Menu

Amphenol® RF

NEED HELP?
Contact Customer Service
(800) 627 - 7100
CONTACT US

HOME / CONNECTORS / SMA

FILTER BY

- Gender
  - Jack (279)
  - Plug (165)
+ Orientation
+ Impedance (Ohms)
+ Mounting Feature
+ Termination Style
+ Cable Type
+ Cable Group
+ Body Finish
+ Body Material
+ Contact Finish
+ Contact Material
+ Contact Termination Style
+ Max Frequency (GHz)
+ Coupling Mechanism
+ Insulator Material
+ IP Rating
+ Isolated
+ Polarity
+ Extended Dielectric
+ Low PIM
+ Rec PCB Thickness (In.)
+ Non-Magnetic
+ Military Qualified

SMA CONNECTOR SERIES

Using a threaded interface, SMA 50 Ohm connectors are semi-precision units that provide excellent electrical performance from DC to 18 GHz and outstanding mechanical durability. SMA connectors feature stainless steel or brass construction and ¼ - 36 threaded coupling, which offers high performance in a compact design.

For phase array radar, test equipment, ILS landing systems and other instrumentation using phase matching techniques, SMA interconnects offer a precise and simple means of phase adjustment for microwave devices. Built in accordance with MIL-C-39012 and CECC 22110/111, SMA connectors can be mated with all connectors that meet these specification mating diameters regardless of manufacturer.

Related Products

SMA Adapters

SMA Accessories

FEATURES AND BENEFITS

- Light weight, compact and vibration proof design
- Low cost commercial grade (Brass SMA) available in nickel or gold plating
- Terminates to all standard flexible coaxial cables, low-loss (LMR) type cables and industry standard semi-rigid and conformable cables

APPLICATIONS

- Base stations
- Antennas
- Telecommunications
- Instrumentation
- PC/LAN

SMA SPECIFICATIONS

Electrical

Impedance	50 Ohm
Frequency Range	
.141" & .085" O.D. Copper Jacket Semi-Rigid Cable	0-18 GHz
Flexible Cables	0-12.4 GHz
Voltage Rating	
RG-55, 58, 141, 142, 223, 303	500 volts peak
RG-122, 174, 188, 316	375 volts peak
Dielectric Withstanding Voltage (max.)	
.141" & RG-58 Group	1000 VRMS
.085" & RG-316 Group	750 VRMS
VSWR for Straight Connectors	
.141" O.D. Copper Jacket Cable	1.05 + .005 f (GHz)
RG-55 Group	1.15 + .011 f (GHz)
RG-122 Group	1.15 + .02 f (GHz)
RG-178 Group	1.20 + .025 f (GHz)

VSWR for Angle Connectors	
.141" O.D. Copper Jacket Cable	1.10 + .01 f (GHz)
RG-55 Group	1.15 + .02 f (GHz)
RG-122 Group	1.15 + .03 f (GHz)
RG-178 Group	1.20 + .03 f (GHz)
Insulation Resistance	5000 MΩ
Contact Resistance	
Center Conductor	2.0 mΩ
Body	2.0 mΩ
Braid to Body	0.5 mΩ
RF Leakage	-60 dB min
Insertion Loss	.03 sqrt(f(GHz)) dB max

Environmental

Temperature Range	-65ºC to +165ºC
Thermal Shock	MIL-STD-202 Method 107 (test cond. B) except at h @ + 200ºC
Corrosion	MIL-STD-202 Method 101 (test cond. B) 5% salt solu
Vibration	MIL-STD-202 Method 204 (test cond. D)
Shock	MIL-STD-202 Method 213 (test cond. I) No Disconti Permitted
Moisture Resistance	MIL-STD-202 Method 106, except step 7b (vibratior and high humidity measurements do not apply
Weatherproofing	
Crimp Type	heat shrink tubing
Solder Type	Silicone rubber gaskets
Altitude	MIL-STD-202 Method 105 (test cond. C), no corona
.141" & RG-55 Group	250 WRMS
.085" & RG-122 Group	190 VRMS

Mechanical

Contact Captivation	All types, except as noted
Connector Durability	500 mating and unmating cycles @ 12 cycles/min
Cable Retention	
RG-58, .141, 303	Crimp type, 60 lbs min
RG-55, 142, 223	80 lbs min, 400 N.cm
Connector Affixment to Cable	Crimp types, solder types
Connector Affixment to Center Contact	Solder, except as noted
Mating	.250-36 threaded coupling
Mating Torque	
Minimum	2" lb, 22 N.cm
Recommended (Industrial/Military Grade Parts)	7-10" lb, 80-110 N.cm
Recommended (Commercial Grade Parts)	4-6"lb, 45-67 N.cm
Maximum (Industrial/Military Grade only)	15" lb, 170N.cm
Coupling Nut Retention	
Axial Force	100lbs. Min., 300N.cm
Torque	15" lb min. 76 N.cm
Jacks	N/A

REVERSE POLARITY SMA SPECIFICATIONS

Electrical

Impedance	50 Ohm
Frequency Range	
Semi-Rigid	0-18 GHz
Flexible Cables	0-12.4 GHz
VSWR	
Straight Connectors: .141" S/R	1.05 + .005 f (GHz)

Straight Connectors: RG-174	1.20 + .025 f (GHz)
Dielectric Withstanding Voltage	1000 VRMS
Insertion Loss	.03 sqrt(f(GHz)) dB max
Insulation Resistance	5000 MΩ
RF Leakage	-60 dB min
Voltage Rating	375 volts peak

Environmental

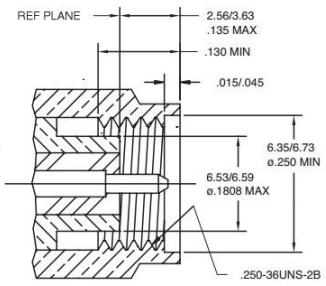
Temperature Range	-65ºC to +165ºC
Moisture Resistant	Mil-STD-202, Method 106 (test cond. B)
Corrosion	Mil-STD-202, Method 101, Condition B
Vibration	Mil-STD-202, Method 204, Condition B

Mechanical

Mating	.250-36 threaded coupling
Cable Affixment	Crimp or solder types
Center Conductor	Solder
Cable Retention	60- 80 lb, depending on cable

INTERFACE DIMENSIONS

Plug



Jack