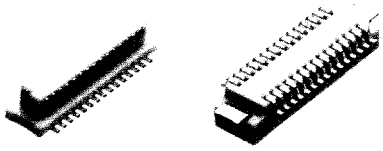
NAiS®

NARROW-PITCH CONNECTORS FOR BOARD-ON-BOARD CONNECTIONS

NARROW-PITCH (0.8mm) CONNECTORS — P8 SERIES FEED THROUGH TYPE —

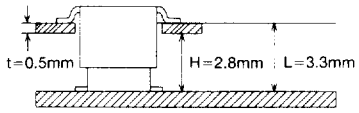


Socket Header

FEATURES

1. Realization of cost savings
As it allows installation "through" the board, eliminating the need for a double-sided sub-board and cuts soldering costs in half.

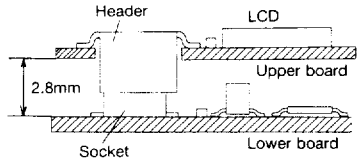
2. Reduction of board-to-board distance
The board-to-board distance is reduced from 3mm to 2.8mm.



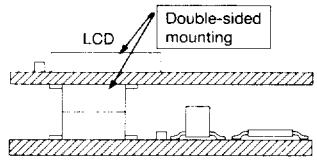
3. Compatibility with automatic placement
Suction face configuration makes the connectors compatible with suction-type automatic placement machines.

What is a feed-through type?

• Feed-through connection



• Standard connection



APPLICATIONS

Pager, video equipment, Cellular telephone, PCS, etc.

SPECIFICATIONS

1. Characteristics

Item		Specifications	Conditions
Electrical characteristics	Rated current	0.5A	
	Rated voltage	AC, DC 60V	
	Breakdown voltage	250V AC for 1 min.	Detection current: 1mA
	Insulation resistance	Min. 1000MΩ	Using 500V DC megohmmeter
	Contact resistance	Max. 60mΩ	Measured with YHP4328A
Mechanical characteristics	Composite insertion force	Max. 1.57N {160gf} × no. of contacts	
	Composite removal force	Min. 0.0981N {10gf} × no. of contacts	
	Post holding force	Min. 1.96N {200gf}	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. 60mΩ	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)	96 hours, insulation resistance min. 100MΩ, contact resistance max. 60mΩ	Bath temperature 40±2°C, humidity 90 to 95% R.H.
	H_2S resistance (header and socket mated)	48 hours, contact resistance max. 60mΩ	Bath temperature 40±2°C, gas concentration 3±1 ppm, humidity 75 to 80% R.H.
	SO_2 resistance (header and socket mated)	48 hours, contact resistance max. 60mΩ	Bath temperature 40±2°C, gas concentration 10±3 ppm, humidity 90 to 95% R.H.
Lifetime characteristics	Insertion and removal life	5 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, Post	Copper alloy	Contact portion: SnPb plating over Ni Terminal portion: SnPb plating over Ni

PRODUCT TYPES

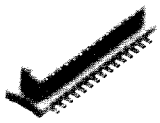
Distance between socket and header (L)	No. of contacts		Part No.	Packing quantity	
				Reel	Outer carton
3.3 mm	30	Socket	AXK21301P	1,000 pcs.	2,000 pcs.
		Header	AXK22301P		

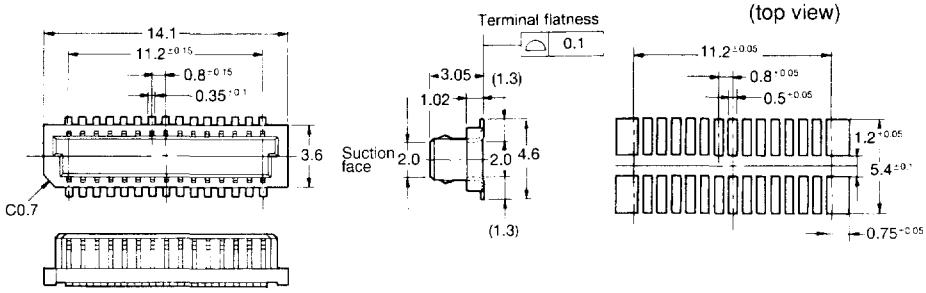
Note) Connectors are available in a standard embossed tape package (1,000 pcs/lot). Minimum ordering quantity is a single reel.

DIMENSIONS

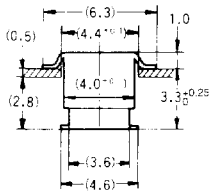
mm General tolerance: ±0.2

• Socket

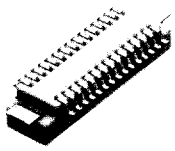


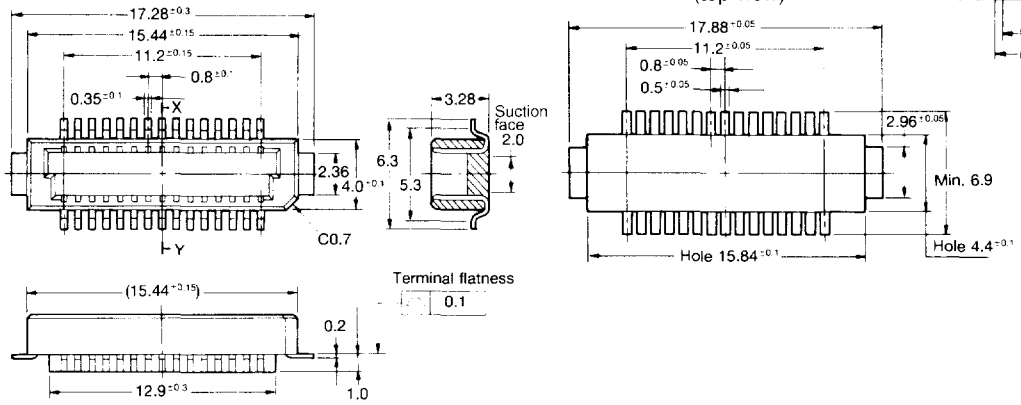


• Stacking mated diagram



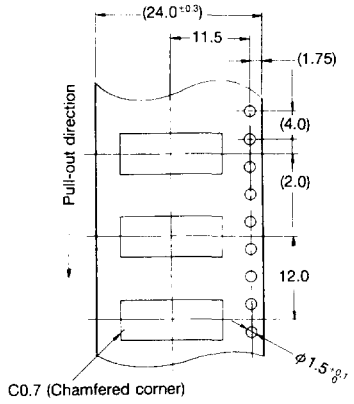
• Header



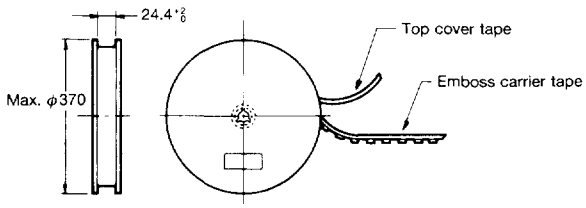


EMBOSS TAPE AND REEL

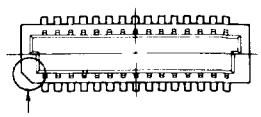
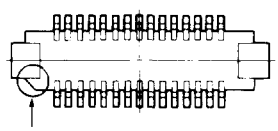
1. Tape dimensions (Conforming to JIS C 0806-1990. However, some tapes have mounting hole pitches that do not comply with the standard.)



2. Reel dimensions (Conforming to JIS C 0806-1990)

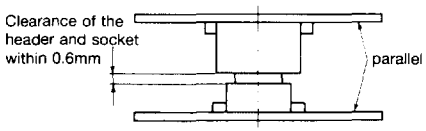


Connector orientation with respect to direction of progress of embossed tape

Direction of tape progress \ Type	All products	
↓	Socket	Header
	 This corner is oriented on the C side	 This corner is oriented on the C side

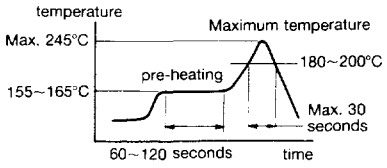
NOTES

1. Preventing vibration and shock
Secure PC boards to prevent them from falling off as a result of vibration and shock, and to prevent a direct force from being applied to the soldered portions. Do not fail to fix those PC boards, together.
Two PC boards should be parallel and the clearance of the header and socket should be less than 0.6mm.



2. Screen thickness during solder printing
A screen thickness of 0.15 to 0.20mm is recommended during cream solder printing.

3. Infrared reflow
When performing soldering using infrared reflow, the peak surface temperature of the PC board should not exceed 245°C. The recommended conditions for the reflow temperature profile are shown in the following figure.

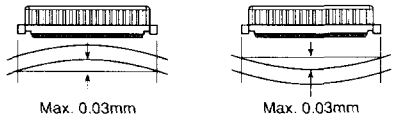


The recommended conditions for the reflow temperature profile

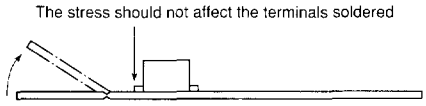
4. Since excessive force on the terminals will cause deformation and the integrity of the soldering will be lost during reflow soldering, avoid dropping or rough handling of the product.

5. Be careful not to deform the terminals or brackets when inserting or removing the connector before soldering. Do not put excessive force to terminals. Doing so may loosen the fixation of terminals and molding parts.

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

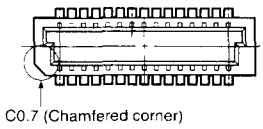


7. When cutting the PC board after mounting the connector, please pay attention that terminals soldered should not be affected by stress.

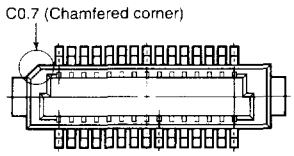


8. Prevention of reverse mating
The socket and header are protected from reverse mating by a molded resin key. Excessive mating force may damage the key, so be sure to match chamfered corners (C0.7) when mating.

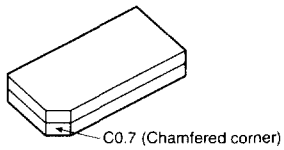
• Socket



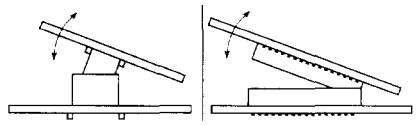
• Header



Mated state



9. Because of its very thin plastic portions for miniaturization of the connector, an excessive force caused by the following insertions and removals may damage it.



10. Keep metal parts and hands away from the terminals located in the side of connector, or it may short circuit the PC board.

11. When soldering by hand or reworking, do not put solder flux to connector terminal portion and PC board. Doing so may cause contact problems by flux.

12. Manufacturing lot may differ from one lot to another. This will not affect specifications.