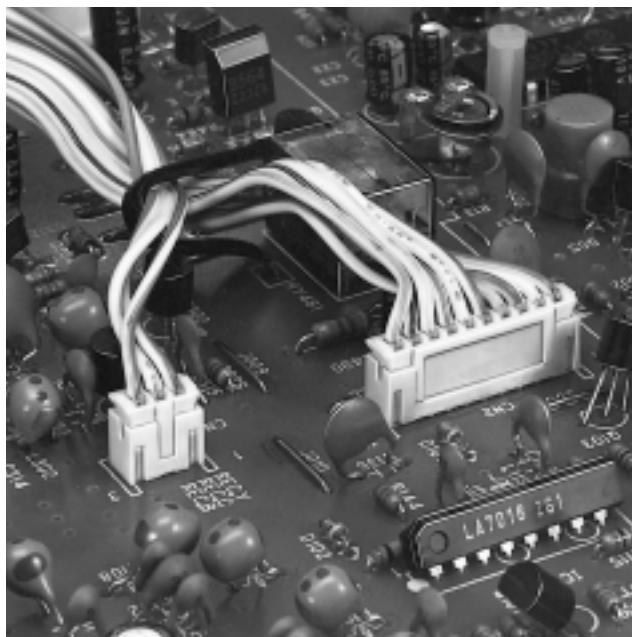
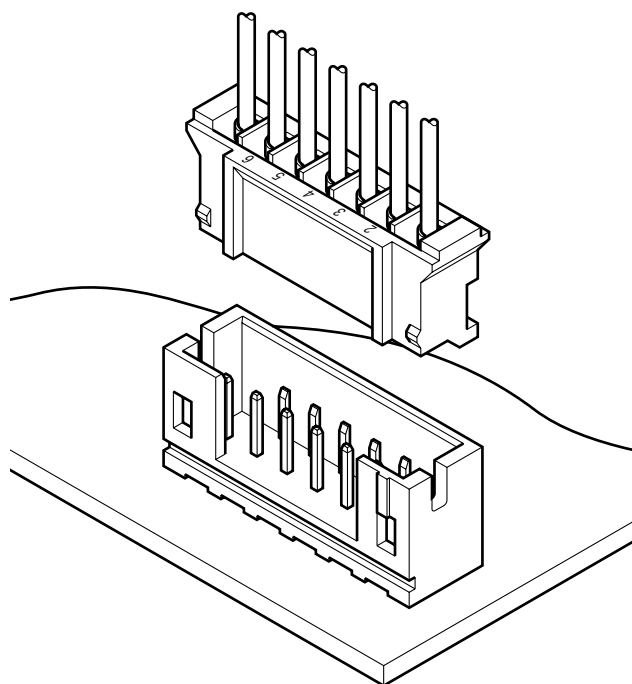




This is a thin, low-profile 2.0mm (.079") pitch connector 7.5mm (.295") in height after mounting and 4.5mm (.177") in width. It is designed to meet the demand for high-density connection of internal wires to printed circuit boards. It is compact, highly reliable and low in cost.



Features

• **Reliable contact**

The contact has long dimples near the center to ensure a good connection at all times, even under conditions of vibration and mechanical abuse, and when used with low voltage and low current circuits.

• **Easy and effective crimping**

Although the contact is compact, it has a long wire strip holding length of 2.6 +/- 0.4mm (.102" +/- .016"). This long length simplifies automatic crimping and the crimping of shielded wires.

• **Fully shrouded header**

The fully shrouded header has walls on all four sides to prevent improper connection to the mating housing and to prevent the intrusion of flux and other contaminants.

• **High solderable square post**

The square post is copper-undercoated and tin/lead-plated for superior solderability and for whisker prevention.

• **Printed circuit board retention mechanism**

The solder side of the header has a retention mechanism that prevents it from floating during soldering. As a result, the header can be positioned accurately.

• **Compatible with the KR insulation displacement connector**

The same shrouded header can be used for either PH crimp-style connector or KR insulation displacement connector. This allows both types of connector to be used interchangeably without replacing the header.

• **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.

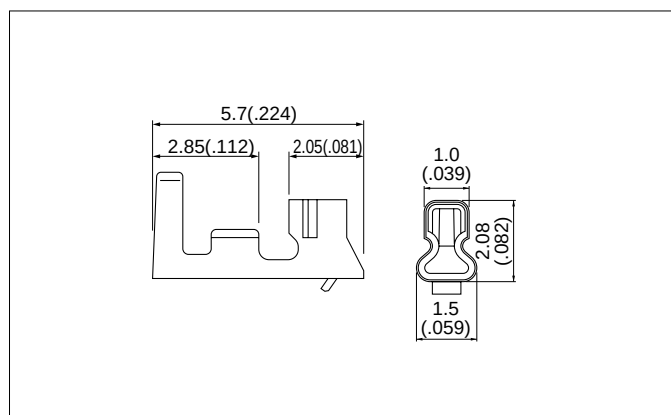
Specifications

- Current rating: 2A AC, DC (AWG #24)
- Voltage rating: 100V AC, DC
- Temperature range: -25°C to +85°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/10m Ω max.
After environmental testing/20m Ω max.
- Insulation resistance: 1,000M Ω min.
- Withstanding voltage: 800V AC/minute
- Applicable wire: AWG #32 to #24
- Applicable PC board thickness: 0.8 to 1.6mm(.031" to .063")
- * Contact JST for details

Standards

- 0 Recognized E60389
- 1 Certified LR20812
- 2 R75087

Contact



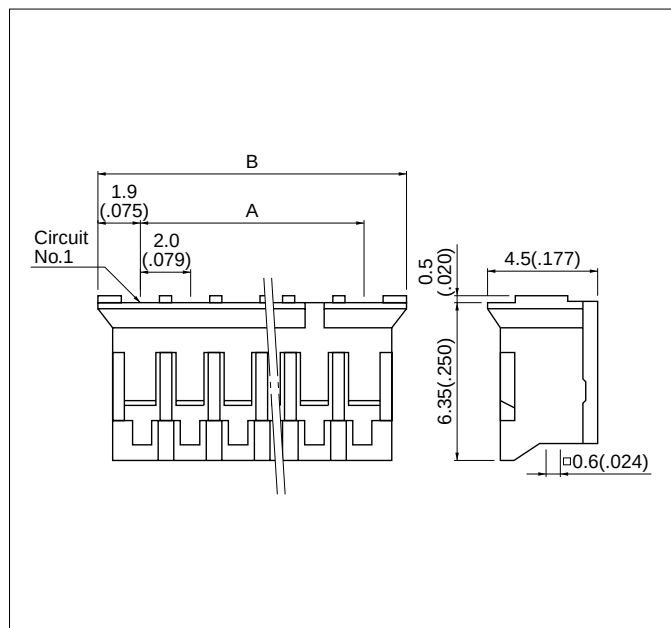
Model No.	Applicable wire			Q'ty / reel
	mm ²	AWG #	Insulation O.D. mm(in.)	
SPH-002T-P0.5S	0.05 to 0.22	30 to 24	0.9 to 1.5(.035 to .059)	8,000
SPH-004T-P0.5S	0.032 to 0.08	32 to 28	0.5 to 0.9(.020 to .035)	10,000

Material and Finish

Phosphor bronze, tin-plated

Note: 1. When using AWG#32 or #30 wires, reflow-treated headers (Low insertion force type, Model no. B#B-PH-KL or S#B-PH-KL) are recommendable.
2. Contact JST for gold-plated contacts.

Housing

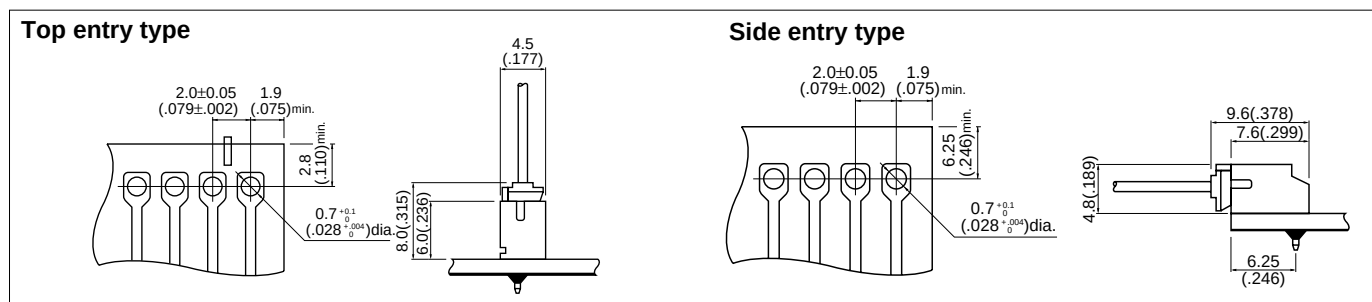


Cir- cuits	Model No.	Dimensions mm(in.)		Q'ty / box
		A	B	
2	PHR- 2	2.0(.079)	5.8(.228)	1,000
3	PHR- 3	4.0(.157)	7.8(.307)	1,000
4	PHR- 4	6.0(.236)	9.8(.386)	1,000
5	PHR- 5	8.0(.315)	11.8(.465)	1,000
6	PHR- 6	10.0(.394)	13.8(.543)	1,000
7	PHR- 7	12.0(.472)	15.8(.622)	1,000
8	PHR- 8	14.0(.551)	17.8(.701)	1,000
9	PHR- 9	16.0(.630)	19.8(.780)	1,000
10	PHR-10	18.0(.709)	21.8(.858)	1,000
11	PHR-11	20.0(.787)	23.8(.937)	1,000
12	PHR-12	22.0(.866)	25.8(1.016)	1,000
13	PHR-13	24.0(.945)	27.8(1.094)	1,000
14	PHR-14	26.0(1.024)	29.8(1.173)	1,000
15	PHR-15	28.0(1.102)	31.8(1.252)	1,000
16	PHR-16	30.0(1.181)	33.8(1.331)	1,000

Material and Finish

Nylon 66, UL94V-0, natural (white)

Through-hole type PC board layout (viewed from soldering side) and Assembly layout



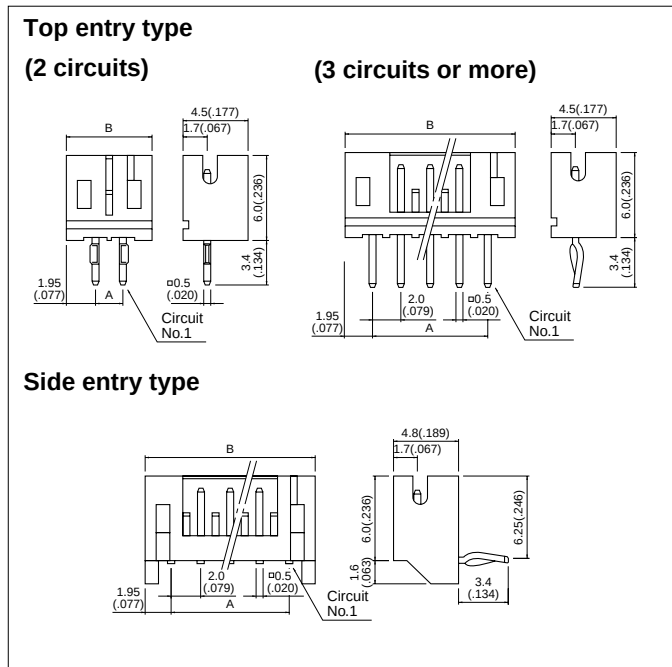
Note:

1. Tolerances are non-cumulative: $\pm 0.05\text{mm}(\pm .002")$ for all centers.
2. Hole dimensions differ according to the kind of printed circuit board and piercing method. If printed circuit boards made of hard material such as FR-4 are used, the hole dimensions should be larger. The hole dimensions shown above are reference values. Contact JST for details.

PH CONNECTOR

Through-hole type shrouded header

The shrouded headers are interchangeable with those of the KR, KRD and CR insulation displacement connectors.

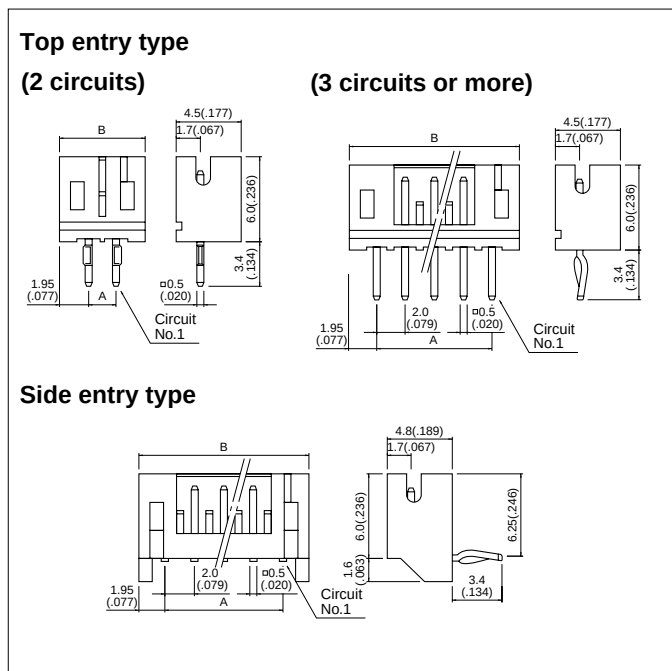


Cir- cuits	Model No.		Dimensions mm(in.)		Q'ty / box	
	Top entry type	Side entry type	A	B	Top entry type	Side entry type
2	B 2B-PH-K-S	S 2B-PH-K-S	2.0(.079)	5.9(.232)	1,000	1,000
3	B 3B-PH-K-S	S 3B-PH-K-S	4.0(.157)	7.9(.311)	1,000	1,000
4	B 4B-PH-K-S	S 4B-PH-K-S	6.0(.236)	9.9(.390)	1,000	500
5	B 5B-PH-K-S	S 5B-PH-K-S	8.0(.315)	11.9(.469)	1,000	500
6	B 6B-PH-K-S	S 6B-PH-K-S	10.0(.394)	13.9(.547)	1,000	500
7	B 7B-PH-K-S	S 7B-PH-K-S	12.0(.472)	15.9(.626)	500	500
8	B 8B-PH-K-S	S 8B-PH-K-S	14.0(.551)	17.9(.705)	500	250
9	B 9B-PH-K-S	S 9B-PH-K-S	16.0(.630)	19.9(.783)	500	250
10	B10B-PH-K-S	S10B-PH-K-S	18.0(.709)	21.9(.862)	500	250
11	B11B-PH-K-S	S11B-PH-K-S	20.0(.787)	23.9(.941)	500	250
12	B12B-PH-K-S	S12B-PH-K-S	22.0(.866)	25.9(1.020)	500	250
13	B13B-PH-K-S	S13B-PH-K-S	24.0(.945)	27.9(1.098)	250	250
14	B14B-PH-K-S	S14B-PH-K-S	26.0(1.024)	29.9(1.177)	250	250
15	B15B-PH-K-S	S15B-PH-K-S	28.0(1.102)	31.9(1.256)	250	200
16	B16B-PH-K-S	S16B-PH-K-S	30.0(1.181)	33.9(1.335)	250	200

Material and Finish

Post: Brass, copper-undercoated, tin/lead-plated
Wafer: Nylon 66, UL94V-0, natural (white)

Through-hole type shrouded header <Low insertion force type>



Cir- cuits	Model No.		Dimensions mm(in.)		Q'ty / box	
	Top entry type	Side entry type	A	B	Top entry type	Side entry type
2	B 2B-PH-KL	S 2B-PH-KL	2.0(.079)	5.9(.232)	1,000	1,000
3	B 3B-PH-KL	S 3B-PH-KL	4.0(.157)	7.9(.311)	1,000	1,000
4	B 4B-PH-KL	S 4B-PH-KL	6.0(.236)	9.9(.390)	1,000	500
5	B 5B-PH-KL	S 5B-PH-KL	8.0(.315)	11.9(.469)	1,000	500
6	B 6B-PH-KL	S 6B-PH-KL	10.0(.394)	13.9(.547)	1,000	500
7	B 7B-PH-KL	S 7B-PH-KL	12.0(.472)	15.9(.626)	500	500
8	B 8B-PH-KL	S 8B-PH-KL	14.0(.551)	17.9(.705)	500	250
9	B 9B-PH-KL	S 9B-PH-KL	16.0(.630)	19.9(.783)	500	250
10	B10B-PH-KL	S10B-PH-KL	18.0(.709)	21.9(.862)	500	250
11	B11B-PH-KL	S11B-PH-KL	20.0(.787)	23.9(.941)	500	250
12	B12B-PH-KL	S12B-PH-KL	22.0(.866)	25.9(1.020)	500	250
13	B13B-PH-KL	S13B-PH-KL	24.0(.945)	27.9(1.098)	250	250
14	B14B-PH-KL	S14B-PH-KL	26.0(1.024)	29.9(1.177)	250	250
15	B15B-PH-KL	S15B-PH-KL	28.0(1.102)	31.9(1.256)	250	200
16	—	S16B-PH-KL	30.0(1.181)	33.9(1.335)	250	200

Material and Finish

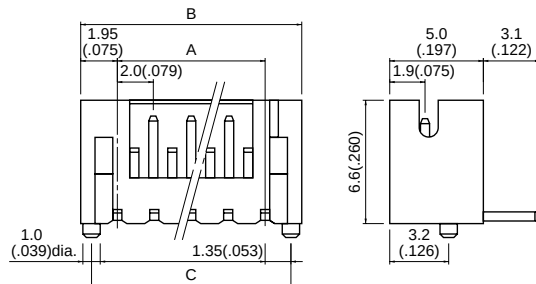
Post: Phosphor bronze, copper-undercoated, tin/lead-plated (reflow-treated)
Wafer: Nylon 66, UL94V-0, gray

SMT type shrouded header

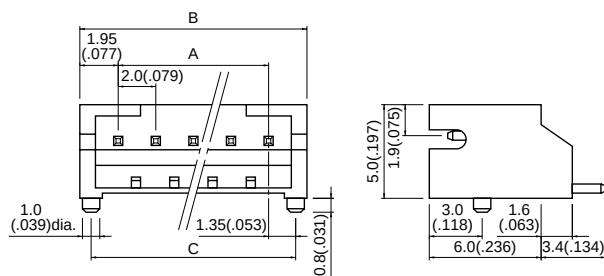
- The shrouded headers are interchangeable with those of the KR, KRD and CR insulation displacement connectors.
- SMT type shrouded headers are not TÜV approved.

SM type

Top entry type

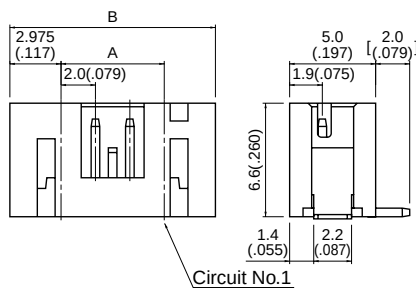


Side entry type

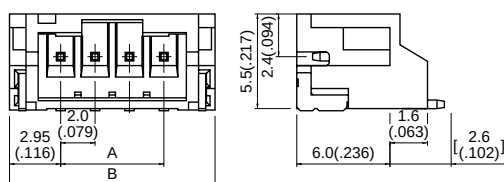


SM3 type

Top entry type (with solder tabs)



Side entry type



Cir- cuits	Model No.		Dimensions mm(in.)			Q'ty / box
	Top entry type	Side entry type	A	B	C	
2	B2B-PH-SM	–	2.0(.079)	5.9(.232)	4.7(.185)	1,000
4	B4B-PH-SM	–	6.0(.236)	9.9(.390)	8.7(.343)	500
5	–	S 5B-PH-SM	8.0(.315)	11.9(.469)	10.7(.421)	500
7	B7B-PH-SM	S 7B-PH-SM	12.0(.472)	15.9(.626)	14.7(.579)	500
10	–	S10B-PH-SM	18.0(.709)	21.9(.862)	20.7(.815)	250
11	–	S11B-PH-SM	20.0(.787)	23.9(.941)	22.7(.894)	250

Material and Finish

Post: Brass, nickel-undercoated, tin/lead-plated
Wafer: PPS, UL94V-0, brown

Cir- cuits	Model No.		Dimensions mm(in.)		Q'ty / reel
	Top entry type	Side entry type	A	B	
2	B 2B-PH-SM3-TB	S 2B-PH-SM3-TB	2.0(.079)	7.9(.311)	1,000
3	B 3B-PH-SM3-TB	S 3B-PH-SM3-TB	4.0(.157)	9.9(.390)	1,000
4	B 4B-PH-SM3-TB	S 4B-PH-SM3-TB	6.0(.236)	11.9(.469)	1,000
5	B 5B-PH-SM3-TB	S 5B-PH-SM3-TB	8.0(.315)	13.9(.547)	1,000
6	B 6B-PH-SM3-TB	S 6B-PH-SM3-TB	10.0(.394)	15.9(.626)	1,000
7	B 7B-PH-SM3-TB	S 7B-PH-SM3-TB	12.0(.472)	17.9(.705)	1,000
8	B 8B-PH-SM3-TB	S 8B-PH-SM3-TB	14.0(.551)	19.9(.783)	1,000
9	B 9B-PH-SM3-TB	S 9B-PH-SM3-TB	16.0(.630)	21.9(.862)	1,000
10	B10B-PH-SM3-TB	S10B-PH-SM3-TB	18.0(.709)	23.9(.941)	1,000
11	B11B-PH-SM3-TB	–	20.0(.787)	25.9(1.020)	1,000
12	B12B-PH-SM3-TB	S12B-PH-SM3-TB	22.0(.866)	27.9(1.098)	1,000
13	B13B-PH-SM3-TB	S13B-PH-SM3-TB	24.0(.945)	29.9(1.177)	1,000
14	B14B-PH-SM3-TB	S14B-PH-SM3-TB	26.0(1.024)	31.9(1.256)	1,000
15	B15B-PH-SM3-TB	S15B-PH-SM3-TB	28.0(1.102)	33.9(1.335)	1,000
16	B16B-PH-SM3-TB	–	30.0(1.181)	35.9(1.413)	1,000

Material and Finish

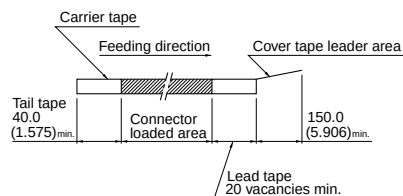
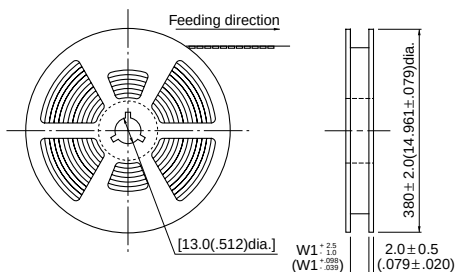
Post: Copper alloy, copper-undercoated, tin/lead-plated
Wafer: Nylon 46, UL94V-0, natural (white)
Solder tab: Brass, copper-undercoated, tin/lead-plated

Note:

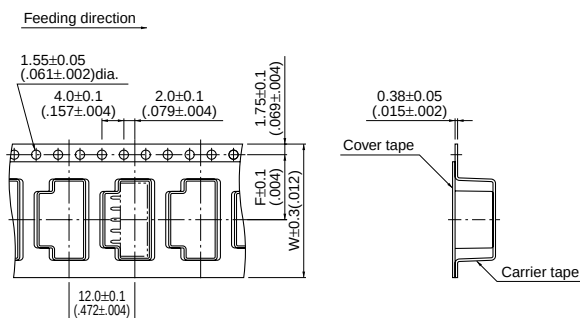
1. The products listed above are supplied on embossed-tape.
2. Contact JST for the top entry type headers with suction cap.

PH CONNECTOR

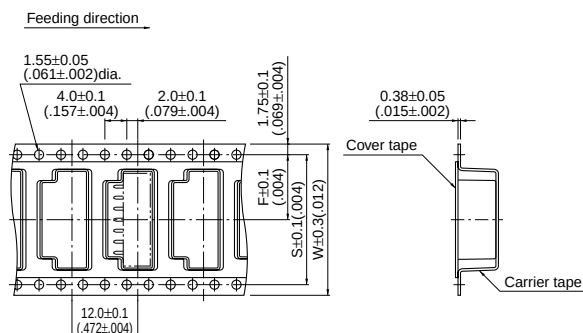
Taping specifications of SM3 type shrouded headers



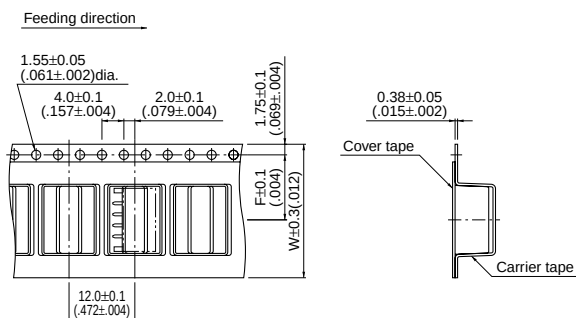
Top entry type (2 to 6 circuits)



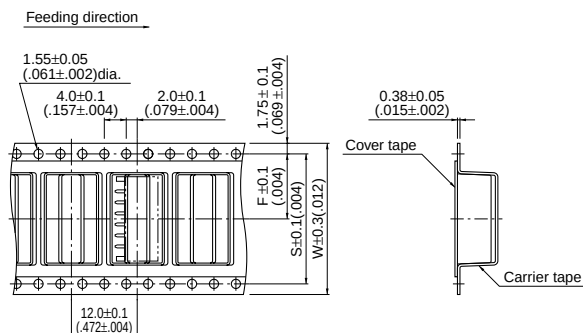
Top entry type (7 to 14 circuits)



Side entry type (2 to 6 circuits)



Side entry type (7 to 14 circuits)

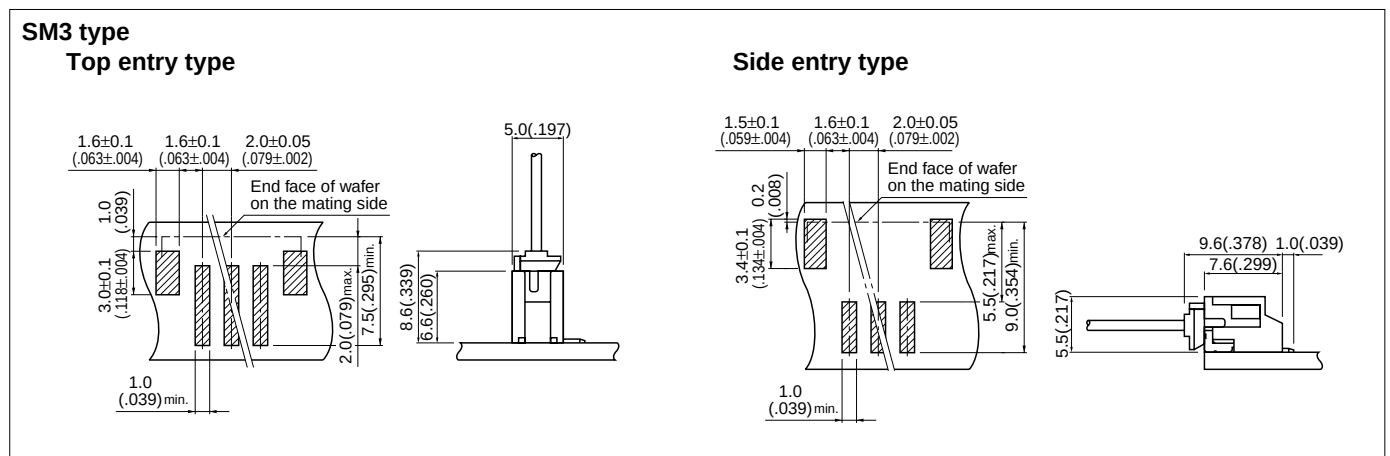
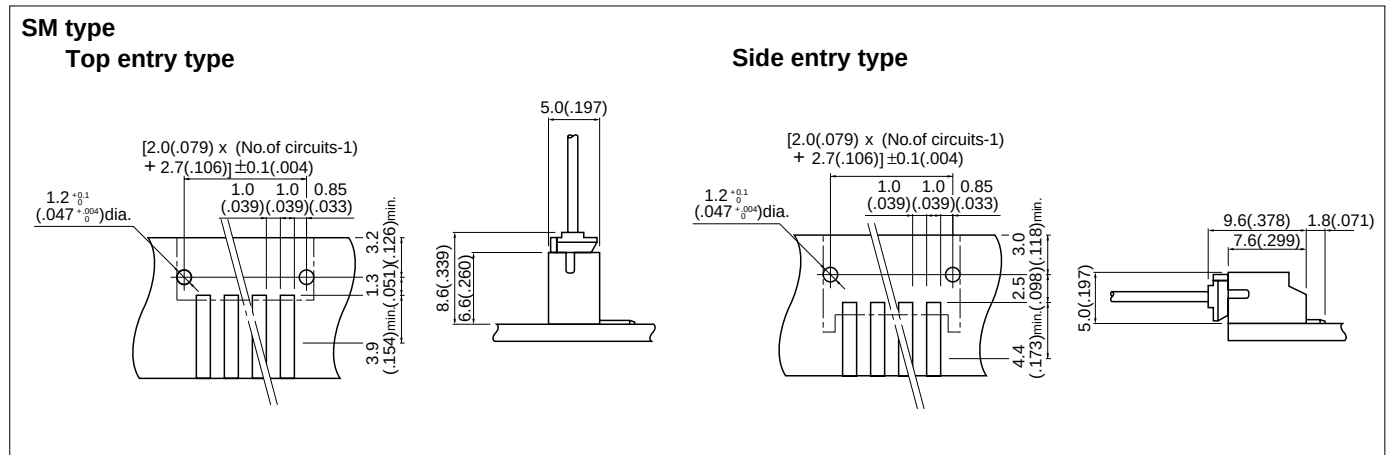


Circuits	Taping dimensions mm(in.)			Reel dimensions mm(in.)		Q'ty / reel
	F	S	W	W1		
Top entry type	2 to 3	7.5(.295)	—	16.0(.630)	17.5(.689)	1,000
	4 to 6	11.5(.453)	—	24.0(.945)	25.5(1.004)	1,000
	7 to 9	14.2(.559)	28.4(1.118)	32.0(1.260)	33.5(1.319)	1,000
	10 to 14	20.2(.795)	40.4(1.591)	44.0(1.732)	45.5(1.791)	1,000
Side entry type	2 to 3	7.5(.295)	—	16.0(.630)	17.5(.689)	1,000
	4 to 6	11.5(.453)	—	24.0(.945)	25.5(1.004)	1,000
	7 to 9	14.2(.559)	28.4(1.118)	32.0(1.260)	33.5(1.319)	1,000
	10 to 14	20.2(.795)	40.4(1.591)	44.0(1.732)	45.5(1.791)	1,000

Note:

- Specifications conform to JIS C 0806. The tape width, connector loading recess square hole dimensions, etc. are determined by the number of circuits and external shape of the connector to be loaded.
- Specifications are subject to change without prior notice.

SMT type PC board layout (viewed from component side) and Assembly layout -----



Note:

1. Tolerances are non-cumulative: $\pm 0.05 \text{ mm} (\pm .002")$ for all centers.
2. The dimensions above should serve as a guideline. Contact JST for details.