

NAIS

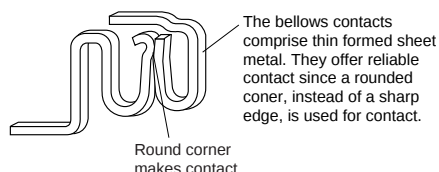
NARROW-PITCH CONNECTORS FOR PC BOARDS

NARROW PITCH (0.5mm) CONNECTORS — P5KF —

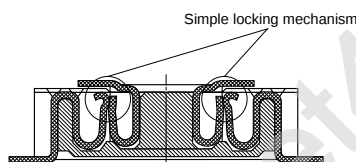


2. Unique bellows-type contacts

Our unique bellows-type contacts resist mating stress and offer high contact reliability.

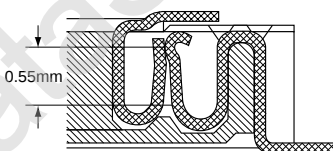


3. Simple locking mechanism is employed which is suitable for FPC connection.



4. 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.



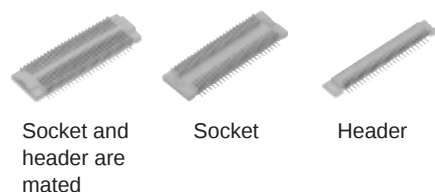
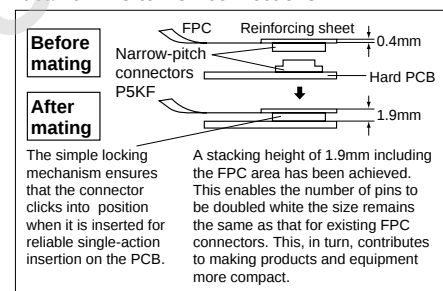
5. Construction resistant to solder lift-off

The construction provides a longer distance between the actual contact areas of the contacts and the pins to yield an improved resistance to solder lift-off.

APPLICATIONS

- Cellular phones
- PHS
- Portable data terminals
- Compact portable devices

Ideal for FPC-to-PCB connections



FEATURES

1. Low profile of 1.5mm

Low profiles of 1.5mm, 2.0mm and 2.5mm are realized. They allow products to be slimmer.

SPECIFICATIONS

1. Characteristics

	Item	Specifications	Conditions
Electrical characteristics	Rated current	0.5A/terminal (Max. 10 A at total terminals)	
	Rated voltage	AC, DC 60V	
	Breakdown voltage	150V AC for 1 minute	Detection current: 1mA
	Insulation resistance	Min. 1,000MΩ (initial)	Using 500V DC megger
	Contact resistance	Max. 90mΩ	Measured with YHP4328A
Mechanical characteristics	Composite insertion force	Max. 0.981N {100kgf}/terminal × total terminals (initial)	
	Composite removal force	Min. 0.981N {100kgf}/terminal × total terminals (initial)	
	Post holding force	Max. 0.981N {100kgf}	Measures the maximum load in the post axial direction until removal
Environmental characteristics	Ambient temperature	-55°C to +85°C	No freezing at low temperatures
	Soldering heat resistance	Max. peak temperature of 245°C	Infrared reflow soldering
		300°C within 5 seconds	Soldering iron
	Thermal shock resistance (header and socket mated)	5 cycles, insulation resistance min. 100MΩ, contact resistance max. 90mΩ	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. 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

2. Material and surface treatment

Part name	Material	Surface treatment
Molded portion	Heat-resistant resin (UL94V-0)	—
Contact	Copper alloy	Contact portion: Au plating over Ni Terminal portion: Au plating over Ni

PRODUCT TYPES

Stacking height	No. of contacts		Part No.
1.5 mm	10	Socket	AXK5F10345*
		Header	AXK6F10345*
	20	Socket	AXK5F20345*
		Header	AXK6F20345*
	30	Socket	AXK5F30345*
		Header	AXK6F30345*
	40	Socket	AXK5F40345*
		Header	AXK6F40345*
	50	Socket	AXK5F50345*
		Header	AXK6F50345*
	60	Socket	AXK5F60345*
		Header	AXK6F60345*
2.0 mm	10	Socket	AXK5F10545*
		Header	AXK6F10345*
	20	Socket	AXK5F20545*
		Header	AXK6F20345*
	30	Socket	AXK5F30545*
		Header	AXK6F30345*
	40	Socket	AXK5F40545*
		Header	AXK6F40345*
	50	Socket	AXK5F50545*
		Header	AXK6F50345*
	60	Socket	AXK5F60545*
		Header	AXK6F60345*
2.5 mm	10	Socket	AXK5F10545*
		Header	AXK6F10545*
	20	Socket	AXK5F20545*
		Header	AXK6F20545*
	30	Socket	AXK5F30545*
		Header	AXK6F30545*
	40	Socket	AXK5F40545*
		Header	AXK6F40545*
	50	Socket	AXK5F50545*
		Header	AXK6F50545*
	60	Socket	AXK5F60545*
		Header	AXK6F60545*

Note) 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) 2,000 pcs. (Outer carton: 4,000 pcs.)
2. The standard type comes with no 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. AXK5F10335P

DIMENSIONS

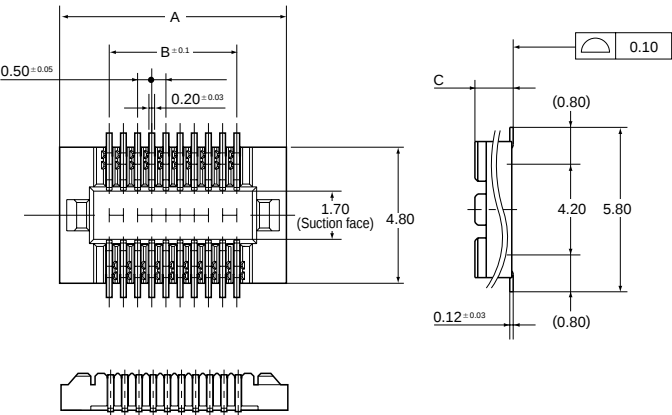
mm

• Socket body

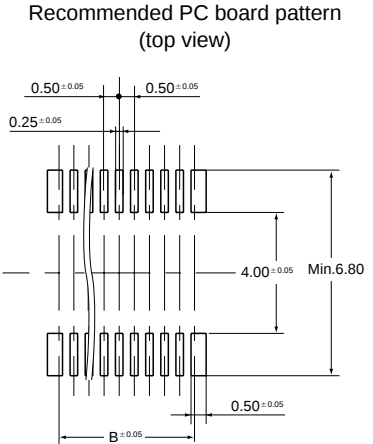


Dimension table (mm)

No. of contacts	A	B
10	5.50	2.00
20	8.00	4.50
30	10.50	7.00
40	13.00	9.50
50	15.50	12.00
60	18.00	14.50



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



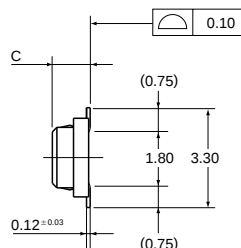
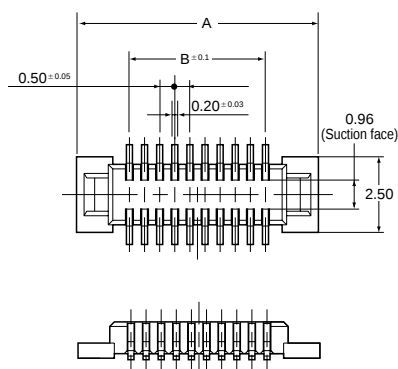
General tolerance ±0.2

• Header



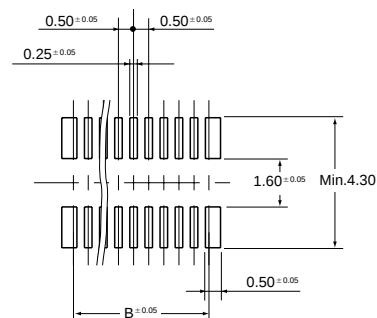
Dimension table (mm)

No. of contacts	A	B
10	5.50	2.00
20	8.00	4.50
30	10.50	7.00
40	13.00	9.50
50	15.50	12.00
60	18.00	14.50



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

Recommended PC board pattern (top view)

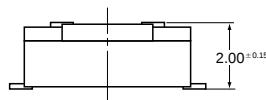
General tolerance ± 0.2

• Socket and header are mated

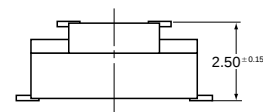
Stacking height 1.5 mm



Stacking height 2.0 mm



Stacking height 2.5 mm



NOTES

1. Preventing vibration and shock

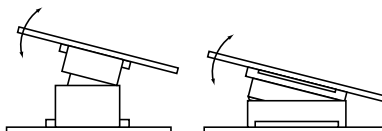
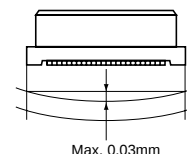
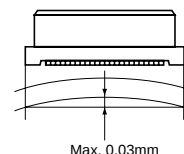
In order to secure the PC board connection even when a shock applied, please keep a connector away from the influence of the shock by fixing the PC boards to the enclosure or any other means.

2. These models are made very thin so that they may be smaller in size and light in weight than before.

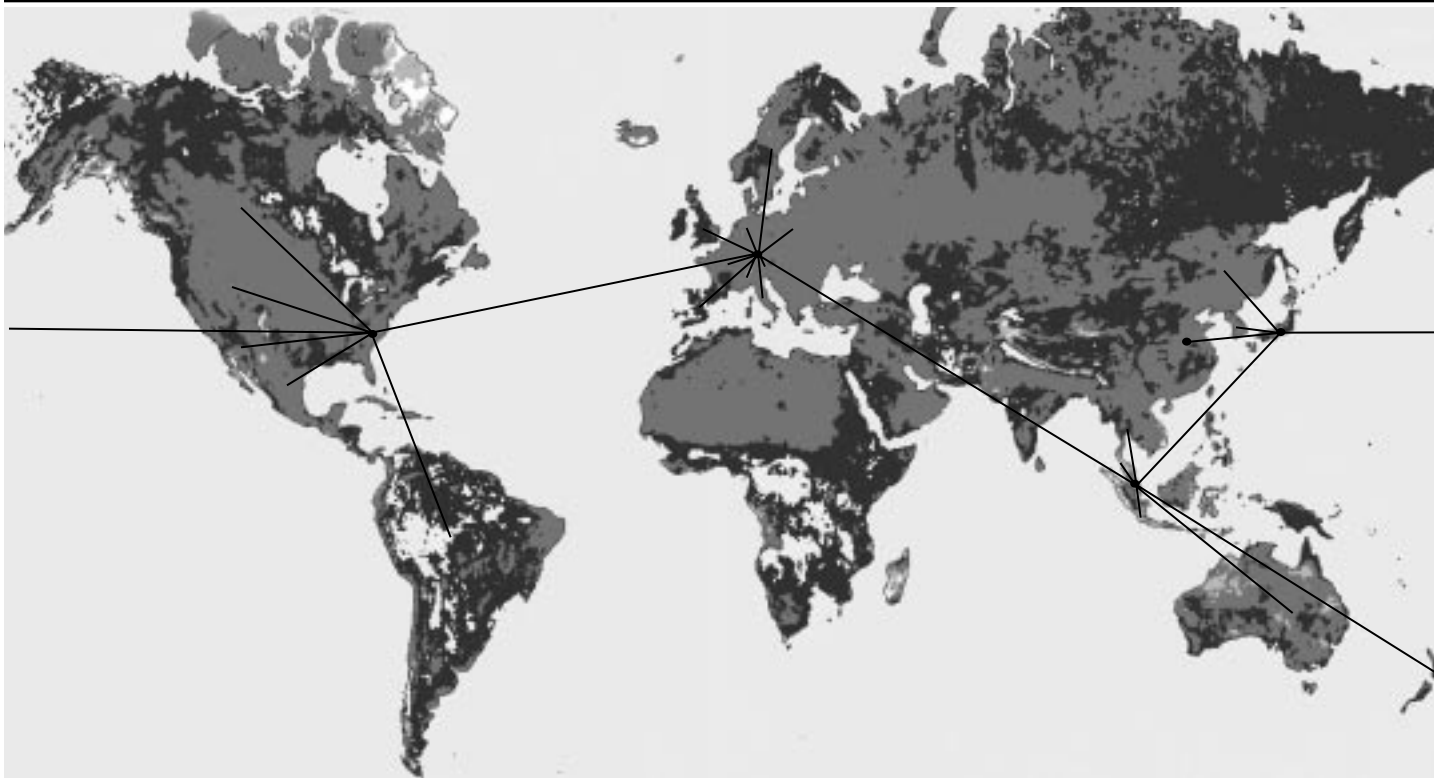
Take care not to give then excessive force when mating them together or unmating them; otherwise, breakage may result.

To prevent damage from incorrect insertions, please confirm the correct position before mating connectors.

3. Keep the PC board warp 0.03 mm or below as against the overall length of the connector.



Global Network



North & South America

Aromat Corporation

629 Central Avenue,
New Providence,
New Jersey, 07974
Tel: 1-908-464-3550
Fax: 1-908-464-8513

Aromat Canada Inc.

109 Woodbine Downs Blvd., Unit 9
Etobicoke, Ontario,
Canada M9W 6Y1
Tel: 1-416-674-2114
Fax: 1-416-674-4933

www.aromat.com

Europe

EURO-Matsushita Electric Works AG

Rudolf-Diesel-Ring 2,
D-83607 Holzkirchen, Germany
Tel: 49-08024-648-0

Asia Pacific

Matsushita Electric Works (Asia Pacific) Pte. Ltd.

101 Thomson Road
United Square, #25-03/05,
Singapore 307591
Tel: 65-255-5473

China

Matsushita Electric Works, Ltd. China Office

1422-25, China World
Tower,
China World Trade Center,
No.1 Jian Guo Men Wai Ave.,
Beijing 100004, China
Tel: 10-505-4580

Japan

Matsushita Electric Works, Ltd. Automation Controls Group

1048, Kadoma,
Kadoma-shi,
Osaka 571, Japan
Tel: 81-06-908-1050

www.mew.co.jp

NAIS A Worldwide Brand



Subsidiary of **Matsushita Electric Works**

Mid-Atlantic Sales Office

629 Central Avenue
New Providence, NJ 07974
Tel: (908) 464-3550
FAX: (908) 464-8513 or (908) 464-8714

New England Sales Office

5 Mount Royal Ave.
Marlboro, MA 01752
Tel: (508) 481-1995 FAX: (508) 485-0858

1-800-AROMAT-9

Visit Our Web Site:

www.aromat.com

Southeast Sales Office

5555 Triangle Parkway, Suite 450
Norcross, GA 30092
Tel: (770) 662-8262 FAX: (770) 662-5690

North Central Sales Office

1701 Golf Road, Suite 900
Rolling Meadows, IL 60008
Tel: (847) 593-8535 FAX: (847) 640-8545

South Central Sales Office

850 East Arapaho Road, Suite 210
Richardson, TX 75081
Tel: (972) 235-0415 FAX: (972) 699-9611

Northwest Sales Office

401 River Oaks Parkway
San Jose, CA 95134
Tel: (408) 433-0466
FAX: (408) 433-0675

Southwest Sales Office

300 North Sepulveda Blvd., Suite 1010
El Segundo, CA 90245
Tel: (310) 524-9862 FAX: (310) 524-9870

Automotive Sales Group Office

2855 Coolidge Hwy., Suite 116
Troy, MI 48064
Tel: (248) 649-0888 FAX: (248) 649-3202

Canada

Aromat Canada Inc.

109 Woodbine Downs Blvd., Unit 9
Etobicoke, Ontario, Canada M9W 6Y1
Tel: (416) 674-2114 FAX: (416) 674-4933

Latin America Sales Office

Aromat Corporation

629 Central Avenue
New Providence, NJ 07974
Tel: (908) 464-3550 FAX: (908) 771-5658
Direct Spanish Line: (908) 464-5781