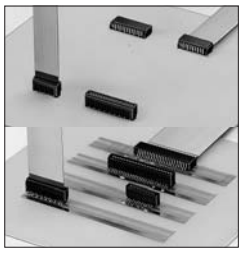
THE DATASHEET OF

13FMN-SMT-A-TF(LF)(SN)

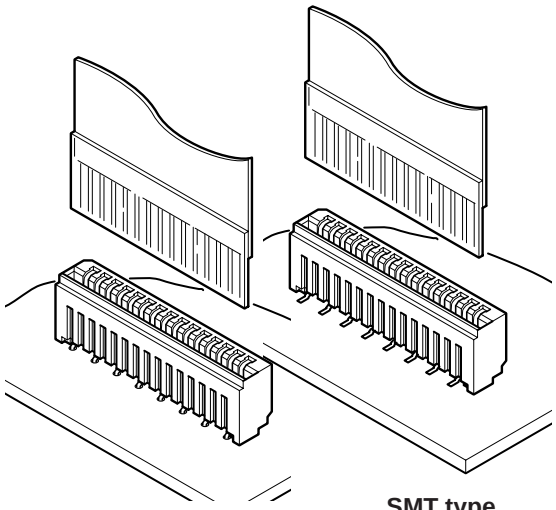


FMN CONNECTOR

Emboss Tape

NON-ZIF TYPE

1.0mm pitch/Connectors for FFC



Through-hole type

SMT type

- ***Compact***
- ***Low insertion force***
- ***Both through-hole and SMT types are available***
- ***Embossed tape for automatic mounting***

Specifications

- Current rating: 0.5 A DC
- Voltage rating: 50 V DC
- Temperature range: -25˚C to +85˚C
  (including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 30 mΩ max.
  After environmental tests/ 50 mΩ max.
- Insulation resistance: 500 MΩ min.
- Withstanding voltage: 500 VAC/minute
- Applicable FFC: Conductor pitch/ 1.0 mm
  Conductor width/ 0.7 mm
  Mating part thickness/ 0.3 ± 0.05 mm
- Applicable PC board thickness: 1.6 mm

Note: FFC to be actually used should be checked for applicability.

* Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.
* Contact JST for details.
* Compliant with RoHS.

Standards

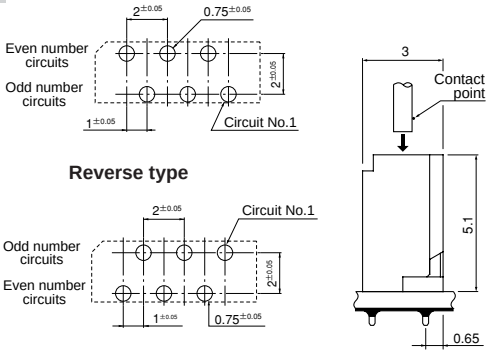
Recognized E60389
Certified LR20812

PC board layout and Assembly layout

<Through-hole type>

Top entry type

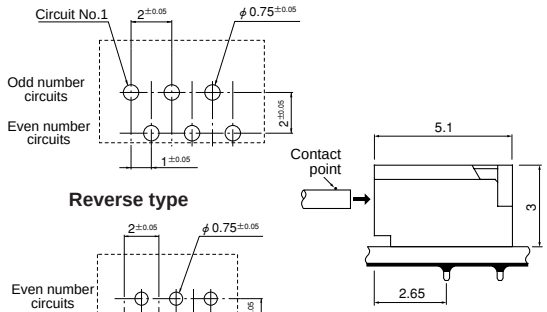
Normal type



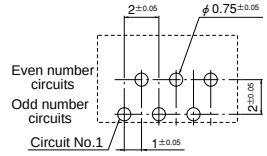
Reverse type

Side entry type

Normal type



Reverse type



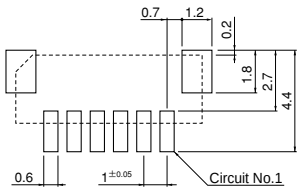
Note:
1. The above figure is the figure viewed from the connector mounting side.
2. Tolerances are non-cumulative: ±0.05 mm for all centers.
3. Hole dimensions differ according to the type of PC board and piercing method. The dimensions above should serve as a guideline. Contact JST for details.

<SMT type>

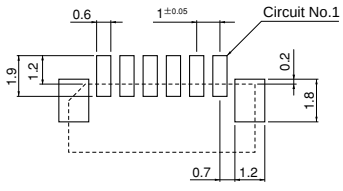
Top entry type

<In-line>

Normal type

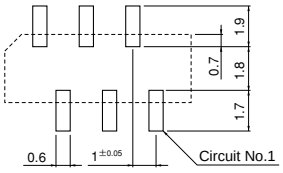


Reverse type

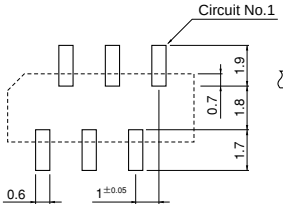


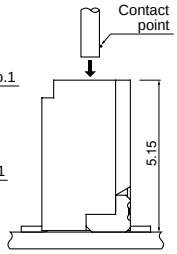
<Staggered>

Normal type

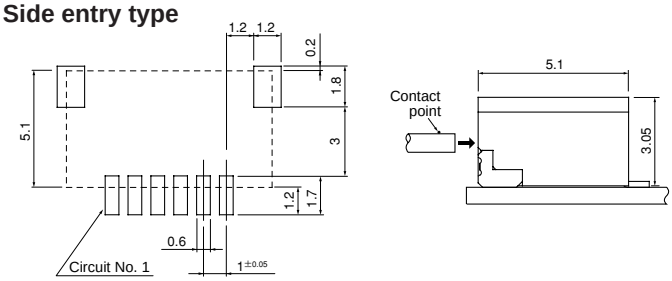


Reverse type



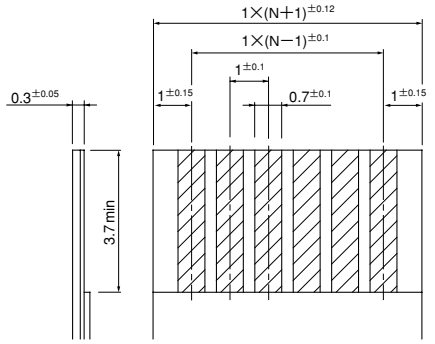


Side entry type



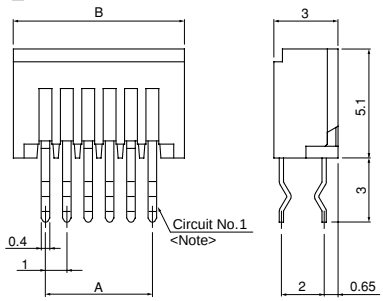
Note:
1. The above figure is the figure viewed from the connector mounting side.
2. Tolerances are non-cumulative: ±0.05 mm for all centers.
3. The dimensions above should serve as a guideline. Contact JST for details.

Lead section dimensions of FFC

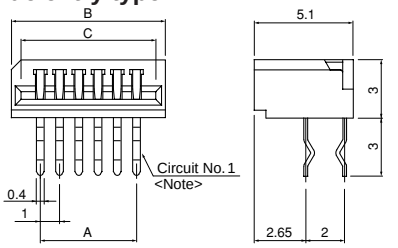


Through-hole type Connector

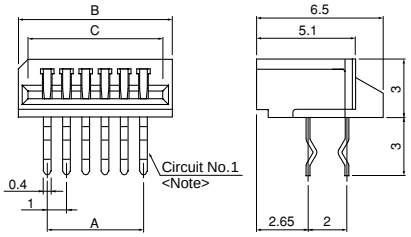
Top entry type



Side entry type



Side entry type with stop



<Note> Normal type: The solder tail for cricuit No.1 contact is positioned in front.
Reverse type: The solder tail for cricuit No.1 contact is positioned behind.

Note: N --- Number of circuits

Circuits	Model No.						Dimensions (mm)			Q'ty/box		
	Top entry type		Side entry type		Side entry type with stop							
	Normal type	Reverse type	Normal type	Reverse type	Normal type	Reverse type	A	B	C	Top entry type	Side entry type	Side entry type with stop
4	**04FMN-BTK-A**	**04FMN-BTRK-A**	**04FMN-STK-A**	**04FMN-STRK-A**	**04FMN-SSTK-A**	**04FMN-SSTRK-A**	3.0	6.0	5.0	3,600	2,160	2,520
5	**05FMN-BTK-A**	**05FMN-BTRK-A**	**05FMN-STK-A**	**05FMN-STRK-A**	**05FMN-SSTK-A**	**05FMN-SSTRK-A**	4.0	7.0	6.0	3,100	1,860	2,170
6	**06FMN-BTK-A**	**06FMN-BTRK-A**	**06FMN-STK-A**	**06FMN-STRK-A**	**06FMN-SSTK-A**	**06FMN-SSTRK-A**	5.0	8.0	7.0	2,700	1,620	1,890
7	**07FMN-BTK-A**	**07FMN-BTRK-A**	**07FMN-STK-A**	**07FMN-STRK-A**	**07FMN-SSTK-A**	**07FMN-SSTRK-A**	6.0	9.0	8.0	2,400	1,440	1,680
8	**08FMN-BTK-A**	**08FMN-BTRK-A**	**08FMN-STK-A**	**08FMN-STRK-A**	**08FMN-SSTK-A**	**08FMN-SSTRK-A**	7.0	10.0	9.0	2,100	1,260	1,470
9	**09FMN-BTK-A**	**09FMN-BTRK-A**	**09FMN-STK-A**	**09FMN-STRK-A**	**09FMN-SSTK-A**	**09FMN-SSTRK-A**	8.0	11.0	10.0	1,900	1,140	1,330
10	**10FMN-BTK-A**	**10FMN-BTRK-A**	**10FMN-STK-A**	**10FMN-STRK-A**	**10FMN-SSTK-A**	**10FMN-SSTRK-A**	9.0	12.0	11.0	1,800	1,080	1,260
11	**11FMN-BTK-A**	**11FMN-BTRK-A**	**11FMN-STK-A**	**11FMN-STRK-A**	**11FMN-SSTK-A**	**11FMN-SSTRK-A**	10.0	13.0	12.0	1,600	960	1,120
12	**12FMN-BTK-A**	**12FMN-BTRK-A**	**12FMN-STK-A**	**12FMN-STRK-A**	**12FMN-SSTK-A**	**12FMN-SSTRK-A**	11.0	14.0	13.0	1,500	900	1,050
13	**13FMN-BTK-A**	**13FMN-BTRK-A**	**13FMN-STK-A**	**13FMN-STRK-A**	**13FMN-SSTK-A**	**13FMN-SSTRK-A**	12.0	15.0	14.0	1,400	840	980
14	**14FMN-BTK-A**	**14FMN-BTRK-A**	**14FMN-STK-A**	**14FMN-STRK-A**	**14FMN-SSTK-A**	**14FMN-SSTRK-A**	13.0	16.0	15.0	1,300	780	910
15	**15FMN-BTK-A**	**15FMN-BTRK-A**	**15FMN-STK-A**	**15FMN-STRK-A**	**15FMN-SSTK-A**	**15FMN-SSTRK-A**	14.0	17.0	16.0	1,200	720	840
16	**16FMN-BTK-A**	**16FMN-BTRK-A**	**16FMN-STK-A**	**16FMN-STRK-A**	**16FMN-SSTK-A**	**16FMN-SSTRK-A**	15.0	18.0	17.0	1,200	720	840
17	**17FMN-BTK-A**	**17FMN-BTRK-A**	**17FMN-STK-A**	**17FMN-STRK-A**	**17FMN-SSTK-A**	**17FMN-SSTRK-A**	16.0	19.0	18.0	1,100	660	770
18	**18FMN-BTK-A**	**18FMN-BTRK-A**	**18FMN-STK-A**	**18FMN-STRK-A**	**18FMN-SSTK-A**	**18FMN-SSTRK-A**	17.0	20.0	19.0	1,000	600	700
19	**19FMN-BTK-A**	**19FMN-BTRK-A**	**19FMN-STK-A**	**19FMN-STRK-A**	**19FMN-SSTK-A**	**19FMN-SSTRK-A**	18.0	21.0	20.0	1,000	600	700
20	**20FMN-BTK-A**	**20FMN-BTRK-A**	**20FMN-STK-A**	**20FMN-STRK-A**	**20FMN-SSTK-A**	**20FMN-SSTRK-A**	19.0	22.0	21.0	900	540	630
21	**21FMN-BTK-A**	**21FMN-BTRK-A**	**21FMN-STK-A**	**21FMN-STRK-A**	**21FMN-SSTK-A**	**21FMN-SSTRK-A**	20.0	23.0	22.0	900	540	630
22	**22FMN-BTK-A**	**22FMN-BTRK-A**	**22FMN-STK-A**	**22FMN-STRK-A**	**22FMN-SSTK-A**	**22FMN-SSTRK-A**	21.0	24.0	23.0	900	540	630
23	**23FMN-BTK-A**	**23FMN-BTRK-A**	**23FMN-STK-A**	**23FMN-STRK-A**	**23FMN-SSTK-A**	**23FMN-SSTRK-A**	22.0	25.0	24.0	800	480	560
24	**24FMN-BTK-A**	**24FMN-BTRK-A**	**24FMN-STK-A**	**24FMN-STRK-A**	**24FMN-SSTK-A**	**24FMN-SSTRK-A**	23.0	26.0	25.0	800	480	560
25	**25FMN-BTK-A**	**25FMN-BTRK-A**	**25FMN-STK-A**	**25FMN-STRK-A**	**25FMN-SSTK-A**	**25FMN-SSTRK-A**	24.0	27.0	26.0	800	480	560
26	**26FMN-BTK-A**	**26FMN-BTRK-A**	**26FMN-STK-A**	**26FMN-STRK-A**	**26FMN-SSTK-A**	**26FMN-SSTRK-A**	25.0	28.0	27.0	700	420	490
27	**27FMN-BTK-A**	**27FMN-BTRK-A**	**27FMN-STK-A**	**27FMN-STRK-A**	**27FMN-SSTK-A**	**27FMN-SSTRK-A**	26.0	29.0	28.0	700	420	490
28	**28FMN-BTK-A**	**28FMN-BTRK-A**	**28FMN-STK-A**	**28FMN-STRK-A**	**28FMN-SSTK-A**	**28FMN-SSTRK-A**	27.0	30.0	29.0	700	420	490
29	**29FMN-BTK-A**	**29FMN-BTRK-A**	**29FMN-STK-A**	**29FMN-STRK-A**	**29FMN-SSTK-A**	**29FMN-SSTRK-A**	28.0	31.0	30.0	700	420	490
30	**30FMN-BTK-A**	**30FMN-BTRK-A**	**30FMN-STK-A**	**30FMN-STRK-A**	**30FMN-SSTK-A**	**30FMN-SSTRK-A**	29.0	32.0	31.0	600	360	420
31	**31FMN-BTK-A**	**31FMN-BTRK-A**	**31FMN-STK-A**	**31FMN-STRK-A**	**31FMN-SSTK-A**	**31FMN-SSTRK-A**	30.0	33.0	32.0	600	360	420
32	**32FMN-BTK-A**	**32FMN-BTRK-A**	**32FMN-STK-A**	**32FMN-STRK-A**	**32FMN-SSTK-A**	**32FMN-SSTRK-A**	31.0	34.0	33.0	600	360	420
33	**33FMN-BTK-A**	**33FMN-BTRK-A**	**33FMN-STK-A**	**33FMN-STRK-A**	**33FMN-SSTK-A**	**33FMN-SSTRK-A**	32.0	35.0	34.0	600	360	420
34	**34FMN-BTK-A**	**34FMN-BTRK-A**	**34FMN-STK-A**	**34FMN-STRK-A**	**34FMN-SSTK-A**	**34FMN-SSTRK-A**	33.0	36.0	35.0	600	360	420
35	**35FMN-BTK-A**	**35FMN-BTRK-A**	**35FMN-STK-A**	**35FMN-STRK-A**	**35FMN-SSTK-A**	**35FMN-SSTRK-A**	34.0	37.0	36.0	500	300	350
36	**36FMN-BTK-A**	**36FMN-BTRK-A**	**36FMN-STK-A**	**36FMN-STRK-A**	**36FMN-SSTK-A**	**36FMN-SSTRK-A**	35.0	38.0	37.0	500	300	350
37	**37FMN-BTK-A**	**37FMN-BTRK-A**	**37FMN-STK-A**	**37FMN-STRK-A**	**37FMN-SSTK-A**	**37FMN-SSTRK-A**	36.0	39.0	38.0	500	300	350
38	**38FMN-BTK-A**	**38FMN-BTRK-A**	**38FMN-STK-A**	**38FMN-STRK-A**	**38FMN-SSTK-A**	**38FMN-SSTRK-A**	37.0	40.0	39.0	500	300	350
39	**39FMN-BTK-A**	**39FMN-BTRK-A**	**39FMN-STK-A**	**39FMN-STRK-A**	**39FMN-SSTK-A**	**39FMN-SSTRK-A**	38.0	41.0	40.0	500	300	350
40	**40FMN-BTK-A**	**40FMN-BTRK-A**	**40FMN-STK-A**	**40FMN-STRK-A**	**40FMN-SSTK-A**	**40FMN-SSTRK-A**	39.0	42.0	41.0	500	300	350

Material and Finish

Contact: Phosphor bronze, copper-undercoated, tin-plated (reflow treatment)
Housing: 4 to 22 circuits/PBT, UL94V-0, Normal type···gray Reverse type···brown
23 to 40 circuits/PA 6T, UL94V-0, Normal type···gray Reverse type···black

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

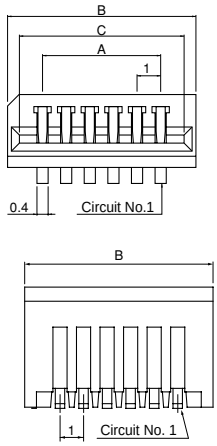
FMN CONNECTOR

SMT type Connector

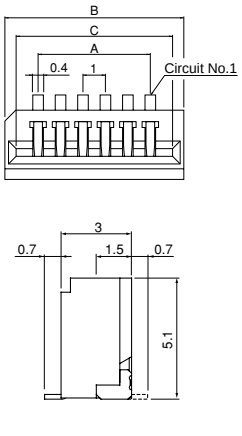
Top entry type

<In-line>

Normal type

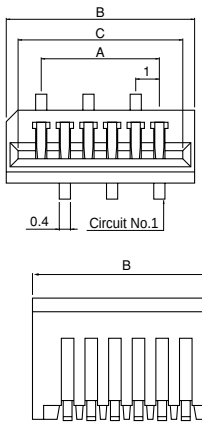


Reverse type

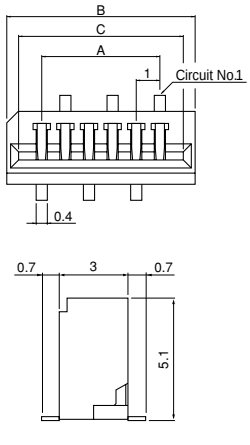


<Staggered>

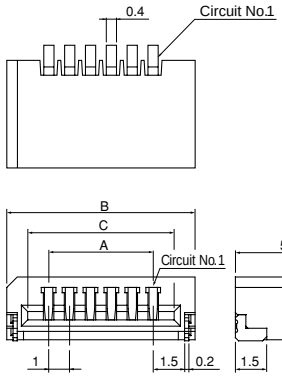
Normal type



Reverse type



Side entry type



Circuits	Model No.					Dimensions (mm)				Q'ty/reel	
	Top entry type				Side entry type	A	B		C		
	In-line		Staggered				Top entry type	Side entry type		Top entry type	Side entry type
	Normal type	Reverse type	Normal type	Reverse type							
4	04FMN-BMT-A-TF	04FMN-BMTR-A-TB	04FMN-BMTTN-A-TF	04FMN-BMTTR-A-TB	04FMN-SMT-A-TF	3.0	6.0	7.0	5.0	1,000	2,000
5	05FMN-BMT-A-TF	05FMN-BMTR-A-TB	05FMN-BMTTN-A-TF	05FMN-BMTTR-A-TB	05FMN-SMT-A-TF	4.0	7.0	8.0	6.0	1,000	2,000
6	06FMN-BMT-A-TF	06FMN-BMTR-A-TB	06FMN-BMTTN-A-TF	06FMN-BMTTR-A-TB	06FMN-SMT-A-TF	5.0	8.0	9.0	7.0	1,000	2,000
7	07FMN-BMT-A-TF	07FMN-BMTR-A-TB	07FMN-BMTTN-A-TF	07FMN-BMTTR-A-TB	07FMN-SMT-A-TF	6.0	9.0	10.0	8.0	1,000	2,000
8	08FMN-BMT-A-TF	08FMN-BMTR-A-TB	08FMN-BMTTN-A-TF	08FMN-BMTTR-A-TB	08FMN-SMT-A-TF	7.0	10.0	11.0	9.0	1,000	2,000
9	09FMN-BMT-A-TF	09FMN-BMTR-A-TB	09FMN-BMTTN-A-TF	09FMN-BMTTR-A-TB	09FMN-SMT-A-TF	8.0	11.0	12.0	10.0	1,000	2,000
10	10FMN-BMT-A-TF	10FMN-BMTR-A-TB	10FMN-BMTTN-A-TF	10FMN-BMTTR-A-TB	10FMN-SMT-A-TF	9.0	12.0	13.0	11.0	1,000	2,000
11	11FMN-BMT-A-TF	11FMN-BMTR-A-TB	11FMN-BMTTN-A-TF	11FMN-BMTTR-A-TB	11FMN-SMT-A-TF	10.0	13.0	14.0	12.0	1,000	2,000
12	12FMN-BMT-A-TF	12FMN-BMTR-A-TB	12FMN-BMTTN-A-TF	12FMN-BMTTR-A-TB	12FMN-SMT-A-TF	11.0	14.0	15.0	13.0	1,000	2,000
13	13FMN-BMT-A-TF	13FMN-BMTR-A-TB	13FMN-BMTTN-A-TF	13FMN-BMTTR-A-TB	13FMN-SMT-A-TF	12.0	15.0	16.0	14.0	1,000	2,000
14	14FMN-BMT-A-TF	14FMN-BMTR-A-TB	14FMN-BMTTN-A-TF	14FMN-BMTTR-A-TB	14FMN-SMT-A-TF	13.0	16.0	17.0	15.0	1,000	2,000
15	15FMN-BMT-A-TF	15FMN-BMTR-A-TB	15FMN-BMTTN-A-TF	15FMN-BMTTR-A-TB	15FMN-SMT-A-TF	14.0	17.0	18.0	16.0	1,000	2,000
16	16FMN-BMT-A-TF	16FMN-BMTR-A-TB	16FMN-BMTTN-A-TF	16FMN-BMTTR-A-TB	16FMN-SMT-A-TF	15.0	18.0	19.0	17.0	1,000	2,000
17	17FMN-BMT-A-TF	17FMN-BMTR-A-TB	17FMN-BMTTN-A-TF	17FMN-BMTTR-A-TB	17FMN-SMT-A-TF	16.0	19.0	20.0	18.0	1,000	2,000
18	18FMN-BMT-A-TF	18FMN-BMTR-A-TB	18FMN-BMTTN-A-TF	18FMN-BMTTR-A-TB	18FMN-SMT-A-TF	17.0	20.0	21.0	19.0	1,000	2,000
19	19FMN-BMT-A-TF	19FMN-BMTR-A-TB	19FMN-BMTTN-A-TF	19FMN-BMTTR-A-TB	19FMN-SMT-A-TF	18.0	21.0	22.0	20.0	1,000	2,000
20	20FMN-BMT-A-TF	20FMN-BMTR-A-TB	20FMN-BMTTN-A-TF	20FMN-BMTTR-A-TB	20FMN-SMT-A-TF	19.0	22.0	23.0	21.0	1,000	2,000
21	21FMN-BMT-A-TF	21FMN-BMTR-A-TB	—	21FMN-BMTTR-A-TB	21FMN-SMT-A-TF	20.0	23.0	24.0	22.0	1,000	2,000
22	22FMN-BMT-A-TF	22FMN-BMTR-A-TB	22FMN-BMTTN-A-TF	22FMN-BMTTR-A-TB	22FMN-SMT-A-TF	21.0	24.0	25.0	23.0	1,000	2,000
23	23FMN-BMT-A-TF	23FMN-BMTR-A-TB	23FMN-BMTTN-A-TF	—	23FMN-SMT-A-TF	22.0	25.0	26.0	24.0	1,000	2,000
24	24FMN-BMT-A-TF	24FMN-BMTR-A-TB	24FMN-BMTTN-A-TF	—	24FMN-SMT-A-TF	23.0	26.0	27.0	25.0	1,000	2,000
25	25FMN-BMT-A-TF	25FMN-BMTR-A-TB	25FMN-BMTTN-A-TF	25FMN-BMTTR-A-TB	25FMN-SMT-A-TF	24.0	27.0	28.0	26.0	1,000	2,000
26	26FMN-BMT-A-TF	26FMN-BMTR-A-TB	26FMN-BMTTN-A-TF	—	26FMN-SMT-A-TF	25.0	28.0	29.0	27.0	1,000	2,000
27	27FMN-BMT-A-TF	27FMN-BMTR-A-TB	27FMN-BMTTN-A-TF	27FMN-BMTTR-A-TB	27FMN-SMT-A-TF	26.0	29.0	30.0	28.0	1,000	2,000
28	—	28FMN-BMTR-A-TB	28FMN-BMTTN-A-TF	28FMN-BMTTR-A-TB	28FMN-SMT-A-TF	27.0	30.0	31.0	29.0	1,000	2,000
29	29FMN-BMT-A-TF	29FMN-BMTR-A-TB	29FMN-BMTTN-A-TF	29FMN-BMTTR-A-TB	29FMN-SMT-A-TF	28.0	31.0	32.0	30.0	1,000	2,000
30	30FMN-BMT-A-TF	30FMN-BMTR-A-TB	30FMN-BMTTN-A-TF	30FMN-BMTTR-A-TB	30FMN-SMT-A-TF	29.0	32.0	33.0	31.0	1,000	2,000
31	31FMN-BMT-A-TF	31FMN-BMTR-A-TB	31FMN-BMTTN-A-TF	31FMN-BMTTR-A-TB	31FMN-SMT-A-TF	30.0	33.0	34.0	32.0	1,000	2,000
32	32FMN-BMT-A-TF	32FMN-BMTR-A-TB	32FMN-BMTTN-A-TF	32FMN-BMTTR-A-TB	32FMN-SMT-A-TF	31.0	34.0	35.0	33.0	1,000	2,000
33	33FMN-BMT-A-TF	—	33FMN-BMTTN-A-TF	33FMN-BMTTR-A-TB	33FMN-SMT-A-TF	32.0	35.0	36.0	34.0	1,000	2,000
34	34FMN-BMT-A-TF	—	34FMN-BMTTN-A-TF	34FMN-BMTTR-A-TB	34FMN-SMT-A-TF	33.0	36.0	37.0	35.0	1,000	2,000
35	35FMN-BMT-A-TF	35FMN-BMTR-A-TB	35FMN-BMTTN-A-TF	35FMN-BMTTR-A-TB	35FMN-SMT-A-TF	34.0	37.0	38.0	36.0	1,000	2,000
36	36FMN-BMT-A-TF	36FMN-BMTR-A-TB	36FMN-BMTTN-A-TF	36FMN-BMTTR-A-TB	36FMN-SMT-A-TF	35.0	38.0	39.0	37.0	1,000	2,000
37	37FMN-BMT-A-TF	37FMN-BMTR-A-TB	37FMN-BMTTN-A-TF	37FMN-BMTTR-A-TB	37FMN-SMT-A-TF	36.0	39.0	40.0	38.0	1,000	2,000
38	38FMN-BMT-A-TF	38FMN-BMTR-A-TB	38FMN-BMTTN-A-TF	38FMN-BMTTR-A-TB	38FMN-SMT-A-TF	37.0	40.0	41.0	39.0	1,000	2,000
39	39FMN-BMT-A-TF	39FMN-BMTR-A-TB	39FMN-BMTTN-A-TF	39FMN-BMTTR-A-TB	39FMN-SMT-A-TF	38.0	41.0	42.0	40.0	1,000	2,000
40	40FMN-BMT-A-TF	40FMN-BMTR-A-TB	40FMN-BMTTN-A-TF	40FMN-BMTTR-A-TB	40FMN-SMT-A-TF	39.0	42.0	43.0	41.0	1,000	2,000

Material and Finish
Contact: Phosphor bronze, copper-undercoated, tin-plated (reflow treatment) Housing: PA 6T, UL94V-0, black Solder tab: Brass, copper-undercoated, tin-plated (reflow treatment)

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

Note: 1. The products listed above are supplied on embossed tape.

2. Contact JST for the top entry type headers with suction cap.

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