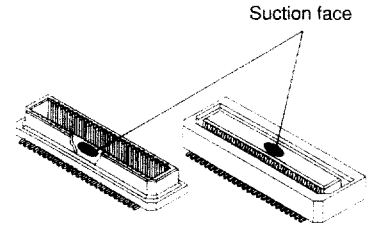
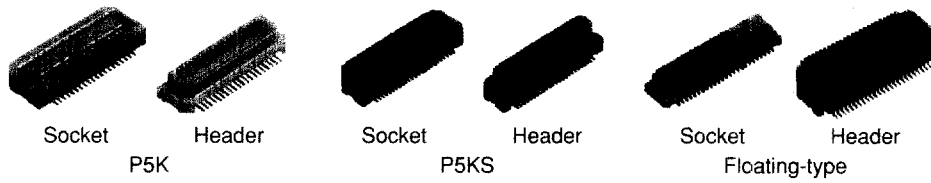


NAIS

NARROW PITCH
CONNECTORS
FOR PCB MOUNTING

NARROW PITCH
(0.5mm) CONNECTORS
— P5 SERIES —



FEATURES

1. Low profile of 3mm
2. Unique bellows-type contacts
Our unique bellows-type contacts resist mating stress and offer high contact reliability.

3. Automatic mounting

- 1) Suction area for suction-type automatic placement machines is employed.
- 2) Embossed tape packaging is standard.
- 3) Terminal construction which is virtually resistant to solder bridging.

APPLICATIONS

Small portable equipment, personal computers, word processors, video equipment, radio communication equipment, cellular telephone, PHS, etc.

SPECIFICATIONS

1. Characteristics

Item	Specifications				Conditions															
	3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm type		7mm, 8mm, 9mm type																	
Electrical characteristics	Rated current	0.2A (0.5A is possible for 10 contacts type) 0.5A/terminal (Max. 16A)																		
	Rated voltage	AC, DC 60V																		
	Breakdown voltage	150V AC for 1 min.																		
	Insulation resistance	Min. 1000MΩ																		
	Contact resistance	Max. 60mΩ		Max. 80mΩ																
Mechanical characteristics	Composite insertion force	Max. 0.785N (80gf) × no. of contacts (initial)																		
	Composite removal force	Min. 0.0588N (6gf) × no. of contacts																		
	Post holding force	Min. 0.981N (100gf)																		
Environmental characteristics	Ambient temperature	-55°C to +85°C																		
	Soldering heat resistance	Max. peak temperature of 245°C 300°C within 5 sec./350°C within 3 sec.																		
	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	<table border="1"> <thead> <tr> <th>Sequence</th> <th>Temperature (°C)</th> <th>Time (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55⁺⁰₋₃</td> <td>30</td> </tr> <tr> <td>2</td> <td>25⁺¹⁰₋₅</td> <td>Max. 5</td> </tr> <tr> <td>3</td> <td>85⁺³₋₀</td> <td>30</td> </tr> <tr> <td>4</td> <td>25⁻¹⁰₋₅</td> <td>Max. 5</td> </tr> </tbody> </table>		Sequence	Temperature (°C)	Time (minutes)	1	-55 ⁺⁰ ₋₃	30	2	25 ⁺¹⁰ ₋₅	Max. 5	3	85 ⁺³ ₋₀	30	4	25 ⁻¹⁰ ₋₅	Max. 5
	Sequence	Temperature (°C)	Time (minutes)																	
	1	-55 ⁺⁰ ₋₃	30																	
	2	25 ⁺¹⁰ ₋₅	Max. 5																	
	3	85 ⁺³ ₋₀	30																	
4	25 ⁻¹⁰ ₋₅	Max. 5																		
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%																	
H ₂ 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.																	
Lifetime characteristics	Insertion and removal life	50 times		Repeated insertion and removal speed of max. 200 times/hours																
Unit weight	P5K 3mm 30 terminals Socket: 0.17g Header: 0.09g																			
	P5KS 4mm 30 terminals Socket: 0.18g Header: 0.16g																			

2. Material and surface treatment

Part name	Stacking height 3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm		Stacking height 7mm, 8mm, 9mm	
	Material	Surface treatment	Material	Surface treatment
Molded portion	Heat-resistant resin (UL94V-0)	—	Heat-resistant resin (UL94V-0)	—
Contact	Copper alloy	Contact portion: Au plating over Ni Terminal portion: Au plating over Ni	Copper alloy	Contact portion: Au plating over Ni Terminal portion: Socket: SnPb plating over Ni Header: Au plating over Ni

AXK(5/6)

PRODUCT TYPES

Product name	Stacking height	No. of contacts	Part No.		
			Socket	Header	
P5K	3.0 mm	20	AXK5 20 145*	AXK6 20 345*	
		30	AXK5 30 145*	AXK6 30 345*	
		40	AXK5 40 145*	AXK6 40 345*	
		50	AXK5 50 145*	AXK6 50 345*	
		60	AXK5 60 145*	AXK6 60 345*	
		80	AXK5 80 145*	AXK6 80 345*	
	3.5 mm	100	AXK5 00 145*	AXK6 00 345*	
		20	AXK5 20 145*	AXK6 20 245*	
		30	AXK5 30 145*	AXK6 30 245*	
		40	AXK5 40 145*	AXK6 40 245*	
		50	AXK5 50 145*	AXK6 50 245*	
		60	AXK5 60 145*	AXK6 60 245*	
	P5KS	4.0 mm	80	AXK5 80 145*	AXK6 80 245*
			100	AXK5 00 145*	AXK6 00 245*
			20	AXK6S 20 045*	AXK6S 20 445*
			30	AXK5S 30 045*	AXK6S 30 445*
			40	AXK5S 40 045*	AXK6S 40 445*
			50	AXK5S 50 045*	AXK6S 50 445*
4.5 mm		60	AXK5S 60 045*	AXK6S 60 445*	
		80	AXK5S 80 045*	AXK6S 80 445*	
		100	AXK5S 00 045*	AXK6S 00 445*	
		160	AXK5S A6 075*	AXK6S A6 475*	
		20	AXK5S 20 245*	AXK6S 20 445*	
		30	AXK5S 30 245*	AXK6S 30 445*	
5.0 mm		40	AXK5S 40 245*	AXK6S 40 445*	
		50	AXK5S 50 245*	AXK6S 50 445*	
		60	AXK5S 60 245*	AXK6S 60 445*	
		80	AXK5S 80 245*	AXK6S 80 445*	
		100	AXK5S 00 245*	AXK6S 00 445*	
		160	AXK5S A6 275*	AXK6S A6 475*	
5.5 mm	20	AXK5S 20 045*	AXK6S 20 545 P		
	30	AXK5S 30 045*	AXK6S 30 545 P		
	40	AXK5S 40 045*	AXK6S 40 545 P		
	50	AXK5S 50 045*	AXK6S 50 545 P		
	60	AXK5S 60 045*	AXK6S 60 545 P		
	80	AXK5S 80 045*	AXK6S 80 545 P		
6.0 mm	100	AXK5S 00 045*	AXK6S 00 545 P		
	20	AXK5S 20 245*	AXK6S 20 545 P		
	30	AXK5S 30 245*	AXK6S 30 545 P		
	40	AXK5S 40 245*	AXK6S 40 545 P		
	50	AXK5S 50 245*	AXK6S 50 545 P		
	60	AXK5S 60 245*	AXK6S 60 545 P		
6.5 mm	80	AXK5S 80 245*	AXK6S 80 545 P		
	100	AXK5S 00 245*	AXK6S 00 545 P		
	20	AXK5S 20 045*	AXK6S 20 645 P		
	30	AXK5S 30 045*	AXK6S 30 645 P		
	40	AXK5S 40 045*	AXK6S 40 645 P		
	50	AXK5S 50 045*	AXK6S 50 645 P		
7.0 mm	60	AXK5S 60 245*	AXK6S 60 645 P		
	80	AXK5S 80 245*	AXK6S 80 645 P		
	100	AXK5S 00 245*	AXK6S 00 645 P		
	20	AXK5S 20 340 P	AXK6S 20 445*		
	30	AXK5S 30 340 P	AXK6S 30 445*		
	40	AXK5S 40 340 P	AXK6S 40 445*		
8.0 mm	50	AXK5S 50 340 P	AXK6S 50 445*		
	60	AXK5S 60 340 P	AXK6S 60 445*		
	80	AXK5S 80 340 P	AXK6S 80 445*		
	100	AXK5S 00 340 P	AXK6S 00 445*		
	20	AXK5S 20 340 P	AXK6S 20 545 P		
	30	AXK5S 30 340 P	AXK6S 30 545 P		
9.0 mm	40	AXK5S 40 340 P	AXK6S 40 545 P		
	50	AXK5S 50 340 P	AXK6S 50 545 P		
	60	AXK5S 60 340 P	AXK6S 60 545 P		
	80	AXK5S 80 340 P	AXK6S 80 545 P		
	100	AXK5S 00 340 P	AXK6S 00 545 P		
	20	AXK5S 20 340 P	AXK6S 20 645 P		
	30	AXK5S 30 340 P	AXK6S 30 645 P		
	40	AXK5S 40 340 P	AXK6S 40 645 P		
	50	AXK5S 50 340 P	AXK6S 50 645 P		
	60	AXK5S 60 340 P	AXK6S 60 645 P		
	80	AXK5S 80 340 P	AXK6S 80 645 P		
	100	AXK5S 00 340 P	AXK6S 00 645 P		

Notes:

1. Please suffix following words at * marked positions.

P: Inner carton (1 reel) 1,000 pcs. (Outer carton: 2,000 pcs.)

J: Inner carton (1 reel) 1,500 pcs. (Outer carton: 3,000 pcs.)

2. As for the part No. P is suffixed, only 1,000 pcs. reel is available.

3. The standard type comes with no positioning bosses. Connectors with positioning bosses are available for on-demand production. For this type of connector, 8th digit of the part no. changes from 4 to 3. e.g. AXK5F10335P AXK520135

mm General tolerance ± 0.2

DIMENSIONS

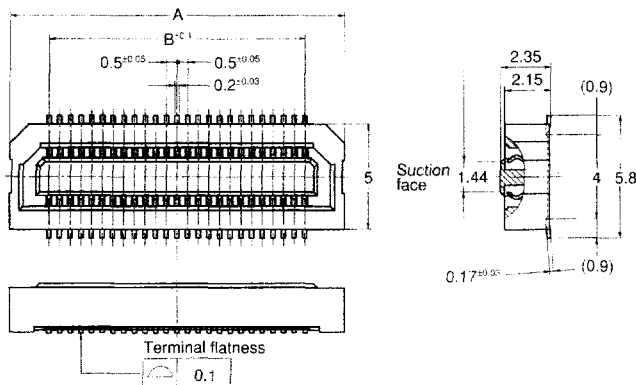
P5K: Stacking height 3mm, 3.5mm type

• Socket

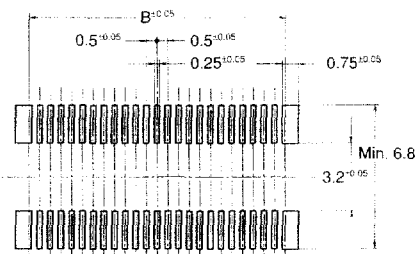


Dimension table (mm)

No. of contacts	A	B
20	8.20	4.50
30	10.70	7.00
40	13.20	9.50
50	15.70	12.00
60	18.20	14.50
80	23.20	19.50
100	28.20	24.50



Recommended PC board pattern (top view)

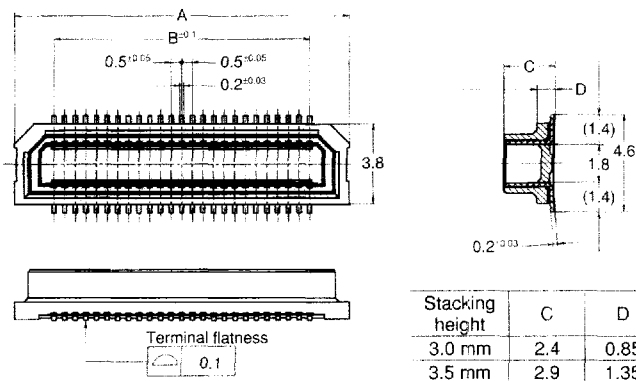


• Header

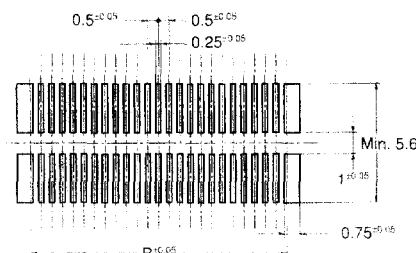


Dimension table (mm)

No. of contacts	A	B
20	8.20	4.50
30	10.70	7.00
40	13.20	9.50
50	15.70	12.00
60	18.20	14.50
80	23.20	19.50
100	28.20	24.50



Recommended PC board pattern (top view)



• Socket and header are mated



Stacking height	A
3.0 mm	3.0
3.5 mm	3.5

Remark: P5KS series cannot be mated

P5KS: Stacking height 4mm, 5mm, 6mm type

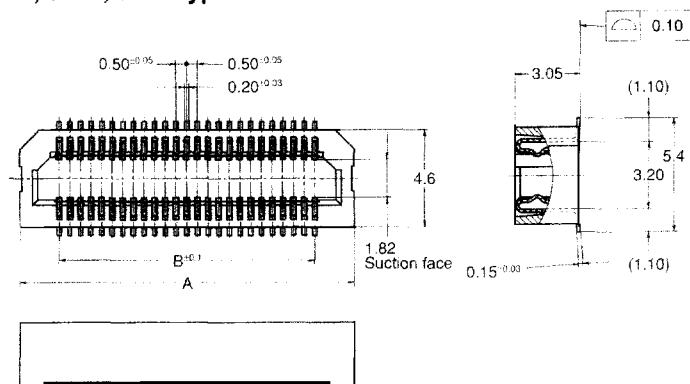
mm General tolerance ± 0.2

• Socket

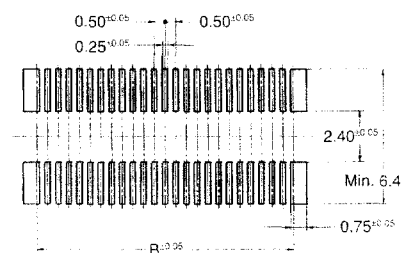


Dimension table (mm)

No. of contacts	A	B
20	8.20	4.50
30	10.70	7.00
40	13.20	9.50
50	15.70	12.00
60	18.20	14.50
80	23.20	19.50
100	28.20	24.50



Recommended PC board pattern (top view)

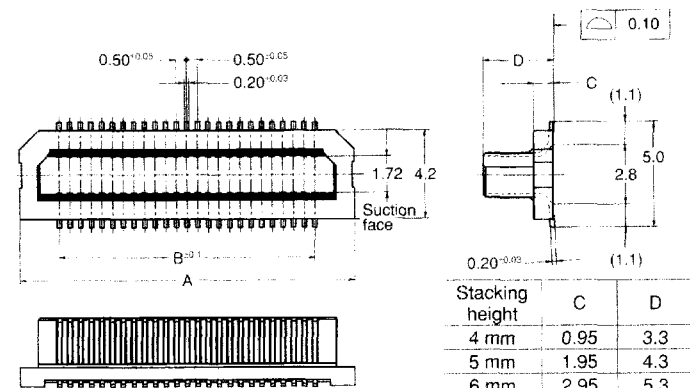


• Header

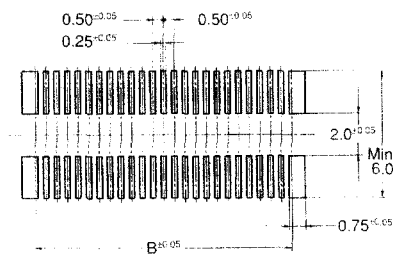


Dimension table (mm)

No. of contacts	A	B
20	8.20	4.50
30	10.70	7.00
40	13.20	9.50
50	15.70	12.00
60	18.20	14.50
80	23.20	19.50
100	28.20	24.50



Recommended PC board pattern (top view)



AXK(5/6)

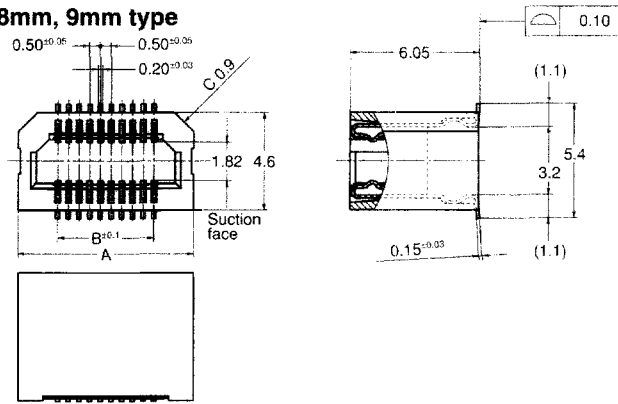
P5KS: Stacking height 7mm, 8mm, 9mm type

• Socket



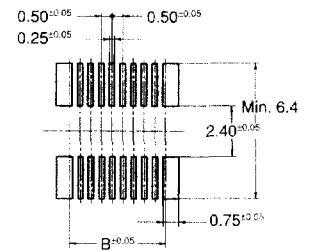
Dimension table (mm)

No. of contacts	A	B
20	8.20	4.50
30	10.70	7.00
40	13.20	9.50
50	15.70	12.00
60	18.20	14.50
80	23.20	19.50



mm General tolerance ±0.2

Recommended PC board pattern (top view)

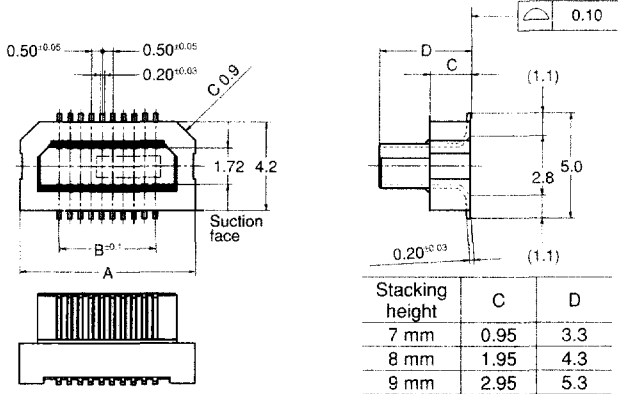


• Header

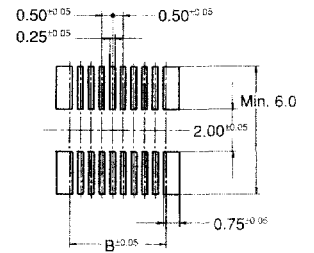


Dimension table (mm)

No. of contacts	A	B
20	8.20	4.50
30	10.70	7.00
40	13.20	9.50
50	15.70	12.00
60	18.20	14.50
80	23.20	19.50

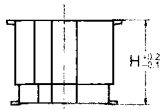


Recommended PC board pattern (top view)



• Socket and header are mated

Remark:
P5K series
cannot be
mated



Stacking height	H
4 mm	4.0
4.5 mm	4.5
5 mm	5.0
5.5 mm	5.5
6 mm	6.0
6.5 mm	6.5
7 mm	7.0
8 mm	8.0
9 mm	9.0