



Title of Document:	HANDLING MANUAL	Issue No. CHM-1-2075	Rev. 2
Customer:		Issue date: January 15, 2004	
Title subject:	FY Connector	Revision date: October 2, 2019	

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

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1. Product Name and Model Number

Part name			Model No.
FY connector	Top entry type	Loose piece product	※※FY-BM(* ₁) (* ₂)
		Embossed-taping product	※※FY-BM(* ₁)-TB (* ₂)
	Side entry type	Loose piece product	※※FY-SM(* ₁) (* ₂)
		Embossed-taping product	※※FY-SM(* ₁)-TF (* ₂)

Note₁: Number of circuits is indicated in ※※

Note₂: Plating specification of contact is indicated in “(*₁)”.

e.g.) T: Tin plating
G: Gold plating
GB: Selective gold plating

Note₃: Identification marking “(LF)(SN)” for lead-free product is indicated in “(*₂)”.

Note₄: FY connector is supplied on embossed-tape.

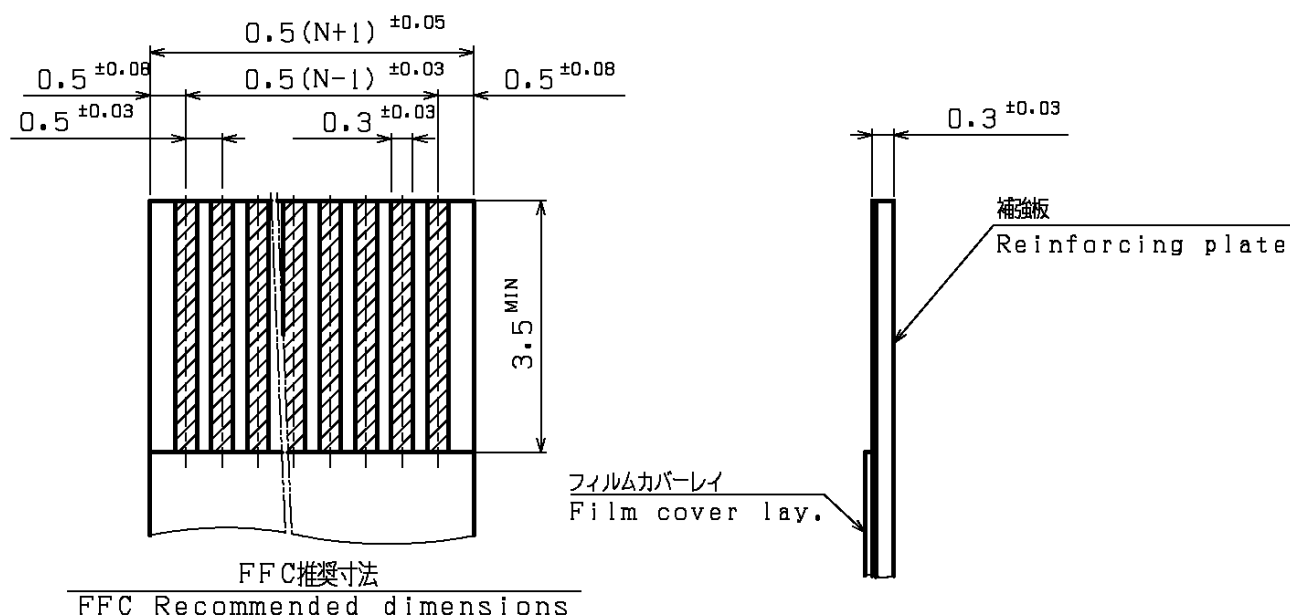
(1,250 pcs./reel for top entry type, 2,000 pcs./reel for side entry type).

2. Applicable Lead

- Dimensions of FFC greatly affect to the contacting reliability with connector.
Conform the dimensions of FFC with those of applicable ones described in drawing.
- Confirm the applicability of the connector with the FFC used, before use.
FFC, which applicability is not confirmed, might not be able to guarantee the performance.

Item	Rated value
Applicable FFC	Conductor: Tin-plated copper wire or gold-plated copper wire Each dimension: As shown in the below figures.

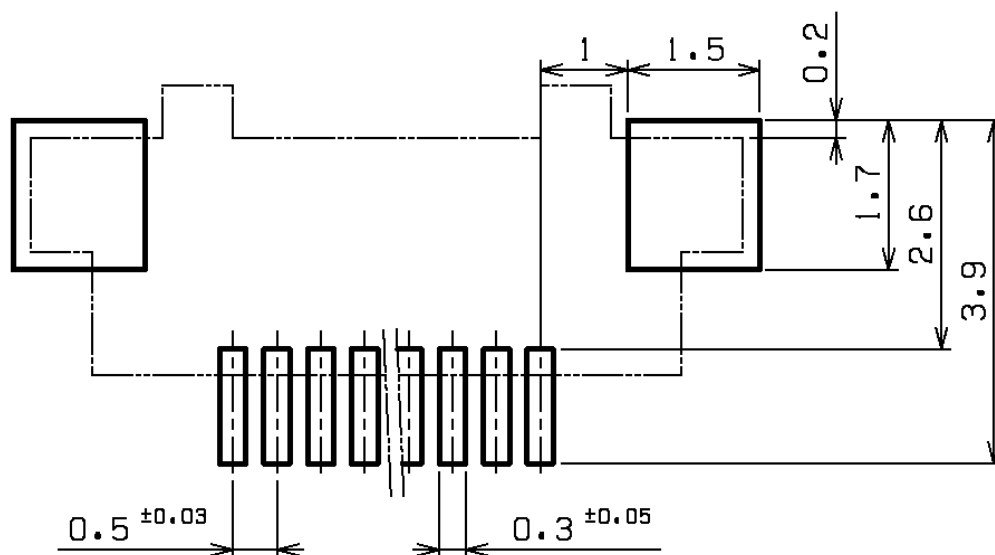
N: No. of circuits



3. PC Board Pattern Layout

The following PC board pattern layout viewed from component side is recommended.

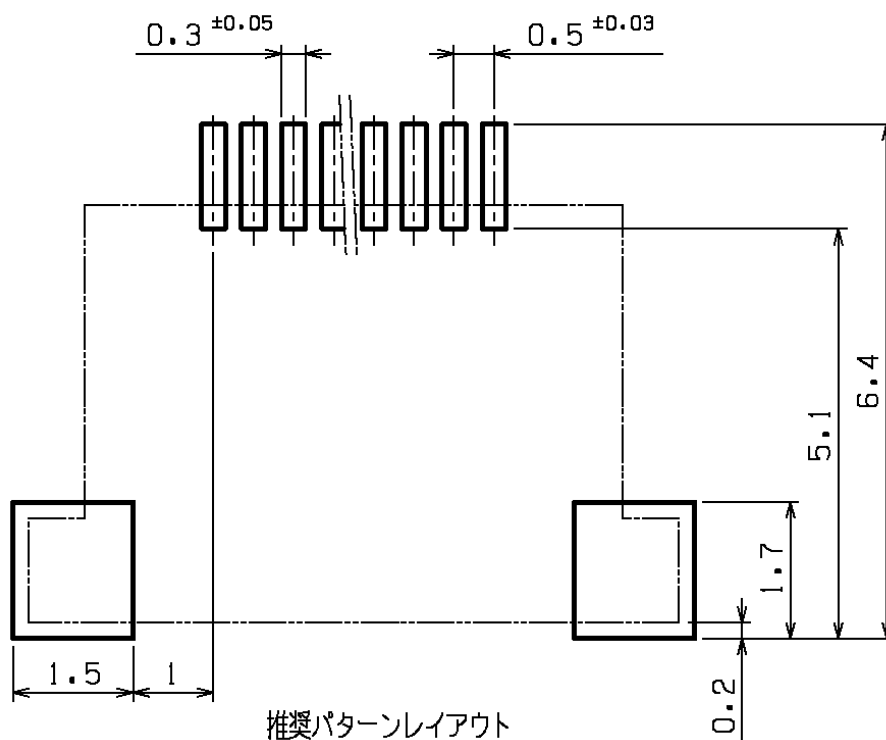
- Top entry type: ※※FY-BM()



推奨パターンレイアウト

Recommendable pattern layout

- Side entry type: ※※FY-SM()



推奨パターンレイアウト

Recommendable pattern layout

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4. Handling Precautions

4.1 In mounting connector on PC board

Note the following points for mounting connector on PC board.

(1) Soldering iron method

When soldering by soldering iron or modification are conducted, use iron with temperature of 350°C at the tip of soldering iron quickly within 3 seconds. Do not apply external force to connector by pressing soldering iron tip on contact solder tail. If done, dismount and change connector, and conduct soldering again. Do not reuse dismounted connector.

(2) Reflow soldering method

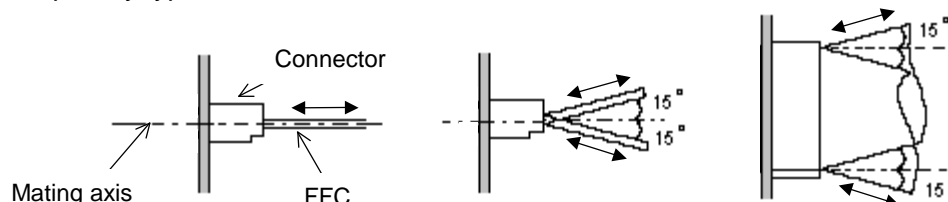
Reflow soldering by lower temperature profile than that of described in item "Resistance to Soldering Heat" of product specification is recommended, though recommended reflow temperature condition varies depending on solder paste to be used.

When bridge trouble appears in process of reflow soldering and repair is conducted by hand, strictly conduct (1) "Soldering iron method."

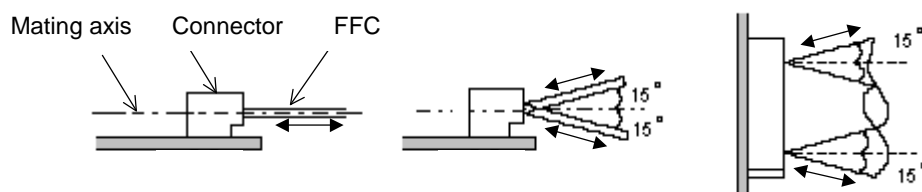
4.2 In inserting and releasing FFC

Inserting and releasing operations with FY connector and FFC shall be conducted on the same axis. When the operation on the mating axis is difficult, conduct smooth operation within 15 degrees to mating axis as shown in the figure below.

e.g.: Top entry type



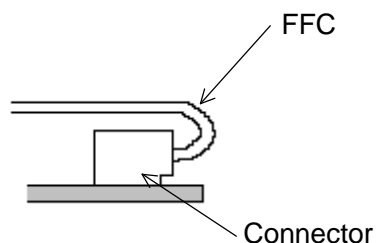
e.g.: Side entry type



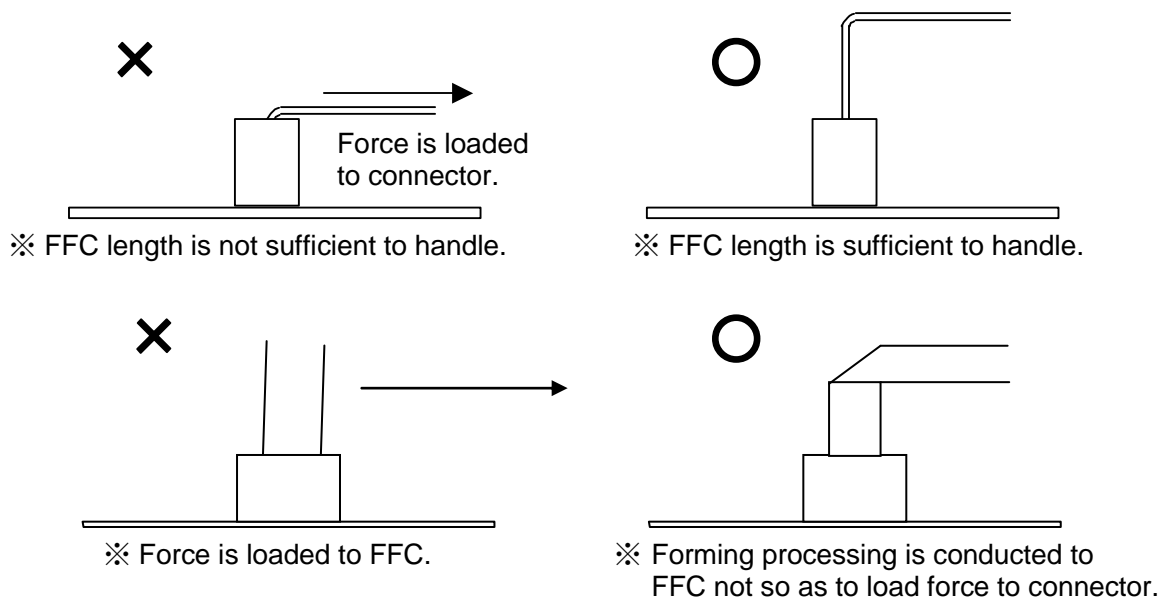
4.3 Handling of FFC after mounting on PC board

When inserted FFC is handled, following operation is required so that tension is not applied to FFC assembled in connector, or FFC does not move in a connector due to sliding.

- (1) Do not handle FFC as below in order to prevent connector from lifting and breaking.



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



4.4 Using FFC at the movable parts

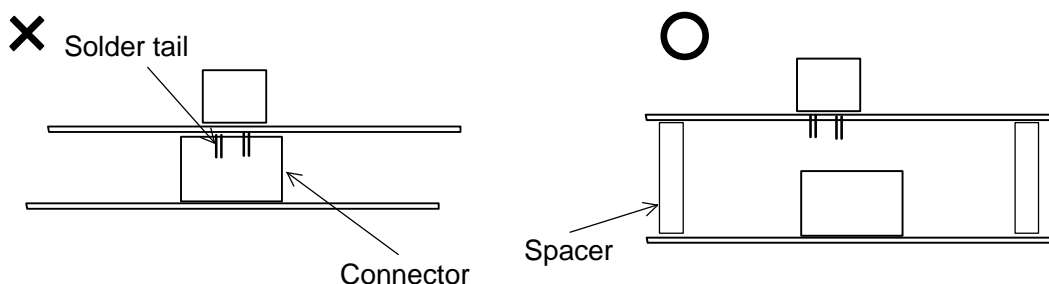
When connector is mounted on PC board under the following conditions, such conditions may cause defective contacting at connector mating part due to fretting corrosion. In such case, some treatment such as fixing FFC and PC board inside of equipment should be conducted so as not to apply external load directly to contacting part.

- FFC and PC board on which connector is mounted can move due to the vibrating device.
- When connector is used at moveable part such as rotation part of device, etc., connecting part between FFC and connector can move.
(e.g.: When inserting FFC into bending part of device (hinge part) to connect with connector)

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4.5 Handling precautions after mounting on PC board

- (1) Do not hook a finger, etc. to connector mounted on PC board during transportation, because such handling may damage solder tail part.
- (2) When PC boards are piled up after connector mounting (FFC not inserted), the tip of solder tail protruding from upper PC board may enter connector, and it may break connector contacting part. Do not stack PC board with connector mounted. If required, be sure to apply sufficient space between PC boards by using spacer, etc.



- (3) Never insert different type of pin into connector, because it may cause breakage of connector contacting part.

5. Storage

Keep FY connector (embossed-taping product) in the following ambience.

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

6. Others

- (1) Keep connector free from direct sunshine, corrosive gas and dust.
- (2) Do not leave connector taken out of carton box (embossed-taping), because deformation, discoloration and adhesion of foreign matter may appear due to external factor. Store them in a carton box.
- (3) As adhesion of foreign matter such as seasoning, fruit juice, detergent, etc. may cause defective continuity and defective soldering. Pay careful attention and if stained, never use stained connector.
- (4) Never spray fumy insecticide in the place where connector is stored. Such spray adhered to contact may cause defective continuity and defective soldering. (These precautions are specifically written to handling manual of such insecticide.) Besides, regarding insecticide other than fumy one, do not spray it directly on connector, because same defective may appear.
When using an insecticide, take out connector from storage area to outside, or put connector into a carton box and apply protection cover, such as a vinyl bag.
- (5) Do not disassemble connector or mate other things except header, because such handling may cause defective continuity.