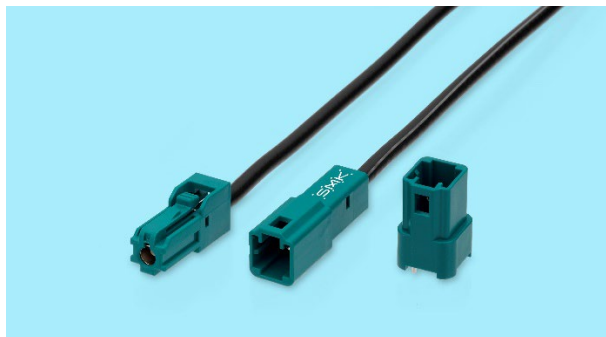


## SMK Develops Small Coaxial Connector for Automobiles That Can Accommodate Cables of Two Different Diameters



SMK Corporation has developed automotive small coaxial connectors “MH-2 Series”. With the commonized housing, it allows the connection of cables of two different thicknesses; 1.5D and 2.5D. Board plugs for connecting coaxial cables to boards are also available.

In recent years, the number of devices such as cameras and antennas equipped in cars has been increasing, and at the same time, these automotive devices are becoming more and more high-definition capable. With the increase in data traffic, the trend toward higher transmission speeds and higher frequencies is accelerating. Against this backdrop, there is a strong need to reduce the size of connectors to save space, use larger diameter cables to improve transmission performance, and take measures against noise. To meet these demands, SMK has developed small coaxial connectors that can connect cables of different thicknesses, support high-speed transmission and high frequency, and have excellent anti-noise performance.

It provides a favorable high-frequency response of up to 6GHz as well as enhanced noise resistance performance by using a unique contact structure. Furthermore, the volume when mated is 30% less than SMK’s conventional FAKRA connector, contributing to the downsizing of automotive devices.

### **[Applications]**

Automotive Devices (cameras, antennas, ECUs, IVIs, etc.)



Published Date	September 22nd, 2021	
Press Release Number	1139CS	
Name	Small Coaxial Connector for Automobiles "MH-2 Series" Part Number: CRC1001-61XXF (1.5D cable plug) CRS9001-53XXF (1.5D cable jack) CRC1001-62XXF (2.5D cable plug) CRS9001-54XXF (2.5D cable jack) CRC5001-93XXF (Board plug)	
Features	1) Common housing enables connection between 1.5D and 2.5D cables. 2) VSWR less than 1.5 (frequency range of up to 6GHz) 3) Enhanced anti-noise performance 4) Small size (Volume reduced by 30% compared to SMK's FAKRA connector)	
Major Specifications	Rated Voltage / Current	60V / 1A
	Contact Resistance	20m $\Omega$ maximum (initial)
	Insulation Resistance	500V DC, 1,000M $\Omega$ minimum
	Withstanding Voltage	500V AC (1 minute)
	Operating Temperature Range	-40°C to +105°C
	Frequency Impedance	DC to 6GHz
	Nominal Impedance	50 $\Omega$
	Insertion Loss	DC to 3GHz 0.4dB maximum 3 to 6GHz 0.6dB maximum
	Applicable Cable	1.5D and 2.5D coaxial cable



Major Specifications	External Dimensions	Cable plug: 8.5mm (W) × 26.75mm (D) × 9.75mm (H) Cable jack: 7.0mm (W) × 20.4mm (D) × 9.45mm (H) When mated: 8.5mm (W) × 36.75mm (D) × 9.75mm (H)
		Board plug: 10.5mm (W) × 10.75mm (D) × 16.5mm (H)
	Mounting of Board Plug	Mounting Area: 112.88mm <sup>2</sup> Mounting Height: 16.5mm Mounting Direction: Vertical Mounting Method: Through hole reflow
	Operating Life	25 cycles
Start Taking Orders From	November 2021	
Goes Into Mass Production From	April 2022	
Sample Price	Depends on specifications of cables.	
Inquiry	<a href="#">For more information, please contact CS Division</a>	