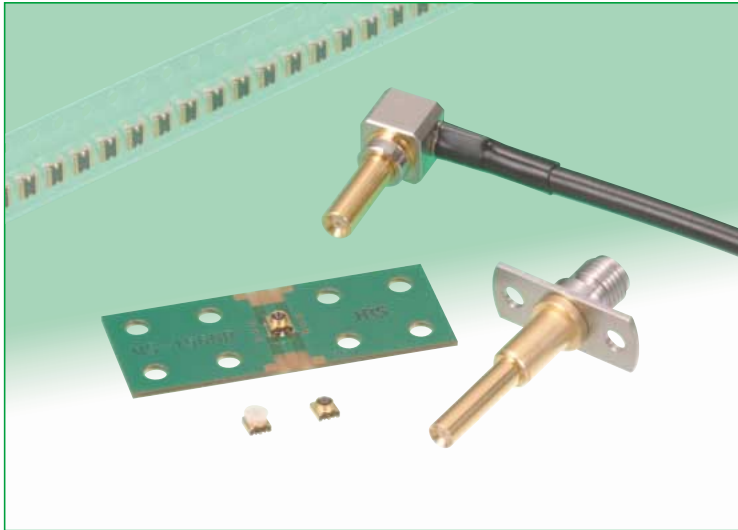




Subminiature Coaxial Switch 1.6 mm High, DC to 6 GHz

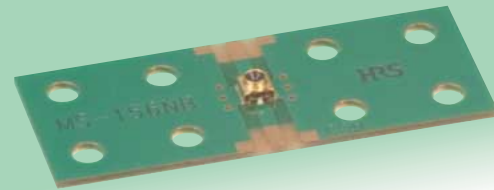
MS-156NB Series



Overview

Developed for inspection of high frequency circuits used in portable terminals. Verification of the circuit performance is accomplished by simply inserting the external plug in the board mounted receptacle. This action re-directs the circuit from normal condition to the plug side. Removing the plug restores circuit to its normal condition.

Space-saving design
Low profile -1.6 mm protrusion above the board.
Lightweight -0.025 g. total weight.



MS-156NB

Features

1. Low insertion loss

0.1 dB typical at 6 GHz (not mated with the plug).

2. Space-saving design

2.7 mm x 2.7 mm occupied board space.

3. Low profile

1.6 mm protrusion above the board.

4. Lightweight

0.025 g. total weight (without vacuum cap).

5. Durability

100 mating/unmating cycles, with corresponding plug.

6. Performs over a wide frequency range

Applicable frequencies range over a wide band, from DC to 6 GHz.

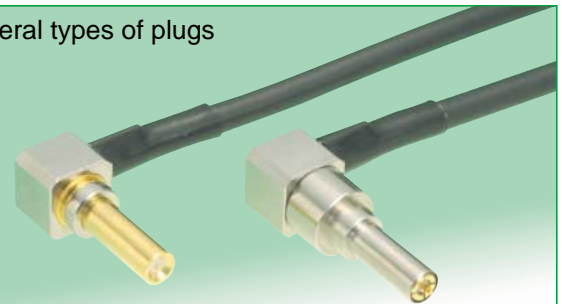
7. Board placement with automatic equipment

Packaged on tape-and-reel. Also available with a vacuum pick-up cap over each switch.

8. RoHS compliant

All components and materials comply with the requirements of the EU Directive 2002/95/EC.

Several types of plugs



Several types of SMA conversion adapters



Adapter for plug inspection



Applications

Portable terminals, ETC, notebook computers (Bluetooth), wireless LAN, POS terminals, GPS terminals, PDA, and any small devices requiring verification of antenna/circuit performance.

Product Specifications

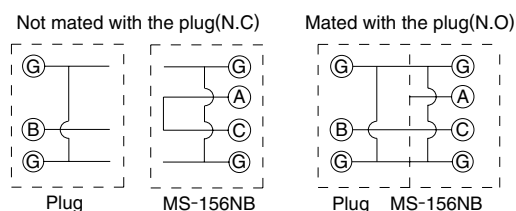
	Not mated with the plug	Mated (MS-156-HRMJ-3)
Operating temperature range	-40°C to +85°C	-40°C to +85°C
Rated power	2W	2W
Frequency range	DC to 6GHz	DC to 6GHz
Insertion loss	0.1 dB max. (DC to 3.0GHz) 0.15 dB max. (3.0GHz to 6.0GHz)	0.5 dB max. (DC to 3.0GHz) 1.2 dB max. (3.0GHz to 6.0GHz)
Isolation	20 dB max. (DC to 2.0GHz) 15 dB max. (2.0GHz to 4.0GHz) 13 dB max. (4.0GHz to 6.0GHz)	
V.S.W.R	1.2 max. (DC to 2.5GHz) 1.3 max. (2.5GHz to 6.0GHz)	1.4 max. (DC to 3.0GHz) 1.8 max. (3.0GHz to 6.0GHz)

Item	Specification	Conditions
1. Contact resistance	100 mΩ max.	100 mA max.
2. Insulation resistance	1000 MΩ min.	100 V DC
3. Withstanding voltage	No flashover or insulation breakdown	100 V AC / 1 minute
4. Vibration	No electrical discontinuity of 1 μs or more	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 axis.
5. Shock		Acceleration of 490 m/s ² , 6 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis
6. Thermal shock	Contact resistance: 100 mΩ max. Insulation resistance: 10 MΩ min.	Temperature: -55°C → +5°C to +35°C → +85°C → +5°C to +35°C Time: 30 → 2 to 3 → 30 → 2 to 3 (Minutes) 100 cycles
7. Durability (mating/un-mating, with corresponding plug)	Contact resistance: 100 mΩ max.	100 cycles

Materials

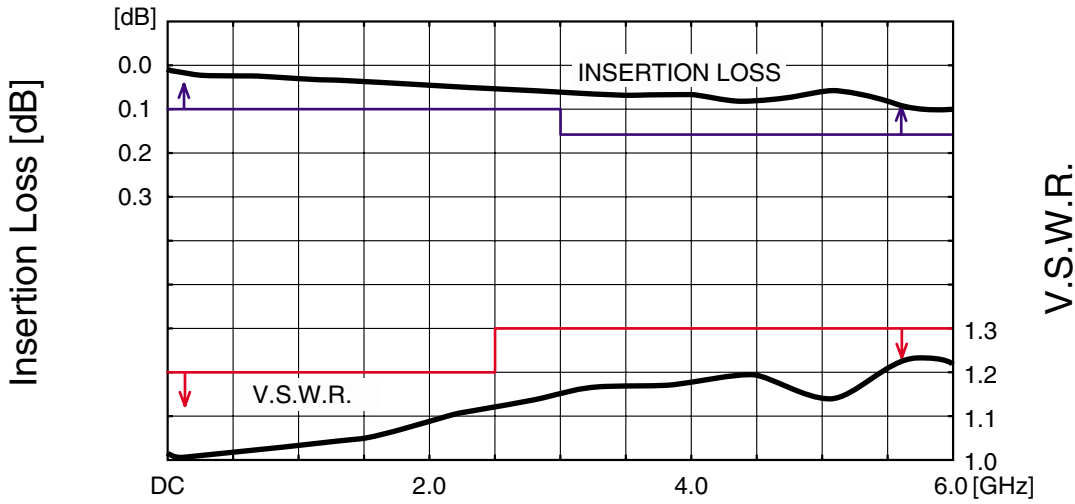
Part	Material	Finish	Remarks
Shell	Phosphor bronze	Gold plated	————
Insulator	9T Nylon	————	UL94V-0
Common terminal	Beryllium copper	Selective gold plated (Nickel barrier)	————
Antenna terminal	Phosphor bronze	Selective gold plated (Nickel barrier)	————

Circuit diagram

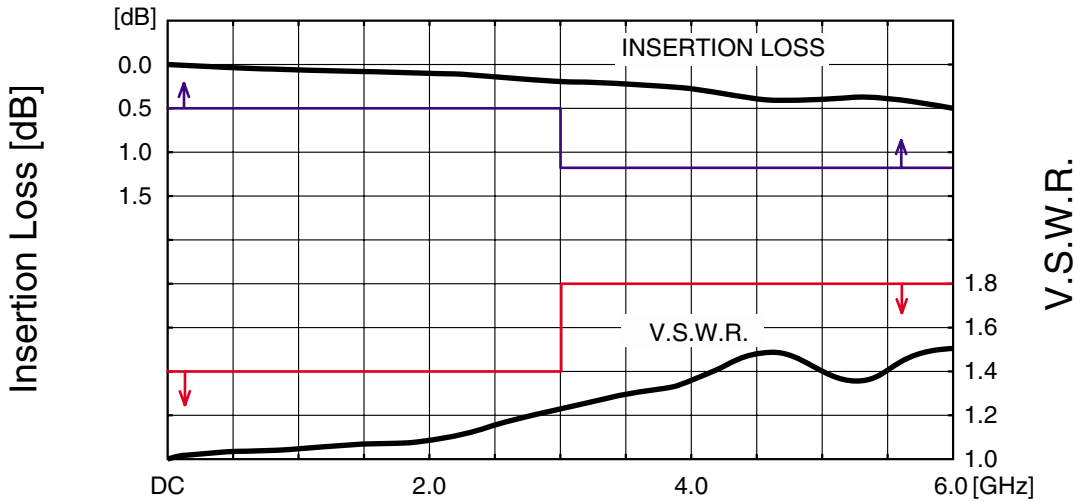


◆ Typical Data

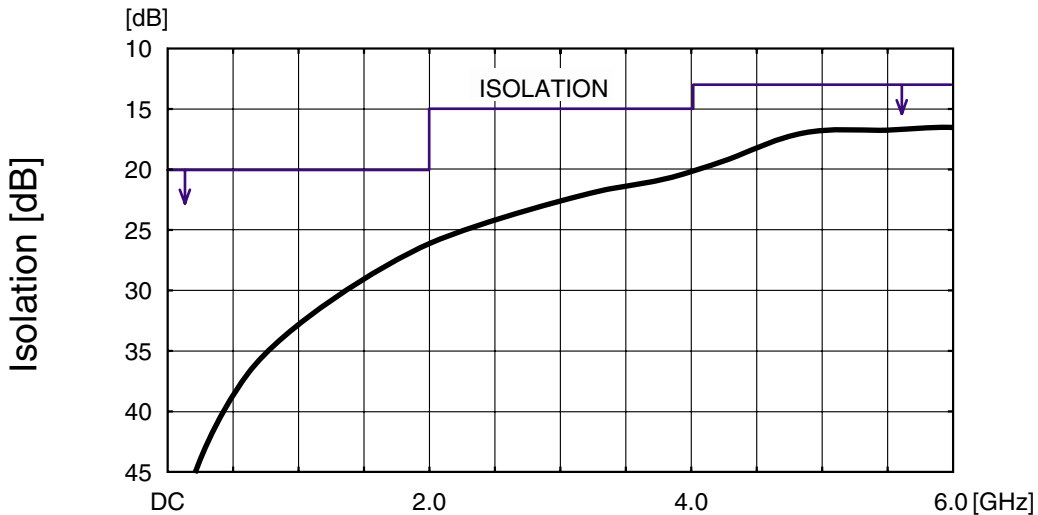
● NORMALLY CLOSED(N.C)~(Not mated with the plug)



● OPEN(N.O)~(Mated with the plug)

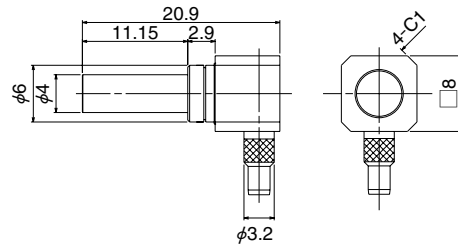


● ISOLATION



Plugs

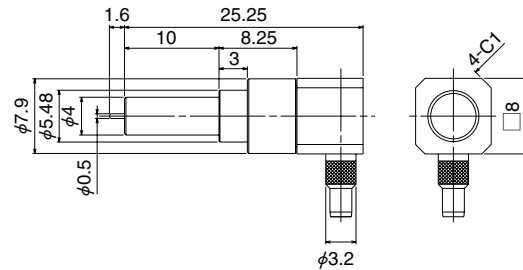
● Press down, right angle



Part Number	CL No.	Durability	RoHS
MS-156-C(LP)-1	358-0173-0	10,000 Times	YES

Applicable cable: 1.5D-HQEW, 1.5D-QEW (Fujikura Ltd.)

● Simplified lock, right angle

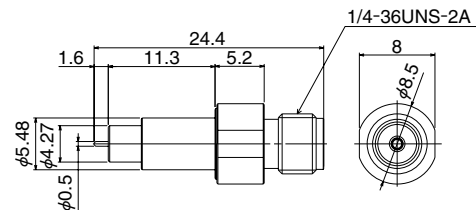


Part Number	CL No.	Durability	RoHS
MS-156-C(LP)-2	358-0174-3	500 Times	YES

Applicable cable: 1.5D-HQEW, 1.5D-QEW (Fujikura Ltd.)

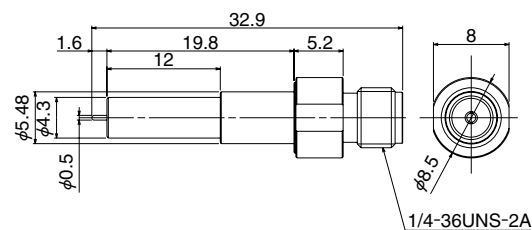
SMA Conversion Adapters

● Simplified lock, straight, short



Part Number	CL No.	Durability	RoHS
MS-156-HRMJ-2	358-0170-2	500 Times	YES

● Simplified lock, straight, long



Part Number	CL No.	Durability	RoHS
MS-156-HRMJ-5	358-0177-1	500 Times	YES