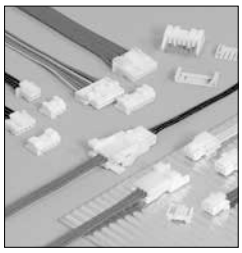
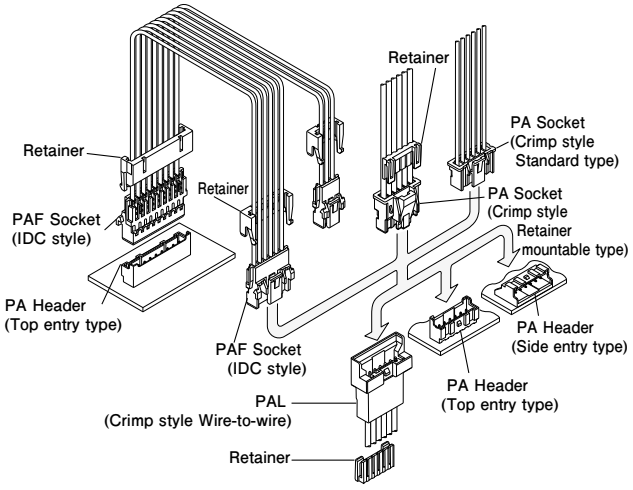


# PA FAMILY/PA • PAF • PAL CONNECTORS

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




**The 2.0 mm pitch PA family consists of the following connectors:**
**・PA connector (Wire-to-board crimp style)**
**・PAF connector (Wire-to-board insulation displacement connection (IDC) style)**
**・PAL connector (Wire-to-wire crimp style)**
**These features enabled a harness with complicated shape for the first time as a 2.0 mm pitch connector with secure locking mechanism.**

- **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 IDC 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

## Specifications

### PA Connector (Standard type)

- Current rating: 3 A AC/DC (AWG #22)
- Voltage rating: 250 V AC/DC
- Temperature range: -25℃ to +85℃
  (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℃ to +85℃
  (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 V AC/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℃ to +85℃
  (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

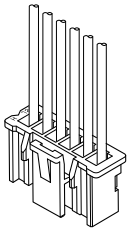
### PAL Connector

- Current rating: 3 A AC/DC (AWG #22)
- Voltage rating: 100 V AC/DC
- Temperature range: -25℃ to +85℃
  (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

* 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.

## List of combinations

**Crimp style**
**Standard type**

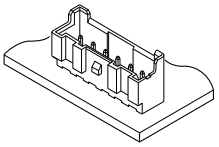


Contact
SPHD-001T-P0.5
SPHD-002T-P0.5

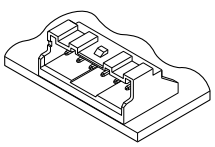
Housing
PAP-( )V-S

Header
B( )B-PASK
B( )B-PASK-1
B( )B-PASK-N
B( )B-PASK-1N
S( )B-PASK-2

Top entry type

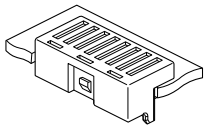


Side entry type



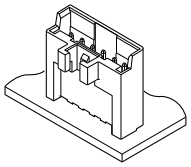
Header
BE( )B-PASK
BE( )B-PASK-C

**Bottom type**

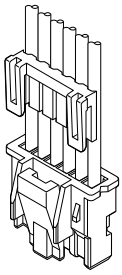


Header
BH( )B-PASK
BH( )B-PASK-1

**High box type**



**Crimp style**
**Retainer mountable type**



Contact
SPA-001T-P0.5

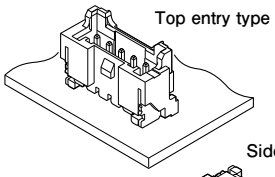
Housing
PARP-( )V

Retainer
PMS-( )V-S

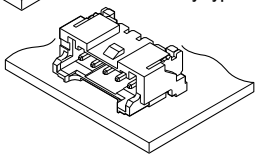
Header
BM( )B-PASS
BM( )B-PASS-1
SM( )B-PASS
SM( )B-PASS-1

**SMT type**

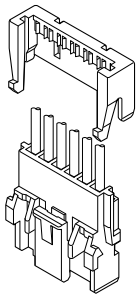
Top entry type



Side entry type



**IDC style**



Socket
( )PAF-6S

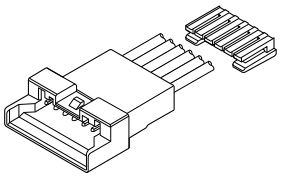
Retainer
PAFS-( )V-S

Contact
SPAL-001T-P0.5
SPAL-002T-P0.5

Receptacle housing
PALR-( )V(F)

Retainer
PMS-( )V-S

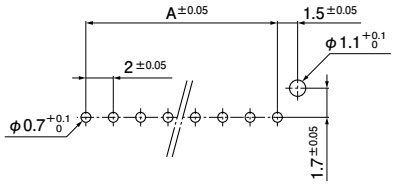
**Wire to wire type**

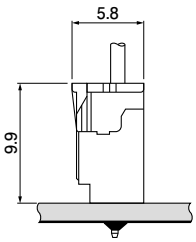


## PC board layout and Assembly layout

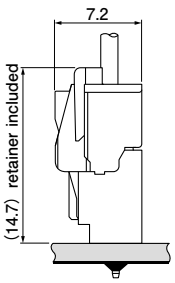
### <Through-hole type>

#### Top entry type

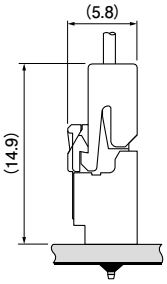



PA Socket
(Standard type)
+
PA Header

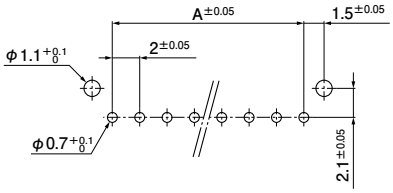


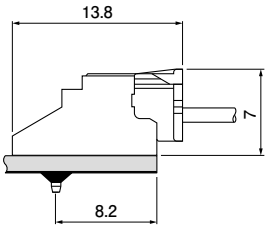

PA Socket
(Retainer mountable type)
+
PA Header



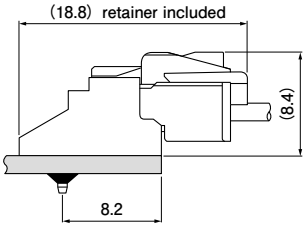

PAF Socket
+
PA Header

#### Side entry type

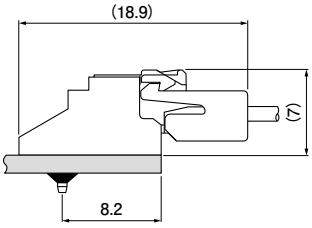



PA Socket
(Standard type)
+
PA side entry type header

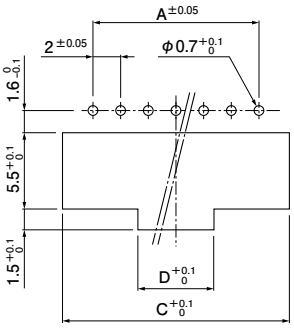



PA Socket
(Retainer mountable type)
+
PA side entry type header

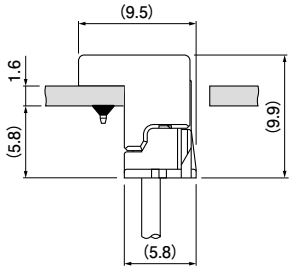



PAF Socket
+
PA side entry type header

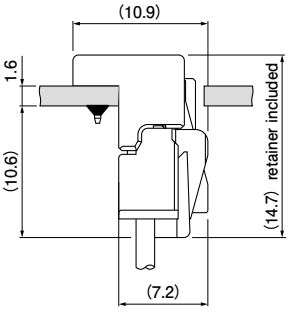
#### Bottom type



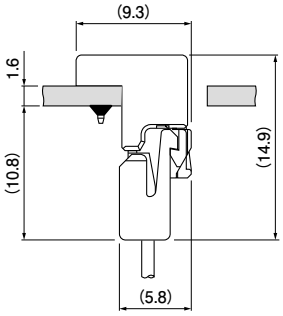

Note: Dimensions C and D; Refer to the header bottom type.




PA Socket
(Standard type)
+
PA bottom type header

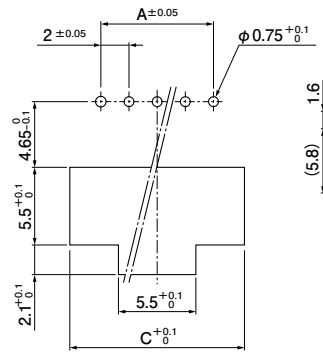



PA Socket
(Retainer mountable type)
+
PA bottom type header

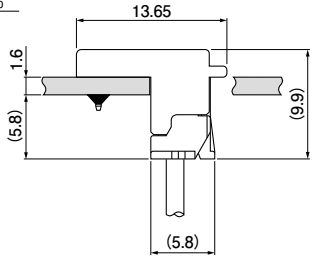



PAF Socket
+
PA bottom type header

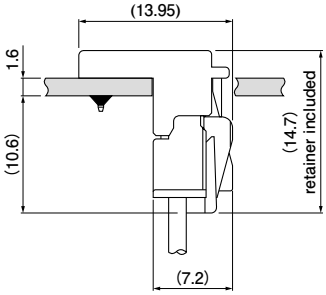
#### Bottom type with extended length



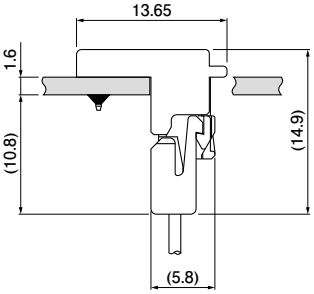

Note: Dimensions C; Refer to the header bottom type.




PA Socket
(Standard type)
+
PA bottom type header
(Extended lenght type)




PA Socket
(Retainer mountable type)
+
PA bottom type header
(Extended lenght type)

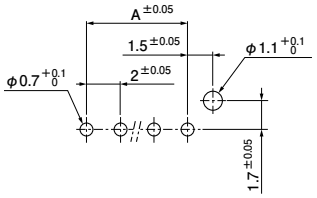


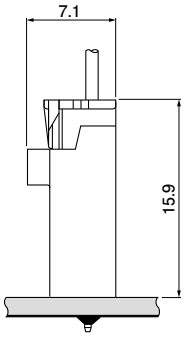

PAF Socket
+
PA bottom type header
(Extended lenght type)

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.
Please contact JST for details as the dimensions shown in the above figure are reference values.

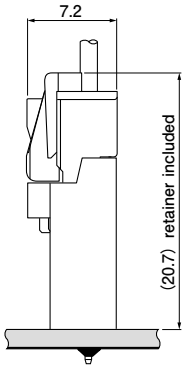
## PC board layout and Assembly layout

### High box type

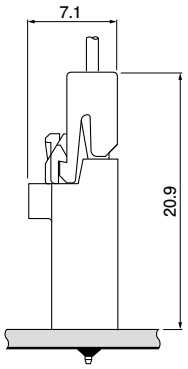



PA Socket
(Standard type)
+
PA high box type header




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

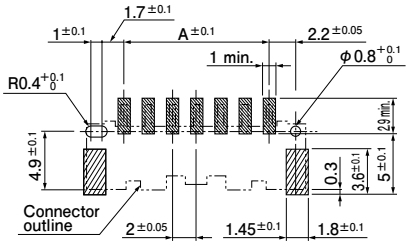


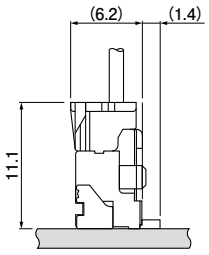

PAF Socket
+
PA high box type header

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.
Please contact JST for details as the dimensions shown in the above figure are reference values.

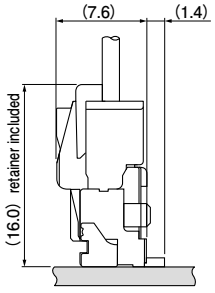
**<SMT type>**

### Top entry type

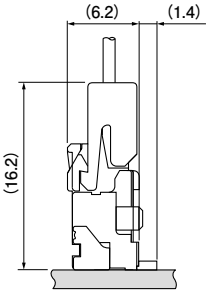



PA Socket
(Standard type)
+
PA Header

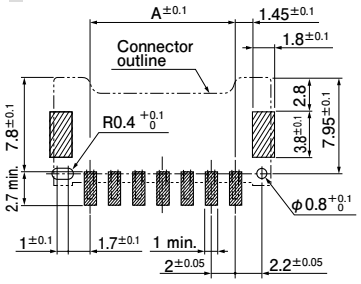


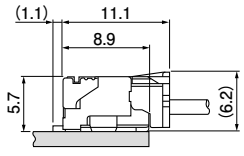

PA Socket
(Retainer mountable type)
+
PA Header



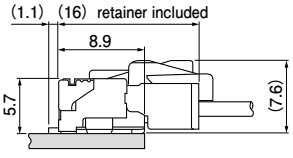

PAF Socket
+
PA Header

### Side entry type

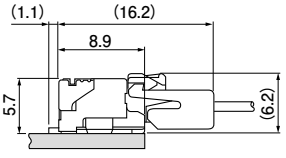



PA Socket
(Standard type)
+
PA side entry type header (SMT)



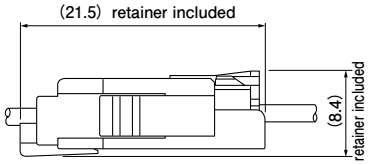

PA Socket
(Retainer mountable type)
+
PA side entry type header (SMT)



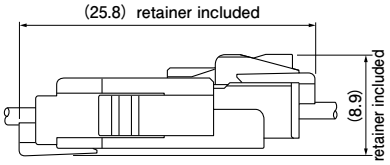

PAF Socket
+
PA side entry type header (SMT)

Note: 1. The above figure is the figure viewed from the connector mounting side.
2. Tolerances for the centers of pattern on PCB is ± 0.05, and shall be not cumulative more than ± 0.1.
3. Please contact JST for details as the dimensions shown in the above figure are reference values.

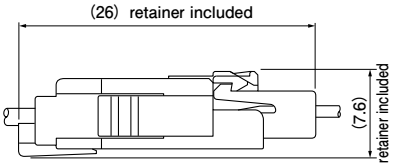
**<Wire-to-wire>**




PA Socket
(Standard type)
+
PAL Receptacle

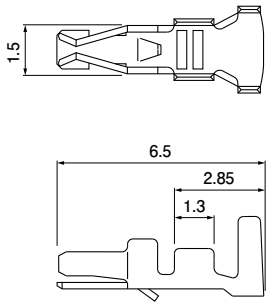



PA Socket
(Retainer mountable type)
+
PAL Receptacle




PAF Socket
+
PAL Receptacle

## Contact




| Model No. | Applicable wire | | Insulation O.D. (mm) | Q'ty/ reel |
|---|---|---|---|---|
| | mm² | 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) |

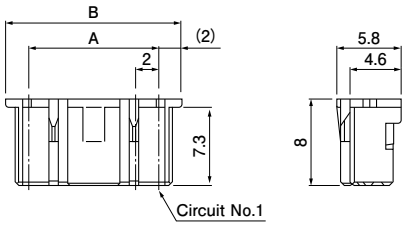
**RoHS2 compliance**

| 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 |
| SPHD-001T-P0.5 | | | MK/SPHD-001-05 | APLMK SPHD001-05 |

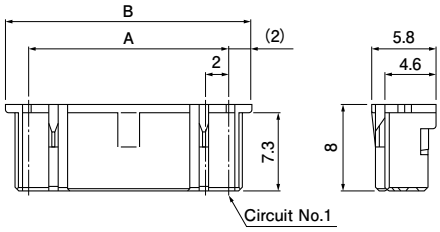
Note: Contact JST for fully automatic crimping applicator.

## Housing

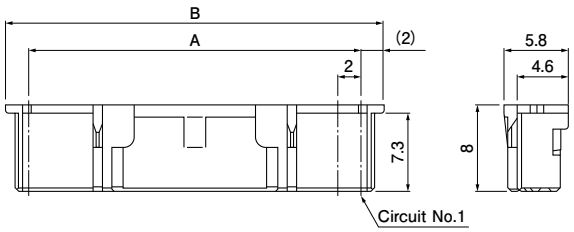
**<2 to 9 circuits>**




**<10 to 15 circuits>**




**<16 circuits>**




| No. of 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 |

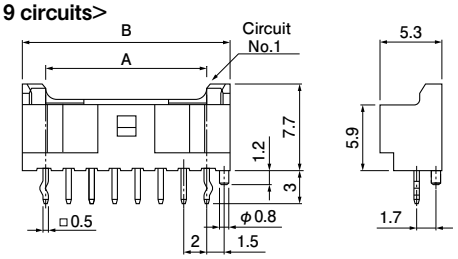
| Material and Finish |
|---|
| PA 66, UL94V-0, natural (white) |

**RoHS2 compliance**

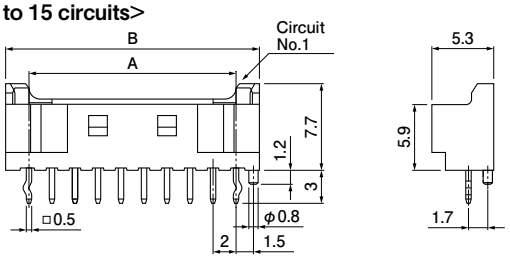
## Through-hole type header

### Top entry type

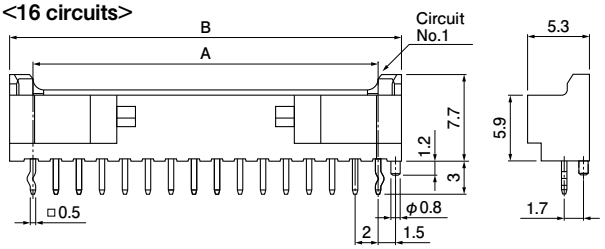
<2 to 9 circuits>




<10 to 15 circuits>

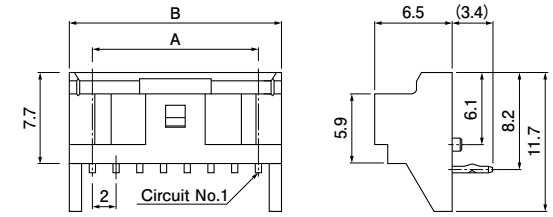



<16 circuits>

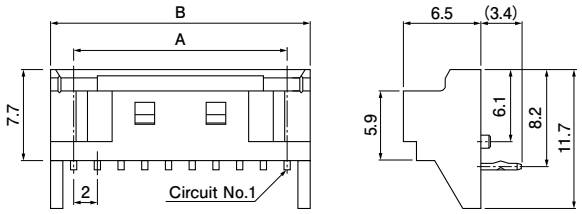



### Side entry type

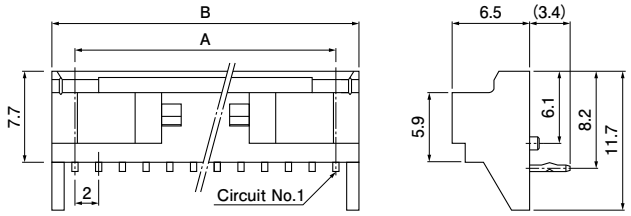
<2 to 9 circuits>




<10 to 15 circuits>




<16 circuits>




### Top entry type

| No. of 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 | 6.0 | 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)<br>Wafer: Glass-filled PBT, UL94V-0, natural (white)<br>(Note1) PA 66, vivid yellow |

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

### Side entry type

| No. of 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 |

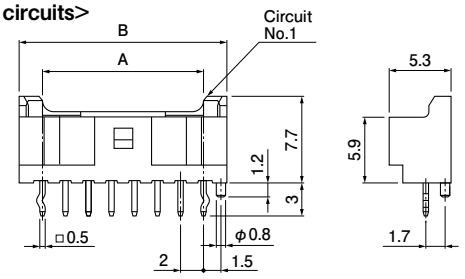
| Material and Finish |
|---|
| Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)<br>Wafer: Glass-filled PBT, UL94V-0, natural (white) |

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

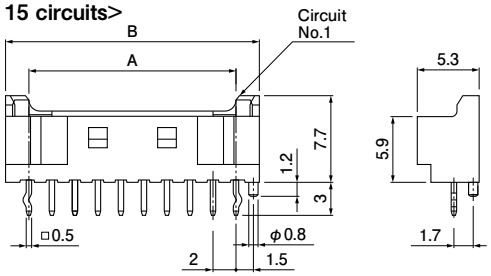
## Through-hole type header

### N type

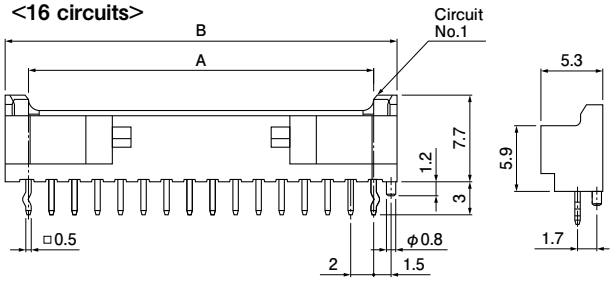
<2 to 9 circuits>




<10 to 15 circuits>

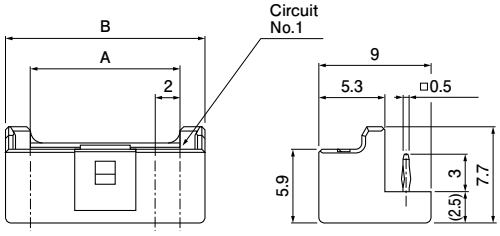



<16 circuits>

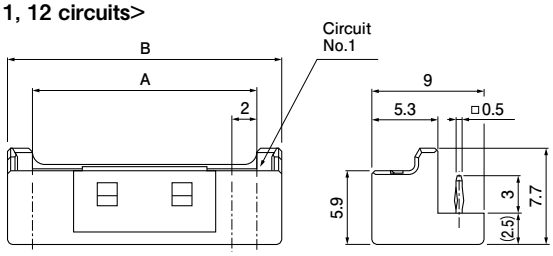



### Bottom type

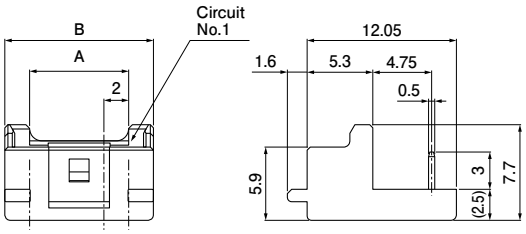
<5, 8 circuits>




<11, 12 circuits>




### Bottom type with extended length




### N type

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

| Material and Finish |
|---|
| Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)<br>Wafer: Glass-filled PA 66, UL94V-0, natural |

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

### Bottom type

| No. of circuits | Model No. | Dimensions (mm) | | | | Q'ty/ bag |
|---|---|---|---|---|---|---|
| | | A | B | C | D | |
| 5 | BE05B-PASK | 8.0 | 12.0 | 12.4 | 5.5 | 300 |
| 8 | BE08B-PASK | 14.0 | 18.0 | 18.4 | 5.5 | 200 |
| 11 | BE11B-PASK | 20.0 | 24.0 | 24.4 | 12.0 | 150 |
| 12 | BE12B-PASK | 22.0 | 26.0 | 26.4 | 12.0 | 150 |

| Material and Finish |
|---|
| Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)<br>Wafer: Glass-filled PBT, UL94V-0, natural |

**RoHS2 compliance** This product displays (LF)(SN) on a label.
Note: Dimemsions C and D; Refer to the PCB layout bottom type (page 3).

### Bottom type with extended length

| No. of circuits | Model No. | Dimensions (mm) | | | Q'ty/ box |
|---|---|---|---|---|---|
| | | A | B | C | |
| 4 | BE04B-PASK-C | 6.0 | 10.0 | 10.4 | 1,050 |
| 5 | BE05B-PASK-C | 8.0 | 12.0 | 12.4 | 875 |
| 6 | BE06B-PASK-C | 10.0 | 14.0 | 14.4 | 750 |

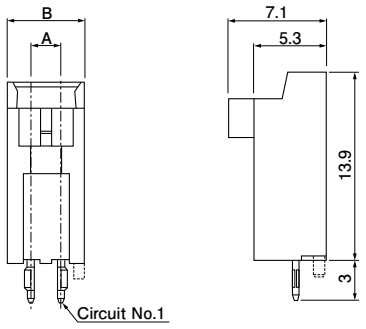
| Material and Finish |
|---|
| Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)<br>Wafer: Glass-filled PA 66, UL94V-0, natural |

**RoHS2 compliance** This product displays (LF)(SN) on a label.
Note: 1. Dimemsions C; Refer to the PCB layout bottom type (page 3).
2. Unlisted in UL.

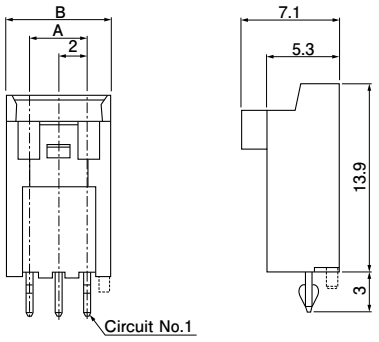
## Through-hole type header

### High box type

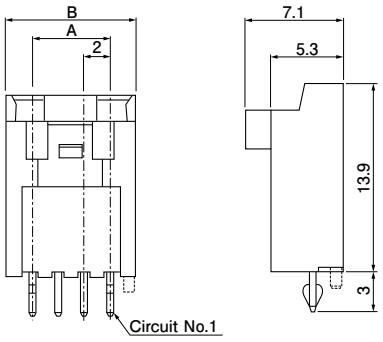
<2 circuits>



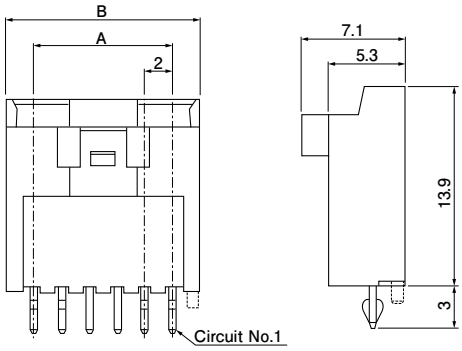

<3 circuits>



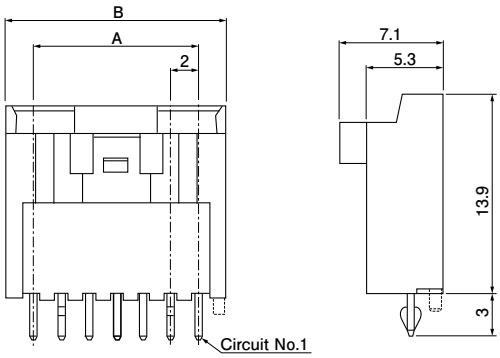

<4 circuits>



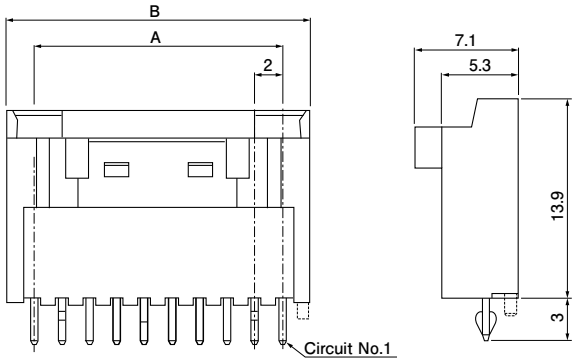

<5, 6 circuits>




<7 to 9 circuits>




<10 to 12, 15 circuits>




| No. of circuits | Model No. | | Dimensions(mm) | | Q'ty/ box |
|---|---|---|---|---|---|
| | Without a boss | With a boss | A | B | |
| 2 | **BH02B-PASK** | **BH02B-PASK-1** | 2.0 | 6.0 | 900 |
| 3 | **BH03B-PASK** | **BH03B-PASK-1** | 4.0 | 8.0 | 675 |
| 4 | **BH04B-PASK** | **BH04B-PASK-1** | 6.0 | 10.0 | 525 |
| 5 | **BH05B-PASK** | **BH05B-PASK-1** | 8.0 | 12.0 | 450 |
| 6 | **BH06B-PASK** | **BH06B-PASK-1** | 10.0 | 14.0 | 375 |
| 7 | **BH07B-PASK** | **BH07B-PASK-1** | 12.0 | 16.0 | 325 |
| 8 | **BH08B-PASK** | **BH08B-PASK-1** | 14.0 | 18.0 | 300 |
| 9 | **BH09B-PASK** | **BH09B-PASK-1** | 16.0 | 20.0 | 250 |
| 10 | **BH10B-PASK** | **BH10B-PASK-1** | 18.0 | 22.0 | 225 |
| 11 | **BH11B-PASK** | **BH11B-PASK-1** | 20.0 | 24.0 | 225 |
| 12 | **BH12B-PASK** | **BH12B-PASK-1** | 22.0 | 26.0 | 200 |
| 15 | **BH15B-PASK** | **BH15B-PASK-1** | 28.0 | 32.0 | 150 |

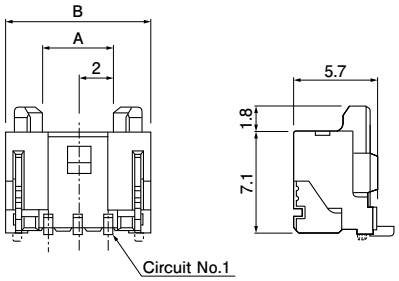
| Material and Finish |
|---|
| Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)<br>Wafer: Glass-filled PBT, UL94V-0, natural (white) |

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

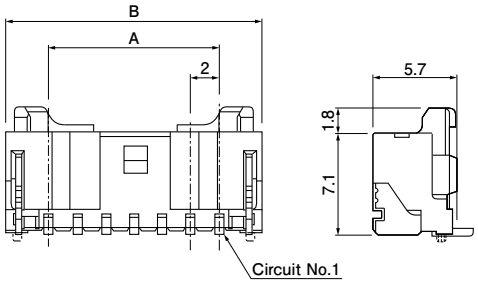
## SMT type header

### Top entry type

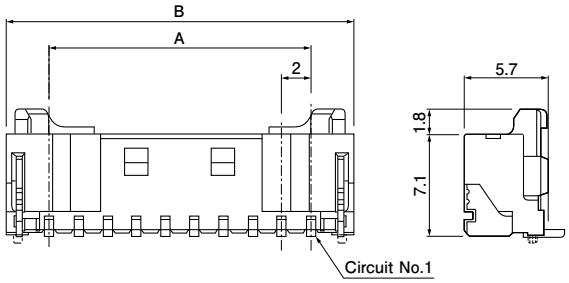
<2 and 3 circuits>




<4 to 9 circuits>

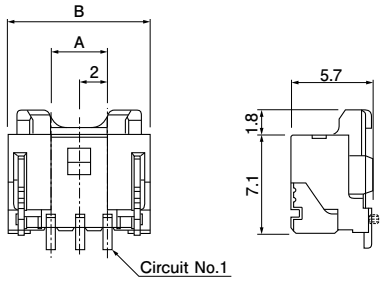



<10 to 13, 15 circuits>

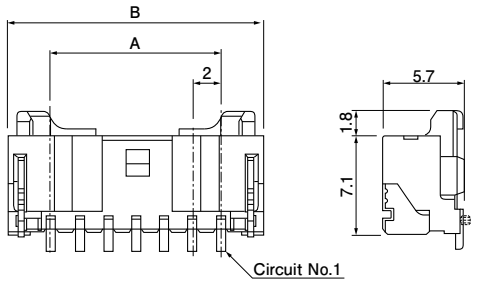



### Side entry type

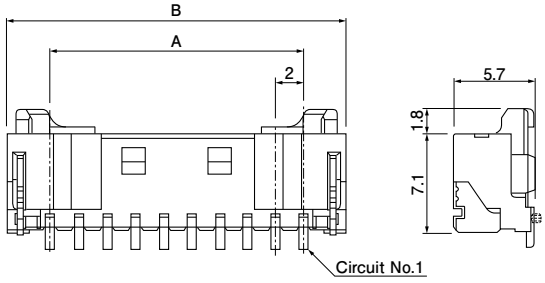
<2 and 3 circuits>




<4 to 9 circuits>




<10 to 13, 15 circuits>




### Top entry type

| No. of circuits | Model No. | | Dimensions(mm) | | Q'ty/ reel |
|---|---|---|---|---|---|
| | Without a boss | With a boss | A | B | |
| 2 | BM02B-PASS-(*) | BM02B-PASS-1-(*) | 2.0 | 8.0 | 500 |
| 3 | BM03B-PASS-(*) | BM03B-PASS-1-(*) | 4.0 | 10.0 | 500 |
| 4 | BM04B-PASS-(*) | BM04B-PASS-1-(*) | 6.0 | 12.0 | 500 |
| 5 | BM05B-PASS-(*) | BM05B-PASS-1-(*) | 8.0 | 14.0 | 500 |
| 6 | BM06B-PASS-(*) | BM06B-PASS-1-(*) | 10.0 | 16.0 | 500 |
| 7 | BM07B-PASS-(*) | BM07B-PASS-1-(*) | 12.0 | 18.0 | 500 |
| 8 | BM08B-PASS-(*) | BM08B-PASS-1-(*) | 14.0 | 20.0 | 500 |
| 9 | BM09B-PASS-(*) | BM09B-PASS-1-(*) | 16.0 | 22.0 | 500 |
| 10 | BM10B-PASS-(*) | BM10B-PASS-1-(*) | 18.0 | 24.0 | 500 |
| 11 | BM11B-PASS-(*) | BM11B-PASS-1-(*) | 20.0 | 26.0 | 500 |
| 12 | BM12B-PASS-(*) | BM12B-PASS-1-(*) | 22.0 | 28.0 | 500 |
| 13 | BM13B-PASS-(*) | BM13B-PASS-1-(*) | 24.0 | 30.0 | 500 |
| 15 | BM15B-PASS-(*) | BM15B-PASS-1-(*) | 28.0 | 34.0 | 500 |

Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
Wafer: PA, UL94V-0, natural (ivory)
Solder tab: Copper alloy, copper-undercoated, tin-plated (reflow treatment)

**RoHS2 compliance** This product displays (LF)(SN) on a label.
Note: (*): TF···taping product
TFT···taping product with suction tape.

### Side entry type

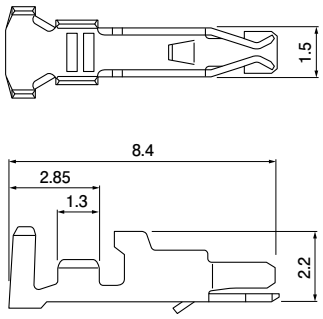
| No. of circuits | Model No. | | Dimensions(mm) | | Q'ty/ reel |
|---|---|---|---|---|---|
| | Without a boss | With a boss | A | B | |
| 2 | SM02B-PASS-(*) | SM02B-PASS-1-(*) | 2.0 | 8.0 | 1,000 |
| 3 | SM03B-PASS-(*) | SM03B-PASS-1-(*) | 4.0 | 10.0 | 1,000 |
| 4 | SM04B-PASS-(*) | SM04B-PASS-1-(*) | 6.0 | 12.0 | 1,000 |
| 5 | SM05B-PASS-(*) | SM05B-PASS-1-(*) | 8.0 | 14.0 | 1,000 |
| 6 | SM06B-PASS-(*) | SM06B-PASS-1-(*) | 10.0 | 16.0 | 1,000 |
| 7 | SM07B-PASS-(*) | SM07B-PASS-1-(*) | 12.0 | 18.0 | 1,000 |
| 8 | SM08B-PASS-(*) | SM08B-PASS-1-(*) | 14.0 | 20.0 | 1,000 |
| 9 | SM09B-PASS-(*) | SM09B-PASS-1-(*) | 16.0 | 22.0 | 1,000 |
| 10 | SM10B-PASS-(*) | SM10B-PASS-1-(*) | 18.0 | 24.0 | 1,000 |
| 11 | SM11B-PASS-(*) | SM11B-PASS-1-(*) | 20.0 | 26.0 | 1,000 |
| 12 | SM12B-PASS-(*) | SM12B-PASS-1-(*) | 22.0 | 28.0 | 1,000 |
| 13 | SM13B-PASS-(*) | SM13B-PASS-1-(*) | 24.0 | 30.0 | 1,000 |
| 15 | SM15B-PASS-(*) | SM15B-PASS-1-(*) | 28.0 | 34.0 | 1,000 |

Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
Wafer: PA, UL94V-0, natural (ivory)
Solder tab: Copper alloy, copper-undercoated, tin-plated (reflow treatment)

**RoHS2 compliance** This product displays (LF)(SN) on a label.
Note: (*): TB···taping product
TBT···taping product with suction tape.

## Contact




| Model No. | Applicable wire | | Insulation O.D. (mm) | Q'ty/ reel |
|---|---|---|---|---|
| | $mm^2$ | AWG # | | |
| **SPA-001T-P0.5** | 0.13～0.33 | 26～22 | 0.9～1.5 | 10,000 |

**Material and Finish**

Phosphor bronze, tin-plated (reflow treatment)

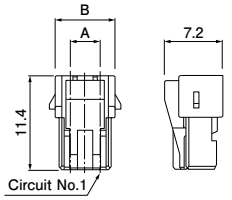
**RoHS2 compliance**

| Contact | Crimping machine | Applicator | | |
|---|---|---|---|---|
| | | Crimp applicator | Dies | Crimp applicator with dies |
| **SPA-001T-P0.5** | AP-K2N | MKS-L | MK/SPA-001-05 | APLMK SPA001-05 |

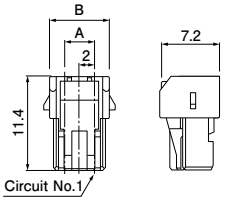
Note: Contact JST for fully automatic crimping applicator.

## Housing

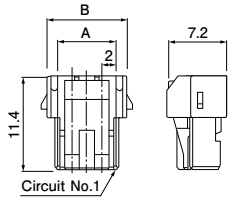
<2 circuits>



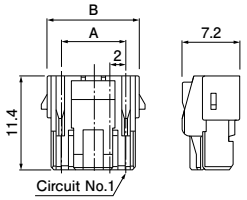

<3 circuits>



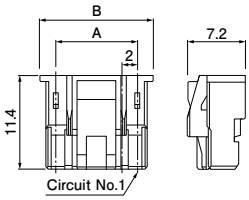

<4 circuits>



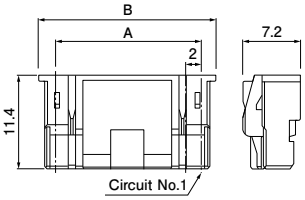

<5 circuits>




<6 to 9 circuits>




<10 to 13, 15 circuits>




| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ bag |
|---|---|---|---|---|
| | | A | B | |
| 2 | **PARP-02V** | 2.0 | 5.4 | 1,000 |
| 3 | **PARP-03V** | 4.0 | 7.4 | 1,000 |
| 4 | **PARP-04V** | 6.0 | 9.4 | 1,000 |
| 5 | **PARP-05V** | 8.0 | 11.4 | 1,000 |
| 6 | **PARP-06V** | 10.0 | 14.0 | 1,000 |
| 7 | **PARP-07V** | 12.0 | 16.0 | 1,000 |
| 8 | **PARP-08V** | 14.0 | 18.0 | 1,000 |
| 9 | **PARP-09V** | 16.0 | 20.0 | 1,000 |
| 10 | **PARP-10V** | 18.0 | 22.0 | 1,000 |
| 11 | **PARP-11V** | 20.0 | 24.0 | 500 |
| 12 | **PARP-12V** | 22.0 | 26.0 | 500 |
| 13 | **PARP-13V** | 24.0 | 28.0 | 500 |
| 15 | **PARP-15V** | 28.0 | 32.0 | 500 |

**Material and Finish**

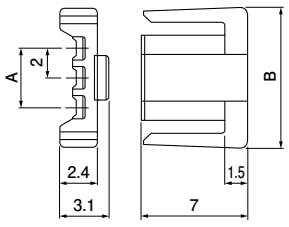
PA 66, UL94V-0, natural (white)

**RoHS2 compliance**

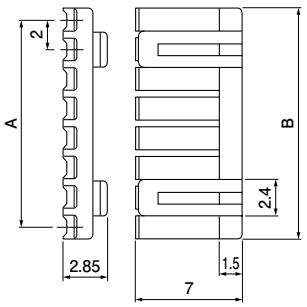
Note: Contact JST for Glow Wire compliant connectors.

## Retainer

<2 to 5 circuits>




<6 to 13, 15 circuits>



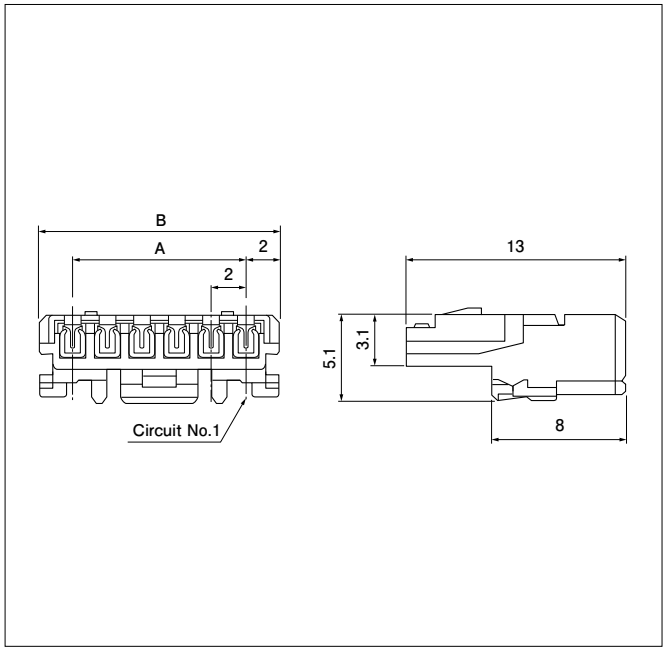

| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ bag |
|---|---|---|---|---|
| | | A | B | |
| 2 | **PMS-02V-S** | 2.0 | 7.3 | 1,000 |
| 3 | **PMS-03V-S** | 4.0 | 9.3 | 1,000 |
| 4 | **PMS-04V-S** | 6.0 | 11.3 | 1,000 |
| 5 | **PMS-05V-S** | 8.0 | 13.3 | 1,000 |
| 6 | **PMS-06V-S** | 10.0 | 11.55 | 1,000 |
| 7 | **PMS-07V-S** | 12.0 | 13.55 | 1,000 |
| 8 | **PMS-08V-S** | 14.0 | 15.55 | 1,000 |
| 9 | **PMS-09V-S** | 16.0 | 17.55 | 1,000 |
| 10 | **PMS-10V-S** | 18.0 | 19.55 | 1,000 |
| 11 | **PMS-11V-S** | 20.0 | 21.55 | 1,000 |
| 12 | **PMS-12V-S** | 22.0 | 23.55 | 1,000 |
| 13 | **PMS-13V-S** | 24.0 | 25.55 | 1,000 |
| 15 | **PMS-15V-S** | 28.0 | 29.55 | 1,000 |

**Material and Finish**

Glass-filled PA 66, UL94V-0, natural (ivory)

**RoHS2 compliance**

## Receptacle

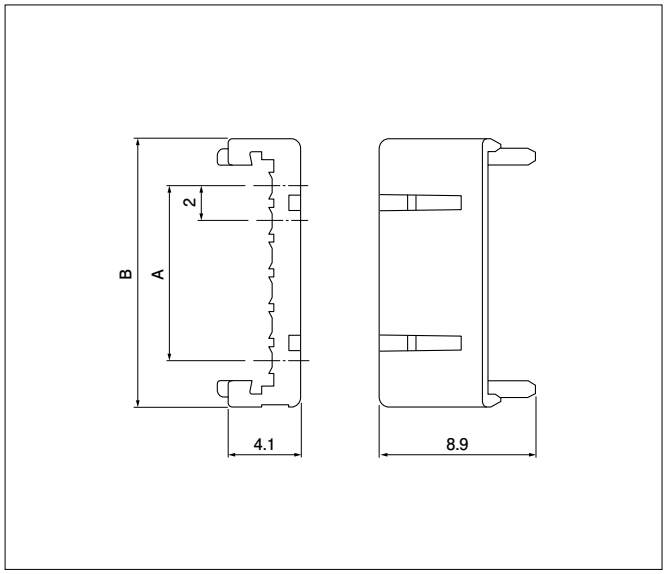



| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ box |
|---|---|---|---|---|
| | | A | B | |
| 2 | **02PAF-6S** | 2.0 | 6.0 | 1,000 |
| 3 | **03PAF-6S** | 4.0 | 8.0 | 1,000 |
| 4 | **04PAF-6S** | 6.0 | 10.0 | 500 |
| 5 | **05PAF-6S** | 8.0 | 12.0 | 500 |
| 6 | **06PAF-6S** | 10.0 | 14.0 | 500 |
| 7 | **07PAF-6S** | 12.0 | 16.0 | 500 |
| 8 | **08PAF-6S** | 14.0 | 18.0 | 250 |
| 9 | **09PAF-6S** | 16.0 | 20.0 | 250 |
| 10 | **10PAF-6S** | 18.0 | 22.0 | 250 |
| 11 | **11PAF-6S** | 20.0 | 24.0 | 250 |
| 12 | **12PAF-6S** | 22.0 | 26.0 | 250 |
| 13 | **13PAF-6S** | 24.0 | 28.0 | 250 |
| 14 | **14PAF-6S** | 26.0 | 30.0 | 250 |
| 15 | **15PAF-6S** | 28.0 | 32.0 | 250 |
| *16 | **16PAF-6S** | 30.0 | 34.0 | 250 |

| Material and Finish |
|---|
| Contact: Phosphor bronze, tin-plated (reflow treatment)<br>Housing: PA 66, UL94V-0, natural (white) |

**RoHS2 compliance**
Note*: Unlisted in UL.

## Retainer

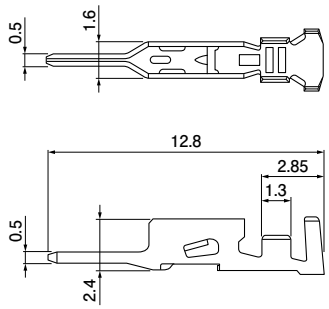



| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ bag |
|---|---|---|---|---|
| | | A | B | |
| 2 | **PAFS-02V-S** | 2.0 | 7.4 | 1,000 |
| 3 | **PAFS-03V-S** | 4.0 | 9.4 | 1,000 |
| 4 | **PAFS-04V-S** | 6.0 | 11.4 | 1,000 |
| 5 | **PAFS-05V-S** | 8.0 | 13.4 | 1,000 |
| 6 | **PAFS-06V-S** | 10.0 | 15.4 | 1,000 |
| 7 | **PAFS-07V-S** | 12.0 | 17.4 | 1,000 |
| 8 | **PAFS-08V-S** | 14.0 | 19.4 | 1,000 |
| * 9 | **PAFS-09V-S** | 16.0 | 21.4 | 1,000 |
| *10 | **PAFS-10V-S** | 18.0 | 23.4 | 1,000 |
| *11 | **PAFS-11V-S** | 20.0 | 25.4 | 1,000 |
| *12 | **PAFS-12V-S** | 22.0 | 27.4 | 1,000 |
| *13 | **PAFS-13V-S** | 24.0 | 29.4 | 1,000 |
| *14 | **PAFS-14V-S** | 26.0 | 31.4 | 1,000 |
| *15 | **PAFS-15V-S** | 28.0 | 33.4 | 1,000 |

| Material and Finish |
|---|
| Glass-filled PA 66, UL94V-0, natural (ivory) |

**RoHS2 compliance**
Note*: Unlisted in UL.

## Contact




| Model No. | Applicable wire | | Insulation O.D. (mm) | Q'ty/ reel |
|---|---|---|---|---|
| | mm² | AWG # | | |
| SPAL-001T-P0.5 | 0.13～0.33 | 26～22 | 1.0～1.5 | 10,000 |
| SPAL-002T-P0.5 | 0.08～0.21 | 28～24 | 0.9～1.5 | 10,000 |

Material and Finish

Phosphor bronze, tin-plated (reflow treatment)

**RoHS2 compliance**

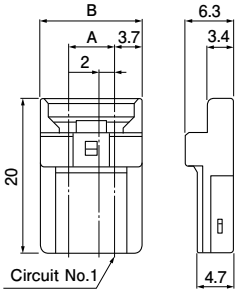
| Contact | Crimping machine | Applicator | | |
|---|---|---|---|---|
| | | Crimp applicator | Dies | Crimp applicator with dies |
| SPAL-001T-P0.5 | AP-K2N | MKS-L | MK/SPAL-001-05 | APLMK SPAL001-05 |
| SPAL-002T-P0.5 | | | MK/SPAL-002-05 | APLMK SPAL002-05 |

Note: Contact JST for fully automatic crimping applicator.

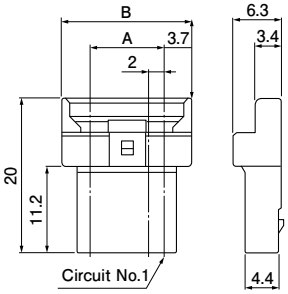
## Housing

**Without panel locks**

**<2 to 5 circuits>**

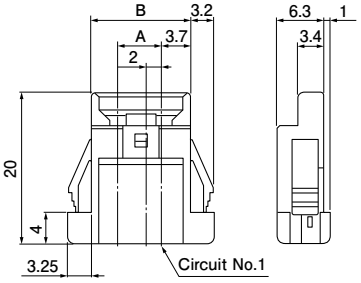



**<6 to 8 circuits>**

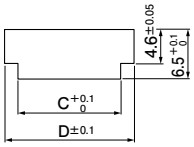



**With panel locks**

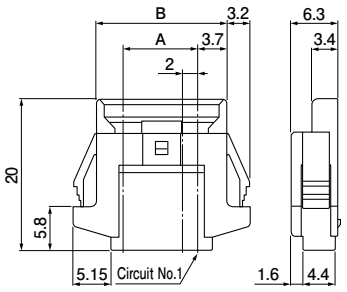
**<2 to 4 circuits>**



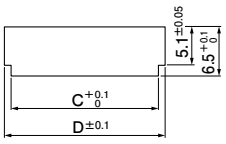

**Panel layout**




**<6 to 8 circuits>**




**Panel layout**




| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ bag |
|---|---|---|---|---|
| | | A | B | |
| 2 | PALR-02VF | 2.0 | 9.4 | 1,000 |
| 3 | PALR-03VF | 4.0 | 11.4 | 1,000 |
| 4 | PALR-04VF | 6.0 | 13.4 | 1,000 |
| 5 | PALR-05VF | 8.0 | 15.4 | 1,000 |
| 6 | PALR-06VF | 10.0 | 17.4 | 1,000 |
| 7 | PALR-07VF | 12.0 | 19.4 | 1,000 |
| 8 | PALR-08VF | 14.0 | 21.4 | 1,000 |

Material and Finish

PA 66, UL94V-0, natural (white)

**RoHS2 compliance**

| No. of circuits | Model No. | Dimensions (mm) | | | | Q'ty/ bag |
|---|---|---|---|---|---|---|
| | | A | B | C | D | |
| 2 | PALR-02V | 2.0 | 9.4 | 9.8 | 13.4 | 1,000 |
| 3 | PALR-03V | 4.0 | 11.4 | 11.8 | 15.4 | 1,000 |
| 4 | PALR-04V | 6.0 | 13.4 | 13.8 | 17.4 | 1,000 |
| 6 | PALR-06V | 10.0 | 17.4 | 19.8 | 21.4 | 1,000 |
| 7 | PALR-07V | 12.0 | 19.4 | 21.8 | 23.4 | 1,000 |
| 8 | PALR-08V | 14.0 | 21.4 | 23.8 | 25.4 | 1,000 |

Material and Finish

PA 66, UL94V-0, natural (white)

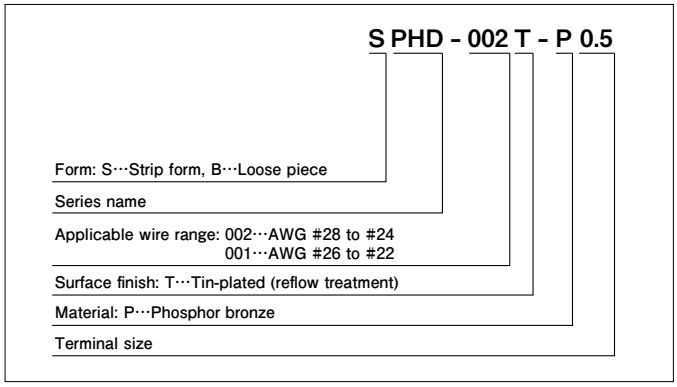
**RoHS2 compliance**

## Retainer

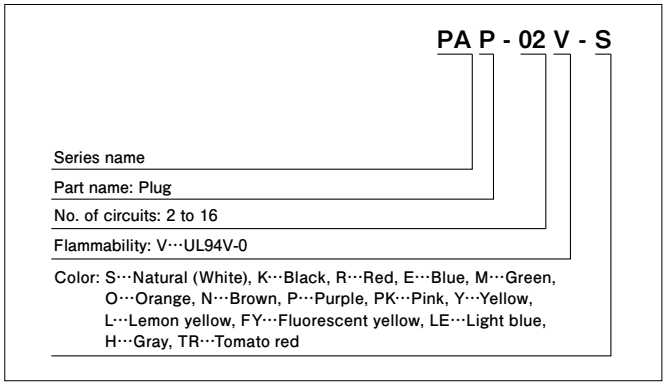
Retainers are interchangeable with those of the PA crimp style retainer mountable type.

## Model number allocation

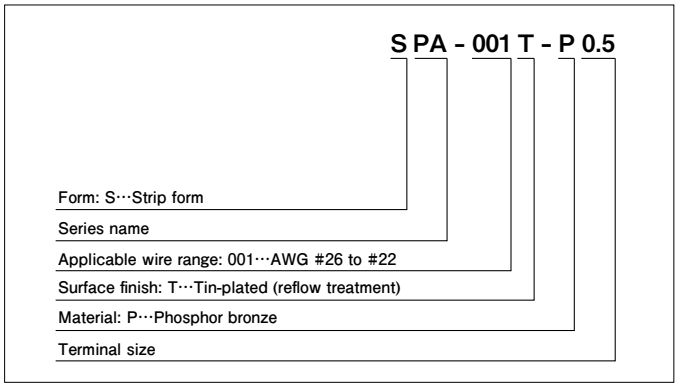
### Contact (Standard type)



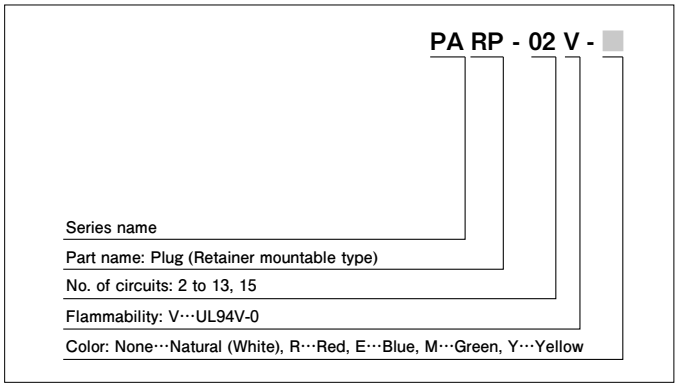

### Housing (Standard type)



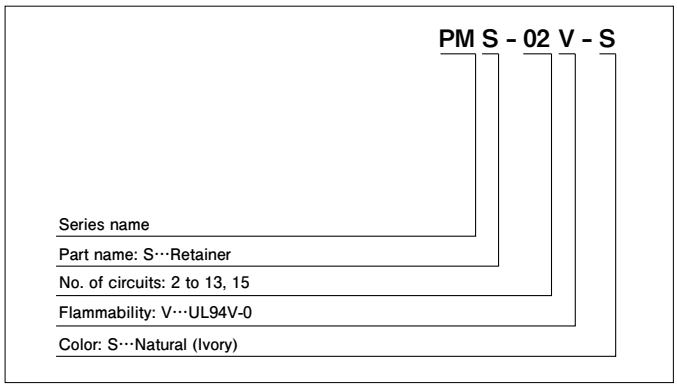

### Contact (Retainer mountable type)



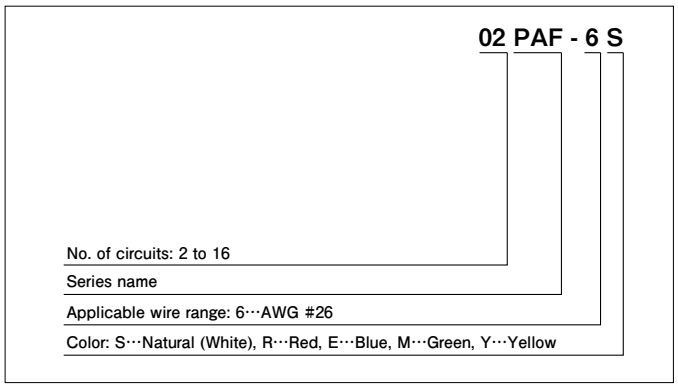

### Housing (Retainer mountable type)



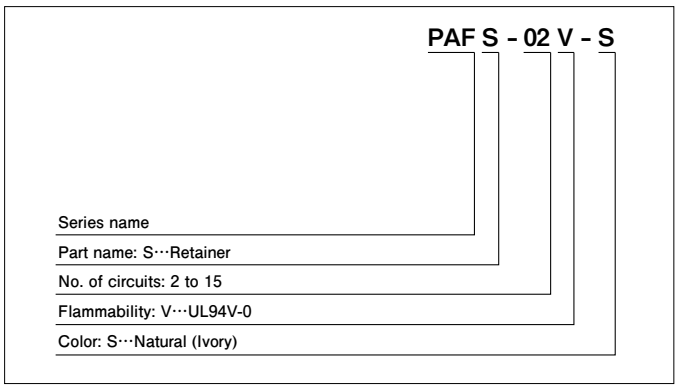

### Retainer (Crimp style)




### Socket (IDC style)




### Retainer (IDC style)



## Model number allocation

### Header (Top entry type)

B 02 B - PA S K - □□

- Shape of assembled product: B···Top entry type
- No. of circuits: 2 to 16
- Part name: Header
- Series name
- Color: 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···Fluorescent yellow, LE···Light blue, H···Gray, TR···Tomato red
- Indication of clinch: K···Clinched, S···Straight pin
- Shape: None···Without boss, 1···With boss
- Resin material: None···Glass-filled PBT, A···PA 66

### Header (Side entry type)

S 03 B - PA S K - 2

- Shape of assembled product: S···Side entry type
- No. of circuits: 2 to 16
- Part name: Header
- Series name
- Color: 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
- Indication of clinch: K···Clinched, S···Straight pin
- Shape: None···Without boss, 1···With boss, 2···With bosses on both sides

### Header (Top entry type, N type)

B 02 B - PA S K - □ N

- Shape of assembled product: B···Top entry type
- No. of circuits: 2 to 16
- Part name: Header
- Series name
- Color: S···Natural
- Indication of clinch: K···Clinched, S···Straight pin
- Shape: None···Without boss, 1···With boss
- Resin material: N···Glass-filled PA 66

### Header (Bottom type, Bottom type with extended length)

BE 05 B - PA S K - C

- Shape of assembled product: BE···Bottom type
- No. of circuits: Bottom type···5, 8, 11, 12; Bottom type with extended length···4 to 6
- Part name: Header
- Series name
- Color: S···Natural
- Indication of clinch: K···Clinched
- Shape: None···Bottom type, C···Bottom type with extended length

### Header (High box type)

BH 02 B - PA S K - □

- Shape of assembled product: BH···Top entry type High box type
- No. of circuits: 2 to 12, 15
- Part name: Header
- Series name
- Color: S···Natural (White)
- Indication of clinch: K···Clinched
- Shape: None···Without boss, 1···With boss

### Header (SMT type)

BM 02 B - PA S S - □ - TF

- Shape of assembled product: BM···SMT Top entry type, SM···SMT Side entry type
- No. of circuits: 2 to 13, 15
- Part name: Header
- Series name
- Color: S···Natural (Ivory)
- Indication of clinch: S···Straight pin
- Shape: None···Without boss, 1···With boss
- Packaging style: TF···Embossed-taping (Top entry type), TFT···With suction tape (Top entry type), TB···Embossed-taping (Side entry type), TBT···With suction tape (Side entry type)

### Pin contact for wire to wire

S PAL - 001 T - P 0.5

- Form: S···Strip form
- Series name
- Applicable wire range: 001···AWG #26 to #22, 002···AWG #28 to #24
- Surface finish: T···Tin-plated (reflow treatment)
- Material: P···Phosphor bronze
- Terminal size

### Receptacle housing for wire-to-wire

PAL R - 02 V □ - □

- Series name
- Part name: R···Receptacle
- No. of circuits: Without panel lock···2 to 8, With panel lock···2 to 4, 6 to 8
- Flammability: V···UL94V-0
- With/Without panel lock: None···With panel lock, F···Without panel lock
- Color: None···Natural (White), R···Red, E···Blue, M···Green, Y···Yellow