



Title of Document:	HANDLING MANUAL	Issue No. CHM-1-2233	Rev. 1
Customer:	GENERAL	Issue date: November 20, 2006	
Title subject:	FMN Connector (Dipping Type)	Revision date: October 24, 2019	

This manual describes important and required points of handling about FMN connector (Dipping type).
Be sure to read this manual thoroughly before using FMN connector.

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1. Part Name and Model Number

Part name		Model No.
FMN connector	Top entry type	() FMN-BTK-A (LF)(SN)
		() FMN-BTRK-A (LF)(SN)
	Side entry type	() FMN-STK-A (LF)(SN)
		() FMN-STRK-A (LF)(SN)
	Side entry type With stopper	() FMN-SSTK-A (LF)(SN)
		() FMN-SSTRK-A (LF)(SN)

Note 1: Number of circuits is indicated in ().

Note 2: Ending identification marking "(LF)(SN)" stands for purified lead-free product.

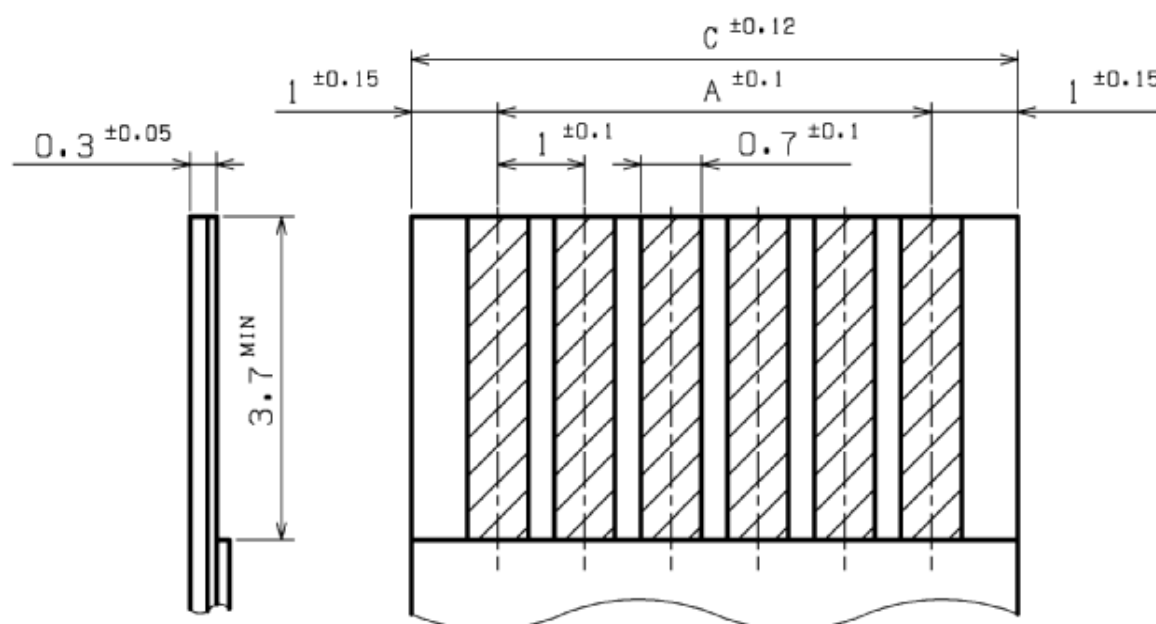
2. Applicable FFC

- ① Dimensions of FFC greatly affect to the contacting reliability with connector.
Conform the dimensions of FFC with those of applicable ones described in drawing.
- ② 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	
Applicable FFC	Conductor: Tin-plated copper wire Each dimension: As shown in below.

	Dimensions
A	$(N-1) \pm 0.1$
C	$(N+1) \pm 0.12$

N = Circuits



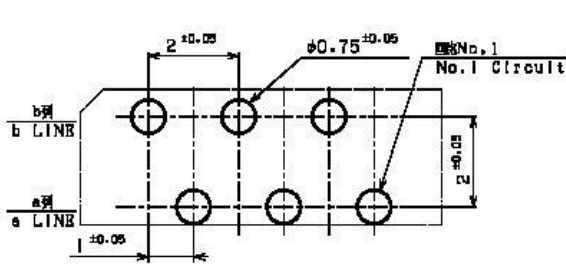
Recommended dimensions for applicable FFC

3. PC Board Pattern Layout

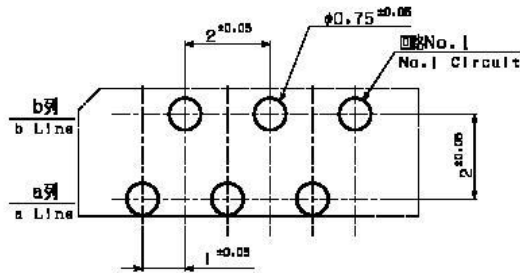
The following PC board pattern layout (viewed from component side) is recommended.

① Top entry type

● *FMN-BTK-A (LF)(SN)

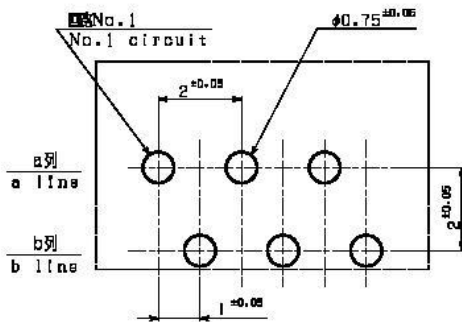


● *FMN-BTRK-A (LF)(SN)

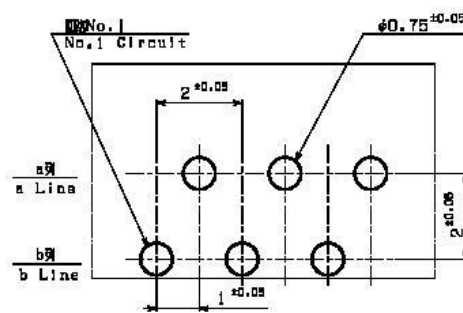


② Side entry type

● *FMN-STK-A (LF)(SN)

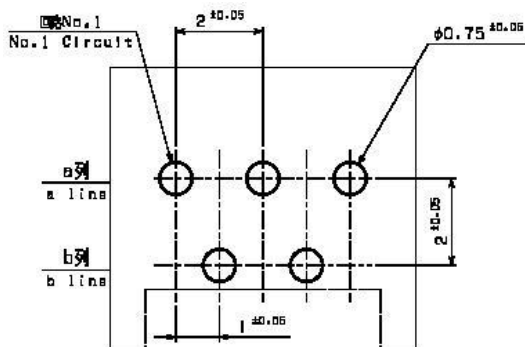


● *FMN-STRK-A (LF)(SN)

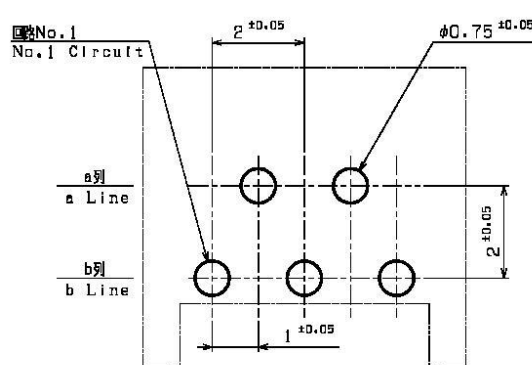


③ Side entry type with stopper

● *FMN-SSTK-A (LF)(SN)



● *FMN-SSTRK-A (LF)(SN)



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4. Handling Precautions

4-1 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 dismantled connector.

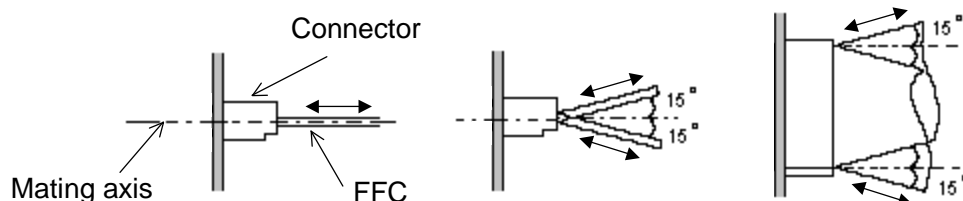
② Dip soldering

Solder the connector at temperature range of 255 ~ 265°C within 5 seconds.

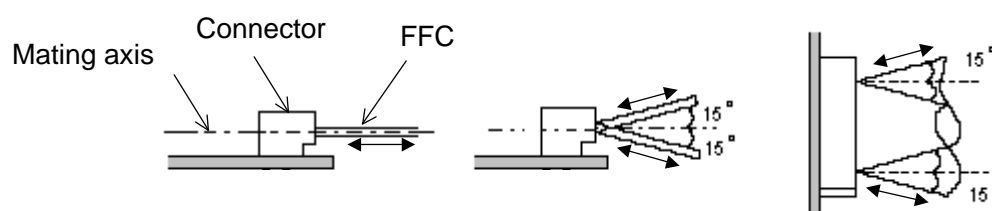
4-2 Inserting and releasing FFC

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

e.g.: In the case of top entry type



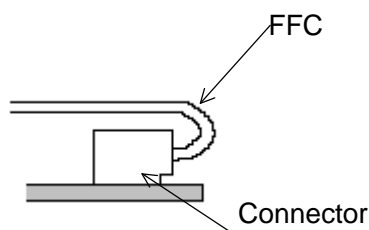
e.g.: In the case of side entry type



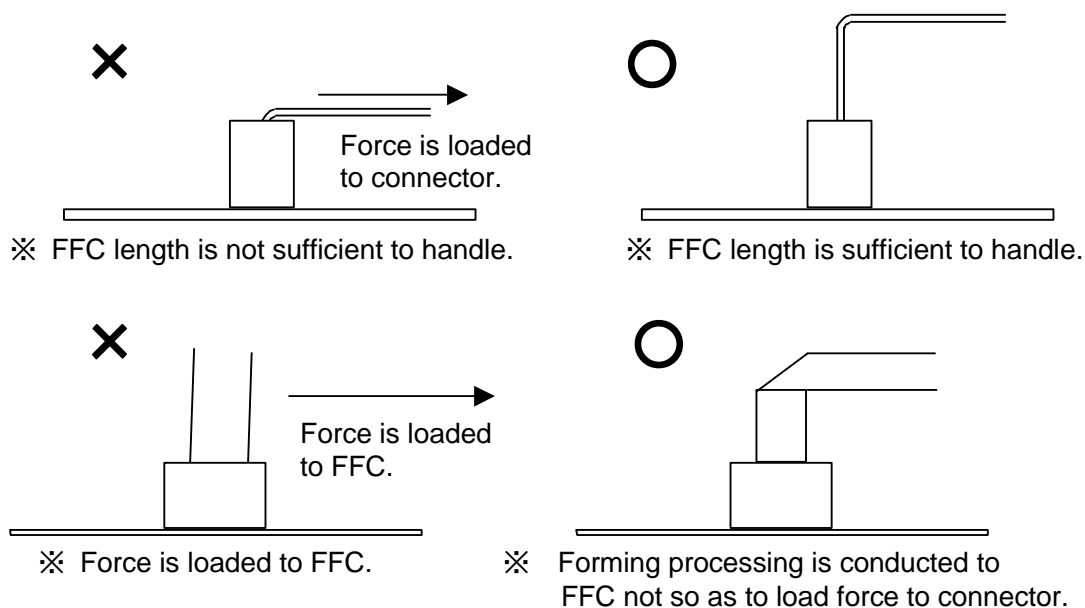
4-3 Handling of FFC after mounting on PC board

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

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

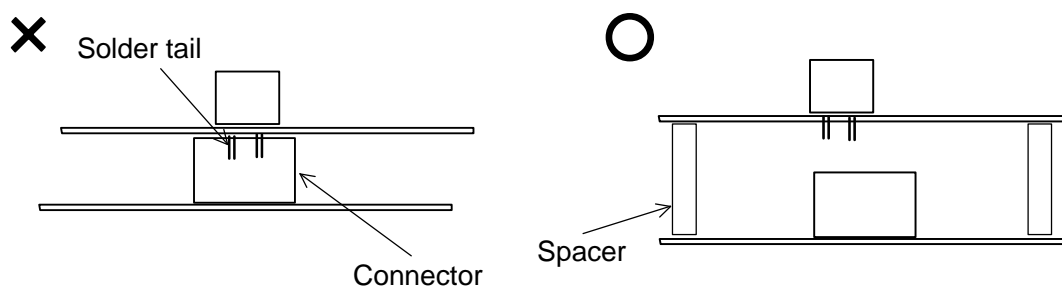


- ② When inserted FFC is handled, provide sufficient FFC length so that force is not loaded to connector, because such loading may cause damage and discontinuity of connector.



4-4 Handling precautions after mounting on PC board

- ① Do not hook a finger, etc. on 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.

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5. Storage

Keep FMN connector (Dipping Type) in the following ambience.

Storage temperature	5 ~ 35°C
Relative humidity	40 ~ 60%

6. Others

- ① Keep connector free from direct sunshine, corrosive gas and dust.
- ② Do not leave connector taken out of carton box, 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 fume 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 fume 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.