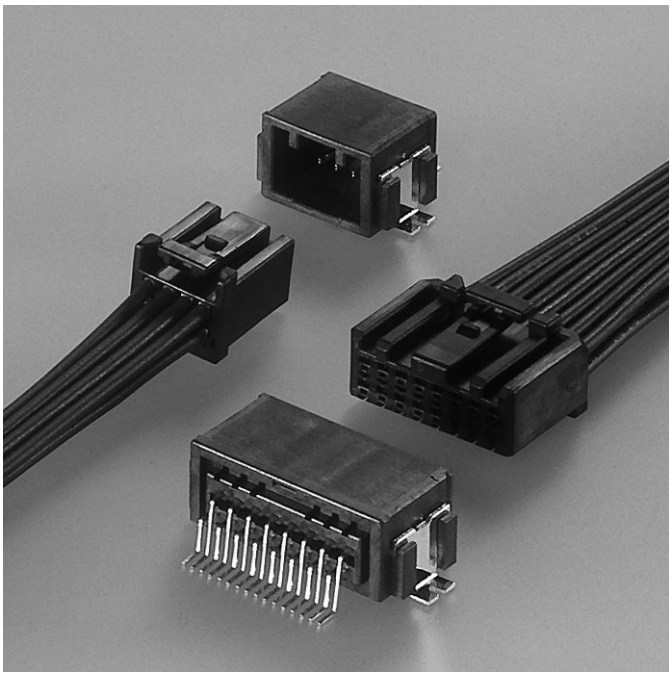
# CPT CONNECTOR

## Board-to-wire

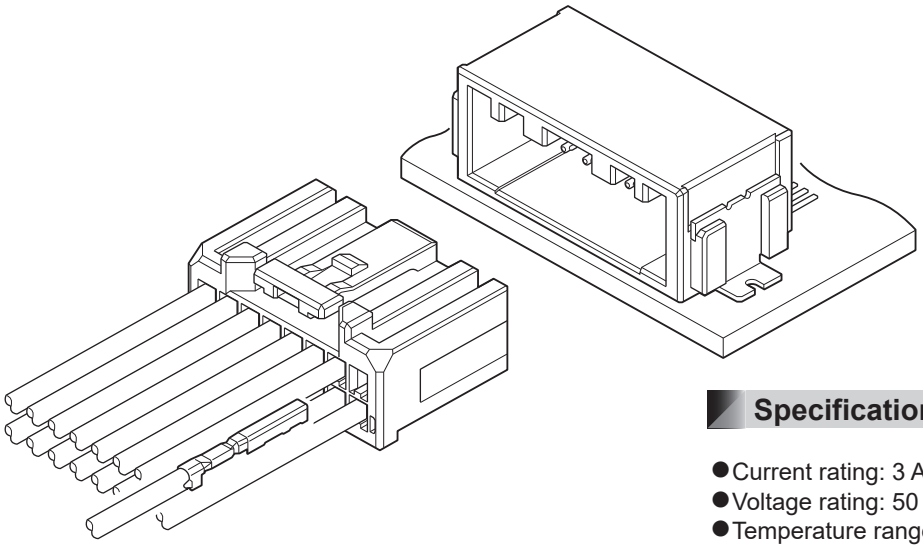


Developed in pursuit of miniaturization and low profile as PC board connector for automobile.
This connector is surface mounting type connector having the spring structure on male terminal disproving the conventional concept.

## Features

**●Compact design**
2.0 mm pitch is realized miniaturization and low profile as the connector for automobile.

**●Terminal construction**
Female terminal is designed for simple box structure by having spring structure on male terminal.

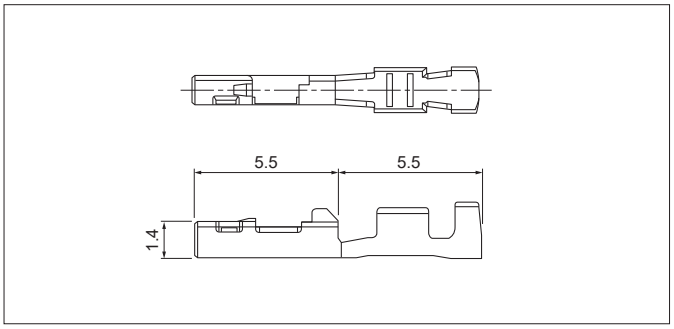


## Specifications

- Current rating: 3 A AC, DC (0.3 $mm^2$, Single circuit)
- Voltage rating: 50 V AC, DC
- Temperature range: –40°C to +100°C
  (including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 8 mΩ max.
  After environmental tests/ 16 mΩ max.
- Insulation resistance: 100 MΩ min.
- Withstanding voltage: 1,000 VAC/minute
- Applicable wire: AESSX-f/ AVSS
  0.3 $mm^2$

* Compliant with ELV/RoHS2.
* Contact JST for details.

## Female terminal



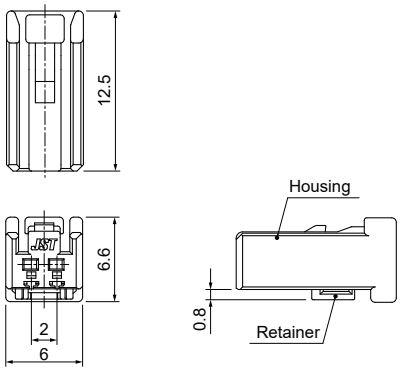

| Model No. | Applicable wire range | | Q'ty/reel |
|---|---|---|---|
| | Conductor (mm²) | Insulation O.D. (mm) | |
| **SCPT-A021GF-0.5** | 0.3 | 1.4 | 15,000 |

| Material and Finish |
|---|
| Brass, nickel-undercoated, Contact area; gold-plated<br>Barrel area; tin-plated |

## Female connector

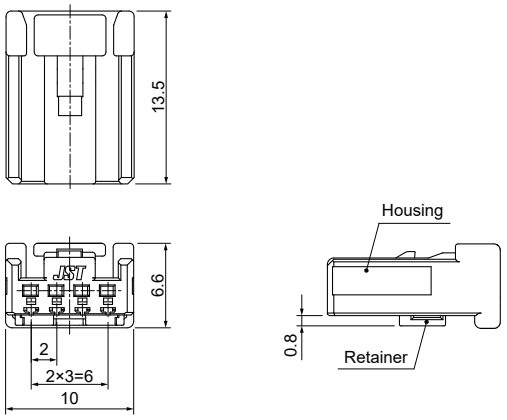
### Single row

●**2 circuits**

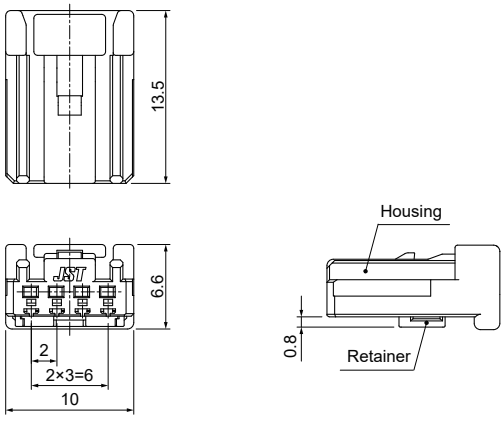



●**4 circuits**

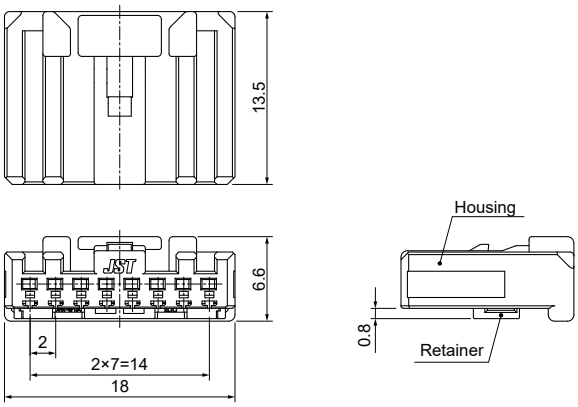
**04CPT-B1-2A**




**04CPT-B1-2B**




●**8 circuits**



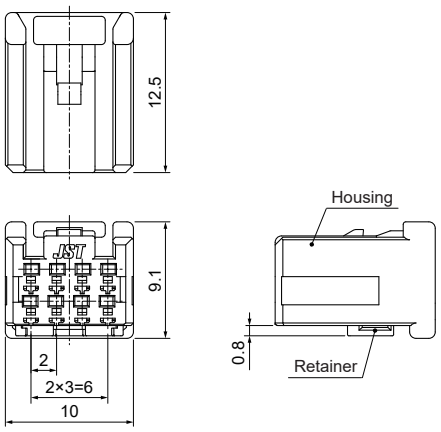

| Circuits | Model No. | Q'ty/box |
|---|---|---|
| 2 | **02CPT-B-2A** | 500 |
| 4 | **04CPT-B1-2A** | 600 |
| | **04CPT-B1-2B** | |
| 8 | **08CPT-B1-2A** | 400 |

| Material and Finish |
|---|
| Housing: Glass-filled PBT, Black<br>Retainer: Glass-filled PBT, Blue |

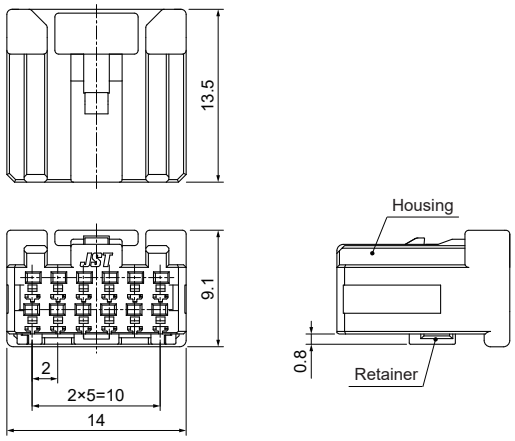
## Female connector

### Dual row

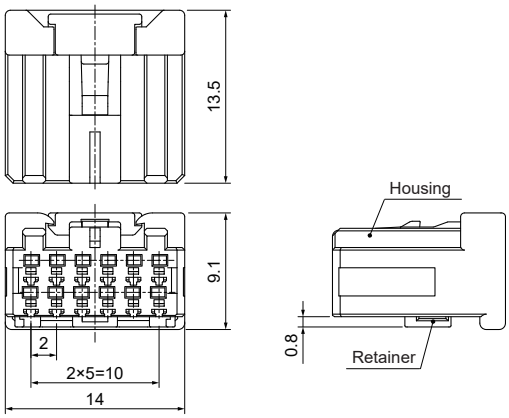
**●8 circuits**



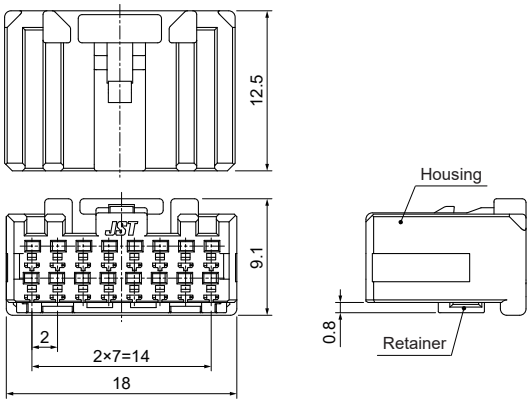

**●12 circuits**
**12CPT-B-2A**



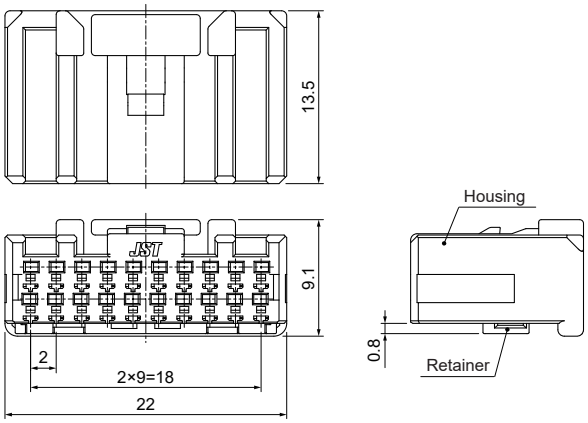

**●12 circuits**
**12CPT-B-2A-FL**



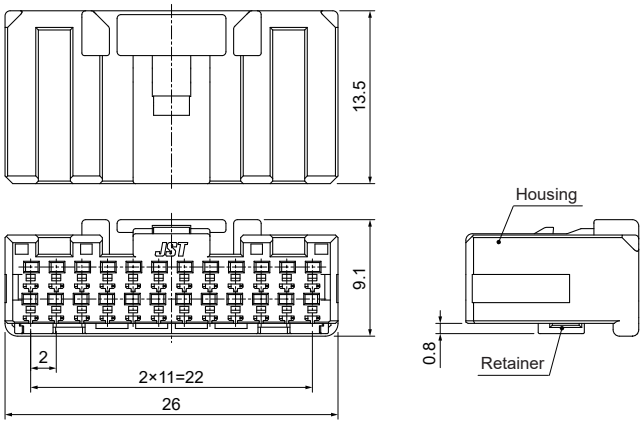

**●16 circuits**




**●20 circuits**




**●24 circuits**




| Circuits | Model No. | Q'ty/box |
|---|---|---|
| 8 | **08CPT-B-2A** | 500 |
| 12 | **12CPT-B-2A** | 300 |
| | **12CPT-B-2A-FL** | |
| 16 | **16CPT-B-2A** | 250 |
| 20 | **20CPT-B-2A** | 250 |
| 24 | **24CPT-B-2A** | 200 |

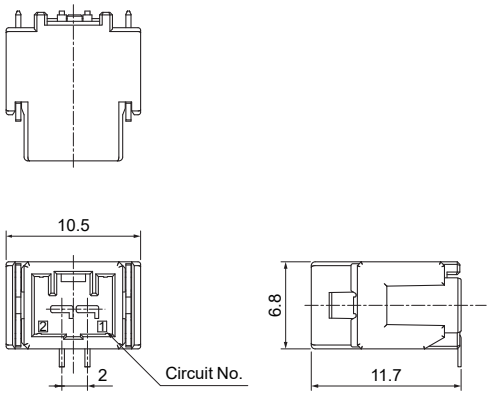
| Material and Finish |
|---|
| Housing: Glass-filled PBT, Black<br>Retainer: Glass-filled PBT, Blue |

## Male connector

### Top entry type

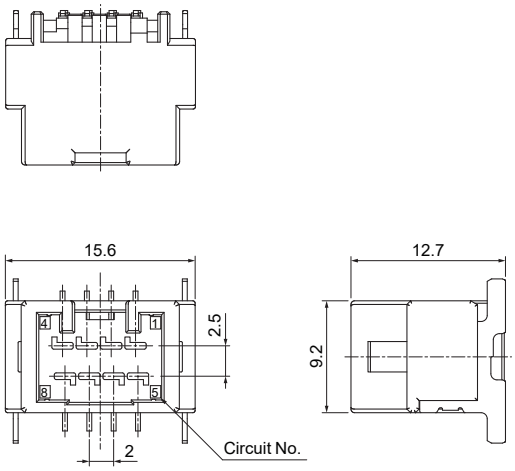
#### Single row

●2 circuits

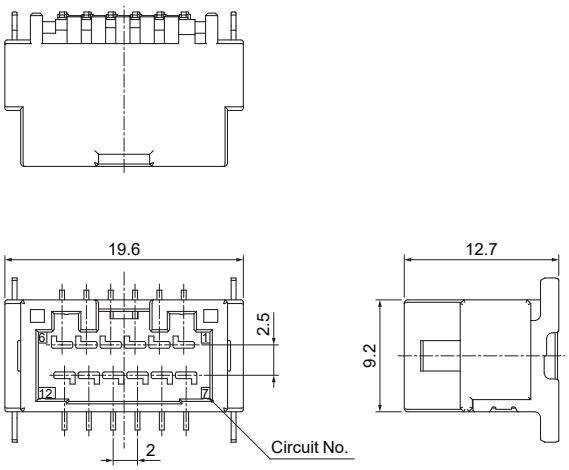



#### Dual row

●8 circuits




●12 circuits




| Type | | Circuits | Model No. | Q'ty/reel |
|---|---|---|---|---|
| Top | Single row | 2 | **BM02B-CPTK-1A-TB** | 370 |
| | Dual row | 8 | **BM08B-CPTK-1A-TB** | 240 |
| | | 12 | **BM12B-CPTK-1A-TB** | |

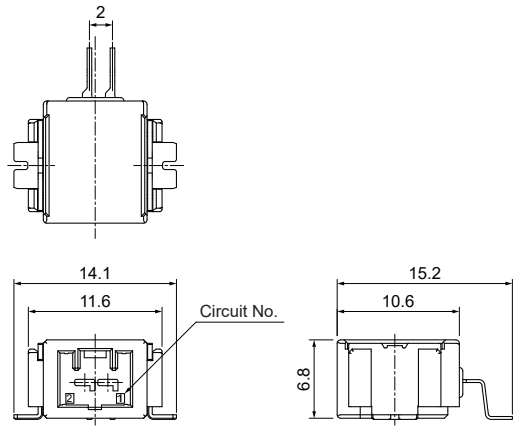
| Material and Finish |
|---|
| Terminal: Copper alloy, nickel-undercoated,<br>Contact area; gold-plated<br>Solder tail; tin-plated (reflow treatment) |
| Housing: Glass-filled LCP, Black |
| Peg: Brass, nickel-undercoated, tin-plated (reflow treatment) |

## Male connector

### Side entry type

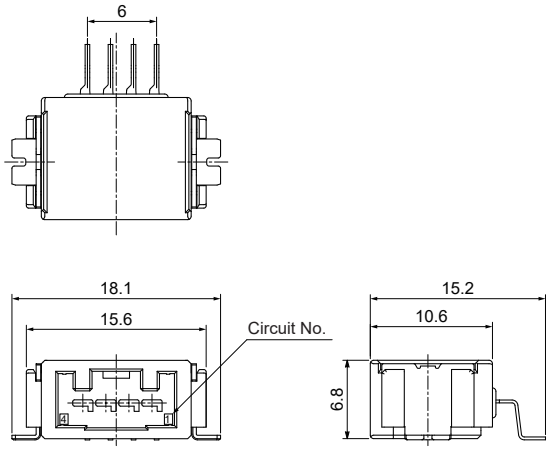
#### Single row

●2circuits

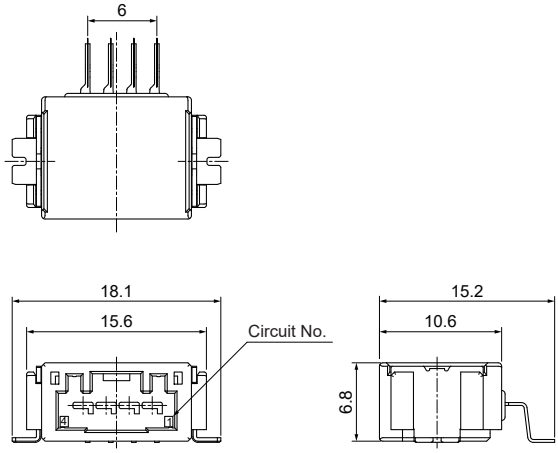



●4 circuits

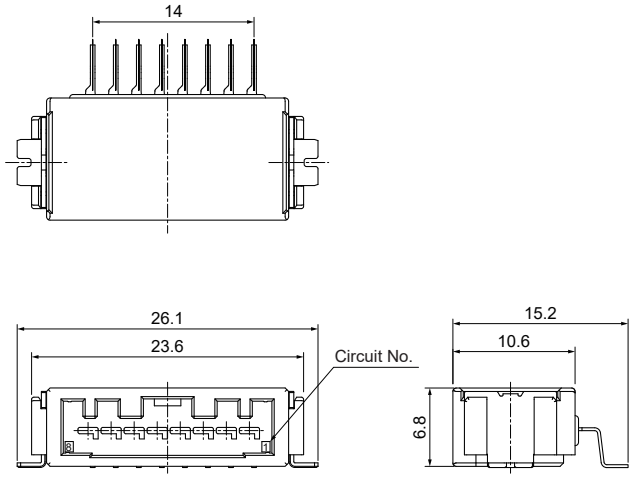
**SM04B1-CPTK-1A-TB**




**SM04B1-CPTK-1B-TB**




●8 circuits




| Type | | Circuits | Model No. | Q'ty/reel |
|---|---|---|---|---|
| Side | Single row | 2 | **SM02B-CPTK-1A-TB** | 500 |
| | | 4 | **SM04B1-CPTK-1A-TB** | |
| | | | **SM04B1-CPTK-1B-TB** | |
| | | 8 | **SM08B1-CPTK-1A-TB** | |

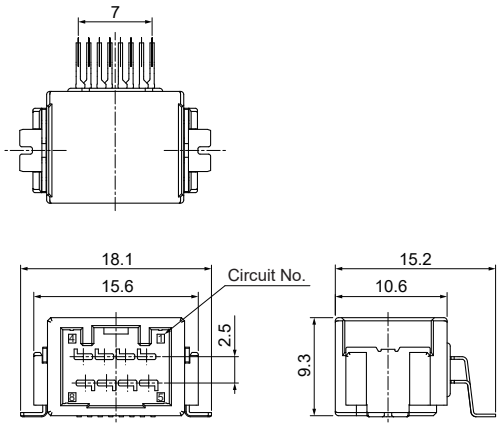
| Material and Finish |
|---|
| Terminal: Copper alloy, nickel-undercoated,<br>Contact area; gold-plated<br>Solder tail; tin-plated (reflow treatment) |
| Housing: Glass-filled LCP, Black |
| Peg: Brass, nickel-undercoated, tin-plated (reflow treatment) |

## Male connector

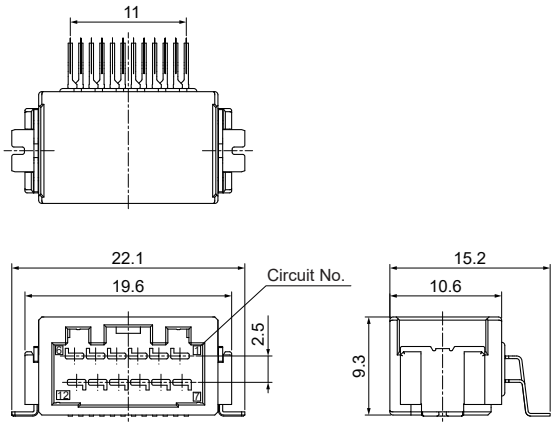
### Side entry type

#### Dual row

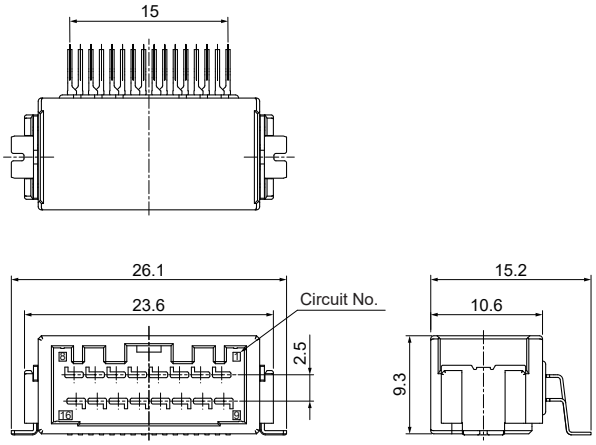
●8 circuits



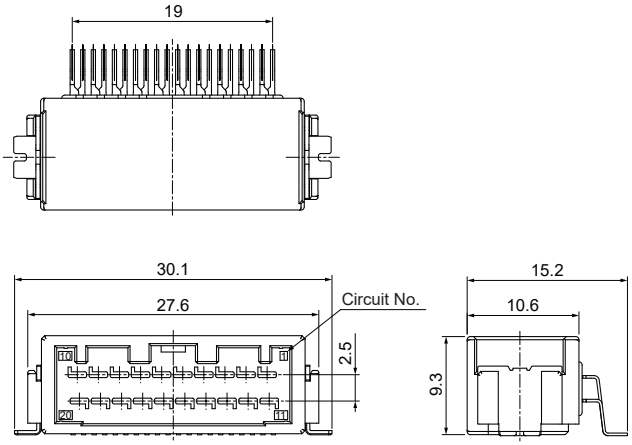

●12 circuits



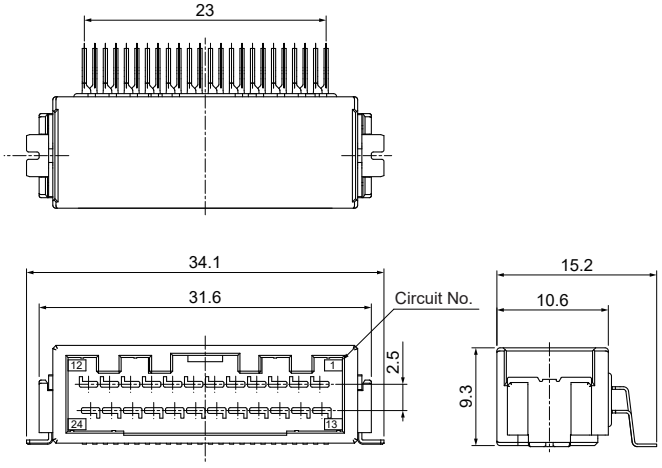

●16 circuits




●20 circuits




●24 circuits



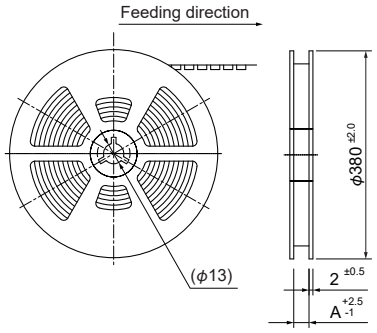

| Type | | Circuits | Model No. | Q'ty/reel |
|---|---|---|---|---|
| Side | Dual row | 8 | **SM08B-CPTK-1A-TB** | 390 |
| | | 12 | **SM12B-CPTK-1A-TB** | |
| | | 16 | **SM16B-CPTK-1A-TB** | |
| | | 20 | **SM20B-CPTK-1A-TB** | |
| | | 24 | **SM24B-CPTK-1A-TB** | |

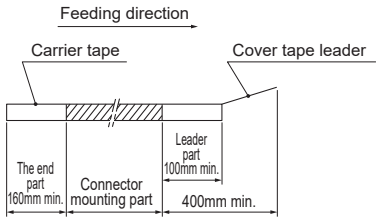
| Material and Finish |
|---|
| Terminal: Copper alloy, nickel-undercoated,<br>Contact area; gold-plated<br>Solder tail; tin-plated (reflow treatment)<br>Housing: Glass-filled LCP, Black<br>Peg: Brass, nickel-undercoated, tin-plated (reflow treatment) |

## Taping Specifications

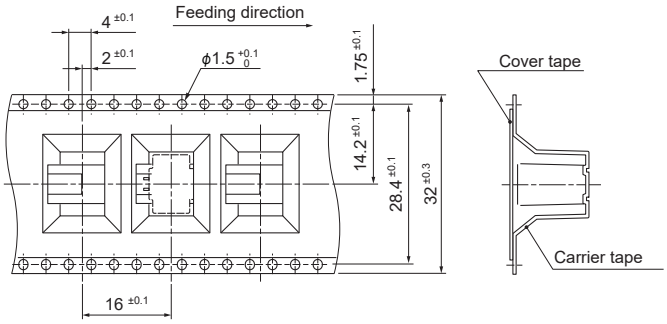
### Top entry type

●2, 8, 12 circuits

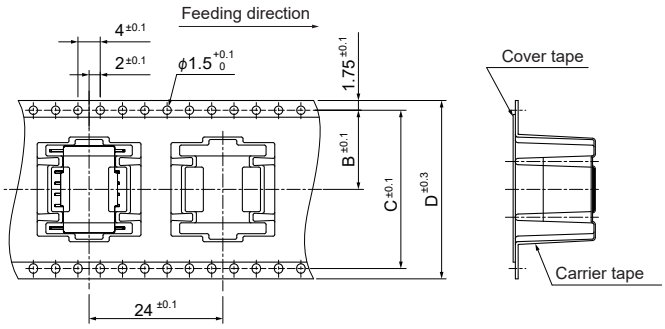



●2 circuits



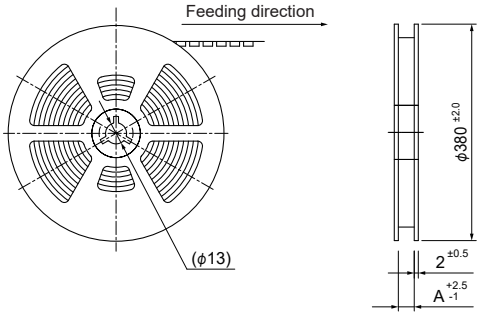

●8, 12 circuits

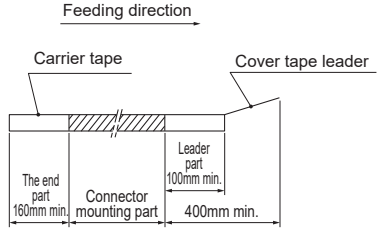


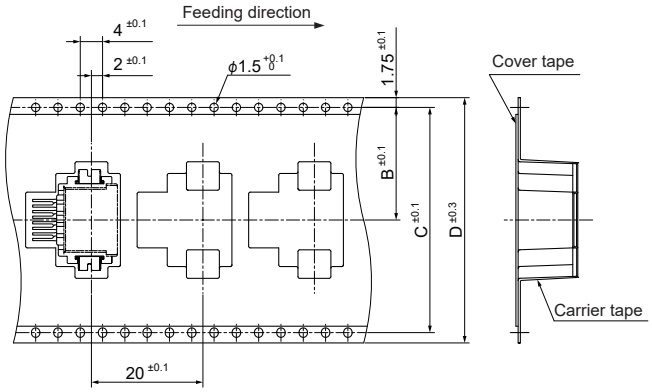

| Type | Circuits | A | B | C | D |
|---|---|---|---|---|---|
| Single row | 2 | 33.5 | — | — | — |
| Dual row | 8 | 33.5 | 14.2 | 28.4 | 32 |
| | 12 | 45.5 | 20.2 | 40.4 | 44 |

### Side entry type

●2, 4, 8, 12, 16, 20, 24 circuits




| Type | Circuits | A | B | C | D |
|---|---|---|---|---|---|
| Single row | 2 | 33.5 | 14.2 | 28.4 | 32 |
| | 4 | 33.5 | 14.2 | 28.4 | 32 |
| | 8 | 45.5 | 20.2 | 40.4 | 44 |
| Dual row | 8 | 45.5 | 20.2 | 40.4 | 44 |
| | 12 | 45.5 | 20.2 | 40.4 | 44 |
| | 16 | 45.5 | 20.2 | 40.4 | 44 |
| | 20 | 45.5 | 20.2 | 40.4 | 44 |
| | 24 | 57.5 | 26.2 | 52.4 | 56 |

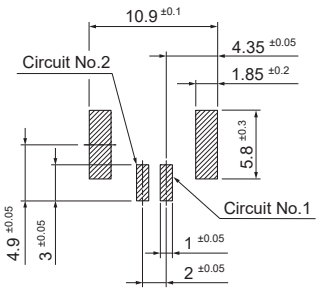
## PC board layout, Assembly layout

### Top entry type

#### PC board layout

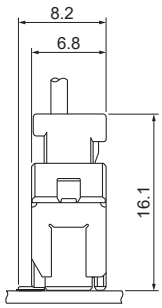
**Single row**

●2 circuits



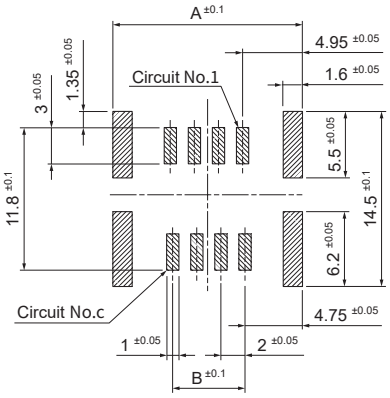

#### Assembly layout

●2 circuits

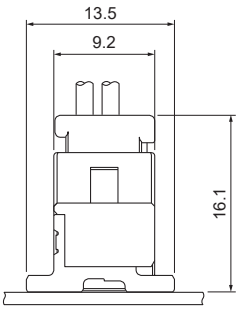



**Dual row**

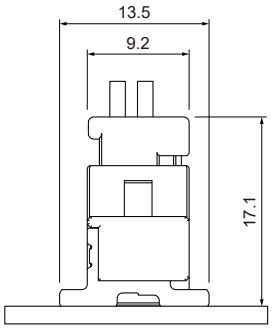
●8, 12 circuits




●8 circuits




●12 circuits




| Circuits | A | B |
|---|---|---|
| 8 | 15.7 | 6 |
| 12 | 19.7 | 10 |

Note: 1. Tolerances are non-cumulative: ±0.05 mm for all centers.
2. The dimensions above should serve as guideline. Contact JST for details.

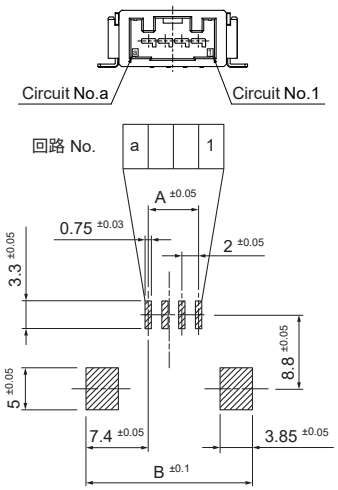
## PC board layout, Assembly layout

### Side entry type

#### PC board layout

#### Single row

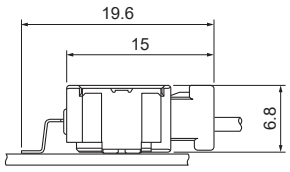
●2, 4, 8 (Single) circuits



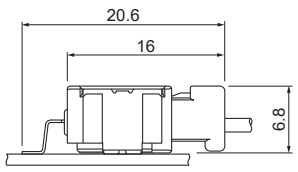

| Circuits | A | B |
|---|---|---|
| 2 | 2 | 15.8 |
| 4 | 6 | 19.8 |
| 8 (Single) | 14 | 27.8 |

#### Assembly layout

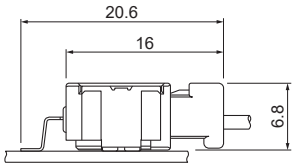
●2 circuits




●4 circuits

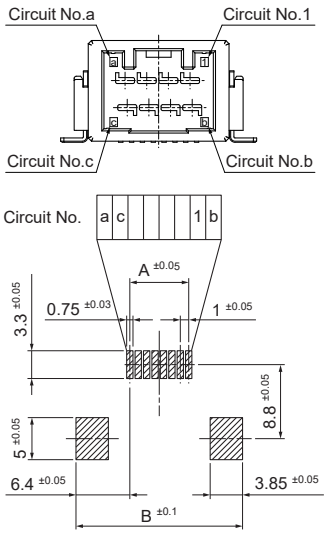



●8 (Single) circuits



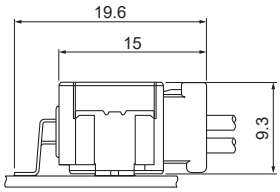

#### Dual row

●8 (Dual), 12, 16, 20, 24 circuits

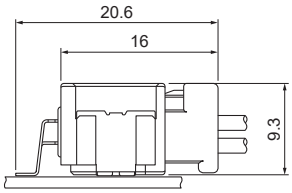



| Circuits | A | B |
|---|---|---|
| 8 (Dual) | 7 | 19.8 |
| 12 | 11 | 23.8 |
| 16 | 15 | 27.8 |
| 20 | 19 | 31.8 |
| 24 | 23 | 35.8 |

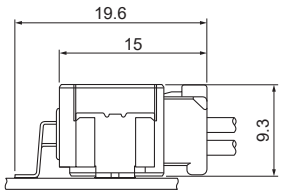
●8 (Dual) circuits



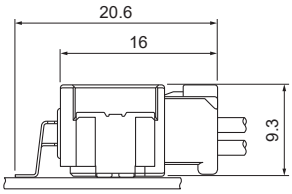

●12 circuits




●16 circuits




●20, 24 circuits




Note: 1. Tolerances are non-cumulative: ±0.05 mm for all centers.
2. The dimensions above should serve as guideline. Contact JST for details.

## Crimping machine, Applicator

| Strip terminal | Crimping machine | Crimp applicator MKS-L | |
|---|---|---|---|
| | | Dies | Crimp applicator with dies |
| **SCPT-A021GF-0.5** | AP-K2N | MK/SCPT-A021-05 | APLMK SCPT-A021-05 |

Note: When crimping operation is conducted using an applicator and die set other than the above, JST cannot guarantee the performance of the terminal.

# Mouser Electronics

Authorized Distributor

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JST:

02CPT-B-2A BM08B-CPTK-1A-TB SM02B-CPTK-1A-TB SM12B-CPTK-1A-TBL SM08B-CPTK-1A-TBL 04CPT-B1-2A 16CPT-B-2A BM02B-CPTK-1A-TB SM16B-CPTK-1A-TBL 20CPT-B-2A 12CPT-B-2A SM04B1-CPTK-1A-TB SM20B-CPTK-1A-TBL 08CPT-B-2A SCPT-A021GF-0.5 24CPT-B-2A SM24B-CPTK-1A-TB(L) SM04B1-CPTK-1B-TB