

Product Selection Guide

FULL SIZE CARD CONNECTORS

				
Series	CCM01	CCM01	CCM02	CCM04
Applications	Consumer	Professional	Professional	Consumer/Professional
PCI*		PCI ready	PCI/PCI ready	
EMV		•	•	
Insertion force	10N max	40N max	40N max	10N max
Overload	150N	250N	180N	40N
Card guide	•	•	•	
Sealed switch		•	•	•
Operating life	10,000 to 30,000 cycles	100,000 to 500,000 cycles**	500,000 cycles	>50,000 cycles
Contact plating	gold	inlay	inlay	gold
Number of contacts	8	8	8	6 or 8
Contact type	friction	friction	friction	friction/vandal proof
Page No.	7	10	12	19

SIM / SAM CARD CONNECTORS

			
Series	CCM03	CCM03	CCM04
Applications	Consumer/Professional	Consumer/Professional	Consumer/Professional
Cover	hinged / fixed	fixed	hinged / fixed
Operating life	10,000 to 50,000 cycles	10,000 to 50,000 cycles	30,000 cycles
Sealed switch	•	•	
Contact plating	inlay / gold	inlay	inlay / gold
Card end travel switch	with / without	with / without	without
Number of contacts	6 or 8	6	6 or 8
Page No.	28	40	43

* PCI

PCI ready: specific features are designed into the connector in order to ease the integration of security devices around and below the connector.

PCI: specific additional accessories are integrated on the connector in order to avoid access to the data contacts and to detect any connection attempt.

** 500,000 cycles available Q4 2011



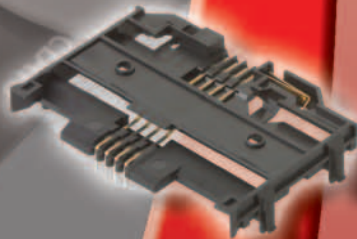
Specifications and dimensions subject to change

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C&K

Full Size Cards

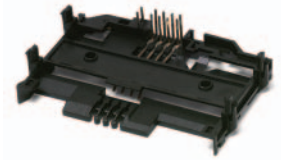


Features

- Card detection switch
- Compatible with lead free THT soldering
- Chamfered opening in the card entry slot improves the card guidance

Typical Applications

- Consumer
- Set-top box
- Pay TV



Mechanical

Number of Contacts	8
Mechanical life	See table
Card insertion force	See table
Card extraction force	1 N min / 10 N max
Contact force	0,2N / 0,50 N max

Packaging

Tray 30 parts / Cartons 300 parts

Soldering

Compatible with lead free THT soldering process

Contact Electrical Data

Insulation resistance	1,000 MΩ min
Resistance	100 mΩ max
Current rating	10 μA min / 1 A max
Dielectric strength	750 Vrms min

Switch Electrical Data

Card detection switch	Normally closed
Contact resistance	100 mΩ max
Dielectric strength	250 Vrms min
Current rating	1 mA min / 10 mA max
Maximum power	0,2 VA

Environmental Data

Operating temperature	-20°C to +70°C
Damp heat	IEC 512 test number 11c (10 days)
Salt mist	IEC 512 test number 11f (96 hours)
RoHS compliant	

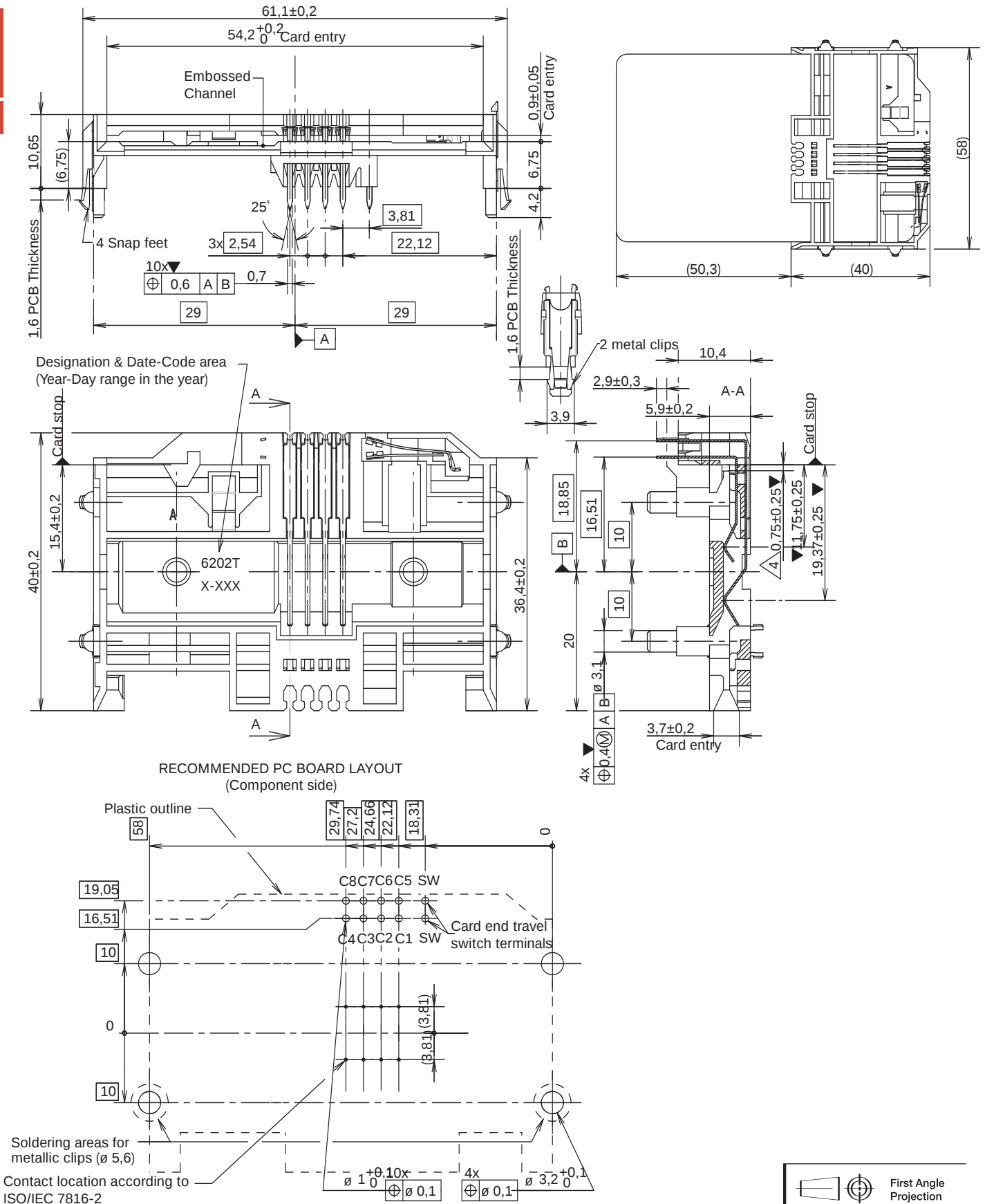
Designation	Termination	Contact Plating	Height (mm)	Operating Life	Operating Temperature	Card Insertion Force
CCM01-6202MLFT	THT	gold	6,75	10,000 cycles	-20°C/+70°C	10N
CCM01-6101LFT	THT	gold	3,9	30,000 cycles	-20°C/+70°C	10N



CCM01 Series

CCM01-6202M LFT

Full Size



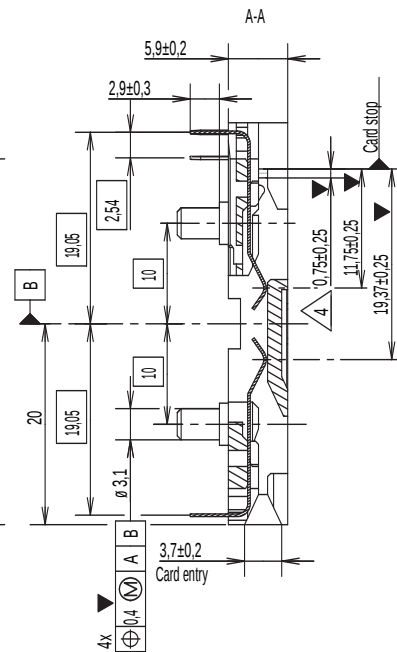
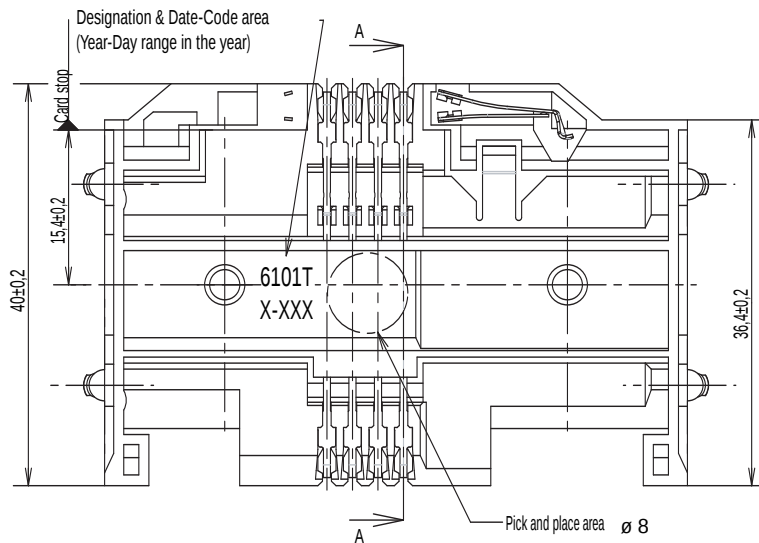
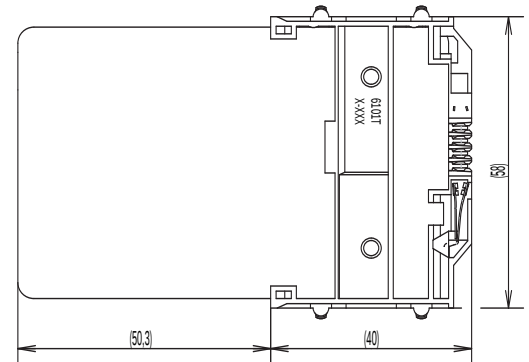
First Angle Projection

Dimensions are shown in mm
Specifications and dimensions subject to change

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Full Size

Technical drawing of a 16-pin edge connector. The drawing shows a side view of the connector with various dimensions and labels. Key dimensions include a total length of 61.1 ± 0.2, a card entry length of 54.2 with a tolerance of +0.2/0, and a 1.6 PCB thickness. Labels include 'Embossed Channel', '4 Snap feet', '25°', '3x', '3.81', '2.54', '22.12', '10x', '0.6', 'A', 'B', '0.7', '29', 'A', '3.9', '0.9 ± 0.05', and 'Card entry'.

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CCM01 Series

Features

- Operating life up to 500,000 cycles
- 40N card insertion force
- EMV
- PCI ready
- Card detection sealed switch

Typical Applications

- Transaction
- Identification
- POS



Mechanical

Number of Contacts	8
Mechanical life	Up to 500,000 cycles
Card insertion force	40N max.
Card extraction force	1 N min / 10 N max
Contact force	0,2N / 0,50 N max
Card detection switch	0,8 N max for actuation (end travel switch actuation force actuates when card is 0,9mm from card stop)
	1,8 N max for complete depression
Vibration Frequency	10 to 500 Hz. Acceleration 50m/s ²
	Duration 6 hours - amplitude 0,35mm
Max elect. discontinuity	1μs
Shock	Peak value 500 m/s ² – Duration 11 ms
	3 shocks in each direction of each axis

Packaging

Tray 30 parts / Cartons 300 parts
Reel 200 parts / Cartons 1,000 parts

Soldering

Compatible with lead free SMT reflow soldering process

Contact Electrical Data

Insulation resistance	1,000 MΩ min
Resistance	100 mΩ max
Current rating	10 μA min / 1 A max
Dielectric strength	750 Vrms min

Switch Electrical Data

Card detection switch	Normally open
Contact resistance	100 mΩ max
Dielectric strength	250 Vrms min
Current rating	1 mA min / 10 mA max
Maximum power	0.2 VA

Environmental Data

Operating temperature	-40°C to +85°C
Damp heat	IEC 512 test number 11c (10 days)
Salt mist	IEC 512 test number 11f (96 hours)
Card detection switch	Sealed against dust
RoHS compliant	

Designation	Termination	Operating Life	Card Insertion Force
CCM01-2027LFT	SMT	100,000 cycles	40N
CCM01-2327LFT	SMT	500,000 cycles *	40N

* CCM01-2327: 500,000 cycles available Q4 2011



Dimensions are shown in mm
Specifications and dimensions subject to change

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Full Size

CCM01-2027 LFT



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CCM02 Series



Features

- Operating life 500,000 cycles
- Insertion force 40N
- EMV
- PCI & PCI ready
- Card detection sealed switch

Typical Applications

- Transaction
- Identification
- POS

Mechanical

Number of Contacts	8
Mechanical life	500,000 cycles min
Card insertion force	10N to 40N
Card extraction force	1N min / 10N max
Contact force	0,2N / 0,50N max
Card detection switch	0,8 N max for actuation (end travel switch actuation force actuates when card is 0,9mm from card stop)
	1,8 N max for complete depression
Vibration Frequency	10 to 500 Hz. Acceleration 50m/s ² Duration 6 hours - amplitude 0,35mm
Max elect. discontinuity	1µs
Shock	Peak value 500 m/s ² – Duration 11 ms 3 shocks in each direction of each axis

Packaging

Tray 30 parts / Cartons 300 parts
Reel 120 parts

Soldering

Compatible with lead free reflow soldering process
For version with security cover, please contact Customer Service for soldering recommendations.

Contact Electrical Data

Insulation resistance	1,000 MΩ min
Resistance	100 mΩ max
Current rating	10 µA min / 1 A max
Dielectric strength	750 Vrms min

Switch Electrical Data

Card detection switch	Normally open
Contact resistance	100 mΩ max
Dielectric strength	250 Vrms min
Current rating	1 mA min / 10 mA max
Maximum power	0.2 VA

Environmental Data

Operating temperature	-40°C to +85°C
Damp heat	IEC 512 test number 11c (10 days)
Salt mist	IEC 512 test number 11f (96 hours)
Card detection switch	Sealed against dust
RoHS compliant	

PCI Features					Total Height (mm)	Dimension	PCB version
Designation	Termination	Contact Type	I/O Protect	Security Cover			
CCM02-2503LFT	THT	landing			6,25	38,5 X 55,6	4 clips
CCM02-2504LFT	SMT	landing			6,25	38,5 X 55,6	4 clips
CCM02-F503LFT	THT	friction			6,25	38,5 X 55,6	4 clips
CCM02-F504LFT	SMT	friction			6,25	38,5 X 55,6	4 clips
CCM02-F796LFT	SMT	friction			6,25	38,5 X 55,6	4 metal pegs
CCM02 F794LFT	SMT	friction	Yes		6,25	38,5 X 55,6	4 metal pegs
CCM02-F844LFT	SMT	friction	Yes	Yes	6,6	40,5 X 58	4 metal pegs



Dimensions are shown in mm
Specifications and dimensions subject to change

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PCI: I/O Protect

Definition

Special accessory in order to avoid and detect frontal access to data contact. It is electrically connected to the PCB through spring finger contacts.

Process

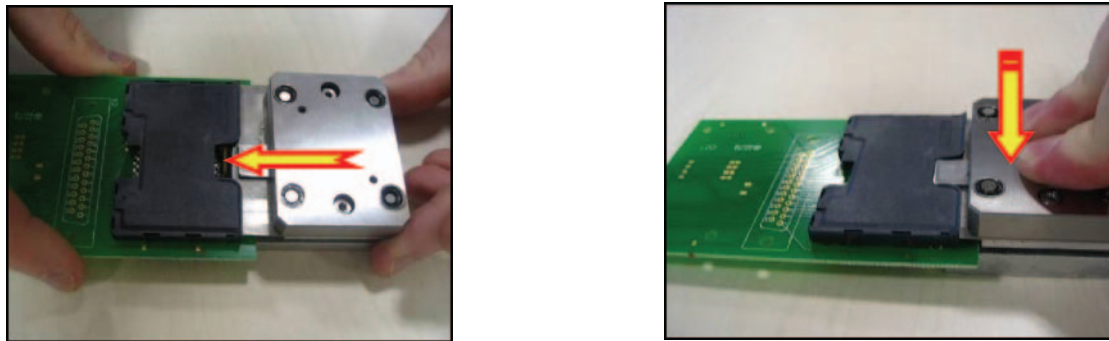
It must be in open position during the reflow soldering of the connector and has to be locked in closed position after soldering.



I/O Protect locking tool

C&K is proposing a manual tool to lock the I/O protect accessory after soldering.

Ordering code: C-CM02-E50



PCI: Security Cover



Definition

It is a multilayer cover placed over the connector to avoid and detect data contact access, especially from the top. It is connected to the PCB through 6 SMT terminals that are soldered at the same time as the other smart card terminals.

Process

Please contact your Sales Representative for advice and recommendations about soldering this version.

Full Size

CCM02-2503 LFT / CCM02-F503 LFT

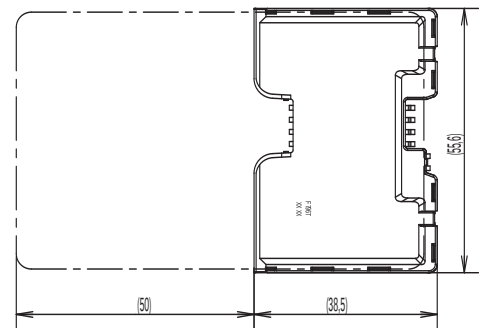
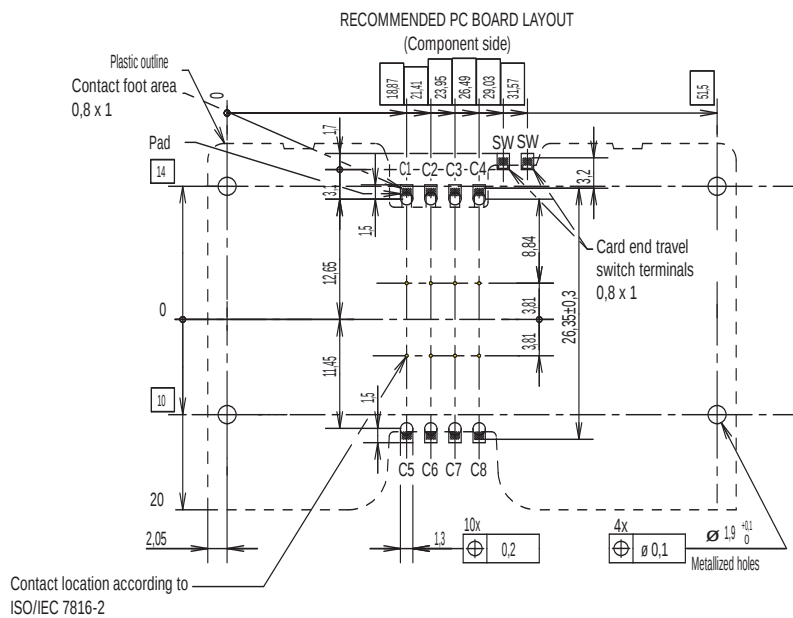


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CCM02-2504 LFT / CCM02-F504 LFT

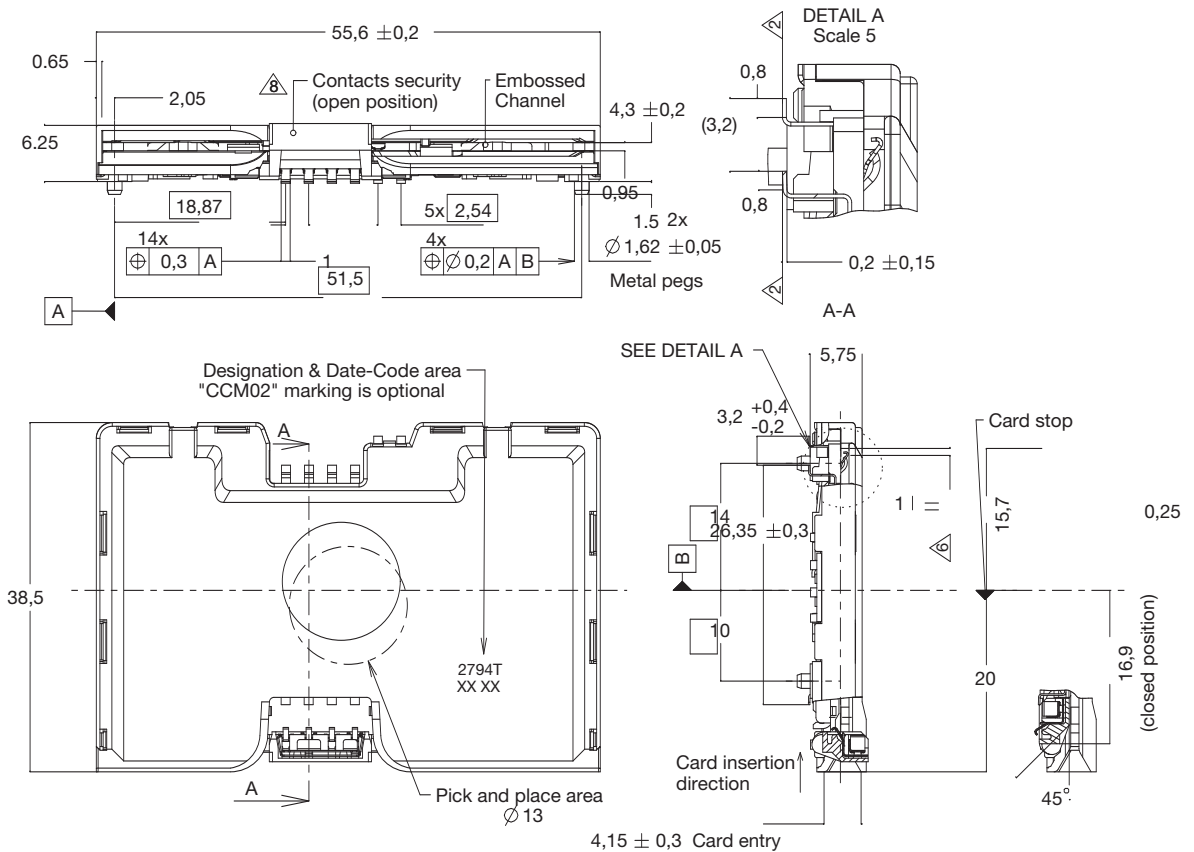
Scale 1

Full Size

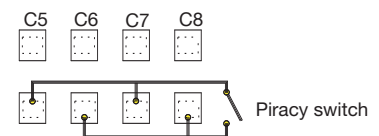
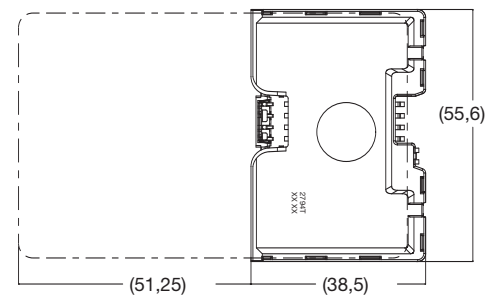
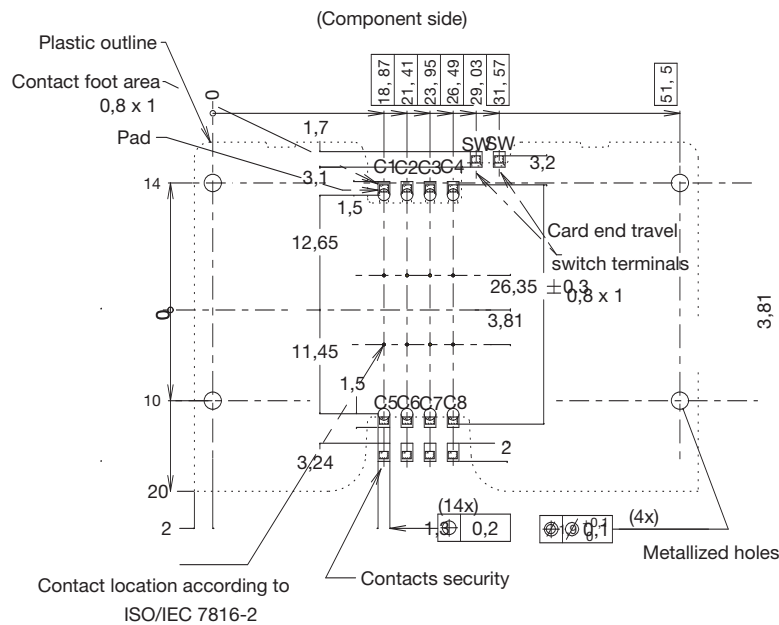
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Dimensions are shown in mm
Specifications and dimensions subject to change



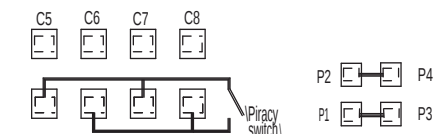


RECOMMENDED PC BOARD LAYOUT



Full Size

CCM02-F844a LFT / CCM02-F844b LFT



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Features

- ID1 full size card acceptance
- Card detection sealed switch
- Compatible with pick and place and lead free soldering

Typical Applications

- Transaction
- POS
- Identification



Mechanical

Number of contacts	6 or 8
Mechanical life	50,000 cycles
Card insertion force	10N max
Card extraction force	1N min / 10N max
Contact force	0,4N to 0,7N
Card detection switch	0,8 N max for actuation (end travel switch actuation force actuates when card is 0,9mm from card stop) 1,8 N max for complete depression
Vibration Frequency	10 to 500 Hz. Acceleration 50m/s ² Duration 6 hours - amplitude 0,35mm
Shock	Peak value 500 m/s ² – Duration 11 ms 3 shocks in each direction of each axis
Max elect. discontinuity	1μs

Packaging

See table below

Soldering Process

Compatible with lead free SMT reflow soldering process

Contact Electrical Data

Insulation resistance	1000 MΩ min
Contact resistance max	100 mΩ max
Switching current	10 μA min / 1 A max
Dielectric strength	750 Vrms min

Switch Electrical Data

Card detection switch	Normally open
Rc card detection switch	100 mΩ max
Dielectric strength	250 Vrms min
Switch current rating	1 mA min / 10 mA max
Maximum switch power	0.2 VA

Environmental Data

Operating temperature	-40°C to +85°C
Salt mist	IEC 512 test number 11f (96 hours)
Damp heat	IEC 512 test number 11c (10 days)
Card detection switch	Sealed against dust
RoHS compliant	

Designation	Housing Type	# of Contacts	Contact Force	Total Height (mm)	Total Dim. (mm)	Packaging
CCM04-5427LFT	standard	8	0,4N to 0,7N	2,65	18,75 X 25	reels of 1,000 pcs
CCM04-5436LFT	standard	8	0,4N to 0,7N	0,90	18,75 X 26,9	reels of 1,000 pcs
CCM04-5468LFT	stand-off	8	0,4N to 0,7N	3,5	18,75 X 24	reels of 1,000 pcs
CCM04-5454LFT	standard	8	0,4N to 0,7N	0,90	18,75 X 26,9	reels of 1,000 pcs
CCM04-5455LFT	standard	8	0,4N to 0,7N	0,90	18,75 X 26,9	reels of 1,000 pcs
CCM04-5452LFT	stand-off	6	0,4N to 0,7N	4,25	18,75 X 24	reels of 1,000 pcs
CCM04-5202LFT	standard	8	0,35N to 0,65N	2,32	16,1 X 26,5	reels of 1,000 pcs



Full Size

Technical drawing of a mechanical assembly, showing a side view, a top view, and a detail view (DETAIL A).

Side View Dimensions:

- Overall width: 15.15 ± 0.3
- Overall height: 2.65 ± 0.05
- Top card level recommended: 0.75 ± 0.05
- Card stop: 0.9 ± 0.25
- Other dimensions: 3.81 , 3.81 , 0.5 , 40° , 1.1 ± 0.15 , 11.15 , 0.85 , 16.6 , 9.5 ± 0.3 , 15.6 , 12.9 ± 0.31 , 0.7 , 0.3 , 7.5 , 1.75 , 7.65 , 0.7 , 0.3 , 0.75 ± 0.05 , 0.6 , 0.8 .

Top View Dimensions:

- Overall width: 15.6
- Overall height: 11.15
- Card stop: 0.9 ± 0.25
- Other dimensions: 1.9 ± 0.05 , 0.75 ± 0.15 , 2.54 , 1.27 , 1.1 ± 0.05 , 1.75 , 1.2 , 0.1 , 0.12 , 0.6 , 0.8 .

DETAIL A Scale 10:

- Overall width: 0.8
- Overall height: 0.75

Other Notes:

- Mated condition
- SEE DETAIL A
- Pick and place area $\varnothing 3,3$
- Card stop
- Top card level recommended

Technical drawing of a terminal block layout showing dimensions and component locations. The drawing includes a grid with dimensions in millimeters (mm).

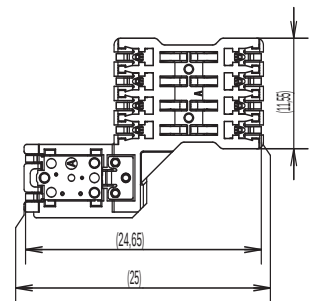
Dimensions:

- Vertical dimensions (left side): 2.54, 2.54, 2.54, 3, 4.
- Horizontal dimensions (top): 13, 13.2, 13, 9.2, 17.
- Horizontal dimensions (bottom): 3.81, 3.81, 2.79, 15.15, 9.5.

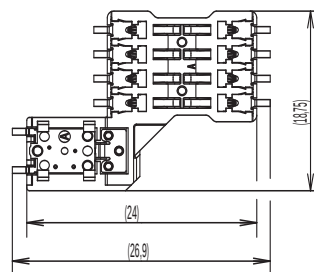
Components and Labels:

- Contacts: C5, C6, C7, C8, C1, C2, C3, C4.
- Switches: SW (two locations).
- Stand-off area: Indicated by a dashed line and label.
- Plastic outline: Indicated by a dashed line and label.
- Pad: Indicated by a label and arrow.
- Switch contact foot area: 0.85 x 0.7.
- Contact foot area: 0.8 x 0.7.

ISO/IEC 7816-2: Contact location according to ISO/IEC 7816-2.

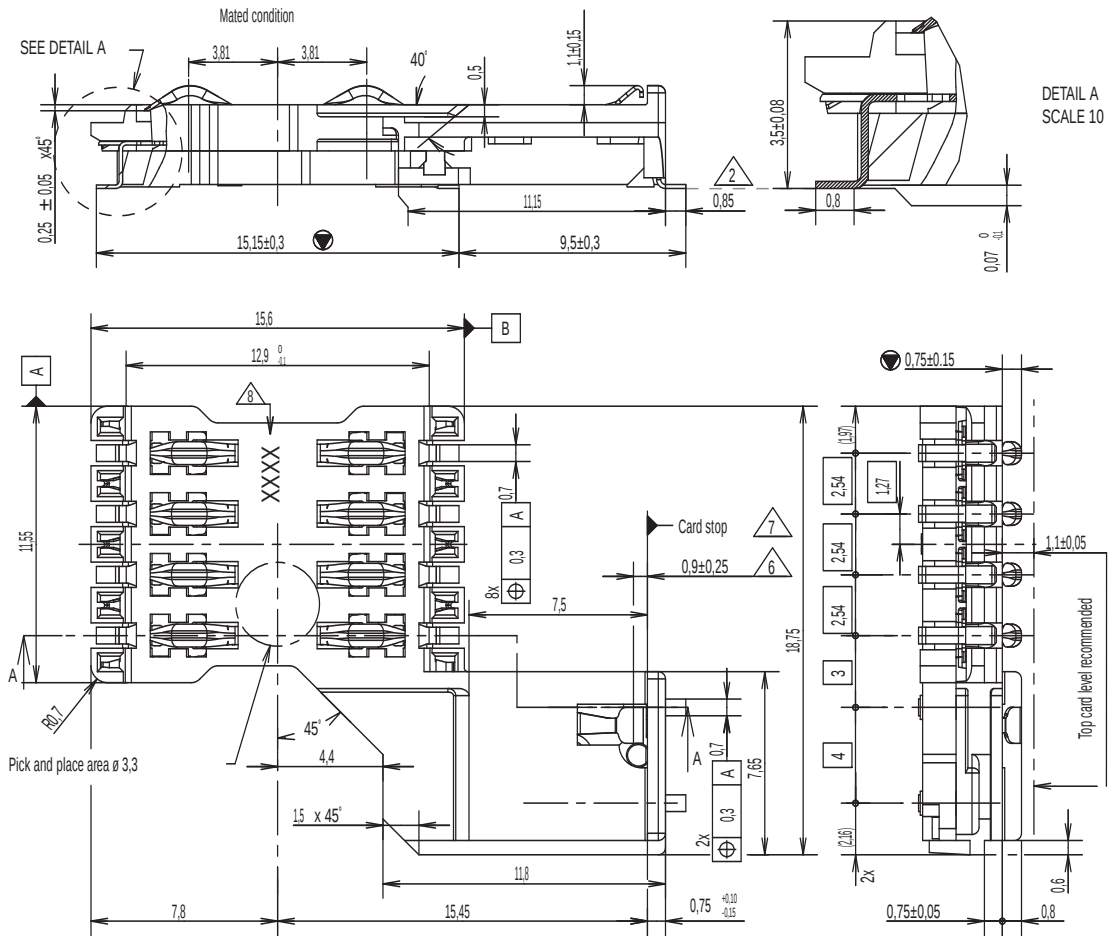


Full Size

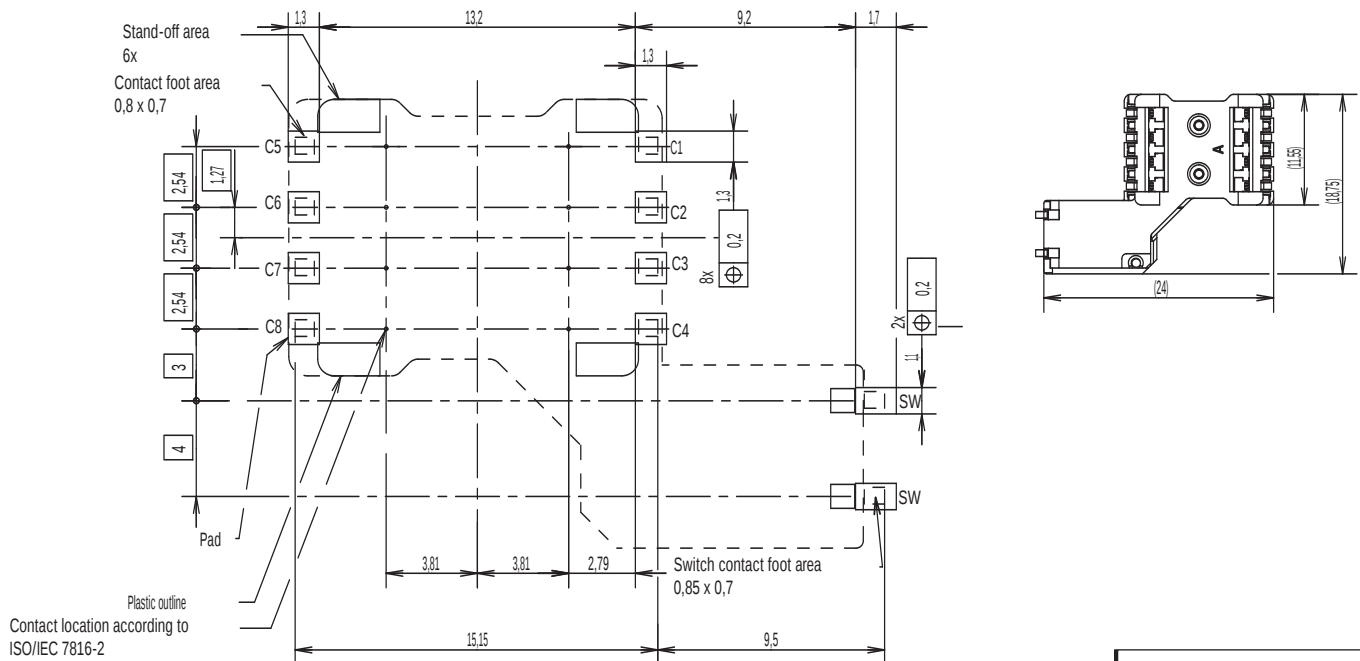


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Full Size



RECOMMENDED PC BOARD LAYOUT
(Component side)



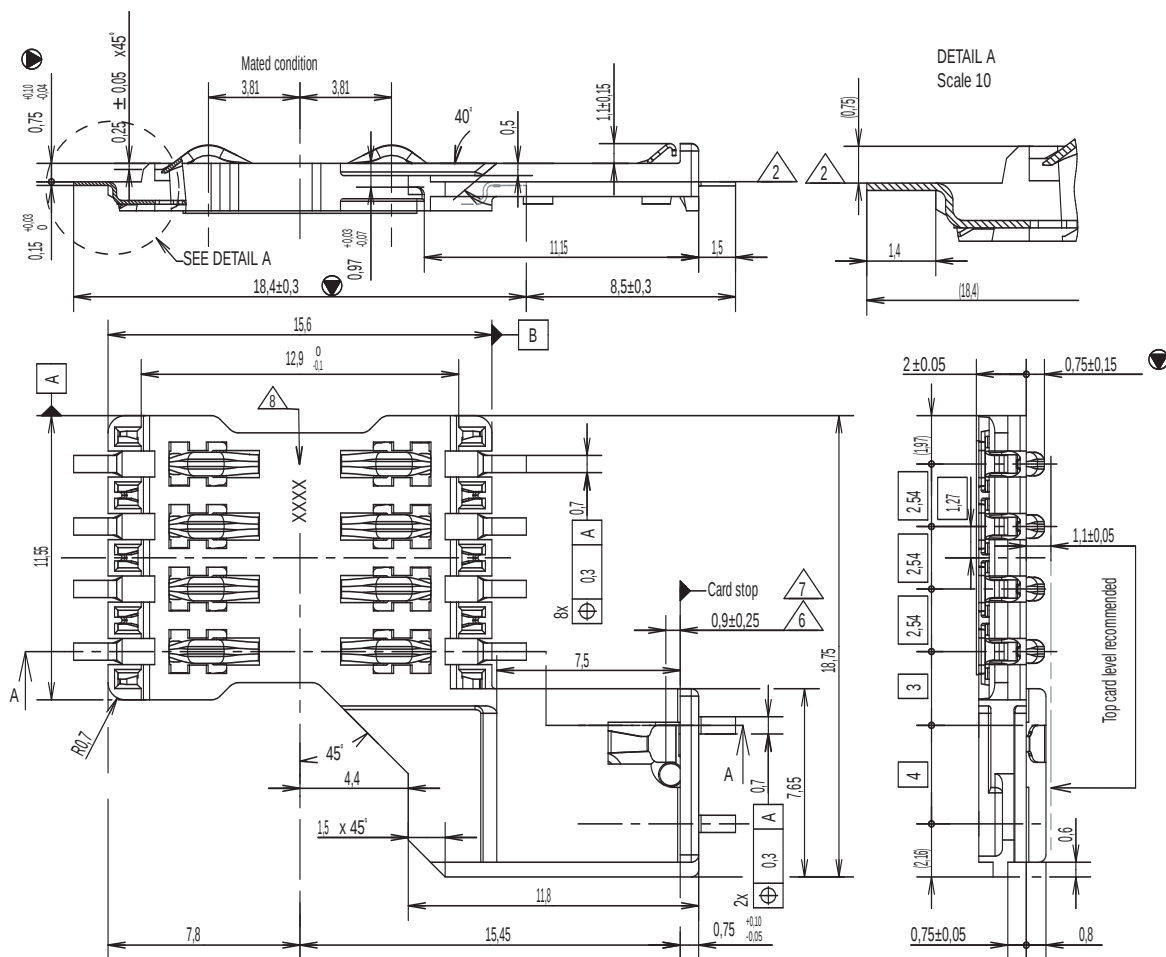
First Angle Projection

Dimensions are shown in mm
Specifications and dimensions subject to change

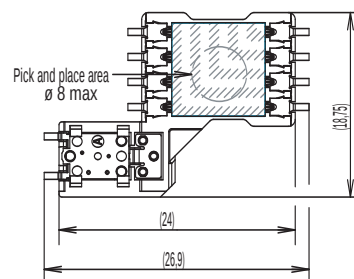
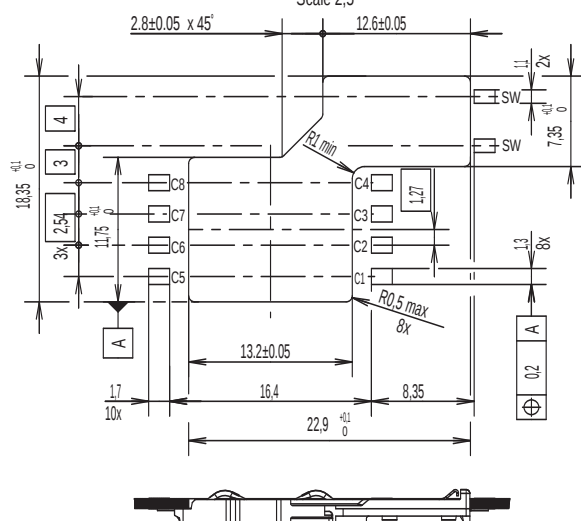
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CCM04-5454 LFT

Full Size



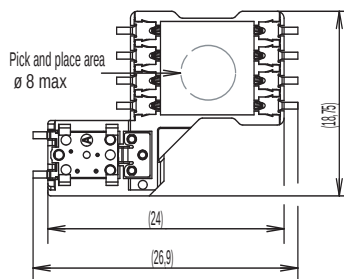
RECOMMENDED PC BOARD LAYOUT
(Component side)
Scale 2,5



Full Size

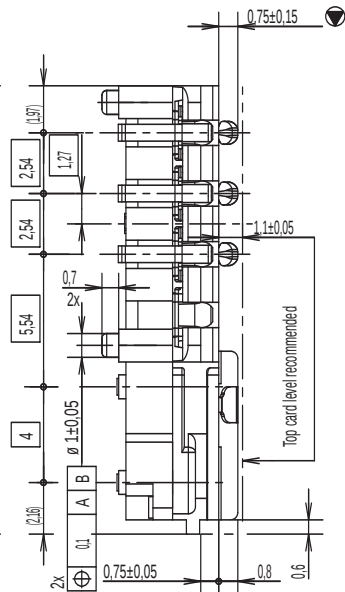
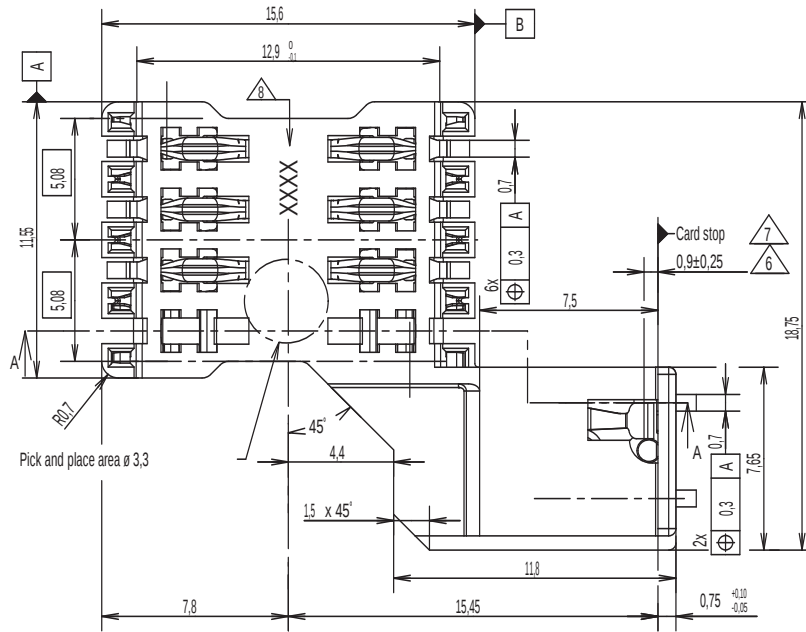
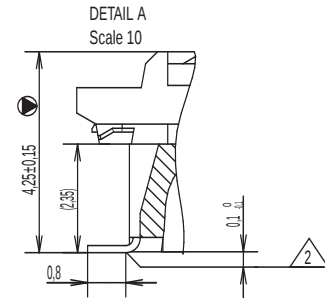
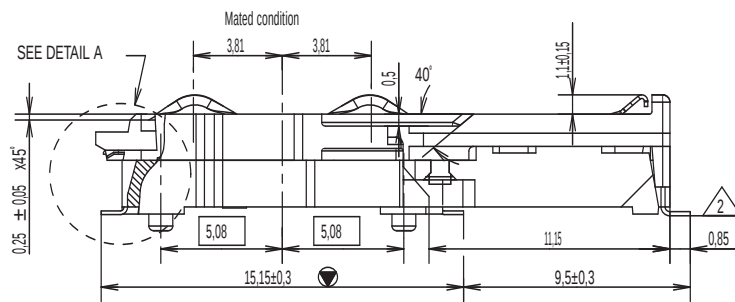
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Technical drawing of a PCB layout for a 2.5 Scale connector. The drawing shows a top view with dimensions in millimeters. Key dimensions include a total width of 22.9 mm, a total height of 18.35 mm, and a central horizontal slot with a width of 13.2 ± 0.05 mm. The layout includes various components labeled C1 through C8, SW, and A. A 2.5 Scale connector is shown at the top. A cross-section view at the bottom shows the internal structure of the connector.

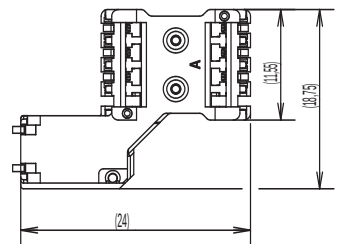
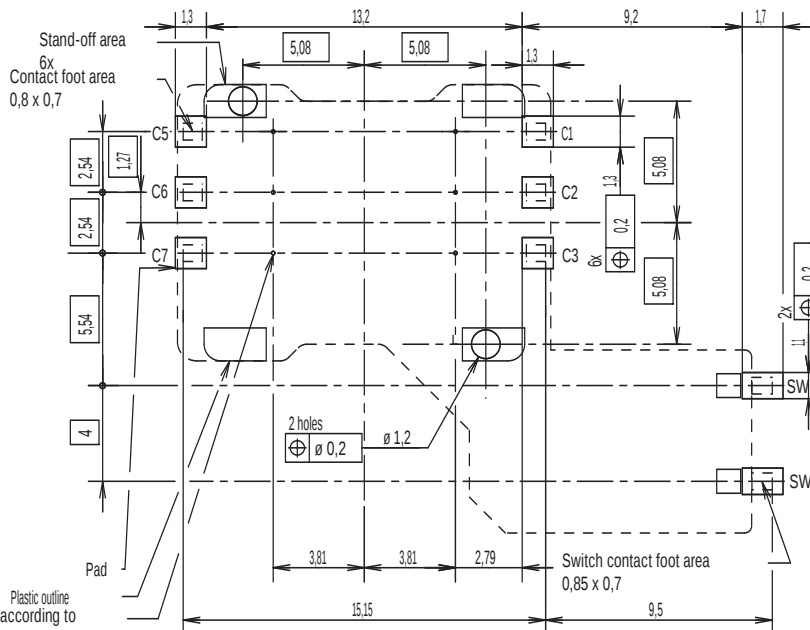


Dimensions are shown in mm
Specifications and dimensions subject to change

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RECOMMENDED PC BOARD LAYOUT
(Component side)



Plastic outline
Contact location according to
ISO/IEC 7816-2

Full Size

Technical drawing of the 100-pin connector, showing side and top views with detailed dimensions and callouts.

Side View (Top):

- Overall length: 15.5 ± 0.2 and 11 ± 0.2
- Pin pitch: $0.25 \pm 0.05 \times 45^\circ$
- Pin diameter: $\phi 0.17$ to $+0.03$ / -0
- Pin height: 1.15 to $+0.10$ / -0
- Pin spacing: $0.4 \times 30^\circ$
- Pin height: 1.6
- Pin height: 0.95 ± 0.05
- Pin height: 0.55
- Pin height: 0.35
- Pin height: 0.3
- Pin height: 0.25
- Pin height: 0.2
- Pin height: 0.15
- Pin height: 0.1
- Pin height: 0.05
- Pin height: 0

Side View (Bottom):

- Overall length: 11.8
- Pin pitch: 10.16
- Pin diameter: $\phi 0.16$
- Pin height: 0.7
- Pin height: 0.3
- Pin height: 0.2
- Pin height: 0.15
- Pin height: 0.1
- Pin height: 0.05
- Pin height: 0

Top View:

- Overall width: 15.45
- Pin pitch: 5.9
- Pin diameter: $\phi 0.1$ to $+0.10$ / -0.05
- Pin height: 0.75
- Pin height: 0.7
- Pin height: 0.65
- Pin height: 0.6
- Pin height: 0.55
- Pin height: 0.5
- Pin height: 0.45
- Pin height: 0.4
- Pin height: 0.35
- Pin height: 0.3
- Pin height: 0.25
- Pin height: 0.2
- Pin height: 0.15
- Pin height: 0.1
- Pin height: 0.05
- Pin height: 0

DETAIL A:

- Overall width: 1.4
- Pin pitch: 1.85
- Pin diameter: $\phi 0.15$
- Pin height: 0.75 ± 0.1
- Pin height: 0.95
- Pin height: 1.5
- Pin height: 0.6
- Pin height: 0.8
- Pin height: 0.8

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First Angle Projection

Dimensions are shown in mm
Specifications and dimensions subject to change

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C&K

SIM / SAM Cards



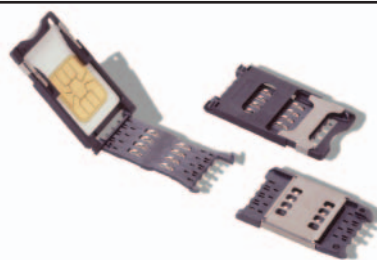
CCM03 Series

Features

- SIM/SAM card acceptance
- Hinged and fixed covers
- Compatible with pick and place and lead free soldering

Typical Applications

- Handheld products
- Identification
- POS
- Automotive



Mechanical

Number of Contacts	6 or 8
Mechanical life, hinged cover	10,000 cycles min
Mechanical life, fixed cover	50,000 cycles
Card insertion force	Hinged cover: 1N max Fixed cover: 3N max
Card extraction force	Hinged cover: 1N max Fixed cover: 0,80N min / 3N max
Contact force	0,25N min / 0,50N max
Slide locking force	2N min / 6N max
Vibration Frequency	1,8N max. for complete depression 10 to 500 Hz. Acceleration 50m/s ² Duration 6 hours - amplitude 0,35 mm
Max electrical discontinuity	1μs
Shock	Peak value 500 m/s ² – Duration 11 ms 3 shocks in each direction of each axis

Switch Electrical Data

Card detection switch	Normally open
Contact resistance	100 mΩ max
Dielectric strength	250 Vrms min
Current rating	1 mA min / 10m A max
Maximum power	0.2 VA

Environment Data

Operating temperature	-40°C to +85°C
Damp heat	IEC 512 test number 11c (10 days)
Salt mist	IEC 512 test number 11f (96 hours)
RoHS compliant	

Soldering Process

Compatible with lead free SMT soldering process

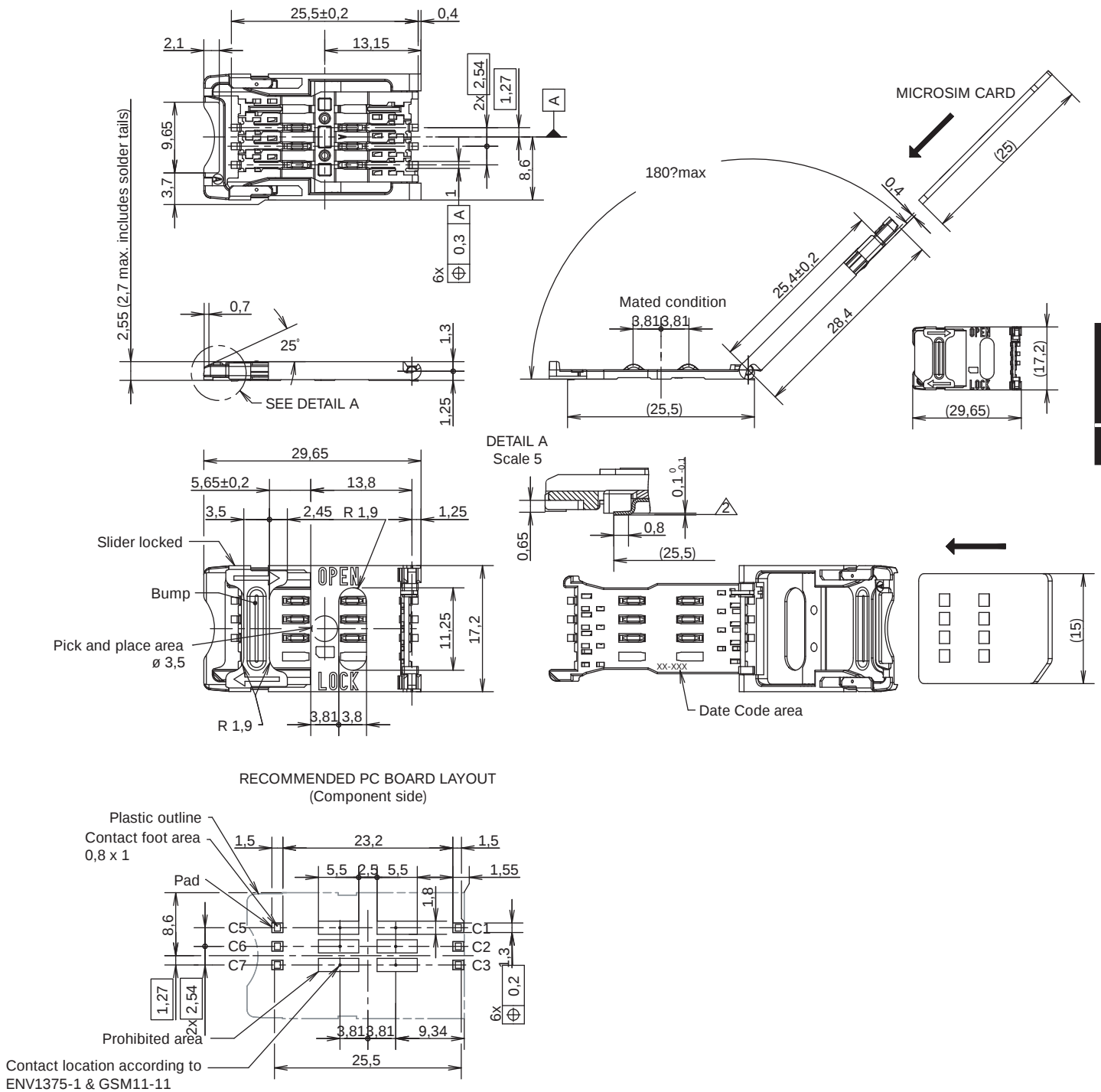


Contact Electrical Data

Insulation resistance	1,000 MΩ min
Resistance	100 mΩ max
Current rating	10 μA min / 1 A max
Dielectric strength	750 Vrms min

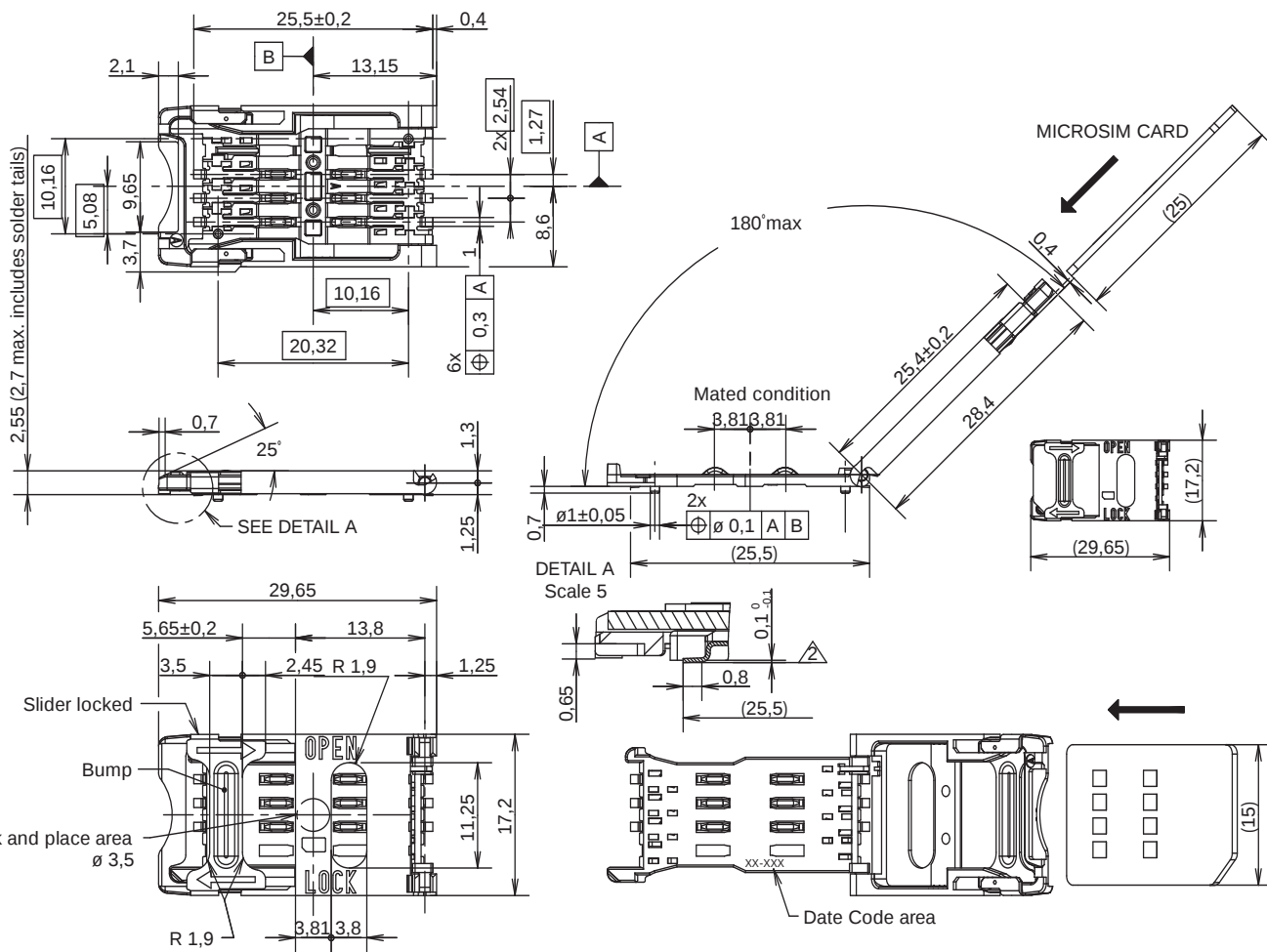
Designation	Contact Plating	Cover	# of Contacts	PCB Version	Card Presence Switch	Operating Life	Total Height (mm)	Dim. (mm)	Packaging
CCM03-3001LFT	inlay	hinged	6		without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3002LFT	inlay	hinged	6	2 plastic pegs	without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3003LFT	inlay	hinged	8		without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3004LFT	inlay	hinged	8	2 plastic pegs	without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3009LFT	gold	hinged	6		without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3010LFT	gold	hinged	6	2 plastic pegs	without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3011LFT	gold	hinged	8		without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3012LFT	gold	hinged	8	2 plastic pegs	without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3013LFT	gold	hinged	6		with	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3512LFT	gold	hinged	6	Large soldering pads*	without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3519LFT	gold	hinged	6	White cover	without	10,000	2,55	17,2 x 29,65	reels of 1,000 pcs
CCM03-3504LFT	gold	fixed	8		without	50,000	2,85	17,2 x 25,5	reels of 1,000 pcs
CCM03-3505LFT	gold	fixed	6		without	50,000	2,85	17,2 x 25,5	reels of 1,000 pcs
CCM03-3535LFT	inlay	fixed	6		without	50,000	2,85	17,2 x 25,5	reels of 1,000 pcs
CCM03-3754LFT	inlay	fixed	6		with	10,000	3,5	16,5 x 18,05	reels of 1,000 pcs
CCM03-3760LFT	inlay	fixed	6		without	10,000	3,45	16,5 x 15,85	reels of 1,000 pcs
CCM03-3764LFT	inlay	none	6		with	10,000	2,9	16,5 x 15,85	reels of 1,000 pcs

* Can go through reflow upside down

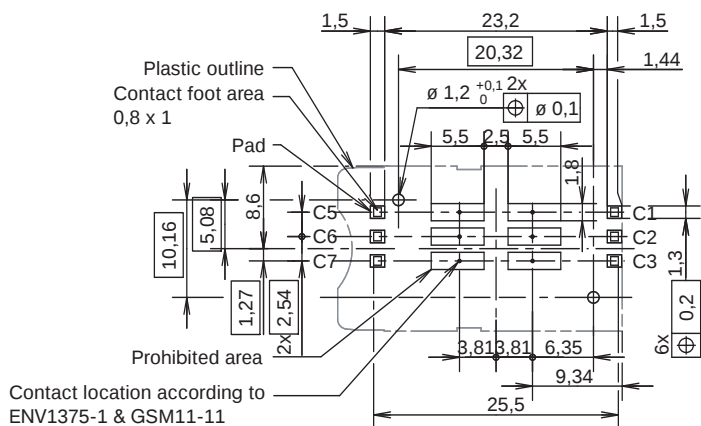


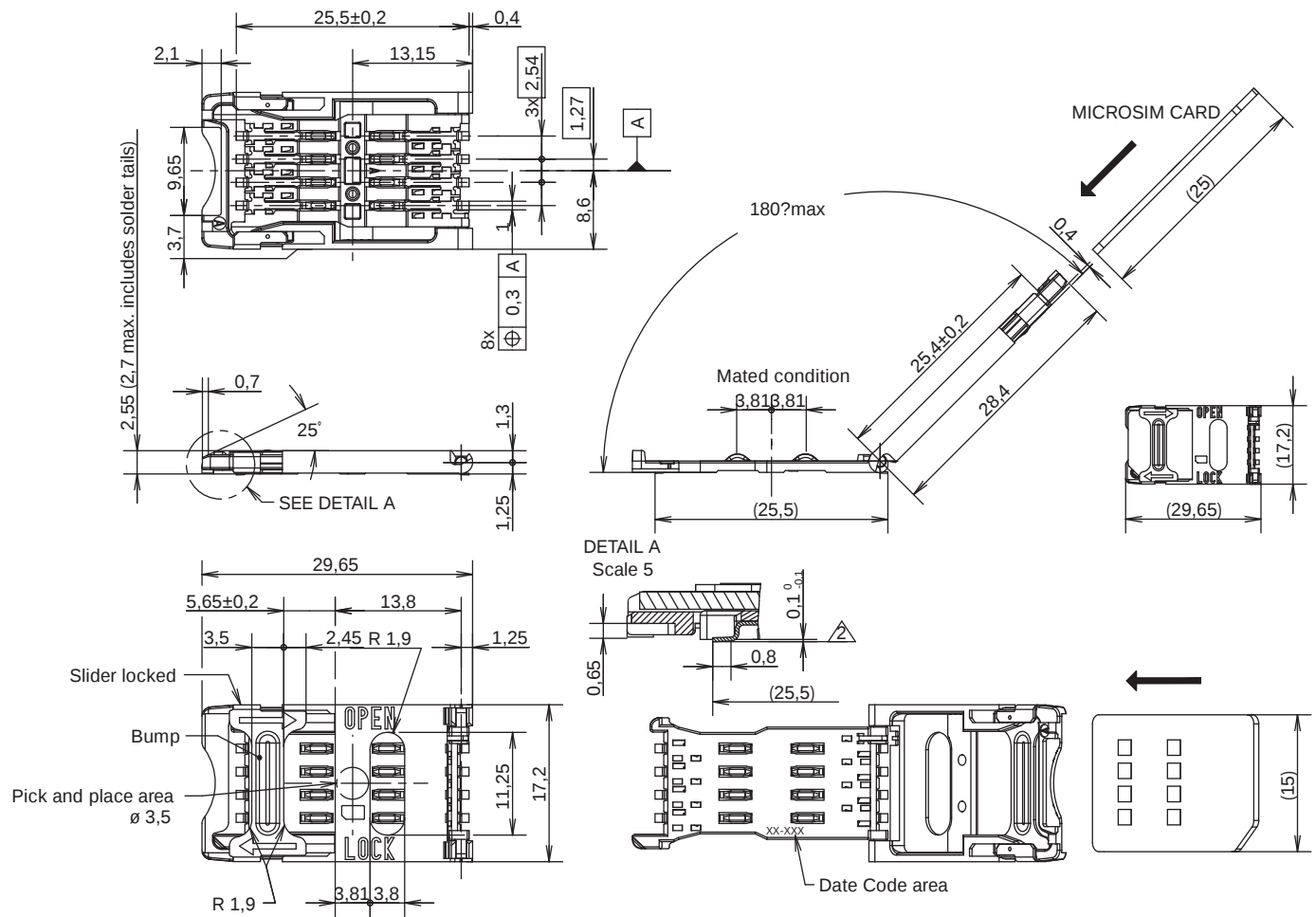
CCM03 Series

CCM03-3002 LFT / CCM03-3010 LFT

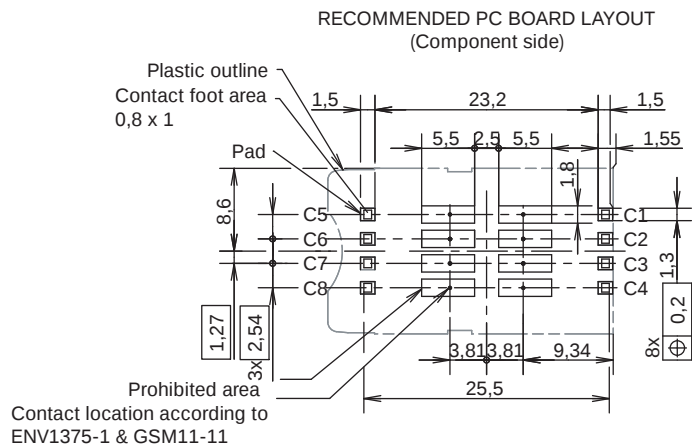


RECOMMENDED PC BOARD LAYOUT
(Component side)



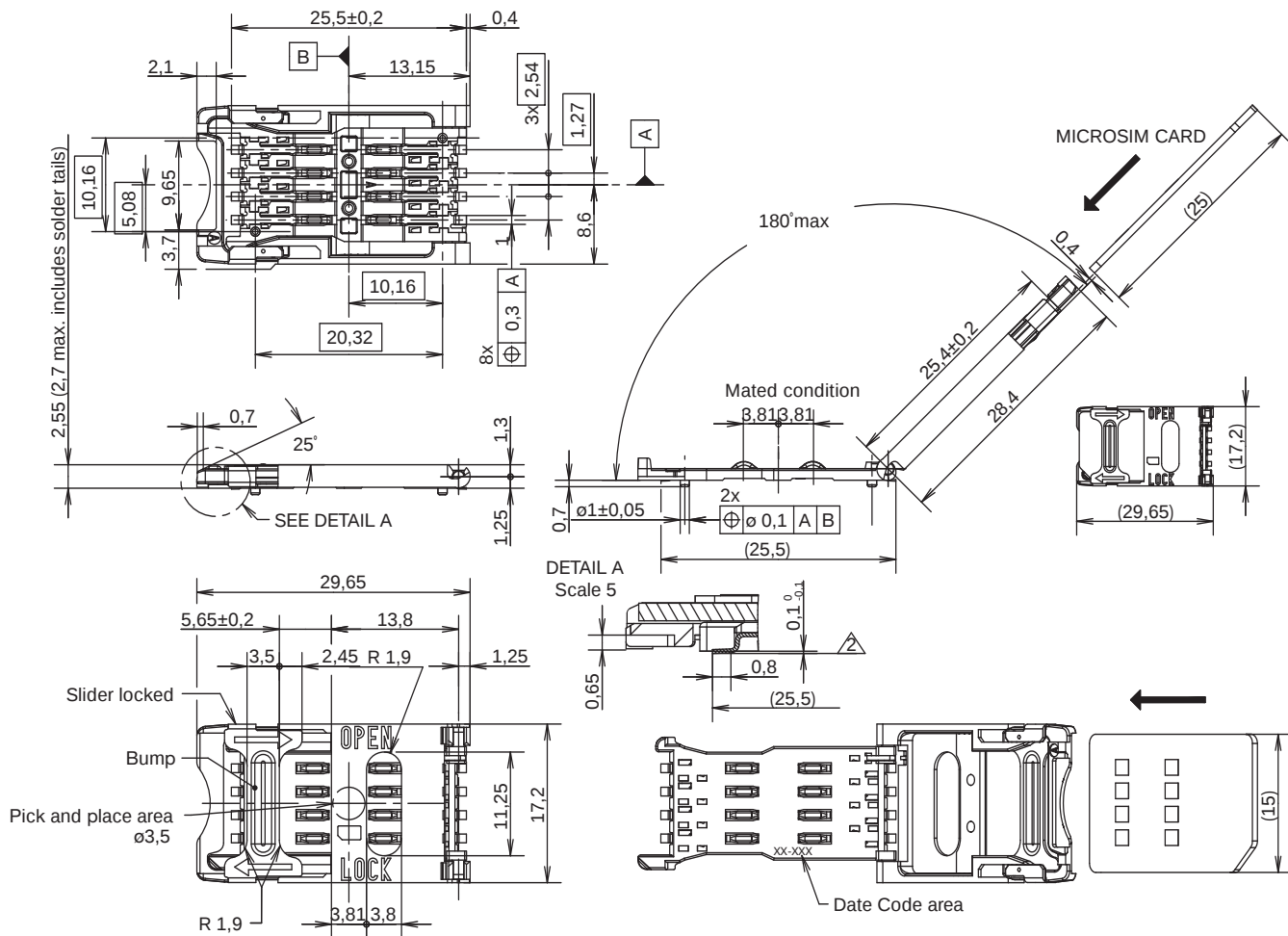


SIM/SAM

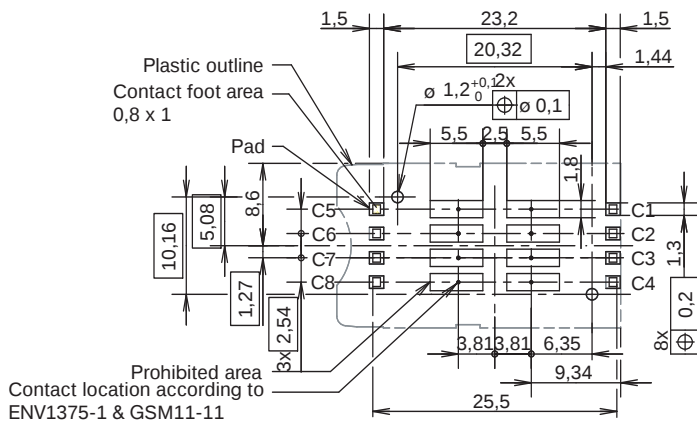


CCM03 Series

CCM03-3004 LFT



RECOMMENDED PC BOARD LAYOUT (Component side)



Dimensions are shown in mm
Specifications and dimensions subject to change

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[illegible]

SIM/SAM

[illegible]

Technical drawing of the contact area of a 12-pin connector, showing dimensions and labels. The drawing includes the following elements:

- Plastic outline**: Indicated by a line pointing to the outer boundary of the connector.
- Contact foot area**: Indicated by a line pointing to the area where the contact foot is attached.
- 0,8 x 1**: Dimension indicating the width and height of the contact foot area.
- Pad**: Indicated by a line pointing to the circular contact pad.
- Dimensions**:
 - Overall width: 25,5
 - Overall height: 10,16
 - Pin pitch (center-to-center): 2,54
 - Pin width: 0,8
 - Pin height: 1
 - Pin diameter: $\varnothing 1,2^{+0,2}_0$
 - Pin hole diameter: $\varnothing 0,1$
 - Pin spacing (edge to center): 5,5
 - Pin spacing (center to center): 2,5
 - Pin spacing (center to edge): 5,5
 - Pin spacing (edge to edge): 1,8
 - Pin spacing (edge to edge): 1,3
 - Pin spacing (edge to edge): 0,2
 - Pin spacing (edge to edge): 8x
 - Pin spacing (edge to edge): 9,34
 - Pin spacing (edge to edge): 6,35
 - Pin spacing (edge to edge): 3,81
 - Pin spacing (edge to edge): 3,81
 - Pin spacing (edge to edge): 25,5
 - Pin spacing (edge to edge): 23,2
 - Pin spacing (edge to edge): 1,5
 - Pin spacing (edge to edge): 1,44
 - Pin spacing (edge to edge): 20,32
 - Pin spacing (edge to edge): 5,08
 - Pin spacing (edge to edge): 8,6
 - Pin spacing (edge to edge): 1,27
 - Pin spacing (edge to edge): 3x
- Prohibited area**: Indicated by a line pointing to the area where the contact foot is not allowed to be.
- Contact location according to ENV1375-1 & GSM111-11**: Reference to the standard governing the contact location.

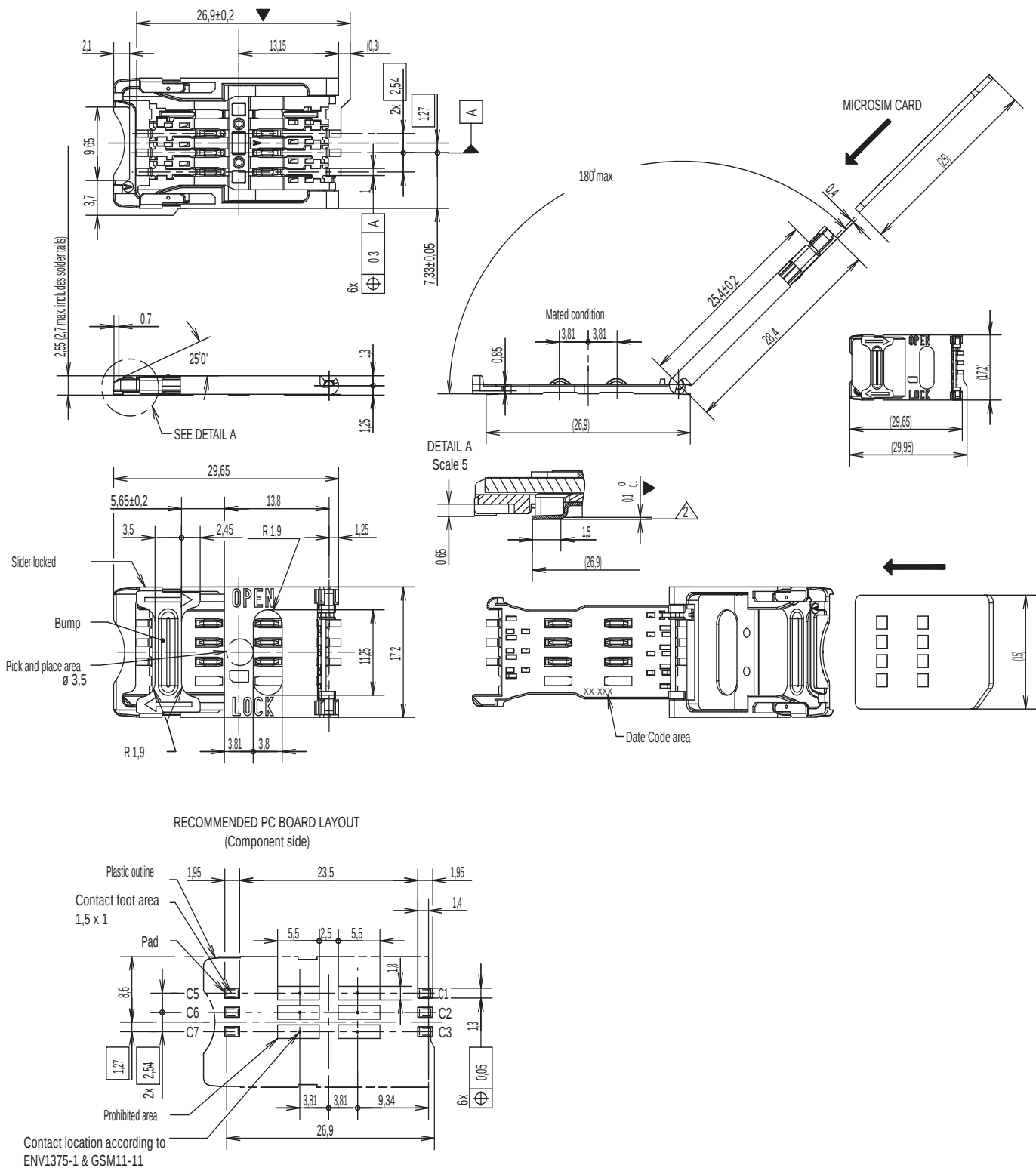


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CCM03 Series

CCM03-3512 LFT

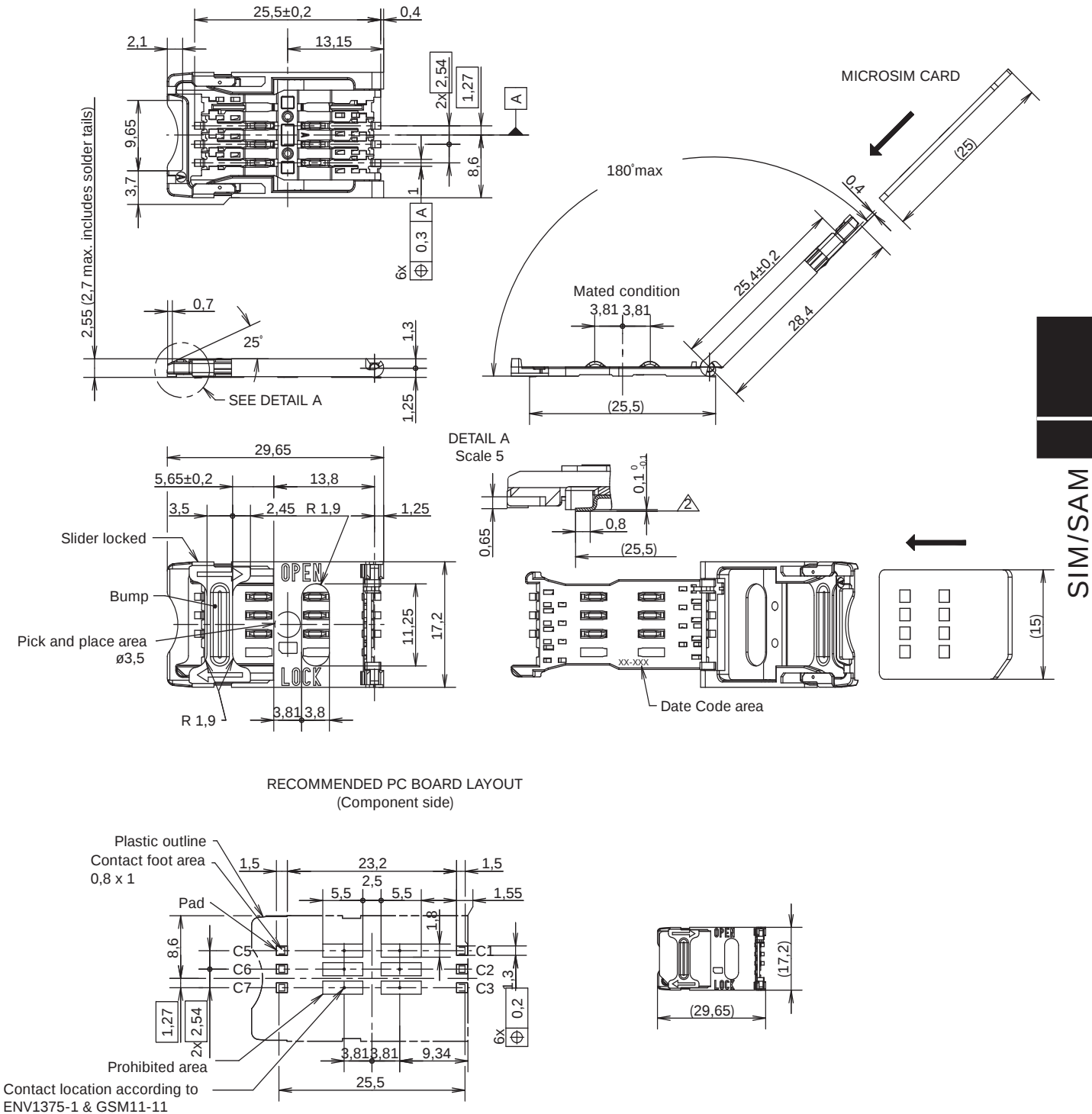


First Angle
Projection



Dimensions are shown in mm
Specifications and dimensions subject to change

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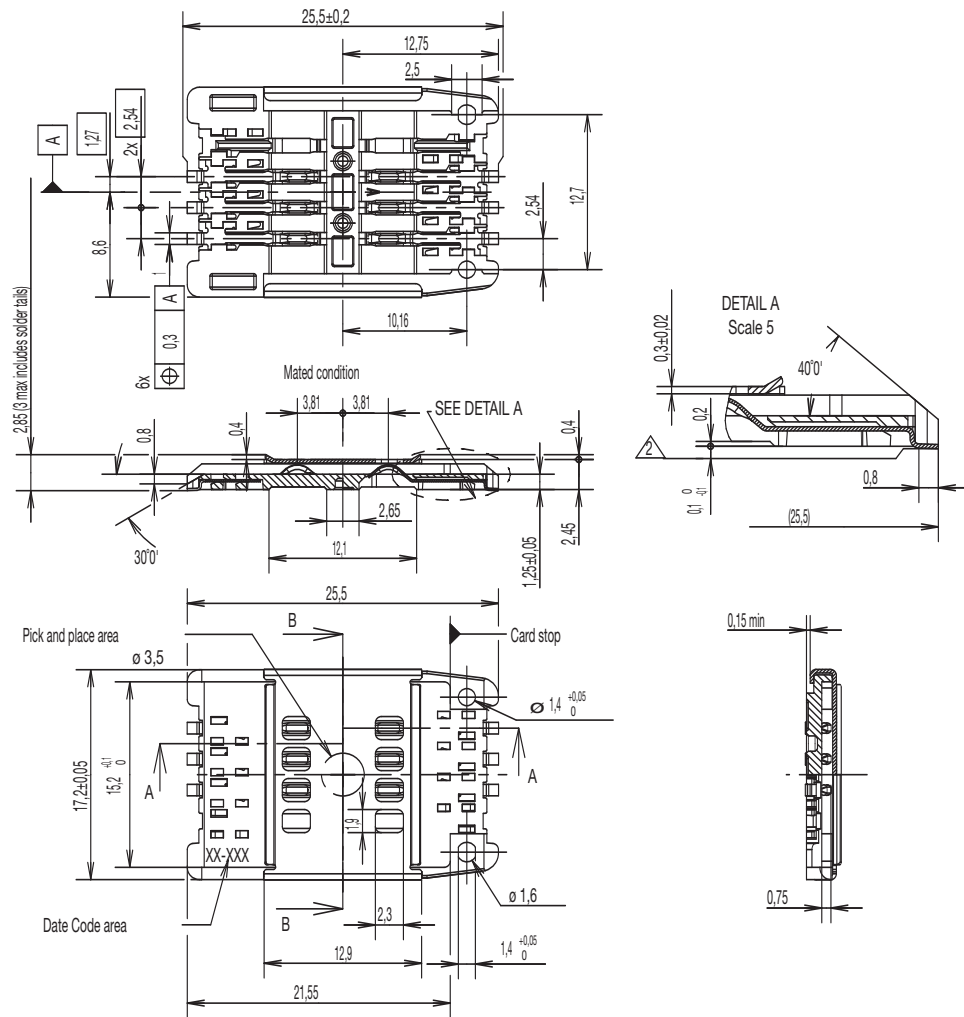
SIM/SAM

CCM03-3504 LFT / CCM03-3505 LFT

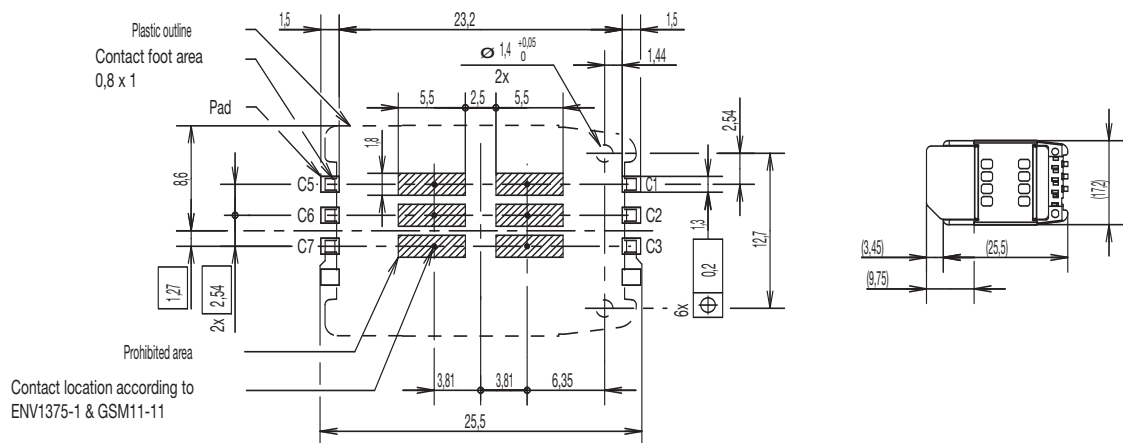


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CCM03-3535 LFT



RECOMMENDED PC BOARD LAYOUT
(Component side)

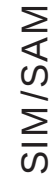


SIM/SAM

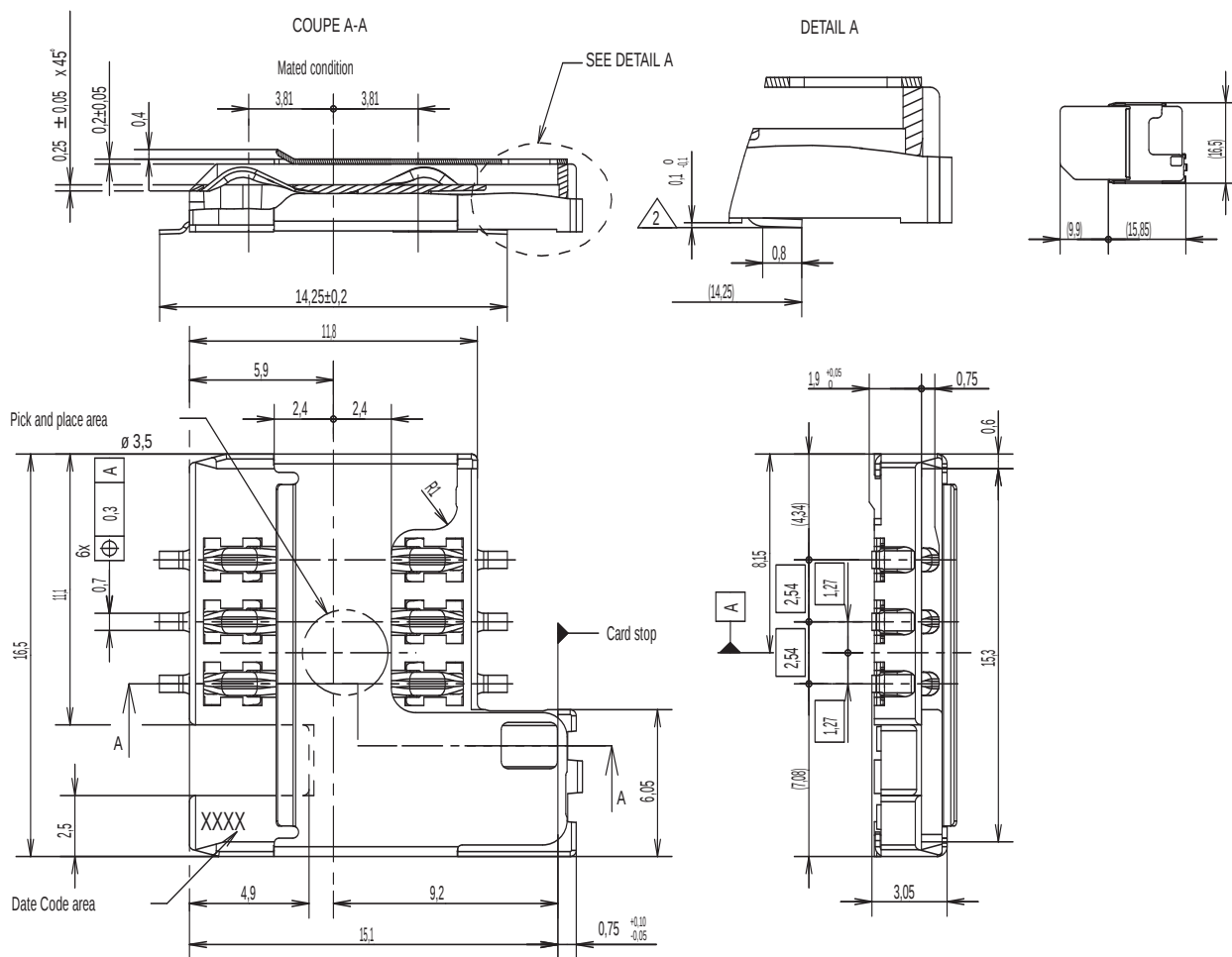
SIM/SAM



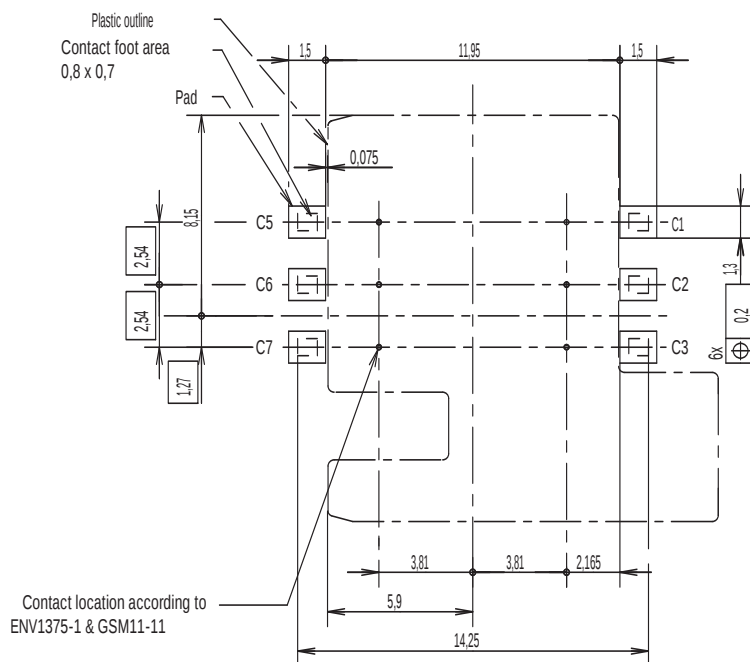
SIM/SAM



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RECOMMENDED PC BOARD LAYOUT
 (Component side)



SIM/SAM

SIM/SAM



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CCM04 Series



Features

- SIM and SAM card acceptance
- Compatible with pick and place and lead free soldering

Typical Applications

- Mobile
- POS
- Identification
- GPS

Mechanical

Number of contacts	6 or 8
Mechanical life	30,000 cycles
Card insertion force	10N max
Card extraction force	1N min / 10N max
Contact force	0,35N min to 0,65N
Vibration Frequency	10 to 500 Hz. Acceleration 50m/s ² Duration 6 hours - amplitude 0,35mm
Shock	Peak value 500 m/s ² – Duration 11 ms 3 shocks in each direction of each axis
Max elect. discontinuity	1µs

Packaging

See table below

Soldering Process

Compatible with lead free SMT soldering process

Contact Electrical Data

Insulation resistance	1000 MΩ min
Contact resistance max	100 mΩ max
Switching current	10 µA min / 1 A max
Dielectric strength	750 Vrms min

Environmental Data

Operating temperature	-40°C to +85°C
Salt mist	IEC 512 test number 11f (96 hours)
Damp heat	IEC 512 test number 11c (10 days)
RoHS compliant	

SIM/SAM

Designation	# of Contacts	Contact Plating	PCB Version	Height (mm)	Dim. (mm)	Packaging
CCM04-5120LFS	6	gold	SMT OUT	2,4	11,95 X 14,25	reels of 1,900 pcs
CCM04-4118LFS	6	inlay	SMT OUT	1,9	7,62 X 14,25	reels of 1,900 pcs
CCM04-5137LFS	6	gold	SMT IN	1,9	8,15 X 10,45	reels of 1,900 pcs
CCM04-5149LFS	6	gold	SMT IN	1,9	7,62 X 11,8	reels of 1,900 pcs
CCM04-4151LFS	8	inlay	SMT OUT	2,65	10,16 X 14,25	reels of 1,900 pcs

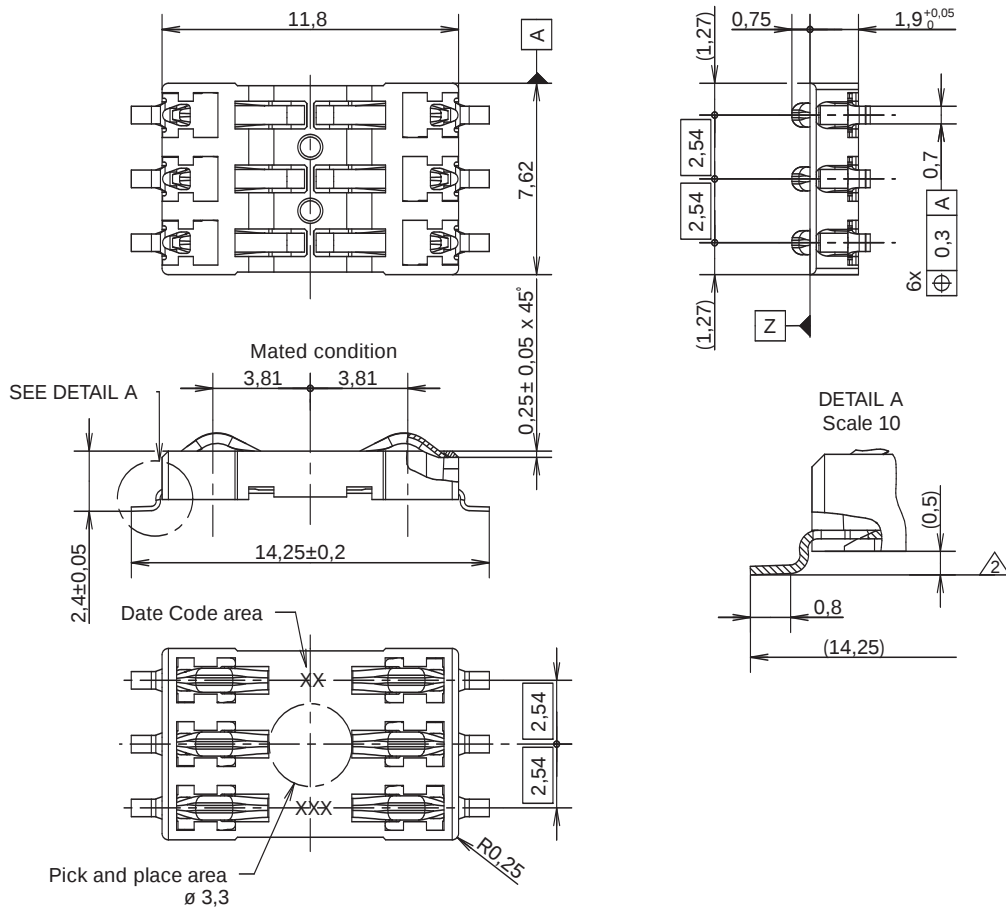


Dimensions are shown in mm
Specifications and dimensions subject to change

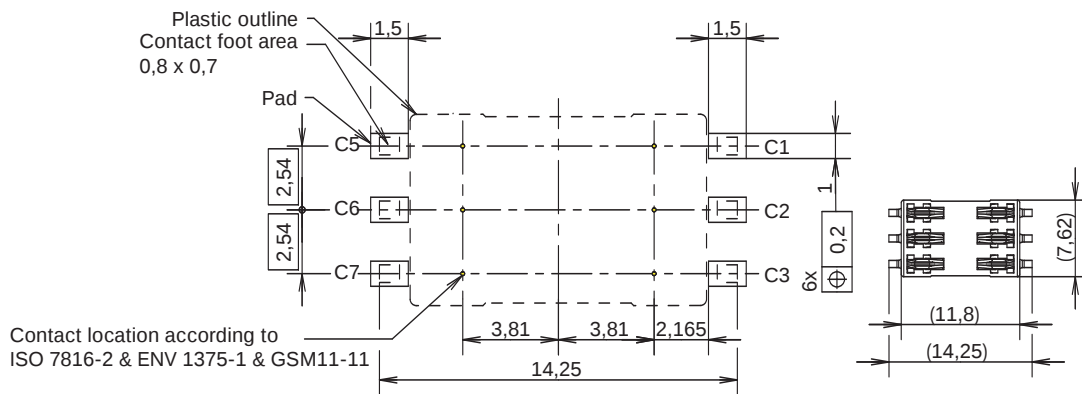
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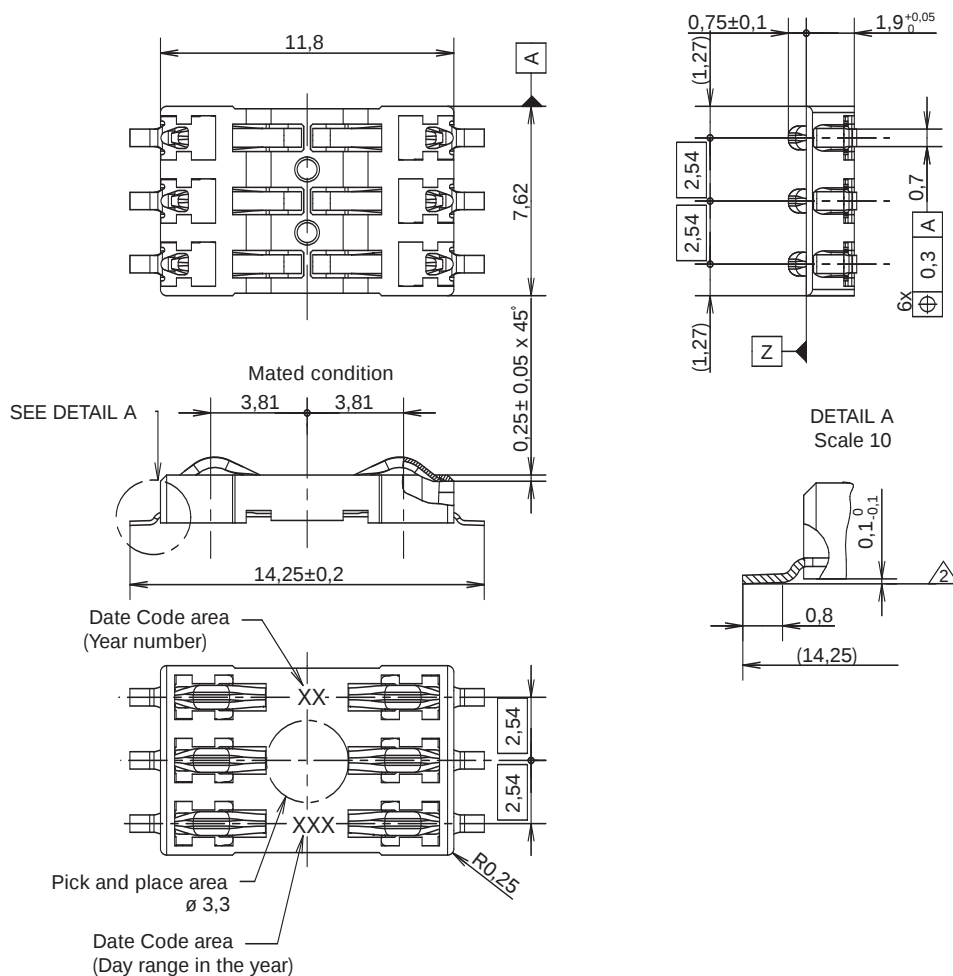
CCM04 Series

CCM04-5120 LFS

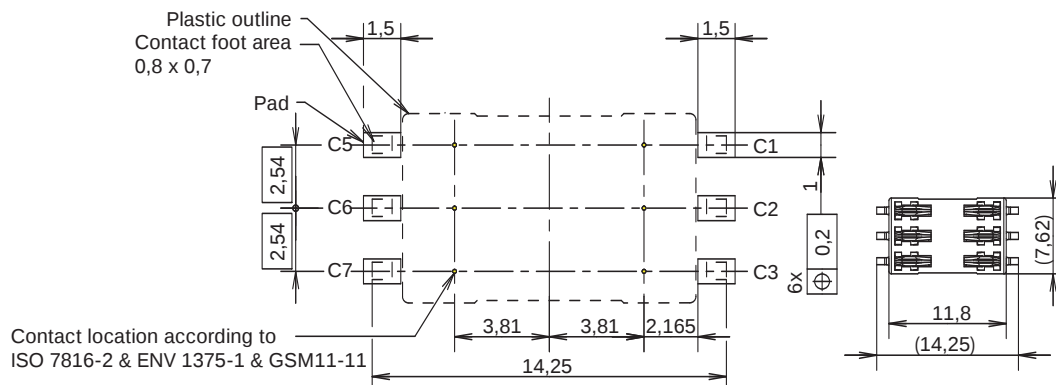


RECOMMENDED PC BOARD LAYOUT
(Component side)



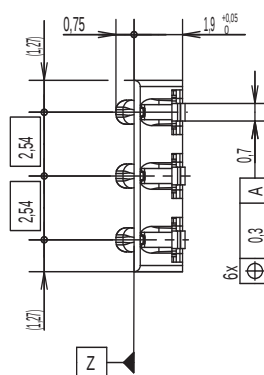
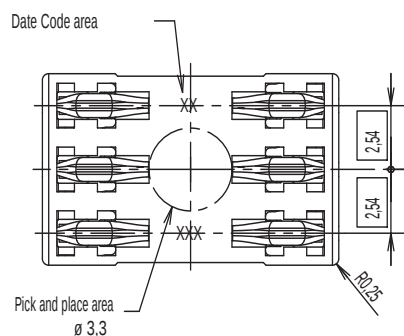
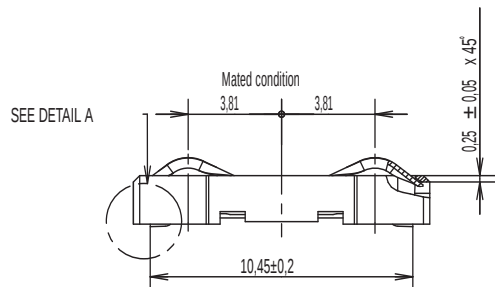
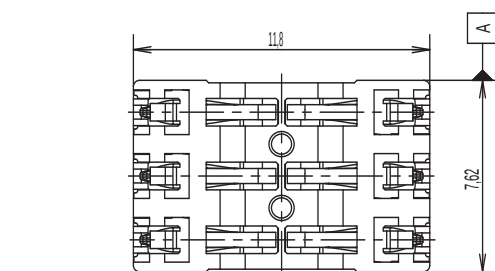


RECOMMENDED PC BOARD LAYOUT (Component side)

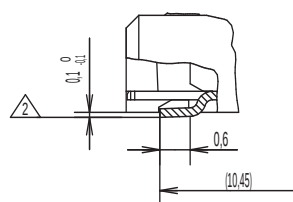


CCM04 Series

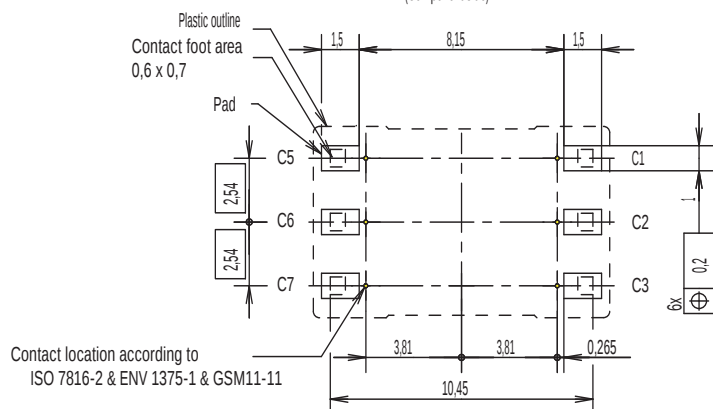
CCM04-5137 LFS



DETAIL A
Scale 10



RECOMMENDED PC BOARD LAYOUT
(Component side)



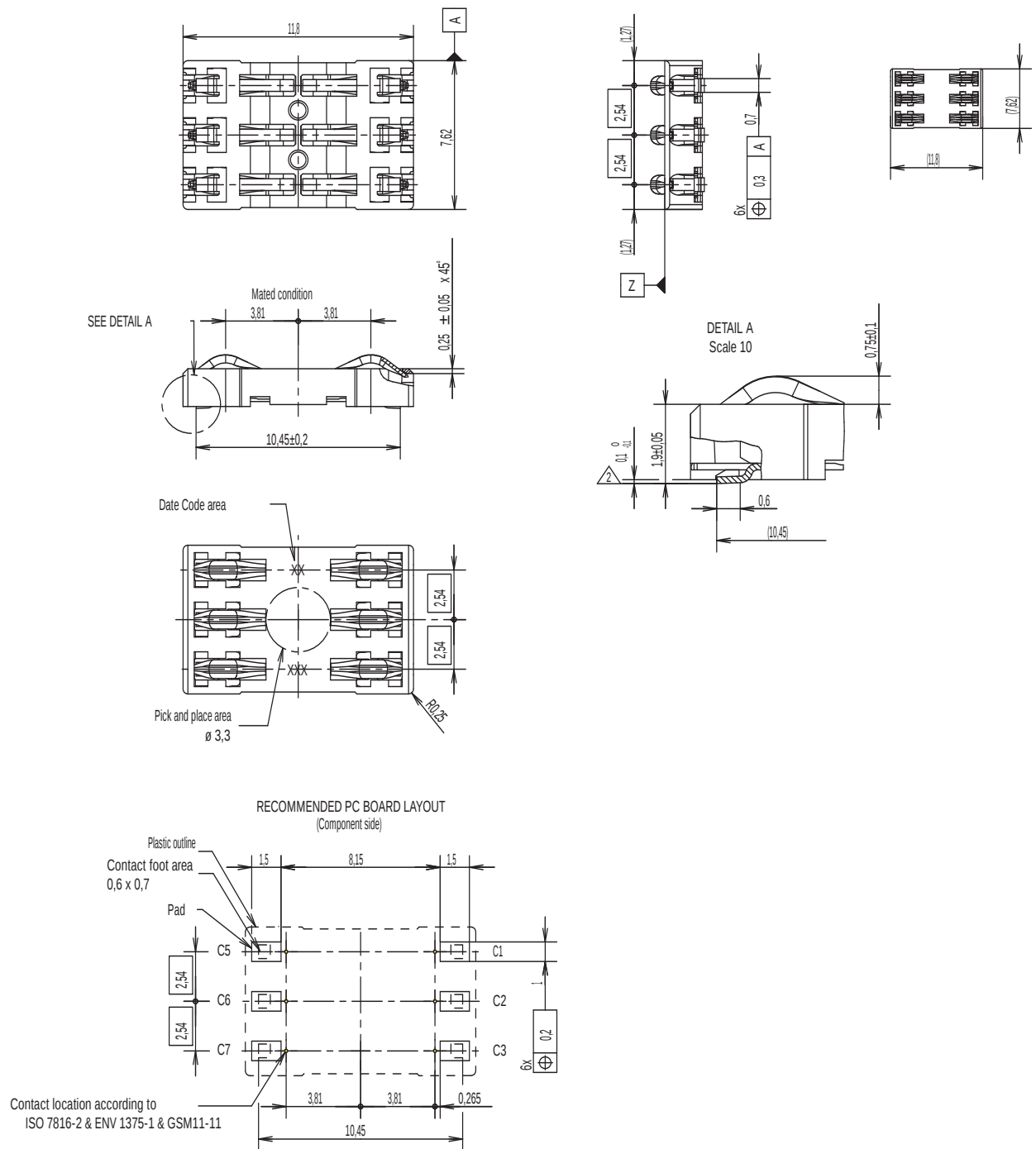
Contact location according to
ISO 7816-2 & ENV 1375-1 & GSM11-11



First Angle
Projection

Dimensions are shown in mm
Specifications and dimensions subject to change

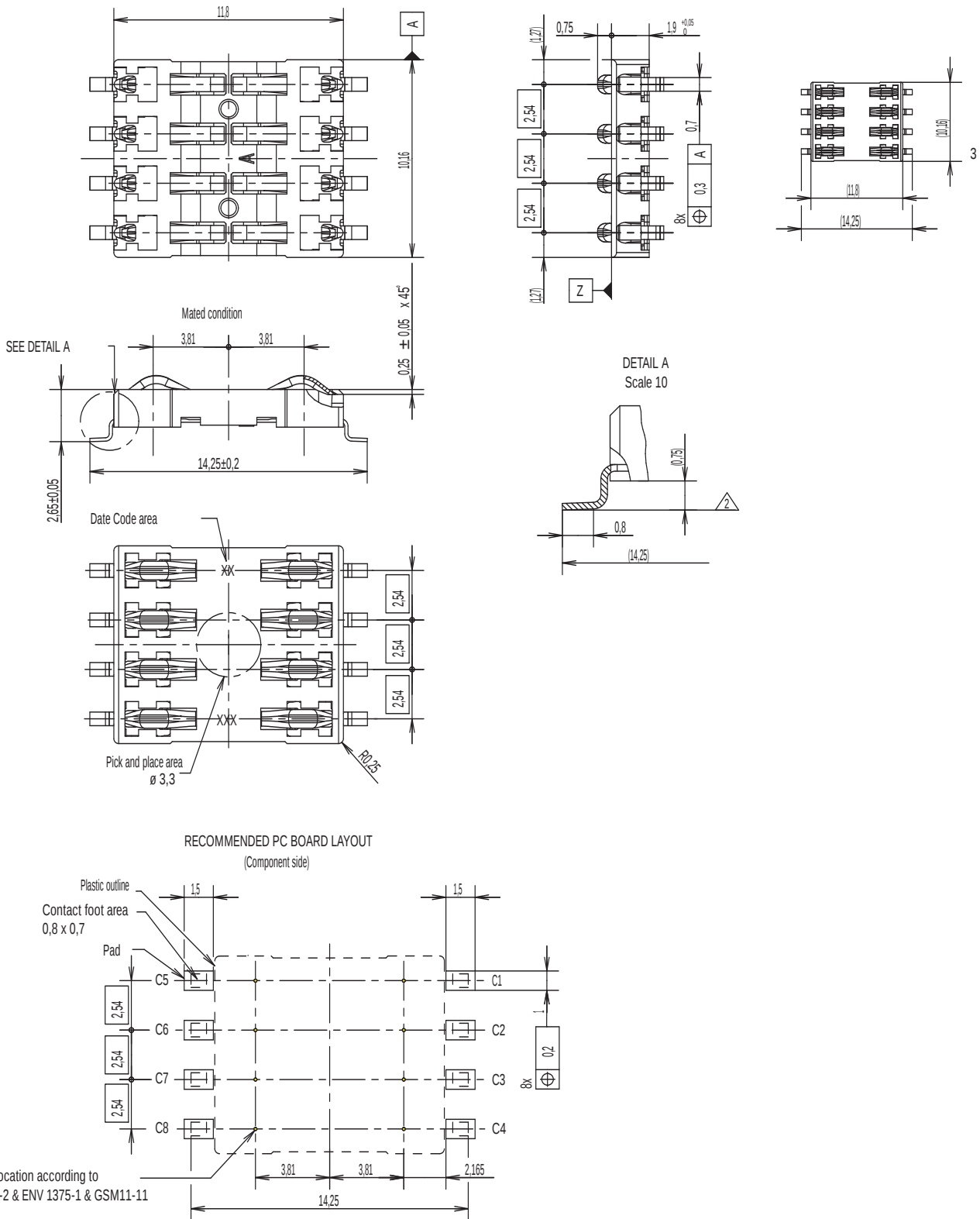
www.ck-components.com



SIM/SAM

CCM04 Series

CCM04-4151 LFS



Dimensions are shown in mm
Specifications and dimensions subject to change

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