

JST J.S.T. Mfg. Co., Ltd. Osaka Engineering Center 3-9-23 Takejima, Nishiyodogawa-ku, Osaka, 555-0011 JAPAN Fax No. (06) 6476-2100 Tel. No. (06) 6474-1705	No. CHM-2-3278	Date issued: Apr 28, 2010
	Title of Document: HANDLING MANUAL	
Title Subject: MicroUSB (UB connector) Receptacle B- & AB-type		Issued by: Tokyo Engineering Center

This manual describes important and required points of handling about MicroUSB receptacle B- and AB-type connectors (embossed-taping product.)
 Be sure to read this manual thoroughly before using MicroUSB receptacle B- and AB-type connectors.

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Prepared by: <i>T.Sawano</i>	Checked by: <i>G. Oono</i>	Reviewed by: <i>Y.Nakazawa</i>	Approved by: <i>S.Uchida</i>
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1. Model Number and Part Name

1-1 Model number

Receptacle: Standard type

Part Name		Part Number	
Receptacle	AB-type	Emboss-taping product	UB-MC5ABR3-SD204-4S NMP
		Loose piece product	UB-MC5ABR3-SD204-4S-TB NMP

Receptacle: Mid mount type 0.85mm height

Part Name		Part Number	
Receptacle	B-type	Emboss-taping product	UB-MC5BR3-M04-4S NMP
		Loose piece product	UB-MC5BR3-M04-4S-TB NMP
	AB-type	Emboss-taping product	UB-MC5ABR3-M04-4S NMP
		Loose piece product	UB-MC5ABR3-M04-4S-TB NMP

Receptacle: Mid mount type 1.2mm height

Part Name		Part Number	
Receptacle	B-type	Emboss-taping product	UB-MC5BR3-M404-4S NMP
		Loose piece product	UB-MC5BR3-M404-4S-TB NMP

Receptacle: Reverse type

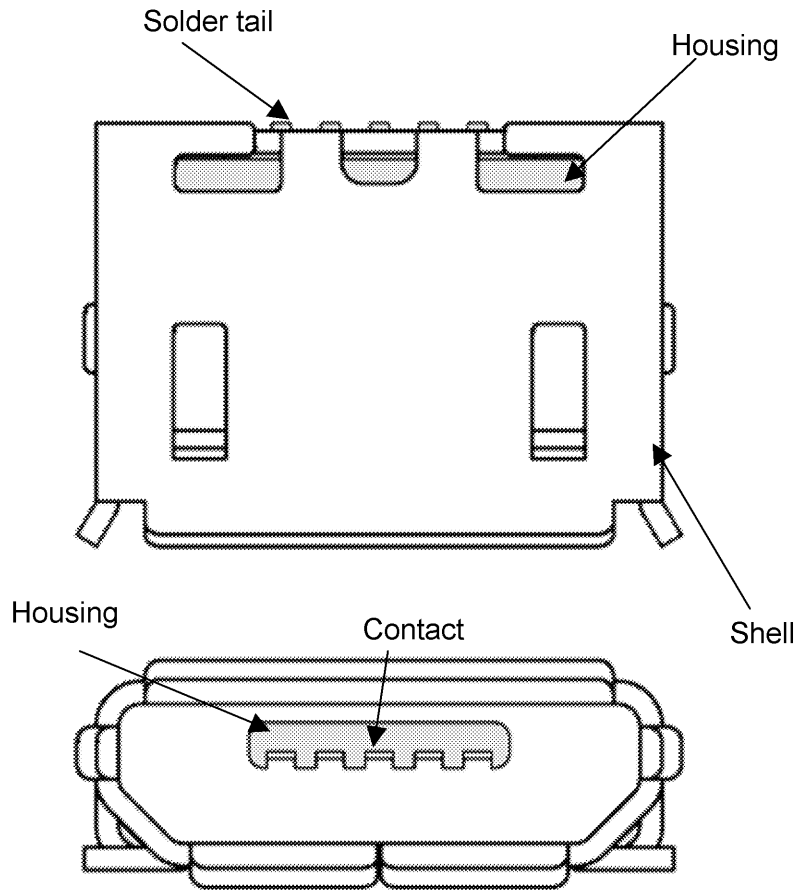
Part Name		Part Number	
Receptacle	B-type	Emboss-taping product	UB-MC5BR3-RS04-4S NMP
		Loose piece product	UB-MC5BR3-RS04-4S-TB NMP
	AB-type	Emboss-taping product	UB-MC5ABR3-RS04-4S NMP
		Loose piece product	UB-MC5ABR3-RS04-4S-TB NMP

Note: MicroUSB standard and reverse type connectors are supplied on embossed-tape (3,000 pcs./reel).

MicroUSB mid mount type connector is supplied on embossed-tape (2,000 pcs./reel).

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1-2 Part name



2. Applicable MicroUSB Receptacle B- and AB-type

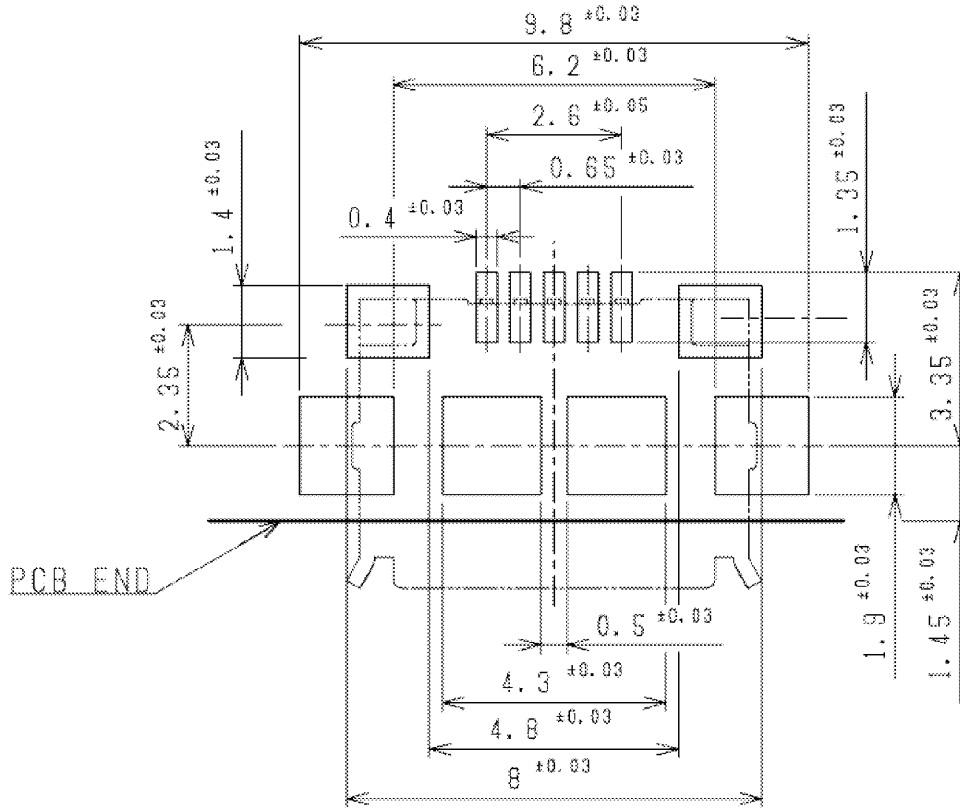
Item	Rated value
Applicable MicroUSB receptacle B- and AB-type	Lead: Gold-plated Lead pitch: 0.65 mm Lead width: 0.25 mm

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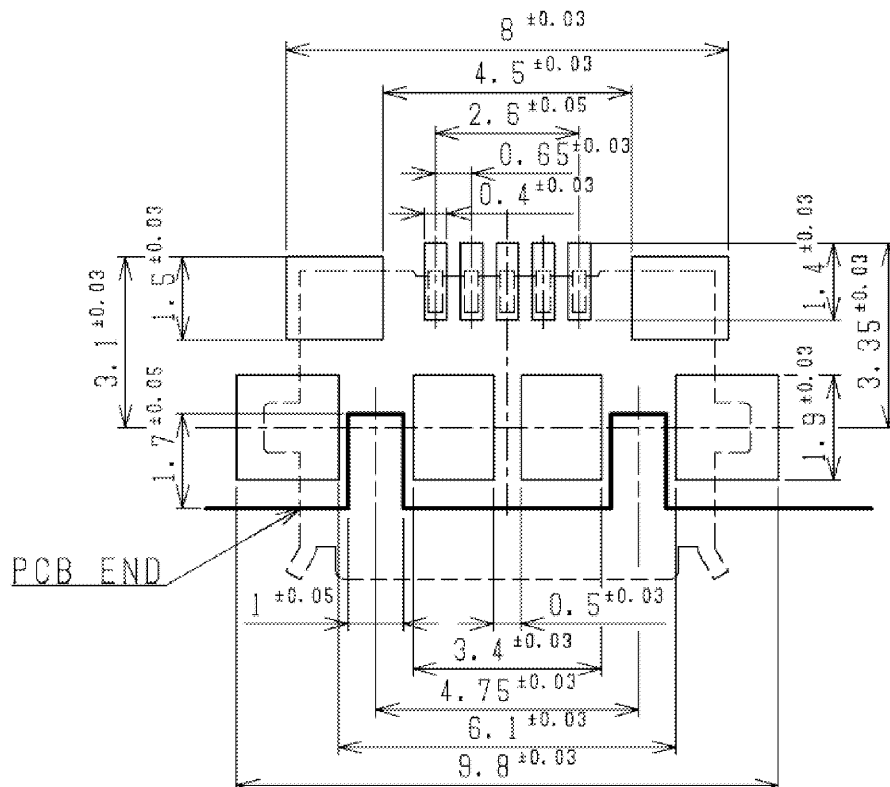
3. PC Board Pattern Layout

The following PC board pattern layout is recommended.

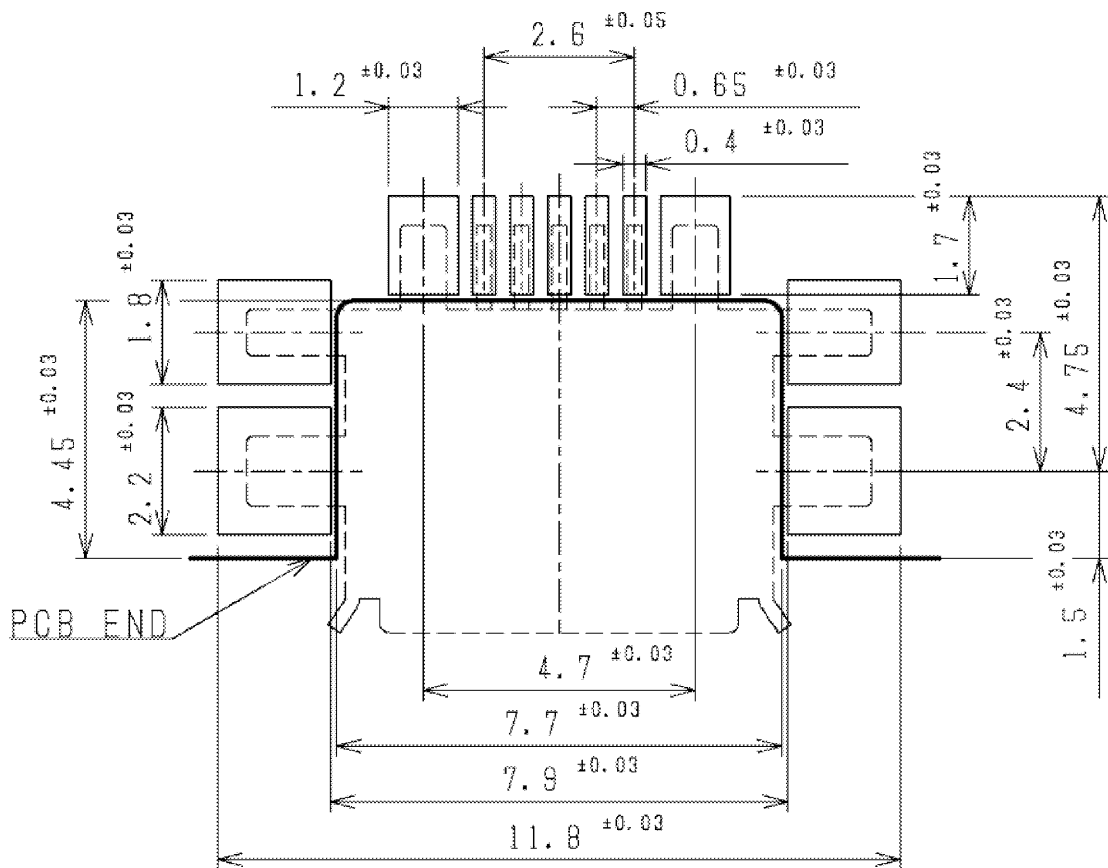
3-1 Standard type



3-2 Reverse type



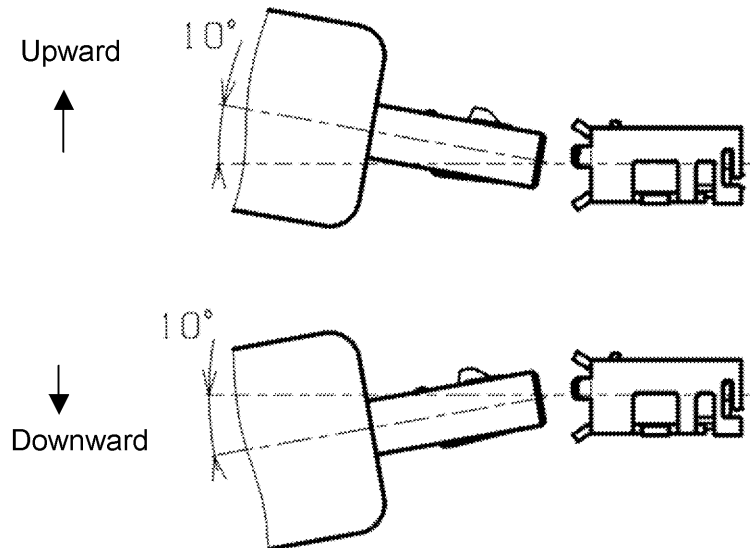
3-3 Mid mount type



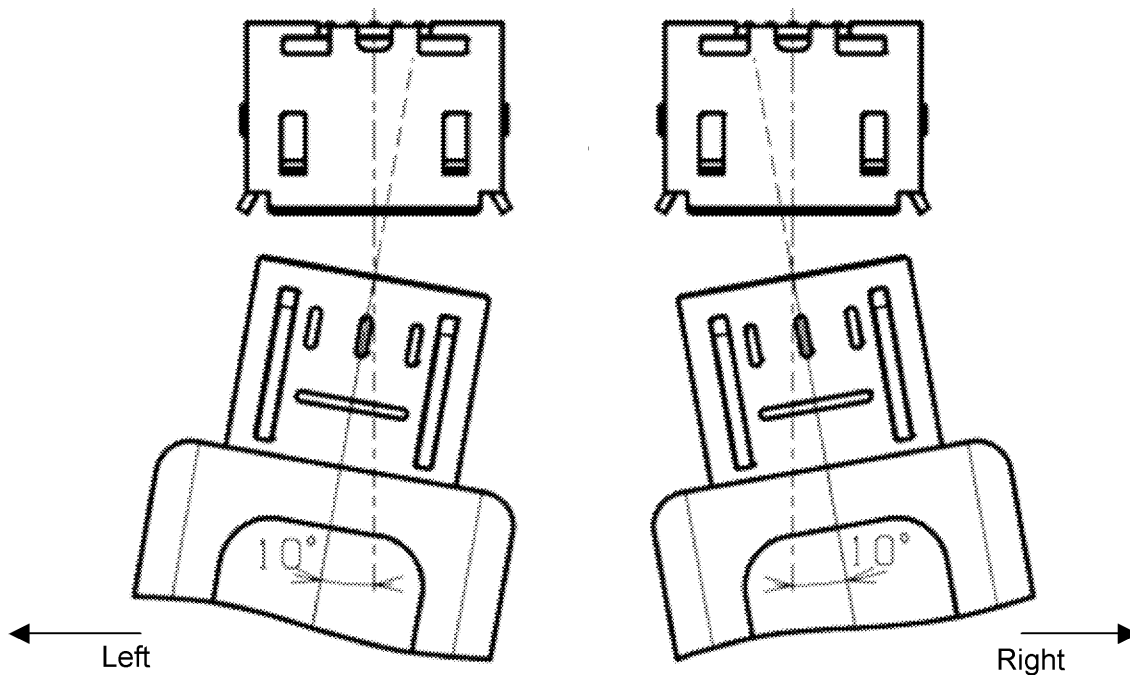
4. Inserting and Releasing MicroUSB Plug

Inserting and releasing operations with MicroUSB receptacle B- and AB-type connectors and MicroUSB plug shall be conducted on the same axis. When the operation on same axis is difficult, conduct smooth operation within 10 degrees to each direction as shown in the figure below.

Vertical direction



Lateral direction



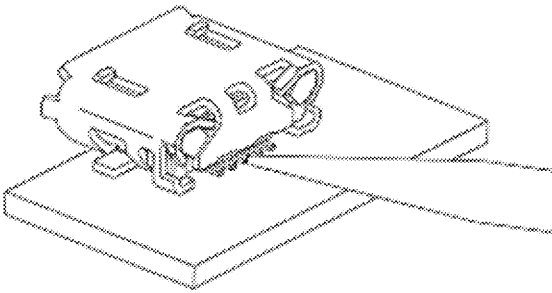
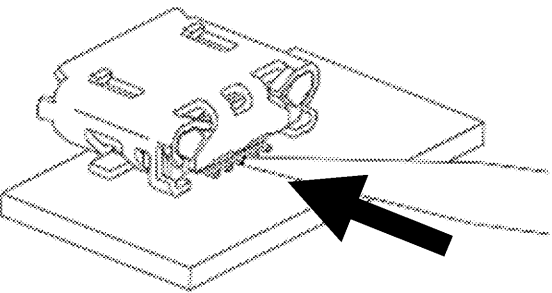
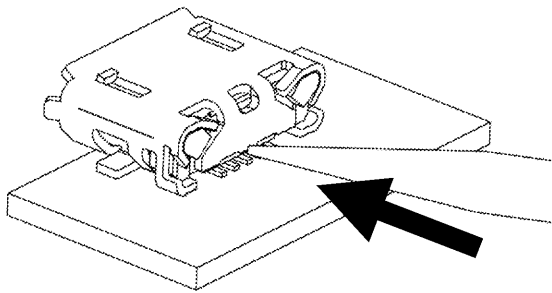
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5. Precautions for Soldering Operation

5-1 Solder iron method

Solder a connector mounted on PC board using a soldering iron with temperature of 350 °C at the tip of soldering iron quickly within 3 seconds, and check appearance visually. Do not strongly press soldering iron tip on connector contact lead part nor apply abnormal load such as lateral load, etc. If done, dismantle and exchange connector, and conduct soldering again. Do not reuse dismantled connector.

Repair connector, paying attention to the following.

	<p>Solder the tip of solder tail of the mounted connector on PC board using a soldering iron with temperature of 350 °C at the tip of soldering iron quickly within 3 seconds, and dismantle the connector from PC board.</p> <p style="text-align: center;">○</p>
	<p>Repair connector not to strongly press soldering iron tip on connector contact lead part nor apply abnormal load such as lateral load, etc. If done, dismantle and exchange connector, and conduct soldering again. Do not reuse dismantled connector.</p> <p style="text-align: center;">✕</p>
	<p>Do not press soldering iron tip on other than connector contact lead part nor apply abnormal load such as lateral load, etc. If done, dismantle and exchange connector, and conduct soldering again. Do not reuse dismantled connector.</p> <p style="text-align: center;">✕</p>

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5-2 Reflow soldering method

Reflow soldering by lower temperature profile than that of described in item "Resistance to Soldering Heat" of product specification is recommended, though recommended reflow temperature condition varies depending on solder paste to be used.
When bridge trouble appears in process of reflow soldering and repair is conducted by hand, strictly conduct item 5-1 "Solder iron method."

5-3 Thickness of metal mask

Following configuration of metal mask is recommended for mounting operation;

- Blanking part: same area as pad area on PC board
- Thickness: 0.10 to 0.12 mm

When metal mask more than 0.12 mm thickness is used, area of blanking part should be smaller than pad area on PC board, and amount of solder should be properly adjusted.

6. Storage

Keep MicroUSB receptacle B- and AB-type connectors (embossed-taping product) in the following ambience.

Storage temperature	5 ~ 35°C
Relative humidity	60% max.

7. Other Precautions

- ① Please completely mate the USB standard compliant plug before use.
- ② Please do not apply loads on the USB standard compliant plug when inserted to the receptacle.
- ③ When unmating, please pull out the USB standard compliant plug in the horizontal direction holding the body of the plug. Unmating by pulling the cable can damage the connector.
- ④ This product has plated shell surface, and the surface glossiness will vary by reflow condition and by lot, however there is no issue in performance or quality.
- ⑤ Surface scratch on the connector due to assembling process may be left, however there is no issue in quality.