



喬山健身器材(上海)有限公司

樣品承認書

SAMPLE SPECIFICATION FOR APPROVAL

品名: 连接器 JST:B12B-PASK-1 料号: 093683

圖号: _____ 機種: T60M 控制板

☒ 新產品

☐ 模具確認

☐ 設計變更

☐ 其它

廠	承認章	核 準	校 對	主 辦
	APPROVED	APPROVAL BY	CHECKED BY	PREPARED BY
商			鄭云珍	李新明
喬 山 公 司	資材核準		資材主辦	王靜 2/22
	是否需要測試	<input type="checkbox"/> 是 <input type="checkbox"/> 否	測試主辦	
	是否安規認證	<input type="checkbox"/> 是 <input type="checkbox"/> 否	認證主辦	
	承認章	核 準	主 辦	
	APPROVED	APPROVAL BY	PREPARED BY	
		業務	<input type="checkbox"/> 認可 <input type="checkbox"/> 有條件認可 <input type="checkbox"/> 不予以認可	
品保		王德偉 2/28	李 靜	
		<input checked="" type="checkbox"/> 認可 <input type="checkbox"/> 有條件認可 <input type="checkbox"/> 不予以認可		
研發	張正平 2/4	顧靜 2/27		
	<input checked="" type="checkbox"/> 認可 <input type="checkbox"/> 有條件認可 <input type="checkbox"/> 不予以認可			

廠商名稱 上海謹明电子有限公司

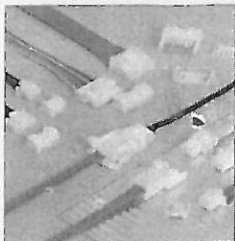
電話 TEL 021-69152633

地 址 嘉定区马陆镇宝安公路 2772 号

傳真 FAX 021-69152916

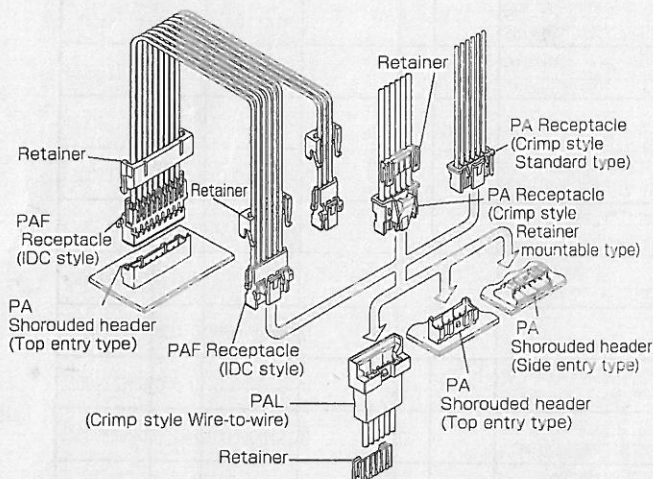
廠商資歷: ☒ ISO9001 ☐ ISO14001 ☐ 其他

送樣履歷: ☒ 首次送樣 ☐ 二次送樣 ☐ 三次送樣



PA FAMILY SERIES/PA•PAF•PAL CONNECTOR

2.0mm pitch/Wire-to-board (Crimp style/IDC) / Wire-to-wire (Crimp style/IDC)



Based upon wire-to-board crimp style PA connectors, the PA series family of connector have been expanded to meet the requirement of complex wire harness of 2.0 mm pitch connectors with secure locking mechanism thanks to the additional line up of wire-to-board IDC style PAF connectors and wire-to-wire crimp style PAL connectors.

- Secure locking device
- Interchangeable between crimp and IDC socket
- Secondary retainers
- Harness variation

PA connector (Standard type, Retainer mountable type)

- Highly reliable contact
- Insertion guide mechanism
- Flanged press pin

PAF connector

- The industry's first secure lock ID connectors
- Metallic strain relief
- Retainer with four locking points

PAL connector

- The industry's first wire to wire 2.0 mm pitch retainer mountable type connector.
- Either with or without panel lock can be selected according to application.

Standards

Recognized E60389

Certified LR20812

Specifications

PA Connector (Standard type)

- Current rating: 3 A AC, DC (AWG #22)
- Voltage rating: 250 V AC, DC
- Temperature range: -25°C to +85°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 10 mΩ max.
After environmental tests/ 20 mΩ max.
- Insulation resistance: Initial/ 1,000 MΩ min.
- Withstanding voltage: 800 VAC/minute
- Applicable wire: Conductor size/ AWG #28 to #22
Insulation O.D./ 0.76 to 1.5 mm
- Applicable PC board thickness: 1.6 mm

PA Connector (Retainer mountable type)

- Current rating: 3 A AC, DC (AWG #22)
- Voltage rating: 100 V AC, DC
- Temperature range: -25°C to +85°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 15 mΩ max.
After environmental tests/ 25 mΩ max.
- Insulation resistance: Initial/ 1,000 MΩ min.
- Withstanding voltage: 800 VAC/minute
- Applicable wire: AWG #26 to #22

PAF Connector

- Current rating: 1.0 A AC, DC (AWG #26)
- Voltage rating: 100 V AC, DC
- Temperature range: -25°C to +85°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 15 mΩ max.
After environmental tests/ 25 mΩ max.
- Insulation resistance: Initial/ 1,000 MΩ min.
- Withstanding voltage: 800 VAC/minute
- Applicable wire: UL1061 (Contact JST for details regarding other UL wires.)
AWG #26
Conductor/ 7 strands, tin-coated annealed copper
Insulation O.D./ 0.9 to 1.0 mm

PAL Connector

- Current rating: 3 A AC, DC (AWG #22)
- Voltage rating: 100 V AC, DC
- Temperature range: -25°C to +85°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 15 mΩ max.
After environmental tests/ 25 mΩ max.
- Insulation resistance: Initial/ 1,000 MΩ min.
- Withstanding voltage: 800 VAC/minute
- Applicable wire: AWG #28 to #22
- Applicable panel thickness : 0.5 to 2.0 mm

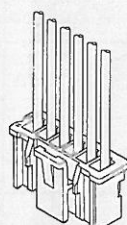
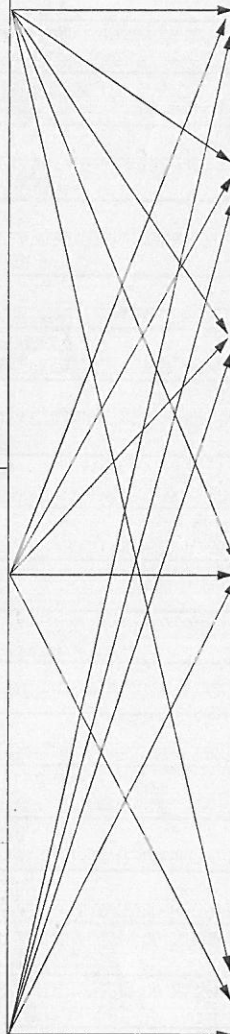
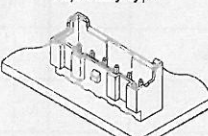
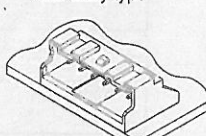
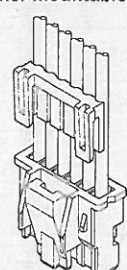
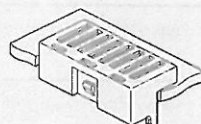
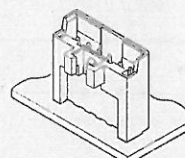
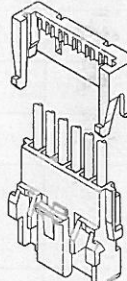
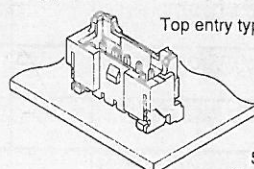
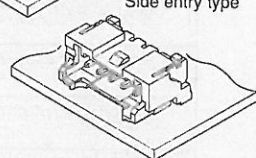
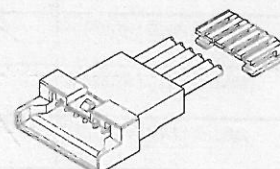
* Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.

* Contact JST for details.

* Compliant with RoHS.

PA FAMILY SERIES /PA•PAF•PAL CONNECTOR

List of combinations

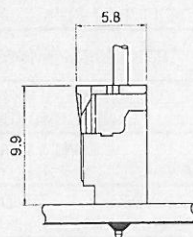
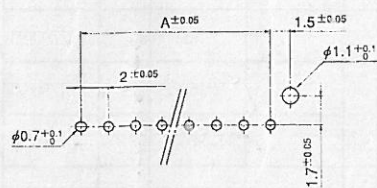
<div>Crimp style Standard type</div> <div></div>	<div>Contact</div> <div>SPHD-001T-P0.5</div> <div>SPHD-002T-P0.5</div> <div>Housing</div> <div>PAP-()V-S</div>	<div></div>	<div>Shrouded header</div> <div>B()B-PASK</div> <div>B()B-PASK-1</div> <div>B()B-PASK-N</div> <div>B()B-PASK-1N</div> <div>S()B-PASK-2</div>	<div>Top entry type</div> <div></div> <div>Side entry type</div> <div></div>
<div>Crimp style Retainer mountable type</div> <div></div>	<div>Contact</div> <div>SPA-001T-P0.5</div> <div>Housing</div> <div>PARP-()V</div> <div>Retainer</div> <div>PMS-()V-S</div>		<div>Shrouded header</div> <div>BE()B-PASK</div> <div>BE()B-PASK-C</div>	<div>Bottom type</div> <div></div>
	<div>Shrouded header</div> <div>BH()B-PASK</div> <div>BH()B-PASK-1</div>		<div>High box type</div> <div></div>	
<div>Insulation displacement type</div> <div></div>	<div>Receptacle</div> <div>()PAF-6S</div> <div>Retainer</div> <div>PAFS-()V-S</div>		<div>Shrouded header</div> <div>BM()B-PASS</div> <div>BM()B-PASS-1</div> <div>SM()B-PASS</div> <div>SM()B-PASS-1</div>	<div>SMT type</div> <div>Top entry type</div> <div></div> <div>Side entry type</div> <div></div>
	<div>Contact</div> <div>SPAL-001T-P0.5</div> <div>SPAL-002T-P0.5</div> <div>Receptacle housing</div> <div>PALR-()V(F)</div> <div>Retainer</div> <div>PMS-()V-S</div>		<div>Wire to wire Connectors</div> <div></div>	

PA FAMILY SERIES /PA•PAF•PAL CONNECTOR

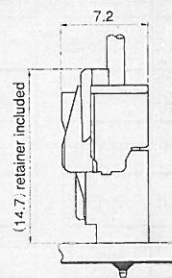
PC board layout and Assembly layout

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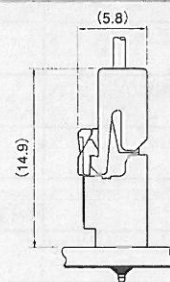
Top entry type



PA Receptacle
(Standard type)
+
PA Header

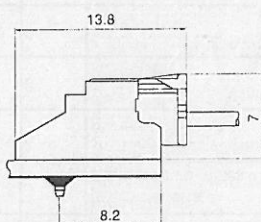
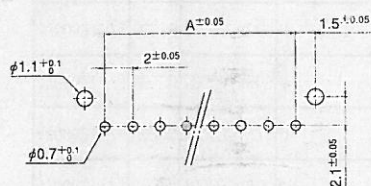


PA Receptacle
(Retainer mountable type)
+
PA Header

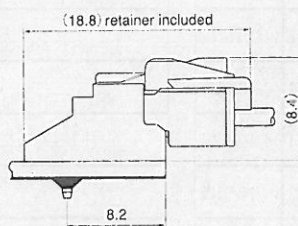


PAF Receptacle
+
PA Header

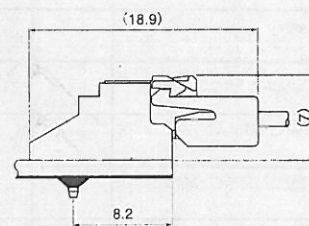
Side entry type



PA Receptacle
(Standard type)
+
PA side entry type header

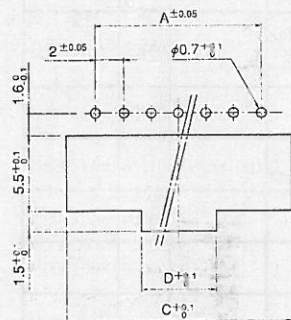


PA Receptacle
(Retainer mountable type)
+
PA side entry type header

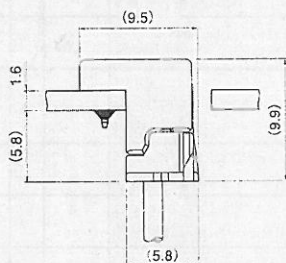


PAF Receptacle
+
PA side entry type header

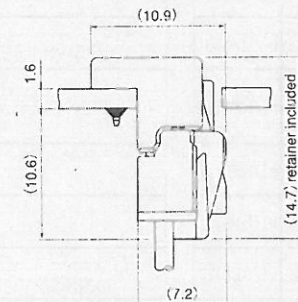
Bottom type



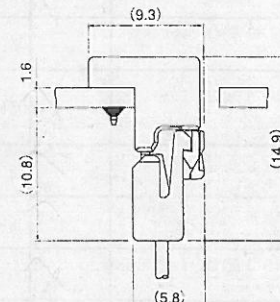
Note: Dimensions C and D; Refer to the header bottom type.



PA Receptacle
(Standard type)
+
PA bottom type header
(Extended length type)

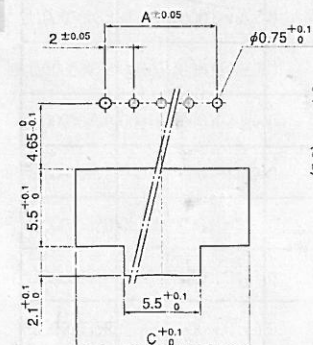


PA Receptacle
(Retainer mountable type)
+
PA bottom type header
(Extended length type)

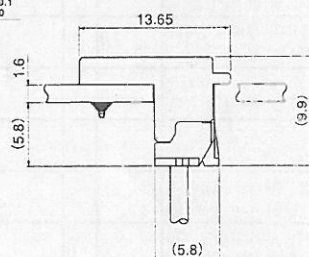


PAF Receptacle
+
PA bottom type header
(Extended length type)

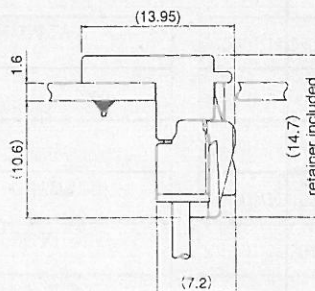
Bottom type with extended length



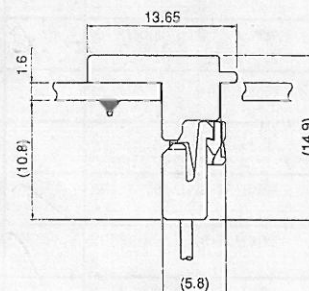
Note: Dimensions C; Refer to the header bottom type.



PA Receptacle
(Standard type)
+
PA bottom type header
(Extended length type)



PA Receptacle
(Retainer mountable type)
+
PA bottom type header
(Extended length type)



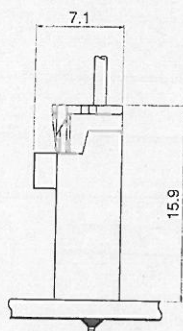
PAF Receptacle
+
PA bottom type header
(Extended length type)

Note: 1. The above figure is the figure viewed from the connector mounting side.

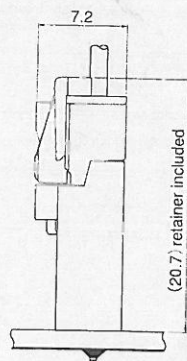
2. Tolerances are non-cumulative: ± 0.05 mm for all centers.

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.

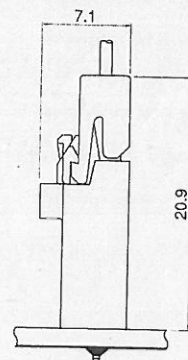
PC board layout and Assembly layout



PA Receptacle
(Standard type)
+
PA high box type header



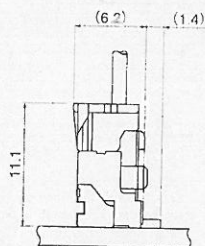
PA Receptacle
(Retainer mountable type)
+
PA high box type header



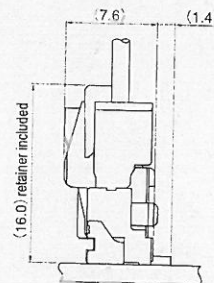
PAF Receptacle
+
PA high box type header

1. The above figure is the figure viewed from the connector
2. Tolerances are non-cumulative: ± 0.05 mm for all centers.

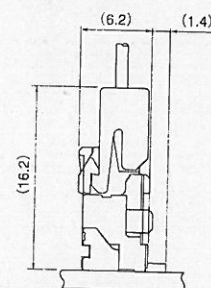
3. Hole dimensions differ according to the type of PC board and piercing method. The dimensions above should serve as a guideline. Contact JST for details.



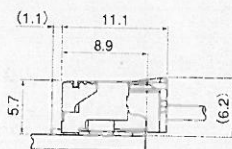
PA Receptacle
(Standard type)
+
PA Header



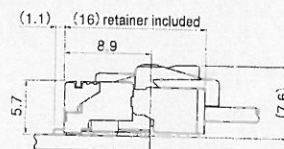
PA Receptacle
(Retainer mountable type)
+
PA Header



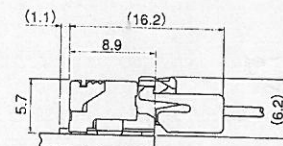
PAF Receptacle
+
PA Header



PA Receptacle
(Standard type)
+
PA side entry type header



PA Receptacle
(Retainer mountable type)
+
PA side entry type header

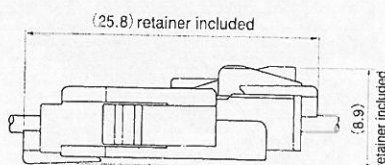


PAF Receptacle
+
PA side entry type header

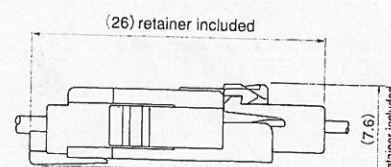
2. Tolerances for the centers of pattern on PCB is ± 0.05 , and shall be not cumulative more than ± 0.1 .

3. The dimensions above should serve as a guideline. Contact JST for details.

PA Receptacle
(Standard type)
+
PAL Receptacle



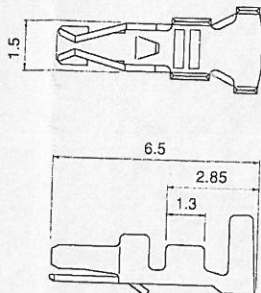
PA Receptacle
(Retainer mountable type)
+
PAL Receptacle



PAF Receptacle
+
PAL Receptacle

PA FAMILY SERIES /PA CONNECTOR (Crimp style Standard type)

Contact



Model No.	Applicable wire		Insulation O.D. (mm)	Q'ty/ reel
	mm ²	AWG #		
SPHD-001T-P0.5	0.13~0.33	26~22	1.0~1.5	8,000
SPHD-002T-P0.5	0.08~0.21	28~24	0.76~1.5	8,000

Material and Finish

Phosphor bronze, tin-plated (reflow treatment)

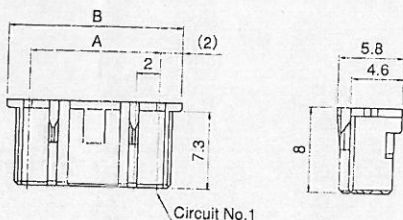
RoHS compliance

Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
SPHD-002T-P0.5	AP-K2N	MKS-L-10	MK/SPHD-002-05	APLMK SPHD002-05
		*MKS-SC-10	SC/SPHD-002-05	APLSC SPHD002-05
SPHD-001T-P0.5		MKS-L-10	MK/SPHD-001-05	APLMK SPHD001-05
		*MKS-SC-10	SC/SPHD-001-05	APLSC SPHD001-05

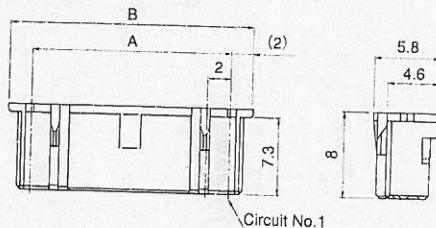
Note: *Strip-crimp applicator

Housing

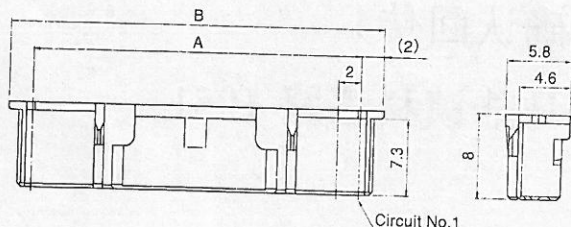
<2 to 9 circuits>



<10 to 15 circuits>



<16 circuits>



Circuits	Model No.	Dimensions (mm)		Q'ty/ bag
		A	B	
2	PAP-02V-S	2.0	6.0	1,000
3	PAP-03V-S	4.0	8.0	1,000
4	PAP-04V-S	6.0	10.0	1,000
5	PAP-05V-S	8.0	12.0	1,000
6	PAP-06V-S	10.0	14.0	1,000
7	PAP-07V-S	12.0	16.0	1,000
8	PAP-08V-S	14.0	18.0	1,000
9	PAP-09V-S	16.0	20.0	1,000
10	PAP-10V-S	18.0	22.0	1,000
11	PAP-11V-S	20.0	24.0	1,000
12	PAP-12V-S	22.0	26.0	1,000
13	PAP-13V-S	24.0	28.0	1,000
14	PAP-14V-S	26.0	30.0	1,000
15	PAP-15V-S	28.0	32.0	1,000
16	PAP-16V-S	30.0	34.0	1,000

Material

PA 66, UL94V-0, natural (white)

RoHS compliance

<For reference> As the color identification,
the following alphabet shall be put in the underlined part.
For availability, delivery and minimum order quantity, contact JST.

ex. PAP-02V-S

S...natural (white)

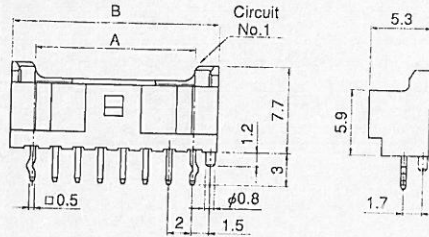
K...black R...red E...blue M...green O...orange N...brown

P...purple PK...pink Y...yellow L...lemon yellow FY...vivid yellow

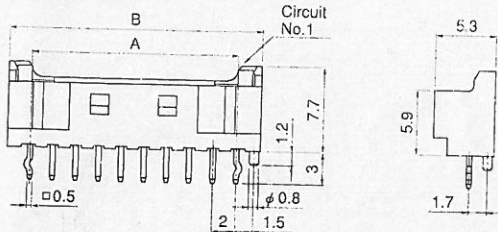
LE...light blue H...gray TR...tomato red

Through-hole type shrouded header

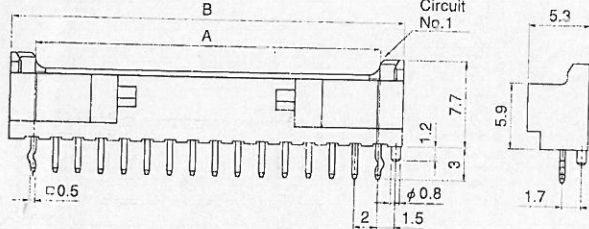
Top entry type <2 to 9 circuits>



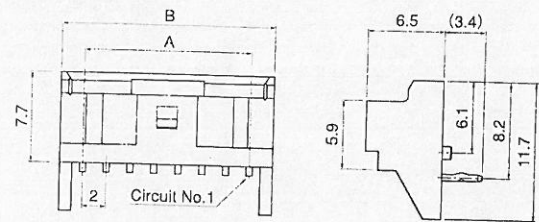
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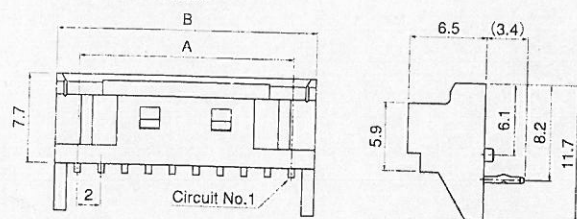
<16 circuits>



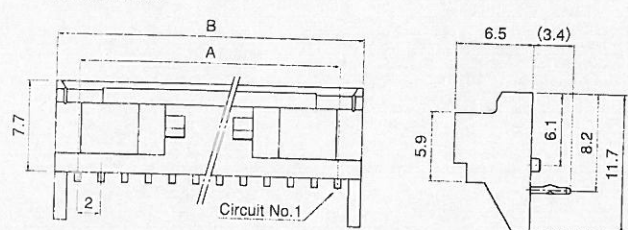
Side entry type <2 to 9 circuits>



<10 to 15 circuits>



<16 circuits>



Top entry type

Circuits	Model No.		Dimensions (mm)		Q'ty/box
	Without boss	With a boss	A	B	
2 (Note1)	B02B-PAFYK-A	B02B-PAFYK-1A	2.0	5.0	1,000
2	B02B-PASK	B02B-PASK-1	2.0	6.0	1,000
3	B03B-PASK	B03B-PASK-1	4.0	8.0	1,000
4	B04B-PASK	B04B-PASK-1	6.0	10.0	1,000
5	B05B-PASK	B05B-PASK-1	8.0	12.0	500
6	B06B-PASK	B06B-PASK-1	10.0	14.0	500
7	B07B-PASK	B07B-PASK-1	12.0	16.0	500
8	B08B-PASK	B08B-PASK-1	14.0	18.0	500
9	B09B-PASK	B09B-PASK-1	16.0	20.0	500
10	B10B-PASK	B10B-PASK-1	18.0	22.0	500
11	B11B-PASK	B11B-PASK-1	20.0	24.0	250
12	B12B-PASK	B12B-PASK-1	22.0	26.0	250
13	B13B-PASK	B13B-PASK-1	24.0	28.0	250
14	B14B-PASK	B14B-PASK-1	26.0	30.0	250
15	B15B-PASK	B15B-PASK-1	28.0	32.0	250
16	B16B-PASK	B16B-PASK-1	30.0	34.0	250

Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
Wafer: Glass-filled PBT, UL94V-0, natural (white)
(Note1) PA 66, UL94V-0, vivid yellow

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

<For reference> As the color identification, the following alphabet shall be put in the underlined part.
For availability, delivery and minimum order quantity, contact JST.

ex. **B02B-PASK**

S...natural (white)

K...black R...red E...blue M...green O...orange N...brown

P...purple PK...pink Y...yellow L...lemon yellow FY...vivid yellow

LE...light blue H...gray TR...tomato red

Side entry type

Circuits	Model No.	Dimensions (mm)		Q'ty/box
		A	B	
2	S02B-PASK-2	2.0	6.0	1,000
3	S03B-PASK-2	4.0	8.0	1,000
4	S04B-PASK-2	6.0	10.0	500
5	S05B-PASK-2	8.0	12.0	500
6	S06B-PASK-2	10.0	14.0	500
7	S07B-PASK-2	12.0	16.0	250
8	S08B-PASK-2	14.0	18.0	250
9	S09B-PASK-2	16.0	20.0	250
10	S10B-PASK-2	18.0	22.0	250
11	S11B-PASK-2	20.0	24.0	250
12	S12B-PASK-2	22.0	26.0	250
13	S13B-PASK-2	24.0	28.0	200
14	S14B-PASK-2	26.0	30.0	200
15	S15B-PASK-2	28.0	32.0	200
16	S16B-PASK-2	30.0	34.0	200

Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
Wafer: Glass-filled PBT, UL94V-0, natural (white)

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

<For reference> As the color identification, the following alphabet shall be put in the underlined part.
For availability, delivery and minimum order quantity, contact JST.

ex. **S03B-PASK-2**

S...natural (white)

K...black R...red E...blue M...green O...orange N...brown

P...purple PK...pink Y...yellow L...lemon yellow LE...light blue

H...gray TR...tomato red