

# XM7

## USB Connectors

### Small Interface Connectors That Conform to USB Standards

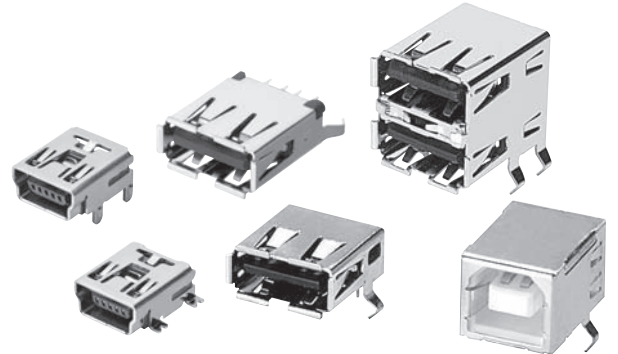
- Compliant with the USB 2.0 standard.

#### mini-USB Connectors

- Insertion durability of 5,000 times.
- Lineup includes models with right-angle DIP terminals and SMT terminals.
- Models with SMT terminals are available with reel packaging.



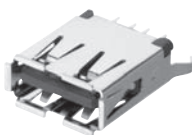
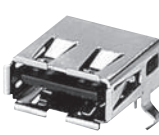


#### USB Connectors

- Insertion durability of 1,500 times.
- USB A-type sockets for mounting on personal computers and USB hubs. USB B-type sockets for mounting on printers, scanners, mice, and other peripheral devices for computers.



RoHS Compliant

### Connectors

|                             |            |  |  |  |  |
|-----------------------------|------------|--|--|--|--|
| USB 2.0 Mini-USB Connectors | Appearance | Right-angle DIP Terminals<br> |  | Right-angle SMT Terminals<br> |  |
|                             | Model      | XM7D-0512  |  | Packaged on stick: XM7D-0514, Packaged on reel: XM7D-0514-R  |  |
|                             | Page       | Page 2   |  |  |  |
| USB 2.0 Connectors          | Appearance | Straight DIP Terminals<br>    | Right-angle DIP Terminals<br> | Right-angle DIP Terminals<br>  | Right-angle DIP Terminals<br> |
|                             | Model      | XM7A-0441  | XM7A-0442  | XM7A-0442-A  | XM7B-0442  |
|                             | Page       | Page 4   |  |  |  |

# XM7D USB 2.0 mini-USB Connectors

## Model Number Legend

XM7D-05 1 □-□  
 1 2 3 4 5

### 1 Type

D: mini-B-type socket

### 2 No. of Contacts

05: 5 contacts

### 3 Plating Specification

1: Gold plating

### 4 Terminal Shape

2: Right-angle DIP terminals

4: Right-angle SMT terminals

### 5 Special Specification



(Right-angle SMT Terminals Only)

Blank : Packaged on tray or stick

R : Packaged on reel

## Ordering Information

### ●Sockets

|                                    | Right-angle DIP terminals   | Right-angle SMT terminals  |
|------------------------------------|---|--|
| Appearance                         |  |  |
| Model                              | <b>XM7D-0512</b>  | <b>XM7D-0514</b>   |
| Minimum ordering quantity (pieces) | 100/tray  | 50/stick   |
| Model                              | -   | <b>XM7D-0514-R</b>   |
| Quantity per reel (pieces)*        | -   | 500/reel*  |

\* Please order by integer multiple of the quantity per reel.

## Ratings and Characteristics

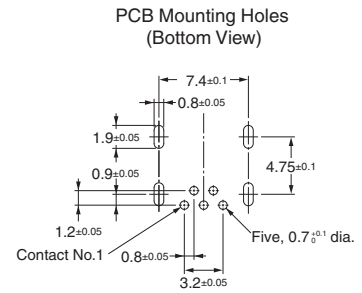
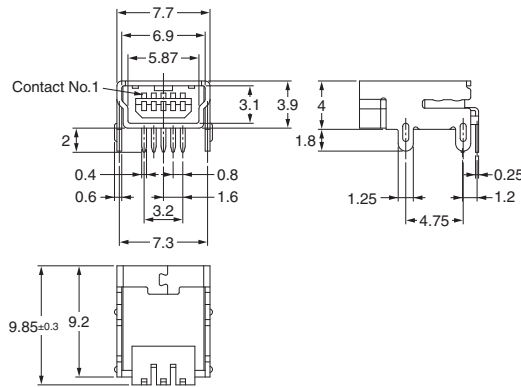
|                               |  |
|-------------------------------|--|
| Rated current                 | 1 A  |
| Rated voltage                 | 30 VAC   |
| Contact resistance            | 50 mΩ max. (at 20 mV, 100 mA max.)               |
| Insulation resistance         | 100 MΩ min.                                      |
| Dielectric strength           | 100 VAC for 1 min (leakage current: 0.5 mA max.) |
| Insertion durability          | 5,000 times                                      |
| Ambient operating temperature | 0 to 50°C (with no icing or condensation)        |

## Materials and Finish

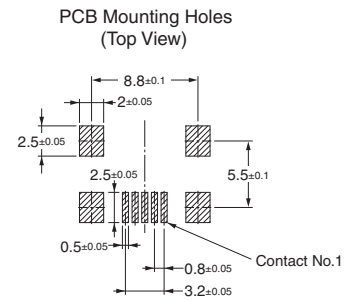
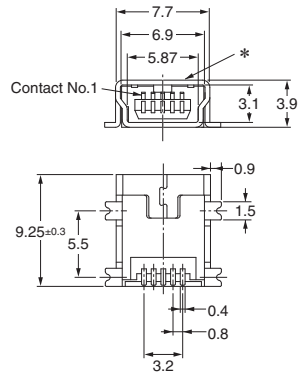
|          |                             |                           |
|----------|-----------------------------|---------------------------|
| Housing  | LCP/Black                   |                           |
| Contacts | Mating end                  | Copper alloy/gold plating |
|          | Terminals                   | Copper alloy/tin plating  |
| Shell    | Copper alloy/nickel plating |                           |

**■Dimensions**

**XM7D-0512**



**XM7D-0514**  
**XM7D-0514-R**



\* The adhesive tape is on the top surface of the Connectors.

XM7

# XM7A/B USB 2.0 USB Connectors

## Model Number Legend

XM7□-04 4 □-□  
<sub>1 2 3 4 5</sub>

### 1 Type

A: A-type socket  
 B: B-type socket

### 2 No. of Contacts

04: 4 contacts

### 3 Plating Specification

4: Gold plating

### 4 Terminal Shape


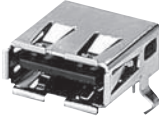


1: Straight DIP terminals  
 2: Right-angle DIP terminals

### 5 Special Specification (A-type Sockets Only)

Blank : Single socket  
 A : Double stacked sockets

## Ordering Information

### ●Sockets

| Item                               | Type | Single A-type Socket  | Single A-type Socket  | Double Stacked A-type Sockets  | Single B-type Socket  |
|------------------------------------|------|---|---|--|---|
| Appearance                         |      | Straight DIP Terminals  | Right-angle DIP Terminals   | Right-angle DIP Terminals  | Right-angle DIP Terminals   |
|                                    |      |  |  |  |  |
| Model                              |      | XM7A-0441   | XM7A-0442   | XM7A-0442-A  | XM7B-0442   |
| Minimum ordering quantity (pieces) |      | 120   | 150   | 120  | 150   |

## Ratings and Characteristics

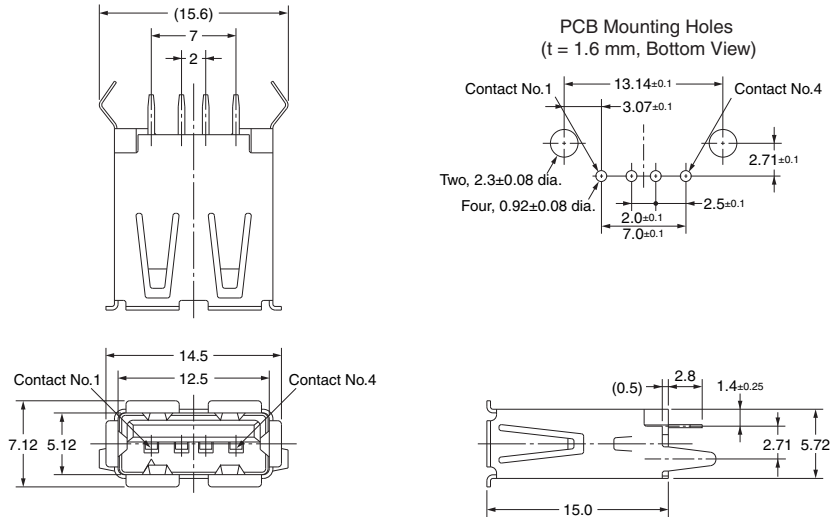
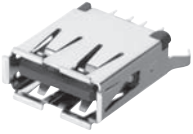
|                               |  |
|-------------------------------|--|
| Rated current                 | 1 A  |
| Rated voltage                 | 30 VAC   |
| Contact resistance            | 30 mΩ max. (at 20 mV, 100 mA max.)               |
| Insulation resistance         | 1,000 MΩ min. (at 500 VDC)                       |
| Dielectric strength           | 750 VAC for 1 min (leakage current: 0.5 mA max.) |
| Insertion durability          | 1,500 times                                      |
| Ambient operating temperature | -40 to 60°C (with no icing or condensation)      |

## Materials and Finish

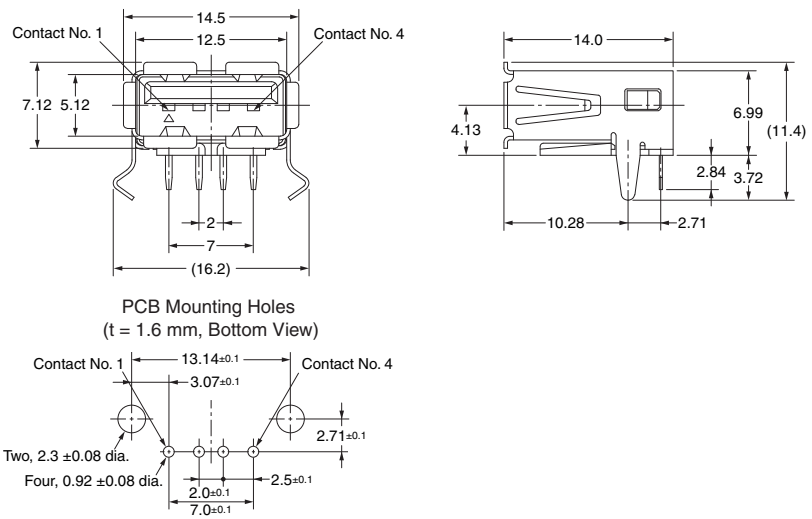
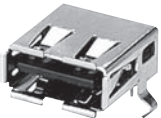
|          |            |   |
|----------|------------|---|
| Housing  |            | PBT<br>A-type Sockets: Black<br>B-type Sockets: White |
| Contacts | Mating end | Copper alloy/gold plating                             |
|          | Terminals  | Copper alloy/tin alloy plating                        |
| Shell    |            | Copper alloy/tin plating                              |

**■Dimensions**

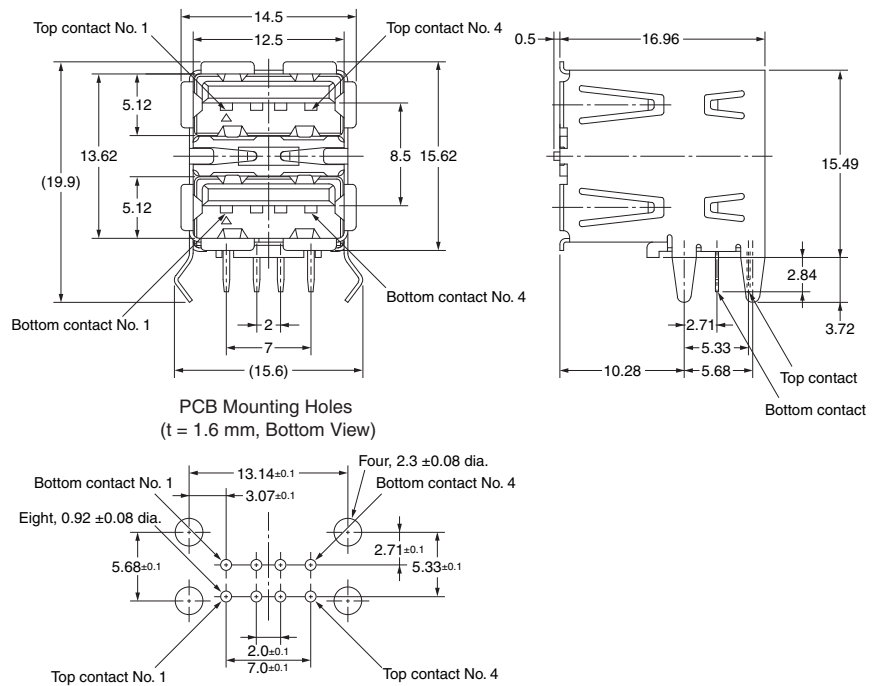
**XM7A-0441  
Single A-type Socket**



**XM7A-0442  
Single A-type Socket**

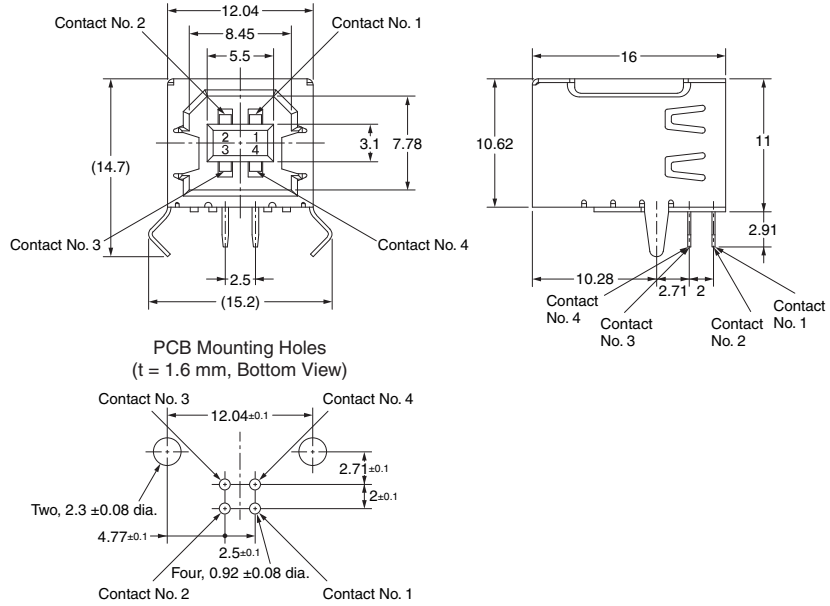


**XM7A-0442-A  
Double Stacked A-type Sockets**



# XM7

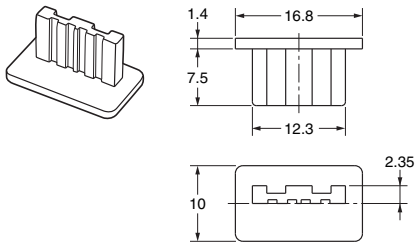
## XM7B-0442 Single B-type Socket



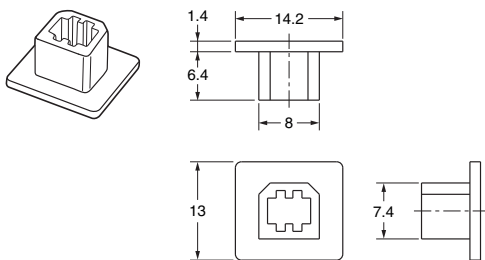
### ■Accessories (sold separately)

(Unit: mm)

#### ●Dust cover (For XM7A Single A-type socket) XM7Z-0001 (A type)



#### ●Dust cover (For XM7B sockets) XM7Z-0002 (B type)



#### Characteristics/Material

|                               |  |
|-------------------------------|--|
| Ambient operating temperature | -40 to 60°C<br>(with no icing or condensation) |
| Material                      | PE   |

| Model     | Applicable                  | Minimum ordering quantity (pieces) |
|-----------|-----------------------------|------------------------------------|
| XM7Z-0001 | XM7A (Single A-type Socket) | 50                                 |
| XM7Z-0002 | XM7B                        |                                    |

Note: Dust covers cannot be used for Double Stacked A-type sockets.

**Precautions**

**Precautions for Correct Use**

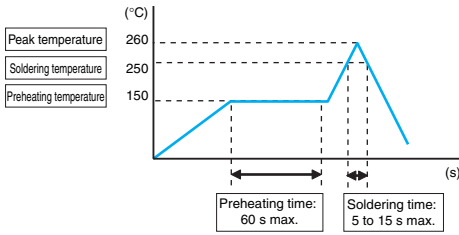
**Automatic Soldering**

Reference Information: Automated Soldering Conditions (Jet Flow)

- (1) Soldering temperature: 250 ±5°C
- (2) Continuous soldering time: 5 ±1 s max.

**Soldering Conditions**

- Reference Information: Reflow Conditions
  - Maximum temperature: 260°C
  - Time: 5 to 15 s max.



These conditions, however, depend on the type of solder, the manufacturer, the amount of solder, the size of the board, and the other mounting materials.

**Metal Mask for Cream Solder Printing**

We recommend a metal mask thickness of 0.15 mm when printing cream solder.

The appropriate conditions, however, depend on the type of solder, the manufacturer, the amount of solder, the size of the circuit board, other mounting materials, and other conditions.

**Terminal Shapes**

The terminals will deform if they are subjected to an excessive load, which will in turn reduce solderability when mounting. Do not drop the Connectors or handle them carelessly. Do not connect anything when the Connectors are not mounted to a board. Doing so may deform the terminals.

**Mating**

Do not connect the connectors in the wrong direction. Doing so will damage the connectors.

**Using an Automatic Solder Bath after Reflow**

Mask the mating portion with tape before you perform automatic soldering to prevent flux or solder from entering the mating portion of the Connector. Select and use a suitable masking tape.

**Application Precautions**

- Confirm that there is no excessive misalignment or inclination in the mating contact portion between the plug and socket before mating the Connector. Make sure that the Connector is mated all the way to the back. If the Connector is not mated all the way to the back, contact reliability may be lost.
- Do not apply an extreme load during Connector insertion or removal. The Connector may be damaged, and contact failure may result. Twist the plug and socket as little as possible when mating the Connector. Not doing so may deform the terminals or housing or crack the housing.
- Do not insert a foreign object, such as tweezers, into the Connector mating contact portion. Doing so may cause the plating to peel off or deform the terminals.

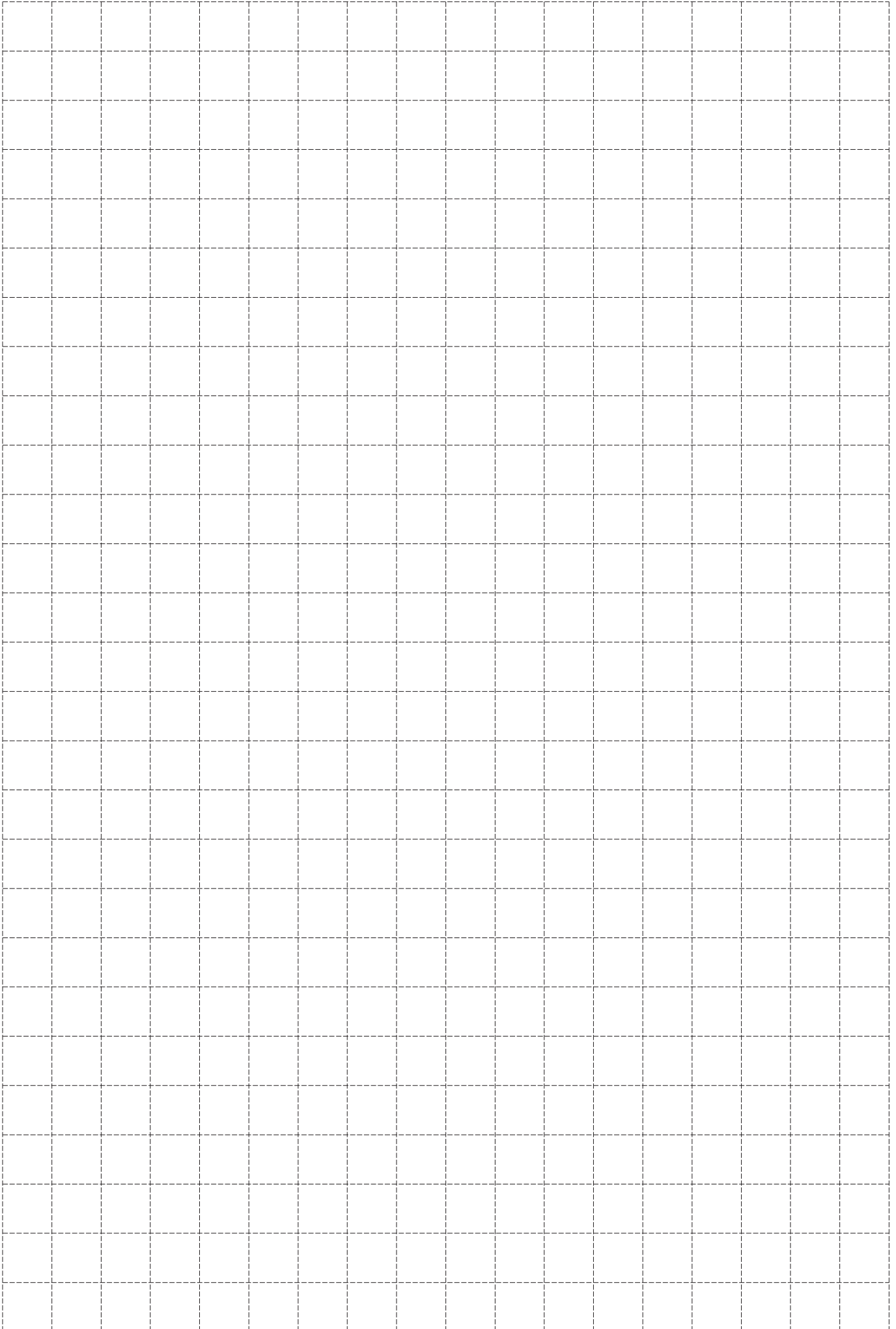
**Precautions for Board Mounting**

Be careful of the amount of board warping. If the board is excessively warped, soldering faults may occur.

**Storage**

Do not store the Connectors in locations subject to dust or high humidity. Do not store the Connectors in locations close to sources of gasses such ammonia gas or sulfide gas.

# MEMO





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