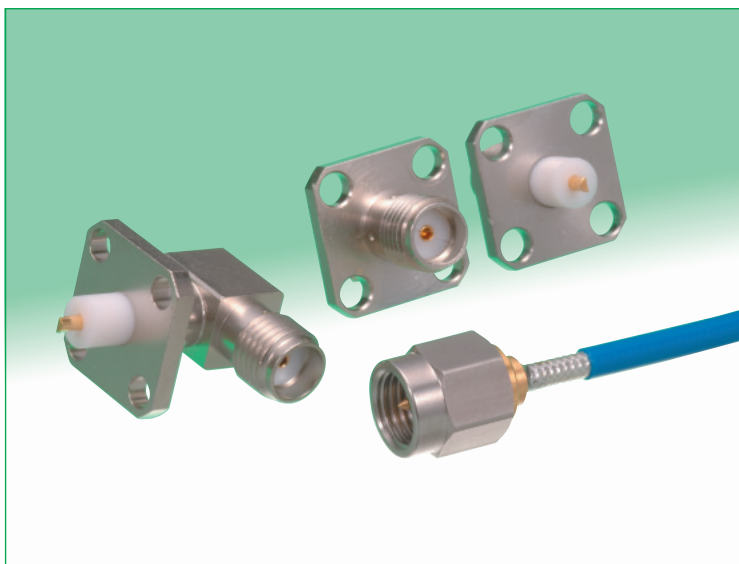




Low-Cost HRM (SMA) Coaxial Connectors

HRM(VA) Series



■ Features

1. Reduced cost

A reduction of the number of parts and a change of materials make these connectors more economical to use than the existing HRM series.

2. Compatible with standard SMA products

Couples with the HRM series connectors and other SMA standard products.

The high frequency characteristics are the same as the existing HRM series.

3. Uses semi-rigid coaxial cable

Semi-rigid coaxial cables of 0.141 inch dia. (3.58mm) or 0.085 inch dia. (2.15mm) can be used with the plug assemblies.

■ Applications

Mobile communications, base stations, microwave equipment, internal wiring of test and measuring instruments.

■ Product Overview

Part Number	CL No.	Overview	Frequency Range
HRM-P101	CL323-0816-5	Straight plug - 0.141-inch dia. semi-rigid coaxial cable	Up to 18 GHz
HRM-P101S	CL323-0817-8	Straight plug - 0.141-inch dia. semi-rigid coaxial cable	Up to 18 GHz
HRM-P100-3.58PSG	CL323-0811-1	Straight plug - 0.141-inch dia. semi-rigid coaxial cable	Up to 12.4 GHz
HRM-P100-141BN	CL323-0837-5	Straight plug - 0.141-inch dia. semi-rigid coaxial cable	Up to 18 GHz
HRM-P100-2.19PSP	CL323-0810-9	Straight plug - 0.085-inch dia. semi-rigid coaxial cable	Up to 12.4 GHz
HRM-P100-085BN	CL323-0838-8	Straight plug - 0.085-inch dia. semi-rigid coaxial cable	Up to 12.4 GHz
HRM(G)-306S	CL323-0823-0	Straight receptacle (3 separate components supplied)	Up to 18 GHz
HRM(G)-306B	CL323-0829-7	Straight receptacle (3 separate components supplied)	Up to 18 GHz
HRM(G)-303B	CL323-0828-4	Straight receptacle (3 separate components supplied)	Up to 18 GHz
HRM(G)-305B	CL323-0830-6	Right-angle receptacle	Up to 12.4 GHz
HRM(G)-310B	CL323-0831-9	Right-angle receptacle	Up to 12.4 GHz
HRM(G)-309B	CL323-0832-1	Right-angle receptacle	Up to 12.4 GHz
HRM-R300-110S	CL323-0818-0	Straight receptacle	Up to 12.4 GHz
HRM-R300-118S	CL323-0819-3	Straight receptacle	Up to 12.4 GHz

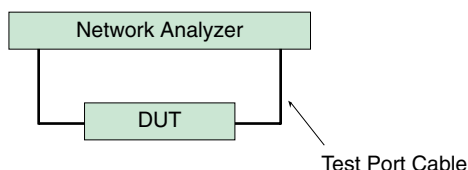
Product specifications

Ratings	Characteristic impedance Frequency range	50 Ω DC to 12.4GHz DC to 18GHz	Operating temperate range Operating relative humidity	-55°C to +85°C 95% max.
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Item	Specification	Conditions
1.Insulation resistance	5000M Ω min.	500V DC
2.Withstanding voltage	No flashover or insulation breakdown.	1000V AC / one minute (plug, 0.141-inch dia. semi-rigid cable / receptacle) 500V AC / one minute (plug, 0.085-inch dia. semi-rigid cable)
3.Contact resistance	4m Ω min. (Center conductor or outer conductor)	100mA max.
4.Center contact holding force	Mating: 8.9N Un-mating: 0.3N	Measured with a ϕ 0.9398 mm pin gauge Measured with a ϕ 0.9017 mm pin gauge
5.V.S.W.R.※	Straight type: 1.05+0.01f[f:GHz]max. Right angle type: 1.05+0.025f[f:GHz]max.	DC to 12.4GHz , 18GHz
6.Vibration	No electrical discontinuity of 1 μ s or more. No damage, cracks or parts dislocations.	Frequency: 10 to 2000Hz, single amplitude of 0.75mm, acceleration of 196m/s ² , for 10 cycles in the direction of each of the 3 axis.
7.Humidity	Insulation resistance 100M Ω min. (high humidity) Insulation resistance 5000M Ω min. (dry) No damage, cracks or parts dislocation.	240 hours at temperature of +25°C to +65°C and humidity of 90% to 98%.
8.Temperature cycle	Contact resistance: 4m Ω min. (Center conductor or outer conductor) No damage, cracks or parts dislocation.	Temperature: -55°C → +5 ~ 35°C → +85°C → +5 ~ 35°C Duration: 30 → 5MAX → 30 → 5MAX (Minutes) 5 cycles
9.Durability (mating/un-mating, with corresponding plug)	Contact resistance: 6m Ω min. (Center conductor or outer conductor) No damage, cracks or parts dislocation.	1000 cycles (Material: Stainless steel) 500 cycles (Material: Brass)
10.Salt spray test	No excessive corrosion	5% salt water solution, 48 hours

※V.S.W.R. Measurement System

The above V.S.W.R. standard values were measured using the measurement shown below.



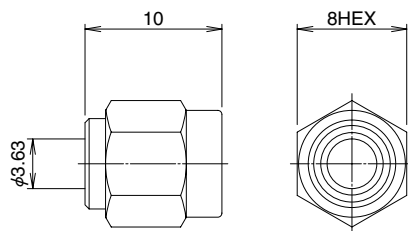
Note 1: Connectors for use with cable are measured with 10 cm of suitable cable attached at both ends.

Note 2: Connectors for use with printed circuit boards are measured with special adapter attached.

Materials/Finish

Part	Material	Finish
Shell	Plug	Stainless steel/Brass
	Receptacle	Stainless steel/Brass
Male center contact	Brass	Gold plated
Female center contact	Beryllium copper	Gold plated
Insulator	PTFE	—
Coupling	Stainless steel/Brass	Gold plated, passivated/nickel plated

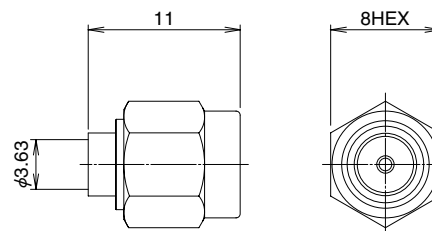
Plugs



Note: Supplied not assembled.

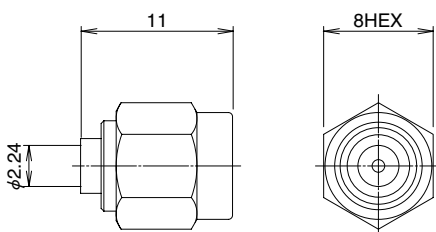
Part number	CL No.	Remarks
HRM-P101	323-0816-5	Stainless steel body, gold plated
HRM-P101S	323-0817-8	Stainless steel body, passivated
HRM-P100-141BN	323-0837-5	Brass body, nickel plated

0.141-inch dia. semi-rigid coaxial cable



Part number	CL No.	Remarks
HRM-P100-3.58PSG	323-0811-1	Stainless steel body, passivated

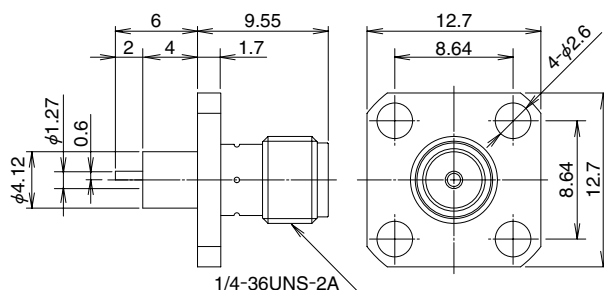
0.141-inch dia. semi-rigid coaxial cable



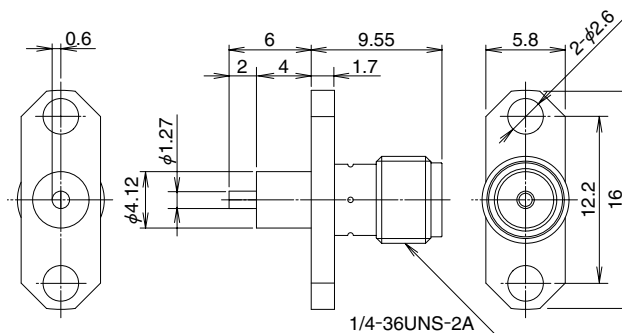
Part number	CL No.	Remarks
HRM-P100-2.19PSP	323-0810-9	Stainless steel body, passivated
HRM-P100-085BN	323-0838-8	Brass body, nickel plated

0.085-inch dia. semi-rigid coaxial cable

Receptacles (3 separate components)

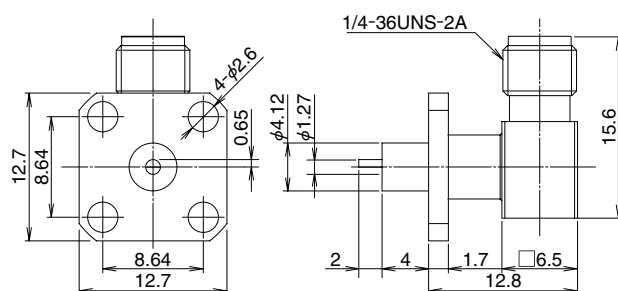


Part number	CL No.	Remarks
HRM(G)-306S	323-0823-0	Stainless steel body, passivated
HRM(G)-306B	323-0829-7	Brass body, nickel plated

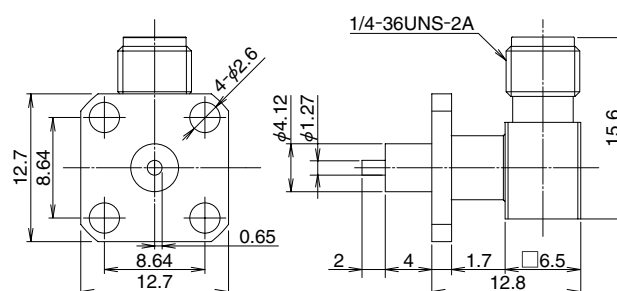


Part number	CL No.	Remarks
HRM(G)-303B	323-0828-4	Brass body, nickel plated

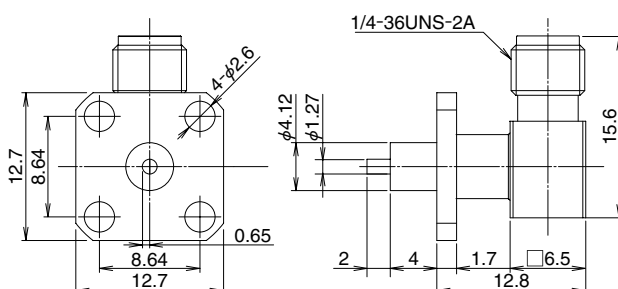
Right angle receptacle



Part number	CL No.	Remarks
HRM(G)-305B	323-0830-6	Brass body, nickel plated

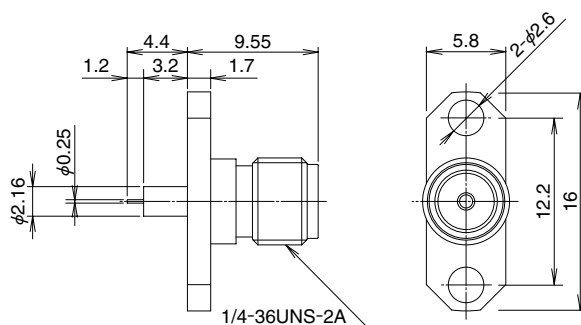


Part number	CL No.	Remarks
HRM(G)-309B	323-0832-1	Brass body, nickel plated

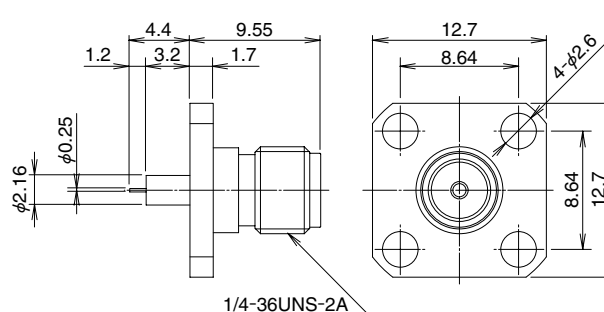


Part number	CL No.	Remarks
HRM(G)-310B	323-0831-9	Brass body, nickel plated

Receptacle



Part number	CL No.	Remarks
HRM-R300-110S	323-0818-0	Stainless steel body, passivated



Part number	CL No.	Remarks
HRM-R300-118S	323-0819-3	Stainless steel body, passivated



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