

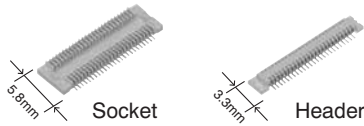
Products marked  are discontinued as of March 31, 2013


Panasonic
ideas for life

For board-to-board | For board-to-FPC

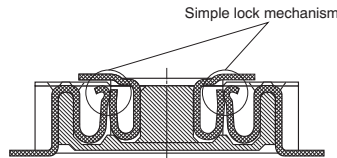
**Narrow pitch connectors
(0.5mm pitch)**

P5KF Series

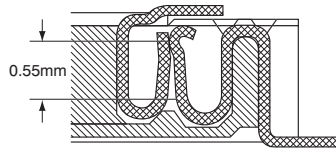


 Products to be discontinued.

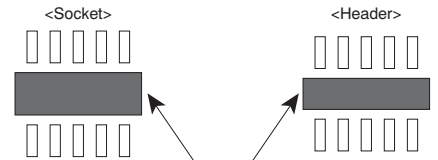
2. Strong resistance to adverse environments! Utilizes **TOUGH CONTACT** construction for high contact reliability.
3. Simple lock structure provides tactile feedback to ensure excellent mating/unmating operation feel.



4. Effective mating length 0.55mm
In addition to achieving a low profile of 1.5mm between PCBs, the effective mating length has been extended to ensure that there is latitude for insertion.



5. The lower connector bottom surface construction prevents contact and shorts between the PCB and metal terminals.
Benefits include freedom in pattern wiring, helping to make PCB's smaller.



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

6. Gull-wing-shaped terminals to facilitate visual inspections.
7. Connectors for inspection available

FEATURES

1. Two-piece structure and 0.5mm pitch.

The product lineup includes mated heights of 1.5mm, 2.0mm and 2.5mm.

ORDERING INFORMATION

AXK 7 Y G

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

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

Number of pins (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 x 2

PRODUCT TYPES

Mated height	No. of pins	Part No.		Packing	
		Socket	Header	Inner carton (1-reel)	Outer carton
		<i>TOUGH CONTACT</i>	<i>TOUGH CONTACT</i>		
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 4 of the [Connector Technical Information](#).)
 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 pin 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.)

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/pin contacts × pin contacts (initial)			
	Composite removal force	Min. 0.0588N/pin contacts × pin contacts			
	Contact holding force	Min. 0.981N/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	
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	Mated height 1.5mm, 20 pin 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

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

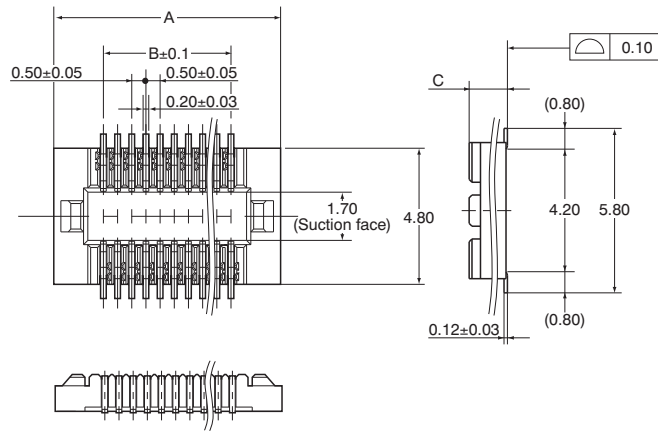
(Unit: mm)

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



Dimension table (mm)

No. of pins	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

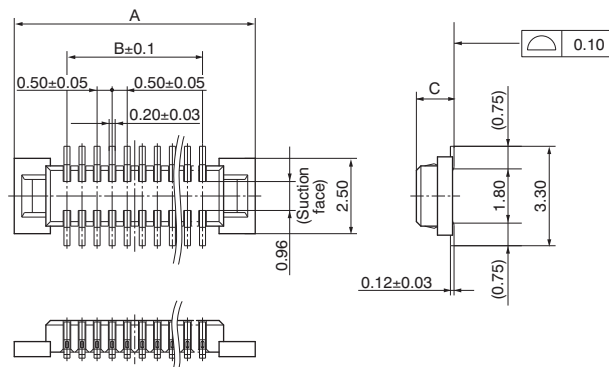
Mated height	C
1.5 mm	1.35
2.0 mm, 2.5 mm	1.85

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



Dimension table (mm)

No. of pins	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

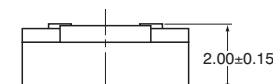
Mated height	C
1.5 mm, 2.0 mm	1.25
2.5 mm	1.75

- Socket and header are mated

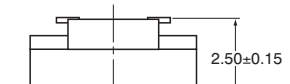
Mated height: 1.5 mm



Mated height: 2.0 mm



Mated height: 2.5 mm

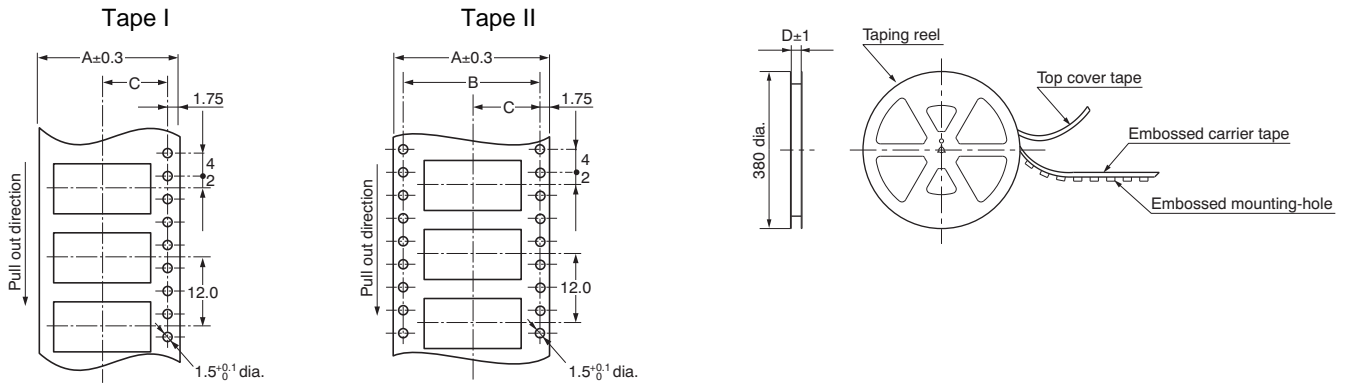


EMBOSED TAPE DIMENSIONS (unit: mm, Common for respective contact type, socket and header)

• 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.)

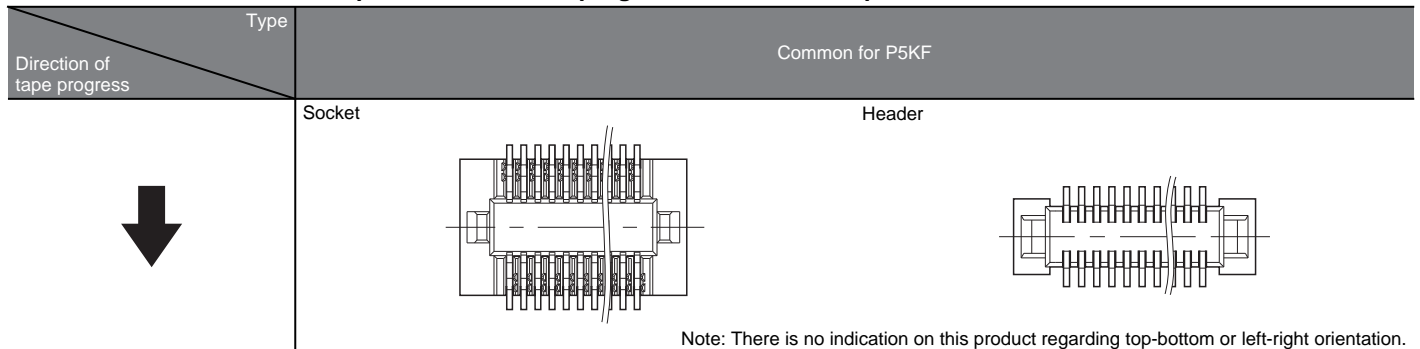


Dimension table (mm)

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

Mated height	No. of pins	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



Note: There is no indication on this product regarding top-bottom or left-right orientation.

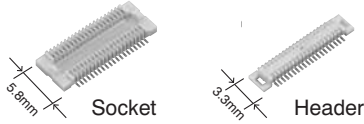
❗ Discontinued as of March 31, 2013

Panasonic
ideas for life

For board-to-board | For board-to-FPC

**Connectors for
inspection usage
(0.5mm pitch)**

P5KF Series



❗ Products are discontinued.

FEATURES

1. 3,000 mating and unmating cycles
2. Same external dimensions and foot patterns as standard type.
3. Improved mating

Insertion and removal easy due to a reduction in mating retention force. This is made possible by a simple locking structure design.

Note: Mating retention force cannot be warranted.

APPLICATIONS

Ideal for module unit inspection and equipment assembly inspection

TABLE OF PRODUCT TYPES

☆: Available for sale

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

- Notes:
1. You can use with each mated height in common.
 2. Please inquire about number of pins other than those shown above.
 3. Please inquire with us regarding availability.
 4. Please keep the minimum order quantities no less than 50 pieces per lot.
 5. Please inquire if further information is needed.

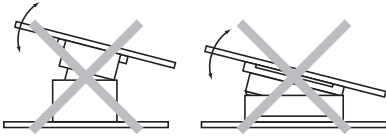
PRODUCT TYPES

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

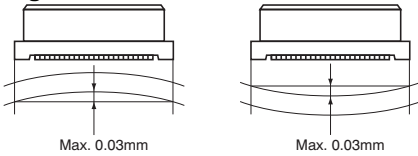
Note: When placing an order, substitute the "*" (asterisk) in the above part number with the number of pins for the specific connector.

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

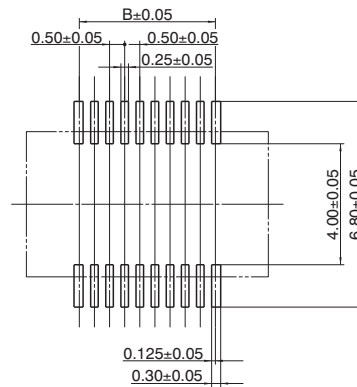
Connectors are mounted with high pitch density, intervals of 0.35 mm, 0.4 mm or 0.5 mm.

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

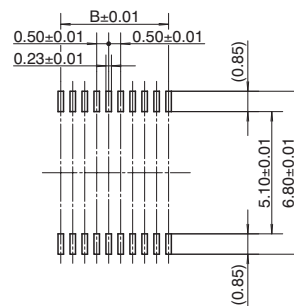
The figures to the right are recommended metal mask patterns. Please use them as a reference.

• Socket

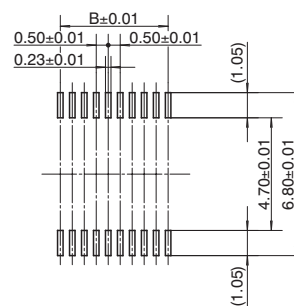
Recommended PC board pattern (TOP VIEW)



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

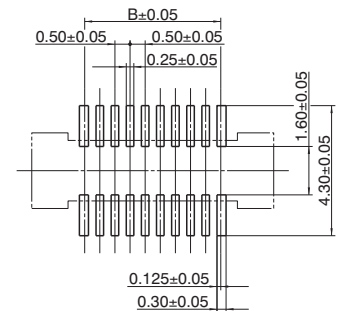


Recommended metal mask pattern
Metal mask thickness: Here, 120 μm
(Opening area ratio: 69%)

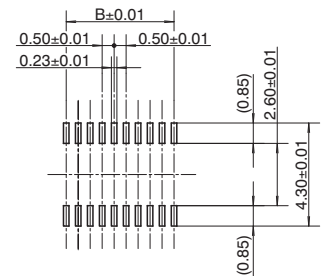


• Header

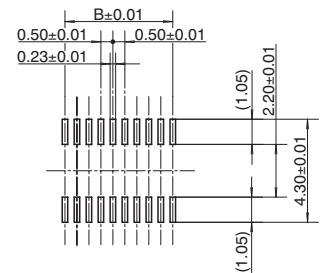
Recommended PC board pattern (TOP VIEW)



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 4 for more information on the B dimension of the socket and header.

For Cautions for Use, see [Connector Technical Information](#). For other details, please verify with the product specification sheets.