NAiS

INTEGRATED CONNECTOR WITH SWITCHING FUNCTION FOR IN-BUILT COAXIAL AND POWER PORTIONS

SYSTEM CONNECTORS FOR CELLULAR PHONE

FEATURES

1. Ultra small, space-saving package

2. Switching function for coaxial and power portions

Automatic conversion from hand portable to in-car use by inserting the plug into the receptacle

3. Connection of incorrect pairs is prevented by cross-manufacturer mating error prevention key.

By changing the location of the mating error prevention key, erroneous insertion of a different connector is prevented. This eliminates the chance of any problems that may be caused by mistaken connections. Please consult us for more information

4. Expected operational life:

In excess of 10,000 insertions and removal

5. Designed for SMD assembly techniques

APPLICATIONS

Cellular phones and its peripherals

PRODUCT TYPES

Type		Part No.	Packing quantity	
			Inner carton (tray)	Outer carton
Receptacle		AXR1111	100 pcs.	2,000 pcs.
Plug	Molding plug	AXR211	—	100 pcs.
	Screw fasten plug	AXR261	—	600 pcs.

Note) For cellular phones and other applications where problems of insertion into the wrong device is possible, the location of the key will be changed for each order. An order number will be set for each separate order.

SPECIFICATIONS

1. Characteristics

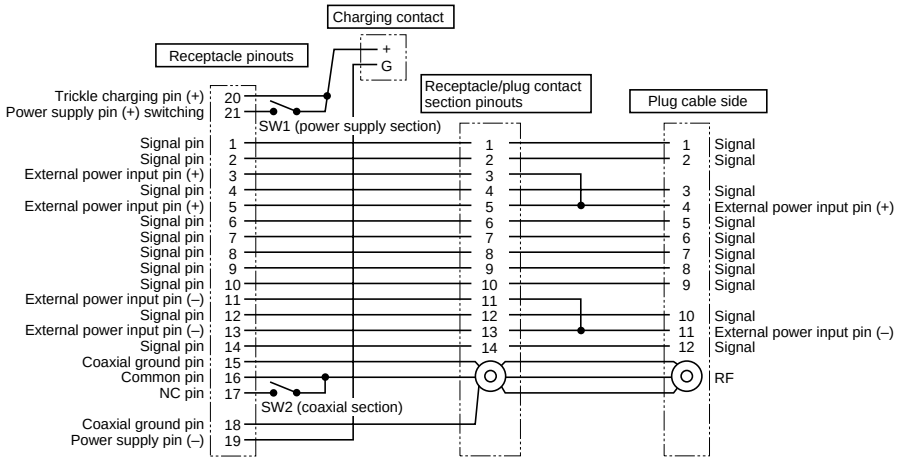
Item		Specifications
Rated Current	Signal contact	0.5A
	Power supply contact	2A
Coaxial portion	Impedance	50Ω
	Applicable frequency	DC ~ 1 GHz
	VSWR	Max. 1.5
	Insertion loss	Max. 0.4dB
	Return loss	Min. 16dB
	Mechanical	10,000 times
Expected life of insertion and removal	Electrical	6V DC 1A 10,000 times (resistive load current)
Ambient temperature		–35°C to +65°C
Applicable wire	Power portion	AWG #26 2 pcs.
	Signal portion	AWG #28 10 pcs.
	Coaxial portion	1.5D-2W 1 pc.
Unit weight	Receptacle	1.59g

2. Material and surface treatment

Portion		Surface
Receptacle	Contact	Contact portion: Au plating Terminal portion: SnPb plating or Au flash plating
Plug	Contact	Au plating over Ni

CIRCUIT DIAGRAM

• Example of circuit configuration when receptacle and plug are mated



HIGH FREQUENCY CHARACTERISTICS TEST DATA

Tested sample: n=5

		Frequency	
		300MHz	1.0GHz
Between common pin and NC pin	Insertion loss (dB)	0.13 (0.12 to 0.14)	0.31 (0.29 to 0.33)
	Return loss (dB)	31.0 (29.2 to 32.3)	22.9 (22.2 to 23.5)
	V.S.W.R.	1.06 (1.05 to 1.07)	1.15 (1.14 to 1.17)
Between common pin and NO pin (Coaxial cable length: 50mm)	Insertion loss (dB)	0.07 (0.07 to 0.08)	0.29 (0.29 to 0.29)
	Return loss (dB)	39.9 (36.1 to 44.5)	17.3 (16.9 to 17.6)
	V.S.W.R.	1.02 (1.02 to 1.03)	1.32 (1.31 to 1.34)

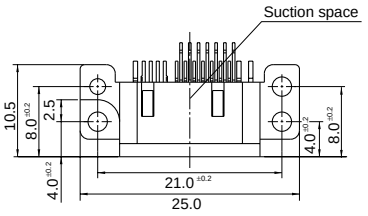
Note) Upper number : Mean number
Lower number : Min. to Max.

DIMENSIONS

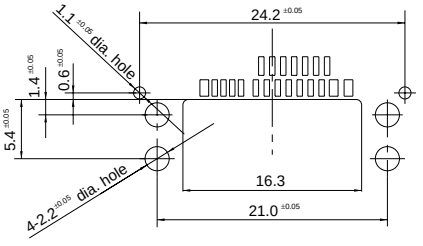
mm General tolerance: ±0.3

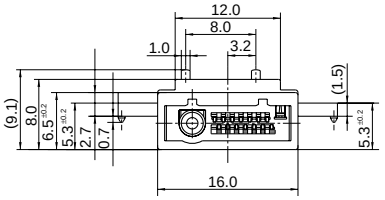
• Receptacle

AXR1111

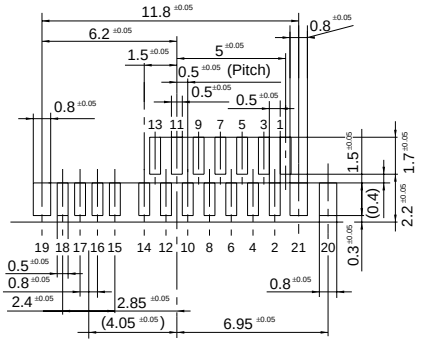


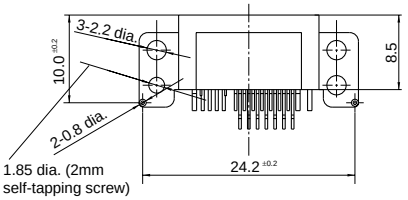
Recommended PC board pattern





Pattern



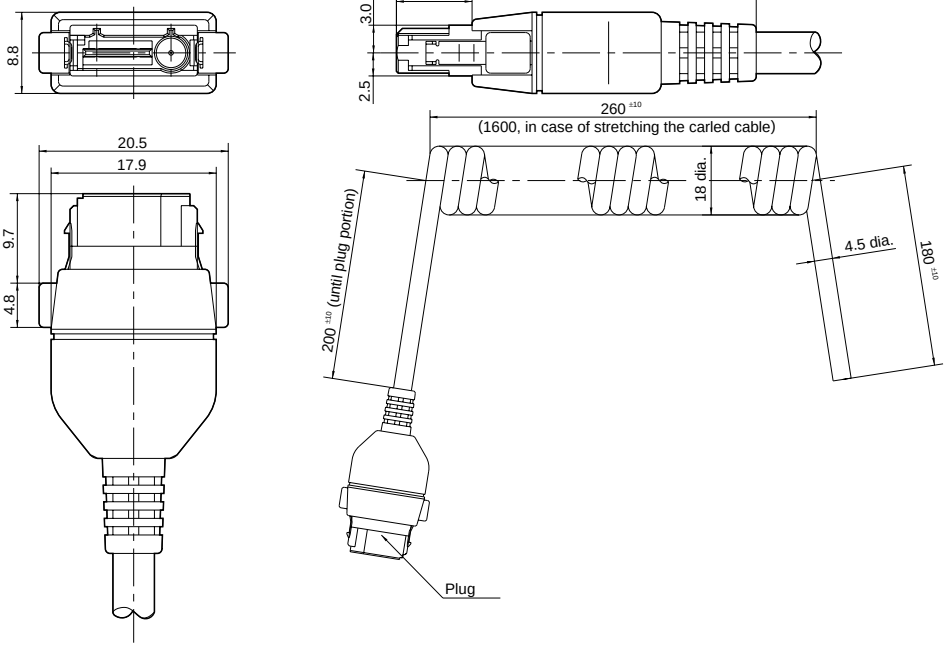


Note) The position of the cross-manufacturer mating error prevention key is set by the customer at the time when detailed product specifications are decided.

• Plug

mm General tolerance: ±0.3

AXR211

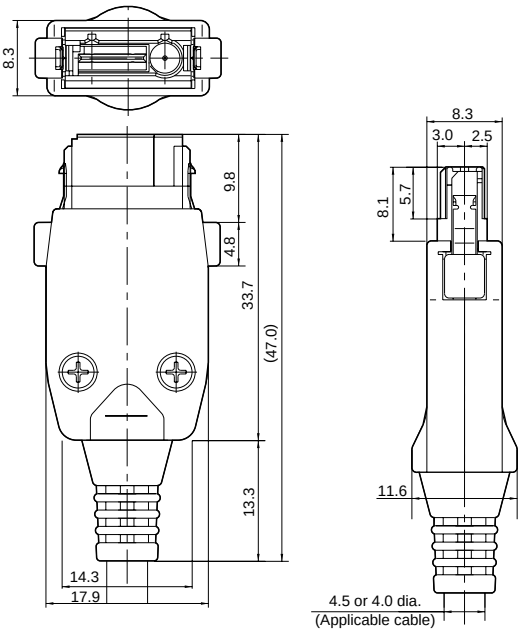


Note) The position of the cross-manufacturer mating error prevention key is set by the customer at the time when detailed product specifications are decided.

• The schematic shows the receptacle connected to the cable by insert molding

• Screw fasten plug (assembled condition)

AXR261



Note) The position of the cross-manufacturer mating error prevention key is set by the customer at the time when detailed product specifications are decided.

The connector can be customized at user request.

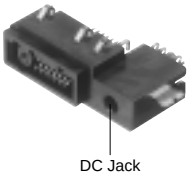
CUSTOMIZING SAMPLES

• Different flange outline

• No coaxial

No coaxial contacts

• With DC Jack

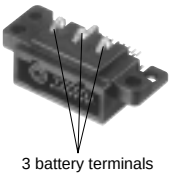


DC Jack

• No battery terminal

No battery terminal

• 3 battery terminals

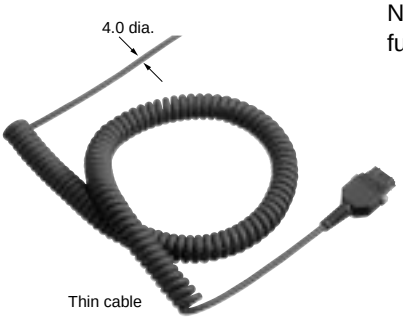


3 battery terminals

• SIL terminals

• Different cable thickness

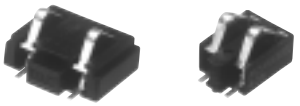
Thick cable
AXR211



Thin cable

• Others
No built-in switching function, etc.

BATTERY SOCKET



NOTE

Avoid cleaning connectors as they are
Contact us if cleaning is necessary.

Regarding general notes, please refer to page 10.

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