Title of Document: **HANDLING MANUAL**	Issue No. CHM-1-061	Rev. 2
Customer:	Issue date: June 19, 2001	
Title subject: FPZ Connector	Revision date: April 24, 2020	

This manual describes important and required points of handling about FPZ Connector.
Be sure to read this manual thoroughly before using FPZ connector.

C O N T E N T S

1. Model Number and Part Name

1) Model number

Part name		Model No.
FPZ connector	Embossed-taping product	※FPZ-SM-TF (*1)
	Loose piece product	※FPZ-SM (*1)

Note1: Number of circuits is indicated in ※.
e.g.) 10FPZ-SM-TF: 10 circuit

Note2: FPZ connector is supplied on embossed-tape.

Note3: In case of lead-free product, an identification mark for lead-free product, "(LF)(SN)" is indicated in (*1).

2) Part name

FPZ connector consists of the contact, the reinforcement, the housing and the slider.
In handling FPZ connector, understand each name and function.

(1) Contact
It contacts a PC board and FFC electrically.

(2) Reinforcement
It is soldered to a PC board and connects FPZ connector with the PC board mechanically.

(3) Housing
It fixes the contact and the reinforcement.

(4) Slider
The contact is electrically connected with FFC by operating the slider.

(5) Contacting part
The contact and FFC are connected electrically and mechanically.

(6) Solder tail of contact
It is soldered to a PC board and connected with the PC board mechanically and electrically.

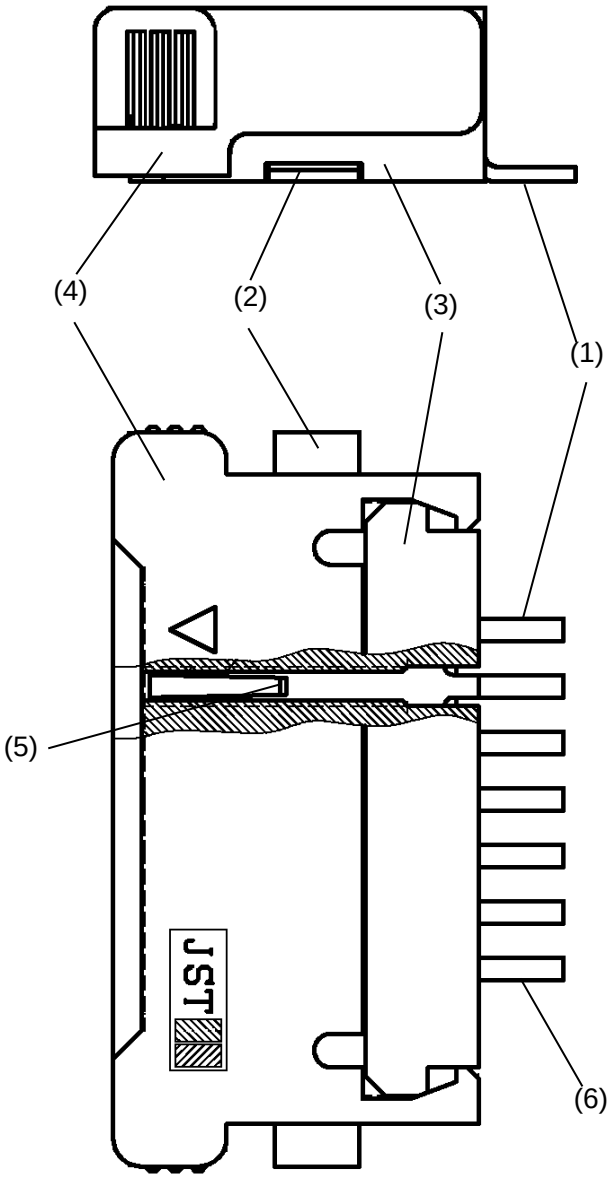


Fig.1: Each part name (Connector)

2. Storage

2.1 Connector storage

Recommended storage condition: Temperature: 5 – 35 ˚C, Relative humidity 60 % or less
(Under packaging like the state of JST shipment)

Keep off direct sunlight, places exposing to such corrosive gas as industrial gas (generate from a stove and whatnot) and ammonia gas (generate from a toilet and whatnot), dusty place and condensation.
Note that the resin molding part may break due to transportation and handling, such as processing and mating, under dry or low temperature condition.
After unpacking, return products in the original package to store.

2.2 Storage of the processed connectors

Not leaving the processed connectors to stand in a place exposed to high humidity and direct sunshine, and not placing them directly on the ground, keep them in a clean storage room,

3. Applicable FFC

① Dimensions of FFC greatly affect to the contacting reliability with the connector.
Conform the dimensions of FFC with those of applicable ones described in drawing.

③ Confirm the applicability of the connector with your FFC before using.
FFC which applicability is not confirmed might not be able to guarantee the performance.

④ Blanking of FFC shall be conducted in the direction from conductor side to reinforcing plate side.

Item	Rated value
Applicable FFC	Lead: Tin-plated flat copper conductor Lead pitch: 1.0 mm Lead width: 0.7 mm Mating part thickness: 0.3 ± 0.05 mm

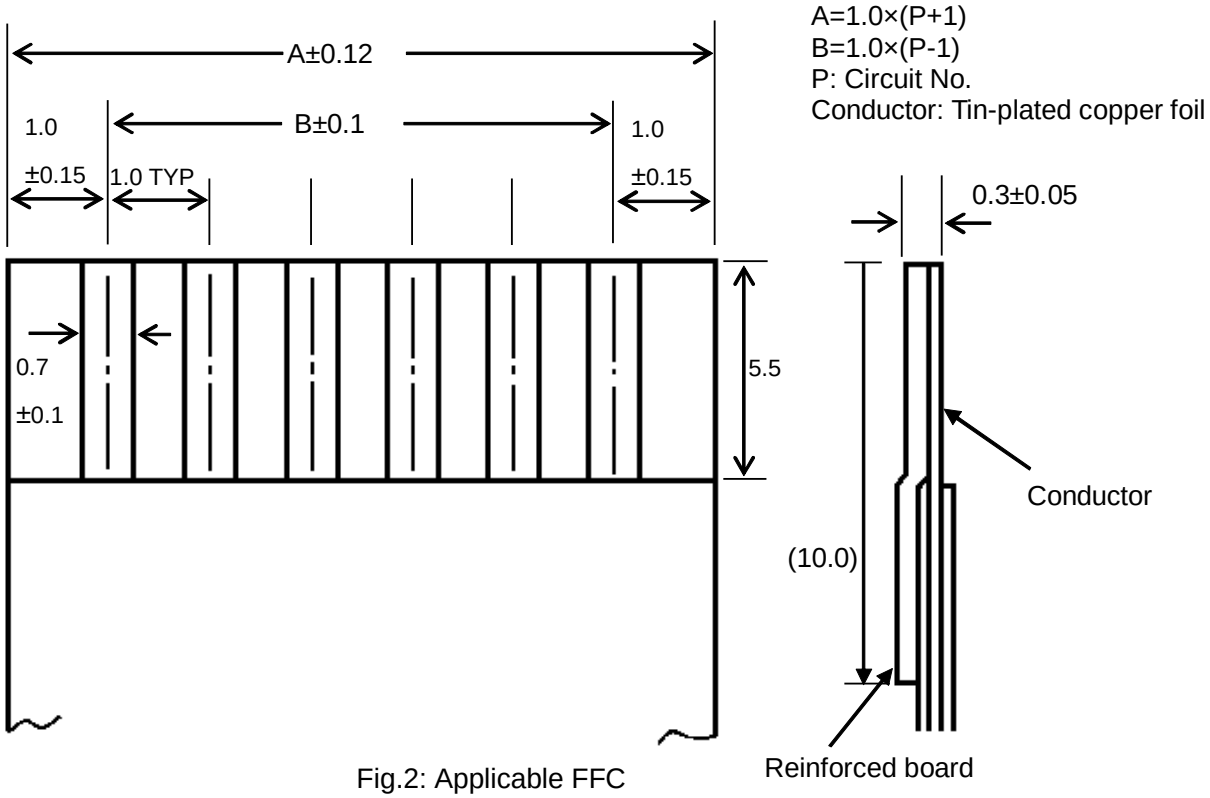
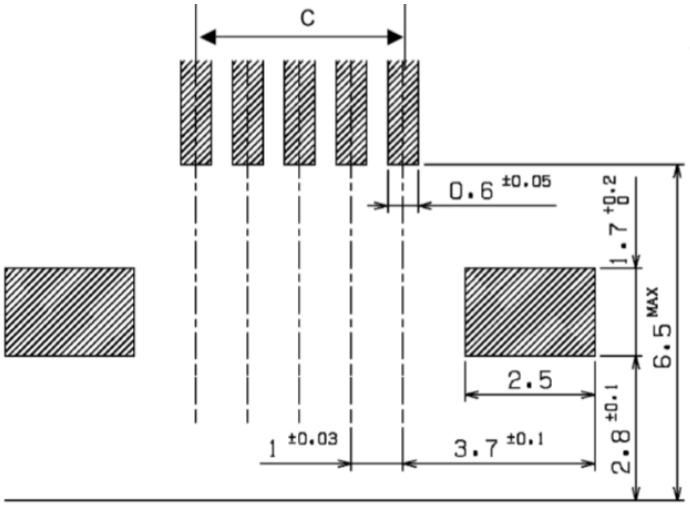


Fig.2: Applicable FFC

4. PC Board Pattern Layout

The following PC board pattern layout is recommended.



C=1.0× (P-1)

P : Circuit No.

※Tolerances are non-cumulative for all centers.

Fig.3: PC board pattern layout

5. Handling Manual and Precautions

5.1 Insertion of FFC

Insert FFC in the following order, referring to the figure.

① Hold the both ends of the slider to which serration is attached, and pull it out in the horizontal direction to release.

Note: The lock is released and raised by pulling the slider out approx. 0.6 mm in the horizontal direction.

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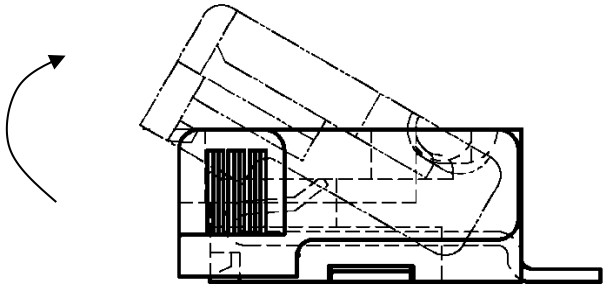
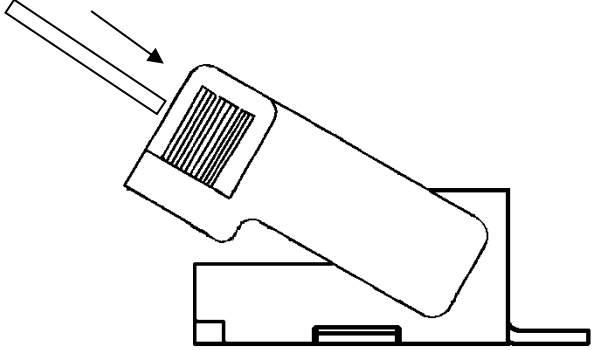
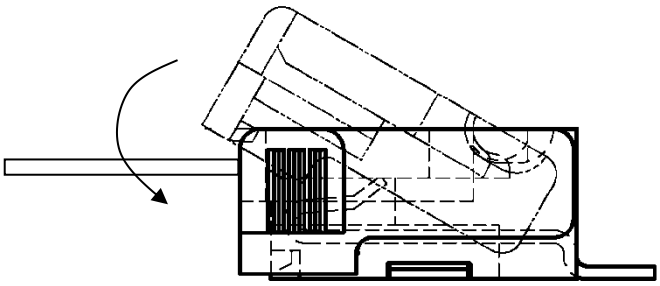


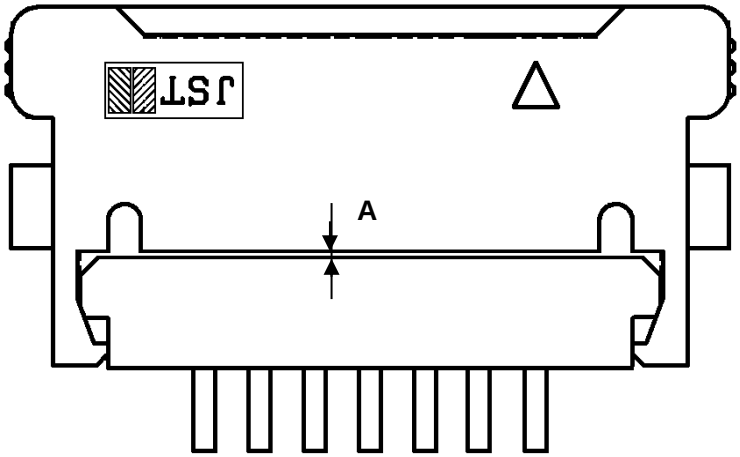
② Insert FFC into the slider slot until stopping.



③ Push the slider top surface in diagonally downward direction to lock.

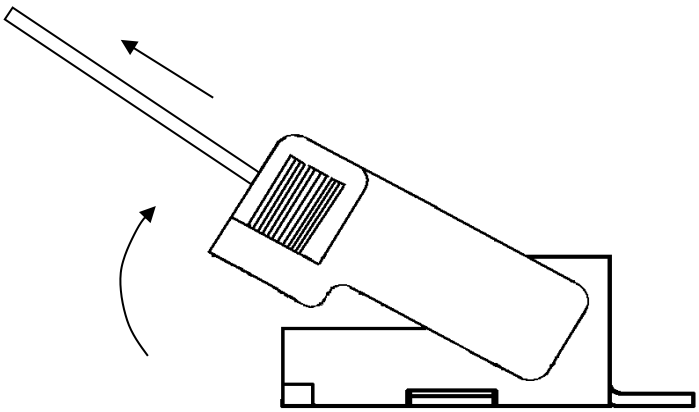
Note: If there is a clearance at the part A of the following figure, push the slider into the connector in the horizontal direction not to make a clearance.





5.2 Extraction of FFC

After releasing the slider, extract FFC from the connector.



Note: Be sure to release the slider lock in insertion and extraction of FFC. Inserting and extracting FFC with the slider locked may damage the contact and FFC contacting part.

6. Handling of FFC after Mounting on PC Board

When inserted FFC is handled, provide sufficient FFC length so that force is not loaded to FPZ connector, because such loading may cause damage and discontinuity of connector.

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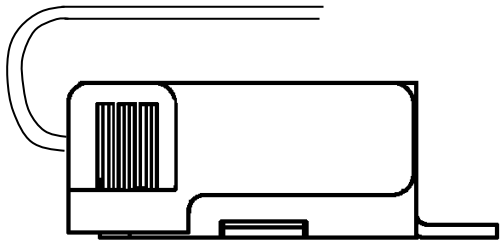

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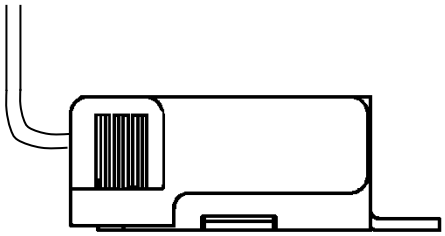

※FFC length is not sufficient to handle.

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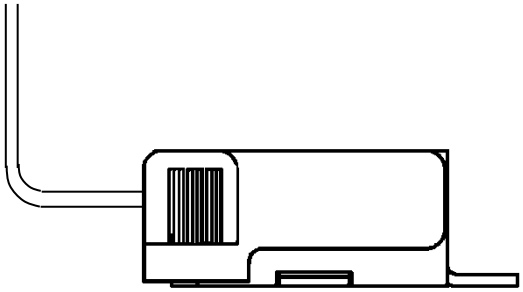

※FFC length is sufficient to handle.

Loading direction

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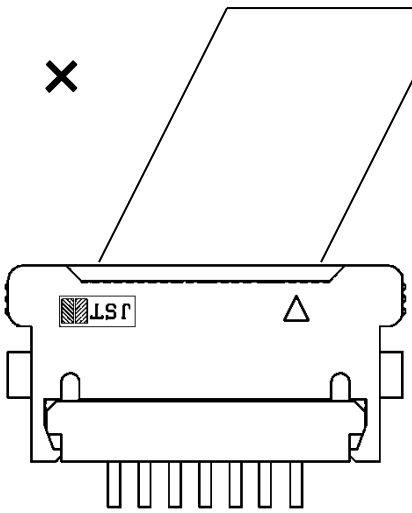

※ Force is loaded to FFC.

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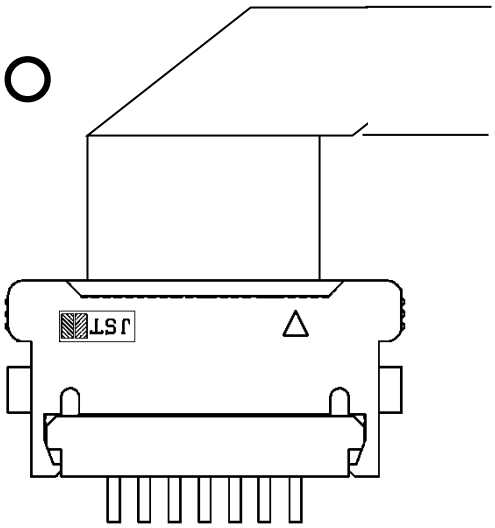

※ Forming processing is conducted to FFC not so as to load force to connector.

When a load is likely to apply to the connection part between the connector and FFC by the operation of the rotational structure of devices, take such a consideration as fixing FFC around the connection part, because fretting corrosion at the connection part is caused, leading to poor contact.

7. Precautions for Soldering Operation

7.1 Soldering 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.
When soldering, strictly conduct the following points.

Do not press soldering iron tip on connector contact lead part nor apply abnormal force such as lateral load, etc. If done, dismount and exchange connector, and conduct soldering again.
Do not reuse dismounted connector.

7.2 Reflow soldering method

Soldering by following the less temperature profile of reflow soldering, which is mentioned in Product Specification as item of “Resistance to soldering heat”, is recommended.
As recommended reflow temperature condition varies depending on solder paste to be used, follow each condition.

When bridge trouble appears in process of reflow soldering method and modification is conducted by hand, strictly conduct item 7.1 “Soldering iron method.”

8. Other Precautions

As adhesion of foreign matters such as seasoning, fruit juice, detergent, etc. may cause defective continuity and defective soldering. Pay careful attention and if stained, never use the stained connector.