

A new range of CCM03 connectors have been developed to interface with SIM/SAM cards as defined by GSM11-11 and ENV1375-1. The connectors are available with either hinged covers or fixed covers and have been designed to minimize the amount of space needed for PCB mounting.

## Features

### Hinged Cover

- Available with 6 or 8 contacts, with or without PCB locating pegs.
- Available with insulated card presence switch.
- The cover springs open when unlocked while the card is in place.
- The molding is polarized so that the cover can only be closed if the card is correctly inserted.
- The cover can be replaced without removing the connector from the PCB.
- Inspection slots allow an electrical test to be made without opening the cover.
- The overall height of the connector is only 2,5 mm. The amount of space needed to mount the connector is just 29,65 mm x 17,2 mm.

### Fixed Cover

- Available with 6 or 8 contacts.
- The overall height of the connector is 2,85 mm max. Only 25,5 mm x 17,2 mm of board space is required to mount the connector.

### General

- With tape and reel packaging as standard, the connectors are designed to be automatically pick-and-placed.
- The high temperature thermoplastic moldings are suited for infrared and convection soldering processes.
- By using an inlay finish in the contact area the life of the precious metal is extended by over 10 times that of standard gold plating.
- Robustly formed printed circuit tails allow a co-planarity of  $\pm 0,05$  mm to be maintained.



## Construction

Contacts	Copper alloy
Plating	Contact area : Gold alloy inlay or gold over nickel Terminals : Tin lead (2 $\mu$ min)
Moldings	High temp. thermoplastic UL 94V-0 rated
Slide lock/metal cover	Stainless steel

## Mechanical Data

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: 1 N max Fixed cover: 3 N max
Card extraction force	Hinged cover: 1 N max Fixed cover: 0.80 N min / 3 N max
Contact force	0.25 N min / 0.50 N max
Slide locking force	2 N min / 6 N max
Vibration	Frequency 10 to 500 Hz. Acceleration 50m/s <sup>2</sup> Duration 6 hours - amplitude 0,35 mm Max electrical discontinuity 1 $\mu$ s
Shock	Peak value 500 m/s <sup>2</sup> – Duration 11 ms 3 shocks in each direction of each axis Max electrical discontinuity 1 $\mu$ s

## Contact Electrical Data

Insulation resistance	1,000 M $\Omega$ min
Resistance	100 m $\Omega$ max
Current rating	10 $\mu$ A min / 1 A max
Dielectric strength	750 Vrms min

## Switch Electrical Data

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

## Environmental Data

Operating temperature	-40°C to +85°C
Soldering temperature	Temperature/time profile acc. to CECC00802 para. 6.1, Fig. 3 with peak temperature 250°C
Damp heat	IEC 512 test number 11c (10 days)
Salt mist	IEC 512 test number 11f (96 hours)

## Packaging

Quantity per reel, see table next page.

# CCM03 MK II

## Ordering Code

Part Number	Number of Contacts	Cover	PCB Locating Pegs	Quantity per reel	Contact Finish	Switch lock	Card Presence switch
CCM03-3001 R102	6	Hinged	No	1000	Inlay	No	No
CCM03-3002 R102	6	Hinged	Yes	1000	Inlay	No	No
CCM03-3003 R102	8	Hinged	No	1000	Inlay	No	No
CCM03-3004 R102	8	Hinged	Yes	1000	Inlay	No	No
CCM03-3009 R102	6	Hinged	No	1000	Gold	No	No
CCM03-3010 R102	6	Hinged	Yes	1000	Gold	No	No
CCM03-3011 R102	8	Hinged	No	1000	Gold	No	No
CCM03-3012 R102	8	Hinged	Yes	1000	Gold	No	No
CCM03-3013 R102	6	Hinged	No	1000	Gold	No	Yes (insulated)
CCM03-3514 R102	6	Hinged	No	1000	Inlay	Yes	No
CCM03-3504 R122	8	Fixed	No	1200	Inlay	No	No
CCM03-3505 R122	6	Fixed	No	1200	Inlay	No	No

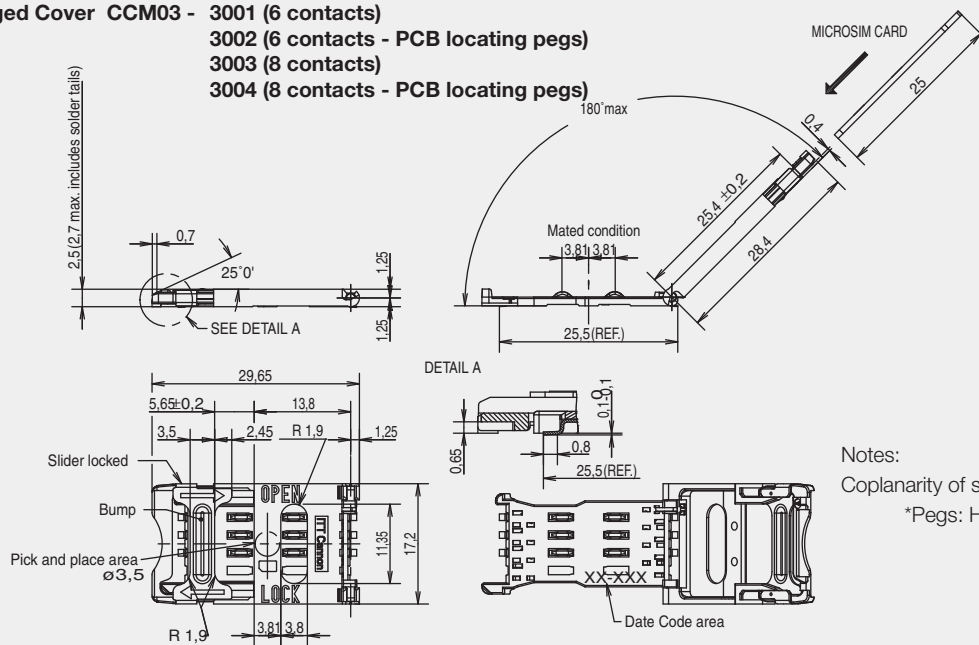
## Dimensional Drawings

### Hinged Cover CCM03 - 3001 (6 contacts)

3002 (6 contacts - PCB locating pegs)

3003 (8 contacts)

3004 (8 contacts - PCB locating pegs)



### Notes:

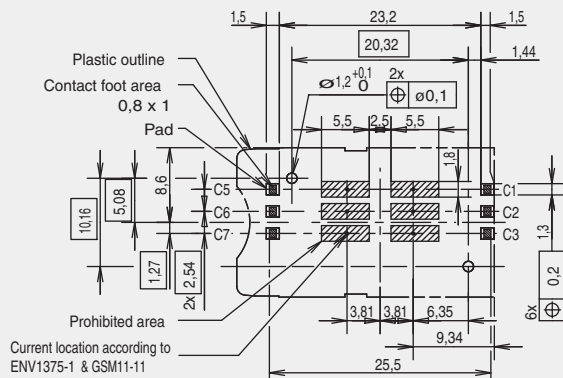
Coplanarity of soldering surfaces:  $\pm 0,05$  mm

\*Pegs: Height 0,7 mm and  $\varnothing 1$  mm

## PCB Layout

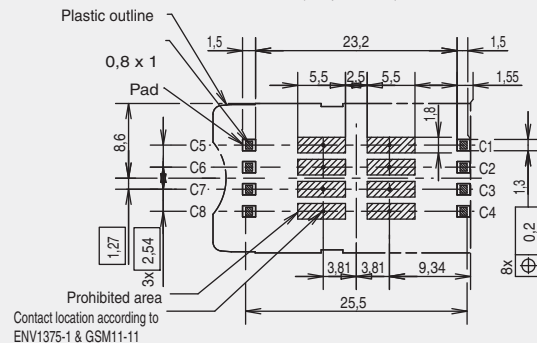
### CCM03-3001 / 3002

(Component side)



### CCM03-3003 / 3004

(Component side)

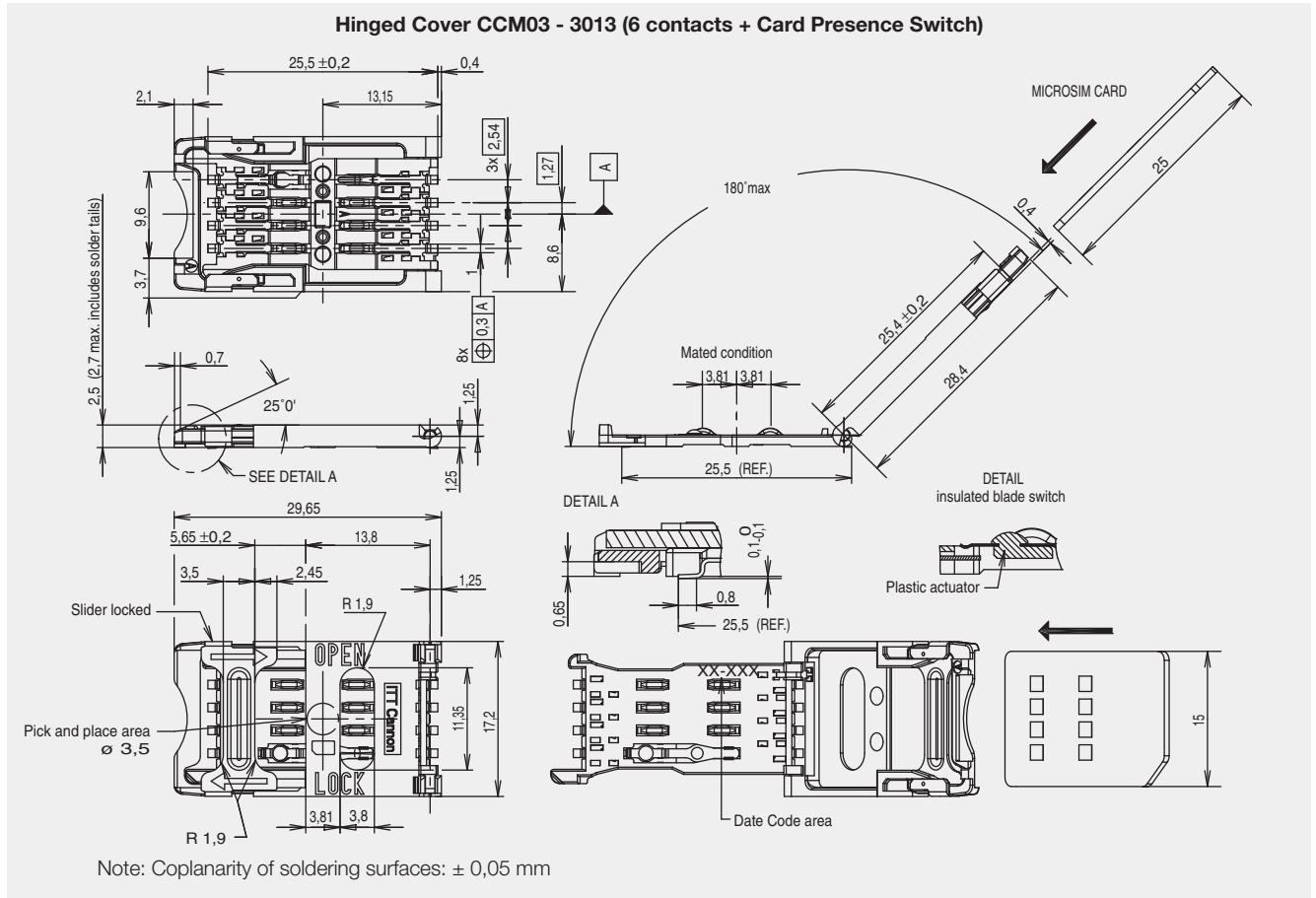


Unless otherwise stated, tolerances are  $\pm 0,10$  mm

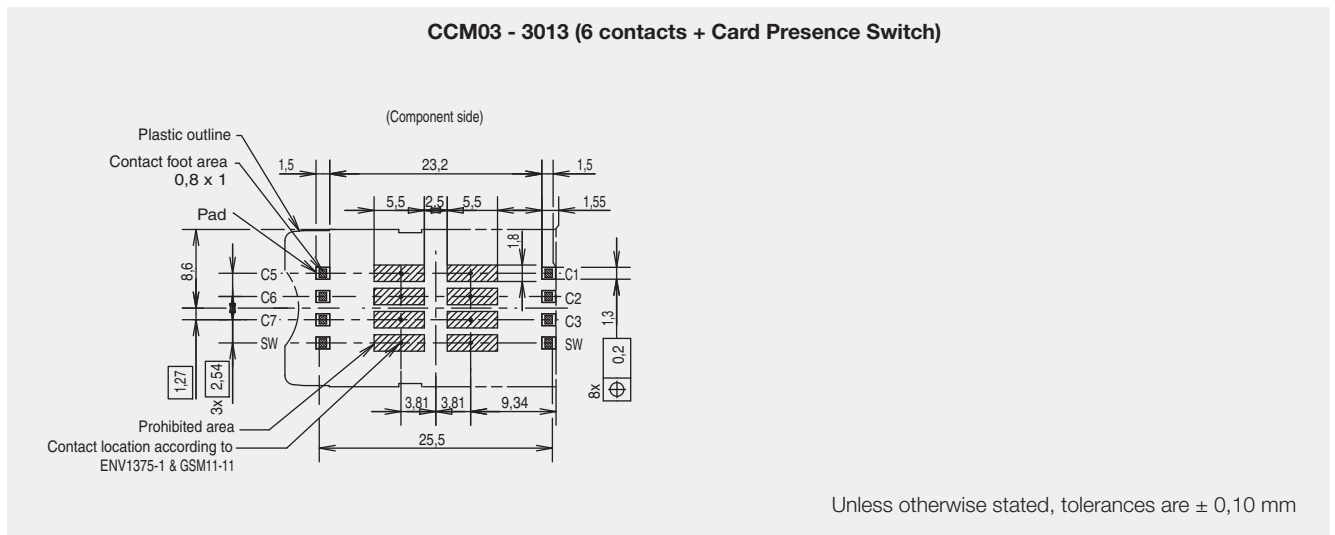
# CCM03 MK II Hinged Cover

## Insulated Card Presence Switch

### Dimensional Drawings

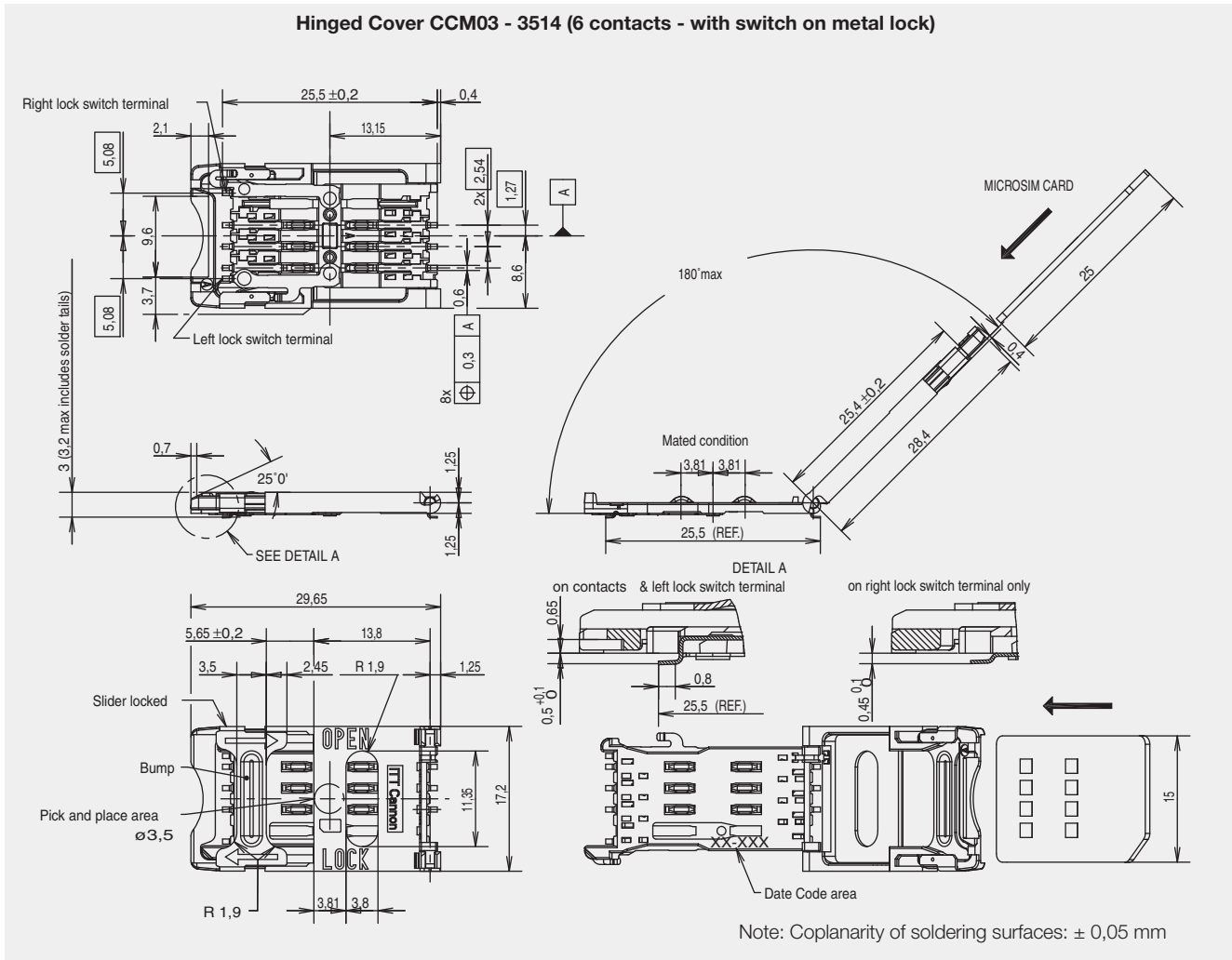


### PCB Layout

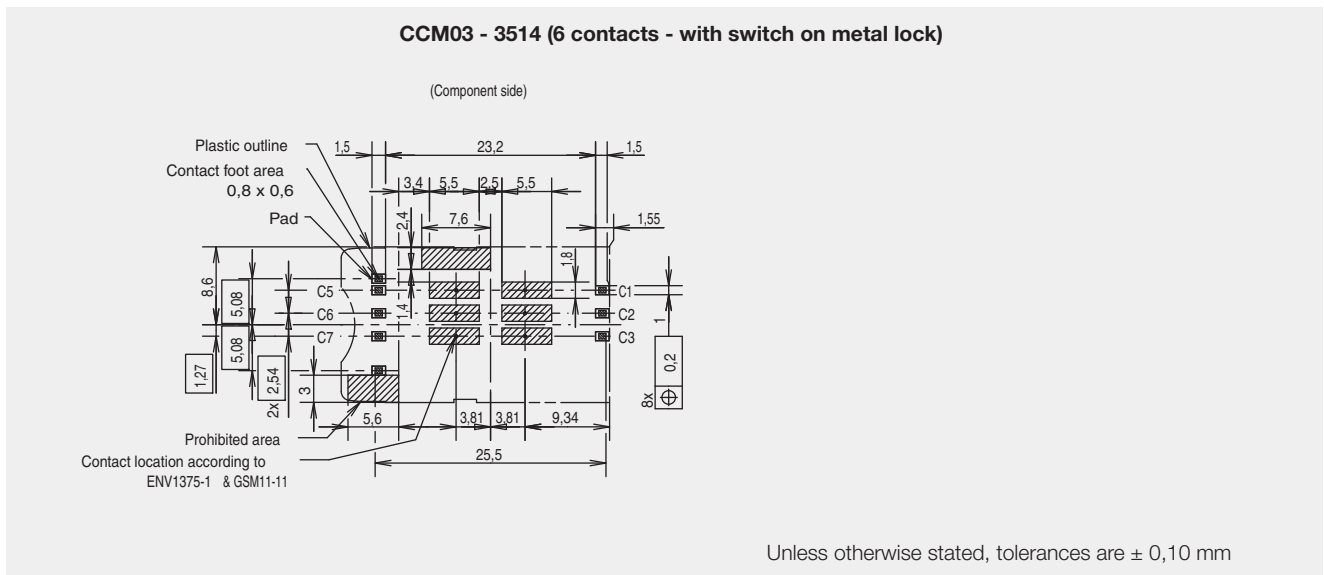


# CCM03 MK II Hinged Cover

## Dimensional Drawings



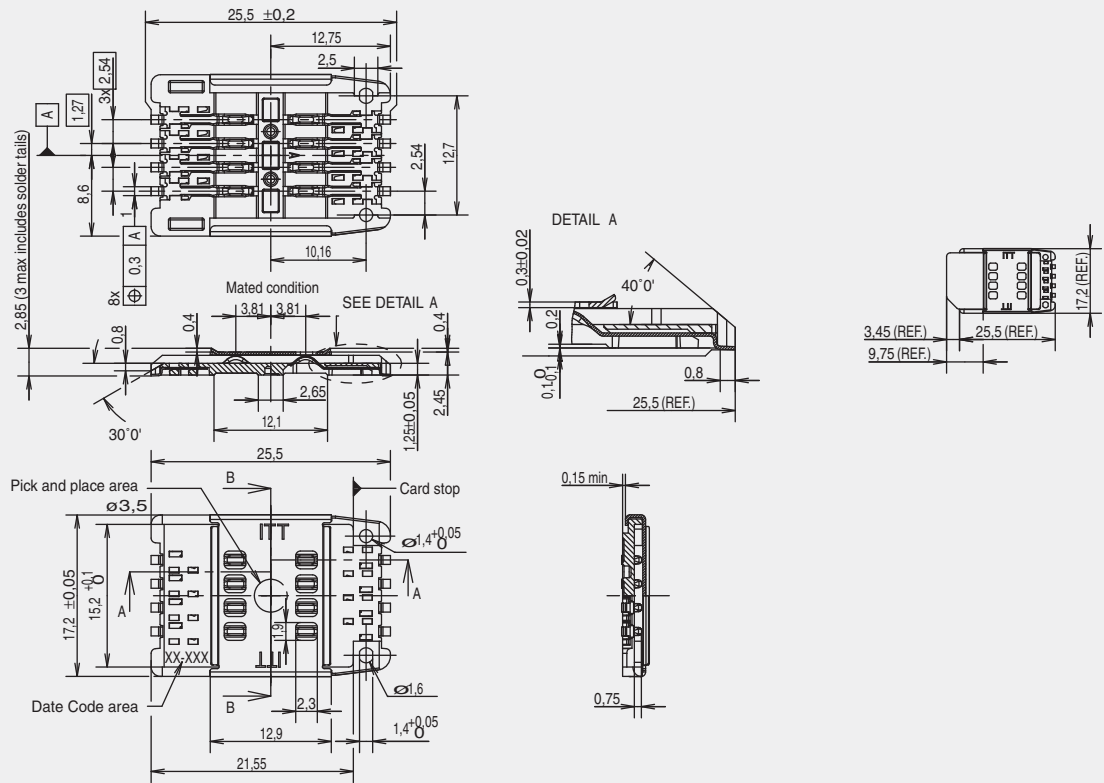
## PCB Layout



# CCM03 MK II Fixed Cover

## Dimensional Drawings

Fixed cover CCM03 - 3504 (8 contacts)

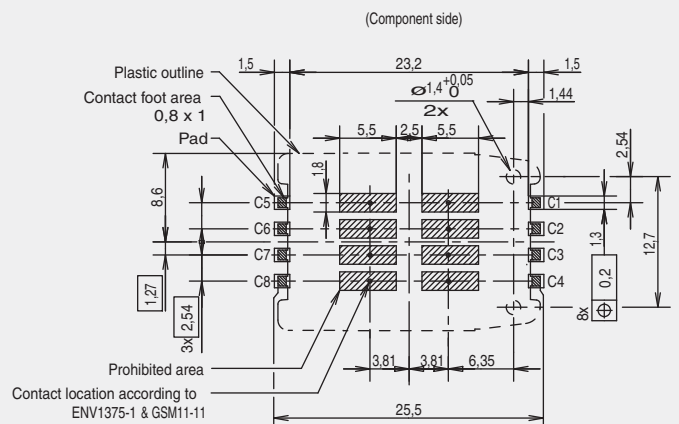
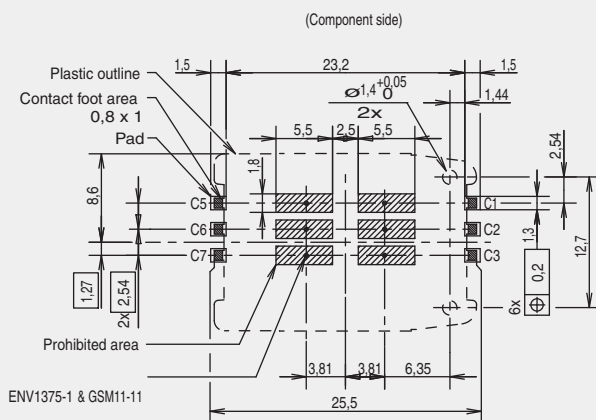


Note: Coplanarity of soldering surfaces:  $\pm 0,05$  mm

## PCB Layout

CCM03 - 3505

CCM03 - 3504



Unless otherwise stated, tolerances are  $\pm 0,10$  mm