

Amphenol[®] RF

Global RF Solutions

FEATURES & BENEFITS

Broadband performance with low reflection DC to 6 GHz

Quick connect/disconnect snap-on mating reduces installation time

Accommodates a wide range of miniature RG flexible semi-rigid coaxial cables

APPLICATIONS

Base Stations

Components (Filters, Amplifiers, Combiners)

GPS

Head End Equipment

Instrumentation

PC/LAN

Radios

Telecom

Wireless Network Antennas



MCX Connectors

MCX

MCX connectors conform to the European CECC 22220 spec and were introduced in the 1980's. While the MCX uses identical inner contact and insulator dimensions as the SMB, the outer diameter of the plug is .140 inches, which is 30% smaller than the SMB. This series provides designers with options where weight and physical space are limited. MCX provides broadband capability though 6 GHz with a snap-on connector design. A range of connectors are available, including printed circuit board and cable connectors and they are all used in the Automotive, Wireless LAN, Broadband and Wireless Infrastructure markets.

50Ω Specification Conditions

Electrical

Impedance	50 Ω
Frequency Range	0-6 GHz
Voltage Rating	335 VRMS
Dielectric Withstanding Voltage	1,000 volts
VSWR	Straight connectors: 1.00 @ 2.5 GHz Right angle connectors: 1.10 @ 2.5 GHz
Contact Resistance	Center contact: 5 m Ω; Outer contact: 1.0 m Ω
Insulation Resistance	5,000 M Ω minimum
Insertion Loss	0.10 dB @ 1 GHz

Mechanical

Mating	Snap-on coupling per CECC 22220
Braid/Jacket Cable Affixment	Hex Crimp/Solder
Center Conductor Cable Affixment	Solder
Contact Captivation	All types unless noted otherwise
Engagement Forces	Engagement: 4.5 lbs (20N) maximum Disengagement: 2.3 lbs (10N) minimum
Connector Durability	500 mating cycles minimum

Material

Male Contact	Brass per QQB-626
Female Contact	Beryllium copper per QQC-530, heat-treated per MIL-H-7199
Contact Plating	30 μ" Gold
Body, Metal Parts	Brass per QQB-626
Body/Metal Parts Finish	Nickel or Gold
Insulator	PTFE
Gasket	Silicone rubber
Crimp Ferrule	Seamless copper tubing alloy
Ferrule Finish	Nickel or Gold

Environmental

Temperature Range	-65°C to +165°C
Thermal Shock	MIL-STD-202 method 107, test condition B (except high temperatures @ 200°C
Shock	MIL-STD-202 method 213, snap-on, test condition B
Vibration	MIL-STD-202 method 204, snap-on, test condition B
Corrosion	MIL-STD-202 method 101, test condition B. 5% salt solution

75Ω Specification Conditions

Electrical

Impedance	75 Ω
Frequency Range	0-4 GHz
Voltage Rating	170 VRMS
Dielectric Withstanding Voltage	500 volts
VSWR	Straight connectors: 1.06 @ 2.5 GHz Right angle connectors: 1.08 @ 2.5 GHz
Contact Resistance	Center contact: 5 m Ω; Outer contact: 2.5 m Ω
Insulation Resistance	10,000 M Ω minimum
Insertion Loss	0.10 dB @ 1 GHz

Mechanical

Mating	Snap-on coupling per CECC 22220
Braid/Jacket Cable Affixment	Hex crimp/Solder
Center Conductor Cable Affixment	Solder
Contact Captivation	All types unless noted otherwise
Engagement Forces	Engagement: 4.5 lbs (20N) maximum Disengagement: 2.3 lbs (10N) minimum
Connector Durability	500 mating cycles minimum

Material

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Crimp Ferrule	Seamless copper tubing alloy
Ferrule Finish	Nickel or Gold

Rev. C

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