

CCM01 MK I



CCM01 MK I connectors have fixed contacts and a blade card detection switch (not sealed).

These connectors are intended for applications where the card usage is relatively low and the environment is benign.

Features

- Available with 8 or 16 through hole contacts.
- A normally closed blade switch detects when the card is fully inserted.
- Snap in boardlocks hold the connector in place prior to soldering.

| Construction | |
|-----------------------|---|
| Contacts | Copper alloy |
| Plating | Contact area : Gold over nickel Terminals : Tin lead (2 μ min) |
| Moldings | Thermoplastic UL 94V-0 rated |
| Card detection switch | Copper alloy |

| Mechanical data | |
|-----------------------|--|
| Number of Contacts | 8 or 16 |
| Mechanical life | 10,000 cycles min |
| Card insertion force | 10 N max |
| Card extraction force | 1 N min / 10N max |
| Contact force | 0.20 N min / 0.60 N max |
| Vibration | Frequency 10 to 500 Hz. Acceleration 50m/s ² Duration 6 hours - amplitude 0.35 mm (0.014) Max electrical discontinuity 1 μ s |
| Shock | Peak value 500 m/s ² - Duration 11 ms 3 shocks in each direction of each axis Max electrical discontinuity 1 μ s |

| Electrical data | |
|---|--------------------------|
| Insulation resistance | 1,000 M Ω min |
| Contact resistance max | 100 m Ω max |
| Switching current | 10 μ A min / 1 A max |
| Dielectric strength | 750 Vrms min |
| Card detection switch | Normally closed |
| Rc card detection switch | 100 m Ω max |
| Dielectric strength card detection switch | 250 Vrms min |
| Switch current rating | 1 mA min / 10 mA max |
| Maximum switch power | 0.2 VA |

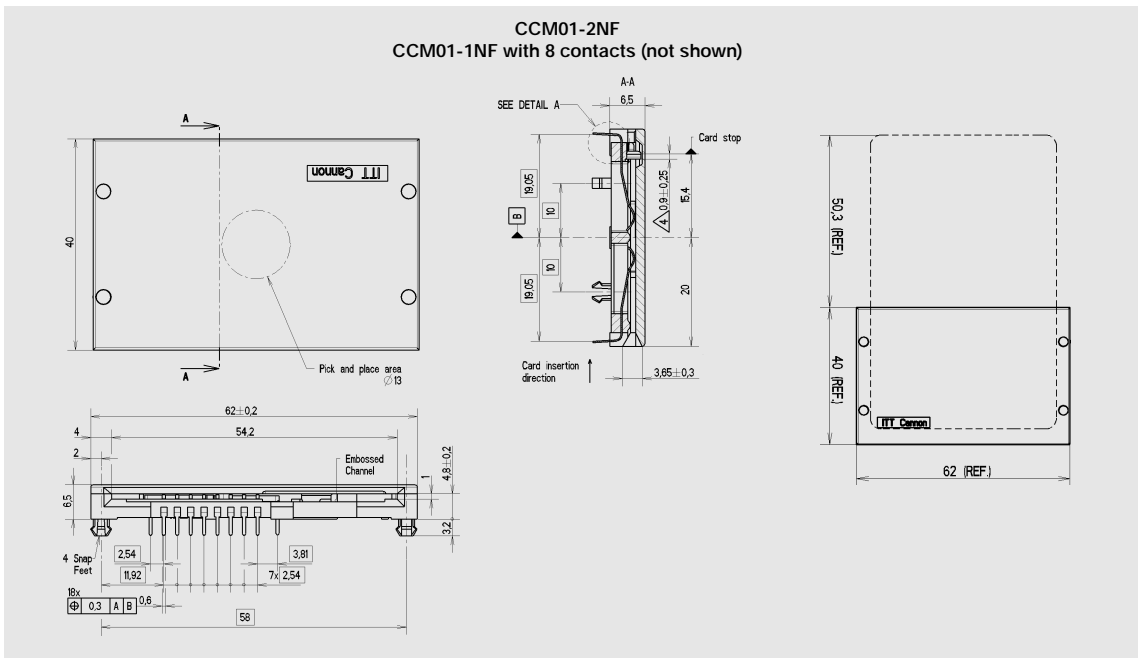
| Environmental data | |
|-----------------------|------------------------------------|
| Operating temperature | -40°C to +85°C |
| Soldering temperature | Wave : 260°C / 5 sec |
| Damp heat | IEC 512 test number 11c (10 days) |
| Salt mist | IEC 512 test number 11f (96 hours) |
| Card detection switch | Not sealed blade switch |

| Ordering code | | |
|---------------|----------------|--------------------|
| Part Number | N° of Contacts | Packaging Multiple |
| CCM01-1NF | 8 | 200 |
| CCM01-2NF | 16 | 200 |

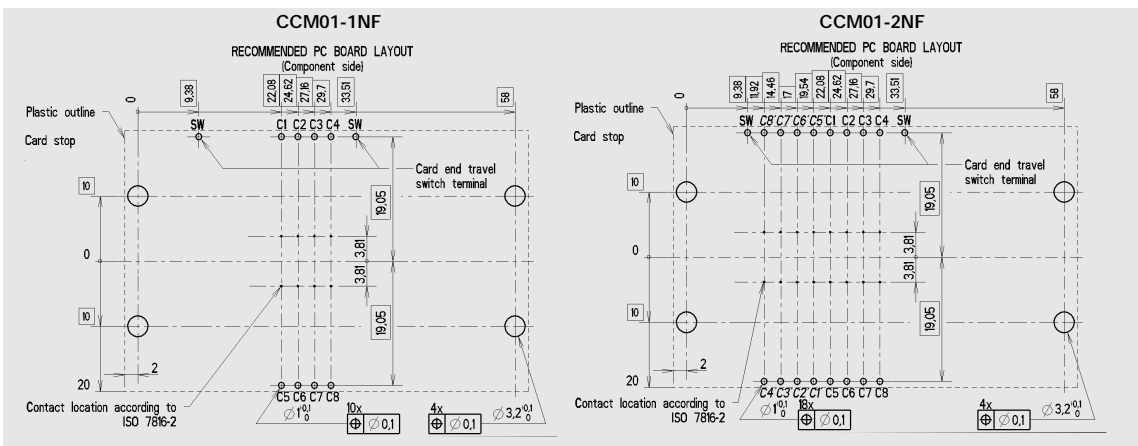
Packaging
20 per tray, 10 trays per box.
Order multiple 200

CCM01 MK I

Dimensional Drawings



PCB Layout



CCM01 MK II



The CCM01 MK II connectors with fixed contacts have been developed for applications where a landing contact mechanism is not required but performance and reliability are still key considerations.

Features

- Available with 8 or 16 contacts which are designed to give a consistently reliable normal force over the life of the connector.
- For added reliability, the card detection switch (which is normally open) is sealed against dust and debris.
- Available with through-hole or surface mount contact termination and its lightweight design means that the connector can be automatically pick-and-placed.
- The moldings are made from high temperature thermoplastics suited for infrared and convection soldering processes.
- Plastic springs in the cover give a positive feel as the card is fully inserted. In case of special version with low card insertions and withdrawal, then the CCM connector is supplied without this spring effect.
- The reduced size of the contact base saves PCB space, makes the connector more stable during soldering and creates an air gap between the contacts and card entry slot, so reducing the risk of an electrostatic transfer to the PCB.
- By using an inlay finish in the contact area, the life of the precious metal is extended by more than 10 times that of standard gold plating.
- A chamfered opening to the card entry slot improves the card guidance into the connector.
- The contact area is spooned to reduce the risk of accidental (or deliberate) damage and to optimize the electrical connection with the card.
- Robustly formed printed circuit tails allow a coplanarity of ± 0.05 mm to be maintained.

Construction

| | |
|-----------------------|---|
| Contacts | Copper alloy |
| Plating | Contact area : Gold alloy inlay Terminals : Tin lead (2 μ min) |
| Moldings | High temp. thermoplastic UL 94V-0 rated |
| Card detection switch | Stainless steel and copper alloy |

Mechanical data

| | |
|---------------------------------------|---|
| Number of Contacts | 8 or 16 |
| Mechanical life | 100,000 cycles min |
| Durability of inlay | 5,000 cycles min (see note 1) |
| Card insertion force | 10 N max |
| Card extraction force | 1 N min / 10N max (4N max for CCM01-2253, 2254, 2255, 2256) |
| Contact force | 0.25 N min / 0.50 N max |
| Card detection switch actuation force | 0.8 N max for actuation (end travel switch actuates when card is 0.9 mm from card stop) 1.8 N max for complete depression |
| Vibration | Frequency 10 to 500 Hz. Acceleration 50m/s ² Duration 6 hours - amplitude 0.35 mm Max electrical discontinuity 1 μ s |
| Shock | Peak value 500 m/s ² - Duration 11 ms 3 shocks in each direction of each axis Max electrical discontinuity 1 μ s |

Electrical data

| | |
|---|--------------------------|
| Insulation resistance | 1,000 M Ω min |
| Contact resistance max | 100 m Ω max |
| Switching current | 10 μ A min / 1 A max |
| Dielectric strength | 750 Vrms min |
| Card detection switch | Normally open |
| Rc card detection switch | 100 m Ω max |
| Dielectric strength card detection switch | 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 |
| 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) |
| Card detection switch | Sealed against dust |

| Part Number | N° of Contacts | Termination Tail Design | Retention Force | Packaging Multiple |
|-------------|----------------|-------------------------|-----------------|--------------------|
| CCM01-2065 | 8 | SMT w/board lock | <10N | 300 |
| CCM01-2067 | 16 | SMT w/board lock | <10N | 300 |
| CCM01-2251 | 8 | SMT | <10N | 300 |
| CCM01-2252 | 16 | SMT | <10N | 300 |
| CCM01-2253 | 8 | SMT | <4N | 300 |
| CCM01-2254 | 16 | SMT | <4N | 300 |
| CCM01-2255 | 8 | Through hole | <4N | 300 |
| CCM01-2256 | 16 | Through hole | <4N | 300 |

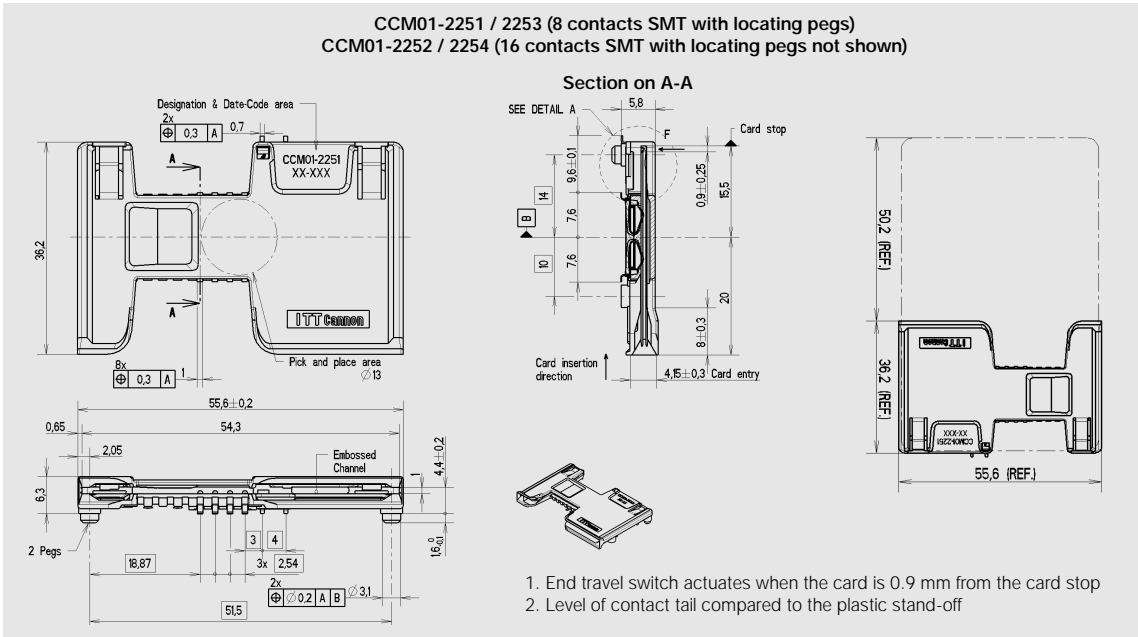
Packaging

30 per tray, 10 trays per box.
Order multiple 300

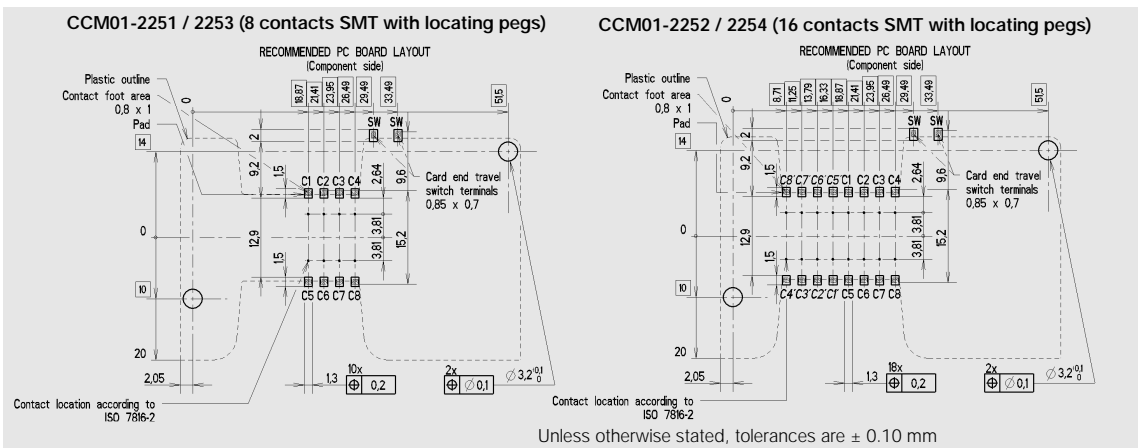
Note 1: Inlay (precious metal) rating is based on a very abrasive card being used and is intended to represent worst case.

CCM01 MK II

Dimensional Drawings

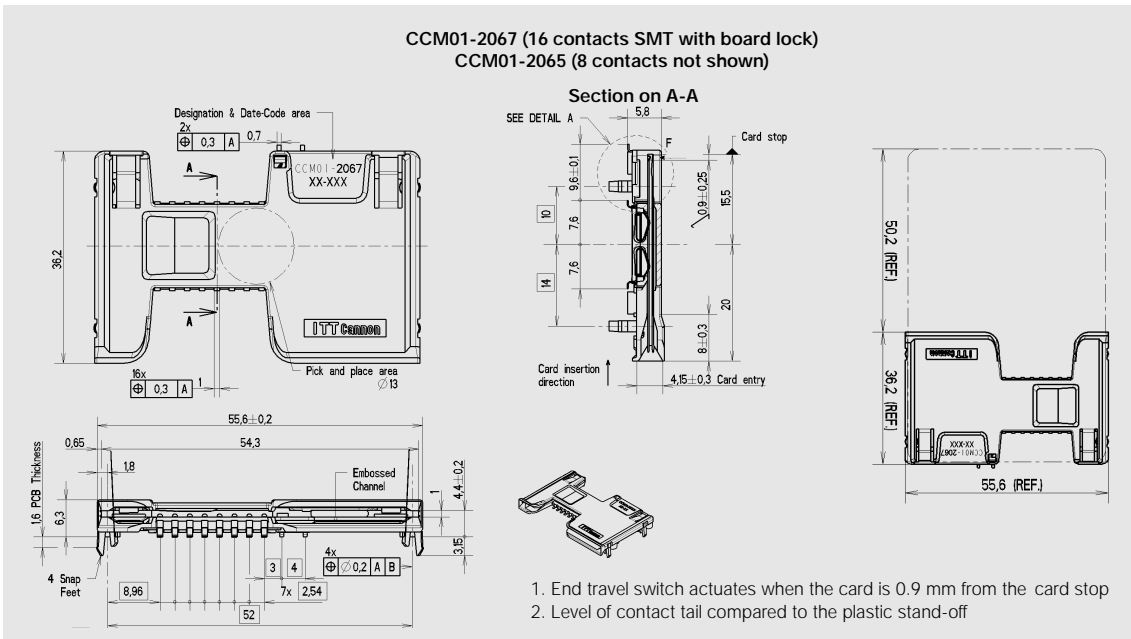


PCB Layout

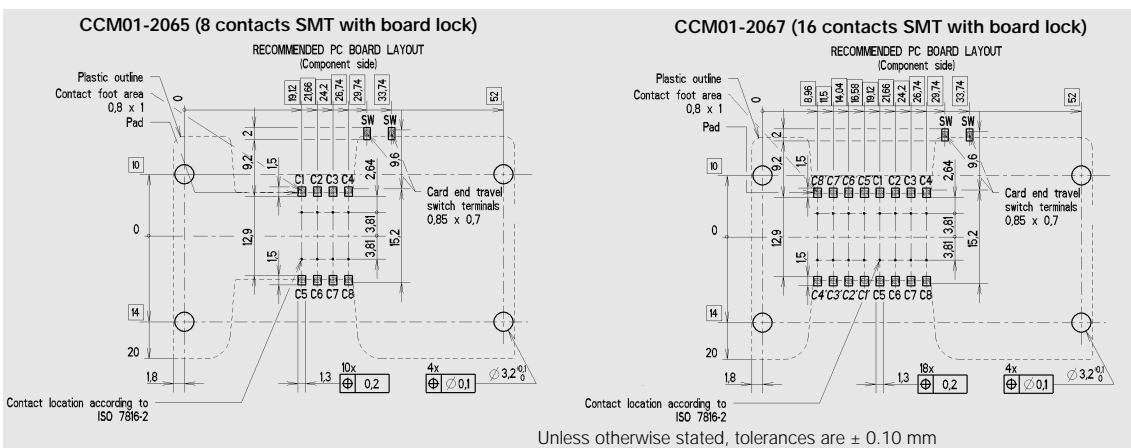


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Dimensional Drawings

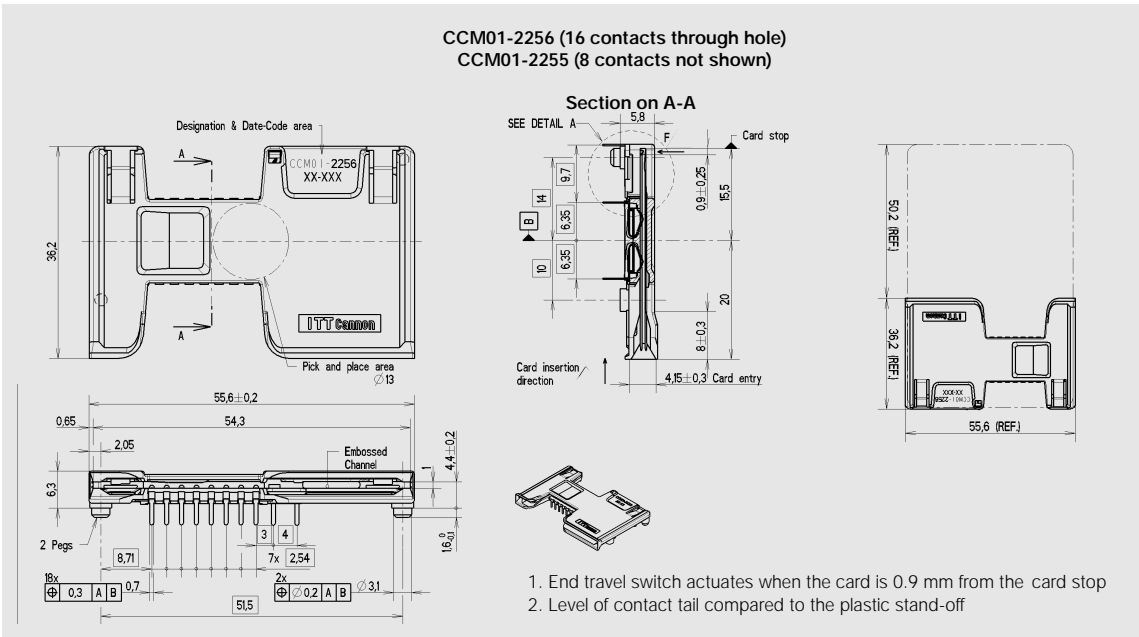


PCB Layout



CCM01 MK II

Dimensional Drawings



PCB Layout

