



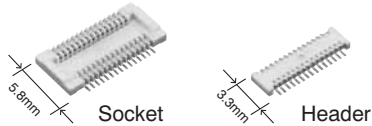
**THE DATASHEET OF
AXK5L60347G**



❗ Discontinued as of September 30, 2013

Panasonic
ideas for life

| | |
|---|--------------------|
| For board-to-board | P5KL Series |
| Narrow pitch connectors (0.5 mm pitch) | |



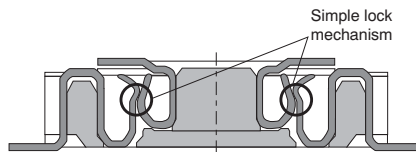
❗ Products are discontinued.

FEATURES

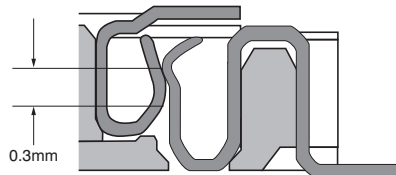
1. Low profile mated height of 1.2 mm and 0.5 mm pitch contributes to device miniaturization.
2. Strong resistance to adverse environments! Utilizes **TOUGH CONTACT** construction for high contact reliability.
3. Simple lock structure provides tactile feedback to ensure excellent mating/unmating operation feel.

APPLICATIONS

Digital devices, such as digital still cameras and digital video cameras.



4. Effective mating length 0.3 mm



ORDERING INFORMATION

| | | | | | | | | |
|---|----------------------------|---|-------------------------------|---|---|---|--|---|
| AXK | □ | □ | □ | □ | 3 | □ | 7 | G |
| 5L: Narrow Pitch Connector P5KL (0.5 mm pitch) Socket | Number of pins (2 digits) | | Mated height | | Functions | | Surface treatment (Contact portion / Terminal portion) | |
| 6L: Narrow Pitch Connector P5KL (0.5 mm pitch) Header | 3: For mated height 1.2 mm | | 3: With positioning bosses | | 7: Ni plating on base, Au plating on surface (for Ni barrier available) | | Packing | |
| | 3: For mated height 1.2 mm | | 4: Without positioning bosses | | G: 3,000 pieces embossed tape and plastic reel x 2 (for Ni barrier available) | | | |

PRODUCT TYPES

| Mated height | No. of pins | Part No. | | Packing quantity | |
|--------------|-------------|----------------------|----------------------|--------------------------|--------------|
| | | Socket | Header | Inner carton (1-reel) | Outer carton |
| | | TOUGH CONTACT | TOUGH CONTACT | | |
| ⓘ 1.2 mm | 10 | AXK5L10347G | AXK6L10347G | 3,000 pieces | 6,000 pieces |
| | 12 | AXK5L12347G | AXK6L12347G | | |
| | 20 | AXK5L20347G | AXK6L20347G | | |
| | 24 | AXK5L24347G | AXK6L24347G | | |
| | 30 | AXK5L30347G | AXK6L30347G | | |
| | 34 | AXK5L34347G | AXK6L34347G | | |
| | 40 | AXK5L40347G | AXK6L40347G | | |
| | 46 | AXK5L46347G | AXK6L46347G | | |
| | 50 | AXK5L50347G | AXK6L50347G | | |
| 60 | AXK5L60347G | AXK6L60347G | | | |

Notes: 1. Regarding ordering units: During production, Please make orders in 1-reel units. Samples for mounting confirmation: Please consult us. 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. 10 pin contacts for sockets: AXK5L10337G

SPECIFICATIONS

1. Characteristics

| Item | | Specifications | Conditions | | |
|---|---|--|---|-------------------|----------------|
| Electrical characteristics | Rated current | 0.5A/pin contact (Max. 10 A at total pin contacts) | | | |
| | Rated voltage | 60V AC/DC | | | |
| | Breakdown voltage | 150V AC for 1 minute | Detection current: 1mA | | |
| | Insulation resistance | Min. 1,000MΩ (initial) | Using 500V DC megger | | |
| | Contact resistance | Max. 90mΩ | Based on the contact resistance measurement method specified by JIS C 5402. | | |
| Mechanical characteristics | Composite insertion force | Max. 0.981N {100gf}/pin contacts × pin contacts (initial) | | | |
| | Composite removal force | Min. 0.0588N {6gf}/pin contacts × pin contacts | | | |
| | Holding force of terminal securing section | Min. 0.981N {100gf}/pin 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 | | |
| | Storage temperature | -55°C to +85°C (product only) -40°C to +50°C (emboss packing) | No freezing at low temperatures. No dew condensation. | | |
| | Thermal shock resistance (header and socket mated) | 5 cycles, insulation resistance min. 100MΩ, contact resistance max. 90mΩ | Conformed to MIL-STD-202F, method 107G | | |
| | | | Order | Temperature (°C) | Time (minutes) |
| | | | 1 | -55 ^{±3} | 30 |
| 2 | | | ∩ | Max. 5 | |
| 3 | 85 ^{±3} | 30 | | | |
| 4 | ∩ | Max. 5 | | | |
| | | -55 ^{±3} | | | |
| Humidity resistance (header and socket mated) | 120 hours, insulation resistance min. 100MΩ, contact resistance max. 90mΩ | 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. 90mΩ | Bath temperature 35±2°C, saltwater concentration 5±1% | | | |
| H ₂ S resistance (header and socket mated) | 48 hours, contact resistance max. 90mΩ | Bath temperature 40±2°C, gas concentration 3±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 | 20 pin contacts; Socket: 0.05g; Header: 0.02g | | | | |

2. Material and surface treatment

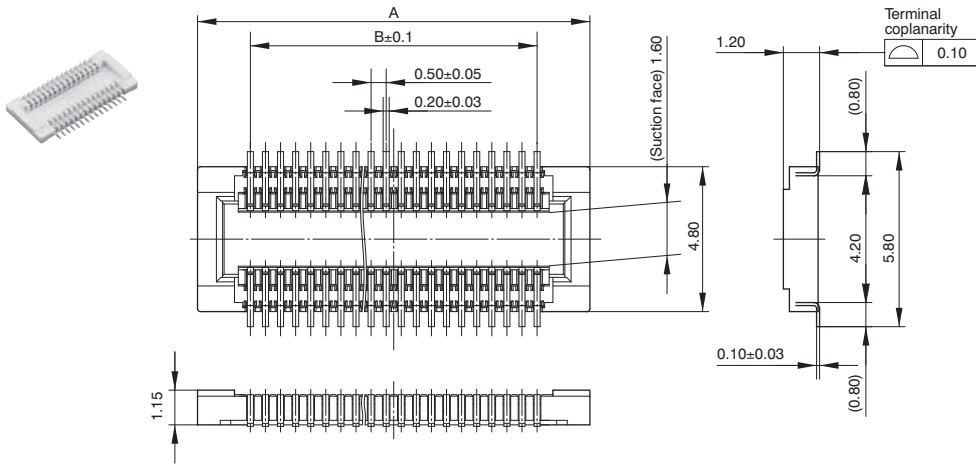
| Part name | Material | Surface treatment |
|----------------|--------------------------------|---|
| Molded portion | Heat-resistant resin (UL94V-0) | — |
| Contact/Post | Copper alloy | Contact portion: Ni plating on base, Au plating on surface Terminal portion: Ni plating on base, Au plating on surface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

DIMENSIONS

Interested in CAD data? You can obtain CAD data for all products with a **CAD Data** mark from your local Panasonic Electric Works representative.

(Unit: mm)

- Socket (Mated height: 1.2mm)

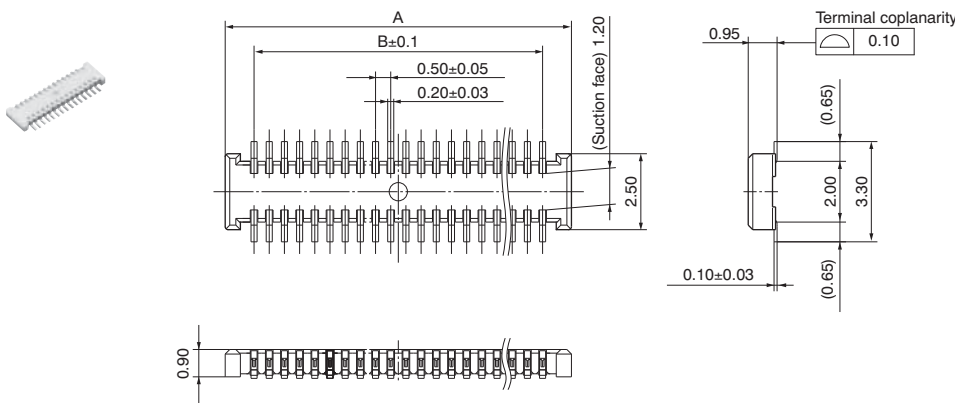


Dimension table (mm)

| No. of contacts | A | B |
|-----------------|-------|-------|
| 10 | 5.50 | 2.00 |
| 12 | 6.00 | 2.50 |
| 20 | 8.00 | 4.50 |
| 24 | 9.00 | 5.50 |
| 30 | 10.50 | 7.00 |
| 34 | 11.50 | 8.00 |
| 40 | 13.00 | 9.50 |
| 46 | 14.50 | 11.00 |
| 50 | 15.50 | 12.00 |
| 60 | 18.00 | 14.50 |

General tolerance: ±0.2

- Header (Mated height: 1.2mm)

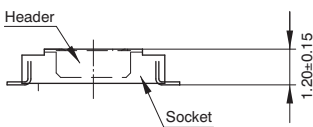


Dimension table (mm)

| No. of contacts | A | B |
|-----------------|-------|-------|
| 10 | 3.90 | 2.00 |
| 12 | 4.40 | 2.50 |
| 20 | 6.40 | 4.50 |
| 24 | 7.40 | 5.50 |
| 30 | 8.90 | 7.00 |
| 34 | 9.90 | 8.00 |
| 40 | 11.40 | 9.50 |
| 46 | 12.90 | 11.00 |
| 50 | 13.90 | 12.00 |
| 60 | 16.40 | 14.50 |

General tolerance: ±0.2

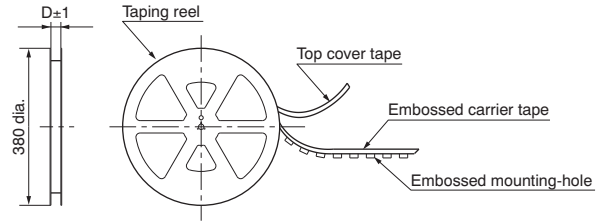
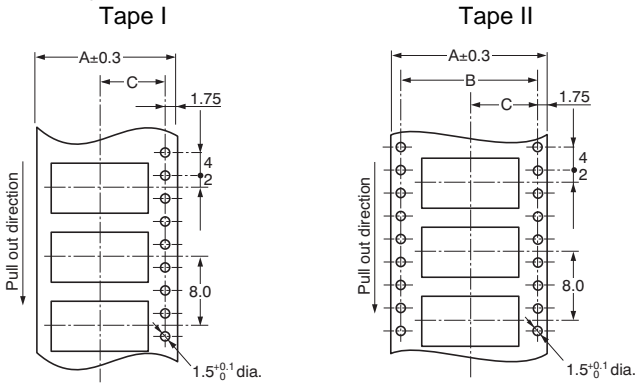
- Socket and header are mated



EMBOSSED 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)

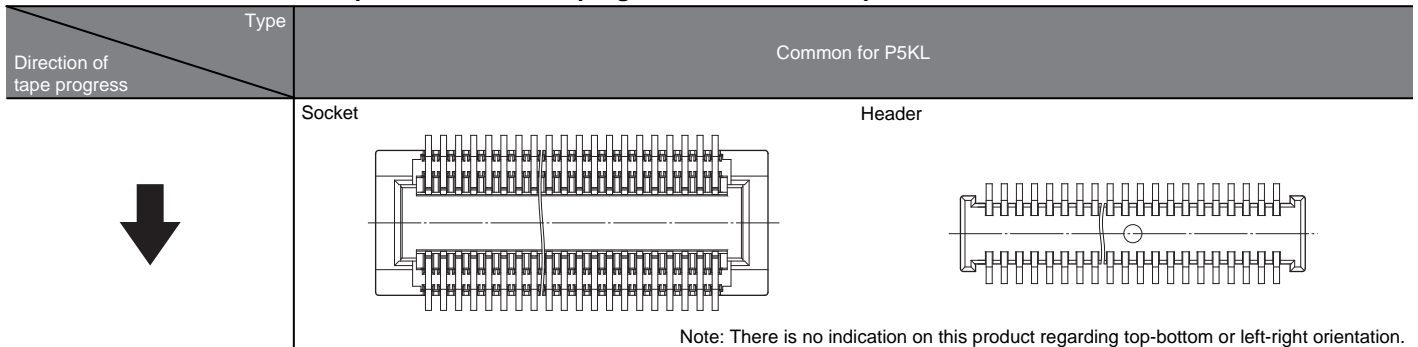


Dimension table (mm)

Suffix: G (1 reel, 3,000 pieces embossed tape: Plastic reel package)

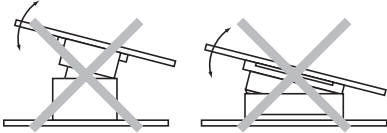
| Mated height | No. of pins | Type of taping | A | B | C | D | Quantity per reel |
|--|-------------|----------------|------|------|------|------|-------------------|
| Socket and header are common: 1.2mm | 10 to 18 | Tape I | 16.0 | — | 7.5 | 17.4 | 3,000 pcs. |
| | 20 to 50 | Tape I | 24.0 | — | 11.5 | 25.4 | 3,000 pcs. |
| | 60 | Tape II | 32.0 | 28.4 | 14.2 | 33.4 | 3,000 pcs. |

Connector orientation with respect to direction of progress of embossed tape

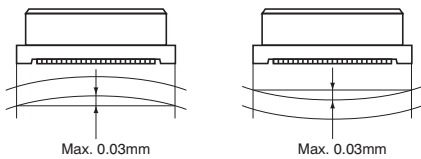


NOTES

1. As shown below, excess force during insertion may result in damage to the connector or removal of the solder. 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. Recommended PC board and metal mask patterns

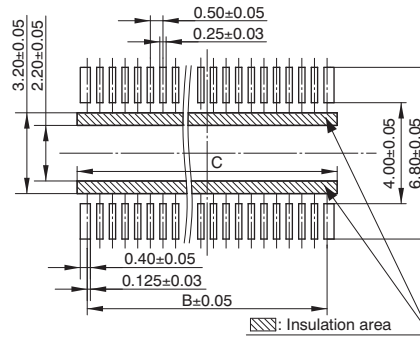
Connectors are mounted with high pitch density, intervals of 0.35 mm, 0.4 mm or 0.5 mm.

In order to reduce solder bridges and other issues make sure the proper levels of solder is used.

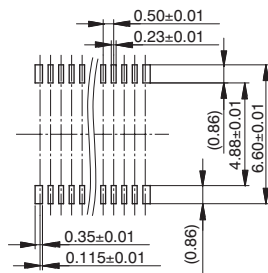
The figures to the right are recommended metal mask patterns. Please use them as a reference.

• Socket

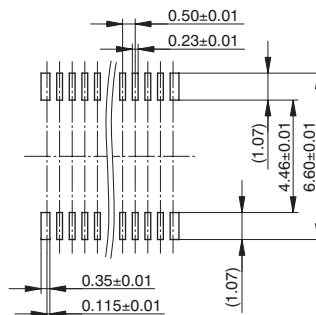
Recommended PC board pattern (TOP VIEW)



Recommended metal mask pattern
Metal mask thickness: 150 μm
(Terminal portion opening area ratio: 57%)



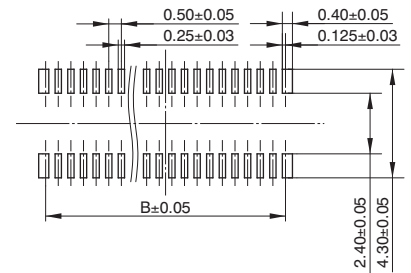
Recommended metal mask pattern
Metal mask thickness: 120 μm
(Terminal portion opening area ratio: 70%)



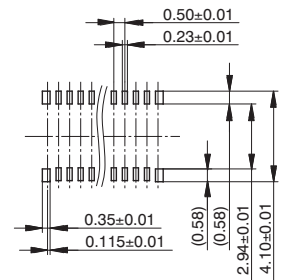
Notes: 1. See the dimension table on page 3 for more information on the B dimension of the socket and header.
2. The socket C dimension is the B dimension in the dimensions table with 0.8 added.

• Header

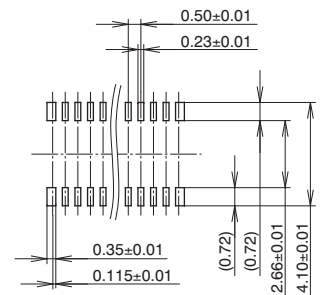
Recommended PC board pattern (TOP VIEW)



Recommended metal mask pattern
Metal mask thickness: 150 μm
(Terminal portion opening area ratio: 56%)





Recommended metal mask pattern
Metal mask thickness: 120 μm
(Terminal portion opening area ratio: 70%)



For Cautions for Use, see Connector Technical Information. For other details, please verify with the product specification sheets.

Looking for pricing, stock, or lifecycle information?

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