

NAIS

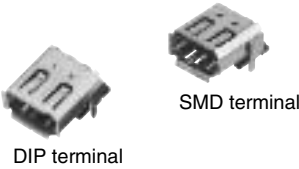
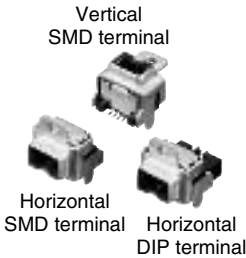
COMPLIANCE WITH
IEEE1394, THE NEW
INTERFACE STANDARD

IEEE1394
CONNECTORS

4 contacts

6 contacts

PRODUCT LINEUP



	No. of contacts	Receptacle		
IEEE1394	4	SMD terminal	Horizontal	With positioning boss Without positioning boss
			Vertical	With positioning boss Without positioning boss
	6	DIP terminal	Horizontal	Without positioning boss
			SMD terminal	—

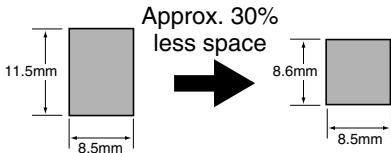
IEEE: The Institute Electrical and Electronics Engineers

FEATURES

4 contacts

1. Compact for space saving

The SMD contacts requires 30% less space when compared with typical products from other manufacturers.

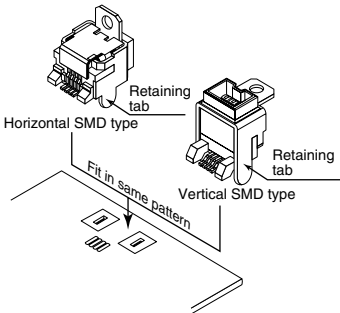


Typical products from other manufacturers

Our manufactures

2. Both vertical and horizontal-type SMD terminals are available

Both vertical and horizontal types are available so a common terminal foot pattern. Therefore, various types of component layouts are possible without changing the pattern on the PC board.



3. Improved EMI resistance characteristics

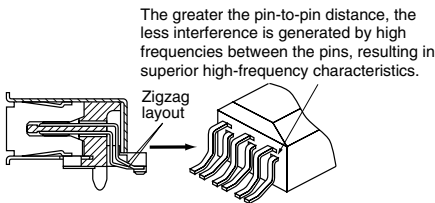
The horizontal type has a metal shell on the lower and back surfaces for improved resistance to EMI interference.

4. Connect/disconnect life of 3,000 times

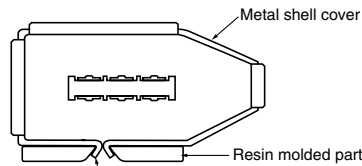
6 contacts

1. Excellent high frequency characteristics

SMD type
The pin-to-pin distance has been extended by placing the pins in zigzag layout instead of the straight line configuration used by our competitors in general.

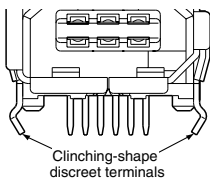


2. Durability ensured against plug mating stress



The metal shell cover is securely locked in place by the molding: this is a construction that protects the connector from external forces such as that which is exerted when the cable is pulled.

3. Save energy during soldering with the DIP-type discreet terminal construction.



APPLICATIONS

- Personal computers
- Peripheral units of personal computers: printer, scanner, HDD, MO, DVD, CD-ROM
- Electronic musical instruments: karaoke, mixer, synthesizer, electronic organ

PRODUCT TYPES

1. 4 contacts

Contacts	Type	Terminal shape	Positioning bosses	Part No.	Packing quantity	
					Inner carton	Outer carton
4 contacts	Horizontal	SMD terminal	With	AXJ2157512P	450 pcs./reel	3,600 pcs.
			Without	AXJ2167512P	450 pcs./reel	3,600 pcs.
	Vertical	SMD terminal	Without	AXJ2167112T	180 pcs./tray	3,600 pcs.
			With	AXJ2158512P	450 pcs./reel	3,600 pcs.

Note) P: Embossed tape packing, T: Tray packing

2. 6 contacts

Contacts	Terminal shape	Holding metal shape	Part No.	Packing quantity	
				Inner carton (Tray)	Outer carton
6 contacts	SMD terminal	Straight type	AXJ2111502T	90 pcs.	900 pcs.
	DIP terminal	Clinching type	AXJ2111302T	90 pcs.	900 pcs.

SPECIFICATIONS

1. Characteristics

1) 4 contacts

Item		Specifications	Conditions
Electrical characteristics	Rated current	0.5A	
	Rated voltage	5V DC	
	Contact resistance	Max. 50mΩ (initial)	EIA-364-23A-85, EIA-364-06A-83
	Insulation resistance	Min. 1,000MΩ	EIA-364-21B-95 500V DC megger
	Breakdown voltage	100V AC for 1 min. (Breakdown voltage)	EIA-364-20A-83 Detection current 0.5mA
Mechanical characteristics	Composite removal force	Min. 4.9N {500gf} to Max. 39.2N {4kgf} (initial)	EIA-364-13A-83 Required force for removing a plug is measured at a speed of 25 mm/min.
Environment characteristics	Ambient temperature	−20 to +80°C	No freezing nor condensing at low temperature
	Soldering heat resistance	Infrared reflow soldering: peak temperature of Max. 245°C	
	Storage temperature	−25 to +60°C	No freezing nor condensing at low temperature
Lifetime characteristics	Mechanical life	3,000 times	EIA-364-09B-91 Repeated insertion and removal speed of 10 to 20 times/hour
Unit weight		0.8g (SMD) 0.9g (DIP)	

2) 6 contacts

Item		Specifications	Conditions
Electrical characteristics	Rated current	1.5A	
	Rated voltage	40V DC	
	Contact resistance	Between terminals: Max. 30mΩ Between shells: Max. 50mΩ	EIA-364-23A-85, EIA-364-06A-83
	Insulation resistance	Min. 1,000MΩ	EIA-364-21B-95 500V DC megger
	Breakdown voltage	Breakdown insulation 500V DC for 1 min. (Breakdown voltage)	EIA-364-20A-83 Detection current 0.5mA
Mechanical characteristics	Composite removal force	Min. 9.8N {1kgf} to Max. 39.2N {4kgf}	EIA-364-13A-83 Required force for removing a plug is measured at a speed of 25 mm/min.
Environment characteristics	Ambient temperature	0 to +45°C	No freezing nor condensing at low temperature
	Soldering heat resistance	Infrared reflow soldering: peak temperature of Max. 245°C	
	Storage temperature	−40 to +60°C	No freezing nor condensing at low temperature
Lifetime characteristics	Mechanical life	1,500 times	EIA-364-09B-91 Repeated insertion and removal speed of 500 ± 50 times/hour
Unit weight		2.5 g (Receptacle)	

2. Material and surface treatment

1) 4 contacts

Part name		Material	Surface treatment
Molded portion		SMD type: LCP resin (UL94V-0) DIP type: PBT resin (UL94V-0)	—
Metal portion	Contact	Copper alloy	Contact portion: Au plating over Ni Terminal portion: Au plating over Ni (except for top of the terminal)
	Shell	Steel or Copper alloy	Sn plating over Ni
	Locking bracket	Copper alloy	Ni plating

2) 6 contacts

Part name		Material	Surface treatment
Molded portion		LCP resin (UL94V-0)	—
Metal portion	Contact	Copper alloy	Contact portion: Au plating over Ni Terminal portion: Au plating over Ni (except for top of the terminal)
	Shell	Copper alloy	Sn plating over Ni

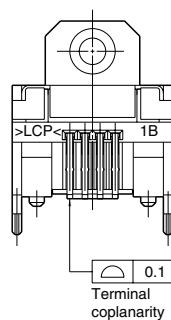
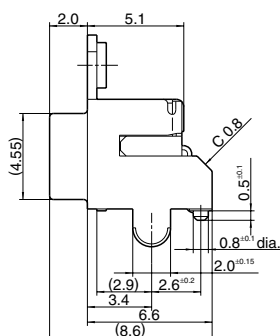
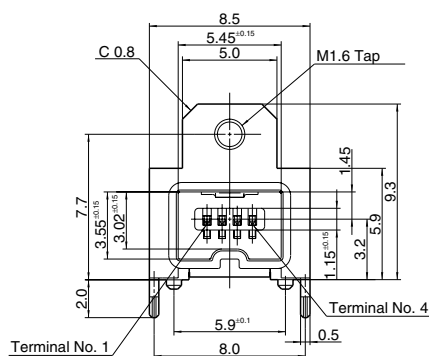
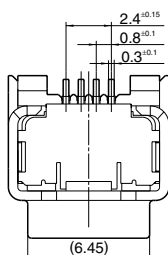
AXJ(2)

DIMENSIONS

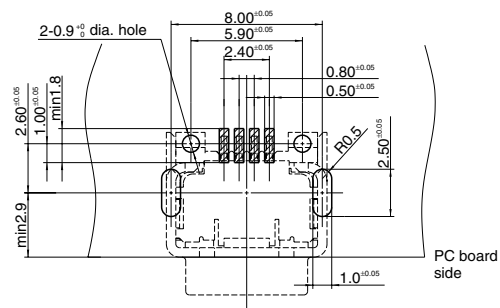
mm General tolerance: ± 0.3

1. Receptacle (4 contacts)

- Horizontal SMD type

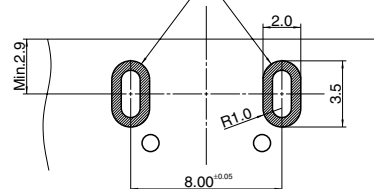


Recommended PC board pattern
(TOP VIEW)



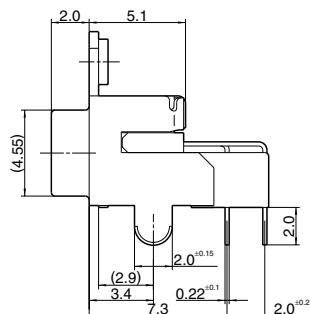
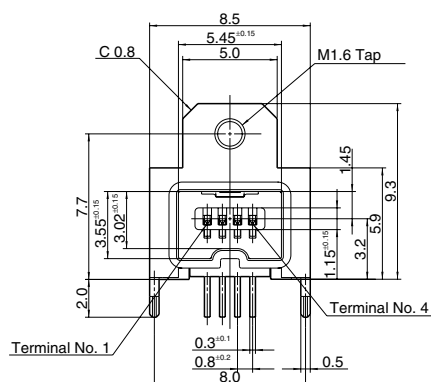
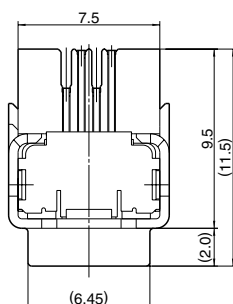
Recommended PC board pattern
(BOTTOM VIEW)

Solder pattern for attaching metal fittings

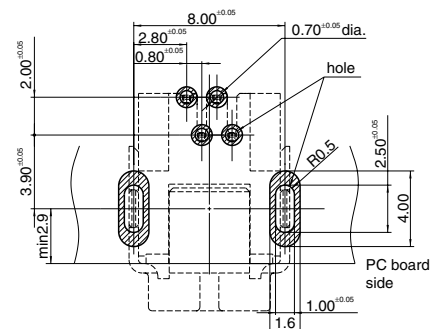


Note) Since product bottom is a metal shell,
do not make pattern circuits (to prevent
shorting).

- Horizontal DIP type



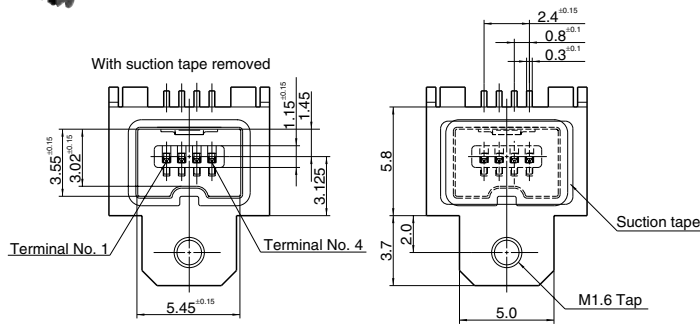
Recommended PC board pattern
(BOTTOM VIEW)



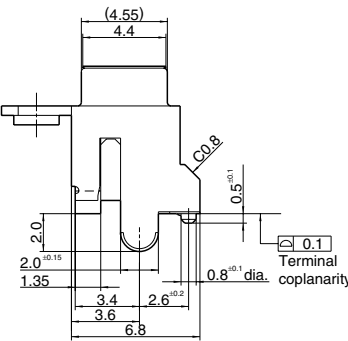
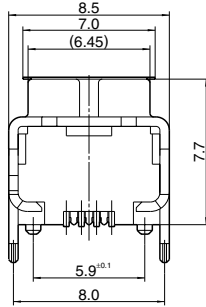
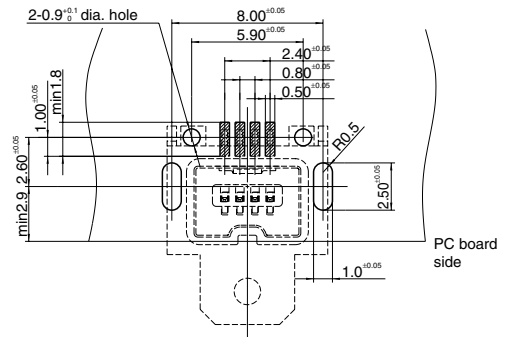
Note) Since product bottom is a metal shell, do not make pattern circuits (to prevent shorting).

• Vertical SMD type

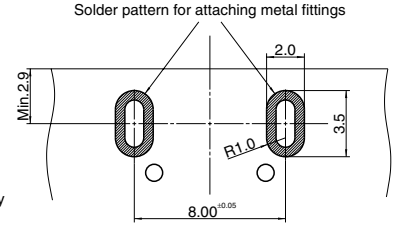
mm General tolerance: ± 0.3



Recommended PC board pattern (TOP VIEW)

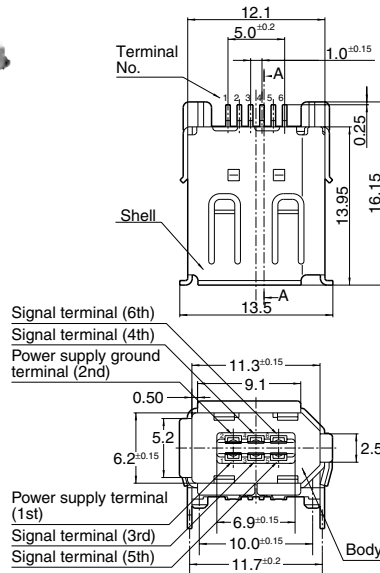


Recommended PC board pattern (BOTTOM VIEW)

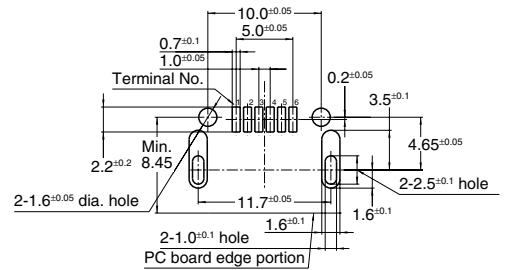


2. Receptacle (6 contacts)

• SMD type



Recommended PC board pattern (TOP VIEW)

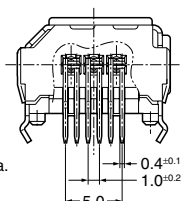
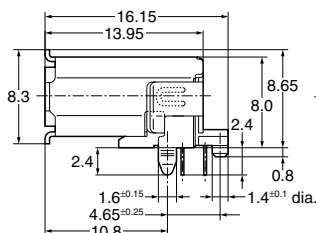
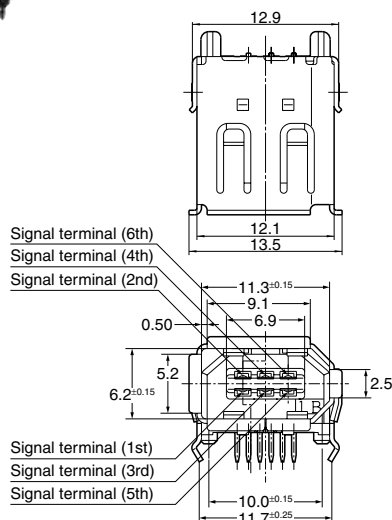


Note) Since product bottom is a metal shell, do not make pattern circuits (to prevent shorting).

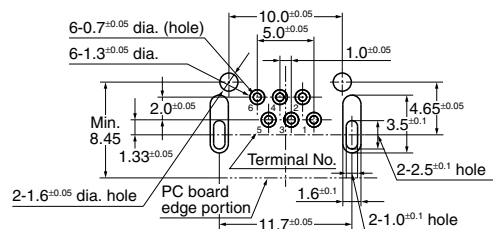
AXJ(2)

• DIP type

mm General tolerance: ± 0.3



Recommended PC board pattern
(BOTTOM VIEW)



Note) Since product bottom is a metal shell, do not make pattern circuits (to prevent shorting).

NOTES

• Receptacle

This connector has metal shell for preventing EMI, when designing an enclosure the followings should be considered.

Guide for plug entrance should be arranged in order to prevent distorted insertions. When using 1.6mm screw, the mounting torque should be 0.15 N·m to 0.2 N·m {1.5 kgf·cm to 2.0 kgf·cm} regarding with flange type.

Also, avoid forcibly twisting the plug when it is plugged in. This could cause such things as solder cracking.

Regarding general notes
please refer to page 8.