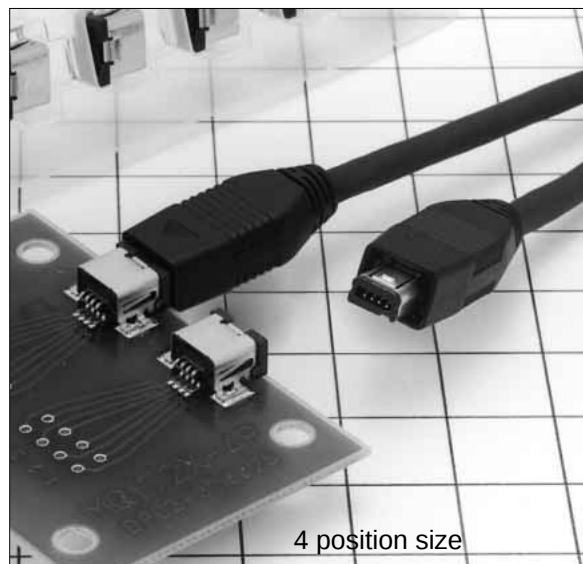


# Micro-Miniature Interface Connectors For Power Supply/Signaling

## MQ172 Series



3 position size



4 position size

### ■Features

#### 1. Ultra Miniature/Low Profile SMT Design

With dimensions of 3.9mm(H) x 6.4mm (W) x 6mm (D) for the 3 contact type, this series is ideal for today's miniature, lightweight electronic products.

#### 2. Automatic Mounting:

SMT receptacles are packaged in embossed tape and reel for automatic pick and place installation.

#### 3. Reliable contact:

The 2-point contact design and lead construction provide a contact which is resistant to vibration and shocks.

#### 4. High current capacity:

Unique contact design ensures high current capacity (e.g., 3A for 3-position), small as it is.

#### 5. Positive Locking

Use of a snap-lock system provides the sensation of locking at the time of insertion.

#### 6. Wide variety of suitable cables:

A wide selection of cable types can be utilized since the plug is of the soldered wiring type.

Additionally, the plug case and cord bushing are integrated into a one piece body, allowing for easy assembly by simply pressing the case into place after the harness work.

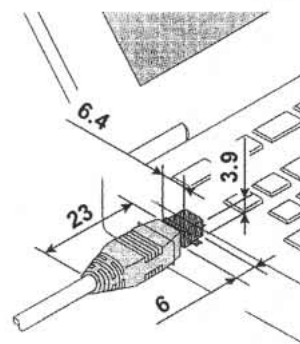
#### 6. Keys for preventing incorrect insertion:

Both 3 and 4-contact types have keys to prevent incorrect insertion.

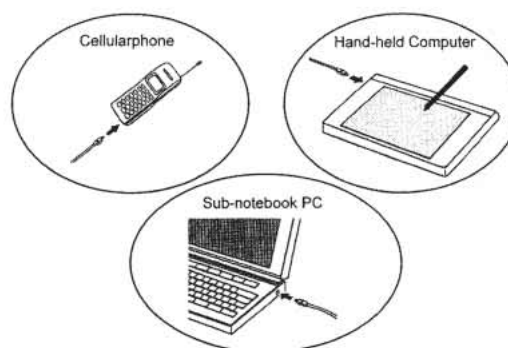
### ■Applications

Portable remote terminals, portable telephones, PHS(personal handy phone system), Notebook PCs, Electronic measuring instruments, etc.

Space saving  
[3 Position type]



### Applications



## ■Product Specifications

|         |                                                 |                                              |
|---------|-------------------------------------------------|----------------------------------------------|
| RATINGS | Rated Current: 3A (Note.1)                      | Applicable Temperature Range:<br>-30℃ - +75℃ |
|         | Rated Voltage: DC 30V or less<br>AC 40V or less |                                              |

| DESCRIPTION                     | SPECIFICATIONS                                                            | REQUIREMENTS                                                                              |                                           |
|---------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------|
| 1. Insulation resistance        | 1000MΩ or more                                                            | Should be measured at DC 100V.                                                            |                                           |
| 2. Voltage resistance           | No flashover/dielectric Breakdown                                         | Should be powered at AC 250V for 1 minute.                                                |                                           |
| 3. Contact resistance           | 30mΩ or less                                                              | Measured at 10mA.                                                                         |                                           |
| 4. Vibration resistance         | No instantaneous electric<br>Disconnection of 1μsec or more               | 10~55Hz, one-sided amplitude 0.75mm, 3 directions for 2 hours, respectively               |                                           |
| 5. Humidity resistance          | Contact resistance: 50mΩ or less<br>Insulation resistance: 10MΩ or more   | Leave under the condition of 40±2℃ in temperature and of 90-95% in humidity for 96 hours. |                                           |
| 6. Temperature cycle            | Contact resistance: 50mΩ or less<br>Insulation resistance: 1000MΩ or more | (-55℃: 30 minutes→15-35℃:max. 5 minutes→85℃: 30 minutes→ 15-35℃:max. 5 minutes) 5 cycles  |                                           |
| 7. Plugging/ unplugging life    | Contact resistance: 50mΩ or less                                          | 5,000 times                                                                               |                                           |
| 8. Heat resistance of soldering | No fusion of resin section affecting performance                          | SMT type                                                                                  | reflow: at recommended temp. profile      |
|                                 |                                                                           | manual soldering (receptacle and plug)                                                    | Temperature of soldering iron: 350℃3 sec. |

(Note.1) For 4-contact type, rated current is 2A, or 3A for optional 2 terminals and 0.5A for other 2 terminals.

(Note.2) Above-stated specifications are typical of this series. For respective formal contract, please refer to "Delivery Specifications".

## ■Material Quality

| Parts                      | Material        | Processing                                                               | Remarks |
|----------------------------|-----------------|--------------------------------------------------------------------------|---------|
| Dielectric                 | Synthetic resin | Black color                                                              | UL94V-0 |
| Terminal                   | Phosphor bronze | Engagement area...Gold plating of 0.2μm<br>Lead section...Solder-plating |         |
| Cover case(plug)           | Synthetic resin | Black color                                                              | UL94V-0 |
| Metal fittings(receptacle) | Stainless steel |                                                                          |         |
| Lock case(plug)            | Stainless steel |                                                                          |         |

## ■Ordering information

### ●RECEPTACLE

**MQ172 X - 4 P A (66)**

① ② ③ ④ ⑤ ⑥

### ●PLUG

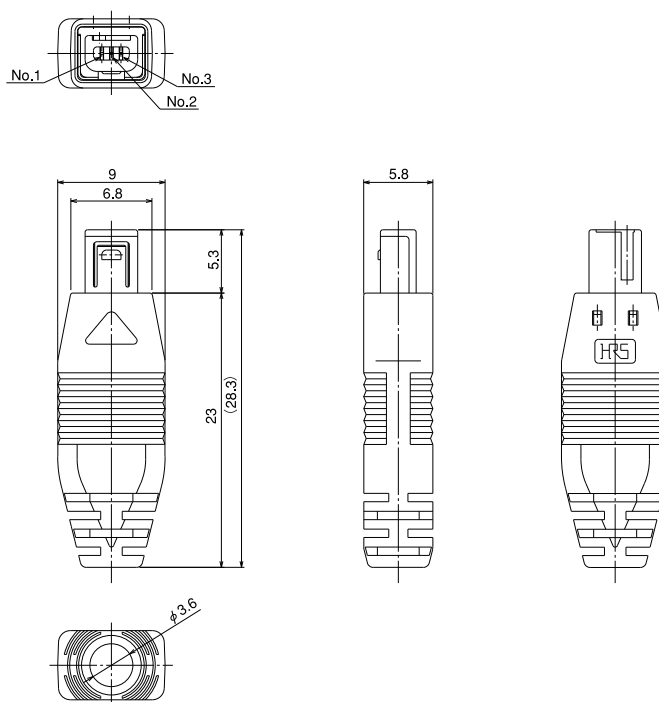
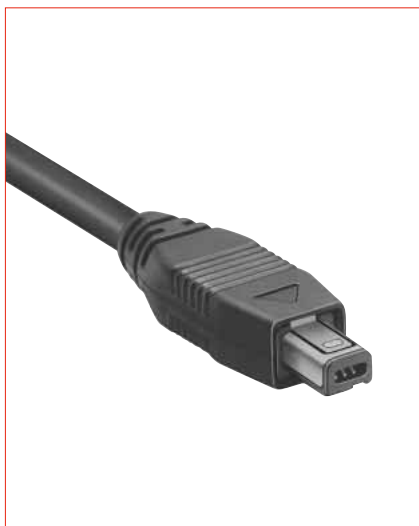
**MQ172 X - 4 S A - CV (50)**

① ② ③ ④ ⑤ ⑦ ⑧

|   |                                                                           |
|---|---------------------------------------------------------------------------|
| ① | Series name: MQ172                                                        |
| ② | Series configuration symbol: none...unshielded type<br>X ...shielded type |
| ③ | Number of contacts: 3, 4                                                  |
| ④ | Connector type: P...receptacle<br>S...plug                                |
| ⑤ | Key type symbol: A (only for A type)                                      |
| ⑥ | Packing type: (55)...tray-based packing<br>(66)...embossed tape packing   |
| ⑦ | Cover case type: CV...standard product (color: black)                     |
| ⑧ | RoHS compliant : (50)                                                     |

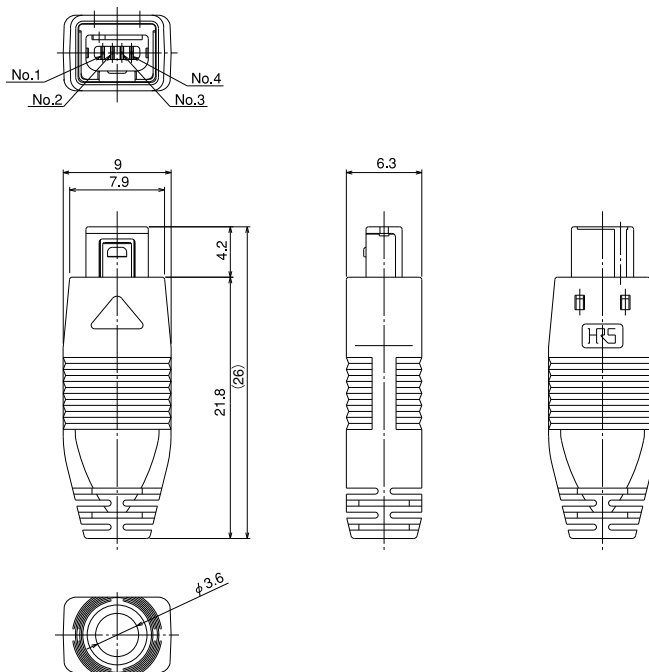
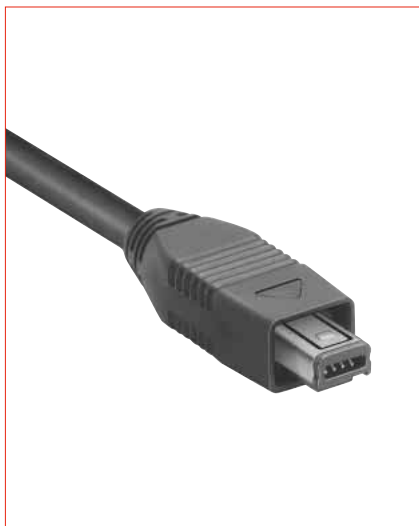
## ■Plugs

### ●3-Position type



| Parts No.        | HRS No.         | RoHS |
|------------------|-----------------|------|
| MQ172-3SA-CV(50) | CL206-0951-7-50 | YES  |

### ●4-Position type



| Parts No.         | HRS No.         | RoHS |
|-------------------|-----------------|------|
| MQ172X-4SA-CV(50) | CL206-2001-9-50 | YES  |

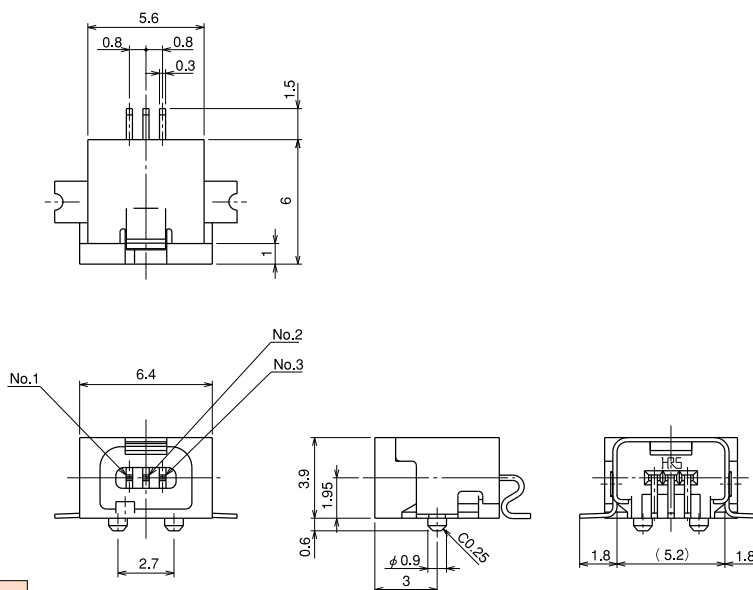
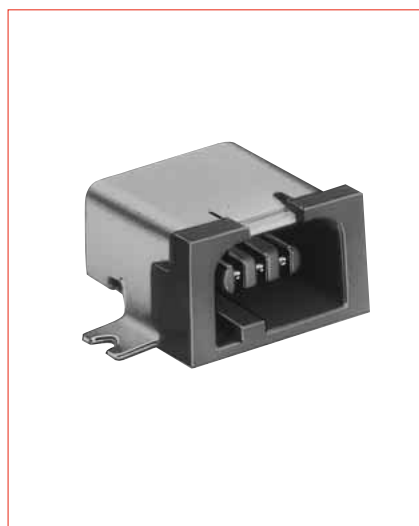
## ■Harness Tool

| Tool name          | Parts No.      | HRS No.      | Parts name of adaptive plugs | Adaptive cable        |
|--------------------|----------------|--------------|------------------------------|-----------------------|
| Cable caulking jig | MQ172-3S/CK-MP | CL902-2069-4 | MQ172-3SA-CV(50)             | Outside diameter:φ3.5 |
|                    | MQ172-4S/CK-MP | CL902-2070-3 | MQ172X-4SA-CV(50)            | AWG#24-#32            |

(Note.) As the crimp height after crimping depends on cable type, please consult factory about your designated cable.

## ■ Receptacles

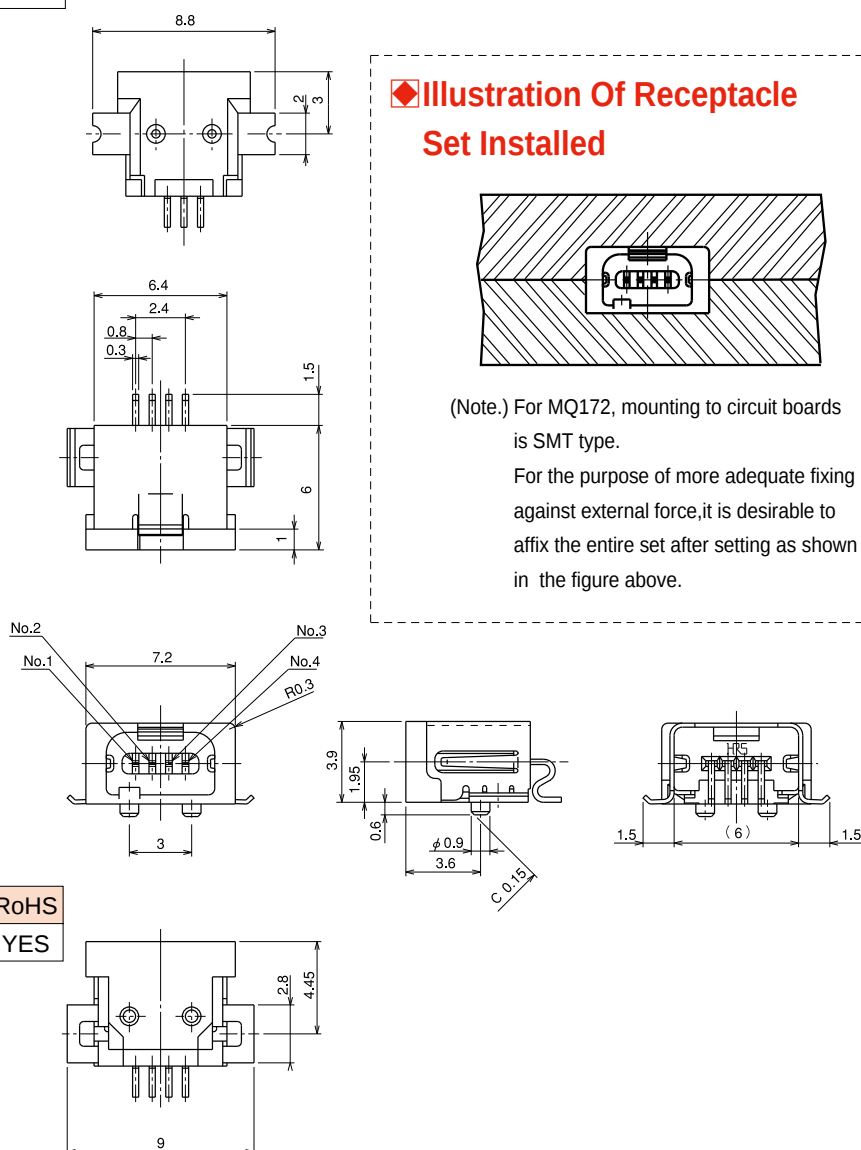
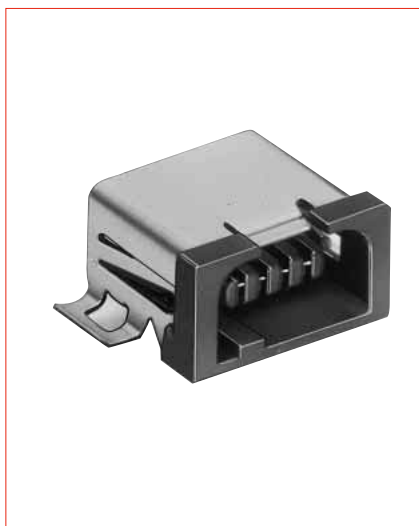
### ● 3-Position type



| Parts No.      | HRS No.          | RoHS |
|----------------|------------------|------|
| MQ172-3PA-(**) | CL206-0950-4(**) | YES  |

\*\* (55) : tray-based packing  
 (66) : embossed tape packing  
 (1 reel = 1,000 pcs.)

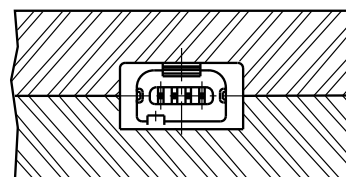
### ● 4-Position type



| Parts No.       | HRS No.          | RoHS |
|-----------------|------------------|------|
| MQ172X-4PA-(**) | CL206-2000-6(**) | YES  |

\*\* (55) : tray-based packing  
 (66) : embossed tape packing  
 (1 reel = 1,000 pcs.)

### ◆ Illustration Of Receptacle Set Installed

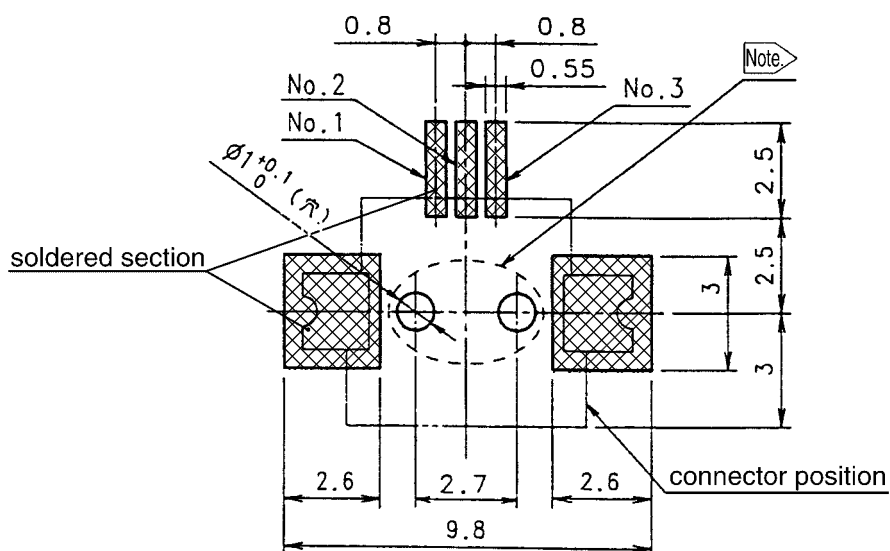


(Note.) For MQ172, mounting to circuit boards is SMT type.

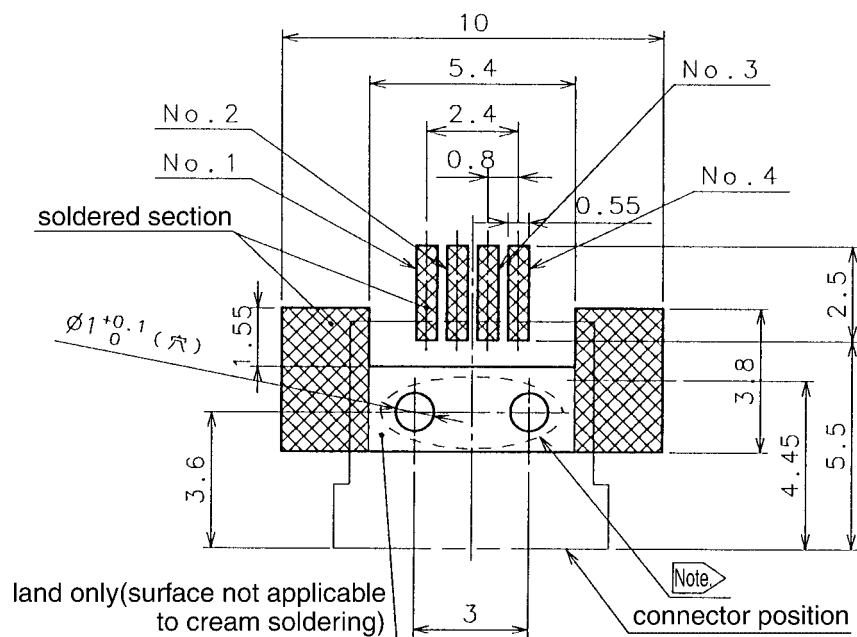
For the purpose of more adequate fixing against external force, it is desirable to affix the entire set after setting as shown in the figure above.

## ◆ Recommended Land Pattern Dimensions Diagram

### ● 3-Position type



### ● 4-Position type

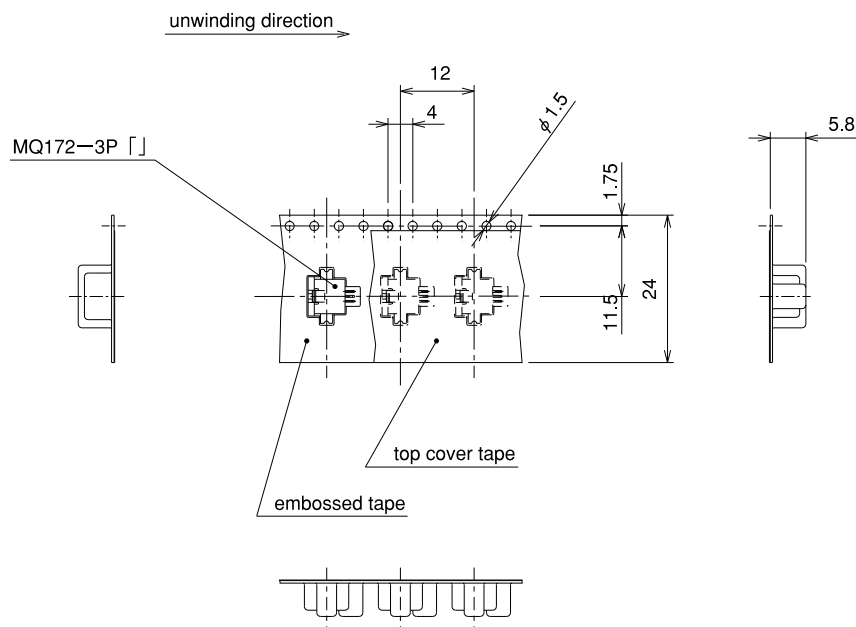


Note.) Mounting of this product to circuit boards is the SMT type.

To provide more adequate fixing, use of adhesive for board-installed area is recommended.

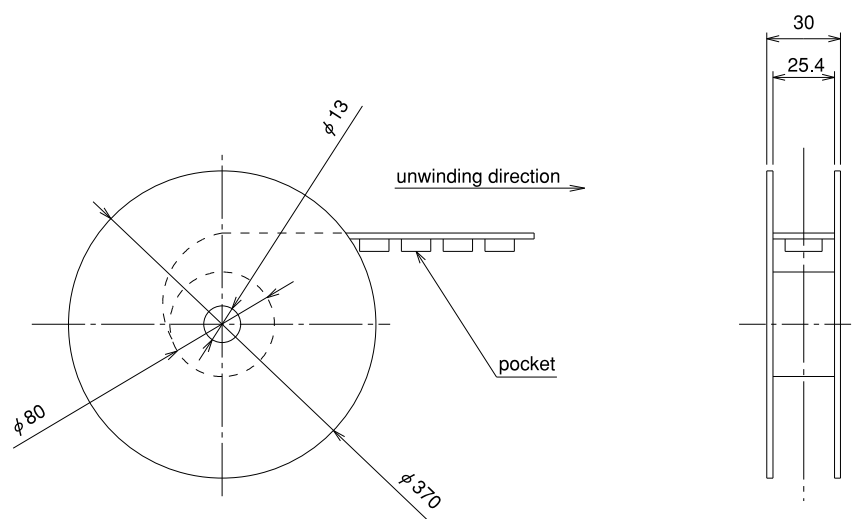
## ◆ Embossed Tape Carrier Dimensions Diagram(JIS-C-0806 dependent)

### ● Carrier Dimensions Diagram

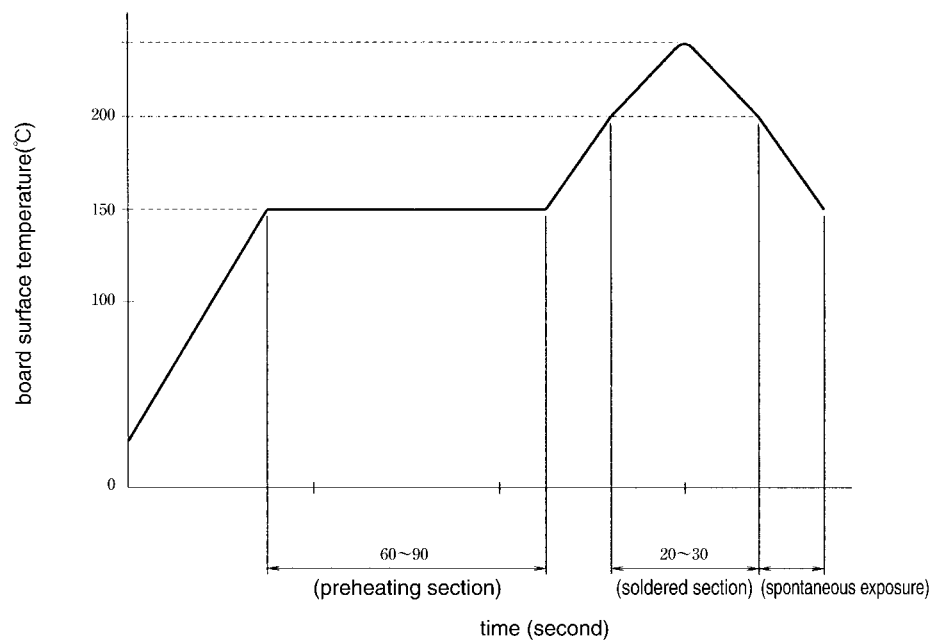


(Note.) The figure above provides the case of a 3 contact type, dimensions shown in such figure are the same as those of a 4 contact type.

### ● Reel Status Diagram



◆Recommended Temperature Profile



(soldering requirements)

- Board  
Dimensions: 50X33X0.8(mm)  
Material: glass epoxy
- Cream soldering  
Composition: Sn 96.5 / Ag 3.0 / Cu 0.5  
Metal mask thickness: 0.15mm
- Reflow method  
IR reflow
- Measurement spot of setting temperature  
Housing (mold) surface

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[MQ172-4S/CK-MP\(63\)](#) [MQ172-4S/CK-MP\(01\)](#) [MQ172-4S/CK-MP\(61\)](#) [MQ172-4S/CK-MP\(62\)](#) [MQ172-4S/CK-MP](#)  
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