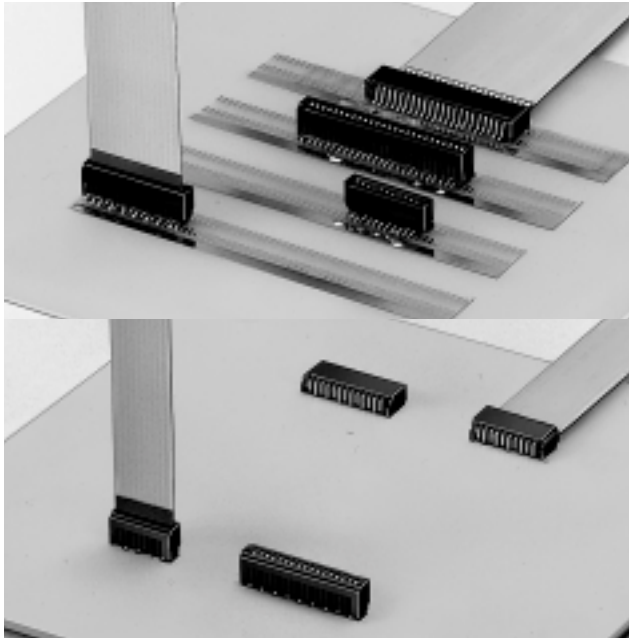


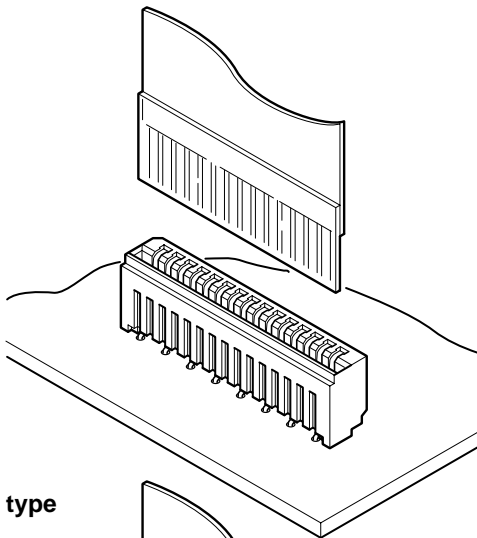
FMN CONNECTOR



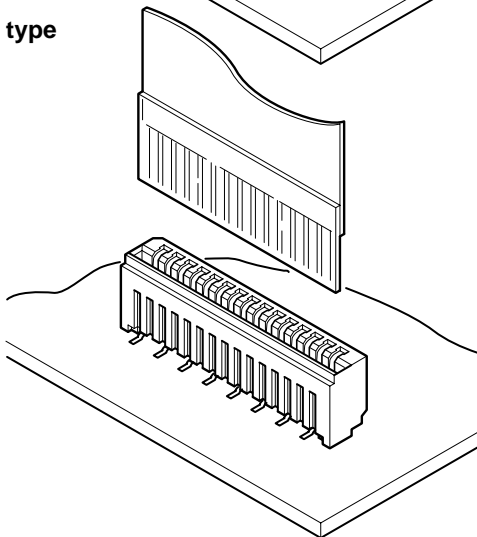
Connectors for FFC



Through-hole type



SMT type



Features

- **Compact**

3.0mm(.118") high <side entry type> and 5.1mm(.201")<top entry type>.

- **Low insertion force**

There are no slides or levers to operate on this recuded insertion force connector. It requires 1/2 the insertion force of JST's conventional FFC connector, but retains stable contact performance when subjected to environmental and mechanical stresses.

- **Both through-hole and SMT types are available**

SMT type connectors have heat-resistant housings so that solder reflow is possible. They also have solder tabs for extra strength.

- **Embossed tape for automatic mounting**

The SMT type FMN connector is supplied in embossed tape packaging, for mounting by automatic placemant machines.

Specifications

- Current rating: 0.5A DC
 - Voltage rating: 50V DC
 - Temperature range: -25°C to +85°C
(including temperature rise in applying electrical current)
 - Contact resistance: Initial value/30mΩ max.
After environmental testing/50mΩ max.
 - Insulation resistance: 500MΩ min.
 - Withstanding voltage: 500V AC/minute
 - Applicable FFC: Lead pitch /1.0mm(.039")
 - Note: Lead width /0.7mm(.028")
Mating part thickness /
0.30 ± 0.05mm(.012± .002)
 - Applicable PC board thickness: 1.6mm(.063")
- * Contact JST for details.

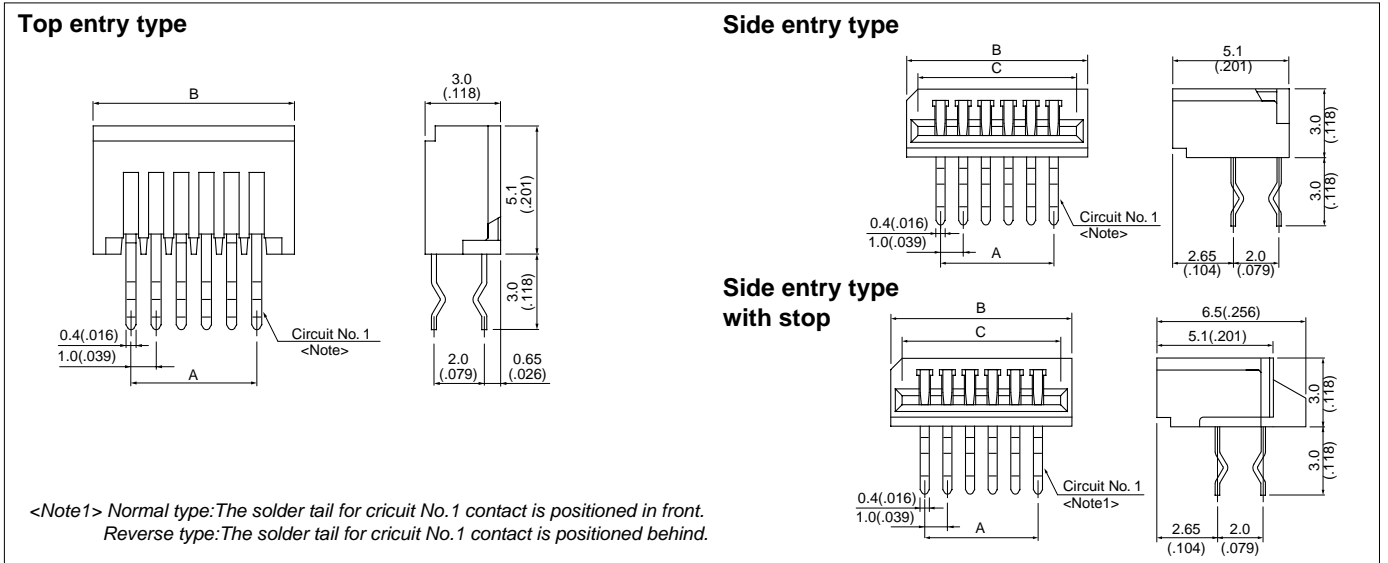
Standards

Recognized E60389

Certified LR20812

FMN CONNECTOR

Through-hole type Connector



Circuits	Model No.						Dimensions mm(in.)			Q'ty / box		
	Top entry type		Side entry type		Side entry type with stop (Note2)							
	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	04FMN-BTRK	04FMN-STK	04FMN-STRK	04FMN-SSTK	04FMN-SSTRK	3.0 (.118)	6.0 (.236)	5.0 (.197)	3,600	2,160	2,520
5	05FMN-BTK	05FMN-BTRK	05FMN-STK	05FMN-STRK	05FMN-SSTK	05FMN-SSTRK	4.0 (.157)	7.0 (.276)	6.0 (.236)	3,100	1,860	2,170
6	06FMN-BTK	06FMN-BTRK	06FMN-STK	06FMN-STRK	06FMN-SSTK	06FMN-SSTRK	5.0 (.197)	8.0 (.315)	7.0 (.276)	2,700	1,620	1,890
7	07FMN-BTK	07FMN-BTRK	07FMN-STK	07FMN-STRK	07FMN-SSTK	07FMN-SSTRK	6.0 (.236)	9.0 (.354)	8.0 (.315)	2,400	1,440	1,680
8	08FMN-BTK	08FMN-BTRK	08FMN-STK	08FMN-STRK	08FMN-SSTK	08FMN-SSTRK	7.0 (.276)	10.0 (.394)	9.0 (.354)	2,100	1,260	1,470
9	09FMN-BTK	09FMN-BTRK	09FMN-STK	09FMN-STRK	09FMN-SSTK	09FMN-SSTRK	8.0 (.315)	11.0 (.433)	10.0 (.394)	1,900	1,140	1,330
10	10FMN-BTK	10FMN-BTRK	10FMN-STK	10FMN-STRK	10FMN-SSTK	10FMN-SSTRK	9.0 (.354)	12.0 (.472)	11.0 (.433)	1,800	1,080	1,260
11	11FMN-BTK	11FMN-BTRK	11FMN-STK	11FMN-STRK	11FMN-SSTK	11FMN-SSTRK	10.0 (.394)	13.0 (.512)	12.0 (.472)	1,600	960	1,120
12	12FMN-BTK	12FMN-BTRK	12FMN-STK	12FMN-STRK	12FMN-SSTK	12FMN-SSTRK	11.0 (.433)	14.0 (.551)	13.0 (.512)	1,500	900	1,050
13	13FMN-BTK	13FMN-BTRK	13FMN-STK	13FMN-STRK	13FMN-SSTK	13FMN-SSTRK	12.0 (.472)	15.0 (.591)	14.0 (.551)	1,400	840	980
14	14FMN-BTK	14FMN-BTRK	14FMN-STK	14FMN-STRK	14FMN-SSTK	14FMN-SSTRK	13.0 (.512)	16.0 (.630)	15.0 (.591)	1,300	780	910
15	15FMN-BTK	15FMN-BTRK	15FMN-STK	15FMN-STRK	15FMN-SSTK	15FMN-SSTRK	14.0 (.551)	17.0 (.669)	16.0 (.630)	1,200	720	840
16	16FMN-BTK	16FMN-BTRK	16FMN-STK	16FMN-STRK	16FMN-SSTK	16FMN-SSTRK	15.0 (.591)	18.0 (.709)	17.0 (.669)	1,200	720	840
17	17FMN-BTK	17FMN-BTRK	17FMN-STK	17FMN-STRK	17FMN-SSTK	17FMN-SSTRK	16.0 (.630)	19.0 (.748)	18.0 (.709)	1,100	660	770
18	18FMN-BTK	18FMN-BTRK	18FMN-STK	18FMN-STRK	18FMN-SSTK	18FMN-SSTRK	17.0 (.669)	20.0 (.787)	19.0 (.748)	1,000	600	700
19	19FMN-BTK	19FMN-BTRK	19FMN-STK	19FMN-STRK	19FMN-SSTK	19FMN-SSTRK	18.0 (.709)	21.0 (.827)	20.0 (.787)	1,000	600	700
20	20FMN-BTK	20FMN-BTRK	20FMN-STK	20FMN-STRK	20FMN-SSTK	20FMN-SSTRK	19.0 (.748)	22.0 (.866)	21.0 (.827)	900	540	630
21	21FMN-BTK	21FMN-BTRK	21FMN-STK	21FMN-STRK	21FMN-SSTK	21FMN-SSTRK	20.0 (.787)	23.0 (.906)	22.0 (.866)	900	540	630
22	22FMN-BTK	22FMN-BTRK	22FMN-STK	22FMN-STRK	22FMN-SSTK	22FMN-SSTRK	21.0 (.827)	24.0 (.945)	23.0 (.906)	900	540	630
23	23FMN-BTK	23FMN-BTRK	23FMN-STK	23FMN-STRK	23FMN-SSTK	23FMN-SSTRK	22.0 (.866)	25.0 (.984)	24.0 (.945)	800	480	560
24	24FMN-BTK	24FMN-BTRK	24FMN-STK	24FMN-STRK	24FMN-SSTK	24FMN-SSTRK	23.0 (.906)	26.0 (1.024)	25.0 (.984)	800	480	560
25	25FMN-BTK	25FMN-BTRK	25FMN-STK	25FMN-STRK	25FMN-SSTK	25FMN-SSTRK	24.0 (.945)	27.0 (1.063)	26.0 (1.024)	800	480	560
26	26FMN-BTK	26FMN-BTRK	26FMN-STK	26FMN-STRK	26FMN-SSTK	26FMN-SSTRK	25.0 (.984)	28.0 (1.102)	27.0 (1.063)	700	420	490
27	27FMN-BTK	27FMN-BTRK	27FMN-STK	27FMN-STRK	27FMN-SSTK	27FMN-SSTRK	26.0 (1.024)	29.0 (1.142)	28.0 (1.102)	700	420	490
28	28FMN-BTK	28FMN-BTRK	28FMN-STK	28FMN-STRK	28FMN-SSTK	28FMN-SSTRK	27.0 (1.063)	30.0 (1.181)	29.0 (1.142)	700	420	490
29	29FMN-BTK	29FMN-BTRK	29FMN-STK	29FMN-STRK	29FMN-SSTK	29FMN-SSTRK	28.0 (1.102)	31.0 (1.220)	30.0 (1.181)	700	420	490
30	30FMN-BTK	30FMN-BTRK	30FMN-STK	30FMN-STRK	30FMN-SSTK	30FMN-SSTRK	29.0 (1.142)	32.0 (1.260)	31.0 (1.220)	600	360	420
31	31FMN-BTK	31FMN-BTRK	31FMN-STK	31FMN-STRK	31FMN-SSTK	31FMN-SSTRK	30.0 (1.181)	33.0 (1.299)	32.0 (1.260)	600	360	420
32	32FMN-BTK	32FMN-BTRK	32FMN-STK	32FMN-STRK	32FMN-SSTK	32FMN-SSTRK	31.0 (1.220)	34.0 (1.339)	33.0 (1.299)	600	360	420
33	33FMN-BTK	33FMN-BTRK	33FMN-STK	33FMN-STRK	33FMN-SSTK	33FMN-SSTRK	32.0 (1.260)	35.0 (1.378)	34.0 (1.339)	600	360	420
34	34FMN-BTK	34FMN-BTRK	34FMN-STK	34FMN-STRK	34FMN-SSTK	34FMN-SSTRK	33.0 (1.299)	36.0 (1.417)	35.0 (1.378)	600	360	420
35	35FMN-BTK	35FMN-BTRK	35FMN-STK	35FMN-STRK	35FMN-SSTK	35FMN-SSTRK	34.0 (1.339)	37.0 (1.457)	36.0 (1.417)	500	300	350
36	36FMN-BTK	36FMN-BTRK	36FMN-STK	36FMN-STRK	36FMN-SSTK	36FMN-SSTRK	35.0 (1.378)	38.0 (1.496)	37.0 (1.457)	500	300	350
37	37FMN-BTK	37FMN-BTRK	37FMN-STK	37FMN-STRK	37FMN-SSTK	37FMN-SSTRK	36.0 (1.417)	39.0 (1.535)	38.0 (1.496)	500	300	350
38	38FMN-BTK	38FMN-BTRK	38FMN-STK	38FMN-STRK	38FMN-SSTK	38FMN-SSTRK	37.0 (1.457)	40.0 (1.575)	39.0 (1.535)	500	300	350
39	39FMN-BTK	39FMN-BTRK	39FMN-STK	39FMN-STRK	39FMN-SSTK	39FMN-SSTRK	38.0 (1.496)	41.0 (1.614)	40.0 (1.575)	500	300	350
40	40FMN-BTK	40FMN-BTRK	40FMN-STK	40FMN-STRK	40FMN-SSTK	40FMN-SSTRK	39.0 (1.535)	42.0 (1.654)	41.0 (1.614)	500	300	350

Material and Finish

Contact: Phosphor bronze, copper-undercoated, tin/lead-plated
Housing: 4 to 22 circuits/PBT, UL94V-0
23 to 40 circuits/Modified 6T nylon, UL94V-0
Normal type---gray Reverse type---black

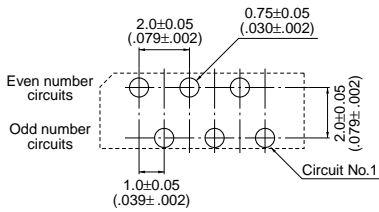
Note 2: Side entry type connectors with stop (<)FMN-SSTK & (<)FMN-SSTRK> are not UL recognized nor CSA certified.

FMN CONNECTOR

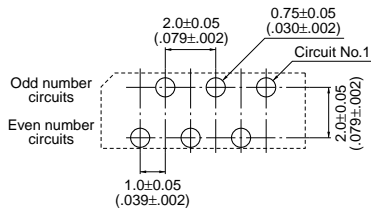
Through-hole type PC board layout (viewed from component side)

Top entry type

<Normal type>

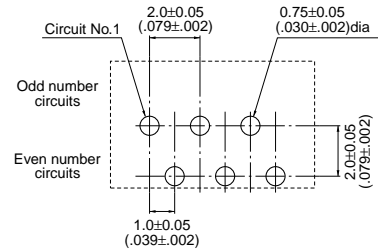


<Reverse type>

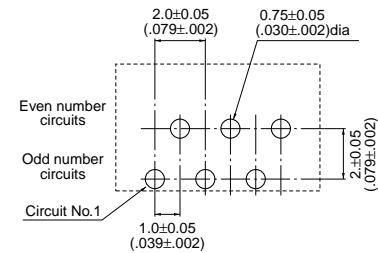


Side entry type

<Normal type>



<Reverse type>

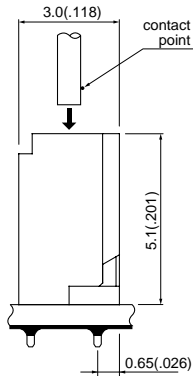


Note:

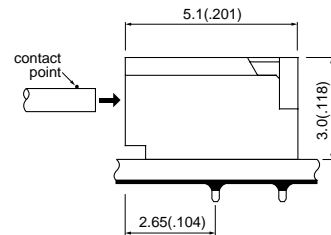
1. Tolerances are non-cumulative: $\pm 0.05\text{mm} (\pm .002")$ for all centers.
2. Hole dimensions differ according to the kind of PC board and piercing method. The dimensions above should serve as a guideline.
Contact JST for details.

Through-hole type Assembly layout

Top entry type



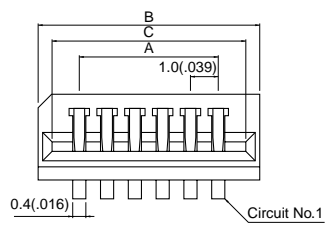
Side entry type



SMT type Connector

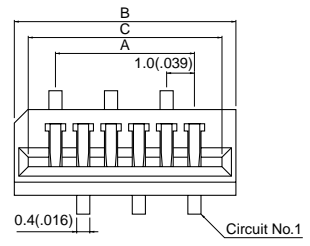
Top entry type

<In-line>

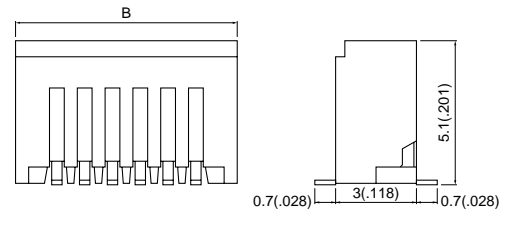
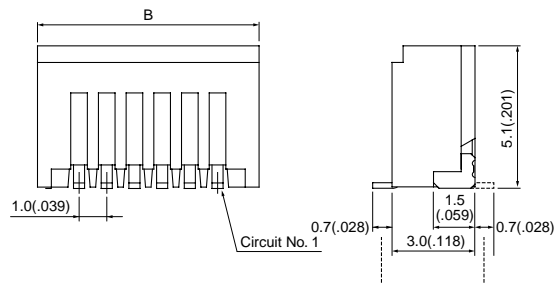
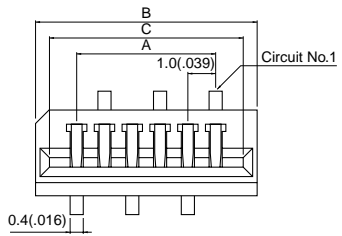
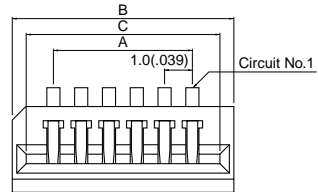


← Normal type →

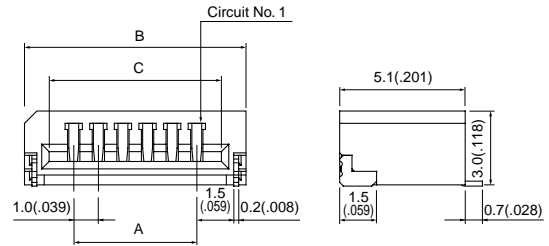
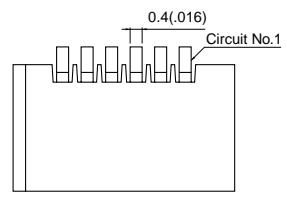
<Staggered>



← Reverse type →



Side entry type



FMN CONNECTOR

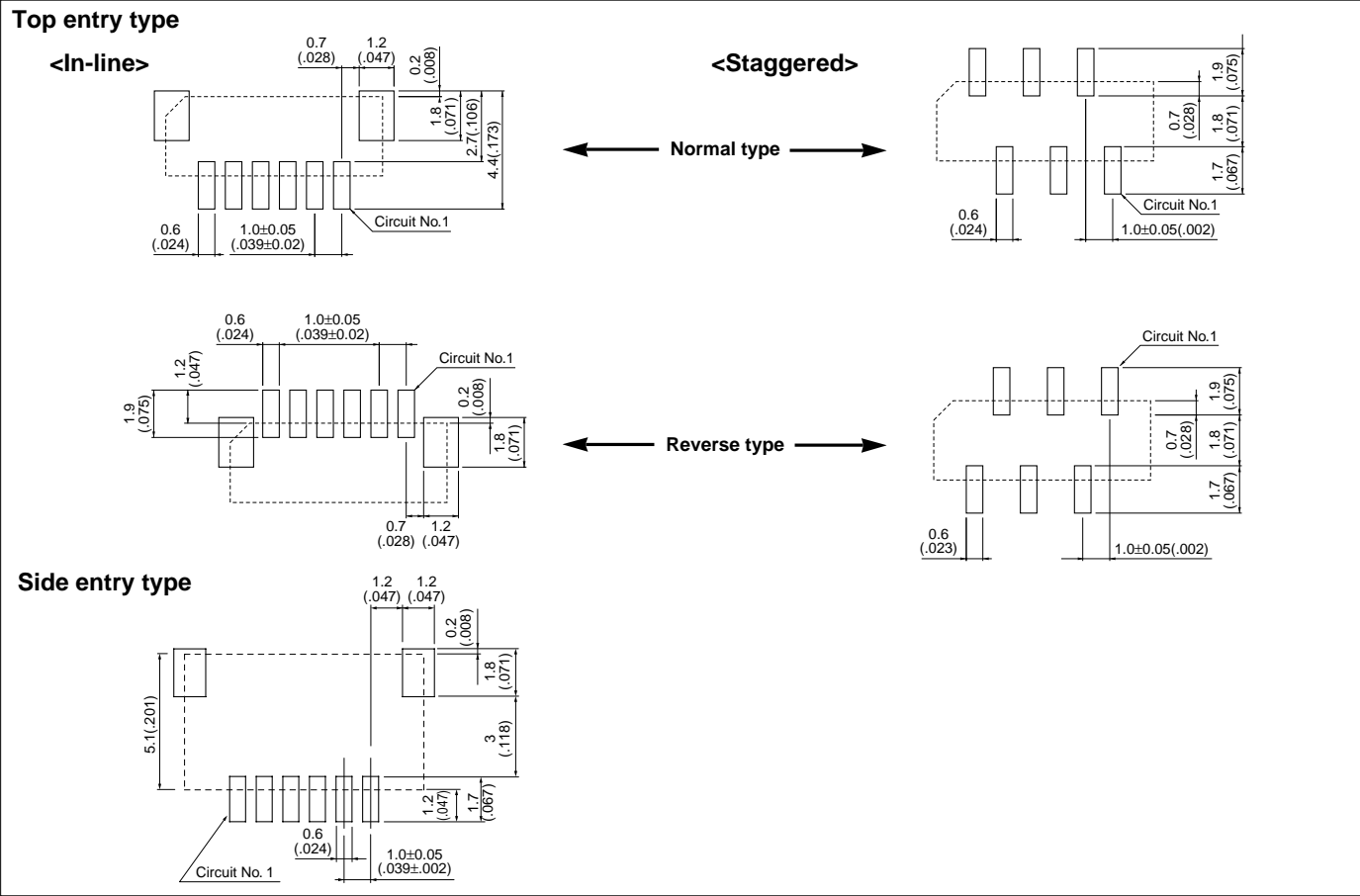
Cir- cuits	Model No.					Dimensions mm(in.)					Q'ty / reel	
	Top entry type				Side entry type	A	B		C	Top entry type	Side entry type	
	Single-row		Staggered				Top entry type	Side entry type				
	Normal type	Reverse type	Normal type	Reverse type								
4	04FMN-BMT-TF	04FMN-BMTR-TB	04FMN-BMTTN-TF	04FMN-BMTTR-TB	04FMN-SMT-TF	3.0(.118)	6.0(.236)	7.0(.276)	5.0(.197)	1,000	2,000	
5	05FMN-BMT-TF	05FMN-BMTR-TB	05FMN-BMTTN-TF	05FMN-BMTTR-TB	05FMN-SMT-TF	4.0(.157)	7.0(.276)	8.0(.315)	6.0(.236)	1,000	2,000	
6	06FMN-BMT-TF	06FMN-BMTR-TB	06FMN-BMTTN-TF	06FMN-BMTTR-TB	06FMN-SMT-TF	5.0(.197)	8.0(.315)	9.0(.354)	7.0(.276)	1,000	2,000	
7	07FMN-BMT-TF	07FMN-BMTR-TB	07FMN-BMTTN-TF	07FMN-BMTTR-TB	07FMN-SMT-TF	6.0(.236)	9.0(.354)	10.0(.394)	8.0(.315)	1,000	2,000	
8	08FMN-BMT-TF	08FMN-BMTR-TB	08FMN-BMTTN-TF	08FMN-BMTTR-TB	08FMN-SMT-TF	7.0(.276)	10.0(.394)	11.0(.433)	9.0(.354)	1,000	2,000	
9	09FMN-BMT-TF	09FMN-BMTR-TB	09FMN-BMTTN-TF	09FMN-BMTTR-TB	09FMN-SMT-TF	8.0(.315)	11.0(.433)	12.0(.472)	10.0(.394)	1,000	2,000	
10	10FMN-BMT-TF	10FMN-BMTR-TB	10FMN-BMTTN-TF	10FMN-BMTTR-TB	10FMN-SMT-TF	9.0(.354)	12.0(.472)	13.0(.512)	11.0(.433)	1,000	2,000	
11	11FMN-BMT-TF	11FMN-BMTR-TB	11FMN-BMTTN-TF	11FMN-BMTTR-TB	11FMN-SMT-TF	10.0(.394)	13.0(.512)	14.0(.551)	12.0(.472)	1,000	2,000	
12	12FMN-BMT-TF	12FMN-BMTR-TB	12FMN-BMTTN-TF	12FMN-BMTTR-TB	12FMN-SMT-TF	11.0(.433)	14.0(.551)	15.0(.591)	13.0(.512)	1,000	2,000	
13	13FMN-BMT-TF	13FMN-BMTR-TB	13FMN-BMTTN-TF	13FMN-BMTTR-TB	13FMN-SMT-TF	12.0(.472)	15.0(.591)	16.0(.630)	14.0(.551)	1,000	2,000	
14	14FMN-BMT-TF	14FMN-BMTR-TB	14FMN-BMTTN-TF	14FMN-BMTTR-TB	14FMN-SMT-TF	13.0(.512)	16.0(.630)	17.0(.669)	15.0(.591)	1,000	2,000	
15	15FMN-BMT-TF	15FMN-BMTR-TB	15FMN-BMTTN-TF	15FMN-BMTTR-TB	15FMN-SMT-TF	14.0(.551)	17.0(.669)	18.0(.709)	16.0(.630)	1,000	2,000	
16	16FMN-BMT-TF	16FMN-BMTR-TB	16FMN-BMTTN-TF	16FMN-BMTTR-TB	16FMN-SMT-TF	15.0(.591)	18.0(.709)	19.0(.748)	17.0(.669)	1,000	2,000	
17	17FMN-BMT-TF	17FMN-BMTR-TB	17FMN-BMTTN-TF	17FMN-BMTTR-TB	17FMN-SMT-TF	16.0(.630)	19.0(.748)	20.0(.787)	18.0(.709)	1,000	2,000	
18	18FMN-BMT-TF	18FMN-BMTR-TB	18FMN-BMTTN-TF	18FMN-BMTTR-TB	18FMN-SMT-TF	17.0(.669)	20.0(.787)	21.0(.827)	19.0(.748)	1,000	2,000	
19	19FMN-BMT-TF	19FMN-BMTR-TB	19FMN-BMTTN-TF	19FMN-BMTTR-TB	19FMN-SMT-TF	18.0(.709)	21.0(.827)	22.0(.866)	20.0(.787)	1,000	2,000	
20	20FMN-BMT-TF	20FMN-BMTR-TB	20FMN-BMTTN-TF	20FMN-BMTTR-TB	20FMN-SMT-TF	19.0(.748)	22.0(.866)	23.0(.906)	21.0(.827)	1,000	2,000	
21	21FMN-BMT-TF	21FMN-BMTR-TB	21FMN-BMTTN-TF	21FMN-BMTTR-TB	21FMN-SMT-TF	20.0(.787)	23.0(.906)	24.0(.945)	22.0(.866)	1,000	2,000	
22	22FMN-BMT-TF	22FMN-BMTR-TB	22FMN-BMTTN-TF	22FMN-BMTTR-TB	22FMN-SMT-TF	21.0(.827)	24.0(.945)	25.0(.984)	23.0(.906)	1,000	2,000	
23	23FMN-BMT-TF	23FMN-BMTR-TB	23FMN-BMTTN-TF	23FMN-BMTTR-TB	23FMN-SMT-TF	22.0(.866)	25.0(.984)	26.0(1.024)	24.0(.945)	1,000	2,000	
24	24FMN-BMT-TF	24FMN-BMTR-TB	24FMN-BMTTN-TF	24FMN-BMTTR-TB	24FMN-SMT-TF	23.0(.906)	26.0(1.024)	27.0(1.063)	25.0(.984)	1,000	2,000	
25	25FMN-BMT-TF	25FMN-BMTR-TB	25FMN-BMTTN-TF	25FMN-BMTTR-TB	25FMN-SMT-TF	24.0(.945)	27.0(1.063)	28.0(1.102)	26.0(1.024)	1,000	2,000	
26	26FMN-BMT-TF	26FMN-BMTR-TB	26FMN-BMTTN-TF	26FMN-BMTTR-TB	26FMN-SMT-TF	25.0(.984)	28.0(1.102)	29.0(1.142)	27.0(1.063)	1,000	2,000	
27	27FMN-BMT-TF	27FMN-BMTR-TB	27FMN-BMTTN-TF	27FMN-BMTTR-TB	27FMN-SMT-TF	26.0(1.024)	29.0(1.142)	30.0(1.181)	28.0(1.102)	1,000	2,000	
28	28FMN-BMT-TF	28FMN-BMTR-TB	28FMN-BMTTN-TF	28FMN-BMTTR-TB	28FMN-SMT-TF	27.0(1.063)	30.0(1.181)	31.0(1.220)	29.0(1.142)	1,000	2,000	
29	29FMN-BMT-TF	29FMN-BMTR-TB	29FMN-BMTTN-TF	29FMN-BMTTR-TB	29FMN-SMT-TF	28.0(1.102)	31.0(1.220)	32.0(1.260)	30.0(1.181)	1,000	2,000	
30	30FMN-BMT-TF	30FMN-BMTR-TB	30FMN-BMTTN-TF	30FMN-BMTTR-TB	30FMN-SMT-TF	29.0(1.142)	32.0(1.260)	33.0(1.299)	31.0(1.220)	1,000	2,000	
31	31FMN-BMT-TF	31FMN-BMTR-TB	31FMN-BMTTN-TF	31FMN-BMTTR-TB	31FMN-SMT-TF	30.0(1.181)	33.0(1.299)	34.0(1.339)	32.0(1.260)	1,000	2,000	
32	32FMN-BMT-TF	32FMN-BMTR-TB	32FMN-BMTTN-TF	32FMN-BMTTR-TB	32FMN-SMT-TF	31.0(1.220)	34.0(1.339)	35.0(1.378)	33.0(1.299)	1,000	2,000	
33	33FMN-BMT-TF	33FMN-BMTR-TB	33FMN-BMTTN-TF	33FMN-BMTTR-TB	33FMN-SMT-TF	32.0(1.260)	35.0(1.378)	36.0(1.417)	34.0(1.339)	1,000	2,000	
34	34FMN-BMT-TF	34FMN-BMTR-TB	34FMN-BMTTN-TF	34FMN-BMTTR-TB	34FMN-SMT-TF	33.0(1.299)	36.0(1.417)	37.0(1.457)	35.0(1.378)	1,000	2,000	
35	35FMN-BMT-TF	35FMN-BMTR-TB	35FMN-BMTTN-TF	35FMN-BMTTR-TB	35FMN-SMT-TF	34.0(1.339)	37.0(1.457)	38.0(1.496)	36.0(1.417)	1,000	2,000	
36	36FMN-BMT-TF	36FMN-BMTR-TB	36FMN-BMTTN-TF	36FMN-BMTTR-TB	36FMN-SMT-TF	35.0(1.378)	38.0(1.496)	39.0(1.535)	37.0(1.457)	1,000	2,000	
37	37FMN-BMT-TF	37FMN-BMTR-TB	37FMN-BMTTN-TF	37FMN-BMTTR-TB	37FMN-SMT-TF	36.0(1.417)	39.0(1.535)	40.0(1.575)	38.0(1.496)	1,000	2,000	
38	38FMN-BMT-TF	38FMN-BMTR-TB	38FMN-BMTTN-TF	38FMN-BMTTR-TB	38FMN-SMT-TF	37.0(1.457)	40.0(1.575)	41.0(1.614)	39.0(1.535)	1,000	2,000	
39	39FMN-BMT-TF	39FMN-BMTR-TB	39FMN-BMTTN-TF	39FMN-BMTTR-TB	39FMN-SMT-TF	38.0(1.496)	41.0(1.614)	42.0(1.654)	40.0(1.575)	1,000	2,000	
40	40FMN-BMT-TF	40FMN-BMTR-TB	40FMN-BMTTN-TF	40FMN-BMTTR-TB	40FMN-SMT-TF	39.0(1.535)	42.0(1.654)	43.0(1.693)	41.0(1.614)	1,000	2,000	

Material and Finish

Contact: Phosphor bronze, copper-undercoated, tin/lead-plated
Housing: Modified 6T nylon, UL94V-0, black
Solder tab: Brass, copper-undercoated, tin/lead plated

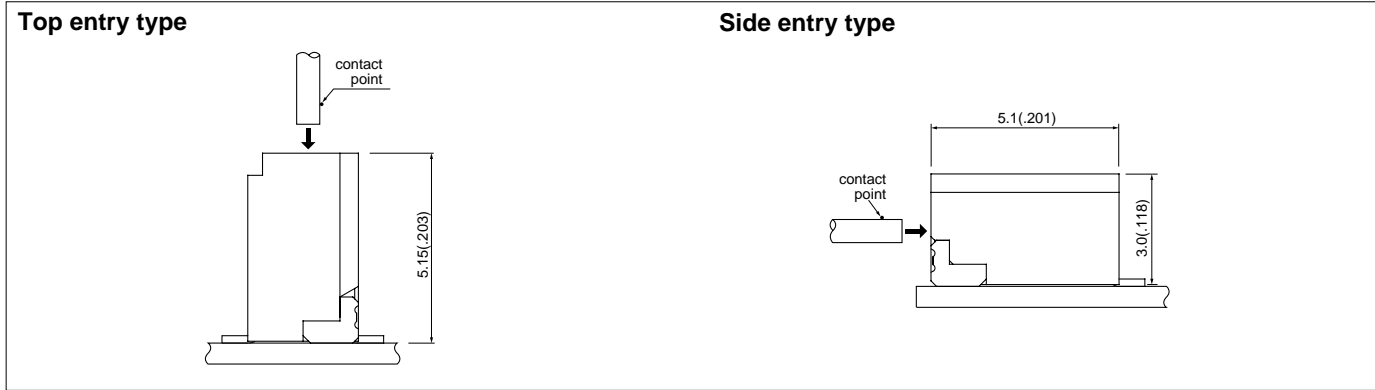
Note: The products listed above are supplied on embossed tape.

SMT type PC board layout (viewed from component side)



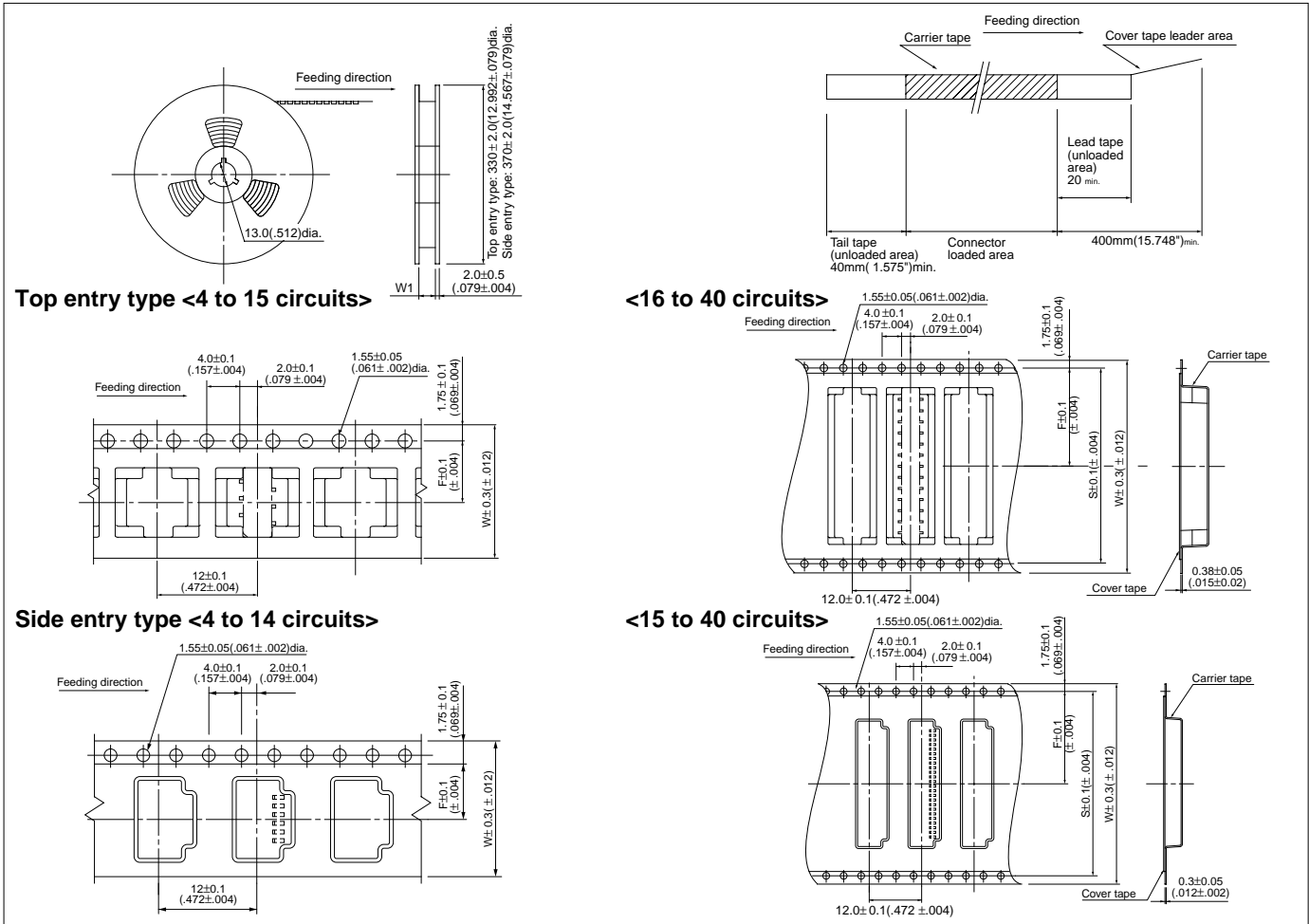
Note:
 1. Tolerances are non-cumulative: ±0.05mm (±.002") for all centers.
 2. The dimensions above should serve as a guideline. Contact JST for details.

SMT type Assembly layout (viewed from component side)



FMN CONNECTOR

Taping specifications



Top entry type

Circuits	Taping dimensions mm(in.)				Q'ty / reel
	F	S	W	W1	
4 to 7	7.5 (.295)	—	16.0 (.630)	17.5 (.689)	1,000
8 to 15	11.5 (.453)	—	24.0 (.945)	25.5 (1.004)	1,000
16 to 19	14.2 (.559)	28.4 (1.118)	32.0 (1.260)	33.5 (1.319)	1,000
20 to 31	20.2 (.795)	40.4 (1.591)	44.0 (1.732)	45.5 (1.791)	1,000
32 to 40	26.2 (1.031)	52.4 (2.063)	56.0 (2.205)	57.5 (2.264)	1,000

Side entry type

Circuits	Taping dimensions mm(in.)				Q'ty / reel
	F	S	W	W1	
4 to 6	7.5 (.295)	—	16.0 (.630)	17.5 (.689)	2,000
7 to 14	11.5 (.453)	—	24.0 (.945)	25.5 (1.004)	2,000
15 to 18	14.2 (.559)	28.4 (1.118)	32.0 (1.260)	33.5 (1.319)	2,000
19 to 30	20.2 (.795)	40.4 (1.591)	44.0 (1.732)	45.5 (1.791)	2,000
31 to 40	26.2 (1.031)	52.4 (2.063)	56.0 (2.205)	57.5 (2.264)	2,000

Note:
Specifications conform to JIS C 0806. The tape width, connector recess dimensions, etc. are determined by the number of circuits and external shape of the connector to be loaded.

Lead section dimensions of FFC

