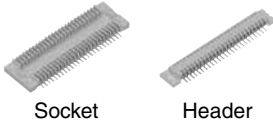


NARROW-PITCH CONNECTORS FOR BOARD-TO-BOARD CONNECTION

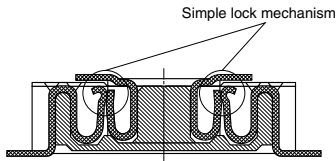
NARROW PITCH (0.5mm) CONNECTORS P5 SERIES — P5KF —



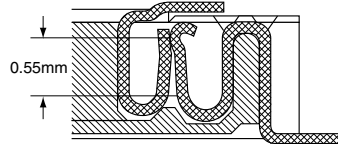
Compliance with RoHS Directive

FEATURES

- The connector is a two-piece structure and 0.5mm pitch.**
The product lineup consists of the mated height of 1.5mm, 2.0mm and 2.5mm.
- Strong resistance to adverse environments! Utilizes TOUGH CONTACT construction for high contact reliability.**
(See Page 6 for details of the structure)
- Simple locking structure**
Superior mating operation with click feel to indicate that mating is complete.

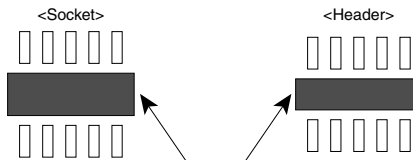


- Mating length 0.55mm**
While achieving a low profile of 1.5mm between PCBs, the effective mating length has been extended to ensure that there is some latitude in the mating.



- The lower connector bottom surface construction prevents contact and shorts between the PCB and metal terminals.**

This enables freedom in pattern wiring, helping to make PCB's smaller.



Connector bottom: Create any thru-hole and pattern wiring.

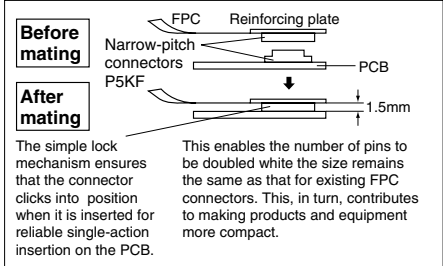
- Automatic mounting inspection is facilitated by the gull-wing terminal shape which makes mounting verification easy.**

- Connectors for inspection available**
Connectors for inspection are available that are ideal for modular unit inspection and inspection in device assembly processes.

APPLICATIONS

Compact portable devices "Cellular phones, DVC, Digital cameras, etc"

Ideal for Board-to-FPC connections



ORDERING INFORMATION

5F: Narrow Pitch Connector P5KF (0.5 mm pitch) Socket
6F: Narrow Pitch Connector P5KF (0.5 mm pitch) Header

Number of contacts (2 digits)

Mated height

<Socket>

3: For mated height 1.5 mm

5: For mated height 2.0 mm and 2.5 mm

<Header>

3: For mated height 1.5 mm and 2.0 mm

5: For mated height 2.5 mm

Functions

3: With positioning bosses

4: Without positioning bosses

Surface treatment (Contact portion / Terminal portion)

<Socket>

7: Ni plating on base, Au plating on surface/Ni plating on base, Au plating on surface (for Ni barrier available)

Contact portion

<Socket> Y: V notch type product (chamfered on both ends)

<Header> Y: V notch type product

Packing

G: 2,000 pieces embossed tape and plastic reel × 2

AXK 7 Y G

PRODUCT TYPES

| Mated height | No. of contacts | Part No. | | Packing | |
|--------------|-----------------|----------------------|----------------------|-----------------------|--------------|
| | | Socket | Header | Inner carton (1-reel) | Outer carton |
| | | TOUGH CONTACT | TOUGH CONTACT | | |
| 1.5 mm | 10 | AXK5F10347YG | AXK6F10347YG | 2,000 pieces | 4,000 pieces |
| | 12 | AXK5F12347YG | AXK6F12347YG | | |
| | 14 | AXK5F14347YG | AXK6F14347YG | | |
| | 16 | AXK5F16347YG | AXK6F16347YG | | |
| | 18 | AXK5F18347YG | AXK6F18347YG | | |
| | 20 | AXK5F20347YG | AXK6F20347YG | | |
| | 22 | AXK5F22347YG | AXK6F22347YG | | |
| | 24 | AXK5F24347YG | AXK6F24347YG | | |
| | 26 | AXK5F26347YG | AXK6F26347YG | | |
| | 30 | AXK5F30347YG | AXK6F30347YG | | |
| | 32 | AXK5F32347YG | AXK6F32347YG | | |
| | 34 | AXK5F34347YG | AXK6F34347YG | | |
| | 40 | AXK5F40347YG | AXK6F40347YG | | |
| | 50 | AXK5F50347YG | AXK6F50347YG | | |
| | 60 | AXK5F60347YG | AXK6F60347YG | | |
| 70 | AXK5F70347YG | AXK6F70347YG | | | |
| 80 | AXK5F80347YG | AXK6F80347YG | | | |
| 2.0 mm | 10 | AXK5F10547YG | AXK6F10347YG | | |
| | 12 | AXK5F12547YG | AXK6F12347YG | | |
| | 14 | AXK5F14547YG | AXK6F14347YG | | |
| | 16 | AXK5F16547YG | AXK6F16347YG | | |
| | 18 | AXK5F18547YG | AXK6F18347YG | | |
| | 20 | AXK5F20547YG | AXK6F20347YG | | |
| | 22 | AXK5F22547YG | AXK6F22347YG | | |
| | 24 | AXK5F24547YG | AXK6F24347YG | | |
| | 26 | AXK5F26547YG | AXK6F26347YG | | |
| | 30 | AXK5F30547YG | AXK6F30347YG | | |
| | 34 | AXK5F34547YG | AXK6F34347YG | | |
| | 40 | AXK5F40547YG | AXK6F40347YG | | |
| | 50 | AXK5F50547YG | AXK6F50347YG | | |
| | 60 | AXK5F60547YG | AXK6F60347YG | | |
| | 70 | AXK5F70547YG | AXK6F70347YG | | |
| 80 | AXK5F80547YG | AXK6F80347YG | | | |
| 100 | AXK5F00547YG | AXK6F00347YG | | | |
| 2.5 mm | 10 | AXK5F10547YG | AXK6F10547YG | | |
| | 12 | AXK5F12547YG | AXK6F12547YG | | |
| | 14 | AXK5F14547YG | AXK6F14547YG | | |
| | 16 | AXK5F16547YG | AXK6F16547YG | | |
| | 20 | AXK5F20547YG | AXK6F20547YG | | |
| | 22 | AXK5F22547YG | AXK6F22547YG | | |
| | 24 | AXK5F24547YG | AXK6F24547YG | | |
| | 30 | AXK5F30547YG | AXK6F30547YG | | |
| | 34 | AXK5F34547YG | AXK6F34547YG | | |
| | 36 | AXK5F36547YG | AXK6F36547YG | | |
| | 40 | AXK5F40547YG | AXK6F40547YG | | |
| | 44 | AXK5F44547YG | AXK6F44547YG | | |
| | 50 | AXK5F50547YG | AXK6F50547YG | | |
| | 60 | AXK5F60547YG | AXK6F60547YG | | |
| | 70 | AXK5F70547YG | AXK6F70547YG | | |
| 80 | AXK5F80547YG | AXK6F80547YG | | | |
| 100 | AXK5F00547YG | AXK6F00547YG | | | |

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. Please consult us.

2. The standard type comes without positioning bosses. Connectors with positioning bosses are available for on-demand production. For this type of connector, 9th digit of the part no. changes from 4 to 3. e.g.

Mated height 1.5mm, 10 contacts for sockets: AXK5F10337YG

3. The 11th digit "Y" in the socket/header part number indicates the connector has a V notch. (For details, please consult one of our sales offices.)

4. Previous non-**TOUGH CONTACT** types and current **TOUGH CONTACT** types are compatible for mating.

AXK(5/6)F

SPECIFICATIONS

1. Characteristics

| | Item | Specifications | Conditions |
|---|--|--|---|
| Electrical characteristics | Rated current | 0.5A/contact (Max. 10 A at total contacts) | |
| | Rated voltage | 60V AC/DC | |
| | Breakdown voltage | 150V AC for 1 minute | Detection current: 1mA |
| | Insulation resistance | Min. 1,000M Ω (initial) | Using 500V DC megger |
| | Contact resistance | Max. 90m Ω | Based on the contact resistance measurement method specified by JIS C 5402. |
| Mechanical characteristics | Composite insertion force | Max. 0.981N/contacts \times contacts (initial) | |
| | Composite removal force | Min. 0.0588N/contacts \times contacts | |
| | Contact holding force | Min. 0.981N/contact | 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 seconds, 350°C within 3 seconds | Soldering iron |
| | Thermal shock resistance (header and socket mated) | 5 cycles, insulation resistance min. 100M Ω , contact resistance max. 90m Ω | Sequence 1. -55 $\frac{0}{-3}$ °C, 30 minutes 2. ~, Max. 5 minutes 3. 85 $\frac{+3}{0}$ °C, 30 minutes 4. ~, Max. 5 minutes |
| | Humidity resistance (header and socket mated) | 120 hours, insulation resistance min. 100M Ω , contact resistance max. 90m Ω | Bath temperature 40 \pm 2°C, humidity 90 to 95% R.H. |
| | Saltwater spray resistance (header and socket mated) | 24 hours, insulation resistance min. 100M Ω , contact resistance max. 90m Ω | Bath temperature 35 \pm 2°C, saltwater concentration 5 \pm 1% |
| H ₂ S resistance (header and socket mated) | 48 hours, contact resistance max. 90m Ω | Bath temperature 40 \pm 2°C, gas concentration 3 \pm 1 ppm, humidity 75 to 80% R.H. | |
| Lifetime characteristics | Insertion and removal life | 50 times | Repeated insertion and removal speed of max. 200 times/hours |
| Unit weight | | Mated height 1.5mm, 20 contacts; Socket: 0.06g Header: 0.04g | |

2. Material and surface treatment

| Part name | Material | Surface treatment |
|----------------|---------------------|---|
| Molded portion | LCP resin (UL94V-0) | — |
| Contact/Post | Copper alloy | Contact portion: Ni plating on base, Au plating on surface Terminal portion: Ni plating on base, Au plating on surface (Except for thick of terminal) The section close to the soldering portion has a nickel barrier. (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>

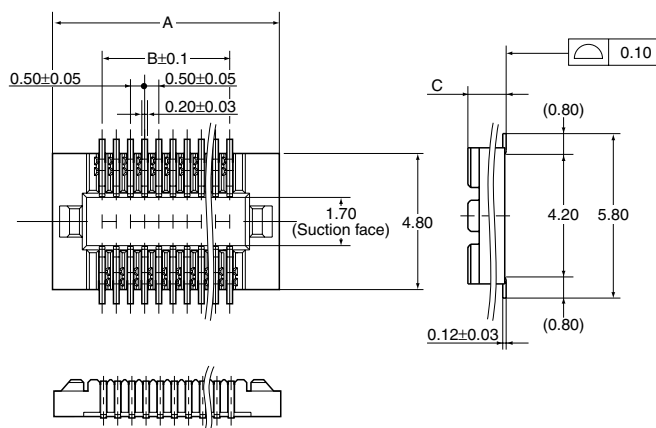
- Socket (Mated height: 1.5mm, 2.0mm, 2.5mm)

CAD Data



Dimension table (mm)

| No. of contacts | A | B |
|-----------------|-------|-------|
| 10 | 5.50 | 2.00 |
| 12 | 6.00 | 2.50 |
| 14 | 6.50 | 3.00 |
| 16 | 7.00 | 3.50 |
| 18 | 7.50 | 4.00 |
| 20 | 8.00 | 4.50 |
| 22 | 8.50 | 5.00 |
| 24 | 9.00 | 5.50 |
| 26 | 9.50 | 6.00 |
| 30 | 10.50 | 7.00 |
| 32 | 11.00 | 7.50 |
| 34 | 11.50 | 8.00 |
| 36 | 12.00 | 8.50 |
| 40 | 13.00 | 9.50 |
| 44 | 14.00 | 10.50 |
| 50 | 15.50 | 12.00 |
| 60 | 18.00 | 14.50 |
| 70 | 20.50 | 17.00 |
| 80 | 23.00 | 19.50 |
| 100 | 28.00 | 24.50 |



General tolerance: ±0.2

| Mated height | C |
|----------------|------|
| 1.5 mm | 1.35 |
| 2.0 mm, 2.5 mm | 1.85 |

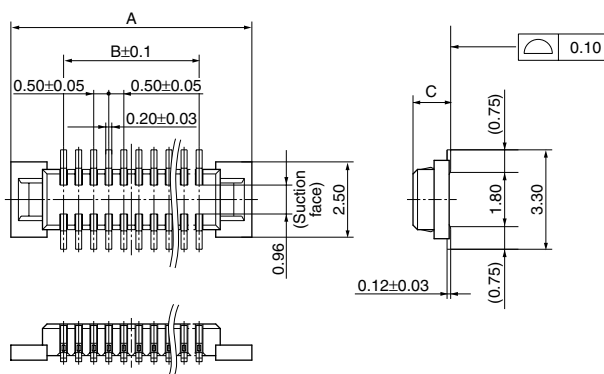
- Header (Mated height: 1.5mm, 2.0mm, 2.5mm)

CAD Data



Dimension table (mm)

| No. of contacts | A | B |
|-----------------|-------|-------|
| 10 | 5.50 | 2.00 |
| 12 | 6.00 | 2.50 |
| 14 | 6.50 | 3.00 |
| 16 | 7.00 | 3.50 |
| 18 | 7.50 | 4.00 |
| 20 | 8.00 | 4.50 |
| 22 | 8.50 | 5.00 |
| 24 | 9.00 | 5.50 |
| 26 | 9.50 | 6.00 |
| 30 | 10.50 | 7.00 |
| 32 | 11.00 | 7.50 |
| 34 | 11.50 | 8.00 |
| 36 | 12.00 | 8.50 |
| 40 | 13.00 | 9.50 |
| 44 | 14.00 | 10.50 |
| 50 | 15.50 | 12.00 |
| 60 | 18.00 | 14.50 |
| 70 | 20.50 | 17.00 |
| 80 | 23.00 | 19.50 |
| 100 | 28.00 | 24.50 |



General tolerance: ±0.2

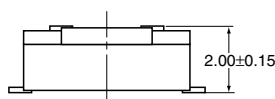
| Mated height | C |
|----------------|------|
| 1.5 mm, 2.0 mm | 1.25 |
| 2.5 mm | 1.75 |

- Socket and header are mated

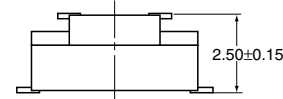
Mated height: 1.5 mm



Mated height: 2.0 mm



Mated height: 2.5 mm



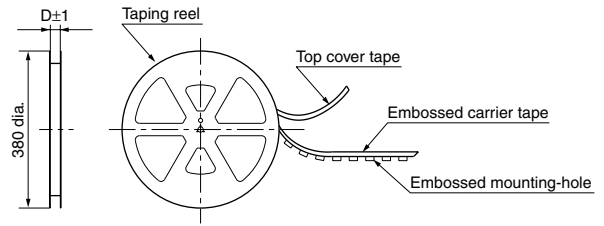
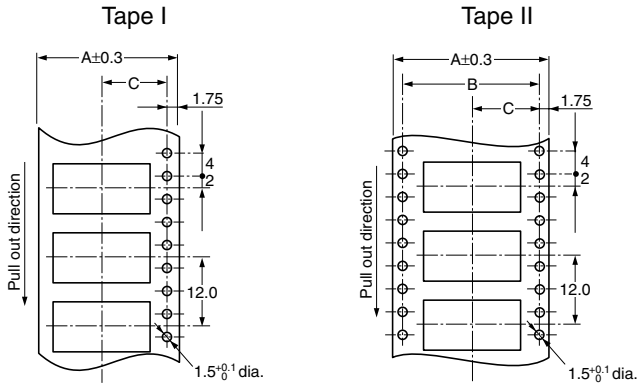
AXK(5/6)F

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

• Tape dimensions (Conforming to JIS C 0806-1990.

• Plastic reel dimensions (Conforming to EIAJ ET-7200B)

However, some tapes have mounting hole pitches that do not comply with the standard.)

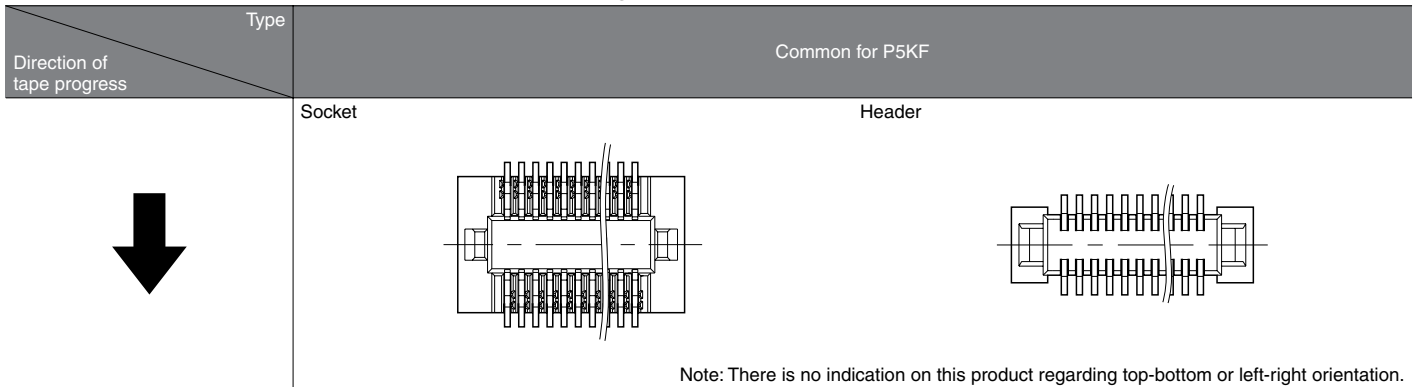


Dimension table (mm)

Suffix: G (1 reel, 2,000 pieces embossed tape: Plastic reel package)

| Mated height | No. of contacts | Type of taping | A | B | C | D | Quantity per reel |
|--|-----------------|----------------|------|------|------|------|-------------------|
| Socket and header are common: 1.5mm, 2.0mm, 2.5mm | 10 to 58 | Tape I | 24.0 | — | 11.5 | 25.4 | 2,000 pcs. |
| | 60 to 70 | Tape II | 32.0 | 28.4 | 14.2 | 33.4 | 2,000 pcs. |
| | 72 to 100 | Tape II | 44.0 | 40.4 | 20.2 | 45.4 | 2,000 pcs. |

Connector orientation with respect to direction of progress of embossed tape

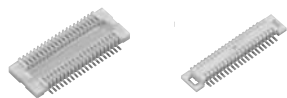


Panasonic

ideas for life

**CONNECTOR FOR INSPECTION
USAGE APPLICATIONS WITH
3,000 INSERTION AND
REMOVAL TIMES**

**NARROW PITCH CONNECTOR P5KF
(0.5 mm PITCHES) FOR INSPECTION USAGE**



Socket

Header

Compliance with RoHS Directive

FEATURES

1. 3,000 insertion and removals (when as recommended)

From the 50 insertion and removals of standard type, up to 3,000 insertion and removals (with recommended insertion and removal) are possible for use in inspection.

Ideal for inspection of module units and inspection during the device assembly process

2. Same external dimensions and foot pattern as standard type.

Since shape is the same as standard type, inspection is possible without interfering with devices in the vicinity of standard connectors.

3. Improved mating

Insertion and removal have become easier due to a reduction in the mating retention force required by the simple locking structure and also in the amount of force needed for insertion and removal. (We cannot warrant anything regarding mating retention.)

TABLE OF PRODUCT TYPES

☆: Available for sale

| Product name | P5KF for inspection |
|--------------|---------------------|
| 10 | ☆ |
| 12 | ☆ |
| 14 | ☆ |
| 16 | ☆ |
| 18 | ☆ |
| 20 | ☆ |
| 22 | ☆ |
| 24 | ☆ |
| 26 | ☆ |
| 30 | ☆ |
| 32 | ☆ |
| 34 | ☆ |
| 40 | ☆ |
| 50 | ☆ |
| 60 | ☆ |
| 70 | ☆ |
| 80 | ☆ |
| 100 | ☆ |

Notes:

1. You can use with each mated height in common.
2. Please inquire about numbers of contacts other than those given above.
3. Please inquire with us regarding delivery times.
4. Please keep the minimum unit for ordering no less than 50 pieces per lot.
5. Please inquire for further information.

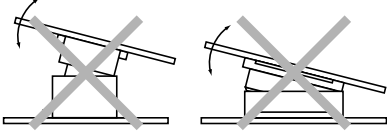
PRODUCT TYPES

| Specifications | | Part No. | Specifications | | Part No. |
|----------------|----------------------------|-------------|----------------|----------------------------|-------------|
| Socket | With positioning bosses | AXK5FE**36G | Header | With positioning bosses | AXK6FE**36G |
| | Without positioning bosses | AXK5FE**46G | | Without positioning bosses | AXK6FE**46G |

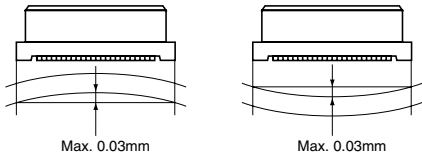
Note: When placing an order, substitute the "*" (asterisk) in the above part number with the number of contacts for the required connector.

NOTES

1. As shown below, excess force during insertion may result in damage to the connector or removal of the solder. Please be careful. Also, to prevent connector damage please confirm the correct position before mating connectors.



2. Keep the PC board warp no more than 0.03 mm in relation to the overall length of the connector.

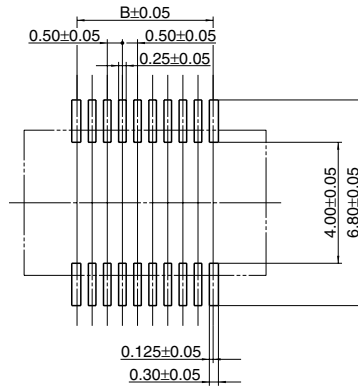


3. PC Boards and Recommended Metal Mask Patterns

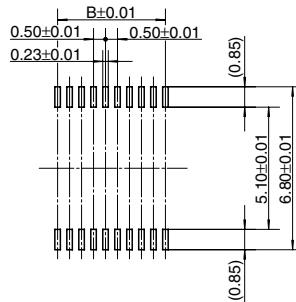
Connectors are mounted with high density, with a pitch interval of 0.4 to 0.5 mm. It is therefore necessary to make sure that the right levels of solder are used, in order to reduce solder bridge and other issues. The figures to the right are recommended metal mask patterns. Please use them as a reference.

• Socket

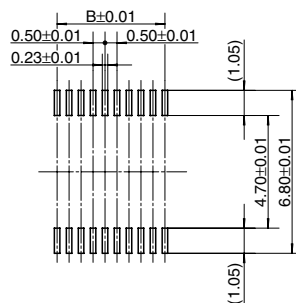
Recommended PC board pattern (TOP VIEW)



Recommended metal mask pattern
Metal mask thickness: Here, 150 μm
(Opening area ratio: 56%)

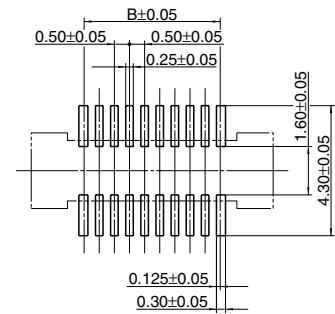


Recommended metal mask pattern
Metal mask thickness: Here, 120 μm
(Opening area ratio: 69%)

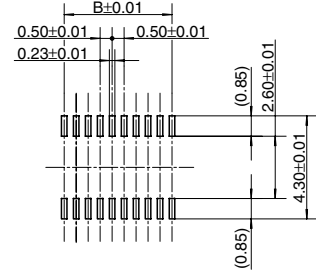


• Header

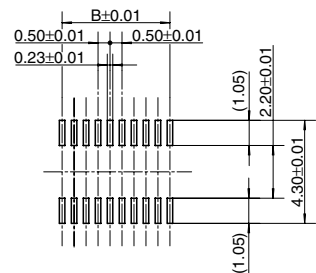
Recommended PC board pattern (TOP VIEW)



Recommended metal mask pattern
Metal mask thickness: Here, 150 μm
(Opening area ratio: 58%)



Recommended metal mask pattern
Metal mask thickness: Here, 120 μm
(Opening area ratio: 72%)



* See the dimension table on page 87 for more information on the B dimension of the socket and header.

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

单击下面可查看定价，库存，交付和生命周期等信息

[>>Panasonic\(松下\)](#)