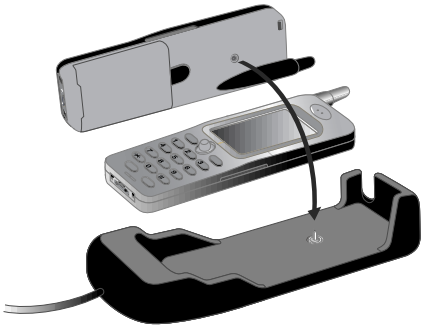
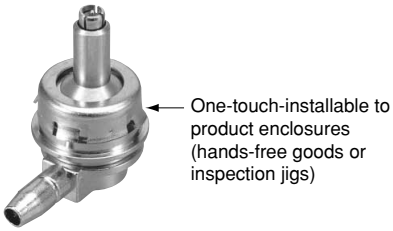
NAiS

COAXIAL CONNECTORS

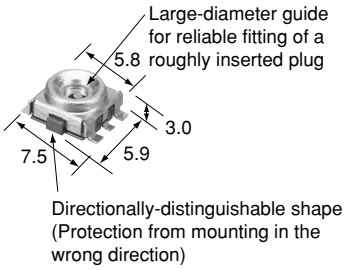
RF (COAXIAL) CONNECTORS FOR CELLULAR PHONE



Plug



Receptacle



FEATURES

1. Space-saving receptacle with low profile

The connector is provided with a large-diameter guide that can absorb up to ±1mm horizontal mating deviation while having the compact dimensions of 7.5mm (W) x 5.9mm (L) x 3.0mm (H).

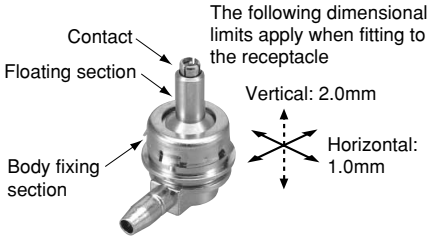
2. Excellent frequency characteristics

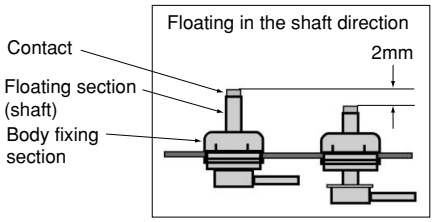
Suitable for 2GHz operation and for use in next-generation mobile phones.

- VSWR: Max. 1.30 (1 to 2 GHz)
- Insertion loss: Max. 0.35dB (1 to 2 GHz)
- Isolation: Min. 26.2dB (1 to 2 GHz)

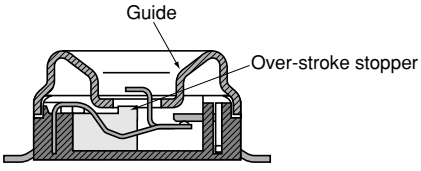
3. Floating mechanism absorbs mating deviation

The floating mechanism absorbs mating deviation in the horizontal and vertical directions of ±1mm and –2mm respectively on the plug side. The receptacle is equipped with an over-stroke stopper and guides to facilitate equipment design.



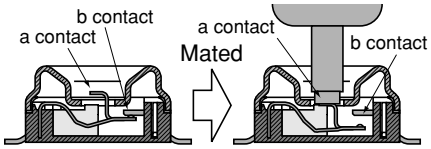


Receptacle

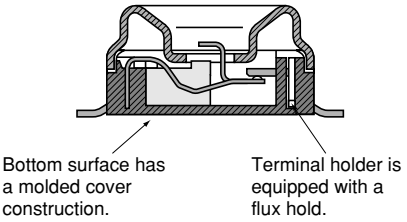


4. Switching function

Includes a switching function that can be used to switch the hands-free goods to the vehicle antenna, and for switching circuits with automatic inspection equipment.



5. Design prevents solder flux from creeping up.



APPLICATIONS

1. Connecting mobile phones to hands-free goods.
2. Automatic inspection equipment used in mobile phone assembly processes.

PRODUCT TYPES

Product	Part No.	Packing quantity	
		Inner carton	Outer carton
Receptacle	AXR111221V	3,000 pcs. (1 reel)	15,000 pcs.
Plug (set)	AXR112225	—	2,000 pcs.

SPECIFICATIONS

1. Characteristics

Item			Specifications	Conditions
Electrical characteristics	Insulation resistance (initial)		Min. 1,000MΩ	Using 500V DC megger (applied for 1min.)
	Initial breakdown voltage		250 V AC for 1min.	Rated voltage is applied for one minute and check for short circuit or damage with a detection current of 1mA.
	Contact resistance (initial)	Common to N.C.	Max. 50mΩ	Measured based on the HP4338B measurement method of JIS C 5402. Common to N.O.: without conductor resistance of plug's cord.
		Common to N.O.	Max. 70mΩ	
		Shield to shield	Max. 10mΩ	
High frequency characteristics	Nominal impedance		50Ω	
	VSWR (initial)	Common to N.C.	Max. 1.30 (to 2GHz)	Measurement method in accordance with Matsushita Electric Works standards.
		Common to N.O.	Max. 1.30 (to 2GHz)	Measurement method in accordance with Matsushita Electric Works standards.
	Insertion loss (initial)	Common to N.C.	Max. 0.35dB (to 2GHz)	Measurement method in accordance with Matsushita Electric Works standards.
		Common to N.O.	Max. 0.45dB (to 2GHz)	Measurement method in accordance with Matsushita Electric Works standards.
	Isolation (initial)		Min. 26.2dB (to 2GHz)	Measurement method in accordance with Matsushita Electric Works standards.
Environmental characteristics	Ambient temperature		–40 to +85°C	No freezing at low temperature
Lifetime characteristics	Insertion and removal life		Mechanical: 30,000 times	
Applicable wire			RG174 or equivalent	

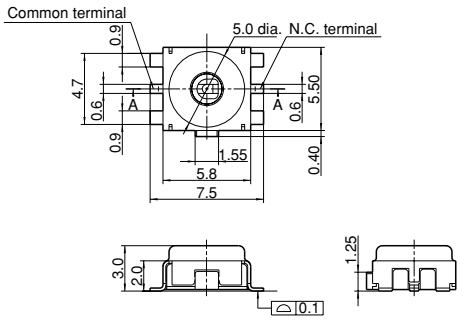
2. Material and surface treatment

Portion			Material	Surface
Receptacle	Resin-molding portion		Heat resistant resin (UL94V-0) Black	—
	Metallic parts		Copper alloy	Contact portion: Au plating over Ni substrate Terminal portion: Au plating over Ni substrate (except for cut surface of the terminal)
Plug	Body	Plug case	Heat resistant resin (UL94V-0) Black	—
		Plug metal case	Copper alloy	Au plating over Ni substrate
		Plug post	Copper alloy	Au plating over Ni substrate
		Centering guide	Copper alloy	Ni plating
		Case	Copper or zinc alloy	Ni plating
		Coil spring	Stainless steel	—
	Ring		Copper alloy	Ni plating
	Cover		Stainless steel	—

DIMENSIONS

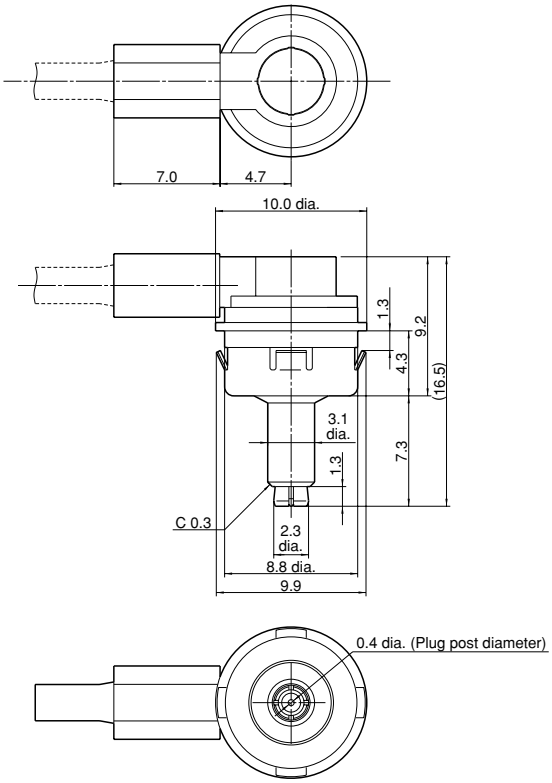
mm General tolerance: ±0.3

Receptacle



Plug
(assembled condition)

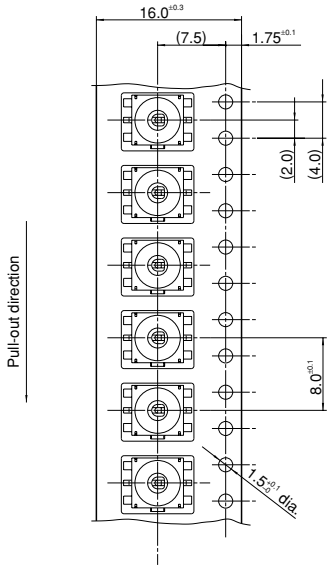
mm General tolerance: ±0.3



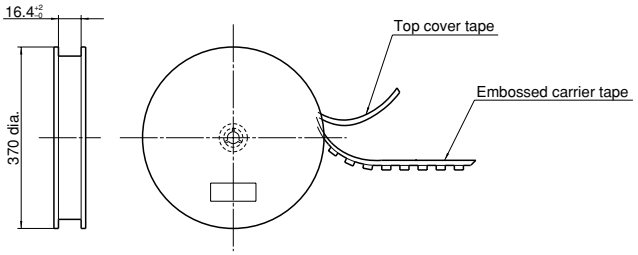
EMBOSSED TAPE AND REEL

mm

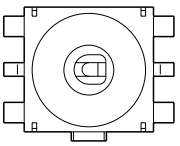
• Tape dimensions



• Reel dimensions



• Connector orientation with respect to direction of progress of embossed tape

Direction of tape progress \ Type	Receptacle
⬇	

NOTES

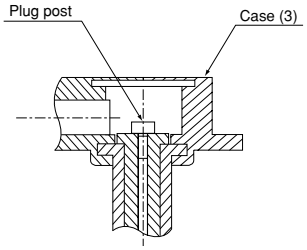
1. Receptacle

1) About attaching the cover
The construction of this product is not drip proof or dustproof. We recommend that you cover the receptacle to prevent entry of foreign matter such as dust and dirt, and liquids such as perspiration. The cover should be durable enough to withstand repeated, long-term use, and should not detach readily from the unit.
2) PCB design
Use the recommended design to ensure that the mechanical strength of the soldered section of the receptacle terminal is maintained.

2. Plug

1) The amount of floating on the plug side of the product is ±1.0mm in the radial direction, and 0.4mm to 2.0mm in the axial direction. When designing the bodies of hands-free goods or inspection jigs, the clearance with the receptacle on the body of the mobile phone must be within these limits. Also, use a construction for the body that prevents over stroke in the axial direction.
2) When designing hands-free goods and inspection jigs, provide a means of securing the cord so that stress does not act on the plug body if the cord is pulled.
3) The construction is such that the edge section of the plug is exposed when the plug is fixed to the hands-free goods. Provide warnings in the instruction manual to alert users to the fact that excessive force applied to the edge section of the plug can cause damage.

4) Soldering
- Take care to ensure that solder flux does not adhere to the contacts. This can result in a poor electrical connection.
- Take care not to melt the resin sections with the soldering iron.
- Take care to avoid formation of solder bulbs, and to avoid shorting the plug post to the case (3) with solder.



5) Before soldering the coaxial cable, crimp the cable to the case using the ring to secure it and ensure that no load is applied to the soldered parts of the coaxial cable.
6) This product is designed so that it can be secured to either hands-free goods or an inspection jig with a one-touch operation. When it is installed to the body of such a unit, ensure that it is secured firmly.

Regarding general notes please refer to page 8 and page 9.