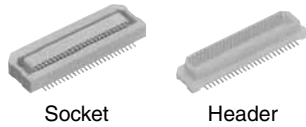
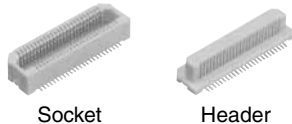




### • P5K



### • P5KS



Note: The external appearance and PC board pattern differs for the P5K and P5KS series.

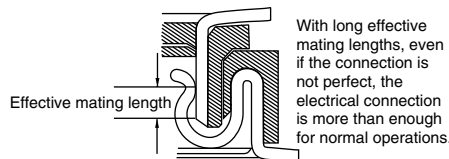
### Compliance with RoHS Directive

## FEATURES

1. The product lineup consists of 3.0 mm, 3.5 mm, 4.0 mm, 4.5 mm, 5.0 mm, 5.5 mm, 6.0 mm, 6.5 mm, 7.0 mm, 8.0 mm, and 9.0 mm.

| Type | Mated height                                               | Notes                                                                             |
|------|------------------------------------------------------------|-----------------------------------------------------------------------------------|
| P5K  | 3 mm, 3.5 mm                                               |                                                                                   |
| P5KS | 4 mm, 4.5 mm, 5 mm, 5.5 mm, 6 mm, 6.5 mm, 7 mm, 8 mm, 9 mm | The external appearance and PC board pattern differs for the P5K and P5KS series. |

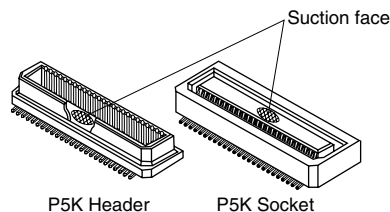
2. Strong resistance to adverse environments! Utilizes **TOUGH CONTACT** construction for high contact reliability.  
(See Page 6 for details of the structure)  
3. Even with the low profile, the effective mating length has been extended to ensure that there is some latitude in the mating.



| Type | Effective mating length |
|------|-------------------------|
| P5K  | 0.65 mm                 |
| P5KS | 1.0 mm                  |

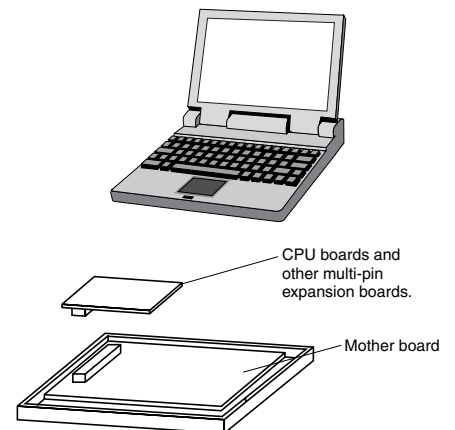
### 4. Automatic mounting

1) Suction area for suction-type automatic mounting machines is employed.



## APPLICATIONS

1. Compact portable devices “Cellular phones, DVC, Digital cameras, etc”  
2. The 160-contacts connector: This connector is particularly suited to the motherboard, CPU board, and other multi-pin expansion boards on notebook PCs and other info-communications applications.



## ORDERING INFORMATION

### 1. P5K (3.0 mm and 3.5 mm)

AXK           7 Y G

5: Narrow Pitch Connector P5K Socket

6: Narrow Pitch Connector P5K Header

Number of contacts (2 digits)

Mated height

<Socket>

1: For mated height 3.0 mm and 3.5 mm

<Header>

2: For mated height 3.5 mm

3: For mated height 3.0 mm

Functions

3: With positioning bosses

4: Without positioning bosses

Surface treatment (Contact portion / Terminal portion)

7: Ni plating on base, Au plating on surface /

Ni plating on base, Au plating on surface (Ni barrier product)

Contact portion

<Socket> Y: V notch type product

<Header> Y: V notch type product

Packing

G: 1,500 pieces embossed tape and plastic reel × 2

# AXK(5(S)/6(S))

## 2. P5KS (4.0 mm, 4.5 mm, 5.0 mm, 5.5 mm, 6.0 mm, 6.5 mm, 7.0 mm, 8.0 mm and 9.0 mm)

AXK

7

Y

G

5S: Narrow Pitch Connector P5KS Socket  
6S: Narrow Pitch Connector P5KS Header

Number of contacts (2 digits)

Mated height  
<Socket>  
0: For mated height 4.0 mm, 5.0 mm and 6.0 mm  
2: For mated height 4.5 mm, 5.5 mm and 6.5 mm  
3: For mated height 7.0 mm, 8.0 mm and 9.0 mm  
<Header>  
4: For mated height 4.0 mm, 4.5 mm and 7.0 mm  
5: For mated height 5.0 mm, 5.5 mm and 8.0 mm  
6: For mated height 6.0 mm, 6.5 mm and 9.0 mm

Functions  
3: With positioning boss and direction for protection from reverse mating  
4: Without positioning boss/with direction for protection from reverse mating  
7: With positioning boss/without direction for protection from reverse mating  
8: Without positioning boss and direction for protection from reverse mating

Surface treatment (Contact portion / Terminal portion)  
7: Ni plating on base, Au plating on surface /  
Ni plating on base, Au plating on surface (Ni barrier product)

Contact portion  
<Socket> Y: V notch type product  
<Header> Y: V notch type product

Packing  
G: 1,500 pieces embossed tape and plastic reel × 2  
(Socket: Mated heights 4.0 mm, 4.5 mm, 5.0 mm, 5.5 mm, 6.0 mm, 6.5 mm )  
(Header: Mated heights 4.0 mm, 4.5 mm, 7.0 mm )  
1,000 pieces plastic reel × 2  
(Socket: Mated heights 7.0 mm, 8.0 mm, 9.0 mm )  
(Header: Mated heights 5.0 mm, 5.5 mm, 6.0 mm, 6.5 mm, 8.0 mm, 9.0 mm )

Note: Models with mating directionality to prevent reverse insertion have less than 100 contacts. Models without mating directionality to prevent reverse insertion have over 100 contacts.

# PRODUCT TYPES

## 1. P5K

| Product name | Mated height | No. of contacts | Part No.             |                      | Packing               |              |
|--------------|--------------|-----------------|----------------------|----------------------|-----------------------|--------------|
|              |              |                 | Socket               | Header               | Inner carton (1 reel) | Outer carton |
|              |              |                 | <i>TOUGH CONTACT</i> | <i>TOUGH CONTACT</i> |                       |              |
| P5K          | 3.0 mm       | 20              | AXK520147YG          | AXK620347YG          | 1,500 pieces          | 3,000 pieces |
|              |              | 22              | AXK522147YG          | AXK622347YG          |                       |              |
|              |              | 30              | AXK530147YG          | AXK630347YG          |                       |              |
|              |              | 40              | AXK540147YG          | AXK640347YG          |                       |              |
|              |              | 50              | AXK550147YG          | AXK650347YG          |                       |              |
|              |              | 60              | AXK560147YG          | AXK660347YG          |                       |              |
|              |              | 70              | AXK570147YG          | AXK670347YG          |                       |              |
|              |              | 80              | AXK580147YG          | AXK680347YG          |                       |              |
|              |              | 100             | AXK500147YG          | AXK600347YG          |                       |              |
|              |              | 120             | AXK5A2147YG          | AXK6A2347YG          |                       |              |
|              | 3.5 mm       | 20              | AXK520147YG          | AXK620247YG          |                       |              |
|              |              | 22              | AXK522147YG          | AXK622247YG          |                       |              |
|              |              | 30              | AXK530147YG          | AXK630247YG          |                       |              |
|              |              | 34              | AXK534147YG          | AXK634247YG          |                       |              |
|              |              | 40              | AXK540147YG          | AXK640247YG          |                       |              |
|              |              | 50              | AXK550147YG          | AXK650247YG          |                       |              |
|              |              | 60              | AXK560147YG          | AXK660247YG          |                       |              |
|              |              | 70              | AXK570147YG          | AXK670247YG          |                       |              |
|              |              | 80              | AXK580147YG          | AXK680247YG          |                       |              |
|              |              | 100             | AXK500147YG          | AXK600247YG          |                       |              |
|              |              | 120             | AXK5A2147YG          | AXK6A2247YG          |                       |              |

- Notes: 1. Regarding ordering units: During production: Please make orders in 1 reel units.  
Samples for mounting confirmation: Available in units of 50 pieces. Please consult us. (See “Regarding sample orders to confirm proper mounting” on page 19.)  
Samples: Small lot orders are possible.
2. The standard type comes without positioning bosses.  
Connectors with positioning bosses are available on-demand production. For P5K type of 8th digit of the part no. changes from 4 to 3.  
e.g. Mated height 3.0 mm, 20 contacts for sockets: AXK520137YG
3. Previous non-TOUGH CONTACT types and current TOUGH CONTACT types are compatible for mating.

## 2. P5KS

| Product name | Mated height | No. of contacts | Part No.             |                      | Packing                                      |                                              |
|--------------|--------------|-----------------|----------------------|----------------------|----------------------------------------------|----------------------------------------------|
|              |              |                 | Socket               | Header               | Inner carton (1 reel)                        | Outer carton                                 |
|              |              |                 | <b>TOUGH CONTACT</b> | <b>TOUGH CONTACT</b> |                                              |                                              |
| P5KS         | 4.0 mm       | 20              | AXK5S20047YG         | AXK6S20447YG         | 1,500 pieces                                 | 3,000 pieces                                 |
|              |              | 24              | AXK5S24047YG         | AXK6S24447YG         |                                              |                                              |
|              |              | 30              | AXK5S30047YG         | AXK6S30447YG         |                                              |                                              |
|              |              | 34              | AXK5S34047YG         | AXK6S34447YG         |                                              |                                              |
|              |              | 40              | AXK5S40047YG         | AXK6S40447YG         |                                              |                                              |
|              |              | 50              | AXK5S50047YG         | AXK6S50447YG         |                                              |                                              |
|              |              | 60              | AXK5S60047YG         | AXK6S60447YG         |                                              |                                              |
|              |              | 70              | AXK5S70047YG         | AXK6S70447YG         |                                              |                                              |
|              |              | 80              | AXK5S80047YG         | AXK6S80447YG         |                                              |                                              |
|              |              | 100             | AXK5S00047YG         | AXK6S00447YG         |                                              |                                              |
|              |              | 120             | AXK5SA2077YG         | AXK6SA2477YG         |                                              |                                              |
|              |              | 160             | AXK5SA6077YG         | AXK6SA6477YG         |                                              |                                              |
|              | 4.5 mm       | 20              | AXK5S20247YG         | AXK6S20447YG         |                                              |                                              |
|              |              | 24              | AXK5S24247YG         | AXK6S24447YG         |                                              |                                              |
|              |              | 30              | AXK5S30247YG         | AXK6S30447YG         |                                              |                                              |
|              |              | 34              | AXK5S34247YG         | AXK6S34447YG         |                                              |                                              |
|              |              | 36              | AXK5S36247YG         | AXK6S36447YG         |                                              |                                              |
|              |              | 40              | AXK5S40247YG         | AXK6S40447YG         |                                              |                                              |
|              |              | 50              | AXK5S50247YG         | AXK6S50447YG         |                                              |                                              |
|              |              | 60              | AXK5S60247YG         | AXK6S60447YG         |                                              |                                              |
|              |              | 70              | AXK5S70247YG         | AXK6S70447YG         |                                              |                                              |
|              |              | 80              | AXK5S80247YG         | AXK6S80447YG         |                                              |                                              |
|              |              | 100             | AXK5S00247YG         | AXK6S00447YG         |                                              |                                              |
|              |              | 120             | AXK5SA2277YG         | AXK6SA2477YG         |                                              |                                              |
|              |              | 160             | AXK5SA6277YG         | AXK6SA6477YG         |                                              |                                              |
| P5KS         | 5.0 mm       | 20              | AXK5S20047YG         | AXK6S20547YG         | Socket: 1,500 pieces<br>Header: 1,000 pieces | Socket: 3,000 pieces<br>Header: 2,000 pieces |
|              |              | 24              | AXK5S24047YG         | AXK6S24547YG         |                                              |                                              |
|              |              | 30              | AXK5S30047YG         | AXK6S30547YG         |                                              |                                              |
|              |              | 34              | AXK5S34047YG         | AXK6S34547YG         |                                              |                                              |
|              |              | 40              | AXK5S40047YG         | AXK6S40547YG         |                                              |                                              |
|              |              | 50              | AXK5S50047YG         | AXK6S50547YG         |                                              |                                              |
|              |              | 60              | AXK5S60047YG         | AXK6S60547YG         |                                              |                                              |
|              |              | 70              | AXK5S70047YG         | AXK6S70547YG         |                                              |                                              |
|              |              | 80              | AXK5S80047YG         | AXK6S80547YG         |                                              |                                              |
|              |              | 100             | AXK5S00047YG         | AXK6S00547YG         |                                              |                                              |
|              | 5.5 mm       | 20              | AXK5S20247YG         | AXK6S20547YG         |                                              |                                              |
|              |              | 24              | AXK5S24247YG         | AXK6S24547YG         |                                              |                                              |
|              |              | 30              | AXK5S30247YG         | AXK6S30547YG         |                                              |                                              |
|              |              | 34              | AXK5S34247YG         | AXK6S34547YG         |                                              |                                              |
|              |              | 40              | AXK5S40247YG         | AXK6S40547YG         |                                              |                                              |
|              |              | 50              | AXK5S50247YG         | AXK6S50547YG         |                                              |                                              |
|              |              | 60              | AXK5S60247YG         | AXK6S60547YG         |                                              |                                              |
|              |              | 70              | AXK5S70247YG         | AXK6S70547YG         |                                              |                                              |
|              |              | 80              | AXK5S80247YG         | AXK6S80547YG         |                                              |                                              |
|              |              | 100             | AXK5S00247YG         | AXK6S00547YG         |                                              |                                              |
|              | 6.0 mm       | 20              | AXK5S20047YG         | AXK6S20647YG         |                                              |                                              |
|              |              | 30              | AXK5S30047YG         | AXK6S30647YG         |                                              |                                              |
|              |              | 40              | AXK5S40047YG         | AXK6S40647YG         |                                              |                                              |
|              |              | 50              | AXK5S50047YG         | AXK6S50647YG         |                                              |                                              |
|              |              | 60              | AXK5S60047YG         | AXK6S60647YG         |                                              |                                              |
|              |              | 70              | AXK5S70047YG         | AXK6S70647YG         |                                              |                                              |
|              |              | 80              | AXK5S80047YG         | AXK6S80647YG         |                                              |                                              |
|              | 6.5 mm       | 100             | AXK5S00047YG         | AXK6S00647YG         |                                              |                                              |
|              |              | 20              | AXK5S20247YG         | AXK6S20647YG         |                                              |                                              |
|              |              | 30              | AXK5S30247YG         | AXK6S30647YG         |                                              |                                              |
|              |              | 40              | AXK5S40247YG         | AXK6S40647YG         |                                              |                                              |
|              |              | 50              | AXK5S50247YG         | AXK6S50647YG         |                                              |                                              |
|              |              | 60              | AXK5S60247YG         | AXK6S60647YG         |                                              |                                              |
|              |              | 70              | AXK5S70247YG         | AXK6S70647YG         |                                              |                                              |
|              |              | 80              | AXK5S80247YG         | AXK6S80647YG         |                                              |                                              |
|              |              | 100             | AXK5S00247YG         | AXK6S00647YG         |                                              |                                              |
|              |              | 130             | AXK5SA3277YG         | AXK6SA3677YG         |                                              |                                              |

# AXK(5(S)/6(S))

| Product name | Mated height | No. of contacts | Part No.             |                      | Packing                                      |                                              |
|--------------|--------------|-----------------|----------------------|----------------------|----------------------------------------------|----------------------------------------------|
|              |              |                 | Socket               | Header               | Inner carton (1 reel)                        | Outer carton                                 |
|              |              |                 | <b>TOUGH CONTACT</b> | <b>TOUGH CONTACT</b> |                                              |                                              |
| P5KS         | 7.0 mm       | 20              | AXK5S20347YG         | AXK6S20447YG         | Socket: 1,000 pieces<br>Header: 1,500 pieces | Socket: 2,000 pieces<br>Header: 3,000 pieces |
|              |              | 30              | AXK5S30347YG         | AXK6S30447YG         |                                              |                                              |
|              |              | 40              | AXK5S40347YG         | AXK6S40447YG         |                                              |                                              |
|              |              | 50              | AXK5S50347YG         | AXK6S50447YG         |                                              |                                              |
|              |              | 60              | AXK5S60347YG         | AXK6S60447YG         |                                              |                                              |
|              |              | 70              | AXK5S70347YG         | AXK6S70447YG         |                                              |                                              |
|              |              | 80              | AXK5S80347YG         | AXK6S80447YG         |                                              |                                              |
|              |              | 100             | AXK5S00347YG         | AXK6S00447YG         |                                              |                                              |
|              | 8.0 mm       | 20              | AXK5S20347YG         | AXK6S20547YG         | 1,000 pieces                                 | 2,000 pieces                                 |
|              |              | 30              | AXK5S30347YG         | AXK6S30547YG         |                                              |                                              |
|              |              | 40              | AXK5S40347YG         | AXK6S40547YG         |                                              |                                              |
|              |              | 50              | AXK5S50347YG         | AXK6S50547YG         |                                              |                                              |
|              |              | 60              | AXK5S60347YG         | AXK6S60547YG         |                                              |                                              |
|              |              | 70              | AXK5S70347YG         | AXK6S70547YG         |                                              |                                              |
|              |              | 80              | AXK5S80347YG         | AXK6S80547YG         |                                              |                                              |
|              |              | 100             | AXK5S00347YG         | AXK6S00547YG         |                                              |                                              |
|              | 9.0 mm       | 20              | AXK5S20347YG         | AXK6S20647YG         |                                              |                                              |
|              |              | 30              | AXK5S30347YG         | AXK6S30647YG         |                                              |                                              |
|              |              | 40              | AXK5S40347YG         | AXK6S40647YG         |                                              |                                              |
|              |              | 50              | AXK5S50347YG         | AXK6S50647YG         |                                              |                                              |
|              |              | 60              | AXK5S60347YG         | AXK6S60647YG         |                                              |                                              |
|              |              | 70              | AXK5S70347YG         | AXK6S70647YG         |                                              |                                              |
|              |              | 80              | AXK5S80347YG         | AXK6S80647YG         |                                              |                                              |
|              |              | 100             | AXK5S00347YG         | AXK6S00647YG         |                                              |                                              |

- Notes: 1. Regarding ordering units: During production: Please make orders in 1 reel units.  
 Samples for mounting confirmation: Available in units of 50 pieces. Please consult us. (See "Regarding sample orders to confirm proper mounting" on page 19.)  
 Samples: Small lot orders are possible.
2. The standard type comes without positioning bosses (However, mated heights of 4 mm or higher and 120 pins or more comes standard with bosses). Connectors with positioning bosses are available for on-demand production. For P5KS type of 9th digit of the part no. changes from 4 to 3.  
 e.g. Mated height 4.0 mm, 20 contacts for sockets: AXK5S20037YG
3. Previous non-**TOUGH CONTACT** types and current **TOUGH CONTACT** types are compatible for mating.

# SPECIFICATIONS

## 1. Characteristics

| Item                          |                                                       | Specifications                                                                                 |                                                                           |                    | Conditions                                                                                                                            |
|-------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|                               |                                                       | 3mm, 3.5mm type                                                                                | 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm type                                   | 7mm, 8mm, 9mm type |                                                                                                                                       |
| Electrical characteristics    | Rated current                                         | 0.5A/terminal (Max. 10A) 0.5A/terminal (Max. 16A)                                              |                                                                           |                    |                                                                                                                                       |
|                               | Rated voltage                                         | 60V AC/DC                                                                                      |                                                                           |                    |                                                                                                                                       |
|                               | Breakdown voltage                                     | 150V AC for 1 min.                                                                             |                                                                           |                    | Detection current: 1mA                                                                                                                |
|                               | Insulation resistance                                 | Min. 1000MΩ                                                                                    |                                                                           |                    | Using 500V DC megger                                                                                                                  |
|                               | Contact resistance                                    | Max. 60mΩ                                                                                      |                                                                           | Max. 80mΩ          | Based on the contact resistance measurement method specified by JIS C 5402.                                                           |
| Mechanical characteristics    | Composite insertion force                             | Max. 0.785N {80gf} × no. of contacts (initial)                                                 |                                                                           |                    |                                                                                                                                       |
|                               | Composite removal force                               | Min. 0.0588N {6gf} × no. of contacts                                                           |                                                                           |                    |                                                                                                                                       |
|                               | Contact holding force                                 | Min. 0.98N {100gf}/contacts                                                                    |                                                                           |                    | Measuring the maximum force. As the contact is axially pull out.                                                                      |
| Environmental characteristics | Ambient temperature                                   | -55°C to +85°C                                                                                 |                                                                           |                    | No freezing at low temperatures                                                                                                       |
|                               | Soldering heat resistance                             | Max. peak temperature of 260°C (on the surface of the PC board around the connector terminals) |                                                                           |                    | Infrared reflow soldering                                                                                                             |
|                               |                                                       | 300°C within 5 sec., 350°C within 3 sec.                                                       |                                                                           |                    | Soldering iron                                                                                                                        |
|                               | Thermal shock resistance (header and socket mated)    | 5 cycles, insulation resistance min. 100MΩ, contact resistance max. 60mΩ                       | 5 cycles, insulation resistance min. 100MΩ, contact resistance max. 80mΩ  |                    | Sequence<br>1. -55 $\frac{3}{4}$ °C, 30 minutes<br>2. ~, Max. 5 minutes<br>3. 85 $\frac{3}{4}$ °C, 30 minutes<br>4. ~, Max. 5 minutes |
|                               | Humidity resistance (header and socket mated)         | 120 hours, insulation resistance min. 100MΩ, contact resistance max. 60mΩ                      | 120 hours, insulation resistance min. 100MΩ, contact resistance max. 80mΩ |                    | Bath temperature 40±2°C, humidity 90 to 95% R.H.                                                                                      |
|                               | Saltwater spray resistance (header and socket mated)  | 24 hours, insulation resistance min. 100MΩ, contact resistance max. 60mΩ                       | 24 hours, insulation resistance min. 100MΩ, contact resistance max. 80mΩ  |                    | Bath temperature 35±2°C, saltwater concentration 5±1%                                                                                 |
| Lifetime characteristics      | H <sub>2</sub> S resistance (header and socket mated) | 48 hours, contact resistance max. 60mΩ                                                         | 48 hours, contact resistance max. 80mΩ                                    |                    | Bath temperature 40±2°C, gas concentration 3±1 ppm, humidity 75 to 80% R.H.                                                           |
|                               | Insertion and removal life                            | 50 times                                                                                       |                                                                           |                    | Repeated insertion and removal speed of max. 200 times/hours                                                                          |
| Unit weight                   |                                                       | P5K 3mm 30 contacts<br>P5KS 4mm 30 contacts                                                    | Socket: 0.17g Header: 0.09g<br>Socket: 0.18g Header: 0.16g                |                    |                                                                                                                                       |

## 2. Material and surface treatment

| Part name      | Mated height 3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm, 7mm, 8mm, 9mm |                                                                                                                                                                                                                                                               |
|----------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | Material                                                                   | Surface treatment                                                                                                                                                                                                                                             |
| Molded portion | Heat-resistant resin (UL94V-0)                                             | —                                                                                                                                                                                                                                                             |
| Contact/post   | Copper alloy                                                               | Contact portion: Ni plating on base, Au plating on surface<br>Terminal portion: Ni plating on base, Au plating on surface (Except for thick of terminal)<br>The section close to the soldering portion has a nickel barrier.<br>(The nickel base is exposed.) |

**DIMENSIONS** (Unit: mm) The CAD data of the products with a **CAD Data** mark can be downloaded from: <http://panasonic-electric-works.net/ac>

### P5K: Mated height 3mm, 3.5mm type

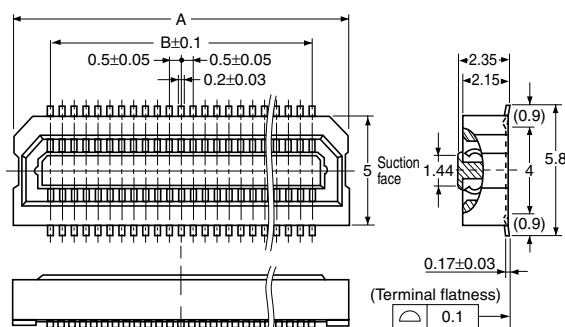
#### • Socket

#### CAD Data



Dimension table (mm)

| No. of contacts | A     | B     |
|-----------------|-------|-------|
| 20              | 8.20  | 4.50  |
| 22              | 8.70  | 5.00  |
| 30              | 10.70 | 7.00  |
| 34              | 11.70 | 8.00  |
| 40              | 13.20 | 9.50  |
| 50              | 15.70 | 12.00 |
| 60              | 18.20 | 14.50 |
| 70              | 20.70 | 17.00 |
| 80              | 23.20 | 19.50 |
| 100             | 28.20 | 24.50 |
| 120             | 33.20 | 29.50 |



# AXK(5(S)/6(S))

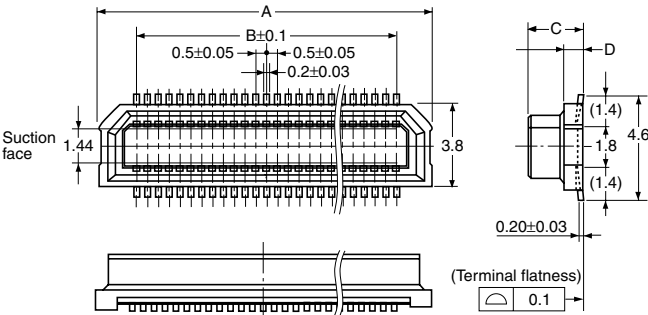
• Header

CAD Data



Dimension table (mm)

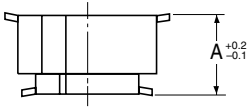
| No. of contacts | A     | B     |
|-----------------|-------|-------|
| 20              | 8.20  | 4.50  |
| 22              | 8.70  | 5.00  |
| 30              | 10.70 | 7.00  |
| 34              | 11.70 | 8.00  |
| 40              | 13.20 | 9.50  |
| 50              | 15.70 | 12.00 |
| 60              | 18.20 | 14.50 |
| 70              | 20.70 | 17.00 |
| 80              | 23.20 | 19.50 |
| 100             | 28.20 | 24.50 |
| 120             | 33.20 | 29.50 |



General tolerance: ±0.2

| Mated height | C   | D    |
|--------------|-----|------|
| 3.0 mm       | 2.4 | 0.85 |
| 3.5 mm       | 2.9 | 1.35 |

• Socket and header are mated



| Mated height | A   |
|--------------|-----|
| 3.0 mm       | 3.0 |
| 3.5 mm       | 3.5 |

Note) P5KS series (mated heights 4.0mm, 4.5mm, 5.0mm, 5.5mm, 6.0mm, 6.5mm, 7.0mm, 8.0mm, and 9.0mm) cannot be mated to this type.

## P5KS: Mated height 4.0mm, 4.5mm, 5.0mm, 5.5mm, 6.0mm, 6.5mm, 7.0mm, 8.0mm, 9.0mm type

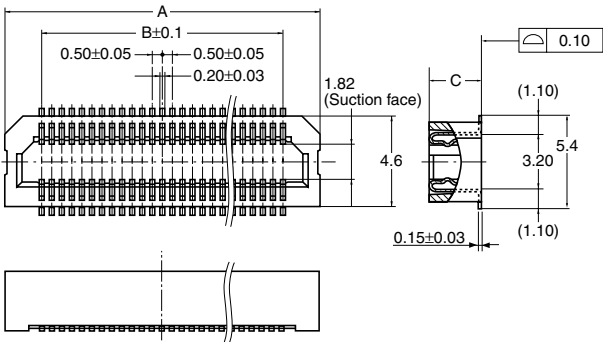
• Socket

CAD Data



Dimension table (mm)

| No. of contacts | A     | B     |
|-----------------|-------|-------|
| 20              | 8.20  | 4.50  |
| 24              | 9.20  | 5.50  |
| 30              | 10.70 | 7.00  |
| 34              | 11.70 | 8.00  |
| 36              | 12.20 | 8.50  |
| 40              | 13.20 | 9.50  |
| 50              | 15.70 | 12.00 |
| 60              | 18.20 | 14.50 |
| 70              | 20.70 | 17.00 |
| 80              | 23.20 | 19.50 |
| 100             | 28.20 | 24.50 |



General tolerance: ±0.2

| Mated height           | C    |
|------------------------|------|
| 4.0 mm, 5.0 mm, 6.0 mm | 3.05 |
| 4.5 mm, 5.5 mm, 6.5 mm | 3.55 |
| 7.0 mm, 8.0 mm, 9.0 mm | 6.05 |

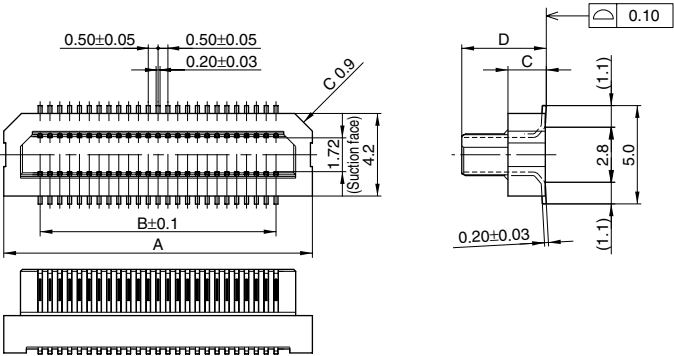
• Header

CAD Data



Dimension table (mm)

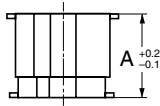
| No. of contacts | A     | B     |
|-----------------|-------|-------|
| 20              | 8.20  | 4.50  |
| 24              | 9.20  | 5.50  |
| 30              | 10.70 | 7.00  |
| 34              | 11.70 | 8.00  |
| 36              | 12.20 | 8.50  |
| 40              | 13.20 | 9.50  |
| 50              | 15.70 | 12.00 |
| 60              | 18.20 | 14.50 |
| 70              | 20.70 | 17.00 |
| 80              | 23.20 | 19.50 |
| 100             | 28.20 | 24.50 |



General tolerance: ±0.2

| Mated height           | C    | D   |
|------------------------|------|-----|
| 4.0 mm, 4.5 mm, 7.0 mm | 0.95 | 3.3 |
| 5.0 mm, 5.5 mm, 8.0 mm | 1.95 | 4.3 |
| 6.0 mm, 6.5 mm, 9.0 mm | 2.95 | 5.3 |

• Socket and header are mated



| Mated height | A   |
|--------------|-----|
| 4.0 mm       | 4.0 |
| 4.5 mm       | 4.5 |
| 5.0 mm       | 5.0 |
| 5.5 mm       | 5.5 |
| 6.0 mm       | 6.0 |
| 6.5 mm       | 6.5 |
| 7.0 mm       | 7.0 |
| 8.0 mm       | 8.0 |
| 9.0 mm       | 9.0 |

Note) P5K series (mated heights 3.0mm, 3.5mm) cannot be mated to this type.

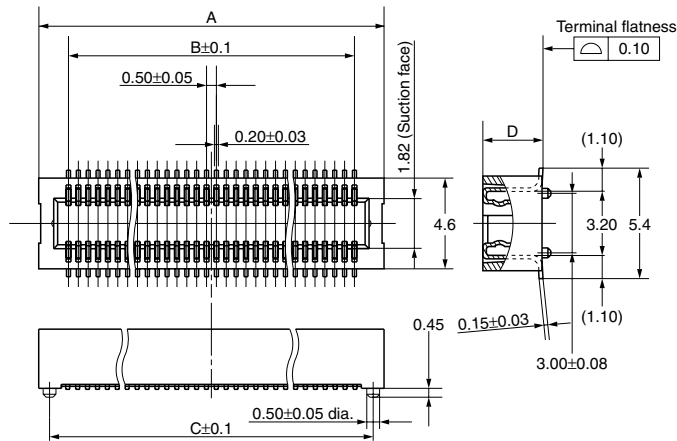
**P5KS: Mated height 4.0mm, 4.5mm for 120 contacts and 160 contacts types, 6.5mm for 130 contacts type**

• Socket

**CAD Data**



| No. of contacts | A     | B     | C     |
|-----------------|-------|-------|-------|
| 120             | 32.50 | 29.50 | 32.00 |
| 130             | 35.00 | 32.00 | 34.50 |
| 160             | 42.50 | 39.50 | 42.00 |



General tolerance:  $\pm 0.2$

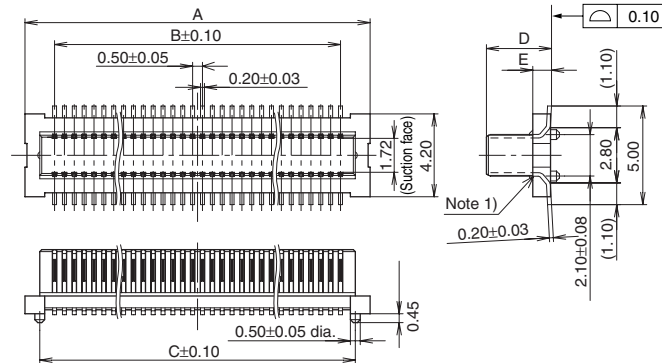
| Mated height   | D    |
|----------------|------|
| 4.0 mm         | 3.05 |
| 4.5 mm, 6.5 mm | 3.55 |

• Header

**CAD Data**



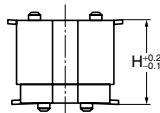
| No. of contacts | A     | B     | C     |
|-----------------|-------|-------|-------|
| 120             | 32.50 | 29.50 | 31.00 |
| 130             | 35.00 | 32.00 | 33.50 |
| 160             | 42.50 | 39.50 | 41.00 |



General tolerance:  $\pm 0.2$

| Mated height   | D    | E    |
|----------------|------|------|
| 4.0 mm, 4.5 mm | 3.30 | 0.95 |
| 6.5 mm         | 5.30 | 2.95 |

• Socket and header are mated



| Mated height | H   |
|--------------|-----|
| 4.0 mm       | 4.0 |
| 4.5 mm       | 4.5 |
| 6.5 mm       | 6.5 |

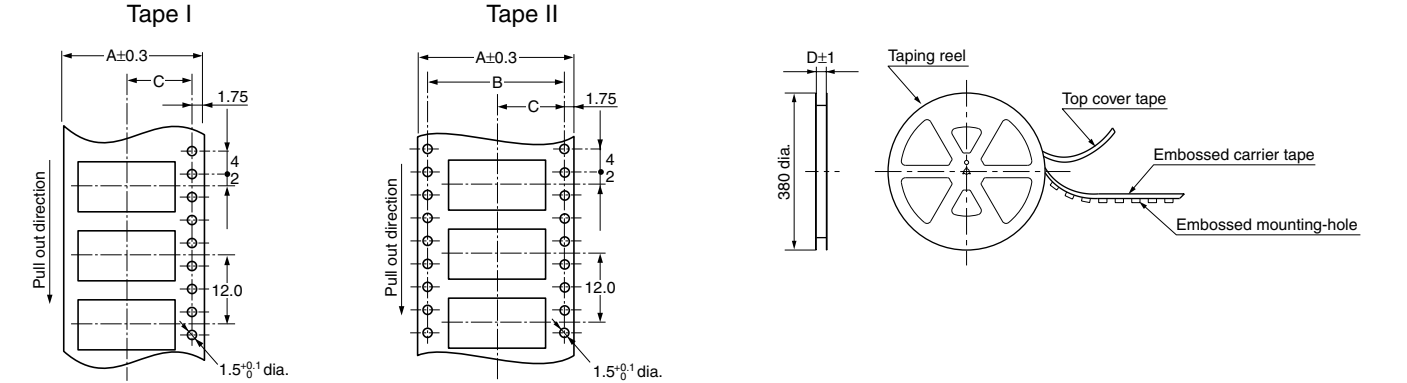
Notes) 1. Inquiry separately for diagrams of the embossed tape and cautions for use.  
2. Be sure to ask for proper specifications and drawings before actual use.



AXK(5(S)/6(S))

EMBOSSSED TAPE DIMENSIONS (unit: mm, Common for respective contact type, socket and header)

- Tape dimensions (Conforming to JIS C 0806-1990.  
However, some tapes have mounting hole pitches that do not comply with the standard.)
- Plastic reel dimensions (Conforming to EIAJ ET-7200B)



Dimension table (mm)

Suffix: G (1 reel, 1,500 pieces or 1,000 pieces embossed tape and plastic reel package)

| Type | Mated height                                                                       | No. of contacts | Type of taping | A    | B    | C    | D    | Quantity per reel |
|------|------------------------------------------------------------------------------------|-----------------|----------------|------|------|------|------|-------------------|
| P5K  | Socket and header are common<br>3.0mm, 3.5mm                                       | 20 to 50        | Tape I         | 24.0 | —    | 11.5 | 25.4 | 1,500 pcs.        |
|      |                                                                                    | 60 to 70        | Tape II        | 32.0 | 28.4 | 14.2 | 33.4 |                   |
|      |                                                                                    | 80 to 100       | Tape II        | 44.0 | 40.4 | 20.2 | 45.4 |                   |
|      |                                                                                    | 120             | Tape II        | 56.0 | 52.4 | 26.2 | 57.4 |                   |
| P5KS | Socket: 4.0mm, 4.5mm, 5.0mm,<br>5.5mm, 6.0mm, 6.5mm<br>Header: 4.0mm, 4.5mm, 7.0mm | 20 to 50        | Tape I         | 24.0 | —    | 11.5 | 25.4 | 1,500 pcs.        |
|      |                                                                                    | 60 to 70        | Tape II        | 32.0 | 28.4 | 14.2 | 33.4 |                   |
|      |                                                                                    | 80 to 100       | Tape II        | 44.0 | 40.4 | 20.2 | 45.4 |                   |
|      |                                                                                    | 120 to 160      | Tape II        | 56.0 | 52.4 | 26.2 | 57.4 |                   |
|      | Socket: 7.0mm, 8.0mm, 9.0mm<br>Header: 5.0mm, 5.5mm, 6.0mm,<br>6.5mm, 8.0mm, 9.0mm | 20 to 50        | Tape I         | 24.0 | —    | 11.5 | 25.4 | 1,000 pcs.        |
|      |                                                                                    | 60 to 70        | Tape II        | 32.0 | 28.4 | 14.2 | 33.4 |                   |
|      |                                                                                    | 80 to 100       | Tape II        | 44.0 | 40.4 | 20.2 | 45.4 |                   |
|      |                                                                                    | 130             | Tape II        | 56.0 | 52.4 | 26.2 | 57.4 |                   |

Connector orientation with respect to direction of progress of embossed tape

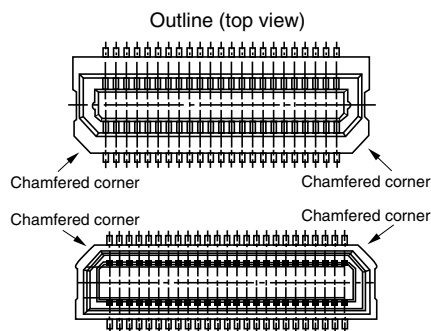
| Type                       | P5K                                   | P5KS (Less than 100 contacts)         | P5KS 120, 130, 160 contacts                                                                                                               |
|----------------------------|---------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Direction of tape progress | <div><p>Socket</p><p>Header</p></div> | <div><p>Socket</p><p>Header</p></div> | <div><p>Socket</p><p>Header</p></div> <p>Note: There is no indication on this product regarding top-bottom or left-right orientation.</p> |



## NOTES

### 1. Prevention of reverse mating

Other than P5KS series 120, 130, 160 contacts type, the socket and header are protected from reverse mating by a molded resin key. Excessive mating force may damage the key, so be sure to match chamfered corners when mating.

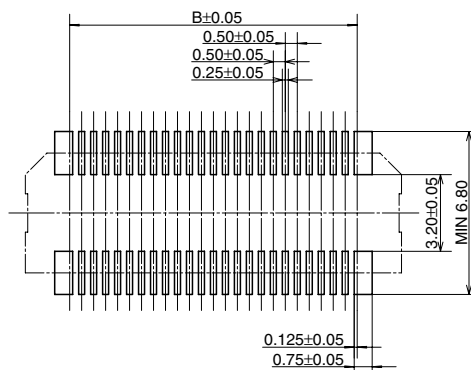


### 2. PC Boards and Recommended Metal Mask Patterns

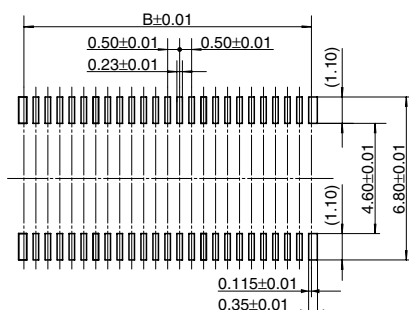
Connectors are mounted with high density, with a pitch interval of 0.4 to 0.5 mm. It is therefore necessary to make sure that the right levels of solder are used, in order to reduce solder bridge and other issues. The figures to the right are recommended metal mask patterns. Please use them as a reference.

#### • P5K Socket

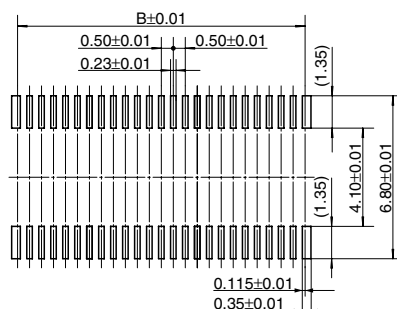
Recommended PC board pattern  
(TOP VIEW)



Recommended metal mask pattern  
Metal mask thickness: Here, 150  $\mu$ m  
(Opening area ratio: 56%)

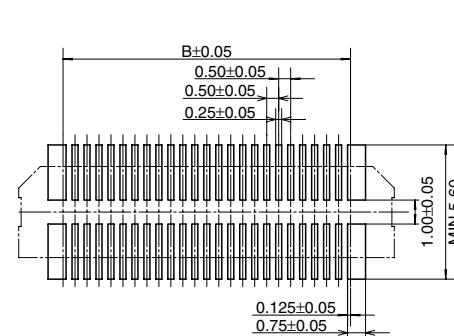


Recommended metal mask pattern  
Metal mask thickness: Here, 120  $\mu$ m  
(Opening area ratio: 69%)

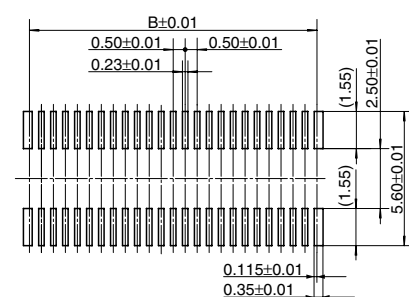


#### • P5K Header

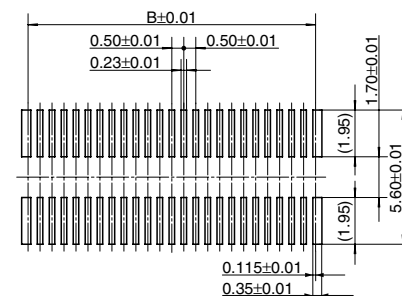
Recommended PC board pattern  
(TOP VIEW)



Recommended metal mask pattern  
Metal mask thickness: Here, 150  $\mu$ m  
(Opening area ratio: 62%)



Recommended metal mask pattern  
Metal mask thickness: Here, 120  $\mu$ m  
(Opening area ratio: 78%)



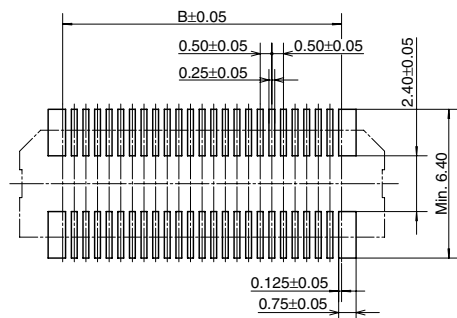
\* See the dimension table on page 95 for more information on the B dimension of the socket and header.

# AXK(5(S)/6(S))

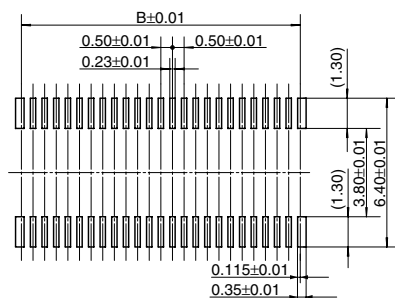
**P5KS: Mated height 4.0mm, 4.5mm, 5.0mm, 5.5mm, 6.0mm, 6.5mm, 7.0mm, 8.0mm, 9.0mm type**

## • Socket

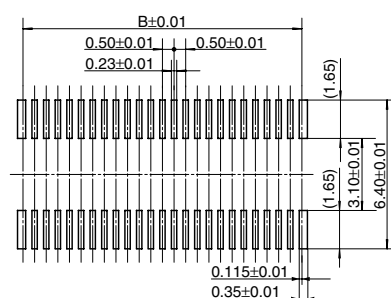
Recommended PC board pattern  
(TOP VIEW)



Recommended metal mask pattern  
Metal mask thickness: Here, 150 μm  
(Opening area ratio: 60%)



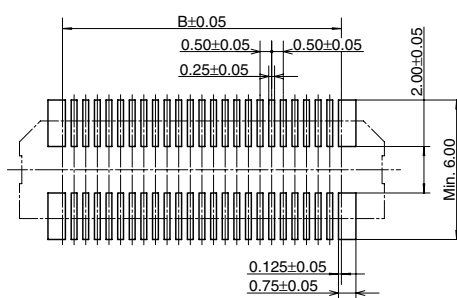
Recommended metal mask pattern  
Metal mask thickness: Here, 120 μm  
(Opening area ratio: 76%)



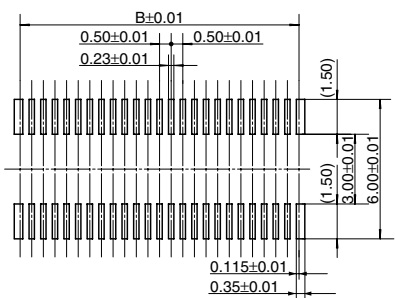
\* See the dimension table on page 96 for more information on the B dimension.

## • Header

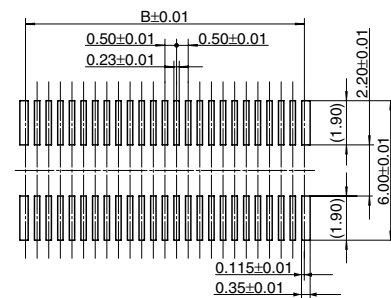
Recommended PC board pattern  
(TOP VIEW)



Recommended metal mask pattern  
Metal mask thickness: Here, 150 μm  
(Opening area ratio: 69%)



Recommended metal mask pattern  
Metal mask thickness: Here, 120 μm  
(Opening area ratio: 87%)

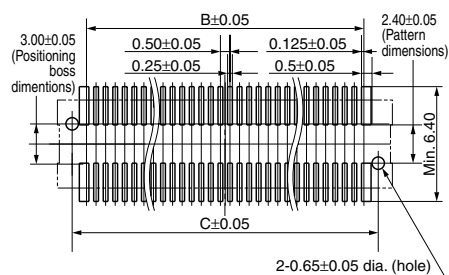


\* See the dimension table on page 96 for more information on the B dimension.

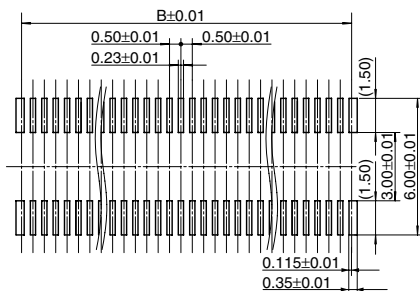
**P5KS: Mated height 4.0mm, 4.5mm for 120 contacts and 160 contacts types, 6.5mm for 130 contacts type**

## • Socket

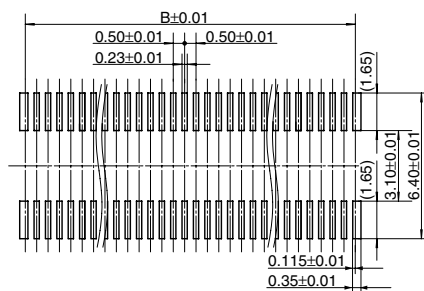
Recommended PC board pattern  
(TOP VIEW)



Recommended metal mask pattern  
Metal mask thickness: Here, 150 μm  
(Opening area ratio: 60%)



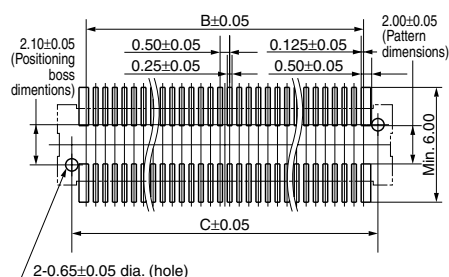
Recommended metal mask pattern  
Metal mask thickness: Here, 120 μm  
(Opening area ratio: 76%)



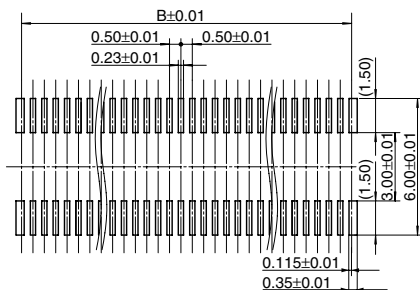
\* See the dimension table on page 97 for more information on the B and C dimensions.

## • Header

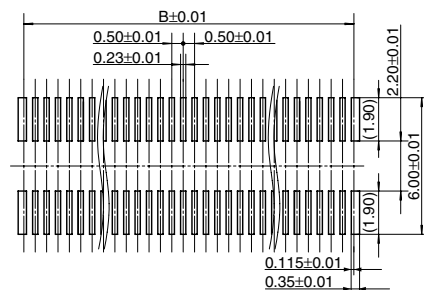
Recommended PC board pattern  
(TOP VIEW)



Recommended metal mask pattern  
Metal mask thickness: Here, 150 μm  
(Opening area ratio: 69%)



Recommended metal mask pattern  
Metal mask thickness: Here, 120 μm  
(Opening area ratio: 87%)



\* See the dimension table on page 97 for more information on the B and C dimensions.

**For other details, please verify with the product specification sheets.**

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