



Description

SMA connectors are adaptable to interconnection requirements of both systems and components. Huang Liang offers a wide variety of cable connectors, receptacles, feed thrus, stripline launchers, and precision adapters to allow for interfacing with other connector series.

Applications

- Civil 8 military telecommunication
- Instrumentation
- Wireless
- Process Controls
PC/LAN
- Microwave Components (power splitters and combiners, filters, amplifiers)

Features

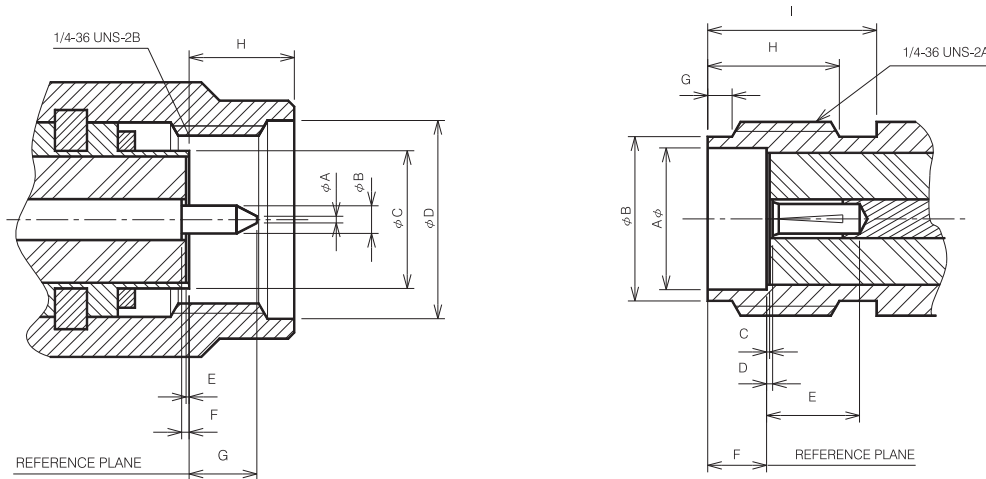
- Commercial Grade (Brass SMA) available.
- Various cable groups including double shielded 316.
- Built in accordance with MIL-C-39012 and CECC 22110/111.
- Gold or stainless steel passivated finish available.

SMA Series

Specification SMA 50 ohm 0-18GHz

SMA connectors are semi-precision, subminiature devices that provide repeatable electrical performance from DC to 12.4 GHz with flexible cable. Semi-rigid cabling extends the frequency range of the device to 18 GHz. These devices offer broadband performance with low reflection and constant 50 ohm impedance. These properties, along with minimum attenuation and low VSWR have made the SMA extremely popular in the microwave community. The SMA design has been broadened to accommodate many interconnect requirements and is available in pressure crimp, clamp and solder terminal attachments. SMA design parameters have incorporated the considerations of balancing cost, size, weight and performance to yield the best value in your microwave system. Among typical applications are components such as dividers, mixers, amplifiers, trimmers and attenuators. SMA connectors are also used to provide interconnections from printed circuit board striplines to coaxial cable.

Interface Mating Dimensions:



PLUG

Letter	Millimeters(Inches)	
	Minimum	Maximum
A	0.00(.000)	0.38(.015)
B	0.90(.0355)	0.94(.037)
C	-	4.59(.1808)
D	6.35(.250)	-
E	0.00(.000)	0.18(.007)
F	0.00(.000)	0.25(.010)
G	-	2.54(.100)
H	-	3.43(.135)

JACK

Letter	Millimeters(Inches)	
	Minimum	Maximum
A	4.60(.1810)	4.67(.1837)
B	5.28(.208)	5.49(.216)
C	0.00(.000)	0.18(.007)
D	0.00(.000)	0.25(.010)
E	2.92(.115)	-
F	1.88(.074)	1.98(.078)
G	0.38(.015)	1.14(.045)
H	4.32(.170)	-
I	5.54(.218)	-
J	1.24(.049)	1.30(.051)

Electrical :

Impedance	50 ohm
Frequency Range	0 to 18 GHz *for RG-402 & RG-405 semi-rigid cable- 0 to 18 GHz *for flexible*max operation frequency of cable per MIL-C-17
VSWR	*1.05+0.015 x f GHz max (straight) *1.15+0.015 x f GHz max (right angle) RG-402(0.141"OD.)→1.05+0.005 x f GHz max RG-405(0.085"OD.)→1.05+0.005 x f GHz max RG-58,141,142,223→1.10+0.01 x f GHz max (straight) 1.15+0.02 x f GHz max (right angle) RG-174,188,316→1.15+0.01 x f GHz max (straight) 1.18+0.02 x f GHz max (right angle) RG-178,196→1.20+0.020 x f GHz max (straight) 1.25+0.025 x f GHz max (right angle)
Voltage Rating	RG-402(0.141"OD.) →550 volts rms max RG-405(0.085"OD.) →335 volts rms max RG-58,141,142,223 →550 volts rms max RG-174,188,316 →335 volts rms max RG-178,196 →250 volts rms max
Dielectric withstanding Voltage	RG-402(0.141"OD.) →1000 volts rms max RG-405(0.085"OD.) →750 volts rms max RG-58,141,142,223 →1000 volts rms max RG-174,188,316 →750 volts rms max RG-178,196 →500 volts rms max
Contact resistance	Center Contact :5.0 milliohms max. Outer contact :1.0 milliohms max.
RF Leakage	-(90-f GHz) dB min
Insertion Loss	0.04dB maximum x \sqrt{f} GHz (straight) 0.06dB maximum x \sqrt{f} GHz (right angle)
Insulator resistance	5,000 Megaohms min

Mechanical & Environmental

Mating	1/4"-36 threaded coupling
Durability	500 matings
Coupling Nut Retention	Min 60 lbs
Recommend Nut Mating Torque	8 inch-pounds
Cable Retention	RG-58,141,142,223→40 lbs min RG-174,188,316→20 lbs min
Temperature Range	-65°C to 165°C
Vibration	MIL-STD-202 Method 204 test Cond.D.
Salt Spray	MIL-STD-202 Method 101 test Cond.B.
Temperature Cycling	MIL-STD-202 Method 102 test Cond.C.

Material

	Material	Plating
Connector Body	Stainless steel Brass	Passivated or gold Gold or Nickel
Center Contact	Male: Brass Female: Beryllium-Copper	Gold over Nickel Gold over Nickel
Insulation	Teflon	None
Gasket	Silicone	None
Crimp Ferrule	Annealed Copper	Same as Body