JST

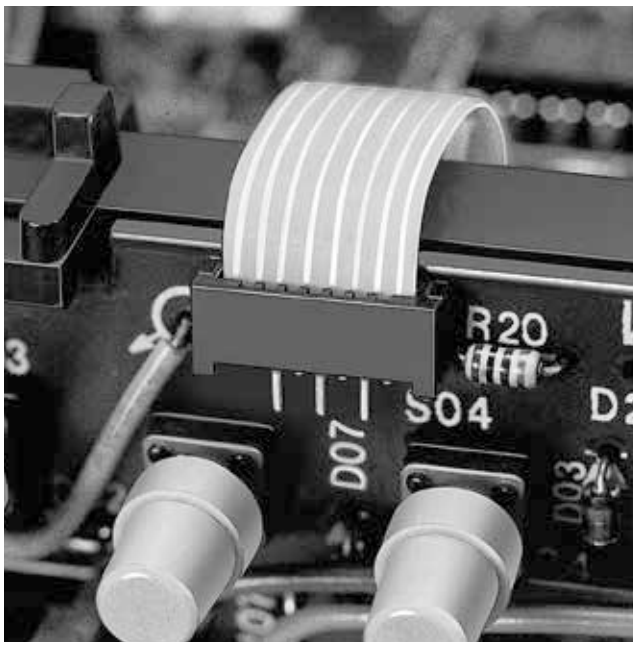
1.0 mm
pitch

FM CONNECTOR

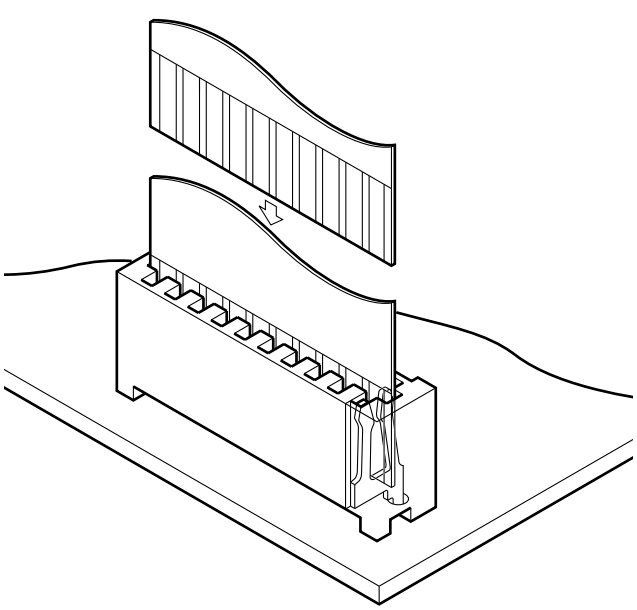
Emboss Tape

NON-ZIF TYPE

Connectors for FFC and FPC



The FM connector, a miniature connector with a thickness of only 3.0 mm, was developed to connect flexible flat cables (FFC) or flexible printed circuits (FPC) with a lead pitch of 1.0 mm to printed circuit boards. It is ideally suited for connections inside high-density equipment or between mechanical units. The contact is constructed to ensure a stable connection and high reliability even under vibration and impact. Connection is easy with a simple snap-in action.



Features

• Compact

Having no complicated cam or slide mechanism, this connector is small with a mounting height of only 4.4 mm and a width of 3.0 mm.

• Double-sided contact

This connector has highly resilient phosphor bronze contacts, each of which has two independent mating spring members that ensure continuity even when subjected to severe vibration. Because each of the contacts simultaneously mates with both sides of the FFC or FPC, the engineer has greater freedom in designing his circuitry.

• Simple snap-in action

The FFC or FPC are securely connected by simply inserting their leads into the connector.

• Surface mount model (SMT)

This connector is also available in a surface mount configuration. Its housing is made of heat resistant resin so that it is not adversely affected during reflow soldering. Because of its tiny size and ability to be surface mounted, this connector meets the demand for high-density mounting of components inside electronic products.

Specifications

- Current rating: 0.5 A AC/DC
- Voltage rating: 50 V AC/DC
- Temperature range: −25℃ to +85℃
  (including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 20 mΩ max.
  After environmental tests/ 30 mΩ max.
- Insulation resistance: 800 MΩ min.
- Withstanding voltage: 500 VAC/minute
- Applicable FFC and FPC: Conductor pitch/ 1.0 mm
  Conductor width/ 0.7 mm
  Mating part thickness/ $0.33^{+0.02}_{-0.03}$ mm
- Applicable PC board thickness: 0.8 to 1.6 mm

<Note>FFC/FPC to be actually used should be checked for applicability.

* In using the products, refer to "Handling Precautions for Terminals and Connectors" described on our website (Technical documents of Product information page).
* RoHS2 compliance
* Dimensional unit: mm
* Contact JST for details.

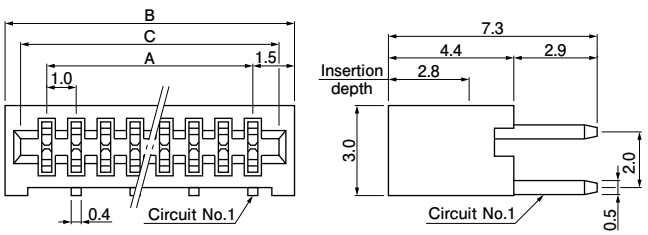
Standards

Recognized E60389
Certified LR20812

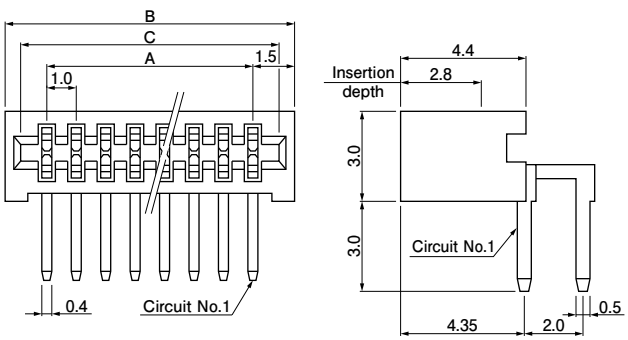
Connector

●Through-hole type

Top entry type

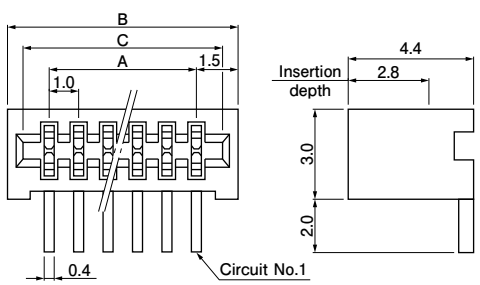


Side entry type

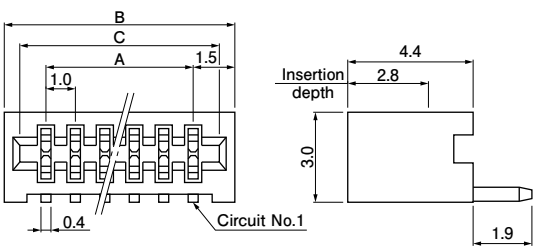


●SMT type

Top entry type



Side entry type



Through-hole type connector

No. of circuits	Model No. of Through-hole type		Dimensions (mm)			Q'ty/box
	Top entry type	Side entry type	A	B	C	
3	**03FM-1.0BT**	**03FM-1.0ST**	2.0	5.0	4.1	2,000
4	**04FM-1.0BT**	**04FM-1.0ST**	3.0	6.0	5.1	2,000
5	**05FM-1.0BT**	**05FM-1.0ST**	4.0	7.0	6.1	2,000
6	**06FM-1.0BT**	**06FM-1.0ST**	5.0	8.0	7.1	1,000
7	**07FM-1.0BT**	**07FM-1.0ST**	6.0	9.0	8.1	1,000
8	**08FM-1.0BT**	**08FM-1.0ST**	7.0	10.0	9.1	1,000
10	**10FM-1.0BT**	**10FM-1.0ST**	9.0	12.0	11.1	1,000
11	**11FM-1.0BT**	**11FM-1.0ST**	10.0	13.0	12.1	1,000
12	**12FM-1.0BT**	**12FM-1.0ST**	11.0	14.0	13.1	1,000

SMT type connector on embossed-tape

No. of circuits	Model No.		Dimensions (mm)			Q'ty/reel	
	Top entry type	Side entry type	A	B	C	Top entry type	Side entry type
3	—	**03FM-1.0SP-1.9-TF**	2.0	5.0	4.1	—	2,500
4	**04FM-1.0BP-TF**	**04FM-1.0SP-1.9-TF**	3.0	6.0	5.1	1,000	2,500
5	**05FM-1.0BP-TF**	**05FM-1.0SP-1.9-TF**	4.0	7.0	6.1	1,000	2,500
6	**06FM-1.0BP-TF**	**06FM-1.0SP-1.9-TF**	5.0	8.0	7.1	1,000	2,500
7	**07FM-1.0BP-TF**	**07FM-1.0SP-1.9-TF**	6.0	9.0	8.1	1,000	2,500
8	**08FM-1.0BP-TF**	**08FM-1.0SP-1.9-TF**	7.0	10.0	9.1	1,000	2,500
10	**10FM-1.0BP-TF-A**	**10FM-1.0SP-1.9-TF**	9.0	12.0	11.1	1,000	2,000
12	—	**12FM-1.0SP-1.9-TF**	11.0	14.0	13.1	—	2,000

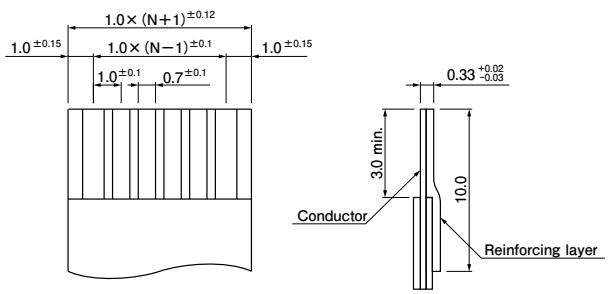
Material and Finish
(Through-hole type) Contact: Phosphor bronze, copper-undercoated, tin-plated (reflow treatment) Housing: PBT, UL94V-0 (SMT type) Contact: Phosphor bronze, copper-undercoated, tin-plated (reflow treatment) Housing: PPS, UL94V-0

RoHS2 compliance This product displays (LF)(SN) on a label.

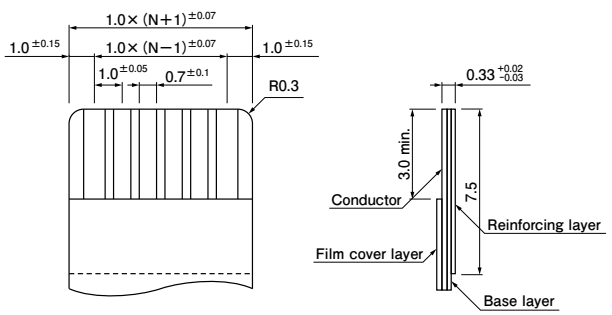
FM CONNECTOR

Lead section dimensions of FFC and FPC

FFC



FPC

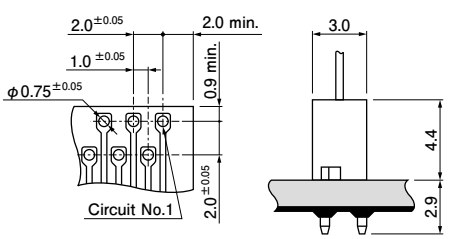


Note: N --- Number of circuits

PC board layout and Assembly layout

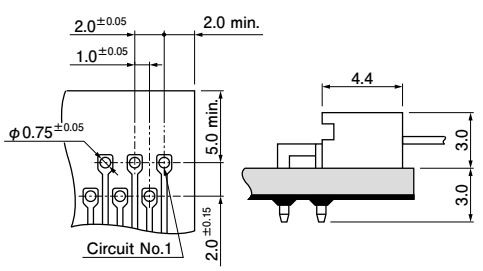
●Through-hole type

Top entry type



Soldering side

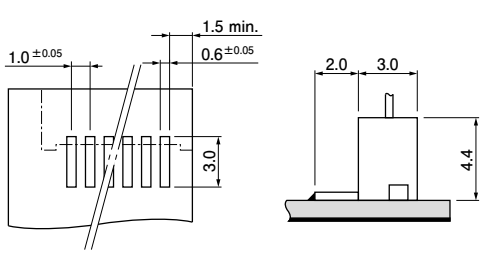
Side entry type



Soldering side

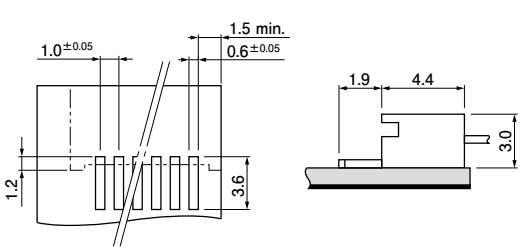
●SMT type

Top entry type



Connector mounting side

Side entry type



Connector mounting side

Note: 1. Tolerances are non-cumulative: ± 0.05 mm for all centers.
2. Hole dimensions differ according to the type of PC board and piercing method. The dimensions above should serve as a guideline.
3. It is recommended that surface mount connectors be secured using thermosetting resin or something similar. Contact JST for details.