samtec
FULL LINE
CATALOG
F-210

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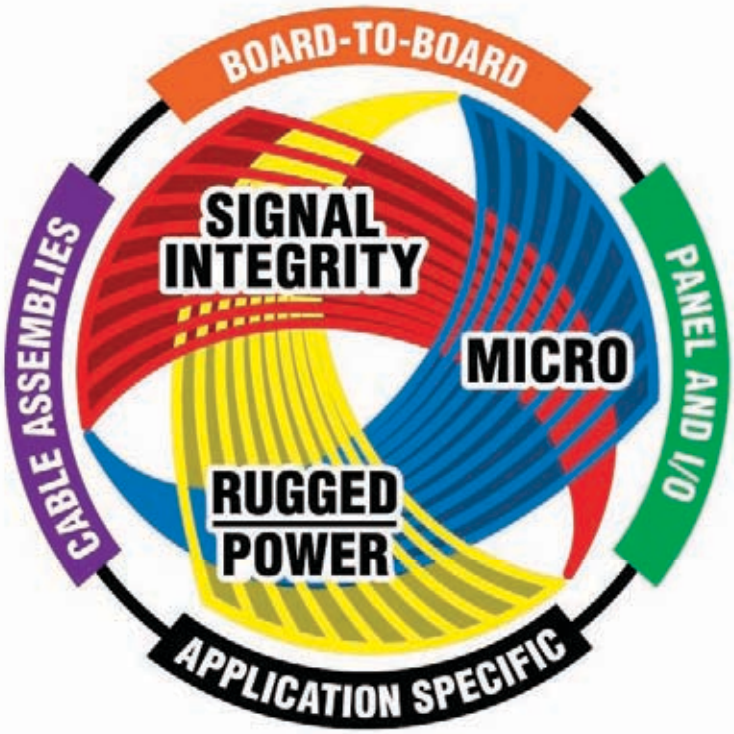
SUDDEN SERVICE®

Samtec Interconnect Systems

- Board-to-Board
- Cable Assemblies
- Panel and I/O

Samtec Design Flexibility

- Signal Integrity
- Micro
- Rugged/Power



SUDDEN SERVICE®

The Path of Least Resistance

Connectors. Cables. Final Inch.® Sudden Service.® Samtec transmission line solutions provide the path of least resistance for routing signals from one location to another, when signal integrity, electromagnetic interference, pin mapping, rugged environments or power requirements present design challenges.

TRANSMISSION LINE TLS SOLUTIONS

Whether you need High Speed Signal Integrity Cables and Connectors, Micro Interconnect flexibility or Rugged and Power Systems, you can depend on Samtec's standard, off-the-shelf interconnect solutions.

For the ultimate in design flexibility, Samtec also offers the unique ability to weave these products and features together for "mix-and-match" Application Specific solutions to fit all your Cable, Board-to-Board and Panel & I/O applications.

HIGH SPEED BOARD-TO-BOARD

HIGH SPEED EDGE CARD MICRO BACKPLANE

MICRO RUGGED MICRO PITCH

STANDARD PITCH BOARD-TO-BOARD

RUGGED POWER-TO-BOARD

HIGH SPEED FLEX & CABLE ASSEMBLIES

RF CONNECTORS & CABLE ASSEMBLIES

IDC & DISCRETE WIRE CABLE ASSEMBLIES

PANEL & I/O INTERFACES

SIGNAL INTEGRITY

Board-to-Board

- High Speed Connectors
- High Density Arrays
- High Speed Edge Card Connectors
- Micro Backplane Interfaces
- RF Interfaces

Cable Assemblies

- High Speed Cable Assemblies
- RF Connectors & Cables
- High Speed Flex
- Custom High Speed Cable Assemblies
- Standard & Custom Test Cables

Panel & I/O

- High Speed I/O Cable Plugs and Receptacles
- AccliMate™ IP68 Sealed Cable Plugs and Receptacles
- True75™ BNCs for 1080p broadcast video

MICRO

Board-to-Board

- Flexible Stacking Systems
- Micro Blade & Beam
- Razor Beam™ Contact
- Micro Pin & Socket
- Standard & Low Profile Headers and Sockets
- High Density, Shrouded & Skyscraper
- High Speed Edge Card Systems

Cable Assemblies

- High Speed Cable Assemblies
- IDC Ribbon Cable Assemblies
- Flex Circuits
- RF Cable Systems
- Test Solutions

Panel & I/O

- AccliMate™ IP68 Sealed Cable Plugs and Receptacles
- RF Cable Plugs and Receptacles
- Standard I/O Cable Plugs and Receptacles

RUGGED POWER

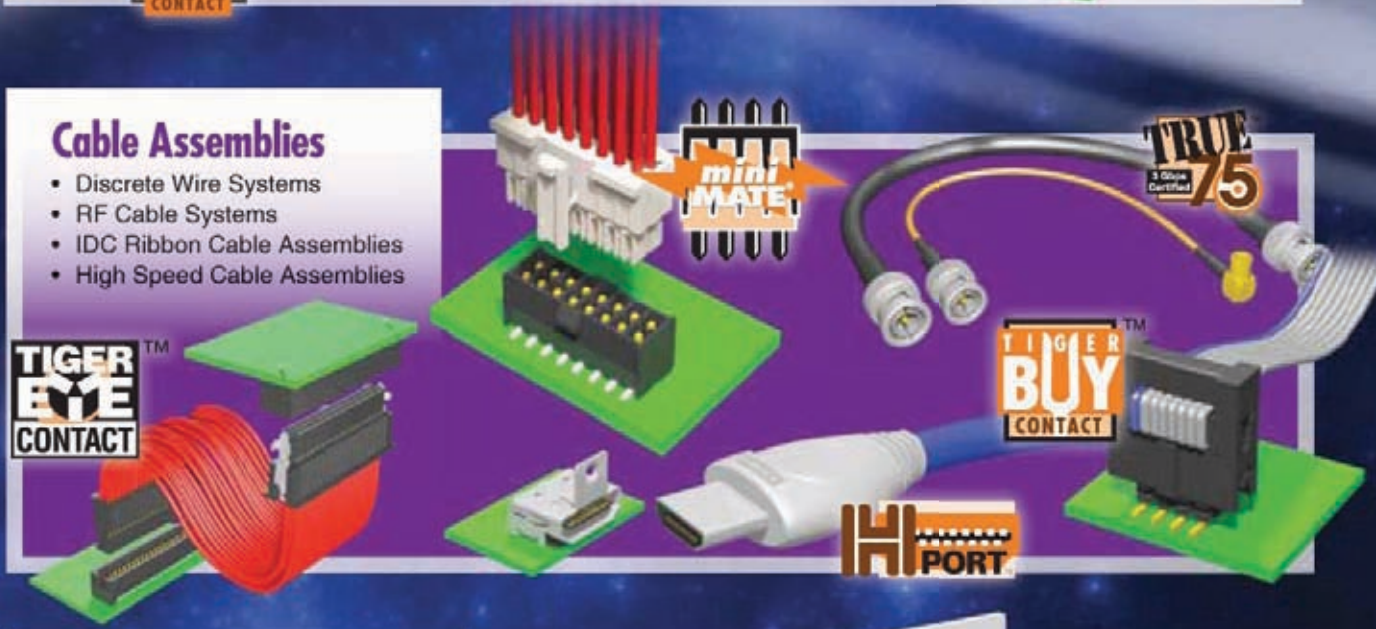
RUGGEDIZED by SAMTEC

Board-to-Board

- Power Sockets & Terminals
- Power/Signal Combinations
- Tiger Eye™ Contacts
- One Piece Interfaces
- Hermaphroditic Systems
- High Speed Board-to-Board

Cable Assemblies

- Discrete Wire Systems
- RF Cable Systems
- IDC Ribbon Cable Assemblies
- High Speed Cable Assemblies



Panel & I/O

- AccliMate™ Sealed (IP68) Cable Plugs and Receptacles
- High Speed I/O Cable Plugs and Receptacles
- RF Cable Plugs and Receptacles
- Specialty Mod Jacks, USB and HDMI™ Interfaces

HDMI™ is a trademark of HDMI Licensing LLC.

APPLICATION SPECIFIC

Board-to-Board

- Pin modifications including hot pluggable, special crimps and angles, modified footprints and selective loading
- Body modifications including custom materials, pick & place pads, shrouds, alignment pins and screen printing
- One Piece Interfaces
- Custom Flex and IDC

Signal Integrity Group

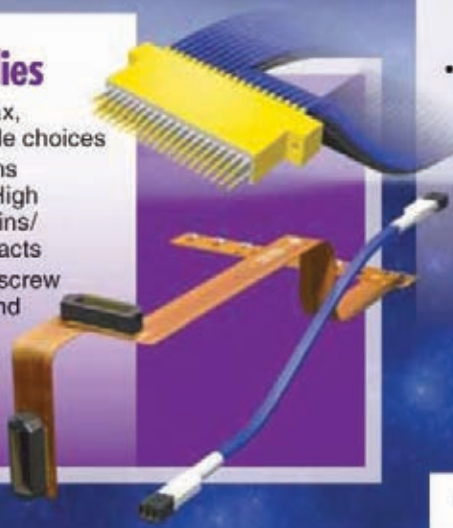
- Application Specific services for design, modeling and testing of full or sub-system
- Extensive modeling, simulation and testing capabilities including de-embedding services
- Samtec involvement available at various levels
- Specific services tailored to your needs and products

Platings, Coax Cables & Flex Circuits

- In-house plating facilities for custom metals, thicknesses, selective platings and plating on plastic
- In-house coax cable manufacturing for custom gauges, constructions and performance specifications
- In-house flex circuit manufacturing for custom designs and high speed specifications

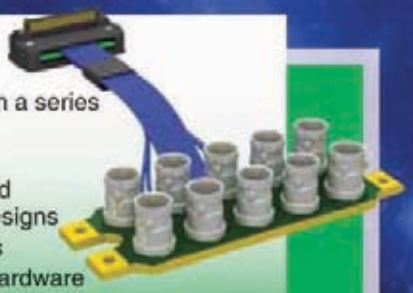
Cable Assemblies

- Wide variety of coax, twinax and RF cable choices
- Custom terminations including RF, I/O, High Speed and Pogo Pins/ Compression Contacts
- Rugged shielding, screw systems, locking and latching features, and retention clips
- Special housings and platings



Panel & I/O

- Combinations within a series and cross series
- Special platings
- Low profile, elevated and high density designs
- Special orientations
- Special mounting hardware
- Standard and high speed cable assemblies



Testing & Development

- SMT lab for processing studies
- Stereolithography for mechanical studies
- Quick-turn prototype capabilities
- In-house mold design and fabrication
- Quick change tooling for easy modification

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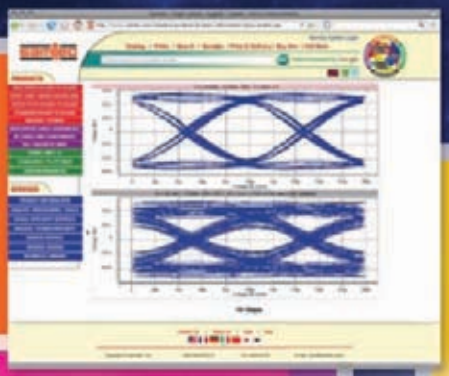
SIGNAL INTEGRITY SERVICES

Test Reports & Models for Simulations



Product Searches

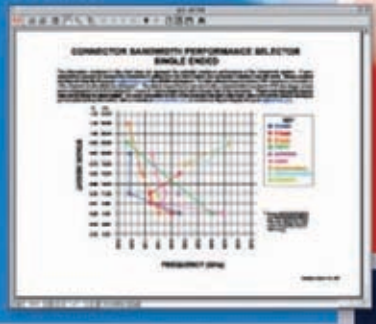
Interactive Cable Builders

Sudden Circuits SOLUTIONATOR™

Application Notes, White Papers, Articles

Electrical Models and Test Data

Bandwidth Performance Selector



Final Inch® Design Tools

Final Inch® Break Out Region Performance Certified finalinch.com

Signal Integrity Center

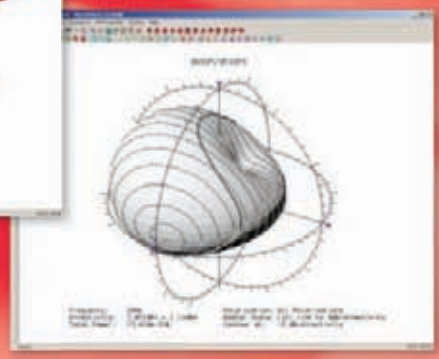
Online support and reference tools for the selection, development, simulation and testing of high speed systems for any application.

- User friendly website
- High speed connector simulations, models, reports, drawings and searches
- HSPICE, PSpice® model, Allegro® SigXplorer model, IBIS ICM, HyperLinx ELDO and ADS models for simulation
- PCB libraries and footprint file types: Allegro® V15.2 & V15.7 file, Altium Designer, ASCII V5, Board Station, CADSTAR, Eagle, Expedition, McCAD, NI Ultiboard, OrCAD® Layout library, P-CAD and Pulsonix
- High speed characterization reports
- Time and frequency domain test data
- Bandwidth Performance Selector and Interactive Cable Builders
- Application Notes: reference designs that verify performance to industry standards
- Cable Assembly Modeling
- Cable Performance Calculator
- Test Data Comparison Program
- High Speed Connector Selector
- White Papers, Presentations, Articles
- Engineering prints, PCB footprints and catalog pages
- Final Inch® breakout region design tool for ease of PCB manufacture and to optimize high speed performance
- "Personal Call Back" program provides immediate reply from Signal Integrity Group

Signal Integrity Group

Personal SI support for questions that cannot be answered via the Signal Integrity Center.

- EE customer interface
- In-house engineers
- Interpret test data, performance results and capabilities
- PCB layout, trace and routing assistance
- Connector ground pin assignment and assistance
- Extensive modeling, simulation and testing capabilities
- De-embedding capabilities
- On-request test data, including eye patterns for Final Inch® circuits using Agilent PLTS 50 GHz Characterization System



SIGNAL INTEGRITY DIVISION

Custom Signal Integrity Services

Application specific design, modeling and testing of circuits, subsystems or complete systems.

- Highly qualified in-house engineers
- Choose the depth of involvement and the breadth of service
- Layout and component strategies during the concept phase
- Customized simulation models to better optimize performance and enhance signal integrity during the design phase
- Testing and verification with Samtec's Signal Integrity expertise during the final development stages
- Electrical engineering services are tailored to specific needs and products
- PCB design support is available for more advanced design needs
- Samtec's support ranges from recommending solder pad footprints to laying out complete system circuits

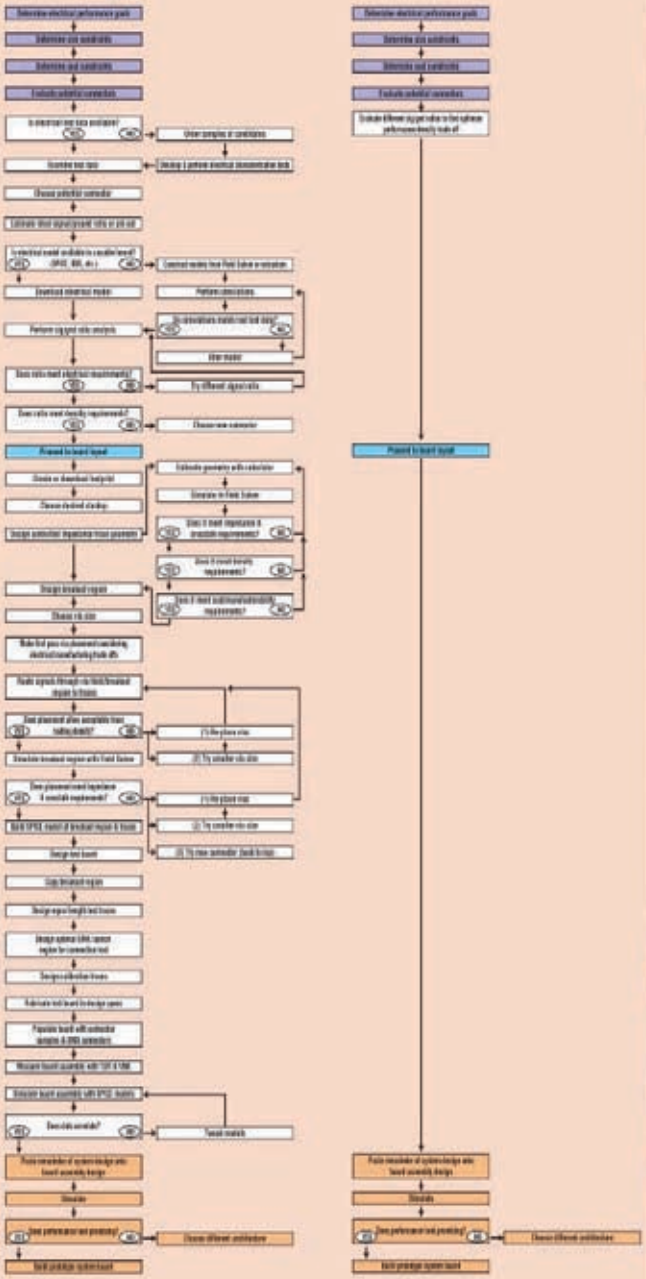
Contact Us! *For assistance with...*

Signal Integrity Capabilities, contact sig@samtec.com
Twinax and Coax Cables, contact dr@samtec.com
RF Cable Systems, contact rf@samtec.com
High Speed Flex, contact flexcircuits@samtec.com
Custom & Application Specific Products, contact asp@samtec.com

FINAL INCH® PCB DESIGN TOOLS

Traditional PCB Design

Samtec's Final Inch®



See www.samtec.com/FI
for downloadable/printable flow chart

Time and Cost Savings

To make high speed connectors easier to specify and use, Samtec has extended the concept of manufacturer PCB layouts and connector SPICE models. Samtec supplies "reference designs" for one of the most difficult design issues on the board: the Break Out Region (BOR) around the high speed connector.

Samtec Signal Integrity engineers have developed Final Inch® Break Out Region PCB trace routing recommendations for many of its most popular high speed connector series. These design recommendations can save design, development and validation time and resources, and balance performance with manufacturability and cost.

Final Inch® BOR design recommendations are typical of real-world signal integrity applications and predict real-world performance expectations. They are based on standard board materials, multiple layers and low cost, high yield manufacturing processes (e.g. no special via treatment).

Within a design's overall transmission line length, the connector and BOR can be the dominating cause of signal integrity degradation. Samtec's Final Inch® BOR design recommendations attempt to minimize this degradation, making signal integrity performance the best it can reasonably be, within real-world design and manufacturing constraints.

When designers use Samtec connectors with Final Inch® BOR design recommendations, the signal integrity performance of their system can be reasonably predicted, as opposed to connector systems that are tested only under lab optimized conditions.

In the final analysis, Samtec provides connectors and PCB BOR design recommendations that work in the real world. In order to simulate the performance in your own system Samtec can provide:

- Empirical TDR and Frequency Domain data
- Test boards
- Validated electrical models

Contact Samtec today for more information.

Samtec Final Inch®	Other Suppliers
Real World	Lab Optimized
Test boards designed to study connector, footprint, Break Out Region and traces in an actual application environment	Test boards are designed to study connector and footprint, with the electrical effects of vias and traces minimized
Standard materials and manufacturing processes show connector and board under real-world conditions	Exotic materials and difficult manufacturing processes show connector under ideal conditions
Real-world performance expectations	Unrealistic performance expectations

Physical Models

Downloadable Gerber and DXF files can be cut and pasted into standard board layout software packages. The entire design is treated as a series of components that PCB designers can drop into their software and route to and from.

These files contain everything required for an optimized design, including:

- Stack Up
- Via Field
- Drill Charts
- Footprint
- Traces

Designs are based on standard materials and low cost, high yield manufacturing processes, and are optimized for the ultimate high speed performance obtainable within these constraints.

Electrical Models

With Final Inch®, Samtec extends the SPICE model concept beyond the connector further out onto the board. SPICE models of the Break Out Region and traces are provided so that the electrical effects of the entire Final Inch® design can be easily simulated. Samtec HSPICE models include:

- Connector
- Vias
- Footprint
- Trace Fanouts

Models of the optimized trace designs are length scalable. Models are also available for various stack heights within a connector family. The connector and Break Out Region models can be used in most SPICE-based simulation tools. The optimized trace design models can only be used in HSPICE.

Empirical Data

Final Inch® is not complete without validation of the electrical system performance through signal integrity modeling, simulations and measurements. Samtec supplies simulation and test reports to support its Final Inch® designs. Empirical signal integrity data is available for download at www.samtec.com/FI. Additionally, Samtec can provide assistance through its Signal Integrity Services Group to customers who wish to use the design in some way other than standard configurations.

Model Availability

Final Inch® physical art and electrical models are available for the following series:

Strips

- QTE/QSE - Q Series® (.8mm)
- QTH/QSH - Q Series® (.5mm)
- DPAM/DPAF - DP Array® (2.16mm)
- YFS/YFT/YFW - Sam Array® (.050")
- QMS/QFS - Q2™ (.635mm)
- QTS-RA/QSS - Q Series® (.635mm)
- SEAM/SEAF - SEARAY™ (.050")
- ST4/SS4 - Micro High Speed Interfaces
- BNC7T - True75™ 75 Ohm BNC Jack
- MMCX - RF Connectors
- RU8 - Rise Up® (.8mm)
- PCIE - PCI Express®* Connectors
- HDAM/HDAF - HD Mezz** (1.2mm)
- HSEC8 (.8mm) Edge Card Connectors
- GCAM/GCCA - DataBank™
- ERM8/ERF8 - (.8mm) Edge Rate™
- MODS-LJ (LifeJack®)
- QRM8/QRF8 - Q Rate® (.8mm)
- ERM5/ERF5 - (.5mm) Edge Rate™
- IJ5/IP5 - (4mm) 50Ω IsoRate™

For a current availability list see www.samtec.com/FI

* PCI Express is a registered trademark of PCI-SIG

** HD Mezz is a trademark of Molex Incorporated

Test & Evaluation Kits

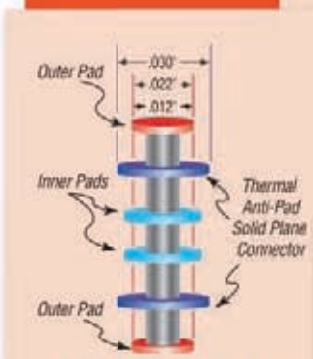
Samtec Final Inch® Test and Evaluation kits are available for loan to customers and allow laboratory testing of the complete Final Inch® design. Test paths include mated connector pair, Break Out Region, matched length controlled impedance traces, and SMA terminations to connect to test equipment. Contact finalinch@samtec.com for more information and availability.

"On-Request" Service

Samtec now offers on-request Final Inch® test data, and is constantly developing new Final Inch® models. For more information contact finalinch@samtec.com

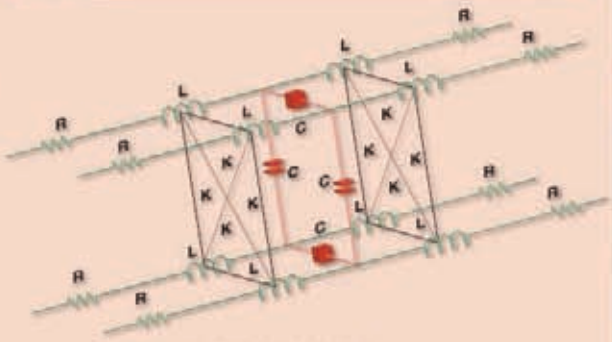
FOOTPRINT

VIA FIELD



TYPICAL STACK UP

TRACE ROUTING



SPICE MODELS

NOTE: Samtec Final Inch® models are Intellectual Property protected by US and International copyrights. These designs and data are licensed for unlimited, free use by Samtec customers under certain conditions. Contact Samtec for a copy of the license agreement.

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HIGH SPEED CONNECTOR STRIPS

Q STRIP®

The Standard for High Speed Board-to-Board

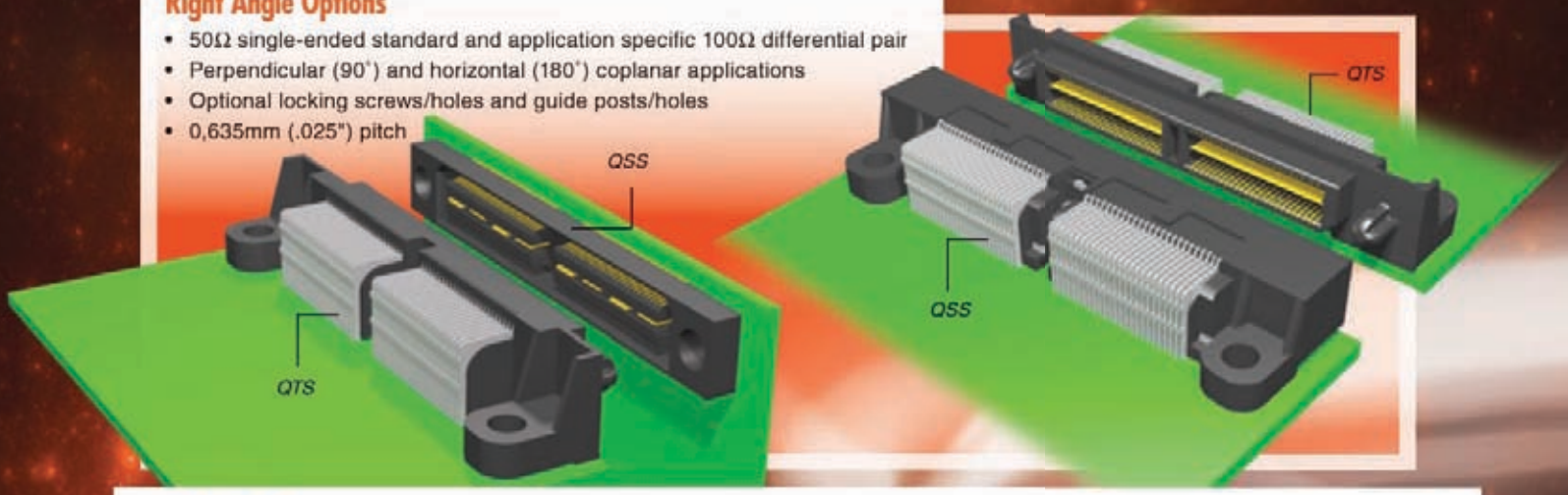
- Low profile 5mm and 8mm standard board stack heights
- Choice of 0,50mm, 0,635mm and 0,80mm pitch
- Elevated mated stack heights to 30mm
- Integral power/ground plane rated for up to 9.5 amps at 80°C depending on pitch
- Single-ended and differential pair designs
- Wide variety of standard high speed mating cables and flex circuits
- Guide posts, edge mount and friction lock designs available
- Application specific "partitioned" single-ended and differential in the same connector
- High speed interface system with rugged Edge Rate™ contacts on 0,8mm pitch (QEF8/QEM8 Series) is footprint compatible with QTE/QSE Series

0,50mm QTH/QSH	0,635mm QTS/QSS	0,635mm MIT/MIS	0,80mm QTE/QSE
Stack Height			
5mm	5mm	5mm	5mm
8mm	8mm	8mm	8mm
11mm	11mm	11mm	11mm
14mm			14mm
16mm	16mm	16mm	16mm
19mm		18.75mm	19mm
22mm		22mm	22mm
25mm			25mm
30mm			30mm

Standard Single-Ended and Differential Pair
Standard Single-Ended; Application Specific Differential Pair
Application Specific Single-Ended and Differential Pair

Right Angle Options

- 50Ω single-ended standard and application specific 100Ω differential pair
- Perpendicular (90°) and horizontal (180°) coplanar applications
- Optional locking screws/holes and guide posts/holes
- 0,635mm (.025") pitch



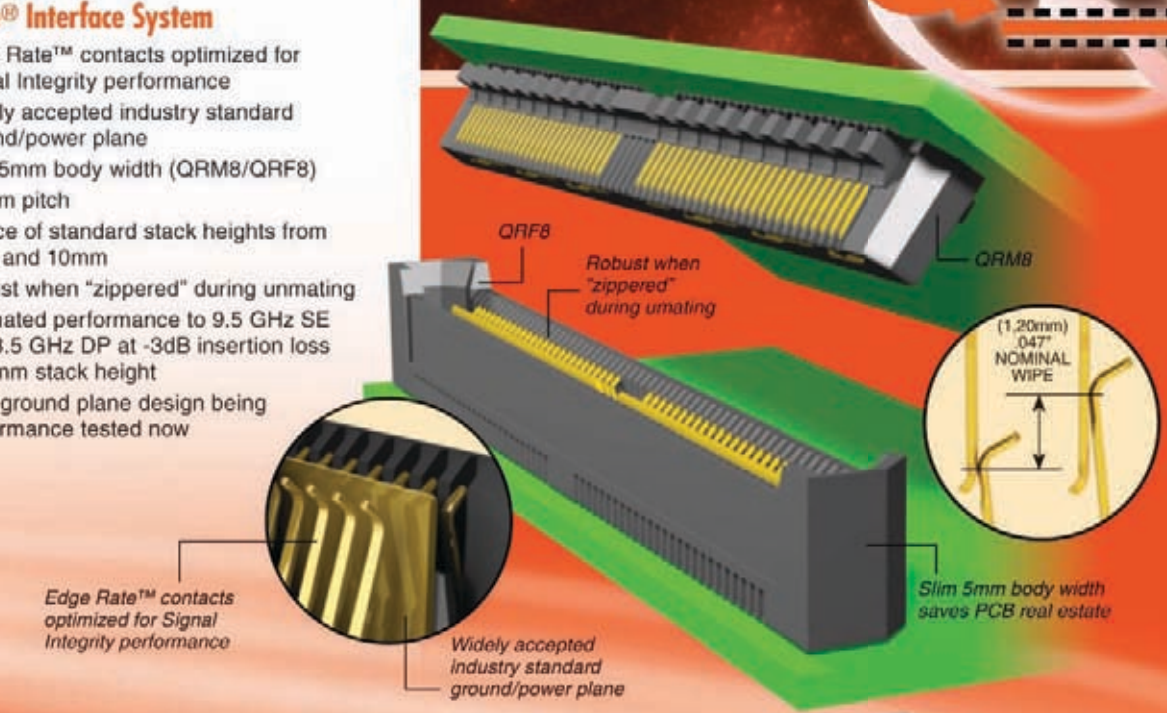
Q Strip®

Series	QTH/QSH		QTS/QSS	MIT/MIS	QTE/QSE		QEM8/QEF8
Pitch	0.5 mm		0.635 mm		0.8 mm		0.8 mm
Stack Heights* (mm)	5, 8, 11, 16, 19, 25		5, 8		5, 8, 11, 16, 19, 25		10
Signaling Type	SE	DP	SE	SE	SE	DP	SE
Total Pin Counts*	60, 120, 180, 240	40, 80, 120, 160	50, 100, 150, 200	38, 76, 114, 152	40, 80, 120, 160	28, 56, 84, 112	40, 80, 120
Performance (5mm Stack)	9 GHz / 18 Gbps	9.5 GHz / 19 Gbps	9 GHz / 18 Gbps	8.5 GHz / 17 Gbps	9 GHz / 18 Gbps	8.5 GHz / 17 Gbps	TBD
Cable Mates	HQCD (50Ω)	HQDP (100Ω)	SQCD (50Ω)	MICD (50Ω)	EQCC (50Ω), EQSD (75Ω), EQRF (RF)	EQDP (100Ω)	
Flex Data Link Mates	HFHM2	HFHM2			HFEM2	HFEM2, ZFHF	
Notes			Right angle available; see Q2™ Series for other options	Mixed technology footprint	See High Speed and Edge Rate™ Series for other options		Edge Rate™ Contact
Page	64-65		66-69	70-71	72-73		79

*Other stack heights and pin counts available. Call Samtec.

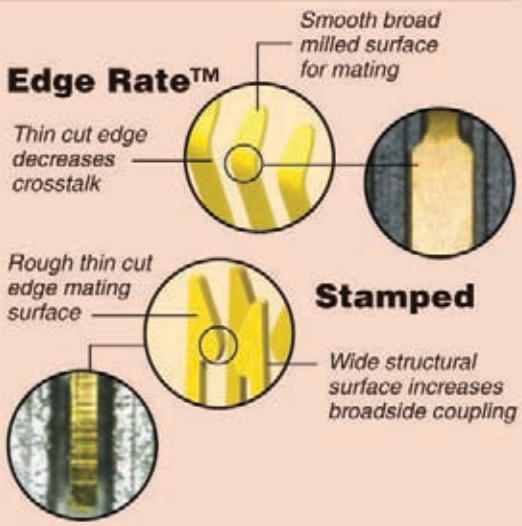
Q Rate® Interface System

- Edge Rate™ contacts optimized for Signal Integrity performance
- Widely accepted industry standard ground/power plane
- Slim 5mm body width (QRM8/QRF8)
- 0,8mm pitch
- Choice of standard stack heights from 7mm and 10mm
- Robust when "zippered" during unmating
- Estimated performance to 9.5 GHz SE and 8.5 GHz DP at -3dB insertion loss for 7mm stack height
- Dual ground plane design being performance tested now



EDGE R·A·T·E CONTACT™

- Designed for Signal Integrity
- Superior impedance control
- Reduced broadside coupling (crosstalk)
- Rugged contact system



Q Rate® Connector Strips

Series	QRM8/QRF8	QDM8/QDF8
Pitch	0,8mm	
Stack Heights* (mm)	7, 10	7, 10
Total Pin Counts*	52, 104, 156	44, 88, 132
Performance (7mm Stack)	9.5 SE/8.5 DP	TBD
Notes	Slim body design, right angle available	Dual ground planes
Page	74-77	78

*Other stack heights and pin counts available. Call Samtec.

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HIGH SPEED CONNECTOR STRIPS

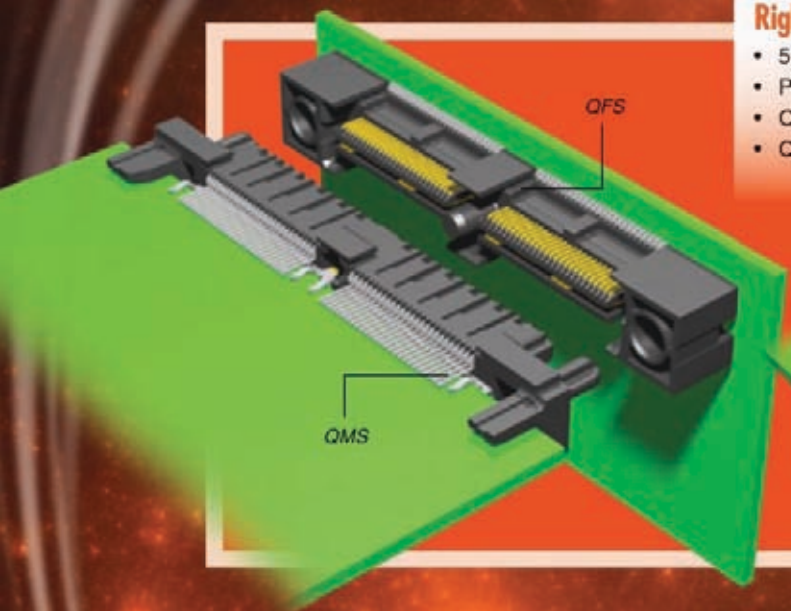
Q2™

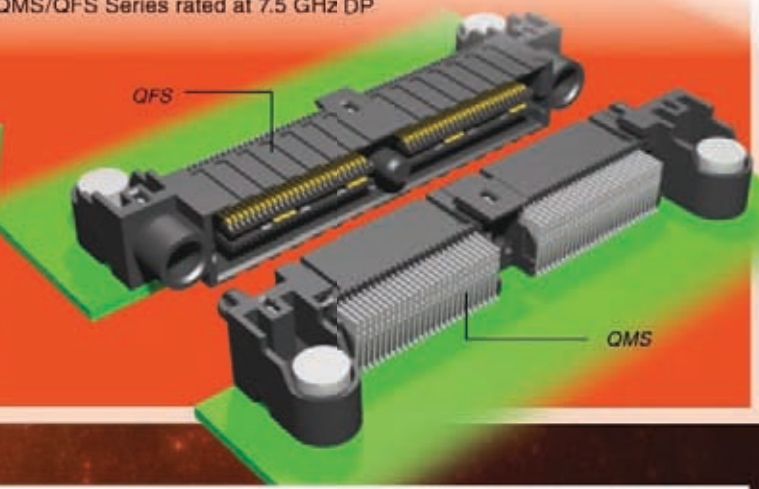
Second Generation Q Series®

- Increased insertion depth for rugged applications
- 0.635mm (.025") pitch
- 10mm, 11mm, 12mm, 13mm, 14mm and 16mm mated heights
- Up to 208 signal pins standard
- Up to 64 signal pairs standard
- Integral power/ground plane rated for up to 8.9 amps at 80°C
- Integrated guide posts
- Wide variety of standard high speed mating cable assemblies
- Choice of RF, power, retention pin and shielding options
- Application specific hot plugging
- Performance to 9 GHz with single-ended and 7.5 GHz with differential routing

Right Angle & Edge Mount

- 50Ω single-ended standard and application specific 100Ω differential pair
- Perpendicular (90°) and horizontal (180°) coplanar applications
- Optional locking screws/holes and guide posts/holes
- QMS/QFS Series rated at 7.5 GHz DP





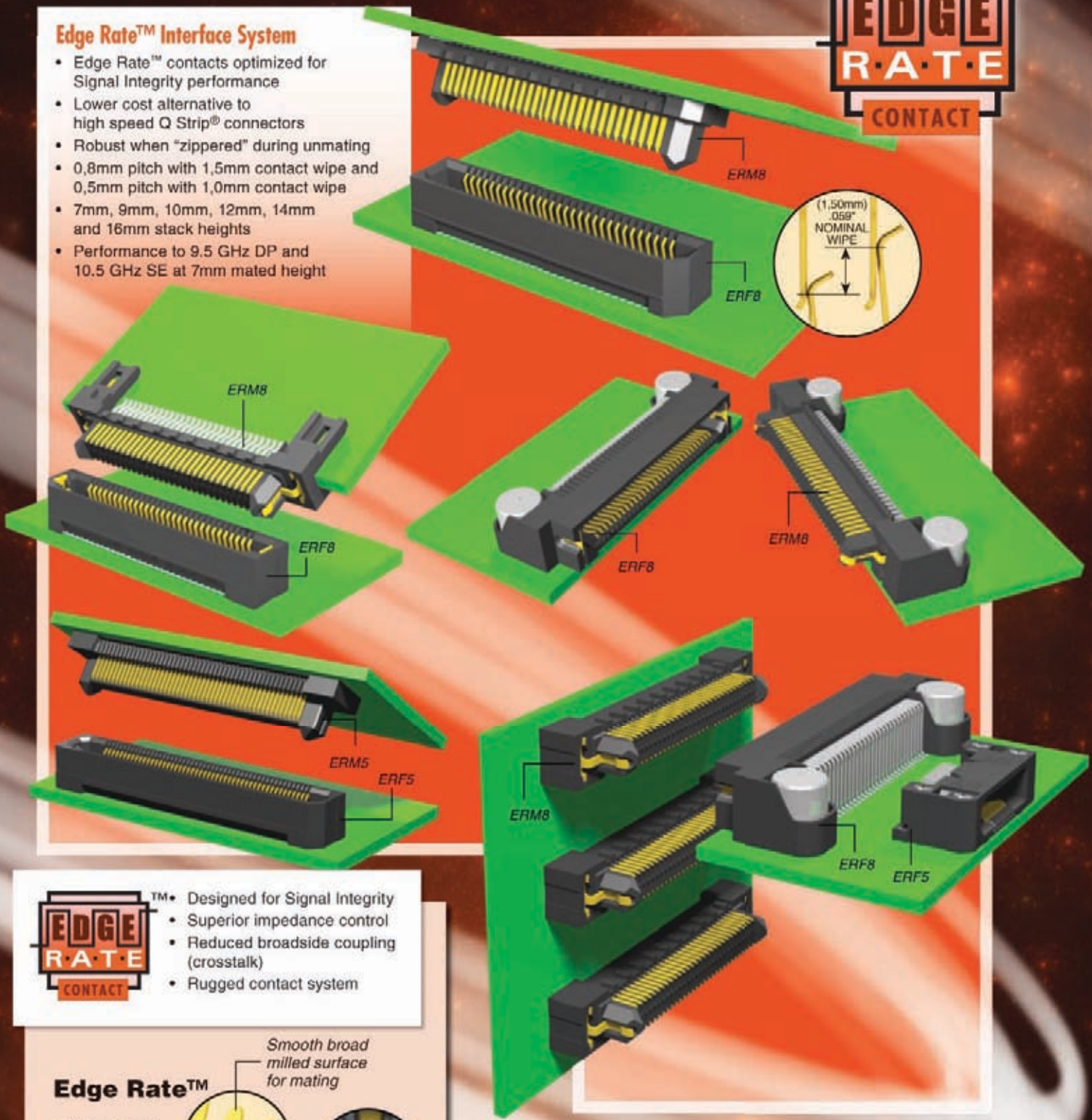
Q2™

Series	QMS/QFS		QMSS/QFSS		ASP-129637/129646
Pitch	0.635 mm		0.635 mm		0.635 mm
Stack Heights* (mm)	10, 11, 12, 13, 14, 16		11		15, 24**
Signaling Type	SE	DP	SE	DP	SE
Total Pin Counts*	52, 104, 156, 208	32, 68, 96, 128	52, 104, 156, 208	32, 68, 96, 128	52, 104, 156
Performance (10mm Stack)	9 GHz / 18 Gbps	7.5 GHz / 15 Gbps			
Cable Mates	Q2DA, 6QCD, 6QP (50Ω)	6QDP (100Ω)		EQDPS (100Ω)	
Notes	Right Angle, Edge Mount, Power & RF Options Available		EMI Shielded		StackableUSB™, SUMIT™ & PCI/104-Express™
Page	80-85		86-87		80-81

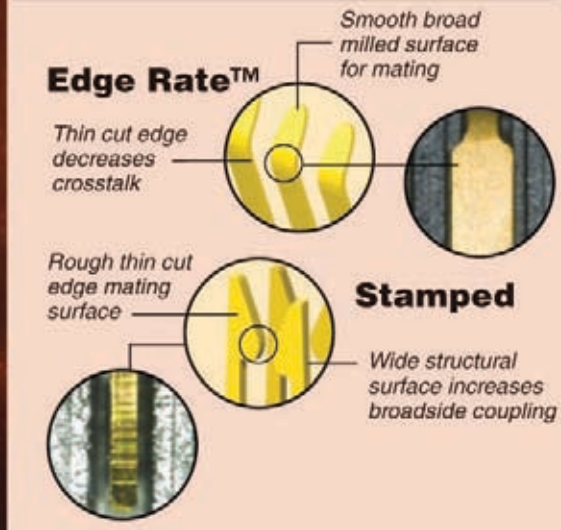
* Other stack heights and pin counts available. Call Samtec.
**Requires mechanical standoff (See SQ Series).

Edge Rate™ Interface System

- Edge Rate™ contacts optimized for Signal Integrity performance
- Lower cost alternative to high speed Q Strip® connectors
- Robust when "zippered" during unmating
- 0,8mm pitch with 1,5mm contact wipe and 0,5mm pitch with 1,0mm contact wipe
- 7mm, 9mm, 10mm, 12mm, 14mm and 16mm stack heights
- Performance to 9.5 GHz DP and 10.5 GHz SE at 7mm mated height



- Designed for Signal Integrity
- Superior impedance control
- Reduced broadside coupling (crosstalk)
- Rugged contact system



Edge Rate™ Connector Strips

Series	ERM5/ERF5	ERM8/ERF8
Pitch	0.5mm	0.8mm
Stack Heights* (mm)	7, 10	7, 9, 10, 12, 14, 16
Total Pin Counts*	20 - 100	20 - 150
Performance (7mm Stack)	TBD	10.5 GHz / 21 Gbps (SE) 9.5 GHz / 19 Gbps (DP)
Cable Mate		ERCDA, ERCD, ERDP
Flex Mate		ERDL2
Notes	Right Angle Available	Right Angle & Edge Mount Available
Page	88-89	90-93

*Other stack heights and pin counts available. Call Samtec.

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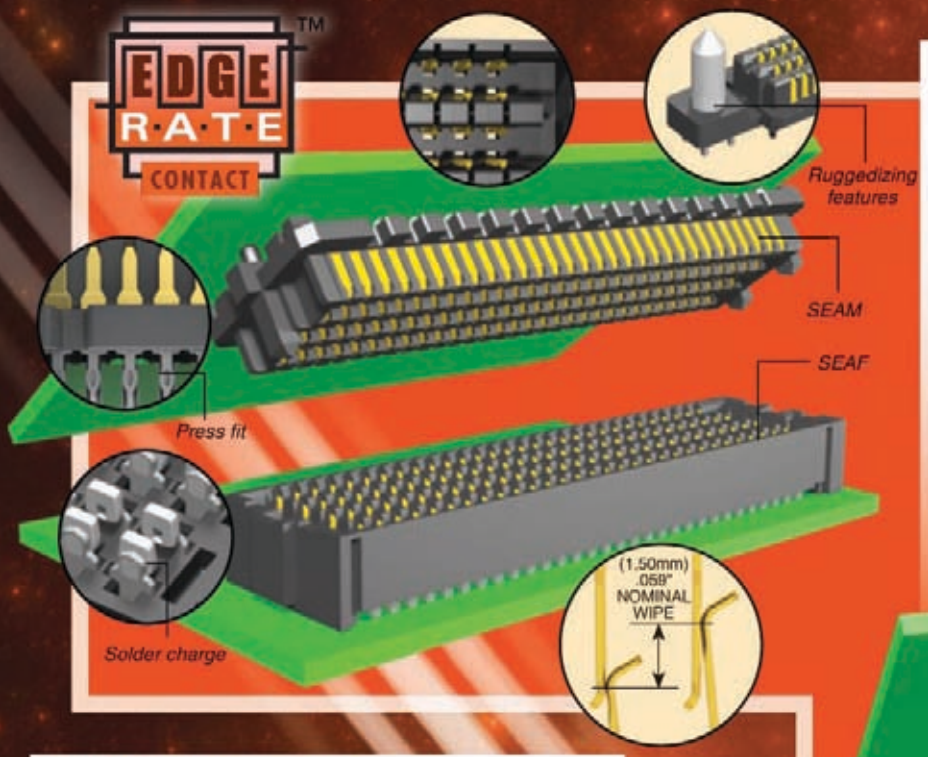
HIGH DENSITY ARRAYS

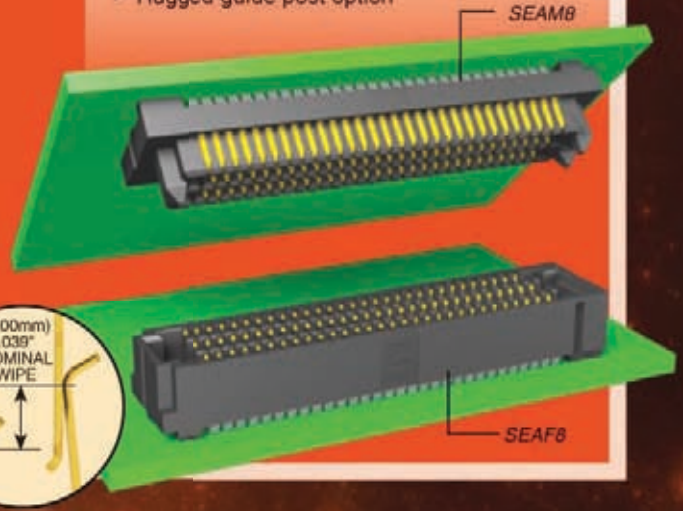
SEARAY™
OPEN PIN FIELD INTERCONNECTS

EDGE R·A·T·E™ CONTACT



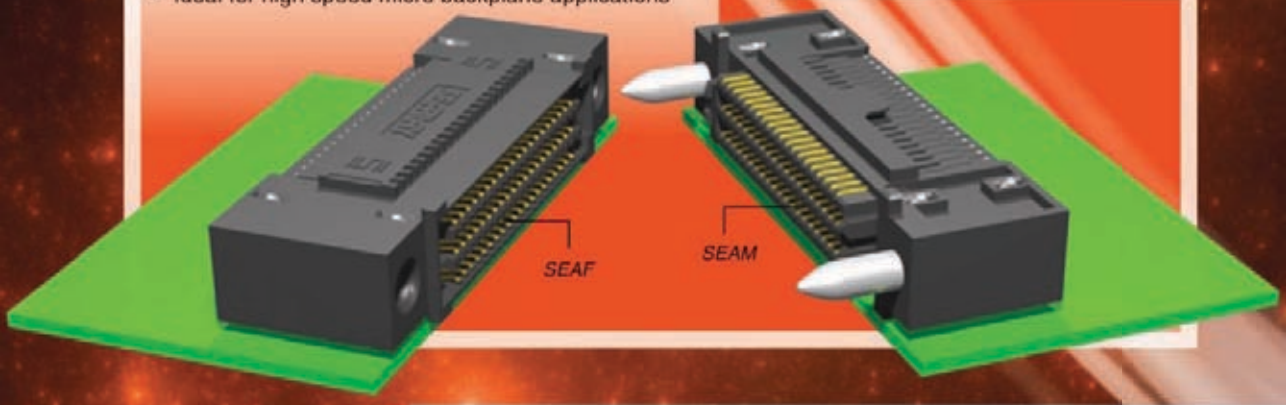
A Sea of Signals and Grounds

- (1,27mm x 1,27mm) .050" x .050" grid array for maximum grounding and routing flexibility
- Fifteen standard board stack heights from 7mm to 17,5mm
- Up to 500 single-ended I/Os or 125 differential pairs (using Samtec recommended pin assignments)
- Lower insertion/extraction forces
- Rugged Edge Rate™ contact system less prone to damage when "zippered" to unmate
- Choice of tin-lead or lead-free solder charged terminations for ease of processing
- Standard and custom jumper lengths and pin counts
- Rugged guide post option



Right Angle/Micro Backplane

- Right angle arrays optimized to reduce skew and impedance mismatch
- Choice of 4, 6, 8 and 10 row designs with 20 to 50 contacts per row
- Rugged Edge Rate™ contacts with lead-free solder charges on tails
- Lower insertion/extraction forces
- Optional guide posts for blind mating
- Ideal for high speed micro backplane applications



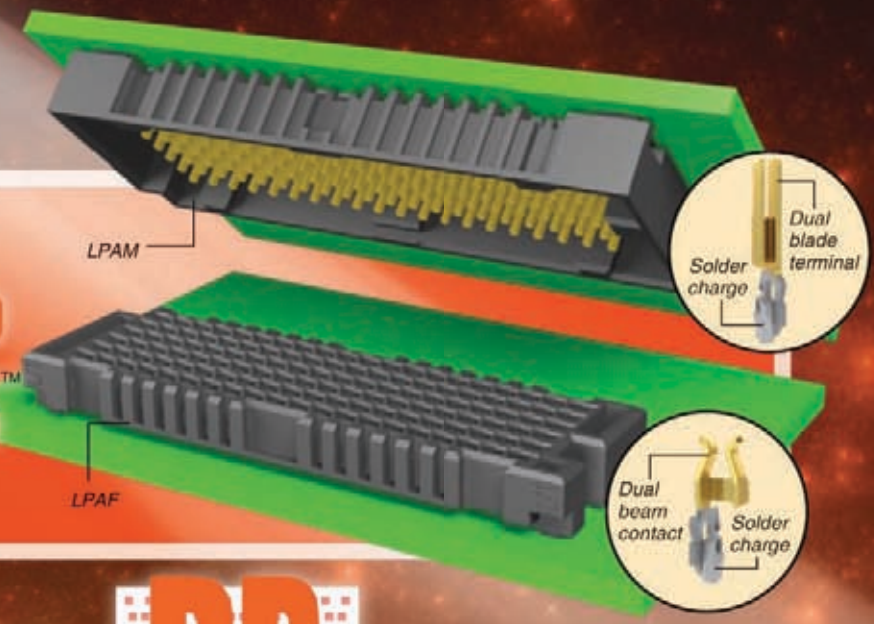
Arrays

Series	SEAM8/SEAF8 (SEARAY™)	SEAM/SEAF (SEARAY™)	
Pitch	0,80mm (.0315")	1,27mm x 1,27mm (.050" x .050")	
Stack Heights* (mm)	7, 10	7, 8, 8.5, 9, 9.5, 10, 11.5, 12, 12.5, 13, 13.5, 14, 15, 15.5, 16, 17, 17.5	
Signaling Type	Open Pin Field	SE	DP
Total Pin / Pair Counts*	30 - 180	80 - 500	25 - 125
Performance (@ -3dB IL)	TBD	9.5 GHz / 19 Gbps (at 7mm)	10.5 GHz / 21 Gbps (at 7mm)
Cables & Flex Data Link Mates		SEAC/SADL	
Notes		Right Angle & Press Fit Available	
Page	98-99	102-107	

* Other stack heights and pin counts available. Call Samtec.

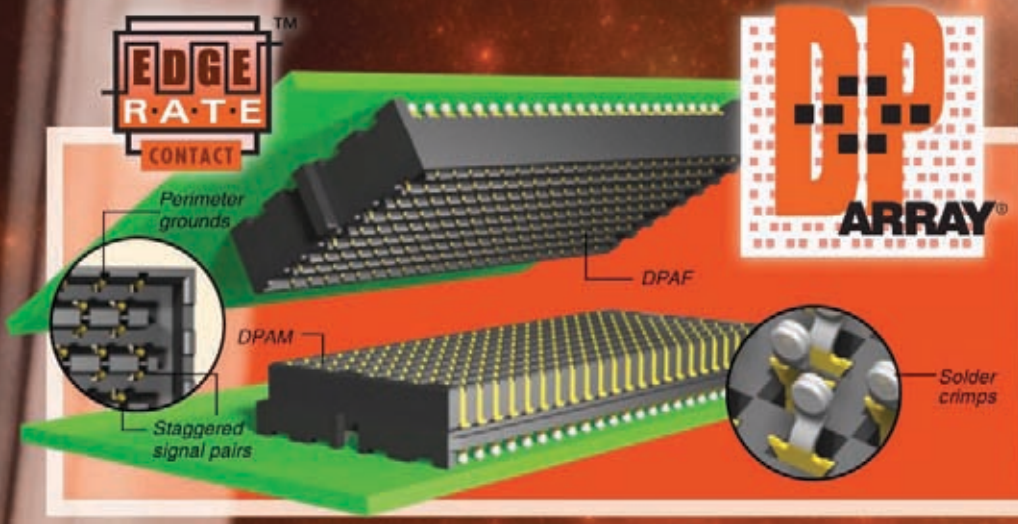
LP Array™ Low Profile Arrays

- 4mm, 4,5mm and 5mm stack heights
- Up to 30 pins per row
- 4 or 6 row
- Dual beam contact
- Solder charge
- In development



DP Array® Differential Pair Arrays

- Perimeter grounds and staggered pin layout eliminates interstitial grounds and makes board routing easier
- Fewer board layers required
- Performance of up to a terabit per connector (up to 4 GHz per pair)
- Lower insertion/extraction forces
- Solder crimp termination
- Up to 168 usable pairs
- 10mm, 14mm and 17mm mated heights



HD Mezz** Elevated High Density Arrays

- 20mm, 25mm, 30mm and 35mm standard board stack heights
- Application specific capability to build any height from 20mm to 35mm
- Up to 299 single-ended I/Os or 92 differential pairs
- Dual wipe contacts
- Integrated guide posts to minimize contact damage when mating and unmating
- Choice of tin-lead or lead-free solder charged terminations for ease of processing
- Intermateable with Molex HD Mezz** Arrays

Arrays

Series	LPAM/LPAF (LP Array™)	DPAM/DPAF (DP Array®)	HDAM/HDAF (HD Mezz**)	
Pitch	1,27mm x 1,27mm (.050" x .050")	2,16mm x 2,54mm (.085" x .100")	1,20mm x 1,00mm (.047" x .0787")	
Stack Heights* (mm)	4, 4.5, 5	10, 14, 17	20, 25, 30, 35	
Signaling Type	SE	DP	SE	DP
Total Pin / Pair Counts*	60 - 180	18 - 168	143 - 299	44 - 92
Performance (@ -3dB IL)	TBD	7 GHz / 14 Gbps (at 10mm)	9 GHz / 18 Gbps (at 35mm)	9 GHz / 18 Gbps (at 35mm)
Cables & Flex Data Link Mates				
Notes			Intermateable with Molex	
Page	100-101	108	109	

* Other stack heights and pin counts available. Call Samtec.
**HD Mezz is a trademark of Molex Incorporated

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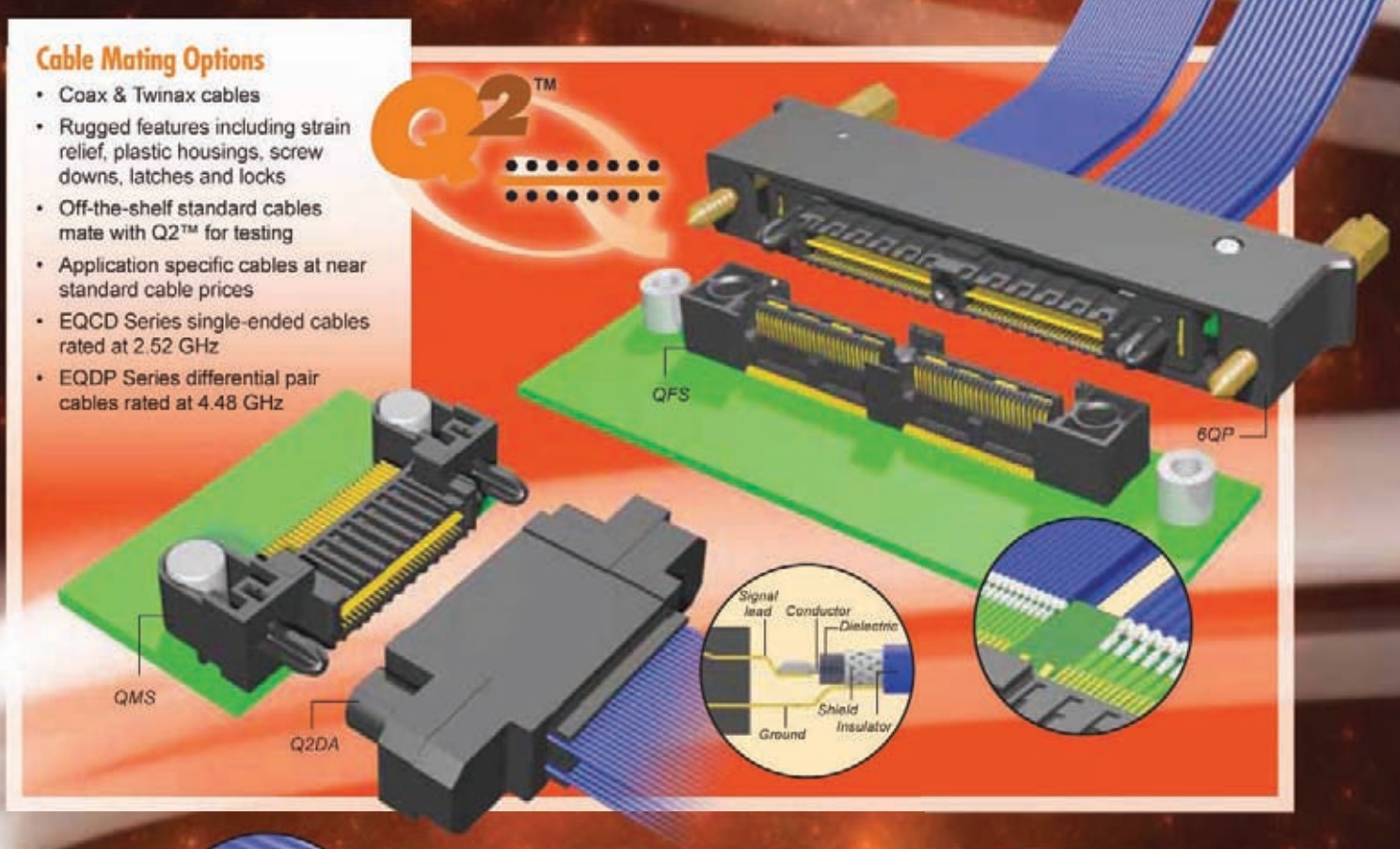
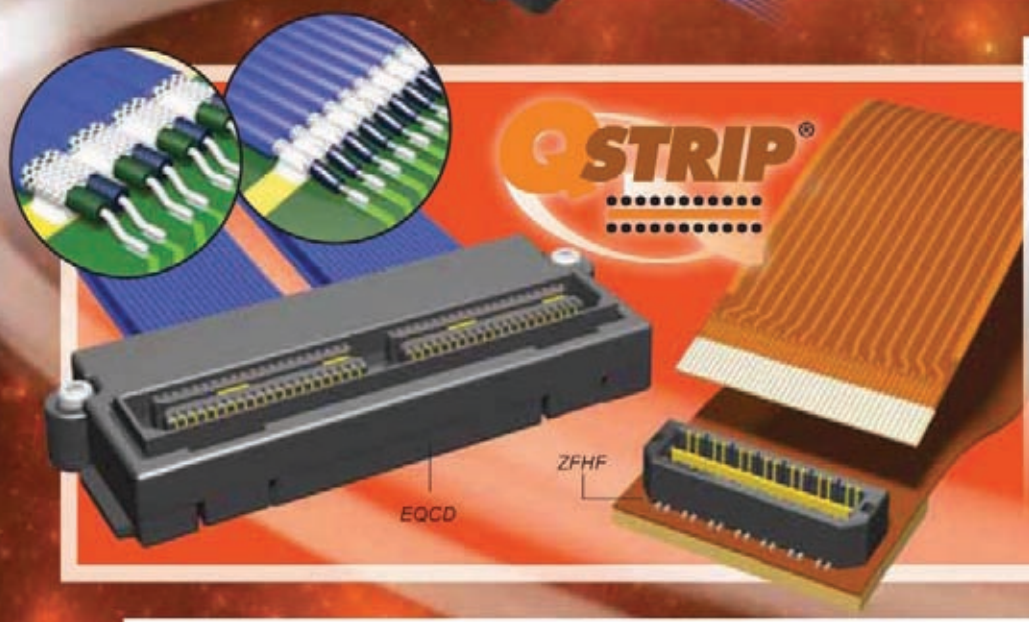
CONNECTOR STRIP CABLE SOLUTIONS

Cable Mating Options

- Coax & Twinax cables
- Rugged features including strain relief, plastic housings, screw downs, latches and locks
- Off-the-shelf standard cables mate with Q2™ for testing
- Application specific cables at near standard cable prices
- EQCD Series single-ended cables rated at 2.52 GHz
- EQDP Series differential pair cables rated at 4.48 GHz





Cable and Flex Mating Options

- 50Ω and 75Ω single-ended and 100Ω differential cables
- Single-ended and differential high speed flex data links
- Rugged features including strain relief, plastic housings, screw downs, latches and locks
- Application specific cables at near standard cable prices
- HFHM2 Series High Speed Data Link rated at 2.36 GHz

Q2™ & Q Series® Cable & Flex Assemblies

Series	QTH/QSH		QMS/QFS		QTS/QSS	MIT/MIS	QTE/QSE	
Pitch	0.5 mm		0.635 mm				0.8 mm	
Signaling Type	SE	DP	SE	DP	SE	SE	SE	DP
Total Pin Counts	60, 120, 180, 240	40, 80, 120, 160	50, 104, 156, 208	32, 64, 96, 128	50, 100, 150, 200	38, 76, 114, 152	40, 80, 120, 160	28, 56, 84, 112
Cable Mates	HQCD (50Ω)	HQDP (100Ω)	Q2DA, 6QCD, 6QP (50Ω)	6QDP (100Ω)	SQCD (50Ω)	MICD (50Ω)	EQCD (50Ω), EQSD (75Ω)	EQDP (100Ω)
Flex Data Link Mates	HFHM, HFHM2						HFEM2	HFEM2, ZFHF
Notes			Power & RF Options Available			Mixed technology footprint	See High Speed and Edge Rate™ Series for other options	
Page	296-298, 306		300, 302		30		296-298, 301, 306, 312	

Cable and Flex Mating Options

- 50Ω single-ended and 100Ω differential cables
- Single-ended and differential high speed flex data links
- Rugged features include strain relief, plastic housings, screw downs, latches and locks
- Application specific cables at near standard cable prices

EDGE R·A·T·E™ CONTACT

SEARAY™ OPEN PIN FIELD INTERCONNECTS

Edge Rate™ Cable & Flex Assemblies

Series	ERF8/ERM8		SEAM/SEAF
Pitch	0.8 mm		1.27mm
Signaling Type	SE	DP	SE & DP
Total Pin Counts	20 - 120	13, 25, 29	80 - 500
Cable Mates	ERCD, ERCDA	ERDP	SEAC
Flex Data Link Mates	ERDL2		SADL
Notes	NEXUS, Power.org™, ARM Emulation Standards		Vertical & Right Angle
Page (Cable)	299-300	302	107, 300
Page (Flex)	306		308

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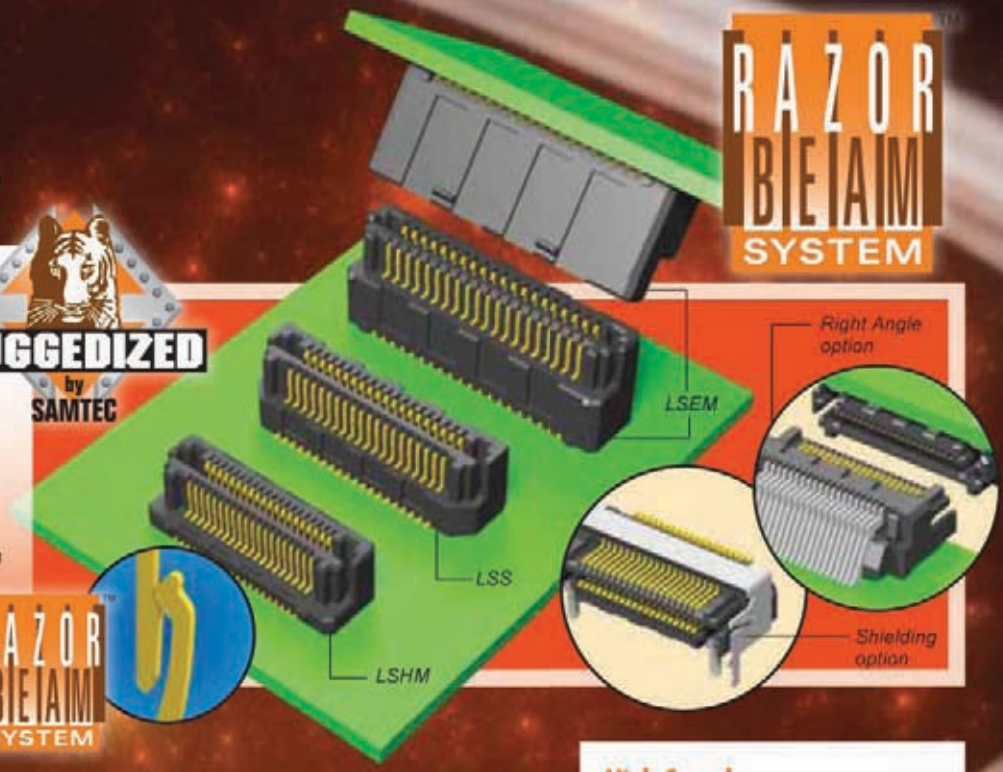
MICRO STRIPS

Micro Rugged Hermaphroditic Interface

- High Speed/High Density
- Slim row-to-row design
- Low cost blade and beam contact
- Mated height variety/flexibility
- Shrouded with audible click when properly mated
- 0,635mm, 0,50mm and 0,80mm pitch
- Self-mating system reduces inventory costs

RUGGEDIZED by SAMTEC

RAZOR BEAM SYSTEM

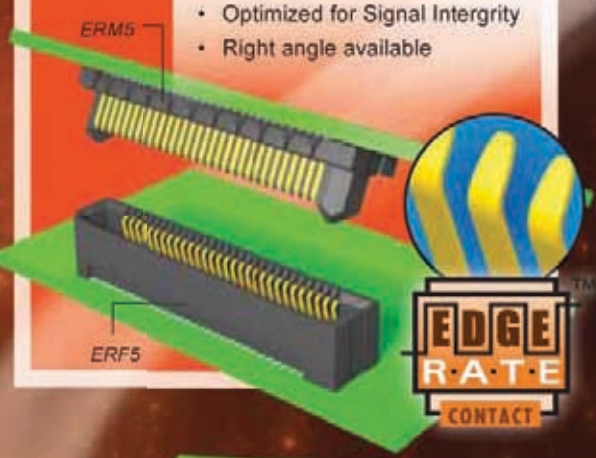


Super Micro Pitch Strips

- 0,4mm pitch with 4mm stack height
- Extra narrow body design saves PCB real estate
- 1mm of contact wipe with superior contact deflection
- Application specific stack heights available

High Speed

- 0,50mm and 0,80mm pitch
- Edge Rate™ contacts
- Optimized for Signal Intergrity
- Right angle available

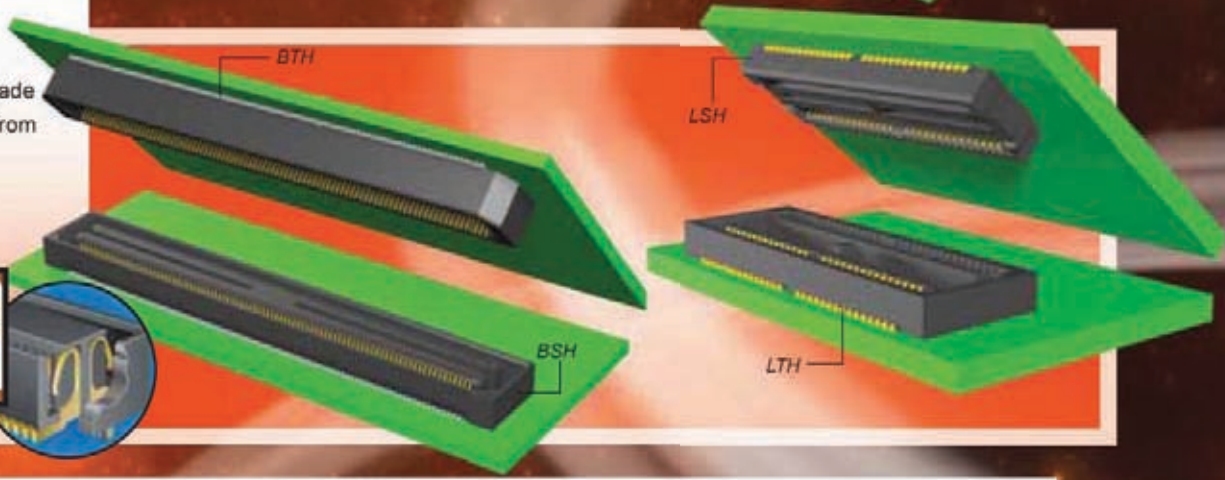


EDGE R·A·T·E CONTACT

Blade & Beam

- Lower costs without integral power/ground blade
- Standard stack heights from 2,3mm to 8mm
- Polarized
- 0,5mm, 0,635mm and 0,8mm pitch

BLADE & BEAM CONTACT



Micro Strips

Series	ERM5/ERF5	SS4/ST4	LSHM	LSS	LSEM	LTH/LSH	BTH/BSH	BTS/BSS	BTE/BSE
Pitch	0,5mm	0,4mm	0,5mm	0,635mm	0,8mm	0,5mm	0,5mm, 0,635mm, 0,8mm		
Stack Heights* (mm)	7, 10	4 - 6	5, 5.5, 6, 6.5, 7, 8, 8.5, 9, 10, 12	6, 7, 8, 9, 10, 12	5, 5.5, 6, 6.5, 7, 8, 8.5, 9, 10, 12	2.31	5	5	5, 8
Total Pin Counts*	20 - 100	20 - 100	40 - 100	40 - 100	40 - 100	20 - 100	60 - 300	50 - 300	40 - 240
Performance (@ -3dB insertion loss)	TBD	7 GHz SE (at 4mm)	TBD	10 GHz SE (at 6mm)	TBD	TBD	9 GHz SE (at 5mm)	TBD	8 GHz SE (at 5mm)
Page	88-89	94	95	96	97	166	167	168	169

*Other stack heights and pin counts available. Call Samtec.

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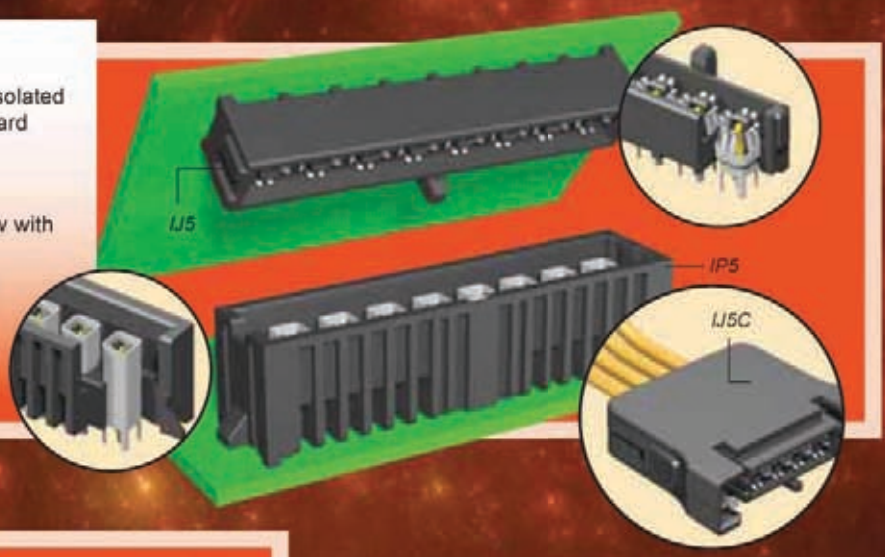
UNIQUE & COMBINATION RF

IsoRate™ Isolated Edge Rate Contact

IsoRate™ Connector Strips

- Low cost, high performance isolated transmission line board-to-board
- 50Ω & 75Ω systems
- 10mm board stack height
- Choice of single or double row with 1, 2, 4 or 8 contacts per row
- Optional guide posts for blind mating applications
- Mating cable assemblies available



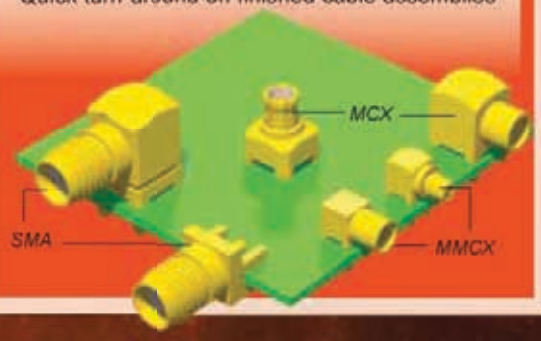
Choice of 75Ω Systems

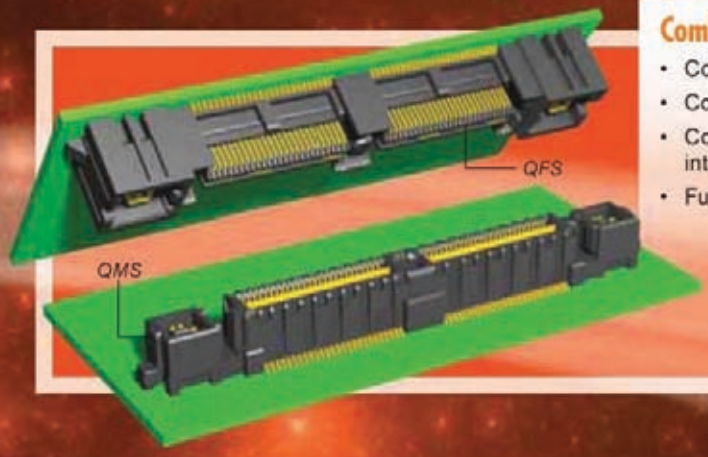
- Standard 75Ω and True75™ connectors certified 75Ω ±3Ω at 3 Gbps
- Edge Mount Bulkhead BNC Jacks for (1,6mm) .062" and (2,4mm) .093" boards
- Vertical straight and right angle BNC, SMB and MCX jacks
- RG6 and RG179 coax assemblies with straight and right angle plugs
- Semi-custom and full custom jacks and cable plugs

TRUE 75™ 3 Gbps Certified

Standard 50Ω PCB Connectors

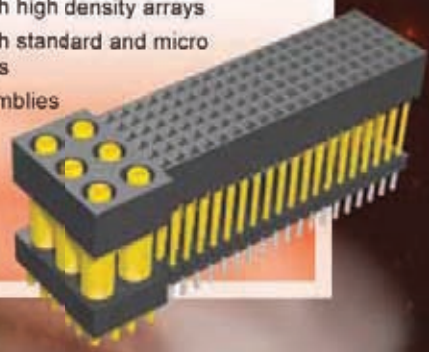
- MHF1 and MHF3
- SMA, SMB, MCX, MMCX, BNC, TNC and N Type connectors
- Quick turn-around on finished cable assemblies





Combination RF Interconnects

- Combinations with Q Series® interconnect strips
- Combinations with high density arrays
- Combinations with standard and micro interconnect strips
- Full custom assemblies



Unique and Standard RF

Series	QMS/QFS	IJ5/IP5	IJ7/IP7	BNC7T, SMB7, MCX7	RSP-122811	SMA, MCX, MMCX, SMB5, TNC
Type	MMCX Scale RF Combination	IsoRate™	IsoRate™	Standard PCB Mount	MHF1 & MHF3	Standard PCB Mount
Impedance		50 Ω	75 Ω	75 Ω	50 Ω	
Pitch	0.635mm	4mm			Discrete	
Cable Mates	N/A	IJ5C		RF179, RF6T	MH081 & MH113	RF174, RF316, RF178, RF058
Total Pin Counts	2 or 4 RF + 52, 104 or 156 signal	1, 2, 4, 8, 16	1, 2, 4, 8, 16	Discrete		
Page	82-83	111	112	327-331	332 - 333	334 - 340

INTERFACE SELECTORS

This guide is designed to quickly and easily determine which Samtec connectors can work in your specific Parallel/Mezzanine high speed board stacking application. As you complete each step, simply eliminate any Samtec product series listed in the chart below that does not meet your needs. After all four steps have been completed and the necessary products eliminated, you will have left the suggested Samtec high speed product series that best fits your application.

1. **Choose the signaling configuration desired.**
2. **Choose the total number of pins (including grounds) or differential pairs that best fit your application.**
3. **Choose the stack height required.**
4. **Choose the performance that you would like the connectors to achieve.**

Parallel/Mezzanine Board Stacking

Strips

Signaling Configuration	Total No. of Pins/Pairs	Stack Height	Perform.	Series/Pitch/ Trade Name	Features/Benefits
Single-Ended	20, 40, 60, 80, 100	4mm	7 GHz	**SS4/ST4 .4mm Ultra Fine Pitch**	Ultra fine pitch, slim, low-profile. Other Stack Heights: 4.5, 5, 5.5, 6
Differential, with grounds	8, 13, 20, 26, 33	4mm	4.5 GHz		
Single-Ended	60, 120, 180, 240	5mm	9.0 GHz	**QTH/QSH .5mm Q Strip®**	Ground plane for power. Other Stack Heights: 8, 14*, 19*, 22*
		11mm*	6.0 GHz		
		16mm*	5.0 GHz		
		30mm*	3.0 GHz		
Differential, with grounds	20, 40, 60, 80	5mm	8.0 GHz		Standard connector routed differentially. Other Stack Heights: 8, 14*, 19*, 22*
		11mm*	5.0 GHz		
		16mm*	5.0 GHz		
		30mm*	1.5 GHz		
Differential, no grounds	20, 40, 60, 80	5mm	9.5 GHz	**QTH-DP/QSH-DP .5mm Q Pairs®**	Ground plane for power. Other Stack Heights: 8, 14*, 19*, 22*
		11mm*	6.0 GHz		
		16mm*	5.5 GHz		
		30mm*	7.0 GHz		
Single-Ended	40, 60, 80, 100	5mm	TBD	**LSHM .5mm Razor Beam™**	Hermaphroditic interconnect. Rugged/high retention contacts. Other Stack Heights: 5.5, 6.5, 7, 8.5, 9
		6mm			
		8mm			
		10mm			
		12mm			
Differential, with grounds	12, 20, 26, 33	5mm			
		6mm			
		8mm			
		10mm			
		12mm			
Single-Ended	10, 20, 40, 60, 80, 100	6mm	10.0 GHz	**LSS .635mm Razor Beam™**	Hermaphroditic interconnect. Rugged/high retention contacts. Other Stack Heights: 7, 9
		8mm	8.0 GHz		
		10mm	7.5 GHz		
		12mm	7.0 GHz		
Differential, with grounds	4, 6, 12, 20, 26, 33	6mm	9.0 GHz		
		8mm	7.5 GHz		
		10mm	7.0 GHz		
		12mm	6.5 GHz		
Single-Ended	38, 76, 114, 152	5mm	8.5 GHz	**MES/MIT .635mm**	Mixed Technology Footprint. Other Stack Heights: 8, 11*, 18*, 18.75*
		22mm*	4.0 GHz		
Differential, with grounds	12, 24, 36, 48	5mm	8.5 GHz		
		22mm*	7.0 GHz		
Differential, no grounds	12, 24, 36, 48	5mm*	9.5 GHz		
		22mm*	8.5 GHz		
Single-Ended	50, 100, 150, 200	5 mm	9.0 GHz	**QTS/QSS .635mm Q Strip®**	Ground plane for power. Other Stack Heights: 8
		11mm*	6.0 GHz		
		16mm*	5.0 GHz		
Differential, with grounds	16, 32, 48, 64, 80	5mm	8.5 GHz		
		11mm*	5.5 GHz		
		16mm*	5.0 GHz		
Differential, no grounds	16, 32, 48, 64, 80	5mm	8.5 GHz	**QTS-DP/QSS-DP .635mm Q Pairs®**	Ground plane for power. Other Stack Heights: 8*
		11mm*	6.0 GHz		
		16mm*	6.0 GHz		

Strips

Signaling Configuration	Total No. of Pins/Pairs	Stack Height	Perform.	Series/Pitch/ Trade Name	Features/Benefits
Single-Ended	52, 104, 156, 208	11mm	8.0 GHz	**QFS/QMS .635mm Q2™**	Increased insertion depth. Power pin, RF & retention options. Shields available. Other Stack Heights: 10, 12, 13, 14, 16
Differential, with grounds	16, 32, 48, 64	11mm	7.5 GHz		Standard connector routed differentially
Differential, no grounds	16, 32, 48, 64	11mm	7.0 GHz	**QFS-DP/QMS-DP .635mm Q2™**	Increased insertion depth. Power pin, RF & retention options. Shields available. Other Stack Heights: 10, 12*, 13*, 14*, 16*
Single-Ended	40, 60, 120, 160, 200	5mm	9.0 GHz	**QTE/QSE .8mm Q Strip®**	Ground plane for power. Other Stack Heights: 8, 14*, 22*
		11mm	8.5 GHz		
		16mm	5.0 GHz		
		19mm	5.0 GHz		
		25mm	4.0 GHz		
Differential, with grounds	14, 28, 42, 56, 70	5mm	8.0 GHz		Standard connector routed differentially. Other Stack Heights: 8, 14*, 22*
		11mm*	6.5 GHz		
		16mm*	5.0 GHz		
		19mm*	5.0 GHz		
		25mm*	7.0 GHz		
Differential, no grounds	14, 28, 42, 56, 70	5mm	8.5 GHz	**QTE-DP/QSE-DP .8mm Q Pairs®**	Ground plane for power. Other Stack Heights: 8, 14*, 22*
		11mm*	9.5 GHz		
		16mm*	8.0 GHz		
		19mm*	7.5 GHz		
		25mm*	9.0 GHz		
Single-Ended	80, 100, 120	25mm	7.5 GHz	**RUS .8mm RiseUp®**	Stack Height flexibility. Other Stack Heights: 19*, 30*
Differential, with grounds	26, 32, 38	25mm	7.5 GHz		Standard connector routed differentially. Other Stack Heights: 19, 30
Single-Ended	20, 40, 60, 80, 100, 120, 140, 150	7mm	10.5 GHz	**ERMS/ERFS .8mm**	Edge Rate® contacts. Other Stack Heights: 9, 12, 14
		10mm	8.0 GHz		
		19mm	5.5 GHz		
Differential, with grounds	20, 40, 60, 80, 100, 120, 140, 150	7mm	8.5 GHz	**ERMS/ERFS .8mm**	Edge Rate® contacts. Other Stack Heights: 9, 12, 14
		10mm	8 GHz		
		16mm	5 GHz		
Single-Ended	52, 104, 156	7mm	9.5 GHz	**QRMS/QRFS .8mm Q Rate®**	Edge Rate® contacts. Ground/power plane. Slim design
		10mm	8.5 GHz		
Differential, with grounds	16, 32, 48	7mm	8.5 GHz		
		10mm	7.0 GHz		
Differential, no grounds	26, 52, 78	7mm	TBD		
		10mm	TBD		
Single-Ended	40, 80, 120	7mm	TBD	**QEMS/QEFS .8mm Q Rate®**	Edge Rate® contacts. Footprint compatible w/ Q Series®. Ground/power plane.
		10mm			
Differential, with grounds	12, 24, 36	7mm			
		10mm			
Differential, no grounds	20, 40, 60	7mm			
		10mm			
Single-Ended	40, 80, 120	7mm	TBD	**QDMS/QDFS .8mm Q Rate®**	Edge Rate® contacts. Dual ground/power planes.
		10mm			
Differential, with grounds	12, 24, 36	7mm			
		10mm			
Differential, no grounds	20, 40, 60	7mm			
		10mm			

Arrays

Signaling Configuration	Total No. of Pins/Pairs	Stack Height	Perform.	Series/Pitch/ Trade Name	Features/Benefits
Single-Ended	143, 195, 299	20mm	9.5 GHz	**HDAM/HDAF 1.2mm HD Mezz*****	Elevated board stacking. Other Stack Heights: 25, 30. Dual source to Molex. Intermateable with Molex HD Mezz***
		35mm	9.0 GHz		
Differential, with grounds	44, 60, 92	20mm	9.0 GHz		
		35mm	9.0 GHz		
Differential, with grounds	18, 39, 48, 83, 104, 168	10mm	7.0 GHz	**DPAM/DPAF 1.00mm DP Array®**	No return paths needed, ease of board routing; Fewer board layers.
Single-Ended	160, 200, 240, 300, 320, 400, 500	7mm	5.0 GHz	**SEAM/SEAF .050" SEARAY™**	Open pin field array. Other Stack Heights: 7 – 17.5
Differential, with grounds	25, 40, 50, 60, 75, 80, 100, 125	7mm	10.5 GHz		Standard connector routed differentially. Other Stack Heights: 7 – 17.5

Please note that the information contained in this chart is obtained from our test data and does not represent the potential maximum performance of the interconnect system. The data reflects the point where a -3dB insertion loss occurs within the connector and is based from a test circuit with a characteristic impedance of 50 ohm for single-ended with a wiring pattern of G-S-G or 100 ohm for a differential pair with a wiring pattern of G-S-S-G.

If your application doesn't appear or may exceed the information provided in this chart, Samtec may still have a connector solution that will work.

Please contact our Signal Integrity Group at **sig@samtec.com** for additional support.

* Application Specific Stack Height. Please contact Samtec.

*** HD Mezz is a trademark of Molex Incorporated

Right Angle/Coplanar Edge Card Selector

Signaling Configuration	Total Number of Pins	Series/Pitch/Trade Name	Performance	Features/Benefits
Single-Ended	20, 40, 60, 80, 100, 120, 140	MEC6-DV .635mm	7.5 GHz	See also MEC6-RA configuration.
Differential, with grounds	7, 14, 21, 28, 35, 42, 49		7.0 GHz	Standard connector routed differentially.
Single-Ended	20, 40, 60, 80, 100	MEC6-RA .635mm	7.0 GHz	See also MEC6-DV configuration.
Differential, with grounds	7, 14, 21, 28, 35		7.0 GHz	
Single-Ended	20, 26, 40, 50, 60, 74, 80, 98, 100, 120, 140, 160, 180, 200	HSEC8-DV .8mm Edge Rate™ Contacts	8.0 GHz	Multiple configurations - DV, EM; Suitable for power
Differential, with grounds	7, 9, 14, 17, 21, 25, 28, 34, 35, 42		10.5 GHz	Standard connector routed differentially.
Single-Ended	20, 40, 60, 80, 100, 120, 140	MEC8-DV .8mm	7.0 GHz	Multiple configurations - DV, EM, RA.
Differential, with grounds	7, 14, 21, 28, 35, 42, 49		7.0 GHz	Standard connector routed differentially.
Single-Ended	10, 16, 60, 80, 100, 120, 140	MEC1-DV 1mm	5.5 GHz	Multiple configurations - DV, EM, RA.
Differential, with grounds	3, 5, 14, 21, 28, 35, 42, 49		6.5 GHz	Standard connector routed differentially.
Single-Ended	10, 16, 40, 60, 80, 100, 120, 140	MEC1-RA 1mm	4.5 GHz	See also MEC1-DV configuration.
Differential, with grounds	3, 5, 14, 21, 28, 35, 42, 49		5.5 GHz	
Differential, with grounds	72, 128, 196, 328	PCIE 1mm PCI Express® Connector ****	7.0 GHz	Multiple configurations - DV, EM; PCI Express® Certified. ****
Single-Ended	20, 27, 30, 40	SAL1 1mm	8.5 GHz (top) 8.5 GHz (bottom)	Variable card thicknesses. Connector can be inverted.
Differential, with grounds	7, 9, 10, 14		9.0 GHz (top) 10.0 GHz (bottom)	Standard connector routed differentially.

Please note that the information contained in this chart is obtained from our test data and does not represent the potential maximum performance of the interconnect system.
The data reflects the point where a -3dB insertion loss occurs within the connector and is based from a test circuit with a characteristic impedance of 50 ohm for single-ended with a wiring pattern of G-S-G or 100 ohm for a differential pair with a wiring pattern of G-S-S-G.

The QTS-RA/QSS-RA is an exception and is based off of a +/- 10% crosstalk and impedance mismatch rating.
If your application doesn't appear or may exceed the information provided in this chart, Samtec may still have a connector solution that will work.
Please contact our Signal Integrity Group for additional support.

Power Interfaces for Combination with Signal Integrity Connectors by Stack Height

HIGH SPEED

Stack Height	Trade Name	Series Name	Pitch
5mm	Razor Beam™	ST4/SS4	4mm
	Q Series®	QTH/QSH	.5mm
		QTS/QSS	.635mm
		QTE/QSE	.8mm
	SamArray®	YFT/YFS	1.27mm
6mm	Razor Beam™	ST4/SS4	4mm
7mm	Edge Rate™	ERMB/ERF8	.8mm
	SEARAY™	SEAM/SEAF	1.27mm
	SamArray®	YFW/YFS	
8mm	Q Series®	QTH/QSH	.5mm
		QTS/QSS	.635mm
		QTE/QSE	.8mm
9mm	SamArray®	YFW/YFS	1.27mm
10mm	Q2™	QMSS/QFSS*	.635mm
		QMS/QFS	
	Edge Rate™	ERMB/ERF8	.8mm
	SEARAY™	SEAM/SEAF	1.27mm
	DP Array®	DPAM/DPAF	2.16mm
10.5mm	SEARAY™	SEAM/SEAF	1.27mm
11mm	Q Series®	QTH/QSH	.5mm
		QTS/QSS*	.635mm
	Q2™	QMSS/QFSS**	
		QMS/QFS	
	Q Series®	QTE/QSE	.8mm
12mm	Q2™	QMSS/QFSS**	.635mm
		QMS/QFS**	
	SEARAY™	SEAM/SEAF	1.27mm
	SamArray®	YFW/YFS	

POWER

Series Name	Pitch	Max Amps @80°C
SMM/TMM	2mm	3.0
MW/MLE	1mm	
AW/CLE	.8mm	
ZLTMM/SMM	2mm	
TW/SMM		
MTLW/SLW	2.54mm	
PCT2/PCS2	2mm	6.0 (7.85mm Stack Height)
TW/SMM		3.0
MTSW/SLW	2.54mm	
MTLW/SLW		
TW/SMM	2mm	3.0
MTSW/SLW	2.54mm	
MTLW/SLW		
TMMH/ESQT	2mm	3.0
TSH/ESQT		
TW/SMM		
TW/SQW		
TW/SQT		
MTLW/SSW	2.54mm	
MTLW/SLW		
MTLW/BCS		
TSW/SLW		
TMMH/ESQT	2mm	3.0
TMMH/ESQT		
TW/SQT		
TW/SMM		
TSH/ESQT		
TSW/SSW	2.54mm	
MTSW/SLW		
MTLW/SLW		
MTLW/SSW		
MTLW/BCS		
IPT1/IPS1		
TMMH/ESQT	2mm	3.0
TW/SQT		
TW/SMM		

HIGH SPEED

Stack Height	Trade Name	Series Name	Pitch
14mm	Q Series®	QTH/QSH*	.5mm
	Q2™	QMSS/QFSS**	.635mm
		QMS/QFS**	
	Q Series®	QTE/QSE*	.8mm
	Edge Rate™	ERMB/ERF8	.8mm
	SEARAY™	SEAM/SEAF	1.27mm
	DP Array®	DPAM/DPAF**	2.16mm
15mm	Edge Rate™	ERMB/ERF8	.8mm
16mm	Q Series®	QTH/QSH	.5mm
		QTS/QSS*	.635mm
	Q2™	QMSS/QFSS**	
		QMS/QFS**	
	Q Series®	QTE/QSE	.8mm
	SEARAY™	SEAM/SEAF	1.27mm
17mm	DP Array®	DPAM/DPAF	2.16mm

POWER

Series Name	Pitch	Max Amps @80°C
TMMH/ESQT	2mm	3.0
TSH/ESQT		
TW/SQT		
MTSW/SSW	2.54mm	
MTSW/ESW		
MTSW/SLW		
DW/SSW		
EW/ESW		
MTLW/SSW		
MTLW/SLW		
MTLW/BCS		
TSS/ESW		
IPT1/IPS1		
HPW(SW)/PSS	5.08mm	6.8 @ 30°C
HPW(SW)/HPF	5.08mm	7.9 @ 30°C
TW/SQW	2mm	3.0
TSH/ESQT		
TMMH/ESQT		
TW/SQT		
MTSW/ESW	2.54mm	
MTSW/SSW		
MTSW/SLW		
MTLW/SLW		
MTLW/BCS		
MTLW/SSW		
EW/SSW		
DW/SSW		
HW/SSM		
IPT1/IPS1		
JW/FHP	3.96mm	8.2 @ 30°C / 15 @ 70°C Ambient
HPW(SW)/PSS	5.08mm	6.8 @ 30°C
HPW(SW)/HPF	5.08mm	7.9 @ 30°C
IP6T/IP6S	165mm	10.0 @ 75°C
TSH/ESQT	2mm	3.0
TSH/SQT		
TW/SQT		
TW/SQW		
DW/ESW		
DW/SSW		
EW/ESW		
EW/SSW		
HW/SSW		
HW/SSM		
MTSW/ESW		
MTSW/SLW		
MTLW/SLW		
MTLW/SSW		
TSS/ESW		
HPW/HPF	5.08mm	7.9 @ 30°C

HIGH SPEED

Stack Height	Trade Name	Series Name	Pitch
19mm	Q Series®	QTH/QSH	.5mm
		QTS/QSS*	.635mm
		QTE/QSE	.8mm
	RoseUp®	RUB	.8mm
	SamArray®	YFW/YFS	1.27mm
20mm	HD Mezz ***	HDAM/HDAF	1.2mm
	RoseUp®	RUB*	.8mm
22mm	Q2™	QMSS/QFSS**	.635mm
		QMS/QFS**	
25mm	Q Series®	QTH/QSH	.5mm
		QTE/QSE	.8mm
	RoseUp®	RUB	
	HD Mezz ***	HDAM/HDAF	1.2mm
	SamArray®	YFW/YFS	1.27mm
30mm	Q Series®	QTH/QSH*	.5mm
		QTE/QSE*	.8mm
	RoseUp®	RUB	
	HD Mezz ***	HDAM/HDAF	1.2mm
35mm	RoseUp®	RUB*	.8mm
	HD Mezz ***	HDAM/HDAF	1.2mm

POWER

Series Name	Pitch	Max Amps @80°C
IP6T/IP6S	165mm	10.0 @ 75°C
TMMH/ESQT	2mm	3.0
TW/SQT		
MTSW/SSW	2.54mm	
MTSW/ESQ		
MTSW/SLW		
MTLW/BCS		
MTLW/SSW		
DW/SSW		
JW/THP	3.96mm	8.2 @ 30°C / 15 @ 70°C Ambient
HPW(SW)/PSS	5.08mm	6.8 @ 30°C
HPW(SW)/HPF	5.08mm	7.9 @ 30°C
PET/PES	6.35mm	25.0
IP6T/IP6S	165mm	10.0 @ 75°C
TMMH/ESQT	2mm	3.0
JW/FHP	3.96mm	8.2 @ 30°C / 15 @ 70°C Ambient
HPW/HPF	5.08mm	7.9 @ 30°C
JW/FHP	3.96mm	9.2
IP6T/IP6S	165mm	10.0 @ 75°C
TW/ESQT	2mm	3.0
TSH/ESQT		
TW/SQT		
MTSW/ESW	2.54mm	
DW/SSW		
EW/ESW		
DW/ESW		
HW/SSM		
HW/SSW		15 @ 70°C
JW/FHP	3.96mm	8.2 @ 30°C
HPW(SW)/PSS	5.08mm	8.2 @ 30°C / 15 @ 70°C Ambient
HPW(SW)/HPF	5.08mm	7.9 @ 30°C
TW/ESQT	2mm	3.0
DW/ESW	2.54mm	
DW/SSW		
EW/ESW		
EW/SSW		
HW/SSW		
MTSW/SSW		
MTSW/ESW		
MTSW/SLW		
TW/ESQT	2mm	3.0
DW/ESW	2.54mm	
DW/SSW		
EW/SSW		
EW/ESW		
HW/SSM		
MTSW/ESW		
MTSW/SSW		
MTSW/SLW		

* Application Specific Option
** In design
*** HD Mezz is a trademark of Molex Incorporated
**** PCI Express® is a registered trademark of PCI-SIG

samtec

HIGH SPEED EDGE CARD SOCKETS

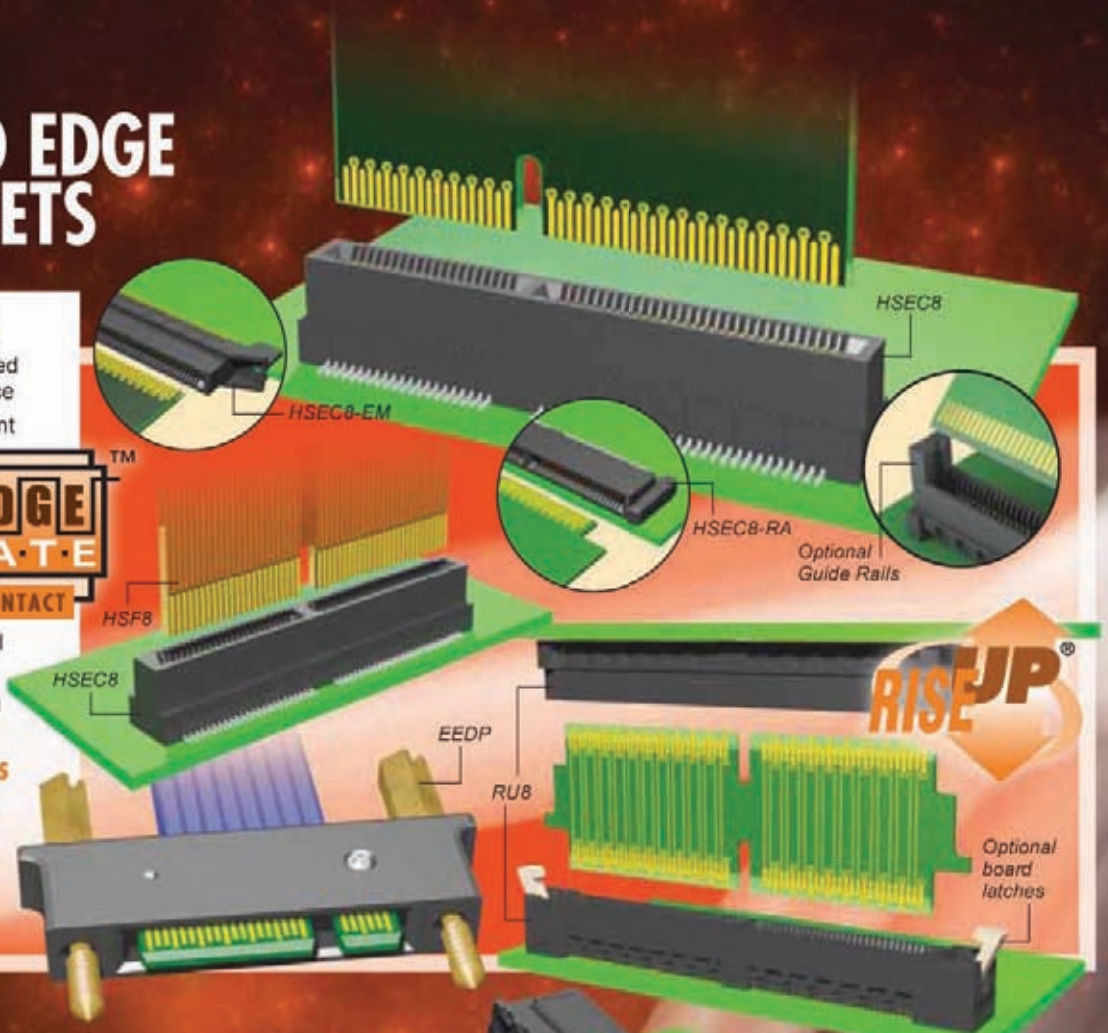
Edge Rate™ Contact Sockets

- Edge Rate™ contacts optimized for Signal Integrity performance
- Surface mount and edge mount designs for parallel, perpendicular and planar board mating
- Mates with standard .062" (1,60mm) PCB cards - supplied by Samtec (RU8 Series), or Samtec can supply physical art to make your own cards
- Optional rugged board locking and cable latching features

EDGE RATE™ CONTACT

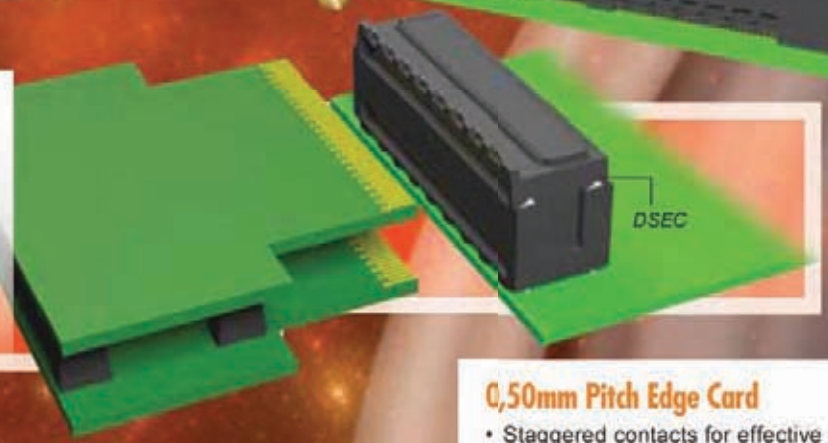
Mating Cable & Flex Jumpers

- 100Ω twinax high speed edge card cables
- High speed flex jumpers with single-ended or differential routing



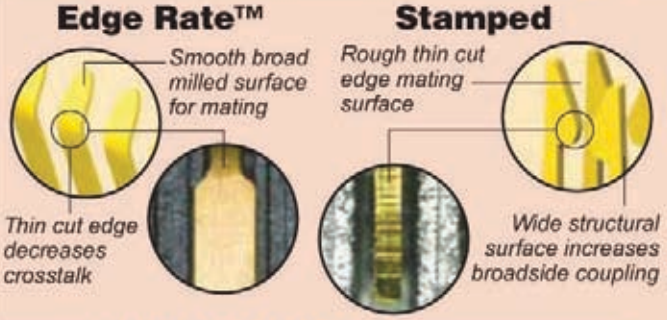
Dual Stack Edge Card Socket

- Accepts two individual cards for low profile stack or "Dual Stack" card set with industry standard 7mm board spacing
- Rugged Edge Rate™ contacts designed for Signal Integrity
- Solder charged terminations for easy board processing



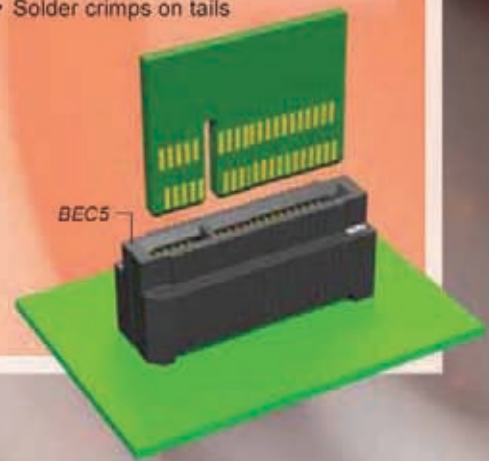
EDGE RATE™ CONTACT

- Designed for Signal Integrity
- Superior impedance control
- Reduced broadside coupling (crosstalk)
- Rugged contact system



0,50mm Pitch Edge Card

- Staggered contacts for effective 0,5mm pitch
- Rugged Edge Rate™ contacts
- Four-row (1,00mm) x .03937" x (1,27mm) .050" grid PCB pad layout
- Mates with standard .062" (1,60mm) and .094" (2,4mm) cards
- Solder crimps on tails

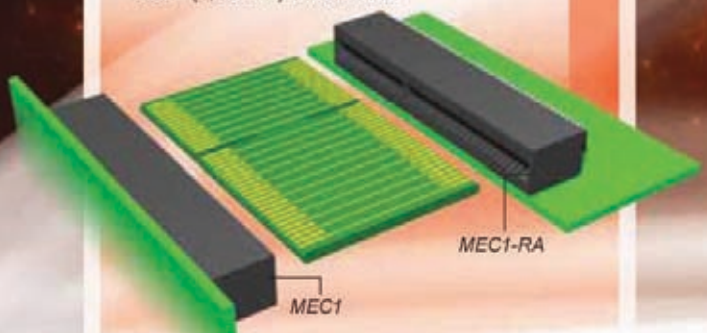


CONTACT SELECTOR

Type	Edge Rate™	Stamped
Pitch	.8mm	.635mm, 1mm
Series	HSEC8	MEC6, MEC1
Signal Integrity Performance	Excellent	Good
Insertion / Withdrawal Force	Average (1.8/1.0 oz/contact)	High (3.0/1.8 oz/contact)
Cycle Life Expectation	High	Moderate
Relative Cost	Good	Excellent

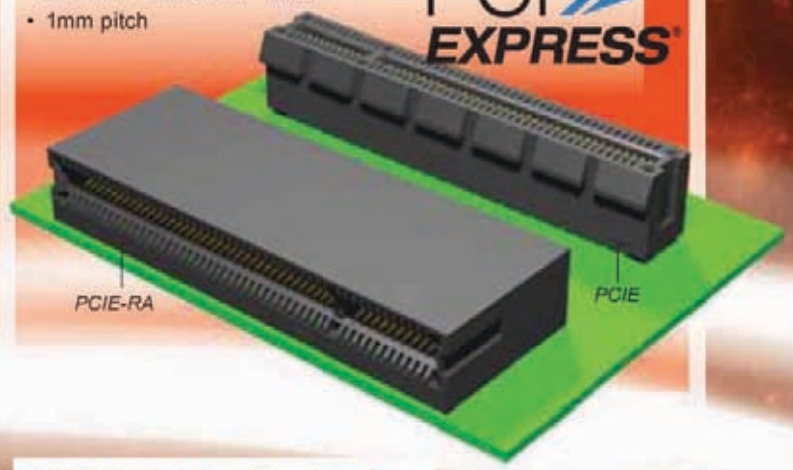
Stamped Contact Sockets

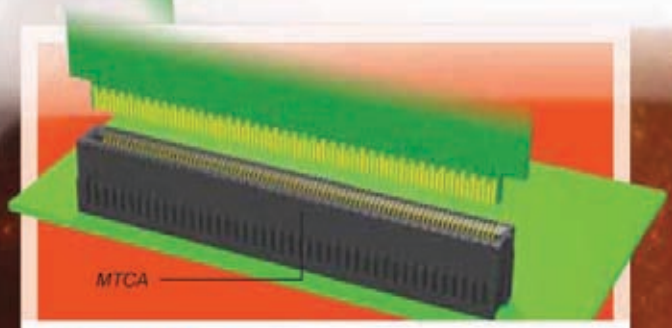
- 0,635mm & 1mm Pitch
- Right angle, vertical and edge mount
- Mates with .031" (0,80mm) or .062" (1,60mm) thick cards



PCI Express® Sockets

- Vertical or right angle PCB Mount and Card Edge Mount
- Supports one, four, eight and sixteen PCI Express® links
- 1mm pitch



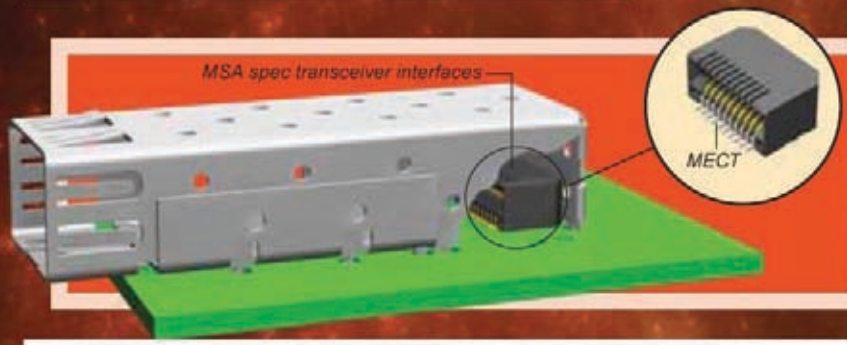


Micro TCA Connectors

- Sockets for Micro TCA applications
- Identical to Molex in form, fit and function
- 170 contacts on high density 0,75mm pitch accept 1,6mm cards
- Press-fit tails for simple, reliable board terminations
- Supports hot plugging and high speed serial connections

High Speed Micro Plane Interface

- 40 to 80 I/Os per pair
- Variable card mating thickness
- Large deflection BeCu contact
- 1mm pitch



SFP, SFP+, XFP and XENPAK Transceiver Interfaces

- SFP+ Compliant
- Choice of 2 x 10, 2 x 15 and 2 x 35 I/Os for standard Fiber Optic Transceivers
- SFP cages available separately or as a kit with interface

High Speed Edge Card Sockets

Series	BEC5	DSEC	MEC6	MTCA	HSEC8/RU8	SAL1	MEC1	PCIE	MECT
Pitch	0,5mm	0,8mm	0,635mm	0,75mm	0,8mm		1mm		0,8mm
Applications	High Density Edge Card	Dual Stack Edge Card		Micro TCA	PCI Express®**, XAUI, SATA	SATALink		PCI Express®**	SFP, SFP+, XFP XENPAK
Total Pin Counts*	80, 100, 120, 140	30, 40, 50	20 - 140	170	20 -120	20, 27, 30, 40	10 - 140	36 (X1), 64 (X4), 98 (X8), 164(X16)	20, 30, 70
Performance (@ -3dB IL)			7.5 GHz / 15 Gbps (SE) 7 GHz / 14 Gbps (DP)		8 GHz / 16 Gbps (SE) 10.5 GHz / 21 Gbps (DP)	8.5 GHz / 17 Gbps (SE) 9 GHz / 18 Gbps (DP)	5.5 GHz / 11 Gbps (SE) 6.5 GHz / 13 Gbps (DP)	7.0 GHz/ 14 Gbps (DP)	
Cable Mates					EEDP			PCIEC	
Flex Data Link Mates					HSF8				
Notes			Right Angle Available		Right Angle & Edge Mount Available			Right Angle & Edge Mount Available	SFP+ Compliant
Page	118	119	120-121	122	123-126	127	128-129	130-131	362

* Other pin counts available. Call Samtec.
**PCI Express® is a registered trademark of PCI-SIG

samtec

MICRO BACKPLANES

Right Angle & Edge Mount

- 50Ω single-ended standard and Application Specific 100Ω differential pair
- Perpendicular (90°) and horizontal (180°) coplanar applications
- Optional locking screws/ holes and guide posts/holes

Q2™

SEARAY™
OPEN PIN FIELD INTERCONNECTS

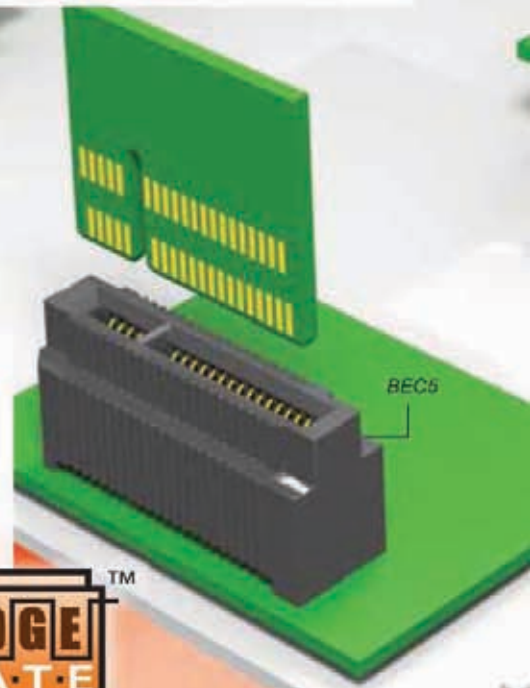
Right Angle/Micro Backplane

- Right angle arrays optimized to reduce skew and impedance mismatch
- Choice of 4 and 6 row designs with 20 to 50 contacts per row
- Rugged Edge Rate™ contacts with lead-free solder charges on tails
- Lower insertion/extraction forces
- Optional guide posts for blind mating
- Ideal for high speed micro backplane applications

Edge Rate™ Interface System

- Edge Rate™ contacts optimized for Signal Integrity performance
- Lower-cost alternative to high speed Q Strip® connectors
- Robust when "zippered" during unmating
- 0,5mm and 0,8mm pitch
- 7mm, 9mm, 10mm, 12mm, 14mm and 16mm stack heights
- Performance to 10.5 GHz DP and 9.5 GHz SE at 7mm mated height

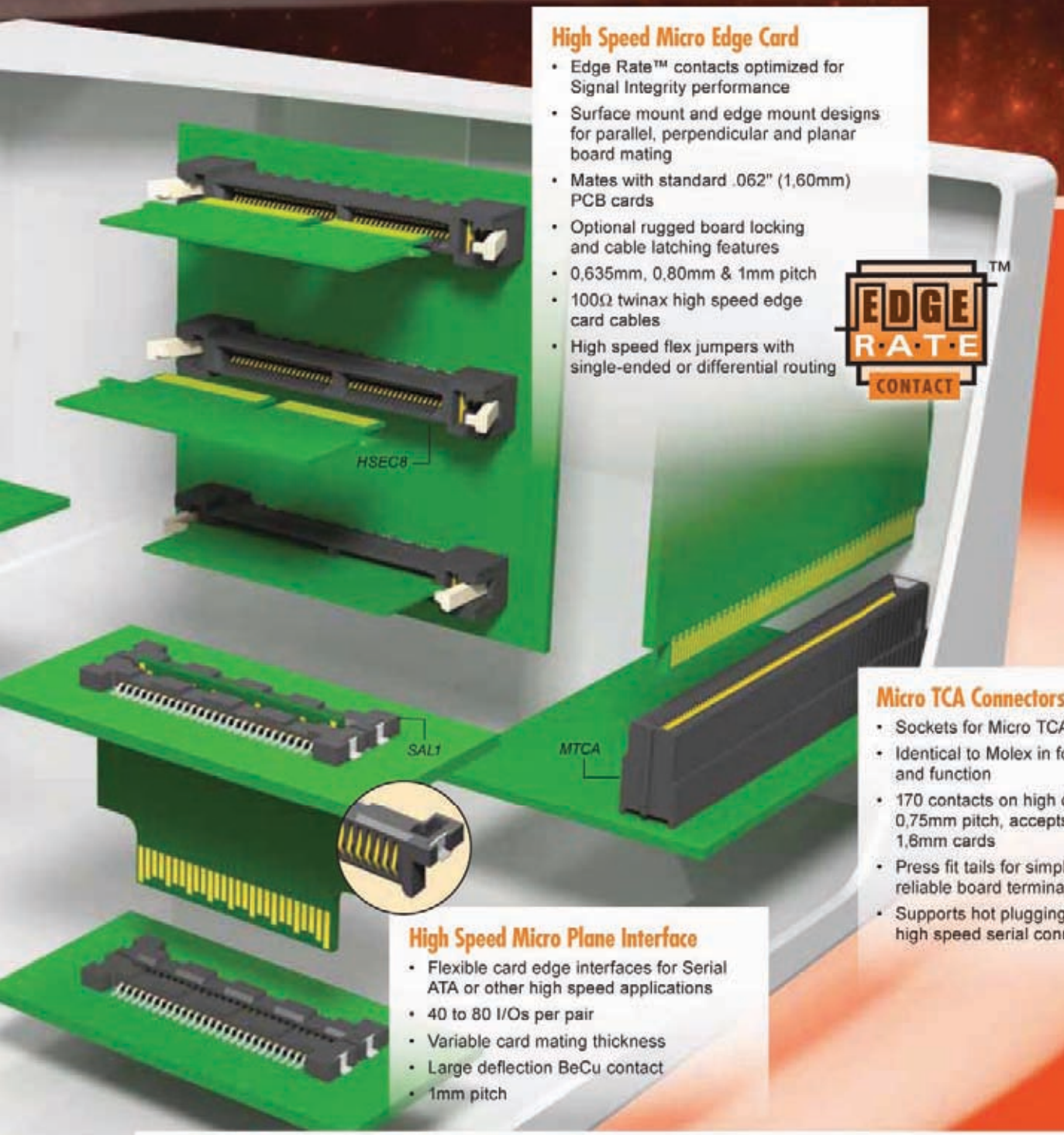
EDGE R·A·T·E™ CONTACT



0,50mm Pitch Edge Card

- Staggered contacts for effective 0,5mm pitch
- Rugged Edge Rate™ contacts
- Four-row (1,00mm) x .03937" x (1,27mm) .050" grid PCB pad layout
- Mates with standard .062" (1,60mm) and .093" (2,4mm) cards
- Solder crimps on tails

EDGE R·A·T·E™ CONTACT



High Speed Micro Edge Card

- Edge Rate™ contacts optimized for Signal Integrity performance
- Surface mount and edge mount designs for parallel, perpendicular and planar board mating
- Mates with standard .062" (1,60mm) PCB cards
- Optional rugged board locking and cable latching features
- 0,635mm, 0,80mm & 1mm pitch
- 100Ω twinax high speed edge card cables
- High speed flex jumpers with single-ended or differential routing

EDGE R·A·T·E™ CONTACT

Micro TCA Connectors

- Sockets for Micro TCA applications
- Identical to Molex in form, fit and function
- 170 contacts on high density 0,75mm pitch, accepts 1,6mm cards
- Press fit tails for simple, reliable board terminations
- Supports hot plugging and high speed serial connections

High Speed Micro Plane Interface

- Flexible card edge interfaces for Serial ATA or other high speed applications
- 40 to 80 I/Os per pair
- Variable card mating thickness
- Large deflection BeCu contact
- 1mm pitch

Micro Backplanes

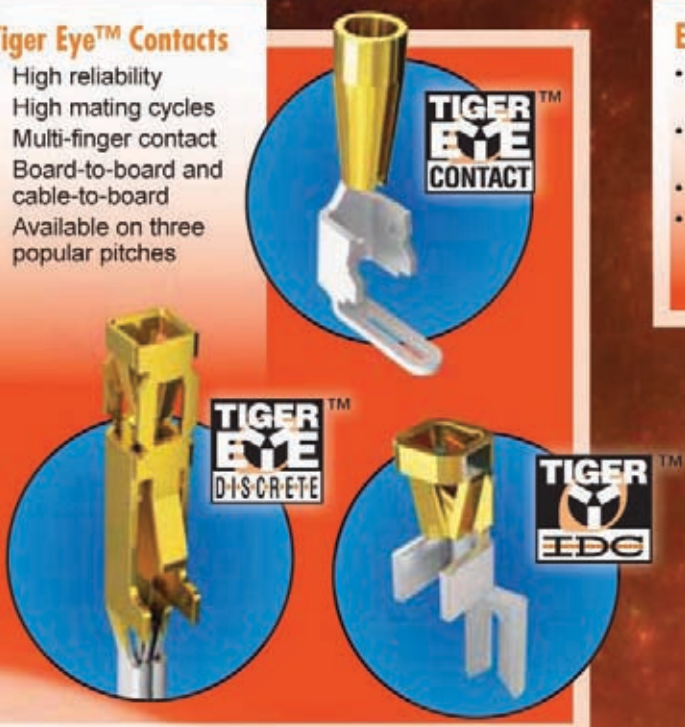
Series	QMS/QFS	ERF8/ERM8	SEAM/SEAF	MEC6	MTCA	HSEC8/DSEC	SAL1	MEC1
Type	Socket/Header (Two Piece) Interface			Card (One Piece) Interface				
Pitch	0.635mm	0.8mm	1.27mm	0.635mm	0.75mm	0.8mm	1mm	
Applications					Micro TCA	PCI Express®, XAUI, SATA		
Total Pin Counts*	52, 104, 156, 208	20 - 150	80 - 500	20 - 140	170	20 - 120	20, 27, 30, 40	10 - 140
Performance	8 GHz / 16 Gbps (SE) 7 GHz / 14 Gbps (DP)	9.5 GHz / 19 Gbps (SE) 10.5 GHz / 21 Gbps (DP)	9.5 GHz / 19 Gbps (SE) 10.5 GHz / 21 Gbps (DP)	7.5 GHz / 15 Gbps (SE) 7 GHz / 14 Gbps (DP)		8 GHz / 16 Gbps (SE) 10.5 GHz / 21 Gbps (DP)	8.5 GHz / 17 Gbps (SE) 9 GHz / 18 Gbps (DP)	5.5 GHz / 11 Gbps (SE) 6.5 GHz / 13 Gbps (DP)
Cable Mates	Q2DA, 6QCD, 6QDP	ERDCA, ERCD, ERDP	SEAC			EEDP		
Flex Data Link Mates		ERDL2	SADL			HSFD		
Connector Orientations	Vertical, Right Angle & Edge Mount		Vertical & Right Angle			Vertical, Right Angle & Edge Mount	Vertical	Vertical, Right Angle & Edge Mount
Backplane Orientations	Perpendicular & Coplanar		Perpendicular	Perpendicular & Coplanar		Perpendicular & Coplanar	Perpendicular	Perpendicular & Coplanar
Page	80-85	90-93	102-106	120-121	122	119, 123-124, 126	127	128-129

*Other total pin counts available. Call Samtec.

CONTACT FLEXIBILITY

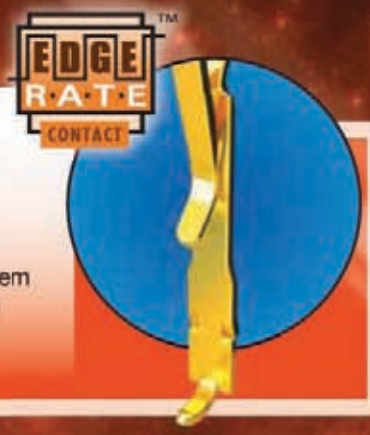
Tiger Eye™ Contacts

- High reliability
- High mating cycles
- Multi-finger contact
- Board-to-board and cable-to-board
- Available on three popular pitches



Edge Rate™

- Designed for Signal Integrity
- Reduced broadside coupling (crosstalk)
- Rugged contact system
- Smooth broad milled surface for mating



Razor Beam™ Contacts

- Rugged retention notch
- Ultra-fine pitch
- High Speed
- Low profile to elevated designs

Tiger Buy™ Contacts

- High retention
- Cost effective
- Tuning fork contact

Tiger Claw™ Contacts

- Pass-through
- Ultra low profile
- Dual wipe contact

Tiger Beam™ Contacts

- Best cost
- Reliable performance
- Post and beam contact

Blade and Beam Contact System

- Micro Pitch
- Mating/alignment "friendly"
- Cost effective

Precision Contacts

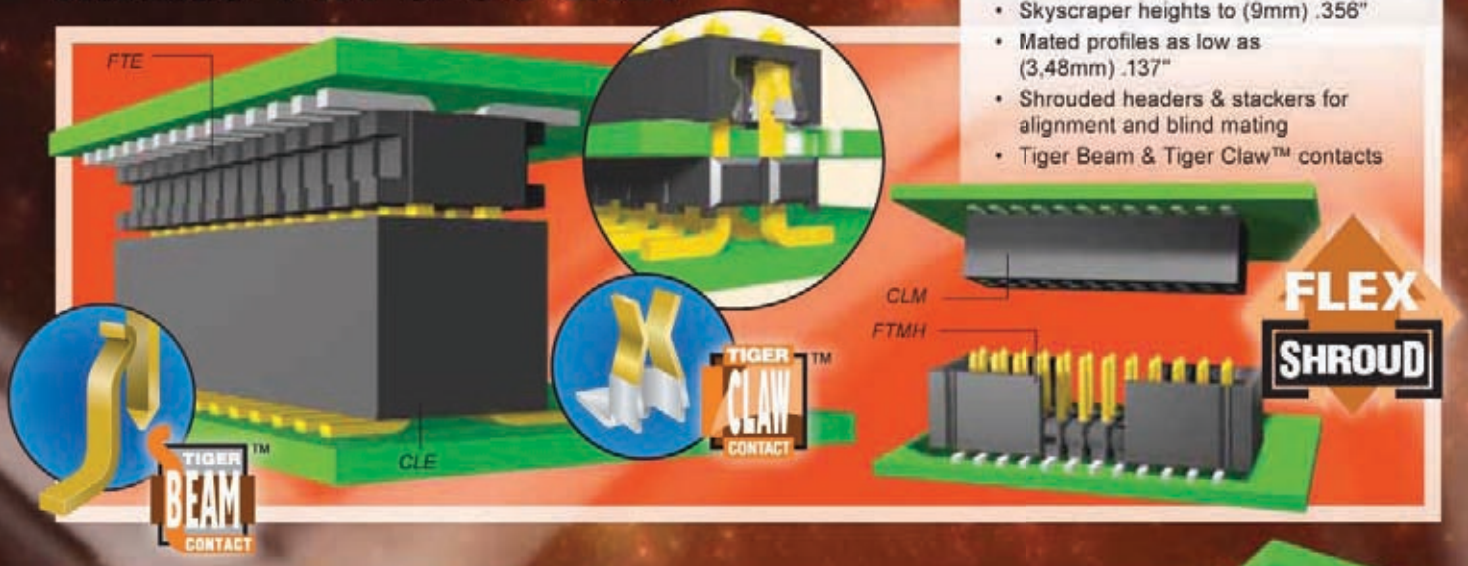
- Multi-finger BeCu contact
- Precision machined shell

samtec

MICRO PIN & SOCKET

0,8mm & 1mm Pitch Connector Sets

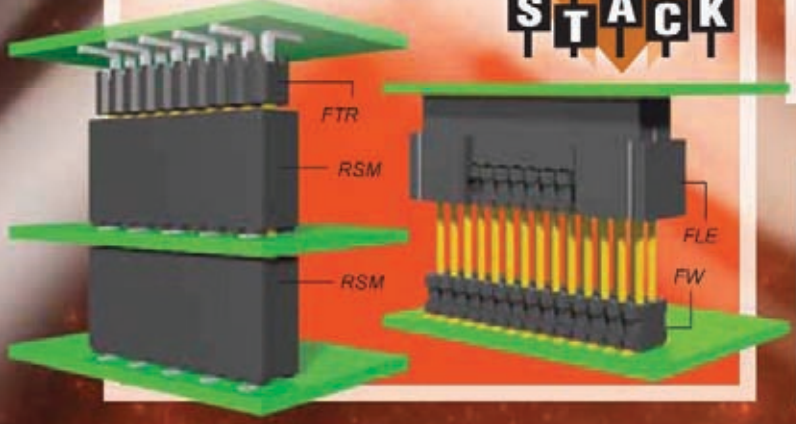
- Suitable for pass-through applications with (1,27mm) .050" mated height
- Skyscraper heights to (9mm) .356"
- Mated profiles as low as (3,48mm) .137"
- Shrouded headers & stackers for alignment and blind mating
- Tiger Beam & Tiger Claw™ contacts



.050" (1,27mm) Pitch Systems

- Choice of .050" x .050" or .050" x .100" systems
- Through-hole and surface mount
- Flex Shroud available
- Low profile and skyscraper systems
- Pass-through sockets available

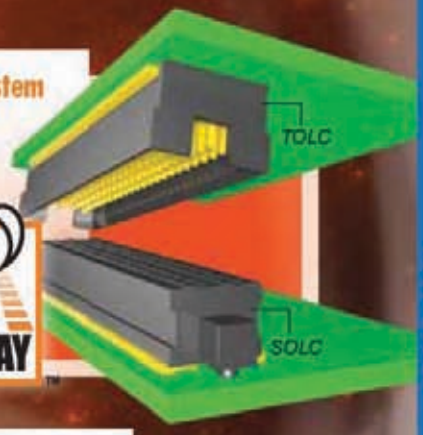
FLEX STACK



FOURRAY™ High Density System

- Up to 200 pins
- .025" (0,635mm) pitch
- Choice of mated heights
- Surface mount, through-hole and mixed technology

FOURRAY™



Rugged Tiger Eye™ Systems

- See Micro Rugged/Tiger Eye™ for our most popular connector lines
- 0,80mm, 1,27mm & 2mm pitch
- Headers, sockets and cable assemblies

TIGER EYE™ SYSTEM

MICRO

Micro Pin & Socket

Series	FTE/AW	CLE	BKS/BKT	FTMH/MW	CLM/MLE	TOLC/ SOLC	MOLC/ FOLC	FTSH/FW/ EHF/SHF/ ESHF	CLP/FLE	(H)TMS/ MTMS/ DWM/ HDWM	TML/ZML	FTR	RSM	SMS/ SLM
Pitch	0,8mm		1mm			1,27mm x 1,27mm				1,27mm x 2,54mm				
Contact Type		Tiger Beam	Tiger Claw™	Flex Stack & Flex Shroud	Tiger Claw™, Tiger Beam	Tiger Buy	Tiger Eye™	Flex Stack & Flex Shroud	Tiger Claw™, Tiger Beam	Flex Stack	Flex Stack		Dual Beam	Tiger Buy
Total Pin Counts	10 - 180	8 - 180	Odd counts only 7 - 69	4 - 100	4 - 100	20 - 200	80 - 200	4 - 100	4 - 100	1 - 100	10 - 80	2 - 80	2 - 72	1 - 100
Right Angle Available	Yes	n/a	n/a	Yes	n/a	n/a	n/a	Yes	Yes	Yes	Yes	n/a	n/a	n/a
Through-Hole/ Surface Mount	SM	SM	SM	SM	SM	SM	SM, T/H & MT	T/H & SM	SM	T/H & SM	T/H & SM	SM	SM	T/H
Notes	Ultra Low Profile through Flex Stack		Polarized	ELP*	ELP*	FOURRAY™ (four row)		ELP*; Low Profile through Flex Stack; Shrouded & Ejector Headers	ELP*	Flex Stack	Shrouded; Flex Stack			
Page	172, 174	173	175	176-178	179	180-181	182-183	184-190	19*-192	193-194, 196-197	195, 198-199	200	201	202

*ELP = Extended Life Product™

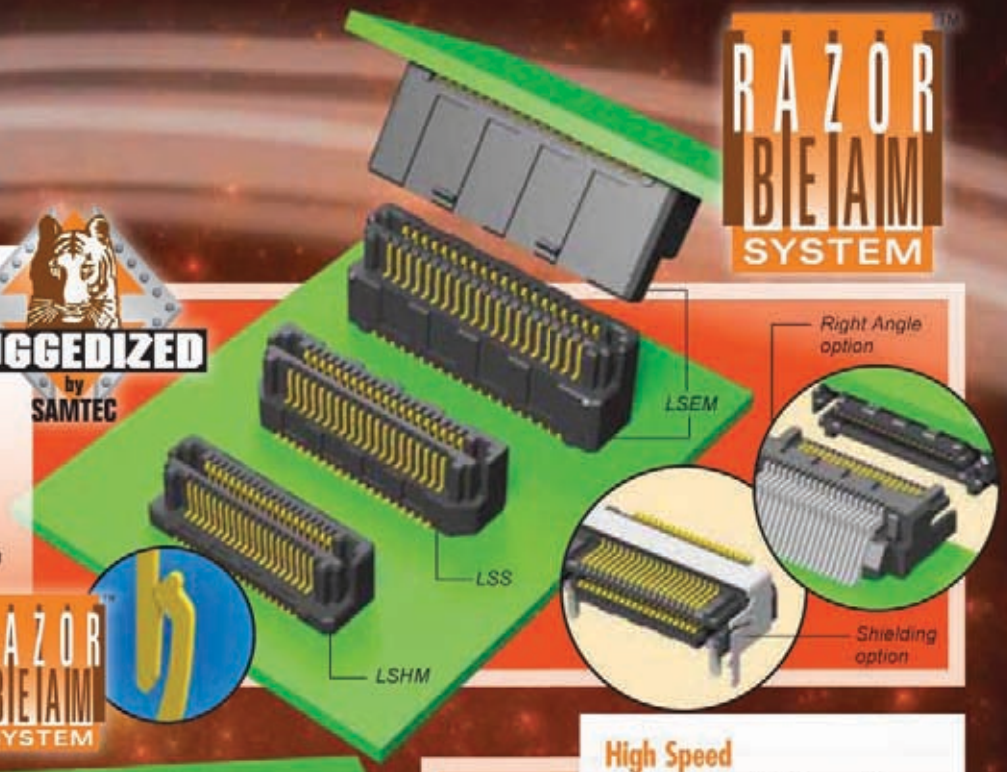
MICRO STRIPS

Micro Rugged Hermaphroditic Interface

- High Speed/High Density
- Slim row-to-row design
- Low cost blade and beam contact
- Mated height variety/flexibility
- Shrouded with audible click when properly mated
- 0.635mm, 0.50mm and 0.80mm pitch
- Self-mating system reduces inventory costs

RUGGEDIZED by SAMTEC

RAZOR BEAM SYSTEM

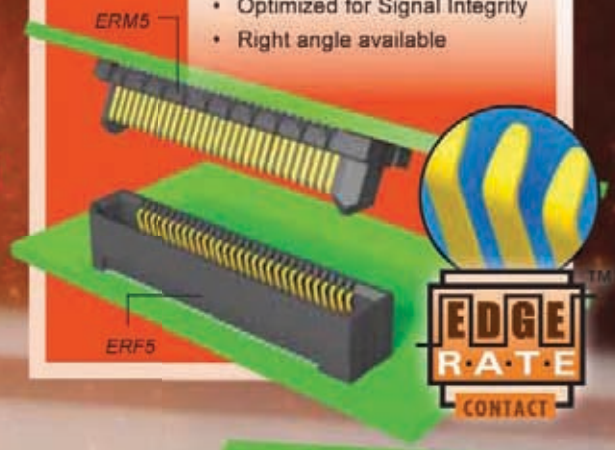


Super Micro Pitch Strips

- 0.4mm pitch with 4mm stack height
- Extra narrow body design saves PCB real estate
- 1mm of contact wipe with superior contact deflection
- Application specific stack heights available

High Speed

- 0.50mm and 0.80mm pitch
- Edge Rate™ contacts
- Optimized for Signal Integrity
- Right angle available

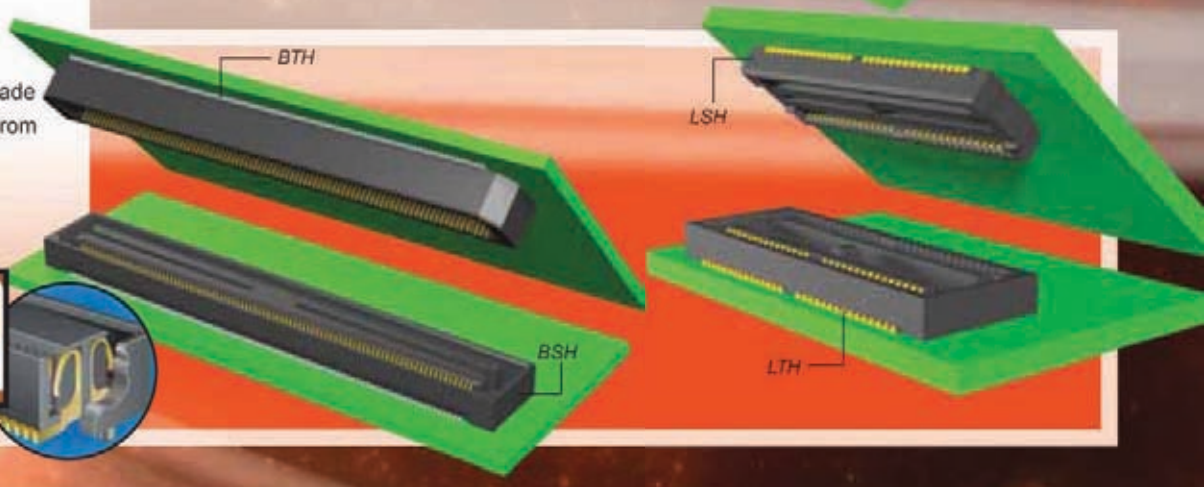


EDGE R·A·T·E CONTACT

Blade & Beam

- Lower costs without integral power/ground blade
- Standard stack heights from 2.3mm to 8mm
- Polarized
- 0.5mm, 0.635mm and 0.8mm pitch

BLADE & BEAM CONTACT



Micro Strips

Series	SS4/ST4	LSHM	LSS	LSEM	ERM5/ERF5	LTH/LSH	BTH/BSH	BTS/BSS	BTE/BSE
Pitch	0.4mm	0.5mm	0.635mm	0.8mm	0.5mm	0.5mm	0.5mm, 0.635mm, 0.8mm		
Stack Heights* (mm)	4 - 6	5, 5.5, 6, 6.5, 7, 8, 8.5, 9, 10, 12	6, 7, 8, 9, 10, 12	5, 5.5, 6, 6.5, 7, 8, 8.5, 9, 10, 12	7, 10	2.31	5	5	5, 8
Total Pin Counts*	20 - 100	40 - 100	40 - 100	40 - 100	20 - 100	20 - 100	60 - 300	50 - 300	40 - 240
Performance (@ -3dB insertion loss)	7 GHz SE (at 4mm)	TBD	10 GHz SE (at 6mm)	TBD	TBD	TBD	9 GHz SE (at 5mm)	TBD	8 GHz SE (at 5mm)
Page	160	161	162	163	164-165	166	167	168	169

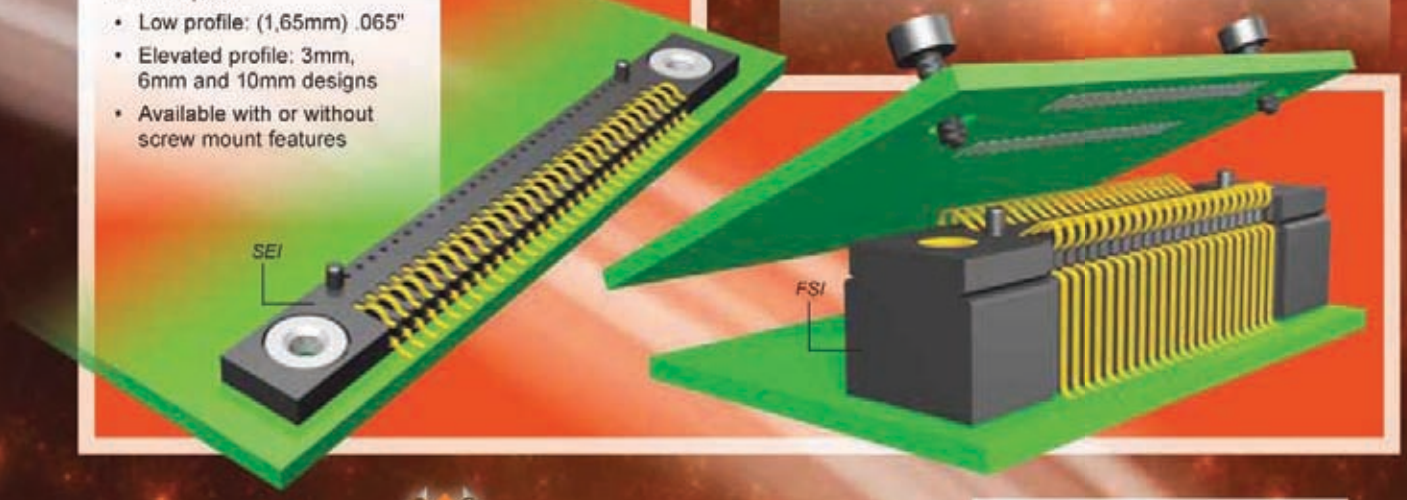
*Other stack heights and pin counts available. Call Samtec.

ONE PIECE INTERFACES

APPLICATION	FEATURE
High shock/vibration	Robust design and mechanical hold-down options
Cost reduction	Handling/processing only one component
Quality improvement	Superior performance and reliability compared to elastomers
Flexible MCM interfaces	Choice of profile, pitch, lead count and configuration

Micro Pitch

- 1mm pitch
- Low profile: (1,65mm) .065"
- Elevated profile: 3mm, 6mm and 10mm designs
- Available with or without screw mount features



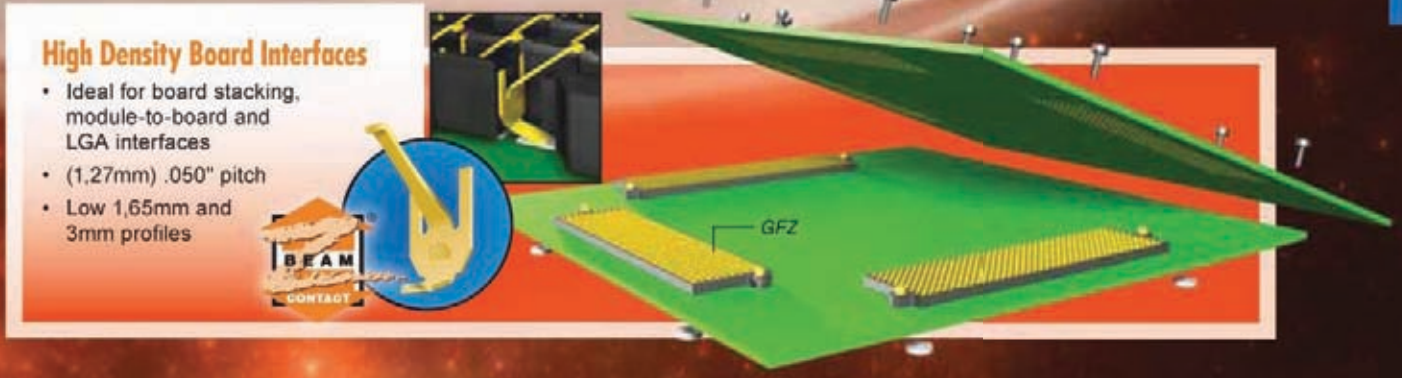
RUGGEDIZED by SAMTEC

.100" (2,54mm) Pitch

- Available with or without screw mount features
- Large contact deflection
- Signal or power applications
- Pogo style pins

High Density Board Interfaces

- Ideal for board stacking, module-to-board and LGA interfaces
- (1,27mm) .050" pitch
- Low 1,65mm and 3mm profiles



One Piece Interfaces

Series	GFZ	PGP	SIB	FSI	SEI
Pitch	1,27mm	2,54mm		1mm	
Stack Heights* (mm)	1, 65, 3	4,5	3,81	3, 6, 10	1,65
Total Pin Counts*	200, 300, 400, 900	2 - 5	2 - 30	5 - 50	5 - 30
Ruggedizing	Alignment Pins	Alignment Pins		Screw down inserts	Alignment Pins
Notes	Dual compression contact	Pogo style contact			
Page	110	203	203	204-205	206

*Other stack heights and total pin counts available. Call Samtec.

MICRO RUGGED TIGER EYE™

TIGER EYE™ SYSTEM

1,27mm (.050") Micro Pitch System

- High reliability Tiger Eye™ three-finger BeCu contact system
- Standard and cost-saving designs
- Friction latching system for higher withdrawal forces (optional)
- Surface mount, through-hole and right angle orientations
- Choice of alignment pin, locking clip or weld tab options
- Shrouded, polarized and keyed
- Choice of mated heights
- Extended Life Product™ testing available
- 1,27mm (.050") pitch discrete wire, flat and twisted pair IDC and IP68 sealed cable systems also available

Tiger Eye™ System - (1,27mm) .050" Pitch

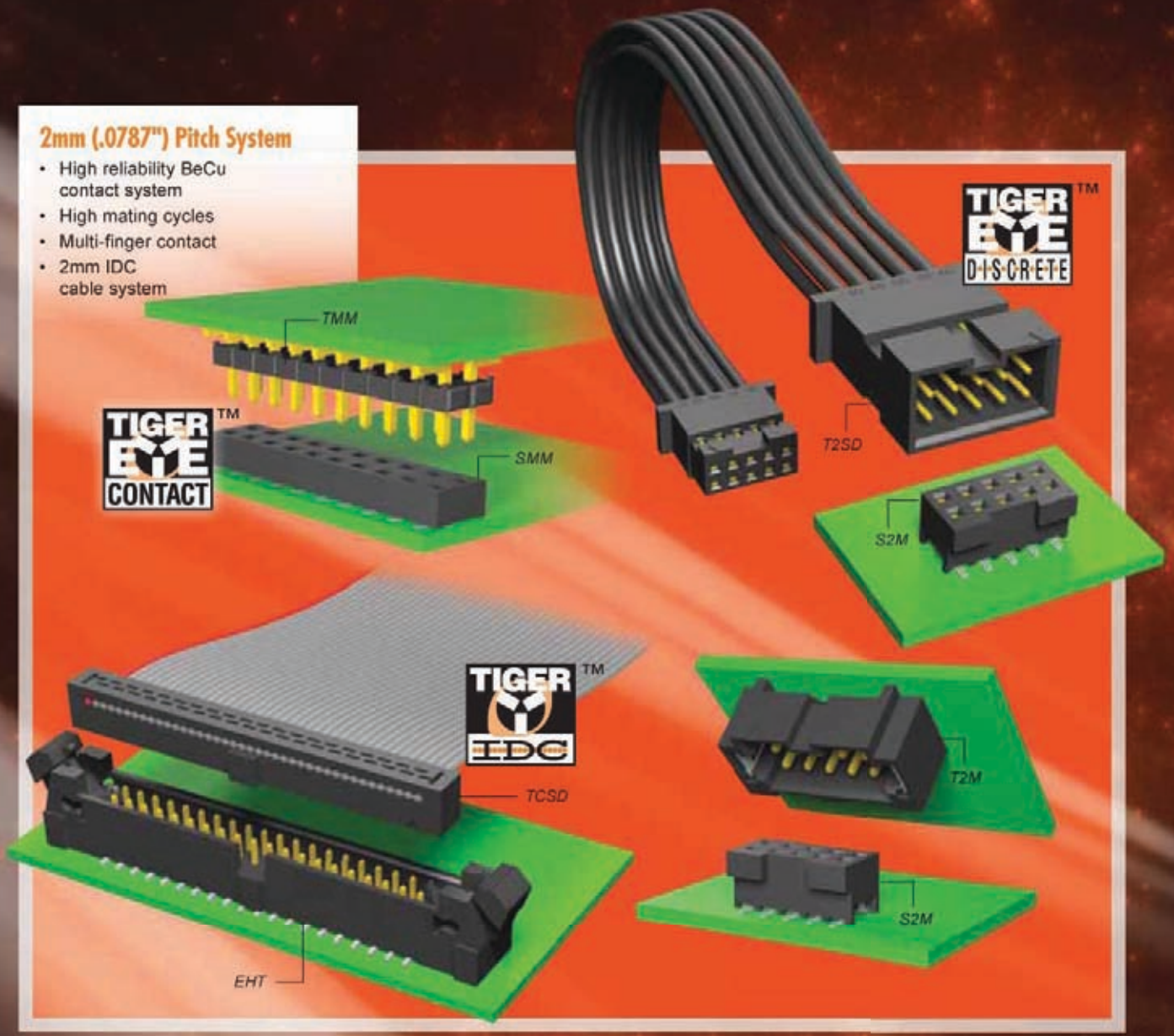
Series	SFM/TFM/ SFML/TFML	SFC/TFC	SFMH/FSH/ SFML	FOLC/MOLC	FFSD/FFTP/ FFMD/FMTP	SFSX(T)/TFSX(T)	RPBT/RCT/RPCT/ SCR3/SCP3
Pitch	1,27mm						
Stack Heights (mm)	6 - 12		n/a	6 - 11.4	n/a	n/a	n/a
Termination Options	SM & T/H (Socket); SM, RA, & T/H (Terminals)	SM & T/H	SM & RA	SM, T/H & MT	IDC	Discrete Wire	Discrete Wire
Total Pin Counts**	10 - 100			80 - 200	10 - 50	5 - 50	14 - 40
Notes	ELP*	Tiger Eye™ LITE Contacts	Right Angle Mating	FOURRAY™	Flat cable & Twisted Pair	Components available	AccliMate™
Page	136-139	140-141	142 - 143	144-145	146-147	148 - 149	370-371

*ELP = Extended Life Product™

**Other pin counts and stack heights available. Call Samtec.

2mm (.0787") Pitch System

- High reliability BeCu contact system
- High mating cycles
- Multi-finger contact
- 2mm IDC cable system



0,8mm (.0315") Micro Pitch System

- High reliability BeCu contact system
- High mating cycles
- Multi-finger contact

Tiger Eye™ System - 0,80mm and 2mm Pitch

Series	SEM/TEM/SEML	S2M/T2M	S2SD/T2SD	TCSD/TCMD	SMM/TMM
Pitch	0.8mm	2mm			
Stack Heights (mm)	6, 7, 10	6.17 & 7.06	n/a	n/a	Flex Stack
Termination Options	SM (Socket); SM & RA (Terminal)	SM & T/H (Socket); SM, RA, & T/H (Terminals)			SM (Sockets); SM, RA, & T/H (Terminals)
Total Pin Counts**	10 - 100	10 - 60	10 - 60	10 - 50	4 - 80
Notes	ELP*				
Page	134-135	153, 155	152, 154	156, 157	158

*ELP = Extended Life Product™
**Other pin counts and stack heights available. Call Samtec.

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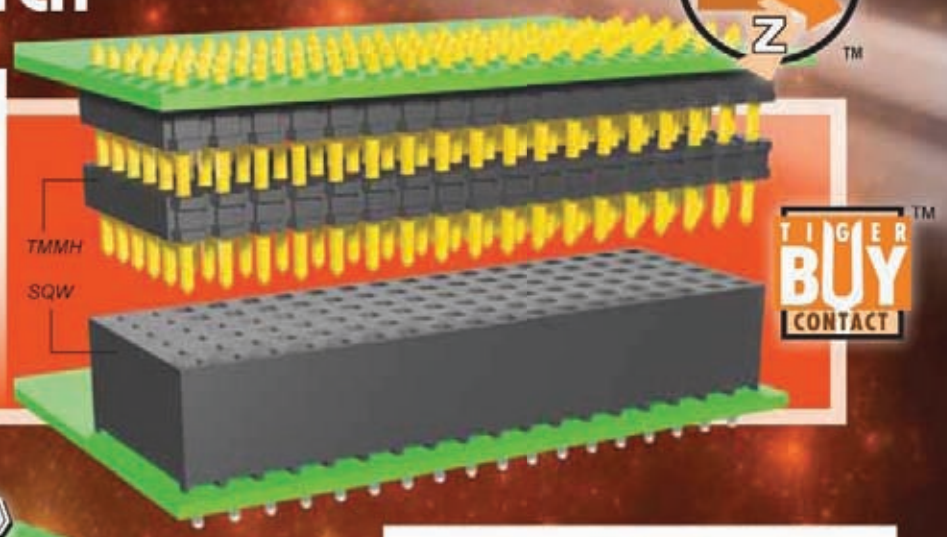
2mm (.0787") PITCH

FLEX Y Z™

High Density Headers and Sockets

- Flexibility on three axes
- Headers, stackers and sockets with up to six rows at 50 pins per row
- Through-hole, surface mount and press fit tail options
- Modified standard post heights
- Precision Tiger Eye™ (four contact point) contacts available
- Shrouded systems for positive mating

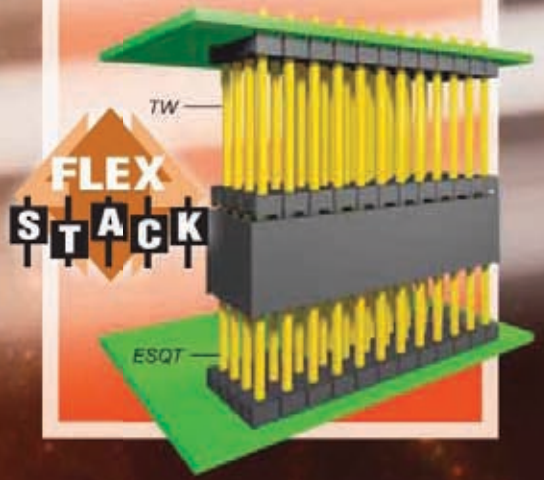


Self-Nesting PC/104-*Plus*

- 2mm (.0787") pitch system
- Through-hole and press fit
- Stack through and non-stack through tails
- Four rows at 30 pins per row
- Optional tail shrouds
- Tiger Buy™ contacts

Flexible Headers & Stackers

- Common sizes molded to position and stocked for quick delivery
- Flex Shroud system provides quick turnaround on unusual sizes
- Surface mount and through-hole
- Systems for IDC cable mating and board stacking

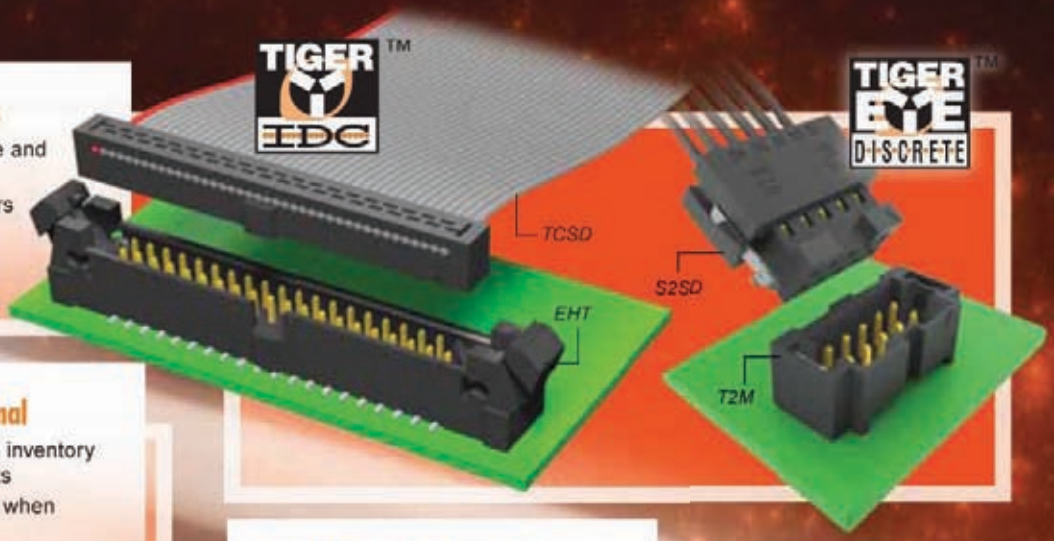


Low Profile

- Pass-through Tiger Claw™ and Tiger Beam contacts for profiles as low as 1.5mm
- Through-hole and surface mount lead styles
- Shrouded and micro pitch systems available
- See Micro Rugged Tiger Eye™ for high reliability socket systems (SMM/S2M Series)

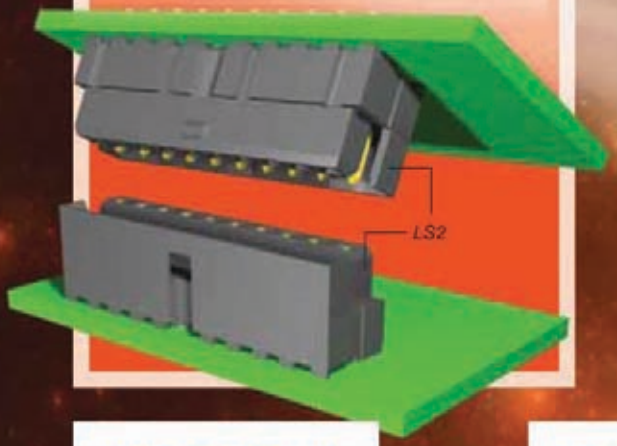
Cable-to-Board Systems

- Tiger Eye™ discrete wire and IDC cable assemblies
- Shrouded ejector headers
- Tiger Eye™ sockets for board level mates



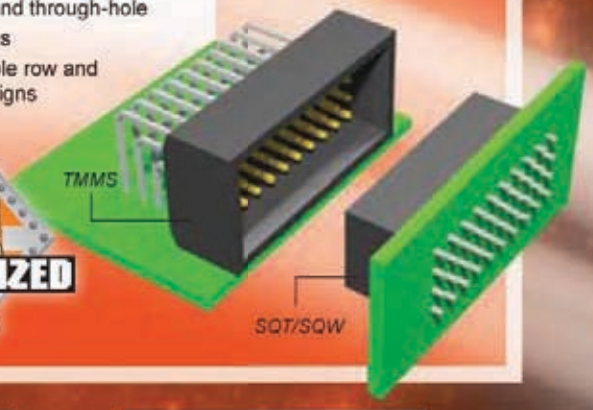
Combination Socket/Terminal

- Self-mating system reduces inventory costs with fewer components
- Shrouded with audible click when properly mated
- Stack heights from 11mm to 35,5mm



Right Angle & Shrouded

- Surface mount and through-hole
- Shrouded options
- Single row, double row and high density designs



RUGGEDIZED by SAMTEC

Tiger Buy™ Contacts

- High retention
- Cost effective
- Tuning fork contact

Tiger Claw™ Contacts

- Pass-through
- Ultra low profile
- Dual wipe contact

Tiger Eye™ Contacts

- High reliability
- High mating cycles
- Multi-finger contact

MICRO

2mm Pitch Sockets

Series	PTF	ESQT/PTHF	SQW/SQT	MMS	CLT	SMM/S2M	TLE
Contact Type		Tiger Buy™		Box	Tiger Claw™	Tiger Eye™	Tiger Beam
Total Pin Counts	4 - 100	4 - 300		4 - 80	4 - 100	2 - 80	4 - 100
Right Angle Available			Yes	Yes			
Through-Hole/ Surface Mount	Press Fit	T/H	T/H & SM	T/H & SM	T/H & SM	SM	SM
Notes		PC/104-*Plus*			ELP*	ELP*	
Page	222	223, 226	224-225	227	228	229, 155	230

*ELP = Extended Life Product™

2mm Pitch Headers/Stackers

Series	TMM/MTMM	MMT	TMMH	EHT/EHLT/TLMM/ETMM/ STMM/ZSTMM/ZLTMM/T2M	TSH/TMMS	TW	PTT	LS2
Through-Hole/ Surface Mount	T/H & SM	SM	T/H & SM	T/H & SM	T/H & SM	T/H & SM	Press Fit	T/H & SM
Total Pin Counts	1 - 200	2 - 72	6 - 100	10 - 50	10 - 90 / 10 - 100	2 - 72	4 - 300	10 - 60
Right Angle Available	Yes	Yes	Yes	Yes	Yes			Yes
Notes	Flex Stack		ELP*	IDC Cable Mates	Shrouded	Flex Stack		Hermaphroditic
Page	208-210	211	212-215	216-218	219	220-221	222	231

*ELP = Extended Life Product™

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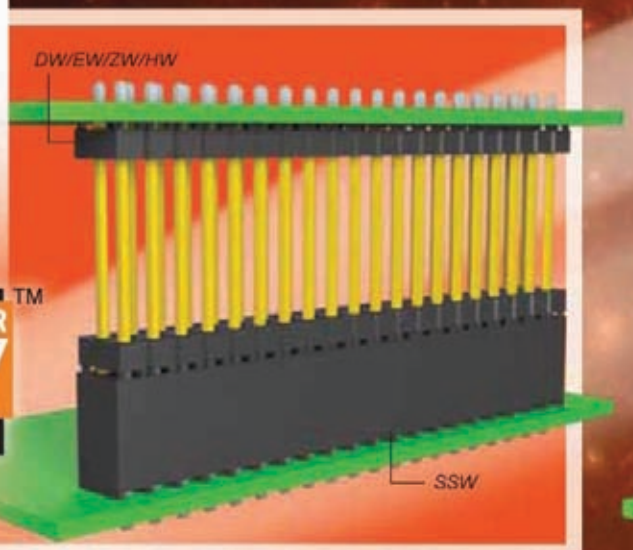
.100" (2,54mm) PITCH

FLEX STACK

Skyscraper

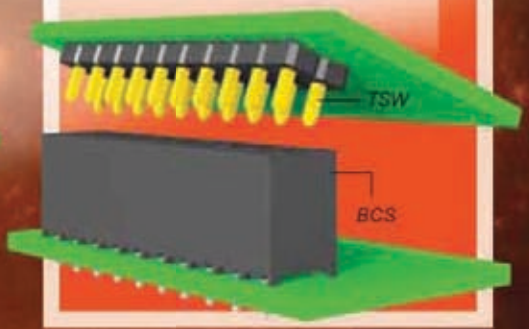
- Modified board stackers and sockets
- Stamped and machined
- Through-hole, surface mount and self-nesting

TIGER BUY™ CONTACT



Headers, Stackers and Sockets

- Through-hole and surface mount
- Modified standard post heights in .005" increments
- Modified stacker heights in .005" increments



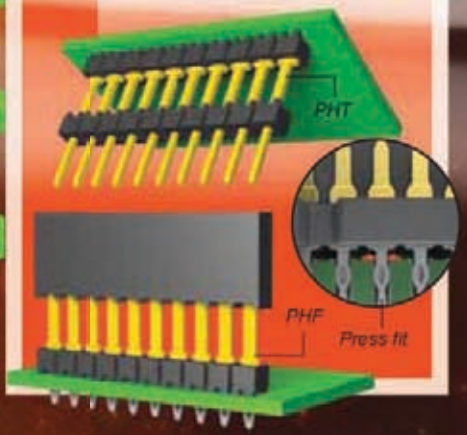
EMBEDDED-PC PC/104 MODULES

Self-Nesting PC/104

- .100" (2,54mm) pitch system
- Through-hole
- Stack through and non-stack through tails
- Two rows at 32 pins, two rows at 20 pins
- Tiger Buy™ contacts

Press Fit

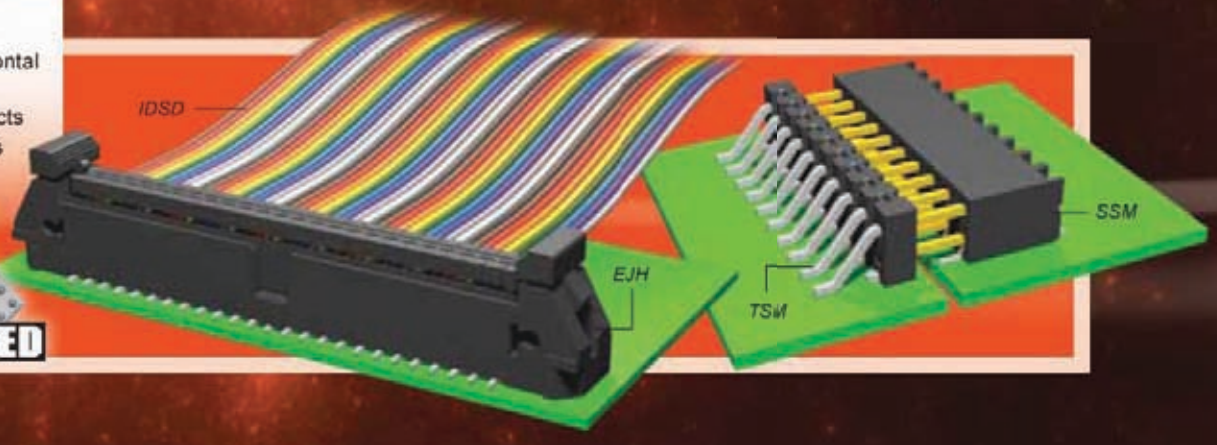
- Wide variety of stack heights from .435" (11mm) to 1.035" (26mm)
- One position to 100 pins (double row)
- Single and double row



Surface Mount

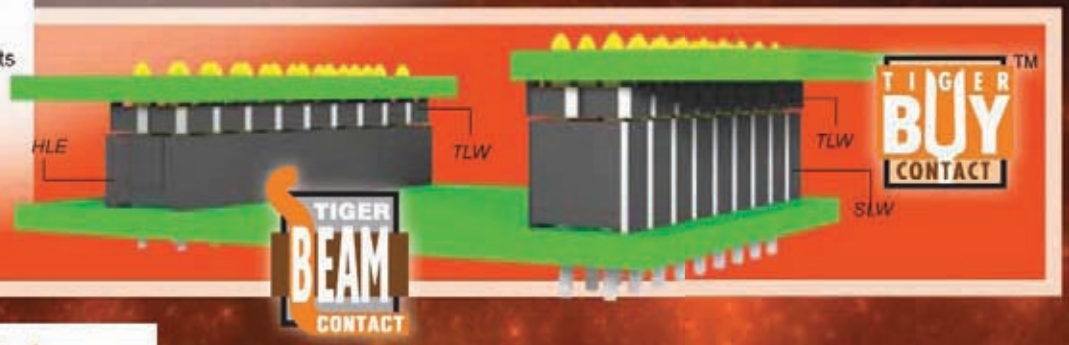
- Vertical and horizontal
- Tiger Buy™ and Tiger Beam contacts
- Shrouded systems
- Ejector headers

RUGGEDIZED by SAMTEC



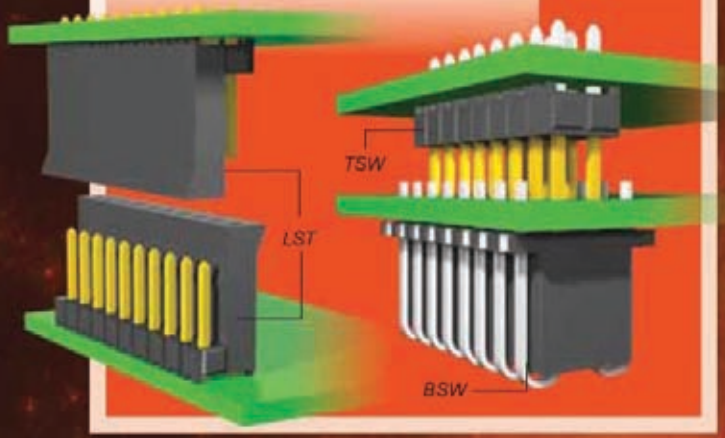
Low Profile

- Rugged Tiger Buy™ contacts
- Through-hole and surface mount lead styles
- Shrouded and micro pitch systems available



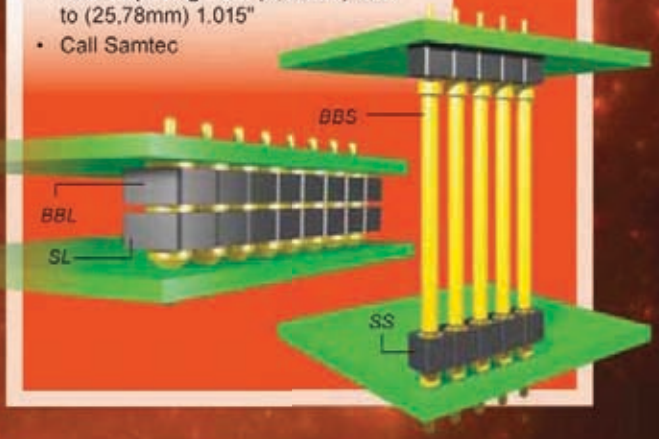
Specialty Sockets/Terminals

- Bottom mount sockets
- Self-mating system reduces inventory costs with fewer components



Machined

- High reliability sockets and terminals
- Board spacing from (3,89mm) .153" to (25,78mm) 1.015"
- Call Samtec



Tiger Buy™ Contacts

- High retention
- Cost effective
- Tuning fork contact

Tiger Beam Contacts

- Best cost
- Reliable performance
- Post and beam contact

Precision Contacts

- Multi-finger BeCu contact
- Precision machined shell
- Call Samtec

MICRO

.100" (2,54mm) Pitch Sockets

Series	SSW/SSQ	SSM/SMH	PHF	ESW/ESQ	HLE	BCS	BSW	SLW/CES	SX/HSS/ESX
Contact Type	Tiger Buy™	Tiger Buy™	Tiger Buy™	Tiger Buy™	Tiger Beam	Box	Tiger Buy™	Tiger Buy™	Screw Machined
Total Pin Counts	1 - 150	2 - 80	1 - 100	1 - 108	4 - 100	1 -100	2 - 72	1 - 100	1 - 72
Right Angle Available	Yes	Yes	n/a	n/a	n/a	Yes	n/a	Yes	n/a
Through-Hole/ Surface Mount	T/H & SM	SM	T/H	T/H	T/H & SM		T/H	T/H	T/H
Notes			Press Fit	PC/104	Low Profile / Pass-Through	ELP* / Pass-Through	Bottom Mount	Low Profile	
Page	246-248	249, 256	250	251	252	253	254	255	258-259

*ELP = Extended Life Product™

.100" (2,54mm) Pitch Headers/Stackers

Series	TSW/HTSW	TSM	MTSW/ HMTSW	PHT	TLW/MTLW	DW/EW/ ZW/HW	TSSH	EJH/TST/TSS/ ZSS/ZST/ HTST/HTSS	LST/HLST	TX/BBX
Total Pin Counts	1 - 150	2 - 72	1 - 150	1 - 100	1 - 72	1 - 150	10 - 72	10 - 72	4 - 60	1 - 72
Right Angle Available	Yes	Yes	Yes	n/a	Yes	n/a	Yes	Yes	Yes (ASP)	T/H
Through-Hole/ Surface Mount	T/H	SM	T/H	T/H	T/H	T/H & SM	T/H & SM	T/H & SM	T/H	Screw Machined
Notes	ELP*	ELP*	Flex Stack	Press Fit	Low Profile / Flex Stack	Skyscraper / Flex Stack	Shrouded	IDC Cable Mates	Hermaphroditic	
Page	232-233	234-235	236-237	238	239	240-241	242	243-244	257	260-261

*ELP = Extended Life Product™

EXTENDED LIFE PRODUCTS™

E.L.P.™ Products are tested to rigorous standards which evaluate contact resistance in simulated storage and field conditions.

- **10 year Mixed Flowing Gas (MFG)**
- **High Mating Cycles (250 to 2,500)**
- Certain plating and/or contact options will apply; see product series pages for E.L.P.™ Certified options
- For complete details on Samtec's E.L.P.™ program and test results for Extended Life Products™, please visit www.samtec.com/ELP or e-mail the Customer Engineering Support Group at CES@samtec.com

PASSED 10 YEAR MIXED FLOW GAS (MFG)

RUGGEDIZED by SAMTEC

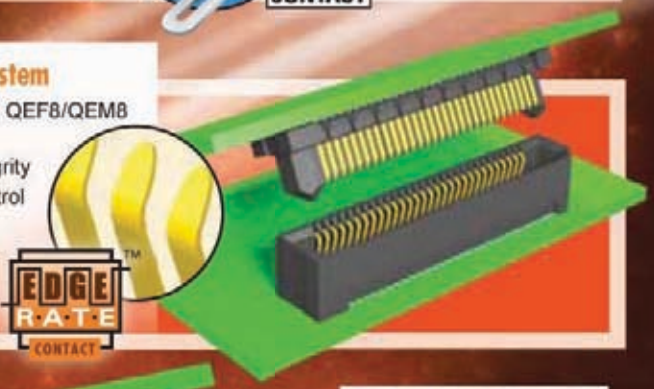
Pitch	Type	Contact	Series*
0,5mm	Q Series® Strip	Blade & Beam	QSH/QTH
	Basic Strip	Blade & Beam	BSH/BTH
0,635mm	Q Series® Strip	Blade & Beam	QSS/QTS
	Basic Strip	Blade & Beam	BSS/BTS
0,8mm	Edge Rate™ Strip	Edge Rate™	ERF8/ERM8
	High Speed Strip	Edge Rate™	QEF8/QEM8
	Q Rate® Strip	Edge Rate™	QRM8/QRF8
	Q Series® Strip	Blade & Beam	QSE/QTE
	Basic Strip	Blade & Beam	BSE/BTE
	Strip	Tiger Eye™	SEM/TEM
1,00mm	Strip	Tiger Claw™	CLM/FTMH
1,27mm	SEARAY™ Array	Edge Rate™	SEAF/SEAM
	Strip	Tiger Eye™	SFM/TFM
	Strip	Tiger Claw™	CLP/FTSH
	Strip	Tiger Beam	FLE/FTSH
2mm	Strip	Tiger Eye™	SMM/TMM
	Strip	Tiger Claw™	CLT/TMMH
2,54mm	Strip	Box	SSM/TSM
	Strip	Box	BCS/TSW

* Tested socket/terminal combination shown.
Other mating headers also available.
Call Samtec if header design you need is not shown.
QXX & BXX require special plating.

Tiger Eye™ Contact System

SFM/TFM, SMM/TMM & SEM/TEM Series

- High reliability
- High mating cycles
- Multi-finger contact



Edge Rate™ Contact System

ERM8/ERF8, SEAM/SEAF, QEF8/QEM8 & QRM8/QRF8 Series

- Designed for Signal Integrity
- Superior impedance control
- Reduced broadside coupling (crosstalk)
- Rugged contact system

Tiger Claw™ Contact System

CLP/FTSH, CLT/TMMH & CLM/FTMH Series

- Dual wipe
- Pass-through applications
- Ultra low profile

Blade and Beam Contact System

QXX & BXX Series

- Micro Pitch
- Mating/alignment "friendly"
- Cost effective
- Special plating required

Tiger Beam Contact System

FLE/FTSH Series

- Best cost
- Reliable performance
- Post and beam contact

RUGGED/POWER

RUGGED FEATURES & OPTIONS

RUGGEDIZED by SAMTEC

Ruggedized Board-to-Board Interfaces

- Retention pins
- Positive latching systems
- Friction locks
- Board locks
- Threaded screw down hardware
- Weld tabs
- Standoffs
- Alignment pins

Ruggedized Cable Assemblies

- Retention pins
- Friction locks
- Captive panel screws
- Screw downs and mounting brackets
- Ejector headers with locking caps
- AccliMate™ Sealed Circular & Rectangular Cable Systems
- Positive latching systems

JACK SCREWS
Threaded inserts, jack screws and mounting hardware

RETENTION PINS
Increase unmating force by up to 50%

BOARD STANDOFFS
Precision machined standoffs for 5mm to 30mm board spacings

BOARD LOCKS
Boards are mechanically locked together

RUGGED IDC
Ejector headers, locks and caps

POSITIVE LATCHING
Manually activated latches increase unmating force by up to 200%

SCREW DOWNS
Secure mechanical attachment to boards

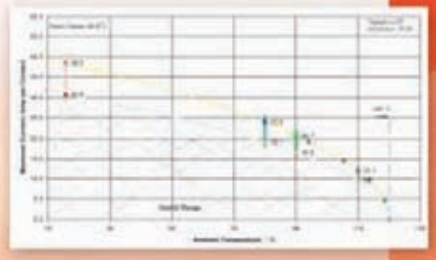
FRICTION LOCKS
Metal or plastic friction locks increase retention/ withdrawal force

POWER SERVICES, SUPPORT & TESTING

POWER INTEGRITY™ CERTIFIED

Online Resources & Support

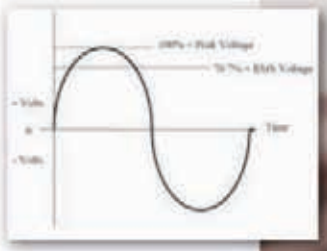
- Technical Library with power ratings, test procedures, simulations and data reports
- Power test reports including Current Cycling Testing, CCC Data and Voltage Drop Data
- Guidelines for power distribution on PCB
- Specification summary charts for each power product
- Power/Signal Integrity Interface Combination Selector
- Power Group offers 24/7 support



Power Integrity Services

- Standard power test data, including current carrying capacity, working voltage, voltage drop and resistance, is available for selected power systems; for testing procedures, visit www.samtec.com/powertesting
- Current Cycling Testing Data, which demonstrates connector performance in realistic and common applications, is available for select series
- Power Integrity guidelines are based on test data and proven design parameters, and are designed to help in connector selection and PCB design maximization; for details visit www.samtec.com/powerintegrity
- Power Integrity Certified™ products undergo testing and additional requirements unique to Samtec; to be certified, products must:
  - pass Current Cycling Test EIA 365-55
  - have current carrying capacity, resistance and amps vs. number of contacts data available
  - have Power Integrity Guidelines developed

Visit www.samtec.com/powerintegrity for a current list of Power Integrity Certified™ Procucts.



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POWER STRIP™ INTERCONNECTS

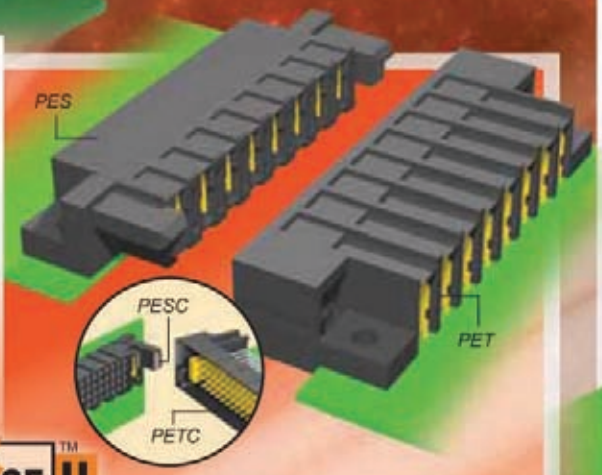
PowerStrip™/25 High Power Interconnects

- Small (form factor) high power system with up to 25A per contact (MPT/MPS Series)
- Up to 8 power pins on (5,00mm) .197" pitch
- Vertical, right angle and hermaphroditic (MPPT Series) headers
- Right angle versions with screw downs also available
- "Hinging" PowerStrip™/25 for 90° mating radius, blind mating (FMPT/FMPS Series)
- Power/Signal combination (MPTC/MPSC Series) with up to 80 signal contacts on (2mm x 2mm) .0787" x .0787" pitch
- Optional locking clips
- Application specific asymmetrical power pin placement available
- PowerStrip™/25 Discrete Wire cable assemblies (MPSS Series) with choice of 14 AWG or 16 AWG coax cable and rugged latching system

RUGGEDIZED by SAMTEC

PowerStrip™/35 Interconnects

- Up to 8 power contacts on (6,35mm) .250" pitch (PET/PES Series)
- Up to 35A per contact
- Right angle and vertical headers & sockets
- Power/Signal combo (PETC/PESC Series) with up to 40 signal contacts on .100" (2,54mm) pitch



PowerStrip™/10 Interconnects

- Up to 8 power contacts
- (3,81mm) .150" pitch
- Up to 10A per contact
- 7mm to 10mm stack height
- Vertical, right angle and hermaphroditic

RUGGED/POWER

PowerStrip™

Series	PET/PES	PETC/PESC	MPPT	MPT/MPS	FMPT/FMPS	MPTC/MPSC	UPT/UPS/UPPT
Brand Name	PowerStrip™/35		PowerStrip™/25				PowerStrip™/10
Current Rating (4 pins @ 75°C)	26 A / contact			23 A / contact	18 A / contact	23 A / contact	TBD
Pitch	(6,35mm) .250"		(5,00mm) .197"				(3,81mm) .150"
Stack Heights (mm)	19		n/a	14	n/a	14	4, 7
Total Power Pin Counts*	2, 4, 6, 8	1, 2, 4		2, 4, 6, 8		1, 2	2, 4, 6, 8
Total Signal Pin Counts*	n/a	80		n/a	n/a	80	n/a
Right Angle Available	Socket & Terminal				"Hinging"	Terminal	Socket & Terminal
Page	264	280	265	266-267	268	281-282	271-273

*Asymmetric power pins and other signal pin counts available. Call Samtec.

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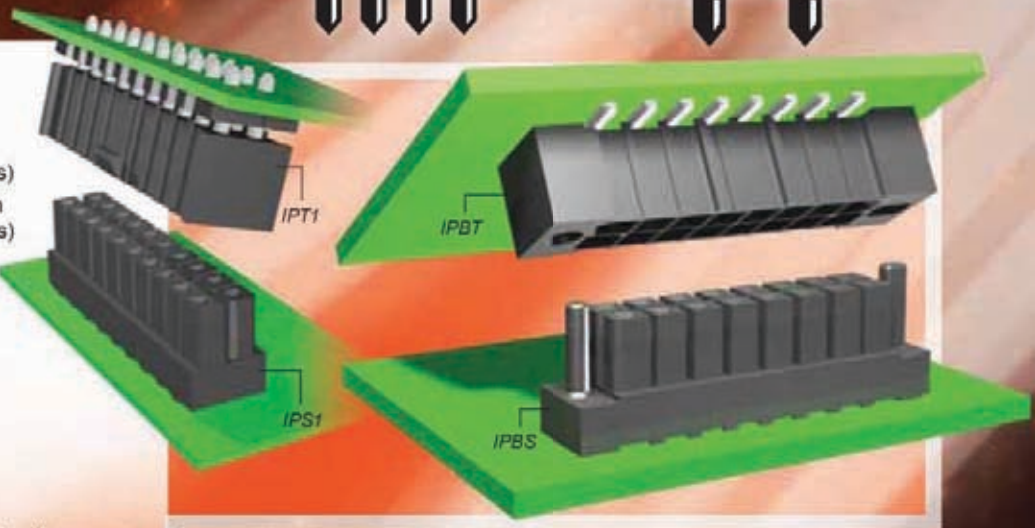
MINI MATE® & POWER MATE™

Mini Mate® & Power Mate™ Interconnect Systems

- 3A Mini Mate® board-to-board system on .100" (2,54mm) pitch (IPT1/IPS1 Series)
- 10A Power Mate™ board-to-board system on .165" (4,19mm) pitch (IPBT/IPBS Series)
- Optional polarization and guide posts
- Through-hole, surface mount and right angle orientations
- Single or double row
- Optional locking clips, alignment pins and polarization
- Rugged metal latching system available for IPT1/IPS1 Series
- Individually shrouded contacts
- Stack heights match a variety of Signal Integrity board-to-board systems including high density arrays, high speed connectors and elevated riser card systems



Discrete Wire Cable Assemblies

- Mini Mate® discrete wire system on .100" (2,54mm) pitch; 3.6A per contact (MMSD, MMSS, IPD1 Series)
- Power Mate™ discrete wire system with power contacts on .165" (4,19mm) pitch; 5.5A per contact (PMSD, PMSS, IPBD Series)
- PowerStrip™/25 discrete wire system (MPSS Series) with power contacts on (5,00mm) .197" pitch
- Polarized, with guide pins and latching system and plastic or metal
- Power Mate™ and Mini Mate® discrete wire and AccliMate™ IP68-rated sealed cable-to-board systems
- Components and assembly tooling available

Power Mate™ & Mini Mate®

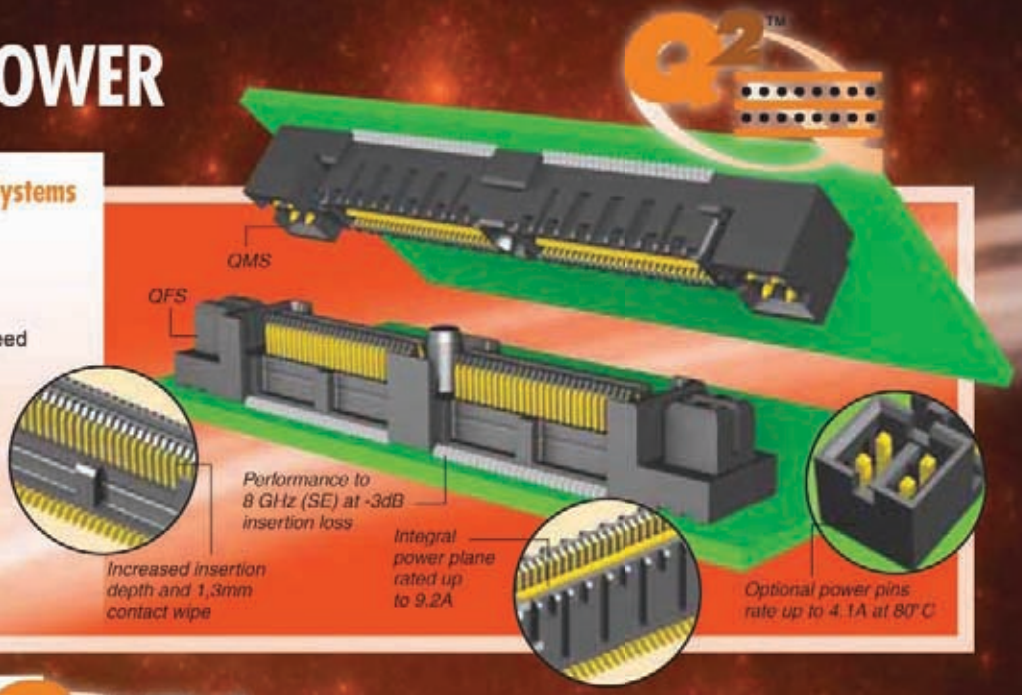
Series	IPBT/IPBS	PMSS(T)/PMSD(T)	IPT1/IPS1	IPL1	MMSS(T)/MMSD(T)	MPSS
Brand Name	Power Mate™		Mini Mate®			PowerStrip™/25
Current Rating (16 position (2x3) @ 95°C)	6.7 A / contact	n/a	4.1 A / contact	3.8 A / contact		TBD
Pitch	.165" (4,19mm)		.100" (2,54mm)			.197" (5mm)
Total Stack Heights (mm)	15.25 - 25	Cable-to-Board	11 - 35	Cable-to-Board		
Total Power Pin Counts	2 - 30		10 - 50	2 - 50		2 - 8
Terminations	T/H, RA, SM	Latch	T/H, RA, SM		Latch	
Notes		AccliMate™ Termination			AccliMate™ Termination	
Page	274-275	276	277	278	279	270

RUGGED/POWER

HIGH SPEED POWER

Q2™ High Speed Interconnect Systems

- Integral power/ground plane rated for up to 9.2 amps at 80°C
- Optional integral power pins rated at 4.1 amps per pin
- Wide variety of standard high speed mating cable assemblies
- Quiet Power™ combination signal/power cable assemblies
- 0,635mm pitch with choice of stack heights
- Rugged contact system with increased insertion depth

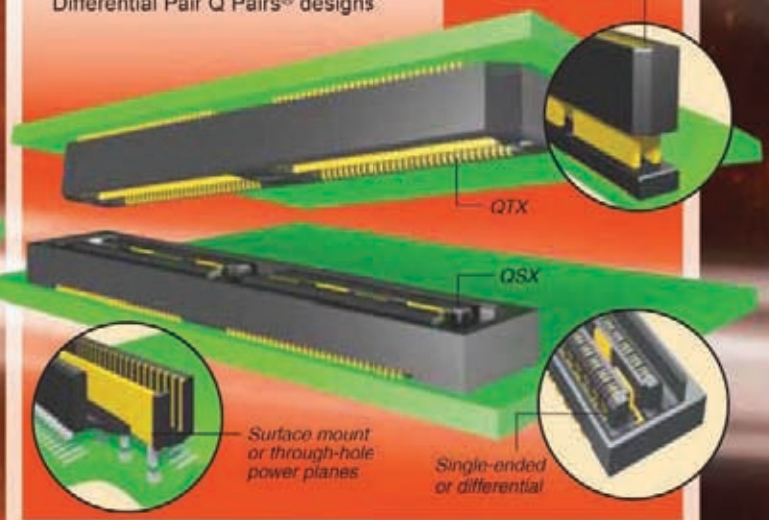


Edge Rate™ Q for Power

- Edge Rate™ contacts on 0,8mm pitch with 1,2mm contact wipe
- Slim 5mm wide footprint
- Integral power/ground plane (dual power/ground plane available)
- Performance rated @ 9.5 GHz SE at –3dB IL and 7mm stack height

Q Series® High Speed Interconnects

- 0,5mm, 0,635mm and 0,8mm micro pitch (QSH/QTH, QSS/QTS, QSE/QTE Series)
- 5mm and 8mm stack heights
- Integral power/ground plane
- Single-ended Q Strip® and Differential Pair Q Pairs® designs



High Speed/Power Combinations

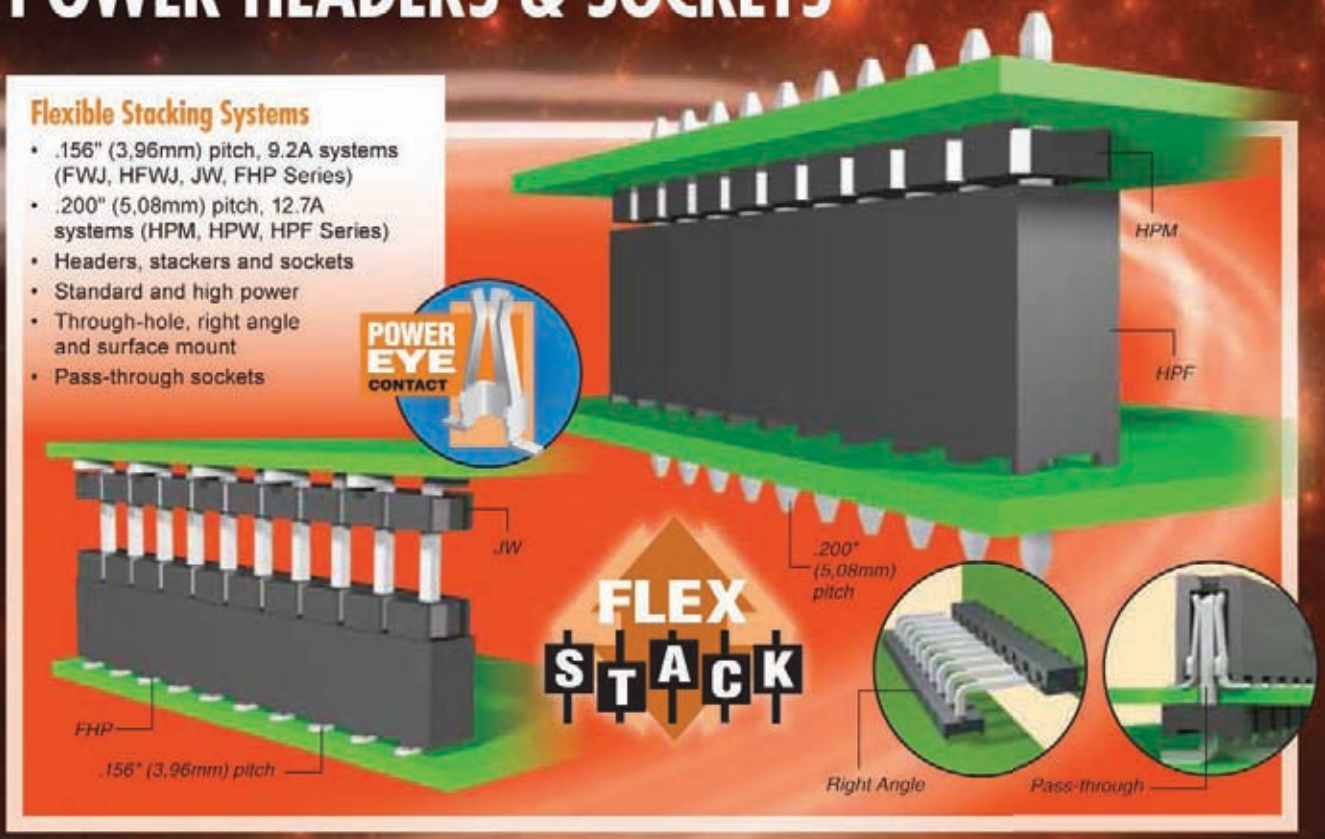
Series	QTX/QSX, QEX8 & MIT/MIS	QRM8/QRF8 & QDM8/QDF8	QMS/QFS/QMSS/QFSS
Brand Name	Q Series®	Q Rate®	Q2™
Pitch	0,6mm, 0,635mm & 0,8mm	0,8 mm	0,635mm
Stack Heights* (mm)	5 to 30	7, 10	10, 11
Total Pin Counts*	40 to 240	52, 78, 156	52, 104, 156, 208
Current Rating (Power Plane)	10,1 A	TBD	9.2 A
Current Rating (Power Pins)	n/a	n/a	4.1 A
Notes	0.635mm Pitch Right Angle Available	Edge Rate™ Contacts; Dual Power/Ground Plane & Right Angle Available	Right Angle & Edge Mount Available
Page	64-73, 79	74-78	80-87

*Other stack heights and total pin counts available. Call Samtec.

POWER HEADERS & SOCKETS

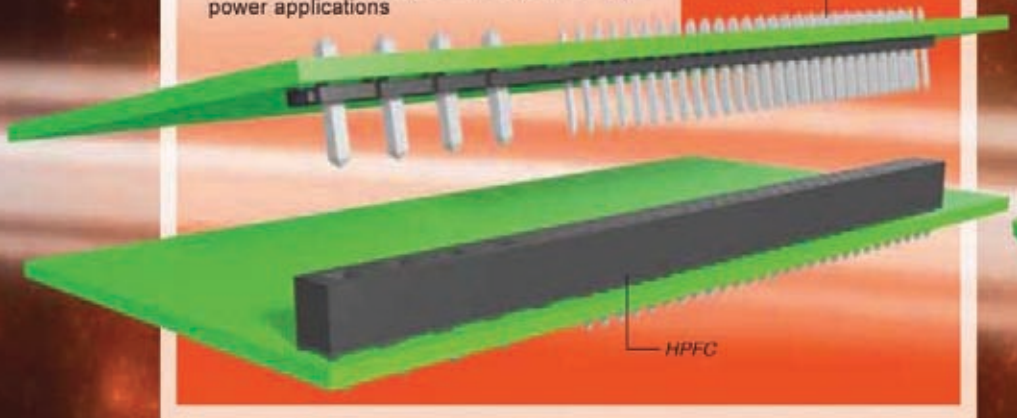
Flexible Stacking Systems

- .156" (3,96mm) pitch, 9.2A systems (FWJ, HFWJ, JW, FHP Series)
- .200" (5,08mm) pitch, 12.7A systems (HPM, HPW, HPF Series)
- Headers, stackers and sockets
- Standard and high power
- Through-hole, right angle and surface mount
- Pass-through sockets



Combination Power/Signal

- 12.7A (at 75°C) system (HPMC/HPFC Series)
- Up to 4 power terminals/sockets
- Up to 24 signal leads/sockets on .100" (2,54mm) pitch
- Surface mount or through-hole orientations
- Power Eye contact system designed for high power applications



One Piece Interfaces

- 5.8A systems
- High shock/vibration applications
- Reduced component and processing cost
- Optional alignment pins and locking clips for increased stability

Power Headers & Sockets

Series	FWJ/HFWJ/JW	FHP	HPM/HPW	HPF	HPMC/HPFC	PEC
Pitch	(3,96mm) .156"		(5,08mm) .200"			(2,54mm) .100"
Total Pin Counts*	1 - 24		1 - 20		2 - 4 Power; 4 - 48 Signal	3, 7, 10
Current Rating (4 pins @ 75°C)	9.2 A		12.7 A			5.8 A
Notes	Flex Stack	Power Eye Contacts	Flex Stack	Power Eye Contacts		One Piece Interfaces
Page	288	289	290	291	283	287

*Other stack heights and total pin counts available. Call Samtec.

RUGGED/POWER

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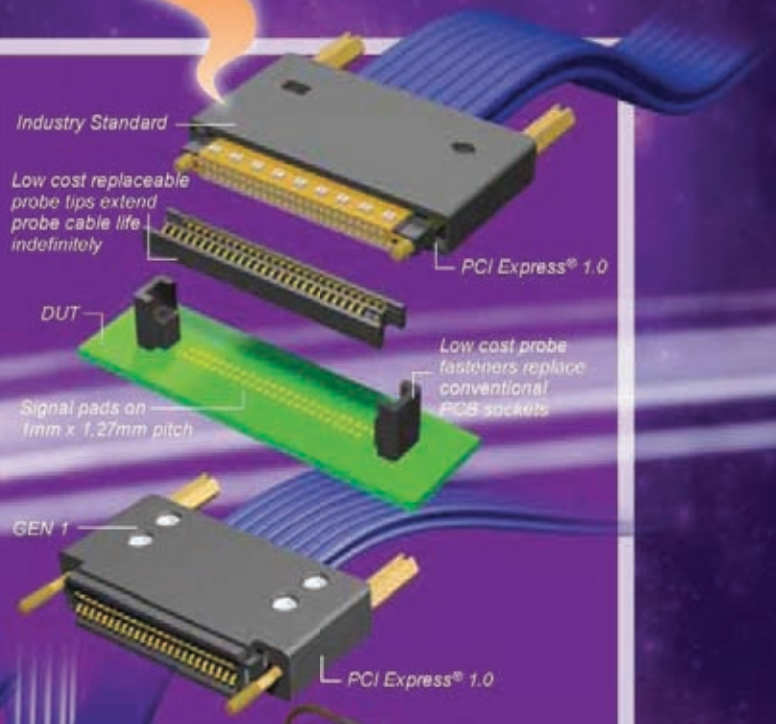
TEST SOLUTIONS

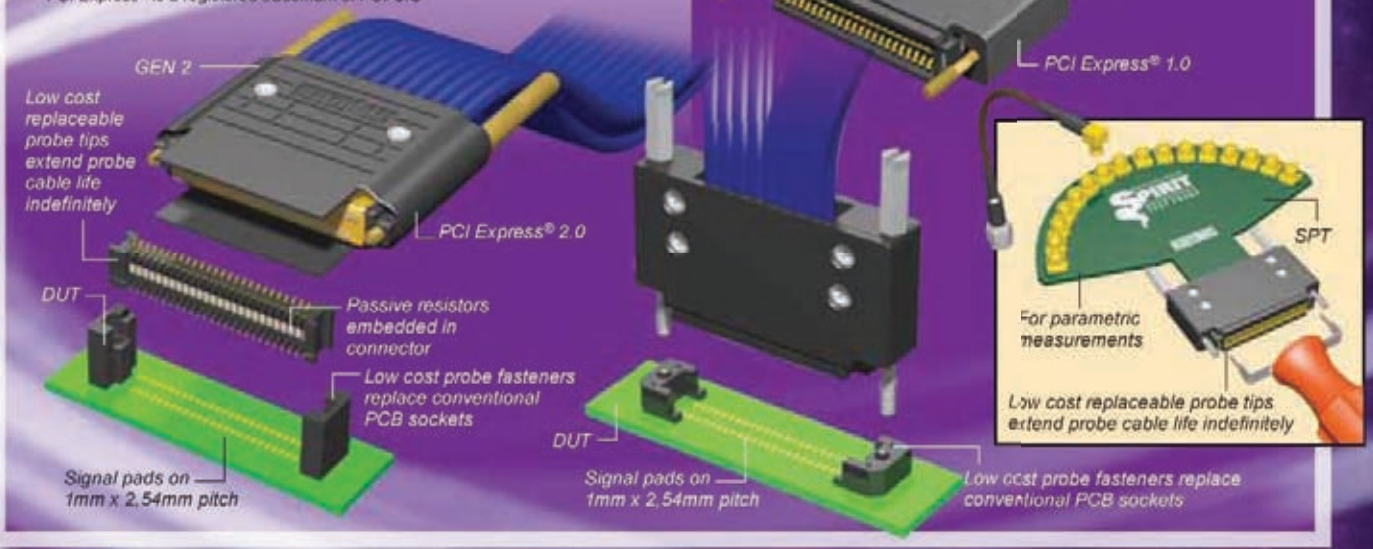
SPIRIT® TEST PROBE

Spirit® Compression Test Probe

- Eliminate costly PCB Test Probe Connectors
- Replaceable probe tip connectors extend probe life indefinitely
- Spring-loaded shroud protects compression contact tips (Gen 1)
- Non-intrusive logic analysis, protocol analysis, oscilloscopes, trace output and testing applications from 1.25 Gbps to 5.2 Gbps
- Enables high speed testing compatible with Intel's industry standard footprint
- PCI Express® protocol footprint
- Choice of 8 pairs (Gen 1), 16 pairs (Gen 2) or 18 pairs (Industry Standard)
- Q Strip® or high speed edge card instrument end interface
- Available as components or complete kits with probe, replacement connectors, application notes and probe fasteners; includes extraction tool for Gen 1 probe
- Application specific logic and protocol analysis applications with differential pair counts and pinout maps available; contact dr@samtec.com

PCI Express® is a registered trademark of PCI-SIG

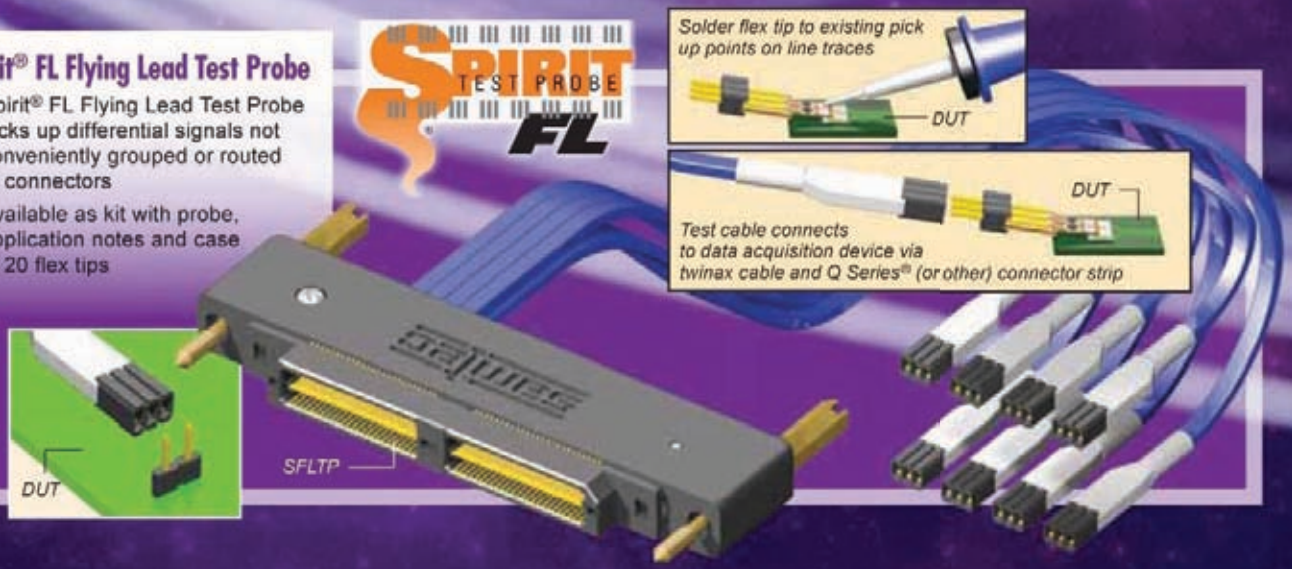




Spirit® FL Flying Lead Test Probe

- Spirit® FL Flying Lead Test Probe picks up differential signals not conveniently grouped or routed to connectors
- Available as kit with probe, application notes and case of 20 flex tips

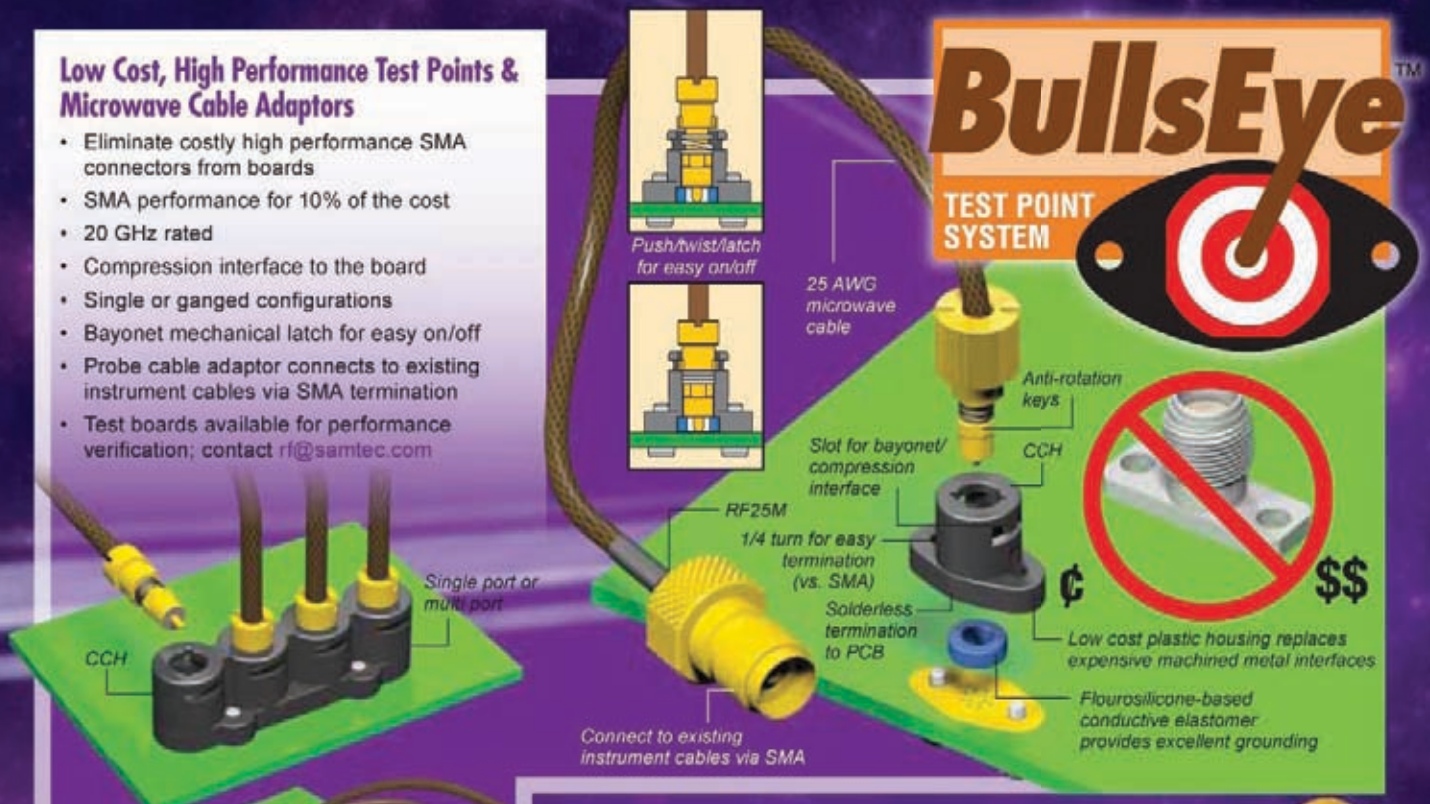
SPIRIT® TEST PROBE FL



Low Cost, High Performance Test Points & Microwave Cable Adaptors

- Eliminate costly high performance SMA connectors from boards
- SMA performance for 10% of the cost
- 20 GHz rated
- Compression interface to the board
- Single or ganged configurations
- Bayonet mechanical latch for easy on/off
- Probe cable adaptor connects to existing instrument cables via SMA termination
- Test boards available for performance verification; contact rf@samtec.com

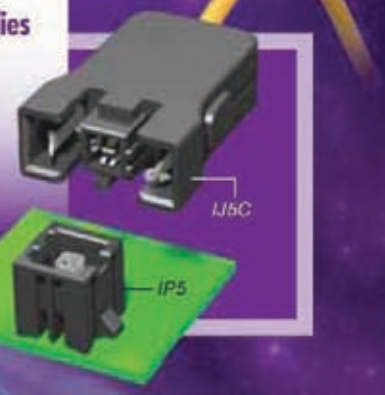
BullsEye™ TEST POINT SYSTEM



IsoRate™ Test Points & Cable Assemblies

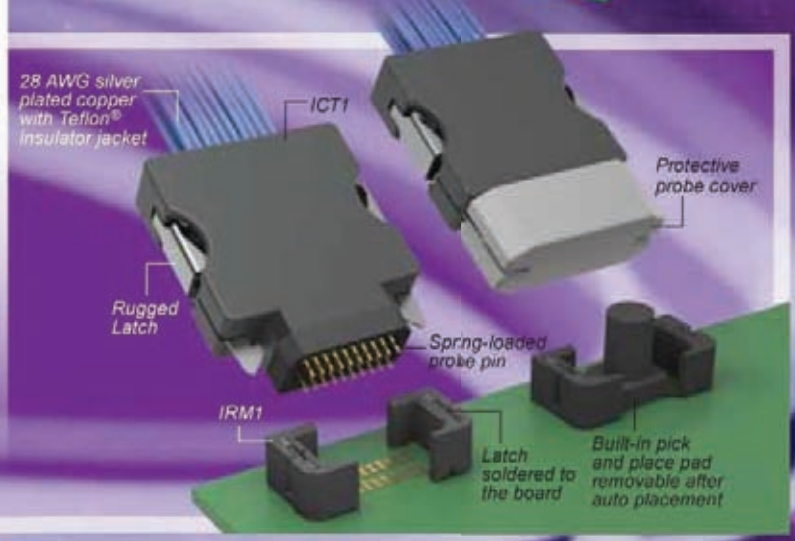
- Low cost, high performance isolated transmission line cables
- Choice of discrete wire or ganged 2, 4 or 8 pin RG 316 cable assemblies

ISIRATE® Isolated Edge Rate Contact



Rugged Low Cost Test System

- Lower production costs by moving most of the interface costs to the lab tool/cable
- Spring loaded compression interface to the board
- Rugged mechanical squeeze latch for easy on/off
- Probe cable adaptor connects to existing instrument cables via Edge Rate™ connector termination or probe point-to-point
- High temperature Teflon® jacket 28 AWG stranded cable conductors
- Test boards available for performance verification. Contact sig@samtec.com



Microwave/Test

Series	ICT1/IRM1	RF25M-SCC1 & CCH	SCTP/SPT	SFLTP	IJ5C
Cable Type	28 AWG	25 AWG Microwave	30 AWG Twinax	30 AWG Twinax	RG 316
Application	Low Cost Test	High Performance Test	Replaceable compression contacts	Flying Lead Test Points	IsoRate™
Performance (@ -3dB IL)		1 to 20 GHz	1.25 Gbps to 5.0 Gbps	1.25 Gbps to 5.2 Gbps	TBD
Instrument Side Termination	ERF8	SMA	QSS/SMP	CSS	IP5
Page	316-317	318-319	320-322		324

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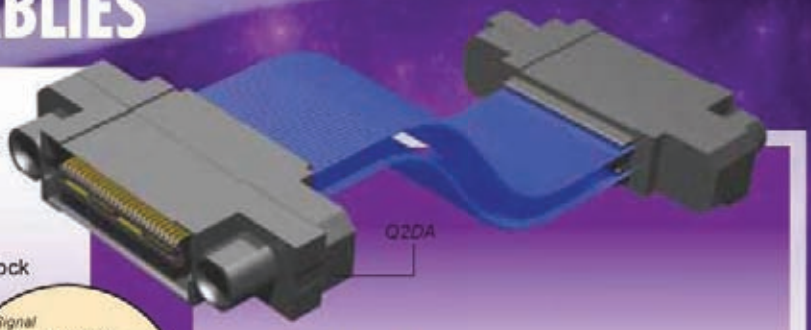
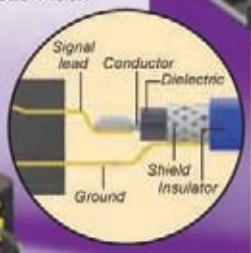
COAX CABLE ASSEMBLIES

"Direct-to-Lead" Coax Cable Assemblies

- Cable mates for Edge Rate™ and Q2™ connectors
- Cable terminated directly to lead optimizes signal integrity
- Hot swappable option
- Edge Rate™ system with standard rugged friction lock
- Q2™ system with standard guide post holes





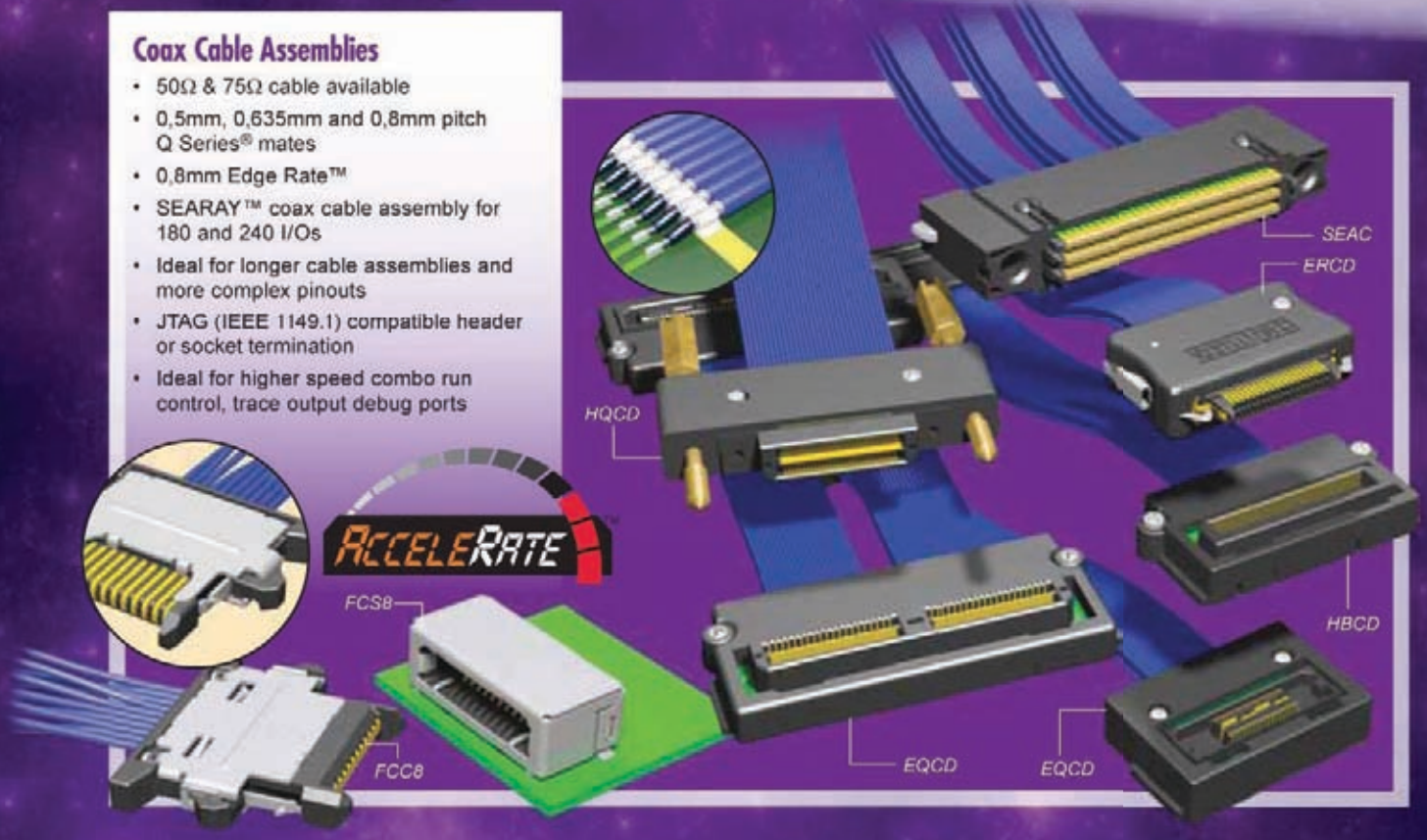
Coax Direct

Series	ERCDA	Q2DA
Cable Type	34 AWG Coax	36 AWG Coax
Standard Cable Length*	95 mm to 1 meter	152 mm to 1 meter
Pitch	0.80mm (.0315")	0.635mm (.025")
Performance (@ -3dB insertion loss)	890 MHz/1.78 Gbps to 7.90 GHz/15.8 Gbps	400 MHz/0.80 Gbps to 1.15 GHz/2.3 Gbps
Mates with	ERF8(-L)	QMS
Page	299-300	300

*Cable lengths longer than 1 meter are not supported by S.I. test data.

Coax Cable Assemblies

- 50Ω & 75Ω cable available
- 0.5mm, 0.635mm and 0.8mm pitch Q Series® mates
- 0.8mm Edge Rate™
- SEARAY™ coax cable assembly for 180 and 240 I/Os
- Ideal for longer cable assemblies and more complex pinouts
- JTAG (IEEE 1149.1) compatible header or socket termination
- Ideal for higher speed combo run control, trace output debug ports



Standard Coax Assemblies

Series	FCC8	EQCD	HQCD	SEAC	ERCD	MICD/ SQCD/6QCD	EQSD	HBCD
Cable Type	36 AWG Coax	36 AWG Coax		36 AWG Coax	34 AWG Coax	38 AWG Coax		
Pitch	0.80mm (.0315")	0.80mm (.0315")	0.50mm (.0197")	1.27mm (.050")	0.80mm (.0315")	0.635mm (.025")	0.80mm (.0315")	0.50mm (.0197")
Performance (@ -3dB IL)	TBD	480 MHz/0.96 Gbps to 2.52 GHz/5.04 Gbps	375 MHz/0.75 Gbps to 1.64 GHz/3.28 Gbps	TBD	690 MHz/1.38 Gbps to 1.84 GHz/3.68 Gbps	360 MHz/.720 Gbps to 2.42 GHz/4.84 Gbps	970 MHz/ 1.94 Gbps to 1.54 GHz/3.08 Gbps	563 MHz/1.13 Gbps to 2.76 GHz/5.52 Gbps
Mates with	FCS8	QTE, QSE	QTH, QSH	SEAF	ERM8, ERF8	MIS, MIT QTS, QSS QMS, QFS	QTE, QSE	BTH, BSH
Notes	50Ω						75Ω	50Ω
Page	294-295	296-297		300		300-301	301	301

*Cable lengths longer than 1 meter are not supported by S.I. test data.

TWINAX CABLE ASSEMBLIES

Twinax Cable Assemblies

- 100Ω differential pair impedance
- Choice of terminations:
  - Edge card
  - High speed connectors on 0,5mm, 0,635mm and 0,8mm pitch
  - High density
- Low skew (pair-to-pair < 10ps/ft; within a pair < 5ps/ft)
- Superior EMI Performance (FCC Class A)
- Contact dr@samtec.com for custom Signal Integrity specifications

Standard Twinax Assemblies

Series	ERDP	6QDP(S)	EQDP	HQDP	EEDP	GCCA
Cable Type	30 AWG Twinax					
Standard Cable Length*	95.3 mm to 1 meter					n/a
Pitch	0.80mm (.0315")	0.635mm (.025")	0.80mm (.0315")	0.50mm (.0197")	0.8)mm (.0315")	1.27mm (.050")
Performance (@ -3dB IL)	1.41 GHz/2.82 Gbps to 6.33 GHz/12.66 Gbps	1.62 GHz/3.24 Gbps to 4.0 GHz/8.0 Gbps	1.32 GHz/2.64 Gbps to 4.48 GHz/8.96 Gbps	1.76 GHz/3.52 Gbps to 5.94 GHz/11.88 Gbps	1.15 GHz/2.30 Gbps to 5.66 GHz/11.32 Gbps	2.30 GHz/1.15 Gbps to 5.89 GHz/2.95 Gbps
Mates with	ERF8, ERM8	QMSS-DP, QFSS-DP, QMS-DP, QFS-DP	QTE-DP, QSE-DP	QTH-DP, QSH-DP	MEC8-RA, HSEC8	GCAM
Page	302				303	

*Cable lengths longer than 1 meter are not supported by S.I. test data.

CUSTOM CABLE ASSEMBLIES

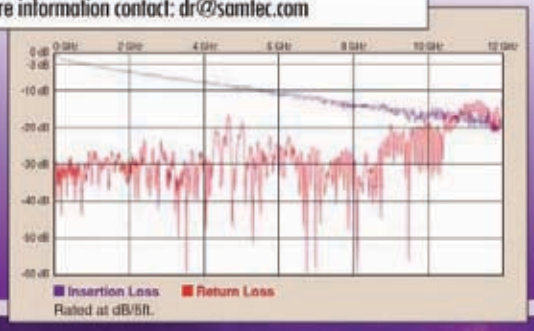
Modified Standards & Full Customs

- Wide variety of coax, twinax and RF cable choices
- Mix and match twinax and coax, signal and power, or coax/twinax and RF cable
- Custom terminations including RF, I/O, High Speed and Pogo Pins/Compression Contacts
- Rugged shielding, screw systems, locking and latching features, and retention clips
- Special housings and platings
- Customized routing and breakout to boards
- Contact dr@samtec.com for more information

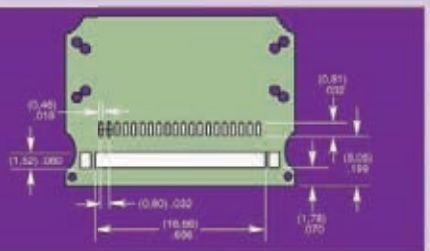
COAX CABLE SELECTOR

50Ω Coax Cable – 34 AWG

Also Available: 50Ω - 26, 28, 30 and 32 AWG
For more information contact: dr@samtec.com

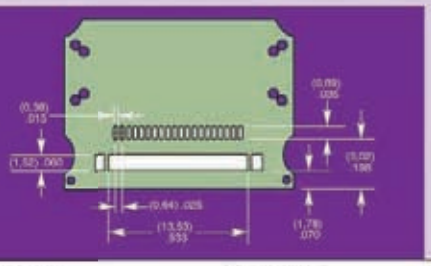


Standard Samtec Series:
EQCDA, ERCD

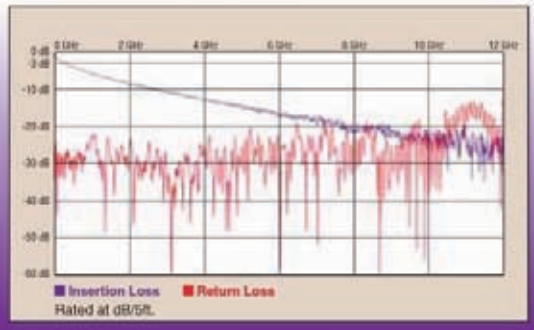


50Ω Coax Cable – 36 AWG

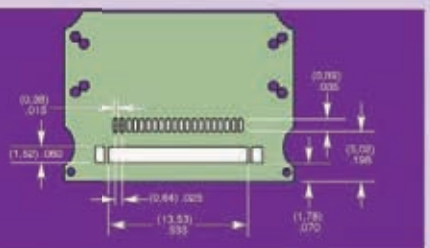
Standard Samtec Series:
Q2DA



50Ω Coax Cable – 38 AWG

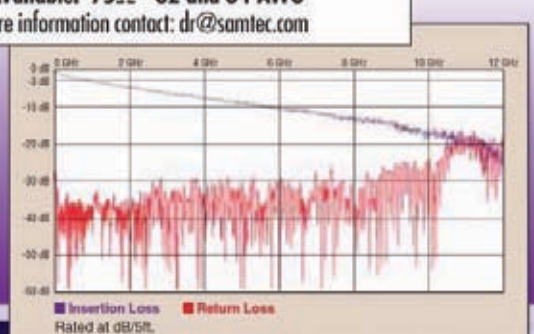


Standard Samtec Series:
SQCD, MICD, HQCD,
EQCD, HBCD, HHSC

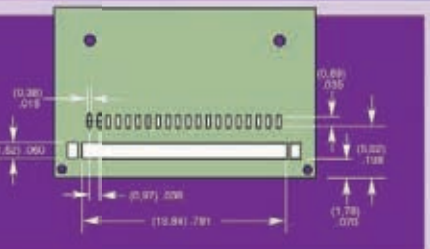


75Ω Coax Cable – 38 AWG

Also Available: 75Ω - 32 and 34 AWG
For more information contact: dr@samtec.com

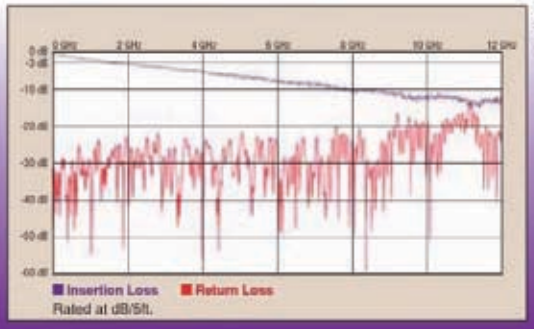


Standard Samtec Series:
EQSD



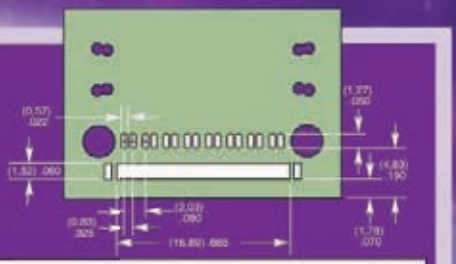
SPECIALTY CABLE SELECTOR

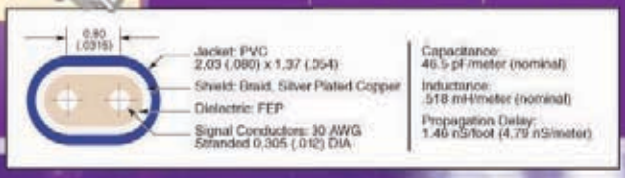
100Ω Twinax Cable – 30 AWG



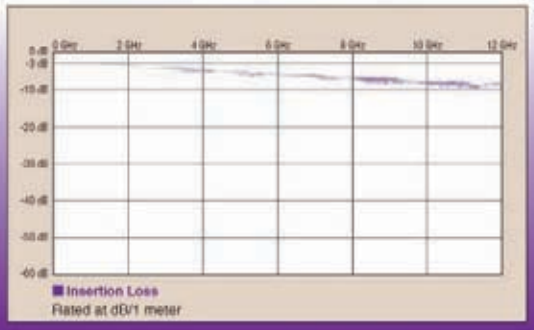
Rated at dB/5ft.

Standard Samtec Series:
EQDP, HQDP, EEDP, ERDP, 6QDPS, 6QDP, GCCA, PCIEC, SCTP, SFLTP



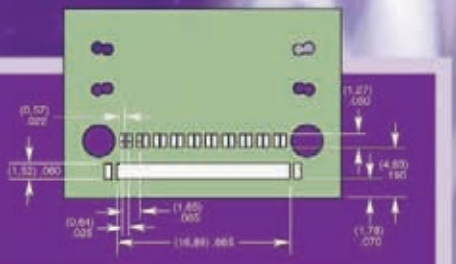


100Ω Low Skew Pair Cable – 32 AWG



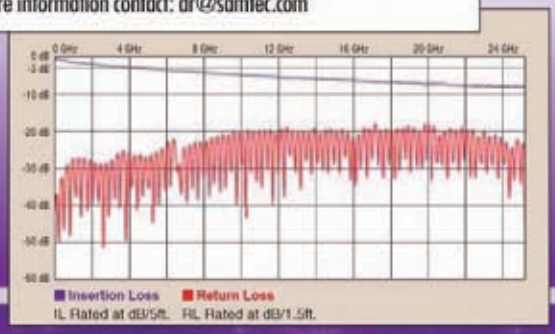
Rated at dB/1 meter

Standard Samtec Series:
EPLSP, HPLSP



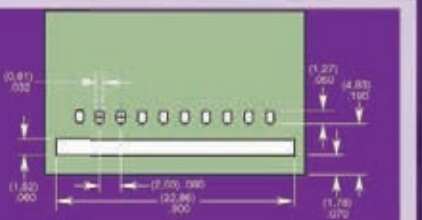
50Ω Temp-Flex Cable – 25 AWG

Also available: 100Ω - 30 AWG Shielded Twisted Pair
For more information contact: dr@samtec.com



IL Rated at dB/5ft. RL Rated at dB/1.5ft.

Standard Samtec Series:
ATEP, PCRF, RF25M

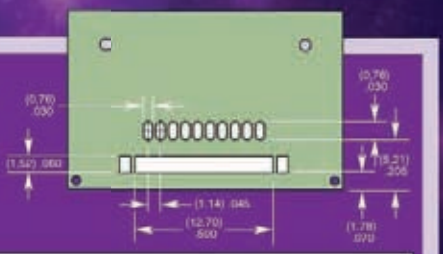


20Ω Coax Quiet Power™ Cable – 26 AWG

Also available: 20Ω - 28 & 36 AWG
For more information contact: dr@samtec.com

- Power Integrity: minimizes coupling to high speed signals
- Power EMI: minimizes EMI aggression
- Current Rating: 4A
- Capacitance: 239 pF/meter (nominal)
- Inductance: .092 mH/meter (nominal)
- Temp Rating: -25°C to +105°C

Standard Samtec Series:
6QP



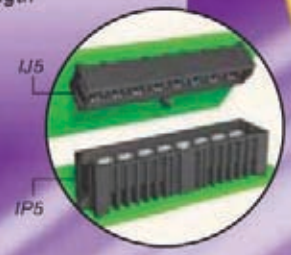
samtec

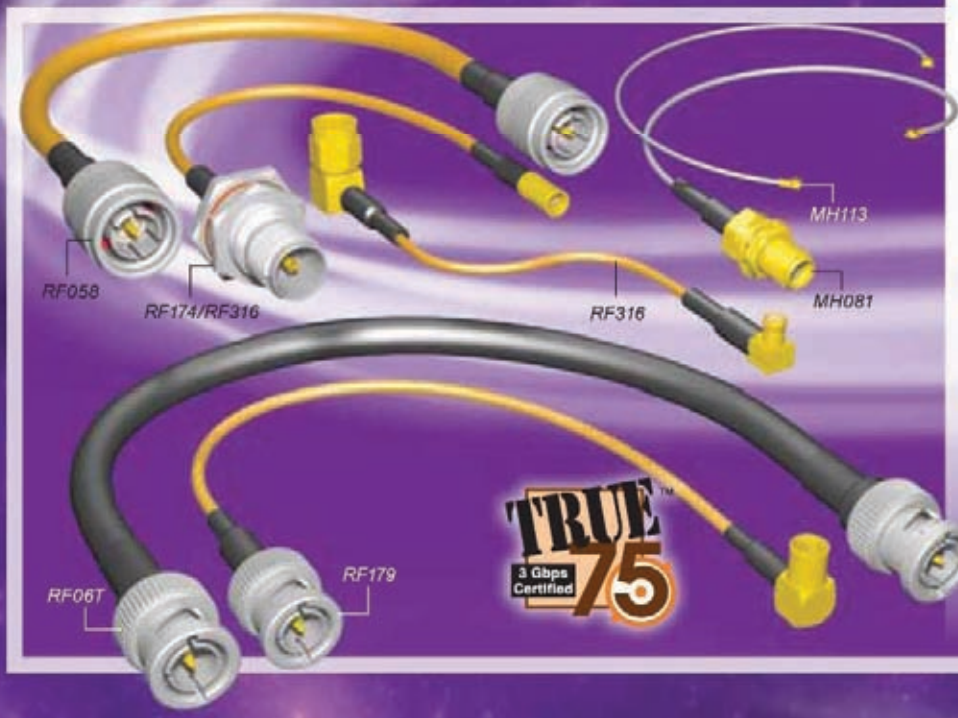
RF CABLE ASSEMBLIES

IsoRate® Isolated Edge Rate Contact

IsoRate™ Cable Assemblies

- Low cost, high performance isolated transmission line cables
- Radio frequency signal quality (call for test data)
- Rugged positive latching system
- Choice of discrete wire or ganged 2, 4 or 8 pin assemblies
- Single or double ended assemblies up to 1 meter in length
- Board stacking systems available





Wide Variety of Cables

- Micro High Frequency 25 AWG Microwave Cable Assemblies
- RG174 & RG316 RF Cable Assemblies
- RG178 RF Cable Assemblies
- RG179 RF Cable Assemblies
- RG58 RF Cable Assemblies
- RG6 RF Cable Assemblies

Wide Variety of Terminations

- MHF1 and MHF3, SMA, SMB, MCX, MMCX, BNC, TNC, N Type

Wide Variety of Options

- Straight cables or bulkhead
- 50Ω, 75Ω and True75™ 75Ω systems
- Choice of PCB mount options

RF Cable Assemblies

Series	IJ5C	RF06T/RFB6T	RF179	MH081/MH113	RF174/RF316	RF178	RF058
Type	IsoRate™	True75™		MHF	Board-to-Board, Panel-to-Board & Panel-to-Panel		
Impedance	50 Ω	75 Ω ± 3Ω		50 Ω			
Pitch	4mm	Discrete Wire					
Type Cable	RG316	RG6/1694A	RG179	0.81mm/1.13mm	RG174/RG316	RG178	RG58
Pin Counts	2, 4, 6, 8	Discrete Wire					
Terminations	Proprietary low cost/high performance RF	BNC	BNC, MCX, SMB	MHF1, MHF3	SMA, SMB, MCX MMCX, BNC, TNC	SMA, MCX, MMCX	TNC, N
Page	324	328	329	332 - 333	334 - 335	336	340

RF CABLE SELECTOR

CABLE TYPE		0,81	1,13	RG178	RG174	RG316	RG58	RG179	CCA25M
Impedance	Ω	50 ± 3	50 ± 2	50 ± 2	50 ± 5	50 ± 2	50 ± 3	75 ± 3	50 ± 1
Attenuation (dB/m) (Except CCA25M Flexible Microwave Cable = dB/0.25m)	100 MHZ	1.0	0.6	0.5	0.4	0.3	0.2	0.3	0.3 @ 1 GHz
	400 MHZ	2.0	1.2	1.1	0.8	0.6	0.4	0.7	
	1 GHZ	3.3	1.9	1.7	1.4	1.0	0.8	1.0	1.47 @ 12 GHz
	2 GHZ	4.7	2.7	2.7	1.9	1.8	1.7	1.8	
	3 GHZ	5.8	3.3	3.5	2.6	2.5	2.6	2.1	1.44 @ 18 GHz
	4 GHZ	6.8	3.9	4.3	3.3	3.2	3.5	2.5	
	5 GHZ	7.7	4.4	5.1	3.8	4.0	4.5	3.4	1.46 @ 20 GHz
	6 GHZ	8.6	4.9	5.9	4.4	4.25	5.4	3.6	
Dielectric Constant (dk)	------	2.0	2.0	2.1	2.3	2.1	2.3	2.1	1.4
Dielectric Strength	VAC	1000	500	1000	500	1200	------	1200	------
Propagation Delay	nS/m	4.70	4.70	4.83	5.06	4.83	5.05	4.83	3.84
Current Rating	Amps	------	------	3	5	5	------	3	5
Capacitance	pF/m	100	95	96	100	96	101	64	75
Center Conductor	Material	Silver plated Copper	Silver plated Copper	Silver plated Copper Clad Steel	Copper	Silver plated Copper Clad Steel	Tinned Copper	Silver plated Copper	Silver plated Copper
	AWG	36	32	30	26	26	20	30	25
	Stranding (No./mm)	7/0.05	7/0.08	7/0.10	7/0.16	7/0.17	19/0.18	7/0.10	n/a
	Diameter (mm)	0.15	0.24	0.3	0.48	0.51	0.90	0.3	0.46
	Max Resistance (Ω/m)	1.40	0.60	0.34	0.14	0.13	------	0.34	------
Dielectric	Material	FEP	FEP	PTFE	LEP	PTFE	Solid Polyethylene	PTFE	FEP
	Diameter (mm)	0.4	0.66	0.84	1.45	1.52	2.95	1.6	1.17
Shield	Material	Silver plated Copper	Tinned Copper	Silver plated Copper	Tinned Copper	Silver plated Copper	Tinned Copper	Tinned Annealed Copper	Silver plated Copper
	Diameter (mm)	0.65	0.88	1.29	1.95	1.93	3.0	2.0	1.6
Jacket	Material	PFA	FEP	FEP	PVC	FEP	PVC	FEP	FEP
	Diameter (mm)	0.81	1.13	1.80	2.70	2.49	4.95	2.54	1.9
	Temp Rating	-10°C to +90°C	-10°C to +90°C	-55°C to +200°C	-40°C to +85°C	-55°C to +200°C	-40°C to +80°C	-55°C to +200°C	-65°C to +200°C
	Color	Gray	Gray	Brown	Black	Brown	Black	Brown	Brown
Bend Radius	Min	5mm	6.8mm	10.2mm	25.4mm	12.7mm	48.3mm	10.2mm	9mm
Termination Options	Standard Commodity	MHF1 MHF3 SMA	MHF1 SMA	MMCX MCX SMA	MMCX MCX SMA SMB BNC TNC N-TYPE	MMCX MCX SMA SMB BNC TNC N-TYPE	TNC N TYPE	MCX SMB BNC	SMA
Termination Options	Unique Samtec	------	------	EQRF	------	EQRF IJ5C	------	------	PCRF, ATEP RF25M

Sudden Circuits®

Sudden Circuits® are quick-turn, highly configurable, high speed data links for both low and high volume applications. They feature traditional flex circuit materials and Samtec connectors using new direct imaging technology.

Sudden Circuits® has three key features:

1. Design Flexibility

- Choose from among our most popular standard connectors including Q2™, Q Series®, Edge Rate™, and micro and standard pitch strips up to .100" (2,54mm) centerline
- Any connector gender, any orientation, and any number of positions
- Any length up to 16.3 inches (414.02mm)
- Any ground/signal pattern
- 1 ounce .0014" copper (½ ounce available)

Sudden Circuits® gives you literally millions of design permutations and a set lead time and price.

2. Quick Delivery, Competitive Price

- Most initial builds will cost about $1,500 (US) depending on panel density and connectors (approximately 30 to 50 assemblies)
- No artwork or Nonrecurring Engineering Charges (NRE's)
- No long lead times for design or artwork production
- Most orders ship in two weeks or less

3. Easy On-Line Solutionator™ Builder

- Design, build, and order high speed data links on-line
- See next page for Solutionator™ guide

Features coming soon:

- Longer assembly lengths (up to 22" (560mm))
- Differential routing
- ½ ounce .0007" copper (1 ounce standard)
- 90° turns or other custom angles
- Custom ends with other standard Samtec connectors, ZIF or card interfaces
- Reversed connectors
- Special end options including retention pins, latches, mounting hardware, etc.

Standard Sudden Circuits®

Centerline	Terminal	Socket	Description
.100"	TSM	SSW	Tiger Buy
		SSM	SMT Socket
2mm	TMM	SQW-D-VS	Tiger Buy
	TMMH	CLT	Tiger Claw™
	TSH-DV	TLE	Tiger Beam
	LTMM-SM	MMS	Box Style
	LS2		Razor Beam™
.050"x.100"	FTR/TML	RSM	Tiger Buy
.050"	FTS	CLP	Tiger Claw™
	FTSH	FLE	Tiger Beam
	TFM/L	SFM/L	Tiger Eye™
1mm	FTM/FTMH	CLM	Tiger Claw™
		MLE	Tiger Beam
1mm ZIF	ZF1/FC1**		FPC/FFC
.8mm	FTE	CLE	Tiger Beam
	TEM	SEM	Tiger Eye™
	ERM8	ERF8	Edge Rate™
	BTE	BSE	Basic B&B
.8mm Ground Plane	QTE	QSE	Q Strip®
	QRM8	QRF8	Q Rate®
.635mm	BTS	BSS	Basic B&B
	LSS		Razor Beam™
.635mm Ground Plane	QMS	QFS	Q2™
	QTS	QSS	Q Strip®
.5mm	BTH	BSH	Basic B&B
	ERM5	ERF5	Edge Rate™
	LSHM		Razor Beam™
	LTH	LSH	Basic B&B
.5mm Ground Plane	QTH	QSH	Q Strip®
.5mm ZIF	ZF5**/ZHR5**		FPC/FFC
.4mm	ST4	SS4	Micro

** Pads on flex mate with board level connectors.
☐ Common high speed data links. See chart for typical performance and more information.

Common High Speed Flex Data Links

Series	ERDL2	HFHM2	HFEM2	TCDL2	FFDL2	TFMDL	S4DL2
Pitch	0,80mm (.0315")	0,50mm (.0197")	0,80mm (.0315")	2,00mm (.0787")	1,27mm (.050")	1,27mm (.050")	0,40mm (.01575")
Performance* (@ -3dB IL)	2.58 GHz/ 5.16 Gbps	2.36 GHz/ 4.72 Gbps	2.62 GHz/ 5.24 Gbps	1.82 GHz/ 3.64 Gbps	1.78 GHz/ 3.56 Gbps	TBD	TBD
Mates with	ERM8, ERF8	QTH, QSH	QTE, QSE	TMMH, CLT	FTSH, FLE	SFM, TFM, SFML, TFML	SS4/ST4
Page	306			307			

* (127mm) 5" length and DP routing

Custom Flex Circuits

Samtec specializes in custom flex circuits that include one or more of the following:

- four layers or less
- signal integrity requirements
- interconnects between Samtec board level connectors
- passive components like resistors and capacitors

Samtec is able to provide unique interconnect solutions. We have always been very willing to develop Application Specific Connectors (ASPs) from simple modifications to catalog standards to complex full customs. Our new flex manufacturing capability is an extension of what customers have come to expect from Samtec.

Please contact suddencircuits@samtec.com if you can't build what you need with our Sudden Circuits® Solutionator™ and we will be happy to develop a custom quote for your specific application.

Sudden Circuits® SOLUTIONATOR™

Design, Build, and Order on-line!

www.samtec.com/solutionator

Samtec | Signal Integrity Services-Build a Cable Assembly

http://www.samtec.com/solutionator

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PRODUCTS

- HIGH SPEED BOARD-TO-BOARD
- EDGE CARD / MICRO BACKPLANE
- MICRO PITCH BOARD-TO-BOARD
- STANDARD BOARD-TO-BOARD
- RUGGED / POWER
- HIGH SPEED CABLE ASSEMBLIES
- RF CABLE AND COMPONENTS
- IDC / DISCRETE WIRE
- PANEL AND I / O
- STANDARDS / PLATFORMS
- CUSTOM PRODUCTS

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- PRODUCT INFORMATION
- QUALITY / PROCESSING / TOOLS
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- RUGGED / POWER INTEGRITY
- SUDDEN SERVICE
- SERVICE CENTER
- TECHNICAL LIBRARY

Welcome to Samtec's Sudden Circuits® Solutionator™. This unique interactive program allows you to create valid Samtec part numbers for cable assemblies based on your desired specifications and options.

Step 1

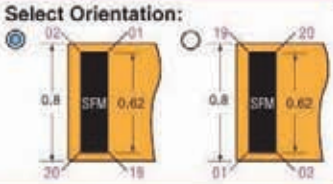
Choose your End One connector, based on pitch, number of positions and orientation:

Select Pitch: 0.40mm, 0.50mm, 0.635mm, 0.80mm, 1.00mm, 1.27mm, 2.00mm

Select Series: FTSH, TFM, TFML, CLP, FLE, SFM, SFML

Select Positions: 05, 07, 10, 15, 20, 25, 30

Select Orientation:



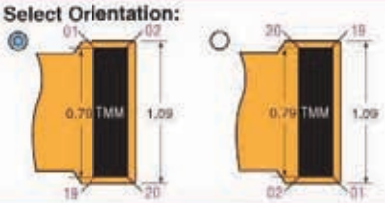
Step 2

Choose your End Two connector, based on pitch, and orientation:

Select Pitch: 0.40mm, 0.50mm, 0.80mm, 1.00mm, 1.27mm, 2.00mm, 2.54mm

Select Series: LTMM, MMS, SMM, SQW, TLE, TMM

Select Orientation:



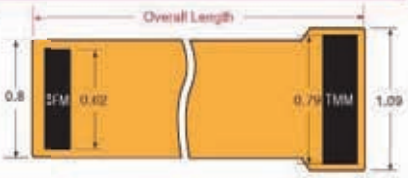
Step 3

Using the diagram, specify the overall length of the assembly. Note that the minimum length is 02.00" (50.80mm) and maximum length is 16.3" (414.02mm).

Enter Overall Length (inches):

192.02 (xx.xx format in mm)

07.56 (xx.xx format in inches)

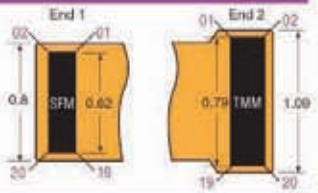


Step 4

Choose your cable assembly pin mapping and whether your assembly needs to be impedance controlled or not: (50 ohm impedance ± 5 ohms)

Select Impedance Controlled: ◉ Yes ○ No

Select Pin Mapping: ◉ Pin 1 to Pin 1 ○ Pin 1 to Pin 2

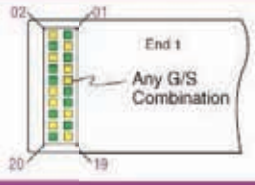


Step 5

Choose your assembly's signaling configuration for End 1 with the specific ground/signal pattern for your application:

Specify Signal/Ground:

- Signal
- Ground



Final Step – Ordering

Complete Part: SCDL–123456–2–SFM–TMM–1

Price and Delivery:

* Minimum order quantity. Varies by assembly.

** May vary by order.

Quantity	Price Each	Standard Delivery**
44* - 72	$34.487 (USD)	7 business days
73 - 172	$27.590 (USD)	9 business days
173 - 287	$24.141 (USD)	11 business days

Select Order Option:

- ◉ **Buy Now** — Enter Credit Card or Purchase Order information to place immediate order
- ○ **Custom Quote** — Enter your Samtec Customer information for customer specific pricing
- ○ **Save for Later** — Save your data link design for future reference, design modification, and/or purchase
- ○ **Configure New** — Start a new flex circuit if the part does not meet your needs

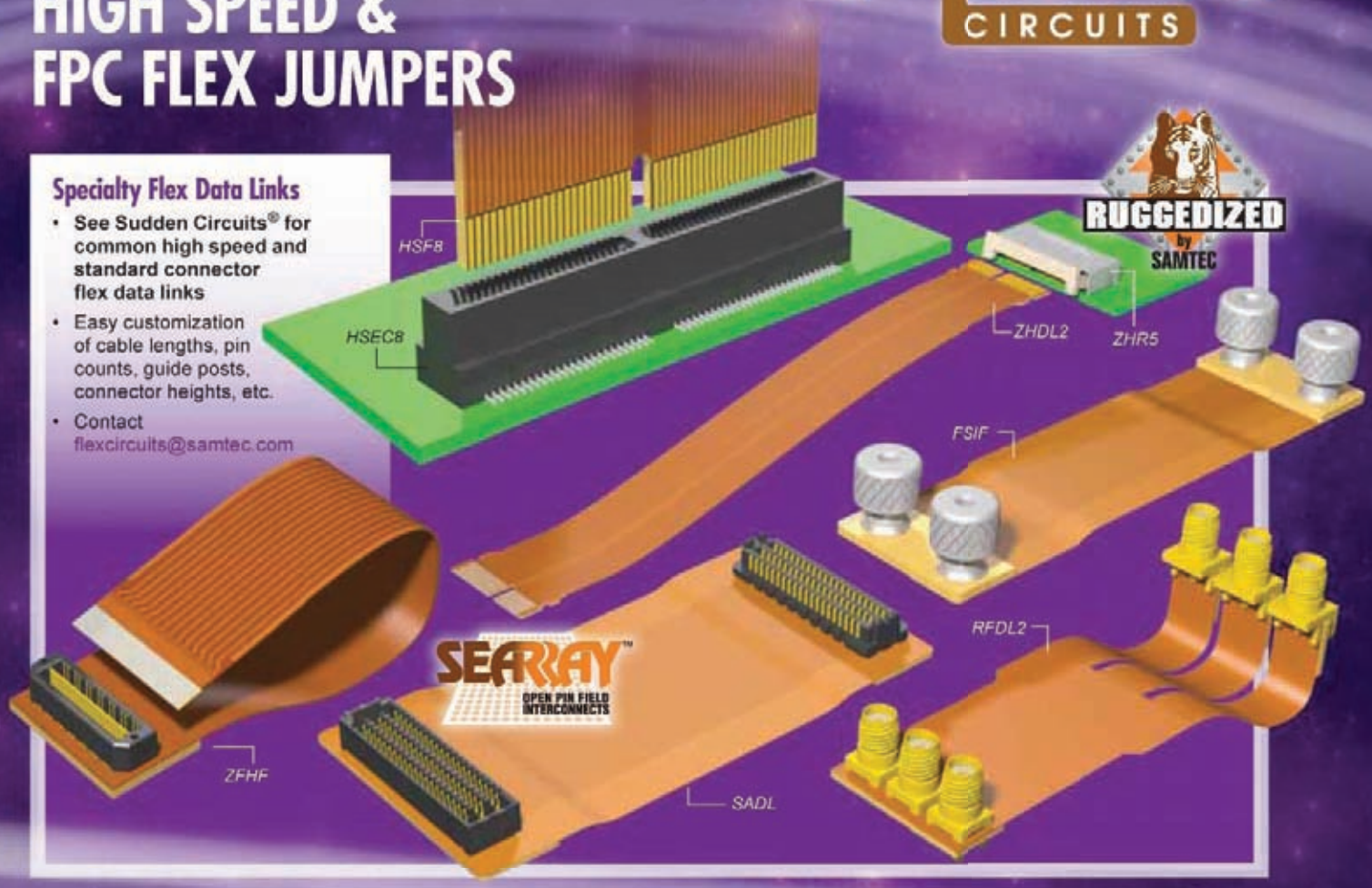
HIGH SPEED & FPC FLEX JUMPERS

FLEX CIRCUITS

RUGGEDIZED by SAMTEC

Specialty Flex Data Links

- See Sudden Circuits® for common high speed and standard connector flex data links
- Easy customization of cable lengths, pin counts, guide posts, connector heights, etc.
- Contact flexcircuits@samtec.com



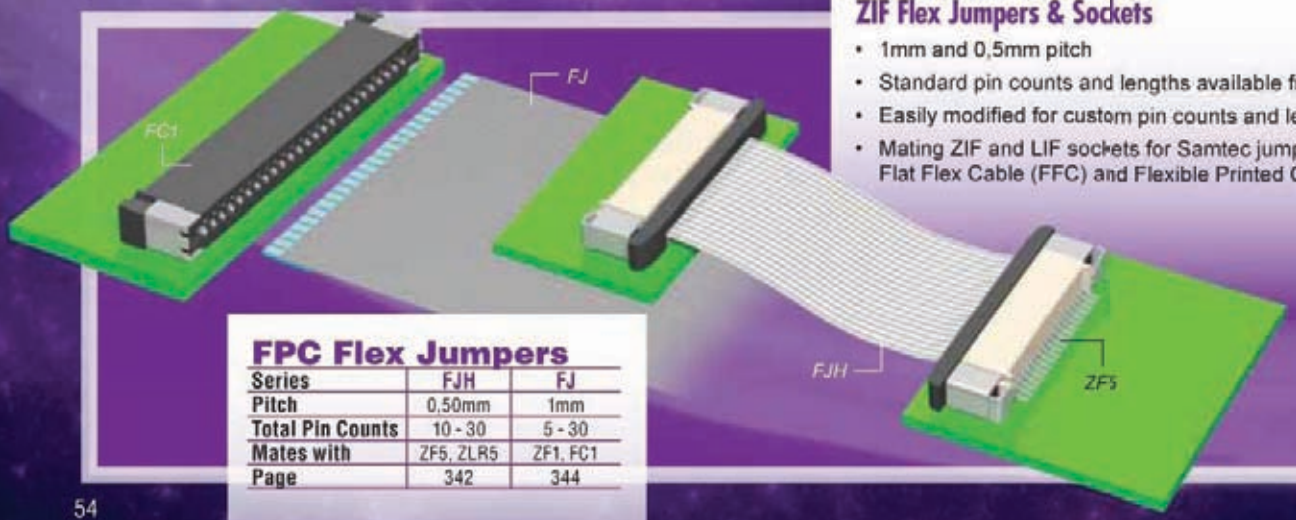
Mid Rate Flex with High Speed Connectors

Series	SADL	RFDL2	FSIF	ZHDL2	ZFHF	HSF8
Cable Type		1 oz. rolled annealed copper				
Standard Cable Length*	254,0mm	127,0mm & 254,0mm	127,0mm & 254,0mm			127,0mm & 254,0mm
Pitch	1,27mm (.050")	12,70mm (.500")	1,00mm (.03937")	0.50mm (.0197")		0,80mm (.0315")
Performance** (@ -3dB IL)	TBD	10.20 GHz/20.4 Gbps	TBD	TBD	TBD	4.86 GHz/9.72 Gbps
Mates with	SEAM, SEAF	SMA	FSI-03	ZHR5	QSE/ZFS	HSEC8
Page	308	309	309	310	312	312

* Other sizes and lengths available. Contact Samtec.
**Performance based on (127mm) 5" to (254mm) 10" assemblies.
HSF8 performance based on (127mm) 5" and DP routing.

ZIF Flex Jumpers & Sockets

- 1mm and 0,5mm pitch
- Standard pin counts and lengths available from stock
- Easily modified for custom pin counts and lengths
- Mating ZIF and LIF sockets for Samtec jumpers or other Flat Flex Cable (FFC) and Flexible Printed Circuit (FPC)



FPC Flex Jumpers

Series	FJH	FJ
Pitch	0,50mm	1mm
Total Pin Counts	10 - 30	5 - 30
Mates with	ZF5, ZLR5	ZF1, FC1
Page	342	344

samtec

FLAT IDC CABLE

.050" (1,27mm) Tiger Eye™ IDC Cable Assemblies

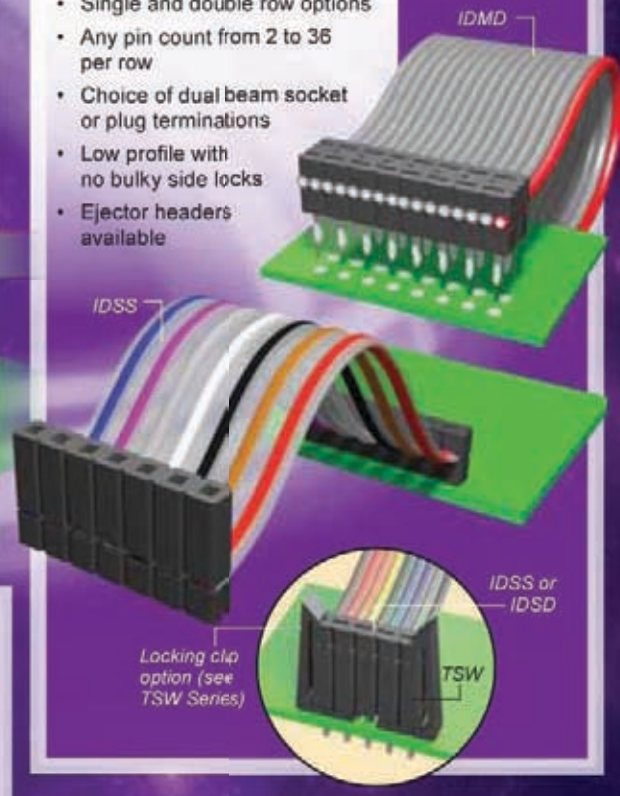
- High performance Tiger Eye™ contacts
- Twisted Pair or flat cable
- Choice of socket and plug terminations
- Ejector headers with optional locking caps
- Exceptionally low profile design – (5,08mm) .200"
- Strain relief option

2mm (.0787") Pitch IDC Cable Assemblies

- High performance Tiger Eye™ contacts
- Choice of socket and plug terminations
- Ejector headers with optional locking caps
- Variety of options including rugged strain relief

Flexible Standard Pitch Flat Cable IDC System

- Single and double row options
- Any pin count from 2 to 36 per row
- Choice of dual beam socket or plug terminations
- Low profile with no bulky side locks
- Ejector headers available



Low Cost/Strain Relief Flat Cable IDC System

- 2mm (0.0787") pitch socket system
- Variety of options including rugged strain relief
- Tiger Beam contacts

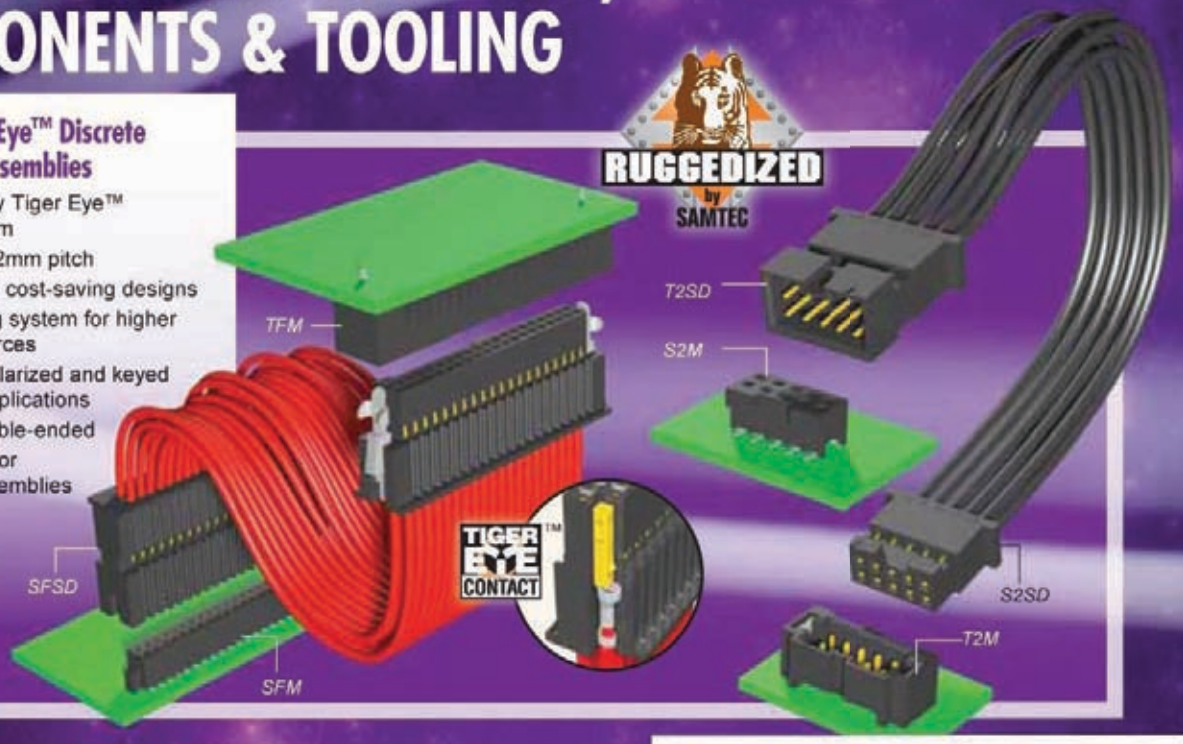
IDC Cable Assemblies

Series	IDMX/IDSX	FFTP/FMTP	FFSD/FFMD	TCSD/TCMD	TLSD
Pitch	2,54mm	1,27mm		2mm	
Cable	28 AWG Gray or Color Coded	30 AWG Twisted Pair	30 AWG Gray	28 AWG Gray	
Shrouded Headers	HTST/TST/ZST	EHF, SHF	SFH/ESHF	STMM/ETMM	TLMM
Ejector Headers	EJH	EHF	EHF	EHT	
Total Pin Counts	2 - 32 (Plug), 4 - 72 (Socket)	10 - 50			
Contacts	Dual Beam	Tiger Eye™			Tiger Beam
Notes	Low Profile & Slim		Strain Relief	Strain Relief Available	
Page	346-347	348	349	350-351	352

DISCRETE WIRE ASSEMBLIES, COMPONENTS & TOOLING

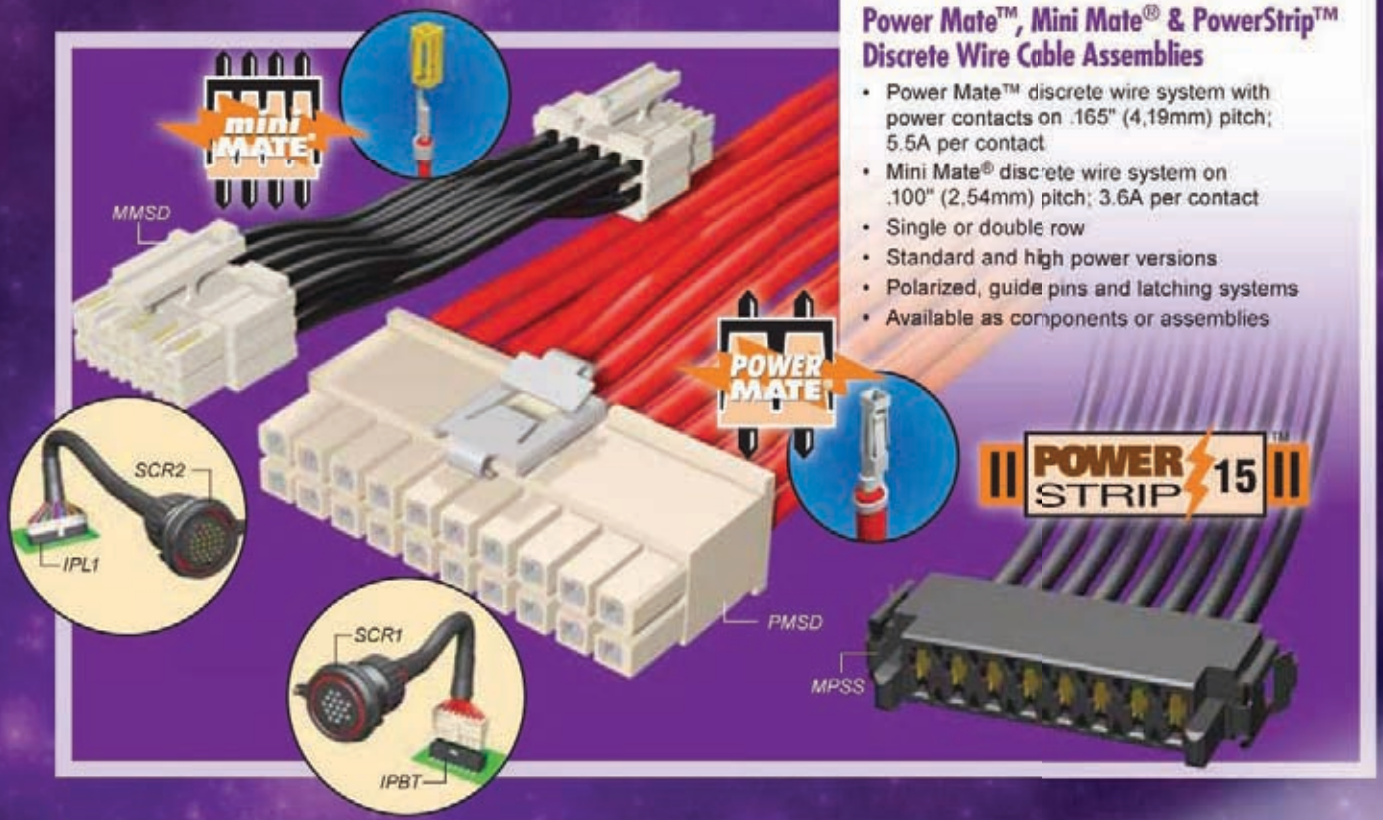
Rugged Tiger Eye™ Discrete Wire Cable Assemblies

- High reliability Tiger Eye™ contact system
- 1,27mm and 2mm pitch
- Standard and cost-saving designs
- Metal latching system for higher withdrawal forces
- Shrouded, polarized and keyed for rugged applications
- Single or double-ended
- Components or complete assemblies



Power Mate™, Mini Mate® & PowerStrip™ Discrete Wire Cable Assemblies

- Power Mate™ discrete wire system with power contacts on .165" (4,19mm) pitch; 5.5A per contact
- Mini Mate® discrete wire system on .100" (2,54mm) pitch; 3.6A per contact
- Single or double row
- Standard and high power versions
- Polarized, guide pins and latching systems
- Available as components or assemblies



Discrete Wire Cable Assemblies

Series	SFSX(T)/TFSX(T)	S2SD/T2SD	MPSS	MMSD(T)/MMSS(T)	PMSD(T)/PMSS(T)
Pitch	1,27mm	2mm	5,00 mm	2,54mm	4,19mm
Cable	28 & 30 AWG	24, 26 & 28 AWG	16 AWG	20 - 30 AWG	16 - 24 AWG
Shrouded Headers	TFM/SFM	T2M/S2M	MPT	IPL1	IPBT
Total Pin Counts	10 - 50	10 - 60	2 - 8	2 - 50	2 - 30
Notes	Tiger Eye™ Contacts		Latches		
Page	148-149	152, 154	270	358	360

Discrete Wire Components

- Broad selection of bodies, contacts & terminals

Bodies & Contacts

Series	ISDF	S2SD	IPD1	IPBD
Pitch	1.27mm (.050")	2mm (.0787")	.100" (2.54mm)	.165" (4.19mm)
Page	353	356	358	360

Mini Applicator (CAT-MA)

- Ideal for use in semi-automatic terminating units
- Quick-change dies matched to specific terminals
- Compatible with industry standard equipment (based on AMP base plate)
- Precision adjust standard
- Wire ranges 16-30 AWG
- For specifications and ordering information go to www.samtec.com?cat-ma

Bench Top Terminating Unit (CAT-3000)

- 3,000 pound (1,360 kilogram) press capacity
- Direct drive electric motor
- Foot switch activated
- Compatible with industry standard equipment
- Precision Adjust, Stripping Module and CQM Sensor available
- For specifications and ordering information go to www.samtec.com?cat-3000

Hand Tool (CAT-HT)

- Ideal for low volume, pre-production and repair applications
- Double-action handle
- Straight-motion die
- Modular head
- Wire ranges 16-30 AWG
- Extraction tools also available
- For specifications and ordering information go to www.samtec.com?cat-ht

Additional Available Hardware

- Wire preparation equipment (de-reel, cut & strip)
- Lead Makers (produces one lead terminated at both ends)
- Harness Makers (produces multiple leads terminated at both ends and bundled)
- Automatic Wire Handling Equipment (bundles, marks, cuts, strips, seals, etc.)
- Please contact atg@samtec.com for more information

Field Engineering Services

- Operator training
- Maintenance and repair
- Set-up and upgrading
- Service plans

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HIGH SPEED I/O

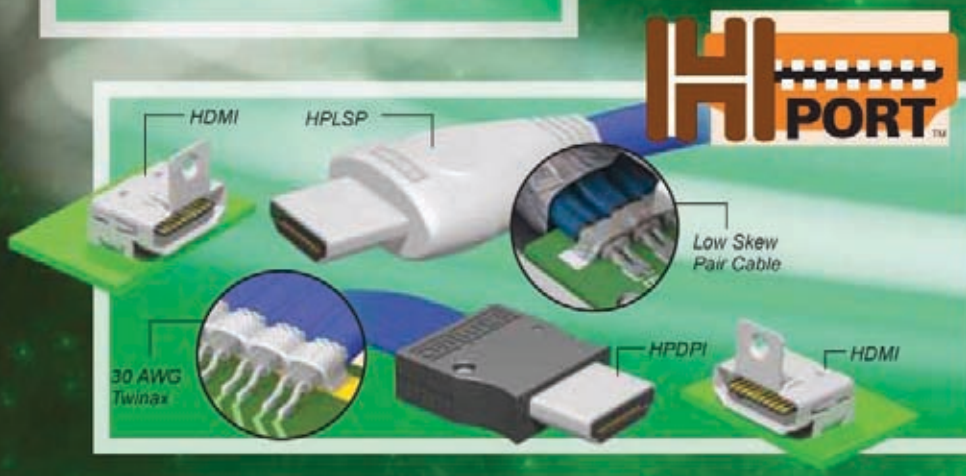
Eye Speed™ Cable Assemblies

- Rugged Edge Rate™ contacts
- 32 AWG Low Skew Pair cable
- 100Ω differential pair signaling
- Connector design minimizes PCB real estate
- Two-piece system allows for high cycles
- Hot pluggable
- Die cast housing
- Positive latching
- Shielded for EMI protection

H-Port™ Cable Assemblies

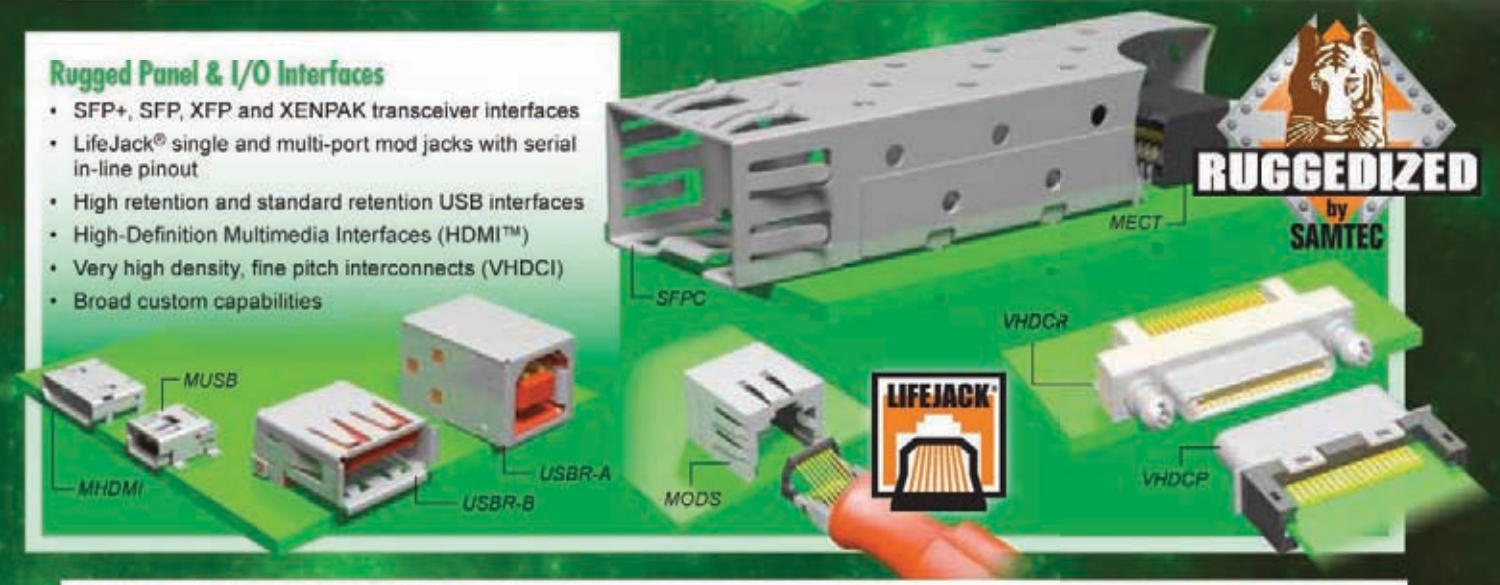
- Higher bandwidth in standard HDMI™ form factor
- 32 AWG Low Skew Pair for outside the box applications
- 30 AWG twinax cable for inside the box
- Tested to HDMI™ Category 2 higher performance
- Mates with industry standard HDMI™ receptacles
- Standard HDMI™ cables available

HDMI™ is a trademark of HDMI Licensing LLC



Rugged Panel & I/O Interfaces

- SFP+, SFP, XFP and XENPAK transceiver interfaces
- LifeJack® single and multi-port mod jacks with serial in-line pinout
- High retention and standard retention USB interfaces
- High-Definition Multimedia Interfaces (HDMI™)
- Very high density, fine pitch interconnects (VHDCI)
- Broad custom capabilities



High Speed I/O Systems

Series	MECT/SFPC	EPLSP	HPLSP	HPDPI	HDMI/MHDMI	USBR/USB/USBC/ MUSB/SPM MUSBS/MUSBR	MODS/MODM	VHDCP/VHDCR
Brand Name		Eye Speed™	H-Port™				LifeJack®	
Applications	SPF+, SFP, XFP & XENPAK	Rugged, Panel-to-Panel	Rugged, Panel-to-Panel	Rugged, Cable-to-Board	HDMI™	Increased Retention Mini & Standard USB	Extended Life Mod Jack	VHDCI
Performance	MSA	2.0 GHz @ 1 meter*	2.4 GHz @ 1 meter*	1.6 GHz @ 1 meter*		USB, USB 2.0	CAT 3, 5, 5e	
Notes	Connectors, Cages & Kits Available	8 (4x) or 16 (8x) Signal Pairs, 5 power 2 clock Power Lines, 32 AWG Low Skew Pair Cable	32 AWG Low Skew Pair Cable	30 AWG Twinax Cable	Standard & Mini	Minimum 15N Withdrawal Force, Cable & Sealed Systems	End-user Field Replaceable Contact Arrays	Right Angle & Edge Mount
Page	362-363	364-365	366	367	368-369	381-384	386-387	385

* Estimated, may vary depending on signal type

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RUGGED I/O

AcciMate™ IP68 Sealed Circulars

- Meets IP68 requirements for dust and waterproof sealing
- Ethernet and USB systems in size 17 shell
- Signal, Power and Mini USB systems in sizes 10 and 17
- Termination from Panel-to-Board via standard Ethernet, USB cable, Power Mate™, Mini Mate® or rugged Tiger Eye™ cable assemblies
- Field Termination Kits for long cable runs and small opening applications where the Sealed Circular Ethernet housing is applied

AcciMate™ IP68 Sealed Rectangulars

- Meets IP68 requirements for dust and waterproof sealing
- Ethernet, power and rugged Tiger Eye™ signal systems
- Maximum density for sealed systems
- Audible click positive latching

AcciMate™ IP68 Cable Plugs & Receptacles

Series	RCT/RPCT	RCE/RPBE	RC1/RPB1	SCP3/SCR3	SCP1/SCR1	SCP2/SCR2	SCPE/SCRES	SCPU/SCRUS
Applications	High Density	Ethernet	Mini Mate®	Micro	Power	High Density	Ethernet	USB
Shell Size	Rectangular			10	17 & 10	17 & 10	17	17 & 10
Wire	28 AWG		24 AWG	28 AWG	22 AWG	24 AWG	24 AWG	Meets USB 2.0
Notes	Tiger Eye™ Contacts		Mini Mate®	Tiger Eye™ Contacts	16 & 4 Pins	32 & 10 pins	Field Termination Kit Available	Standard & Mini USB Available
Page	370-371	372-373	374	375	376-377	378	379	380

APPLICATION SPECIFIC PRODUCTS

Express Modifications
Simple deeds done cheap (and fast)

- Pin modifications
- Body modifications
- Screen printing
- Special plating
- Special cables & wiring
- Multiple stack bodies
- Special polarizations
- Sudden Circuits®

Engineered Customs

Guaranteed to blow your mind (not your budget)

- Special platings/metals (non-magnetic, ferrite-free)
- Coax and twinax cables optimized for signal integrity
- Rugged locking, latching screw systems
- Custom high speed flex circuit assemblies

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SUDDEN INFORMATION
USER FRIENDLY WEB SITES

Visit us on the web at www.samtec.com

Product Specs & Test Reports

www.samtec.com

- See www.samtec.com? followed by series prefix
- Engineering prints
- PCB footprints
- PDF catalog pages
- Models for simulation (SPICE, IBIS, ADS, ELDO, Allegro®)
- PADs and OrCAD® libraries (13 file types)
- 3D Models
- Application Notes
- Media Room
- High speed characterization reports
- Lead coplanarity specifications

Product Searches

- New comprehensive product search
- Keyword search
- Picture search
- Industry standard search

Online Cable Builders

- High Speed, I/O, Discrete Wire, IDC, Sealed Circulars, Flex, RF and RF/Combo Builders
- Sudden Circuits® Solutionator™ program for design, build and ordering flex circuit data links on-line
- Automatically validate part numbers
- Order samples on-line

Sudden Service

- Price & Delivery
- Buy Now
- Sudden Samples ship within 24 hours via express service

SUDDEN samtec SAMPLE

Service Center

www.samtec.com?logon=psc

- Customer specific information
- Real-time 24 hours/7 days
- Quotes and ordering on-line
- Delivery status and expediting
- Shipment tracking
- "Personal Call Back" program available

Personal Call Back

- Immediate reply from a Samtec Customer Service Representative or the Signal Integrity Group
- Choose either phone or private, one-on-one chat
- Choose from one of Samtec's worldwide service facilities

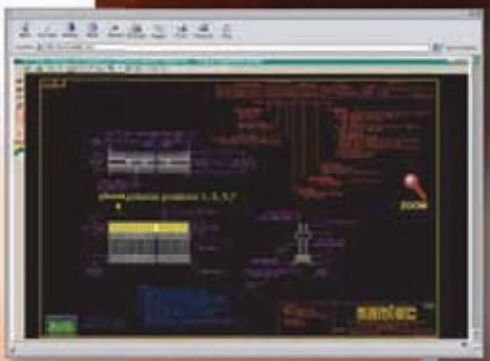
Signal Integrity Tools

- Bandwidth Performance Selector
- High Speed Connector Selector
- Final Inch® breakout region design tool for ease of PCB manufacture and to optimize high speed performance
- Cable Performance Calculator
- High Speed Cable (On-Line Cable Builder) "Build-a-Part-Number" Program
- Test data comparison
- White Papers and Application Notes

Custom Products

www.samtec.com?logon=pdc

- Project Management System
- For standard and modified connectors
- Create modified connectors on-line by "redlining" prints
- "Personal Call Back" program available



SIGNAL INTEGRITY

BOARD TO BOARD

Q Series® Strips
0,5mm Pitch Q Series® (QTH, QSH) 64-65
.025" (0,635mm) Pitch Q Series® (MIT, MIS, QTS, QSS) 66-71
0,8mm Pitch Q Series® (QTE, QSE) 72-73

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Q2™ and Edge Rate™ Strips 14-15
High Density Arrays 16-17
Connector Strip Cable Solutions 18-19
Micro Pitch & RF 20-21
High Speed Interconnect Selector 22-23

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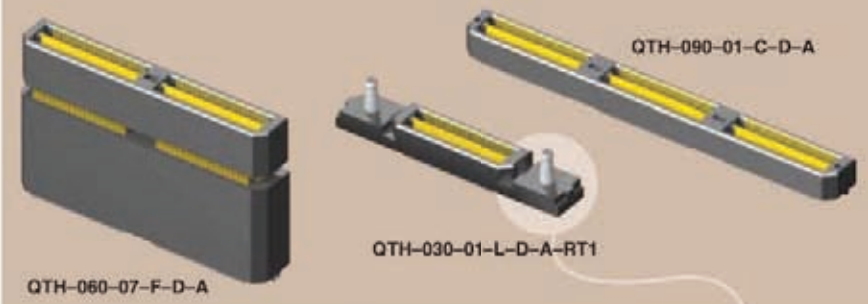
QSTRIP®

(0,50mm) .0197"

QTH SERIES



HIGH SPEED GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QTH

Insulator Material: Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: Contact: 1.0A @ 30°C Temperature Rise Ground Plane: 7.8A @ 30°C Temperature Rise

Operating Temp Range: -55°C to +125°C

Voltage Rating: 125 VAC (5mm Stack Height)

Max Cycles: 100

Unmating Force (-RT1 option): -RT1 option increases unmating force up to 50%

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (030-060) (0,15mm) .006" max (090-120)

Board Stacking: For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- 14mm, 15mm, 22mm and 30mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0,76µm) Gold (Specify -H plating for Data Rate cable mating applications.)
- Edge Mount & Guide Posts
- 150 positions per row Call Samtec.

***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

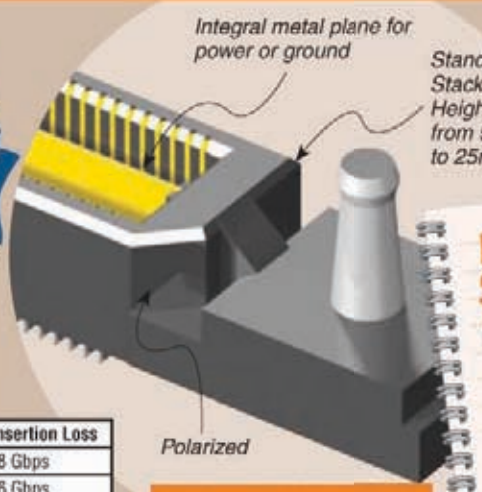
Board Mates: QSH

Cable Mates: HFHM2, HQCD, HQDP (See Application Specific note)

Final Inch Break Out Region Performance Certified finalinch.com

E.L.P. EXTENDED LIFE PRODUCT

10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with QSH



RUGGEDIZED by SAMTEC

5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	9 GHz / 18 Gbps
Differential Pair Signaling	–D	8 GHz / 16 Gbps
Differential Pair Signaling	–DP	9.5 GHz / 19 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QTH or contact sig@samtec.com

Protocols Supported

Hypertransport™
XAUI
PCI Express®
SATA
Infiniband

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

QTH	–	PINS PER ROW NO. OF PAIRS	–	LEAD STYLE	–	PLATING OPTION	–	TYPE	–	A	–	OTHER OPTION

PINS PER ROW NO. OF PAIRS

–030, –060, –090, –120
(60 total pins per bank = –D)

–020, –040, –060, –080
(20 pairs per bank = –D–DP)

LEAD STYLE

Specify LEAD STYLE from chart

PLATING OPTION

–F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

TYPE

–D
= Single-Ended

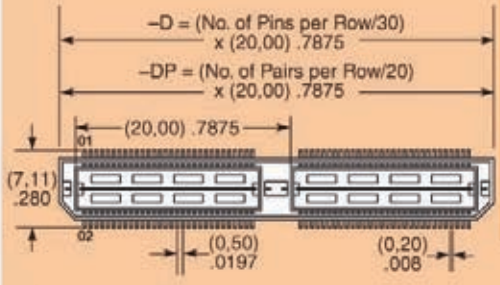
–D–DP
= Differential Pair (–01 only)

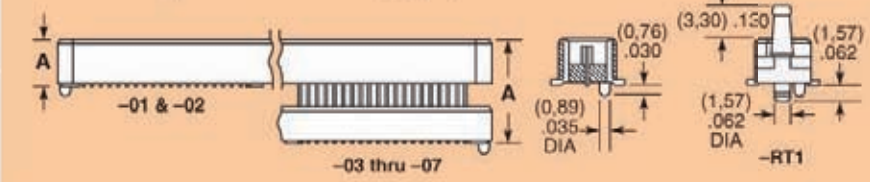
OTHER OPTION

–K
= (7,00mm) .275" DIA Polyimide film Pick & Place Pad (N/A with -05 & -07 lead style)

–TR
= Tape & Reel (–090 positions maximum)

–RT1
= Retention Option (–01 Lead Style only & –090 positions maximum)





QTH LEAD STYLE	A	HEIGHT WITH QSH
–01	(4,27) .168	(5,00) .197
–02	(7,26) .286	(8,00) .315
–03	(10,27) .404	(11,00) .433
–04	(15,25) .600	(16,00) .630
–05	(18,26) .718	(19,00) .748
–07	(24,24) .954	(25,00) .984

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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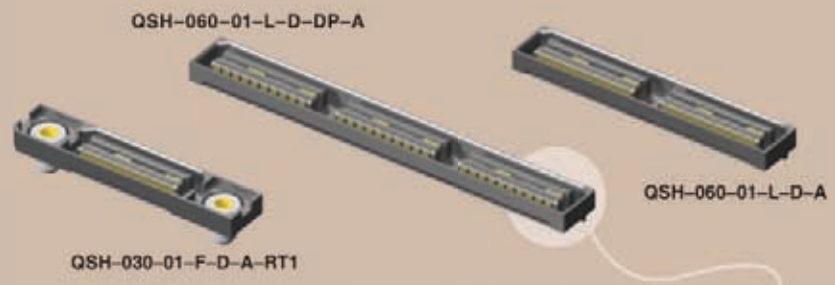
QSTRIP®

(0,50mm) .0197"

QSH SERIES



HIGH SPEED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QSH

Insulator Material: Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: Contact: 1.0A @ 30°C Temperature Rise Ground Plane: 7.8A @ 30°C Temperature Rise

Operating Temp Range: -55°C to +125°C

Voltage Rating: 125 VAC (5mm Stack Height)

Max Cycles: 100

Unmating Force (-RT1 option): -RT1 option increases unmating force up to 50%

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 80 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (030-060) (0,15mm) .006" max (090-120)

Board Stacking: For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- 14mm, 15mm, 22mm and 30mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0,76µm) Gold (Specify -H plating for Data Rate cable mating applications.)
- Edge Mount & Guide Posts
- 150 positions per row

Call Samtec.

***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates: QTH

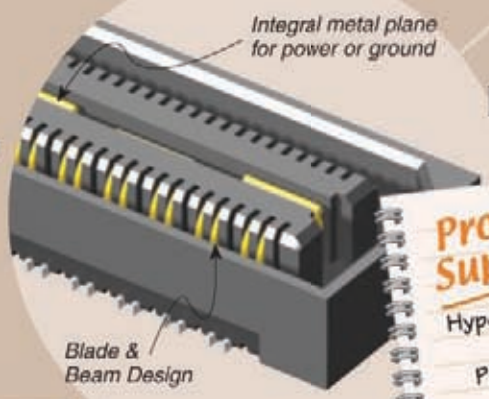
Cable Mates: HQCD, HQDP, HFHM2 (See Application Specific note)

Final Inch Break Out Region Performance Certified finalinch.com

E.L.P. EXTENDED LIFE PRODUCT

10 Year Mixed Flowing Gas (MFG)

Call Samtec for maximum cycles mated with QSH



RUGGEDIZED by SAMTEC

Protocols Supported

Hypertransport™
XAUI
PCI Express®
SATA
Infiniband

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	9 GHz / 18 Gbps
Differential Pair Signaling	–D	8 GHz / 16 Gbps
Differential Pair Signaling	–DP	9.5 GHz / 19 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QSH or contact sig@samtec.com

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

QSH – PINS PER ROW NO. OF PAIRS – 01 – PLATING OPTION – TYPE – A – OTHER OPTION

–030, –060, –090, –120
(60 total pins per bank = –D)

–020, –040, –060, –080
(20 pairs per bank = –D–DP)

–F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

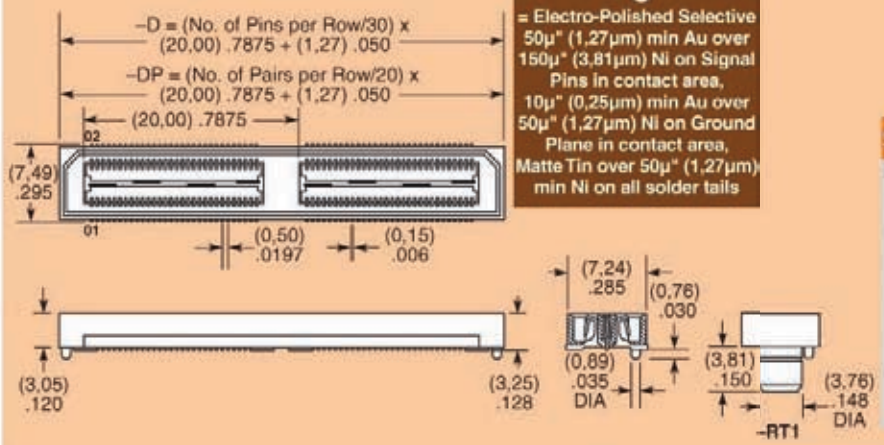
–D
= Single-Ended

–D–DP
= Differential Pair (–01 only)

–K
= (8,25mm) .325" DIA Polyimide Film Pick & Place Pad

–TR
= Tape & Reel (–090 positions maximum)

–RT1
= Retention Option (–090 positions maximum)



STACK HEIGHTS

QTH LEAD STYLE	MATED HEIGHT WITH QSH
–01	(5,00) .197
–02	(8,00) .315
–03	(11,00) .433
–04	(16,00) .630
–05	(19,00) .748
–07	(25,00) .984

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739292
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SAMTEC TAIWAN • Tel: 886-2-2735 6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 1 : 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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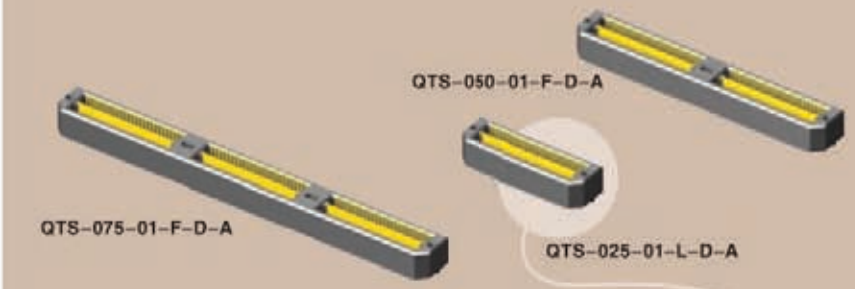
QSTRIP®

(0,635mm) .025"

QTS SERIES



HIGH SPEED GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QTS

Insulator Material:
Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
Contact: 1.1A @ 30°C Temperature Rise
Ground Plane: 7.8A @ 30°C Temperature Rise

Operating Temp:
-55°C to +125°C

Voltage Rating:
285 VAC

Max Cycles:
100

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

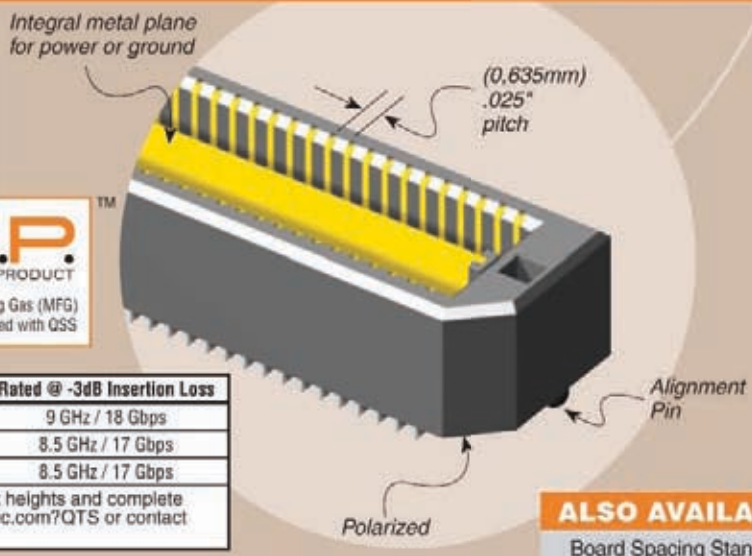
SMT Lead Coplanarity:
(0,10mm) .004" max (025-075)
(0,15mm) .006" max (100)

Board Stacking:
For applications requiring more than two connectors per board or 100 positions or higher, contact ipg@samtec.com

Board Mates:
QSS

Cable Mates:
SQCD

E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with QSS



5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	-D	9 GHz / 18 Gbps
Differential Pair Signaling	-D	8.5 GHz / 17 Gbps
Differential Pair Signaling	-DP	8.5 GHz / 17 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QTS or contact sig@samtec.com

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

APPLICATION SPECIFIC OPTION

- 11mm & 16mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0,76µm) Gold
- Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available.
- 125 positions per row
- Edge Mount

Call Samtec.

***Note:** -C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

QTS - NO. OF POSITIONS PER ROW - LEAD STYLE - PLATING OPTION - D - A - OTHER OPTION

NO. OF POSITIONS PER ROW: -025, -050, -075, -100 (50 total positions per bank)

LEAD STYLE: Specify LEAD STYLE from chart.

PLATING OPTION:

-F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

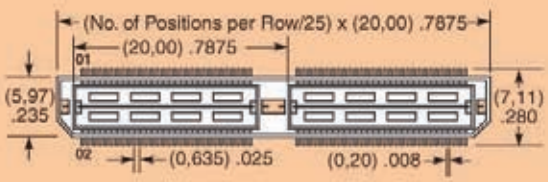
-L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

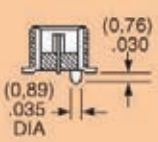
-C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

OTHER OPTION:

-K
= (7,00mm) .275" DIA Polyimide film Pick & Place Pad

-TR
= Tape & Reel (-075 positions maximum)





STACK HEIGHTS		
LEAD STYLE	A	MATED HEIGHT
-01	(4,27) .168	(5,00) .197
-02	(7,26) .286	(8,00) .315

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

F-210

samtec

QSTRIP®

(0,635mm) .025"

QSS SERIES

HIGH SPEED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QSS

Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Contact: 1.1A @ 30°C Temperature Rise
Ground Plane: 7.8A @ 30°C Temperature Rise
Operating Temp:
-55°C to +125°C
Voltage Rating:
285 VAC
Max Cycles:
100
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (025-050)
(0,15mm) .006" max (75-100)
Board Stacking:
For applications requiring more than two connectors per board or 100 positions or higher, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- 11mm & 16mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0,76µm) Gold
- Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available.
- 125 positions per row
- Edge Mount
- Locking screw hole for QTS-RA-LS2

Call Samtec.

***Note:** -C Plating passes 10 year MFG testing

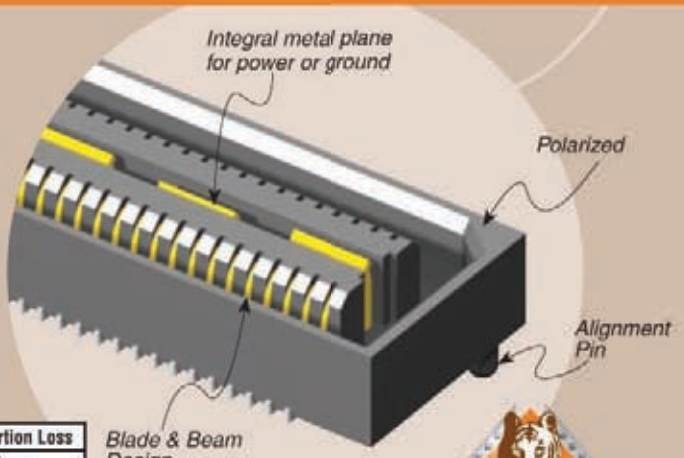
Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates:
QTS

Cable Mates:
SQCD

Final Inch
Break Out Region Performance Certified
finalinch.com

E.L.P.™
EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with QTS



5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	-D	9 GHz / 18 Gbps
Differential Pair Signaling	-D	8.5 GHz / 17 Gbps
Differential Pair Signaling	-DP	8.5 GHz / 17 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QSS or contact sig@samtec.com

RUGGEDIZED by SAMTEC

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

QSS - NO. OF POSITIONS PER ROW - 01 - PLATING OPTION - D - A - OTHER OPTION

-025, -050, -075, -100
(50 total positions per bank)

-F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

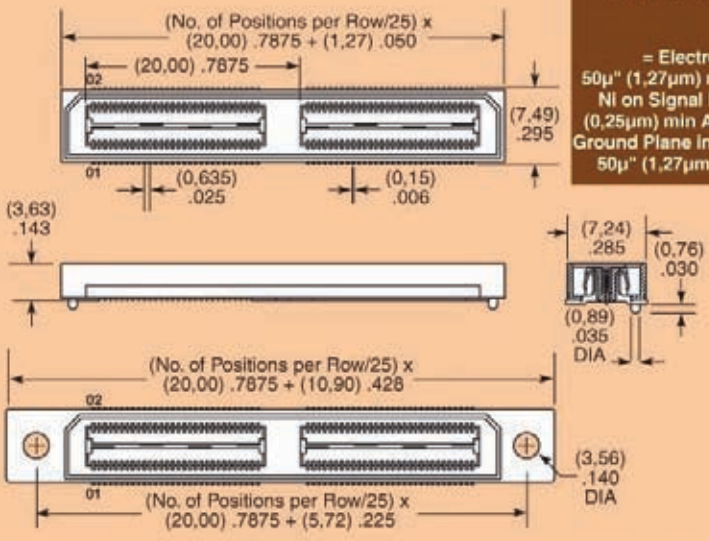
-L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

-C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

-GP
= Guide Holes for mating with QTS-RA

-K
= (6,25mm) .325" DIA Polyimide Film Pick & Place Pad

-TR
= Tape and Reel (-075 positions maximum)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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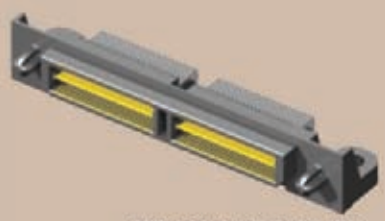
QSTRIP®

(0,635mm) .025"

QTS-RA SERIES



QTS-050-01-F-D-RA-WT

QTS-025-01-F-D-RA

RIGHT ANGLE GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QTS-RA

Insulator Material:
Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
1.2A @ 30°C Temperature Rise

Operating Temp Range:
-55°C to +125°C

Voltage Rating:
275 VAC mated with QSS-RA

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max (025-075)
(0,15mm) .006" max (100)

APPLICATION SPECIFIC OPTION

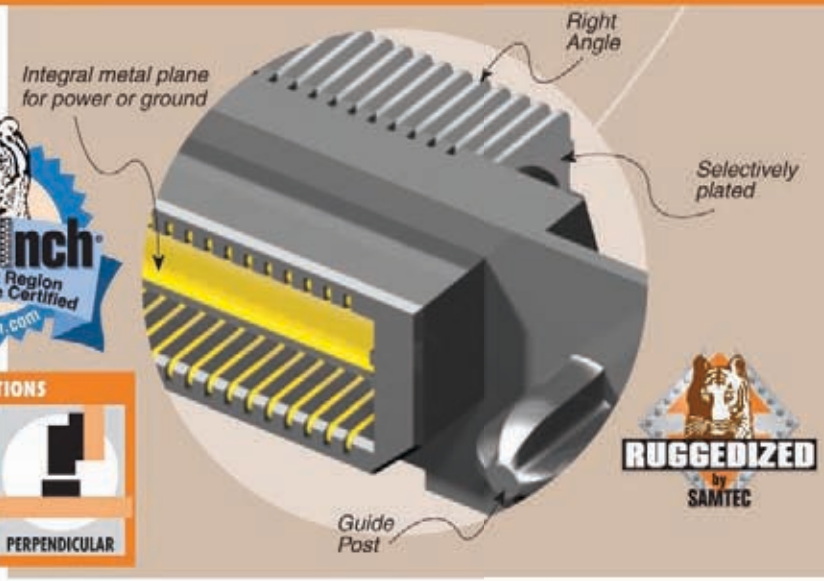
- 30µ" (0,76µm) Gold
- Differential Pair
- "Partitionable" (combine differential & single-ended banks in same connector)
- Lead Style for (2,36mm) .093" thick board
- –LS1 Locking Screw (Mates with QSS-RA-LS1)
- –LS2 Locking Screw (Mates with QSS-LS2)

Call Samtec.

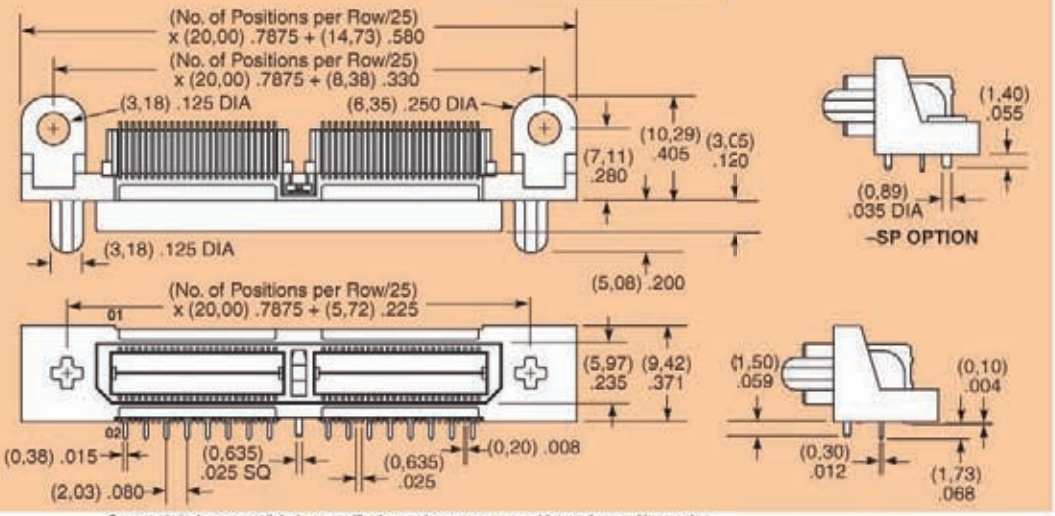
Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates:
QSS

FinalInch Break Out Region Performance Certified finalinch.com



QTS	NO. OF POSITIONS PER ROW	01	PLATING OPTION	D	RA	WT	OTHER OPTION
	–025, –050, –075, –100 (50 total positions per bank)		–F = Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails –L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails			–WT = Weld Tab (Not available on 25 positions)	–SP = Solder Pin



Due to technical progress, all designs, specifications and components are subject to change without notice.

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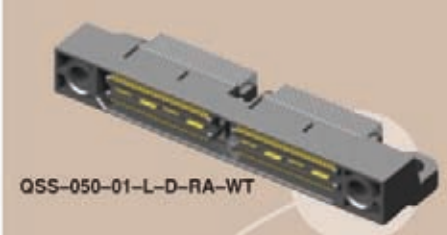
QSTRIP®

(0,635mm) .025"

QSS-RA SERIES



RIGHT ANGLE GROUND PLANE SOCKET

SPECIFICATIONS

Board Mates: QTS

For complete specifications and recommended PCB layouts see www.samtec.com?QSS-RA

Insulator Material: Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: 1.2A @ 30°C Temperature Rise (Inner Row)

Operating Temp: -55°C to +125°C

Voltage Rating: 275 VAC mated with QTS-RA

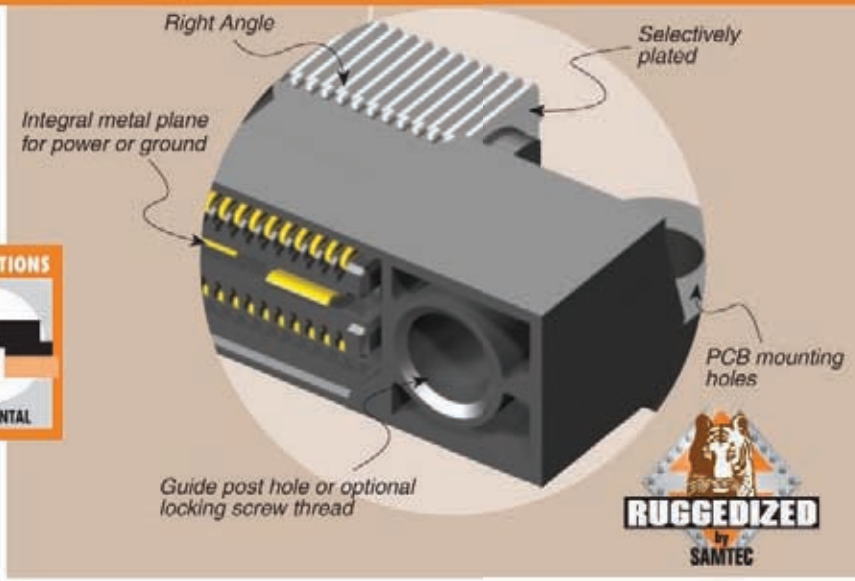
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (025-075) (0,15mm) .006" max (100)



APPLICATION SPECIFIC OPTION

- 30µ" (0,76µm) Gold
- Tray Packaging
- Lead style for (2,36mm) .093" thick board
- Threaded insert (-MTI) for mating with SQCD with captive screws
- –LS1 Locking Screw Hole for mating with QTS-RA-LS1

Call Samtec.

APPLICATION

Note: Some lengths, styles and options are non-standard, non-returnable.

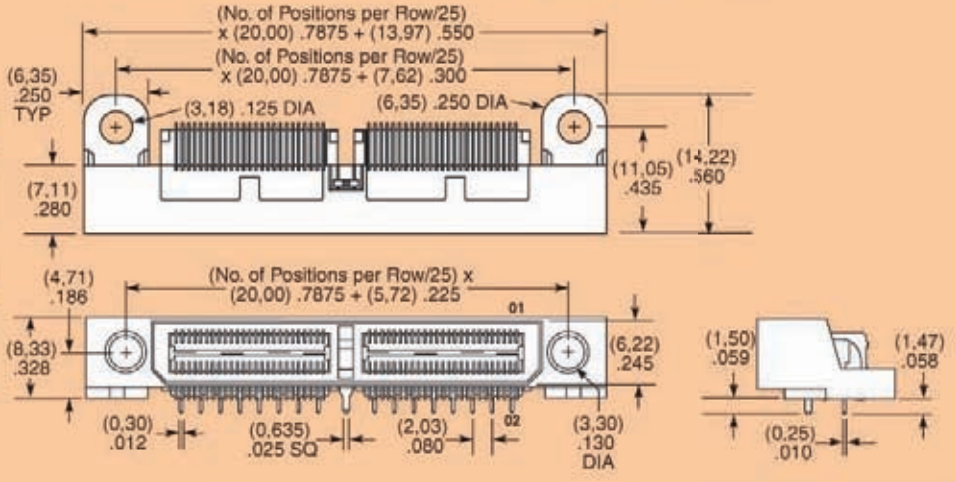
QSS	–	NO. OF POSITIONS PER ROW	–	01	–	PLATING OPTION	–	D	–	RA	–	WT

–025, –050, –075, –100
(50 total positions per bank)

–F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–WT
= Weld Tab (Not available on 25 position)



Due to technical progress, all designs, specifications and components are subject to change without notice.

F-210

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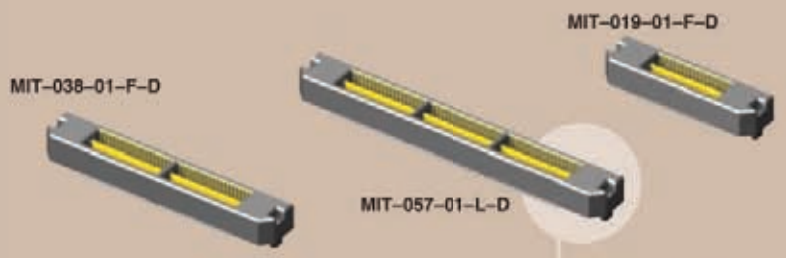
QSTRIP®

(0,635mm) .025"

MIT SERIES



THROUGH-HOLE GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MIT

Insulator Material:
Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
Contacts: 1.6A @ 80°C
Ground Plane: 8.7A @ 80°C

Operating Temp Range:
-55°C to +125°C

Voltage Rating:
275 VAC

Max Cycles:
100

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

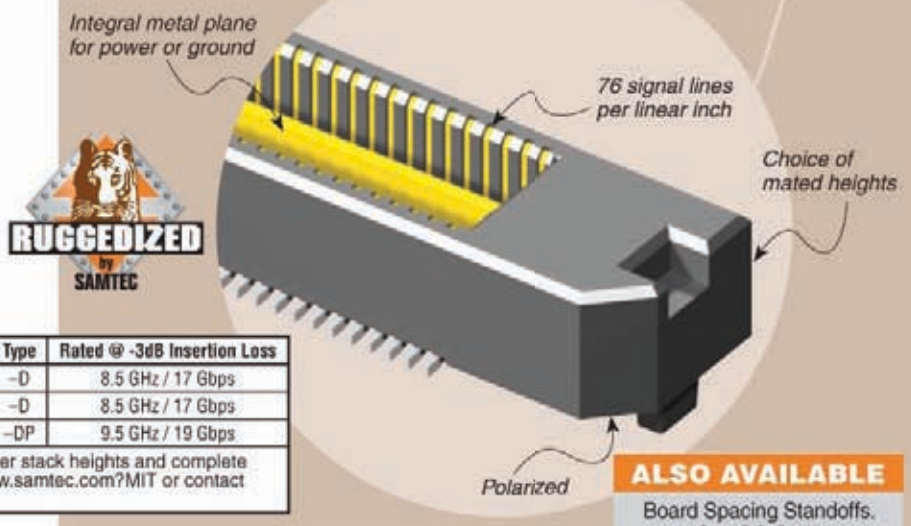
Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0.10mm) .004" max (019-076)

Board Stacking:
For applications requiring more than two connectors per board or 76 positions or higher, contact ipg@samtec.com

Board Mates:
MIS

Cable Mates:
MICD



5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	-D	8.5 GHz / 17 Gbps
Differential Pair Signaling	-D	8.5 GHz / 17 Gbps
Differential Pair Signaling	-DP	9.5 GHz / 19 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?MIT or contact sig@samtec.com

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

APPLICATION SPECIFIC OPTION

- 11mm, 16mm, 18,75mm and 22mm stack height
- 30µ" (0,76µm) Gold
- Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available.
- 95, 114 and 133 positions per row
- Edge Mount

Call Samtec.

MIT - **NO. OF POSITIONS PER ROW** - **LEAD STYLE** - **PLATING OPTION** - **D** - **OTHER OPTION**

–019, –038, –057, –076
(38 total positions per bank)

Specify LEAD STYLE from chart

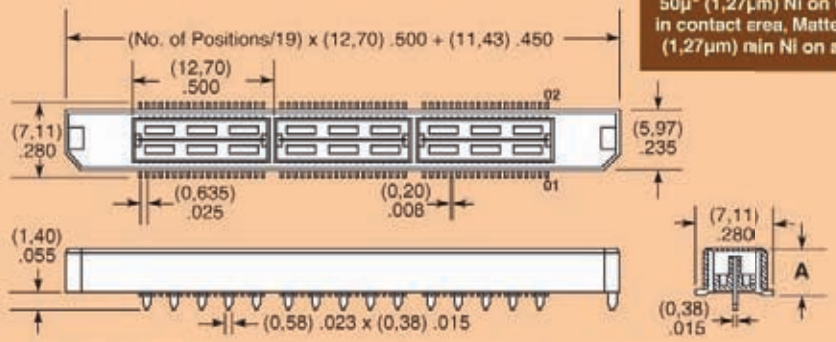
–F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

–K
= (7,00mm) .275" DIA Polyimide film Pick & Place Pad

–TR
= Tape & Reel



STACK HEIGHTS		
LEAD STYLE	A	MATED HEIGHT
–01	(4,27) .168	(5,00) .197
–02	(7,26) .286	(8,00) .315

Processing conditions will affect mated height.

Note: Rugged through-hole ground plane soldered to board (requires paste-over-hole, not press-fit) for added retention to PCB.

***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

QSTRIP®

(0,635mm) .025"

MIS SERIES

THROUGH-HOLE GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MIS

Insulator Material:
Liquid Crystal Polymer
FILE NO. E111594

Contact Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
Contacts: 1.6A @ 80°C
Ground Plane: 8.7A @ 80°C

Operating Temp Range:
-55°C to +125°C

Voltage Rating:
275 VAC

Max Cycles:
100

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

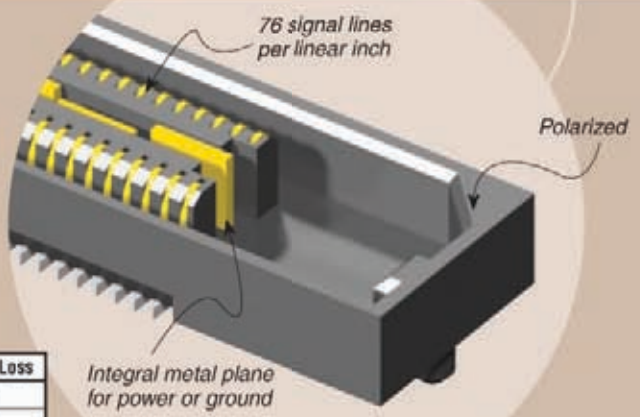
SMT Lead Coplanarity:
(0.10mm) .004" max (019-076)

Board Stacking:
For applications requiring more than two connectors per board or 76 positions or higher, contact ipg@samtec.com

Board Mates:
MIT

Cable Mates:
MICD

RUGGEDIZED by SAMTEC



5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	8.5 GHz / 17 Gbps
Differential Pair Signaling	–D	8.5 GHz / 17 Gbps
Differential Pair Signaling	–DP	9.5 GHz / 19 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?MIS or contact sig@samtec.com		

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

APPLICATION SPECIFIC OPTION

- 11mm, 16mm, 18,75mm and 22mm stack height
- 30µ" (0,76µm) Gold
- Differential Pair and "Partitionable" (combine differential & single-ended banks in same connector) available.
- 95, 114 and 133 positions per row
- Edge Mount

Call Samtec.

***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

MIS	–	NO. OF POSITIONS PER ROW	–	01	–	PLATING OPTION	–	D	–	OTHER OPTION

–019, –038, –057, –076
(38 total positions per bank)

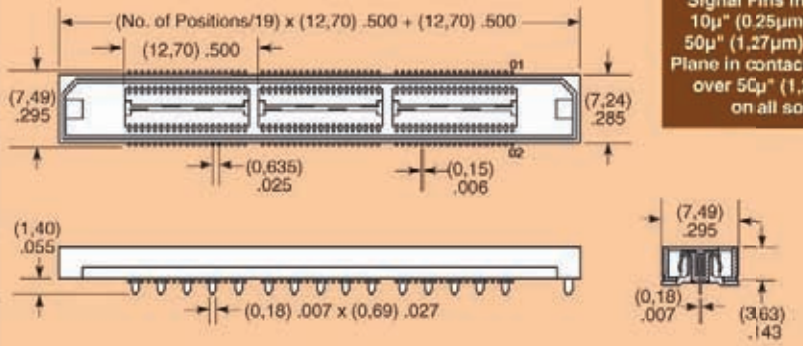
–F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

–K
= (7,00mm) .275" DIA Polyimide film Pick & Place Pad

–TR
= Tape & Reel



Note: Rugged through-hole ground plane soldered to board (requires paste-over-hole, not press-fit) for added retention to PCB.

Due to technical progress, all designs, specifications and components are subject to change without notice.

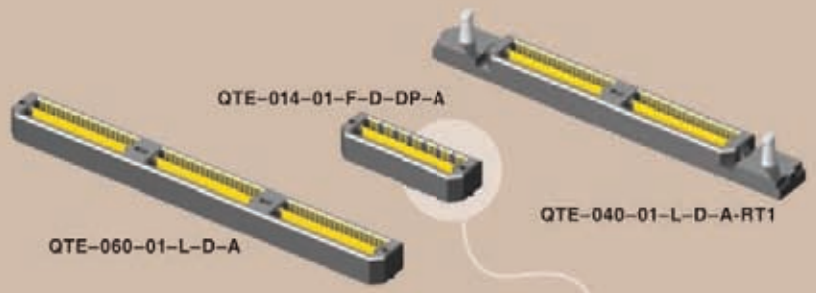
F-210

samtec

QSTRIP®

(0,80mm) .0315"

QTE SERIES



HIGH SPEED GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QTE

Insulator Material: Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: Contacts: 1.3A @ 95°C Ground Plane: 10.1A @ 95°C

Operating Temp Range: -55°C to +125°C

Voltage Rating: 225 VAC mated with QSE & 5mm Stack Height

Max Cycles: 100

Unmating Force (-RT1 option): -RT1 option increases unmating force up to 50%

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (020-060) (0,15mm) .006" max (080)

Board Stacking: For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- 14mm, 15mm, 22mm and 30mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0,76µm) Gold (Specify -H plating for Data Rate cable mating applications.)
- Edge Mount
- 100 positions per row
- Guide Posts, Screw Down & Friction Lock

Call Samtec.

***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates: QSE

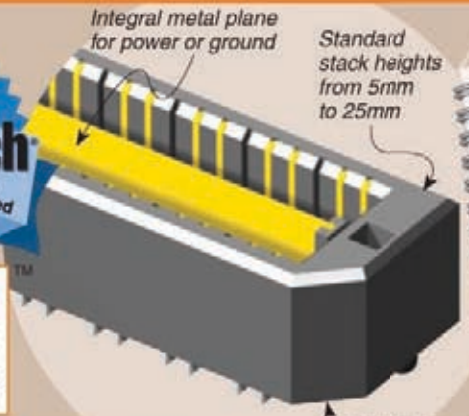
Cable Mates: EQCD, EQSD, EQDP, EQRF (See Application Specific note)

Final Inch Break Out Region Performance Certified finalinch.com

E.L.P. EXTENDED LIFE PRODUCT

10 Year Mixed Flowing Gas (MFG)

Call Samtec for maximum cycles mated with QSE



Protocols Supported

XAUI
PCI Express®
SATA
MGT (Rocket I/O)
Infiniband

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	9 GHz / 18 Gbps
Differential Pair Signaling	–D	8 GHz / 16 Gbps
Differential Pair Signaling	–DP	8.5 GHz / 17 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QTE or contact sig@samtec.com

RUGGEDIZED by SAMTEC

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

QTE – PINS PER ROW NO. OF PAIRS – LEAD STYLE – PLATING OPTION – TYPE – A – OTHER OPTION

–020, –040, –060, –080
(40 total pins per bank = –D)

–014, –028, –042, –056
(14 pairs per bank = –D–DP)

LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION

–F = Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–C* = Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

TYPE

–D = Single-Ended

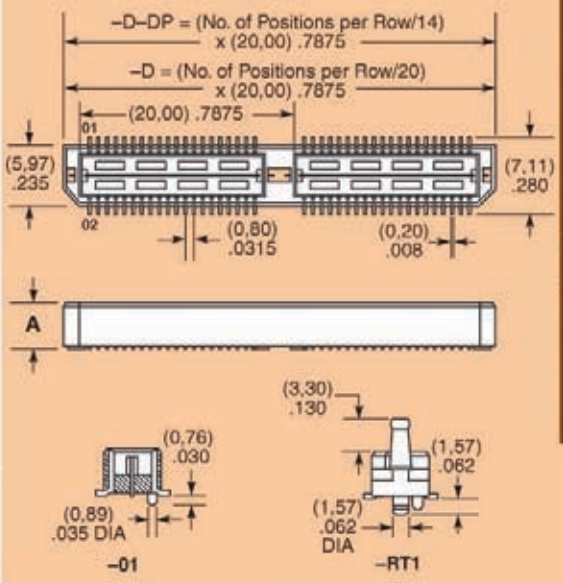
–D–DP = Differential Pair (–01 only)

OTHER OPTION

–K = (7,00mm) .275" DIA Polyimide Film Pick & Place Pad

–TR = Tape & Reel Packaging (–060 positions maximum)

–RT1 = Retention Option (-01 Lead Style only & –060 positions maximum)



QTE LEAD STYLE	A	HEIGHT WITH QSE
–01	(4,27) .168	(5,00) .197
–02	(7,26) .286	(8,00) .315
–03	(10,27) .404	(11,00) .433
–04	(15,25) .600	(16,00) .630
–05	(18,26) .718	(19,00) .748
–07	(24,24) .954	(25,00) .984

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5665 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86 21 61103766
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5665 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

samtec

QSTRIP®

(0,80mm) .0315"

QSE SERIES

HIGH SPEED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QSE

Insulator Material: Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: Contacts: 1.3A @ 95°C Ground Plane: 10.1A @ 95°C

Operating Temp Range: -55°C to +125°C

Voltage Rating: 225 VAC (5mm Stack Height)

Max Cycles: 100

Unmating Force (-RT1 option): -RT1 option increases unmating force up to 50%

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (020-060) (0,15mm) .006" max (080)

Board Stacking: For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- 14mm, 15mm, 22mm and 30mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0,76µm) Gold (Specify -H plating for Data Rate cable mating applications.)
- Edge Mount
- 100 positions per row
- Guide Posts and Friction Lock options.

Call Samtec.

***Note:** –C Plating passes 10 year MFG testing

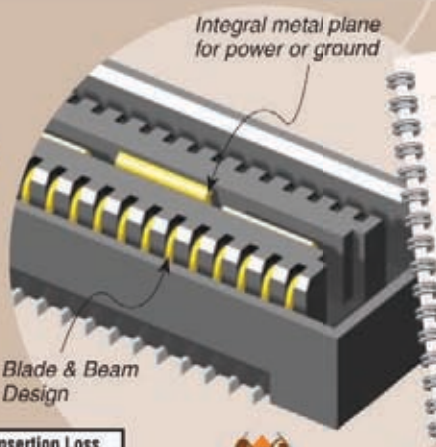
Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates: QTE

Cable Mates: EQCD, EQSD, EQDP, EQRF (See Application Specific note)

Final Inch — Break Out Region Performance Certified — finalinch.com

E.L.P. EXTENDED LIFE PRODUCT — 10 Year Mixed Flowing Gas (MFG) — Call Samtec for maximum cycles mated with QSE



Protocols Supported

XAUI
PCI Express®
SATA
MGT (Rocket I/O)
Infiniband

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

5mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	9 GHz / 18 Gbps
Differential Pair Signaling	–D	8 GHz / 16 Gbps
Differential Pair Signaling	–DP	8.5 GHz / 17 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QSE or contact sig@samtec.com

RUGGEDIZED by SAMTEC

ALSO AVAILABLE

Board Spacing Standoffs. See SO Series.

QSE - PINS PER ROW NO. OF PAIRS - 01 - PLATING OPTION - TYPE - A - OTHER OPTION

–020, –040, –060, –080
(40 total pins per bank = –D)

–014, –028, –042, –056
(14 pairs per bank = –D–DP)

–F
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

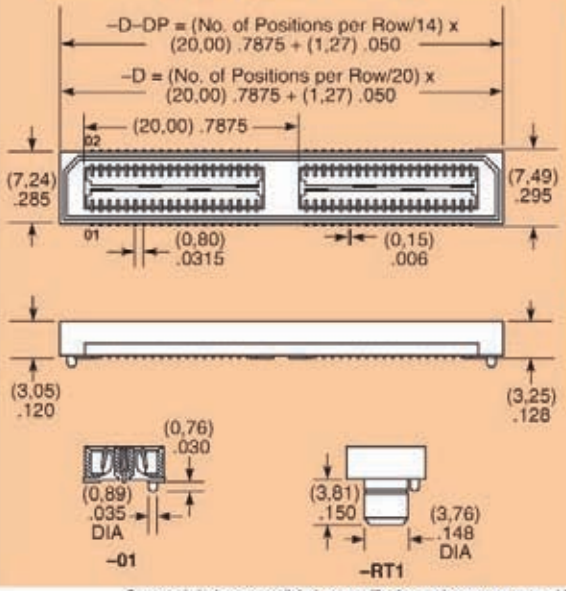
–D
= Single-Ended

–D–DP
= Differential Pair (–01 only)

–K
= (8,25mm) .325" DIA Polyimide Film Pick & Place Pad

–TR
= Tape & Reel Packaging (–060 positions maximum)

–RT1
= Retention Option (–060 positions maximum)



STACK HEIGHTS

QTE LEAD STYLE	MATED HEIGHT WITH QSE
–01	(5,00) .197
–02	(8,00) .315
–03	(11,00) .433
–04	(16,00) .630
–05	(19,00) .748
–07	(25,00) .984

Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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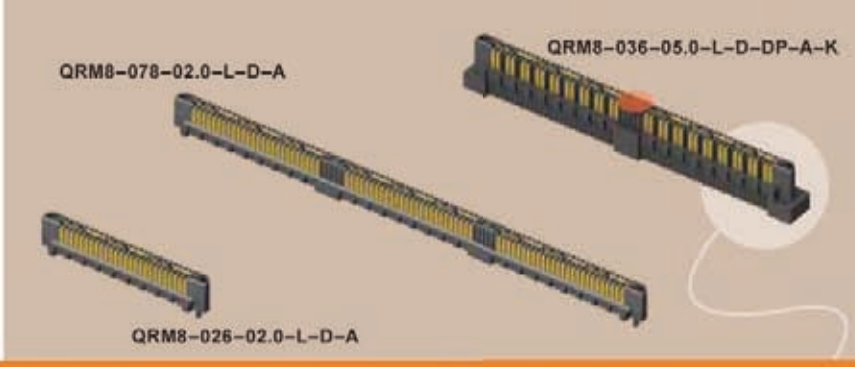
Q RATE®

(0,80mm) .0315"

QRM8 SERIES



SLIM BODY GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QRM8

Insulator Material:
Black LCP
Terminal & Ground Plane Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
2.0A @ 80°C ambient
Operating Temp Range:
-55°C to + 125°C
Voltage Rating:
215 VAC
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026)
(0,15mm) .006" max (052-078)

MATED HEIGHT*		
QRM8 LEAD STYLE	QRF8 LEAD STYLE	
	–05.0	–07.0
–02.0	(7,00) .276	(9,00) .354
–05.0	(10,00) .394	(12,00) .472
–07.0	(12,00) .472	(14,00) .551

*Processing conditions will affect mated height.

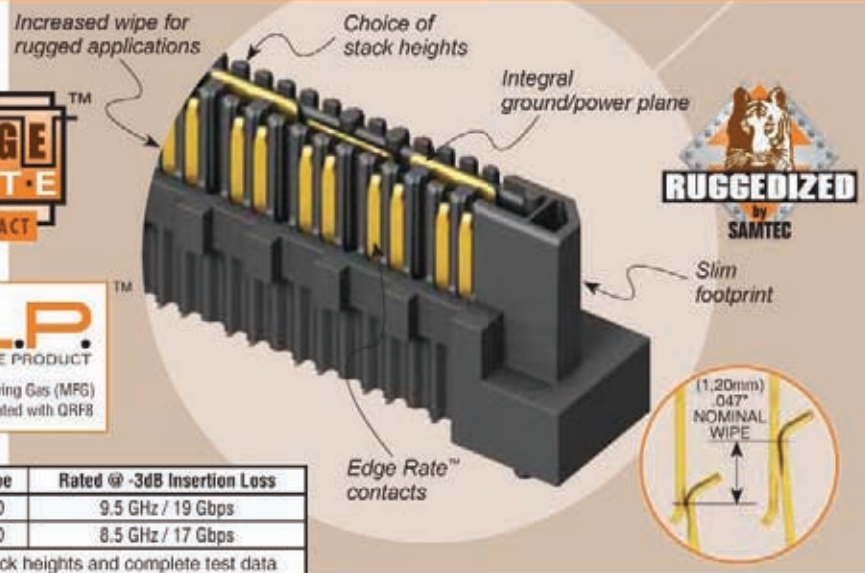
Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates:
QRF8

EDGE R·A·T·E™ CONTACT

E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with QRF8



7mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	9.5 GHz / 19 Gbps
Differential Pair Signaling	–D	8.5 GHz / 17 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QRM8 or contact sig@samtec.com

QRM8 – PINS PER ROW NO. OF PAIRS – LEAD STYLE – PLATING OPTION – TYPE – A – OTHER OPTION

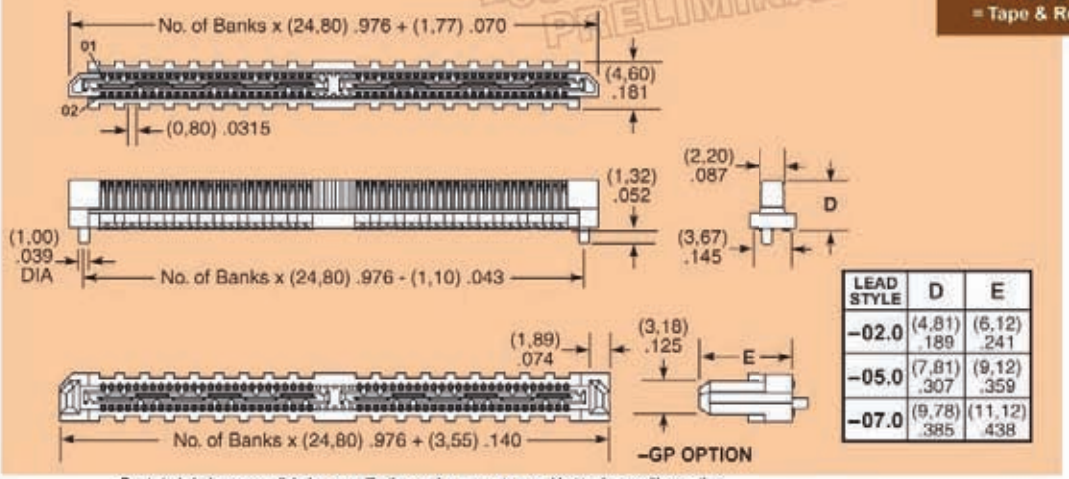
PINS PER ROW NO. OF PAIRS
–026, –052, –078
(52 total pins per bank = –D)
–018, –036, –054
(18 pairs per bank = –D–DP)

LEAD STYLE
–02.0 = 2mm Body Height
–05.0 = 5mm Body Height
–07.0 = 7mm Body Height

PLATING OPTION
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

TYPE
–D = Single-Ended
–D–DP = Differential Pair

OTHER OPTION
–GP = Guide Post (Requires –GP on mating connector)
–K = (5,00mm) .197" DIA Polyimide Film Pick & Place Pad
–TR = Tape & Reel



LEAD STYLE	D	E
–02.0	(4,81) .189	(6,12) .241
–05.0	(7,81) .307	(9,12) .359
–07.0	(9,78) .385	(11,12) .438

Due to technical progress, all designs, specifications and components are subject to change without notice.

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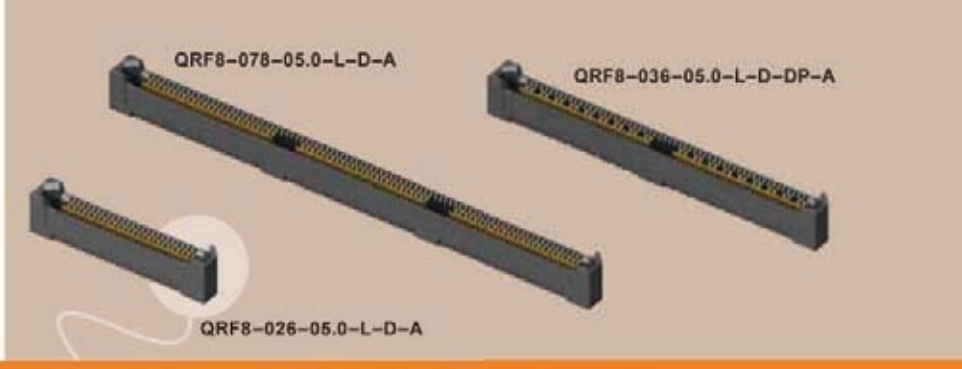
Q RATE®

(0,80mm) .0315"

QRF8 SERIES



SLIM BODY GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QRF8

Insulator Material:
Black LCP
Contact Material:
BeCu
Ground Plane Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
2.0A @ 80°C ambient
Operating Temp Range:
-55°C to + 125°C
Voltage Rating:
215 VAC
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026)
(0,15mm) .006" max (052-078)

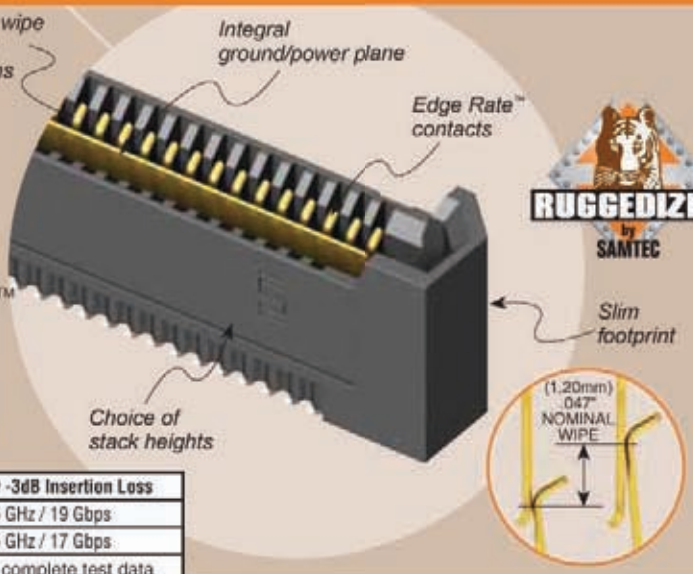
MATED HEIGHT*			
QRF8 LEAD STYLE	QRM8 LEAD STYLE		
	-02.0	-05.0	-07.0
-05.0	(7,00) .276	(10,00) .394	(12,00) .472
-07.0	(9,00) .354	(12,00) .472	(14,00) .551

*Processing conditions will affect mated height.

Board Mates:
QRM8

EDGE R·A·T·E™ CONTACT

E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with QRM8



RUGGEDIZED by SAMTEC

7mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	-D	9.5 GHz / 19 Gbps
Differential Pair Signaling	-D	8.5 GHz / 17 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?QRF8 or contact sig@samtec.com		

QRF8 - PINS PER ROW NO. OF PAIRS - LEAD STYLE - PLATING OPTION - TYPE - A - OTHER OPTION

PINS PER ROW NO. OF PAIRS
-026, -052, -078
(52 total pins per bank = -D)
-018, -036, -054
(18 pairs per bank = -D-DP)

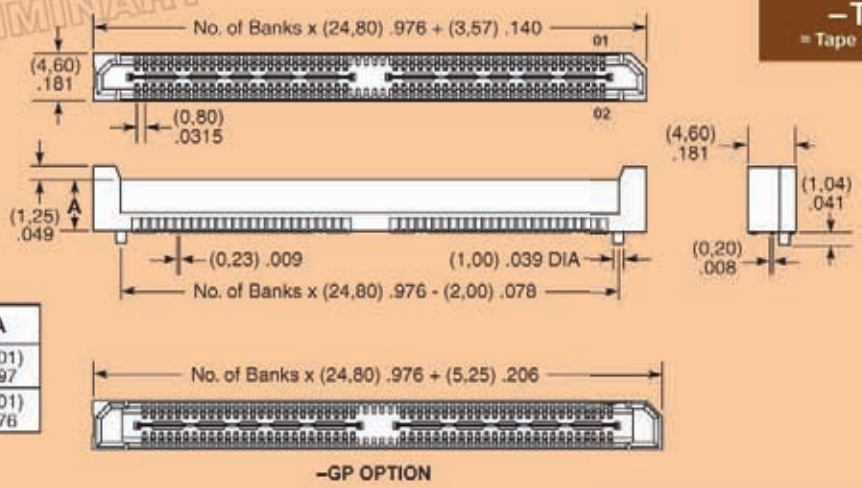
LEAD STYLE
-05.0 = 5mm Body Height
-07.0 = 7mm Body Height

PLATING OPTION
-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

TYPE
-D = Single-Ended
-D-DP = Differential Pair

OTHER OPTION
-GP = Guide Post (Requires -GP on mating connector)
-K = (5,00mm) .197" DIA Polyimide Film Pick & Place Pad
-TR = Tape & Reel

-054 & -078 PRELIMINARY



LEAD STYLE	A
-05.0	(5,01) .197
-07.0	(7,01) .276

-GP OPTION

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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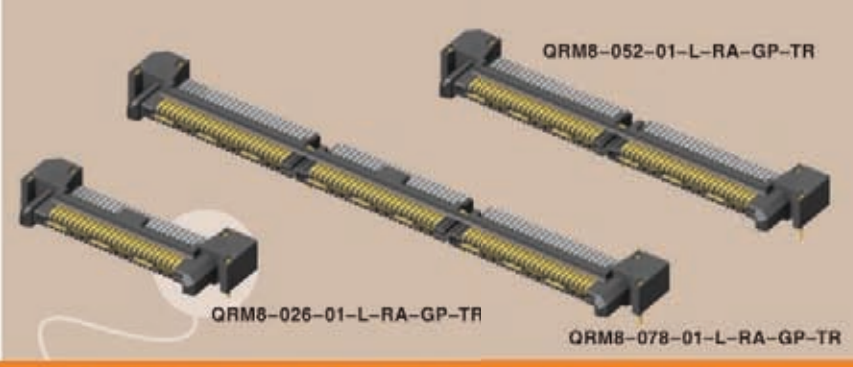
(0,80mm) .0315"

QRM8-RA SERIES



RIGHT ANGLE GROUND PLANE HEADER

SPECIFICATIONS

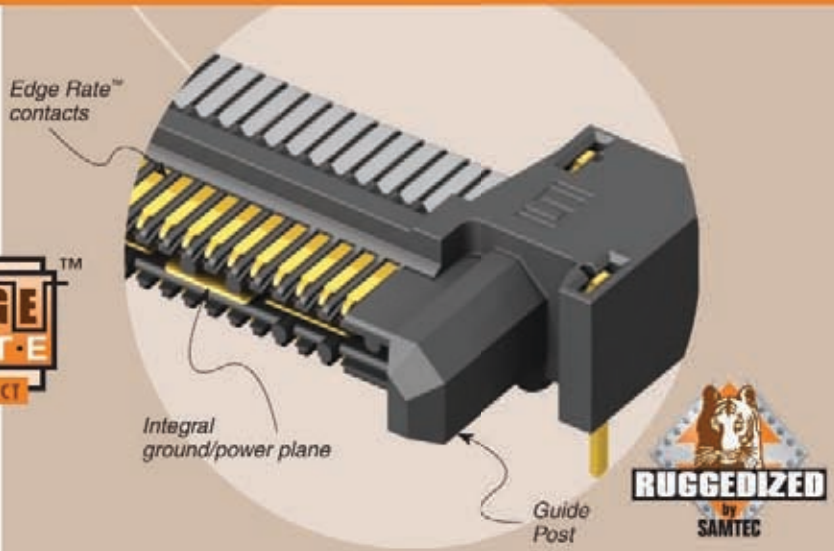
For complete specifications and recommended PCB layouts see www.samtec.com?QRM8-RA

Insulator Material:
Black LCP
Terminal & Ground Plane Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to + 125°C
Voltage Rating:
Testing Now!
RoHS Compliant:
Yes

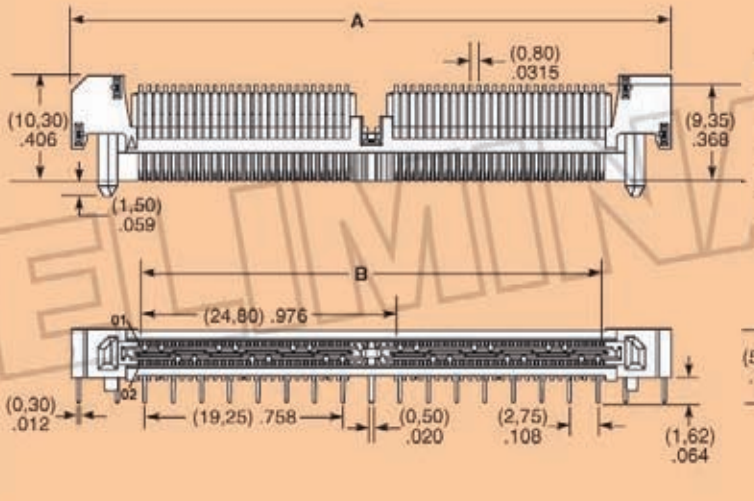
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026-052)
(0,15mm) .006" max (078)

Board Mates:
QRF8 (–GP required)



QRM8	–	POSITIONS PER ROW	–	01	–	PLATING OPTION	–	RA	–	GP	–	OPTION	–	TR
		–026, –052, –078 (52 total positions per bank)				–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail						–K = (7,00mm) .275" DIA Polyimide film Pick & Place Pad (–052 only)		–TR = Tape & Reel



POSITIONS PER ROW	A	B
–026	(33,46) 1.317	(20,00) .787
–052	(58,26) 2.294	(44,80) 1.764
–078	(83,06) 3.270	(69,60) 2.740

Note: Other Gold plating options available. Contact Samtec.

Note:
For –GP (Guide Post option) to –GP (Guide Post option) mating.

Note:
Some lengths, styles and options are non-standard, non-returnable.

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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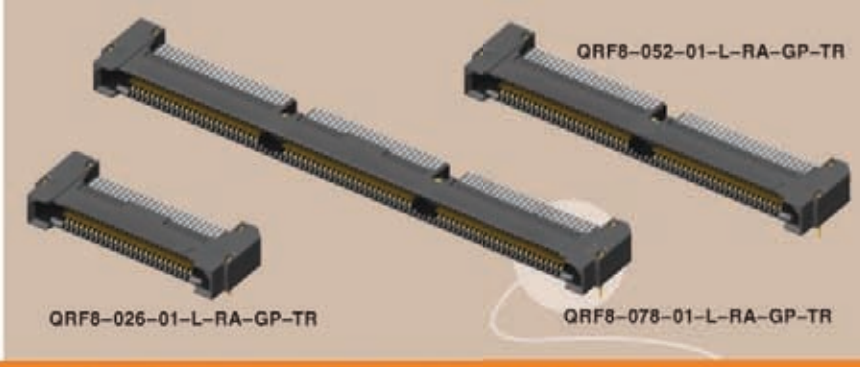
(0,80mm) .0315"

QRF8-RA SERIES



RIGHT ANGLE GROUND PLANE SOCKET

SPECIFICATIONS

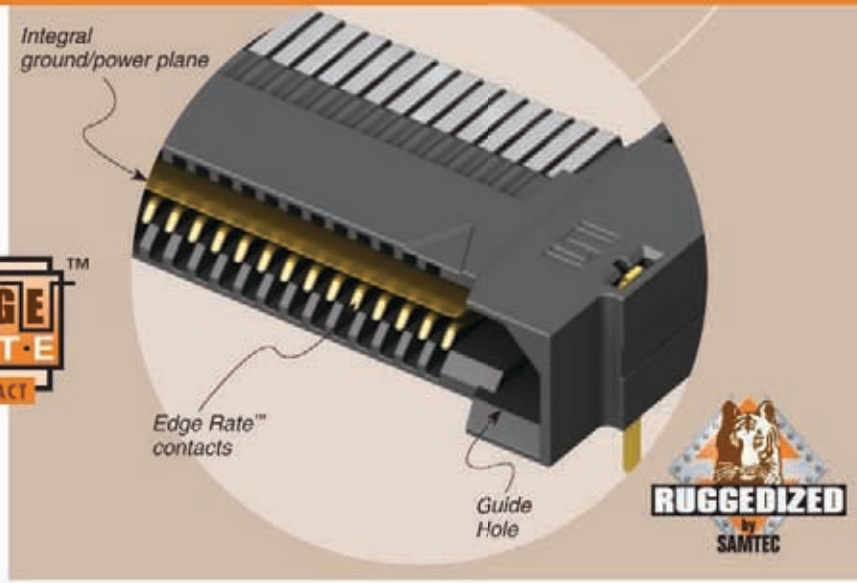
For complete specifications and recommended PCB layouts see www.samtec.com?QRF8-RA

Insulator Material:
Black LCP
Contact Material:
BeCu
Ground Plane Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to + 125°C
Voltage Rating:
Testing Now!
RoHS Compliant:
Yes

Processing:

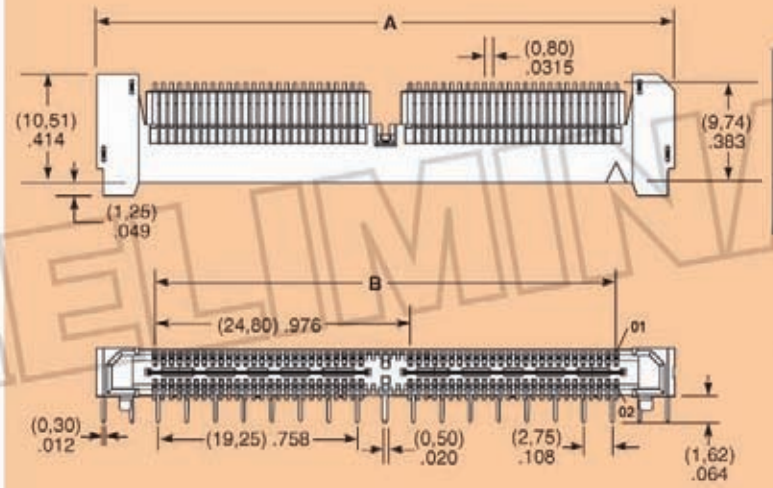
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026-052)
(0,15mm) .006" max (078)

Board Mates:
QRM8 (-GP required)



EDGE R·A·T·E™ CONTACT

QRF8	–	POSITIONS PER ROW	–	01	–	PLATING OPTION	–	RA	–	GP	–	OPTION	–	TR
		–026, –052, –078 (52 total positions per bank)				–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail						–K = (7,00mm) .275" DIA Polyimide film Pick & Place Pad (–052 only)		–TR = Tape & Reel



POSITIONS PER ROW	A	B
–026	(31,35) 1.234	(20,00) .787
–052	(56,15) 2.211	(44,80) 1.764
–078	(80,95) 3.187	(69,60) 2.740

Note: Other Gold plating options available. Contact Samtec.

Note:
For –GP (Guide Post option) to –GP (Guide Post option) mating.

Note:
Some lengths, styles and options are non-standard, non-returnable.

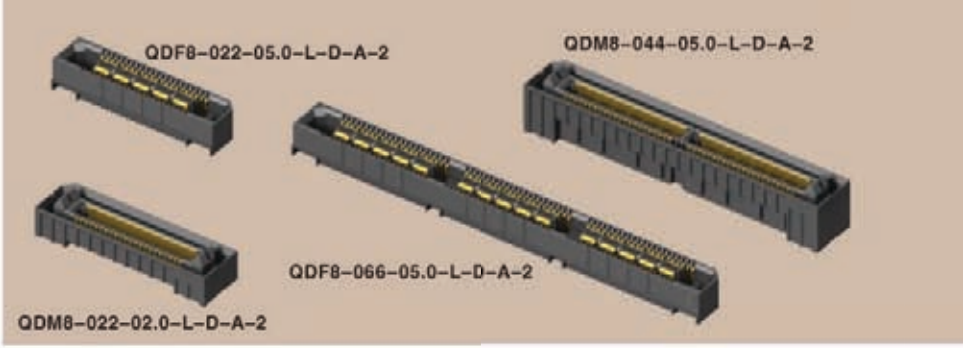
PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

(0,80mm) .0315"

QDM8, QDF8 SERIES



DUAL GROUND PLANE HEADER & SOCKET

QDM8 Board Mates:
QDF8

QDF8 Board Mates:
QDM8

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QDM8 or www.samtec.com?QDF8

Insulator Material:
Black LCP
Terminal & Ground Plane Material (QDM8):
Phosphor Bronze
Contact & Ground Plane Material (QDF8):
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1.6A @ 30° temperature rise, 6 contact energized
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
200 VAC
Max Cycles:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (022-044)
(0,15mm) .006" max (066)

MATED HEIGHT*	
QDM8 LEAD STYLE	QDF8 LEAD STYLE –05.0
–02.0	(7,00) .276
–05.0	(10,00) .394

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

QDM8 – POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – A – SOLDER TYPE – OTHER OPTION

POSITIONS PER ROW: –022, –044, –066 (44 total positions per bank)

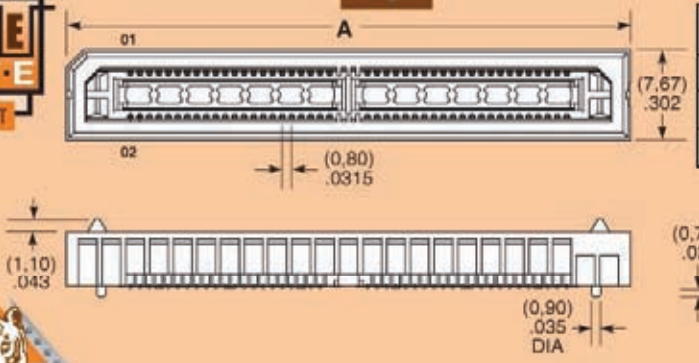
LEAD STYLE:
–02.0 = 2mm Body Height
–05.0 = 5mm Body Height

PLATING OPTION: –L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

SOLDER TYPE: –2 = Lead-Free Tin Alloy 96.5% Sn/ 3% Ag/0.5% Cu Solder Charge

OTHER OPTION:
–K = (9,00mm) .354" DIA Polyimide Film Pick & Place Pad
–TR = Tape & Reel

EDGE R·A·T·E CONTACT™



NO. OF POSITIONS	A
–022	(27,58) 1.086
–044	(47,58) 1.873
–066	(67,58) 2.661

LEAD STYLE	B	C
–02.0	(4,86) .191	(5,96) .235
–05.0	(7,86) .309	(8,96) .353

RUGGEDIZED by SAMTEC

QDF8 – POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – A – SOLDER TYPE – OTHER OPTION

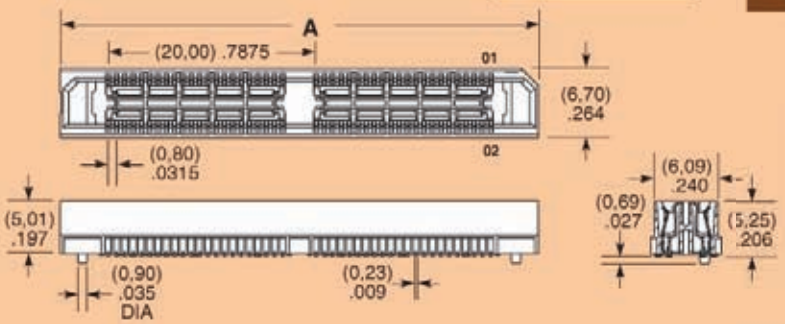
POSITIONS PER ROW: –022, –044, –066 (44 total positions per bank)

LEAD STYLE:
–05.0 = 5mm Body Height

PLATING OPTION: –L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

SOLDER TYPE: –2 = Lead-Free Tin Alloy 96.5% Sn/ 3% Ag/0.5% Cu Solder Charge

OTHER OPTION:
–K = (7,00mm) .275" DIA Polyimide Film Pick & Place Pad
–TR = Tape & Reel



NO. OF POSITIONS	A
–022	(26,00) 1.024
–044	(46,00) 1.811
–066	(66,00) 2.598

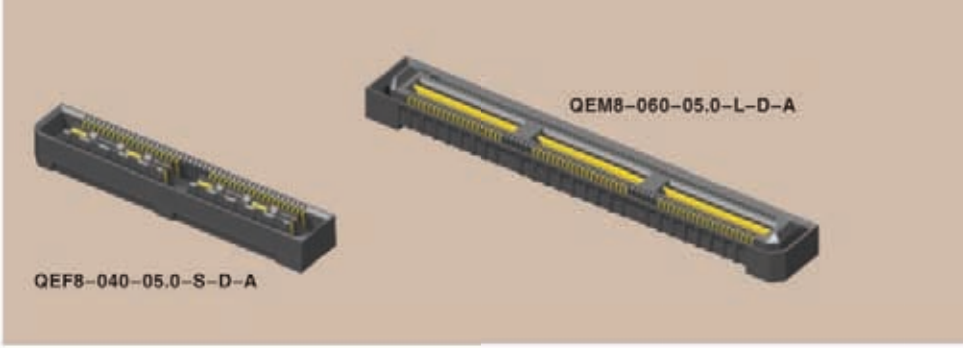
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

QSTRIP®

(0,80mm) .0315"

QEM8, QEF8 SERIES



EDGE RATE™ CONTACT GROUND PLANE

QEM8 Board Mates:
QEF8

QEF8 Board Mates:
QEM8

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QEM8 or www.samtec.com?QEF8

Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze (QEM8)
BeCu (QEF8)
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
Testing Now!
Voltage Rating:
Testing Now!
Max Cycles:
Testing Now!
RoHS Compliant:
Yes

EDGE R·A·T·E™ CONTACT

E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

MATED HEIGHT*	
QEM8 LEAD STYLE	QEF8 LEAD STYLE
	–05.0
–05.0	(10,00) .394

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

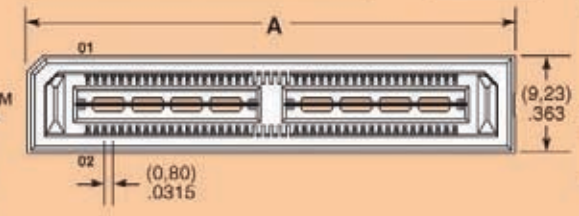
QEM8 – NO. OF POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – A – OTHER OPTION

NO. OF POSITIONS PER ROW: –020, –040, –060 (40 total positions per bank)

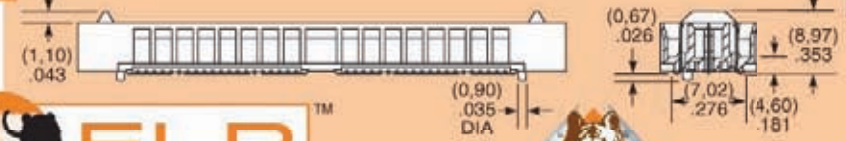
LEAD STYLE: –05.0 = 5mm Body Height

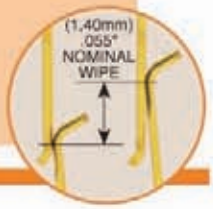
PLATING OPTION:
–L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails
–S = 30µ" (0,76µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

OTHER OPTION:
–K = (10,25mm) .404" DIA Polyimide Film Pick & Place Pad
–TR = Tape & Reel Packaging



NO. OF POSITIONS	A
–020	(26,82) 1.056
–040	(46,82) 1.843
–060	(66,82) 2.631





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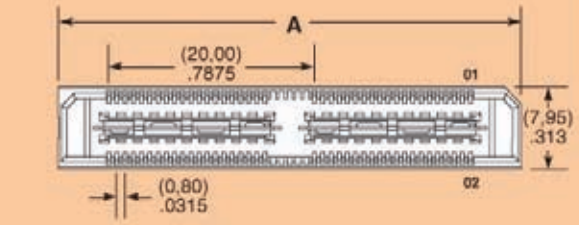
QEF8 – NO. OF POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – A – OTHER OPTION

NO. OF POSITIONS PER ROW: –020, –040, –060 (40 total positions per bank)

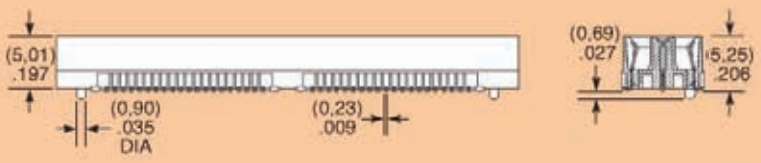
LEAD STYLE: –05.0 = 5mm Body Height

PLATING OPTION:
–L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails
–S = 30µ" (0,76µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

OTHER OPTION:
–K = (8,25mm) .325" DIA Polyimide Film Pick & Place Pad
–TR = Tape & Reel Packaging



NO. OF POSITIONS	A
–020	(25,02) 0.985
–040	(45,02) 1.772
–060	(65,02) 2.560



Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

Q2™

(0,635mm) .025"

QMS SERIES

QMS-026-06.75-L-D-A

QMS-032-06.75-L-D-DP-A

RUGGED GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMS

Insulator Material:
Liquid Crystal Polymer

Terminal & Ground Plane Material:
Phosphor Bronze

Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane Tail)

Current Rating:
Contact: 1.6A @ 95°C
Ground Plane: 9.2A @ 95°C

Voltage Rating:
300 VAC mated with QFS

Operating Temp:
-55°C to +125°C

RoHS Compliant:
Yes

RUGGEDIZED by SAMTEC

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max (026-052)
(0,15mm) .006" max (078-104)

Board Stacking:
For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

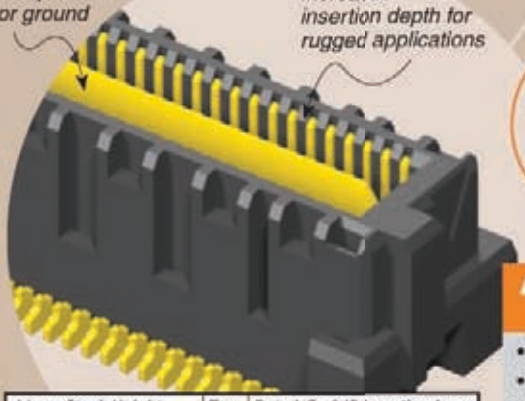
Board Mates:
QFS

Cable Mates:
Q2DA, 6QCD, 6QDP

Final Inch Break Out Region Performance Certified finalinch.com

Integral metal plane for power or ground

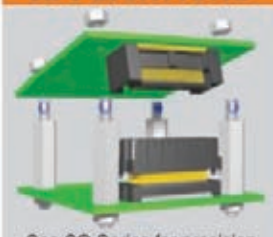
Increased insertion depth for rugged applications



11mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	8 GHz / 16 Gbps
Differential Pair Signaling	–D	7.5 GHz / 15 Gbps
Differential Pair Signaling	–DP	7 GHz / 14 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QMS or contact sig@samtec.com

APPLICATIONS



See SO Series for precision machined standoffs.

APPLICATION SPECIFIC

- Power & RF options
- Edge Mount
- Guide Posts
- Without PCB Alignment Pins (05.75 and 06.75 only)
- Hot Pluggable

Call Samtec.

QMS - PINS PER ROW NO. OF PAIRS - LEAD STYLE - PLATING OPTION - TYPE - A - OTHER OPTION

PINS PER ROW NO. OF PAIRS

–026, –052, –078, –104
(52 total pins per bank = –D)

–016, –032, –048, –064
(16 pairs per bank = –D–DP)

LEAD STYLE

Specify LEAD STYLE from chart

PLATING OPTION

–L
(–05.75 and –06.75 lead style only)
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane (Gold flash on Signal Pin tails, Tin on Ground Plane tails)

–SL
(–09.75 lead style only)
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane (Tin on Signal Pin tails, and Ground Plane tails)

TYPE

–D
= Single-Ended

–D–DP
= Differential Pair

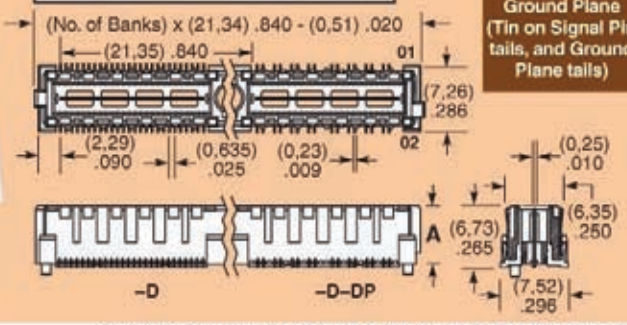
A

OTHER OPTION

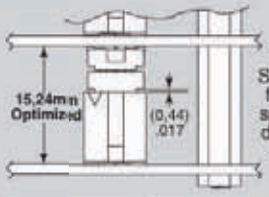
–K
= (5,50mm) .217" DIA Polyimide film Pick & Place Pad

MATED HEIGHT*			
LEAD STYLE	A	QFS LEAD STYLE	
		–04.25	–06.25
–05.75	(5.38) .212	10mm	12mm
–06.75	(6.35) .250	11mm	13mm
–09.75	(9.35) .368	14mm	16mm

*Processing conditions will affect mated height.



APPLICATION



Requires Standoff SO-1524-03-01-02-L for 15,24mm board spacing. Connectors designed to not fully seat when mated.

INDUSTRY STANDARD	INTERCONNECTS	
	TERMINAL	SOCKET
Stackable USB™	ASP-129637-01	ASP-129646-01
SUMIT™	ASP-129637-01	ASP-129646-01
PCI/104-Express™	ASP-129637-03	ASP-129646-03

Industry Standards

StackableUSB™
SUMIT™
PC/104-Express™

Protocols Supported

Fibre Channel
XAUI
PCI Express®
SATA

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

Note: Some lengths, styles and options are non-standard, non-returnable.

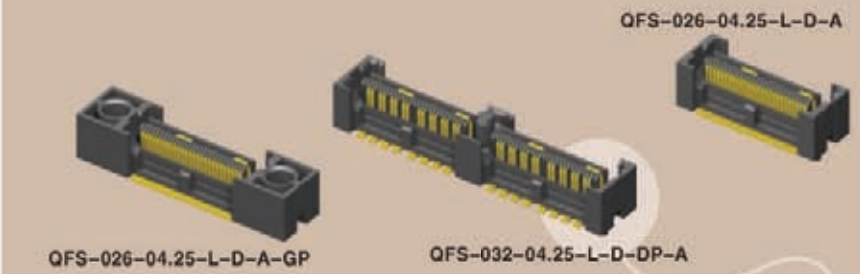
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

Q2™

(0,635mm) .025"

QFS SERIES



RUGGED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QFS

Insulator Material: Liquid Crystal Polymer

Contact & Ground Plane Material: Phosphor Bronze

Plating: Au over 50µ" (1,27µm) Ni (Tin on Ground Plane Tail)

Current Rating: Contact: 1.6A @ 95°C Ground Plane: 9.2A @ 95°C

Voltage Rating: 300 VAC mated with QMS

Operating Temp: -55°C to +125°C

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (026-078) (0,15mm) .006" max (104)

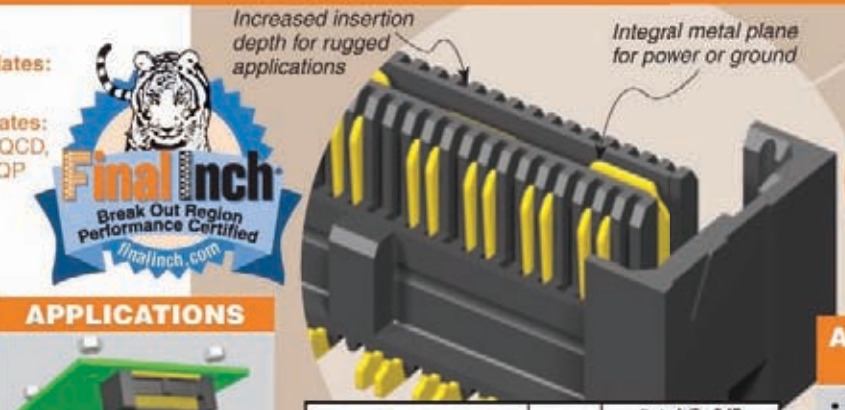
Board Stacking: For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

Board Mates: QMS

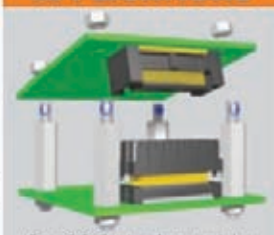
Cable Mates: Q2DA, 6QCD, 6QDP, 6QP

Final Inch Break Out Region Performance Certified finalinch.com

RUGGEDIZED by SAMTEC



APPLICATIONS



See SO Series for precision machined standoffs.

11mm Stack Height	Type	Rated @ -3dB Insertion Loss
Single-Ended Signaling	–D	8 GHz / 16 Gbps
Differential Pair Signaling	–D	7.5 GHz / 15 Gbps
Differential Pair Signaling	–DP	7 GHz / 14 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QFS or contact sig@samtec.com

APPLICATION SPECIFIC

- Power & RF options
- Edge Mount
- Guide Posts
- Without PCB Alignment Pins
- Hot Pluggable

Call Samtec.

QFS	–	PINS PER ROW NO. OF PAIRS	–	LEAD STYLE	–	PLATING OPTION	–	TYPE	–	A	–	OTHER OPTION

PINS PER ROW NO. OF PAIRS

–026, –052, –078, –104
(52 total pins per bank = –D)

–016, –032, –048, –064
(16 pairs per bank = –D–DP)

LEAD STYLE

Specify LEAD STYLE from chart

PLATING OPTION

–L
(–04.25 lead style only)
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane (Gold flash on Signal Pin tails, Tin on Ground Plane tails)

–SL
(–06.25 lead style only)
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane (Tin on Signal Pin tails, and Ground Plane tails)

TYPE

–D
= Single-Ended

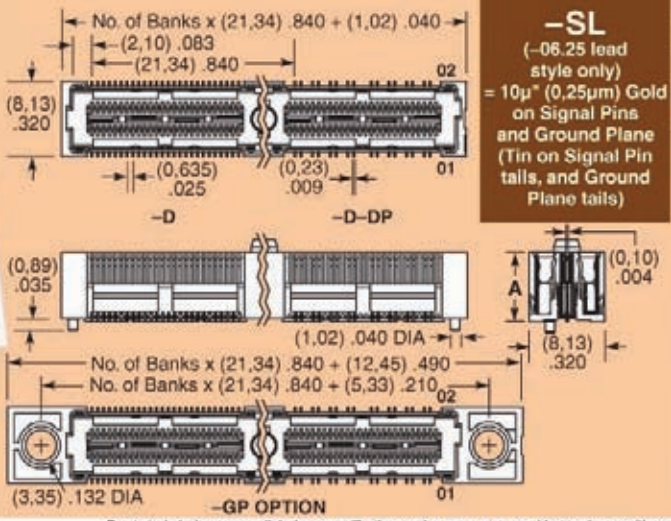
–D–DP
= Differential Pair
(–04.25 only)

OTHER OPTION

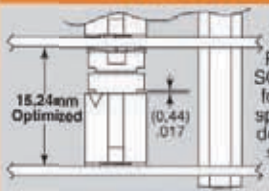
–GP
= Guide Holes (–052 pin and 04.25 lead style only for mating with 6QP Series assembly. Call Samtec for other sizes)

MATED HEIGHT*				
LEAD STYLE	A	QMS LEAD STYLE –05.75	–06.75	–09.75
–04.25	(7,44) .293	10mm	11mm	14mm
–06.25	(9,42) .371	12mm	13mm	16mm

*Processing conditions will affect mated height.



APPLICATION



Requires Standoff SO-1524-03-01-02-L for 15,24mm board spacing. Connectors designed to not fully seat when mated.

INDUSTRY STANDARD	INTERCONNECTS TERMINAL	SOCKET
Stackable USB™	ASP-129637-01	ASP-129646-01
SUMIT™	ASP-129637-01	ASP-129646-01
PCI104-Express™	ASP-129637-03	ASP-129646-03

Industry Standards

StackableUSB™
SUMIT™
PC/104-Express™

Protocols Supported

Fibre Channel
XAUI
PCI Express®
SATA

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

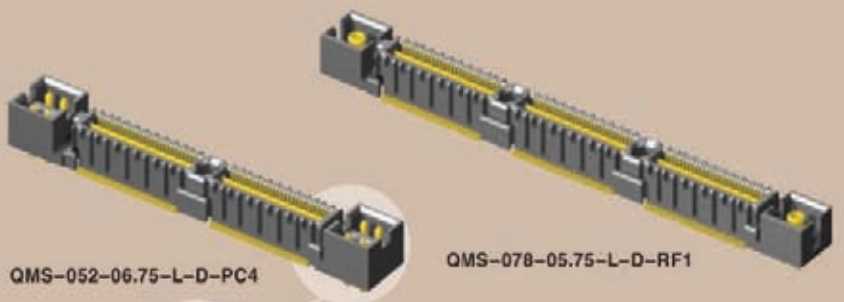
SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739292
SAMTEC GERMANY • Tel: +49 (0) 89 / 89480-0 SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6890337 SAMTEC NORDIC/BALTIC • Tel: +46-84177280 SAMTEC BENELUX • Tel: 44 01236 739292
SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1812 SAMTEC ASIA PACIFIC • Tel: 65 6745-5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
SAMTEC TAIWAN • Tel: 886-2-2735 6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

samtec

Q2™

(0,635mm) .025"

QMS-PC, QMS-RF SERIES



HIGH SPEED COMBO RF & POWER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMS-PC or www.samtec.com?QMS-RF

Insulator Material:
Liquid Crystal Polymer
Terminal & Ground Plane Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane Tail)
Current Rating:
Signal Contact: 1.8A @ 80°C
Power Contact: 4.1A @ 80°C
Ground Plane: 8.9A @ 80°C
Voltage Rating:
300 VAC mated with QFS
Operating Temp:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026-078)
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- Differential Pairs
- Retention Pins
- 8 Power Pins/End for (1,60mm) 0.62" thick Board
- 4 or 8 Power Pins/End for (2,36mm) 0.93" thick Board
- 2 RF Connectors/End
- Hot Pluggable

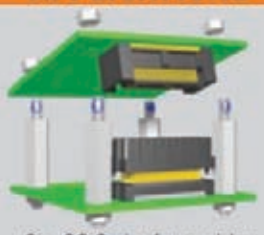
Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

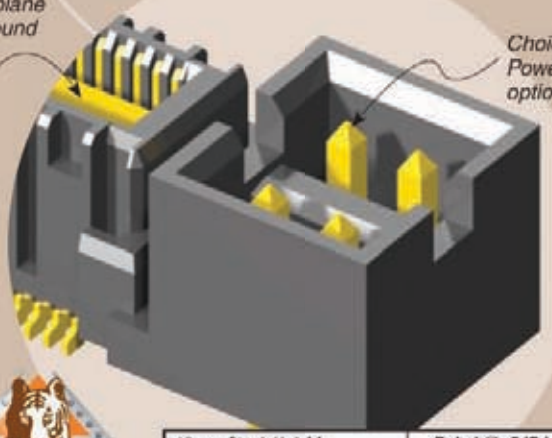
Board Mates:
QFS-PC,
QFS-RA-PC,
QFS-RF

Final Inch
Break Out Region Performance Certified
finalinch.com

APPLICATIONS



See SO Series for precision machined standoffs.



RUGGEDIZED by SAMTEC

10mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	9 GHz / 18 Gbps
Differential Pair Signaling	7.5 GHz / 15 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QMS-PC or www.samtec.com?QMS-RF or contact sig@samtec.com

QMS	- NO. OF PINS PER ROW	- LEAD STYLE	- PLATING OPTION	- D	- END OPTION

-026, -052, -078
(52 total pins per bank)

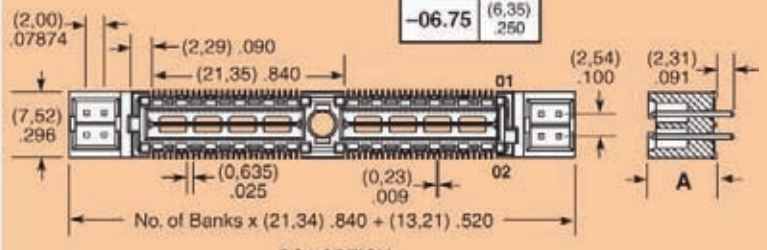
Specify LEAD STYLE from chart

-L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane
(Gold flash on Signal Pin tails, Tin on Ground Plane tails)

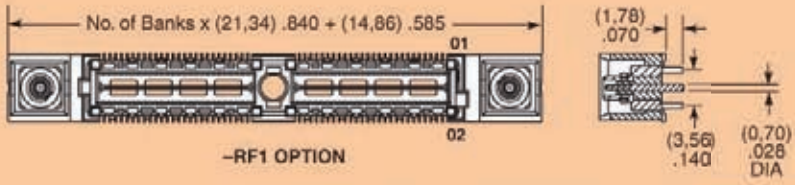
-PC4
= 4 Power Pins per End for (1,60mm) .062" thick Board (N/A with -RF1)

-RF1
= One RF Plug per End (-05.75 only, not available with -PC4)

LEAD STYLE	A
-05.75	(5,38) .212
-06.75	(6,35) .250

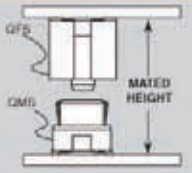


-PC4 OPTION



-RF1 OPTION

APPLICATION



QMS LEAD STYLE	MATED HEIGHT*
-05.75	10mm
-06.75	11mm

*Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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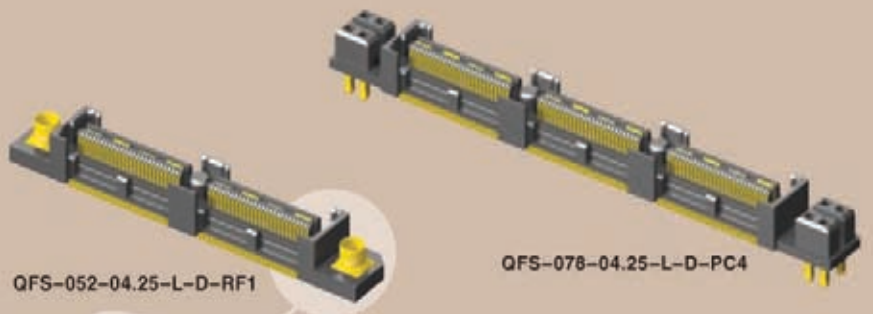
Q2™

(0,635mm) .025"

QFS-PC, QFS-RF SERIES



HIGH SPEED COMBO RF & POWER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QFS-PC or www.samtec.com?QFS-RF

Insulator Material:
Liquid Crystal Polymer
Contact & Ground Plane Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane Tail)
Current Rating:
Signal Contact: 1.8A @ 80°C
Power Contact: 4.1A @ 80°C
Ground Plane: 8.9A @ 80°C
Voltage Rating:
300 VAC mated with QMS
Operating Temp:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026-078)
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- Differential Pairs
- Retention Pins
- 8 Power Pins/End for (1,60mm) .062" thick Board
- 4 or 8 Power Pins/End for (2,36mm) .093" thick Board
- 2 RF Connectors/End
- Hot Pluggable

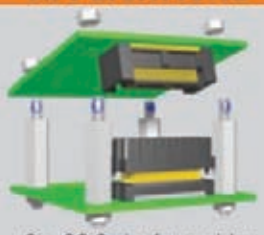
Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

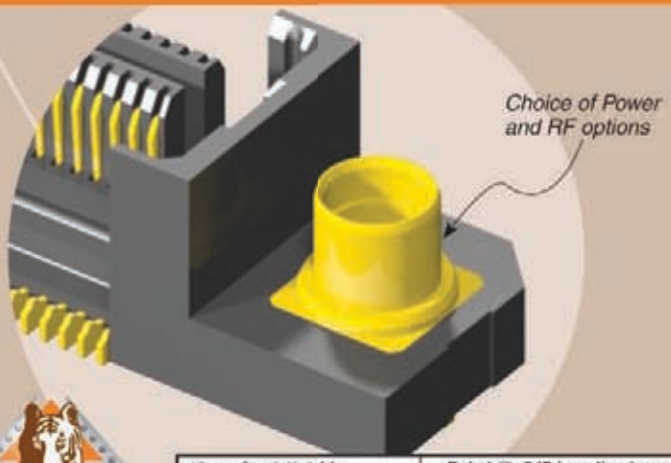
Board Mates:
QMS-PC,
QMS-RA-PC,
QMS-RF

Final Inch
Break Out Region Performance Certified
finalinch.com

APPLICATIONS



See SO Series for precision machined standoffs.



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10mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	9 GHz / 18 Gbps
Differential Pair Signaling	7.5 GHz / 15 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QFS-PC or www.samtec.com?QFS-RF or contact sig@samtec.com

QFS	–	NO. OF PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	D	–	END OPTION

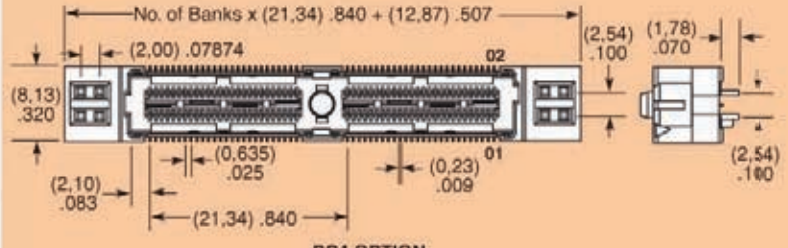
–026, –052, –078
(52 total pins per bank)

–04.25
=04.25mm

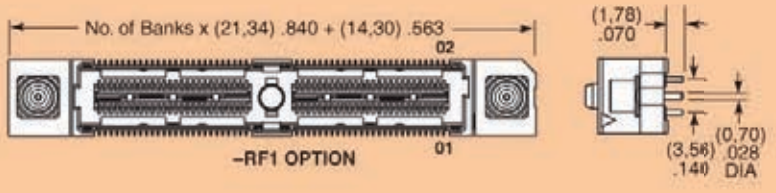
–L
= 10µ" (0,25µm) Gold on Signal Pins and Ground Plane
(Gold flash on Signal Pin tails, Tin on Ground Plane tails)

–PC4
= 4 Power Pins per End for (1,60mm) .062" thick Board (N/A with –RF1)

–RF1
= One RF Jack per End (N/A with –PC4)



–PC4 OPTION



–RF1 OPTION

APPLICATION

QMS LEAD STYLE	MATED HEIGHT*
–05.75	10mm
–06.75	11mm

*Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

F-210

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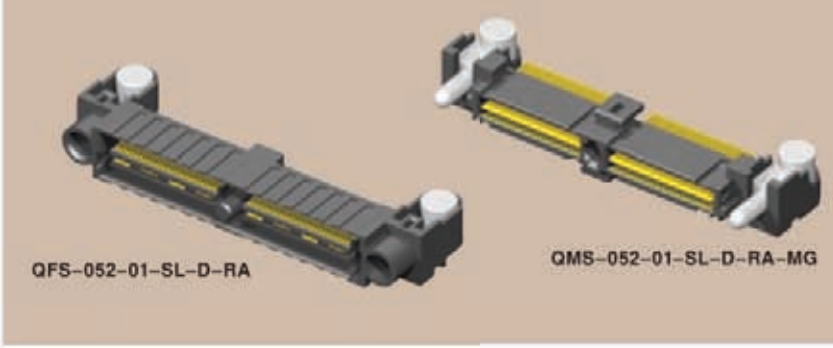
Q2™

(0,635mm) .025"

QMS-RA, QFS-RA SERIES



RIGHT ANGLE GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMS-RA or www.samtec.com?QFS-RA

Insulator Material: Liquid Crystal Polymer
Terminal & Ground Plane Material: Phosphor Bronze
Plating: Au over 50µ" (1,27µm) Ni (Tin on Ground Plane Tail)
Current Rating: Power Contact: 4.1A @ 80°C Ground Plane: 8.9A @ 80°C Signal Contact: 1.8A @ 80°C
Voltage Rating: 300 VAC
Operating Temp: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (026-052) (0,15mm) .006" max (078-104)

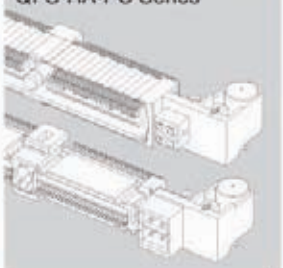
APPLICATION SPECIFIC

- Plastic Guide Post option available.
- –02 lead style for (2,36mm) .093" thick board.

Call Samtec.

ALSO AVAILABLE

Combination Signal/Power
See QMS-RA-PC Series or QFS-RA-PC Series



Note: Some lengths, styles and options are non-standard, non-returnable.

QMS	–	PINS PER ROW NO. OF PAIRS	–	01	–	PLATING OPTION	–	TYPE	–	RA	–	MG	–	OTHER OPTION

Board Mates: QFS

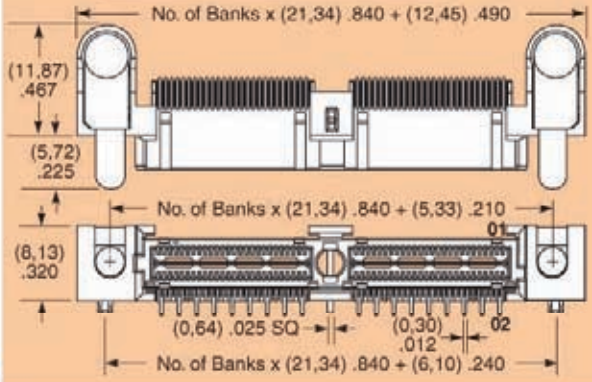
PINS PER ROW NO. OF PAIRS: –026, –052, –078, –104 (52 total pins per bank = –D); –016, –032, –048, –064 (16 pairs per bank = –D–DP)

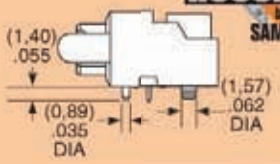
PLATING OPTION: –SL = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

TYPE: –D = Single-Ended; –D–DP = Differential Pair

MG: –MG = Metal Guide Post

OTHER OPTION: –K = Polyimide film Pick & Place Pad; –TR = Tape & Reel (–016, –026, –032 & –052 positions only)





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QMS-RA mated to QFS	Rated @ -3dB Insertion Loss
Single-Ended Signaling	8.0 GHz / 16 Gbps
Differential Pair Signaling	5.5 GHz / 11.0 Gbps

QFS	–	PINS PER ROW NO. OF PAIRS	–	01	–	PLATING OPTION	–	TYPE	–	RA	–	OTHER OPTION

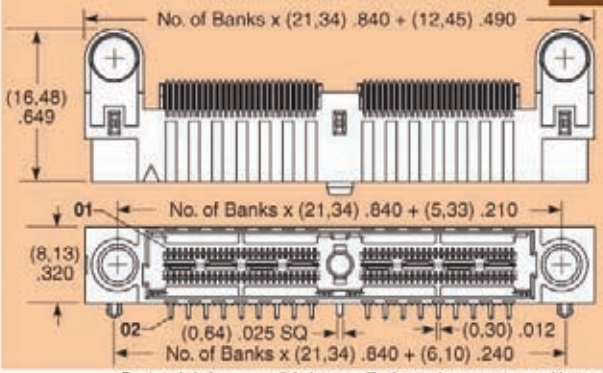
Mates with: QMS, 6QP

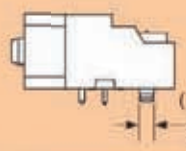
PINS PER ROW NO. OF PAIRS: –026, –052, –078, –104 (52 total pins per bank = –D); –016, –032, –048, –064 (16 pairs per bank = –D–DP)

PLATING OPTION: –SL = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

TYPE: –D = Single-Ended; –D–DP = Differential Pair

OTHER OPTION: –K = Polyimide film Pick & Place Pad; –TR = Tape & Reel (–016, –026, –032 & –052 positions only)





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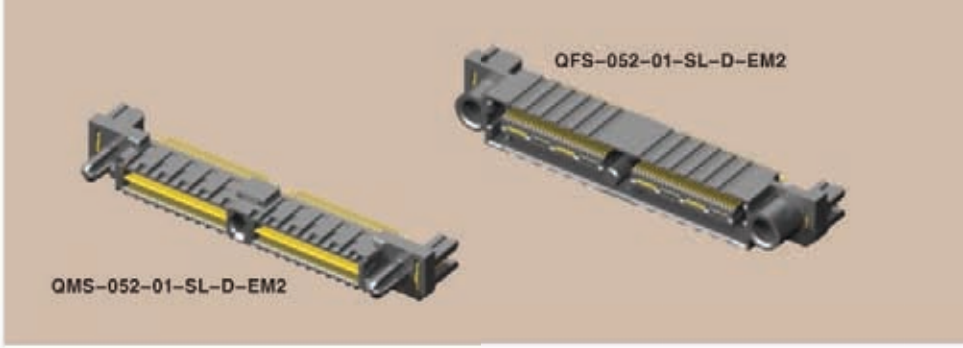
Q2™

(0,635mm) .025"

QMS-EM, QFS-EM SERIES



EDGE MOUNT GROUND PLANE SOCKETS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMS-EM or www.samtec.com?QFS-EM

Insulator Material:
Liquid Crystal Polymer
Terminal & Ground Plane Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane Tail)
Current Rating:
Signal Contact: 1.8A @ 80°C
Power Contact: 4.1A @ 80°C
Ground Plane: 8.9A @ 80°C
Voltage Rating:
300 VAC
Operating Temp:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

APPLICATION SPECIFIC OPTION

- 8 Power pins per end
- Differential Pairs

Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

QMS – NO. OF POSITIONS – 01 – PLATING OPTION – D – EM2 – END OPTION – OTHER OPTION

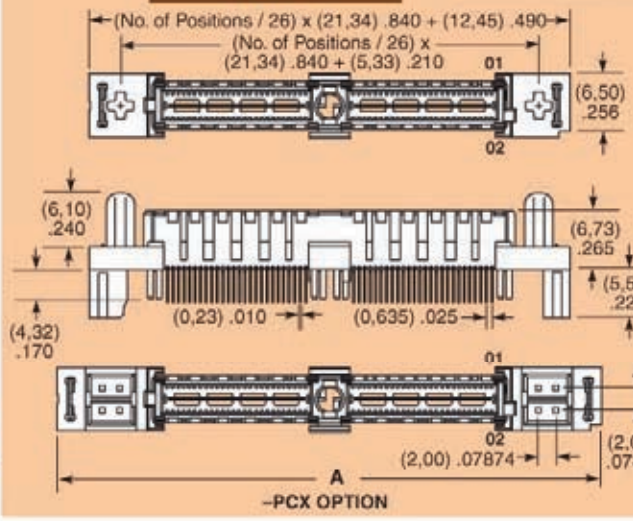
Board Mates: QFS

NO. OF POSITIONS: –026, –052, –078, –104 (Per Row)

PLATING OPTION: –SL = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

END OPTION: –PC4 = 4 Power Pins per End

OTHER OPTION: –TR = Tape & Reel Packaging (–026 & –052 positions only)



NO. OF POSITIONS	A
–026	(41,05) 1,616
–052	(62,38) 2,456
–078	(83,72) 3,296

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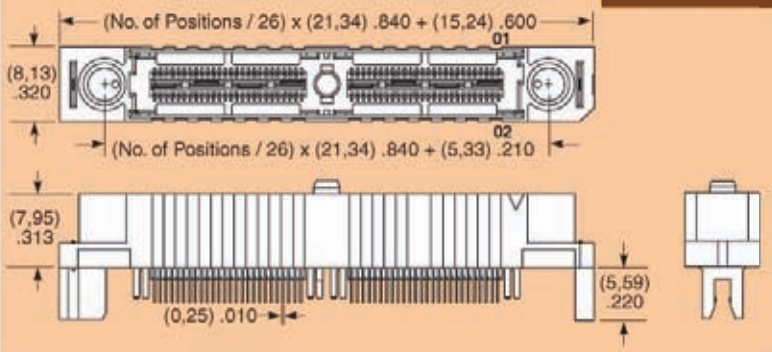
QFS – NO. OF POSITIONS – 01 – PLATING OPTION – D – EM2 – OTHER OPTION

Mates with: QMS, 6QP

NO. OF POSITIONS: –026, –052, –078, –104 (Per Row)

PLATING OPTION: –SL = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

OTHER OPTION: –TR = Tape & Reel Packaging (–026 & –052 positions only)



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Due to technical progress, all designs, specifications and components are subject to change without notice.

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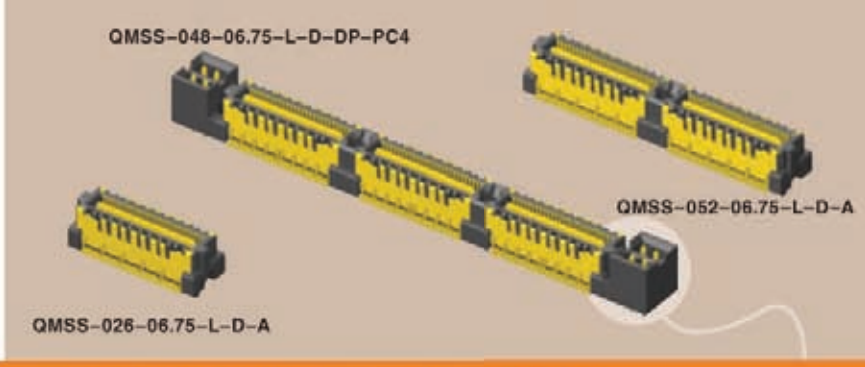
(0,635mm) .025"

QMSS SERIES



SHIELDED GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMSS

Insulator Material:
Liquid Crystal Polymer

Terminal, Ground Plane & Shield Material:
Phosphor Bronze

Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane Tail)

Current Rating:
Signal Contact: 1.8A @ 80°C
Power Contact: 3.95A @ 80°C
Ground Plane: 8.9A @ 80°C

Voltage Rating:
300 VAC mated with QFSS

Operating Temp:
-55°C to +125°C

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max (026-078)
(0,15mm) .006" max (104)

Board Stacking:
For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

Board Mates:
QFSS

Cable Mates:
6QDPS

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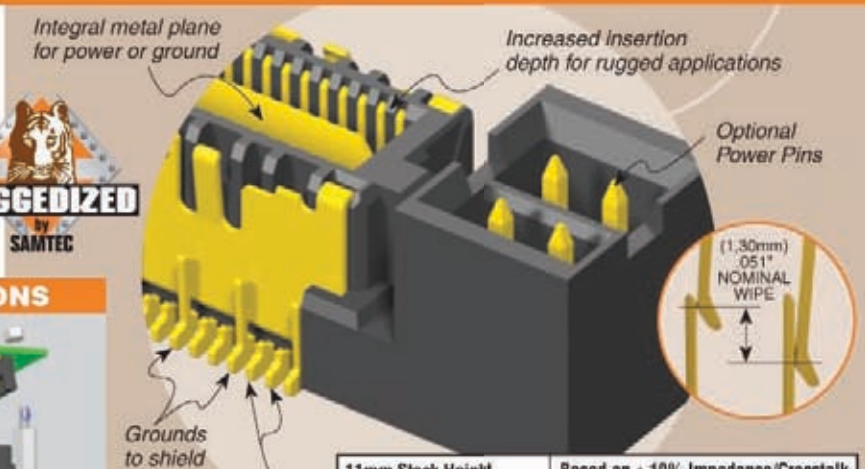
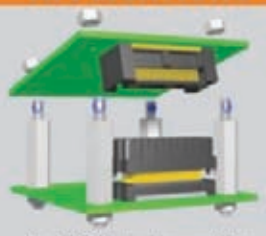


11mm Stack Height	Based on ± 10% Impedance/Crosstalk
Single-Ended Signaling	2.3 GHz / 4.6 Gbps
Differential Pair Signaling	1.4 GHz / 2.8 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?QMSS or contact sig@samtec.com

APPLICATIONS



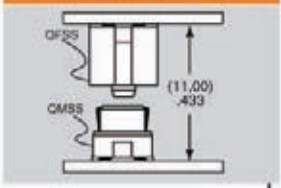
See SO Series for precision machined standoffs.

APPLICATION SPECIFIC OPTION

- Headers without Alignment Pins
- 8 Power Pins/End
- 4 or 8 Power Pins/End for (2,36mm) 0.93" thick board
- Guide Post
- Edge Mount
- Hot Pluggable

Call Samtec.

APPLICATION



Note: Some lengths, styles and options are non-standard, non-returnable.

QMSS	-	PINS PER ROW NO. OF PAIRS	-	06.75	-	PLATING OPTION	-	TYPE	-	A	-	OTHER OPTION

–026, –052, –078, –104
(52 total pins per bank
40 signals + 12 grounds to shield = –D)

–016, –032, –048, –064
(16 pairs per bank = –D–DP)

–L
= 10µ" (0,25µm) Gold on Signal Pins, Shield and Ground Plane

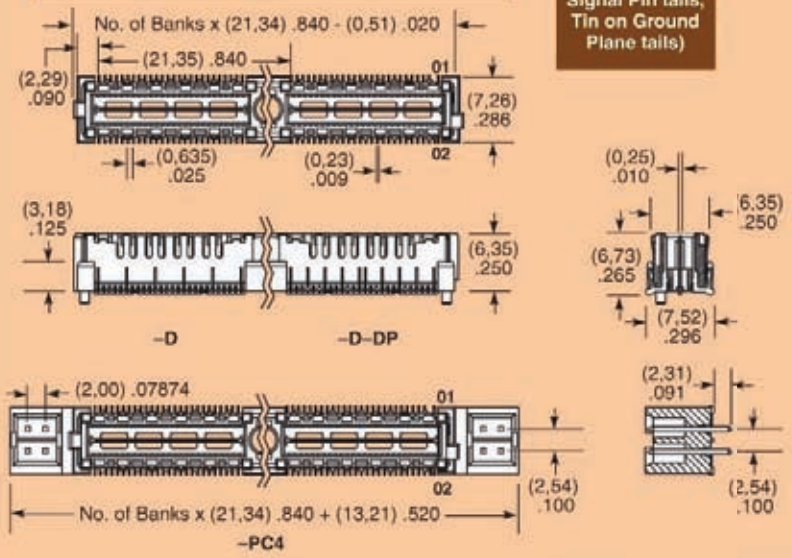
(Gold flash on Signal Pin tails, Tin on Ground Plane tails)

–D
= Single-Ended

–D–DP
= Differential Pair

–K
= (5,50mm) .217" DIA Polyimide film Pick & Place Pad (N/A with –PC4)

–PC4
= 4 Power Pins/End (N/A with –104 or –A)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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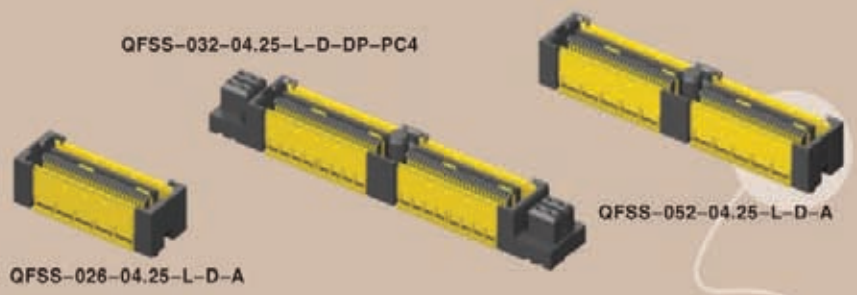
(0,635mm) .025"

QFSS SERIES



SHIELDED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QFSS

Insulator Material:
Liquid Crystal Polymer
UL FILE NO. E111594
Contact, Ground Plane & Shield Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane tails)
Current Rating:
Signal Contact: 1.8A @ 80°C
Power Contact: 3.95A @ 80°C
Ground Plane: 8.9A @ 80°C
Voltage Rating:
300 VAC mated with QMSS
Operating Temp:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

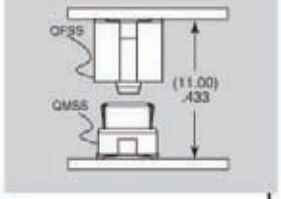
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026-078)
(0,15mm) .006" max (104)
Board Stacking:
For applications requiring more than two connectors per board or 4 banks or more, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- Headers without Alignment Pins
- 8 Power Pins/End
- 4 or 8 Power Pins/End for (2,36mm) 0.93" thick board
- Guide Holes
- Hot Pluggable

Call Samtec.

APPLICATION



Note: Some lengths, styles and options are non-standard, non-returnable.

Board Mates:
QMSS

Cable Mates:
6QDPS

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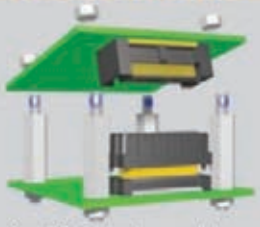
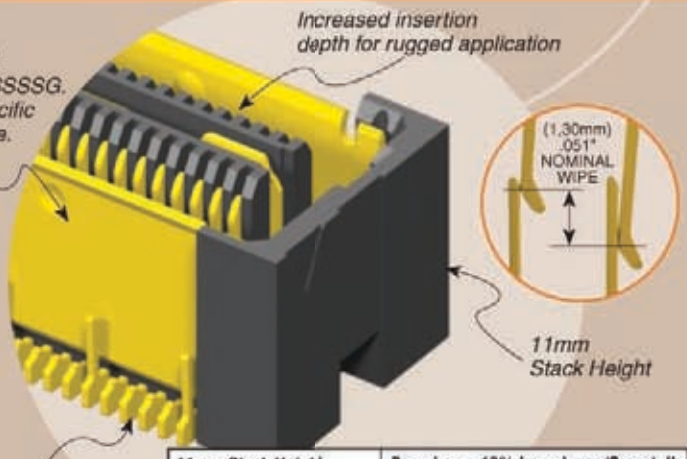
APPLICATIONS



See SO Series for precision machined standoffs.



11mm Stack Height	Based on ± 10% Impedance/Crosstalk
Single-Ended Signaling	2.3 GHz / 4.6 Gbps
Differential Pair Signaling	1.4 GHz / 2.8 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?QFSS or contact sig@samtec.com	

ORDERING INFORMATION

QFSS	-	PINS PER ROW NO. OF PAIRS	-	04.25	-	PLATING OPTION	-	TYPE	-	A	-	OTHER OPTION

–026, –052, –078, –104
(52 total pins per bank
40 signals + 12 grounds to shield = –D)

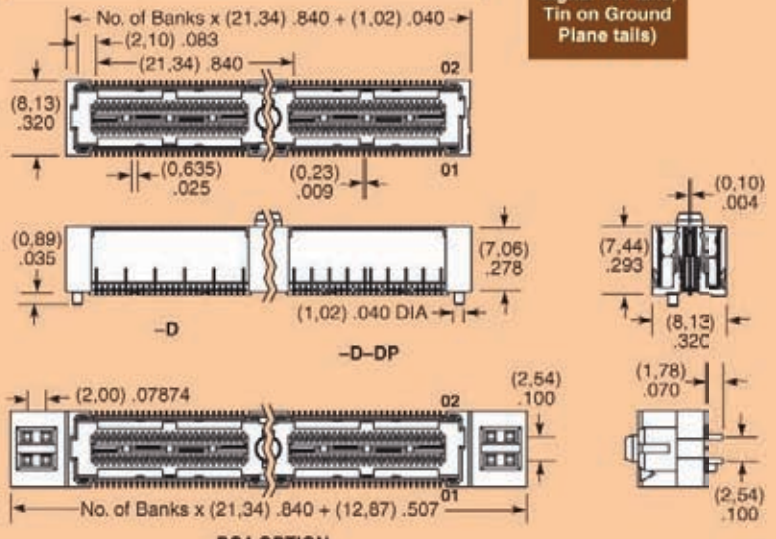
–016, –032, –048, –064
(16 pairs per bank = –D–DP)

–L
= 10µ" (0,25µm) Gold on Signal Pins, Shield and Ground Plane
(Gold flash on Signal Pin tails, Tin on Ground Plane tails)

–D
= Single-Ended

–D–DP
= Differential Pair

–PC4
= 4 Power Pins/End (N/A with –104 or –A)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC TAIWAN • Tel: 886-2-2735 6109 SAMTEC HONG KONG • Tel: 852-26004858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 1 : 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

samtec

(0,50mm) .0197"

ERM5 SERIES

EDGE R·A·T·E™ CONTACT

RUGGED HIGH SPEED HEADER

SPECIFICATIONS

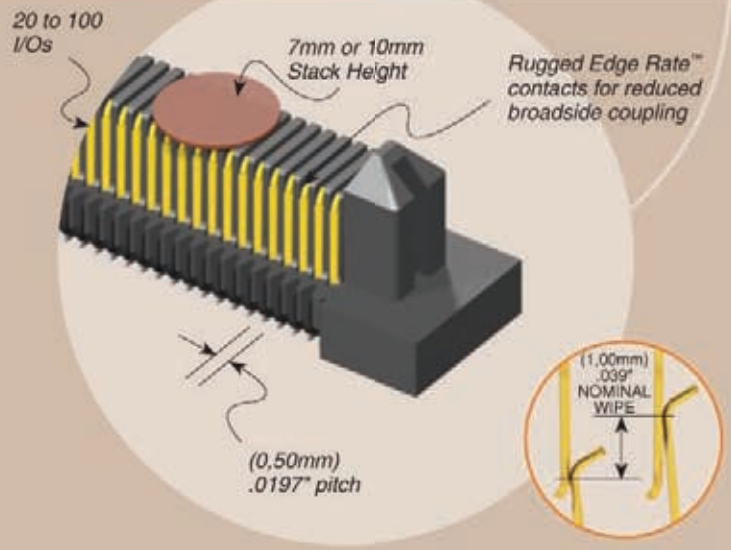
Mates with: ERF5

For complete specifications and recommended PCB layouts see www.samtec.com?ERM5

Insulator Material:
Black LCP
Terminal Material:
Phosphor Bronze or BeCu
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1.9A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
194 VAC mated with ERF5
RoHS Compliant:
Yes

Processing:

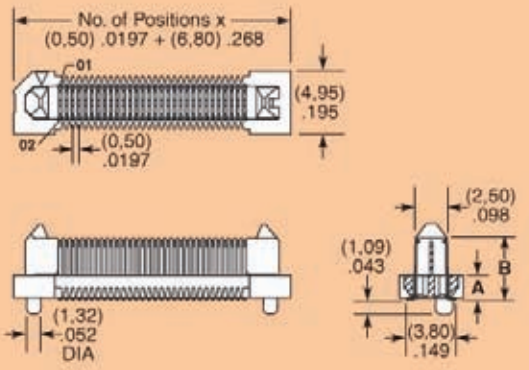
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (010-040)
(0,13mm) .005" max (050)



MATED HEIGHT*	
ERM5 LEAD STYLE	ERF5 LEAD STYLE
	–05.0
–02.0	(7,00) .276
–05.0	(10,00) .394

*Processing conditions will affect mated height.

ERM5	–	NO. OF POSITIONS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	DV	–	K	–	TR
		–010, –020, –030, –040, –050		–02.0 = 2mm Body Height –05.0 = 5mm Body Height		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail				–K = (3,50mm) .138" DIA Polyimide Film Pick & Place Pad		–TR = Tape & Reel Packaging



LEAD STYLE	A	B
–02.0	(1,94) .076	(4,84) .191
–05.0	(4,94) .194	(7,84) .309

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739292
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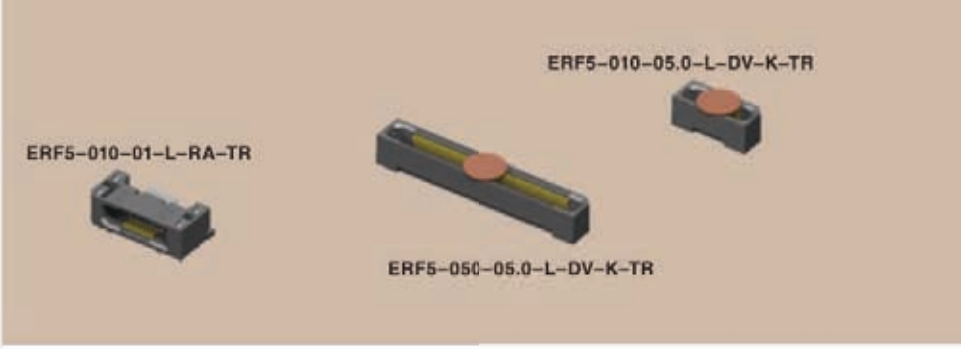
(0,50mm) .0197"

ERF5, ERF5-RA SERIES

EDGE RATE™ CONTACT



RUGGED HIGH SPEED SOCKET

Mates with:
ERM5

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERF5 or www.samtec.com?ERF5-RA

Insulator Material:
Black LCP
Terminal Material:
BeCu
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Current Rating:
1.9A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
194 VAC mated with ERM5
RoHS Compliant:
Yes

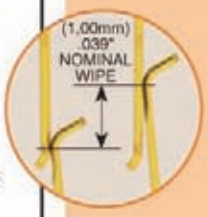
Processing:

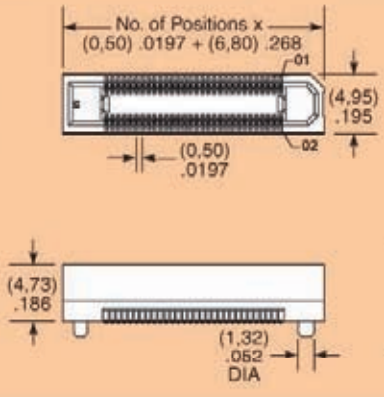
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (010-040)
(0,13mm) .005" max (050)

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

ERF5	– NO. OF POSITIONS PER ROW	– LEAD STYLE	– PLATING OPTION	– DV	– K	– TR
	–010, –020, –030, –040, –050	–05.0 = 5mm Body Height	–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail		–K = (6,00mm) .236" DIA Polyimide Film Pick & Place Pad –TR = Tape & Reel Packaging	

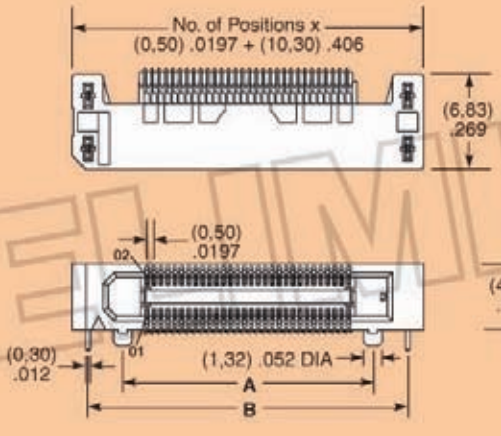




MATED HEIGHT*		
ERF5 LEAD STYLE	ERM5 LEAD STYLE –02.0	ERM5 LEAD STYLE –05.0
–05.0	(7,00) .276	(10,00) .394

*Processing conditions will affect mated height.

ERF5	– NO. OF POSITIONS PER ROW	– 01	– PLATING OPTION	– RA	– TR
	–010, –020, –030, –040, –050		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail		–TR = Tape & Reel Packaging



NO. OF POSITIONS	A	B
–010	(8,00) .315	(13,00) .512
–020	(13,00) .512	(18,00) .709
–030	(18,00) .709	(23,00) .906
–040	(23,00) .906	(28,00) 1,102
–050	(28,00) 1,102	(33,00) 1,299

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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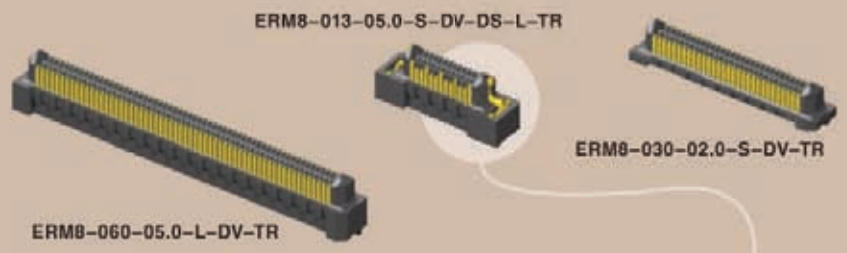
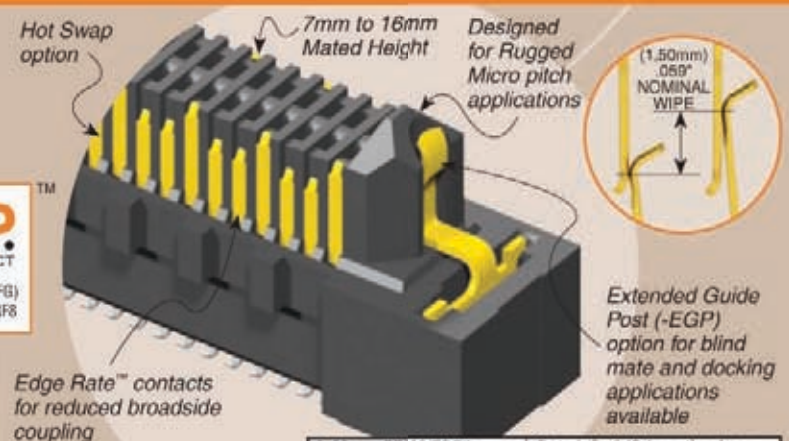
EDGE R·A·T·E™ CONTACT

(0,80mm) .0315"
ERM8 SERIES



RUGGED HIGH SPEED HEADER



SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERM8

Insulator Material: Black LCP
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 2.1A @ 85°C
Operating Temp Range: -55°C to +125°C
Voltage Rating: 200 VAC max
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (005-030)
(0,12mm) .005" max (040-060)
(0,15mm) .006" max (070-075)

Board Mates: ERF8

Cable Mates: ERDL2, ERCD, ERDP

E.L.P. EXTENDED LIFE PRODUCT™
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with ERF8

MATED HEIGHT*		
ERM8 LEAD STYLE	ERF8 LEAD STYLE –05.0	ERF8 LEAD STYLE –07.0
–02.0	(7,00) .276	(9,00) .354
–05.0	(10,00) .394	(12,00) .472
–08.0	(13,00) .512	(15,00) .591
–09.0	(14,00) .551	(16,00) .629

*Processing conditions will affect mated height.

RUGGEDIZED by SAMTEC

0,80mm ERM8/ERF8	Rated @ -3dB Insertion Loss
7mm Stack Height	
Single-Ended Signaling	10.5 GHz / 21 Gbps
Differential Pair Signaling	9.5 GHz / 19 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?ERM8 or contact sig@samtec.com

Protocols Supported
PCI Express®
Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

APPLICATIONS

STANDARD	POS.	PART NOs.	SERIES
NEXUS5001™.org POWER.org™	11	ASP-137968-01	ERM8-DV
	17	ASP-137972-01	ERM8-DV
ARM/HSSTP	20	ASP-130365-01	ERM8-DV
NEXUS5001™.org POWER.org™	23	ASP-130366-01	ERM8-DV
	35	ASP-135020-01	ERM8-DV

LEAD STYLE	A	B
–02.0	(1,61) .063	(5,97) .235
–05.0	(4,61) .181	(8,91) .351
–08.0	(7,61) .300	(11,91) .469
–09.0	(8,61) .339	(12,91) .508

Note: Some lengths, styles and options are non-standard, non-returnable.

ERM8 - NO. OF POSITIONS PER ROW - LEAD STYLE - PLATING OPTION - DV - OTHER OPTION - TR

NO. OF POSITIONS PER ROW
–005, –010, –020, –030, –040, –050, –060, –070, –075
–013, –025 (Lead Style –05.0 only)

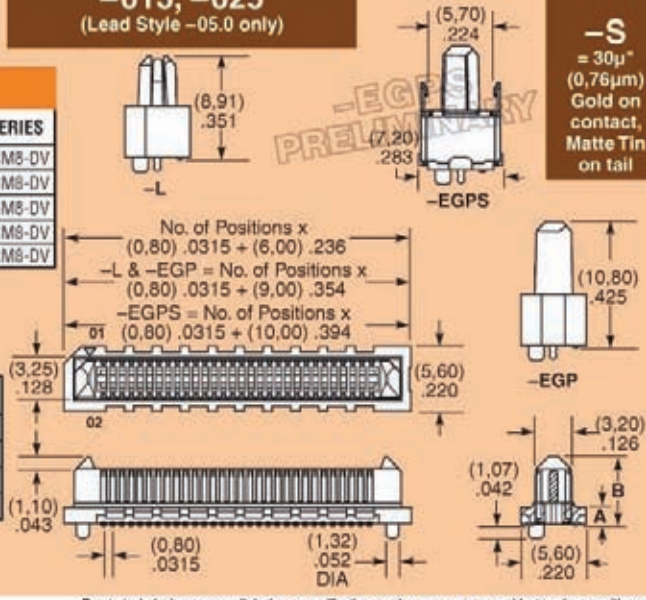
LEAD STYLE
Specify LEAD STYLE from chart

PLATING OPTION
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail
–S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

DV
–DS = Differential Pair Lead Style –05.0 only (–013, –025 positions only) (Hot swap)
–L = Latching (Lead Style –05.0 only) (Not available with –EGP option)
–EGP = Extended Guide Post (Lead Style –05.0 only) (Not available with –L option, or –013, –025 positions)
–EGPS = Extended Guide Post Shield (Lead Style –05.0 only) (Not available with –L option) (–010, –020, –025, –030 only)
–K = (3,50mm) .138" DIA Polyimide Film Pick & Place Pad

OTHER OPTION

TR
–TR = Tape & Reel Packaging



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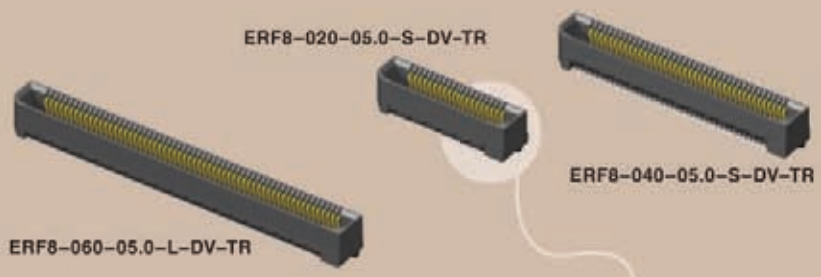
(0,80mm) .0315"
ERF8 SERIES

EDGE R·A·T·E™ CONTACT



RUGGED HIGH SPEED SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERF8

Insulator Material: Black LCP
Contact Material: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 2.1A @ 85°C
Operating Temp Range: -55°C to + 125°C
Voltage Rating: 200 VAC max
RoHS Compliant: Yes

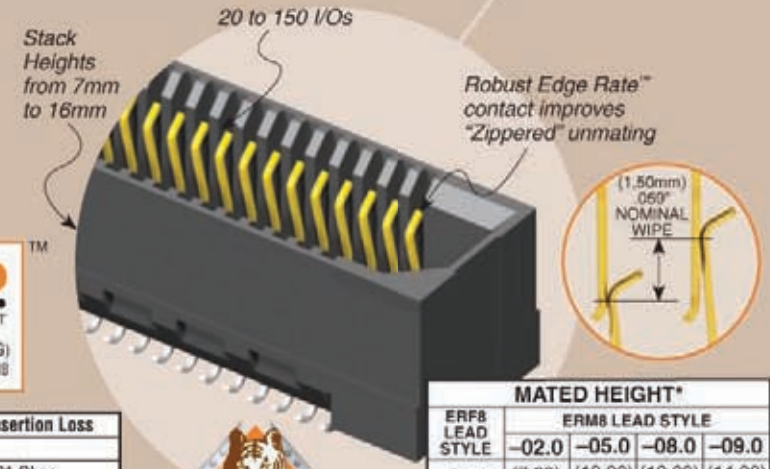
Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (005-030)
(0,12mm) .005" max (040-060)
(0,15mm) .006" max (070-075)

Board Mates: ERM8

Cable Mates: ERCDA, ERDL2, ERCD, ERDP

E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with ERM8



0,80mm ERM8/ERF8	Rated @ -3dB Insertion Loss
7mm Stack Height	
Single-Ended Signaling	10.5 GHz / 21 Gbps
Differential Pair Signaling	9.5 GHz / 19 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?ERF8 or contact sig@samtec.com

RUGGEDIZED by SAMTEC

MATED HEIGHT*

ERF8 LEAD STYLE	ERM8 LEAD STYLE -02.0	-05.0	-08.0	-09.0
-05.0	(7,00) .276	(10,00) .394	(13,00) .512	(14,00) .551
-07.0	(9,00) .354	(12,00) .472	(15,00) .591	(16,00) .629

*Processing conditions will affect mated height.

ERF8 - NO. OF POSITIONS PER ROW - LEAD STYLE - PLATING OPTION - DV - OTHER OPTION - TR

NO. OF POSITIONS PER ROW: -005, -010, -013, -020, -025, -030, -040, -050, -060, -070, -075

LEAD STYLE: Specify LEAD STYLE from chart

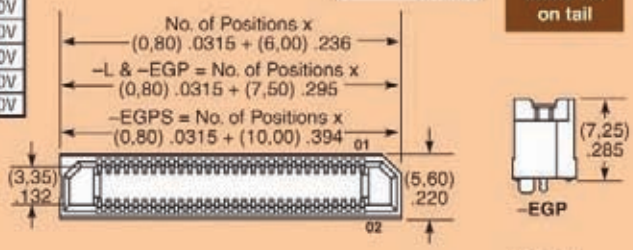
LEAD STYLE	A
-05.0	(5,10) .200
-07.0	(7,00) .276

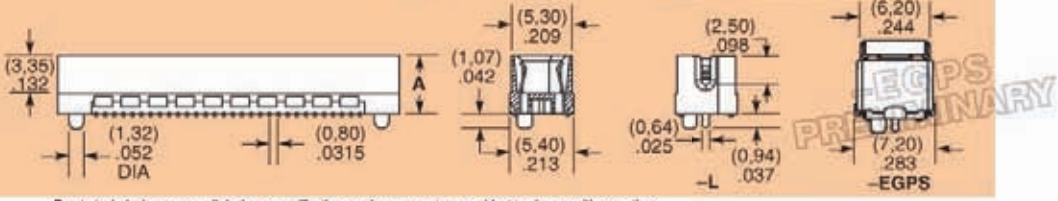
PLATING OPTION:
-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail
-S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

DV

OTHER OPTION:
-L = Latching (Lead Style -05.0 only) (Not available with -EGP option)
-EGP = Extended Guide Post (Lead Style -07.0 only) (Not available with -L option, or -013, -025 positions)
-EGPS = Extended Guide Post Shield (Lead Style -07.0 only) (Not available with -L option) (-010, -020, -025, -030 only)
-K = (6,00mm) .236" DIA Polyimide Film Pick & Place Pad

TR: -TR = Tape & Reel Packaging





Protocols Supported
PCI Express®
Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

APPLICATIONS

STANDARD	POS.	PART NOs.	SERIES
NEXUS5001.org POWER.org	11	ASP-137969-01	ERF8-DV
	17	ASP-130368-01	ERF8-DV
ARM/HSSTP	20	ASP-130367-01	ERF8-DV
NEXUS5001.org POWER.org	23	ASP-130368-01	ERF8-DV
	35	ASP-135029-01	ERF8-DV

APPLICATION SPECIFIC

Other positions and mezzanine stack heights available.
Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

EDGE R·A·T·E™ CONTACT

(0,80mm) .0315"

ERM8-RA, ERF8-RA SERIES

RIGHT ANGLE RUGGED STRIPS

ERM8-RA Board Mates:
ERF8

ERF8-RA Board Mates:
ERM8

ERF8-RA Cable Mates:
ERCDA, ERCD, ERDP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERM8-RA or www.samtec.com?ERF8-RA

Insulator Material:
Black LCP
Contact Material:
ERF8: BeCu
Terminal Material:
ERM8: Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1.6A @ 85°C
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
235 VAC max
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

APPLICATION SPECIFIC

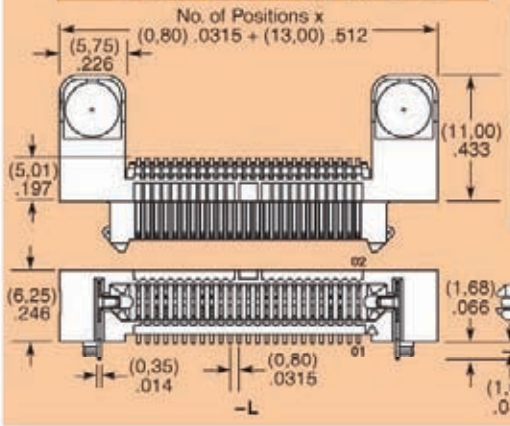
- Other positions available.
- Solder leads & weld tab for (2,36mm) .093" thick board

Call Samtec.

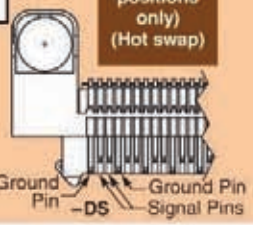
Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

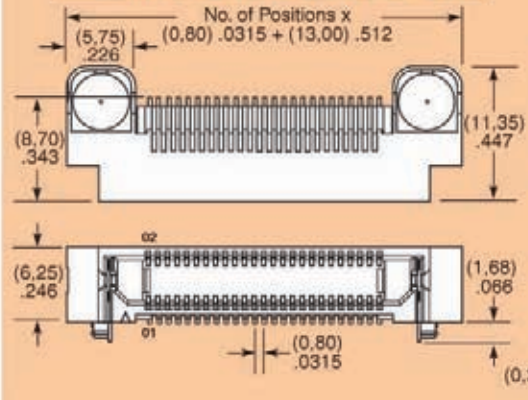
ERM8	NO. OF POSITIONS PER ROW	01	PLATING OPTION	D	RA	OTHER OPTION	TR
	–010, –013, –020, –025, –030, –040, –050, –060, –070, –075		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail			–K = (6,00mm) .236" DIA Polyimide Film Pick & Place Pad –L = Latching –DS = Differential Pair (–013, –025 positions only) (Hot swap)	–TR = Tape & Reel Packaging



ERM8-RA mated to ERF8	Rated @ -3dB Insertion Loss
Single-Ended Signaling	8.0 GHz / 16.0 Gbps
Differential Pair Signaling	9.0 GHz / 18.0 Gbps
Complete test data available at www.samtec.com?ERM8-RA or contact sig@samtec.com	



ERF8	NO. OF POSITIONS PER ROW	01	PLATING OPTION	D	RA	OTHER OPTION	TR
	–010, –013,–020, –025, –030, –040, –050, –060, –070, –075		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail			–L = Latching	–TR = Tape & Reel Packaging



ERF8-RA mated to ERM8-RA	Rated @ -3dB Insertion Loss
Single-Ended Signaling	8.0 GHz / 16.0 Gbps
Differential Pair Signaling	9.0 GHz / 18.0 Gbps
Complete test data available at www.samtec.com?ERF8-RA or contact sig@samtec.com	

Due to technical progress, all designs, specifications and components are subject to change without notice.

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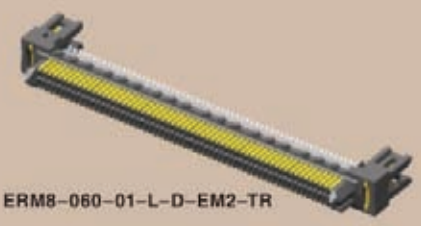


(0,80mm) .0315"

ERM8-EM, ERF8-EM SERIES

RUGGED EDGE MOUNT STRIPS

ERM8-EM Board Mates:
ERF8

ERM8-EM Cable Mates:
ERCD, ERDP

ERF8-EM Board Mates:
ERM8

ERF8-EM Cable Mates:
ERDL2, ERCD, ERDP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERM8-EM or www.samtec.com?ERF8-EM

Insulator Material:
Black LCP
Contact Material (ERF8):
BeCu
Terminal Material (ERM8):
Phosphor Bronze
Latch Material (ERM8):
BeCu
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
2.1A @ 85°C
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
200 VAC max
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (005-030)
(0,12mm) .005" max (040-075)

APPLICATION SPECIFIC

Other positions available.
Call Samtec.

APPLICATIONS

STANDARD	POS.	PART NOs.	SERIES
NEXUS5001.org POWER.org	11	ASP-137971-01	ERM8-EM
	17	ASP-137974-01	ERM8-EM
ARM/HSSTP	20	ASP-133811-01	ERM8-EM
NEXUS5001.org POWER.org	23	ASP-133811-02	ERM8-EM
	35	ASP-135040-01	ERM8-EM

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

RUGGEDIZED by SAMTEC

ERM8 - NO. OF POSITIONS PER ROW - 01 - PLATING OPTION - D - EM2 - OTHER OPTION - TR

–005, –010, –013, –020, –025, –030, –040, –050, –060, –070, –075

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

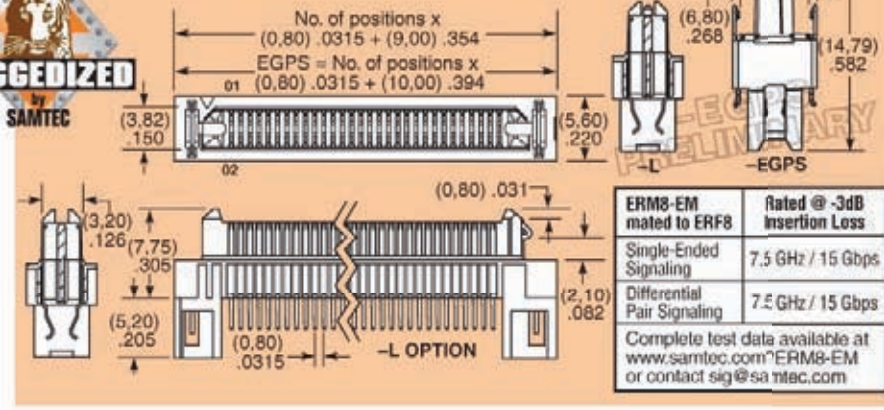
–EM2 = (1,60mm) .062" Thick PCB

–DS = Differential Pair (–013, –025 positions only) (Hot Swap)

–L = Latching (Mates to ERF8 Lead Style –05.0 or –RA only)

–EGPS = Extended Guide Post Shield (–010, –020, –025, –030 positions only)

–TR = Tape & Reel



ERM8-EM mated to ERF8	Rated @ -3dB Insertion Loss
Single-Ended Signaling	7.5 GHz / 15 Gbps
Differential Pair Signaling	7.5 GHz / 15 Gbps

Complete test data available at www.samtec.com?ERM8-EM or contact sig@samtec.com

–DS OPTION	
PIN COUNT	PAIR COUNT
2x13	8
2x25	16

ERF8 - NO. OF POSITIONS PER ROW - 01 - PLATING OPTION - D - EM2 - OTHER OPTION - TR

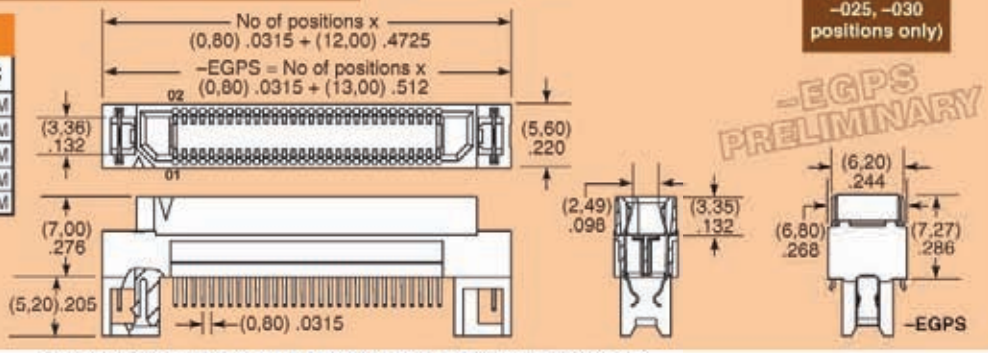
–005, –010, –013, –020, –025, –030, –040, –050, –060, –070, –075

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–EM2 = (1,60mm) .062" Thick PCB

–EGPS = Extended Guide Post Shield (–010, –020, –025, –030 positions only)

–TR = Tape & Reel



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC TAIWAN • Tel: 886-2-2735 6109 SAMTEC HONG KONG • Tel: 852-26004858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 1 : 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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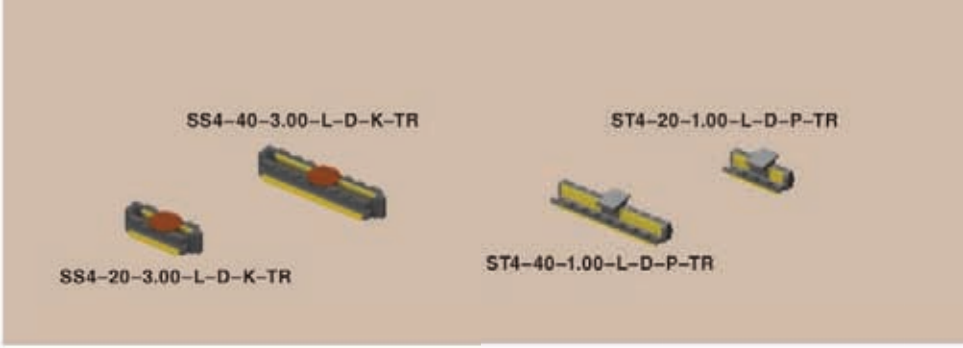


(0,40mm) .01575"
SS4, ST4 SERIES

ULTRA FINE PITCH HEADER & SOCKET

SS4 Mates with: ST4
ST4 Mates with: SS4

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SS4 or www.samtec.com?ST4

Insulator Material: Black LCP
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C
Current Rating: 1.3A @ 80°C ambient
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

MATED HEIGHT

MATED HEIGHT*		
ST4 LEAD STYLE	SS4 LEAD STYLE	
	–3.00	–3.50
–1.00	(4,00) .157	(4,50) .177
–1.50	(4,50) .177	(5,00) .197
–2.50	(5,50) .217	(6,00) .236

*Processing conditions will affect mated height.

Note: –L latching option not intended for alignment to PCB. Automated placement is recommended.

Note: Some lengths, styles and options are non-standard, non-returnable.

SS4 – POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – LATCH OPTION – K – TR

POSITIONS PER ROW: –10, –20, –30, –40, –50

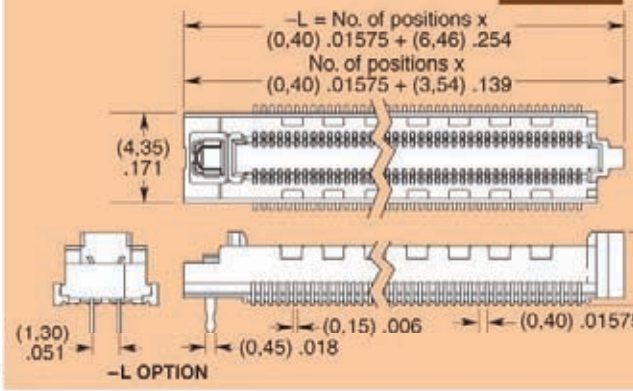
LEAD STYLE: –3.00 = 3.00mm; –3.50 = 3.50mm

PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

LATCH OPTION: –L = Latching (Leave blank for no latching) (Only available in –3.00 Lead Style)

K: (Required in callout) –K = (3,51mm) .138" DIA Polyimide Film Pick & Place Pad

TR: (Required in callout) –TR = Tape & Reel



LEAD STYLE	A	B
–3.00	(2,85) .112	(3,50) .138
–3.50	(3,35) .132	(4,00) .157

4mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	4.5 GHz / 9 Gbps

Complete test data available at www.samtec.com?SS4, www.samtec.com?ST4 or contact sig@samtec.com

ST4 – POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – LATCH OPTION – P – TR

POSITIONS PER ROW: –10, –20, –30, –40, –50

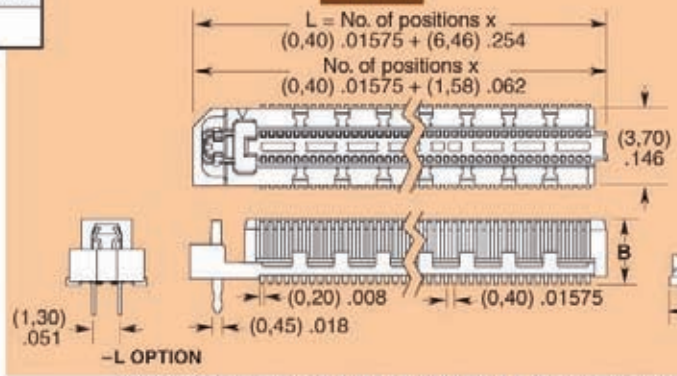
LEAD STYLE: –1.00 = 1.00mm; –1.50 = 1.50mm; –2.50 = 2.50mm

PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

LATCH OPTION: –L = Latching (Leave blank for no latching) (Only available in –1.00 Lead Style)

P: (Required in callout) –P = Pick & Place Pad

TR: (Required in callout) –TR = Tape & Reel



LEAD STYLE	A	B
–1.00	(1,00) .039	(3,08) .121
–1.50	(1,50) .059	(3,58) .141
–2.50	(2,50) .098	(4,58) .180

Due to technical progress, all designs, specifications and components are subject to change without notice.

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RAZOR BEAM SYSTEM™

(0,50mm) .0197"

LSHM SERIES

HIGH SPEED HERMAPHRODITIC STRIP

SPECIFICATIONS

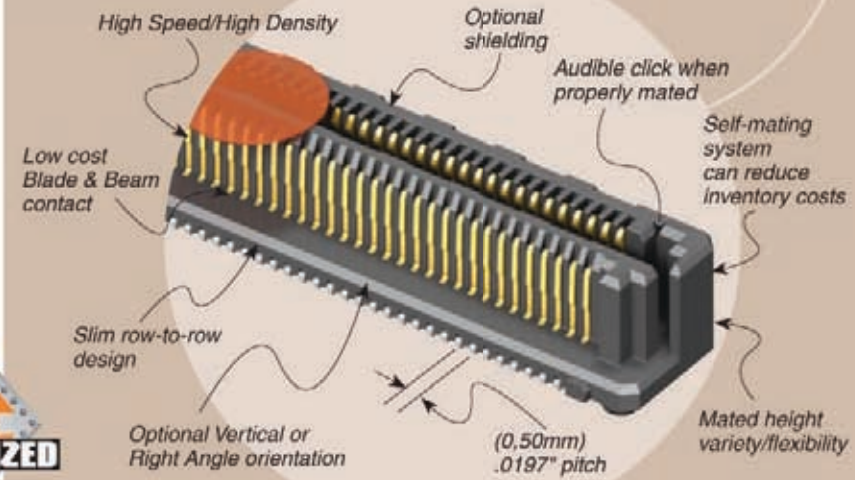
Mates with:
LSHM

For complete specifications and recommended PCB layouts see www.samtec.com?LSHM

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
TBD
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

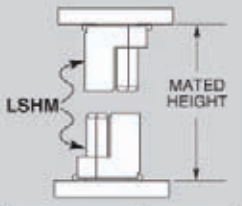
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com



RUGGEDIZED by SAMTEC

APPLICATION



LEAD STYLE	MATED HEIGHT*
–02.5 & –02.5	(5,00) .196
–02.5 & –03.0	(5,50) .217
–03.0 & –03.0	(6,00) .236
–02.5 & –04.0	(6,50) .256
–03.0 & –04.0	(7,00) .276
–04.0 & –04.0	(8,00) .315
–02.5 & –06.0	(8,50) .335
–03.0 & –06.0	(9,00) .354
–04.0 & –06.0	(10,00) .394
–06.0 & –06.0	(12,00) .472

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

LSHM	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	TAIL OPTION	A	SHIELD OPTION	K	TR

20, 30, 40, 50

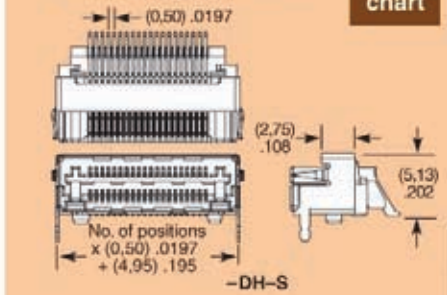
Specify LEAD STYLE from chart

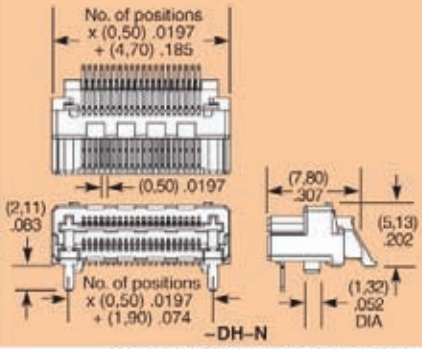
–F = Gold flash on contact, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–DV = Vertical
–DH = Right Angle (Lead style –01 only)

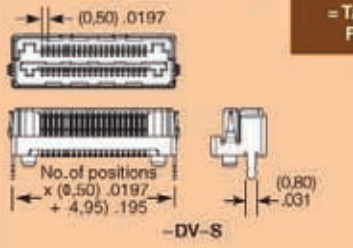
–S = With Shield
–N = Without Shield

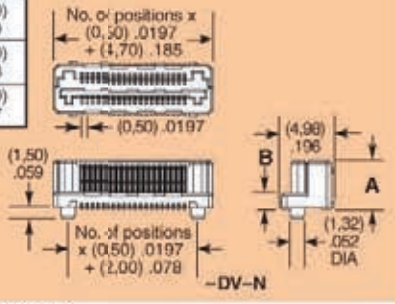
–K = (4,50mm) .177" DIA Polyimide film Pick & Place Pad
–TR = Tape & Reel





LEAD STYLE	A	B
–01	NA (-DH only)	NA (-DH only)
–02.5	(3,95) .156	(1,00) .039
–03.0	(4,45) .175	(1,50) .059
–04.0	(5,45) .215	(2,50) .098
–06.0	(7,45) .293	(4,50) .177





Due to technical progress, all designs, specifications and components are subject to change without notice.

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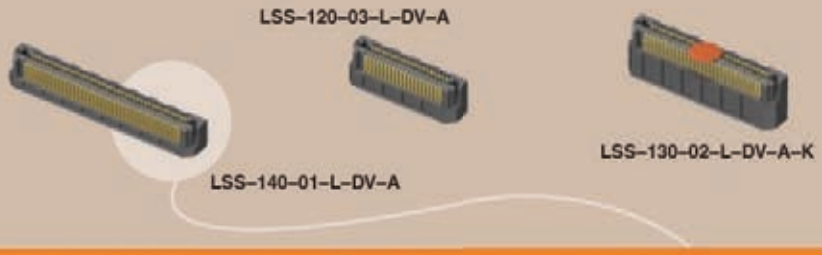
RAZOR BEAM™ SYSTEM

(0,635mm) .025"

LSS SERIES



HIGH SPEED HERMAPHRODITIC STRIP

SPECIFICATIONS

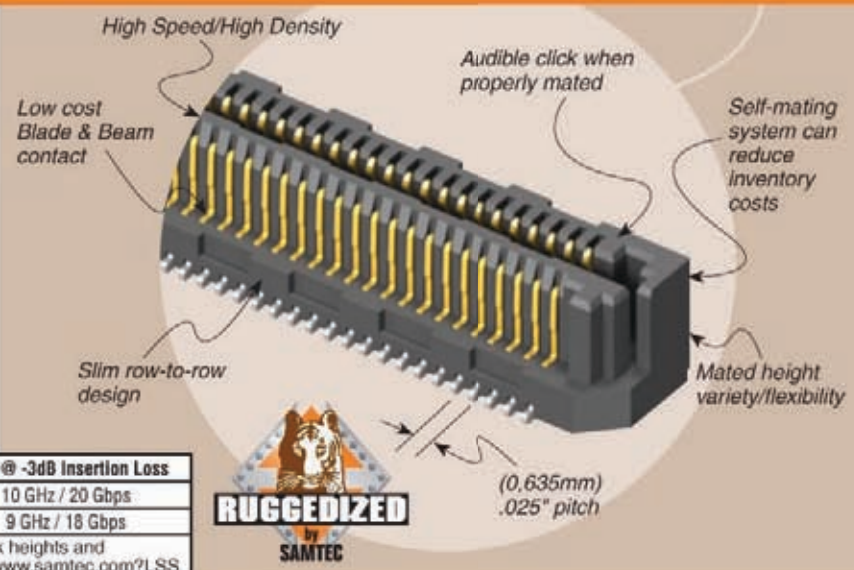
For complete specifications and recommended PCB layouts see www.samtec.com?LSS

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Current Rating:
1.7A @ 30°C Temperature Rise
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com

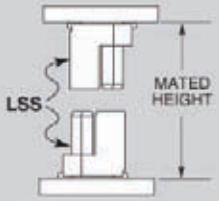
Mates with:
LSS



6mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	10 GHz / 20 Gbps
Differential Pair Signaling	9 GHz / 18 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?LSS or contact sig@samtec.com

APPLICATION



LEAD STYLE	MATED HEIGHT*
–01 & –01	(6,00) .236
–01 & –03	(7,00) .276
–03 & –03	(8,00) .315
–01 & –02	(9,00) .354
–02 & –03	(10,00) .394
–02 & –02	(12,00) .472

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

LSS	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	DV	–	A	–	OPTION

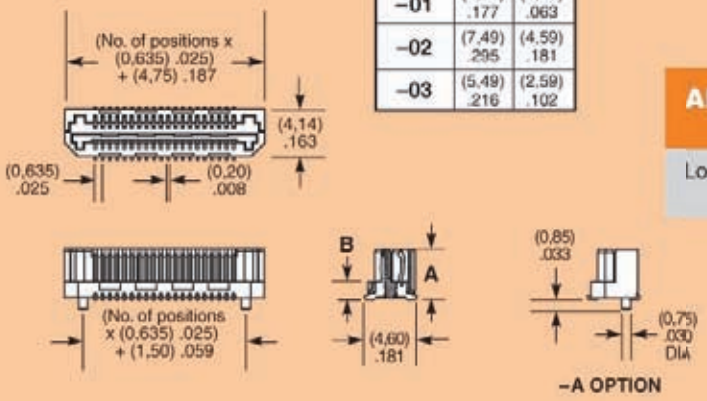
NO. PINS PER ROW: 5, 10, 20, 30, 40, 50

LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
–F = Gold flash on contact, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

OPTION:
–K = (3,50mm) .138" DIA Polyimide film Pick & Place Pad
–TR = Tape & Reel

LEAD STYLE	A	B
–01	(4,50) .177	(1,60) .063
–02	(7,49) .295	(4,59) .181
–03	(5,49) .216	(2,59) .102



APPLICATION SPECIFIC OPTION

Locking Clip on –02 or –03 lead style. Call Samtec.

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RAZOR BEAM™ SYSTEM

(0,80mm) .0315"

LSEM SERIES

HIGH SPEED HERMAPHRODITIC STRIP

SPECIFICATIONS

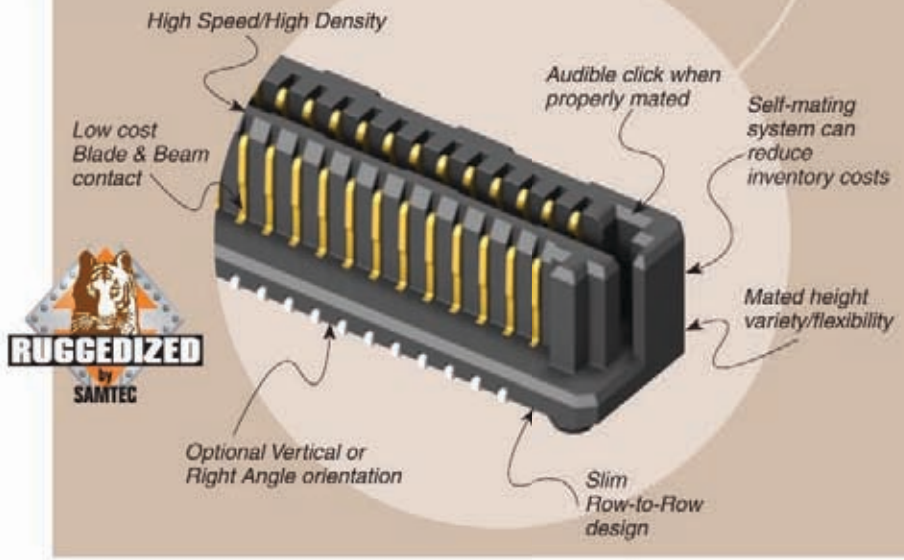
Mates with:
LSEM

For complete specifications and recommended PCB layouts see www.samtec.com?LSEM

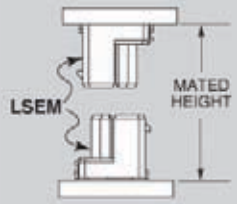
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
TBD
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com



APPLICATION



LEAD STYLE	MATED HEIGHT*
–02.5 & –02.5	(5,00) .198
–02.5 & –03.0	(5,50) .217
–03.0 & –03.0	(6,00) .236
–02.5 & –04.0	(6,50) .256
–03.0 & –04.0	(7,00) .276
–04.0 & –04.0	(8,00) .315
–02.5 & –06.0	(8,50) .335
–03.0 & –06.0	(9,00) .354
–04.0 & –06.0	(10,00) .394
–06.0 & –06.0	(12,00) .472

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

LSEM	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	TAIL OPTION	–	A	–	SHIELD OPTION	–	K	–	TR

20, 30, 40, 50

Specify LEAD STYLE from chart

–F
= Gold flash on contact, Matte Tin on tail

–L
=10µ" (0,25µm) Gold on contact, Matte Tin on tail

–DV
= Vertical

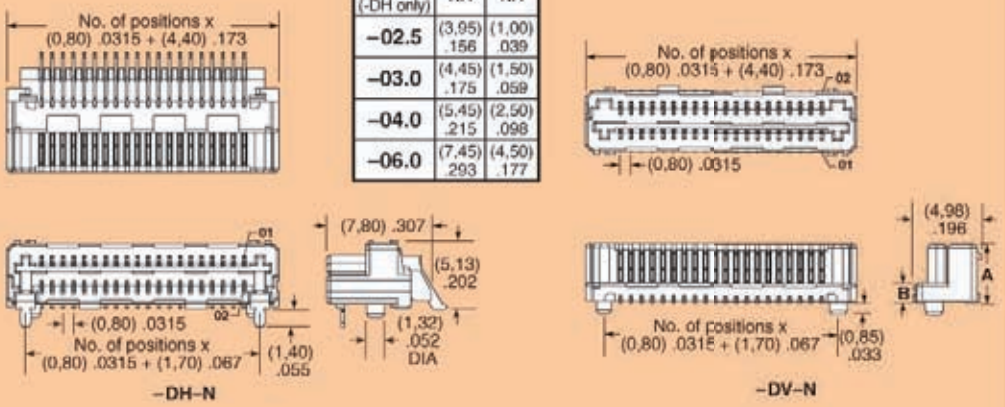
–DH
= Right Angle (Lead style –01 only)

–N
= Without Shield

–K
= (5,50mm) .217" DIA Polyimide film Pick & Place Pad

–TR
= Tape & Reel

LEAD STYLE	A	B
–01 (-DH only)	NA	NA
–02.5	(3,95) .156	(1,00) .039
–03.0	(4,45) .175	(1,50) .059
–04.0	(5,45) .215	(2,50) .098
–06.0	(7,45) .293	(4,50) .177



Due to technical progress, all designs, specifications and components are subject to change without notice.

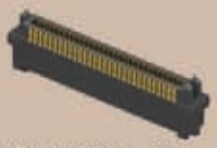
samtec

SEARRAY™ OPEN PIN FIELD INTERCONNECTS

(0,80mm) .0315"

SEAM8 SERIES

SEAM8-30-S02.0-L-06-2



SEAM8-30-S05.0-L-04-2

ULTRA HIGH DENSITY OPEN PIN FIELD

SPECIFICATIONS

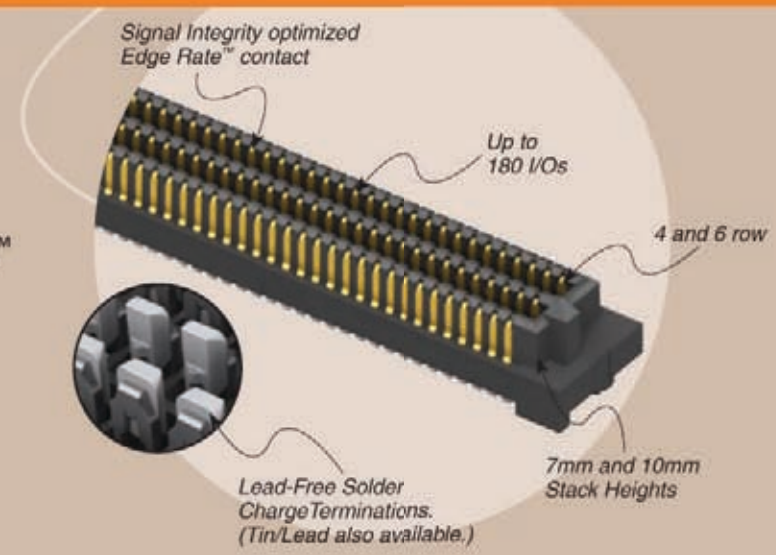
Mates with: SEAF8

For complete specifications and recommended PCB layouts see www.samtec.com?SEAM8

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance:
Testing Now!
Working Voltage:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes



EDGE R·A·T·E™ CONTACT

ALSO AVAILABLE

- Tin-Lead Solder charge
- Other Gold plating options.
- Other pin counts in design.

Call Samtec.

SEAM8	–	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	NO. OF ROWS	–	SOLDER TYPE	–	OPTION	–	TR

–10, –20, –30
(Call Samtec for other sizes)

–S02.0
= 2mm Body Height

–S05.0
= 5mm Body Height

–L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail

–04
=Four Rows

–06
=Six Rows

–2
= Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7%Cu Solder Charge

–K
= Polyimide film Pick & Place Pad

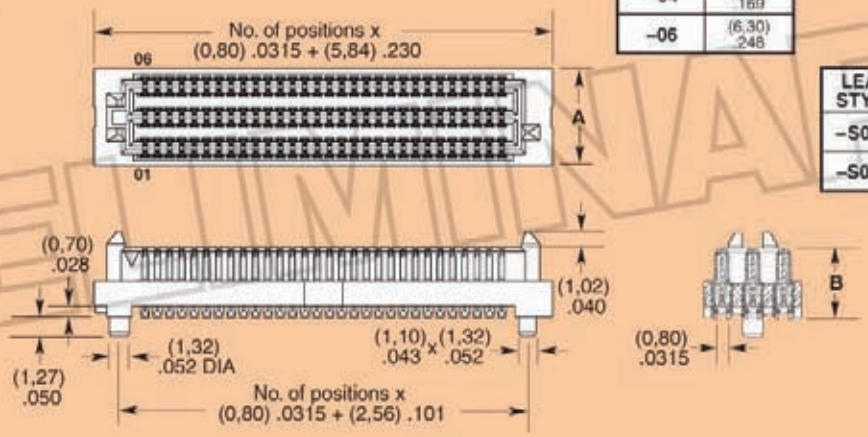
–TR
=Tape & Reel

MATED HEIGHT*		
SEAF8 LEAD STYLE	SEAM8 LEAD STYLE	
	–S02.0	–S05.0
–05.0	(7,00) .276	(10,00) .394

*Processing conditions will affect mated height.

NO. OF ROWS	A
–04	(4,30) .169
–06	(6,30) .248

LEAD STYLE	B
–S02.0	(4,50) .177
–S05.0	(7,50) .295



Note: Some sizes, styles and options are non-standard, non-returnable.

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

SEARRAY™ OPEN PIN FIELD INTERCONNECTS

(0,80mm) .0315"

SEAF8 SERIES

SEAF8-30-05.0-L-04-2

SEAF8-30-05.0-L-06-2

ULTRA HIGH DENSITY OPEN PIN FIELD

SPECIFICATIONS

Mates with: SEAM8

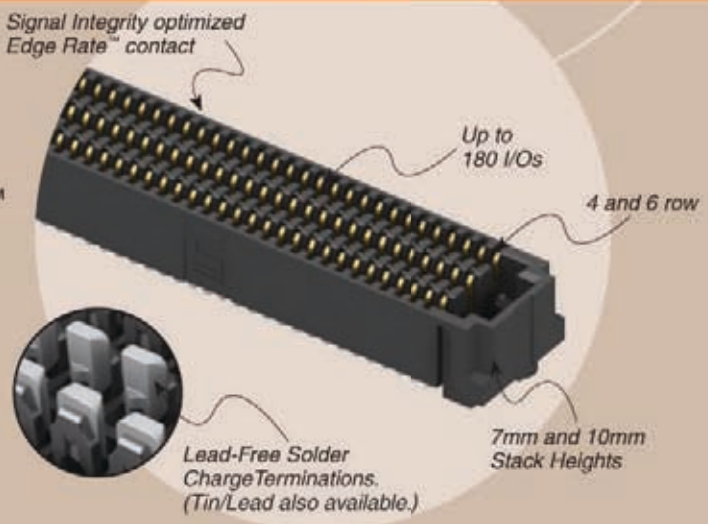
For complete specifications and recommended PCB layouts see www.samtec.com?SEAF8

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance:
Testing Now!
Working Voltage:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

EDGE R·A·T·E™ CONTACT



ALSO AVAILABLE

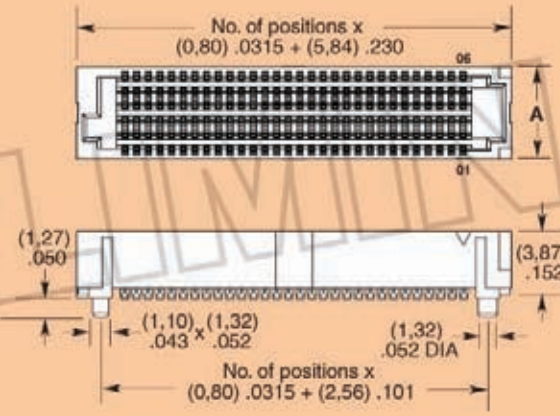
- Tin-Lead Solder charge
- Other Gold plating options.
- Other pin counts in design.

Call Samtec.

SEAF8	NO. PINS PER ROW	05.0	PLATING OPTION	NO. OF ROWS	SOLDER TYPE	OPTION	TR
	–10, –20, –30 (Call Samtec for other sizes)		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail	–04 = Four Rows –06 = Six Rows	–2 = Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7%Cu Solder Charge	–K = Polyimide film Pick & Place Pad	–TR = Tape & Reel

MATED HEIGHT*		
SEAF8 LEAD STYLE	SEAM8 LEAD STYLE	
	–S02.0	–S05.0
–05.0	(7,00) .276	(10,00) .394

*Processing conditions will affect mated height.



NO. OF ROWS	A
–04	(4,30) .169
–06	(6,30) .248

Note: Some sizes, styles and options are non-standard, non-returnable.

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

(1,27mm) .050"

LPAM SERIES

LP ARRAY™ Low Profile Array

LPAM-20-01.5-L-04-2

LPAM-20-01.5-L-06-2

HIGH SPEED LOW PROFILE OPEN PIN FIELD

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?LPAM

Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance:
Testing Now!
Current Rating:
Testing Now!
Performance:
Testing Now!
Working Voltage:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

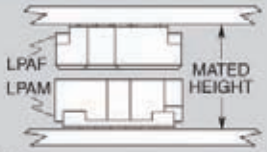
ALSO AVAILABLE

- Tin-Lead Solder Charge.
- Other pins/row and row counts.
- Other Gold plating options.

Call Samtec.

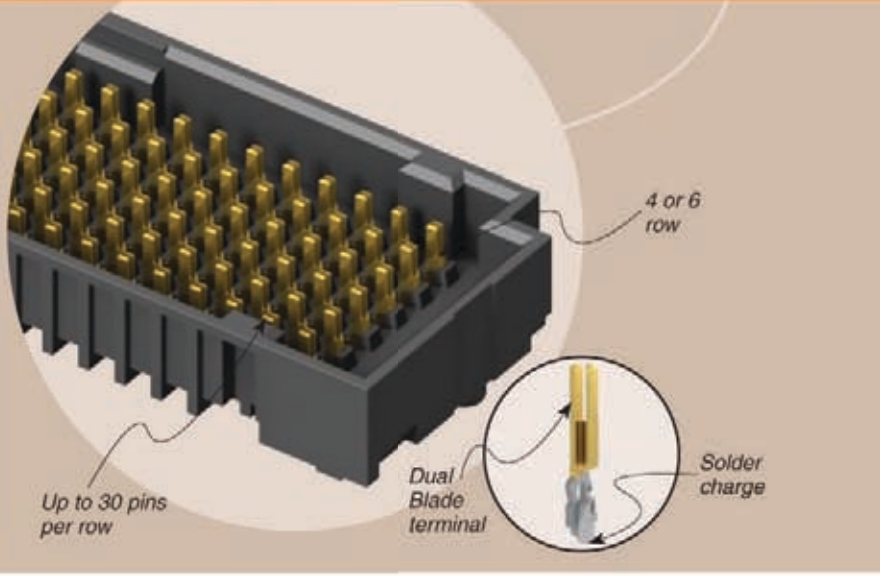
Mates with:
LPAF

MATED HEIGHT



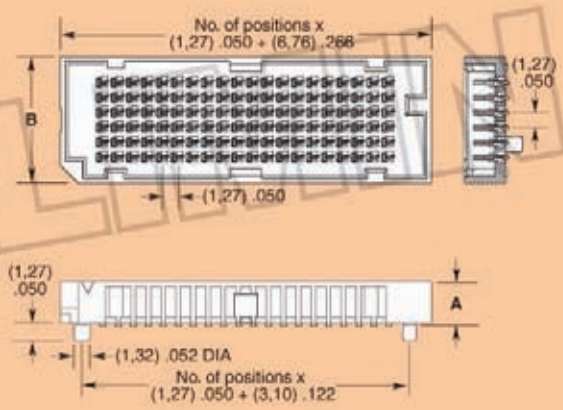
MATED HEIGHT*		
LPAM LEAD STYLE	LPAF LEAD STYLE	
	–03.0	–03.5
–01.0	(4,00) .157	(4,50) .177
–01.5	(4,50) .177	(5,00) .197

*Processing conditions will affect mated height.



LPAM	–	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	NO. OF ROWS	–	2	–	OPTION	–	TR
		–10, –20, –30 (Per Row)		–01.0 = (1,0mm) .039" –01.5 = (1,5mm) .060"		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail		–04 = Four Rows –06 = Six Rows		–2 = Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7% Cu Solder Charge		–K = Polyimide film Pick & Place Pad		–TR = Tape & Reel

NO. OF ROWS	B
–04	(8,16) .322
–06	(8,16) .322



LEAD STYLE	A
–01.0	(3,68) .145
–01.5	(4,19) .165

PRELIMINARY

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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(1,27mm) .050"

LPAF SERIES

LP ARRAY™ Low Profile Array

LPAF-20-03.5-L-04-2

LPAF-20-03.5-L-06-2

HIGH SPEED LOW PROFILE OPEN PIN FIELD

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?LPAF

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance:
Testing Now!
Current Rating:
Testing Now!
Performance:
Testing Now!
Working Voltage:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

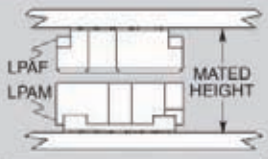
ALSO AVAILABLE

- Tin-Lead Solder Charge.
- Other pins/row and row counts.
- Other Gold plating options.

Call Samtec.

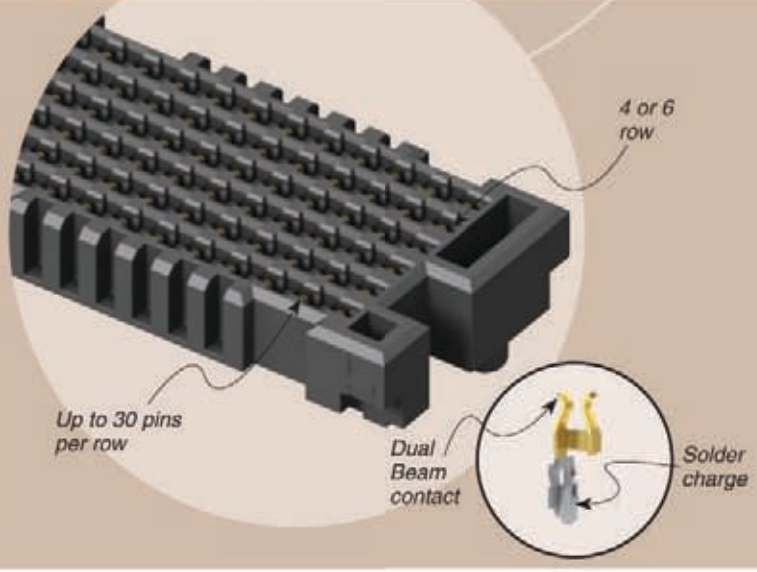
Mates with:
LPAM

MATED HEIGHT



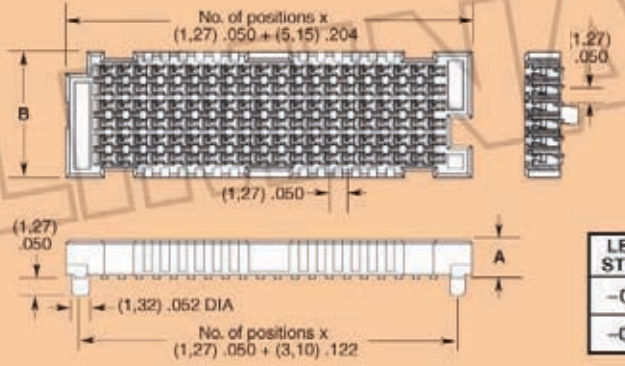
MATED HEIGHT*		
LPAF LEAD STYLE	LPAM LEAD STYLE	
	–01.0	–01.5
–03.0	(4,00) .157	(4,50) .177
–03.5	(4,50) .177	(5,00) .197

*Processing conditions will affect mated height.



LPAF	–	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	NO. OF ROWS	–	2	–	OPTION	–	TR
		–10, –20, –30 (Per Row)		–03.0 = (3,0mm) .118" –03.5 = (3,5mm) .138"		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail		–04 = Four Rows –06 = Six Rows		–2 = Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7% Cu Solder Charge		–K = Polyimide film Pick & Place Pad		–TR = Tape & Reel

NO. OF ROWS	B
–04	(6,71) .264
–06	(9,25) .364



LEAD STYLE	A
–03.0	(2,79) .110
–03.5	(3,30) .130

PRELIMINARY

Note: Some sizes, styles and options are non-standard, non-returnable.

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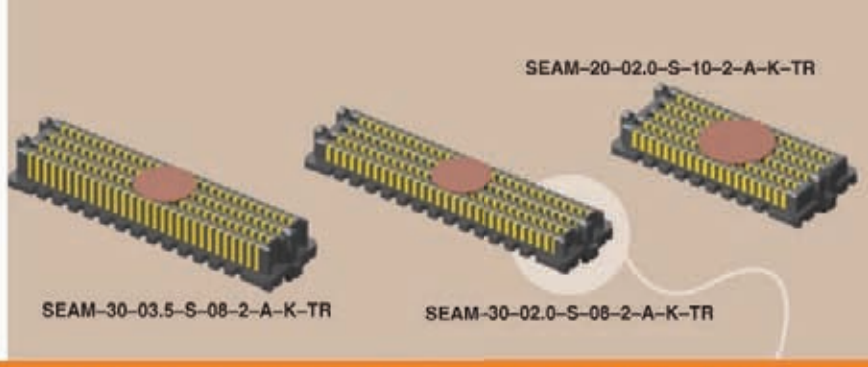
SEARRAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SEAM SERIES



HIGH SPEED/HIGH DENSITY OPEN PIN FIELD

SPECIFICATIONS

Mates with: SEAF, SADL

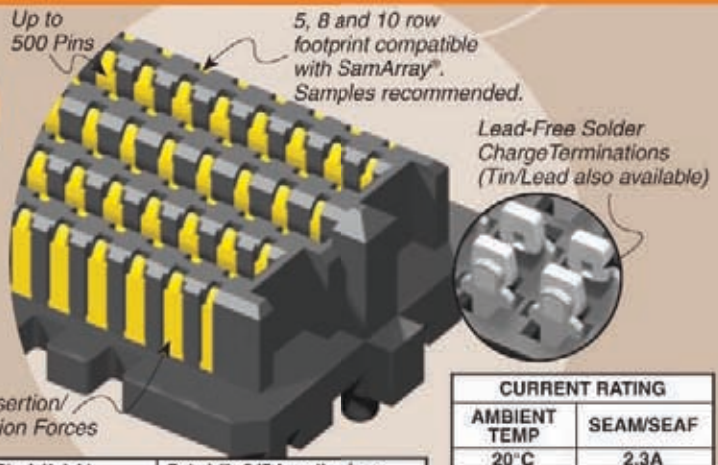
For complete specifications and recommended PCB layouts see www.samtec.com?SEAM

Insulator Material: Black LCP
Contact Material: Copper Alloy
Operating Temp Range: -55°C to +125°C
Plating: Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance: 5.5 mΩ
Working Voltage: 240 VAC
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

E.L.P. EXTENDED LIFE PRODUCT™
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with SEAF



CURRENT RATING	
AMBIENT TEMP	SEAM/SEAF
20°C	2.3A
40°C	2A
60°C	1.75A
95°C	1.14A
30 ADJACENT POSITIONS POWERED	

7mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	9.5 GHz / 19 Gbps
Differential Pair Signaling	10.5 GHz / 21 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?SEAM or contact sig@samtec.com	

FinalInch Break Out Region Performance Certified finalinch.com

Industry Standards

PISMO 2
VITA 47
VITA 57

Protocols Supported

Fibre Channel
Rapid I/O
PCI Express®
SATA
Infiniband

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

SEAM	–	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	NO. OF ROWS	–	SOLDER TYPE	–	A	–	K	–	TR

–10, –15, –20, –30, –40, –50
(–10 only available in 04 row)
(–15 only available in 10 row)

Specify LEAD STYLE from chart

–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail

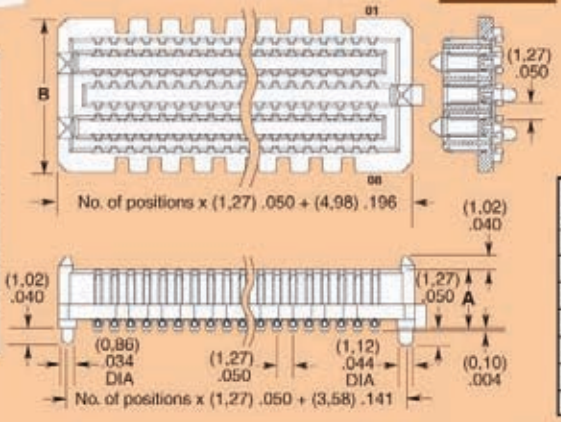
–S = 30µ" (0,76µm) Gold on contact area, Matte Tin on solder tail

–04 = Four Rows (–06.5 not available)
–05 = Five Rows (–06.5 not available)
–06 = Six Rows (–06.5 not available)
–08 = Eight Rows
–10 = Ten Rows

–2 = Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7% Cu Solder Charge

–A = Alignment Pins (Required. Arrays will not self-center on solder pads)
–K = Polyimide film Pick & Place Pad
–TR = Tape & Reel

NO. OF ROWS	B
–04	(7,06) .278
–05, –06	(9,60) .378
–08	(12,14) .478
–10	(14,68) .578



LEAD STYLE	A
–02.0	(4,60) .181
–03.0	(5,59) .220
–03.5	(6,10) .240
–06.5	(6,40) .252
–07.0	(9,60) .378
–09.0	(11,60) .457
–11.0	(13,60) .535

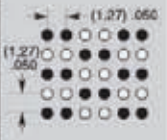
MATED HEIGHTS*			
SEAM LEAD STYLE	SEAF LEAD STYLE		
	–05.0	–06.0	–06.5
–02.0	7mm	8mm	8.5mm
–03.0	8mm	9mm	9.5mm
–03.5	8.5mm	9.5mm	10mm
–06.5	11.5mm	12.5mm	13mm
–07.0	12mm	13mm	13.5mm
–09.0	14mm	15mm	15.5mm
–11.0	16mm	17mm	17.5mm

*Processing conditions will affect mated height.

Note: Some sizes, styles and options are non-standard, non-returnable.

DIFFERENTIAL APPLICATION

ARRAY	PAIR COUNT
50x10	125
50x8	100
40x10	100
40x8	80
40x6	60
30x10	75
30x8	60
30x6	45
20x10	50
20x8	40
20x10	25



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SAMTEC TAIWAN • Tel: 886-2-2735 6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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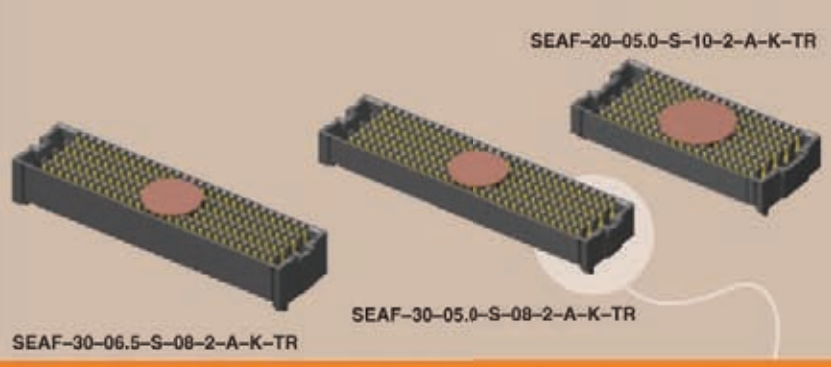
SEARRAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SEAF SERIES



HIGH SPEED/HIGH DENSITY OPEN PIN FIELD

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SEAF

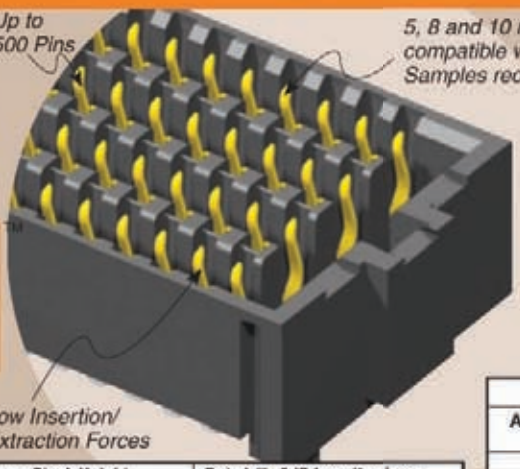
Insulator Material: Black LCP
Contact Material: Copper Alloy
Operating Temp Range: -55°C to +125°C
Plating: Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance: 5.5 mΩ
Working Voltage: 240 VAC
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

Mates with: SEAM, SADL, SEAMP, SEAC (Requires –LP)

E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with SEAM



7mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	9.5 GHz / 19 Gbps
Differential Pair Signaling	10.5 GHz / 21 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?SEAF or contact sig@samtec.com

CURRENT RATING	
AMBIENT TEMP	SEAM/SEAF
20°C	2.3A
40°C	2A
60°C	1.75A
95°C	1.14A
30 ADJACENT POSITIONS POWERED	

Final Inch Break Out Region Performance Certified finalinch.com

Industry Standards Protocols Supported

PISMO 2
VITA 47
VITA 57

Fibre Channel
Rapid I/O
PCI Express®
SATA
Infiniband

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

SEAF – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – NO. OF ROWS – 2 – A – OPTION – K – TR

NO. PINS PER ROW: –10, –15, –20, –30, –40, –50 (–10 only available in 04 row) (–15 only available in 10 row)

LEAD STYLE: Specify LEAD STYLE from chart

LEAD STYLE	A
–05.0	(5,05) .199
–06.0	(6,05) .238
–06.5	(6,55) .258

NO. OF ROWS	B
–04	(5,61) .221
–05, –06	(8,20) .323
–08	(10,69) .421
–10	(13,23) .521

PLATING OPTION:
–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail
–S = 30µ" (0,76µm) Gold on contact area, Matte Tin on solder tail

NO. OF ROWS:
–04 = Four Rows
–05 = Five Rows
–06 = Six Rows
–08 = Eight Rows
–10 = Ten Rows

2: –2 = Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7% Cu Solder Charge

A

OPTION: –LP = Latch Post (–LP required for SEAC mate only)

K

TR

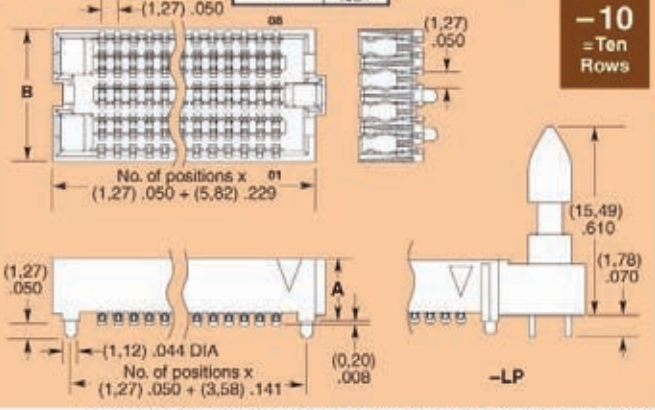
APPLICATION SPECIFIC OPTION

–07.5 lead style for 30x4 available. Call Samtec.

MATED HEIGHTS*			
SEAM LEAD STYLE	SEAF LEAD STYLE		
	–05.0	–06.0	–06.5
–02.0	7mm	8mm	8.5mm
–03.0	8mm	9mm	9.5mm
–03.5	8.5mm	9.5mm	10mm
–06.5	11.5mm	12.5mm	13mm
–07.0	12mm	13mm	13.5mm
–09.0	14mm	15mm	15.5mm
–11.0	16mm	17mm	17.5mm

*Processing conditions will affect mated height.

Note: Some sizes, styles and options are non-standard, non-returnable.



DIFFERENTIAL

AFRAY	PAIR COUNT
50x10	125
50x8	100
40x10	100

ARRAY	PAIR COUNT
40x8	80
40x6	60
30x10	75
30x8	60
30x6	45
20x10	50
20x8	40
20x5	25

Due to technical progress, all designs, specifications and components are subject to change without notice.

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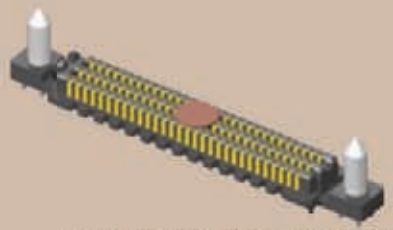
SEARAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SEAM-RA, SEAM-GP SERIES

SEAM-20-01-L-06-2-RA-GP-TR



SEAM-30-02.0-L-06-2-A-GP-K-TR

HI-DENSITY RIGHT ANGLE OPEN PIN FIELD

Mates with:
SEAF-RA, SADL, SEAF

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SEAM

Insulator Material: Black LCP
Contact Material: Copper Alloy
Current Rating: Testing Now!
Operating Temp Range: -55°C to +125°C
Plating: Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance: Testing Now!
Working Voltage: Testing Now!
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

ALSO AVAILABLE

Tin-Lead Solder Charge
Call Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

SEAM – NO. PINS PER ROW – 01 – PLATING OPTION – NO. OF ROWS – 2 – RA – OPTION – TR

NO. PINS PER ROW: –20, –30, –40, –50

PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail

Note: Other Gold plating options available. Contact Samtec.

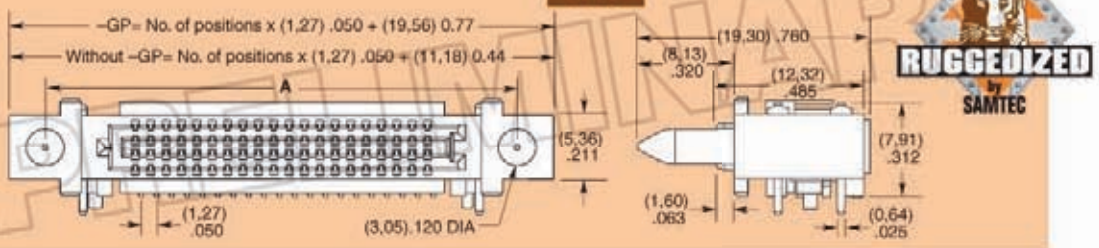
NO. OF ROWS: –04 = Four Rows; –06 = Six Rows; –08 = Eight Rows; –10 = Ten Rows

2: –2 = Lead-Free Tin Alloy 95.5% Sn/ 3.8% Ag/ 0.7% Cu Solder Charge

OPTION: –GP = Guide Post; –K = (7,49mm) .295" DIA Polyimide film Pick & Place Pad

TR: –TR = Tape & Reel

NUMBER PINS PER ROW	A
–20	(38,94) 1.533
–30	(51,64) 2.033
–40	(64,34) 2.533
–50	(77,04) 3.033



PRELIMINARY

RUGGEDIZED by SAMTEC

Mates with:
SEAF-RA-GP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SEAM-GP

Insulator Material: Black LCP
Contact Material: Copper Alloy
Current Rating: 2.7 A
Operating Temp Range: -55°C to +125°C
Plating: Au over 50µ" (1,27µm) Ni
Contact Resistance: 5.5 mΩ
Working Voltage: 240 VAC
Mated Cycles: 100
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

Note: Some sizes, styles and options are non-standard, non-returnable.

SEAM – NO. PINS PER ROW – 02.0 – PLATING OPTION – NO. OF ROWS – 2 – A – GP – K – TR

NO. PINS PER ROW: –20, –30, –40, –50

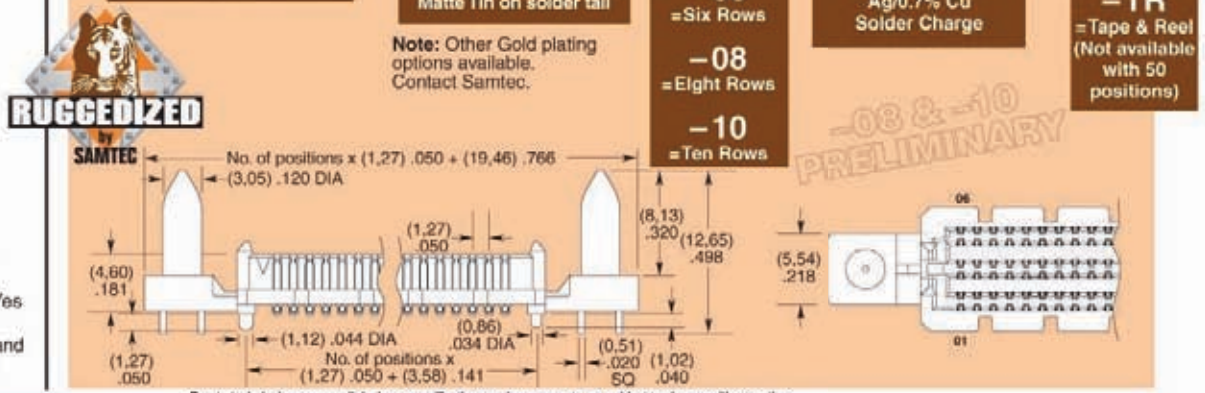
PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail

Note: Other Gold plating options available. Contact Samtec.

NO. OF ROWS: –04 = Four Rows; –06 = Six Rows; –08 = Eight Rows; –10 = Ten Rows

2: –2 = Lead-Free Tin Alloy 95.5% Sn/3.8% Ag/0.7% Cu Solder Charge

TR: –K = Polyimide film Pick & Place Pad; –TR = Tape & Reel (Not available with 50 positions)



-08 & -10 PRELIMINARY

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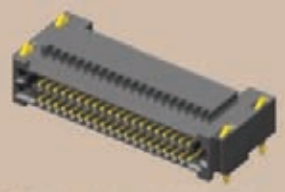
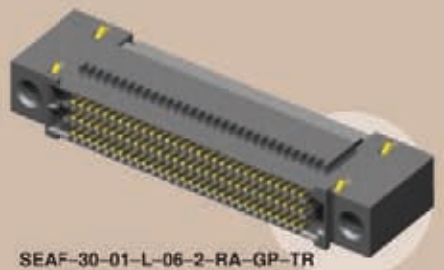
SEARAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SEAF-RA SERIES



SEAF-20-01-L-04-2-RA-TR



SEAF-30-01-L-06-2-RA-GP-TR

HI-DENSITY RIGHT ANGLE OPEN PIN FIELD

SPECIFICATIONS

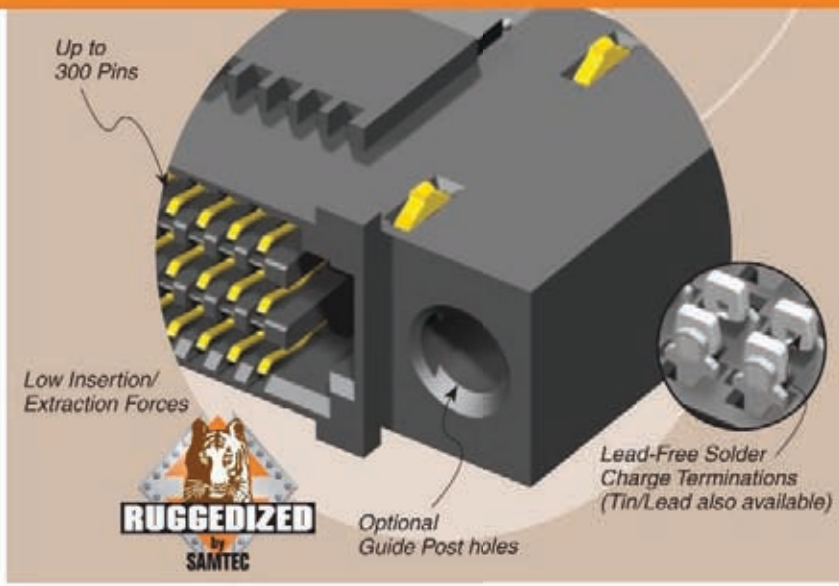
For complete specifications and recommended PCB layouts see www.samtec.com?SEAF-RA

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Current Rating:
2.1 A with 4 adjacent contacts powered
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance:
17.1 mΩ max
Working Voltage:
280 VAC
Mated Cycles:
100
RoHS Compliant:
Yes

Processing:

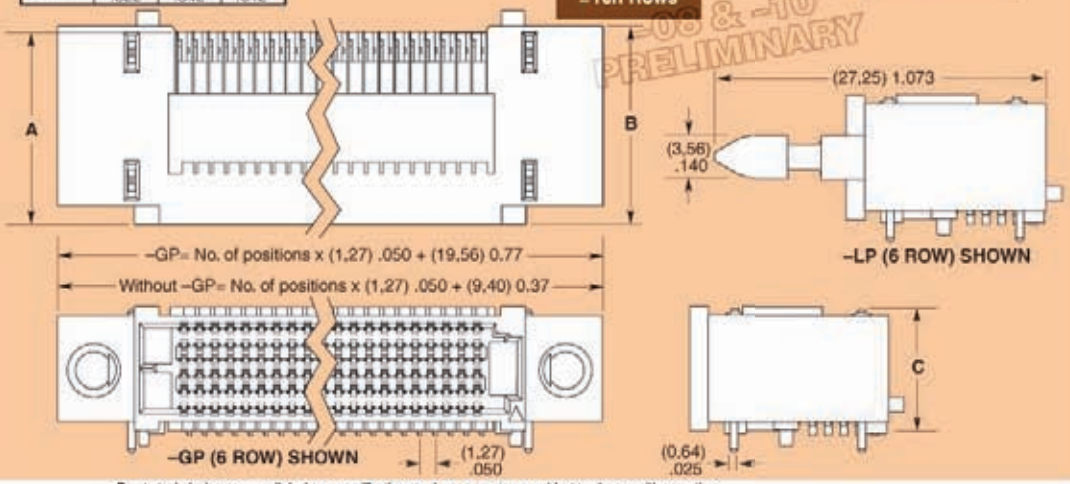
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

Mates with:
SEAM, SADL,
SEAC (Requires –LP)



SEAF	–	NO. PINS PER ROW	–	01	–	PLATING OPTION	–	NO. OF ROWS	–	2	–	RA	–	OPTION	–	TR
		–20, –30, –40, –50				–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail		–04 =Four Rows –06 =Six Rows –08 =Eight Rows –10 =Ten Rows		–2 = Lead-Free Tin Alloy 95.5%Sn/ 3.8% Ag/ 0.7% Cu Solder Charge				–GP = Guide Post Hole –LP = Latch Post (06 row 30 positions only) (Mates to SEAC Series)		–TR =Tape & Reel (Not available with –LP option)

NO. OF ROWS	A	B	C
–04	(13,26) .522	(13,77) .542	(7,91) .312
–06	(15,80) .622	(16,31) .642	(10,45) .412
–08	(18,34) .722	(18,85) .742	(12,99) .512
–10	(20,88) .822	(21,39) .842	(15,53) .612



Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

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SEARRAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SEAMP SERIES

SEAMP-20-02.0-L-04-TR

SEAMP-20-02.0-L-06-TR

PRESS FIT OPEN PIN FIELD ARRAY

SPECIFICATIONS

Mates with:
SEAF

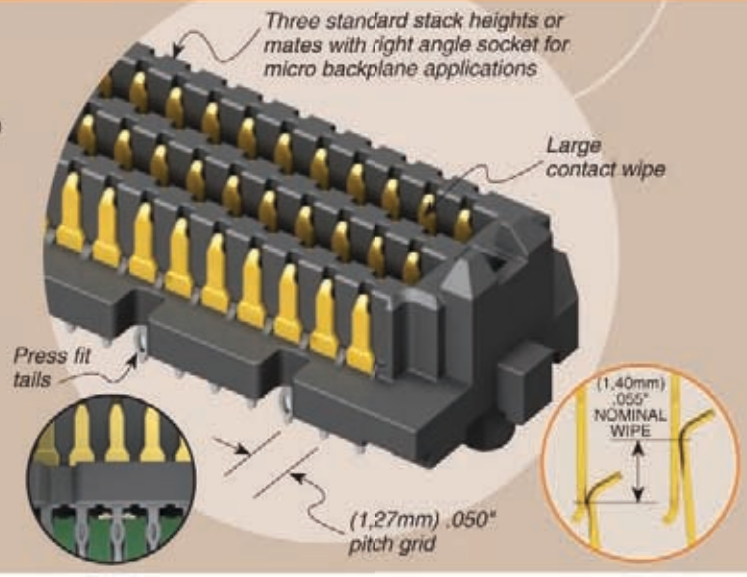
For complete specifications and recommended PCB layouts see www.samtec.com?SEAMP

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Contact Resistance:
Testing Now!
Current Rating:
Testing Now!
Working Voltage:
Testing Now!
Performance:
Testing Now!
RoHS Compliant:
Yes

Processing:

Application tooling and one ton minimum press required. Contact ATG@samtec.com for more information.

EDGE R·A·T·E™ CONTACT



ALSO AVAILABLE

Other pin counts, plating and guide post options.
Call Samtec.

MATED HEIGHTS*			
SEAMP LEAD STYLE	SEAF LEAD STYLE		
	-05.0	-06.0	-06.5
-02.0	7mm	8mm	8.5mm
*Processing conditions will affect mated height.			

SEAMP - NO. OF POSITIONS PER ROW - 02.0 - PLATING OPTION - NO. OF ROWS - TR

-20, -30, -40 (Per Row)

-L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

-04 = Four Rows
-06 = Six Rows

-TR = Tape & Reel

APPLICATION TOOLING

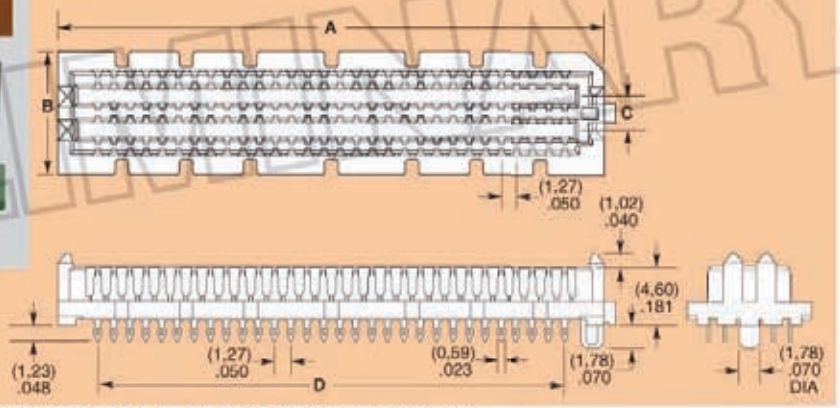
SEAMP - PT - NO. OF POSITIONS - ROWS

-20, -30, -40 | -04, -06

Contact ATG@samtec.com for tooling questions.

NO. OF POSITIONS	A	D
-20	(30,38) 1.196	(24,13) .950
-30	(43,08) 1.696	(36,83) 1.450
-40	(55,78) 2.196	(49,53) 1.950

NO. OF ROWS	B	C
-04	(7,06) .278	(2,54) .100
-06	(9,60) .378	(2,54) .100



Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

PRELIMINARY

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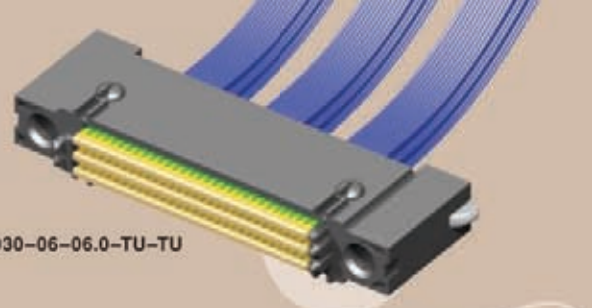
SEARAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SEAC SERIES



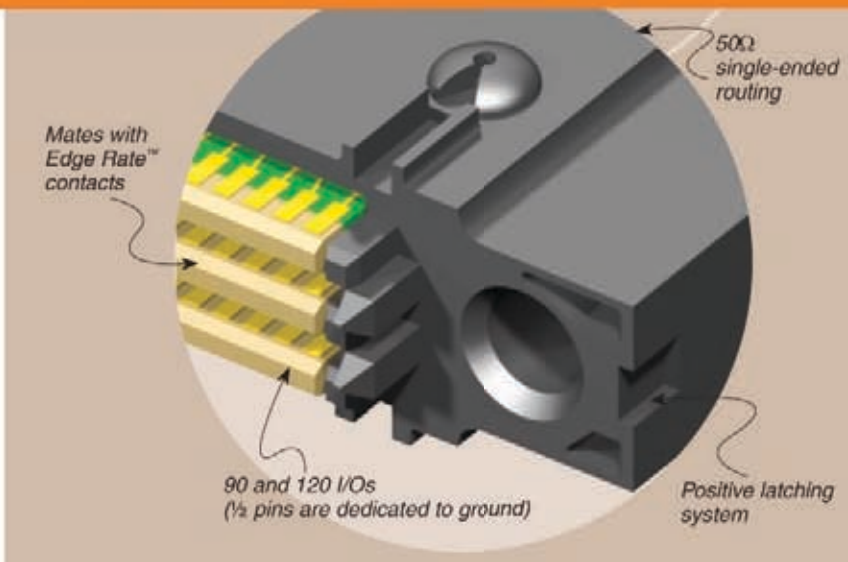
HIGH SPEED/HIGH DENSITY JUMPER

SPECIFICATIONS

Mates with:
SEAF-LP, SEAF-RA-LP

For complete specifications and recommended PCB layouts see www.samtec.com?SEAC

Cable:
36 AWG 50Ω coax
Signal Routing:
50Ω Single-Ended
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

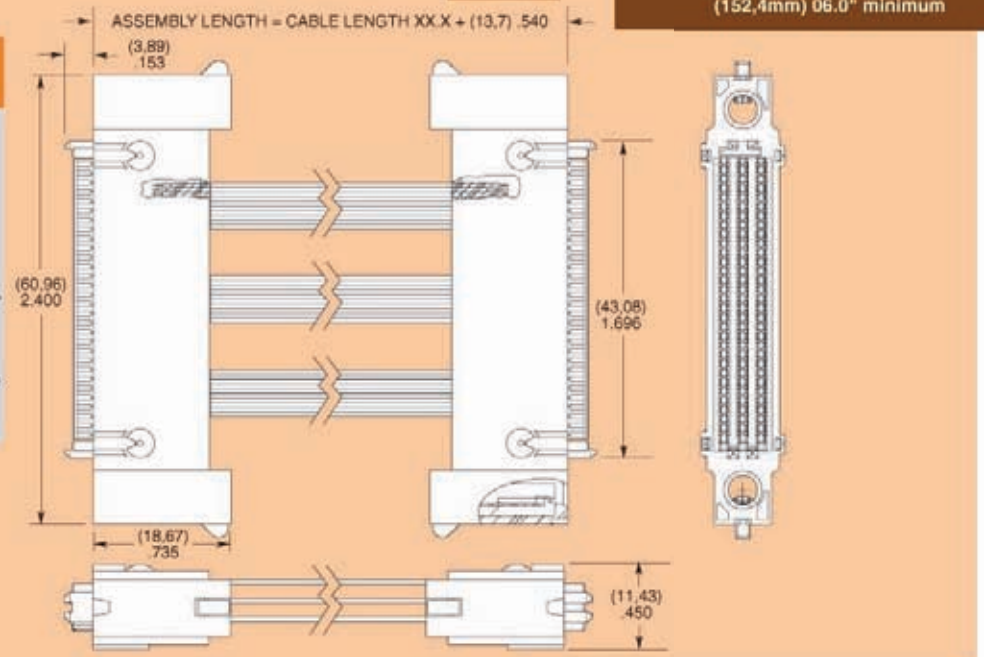


SEAC	– NO. OF POSITIONS PER ROW	– NO. OF ROWS	– CABLE LENGTH	– TU	– TU
	–030	–06 –08	–"XX.X" = Cable Length in Inches (152,4mm) 06.0" minimum		

SIGNAL ROUTING

Product has some lines dedicated to ground. For signal/ground assignments see signal routing information on this page or the assembly print at the web address above.

Verify part number and correct wiring scheme with Samtec's Interactive Cable Builder at www.samtec.com/cable_builder/pitch.asp



Note:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note:
Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

F-210

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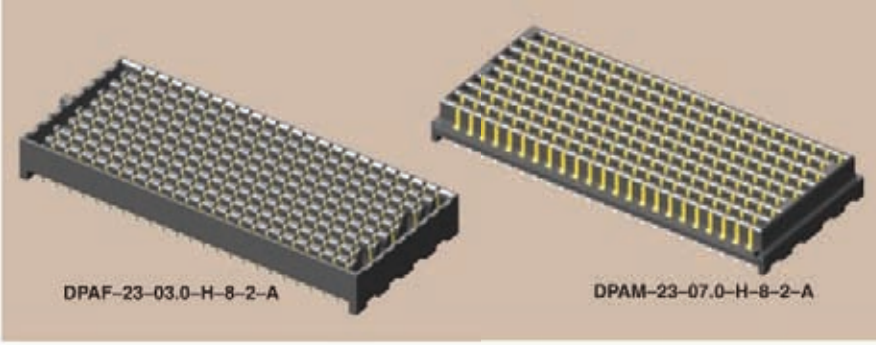
(2,16mm) .085"

DPAM, DPAF SERIES



HIGH DENSITY DIFFERENTIAL PAIR ARRAY

DPAM Mates with:
DPAF, RDPAF

DPAF Mates with:
DPAM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?DPAM or www.samtec.com?DPAF

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating (2x3):
2.9A @ 30°C Temperature Rise
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
10.4mΩ max
Working Voltage:
300 VAC
Mated Cycles:
100 Cycles
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

Protocols Supported

- Fibre Channel
- Rapid I/O
- PCI Express®
- SATA
- Infiniband
- XAUI
- MGT (Rocket I/O)

Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

ALSO AVAILABLE

Tin-Lead Solder Charge. Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

DPAM - PAIRS PER ROW - LEAD STYLE - PLATING OPTION - NO. OF ROWS - SOLDER TYPE - A - OPTION

PAIRS PER ROW: –04, –06 (–07.0 only); –08, –15, –23 (All lead styles)

LEAD STYLE: Specify LEAD STYLE from chart

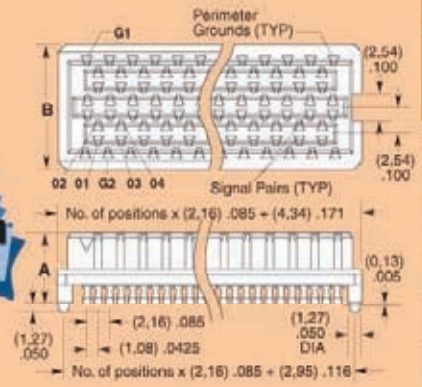
PLATING OPTION:
–S = 30µ" (0,76µm) Gold on contact area, Tin on solder tail (–11 & –14 only)
–H = 30µ" (0,76µm) Gold on contact area, Gold Flash on solder tail (–07 only)

NO. OF ROWS:
–8 = Eight Pair Rows
–3 = Three Pair Rows (–07 only)

SOLDER TYPE:
–2 = Lead-Free Tin Alloy 96.5% Sn/ 3% Ag/.5% Cu Solder Crimp

A

OPTION:
–K = (20,00 mm) 0.80" DIA Polyimide film Pick & Place Pad
–TR = Tape & Reel
–GP = Guide Post (–23 only & –07 only)



LEAD STYLE	A
–07.0	(6,66) .262
–11.0	(10,72) .422
–14.0	(13,66) .538

NO OF ROWS	B
–8	(24,59) .968
–3	(11,89) .468

Staggered pitch DPAM/DPAF	Rated @ -3dB Insertion Loss
10mm Stack Height	
Differential Pair Signaling	7.0 GHz / 14.0 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?DPAM, www.samtec.com?DPAF or contact sig@samtec.com

DPAF - PAIRS PER ROW - 03.0 - PLATING OPTION - NO. OF ROWS - SOLDER TYPE - A - OPTION

PAIRS PER ROW: –04, –06, –08, –15, –23

03.0

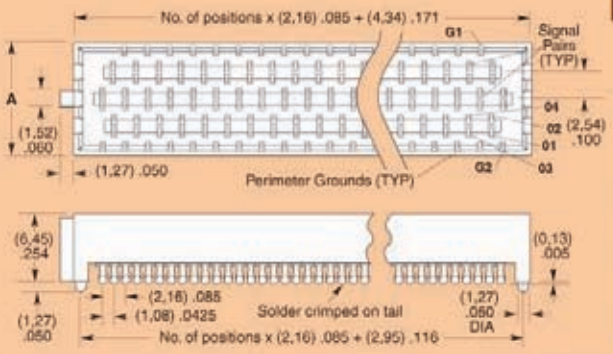
PLATING OPTION: –H = 30µ" (0,76µm) Gold on contact area, Gold Flash on solder tail

NO. OF ROWS:
–8 = Eight Pair Rows
–3 = Three Pair Rows

SOLDER TYPE:
–2 = Lead-Free Tin Alloy 96.5% Sn/ 3%Ag/ .5% Cu Solder Crimp

A

OPTION:
–K = (20,00 mm) 0.80" DIA Polyimide film Pick & Place Pad
–TR = Tape & Reel



SIZE	USABLE PAIRS PER ARRAY*
–08 x –8	48 Pairs
–15 x –8	104 Pairs
–23 x –8	168 Pairs
–08 x –3	18 Pairs
–15 x –3	39 Pairs
–23 x –3	63 Pairs

*Assumes first and last pair in each row are grounded

NO OF ROWS	A
–8	(23,32) .918
–3	(10,62) .418

DPAM LEAD STYLE	DPAF MATED HEIGHT* –03.0
–07.0	10mm
–11.0	14mm
–14.0	17mm

*Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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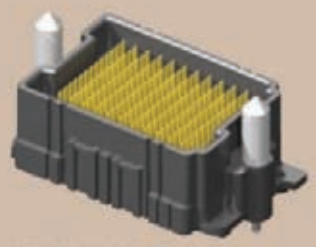
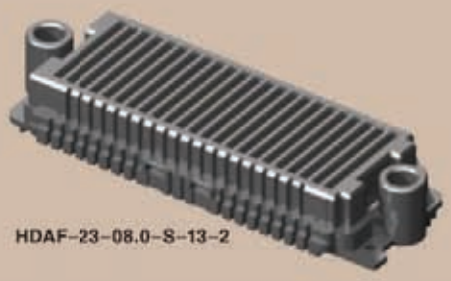
HD MEZZ

(2,00mm) .0787"

HDAM, HDAF SERIES



HDAM-11-12.0-S-13-2



HDAF-23-08.0-S-13-2

RUGGED ELEVATED HIGH DENSITY ARRAY

HDAM Mates with:
HDAF

HDAF Mates with:
HDAM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HDAM or www.samtec.com?HDAF

Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Current Rating:
2.3A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Contact Resistance:
19 mΩ max
Working Voltage:
200 VAC
Mated Cycles:
100
RoHS Compliant:
Yes

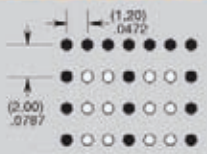
FILE NO. E111594

Final Inch Break Out Region Performance Certified

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable: Yes

DIFFERENTIAL APPLICATIONS



ARRAY	PAIR COUNT*
11x13	44
15x13	60
23x13	92

*2:1 S:G Ratio

ALSO AVAILABLE

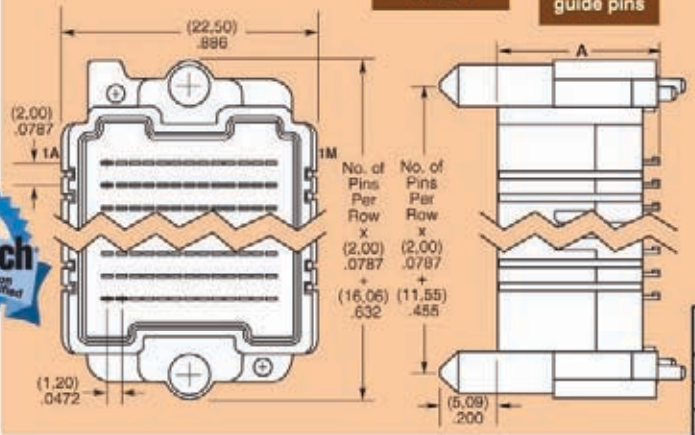
Tin-Lead Solder Charge.
Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note: HD Mezz is a trademark of Molex Incorporated

Note: Some lengths, styles and options are non-standard, non-returnable.

HDAM	NO. OF PINS PER ROW	LEAD STYLE	PLATING OPTION	NO. OF ROWS	SOLDER TYPE	OTHER OPTION
	-11, -15, -23	Specify LEAD STYLE from chart	-S = 30µ" (0,76µm) Gold on contact area, Matte Tin on tails and guide pins	-13	-2 = Lead-Free Tin Alloy 95.5% Sn/ 3.8% Ag/0.7% Cu Solder Charge	-P = Pick & Place Pad



LEAD STYLE	A
-12.0	(14,41) .567
-17.0	(19,41) .764

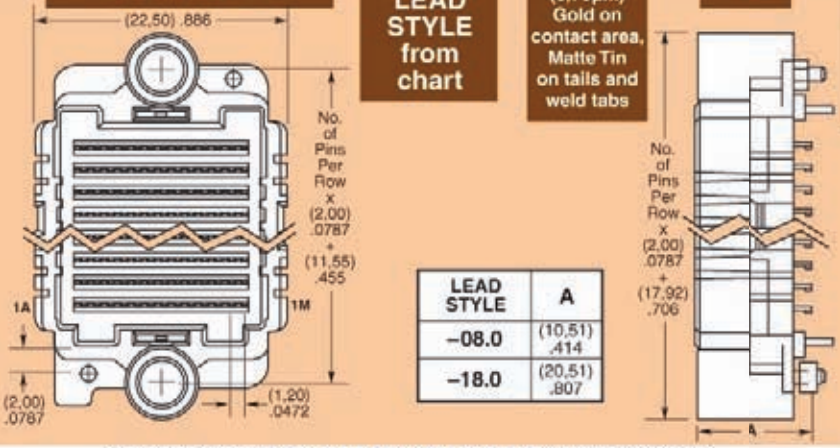
RUGGEDIZED by SAMTEC

35mm Stack Height	Rated @ -3dB Insertion Loss*
Single-Ended Signaling	9.0 GHz / 18.0 Gbps
Differential Pair Signaling	9.0 GHz / 18.0 Gbps

*Data based on simulations using Final Inch® design.

Performance data for other stack heights and complete test data available at www.samtec.com?HDAM, www.samtec.com?HDAF or contact sig@samtec.com

HDAF	NO. OF PINS PER ROW	LEAD STYLE	PLATING OPTION	NO. OF ROWS	SOLDER TYPE	OTHER OPTION
	-11, -15, -23	Specify LEAD STYLE from chart	-S = 30µ" (0,76µm) Gold on contact area, Matte Tin on tails and weld tabs	-13	-2 = Lead-Free Tin Alloy 95.5% Sn/ 3.8% Ag/ 0.7% Cu Solder Charge	-P = Pick & Place Pad



LEAD STYLE	A
-08.0	(10,51) .414
-18.0	(20,51) .807

RUGGEDIZED by SAMTEC

Due to technical progress, all designs, specifications and components are subject to change without notice.

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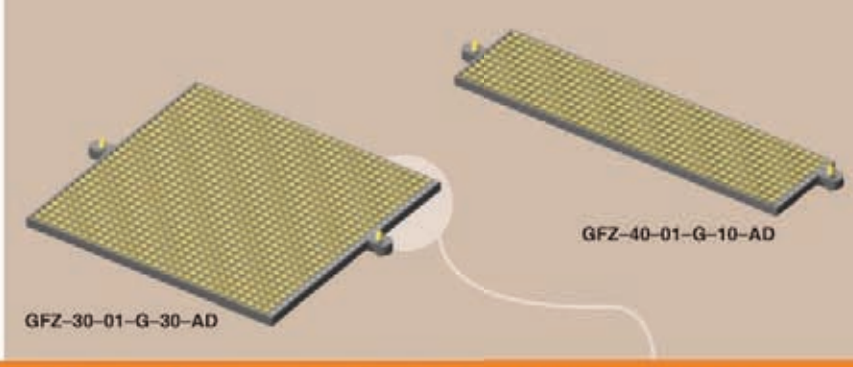


(1,27mm) .050"

GFZ SERIES

ULTRA LOW PROFILE ONE PIECE ARRAY

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?GFZ

Insulator Material:
Liquid Crystal Polymer

Contact Material:
BeCu

Current Rating:
2A 6 in series @ 80°C ambient
2.2A 2x3 @ 80°C ambient
1.8A 3x3 @ 80°C ambient

Plating:
Au over 50µ" (1,27µm) Ni

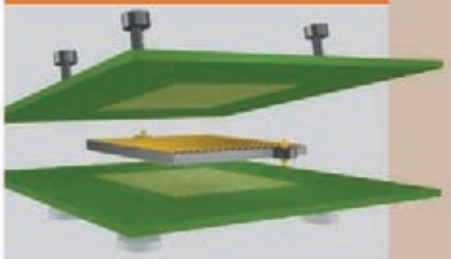
Operating Temp Range:
-55°C to +125°C

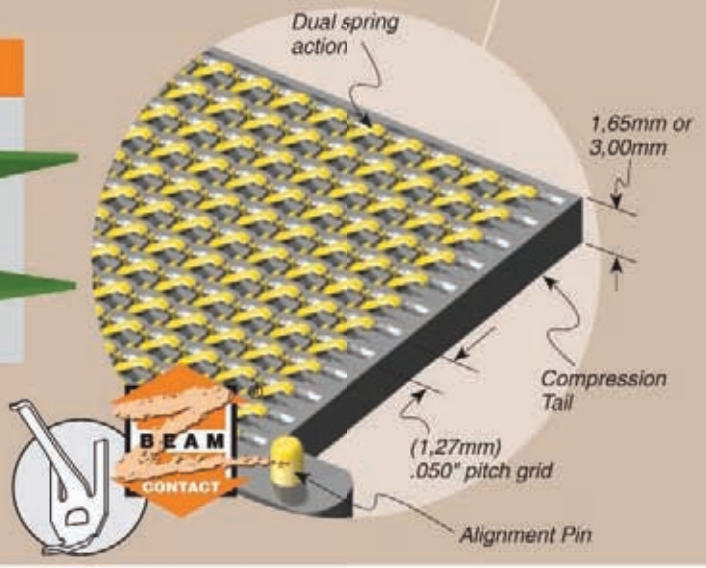
RoHS Compliant:
Yes

Processing:

Lead Coplanarity:
Dual Compression system

APPLICATION





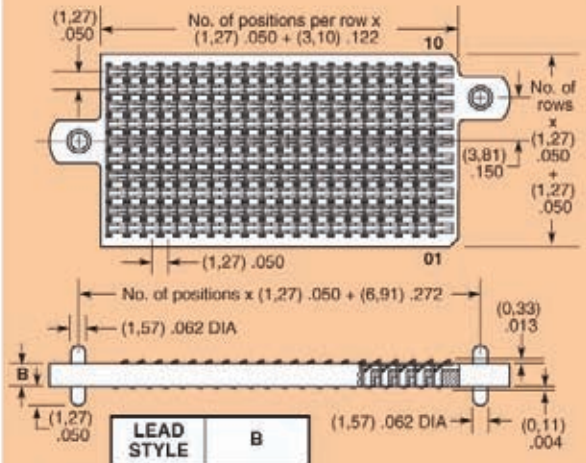
APPLICATION SPECIFIC OPTIONS

Other grid sizes.
No alignment option.
Call Samtec.

DIFFERENTIAL APPLICATIONS

ARRAY	PAIR COUNT
20x10	50
30x10	75
40x10	100
30x30	225

GFZ	–	POSITIONS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	NUMBER OF ROWS	–	AD
		–20, –30, –40 (See chart for available callouts)		Specify LEAD STYLE from chart below.		–G = 30µ" (0,76µm) Gold		–10, –30 (See chart for available callouts)		



LEAD STYLE	B
–01	(1.65) .065
–03	(3.00) .118

AVAILABLE PART NUMBERS

POSITIONS PER ROW	NUMBER OF ROWS	TOTAL PINS	PART NUMBER
20	10	200	GFZ-20-01-G-10-AD
30	10	300	GFZ-30-01-G-10-AD GFZ-30-03-G-10-AD
40	10	400	GFZ-40-01-G-10-AD GFZ-40-03-G-10-AD
30	30	900	GFZ-30-01-G-30-AD

APPLICATIONS

	(1,60mm) .062" MIN PCB		(2,40mm) .093" MIN PCB	
GRID SIZE	STIFFENER REQUIRED?	NO. OF SCREWS	STIFFENER REQUIRED?	NO. OF SCREWS
20x10	NO*	6	NO*	4
30x10	NO*	8	NO*	6
40x10	NO*	8	NO*	6
30x30	YES	4	YES	4

* Stiffeners may be used for all grid sizes shown. In that case, only 4 screws will be needed for most applications.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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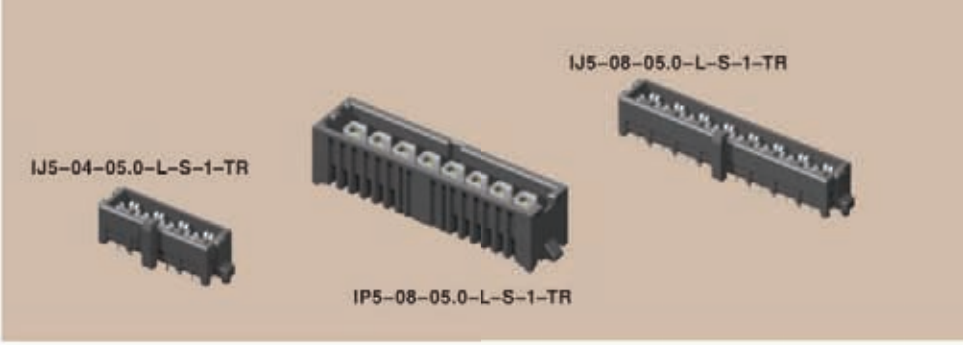
(4,00mm) .1575"
IJ5, IP5 SERIES

ISRATE™ Isolated Edge Rate Contact



50Ω HIGH ISOLATION SYSTEM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IJ5 or www.samtec.com?IP5

Shell Material: Copper Alloy
Insulator Material: Black LCP
Contact Material: Copper Alloy
Pin Material: Brass
Dielectric Material: Black LCP
Plating: Au over 50µ" (1,27µm) Ni
Operating Temp Range: -40°C to +90°C
Insulation Resistance: >35,000 MΩ
Contact Resistance: Center: <34 mΩ Outer: <7 mΩ
Dielectric Withstanding Voltage: 600 VAC
Working Voltage: 200 VAC
RoHS Compliant: Yes

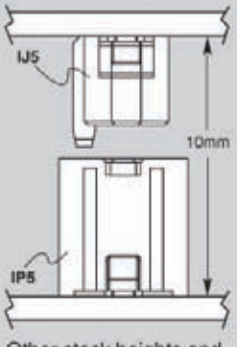
Processing:

Lead-Free Solderable: Yes

ALSO AVAILABLE

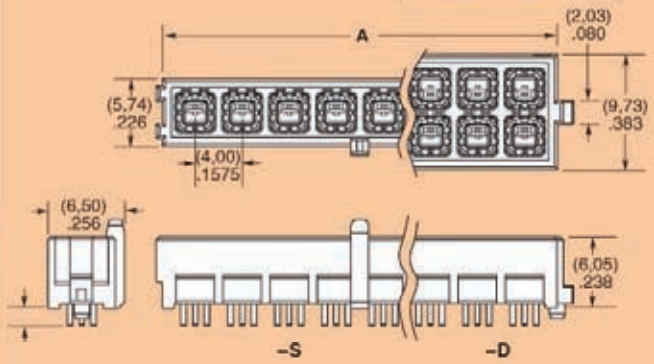
75Ω system. See IJ7/IP7 Series

APPLICATION



Other stack heights and PCB thicknesses available. Call Samtec.

IJ5	JACKS PER ROW	05.0	PLATING	ROW OPTION	TAIL	TR
Mates with: IP5	–01, –02, –04, –08		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail	–S = Single Row –D = Double Row (Not available with –01)	–1 = (1,60mm) .062" board thickness	–TR = Tape & Reel

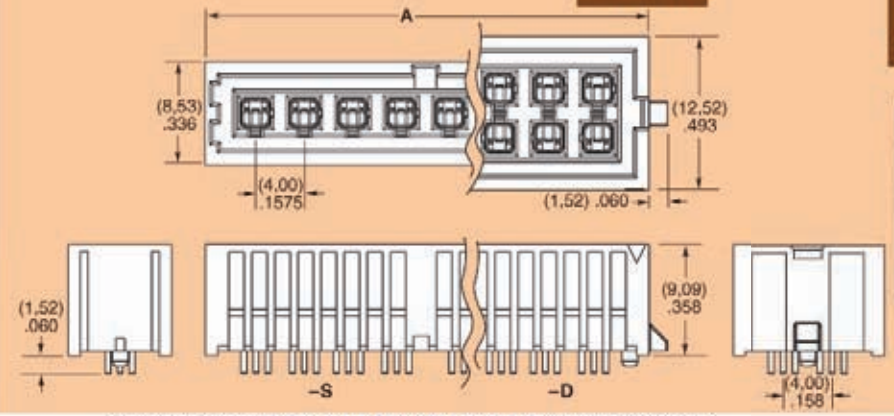


NO. OF JACKS	A
–01	(5,55) .219
–02	(9,55) .376
–04	(17,55) .691
–08	(33,55) 1.321

ALSO AVAILABLE

For cable see IJ5C Series.

IP5	PLUGS PER ROW	05.0	PLATING	ROW OPTION	TAIL	OPTION	TR
Mates with: IJ5, IJ5C	–01, –02, –04, –08		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail	–S = Single Row –D = Double Row (Not available with –01)	–1 = (1,60mm) .062" board thickness	–L = Cable Latch (Single Row only) (Not available with –01 & –04 positions)	–TR = Tape & Reel (Required in callout)



NO. OF PLUGS	A
–01	(8,33) .328
–02	(12,32) .485
–04	(20,32) .800
–08	(36,32) 1.430

Due to technical progress, all designs, specifications and components are subject to change without notice.

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(4,00mm) .1575"

IJ7, IP7 SERIES

ISRATE® Isolated Edge Rate Contact

75Ω HIGH ISOLATION SYSTEM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IJ7 or www.samtec.com?IP7

Shell Material: Copper Alloy
Insulator Material: Black LCP
Contact Material: Copper Alloy
Pin Material: Copper Alloy
Dielectric Material: Natural LCP
Plating: Au over 50µ" (1,27µm) Ni
Operating Temp Range: -40°C to +90°C
Insulation Resistance: Testing Now!
Contact Resistance: Center: Testing Now! Outer: Testing Now!
Impedance: Testing Now!
Dielectric Withstanding Voltage: Testing Now!
Dielectric Working Voltage: Testing Now!
Frequency Range: Testing Now!
RoHS Compliant: Yes

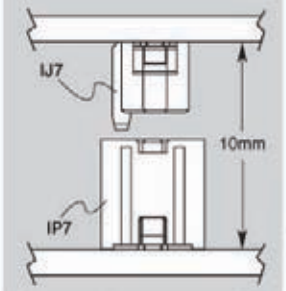
Processing:

Lead-Free Solderable: Yes

ALSO AVAILABLE

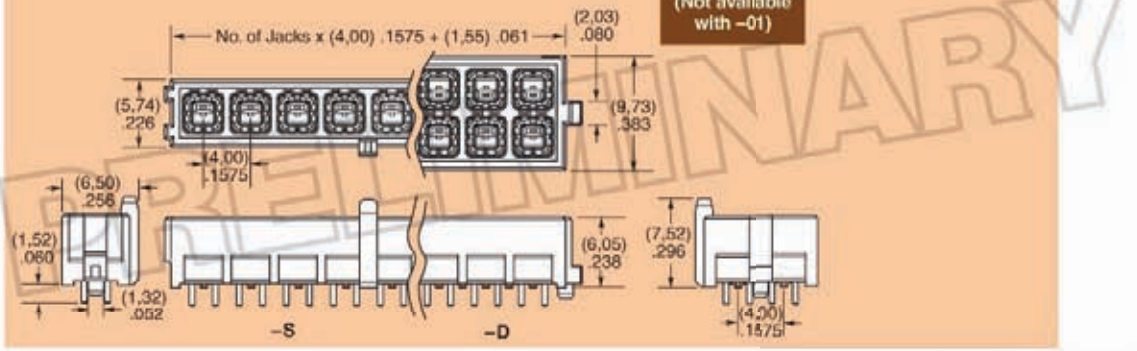
50Ω system. See IJ5/IP5 Series

APPLICATION

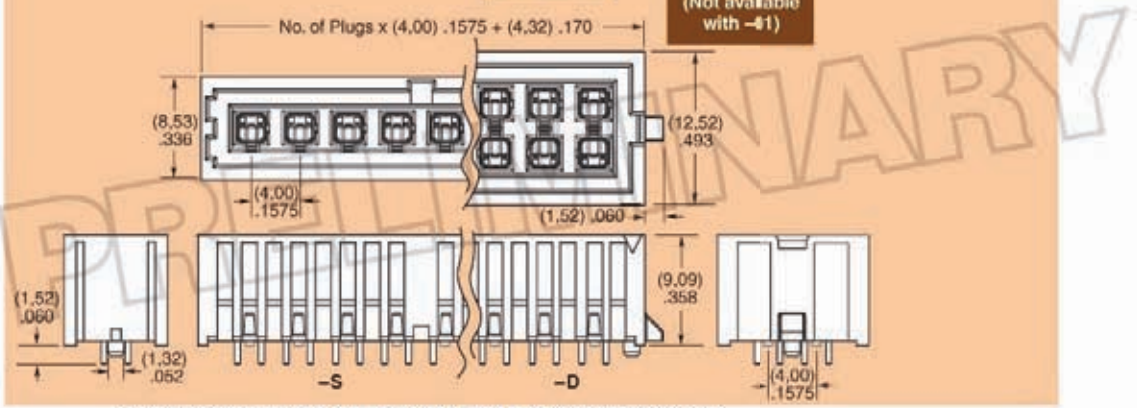


Other stack heights and PCB thicknesses available. Call Samtec.

IJ7	JACKS PER ROW	05.0	PLATING	ROW OPTION	TAIL	TR
	Mates with: IP7					
	–01, –02, –04, –06, –08, –10		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail	–S = Single Row –D = Double Row (Not available with –01)	–1 = (1,60mm) .062" board thickness	–TR = Tape & Reel



IP7	PLUGS PER ROW	05.0	PLATING	ROW OPTION	TAIL	TR
	Mates with: IJ7					
	–01, –02, –04, –06, –08, –10		–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail	–S = Single Row –D = Double Row (Not available with –01)	–1 = (1,60mm) .062" board thickness	–TR = Tape & Reel



PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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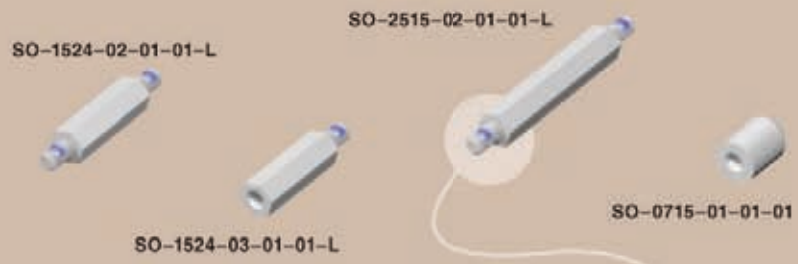


SO SERIES

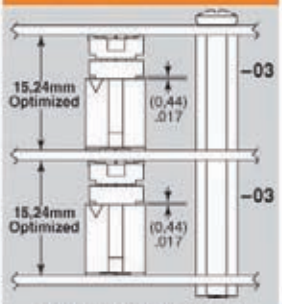
PRECISION BOARD STACKING STANDOFF

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SO

Material:
Aluminum
Locking Compound:
Nylon

APPLICATIONS

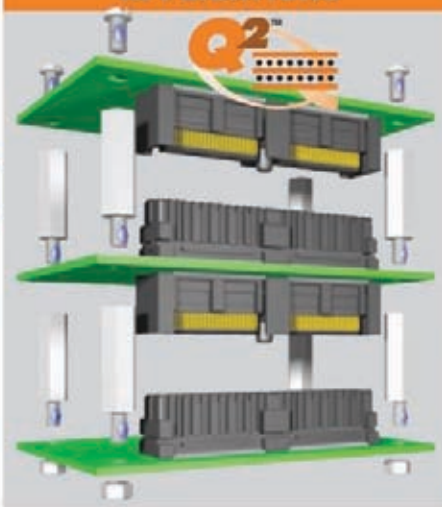


See QMS/QFS Series for StackableUSB™, SUMIT™ & PCI/104-Express™ connectors

Requires Standoff SO-1524-03-01-02-L 15,24mm board spacing. Connectors designed to not fully seat when mated.

See next page for more applications!

APPLICATIONS



RUGGEDIZED by SAMTEC

APPLICATION SPECIFIC OPTION

- Stainless Steel
- Locking compound removed
- Other materials and threading
- No Hardware

Call Samtec.

BOARD STACKER	A	BOARD STACK HEIGHT
-0515	(5,15) .203	5mm
-0715	(7,15) .282	7mm
-0815	(8,15) .321	8mm
-0865	(8,65) .341	8,5mm
-0915	(9,15) .360	9mm
-1015	(10,15) .400	10mm
-1115	(11,15) .439	11mm
-1215	(12,15) .478	12mm
-1315	(13,15) .518	13mm
-1415	(14,15) .557	14mm
-1515	(15,15) .597	15mm
-1524	(15,24) .600	15,24mm
-1615	(16,15) .636	16mm
-1715	(17,15) .675	17mm
-1890	(18,90) .744	18,75mm
-1915	(19,15) .754	19mm
-2015	(20,15) .793	20mm
-2215	(22,15) .872	22mm
-2515	(25,15) .990	25mm

Note:
Some sizes, styles and options are non-standard, non-returnable.

SO	–	BOARD STACKER	–	LEAD STYLE	–	THREAD STYLE	–	01	–	L

Specify BOARD STACKER from chart

-01
= Female Thread/Press-In (-0515 thru -0915 only)

-02
= Male/Male Thread (-0515 thru -0715 and -1015 thru -2515 only)

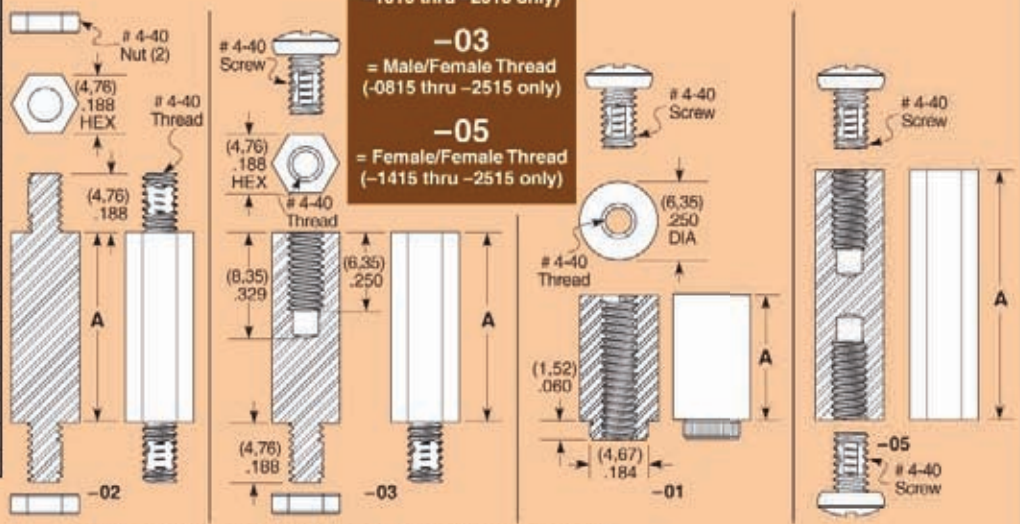
-03
= Male/Female Thread (-0815 thru -2515 only)

-05
= Female/Female Thread (-1415 thru -2515 only)

-01
= #4-40 Thread

-02
= M3 x 0.5 Thread

-L
= -02 & -03 Lead Style thread locking compound (Leave blank for -01 Lead Style)



Components are to be packaged in separate bags unassembled.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SO SERIES

STACKING STANDOFF APPLICATIONS

APPLICATIONS

Stack Height	Type Interconnct	Trade Name	Series Name	Pitch	Standoff
5 mm	Strip	Q Series®	QTH/QSH	.5mm	SO-0515-01-01-01
		B Series	BTH/BSH	.5mm	
		Q Series®	QTS/QSS	.635mm	
		Q Series®	MIT/MIS	.635mm	
		B Series	BTS/BSS	.635mm	
		Q Series®	QTE/QSE	.8mm	
		B Series	BTE/BSE	.8mm	
7 mm	Strip	Edge Rate	ERM8/ERF8	.8mm	SO-0715-01-01-01
	Array	SEARAY™	SEAM/SEAF	1.27mm	
8 mm	Strip	Q Series®	QTH/QSH	.5mm	SO-0815-01-01-01
		B Series	BTH/BSH*	.5mm	
		Q Series®	QTS/QSS	.635mm	
		Q Series®	MIT/MIS	.635mm	
		B Series	BTS/BSS*	.635mm	
		Q Series®	QTE/QSE	.8mm	
		B Series	BTE/BSE	.8mm	
	Array	SEARAY™	SEAM/SEAF**	1.27mm	
8.5 mm	Array	SEARAY™	SEAM/SEAF	1.27mm	SO-0865-01-01-01
10 mm	Strip	Q2	QMS/QFS	.635mm	SO-1015-02-01-01-L
		Edge Rate	ERM8/ERF8	.8mm	
	Array	SEARAY™	SEAM/SEAF	1.27mm	
		DP Array®	DPAM/DPAF	2.16mm	
11 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-1115-02-01-01-L
		B Series	BTH/BSH*	.5mm	
		Q Series®	QTS/QSS*	.635mm	
		Q2	QMS/QFS	.635mm	
		Q2	QMSS/QFSS	.635mm	
		Q Series®	MIT/MIS*	.635mm	
		B Series	BTS/BSS*	.635mm	
		Q Series®	QTE/QSE	.8mm	
		B Series	BTE/BSE*	.8mm	
12 mm	Strip	Q2	QMS/QFS	.635mm	SO-1215-02-01-01-L
		Edge Rate	ERM8/ERF8	.8mm	
	Array	SEARAY™	SEAM/SEAF	1.27mm	
14 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-1415-02-01-01-L
		Q2	QMS/QFS	.635mm	
		Edge Rate	ERM8/ERF8	.8mm	
		Q Series®	QTE/QSE*	.8mm	
		B Series	BTE/BSE*	.8mm	
	Array	SEARAY™	SEAM/SEAF	1.27mm	
		DP Array®	DPAM/DPAF	2.16mm	
15 mm	Strip	Q Series®	QTE/QSE	.8mm	SO-1515-02-01-01-L
15.24 mm	Strip	Q2	QMS/QFS	.635mm	SO-1524-02-01-01-L SO-1524-03-01-01-L
16 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-1615-02-01-01-L
		B Series	BTH/BSH*	.5mm	
		Q Series®	QTS/QSS*	.635mm	
		Q2	QMS/QFS	.635mm	
		Q Series®	MIT/MIS*	.635mm	
		B Series	BTS/BSS*	.635mm	
		Q Series®	QTE/QSE	.8mm	
		Edge Rate	ERM8/ERF8	.8mm	
		B Series	BTE/BSE*	.8mm	
	Array	SEARAY™	SEAM/SEAF	1.27mm	
17 mm	Array	SEARAY™	SEAM/SEAF**	1.27mm	SO-1715-02-01-01-L
		DP Array®	DPAM/DPAF	2.16mm	
18.75 mm	Strip	Q Series®	MIT/MIS*	.635mm	SO-1890-02-01-01-L
19 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-1915-02-01-01-L
		B Series	BTH/BSH*	.5mm	
		Q Series®	QTE/QSE	.8mm	
		RiseUp®	RU8	.8mm	
		B Series	BTE/BSE*	.8mm	
20 mm	Strip	RiseUp®	RU8*	.8mm	SO-2015-02-01-01-L
	Array	HD Mezz***	HDAM/HDAF	1.2mm	
22 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-2215-02-01-01-L
		B Series	BTH/BSH*	.5mm	
		Q Series®	MIT/MIS*	.635mm	
		Q Series®	QTE/QSE*	.8mm	
		B Series	BTE/BSE*	.8mm	
25 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-2515-02-01-01-L
		Q Series®	QTE/QSE	.8mm	
		RiseUp®	RU8	.8mm	
		B Series	BTE/BSE*	.8mm	
	Array	HD Mezz***	HDAM/HDAF	1.2mm	
30 mm	Strip	Q Series®	QTH/QSH*	.5mm	SO-3015-02-01-01-L
		Q Series®	QTE/QSE*	.8mm	
		RiseUp®	RU8	.8mm	
		B Series	BTE/BSE*	.8mm	
	Array	HD Mezz***	HDAM/HDAF	1.2mm	

*ASO (Application Specific Option) **In-Design ***HD Mezz is a trademark of Molex Incorporated

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HIGH SPEED

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EDGE CARD

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samtec

MICRO BACKPLANES

HIGH SPEED RIGHT ANGLE, EDGE MOUNT AND EDGE CARD TRANSMISSION LINE SOLUTIONS

High Speed Edge Card Sockets (HSEC8 Series)

- Edge Rate™ contacts optimized for signal integrity performance
- Surface mount, right angle, dual right angle and edge mount designs for parallel, perpendicular and planar board mating
- Mates with standard .062" (1,60mm) PCB cards - supplied by Samtec (RU8 Series), or Samtec can supply physical art to make your own cards
- Optional rugged board locking and cable latching features
- 0,635mm, 0,80mm & 1mm pitch

Edge Rate™ High Speed Connector Strip (ERM8/ERF8 Series)

- Edge Rate™ contacts optimized for signal integrity performance
- Lower-cost alternative to high speed Q Strip® connectors
- Robust when "zippered" during mating and unmating
- 0,8mm pitch
- 7mm, 9mm, 10mm, 12mm, 14mm and 16mm stack heights
- Performance to 10.5 GHz DP and 9.5 GHz SE at 7mm mated height

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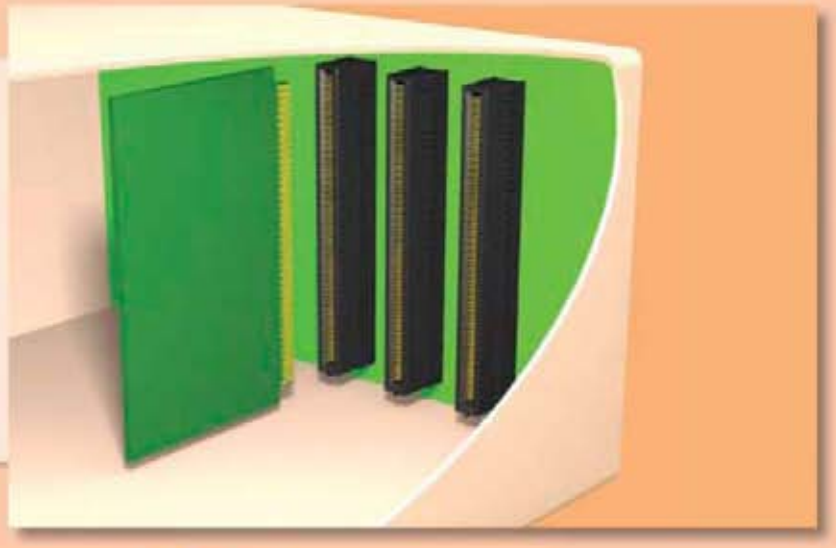
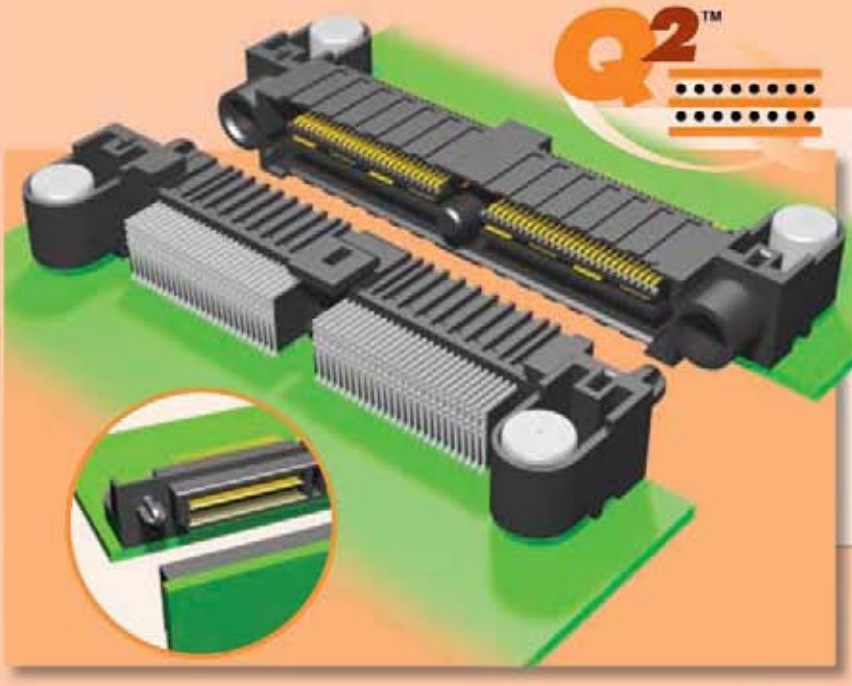
Micro TCA Connectors
(MTCA Series)

- Sockets for Micro TCA applications
- Identical to Molex in form, fit and function
- 170 contacts on high density 0,75mm pitch accept 1,6mm cards
- Press-fit tails for simple, reliable board terminations
- Supports hot plugging and high speed serial connections



Q2™



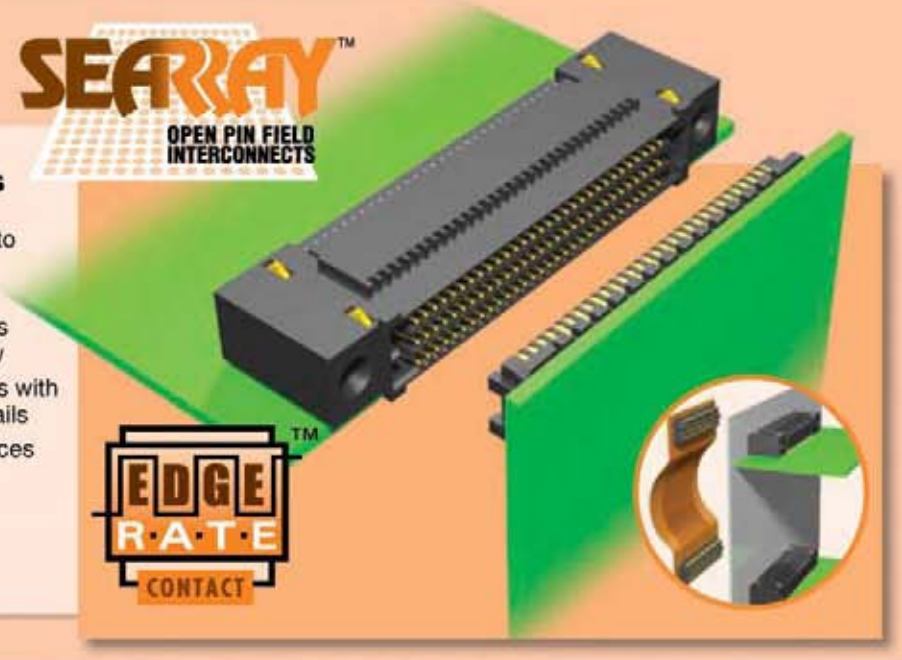
Q2™ Series High Speed Connector Strips
(QMS/QFS Series)

- 50Ω single-ended standard and Application Specific 100Ω differential pair
- Perpendicular (90°) and horizontal (180°) coplanar applications
- Optional locking screws/holes and guide posts/holes

SEARAY™
OPEN PIN FIELD INTERCONNECTS

High Density Arrays
(SEAM/SEAF Series)

- Right angle arrays optimized to reduce skew and impedance mismatch
- Choice of 4 and 6 row designs with 20 to 50 contacts per row
- Rugged Edge Rate™ contacts with lead-free solder charges on tails
- Lower insertion/extraction forces
- Optional guide posts for blind mating
- Ideal for high speed micro backplane applications



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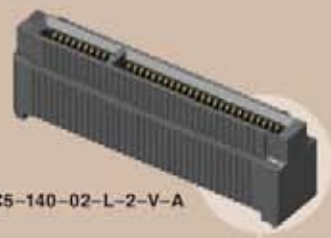
EDGE R·A·T·E™ CONTACT

(0,50mm) .0197"

BEC5 SERIES



HIGH DENSITY EDGE CARD

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?BEC5

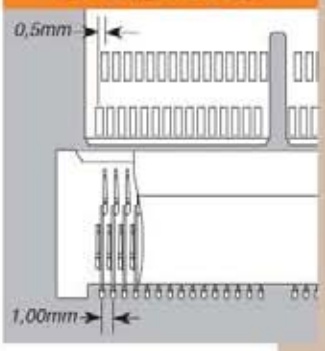
Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Current Rating:
Testing Now!
Voltage Rating:
Testing Now!
RoHS Compliant:
Yes

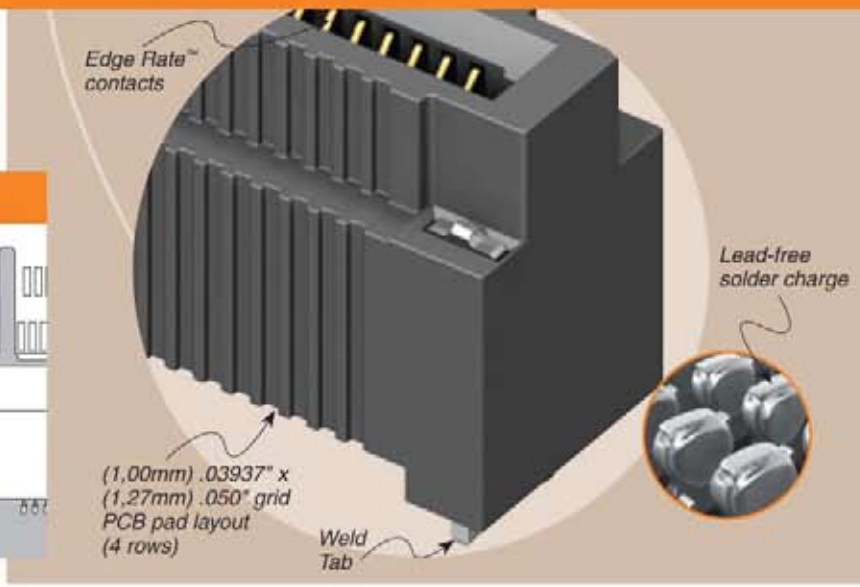
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead–Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max

Mates with:
(1,60mm) .062" and
(2,40mm) .094" thick cards

APPLICATION





ALSO AVAILABLE

- Tin-Lead Solder Charge.
- Other platings and pin counts.

Call Samtec.

BEC5	-	NO. OF POSITIONS	-	CARD THICKNESS	-	PLATING OPTION	-	2	-	V	-	A	-	OPTION	-	TR

–080, –100, –120, –140
(Call Samtec for other sizes)

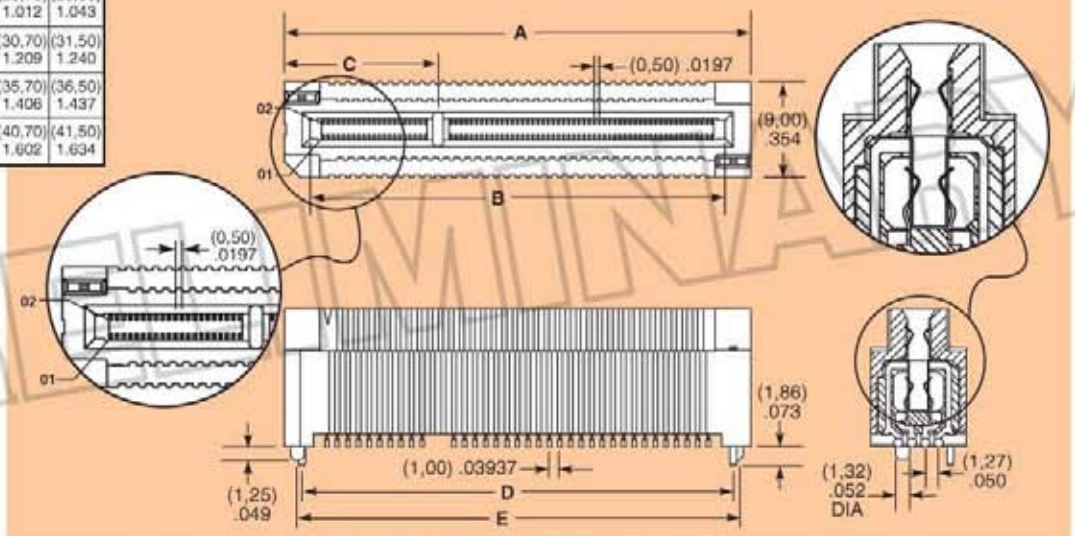
–02
= (1,60mm) .062" thick card

–03
= (2,40mm) .094" thick card

–L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on solder tail

–K
= Polyimide film Pick & Place Pad

NO. OF POSITIONS	A	B	C	D	E
–080	(29,00) 1.142	(24,15) .951	(7,08) .279	(25,70) 1.012	(26,50) 1.043
–100	(34,00) 1.339	(29,15) 1.148	(7,08) .279	(30,70) 1.209	(31,50) 1.240
–120	(39,00) 1.535	(34,15) 1.344	(12,08) .475	(35,70) 1.406	(36,50) 1.437
–140	(44,00) 1.732	(39,15) 1.541	(12,08) .475	(40,70) 1.602	(41,50) 1.634



PRELIMINARY

Note: Some sizes, styles and options are non-standard, non-returnable.

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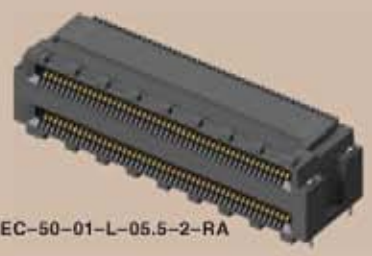


(0,80mm) .0315"

DSEC SERIES

DUAL STACK EDGE CARD SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?DSEC

Insulator Material:
Black Liquid Crystal Polymer
Contact:
Copper Alloy
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp:
-55°C to +125°C
Card Insertion Depth:
(5,94mm) .234" nominal
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

ALSO AVAILABLE

- Tin-Lead Solder Charge
- Other card spacings
- Single card elevated
- Other plating options

Call Samtec.

Mates with:
1,60mm (.062") thick cards

EDGE R·A·T·E™ CONTACT

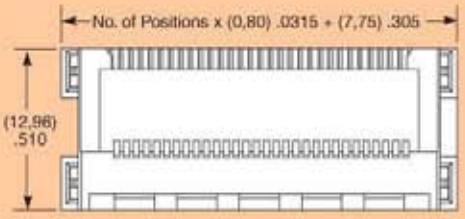
Rugged Edge Rate™ contacts designed for Signal Integrity

Accepts two individual cards for low profile stack or "Dual Stack" card set with industry standard 7mm board spacing

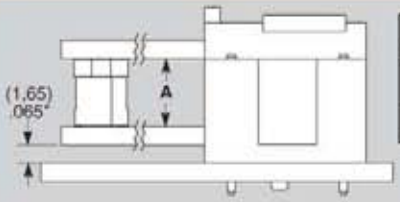
Solder charged terminations for easy board processing

APPLICATION

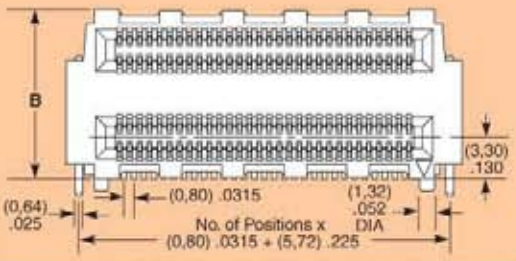
DSEC	- NO. OF POSITIONS	- LEAD STYLE	- PLATING OPTION	- BOARD SPACING	- SOLDER TYPE	- RA
	–30, –40, –50 (Per Row)	–01 = (1,60mm) .062" thick card	–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail	–05.5 = (5.5mm) .217" –07.0 = (7mm) .276"	–2 = Lead-Free Tin Alloy 96.5% Sn/ 3% Ag/.5% Cu Solder Crimp	

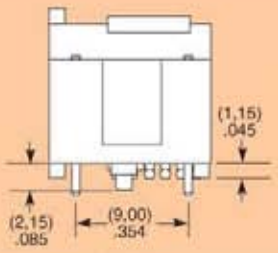


TYPICAL APPLICATION



BOARD SPACING	A
–05.5	(5,50) .217
–07.0	(7,00) .276





BOARD SPACING	B
–05.5	(13,60) .535
–07.0	(15,10) .594

Note: Some lengths, styles and options are non-standard, non-returnable.

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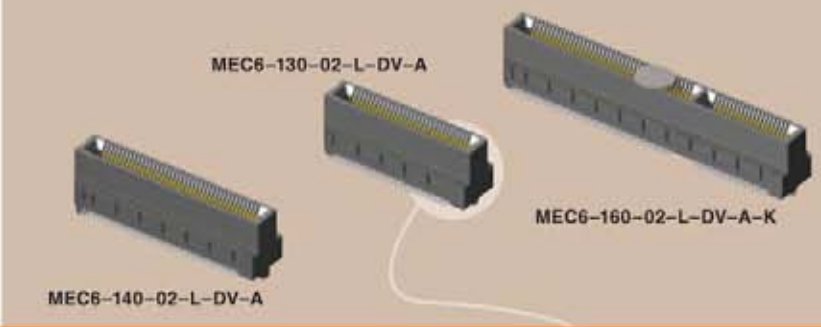


(0,635mm) .025"
MEC6-DV SERIES

VERTICAL MICRO EDGE CARD SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MEC6-DV

Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Insertion Depth:
(4,22mm) .166" to
(5,66mm) .223"
Current Rating:
Testing Now!
Voltage Rating:
Testing Now!
RoHS Compliant:
Yes

Processing:

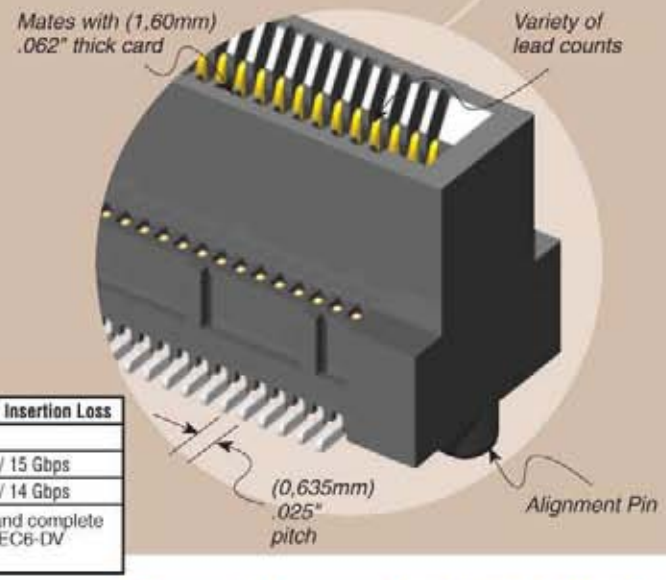
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (10-50)
(0,15mm) .006" max (60-70)

Mates with:
(1,60mm) .062" thick cards

APPLICATION SPECIFIC OPTION

- Locking Clip

Call Samtec.



0,635mm MEC6-DV	Rated @ -3dB Insertion Loss
8,65mm Stack Height	
Single-Ended Signaling	7.5 GHz / 15 Gbps
Differential Pair Signaling	7.0 GHz / 14 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?MEC6-DV or contact sig@samtec.com

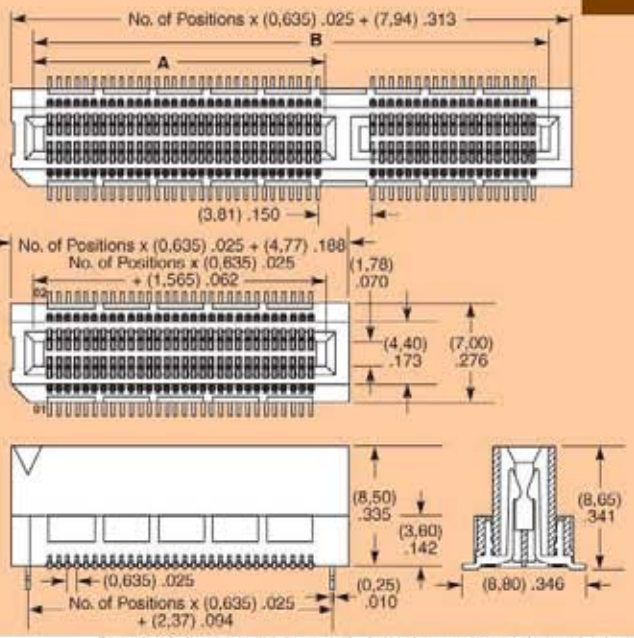
MEC6 - 1 - POSITIONS PER ROW - 02 - PLATING OPTION - DV - A - OPTION

10, 20, 30, 40, 50, 60, 70

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–K
= (5,50) .217" DIA Polyimide Pick & Place Pad

–TR
= Tape & Reel



POSITIONS PER ROW	A	B
50	(22,96) .904	(36,49) 1.437
60	(24,87) .979	(42,84) 1.687
70	(28,66) 1.129	(49,19) 1.937

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

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(0,635mm) .025"

MEC6-RA SERIES

RIGHT ANGLE MICRO EDGE CARD SOCKET

SPECIFICATIONS

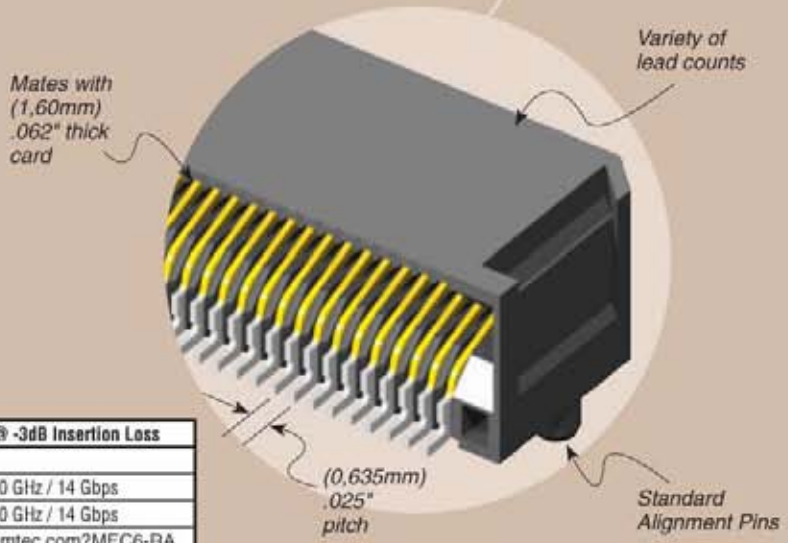
Mates with:
(1,60mm) .062" thick cards

For complete specifications and recommended PCB layouts see www.samtec.com?MEC6-RA

Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Insertion Depth:
(4,22mm) .166" to
(5,66mm) .223"
Current Rating:
Testing Now!
Voltage Rating:
Testing Now!
RoHS Compliant:
Yes

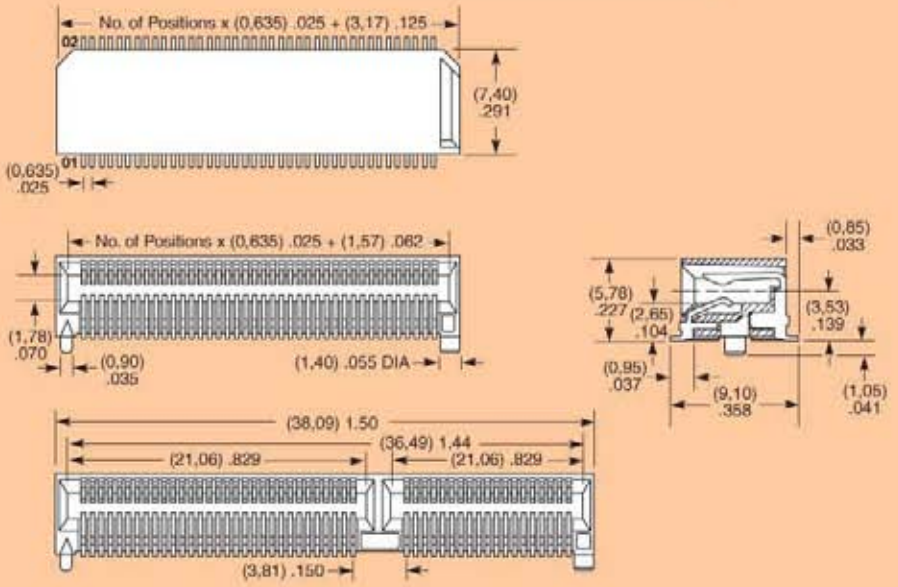
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (10-30)
(0,15mm) .006" max (40-50)



0,635mm MEC6-RA	Rated @ -3dB Insertion Loss
5,78mm Stack Height	
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	7.0 GHz / 14 Gbps
Complete test data available at www.samtec.com?MEC6-RA or contact sig@samtec.com	

MEC6	-	1	POSITIONS PER ROW	-	02	-	PLATING OPTION	-	D	-	TAIL OPTION	-	OPTION
			10, 20, 30, 40, 50				–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail				–RA1 = Right Angle		–TR = Tape & Reel



Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

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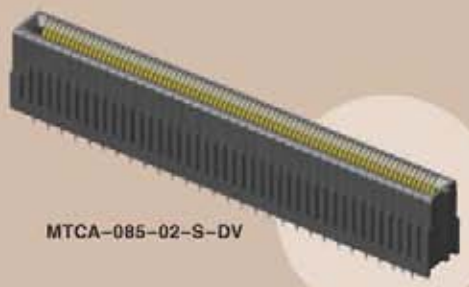


(0,75mm) .030"

MTCA SERIES

PRESS FIT MICRO TCA CONNECTOR

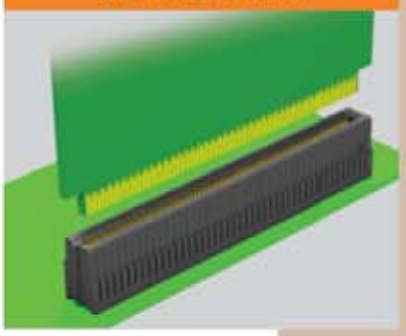
SPECIFICATIONS

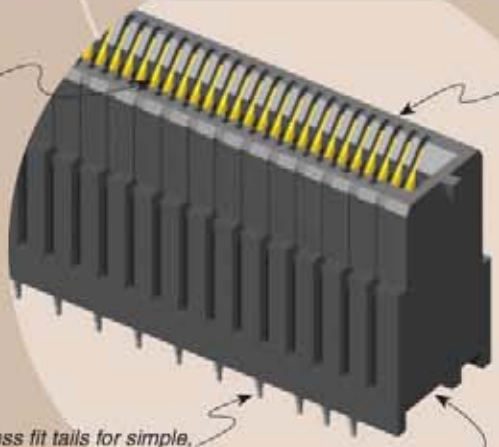
For complete specifications see www.samtec.com?MTCA

Insulator Material:
LCP
Terminal Material:
Brass Alloy
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
2.3A @ 80°C ambient
(See website for details)
Operating Temp Range:
-55°C to +125°C

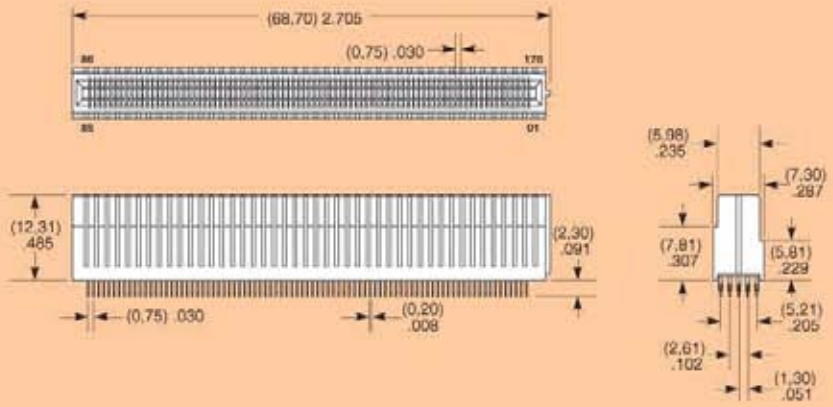
Mates with:
1,60 mm (.063") thick cards

APPLICATION





MTCA	–	NO. OF POSITIONS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	DV
		–085 = (Per Row, 170 total)		–02 = (1,60mm) .063" Thick Card		–S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail		–DV = Dual Vertical



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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(0,80mm) .0315"

HSEC8-RA SERIES

RIGHT ANGLE EDGE RATE™ CARD SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HSEC8-RA

Insulator Material:
Black Liquid Crystal Polymer

Contact:
BeCu

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
3.1A @ 30°C Temperature Rise (See website for details)

Operating Temp:
-55°C to +125°C

Card Insertion Depth:
(3,15mm) .125" nominal

RoHS Compliant:
Yes

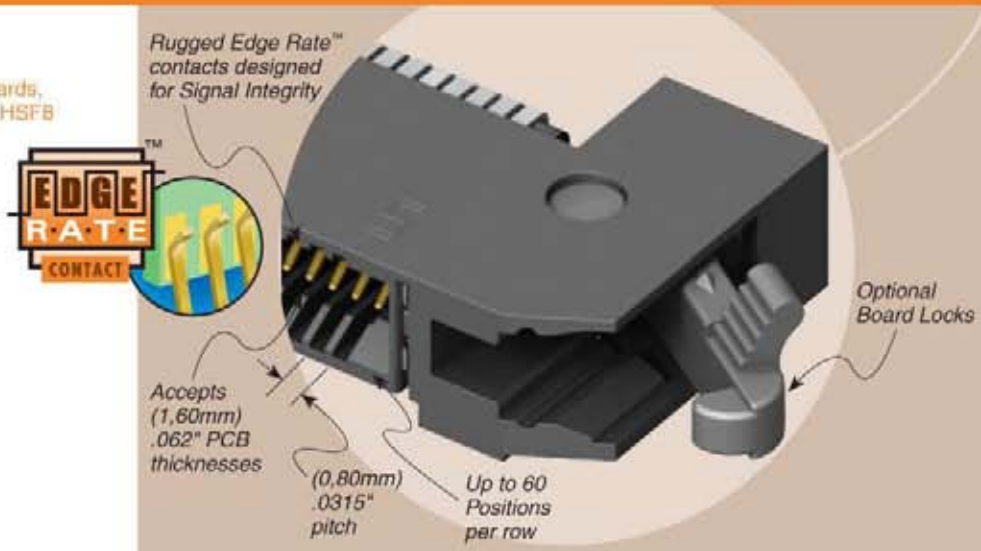
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

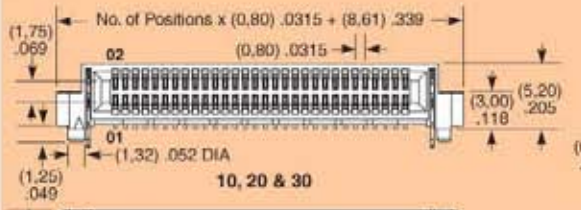
Lead-Free Solderable:
Yes

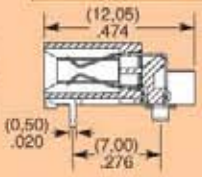
SMT Lead Coplanarity:
(0,10mm) .004" max (10-60)

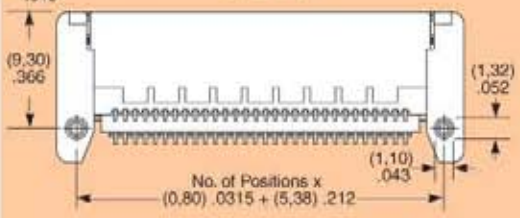
Mates with:
1,6mm thick cards, EEDP, HSC8, HSFB



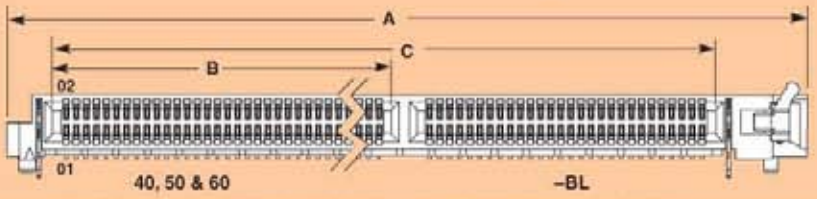
HSEC8	- 1	POSITIONS PER ROW	- CARD THICKNESS	- PLATING OPTION	- RA	- OTHER OPTION	- TR
		10, 20, 30, 40, 50, 60	–01 = (1,60mm) .062" thick card	–S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail		–BL = Board Locks (40, 50, 60 only)	–TR = Tape & Reel Packaging (10 thru 60 positions only)







POSITIONS PER ROW	A	B	C
40	(43,80) 1.724	(18,90) .744	(36,60) 1.441
50	(51,80) 2.039	(22,90) .902	(44,60) 1.756
60	(59,80) 2.354	(26,90) 1.059	(52,60) 2.071
40-BL	(51,30) 2.020	(18,90) .744	(36,60) 1.441
50-BL	(59,30) 2.335	(22,90) .902	(44,60) 1.756
60-BL	(67,30) 2.650	(26,90) 1.059	(52,60) 2.071



Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

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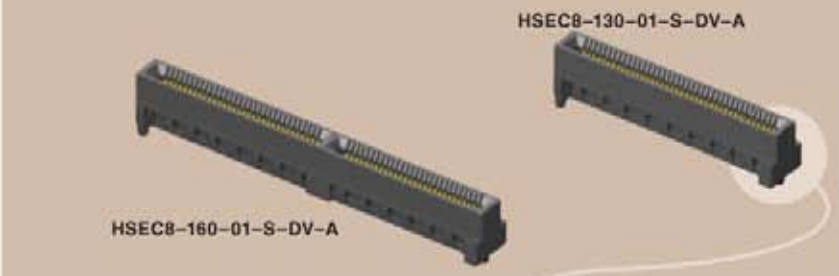


(0,80mm) .0315"

HSEC8-DV SERIES

VERTICAL EDGE RATE™ CARD SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HSEC8-DV

Insulator Material: Black Liquid Crystal Polymer
Contact: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 3.1A @ 30°C Temperature Rise (See website for details)
Operating Temp: -55°C to +125°C
Card Insertion Depth: (3,15mm) .125" nominal
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (10-60)

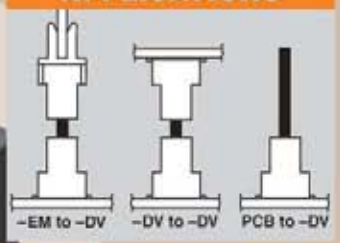
Mates with: 1,6mm thick cards, EEDP, HSC8, HSF8

EDGE R·A·T·E™ CONTACT

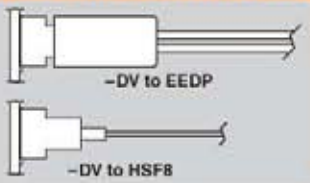
Final inch Break Out Region Performance Certified finalinch.com

0,80mm HSEC8	Rated @ -3dB Insertion Loss
7,98mm Stack Height	
Single-Ended Signaling	8 GHz / 16 Gbps
Differential Pair Signaling	10.5 GHz / 21 Gbps
For complete test data go to www.samtec.com?HSEC8 or contact sig@samtec.com	

BOARD-TO-BOARD APPLICATIONS



HIGH SPEED CABLE & FLEX APPLICATIONS



STANDARD & CUSTOM CARDS AVAILABLE

- Standard high speed interface cards for 19mm, 25mm & 30mm mated heights, single-ended & differential applications. See HSC8 Series.
- Custom cards for low-cost stack height customization
- Samtec supplied card layout/artwork to make your own cards
- Specialty card shapes

APPLICATION SPECIFIC OPTION

Guide Rails. Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

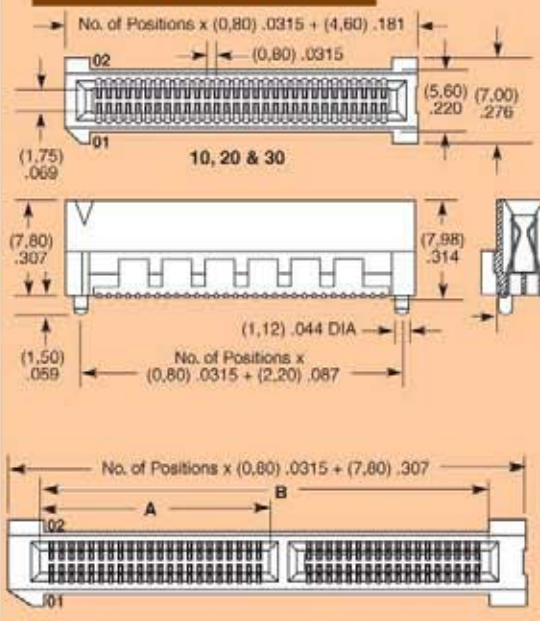
HSEC8 - 1 - POSITIONS PER ROW - CARD THICKNESS - PLATING OPTION - DV - A - OTHER OPTION

POSITIONS PER ROW: 10, 13, 20, 25, 30, 37, 40, 49, 50, 60

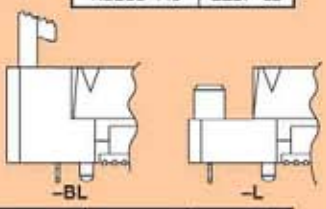
CARD THICKNESS: –01 = (1,60mm) .062" thick card

PLATING OPTION: –S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

OTHER OPTION:
- –K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad
- –TR = Tape & Reel Packaging
- –L = Latching Option (For use with EEDP.) (13, 25, 37, 49 only)
- –BL = Board Locks (40, 50, 60 only) (Other sizes available. Contact Samtec)



CONNECTOR	CABLE*
HSEC8-113	EEDP-08
HSEC8-125	EEDP-16
HSEC8-137	EEDP-24
HSEC8-149	EEDP-32



POSITIONS PER ROW	A	B
13*	(6,10) .240	(15,00) .591
25*	(6,10) .240	(24,60) .969
37*	(18,10) .713	(34,20) 1.346
40	(18,90) .744	(36,60) 1.441
49*	(22,90) .902	(43,80) 1.724
50	(22,90) .902	(44,60) 1.756
60	(26,90) 1.059	(52,60) 2.071

Positions where no dimensions are given do not have keying feature.
*Mates with EEDP Series.

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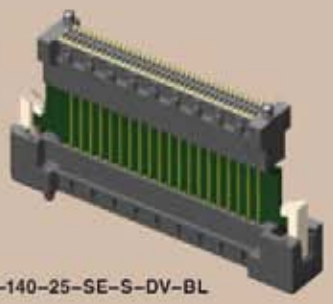
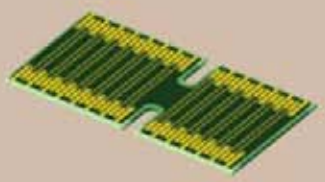
(0,80mm) .0315"

RU8, HSC8 SERIES

RISE UP®



RU8-140-25-SE-S-DV-BL



HSC8-040-02-25-DP

HIGH SPEED RISER CARD KIT

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?RU8

Connector:
Insulator Material: Black LCP
Contact: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 3.1A @ 30°C
Temperature Rise (See website for details)
Operating Temp: -55°C to +125°C

Processing:
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (40-60)
RoHS Compliant: Yes

Protocols Supported
PCI Express®
XAUI, SATA
Download app notes at www.samtec.com/appnote
Contact SiG @ samtec.com for questions on protocols

RU8	-	1	-	POSITIONS PER ROW	-	STACK HEIGHT	-	SIGNAL ROUTING	-	PLATING OPTION	-	DV	-	BL	-	OTHER OPTION

Note: Some lengths, styles and options are non-standard, non-returnable.

POSITIONS PER ROW: 40, 50, 60

STACK HEIGHT:
- –19 = (19mm) .748"
- –25 = (25mm) .984"
- –30 = (30mm) 1.180"

SIGNAL ROUTING:
- –SE = Single-Ended
- –DP = Differential Pair

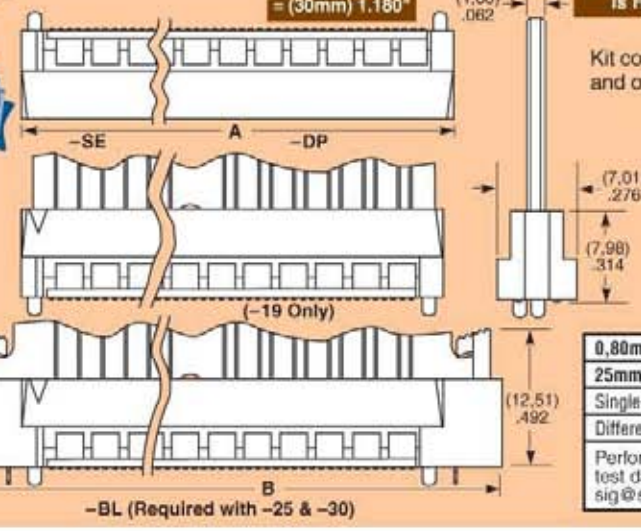
PLATING OPTION:
- –S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail (Plating for connectors) Plating for Card is Hard Gold

DV

BL:
- –BL = Board Locks (Bottom Socket only) (Not available on –19 stack height)

OTHER OPTION:
- Leave blank for Trays
- –K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad
- –TR = Tape & Reel

Kit contains two connectors and one card. Assembly required.



NO. OF POSITIONS PER SIDE	A	B	–SE TOTAL SIGNAL LINES	–DP TOTAL SIGNAL PAIRS
40	(39,60) 1.567	(50,39) 1.984	40	26
50	(47,80) 1.882	(58,39) 2.299	50	32
60	(55,80) 2.197	(66,40) 2.614	60	38

0,80mm pitch RU8	Rated @ -3dB Insertion Loss
25mm Stack Height	
Single-Ended Signaling	7.5 GHz / 15 Gbps
Differential Pair Signaling	7.5 GHz / 15 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?RU8 or contact sig@samtec.com

Mates with: HSEC8

SPECIFICATIONS

For complete specifications see www.samtec.com?HSC8

Conductor: ½ oz Copper
Contact Area: Hard Gold Plated
Insulator: FR-4
RoHS Compliant: Yes

NO. OF POSITIONS PER SIDE	–SE TOTAL SIGNAL LINES	–DP TOTAL SIGNAL PAIRS
–040	40	26
–050	50	32
–060	60	38

Note: Some sizes, styles and options are non-standard, non-returnable.

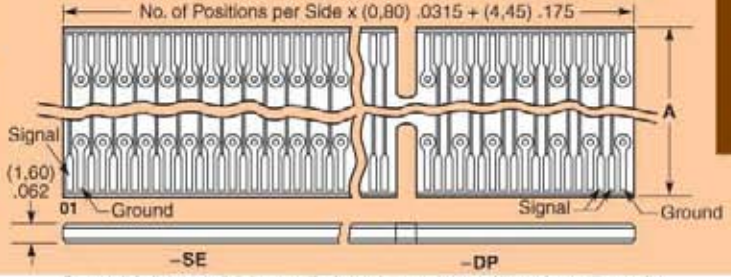
HSC8	-	NUMBER OF POSITIONS PER SIDE	-	CARD STYLE	-	STACK HEIGHT	-	SIGNAL ROUTING

NUMBER OF POSITIONS PER SIDE: –040, –050, –060

CARD STYLE:
- –02 = (1,60mm) .062" thick card

STACK HEIGHT:
- –19 = (19mm) .748"
- –25 = (25mm) .984"
- –30 = (30mm) 1.180"

SIGNAL ROUTING:
- –SE = Single-Ended
- –DP = Differential Pair



STACK HEIGHT	A
–19	(14,64) .584
–25	(20,84) .820
–30	(25,84) 1.017

Due to technical progress, all designs, specifications and components are subject to change without notice.

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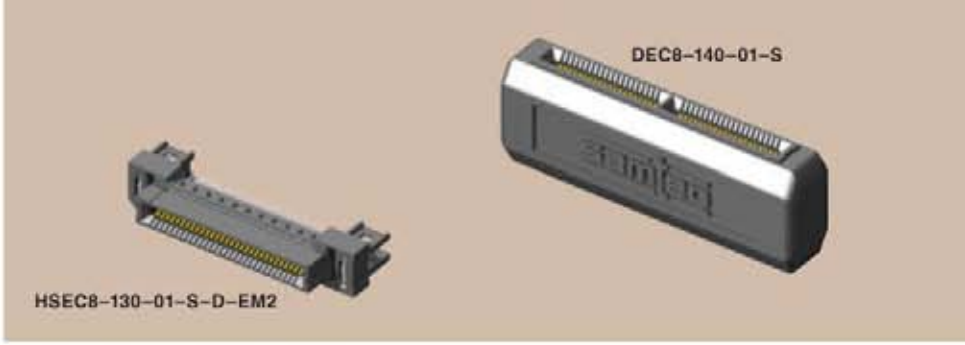


(0,80mm) .0315"

HSEC8-EM, DEC8 SERIES

EDGE MOUNT EDGE RATE™ CARD SOCKET

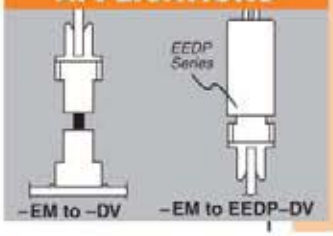
SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HSEC8-EM

Insulator Material: Liquid Crystal Polymer
Contact: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 3.1A @ 30°C Temperature Rise (See website for details)
Operating Temp: -55°C to +125°C
Card Insertion Depth: (3,15mm) .125" nominal
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes
RoHS Compliant: Yes

Note: Requires PCB thickness of (1,60mm) .062" ±(0,08mm) .003"

APPLICATIONS



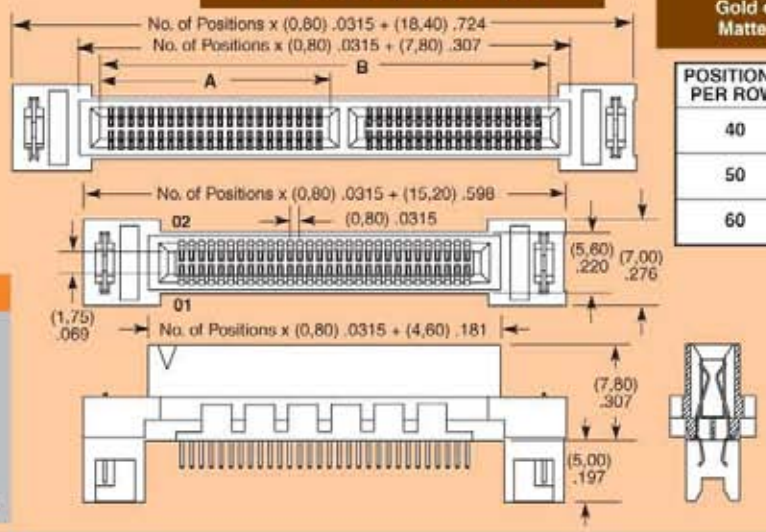
HSEC8 – 1 – POSITIONS PER ROW – 01 – PLATING OPTION – D – EM2

Mates with: (1,60mm) 0.62" thick cards, EEDP, HSC8

10, 20, 30, 40, 50, 60

–S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

–EM2 = (1,60mm) .062" thick PCB



POSITIONS PER ROW	A	B
40	(18,90) .744	(36,60) 1.441
50	(22,90) .902	(44,60) 1.756
60	(26,90) 1.059	(52,60) 2.071

ALSO AVAILABLE

Polarized mates for EEDP Series twinax cables

CONNECTOR	CABLE
HSEC8–113	EEDP–08
HSEC8–125	EEDP–16
HSEC8–137	EEDP–24
HSEC8–149	EEDP–32

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?DEC8

Insulator Material: Black ABS
Contact: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 3.1A @ 95°C relative to 125°C (See website for details)
Operating Temp: -55°C to +125°C
RoHS Compliant: Yes

APPLICATIONS

Note: Some lengths, styles and options are non-standard, non-returnable.

DEC8 – 1 – POSITIONS PER ROW – LEAD STYLE – PLATING

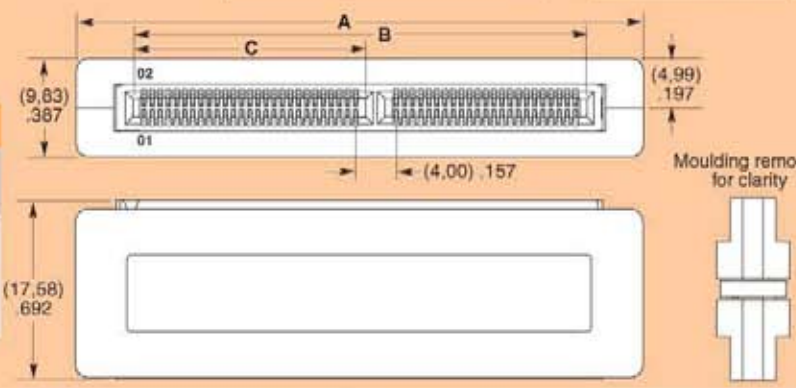
Mates with: (1,60mm) .062" thick cards, HSC8

40, 50, 60

–01 = (1,60) .062" Card Thickness

–S = 30µ" (0,76µm) Gold on contact

Note: Other Gold plating options available. Contact Samtec.



POSITIONS PER ROW	A	B	C
40	(47,75) 1.880	(36,60) 1.441	(18,90) .744
50	(55,75) 2.195	(44,60) 1.756	(22,91) .902
60	(63,75) 2.510	(52,60) 2.071	(26,90) 1.059

Due to technical progress, all designs, specifications and components are subject to change without notice.

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(1,00mm) .03937"

SAL1 SERIES

HIGH SPEED MICRO PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SAL1

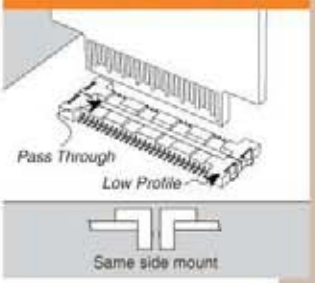
Insulator Material: Black LCP
Contact Material: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Operating Temp: -55°C to +125°C
Current Rating: 2.3 A @ 80°C
RoHS Compliant: Yes

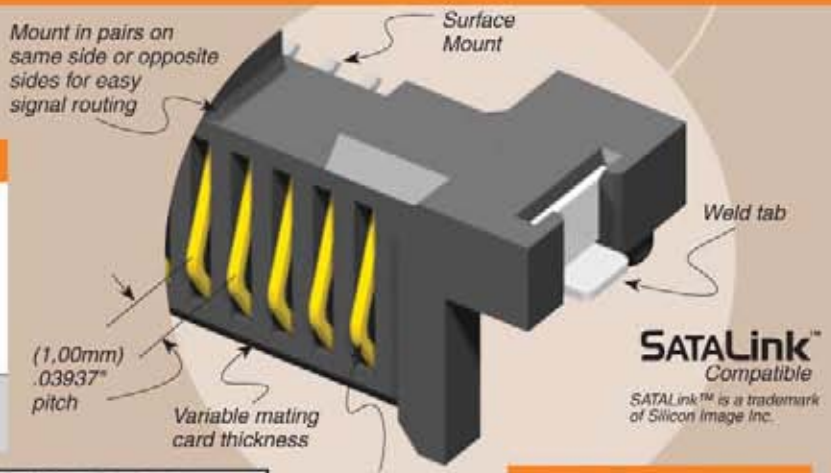
Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

Mates with:
(1,60mm) .062" or
(2,40mm) .093" card

APPLICATIONS





1,65mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	8.5 GHz / 17 Gbps
Differential Pair Signaling	9.0 GHz / 18 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?SAL1 or contact sig@samtec.com	

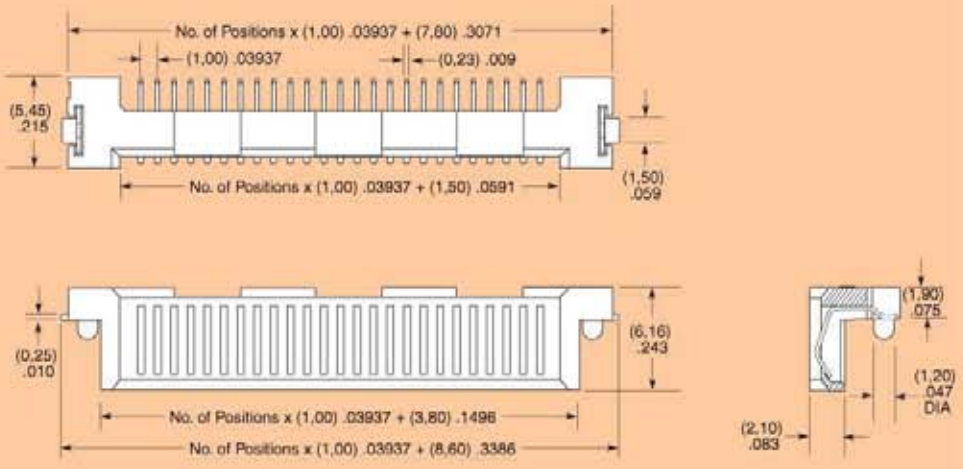
APPLICATION SPECIFIC OPTION

Heavy Gold plating available. Call Samtec.

SAL1 – 1 – NO. OF POSITIONS – 01 – PLATING OPTION – S – A

20, 27, 30, 40

–S
= 30µ" (0,76µm) Gold on contact, Matte Tin on tail



Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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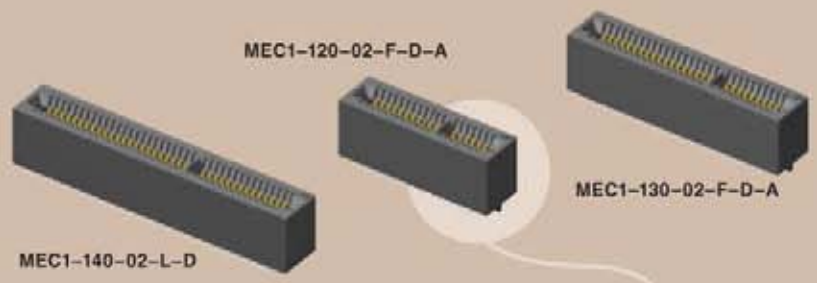


(1,00mm) .03937"

MEC1 SERIES

MINI EDGE CARD SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MEC1

Insulator Material: Black LCP
Contact Material: BeCu
Plating: Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C
Current Rating: 2A @ 80°C ambient (See website for details)
Voltage Rating: 300 VAC
Insertion Depth: (5,84mm) .230" to (8,13mm) .320"
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (05-20) (0,15mm) .006" max (30-70)

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with: (1,60mm) .062" card

APPLICATION

APPLICATION SPECIFIC OPTION

- Locking Clip
- Non-polarized

Call Samtec.

1mm MEC1	Rated @ -3dB Insertion Loss
9,19mm Stack Height	
Single-Ended Signaling	5.5 GHz / 11 Gbps
Differential Pair Signaling	6.5 GHz / 13 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?MEC1 or contact sig@samtec.com	

MEC1 – 1 POSITIONS PER ROW – 02 – PLATING OPTION – D – OTHER OPTION

05, 08, 20, 30, 40, 50, 60, 70

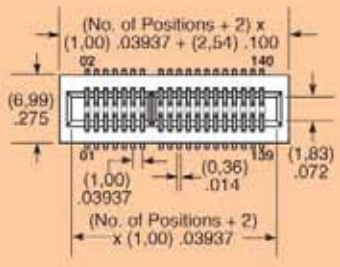
–F = Gold flash on contact, Matte tin on tail

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

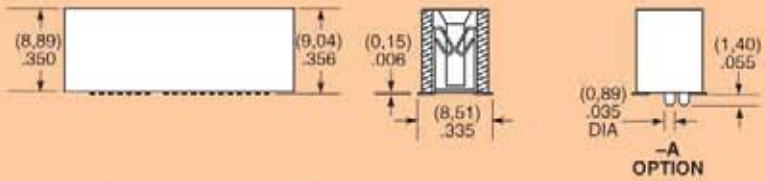
–A = Alignment Pin Metal or plastic at Samtec discretion.

–K = (7,87mm) .310" DIA Polyimide film Pick & Place Pad

–TR = Tape & Reel



POSITIONS PER ROW	POLARIZED POSITIONS
05	3, 4
08	5, 6
20	15, 16
30	21, 22
40	31, 32
50	41, 42
60	31, 32, 63 & 64
70	53, 54, 115 & 116



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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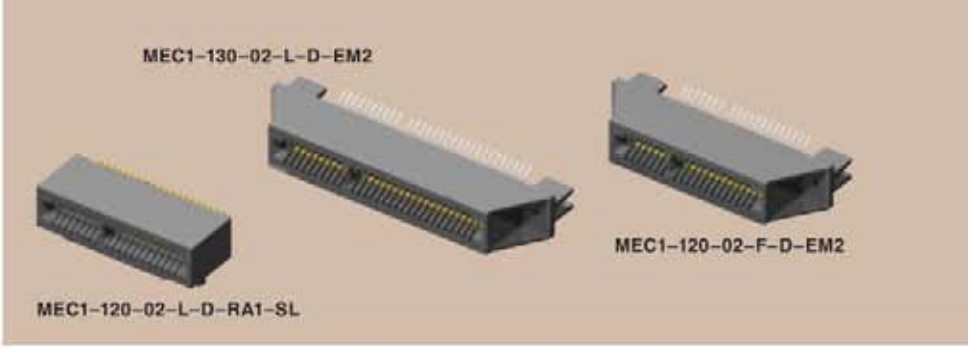


(1,00mm) .03937"

MEC1-RA, MEC1-EM SERIES

RIGHT ANGLE/EDGE MOUNT SOCKETS

Mates with:
(1,60mm) .062" card

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MEC1-RA

Insulator Material: Black LCP
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1.5A @ 80°C (See website for details)
Operating Temp Range: -55°C to +125°C
Insertion Depth: (5,84mm) .230" to (8,13mm) .320"
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (05-40) (0,15mm) .006" max (50-70)

Note: Some sizes, styles and options are non-standard, non-returnable.

MEC1 - 1 - POSITIONS PER ROW - CARD SLOT - PLATING OPTION - D - RA1 - SL

POSITIONS PER ROW: 05, 08, 20, 30, 40, 50, 60, 70

CARD SLOT: –02 = (1,60mm) .062" thick card

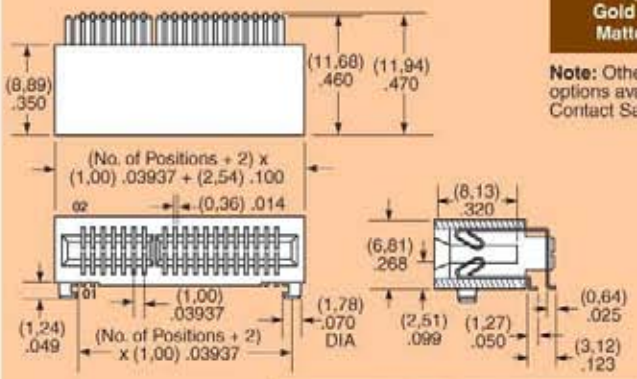
PLATING OPTION:
–F = Gold flash on contact, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

Note: Other Gold plating options available. Contact Samtec.

APPLICATION SPECIFIC OPTION
- Elevated body height
- Non-polarized

Call Samtec.

POSITIONS PER ROW	POLARIZED POSITIONS
05	3, 4
08	5, 6
20	15, 16
30	21, 22
40	31, 32
50	41, 42
60	31, 32, 63 & 64
70	53, 54, 115 & 116



1mm MEC1-RA	Rated @ -3dB Insertion Loss
6,81mm Stack Height	
Single-Ended Signaling	4.5 GHz / 9 Gbps
Differential Pair Signaling	5.5 GHz / 11 Gbps
Complete test data available at www.samtec.com?MEC1-RA or contact sig@samtec.com	

APPLICATION

Samtec recommends that pads on the mating board be Gold plated.

Mates with:
(1,60mm) .062" card

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MEC1-EM

Insulator Material: Black LCP
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C
Insertion Depth: (5,84mm) .230" to (8,13mm) .320"
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

Note: Some sizes, styles and options are non-standard, non-returnable.

MEC1 - 1 - POSITIONS PER ROW - 02 - PLATING OPTION - D - EM2

POSITIONS PER ROW: 05, 08, 20, 30, 40, 50, 60, 70

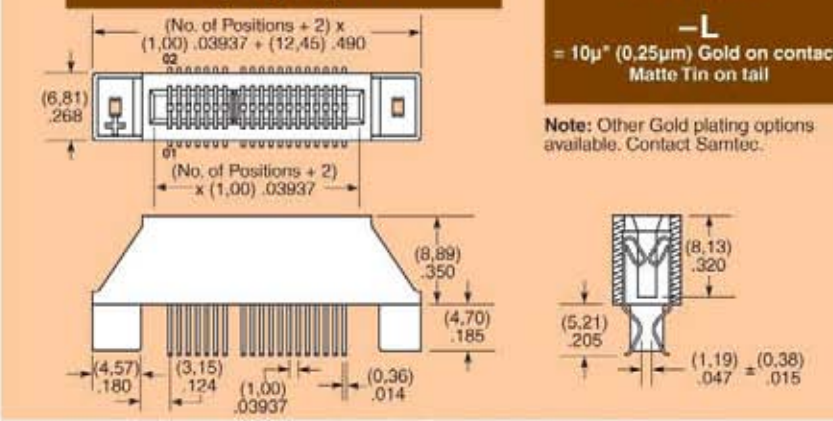
PLATING OPTION:
–F = Gold flash on contact, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

Note: Other Gold plating options available. Contact Samtec.

APPLICATION SPECIFIC OPTION
- Edge mount leads for (0,80mm) .031" thick board
- Non-polarized

Call Samtec.

POSITIONS PER ROW	POLARIZED POSITIONS
05	3, 4
08	5, 6
20	15, 16
30	21, 22
40	31, 32
50	41, 42
60	31, 32, 63 & 64
70	53, 54, 115 & 116



Due to technical progress, all designs, specifications and components are subject to change without notice.

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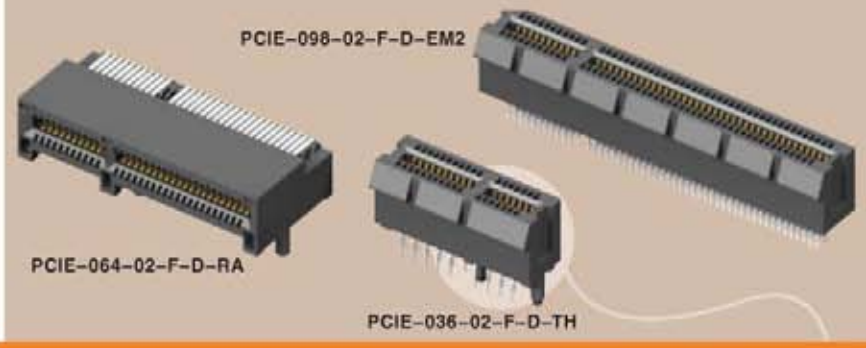
PCI EXPRESS®

(1,00mm) .03937"

PCIE SERIES



PCI EXPRESS® CARD SOCKETS

SPECIFICATIONS

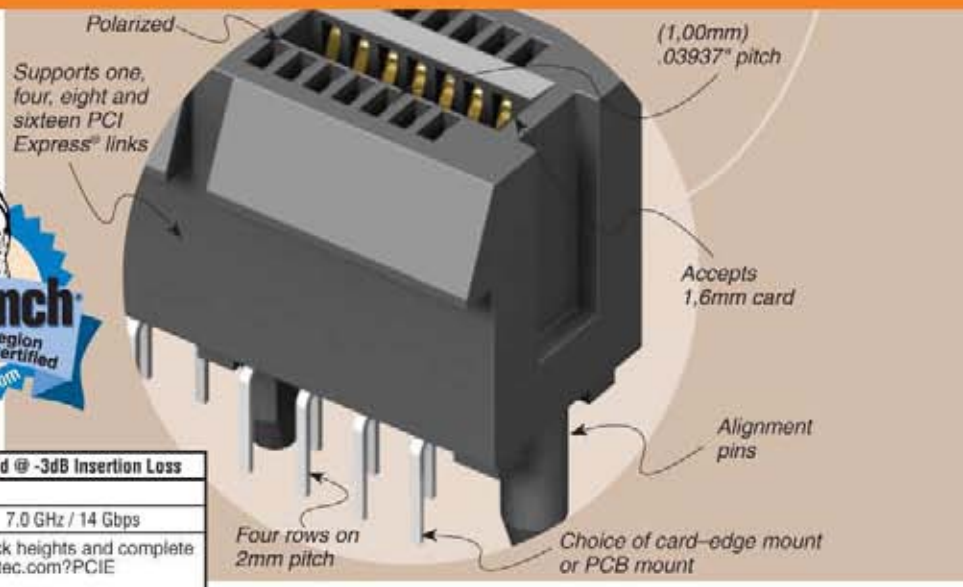
For complete specifications and recommended PCB layouts see www.samtec.com?PCIE

Insulator Material:
Black Nylon
Contact:
Phosphor Bronze
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp:
-55°C to +125°C
Card Insertion Depth:
(8,00mm) .315" nominal
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds
Lead–Free Solderable:
Wave only

Mates with:
.062" (1,60mm) Card



PCIE	Rated @ -3dB Insertion Loss
11,1mm Stack Height	
Differential Pair Signaling	7.0 GHz / 14 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?PCIE or contact sig@samtec.com

APPLICATION SPECIFIC OPTION

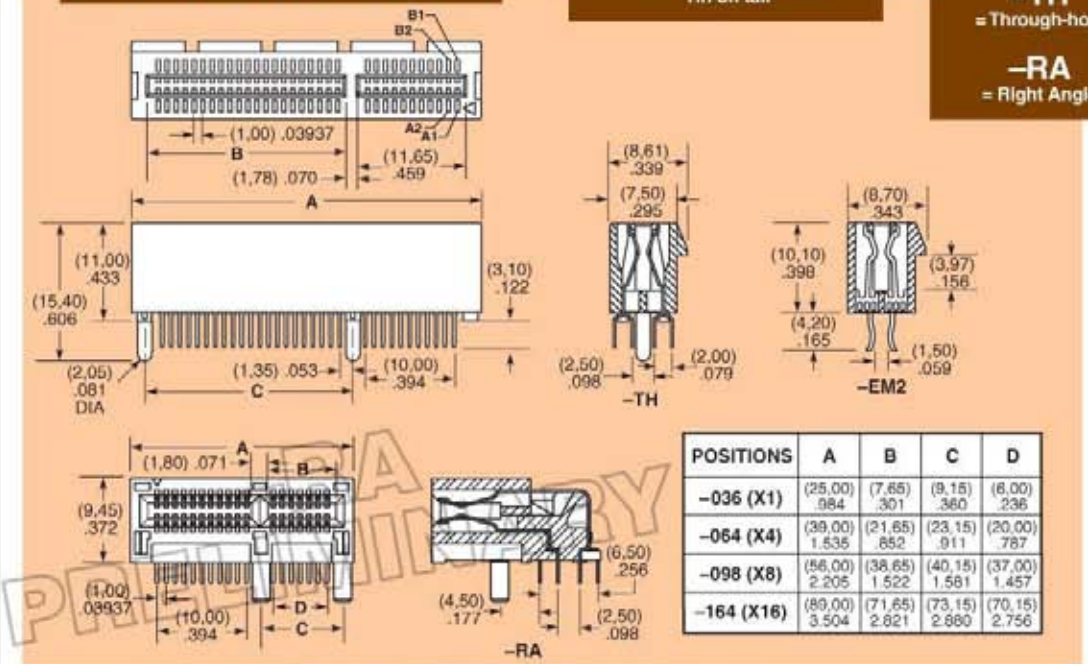
Other plating options available.
Call Samtec.

PCIE – NO. OF POSITIONS – 02 – PLATING OPTION – D – TAIL OPTION

–036, –064, –098, –164

–F
= Gold flash on contact, Tin on tail

–EM2
= Edge Mount
–TH
= Through-hole
–RA
= Right Angle



POSITIONS	A	B	C	D
–036 (X1)	(25,00) .984	(7,65) .301	(9,15) .360	(6,00) .236
–054 (X4)	(39,00) 1.535	(21,65) .852	(23,15) .911	(20,00) .787
–098 (X8)	(56,00) 2.205	(38,65) 1.522	(40,15) 1.581	(37,00) 1.457
–164 (X16)	(89,00) 3.504	(71,65) 2.821	(73,15) 2.880	(70,15) 2.756

PRELIMINARY

PCI Express® is a registered trademark of PCI-SIG

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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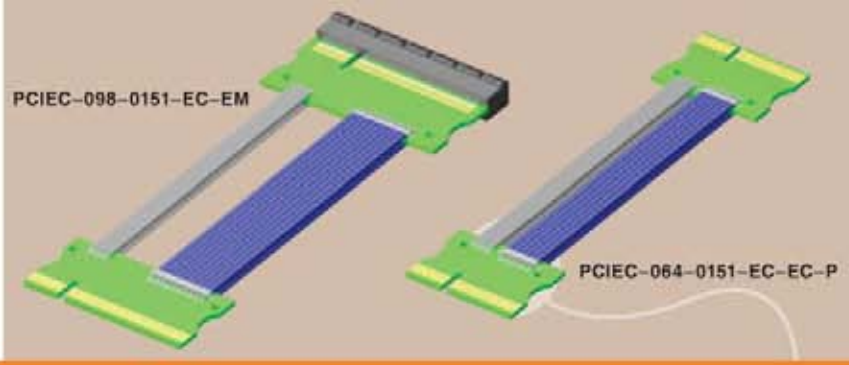
PCI EXPRESS®

(1,00mm) .03937"

PCIEC SERIES



PCI EXPRESS® JUMPERS & EXTENDERS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?PCIEC

Connector:
Insulator Material:
Black Nylon
Contact:
Phosphor Bronze
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Operating Temp:
-55°C to +125°C
Card Insertion Depth:
(8,00mm) .315" nominal
RoHS Compliant:
Yes

Card:
Conductor:
½ oz. Copper
Contact Area:
Hard Gold (Contact area)
Insulator:
Nelco 4000-13
RoHS Compliant:
Yes

Cable:
Conductor:
30 AWG shielded twinax
30 AWG standard ribbon
RoHS Compliant:
Yes

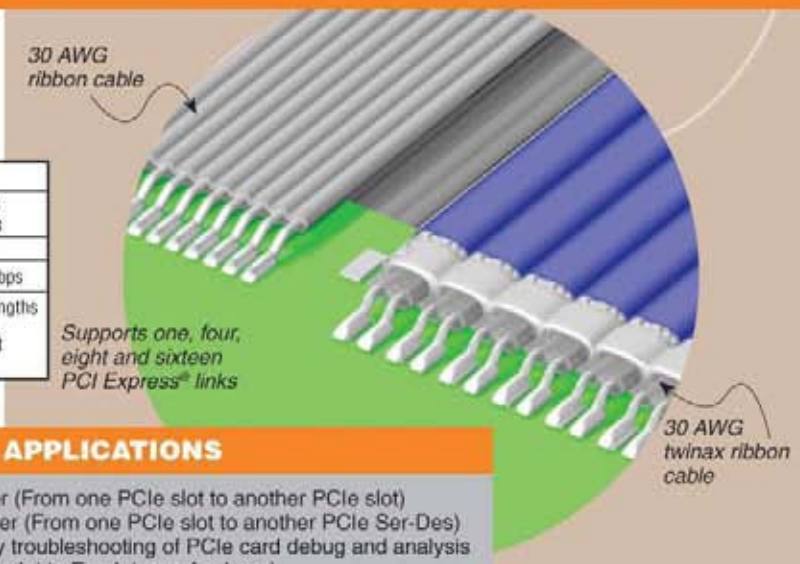
PCI Express® is a registered trademark of PCI-SIG

Note:
This Series is non-standard, non-returnable.

Mates with:
PCIE

PCIEC	
Cable Length	Rated @ -3dB Insertion Loss -DP
6" (152mm)	3.01 GHz / 6.02 Gbps

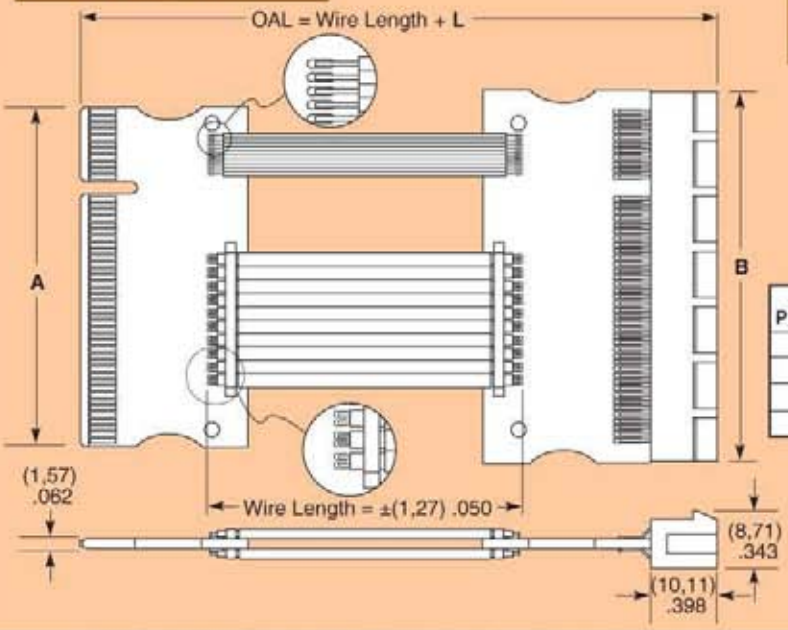
Performance data for other cable lengths and complete test data available at www.samtec.com?PCIEC or contact sig@samtec.com



APPLICATIONS

Loop back Extender (From one PCIe slot to another PCIe slot)
Ser-Des Physical Extender (From one PCIe slot to another PCIe Ser-Des)
Physical Extender for easy troubleshooting of PCIe card debug and analysis (PCIe slot to Emulator or Analyzer)

PCIEC	– NO. OF POSITIONS	– WIRE LENGTH	– END NO. 1	– END NO. 2	– POWER LINES
	–036, –064, –098, –164	–"XXXX" = Wire Length in millimeters 0095mm minimum	–EC = Edge Card	–EC = PCIe Edge Card –EM = PCIe Edge Mount Connector	–P = Power Lines (Leave Blank for no Power Lines)



END TO END	L
–EC to –EC	(39,6) 1.56
–EC to –EM	(49,6) 1.95

NO. OF POSITIONS	A	B
–036	(20,30) .800	(25,40) 1.00
–064	(34,30) 1.35	(39,40) 1.55
–098	(51,30) 2.02	(56,40) 2.22
–164	(84,30) 3.32	(89,40) 3.52

Due to technical progress, all designs, specifications and components are subject to change without notice.

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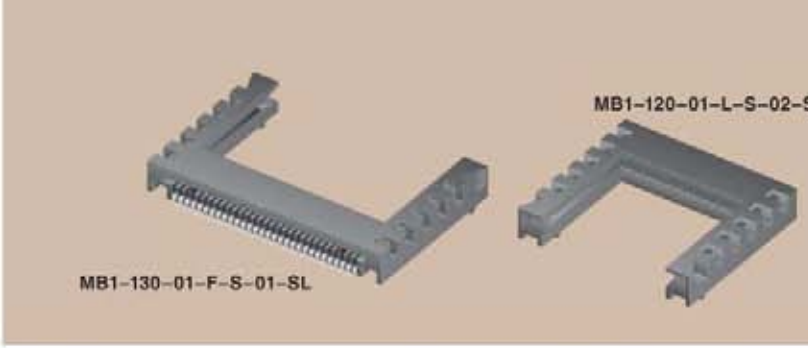


(1,00mm) .03937"

MB1 SERIES

MINI EDGE CARD SOCKET WITH GUIDES

Mates with:
(0,80mm) .031" PCB,
(1,60mm) .062" PCB

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MB1

Insulator Material: Black LCP
Contact Material: BeCu
Plating: Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C
Insertion Depth: (5,26mm) .207" to (6,10mm) .240"
RoHS Compliant: Yes

Processing:

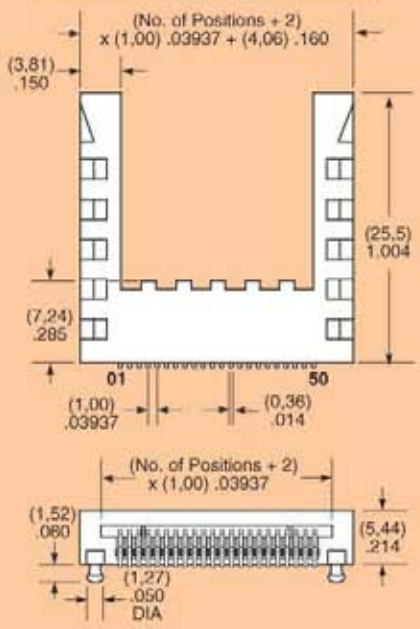
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (20-30) (0,15mm) .006" max (40-50)

Important Note: Samtec recommends that pads on the mating board be Gold plated.

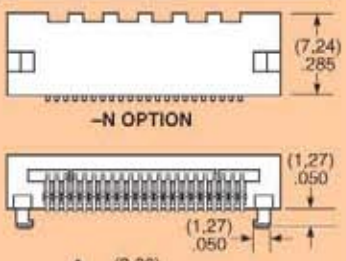
Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

MB1	–	1	NO. OF PINS	–	01	–	PLATING OPTION	–	S	–	CARD SLOT	–	SL	–	OTHER OPTION
			20, 30, 40, 50				–F = Gold flash on contact, Matte Tin on tail –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail				Specify CARD SLOT from chart				–N = No Card Guides



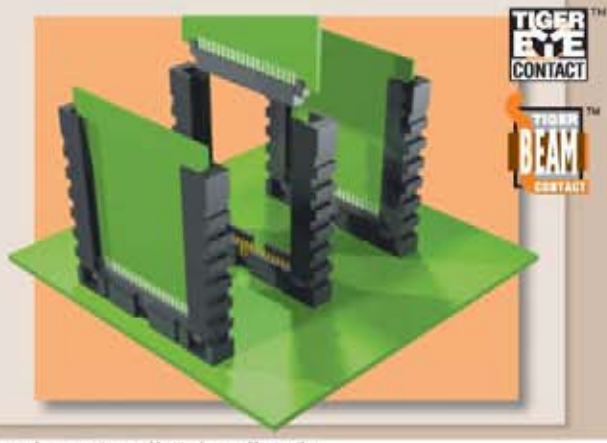
CARD SLOT	A	MATES WITH BOARD THICKNESS
–01	(0,97) .038	(0,80) .031
–02	(1,83) .072	(1,60) .062



ALSO AVAILABLE

Flex Card System

- 2mm (.0787") (FCT/EMT Series) and .050" (1,27mm) (FCF/EMF Series) systems
- Vertical and horizontal
- Header with snap-on card guides for design flexibility
- Elevated design now available
- PCMCIA (PCMT/PCMS Series) Compact Flash (CFT/CFS Series) compatible applications available
- Ideal for multiple add-on cards
- Solder locks for mechanical stability
- Any size from 40 to 100 contacts



Due to technical progress, all designs, specifications and components are subject to change without notice.

MICRO RUGGED

0,8mm Pitch System

Micro 0,80 mm Pitch Connector Sets (TEM, SEM) 134-135

.050" (1,27mm) Pitch System

Standard .050" (1,27mm) Pitch Connector Sets (SFM, TFM) 136-139
Friction Lock Connector Sets (SFML/TFML) 136-139
Tiger Eye™ LITE Connector Sets (SFC, TFC) 140-141
Right Angle Connectors (FSH, SFMH) 142
Flexible Pin Count Tiger Eye™ Sockets (SFMC) 143
Four-row .050" (1,27mm) Pitch FOURRAY™ Strips (FOLC, MOLC) 144-145
IDC Cable Assemblies, .050" (1,27mm) Pitch (FXTP, FFXD) 146-147
Discrete Wire Cable Systems, .050" (1,27mm) Pitch (SFSX, TFSX) 148-149
AccliMate™ IP68 Sealed System (RPBT, RPCT, RCT) 150-151

2mm Pitch System

Discrete Wire Cable Systems, 2mm Pitch (S2SD, T2M, T2SD, S2M) 152-155
IDC Cable Assemblies, 2mm Pitch (TCSD, TCMD) 156-157
Tiger Eye™ Sockets (SMM) 158

TIGER EYE™ SYSTEM

APPLICATIONS

Micro Rugged Tiger Eye™ Connector Sets & Cable Assemblies 32-33

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TIGER EYE™ SYSTEM

(0,80mm) .0315"

SEM, SEML SERIES

MICRO TIGER EYE™ SOCKET

SPECIFICATIONS

Mates with: TEM

For complete specifications and recommended PCB layouts see www.samtec.com?SEM or www.samtec.com?SEML

Insulator Material:
Black Liquid Crystal Polymer
UL FILE NO. E111594

Contact Material:
BeCu

Plating:
Au or Sn over 50µ" (1,27µm) Ni

RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	TEM/SEM
20°C	3.5A
40°C	3.1A
60°C	2.6A
80°C	2.2A
95°C	1.78A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max

ALSO AVAILABLE

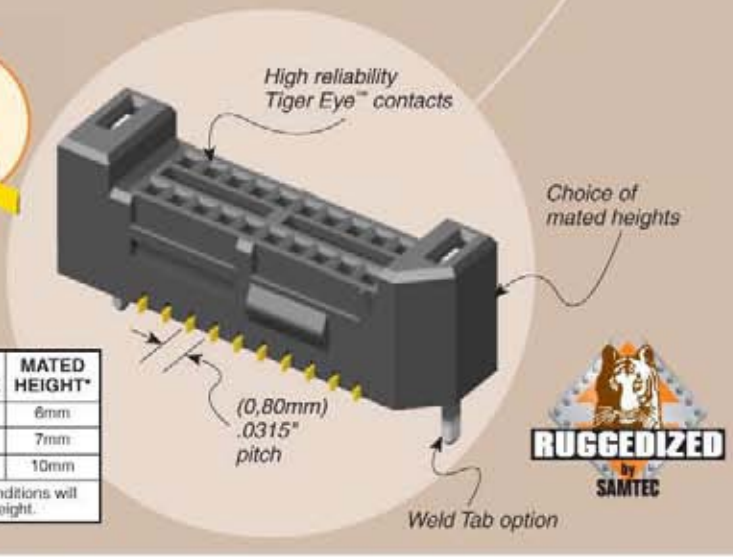
- (1,27mm) .050" board-to-board and cable-to-board Tiger Eye™ systems available.
- Board Stacking: See SFM, TFM Series
- Cable Assemblies: See SFSD, TFSD Series
- AccliMate™: See SCP3/SCR3 Series

Call Samtec.

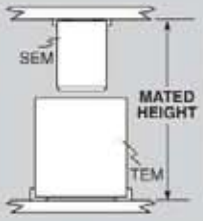
E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with TEM

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.



MATED HEIGHT



TEM LEAD STYLE	MATED HEIGHT*
–03.0	6mm
–04.0	7mm
–07.0	10mm

*Processing conditions will affect mated height.

TYPE STRIP	–	1	NO. PINS PER ROW	–	02	–	STACK HEIGHT	–	PLATING OPTION	–	D	–	OPTION	–	OTHER OPTION

SEM = Tiger Eye™ Strip
SEML = Tiger Eye™ Friction Lock

05, 10, 15, 20, 25, 30, 35, 40, 45, 50
(Call Samtec for other sizes)

–03.0 = 6mm, 7mm or 10mm Stack Height when mated with TEM Series (SEML only available with 6mm Stack Height)

–H = 30µ" (0,76µm) Gold on contact, Gold Flash on tail

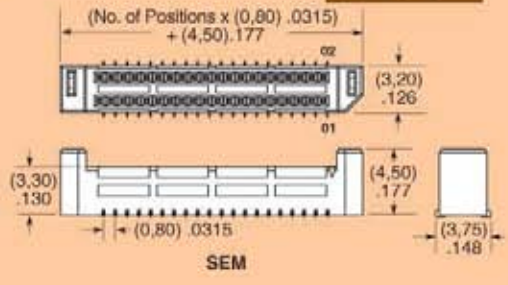
–A = Alignment Pin (Not available with –LC or –WT)

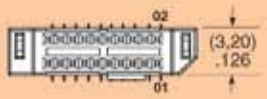
–LC = Locking Clip (Not available with –A or –WT)

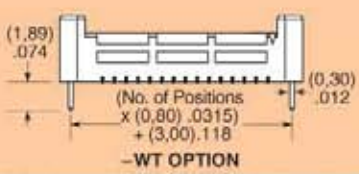
–WT = Weld Tab (Not available with –A or –LC) (Required callout for SEML)

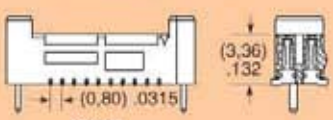
–K = (3,50mm) .138" DIA Polyimide film Pick & Place Pad

–TR = Tape & Reel









Due to technical progress, all designs, specifications and components are subject to change without notice.

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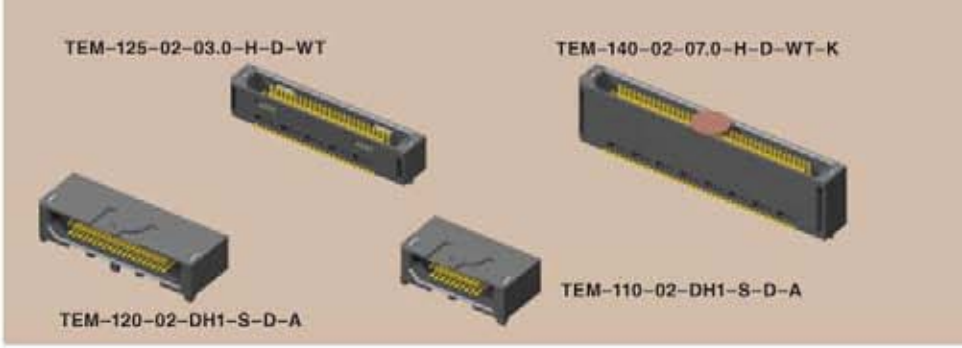
TIGER EYE™ SYSTEM

(0,80mm) .0315"

TEM, TEM-DH SERIES



MICRO TIGER EYE™ HEADER

TEM Mates with:
SEM, SEML

TEM-DH Mates with:
SEM, SEML

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TEM or www.samtec.com?TEM-DH

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	TEM/SEM
20°C	3.5A
40°C	3.1A
60°C	2.6A
80°C	2.2A
95°C	1.78A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

ALSO AVAILABLE

- (1,27mm) .050" board-to-board and cable-to-board Tiger Eye™ systems available.
- Board Stacking: See SFM, TFM Series
- Cable Assemblies: See SFSD, TFSD Series
- AccliMate™: See SCP3/SCR3 Series

Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

TEM - 1 - NO. PINS PER ROW - 02 - STACK HEIGHT - PLATING OPTION - D - OPTION - OTHER OPTION

NO. PINS PER ROW: 05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

STACK HEIGHT:
- –03.0 = 6mm Stack Height
- –04.0 = 7mm Stack Height
- –07.0 = 10mm Stack Height

STACK HEIGHT	A	MATED HEIGHT* (WHEN MATED WITH SEM)
–03.0	(5,610) .2209	6mm
–04.0	(6,610) .2602	7mm
–07.0	(9,610) .3783	10mm

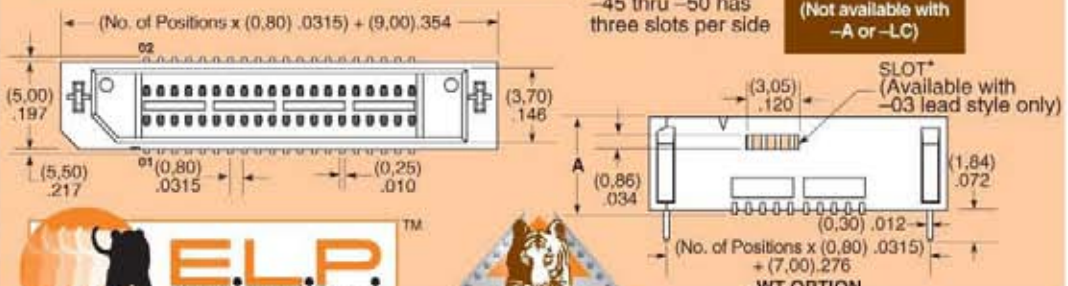
*Processing conditions will affect mated height.

PLATING OPTION:
- –H = 30µ" (0,76µm) Gold on contact, Gold Flash on tail

***Important Note:**
–10 thru –20 has one slot per side
–25 thru –40 has two slots per side
–45 thru –50 has three slots per side

OPTION:
- –A = Alignment Pin (Not available with –LC or –WT)
- –LC = Locking Clip (Not available with –A or –WT)
- –WT = Weld Tab (Not available with –A or –LC)

OTHER OPTION:
- –K = (5,50mm) .217" DIA Polyimide film Pick & Place Pad
- –TR = Tape & Reel



E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with SEM

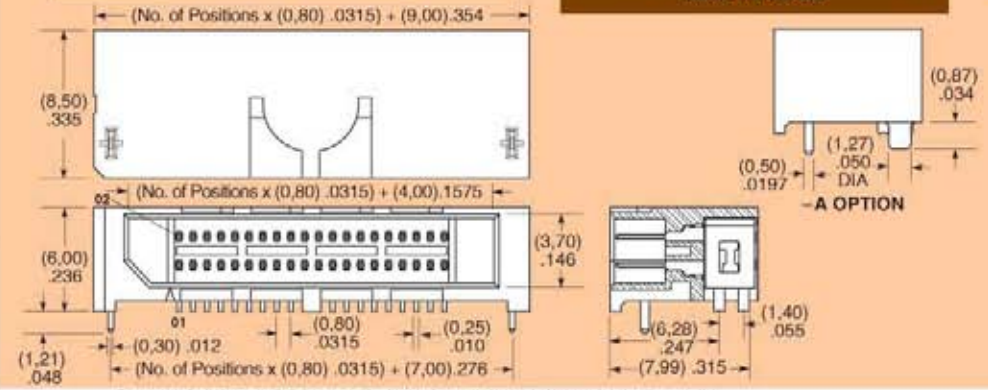
RUGGEDIZED by SAMTEC

TEM - 1 - NO. OF POSITIONS - 02 - DH1 - PLATING OPTION - D - OPTION

NO. OF POSITIONS: 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

PLATING OPTION:
- –S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

OPTION:
- –A = Alignment Pin



Due to technical progress, all designs, specifications and components are subject to change without notice.

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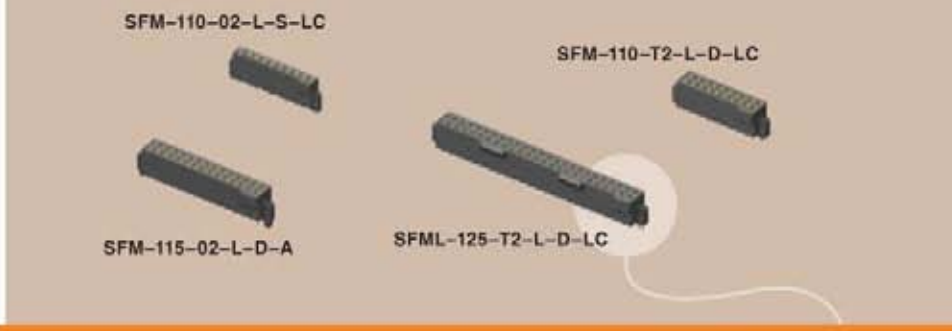
TIGER EYE™ SYSTEM

(1,27mm) .050"

SFM, SFML SERIES



SMT TIGER EYE™ SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SFM or www.samtec.com?SFML

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Tiger Eye™= BeCu
Tiger Eye™ LITE= Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating:
350 VAC mated with TFM
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
15 mΩ max
Insertion Depth:
(3,05mm) .120" to (4,06mm) .160"
Wiping Distance:
(0,38mm) .015"
Normal Force:
Standard= 132g (1,29N) avg.; LIF= 90g (0,88N) avg.
Insertion Force (SFM):
(Single contact only)
Standard= 2.5oz (0,69N) avg.; LITE= 2.0oz (0,56N) avg.
LIF= 1.4oz (0,39N) avg.
Withdrawal Force (SFM):
(Single contact only)
Standard= 2.0oz (0,56N) avg.; LITE= 1.5oz (0,42N) avg.
LIF= 1.0oz (0,28N) avg.
Insertion Force (SFML):
(Single contact only)
2.5oz (0,69N) avg.
Unmating Force (SFML):
Withdrawal force per contact (Single contact only)= 1.5oz (0,42N) average; Incremental unmating force with friction locks: 10-20 pins/row (One Lock) increases withdrawal force by 4 x average; 25 & 30 pins/row (Two Locks) increases withdrawal force by 3 x average; 35-50 pins/row (Three Locks) increases withdrawal force by 1.7 x average
Max Cycles:
10,000 with 30µ" (0,76µm) Au
RoHS Compliant: Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (05-25)
(0,15mm) .006" max (30-50)

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

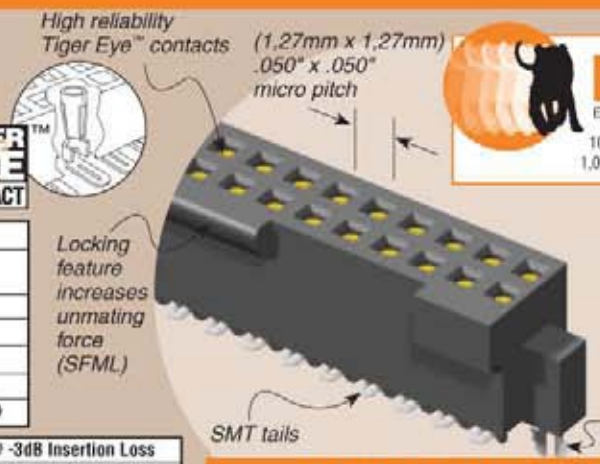
SFM Mates with:
TFM, TFSD, TFSS, FTS (LIF), FW (LIF), FTSH (LIF)

SFML Mates with:
TFML

CURRENT RATING	
AMBIENT TEMP	TFM/SFM
20°C	5A
40°C	4.5A
60°C	3.9A
95°C	2.6A
6 POSITIONS (2x3) POWERED	

1,27mm SFM/TFM	Rated @ -3dB Insertion Loss
6,35mm Stack Height	
Single-Ended Signaling	6.0 GHz / 12 Gbps
Differential Pair Signaling	7.0 GHz / 14 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?SFM or contact sig@samtec.com



E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
1,000 cycles when mated with TFM

APPLICATION SPECIFIC OPTION

SFML solder nail option available. Call Samtec.

COST-SAVING APPLICATIONS

TIGER EYE™ L·I·T·E

Lower cost Phosphor Bronze contact (–T2) for applications where Beryllium Copper is not needed. See SFC Series for lower cost plating options.

TYPE STRIP	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OPTION
SFM = Standard **SFML** = Locking (Lead style –T2 only)			05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec or see SFMC Series for more sizes)		**–02** = Tiger Eye™ Contact **–L2** = Low Insertion Force Tiger Eye™ Contact **–T2** = Tiger Eye™ LITE Contact		**–L** = 10µ" (0,25µm) Gold on contact, Matte Tin on tail **–S** = 30µ" (0,76µm) Gold on contact, Matte Tin on tail		**–S** = Single Row (SFM only) **–D** = Double Row		**–A** = Alignment Pin (N/A with –LC) **–LC** = Locking Clip (N/A with –A) **–K** = (4,00mm) .157" DIA Polyimide film Pick & Place Pad **–P** = Plastic Pick & Place Pad **–TR** = Tape & Reel

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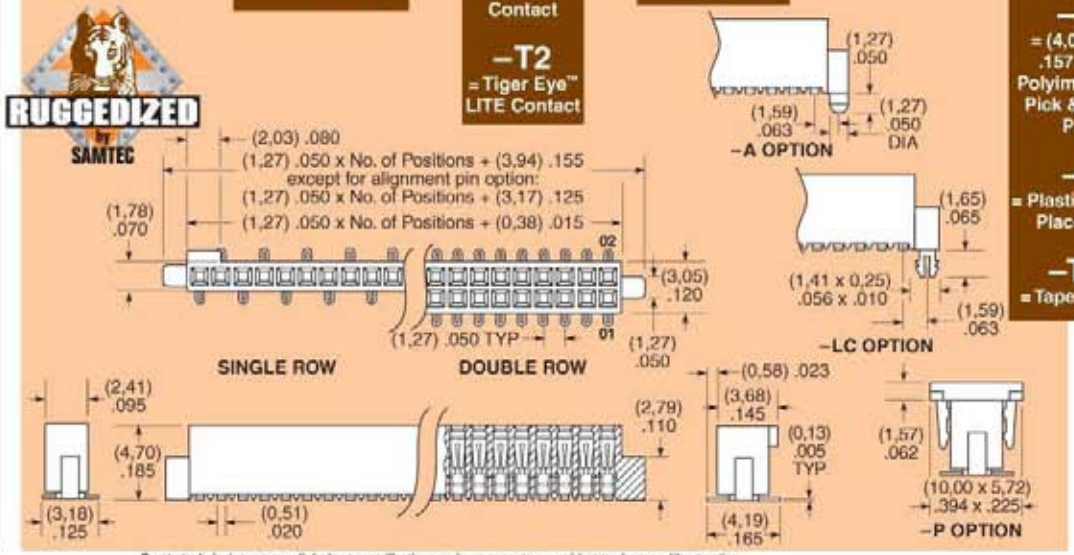

Due to technical progress, all designs, specifications and components are subject to change without notice.

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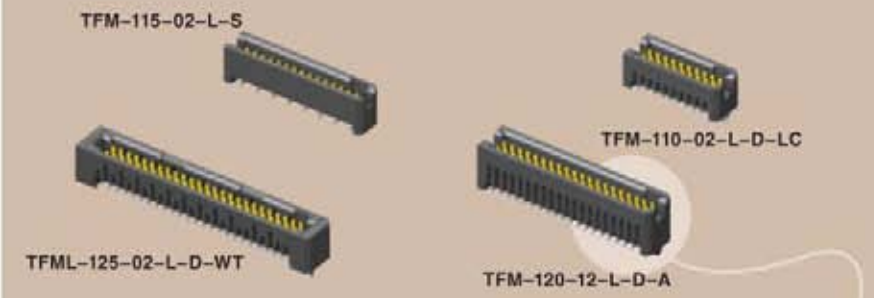
TIGER EYE SYSTEM™

(1,27mm) .050"

TFM, TFML SERIES



SMT HIGH RELIABLE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TFM or www.samtec.com?TFML

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Voltage Rating:
350 VAC mated with SFM

Operating Temp Range:
-55°C to +125°C

RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	TFM/SFM
20°C	5A
40°C	4.5A
60°C	3.9A
95°C	2.6A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max (05-25)
(0,15mm) .006" max (30-50)

APPLICATION SPECIFIC OPTION

TFML solder nail option available. Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note:
Some sizes, styles and options are non-standard, non-returnable.

TFM
Mates with:
SFM, SFMC, SFSD

TFML
Mates with:
SFML

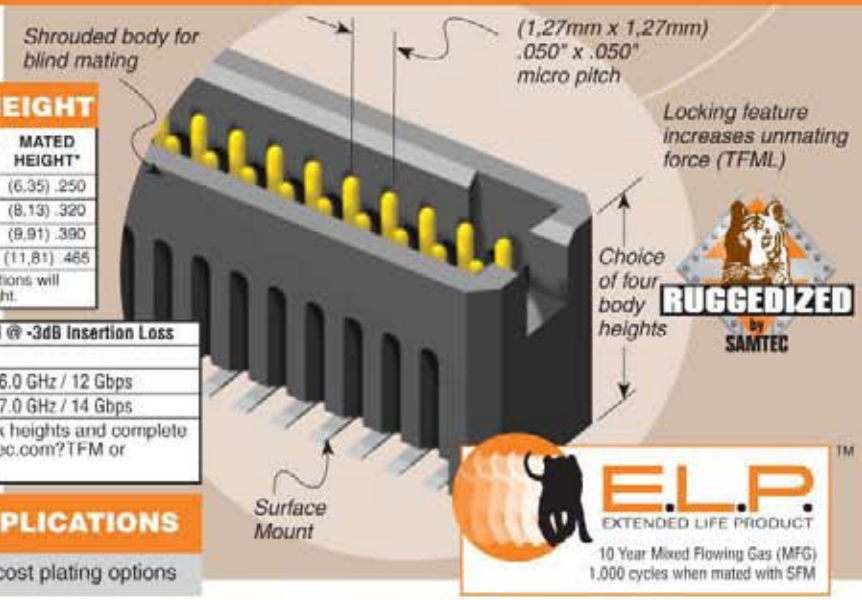
MATED HEIGHT

LEAD STYLE		MATED HEIGHT*
TFM	SFM	
-02	-02	(6,35) .250
-12		(8,13) .320
-22		(9,91) .390
-32		(11,81) .465

*Processing conditions will affect mated height.

1,27mm SFM/TFM	Rated @ -3dB Insertion Loss
6,35mm Stack Height	
Single-Ended Signaling	6.0 GHz / 12 Gbps
Differential Pair Signaling	7.0 GHz / 14 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?TFM or contact sig@samtec.com



E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
1,000 cycles when mated with SFM

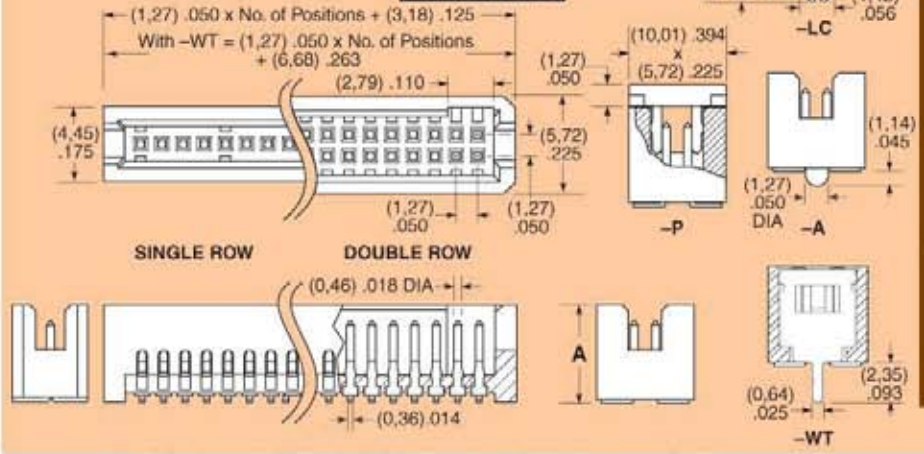
COST-SAVING APPLICATIONS

See TFC Series for lower cost plating options

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OPTION
TFM = Standard **TFML** = Locking (Lead style -02 only)		05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)	Specify LEAD STYLE from chart	**-L** = 10µ" (0,25µm) Gold on post, Matte Tin on tail **-S** = 30µ" (0,76µm) Gold on post, Matte Tin on tail	**-S** = Single Row (TFM only) **-D** = Double Row	**-A** = Alignment Pin (N/A with -LC) **-LC** = Locking Clip (N/A with -A) **-K** = (5,50mm) .216" DIA Polyimide Film Pick & Place Pad **-P** = Plastic Pick & Place Pad **-TR** = Tape & Reel **-WT** = Weld Tabs -02 lead style & 05 thru 30 positions only (N/A with -A, -LC, 07 positions or TFML Series) Mates to SFSS/SFSD -SR & -DR option

LEAD STYLE	A
-02	(5,72) .225
-12*	(7,49) .295
-22*	(9,27) .365
-32*	(11,18).440

* N/A WITH 07 OR -S



Due to technical progress, all designs, specifications and components are subject to change without notice.

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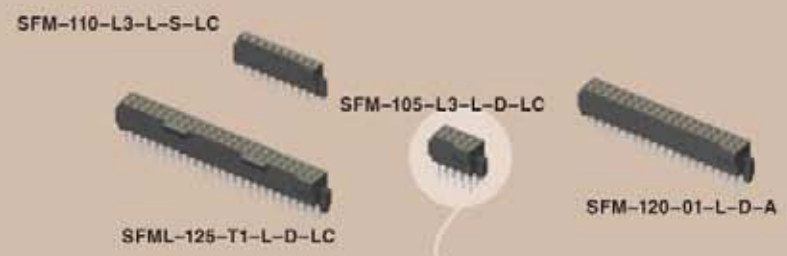
TIGER EYE™ SYSTEM

(1,27mm) .050"

SFM, SFML SERIES



THROUGH-HOLE TIGER EYE™ SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SFM or www.samtec.com?SFML

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Tiger Eye™= BeCu
Tiger Eye™ LITE= Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating:
350 VAC mated with TFM
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
15 mΩ max
Insertion Depth:
(3,05mm) .120" to (4,06mm) .160"
Wiping Distance:
(0,38mm) .015"
Normal Force:
Standard= 132g (1,29N) avg.; LIF= 90g (0,88N) avg.
Insertion Force (SFM):
(Single contact only)
Standard= 2.5oz (0,69N) avg.; LITE= 2.0oz (0,56N) avg.
LIF= 1.4oz (0,39N) avg.
Withdrawal Force (SFM):
(Single contact only)
Standard= 2.0oz (0,56N) avg.; LITE= 1.5oz (0,42N) avg.
LIF= 1.0oz (0,28N) avg.
Insertion Force (SFML):
(Single contact only)
2.5oz (0,69N) avg.
Unmating Force (SFML):
Withdrawal force per contact (Single contact only)= 1.5oz (0,42N) average; Incremental unmating force with friction locks: 10-20 pins/row (One Lock) increases withdrawal force by 4 x average; 25 & 30 pins/row (Two Locks) increases withdrawal force by 3 x average; 35-50 pins/row (Three Locks) increases withdrawal force by 1.7 x average
Max Cycles:
10,000 with 30µ" (0,76µm) Au
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

Note: Other Gold plating options available. Contact Samtec.

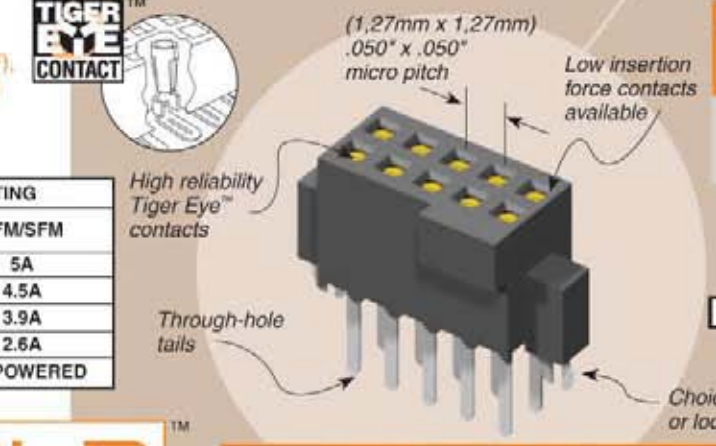
Note: Some sizes, styles and options are non-standard, non-returnable.

SFM Mates with:
TFM, TFSD, FTS (LIF), FW (LIF), FTSH (LIF)

SFML Mates with:
TFML

CURRENT RATING	
AMBIENT TEMP	TFM/SFM
20°C	5A
40°C	4.5A
60°C	3.9A
95°C	2.6A
6 POSITIONS (2x3) POWERED	

TIGER EYE™ CONTACT



APPLICATION SPECIFIC OPTION

SFML solder nail option available. Call Samtec.

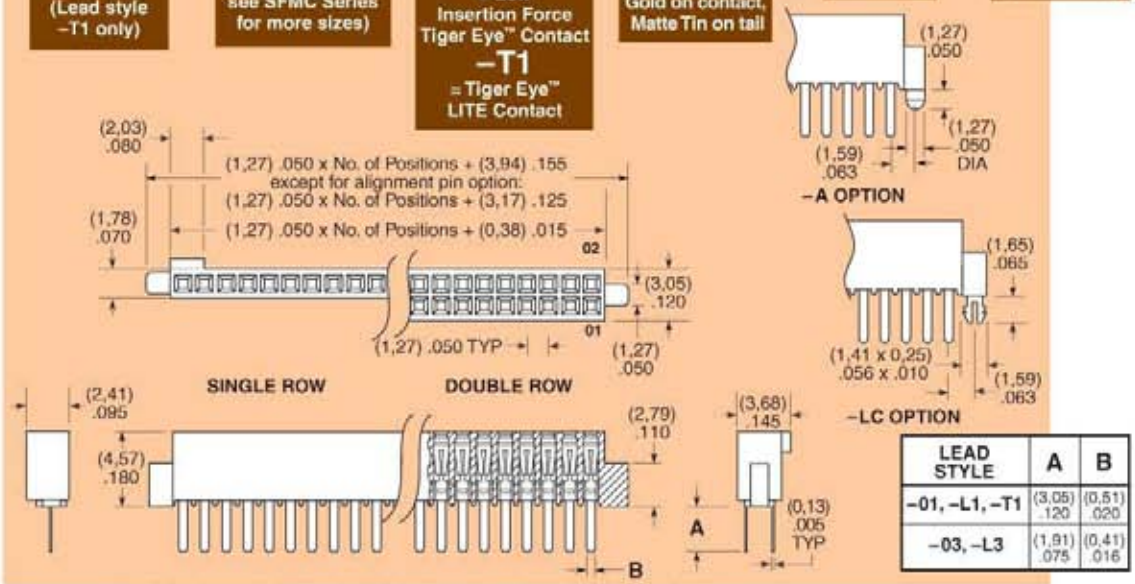
RUGGEDIZED by SAMTEC

E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
1,000 cycles when mated with TFM

COST-SAVING APPLICATIONS

TIGER EYE™ L·I·T·E
Lower cost Phosphor Bronze contact (–T1) for applications where Beryllium Copper is not needed. See SFC Series for lower cost plating options.

TYPE STRIP	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OPTION
SFM = Standard SFML = Locking (Lead style –T1 only)			05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec or see SFMC Series for more sizes)		–01, –03 = Tiger Eye™ Contact –L1, –L3 = Low Insertion Force Tiger Eye™ Contact –T1 = Tiger Eye™ LITE Contact		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail		–S = Single Row (SFM only) –D = Double Row		–A = Alignment Pin (N/A with –LC) –LC = Locking Clip (N/A with –A)



LEAD STYLE	A	B
–01, –L1, –T1	(3,05) .120	(0,51) .020
–03, –L3	(1,91) .075	(0,41) .016

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC GERMANY • Tel: +49 (0) 89 / 89460 0 SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6893337 SAMTEC NORDIC/BALTIC • Tel: +46-84477280 SAMTEC BENELUX • Tel: 44 01236 739292
SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
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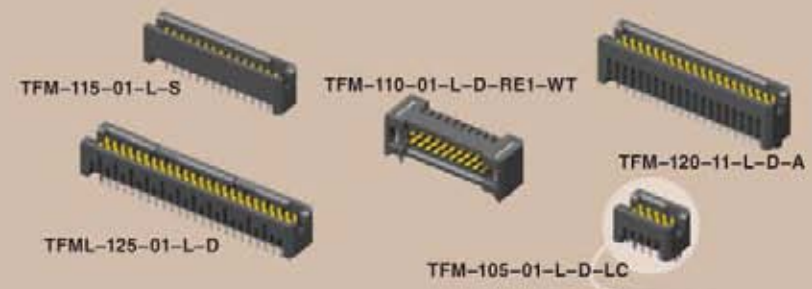
TIGER EYE SYSTEM™

(1,27mm) .050"

TFM, TFML SERIES



THROUGH-HOLE HIGH REL HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TFM or www.samtec.com?TFML

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Voltage Rating:
350 VAC mated with SFM

Operating Temp Range:
-55°C to +125°C

RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	TFM/SFM
20°C	5A
40°C	4.5A
60°C	3.9A
95°C	2.6A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

APPLICATION SPECIFIC OPTION

- TFML solder nail option available.

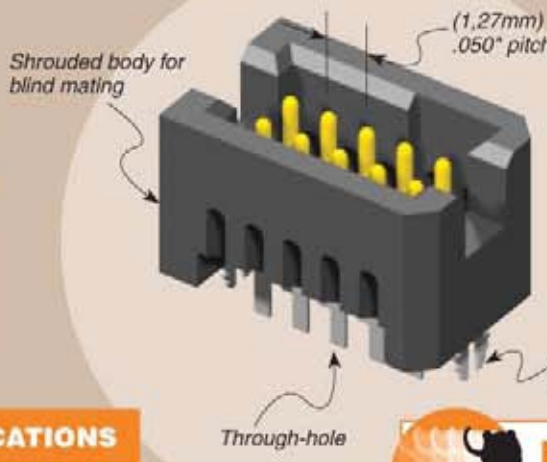
Call Samtec

TFM Mates with:
SFM, SFMC, SFSD

TFML Mates with:
SFML

STACK HEIGHT

LEAD STYLE		MATED HEIGHT
TFM	SFM	
-01	-01	(5,97) .235
-03		(5,97) .235
-11		(7,75) .305
-13		(7,75) .305
-21		(9,53) .375
-31		(11,43) .450



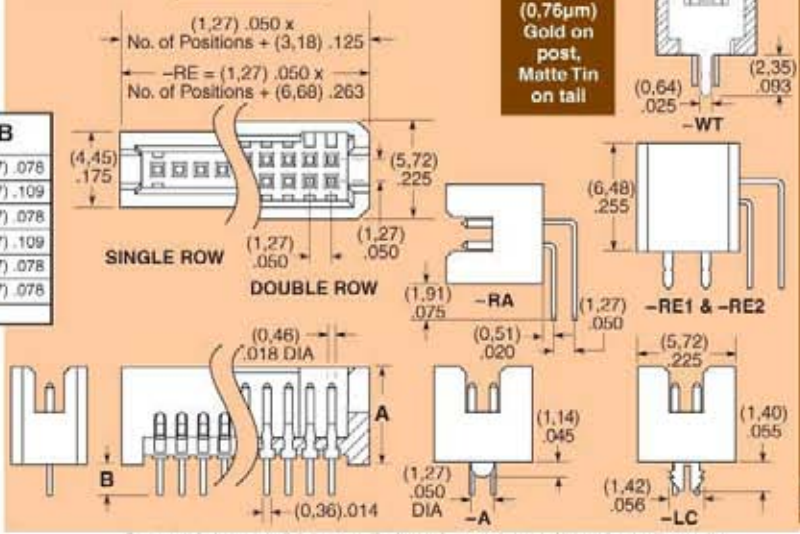
RUGGEDIZED by SAMTEC

COST-SAVING APPLICATIONS

See TFC Series for lower cost plating options

E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
1,000 cycles when mated with SFM

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OPTION
TFM = Standard **TFML** = Locking (Lead style -01 only)		05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)	Specify LEAD STYLE from chart	**-L** = 10µ" (0,25µm) Gold on post, Matte Tin on tail **-S** = 30µ" (0,76µm) Gold on post, Matte Tin on tail	**-S** = Single Row (TFM only) **-D** = Double Row	**-RA** = Right Angle (Style -01 only) **-RE1** = Right Angle Elevated for (1,58mm) .062" PCB (Requires -WT) (TFM lead style -01, -D and 5, 10, 15, 20, 25, 30 positions only) **-RE2** = Right Angle Elevated for (2,36mm) .093" PCB (Requires -WT) (TFM lead style -01, -D and 5, 10, 15, 20, 25, 30 positions only) **-A** = Alignment Pin (N/A with -RA or -LC) **-LC** = Locking Clip (N/A with -RA or -A) **-WT** = Weld Tabs lead style -01 and 05, 10, 15, 20, 25, 30 positions only. (N/A with -A, -LC, -RA or TFML Series) Mates to SFSS/SFSD -SR & -DR option



LEAD STYLE	A	B
-01	(5,59) .220	(1,97) .078
-03*	(5,59) .220	(2,77) .109
-11*	(7,37) .290	(1,97) .078
-13*	(7,37) .290	(2,77) .109
-21*	(9,14) .360	(1,97) .078
-31*	(11,05).435	(1,97) .078

* N/A WITH 07 OR -S

Note: Other Gold plating options available. Contact Samtec.

Note:
Some sizes, styles and options are non-standard, non-returnable.

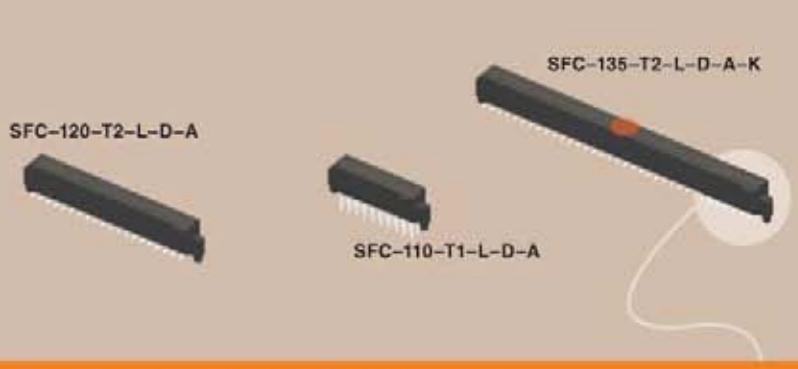
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

TIGER EYE™ SYSTEM

(1,27mm) .050"

SFC SERIES



COST SAVING RELIABLE SOCKET

SPECIFICATIONS

Mates with: TFC

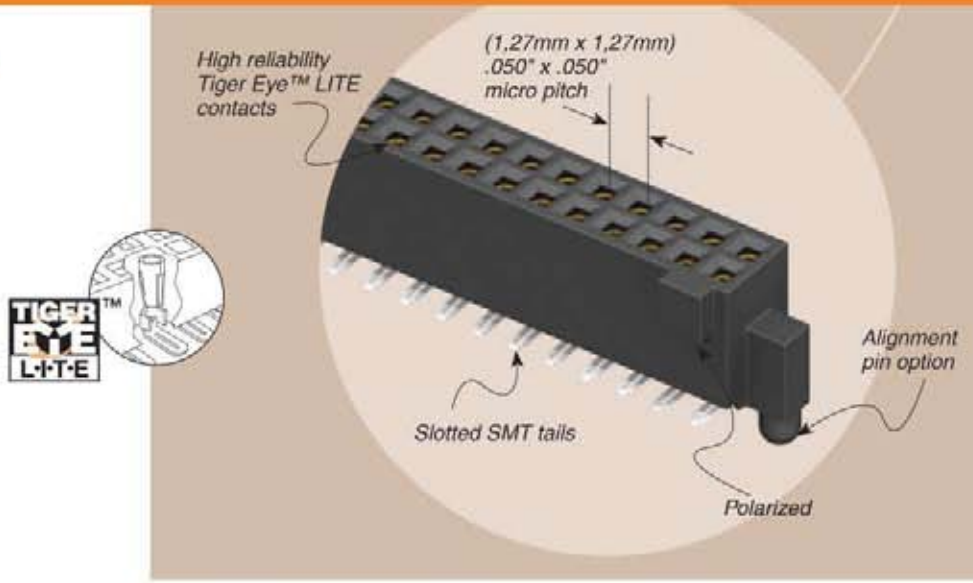
For complete specifications and recommended PCB layouts see www.samtec.com?SFC

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
2A @ 80°C ambient
Voltage Rating:
350 VAC mated with TFC
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
15 mΩ max
Insertion Depth:
(3,05mm) .120" to (4,06mm) .160"
Insertion Force:
(Single contact only) 2.5oz (0,69N) avg.
Withdrawal Force:
(Single contact only) 2.0oz (0,56N) avg.
Max Cycles:
10,000 with 30µ" (0,76µm) Au
RoHS Compliant:
Yes

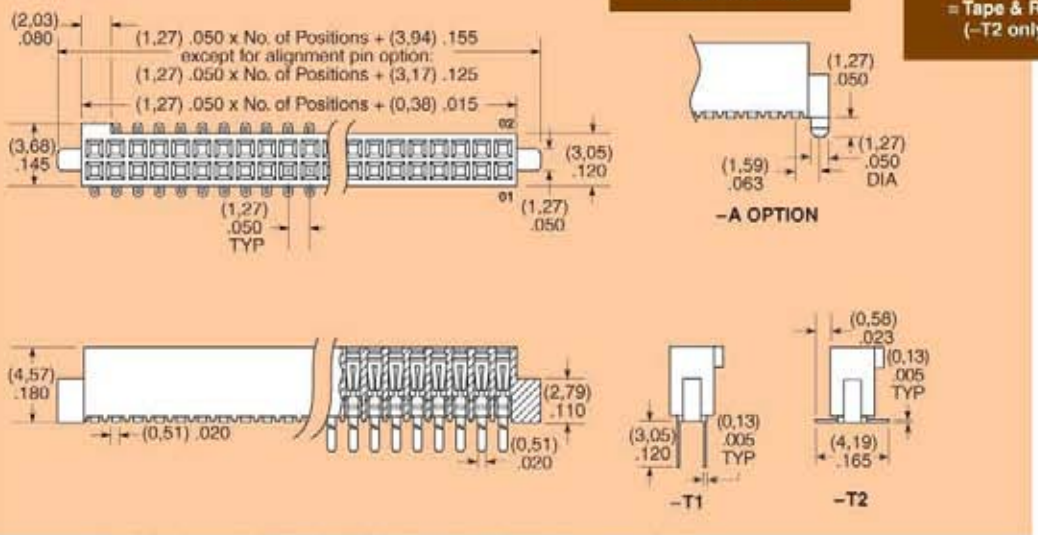
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (10-25)
(0,15mm) .006" max (30-50)

Note: Some sizes, styles and options are non-standard, non-returnable.



SFC	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	D	–	OPTION
			10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)		–T1 = Through-hole Tiger Eye™ LITE –T2 = Surface Mount Tiger Eye™ LITE		–F = Gold flash on contact, Matte Tin on tail –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail				–A = Alignment Pin –K = (4,00mm) .157" DIA Polyimide film Pick & Place Pad –TR = Tape & Reel (–T2 only)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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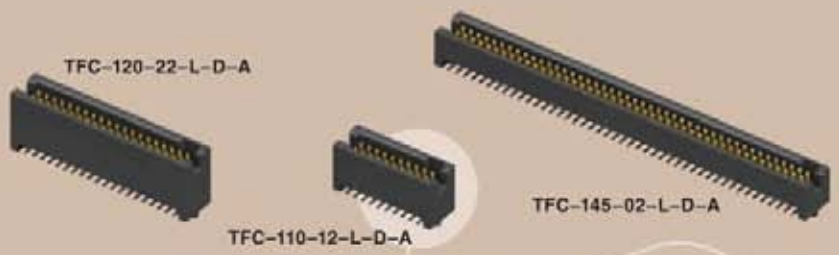
TIGER EYE™ SYSTEM

(1,27mm) .050"

TFC SERIES



COST SAVING RELIABLE HEADER

SPECIFICATIONS

Mates with:
SFC, SFSD, SFSDT

For complete specifications and recommended PCB layouts see www.samtec.com?TFC

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating:
350 VAC mated with SFC
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	SFSD/TFC
20°C	3.7A
40°C	3.4A
60°C	2.9A
95°C	1.9A
6 POSITIONS (2x3) POWERED	

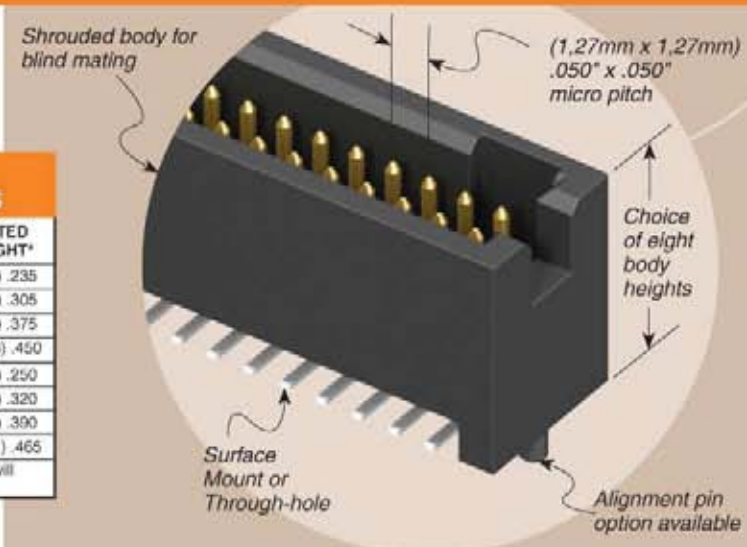
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (10-25)
(0,15mm) .006" max (30-50)

MATED HEIGHTS

LEAD STYLE		MATED HEIGHT*
TFC	SFC	
–01	–T1	(5,97) .235
–11		(7,75) .305
–21		(9,53) .375
–31		(11,43) .450
–02	–T2	(6,35) .250
–12		(8,13) .320
–22		(9,91) .390
–32		(11,81) .465

*Processing conditions will affect mated height.



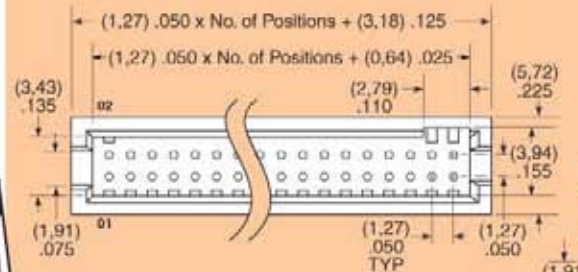
TFC	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	D	–	OPTION

10, 15, 20, 25, 30, 35, 40, 45, 50
(Call Samtec for other sizes)

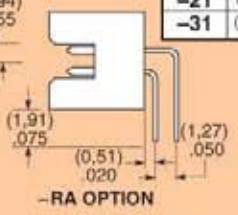
–X1 = Through-hole
–X2 = Surface Mount

–F = Gold flash on post, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

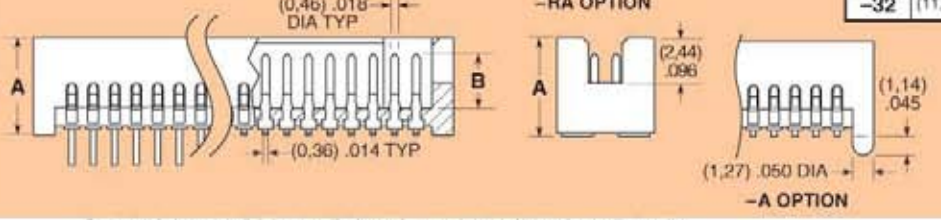
–RA = Right Angle (–01 only)
–A = Alignment Pin
–K = (6,75mm) .266" DIA Polyimide film Pick & Place Pad
–TR = Tape & Reel (–X2 only)



TH LEAD STYLE	A	B
–01	(5,59) .220	(3,38) .133
–11	(7,37) .290	
–21	(9,14) .360	(3,30) .130
–31	(11,05) .435	



SMT LEAD STYLE	A	B
–02	(5,72) .225	(3,38) .133
–12	(7,49) .295	
–22	(9,27) .365	(3,30) .130
–32	(11,18) .440	



TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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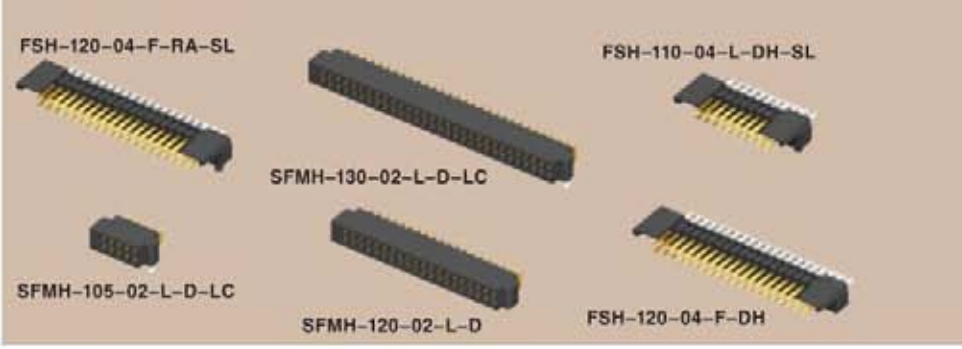
TIGER EYE SYSTEM™

(1,27mm) .050"

FSH, SFMH SERIES



HIGH RELIABLE HORIZONTAL SMT

Mates with:
SFMH

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FSH

Insulator Material: Black Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 1.75A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,15mm) .006" max

Note: Some sizes, styles and options are non-standard, non-returnable.

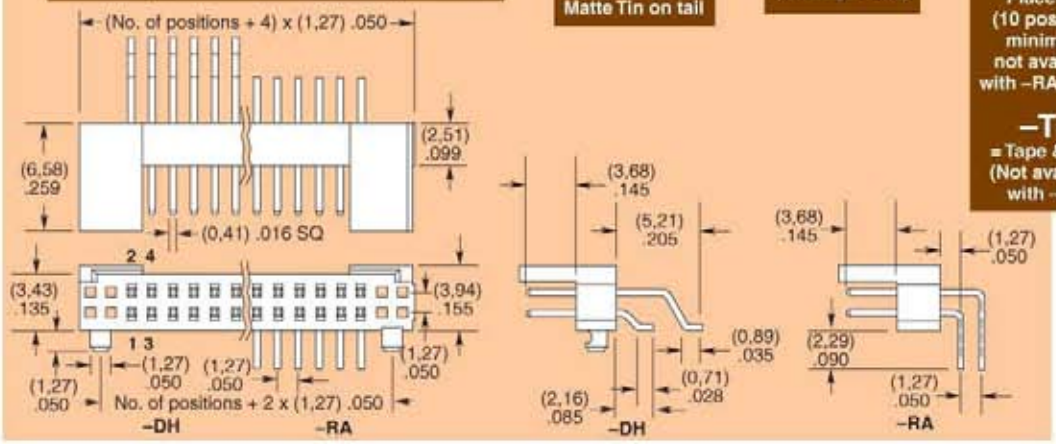
FSH – 1 – NO. PINS PER ROW – 04 – PLATING OPTION – ROW OPTION – OPTIONS

NO. PINS PER ROW:
05, 10, 15, 20, 25
(–DH Option)
05, 10, 15, 20, 25, 30, 35, 40, 45
(–RA Option)
(Call Samtec for other sizes.)

PLATING OPTION:
–F = Gold flash on post, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

ROW OPTION:
–DH = Double Row Horizontal (Surface Mount)
–RA = Right Angle (Through-Hole)

OPTIONS:
–SL = Solder Locks
–C = (4,50mm) .177" DIA Polyimide film Pick & Place Pad (10 positions minimum) not available with –RA option
–TR = Tape & Reel (Not available with –RA)



SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SFMH

Insulator Material: Black, LCP
Contact Material: Phosphor Bronze
Plating: Au over 50µ" (1,27µm) Ni
Current Rating: 2A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Contact Resistance: 15 mΩ max
Insertion Depth: (3,35mm) .132" to (4,57mm) .180"
Insertion Force: 2.5oz (0,69N) average
Withdrawal Force: 2.0oz (0,56N) average
RoHS Compliant: Yes
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

TIGER EYE L·I·T·E™

APPLICATIONS

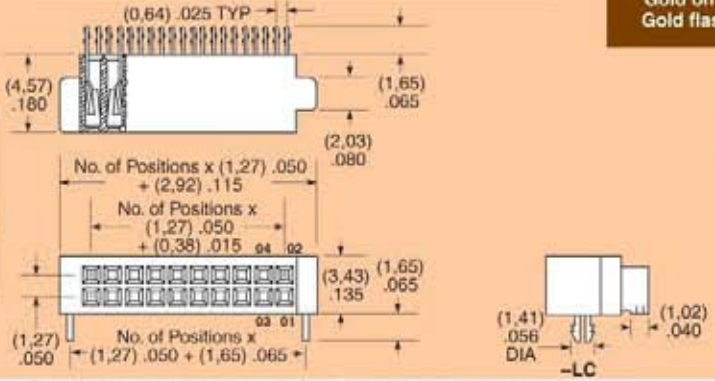
SFMH – 1 – NO. PINS PER ROW – 02 – PLATING OPTION – D – OPTION

Mates with:
FTSH, FSH

NO. PINS PER ROW:
05, 10, 15, 20, 25, 30, 35, 40, 45, 50

PLATING OPTION:
–L = 10µ" (0,25µm) Gold on contact, Gold flash on tail

OPTION:
–LC = Locking Clip
–TR = Tape & Reel



APPLICATION SPECIFIC OPTION

Weld tab capability for rugged applications. Call Samtec for ASP-112133-01 drawing.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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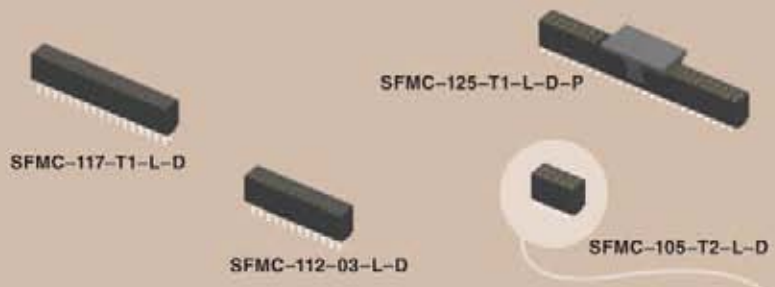
TIGER EYE™ SYSTEM

(1,27mm) .050"

SFMC SERIES



FLEXIBLE PIN COUNT TIGER EYE™ SOCKETS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SFMC

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
Tiger Eye™ = BeCu
Tiger Eye™ LITE= Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
2A @ 80°C ambient

Operating Temp Range:
-55°C to +125°C

Contact Resistance:
15 mΩ max

Insertion Depth:
(3,05mm) .120" to (4,06mm) .160"

Insertion Force:
(Single contact only)
Standard= 2.5oz (0,69N) avg.
LITE= 2.0oz (0,56N) avg.
LIF= 1.5oz (0,42N) avg.

Normal Force:
Standard= 132g (1,29N) avg.
LIF= 90g (0,88N) avg.

Withdrawal Force:
(Single contact only)
Standard= 2.0oz (0,56N) avg.
LITE= 1.5oz (0,42N) avg.
LIF= 1.5oz (0,42N) avg.

Max Cycles:
10,000 with 30µ" (0,76µm) Au

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

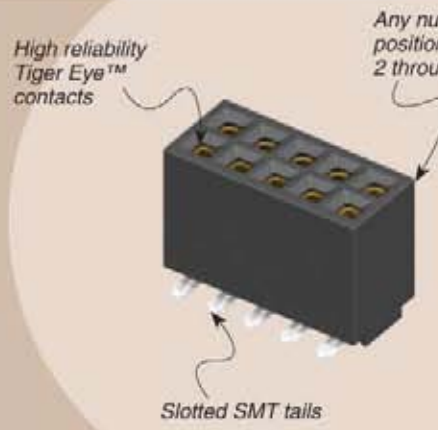
Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max (02-26)
(0,15mm) .006" max (27-50)

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
TFM, FTSH(LIF), FW(LIF), TFMDL, FMTP, FFMD



Available with optional Pick & Place Pads

SFMC	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	D	–	OPTION

NO. PINS PER ROW: 02 thru 50

LEAD STYLE:

–01, –03
= Through-hole

–L1, –L3
= Low Insertion Force Through-hole

–02
= Surface Mount

–L2
= Low Insertion Force Surface Mount

–T1
= Through-hole Tiger Eye™ LITE

–T2
= Surface Mount Tiger Eye™ LITE

PLATING OPTION:

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

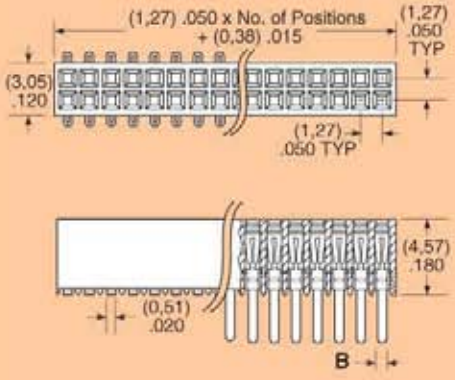
OPTION:

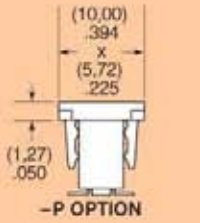
–K
= (4,00mm) .157 DIA Polyimide film Pick & Place Pad (4 positions minimum)

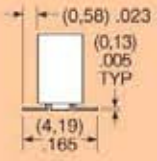
–P
= Plastic Pick & Place Pad (5 positions minimum)

–TR
= Tape & Reel

LEAD STYLE	A	B
–01, –L1, –T1	(3,05) .120	(0,51) .020
–03, –L3	(1,91) .075	(0,41) .016







Due to technical progress, all designs, specifications and components are subject to change without notice.

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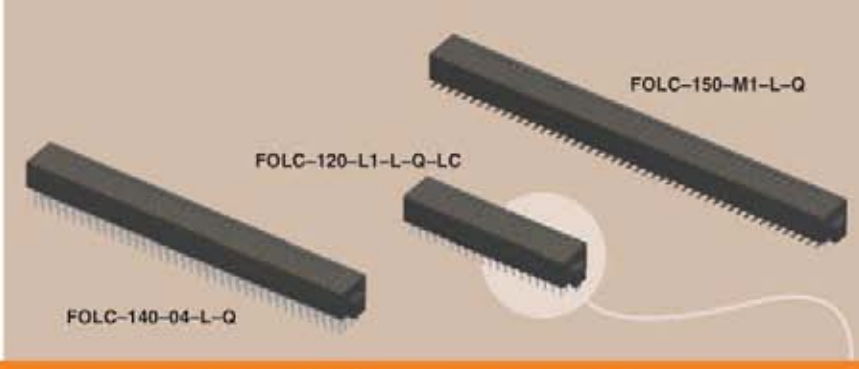
FOURRAY™

(1,27mm) .050"
FOLC SERIES



HIGH DENSITY TIGER EYE™ SOCKETS

SPECIFICATIONS

Mates with:
MOLC

For complete specifications and recommended PCB layouts see www.samtec.com?FOLC

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Current Rating:
1A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Contact Resistance:
15 mΩ max
Insertion Depth:
(3,30mm) .130" to
(4,06mm) .160"
Insertion Force:
(Single contact only)
Standard= 5.0oz (1,39N) avg.
LIF= 2.0oz (0,56N) avg.
Normal Force:
Standard= 70 grams
(0,69N) avg. LIF= 40 grams
(0,39N) avg.
Withdrawal Force:
(Single contact only)
Standard= 4oz (1,11N) avg.
LIF= 1.5oz (0,42N) avg.
Max Cycles:
100 with 30µ" (0,76µm) Au
RoHS Compliant:
Yes

Processing:

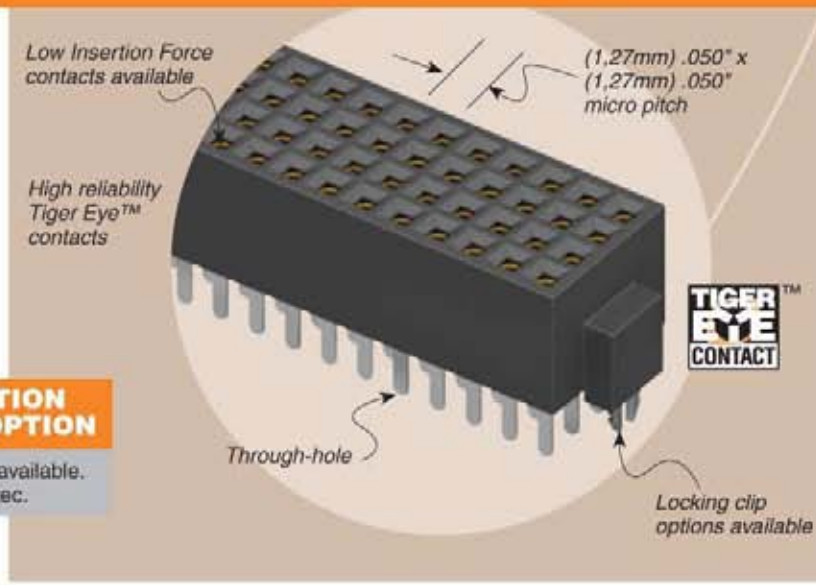
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max

ALSO AVAILABLE

- For surface mount with Tiger Eye™ contact, see www.samtec.com?ROLC
- Also see TOLC/SOLC Series for surface mount design with Tiger Buy contacts.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.



APPLICATION SPECIFIC OPTION

Alignment pins available. Call Samtec.

FOLC	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	Q	–	OPTION

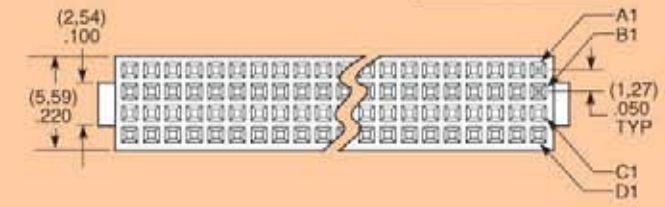
NO. PINS PER ROW: 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

LEAD STYLE:
- –01 & –04 = Through-Hole
- –M1 & –M2 = Mixed Technology
- –L1 & –L4 = Low Insertion Force Through-Hole

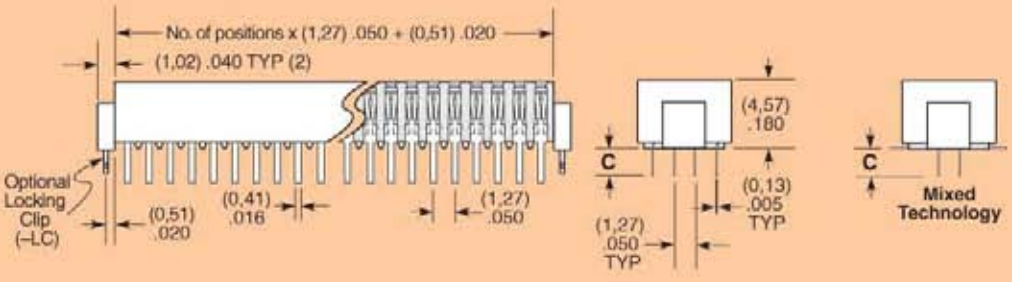
PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

Q

OPTION: –LC = Locking Clip



LEAD STYLE	C
–01, –M1	(1,91) .075
–04, –M2	(3,04) .120

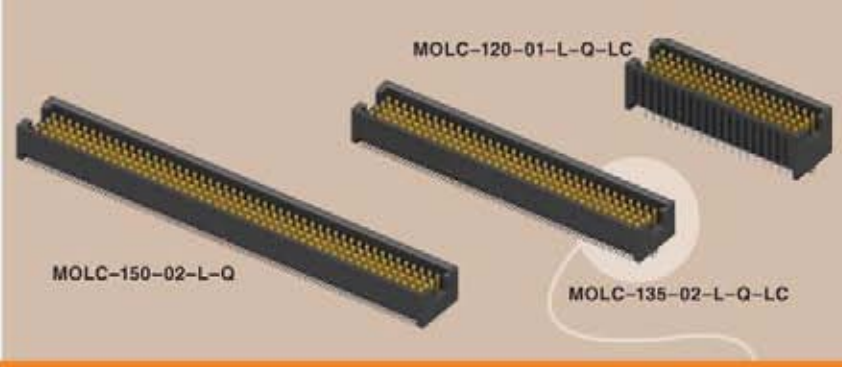


Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

FOURRAY

(1,27mm) .050"
MOLC SERIES



HIGH DENSITY HIGH REL HEADERS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MOLC

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

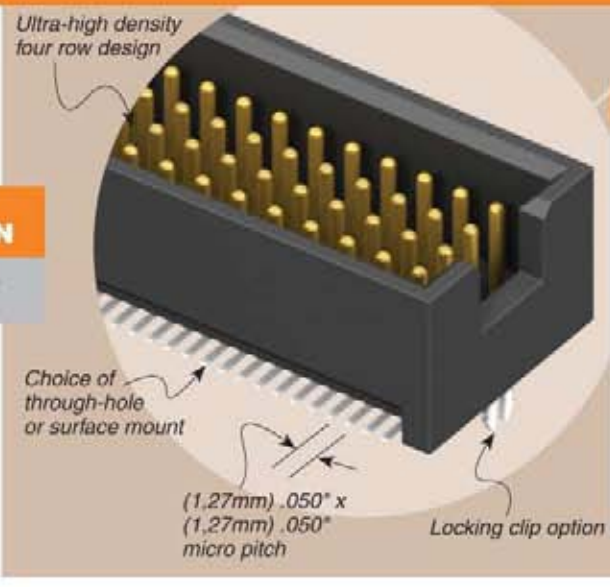
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (20-25)
(0,15mm) .006" max (30-50)

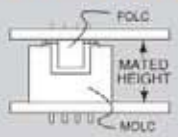
Mates with:
FOLC

APPLICATION SPECIFIC OPTION

Alignment pins available. Call Samtec.



APPLICATIONS



LEAD STYLE		MATED HEIGHT*
MOLC	FOLC	
-01	-01	(5,97) .235
-11		(7,75) .305
-31		(11,43) .450
-02	-02	(6,00) .235

*Processing conditions will affect mated height.

ALSO AVAILABLE

- For surface mount with Tiger Eye™ contact, see www.samtec.com?ROLC
- Also see TOLC/SOLC Series for surface mount design with Tiger Buy contacts.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

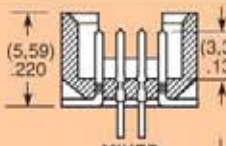
MOLC – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – Q – OPTION

NO. PINS PER ROW: 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

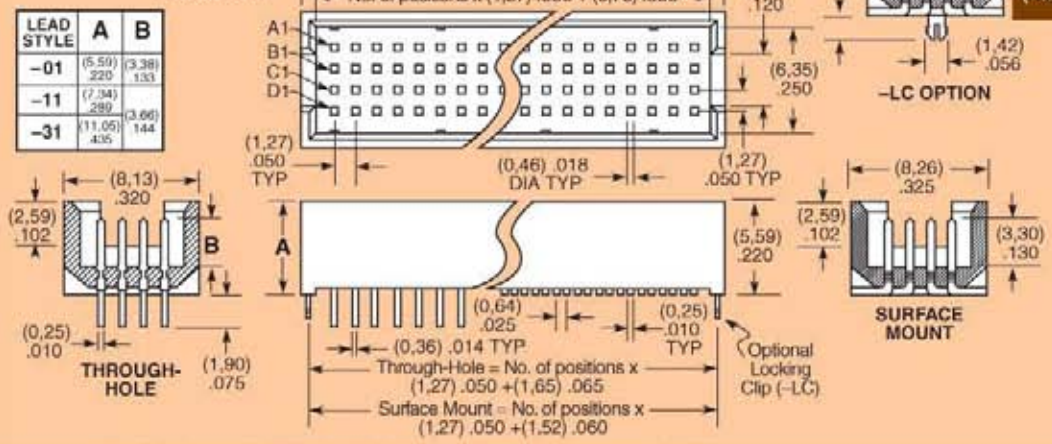
LEAD STYLE:
- –'X'1 = Through- hole (Specify from chart)
- –02 = Surface Mount
- –M1 = Mixed Technology

PLATING OPTION:
- –L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

OPTION:
- –LC = Locking Clip
- –P = Pick & Place Pad (–02 only)
- –TR = Tape & Reel (–02 only)



LEAD STYLE	A	B
-01	(5,59) .220	(3,38) .133
-11	(7,34) .289	(3,66) .144
-31	(11,05) .435	



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SAMTEC GERMANY • Tel: +49 (0) 89 / 89460 0 SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6893337 SAMTEC NORDIC/BALTIC • Tel: +46 84477280 SAMTEC BENELUX • Tel: 44 01236 739282
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SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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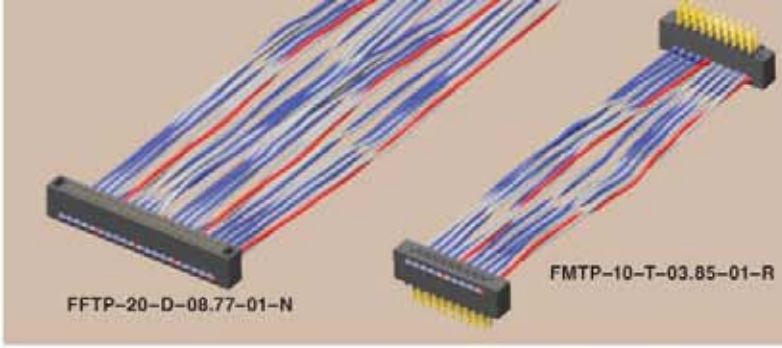
TIGER™ IDC

(1,27mm) .050"

FFTP, FMTP SERIES



TIGER EYE™ TWISTED PAIR IDC CABLES

Mates with:
FTS, FTSH, EHF, SHF

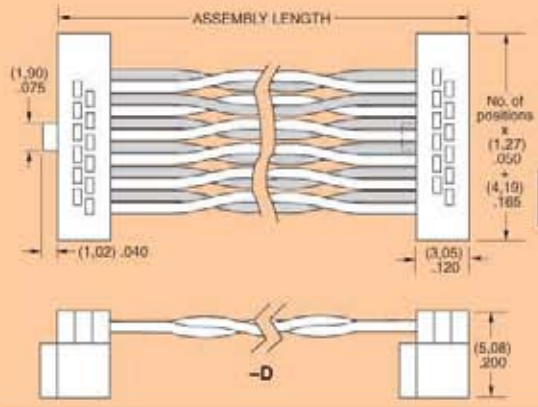
SPECIFICATIONS

For complete specifications see www.samtec.com?FFTP

Insulator Material: PBT
Contact: BeCu
Plating: 10µ" (0,25µm) Au over 50µ" (1,27µm) Ni on contact area; Sn over 50µ" (1,27µm) Ni on balance
Wire: 30 AWG 7/40, Tinned, Twisted Pair with PVC insulator
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
Lead Size Accepted: (0,41mm) .016" SQ
Contact Resistance: 10 mΩ maximum
Insertion Depth: (2,64mm) .104" to (3,17mm) .125"
Insertion Force: (Single contact only) 5oz (1,39N) avg.
Withdrawal Force: (Single contact only) 3oz (0,83N) avg.
RoHS Compliant: Yes

Note: This Series is non-standard, non-returnable.

FFTP	PINS PER ROW	END ASSEMBLY	ASSEMBLY LENGTH	01	N	OPTION
	–05, –08 –10, –13, –17, –20, –25 (Call for other sizes)	–D = Double End	–03.85 = (97,79mm) 3.85" –08.77 = (222,76mm) 8.77" –18.00 = (457,20mm) 18.00" Other sizes and lengths available. Contact Samtec.		–N = Notch Polarization (Standard)	–R = Reverse Connector



FFTP	
Cable Length	Rated @ -3dB Insertion Loss
	–SE
3.85" (97,8mm)	810 MHz / 1.62 Gbps

Performance data for other cable lengths and complete test data available at www.samtec.com?FFTP or contact sig@samtec.com

Mates with:
FLE*, SFMC*

SPECIFICATIONS

For complete specifications see www.samtec.com?FMTP

Insulator Material: PBT
Terminal: BeCu
Plating: Sn over 50µ" (1,27µm) Ni
Wire: 30 AWG 7/40, Tinned, Twisted Pair with PVC insulator
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
RoHS Compliant: Yes

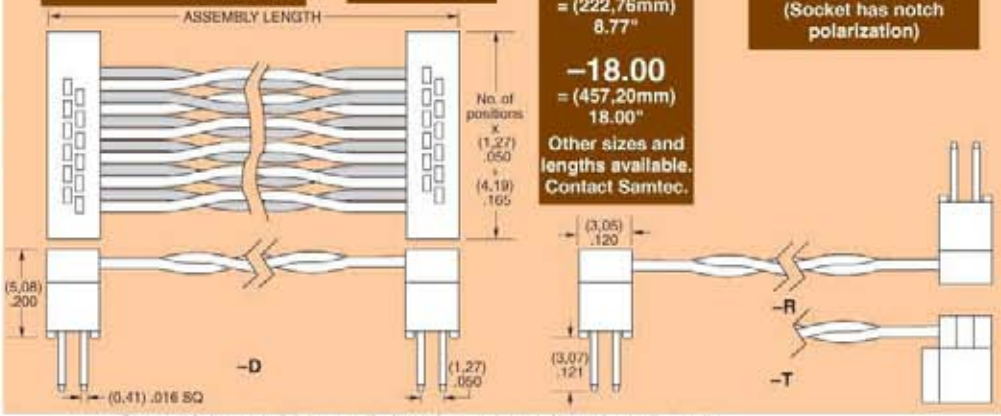
APPLICATION SPECIFIC OPTION

Other cable lengths available.
Call Samtec.

***Note:** Standard FMTP callout will not mate with FLE, SFMC. Must use gold plated callouts. See drawing on web.

Note: This Series is non-standard, non-returnable.

FMTP	PINS PER ROW	END ASSEMBLY	ASSEMBLY LENGTH	01	TRANSFER OPTION	OPTION
	–05, –08, –10, –13, –17, –20, –25 (Call for other sizes)	–D = Double End –T = Transfer End	–03.85 = (97,79mm) 3.85" –08.77 = (222,76mm) 8.77" –18.00 = (457,20mm) 18.00" Other sizes and lengths available. Contact Samtec.		Leave blank for –D End Assembly. For –T End Assembly Specify "–N" (Socket has notch polarization)	–R = Reverse Connector



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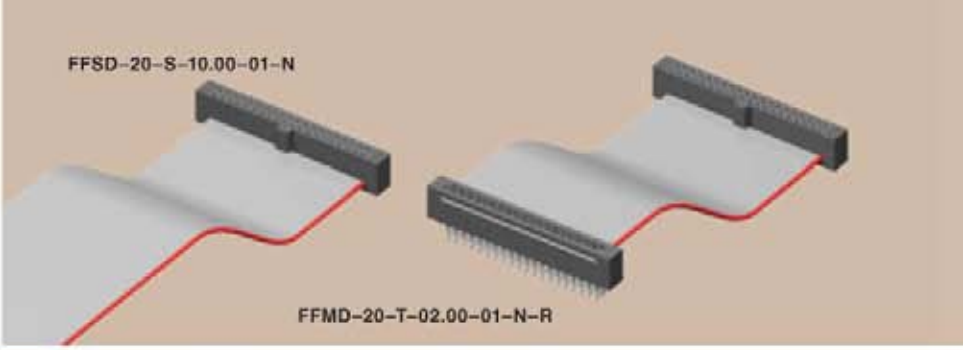
TIGER IDC™

(1,27mm) .050"

FFSD, FFMD SERIES



TIGER EYE™ FLAT IDC WIRE CABLES

SPECIFICATIONS

FFSD Mates with:
FTS, FTSH, EHF, SHF, ESHF

For complete specifications see www.samtec.com?FFSD

FFSD

Insulator Material: PBT
Contact: BeCu
Plating: 10µ" (0,25µm) Au over 50µ" (1,27µm) Ni on contact area; Sn over 50µ' (1,27µm) Ni on balance
Wire: 30 AWG
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
Lead Size Accepted: (0,41mm) .016" SQ
Contact Resistance: 10 mΩ maximum
Insertion Depth: (2,64mm) .104" to (3,17mm) .125"
Insertion Force: (Single contact only) 5oz (1,39N) avg.
Withdrawal Force: (Single contact only) 3oz (0,83N) avg.
RoHS Compliant: Yes

Note: This Series is non-standard, non-returnable.

SPECIFICATIONS

Mates with:
FLE*, SFMC*

For complete specifications see www.samtec.com?FFMD

FFMD

Insulator Material: Black Glass Filled Polyester
Terminal: BeCu
Plating: Sn over 50µ" (1,27µm) Ni
Wire: 30 AWG
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
RoHS Compliant: Yes

***Note:** Standard FFMD callout will not mate with FLE, SFMC. Must use gold plated callouts. See drawing on web.

Note: This Series is non-standard, non-returnable.

TYPE STRIP – NO. PINS PER ROW – END OPTION – OVERALL LENGTH – 01 – OPTION – OTHER OPTION

NO. PINS PER ROW: –05, –08, –10, –13, –17, –20, –25 (Call for other sizes)

OVERALL LENGTH: –"XX.XX" = Assembled Length

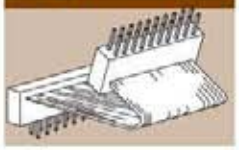
OPTION: –N = Notch Polarization (FFSD only)

OTHER OPTION: Leave blank for –S and –D End Options. For –T End Option Specify "–N" (Socket has notch polarization) (FFMD only)

END OPTION:

–S = Single End

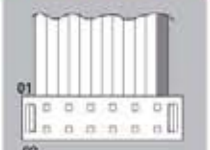
–D = Double End



–T = Transfer End (FFMD only)

OTHER OPTION:

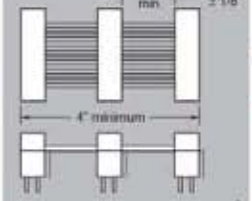
–RW = Reverse Wiring



Blue or black wire opposite position #1.

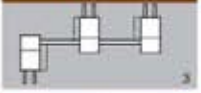
1

–D "XX" = Daisy Chain



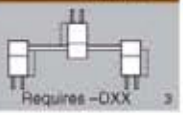
2

–R = Reverse



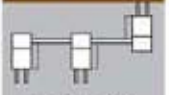
3

–M = Middle Reverse



Requires –DXX 3

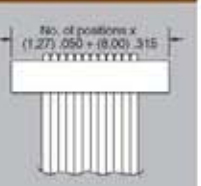
–O = Outside Reverse



Requires –DXX 3

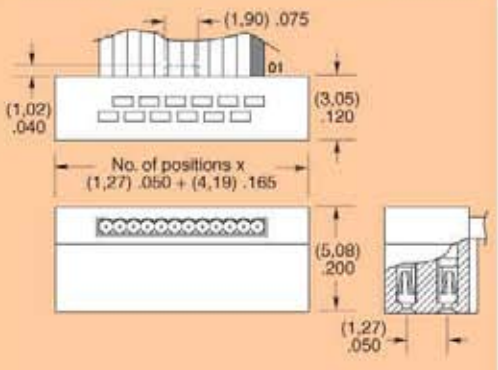
RUGGEDIZED by SAMTEC

–SR = Strain Relief

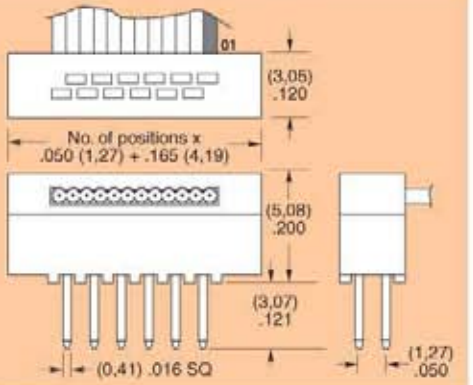


Not available with –S, –O, –M, –R or –DXX

FFSD = Socket Strip



FFMD = Terminal Strip



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TIGER EYE™ DISCRETE

(1,27mm) .050"

SFSS, SFST, SFSD, SFSDT SERIES

TIGER EYE™ DISCRETE WIRE CABLES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFSS, www.samtec.com?SFSD, www.samtec.com?SFSDT or www.samtec.com?SFSST

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +80°C (PVC)
-55°C to +125°C (*Teflon®)
Voltage Rating:
275 VAC (PVC)
235 VAC (*Teflon®)
Wire: 28 or 30 AWG
RoHS Compliant:
Yes

Mates with:
TFM, TFC
(–SR & –DR requires –WT option)

CURRENT RATING	
AMBIENT TEMP	SFSD/TFC
20°C	3.7A
40°C	3.4A
60°C	2.9A
95°C	1.9A
6 POSITIONS (2x3) 28 AWG POWERED	

–SR/–DR APPLICATIONS

When Mated to TFM-WT

Terminal/Housing Retention	
Min	(22,25N) 5.0 lb
Max	(26,52N) 5.96 lb
Avg	(24,34N) 5.47 lb

Wire/Crimp Retention	
Min	(20,47N) 4.6 lb
Max	(36,49N) 8.2 lb
Avg	(29,95N) 6.73 lb

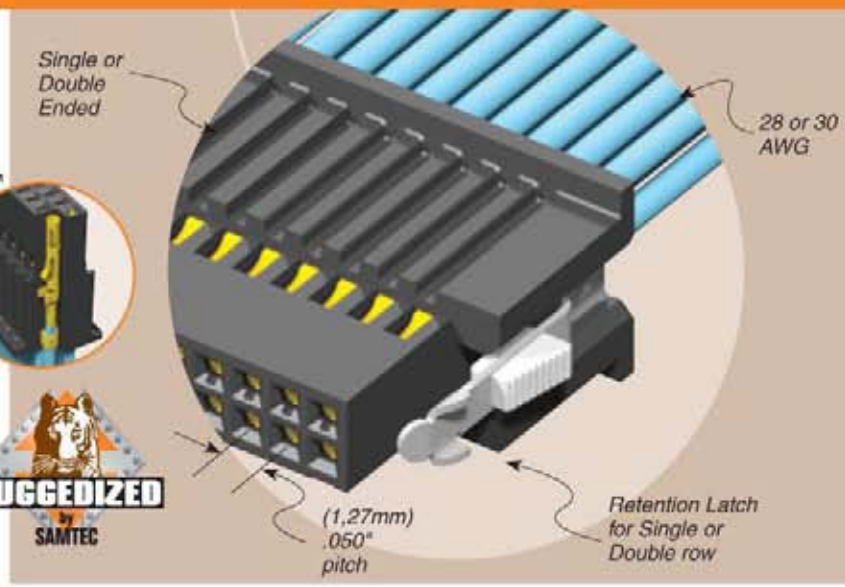
APPLICATION SPECIFIC OPTION

- Locking feature available for mating to the TFML Series
- Color coded cable available (*Teflon® N/A)
- Other plating options available

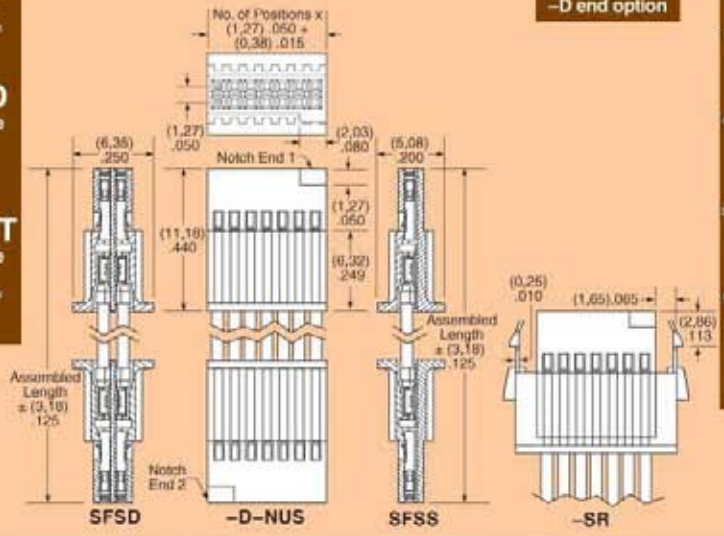
Call Samtec.

*Teflon® is a trademark of Dupont.

Note: Some lengths, styles and options are non-standard, non-returnable.



TYPE STRIP	POSITIONS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
SFSS = Single Row PVC Cable	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–30 = 30 AWG –28 = 28 AWG	–G = 10µ" (0,25µm) Gold on contact, Gold Flash on balance	–"XX.XX" = Assembled Length in Inches (76,20mm) 03.00" min. for –S end option (82,60mm) 03.25" min. for –D end option	–S = Single Ended –D = Double Ended (End No. 2 notch options required) –SR = Single Ended with Retention Latch (TFM –WT option required for mating) –DR = Double Ended with Retention Latch (TFM –WT option required for mating) (End No. 2 notch options required)	Requires –D or –DR (End No. 1 Notch Up). –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed (SFSD/ SFSDT only) –NDX = Notch down, crossed (SFSD/ SFSDT only)
SFSST = Single Row *Teflon® Cable						
SFSD = Double Row PVC Cable						
SFSDT = Double Row *Teflon® Cable						



Due to technical progress, all designs, specifications and components are subject to change without notice.

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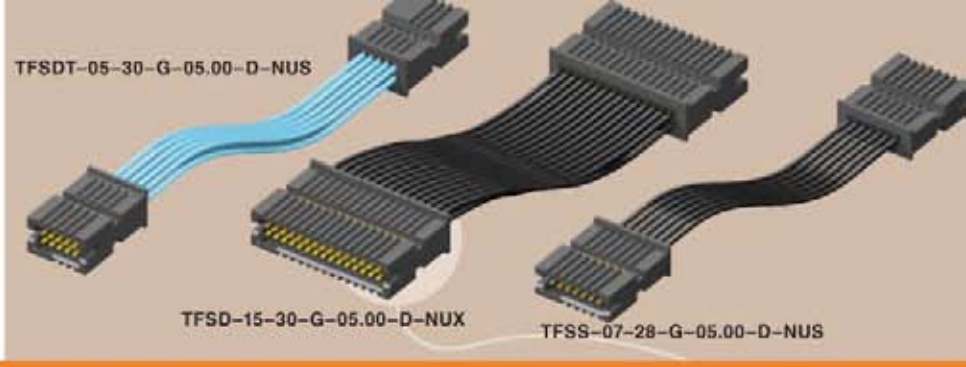
TIGER EYE™ DISCRETE

(1,27mm) .050"

TFSS, TFSST, TFSD, TFSDT SERIES



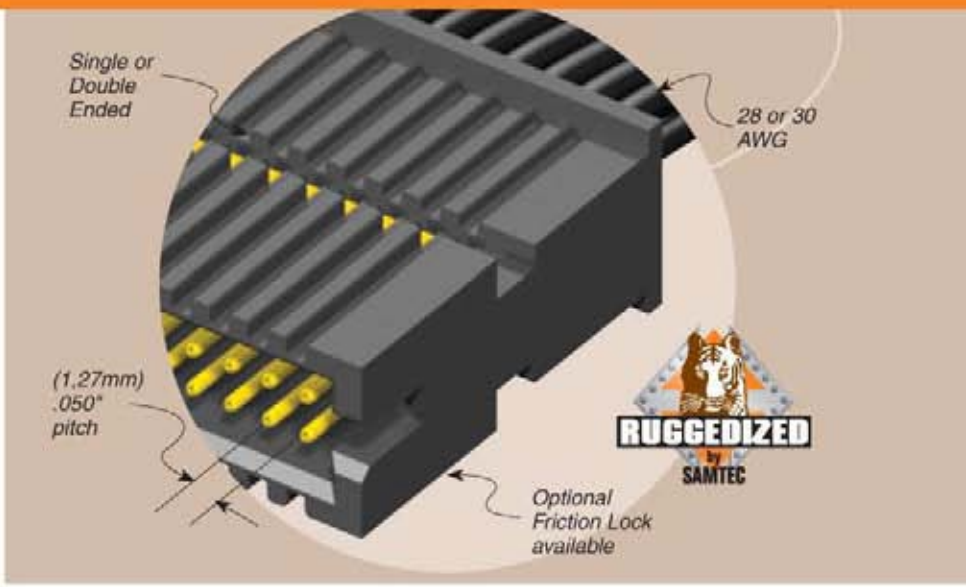
TIGER EYE™ DISCRETE WIRE CABLES

SPECIFICATIONS

Mates with:
SFM, SFC

For complete specifications see www.samtec.com?TFSS www.samtec.com?TFSD, www.samtec.com?TFSDT, or www.samtec.com?TFSST

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +80°C (PVC)
-55°C to +125°C (*Teflon®)
Wire:
28 or 30 AWG
RoHS Compliant: Yes

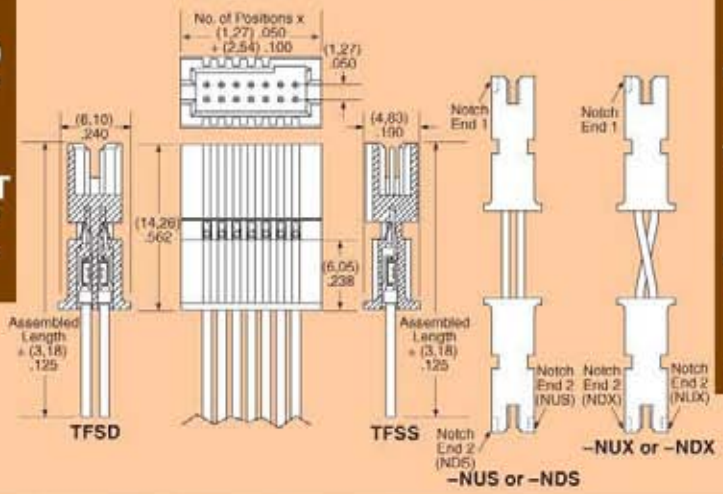


APPLICATION SPECIFIC OPTION

- Color coded cable available (*Teflon® N/A)
- Other plating options available

Call Samtec.

TYPE STRIP	POSITIONS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
TFSS = Single Row PVC Cable **TFSST** = Single Row *Teflon® Cable **TFSD** = Double Row PVC Cable **TFSDT** = Double Row *Teflon® Cable	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–30 = 30 AWG –28 = 28 AWG	–G = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Assembled Length in Inches (76,20mm) 03.00" min. for –S end option (82,60mm) 03.25" min. for –D end option	–S = Single Ended –SL* = Single Ended with Friction Lock –D = Double Ended –DL* = Double Ended with Friction Lock –T = Transferred End Terminal on End 1 Socket on End 2 –TL* = Transferred End with Friction Lock *–10, –15, –25, –30 positions only. Call Samtec for other sizes TFSD, TFSDT only	Requires –D, –DL, –T or –TL (End No. 1 Notch Up). –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed (TFSD/TFSDT only) –NDX = Notch down, crossed (TFSD/TFSDT only)



*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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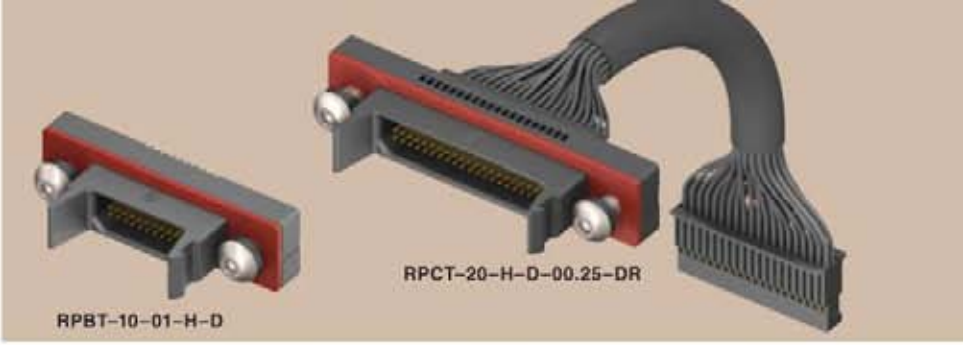
ACCLIMATE

(1,27mm) .050"

RPBT, RPCT SERIES



IP68 TIGER EYE™ SEALED PANEL MOUNT

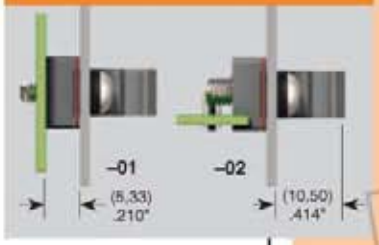
Mates with:
RCT

SPECIFICATIONS

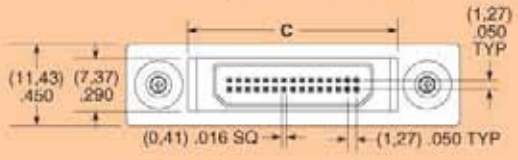
For complete specifications see www.samtec.com?RPBT

Insulator Material:
Black Liquid Crystal Polymer
Terminal:
Phosphor Bronze
Seal: Silicone
Nut: Steel
Lock Washer:
Steel

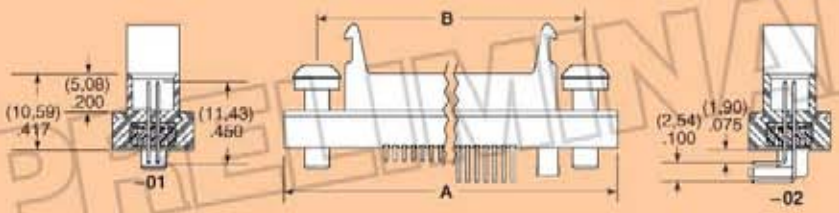
APPLICATION



RPBT	–	NO. OF POSITIONS	–	LEAD STYLE	–	PLATING	–	ROW
		–10, –15, –20 (Per Row)		–01 = Through-hole –02 = Right Angle		–H = 30µ" (0,76µm) Gold		–D = Double Row



NO. OF POSITIONS	A	B	C
–10	(40,39) 1.590	(31,24) 1.230	(23,11) .910
–15	(46,74) 1.840	(37,59) 1.480	(29,46) 1.160
–20	(53,09) 2.090	(43,94) 1.730	(35,81) 1.410



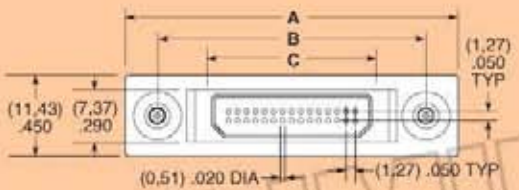
Mates with:
RCT, TFM, TFC, SFM, SFC

SPECIFICATIONS

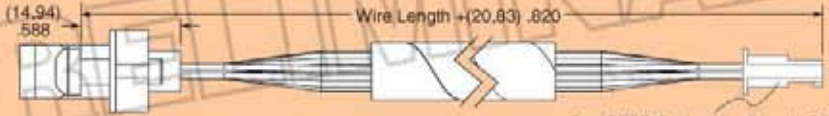
For complete specifications see www.samtec.com?RPCT

Insulator Material:
Black Liquid Crystal Polymer
Terminal:
Phosphor Bronze
Cable Insulator:
PVC
Wire:
Tin Copper
Seal:
Silicone
Nut:
Steel
Latch:
Phosphor Bronze

RPCT	–	NO. OF POSITIONS	–	PLATING	–	D	–	WIRE LENGTH	–	END OPTION
		–10, –15, –20 (Per Row)		–H = 30µ" (0,76µm) Gold				–00.25 = (0.25m) 9.84" –00.50 = (0.50m) 19.69"		–BC = Blunt Cut –D = Double End –DR = Double Latch –TR = Transfer End



NO. OF POSITIONS	A	B	C
–10	(40,39) 1.590	(31,24) 1.230	(15,37) .605
–15	(46,74) 1.840	(37,59) 1.480	(21,72) .855
–20	(53,09) 2.090	(43,94) 1.730	(28,07) 1.105



See SFSD Series for –D and –DR
See TFSD Series for –TR

TIGER EYE™ CONTACT

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739282
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ACCLIMATE

(1,27mm) .050"

RCT SERIES

IP68 TIGER EYE™ SEALED CABLE PLUG

SPECIFICATIONS

For complete specifications see www.samtec.com?RCT

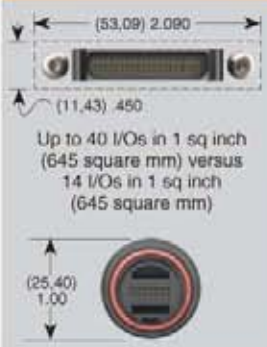
Insulator Material:
Black Liquid Crystal Polymer
Contact:
Phosphor Bronze
Cable:
PVC Jacket/Copper Conductor
Seal:
Silicone
Latch:
Phosphor Bronze/LCP

Mates with:
RPBT, RPCT

TIGER EYE™ CONTACT

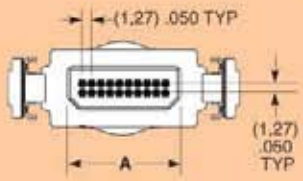
APPLICATION

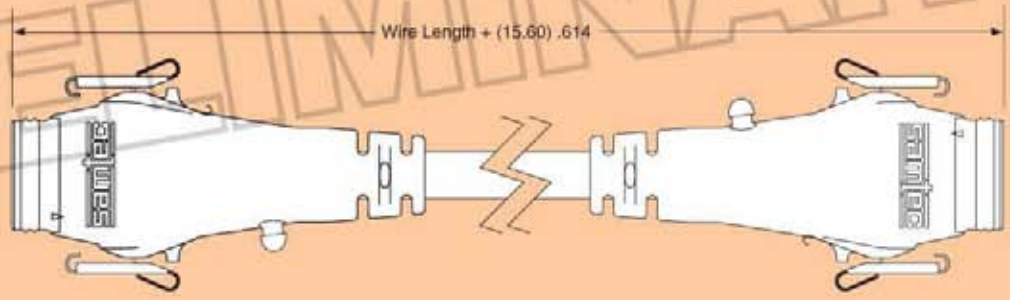
APPLICATION



RCT	– NO. OF POSITIONS	– LEAD STYLE	– PLATING	– D	– WIRE LENGTH	– END OPTION
	–10, –15, –20 (Per Row)	–01 = Mates with RPCT Series –02 = Mates with RPBT Series	–H = 30µ" (0,76µm) Gold		–02.00 = (2m) 78.74" –03.00 = (3m) 118.11" –05.00 = (5m) 196.85"	–D = Double End –BC = Blunt Cut

NO. OF POSITIONS	A
–10	(15,62) .615
–15	(21,97) .865
–20	(28,32) 1.115





PRELIMINARY

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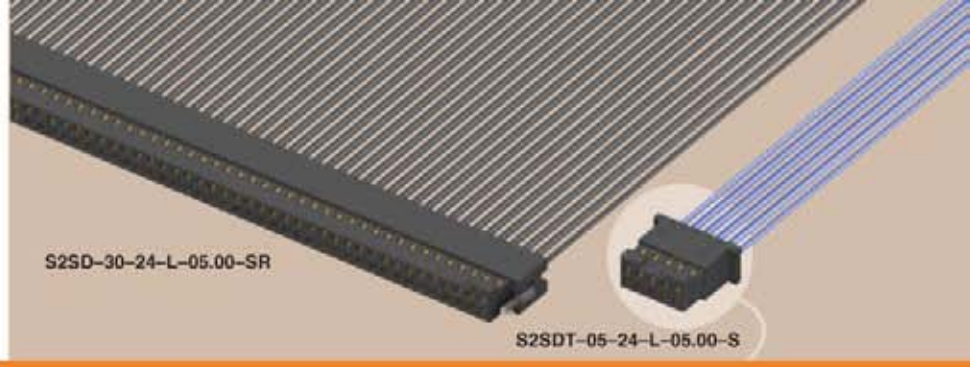
TIGER EYE™ DISCRETE

(2,00mm) .0787"

S2SD, S2SDT SERIES



TIGER EYE™ DISCRETE WIRE SOCKET CABLE

SPECIFICATIONS

For complete specifications see www.samtec.com?S2SD or www.samtec.com?S2SDT

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
Testing Now!
Wire:
24, 26 or 28 AWG
RoHS Compliant:
Yes

Mates with:
T2M

ALSO AVAILABLE

Bodies, contacts and assembly tooling.
Call Samtec.

APPLICATION

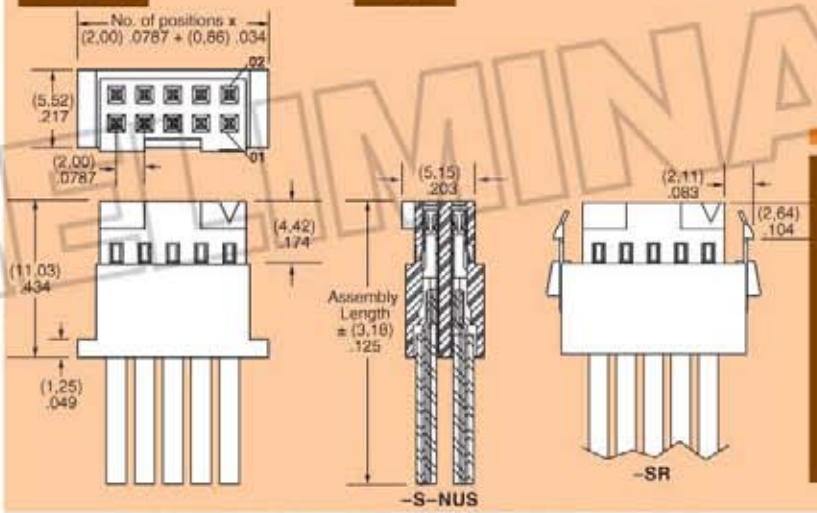
–24C CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	VIOLET
7	GRAY
8	WHITE
9	BLACK
10	BLUE
ETC	REPEAT

*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE	NO. OF POSITIONS	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
S2SD = Double Row PVC Cable **S2SDT** = Double Row *Teflon® Cable (24 Wire Gauge only)	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–24 –24C = Color Coded Cable (S2SD only) –26 –28	–L = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Wire Length in Inches (69,85mm) 02.75" min.	–S = Single End –D = Double End –SR = Single End with Retention Latch –DR = Double End with Retention Latch	(Only available with –D & –DR) –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed –NDX = Notch down, crossed



PRELIMINARY

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TIGER EYE SYSTEM™

(2,00mm) .0787"

T2M SERIES

T2M-105-01-L-D-RA-WT

T2M-105-01-L-D-TH-WT

T2M-105-01-L-D-SM-WT

HIGH RELIABILITY CABLE HEADER

SPECIFICATIONS

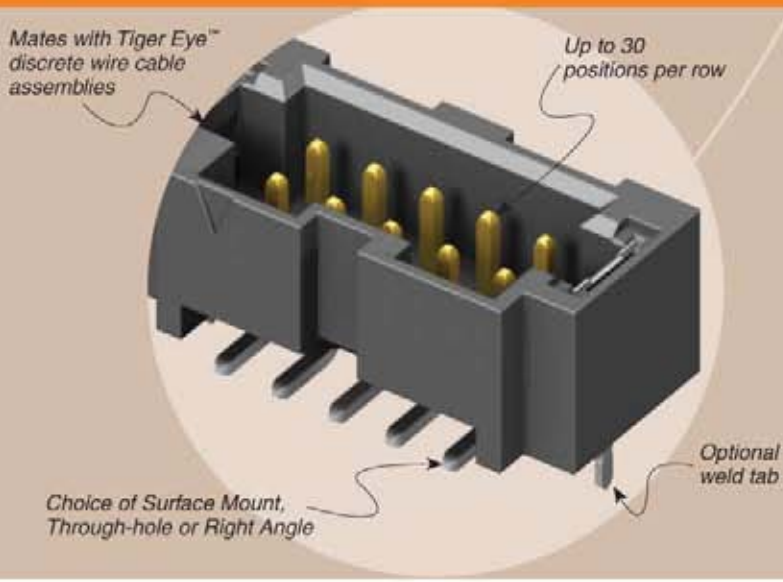
For complete specifications and recommended PCB layouts see www.samtec.com?T2M

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Mates with:
S2SD, S2M



T2M	-	1	NO. OF POSITIONS	-	01	-	PLATING OPTION	-	D	-	OPTION	-	OTHER OPTION

05, 07, 10, 15, 20, 25, 30 (Per Row)

-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

-TH = Through-hole

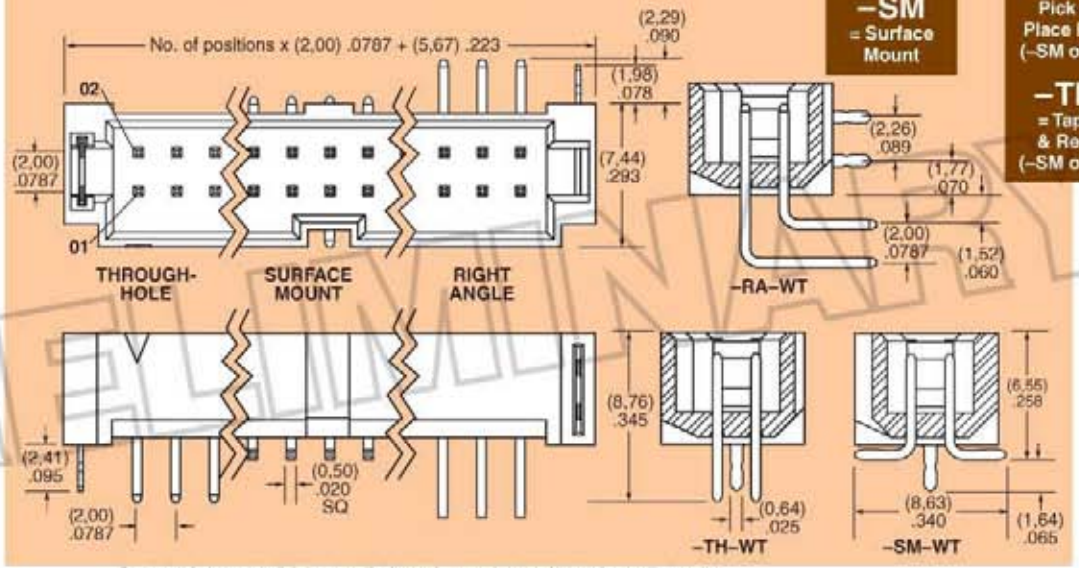
-RA = Right Angle

-SM = Surface Mount

-WT = Weld Tab

-K = (7,50mm) .295" DIA Polyimide film Pick & Place Pad (-SM only)

-TR = Tape & Reel (-SM only)



Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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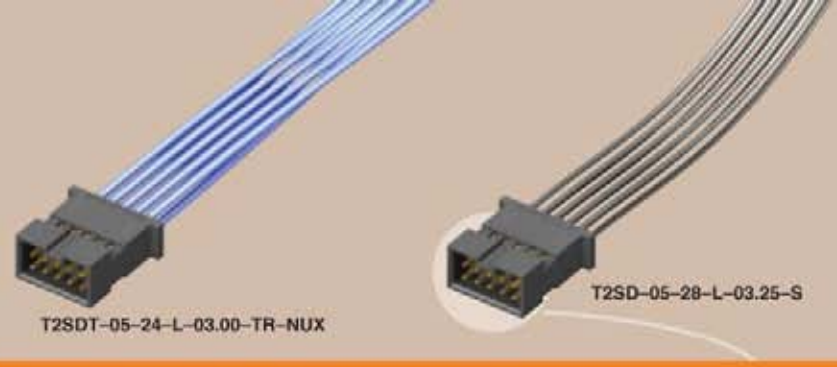
TIGER EYE DISCRETE™

(2,00mm) .0787"

T2SD, T2SDT SERIES



HIGH REL DISCRETE WIRE HEADER CABLE

SPECIFICATIONS

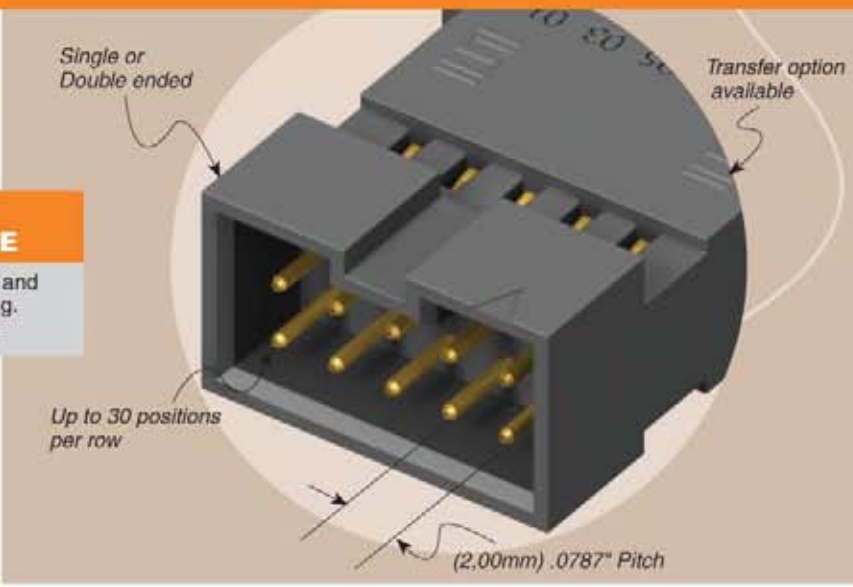
For complete specifications see www.samtec.com?T2SD or www.samtec.com?T2SDT

Insulator Material:
Black LCP
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Wire:
24, 26 or 28 AWG
RoHS Compliant:
Yes

Mates with:
T2M (Requires –T or –TR), S2M

ALSO AVAILABLE

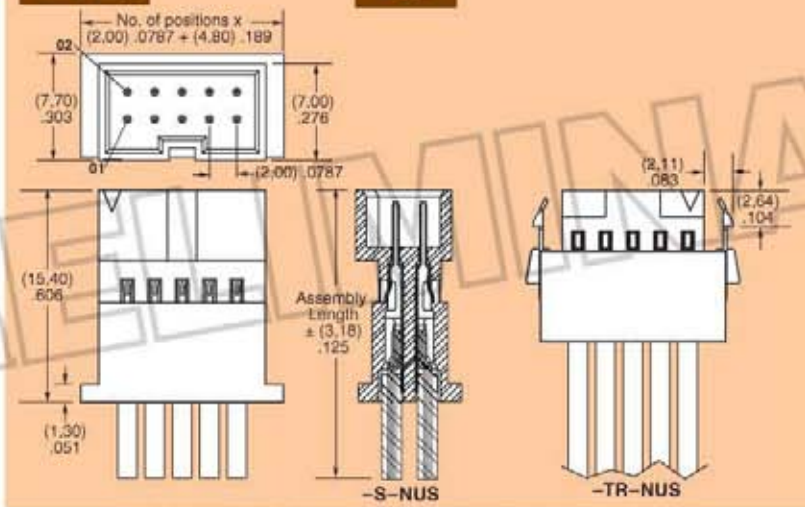
Bodies, terminals and assembly tooling.
Call Samtec.



TYPE	PINS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
T2SD = Double Row PVC Cable **T2SDT** = Double Row *Teflon® Cable (24 Wire Gauge only)	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–24 –24C = Color Coded Cable (T2SD only) –26 –28	–L = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Wire Length in Inches (69,85mm) 02.75" min.	–S = Single End –D = Double End –T = Transfer End (Socket on end 2) –TR = Transfer End with Retention Latch on Socket	(Only available with –D, –T & –TR) –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed –NDX = Notch down, crossed

APPLICATION

–24C CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	VIOLET
7	GRAY
8	WHITE
9	BLACK
10	BLUE
ETC	REPEAT



*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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DATASHEETMAX.IT

samtec

TIGER EYE™ SYSTEM

(2,00mm) .0787"

S2M SERIES

TIGER EYE™ CABLE SOCKET

SPECIFICATIONS

Mates with:
T2SD, T2M

For complete specifications and recommended PCB layouts see www.samtec.com?S2M

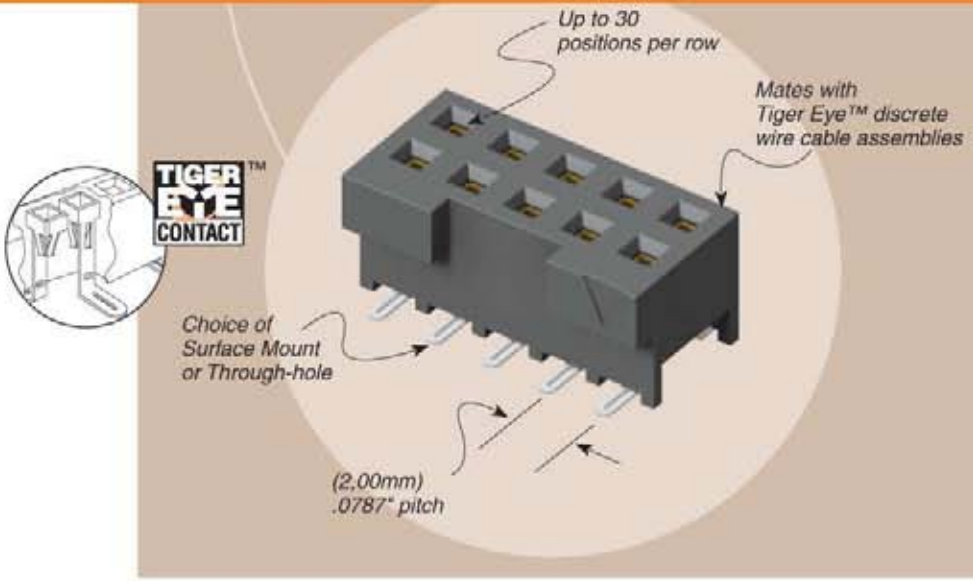
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
10 mΩ max
Insertion Depth:
(3,05mm) .120" to (3,25mm) .128"
Insertion Force:
(Single contact only) 2.0oz (0,56N) average
Withdrawal Force:
(Single contact only) 1.5oz (0,42N) average
Max Cycles:
100 with 10µ" (0,25µm) Au
RoHS Compliant:
Yes

Processing:

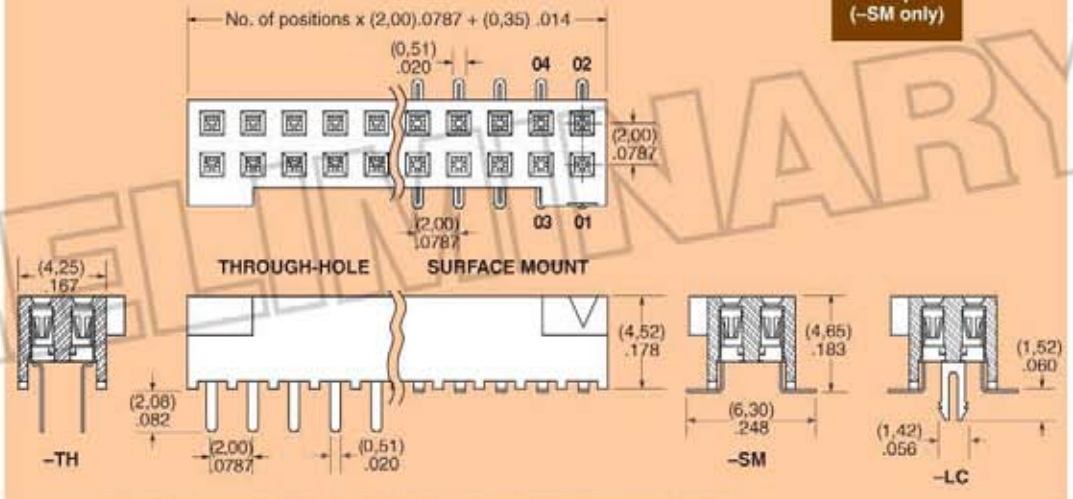
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.



S2M	1	NO. OF POSITIONS	LEAD STYLE	PLATING OPTION	D	OPTION	OTHER OPTION
		05, 07, 10, 15, 20, 25, 30 (Per Row)	–01 = Through-hole –02 = Surface Mount	–F = Gold flash on contact, Matte Tin on tail –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail		–K = (5,50mm) .217" DIA Polyimide film Pick & Place Pad (–SM only) –LC = Locking Clip (–SM only)	–TR = Tape & Reel Packaging



PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739292
SAMTEC GERMANY • Tel: +49 (0) 89 / 89460 0 SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6893337 SAMTEC NORDIC/BALTIC • Tel: +46 84477280 SAMTEC BENELUX • Tel: 44 01236 739292
SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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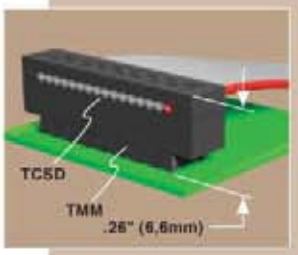
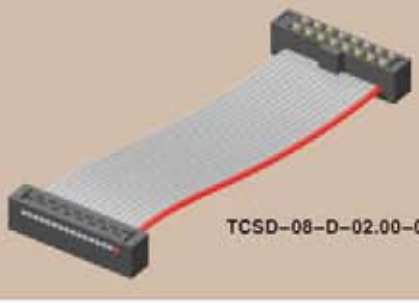
TIGER IDC™

(2,00mm) .0787"

TCSD SERIES





TIGER EYE™ IDC SOCKET CABLE

Mates with:
TMM, TMMH, STMM, MMT, TW, MTMM, EHT, ETMM (-SR), ZSTMM

FEATURES

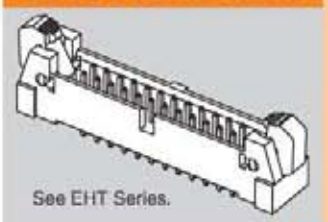
- Low profile, only 5mm (.200") assembled height
- Four-finger contacts optimize normal, insertion and withdrawal forces
- Ask about our custom IDC design capabilities

SPECIFICATIONS

For complete specifications see www.samtec.com?TCSD

Insulator Material: Black Glass Filled Polyester
Contact: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Wire: 28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator
Current Rating: 1A
Operating Temp Range: -40°C to +105°C
Lead Size Accepted: (0,48mm) .019" to (0,53mm) .021"
Contact Resistance: 10 mΩ maximum
Insertion Depth: (2,87mm) .113" to (3,17mm) .125"
Insertion Force: (Single contact only) 2 oz. (0,56N) average
Withdrawal Force: (Single contact only) 1.4 oz (0,39N) average
RoHS Compliant: Yes

EJECTOR HEADER



See EHT Series.

Note: Other Gold plating options available. Contact Samtec.

Note: TCSD Series assemblies are non-standard, non-returnable.

TYPE STRIP – NO. PINS PER ROW – END OPTION – LENGTH – 01 – PLATING OPTION – N – OTHER OPTION

–05, –08, –10, –12, –13, –15, –17, –20, –22, –25
(Call for other sizes)

–"XX.XX"
= Assembled Length

–N
= Notch Polarization

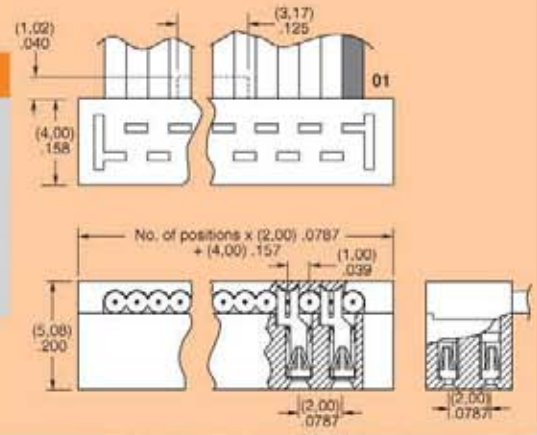
–F = Gold flash on contact
Leave blank for standard plating: 30µ"(0,76µm) Gold on contact area

POLARIZING KEY
Specify PK-01-07 for polarizing key (Available in wheels of six each). Also polarizes SMM Series socket strips.

–S
= Single End

–D
= Double End

TCSD
= Socket Strip



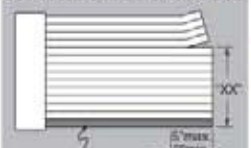
RUGGEDIZED

–P "XX"
= Position Polarization

Specify "XX" as position number. Same position will be polarized on both ends. 1

–B "XX"
= Breakout

Specify "XX" as number of conductors to be broken out.

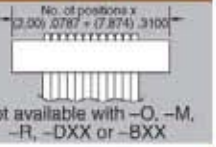


Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side. 2

–RW
= Reverse Wiring

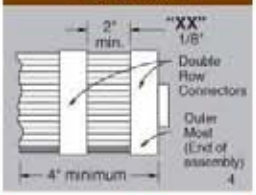
Blue or black wire opposite position #1. 3

SAMTEC –SR
= Strain Relief



Not available with –O, –M, –R, –DXX or –BXX

–D "XX"
= Daisy Chain

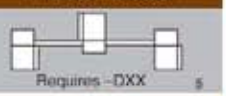


4

–R
= Reversed

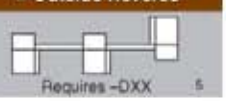
5

–M
= Middle Reverse



Requires –DXX 5

–O
= Outside Reverse



Requires –DXX 5

Due to technical progress, all designs, specifications and components are subject to change without notice.

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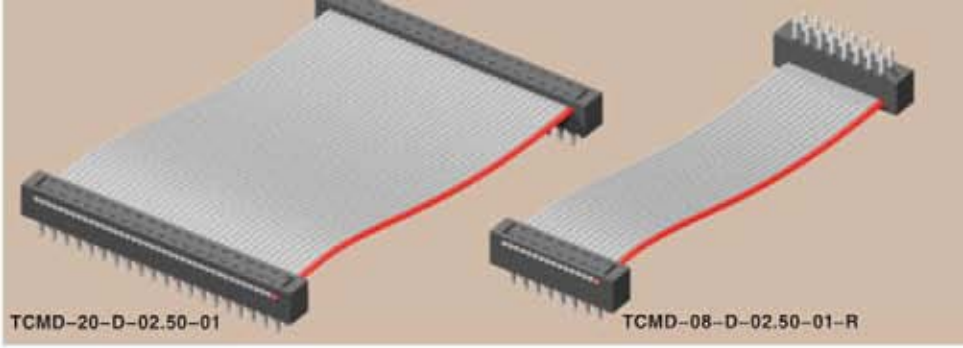
TIGER IDC™

(2,00mm) .0787"

TCMD SERIES



HIGH RELIABILITY IDC HEADER CABLE

Mates with:
SMM*, MMS*

SPECIFICATIONS

For complete specifications see www.samtec.com?TCMD

Insulator Material:
Black Glass Filled Polyester
Terminal:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Wire:
28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator
Current Rating:
1A
Operating Temp Range:
-40°C to +105°C
RoHS Compliant:
Yes

***Note:** Standard TCMD callout will not mate with SMM, MMS. Must use gold plated callouts. See drawing on web.

Note: TCMD Series assemblies are non-standard, non-returnable.

TYPE STRIP – NO. PINS PER ROW – END OPTION – OVERALL LENGTH – 01 – TRANSFER OPTION – OTHER OPTION

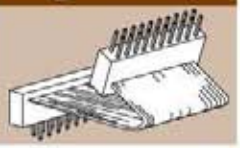
–05, –08, –10, –12, –13, –15, –17, –20, –22, –25
(Call for other sizes)

–"XX.XX"
= Assembled Length

Leave blank for –S and –D End Options. For –T End Option Specify "–N" (Socket has notch polarization)

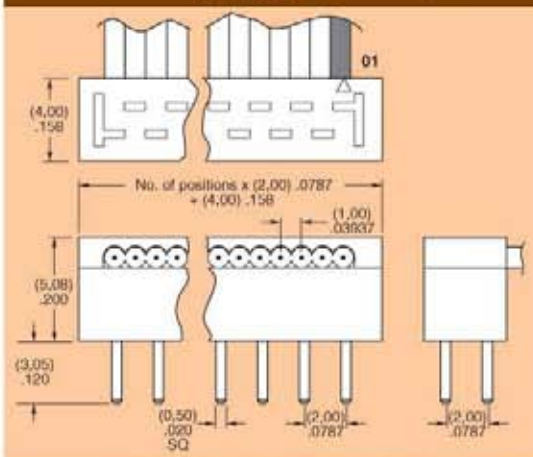
–S = Single End

–D = Double End



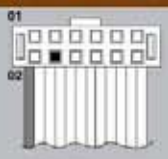
–T =Transfer End

TCMD =Terminal Strip



RUGGEDIZED by SAMTEC

–P "XX"
= Position Polarization



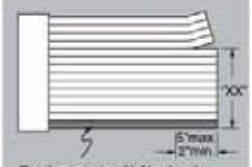
Specify "XX" as position number. Requires Transfer End. Only Socket is polarized. 1

–SR
= Strain Relief

Not available with –O, –M, –R, –DXX or –BXX

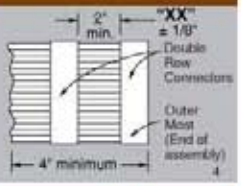
–B "XX"
= Breakout

Specify "XX" as number of conductors to be broken out.



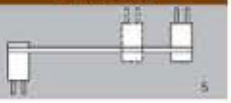
Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side. 2

–D "XX"
= Daisy Chain



4

–R
= Reversed

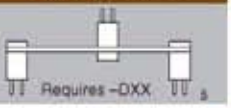


5

–RW
= Reverse Wiring

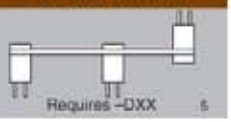
Blue or black wire opposite position #1. 3

–M
= Middle Reverse



Requires –DXX 5

–O
= Outside Reverse



Requires –DXX 5

Due to technical progress, all designs, specifications and components are subject to change without notice.

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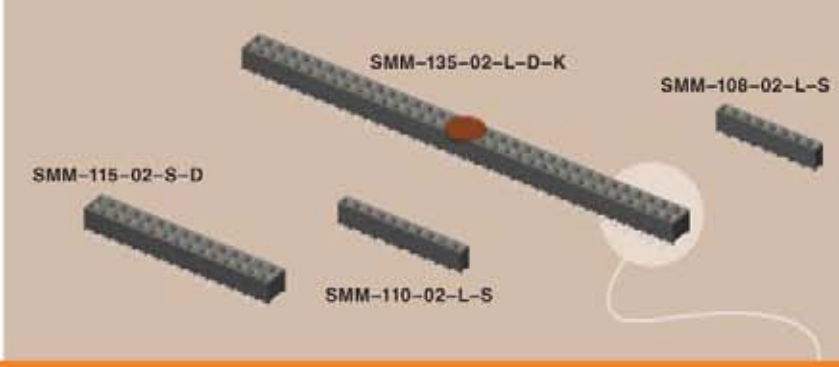
TIGER EYE™ SYSTEM

(2,00mm) .0787"

SMM SERIES



TIGER EYE™ SOCKET STRIP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SMM

Insulator Material: Black Liquid Crystal Polymer

Contact Material: BeCu

Plating: Sn or Au over 50µ" (1,27µm) Ni

Operating Temp Range: -55°C to +125°C

Contact Resistance: 10 mΩ max

Insertion Depth: (3,05mm) .120" to (3,25mm) .128"

Insertion Force: (Single contact only) 2.0oz (0,56N) average

Withdrawal Force: (Single contact only) 1.5oz (0,42N) average

Max Cycles: 100 with 10µ" (0,25µm) Au

RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	Mated with TMM
20°C	3.9A
40°C	3.5A
60°C	3A
95°C	2A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max

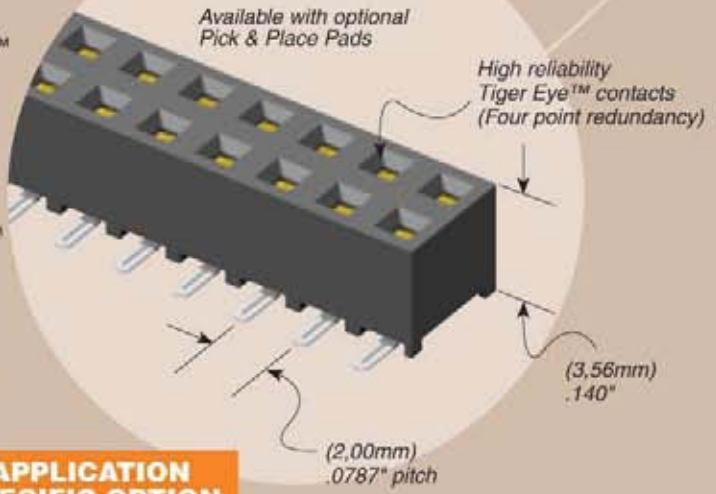
Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with: TMM, TMMH, MTMM, MMT, LTMM, TW, TCMD

E.L.P. EXTENDED LIFE PRODUCT

10 Year Mixed Flowing Gas (MFG) 1,000 cycles when mated with TMM



POLARIZING KEY

Specify PK-01-07 for polarizing key (Available in wheels of six each). Also polarizes TCSD Series IDC Cable.

APPLICATION SPECIFIC OPTION

Locking clip option available. Call Samtec.

SMM	-	1	NO. PINS PER ROW	-	02	-	PLATING OPTION	-	ROW OPTION	-	OTHER OPTION

02 thru 40

-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

-S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

-S = Single Row

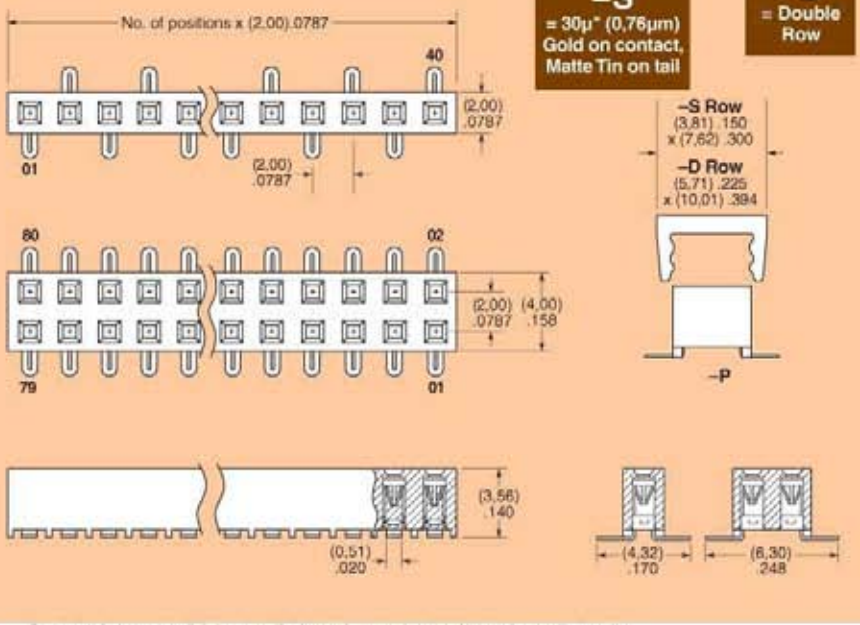
-D = Double Row

-"XX" = Polarized Position

-K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad (2 positions minimum, -02 thru -05 requires -TR)

-P = Plastic Pick & Place Pad (-02 thru -05 requires -TR)

-TR = Tape & Reel Packaging (27 positions maximum)



Due to technical progress, all designs, specifications and components are subject to change without notice.

MICRO PITCH & ONE PIECE INTERFACES

Micro Blade & Beam
0,40mm Pitch (SS4, ST4) 160
Micro Rugged High Speed Hermaphroditic (LSS, LSHM, LSEM) 161-163
0,50mm Edge Rate™ (ERF5, ERM5) 164-165
Low Profile 0,5mm Pitch (LTH, LSH) 166
0,50mm Pitch Blade & Beam (BTH, BSH) 167
0,635mm Pitch Blade & Beam (BTS, BSS) 168
0,80mm Pitch Blade & Beam (BTE, BSE) 169

Micro Pin & Socket
0,80mm Pitch Tiger Eye™ (SEM, TEM) 170-171
0,80mm Pitch Headers, Stackers & Sockets (AW, FTE, CLE) .. 172-174
1mm Polarized Connectors (BKS, BKT) 175
1mm Pitch Headers & Sockets (FTMH, MW, CLM, MLE) 176-179

(1,27mm) .050" Pitch
High Density (SOLC, TOLC, MOLC, FOLC) 180-183
Headers & Stackers (FTSH, FW, EHF, SHF) 184-190
Sockets (CLP, FLE) 191-192

(1,27mm) .050" x (2,54mm) .100" Pitch
Headers & Stackers (TMS, HTMS, MTMS, HMTMS,
TML, ZML, DWM, HDWM, FTR) 193-200
Sockets (RSM, SMS, SLM) 201-202

One Piece Interfaces
(2,54mm) .100" Pitch (SIB, PGP) 203
1mm Pitch (FSI, SEI) 204-206

APPLICATIONS

Micro Pin & Socket 29
Micro Blade & Beam 30
One Piece Interfaces 31
Micro Rugged Tiger Eye™ 32-33
Extended Life Products™ 38

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(0,40mm) .01575"
SS4, ST4 SERIES

ULTRA FINE PITCH HEADER & SOCKET

SS4 Mates with:
ST4
ST4 Mates with:
SS4

SPECIFICATIONS

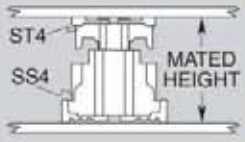
For complete specifications and recommended PCB layouts see www.samtec.com?SS4 or www.samtec.com?ST4

Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Current Rating:
1.3A @ 80°C ambient
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

MATED HEIGHT



MATED HEIGHT*		
ST4 LEAD STYLE	SS4 LEAD STYLE	
	–3.00	–3.50
–1.00	(4,00) .157	(4,50) .177
–1.50	(4,50) .177	(5,00) .197
–2.50	(5,50) .217	(6,00) .236

*Processing conditions will affect mated height.

Note: –L latching option not intended for alignment to PCB. Automated placement is recommended.

Note: Some lengths, styles and options are non-standard, non-returnable.

SS4 – POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – LATCH OPTION – K – TR

POSITIONS PER ROW: –10, –20, –30, –40, –50

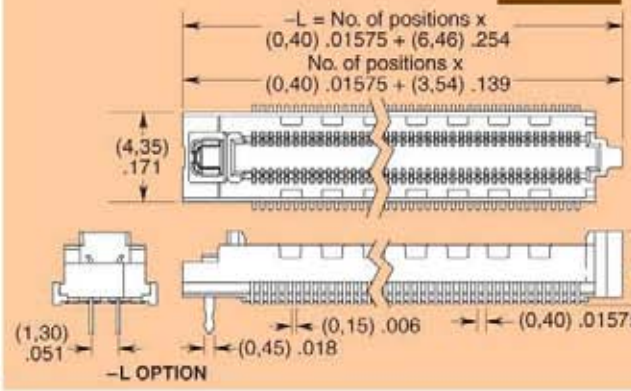
LEAD STYLE:
–3.00 = 3.00mm
–3.50 = 3.50mm

PLATING OPTION:
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

LATCH OPTION:
–L = Latching (Leave blank for no latching) (Only available in –3.00 Lead Style)

K: (Required in callout) –K = (3,51mm) .138" DIA Polyimide Film Pick & Place Pad

TR: (Required in callout) –TR = Tape & Reel



LEAD STYLE	A	B
–3.00	(2,85) .112	(3,50) .138
–3.50	(3,35) .132	(4,00) .157

4mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	4.5 GHz / 9 Gbps

Complete test data available at www.samtec.com?SS4, www.samtec.com?ST4 or contact sig@samtec.com

ST4 – POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – LATCH OPTION – P – TR

POSITIONS PER ROW: –10, –20, –30, –40, –50

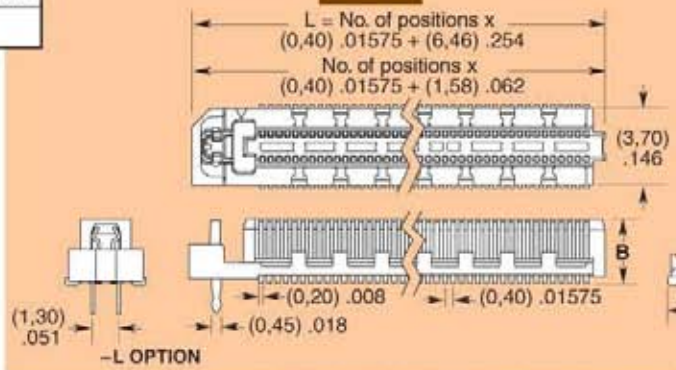
LEAD STYLE:
–1.00 = 1.00mm
–1.50 = 1.50mm
–2.50 = 2.50mm

PLATING OPTION:
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

LATCH OPTION:
–L = Latching (Leave blank for no latching) (Only available in –1.00 Lead Style)

P: (Required in callout) –P = Pick & Place Pad

TR: (Required in callout) –TR = Tape & Reel



LEAD STYLE	A	B
–1.00	(1,00) .039	(3,08) .121
–1.50	(1,50) .059	(3,58) .141
–2.50	(2,50) .098	(4,58) .180

Due to technical progress, all designs, specifications and components are subject to change without notice.

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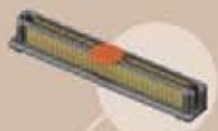
RAZOR BEAM SYSTEM™

(0,50mm) .0197"
LSHM SERIES

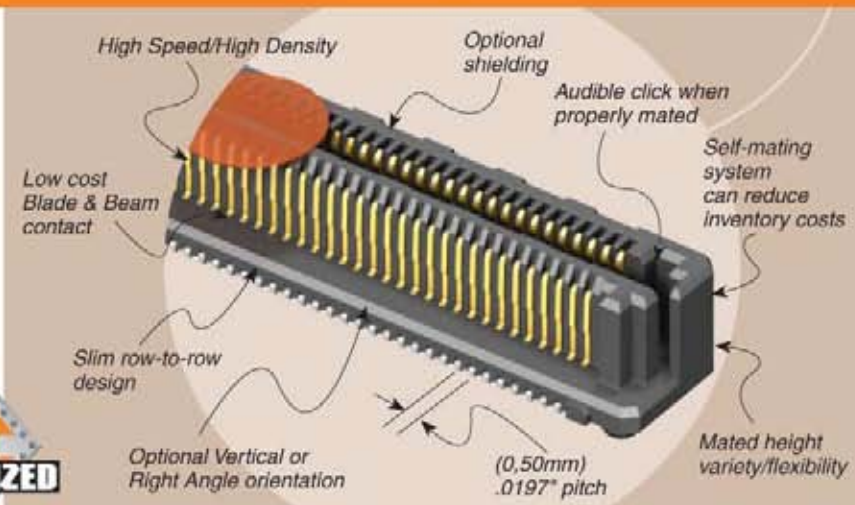
LSHM-120-01-L-DH-A-S-K-TR


LSHM-150-02.5-L-DV-A-N-K-TR

LSHM-130-02.5-L-DV-A-S-K-TR

LSHM-120-04.0-L-DV-A-N-K-TR

HIGH SPEED HERMAPHRODITIC STRIP



SPECIFICATIONS

Mates with: LSHM

For complete specifications and recommended PCB layouts see www.samtec.com?LSHM

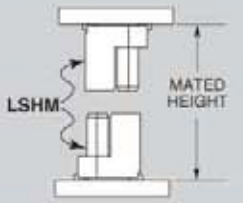
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
TBD
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com

RUGGEDIZED by SAMTEC

APPLICATION



LEAD STYLE	MATED HEIGHT*
-02.5 & -02.5	(5,00) .196
-02.5 & -03.0	(5,50) .217
-03.0 & -03.0	(6,00) .236
-02.5 & -04.0	(6,50) .256
-03.0 & -04.0	(7,00) .276
-04.0 & -04.0	(8,00) .315
-02.5 & -06.0	(8,50) .335
-03.0 & -06.0	(9,00) .354
-04.0 & -06.0	(10,00) .394
-06.0 & -06.0	(12,00) .472

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

LSHM	- 1	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-	TAIL OPTION	- A -	SHIELD OPTION	- K -	TR

20, 30, 40, 50

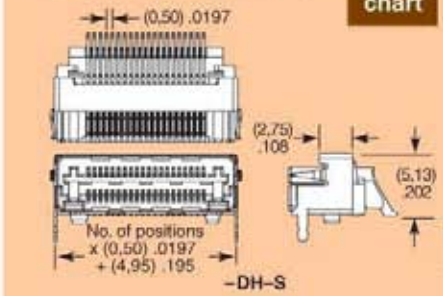
Specify LEAD STYLE from chart

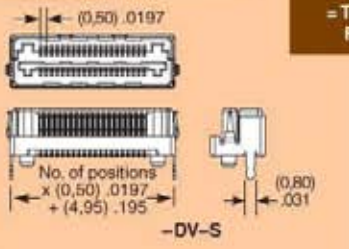
-F = Gold flash on contact, Matte Tin on tail
-L =10µ" (0,25µm) Gold on contact, Matte Tin on tail

-DV = Vertical
-DH = Right Angle (Lead style -01 only)

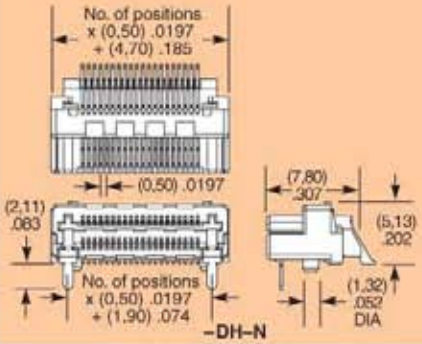
-S = With Shield
-N = Without Shield

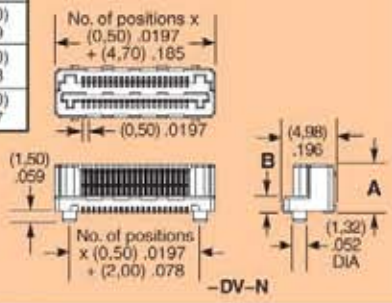
-K = (4,50mm) .177" DIA Polyimide film Pick & Place Pad
-TR = Tape & Reel





LEAD STYLE	A	B
-01	NA (-DH only)	NA (-DH only)
-02.5	(3,95) .156	(1,00) .039
-03.0	(4,45) .175	(1,50) .059
-04.0	(5,45) .215	(2,50) .098
-06.0	(7,45) .293	(4,50) .177





Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

RAZOR BEAM SYSTEM™

(0,635mm) .025"

LSS SERIES

HIGH SPEED HERMAPHRODITIC STRIP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?LSS

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
1.7A @ 30°C Temperature Rise

Operating Temp Range:
-55°C to +125°C

RoHS Compliant:
Yes

Processing:

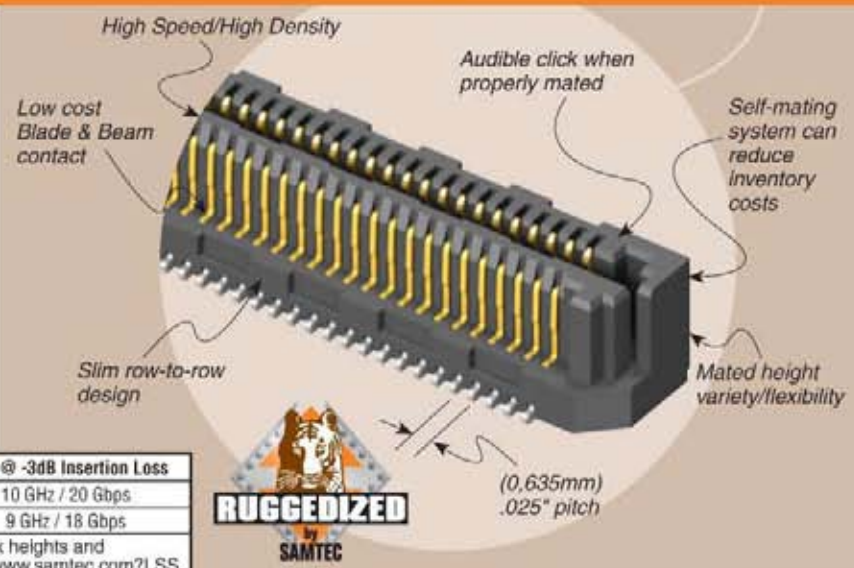
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max

Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com

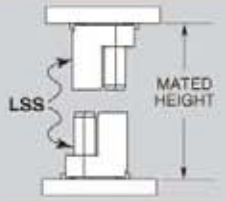
Mates with:
LSS



6mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	10 GHz / 20 Gbps
Differential Pair Signaling	9 GHz / 18 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?LSS or contact sig@samtec.com

APPLICATION



LEAD STYLE	MATED HEIGHT*
–01 & –01	(6,00) .236
–01 & –03	(7,00) .276
–03 & –03	(8,00) .315
–01 & –02	(9,00) .354
–02 & –03	(10,00) .394
–02 & –02	(12,00) .472

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

LSS	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	DV	–	A	–	OPTION

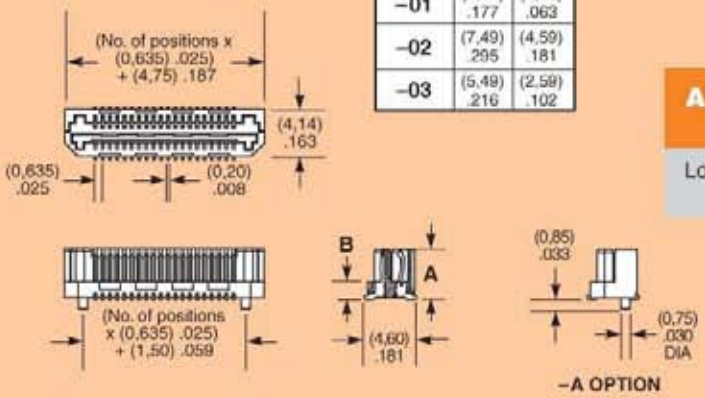
NO. PINS PER ROW: 5, 10, 20, 30, 40, 50

LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
–F = Gold flash on contact, Matte Tin on tail
–L = =10µ" (0,25µm) Gold on contact, Matte Tin on tail

OPTION:
–K = (3,50mm) .138" DIA Polyimide film Pick & Place Pad
–TR = Tape & Reel

LEAD STYLE	A	B
–01	(4,50) .177	(1,60) .063
–02	(7,49) .295	(4,59) .181
–03	(5,49) .216	(2,59) .102



APPLICATION SPECIFIC OPTION

Locking Clip on –02 or –03 lead style. Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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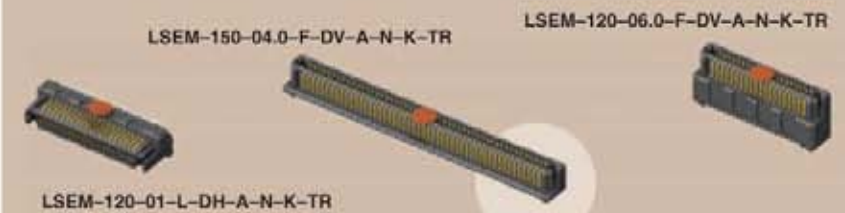
RAZOR BEAM SYSTEM

(0,80mm) .0315"
LSEM SERIES



HIGH SPEED HERMAPHRODITIC STRIP

SPECIFICATIONS

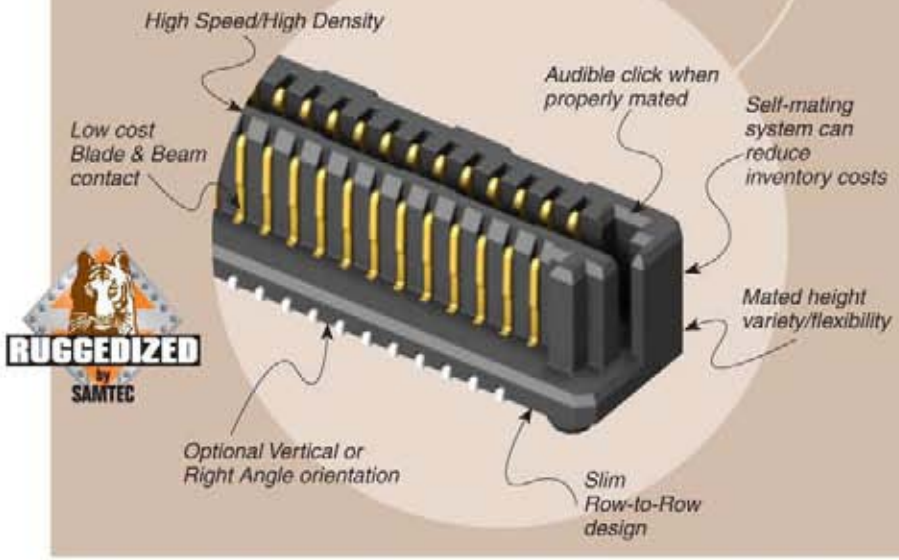
Mates with:
LSEM

For complete specifications and recommended PCB layouts see www.samtec.com?LSEM

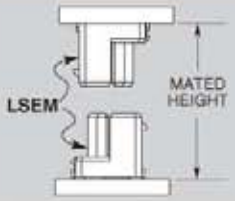
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
TBD
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com



APPLICATION



LEAD STYLE	MATED HEIGHT*
–02.5 & –02.5	(5,00) .196
–02.5 & –03.0	(5,50) .217
–03.0 & –03.0	(6,00) .236
–02.5 & –04.0	(6,50) .256
–03.0 & –04.0	(7,00) .276
–04.0 & –04.0	(8,00) .315
–02.5 & –06.0	(8,50) .335
–03.0 & –06.0	(9,00) .354
–04.0 & –06.0	(10,00) .394
–06.0 & –06.0	(12,00) .472

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

LSEM – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – TAIL OPTION – A – SHIELD OPTION – K – TR

NO. PINS PER ROW: 20, 30, 40, 50

LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
–F = Gold flash on contact, Matte Tin on tail
–L = =10µ" (0,25µm) Gold on contact, Matte Tin on tail

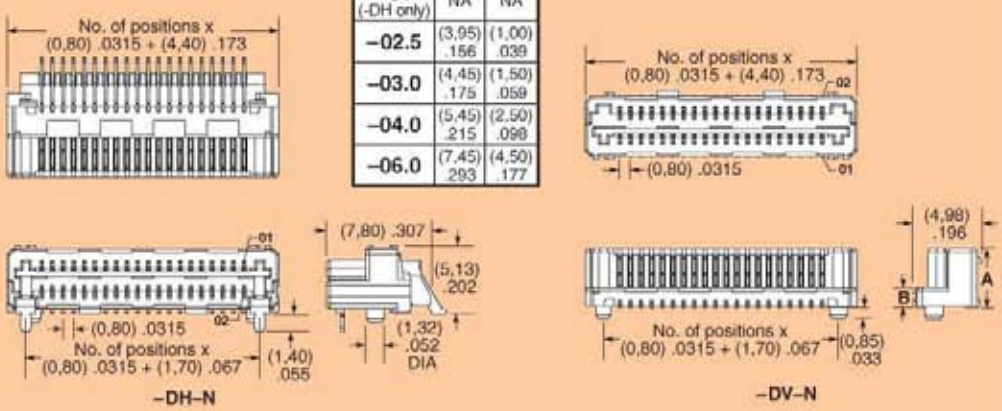
TAIL OPTION:
–DV = Vertical
–DH = Right Angle (Lead style –01 only)

SHIELD OPTION:
–N = Without Shield

K:
–K = (5,50mm) .217" DIA Polyimide film Pick & Place Pad

TR:
–TR = Tape & Reel

LEAD STYLE	A	B
–01 (-DH only)	NA	NA
–02.5	(3,95) .156	(1,00) .039
–03.0	(4,45) .175	(1,50) .059
–04.0	(5,45) .215	(2,50) .098
–06.0	(7,45) .293	(4,50) .177



Due to technical progress, all designs, specifications and components are subject to change without notice.

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EDGE R·A·T·E™ CONTACT

(0,50mm) .0197"

ERM5 SERIES

RUGGED HIGH SPEED HEADER

SPECIFICATIONS

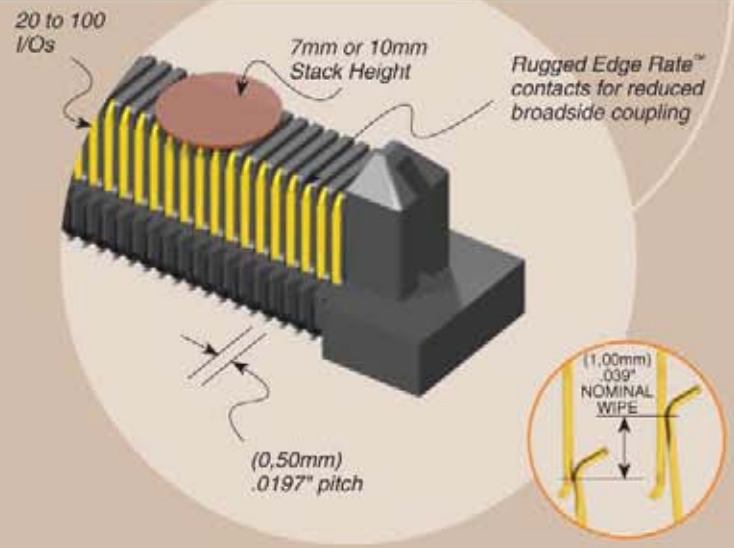
Mates with: ERF5

For complete specifications and recommended PCB layouts see www.samtec.com?ERM5

Insulator Material:
Black LCP
Terminal Material:
Phosphor Bronze or BeCu
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1.9A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
194 VAC mated with ERF5
RoHS Compliant:
Yes

Processing:

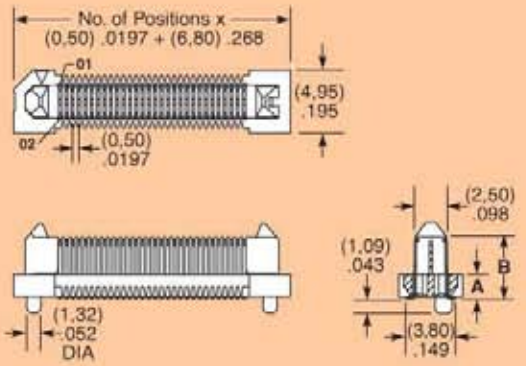
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (010-040)
(0,13mm) .005" max (050)



MATED HEIGHT*	
ERM5 LEAD STYLE	ERF5 LEAD STYLE –05.0
–02.0	(7,00) .276
–05.0	(10,00) .394

*Processing conditions will affect mated height.

ERM5	–	NO. OF POSITIONS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	DV	–	K	–	TR
		–010, –020, –030, –040, –050		–02.0 = 2mm Body Height –05.0 = 5mm Body Height		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail				–K = (3,50mm) .138" DIA Polyimide Film Pick & Place Pad –TR = Tape & Reel Packaging		



LEAD STYLE	A	B
–02.0	(1,94) .076	(4,84) .191
–05.0	(4,94) .194	(7,84) .309

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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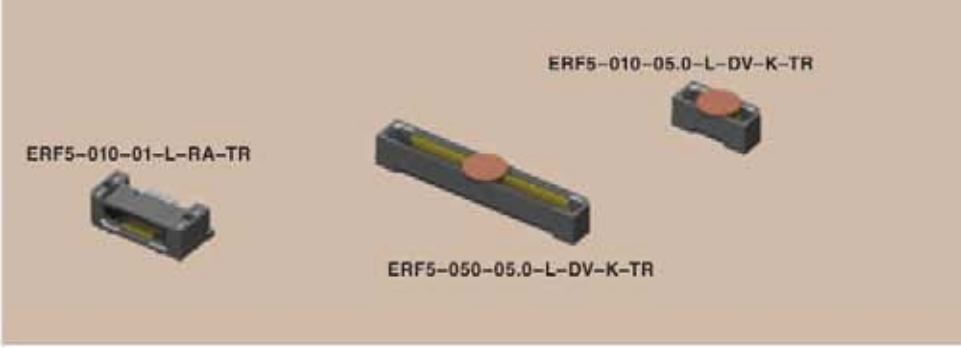
(0,50mm) .0197"

ERF5, ERF5-RA SERIES

EDGE RATE™ CONTACT



RUGGED HIGH SPEED SOCKET

Mates with:
ERM5

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERF5 or www.samtec.com?ERF5-RA

Insulator Material:
Black LCP
Terminal Material:
BeCu
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Current Rating:
1.9A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
194 VAC mated with ERM5
RoHS Compliant:
Yes

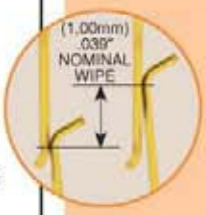
Processing:

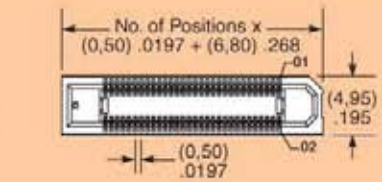
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (010-040)
(0,13mm) .005" max (050)

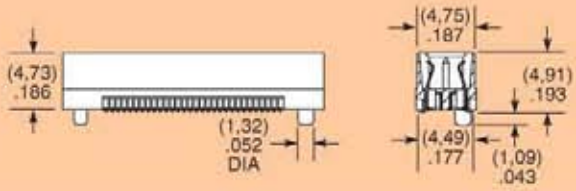
Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

ERF5	– NO. OF POSITIONS PER ROW	– LEAD STYLE	– PLATING OPTION	– DV	– K	– TR
	–010, –020, –030, –040, –050	–05.0 = 5mm Body Height	–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail		–K = (6,00mm) .236" DIA Polyimide Film Pick & Place Pad	–TR = Tape & Reel Packaging



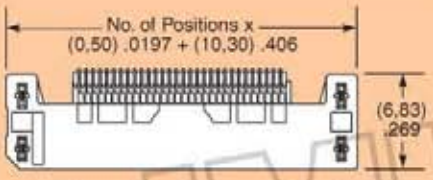


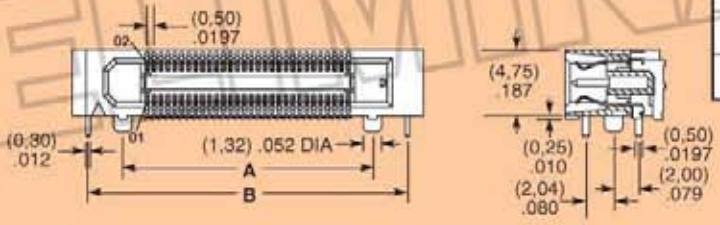


MATED HEIGHT*		
ERF5 LEAD STYLE	ERM5 LEAD STYLE	
	–02.0	–05.0
–05.0	(7,00) .276	(10,00) .394

*Processing conditions will affect mated height.

ERF5	– NO. OF POSITIONS PER ROW	– 01	– PLATING OPTION	– RA	– TR
	–010, –020, –030, –040, –050		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail		–TR = Tape & Reel Packaging





NO. OF POSITIONS	A	B
–010	(8,00) .315	(13,00) .512
–020	(13,00) .512	(18,00) .709
–030	(18,00) .709	(23,00) .906
–040	(23,00) .906	(28,00) 1.102
–050	(28,00) 1.102	(33,00) 1.299

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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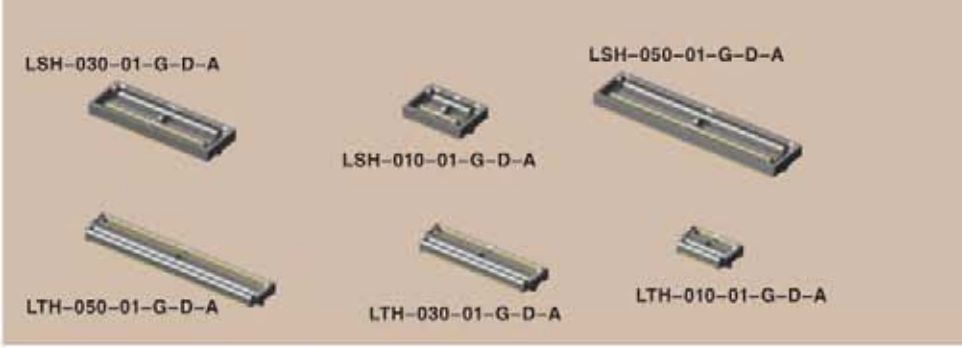


(0,50mm) .01969"
LTH, LSH SERIES

LOW PROFILE BLADE AND BEAM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?LTH or www.samtec.com?LSH

Insulator Material: Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Contact Material: BeCu
Plating: Au over 50µ" (1,27µm) Ni
Current Rating: 1.5A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds
Lead-Free Solderable: No
SMT Lead Coplanarity: (0,10mm).004" max
Board Stacking: For applications requiring more than two connectors per board, contact ipg@samtec.com

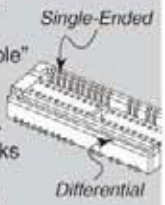
MATED HEIGHT

LEAD STYLE	MATED HEIGHT*
–01	(2,31) .091

*Processing conditions will affect mated height.

APPLICATION SPECIFIC OPTION

Differential Pair and "Partitionable" (combine differential and single-ended banks in same connector) available. Call Samtec ASP Group.



Note: Samtec recommends right-side-up, single-pass 63/37 Tin/Lead reflow soldering for these connectors. This product is not compatible with lead-free reflow soldering.

Note: Some lengths, styles and options are non-standard, non-returnable.

LTH – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

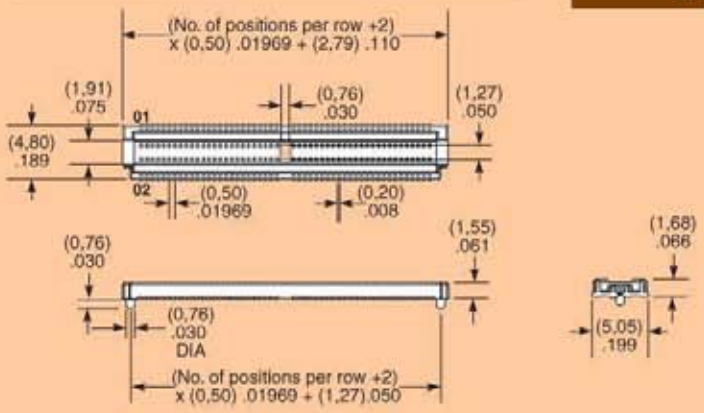
Mates with: LSH

–010, –020, –030, –040, –050

–G = 10µ" (0,25µm) Gold

–K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad

–TR = Tape and Reel



LSH – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

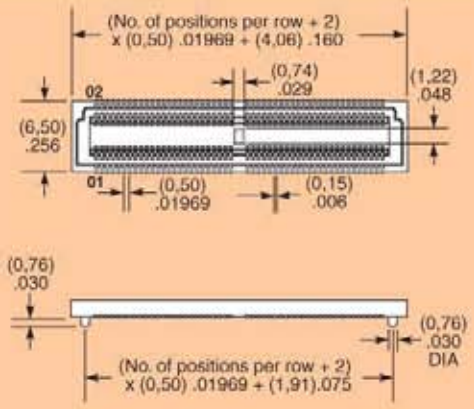
Mates with: LTH

–010, –020, –030, –040, –050

–G = 10µ" (0,25µm) Gold

–K = (7,50mm) .295" DIA Polyimide Film Pick & Place Pad

–TR = Tape and Reel



Due to technical progress, all designs, specifications and components are subject to change without notice.

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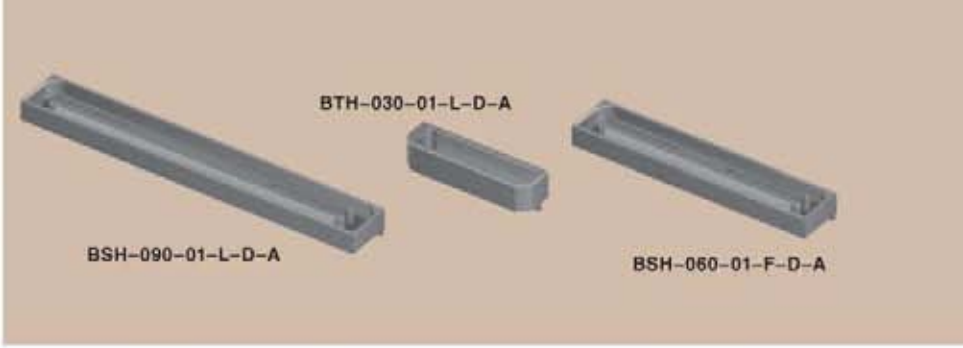


E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(0,50mm) .01969"
BTH, BSH SERIES

BASIC BLADE & BEAM HEADER & SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?BTH or www.samtec.com?BSH

Insulator Material: LCP
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1.25A @ 80°C ambient
Flammability Rating: UL 94 VO
Operating Temp Range: -55°C to +125°C
Voltage Rating: 125 VAC
Max Cycles: 100
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm).004" max (030-090) (0,15mm).006" max (120-150)
Board Stacking: For applications requiring more than two connectors per board or 90 positions or higher, contact ipg@samtec.com

MATED HEIGHT

LEAD STYLE	MATED HEIGHT*
–01	(5,00) .197

*Processing conditions will affect mated height.

APPLICATION SPECIFIC

- 30µ" (0,76µm) Gold
- Edge Mount Capability
- 8mm, 11mm, 16 mm, 19mm and 22mm Stack Height (Caution: Some automatic placement/ inspection machines may have component height restrictions. Please consult machinery specifications.) (11mm, 16mm, 19mm and 22mm not available with 50 positions)

Call Samtec.

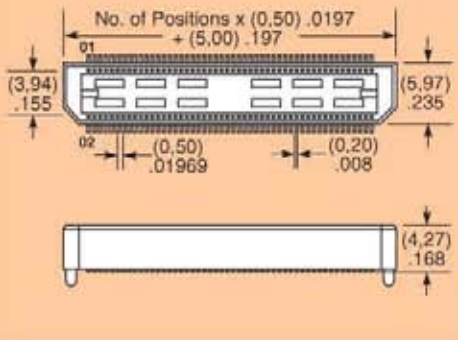
***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

BTH – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

Mates with: BSH

–030, –050, –060, –090, –120, –150



–F
= Gold Flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

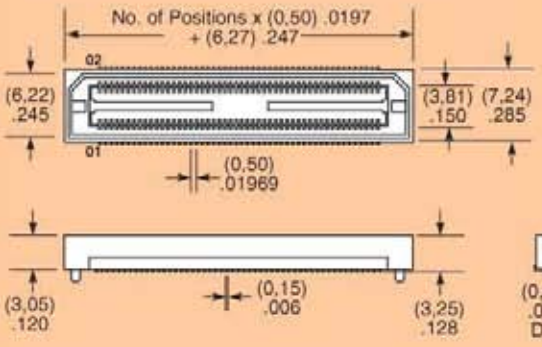
–K
= (7,00mm) .276" DIA Polyimide Film Pick & Place Pad

–TR
= Tape and Reel (120 positions maximum)

BSH – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

Mates with: BTH

–030, –050, –060, –090, –120, –150



–F
= Gold Flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

–TR
= Tape and Reel (120 positions maximum)

AGILENT LOGIC ANALYZER TEST POINT CONNECTOR
Specify: ASP-65067-01

Due to technical progress, all designs, specifications and components are subject to change without notice.

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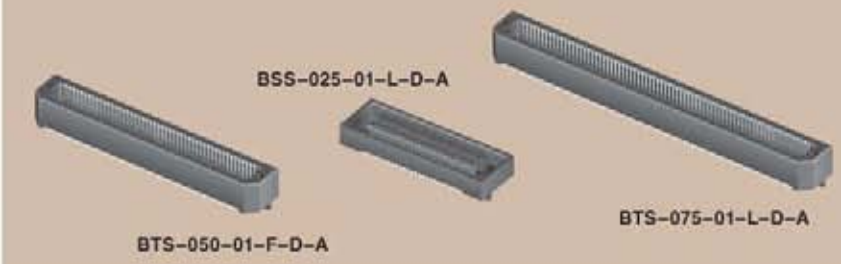
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles



(0,635mm) .025"
BTS, BSS SERIES

BASIC BLADE & BEAM HEADER & SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?BTS or www.samtec.com?BSS

Insulator Material: Liquid Crystal Polymer
Terminal Material (BTS): Phosphor Bronze
Contact Material (BSS): Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1.6A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max
Board Stacking: For applications requiring more than two connectors per board or 100 positions or higher, contact ipg@samtec.com

MATED HEIGHT

LEAD STYLE	MATED HEIGHT*
–01	(5,00) .197

*Processing conditions will affect mated height.

APPLICATION SPECIFIC OPTION

30µ" (0,76µm) Gold available.
Call Samtec.

EDGE MOUNT CAPABILITY

Edge Mount capability. Call for availability.

Note: Some lengths, styles and options are non-standard, non-returnable.

BTS – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

Mates with: BSS

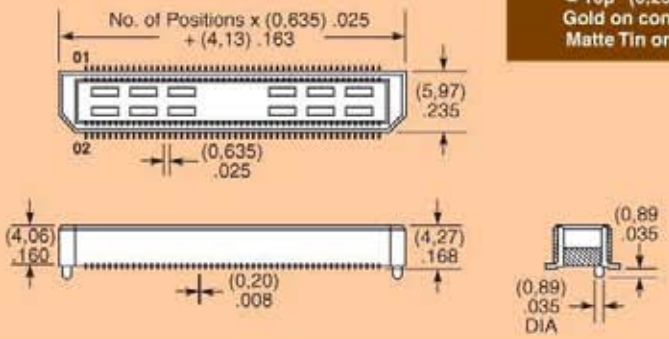
–025, –050, –075, –100, –125, –150

–F = Gold Flash on contact, Matte Tin on tail

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–K = (7,00mm) .275" DIA Polyimide Film Pick & Place Pad

–TR = Tape & Reel (–100 positions maximum)



BSS – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

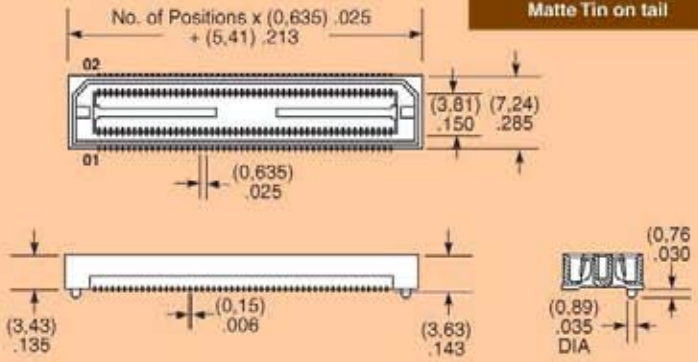
Mates with: BTS

–025, –050, –075, –100, –125, –150

–F = Gold Flash on contact, Matte Tin on tail

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–TR = Tape & Reel (–100 positions maximum)



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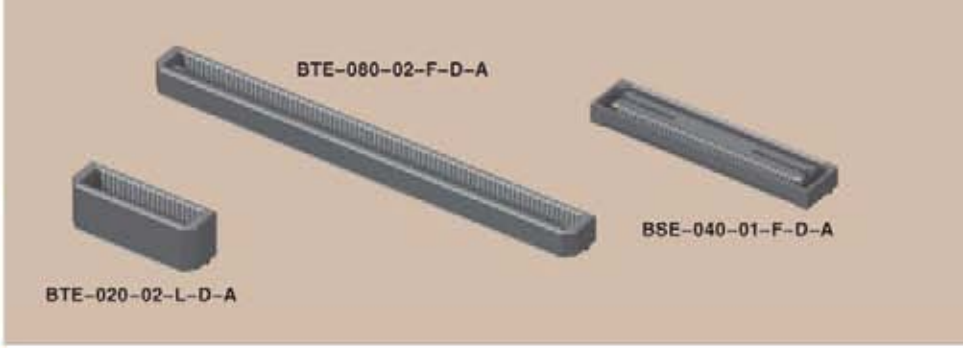
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles



(0,80mm) .0315"
BTE, BSE SERIES

BASIC BLADE & BEAM HEADER & SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?BTE or www.samtec.com?BSE

Insulator Material: Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 2A @ 80°C ambient with 5mm Stack Height
Operating Temp Range: -55°C to +125°C
Voltage Rating: 225 VAC with 5mm Stack Height
Max Cycles: 100
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (020-080) (0,15mm) .006" max (100-120)
Board Stacking: For applications requiring more than two connectors per board or 80 positions or higher, contact ipg@samtec.com

MATED HEIGHT

LEAD STYLE	MATED HEIGHT*
–01	(5.00) .197
–02	(8.00) .315

*Processing conditions will affect mated height.

APPLICATION SPECIFIC

- 30µ" (0,76µm) Gold
- Edge Mount Capability
- Friction Lock option
- 11mm, 14mm, 16,10mm, 19,10mm, 22mm, 25mm and 30mm Stack Height (Caution: Some automatic placement/ inspection machines may have component height restrictions. Please consult machinery specifications.)

Call Samtec.

***Note:** –C Plating passes 10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

BTE – NO. OF POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – D – A – OTHER OPTION

Mates with: BSE

–020, –040, –060, –080, –100, –120

Specify LEAD STYLE from chart

–F
= Gold Flash on contact, Matte Tin on tail

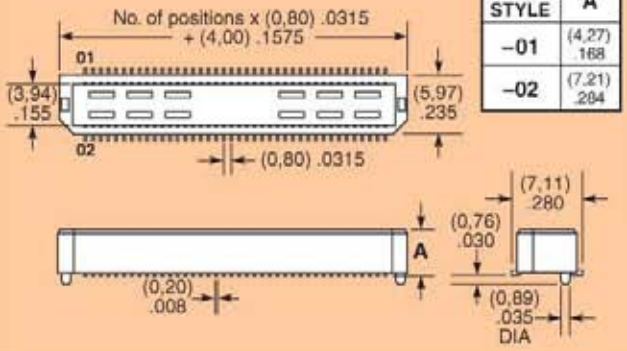
–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

–K
= (7,00mm) .275" DIA Polyimide Film Pick & Place Pad

–TR
= Tape and Reel (60 positions maximum)

LEAD STYLE	A
–01	(4,27) .168
–02	(7,21) .284



BSE – NO. OF POSITIONS PER ROW – 01 – PLATING OPTION – D – A – OTHER OPTION

Mates with: BTE

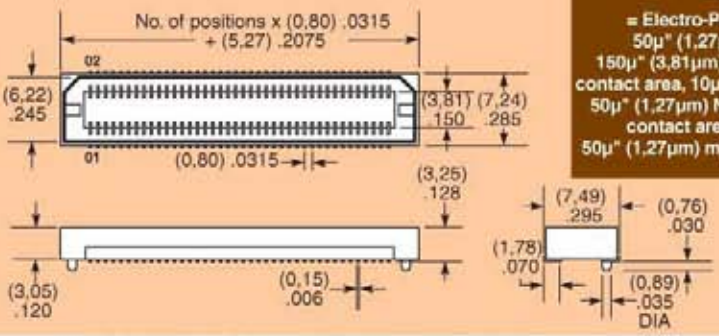
–020, –040, –060, –080, –100, –120

–F
= Gold Flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–C*
= Electro-Polished Selective 50µ" (1,27µm) min Au over 150µ" (3,81µm) Ni on Signal Pins in contact area, 10µ" (0,25µm) min Au over 50µ" (1,27µm) Ni on Ground Plane in contact area, Matte Tin over 50µ" (1,27µm) min Ni on all solder tails

–TR
= Tape and Reel (80 positions maximum)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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TIGER EYE™ SYSTEM

(0,80mm) .0315"

SEM, SEML SERIES

MICRO TIGER EYE™ SOCKET

SPECIFICATIONS

Mates with: TEM

For complete specifications and recommended PCB layouts see www.samtec.com?SEM or www.samtec.com?SEML

Insulator Material:
Black Liquid Crystal Polymer
UL FILE NO. E111594

Contact Material:
BeCu

Plating:
Au or Sn over 50µ" (1,27µm) Ni

RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	TEM/SEM
20°C	3.5A
40°C	3.1A
60°C	2.6A
80°C	2.2A
95°C	1.78A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max

ALSO AVAILABLE

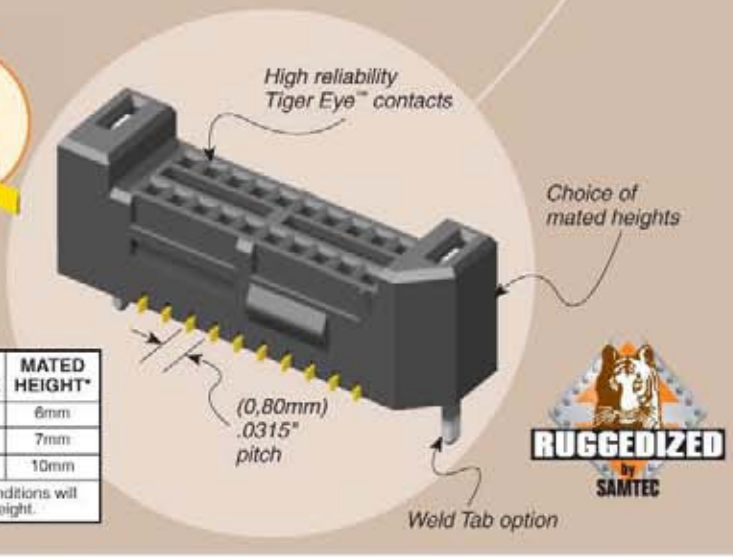
- (1,27mm) .050" board-to-board and cable-to-board Tiger Eye™ systems available.
- Board Stacking: See SFM, TFM Series
- Cable Assemblies: See SFSD, TFSD Series
- AccliMate™: See SCP3/SCR3 Series

Call Samtec.

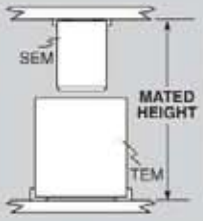
E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with TEM

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.



MATED HEIGHT



TEM LEAD STYLE	MATED HEIGHT*
–03.0	6mm
–04.0	7mm
–07.0	10mm

*Processing conditions will affect mated height.

TYPE STRIP	–	1	NO. PINS PER ROW	–	02	–	STACK HEIGHT	–	PLATING OPTION	–	D	–	OPTION	–	OTHER OPTION

SEM = Tiger Eye™ Strip
SEML = Tiger Eye™ Friction Lock

05, 10, 15, 20, 25, 30, 35, 40, 45, 50
(Call Samtec for other sizes)

–03.0 = 6mm, 7mm or 10mm Stack Height when mated with TEM Series (SEML only available with 6mm Stack Height)

–H = 30µ" (0,76µm) Gold on contact, Gold Flash on tail

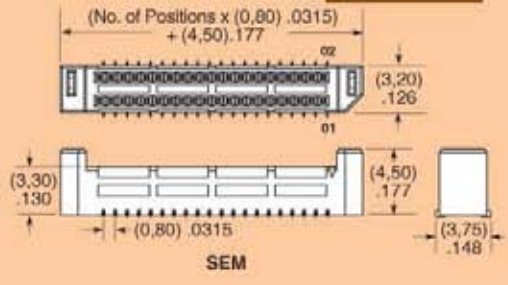
–A = Alignment Pin (Not available with –LC or –WT)

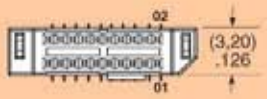
–LC = Locking Clip (Not available with –A or –WT)

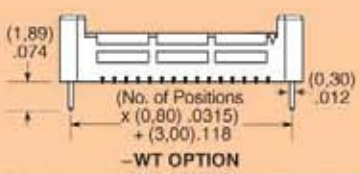
–WT = Weld Tab (Not available with –A or –LC) (Required callout for SEML)

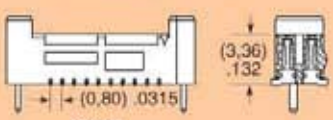
–K = (3,50mm) .138" DIA Polyimide film Pick & Place Pad

–TR = Tape & Reel









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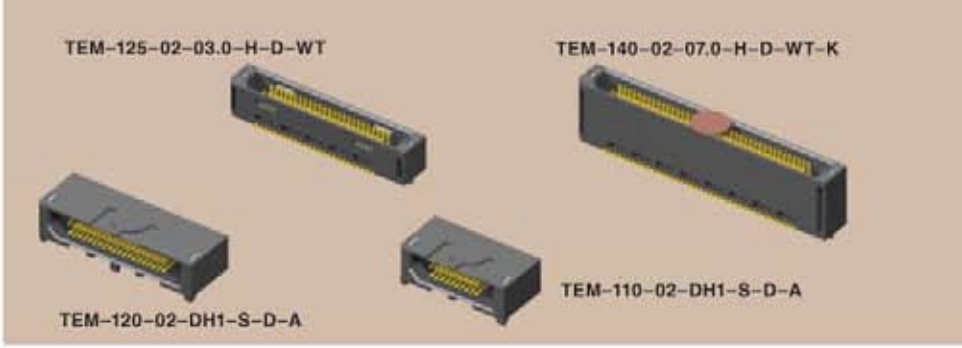
TIGER EYE™ SYSTEM

(0,80mm) .0315"

TEM, TEM-DH SERIES



MICRO TIGER EYE™ HEADER

TEM Mates with:
SEM, SEML

TEM-DH Mates with:
SEM, SEML

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TEM or www.samtec.com?TEM-DH

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	TEM/SEM
20°C	3.5A
40°C	3.1A
60°C	2.6A
80°C	2.2A
95°C	1.78A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

ALSO AVAILABLE

- (1,27mm) .050" board-to-board and cable-to-board Tiger Eye™ systems available.
- Board Stacking: See SFM, TFM Series
- Cable Assemblies: See SFSD, TFSD Series
- AccliMate™: See SCP3/SCR3 Series

Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

TEM - 1 - NO. PINS PER ROW - 02 - STACK HEIGHT - PLATING OPTION - D - OPTION - OTHER OPTION

NO. PINS PER ROW: 05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

STACK HEIGHT:
- –03.0 = 6mm Stack Height
- –04.0 = 7mm Stack Height
- –07.0 = 10mm Stack Height

STACK HEIGHT	A	MATED HEIGHT* (WHEN MATED WITH SEM)
–03.0	(5,610) .2209	6mm
–04.0	(6,610) .2602	7mm
–07.0	(9,610) .3783	10mm

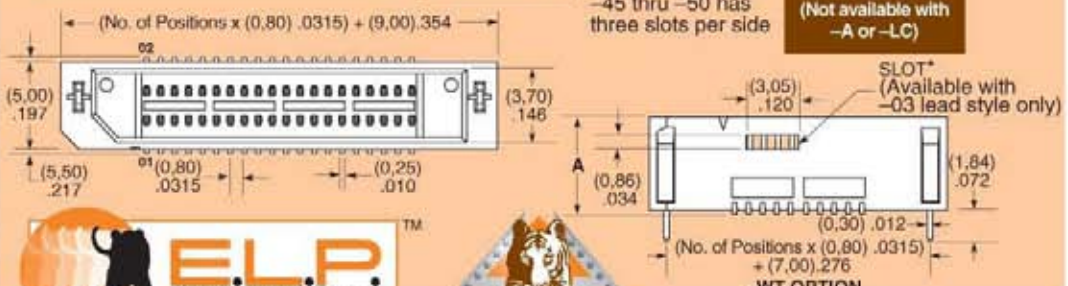
*Processing conditions will affect mated height.

PLATING OPTION:
- –H = 30µ" (0,76µm) Gold on contact, Gold Flash on tail

***Important Note:**
–10 thru –20 has one slot per side
–25 thru –40 has two slots per side
–45 thru –50 has three slots per side

OPTION:
- –A = Alignment Pin (Not available with –LC or –WT)
- –LC = Locking Clip (Not available with –A or –WT)
- –WT = Weld Tab (Not available with –A or –LC)

OTHER OPTION:
- –K = (5,50mm) .217" DIA Polyimide film Pick & Place Pad
- –TR = Tape & Reel



E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with SEM

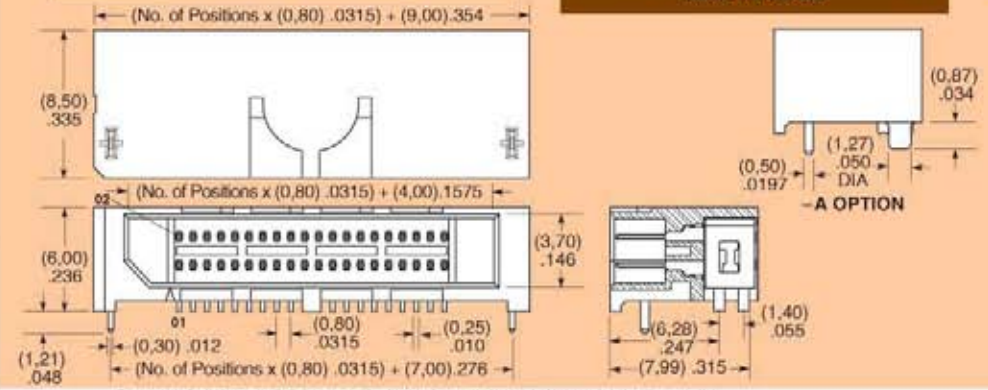
RUGGEDIZED by SAMTEC

TEM - 1 - NO. OF POSITIONS - 02 - DH1 - PLATING OPTION - D - OPTION

NO. OF POSITIONS: 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

PLATING OPTION:
- –S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

OPTION:
- –A = Alignment Pin



Due to technical progress, all designs, specifications and components are subject to change without notice.

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(0,80mm) .0315"

FTE SERIES

SMT MICRO HEADER

SPECIFICATIONS

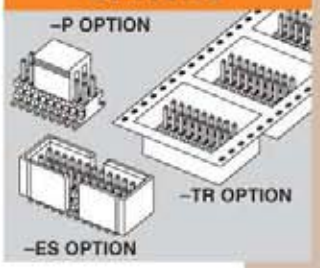
For complete specifications and recommended PCB layouts see www.samtec.com?FTE

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	FTE/CLE
20°C	3.1A
40°C	2.8A
60°C	2.4A
95°C	1.6A
6 POSITIONS (2x3) POWERED	

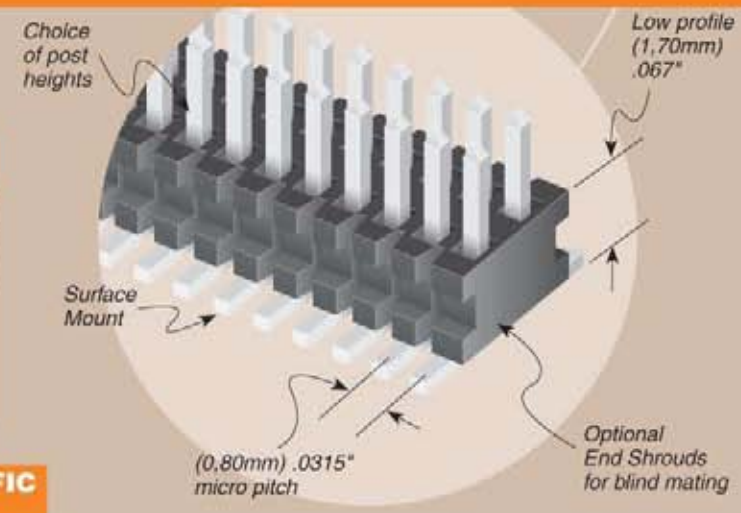
Mates with:
CLE

OPTIONS



APPLICATION SPECIFIC OPTION

End shrouds with board locks and Gold flash plating available. Call Samtec.



Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
-DV Lead Coplanarity:
(0,10mm) .004" max
-DH Lead Coplanarity:
(0,10mm) .004" max (05-25)
(0,15mm) .006" max (26-50)

Note: Some lengths, styles and options are non-standard, non-returnable.

FTE - 1 - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - TAIL OPTION - FLEX-SHROUD OPTIONS - OTHER OPTION

NO. PINS PER ROW: 05 thru 90

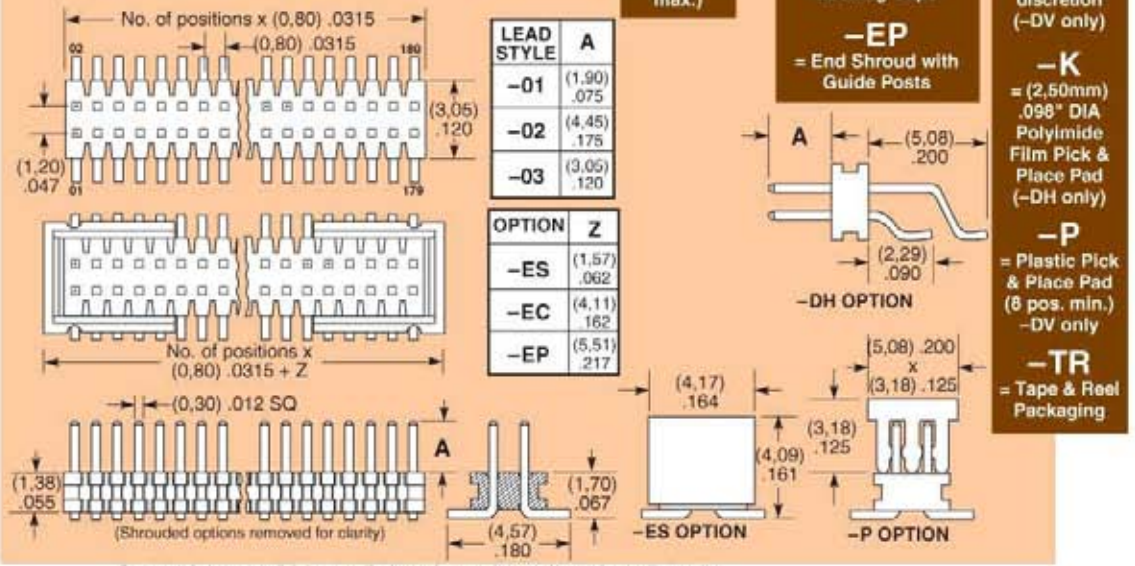
LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
-G = 10µ" (0,25µm) Gold on post, Gold flash on balance

TAIL OPTION:
-DV = Dual Vertical
-DH = Dual Horizontal (50 pos. max.)

FLEX-SHROUD OPTIONS: Style -01 -DV only (11 pins/row min.)
-ES = End Shroud
-EC = End Shroud with Locking Clips
-EP = End Shroud with Guide Posts

OTHER OPTION:
-A = Alignment Pin (5 pos. min.) Metal or plastic at Samtec discretion (-DV only)
-K = (2,50mm) .098" DIA Polyimide Film Pick & Place Pad (-DH only)
-P = Plastic Pick & Place Pad (8 pos. min.) -DV only
-TR = Tape & Reel Packaging



LEAD STYLE	A
-01	(1,90) .075
-02	(4,45) .175
-03	(3,05) .120

OPTION	Z
-ES	(1,57) .062
-EC	(4,11) .162
-EP	(5,51) .217

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

(0,80mm) .0315"

CLE SERIES

COST EFFECTIVE MICRO SOCKET

SPECIFICATIONS

Mates with:
FTE, AW

For complete specifications and recommended PCB layouts see www.samtec.com?CLE

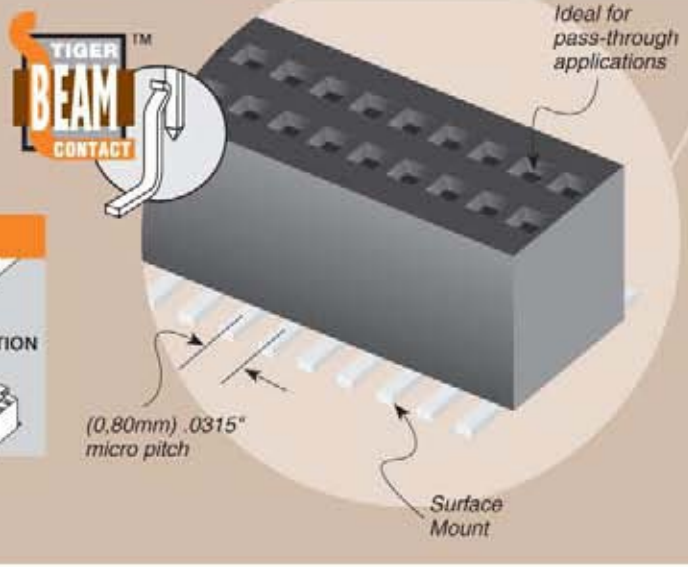
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
15 mΩ max (initial)
Insertion Depth:
Top Entry = (1,73mm) .068" to (3,18mm) .125" with (0,38mm) .015" wipe, or pass-through
Bottom Entry = (3,23mm) .127" minimum plus board thickness
Insertion Force:
(Single contact only)
2.0oz (0,56N)
Normal Force:
75 grams (0,73N)
Withdrawal Force:
(Single contact only)
1.2oz (0,33N)
Max Cycles:
100 with 10µ" (0,25µm) Au
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	FTE/CLE
20°C	3.1A
40°C	2.8A
60°C	2.4A
95°C	1.6A
6 POSITIONS (2x3) POWERED	

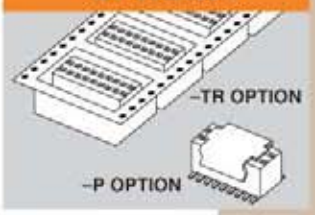
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (04-65)
(0,15mm) .006" max (66-90)

Note: Some lengths, styles and options are non-standard, non-returnable.



OPTIONS



CLE	–	1	NO. PINS PER ROW	–	01	–	PLATING OPTION	–	DV	–	OPTIONS

04 thru 90

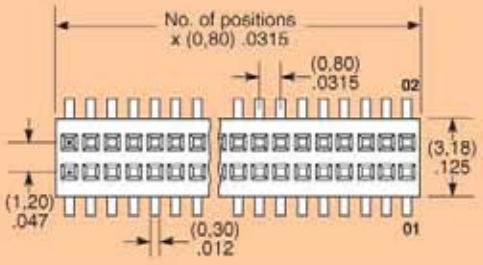
–G
= 10µ" (0,25µm) Gold

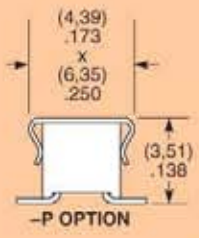
–A
= Alignment Pin (4 positions minimum) Metal or plastic at Samtec discretion.

–K
= (3,50mm) .138" DIA Polyimide film Pick & Place Pad (8 positions minimum)

–P
= Metal Pick & Place Pad (8 positions minimum)

–TR
= Tape & Reel Packaging





TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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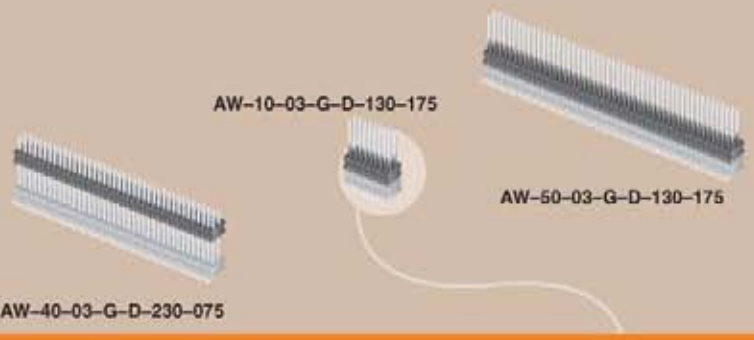
FLEX STACK

(0,80mm) .0315"

AW SERIES



SMT MICRO BOARD STACKER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?AW

Insulator Material:
Top: Black LCP
Bottom: Natural LCP

Terminal Material:
Phosphor Bronze

Plating:
Au over 50µ" (1,27µm) Ni

Current Rating:
.75A @ 80°C ambient

Operating Temp Range:
-55°C to +125°C

RoHS Compliant:
Yes

Processing:

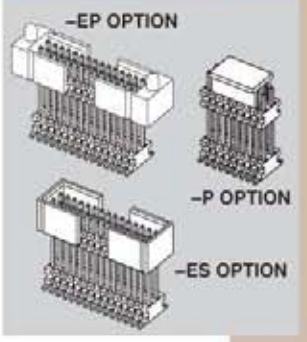
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

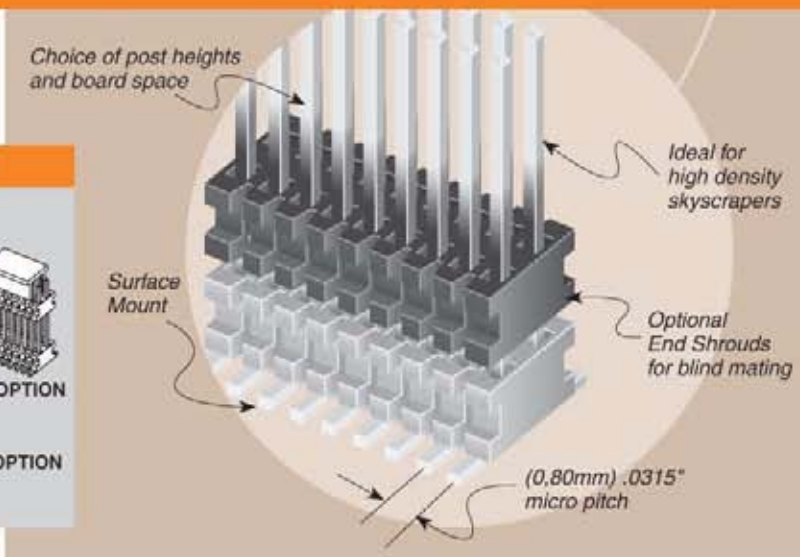
Lead-Free Solderable:
Yes

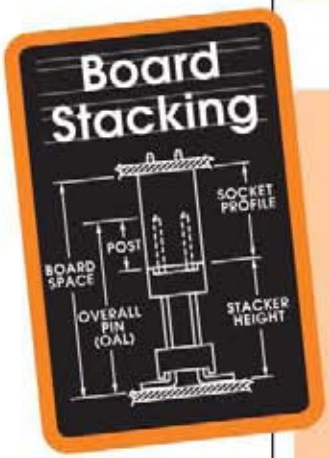
SMT Lead Coplanarity:
(0,10mm) .004" max (05-40)
(0,15mm) .006" max (41-90)

Mates with:
CLE

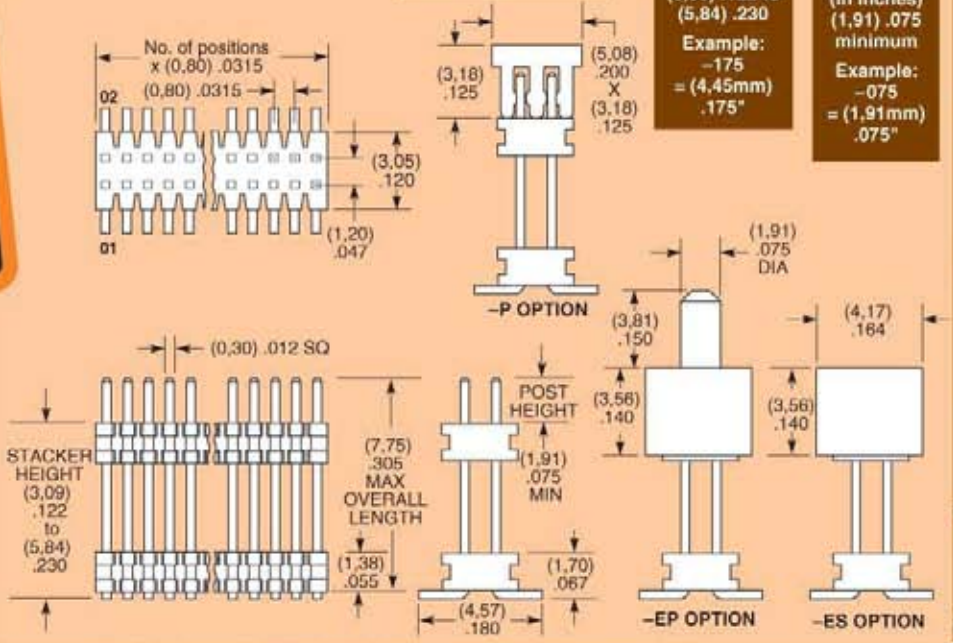
OPTIONS







AW	NO. PINS PER ROW	03	PLATING OPTION	D	STACKER HEIGHT	POST HEIGHT	OPTION
	05 thru 90		–G = 10µ" (0,25µm) Gold		–"XXX" = Stacker Height (in inches) (3,09) .122 to (5,84) .230 Example: –175 = (4,45mm) .175"	–"XXX" = Post Height (in inches) (1,91) .075 minimum Example: –075 = (1,91mm) .075"	–ES = End Shroud 11 pins/row min. (–075 Post Height only) –EP = End Shroud with Guide Post (–075 Post Height only) 11 pins/row min. –A = Alignment Pin (4 positions min.) (Available for board stacks between (4,06) .160 to (5,84) .230) Metal or plastic at Samtec discretion. –P = Pick & Place Pad (6 positions min.) –TR = Tape & Reel (84 positions max.)



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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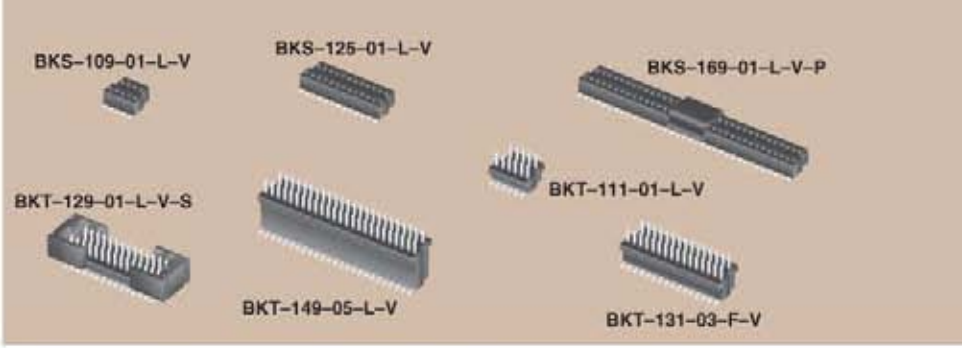


(1,00mm) .03937"

BKT, BKS SERIES

POLARIZED MICRO HEADER & SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?BKT or www.samtec.com?BKS

Insulator Material: Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: 1.5A @ 80°C ambient

Operating Temp Range: -55°C to +125°C

Contact Resistance: 15 mΩ max

Insertion Depth: (1,40mm) .055" minimum

Insertion Force: (Single contact only) 1.5oz (0,42N) average

Normal Force: 40 grams (0,39N) average

Withdrawal Force: (Single contact only) .75oz (0,20N) average

Max Cycles: 100 with 10µ" (0,25µm) Au

RoHS Compliant: Yes

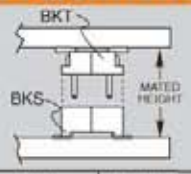
Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max

APPLICATIONS



BKT LEAD STYLE	MATED HEIGHT*
-01	(4,14) .163
-02	(4,50) .177
-03	(5,00) .197
-04	(6,00) .236
-05	(7,00) .276

*Processing conditions will affect mated height.

Note: Some sizes, styles and options are non-standard, non-returnable.

BKT – 1 – NO. OF POSITIONS – BASE HEIGHT – PLATING OPTION – V – OPTIONS

Mates with: BKS

07 thru 69
(Odd lead counts only)

Specify BODY STYLE from chart

–F
= Gold flash on post, Matte Tin on tail

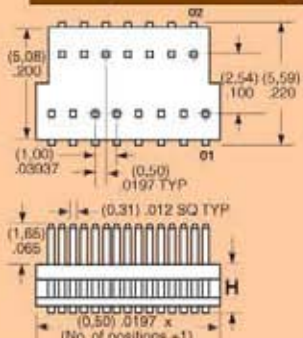
–L
= 10µ" (0,25µm) Gold on post, Matte Tin on tail

–S
= Shrouded (15 positions minimum)

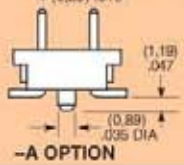
–A
= Alignment Pin (Metal or plastic at Samtec discretion) (14 positions minimum)

–P
= Pick & Place Pad (13 positions minimum)

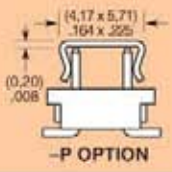
–TR
= Tape & Reel Packaging



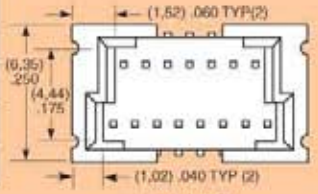
BODY STYLE	BASE HEIGHT H	BOARD SPACE (mated with BKS)
-01	(1,93) .076	(4,14) .163
-02	(2,29) .090	(4,50) .177
-03	(2,79) .110	(5,00) .197
-04	(3,78) .149	(6,00) .236
-05	(4,80) .189	(7,00) .276



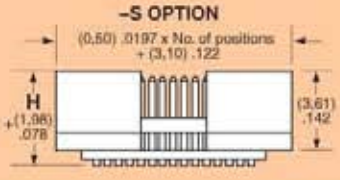
–A OPTION



–P OPTION



–S OPTION



BKS – 1 – NO. OF POSITIONS – 01 – PLATING OPTION – V – OPTIONS

Mates with: BKT

07 thru 69
(Odd lead counts only)
(07 positions available with –TR only)

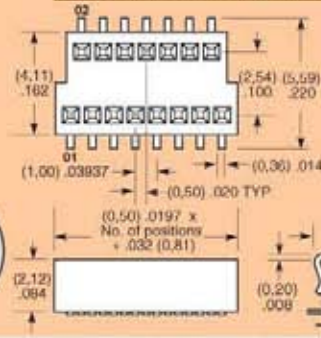
– F
= Pre-plated Gold flash on contact, Matte Tin on tail

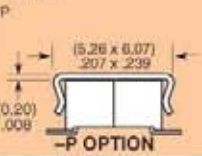
– L
= Pre-plated 10µ"(0,25µm) Gold contact, Matte Tin on tail

–A
= Alignment Pin (Metal or plastic at Samtec discretion) (11 positions minimum)

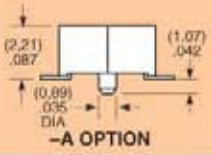
–P
= Pick and Place Pad (13 positions minimum) Not always necessary for auto placement. See Flex Processing.

–TR
= Tape & Reel Packaging





–P OPTION



–A OPTION

Due to technical progress, all designs, specifications and components are subject to change without notice.

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E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(1,00mm) .03937"
FTMH SERIES

SMT MICRO HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FTMH

Insulator Material: Black Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Current Rating: 2.5A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Plating: Sn or Au over 50µ" (1,27µm) Ni
RoHS Compliant: Yes

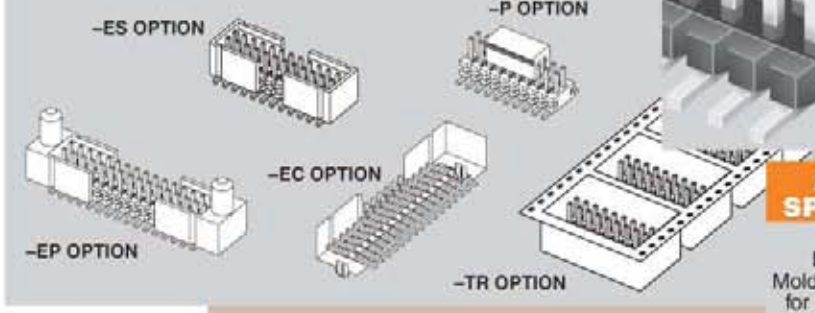
Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
-DV Lead Coplanarity: (0,10mm) .004" max
-DH Lead Coplanarity: (0,10mm) .004" max (05-25) (0,15mm) .006" max (26-50)

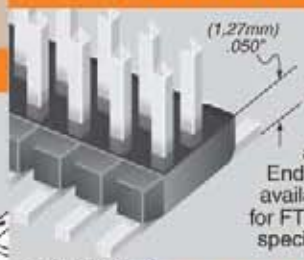
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with: CLM, MLE

OPTIONS



ALSO AVAILABLE



Ultra-low profile option available. End Shrouds available. Call for FTM Series specifications.

APPLICATION SPECIFIC OPTION

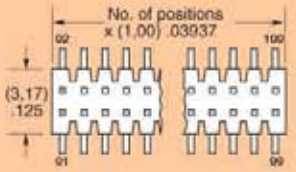
End shrouds with board locks available. Molded end shrouds available for 05 through 08 positions. Call Samtec.

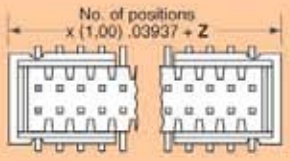
FTMH	-	1	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-

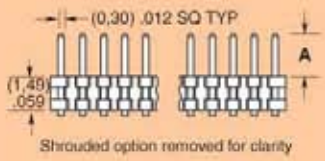
NO. PINS PER ROW: 05 thru 50

LEAD STYLE:
- **-02** = (1,91) .075" Post (Mates with MLE)
- **-03** = (1,65) .065" Post (Mates with CLM)

PLATING OPTION:
- **-F** = Gold flash on post, Matte Tin on tail
- **-L** = 10µ" (0,25µm) Gold on post, Matte Tin on tail



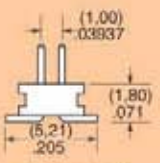




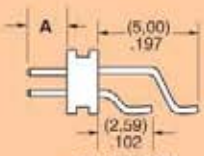
Shrouded option removed for clarity

LEAD STYLE	A
-02	(1,91) .075
-03	(1,65) .065

OPTION	Z
-ES	(1,57) .062
-EC	(4,06) .160
-EP	(5,49) .216



-DV OPTION



-DH OPTION

Due to technical progress, all designs, specifications and components are subject to change without notice.

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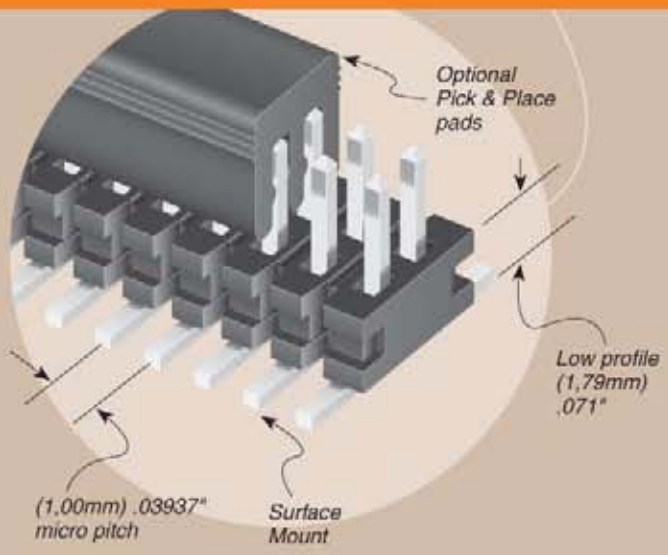
FTMH-110-02-L-DV-P

FTMH-130-02-L-DV-ES

FTMH-120-02-F-DV-EC

FTMH-128-02-L-DV-EP



ROW OPTION

–DV
= Dual Vertical

–DH
= Dual Horizontal

FLEX SHROUD OPTIONS
(–DV only) 9 pins/row minimum

–ES
= End Shroud

–EC
= End Shroud with Locking Clip

–EP
= End Shroud with Guide Post
(Use only when mating with CLM)

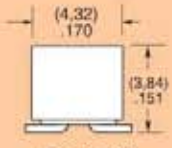
OTHER OPTIONS

–A
= Alignment Pin
(3 positions minimum)
Metal or plastic at Samtec discretion
(–DV only)

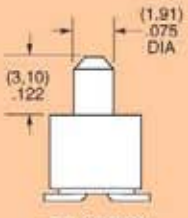
–K
= (2,50mm) .098" DIA Polyimide
Film Pick & Place Pad
(–DH only)

–P
= Plastic Pick & Place Pad
(–DV only)
(6 positions minimum)

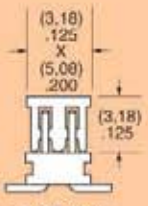
–TR
= Tape & Reel



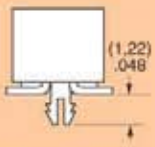
–ES OPTION



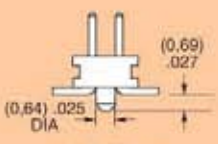
–EP OPTION



–P OPTION



–EC OPTION



–A OPTION

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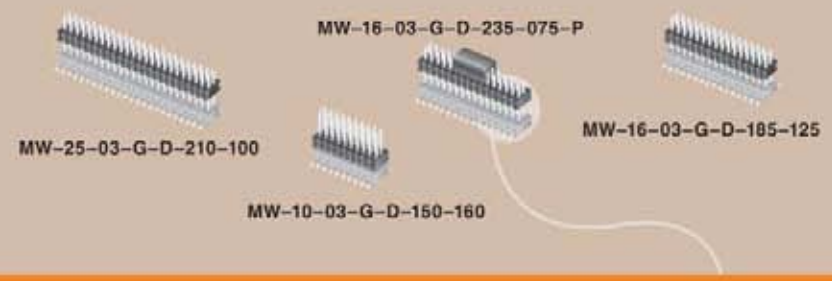
FLEX STACK

(1,00mm) .03937"

MW SERIES



SMT MICRO BOARD STACKER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MW

Insulator Material:
Top: Black LCP
Bottom: Natural LCP

Terminal Material:
Phosphor Bronze

Current Rating:
2.5A @ 80°C ambient

Operating Temp Range:
-55°C to +125°C

Plating:
Au over 50µ"(1,27µm) Ni

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

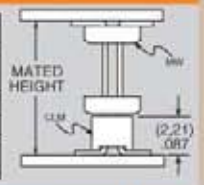
SMT Lead Coplanarity:
(0,10mm) .004" max (02-30)
(0,15mm) .006" max (31-50)

Mates with:
CLM, MLE

APPLICATIONS

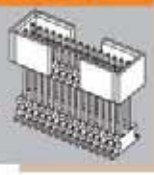
EXAMPLES		
LEAD STYLE		MATED HEIGHT*
MW	CLM	
-163-065	– 02	(6,35) .250
-233-065		(8,13) .320

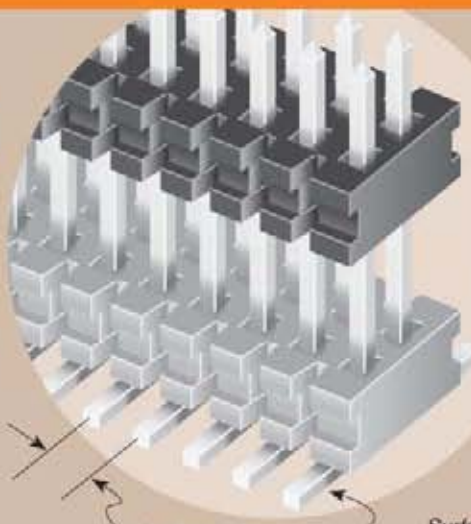
*Processing conditions will affect mated height.



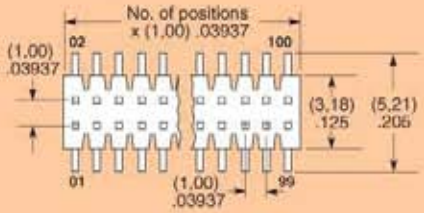
APPLICATION SPECIFIC OPTION

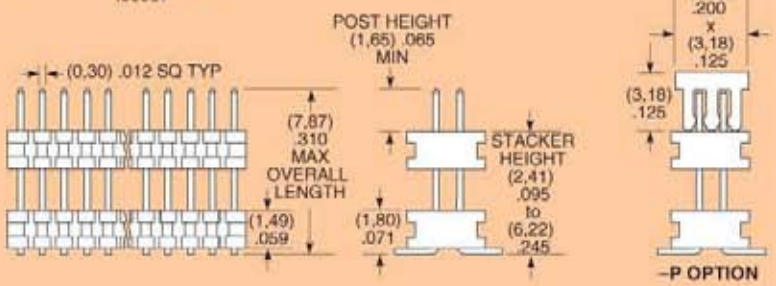
Alignment pins, end shrouds and end shrouds with guide posts available. Call Samtec.

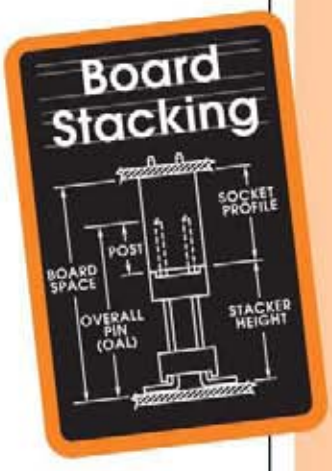




MW	NO. PINS PER ROW	03	PLATING OPTION	D	STACKER HEIGHT	POST HEIGHT	OPTION
	02 thru 50		–G = 10µ" (0,25µm) Gold		–"XXX" = Stacker Height (in inches) (2,41) .095 to (6,22) .245 Example: –245 = (6,22mm) .245"	–"XXX" = Post Height (in inches) (1,65) .065 minimum Example: –065 = (1,65) .065"	–P = Pick & Place Pad (7 positions minimum) –TR = Tape & Reel







Note: This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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E.L.P™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(1,00mm) .03937"
CLM, MLE SERIES

RUGGED RELIABLE MICRO SOCKETS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?CLM

Insulator Material: Black LCP
Contact Material: Phosphor Bronze
Plating: Au, Sn or SnPb over 50µ" (1,27µm) Ni
Current Rating: 3A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Contact Resistance: 15 mΩ max
Insertion Depth: Top Entry = (1,40mm) .055" min., Bottom Entry = (2,41mm) .095" min. (Add board thickness for correct post OAL)
Insertion Force: 1.5oz (0,42N) average
Normal Force: 40 grams (0,39N) average
Withdrawal Force: .75oz (0,21N) average
Max Cycles: 100 with 10µ" (0,25µm) Au
RoHS Compliant: Yes

Note: Some lengths, styles and options are non-standard, non-returnable.

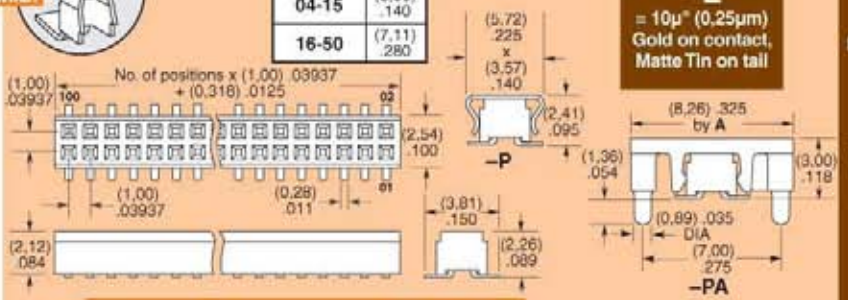
CLM – 1 – NO. PINS PER ROW – 02 – PLATING OPTION – D – OPTIONS

Mates with: FTM, FTMH, MW

TIGER CLAW™ CONTACT

02 thru 50

PIN/ROW	A
04-15	(3,56) .140
16-50	(7,11) .280



–F
= Gold flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–BE
= Bottom Entry (Required for bottom entry)

–K
= (3,50mm) .138" DIA Polyimide film Pick & Place Pad (7 positions minimum)

–P
= Pick & Place Pad (7 positions minimum)

–PA
= Pick & Place Pad with integral Alignment Pin

–TR
= Tape & Reel Packaging

PROCESSING

- **Max Processing Temp:** 230°C for 60 seconds, or 260°C for 20 seconds 3x
- **Lead-Free Solderable:** Yes
- **SMT Lead Coplanarity:** (0,10mm) .004" max (02-25) (0,15mm) .006" max (26-50)

APPLICATION SPECIFIC OPTION

Alignment Pin available. Call Samtec.

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MLE

Insulator Material: Black LCP
Contact Material: BeCu
Operating Temp Range: -55°C to +125°C
Plating: Au over 10µ" (0,25µm) Ni
Insertion Depth: (1,63mm) .064" to (3,18mm) .125" with (0,38mm) .015" wipe, pass-through, or (2,44mm) .096" minimum for bottom entry
Insertion Force: 2.70oz (0,75N) average
Withdrawal Force: 0.50oz (0,14N) average
RoHS Compliant: Yes

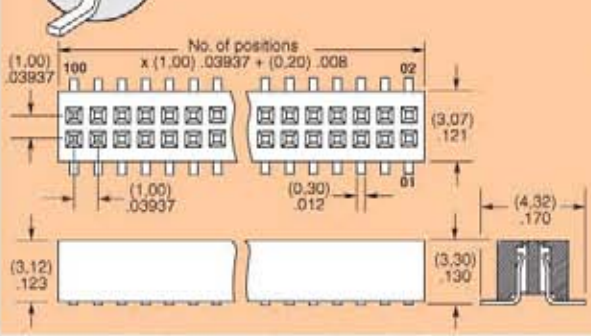
Note: Some lengths, styles and options are non-standard, non-returnable.

MLE – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – DV – OPTIONS

Mates with: FTM, FTMH, MW

TIGER BEAM™ CONTACT

02 thru 50



–G
= 10µ" (0,25µm) Gold

–A
= Alignment Pin (3 positions minimum) Metal or plastic at Samtec discretion.

–K
= (4,00mm) .1575" DIA Polyimide film Pick & Place Pad (5 positions minimum)

–P
= Metal Pick & Place Pad (5 positions minimum)

–TR
= Tape & Reel Packaging

Due to technical progress, all designs, specifications and components are subject to change without notice.

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FOURRAY™

(0,635mm) .025"

SOLC SERIES

QUAD ROW SMT SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SOLC

Insulator Material:
Black Liquid Crystal Polymer
UL FILE NO. E111594
Contact Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating:
2.5A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
10 mΩ max
Insertion Depth:
(1,68mm) .066" to
(3,61mm) .142" with
(0,38mm) .015" wipe
Insertion Force:
(Single contact only)
2.0oz (0.56N) average
Normal Force:
75 grams (0,74N) average
Withdrawal Force:
(Single contact only)
1.5oz (0,42N) average
Max Cycles:
100+
RoHS Compliant:
Yes

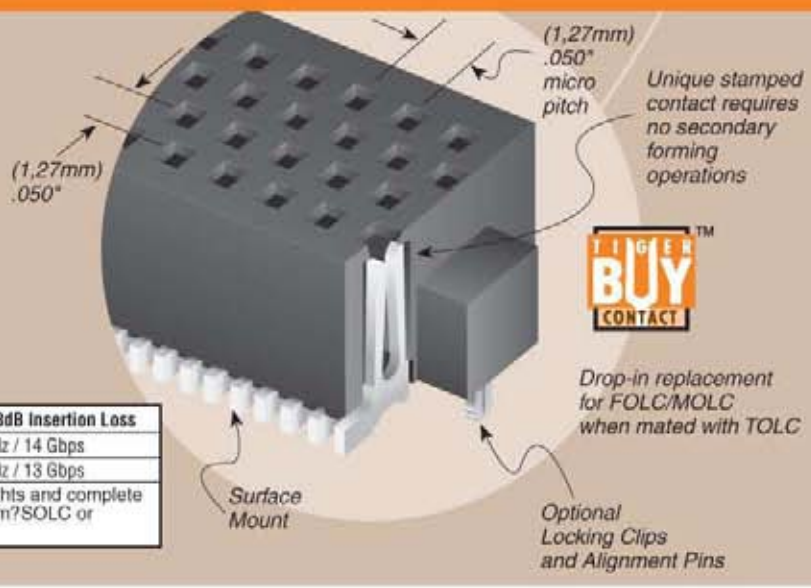
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (05-35)
(0,15mm) .006" max (40-50)

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with:
TOLC



6,35mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	6.5 GHz / 13 Gbps

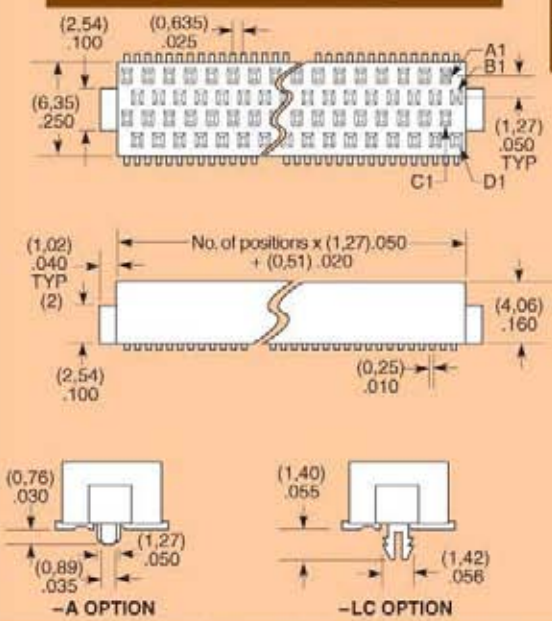
Performance data for other stack heights and complete test data available at www.samtec.com?SOLC or contact sig@samtec.com.

SOLC – 1 – NO. PINS PER ROW – 02 – PLATING OPTION – Q – OPTION

NO. PINS PER ROW:
05, 10, 15, 20, 25, 30, 35, 40, 45, 50
(Call Samtec for other sizes)

PLATING OPTION:
–F = Gold flash on contact, Gold flash on tail
–L = 10µ" (0,25µm) Gold on contact, Gold flash on tail

OPTION:
–A = Alignment Pin (N/A with -LC)
–LC = Locking Clip (N/A with -A)
–K = (7,00mm) .276" DIA Polyimide film Pick & Place Pad
–P = Pick & Place Pad
–TR = Tape & Reel



TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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FOURRAY™

(0,635mm) .025"

TOLC SERIES

QUAD ROW SMT TERMINAL

SPECIFICATIONS

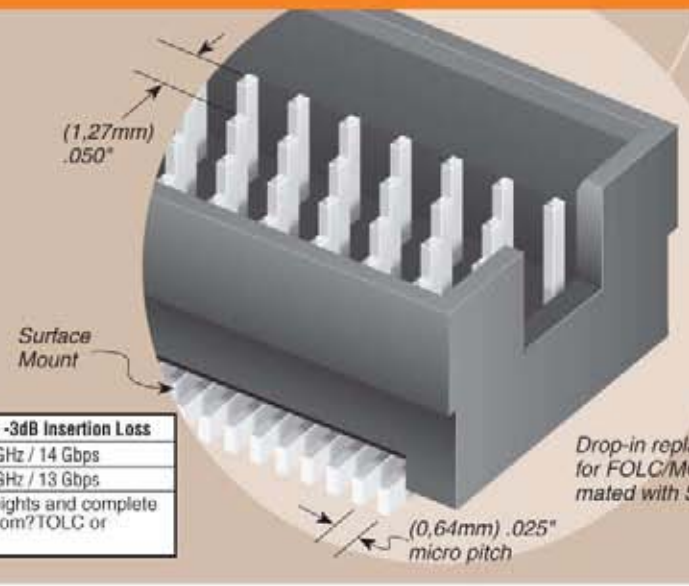
For complete specifications and recommended PCB layouts see www.samtec.com?TOLC

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating: Au over 50µ" (1,27µm) Ni
Current Rating:
2.5A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (05-30)
(0,15mm) .006" max (35-50)

Mates with:
SOLC



Drop-in replacement for FOLC/MOLC when mated with SOLC

6,35mm Stack Height	Rated @ -3dB Insertion Loss
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	6.5 GHz / 13 Gbps

Performance data for other stack heights and complete test data available at www.samtec.com?TOLC or contact sig@samtec.com.

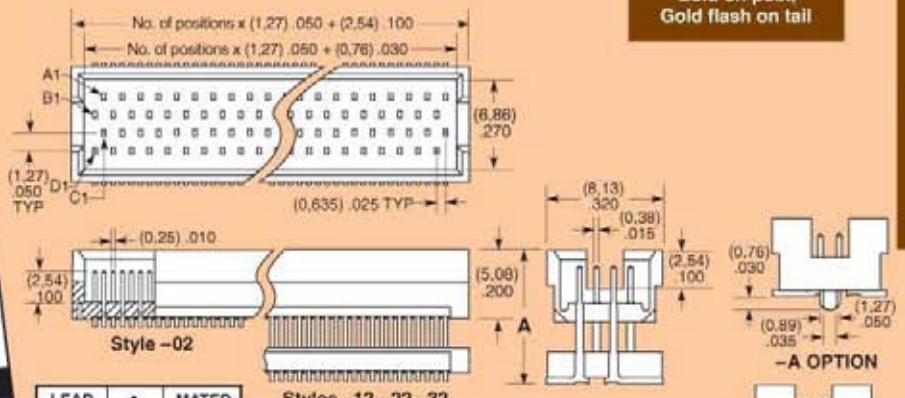
TOLC – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – Q – OPTION

NO. PINS PER ROW: 05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
- **–F** = Gold flash on post, Gold flash on tail
- **–L** = 10µ" (0,25µm) Gold on post, Gold flash on tail

OPTION:
- **–A** = Alignment Pin (N/A with -LC)
- **–LC** = Locking Clip (N/A with -A)
- **–K** = (9,00mm) .354" DIA Polyimide film Pick & Place Pad
- **–TR** = Tape & Reel



LEAD STYLE	A	MATED HEIGHT
–02	(5,59) .220	(6,35) .250
–12	(7,24) .285	(8,00) .315
–22	(9,25) .364	(10,00) .394
–32	(11,23) .442	(12,00) .472

TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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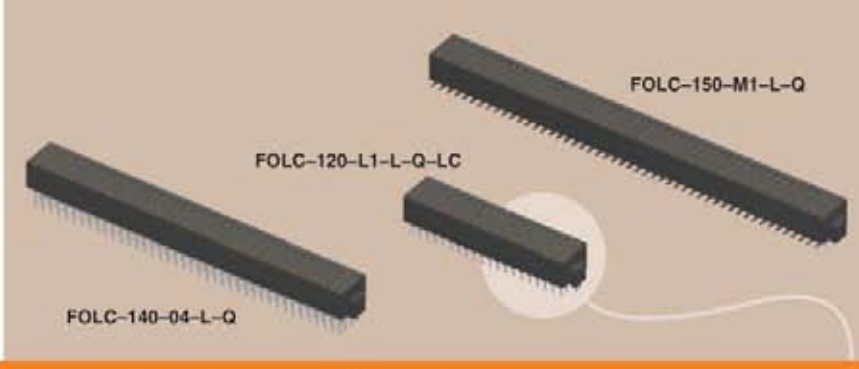
FOURRAY™

(1,27mm) .050"
FOLC SERIES



HIGH DENSITY TIGER EYE™ SOCKETS

SPECIFICATIONS

Mates with:
MOLC

For complete specifications and recommended PCB layouts see www.samtec.com?FOLC

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Current Rating:
1A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Contact Resistance:
15 mΩ max
Insertion Depth:
(3,30mm) .130" to
(4,06mm) .160"
Insertion Force:
(Single contact only)
Standard= 5.0oz (1,39N) avg.
LIF= 2.0oz (0,56N) avg.
Normal Force:
Standard= 70 grams
(0,69N) avg. LIF= 40 grams
(0,39N) avg.
Withdrawal Force:
(Single contact only)
Standard= 4oz (1,11N) avg.
LIF= 1.5oz (0,42N) avg.
Max Cycles:
100 with 30µ" (0,76µm) Au
RoHS Compliant:
Yes

Processing:

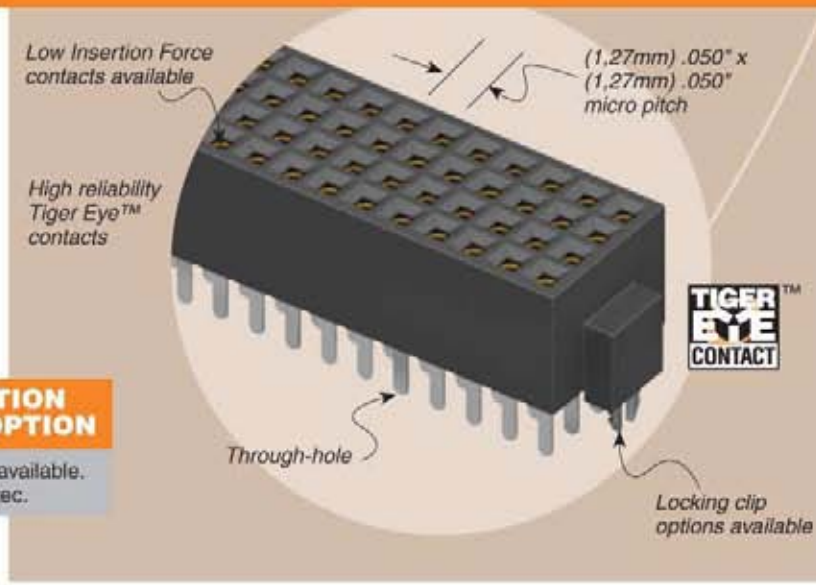
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max

ALSO AVAILABLE

- For surface mount with Tiger Eye™ contact, see www.samtec.com?ROLC
- Also see TOLC/SOLC Series for surface mount design with Tiger Buy contacts.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.



APPLICATION SPECIFIC OPTION

Alignment pins available. Call Samtec.

FOLC	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	Q	–	OPTION

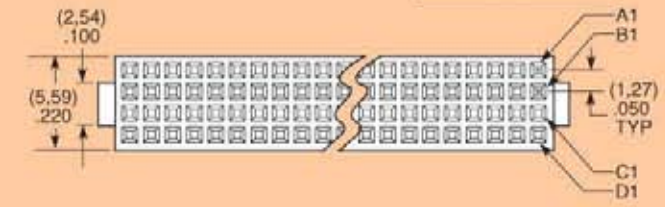
NO. PINS PER ROW: 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

LEAD STYLE:
- –01 & –04 = Through-Hole
- –M1 & –M2 = Mixed Technology
- –L1 & –L4 = Low Insertion Force Through-Hole

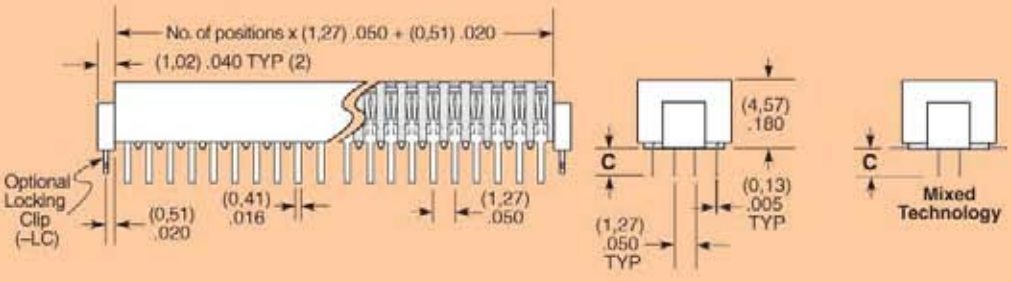
PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

Q

OPTION: –LC = Locking Clip



LEAD STYLE	C
–01, –M1	(1,91) .075
–04, –M2	(3,04) .120

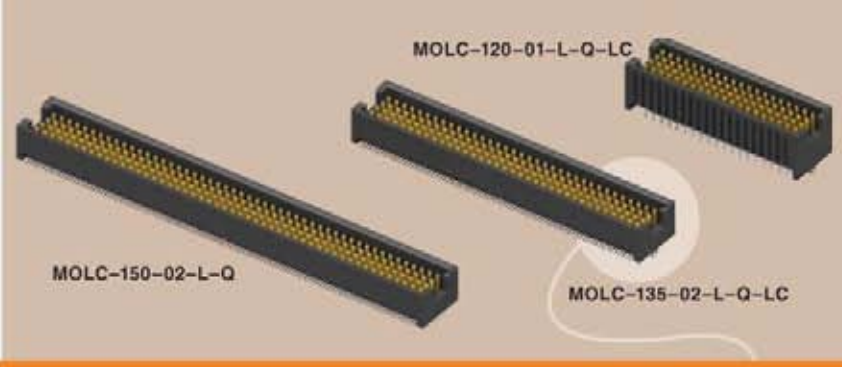


Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

FOURRAY

(1,27mm) .050"
MOLC SERIES



HIGH DENSITY HIGH REL HEADERS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MOLC

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

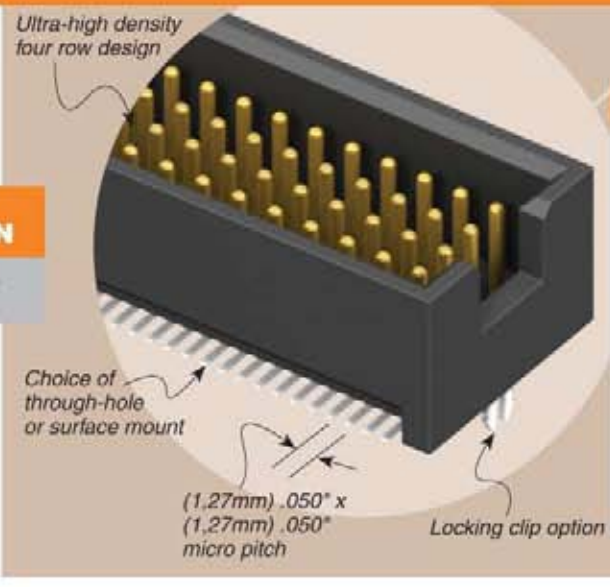
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (20-25)
(0,15mm) .006" max (30-50)

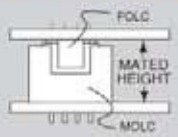
Mates with:
FOLC

APPLICATION SPECIFIC OPTION

Alignment pins available. Call Samtec.



APPLICATIONS



LEAD STYLE		MATED HEIGHT*
MOLC	FOLC	
-01	-01	(5,97) .235
-11		(7,75) .305
-31		(11,43) .450
-02	-02	(6,00) .235

*Processing conditions will affect mated height.

ALSO AVAILABLE

- For surface mount with Tiger Eye™ contact, see www.samtec.com?ROLC
- Also see TOLC/SOLC Series for surface mount design with Tiger Buy contacts.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

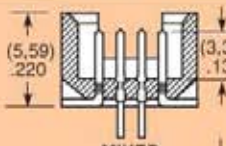
MOLC – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – Q – OPTION

NO. PINS PER ROW: 20, 25, 30, 35, 40, 45, 50 (Call Samtec for other sizes)

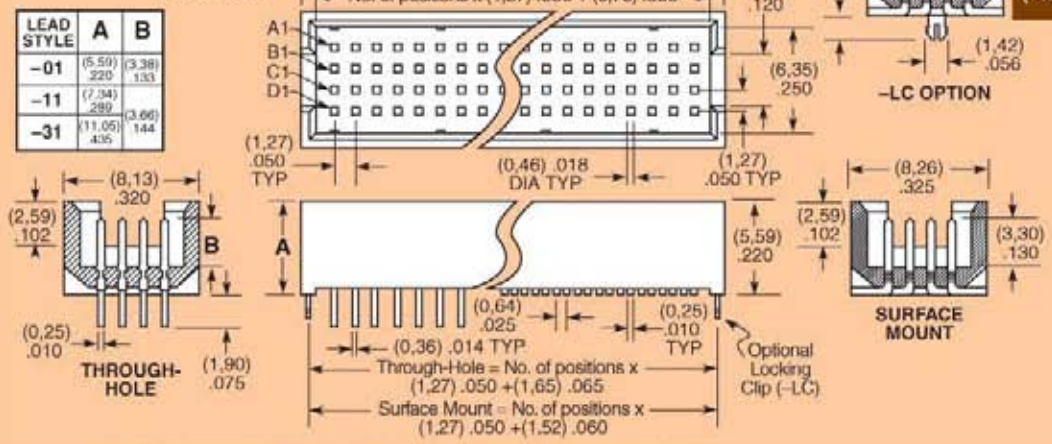
LEAD STYLE:
- –'X'1 = Through- hole (Specify from chart)
- –02 = Surface Mount
- –M1 = Mixed Technology

PLATING OPTION:
- –L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

OPTION:
- –LC = Locking Clip
- –P = Pick & Place Pad (–02 only)
- –TR = Tape & Reel (–02 only)



LEAD STYLE	A	B
-01	(5,59) .220	(3,38) .133
-11	(7,34) .289	(3,66) .144
-31	(11,05) .435	



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(1,27mm) .050"
FTSH SERIES

SMT MICRO HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FTSH

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
–MT & –DV Tail Option:
(0,10mm) .004" max (02-25)
–MT & –DH Tail Option:
(0,15mm) .006" max (26-50)

1,27mm FTSH/CLP	Rated @ -3dB Insertion Loss
5,13mm Stack Height	
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	8.5 GHz / 17 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?FTSH or contact sig@samtec.com.	

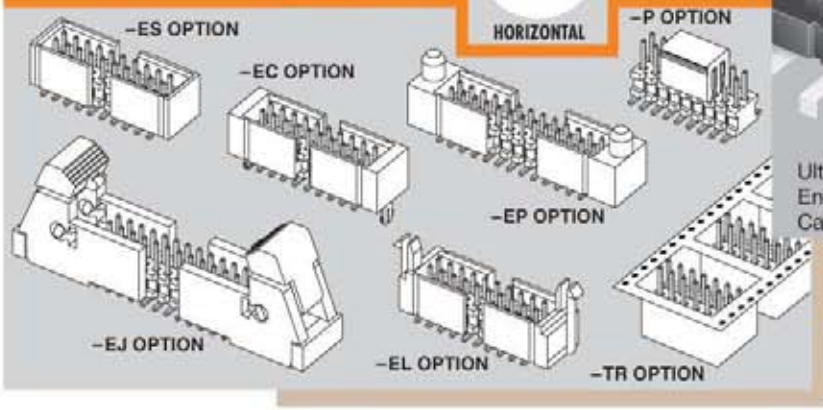
Note: Some sizes, styles and options are non-standard, non-returnable.

Note: See SFM/TFM for positive alignment feature.

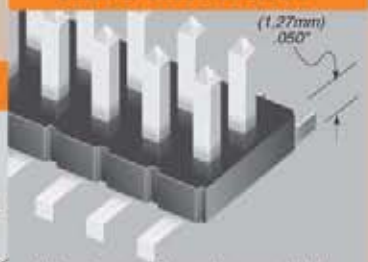
Mates with:
FFSD, CLP, FLE, SFMC, SFMH

APPLICATIONS

OPTIONS



ALSO AVAILABLE



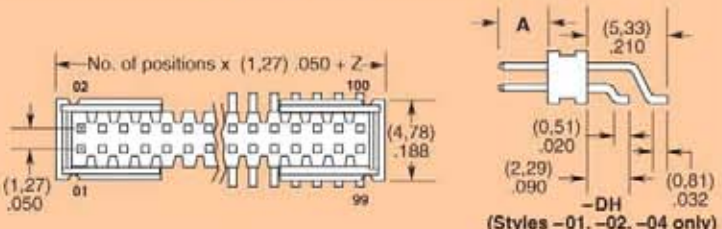
Ultra-low profile option available.
End Shrouds available.
Call for FTS Series specifications.

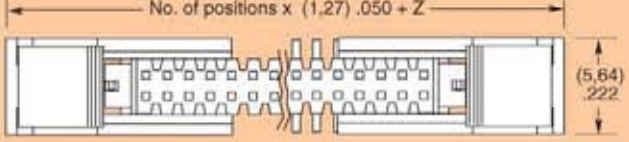
APPLICATION SPECIFIC OPTION

Molded Pick & Place pads, latches and straddle mount leads available. Call Samtec.

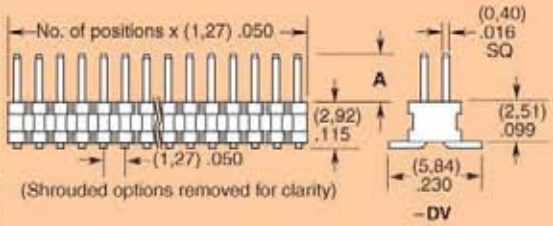
FTSH – **1** – **NO. PINS PER ROW** – **LEAD STYLE**

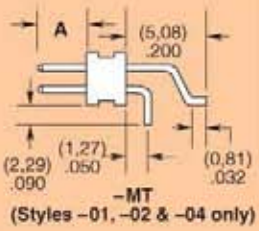
02 thru 50





OPTION	Z
–ES	(2,57) .101
–EJ	(15,77) .621
–EC	(3,33) .131
–EP	(5,87) .231
–EL	(6,53) .257





LEAD STYLE	A
–01	(3,05) .120
–02	(1,91) .075
–03	(1,65) .065
–04	(3,81) .150
–05	(4,32) .170

–01
= (3,05) .120" Post
(Mates with FFSD, FLE, CLP–DH)

–02
= (1,91) .075" Post
(Mates with FLE)

–03
= (1,65) .065" Post
(Mates with CLP–D)

–04
= (3,81) .150" Post
(Mates with SFMC, SFMH)

–05
= (4,32) .170" Post
(Mates with CLP–BE)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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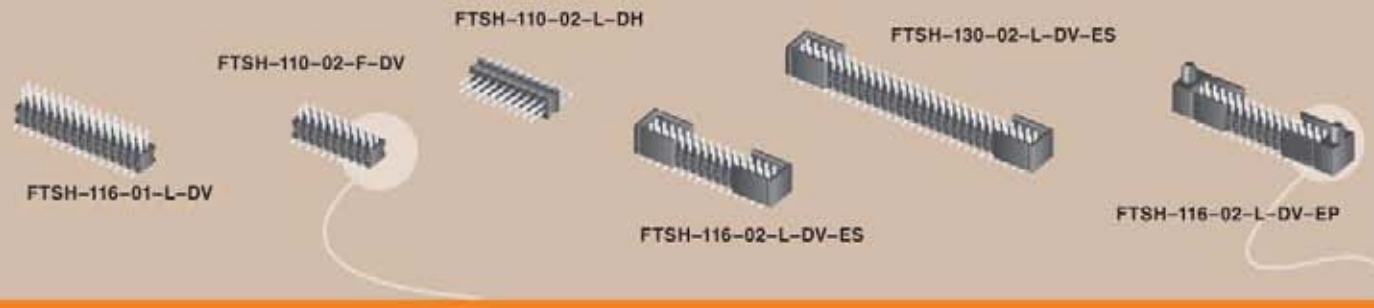
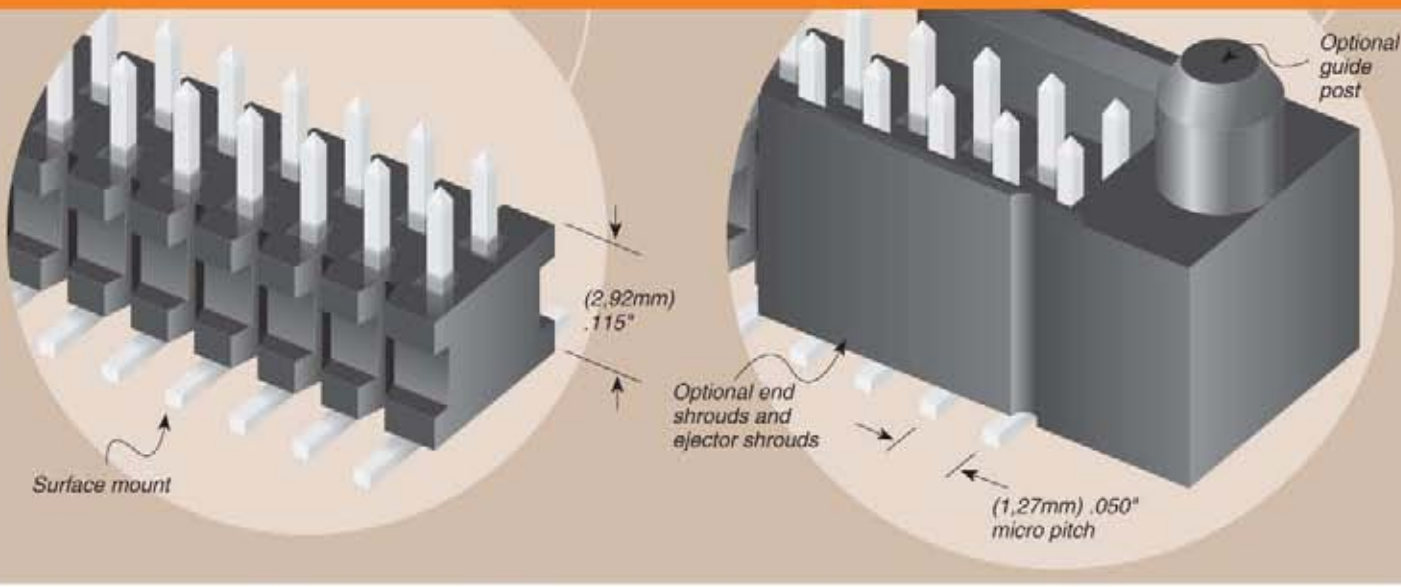




PLATING OPTION

–F
= Gold flash on post, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on post, Matte Tin on tail

TAIL OPTION

–DV
= Double Vertical

–DH
= Double Horizontal (Styles –01, –02 & –04 only)

–MT
= Mixed Technology (Styles –01, –02 & –04 only)

FLEX SHROUD OPTIONS

(Style –02 & –03 only, –DH not available)
9 pins/row minimum
(Other positions available. Call Samtec.)

–ES
= End Shroud

–EC
= End Shroud with Locking Clip

–EP
= End Shroud with Guide Post

–EL
= End Shroud with Board Lock (Boards are positively locked and cannot be unmated)

–EJ
= Ejector Shroud (Style –01 only)
–DH & –MT not available
10 pins/row minimum
25 pins/row maximum

OTHER OPTIONS

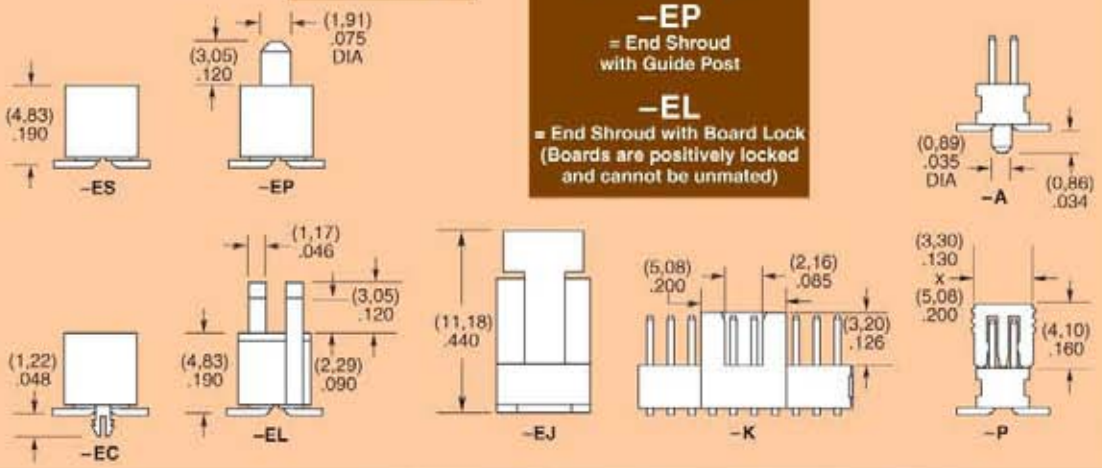
–K
= Keying Shroud (For mating with FFSD Styles –01 only, 05, 08, 10, 13, 17, 20 & 25 pins/row only, 13, 17, 20 & 25 only with shrouds) (–DV only)

–A
= Alignment Pin (–DV 3 positions min.) (–DH 5 positions min.) (Metal or plastic at Samtec discretion)

–C
= (4,00mm) .157" DIA Polyimide film Pick & Place Pad (–DH only)

–P
= Pick & Place Pad (–DV 4 positions min.) (–DH & –MT not available)

–TR
= Tape & Reel Packaging (Flex Shroud options not available except –ES & –EJ)



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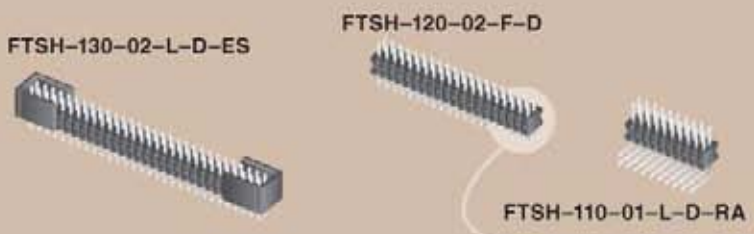
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(1,27mm) .050"
FTSH SERIES



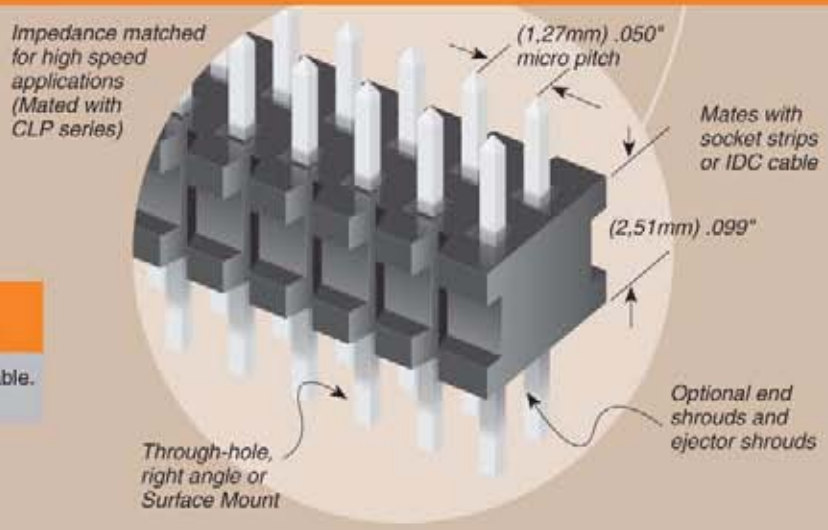
THROUGH-HOLE MICRO HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?FTSH

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Mates with:
FFSD, CLP, FLE, SFMC



APPLICATION SPECIFIC OPTION

Molded Pick & Place pads available. Call Samtec.

Note:
See SFM/TFM for positive alignment feature.

Note: Some sizes, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

SUDDEN SPECS!
www.samtec.com

FTSH - 1 - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - TAIL OPTION - OTHER OPTIONS

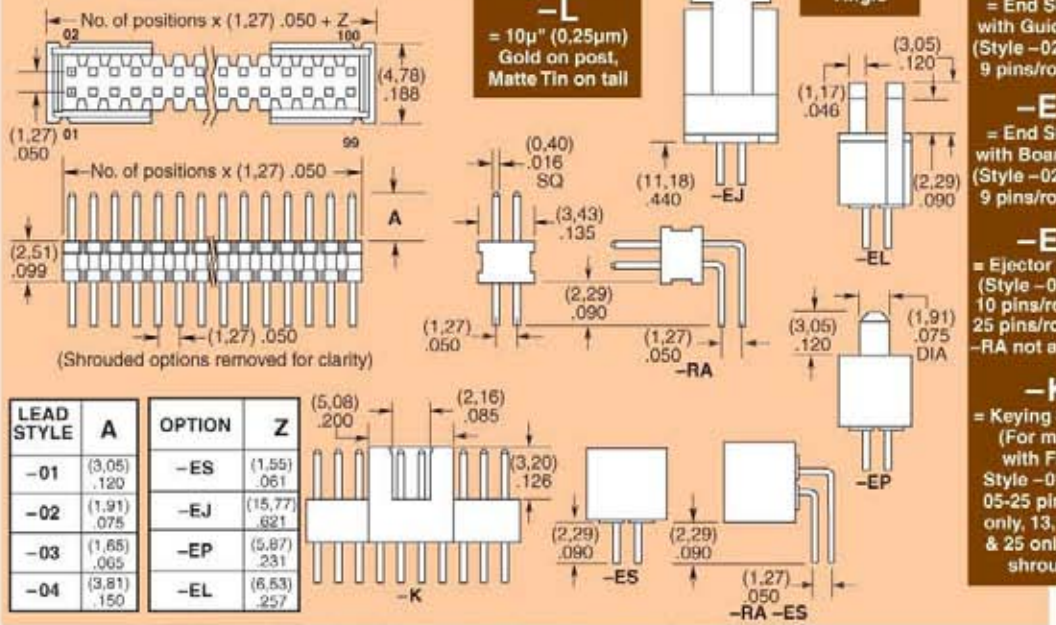
NO. PINS PER ROW: 02 thru 50

LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
–F = Gold flash on post, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

TAIL OPTION: Leave blank for straight tail
–RA = Right Angle

OTHER OPTIONS:
–ES = End Shroud (Style –02 & –03) 9 pins/row min.
–EP = End Shroud with Guide Post (Style –02 & –03) 9 pins/row min.
–EL = End Shroud with Board Lock (Style –02 & –03) 9 pins/row min.
–EJ = Ejector Shroud (Style –01 only) 10 pins/row min. 25 pins/row max. –RA not available
–K = Keying Shroud (For mating with FFSD Style –01 only, 05-25 pins/row only, 13, 17, 20 & 25 only with shrouds)



LEAD STYLE	A
–01	(3,05) .120
–02	(1,91) .075
–03	(1,65) .065
–04	(3,81) .150

OPTION	Z
–ES	(1,55) .061
–EJ	(15,77) .621
–EP	(5,87) .231
–EL	(6,53) .257

Due to technical progress, all designs, specifications and components are subject to change without notice.

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(1,27mm) .050"

EHF, ECF SERIES

SHROUDED IDC EJECTOR HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?EHF

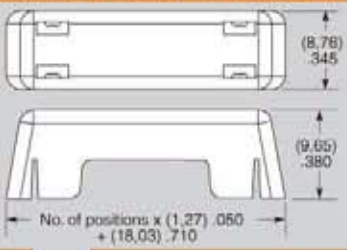
Insulator Material: Black Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 1.75A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

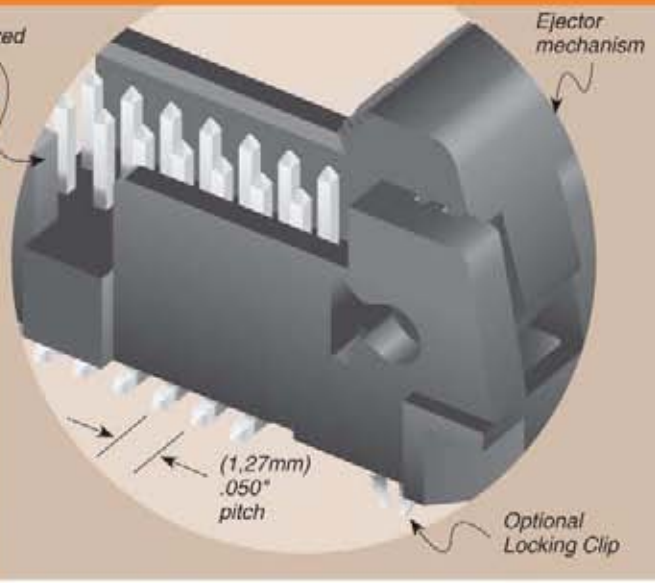
Mates with: FFSD, FFTP

EJECTOR HEADER CAP
(Locks FFSD cable to EHF header)



ECF – NO. PINS PER ROW

05, 08, 10, 13, 17, 20, 25



EHF – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – D – TAIL OPTION – OTHER OPTION

05, 08, 10, 13, 17, 20, 25

–F = Gold flash on post, Matte Tin on tail

–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

Leave blank for Through-Hole version

–SM = Surface Mount

–RA = Right Angle

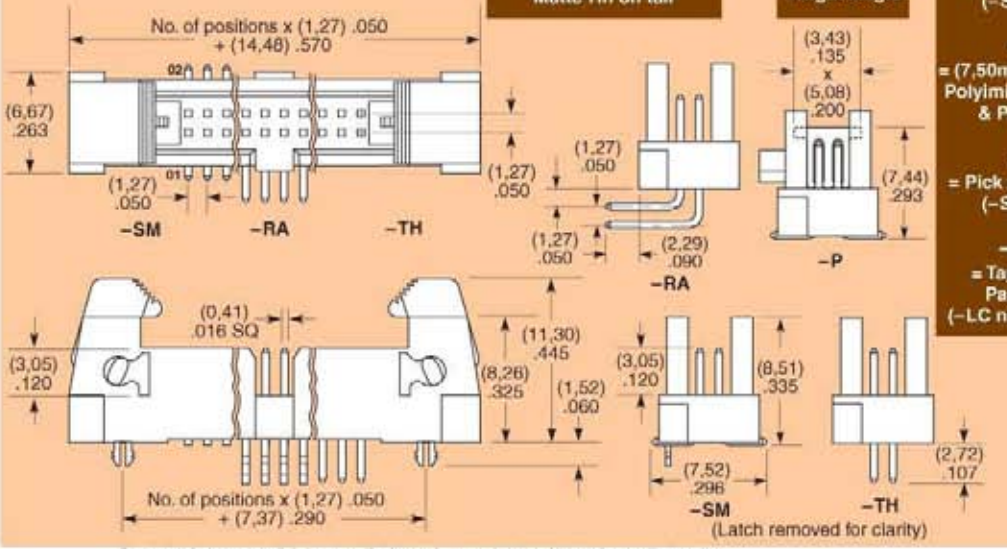
–"XX" = Polarized Position (–RA not available)

–LC = Locking Clip (–SM Only)

–K = (7,50mm) .295" DIA Polyimide Film Pick & Place Pad

–P = Pick & Place Pad (–SM Only)

–TR = Tape & Reel Packaging (–LC not available)



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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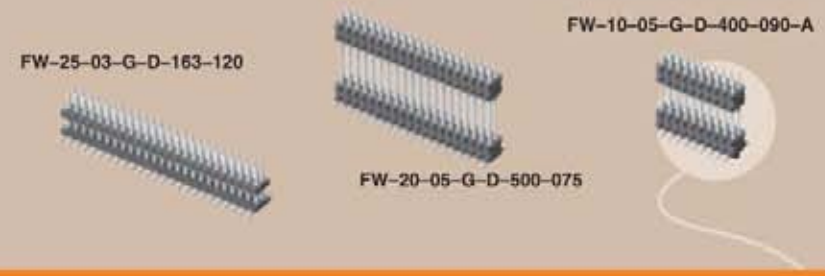
FLEX STACK

(1,27mm) .050"

FW SERIES



SMT MICRO BOARD STACKER

SPECIFICATIONS

Mates with:
CLP, FFSD, FLE

For complete specifications and recommended PCB layouts see www.samtec.com?FW

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (02-30)
(0,15mm) .006" max (31-50)

1,27mm FW/CLP	Rated @ -3dB Insertion Loss
17,7mm Stack Height	
Single-Ended Signaling	3.0 GHz / 6.0 Gbps
Differential Pair Signaling	4.0 GHz / 8.0 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?FW or contact sig@samtec.com.	

ALSO AVAILABLE

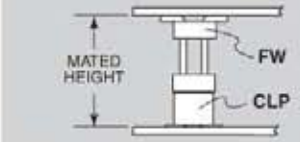
- Smaller stack heights. Call Samtec.

TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

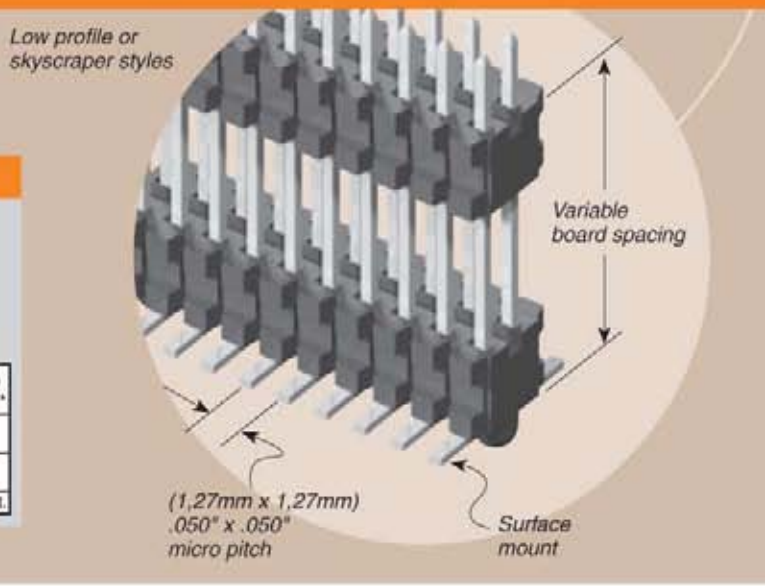
Note: This Series is non-standard, non-returnable.

APPLICATIONS



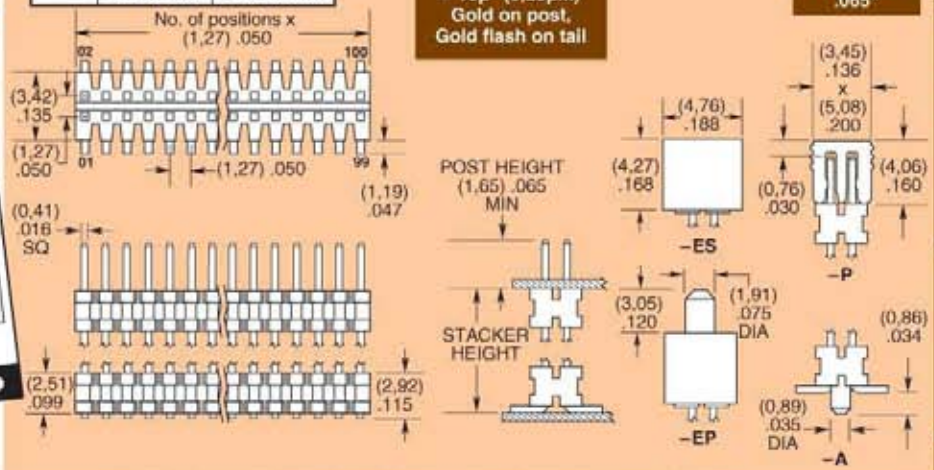
LEAD STYLE		MATED HEIGHT*
FW	CLP	
FW-XX-03-X-X-233-065	-02	(8,13) .320
FW-XX-03-X-X-303-065		(9,91) .390

*Processing conditions will affect mated height.



FW	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	STACKER HEIGHT	POST HEIGHT	OPTION
	02 thru 50	Specify LEAD STYLE from chart	–F = Gold flash on post, Matte Tin on tail –L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail		–"XXX" = Stacker Height (in inches) Example: –250 = (6,35mm) .250"	–"XXX" = Post Height (in inches) (1,65mm) .065" minimum Example: –065 = (1,65mm) .065"	–ES = End Shroud (–075 post height only. Mate only with CLP) (5,46mm) .215" to (15,49mm) .610" stacker height only 9 pins/row min. –EP = End Shroud with Guide Post (–075 post height only. Mate only with CLP.) (5,46mm) .215" to (15,49mm .610" stacker height only) 9 pins/row min. –A = Alignment Pin (3 positions min.) (5,46mm) .215" to (15,75mm) .620" stacker height only –P = Pick & Place Pad (5 positions min.) –TR = Tape & Reel (Post+Stacker Height = (17,46mm) .6875 max.)

LEAD STYLE	STACKER HEIGHT	STACKER + POST
–03	(5,46) .215 to (8,51) .335	(7,11) .280 to (10,16) .400
–05	(8,64) .340 to (15,49) .610	(10,29) .405 to (17,15) .675



Due to technical progress, all designs, specifications and components are subject to change without notice.

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FLEX STACK

(1,27mm) .050"

FW SERIES

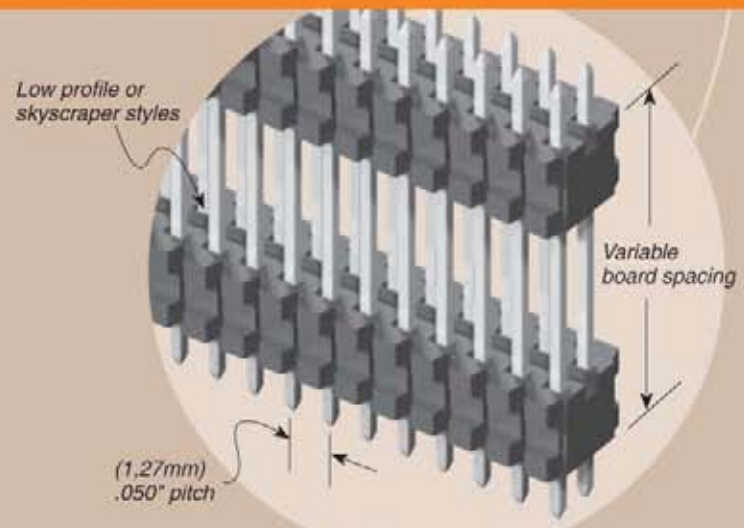
THROUGH-HOLE MICRO BOARD STACKER

SPECIFICATIONS

Mates with:
CLP, FFSD, FLE

For complete specifications see www.samtec.com?FW

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes



ALSO AVAILABLE

- Smaller stack heights. Call Samtec.

Note: This Series is non-standard, non-returnable.

Processing:

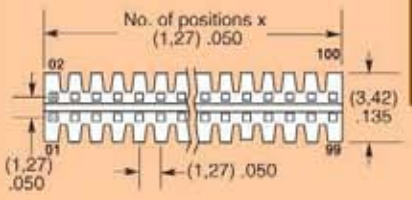
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

SMT COMPATIBLE THROUGH-HOLE

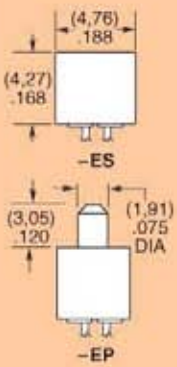
SUDDEN SPECS!

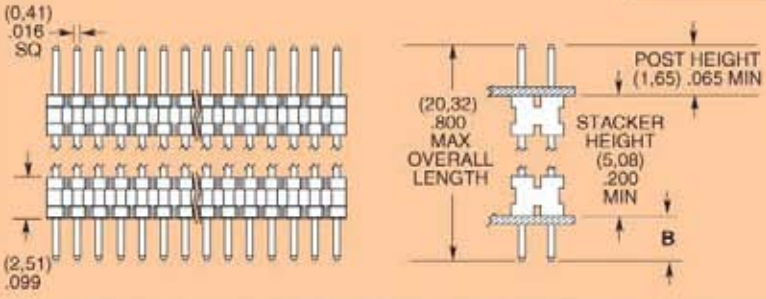
www.samtec.com

FW	–	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	D	–	STACKER HEIGHT	–	POST HEIGHT	–	OPTION
		02 thru 50		Specify LEAD STYLE from chart		–F = Gold flash on post, Matte Tin on tail –L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail				–"XXX" = Stacker Height (in inches) Example: –250 = (6,35mm) .250"		–"XXX" = Post Height (in inches) (1,65mm) .065" minimum Example: –065 = (1,65mm) .065"		–ES = End Shroud (–075 post height only. Mate only with CLP.) (5,46mm) .215" to (15,49mm) .610" stacker height only 9 pins/row minimum –EP = End Shroud with Guide Post (–075 post height only. Mate only with CLP) (5,46mm) .215" to (15,49mm) .610" stacker height only 9 pins/row minimum



LEAD STYLE	TAIL (B)
–01	(1,14) .045
–02	(1,91) .075
–04	(2,29) .090





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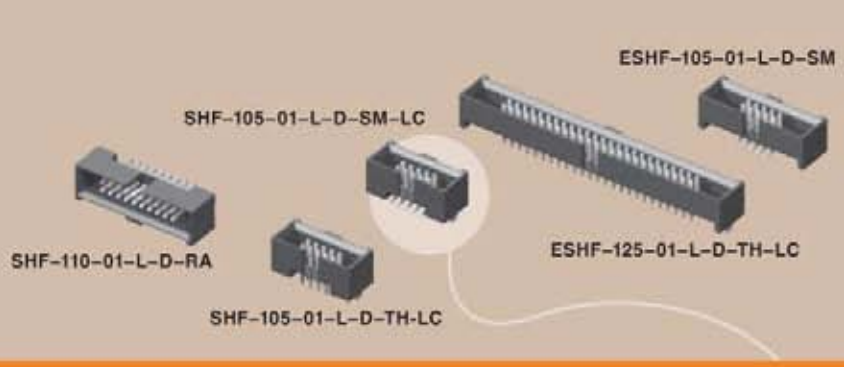


(1,27mm) .050"
SHF, ESHF SERIES

SHROUDED IDC HEADER

SPECIFICATIONS

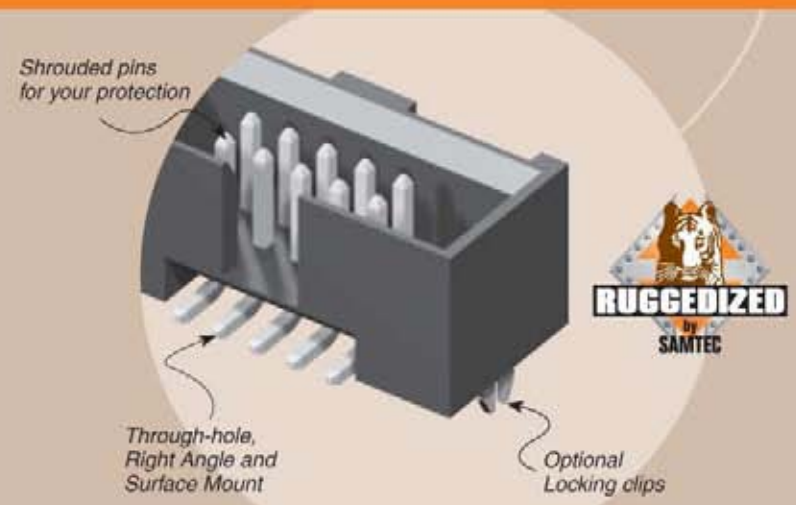
Mates with:
FFSD, FFTP (SHF)

For complete specifications see www.samtec.com?SHF or www.samtec.com?ESHF

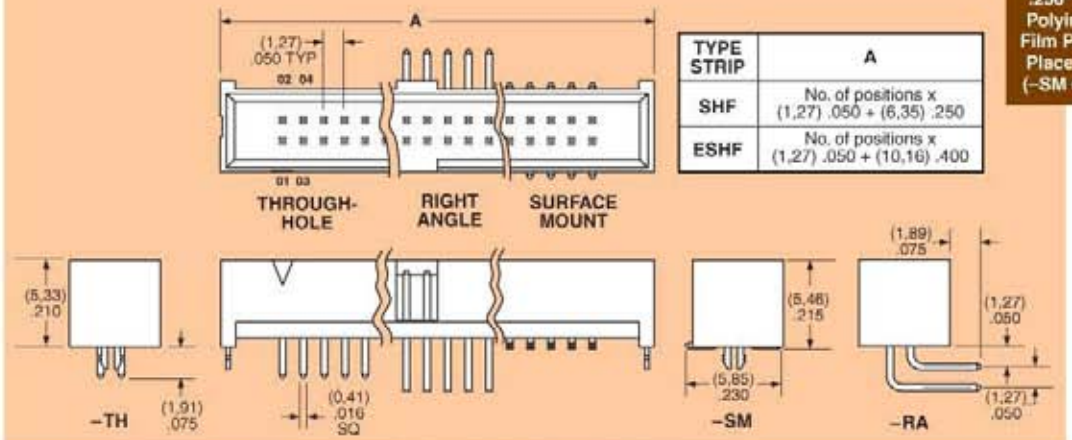
Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max
RoHS Compliant:
Yes



TYPE STRIP	–	1	NO. OF POSITIONS	–	01	–	PLATING OPTION	–	D	–	TAIL STYLE	–	OTHER OPTION
SHF = Mates with FFSD without Strain Relief **ESHF** = Mates with FFSD with Strain Relief			05, 08, 10, 13, 17, 20, 25				**–L** = 10µ" (0,25µm) Gold on post, Matte Tin on tail				**–TH** = Through-hole **–RA** = Right Angle **–SM** = Surface Mount		**–LC** = Locking Clip (Not available with –RA) **–TR** = Tape & Reel Packaging **–K** = (6,50mm) .256" DIA Polyimide Film Pick & Place Pad (–SM only)



TYPE STRIP	A
SHF	No. of positions x (1,27) .050 + (6,35) .250
ESHF	No. of positions x (1,27) .050 + (10,16) .400

Note: Some lengths, styles and options are non-standard, non-returnable.

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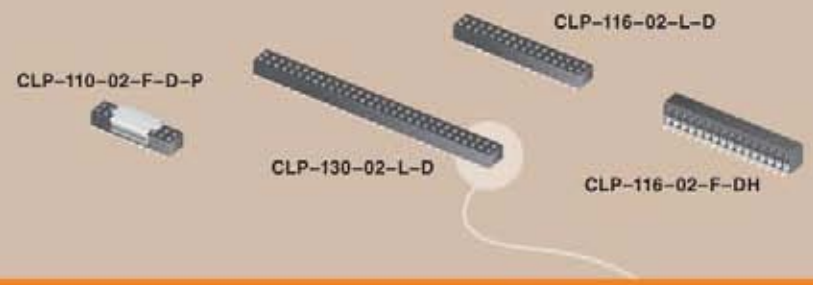
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(1,27mm) .050"
CLP SERIES



LOW PROFILE DUAL WIPE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?CLP

Insulator Material: Black Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 1.75A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Contact Resistance: 10 mΩ max
Insertion Depth: Top Entry = (1,40mm) .055" minimum, Bottom Entry = (2,41mm) .095" minimum plus board thickness
DH Entry = (2,31mm) .091" to (2,67mm) .105"
Insertion Force: (Single contact only) 3.8oz (1,05N) average
Normal Force: 60 grams (0,59N) average
Withdrawal Force: (Single contact only) 2oz (0,56N) average
Max Cycles: 100 with 10µ" (0,25µm) Au
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (02-35) (0,15mm) .006" max (36-50)

ALSO AVAILABLE

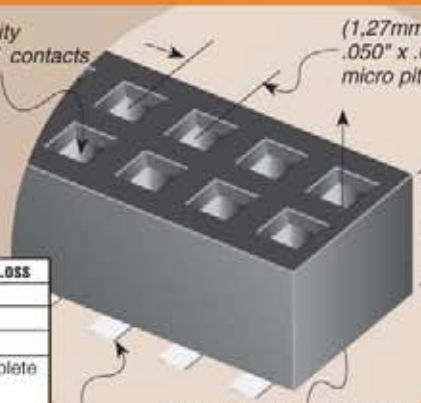
Single row available. (Mates with FTS Series) Call Samtec.

TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Some sizes, styles and options are non-standard, non-returnable.

Mates with: FTSH, FTS, FW, FFDL2



APPLICATIONS

1,27mm FTSH/CLP	Rated @ -3dB Insertion Loss
5,13mm Stack Height	
Single-Ended Signaling	7.0 GHz / 14 Gbps
Differential Pair Signaling	8.5 GHz / 17 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?CLP or contact sig@samtec.com	

1,27mm FW/CLP	Rated @ -3dB Insertion Loss
17,7mm Stack Height	
Single-Ended Signaling	3.0 GHz / 6.0 Gbps
Differential Pair Signaling	4.0 GHz / 8.0 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?CLP or contact sig@samtec.com	

APPLICATION SPECIFIC OPTION

Single row options available. Call Samtec.

CLP	–	1	NO. PINS PER ROW	–	02	–	PLATING OPTION	–	ROW OPTION	–	OTHER OPTION

02 thru 50

–F = Gold flash on contact, Matte Tin on tail

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–G = 10µ" (0,25µm) Gold (–D only)

–D = Double Row

–DH = Double Horizontal (Requires FTSH or FSH –01 lead style)

–BE = Bottom Entry (Required for bottom entry applications)

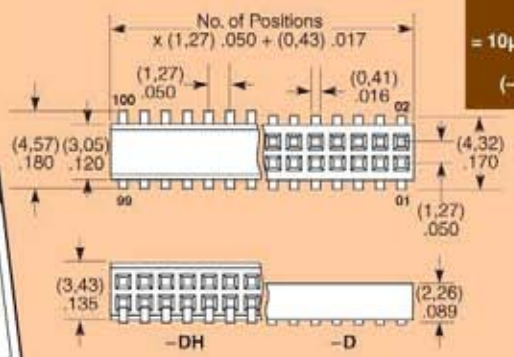
–A = Alignment Pin (Not available with –PA option) (5, 10, 25 position only) (–DH option and other sizes. Call Samtec)

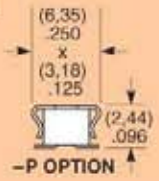
–K = (4,00mm) .157" DIA Polyimide film Pick & Place Pad (5 positions min.)

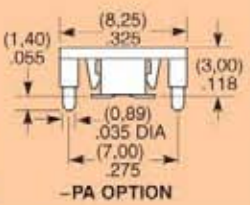
–P = Pick & Place Pad (5 positions min. –D only) (Not always necessary for auto placement. See Flex Processing.)

–PA = Pick & Place Pad with Alignment Pin (–D only) (Not Available with –A option)

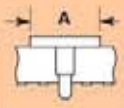
–TR = Tape & Reel







PIN/ROW	A
04-15	(3,56) .140
16-50	(7,11) .280



If odd pins/row, alignment pins are on middle position on centerline of the part. If even pins/row, then alignment pins are between middle two positions.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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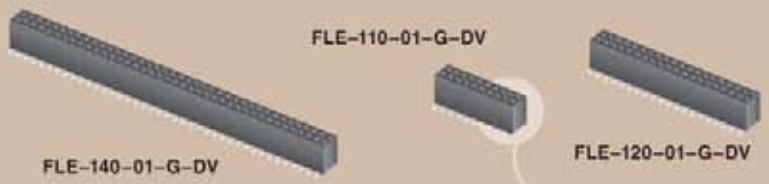
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(1,27mm) .050"
FLE SERIES



COST EFFECTIVE RELIABLE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FLE

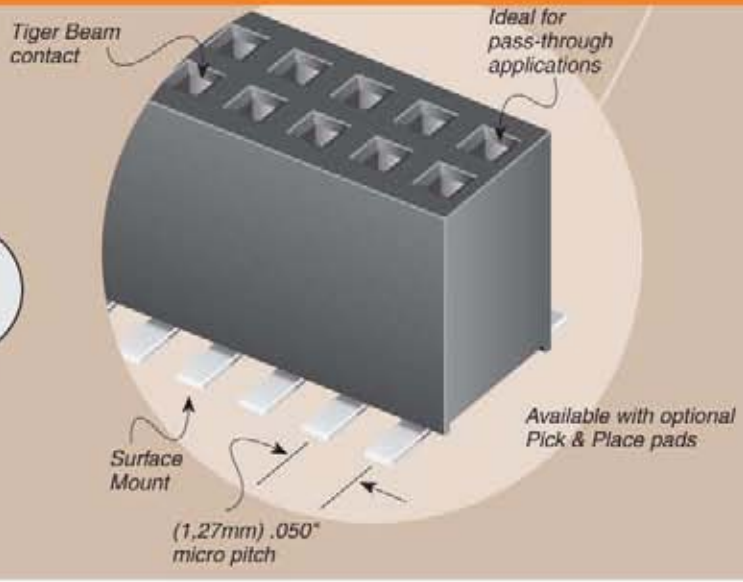
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating:
1.75A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
15mΩ max
Insertion Depth:
(1,83mm) .072" to (4,37mm) .172" or pass-through
Insertion Force:
(Single contact only)
1.5oz (0,42N)
Normal Force:
100 grams (0,98N)
Withdrawal Force:
(Single contact only)
1.5oz (0,42N)
Max Cycles:
100+
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Mates with:
FTSH, FTS, FW, FFMD, FMTP

TIGER BEAM™ CONTACT



FLE	–	1	NO. PINS PER ROW	–	01	–	PLATING OPTION	–	DV	–	OPTIONS

02 thru 50

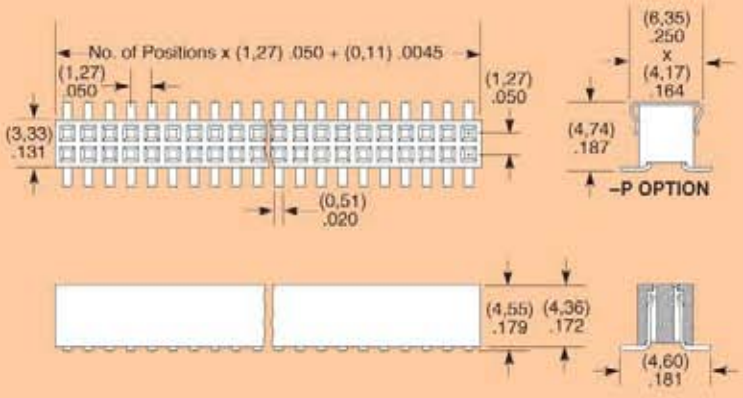
–G
= 10µ" (0,25µm) Gold

–A
= Alignment Pin (Metal or plastic at Samtec discretion) (3 positions minimum)

–K
= (4,25mm) .167" DIA Polyimide film Pick & Place Pad (5 positions minimum)

–P
= Metal Pick & Place Pad (5 positions minimum)

–TR
= Tape & Reel



TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

(1,27mm) .050"

TMS, HTMS, SNM SERIES

THROUGH-HOLE MICRO HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?TMS or www.samtec.com?HTMS

Insulator Material: Black Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1A
Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold
RoHS Compliant: Yes

Important Note: Style -02 does not mate with SMS Series.

SNM

For complete specifications see www.samtec.com?SNM

Same as HTMS except:
Insulator Material: Black Glass Filled Polyester
Contact Resistance: 10 mΩ max
Lead Size accepted: (0,46mm) .018" SQ
Insertion Depth: (3,43mm) .135" minimum
Max Processing Temp: Not recommended for IR/VP

Note: Some lengths, styles and options are non-standard, non-returnable.

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

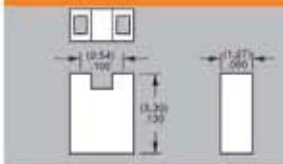
SMT COMPATIBLE THROUGH-HOLE

SUDDEN SPECS!

www.samtec.com

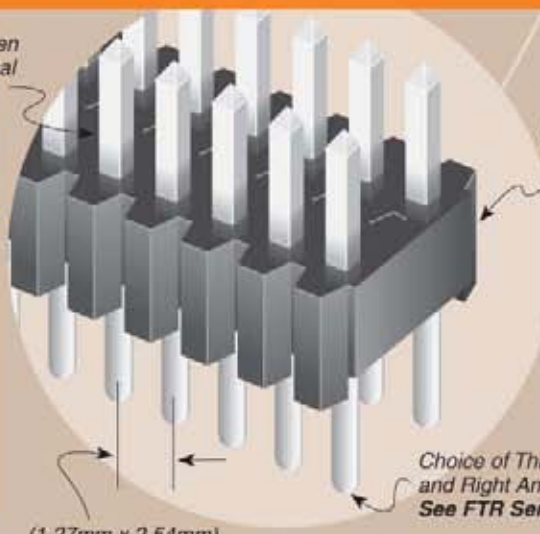
Mates with: SMS, SLM, RSM

MICRO SHUNT
SNM SERIES

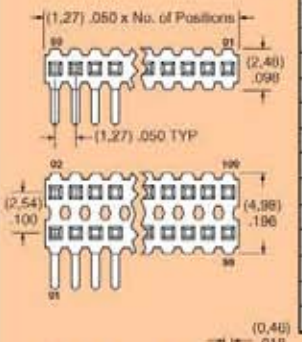


Part No.	Plating
SNM–100–BK–T	Tin
SNM–100–BK–G	10µ" (0,25µm) Gold

Note: Other Gold plating options available. Contact Samtec.

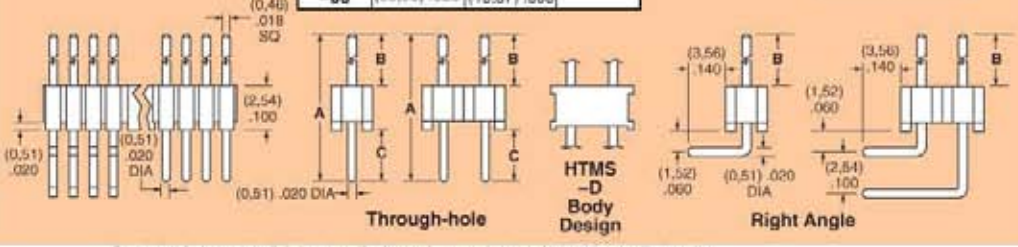


TYPE STRIP	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OPTION
TMS = Standard HTMS = High Temp			01 thru 50		Specify LEAD STYLE from chart		–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail		–S = Single Row –D = Double Row		–RA =Right Angle –"XXX" = Polarized Position (Specify position of omitted pin)



T/H LEAD STYLE	A	B	C
–01	(11,43) .450	(5,84) .230	(3,05) .120
–02	(8,13) .320	(2,54) .100	
–21	(12,83) .505	(5,84) .230	(4,45) .175
–51	(10,41) .410	(4,83) .190	(3,05) .120
–52	(10,80) .425	(5,21) .205	
–53	(12,83) .505	(7,24) .285	
–54	(14,10) .555	(8,51) .335	
–55	(15,49) .610	(9,91) .390	
–56	(15,88) .625	(10,29) .405	
–57	(16,51) .650	(10,92) .430	
–58	(17,91) .705	(12,32) .485	
–59	(19,18) .755	(13,59) .535	
–60	(20,96) .825	(15,37) .605	

RA LEAD STYLE	B
–01	(5,84) .230
–02	(2,54) .100
–03	(3,18) .125

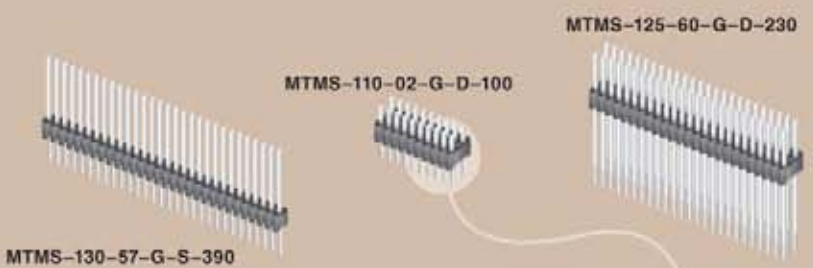


samtec

FLEX STACK

(1,27mm) .050"

MTMS, HMTMS SERIES



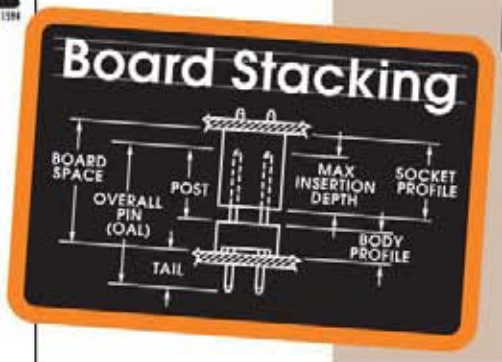
MODIFIED MICRO HEADER

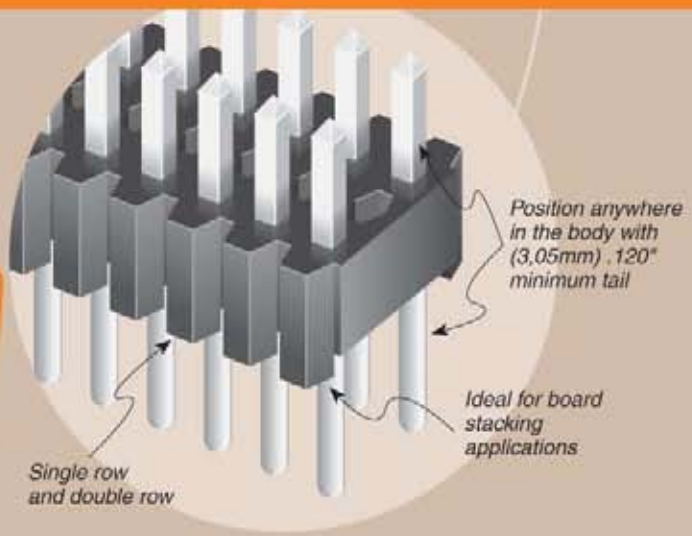
SPECIFICATIONS

Mates with:
SMS, SLM, RSM

For complete specifications see www.samtec.com?MTMS or www.samtec.com?HMTMS

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A
Operating Temp Range:
-55°C to + 105°C with Tin
-55°C to + 125°C with Gold
RoHS Compliant:
Yes





Note: Other Gold plating options available. Contact Samtec.

Note: This Series is non-standard, non-returnable.

Processing:

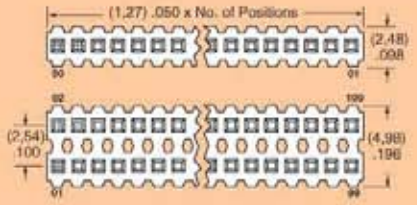
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

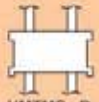
SMT COMPATIBLE THROUGH-HOLE

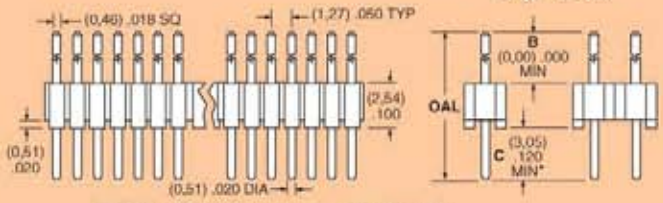
SUDDEN SPECS!

www.samtec.com

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	POST HEIGHT	OPTION
		01 thru 50	Specify LEAD STYLE from chart	–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail	–S = Single Row –D = Double Row	–"XXX" = "B" Dimension (Specify Post Height in inches (0,13mm) .005" increments)	–"XXX" = Polarized Position (Specify position of omitted pin)
MTMS = Modified Standard HMTMS = Modified High Temp							







Tail DIA is .020" (0,51mm) for min .120" (3,05mm).
Balance of tail is .018" (0,46mm) SQ.

LEAD STYLE	OAL	B (Maximum when C = .120 (3,05))
–01	(11,43) .450	(5,84) .230
–02	(8,13) .320	(2,54) .100
–25*	(8,38) .330	(3,18) .125
–51	(10,41) .410	(4,83) .190
–52	(10,80) .425	(5,21) .205
–53	(12,83) .505	(7,24) .285
–54	(14,10) .555	(8,51) .335
–55	(15,49) .610	(9,91) .390
–56	(15,88) .625	(10,29) .405
–57	(16,51) .650	(10,92) .430
–58	(17,91) .705	(12,32) .485
–59	(19,18) .755	(13,59) .535
–60	(20,96) .825	(15,37) .605

*Style -25 tail C=.105 (2,67) min is available.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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TML-125-02-G-D

TML-113-02-G-D-RA

TML-110-01-G-D

(1,27mm) .050"

TML SERIES

SHROUDED MICRO HEADER

SPECIFICATIONS

Mates with:
SMS, RSM

For complete specifications and recommended PCB layouts see www.samtec.com?TML

Insulator Material:
Black Liquid Crystal Polymer

Insulation Resistance:
5000 MΩ min

Terminal Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
1A

Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold

RoHS Compliant:
Yes

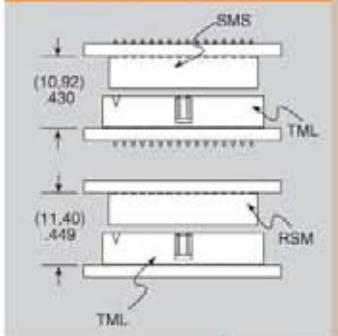
Processing:

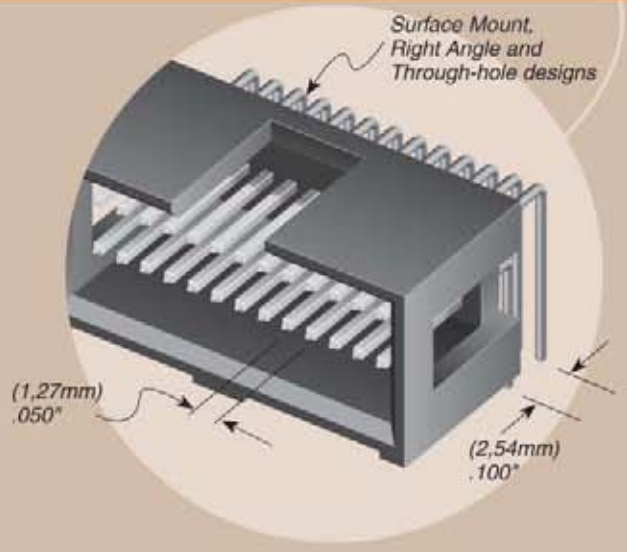
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

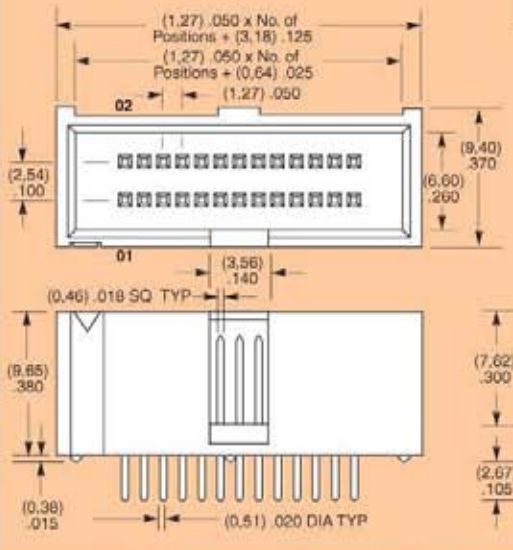
SMT Lead Coplanarity:
(0,15mm) .006" max

APPLICATIONS

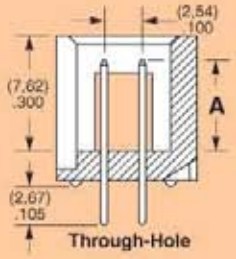


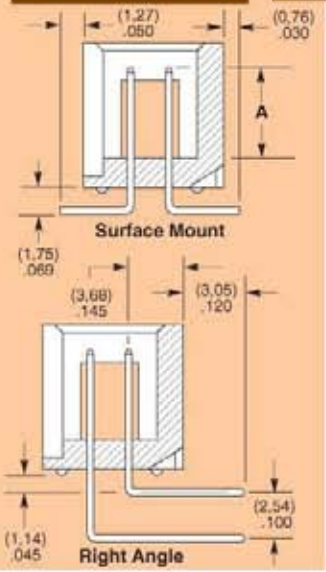


TML	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	TAIL OPTION	OTHER OPTION
		–05, –08, –10, –13, –17, –20, –25, –30, –32, –36, –40 (Call Samtec for other sizes)	Specify LEAD STYLE from chart	–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail		–RA = Right Angle –SM = Surface Mount (For locking clip add –LC)	–"XXX" = Polarized position. (Specify position of omitted pin)



LEAD STYLE	POST HEIGHT (A)
–01	(3,05) .120
–02	(5,84) .230
–03	(4,32) .170





Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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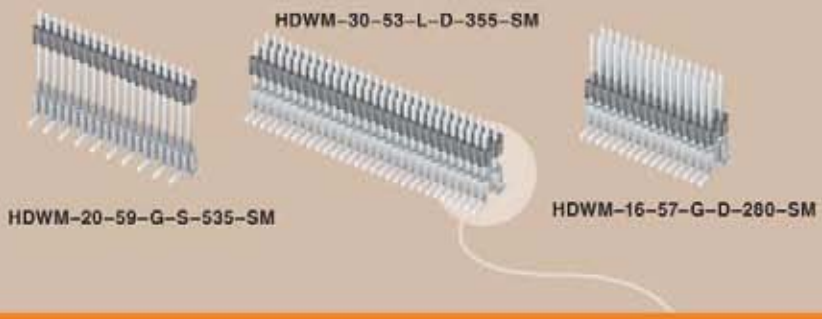
FLEX STACK

(1,27mm) .050"
HDWM SERIES



SMT MICRO BOARD STACKER

SPECIFICATIONS

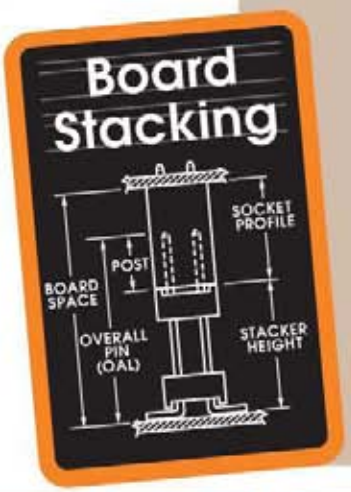
Mates with:
SMS, SLM, RSM

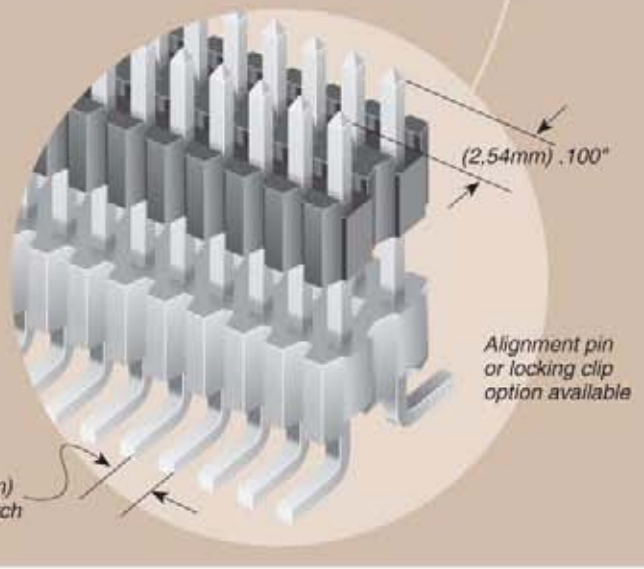
For complete specifications and recommended PCB layouts see www.samtec.com?HDWM

Insulator Material:
Top: Black LCP
Bottom: Natural LCP
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A
Operating Temp Range:
-55°C to + 105°C with Tin
-55°C to + 125°C with Gold
RoHS Compliant:
Yes

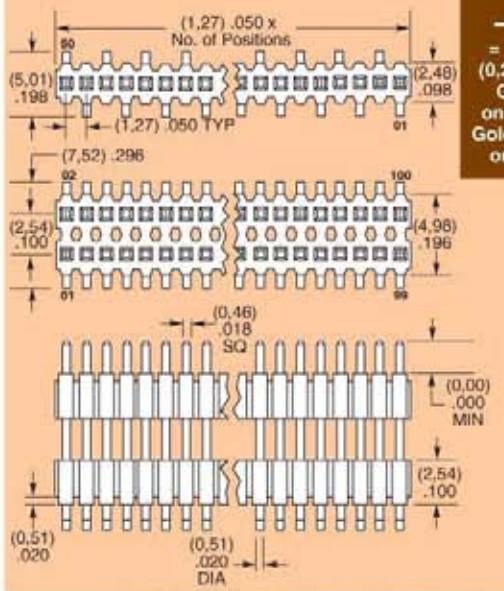
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
.006" (0,15mm) max

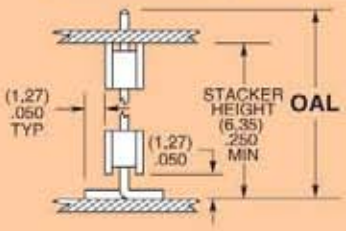




HDWM	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	SM	OTHER OPTION
	02 thru 40	Specify LEAD STYLE from chart	–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail	–S = Single Row –D = Double Row	–"XXX" = Stacker Height Example: –250 = (6,35mm) .250"		–"XXX" = Polarized –A = Alignment Pin (6 positions minimum –D only.) Metal or plastic at Samtec's discretion (N/A with –LC) –LC = Locking Clip (5 positions minimum. –D only) (N/A with –A) –P = Pick & Place Pad



LEAD STYLE	OAL
–01	(8,38) .330
–53	(9,78) .385
–54	(11,05) .435
–55	(12,45) .490
–56	(12,83) .505
–57	(13,46) .530
–58	(14,86) .585
–59	(15,62) .615



Note: Other Gold plating options available. Contact Samtec.

Note: This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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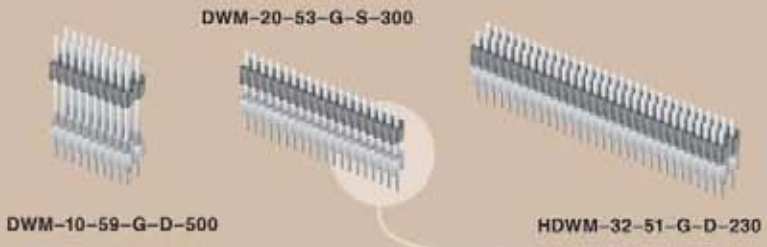
FLEX STACK

(1,27mm) .050"

DWM, HDWM SERIES



THROUGH-HOLE MICRO BOARD STACKER

SPECIFICATIONS

Mates with:
SMS, SLM, RSM

DWM

For complete specifications see www.samtec.com?DWM

Insulator Material:
Top: Black LCP
Bottom: Natural LCP

Terminal Material:
Phosphor Bronze

Plating:
Au or SN over 50µ" (1,27µm) Ni

Current Rating:
1A

Operating Temp Range:
-55°C to + 105°C with Tin
-55°C to + 125°C with Gold

RoHS Compliant:
Yes

HDWM

For complete specifications see www.samtec.com?HDWM

Same as DWM except not CSA rated.

Note: Other Gold plating options available. Contact Samtec.

Note: These Series are non-standard, non-returnable.

Processing:

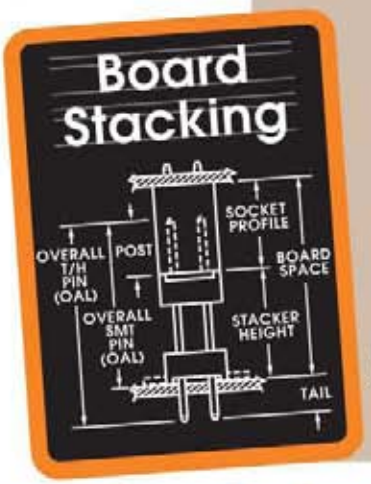
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

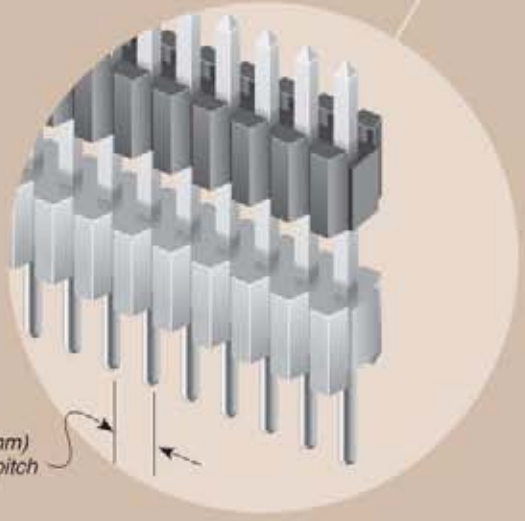
Lead-Free Solderable:
Yes

SMT COMPATIBLE THROUGH-HOLE

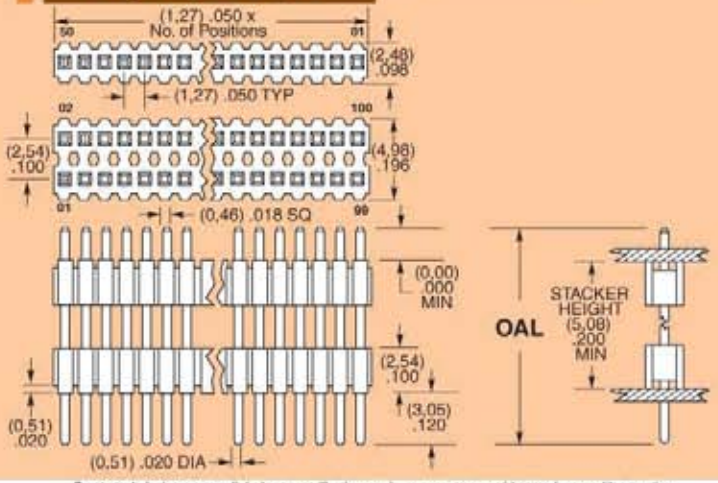
SUDDEN SPECS!

www.samtec.com





TYPE STRIP	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	OTHER OPTION
DWM = Standard Board Spacer HDWM = High Temp Board Spacer	01 thru 50	Specify LEAD STYLE from chart	–L = 10µ" (0,25µm) Gold contact, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail	–S = Single Row –D = Double Row	–"XXX" = Stacker Height Example: –250 = (6,35mm) .250"	– "XXX" = Polarized Position (Specify position of omitted pin)



LEAD STYLE	OAL
–01	(11,43) .450
–51	(10,41) .410
–52	(10,80) .425
–53	(12,83) .505
–54	(14,10) .555
–55	(15,49) .610
–56	(15,88) .625
–57	(16,51) .650
–58	(17,91) .705
–59	(19,18) .755
–60	(20,96) .825
–61	(26,67) 1.050

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

FLEX STACK

(1,27mm) .050"
ZML SERIES

SMT SHROUDED ELEVATED STACKER

SPECIFICATIONS

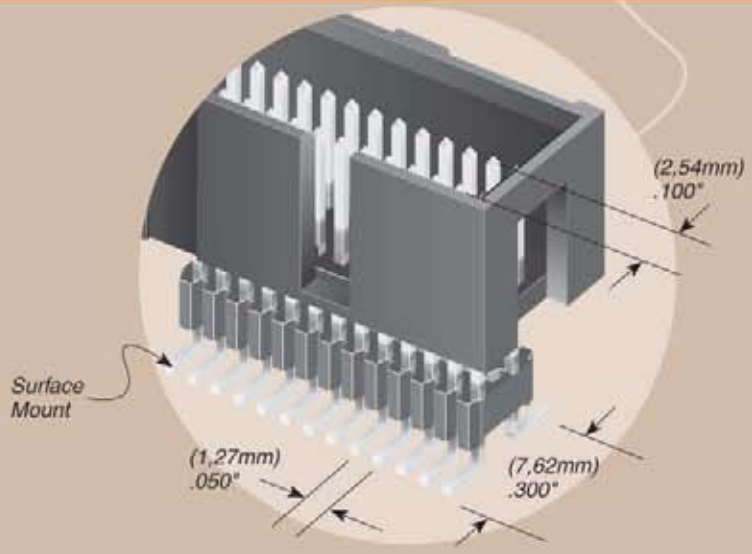
Mates with:
SMS, RSM

For complete specifications and recommended PCB layouts see www.samtec.com?ZML

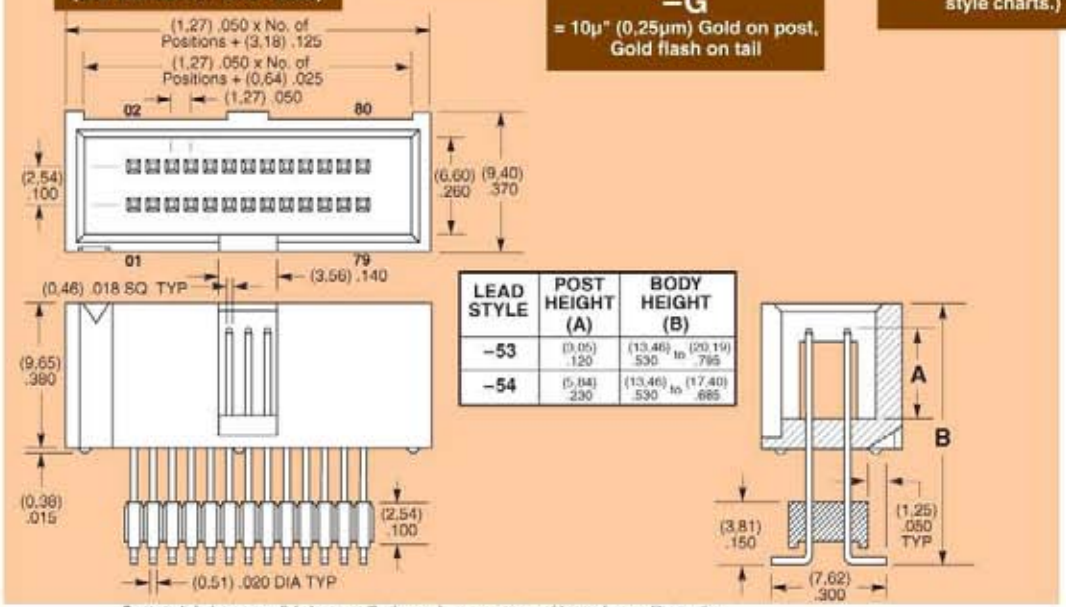
Insulator Material:
Black LCP
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (05-20)
(0,15mm) .006" max (25-40)



ZML	– 1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	– D –	BODY HEIGHT	– SM
		05, 08, 10, 13, 17, 20, 25, 30, 32, 36, 40 (Call Samtec for other sizes)		Specify LEAD STYLE from chart		–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail –G = 10µ" (0,25µm) Gold on post, Gold flash on tail		–"XXX" = Body Height (Specify board space "B" in inches from lead style charts.)	



LEAD STYLE	POST HEIGHT (A)	BODY HEIGHT (B)
–53	(3,05) .120	(13,46) .530 to (20,19) .795
–54	(5,84) .230	(13,46) .530 to (17,40) .685

Note: Other Gold plating options available. Contact Samtec.

Note: This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

FLEX STACK

(1,27mm) .050"
ZML SERIES

ZML-125-04-G-D

ZML-113-02-G-D

ZML-110-03-G-D

THROUGH-HOLE ELEVATED STACKER

SPECIFICATIONS

For complete specifications see www.samtec.com?ZML

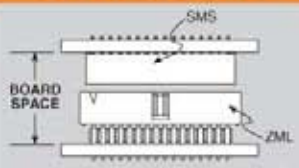
Insulator Material: Black LCP
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1A
Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold
RoHS Compliant: Yes

Note: Other Gold plating options available. Contact Samtec.

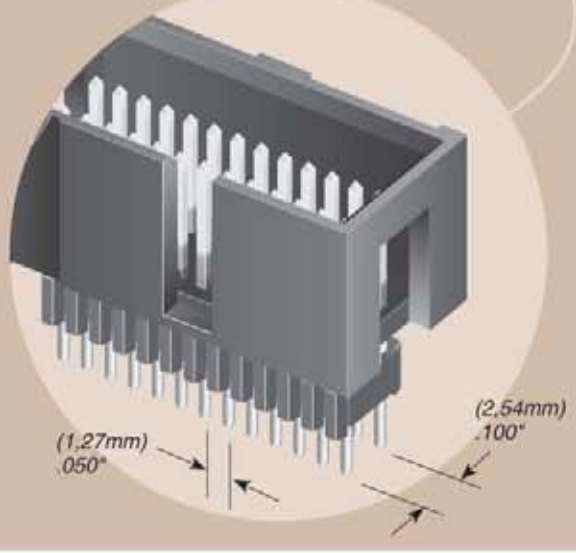
Note: This Series is non-standard, non-returnable.

Mates with: SMS, RSM

APPLICATIONS



APPLICATIONS	BOARD SPACE
ZML Style -01 mated with SMS	(13,72) .540
ZML Style -02 mated with SMS	(15,11) .595
ZML Style -03 mated with SMS	(17,53) .690
ZML Style -04 mated with SMS	(20,57) .810



ZML	-	1	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-	D

05, 08, 10, 13, 17, 20, 25, 30, 32, 36, 40
(Call Samtec for other sizes)

Specify LEAD STYLE from chart

–L
= 10µ" (0,25µm) Gold on post, Matte Tin on tail

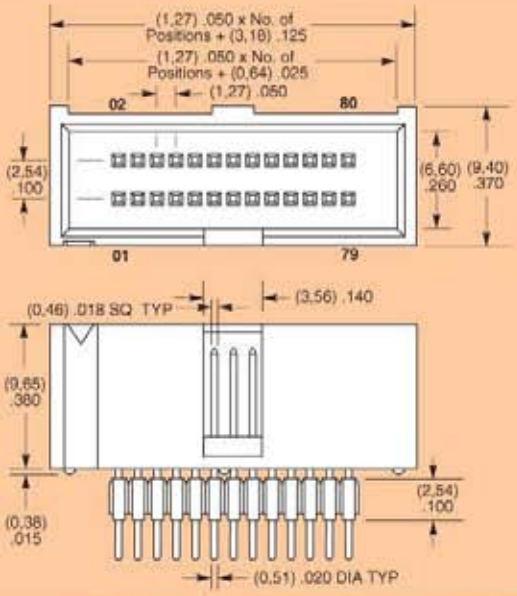
–G
= 10µ" (0,25µm) Gold on post, Gold flash on tail

Processing:

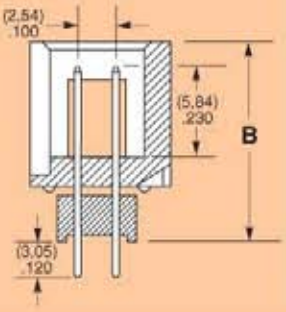
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

SMT COMPATIBLE THROUGH-HOLE

SUDDEN SPECS!
www.samtec.com



LEAD STYLE	BODY HEIGHT (B)
–01	(12,83) .505
–02	(14,22) .560
–03	(16,64) .655
–04	(19,69) .775



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(1,27mm) .050"

FTR SERIES

SMT MICRO HEADER

SPECIFICATIONS

Mates with:
RSM, SMS, SLM

For complete specifications and recommended PCB layouts see www.samtec.com?FTR

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

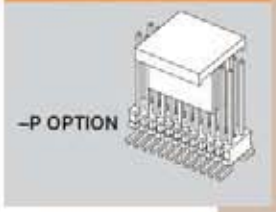
Processing:

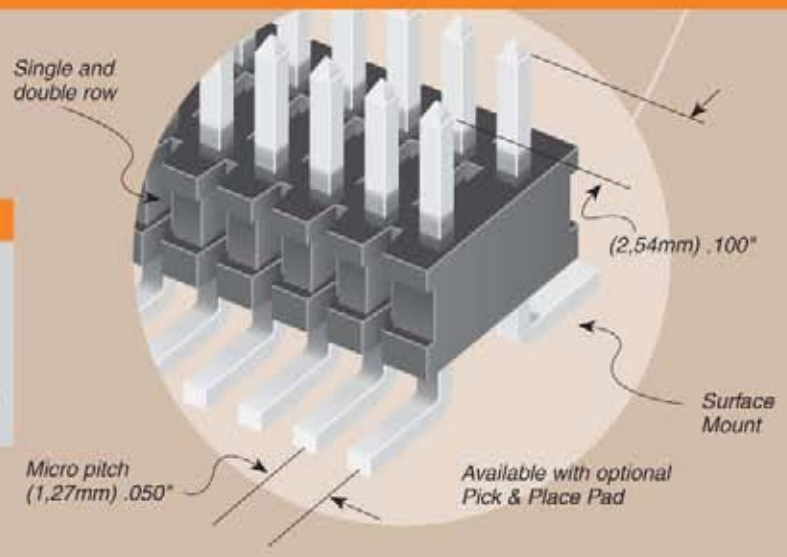
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (02-20)
(0,15mm) .006" max (21-40)

Note: Other Gold plating options available. Contact Samtec.

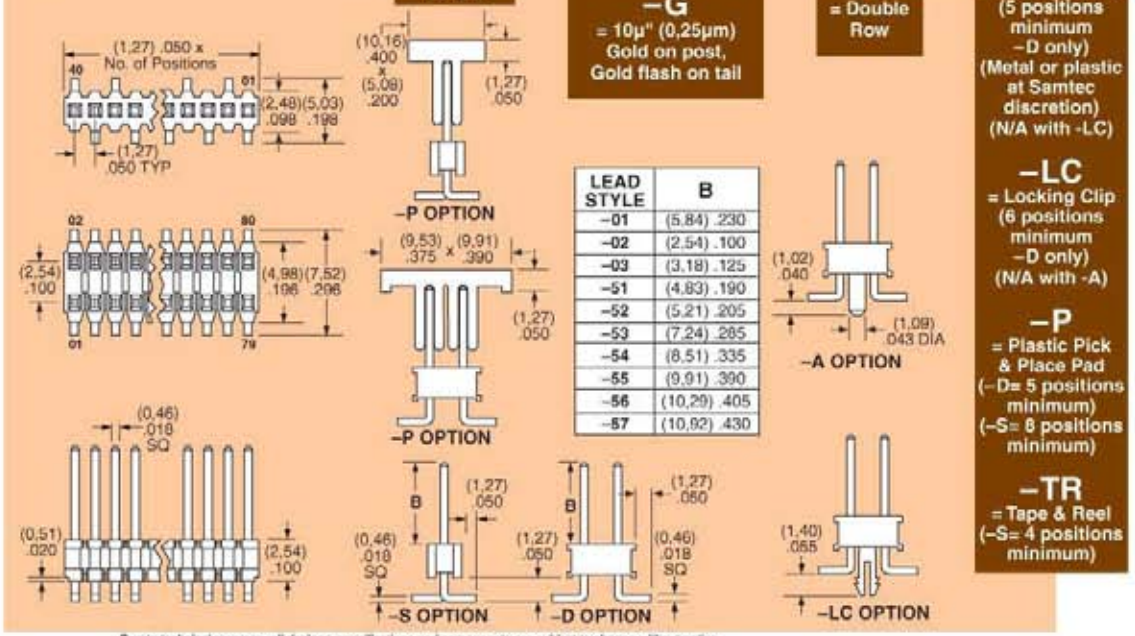
Note: Some sizes, styles and options are non-standard, non-returnable.

OPTIONS





FTR	-	1	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-	ROW OPTION	-	OPTION
			02 thru 40		Specify LEAD STYLE from chart		-L = 10µ" (0,25µm) Gold on post, Matte Tin on tail -G = 10µ" (0,25µm) Gold on post, Gold flash on tail		-S = Single Row -D = Double Row		-"XX" = Polarized -A = Alignment Pin (5 positions minimum -D only) (Metal or plastic at Samtec discretion) (N/A with -LC) -LC = Locking Clip (6 positions minimum -D only) (N/A with -A) -P = Plastic Pick & Place Pad (-D= 5 positions minimum) (-S= 8 positions minimum) -TR = Tape & Reel (-S= 4 positions minimum)



LEAD STYLE	B
-01	(5,84) .230
-02	(2,54) .100
-03	(3,18) .125
-51	(4,83) .190
-52	(5,21) .205
-53	(7,24) .285
-54	(8,51) .335
-55	(9,91) .390
-56	(10,29) .405
-57	(10,92) .430

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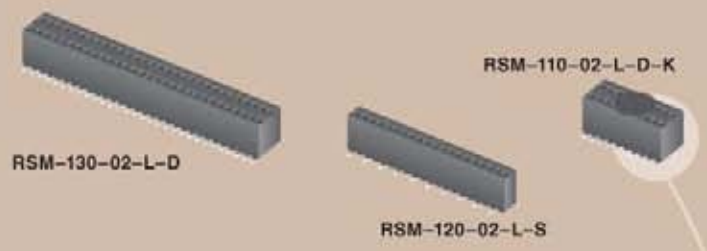


(1,27mm) .050"

RSM SERIES

SMT MICRO SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?RSM

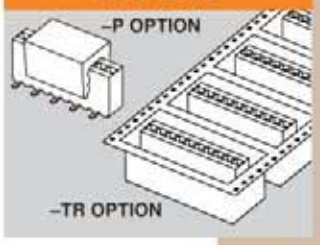
Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au, or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
10 mΩ max
Lead Size Accepted:
(0,46mm) .018" SQ
Insertion Depth:
Top Entry = (2,64mm) .104" to (5,84mm) .230" with (0,38mm) .015" wipe, or pass-through.
Bottom Entry = (5,49mm) .216" minimum (Add board thickness for correct post OAL)
Insertion Force:
(Single contact only) 3.5oz (0,97N) avg.
Withdrawal Force:
(Single contact only) 1.5oz (0,42N) avg.
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

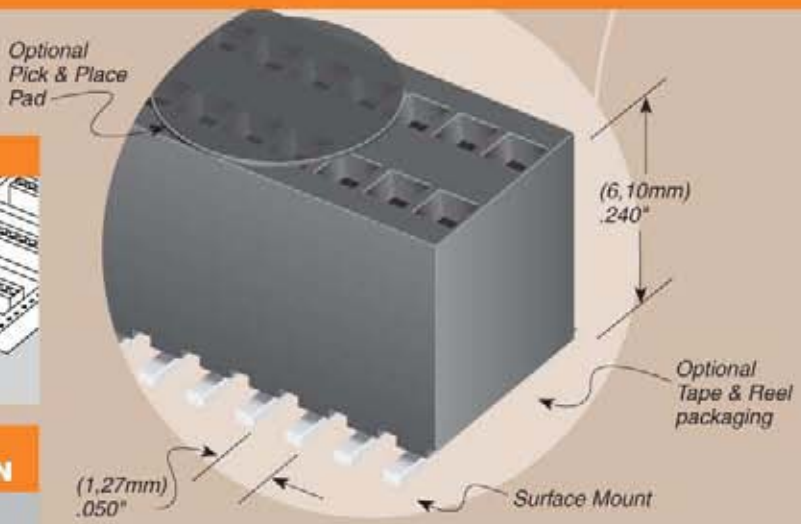
Mates with:
FTR, HTMS, HDWM, DWM, TML, ZML, TMS

OPTIONS

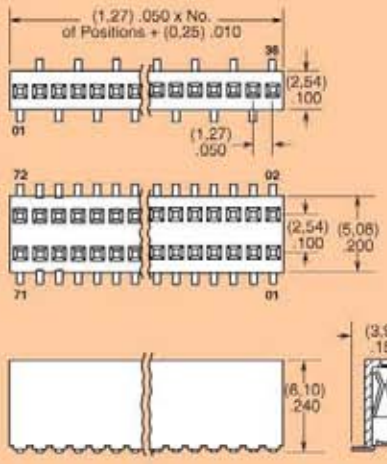


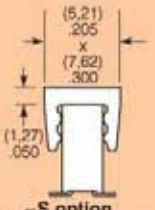
APPLICATION SPECIFIC OPTION

Locking clips available. Call Samtec.



RSM	1	NO. PINS PER ROW	02	PLATING OPTION	ROW OPTION	OPTION
		02 thru 36		-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail	-S = Single Row -D = Double Row	-K = (6,25mm) .246" DIA Polyimide film Pick & Place Pad (5 positions minimum for -D) (7 positions minimum for -S) -P = Plastic Pick & Place Pad (-D = 5 positions minimum -S = 6 positions minimum) -TR = Tape & Reel





TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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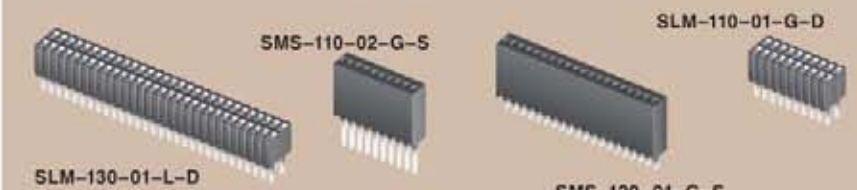


(1,27mm) .050"

SLM, SMS SERIES

THROUGH-HOLE MICRO SOCKETS

Mates with:
HTMS, TMS, MTMS, DWM, HDWM, FTR

SPECIFICATIONS

For complete specifications see www.samtec.com?SLM

Insulator Material: Black Glass Filled Polyester
Contact Material: Phosphor Bronze
Current Rating: 1A
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Contact Resistance: 10 mΩ max
Insertion Depth: (2,03mm) .080" to (3,05mm) .120"
Insertion Force: (Single contact only) 8oz (2,22N) avg.
Withdrawal Force: (Single contact only) 6oz (1,67N) avg.
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Wave Only

SLM – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – ROW OPTION

Note: Some lengths, styles and options are non-standard, non-returnable.

01 thru 50

PLATING OPTION

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

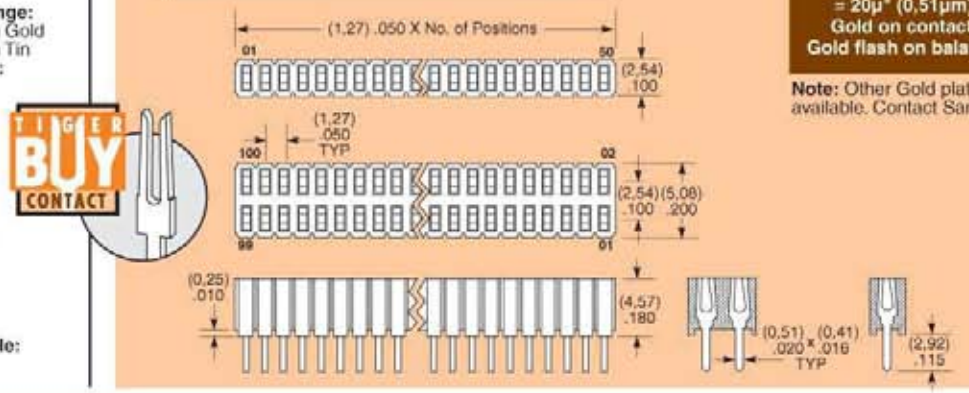
–G = 20µ" (0,51µm) Gold on contact, Gold flash on balance

Note: Other Gold plating options available. Contact Samtec.

ROW OPTION

–S = Single Row

–D = Double Row



TIGER BUY CONTACT

Mates with:
HTMS, TMS, MTMS, DWM, HDWM, FTR, TML, ZML

SPECIFICATIONS

For complete specifications see www.samtec.com?SMS

Insulator Material: -D= LCP -S= Glass Filled Polyester
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1A
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Contact Resistance: 10 mΩ max
Insertion Depth: (3,43mm) .135" to (6,35mm) .250" with (0,38mm) .015" wipe
Insertion Force: (Single contact only) 8 oz (2,22N) avg.
Withdrawal Force: (Single contact only) 6 oz (1,67N) avg.
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Single Row: Wave Only Double Row: Yes

SMS – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION

Note: Some lengths, styles and options are non-standard, non-returnable.

01 thru 50

LEAD STYLE

Specify LEAD STYLE from chart

PLATING OPTION

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

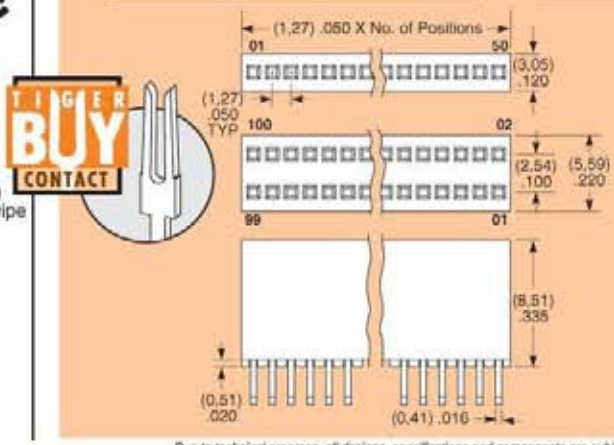
–G = 10µ" (0,25µm) Gold

Note: Other Gold plating options available. Contact Samtec.

ROW OPTION

–S = Single Row

–D = Double Row



TIGER BUY CONTACT

LEAD STYLE	A
–01	(2,54) .100
–02	(4,83) .190

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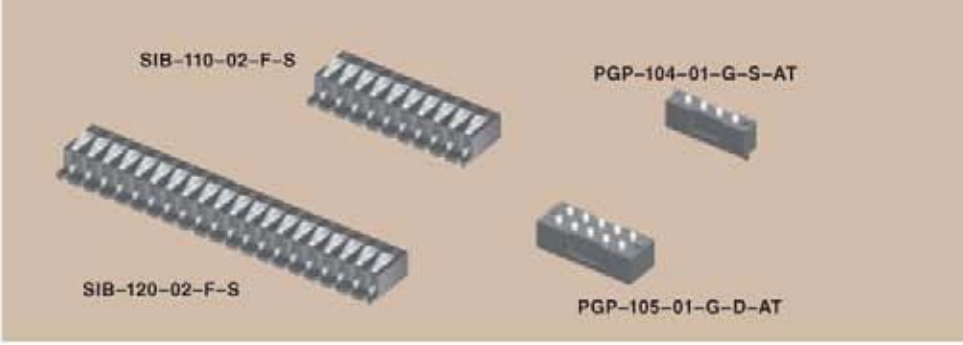


(2,54mm) .100"

SIB, PGP SERIES

ONE PIECE INTERFACES

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SIB

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
1A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Normal Force:
111 grams (1,09N) per contact
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

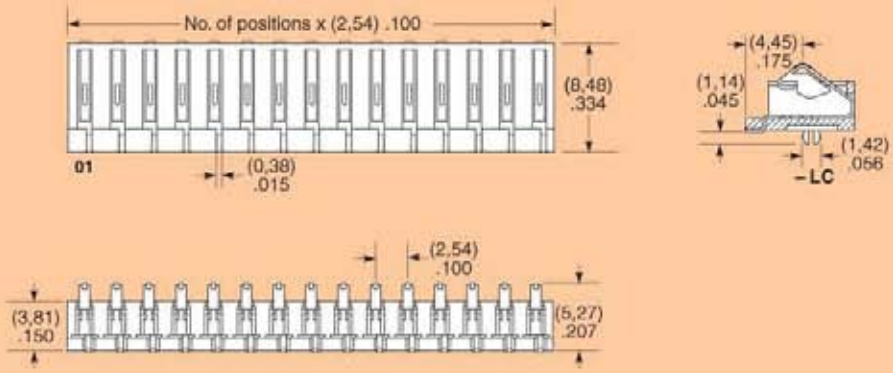
Note: Some sizes, styles and options are non-standard, non-returnable.

SIB – 1 – NO. PINS PER ROW – 02 – PLATING OPTION – S – OPTION

NO. PINS PER ROW: 02 thru 30

PLATING OPTION: –F = Gold flash on contact, Matte Tin on tail

OPTION: –LC = Locking Clip



SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?PGP

Insulator Material:
Black LCP
Contact Material:
Brass
Plating:
Au over 30µ" (0,76µm) Ni
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Note: Some lengths, styles and options are non-standard, non-returnable.

PGP – 1 – NO. OF POSITIONS – 01 – PLATING OPTION – ROW OPTION – ALIGNMENT PIN – OPTION

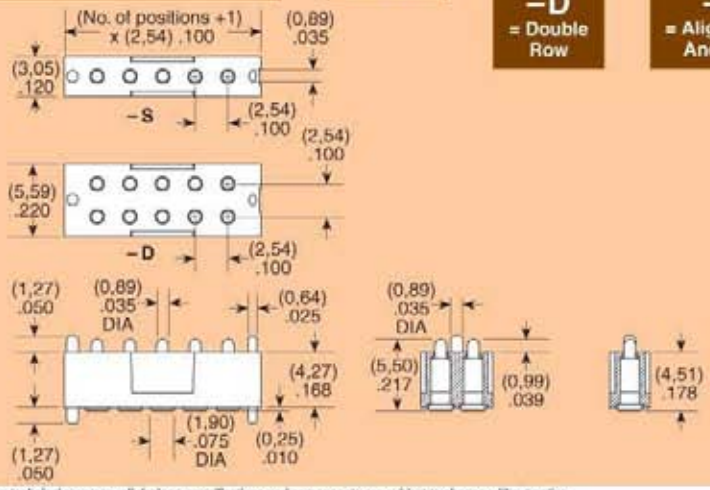
NO. OF POSITIONS: 02 thru 05

PLATING OPTION: –G = 10µ" (0,25µm) Gold

ROW OPTION: –S = Single Row; –D = Double Row

ALIGNMENT PIN: –AT = Alignment Top Side; –AD = Alignment Top And Bottom

OPTION: –P = Pick & Place Pad; –TR = Tape & Reel



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(1,00mm) .03937"

FSI SERIES

LOW PROFILE ONE PIECE INTERFACES

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FSI

Insulator Material: Liquid Crystal Polymer
Contact Material: BeCu
Current Rating: 1A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Plating: Au over 50µ" (1,27µm) Ni
RoHS Compliant: Yes

Processing:

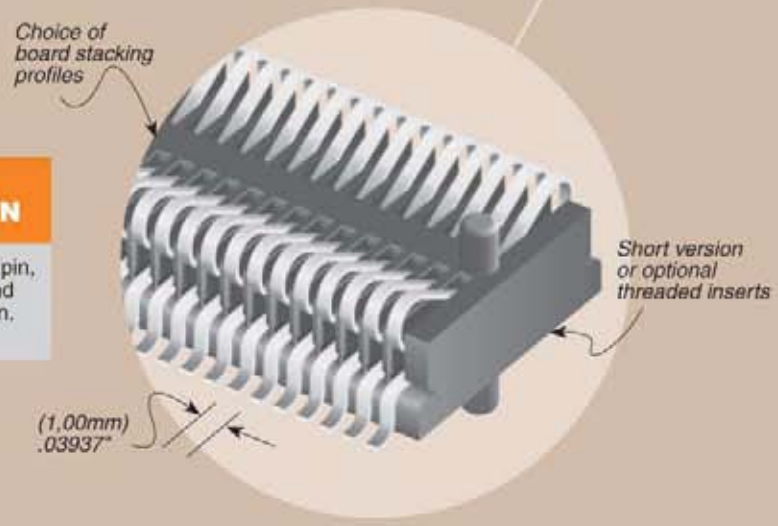
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (05-35) (0,15mm) .006" max (40-50)
Compression Board: Gold Pads required

Note: Applications requiring 40-50 positions without threaded inserts, please contact Samtec Interconnect Processing Group.

Note: Some lengths, styles and options are non-standard, non-returnable.

APPLICATION SPECIFIC OPTION

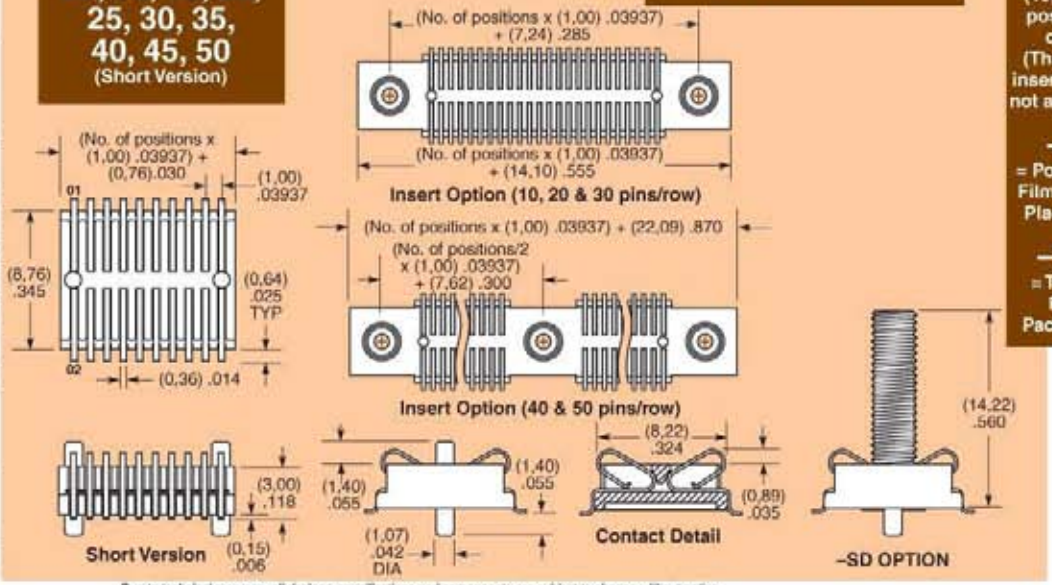
Metric insert, no alignment pin, top side alignment pin and bottom side alignment pin. Call Samtec.



Also Available

- **Low Profile** See SEI Series.
- **.100" (2,54mm) Pitch** See SIB Series.
- **High Density** See GFZ Series.
- **Flex Data Link** See FSIF Series.

FSI	1	PINS PER ROW	BODY HEIGHT	PLATING OPTION	D	INSERT OPTION	AD	OTHER OPTION
		10, 20, 30, 40 & 50 (Insert/Screw Option) 05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Short Version)	–03 = 3,00mm	–G = 10µ" (0,25µm) Gold		Leave blank for Short Version (No screw down inserts or holes) –E = #2-56 x 1/16" screw thread (-SD not available)		–SD = Screw Down (For mating with FSIF Series Flex Data Link) (10, 20, 30 positions only) (Threaded insert option not available) –K = Polyimide Film Pick & Place Pad –TR = Tape & Reel Packaging



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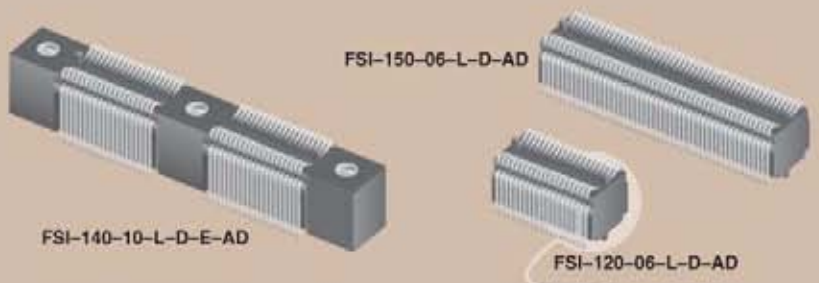


(1,00mm) .03937"

FSI SERIES

ELEVATED ONE PIECE INTERFACES

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FSI

Insulator Material: Liquid Crystal Polymer
Contact Material: BeCu
Current Rating: 1A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Plating: Au or Sn over 50µ" (1,27µm) Ni

Processing:

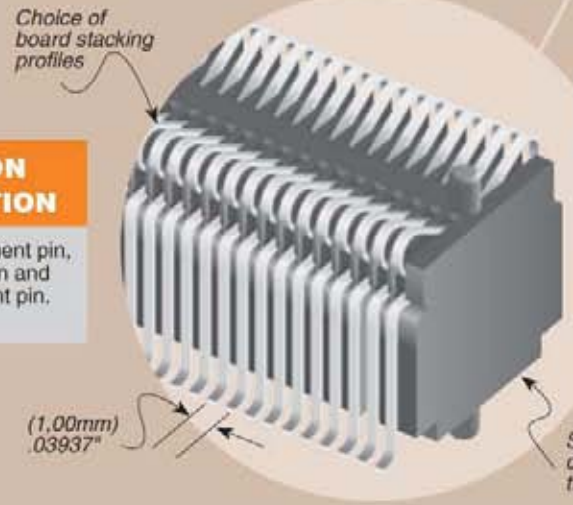
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (05-35) (0,15mm) .006" max (40-50)
Compression Board: Gold Pads required

Note: Applications requiring 40-50 positions without threaded inserts, please contact Samtec Interconnect Processing Group.

Note: Some lengths, styles and options are non-standard, non-returnable.

APPLICATION SPECIFIC OPTION

Metric insert, no alignment pin, top side alignment pin and bottom side alignment pin. Call Samtec.



ALSO AVAILABLE

Low profile see SEI series.
(2,54mm) .100" pitch see SIB series.

FSI	-	1	PINS PER ROW	-	BODY HEIGHT	-	PLATING OPTION	-	D	-	INSERT OPTION	-	AD	-	OTHER OPTION

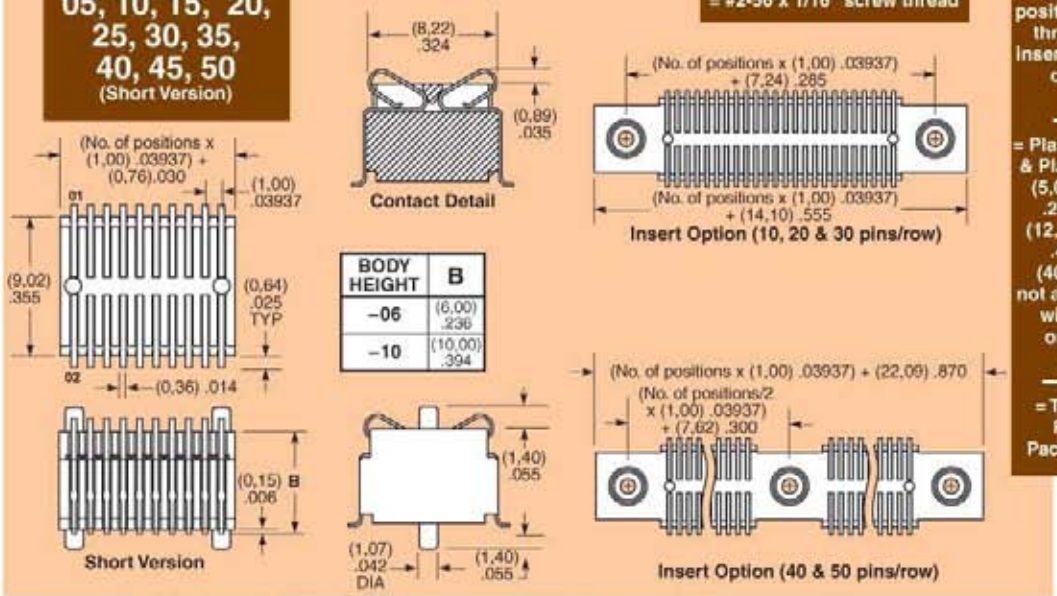
PINS PER ROW
10, 20, 30, 40 & 50 (Screw Option)
05, 10, 15, 20, 25, 30, 35, 40, 45, 50 (Short Version)

BODY HEIGHT
–06 = 6,00mm
–10 = 10,00mm

PLATING OPTION
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

INSERT OPTION
Leave blank for Short Version (No screw down inserts or holes)
–E = #2-56 x 1/16" screw thread

OTHER OPTION
–K = (8,00mm) .315" DIA Polyimide Film Pick & Place Pad (40 & 50 position with threaded insert option only)
–P = Plastic Pick & Place Pad (5,08mm) .200" x (12,45mm) .490" (40 & 50 not available with –E or –M)
–TR = Tape & Reel Packaging



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(1,00mm) .03937"

SEI SERIES

LOW PROFILE ONE PIECE INTERFACE

SPECIFICATIONS

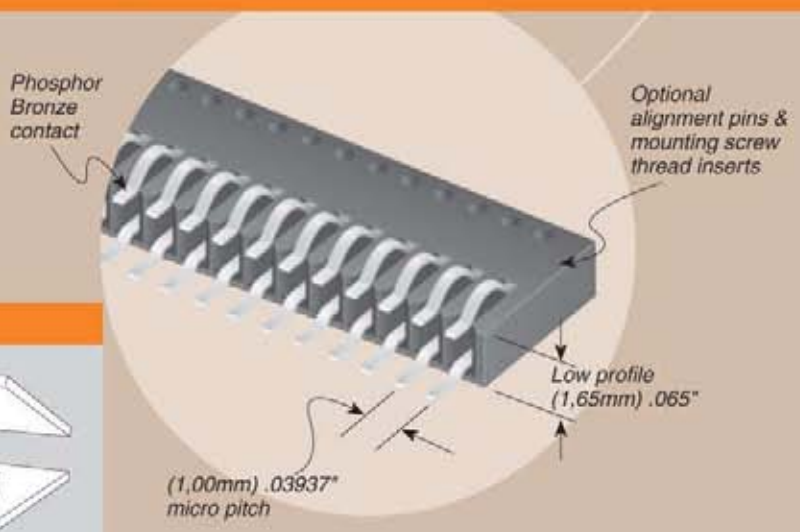
For complete specifications and recommended PCB layouts see www.samtec.com?SEI

Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating:
1A @ 80°C ambient
Mating Force:
50g (0,49N) per contact
Voltage Rating:
60VAC
Cycles:
100 min
Contact Deflection:
(0,46mm) .018" nominal
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

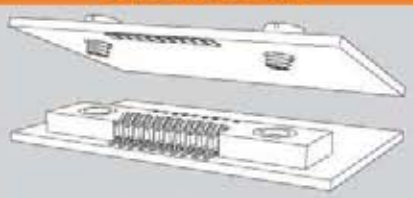
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (05-25)
(0,15mm) .006" max (30)

Note: Some lengths, styles and options are non-standard, non-returnable.

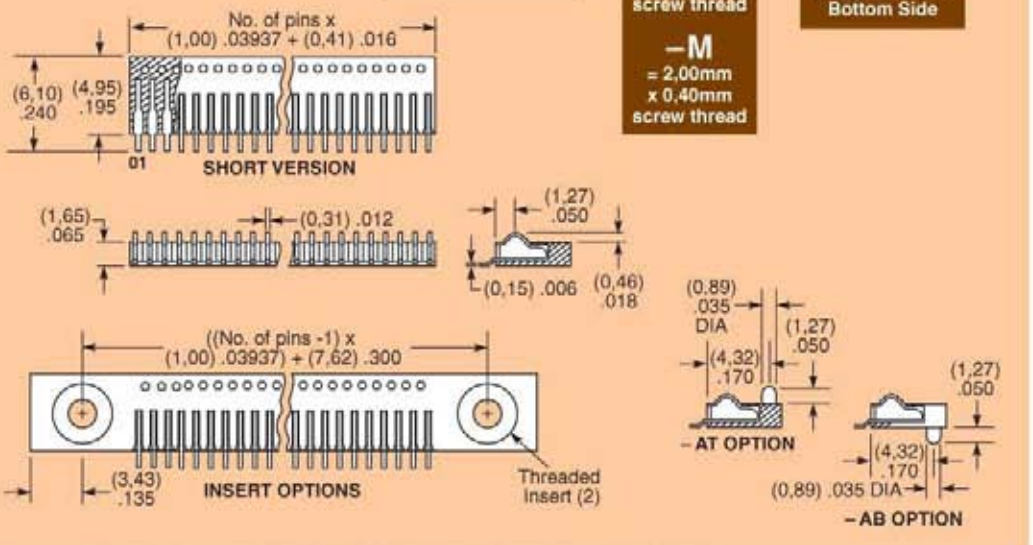


APPLICATION



Screw from top only.

SEI	-	1 PINS PER ROW	-	02	-	PLATING OPTION	-	S	-	INSERT OPTION	-	ALIGNMENT OPTION	-	OTHER OPTION
		05, 10, 15, 20, 25, 30 (Call Samtec for other sizes)				–G = 10µ" (0,25µm) Gold –GF = 3µ" (0,08µm) Gold flash				Leave blank for Short Version (No screw down inserts or holes) –E = #2-56 x 1/16" screw thread –M = 2,00mm x 0,40mm screw thread		Leave blank for no Alignment Pin –AT = Alignment Pin Top Side –AB = Alignment Pin Bottom Side		–TR = Tape & Reel



Due to technical progress, all designs, specifications and components are subject to change without notice.

BOARD TO BOARD

2mm Pitch

Headers & Stackers (TMM, MTMM, MMT) 208-211
Shrouded Headers & Stackers (TMMH, TSH, EHT, EHLT, TW, TMMS, STMM, TLMM, ETMM). 212-221
Press Fit Headers & Sockets (PTT, PTF) 222
PC/104+ (PTHF, ESQT) 223
Sockets (ESQT, SQW, SQT, TLE, CLT, MMS, SMM) 224-230
Hermaphroditic (LS2). 231

.100" (2,54mm) Pitch

Square Post Headers & Stackers (TSW, TSM, MTSW, PHT, TLW, MTLW, TSSH, TST, EJH, ZW, HW) 232-244
Square Post Sockets (SSW, SSQ, SSM, PHF, SMH, HLE, BCS, ESW, BSW, SLW, CES) 246-256
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Shunts & Jumpers

.100", 2mm & .050" Pitch (SNT, MNT, PK, 2SN, SNM, JL) 245

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.100" (2,54mm) Headers, Stackers and Sockets 36-37
Extended Life Products™ 38
Ruggedizing & Power Services/Support 39

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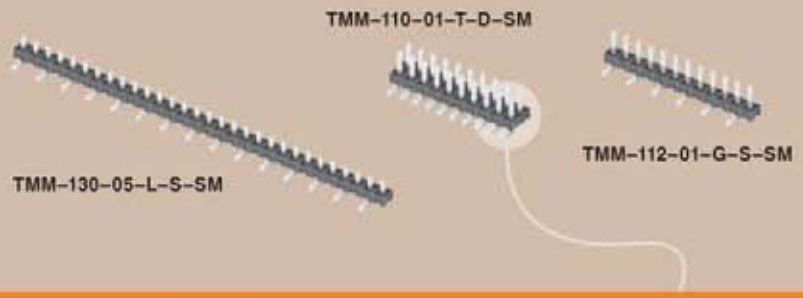
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
1,000 cycles when mated with SMM

(2,00mm) .0787"
TMM SERIES



LOW PROFILE SMT HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TMM

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
Voltage Rating:
500 VAC mated with SQW
450 VAC mated with SQT
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	Mated with SMM
20°C	3.9A
40°C	3.5A
60°C	3A
95°C	2A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max

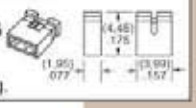
Note:
Some lengths, styles and options are non-standard, non-returnable.

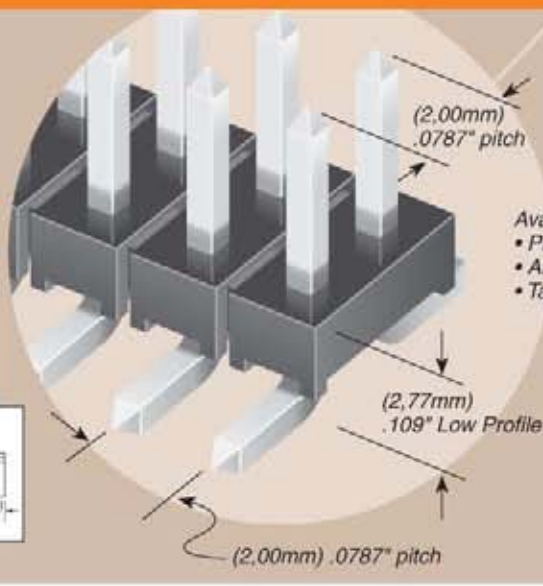
Mates with:
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD, TLSD

ALSO AVAILABLE

Through-Hole

2mm Shunt
Specify **2SN-BK-G** for 2mm shunt with Gold plating.





Available with optional
- *Pick & Place Pads*
- *Alignment pins*
- *Tape & reel packaging*

TMM	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	SM	–	OTHER OPTION

02 thru 40

Specify LEAD STYLE from chart below.

LEAD STYLE	A	MATES WITH
–01	(3,20) .126	SQT, SQW, ESQT, TLE, SMM, MMS, TCSD
–04	(1,91) .075	
–05	(1,65) .065	CLT
–06	(4,27) .168	CLT-BE

PLATING OPTION

–L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

–G
= 20µ" (0,51µm) Gold on contact area, Gold flash on tail

–S
= 30µ" (0,76µm) Gold on contact area, Matte Tin on tail

–T
= Matte Tin

ROW OPTION

–S
= Single Row

–D
= Double Row

SM

OTHER OPTION

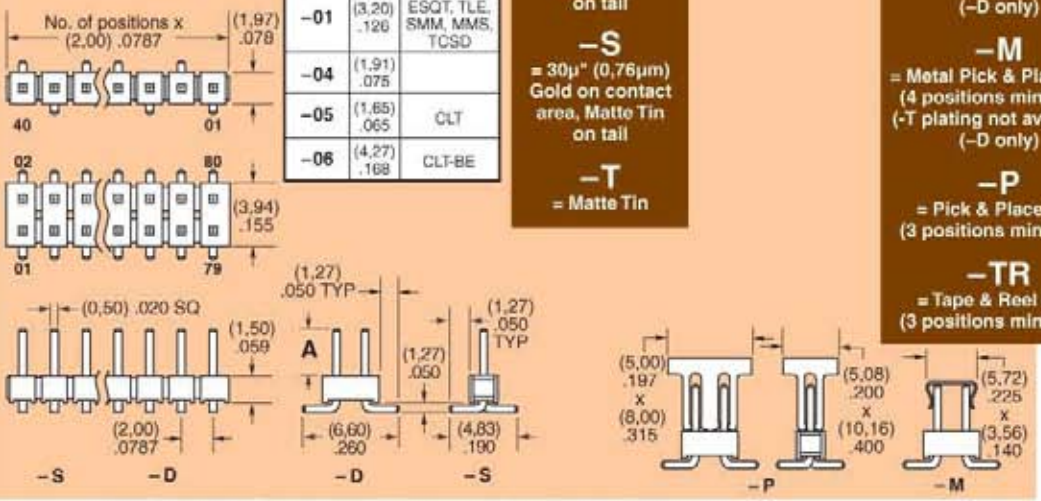
–"XXX"
= Polarized Position (Specify position of omitted pin)

–A
= Alignment Pin (Metal or plastic at Samtec's discretion) (5 positions minimum) (–D only)

–M
= Metal Pick & Place Pad (4 positions minimum) (-T plating not available) (–D only)

–P
= Pick & Place Pad (3 positions minimum)

–TR
= Tape & Reel Pkg. (3 positions minimum)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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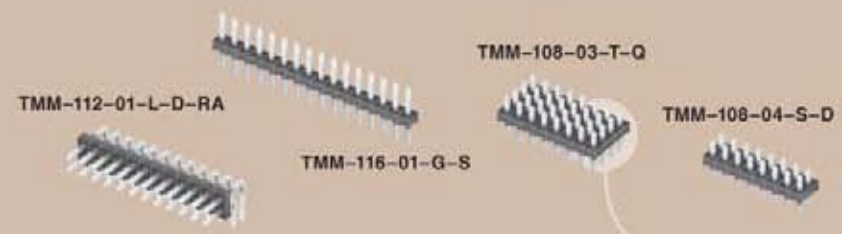
FLEX Y Z ™

(2,00mm) .0787"

TMM SERIES



LOW PROFILE THROUGH-HOLE HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?TMM

Insulator Material: Black Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Sn or Au over 50µ" (1,27µm) Ni

Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold

Voltage Rating: 500 VAC mated with SQW 450 VAC mated with SQT

RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	Mated with SMM
20°C	3.9A
40°C	3.5A
60°C	3A
95°C	2A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

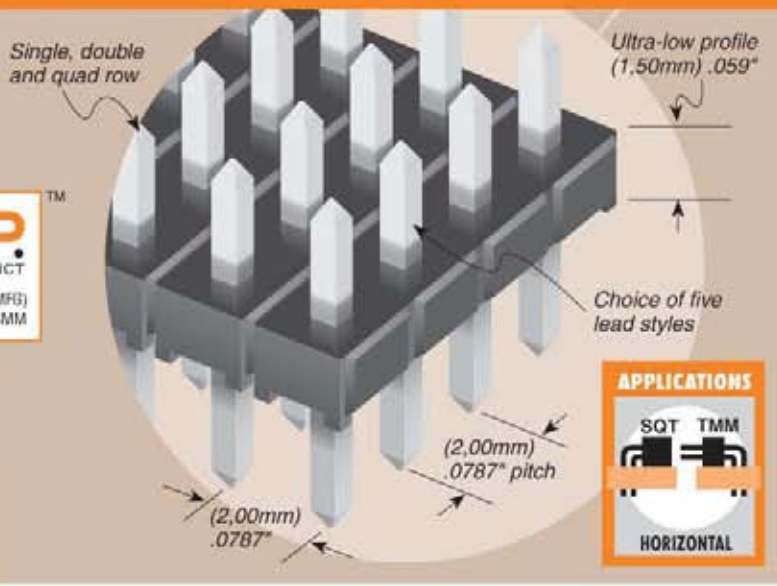
Lead-Free Solderable: Yes

Note: Some lengths, styles and options are non-standard, non-returnable.

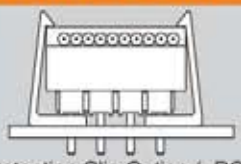
Mates with: CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD, TLSD

E.L.P. EXTENDED LIFE PRODUCT ™

10 Year Mixed Flowing Gas (MFG)
1,000 cycles when mated with SMM



APPLICATION



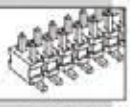
Retention Clip Option (–RC)

APPLICATIONS

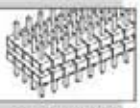
Also Available

Press Fit See PTT Series.

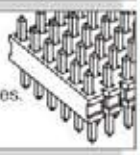
Surface Mount See TMM Series.



Elevated See TW Series.



High Density See TMMH Series.



Shrouded Four Row Vertical & Right Angle See TMMS Series.

Paste In Hole (PIH) processing. Contact Samtec ASP Group.

TMM	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OTHER OPTION

01 thru 50

Specify LEAD STYLE from chart below.

–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

–G = 20µ" (0,51µm) Gold on contact area, Gold flash on tail

–S = 30µ" (0,76µm) Gold on contact area, Matte Tin on tail

–T = Matte Tin

–S = Single Row

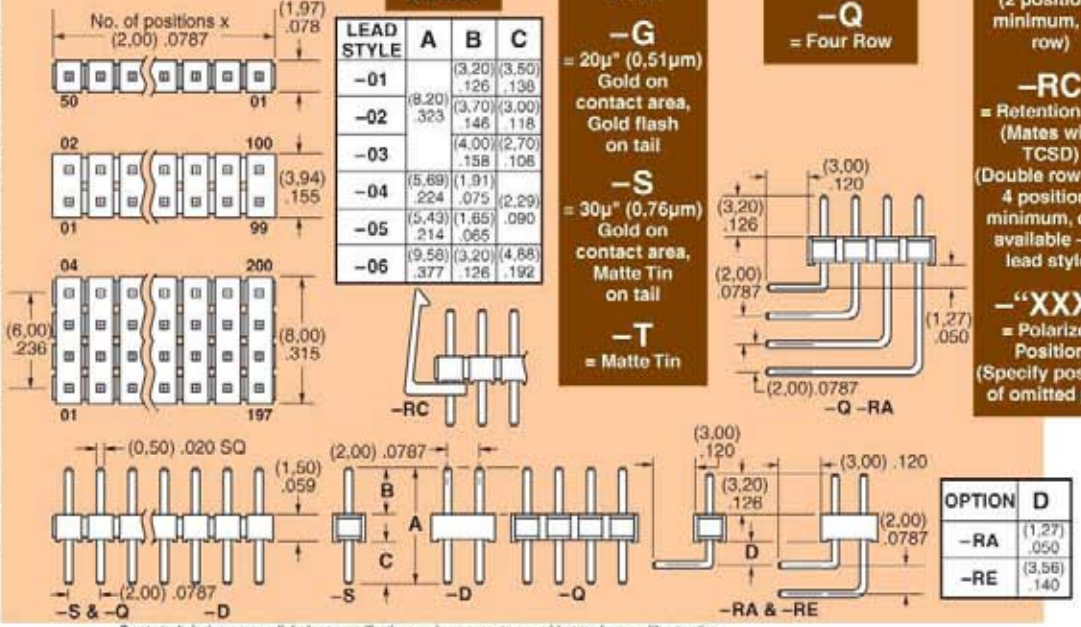
–D = Double Row

–Q = Four Row

–RA & –RE = Right Angle (Lead Style –01 only) (2 positions minimum, –Q row)

–RC = Retention Clip (Mates with TCSD) (Double row only, 4 positions minimum, only available –06 lead style)

–"XXX" = Polarized Position (Specify position of omitted pin)



LEAD STYLE	A	B	C
–01	(8,20) .323	(3,20) .126	(3,50) .138
–02		(3,70) .146	(3,00) .118
–03		(4,00) .158	(2,70) .106
–04	(5,69) .224	(1,91) .075	(2,29) .090
–05	(5,43) .214	(1,65) .065	
–06	(9,58) .377	(3,20) .126	(4,68) .192

OPTION	D
–RA	(1,27) .050
–RE	(3,56) .140

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

FLEX Y Z ™

(2,00mm) .0787"

MTMM SERIES

MODIFIED THROUGH-HOLE HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?MTMM

Insulator Material: Black Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Sn or Au over 50µ" (1,27µm) Ni

Current Rating: 3A @ 80°C ambient

Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold

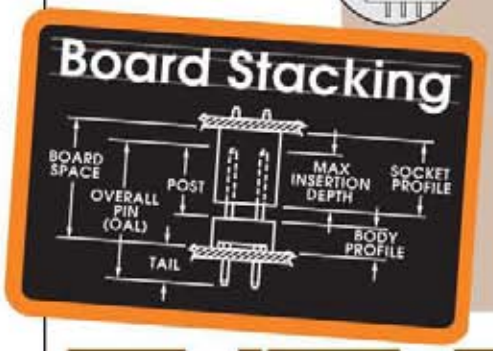
RoHS Compliant: Yes

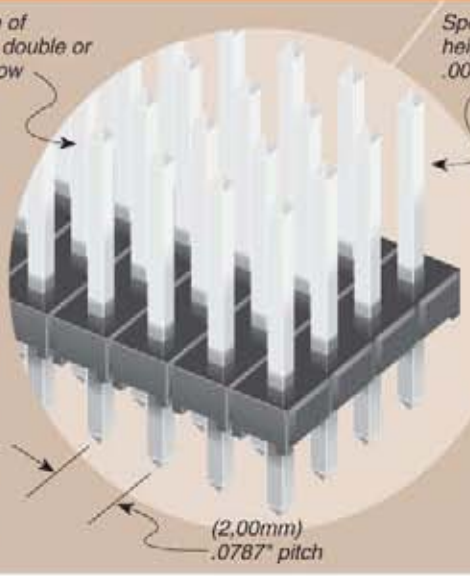
Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

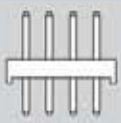
Lead-Free Solderable: Yes

Mates with: CLT, SQT, SOW, ESQT, TLE, SMM, MMS, TCSD



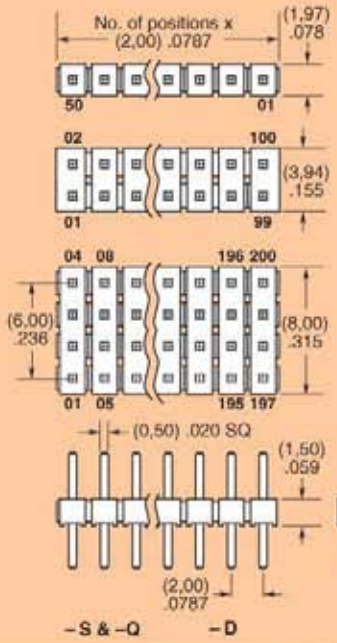


ALSO AVAILABLE



Paste In Hole (PIH) processing. Contact Samtec ASP Group.

MTMM	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	POST HEIGHT	–	OPTION
			01 thru 50		Specify LEAD STYLE from chart.		–L = 10µ" (0,25µm) Gold post, Matte Tin on tail –G = 20µ" (0,51µm) Gold post Gold flash on tail –T = Matte Tin		–S = Single Row –D = Double Row –Q = Quad Row		–"XXX" = Post Height in inches (0,13mm) .005" increments Example: –070 = (1,78mm) .070"		–"XXX" = Polarized Position Specify position of omitted pin



LEAD STYLE	OAL
–02	(6,48) .255
–03	(7,67) .302
–04	(8,20) .323
–05	(9,56) .377
–06	(10,08) .397
–07	(11,58) .456
–08	(12,09) .476
–09	(13,59) .535
–10	(14,10) .555
–11	(15,09) .594
–12	(15,60) .614
–13	(17,09) .673
–14	(19,08) .751
–15	(21,08) .830

Note: Other Gold plating options available. Contact Samtec.

Note: This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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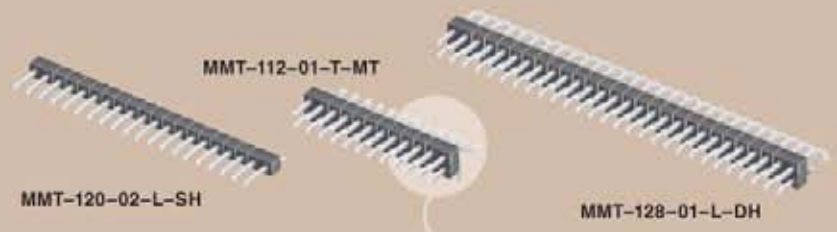


(2,00mm) .0787"

MMT SERIES

HORIZONTAL SURFACE MOUNT HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MMT

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
3A @ 80°C ambient

Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold

RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

SMT Lead Coplanarity:
(0,10mm) .004" max (02-25)
(0,15mm) .006" max (26-36)

Mates with:
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD

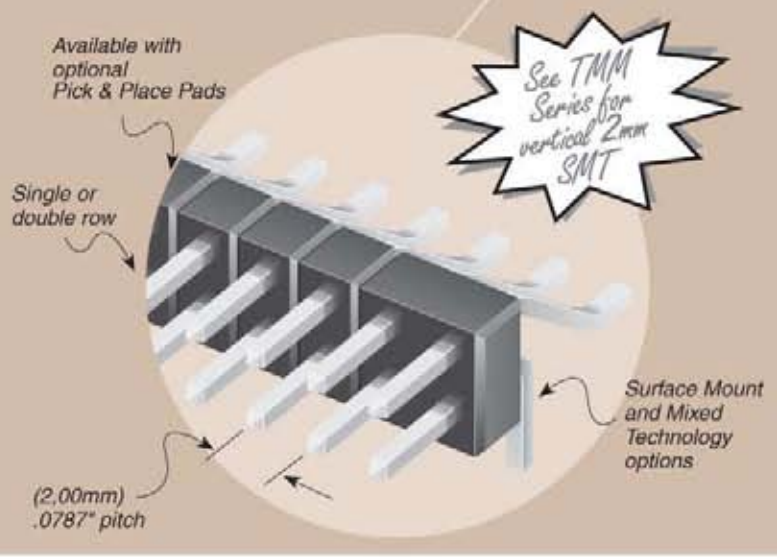
APPLICATIONS

MMS MMT

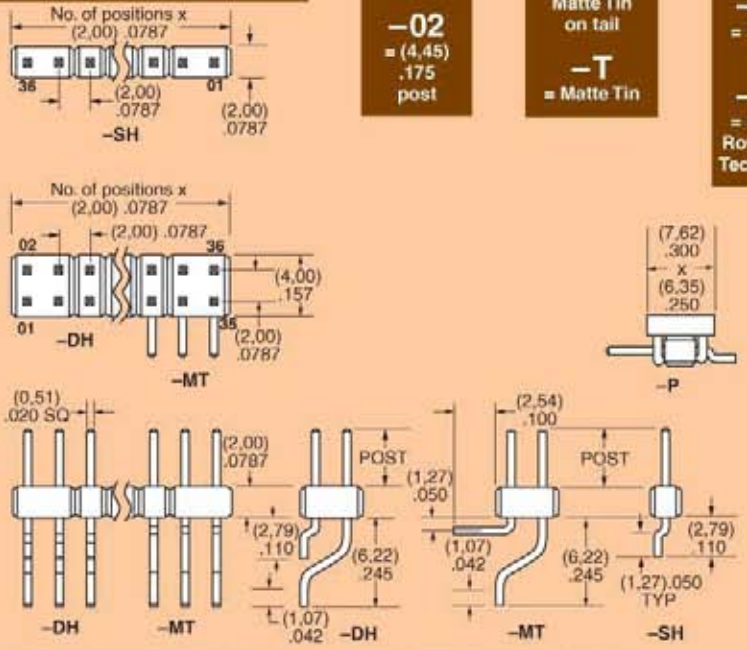
HORIZONTAL

APPLICATION SPECIFIC OPTIONS

Alignment pins, locking clips, and molded Pick & Place Pads available. Call Samtec.



MMT	-	1	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-	ROW OPTION	-	OPTION
			02 thru 36		-01 = (3,20) .126 post -02 = (4,45) .175 post		-L = 10µ" (0,25µm) Gold post, Matte Tin on tail -T = Matte Tin		-SH = Single Row -DH = Double Row -MT = Double Row Mixed Technology		-K = (4,00mm) .157" DIA Polyimide Film Pick & Place Pad (3 positions minimum) -P = Pick & Place Pad (2 positions minimum) -"XXX" = Polarized Position Specify position of omitted pin -TR = Tape & Reel Packaging



TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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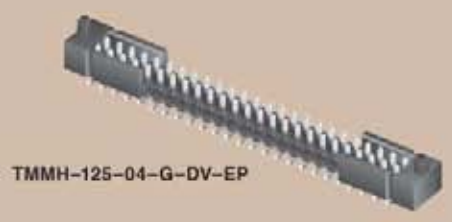
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles



(2,00mm) .0787"
TMMH SERIES

FLEXIBLE SMT HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TMMH

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
Voltage Rating:
500 VAC mated with SQW
RoHS Compliant:
Yes

CURRENT RATING		
AMBIENT TEMP	Mated with	
	ESQT	SQW
20°C	5.8A	5A
40°C	5.1A	4.6A
60°C	4.5A	4A
95°C	2.9A	2.6A
6 POSITIONS (2x3) POWERED		

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

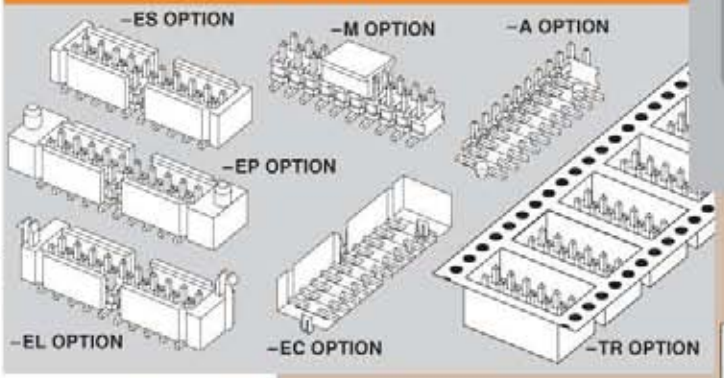
2mm TMMH/CLT	Rated @ -3dB Insertion Loss
4,77mm Stack Height	
Single-Ended Signaling	5.5 GHz / 11 Gbps
Differential Pair Signaling	6.5 GHz / 13 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?TMMH or contact sig@samtec.com.	

Note: Other Gold plating options available. Contact Samtec.

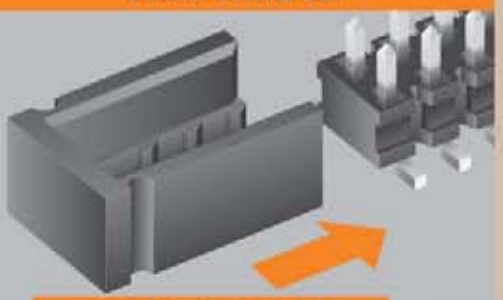
Note:
Some lengths, styles and options are non-standard, non-returnable.

Mates with:
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD

OPTIONS



FLEX SHROUD



ALSO AVAILABLE

Through-Hole

2mm Shunt
Specify **2SN-BK-G** for 2mm shunt with Gold plating.

TMMH	-	1	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-

03 thru 50

Specify LEAD STYLE from chart

-F
= Gold flash on post, Matte Tin on tail

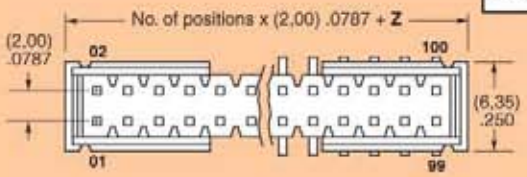
-L
= 10µ" (0,25µm) Gold on post, Matte Tin on tail

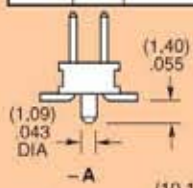
-G
= 20µ" (0,51µm) Gold on post Gold flash on tail

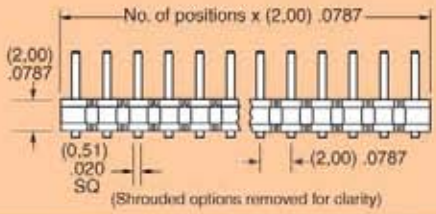
-T
= Matte Tin

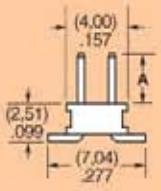
OPTION	Z
-ES	(2,92) .115
-EC	(4,70) .185
-EP & -EPC	(6,10) .240
-EL & -EBC	(4,45) .175

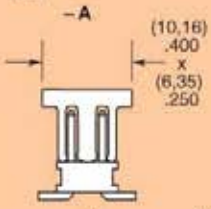
LEAD STYLE	A	MATES WITH
-01	(3,20) .126	SQT, SQW, ESQT, TLE, SMM, MMS, TCSD
-04	(1,91) .075	CLT
-05	(1,65) .065	

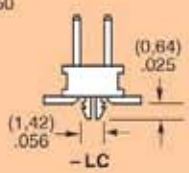












Due to technical progress, all designs, specifications and components are subject to change without notice.

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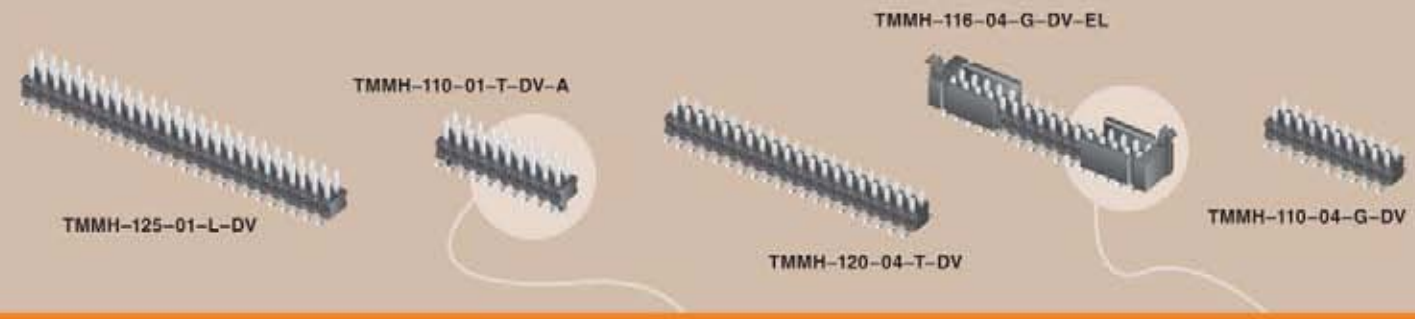
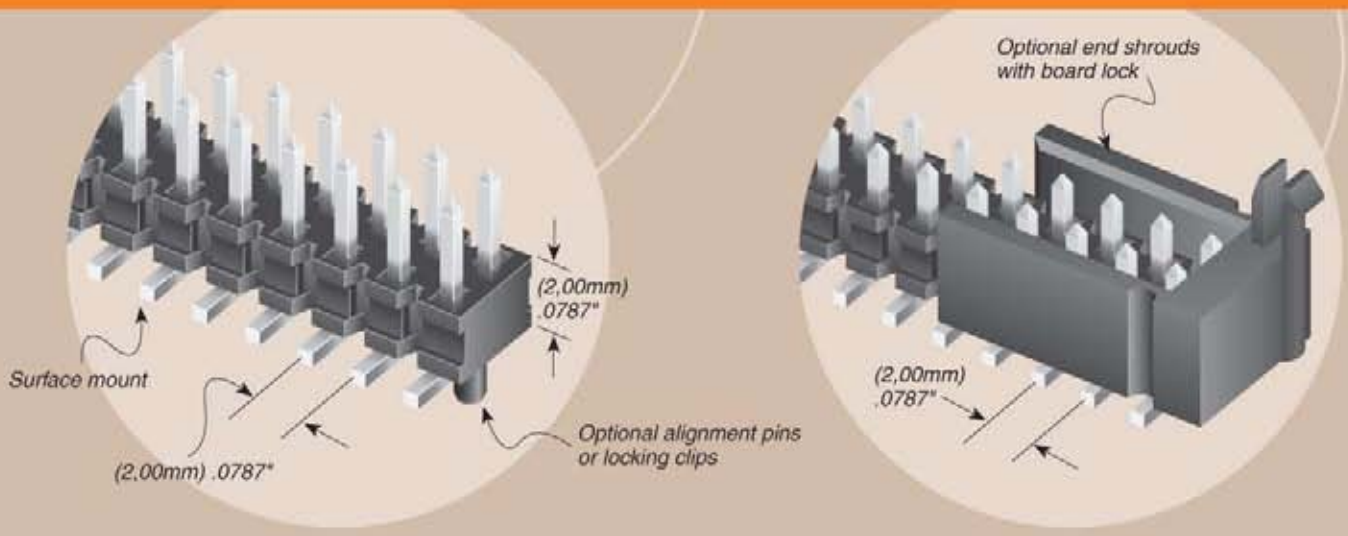




DV

FLEX SHROUD OPTIONS

All Flex Shroud options require 9 pins/row minimum
(For board-to-board interfaces. Will not mate with TCSD)

–ES
= End Shroud
(For best cost also see TSH Series)

–EC
= End Shroud with Locking Clip
(For best cost also see TSH Series)

–EP
= End Shroud with Guide Post

–EL
= End Shroud with Board Lock
(Boards are positively locked and cannot be unmated)

–EBC
= End Shroud with Board Lock and Locking Clip
(Boards are positively locked and cannot be unmated)

–EPC
= End Shroud with Guide Post and Locking Clip

OTHER OPTIONS

–"XXX"
= Polarized Position
Specify position of omitted pin

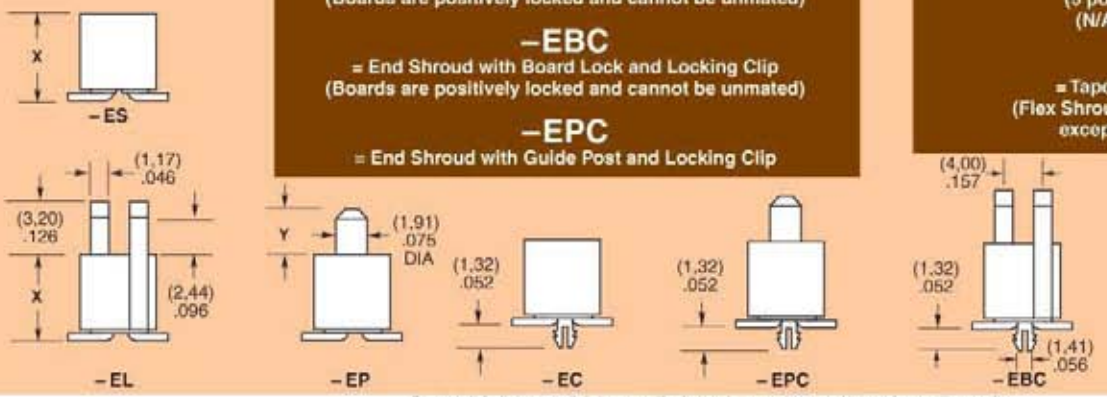
–A
= Alignment Pin
(3 positions minimum)
(N/A with -LC)

–LC
= Locking Clip
(10 positions minimum)
(N/A with -A)

–M
= Pick & Place Pad
(5 positions minimum)
(N/A with -T plating)

–TR
= Tape & Reel Packaging
(Flex Shroud options not available
except –ES, –EP & –EL)

LEAD STYLE	X	Y
–01	(5,84) .230	(4,45) .175
–04 & –05	(4,50) .177	(3,02) .119



TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces. Order any quantity above minimum.
In-house design, manufacture. Quick turn-around.
Call Samtec for specifications and ordering information.

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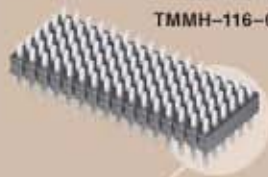
samtec

FLEX Y Z ™

(2,00mm) .0787"

TMMH SERIES



FLEXIBLE THROUGH-HOLE HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?TMMH

Insulator Material:
Black Liquid Crystal Polymer

Terminal Material:
Phosphor Bronze

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold

Voltage Rating:
500 VAC mated with SQW

RoHS Compliant:
Yes

CURRENT RATING		
AMBIENT TEMP	Mated with	
	ESQT	SQW
20°C	5.8A	5A
40°C	5.1A	4.6A
60°C	4.5A	4A
95°C	2.9A	2.6A
6 POSITIONS (2x3) POWERED		

Processing:

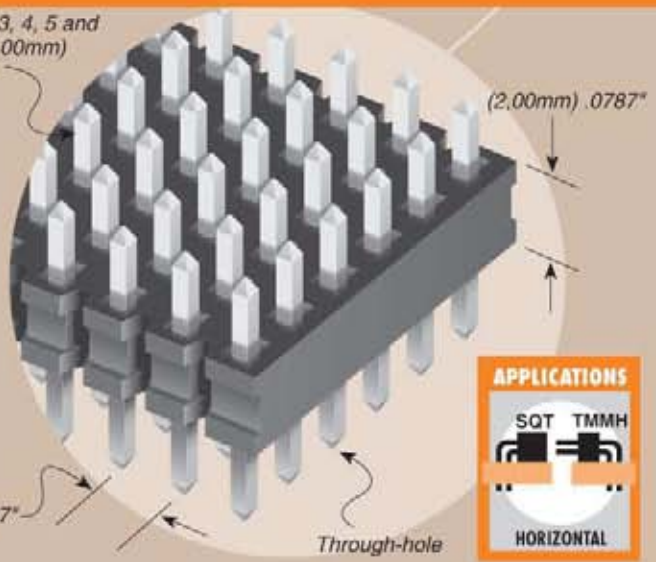
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

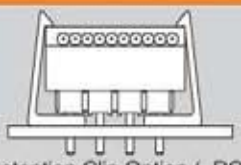
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD

E.L.P. EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles mated with CLT



APPLICATION



APPLICATIONS

Also Available

Press Fit
See PTT Series.

Surface Mount
See previous page.

Low Profile
See TMM Series.

Right Angle Four Row
See TMM Series.

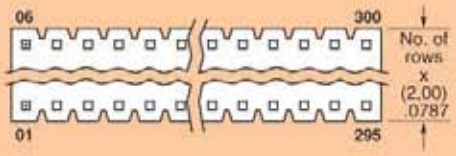
Shrouded Four Row Vertical & Right Angle
See TMMS Series.

Paste In Hole (PIH) processing. Contact Samtec ASP Group.

TMMH	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–

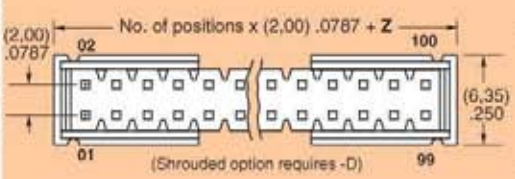
03 thru 50

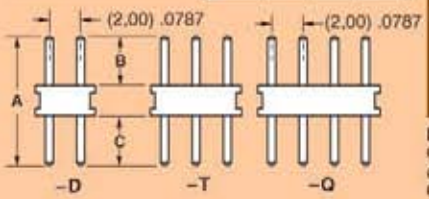
Specify LEAD STYLE from chart

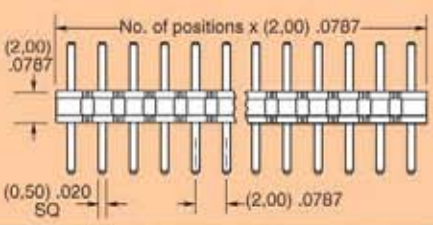


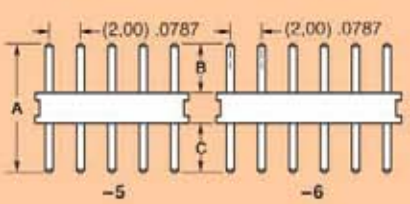
OPTION	Z
–ES	(2,92) .115
–EC	(4,70) .185
–EP & –EPC	(6,10) .240
–EL & –EBC	(4,45) .175

LEAD STYLE	A	B	C
–01	(7,67) .302	(3,20) .126	(2,46) .097
–04	(6,45) .255	(1,91) .075	(2,57) .101
–05	(5,94) .234	(1,65) .065	(2,29) .090
–06	(8,74) .344	(3,20) .126	(3,53) .139









–F
= Gold flash on contact area, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

–G
= 20µ" (0,51µm) Gold on contact area, Gold flash on tail

–T
= Matte Tin

Note:
Other Gold plating options available. Contact Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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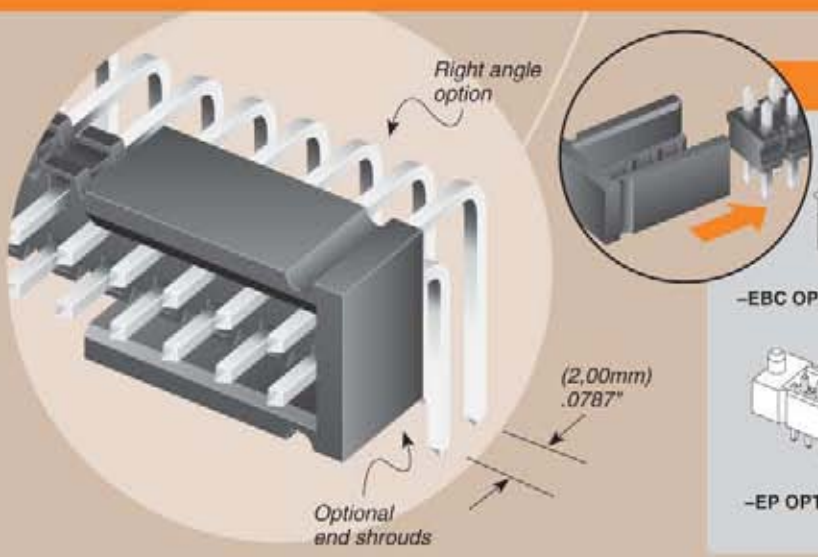
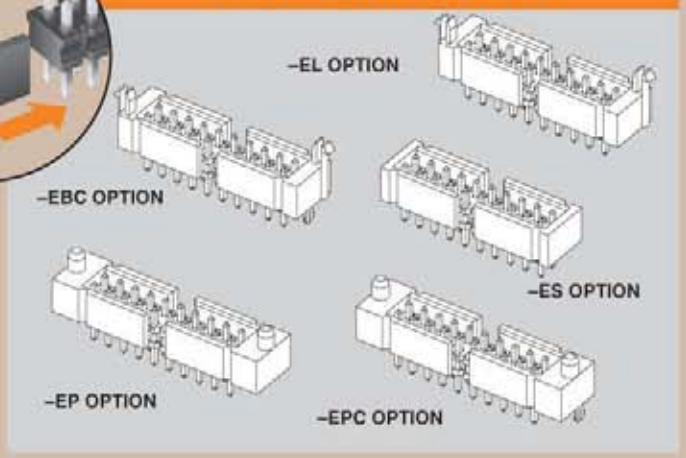


FLEX SHROUD OPTIONS



ROW OPTION

–D
= Double Row
(Required for Flex Shroud option)

–T
= Triple Row

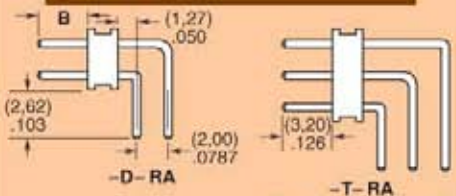
–Q
= Four Row

–5
= Five Row

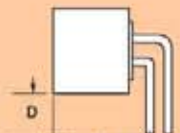
–6
= Six Row

TAIL OPTION

–RA
= Right Angle
(Double & Triple Row only)
(–ES, –EP, –EL Double Row only)
(–EC, –EBC and –EPC not available)
(–06 Lead style not available)



LEAD STYLE	X	Y
–01	(5,84) .230	(4,45) .175
–04 & –05	(4,50) .177	(3,02) .119



–D– RA –ES
(–RA also available with other flex shroud options)

LEAD STYLE	D	E
–01	(2,34) .092	(6,60) .260
–04	(2,62) .103	(5,26) .207
–05	(3,12) .123	(5,26) .207

FLEX SHROUD OPTIONS

Flex Shroud requires -D row & 9 pins/row minimum
(For board-to-board interfaces. Will not mate with TCSD)

–ES
= End Shroud

–EC
= End Shroud with Locking Clip

–EP
= End Shroud with Guide Post

–EL
= End Shroud with Board Lock
(Boards are positively locked and cannot be unmated)

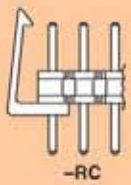
–EBC
= End Shroud with Board Lock and Locking Clip
(Boards are positively locked and cannot be unmated)

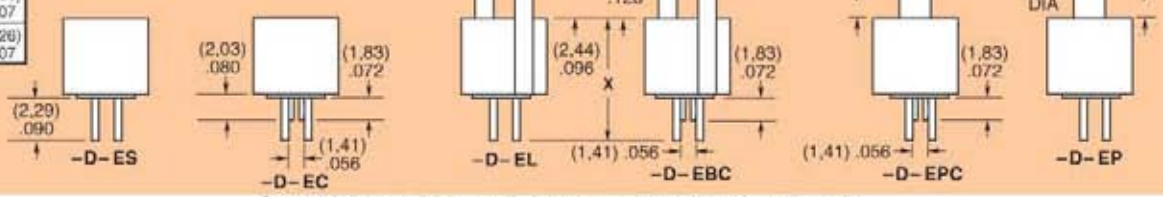
–EPC
= End Shroud with Guide Post and Locking Clip

OTHER OPTIONS

–"XXX"
= Polarized Position
Specify position of omitted pin

–RC
= Retention Clip
(Mates to TCSD)
(Double row only, minimum position 4 and available only –06 lead style)





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(2,00mm) .0787"

EHT, EC2, EHLT SERIES

SHROUDED IDC EJECTOR HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?EHT

Insulator Material: Black Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 3A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

EHT – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – D – TAIL OPTION – OTHER OPTION

Mates with: TCSD

05, 08, 10, 12, 13, 15, 17, 20, 22, 25

–L = 10µ" (0,25µm) Gold post, Matte Tin on tail

Leave blank for Through-hole

–RA = Right Angle

–SM = Surface Mount

–"XX" = Polarized Position

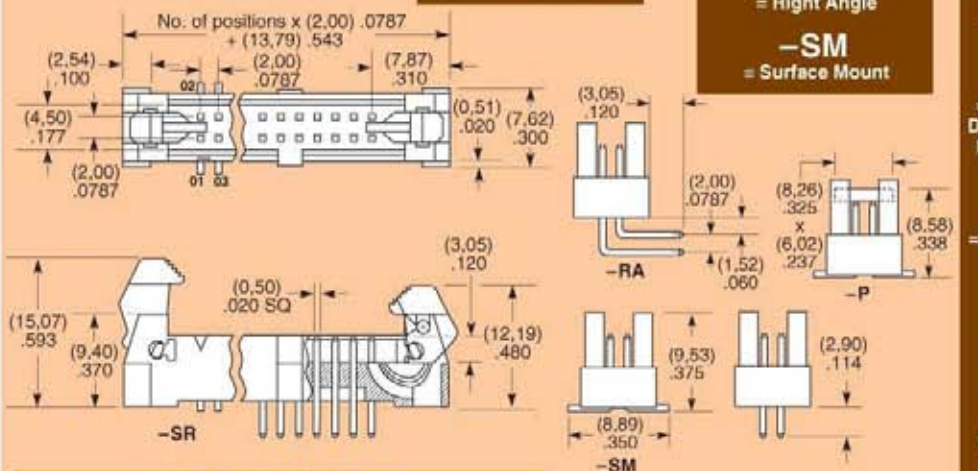
–LC = Locking Clip (–SM only)

–K = (6,50mm) .256" DIA Polyimide Film Pick & Place Pad (–SM only)

–P = Pick & Place Pad (–SM only)

–TR = Tape & Reel (–SM only)

–SR = Strain Relief (Leave Blank for no strain relief)



(Latch removed for clarity)

ALSO AVAILABLE

Ejector Header Cap.
(Locks TCSD cable to EHT header) Specify EC2-XX.

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?EHLT

Insulator Material: Black Liquid Crystal Polyme
Terminal Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 3A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

Note: Some lengths, styles and options are non-standard, non-returnable.

EHLT – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – D – TAIL OPTION – OTHER OPTION

Mates with: TLSD

05, 08, 10, 12, 13, 15, 17, 20, 22, 25

–L = 10µ" (0,25µm) Gold post, Matte Tin on tail

Note: Other Gold plating options available. Contact Samtec.

Leave blank for Through-hole

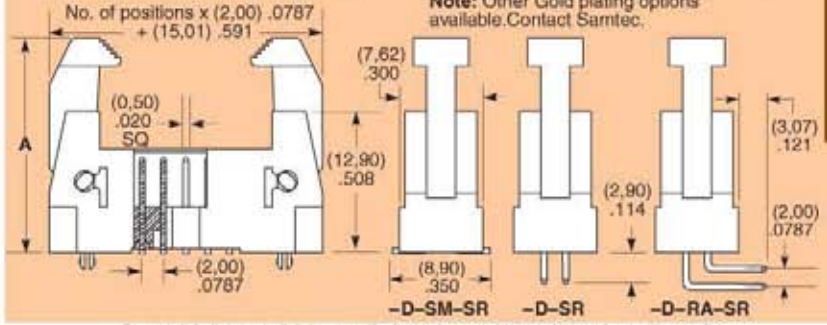
–RA = Right Angle

–SM = Surface Mount

–"XX" = Polarized Position

–LC = Locking Clip (–SM only)

–SR = Strain Relief (Leave Blank for no strain relief)



OPTION	A
WITH –SR	(19,60) .772
WITHOUT –SR	(15,93) .627

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC TAIWAN • Tel: 886-2-2735-6109 **SAMTEC HONG KONG** • Tel: 852-26904858 **SAMTEC KOREA** • Tel: 82-31-717-5685 **SAMTEC SOUTH AFRICA** • Tel: 27 11 452 8112 **SAMTEC ANZ** • Tel: 613 9512 7747

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FLEX STACK

(2,00mm) .0787"

STMM, LTMM, ZSTMM, ZLTMM SERIES

SHROUDED IDC HEADER & STACKER

Mates with:
SQT, SQW, ESQT, SMM, TCSD

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?STMM, www.samtec.com?LTMM, www.samtec.com?ZSTMM or www.samtec.com?ZLTMM

Insulator Material:
High Temperature Nylon
FILE NO. E111594
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Note: Other Gold plating options available. Contact Samtec.

Note: This Series is non-standard, non-returnable.

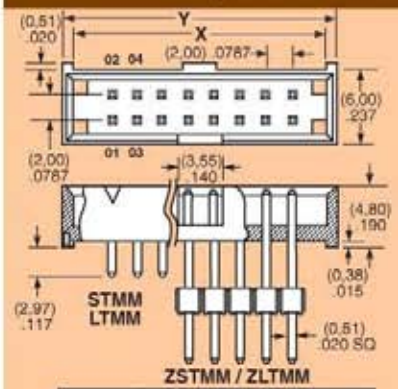
TYPE STRIP - 1 - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - D - BODY HEIGHT - OTHER OPTION

TYPE STRIP

- **STMM** = Cable Strip
- **LTMM** = Connector Strip
- **ZSTMM** = Elevated Cable Strip
- **ZLTMM** = Elevated Connector Strip

NO. PINS PER ROW

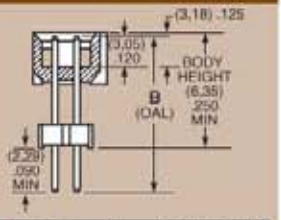
05, 08, 10, 12, 13, 15, 17, 20, 22, 25
(Call Samtec for other sizes)



TYPE STRIP	X	Y
LTMM/ ZLTMM	(2,00) .0787 x No. of Positions + (0,61) .024	(2,00) .0787 x No. of Positions + (2,39) .094
STMM/ ZSTMM	(2,00) .0787 x No. of Positions + (4,39) .173	(2,00) .0787 x No. of Positions + (6,17) .243

LEAD STYLE

–02
= STMM & LTMM
Specify ZSTMM & ZLTMM from chart



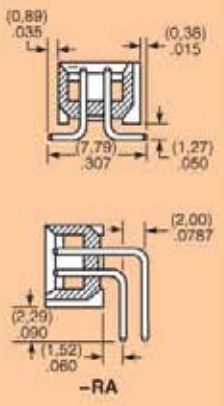
LEAD STYLE	B (OAL)	MAX BODY HEIGHT
-75	(9,58) 0.377	(7,42) 0.292
-62	(10,08) 0.397	(7,92) 0.312
-65	(10,49) 0.413	(8,33) 0.328
-73	(12,09) 0.476	(9,93) 0.391
-63	(14,10) 0.555	(11,94) 0.470
-66	(15,09) 0.594	(12,93) 0.509
-69	(15,60) 0.614	(13,44) 0.529
-74	(17,09) 0.673	(14,94) 0.588
-70	(17,60) 0.693	(15,44) 0.608
-71	(21,08) 0.830	(18,92) 0.745
-72	(21,62) 0.851	(19,46) 0.766

PLATING OPTION

- **–L** = 10µ" (0,25µm) Gold on post, Matte Tin on tail
- **–G** = 20µ" (0,51µm) Gold on post, Gold flash on tail
- **–T** = Matte Tin

D

- Leave blank for Through-hole
- **–RA** = Right Angle (STMM & LTMM only)
- **–SM** = Surface Mount (STMM & LTMM only)
- **–"XXX"** = ZSTMM & ZLTMM Body Height

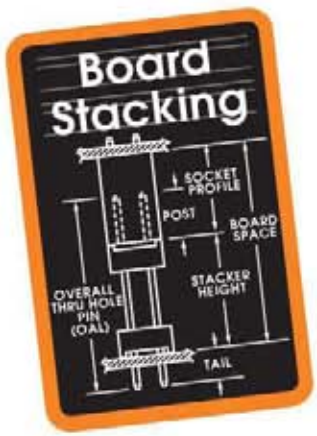


BODY HEIGHT

Leave blank for Through-hole

OTHER OPTION

- **–"XX"** = Polarized Position
- **–LC** = Locking Clip (-SM only)
- **–K** = (6,50mm) .256" DIA Film Pick & Place Pad (-SM only)
- **–TR** = Tape & Reel (–SM only)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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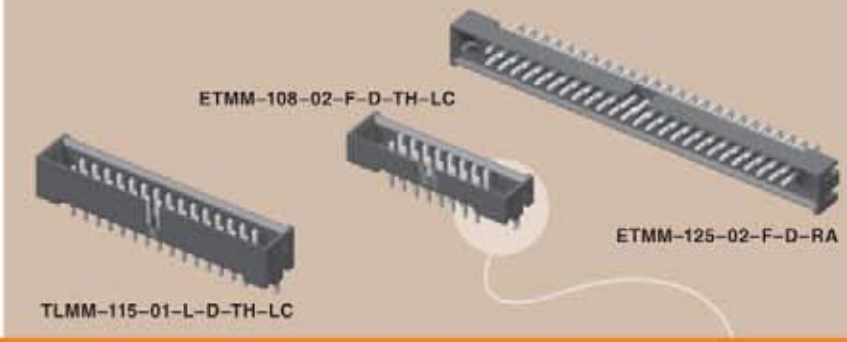


(2,00mm) .0787"

ETMM, TLMM SERIES

SHROUDED STRAIN RELIEF IDC HEADER

SPECIFICATIONS

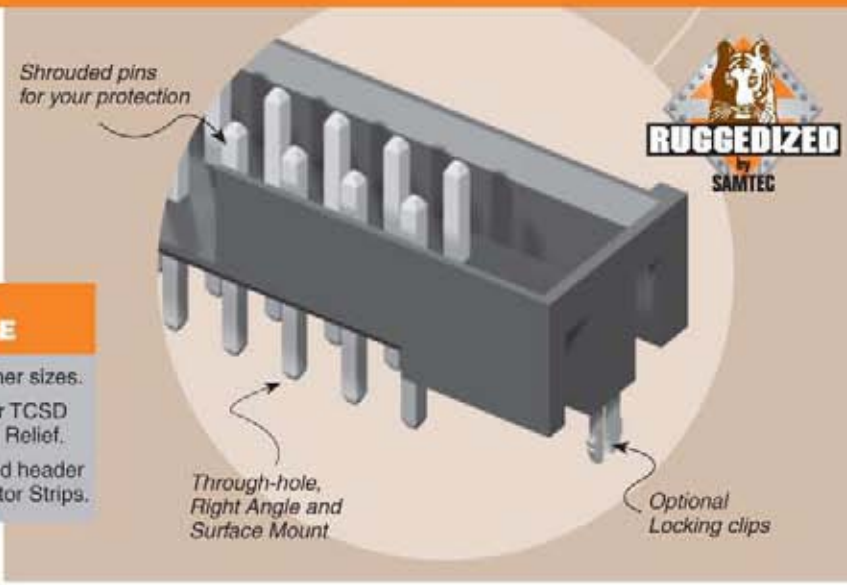
Mates with:
TLSD, TCSD, TCMD

For complete specifications see www.samtec.com?ETMM or www.samtec.com?TLMM

Insulator Material:
Black Liquid Crystal Polymer (ETMM)
High Temp Nylon (TLMM)
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,13mm) .005" max
RoHS Compliant:
Yes



ALSO AVAILABLE

Contact Samtec for other sizes.

See STMM Series for TCSD mates without Strain Relief.

See LTMM for shrouded header for mating with Connector Strips.

TYPE STRIP	–	1	NO. OF POSITIONS	–	LEAD STYLE	–	PLATING OPTION	–	D	–	BODY HEIGHT	–	OTHER OPTION

ETMM = Mates with TCSD and TCMD with Strain Relief

TLMM = Mates with TLSD with and without Strain Relief

05, 08, 10, 12, 13, 15, 17, 20, 22, 25 (Call for other sizes)

–01 = TLMM

–02 = ETMM

–F = Gold Flash on post, Matte Tin on tail

–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

–TH = Through-hole

–RA = Right Angle

–SM = Surface Mount

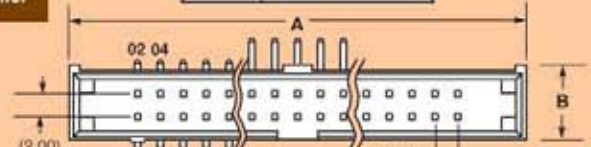
–"XX" = Polarized Position

–LC = Locking Clip (Not available for –RA)

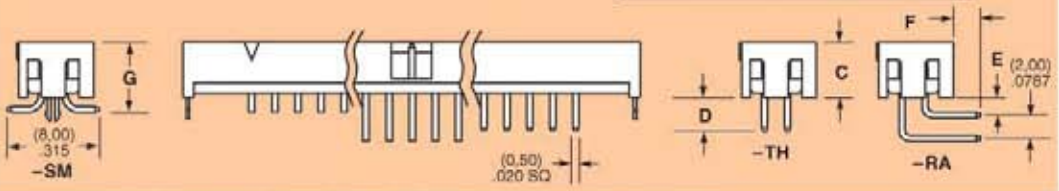
–TR = Tape & Reel Packaging (–SM only)

–K = (7,50mm) .295" DIA Polyimide Film Pick & Place Pad (–SM only)

TYPE STRIP	A
ETMM	No. of positions x (2,00) .0787 + (9,97) .393
TLMM	No. of positions x (2,00) .0787 + (7,37) .290



TYPE STRIP	B	C	D	E	F	G
ETMM	(6,54) .257	(4,83) .190	(2,97) .117	(1,52) .060	(2,29) .090	(6,10) .240
TLMM	(6,60) .260	(6,99) .275	(2,29) .090	(1,27) .050	(2,05) .081	(8,26) .325



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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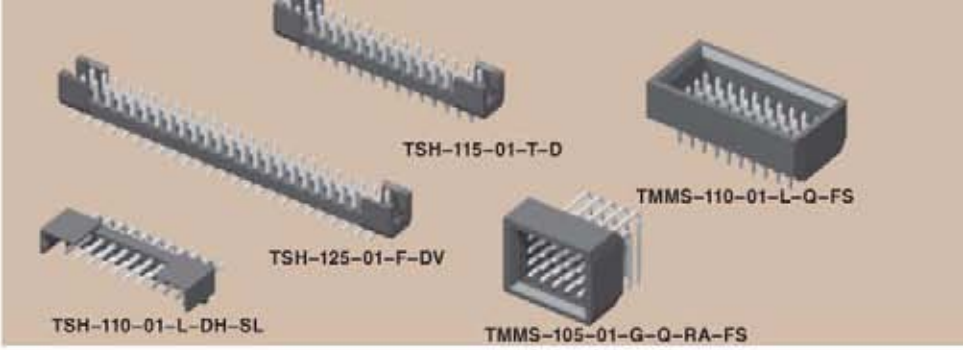


(2,00mm) .0787"

TSH, TMMS SERIES

SHROUDED HEADERS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TSH

Insulator Material: Black Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 3A @ 80°C ambient
Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,15mm) .006" max

Note: Some lengths, styles and options are non-standard, non-returnable.

TSH – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – ROW OPTION – OTHER OPTION

Mates with: CLT, SQT, SQW, ESQT, TLE, SMM, MMS, PTF

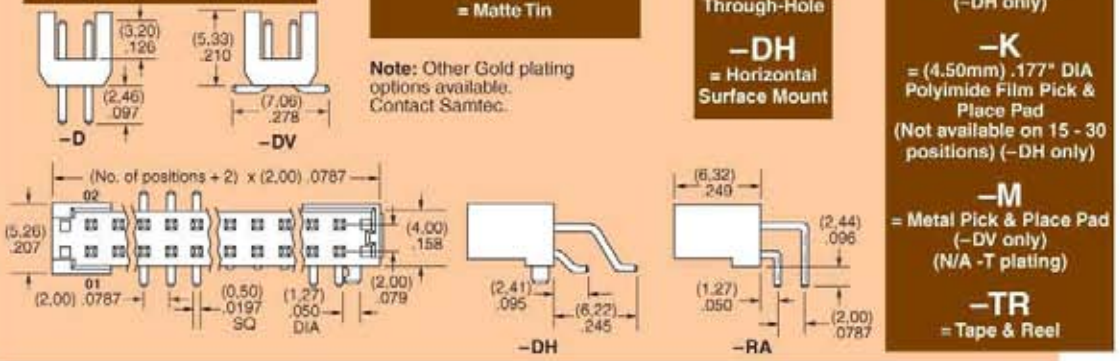
05, 10, 15, 20, 25, 30, 35, 40, 45
(40 & 45 = –D & -D-RA only)
(Call Samtec for other sizes)

–F = Gold flash on post, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail
–T = Matte Tin

Note: Other Gold plating options available. Contact Samtec.

–D = Vertical Through-Hole
–DV = Vertical Surface Mount
–RA = Right Angle Through-Hole
–DH = Horizontal Surface Mount

–LC = Locking Clip (–DV only) (N/A with -A)
–A = Alignment Pin (–DV only) (N/A with -LC)
–SL = Solder Locks (–DH only)
–K = (4.50mm) .177" DIA Polyimide Film Pick & Place Pad (Not available on 15 - 30 positions) (–DH only)
–M = Metal Pick & Place Pad (–DV only) (N/A -T plating)
–TR = Tape & Reel



SPECIFICATIONS

For complete specifications see www.samtec.com?TMMS

Insulator Material: Black, LCP
Terminal Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMPERATURE	TMMS Mated with SQT
20°C	5.5A
40°C	5A
60°C	4A
80°C	3A

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

Note: Some lengths, styles and options are non-standard, non-returnable.

TMMS – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – Q – OPTION – FS

Mates with: SQT, SQW, ESQT

05, 10, 15, 20, 30, 40 & 50

–F = Gold flash on contact area, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail
–G = 20µ" (0,51µm) Gold on contact area, Gold flash on tail

Note: Other Gold plating options available. Contact Samtec.

–RA = Right Angle

Due to technical progress, all designs, specifications and components are subject to change without notice.

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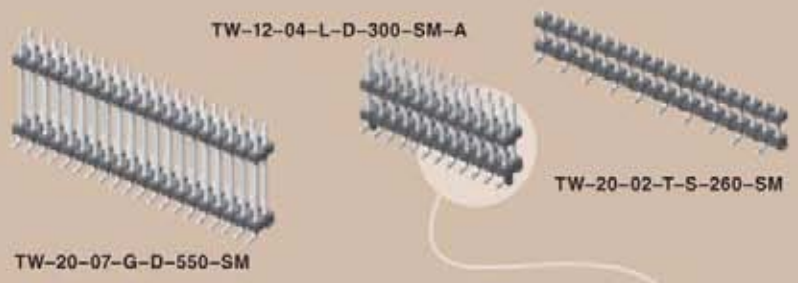
FLEX STACK

(2,00mm) .0787"

TW SERIES



SMT BOARD STACKERS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TW

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max

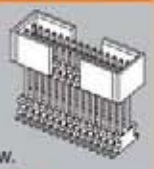
Note: Other Gold plating options available. Contact Samtec.

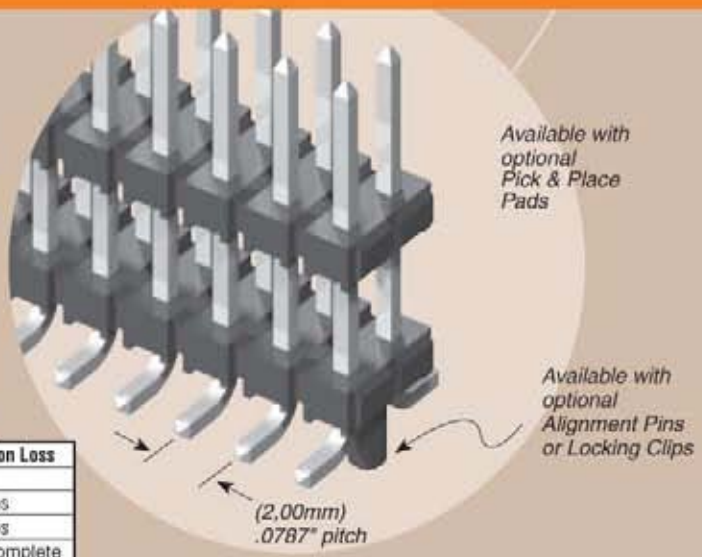
Note: This Series is non-standard, non-returnable.

Mates with:
CLT, SQT, SQW, ESQT, TLE SMM, MMS, TCSD

APPLICATION SPECIFIC OPTIONS

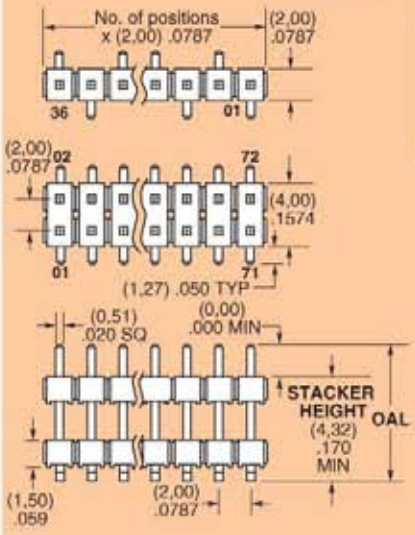
End shrouds with or without guide posts available.
Call Samtec for stacker height ranges and standard part numbers on double row.





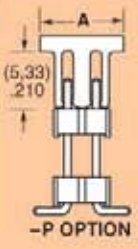
2mm TW/CLT	Rated @ -3dB Insertion Loss
18mm Stack Height	
Single-Ended Signaling	2.5 GHz / 5.0 Gbps
Differential Pair Signaling	3.0 GHz / 6.0 Gbps
Performance data for other stack heights and complete test data available at www.samtec.com?TW or contact sig@samtec.com	

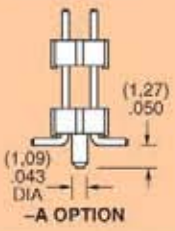
TW	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	SM	OTHER OPTIONS
	02 thru 36	Specify LEAD STYLE from chart below.	–L = 10µ" (0,25µm) Gold post, Matte Tin on tail –G = 20µ" (0,51µm) Gold post, Gold flash on tail –T = Matte Tin	–S = Single Row –D = Double Row	–"XXX" = Stacker Height in inches (0,13mm) .005" increments Example: –250 = (6,35mm) .250"		–"XXX" = Polarized Position –A = Alignment Pin (Metal or plastic at Samtec discretion) (4,83mm) .190" min. board space (–D only) –P = Pick & Place Pad (1,91mm) .075" min. post height (04-36 only) –TR = Tape & Reel Packaging (–07 lead style not available) (–06 lead style with –P option not available as a standard)



ROW OPTION	A
–S	(5,08) .200
–D	(6,35) .250

LEAD STYLE	OAL
–02	(7,85) .309
–03	(11,86) .467
–04	(12,37) .487
–06	(15,37) .605
–07	(17,38) .683
–09	(9,86) .388





Due to technical progress, all designs, specifications and components are subject to change without notice.

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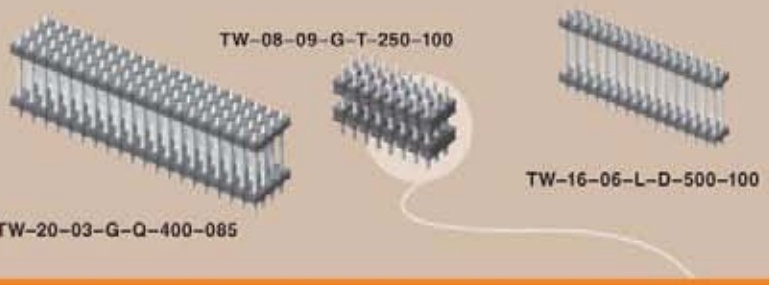
FLEX

(2,00mm) .0787"

TW SERIES



THROUGH-HOLE BOARD STACKERS

SPECIFICATIONS

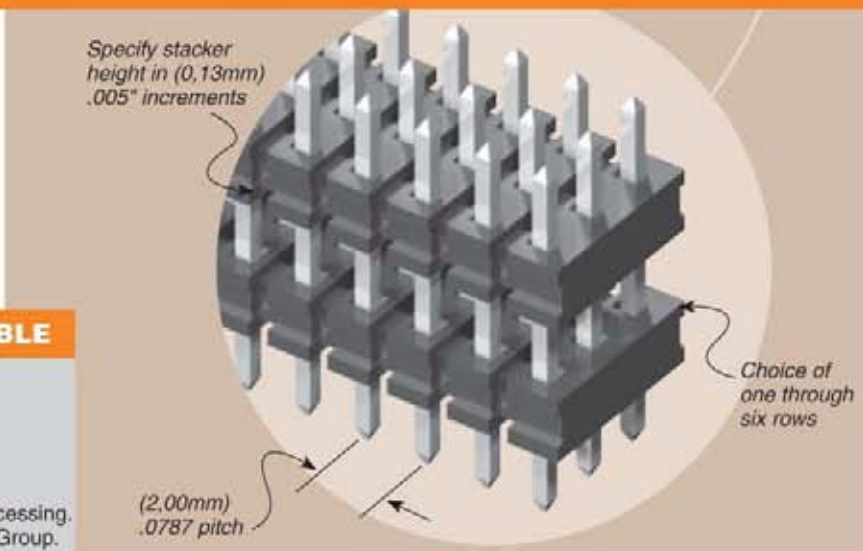
For complete specifications see www.samtec.com?TW

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

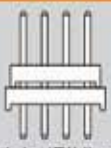
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

Mates with:
CLT, SQT, SQW, ESQT, TLE, SMM, MMS, TCSD



ALSO AVAILABLE



Paste In Hole (PIH) processing. Contact Samtec ASP Group.

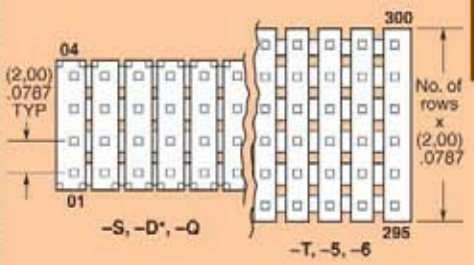
Note: Other Gold plating options available. Contact Samtec.

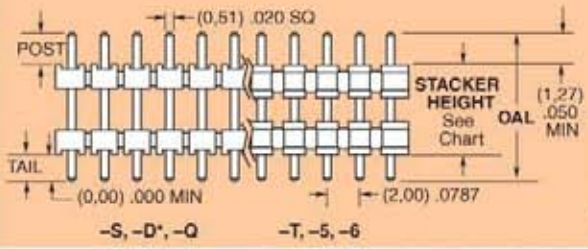
Note: This Series is non-standard, non-returnable.

Also Available

- **2mm Shunt** — See 2SN Series.
- **Surface Mount** — See previous page.
- **Low Profile** — See TMM Series.
- **Right Angle** — See TMM Series.
- **Shrouded Double Row** — See ZLTMM Series.

TW	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	STACKER HEIGHT	TAIL SPEC
	02 thru 50	Specify LEAD STYLE from chart below.	–L = 10µ" (0,25µm) Gold contact area, Matte Tin on tail –G = 20µ" (0,51µm) Gold contact area Gold flash on tail –T = Matte Tin	–S = Single Row –D = Double Row –T = Triple Row –Q = Four Row –5 = Five Row –6 = Six Row	–"XXX" = Stacker Height In inches (0,13mm) .005" increments Example: –250 = (6,35mm) .250"	–"XXX" = Tail Length In inches (0,13mm) .005" increments Example: -150 = (3,81mm) .150" –"XXX" = Polarized Position (Specify position to be removed)





LEAD STYLE	OAL
–01	(8,20) .323
–02	(9,60) .377
–03	(13,60) .538
–04	(14,10) .555
–05	(15,10) .594
–06	(17,10) .673
–07	(19,10) .751
* –08	(21,10) .830
–09	(11,60) .456
–10	(15,60) .614
–11	(10,08) .397
* –12	(28,19) 1.110

* Style –08 & –12 = S & D only

ROW OPTION	STACKER HEIGHT
–S, –D*, & –Q	(3,05) .120 MIN
–T, –5, –6	(4,06) .160 MIN

*–D with stacker height greater than (4,06mm) .160" will not have standoffs.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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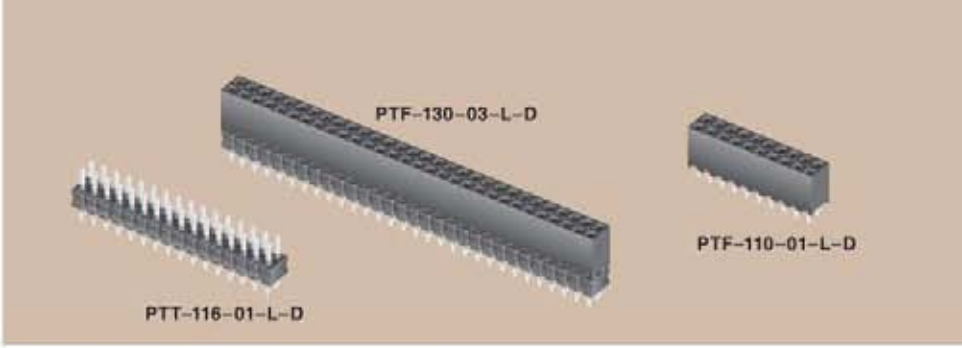


(2,00mm) .0787"

PTT, PTF SERIES

PRESS FIT HEADERS & SOCKETS

SPECIFICATIONS

For complete specifications see www.samtec.com?PTT or www.samtec.com?PTF

Insulator Material: Black Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Plating: Au or Sn over 50µ" (1,27µm) Ni

Current Rating: 2A @ 80°C ambient

Operating Temp Range: -55°C to +125°C

Insertion Depth: (2,67mm) .105" to (3,56mm) .140"

Insertion Force: (Single contact only) 4oz (1,11N) average

Normal Force: 60 grams (0,59N) average

Withdrawal Force: (Single contact only) 3oz (0,83N) average

Max Cycles: 100 with 30µ" (0,76µm) Au

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

ALSO AVAILABLE

Press fit tooling available. Contact Samtec.

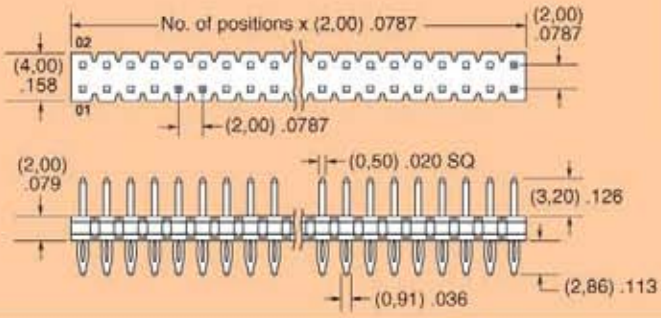
Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

PTT – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – ROW OPTION – OPTION

Mates with: PTF, ESQT, PTHF, SQW, SQT

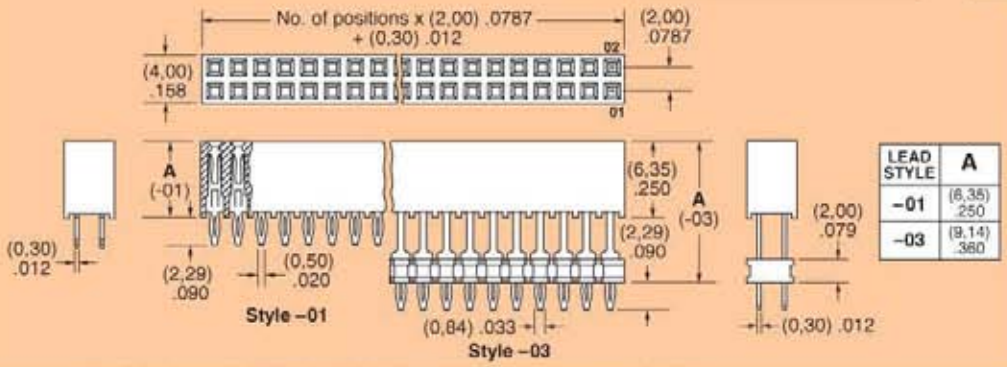
- NO. PINS PER ROW: 02 thru 50
- PLATING OPTION: –L = 10µ" (0,25µm) Gold contact, Matte Tin on tail
- ROW OPTION: –D = Double Row; –T = Triple Row; –Q = Four Row; –5 = Five Row; –6 = Six Row
- OPTION: –"XXX" = Polarized Position



PTF – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – D – OPTION

Mates with: PTT, TMMH, TMM, MTMM, MMT, TW, LTMM, ZLTMM

- NO. PINS PER ROW: 02 thru 50
- LEAD STYLE: Specify LEAD STYLE from chart
- PLATING OPTION: –L = 10µ" (0,25µm) Gold contact, Matte Tin on tail
- OPTION: –"XXX" = Polarized Position



LEAD STYLE	A
–01	(6,35) .250
–03	(9,14) .360

Due to technical progress, all designs, specifications and components are subject to change without notice.

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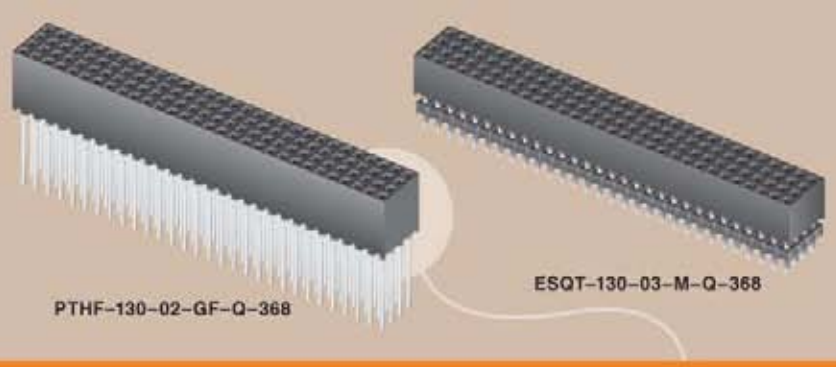
EMBEDDED-PC PC/104-Plus MODULES

(2,00mm) .0787"

ESQT (-368), PTHF SERIES



PC/104+ SELF NESTING SOCKETS

SPECIFICATIONS

Mates with:
ESQT, PTHF

For complete specifications and recommended PCB layouts see www.samtec.com?ESQT or www.samtec.com?PTHF

Insulator Material:
Black Liquid Crystal Polymer (ESQT)
Black High Temp Nylon (PTHF)
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
2A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C
Contact Resistance:
10 mΩ max
Insertion Depth:
(2,62mm) .103" to (5,03mm) .198"
Insertion Force:
(Single contact only)
4oz (1,11N) average
Normal Force:
60 grams (0,59N) average
Withdrawal Force:
(Single contact only)
3oz (0,83N) average
Max Cycles:
100 with 10µ" (0,25µm) Au
RoHS Compliant:
Yes

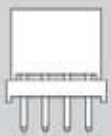
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

ALSO AVAILABLE

Press fit tooling available. Contact Samtec.

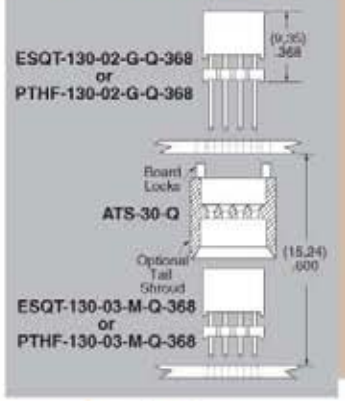
ALSO AVAILABLE



Paste In Hole (PIH)processing. Contact Samtec ASP Group.
(Not recommended for stack through applications)
ESQT only.

Note: Some lengths, styles and options are non-standard, non-returnable.

APPLICATIONS



TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	Q	368

ESQT = Solder Tails
PTHF = Press Fit Tails

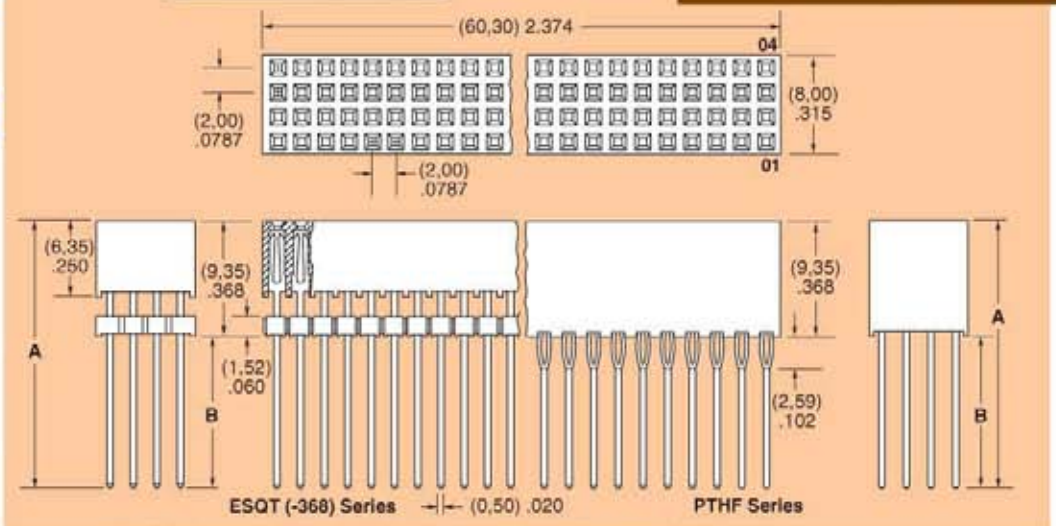
30

Specify LEAD STYLE from chart

LEAD STYLE	ESQT A	ESQT B	PTHF A	PTHF B
–02	(21,59) .850	(12,24) .482	(21,59) .850	(12,24) .482
–03	(11,63) .458	(2,29) .090	(12,34) .486	(3,00) .118

–GF
= 15µ" (0,38µm) Gold on contact, Gold flash on tail (–02 Lead Style only)

–M
= 20µ" (0,51µm) Gold on contact, Matte Tin on tail (–03 Lead Style only)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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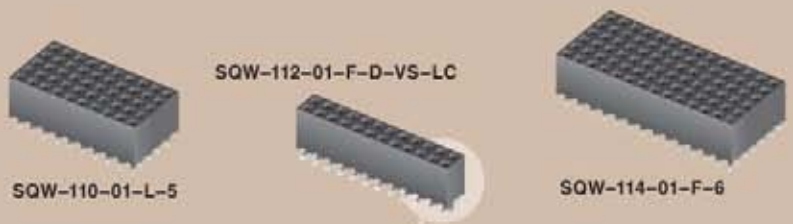
FLEX Y Z ™

(2,00mm) .0787"

SQW SERIES



COST-EFFECTIVE RUGGED SOCKETS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SQW

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Voltage Rating:
500 VAC mated with TMM or TMMH

Operating Temp Range:
-55°C to +125°C

Contact Resistance:
10 mΩ max

Insertion Depth:
(2,62mm) .103" to (5,03mm) .198" with (0,38mm) .015" wipe

Insertion Force:
(Single contact only) 1.8oz (0,50N) avg.

Withdrawal Force:
(Single contact only) 1.0oz (0,28N) avg.

Max Cycles:
100 with 10µ" (0,25µm) Au

RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	Mated with TMMH
20°C	5A
40°C	4.6A
60°C	4A
95°C	2.6A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x for -D & -D-VS (230°C for 60 seconds only for -T, -Q, -5 & -6)

Lead-Free Solderable:
Yes, for -D & -D-VS (Wave only for -T, -Q, -5 & -6)

SMT Lead Coplanarity:
(0,15mm) .006" max

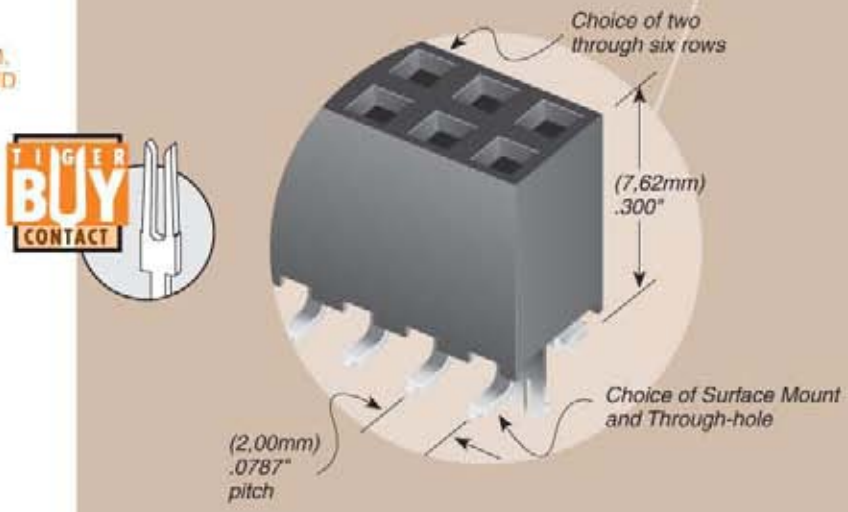
TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
TMMH, TMM, MTMM, MMT, TW, TSH, TCMD

TIGER BUY CONTACT



SQW – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – ROW OPTION – OPTION

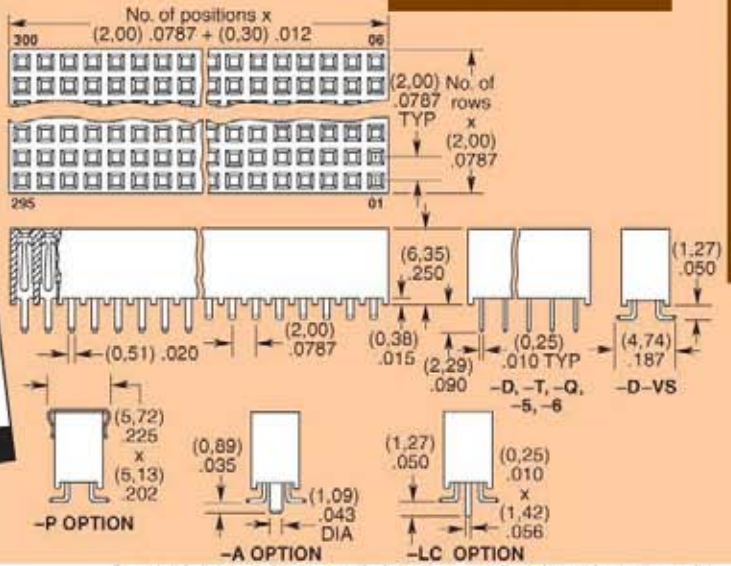
NO. PINS PER ROW: 02 thru 50

PLATING OPTION:
- **–F** = Gold flash on contact, Matte Tin on tail
- **–L** = 10µ" (0,25µm) Gold contact, Matte Tin on tail

ROW OPTION:
- **–D** = Double Row
- **–D–VS** = Double Row Surface Mount
- **–T** = Triple Row
- **–Q** = Four Row
- **–5** = Five Row
- **–6** = Six Row

OPTION:
- **–"XXX"** = Polarized Position

–D–VS only options:
- **–A** = Alignment Pin (5 positions minimum) Metal or plastic at Samtec discretion. (N/A with -LC)
- **–LC** = Locking Clip (5 positions minimum) (N/A with -A)
- **–K** = (4,25mm) .167" DIA Polyimide Film Pick & Place Pad (4 positions minimum)
- **–P** = Pick & Place Pad (4 positions minimum)
- **–TR** = Tape & Reel Packaging (4 thru 28 positions only)



Due to technical progress, all designs, specifications and components are subject to change without notice.

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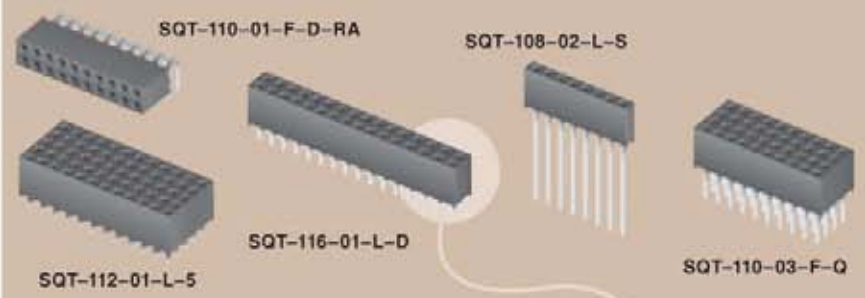
FLEX Y Z

(2,00mm) .0787"

SQT SERIES



COST-EFFECTIVE RUGGED SOCKETS

SPECIFICATIONS

For complete specifications see www.samtec.com?SQT

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
Phosphor Bronze

Plating:
Sn or Au over 50µ" (1,27µm) Ni

Voltage Rating:
450 VAC mated with TMM or TMMH

Operating Temp Range:
-55°C to +125°C

Contact Resistance:
10 mΩ max

Insertion Depth:
(2,62mm) .103" to (5,03mm) .198"

Insertion Force:
(Single contact only) 4oz (1,11N) average

Normal Force:
60 grams (0,59N) average

Withdrawal Force:
(Single contact only) 3oz (0,83N) average

Max Cycles:
100 with 10µ" (0,25µm) Au

RoHS Compliant:
Yes

Processing:

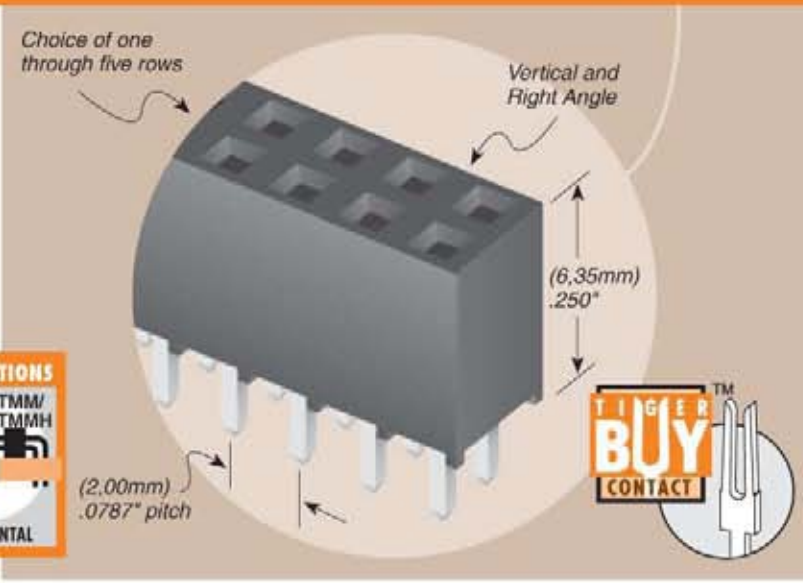
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable:
Yes

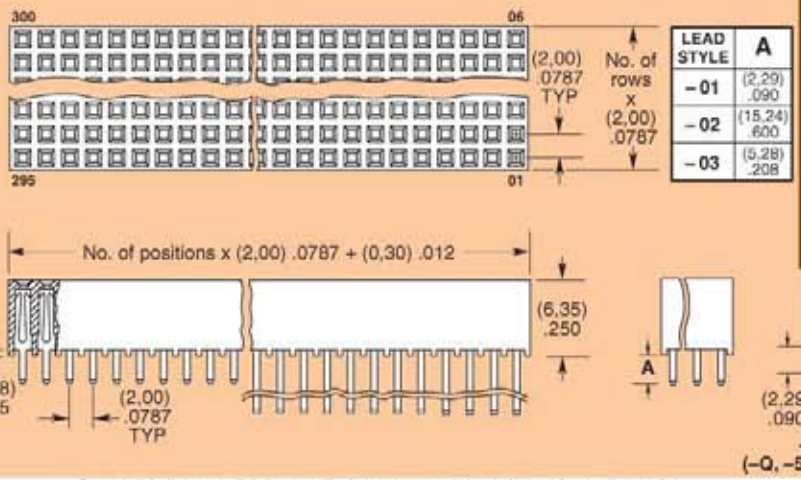
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with:
TMMH, TMM, MTMM, MMT, TW, LTMM, ZLTMM, ESQT, TCMD

CURRENT RATING	
AMBIENT TEMP	Mated with TMM/TMMH
20°C	5.5A
40°C	5A
60°C	4A
80°C	3A



SQT	– 1	NO. PINS PER ROW	– LEAD STYLE	– PLATING OPTION	– ROW OPTION	– OTHER OPTION
		02 thru 50	Specify LEAD STYLE from chart	–F = Gold flash on contact, Matte Tin on tail –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail	–S = Single Row –D = Double Row –T = Triple Row –Q = Four Row –5 = Five Row –6 = Six Row	–RA = Right Angle (–Q, –5 & –6 Row not available) (Lead Style –01 only) –"XXX" = Polarized Position (Indicate position number)



LEAD STYLE	A
–01	(2,29) .090
–02	(15,24) .600
–03	(5,28) .208

Also Available

Elevated
See ESQT Series.

Surface Mount
See SQW and TLE Series.

Low Profile
See CLT Series.

High Reliability
See SMM Series.

Press Fit
See PTF Series.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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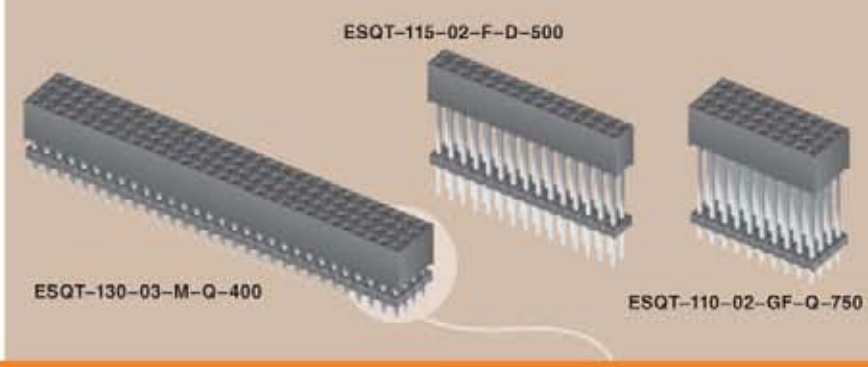
FLEX

(2,00mm) .0787"

ESQT SERIES



FLEXIBLE ELEVATED SOCKET STRIPS

SPECIFICATIONS

For complete specifications see www.samtec.com?ESQT

Insulator Material: Black Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Plating: Sn or Au over 50µ" (1,27µm) Ni

Operating Temp Range: -55°C to +125°C

Contact Resistance: 10 mΩ max

Insertion Depth: (2,62mm) .103" to (5,03mm) .198" with (0,38mm) .015" wipe

Max Cycles: 100 with 10µ" (0,25µm) Au

Insertion Force: (Single contact only) 4oz (1,11N) avg.

Withdrawal Force: (Single contact only) 3oz (0,83N) avg.

RoHS Compliant: Yes

Processing:

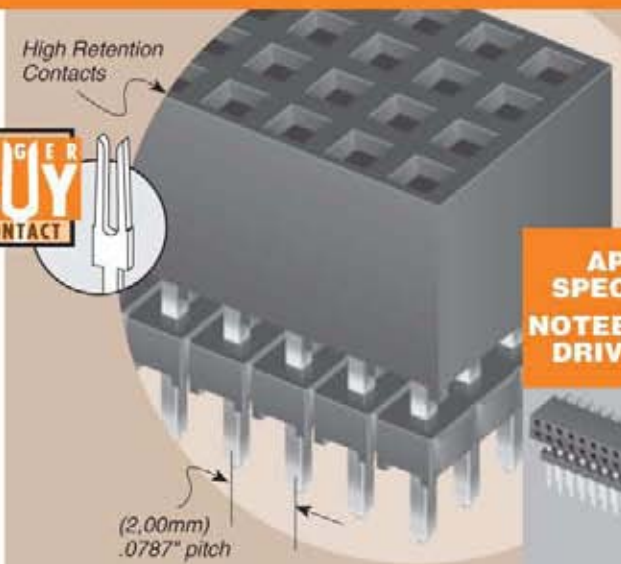
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x for -S, -D & -Q (230°C for 60 seconds only for -T, -5 & -6)

Lead-Free Solderable: Yes, for -S, -D & -Q (Wave only for -T, -5 & -6)

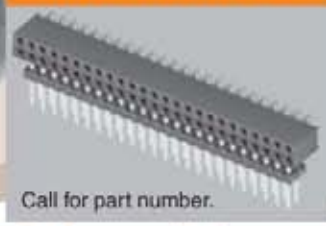
Mates with: TMMH, TMM, MTMM, MMT, TW, LTMM, ZLTMM, ESQT, TCMD

CURRENT RATING	
AMBIENT TEMP	Mated with TMMH
20°C	5.8A
40°C	5.1A
60°C	4.5A
95°C	2.9A
6 POSITIONS (2x3) POWERED	

Note: This Series is non-standard, non-returnable.



APPLICATION SPECIFIC OPTION:
NOTEBOOK 2.5" DISK DRIVE INTERFACE



Call for part number.

ESQT - 1 - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - ROW OPTION - BODY HEIGHT - OTHER OPTION

NO. PINS PER ROW: 02 thru 50

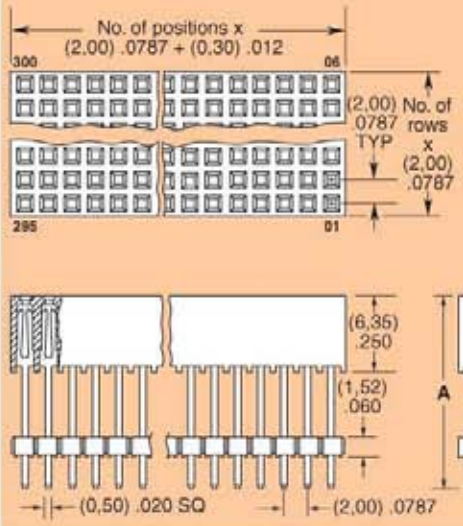
LEAD STYLE: Specify LEAD STYLE from chart

PLATING OPTION:
- **–F** = Gold flash on contact, Matte Tin on tail
- **–L** = 10µ" (0,25µm) Gold on contact, Matte Tin on tail
- **–M** = 20µ" (0,51µm) Gold on contact, Matte Tin on tail
- **–GF** = 15µ" (0,38µm) Gold on contact, Gold flash on tail (Recommended for self-nesting) (–02 lead style only)

ROW OPTION:
- **–S** = Single Row
- **–D** = Double Row
- **–T** = Triple Row
- **–Q** = Quad Row
- **–5** = Five Row
- **–6** = Six Row

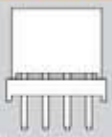
BODY HEIGHT: **–"XXX"** = Body Height (in inches)
(7,87mm) .310" minimum for –S, –D, –Q
(9,53mm) .375" minimum for –T, –5, –6

OTHER OPTION: **–"XXX"** = Polarized Position (Indicate position number)



LEAD STYLE	A	MAX TAIL	MAX BODY HEIGHT
–02	(21,59) .850	(13,72) .540	(20,32) .800
–03	(11,63) .458	(3,76) .148	(10,36) .408

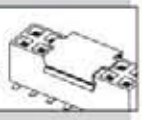
ALSO AVAILABLE



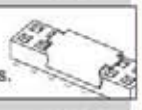
Paste In Hole (PIH) processing. Contact Samtec ASP Group.
(Not recommended for stack through applications)

Also Available

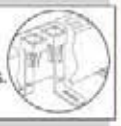
Surface Mount See SQW and TLE Series.



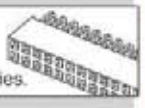
Low Profile See CLT Series.



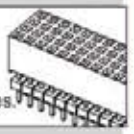
High Reliability See SMM Series.



Right Angle See SQW Series.



PC104+ Sockets See ESQT-368 and PTHF Series.



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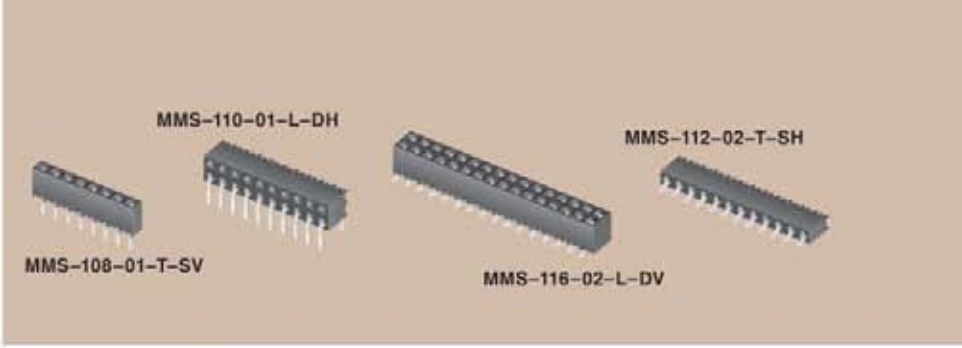


(2,00mm) .0787"

MMS SERIES

BOX CONTACT SOCKET

SPECIFICATIONS

For complete specifications see www.samtec.com?MMS

Insulator Material: Black LCP
Contact Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Contact Resistance: 10 mΩ max
Current Rating: 2A @ 80°C ambient
Insertion Depth: DH = (2,13mm) .084" to (2,79mm) .110", SH= (2,13mm) .084" minimum or pass-through Top Entry DV/SV= (2,13mm) .084" to (4,32mm) .170" Bottom Entry DV/SV= (4,27) .168" minimum (Plus board)
Insertion Force: (Single contact only) 3.7oz (1,03N) avg.
Withdrawal Force: (Single contact only) 2.2oz (0,61N) avg.
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,15mm) .006" max

Note: Some lengths, styles and options are non-standard, non-returnable.

MMS – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – ROW OPTION – OTHER OPTION

Mates with: TMMH, TMM, MTMM, MMT, TW, LTMM, ZLTMM, TCMD

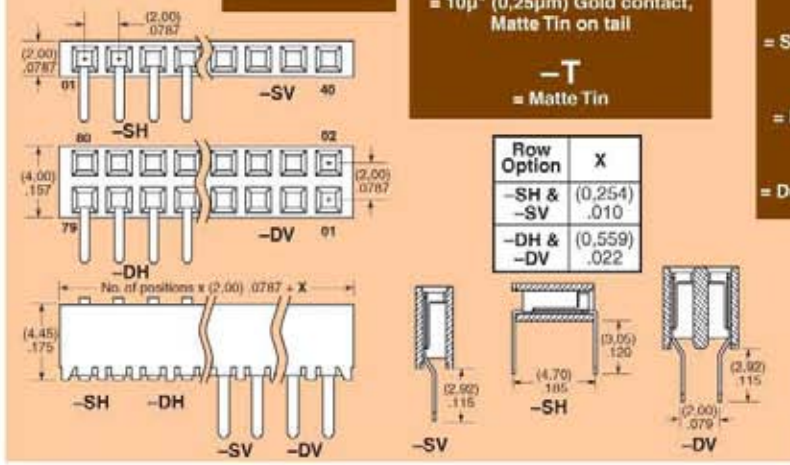
NO. PINS PER ROW: 02 thru 40

PLATING OPTION:
- –L = 10µ" (0,25µm) Gold contact, Matte Tin on tail
- –T = Matte Tin

ROW OPTION:
- –SV = Single Vertical
- –SH = Single Horizontal
- –DV = Double Vertical
- –DH = Double Horizontal

OTHER OPTION:
- –"XX" = Polarized Position

Row Option	X
–SH & –SV	(0,254) .010
–DH & –DV	(0,559) .022



APPLICATION SPECIFIC OPTIONS

Alignment Pin (–DV only), Locking clips and Through-hole pass-through options available. Call Samtec.

MMS – 1 – NO. PINS PER ROW – 02 – PLATING OPTION – ROW OPTION – OTHER OPTION

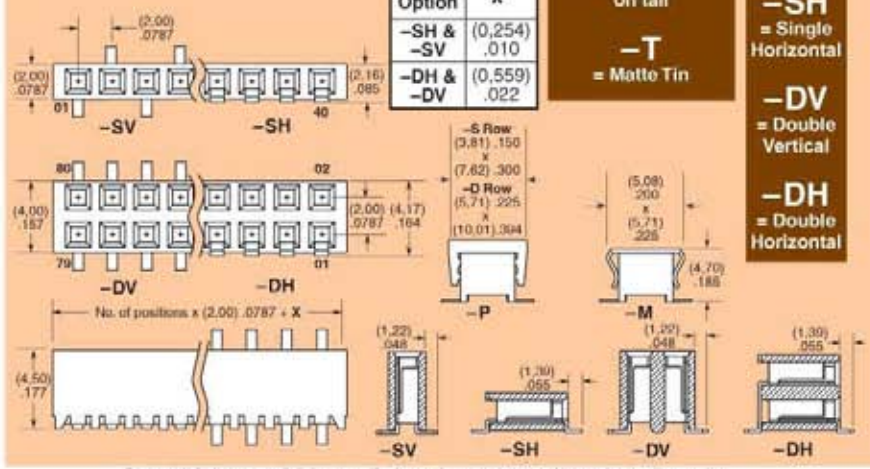
NO. PINS PER ROW: 02 thru 40

PLATING OPTION:
- –L = 10µ" (0,25µm) Gold contact, Matte Tin on tail
- –T = Matte Tin

ROW OPTION:
- –SV = Single Vertical
- –SH = Single Horizontal
- –DV = Double Vertical
- –DH = Double Horizontal

OTHER OPTION:
- –"XX" = Polarized Position
- –K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad (–SV & –DV only) (–SV= 3 pos. min.) (–DV= 4 pos. min.)
- –M = Metal Pick & Place Pad (4 positions min.) (–DV only)
- –P = Plastic Pick & Place Pad (4 pos. min., –SV only) (5 pos. min., –DV only)
- –TR = Tape & Reel Packaging

Row Option	X
–SH & –SV	(0,254) .010
–DH & –DV	(0,559) .022



Due to technical progress, all designs, specifications and components are subject to change without notice.

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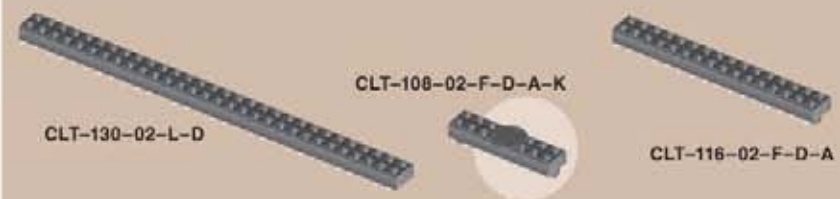
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(2,00mm) .0787"
CLT SERIES



LOW PROFILE DUAL WIPE SOCKET

SPECIFICATIONS

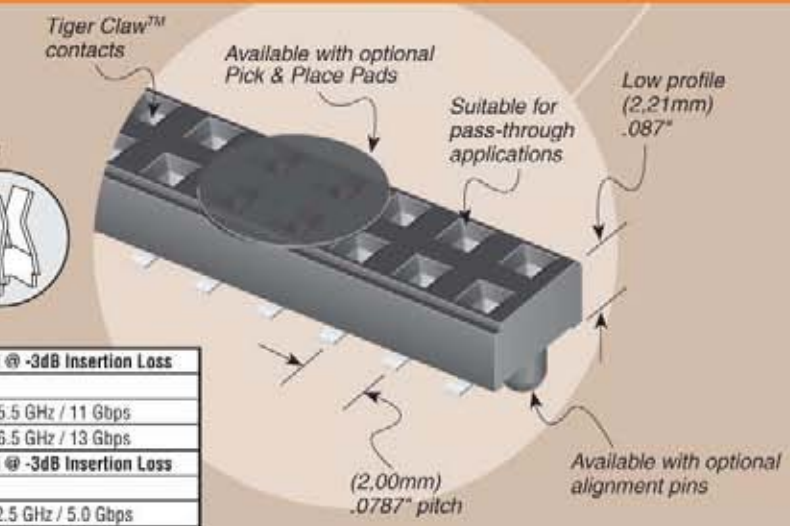
For complete specifications and recommended PCB layouts see www.samtec.com?CLT

Insulator Material: Black Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating: 2A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Contact Resistance: 10 mΩ max
Insertion Depth: Top Entry= (1,40mm) .055" minimum Bottom Entry= (2,57mm) .101" minimum (add board thickness for correct post OAL)
Insertion Force: (Single contact only) 1.8oz (0,50N) avg.
Withdrawal Force: (Single contact only) .6oz (0,17N) avg.
Max Cycles: 100 with 10µ" (0,25µm) Au
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (02-25)
(0,15mm) .006" max (26-34)
(0,20mm) .008" max (35-50)

Mates with: TMM, TMMH, MTMM, MMT, TW



TMMH/CLT	Rated @ -3dB Insertion Loss
4,77mm Stack Height	
Single-Ended Signaling	5.5 GHz / 11 Gbps
Differential Pair Signaling	6.5 GHz / 13 Gbps
TW/CLT	**Rated @ -3dB Insertion Loss**
18mm Stack Height	
Single-Ended Signaling	2.5 GHz / 5.0 Gbps
Differential Pair Signaling	3.0 GHz / 6.0 Gbps
Complete test data available at www.samtec.com?CLT or contact sig@samtec.com	

CLT – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – D – OTHER OPTIONS

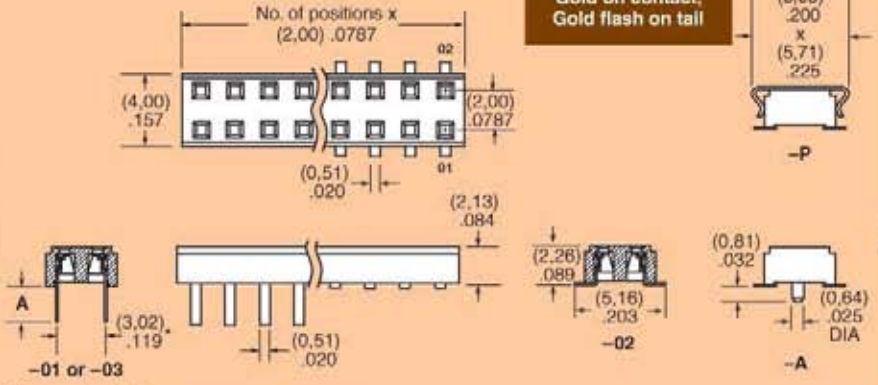
NO. PINS PER ROW: 02 thru 50

LEAD STYLE
- **–01** = Through-hole
- **–02** = Surface Mount
- **–03** = Through-hole

PLATING OPTION
- **–F** = Gold flash on contact, Matte Tin on tail
- **–L** = 10µ" (0,25µm) Gold on contact, Matte Tin on tail
- **–G** = 10µ" (0,25µm) Gold on contact, Gold flash on tail

OTHER OPTIONS
All options require Style –02
- **–BE** = Bottom Entry (Required for bottom entry applications)
- **–A** = Alignment Pin (3 positions minimum) Metal or plastic at Samtec's discretion
- **–K** = (5,00mm) .197" DIA Polyimide Film Pick & Place Pad (04 thru 50 only)
- **–P** = Pick & Place Pad (4 positions minimum) (Not always necessary for auto placement.)
- **–TR** = Tape & Reel Packaging (36 positions max)

LEAD STYLE	A
–01	(2,16) .085
–03	(2,95) .116



***Processing Note:**
For Pass-through application drill PCB on (2,22) .0674 row spacing & (1,22) .048 DIA holes

TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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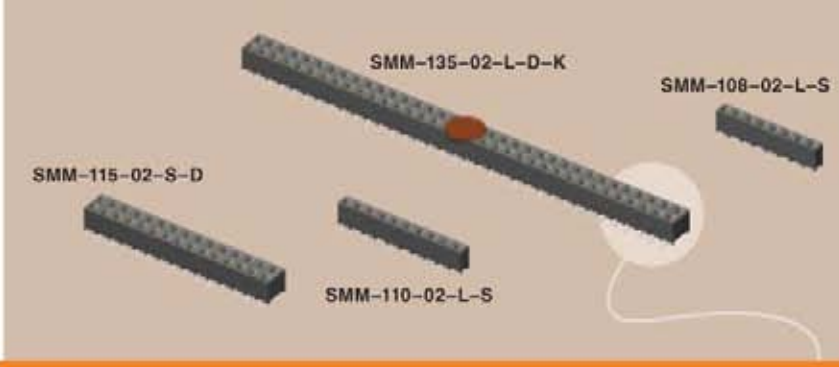
TIGER EYE™ SYSTEM

(2,00mm) .0787"

SMM SERIES



TIGER EYE™ SOCKET STRIP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SMM

Insulator Material: Black Liquid Crystal Polymer

Contact Material: BeCu

Plating: Sn or Au over 50µ" (1,27µm) Ni

Operating Temp Range: -55°C to +125°C

Contact Resistance: 10 mΩ max

Insertion Depth: (3,05mm) .120" to (3,25mm) .128"

Insertion Force: (Single contact only) 2.0oz (0,56N) average

Withdrawal Force: (Single contact only) 1.5oz (0,42N) average

Max Cycles: 100 with 10µ" (0,25µm) Au

RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	Mated with TMM
20°C	3.9A
40°C	3.5A
60°C	3A
95°C	2A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max

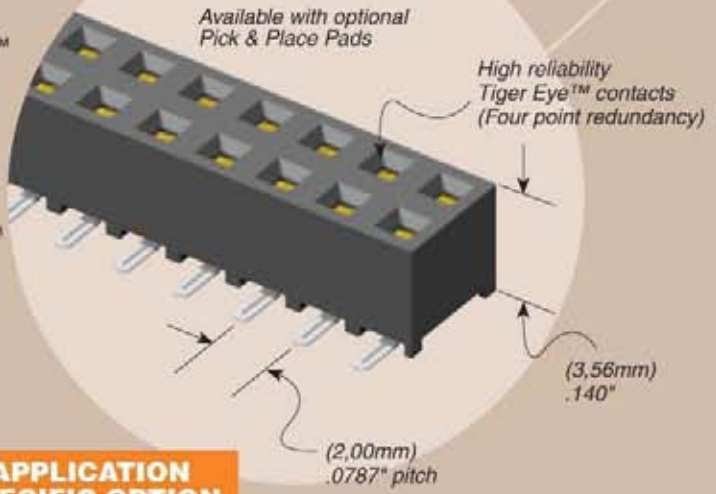
Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with: TMM, TMMH, MTMM, MMT, LTMM, TW, TCMD

E.L.P. EXTENDED LIFE PRODUCT

10 Year Mixed Flowing Gas (MFG) 1,000 cycles when mated with TMM



POLARIZING KEY

Specify PK-01-07 for polarizing key (Available in wheels of six each). Also polarizes TCSD Series IDC Cable.

APPLICATION SPECIFIC OPTION

Locking clip option available. Call Samtec.

SMM	-	1	NO. PINS PER ROW	-	02	-	PLATING OPTION	-	ROW OPTION	-	OTHER OPTION

02 thru 40

-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

-S = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

-S = Single Row

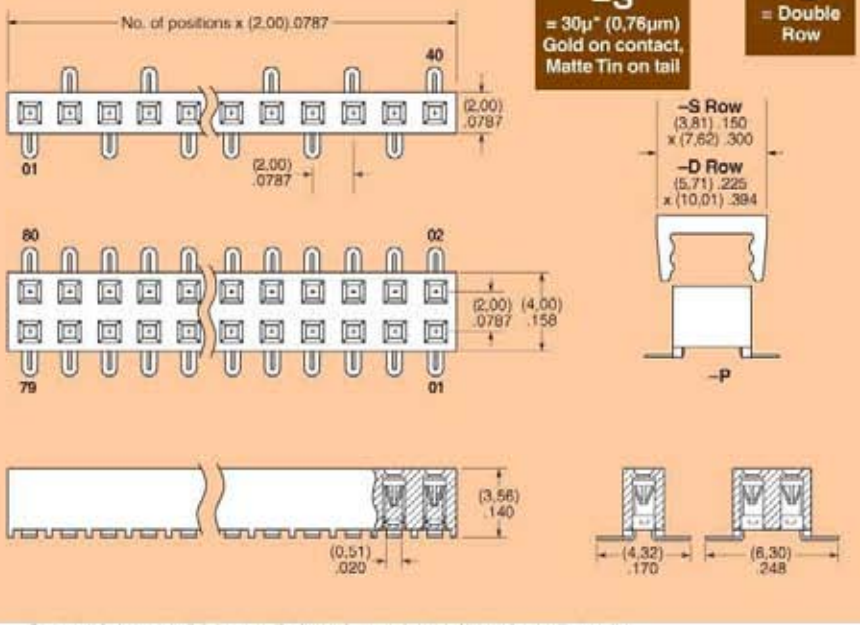
-D = Double Row

-"XX" = Polarized Position

-K = (5,50mm) .217" DIA Polyimide Film Pick & Place Pad (2 positions minimum, -02 thru -05 requires -TR)

-P = Plastic Pick & Place Pad (-02 thru -05 requires -TR)

-TR = Tape & Reel Packaging (27 positions maximum)



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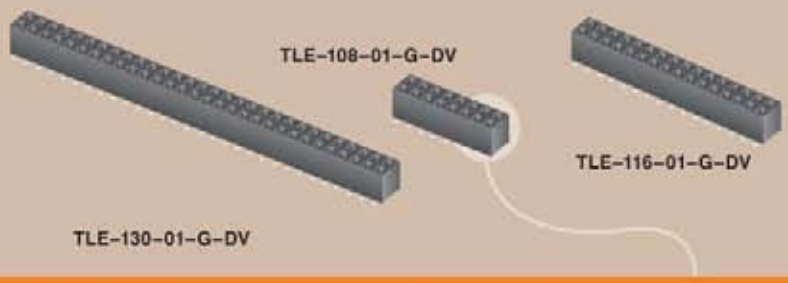


(2,00mm) .0787"

TLE SERIES

COST-EFFECTIVE RELIABLE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TLE

Insulator Material: Black Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Plating: Au over 50µ" (1,27µm) Ni

Operating Temp Range: -55°C to +125°C

Insertion Depth: (2,08mm) .082" to (4,37mm) .172" with (0,38mm) .015" wipe, pass-through, or (3,35mm) .132" min for bottom entry

Insertion Force: (Single contact only) 2.75oz (0,76N) avg.

Withdrawal Force: (Single contact only) 0.80oz (0,22N) avg.

RoHS Compliant: Yes

Processing:

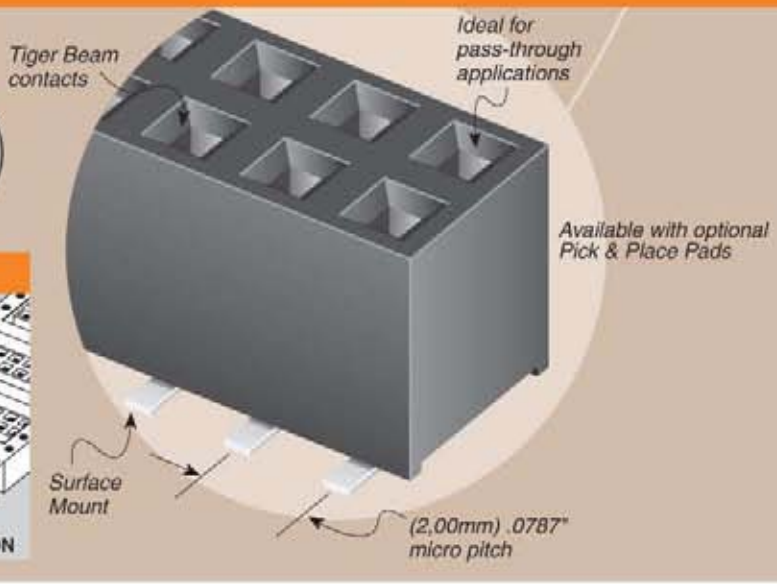
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

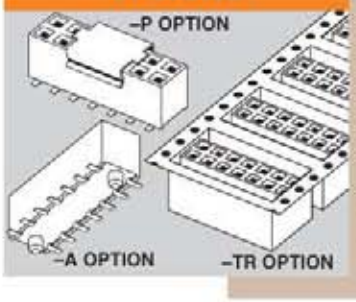
SMT Lead Coplanarity: (0,10mm) .004" max (02-26) (0,15mm) .006" max (27-50)

Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with: TMMH, TMM, MTMM, MMT, TW, LTMM, ZLTMM, TCMD



OPTIONS



TLE – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – DV – OPTION

NO. PINS PER ROW: 02 thru 50

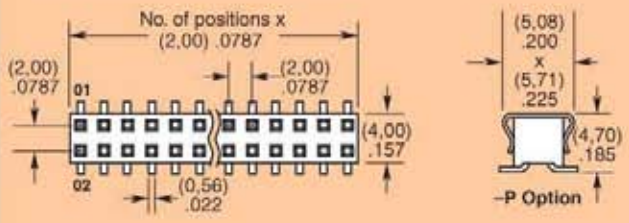
PLATING OPTION:
–G = 10µ" (0,25µm) Gold

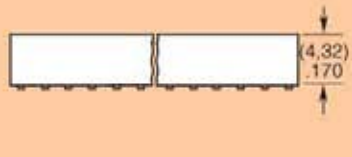
OPTION:
–A = Alignment Pin (3 positions minimum) Metal or plastic at Samtec's discretion.

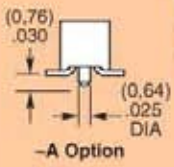
–K = (5,00mm) .197" DIA Polyimide Film Pick & Place Pad (3 positions minimum)

–P = Metal Pick & Place Pad (4 positions minimum)

–TR = Tape & Reel Packaging (2-37 positions only)







TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

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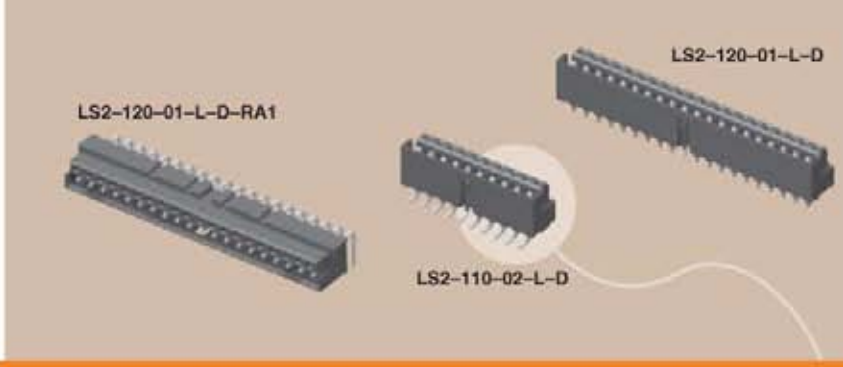


(2,00mm) .0787"

LS2 SERIES

SELF MATING HERMAPHRODITIC STRIP

SPECIFICATIONS

Mates with: LS2

For complete specifications and recommended PCB layouts see www.samtec.com?LS2

Insulator Material: Black Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating: 475 VAC mated with LS2
Operating Temp Range: -55°C to +125°C
Insertion Force: (Single contact only) 4oz (1,11N) avg.
Withdrawal Force: (Single contact only) 3oz (0,83N) avg.
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	6 Contacts
20°C	5A
40°C	4.3A
60°C	3.6A
80°C	2.7A

Processing:

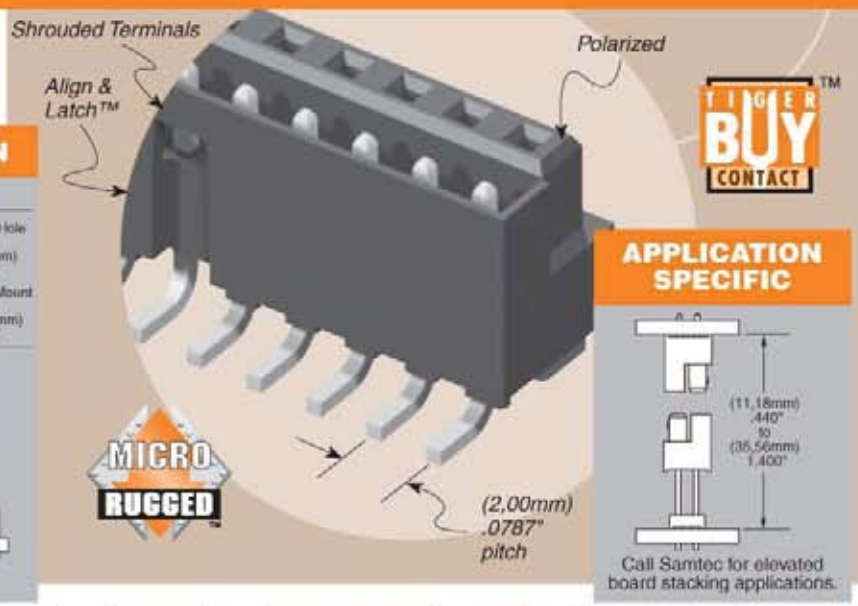
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,15mm).006" max

APPLICATION SPECIFIC OPTION

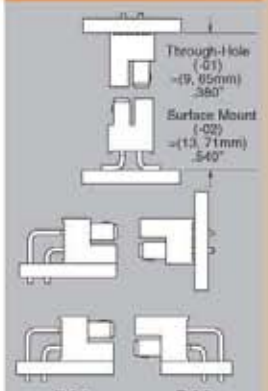
Alignment pin. Call Samtec.

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.



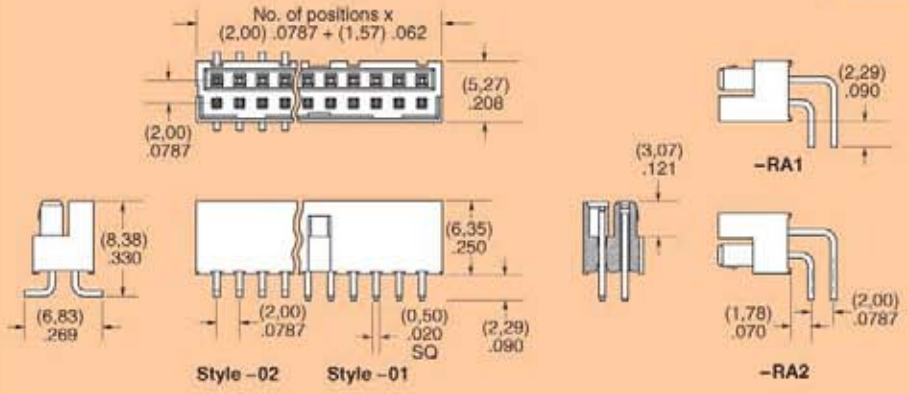
APPLICATION



APPLICATION SPECIFIC

Call Samtec for elevated board stacking applications.

LS2	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	D	TAIL OPTION	OPTION
		05, 10, 15, 20, 25, 30	-01 =Through-hole -02 = Surface Mount	-F = Gold flash on contact, Matte Tin on tail -L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail		-01 only -RA1 = Right Angle (Shroud Down) -RA2 = Right Angle (Shroud Up)	-K = (6,30mm) .248" DIA Polyimide Film Pick & Place Pad (-02 only) -TR = Tape & Reel Packaging



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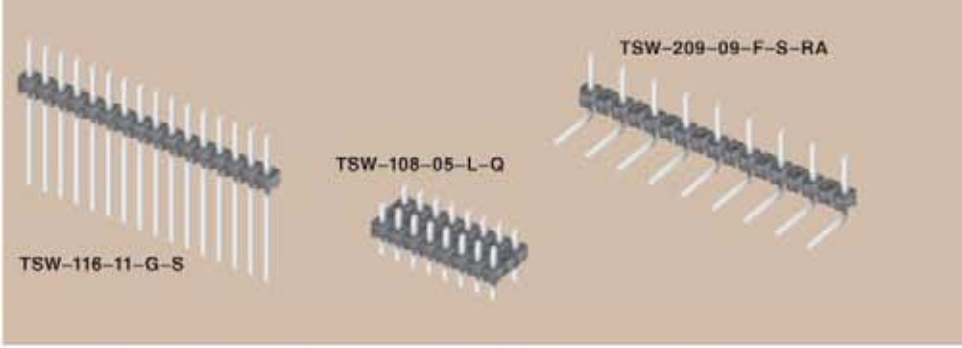


E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
Call Samtec for maximum cycles

(2,54mm) .100"
TSW, HTSW SERIES

THROUGH-HOLE .025" SQ POST HEADER

Mates with:
SSW, SSQ, ESW, ESQ, BCS, BSW, IDSD, IDSS, CES, SLW

SPECIFICATIONS

For complete specifications see www.samtec.com?TSW

TSW

Insulator Material:
Black Glass Filled Polyester
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Voltage Rating:
550 VAC mated with SSW;
500 VAC mated with BCS or ESQ;
450 VAC -RA/-RE mated with BCS or SSM
RoHS Compliant:
Yes

CURRENT RATING						
AMBIENT TEMP	TSW mated with					
	ESW	SSW	SLW	SSQ	SSM	BCS
20°C	6.9A	6.9A	7.1A	7.6A	6.9A	5.9A
40°C	6A	6.1A	6.2A	6.9A	6A	5.2A
60°C	5.3A	5.3A	5.8A	5.9A	5.3A	4.7A
95°C	3.5A	3.5A	3.7A	3.9A	3.5A	3A
6 POSITIONS (2x3) POWERED						

Processing:

Lead-Free Solderable:
Wave Only

SPECIFICATIONS

For complete specifications see www.samtec.com?HTSW

HTSW

Same as TSW except:
Insulator Material:
Natural Liquid Crystal Polymer

Processing:

Max Processing Temp:
230°C for 30 to 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

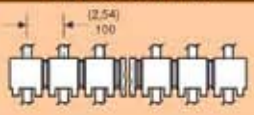
Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP – **PIN CENTERS** – **NO. PINS PER ROW**

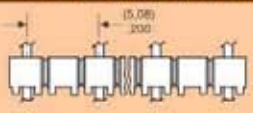
TSW = Standard Strip

HTSW = Hi-Temp Strip

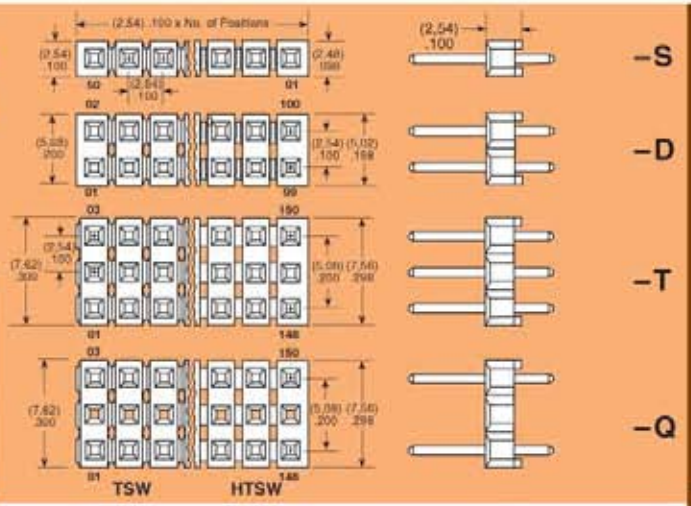
–1 = .100" (2,54mm) Centers, All Positions Filled



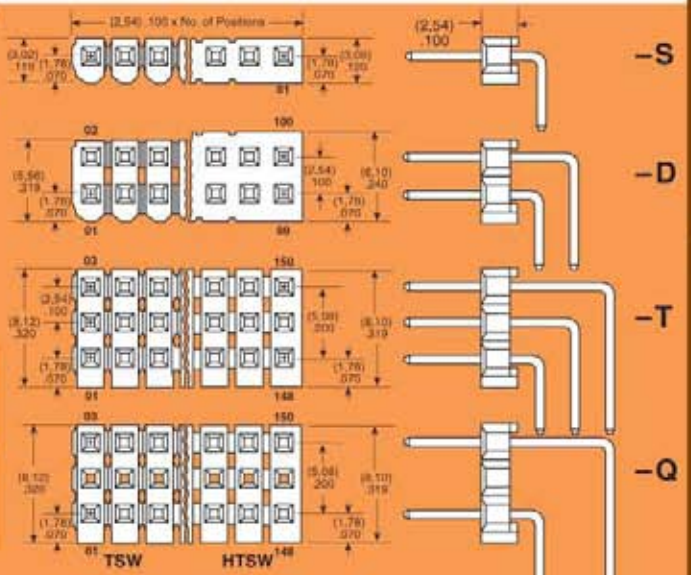
–2 = .200" (5,08mm) Centers, Every Other Position Filled



Straight Pin Versions



Right Angle Versions



01 thru 50 = .100" (2,54mm) Center Version

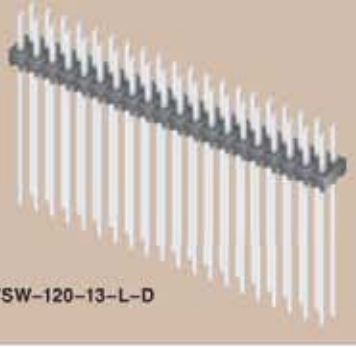
02 thru 25 = .200"(5,08mm) Center Version

APPLICATIONS

Due to technical progress, all designs, specifications and components are subject to change without notice.

TSW–112–07–G–T

TSW–109–09–F–D–RA



TSW–120–13–L–D

TSW–112–16–T–S–RE

LEAD STYLE – PLATING OPTION – ROW OPTION – OTHER OPTIONS

PLATING OPTION

–F
= Gold flash on contact area, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

–G
= 10µ" (0,25µm) Gold on contact area, Gold flash on balance

–T
= Matte Tin

Note: Other Gold plating options available. Contact Samtec.

ROW OPTION

–S
= Single Row

–D
= Double Row

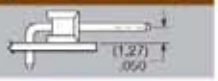
–T
= Triple Row

–Q
= Double Row (5,08mm) .200" row space

OTHER OPTIONS

– RA or –RE
= Right Angle

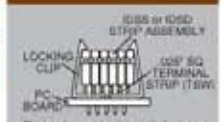
–NA
= Right Angle (using straight body for coplanar mating with SSW-RA series)



–LC
= Locking Lead (Styles –08 thru –13 & –22 only)

Two leads per strip crimped in opposite directions on or near centerline. See charts for available styles. N/A with single row 1 or 2 positions. Recommended hole size (1,02mm ± 0,03mm) .040" ± .001"

–LC
= Locking Clip (Styles –08 thru –13 & –22 only)



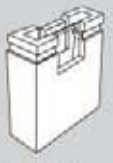
Requires 4 pin minimum (NA with -T,-Q,-RA or -RE)

–LA
= –RA Option with –LL Option

–"XXX"
= Polarized Position

ALSO AVAILABLE

Elevated Right Angle option. Call Samtec.



Shunts. See SNT Series

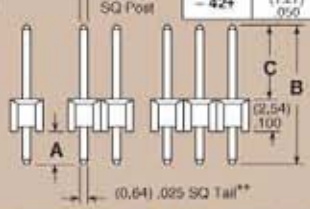
Straight Pin Versions

(Specify "LEAD STYLE" from chart)

	STYLE	A	B	C
★	–05	(3,30) .130	(8,51) .335	(2,67) .105
★	–06	(2,41) .095	(7,62) .300	(2,67) .105
★	–07	(2,54) .100	(10,92) .430	(5,84) .230
★	–08	(5,08) .200	(13,46) .530	
	–09	(10,16) .400	(18,54) .730	
	–10	(12,70) .500	(21,08) .830	
	–11	(15,24) .600	(23,62) .930	
	–12	(17,78) .700	(26,16) 1.030	
	–13	(22,86) .900	(31,24) 1.230	
★	–14	(2,79) .110	(13,46) .530	(8,13) .320
★	–15		(18,54) .730	(13,21) .520
★	–16	(7,87) .310		(8,13) .320
★	–17	(2,79) .110	(21,08) .830	(15,74) .620

	STYLE	A	B	C
★	–18	(2,79) .110	(23,62) .930	(18,29) .720
★	–19		(26,16) 1.030	(20,83) .820
★	–20		(31,24) 1.230	(25,91) 1.020
★	–21		(36,32) 1.430	(30,99) 1.220
★	–22	(7,62) .300	(16,00) .630	(5,84) .230
★	–23	(2,92) .115	(11,30) .445	
★	–24		(12,15) .480	(6,73) .265
★	–25	(5,33) .210	(16,00) .630	(8,13) .320
	–26	(3,20) .126	(11,58) .456	(5,84) .230
	–27	(25,40) 1.000	(33,78) 1.330	
	–28	(20,32) .800	(28,70) 1.130	
	–29	(23,11) .910	(33,78) 1.330	(8,13) .320
	–30	(18,03) .710	(28,70) 1.130	
	–41+	(0,89) .035	(9,27) .365	(5,84) .230
	–42+	(1,27) .050	(11,94) .470	(8,13) .320

*Available with –LL (Locking Lead) Option



Specify -07 for best mate with IDXX Series IDC Cable

+ Style –41 & –42 available with HTSW only.

**Except: Style –26 (0,46) .018 DIA Tail

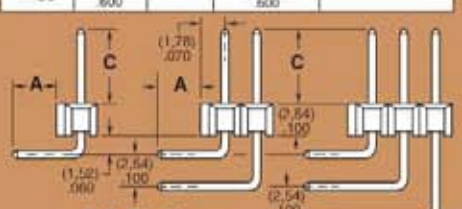
Right Angle Versions

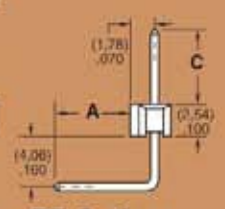
(Specify "LEAD STYLE" from chart and select –RA or –RE from other options)

	–RA LEAD STYLE	SINGLE (–S) A	SINGLE (–S) C	DOUBLE (–D) A	TRIPLE (–T & –Q) A
★	–08	(2,29) .090	(5,84) .230	(2,29) .090	(2,29) .090
★	–09	(7,37) .290		(7,37) .290	(7,37) .290
	–10	(9,91) .390		(9,91) .390	(9,91) .390
	–11	(12,45) .490		(12,45) .490	(12,45) .490
	–12	(14,99) .590		(14,99) .590	(14,99) .590
	–13	(20,07) .790		(20,07) .790	N/A
★	–16	(5,08) .200	(8,13) .320	(5,08) .200	(5,08) .200
	–21	(25,15) .990	(5,84) .230	N/A	N/A
★	–22	(4,83) .190		(4,83) .190	(4,83) .190
★	–25	(2,54) .100	(8,13) .320	(2,54) .100	(2,54) .100
	–27	(22,61) .890	(5,84) .230	N/A	N/A
	–28	(17,53) .690		(17,53) .690	
	–29	(20,32) .800	(8,13) .320	N/A	
	–30	(15,24) .600		(15,24) .600	

–RE LEAD STYLE	SINGLE A	C
–09	(4,83) .190	(5,84) .230
–10	(7,37) .290	
–11	(9,91) .390	
–12	(12,45) .490	
–13	(17,53) .690	
–16	(2,54) .100	(8,13) .320
–21	(22,61) .890	(5,84) .230
–22	(2,29) .090	
–27	(20,07) .790	
–28	(14,99) .590	

*Available with –LA (Locking Lead) Option



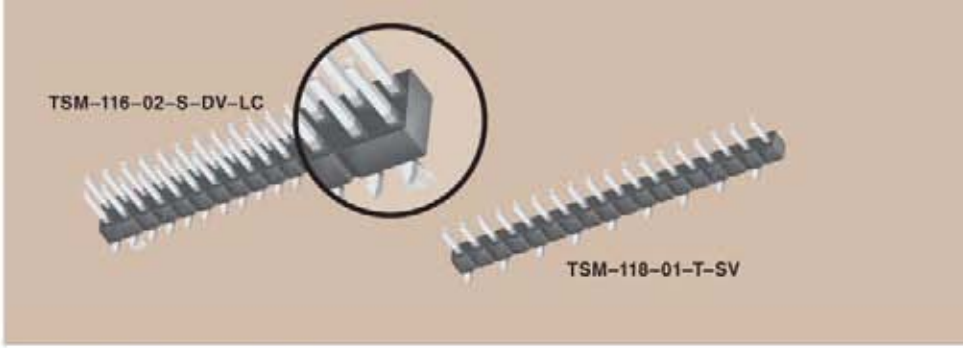


Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
2,500 cycles when mated with BCS
2,500 cycles when mated with SSM

(2,54mm) .100"
TSM SERIES



SMT .025" SQ POST HEADER

Mates with:
SSW, SSQ, SSM, BSW, ESW, ESQ, BCS, SLW, CES, IDSS, IDSD, HLE

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TSM

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
Voltage Rating:
475 VAC -SV/-DV mated with BCS or SSM
RoHS Compliant:
Yes

AMBIENT TEMPERATURE	CURRENT RATING
20°C	7A
40°C	6A
60°C	4A
80°C	3A

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
-DH/-SH Lead Coplanarity:
(0,15mm) .006" max (02-36)
-DV/-SV Lead Coplanarity:
(0,10mm) .004" max (02-05)
(0,13mm) .005" max (06-10)
(0,15mm) .006" max (11-36)

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

TSM – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION –

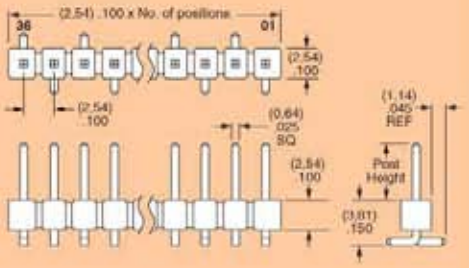
NO. PINS PER ROW: 02 thru 36

LEAD STYLE:
- –01 = .230" (5,84mm) Post Height (Mates with SSW, BCS, SSM, IDSS, IDSD)
- –02 = .320" (8,13mm) Post Height (Mates with SSM -DH)
- –03 = .420" (10,67mm) Post Height (For Bottom Mount & Pass Through)
- –04 = .120" (3,05mm) Post Height (Mates with SLW, CES, HLE)

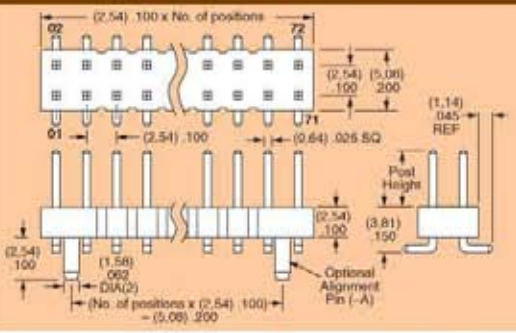
PLATING OPTION:
- **–L** = 10µ" (0,25µm) Gold on post, Matte Tin on tail
- **–S** = 30µ" (0,76µm) Gold on post, Matte Tin on tail
- **–T** = Matte Tin

ROW OPTION:
Edge Mount available. Call Samtec.

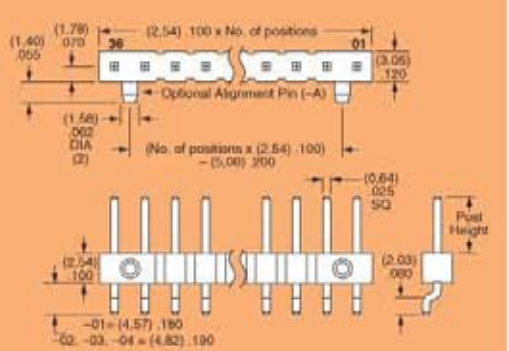
–SV = Single Row Vertical Pin



–DV = Double Row Vertical Pin

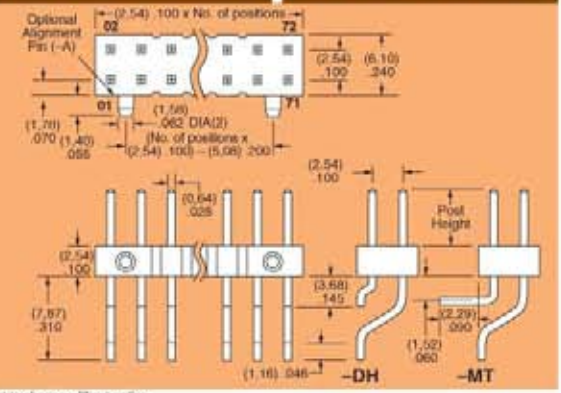


–SH = Single Row Horizontal Pin



–DH = Double Row Horizontal Pin (Style –01, –02 or –03 only)

–MT = Mixed Technology Pin (Style –01, –02 or –03 only)



APPLICATIONS
SSM TSM
HORIZONTAL

Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-395-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739292
SAMTEC GERMANY • Tel: +49 (0) 89 / 89460 0 SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6893337 SAMTEC NORDIC/BALTIC • Tel: +46-84477280 SAMTEC BENELUX • Tel: 44 01236 739292
SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

TSM–118–01–L–DH

TSM–115–01–T–SH–A

TSM–110–01–T–DV

OTHER OPTIONS

–A
= Alignment Pin Metal or plastic at Samtec discretion (Not available with –TV, TM or –MT) (02 positions min.) (N/A with –LC)

–LC
= Locking Clip (Not available with –TV or –TM) (3 positions min.) (N/A with –A)

–K
= (6,50mm) .256" DIA Polyimide Film Pick & Place Pad (–SH: 4 positions minimum without –TR; 2 & 3 positions available with –TR) (–DH 4 positions minimum without –TR)

–"XXX"
= Polarized Position

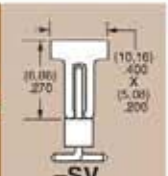
–P
=Plastic Pick & Place Pad

(–DV: 4 positions minimum without –TR; 2 & 3 positions available with –TR)

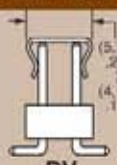
(–SH: 4 positions minimum without –TR; 2 & 3 positions available with –TR)

(–DH: 5 positions minimum without –TR)

(–SV: 4 positions minimum without –TR; 2 & 3 positions available with –TR)



–M
= Metal Pick & Place Pad (4 positions minimum without –TR) (2 & 3 positions available with –TR) Styles –01 & –04 only (N/A with -T plating)



–TR
= Tape & Reel Packaging
(–SV = 02-22 positions;
02 & 03 positions only available with –P)
(–DV = 02-28 positions;
02 & 03 positions only available with –M)
(–SH = 02-30 positions;
02 position only available with –P)
(–DH = 02-36 positions;
02 & 03 positions only available with –K and –P, 04 positions only with –P)

N/A with –MT, –TV or –TM

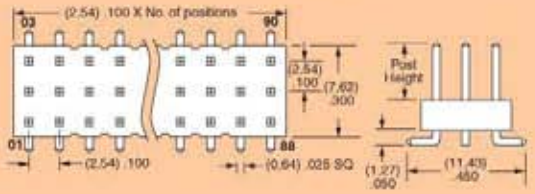
TAPE & REEL AVAILABILITY

No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.

Call Samtec for specifications and ordering information.

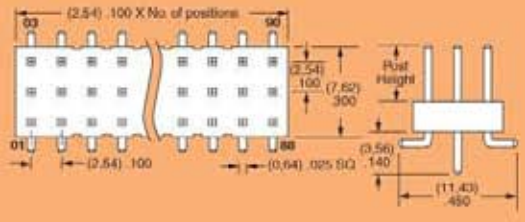
–TV
= Triple Row Vertical Surface Mount (Style –01 only)

02 thru 30 positions only



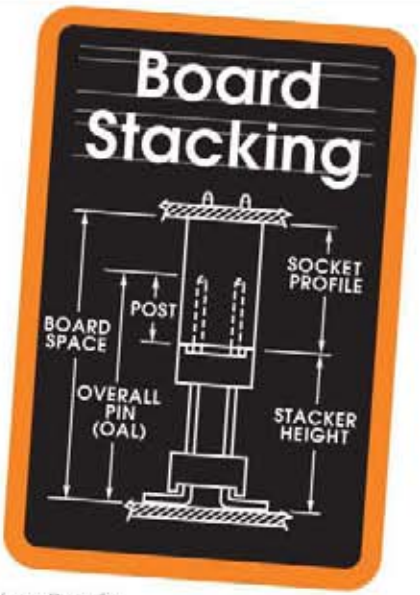
–TM
= Triple Row Vertical Mixed Technology (Style –01 only)

02 thru 30 positions only



APPLICATION SPECIFIC OPTIONS

Edge Mount and Locking Clips for –SV, Solder Locks for –DH and Shrouds for –DV. Call Samtec.



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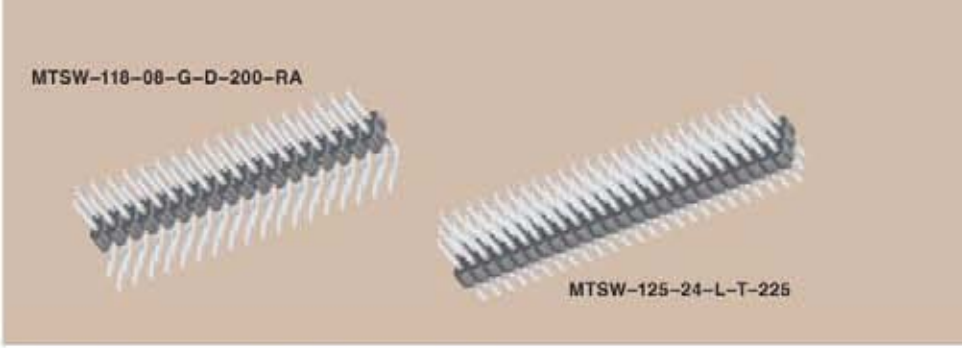
samtec

FLEX STACK

(2,54mm) .100"

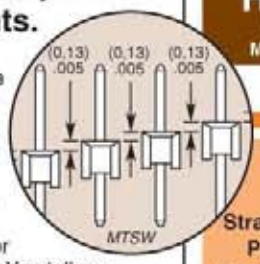
MTSW, HMTSW SERIES



MODIFIED .025" SQ POST HEADERS

Mates with:
SSW, SSQ, ESW, ESQ, BCS, BSW, IDSS, IDSD, CES, SLW, HLE

Modified .025" strips permit custom post heights.



Samtec offers the greatest stacking flexibility in the industry. The "M" stands for Modified. You tell us the post height you need and we'll deliver it.

SPECIFICATIONS

For complete specifications see www.samtec.com?MTSW

MTSW

Insulator Material: Black Glass Filled Polyester
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 3 amp continuous
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Wave Only

SPECIFICATIONS

For complete specifications see www.samtec.com?HMTSW

HMTSW

Same as MTSW except:
Insulator Material: Natural Liquid Crystal Polymer

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

Note:
These Series are non-standard, non-returnable.

TYPE STRIP — **PIN PITCH** — **NO. PINS PER ROW** — **LEAD STYLE**

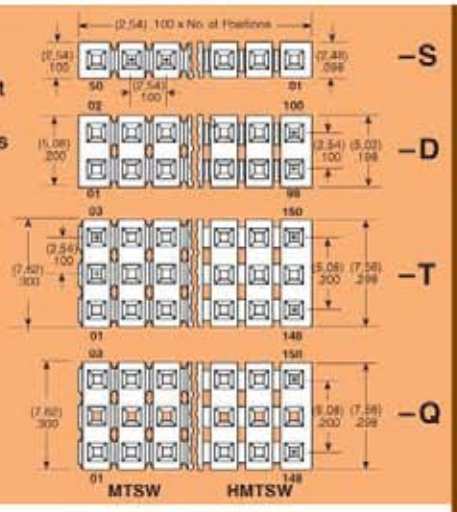
MTSW = Modified Strip

HMTSW = Hi-Temp Modified Strip

–1 = (2,54mm) .100" Pitch

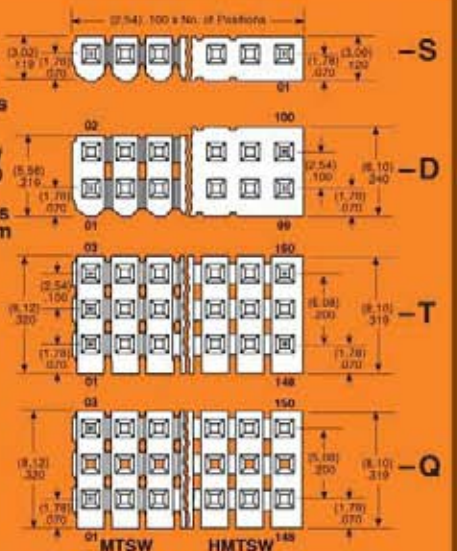
–2 = (5,08mm) .200" Pitch

Straight Pin Versions



Right Angle Versions

HMTSW –S & –D = 36 positions maximum

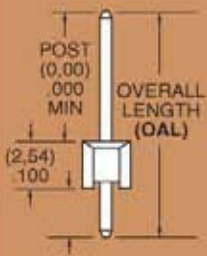


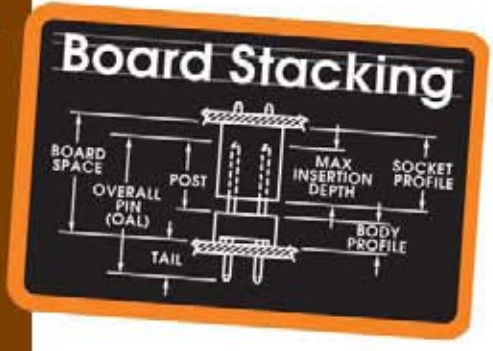
01 thru 50 = (2,54mm) .100" Center Version

02 thru 25 = (5,08mm) .200" Center Version

SPECIFY "LEAD STYLE" FROM CHART

LEAD STYLE	OAL
– 06	(7,62) .300
– 07	(10,92) .430
– 08	(13,46) .530
– 09	(18,54) .730
– 10	(21,08) .830
– 11	(23,62) .930
– 12	(26,16) 1.030
– 13	(31,24) 1.230
– 21	(36,32) 1.430
– 22	(16,00) .630
– 23	(11,30) .445
– 24	(12,19) .480
– 27	(33,78) 1.330
– 28	(28,70) 1.130





Due to technical progress, all designs, specifications and components are subject to change without notice.

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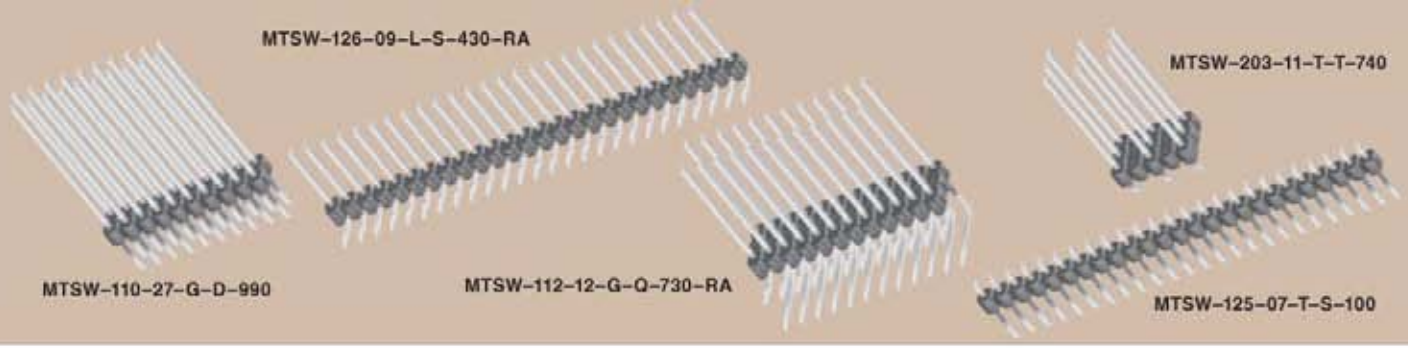


PLATING OPTION

–L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

–G
= 10µ" (0,25µm) Gold on contact area, Gold flash on balance

–T
= Matte Tin

Note: Other Gold plating options available. Contact Samtec.

ROW OPTION

–S
= Single

–D
= Double

–T
= Triple

–Q
= Double Row .200" (5,08mm) row space

POST HEIGHT

OTHER OPTION

–RA or –RE = Right Angle

–LL
= Locking Lead
(N/A with –RE
N/A in single row 1 or 2 positions. Available on tails from (2,29) .090" to (10,16) .400" only)

Two leads per strip crimped in opposite directions on or near centerline. See TSW for availability.

–LA = –RA Option with –LL Option (Maximum "C" = (13,46) .530)

POLARIZED OPTION

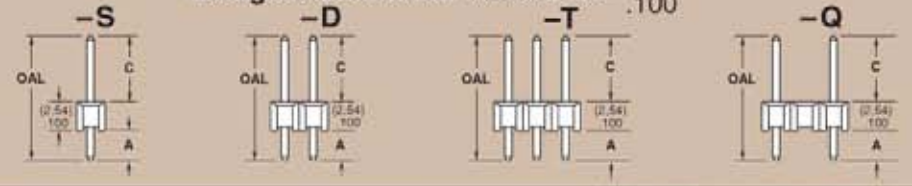
–"XXX"
= Polarized (Specify 'XXX' as position number)

–"XXXX" = "C" Dimension (Specify post height in INCHES – .005" (0,13mm) increments)

LEAD STYLE	OAL	C MAXIMUM STRAIGHT (FOR A = (2,29) .090)	C MAXIMUM w/RA	C MAXIMUM w/RE
– 06	(7,62) .300	(2,79) .110	N/A	N/A
– 07	(10,92) .430	(6,10) .240	(3,30) .130	N/A
– 08	(13,46) .530	(8,64) .340	(5,84) .230	(3,30) .130
– 09	(18,54) .730	(13,72) .540	(10,92) .430	(8,38) .330
– 10	(21,08) .830	(16,26) .640	(13,46) .530	(10,92) .430
– 11	(23,62) .930	(18,80) .740	(16,00) .630	(13,46) .530
– 12	(26,16) 1.030	(21,34) .840	(18,54) .730	(16,00) .630
★ – 13	(31,24) 1.230	(26,42) 1.040	(23,62) .930	(21,08) .830
★ – 21	(36,32) 1.430	(31,50) 1.240	(28,70) 1.130	(26,16) 1.030
– 22	(16,00) .630	(11,18) .440	(8,38) .330	(5,84) .230
★ – 23	(11,30) .445	(6,48) .255	(3,68) .145	N/A
★ – 24	(12,19) .480	(7,37) .290	(4,57) .180	
★ – 27	(33,78) 1.330	(28,96) 1.140	(26,16) 1.030	(23,62) .930
★ – 28	(28,70) 1.130	(23,88) .940	(21,08) .830	(18,54) .730

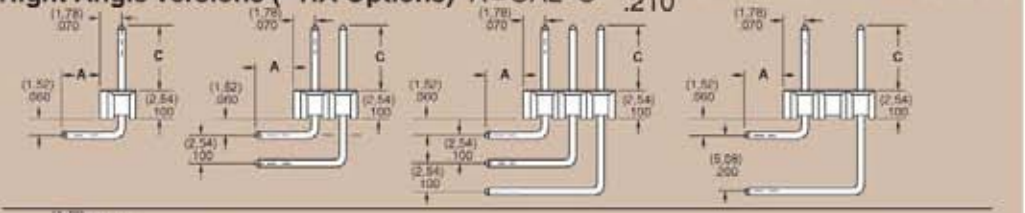
* Styles –21, –23, –24, –27 not available with –D Right Angle
Styles –13, –21, –23, –24, –27, –28 not available with –T or –Q Right Angle

Straight Pin Versions $A = OAL - C - \frac{(2,54)}{.100}$



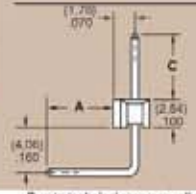
Right Angle Versions (–RA Options) $A = OAL - C - \frac{(5,33)}{.210}$

Styles –21, –23, –24, –27 N/A with –D
Styles –13, –21, –23, –24, –27, –28 N/A with –T or –Q



Right Angle Versions (–RE Options) Single Row Only

$A = OAL - C - \frac{(7,87)}{.310}$



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samtec

(2,54mm) .100"
PHT SERIES

PRESS FIT .025" SQ POST HEADER

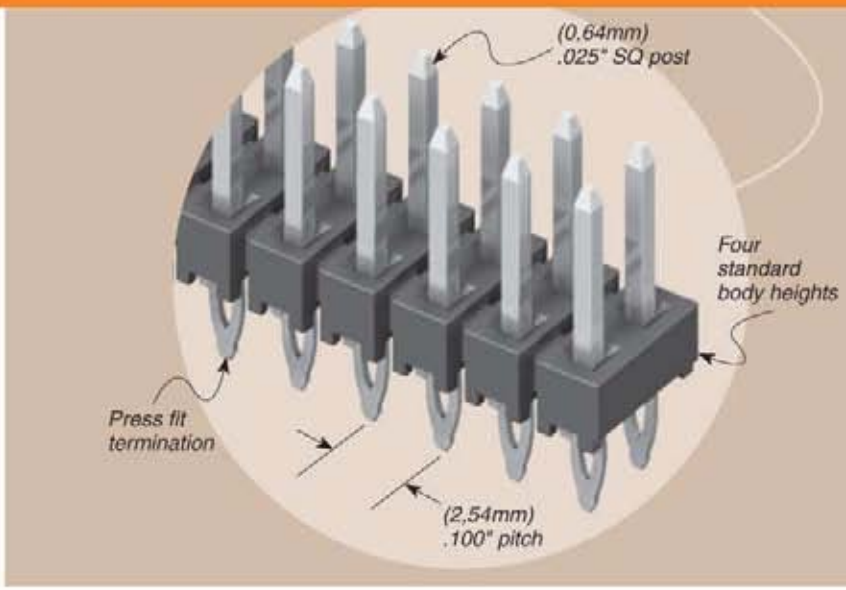
SPECIFICATIONS

For complete specifications see www.samtec.com?PHT

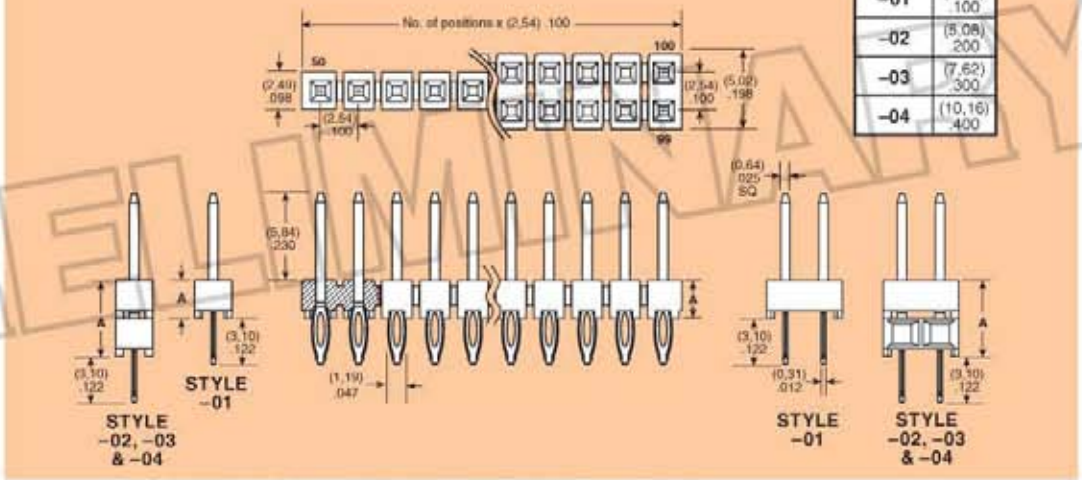
Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:
Contact ipg@samtec.com

Mates with:
SSW, SSQ, ESW, ESQ, BCS, BSW, IDSD, IDSS, CES, SLW, PHF



PHT	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OTHER OPTION
			01 = (single row only) 02 thru 50		Specify LEAD STYLE from chart		–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail		–S = Single Row – D = Double Row		–"XXX" = Polarized Position



LEAD STYLE	A
–01	(2,54) .100
–02	(5,08) .200
–03	(7,62) .300
–04	(10,16) .400

ALSO AVAILABLE

- Other plating options. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

PRELIMINARY

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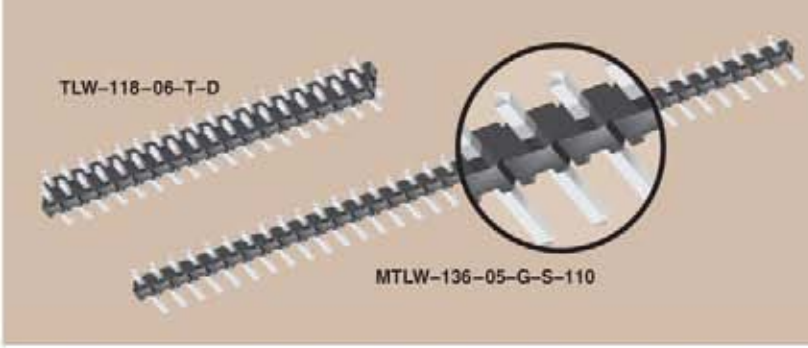
FLEX STACK

(2,54mm) .100"

TLW, MTLW SERIES

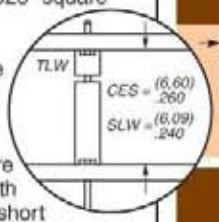


LOW PROFILE .025" SQ POST HEADERS

Mates with:
BSW, CES, SLW, HLE

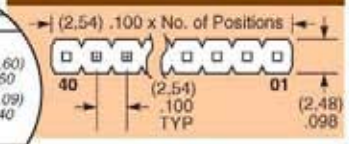
FEATURES

These headers provide the ultimate low profile (0,64mm) .025" square post board stacking system. The high quality Phosphor Bronze terminals are available with a standard short post height (TLW Series) for mating with low profile sockets, or the post height can be Modified (MTLW Series) to accommodate IDC assemblies and other applications.

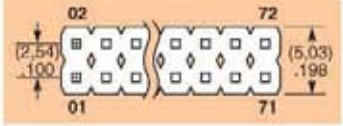


TLW – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION – OTHER OPTION

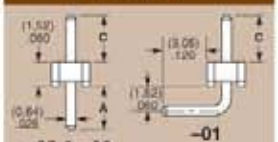
01 thru 40
= Single Row



01 thru 36
= Double Row



Specify "LEAD STYLE" from chart



LEAD STYLE	A	C
–01	N/A	(5,84) .230
–05	(4,32) .170	(2,67) .105
–06	(3,43) .135	(2,67) .105

PLATING OPTION

–G
= 10µ" (0,25µm) Gold on post, Gold flash on tail

–T
=Matte Tin

ROW OPTION

–S
= Single Row

–D
= Double Row

OTHER OPTION

–RA
= Right Angle
(–01 Lead Style only)

–"XX"
= Polarized Position
Specify position for omitted pin.

SPECIFICATIONS

For complete specifications www.samtec.com?TLW or see www.samtec.com?MTLW

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27mm) Ni
Current Rating:
3A
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

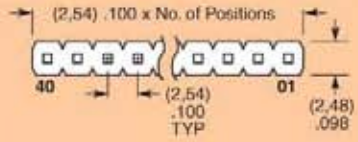
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable:
Yes

Note: Other Gold plating options available. Contact Samtec.

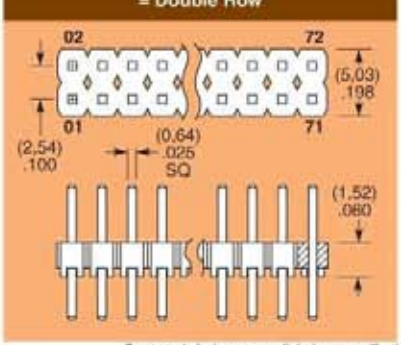
Note:
Some lengths, styles and options are non-standard, non-returnable. MTLW Series is non-standard, non-returnable.

MTLW – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION – POST HEIGHT

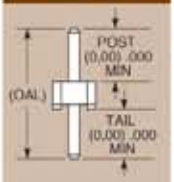
01 thru 40
= Single Row



01 thru 36
= Double Row



Specify "LEAD STYLE" from chart



LEAD STYLE	OAL
–05	(8,51) .335
–06	(7,62) .300
–07	(10,92) .430
–08	(13,46) .530
–09	(16,54) .730
–10	(21,08) .830
–22	(16,00) .630
–23	(11,30) .445
–24	(12,19) .480

PLATING OPTION

–L
= 10µ" (0,25µm) Gold on post, Matte Tin on tail (Styles -05 & -06 N/A)

–G
= 10µ" (0,25µm) Gold on post, Gold flash on tail

–T
= Matte Tin

ROW OPTION

–S
= Single Row

–D
= Double Row

POST HEIGHT

–"XXX"
= Post Height Dimension (In Inches)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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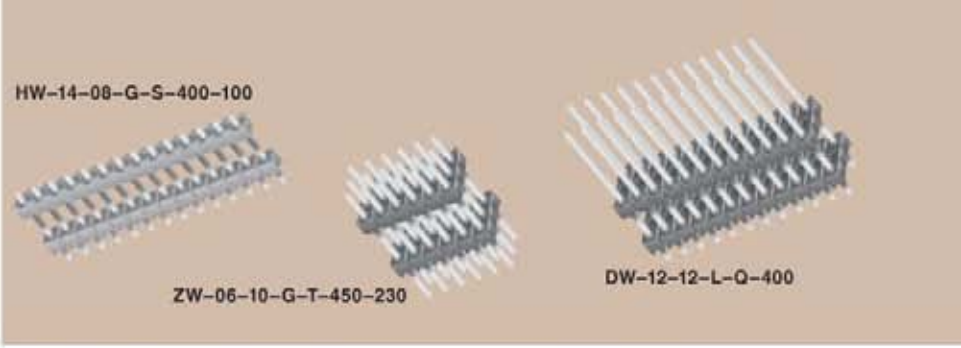
FLEX STACK

(2,54mm) .100"

DW, EW, ZW, HW SERIES



FLEXIBLE .025" SQ BOARD STACKERS

Mates with:
SSW, SSQ, ESW, ESQ, CES, SLW, BSW, BCS, SSM, IDSS, IDSD, HLE

SPECIFICATIONS

For complete specifications see www.samtec.com?DW, www.samtec.com?EW or www.samtec.com?ZW

DW, EW, ZW

Insulator Material: Black Glass Filled Polyester
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 3A @ 80°C ambient
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Wave Only

SPECIFICATIONS

For complete specifications see www.samtec.com?HW

HW

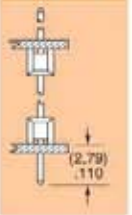
Same as ZW except:
Insulator Material: Natural Liquid Crystal Polymer
RoHS Compliant: Yes

Processing:

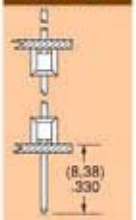
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

TYPE STRIP - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - ROW OPTION - STACKER HEIGHT - OTHER OPTIONS

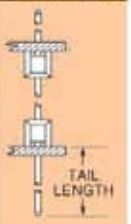
DW = (2,79mm) .110" Tail



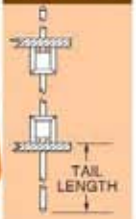
EW = (8,38mm) .330" Tail



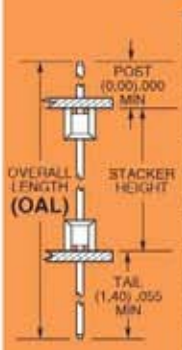
ZW = Custom Tail



HW = High Temp Custom Tail

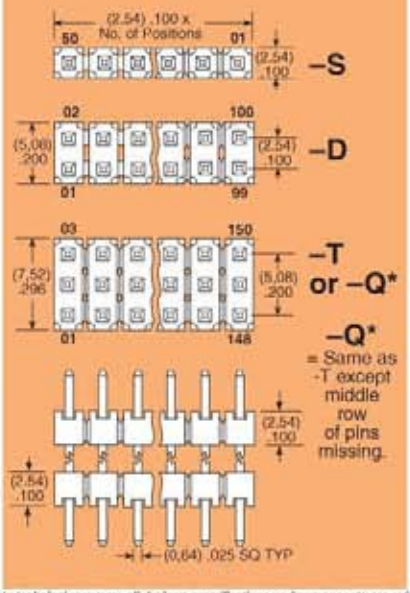


Specify LEAD STYLE from chart



LEAD STYLE	OAL
-07	(10,92) .430
-08	(13,46) .530
-09	(18,54) .730
-10	(21,08) .830
-11	(23,62) .930
-12	(26,16) 1.030
-13	(31,24) 1.230
-14	(36,32) 1.430
-15	(16,00) .630
-16	(11,30) .445
-17	(12,19) .480
-19	(33,78) 1.330
-20	(28,70) 1.130

01 thru 50



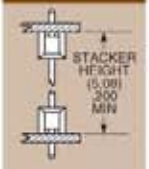
-S = Single Row

-D = Double Row

-T = Triple Row

-Q = Double Row .200" (5,08mm) row space

-"XXX" = Stacker Height



-"XXX" = ZW or HW Tail Length

-LL = Locking Lead (Shortest dimension between the tail and the post is the end that will be crimped. Available on tails from (2,29) .090" to (7,87) .310" only.) Single row, 01 & 02 positions & -Q row not available

"XXX" = Polarized

Specify omitted pin position

-F = Gold flash on contact, Matte Tin on tail

-L = 10µ" (0,25µm) Gold on contact area of longer tail, Matte Tin on tail

-G = 10µ" (0,25µm) Gold on contact area of longer tail, Gold flash on balance

-T Matte Tin

Note: Other Gold plating options available. Contact Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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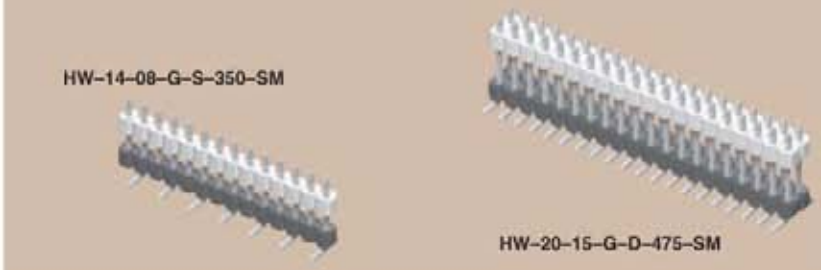
samtec

FLEX STACK

(2,54mm) .100"

HW SERIES



FLEXIBLE .025" SQ BOARD STACKERS

Mates with:
SSW, SSQ, ESW, ESQ, CES, SLW, BSW, BCS, SSM, IDSS, IDSD, HLE

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HW

Insulator Material:
Top: Natural LCP
Bottom: Black LCP
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
3A @ 80°C ambient
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max

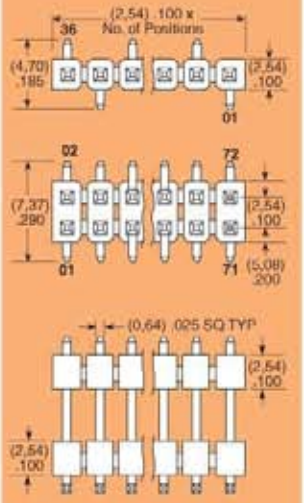
Note: These Series are non-standard, non-returnable.

APPLICATION SPECIFIC OPTION

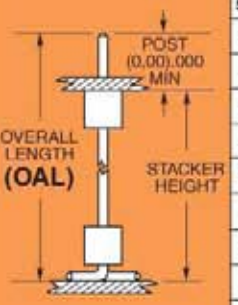
Locking Clip available with double row -SM. Call Samtec.

HW - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - ROW OPTION - STACKER HEIGHT - SM - OTHER OPTIONS

02 thru 36



Specify LEAD STYLE from chart

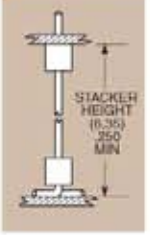


LEAD STYLE	OAL (SMT)
-08	(11,81) .465
-09	(16,89) .665
-10	(19,43) .765
-11	(21,97) .865
-12	(24,51) .965
-15	(14,35) .565
-16	(9,65) .380
-17	(10,54) .415
-20	(27,05) 1.065

– S
= Single Row

– D
= Double Row

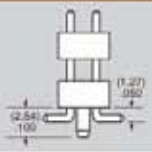
–"XXX"
= Stacker Height



"XX"
= Polarized

Specify omitted pin position

–A
= Alignment Pin



Double row only
(Metal or plastic at Samtec discretion)

–TR
= Tape & Reel Packaging (27 positions Max.)
(Not Available on Lead Styles 10, 11, 12 & 20)

–F
= Gold flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact area of longer tail, Matte Tin on tail

–G
= 10µ" (0,25µm) Gold on contact area of longer tail, Gold flash on balance

–T
= Matte Tin

Note: Other Gold plating options available. Contact Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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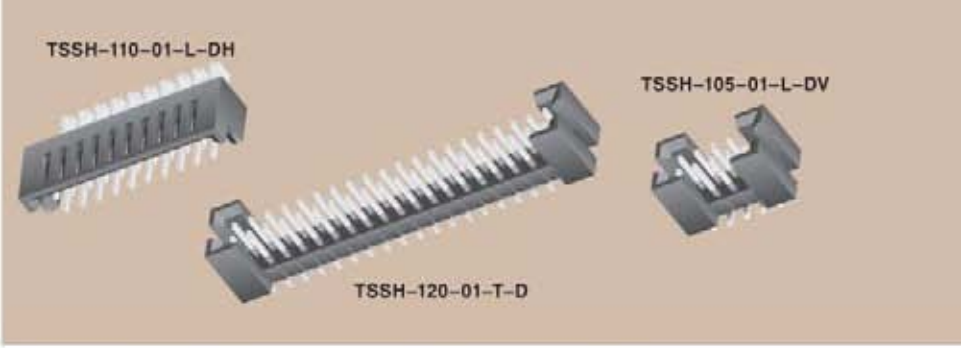


(2,54mm) .100"

TSSH SERIES

SHROUDED .025" SQ POST HEADERS

Mates with:
SSW, SSQ, SSM

Important Note:
This Series will only mate with SSW, SSQ & SSM Series

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?TSSH

Insulator Material:
Black Liquid Crystal Polymer
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin;
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,20mm) .008" max (–DH)
(0,20mm) .008" max (–DV)

Note: Some lengths, styles and options are non-standard, non-returnable.

APPLICATIONS

TSSH	–	1	NO. PINS PER ROW	–	01	–	PLATING OPTION	–	ROW OPTION	–	OTHER OPTION

NO. PINS PER ROW

05, 10, 15, 20, 25, 30, 34
(–D–RA, –DH)

05, 10, 15, 20, 25, 30, 35, 36
(–D, –DV)

PLATING OPTION

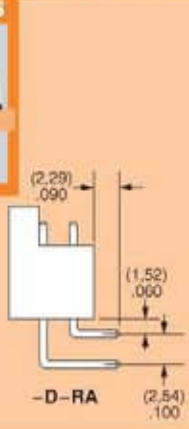
–L
= 10µ" (0,25µm) Gold on post, Matte Tin on tail

–T
= Matte Tin

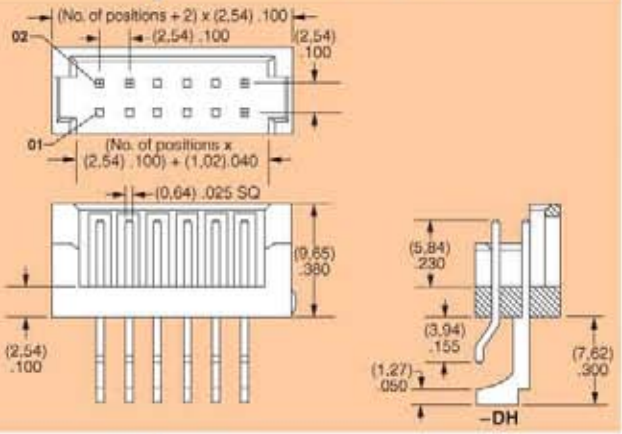
Note: Other Gold plating options available. Contact Samtec.

ROW OPTION

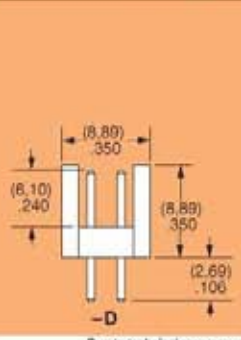
–D–RA
= Double Row Right Angle Pin Through-hole



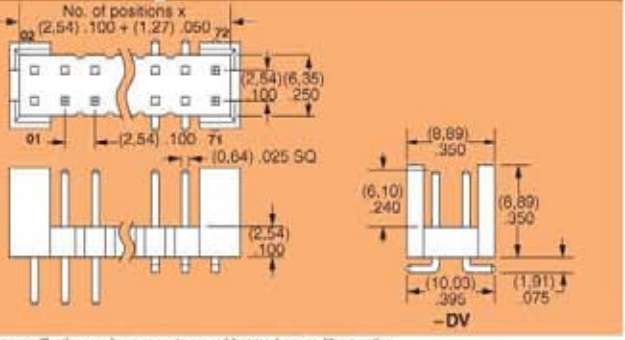
–DH
= Double Row Horizontal Pin Surface Mount



–D
= Double Row Vertical Pin Through-hole

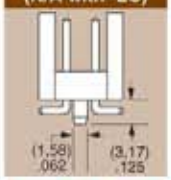


–DV
= Double Row Vertical Pin Surface Mount

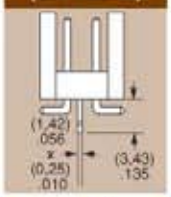


OTHER OPTION

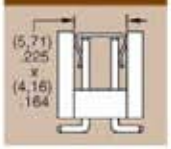
–A
= Alignment Pin (N/A with -LC)



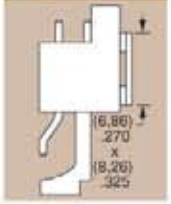
–LC
= Locking Clip (–DV only) (N/A with -A)



–M
= Metal Pick & Place Pad (–DV only) (N/A with -T plating)



–P
= Plastic Pick & Place Pad (–DH only) 5 pos. min



–TR
= Tape & Reel 5 to 25 positions (–DH & –DV only)

Due to technical progress, all designs, specifications and components are subject to change without notice.

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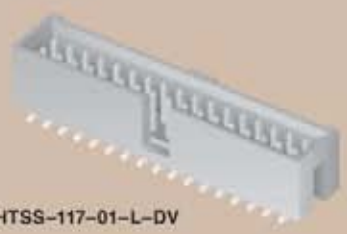
FLEX STACK



(2,54mm) .100"

TSS, TST, HTSS, HTST, ZSS, ZST SERIES

SHROUDED .025" SQ POST HEADERS

TSS, HTSS, ZSS
Mates with:
SSW, SSQ, ESW, ESQ, SSM, BCS

TST, HTST, ZST
Mates with:
IDSD

SPECIFICATIONS

For complete specifications see www.samtec.com?TSS, www.samtec.com?TST, www.samtec.com?HTSS, www.samtec.com?HTST, www.samtec.com?ZSS or www.samtec.com?ZST

Insulator Material:
Black Glass Filled Polyester (TSS, TST, ZSS, ZST)
Natural PCT (HTSS, HTST)
Insulation Resistance:
5000 MΩ min
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
3A
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Flamability Rating:
UL 94V-O
Withstanding Voltage:
1000 VRMS
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
HTSS & HTST only:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes (HTSS, HTST)
Wave Only (TSS, TST, ZSS, ZST)
SMT Lead Coplanarity:
(0,15mm) .006"

APPLICATION SPECIFIC OPTION

- Alignment Pins
- Single Row
- Locking Leads
- Polarized

Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable. ZSS, ZST are non-standard, non-returnable.

TYPE STRIP - 1 - NO. PINS PER ROW - LEAD STYLE - PLATING OPTION - ROW OPTION - BODY HEIGHT

TSS
= Top Shrouded Connector Strip

TST
= Top Shrouded Cable Strip

HTSS
= High Temp Top Shrouded Connector Strip

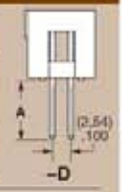
HTST
= High Temp Top Shrouded Cable Strip

ZSS
= Elevated Connector Strip

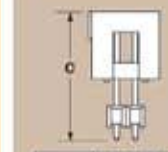
ZST
= Elevated Cable Strip

Specify "LEAD STYLE" from chart

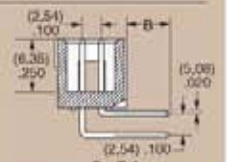
LEAD STYLE	TSS/TST STRAIGHT TAIL LENGTH (A)	HTSS/HTST STRAIGHT TAIL LENGTH (A)
-01	(2,92) .115	(3,30) .130
-02	(4,19).165	(4,57) .180
-03	(14,35) .565	(14,73) .580



-D



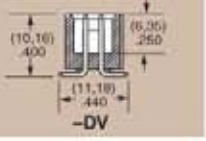
LEAD STYLE	ZSS/ZST OVERALL LENGTH (C)
-01	(16,00) .630
-02	(18,54) .730
-03	(21,08) .830
-04	(23,62) .930
-05	(26,16) 1.030
-06	(28,70) 1.130
-07	(31,24) 1.230
-08	(33,78) 1.330
-09	(36,32) 1.430



-D-RA

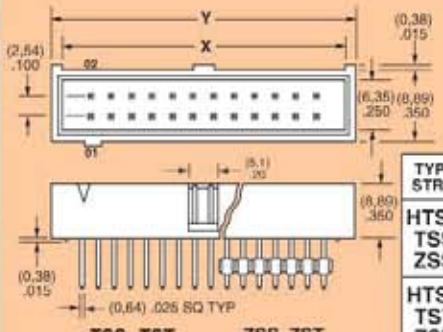
LEAD STYLE	TSS/TST/ HTSS/HTST RIGHT ANGLE TAIL LENGTH (B)
-04	(3,30) .130
-05	(5,84) .230

HTSS/HTST Lead Style -01



-DV

05, 07, 08, 10, 12, 13, 15, 17, 20, 25, 32, 36
(Call Samtec for other sizes.)



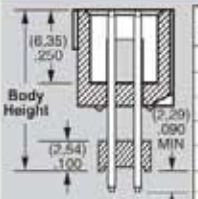
TYPE STRIP	X	Y
HTSS TSS ZSS	(2,54) .100 X No. of Positions + (1,27) .050	(2,54) .100 X No. of Positions + (3,81).150
HTST TST ZST	(2,54).100 X No. of Positions + (5,08).200	(2,54).100 X No. of Positions + (7,62) .300

-D
= Double Row Through-hole (Lead style -01, -02 & -03 only or BODY HEIGHT must be specified)

-DV
= Double Row Surface Mount (Lead style -01 only) (HTSS, HTST only)

-D-RA
= Double Row Right Angle (Lead style -04 & -05 only) (ZSS, ZST N/A)

-"XXXX"
= Body Height (ZSS, ZST & -D only)



LEAD STYLE	MAX. BODY HEIGHT
-01	.540 (13,72)
-02	.640 (16,26)
-03	.740 (18,80)
-04	.840 (21,34)
-05	.940 (23,88)
-06	1.040 (26,42)
-07	1.140 (28,96)
-08	1.240 (31,50)
-09	1.340 (34,04)

For board stacking height add .085" (2,16mm) when mated with SSW series.

Example: ZST-1XX-01-X-X-465 mated with SSW = (13,97mm) .550" board space

-L
= 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

-G
= 10µ" (0,25µm) Gold on contact area, Gold flash on balance (Not available on -DV)

-T
= Matte Tin

Note: Other Gold plating options available. Contact Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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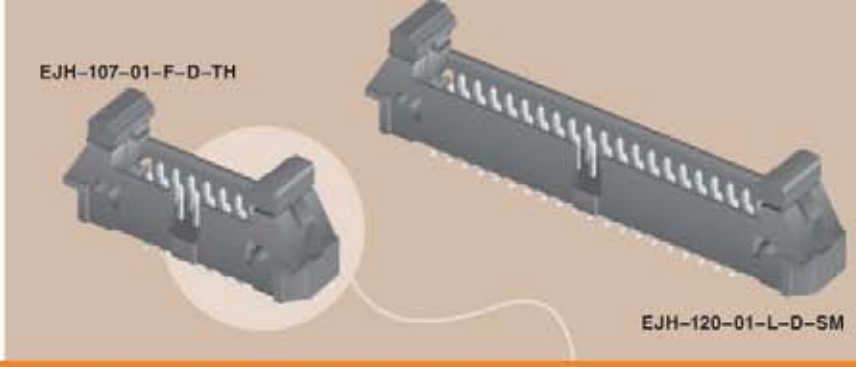
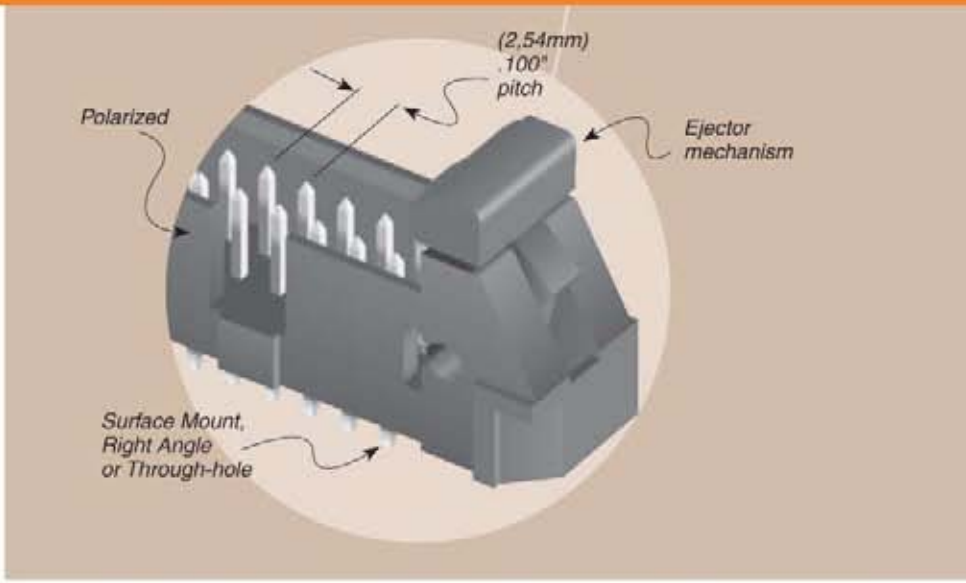


(2,54mm) .100"

EJH SERIES

SHROUDED IDC EJECTOR HEADERS



SPECIFICATIONS

Mates with: IDSD

For complete specifications and recommended PCB layouts see www.samtec.com?EJH

Insulator Material: Liquid Crystal Polymer

Terminal Material: Phosphor Bronze

Plating: Sn or Au over 50µ" (1,27µm) Ni

Current Rating: 3A @ 80°C ambient

Operating Temp Range: -55°C to +125°C

RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max

APPLICATION SPECIFIC OPTION

-02 lead style
Call Samtec.

Mates to HCSD Series.

See www.samtec.com?HCSD for more information.

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

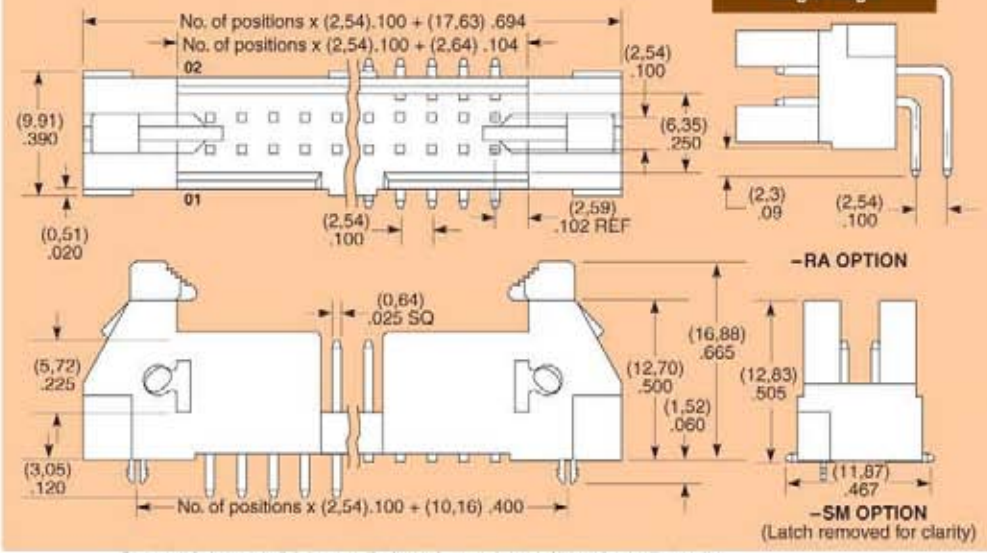
EJH – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – D – TAIL OPTION – OTHER OPTION

NO. PINS PER ROW
05, 07, 08, 10, 13, 15, 17, 20, 25
(Call Samtec for other sizes.)

PLATING OPTION
–F = Gold flash on post, Matte Tin on tail
–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail

TAIL OPTION
–SM = Surface Mount
–TH = Through-hole
–RA = Right Angle

OTHER OPTION
–"XX" = Polarized Position
–LC = Locking Clip (-SM only)
–K = .475" (12,00) DIA Polyimide Film Pick & Place Pad (-SM only)
–P = Pick & Place Pad (-SM only)
–TR = Tape & Reel Packaging (-SM only) 25 position not available



Due to technical progress, all designs, specifications and components are subject to change without notice.

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(2,54mm) .100"

SNT, MNT, JL, 2SN, PK, SNM SERIES

SHUNTS & JUMPERS

SPECIFICATIONS

SNT
For complete specifications see www.samtec.com?SNT

Insulator Material: Glass Filled Polyester
Contact Material: Phosphor Bronze
Current Rating: 2.5A
Operating Temp Range: -40°C to +90°C
Contact Resistance: 5 mΩ max
Insertion Depth: (4,32mm) .170" min.
Lead Size accepted: (0,64mm) .025" SQ
Insertion Force: (Single contact only) 33oz (9,17N) average
Withdrawal Force: (Single contact only) 27oz (7,51N) average
RoHS Compliant: Yes

MNT
For complete specifications see www.samtec.com?MNT

Same as SNT except:
Current Rating: 2A @ 80°C ambient
Working Voltage: 675 VAC

2SN
For complete specifications see www.samtec.com?2SN

Same as SNT except:
Insertion Depth: (2,29mm) .090" minimum
Lead Size accepted: (0,51mm) .020" SQ

2SN mates with:
TMMH, TMM, MTMM, MMT, TW, LTMM, ZLTMM, TMSH, TSH, EHT

SNM
For complete specifications see www.samtec.com?SNM

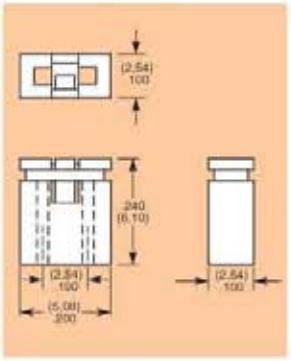
Same as SNT except:
Contact Resistance: 10 mΩ max
Insertion Depth: (3,43mm) .135" minimum
Lead Size accepted: (0,46mm) .018" SQ

SNM mates with:
TMS, MTMS, DWM

JL
For complete specifications see www.samtec.com?JL

Insulator Material: White Teflon per MIL–T–16878 Type E
Insulation Resistance: >10⁸ ohm-cm
Terminal Material: Tinned 22 ga Copper
Current Rating: 1.6 amp @ 60°C
Plating: Ag per MIL–QQW–343

SNT – 100 – BODY COLOR – PLATING OPTION – HANDLE OPTION

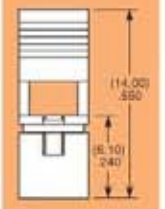


BODY COLOR
- **–BK** = Black
- **–OR** = Orange
- **–RD** = Red
- **–BL** = Blue
- **–YW** = Yellow

PLATING OPTION
- **–G** = 10µ" (0,25µm) Gold
- **–T** = Tin

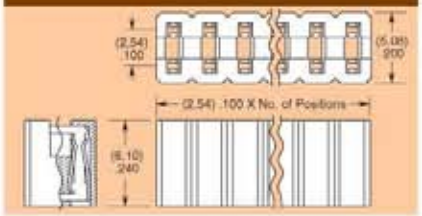
Note: Other Gold plating options available. Contact Samtec.

HANDLE OPTION
- **–H** = Handle (Black Only)



MNT – 1 – NO. OF POSITIONS – BODY COLOR – PLATING OPTION

NO. OF POSITIONS
- **02 thru 20**



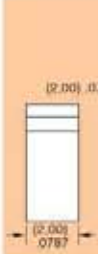
BODY COLOR
- **–BK** = Black

PLATING OPTION
- **–G** = 10µ" (0,25µm) Gold
- **–T** = Tin

Note: Some lengths, styles and options are non-standard, non-returnable.

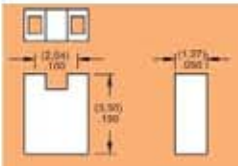
SNT/MNT mates with:
TSW, MTSW, TLW, DW, EW, ZW, HW, TSM

2SN



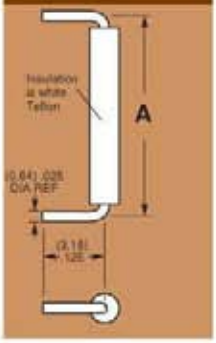
Part No.	Plating
2SN–BK–G	10µ" (0,25µm) Gold

SNM



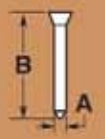
Part No.	Plating
SNM–100–BK–L	10µ" (0,25µm) Gold

JL



Part No.	A
JL–100–25–T	(2,54) .100
JL–250–25–T	(6,35) .250
JL–300–25–T	(7,62) .300
JL–400–25–T	(10,16) .400
JL–500–25–T	(12,70) .500
JL–600–25–T	(15,24) .600
JL–1000–25–T	(25,40) 1.000

PK



Insulator Material: Natural Thermoplastic
Note: Order total number of pins. 6 pins per ring.

Part No.	A	B
PK–01–06	(0,64) .025 SQ	(5,84) .230
PK–01–07	(0,51) .020 SQ	(3,18) .125

-06 polarizes:
SSW, SSQ, ESW, ESQ, IDSS, IDSD
-07 polarizes:
SSM, TCSD

Due to technical progress, all designs, specifications and components are subject to change without notice.

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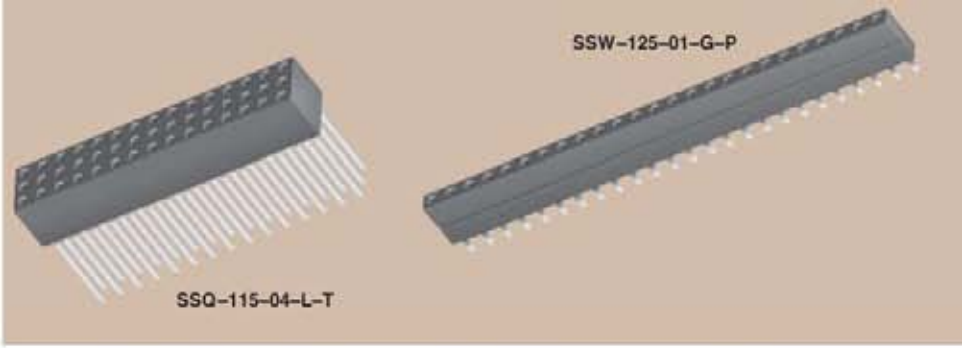


(2,54mm) .100"

SSW, SSQ SERIES

THROUGH-HOLE .025" SQ POST SOCKET

SPECIFICATIONS

For complete specifications see www.samtec.com?SSW or www.samtec.com?SSQ

Insulator Material:
Black Liquid Crystal Polymer (-S & -D) or Black High Temperature Thermoplastic (-T)
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Contact Resistance:
10 mΩ max
Insertion Depth:
(3,68mm) .145" to (6,35mm) .250"
Insertion Force:
(Single contact only)
(–S plating)
Standard= 6oz (1,67N) avg
((0,64mm) .025" SQ pin);
SSW Low Insertion Force= 3oz (0,83N) avg
SSQ Low Insertion Force= 3.3oz (0,92N) avg
Normal Force:
Standard= 125grams (4.4N)
Withdrawal Force:
(Single contact only)
(–S plating)
Standard= 5oz (1,39N) avg
((0,64mm) .025" SQ pin);
SSW Low Insertion Force= 2.6oz (0,72N) avg
SSQ Low Insertion Force= 2.9oz (0,81N) avg
Max Cycles:
100 with 10µ" (0,25µm) Au
Voltage Rating:
550 VAC mated with TSW
RoHS Compliant:
Yes: Single & Double Row
No: Triple Row

CURRENT RATING		
AMBIENT TEMP	TSW mated with SSQ	TSW mated with SSW
20°C	7.6A	6.9A
40°C	6.9A	6.1A
60°C	5.9A	5.3A
95°C	3.9A	3.5A
6 POSITIONS (2x3) POWERED		

Processing:

Lead-Free Solderable:
Yes: Single & Double Row
No: Triple Row

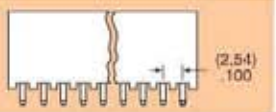
Note:
Some lengths, styles and options are non-standard, non-returnable.

Mates With:
TSW, MTSW, MTLW, LCW, EW, ZW, TSS, ZSS, TSM, TSSH

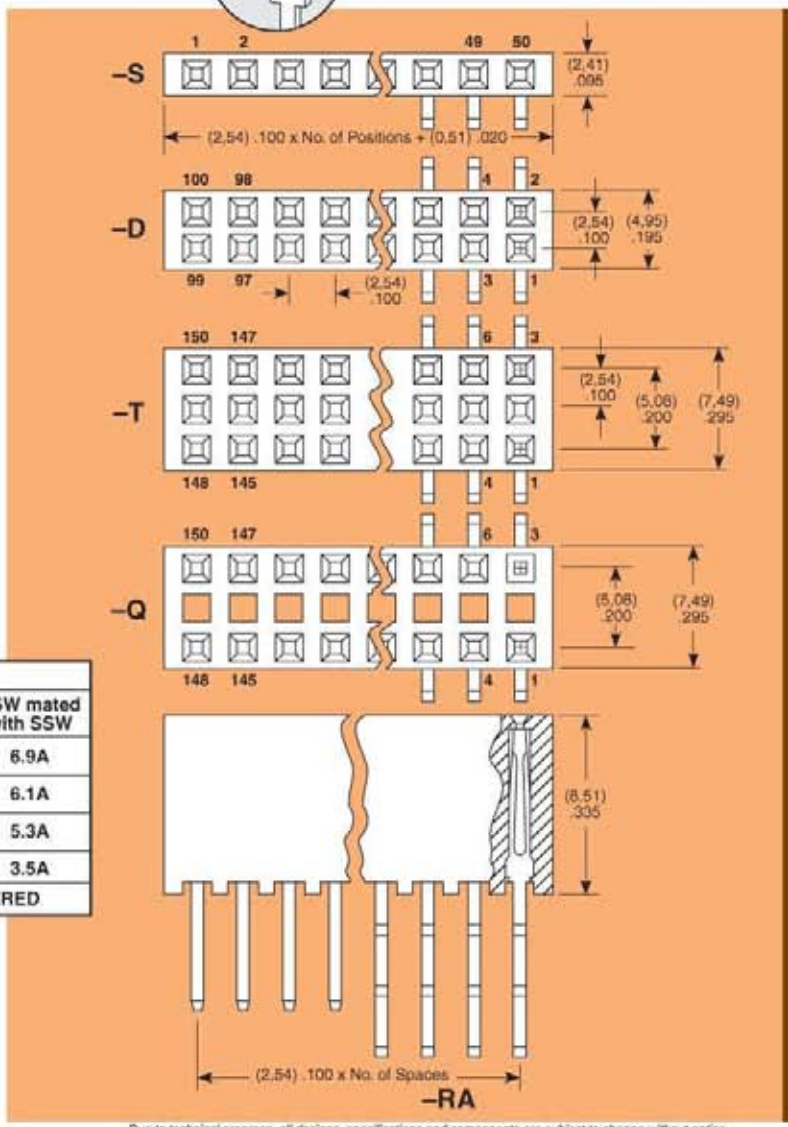
TYPE STRIP – PIN CENTERS – NO. PINS PER ROW

SSW = Solder Tail
SSQ = Square Tail

–1 = (2,54mm) .100" Centers



TIGER BUY CONTACT



01 thru 50

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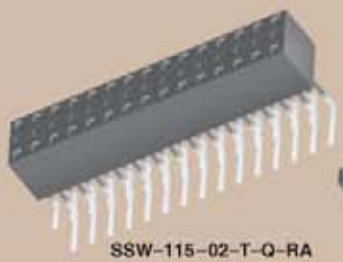
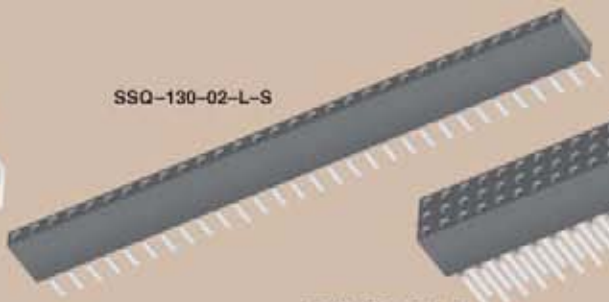
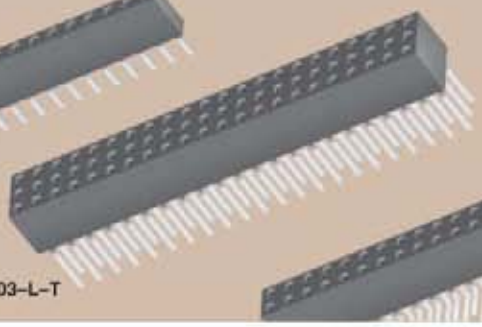


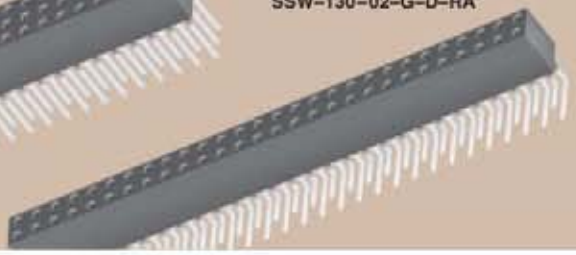
SSW-115-02-T-Q-RA



SSQ-130-02-L-S



SSW-122-03-L-T



SSW-130-02-G-D-RA

LEAD STYLE - **PLATING OPTION** - **ROW OPTION** - **TAIL OPTION** - **OTHER OPTION**

PLATING OPTION

–F
= Gold flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–G
= 20µ" (0,51µm) Gold on contact, Gold flash on tail

–T
= Matte Tin
(-T N/A on LIF contacts)

Note: Other Gold plating options available. Contact Samtec.

ROW OPTION

–S
= Single Row

–P
= Single Row
(Notched to mate with LCW)
36 pins max

–D
= Double Row

–T
= Triple Row

–Q
= Double Row
.200" (5,08mm) row space
(Outer rows filled only)

TAIL OPTION

–RA
= Right Angle
(Leave blank for straight pin version)

OTHER OPTION

–LL
= Locking Lead

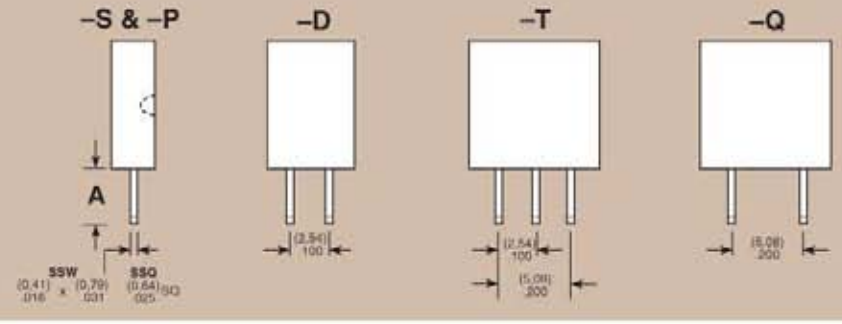
Two leads per strip crimped in opposite directions on or near centerline. Available on tails from (2,29) .090" to (7,87) .310" only. N/A with single row 1 or 2 positions.

–"XXX"
= Polarized
(Specify "XXX" as position number)

Straight Pin Versions (Specify "LEAD STYLE" from chart)

LEAD STYLE		SINGLE DOUBLE OR TRIPLE
Standard Insertion Force	Low Insertion Force*	A
– 01	– 21	(2,64) .104
– 02	– 22	(4,93) .194
– 03	– 23	(10,00) .394
– 04	– 24	(14,83) .584
– 06**	N/A	(3,00) .118

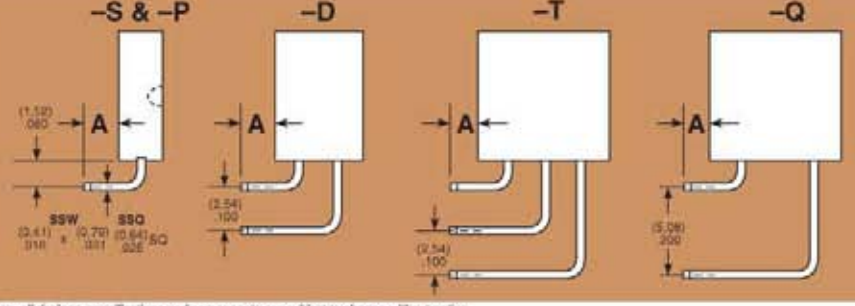
* LIF N/A with Tin Plating
**Style –06 N/A with SSQ



Right Angle Versions (Specify "LEAD STYLE" from chart)

LEAD STYLE		SINGLE	DOUBLE	TRIPLE
Standard Insertion Force	Low Insertion Force*	(-S & -P) A	(-D) A	(-T & -Q) A
– 02	–22	(2,54) .100	(2,54) .100	(2,54) .100
– 03	– 23	(7,62) .300	(7,62) .300	N/A
– 04	–24	(12,45) .490	N/A	N/A

*LIF N/A with Tin Plating



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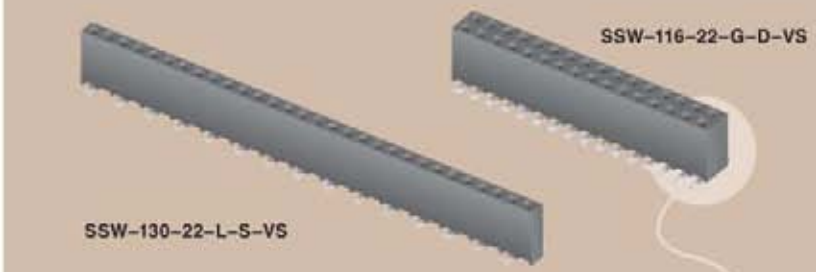


(2,54mm) .100"

SSW SERIES

SMT .025" SQ POST SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SSW

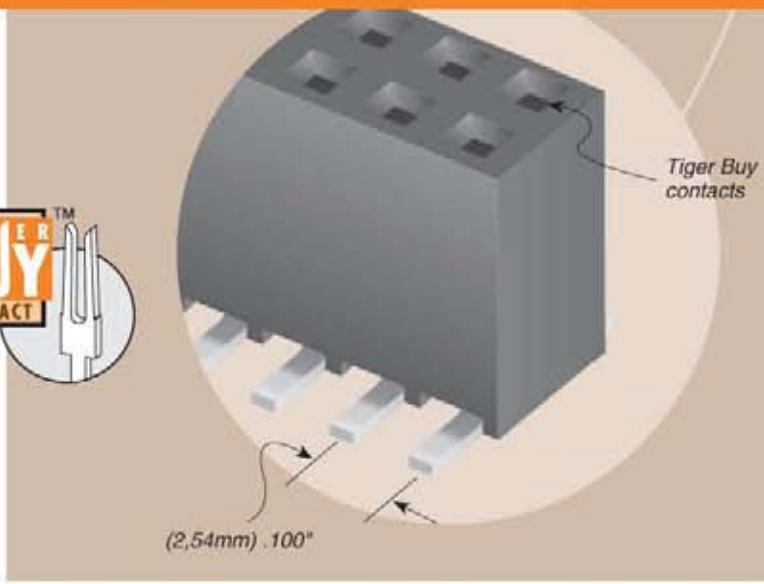
Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Contact Resistance:
10 mΩ max
Insertion Depth:
(3,68mm) .145" to
(6,35mm) .250"
Insertion Force:
(Single contact only)
3oz (0,83N) avg.
Withdrawal Force:
(Single contact only)
2.6oz (0,72N) avg.
Max Cycles:
100 with 10µ" (0,25µm) Au
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	SSW mated with TSW
20°C	6.9A
40°C	6.1A
60°C	5.3A
95°C	3.5A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Mates With:
TSW, MTSW, MTLW, EW, ZW, TSS, ZSS, TSM, TSSH



SSW	–	1	NO. PINS PER ROW	–	22	–	PLATING OPTION	–	ROW OPTION	–	VS	–	OTHER OPTION

02 thru 36

–F
= Gold flash on contact, Matte Tin on tail

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–G
= 20µ" (0,51µm) Gold on contact, Gold flash on tail

–S
= Single Row

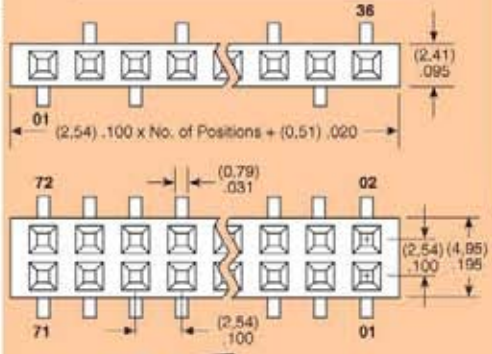
–D
= Double Row

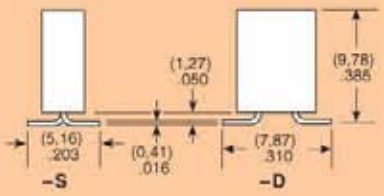
–"XX"
= Polarized Position

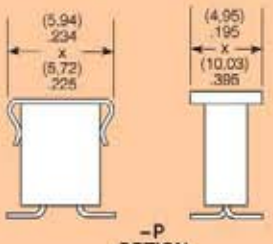
–K
= (6,50mm) .256" DIA Polyimide film Pick & Place Pad (05 positions min.)

–P
= Pick & Place Pad (05 positions min.)

–TR
= Tape & Reel Packaging (–02 thru –28)







Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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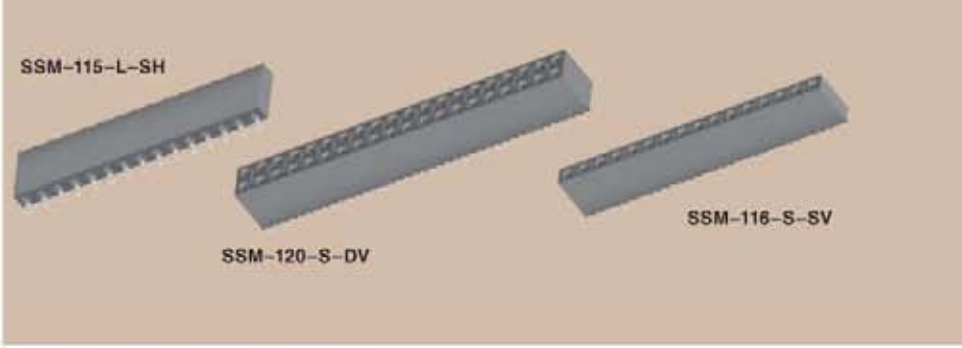
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
2,500 cycles when mated with TSM

(2,54mm) .100"
SSM SERIES



SMT .025" SQ BOX SOCKET

Mates with:
TSW, MTSW, TST, TSS, ZST, ZSS, DW, EW, ZW, TSM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SSM

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating:
475 VAC (-SV/-DV mated with TSW)
450 VAC (-SH/-DH mated with TSM)
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Contact Resistance:
10 mΩ max
Insertion Depth:
SV/DV is (4,34mm) .171" to (7,24mm) .285" or pass-through from top; (5,56mm) .219" plus board thickness minimum from bottom; SH/DH is (4,34mm) .171" to (6,35mm) .250"
Insertion Force:
(Single contact only)
5oz (1,39N) average
Normal Force:
125 grams (1,21N) average
Withdrawal Force:
(Single contact only)
2oz (0,56N) average
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	SSM mated with TSW
20°C	6.9A
40°C	6A
60°C	5.3A
95°C	3.5A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
-DH Coplanarity:
Less than 28 positions (0,15mm) .006" max
More than 27 positions (0,20mm) .008" max
-SH, -SV, -DV Coplanarity:
(0,15mm) .006" max

Note: Some lengths, styles and options are non-standard, non-returnable.

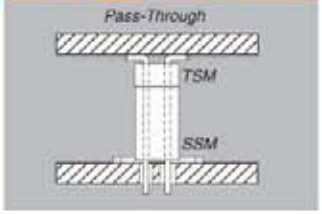
SSM – 1 – NO. PINS PER ROW – PLATING OPTION – ROW OPTION – OTHER OPTION

NO. PINS PER ROW
- 02 thru 36 (-SV, -SH, -DH)
- 02 thru 40 (-DV)

PLATING OPTION
- **-L** = 10µ" (0,25µm) Gold on contact, Matte Tin on tail
- **-S** = 30µ" (0,76µm) Gold on contact, Matte Tin on tail

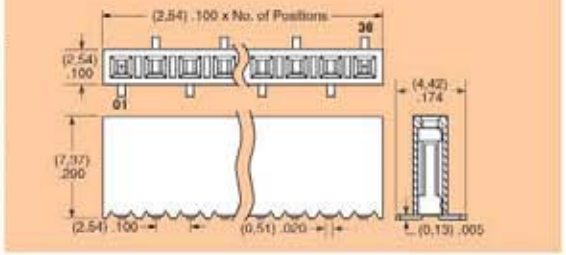
APPLICATION SPECIFIC OPTION
Alignment Pin available. Call Samtec.

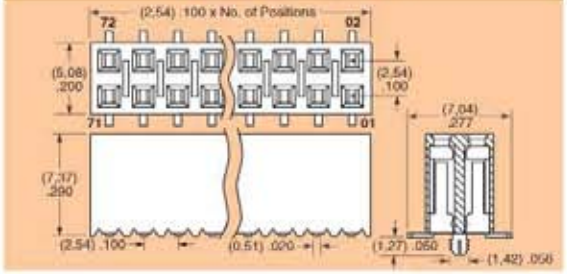
APPLICATIONS

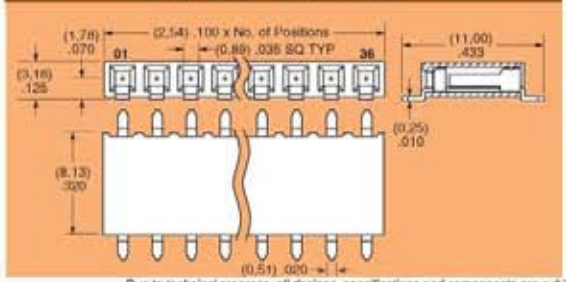
APPLICATION


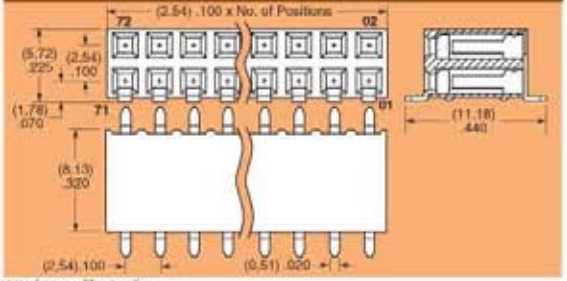
ROW OPTION
- **-SV** = Single Row Vertical Pin
- **-DV** = Double Row Vertical Pin
- **-SH** = Single Row Horizontal Pin
- **-DH** = Double Row Horizontal Pin

OTHER OPTION
- **-BE** = Bottom Entry (-DV & -SV only)
- **-LC** = Locking Clip (-DV & -SV only) Contact Samtec for -DH & -SH
- **-K** = (6,50mm) .256" DIA Polyimide film Pick & Place Pad (5 positions min.) -DV & -SV only
- **-"XXX"** = Polarized Position (-BE not available)
- **-TR** = Tape & Reel Packaging (29 positions max.)
- **-M** = Metal Pick & Place Pad (5 positions min.) -DV only
- **-P** = Plastic Pick & Place Pad (-DV & -SV only) (6 pos. minimum, contact Samtec for availability on smaller positions)









Due to technical progress, all designs, specifications and components are subject to change without notice.

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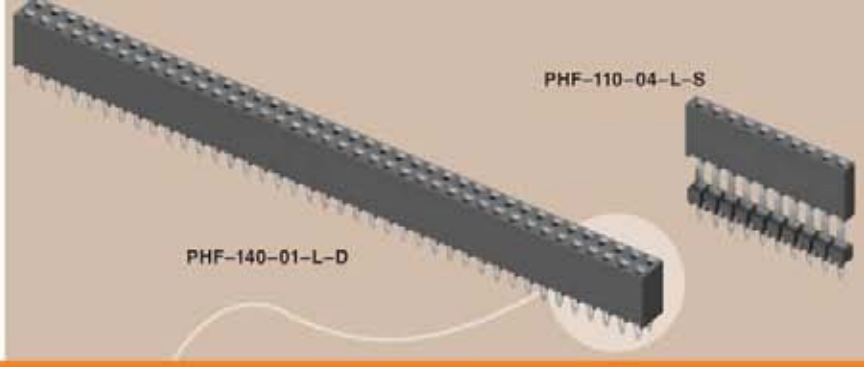


(2,54mm) .100"

PHF SERIES

PRESS FIT .025" SQ POST SOCKET

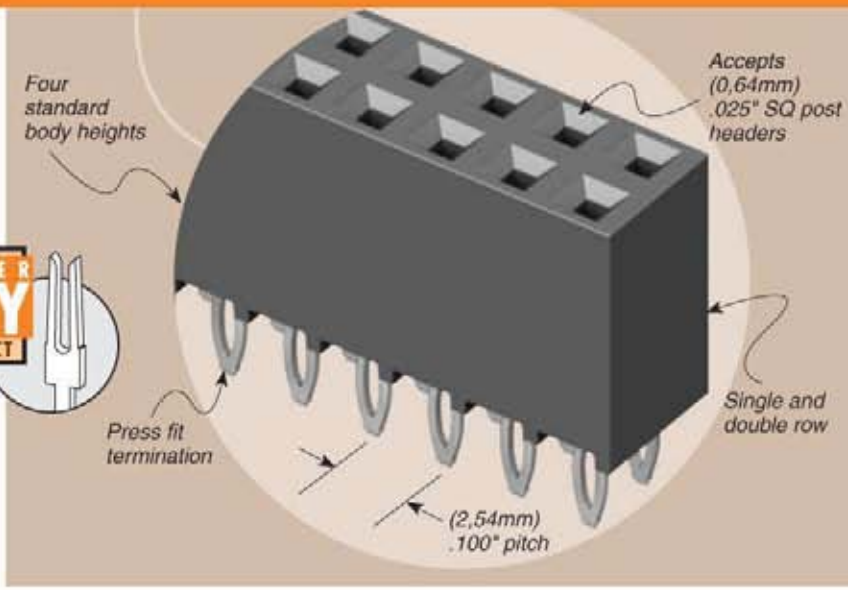
SPECIFICATIONS

For complete specifications see www.samtec.com?PHF

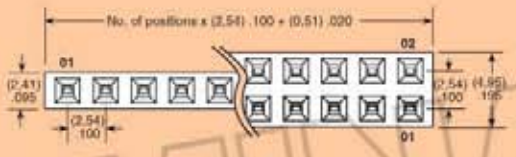
Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to +125°C with Gold
Contact Resistance:
10mΩ max
Insertion Depth:
(3,68mm) .145" to (6,35mm) .250"
RoHS Compliant:
Yes

Processing:
Contact ipg@samtec.com

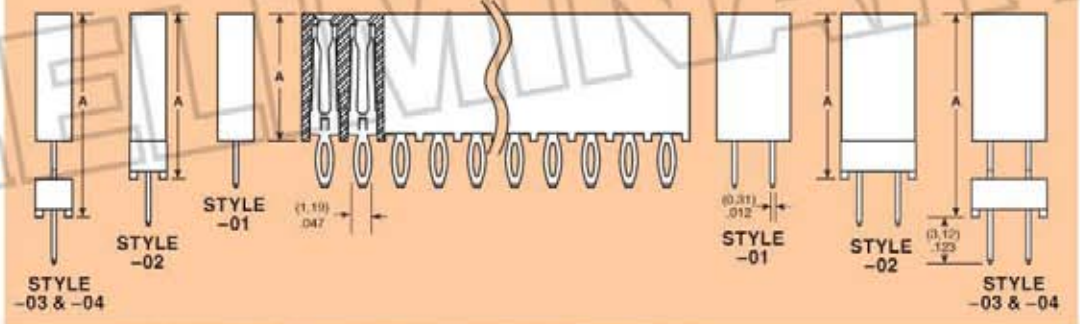
Mates With:
TSW, MTSW, MTLW, LCW, EW, ZW, TSS, ZSS, TSM, TSSH, PHT



PHF	– 1	NO. PINS PER ROW	– LEAD STYLE	– PLATING OPTION	– ROW OPTION	– OTHER OPTION
		01 = (single row only) 02 thru 50	Specify LEAD STYLE from chart	–L = 10µ" (0,25µm) Gold on post, Matte Tin on tail	–S = Single Row – D = Double Row	–"XXX" = Polarized Position



LEAD STYLE	A
–01	(8,50) .335
–02	(11,05) .435
–03	(13,59) .535
–04	(16,13) .635



PRELIMINARY

ALSO AVAILABLE

- Other plating options. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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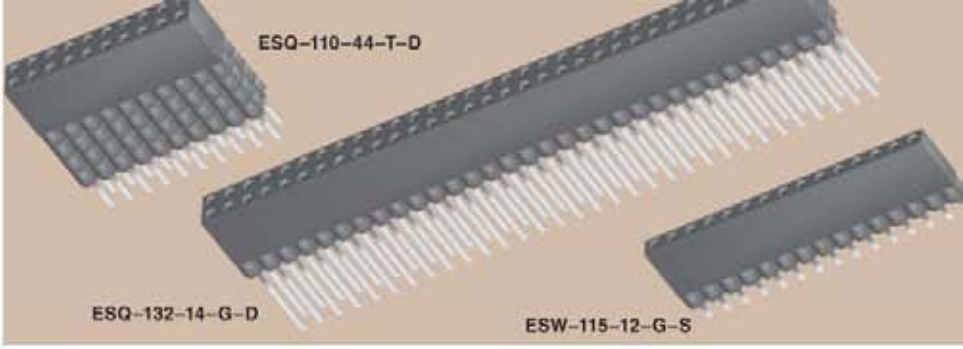


(2,54mm) .100"
ESW, ESQ SERIES

ELEVATED SOCKET

Mates with:
TSW, MTSW, EW, MTLW, TSS, ZSS, TSM, DW, ZW, HW

SPECIFICATIONS

For complete specifications see www.samtec.com?ESW or www.samtec.com?ESQ

Insulator Material: Black Glass Filled Polyester
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating: 550 VAC mated with TSW or ESQ
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Contact Resistance: 10 mΩ max
Insertion Depth: (3,68mm) .145" to (6,35mm) .250"
Insertion Force: (Single contact only) Standard = 6oz (1,67N) avg. ((0,64mm) .025" SQ pin); ESW Low Insertion Force= 3oz (0,83N) avg. ESQ Low Insertion Force= 3.3oz (0,92N) avg.
Normal Force: Standard = 125 grams (4,4N)
Withdrawal Force: (Single contact only) Standard = 5oz (1,39N) avg. ((0,64mm) .025" SQ pin); ESW Low Insertion Force= 2.6oz (0,72N) avg. ESQ Low Insertion Force= 2.9oz (0,81N) avg.
Max Cycles: 100 with 10µ" (0,25µm) Au
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP	1	NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	ROW OPTION	OTHER OPTION

ESW = Solder Tail
ESQ = Square Tail

CURRENT RATING	
AMBIENT TEMP	ESW mated with TSW
20°C	6.9A
40°C	6.0A
60°C	5.3A
95°C	3.5A
6 POSITIONS (2x3) POWERED	

01 thru 36

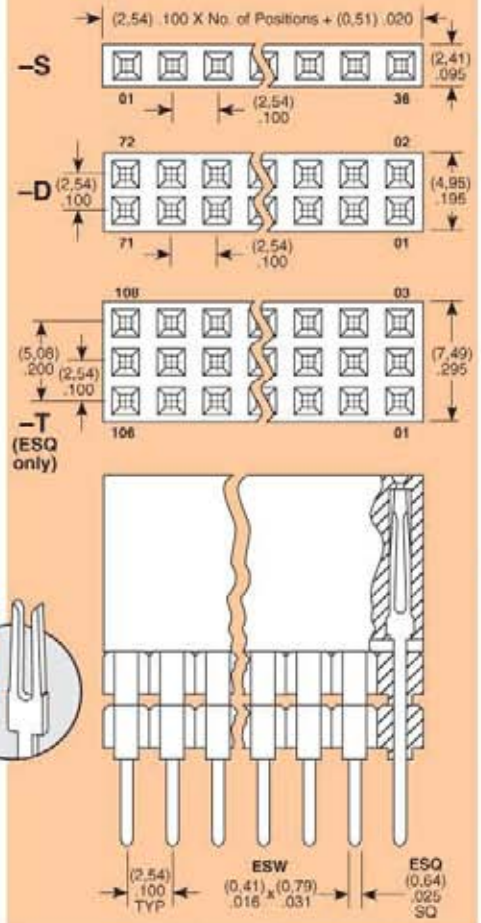
–L = 10µ" (0,25µm) Gold contact, Matte Tin on tail
–G = 20µ" (0.51µm) Gold contact, Gold Flash on Balance
–T = Matte Tin (N/A w/LIF contact)

–S = Single Row
–D = Double Row
–T = Triple Row (ESQ only)

–LL = Locking Lead

Two leads per strip crimped. N/A with single row 1 or 2 positions.

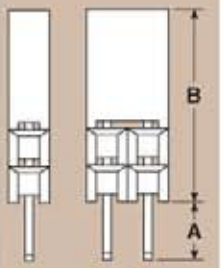
–"XXX" = Polarized



TIGER BUY CONTACT

Specify LEAD STYLE from chart below.

STANDARD INSERTION FORCE	LOW INSERTION FORCE	A	B
– 12	– 37	(2,29) .090	(11,05) .435
– 13	– 38	(7,36) .290	
– 23	– 48	(4,83) .190	(13,59) .535
– 33	– 58	(2,29) .090	(16,13) .635
– 14	– 39	(12,19) .480	(11,05) .435
– 24	– 49	(9,65) .380	(13,59) .535
– 34	– 59	(7,11) .280	(16,13) .635
– 44	– 69	(4,57) .180	(18,67) .735



APPLICATIONS

Self Nesting Sockets

(ESQ Series)

PC/104 J1/P1 "Stackthrough" Connectors	
Standard Insertion Force	ESQ-132-14-G-D
Low Insertion Force	ESQ-132-39-G-D
PC/104 J1 "Non-Stackthrough" Connectors	
Standard Insertion Force	ESQ-132-12-G-D
Low Insertion Force	ESQ-132-37-G-D
PC/104 J2/P2 "Stackthrough" Connectors	
Standard Insertion Force	ESQ-120-14-G-D
Low Insertion Force	ESQ-120-39-G-D

PC/104 is a trademark of the PC/104 Consortium.

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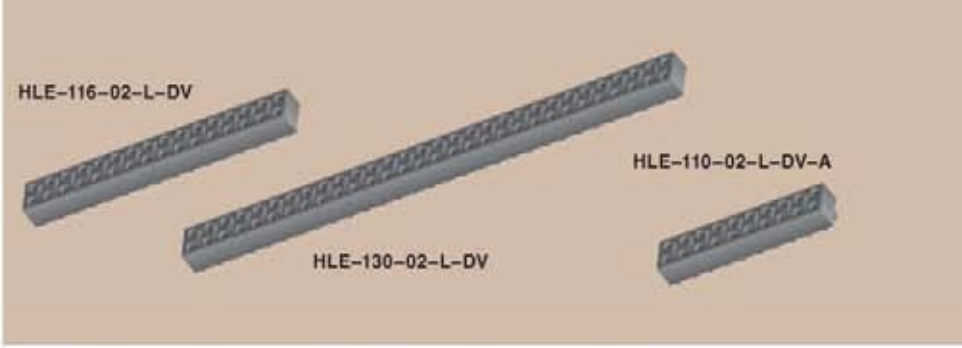


(2,54mm) .100"

HLE SERIES

COST-EFFECTIVE RELIABLE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HLE

Insulator Material: Black Liquid Crystal Polymer
Contact Material: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 2.5A @ 80°C ambient
Operating Temp Range: -55°C to +125°C
Insertion Depth: (1,78mm) .070" to (3,43mm) .135", pass-through, or (2,59mm) .102" min for bottom entry
Insertion Force: (Single contact only) 2oz (0,56N) avg.
Withdrawal Force: (Single contact only) 1.6oz (0,44N) avg.
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max (02-20) (0,15mm) .006" max (21-50)

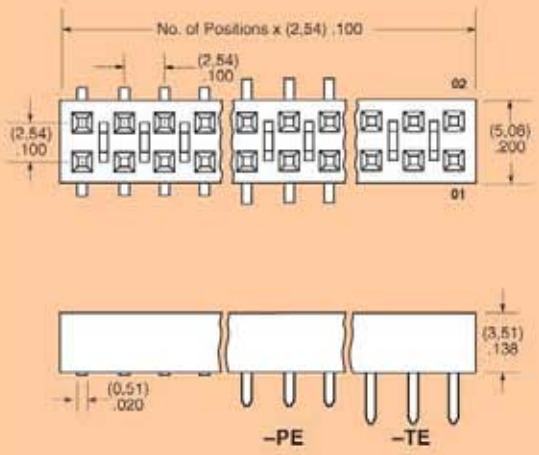
Note: Some lengths, styles and options are non-standard, non-returnable.

HLE – 1 NO. PINS PER ROW – 02 – PLATING OPTION – DV – TAIL OPTION – OTHER OPTION

Mates With: TSW, MTSW, DW, EW, ZW, TLW, TSM, MTLW, HW

TIGER BEAM™ CONTACT

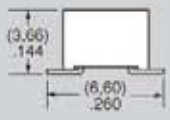
02 thru 50



-L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

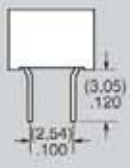
Note: Other Gold plating options available. Contact Samtec.

Leave blank for Surface Mount

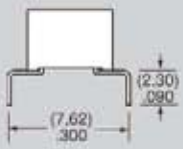


(Requires -BE for Bottom Entry)

-TE
= Through-Hole Top Entry



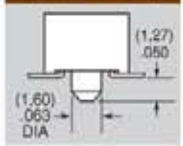
-PE
= Through-hole Pass Through Entry



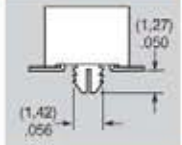
(Requires -BE for Bottom Entry)

-BE
= Bottom Entry (Requires Surface Mount or -PE)

-A
= Alignment Pin (4 positions min.) Metal or plastic at Samtec discretion (N/A with -LC)

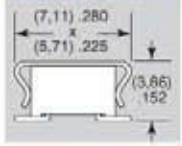


-LC
= Locking Clip (2 positions min.) (N/A with -A)



-K
= (6,50mm) .256" DIA Polyimide Film Pick & Place Pad (3 positions min.) Not available with -TE or -PE tail option

-P
= Metal Pick & Place Pad (3 positions min.)



-TR
= Tape & Reel Packaging (29 positions max.)

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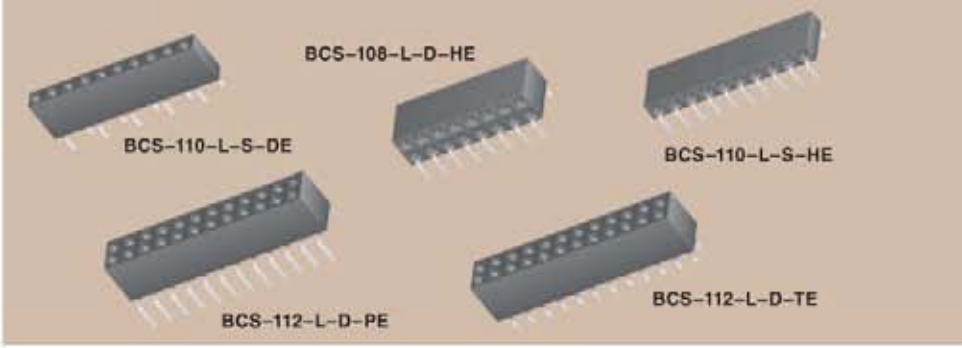
E.L.P.™ EXTENDED LIFE PRODUCT
10 Year Mixed Flowing Gas (MFG)
2,500 cycles when mated with TSM

(2,54mm) .100"
BCS SERIES



STANDARD BOX CONTACT SOCKET

SPECIFICATIONS

For complete specifications see www.samtec.com?BCS

Insulator Material: Black Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Voltage Rating: 475 VAC (-TE/-DE/-PE mated with TSM) 450 VAC (-HE mated with TSW)
Operating Temp Range: -55°C to +125°C
Contact Resistance: 10 mΩ max
Insertion Depth: (4,34mm) .171" to (7,24mm) .285" from top, (5,64mm) .222" plus board thickness minimum from bottom. –HE is (4,34mm) .171" to (6,35mm) .250"
Insertion Force: (Single contact only) 5oz (1,39N) avg. (.025" (0,64mm) SQ pin)
Withdrawal Force: (Single contact only) 3oz (0,83N) avg. (.025" (0,64mm) SQ pin)
RoHS Compliant: Yes

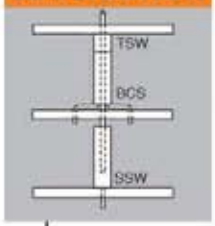
CURRENT RATING	
AMBIENT TEMP	BCS mated with TSW
20°C	5.9A
40°C	5.2A
60°C	4.7A
95°C	3A
6 POSITIONS (2x3) POWERED	

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes

Note: Some lengths, styles and options are non-standard, non-returnable.

APPLICATION



BCS	–	1	NO. PINS PER ROW	–	PLATING OPTION	–	ROW OPTION	–	ENTRY OPTION	–	OTHER OPTION

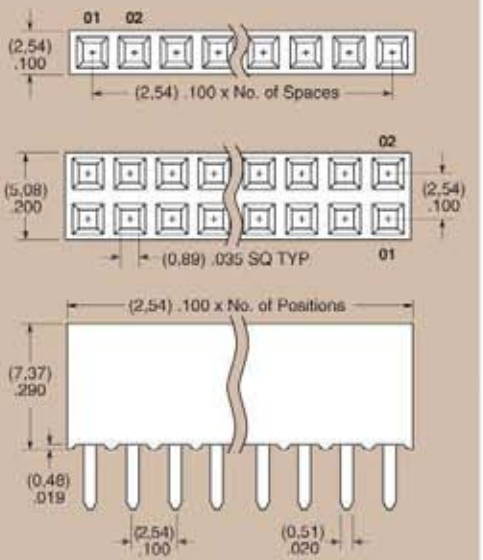
Mates with: TSW, MTSW, TSS, ZSS, DW, EW, ZW, HW, TSM, MTLW

PLATING OPTION
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

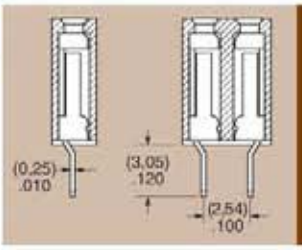
ROW OPTION
–S = Single
–D = Double

OTHER OPTION
–"XXX" = Polarized Position (–BE not available)

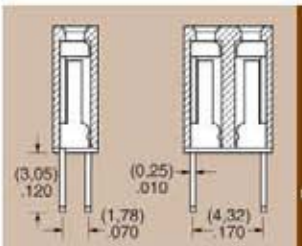
NO. PINS PER ROW
01 thru 50



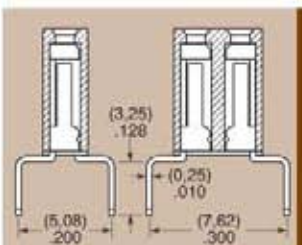
ENTRY OPTION



–TE = Top Entry

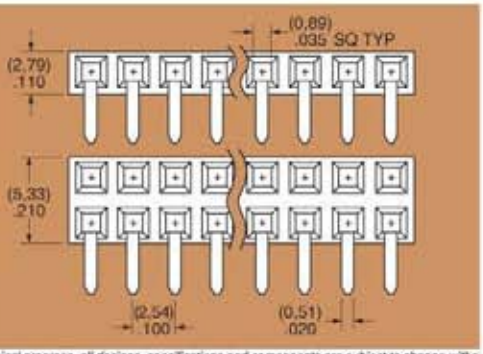


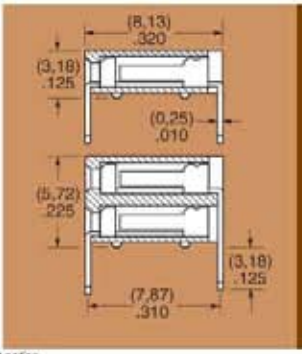
–DE = Top Entry (For Bottom Entry specify –DE–BE) Cannot be used with plated through-holes



–PE = Pass Through Entry (For Bottom Entry specify –PE–BE)

APPLICATIONS





–HE = Horizontal Entry

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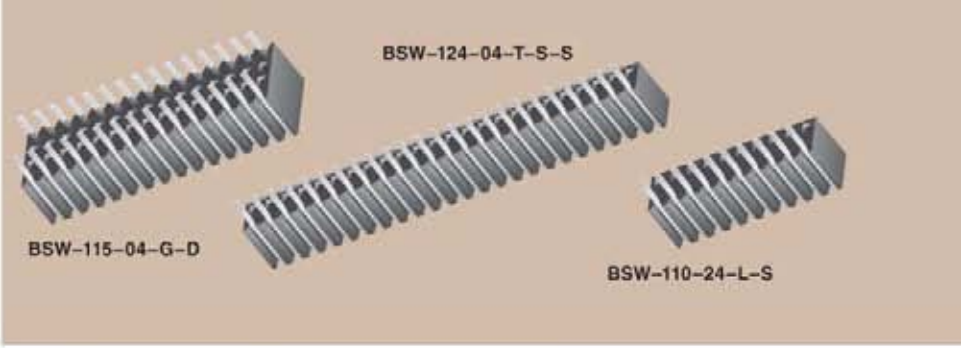


(2,54mm) .100"

BSW SERIES

BOTTOM MOUNT SOCKET STRIPS

Mates with:
TSW, MTSW, MTLW, EW, ZW, TSM

FEATURES

- Bottom mount socket strips accept .025" SQ terminals.
- Ideal for soldering and plugging from the same side of the board.
- For low profile connections and high temperature soldering.

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?BSW

Insulator Material:
Black High Temperature Thermoplastic
UL FILE NO. E111594

Insulation Resistance:
5000 MΩ min

Contact Material:
Phosphor Bronze

Plating:
Au or Sn over 50µ" (1,27µm) Ni

Current Rating:
3A

Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin

Withstanding Voltage:
1000 VRMS @ 60 Hz

Contact Resistance:
10 mΩ max

Insertion Depth:
(3,68mm) .145" to (6,35mm) .250"

Insertion Force:
(Single contact only)
Standard = 8oz (2,23N) avg.
Low Insertion Force = 3oz (0,83N) avg.

Withdrawal Force:
(Single contact only)
Standard = 8oz (2,23N) avg.
Low Insertion Force = 3oz (0,83N) avg.

RoHS Compliant:
Yes

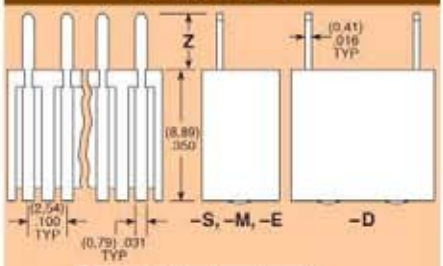
Lead-Free Solderable:
Wave only

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

BSW	–	1	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OTHER OPTION

02 thru 36



Row Option	Z
–S*	(4,31) .170
–M	(3,43) .135
–E	(2.54) .100
–D*	(4,32) .170

*Less (0,38mm) .015" with standoffs

–04 = Standard Lead

–24 = Low Insertion Force

–L = 10µ" (0,25µm) Gold contact, Matte Tin on tail

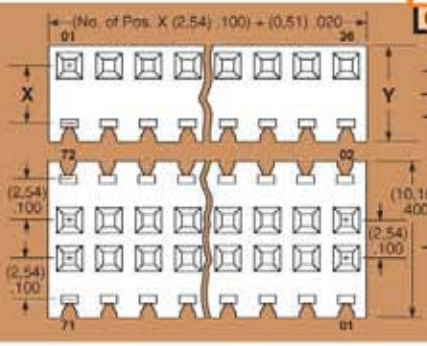
–G = 20µ" (0,51µm) Gold contact, Gold Flash on tail

–T = Matte Tin (N/A with Low Insertion Force)

–S = Standoffs for single and double rows only.

(–S & –D only)

TIGER BUY CONTACT



Row Option	X	Y
–S	(2,54) .100	(5,08) .200
–M	(3,81) .150	(6,35) .250
–E	(4,31) .170	(6,86) .270

Body design may vary slightly from drawing shown.

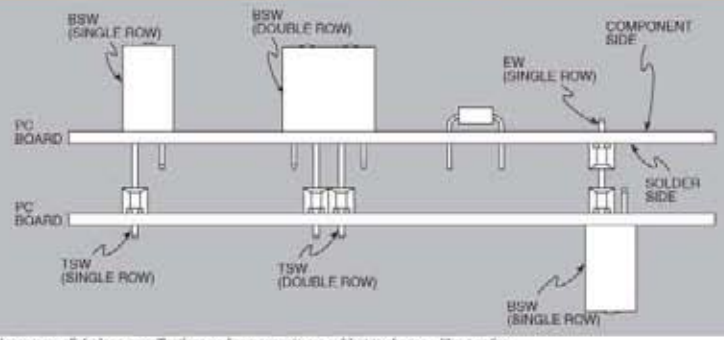
–S = Single Row

–M = Single Row More Plug Space

–E = Single Row Extended Plug Space

–D = Double Row

APPLICATIONS



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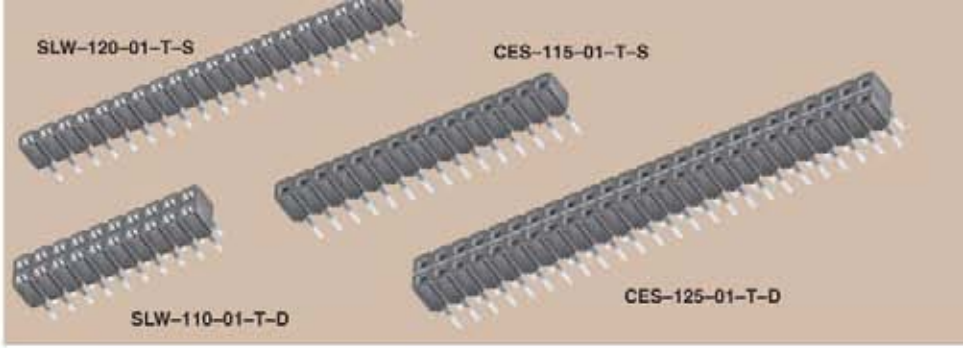


(2,54mm) .100"

SLW, CES SERIES

LOW PROFILE SOCKET STRIPS

Mates with:
TLW, TSW, MTLW, MTSW, EW, ZW

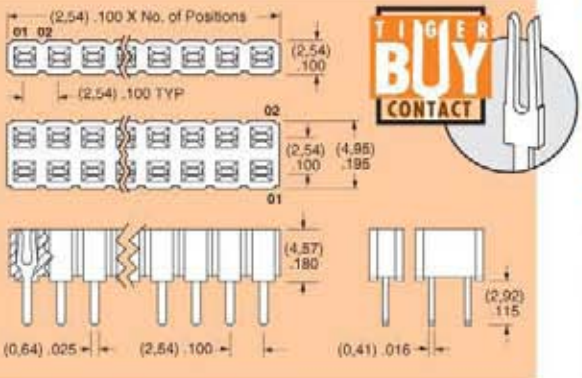
SPECIFICATIONS

For complete specifications see www.samtec.com?SLW

Insulator Material: Black G.F. Polyester
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ"(1,27µm) Ni
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Contact Resistance: 10 mΩ max
Insertion Depth: (2,16mm) .085" to (2,92mm) .115"
Insertion Force: (Single contact only) (3,34N) 12oz avg. (0,64mm) .025" SQ pin
Withdrawal Force: (Single contact only) (1,67N) 6 oz avg. (0,64mm) .025" SQ pin
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

SLW – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – ROW OPTION

01 thru 50



Note: Some lengths, styles and options are non-standard, non-returnable.

–L = 10µ" (0,25µm) Gold contact, Matte Tin on tail

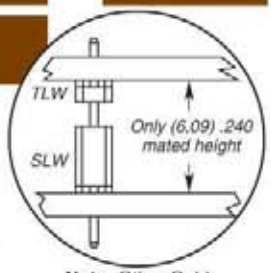
–G = 20µ" (0,51µm) Gold contact, Gold flash on balance

–T = Matte Tin

CURRENT RATING	
AMBIENT TEMP	SLW mated with TSW
20°C	7.1A
40°C	6.2A
60°C	5.8A
95°C	3.7A
6 POSITIONS (2x3) POWERED	

–S = Single Row

–D = Double Row



Note: Other Gold plating options available. Contact Samtec.

Mates with:
TLW, TSW, MTLW, MTSW, EW, ZW, DW

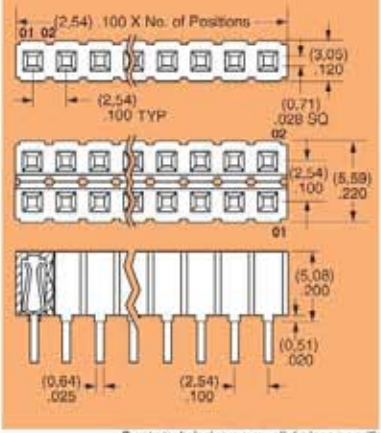
SPECIFICATIONS

For complete specifications see www.samtec.com?CES

Insulator Material: Black G.F. Polyester
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: 1A
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Contact Resistance: 10 mΩ max
Insertion Depth: (2,62mm) .103" to (4,06mm) .160"
Insertion Force: (Single contact only) (2,22N) 8 oz avg. (0,64mm) .025" SQ pin
Withdrawal Force: (Single contact only) (1,11N) 4 oz avg. (0,64mm) .025" SQ pin
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

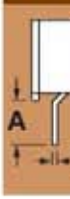
CES – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION – RA OPTION

01 thru 50



–01 = (3,25) .128 "A" Dim.

–02 = (5,66) .223 "A" Dim.



Note: Some lengths, styles and options are non-standard, non-returnable.

–L = 10µ" (0,25µm) Gold contact, Matte Tin on tail

–T = Matte Tin

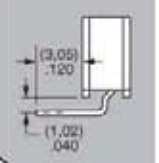
Note: Other Gold plating options available. Contact Samtec.

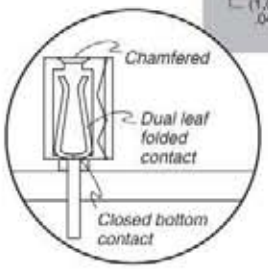
–S = Single Row

–D = Double Row

–RA = Right Angle version

Style –02 only
Single Row only





Due to technical progress, all designs, specifications and components are subject to change without notice.

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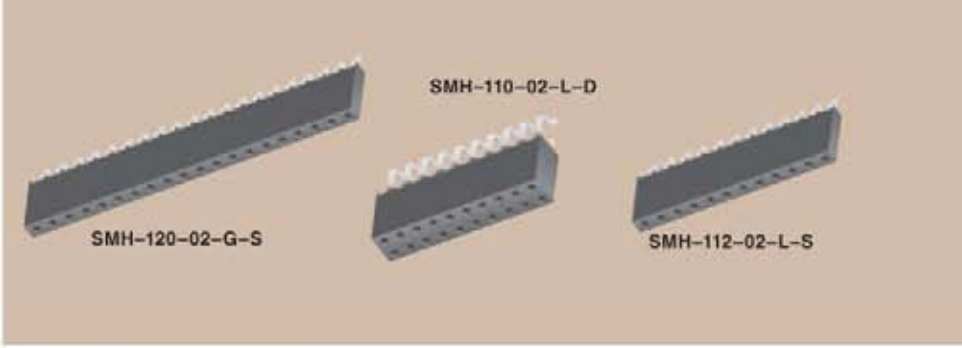


(2,54mm) .100"

SMH SERIES

SMT HORIZONTAL SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SMH

Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Current Rating:
3A continuous
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Contact Resistance:
10 mΩ max
Insertion Depth:
(3,68mm) .145" to (6,35mm) .250"
Insertion Force:
(Single contact only) 6oz (1,67N) avg.
Withdrawal Force:
(Single contact only) 5oz (1,39N) avg.
Max Cycles:
100 with 10µ" (0,25µm) Au
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,15mm) .006" max (02-24)
(0,20mm) .008" max (25-36)

Important Note:
SMH mated to TSM-DH/-SH not coplanar, SSM-DH/-SH recommended for coplanar applications.

Note:
Other Gold plating options available. Contact Samtec.

Note:
Some lengths, styles and options are non-standard, non-returnable.

SMH – 1 – NO. PINS PER ROW – 02 – PLATING OPTION – ROW OPTION – OTHER OPTION

Mates With:
TSW, MTSW, MTLW, EW, ZW, TSS, ZSS, TSM

PLATING OPTION
- **–L** = 10µ" (0,25µm) Gold on contact, Matte Tin on tail
- **–G** = 20µ" (0,51µm) Gold on contact, Gold flash on tail
- **–T** = Matte Tin

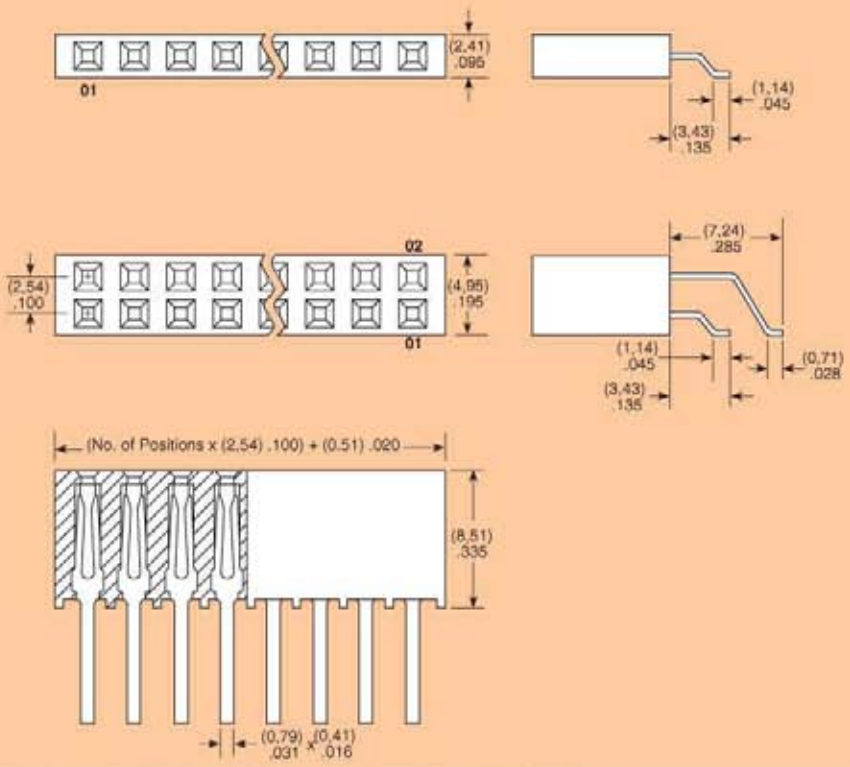
ROW OPTION
- **–S** = Single Row
- **–D** = Double Row

OTHER OPTION
- **–"XXX"** = Polarized Position
- **–TR** = Tape & Reel Packaging (02-29 positions only)

TIGER BUY CONTACT

TAPE & REEL AVAILABILITY
No tooling charges.
Minimum order is the lesser of a full reel quantity or 125 pieces.
Order any quantity above minimum.
In-house design, manufacture.
Quick turn-around.
Call Samtec for specifications and ordering information.

02 thru 36



Due to technical progress, all designs, specifications and components are subject to change without notice.

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(2,54mm) .100"

LST, HLST SERIES

SELF-MATING HERMAPHRODITIC STRIP

SPECIFICATIONS

Mates with:
LST, HLST

For complete specifications see www.samtec.com?LST or www.samtec.com?HLST

LST

Insulator Material:
LST: Black
Glass Filled Polyester
Terminal Material:
Phosphor Bronze
Contact Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C with Gold
-55°C to +105°C with Tin
Insertion Depth:
(3,68 mm) .145" to (6,35 mm) .250"
Insertion Force:
(Single contact only)
6oz (1,67N) avg
Withdrawal Force:
(Single contact only)
4oz (1,11N) avg
Cycles:
100 with 10µ" (0,25µm) Au
RoHS Compliant:
Yes
Lead-Free Solderable:
Wave Only

CURRENT RATING	
AMBIENT TEMP	5 Contacts
20°C	6.0A
40°C	5.3A
60°C	4.2A
80°C	3.0A

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

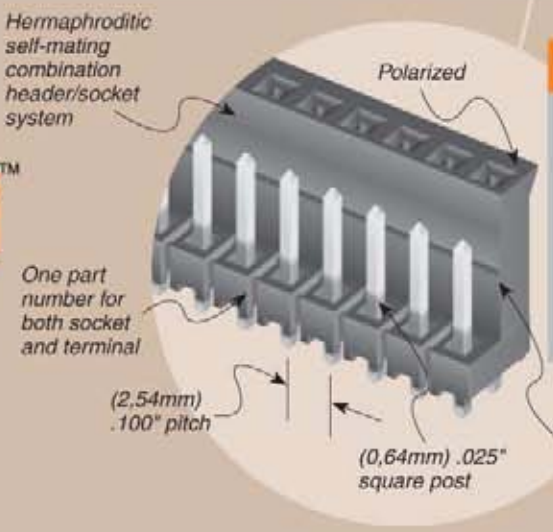
HLST

Same as LST except:
Insulator Material:
Liquid Crystal Polymer
(Socket Black, Header Natural)

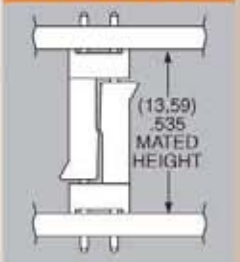
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

TIGER BUY CONTACT™



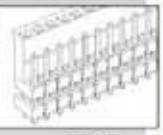
APPLICATION



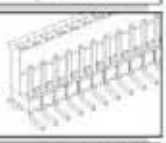
Also Available

Right Angle
Call Samtec.

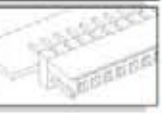
Elevated
Call Samtec.



Surface Mount
Call Samtec.



Edge Mount
Call Samtec.



TYPE STRIP	–	1	NO. PINS PER ROW	–	07	PLATING OPTION	–	D

LST
= Standard

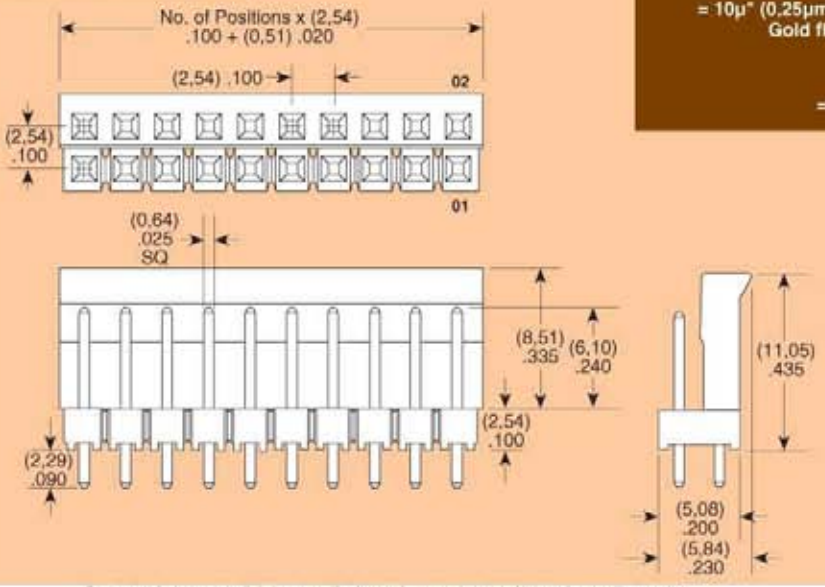
HLST
= High Temperature

02 thru 30

–F
= Gold flash on contact area, Matte Tin on tail

–G
= 10µ" (0,25µm) Gold on contact area, Gold flash on balance

–T
= Matte Tin



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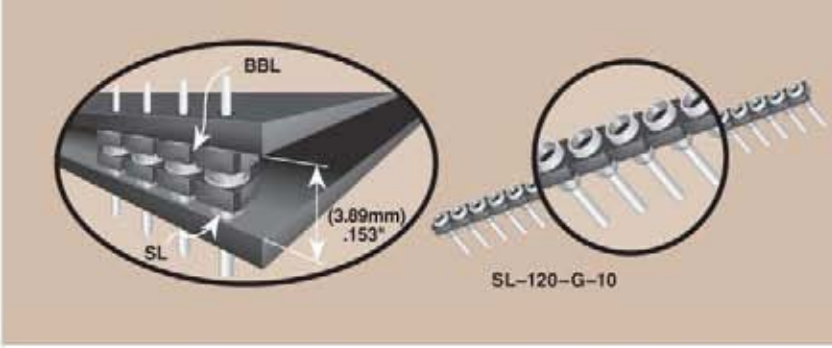


(2,54mm) .100"

SL, SDL SERIES

LOW PROFILE MACHINED SOCKET STRIPS

FEATURES

- Achieve low profile without sacrificing insertion depth!
- Choice of four precision screw machined lead styles.
- Exceptionally low profile, down to (2,11mm) .083" off of board.
- Mates with BBL or BDL for board stacking spaces down to (3,89mm) .153"

SPECIFICATIONS

For complete specifications see www.samtec.com?SL or www.samtec.com?SDL

Insulator Material: Black Glass Filled Polyester

Contact/Shell Materials: BeCu/Brass

Plating: Au or Sn over 50µ" (1,27µm) Ni

Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin

Current Rating: 1A

Contact Resistance: 10 mΩ max

Insertion Force: (Single contact only) Standard = 9 oz (2,50N) avg., 16oz (4,45N) max ((0,43mm) .017" DIA probe) Low Insertion Force = 2.5oz (0,70N) avg., 5.5oz (1,53N) max ((0,43mm) .017" DIA probe except Style 30 (0,46mm) .018" DIA probe)

Withdrawal Force: (Single contact only) Standard = 2.5oz (0,70N) avg., 1.5oz (0,42N) min ((0,43mm) .017" DIA probe) Low Insertion Force = 2.0oz (0,56N) avg., 0.5oz min ((0,43mm) .017" DIA probe except Style 30 is 2.0oz (0,56N) avg., .35oz (0,10N) min (0,46mm) .018" DIA probe)

RoHS Compliant: Yes

Lead-Free Solderable: Wave only

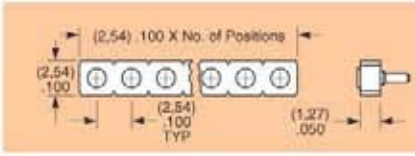
Note: Some lengths, styles and options are non-standard, non-returnable.

Mates with: TS, TD, HTS, BBS, BBD, BBL, BDL, BHS

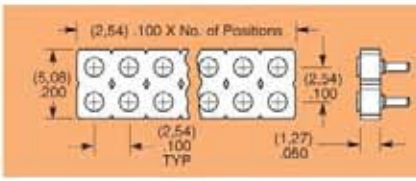
TYPE STRIP – **1** **NO. PINS PER ROW** – **PLATING OPTION** – **LEAD STYLE**

SL = Single Row Low Profile Socket Strip

SDL = Double Row Low Profile Socket Strip



01 thru 32



01 thru 36

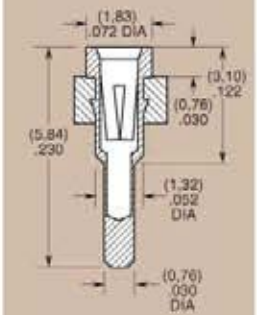
–G = 30µ" (0,76µm) Gold contact, 10µ" (0,25µm) Gold shell

–T = 30µ"(0,76µm) Gold contact, Tin shell

–TT = Tin contact and shell (LIF not available)

Low Insertion Force (LIF) Available

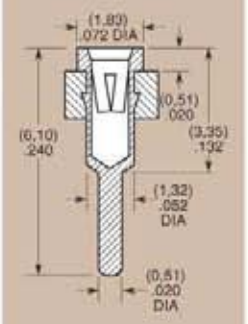
–10 Low Profile (Hollow Leg)



Contact Length = (2,11mm) .083"
Lead DIA Accepted = (0,38mm) .015" to (0,51mm) .020"
Insertion Depth = (2,67mm) .105" to (4,32mm) .170"
Style 10 Component Part No. = SC-3P1

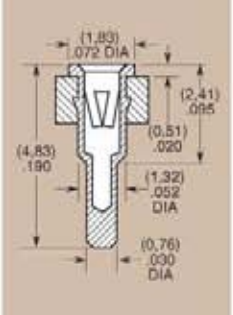
–11 Low Profile (Standard Mount)

For LIF specify –31



Contact Length = (1,58mm) .062"
Lead DIA Accepted = (0,41mm) .016" to (0,53mm) .021"
Insertion Depth = (2,03mm) .080" to (2,67mm) .105"
Style 11 Component Part No. = SC-4P1
Style 31 Component Part No. = EZ-4P1

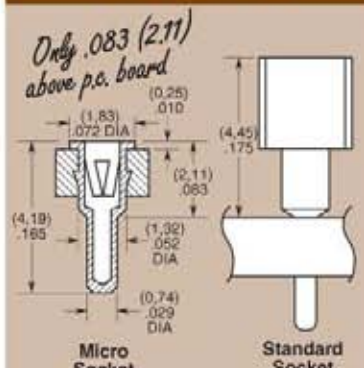
–12 Micro-Socket (Hollow Leg)



Contact Length = (1,58mm) .062"
Lead DIA Accepted = (0,41mm) .016" to (0,51mm) .020"
Insertion Depth = (1,65mm) .065" to (3,81mm) .150"
Style 12 Component Part No. = SC-5P1

–19 Micro-Socket (Hollow Leg)

For LIF specify –39



(Reference only. Not available with SL & SDL)

Contact Length = (1,58mm) .062"
Lead DIA Accepted = (0,41mm) .016" to (0,51mm) .020"
Insertion Depth = (1,65mm) .065" to (3,56mm) .140"
Style 19 Component Part No. = SC-8P1
Style 39 Component Part No. = EZ-8P1

Due to technical progress, all designs, specifications and components are subject to change without notice.

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F-210

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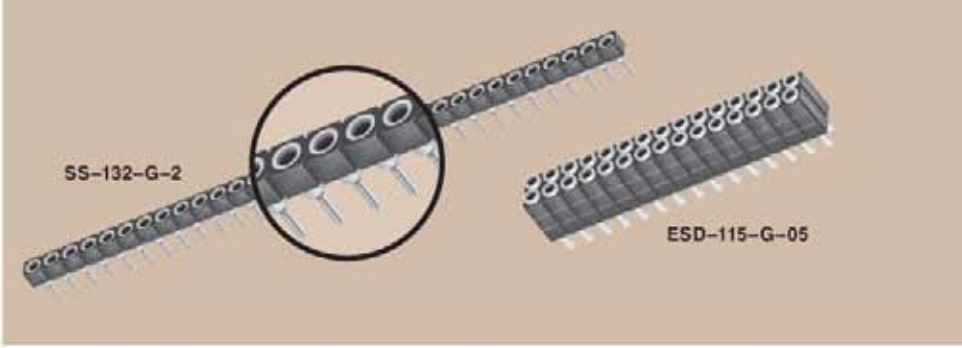


(2,54mm) .100"

SS, SD, ESD, ESS, HSS SERIES

PRECISION MACHINED SOCKET STRIPS

Mates with:
TS, TD, HTS, BBS, BBD, BBL, BDL, BHS,

SPECIFICATIONS

For complete specifications see www.samtec.com?SS, www.samtec.com?ESS, www.samtec.com?SD or www.samtec.com?ESD

SS, SD, ESS, ESD

Insulator Material: Black G.F. Polyester
Contact: BeCu
Shell: Brass except Style 5A Phosphor Bronze
Current Rating: 1A
Plating: Au over 50µ" (1,27µm) Ni or Sn over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C
Contact Resistance: 10 mΩ max
Insertion Force: (Single contact only)
Standard=
9oz (2,50N) avg.,
16oz (4,45N) max
Low Insertion Force=
2.5oz (0,70N) avg.,
5.5oz (1,53N) max
Withdrawal Force: (Single contact only)
Standard=
2.5oz (0,70N) avg.,
1.5oz (0,42N) min
Low Insertion Force=
2.0oz (0,56N) avg.,
0.35oz (0,10N) min
Insertion Depth: (-05 thru -08, -1X & -21X, -5A)
(3,18mm) .125" to
(3,99mm) .157"
Insertion Depth: (-2, -22, -38)
(2,41mm) .095" to
(3,68mm) .145"
Insertion Depth:(-7)
(2,41mm) .095" to
(3,51mm) .138"
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

SPECIFICATIONS

For complete specifications see www.samtec.com?HSS

HSS

Same as SS except:
Insulator Material: Black Liquid Crystal Polymer
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x with all Au
Lead-Free Solderable: Wave, or reflow with all Au

TYPE STRIP – 1 – NO. PINS PER ROW – PLATING OPTION – LEAD STYLE – OPTION – OTHER OPTION

01 thru 32
= SS, ESS Series

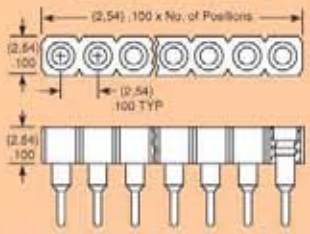
01 thru 36
= HSS, SD & ESD Series

SS
= Standard Single Row Socket

HSS
= High Temp Single Row Socket

ESS
= Elevated Single Row Socket

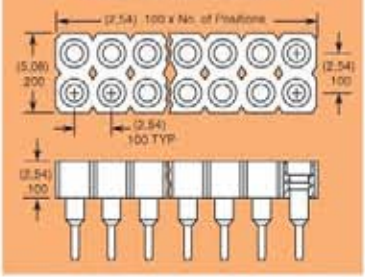
Styles –5A & –05 thru –08 socket heads not countersunk.



SD
= Standard Double Row Socket

ESD
= Elevated Double Row Socket

Style –5A not available.
Styles –5A & –05 thru –08 socket heads not countersunk.



LIF= Low Insertion Force

Note:
Some lengths, styles and options are non-standard, non-returnable.

–S
= 10µ" (0,25µm) Gold contact, Tin shell
(Styles 2 & 22 only)

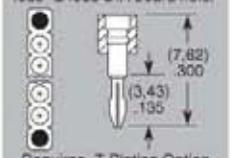
–T
= 30µ" (0,76µm) Gold contact, Tin shell

–G
= 30µ" (0,76µm) Gold contact, 10µ" (0,25µm) Gold shell

–TT
= Tin contact and shell
(Styles 1, 2, 18 and 21 only)
(and 05 thru 08, except LIF N/A)

–L = Locking Socket

Add –L suffix for locking lead socket in end positions. Requires **Style -2** or **-22** and .035" ± .003 DIA board hole.



Requires -T Plating Option

–N
= Non Flush

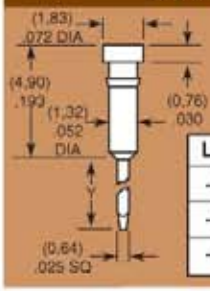
N/A Style –5A

ALSO AVAILABLE

Locking lead option on ESS and ESD series. Contact Samtec.

–1A, –1B or –1C

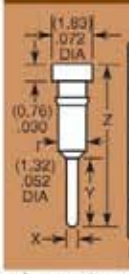
For LIF specify –21A, –21B or –21C
(SS, HSS, SD)



LEAD STYLE	Y
–1A or –21A	(9,14) .360
–1B or –21B	(12,95) .510
–1C or –21C	(6,60) .260

–2, –22*, –5A, –7 or –38*

*For LIF specify –22 or –38 (SS, HSS, SD)

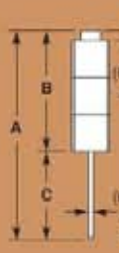


LEAD STYLE	X DIA	Y	Z
–2 or –22	(0,51) .020	(3,18) .125	(7,62) .300
–38	(0,51) .020	(4,57) .180	(8,89) .350
–7	(0,64) .025	(10,41) .410	(15,24) .600
–5A	(0,89) .035	(12,95) .510	(17,86) .703

Locking lead available. See OPTION.

–05, –06, –08

For LIF specify –25, –26, –28
(ESS, ESD)



LEAD STYLE	A	B	C
05 or 25	(17,86) .703	(13,46) .530	(4,39) .173
06 or 26	(14,05) .553	(8,38) .330	(5,66) .223
08 or 28	(17,86) .703	(8,38) .330	(9,47) .373

Due to technical progress, all designs, specifications and components are subject to change without notice.

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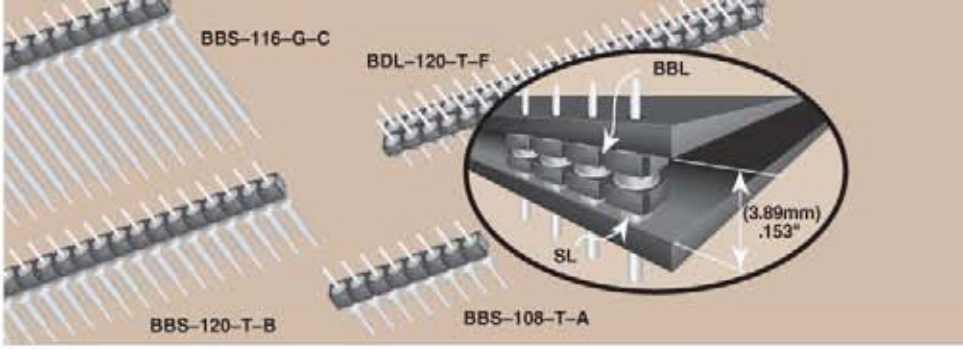


(2,54mm) .100"

BBS, BBL, BHS, BBD, BDL SERIES

MACHINED BOARD STACKING STRIPS

Mates with:
SS, SD, HSS, SL, SDL, ESS, ESD

FEATURES

- Low profile design achieves (3,89mm) .153" board spacings when mated with SL series.
- Choice of precision machined (BXX Series) or coined (LBS Series) terminals.
- Approach the reliability of a permanent connection with the flexibility of a separable connection.

SPECIFICATIONS

For complete specifications see www.samtec.com?BBS, www.samtec.com?BBD, www.samtec.com?BBL or www.samtec.com?BDL

BBS, BBD, BBL, BDL

FILE NO. E111594

Insulator Material:
Black Glass Filled Polyester (BBS, BBD, BBL)
Black High Temp Nylon (BDL)
Temperature Range:
-55°C to +125°C
Terminal Material:
Phosphor Bronze or Brass
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Current Rating: 1A
RoHS Compliant: Yes
Lead-Free Solderable:
Wave only

SPECIFICATIONS

For complete specifications see www.samtec.com?BHS

BHS

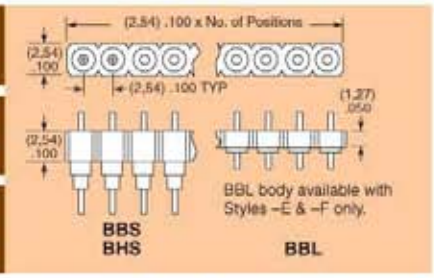
FILE NO. E111594

Same as BBS except:
Insulator Material:
Black Liquid Crystal Polymer
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x with all Au
RoHS Compliant: Yes
Lead-Free Solderable:
Wave, or reflow with all Au

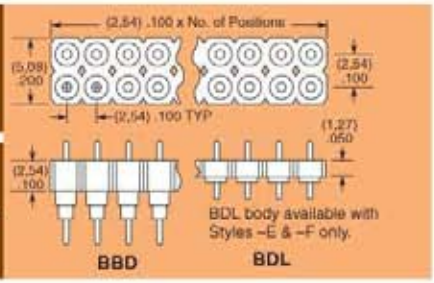
Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP	–	1	NO. PINS PER ROW	–	PLATING OPTION	–	LEAD STYLE

BBS = Standard Single Row
BBL = Low Profile Single Row
BHS = High Temp Single Row



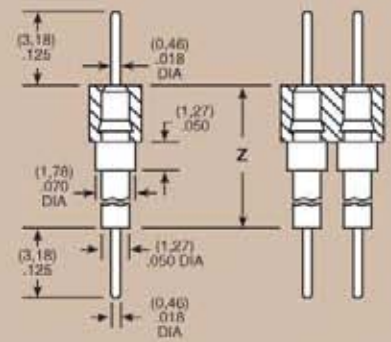
BBD = Standard Double Row
BDL = Low Profile Double Row

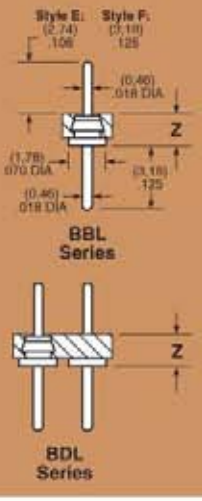


–G =20µ" (0,51µm) Gold
–T =Tin

01 thru 32 =BBS & BBL
01 thru 36 =BBD, BDL & BHS

–A	–B	–C	–E	–F
Z = (5,33) .210	Z = (8,51) .335	Z = (14,86) .585	Z = (1,78) .070	Z = (2,16) .085





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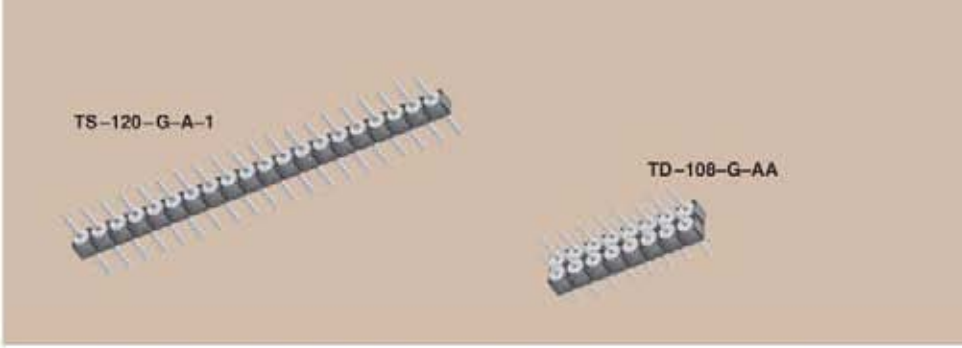


(2,54mm) .100"

TS, TD, HTS SERIES

PRECISION MACHINED TERMINAL STRIPS

SPECIFICATIONS

For complete specifications see www.samtec.com?TS or www.samtec.com?TD

TS, TD

Insulator Material: Black G.F. Polyester
Terminal Material: Brass, except Style G is Phosphor Bronze
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Current Rating: 1A
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

SPECIFICATIONS

For complete specifications see www.samtec.com?HTS

HTS

Same as TS except:
Insulator Material: Black Liquid Crystal Polymer
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x with all Au
Lead-Free Solderable: Wave, or reflow with all Au

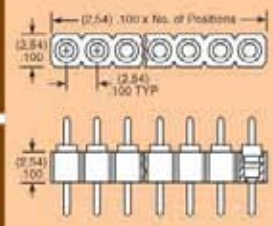
Mates with: SS, SD, HSS, SL, SDL, ESS, ESD

Note: Some lengths, styles and options are non-standard, non-returnable.

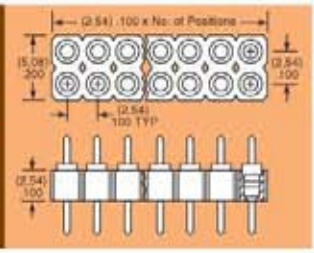
TYPE STRIP – **1** – **NO. PINS PER ROW** – **PLATING OPTION** – **LEAD STYLE**

TS = Single Row Terminal Strip

HTS = Single Row High Temp Terminal Strip



TD = Double Row Terminal Strip



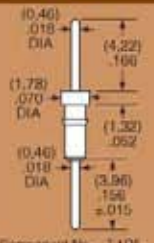
–G
= 20µ" (0,51µm) Gold Except –J & –L are 10µ" (0,25µm) Gold

–T
= Tin

01 thru 32
=TS Series

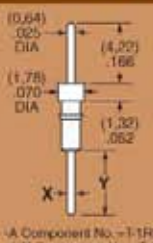
01 thru 36
=HTS & TD Series

–AA



Component No. = T-1R5-

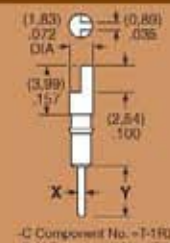
–A, –A–1, –A–2



LEAD STYLE	X (DIA)	Y (±.015)
-A	(0,46) .018	(3,96) .156
-A-1	(0,64) .025	(5,33) .210
-A-2	(0,89) .035	

-A Component No. = T-1R6-
-A-X Component No. = T-1R7-

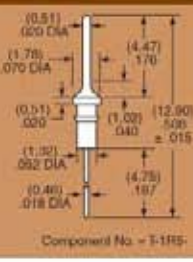
–C, –C–1, –C–2



LEAD STYLE	X (DIA)	Y (±.015)
-C	(0,46) .018	(3,96) .156
-C-1	(0,64) .025	(5,33) .210
-C-2	(0,89) .035	

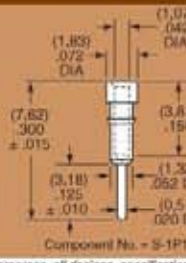
-C Component No. = T-1R2-
-C-X Component No. = T-1R9-

–G–1



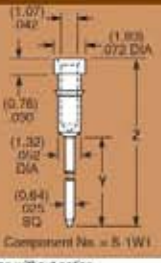
Component No. = T-1R5-

–J



Component No. = S-1P1-

–L–1, –L–2, –L–3



LEAD STYLE	Y (DIA)	Z (±.015)
-L-1	(12,95) .510	(17,86) .703
-L-2	(9,14) .360	(14,05) .553
-L-3	(6,60) .260	(11,51) .453

Component No. = S-1W1-

Due to technical progress, all designs, specifications and components are subject to change without notice.

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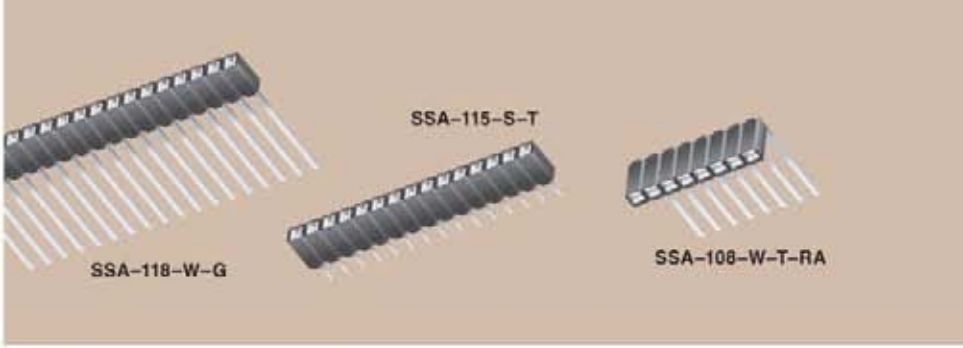


(2,54mm) .100"

SSA SERIES

LOW COST SOCKET STRIPS

SPECIFICATIONS

For complete specifications see www.samtec.com?SSA

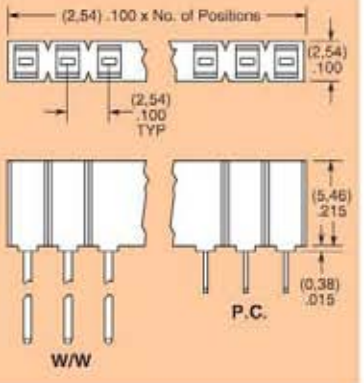
Insulator Material: Black PET Polyester
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Flammability Rating: UL 94V-O
Insulation Resistance: 5000 MΩ min
Operating Temp Range: -55°C to +125°C with Gold -55°C to +105°C with Tin
Heat Deflection Temp: 215°C @ 264 psi (1,8 MPa)
Dielectric Withstanding Voltage: 1000 VRMS
Current Rating: 1A
Contact Resistance: 10 mΩ
Lead Size Range: (0,38mm) .015" to (0,56mm) .022" DIA and most IC leads
Insertion Depth: (1,27mm) .050" to (3,30mm) .130"
Insertion Force: (Single contact only) 10 oz (2,78N) average
Withdrawal Force: (Single contact only) 5 oz (1,39N) average
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

Note: Some lengths, styles and options are non-standard, non-returnable.

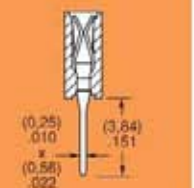
SSA – 1 – NO. OF POSITIONS – LEAD STYLE – PLATING OPTION – RA OPTION

Mates with: TS, HTS, BBS, BBL, BHS, LBS

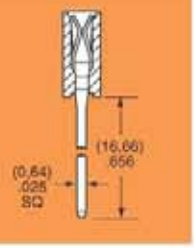
01 thru 32



– S = P.C.



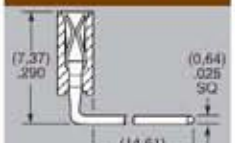
– W = Wire Wrap



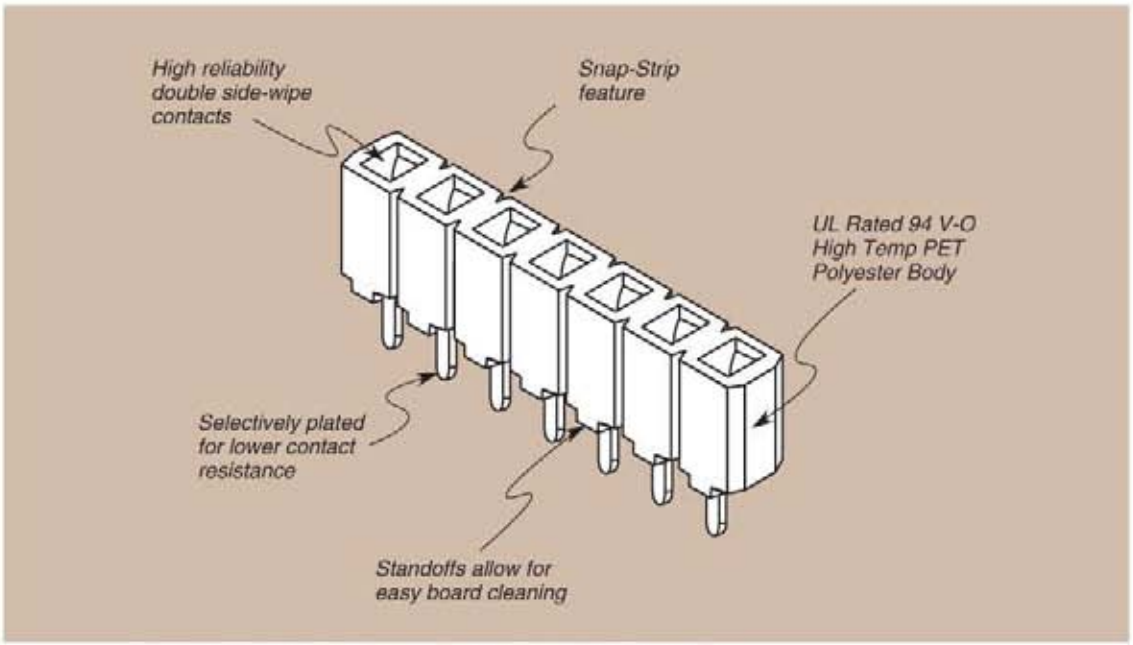
– G = 10µ" (0,25µm) Gold

–T = Matte Tin

–RA = Right Angle



(Requires –W Lead Style)



Due to technical progress, all designs, specifications and components are subject to change without notice.

RUGGED & POWER

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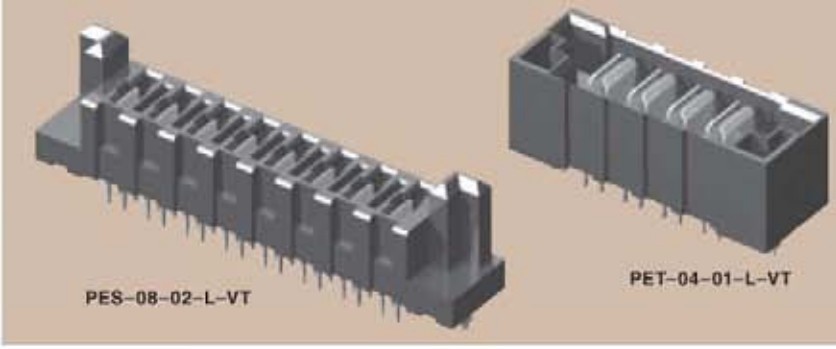
POWER STRIP 35™

(2,54mm) .100"

PES, PET SERIES



35A HEADER & SOCKET

PES Mates with: PET

PET Mates with: PES

SPECIFICATIONS

For complete specifications see www.samtec.com?PET or www.samtec.com?PES

Insulator Material: Black LCP
Terminal Material: Copper Alloy
Plating: Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +105°C with Tin -55°C to +125°C with Gold
Insertion Depth (PES): (5,09mm) .197" to (8,46mm) .333"
Voltage Rating: 725 VAC
Wiping Distance (PES): (0,38mm) .015"
RoHS Compliant: Yes

Processing:

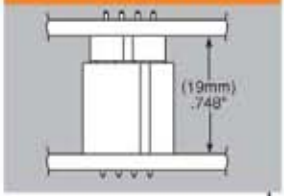
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes

CURRENT RATING		
AMBIENT TEMP	PET/PES	
	2 PINS	4 PINS
20°C	47A	43A
40°C	40A	39A
60°C	33A	31A
75°C	27.6A	26.2A
TIN PLATED		

APPLICATION SPECIFIC OPTION

Locking Clip. Call Samtec.

MATED HEIGHT



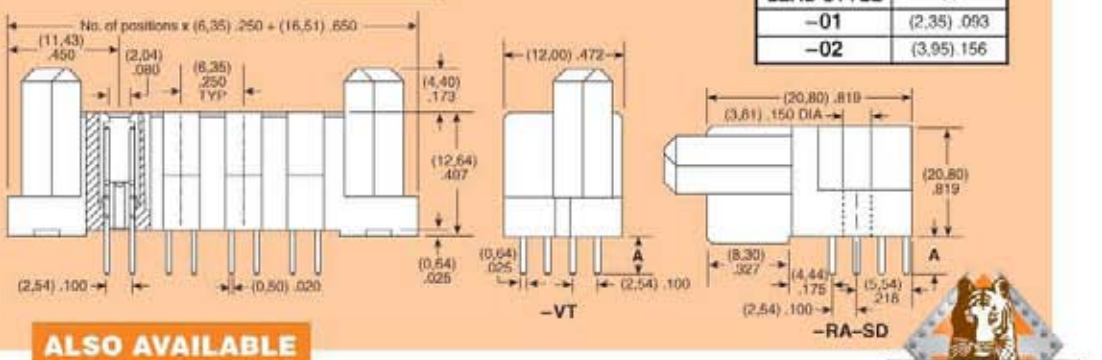
Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

PES

NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	TAIL OPTION	OTHER OPTION
–02, –04, –06, –08	–01 = Use with (1,60mm) .062" Thick PCB –02 = Use with (3,18mm) .125" Thick PCB	–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin	–VT = Vertical – RA = Right Angle (Screw Down option required)	–SD = Screw Down (Right Angle only)

LEAD STYLE	A
–01	(2,35) .093
–02	(3,95) .156



ALSO AVAILABLE

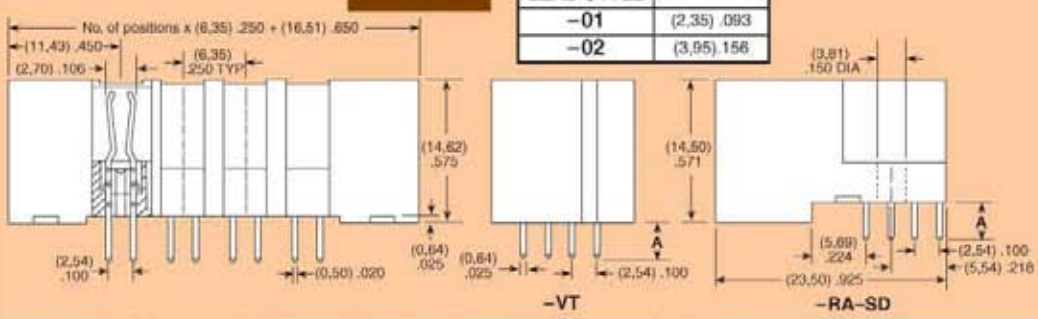
Combination Signal/Power: See PESC or PETC Series.

RUGGEDIZED by SAMTEC

PET

NO. PINS PER ROW	LEAD STYLE	PLATING OPTION	TAIL OPTION	OTHER OPTION
–02, –04, –06, –08	–01 = Use with (1,60mm) .062" Thick PCB –02 = Use with (3,18mm) .125" Thick PCB	–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin	–VT = Vertical – RA = Right Angle (Screw Down option required)	–SD = Screw Down (Right Angle only)

LEAD STYLE	A
–01	(2,35) .093
–02	(3,95) .156



Due to technical progress, all designs, specifications and components are subject to change without notice.

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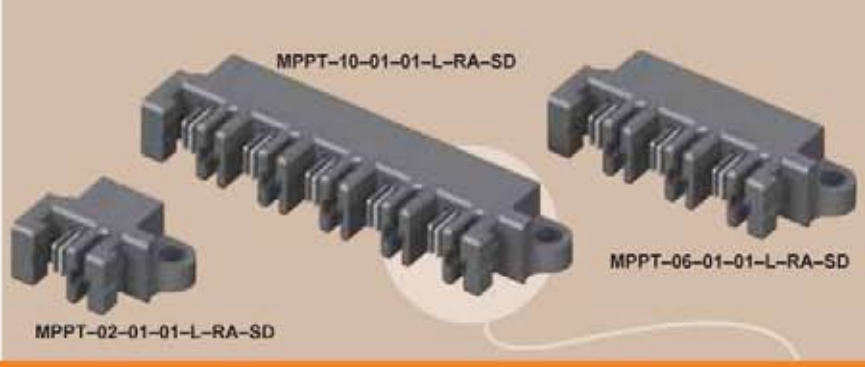
POWER STRIP 25™

(5,00mm) .197"

MPPT SERIES



HERMAPHRODITIC 25A POWER SYSTEM

SPECIFICATIONS

For complete specifications see www.samtec.com?MPPT

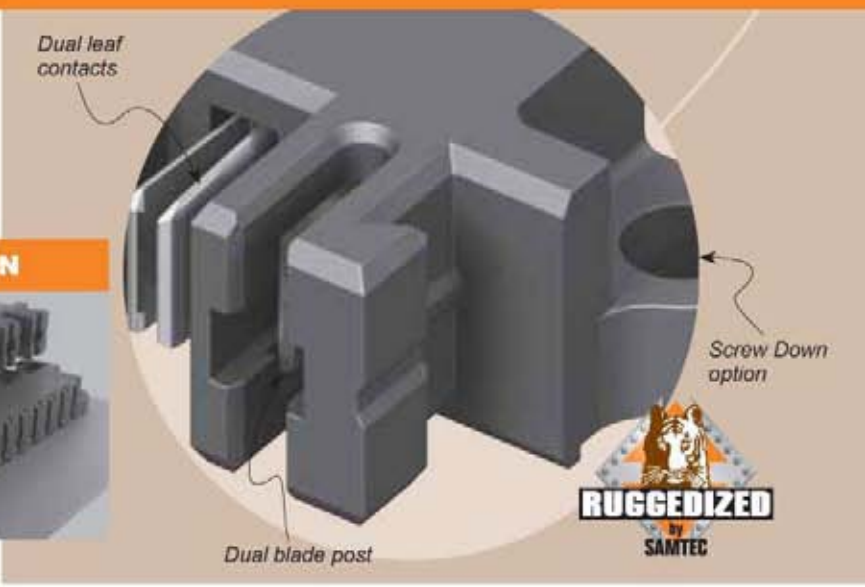
Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable:
Yes

Mates with:
MPPT

APPLICATION

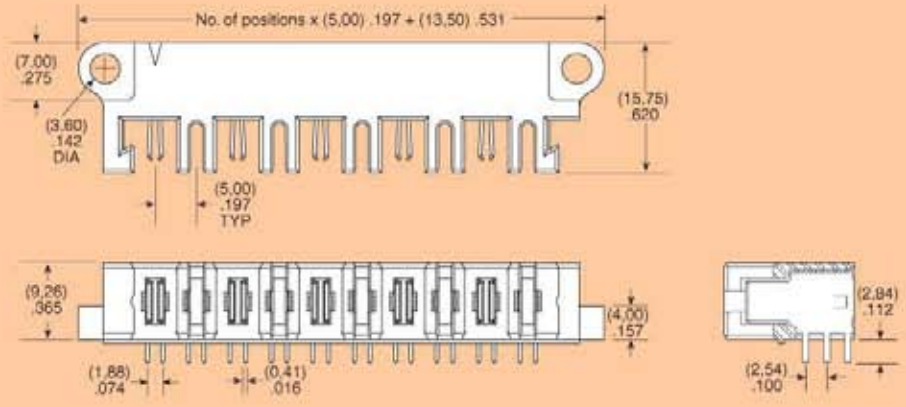


APPLICATION SPECIFIC OPTION

- Locking Clip
- Solder Leads for (2,36mm) .093" thick board.

Call Samtec.

MPPT	–	NO. OF POSITIONS	–	01	–	TAIL LENGTH	–	PLATING	–	RA	–	OPTION
		–02, –04, –06, –08, –10				–01 = (1,60mm) .062" Thick PCB		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin				–SD = Screw Down –TR = Tape & Reel



Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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POWER STRIP 25™

(5,00mm) .197"

MPT SERIES

25A DUAL BLADE HEADER

SPECIFICATIONS

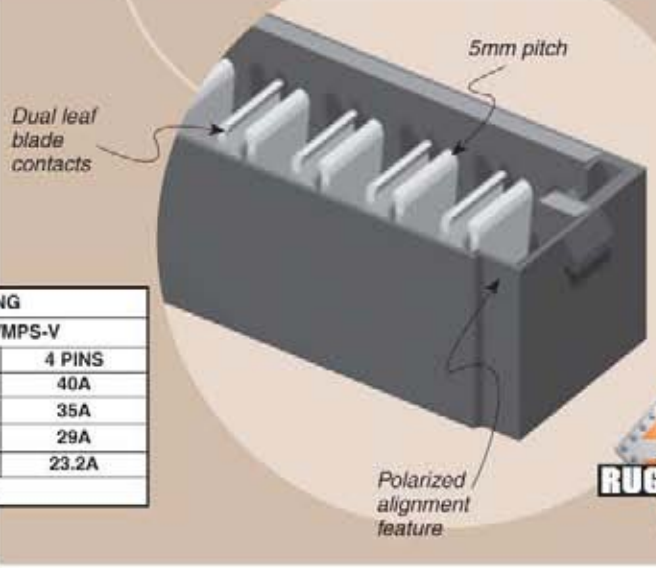
Mates with:
MPS, MPSS

For complete specifications see www.samtec.com?MPT

Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

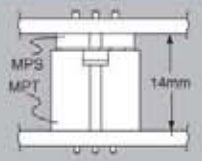
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes



RUGGEDIZED by SAMTEC

CURRENT RATING		
AMBIENT TEMP	MPT-V/MPS-V	
	2 PINS	4 PINS
20°C	48A	40A
40°C	40A	35A
60°C	33A	29A
75°C	27.9A	23.2A
-T PLATING		

MATED HEIGHT



ALSO AVAILABLE

- Power/Signal combination Headers. See MPTC Series.
- High Power Headers. See PET Series.
- Right Angle. See MPT-RA Series.

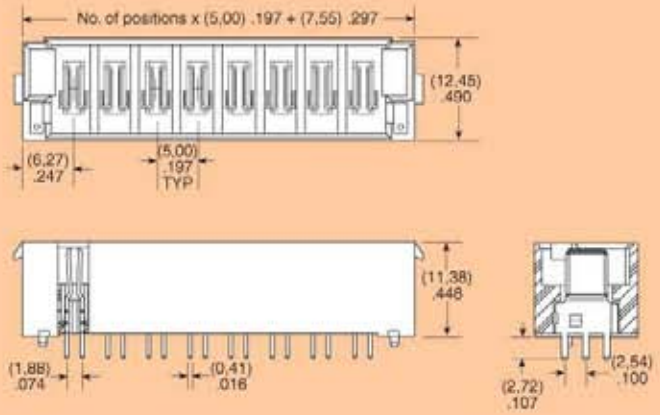
APPLICATION SPECIFIC OPTION

- Locking Clip
- Solder leads for (2,36mm) .093" thick board

Call Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

MPT	-	POWER PINS	-	LEAD STYLE	-	TAIL LENGTH	-	PLATING OPTION	-	V
		–02, –04, –06, –08		–6.30 = (6,30mm) 0.248"		–01 = Use with (1,60mm) .062" Thick PCB		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin		



Due to technical progress, all designs, specifications and components are subject to change without notice.

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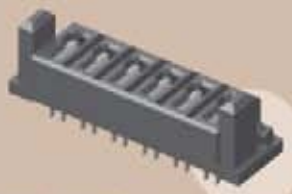
POWER STRIP 25™

(5,00mm) .197"

MPS SERIES

MPS–02–7.70–01–L–V



MPS–06–7.70–01–L–V

25A DUAL LEAF SOCKET

SPECIFICATIONS

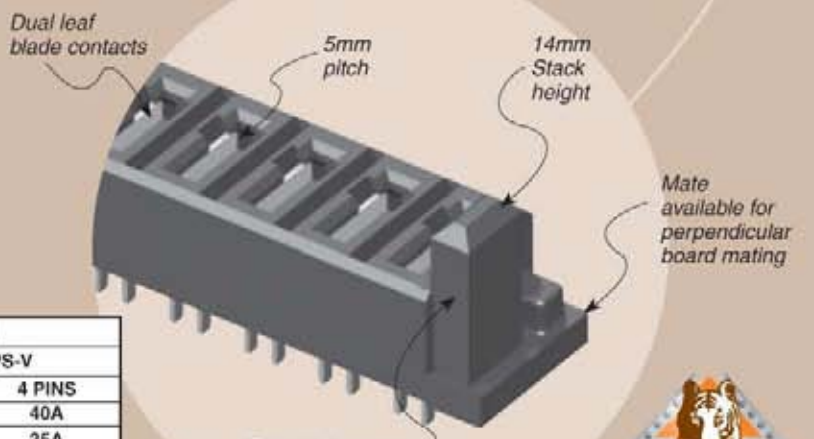
Mates with:
MPT

For complete specifications see www.samtec.com?MPS

Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

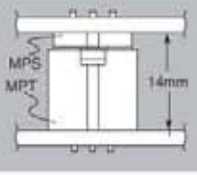
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead–Free Solderable:
Yes



CURRENT RATING		
AMBIENT TEMP	MPT-V/MPS-V	
	2 PINS	4 PINS
20°C	48A	40A
40°C	40A	35A
60°C	33A	29A
75°C	27.9A	23.2A
–T PLATING		

RUGGEDIZED by SAMTEC

MATED HEIGHT



ALSO AVAILABLE

- Power/Signal combination Sockets. See MPSC Series.
- High Power Sockets. See PES Series.

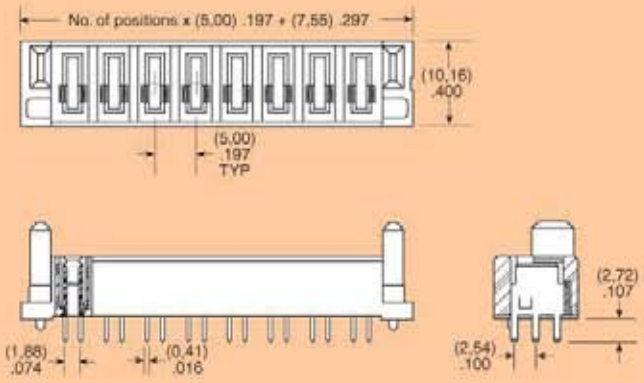
Call Samtec.

APPLICATION SPECIFIC OPTION

- Locking Clip.
- Solder leads for (2,36mm) .093" thick board.

Call Samtec.

MPS	–	POWER PINS	–	LEAD STYLE	–	TAIL LENGTH	–	PLATING OPTION	–	V
		–02, –04, –06, –08		–7.70 = (7,70mm) .303"		–01 = Use with (1,60mm) .062" Thick PCB		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin		



Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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POWER STRIP 25™

(5,00mm) .197"

MPT-RA, MPS-RA SERIES

RIGHT ANGLE 25A POWER CONNECTORS

MPT-RA Mates with:
MPS

MPS-RA Mates with:
MPT

SPECIFICATIONS

For complete specifications see www.samtec.com?MPT or www.samtec.com?MPS

Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

ALSO AVAILABLE

- Power/Signal combination headers & sockets. See MPTC or MPSC Series.
- High Power Headers. See PET Series.
- High Power Sockets. See PES Series.
- Vertical. See MPT or MPS Series.

APPLICATION SPECIFIC OPTION

- Locking Clip.
- Solder leads for (2,36mm) .093" thick board.

Call Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

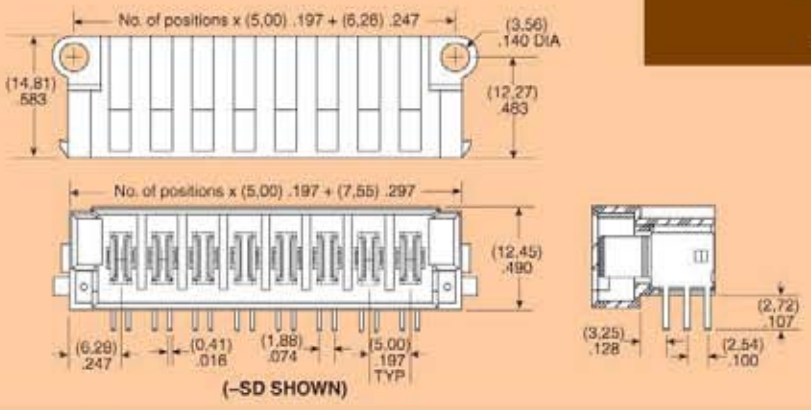
MPT – POWER PINS – 01 – TAIL LENGTH – PLATING OPTION – RA – SD

–02, –04, –06, –08

–01
= Use with (1,60mm) .062" Thick PCB

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–T
= Matte Tin



(–SD SHOWN)

RUGGEDIZED by SAMTEC

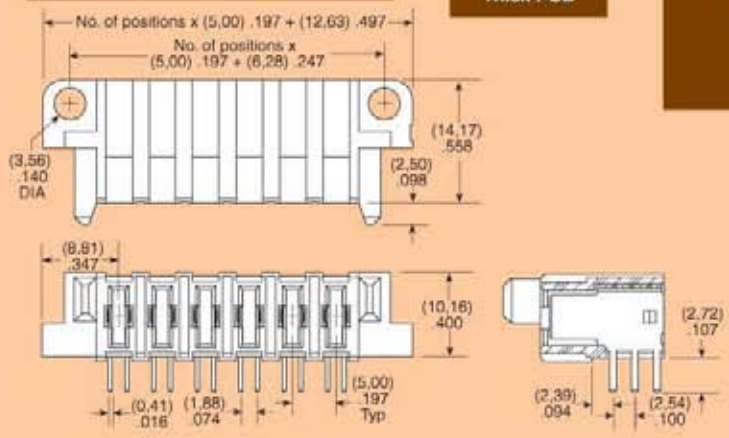
MPS – POWER PINS – 01 – TAIL LENGTH – PLATING OPTION – RA – SD

–02, –04, –06, –08

–01
= Use with (1,60mm) .062" Thick PCB

–L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–T
= Matte Tin



(–SD SHOWN)

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POWER STRIP 25™

(5,00mm) .197"

FMPS, FMPT SERIES

FMPT-04-01-L-S-V

FMPS-04-01-L-S-RA-SD

"HINGING" 25A POWER HEADER & SOCKET

FMPS Mates with:
FMPT

FMPT Mates with:
FMPS

SPECIFICATIONS

For complete specifications see www.samtec.com?FMPS or www.samtec.com?FMPT

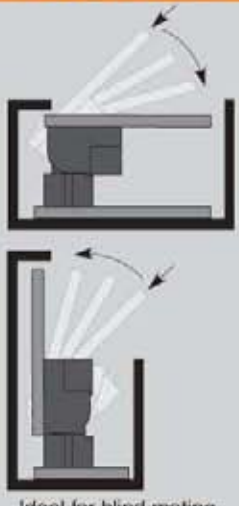
Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	FMPT/FMPS
20°C	34A
40°C	30A
60°C	26.5A
95°C	17.6A
4 POSITIONS (1x4) POWERED	

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable: Yes

APPLICATION



Ideal for blind mating applications.

Note:
Some sizes, styles and options are non-standard, non-returnable.

FMPS - NO. OF POSITIONS - 01 - PLATING OPTION - S - RA - OPTION

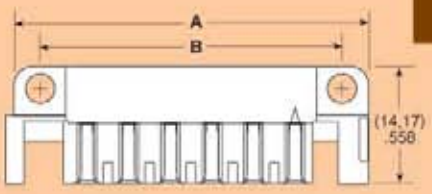
02, 04, 06, 08
(Call Samtec for other sizes)

-L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

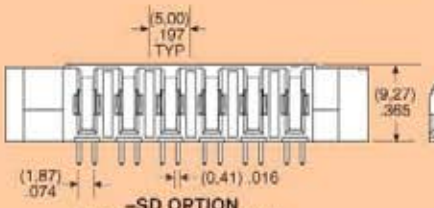
-T
= Matte Tin

-SD
= Screw Down
(Not Available with -LC)

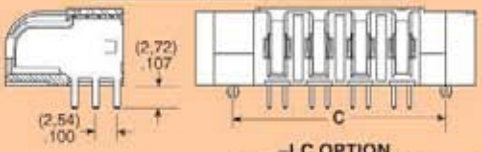
-LC
= Locking Clip
(Not Available with -SD)



NUMBER OF POSITIONS	A	B	C
-02	(22,63) .891	(16,28) .641	(15,63) .615
-04	(32,63) 1.285	(26,28) 1.035	(25,63) 1.009
-06	(42,63) 1.678	(36,28) 1.428	(35,63) 1.403
-08	(52,63) 2.072	(46,28) 1.822	(45,63) 1.796



-SD OPTION
(6 POSITIONS SHOWN)



-LC OPTION
(4 POSITIONS SHOWN)

RUGGEDIZED by SAMTEC

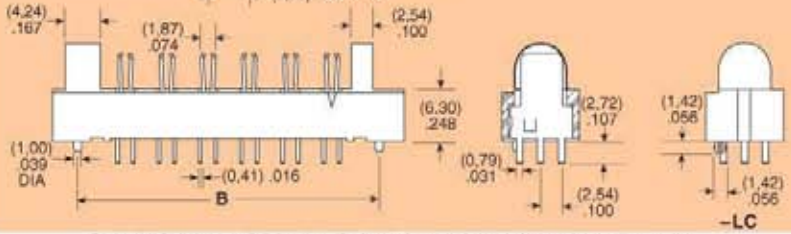
FMPT - NO. OF POSITIONS - 01 - PLATING OPTION - S - V - OPTION

02, 04, 06, 08
(Call Samtec for other sizes)

-L
= 10µ" (0,25µm) Gold on contact, Matte Tin on tail

-T
= Matte Tin

-LC
= Locking Clip



-LC

NUMBER OF POSITIONS	A	B
-02	(22,63) .891	(16,53) .651
-04	(32,63) 1.285	(26,53) 1.044
-06	(42,63) 1.678	(36,53) 1.438
-08	(52,63) 2.072	(46,53) 1.832

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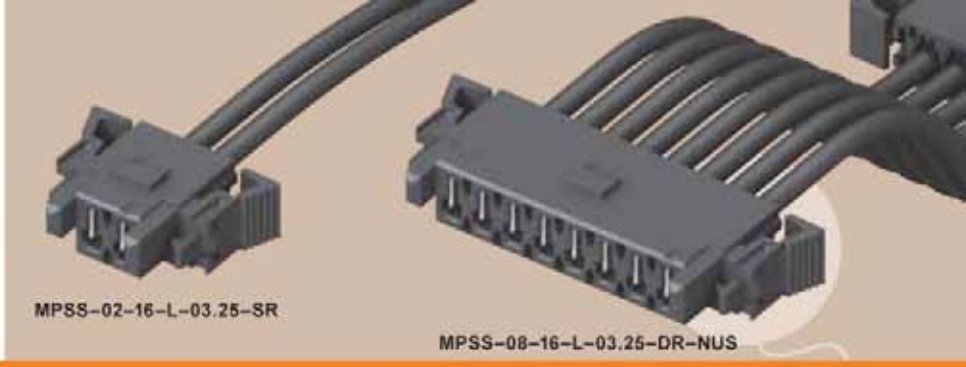
POWER STRIP™

(5,00mm) .197"

MPSS SERIES



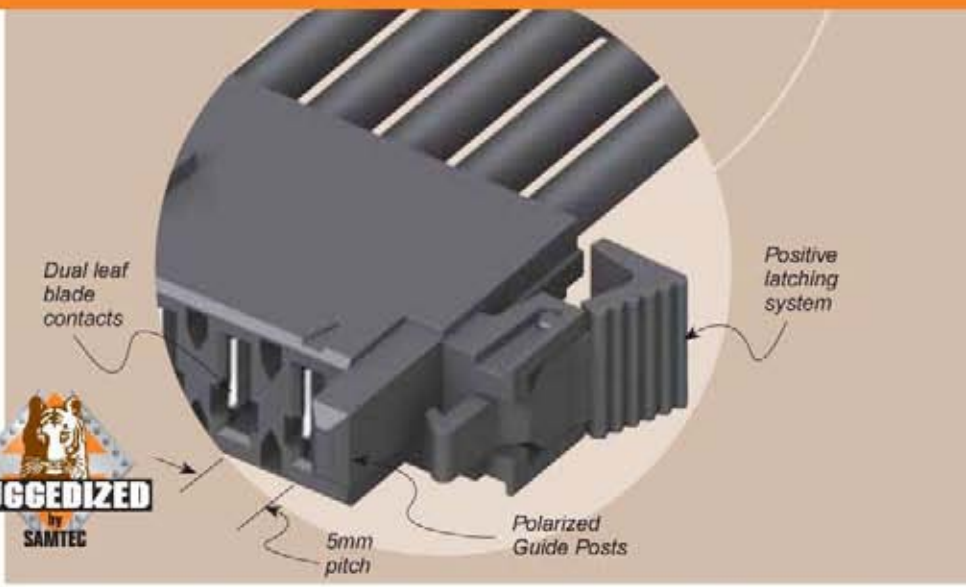
15A CABLE ASSEMBLY

SPECIFICATIONS

Mates with:
MPT

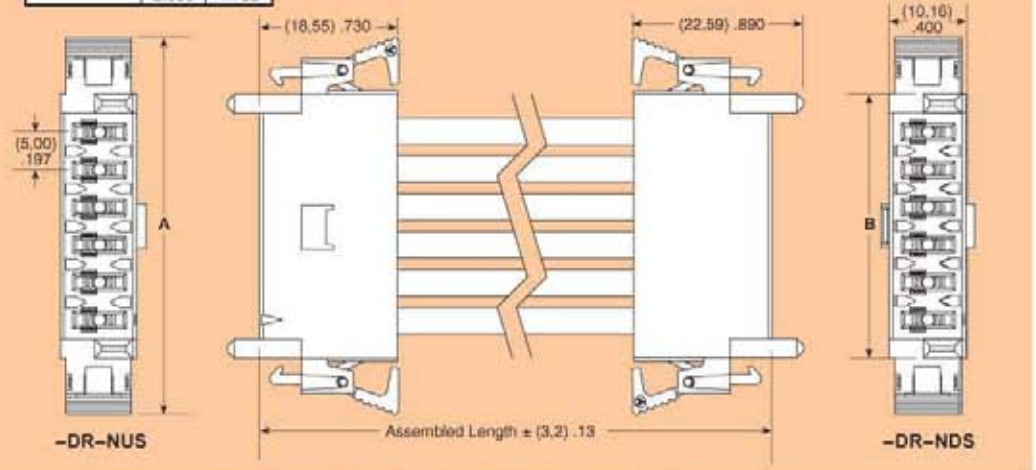
For complete specifications see www.samtec.com?MPSS

Insulator Material:
Nylon 6/6
Contact Material:
Copper Alloy
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Latch:
Nylon 6/6
Operating Temp Range:
-55°C to +105°C
Voltage Rating:
600 VAC
Wire:
14 or 16 AWG
RoHS Compliant:
Yes



MPSS	– NO. OF POSITIONS	– WIRE GAUGE	– PLATING OPTION	– ASSEMBLED LENGTH	– END 1 OPTION	– END 2 OPTION
	–02, –04, –06, –08	–14 –16	–L = 10µ" (0,25µm) Gold on contact –T = Matte Tin	–"XX.XX" = Wire Length In Inches (83,00mm) 03.25" min.	–SR = Single End –DR = Double End	(Available with –DR only) NUS = Notch up, straight –NDS = Notch down, straight

NO. OF POSITIONS	A	B
–02	(30,07) 1.184	(15,27) .601
–04	(40,08) 1.578	(25,25) .994
–06	(50,09) 1.972	(35,26) 1.388
–08	(60,10) 2.366	(45,26) 1.782



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samtec

(3,81mm) .150"

UPPT SERIES

HERMAPHRODITIC 10A POWER SYSTEM

SPECIFICATIONS

For complete specifications see www.samtec.com?UPPT

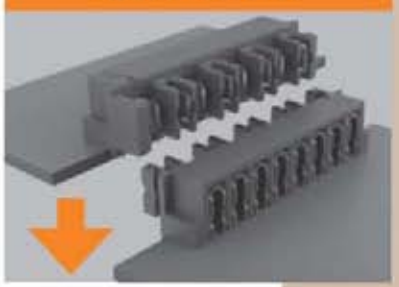
Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
Testing Now!
RoHS Compliant:
Yes

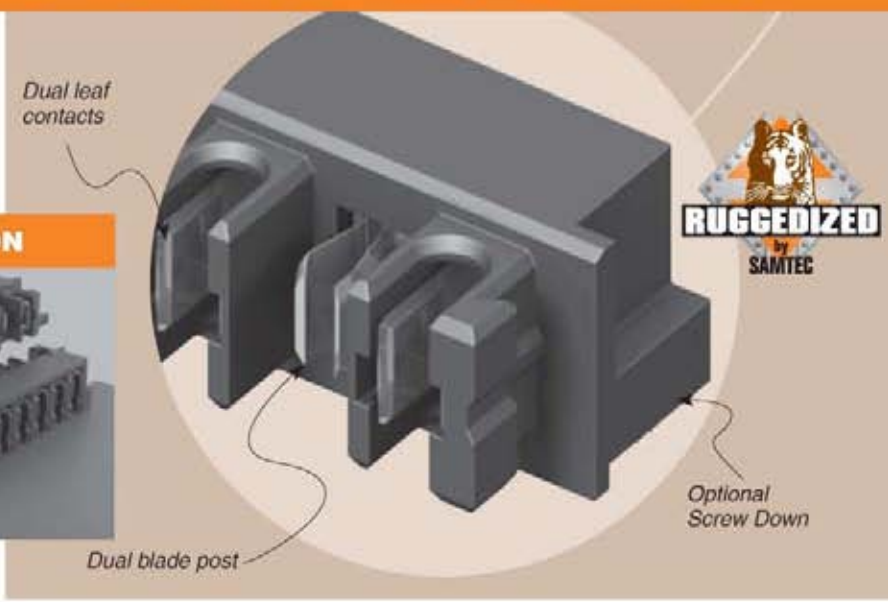
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

Mates with:
UPPT

APPLICATION



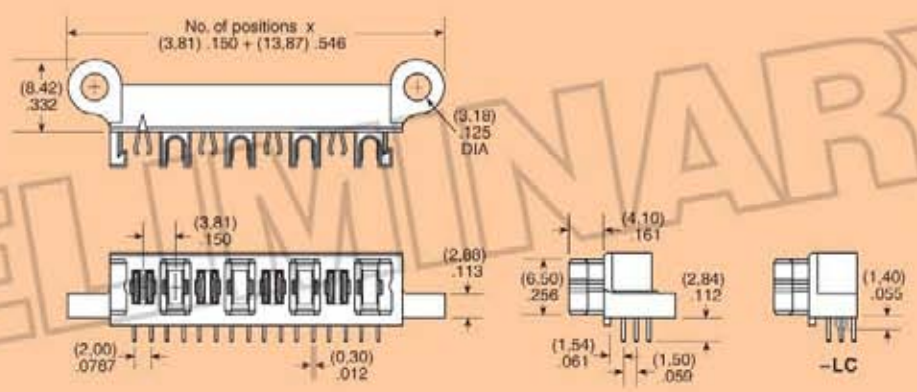


APPLICATION SPECIFIC OPTION

- Solder Leads for (2,36mm) .093" thick board.

Call Samtec.

UPPT	–	NO. OF POSITIONS	–	01	–	TAIL LENGTH	–	PLATING	–	RA	–	OPTION	–	TR
		–02, –04, –06, –08				–01 = (1,60mm) .062" Thick PCB		–L =10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin				–SD = Screw Down –LC = Locking Clip		–TR = Tape & Reel



PRELIMINARY

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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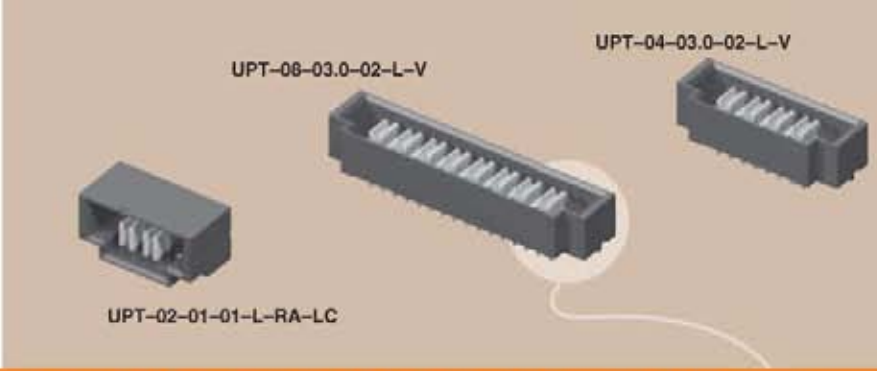
POWER STRIP 10™

(3,81mm) .150"

UPT SERIES



DUAL BLADE 10A POWER HEADER STRIP

SPECIFICATIONS

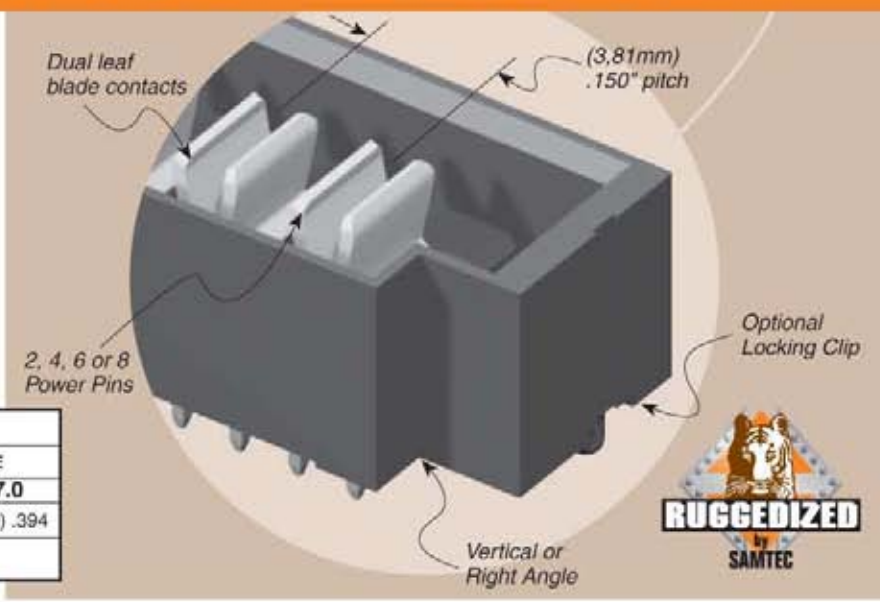
Mates with:
UPS

For complete specifications see www.samtec.com?UPT

Insulator Material:
Black LCP
Terminal Material:
BeCu
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
Current Rating:
21A @ 80°C ambient
Voltage Rating:
375 VAC
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes



MATED HEIGHT*		
UPT LEAD STYLE	UPS LEAD STYLE	
	–04.0	–07.0
–03.0	(7,00) .276	(10,00) .394

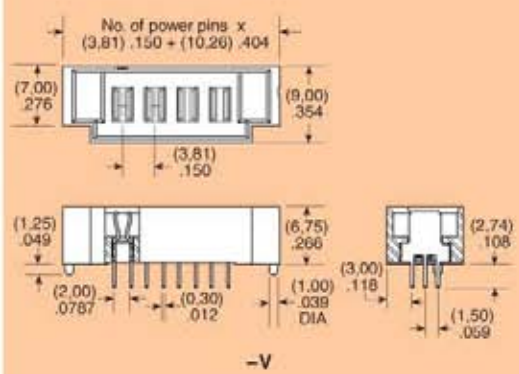
*Processing conditions will affect mated height.

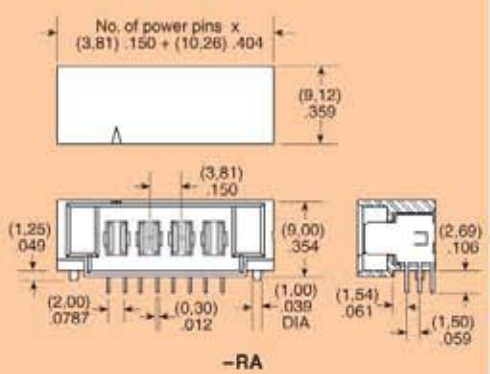
APPLICATION SPECIFIC OPTION

- Solder leads for (2,36mm) .093" thick board.

Call Samtec.

UPT	–	POWER PINS	–	LEAD STYLE	–	TAIL LENGTH	–	PLATING OPTION	–	TAIL	–	OTHER OPTION
		–02, –04, –06, –08		–01 = RA only –03.0 = (03,0mm) .118" (–V only)		–01 = Use with (1,60mm) .062" Thick PCB		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin (–RA option only)		–V = Vertical (Not available with –T plating) –RA = Right Angle		–LC = Locking Clip –TR = Tape & Reel





Note: Some sizes, styles and options are non-standard, non-returnable.

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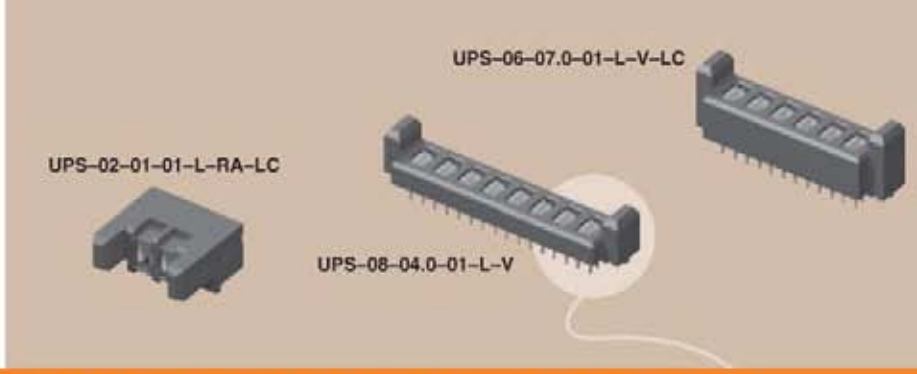
POWER STRIP 10™

(3,81mm) .150"

UPS SERIES



DUAL LEAF 10A POWER SOCKET STRIP

SPECIFICATIONS

For complete specifications see www.samtec.com?UPS

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C with Tin
-55°C to +125°C with Gold
Current Rating:
21A @ 80°C ambient
Voltage Rating:
375 VAC
RoHS Compliant:
Yes

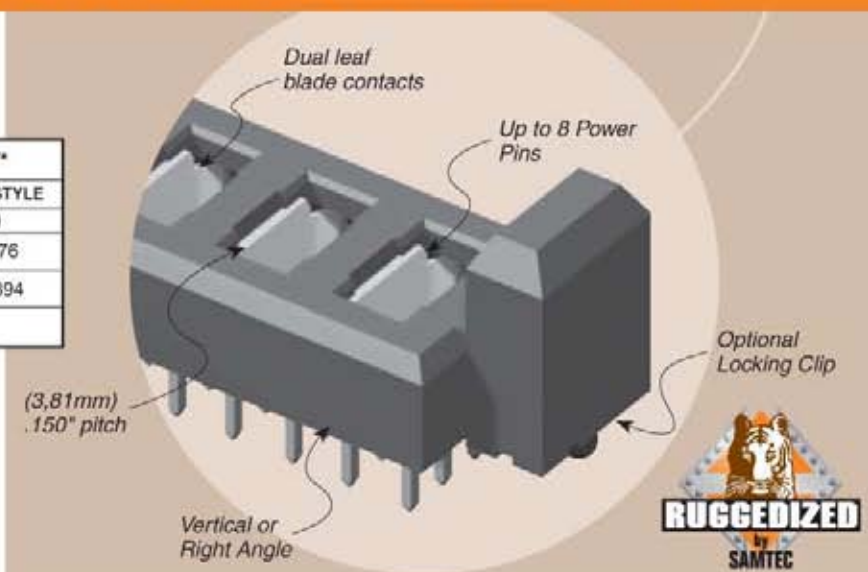
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead–Free Solderable:
Yes

Mates with:
UPT

MATED HEIGHT*	
UPS LEAD STYLE	UPT LEAD STYLE –03.0
–04.0	(7,00) .276
–07.0	(10,00) .394

*Processing conditions will affect mated height.



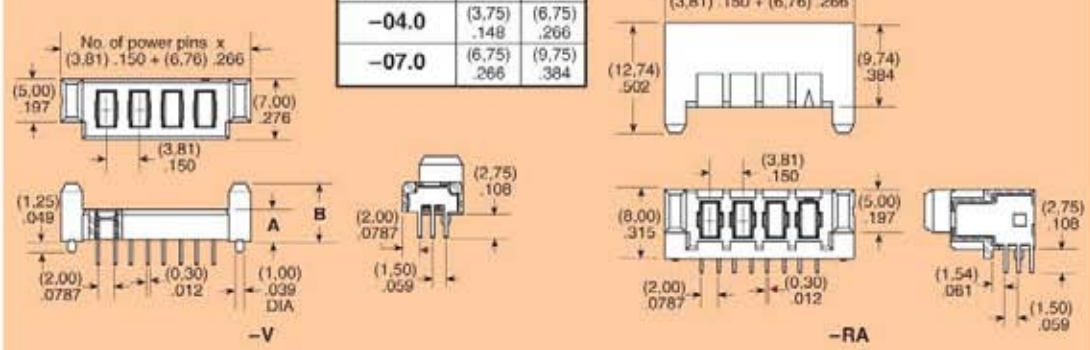
APPLICATION SPECIFIC OPTION

- Solder leads for (2,36mm) .093" thick board.

Call Samtec.

UPS	–	POWER PINS	–	LEAD STYLE	–	TAIL LENGTH	–	PLATING OPTION	–	TAIL	–	OTHER OPTION
		–02, –04, –06, –08		–01 = RA only –04.0 = (04,0mm) .157" (–V only) –07.0 = (07,0mm) .276" (–V only)		–01 = Use with (1,60mm) .062" Thick PCB		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail –T = Matte Tin (–RA option only)		–V = Vertical (Not available with –T plating) –RA = Right Angle		–LC = Locking Clip –TR = Tape & Reel

LEAD STYLE	A	B
–04.0	(3,75) .148	(6,75) .266
–07.0	(6,75) .266	(9,75) .384



Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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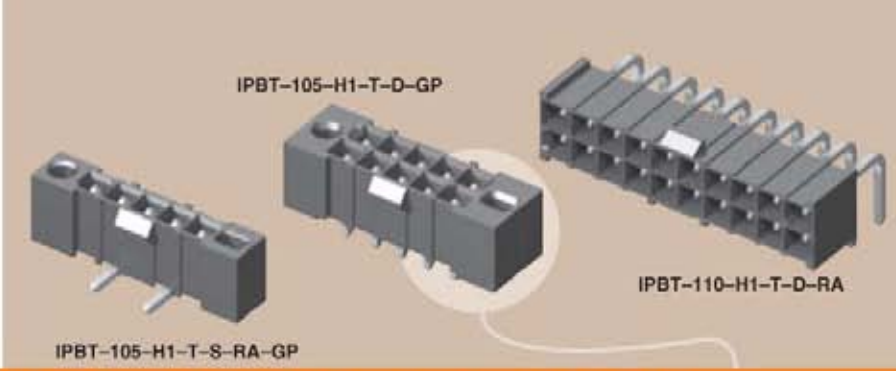
POWER MATE™

(4,19mm) .165"

IPBT SERIES



ISOLATED TERMINAL POWER HEADER

SPECIFICATIONS

For complete specifications see www.samtec.com?IPBT

Insulator Material:
Black Liquid Crystal Polymer

Contact Material:
High Copper Alloy

Plating:
Sn over 50µ" (1,27µm) Ni

Operating Temp Range:
-40°C to +105°C

RoHS Compliant:
Yes

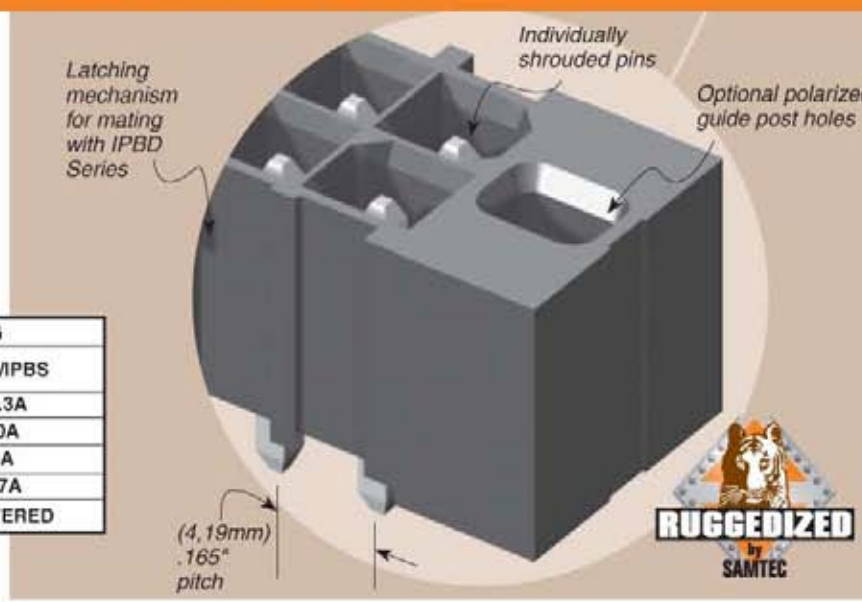
Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x

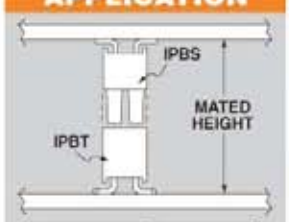
Lead-Free Solderable:
Yes

Mates with:
IPBS, IPBD, PMSD, PMSS, SCR1

CURRENT RATING	
AMBIENT TEMP	IPBT/IPBS
20°C	11.3A
40°C	10A
60°C	8A
75°C	6.7A
6 POSITIONS (2x3) POWERED	



APPLICATION



IPBT/IPBS LEAD STYLE	MATED HEIGHT*
–H1/–01	(15,25) .600
–H2/–02	(16,84) .663
–H3/–01	(17,00) .670
–H4/–01	(19,00) .748
–H5/–01	(20,00) .789
–H6/–01	(25,00) .984

*Processing conditions will affect mated height.

Note: Some lengths, styles and options are non-standard, non-returnable.

IPBT – 1 – NO. OF POSITIONS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION – OPTION

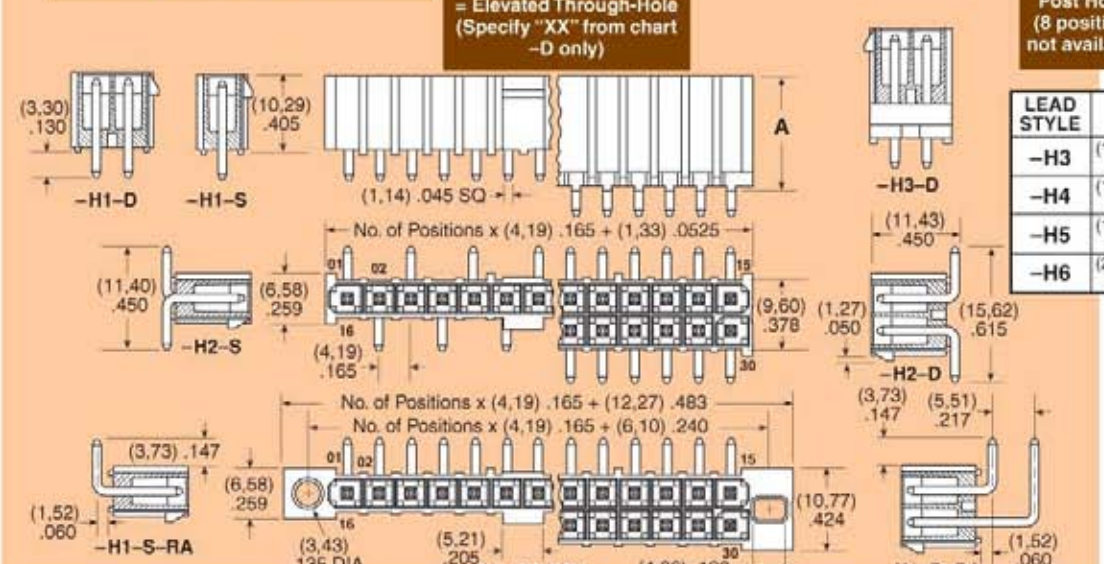
NO. OF POSITIONS PER ROW:
02, 03, 04, 05, 08, 10, 15 (–D only)
02, 03, 04, 05 (–S only)
(Call Samtec for other sizes)

LEAD STYLE:
–H1 = Through-Hole
–H2 = Surface Mount
–HX = Elevated Through-Hole (Specify "XX" from chart –D only)

PLATING OPTION:
–T = Matte Tin

ROW OPTION:
–S = Single Row
–D = Double Row

OPTION:
–RA = Right Angle (Lead Style –H1 only)
–GP = Guide Post Holes (8 positions not available)



LEAD STYLE	A
–H3	(12,07) .475
–H4	(14,05) .553
–H5	(15,04) .592
–H6	(20,05) .789

Due to technical progress, all designs, specifications and components are subject to change without notice.

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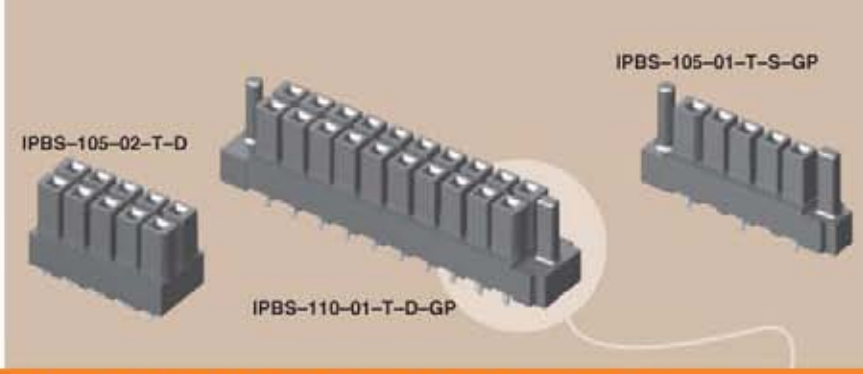
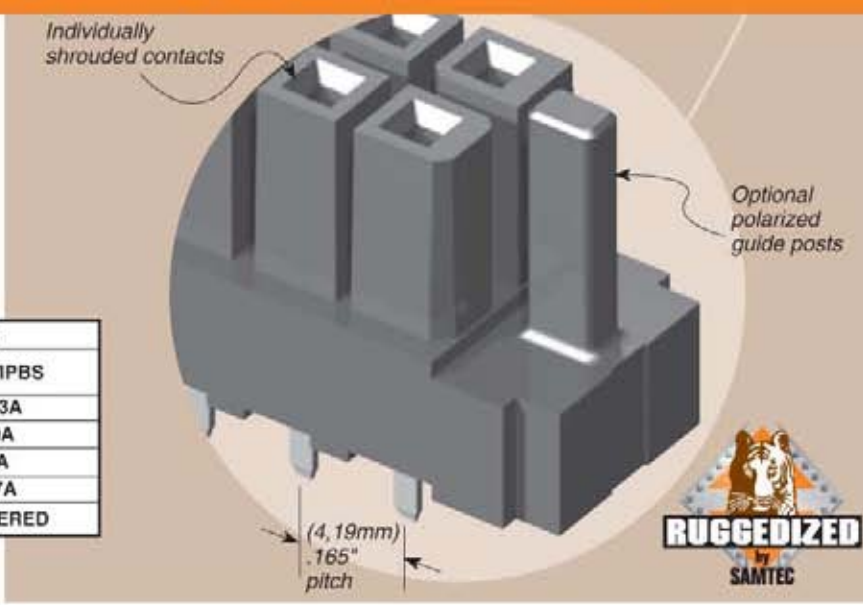
POWER MATE™

(4,19mm) .165"

IPBS SERIES



ISOLATED CONTACT POWER HEADER



SPECIFICATIONS

For complete specifications see www.samtec.com?IPBS

Insulator Material: Black Liquid Crystal Polymer

Contact Material: Phosphor Bronze

Plating: Sn over 50µ" (1,27µm) Ni

Operating Temp Range: -40°C to +105°C

Insertion Depth: (6,15mm) .242" to (7,24mm) .285"

Wiping Distance: (0,38mm) .015" min.

Insertion Force: 14oz (3,89N) avg.

Withdrawal Force: 10oz (2,78N) avg.

Voltage Rating: 725 VAC

RoHS Compliant: Yes

Processing:

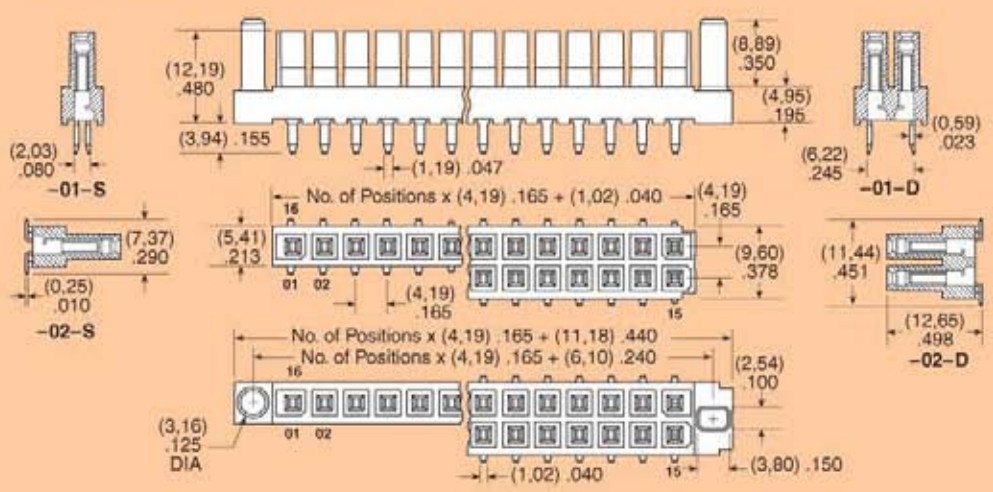
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

Mates with: IPBT

CURRENT RATING	
AMBIENT TEMP	IPBT/IPBS
20°C	11.3A
40°C	10A
60°C	8A
75°C	6.7A
6 POSITIONS (2x3) POWERED	

IPBS	–	1	NO. OF POSITIONS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	ROW OPTION	–	OPTION
			02, 03, 04, 05, 08, 10, 15 (–D only) 02, 03, 04, 05 (–S only) (Call Samtec for other sizes)		–01 = Standard Power –02 = Standard Power Surface Mount		–T = Matte Tin		–S = Single Row –D = Double Row		–GP = Guide Post



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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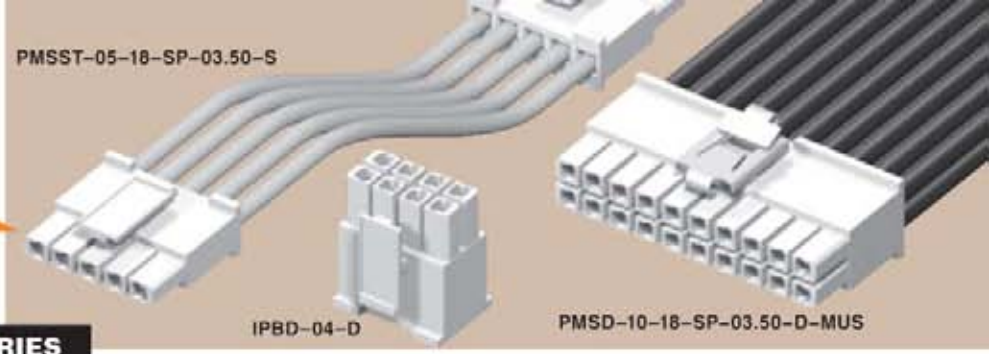
POWER MATE™

(4,19mm) .165"

PMSD, PMSDT, PMSS, PMSST, IPBD SERIES



DISCRETE WIRE POWER CABLE ASSEMBLY

Mates with:
IPBT

SPECIFICATIONS

For complete specifications see www.samtec.com?PMSD, www.samtec.com?PMSDT, www.samtec.com?PMSS, www.samtec.com?PMSST or www.samtec.com?IPBD

Insulator Material:
Valox 457
Contact Material:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-40°C to +105°C (PVC)
-55°C to +125°C (*Teflon®)
Voltage Rating:
22 & 24 AWG = 300 VAC (PVC)
16, 18 & 20 AWG = 600 VAC (PVC)
18 & 24 AWG = 300 VAC (*Teflon®)
Wire:
16 to 24 AWG
RoHS Compliant:
Yes

APPLICATION SPECIFIC OPTION

- Color coded cables (*Teflon® N/A).
- Other sizes/pin counts.
- 20 AWG/300 Volts

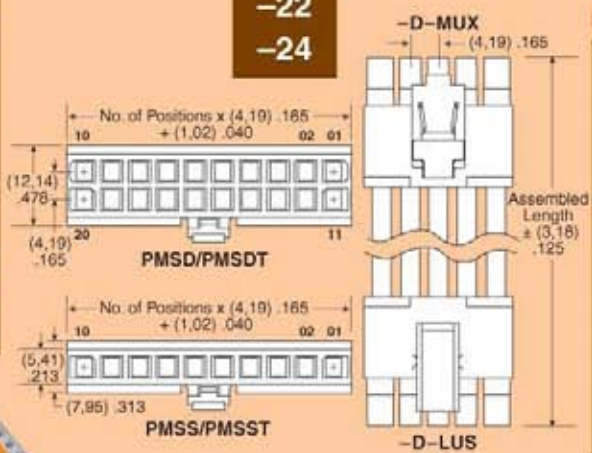
Call Samtec.

*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

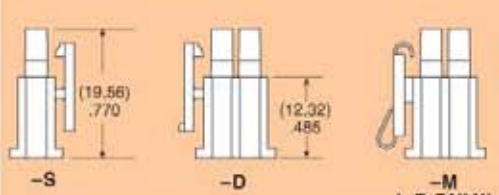
TYPE	PINS PER ROW	WIRE GAUGE	LEAD STYLE	ASSEMBLED LENGTH	END OPTION	LATCH OPTION
PMSD = Double Row PVC Cable **PMSDT** = Double Row *Teflon® Cable (18 & 24 Wire Gauge only) **PMSS** = Single Row PVC Cable (-02, -03, -04, -05) **PMSST** = Single Row *Teflon® Cable (18 & 24 Wire Gauge only)	-02, -03, -04, -05, -10, -15	-16 -18 -206 (20 AWG/ 600 volts) -22 -24	-SP = Standard Power	-"XX.XX" = Wire Length In Inches (88,90mm) 03.50" min.	-S = Single End -D = Double End (Latch required)	-M = Single Ended, Metal Latches PMSD/ PMSDT only (Leave blank for plastic) -LUS = Plastic Latch up, straight -LDS = Plastic Latch down, straight -LUX* = Plastic Latch up, crossed -LDX* = Plastic Latch down, crossed -MUS* = Metal Latch up, straight -MDS* = Metal Latch down, straight -MUX* = Metal Latch up, crossed -MDX* = Metal Latch down, crossed (* PMSD/PMSDT only)

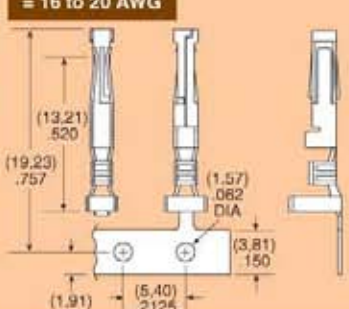


RUGGEDIZED by SAMTEC

TYPE	POSITIONS PER ROW	ROW OPTION	LATCH OPTION
IPBD = Body, Loose	-02, -03, -04, -05, -10, -15 (-D only) -02, -03, -04, -05 (-S only)	-S = Single Row -D = Double Row	-M = Metal Latch (Leave blank for plastic latch) (-D only)

TYPE	WIRE GAUGE	01	T	LEAD STYLE
CC69L = Contact, Loose **CC69R** = Contact, Full Reel (4,000 Parts per Reel)	-2024 = 20 to 24 AWG -1620 = 16 to 20 AWG		-T = Tin	-SP = Standard Power





HAND TOOLS
16 to 20 AWG:
CAT-HT-169-1620-11
20 to 24 AWG:
CAT-HT-169-2024-11

Due to technical progress, all designs, specifications and components are subject to change without notice.

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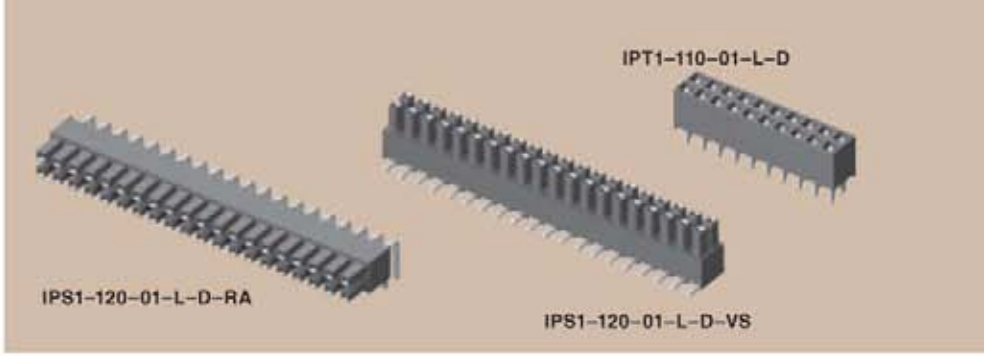
(2,54mm) .100"

IPT1, IPS1 SERIES



SHROUDED POWER CONNECTOR SET

SPECIFICATIONS

For complete specifications see www.samtec.com?IPT1 or www.samtec.com?IPS1

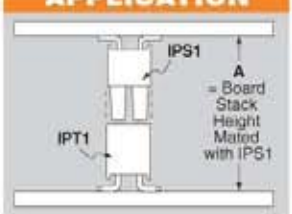
Insulator Material: Black LCP
Contact Material: Phosphor Bronze
Plating: Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold
Insertion Depth: (3,71mm) .146" to (6,48mm) .255"
Wiping Distance: (0,38mm) .015"
Insertion Force (SMT): 3.0oz (0,83N) avg.
Withdrawal Force (SMT): 2.6oz (0,72N) avg.
Insertion Force (T/H): 6.0oz (1,67N) avg.
Withdrawal Force (T/H): 5.0oz (1,39N) avg.
Voltage Rating: 550 VAC
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	IPT1/IPS1
20°C	8A
40°C	7.2A
60°C	6A
95°C	4.1A
6 POSITIONS (2x3)	

APPLICATION SPECIFIC OPTION

Latching feature available. Call Samtec.

APPLICATION



Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes
SMT Lead Coplanarity: (0,13mm) .005" max (05-10) (0,15mm) .006" max (15-25)

Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

IPT1 – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – D – TAIL OPTION – OTHER OPTION

Mates with: IPS1

05, 10, 15, 20, 25 (Call Samtec for other sizes)

Specify LEAD STYLE from chart

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on Tail

Requires –01 Lead Style (Leave blank for Through-Hole)

–RA = Right Angle

–VS = Surface Mount

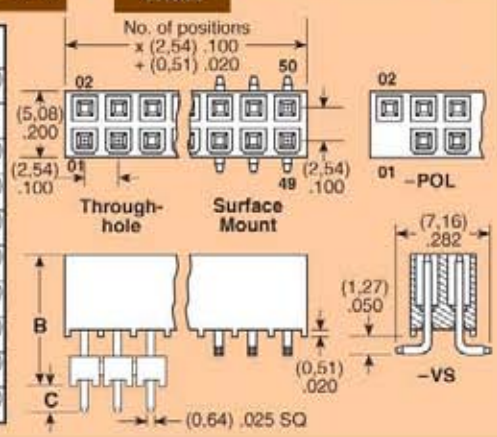
–K = (6,00mm) .236" DIA Polyimide film Pick & Place Pad (–VS only)

–LC = Locking Clip (–VS only) (N/A with -A)

–A = Alignment Pin (–VS only) (N/A with -LC)

–POL = No. 1 position polarized

LEAD STYLE	A	B	C
–01	(11,05) .435	(5,84) .250	(2,16) .085
-01-VS	(13,59) .535	(5,84) .250	N/A
–02	(14,00) .551	(9,30) .366	(2,64) .104
–03	(16,00) .630	(11,30) .445	(2,16) .085
–04	(17,00) .669	(12,30) .484	(2,69) .106
–05	(19,00) .748	(14,30) .563	(2,46) .097
–06	(20,00) .787	(15,30) .602	(2,35) .093
–07	(25,00) .984	(20,30) .799	(2,31) .091
–08	(30,00) 1.181	(25,30) .996	(2,39) .094
–09	(35,00) 1.378	(30,30) 1.193	(2,46) .097



RUGGEDIZED by SAMTEC

IPS1 – 1 – NO. PINS PER ROW – 01 – PLATING OPTION – D – TAIL OPTION – OTHER OPTION – POL OPTION

Mates with: IPT1

05, 10, 15, 20, 25 (Call Samtec for other sizes)

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on Tail

Leave blank for Through-hole

–VS = Surface Mount

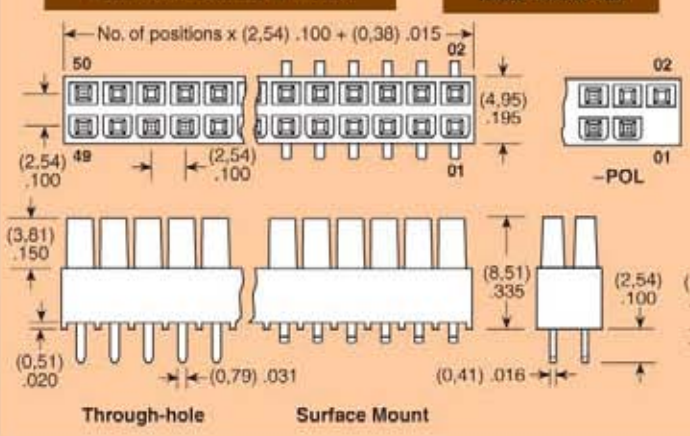
–RA = Right Angle

–K = (5,50mm) .217" DIA Polyimide film Pick & Place Pad (–VS only)

–LC = Locking Clip (–VS only)

–POL = No. 1 position polarized

–TR = Tape & Reel Packaging



TIGER BUY CONTACT™

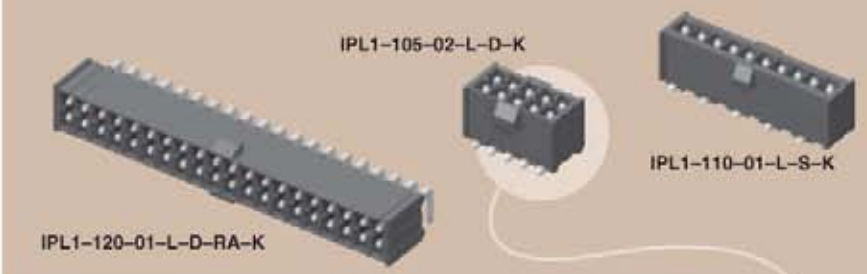
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

mini MATE

(2,54mm) .100"

IPL1 SERIES



SHROUDED POWER CABLE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IPL1

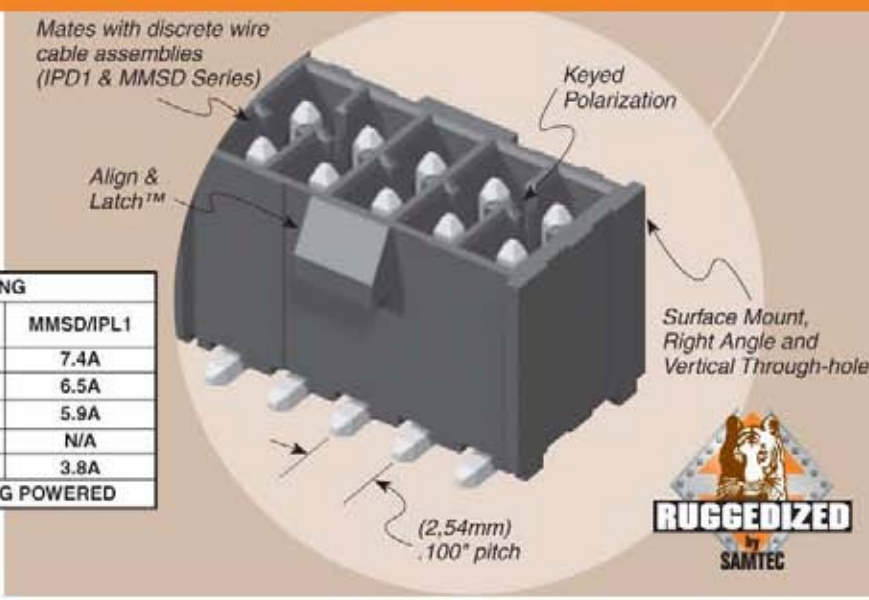
Insulator Material:
Black LCP
Terminal Material:
Phosphor Bronze
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
675 VAC
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable:
Yes
–S & –D
SMT Lead Coplanarity:
(0,10mm) .004" max (02-05)
(0,13mm) .005" max (06-10)
(0,15mm) .006" max (11-25)
–DH
SMT Lead Coplanarity:
(0,254mm) .010" max

Mates with:
MMSD, MMSS, SCR2
(Does not mate with IPS1)

CURRENT RATING		
AMBIENT TEMP	SCP2/SCR2/ IPL1	MMSD/IPL1
20°C	5A	7.4A
40°C	4.2A	6.5A
60°C	3.5A	5.9A
75°C	2.8A	N/A
95°C	N/A	3.8A
6 POSITIONS (2x3) 20 AWG POWERED		



APPLICATION SPECIFIC OPTIONS

With or without Plug Polarization. Call Samtec.

IPL1 – 1 – NO. PINS PER ROW – LEAD STYLE – PLATING OPTION – ROW OPTION – OPTION – K

NO. PINS PER ROW: 02, 05, 10, 15, 16, 20, 25 (Call Samtec for other sizes)

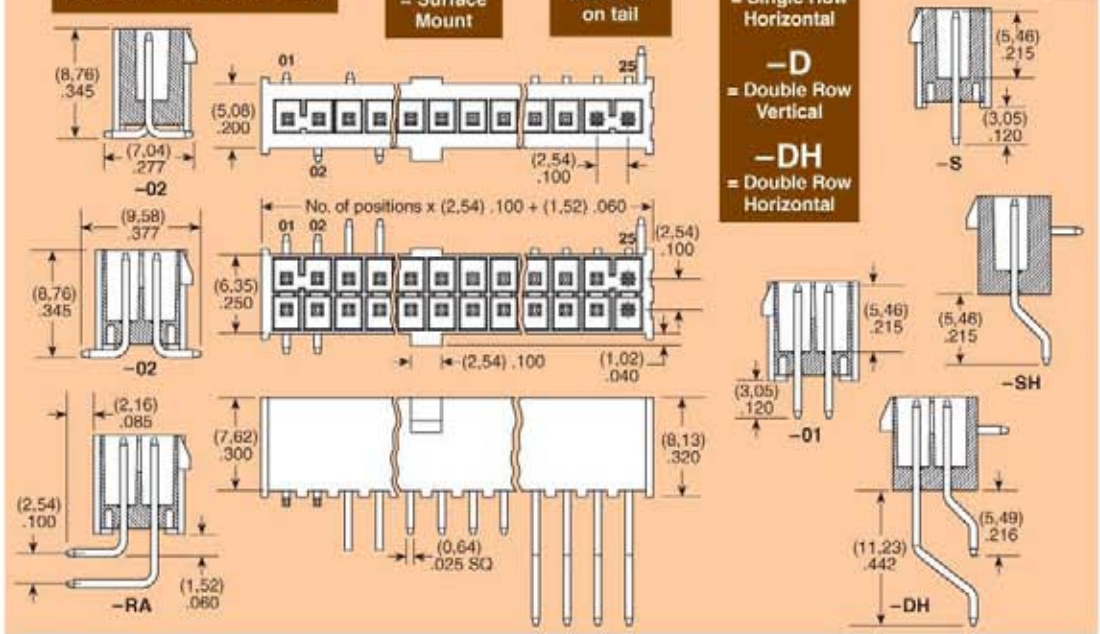
LEAD STYLE:
–01 = Through-hole
–02 = Surface Mount

PLATING OPTION:
–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

ROW OPTION:
–S = Single Row Vertical
–SH = Single Row Horizontal
–D = Double Row Vertical
–DH = Double Row Horizontal

OPTION:
–RA = Right Angle (–01 lead style only)

K:
–K = Keyed Polarization



Note:
Other Gold plating options available. Contact Samtec.

Note:
Some sizes, styles and options are non-standard, non-returnable.

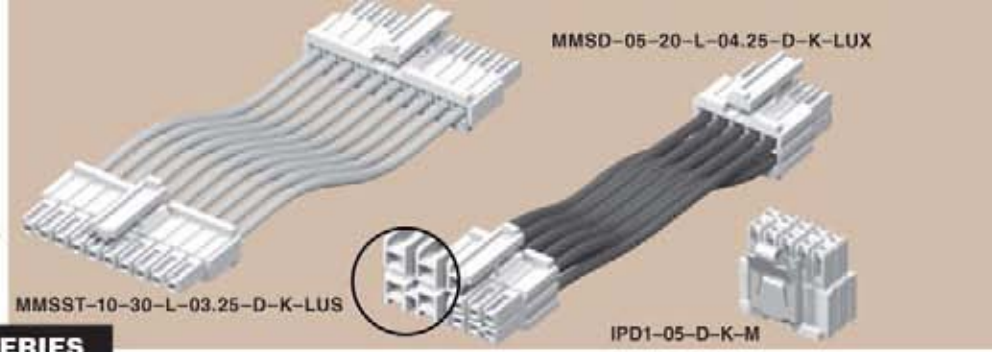
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

mini MATE

(2,54mm) .100"

MMSD, MMSDT, MMSS, MMSST, IPD1 SERIES



DISCRETE WIRE CABLE ASSEMBLY

Mates with: IPL1
(Does not mate with IPT1)

SPECIFICATIONS

For complete specifications see www.samtec.com?MMSD, www.samtec.com?MMSDT, www.samtec.com?MMSS, www.samtec.com?MMSST or www.samtec.com?IPD1

Insulator Material: Nylon 66
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C (20-26 AWG)
-55°C to +80°C (28-30 AWG)
-55°C to +125°C (*Teflon®)
Voltage Rating:
22 to 30 AWG = 300 VAC
20 AWG = 600 VAC (PVC)
20 AWG = 300 VAC (*Teflon®)
Wire: 20 to 30 AWG
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	MMSD/IPL1
20°C	7.4A
40°C	6.5A
60°C	5.9A
95°C	3.8A
6 POSITIONS (2x3) 20 AWG POWERED	

APPLICATION SPECIFIC OPTION

- Other color coded cables (*Teflon® N/A).
- Other sizes/pin counts.
- With or without Plug Polarization (omit pin 1).
- Other Gold plating options.

Call Samtec.

APPLICATION

-24C CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	VIOLET
8	GRAY
9	WHITE
10	BLACK
ETC	REPEAT

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE - **PINS PER ROW** - **WIRE GAUGE** - **PLATING OPTION** - **ASSEMBLY LENGTH** - **END OPTION** - **K** - **LATCH OPTION**

MMSD = Double Row PVC Cable

MMSDT = Double Row *Teflon® Cable (20, 24, 28 & 30 AWG only)

MMSS = Single Row PVC Cable

MMSST = Single Row *Teflon® Cable (20, 24, 28 & 30 AWG only)

–02, –05, –10, –15, –16, –20, –25

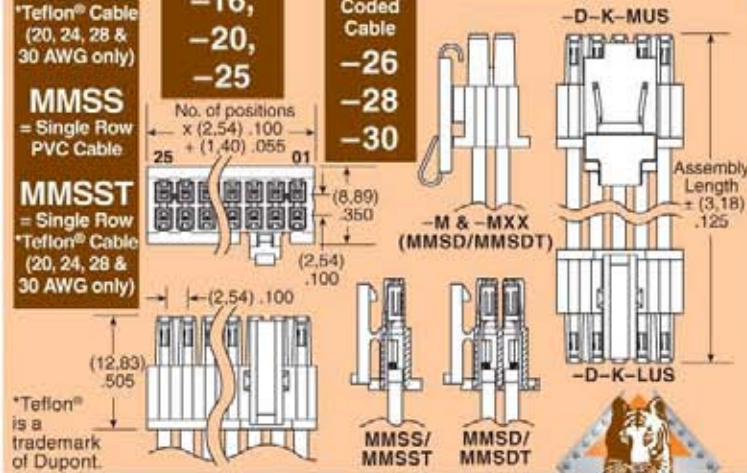
–20 –22 –24 –24C = Color Coded Cable **–26 –28 –30**

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

–"XX.XX" = Assembly Length in Inches (82,55mm) 03.25" min.

–S = Single End
–D = Double End (Latch Required)

–K = Keyed Polarization



–M = Single Ended, Metal Latches (Leave blank for plastic)

Double Ended (–D) Crossed requires MMSD/MMSDT

–LUS = Plastic Latch up, straight
–LDS = Plastic Latch down, straight
–LUX = Plastic Latch up, crossed
–LDX = Plastic Latch down, crossed
–MUS = Metal Latch up, straight
–MDS = Metal Latch down, straight
–MUX = Metal Latch up, crossed
–MDX = Metal Latch down, crossed

RUGGEDIZED by SAMTEC

TYPE - **POSITIONS PER ROW** - **ROW OPTION** - **K** - **LATCH OPTION** | **TYPE** - **WIRE GAUGE** - **01** - **PLATING OPTION**

IPD1 = Body, Loose

–02, –05, –10, –15, –16, –20, –25

–S = Single Row
–D = Double Row

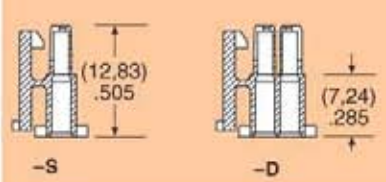
–K = Keyed Polarization

–M = Metal Latch (Leave blank for plastic latch)

CC79L = Contact, Loose
CC79R = Contact, Full Reel (15,000 Parts per Reel)

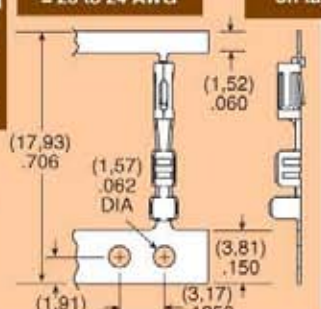
–2630 = 26 to 30 AWG
–2024 = 20 to 24 AWG

–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail



HAND TOOLS

20 to 24 AWG:
CAT-HT-179-2024-11
26 to 30 AWG:
CAT-HT-179-2630-11



Due to technical progress, all designs, specifications and components are subject to change without notice.

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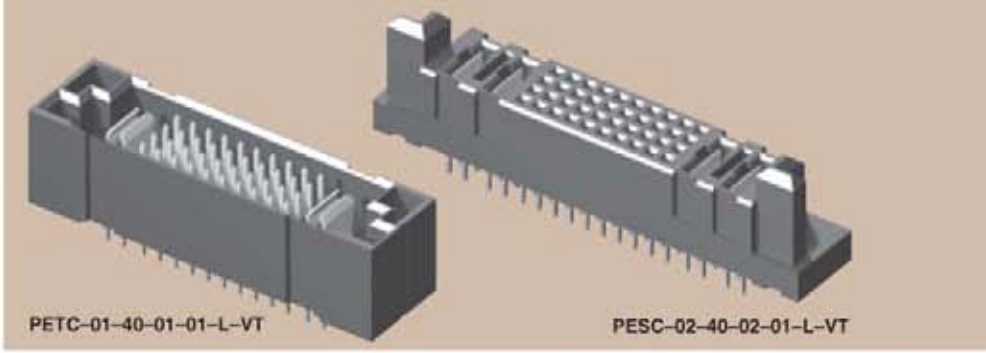
POWER STRIP 35™

(2,54mm) .100"

PETC, PESC SERIES



35A SIGNAL POWER COMBO SYSTEM

SPECIFICATIONS

For complete specifications see www.samtec.com?PETC or www.samtec.com?PESC

Insulator Material: Black LCP
Terminal Material: Copper Alloy
Plating: Sn or Au over 50µ" (1,27µm) Ni
Current Rating (Power Pin): See PET/PES Series
Current Rating (Signal Pin): 3A @ 80°C
Insertion Depth (Power Pin): (5,00mm) .197" to (8,46mm) .333"
Wiping Distance (Power Pin): (0,38mm) .015"
Operating Temp Range: -55°C to +105°C
RoHS Compliant: Yes

Processing:

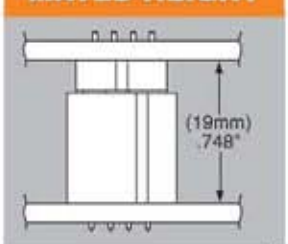
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes

APPLICATION SPECIFIC OPTION

- Other signal pin and power pin counts
- Asymmetric power pin placement

Call Samtec.

MATED HEIGHT



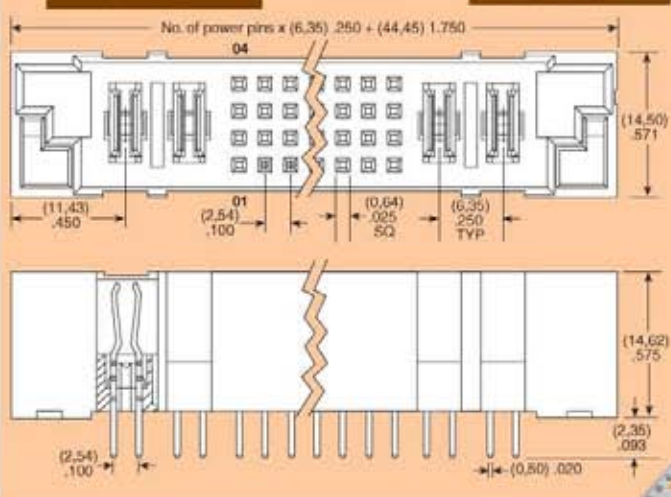
Note: The number of power pins on each end must equal.

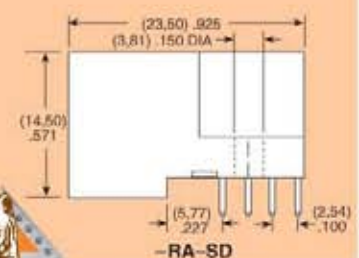
Note: Other Gold plating options available. Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

PETC – POWER PINS – SIGNAL PINS – POWER PINS – 01 – PLATING OPTION – TAIL – OTHER OPTION

- POWER PINS: –01, –02, –04
- SIGNAL PINS: –40
- POWER PINS: –01, –02, –04
- PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail; –T = Matte Tin
- TAIL: –VT =Vertical; –RA = Right Angle
- OTHER OPTION: –SD = Screw Down (Right Angle only); –LC = Locking Clip

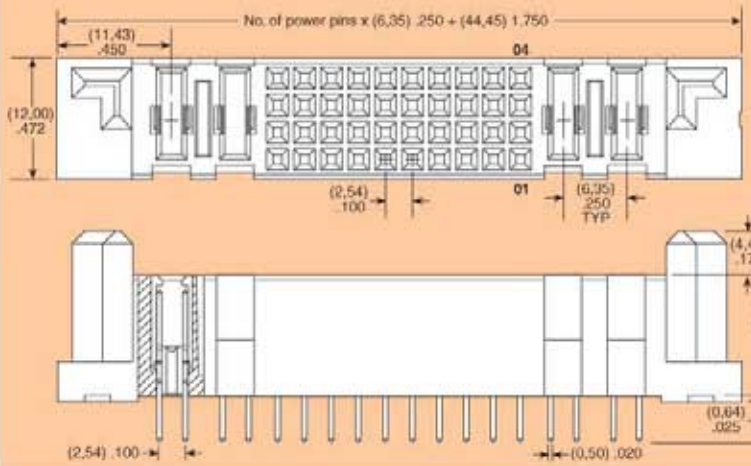


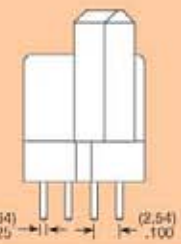


RUGGEDIZED by SAMTEC

PESC – POWER PINS – SIGNAL PINS – POWER PINS – 01 – PLATING OPTION – VT – OTHER OPTION

- POWER PINS: –01, –02, –04
- SIGNAL PINS: –40
- POWER PINS: –01, –02, –04
- PLATING OPTION: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail; –T = Matte Tin
- OTHER OPTION: –LC = Locking Clip





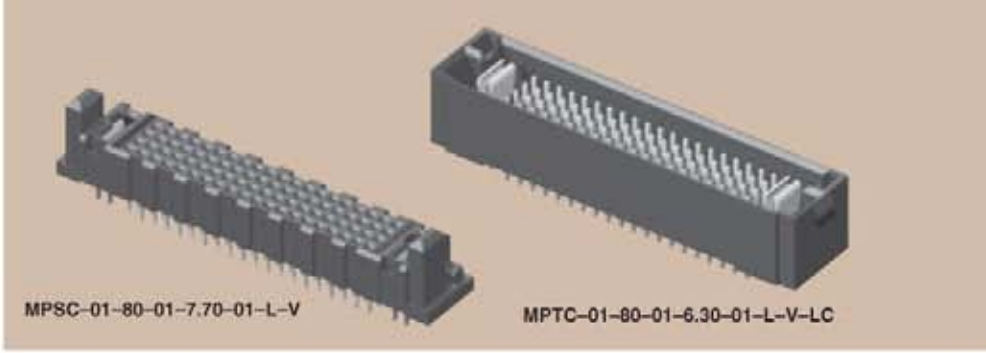
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

POWER STRIP 25™

(2,00mm) .0787"

MPTC, MPSC SERIES



25A SIGNAL POWER COMBO SYSTEM

MPTC Mates with:
MPSC
MPSC Mates with:
MPTC

SPECIFICATIONS

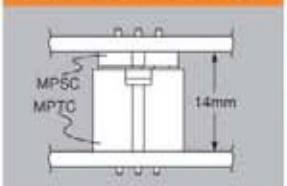
For complete specifications see www.samtec.com?MPTC or www.samtec.com?MPSC

Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to +105°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

MATED HEIGHT



APPLICATION SPECIFIC OPTION

- Asymmetric power pin placement.
- 4, 8, 16, 36 and 48 total signal pins
- Solder leads for (2,36mm) .093" thick board.

Call Samtec.

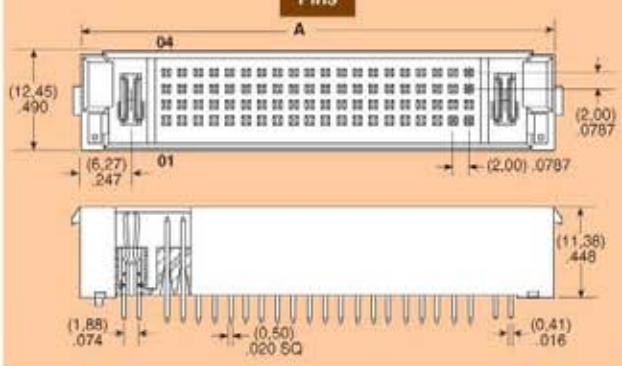
ALSO AVAILABLE

- Right Angle. See MPTC-RA Series.

Note: Some sizes, styles and options are non-standard, non-returnable.

MPTC - PWR PINS - SIG PINS - PWR PINS - LEAD STYLE - 01 - PLATING OPTION - V - OTHER OPTION

- **PWR PINS:** –01, –02 = Power Pins Per End
- **SIG PINS:** –24 = Total Signal Pins; –80 = Total Signal Pins
- **PWR PINS:** –01, –02 = Power Pins Per End
- **LEAD STYLE:** –6.30 = (6,30mm) 0.248"
- **PLATING OPTION:** –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail (Power & Signal); –T = Matte Tin on contacts and tail (Power), Gold on contact, Matte Tin on tail (Signal)
- **OTHER OPTION:** –LC = Locking Clip

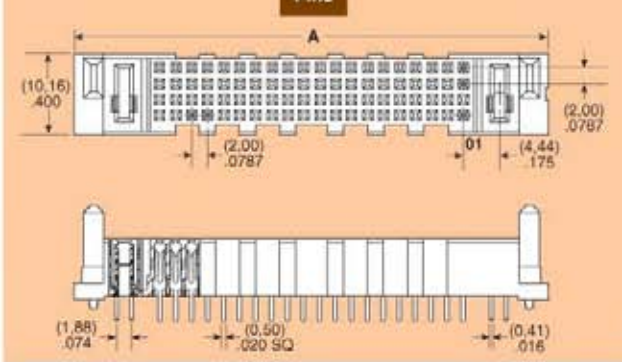


POWER PINS/END	A
–01	(59,44) 2.340
–02	(69,44) 2.734

RUGGEDIZED by SAMTEC

MPSC - PWR PINS - SIG PINS - PWR PINS - LEAD STYLE - 01 - PLATING OPTION - V - OTHER OPTION

- **PWR PINS:** –01, –02 = Power Pins Per End
- **SIG PINS:** –24 = Total Signal Pins; –80 = Total Signal Pins
- **PWR PINS:** –01, –02 = Power Pins Per End
- **LEAD STYLE:** –7.70 = (7,70mm) .303"
- **PLATING OPTION:** –L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail (Power & Signal); –T = Matte Tin on contacts and tail (Power), Gold on contact, Matte Tin on tail (Signal)
- **OTHER OPTION:** –LC = Locking Clip



POWER PINS/END	A
–01	(59,44) 2.340
–02	(69,44) 2.734

Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 SAMTEC SILICON VALLEY • Tel: 408-595-5900 SAMTEC SOUTHERN CALIFORNIA • Tel: 1-800-726-8329 SAMTEC UK • Tel: 44 01236 739292
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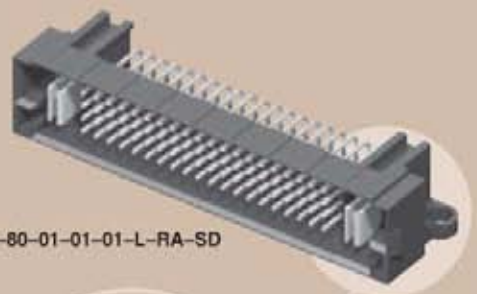
POWER STRIP 25™

(2,00mm) .0787"

MPTC-RA SERIES



MPTC-01-80-01-01-01-L-RA-SD

25A RIGHT ANGLE SIGNAL/POWER COMBO

SPECIFICATIONS

For complete specifications see www.samtec.com?MPTC

Insulator Material:
Black LCP
Terminal Material:
Copper Alloy
Plating:
Sn or Au over
50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Operating Temp Range:
-55°C to +105°C
RoHS Compliant:
Yes

Processing:

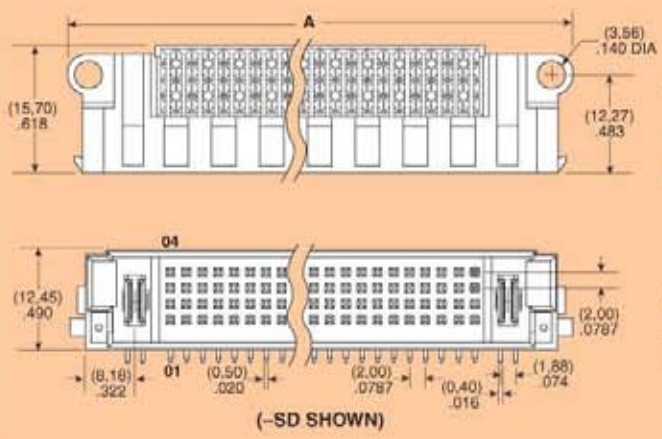
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes

Mates with:
MPSC

APPLICATION SPECIFIC OPTION

Asymmetric power pin placement.
Call Samtec.

MPTC	–	PWR PINS	–	SIG PINS	–	PWR PINS	–	01	–	TAIL LENGTH	–	PLATING OPTION	–	RA	–	OTHER OPTION
		–01, –02 = Power Pins Per End		–24 = Total Signal Pins –80 = Total Signal Pins		–01, –02 = Power Pins Per End				–01 = Use with (1,60mm) .062" Thick PCB		–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail (Power & Signal) –T = Matte Tin on contacts and tail (Power), Gold on contact, Matte Tin on tail (Signal)				–SD = Screw Down –LC = Locking Clip



(–SD SHOWN)

POWER PINS/END	A	
	24 SIGNAL PINS	80 SIGNAL PINS
–01	(35,25) 1.388	(63,25) 2.490
–02	(45,25) 1.781	(73,25) 2.884

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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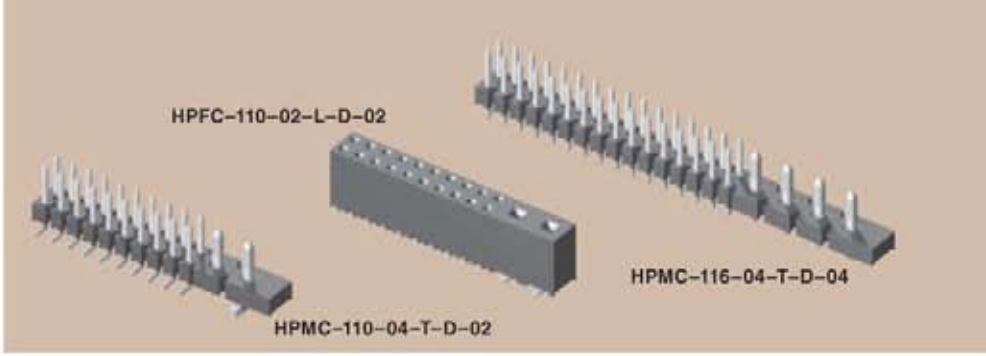


(2,00mm) .0787"

HPFC, HPMC SERIES

SIGNAL POWER COMBO SYSTEM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HPFC or www.samtec.com?HPMC

Insulator Material: Black Liquid Crystal Polymer
Signal Contact (HPFC): Phosphor Bronze
Power Contact (HPFC): BeCu
Terminal (HPMC): Phosphor Bronze (Signal & Power)
Plating: Sn or Au over 50µ" (1,27µm) Ni on signal pins; Sn over 50µ" (1,27µm) Ni on power pins
Operating Temp Range: -55°C to +105°C with Tin; -55°C to +125°C with Gold
Contact Resistance: 10 mΩ max
Insertion Depth: (3,68mm) .145" to (8,26mm) .325"
Wiping Distance: (0,381mm) .015"
Insertion Force: (Single contact only) 5oz (1,39N) avg. (signal pins) 56oz (15,57N) avg. (power pins)
Withdrawal Force: (Single contact only) 3oz (0,83N) avg. (signal pins) 52oz (14,46N) avg. (power pins)
Voltage Rating: 850 VAC
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	HPMC/HPFC
20°C	20A
40°C	17A
60°C	14A
75°C	12.7A
4 POWER PINS POWERED	

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes
SMT Lead Coplanarity: (0,15mm) .006" max (02-20) (0,20mm) .008" max (21-24)

ALSO AVAILABLE

2mm Combination Power/Signal. Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

HPFC - 1 - SIGNAL PIN PER ROW - LEAD STYLE - SIGNAL PIN PLATING - D - POWER PINS - OPTION

Mates with: HPMC

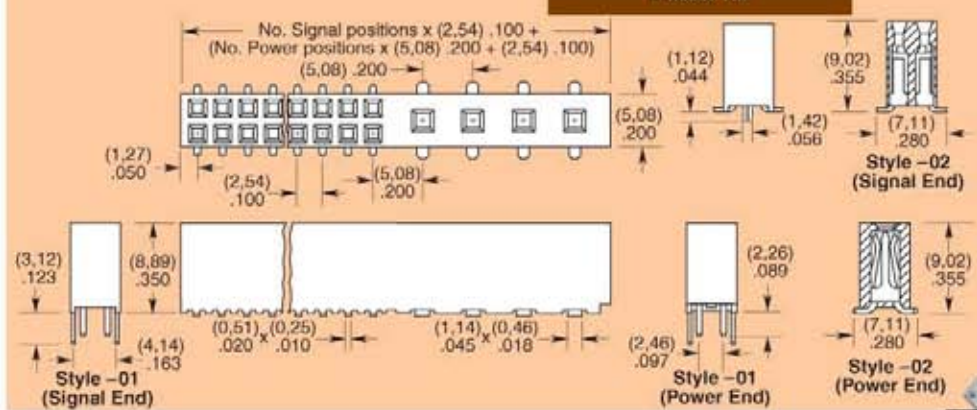
SIGNAL PIN PER ROW: 02 thru 24

LEAD STYLE:
- –01 = Through -Hole
- –02 = Surface Mount

SIGNAL PIN PLATING:
- –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail (Power Pins = All Matte Tin)
- –T = Matte Tin

POWER PINS: 02 thru 04

OPTION:
- –LC = Locking Clip (Not available with –01 lead style)
- –K = (6,50mm) .256" DIA Polyimide film Pick & Place Pad (5 positions minimum)



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HPMC - 1 - SIGNAL PIN PER ROW - LEAD STYLE - SIGNAL PIN PLATING - D - POWER PINS

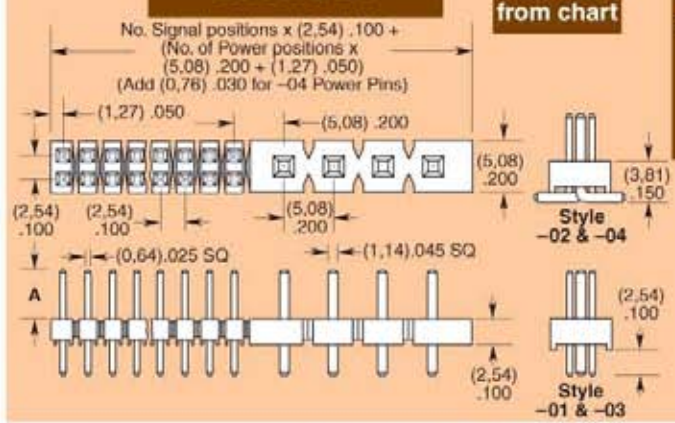
Mates with: HPFC

SIGNAL PIN PER ROW: 02 thru 24

LEAD STYLE: Specify LEAD STYLE from chart

SIGNAL PIN PLATING:
- –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail (Power Pins = All Matte Tin)
- –T = Matte Tin

POWER PINS: 02 thru 04



LEAD STYLE	A
–01, –02	(5,84) .230
–03, –04	(8,13) .320

Due to technical progress, all designs, specifications and components are subject to change without notice.

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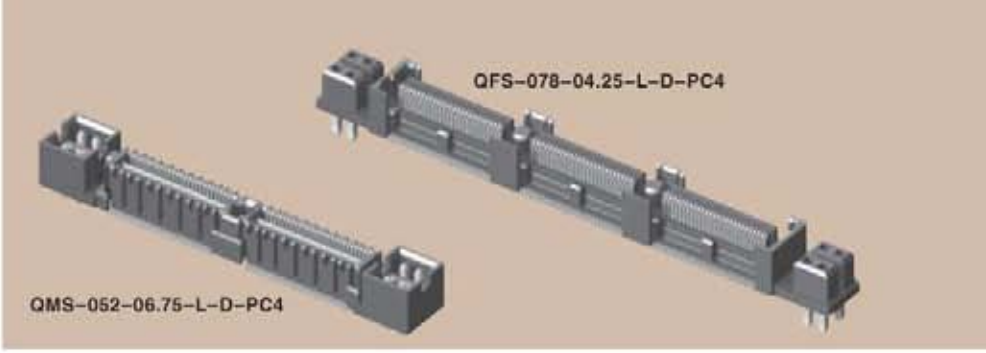
samtec Q2™

(0,635mm) .025"

QMS-PC, QFS-PC SERIES



HIGH SPEED SIGNAL WITH POWER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMS-PC or www.samtec.com?QFS-PC

Insulator Material: Liquid Crystal Polymer

Contact, Terminal & Ground Plane Material: Phosphor Bronze

Plating: Au over 50µ" (1,27µm) Ni (Tin on Ground Plane Tail)

Insertion Depth (Power Pins): (2,29mm) .090" to (4,06mm) .160"

Wiping Distance (Power Pins): (0,38mm) .015"

Current Rating: Signal Contact: 1.8A @ 80°C Power Contact: See chart Ground Plane: 8.9A @ 80°C

Voltage Rating: 300 VAC

Operating Temp: -55°C to +125°C

RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	QMS-PC/QFS-PC
20°C	5.0A
40°C	4.5A
60°C	4.0A
95°C	2.7A
8 POWER PINS POWERED	

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x

Lead-Free Solderable: Yes

SMT Lead Coplanarity: (0,10mm) .004" max (026-078)

Board Stacking: For applications requiring more than two connectors per board, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- Shielded (See QMSS/QFSS Series)
- Differential Pairs
- 8 Power Pins/End for (1,60mm) .062" thick board
- 4 or 8 Power Pins/End for (2,36mm) .093" thick board

Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

QMS - NO. OF PINS PER ROW - LEAD STYLE - PLATING OPTION - D - END OPTION

Mates with: QFS-PC

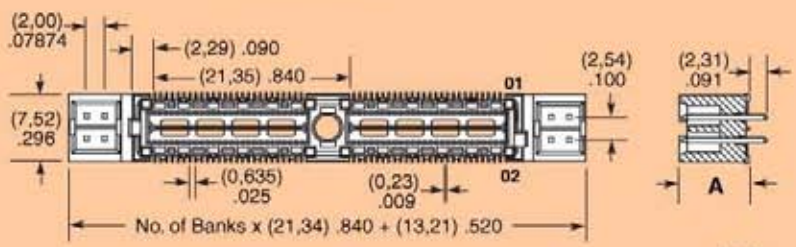
-026, -052, -078 (52 total pins per bank)

Specify LEAD STYLE from chart

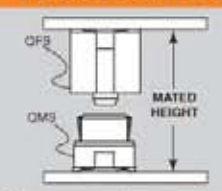
-L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane (Gold flash on Signal Pin tails, Tin on Ground Plane tails)

-PC4 = 4 Power Pins per End

LEAD STYLE	A
-05.75	(5,38) .212
-06.75	(6,35) .250



APPLICATION



QMS LEAD STYLE	MATED HEIGHT*
-05.75	10mm
-06.75	11mm

*Processing conditions will affect mated height.

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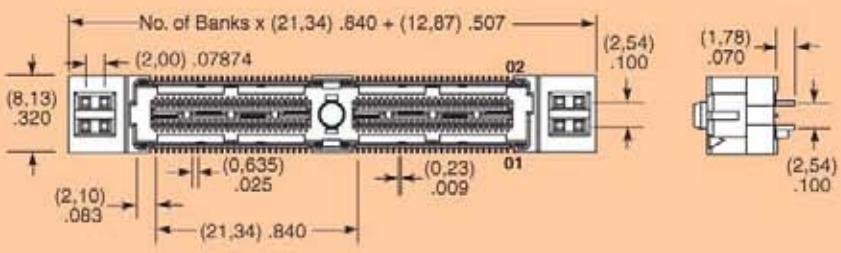
QFS - NO. OF PINS PER ROW - 04.25 - PLATING OPTION - D - END OPTION

Mates with: QMS-PC

-026, -052, -078 (52 total pins per bank)

-L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane (Gold flash on Signal Pin tails, Tin on Ground Plane tails)

-PC4 = 4 Power Pins per End



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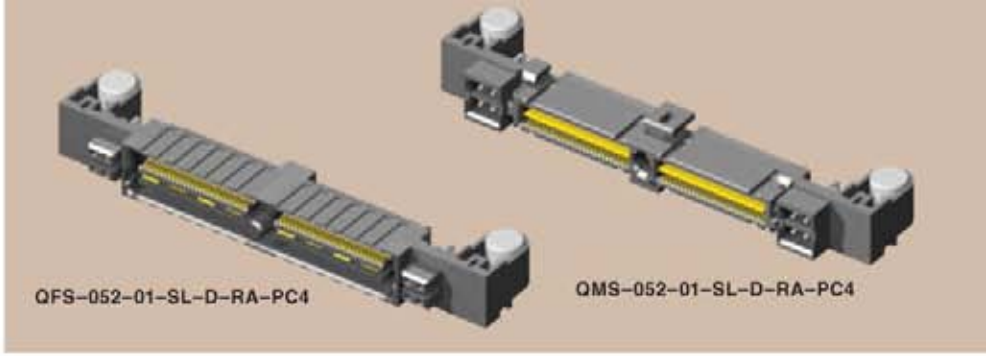
samtec Q2™



(0,635mm) .025"

QMS-RA-PC, QFS-RA-PC SERIES

HIGH SPEED SIGNAL WITH POWER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QMS-RA-PC or www.samtec.com?QFS-RA-PC

Insulator Material:
Liquid Crystal Polymer
Terminal & Ground Plane Material:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
(Tin on Ground Plane Tail and Signal Tails)
Current Rating:
Power Contact: 4.1A @ 80°C
Ground Plane: 8.9A @ 80°C
Signal Contact: 1.8A @ 80°C
Voltage Rating:
300 VAC
Operating Temp:
-55°C to +125°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (026-052)
(0,15mm) .006" max (078)
Board Stacking:
For applications requiring more than two connectors per board, contact ipg@samtec.com

APPLICATION SPECIFIC OPTION

- 8 Power Pins/End.
- -02 lead style for (2,36mm) .093" thick board

Call Samtec.

APPLICATION

Note: Some lengths, styles and options are non-standard, non-returnable.

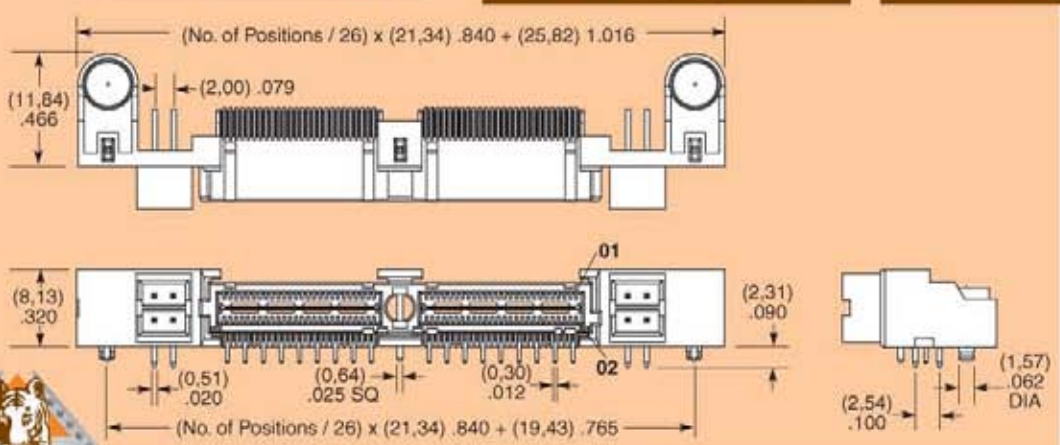
QMS	NO. OF POSITIONS	01	PLATING OPTION	D	RA	PC4	OTHER OPTION

Mates with: QFS-PC

–026, –052, –078 (Per Row)

–SL = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–K = Polyimide film Pick & Place Pad



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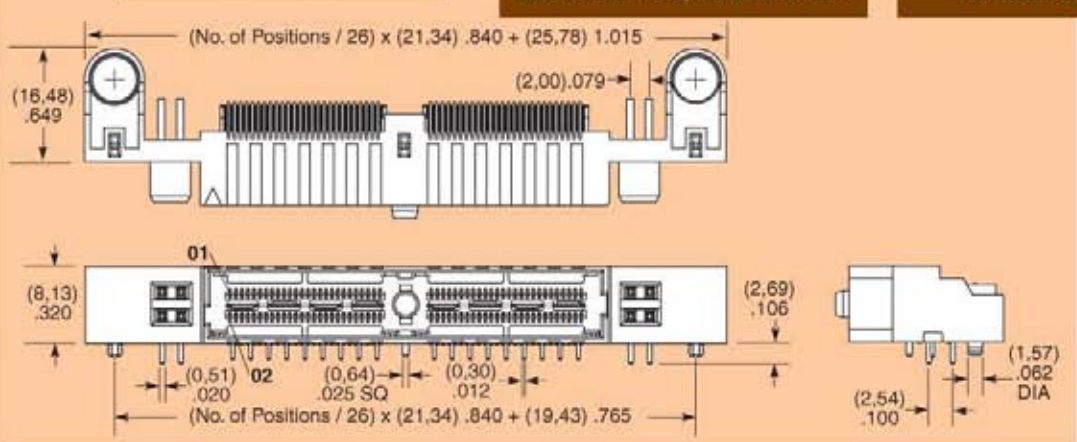
QFS	NO. OF POSITIONS	01	PLATING OPTION	D	RA	PC4	OTHER OPTION

Mates with: QMS-PC

–026, –052, –078 (Per Row)

–SL = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

–K = Polyimide film Pick & Place Pad



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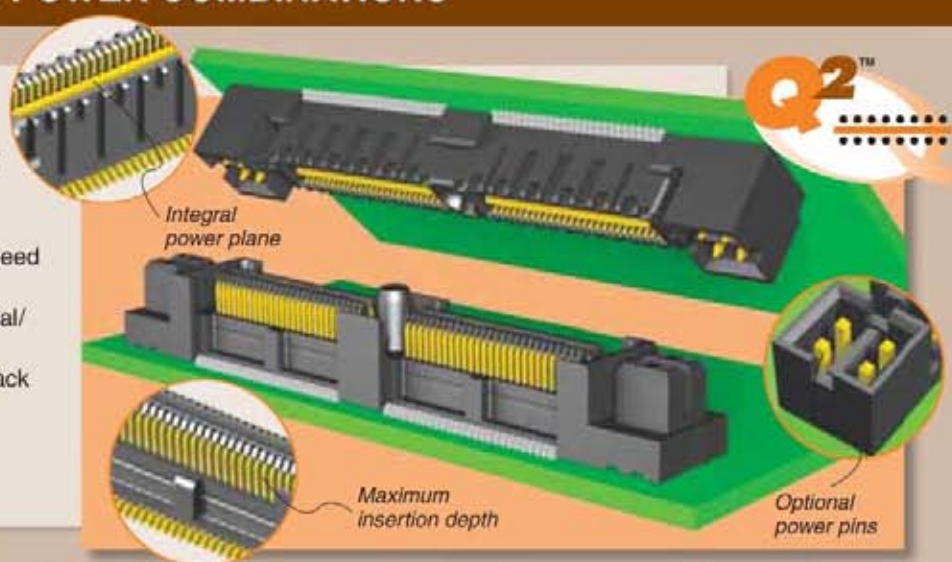
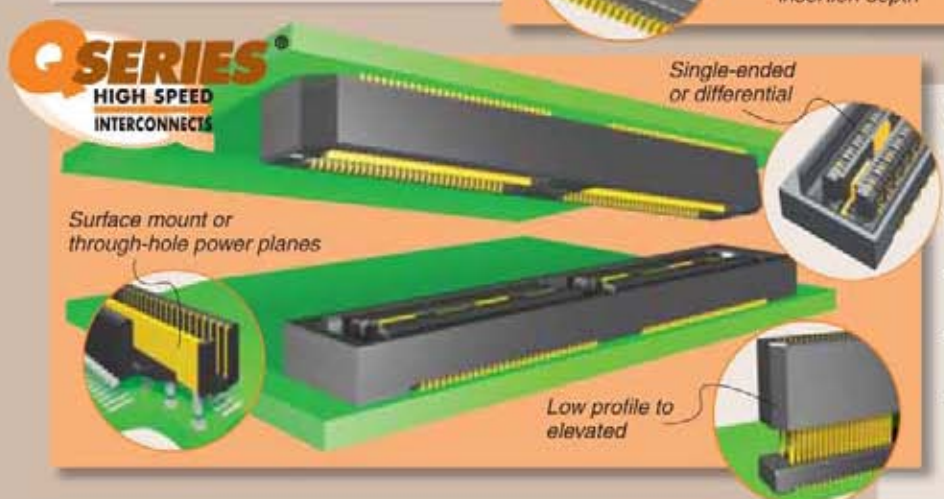
Q FOR POWER

HIGH SPEED SIGNAL & POWER COMBINATIONS

Q2™

- Integral power/ground plane rated for up to 9.2 amps at 95°C
- Optional integral power pins rated at 3 amps per pin
- Wide variety of standard high speed mating cable assemblies
- Quiet Power™ combination signal/ power cable assemblies
- 0,635mm pitch with choice of stack heights
- Rugged contact system with increased insertion depth
- See QMS/QFS Series



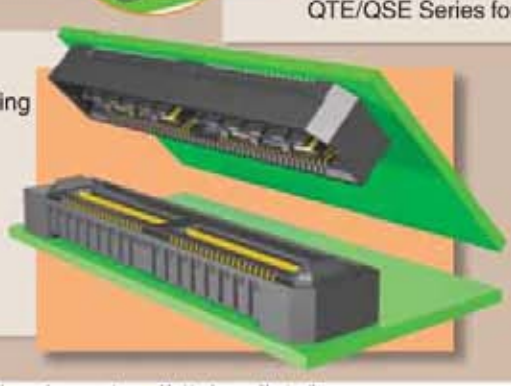


Q Series®

- Integral power/ground plane rated for up to 10.1 amps at 95°C
- Optional integral power pins rated at 4.1 amps per pin
- Wide variety of standard high speed mating cables
- Low profile (5mm) to elevated (30mm) stack heights
- Choice of pitches:
  QTH/QSH Series for .5mm pitch
  QTS/QSS or MIT/MIS Series for .635mm pitch
  QTE/QSE Series for .8mm pitch

Edge Rate™

- Robust Edge Rate™ contact improves "zippered" unmating
- Footprint compatible with QTE/QSE on 0,8mm pitch
- Integral metal plane for power or ground
- Increased insertion depth and contact wipe
- Edge Rate™ contacts for reduced broadside coupling
- 7mm and 10mm stack heights
- See QEM8/QEF8 Series



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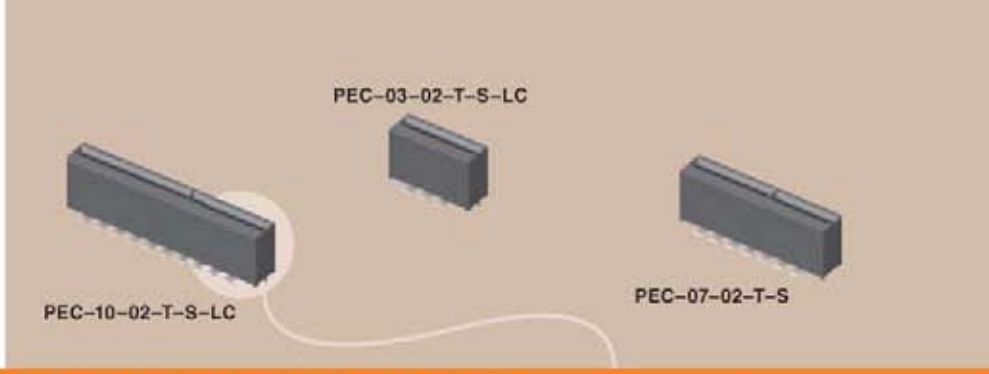


(2,54mm) .100"

PEC SERIES

POWER EDGE CARD INTERFACE

SPECIFICATIONS

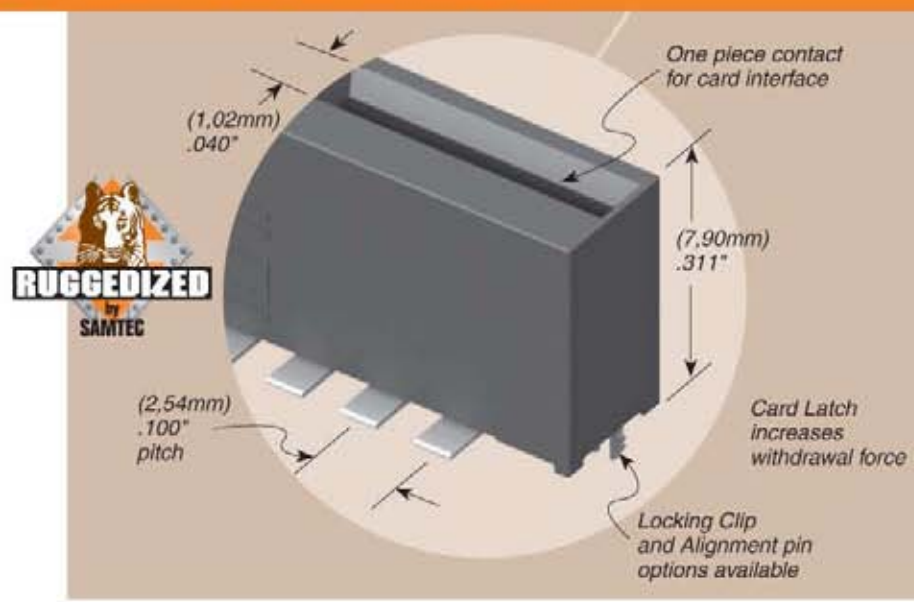
For complete specifications and recommended PCB layouts see www.samtec.com?PEC

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
BeCu
Plating:
Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C
Voltage Rating:
250 VAC
RoHS Compliant:
Yes

Processing:

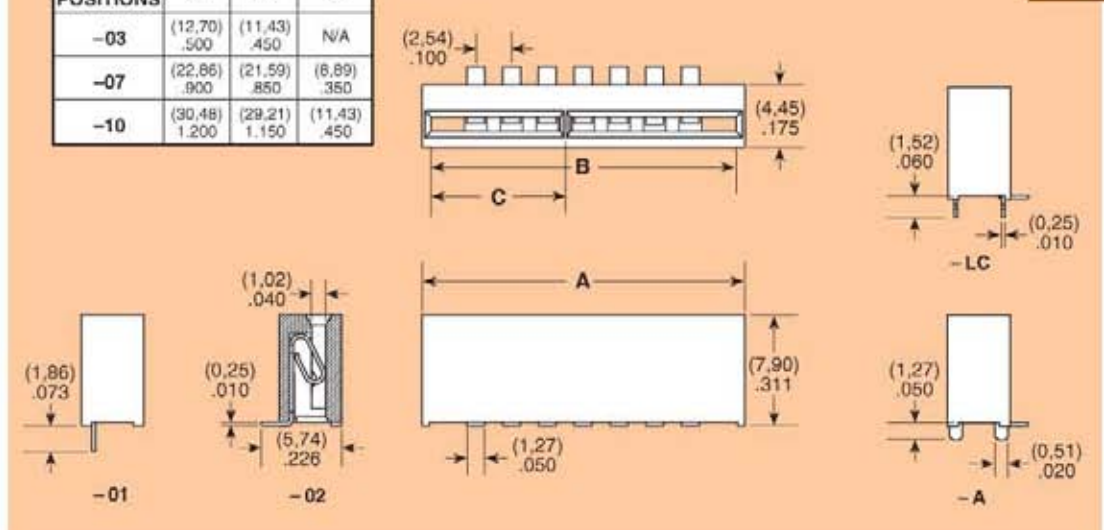
Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

CURRENT RATING	
AMBIENT TEMP	PEC
20°C	9.8A
40°C	8.5A
60°C	7A
75°C	5.8A
4 POSITIONS POWERED	



PEC	-	NO. PINS PER ROW	-	LEAD STYLE	-	PLATING OPTION	-	S	-	OPTION
		-03, -07, -10		-01 = Straight Tail -02 = Surface Mount		-T = Matte Tin				-A = Alignment Pin (N/A with -LC) -LC = Locking Clip (N/A with -A)

NO. OF POSITIONS	A	B	C
-03	(12,70) .500	(11,43) .450	N/A
-07	(22,86) .900	(21,59) .850	(6,89) .350
-10	(30,48) 1.200	(29,21) 1.150	(11,43) .450



Note: Some sizes, styles and options are non-standard, non-returnable.

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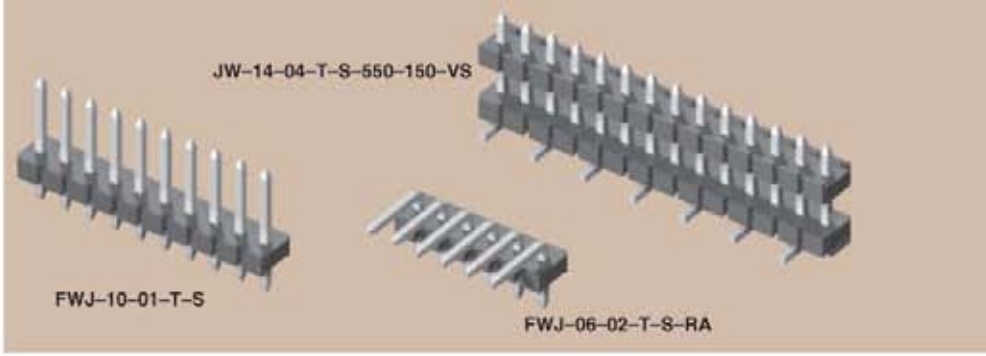

(3,96mm) .156"

FWJ, HFWJ, JW SERIES

POWER HEADERS & BOARD STACKERS

Mates with:
FHP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FWJ

FWJ

Insulator Material: Black Glass Filled Polyester
Terminal Material: Phosphor Bronze
Plating: Sn over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +105°C
RoHS Compliant: Yes
Lead-Free Solderable: Wave only

HFWJ

For complete specifications and recommend PCB layouts see www.samtec.com?HFWJ

Same as FWJ except:
Insulator Material: Natural Liquid Crystal Polymer

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,20mm) .008" max (02-16) (0,25mm) .010" max (17-24)

TYPE STRIP	–	NO. OF PINS	–	LEAD STYLE	–	PLATING OPTION	–	S	–	OTHER OPTION

FWJ = Standard Header

HFWJ = High Temp Header

CURRENT RATING		
AMBIENT TEMP	FHP/HFWJ	
	2 PINS	4 PINS
20°C	19.5A	15.5A
40°C	17A	14A
60°C	14A	11.5A
75°C	11.2A	9.2A

Note: Some lengths, styles and options are non-standard, non-returnable.

–T = Matte Tin

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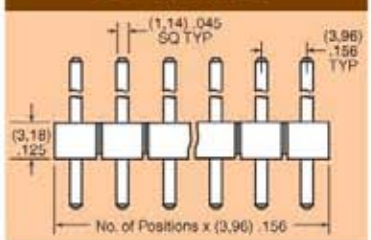
Leave blank for Through-hole

–RA = Right Angle (Style –02 & –04 only)

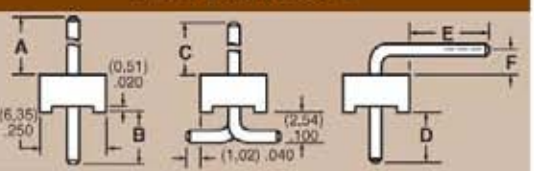
–VS = Surface Mount Requires HFWJ (2 pins/row minimum) Style –05 not available.

–P = Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height (–VS only)

01 thru 24



Specify LEAD STYLE from chart below.



LEAD STYLE	A	B
–01	(11,43) .450	(4,45) .175
–02	(12,70) .500	
–04	(20,55) .809	(3,96) .156
–05	(3,81) .150	(12,07) .475

LEAD STYLE	C
–01	(10,46) .412
–02	(11,73) .462
–04	(19,10) .752

LEAD STYLE	D	E	F
–02	(4,45) .175	(8,13) .320	(2,54) .100
–04	(3,96) .156	(13,56) .534	(4,95) .195

*FWJ Only

Mates with:
FHP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?JW

Insulator Material: Natural Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Sn over 50µ" (1,27µm) Ni
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,20mm) .008" max (02-16) (0,25mm) .010" max (17-24)

Note: This Series is non-standard, non-returnable.

JW	–	NO. ROW	–	04	–	PLATING OPTION	–	S	–	STACK HEIGHT	–	POST HEIGHT	–	OTHER OPTION

–T = Matte Tin

–"XXX" = Stacker Height (in inches) (0,13mm) .005" increments
Example: –250 = (6,35mm) .250"

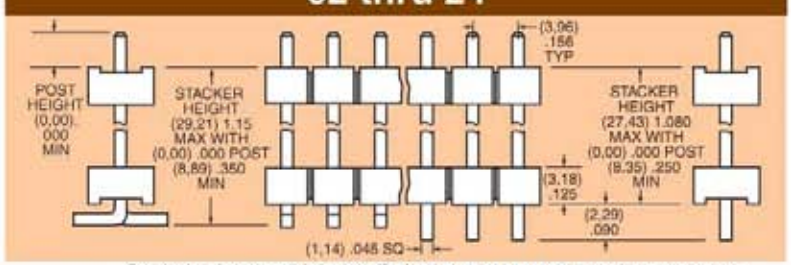
–"XXX" = Post Height (in inches)

Leave blank for Through-hole

–VS = Surface Mount (2 pins/row minimum)

–P = Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height (–VS only)

02 thru 24



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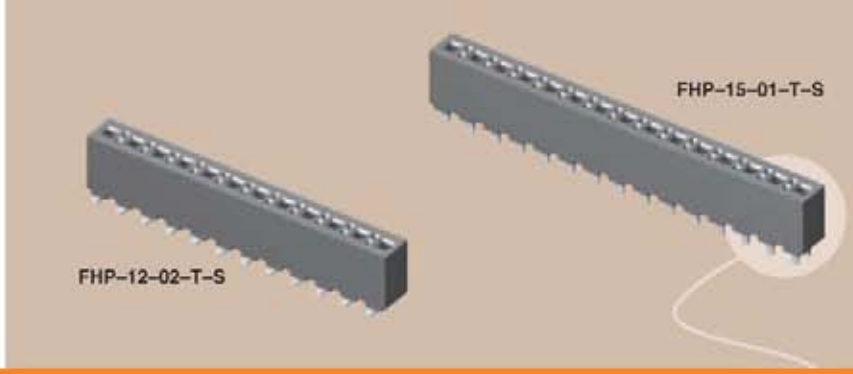


(3,96mm) .156"

FHP SERIES

POWER SOCKETS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FHP

Insulator Material: Black LCP
Contact Material: BeCu
Plating: Sn over 50µ" (1,27µm) Ni
Insertion Depth: (3,57mm) .140" to (8,76mm) .345" or pass-through from top
Wiping Distance: (0,38mm) .015"
Insertion Force: (Single contact only) 56oz (15,57N) avg.
Withdrawal Force: (Single contact only) 52oz (14,46N) avg.
RoHS Compliant: Yes

Processing:

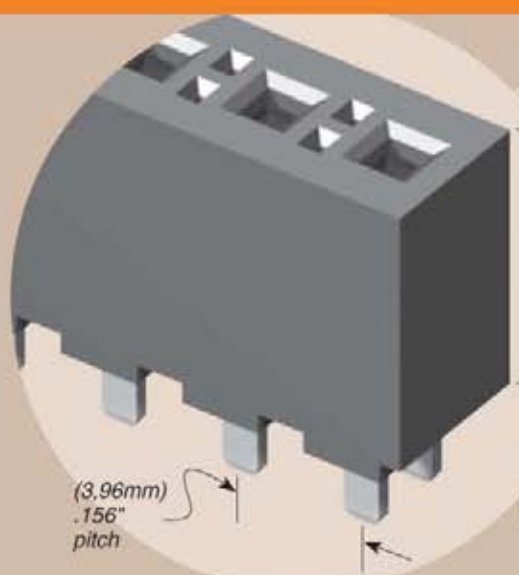
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

APPLICATION SPECIFIC OPTION

Alignment pins available. Call Samtec.

Mates with: FWJ, HFWJ, JW

CURRENT RATING		
AMBIENT TEMP	FHP/HFWJ	
	2 PINS	4 PINS
20°C	19.5A	15.5A
40°C	17A	14A
60°C	14A	11.5A
75°C	11.2A	9.2A



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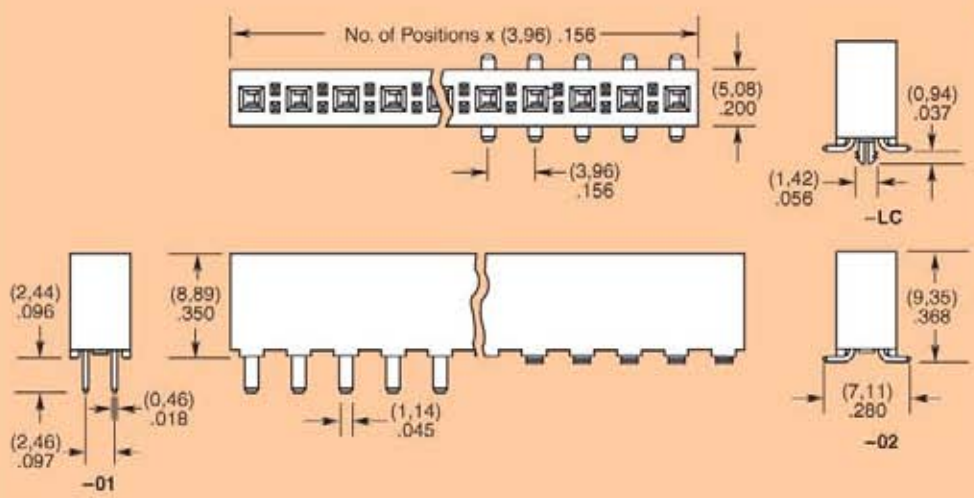
FHP	–	NO. OF PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	S	–	OTHER OPTION

02 thru 24

–01 = Through-hole
–02 = Surface Mount

–T = Matte Tin

–LC = Locking Clip (–02 lead style only)
–K = (6,50mm) .256" DIA Polyimide film Pick & Place Pad (–02 lead style only)
–TR = Tape & Reel Packaging (Available on positions 2-24, 2-4 positions required in –TR) –02 lead style only



Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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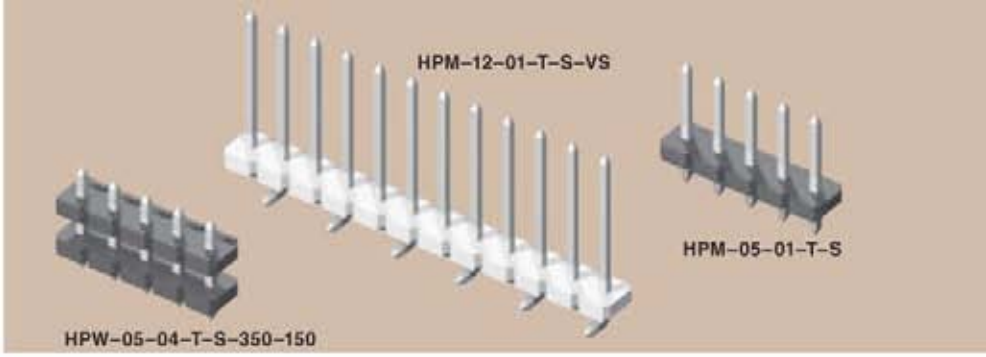


(5,08mm) .200"

HPM, HPW SERIES

POWER HEADERS & BOARD STACKERS

Mates with:
HPF

SPECIFICATIONS

For complete specifications see www.samtec.com?HPM

Insulator Material:
Glass Filled Polyester (TH)
Liquid Crystal Polymer (SMT)
Terminal Material:
Copper Alloy
Plating:
Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp (–VS):
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead–Free Solderable:
Yes
SMT Lead Coplanarity:
(0,20mm) .008" max (02-15)
(0,25mm) .010" max (16-20)

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP	–	NO. PINS	–	LEAD STYLE	–	PLATING OPTION	–	S	–	TAIL OPTION	–	OTHER OPTION

HPM
= High Temp High Power Header

–T
= Matte Tin

Leave blank for Through-hole

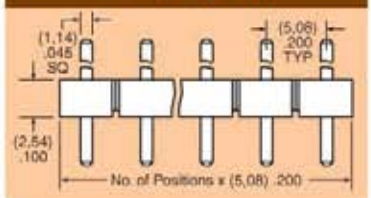
–RA
= Right Angle

–VS
= Surface Mount (2 pins/row minimum)

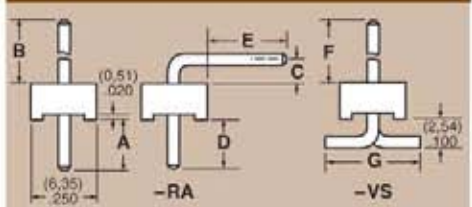
–P
= Pick & Place Pad (3 Pos. min.) (6,98mm) .275" min. post height (–VS only)

CURRENT RATING		
AMBIENT TEMP	HPM/HPF	
	2 PINS	4 PINS
20°C	25A	22A
40°C	24A	19A
60°C	17A	15.5A
75°C	14.4A	12.7A

01 thru 20



Specify LEAD STYLE from chart below.



LEAD STYLE	A	B	C	D	E	F	G
–01	(4,57) .180	(11,94) .470	—	—	—	(10,72) .422	(8,64) .340
–02	(4,57) .180	(13,21) .520	(2,54) .100	(4,57) .180	(8,08) .318	(12,24) .482	(8,38) .330
–04	(4,09) .161	(21,06) .829	(4,95) .195	(3,96) .156	(13,82) .544	—	—
–05	(4,57) .180	(3,81) .150	—	—	—	—	—

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Mates with:
HPF

SPECIFICATIONS

For complete specifications see www.samtec.com?HPW

Insulator Material:
Liquid Crystal Polymer
Terminal Material:
Copper Alloy
Plating:
Sn over 50u" (1,27um) Ni
Operating Temp Range:
-55°C to + 105°C
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,20mm) .008" max.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE STRIP	–	NO. PINS	–	04	–	PLATING OPTION	–	S	–	STACK HEIGHT	–	POST HEIGHT	–	TAIL OPTION

HPW
= High Temp High Power

–T
= Matte Tin

–"XXX"
= Stacker Height (in inches) (0,13mm) .005" increments
Example: –250 = (6,35mm) .250"

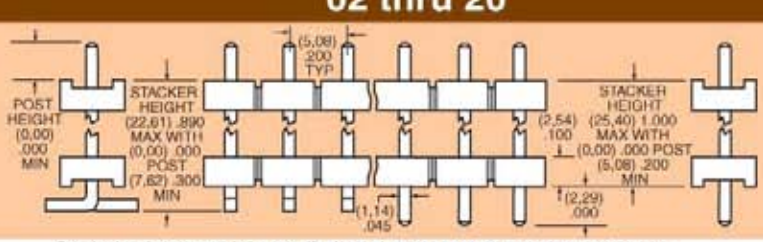
–"XXX"
= Post Height (in inches)

Leave blank for Through-hole

–VS
=Surface Mount (2 pins/row minimum)

–P
= Pick & Place Pad (3 Pos. min.) (6,98mm) .275" max. post height (–VS only)

02 thru 20



Due to technical progress, all designs, specifications and components are subject to change without notice.

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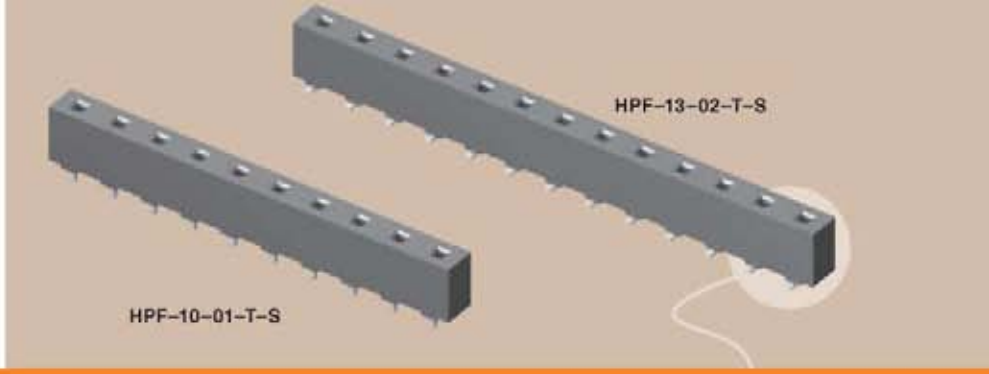


(5,08mm) .200"

HPF SERIES

POWER SOCKETS

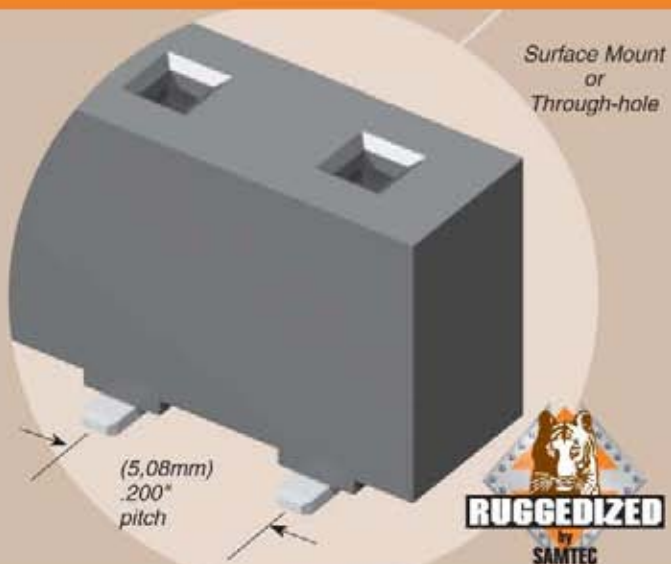
SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?HPF

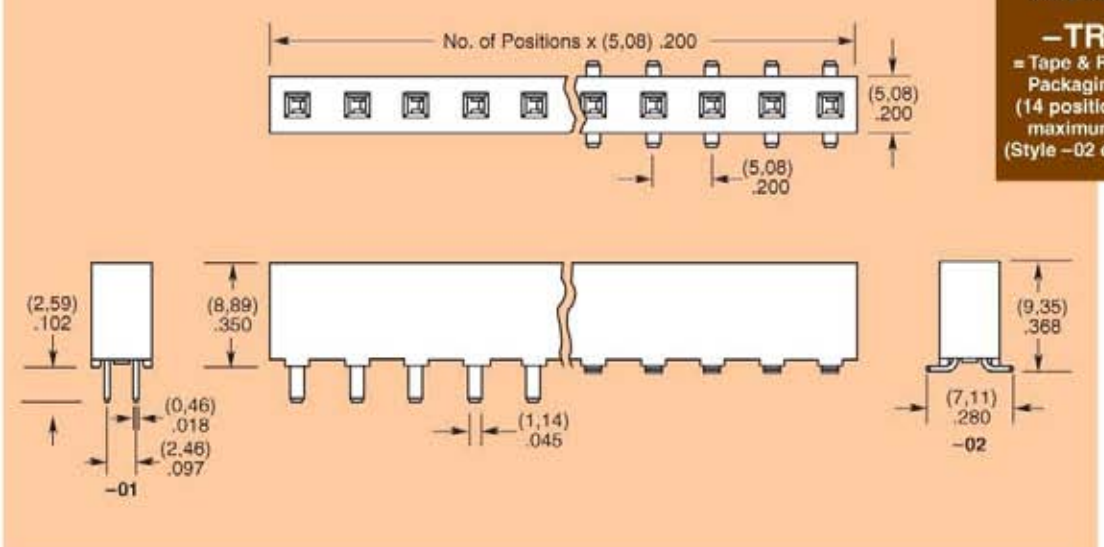
Insulator Material: Black LCP
Contact Material: BeCu
Plating: Sn over 50µ" (1,27µm) Ni
Insertion Depth: (3,68mm) .145" to (8,26mm) .325" (.368" (9,35mm) plus board thickness minimum for bottom entry)
Wiping Distance: (0,38mm) .015"
Insertion Force: (Single contact only) 56oz (15,57N) avg.
Withdrawal Force: (Single contact only) 52oz (14,46N) avg.
Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead–Free Solderable: Yes
SMT Lead Coplanarity: (0,15mm) .006" max (02-10) (0,20mm) .008" max (11-20)
RoHS Compliant: Yes

Mates with: HPM, HPW

CURRENT RATING		
AMBIENT TEMP	HPM/HPF	
	2 PINS	4 PINS
20°C	25A	22A
40°C	24A	19A
60°C	17A	15.5A
75°C	14.4A	12.7A



HPF	–	NO. PINS PER ROW	–	LEAD STYLE	–	PLATING OPTION	–	S	–	OTHER OPTIONS
		02 thru 20		–01 = Through-hole –02 = Surface Mount		–T = Matte Tin				–LC = Locking Clip (Style –02 only) –K = (6,50mm) .256" DIA Polyimide Film Pick & Place Pad –TR = Tape & Reel Packaging (14 positions maximum) (Style –02 only)



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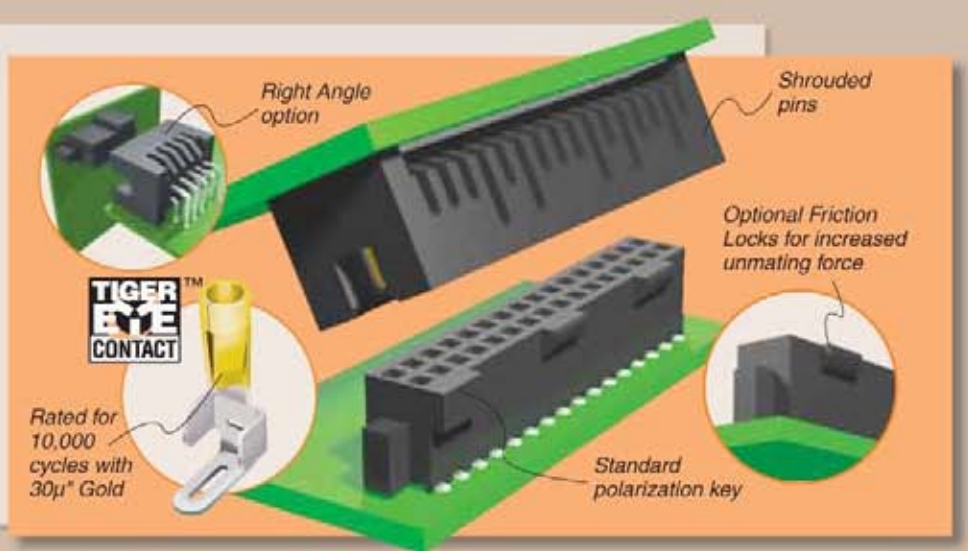
Due to technical progress, all designs, specifications and components are subject to change without notice.

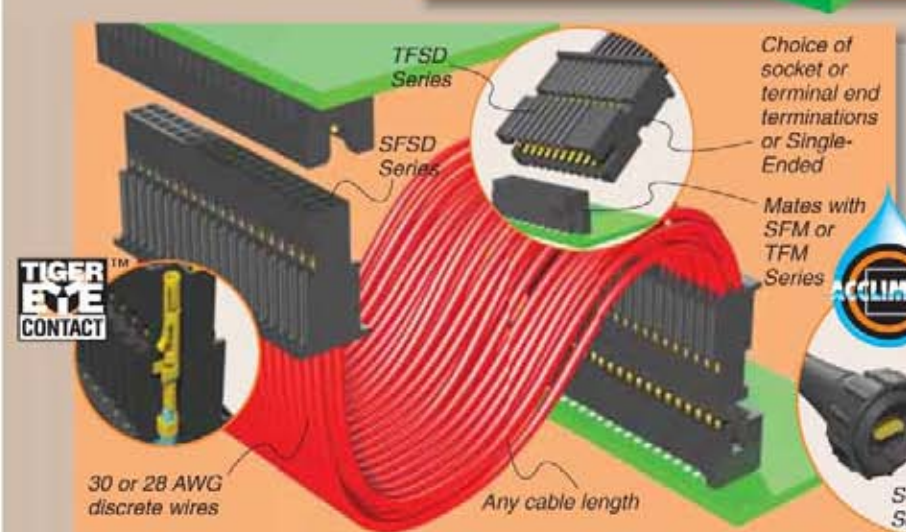
MICRO RUGGED TIGER EYE™

HIGH RELIABILITY. HIGH CYCLES. OPTIONS GALORE.

Board-to-Board

- High reliability Tiger Eye™ three-finger BeCu sockets
- Friction locking system for higher withdrawal forces
- Shrouded, polarized and keyed for rugged applications
- Rated for 10,000 cycles with 30µ" Gold plating
- Standard: SFM/TFM Series
  Friction Lock: SFML/TFML Series
  Cost-saving: SFC/TFC Series





Cable Assemblies

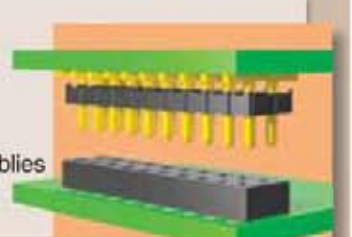
- Discrete wire and IDC cable assemblies
- High reliability Tiger Eye™ contacts system
- Socket, terminal or combination end options

.8mm Pitch

- Next generation micro rugged interconnect
- Extended Life Product
- Tiger Eye™ contacts
- See SEM/TEM Series

2mm Pitch

- Tiger Eye™ contacts with four points of contact
- Extended Life Product
- Mating IDC cable assemblies
- See SMM/TCSD Series



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SIGNAL INTEGRITY CABLES

Coax & Twinax Cable Assemblies

AcceleRate™ Cable Systems (FCC8, FCS8) 294-295
Coax Cables (ERCDA, SEAC, MICD, SQCD, 6QCD, HQCD, EQCD, HBCD, EQSD, 6QP, HHSC) 296-301
Twinax Cables (6QDPS, 6QDP, HQDP, EQDP, EEDP, ERDP) 302-303

Flex Circuit Assemblies

Sudden Circuits® High Speed Data Links 304-305
Standard Sudden Circuits® Data Links 306-307
SEARAY™ Flex Data Link (SADL) 308
Flex Data Links (RFDL2, FSIF) 309
ZIF Sockets & Jumpers (ZHDL2, ZLDL2, ZHR5, ZFHF, HSF8) . . 310-312

APPLICATIONS

Coax & Twinax Cable Assemblies. 46-47
Application Specific High Speed Cables. 47
High Speed Cable Specifications 48-49
High Speed Flex 52-54
Panel & I/O Cables 58-59

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(0,80mm) .0315"

ACCELERATE™

FCC8 SERIES

HIGH SPEED COST EFFECTIVE COAX CABLE

SPECIFICATIONS

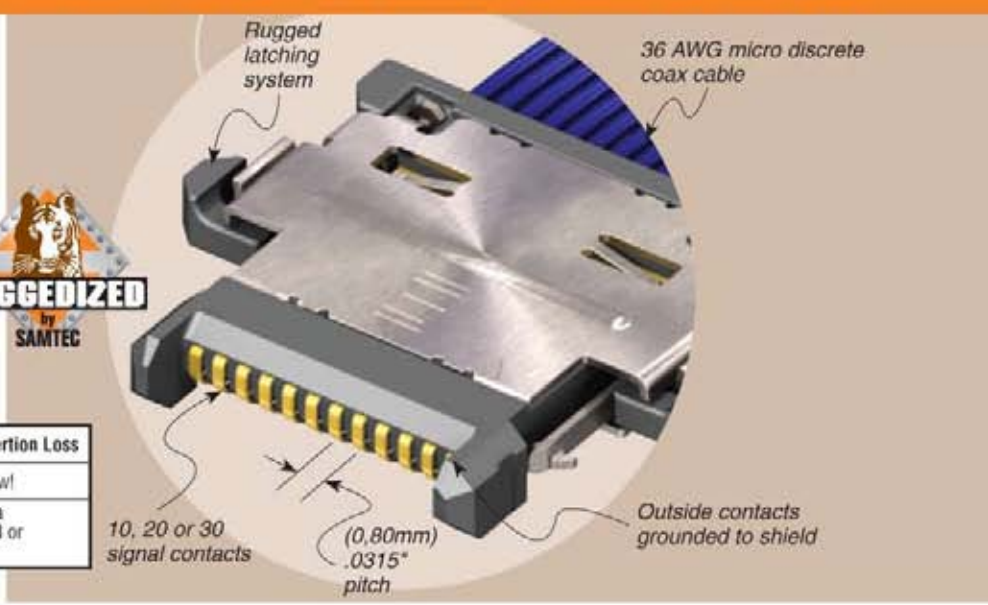
For complete specifications see www.samtec.com?FCC8

Cable:
36 AWG micro discrete coax cable
Signal Routing:
50Ω Single-Ended
Overall Length:
(1m) 40" standard
Cable Flexing Life:
>10,000 cycles
Cable Bending Radius:
<2,5mm
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating:
Testing Now!
Cable Propagation Delay:
4,4 nsec/meter
Operating Temp Range:
TBD
RoHS Compliant:
Yes

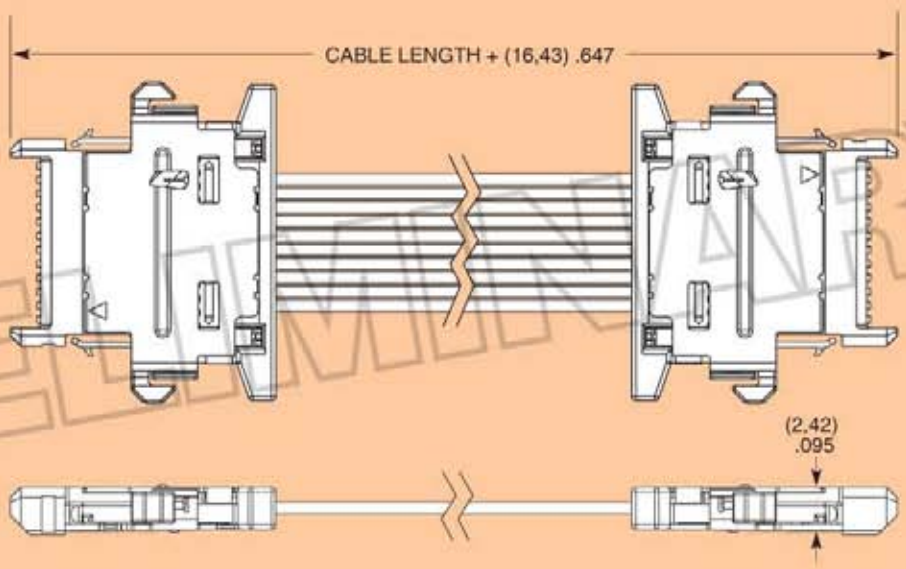
Mates with:
FCS8

RUGGEDIZED by SAMTEC

Cable Length	Rated @ -3dB Insertion Loss
39.37" (1m)	Testing Now!
Performance and complete test data available at www.samtec.com?FCC8 or contact sig@samtec.com	



FCC8	–	NO. OF POSITIONS	–	01	–	PLATING OPTION	–	CABLE LENGTH	–	S
		–10, –20, –30 (Call Samtec for other sizes)				–L = 10µ" (0,25µm) Gold on contact		–"XX.X" = Length in Inches 03.0" (76,2mm) MIN		



APPLICATION SPECIFIC

- Other sizes and lengths
- Other terminations
- Other wire AWG

Contact dr@samtec.com

Note:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note:
Verify part number with Samtec's Interactive Cable Builder at www.samtec.com/cable_builder/pitch.asp

Note:
Some lengths, styles and options are non-standard, non-returnable.

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

(0,80mm) .0315"

ACCELERATE™

FCS8 SERIES

FCS8-10-01-L-S-A-TR

FCS8-20-01-L-S-A-TR

HIGH SPEED COST EFFECTIVE COAX CABLE

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FCS8

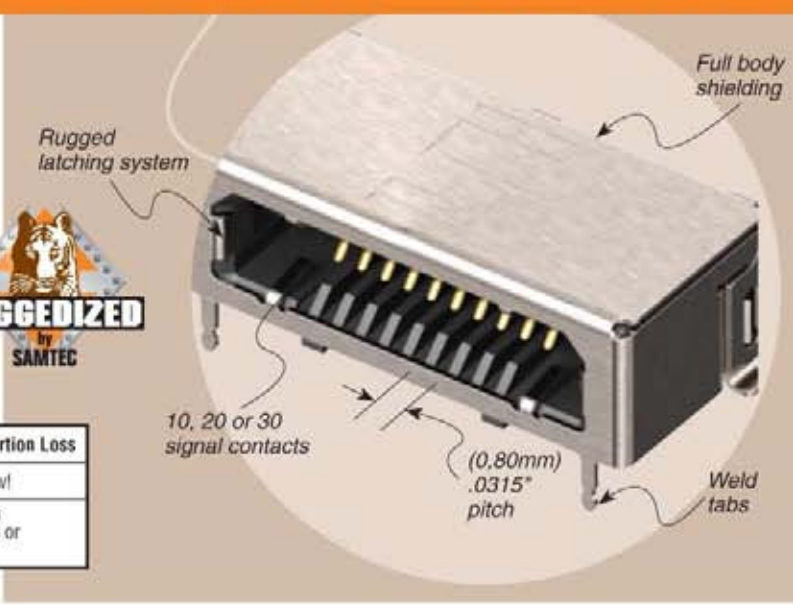
Insulator Material:
Black LCP
Contact Material:
BeCu
Contact Plating:
Au or Sn over 50µ" (1,27µm) Ni
Shield:
Nickel Plated Phosphor Bronze
Operating Temp Range:
-55°C to +125°C
Current Rating:
Testing Now!
RoHS Compliant:
Yes

Processing:

Max Processing Temp:
230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

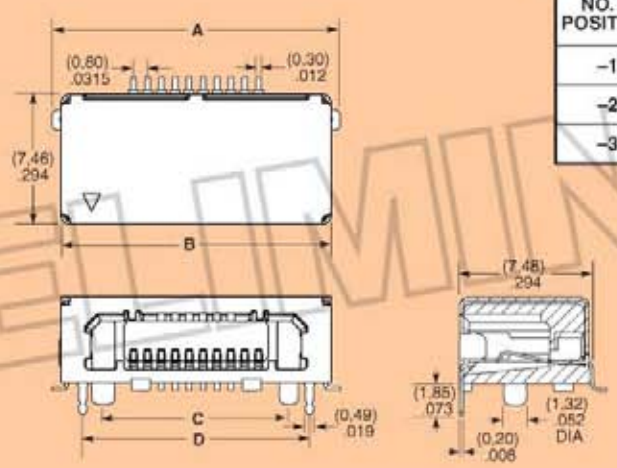
Mates with:
FCC8

RUGGEDIZED by SAMTEC



Cable Length	Rated @ -3dB Insertion Loss
39.37" (1m)	Testing Now!
Performance and complete test data available at www.samtec.com?FCS8 or contact sig@samtec.com	

FCS8	–	NO. OF POSITIONS	–	01	–	PLATING OPTION	–	S	–	A	–	TR
		–10, –20, –30 (Call Samtec for other sizes)				–L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail				–TR = Tape & Reel		



NO. OF POSITIONS	A	B	C	D
–10	(16,59) .653	(15,56) .613	(10,70) .421	(13,06) .514
–20	(24,59) .968	(23,56) .928	(18,70) .736	(21,06) .829
–30	(32,59) 1.282	(31,56) 1.243	(26,70) 1.051	(29,06) 1.144

PRELIMINARY

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

Q STRIP®

(0,50mm) .0197"
(0,80mm) .0315"

HQCD, EQCD SERIES

Q STRIP® COAX CABLE ASSEMBLIES

SPECIFICATIONS

For complete specifications see www.samtec.com?HQCD or www.samtec.com?EQCD

Cable:
38 AWG micro ribbon coax cable
Signal Routing:
50Ω Single-Ended
Overall Length:
(95,3mm) 03.75" to (1m) 40" standard
Cable Flexing Life:
>10,000 cycles
Cable Bending Radius:
<2,5mm
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating:
300 milliamp max
Cable Propagation Delay:
4.4 nsec/meter
Operating Temp Range:
-40°C to +105°C
Unmating Force (-RT1 option):
-RT1 option increases unmating force up to 50%
RoHS Compliant:
Yes

HQCD Mates with:
QTH, QSH

EQCD Mates with:
QTE, QSE

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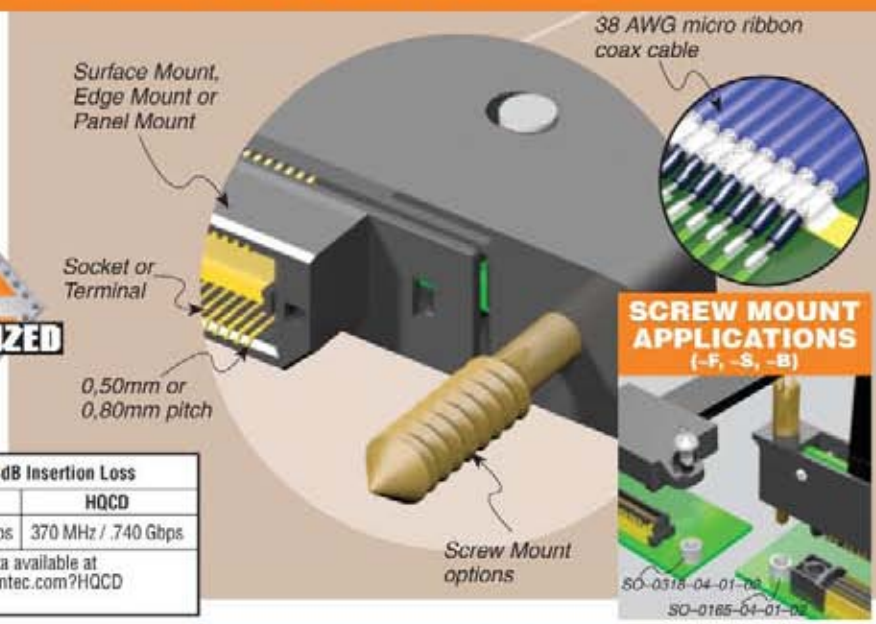
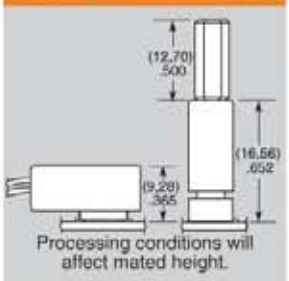


SCREW MOUNT APPLICATIONS (-F, -S, -B)

Cable Length	Rated @ -3dB Insertion Loss	
	EQCD	HQCD
39.37" (1m)	465 MHz / .930 Gbps	370 MHz / .740 Gbps
Performance and complete test data available at www.samtec.com?EQCD, www.samtec.com?HQCD or contact sig@samtec.com		

APPLICATIONS



APPLICATION SPECIFIC

- Other sizes and lengths
- Other terminations
- Other wire AWG

Contact dr@samtec.com

Note:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note:
Verify part number with Samtec's Interactive Cable Builder at www.samtec.com/cable_builder/pitch.asp

Note:
This Series is non-standard, non-returnable.

TYPE – **NO. OF POSITIONS PER ROW** – **WIRE LENGTH**

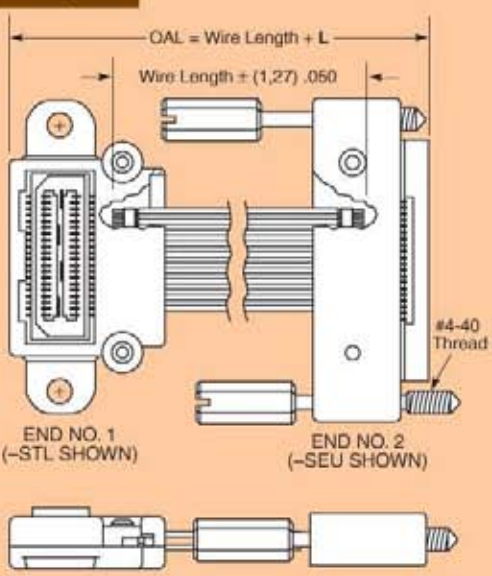
HQCD
= (0,50mm) .0197" pitch

EQCD
= (0,80mm) .0315" pitch

–030, –060, –090, –120
(HQCD Series)

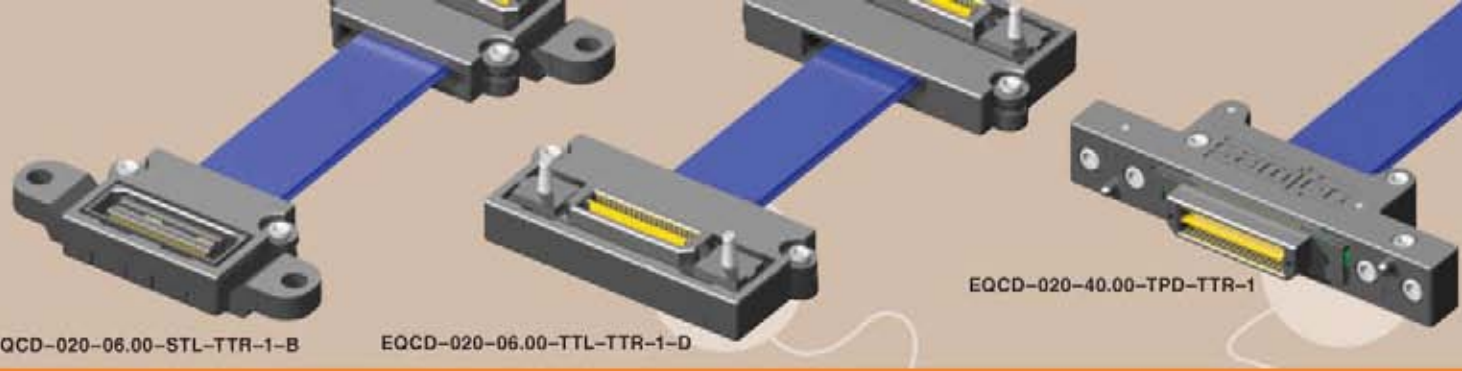
–020, –040, –060, –080
(EQCD Series)

–"XX.XX"
= Wire Length in Inches
(95,3mm) 03.75" Minimum



END TO END	L
Surface Mount to Surface Mount	(24,13) .950
Surface Mount to Edge Mount (Terminal)	(21,21) .835
Surface Mount to Edge Mount (Socket)	(20,47) .806
Edge Mount (Terminal) to Edge Mount (Terminal)	(18,29) .720
Edge Mount (Terminal) to Edge Mount (Socket)	(17,55) .691
Edge Mount (Socket) to Edge Mount (Socket)	(16,81) .662

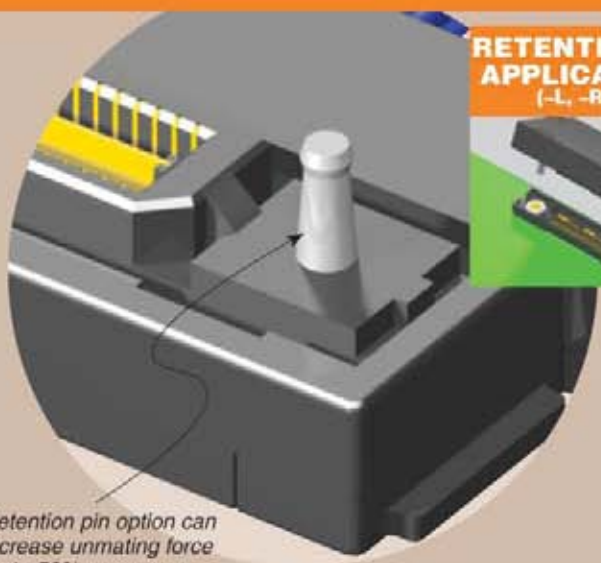
Due to technical progress, all designs, specifications and components are subject to change without notice.



HQCD–020–06.00–STL–TTR–1–B

EQCD–020–06.00–TTL–TTR–1–D

EQCD–020–40.00–TPD–TTR–1



Retention pin option can increase unmating force up to 50%

RETENTION PIN APPLICATIONS
(–L, –R, –D)

PANEL MOUNT END OPTION APPLICATIONS
(–TPU, –TPD, –SPU, SPD)

#4-40 Thread

Panel Mount options

END NO. 1	END NO. 2	WIRING OPTION	END OPTIONS

Specify END ASSEMBLIES from chart

END 1 or END 2	EDGE MOUNT
TEU	Terminal, Edge Mount, Notch Up
TED	Terminal, Edge Mount, Notch Down
SEU	Socket, Edge Mount, Notch Up
SED	Socket, Edge Mount, Notch Down

END 1 ONLY	PANEL MOUNT (Not available on HQCD 120 position and EQCD 80 positions)
TPU	Terminal, Panel Mount, Notch Up
TPD	Terminal, Panel Mount, Notch Down
SPU	Socket, Panel Mount, Notch Up
SPD	Socket, Panel Mount, Notch Down

–1
= Pin 1 to Pin 1

–2
= Pin 1 to Pin 2

–3
= Pin 1 to Second to Last Pin

–4
= Pin 1 to Last Pin

END 1 or END 2	SURFACE MOUNT
TTR	Terminal, Top Mount, Notch Right
TTL	Terminal, Top Mount, Notch Left
TBR	Terminal, Bottom Mount, Notch Right
TBL	Terminal, Bottom Mount, Notch Left
STR	Socket, Top Mount, Notch Right,
STL	Socket, Top Mount, Notch Left
SBR	Socket, Bottom Mount, Notch Right
SBL	Socket, Bottom Mount, Notch Left

Leave blank for no Screw Mount & Retention End Option

–F
= Screw Mount End No. 1 only
(N/A with XPX options)

–S
= Screw Mount End No. 2 only

–B
= Screw Mount Both Ends
(N/A with XPX options)

(N/A on 80 positions EQCD and 120 position HQCD)

–L
= End No. 1 Retention Pin or Socket

–R
= End No. 2 Retention Pin or Socket

–D
= Both Ends Retention Pin or Socket

–1
= End No. 1 Screw Mount.
End No. 2 Retention Pin or Socket

–2
= End No. 1 Retention Pin or Socket.
End No. 2 Screw Mount Option

Due to technical progress, all designs, specifications and components are subject to change without notice.

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QPAIRS®

(0,50mm) .0197"
(0,80mm) .0315"

HQDP, EQDP SERIES

Q PAIRS® TWINAX CABLE ASSEMBLIES

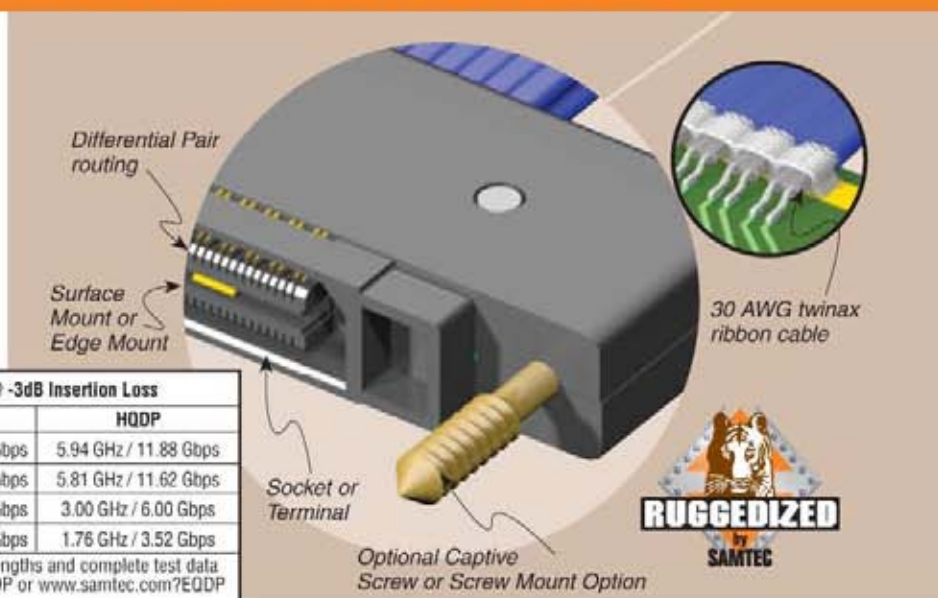
SPECIFICATIONS

For complete specifications see www.samtec.com?EQDP or www.samtec.com?HQDP

Cable:
30 AWG twinax micro ribbon
Signal Routing:
100Ω Differential
Cable Bending Radius:
(11,11mm) 7/16" min
Plating:
Au over 50µ" (1,27µm) Ni
Current Rating:
1 A max
Propagation Delay:
4.67 nsec/meter
Operating Temp Range:
-40°C to +105°C
Skew (pair-to-pair):
<10 ps/ft
Skew (within a pair):
<5 ps/ft
EMI Performance:
FCC Class A
RoHS Compliant:
Yes

EQDP Mates with:
QTE-DP, QSE-DP

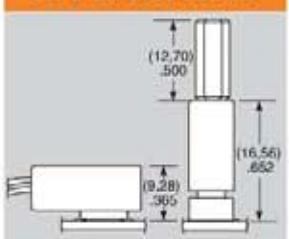
HQDP Mates with:
QTH-DP, QSH-DP



Cable Length	Rated @ -3dB Insertion Loss	
	EQDP	HQDP
6" (152,4mm)	4.48 GHz / 8.96 Gbps	5.94 GHz / 11.88 Gbps
12" (304,8mm)	4.11 GHz / 8.22 Gbps	5.81 GHz / 11.62 Gbps
19.68" (0,5m)	3.58 GHz / 7.16 Gbps	3.00 GHz / 6.00 Gbps
39.37" (1m)	1.32 GHz / 2.64 Gbps	1.76 GHz / 3.52 Gbps

Performance data for other cable lengths and complete test data available at www.samtec.com?HQDP or www.samtec.com?EQDP or contact sig@samtec.com

APPLICATIONS



Processing conditions will affect mated height.

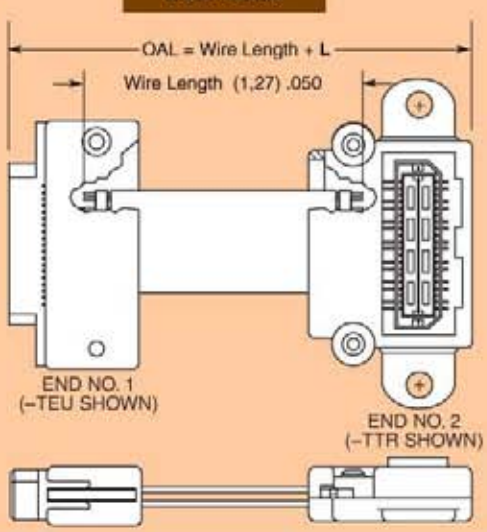
TYPE	NO. OF PAIRS	WIRE LENGTH	END NO. 1	END NO. 2	WIRING OPTION	SCREW OPTION
HQDP = (0,50mm) .0197" pitch **EQDP** = (0,80mm) .0315" pitch	–020, –040, –060, –080 (20 pairs per bank) HQDP Series –014, –028, –042, –056 (14 pairs per bank) EQDP Series	–"XX.XX" = Wire Length in Inches (95,3mm) 03.75" minimum	Specify END ASSEMBLIES from chart		–1 = Pin 1 to Pin 1 –2 = Pin 1 to Pin 2 –3 = Pin 1 to Second Last Pin –4 = Pin 1 to Last Pin	Leave blank for no Screw Option –F = End No. 1 –S = End No. 2 –B = Both Ends

END	SURFACE MOUNT
TTR	Terminal, Top, Notch Right
TTL	Terminal, Top, Notch Left
TBR	Terminal, Bottom, Notch Right
TBL	Terminal, Bottom, Notch Left
STR	Socket, Top Notch Right,
STL	Socket, Top, Notch Left
SBR	Socket, Bottom, Notch Right
SBL	Socket, Bottom, Notch Left

END	EDGE MOUNT
TEU	Terminal, Edge, Notch Up
TED	Terminal, Edge, Notch Down
SEU	Socket, Edge, Notch Up
SED	Socket, Edge, Notch Down

WIRING REQUIREMENTS	
WIRING OPTION	END OPTIONS
1 or 2	TTR, TBL, STL, SBR, TEU, SED to TTR, TBL, STL, SBR, TED, SEU or TTL, TBR, STR, SBL, TED, SEU to TTL, TBR, STR, SBL, TEU, SED
3 or 4	TTR, TBL, STL, SBR, TEU, SED to TTL, TBR, STR, SBL, TEU, SED or TTL, TBR, STR, SBL, TED, SEU to TTR, TBL, STL, SBR, TED, SEU

END TO END	L
Surface Mount to Surface Mount	(24,13) .950
Surface Mount to Edge Mount (Terminal)	(21,21) .835
Surface Mount to Edge Mount (Socket)	(20,47) .806
Edge Mount (Terminal) to Edge Mount (Terminal)	(18,29) .720
Edge Mount (Terminal) to Edge Mount (Socket)	(17,55) .691
Edge Mount (Socket) to Edge Mount (Socket)	(16,81) .662



Note: Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note: Verify part number with Samtec's Interactive Cable Builder at www.samtec.com/cable_builder/pitch.asp

Note: This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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EDGE R·A·T·E™ CONTACT

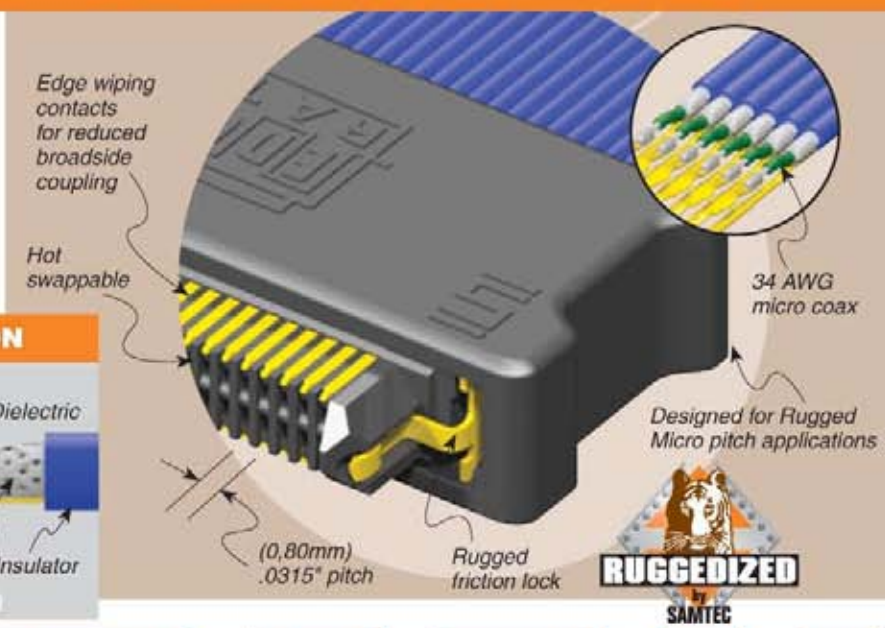
(0,80mm) .0315"
ERCDA SERIES

EDGE RATE™ COAX CABLE ASSEMBLIES

FEATURES

- Direct Termination, no PCB
- Edge Rate™ contact
- Latching
- 34 AWG micro coax for higher performance
- Hot swappable

Mates with:
ERF8(–L)

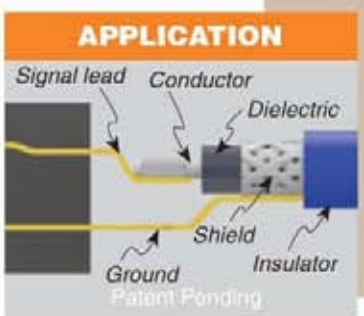


SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERCDA

Cable:
34 AWG micro coax
Signal Routing:
50Ω Single-Ended
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-40°C to +105°C
RoHS Compliant:
Yes

APPLICATION



APPLICATION

ALSO AVAILABLE

Additional cable designs in development.
Call Samtec.

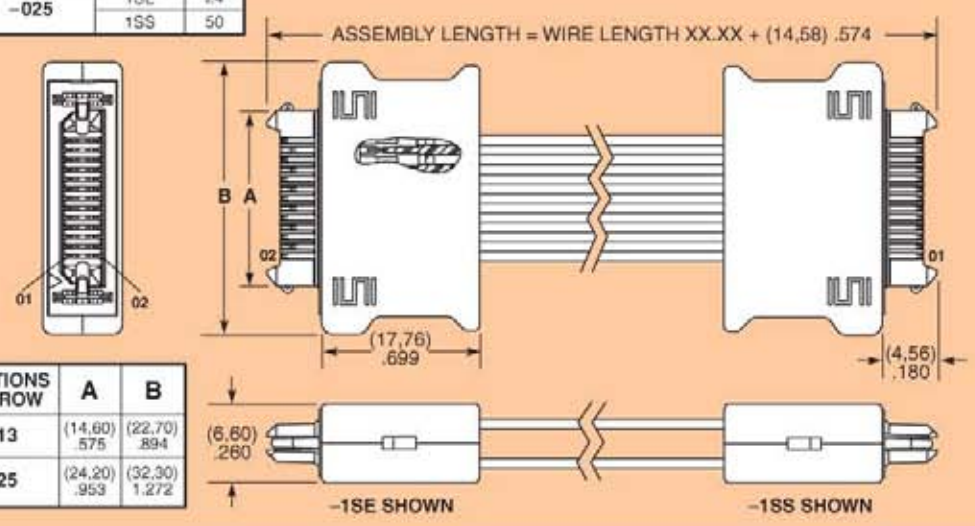
Note:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note:
Verify part number and correct wiring scheme with Samtec's Interactive Cable Builder at www.samtec.com/cable_builder/pitch.asp

Note:
Some lengths, styles and options are non-standard, non-returnable.

ERCDA	–	NO. OF POSITIONS PER ROW	–	WIRE LENGTH	–	WIRE OPTION	–	END NO. 1	–	END NO. 2
		–013, –025 (See chart for number of I/Os)		–"XX.XX" = Wire Length in Inches (95,3mm) 03.75" minimum		–1SE = GSGSG –1SS = SSSSS		–TD = Terminal, Pin 1 Down		–TU = Terminal, Pin 1 Up

POSITIONS PER ROW	WIRE OPTION	I/Os
–013	1SE	12
	1SS	26
–025	1SE	24
	1SS	50



POSITIONS PER ROW	A	B
–013	(14,60) .575	(22,70) .894
–025	(24,20) .953	(32,30) 1.272

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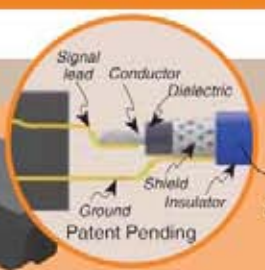
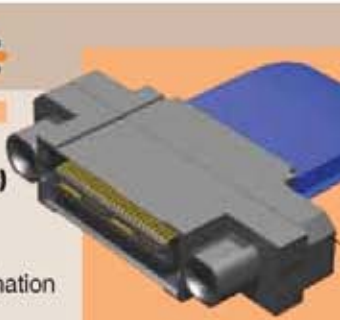
FLAT RIBBON COAX CABLE ASSEMBLIES

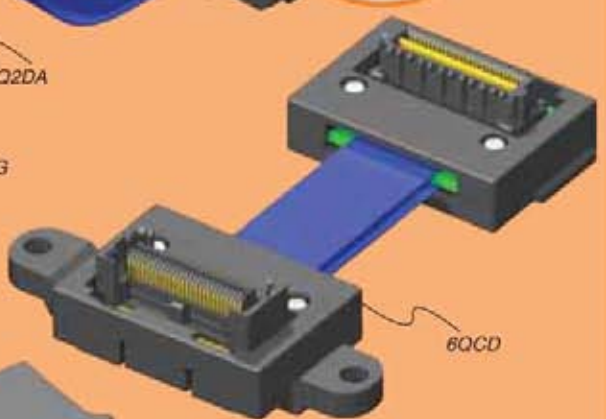
Q2™

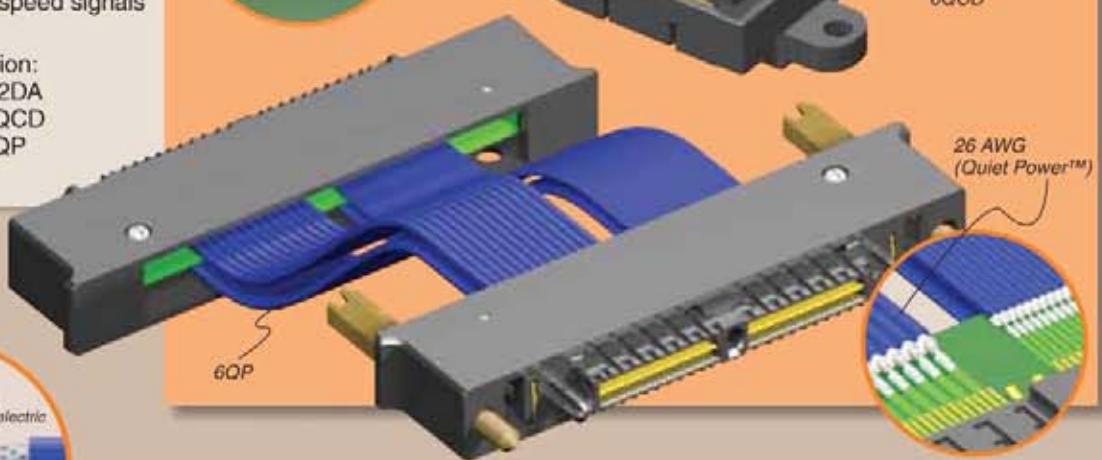
Q2™ Series Cables
(Q2DA, 6QCD, 6QP Series)

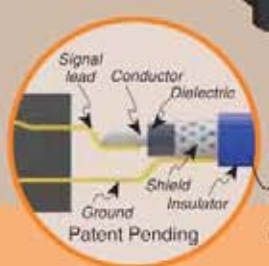
- 50Ω system
- 0,635mm pitch
- Vertical or edge mount termination to cable
- 36 AWG coax cable terminated directly to lead optimizes signal integrity (Q2DA Series)
- 38 AWG coax ribbon cable (6QCD Series)
- 26 AWG Quiet Power™ coax cable minimizes EMI aggression and coupling of high speed signals (6QP Series)
- For ordering information:
  www.samtec.com?Q2DA
  www.samtec.com?6QCD
  www.samtec.com?6QP











EDGE R·A·T·E™ CONTACT

Edge Rate™ High Speed Cables
(ERCDA, ERCD Series)

- 0,8mm pitch
- 34 AWG cable
- Cable terminated directly to lead optimizes signal integrity (ERCDA)
- Hot swappable option (grey cable)
- Standard rugged friction lock
- For ordering information:
  www.samtec.com?ERCDA
  www.samtec.com?ERCD

Due to technical progress, all designs, specifications and components are subject to change without notice.

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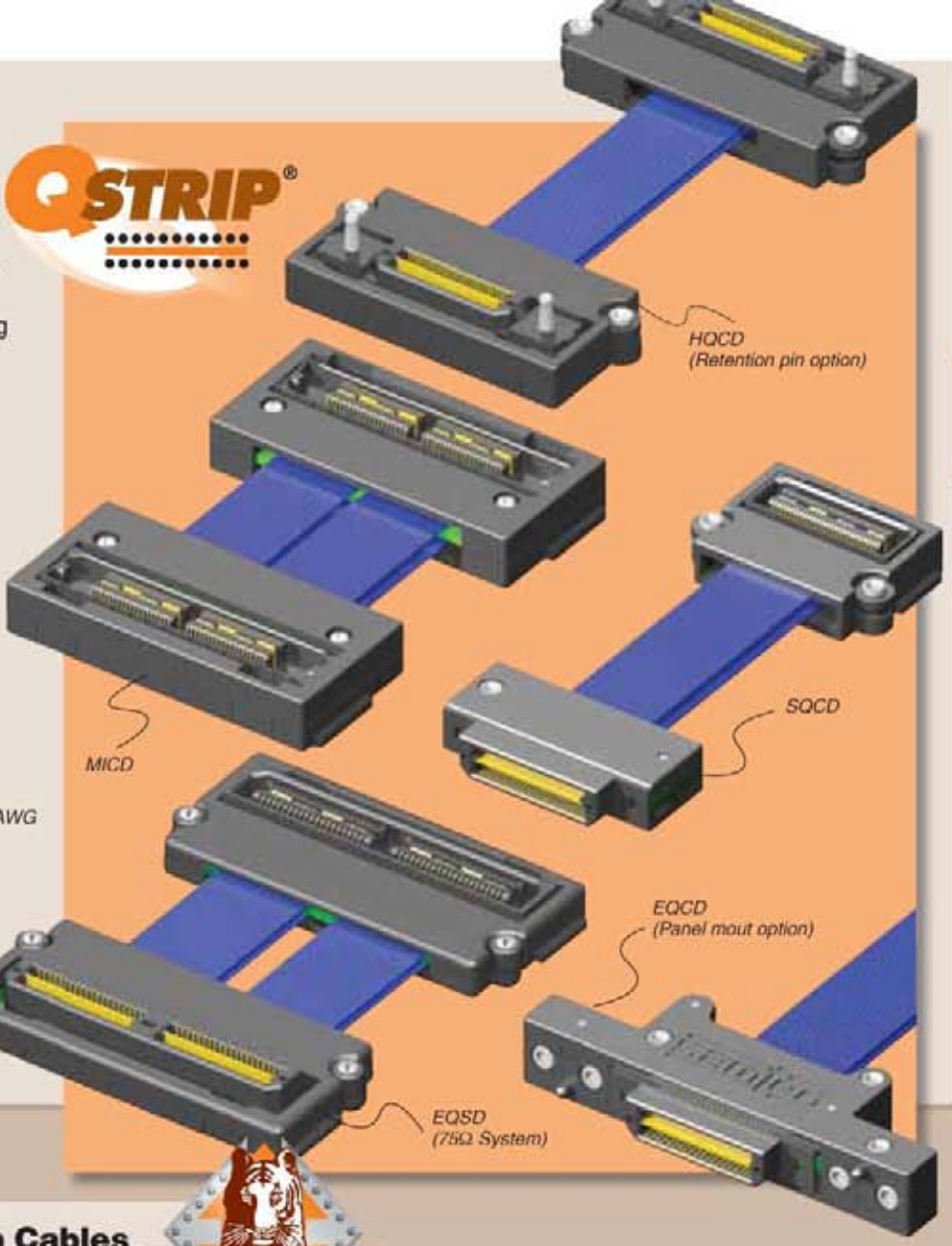
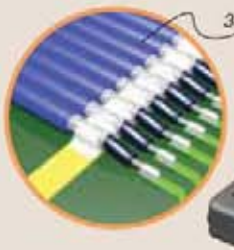
Q Strip® Cables
(HQCD, SQCD, MICD, EQCD, EQSD Series)

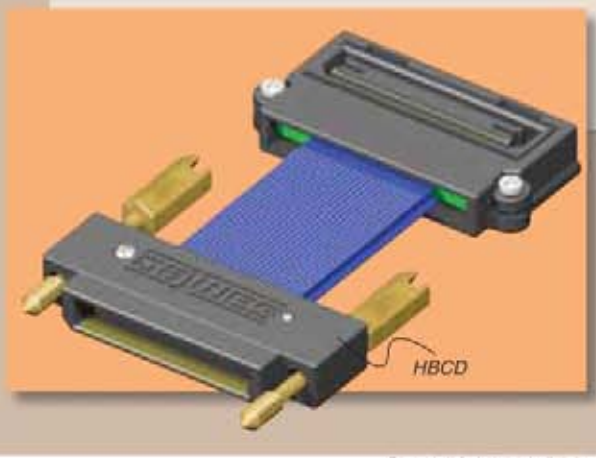
- 38 AWG ribbon coax cable (SQCD, MICD, EQSD)
- 36 AWG ribbon coax cable (EQCD, HQCD)
- 50Ω and 75Ω signal routing
- 0,5mm, 0,635mm, and 0,8mm pitch
- Vertical or edge mount termination to cable
- Ideal for longer cable assemblies (6" to 40")
- For ordering information:
  www.samtec.com?HQCD
  www.samtec.com?SQCD
  www.samtec.com?MICD
  www.samtec.com?EQCD
  www.samtec.com?EQSD





Basic Blade & Beam Cables
(HBCD Series)

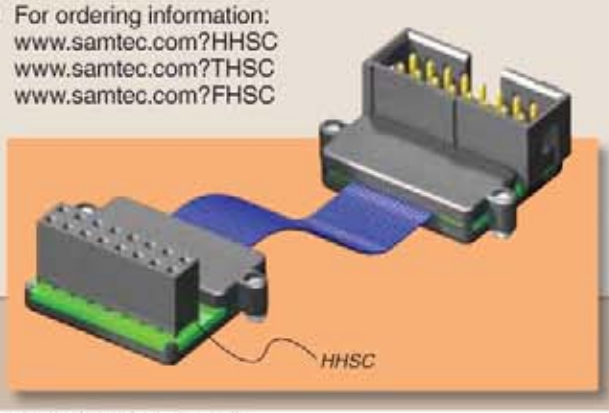
- 0,5mm pitch
- 38 AWG ribbon coax cable
- 50Ω signal routing
- Mate with BTH/BSH Series sockets and headers
- For ordering information:
  www.samtec.com?HBCD



RUGGEDIZED by SAMTEC

Standard Connector Cables
(HHSC, THSC, FHSC Series)

- JTAG (IEEE 1149.1) compatible
- .100" (2,54mm), .050" (1,27mm) and .0787" (2mm) pitch
- 38 AWG ribbon coax cable
- 50Ω signal routing
- Header or socket termination
- For ordering information:
  www.samtec.com?HHSC
  www.samtec.com?THSC
  www.samtec.com?FHSC



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FLAT RIBBON TWINAX CABLE ASSEMBLIES

Q2™

RUGGEDIZED by SAMTEC

Q2™ Series Cables
(6QDP, 6QDPS Series)

- 100Ω differential pair impedance
- 0,635mm pitch
- Choice of shielded (6QDPS) for superior EMI performance (FCC Class A), or unshielded (6QDP) for cost savings
- Wide variety of locking, latching and other ruggedizing features
- For ordering information:
  www.samtec.com?6QDP
  www.samtec.com?6QDPS

Q Series® Cables
(EQDP, HQDP Series)

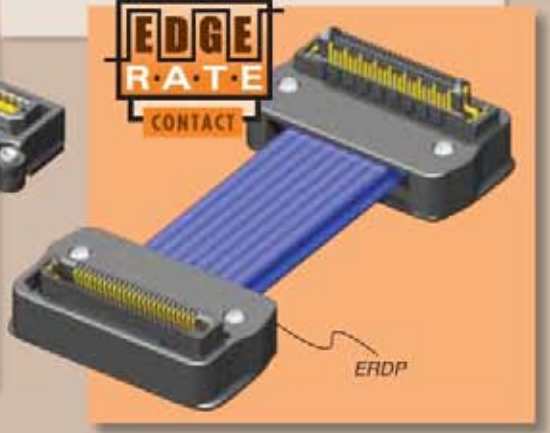
- 100Ω differential pair system
- Choice of 0,8mm (EQDP) or 0,5mm (HQDP) systems
- Variety of pair counts and ruggedizing features/options
- For ordering information:
  www.samtec.com?EQDP
  www.samtec.com?HQDP

QPAIRS®

Edge Rate™ Cables
(ERDP Series)

- 100Ω system on 0,8mm pitch
- SI optimized Edge Rate™ contacts
- 8, 16, 24 and 32 pairs standard
- Hot swappable
- Rugged latching option
- For ordering information:
  www.samtec.com?ERDP

EDGE R·A·T·E™ CONTACT

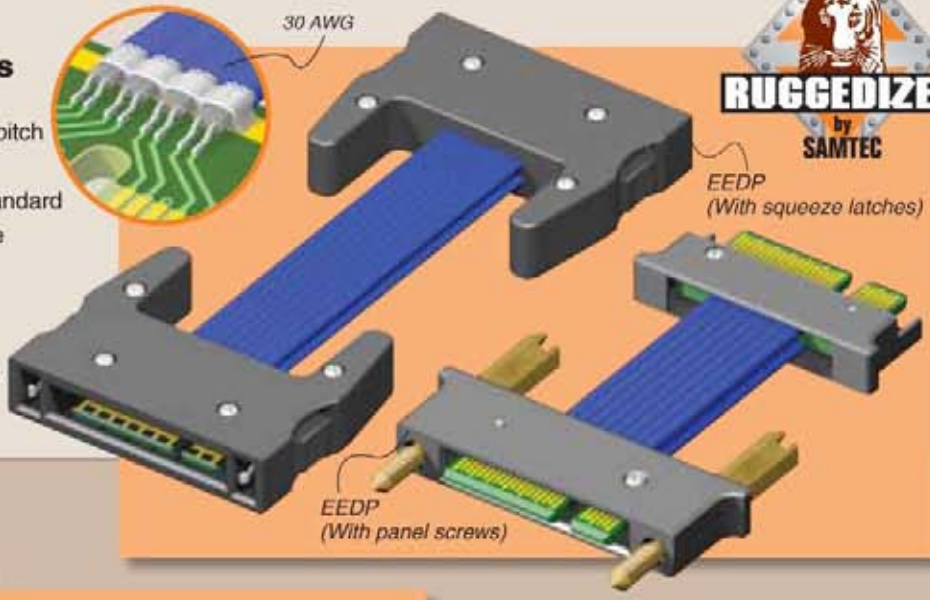


Due to technical progress, all designs, specifications and components are subject to change without notice.

High Speed Edge Card Cables
(EEDP Series)

- 100Ω system on 0,8mm pitch
- Hot pluggable
- 8, 16, 24 and 32 pairs standard
- Variety of latches, captive panel screws
- Vertical and right angle orientations
- For ordering information: www.samtec.com?EEDP

RUGGEDIZED by SAMTEC



DATA BANK™
HIGH SPEED / HIGH DENSITY CABLE SYSTEM

High Density Cables
(GCCA, GCAM Series)

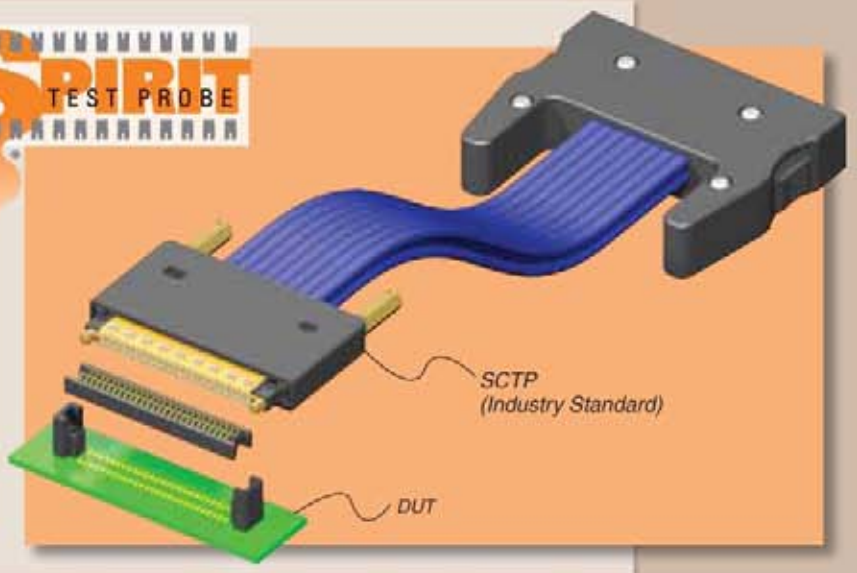
- 100Ω differential pair signal impedance
- Optimizes Signal Integrity with no transition board between cable and contacts
- Surface mount (GCAM Series) or panel mount (GCCA Series) orientations
- Socket or terminal end connector options
- 8 pairs per chicklet, 4 chicklets per bank
- Choice of 1 or 2 banks, for a total of 32 or 64 pairs
- Combination guide pin/locking posts (solders to PCB)
- Mounting blocks or right angle applications also available
- Chicklets repositionable with available tool
- For ordering information: www.samtec.com?GCCA www.samtec.com?GCAM

Spirit® Compression Test Probes
(SCTP, SFLTP Series)

PATENT PENDING

- 100Ω differential pair system
- Logic analysis, protocol analysis, oscilloscopes, trace output and testing applications from 1.25 Gbps to 5.2 Gbps
- Enables high speed testing compatible with Intel specific PCI Express® protocol footprint
- Replaceable probe tip connectors extend probe life indefinitely (SCTP Series)
- Flying leads pick up differential signals not conveniently grouped or routed to connectors (SFLTP Series)
- For ordering information: www.samtec.com?SCTP www.samtec.com?SFLTP

SPIRIT TEST PROBE



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Sudden Circuits®

HIGH SPEED FLEX DATA LINKS

Sudden Circuits® are quick-turn, highly configurable, high speed data links for both low and high volume applications. They feature traditional flex circuit materials and Samtec connectors using new direct imaging technology.
Sudden Circuits® has three key features:

1. Design Flexibility

- Choose from among our most popular standard connectors including Q2™, Q Series®, Edge Rate™, and micro and standard pitch strips up to .100" (2,54mm) centerline
- Any connector gender, any orientation, and any number of positions
- Any length up to 16.3 inches (414.02mm)
- Any ground/signal pattern
- 1 ounce .0014" copper (½ ounce available)

Sudden Circuits® gives you literally millions of design permutations and a set lead time and price.

2. Quick Delivery, Competitive Price

- Most initial builds will cost about $1,500 (US) depending on panel density and connectors (approximately 30 to 50 assemblies)
- No artwork or Nonrecurring Engineering Charges (NRE's)
- No long lead times for design or artwork production
- Most orders ship in two weeks or less

3. Easy On-Line Solutionator™ Builder

- Design, build, and order high speed data links on-line
- See next page for Solutionator™ guide

Features coming soon:

- Longer assembly lengths (up to 22" (560mm))
- Differential routing
- ½ ounce .0007" copper (1 ounce standard)
- 90° turns or other custom angles
- Custom ends with other standard Samtec connectors, ZIF or card interfaces
- Reversed connectors
- Special end options including retention pins, latches, mounting hardware, etc.

Standard Sudden Circuits®

Pitch	Terminal	Socket	Description
.100"	TSM	SSW	Tiger Buy
		SSM	SMT Socket
2mm	TMM	SQW-D-VS	Tiger Buy
	TMMH	CLT	Tiger Claw™
	TSH-DV	TLE	Tiger Beam
	LTMM-SM	MMS	Box Style
	LS2		Razor Beam™
.050"x.100"	FTR/TML	RSM	Tiger Buy
.050"	FTS	CLP	Tiger Claw™
	FTSH	FLE	Tiger Beam
	TFM/L	SFM/L	Tiger Eye™
1mm	FTM/FTMH	CLM	Tiger Claw™
		MLE	Tiger Beam
1mm ZIF	ZF1/FC1**		FPC/FFC
.8mm	FTE	CLE	Tiger Beam
	TEM	SEM	Tiger Eye™
	ERM8	ERF8	Edge Rate™
	BTE	BSE	Basic B&B
.8mm Ground Plane	QTE	QSE	Q Strip®
	QRM8	QRF8	Q Rate®
.635mm	BTS	BSS	Basic B&B
	LSS		Razor Beam™
.635mm Ground Plane	QMS	QFS	Q2™
	QTS	QSS	Q Strip®
.5mm	BTH	BSH	Basic B&B
	ERM5	ERF5	Edge Rate™
	LSHM		Razor Beam™
	LTH	LSH	Basic B&B
.5mm Ground Plane	QTH	QSH	Q Strip®
.5mm ZIF	ZF5**/ZHR5**		FPC/FFC
.4mm	ST4	SS4	Micro

** Pads on flex mate with board level connectors.
☐ Common high speed data links. See chart for typical performance and more information.

Common High Speed Flex Data Links

Series	ERDL2	HFHM2	HFEM2	TCDL2	FFDL2	TFMDL	S4DL2
Pitch	0.80mm (.0315")	0.50mm (.0197")	0.80mm (.0315")	2.00mm (.0787")	1.27mm (.050")	1.27mm (.050")	0.40mm (.01575")
Performance* (@ -3dB IL)	2.58 GHz/ 5.16 Gbps	2.36 GHz/ 4.72 Gbps	2.62 GHz/ 5.24 Gbps	1.82 GHz/ 3.64 Gbps	1.78 GHz/ 3.56 Gbps	TBD	TBD
Mates with	ERM8, ERF8	QTH, QSH	QTE, QSE	TMMH, CLT	FTSH, FLE	SFM, TFM, SFML, TFML	SS4/ST4
Page	306			307			

* (127mm) 5" length and DP routing

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Sudden Circuits®

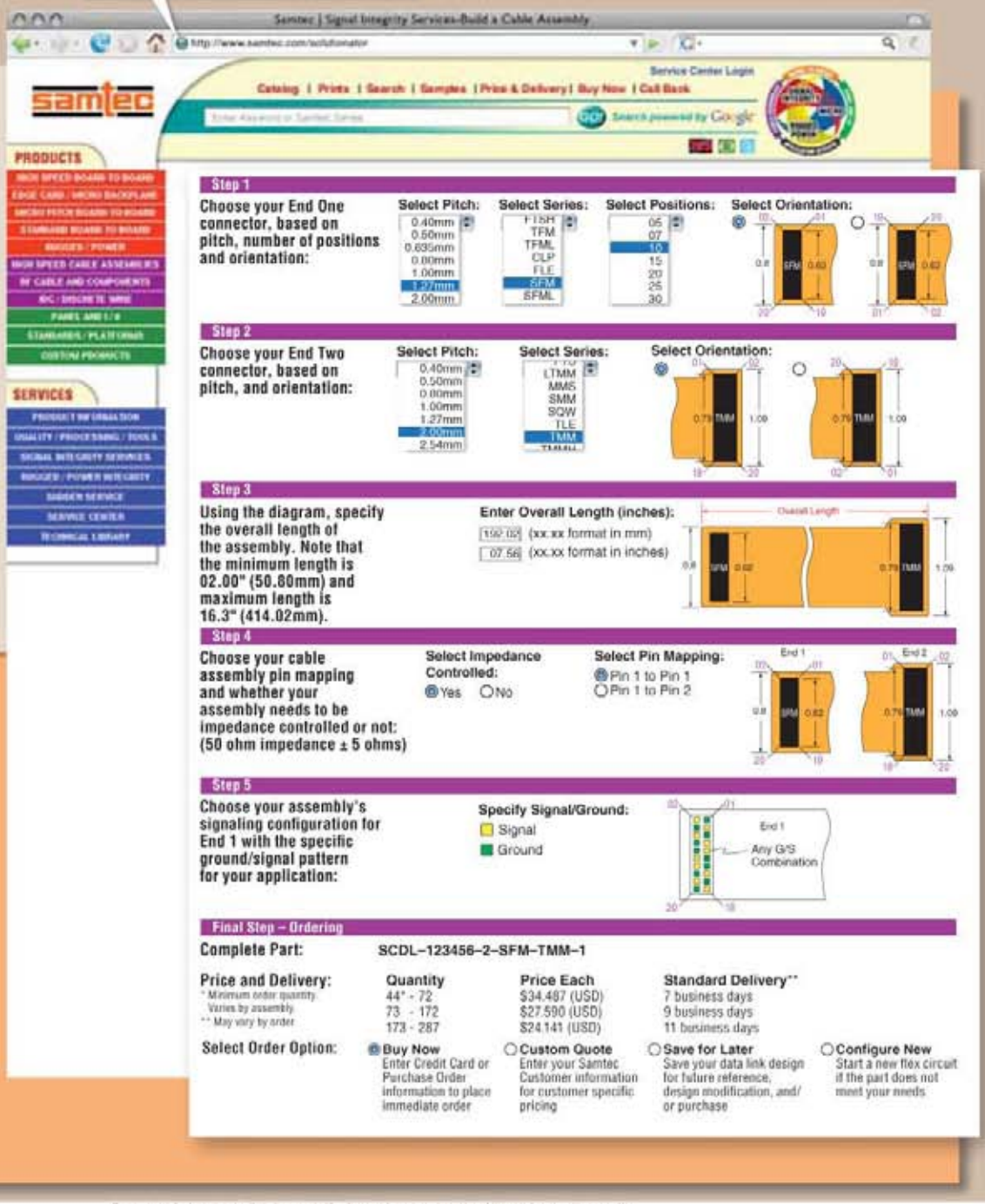
SOLUTIONATOR™

DESIGN, BUILD & ORDER ON-LINE

Welcome to Samtec's Sudden Circuits® Solutionator™. This unique interactive program allows you to create valid Samtec part numbers for high speed flex data links based on your desired specifications and options:

Any pin count, any length, any orientation and with unique signal/ground assignments, all with standard product lead time and pricing.

www.samtec.com/solutionator



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COMMON HIGH SPEED FLEX DATA LINKS

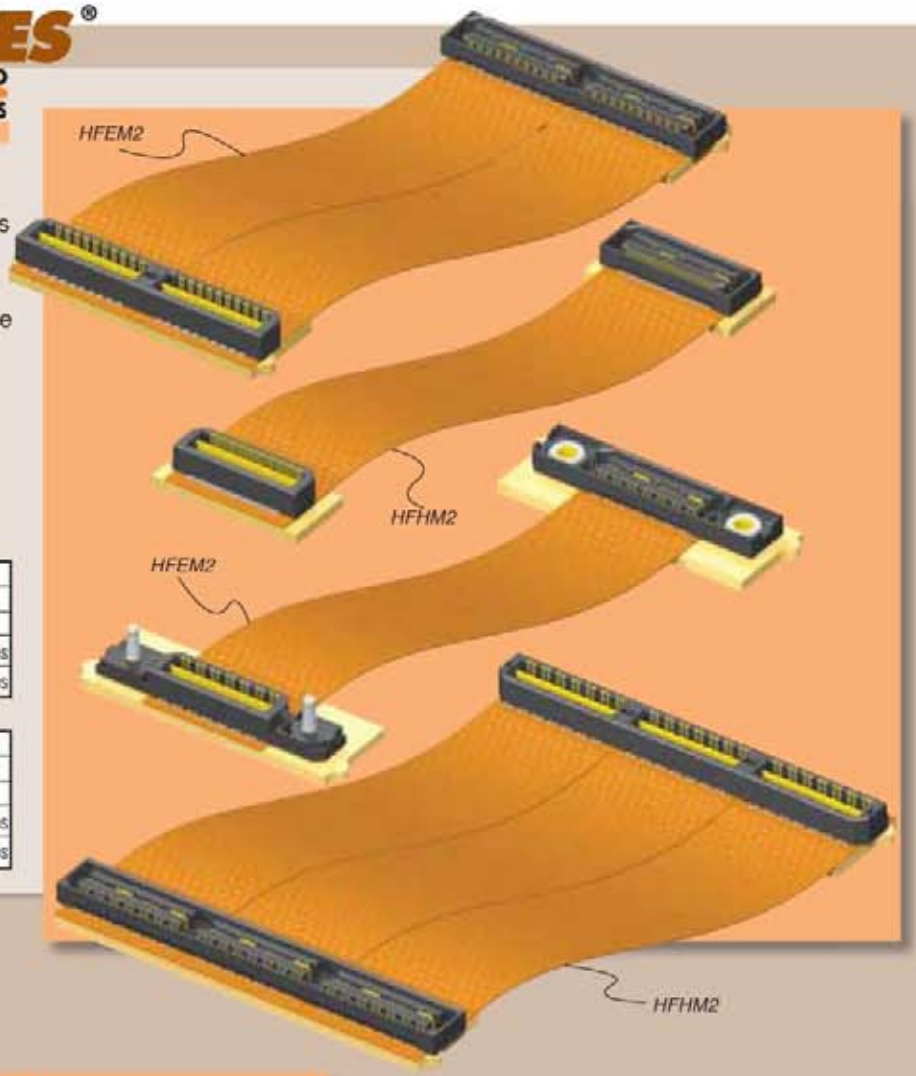
QSERIES® HIGH SPEED INTERCONNECTS

High Speed Connectors on Flex

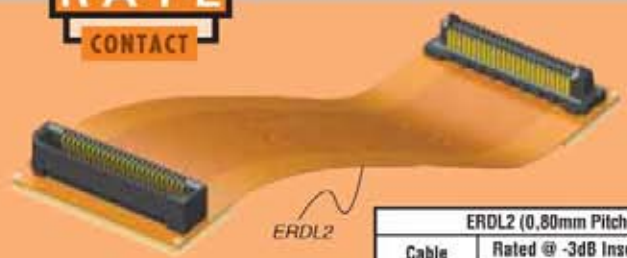
- Terminate with single-ended or differential pair high speed connectors
- 0,5mm (HFHM2 Series) and 0,8mm (HFEM2 Series) pitch
- Choice of vertical, horizontal and edge mount mating connectors
- Easy customization of cable lengths, pin counts, guide posts, connector heights, etc.
- For complete specifications see: www.samtec.com?HFEM2 www.samtec.com?HFHM2

HFEM2 (0,8mm Pitch)		
Cable Length	Rated @ -3dB Insertion Loss	
	-DP	-SE
5" (127mm)	2.62 GHz / 5.24 Gbps	2.13 GHz / 4.26 Gbps
10" (254mm)	1.36 GHz / 2.72 Gbps	1.23 GHz / 2.46 Gbps

HFHM2 (0,5mm Pitch)		
Cable Length	Rated @ -3dB Insertion Loss	
	-DP	-SE
5" (127mm)	2.36 GHz / 4.72 Gbps	1.91 GHz / 3.82 Gbps
10" (254mm)	1.64 GHz / 3.28 Gbps	1.05 GHz / 2.10 Gbps



EDGE R·A·T·E™ CONTACT



ERDL2 (0,80mm Pitch)	
Cable Length	Rated @ -3dB Insertion Loss
	-DP
5" (127mm)	2.58 GHz / 5.16 Gbps

High Speed Connectors on Flex

- Terminate with single-ended or differential pair high speed connectors
- Easy customization of cable lengths, pin counts, guide posts, connector heights, etc.
- For complete specifications including optimized pin mapping on the assembly print see: www.samtec.com?ERDL2

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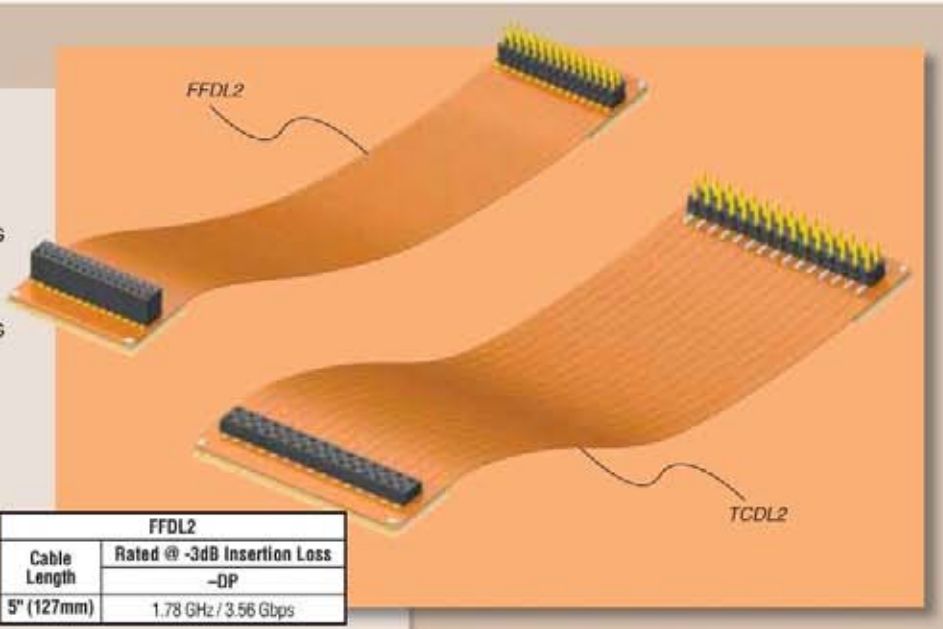
Sudden Circuits®

ORDER FROM STOCK OR BUILD YOUR OWN

Standard Connectors on Flex

- Terminate with single-ended or differential pair standard connectors
- 1,27mm (FFDL2 Series) and 2mm (TCDL2 Series) pitch
- Easy customization of cable lengths & pin counts
- For complete specifications see: www.samtec.com?TCDL2 www.samtec.com?FFDL2



TCDL2	
Cable Length	Rated @ -3dB Insertion Loss –DP
5" (127mm)	1.82 GHz / 3.64 Gbps

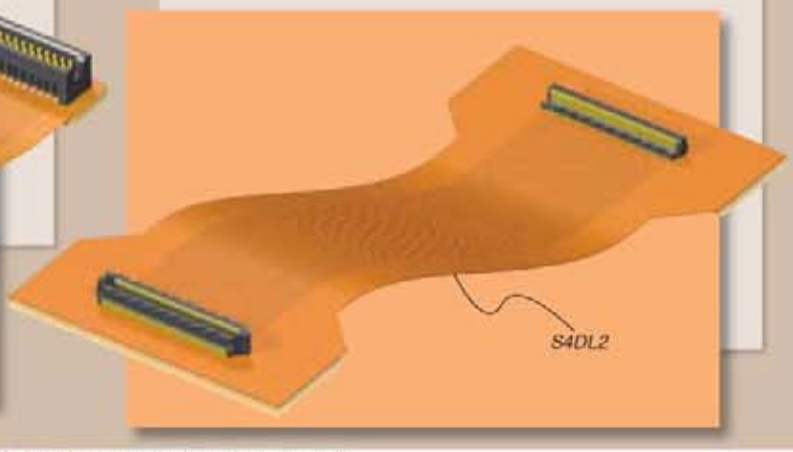
FFDL2	
Cable Length	Rated @ -3dB Insertion Loss –DP
5" (127mm)	1.78 GHz / 3.56 Gbps

Tiger Eye™ Connectors on Flex

- Terminate with standard or friction lock sockets and terminals
- Easy customization of cable lengths & pin counts
- For complete specifications see: www.samtec.com?TFMDL

Micro Pitch Connectors on Flex

- .4mm pitch connectors terminated with differential pair high speed conductors
- Easy customization of cable lengths & pin counts
- For complete specifications see: www.samtec.com?S4DL2



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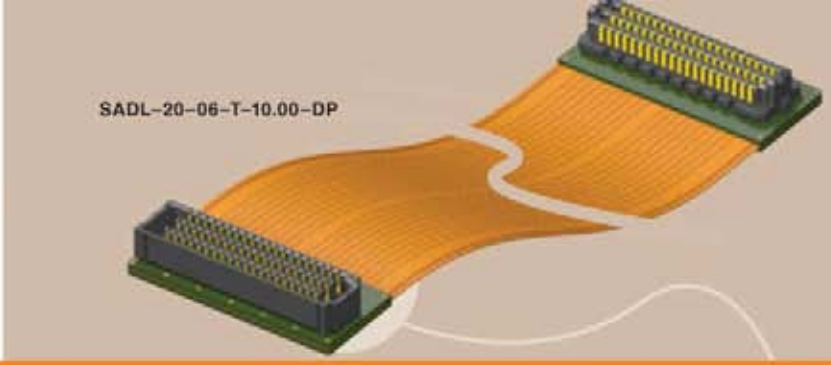
SEARAY™ OPEN PIN FIELD INTERCONNECTS

(1,27mm) .050"

SADL SERIES



HIGH DENSITY FLEX DATA LINKS

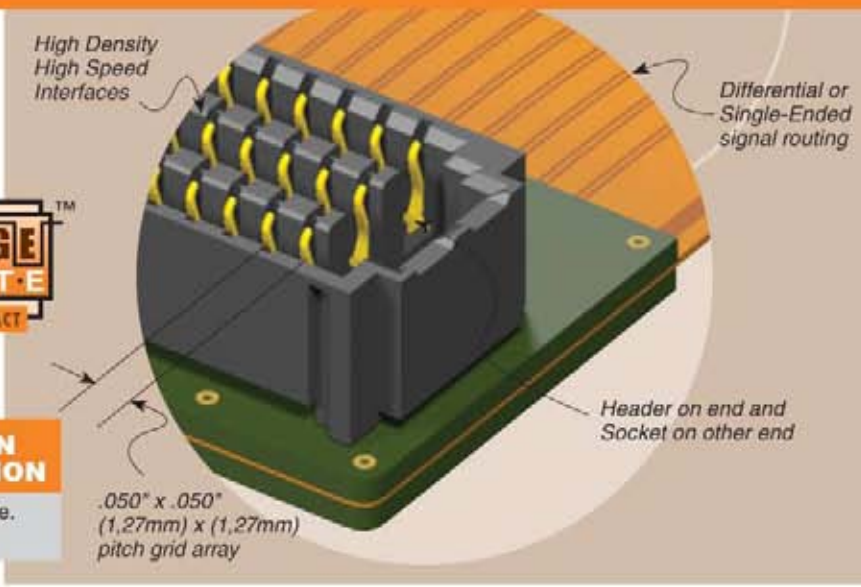
SPECIFICATIONS

Mates with:
SEAM, SEAF

For complete specifications see www.samtec.com?SADL-DP or www.samtec.com?SADL-SE

Header:
SEAM Series
Socket:
SEAF Series
Plating (Connector):
30µ" (0,76µm) Au on contact area, Matte Sn on Tail
Cable:
1 oz. rolled annealed copper
Base Film:
1 mil Polyimide
Adhesive:
FR (DuPont)
Stiffener:
FR-4 glass epoxy
Flammability Rating:
UL 94 VO
Operating Temp Range:
-40°C to +100°C
RoHS Compliant:
Yes

EDGE R·A·T·E™ CONTACT

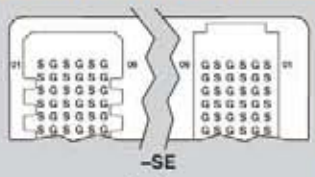


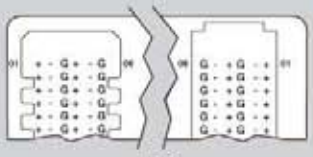
APPLICATION SPECIFIC OPTION

Other sizes available.
Call Samtec.

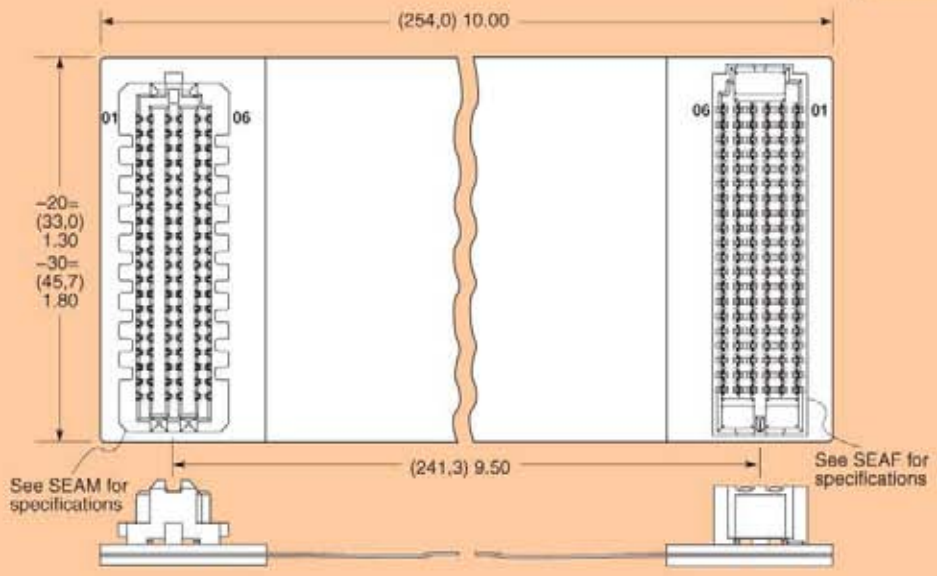
TYPE	NO. PINS PER ROW	NO. OF ROWS	T	OVERALL LENGTH	SIGNAL ROUTING
SADL = 3 layer flex	-20, -30	-06		-10.00 = (254,0mm) 10.00"	-DP = Differential Pair -SE = Single-Ended

SIGNAL ROUTING





Product has some lines dedicated to ground. For signal/ground assignments see signal routing information on this page or the assembly print at the web address above.



Note: Some sizes, styles and options are non-standard, non-returnable

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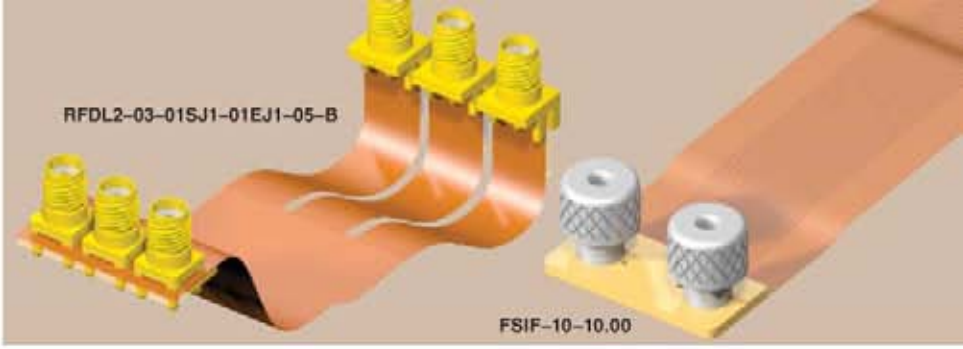


RFDL2, FSIF SERIES

RF & ONE PIECE FLEX DATA LINKS

Mates with:
SMA

SPECIFICATIONS

For complete specifications see www.samtec.com?RFDL2

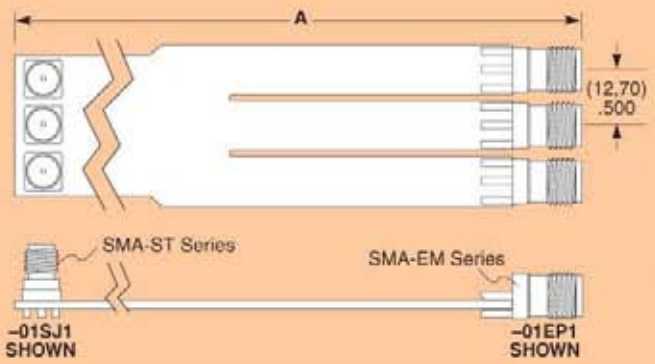
Cable:
1oz. rolled annealed copper
Base Film:
1 mil Polyimide
Adhesive:
FR (DuPont)
Stiffener:
FR-4 glass epoxy
Flammability Rating:
UL 94 VO
Operating Temp Range:
-55°C to +105°C
RoHS Compliant:
Yes

APPLICATION SPECIFIC OPTION

Other sizes and lengths available.
Contact Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

RFDL2	– NO. OF POSITIONS	– END 1	– END 2	– OVERALL LENGTH	– B
	–03	–01SJ1 = Straight Jack –01SP1 = Straight Plug	–01EJ1 = Edge Mount Jack –01EP1 = Edge Mount Plug	(In Inches) –05 = (127,0mm) 5.00" –10 = (254,0mm) 10.00"	–B = Break Out



OVERALL LENGTH	A
–05	(127,00) 5.00
–10	(254,00) 10.00

RF VALIDATION SAMPLE	
5"	RFDL2-03-01SJ1-01EJ1-05-B
10"	RFDL2-03-01SJ1-01EJ1-10-B

Mates with:
FSI-03-SD

SPECIFICATIONS

For complete specifications see www.samtec.com?FSIF

Cable:
1 oz. rolled annealed copper
Base Film:
1 mil Polyimide
Adhesive:
FR (DuPont)
Stiffener:
FR-4 glass epoxy
Flammability Rating:
UL 94 VO
Operating Temp Range:
-40°C to +105°C
Plating:
10µ" (0,25µm) Gold over 50µ" (1,27µm) Ni
RoHS Compliant:
Yes

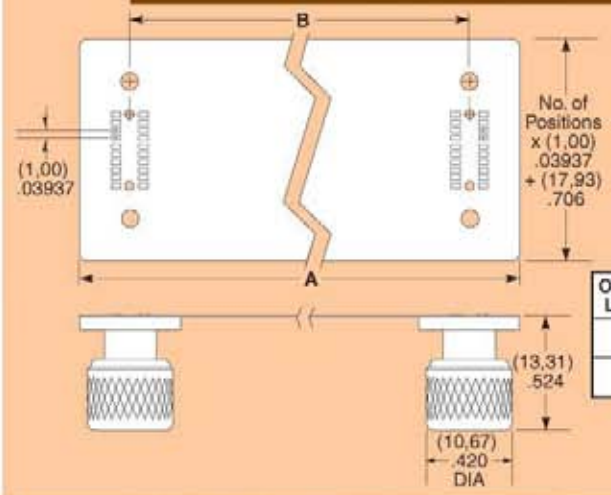
ALSO AVAILABLE

Other pin counts and lengths available.
Call Samtec.

Pinout:
Pinout is 1:1, 2:2, etc.

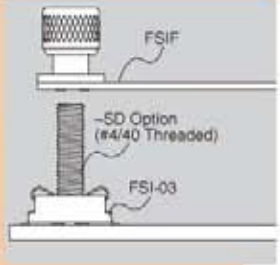
Note: Some sizes, styles and options are non-standard, non-returnable.

FSIF	– NO. OF POSITIONS	– LENGTH
	–10, –20, –30	–05.00 = (127,0mm) 5.00" –10.00 = (254,0mm) 10.00"



OVERALL LENGTH	A	B
–05.00	(127,00) 5.00	(114,30) 4.50
–10.00	(254,00) 10.00	(241,30) 9.50

APPLICATION



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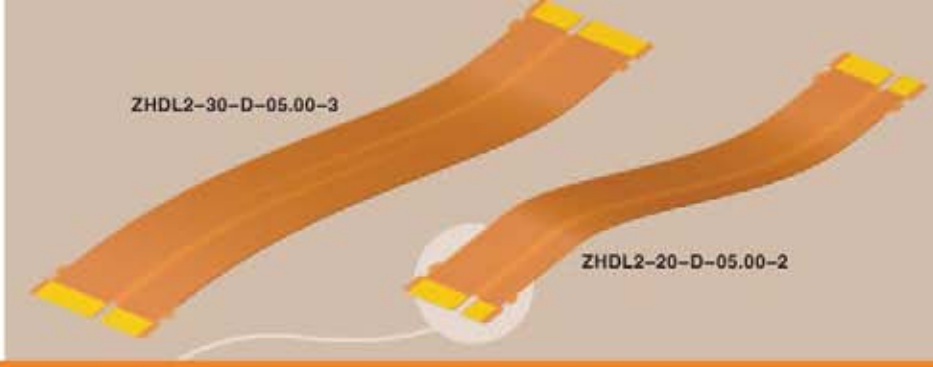


(0,50mm) .0197"

ZHDL2, ZLDL2 SERIES

HIGH SPEED RUGGED ZIF FLEX DATA LINK

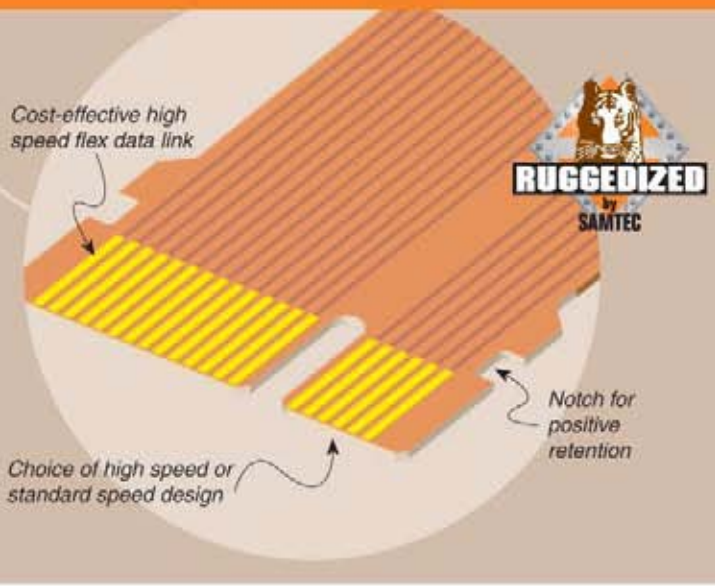
SPECIFICATIONS

Mates with:
ZHR5

For complete specifications see www.samtec.com?ZHDL2 or www.samtec.com?ZLDL2

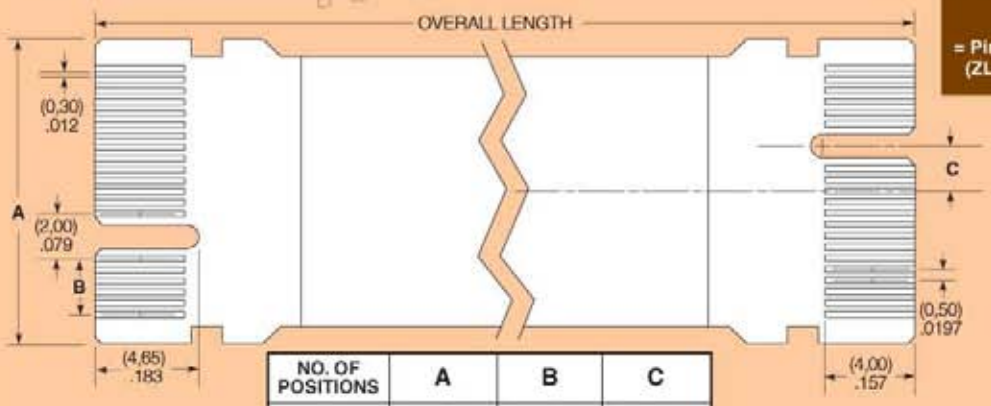
Cable:
1 oz. rolled annealed copper
Operating Temp Range:
-55°C to +105°C
Plating:
30µ" (0,76µm) Au over 100µ" (2,54µm) Ni
Flammability Rating:
UL 94 VO
Impedance (ZHDL2 only):
50Ω –SE
90Ω –DP
RoHS Compliant:
Yes

APPLICATION



TYPE FLEX	NO. OF POSITIONS	D	OVERALL LENGTH	WIRING OPTION
ZHDL2 = High Speed: Signals on top; grounds on bottom **ZLDL2** = Standard Speed: Signals on both sides of flex	–20, –30, –40, –50		**–05.00** = 5.00" (127,0mm) **–10.00** = 10.00" (254,0mm)	**–1** = Pin 1 to Pin 1 (ZLDL2 only) **–2** = Pin 1 to Pin 2 **–3** = Pin 1 to Pin N-1 **–4** = Pin 1 to Pin N (ZLDL2 only)

-ZLDL2 PRELIMINARY



NO. OF POSITIONS	A	B	C
–20	(13,60) .535	(2,50) .098	(2,00) .079
–30	(18,60) .732	(5,50) .217	(1,50) .059
–40	(23,60) .929	(7,50) .295	(2,00) .079
–50	(28,60) 1.126	(10,50) .413	(1,50) .059

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

ZHR5-40-02-T-RA

ZHR5-30-02-T-RA

(0,50mm) .0197"

ZHR5 SERIES

HIGH SPEED RUGGED ZIF FLEX SOCKET

SPECIFICATIONS

Mates with:
ZHDL2, ZLDL2

For complete specifications and recommended PCB layouts see www.samtec.com?ZHR5

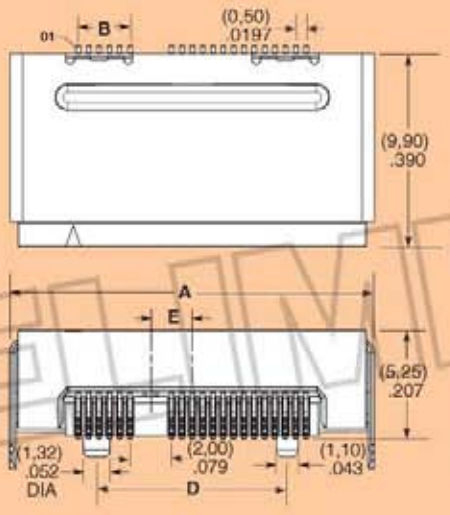
Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Weld Tab:
Phosphor Bronze
Operating Temp Range:
-55°C to +105°C
RoHS Compliant:
Yes

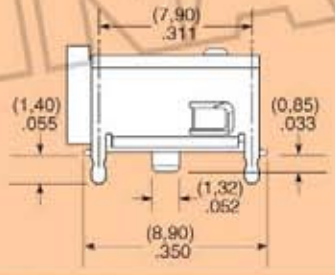
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 2x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

APPLICATION

ZHR5	NO. OF POSITIONS	LEAD STYLE	PLATING OPTION	RA	OTHER OPTION
	–20, –30, –40, –50 (Per Row)	–02 = Contacts on Top & Bottom	–T = Matte Tin		–TR = Tape & Reel





NO. OF POSITIONS	A	B	D	E
–20	(19,20) .756	(2,50) .098	(10,70) .421	(2,00) .079
–30	(24,20) .953	(5,50) .217	(15,70) .618	(1,50) .059
–40	(29,20) 1.150	(7,50) .295	(20,70) .815	(2,00) .079
–50	(34,20) 1.346	(10,50) .413	(25,70) 1.012	(1,50) .059

Note: Some lengths, styles and options are non-standard, non-returnable.

PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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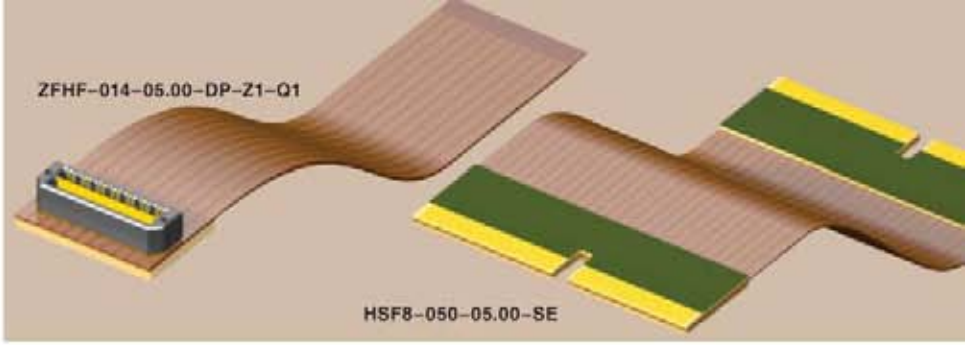


(0,50mm) .0197"
(0,80mm) .0315"

ZFHF, HSF8 SERIES

HIGH SPEED FLEX DATA LINKS

Mates with:
QSE-014-01-X-D-DP-A,
ZF5-43-XX-T-WT

SPECIFICATIONS

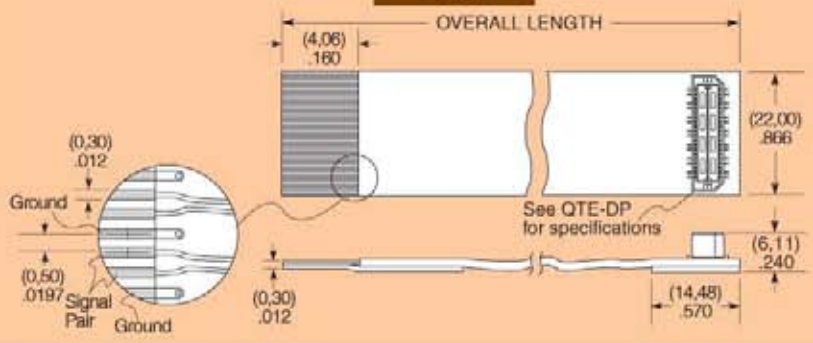
For complete specifications see www.samtec.com?ZFHF-DP

Terminal:
QTE-DP Series
Cable:
1/2 oz. rolled annealed copper
Operating Temp Range:
-55°C to +105°C
Plating:
100µ" (2,54µm) Tin
Adhesive:
FR (DuPont)
Stiffener:
FR-4 glass epoxy
Flammability Rating:
UL 94 VO
RoHS Compliant: Yes

Important Note:
Product may have some lines dedicated to ground. For actual signal-to-ground pinouts, see assembly print at web address above.

Note: Some sizes, styles and options are non-standard, non-returnable.

ZFHF	– SIGNAL PAIRS	– OVERALL LENGTH	– DP	– Z1	– END NO. 2 OPTION
	–014 = 14 Pairs	–05.00 = (127,0mm) 5.00" –10.00 = (254,0mm) 10.00"	–DP = Differential Pair	–Z1 = Flex Cable Jumper for End 1	–Z1 = Flex Cable Jumper –Q1 = QTE-DP



Z1-Z1	
Cable Length	Rated @ -3dB Insertion Loss
	–DP
5" (127mm)	1.97 GHz / 3.94 Gbps
10" (254mm)	1.31 GHz / 2.62 Gbps

Z1-Q1	
Cable Length	Rated @ -3dB Insertion Loss
	–DP
5" (127mm)	3.16 GHz / 6.32 Gbps
10" (254mm)	1.65 GHz / 3.30 Gbps

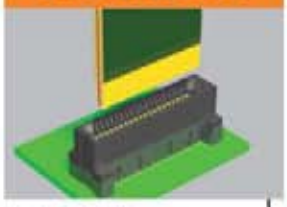
Mates with:
HSEC8, DSEC, HSEC8-RA

SPECIFICATIONS

For complete specifications see www.samtec.com?HSF8-DP see www.samtec.com?HSF8-SE

Operating Temp Range:
-55°C to +105°C
Plating:
30µ" (0,76µm) Gold over 50µ" (1,27µm) Nickel
RoHS Compliant: Yes

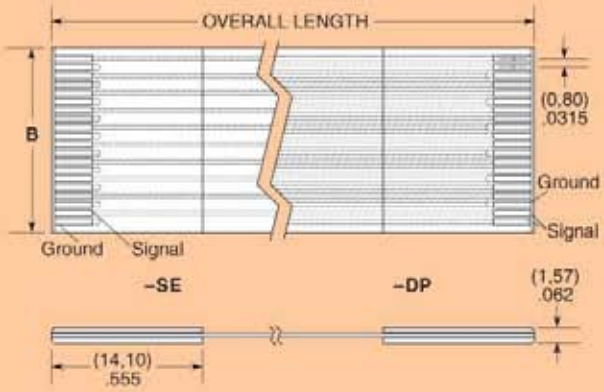
APPLICATION



Important Note:
Product may have some lines dedicated to ground. For actual signal-to-ground pinouts, see assembly print at web address above.

Note: Some sizes, styles and options are non-standard, non-returnable.

HSF8	– NO. OF POSITIONS PER SIDE	– OVERALL LENGTH	– SIGNAL ROUTING
	–020, –050 (–050 has polarization notch. See HSEC8 for location.)	–05.00 = (127,0mm) 5.00" –10.00 = (254,0mm) 10.00"	–DP = Differential Pair –SE = Single-Ended



HSF8	
Cable Length	Rated @ -3dB Insertion Loss
	–DP
5" (127mm)	4.86 GHz / 9.72 Gbps

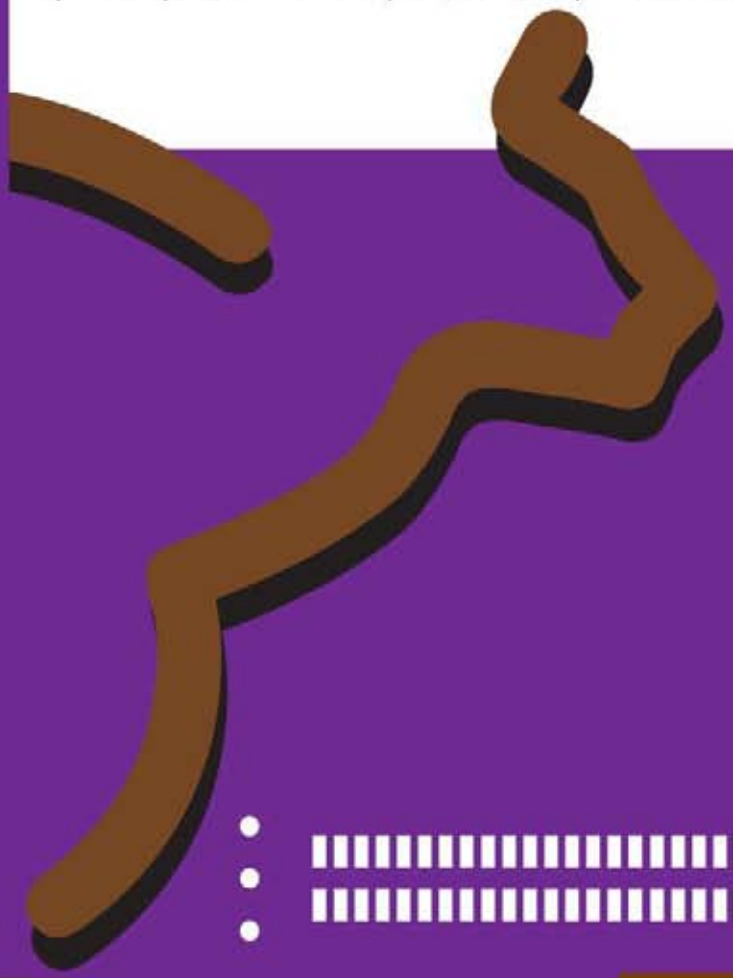
Performance data for other cable lengths and complete test data available at www.samtec.com?HSF8 or contact sig@samtec.com

NO. OF POSITIONS PER SIDE	B	SIGNAL PAIRS PER SIDE (–DP)	SIGNAL PINS PER SIDE (–SE)
–020	(17,25) .679	7	10
–050	(44,45) 1.750	16	25

Due to technical progress, all designs, specifications and components are subject to change without notice.

SIGNAL INTEGRITY

Test & Debug Cables
Low Cost Test Probe (ICT1/IRM1) 316-317
Bull's Eye™ Test Points (RF25M, CCH) 318-319
Spirit® Compression Test Probes (SCTP, SFLTP, SPT) 320-322



TEST & DEBUG

APPLICATIONS
Test & Debug Cables 44-45

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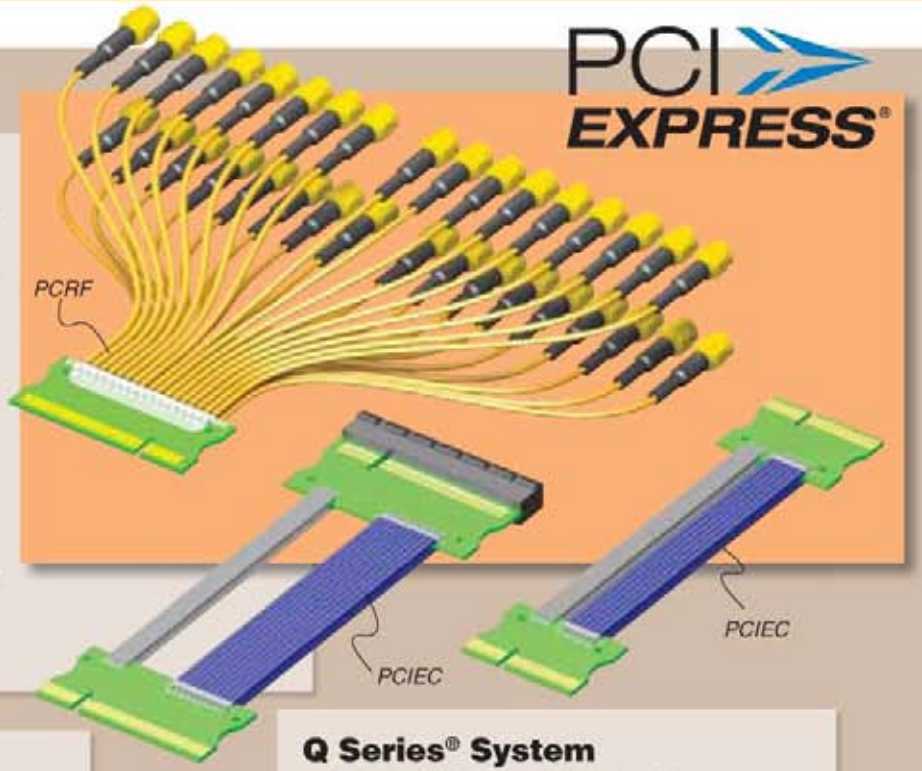
TEST & DEBUG SYSTEMS

PCI Express® Systems

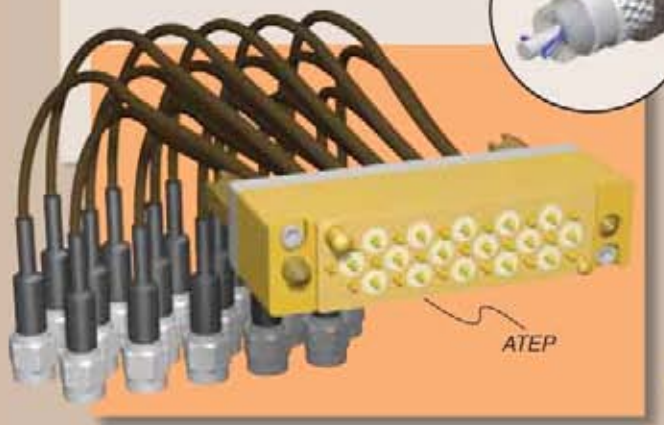
- Supports one, four, eight and sixteen PCI Express® links
- Loop back Extender (From one PCIe slot to another PCIe slot)
- Ser-Des Physical Extender (From one PCIe slot to another PCIe Ser-Des)
- Physical Extender for easy troubleshooting of PCIe card debug and analysis (PCIe slot to Emulator or Analyzer)
- See www.samtec.com?PCIEC
- SMA termination low loss micro wave coax cable
- See www.samtec.com?PCRF

PCI Express® is a registered trademark of PCI-SIG



High Density Pogo Pin Interfaces

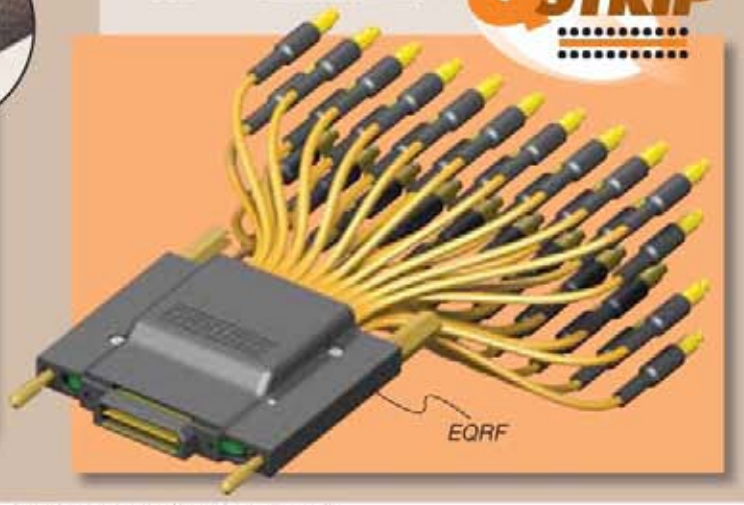
- Pogo pin interface for high cycles
- Low loss microwave coax cable
- Plating on plastic reduces cost & weight
- Signal lines with RF termination
- See www.samtec.com?ATEP



Q Series® System

- Choice of RG 316 or RG 178 cable
- 0,80mm pitch vertical or edge mount orientation
- QTE QSE socket or terminal
- Optional captive screws
- Choice of SMA, MCX or MMCX RF termination
- See www.samtec.com?EQRF

QSTRIP®



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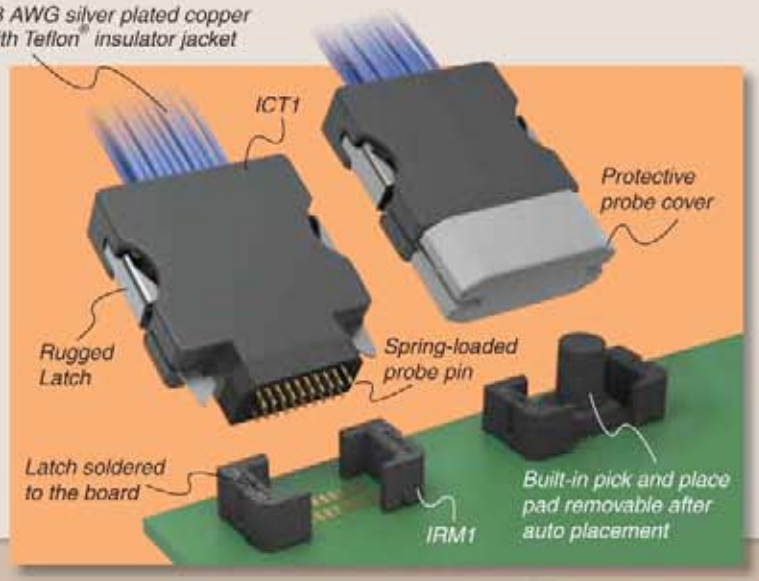
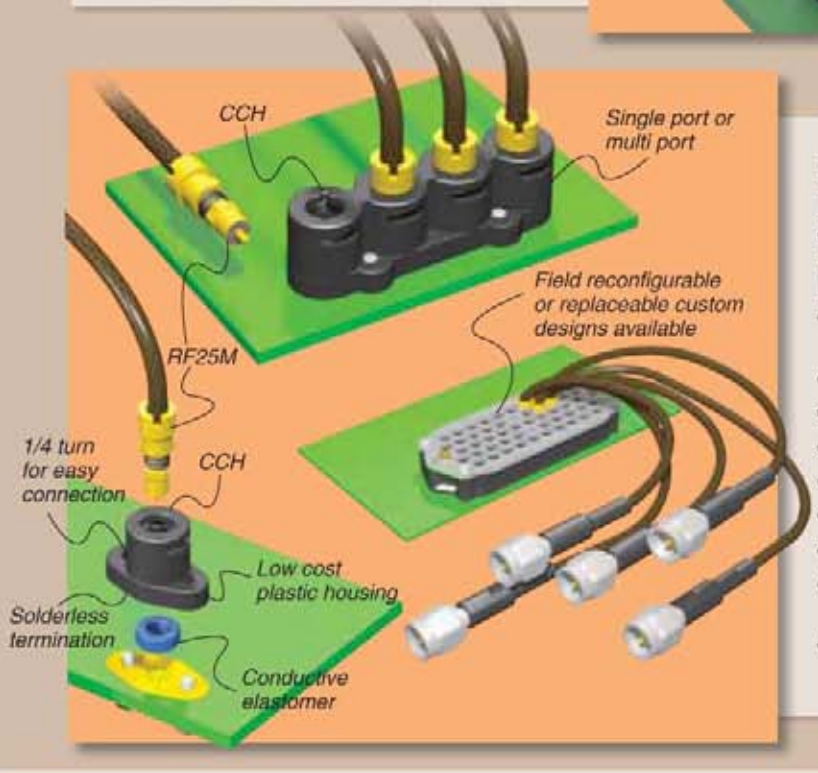
Rugged Low Cost Test System

- Lower production costs by moving most of the interface costs to the lab tool/cable
- Spring loaded compression interface to the board
- Rugged mechanical squeeze latch for easy on/off
- Probe cable adaptor connects to existing instrument cables via Edge Rate™ connector termination or probe point-to-point
- High temperature Teflon® jacket 28 AWG stranded cable conductors
- Test boards available for performance verification. Contact sig@samtec.com

Teflon® is a registered trademark of Dupont





BullsEye™ TEST POINT SYSTEM

Low Cost, High Performance Test Points & Microwave Cable Adaptors

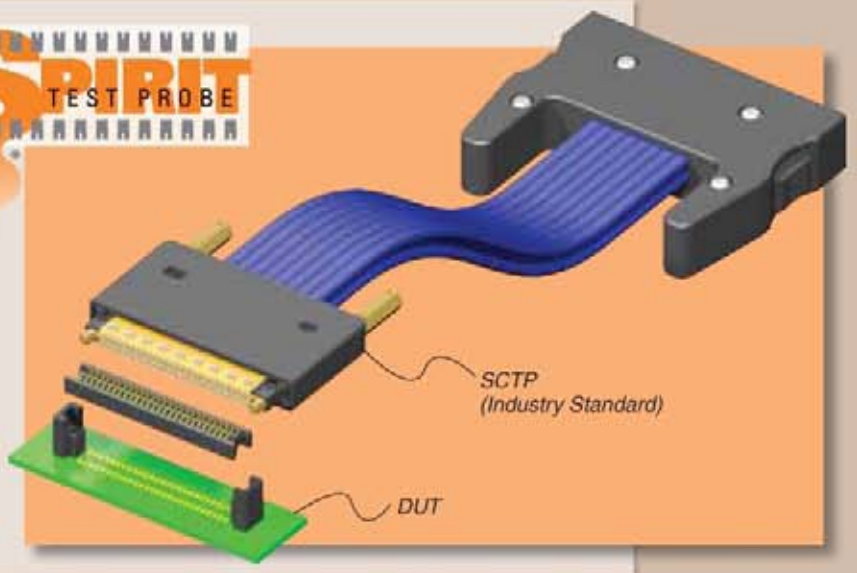
- Eliminate costly high performance SMA connectors from boards
- SMA performance for 10% of the cost
- 20 GHz rated @ -3dB IL (6" cable)
- 10 GHz rated @ 1.3 VSWR (6" cable)
- Compression interface to the board
- Single or ganged configurations
- Bayonet mechanical latch for easy on/off
- Probe cable adaptor connects to existing instrument cables via SMA termination
- Test boards available for performance verification; contact rf@samtec.com

Spirit® Compression Test Probes

PATENT PENDING

- 100Ω differential pair system
- Logic analysis, protocol analysis, oscilloscopes, trace output and testing applications from 1.25 Gbps to 5.2 Gbps
- Enables high speed testing compatible with Intel specific PCI Express® protocol footprint
- Replaceable probe tip connectors extend probe life indefinitely (SCTP Series)
- Flying leads pick up differential signals not conveniently grouped or routed to connectors (SFLTP Series)
- For ordering information: www.samtec.com?SCTP www.samtec.com?SFLTP

SPIRIT TEST PROBE



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(1,00mm) .0394"

ICT1 SERIES

RUGGED LOW COST TEST PROBE

SPECIFICATIONS

Mates with:
ERF8(-L)

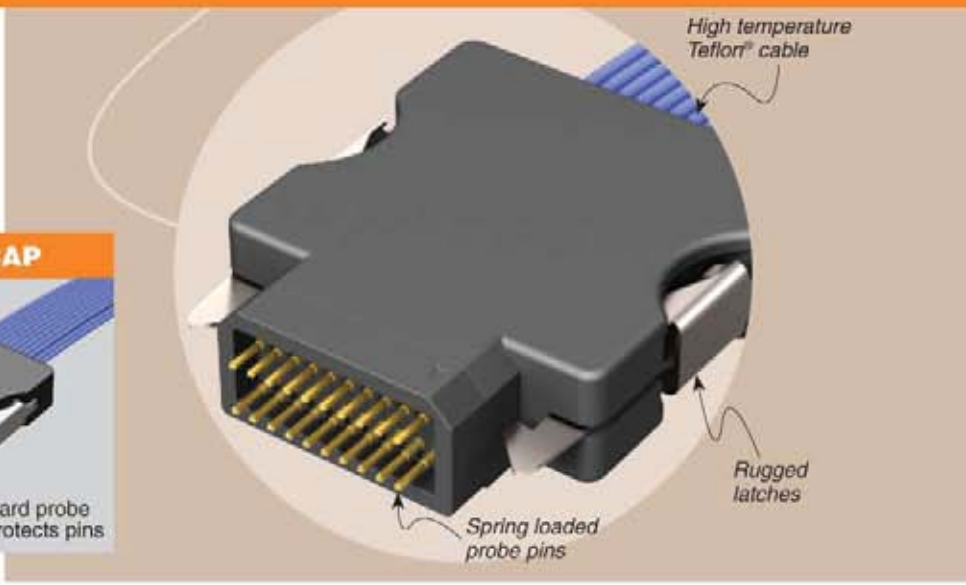
For complete specifications and recommended PCB layouts see www.samtec.com?ICT1

Cable:
28 AWG Silver plated Copper
Signal Routing:
50Ω Single-Ended
Probe Tip:
Phosphor Bronze
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +125°C
RoHS Compliant:
Yes

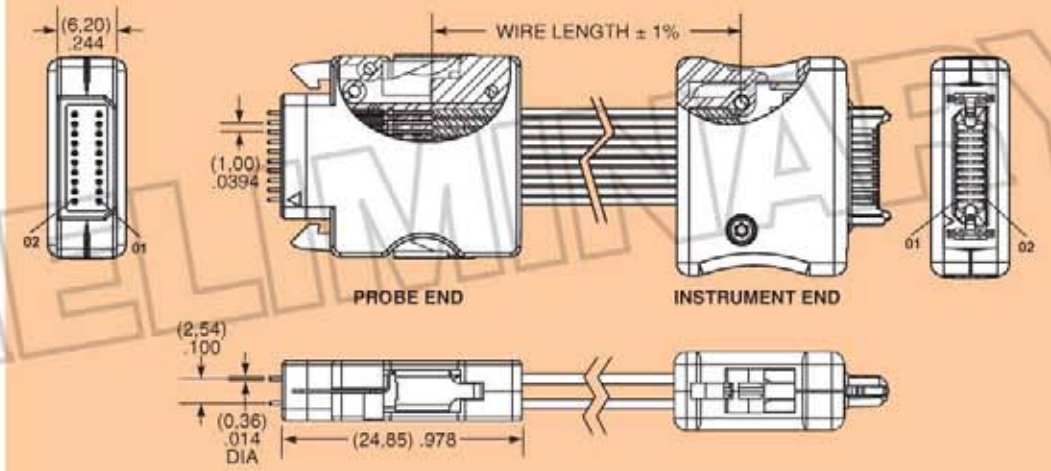
ALSO AVAILABLE

- Other pin counts. Call Samtec.

PROBE CAP



ICT1	– NO. OF POSITIONS PER ROW	– WIRE LENGTH	– INSTRUMENT END
	–10 (Per row) Other pin count available. Call Samtec	Wire Length in inches –12.00 = 12.00" (304,80mm) –24.00 = 24.00" (609,60mm) –36.00 = 36.00" (914,40mm)	–ICT1 = Probe Pin –TEU = ERM8 Pin 1 up –TED = ERM8 Pin 1 down



PRELIMINARY

*Teflon® is a trademark of Dupont.

Note:
Some lengths, styles and options are non-standard, non-returnable.

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IRM1–10–T–TR

IRM1–10–T–TR

IRM1 SERIES

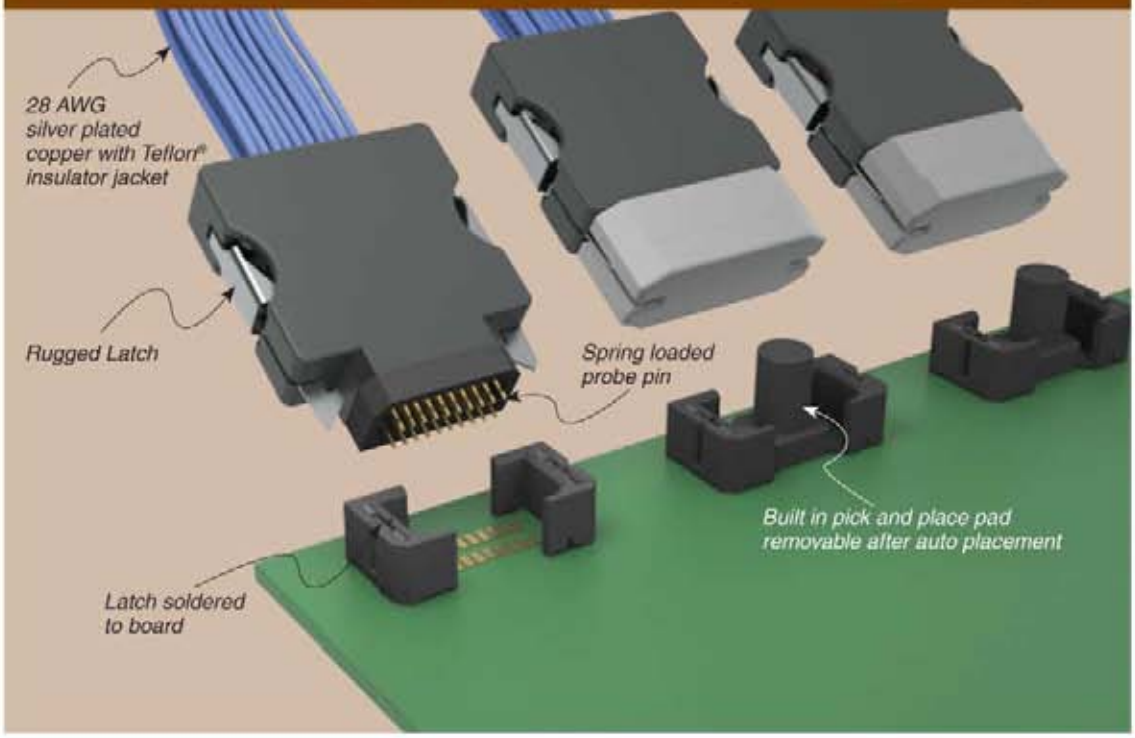
LOW COST TEST POINTS

FEATURES

- Lower production costs by moving most of the interface costs to the lab tool/cable
- Spring loaded compression interface to the board
- Rugged mechanical squeeze latch for easy on/off
- Probe cable adaptor connects to existing instrument cables via Edge Rate™ connector termination or probe point-to-point
- High temperature Teflon® jacket 28 AWG stranded cable conductors
- Test boards available for performance verification. Contact sig@samtec.com

*Teflon® is a trademark of Dupont.

ELIMINATE COSTLY PCB TEST CONNECTORS!



Mates with:
ICT1

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IRM1

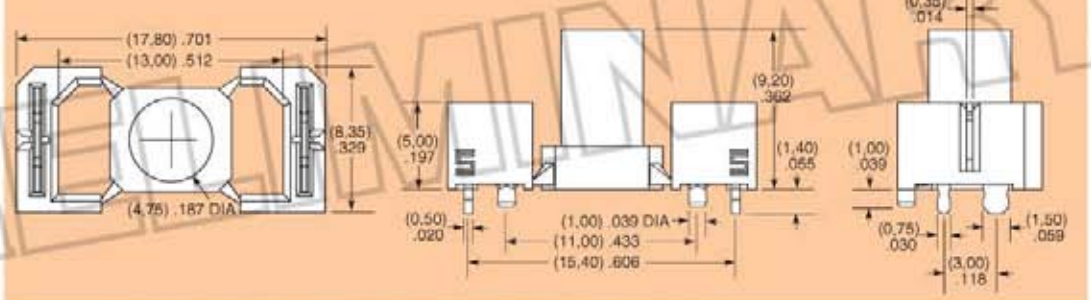
Insulator Material:
Black LCP
Plating:
Sn over 50µ" (1,27µm) Ni
Weld Tab:
Phosphor Bronze

ALSO AVAILABLE

- Other pin counts. Call Samtec.

Note: Some sizes, styles and options are non-standard, non-returnable.

IRM1	–	NO. OF POSITIONS	–	PLATING	–	TR
		–10 (Per Row)		–T = Matte Tin		–TR = Tape & Reel



PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

F-210

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BullsEye™ TEST POINT SYSTEM

RF25M SERIES

MICROWAVE COAX TEST CABLES

SPECIFICATIONS

Mates with:
CCH, SMA

For complete specifications see www.samtec.com?RF25M

RF Connector:

Outer Contact Material:
Brass (SMA)
Center Contact Material:
Brass (SMA-P)
BeCu (SMA-J)
Plating:
30µ" (0,76µm)
Gold on center contact,
Gold flash on shell (SMA)
Insulator Material:
PTFE
Operating Temperature:
-65°C to +165°C
Insulator Resistance:
5,000 MΩ
Impedance:
50Ω
Frequency Range:
0~20 GHz
RoHS Compliant:
Yes

Cable:

Type:
Low Loss Microwave Coax
Gauge:
25 AWG Silver plated Copper, Helically flat & braided shield
Jacket Material:
FEP
Impedance:
50Ω ±1Ω
Propagation Delay:
3.84 nsec/meter
Capacitance:
75.4 pF/meter

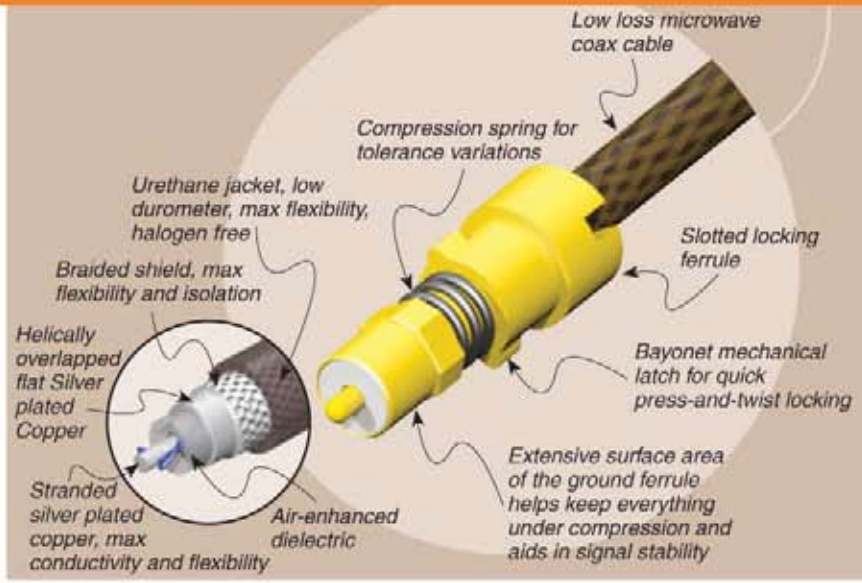
ALSO AVAILABLE

- Extraction Tool: CAT-EX-SCC-01.
- Additional plating options available.

Call Samtec.

Note:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note:
Some lengths, styles and options are non-standard, non-returnable.



CABLE TYPE	–	END 1 CONNECTOR	–	END 2 CONNECTOR	–	OVERALL LENGTH
RF25M = 25 AWG Microwave Cable		Specify END OPTIONS from chart				–"XXXX" = Overall Length in millimeters –0100 (100mm) 3.94" minimum

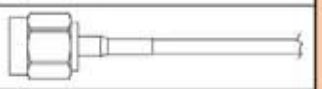
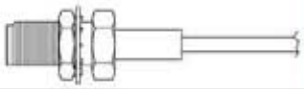
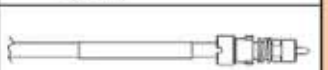
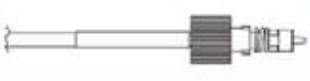
–01BJ1–SCC11 SHOWN

STRIPPED & TINNED (Dimensions in mm)

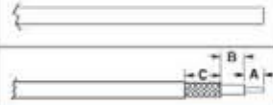
CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samec for other sizes.

END OPTIONS

–01SP1 = SMA, Straight Plug	
–01BJ1 = SMA, Bulkhead Jack	
SCC1 = Coax Test Point with standard ferrule	
–SCC2 = Coax Test Point with knurled ferrule (Mates with CCH–01 only)	

END OPTIONS

–SING = Single-Ended (End 2 Callout)	
XXXXXX = Stripped & Tinned (End 2 callout)	

Due to technical progress, all designs, specifications and components are subject to change without notice.

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samtec

BullsEye™ TEST POINT SYSTEM

CCH-J-04

CCH-J-01

CCH SERIES

HIGH PERFORMANCE TEST POINTS

FEATURES

- Lower production costs by moving most of the interface costs to the lab tool/cable
- SMA performance for 10% of the cost
- Compression interface to the board
- Single or ganged configurations
- Bayonet mechanical latch for easy on/off
- Probe cable adaptor connects to existing instrument cables via SMA termination
- Test boards available for performance verification. Contact bullseye@samtec.com

Cable Length	PERFORMANCE	
	Rated @ -3dB Insertion Loss	Rated @ 1.3 VSWR
6" (152mm)	20 GHz	10 GHz

Performance and complete test data available at www.samtec.com?CCH or contact sig@samtec.com

ELIMINATE COSTLY HIGH PERFORMANCE SMAs!

Mates with:
RF25M-SCC1,
RF25M-SCC2 (–01 only)

SPECIFICATIONS

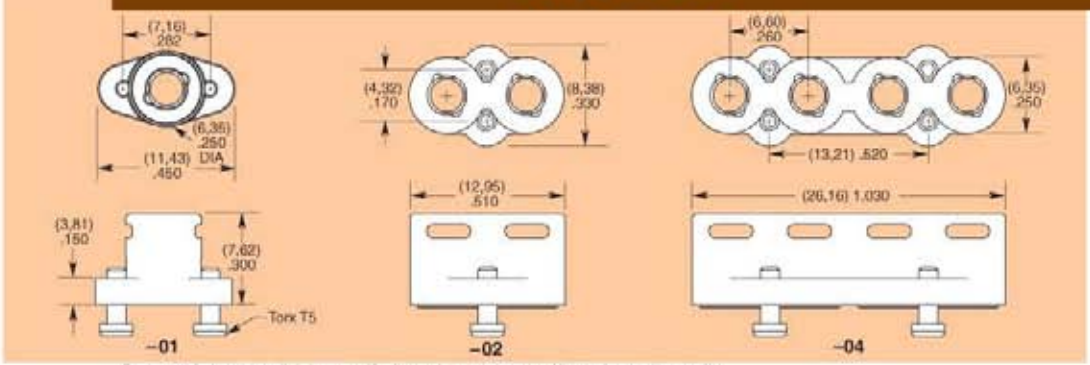
For complete specifications and recommended PCB layouts see www.samtec.com?CCH

Insulator Material:
Black LCP
Gasket Material:
MIL-DTL-83528C, Type D

Note: Some sizes, styles and options are non-standard, non-returnable.

CCH – J – NO. OF POSITIONS

–01, –02, –04



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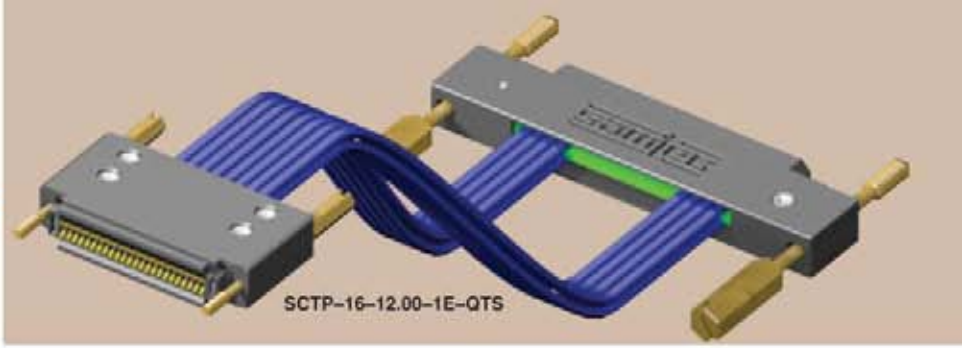
SPIRIT TEST PROBE

PATENT PENDING



SCTP, SFLTP SERIES

TEST PROBE CABLE ASSEMBLIES

SPECIFICATIONS

For complete specifications see www.samtec.com?SCTP

Cable:
30 AWG twinax (Gen 1 & Industry Standard)
Gen 2: TBD AWG Twinax
Signal Routing:
100Ω Differential (±5Ω)
Operating Range:
Gen 1 & Industry Standard DC to 1.25GHz (2.5Gbps)
Gen 2: DC to 2.5GHz (5.0Gbps)
Pinout Mapping:
See www.samtec.com?SCTP
RoHS Compliant:
Yes

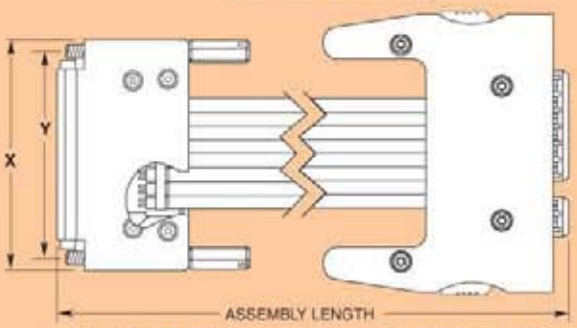
SCTP	–	NO. OF PAIRS	–	ASSEMBLY LENGTH	–	DUT END OPTION	–	INSTRUMENT END OPTION
SCTP = Compression Test Probe		**–08, –16** = Number of Pairs (–1E, –2D & –2E) **–18** = Number of Pairs (–SE)		**–12.00, –24.00, –36.00** = Assembly Length in inches		**–1E** = Spirit® Gen 1 **–2E, –2D** = Spirit® Gen 2 **–SE, –SD** = Spirit® IS (Industry Standard)		**–EEDP** = High Speed Edge Card **–QTS** = Q Strip®

NO. OF PAIRS	X	Y
–08	(22.05) .868	(17.96) .708
–16 & –18	(34.04) 1.340	(29.97) 1.180

CONNECTORS & PROBE FASTENERS**

PROBE TYPE	PAIRS	PROBE FASTENER*	CONNECTOR*	EXTRACTION TOOL
GEN 1	8 16	SPF-14 SPF-24	LGP-14-G-D LGP-24-G-D	CAT-EX-SCTP-02 CAT-EX-SCTP-01
GEN 2	8 16	SPF2-14 SPF2-24	LGISR-14-G-D LGISR-24-G-D	NA NA
INDUSTRY STANDARD	18	SPFD-27	LGIS-27-01-E-D	NA

* Add -TR to the part number for Tape & Reel
** Prefix part number with "KIT-" for complete kit with probe cable, replacement connectors, application notes and product fasteners



SPECIFICATIONS

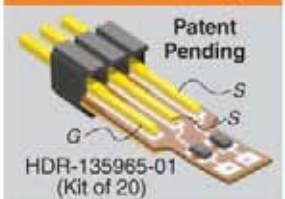
For complete specifications see www.samtec.com?SFLTP

Cable:
30 AWG twinax
Signal Routing:
100Ω Differential (±5Ω)
Operating Range:
DC to 1.25GHz (2.5Gbps)
RoHS Compliant:
Yes

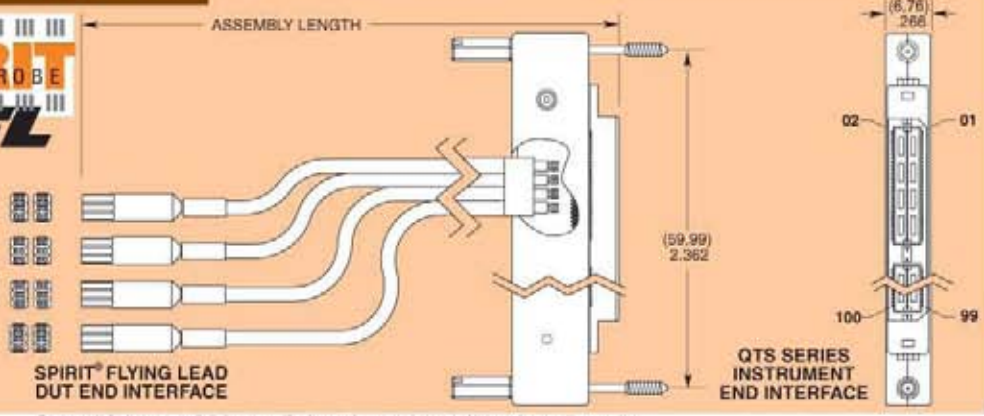
SFLTP	–	NO. OF PAIRS	–	ASSEMBLY LENGTH
SFLTP = Flying Lead Test Probe		**–08, –16** = Number of Pairs		**–12.0, –24.0, –36.0** = Assembly Length In Inches

SPIRIT TEST PROBE FL

TARGET BOARD FLEX TIPS



HDR-135965-01
(Kit of 20)



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ELIMINATE COSTLY PCB TEST PROBE CONNECTORS

Spirit® Compression Test Probes

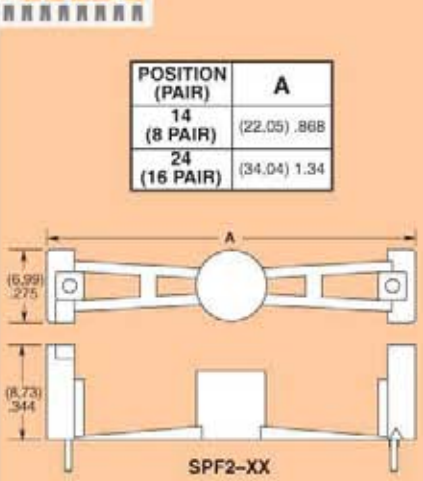
PATENT PENDING

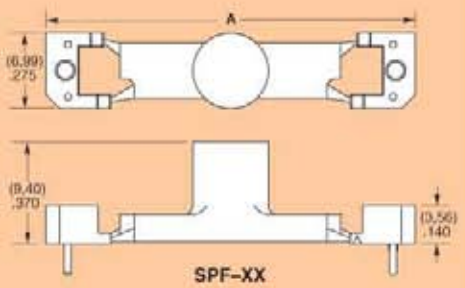
- Logic analysis, protocol analysis, oscilloscopes, trace output and testing applications from 1.25 Gbps to 5.2 Gbps
- Enables high speed testing compatible with Intel specific PCI Express® protocol footprint
- Replaceable probe tip connectors extend probe life indefinitely
- Spring loaded shroud protects compression contact tips (Gen 1)
- Choice of 8 pairs (Gen 1) or 16 pairs (Gen 2) or 18 pairs (Industry Standard)
- Q Strip® or High Speed Edge Card instrument end interface
- Available as components or complete kits with probe, replacement connectors, application notes and probe fasteners. Includes extraction tool for Gen 1 probe. (Add "KIT-" in front of the cable part number.)
- Application specific logic and protocol analysis applications with differential pair counts and pinout maps available; contact dr@samtec.com

Tip resistance value = 300Ω

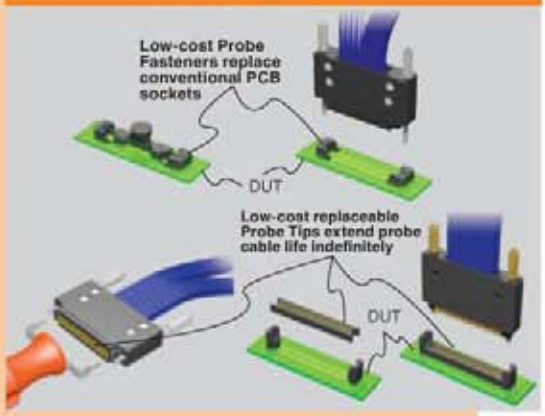
SPIRIT TEST PROBE

POSITION (PAIR)	A
14 (8 PAIR)	(22.05) .868
24 (16 PAIR)	(34.04) 1.34





APPLICATIONS



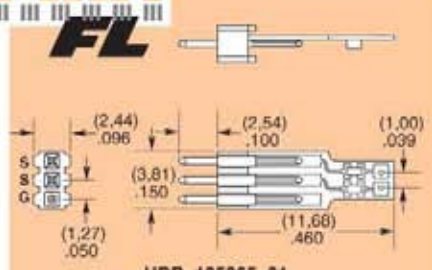
Spirit® FL Flying Lead Test Probe

PATENT PENDING

- Picks up differential signals not conveniently grouped or routed to connectors
- Flex tip provides improved SI performance over two piece connector system
- Available as kit with probe, application notes and case of 20 flex tips (Add "KIT-" in front of the cable part number.)

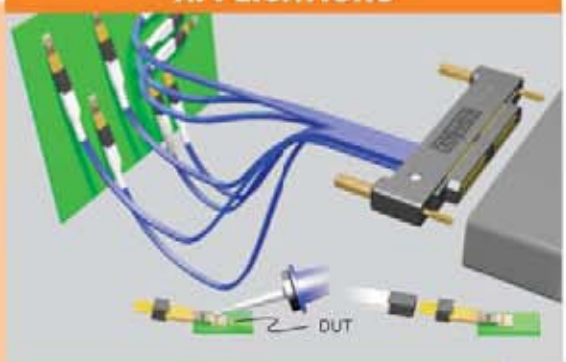
Tip resistance value = 300Ω

SPIRIT TEST PROBE FL



HDR-135965-01
(Case of 20)

APPLICATIONS



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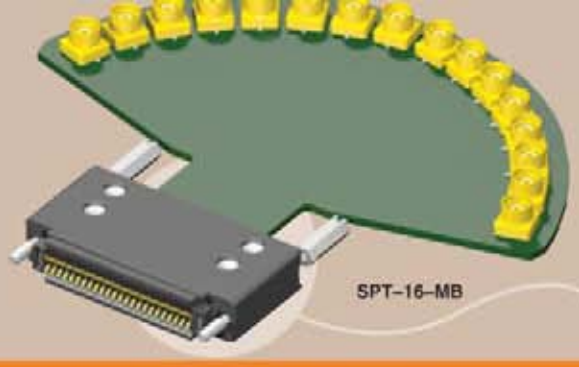
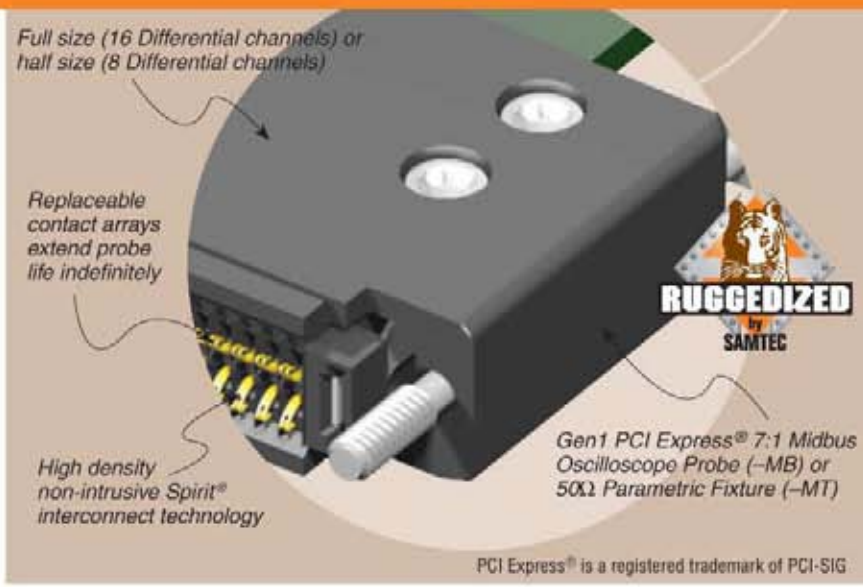
SPIRIT TEST PROBE

PATENT PENDING

SPT SERIES



MIDBUS TDR TEST PROBE



PCI Express® is a registered trademark of PCI-SIG

FEATURES

- Compatible to Intel specified PCI Express® protocol footprint
- For other protocol analyzer applications contact: dr@samtec.com
- For other coax/twinax sizes or different instrument end connectors call Samtec

SPECIFICATIONS

For complete specifications see www.samtec.com?SPT

Signal Routing:
50Ω Differential
Operating Temp Range:
DC to 4 GHz (-MT)
DC to 5 GHz (-MB)
Pinout Map:
See web address above
RoHS Compliant:
Yes

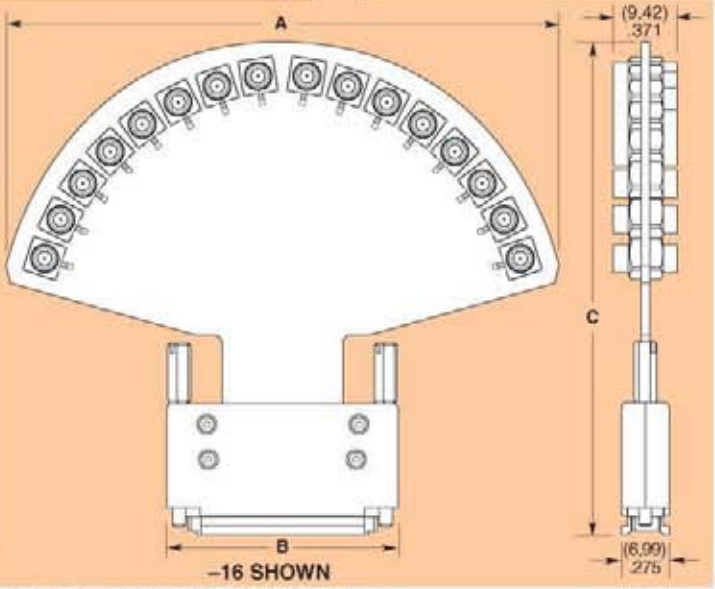
ALSO AVAILABLE

- 12" SMP-to-SMA Coax: CCS-145025-01-MC
- Extraction Tool
  8 Positions:
  CAT-EX-SCTP-02
  16 Positions:
  CAT-EX-SCTP-01

Call Samtec.

SPT	–	NO. OF POSITIONS	–	OPTION
		–16 = Full Size –08 = Half Size		–MB = Midbus Probe –MT = Midbus TDR Probe

NO. OF POSITIONS	A	B	C
–08	(49,53) 1.95	(22,05) .868	(53,98) 2.125
–16	(81,28) 3.20	(34,04) 1.34	(72,42) 2.851



CONNECTORS & PROBE FASTENERS**

PROBE TYPE	POSITIONS	PROBE FASTENER*	SPIRIT® INTERCONNECT*
Gen 1, PCI Express® 7:1 Midbus Oscilloscope Probe	8	SPF-14	LGP-14-G-D
	16	SPF-24	LGP-24-G-D
Gen 1, PCI Express® 50Ω Parametric Fixture	8	SPF-14	LGP-14-G-D
	16	SPF-24	LGP-24-G-D

* Add -TR to the part number for Tape & Reel

** Prefix part number with "KIT-" for complete kit with probe, two coaxial cables, 3 Spirit® interconnects, 5 probe fasteners, tools for attaching the probe to the target PCB and replacing the Spirit® interconnect.

Due to technical progress, all designs, specifications and components are subject to change without notice.

RF INTERFACES

IsoRate™ Isolated Transmission Line System

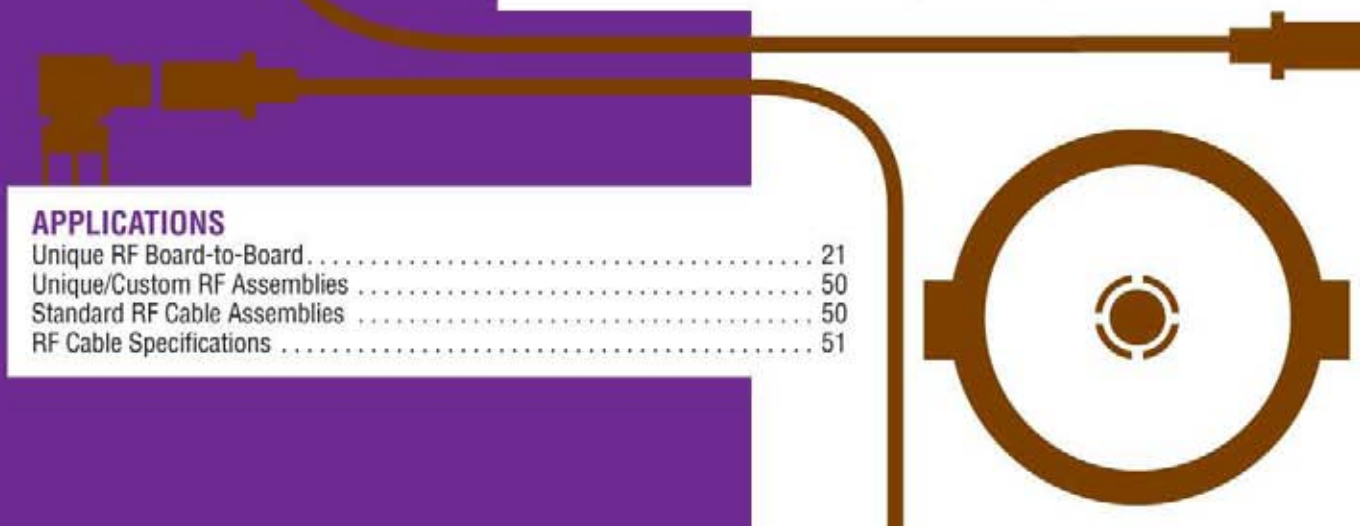
IsoRate™ 50Ω Cable Assembly (IJ5C) 324
IsoRate™ 50Ω Edge Rate™ RF Jacks & Plugs (IJ5, IP5) 325
IsoRate™ 75Ω Edge Rate™ RF Jacks & Plugs (IJ7, IP7) 326

True75™ and Standard 75Ω RF Systems

75Ω BNC Connectors (BNC7T) 327
75Ω Cable Assemblies (RF06T, RFB6T, RF179) 328-329
75Ω PCB Connectors (MCX7, SMB7H) 330-331

Standard 50Ω RF Systems

MHF Type Cable Assemblies (MH081, MH113) 332-333
50Ω Cable Assemblies (RF174, RF316, RF178) 334-336
50Ω PCB Connectors (MMCX, MCX, SMA, SMB5) 337-339
50Ω Cable Assemblies & Connectors (TNC, RF058) 340



APPLICATIONS

Unique RF Board-to-Board 21
Unique/Custom RF Assemblies 50
Standard RF Cable Assemblies 50
RF Cable Specifications 51

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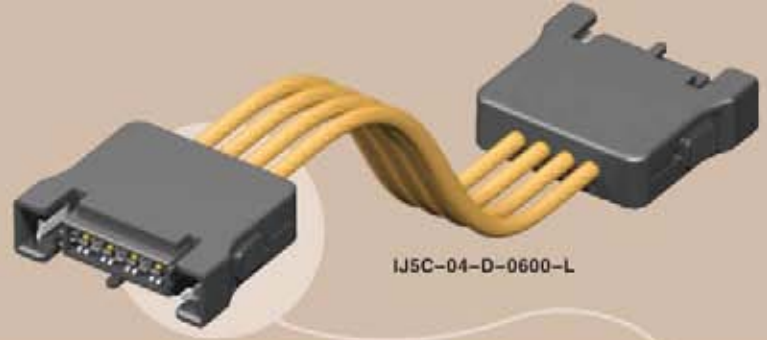
(4,00mm) .1575"

IJ5C SERIES

ISRATE™ Isolated Edge Rate Contact



50Ω HIGH ISOLATION CABLE ASSEMBLY

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IJ5C

Shell Material:
Copper Alloy
Insulator Material:
Black LCP
Contact Material:
Copper Alloy
Pin Material:
Brass
Dielectric Material:
Black LCP
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-40°C to +90°C
RoHS Compliant:
Yes

RG 316 Cable:

Impedance:
50Ω
Capacitance:
96.432pF/meter
Propagation Delay:
4.83 nsec/meter
Max Attenuation (cable only):
1.25dB @ 1GHz for 1 meter
Conductor Size:
26 AWG, (0,51mm) .020" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
0.13Ω/meter max
Current Rating:
5A
Insulator Diameter:
(1,52mm) .060"
Insulator Material:
PTFE
Dielectric Constant:
2.1dK
Shield Material:
Silver Plated Copper Clad Steel
Jacket Material:
FEP
Jacket Diameter:
(2,54mm) .100"
Jacket Temp Rating:
-50°C to +250°C
Typical Bend Radii:
(6,48mm) .255"
RoHS Compliant:
Yes

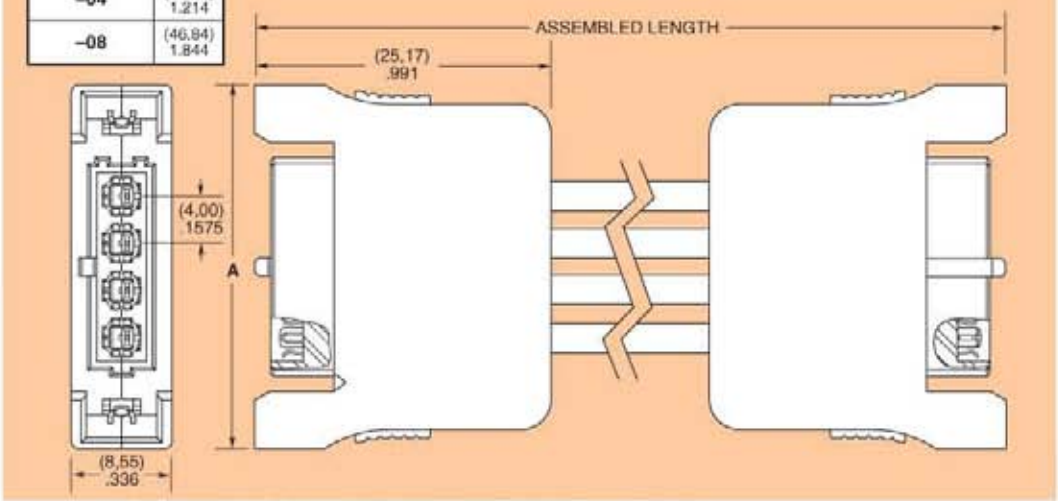
Note:
This Series is non-standard, non-returnable.

Mates with:
IP5

RUGGEDIZED by SAMTEC

IJ5C	–	NO. OF POSITIONS	–	END OPTION	–	ASSEMBLED LENGTH	–	PLATING OPTION
		–01, –02, –04, –08		–S = Single Ended –D = Double Ended		–"XXXX" = Assembled Length in millimeters –0100 to –1000 (100mm) 3.94" minimum		–L = 10µ" (0,35µm) Gold on contact area, Matte Tin on tail

NO. OF POSITIONS	A
–01	(18,83) .742
–02	(22,83) .899
–04	(30,84) 1.214
–08	(46,84) 1.844



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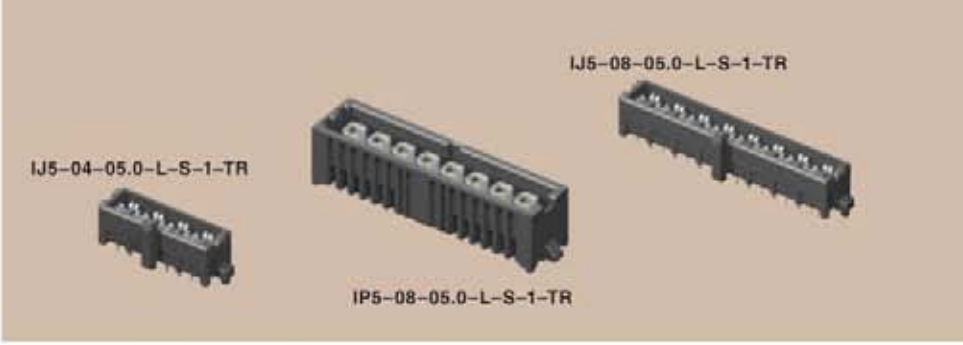
ISRATE™ Isolated Edge Rate Contact

(4,00mm) .1575"

IJ5, IP5 SERIES



50Ω HIGH ISOLATION SYSTEM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IJ5 or www.samtec.com?IP5

Shell Material: Copper Alloy
Insulator Material: Black LCP
Contact Material: Copper Alloy
Pin Material: Brass
Dielectric Material: Black LCP
Plating: Au over 50µ" (1,27µm) Ni
Operating Temp Range: -40°C to +90°C
Insulation Resistance: >35,000 MΩ
Contact Resistance: Center: <34 mΩ Outer: <7 mΩ
Dielectric Withstanding Voltage: 600 VAC
Working Voltage: 200 VAC
RoHS Compliant: Yes

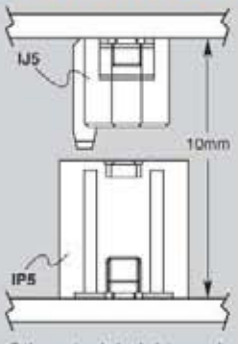
Processing:

Lead-Free Solderable: Yes

ALSO AVAILABLE

75Ω system. See IJ7/IP7 Series

APPLICATION



Other stack heights and PCB thicknesses available. Call Samtec.

IJ5 - JACKS PER ROW - 05.0 - PLATING - ROW OPTION - TAIL - TR

Mates with: IP5

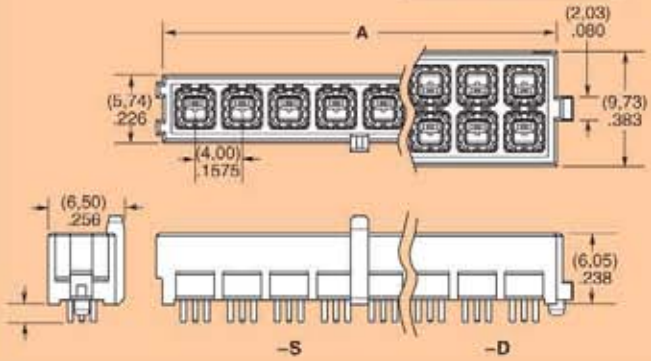
JACKS PER ROW: –01, –02, –04, –08

PLATING: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

ROW OPTION: –S = Single Row; –D = Double Row (Not available with –01)

TAIL: –1 = (1,60mm) .062" board thickness

TR: –TR = Tape & Reel



NO. OF JACKS	A
–01	(5,55) .219
–02	(9,55) .376
–04	(17,55) .691
–08	(33,55) 1.321

ALSO AVAILABLE

For cable see IJ5C Series.

IP5 - PLUGS PER ROW - 05.0 - PLATING - ROW OPTION - TAIL - OPTION - TR

Mates with: IJ5, IJ5C

PLUGS PER ROW: –01, –02, –04, –08

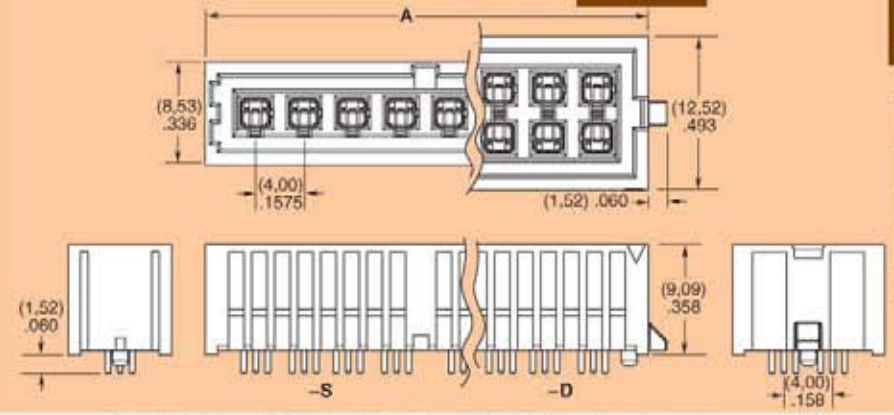
PLATING: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

ROW OPTION: –S = Single Row; –D = Double Row (Not available with –01)

TAIL: –1 = (1,60mm) .062" board thickness

OPTION: –L = Cable Latch (Single Row only) (Not available with –01 & –04 positions)

TR: –TR = Tape & Reel (Required in callout)



NO. OF PLUGS	A
–01	(8,33) .328
–02	(12,32) .485
–04	(20,32) .800
–08	(36,32) 1.430

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IP7-02-05.0-L-S-1-TR

IJ7-08-05.0-L-D-1-TR

IP7-06-05.0-L-D-1-TR

ISRATE® Isolated Edge Rate Contact

(4,00mm) .1575"

IJ7, IP7 SERIES

75Ω HIGH ISOLATION SYSTEM

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?IJ7 or www.samtec.com?IP7

Shell Material: Copper Alloy
Insulator Material: Black LCP
Contact Material: Copper Alloy
Pin Material: Copper Alloy
Dielectric Material: Natural LCP
Plating: Au over 50µ" (1,27µm) Ni
Operating Temp Range: -40°C to +90°C
Insulation Resistance: Testing Now!
Contact Resistance: Center: Testing Now! Outer: Testing Now!
Impedance: Testing Now!
Dielectric Withstanding Voltage: Testing Now!
Dielectric Working Voltage: Testing Now!
Frequency Range: Testing Now!
RoHS Compliant: Yes

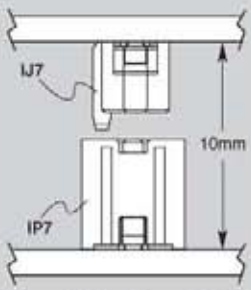
Processing:

Lead-Free Solderable: Yes

ALSO AVAILABLE

50Ω system. See IJ5/IP5 Series

APPLICATION



Other stack heights and PCB thicknesses available. Call Samtec.

IJ7 – JACKS PER ROW – 05.0 – PLATING – ROW OPTION – TAIL – TR

Mates with: IP7

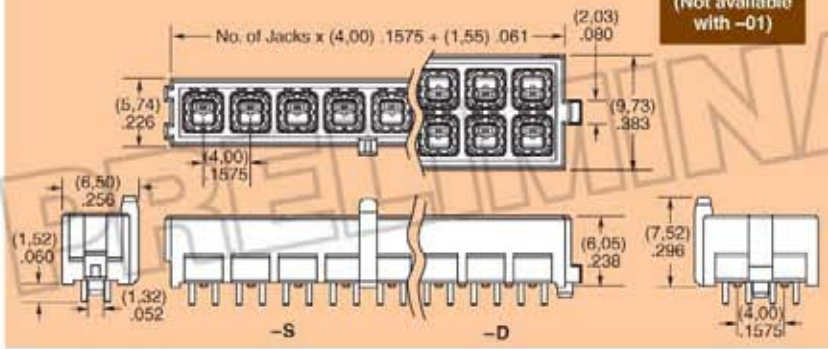
JACKS PER ROW: –01, –02, –04, –06, –08, –10

PLATING: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

ROW OPTION: –S = Single Row; –D = Double Row (Not available with –01)

TAIL: –1 = (1,60mm) .062" board thickness

TR: –TR = Tape & Reel



PRELIMINARY

IP7 – PLUGS PER ROW – 05.0 – PLATING – ROW OPTION – TAIL – TR

Mates with: IJ7

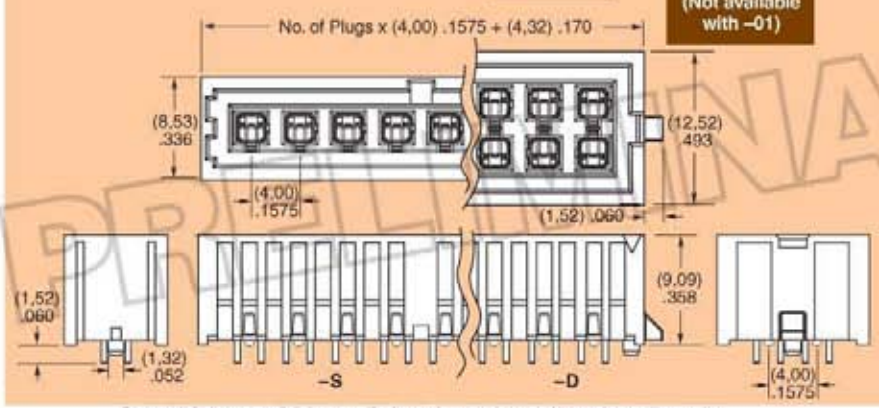
PLUGS PER ROW: –01, –02, –04, –06, –08, –10

PLATING: –L = 10µ" (0,25µm) Gold on contact area, Matte Tin on tail

ROW OPTION: –S = Single Row; –D = Double Row (Not available with –01)

TAIL: –1 = (1,60mm) .062" board thickness

TR: –TR = Tape & Reel



PRELIMINARY

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BNC7T SERIES

75Ω OPTIMIZED BNC JACKS

SPECIFICATIONS

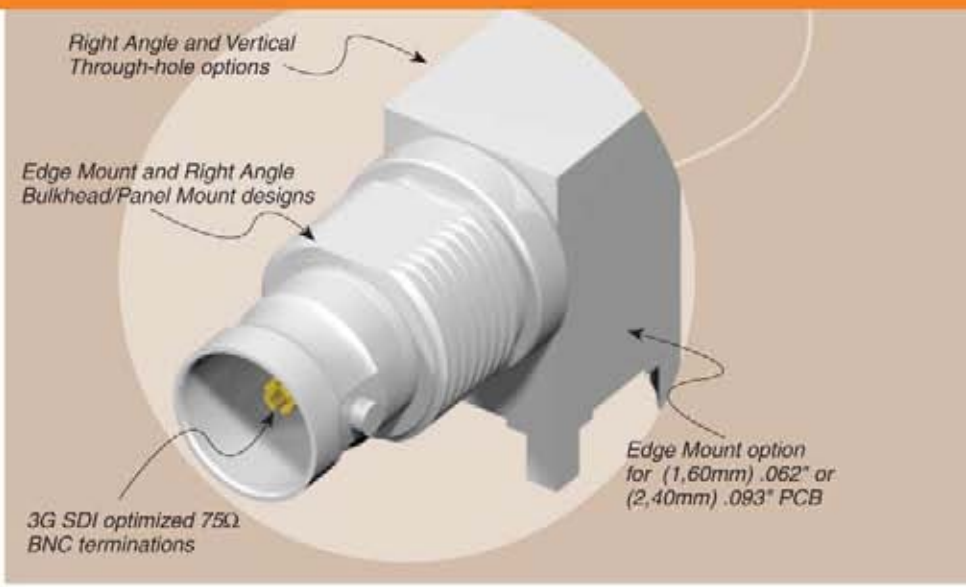
For complete specifications and recommended PCB layouts see www.samtec.com?BNC7T

Shell Material:
Ni plated Brass
Contact Material:
Gold plated Phosphor Bronze
Insulator Material:
PTFE
Impedance:
ST = 75Ω ±3Ω
RA = 75Ω ±4Ω
Frequency Range:
0-6 GHz
V.S.W.R:
1.3 max
(with optimized launch design)
Working Voltage:
500 Vrms max
Dielectric Withstanding:
1500 Vrms min
Contact Resistance:
Center Contact: 1,5mΩ max
Outer Contact: 0,4mΩ max
RoHS Compliant:
Yes

Processing:

Lead-Free Solderable:
Yes

Mates with:
RF179, RF06T, RF174, RF316

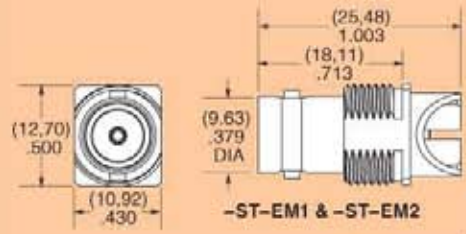


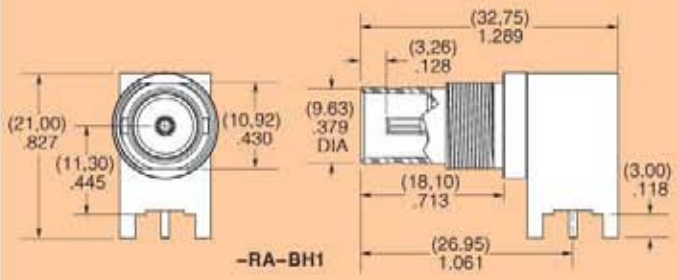
ALSO AVAILABLE

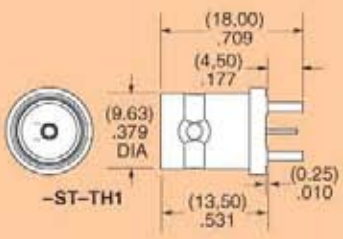
Tool for quickly installing/uninstalling knurl nut for BNC7T Series

Part Number:
CAT-HT-BNC7T-01

BNC7T	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	-J = Jack	-P = PCB Mount	-MN = 10µ" (0,25µm) Gold contact, 100µ" (2,54µm) Nickel shell -HN = 30µ" (0,76µm) Gold contact, 100µ" (2,54µm) Nickel shell	-ST = Straight -RA = Right Angle Bulkhead/ Panel Mount	-TH1 = Through-hole -BH1 = Bulkhead Through-hole -EM1 = Edge Mount Bulkhead/Panel Mount for (1,60mm) .062" PCB (-ST only) -EM2 = Edge Mount Bulkhead/Panel Mount for (2,40mm) .093" PCB (-ST only)







* Lock washers & knurled nuts supplied with Bulkhead/Panel Mount options

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RF06T, RFB6T SERIES

75Ω OPTIMIZED BNC CABLE ASSEMBLIES

SPECIFICATIONS

Mates with: BNC7T

For complete specifications see www.samtec.com?RF06T or www.samtec.com?RFB6T

RF Connector:

Outer Contact Material: Ni plated Brass
Center Contact Material: Gold plated Brass
Insulator Material: PTFE
Operating Temperature: -50°C to +90°C
Impedance: 75Ω ± 3Ω (ST) 75Ω ± 4Ω (RA)
Frequency Range: 0–6 GHz
Working Voltage: 500 Vrms max
Dielectric Withstanding: 1500 Vrms min
Contact Resistance: Center Contact: 1,5mΩ max Outer Contact: 0,4mΩ max
RoHS Compliant: Yes

RG 6 Cable:

Impedance: 75Ω ±3Ω
Capacitance: 53 ±3pF/meter
Max Attenuation (cable only): 0.2dB @ 1GHz for 1 meter
Conductor Size: 18 AWG, (1,02mm) .040" dia.
Conductor Material: Bare Copper
Conductor Resistance: TBD
Insulator Diameter: (4,57mm) .180"
Insulator Material: Gas Injected Foamed Polyethylene
Dielectric Constant: 1.44
Shield Material: Aluminum wire braid over Aluminum foil wrap
Jacket Material: PVC
Jacket Diameter: (7,00mm) .275"
Jacket Temp Rating: -50°C to +90°C
Jacket Color: Black
RoHS Compliant: Yes

ALSO AVAILABLE

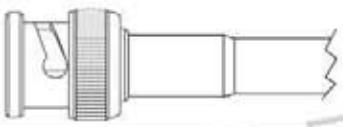
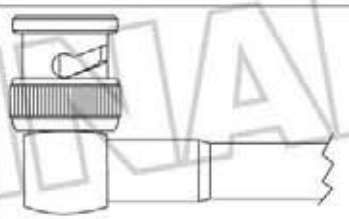
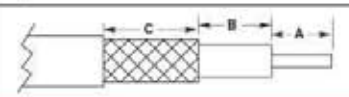
- Connector Kits.
- Additional plating options available.

Call Samtec.

CABLE TYPE	–	END 1 CONNECTOR	–	END 2 CONNECTOR	–	OVERALL LENGTH
RF06T = RG 6 Cable RFB6T = Belden 1694A Cable		Specify END OPTIONS from chart				–"XXXX" = Overall Length in millimeters –0100 (100mm) 3.94" minimum

RF06T–T4SP3–T4RP3 SHOWN

END OPTIONS

–74SP3 = 75Ω BNC, Straight Plug (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	
–74RP3 = 75Ω BNC, Right Angle Plug (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	
–SING = Single Ended (End 2 callout)	
–XXXXXX = Stripped & Tinned (End 2 callout) (See chart for callout)	

STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samtec for other sizes.

PRELIMINARY

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RF179 SERIES

75Ω OPTIMIZED CABLE ASSEMBLIES

SPECIFICATIONS

Mates with:
BNC7T, MCX7, SMB7H

For complete specifications see www.samtec.com?RF179

RF Connector:

Outer Contact Material:
Ni plated Brass (BNC)
Au plated Brass (SMB)
Au plated BeCu (MCX)
Center Contact Material:
Au plated Brass (BNC-P, MCX-P)
Au plated BeCu (SMB-P)
Au plated Phosphor Bronze (BNC-J)
Insulator Material:
PTFE
Operating Temperature:
-50°C to +165°C
Impedance:
ST = 75Ω ±3Ω
RA = 75Ω ±4Ω
Frequency Range:
0–6 GHz
Working Voltage:
170 Vrms (MCX)
500 Vrms (BNC & SMB)
Dielectric Withstanding:
500 Vrms min (MCX)
1500 Vrms min (BNC & SMB)
Contact Resistance:
Center Contact: 1,5mΩ max
Outer Contact: 0,4mΩ max
RoHS Compliant:
Yes

RG 179 Cable:

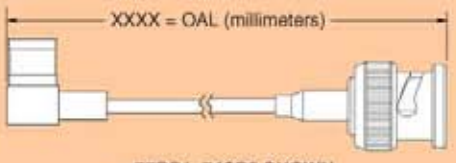
Impedance:
75Ω ±3Ω
Capacitance:
64pF/meter
Propagation Delay:
4.83 nsec/meter
Max Attenuation (cable only):
0.8dB @ 1GHz for 1 meter
Conductor Size:
30 AWG, (0,31mm) .012" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
0.34Ω/meter max
Current Rating:
3A DC
Insulator Diameter:
(1,6mm) .063"
Insulator Material:
PTFE
Dielectric Constant:
1.8 dK
Shield Material:
Silver Plated Copper
Jacket Material:
FEP
Jacket Diameter:
(2,54mm) .100"
Jacket Temp Rating:
-55°C to +165°C
Jacket Color:
Amber
RoHS Compliant:
Yes

ALSO AVAILABLE

- Connector Kits.
- Additional plating options available.

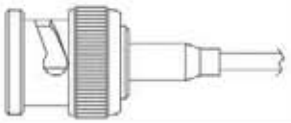
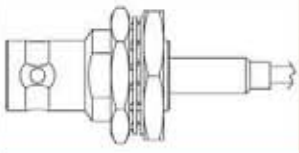
Call Samtec.

CABLE TYPE	–	END 1 CONNECTOR	–	END 2 CONNECTOR	–	OVERALL LENGTH
RF179 = RG 179 Cable		Specify END OPTIONS from chart				–"XXXX" = Overall Length in millimeters –0100 (100mm) 3.94" minimum

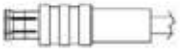
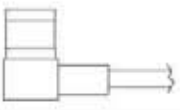


–77RP1–74SP3 SHOWN

END OPTIONS

–74SP3 = 75Ω BNC, Straight Plug (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	
–74BJ3 = 75Ω BNC, Bulkhead Jack (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	

END OPTIONS

–72RP1 = 75Ω MCX, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–72SP1 = 75Ω MCX, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–77RP1 = 75Ω SMB, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–77SP1 = 75Ω SMB, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–SING = Single Ended (End 2 callout)	
XXXXXX = Stripped & Tinned (End 2 callout)	

STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samec for other sizes.

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MCX7 SERIES

75Ω OPTIMIZED MCX JACKS & PLUGS

SPECIFICATIONS

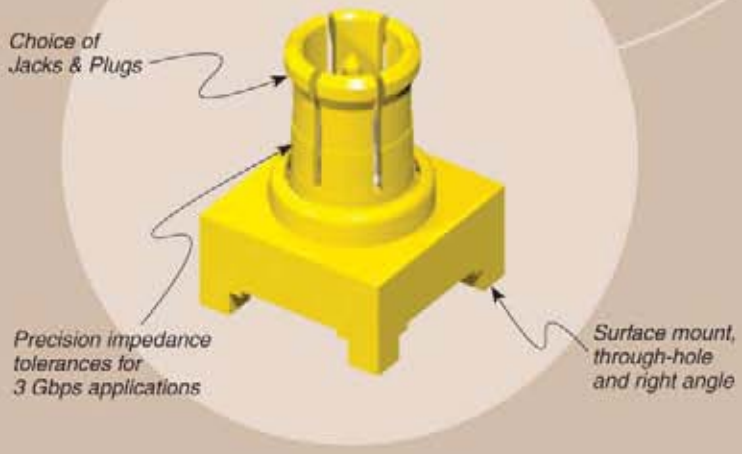
Mates with:
RF179

For complete specifications and recommended Cable Stripping see www.samtec.com?MCX7

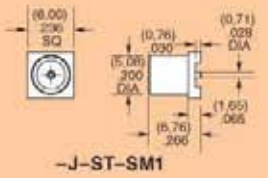
Shell Material:
Brass
Contact Material:
BeCu
Insulator Material:
PTFE
Impedance:
ST = 75Ω ±3Ω
RA = 75Ω ±4Ω
Frequency Range:
0-6 GHz
V.S.W.R:
1.3 max
(With optimized launch design)
Working Voltage:
170 Vrms max
Dielectric Withstanding:
500 Vrms min
Contact Resistance:
Center Contact: 5mΩ max
Outer Contact: 2.5mΩ max
Insulator Resistance:
1000 MΩ min
Engagment Force:
4.5 lbs max (–ST only)
Disengagment Force:
2.3 lbs max (–ST only)
RoHS Compliant:
Yes

Processing:

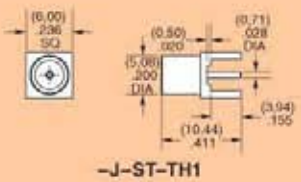
Lead-Free Solderable:
Yes



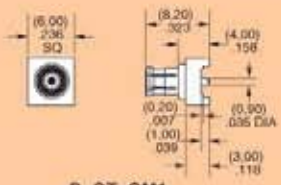
MCX7	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–P = Plug –J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold center contact, 3µ" (0,08µm) Gold outer contact –HN = 30µ" (0,76µm) Gold center contact, 3µ" (0,08µm) Gold outer contact, 50µ" (1,27µm) Nickel body (Available on RA only)	–ST = Straight –RA = Right Angle (–J–TH1 only)	–SM1 = Surface Mount (–ST only) –TH1 = Through-hole (–J only)



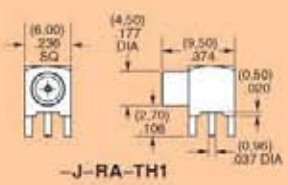
–J–ST–SM1



–J–ST–TH1



–P–ST–SM1



–J–RA–TH1

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SMB7H SERIES

SMB7H-J-P-H-ST-TH1

SMB7H-J-P-HN-RA-TH1

SMB7H-J-P-H-ST-EM1

75Ω OPTIMIZED SMB JACKS

SPECIFICATIONS

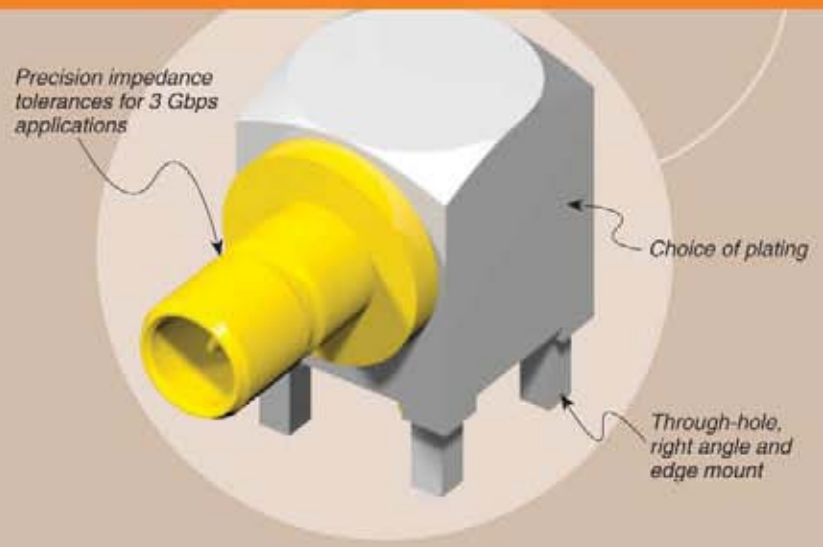
Mates with: RF179

For complete specifications and recommended Cable Stripping see www.samtec.com?SMB7H

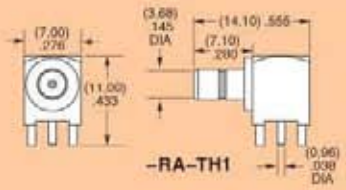
Shell Material:
Brass
Contact Material:
Brass
Insulator Material:
PTFE
Impedance:
ST = 75Ω ±3Ω
RA = 75Ω ±4Ω
Frequency Range:
0–4 GHz
V.S.W.R:
1.3 max
(With optimized launch design)
Working Voltage:
335 Vrms max
Dielectric Withstanding:
1000 Vrms min
Contact Resistance:
Center Contact: 6mΩ max
Outer Contact: 1mΩ max
Insulator Resistance:
1000 MΩ min
RoHS Compliant:
Yes

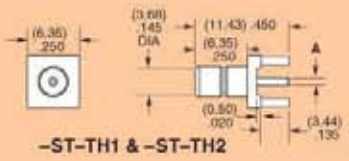
Processing:

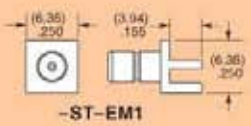
Lead-Free Solderable:
Yes



SMB7H	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold center contact, 3µ" (0,08µm) Gold outer contact –HN = 30µ" (0,76µm) Gold center contact, 3µ" (0,08µm) Gold outer contact, 50µ" (1,27µm) Nickel body (Available on RA only)	–ST = Straight –RA = Right Angle	–TH1 = Through-hole (0,90mm .035" DIA Signal Pin) –TH2 = Through-hole (0,51mm .021" DIA Signal Pin) –EM1 = Edge Mount (–ST only)







TERMINATION	A (DIA)
–TH1	(0,90) .035
–TH2	(0,51) .021

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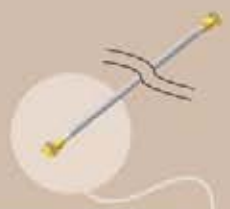
MH081–MH3RP–01BJ1–0300



MH081–MH3RP–MH3RP–0300

MH081* SERIES

MICRO HIGH FREQUENCY RF CABLES

SPECIFICATIONS

For complete specifications see www.samtec.com?MH081 or www.samtec.com?MH081

Outer Contact Material: Au plated Phosphor Bronze
Center Contact Material: Au plated Phosphor Bronze (MHX) Au plated BeCu (SMA)
Insulator Material: PBT (MHX) PTFE (SMA)
Operating Temperature: -10°C to +90°C
Voltage Rating: 170V max
Dielectric Withstanding Voltage: 200 Vrms
Frequency Range: 0–3 GHZ
Contact Resistance: Center Contact: 6mΩ max Outer Contact: 2mΩ max
Insulator Resistance: 5,000 MΩ
Impedance: 50Ω
RoHS Compliant: Yes

0,81mm Cable:

Impedance: 50Ω
Capacitance: 100pF/meter
Max Attenuation (cable only): 3.1dB @ 1GHz
Conductor Size: 36 AWG, (0,81mm) .032" dia.
Conductor Material: Silver Plated Copper
Conductor Resistance: 1.40Ω/meter max
Insulator Diameter: (0,4mm) .016"
Insulator Material: FEP
Shield Material: Silver Plated Copper
Jacket Material: FEP
Jacket Diameter: (0,81mm) .032" dia.
Jacket Temp Rating: -10°C to +90°C
RoHS Compliant: Yes

ALSO AVAILABLE

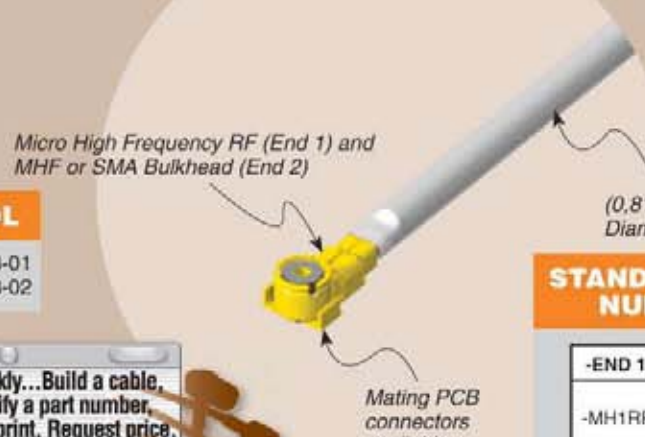
- Micro RF PCB connectors for Micro High Frequency RF
- Additional end connector combinations and overall lengths

Contact: RFgroup@samtec.com

* MH081 Series was previously RF081 Series

MH1RP End Mates with: RSP-122811-01

MH3RP End Mates with: RSP-122811-02



REMOVAL TOOL

–MH1RP = RSP-122893-01
–MH3RP = RSP-122893-02

RF Cable Builder
Quickly...Build a cable, Verify a part number, View print, Request price, Order sample...all online!
www.samtec.com/rfbuilder

STANDARD PART NUMBERS

-END 1	-END 2
-MH1RP	-MH1RP -01BJ1 -01BR1
-MH3RP	-MH3RP -01BJ1 -01BR1

MH081 – END 1 CONNECTOR – END 2 CONNECTOR – OVERALL LENGTH

END 1 CONNECTOR

–MH1RP
= MHF1 Type Plug

–MH3RP
= MHF3 Type Plug

END 2 CONNECTOR

–MH1RP
= MHF1 Type Plug

–MH3RP
= MHF3 Type Plug

–01BJ1
= SMA Bulkhead, Straight Jack

–01BR1
= SMA Bulkhead, Straight Jack, Reverse Polarity

–01SB1
= SMA Sealed Bulkhead, Straight Jack

–01SR1
= SMA Sealed Bulkhead, Straight Jack, Reverse Polarity

–XXXXXX
= Stripped & Tinned

OVERALL LENGTH

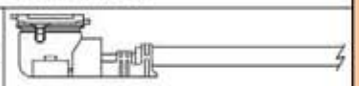
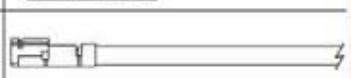
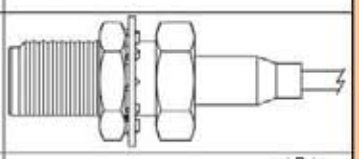
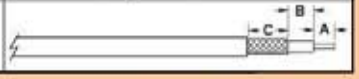
–0050
= 1.97" (50mm)

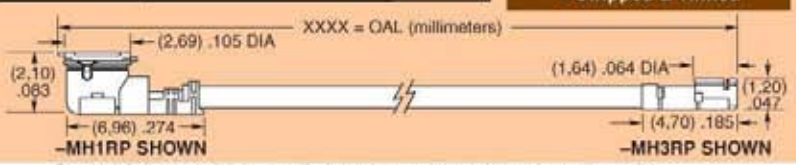
–0100
= 3.94" (100mm)

–0150
= 5.91" (150mm)

–0300
= 11.81" (300mm)

END OPTIONS

–MH1RP (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–MH3RP (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–01BJ1, –01BR1 & –01SB1, –01SR1 (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
XXXXXX = Stripped & Tinned (End 2 callout)	



STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samec for other sizes.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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MH113* SERIES

MICRO HIGH FREQUENCY RF CABLES

SPECIFICATIONS

For complete specifications see www.samtec.com?MH113

Outer Contact Material:
Au plated Phosphor Bronze
Center Contact Material:
Au plated Phosphor Bronze (MHX)
Au plated BeCu (SMA)
Insulator Material:
PBT (MHX)
PTFE (SMA)
Operating Temperature:
-10°C to +90°C
Voltage Rating:
170V max
Dielectric Withstanding Voltage:
200 Vrms
Frequency Range:
0–3 GHZ
Contact Resistance:
Center Contact: 6mΩ max
Outer Contact: 2mΩ max
Insulator Resistance:
5,000 MΩ
Impedance:
50Ω
RoHS Compliant:
Yes

1,13mm Cable:

Impedance:
50Ω
Capacitance:
95pF/meter
Max Attenuation (cable only):
2dB @ 1GHz
Conductor Size:
32 AWG, (1,13mm) .045" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
0.60Ω/meter max
Insulator Diameter:
(0,66mm) .026"
Insulator Material:
FEP
Shield Material:
Tinned Copper
Jacket Material:
FEP
Jacket Diameter:
(1,13mm) .045" dia
Jacket Temp Rating:
-10°C to +90°C
RoHS Compliant:
Yes

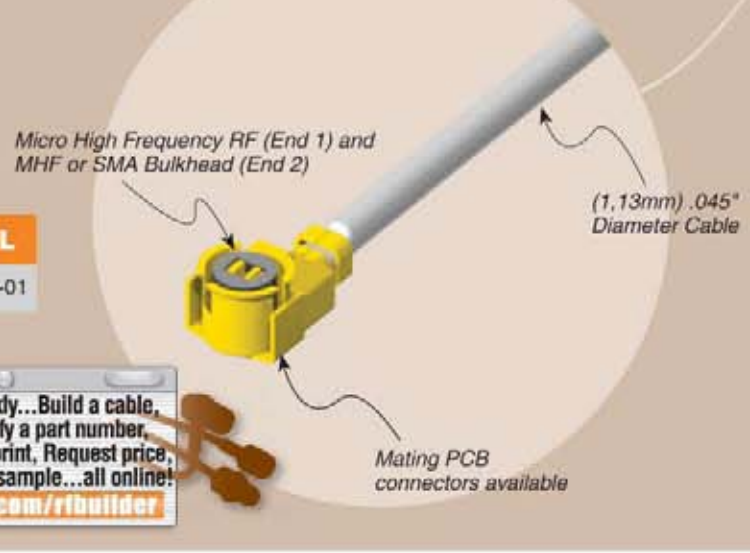
ALSO AVAILABLE

- Micro RF PCB connectors for Micro High Frequency RFs
- Additional end connector combinations and overall lengths

Contact:
RFgroup@samtec.com

* MH113 Series was previously RF113 Series

MH1RP End Mates with:
RSP-122811-01

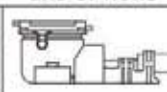
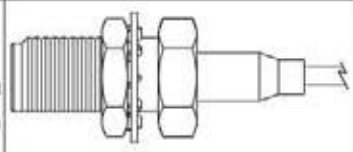


REMOVAL TOOL
–MH1RP = RSP-122893-01

MH113	– END 1 CONNECTOR	– END 2 CONNECTOR	– OVERALL LENGTH

–MH1RP
= MHF1 Type Plug

END OPTIONS

–MH1RP (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–01BJ1, –01BR1 & –01SB1, –01SR1 (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
XXXXXX = Stripped & Tinned (End 2 callout)	

–MH1RP
= MHF1 Type Plug

–01BJ1
= SMA Bulkhead, Straight Jack

–01BR1
= SMA Bulkhead, Straight Jack, Reverse Polarity

–01SB1
= SMA Sealed Bulkhead, Straight Jack

–01SR1
= SMA Sealed Bulkhead, Straight Jack, Reverse Polarity

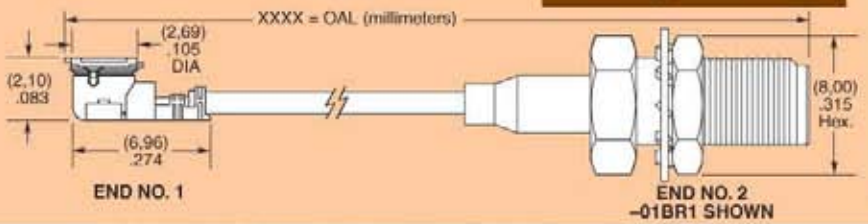
–XXXXXX
= Stripped & Tinned

–0050
= 1.97" (50mm)

–0100
= 3.94" (100mm)

–0150
= 5.91" (150mm)

–0300
= 11.81" (300mm)



STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samec for other sizes.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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RF174, RF316 SERIES

50Ω RG 174 & RG 316 CABLE ASSEMBLIES

SPECIFICATIONS

For complete specifications see www.samtec.com?RF174 or www.samtec.com?RF316

RF Connector:

Outer Contact Material:
Ni plated Brass (BNC)
Au plated Brass (SMB & SMA)
Au plated BeCu (MCX & MMCX)
Center Contact Material:
Au plated Brass (BNC-P, MCX-P, MMCX-P, SMA-P)
Au plated BeCu (SMB-P)
Au plated Phosphor Bronze (BNC-J)
Au plated BeCu (SMA-J)
Insulator Material: PTFE
Operating Temperature:
RF174: -50°C to +90°C
RF316: -50°C to +165°C
Insulator Resistance:
5,000 MΩ
Impedance: 50Ω
Frequency Range: 0-6 GHZ
RoHS Compliant: Yes

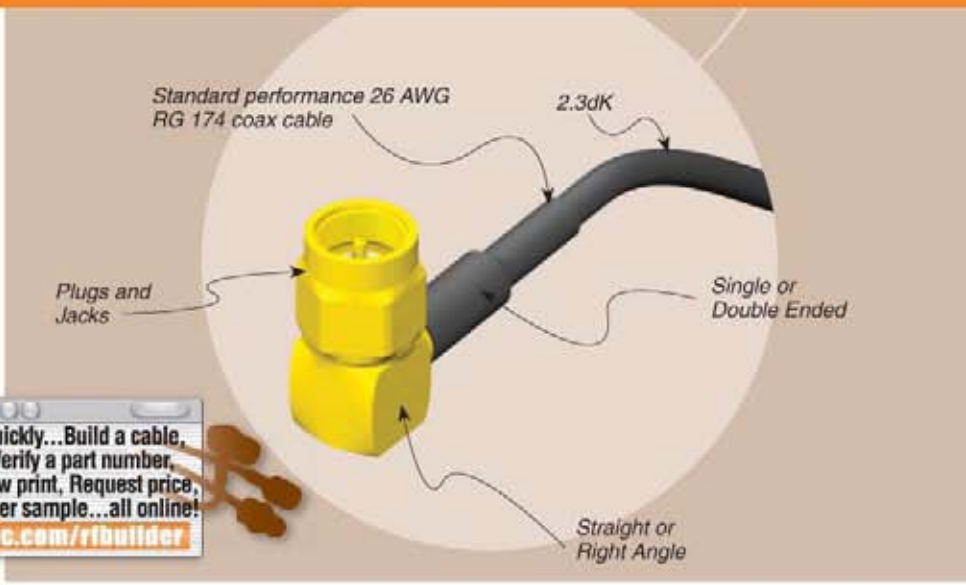
RG 174 Cable:

Impedance: 50Ω
Capacitance: 101.024pF/meter
Propagation Delay:
5.06 nsec/meter
Max Attenuation:
1.4dB @ 1GHz for 1 meter
Conductor Size:
26 AWG, (0,48mm) .019" dia.
Conductor Material: Copper
Conductor Resistance:
0.14Ω/meter
Current Rating: 5A DC
Insulator Material: PE
Dielectric Constant: 2.3dK
Shield Material: Tin Copper
Jacket Material: PVC
Jacket Diameter:
(2,70mm) .106"
Jacket Temp Rating:
-50°C to +90°C
Jacket Color: Black
RoHS Compliant: Yes

RG 316 Cable:

Impedance: 50Ω
Capacitance: 96.432pF/meter
Propagation Delay:
4.83 nsec/meter
Max Attenuation:
1.25dB @ 1GHz for 1 meter
Conductor Size:
26 AWG, (0,51mm) .020" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
0.13Ω/meter max
Current Rating: 5A DC
Insulator Material: PTFE
Dielectric Constant: 2.1dK
Shield Material:
Silver Plated Copper Clad Steel
Jacket Material: FEP
Jacket Diameter:
(2,54mm) .100"
Jacket Temp Rating:
-50°C to +165°C
Jacket Color: Amber
RoHS Compliant: Yes

Mates with:
MCX, MMCX, SMA, SMB5, BNC7T



RF Cable Builder
Quickly...Build a cable, Verify a part number, View print, Request price, Order sample...all online!
www.samtec.com/rfbuilder

CABLE TYPE – **END 1 CONNECTOR** – **END 2 CONNECTOR** –

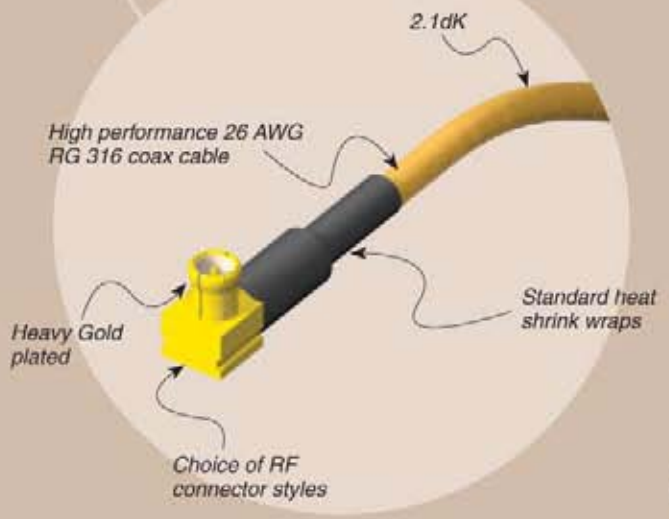
RF174 = RG 174 Cable
RF316 = RG 316 Cable

Specify END OPTIONS from chart

-01SP1 = SMA, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-01RP1 = SMA, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-07SP1 = SMB, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-07RP1 = SMB, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-02SJ1 = MCX, Straight Jack (30µ" (0,76µm) Gold on Contact, Gold Flash on Shell)

END OPTIONS
-02RP1 = MCX, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-02SP1 = MCX, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-03SP1 = MMCX, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-03RP1 = MMCX, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)
-04SP3 = BNC, Straight Plug (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)
-05SP3 = TNC, Straight Plug (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)

Due to technical progress, all designs, specifications and components are subject to change without notice.



ALSO AVAILABLE

- Connector Kits.
- Additional plating options available.
- Additional end connector combinations.

Call Samtec.

OVERALL LENGTH

–"XXXX"

= Overall Length in millimeters –0100 (100mm) minimum
(Cable lengths larger than 1000 millemeters are not supported by S.I. Test data)

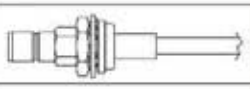
STRIPPED & TINNED
(Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samec for other sizes.

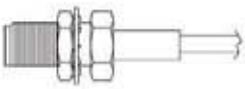
END OPTIONS

–07BJ1 = SMB, Bulkhead Jack (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)



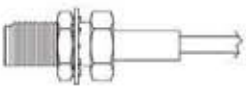
–01BJ1 = SMA, Straight Bulkhead Jack

–01BR1 = SMA, Straight Bulkhead Jack, Reversed Polarity (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)



–01SB1 = SMA, Sealed Straight Bulkhead Jack

–01SR1 = SMA, Sealed Bulkhead Jack, Reversed Polarity (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)



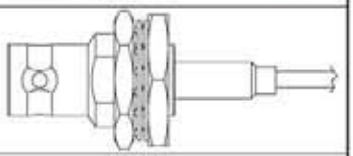
END OPTIONS

–SING = Single-Ended (End 2 only)

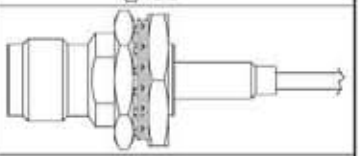
XXXXXX = Stripped & Tinned (End 2 callout)

END OPTIONS

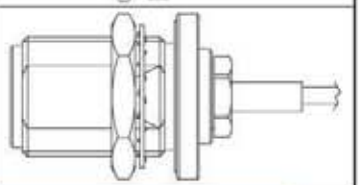
–04BJ3 = BNC, Bulkhead Jack (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)



–05BJ3 = TNC, Bulkhead Jack (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)



–06BJ2 = N Type, Bulkhead Jack (30µ" (0,76µm) Gold on Center Contact, Nickel on Shell)



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RF178 SERIES

50Ω RG 178 CABLE ASSEMBLIES

SPECIFICATIONS

Mates with:
MCX, MMCX

For complete specifications see www.samtec.com?RF178

RF Connector:

Outer Contact Material:
Au plated Brass (SMA)
Au plated BeCu (MCX & MMCX)
Center Contact Material:
Au plated Brass (MCX-P & MMCX-P)
Au plated BeCu (SMA-J & MCX-J)
Insulator Material:
PTFE
Operating Temperature:
-50°C to +165°C
Frequency Range:
0~6 GHz
Insulator Resistance:
5,000 MΩ
Impedance:
50Ω
RoHS Compliant:
Yes

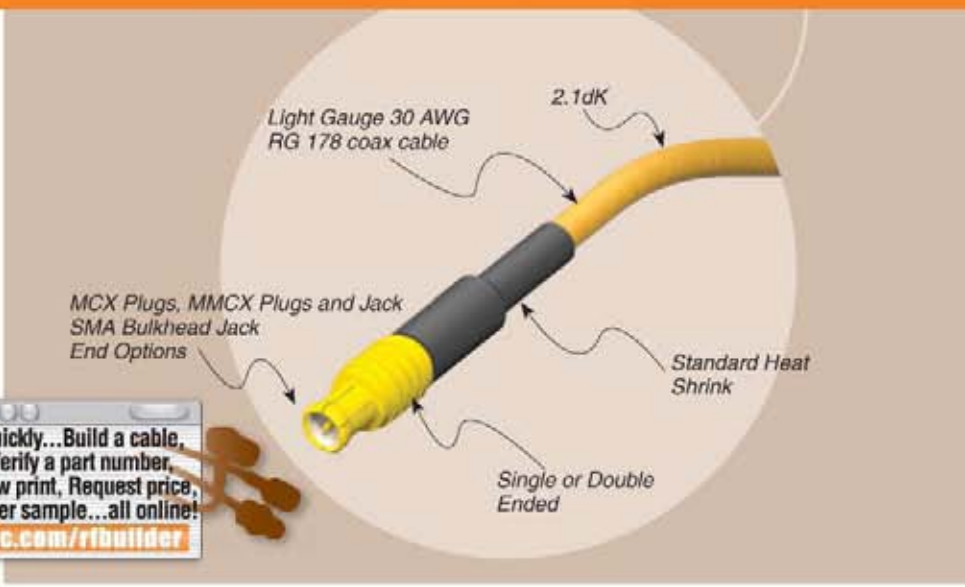
RG 178 Cable:

Impedance:
50Ω
Capacitance:
89.61pF/meter
Propagation Delay:
4.83 nsec/meter
Max Attenuation (cable only):
1.7dB @ 1GHz for 1 meter
Conductor Size:
30 AWG, (0,31mm) .012" dia.
Conductor Material:
Silver Plated Copper
Conductor Resistance:
0.34Ω/meter max
Current Rating:
3A DC
Insulator Diameter:
(0,86mm) .034"
Insulator Material:
PTFE
Dielectric Constant:
2.1dK
Shield Material:
Silver Plated Copper Clad Steel
Jacket Material:
FEP
Jacket Diameter:
(1,80mm) .071"
Jacket Temp Rating:
-50°C to +165°C
Jacket Color:
Amber
RoHS Compliant: Yes

ALSO AVAILABLE

- Connector Kits.
- Additional end connector combinations.
- Additional plating options available.

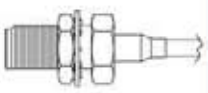
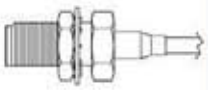
Call Samtec.



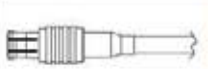
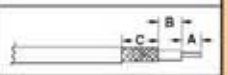
RF Cable Builder
Quickly...Build a cable, Verify a part number, View print, Request price, Order sample...all online!
www.samtec.com/rfbuilder

CABLE TYPE	END 1 CONNECTOR	END 2 CONNECTOR	OVERALL LENGTH
RF178 = RG 178 Cable	Specify END OPTIONS from chart		–"XXXX" = Overall Length in millimeters –0100 (100mm) 3.94" minimum

END OPTIONS

–01BJ1 = SMA, Straight Bulkhead Jack **–01BR1** = SMA, Straight Bulkhead Jack, Reversed Polarity (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–01SB1 = SMA, Sealed Straight Bulkhead Jack **–01SR1** = SMA, Sealed Bulkhead Jack, Reversed Polarity (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–02SJ1 = MCX, Straight Jack (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–02RP1 = MCX, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	

END OPTIONS

–02SP1 = MCX, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–03SP1 = MMCX, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–03RP1 = MMCX, Right Angle Plug (30µ" (0,76µm) Gold on Center Contact, Gold Flash on Shell)	
–SING = Single-Ended (End 2 Callout)	
XXXXXX = Stripped & Tinned (End 2 callout)	

STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samtec for other sizes.

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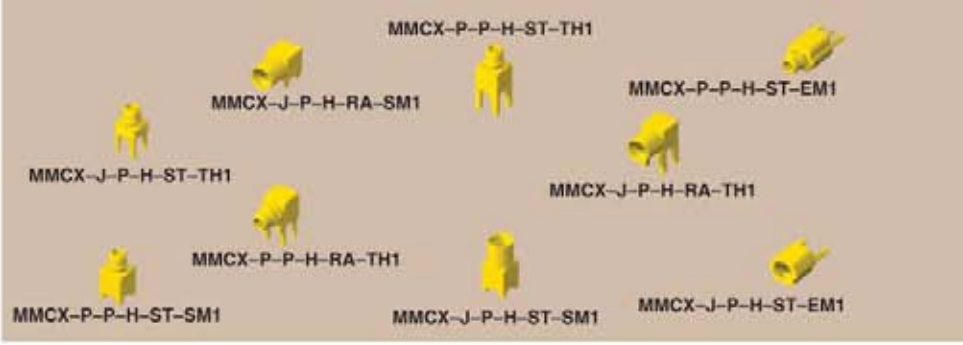


MMCX SERIES

50Ω MMCX JACKS & PLUGS

Mates with:
RF174, RF316, RF178

SPECIFICATIONS

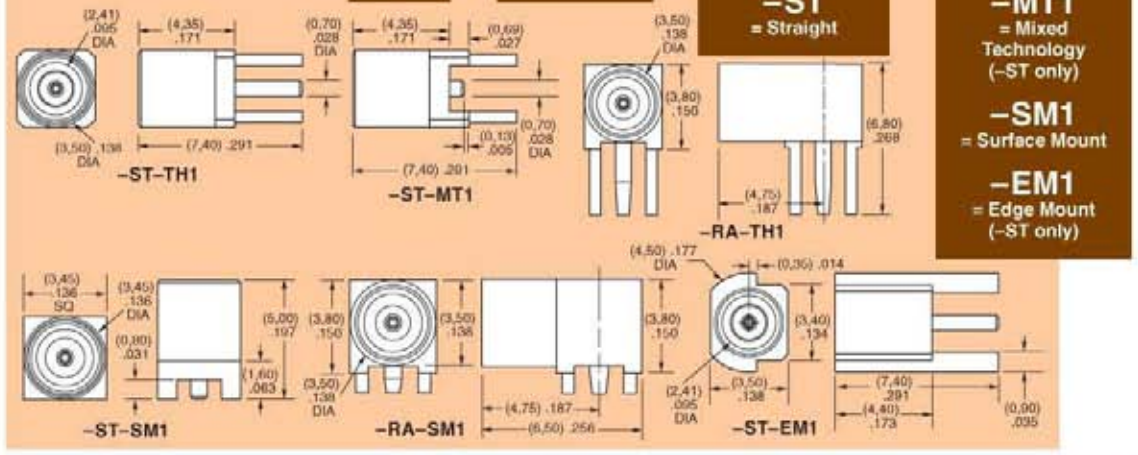
For complete specifications and recommended PCB layouts see www.samtec.com?MMCX-J or www.samtec.com?MMCX-P

Contact Material:
BeCu
Insulator Material:
PTFE
Pin and Shell Material:
Brass
Operating Temp Range:
-40°C to +90°C
Insulation Resistance:
1000MΩ min
Contact Resistance:
Center: 5mΩ
Outer: 2.5mΩ
Impedance:
50Ω
Dielectric Withstanding Voltage:
500 Vrms, 50Hz
Dielectric Working Voltage:
170 Vrms, 50Hz
V.S.W.R.:
1.3 max (–EM, –ST–SM1)
1.5 max (–RA–SM1)
Frequency Range:
0–6 GHz
RoHS Compliant:
Yes

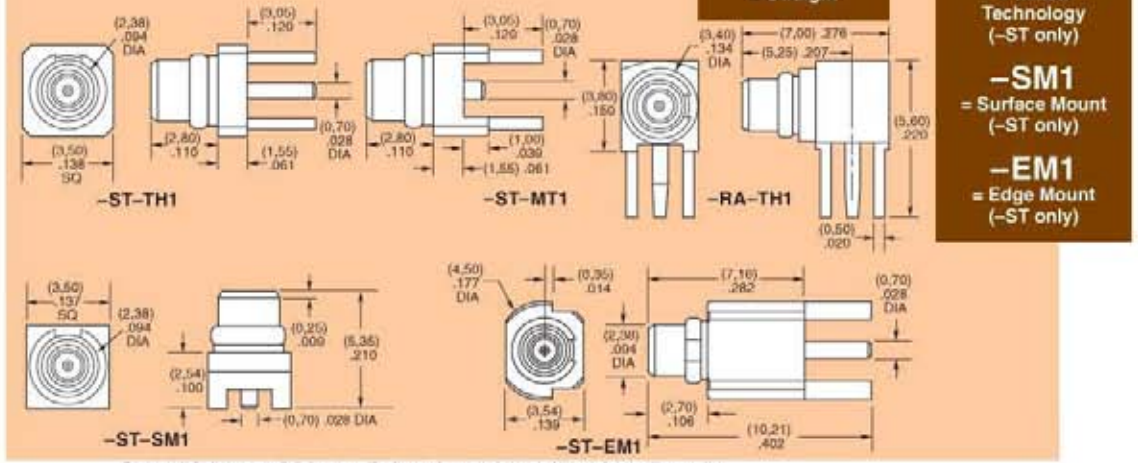
Processing:

Lead-Free Solderable
Yes

MMCX	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold	–RA = Right Angle –ST = Straight	–TH1 = Through-hole –MT1 = Mixed Technology (–ST only) –SM1 = Surface Mount –EM1 = Edge Mount (–ST only)



MMCX	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–P = Plug	–P = PCB Mount	–H = 30µ" (0,76µm) Gold	–RA = Right Angle –ST = Straight	–TH1 = Through-hole –MT1 = Mixed Technology (–ST only) –SM1 = Surface Mount (–ST only) –EM1 = Edge Mount (–ST only)



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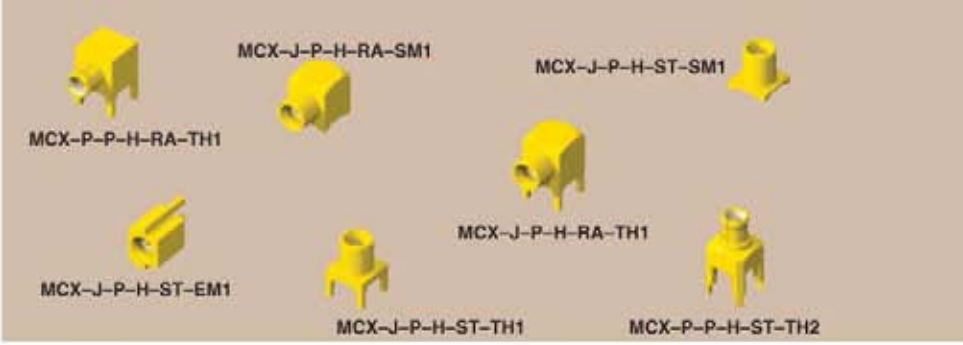


MCX SERIES

50Ω MCX JACKS & PLUGS

Mates with:
RF174, RF316, RF178

SPECIFICATIONS

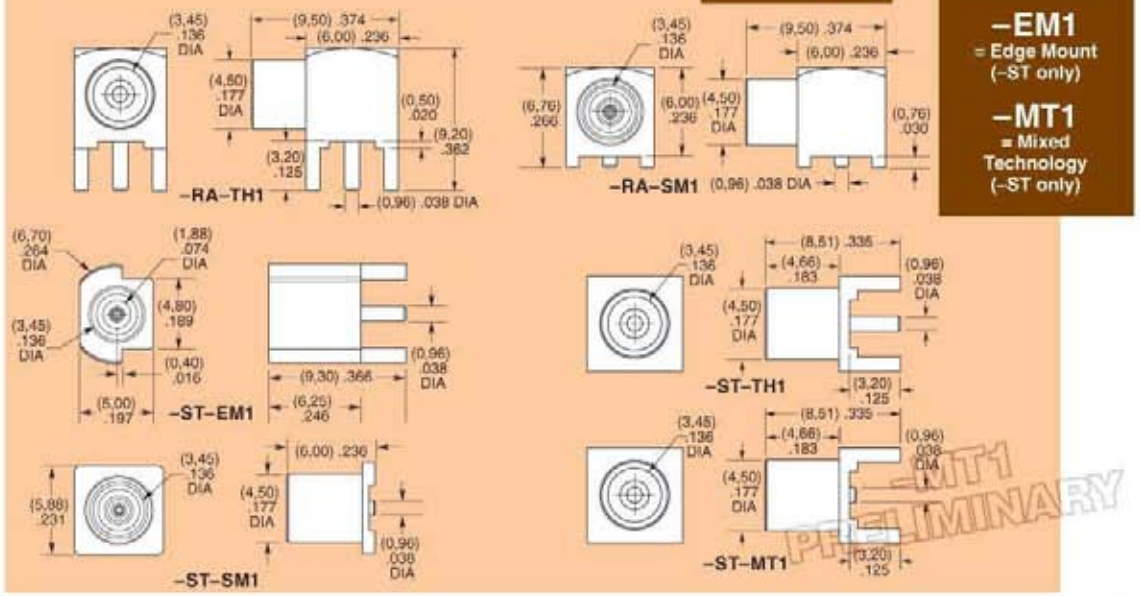
For complete specifications and recommended PCB layouts see www.samtec.com?MCX-J or www.samtec.com?MCX-P

Insulator Material:
PTFE
Contact Material:
BeCu, Brass (–P–TH)
Shell Material:
Brass
Operating Temp Range:
-40°C to +90°C
Insulation Resistance:
1000MΩ min
Contact Resistance:
Center: 5mΩ max
Outer: 2.5mΩ max
Impedance:
50Ω
V.S.W.R:
1.3 max (–ST)
1.5 max (–RA)
Dielectric Withstanding Voltage:
1000 Vrms min, 50Hz
Dielectric Working Voltage:
335 Vrms max
Frequency Range:
0–6 GHz
RoHS Compliant:
Yes

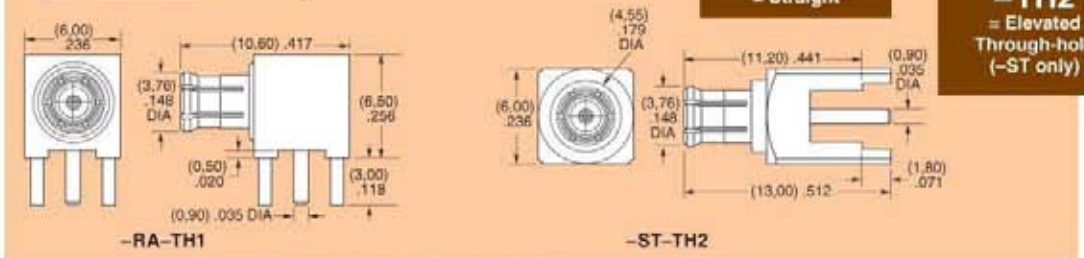
Processing:

Lead-Free Solderable:
Yes

MCX	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold	–RA = Right Angle –ST = Straight	–TH1 = Through-hole –SM1 = Surface Mount –EM1 = Edge Mount (–ST only) –MT1 = Mixed Technology (–ST only)



MCX	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	–P = Plug	–P = PCB Mount	–H = 30µ" (0,76µm) Gold	–RA = Right Angle –ST = Straight	–TH1 = Through-hole (–RA only) –TH2 = Elevated Through-hole (–ST only)



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SMA, SMB5 SERIES

50Ω SMA & SMB JACKS

SPECIFICATIONS

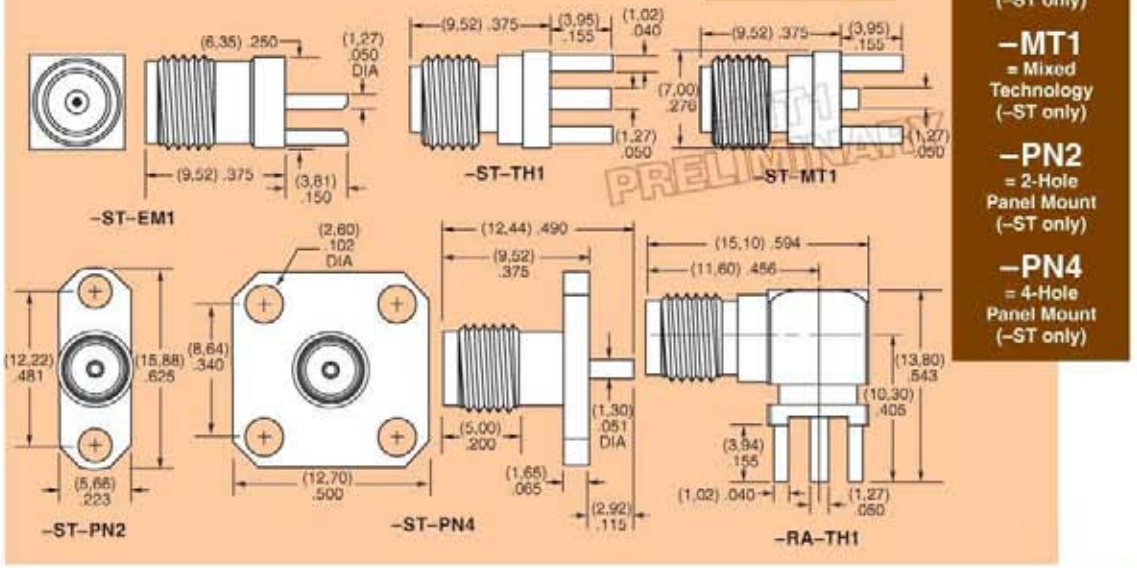
For complete specifications and recommended PCB layouts see www.samtec.com?SMA

Contact Material: BeCu
Shell Material: Brass
Insulator Material: PTFE (-PN)
Operating Temp Range: -40°C to +90°C
Contact Resistance: Center Contact: 6mΩ max Outer Contact: 2mΩ max
Insulator Resistance: 5,000 MΩ
Impedance: 50Ω
Dielectric Withstanding Voltage: 500 Vrms min (-EM1 & -PN) 750 Vrms min (-TH1)
Working Voltage: 170 Vrms max
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Yes

SMA	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	Mates with: RF174, RF316, PCRF				
	–J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold	–ST = Straight –RA = Right Angle	–TH1 = Through-hole –EM1 = Edge Mount (–ST only) –MT1 = Mixed Technology (–ST only) –PN2 = 2-Hole Panel Mount (–ST only) –PN4 = 4-Hole Panel Mount (–ST only)



SPECIFICATIONS

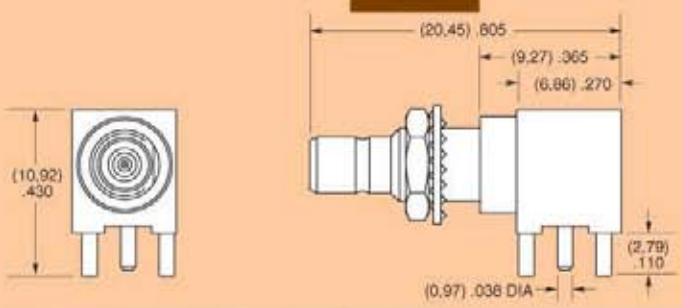
For complete specifications and recommended Cable Stripping see www.samtec.com?SMB5

Shell Material: Brass
Contact Material: Brass
Insulator Material: PTFE
Impedance: 50Ω
Frequency Range: 0–4 GHz
V.S.W.R: 1.5 max
Working Voltage: 250 Vrms max
Dielectric Withstanding: 750 Vrms min
Contact Resistance: Center Contact: 6mΩ max Outer Contact: 2.5mΩ max
Insulator Resistance: 1000 MΩ min
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Yes

SMB5	GENDER	TYPE	PLATING	ORIENTATION	TERMINATION
	Mates with: RF174, RF316				
	–J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold	–RA = Right Angle	–TH1 = Through-Hole



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TNC, RF058 SERIES

50Ω TNC JACKS & RG 58 CABLES

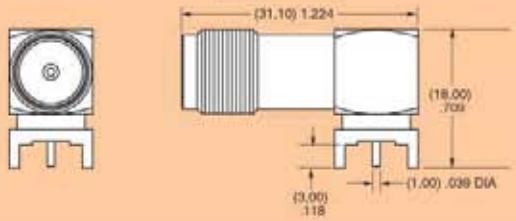
SPECIFICATIONS

For complete specifications and recommended Cable Stripping see www.samtec.com?TNC

Outer Contact Material: Ni plated Brass
Center Contact Material: Au plated Brass (N-Type) Au plated Phosphor Bronze (TNC)
Insulator Material: PTFE
Operating Temperature: -65°C to +165°C
Impedance: 50Ω
Frequency Range: 0–6 GHz
Working Voltage: 500 Vrms max
Dielectric Withstanding: 1500 Vrms min
Contact Resistance: Center Contact: 3mΩ max Outer Contact: 2mΩ max
Insulator Resistance: 5000 MΩ min
RoHS Compliant: Yes

Processing:
Lead-Free Solderable: Yes

TNC	– GENDER	– TYPE	– PLATING	– ORIENTATION	– TERMINATION
Mates with: RF058	–J = Jack	–P = PCB Mount	–H = 30µ" (0,76µm) Gold on center contact, Nickel on Shell	–RA = Right Angle	–TH1 = Through-Hole



SPECIFICATIONS

For complete specifications see www.samtec.com?RF058

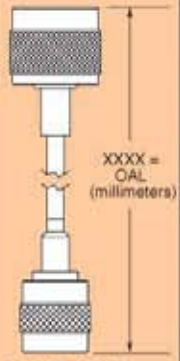
Cable: 50Ω RG 58 (See RF Cable Selector for details)
Outer Contact Material: Brass
Center Contact Material: Brass, (–P) Phosphor Bronze (–J)
Insulator Material: PTFE
Impedance: 50Ω
Frequency Range: 0–6 GHz
Working Voltage: 1000 Vrms max (N-Type), 500 Vrms max (TNC)
Dielectric Withstanding: 2500 Vrms min (N-Type), 1500 Vrms min (TNC)
Contact Resistance: Center Contact: 3mΩ max Outer Contact: 2mΩ max
Insulator Resistance: 5,000 MΩ
RoHS Compliant: Yes

ALSO AVAILABLE

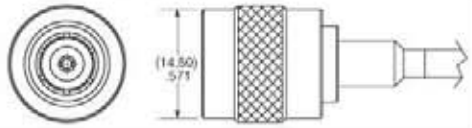
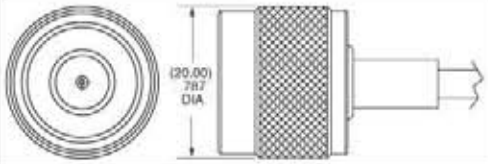
- Connector Kits.
- Additional plating options.
- Additional end connector options.

Call Samtec.

CABLE TYPE	– END 1 CONNECTOR	– END 2 CONNECTOR	– OVERALL LENGTH
Mates with: TNC	RF058 = RG 58 Cable	Specify END OPTIONS from chart	–"XXXX" = Overall Length in millimeters –0100 (100mm) 3.94" minimum



END OPTIONS

–05SR3 = TNC, Reversed Polarity Straight Plug (10µ" (0,25µm) Gold on Center Contact, Nickel on Shell)	
–06SP2 = N Type, Straight Plug (30µ" (0,76µm) Gold on Center Contact, Nickel on Shell)	
–SING = Single Ended (End 2 Callout)	
–XXXXXX = Stripped & Tinned (End 2 callout)	

STRIPPED & TINNED (Dimensions in mm)

CALLOUT	A	B	C
–303030	3.0	3.0	3.0
–303040	3.0	3.0	4.0
–403030	4.0	3.0	3.0
–403040	4.0	3.0	4.0
–404040	4.0	4.0	4.0

Both center conductor and braid shield are Stripped and Tinned.
Call Samtec for other sizes.

Due to technical progress, all designs, specifications and components are subject to change without notice.

CABLE INTERFACES

Flex Jumpers

0,5mm FPC Jumper & Sockets (FJH, ZF5, ZLR5) 342-343
1mm FPC Jumper & Sockets (FJ, ZF1, FC1) 344-345

Flat Cable IDC Assemblies

.100" (2,54mm) Pitch (IDSX, IDMX) 346-347
.050" (1,27mm) Pitch (FFSD, FFMD, FFTP, FMTP) 348-349
2mm Pitch (TCSD, TCMD, TLSD) 350-352

Discrete Wire Cable Assemblies

Tiger Eye™ System (SFSX, TFSX, ISDF, S2SD, T2SD) 353-357
Mini Mate® System (MMXD, MMXS) 358-359
Power Mate™ System (PMSD, PMSS) 360

APPLICATIONS

Standard & Custom Coax and Twinax High Speed Cable Assemblies 46-47
Standard Mid Rate & Custom High Speed Flex Circuits 52-54
Flat Cable IDC, Discrete Wire & Flex Jumpers 55-56

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(0,50mm) .0197"

FJH SERIES

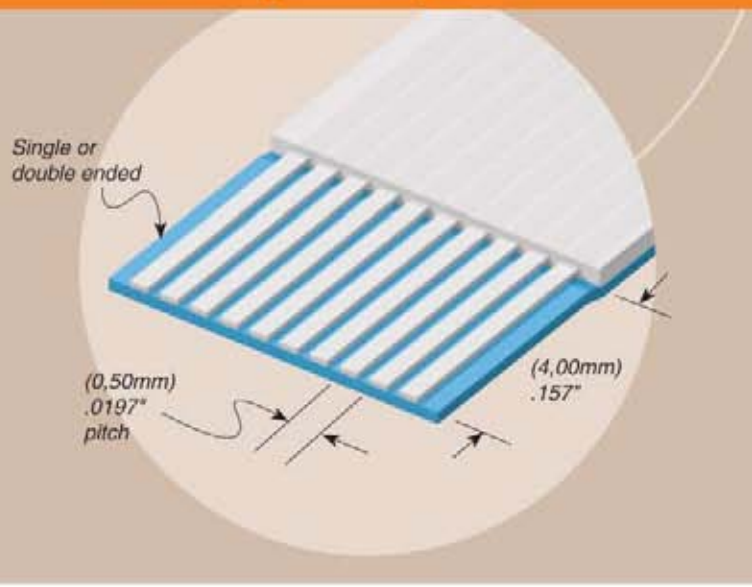
FLEXIBLE PRINTED CIRCUIT (FPC) JUMPER

SPECIFICATIONS

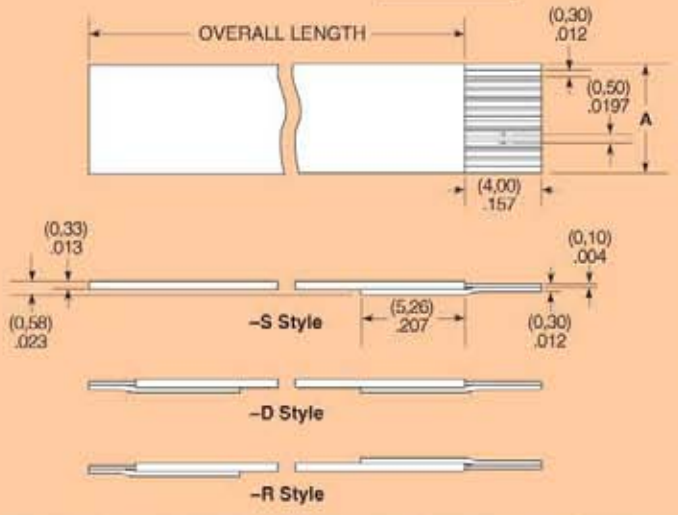
Mates with:
ZF5, ZLR5

For complete specifications see www.samtec.com?FJH

Conductor: Tin Plated Copper
Conductor Resistance: 1000 Ω/km max
Insulation Resistance: 10 MΩ/km min (conductor-to-conductor)
Dielectric Test: 400 VAC during 1 minute (conductor-to-conductor)
Temperature Rating: -30°C to +80°C
Voltage Rating: 60 VAC
Flame Resistance: VW-1 (UL 758)
RoHS Compliant: Yes



FJH	– NO. OF POSITIONS	– STYLE	– OVERALL LENGTH	– STRIP LENGTH
	–10, –15, –20, –25, –30, –40, –43, –50	–S = Single End –D = Double End –R = Reversed End	–"XX.XX" = Specify OVERALL LENGTH in inches ±1/8 inch (–D & –R = (50,80mm) 2.00" minimum) (–S = (63,50mm) 2.50" minimum)	–4 = (4,00mm) .157"



NO. OF POSITIONS	A
–10	(5,50) .217
–15	(8,00) .315
–20	(10,50) .413
–25	(13,00) .512
–30	(15,50) .610

Note: Stiffener color will be blue or black at Samtec's discretion.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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(0,50mm) .0197"

ZLR5, ZF5 SERIES

ZIF FPC/FFC SOCKET

Mates with:
FJH

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ZLR5

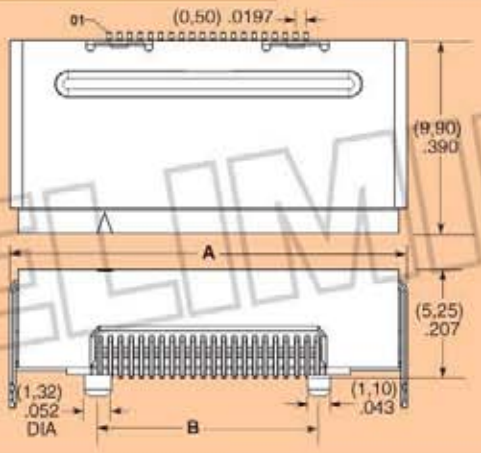
Insulator Material:
Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Weld Tab:
Phosphor Bronze
Operating Temp Range:
-55°C to +105°C
RoHS Compliant:
Yes

Processing:

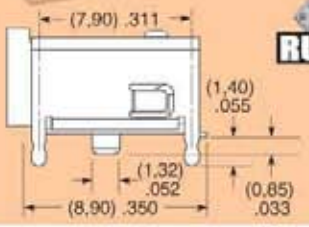
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 2x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Note: Some sizes, styles and options are non-standard, non-returnable.

ZLR5	– NO. OF POSITIONS	– LEAD STYLE	– PLATING OPTION	– RA	– OTHER OPTION
	–20, –30 (Call Samtec for other sizes.)	–01 = Contacts on Top only	–T = Matte Tin		–TR = Tape & Reel



NO. OF POSITIONS	A	B
–20	(19,20) .756	(10,70) .421
–30	(24,20) .953	(15,70) .618



RUGGEDIZED by SAMTEC

PRELIMINARY

Mates with:
FJH, ZFHF and flex cable with stiffener thickness of (0,30mm) .012"

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ZF5

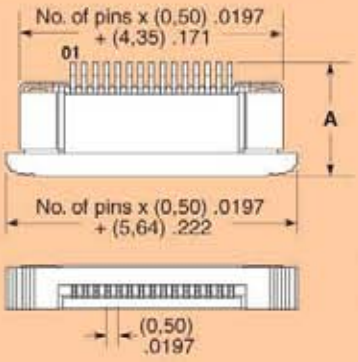
Insulator Material:
High Temperature Nylon
Contact Material:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Weld Tab:
Phosphor Bronze
Operating Temp Range:
-55°C to +105°C
RoHS Compliant: Yes

Processing:

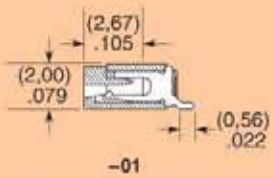
Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 2x
Lead-Free Solderable: Yes
SMT Lead Coplanarity:
(0,10mm) .004" max

Note: Some sizes, styles and options are non-standard, non-returnable.

ZF5	– NO. OF POSITIONS	– LEAD STYLE	– PLATING OPTION	– WT	– OPTION
	–10, –15, –20, –25, –30, –40, –43, –50 (Call Samtec for other sizes.)	–01 = Contact Bottom	–T = Matte Tin	–WT = Weld Tab	–TR = Tape & Reel Packaging



NO. OF POSITIONS	A
–10, –15, –20, –25	(5,49) .216
–30	(5,59) .220
–40, –43	(5,69) .224



ALSO AVAILABLE

Vertical, Contact Top and other positions available. Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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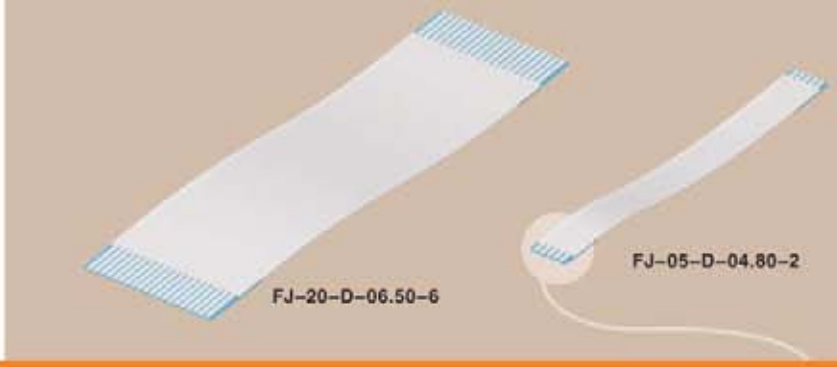


(1,00mm) .03937"

FJ SERIES

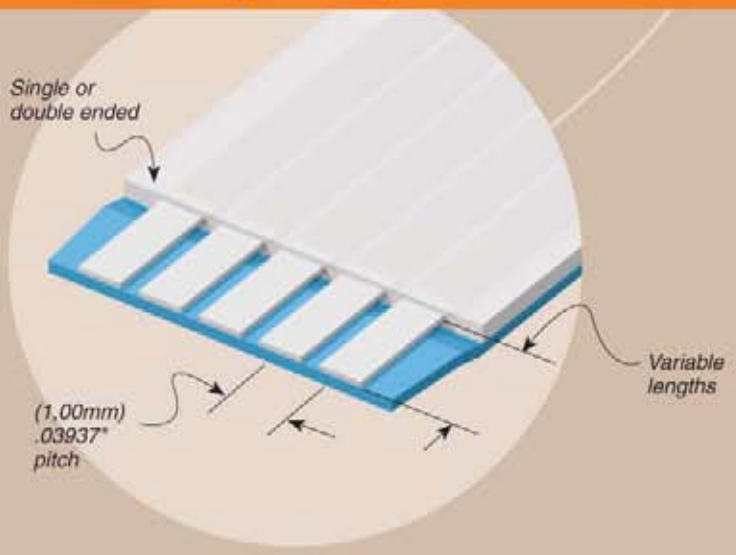
FLEXIBLE PRINTED CIRCUIT (FPC) JUMPER

SPECIFICATIONS

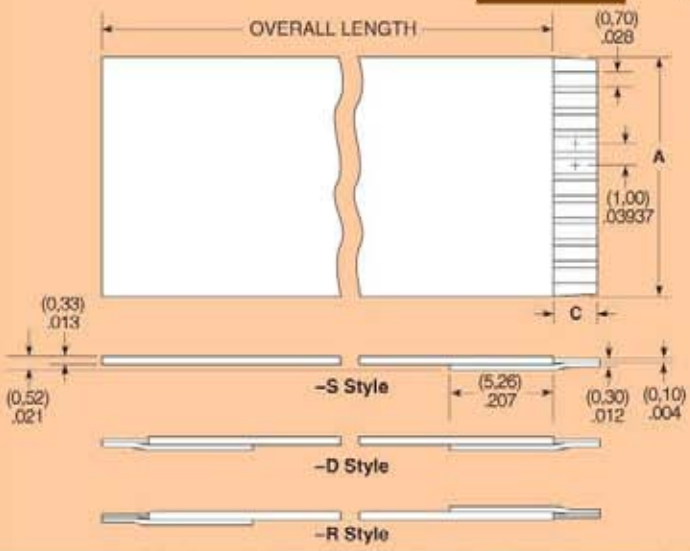
Mates with:
FC1, ZF1

For complete specifications see www.samtec.com?FJ

Conductor:
Tin Plated Copper
Conductor Resistance:
300 Ω/km max
Insulation Resistance:
10 MΩ/km min
(conductor-to-conductor)
Dielectric Test:
400 VAC during 1 minute
(conductor-to-conductor)
Temperature Rating:
-30°C to +80°C
Voltage Rating:
300 VAC
Flame Resistance:
VW-1 (UL 758)
RoHS Compliant:
Yes



FJ	– NO. OF POSITIONS	– STYLE	– OVERALL LENGTH	– STRIP LENGTH
	–05, –10, –15, –20, –25, –30	–S = Single End –D = Double End –R = Reversed End	–"XX.XX" = Specify OVERALL LENGTH in inches (±1/8 inch) (–D = (50,80mm) 2.00" minimum) (–S = (63,50mm) 2.50" minimum)	–2 = (2,00mm) .079" –4 = (4,00mm) .157" (Required for mating with FC1) –6 = (6,00mm) .236"



NO. OF POSITIONS	A
–05	(6,00) .236
–10	(11,00) .433
–15	(16,00) .630
–20	(21,00) .827
–25	(26,00) 1.024

STRIP LENGTH	C
–2	(2,00) .079
–4	(4,00) .157
–6	(6,00) .236

Note: Stiffener color will be blue or black at Samtec's discretion.

Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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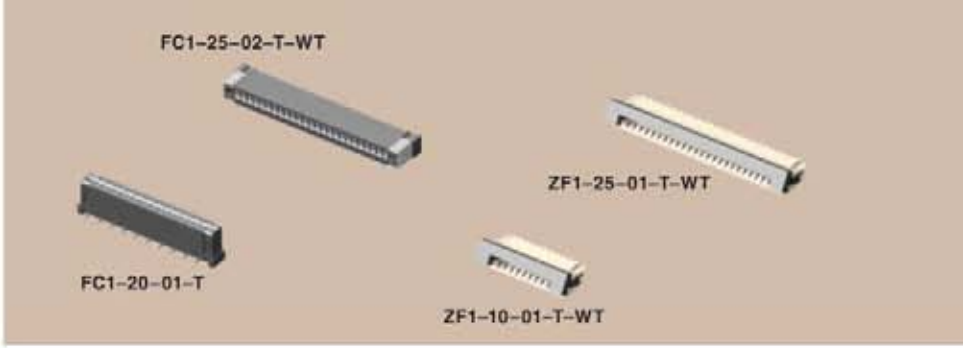


(1,00mm) .03937"

ZF1, FC1 SERIES

FPC/FFC SOCKET

Mates with:
FJ and flex cable with contact/stiffener thickness of (0,30mm) .012"

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ZF1

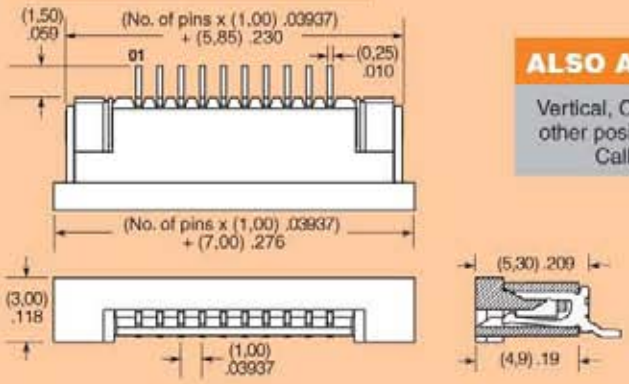
Insulator Material: Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Sn over 40µ" (1,02µm) Ni
Weld Tab: Phosphor Bronze
Operating Temp Range: -55°C to +105°C
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 2x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

Note: Some lengths, styles and options are non-standard, non-returnable.

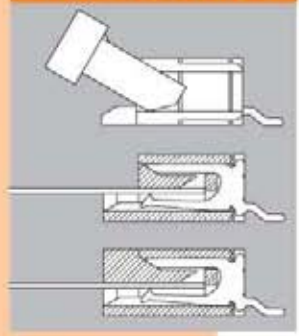
ZF1	– NO. OF POSITIONS	– LEAD STYLE	– PLATING OPTION	– WT	– OPTION
	–05, –10, –15, –16, –20, –25, –30	–01 = Contact Bottom	–T = Matte Tin	–WT = Weld Tab	–TR = Tape & Reel Packaging



ALSO AVAILABLE

Vertical, Contact Top and other positions available. Call Samtec.

APPLICATION



Mates with:
FJ and flex cable with contact/stiffener thickness of (0,30mm) .012"

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?FC1

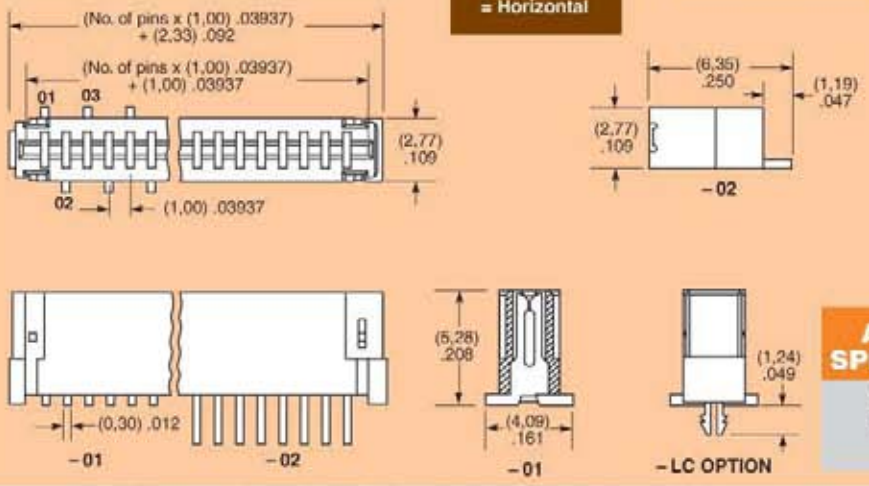
Insulator Material: Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Tin over 50µ" (1,27µm) Ni
Current Rating: 2A @ 80° ambient
Operating Temp Range: -55°C to +105°C
Max Cycles: 25 with FJ
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

Note: Some lengths, styles and options are non-standard, non-returnable.

FC1	– NO. OF POSITIONS	– LEAD STYLE	– PLATING OPTION	– OPTIONS
	–05, –10, –15, –20 & –25	–01 = Vertical –02 = Horizontal	–T = Tin	–LC = Locking Clip (–01 only) –WT = Weld Tab (–02 only) –K = (4,00mm) .156" DIA Polyimide film Pick & Place Pad (–01 only) –TR = Tape & Reel Packaging



APPLICATION SPECIFIC OPTION

Low insertion force contacts available. Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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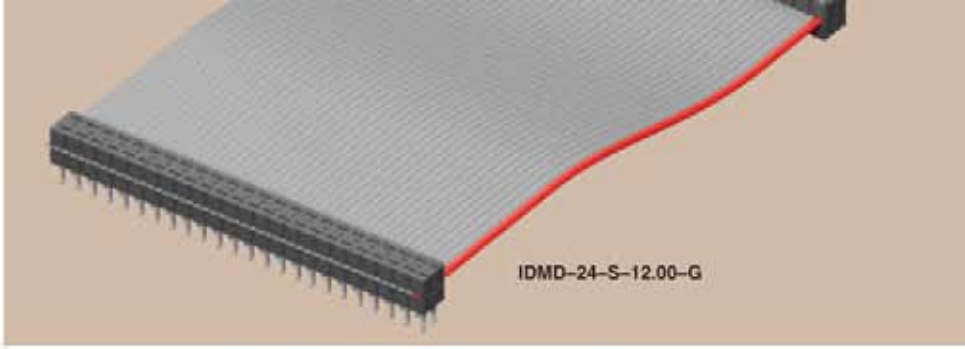


(2,54mm) .100"

IDSS, IDSD, IDMS, IDMD SERIES

SLIM BODY FLAT RIBBON IDC CABLES

SPECIFICATIONS

IDSS, IDSD

For complete specifications see www.samtec.com?IDSS or www.samtec.com?IDSD

Insulator Material: Black Glass Filled Polyester
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Wire: 28 AWG 7/36 stranded Tinned Copper
Temperature Range: -20°C to +105°C (Rainbow Cable) -40°C to +105°C (Gray Cable)
Contact: BeCu
Current Rating: 1A
Contact Resistance: 10 mΩ max
Lead Size Range: (0,56mm) .022" SQ to (0,71mm) .028" SQ
Lead Insertion Depth: (5,59mm) .220" to (6,22mm) .245"
Insertion Force: (Single contact only) 4oz avg. ((0,64mm) .025" SQ probe)
Withdrawal Force: (Single contact only) 3oz avg. ((0,64mm) .025" SQ probe)
RoHS Compliant: Yes

SPECIFICATIONS

IDMS, IDMD

For complete specifications see www.samtec.com?IDMS or www.samtec.com?IDMD

Insulator Material: Black Glass Filled Polyester
Plating: Au over 50µ" (1,27µm) Ni or Sn over 100µ" (2,54µm) Cu or 50µ" (1,27µm) Ni
Wire: 28 AWG 7/36 stranded Tinned Copper
Temperature Range: -20°C to +105°C (Rainbow Cable) -40°C to +105°C (Gray Cable)
Terminal: Phosphor Bronze
Current Rating: 1A
RoHS Compliant: Yes

Note: This Series is non-standard, non-returnable.

Mates with: TSW, MTSW, TSM, EJH

IDSD Mates with: TST, HTST, ZST

TYPE STRIP

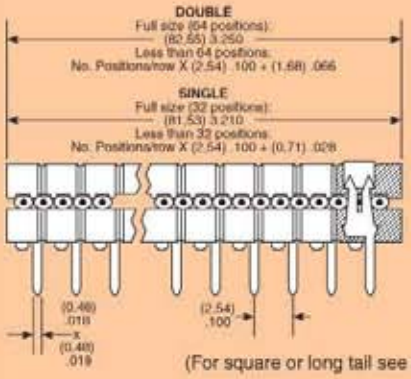
- **IDM** = Standard Tail Male Plug
- **IDS** = Socket

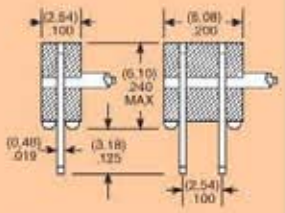
ROW OPTION

- **S** = Single
- **D** = Double (Color coded cable N/A for 31 thru 36 pins/row. See –G option.)

NO. PINS PER ROW

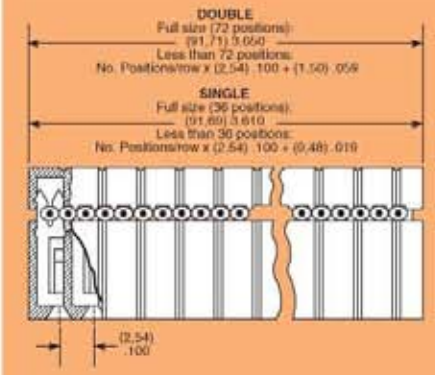
–02 thru –32

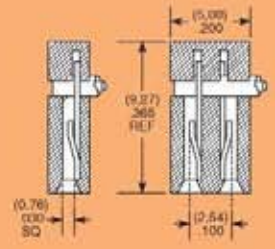




(For square or long tail see HCMX Series)

–02 thru –36





END ASSEMBLY

–S = Single End

Socket or Male Plug on one end

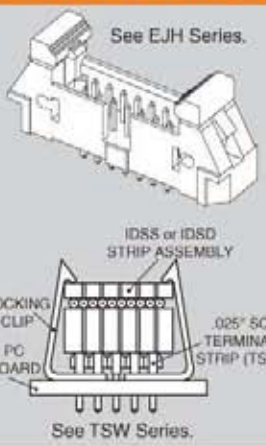
–D = Double End

Socket or Male Plug on each end

–T = Transfer End

Male Plug on one end with socket on other. **Begin part number with IDM.**

EJECTOR HEADERS & LOCKING CLIPS



See TSW Series.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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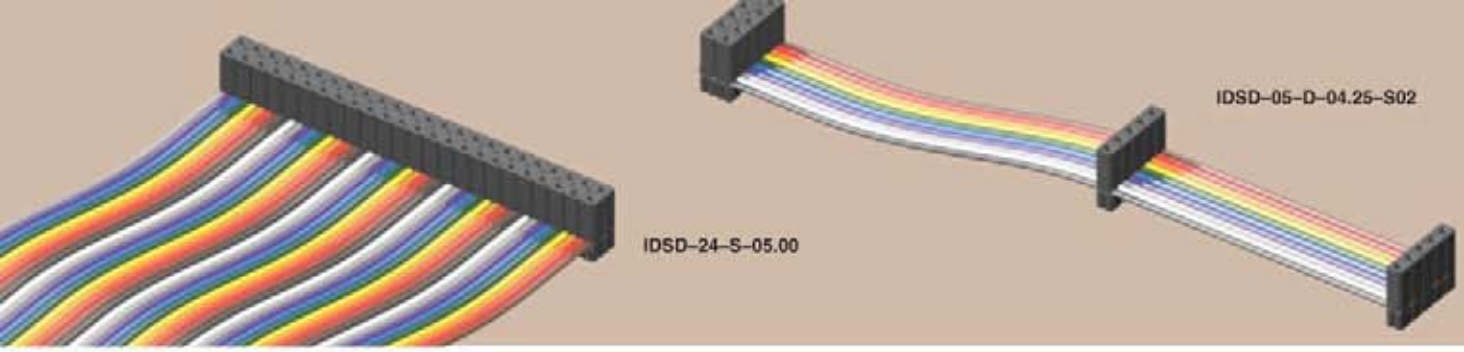
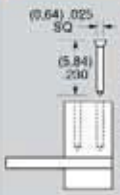


ASSEMBLED LENGTH

– "XX.XX"
= Assembled Length

OPTION

POLARIZING KEY



Optional polarizing key for use with IDSS & IDSD Series. Also polarizes SSW, SSQ, ESW & ESQ Series. Black High Temperature Thermoplastic

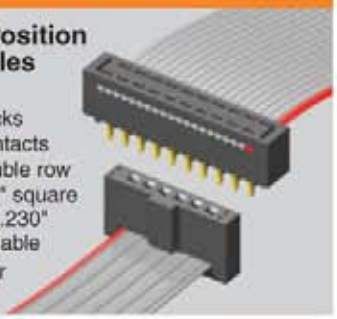
Order: Part Number PK-01-06
(Available in wheels of six each)

ALSO AVAILABLE

Molded-To-Position IDC Assembles

- Low Profile
- Skinny side locks
- Dual beam contacts
- Single and double row
- (6,35mm) .025" square and (5,84mm) .230" length tail available

Call Samtec for HCXX Series.



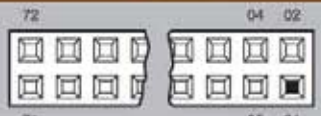
–T = Tin Plating (Both ends)

–C = Tin IDM 10µ" (0,25µm) Gold IDS (-T End Assembly Required)

–A = 10µ" (0,25µm) Gold IDM Tin IDS (-T End Assembly Required)

Standard plating is selective gold over BeCu contact for IDS; Selective gold over phosphor bronze for IDM. 1

–P "XX"
=Polarized



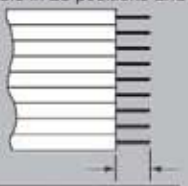
Specify "XX" as position. For Double the same position will be polarized on both ends. (Not available on IDM or EDM, unless transfer, then only the socket is polarized.) 2

–G
= Gray Cable

Specify –G for Gray cable. Gray cable has one red edge. IDSS and IDMS uses .100" centerline cable. IDSD and IDMD uses .050" centerline cable. Cable is 28 AWG 7/36 copper wire. Standard cable is same as above except color coded. 3

–ST "X"
= Stripped & Tinned

Specify Suffix from table.
All dimensions are ± 1/16".
Not available in 28 positions and higher.

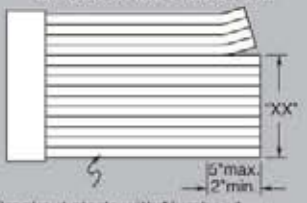


–ST8	1/8" (3,18)
–ST4	1/4" (6,35)
–ST2	1/2" (12,70)
–ST3	3/8" (9,53)

4

–B "XX"
= Breakout

Specify "XX" as number of conductors to be broken out.

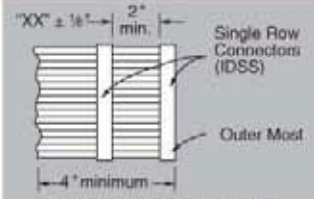


Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side. 5

–RW
= Reversed Wiring

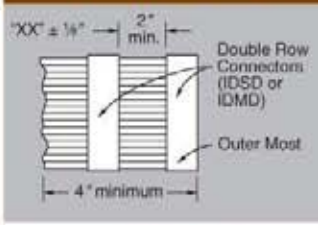
#1 wire opposite position #1. 6

–S "XX"
= Daisy Chain Single



When mating double row connector with two single row connectors, the outer most single will be connected to Conductor #1 and the inside single to Conductor #2. 7

–D "XX"
= Daisy Chain, Double

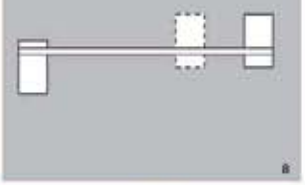


7

–W "XX"
= Wiring Reversed Daisy Chain, Single

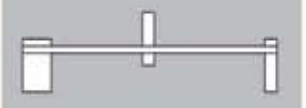
Same as –S "XX" except outer strip connected to Conductor #2 and inside strip connected to Conductor #1. 7

–R
= Reversed



8

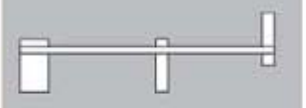
–M
= Middle Reversed



Requires –SXX, –WXX or –DXX

8

–O
= Outside Reversed



Requires –SXX, –WXX or –DXX

8

Due to technical progress, all designs, specifications and components are subject to change without notice.

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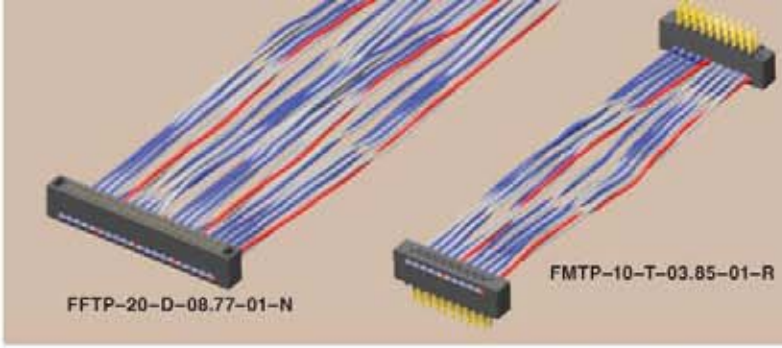
TIGER™ IDC

(1,27mm) .050"

FFTP, FMTP SERIES



TIGER EYE™ TWISTED PAIR IDC CABLES

Mates with:
FTS, FTSH, EHF, SHF

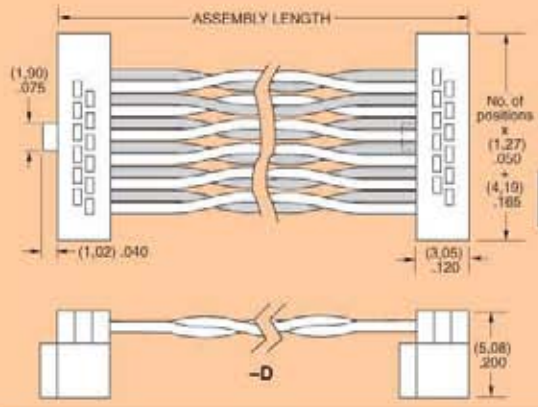
SPECIFICATIONS

For complete specifications see www.samtec.com?FFTP

Insulator Material: PBT
Contact: BeCu
Plating: 10µ" (0,25µm) Au over 50µ" (1,27µm) Ni on contact area; Sn over 50µ" (1,27µm) Ni on balance
Wire: 30 AWG 7/40, Tinned, Twisted Pair with PVC insulator
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
Lead Size Accepted: (0,41mm) .016" SQ
Contact Resistance: 10 mΩ maximum
Insertion Depth: (2,64mm) .104" to (3,17mm) .125"
Insertion Force: (Single contact only) 5oz (1,39N) avg.
Withdrawal Force: (Single contact only) 3oz (0,83N) avg.
RoHS Compliant: Yes

Note: This Series is non-standard, non-returnable.

FFTP	PINS PER ROW	END ASSEMBLY	ASSEMBLY LENGTH	01	N	OPTION
	–05, –08 –10, –13, –17, –20, –25 (Call for other sizes)	–D = Double End	–03.85 = (97,79mm) 3.85" –08.77 = (222,76mm) 8.77" –18.00 = (457,20mm) 18.00" Other sizes and lengths available. Contact Samtec.		–N = Notch Polarization (Standard)	–R = Reverse Connector



FFTP	
Cable Length	Rated @ -3dB Insertion Loss
	–SE
3.85" (97,8mm)	810 MHz / 1.62 Gbps

Performance data for other cable lengths and complete test data available at www.samtec.com?FFTP or contact sig@samtec.com

Mates with:
FLE*, SFMC*

SPECIFICATIONS

For complete specifications see www.samtec.com?FMTP

Insulator Material: PBT
Terminal: BeCu
Plating: Sn over 50µ" (1,27µm) Ni
Wire: 30 AWG 7/40, Tinned, Twisted Pair with PVC insulator
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
RoHS Compliant: Yes

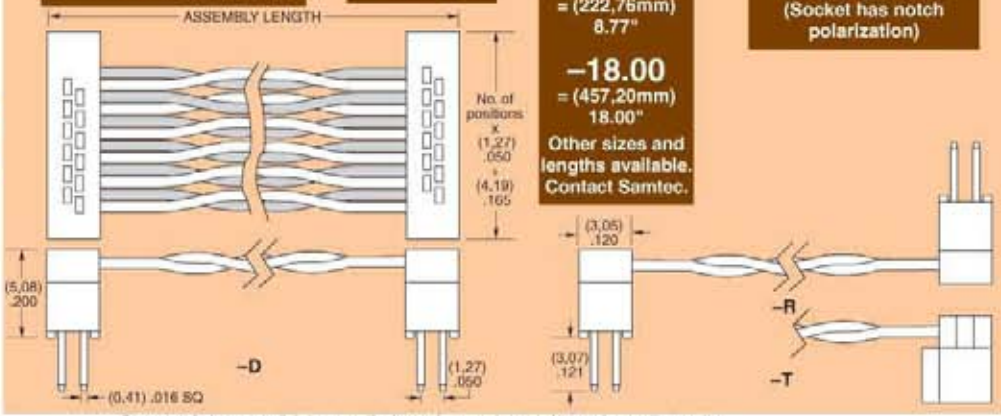
APPLICATION SPECIFIC OPTION

Other cable lengths available.
Call Samtec.

***Note:** Standard FMTP callout will not mate with FLE, SFMC. Must use gold plated callouts. See drawing on web.

Note: This Series is non-standard, non-returnable.

FMTP	PINS PER ROW	END ASSEMBLY	ASSEMBLY LENGTH	01	TRANSFER OPTION	OPTION
	–05, –08, –10, –13, –17, –20, –25 (Call for other sizes)	–D = Double End –T = Transfer End	–03.85 = (97,79mm) 3.85" –08.77 = (222,76mm) 8.77" –18.00 = (457,20mm) 18.00" Other sizes and lengths available. Contact Samtec.		Leave blank for –D End Assembly. For –T End Assembly Specify "–N" (Socket has notch polarization)	–R = Reverse Connector



Due to technical progress, all designs, specifications and components are subject to change without notice.

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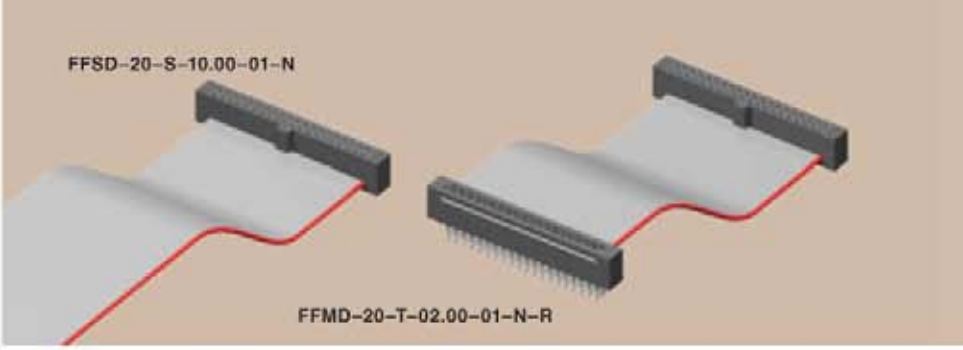
TIGER IDC™

(1,27mm) .050"

FFSD, FFMD SERIES



TIGER EYE™ FLAT IDC WIRE CABLES

SPECIFICATIONS

FFSD Mates with:
FTS, FTSH, EHF, SHF, ESHF

For complete specifications see www.samtec.com?FFSD

FFSD

Insulator Material: PBT
Contact: BeCu
Plating: 10µ" (0,25µm) Au over 50µ" (1,27µm) Ni on contact area; Sn over 50µ' (1,27µm) Ni on balance
Wire: 30 AWG
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
Lead Size Accepted: (0,41mm) .016" SQ
Contact Resistance: 10 mΩ maximum
Insertion Depth: (2,64mm) .104" to (3,17mm) .125"
Insertion Force: (Single contact only) 5oz (1,39N) avg.
Withdrawal Force: (Single contact only) 3oz (0,83N) avg.
RoHS Compliant: Yes

Note: This Series is non-standard, non-returnable.

SPECIFICATIONS

Mates with:
FLE*, SFMC*

For complete specifications see www.samtec.com?FFMD

FFMD

Insulator Material: Black Glass Filled Polyester
Terminal: BeCu
Plating: Sn over 50µ" (1,27µm) Ni
Wire: 30 AWG
Current Rating: 0.5A
Operating Temp Range: -40°C to +105°C
RoHS Compliant: Yes

***Note:** Standard FFMD callout will not mate with FLE, SFMC. Must use gold plated callouts. See drawing on web.

Note: This Series is non-standard, non-returnable.

TYPE STRIP – NO. PINS PER ROW – END OPTION – OVERALL LENGTH – 01 – OPTION – OTHER OPTION

NO. PINS PER ROW: –05, –08, –10, –13, –17, –20, –25 (Call for other sizes)

OVERALL LENGTH: –"XX.XX" = Assembled Length

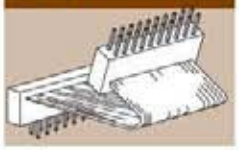
OPTION: –N = Notch Polarization (FFSD only)

OTHER OPTION: Leave blank for –S and –D End Options. For –T End Option Specify "–N" (Socket has notch polarization) (FFMD only)

END OPTION:

–S = Single End

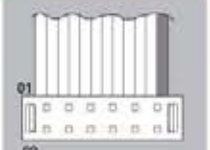
–D = Double End



–T = Transfer End (FFMD only)

OTHER OPTION:

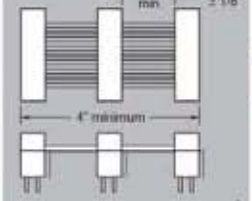
–RW = Reverse Wiring



Blue or black wire opposite position #1.

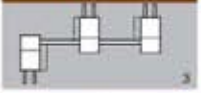
1

–D "XX" = Daisy Chain



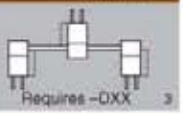
2

–R = Reverse



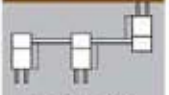
3

–M = Middle Reverse



Requires –DXX 3

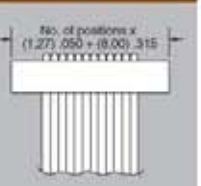
–O = Outside Reverse



Requires –DXX 3

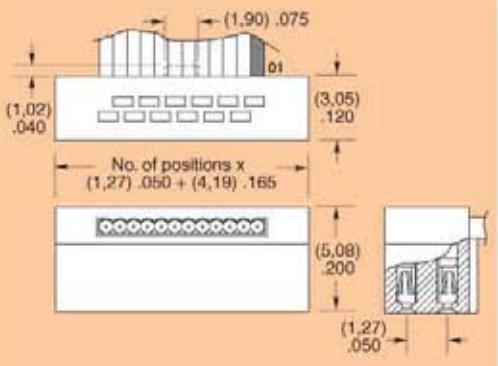
RUGGEDIZED by SAMTEC

–SR = Strain Relief

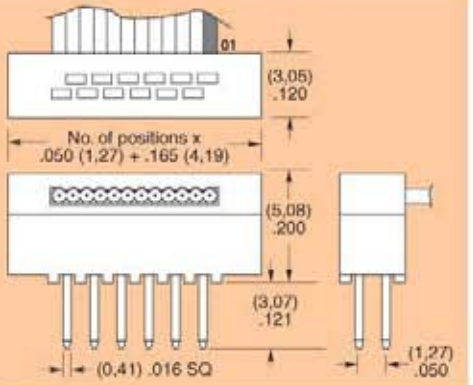


Not available with –S, –O, –M, –R or –DXX

FFSD = Socket Strip



FFMD = Terminal Strip



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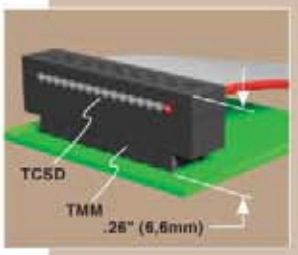
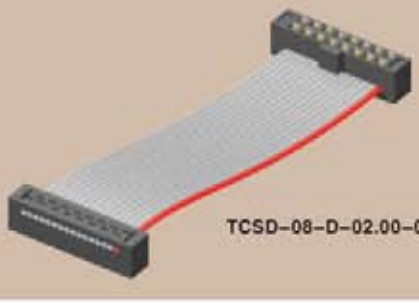
TIGER IDC™

(2,00mm) .0787"

TCSD SERIES





TIGER EYE™ IDC SOCKET CABLE

Mates with:
TMM, TMMH, STMM, MMT, TW, MTMM, EHT, ETMM (-SR), ZSTMM

FEATURES

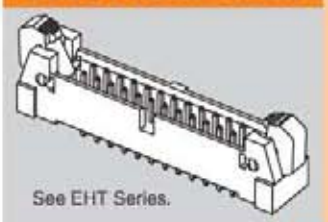
- Low profile, only 5mm (.200") assembled height
- Four-finger contacts optimize normal, insertion and withdrawal forces
- Ask about our custom IDC design capabilities

SPECIFICATIONS

For complete specifications see www.samtec.com?TCSD

Insulator Material: Black Glass Filled Polyester
Contact: BeCu
Plating: Au or Sn over 50µ" (1,27µm) Ni
Wire: 28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator
Current Rating: 1A
Operating Temp Range: -40°C to +105°C
Lead Size Accepted: (0,48mm) .019" to (0,53mm) .021"
Contact Resistance: 10 mΩ maximum
Insertion Depth: (2,87mm) .113" to (3,17mm) .125"
Insertion Force: (Single contact only) 2 oz. (0,56N) average
Withdrawal Force: (Single contact only) 1.4 oz (0,39N) average
RoHS Compliant: Yes

EJECTOR HEADER



See EHT Series.

Note: Other Gold plating options available. Contact Samtec.

Note: TCSD Series assemblies are non-standard, non-returnable.

TYPE STRIP – NO. PINS PER ROW – END OPTION – LENGTH – 01 – PLATING OPTION – N – OTHER OPTION

–05, –08, –10, –12, –13, –15, –17, –20, –22, –25
(Call for other sizes)

–"XX.XX"
= Assembled Length

–N
= Notch Polarization

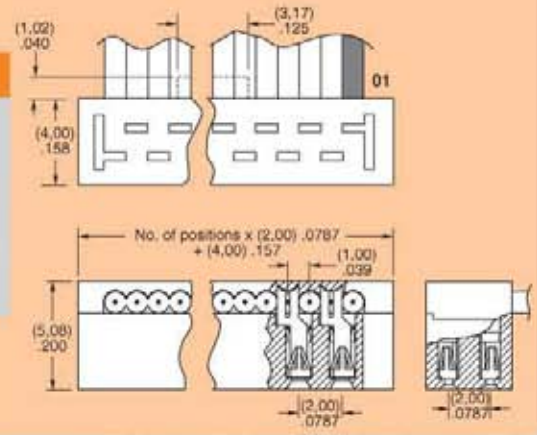
–F = Gold flash on contact
Leave blank for standard plating: 30µ"(0,76µm) Gold on contact area

POLARIZING KEY
Specify PK-01-07 for polarizing key (Available in wheels of six each). Also polarizes SMM Series socket strips.

–S
= Single End

–D
= Double End

TCSD
= Socket Strip



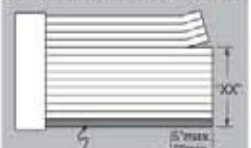
RUGGEDIZED

–P "XX"
= Position Polarization

Specify "XX" as position number. Same position will be polarized on both ends. 1

–B "XX"
= Breakout

Specify "XX" as number of conductors to be broken out.

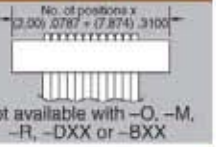


Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side. 2

–RW
= Reverse Wiring

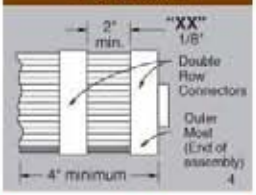
Blue or black wire opposite position #1. 3

SAMTEC –SR
= Strain Relief



Not available with –O, –M, –R, –DXX or –BXX

–D "XX"
= Daisy Chain

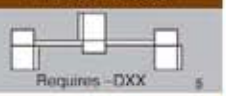


4

–R
= Reversed

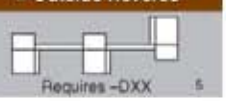
5

–M
= Middle Reverse



Requires –DXX 5

–O
= Outside Reverse



Requires –DXX 5

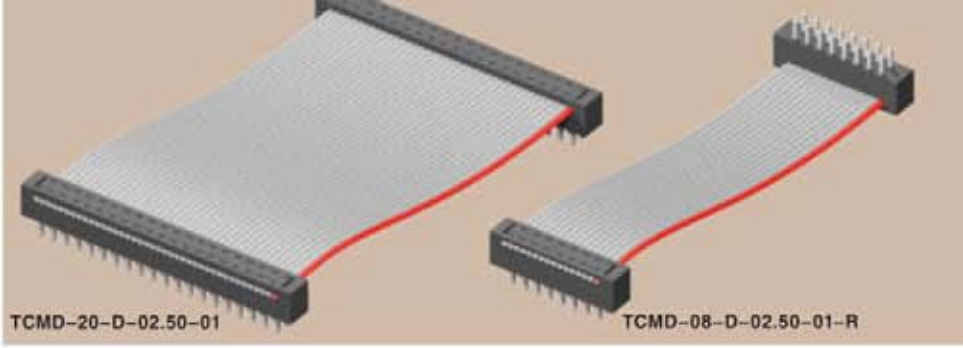
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

TIGER IDC™

(2,00mm) .0787"

TCMD SERIES



HIGH RELIABILITY IDC HEADER CABLE

Mates with:
SMM*, MMS*

SPECIFICATIONS

For complete specifications see www.samtec.com?TCMD

Insulator Material:
Black Glass Filled Polyester
Terminal:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Wire:
28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator
Current Rating:
1A
Operating Temp Range:
-40°C to +105°C
RoHS Compliant:
Yes

***Note:** Standard TCMD callout will not mate with SMM, MMS. Must use gold plated callouts. See drawing on web.

Note: TCMD Series assemblies are non-standard, non-returnable.

TYPE STRIP – NO. PINS PER ROW – END OPTION – OVERALL LENGTH – 01 – TRANSFER OPTION – OTHER OPTION

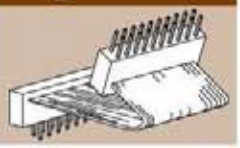
–05, –08, –10, –12, –13, –15, –17, –20, –22, –25
(Call for other sizes)

–"XX.XX"
= Assembled Length

Leave blank for –S and –D End Options. For –T End Option Specify "–N" (Socket has notch polarization)

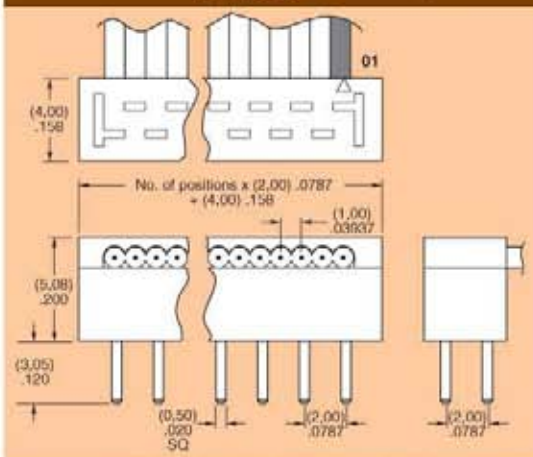
–S = Single End

–D = Double End



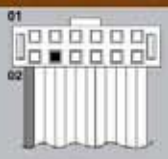
–T =Transfer End

TCMD =Terminal Strip



RUGGEDIZED by SAMTEC

–P "XX"
= Position Polarization



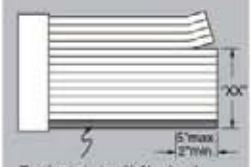
Specify "XX" as position number. Requires Transfer End. Only Socket is polarized. 1

–SR
= Strain Relief

Not available with –O, –M, –R, –DXX or –BXX

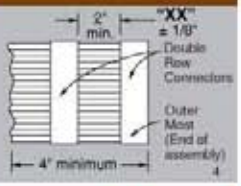
–B "XX"
= Breakout

Specify "XX" as number of conductors to be broken out.



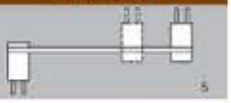
Breakout starts with Number 1 lead indicated by brown wire or red stripe. Shown on top side. 2

–D "XX"
= Daisy Chain



4

–R
= Reversed

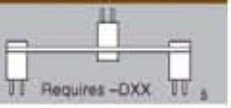


5

–RW
= Reverse Wiring

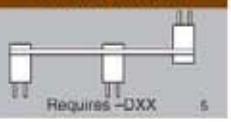
Blue or black wire opposite position #1. 3

–M
= Middle Reverse



Requires –DXX 5

–O
= Outside Reverse



Requires –DXX 5

Due to technical progress, all designs, specifications and components are subject to change without notice.

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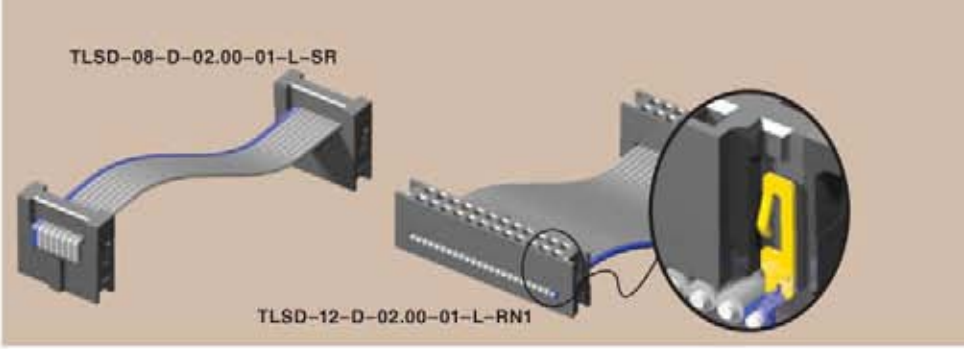


(2,00mm) .0787"

TLSD SERIES

COST EFFECTIVE IDC SOCKET CABLES

Mates with:
TMM, TMMH (Except –SR), TW, MTMM, TLMM

FEATURES

- Low cost alternative to TCSD
- 1 point of contact phosphor bronze
- Strain Relief for Rugged Applications

SPECIFICATIONS

For complete specifications see www.samtec.com?TLSD

Insulator Material:
Black Glass Filled Polyester
Contact:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Wire:
28 AWG 7/36 Stranded, Tinned, Copper with Gray PVC Insulator
Current Rating:
1A
Operating Temp Range:
-40°C to +105°C
Lead Size Accepted:
(0,48mm) .019" to (0,53mm) .021"
Contact Resistance:
10 mΩ maximum
Insertion Depth:
(3,56mm) .140" to (4,27mm) .168"
Insertion Force:
(Single contact only) 2 oz. (0,56N) average
Withdrawal Force:
(Single contact only) 1.4 oz (0,39N) average
RoHS Compliant:
Yes

POLARIZING KEY

Specify PK-01-07 for polarizing key. Also polarizes SMM Series socket strips.

ALSO AVAILABLE

Connector only (KTLSD Series). Call Samtec.

Note: TLSD Series assemblies are non-standard, non-returnable.

TYPE – NO. PINS PER ROW – END OPTION – LENGTH – 01 – PLATING OPTION – OTHER OPTION

–05, –08, –10, –12, –13, –15, –17, –20, –22, –25
(Call for other sizes)

–"XX.XX"
= Assembled Length

–L
= 10µ" (0,25µm) Gold on contact area

–S
= Single End

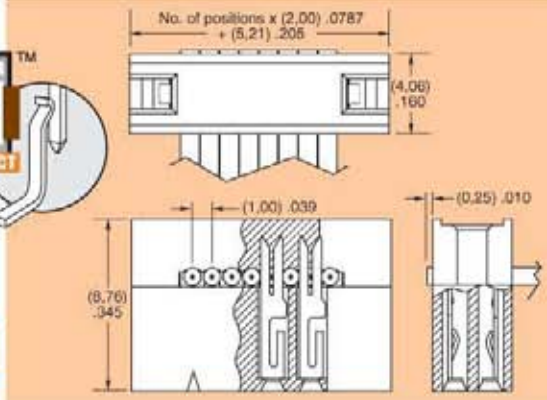
–D
= Double End

–N
= Notch Polarization

–RW
= Reverse Wiring

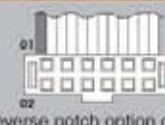
Black wire opposite position #1.

TLSD
= Socket Strip



–SR
= Strain Relief

–RN1
= Reverse Notch End 1

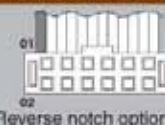


Reverse notch option on end 1 only. Not Available with –R option.

–P "XX"
= Position Polarization

Specify "XX" as position number. Same position will be polarized on both ends.

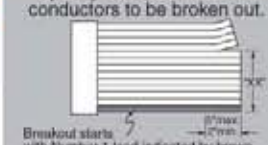
–RN2
= Reverse Notch End 2



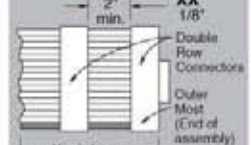
Reverse notch option on end 2 only. Not Available with –R option.

–B "XX"
= Breakout

Specify "XX" as number of conductors to be broken out.



–D "XX"
= Daisy Chain



–R
= Reversed

Requires –DXX

–M
= Middle Reverse

Requires –DXX

–O
= Outside Reverse

Requires –DXX

Due to technical progress, all designs, specifications and components are subject to change without notice.

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TIGER EYE SYSTEM™

(1,27mm) .050"

ISDF, TSDF SERIES

DISCRETE WIRE HOUSINGS & CONTACTS

Mates with:
TFM, TFC

SPECIFICATIONS

For complete specifications see www.samtec.com?ISDF

Insulator Material: Black LCP
Contact Material: BeCu
Plating: Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +80°C (PVC) -55°C to +125°C (*Teflon®)
Voltage Rating: 275 VAC (PVC) 235 VAC (*Teflon®)
Wire: 28 or 30 AWG
RoHS Compliant: Yes

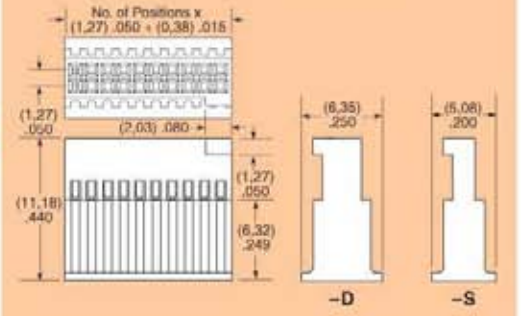
HAND TOOLS

28 to 30 AWG:
CAT-HT-203-2832-11

*Teflon® is a trademark of Dupont.

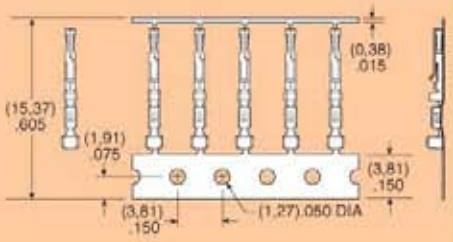
Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE	POSITIONS PER ROW	ROW OPTION	LATCH OPTION
ISDF = Housing	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–S = Single Row –D = Double Row	–M = Metal Retention Latch



TYPE	WIRE GAUGE	01	PLATING
CC03L = Contact, Loose CC03R = Contact, Full Reel (35,000 Parts per Reel)	–2830 = 28 to 30 AWG		–G = 10µ" (0,25µm) Gold on contact, Gold Flash on balance

TIGER EYE CONTACT™



Mates with:
SFM, SFC

SPECIFICATIONS

For complete specifications see www.samtec.com?TSDF

Insulator Material: Black LCP
Contact Material: BeCu
Plating: Au over 50µ" (1,27µm) Ni
Operating Temp Range: -55°C to +80°C (PVC) -55°C to +125°C (*Teflon®)
Wire: 28 or 30 AWG
RoHS Compliant: Yes

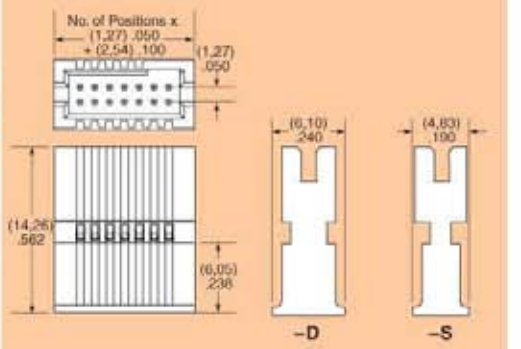
APPLICATION SPECIFIC OPTION

- Color coded cable available (*Teflon® N/A)
- Other plating available Call Samtec.

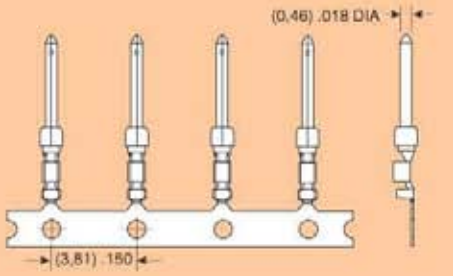
*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

TYPE	POSITIONS PER ROW	ROW OPTION	S
TSDF = Housing	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–S = Single Row –D = Double Row	



TYPE	WIRE GAUGE	01	PLATING
T1M44–L = Contact, Loose T1M44–R = Contact, Full Reel (35,000 Parts per Reel)	–2830 = 28 to 30 AWG		–G = 10µ" (0,25µm) Gold on contact



Due to technical progress, all designs, specifications and components are subject to change without notice.

SAMTEC USA • Tel: 1-800-SAMTEC-9 or 812-944-6733 **SAMTEC SILICON VALLEY** • Tel: 408-395-5900 **SAMTEC SOUTHERN CALIFORNIA** • Tel: 1-800-726-8329 **SAMTEC UK** • Tel: 44 01236 739282
SAMTEC GERMANY • Tel: +49 (0) 89 / 89460 0 **SAMTEC FRANCE** • Tel: 33 01 60 95 06 60 **SAMTEC ITALY** • Tel: 39 039 6893337 **SAMTEC NORDIC/BALTIC** • Tel: +46 84477280 **SAMTEC BENELUX** • Tel: 44 01236 739282
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samtec

TIGER EYE™ DISCRETE

(1,27mm) .050"

SFSS, SFST, SFSD, SFSDT SERIES

TIGER EYE™ DISCRETE WIRE CABLES

SPECIFICATIONS

For complete specifications see www.samtec.com?SFSS, www.samtec.com?SFSD, www.samtec.com?SFSDT or www.samtec.com?SFSST

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +80°C (PVC)
-55°C to +125°C (*Teflon®)
Voltage Rating:
275 VAC (PVC)
235 VAC (*Teflon®)
Wire: 28 or 30 AWG
RoHS Compliant:
Yes

Mates with:
TFM, TFC
(–SR & –DR requires –WT option)

CURRENT RATING	
AMBIENT TEMP	SFSD/TFC
20°C	3.7A
40°C	3.4A
60°C	2.9A
95°C	1.9A
6 POSITIONS (2x3) 28 AWG POWERED	

–SR/–DR APPLICATIONS

When Mated to TFM-WT

Terminal/Housing Retention	
Min	(22,25N) 5.0 lb
Max	(26,52N) 5.96 lb
Avg	(24,34N) 5.47 lb

Wire/Crimp Retention	
Min	(20,47N) 4.6 lb
Max	(36,49N) 8.2 lb
Avg	(29,95N) 6.73 lb

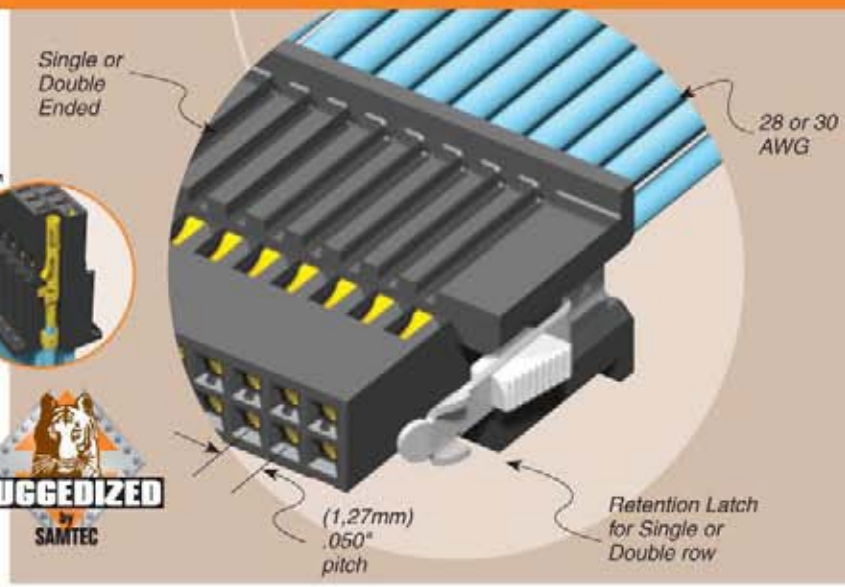
APPLICATION SPECIFIC OPTION

- Locking feature available for mating to the TFML Series
- Color coded cable available (*Teflon® N/A)
- Other plating options available

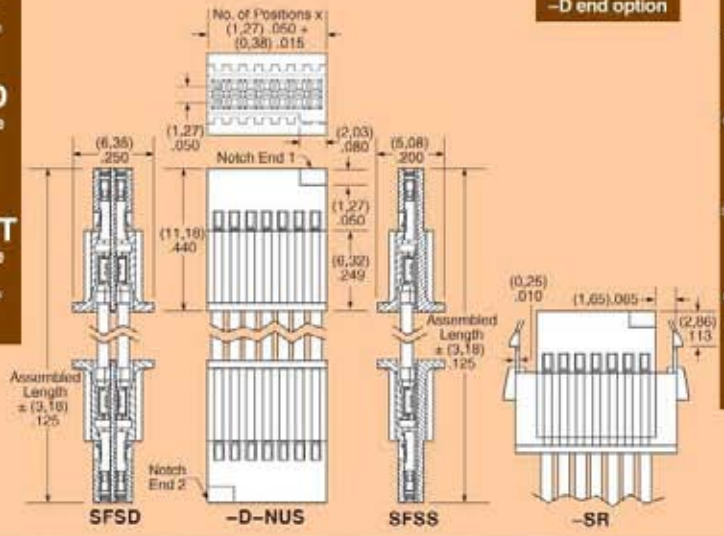
Call Samtec.

*Teflon® is a trademark of Dupont.

Note: Some lengths, styles and options are non-standard, non-returnable.



TYPE STRIP	POSITIONS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
SFSS = Single Row PVC Cable	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–30 = 30 AWG –28 = 28 AWG	–G = 10µ" (0,25µm) Gold on contact, Gold Flash on balance	–"XX.XX" = Assembled Length in Inches (76,20mm) 03.00" min. for –S end option (82,60mm) 03.25" min. for –D end option	–S = Single Ended –D = Double Ended (End No. 2 notch options required) –SR = Single Ended with Retention Latch (TFM –WT option required for mating) –DR = Double Ended with Retention Latch (TFM –WT option required for mating) (End No. 2 notch options required)	Requires –D or –DR (End No. 1 Notch Up). –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed (SFSD/ SFSDT only) –NDX = Notch down, crossed (SFSD/ SFSDT only)
SFSST = Single Row *Teflon® Cable						
SFSD = Double Row PVC Cable						
SFSDT = Double Row *Teflon® Cable						



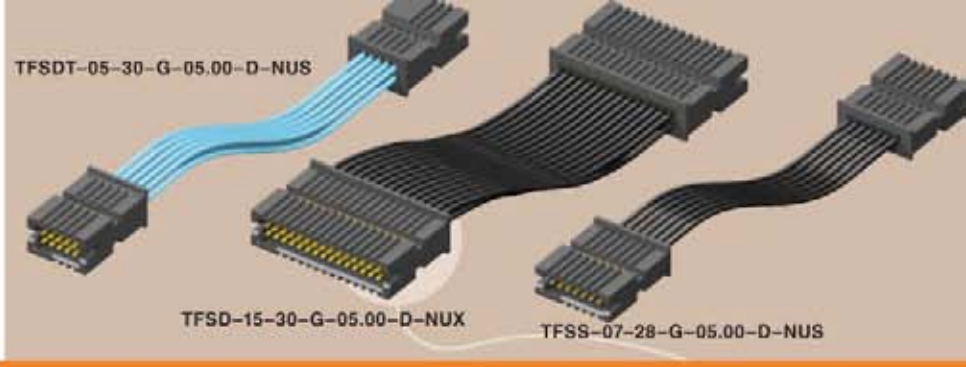
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

TIGER EYE™ DISCRETE

(1,27mm) .050"

TFSS, TFSST, TFSD, TFSDT SERIES



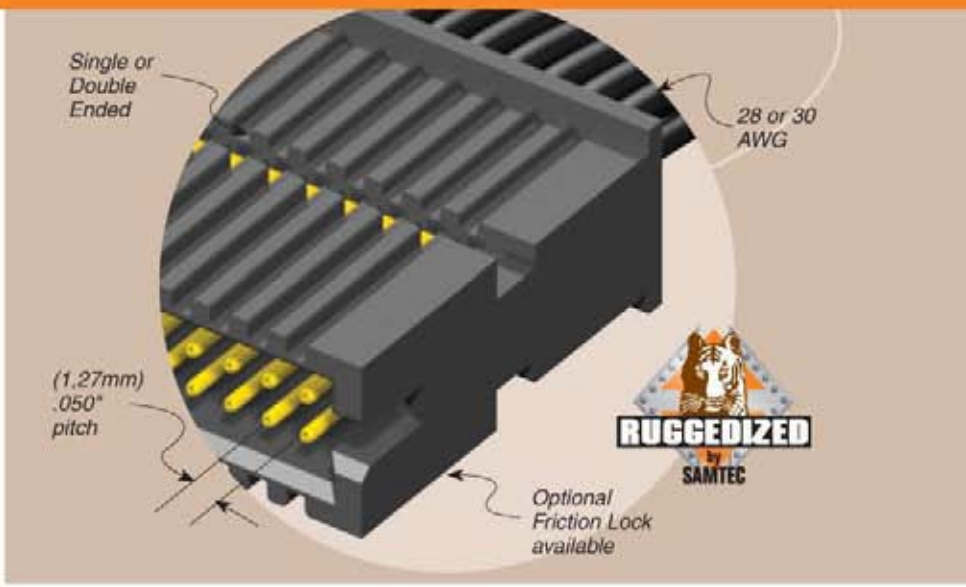
TIGER EYE™ DISCRETE WIRE CABLES

SPECIFICATIONS

Mates with:
SFM, SFC

For complete specifications see www.samtec.com?TFSS www.samtec.com?TFSD, www.samtec.com?TFSDT, or www.samtec.com?TFSST

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au over 50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +80°C (PVC)
-55°C to +125°C (*Teflon®)
Wire:
28 or 30 AWG
RoHS Compliant: Yes

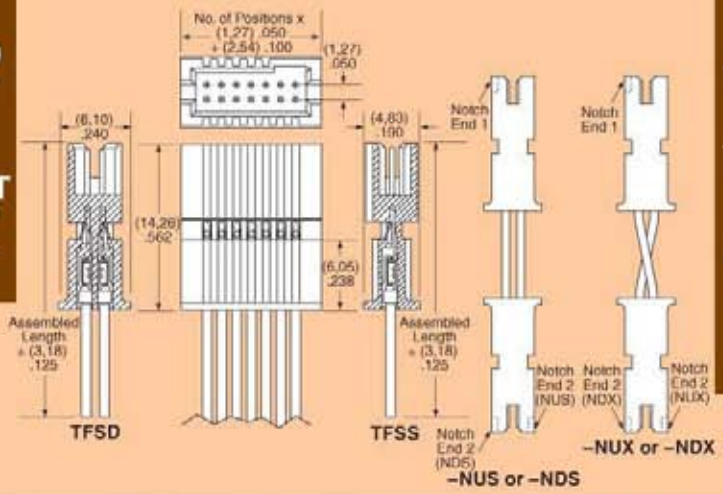


APPLICATION SPECIFIC OPTION

- Color coded cable available (*Teflon® N/A)
- Other plating options available

Call Samtec.

TYPE STRIP	POSITIONS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
TFSS = Single Row PVC Cable **TFSST** = Single Row *Teflon® Cable **TFSD** = Double Row PVC Cable **TFSDT** = Double Row *Teflon® Cable	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–30 = 30 AWG –28 = 28 AWG	–G = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Assembled Length in Inches (76,20mm) 03.00" min. for –S end option (82,60mm) 03.25" min. for –D end option	–S = Single Ended –SL* = Single Ended with Friction Lock –D = Double Ended –DL* = Double Ended with Friction Lock –T = Transferred End Terminal on End 1 Socket on End 2 –TL* = Transferred End with Friction Lock *–10, –15, –25, –30 positions only. Call Samtec for other sizes TFSD, TFSDT only	Requires –D, –DL, –T or –TL (End No. 1 Notch Up). –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed (TFSD/TFSDT only) –NDX = Notch down, crossed (TFSD/TFSDT only)



*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

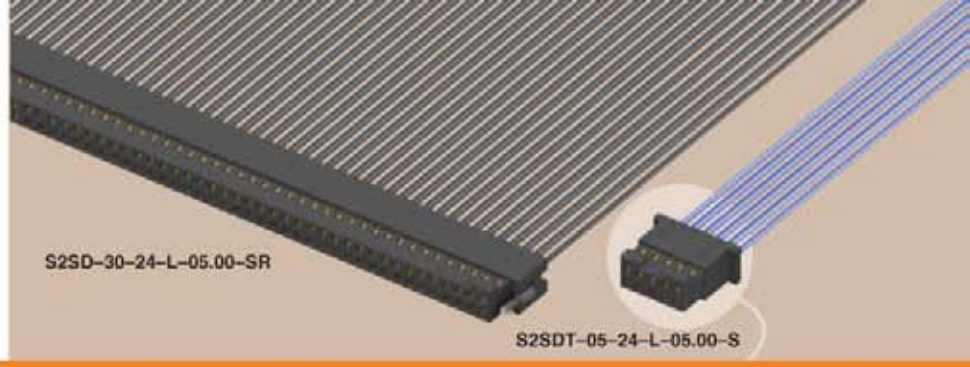
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

TIGER EYE™ DISCRETE

(2,00mm) .0787"

S2SD, S2SDT SERIES



TIGER EYE™ DISCRETE WIRE SOCKET CABLE

SPECIFICATIONS

For complete specifications see www.samtec.com?S2SD or www.samtec.com?S2SDT

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
Testing Now!
Wire:
24, 26 or 28 AWG
RoHS Compliant:
Yes

Mates with:
T2M

ALSO AVAILABLE

Bodies, contacts and assembly tooling.
Call Samtec.

APPLICATION

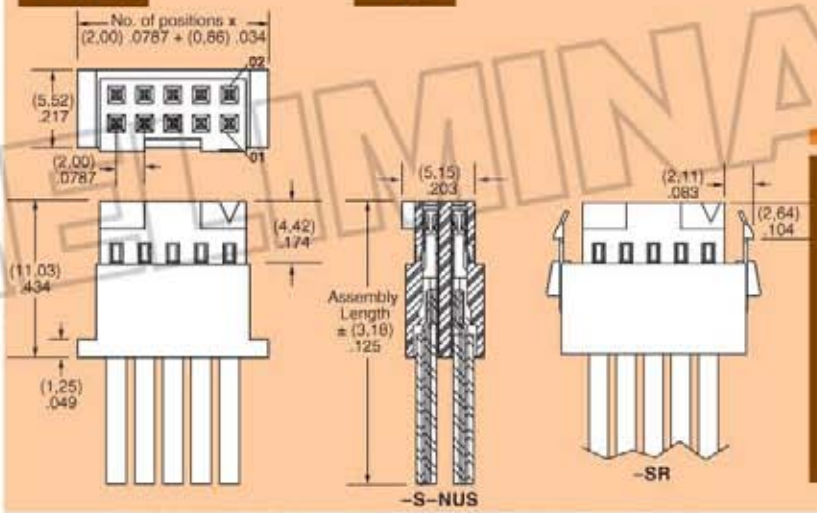
–24C CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	VIOLET
7	GRAY
8	WHITE
9	BLACK
10	BLUE
ETC	REPEAT

*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE	NO. OF POSITIONS	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
S2SD = Double Row PVC Cable **S2SDT** = Double Row *Teflon® Cable (24 Wire Gauge only)	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–24 –24C = Color Coded Cable (S2SD only) –26 –28	–L = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Wire Length in Inches (69,85mm) 02.75" min.	–S = Single End –D = Double End –SR = Single End with Retention Latch –DR = Double End with Retention Latch	(Only available with –D & –DR) –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed –NDX = Notch down, crossed



PRELIMINARY

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SAMTEC GERMANY • Tel: +49 (0) 89 / 89460 0 SAMTEC FRANCE • Tel: 33 01 60 95 06 60 SAMTEC ITALY • Tel: 39 039 6893337 SAMTEC NORDIC/BALTIC • Tel: +46 84477280 SAMTEC BENELUX • Tel: 44 01236 739282
SAMTEC ISRAEL • Tel: 972-3-7526600 SAMTEC INDIA • Tel: +91-80-3272 1612 SAMTEC ASIA PACIFIC • Tel: 65 6745 5955 SAMTEC JAPAN • Tel: 045-475-1385 SAMTEC CHINA • Tel: 86-21-61103766
SAMTEC TAIWAN • Tel: 886-2-2735-6109 SAMTEC HONG KONG • Tel: 852-26904858 SAMTEC KOREA • Tel: 82-31-717-5685 SAMTEC SOUTH AFRICA • Tel: 27 11 452 8112 SAMTEC ANZ • Tel: 613 9512 7747

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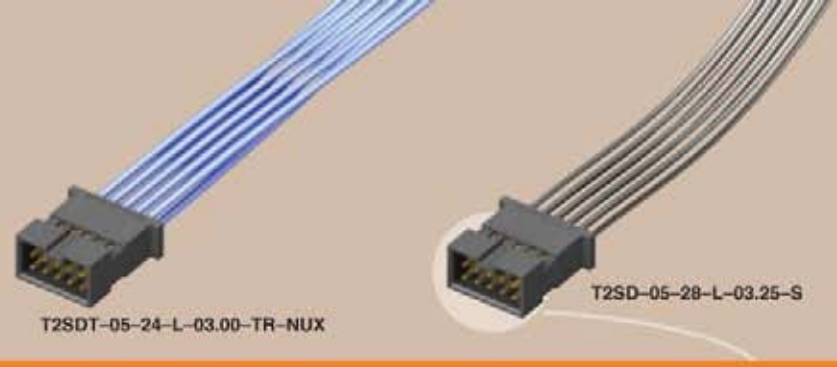
TIGER EYE DISCRETE™

(2,00mm) .0787"

T2SD, T2SDT SERIES



HIGH REL DISCRETE WIRE HEADER CABLE

SPECIFICATIONS

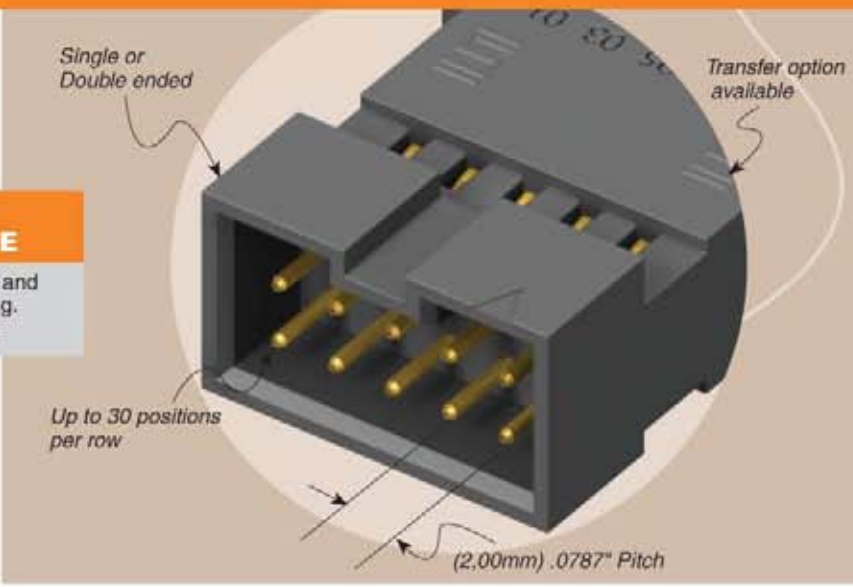
For complete specifications see www.samtec.com?T2SD or www.samtec.com?T2SDT

Insulator Material:
Black LCP
Terminal Material:
Phosphor Bronze
Plating:
Au or Sn over 50µ" (1,27µm) Ni
Wire:
24, 26 or 28 AWG
RoHS Compliant:
Yes

Mates with:
T2M (Requires –T or –TR), S2M

ALSO AVAILABLE

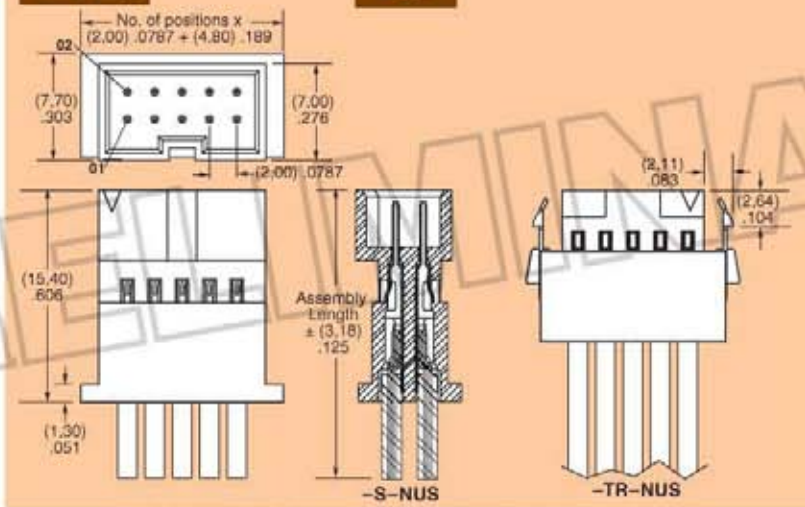
Bodies, terminals and assembly tooling.
Call Samtec.



TYPE	PINS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLED LENGTH	END OPTION	END 2 OPTION
T2SD = Double Row PVC Cable **T2SDT** = Double Row *Teflon® Cable (24 Wire Gauge only)	–05, –07, –10, –15, –20, –25, –30 (Call Samtec for other sizes)	–24 –24C = Color Coded Cable (T2SD only) –26 –28	–L = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Wire Length in Inches (69,85mm) 02.75" min.	–S = Single End –D = Double End –T = Transfer End (Socket on end 2) –TR = Transfer End with Retention Latch on Socket	(Only available with –D, –T & –TR) –NUS = Notch up, straight –NDS = Notch down, straight –NUX = Notch up, crossed –NDX = Notch down, crossed

APPLICATION

–24C CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	VIOLET
7	GRAY
8	WHITE
9	BLACK
10	BLUE
ETC	REPEAT



*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

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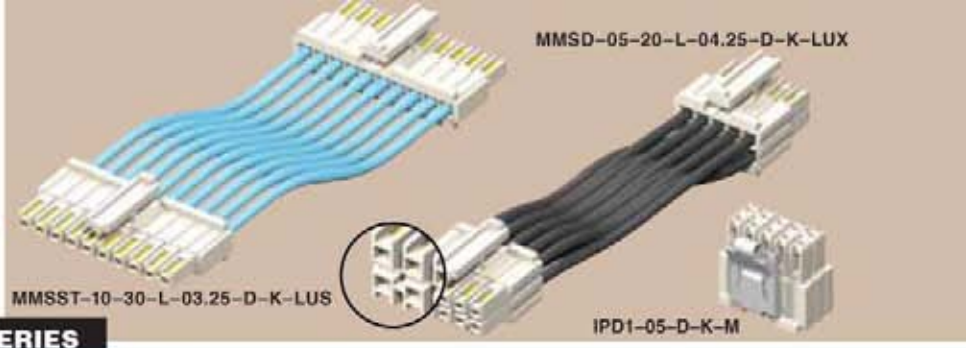
DATASHEETMAX.IT

samtec

mini MATE

(2,54mm) .100"

MMSD, MMSDT, MMSS, MMSST, IPD1 SERIES



DISCRETE WIRE CABLE ASSEMBLY

Mates with: IPL1
(Does not mate with IPT1)

SPECIFICATIONS

For complete specifications see www.samtec.com?MMSD, www.samtec.com?MMSDT, www.samtec.com?MMSS, www.samtec.com?MMSST or www.samtec.com?IPD1

Insulator Material: Nylon 66
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
FILE NO. E111594
Operating Temp Range:
-55°C to +105°C (20-26 AWG)
-55°C to +80°C (28-30 AWG)
-55°C to +125°C (*Teflon®)
Voltage Rating:
22 to 30 AWG = 300 VAC
20 AWG = 600 VAC (PVC)
20 AWG = 300 VAC (*Teflon®)
Wire: 20 to 30 AWG
RoHS Compliant: Yes

CURRENT RATING	
AMBIENT TEMP	MMSD/IPL1
20°C	7.4A
40°C	6.5A
60°C	5.9A
95°C	3.8A
6 POSITIONS (2x3) 20 AWG POWERED	

APPLICATION SPECIFIC OPTION

- Other color coded cables (*Teflon® N/A).
- Other sizes/pin counts.
- With or without Plug Polarization (omit pin 1).
- Other Gold plating options.

Call Samtec.

APPLICATION

-24C CABLE COLOR CODING	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	VIOLET
8	GRAY
9	WHITE
10	BLACK
ETC	REPEAT

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE - PINS PER ROW - WIRE GAUGE - PLATING OPTION - ASSEMBLY LENGTH - END OPTION - K - LATCH OPTION

TYPE
- **MMSD** = Double Row PVC Cable
- **MMSDT** = Double Row *Teflon® Cable (20, 24, 28 & 30 AWG only)
- **MMSS** = Single Row PVC Cable
- **MMSST** = Single Row *Teflon® Cable (20, 24, 28 & 30 AWG only)

PINS PER ROW
-02, -05, -10, -15, -16, -20, -25

WIRE GAUGE
-20, -22, -24, -24C = Color Coded Cable, -26, -28, -30

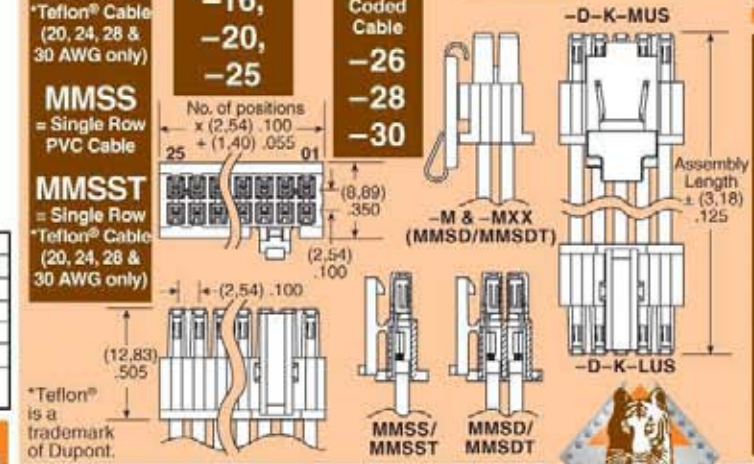
PLATING OPTION
-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail

ASSEMBLY LENGTH
-"XX.XX" = Assembly Length in Inches (82,55mm) 03.25" min.

END OPTION
-S = Single End
-D = Double End (Latch Required)

K
-K = Keyed Polarization

LATCH OPTION
-M = Single Ended, Metal Latches (Leave blank for plastic)
Double Ended (-D) Crossed requires MMSD/MMSDT
-LUS = Plastic Latch up, straight
-LDS = Plastic Latch down, straight
-LUX = Plastic Latch up, crossed
-LDX = Plastic Latch down, crossed
-MUS = Metal Latch up, straight
-MDS = Metal Latch down, straight
-MUX = Metal Latch up, crossed
-MDX = Metal Latch down, crossed



*Teflon® is a trademark of Dupont.

RUGGEDIZED by SAMTEC

TYPE - POSITIONS PER ROW - ROW OPTION - K - LATCH OPTION

TYPE
- **IPD1** = Body, Loose

POSITIONS PER ROW
-02, -05, -10, -15, -16, -20, -25

ROW OPTION
-S = Single Row
-D = Double Row

K
-K = Keyed Polarization

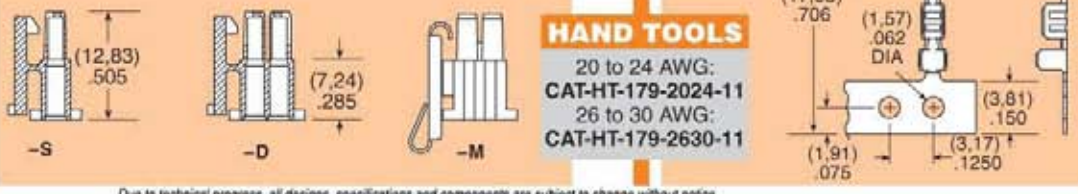
LATCH OPTION
-M = Metal Latch (Leave blank for plastic latch)

TYPE - WIRE GAUGE - 01 - PLATING OPTION

TYPE
- **CC79L** = Contact, Loose
- **CC79R** = Contact, Full Reel (15,000 Parts per Reel)

WIRE GAUGE
-2630 = 26 to 30 AWG
-2024 = 20 to 24 AWG

PLATING OPTION
-L = 10µ" (0,25µm) Gold on contact, Matte Tin on tail



HAND TOOLS
20 to 24 AWG:
CAT-HT-179-2024-11
26 to 30 AWG:
CAT-HT-179-2630-11

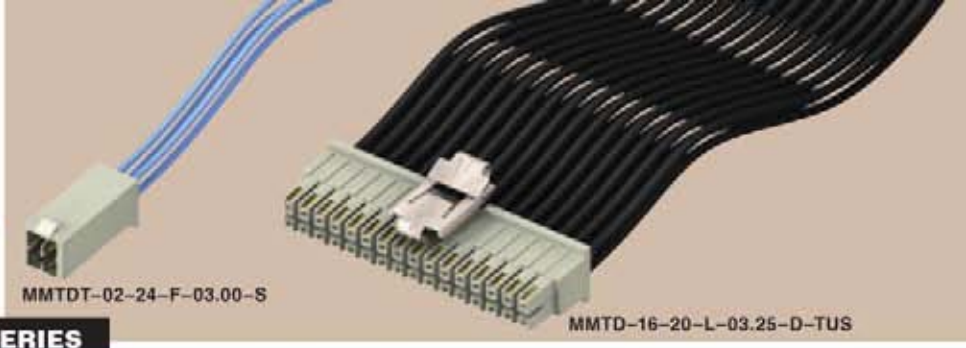
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

mini MATE

(2,54mm) .100"

MMTD, MMTDT, MMTS, MMTST, IPM1 SERIES



DISCRETE WIRE JUMPER CABLE

Mates with:
MMSD(T), MMSS(T)

–TXS Mates with:
IPL1

SPECIFICATIONS

For complete specifications see www.samtec.com?MMTD, www.samtec.com?MMTDT, www.samtec.com?MMTS or www.samtec.com?MMTST

Insulator Material:
Nylon, White
Contact Material:
Phosphor Bronze
Wire:
20 to 30 AWG
Plating:
Au or Sn over
50µ" (1,27µm) Ni
Operating Temp Range:
-55°C to +105°C (20-26 AWG)
-55°C to +80°C (28-30 AWG)
-55°C to +125°C (*Teflon®)
Current Rating:
Testing Now!
Voltage Rating:
Testing Now!
RoHS Compliant: Yes

ALSO AVAILABLE

- Different pin counts and wiring configurations.
- Other color coded cables.
- Other Gold plating options.

Call Samtec.

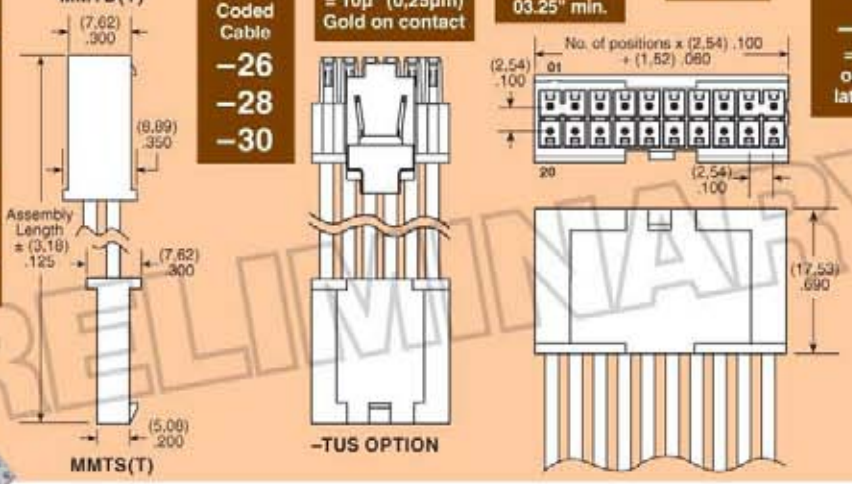
APPLICATION

–24C CABLE COLOR CODING (PVC CABLE ONLY)	
PIN	COLOR
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	VIOLET
8	GRAY
9	WHITE
10	BLACK
ETC	REPEAT

*Teflon® is a trademark of Dupont.

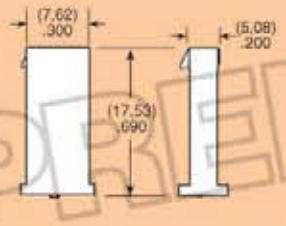
Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE	PINS PER ROW	WIRE GAUGE	PLATING OPTION	ASSEMBLY LENGTH	END OPTION	OPTION
MMTD = Double Row PVC Cable **MMTDT** = Double Row *Teflon® Cable (24, 28 & 30 Wire Gauge only) **MMTS** = Single Row PVC Cable **MMTST** = Single Row *Teflon® Cable (24, 28 & 30 Wire Gauge only)	–02, –05, –10, –15, –16, –20, –25	–20 –22 –24 –24C = Color Coded Cable –26 –28 –30	–F = Flash Gold on contact –L = 10µ" (0,25µm) Gold on contact	–"XX.XX" = Assembly Length in Inches –S= (76,2mm) 03.00" min. –D= (82,6mm) 03.25" min.	–S = Single End –D = Double End	(Only available with –D) –TUS = Socket on End 2, latch up –TDS = Socket on End 2, latch down

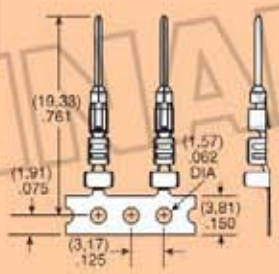


RUGGEDIZED by SAMTEC

TYPE	POSITIONS PER ROW	ROW OPTION	TYPE	WIRE GAUGE	PLATING OPTION
IPM1 = Body, Loose	–02, –05, –10, –15, –16, –20, –25	–S = Single Row –D = Double Row	T1M74L = Contact, Loose T1M74R = Contact, Full Reel (15,300 Parts per Reel)	–01 = 26 to 30 AWG –02 = 20 to 24 AWG	–F = Flash Gold on contact –L = 10µ" (0,25µm) Gold on contact



HAND TOOLS
20 to 24 AWG:
CAT-HT-179-2024-11
26 to 30 AWG:
CAT-HT-179-2630-11



PRELIMINARY
PRELIMINARY

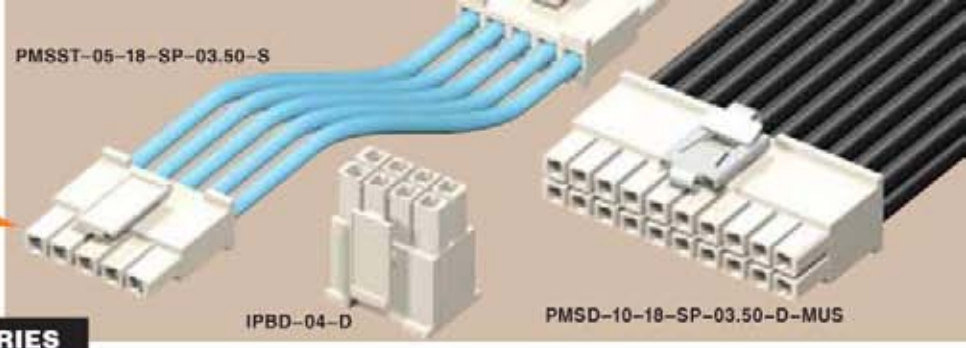
Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

POWER MATE™

(4,19mm) .165"

PMSD, PMSDT, PMSS, PMSST, IPBD SERIES



DISCRETE WIRE POWER CABLE ASSEMBLY

Mates with:
IPBT

SPECIFICATIONS

For complete specifications see www.samtec.com?PMSD, www.samtec.com?PMSDT, www.samtec.com?PMSS, www.samtec.com?PMSST or www.samtec.com?IPBD

Insulator Material:
Valox 457
Contact Material:
Phosphor Bronze
Plating:
Sn over 50µ" (1,27µm) Ni
Operating Temp Range:
-40°C to +105°C (PVC)
-55°C to +125°C (*Teflon®)
Voltage Rating:
22 & 24 AWG = 300 VAC (PVC)
16, 18 & 20 AWG = 600 VAC (PVC)
18 & 24 AWG = 300 VAC (*Teflon®)
Wire:
16 to 24 AWG
RoHS Compliant:
Yes

APPLICATION SPECIFIC OPTION

- Color coded cables (*Teflon® N/A).
- Other sizes/pin counts.
- 20 AWG/300 Volts

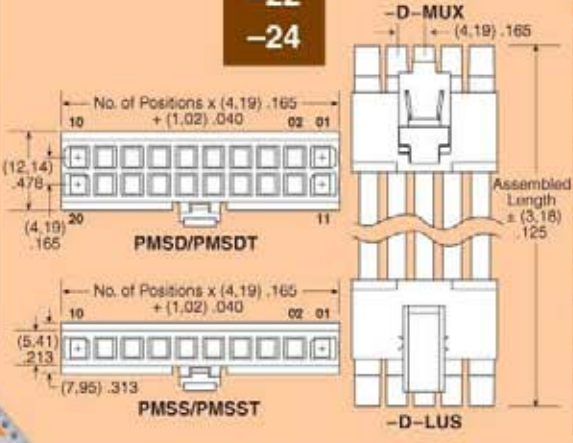
Call Samtec.

*Teflon® is a trademark of Dupont.

Note: For wiring option information refer to drawing on web.

Note: Some lengths, styles and options are non-standard, non-returnable.

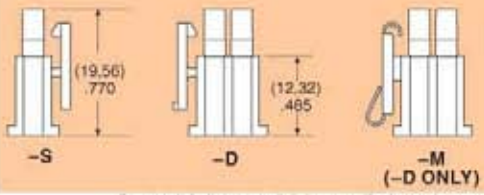
TYPE	PINS PER ROW	WIRE GAUGE	LEAD STYLE	ASSEMBLED LENGTH	END OPTION	LATCH OPTION
PMSD = Double Row PVC Cable **PMSDT** = Double Row *Teflon® Cable (18 & 24 Wire Gauge only) **PMSS** = Single Row PVC Cable (-02, -03, -04, -05) **PMSST** = Single Row *Teflon® Cable (18 & 24 Wire Gauge only)	-02, -03, -04, -05, -10, -15	-16 -18 -206 (20 AWG/ 600 volts) -22 -24	-SP = Standard Power	-"XX.XX" = Wire Length In Inches (88,90mm) 03.50" min.	-S = Single End -D = Double End (Latch required)	-M = Single Ended, Metal Latches PMSD/ PMSDT only (Leave blank for plastic) -LUS = Plastic Latch up, straight -LDS = Plastic Latch down, straight -LUX* = Plastic Latch up, crossed -LDX* = Plastic Latch down, crossed -MUS* = Metal Latch up, straight -MDS* = Metal Latch down, straight -MUX* = Metal Latch up, crossed -MDX* = Metal Latch down, crossed (* PMSD/PMSDT only)



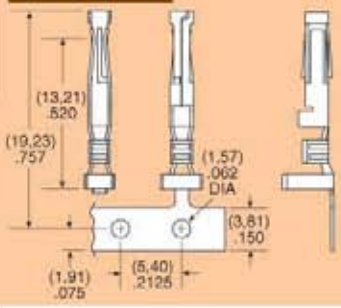
RUGGEDIZED by SAMTEC

TYPE	POSITIONS PER ROW	ROW OPTION	LATCH OPTION
IPBD = Body, Loose	-02, -03, -04, -05, -10, -15 (-D only) -02, -03, -04, -05 (-S only)	-S = Single Row -D = Double Row	-M = Metal Latch (Leave blank for plastic latch) (-D only)

TYPE	WIRE GAUGE	01	T	LEAD STYLE
CC69L = Contact, Loose CC69R = Contact, Full Reel (4,000 Parts per Reel)	-2024 = 20 to 24 AWG -1620 = 16 to 20 AWG		-T = Tin	-SP = Standard Power



HAND TOOLS
16 to 20 AWG:
CAT-HT-169-1620-11
20 to 24 AWG:
CAT-HT-169-2024-11



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samtec

(0,80mm) .0315"

MECT SERIES

SFP & SFP+ TRANSCEIVER INTERFACES

SPECIFICATIONS

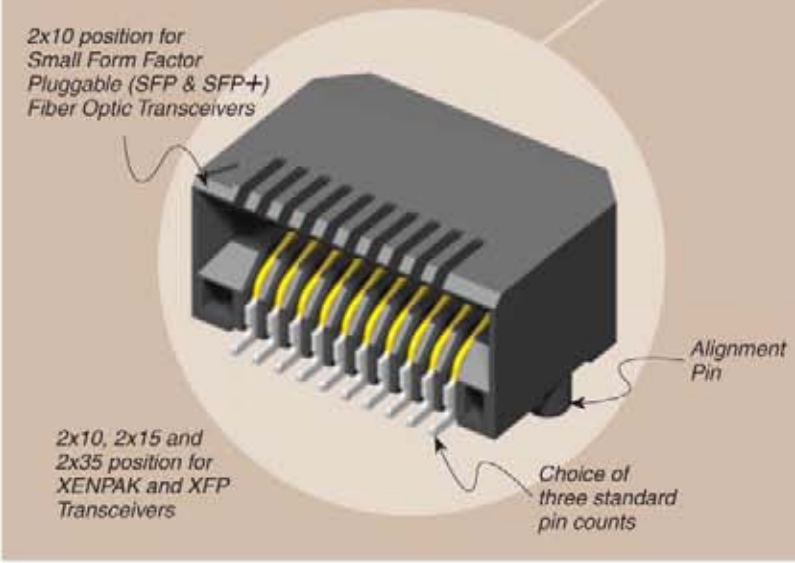
For complete specifications and recommended PCB layouts see www.samtec.com?MECT

Insulator Material:
Black LCP
Contact Material:
Phosphor Bronze
Plating:
Sn or Au over 100µ" (2,54µm) Ni
Operating Temp Range:
-55°C to +125°C
Current Rating:
2A @ 80°C ambient
(see web site for details)
Voltage Rating:
265 VAC
RoHS Compliant:
Yes

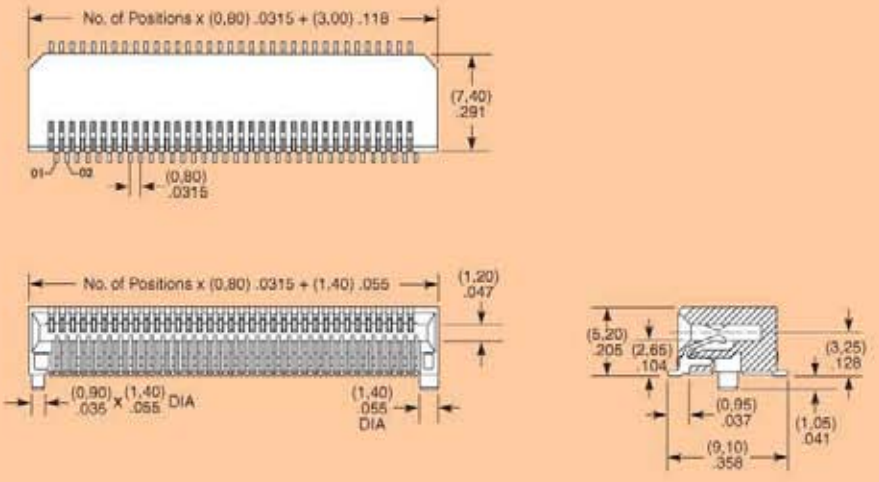
Processing:

Max Processing Temp:
230°C for 60 seconds, or
260°C for 20 seconds 3x
Lead-Free Solderable:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max (10-35)

Mates with:
SFP, SFP+, XFP or XENPAK transceivers
(For MSA specifications see www.schelto.com)



MECT	- 1	POSITIONS PER ROW	-	CARD THICKNESS	-	PLATING OPTION	- D -	RA1	-	OTHER OPTION
		10, 15, 35		–01 = (1mm) .039" thick board		–M = 15µ" (0,38µm) Gold on contact, Matte Tin on tail				–TR = Tape & Reel Packaging



Note: Some sizes, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SFPC, SFPK SERIES

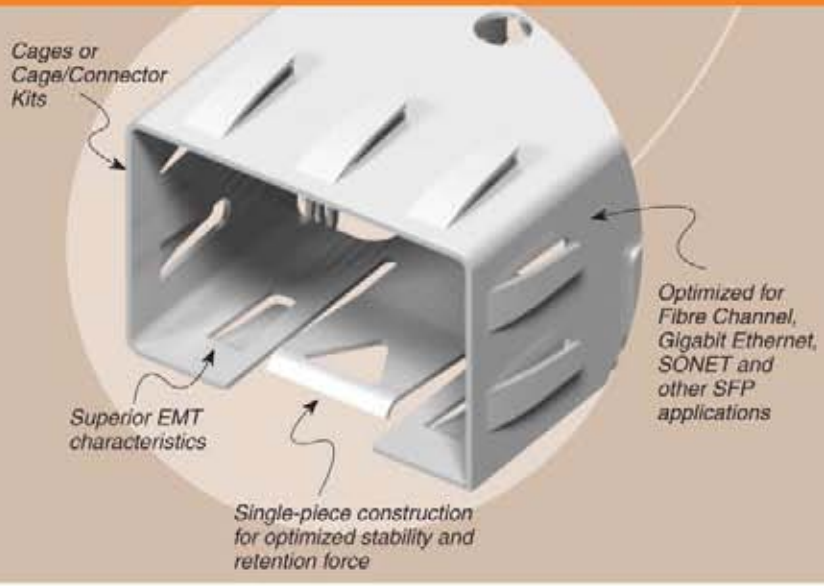
SFP CAGES & CAGE/CONNECTOR KITS

SPECIFICATIONS

For complete specifications see www.samtec.com?SFPC or www.samtec.com?SFPK

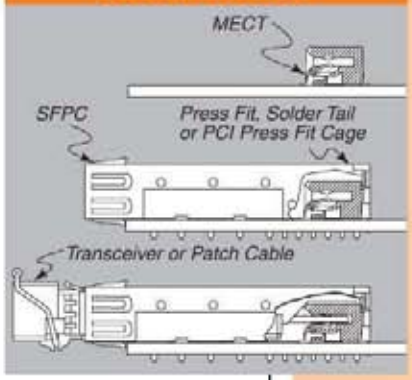
For SFP specifications see www.schelto.com/SFP

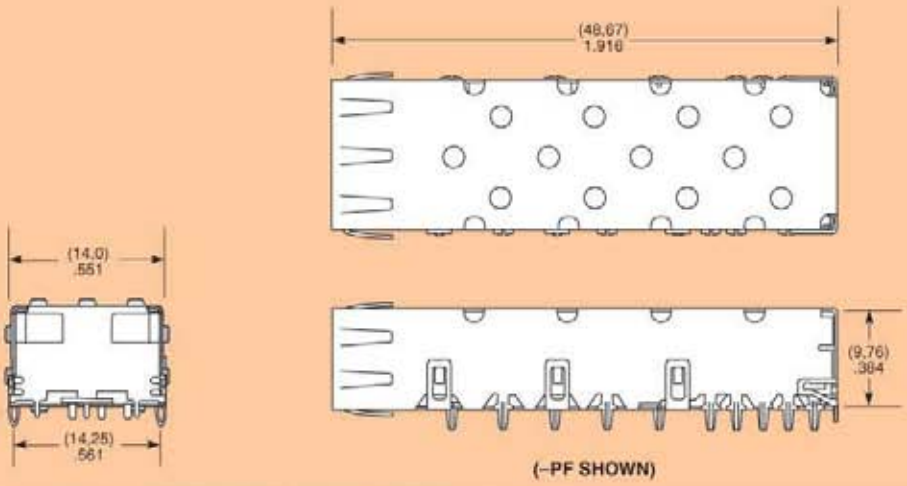
Use with:
MECT



TYPE	TERMINATION	CONNECTOR PACKAGE
SFPC = Cage **SFPK** = Cage and Connector Kit (SFPC & MECT–110–01–M–D–RA1)	**–PF** = Press Fit **–SL** = Solder Lead **–PC** = PCI Press Fit (1° slope for PCI specifications)	SFPK only **–TR** = Tape & Reel (Leave blank for tube packaging)

APPLICATION





Note: Some sizes, styles and options are non-standard, non-returnable.

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EYE SPEED I/O SYSTEM ™

(0,80mm) .0315"

EPLSP SERIES

RUGGED LATCHING HIGH SPEED SYSTEM

FEATURES

- Rugged External Cable
- Hot Plug/Hot Swap
- Latching
- Connector to connector interface (two-piece system)
- High cycles
- Applicable for many high speed differential protocols

SPECIFICATIONS

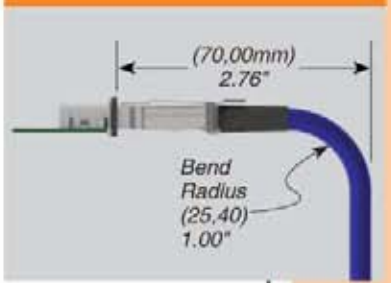
For complete specifications see www.samtec.com?EPLSP

Cable:
32 AWG Low Skew Pair
Bend Radius:
(25,40mm) 1.00"
Signal Routing:
100Ω Differential
Pinout Map:
See web address above
RoHS Compliant:
Yes

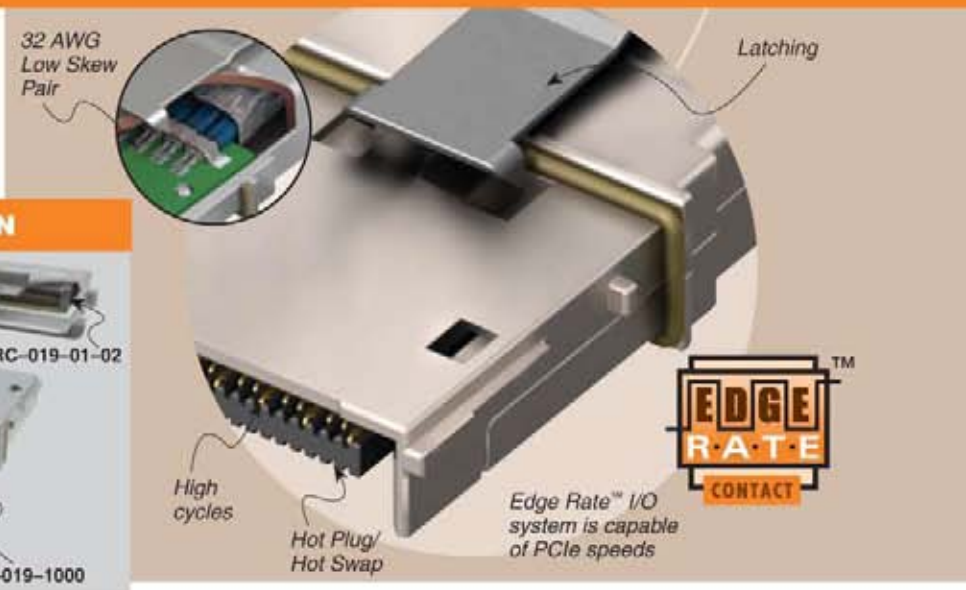
EPLSP	
Cable Length	Rated @ -3dB Insertion Loss
	–DP
1 meter (39.4")	2.00 GHz / 4.00 Gbps

Performance and complete test data available at www.samtec.com?EPLSP or contact sig@samtec.com

APPLICATION



Note:
This Series is non-standard, non-returnable.

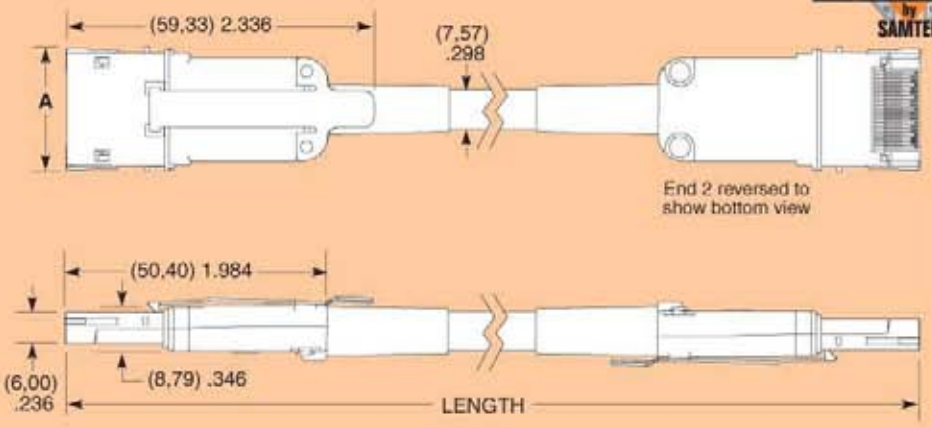


APPLICATION

TYPE	NO. OF POSITIONS	LENGTH
EPLSP = Eye Speed I/O Cable	**–019** = 8 Pairs, 5 Power, 2 Clock, 19 positions **–031** = 16 Pairs, 5 Power, 2 Clock, 31 positions	**–"XXXX"** = Length in millimeters –1000, –2000, –3000, –5000 (Contact Samtec for other lengths)

NO. OF POSITIONS	A
–019	(23,86) .939
–031	(32,95) 1.30

RUGGEDIZED by SAMTEC



Due to technical progress, all designs, specifications and components are subject to change without notice.

samtec

EYE SPEED™ I/O SYSTEM

(0,80mm) .0315"

ERI8, ERC SERIES

ERI8-019-S-D-RA

ERC-019-01-02

HIGH SPEED I/O SYSTEM

ERI8 Mates with:
EPLSP

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERI8

Insulator Material: Black LCP
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1,27µm) Ni
Current Rating: Testing Now!
Operating Temp Range: -55°C to +125°C
Voltage Rating: Testing Now!
RoHS Compliant: Yes

Processing:

Max Processing Temp: 230°C for 60 seconds, or 260°C for 20 seconds 3x
Lead-Free Solderable: Yes
SMT Lead Coplanarity: (0,10mm) .004" max

Note: Other Gold plating options available. Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

EDGE R·A·T·E™ CONTACT

ERI8	–	NO. OF POSITIONS	–	PLATING OPTION	–	D	–	RA	–	OTHER OPTION

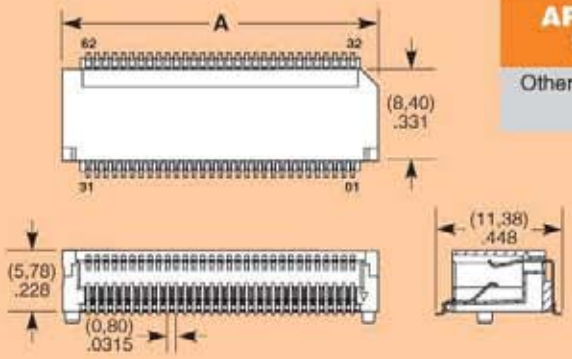
–019
= 8 Pairs, 5 Power, 2 Clock, 19 positions

–031
= 16 Pairs, 5 Power, 2 Clock, 31 positions

–S
= 30µ" (0,76µm) Gold on contact, Matte Tin on tail

–TR
= Tape & Reel Packaging

NO. OF POSITIONS	A
–019	(19,08) .751
–031	(26,68) 1.13



APPLICATION SPECIFIC
Other positions available. Call Samtec.

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?ERC

TYPE	–	NO. OF POSITIONS	–	01	–	OPTION

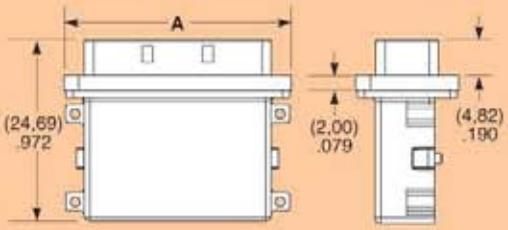
ERC
= Cage

–019, –031
= Number of Positions

–01
= Without Gasket

–02
= With Gasket

NO. OF POSITIONS	A
–019	(30,55) 1.203
–031	(40,15) 1.58



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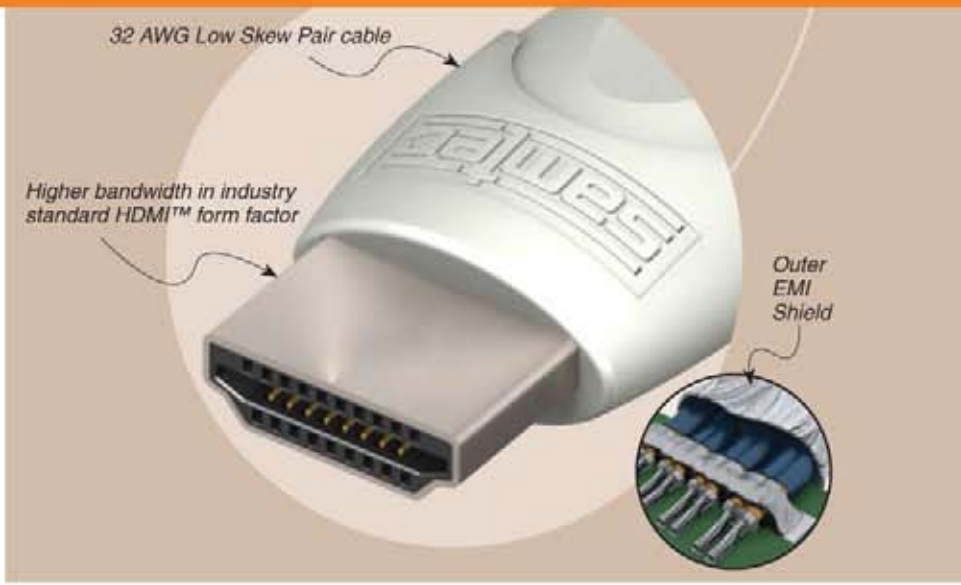
HPORT

HPLSP SERIES

HIGH SPEED I/O SYSTEM



SPECIFICATIONS

Mates with: HDMI

For complete specifications see www.samtec.com?HPLSP

Signal Routing:
100Ω Differential
Pinout Map:
See web address above
RoHS Compliant:
Yes

HPLSP	
Cable Length	**32 AWG Low Skew Pair**
1 meter (39.4")	2.42 GHz / 4.84 Gbps

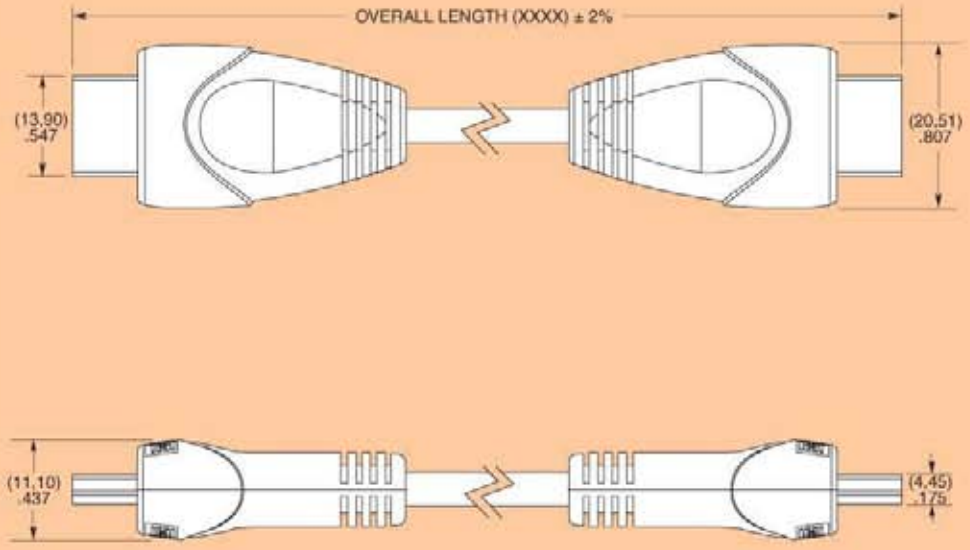
Performance data for other cable lengths and complete test data available at www.samtec.com?HPLSP or contact sig@samtec.com

ALSO AVAILABLE

- 30 AWG twinax cable. (See HPDPI Series)
- 30 AWG shielded twisted pair cable. (HPSTP Series)
- Custom cable lengths/ higher performance.
- Standard HDMI™ cables.

Call Samtec.

TYPE	–	NO. OF POSITIONS	–	LENGTH	–	S	–	S
HPLSP = Micro Low Skew Pair Cable		**–19** = 5 Pairs, 5 Power, 19 Positions		**–"XXXX"** = Length in millimeters –1000, –2000, –3000, –5000				



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

HDMI™ is a trademark of HDMI Licensing LLC.

Note:
This product is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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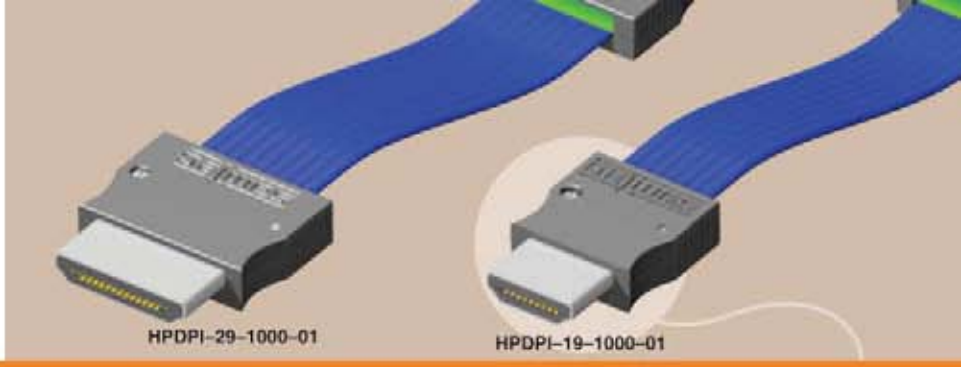
HPORT

HPDPI SERIES



INTERNAL HIGH SPEED SYSTEM

FEATURES

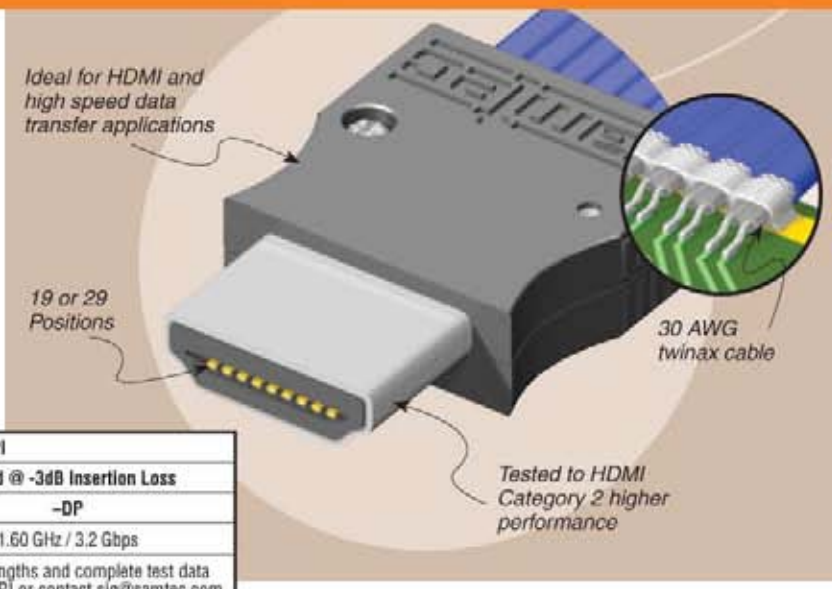
- Internal
- Hot Plug/Hot Swap
- Very Low Skew
- Twinax

Mates with:
HDMI

SPECIFICATIONS

For complete specifications see www.samtec.com?HPDPI

Cable:
30 AWG twinax micro ribbon
FILE NO. E111594
Signal Routing:
100Ω Differential
Pinout Map:
See www.samtec.com?HPDPI
RoHS Compliant:
Yes

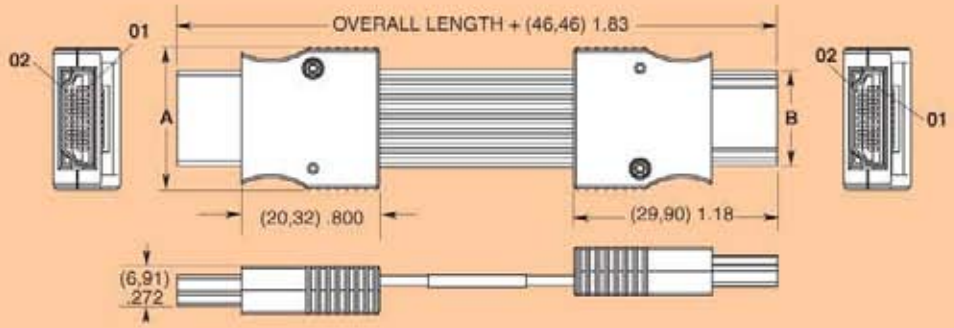


HPDPI	
Cable Length	Rated @ -3dB Insertion Loss
	-DP
1 meter (39.4")	1.60 GHz / 3.2 Gbps

Performance data for other cable lengths and complete test data available at www.samtec.com?HPDPI or contact sig@samtec.com

TYPE	NO. OF POSITIONS	LENGTH	WIRE OPTION
HPDPI = Twinax Cable	-19 = 5 Pairs, 4 Power, 19 Positions -29 = 8 Pairs, 6 Power, 29 Positions	-"XXXX" = Length in millimeters (-0095 minimum)	-01 = Pin 1 to Pin 1

NO. OF POS.	A	B	NO. OF PAIRS
-19	(20,83) .820	(13,89) .547	05
-29	(28,12) 1.107	(21,21) .835	08



Note:
Cable lengths longer than 40.00" (1 meter) are not supported with S.I. test data.

Note:
This Series is non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

HDMI-19-01-F-SM-PF

HDMI-19-02-S-SM

HDMI-29-01-S-SM

HDMI SERIES

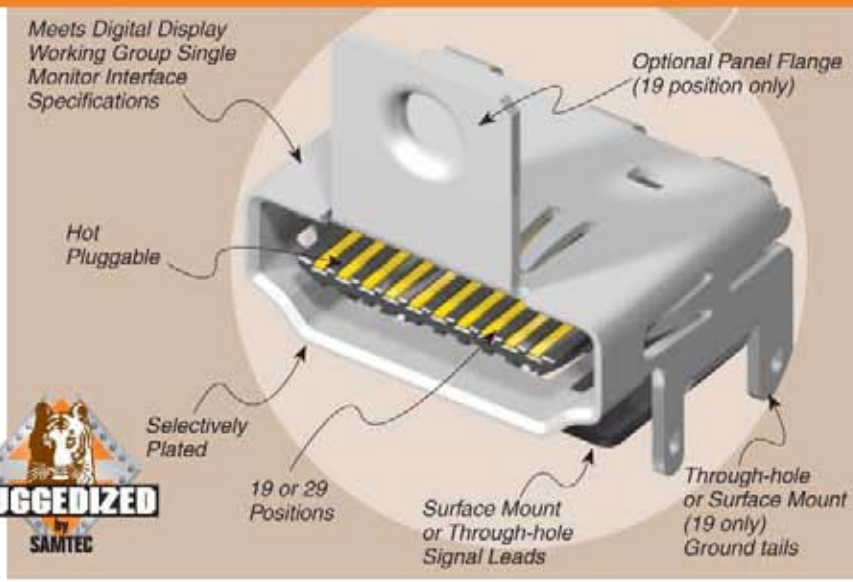
HIGH SPEED I/O RECEPTACLES

SPECIFICATIONS

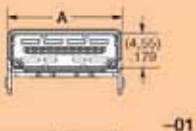
For complete specifications and recommended PCB layouts see www.samtec.com?HDMI

Insulator Material:
High Temperature Thermoplastic
Contact Material:
Copper Alloy
Shell Material:
Steel
Operating Temp Range:
-25°C to +85°C
Plating:
Gold on Contacts, Nickel on Shell and Tin on Tails
Current Rating:
1.2 A per contact
Voltage Rating:
40 VAC
Contact Resistance:
30 mΩ
Minimum Cycles:
100
Lead-Free Solderable:
Yes
RoHS Compliant:
Yes

Mates with:
HPLSP, HPDPI,
Industry Standard
HDMI Cable Assemblies

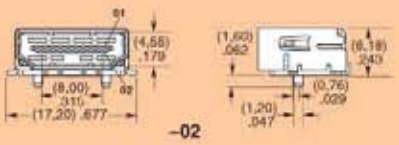


HDMI	– NO. OF POSITIONS	– LEAD STYLE	– PLATING	– TAIL OPTION	– OPTIONS
	–19 = 19 Positions / Mates with HPXXX 5 Pairs –29 = 29 Positions / Mates with HPXXX 8 Pairs	–01 = Through-hole Ground Tails –02 = Surface Mount Ground Tails (-19 only)	–F = Gold Flash on Mating Area, Tin on Tails –S = 30µ" (0,76µm) Gold on Mating Area, Tin on Tails	–SM = Surface Mount (Signal Leads) –TH = Through-hole (Only available on HDMI-19-01-X-TH-PF-L)	(Leave Blank for no Panel Flange) –PF = Panel Flange –L = Locking Option (Only available on HDMI-19-01-X-TH-PF-L)

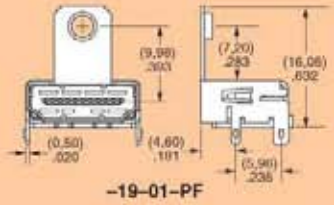


–01

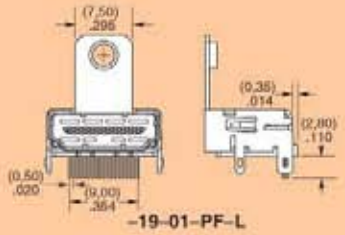
NO. OF POSITIONS	A
–19	(15,00) .591
–29	(22,30) .878



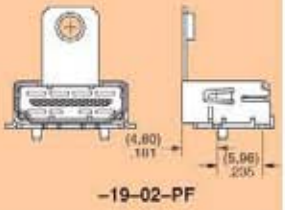
–02



–19-01-PF



–19-01-PF-L



–19-02-PF

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Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

MHDMI-19-02-F-TH-L-TR

MHDMI-19-02-F-TH-L-TR

MHDMI SERIES

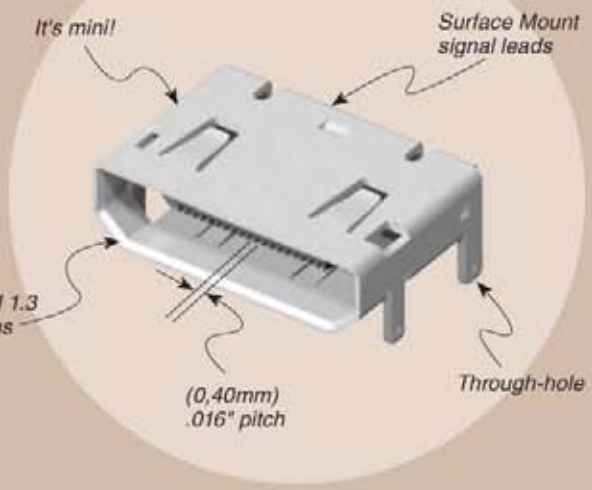
MINI HIGH SPEED I/O RECEPTACLES

SPECIFICATIONS

Mates with:
HPSTP-M, HPSTP-ML

For complete specifications and recommended PCB layouts see www.samtec.com?MHDMI

Insulator Material:
Black Glass Filled Thermoplastic
Contact Material:
Phosphor Bronze
Shell Material:
Brass
Plating:
Au over Ni on contacts, Ni on shell
Operating Temp Range:
-25 °C to +85 °C
Current Rating:
.5 A min.
Voltage Rating:
40 VAC
Contact Resistance:
30mΩ max
Minimum Cycles:
100
Lead-Free Solderable:
Yes
RoHS Compliant:
Yes
SMT Lead Coplanarity:
(0,10mm) .004" max



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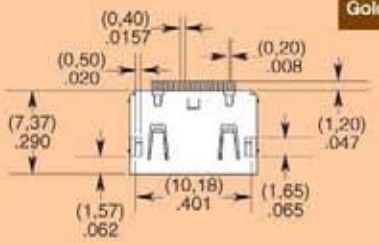
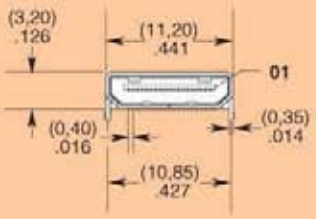
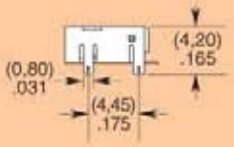
MHDMI	19	LEAD STYLE	PLATING	TAIL OPTION	LATCH OPTION	TR
		–02 = Surface Mount	–F = Gold Flash on contact and tail –H = 30µ" (0,76µm) Gold on on contact, Gold Flash on tails	–TH = Through-hole	–L = Latching	–TR = Tape & Reel Packaging







HDMI™ is a trademark of HDMI Licensing LLC.

Note: Some lengths, styles and options are non-standard, non-returnable.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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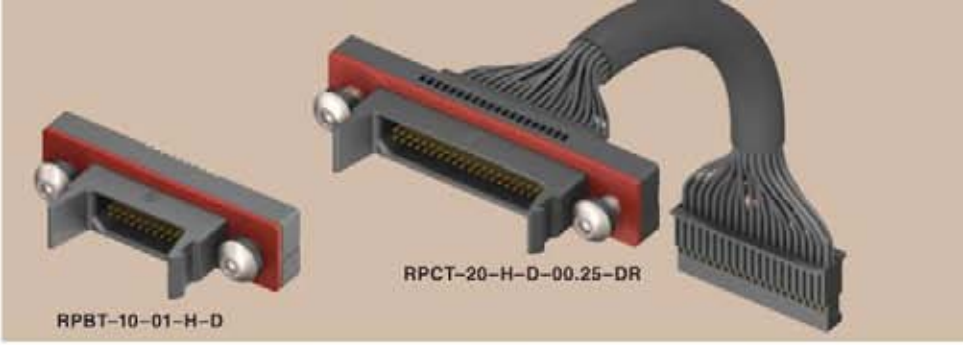
ACCLIMATE

(1,27mm) .050"

RPBT, RPCT SERIES



IP68 TIGER EYE™ SEALED PANEL MOUNT

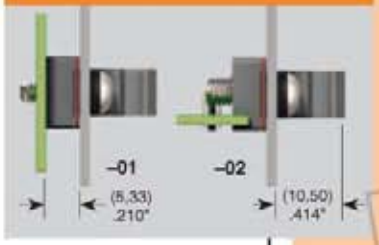
Mates with:
RCT

SPECIFICATIONS

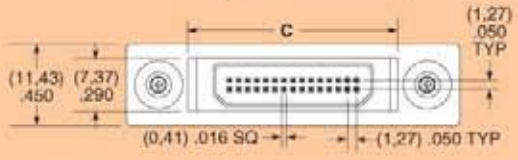
For complete specifications see www.samtec.com?RPBT

Insulator Material:
Black Liquid Crystal Polymer
Terminal:
Phosphor Bronze
Seal: Silicone
Nut: Steel
Lock Washer:
Steel

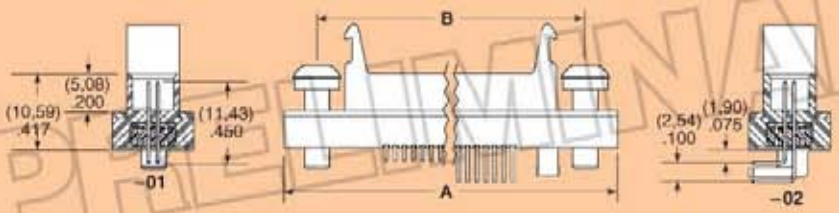
APPLICATION



RPBT	–	NO. OF POSITIONS	–	LEAD STYLE	–	PLATING	–	ROW
		–10, –15, –20 (Per Row)		–01 = Through-hole –02 = Right Angle		–H = 30µ" (0,76µm) Gold		–D = Double Row



NO. OF POSITIONS	A	B	C
–10	(40,39) 1.590	(31,24) 1.230	(23,11) .910
–15	(46,74) 1.840	(37,59) 1.480	(29,46) 1.160
–20	(53,09) 2.090	(43,94) 1.730	(35,81) 1.410



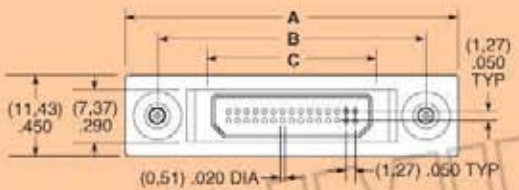
Mates with:
RCT, TFM, TFC, SFM, SFC

SPECIFICATIONS

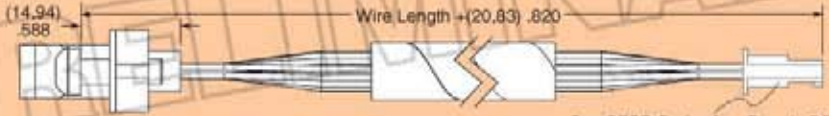
For complete specifications see www.samtec.com?RPCT

Insulator Material:
Black Liquid Crystal Polymer
Terminal:
Phosphor Bronze
Cable Insulator:
PVC
Wire:
Tin Copper
Seal:
Silicone
Nut:
Steel
Latch:
Phosphor Bronze

RPCT	–	NO. OF POSITIONS	–	PLATING	–	D	–	WIRE LENGTH	–	END OPTION
		–10, –15, –20 (Per Row)		–H = 30µ" (0,76µm) Gold				–00.25 = (0.25m) 9.84" –00.50 = (0.50m) 19.69"		–BC = Blunt Cut –D = Double End –DR = Double Latch –TR = Transfer End



NO. OF POSITIONS	A	B	C
–10	(40,39) 1.590	(31,24) 1.230	(15,37) .605
–15	(46,74) 1.840	(37,59) 1.480	(21,72) .855
–20	(53,09) 2.090	(43,94) 1.730	(28,07) 1.105



See SFSD Series for –D and –DR
See TFSD Series for –TR

TIGER EYE™ CONTACT

PRELIMINARY

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ACCLIMATE

(1,27mm) .050"

RCT SERIES

IP68 TIGER EYE™ SEALED CABLE PLUG

SPECIFICATIONS

For complete specifications see www.samtec.com?RCT

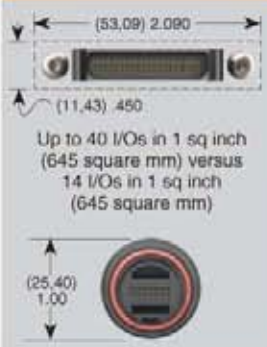
Insulator Material:
Black Liquid Crystal Polymer
Contact:
Phosphor Bronze
Cable:
PVC Jacket/Copper Conductor
Seal:
Silicone
Latch:
Phosphor Bronze/LCP

Mates with:
RPBT, RPCT

TIGER EYE™ CONTACT

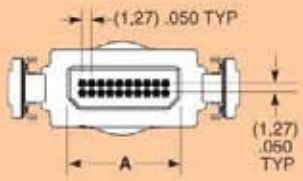
APPLICATION

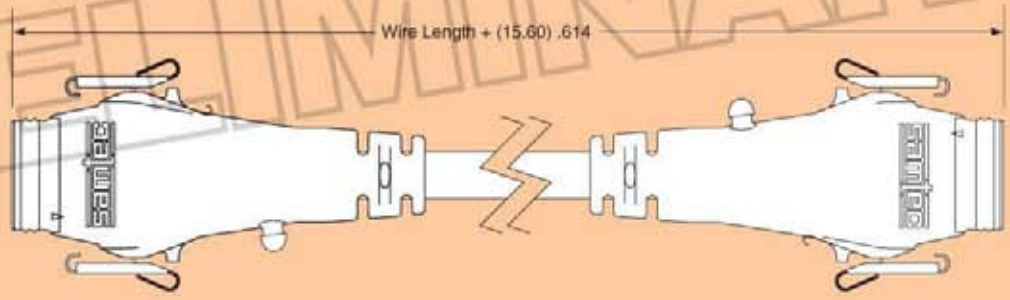
APPLICATION



RCT	– NO. OF POSITIONS	– LEAD STYLE	– PLATING	– D	– WIRE LENGTH	– END OPTION
	–10, –15, –20 (Per Row)	–01 = Mates with RPCT Series –02 = Mates with RPBT Series	–H = 30µ" (0,76µm) Gold		–02.00 = (2m) 78.74" –03.00 = (3m) 118.11" –05.00 = (5m) 196.85"	–D = Double End –BC = Blunt Cut

NO. OF POSITIONS	A
–10	(15,62) .615
–15	(21,97) .865
–20	(28,32) 1.115





PRELIMINARY

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ACCLIMATE

RPBE–01–01–E

RPBE SERIES

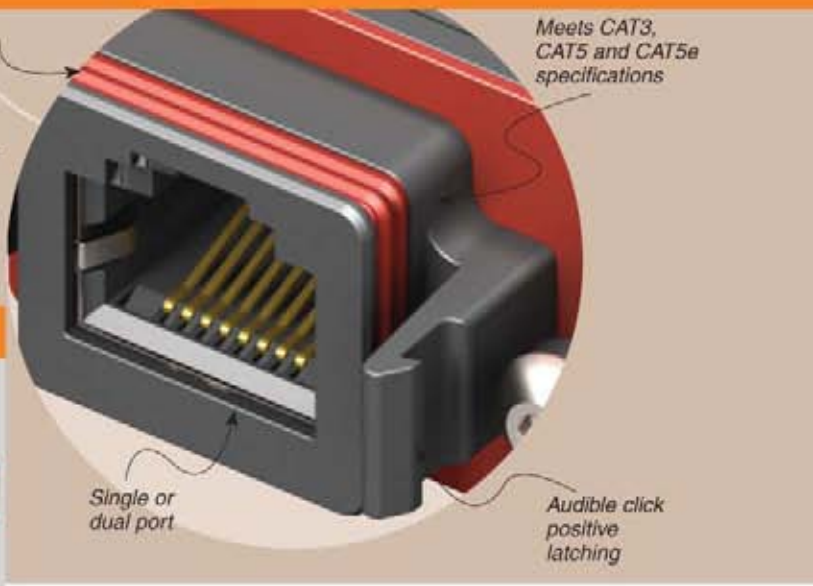
IP68 SEALED ETHERNET SOCKET

SPECIFICATIONS

For complete specifications see www.samtec.com?RPBE

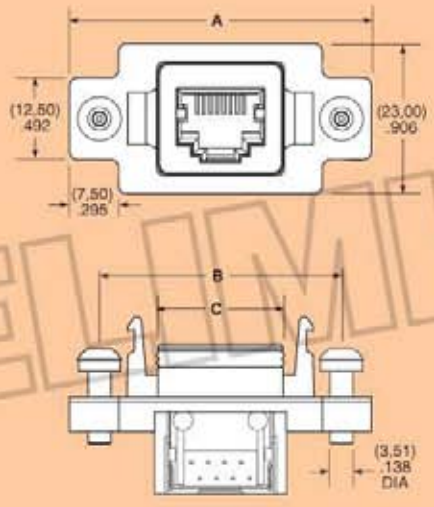
Insulator Material:
Black Liquid Crystal Polymer
Contact:
Phosphor Bronze
Seal:
Silicone
Screw:
Stainless Steel
Nut:
Stainless Steel
Sealing Washer:
Rubber

Mates with:
RCE



APPLICATION

RPBE	–	NO. OF PORTS	–	LEAD STYLE	–	PLATING
		–01, –02		–01 = Right Angle		–E = 50µ" (1,27µm) Gold on contact, Flash Gold on tail



NO. OF PORTS	A	B	C
–01	(46,10) 1.815	(36,95) 1.455	(19,49) .767
–02	(58,70) 2.311	(49,55) 1.951	(37,19) 1.464

Some components Removed for clarity

PRELIMINARY

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RCE SERIES

IP68 SEALED ETHERNET PLUG

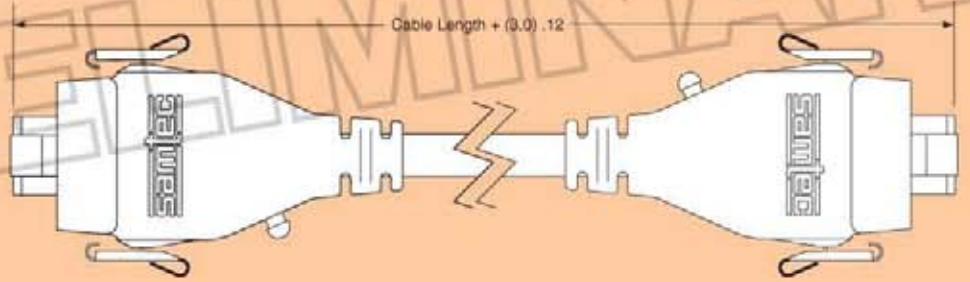
SPECIFICATIONS

For complete specifications see www.samtec.com?RCE

Insulator Material:
Black Liquid Crystal Polymer
Contact:
Phosphor Bronze
Latch:
BeCu
Cable:
28 AWG Copper conductors with PVC jacket

Mates with:
RPBE-01

RCE	CABLE STYLE	PLATING	WIRE LENGTH	END OPTION
	–01 = Outdoor UL	–G = 50µ" (1,27µm) Gold on contact	–02.00 = (2m) 78.74" –03.00 = (3m) 118.11" –05.00 = (5m) 196.85"	–D = Double End (Both ends sealed) –BC = Blunt Cut (One end sealed)



PRELIMINARY

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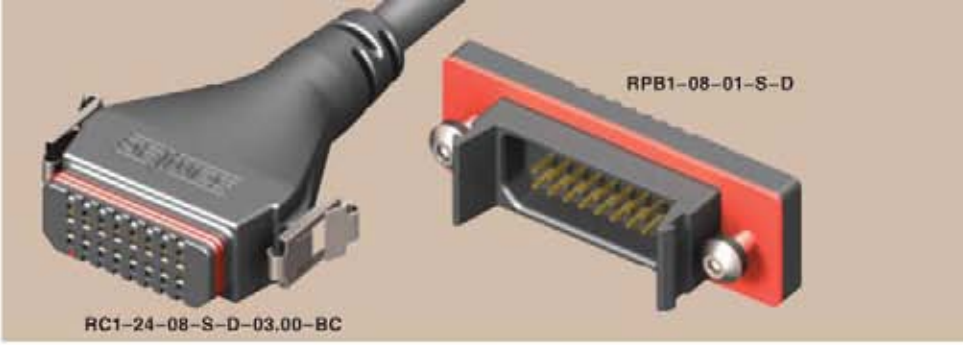
ACCLIMATE

(2,54mm) .100"

RPB1, RC1 SERIES



IP68 SEALED MINI MATE® SYSTEM

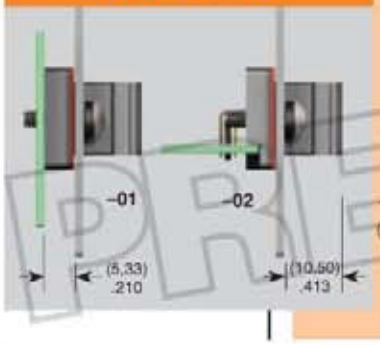
Mates with:
RC1

SPECIFICATIONS

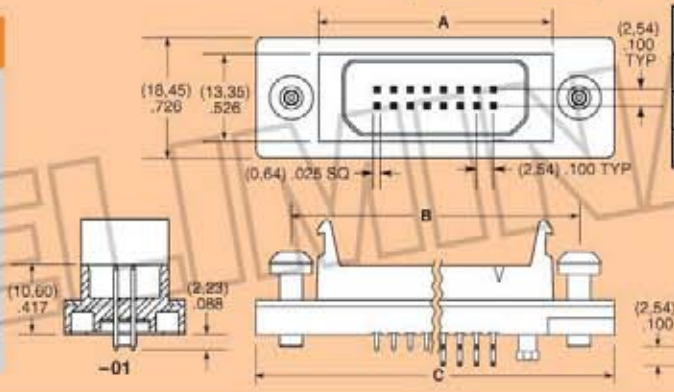
For complete specifications see www.samtec.com?RPB1

Insulator Material:
Black Liquid Crystal Polymer
Contact:
Phosphor Bronze
Seal:
Silicone

APPLICATION



RPB1	NO. OF POSITIONS	LEAD STYLE	PLATING	ROW
	-08, -11, -15 (Per Row)	-01 = Through-hole -02 = Right Angle	-S = 30µ" (0,76µm) Gold on contact, Matte tin on tail	-D = Double Row



NO. OF POSITIONS	A	B	C
-08	(35,82) 1.410	(43,95) 1.730	(54,70) 2.154
-11	(43,82) 1.725	(51,95) 2.045	(62,70) 2.469
-15	(51,82) 2.040	(59,95) 2.360	(70,70) 2.783

Mates with:
RPB1

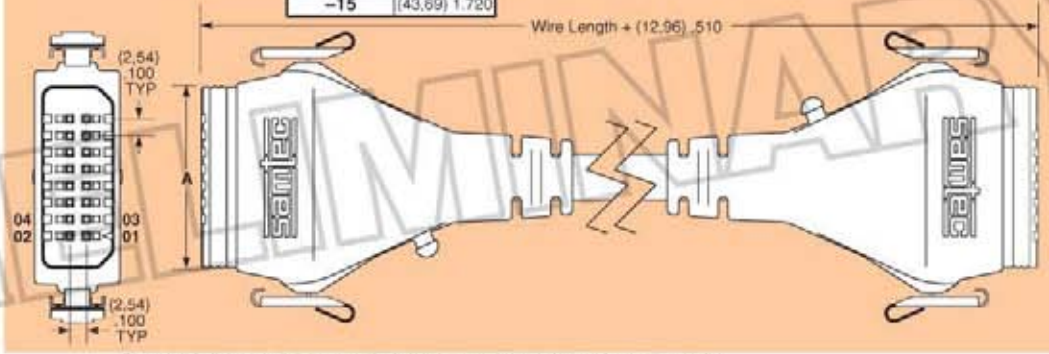
SPECIFICATIONS

For complete specifications see www.samtec.com?RC1

Insulator Material:
Black Liquid Crystal Polymer
Cable:
PVC Jacket/
Copper Conductors
O-Ring:
Silicone
Contact:
Phosphor Bronze
Latch:
BeCu

RC1	WIRE GAUGE	NO. OF POSITIONS	PLATING	ROW	WIRE LENGTH	END OPTION
	-24 = 24 AWG	-08, -11, -15 (Per Row)	-S = 30µ" (0,76µm) Gold on contact, Matte tin on tail	-D = Double Row	-02.00 = (2m) 78.74" -03.00 = (3m) 118.11" -05.00 = (5m) 196.85"	-D = Double End -BC = Blunt Cut

NO. OF POSITIONS	A
-08	(27,69) 1.090
-11	(35,69) 1.405
-15	(43,69) 1.720



PRELIMINARY

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SCP3, SCR3 SERIES

IP68 SEALED TIGER EYE™ CIRCULAR

Mates with:
SCR3

SPECIFICATIONS

For complete specifications see www.samtec.com?SCP3

Housing: PBT
Insert: LCP
Terminal Material: Copper Alloy
Wire: 28 AWG
Sealed Overmold: PA66
RoHS Compliant: Yes

FILE NO. E71636

ALSO AVAILABLE

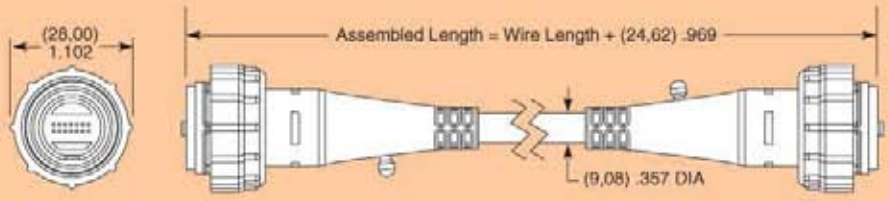
Other wire lengths.
Dust Cap: DCA-10-02

Other applications:
Ethernet: See SCPE Series
USB: See SCPU Series
Power: See SCP1 Series
High Density: See SCP2 Series

Note: Some lengths, styles and options are non-standard, non-returnable.

SCP3	10	TOTAL PINS	PLATING	WIRE LENGTH	END OPTION
		–14 = 14 Pins	–H = 30µ" (0,76µm) Gold	–02.00 = (2m) 78.74" –03.00 = (3m) 118.11" –05.00 = (5m) 196.85"	–D = Double Ended

RUGGEDIZED by SAMTEC



APPLICATION SPECIFIC

Single ended and custom wire lengths available.
Call Samtec.

Mates with: SCP3, SFM (-107), TFM (-107)

SPECIFICATIONS

For complete specifications and recommended panel hole layout see www.samtec.com?SCR3

Housing: PBT
Insert: LCP
Panel Contacts: Brass/BeCu
Board Contacts: Phosphor Bronze
Wire: 28 AWG
RoHS Compliant: Yes

FILE NO. E71636

TIGER EYE™ CONTACT

ALSO AVAILABLE

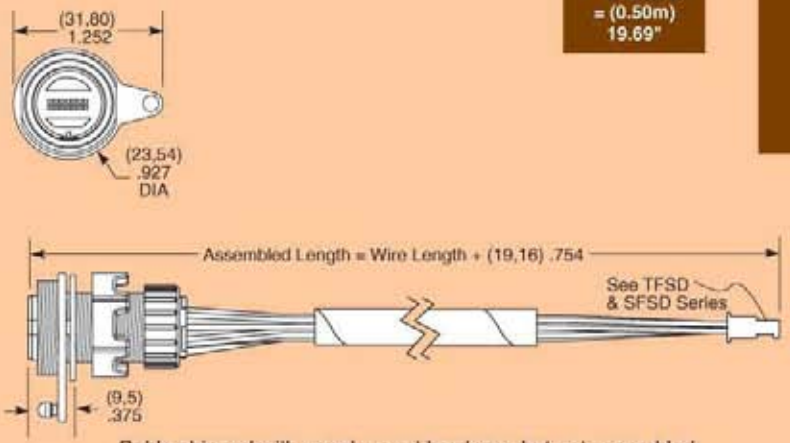
Dust Cap: DCA-10-01
Panel Plug: SCPPA-10-01

APPLICATION SPECIFIC

Single ended and custom wire lengths available.
Friction locking feature available for mating with TFML Series.
Call Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

SCR3	10	TOTAL PINS	PLATING	WIRE LENGTH	END TERMINATION
		–14 = 14 Pins	–H = 30µ" (0,76µm) Gold	–00.25 = (0.25m) 9.84" –00.50 = (0.50m) 19.69"	–D = Socket (See SFSD Series) –DR = Latching Socket (See SFSD-XR Series) –T = Terminal (See TFSD Series)



RUGGEDIZED by SAMTEC

Cable shipped with panel mount hardware but not assembled.

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ACCLIMATE

SCP1 SERIES

IP68 SEALED POWER PLUG

SPECIFICATIONS

Mates with:
SCR1

For complete specifications see www.samtec.com?SCP1

Insulator Material:
PBT
Terminal Material:
Brass Alloy
Contact Material:
Phosphor Bronze
Wire:
22 AWG
Sealed Overmold:
PA66
RoHS Compliant:
Yes

CURRENT RATING	
AMBIENT TEMP	SCP1-17/ SCR1-17
20°C	4.4A
40°C	3.9A
60°C	3.3A
75°C	2.7A
16 POSITIONS POWERED	

APPLICATION SPECIFIC

Single ended and custom wire lengths available.
Call Samtec.

ALSO AVAILABLE

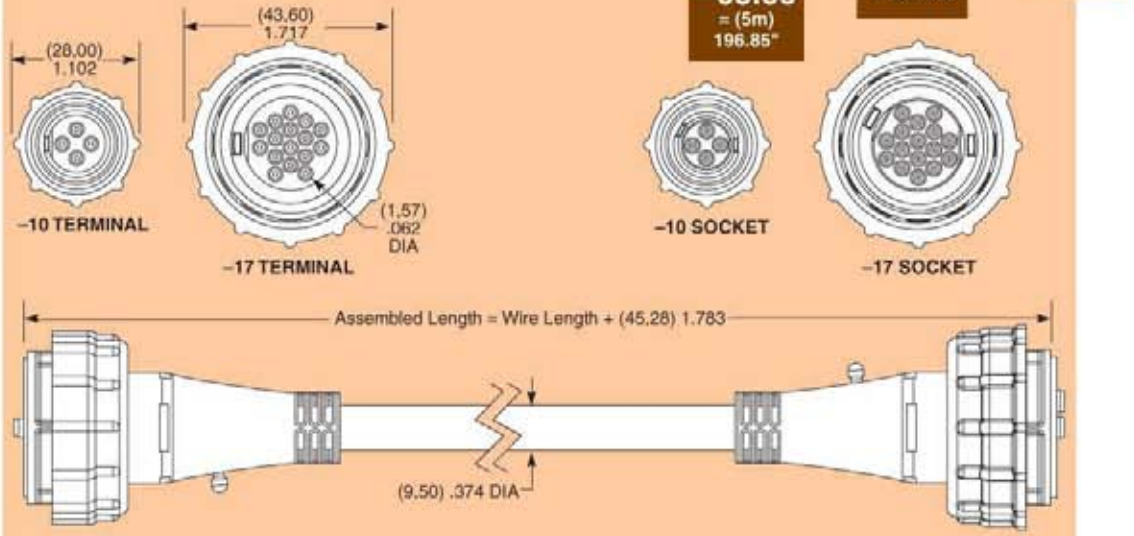
Other applications:
Ethernet: See SCPE Series
USB: See SCPU Series
High Density: See SCP2 Series
Tiger Eye™: See SCP3 Series

ALSO AVAILABLE

DUST CAPS	
SIZE	SCPX
–10	DCA-10-02
–17	DCA-17-02

Note: Some lengths, styles and options are non-standard, non-returnable.

SCP1	– SIZE	– NO. OF POSITIONS	– PLATING	– WIRE LENGTH	– END 1 OPTION	– END 2 OPTION
	–10, –17	–04 = 04 Positions (Size –10 only) –16 = 16 Positions (Size –17 only)	–T = Tin	–02.00 = (2m) 78.74" –03.00 = (3m) 118.11" –05.00 = (5m) 196.85"	–S = Socket (Not available with End 2 option –T) –T = Terminal	–S = Socket –T = Terminal –BC = Blunt Cut



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ACCLIMATE

SCR1 SERIES

IP68 SEALED POWER RECEPTACLE

SPECIFICATIONS

For complete specifications and recommended panel hole layout see www.samtec.com?SCR1

Insulator Material: PBT
Panel & Board Contacts: Phosphor Bronze
Terminal Material: Brass Alloy
Wire: 22 AWG
RoHS Compliant: Yes

Mates with:
SCP1, IPBT (2 x 8 positions, 2 x 2 positions)

CURRENT RATING	
AMBIENT TEMP	SCP1-17/ SCR1-17
20°C	4.4A
40°C	3.9A
60°C	3.3A
75°C	2.7A
16 POSITIONS POWERED	

APPLICATION SPECIFIC

Single ended and custom wire lengths available. Call Samtec.

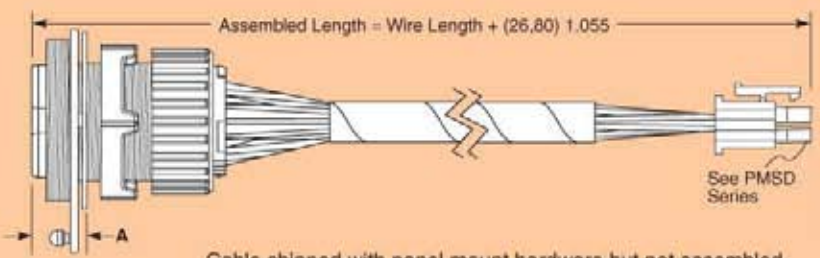
ALSO AVAILABLE

DUST CAPS	
SIZE	SCRX
–10	DCA-10-01
–17	DCA-17-01

PANEL PLUGS	
SIZE	SCRX
–10	SCPPA-10-01
–17	SCPPA-17-01

Note: This Series is non-standard, non-returnable.

SCR1 –	SIZE –	NO. OF POSITIONS –	PLATING –	WIRE LENGTH –	END 1 OPTION –	END 2 OPTION
	–10, –17	–04 = 04 Positions (Size –10 only) –16 = 16 Positions (Size –17 only)	–T = Tin	–00.25 = (0,25m) 9.84" –00.50 = (0,50m) 19.68"	–S = Socket –T = Terminal	–S1 = Socket Power Mate™ –BC = Blunt Cut



SIZE	A
–10	(9,5) .375
–17	(12,7) .50

Cable shipped with panel mount hardware but not assembled.

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SCP2, SCR2 SERIES

IP68 SEALED HIGH DENSITY SYSTEM

Mates with:
SCR2

SPECIFICATIONS

For complete specifications see www.samtec.com?SCP2

Insulator Material: PBT
Terminal Material: Brass Alloy
Wire: 24 AWG
Sealed Overmold: PA66
RoHS Compliant: Yes

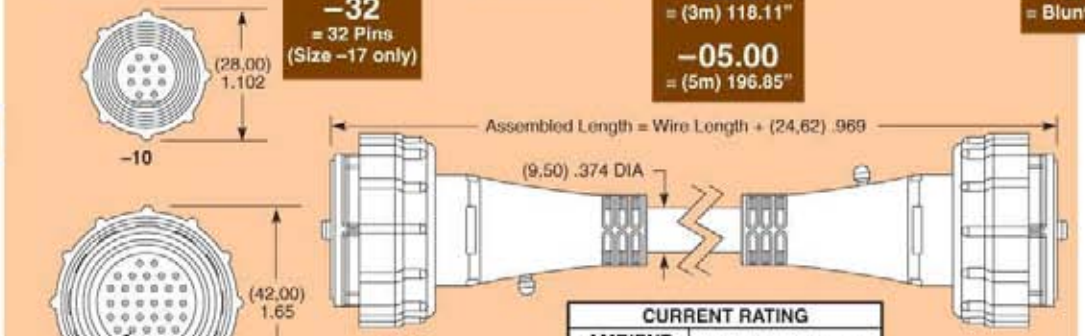
ALSO AVAILABLE

Single ended and custom wire lengths available

Other applications:
Ethernet: See SCPE Series
USB: See SCPU Series
Power: See SCP1 Series
Tiger Eye™: See SCP3 Series

Note: Some lengths, styles and options are non-standard, non-returnable.

SCP2	SIZE	NO. OF PINS	PLATING	WIRE LENGTH	END 1 OPTION	END 2 OPTION
	–10, –17	–10 = 10 Pins (Size –10 only) –32 = 32 Pins (Size –17 only)	–F = Gold Flash	–02.00 = (2m) 78.74" –03.00 = (3m) 118.11" –05.00 = (5m) 196.85"	–T = Terminal	–T = Terminal –BC = Blunt Cut



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CURRENT RATING	
AMBIENT TEMP	SCP2/SCR2/IPL1
20°C	5A
40°C	4.2A
60°C	3.5A
75°C	2.8A
6 POSITIONS (2x3) POWERED	

Mates with:
SCP2, IPL1

SPECIFICATIONS

For complete specifications and recommended panel hole layout see www.samtec.com?SCR2

Insulator Material: PBT
Panel Contacts: Phosphor Bronze
Board Contacts: Phosphor Bronze
Wire: 24 AWG
RoHS Compliant: Yes

TIGER EYE™ CONTACT

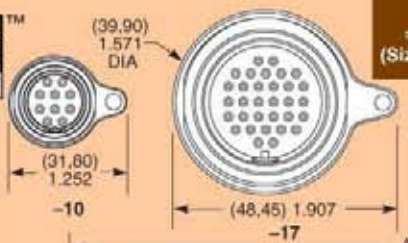
APPLICATION SPECIFIC OPTION

- Single ended and custom wire lengths available.
- Without keyed polarization

Call Samtec.

Note: This Series is non-standard, non-returnable.

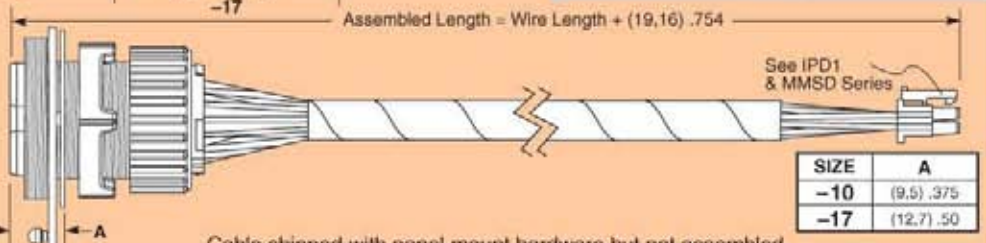
SCR2	SIZE	NO. OF PINS	PLATING	WIRE LENGTH	END OPTION
	–10, –17	–10 = 10 Pins (Size –10 only) –32 = 32 Pins (Size –17 only)	–F = Gold Flash	–00.25 = (0.25m) 9.84" –00.50 = (0.50m) 19.69"	–DK = Double Keyed Polarization



ALSO AVAILABLE

DUST CAPS		
SIZE	SCPX	SCRX
–10	DCA-10-02	DCA-10-01
–17	DCA-17-02	DCA-17-01

PANEL PLUGS	
SIZE	SCRX
–10	SCPPA-10-01
–17	SCPPA-17-01



SIZE	A
–10	(9,5) .375
–17	(12,7) .50

Cable shipped with panel mount hardware but not assembled.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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SCPE, SCRES SERIES

IP68 SEALED ETHERNET SOCKET & PLUG

Mates with: SCRES

SPECIFICATIONS

For complete specifications see www.samtec.com?SCPE

Insulator Material: Polycarbonate
Contact Material: Phosphor Bronze
Shield Material: Phosphor Bronze
Wire: 24 AWG
Overmold: PA66 GF13 FR
Operating Temp Range: -40°C to +70°C
RoHS Compliant: Yes

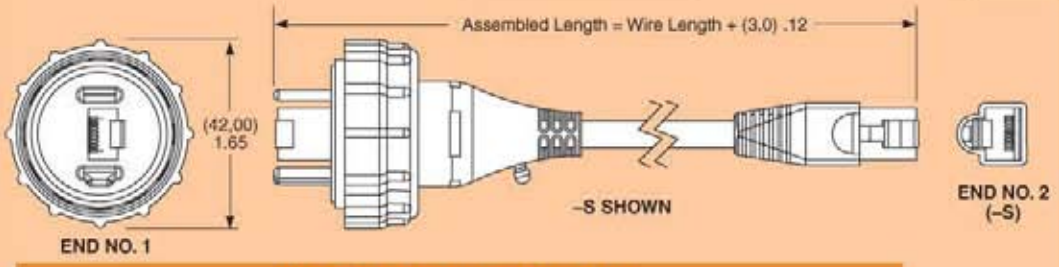
ALSO AVAILABLE

Other wire lengths.
Dust Cap: DCA-17-02
Contact Samtec.

APPLICATION	SERIES
USB	SCPU
POWER	SCP1
HIGH DENSITY	SCP2
TIGER EYE™	SCP3

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE	PLATING	WIRE LENGTH	END OPTION	CAT OPTION
SCPE = Sealed Circular Ethernet Cable Plug	**–G** = 50µ" (1,27µm) Gold on Contact, Nickel on Shell	**–02.00** = (2m) 79" Cable **–03.00** = (3m) 118" Cable **–05.00** = (5m) 197" Cable	**–D** = Double Ended (Both Ends Sealed) **–S** = Single Ended (End No. 1 Sealed)	**–NP** = Cat 5e (No polarization mates with SCRES –C5E) (Leave blank for Cat 3 version)



FIELD TERMINATION KIT

- Ethernet Field Termination Kit available for long cable run and small-opening applications, so housings can be customer-installed after the runs are complete.
- SCPFE-17-G-01 Series (For cable outside diameter range of 5.00-5.75mm)
- SCPFE-17-G-02 Series (For cable outside diameter range of 5.75-6.50mm)

Call Samtec.

RUGGEDIZED by SAMTEC

Mates with: SCPE

SPECIFICATIONS

For complete specifications and recommended panel hole layout see www.samtec.com?SCRES

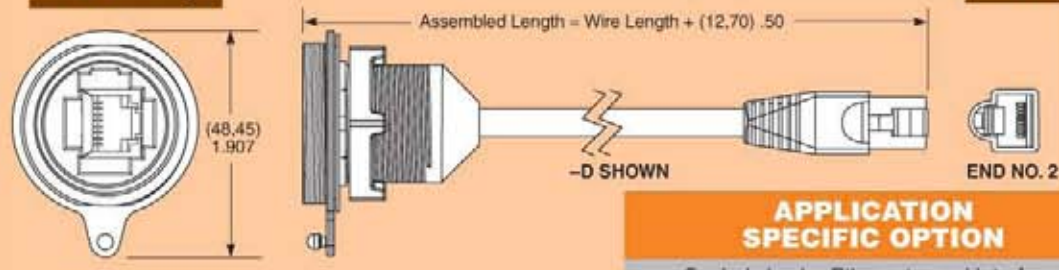
Insulator Material: PBT
Contact Material: Phosphor Bronze
Shield Material: Phosphor Bronze
O-Ring: Silicone
Mold: PA66
Operating Temp Range: -20°C to +75°C
RoHS Compliant: Yes

ALSO AVAILABLE

Dust Cap: DCA-17-01
Panel Plug: SCPPA-17-01
Contact Samtec.

Note: Some lengths, styles and options are non-standard, non-returnable.

TYPE	PLATING	WIRE LENGTH	END OPTION	CAT OPTION
SCRES = Sealed Circular Ethernet Receptacle Cable Assembly	**–G** = 50µ" (1,27µm) Gold on Contact, Nickel on Shell	**–00.25** = (0,25m) 9.84" Cable **–00.50** = (0,50m) 19.68" Cable	**–D** = Double Ended **–BC** = Blunt Cut	**–C5E** = Cat 5e rating (Leave blank for Cat 3 version)



APPLICATION SPECIFIC OPTION

Sealed circular Ethernet panel interface.
(Use standard Ethernet cable from panel to board.)
Call Samtec.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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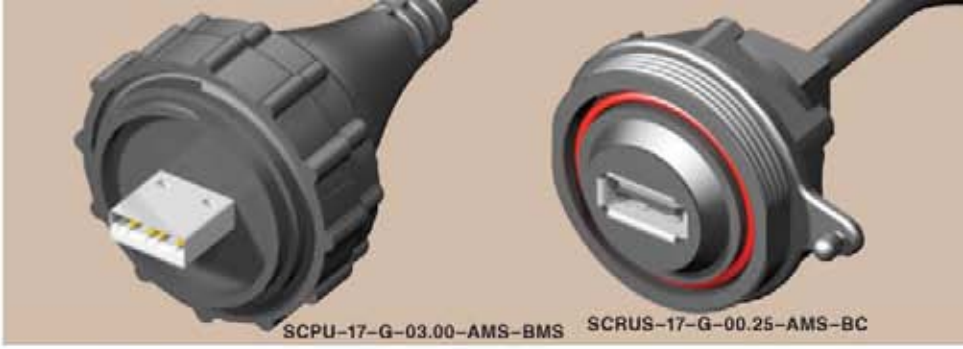


SCPU, SCRUS SERIES

IP68 USB & MINI USB SOCKETS & PLUGS

Mates with:
SCRUS

SPECIFICATIONS

For complete specifications see www.samtec.com?SCPU

Insulator Material: Glass Filled Thermoplastic
Contact Material: Copper Alloy
Shield Material: CRS
Wire: Wire gauge varies based on length to meet USB 2.0 specifications. Call Samtec for more information.
Sealed Overmold: PA66 GF13 FR
Operating Temp Range: -20°C to +75°C
RoHS Compliant: Yes

ALSO AVAILABLE

Other wire lengths.
Dust Cap: DCA-17-02
Contact Samtec.

APPLICATION	SERIES
ETHERNET	SCPE
POWER	SCP1
HIGH DENSITY	SCP2
TIGER EYE™	SCP3

Note: Some lengths, styles and options are non-standard, non-returnable.

SCPU	SHELL SIZE	PLATING	WIRE LENGTH	END 1 OPTION	END 2 OPTION
	–17 (Standard USB only) –10 (Mini USB only)	–G = 30µ" (0,76µm) Gold on Contact, Nickel on Shell	–02.00 = (2m) 79" Cable –03.00 = (3m) 118" Cable –05.00 = (5m) 197" Cable (Assembled Length = Wire Length + (19,5) .77)	–AMS = USB A Type, Sealed –BMS = USB B Type, Sealed –MBS = Mini USB B Type, Sealed (–10 only)	See chart for available combinations –AMS = USB A Type, Sealed –BMS = USB B Type, Sealed (-17 only) –MBS = Mini USB B Type, Sealed (–10 only) –AM = USB A Type, Not Sealed –BM = USB B Type, Not Sealed (-17 only) –MB = Mini USB B Type, Not Sealed (-10 only)

ALSO AVAILABLE

Dust Cap: DCA-17-01
Panel Plug: SCPPA-17-01

RUGGEDIZED by SAMTEC

Mates with:
SCPU

SPECIFICATIONS

For complete specifications and recommended panel hole layout see www.samtec.com?SCRUS

Insulator Material: PBT
Contact Material: Phosphor Bronze
O-Ring: Silicone
Operating Temp Range: -20°C to +75°C
RoHS Compliant: Yes

ALSO AVAILABLE

USB Flash Drive Cover: DCA–17–03

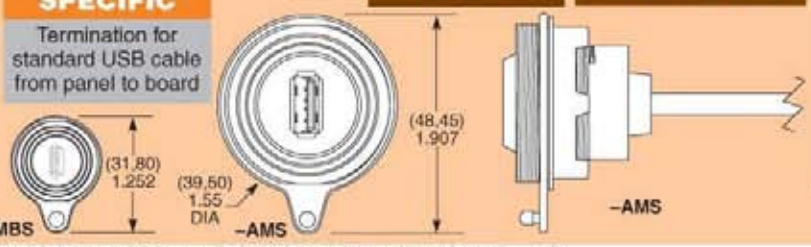
Device dimensions: 80,00mm x 13,30mm x 20,25mm max.

TYPE	SHELL SIZE	PLATING	WIRE LENGTH	END 1 OPTION	END 2 OPTION
SCRUS = Sealed Circular USB Receptacle Cable Assembly	–17 (Standard USB only) –10 (Mini USB only)	–G = 30µ" (0,76µm) Gold on Contact, Nickel on Shell	–00.25 = (0,25m) 9.84" Cable –00.50 = (0,50m) 19.68" Cable (Assembled Length = Wire Length + (37,9) 1.50)	–AMS = USB A Type, Sealed –BMS = USB B Type, Sealed –MBS = Mini USB B Type, Sealed	See chart for available combinations –AM = USB A Type, Not Sealed –BM = USB B Type, Not Sealed –MB = Mini USB B Type, Not Sealed –BC = Blunt Cut

Note: Some lengths, styles and options are non-standard, non-returnable.

APPLICATION SPECIFIC

Termination for standard USB cable from panel to board



Due to technical progress, all designs, specifications and components are subject to change without notice.

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SPM-05-B-VT-PF

SPM-05-B-RA-PF

SPM SERIES

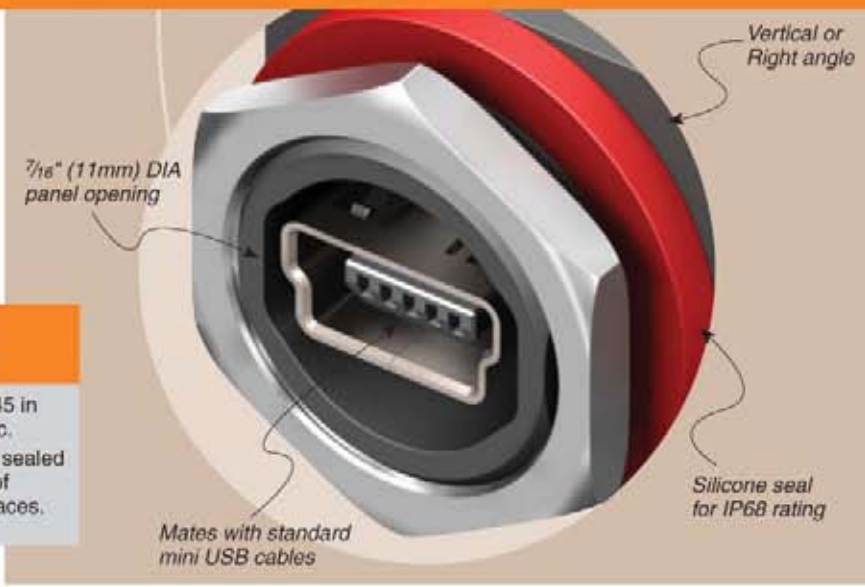
IP68 SEALED MINI USB PORT

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?SPM

Insulator Material:
Black Liquid Crystal Polymer
Contact Material:
Phosphor Bronze
Shield Material:
Phosphor Bronze
Seal:
Silicone

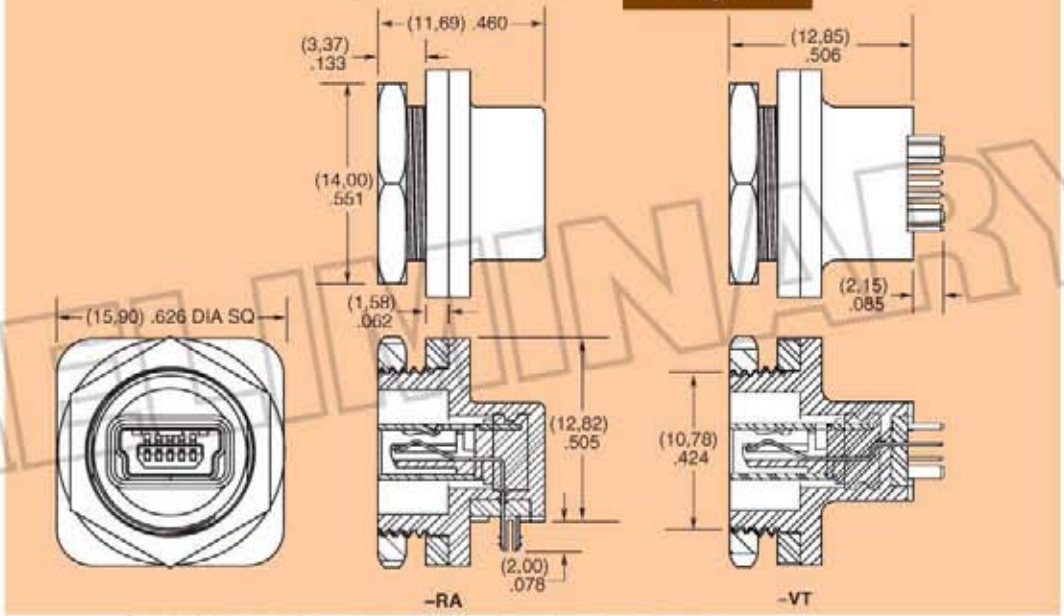
Mates with:
USBC



ALSO AVAILABLE

- Sealed port USB and RJ45 in development. Call Samtec.
- See our Acclimate™ IP68 sealed connectors for a full line of rugged Panel & I/O interfaces.

SPM	– NO. OF POSITIONS	– PLATING	– B	– TERMINATION	– OPTION	– OTHER OPTION
	–05	–S = 30µ" (0,76µm) Gold on Mating Area, Tin on Tails		–RA = Right Angle –VT = Vertical Through-Hole	–PF = Panel Flange	–TR = Tape & Reel



PRELIMINARY

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USB–A–D–S–B–TH

USBR–A–S–F–O–TH

USB–AM–S–F–W–TH

USB–A–S–F–B–VU

USB-A, USBR-A, USB-AM SERIES

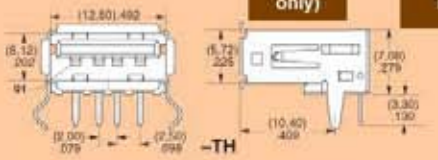
STANDARD & RUGGED USB INTERFACES

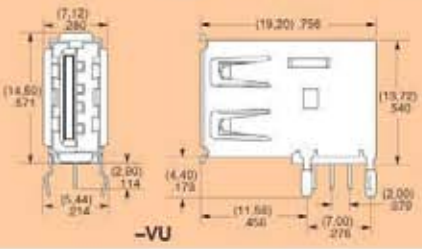
SPECIFICATIONS

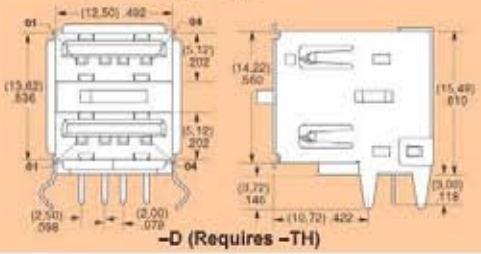
For complete specifications and recommended PCB layouts see www.samtec.com?USB-A or www.samtec.com?USBR-A

Insulator Material: High Temperature Thermoplastic
Contact Material: Phosphor Bronze
Shell Material: Copper Alloy
Plating: Gold on Contacts, Nickel on Shell, Tin on Tails
Operating Temp Range: -50°C to +85°C
Current Rating: 1 A per contact
Voltage Rating: 30 VAC
Contact Resistance: 30 mΩ max
Cycles: 1500 (maximum number of cycles tested)
Packaging: Packaged and shipped in Bulk Packaging Trays; Trays suitable for automation are available upon request.
RoHS Compliant: Yes
Lead–Free Solderable: –SM1=Yes –TH & –VU=Yes (Wave Solder only)

TYPE	A	SHELL TYPE	PLATING	COLOR	TERMINATION
USB = Standard Connector **USBR** = Increased Retention Connector (Complies with Class 1, DIV II minimum withdrawal requirement of 15N.)		**–S** = Single **–D** = Double (–TH option only)	**–S** = 30µ" (0,76 µm) Gold on Mating Area, Tin on Tails **–F** = Gold Flash on Mating Area, Tin on Tails	**–B** = Black **–W** = White **–O** = Orange (USBR only)	**–TH** = Through-hole **–SM1** = Offset Surface Mount **–VU** = Upright, Through-Hole





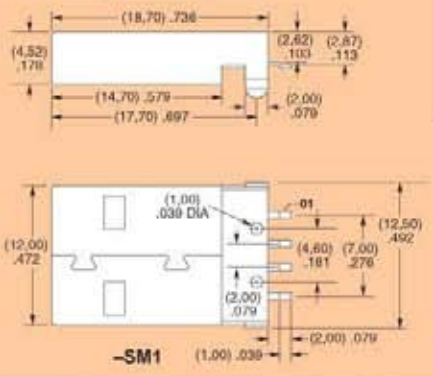


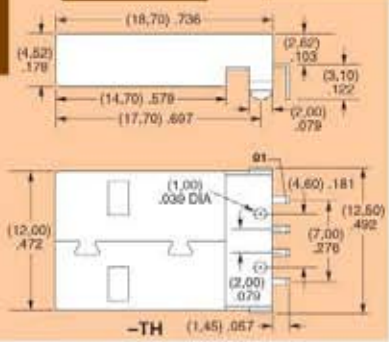
SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?USB-AM

Insulator Material: High Temperature Thermoplastic
Contact Material: Phosphor Bronze
Shell Material: Copper Alloy
Plating: Gold on Contacts, Nickel on Shell, Tin on Tails
Operating Temp Range: -50°C to +85°C
Current Rating: 1 A per contact
Voltage Rating: 30 VAC
Contact Resistance: 30 mΩ max
Cycles: 1500 (maximum number of cycles tested)
Packaging: Packaged and shipped in Bulk Packaging Trays; Trays suitable for automation are available upon request.
RoHS Compliant: Yes
Lead–Free Solderable: –SM1=Yes –TH=Yes (Wave Solder only)

USB	TYPE	SHELL TYPE	PLATING	COLOR	TERMINATION
	–AM = A Type (Plug)	**–S** = Single	**–S** = 30µ" (0,76 µm) Gold on Mating Area, Tin on Tails **–F** = Gold Flash on Mating Area, Tin on Tails	**–B** = Black **–W** = White	**–TH** = Through-hole **–SM1** = Surface Mount





Due to technical progress, all designs, specifications and components are subject to change without notice.

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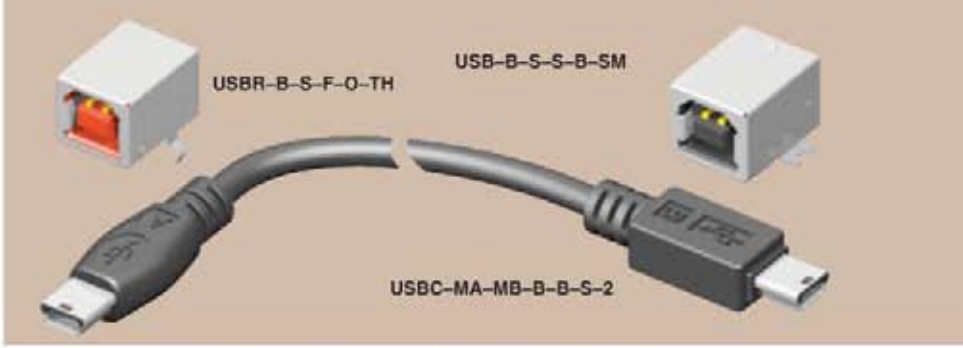


USB-B, USBR-B, USBC SERIES

STANDARD & RUGGED USB INTERFACES

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?USB-B or www.samtec.com?USBR-B

Insulator Material: High Temperature Thermoplastic
Contact Material: Phosphor Bronze
Shell Material: Brass
Plating: Gold on Contacts, Nickel on Shell, Tin on Tails
Operating Temp Range: -50°C to +85°C
Current Rating: 1A per contact
Voltage Rating: 30 VAC
Contact Resistance: 30 mΩ max
Cycles: 1500 (maximum number of cycles tested)
Packaging: Packaged and shipped in Bulk Packaging Trays; Trays suitable for automation are available upon request.
RoHS Compliant: Yes
Lead-Free Solderable: USB-SM=Yes USB-TH= Yes (Wave Solder only) USBR=Yes (Wave Solder only)

TYPE	B	S	PLATING	COLOR	TERMINATION	OTHER OPTION

TYPE
- **USB** = Standard Connector
- **USBR** = Increased Retention Connector (Complies with Class 1, DIV II minimum withdrawal requirement of 15N.)

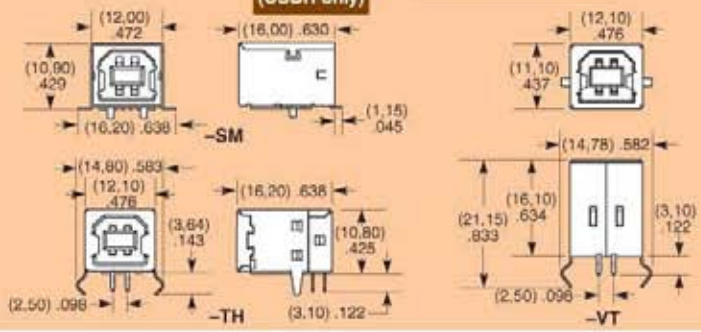
PLATING
- **–F** = Gold Flash on Mating Area, Tin on Tails
- **–S** = 30µ" (0,76 µm) Gold on Mating Area, Tin on Tails

COLOR
- **–B** = Black (USB only)
- **–W** = White (USB only)
- **–O** = Orange (USBR only)

TERMINATION
- **–TH** = Through-hole
- **–SM** = Surface Mount (USB Series only)
- **–VT** = Vertical Top Entry (USBR Series only)

OTHER OPTION
- **–TR** = Tape and Reel Packaging (–SM only)

MATING / UNMATING FORCE (100 CYCLES)		
SERIES	MATING	UNMATING
USB	5.3 (23,59N)	6.1 (27,15N)
USBR	11.8 (52,51N)	11.5 (51,18N)



SPECIFICATIONS

For complete specifications see www.samtec.com?USBC

Insulator Material: Glass Filled Thermoplastic
Contact Material: Copper Alloy
Shell Material: Cold Rolled Steel ((0,30mm) .012" thickness)
Plating: Gold on Contacts, Nickel on Shell, Tin on Tails
Operating Temp Range: 0°C to +40°C
Current Rating: 1.0A per contact
Voltage Rating: 30 VAC (R.M.S.)
Contact Resistance: 30 mΩ max
Minimum Cycles: 5000
RoHS Compliant: Yes

USBC	END NO. 1	END NO. 2	B	B	PLATING	WIRE LENGTH

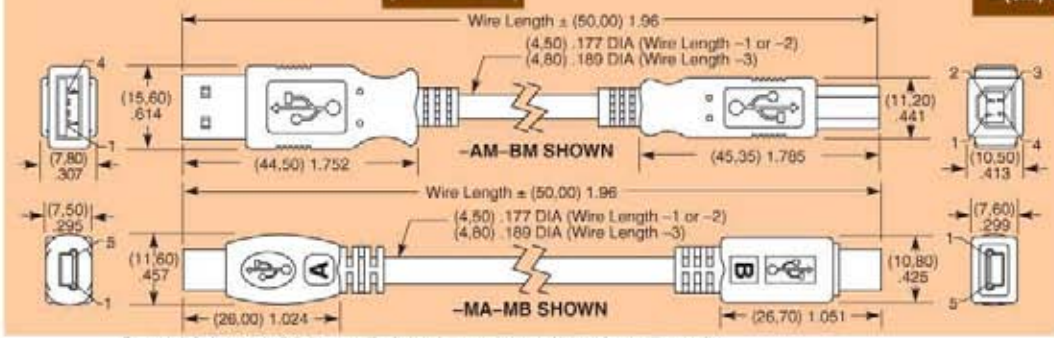
Mates with: MUSB, USB, USBR

END NO. 1
- **–MA** = USB Mini A Type Plug
- **–AM** = USB-A Type Plug

END NO. 2
- **–MB** = USB Mini B Type Plug
- **–BM** = USB-B Type Plug (N/A with –MA)

PLATING
- **–S** = 30µ" (0,76µm) Gold on contact area

WIRE LENGTH
- **–1** = (1m) 39.37"
- **–2** = (2m) 78.74"
- **–3** = (3m) 118.11"



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MUSB-05-S-AB-SM-A

MUSBS-05-S-B-TH-TR

MUSB, MUSBS, MUSBR SERIES

STANDARD & RUGGED MINI USB INTERFACES

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MUSB or www.samtec.com?MUSBR

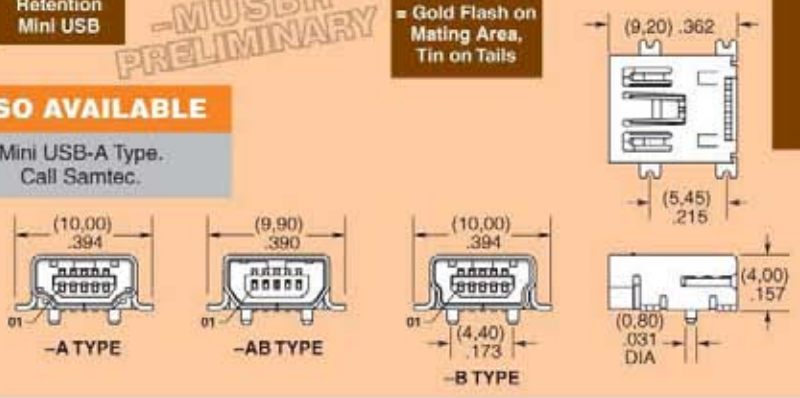
Insulator Material: High Temperature Thermoplastic
Contact Material: Phosphor Bronze
Shell Material: Brass
Plating: Gold on Mating Area, Nickel on Shell, Tin on Tails
Operating Temp Range: -50°C to +85°C
Current Rating: 1A per contact
Voltage Rating: 30 VRMS
Contact Resistance: 50 mΩ max
Minimum Cycles: 1500
Packaging: Packaged and shipped in Bulk Packaging Trays; Trays suitable for automation are available upon request.
RoHS Compliant: Yes
Lead-Free Solderable: Yes

TYPE	NO. OF CONTACTS	PLATING	COLOR	TYPE	SM	A
MUSB = Mini USB **MUSBR** = High Retention Mini USB	–05	–S = 30µ" (0,76µm) Gold on Mating Area, Tin on Tails –F = Gold Flash on Mating Area, Tin on Tails	= Leave blank for MUSB –O = Orange	–B = B Type (MUSB & MUSBR) –AB = AB Type (MUSB only) –A = A Type (MUSBR only)		

–MUSBR PRELIMINARY

ALSO AVAILABLE

Mini USB-A Type. Call Samtec.

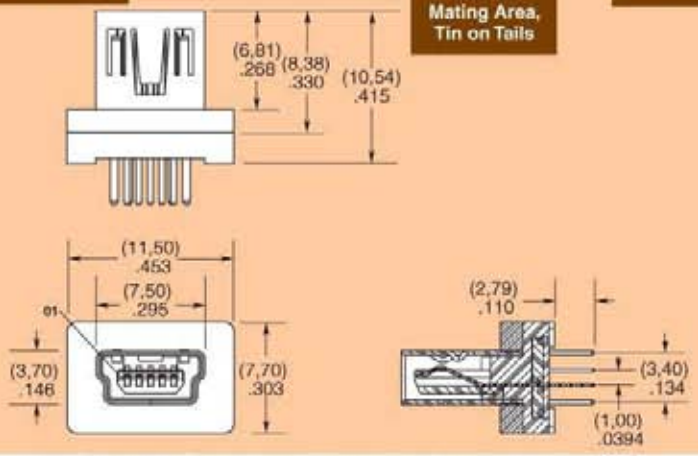


SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MUSBS

Insulator Material: Black High Temperature Thermoplastic
Contact Material: Phosphor Bronze
Shell Material: Phosphor Bronze
Plating: Gold on Mating Area, Nickel on Shell, Tin on Tails
Operating Temp Range: -50°C to +85°C
Current Rating: 2A per contact
Voltage Rating: 30 VRMS
Contact Resistance: 50 mΩ max
Minimum Cycles: 5000
RoHS Compliant: Yes
Lead-Free Solderable: Yes

MUSBS	NO. OF CONTACTS	PLATING	TYPE	TH	TR
MUSBS = Sealed Mini USB	–05	–S = 30µ" (0,76µm) Gold on Mating Area, Tin on Tails	–B = B Type		–TR = Tape & Reel Packaging



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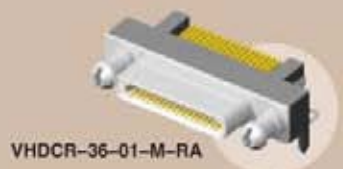


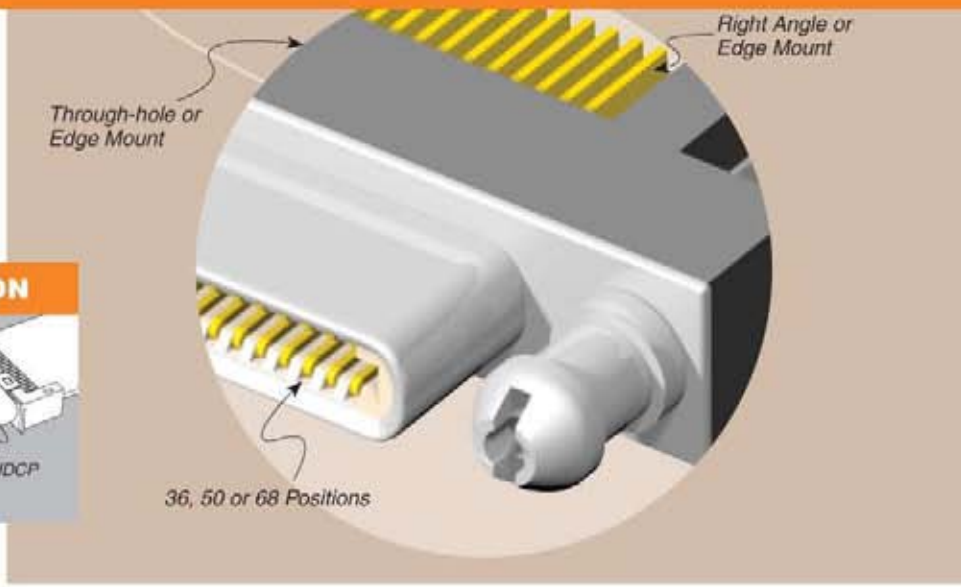
VHDCR–36–01–M–RA

VHDCP–68–01–M–EM

(0,80mm) .0315"

VHDCR, VHDCP SERIES

VHDCI CONNECTORS



SPECIFICATIONS

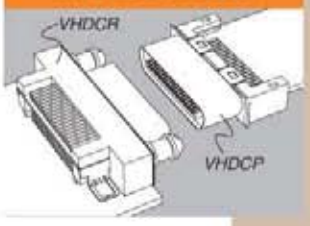
For complete specifications and recommended PCB layouts see www.samtec.com?VHDCR or www.samtec.com?VHDCP

RoHS Compliant:
Yes
Lead-Free Solderable:
No

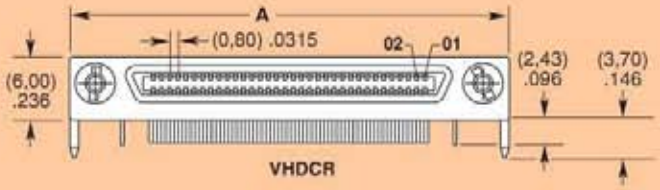
VHDCR Mates with:
VHDCP and Industry Standard VHDCI Cable Assemblies

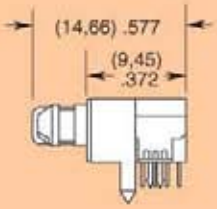
VHDCP Mates with:
VHDCR

APPLICATION

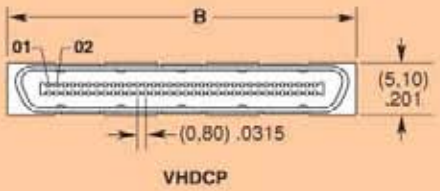


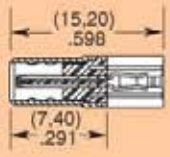
TYPE	NO. OF POSITIONS	01	PLATING	MOUNTING OPTION
VHDCR = Right Angle VHDCP = Edge Mount	–36, –50, –68		–M = 15µ" (0,38µm) Gold	–RA = Right Angle (Required for VHDCR) –EM = Edge Mount (Required for VHDCP)





NO. OF POSITIONS	A VHDCR	B VHDCP
36	(29,90) 1.177	(21,80) .858
50	(35,50) 1.400	(27,40) 1.079
68	(42,70) 1.681	(34,60) 1.362





Note:
This Series is non-standard, non-returnable.

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LIFEJACK®

MODS-LJ, MODM-LJ SERIES

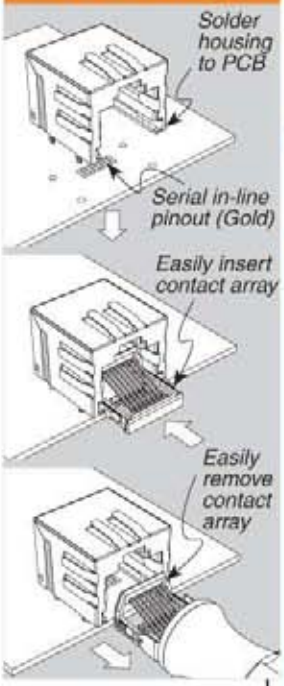
FIELD REPLACEABLE MOD JACKS

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?MODS-LJ or www.samtec.com?MODM-LJ

Insulator Material: Black LCP
Contact Material: BeCu
Shield Material: Brass
Operating Temp Range: -55°C to +90°C
Current Rating: 1.5 A per contact
Voltage Rating: 120 VAC max
Contact Resistance: 20 mΩ max
Minimum Cycles: 500 per contact array (LJRS)
System Applications: CAT3, CAT5, CAT5e
RoHS Compliant: Yes
Lead-Free Solderable: Yes
Packaging: Packaged and shipped in Bulk Packaging Trays; Trays suitable for automation are available upon request.

APPLICATIONS



MODS – LJ – 8P8C – PLATING – NO. OF PORTS – S3 – LED 1 – LED 2 – OPTION

PLATING
–H
= 30µ" (0,76µm) Gold on contact assembly, Tin on shield
(See LJRS Series for replacement contact assemblies)

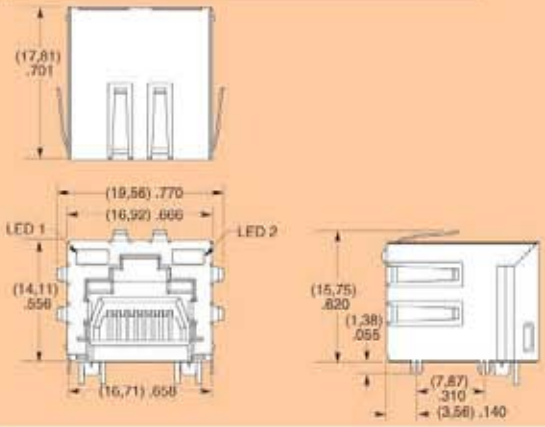
NO. OF PORTS
–01
= One Port

S3

LED 1 / LED 2
(Leave Blank for no LED)
(Callouts required for both LED options)
*Voltage Forward/Reverse

–G = Green	**–3*** =Green/Red
–Y = Yellow	**–4*** =Yellow/Red
–1* = Green/Orange	**–5*** =Green/Yellow
–2* =Yellow/Orange	**–6*** = Yellow/Green

OPTION
(Leave Blank for no Alignment Pin)
–A = Alignment Pin



Signal Contact Array Shown Inserted.
(Customer assembly required after soldering shield with insulator to PCB)
Housing and contact array shipped separately.

MODM – LJ – NO. OF PORTS – 8P8C – PLATING – S3 – LED 1 – LED 2 – OPTION

NO. OF PORTS
–02 = Two Ports
–04 = Four Ports

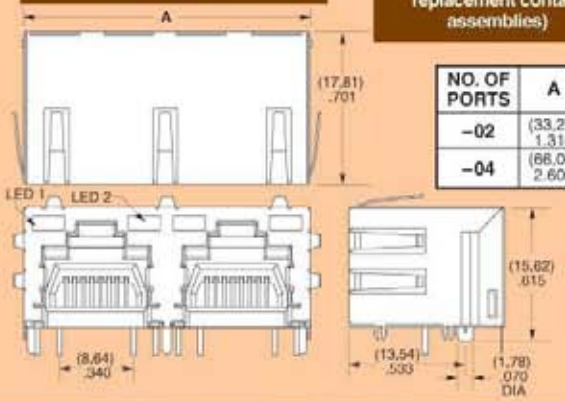
PLATING
–H
= 30µ" (0,76µm) Gold on contact assembly, Nickel on shield
(See LJRS Series for replacement contact assemblies)

S3

LED 1 / LED 2
(Leave Blank for no LED)
(Callouts required for both LED options)
*Voltage Forward/Reverse

–G = Green	**–3*** =Green/Red
–Y = Yellow	**–4*** =Yellow/Red
–1* = Green/Orange	**–5*** =Green/Yellow
–2* =Yellow/Orange	**–6*** = Yellow/Green

OPTION
(Leave Blank for no Alignment Pin)
–A = Alignment Pin



NO. OF PORTS	A
–02	(33,27) 1.310
–04	(66,04) 2.600

Signal Contact Array Shown Inserted.
(Customer assembly required after soldering shield with insulator to PCB)
Housing and contact array shipped separately.

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LIFEJACK®

LJRS–8P8C–H–01

CAT–EX–LJRS–01

LJRS, CAT-EX SERIES

REPLACEMENT CONTACTS & TOOLS

FEATURES

- Single and multi-port field replaceable Mod Jacks (See MODS-LJ and MODM-LJ Series)
- End-user replaceable contact array for 100,000 or more cycles
- Replace contacts in high cycle applications
- Replace damaged contacts
- Replace contacts without desoldering connector or opening box
- Single row of contacts for true serial pinout
- Compression contacts interface with PCB
- LEDs available

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?LJRS

Insulator Material:
Black LCP
Contact Material:
BeCu
Plating:
Gold on Contacts
Operating Temp Range:
-25°C to +90°C
Current Rating:
1.5 A per contact
Voltage Rating:
120 VAC max
Contact Resistance:
20 mΩ max
Minimum Cycles:
500
System Applications:
CAT3
RoHS Compliant:
Yes

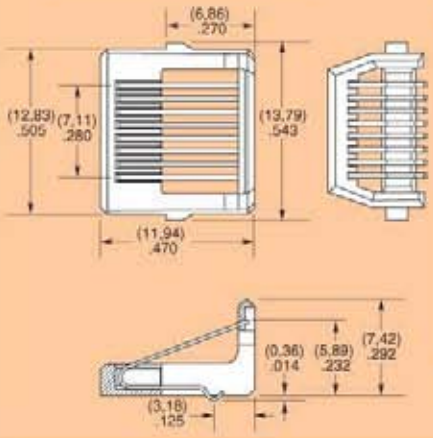
LJRS - 8P8C - PLATING - 01 | CAT - EX - LJRS - 01

LJRS
= Replacement Contact Array for MODS-LJ and MODM-LJ Series

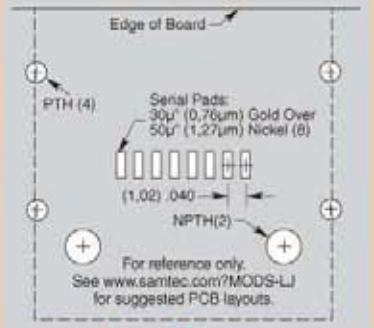
–H
= 30µ" (0,76µm) Gold

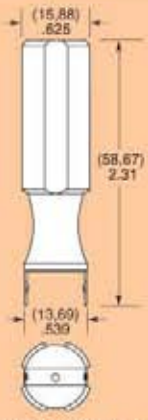
–EX
= Extractor Tool

–LJRS
= LifeJack® Replaceable Sled



APPLICATION





For complete specifications see www.samtec.com?CAT-EX

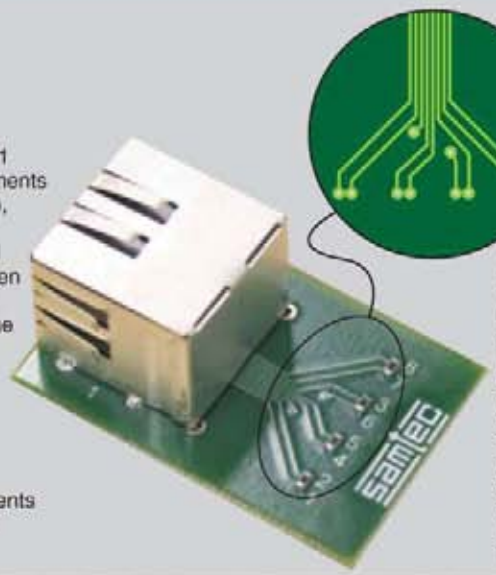
LIFEJACK® CAT 5e & CAT 5 APPLICATIONS

CAT 5e

LifeJack® met or exceeded TIA/EIA-568-B.2-2001 Category 5e requirements for Insertion Loss (IL), Near-End Crosstalk (NEXT), and Far-End Crosstalk (FEXT) when the proper capacitive compensation scheme was implemented.

CAT5

LifeJack® also met TIA/EIA-568-A Category 5 requirements for Return Loss (RL).



Crosstalk Compensation Scheme

The fundamental idea behind crosstalk compensation is to introduce a capacitive coupling effect between the differential pairs to enhance the crosstalk rejection performance. The technique used is controlled routing and spacing of the PCB traces to create the capacitive coupling effect.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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INDUSTRY STANDARDS

INDUSTRY STANDARD	BANDWIDTH	COMPLIANT TO INDUSTRY STANDARD BANDWIDTH	CERTIFIED TO INDUSTRY STANDARD STANDARD	SERIES COMPLIANT TO INDUSTRY STANDARD BANDWIDTH	PART NUMBERS CERTIFIED TO THE INDUSTRY STANDARD
ARM HSSTP	JTAG Trace, Run Control & Resource Management	Y	Y		ASP-130365-01 ASP-130367-01 • ASP-133811-01
CAT3	8 MHz / 16 Mbps	Y	N	MODS, MODM, MODS-LJ	
CAT5	50 MHz / 100 Mbps	N	N	MODS-LJ	
CAT5e	500 MHz / 1000 Mbps	N	N	MODS-LJ	
COMIT™: C.O.M. Interconnect Technology	Computer on module, Various channels and links. Contact: Standards@samtec.com	Y	Y	SEAM / SEAF, DPAM/DPAF, TMM/SMM	ASP-140868-01 ASP-140867-01 • ASP-142677-02 ASP-140308-03 • ASP-144136-01
EBX™	33 MHz / 66 Mbps (PC / 104-Plus™) 8 MHz / 16 Mbps (PC / 104™)	Y	Y	ESQT, PTHF, ESQ, TSW, TSS, TSM, ZW, DW, SSW, SSM, HLE, SSQ, ESW	ATS-30-Q ESQ-132-14-G-D • ESQ-132-12-G-D ESQ-120-14-G-D • SO-1524-03-01-02-L SO-1524-03-01-02-L • SO-1524-03-01-02-L ESQT-130-02-G-Q-368 • ESQT-130-03-G-Q-368 PTHF-130-03-M-Q-368 • PTHF-130-02-G-Q-368
EPIC	33 MHz / 66 Mbps (PC / 104-Plus™) 8 MHz / 16 Mbps (PC / 104™)	Y	Y	ESQT, PTHF, ESQ, TSW, TSS, TSM, ZW, DW, SSW, SSM, HLE, SSQ, ESW	ATS-30-Q ESQT-130-02-G-Q-368 • ESQT-130-03-G-Q-368 SO-1524-03-01-02-L • PTHF-130-02-G-Q-368 PTHF-130-03-M-Q-368 • SO-1524-03-01-02-L
EPIC EXPRESS	1 bank = 1 GHz / 2 Gbps 3 bank = 3 GHz / 6 Gbps	Y	Y	QTE/QSE, BTE/BSE, SEAM/SEAF, HSEC8/RU8, ERM8/ERF8, QRM8/QRF8	QTE-014-10-L-D-DP-A QSE-014-01-L-D-DP-A
FIBRE CHANNEL	133 Mbps - 4.25 Gbps	Y	N	EQDP, EEDP, 6QDPS, QMF/QFS, QMSS/QFSS, SEAM/SEAF, HSEC8/RU8	
HDMI™	825 MHz / 1650 Mbps @ -8dB 2.47 GHz / 4.95 Gbps @ -21dB 4.12 GHz / 8.25 Gbps @ -30dB	Y	Y	HDMI, HPSTP, HPLSP	HDMI-19-01/02-S-SM • HDMI-19-01-F-SM HDMI-19-01-F-SM-PF • HDMI-19-01-S-SM-PF HDMI-19-02-F-SM • HDMI-19-02-F-SM-PF HDMI-19-02-S-SM • HDMI-19-02-S-SM-PF HDMI-19-01-S-SM • HDMI-19-01-X-TH-PF-L
Power.org HSSTP (POWER PC, ROCKET I/O) High Speed Serial Trace Port	JTAG Trace, Run Control & Resource Management	Y	Y	QMS/QFS, QTE/QSE, EQCD	QSE-040-01-L-D-A-K EQCD-040-06.00-TTL-TBR-2-B
HYPERTRANSPORT™	800 MHz / 1600 Mbps	Y	N	SEAM/SEAF, QTE/QSE, QTS/QSS, HSEC8/RU8, QTH/QSH, BTH/BSH	
IDE/ATA	133 Mbps	Y	Y	SCID	
INFINIBAND	500 Mbps to 6 Gbps per link. Most common speed is 2.5 Gbps.	Y	N	DPAM/DPAF, SEAM/SEAF, QMS/QFS, QMSS/QFSS, QRM8/QRF8	
IP67	N/A (Environmental Standard)	N/A	Y	N/A	SCP1/SCR1 • SCP2/SCR2 SCPU/SCRU • RCT/RPCT/RPBT SCP3/SCR3 • SCPE/SCRE/SCRES
IP68	N/A (Environmental Standard)	N/A	Y	N/A	SCP1/SCR1 • SCP2/SCR2 SCPU/SCRU • RCT/RPCT/RPBT SCP3/SCR3 • SCPE/SCRE/SCRES
JTAG	10 MHz - 12 MHz	Y	Y	TLW, DW, EW, TMM, CLT, ESQT, TST, ZSS, EJH, IDSD, IDSS, SSW, SSQ, ESW, ESQ, SMM, HLE (Several More)	MTLW • TLW • TSSH • HTSS • HTST TST • ZSS • ZST • EJH • DSD • IDSS FHSC • HHSC • THSC • TSW • TSM HMTSW • MTSW
MiniBlade™	SATA, USB 3.0, SD, MMC	Y	Y	SBS	SBS-120-01-S-DV-A-ML SBS-120-01-S-DH-WT-ML
NEXUS 5001™	JTAG Trace, Run Control & Resource Management	Y	Y	SEAM/SEAF, ERM8/ERF8, BTE/BSE, HSEC8, QRM8/QRF8	ASP-130368-01 • ASP-135029-01 ASP-137969-01 • ASP-137973-01 ASP-148421-01 • ASP-148422-01 ASP-148424-01 • ASP-149700-01

Due to technical progress, all designs, specifications and components are subject to change without notice.

INDUSTRY STANDARD	BANDWIDTH	COMPLIANT TO INDUSTRY STANDARD BANDWIDTH	CERTIFIED TO INDUSTRY STANDARD STANDARD	SERIES COMPLIANT TO INDUSTRY STANDARD BANDWIDTH	PART NUMBERS CERTIFIED TO THE INDUSTRY STANDARD
PC/104™	8 MHz / 16 Mbps	Y	Y	ESQ, ESQT, PTHF, TLW, TST, ZSS, EJH, IDSD, IDSS, DW, EW, SSW, SSQ, TMM, CLT, ESW, SMM, HLE	ESQ-132-14-G-D ESQ-132-12-G-D ESQ-120-14-G-D
PC/104-PLUS™	33 MHz / 66 Mbps	Y	Y	ESQ, ESQT, PTHF, TLW, TST, ZSS, EJH, IDSD, IDSS, DW, EW, SSW, SSQ, TMM, CLT, ESW, SMM, HLE	SO-1524-03-01-02-L SO-1524-03-01-02-L • ATS-30-D ESQT-130-02-G-Q-368 • ESQT-130-03-G-Q-368 PTHF-130-02-G-Q-368 • PTHF-130-03-M-Q-368
PCI/104-Express™	1.25 GHz / 2.5 Gbps	Y	Y	QMS/QFS, QRM8/QRF8, SEAM/SEAF, ERM8/ERF8, QTH/QSH, BTH/BSH	ASP-129637-03 • ASP-129646-03 SO-1524-03-01-02-L • SO-2215-03-01-02-L
PCI EXPRESS®	250 MHz / 500 Mbps - 4 GHz / 8 Gbps	Y	Y	QTE/QSE-DP, QTH/QSH-DP, HSEC8/RU8	PCIE-XX-02-XX-XX • DPAM/DPAF PCIEC • PCRF • QFS/QMS • SEAM/SEAF (Many Solutions Exist)
PCI EXPRESS® 2.0	5 Gbps	Y	Y	ERM8/ERF8, PCIE, PCIEC, QTS/QSS (16mm), QTE-DP/QSE-DP (16mm), QTH-DP/QSH-DP (16mm), RU8-DP (30mm), SEAM/SEAF (7mm)	PCIE
PCIe/104™	33 MHz / 66 Mbps	Y	Y	PTHF, ESQT	PTHF-130-02-GF-Q-368 ESQT-130-02-GF-Q-368
PCMCIA	160 Mbps	Y	N	PCMS/PCMT, CFT/CFS	PCMS/PCMT • CFT/CFS
PICO-I/O	Up to 2.5 GHz / 5 Gbps	Y	Y	QMS/QFS, QRM8/QRF8, ERM8/ERF8, SEAM/SEAF	ASP-142781-01 ASP-129637-01 • ASP-129646-01 SO-1524-03-01-02-L • SO-2215-03-01-02-L
Pico-ITXe™	Up to 2.5 GHz / 5 Gbps	Y	Y	QMS/QFS, QRM8/QRF8, ERM8/ERF8, SEAM/SEAF, QTH/QSH, BTH/BSH, LSS	ASP-142781-01 ASP-129637-01 • ASP-129646-01 SO-1524-03-01-02-L • SO-2215-03-01-02-L
PISMO 1	2.15 GHz / 4.3 Gbps	Y	Y	QTH/QSH, BTH/BSH, QTS/QSS, QTE/QSE SS4/ST4, LSS	QTH-060-01-F-D-A QSH-060-01-F-D-A
PISMO 2	9.4 GHz / 18.8 Gbps	Y	Y	SEAM/SEAF, ERM8/ERF8, QRM8/QRF8	SEAM-40-05.0-SM-8-2-A-K SEAF-40-02.0-SM-8-2-A-K
POWER.org™	JTAG Trace, Run Control & Resource Management	Y	Y	ERM8/ERF8, BTE/BSE, HSEC8/RU8, QRM8/QRF8, SEAM/SEAF, LSS, SS4/ST4	ASP-137969-01 • ASP-137973-01 ASP-130368-01 • ASP-135029-01
SATA (Gen 1, Gen 2, Gen 3)	Serial ATA begin at 150 Mbps SATA 2 300 Mbps (750 MHz - 3.0 GHz)	Y	N	RU8, DPAM/DPAF, SEAM/SEAF, QMS-DP/QFS-DP, QTE-DP/QSE-DP, QTH-DP/QSH-DP, LSS-DP	
SFP, SFP+	4.25 Gbps	Y	Y	MECT, SFPK	SFPC-XX • SFPK-XX-TR MECT-110-01-M-D-RA1-TR
StackableUSB™	Up to 240 MHz / 480Mbps	Y	Y	QMS/QFS, QRM8/QRF8, ERM8/ERF8, SEAM/SEAF, LSS, SS4/ST4	ASP-129637-01 ASP-129646-01 SO-1524-03-01-02-L
SUMIT-ISM™	Up to 2.5 GHz / 5 Gbps	Y	Y	QMS/QFS, QRM8/QRF8, ERM8/ERF8, SEAM/SEAF, LSS, SS4/ST4	ASP-142781-01 ASP-129637-01 • ASP-129646-01 SO-1524-03-01-02-L • SO-2215-03-01-02-L
SUMIT™	Up to 2.5 GHz / 5 Gbps	Y	Y	QMS/QFS, QRM8/QRF8, ERM8/ERF8, SEAM/SEAF, LSS, SS4/ST4	ASP-142781-01 ASP-129637-01 • ASP-129646-01 SO-1524-03-01-02-L • SO-2215-03-01-02-L
SYNPLICITY HAPS	300-500 MHz (800 Mbps)	Y	Y	QTE/QSE, QTS/QSS, QTH/QSH, BTH/BSH	ASP-132422-01 • ASP-132424-01 ASP-125521-01 • ASP-125516-03
USB 1.0-2.0	USB 1.0 - 6 MHz / 12 Mbps USB 2.0 - 240 MHz / 480 Mbps	Y	Y	USB/USBR, USBC, MUSB, SCPU/SCRU	USB/USBR • USBC MUSB • SCPU/SCRU
USB 3.0	5 Gbps (625 Mbps)	Y	Y		Estimated Release 2010
µTCA™	AMC.1 PCI Express (ratified) AMC.2 Gigabit Ethernet and XAUI (under review) AMC.3 Storage (ratified) AMC.4 Serial Rapid I/O (under development)	Y	Y	MTCA	MTCA-085-02-S-DV
VITA 42: XMC	1.56 GHz / 3.125 Gbps	Y	Y	SEAM/SEAF, QTE/QSE, QMS/QFS, QRM8/QRF8, LSS, SS4/ST4	ASP-105884-01 ASP-105885-01
VITA 57: FMC	5 GHz / 10 Gbps	Y	Y	SEAM/SEAF, QTE/QSE, EMR8/ERF8, QRM8/QRF8, LSS, HSEC8/RU8	ASP-134485-01 • ASP-134486-01 ASP-127796-01 • ASP-134603-01 ASP-134487-01 • ASP-134488-01 ASP-127797-01 • ASP-134606-01 ASP-134601-01 • ASP-134604-01 ASP-134605-01 • ASP-134602-01
XAUI	1.56 GHz / 3.125 Gbps	Y	N	SEAM/SEAF, DPAM/DPAF, QTE/QSE-DP, QTH/QSH-DP, HSEC8/RU8	
XFP, XENPAK	2.5 GHz / 5 Gbps	Y	N	MECT, SFPK	

*For more information on any of the above Industry Standards / Platforms, please contact Standards@samtec.com

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SPECIFICATIONS & TESTING

SPECIFICATIONS AND STANDARD TEST PROCEDURES

Samtec products are subject to the following general specifications and standard test procedures.

Quality Assurance

Quality Program Certifications	TS 16949 and/or ISO-9001
UL File Number	E111594
CSA File Number	090871_0_000
Sampling procedures	ANSI/ASQ Z1.4
Quality assurance terms and definitions	ISO 9000
Calibration system requirements	Per TS 16949

Insulator

Specifications	
Molding plastics. Thermoplastic polyesters	MIL-M-24519 Rev E
UL Temperature index	UL 746B
Applied tests	
Dielectric Breakdown Voltage	ASTM D 149-97a
AC Loss Characteristics	ASTM D 150-98
Impact Resistance of Plastics	ASTM D 256-06ae1
DC Resistance	ASTM D 257-07
High-Voltage, Low-Current Arc Resistance	ASTM D 495-99
Water Absorption of Plastics	ASTM D 570-98
Test for Tensile Properties of Plastics	ASTM D 638-08
Deflection Temperature of Plastics	ASTM D 648-07
Compressive Properties of Plastics	ASTM D 695-08
Coefficient of Linear Thermal Expansion	ASTM D 696-08
Shear Strength of Plastics	ASTM D 732-02
Rockwell Hardness of Plastics	ASTM D 785-08
Flexural Properties of Plastics	ASTM D 790-07e1
Specific Gravity and Density of Plastics	ASTM D 792-08

Plating

Specifications	
Gold	ASTM-B488
Tin	ASTM-B545
Under plating specifications	
Nickel	QQ-N-290
Copper	AMS 2418
Palladium Nickel	MIL-P-45209 Class 1.2
Applied tests	
Measuring metal and oxide coating thickness	ASTM-B487-79
Coating thickness (Beta Backscatter principle)	ASTM-B567
Coating thickness (X-ray Fluorescence)	ASTM-A-754-79

Other Specifications

Insulation Resistance	5000MΩ min
Flammability Rating	UL 94V-0

Contact & Terminal

Specifications	
Brass	ASTM B16-85
Phosphor Bronze	ASTM B 139
Beryllium Copper	ASTM B 194
General specification for contacts	SAE-AS39029
General specification for sockets	MIL-DTL-83505

Assembly

Testing specifications	
Test methods for electrical connectors	EIA-364
Test methods for electronic/electrical components	EIA-364
Connections, electrical, solderless, wrapped	EIA-364
Environmental Test Methods	EIA-364
Sockets (lead, electronic components), general	EIA-364
Sockets, plug-in electronic components, general	EIA-364
Packaging specifications	
Connectors, preparation for delivery	MIL-DTL-55330C
Tape and Reel Packaging of Connectors	EIA-481-D
Tray Packaging of Connectors	EIA/ECA-960
Packaging Materials for ESD Sensitive Items	ANSI/ESD S541
Package Testing Procedures	ISTA-3A

RoHS Terms & Compliance

RoHS Compliant Pb LEAD

The majority of Samtec's products are compliant with the EU WEEE and RoHS (2002/95/EC) Directives as they are currently written. All WEEE and RoHS compliant products are available in production quantities.

RoHS Compliant	This product is compliant with the RoHS Directive (2002/95/EC) as it is currently written.
Lead-Free Wave Solderable	This product is compatible with wave solder pot temperatures to 260°C with maximum exposure of the termination pins to the solder wave for 6 seconds.
Lead-Free Reflow Solderable	This product can with stand the elevated temperatures of 260°C+ and the longer dwell times required during lead-free reflow processing.

Samtec has offered both lead-bearing and lead-free products for many years and will continue to support customers requiring products not compliant with the EU Directives, such as those specified for military, aerospace and specialty applications.

For more information on Samtec's Roadmap for Lead-Free Processing see: **www.samtec.com/Lead-Free** or email: **lead-free@samtec.com**

Automotive Certification (ACD Series)

Samtec offers design and manufacture of electronic connectors, marketed as "ACD Series" (Automotive Certified Designs) for printed circuit boards. ACD Series status must be established for a product to be considered TS 16949 Certified for automotive applications. Contact **autosalesgroup@samtec.com** for qualifying products and alternative automotive application solutions.

Note: Products with specifications other than those listed above are noted on the individual product pages.

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INDEX BY BRAND NAME

Call Samtec or see www.samtec.com?xxxx for specifications
(Substitute series callout for xxxx)

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AcciMate™
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Bull's Eye™
CCH Bull's Eye™ High Performance Test Point 318
RF26M RF Microwave Coax Assembly, Mates with CCH 318

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