



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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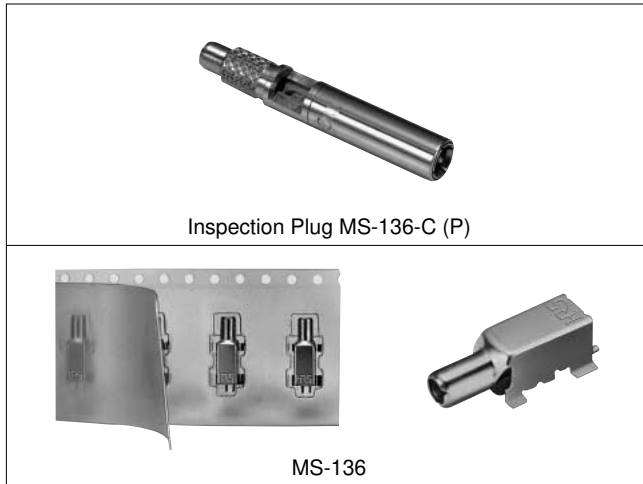
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Coaxial Switches for Check Purposes

MS-136 Series



■ Features

1. Simplification of Internal Output Checks

The high frequency signal can be simply switched by coupling or uncoupling.

2. Small, Lightweight Design

Switches are small and lightweight with a height of 3.6 mm, length of 11.5 mm, width of 4.6 mm, and weight of 0.5 g.

3. Suited to Automatic Mounting

Embossed tape packaging permits automatic mounting.

■ Product Specifications

Rating	Frequency range Characteristic impedance Maximum usable power	DC to 3 GHz 50Ω 2 W	Operating temperature range Operating relative humidity	-30°C to +85°C (No freezing) 90% or less
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Item	Standard				Conditions
1. Contact resistance	50 mΩ max.				Measured at 10 mA
2. Insulation resistance	1000 MΩ min.				Measured at 100 V DC
3. Withstand voltage	No line or insulation breakdown				100 V AC for one minute
4. VSWR	N•C	1.3 1.35 or less 1.4	N•O	1.4 1.7 or less 1.8	Measured at DC to 1 GHz Measured at 1 to 2 GHz Measured at 2 to 3 GHz
5. Insertion loss	N•C	0.3 dB 0.4 dB or less 0.5 dB	N•O	0.3 dB 0.6 dB or less 0.8 dB	Measured at DC to 1 GHz Measured at 1 to 2 GHz Measured at 2 to 3 GHz
6. Reverse Direction Loss	20 dB 16 dB or greater 14 dB				Measured at DC to 1 GHz Measured at 1 to 2 GHz Measured at 2 to 3 GHz
7. Vibration resistance	No electrical disconnections of 1μs or greater Contact resistance: 70 mΩ max. No damage, cracks, or parts looseness				Frequency of 10 to 55 Hz, overall amplitude of 1.5 mm, in 3 axial directions, 2 hours each
8. Shock resistance	No electrical disconnections of 1μs or greater Contact resistance: 70 mΩ max. No damage, cracks, or parts looseness				490 m/s ² acceleration, half sine wave, in 3 axial directions, 6 times each
9. Insertion/Withdrawal life	70 mΩ or less				5000 insertion/withdrawal cycles
10. Humidity resistance	Contact resistance: 70 mΩ max. Insulation resistance: 10 MΩ min. No damage, cracks, or parts looseness				Leave for 96 hours at a temperature of 40°C and humidity of 90 to 95%
11. Temperature resistance cycle	Contact resistance: 70 mΩ max. Insulation resistance: 1000 MΩ min. No damage, cracks, or parts looseness				(-55°C: 30 min. → 5 to 35°C: 5 min. → 85°C: 30 min. → 5 to 35°C: 5 min.) for 5 cycles
12. Corrosion resistance	Contact resistance: 70 mΩ max. No serious corrosion				Continuous immersion in 5% salt water for 48 hours

● The test method conforms to JIS.

● The temperature resistance cycle, humidity resistance, and shock resistance tests are verification tests of part deterioration and looseness, not tests to be conducted at time of switching or when conducting.

■ Applications

Portable terminals and mobile wireless equipment.

Materials

MS-136

Part	Material	Processing
External conductor (B)	Phosphor bronze	Gold plating
Insulation	Polyamide resin	—
Contact (A)	Phosphor bronze	Gold plating
Contact (B)	Beryllium copper	Gold plating

MS-136-C (P)

Part	Material	Processing
External ring	Phosphor bronze	Gold plating
External conductor	Phosphor bronze	Nickel plating
Male contact	Phosphor bronze	Gold plating
Insulation	Teflon	—
Crimp sleeve	Copper	Nickel plating

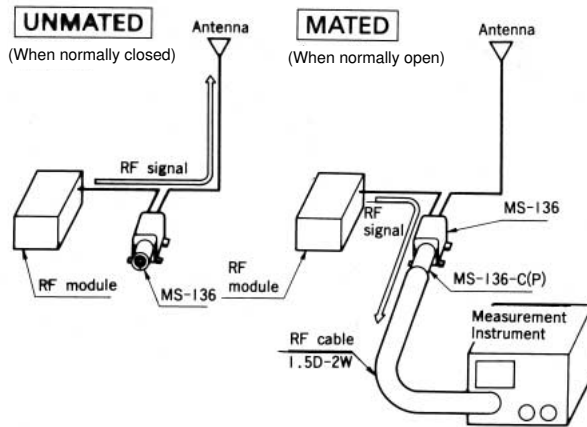
Product Number Breakdown

MS - 136 - C (P)

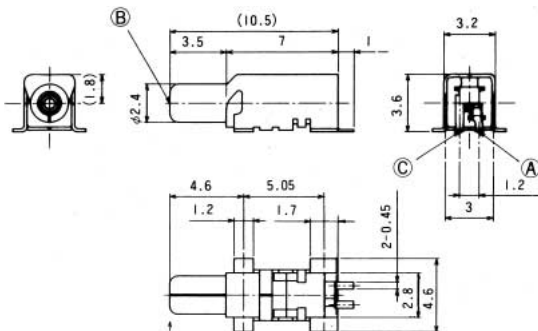
① ② ③

① MS: Indicates coaxial switches (i.e., Mobile Switches)
② Series No.: 136
③ C (P): Indicates a straight plug

Application Diagram

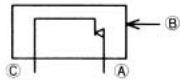


External Dimensions



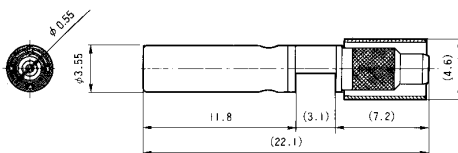
Aperture surface

The circuit structure is as described below.
 Between (A) and (C): Normally closed
 Between (B) and (C): Normally open



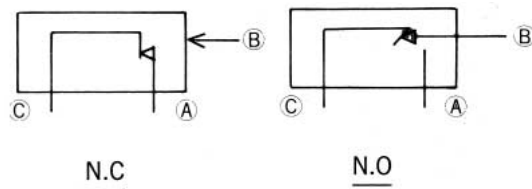
Product Number	Weight
MS-136	0.5g

NOTE: When ordering embossed tape packaged items, affix (06) to the end of the product number.

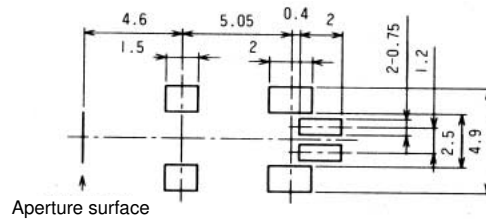


Product Number	Weight	Suitable Cable
MS-136-C (P)	1g	1.5D-2W (JIS standard)

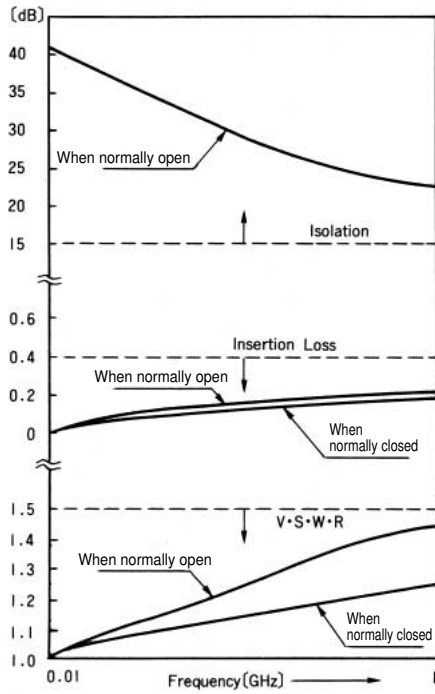
Circuit Structure Diagram



Recommended Board Pattern Diagram

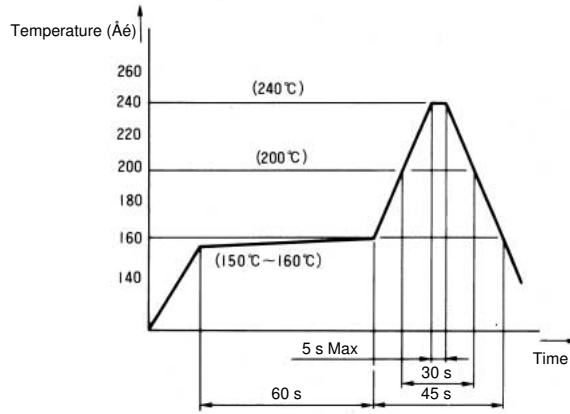


■ Typical Data



(When normally closed: MS-135 single item condition
 When normally open: MS-135 and MS-135-C (P) coupled condition)

■ Recommended Temperature Profile (VPS Reflow and IR Reflow)



When hand soldering is used, use a tip temperature of 280°C or less and a soldering time of 3 seconds or less.