



Title of Document:	HANDLING MANUAL	Issue No. CHM-1-198	Rev. 5
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Title subject:	FKZ Connector	Revision date: March 16, 2020	

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

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1. Model Number and Part Name

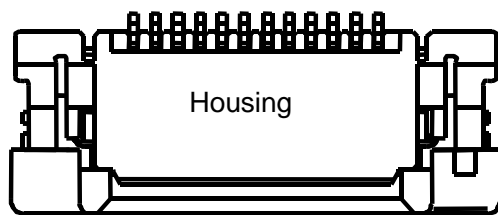
1-1 Model number

Part name			Model No.
FKZ connector	Normal type	25 circuits or less	**FKZ-SM1-1 (*)
			**FKZ-SM1-1A (*)
		26 circuits or more	**FKZ-SM1-2 (*)
	Reverse type	25 circuits or less	**FKZ-RSM1-1 (*)
		26 circuits or more	**FKZ-RSM1-2 (*)
		Embossed-taping product	25 circuits or less
26 circuits or more	**FKZ-SM1-2-TB (*)		
25 circuits or less	**FKZ-RSM1-1#-TB (*)		
26 circuits or more	**FKZ-RSM1-2-TB (*)		

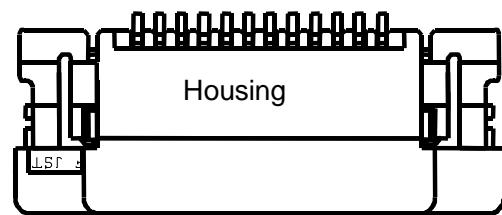
Note₁: 2-digit figures in an asterisk denoted the circuit number.

Note₂: "(LF)(SN)" in "(*)" denoted lead-free products.

1-2 Part name



Slider
Normal type



Slider
Reverse type

Fig.-1

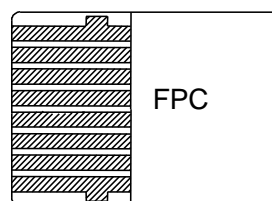


Fig.-2

JST	Title subject: FKZ Connector	No. CHM-1-198
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2. Storage

2-1 Storing the connectors

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) and dusty place.

Especially, note that the seal ring and the seal rubber plate exposed to direct sunshine brings about deterioration of the rubber and adhesion of dust, affecting the waterproof performance. Also, keep the storage room from 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 the products in the original package to store.

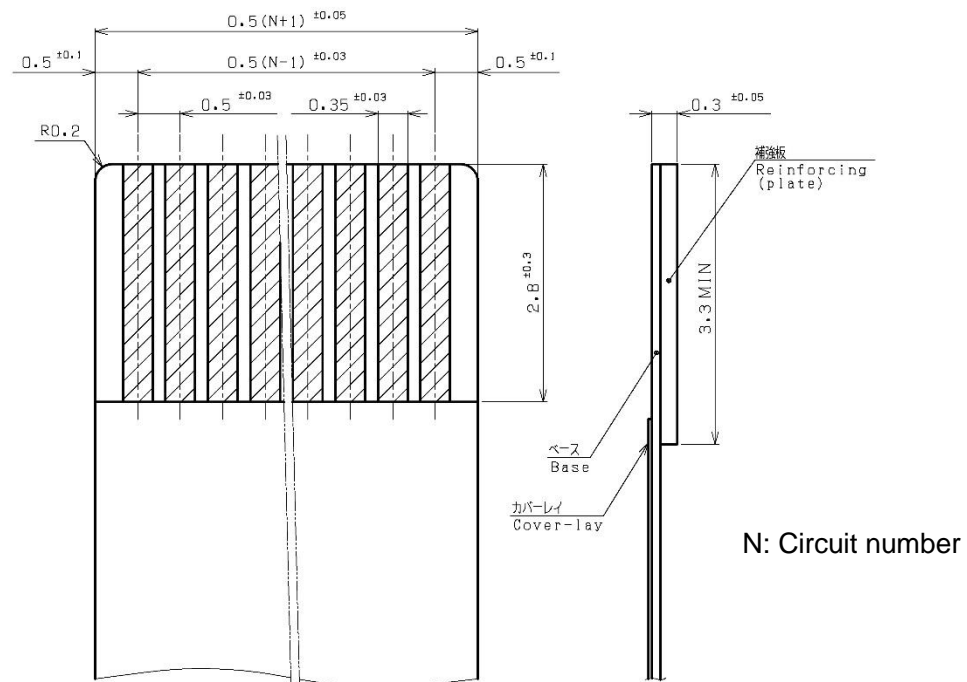
2-2 Storing the crimped contacts

Not leaving the crimped contact 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 FPC

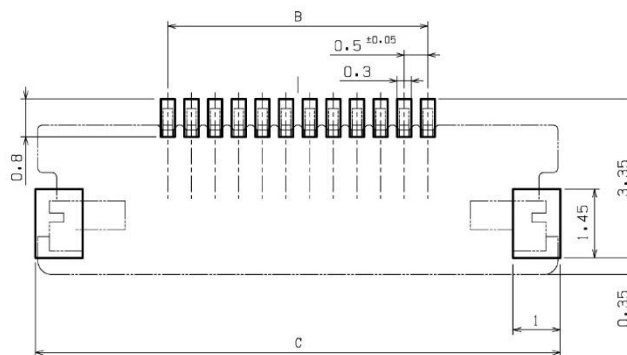
- ①: The dimensions of FPC greatly affect the contacting reliability with the connector.
Conform the dimensions of FPC with those of applicable ones described in drawing.
- ②: Especially, narrow pitch connectors have a high possibility to come off the contact point due to warpage, deformation, slant insertion, insufficient insertion and so on of FPC.
In order to reduce these risks, manage that the important dimensions such as conductor width, length, pitch, FPC total width, position misalignment between conductor and FPC width shall meet the given tolerances, considering the variations of those dimensions.
- ③: Confirm the applicability of the connector with the FPC used, before using.
FPC, which applicability is not confirmed, might not be able to guarantee the performance.
- ④: The blanking shall be conducted from the conductor side to the reinforcing plate side
Use FPC with applicable dimensions, which are recommended by JST.

Item	Rated value	
Applicable FPC (Connector approval drawing & see the next page.)	Lead:	Tin-plated copper foil (By electroplating way)
	Lead pitch:	0.5 mm
	Lead width:	0.35 mm
	Mating part thickness:	0.3 ±0.05 mm



4. PC Board Pattern Layout

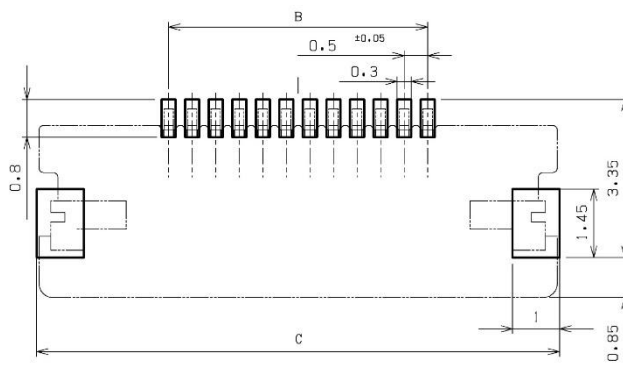
25 circuits or less



UNIT: mm

極数 Circuits	B	C
5	2.0	7.6
6	2.5	8.1
8	3.5	9.1
12	5.5	11.1
14	6.5	12.1
16	7.5	13.1
18	8.5	14.1
19	9.0	14.6
20	9.5	15.1
22	10.5	16.1
24	11.5	17.1

26 circuits or more



UNIT: mm

極数 Circuits	B	C
26	12.5	18.1
27	13.0	18.6
28	13.5	19.1
30	14.5	20.1
32	15.5	21.1

5. Handling Precautions

5-1 FPC inserting operation

5-1-1 Releasing the slider of the connector

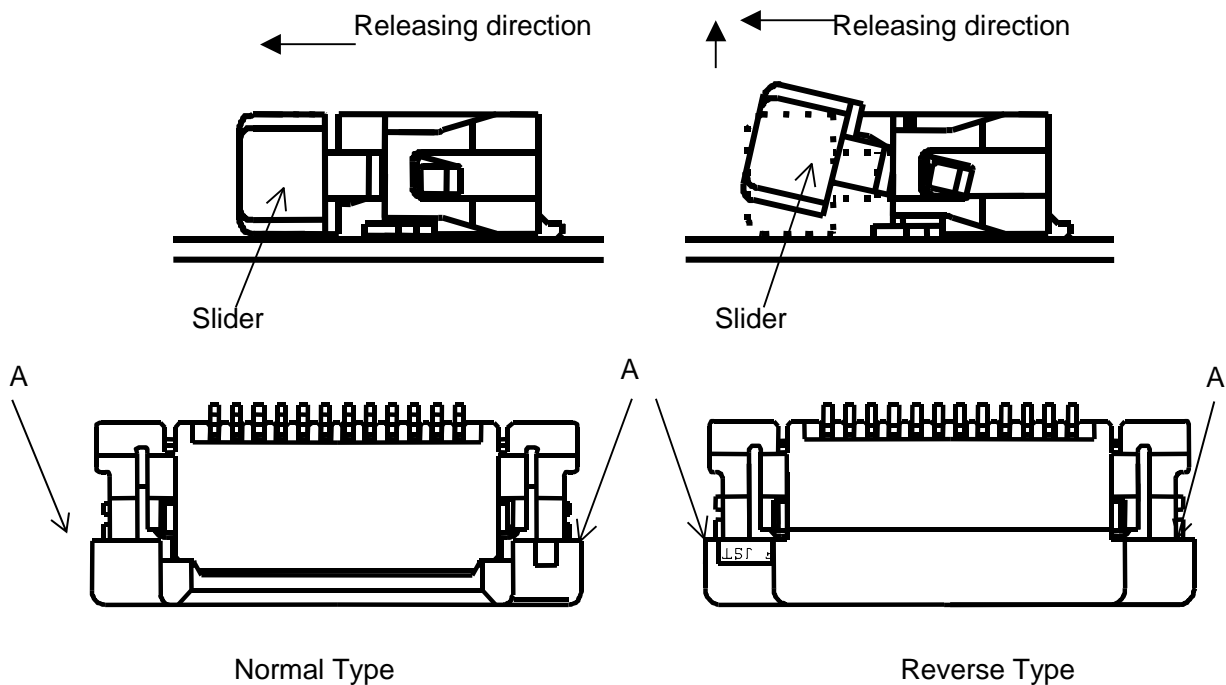


Fig.-3

- ① Hold the A part of the slider between your thumb and forefinger to pull the slider out in a straight with even load at the both sides.
- ② When pulling the slider out, do not apply excessive force or pull the only one end of the slider. (Because the connector may break.)

5-1-2 Inserting FPC into the connector

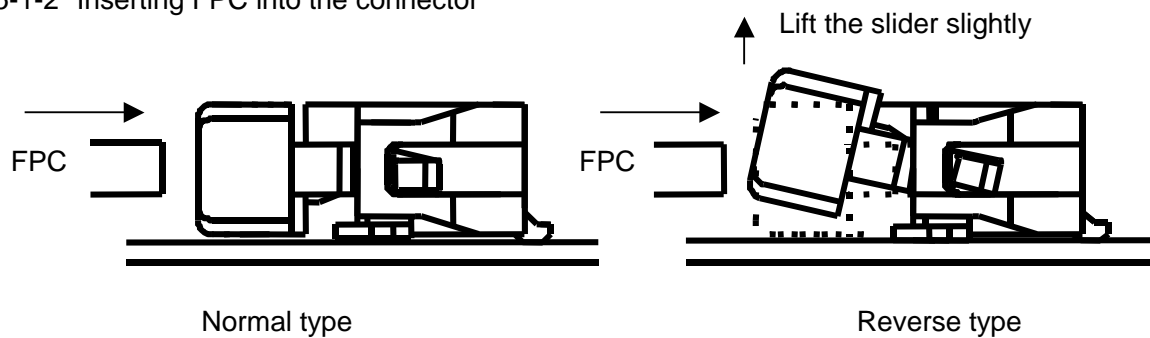


Fig.-4

- Insert FPC into the connector in a straight up to the innermost on mating axis.
In the case of the reverse type, lifting the slider a little makes the insertion of FPC easy.

Note₃: When inserting FPC in the connector, it sometimes hits the slider and lets the slider to enter the connector together with it, leading insufficient insertion of FPC.
In such a case, release the slider and re-insert FPC.

5-1-3 Inserting the slider

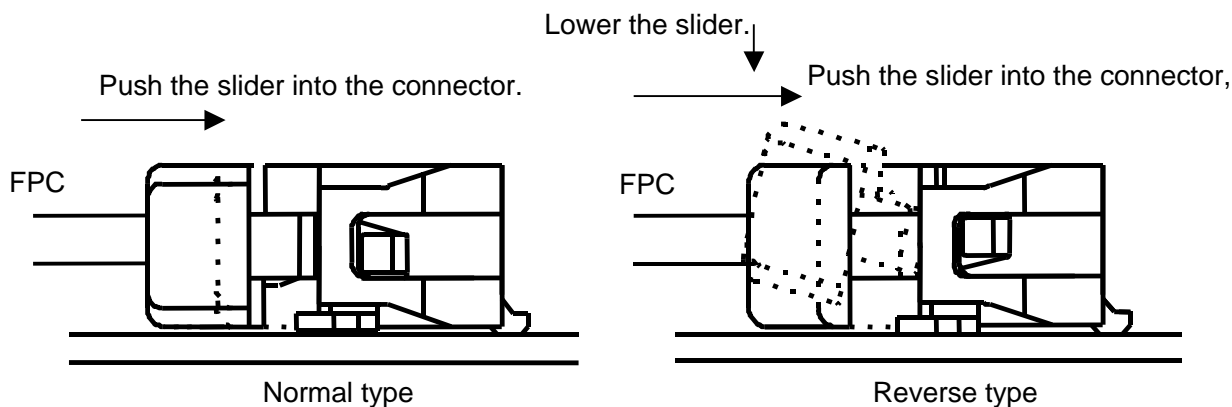


Fig.-5

- ① After checking that FPC is inserted up to the innermost of the connector, in case of the normal type, push the slider in the connector with even force at the both sides. In case of the reverse type, lower the lifted slider for inserting FPC, and push it in the connector in a straight with even force at the both sides.
- ② In the same way as item 5-1-1, insert the both sides at once, not only one side.
(Because the connector may break.)

5-2 Releasing FPC

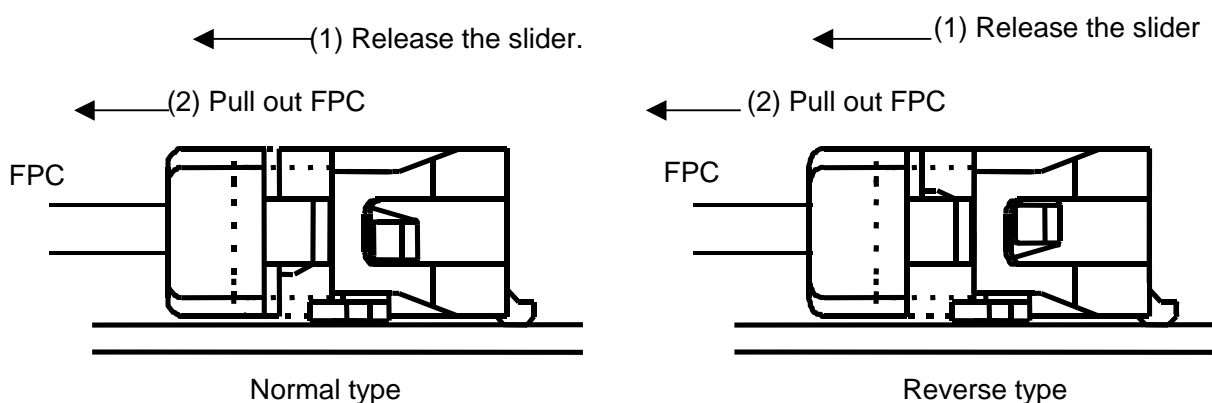


Fig.-6

- ① In the same way as item 5-1-1, hold the A part of the slider between your thumb and forefinger and pull the slider out in a straight to avoid applying excessive force with care.
- ② When pulling the slider out, do not apply excessive force, release in a stroke or pull the only one end of the slider. (Because the connector may break.)
- ③ After releasing the slider, pull out FPC in a straight on the same axis.
Do not pull FPC out with prying or upwardly, because FPC or the connector may be damaged.

5-3 Handling of FPC after mounting the connector on a PC Board

Handle FPC not to apply a load to the connector by making an enough length.
(Because the connector may break or cause electrical discontinuity.)

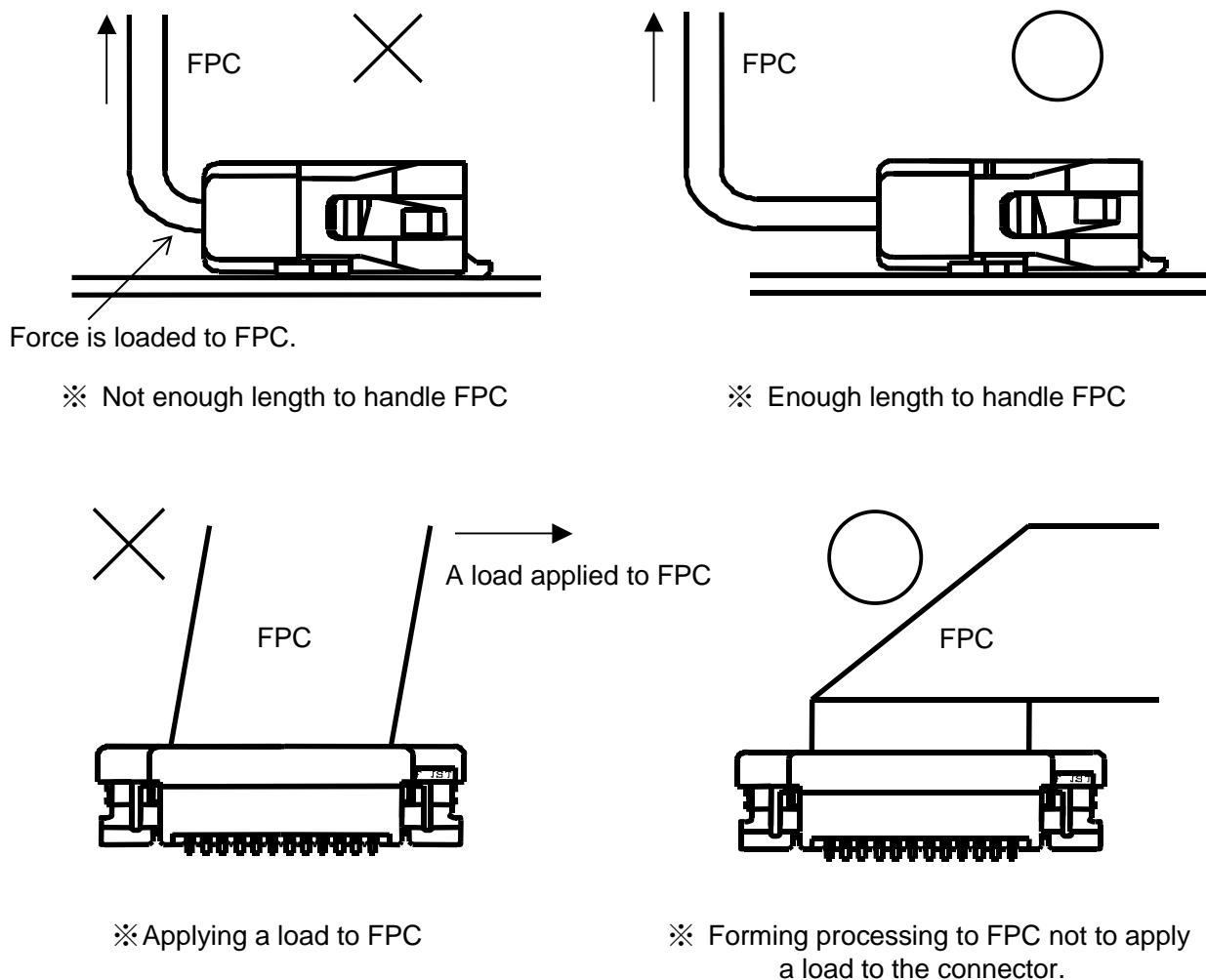


Fig.-7

5-4 Precautions for soldering operation

5-4-1 Solder iron method

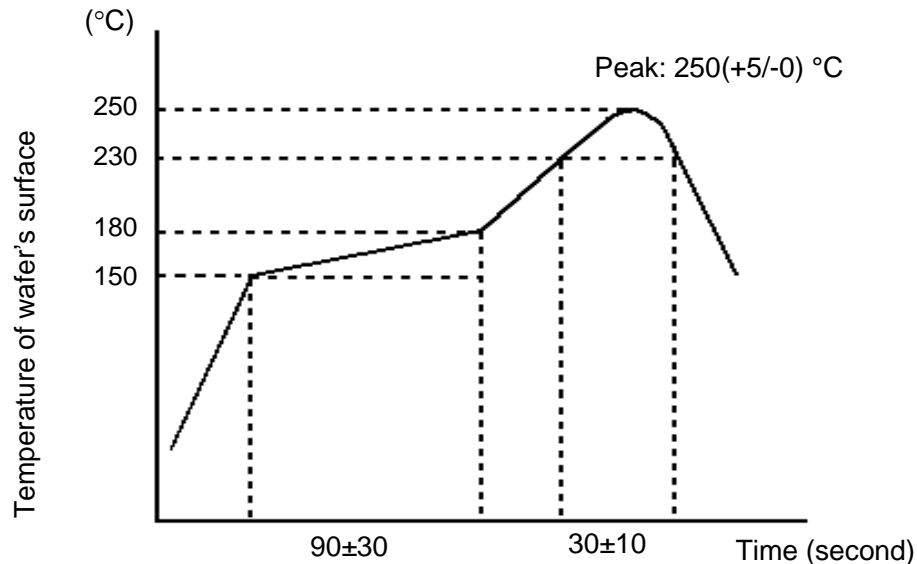
Solder the connector mounted on PC board by a soldering iron of 350°C quickly within 3 seconds, and check the appearance visually.

When soldering, do not push the iron tip on the connector contact lead part nor apply an abnormal force such as lateral load. If done, dismount and replace the connector with the new one, and redo soldering.

Do not reuse the dismounted connector.

5-4-2 Reflow soldering method

We recommend reflow-soldering at the temperature below the following temperature profile.
Solder the connector according to condition of soldering materials such as solder paste, because the recommended reflow temperature varies.



Temperature profile for reflow soldering

When bridge trouble appears in process of reflow soldering and repair is conducted by hand, strictly conduct item 5-4-1 "Solder iron method."

5-5 Other precautions

- ① Each connector components are very delicate.
Handle with care during operating the slider or mating FPC in accordance with the points to be noted above.
- ② After inserting FPC into the connector, do not pull out FPC with the slider inserted or do not apply a load to FPC, because FPC and the connector may be damaged or electrical discontinuity may be caused.