



SMA Connectors

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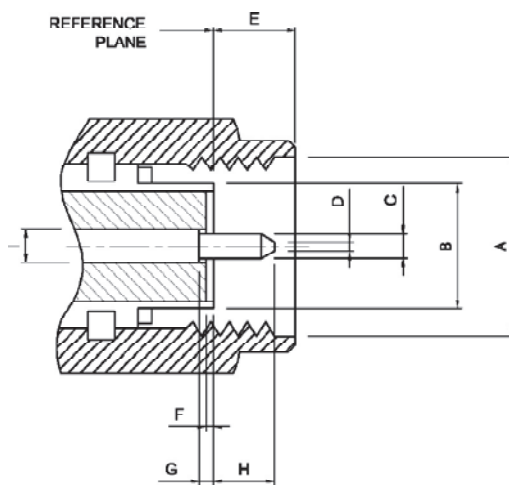


SMA connectors are semi-precision, subminiature devices that provide repeatable electrical performance from DC to 12.4 GHz with flexible cable. Semi-rigid cabling extends the frequency range of the device to 18 GHz. These devices offer broadband performance with low reflections and constant 50 ohm impedance. These properties, along with minimum attenuation and low VSWR have made the SMA extremely popular in the microwave community. LTI SMA connectors are designed to conform to MIL-C-39012 specifications.

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



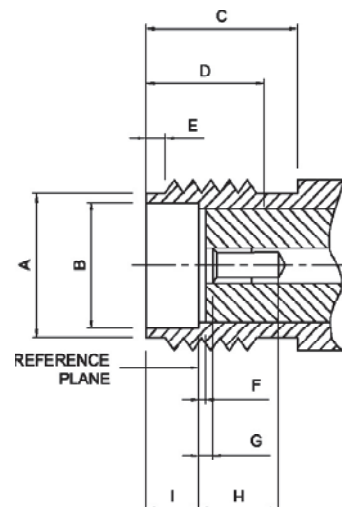
Letter	Minimum	Maximum
A	6.35	6.73
B	4.53	4.59
C	0.90	0.94
D	0.00	0.38
E	2.54	3.43
F	0.00	0.25
G	0.00	0.25
H	1.91	2.54
I	1.24	1.30

DIMENSIONS ARE IN MILLIMETERS

JACK

Letter	Minimum	Maximum
A	5.28	5.49
B	4.60	4.67
C	5.54	-
D	4.32	-
E	0.38	1.14
F	0.00	0.25
G	0.00	0.25
H	2.92	-
I	1.88	1.98
J	1.24	1.30

DIMENSIONS ARE IN MILLIMETERS





ELECTRICAL RATINGS

Impedance	50 ohm											
RF Leakage	-90 dB @ 2-3 GHz											
Insulation Resistance	5000 MΩ min											
Contact Resistance	<i>Center Contact</i>						<i>Outer Contact</i>					
	3.0 mΩ max						2.0 mΩ max					
	<i>Straight Connectors</i>						<i>Right Angle Connectors</i>					
Insertion Loss	.04 dB max x √f GHz											
Cable Type	<i>Semi-Rigid</i>			<i>Flexible</i>			<i>Semi-Rigid</i>			<i>Flexible</i>		
Frequency	DC to 18 GHz			DC to 12.4 GHz			DC to 18 GHz			DC to 12.4 GHz		
Cable Dielectric Diameter (mm)	0.94	1.68	3	0.86	1.5	2.95	0.94	1.68	3	0.86	1.5	2.95
Dielectric Withstanding Voltage (at sea level, in V rms, 50 Hz)	1000	1000	1500	500	750	1000	1000	1000	1500	500	750	1000
Working Voltage (at sea level, in V rms, 50 Hz)	250	335	500	250	250	335	250	335	500	250	250	335
Corona Extinction Voltage (at 21000m, in V rms, 50 Hz)	250	250	375	190	190	250	250	250	375	190	190	250

MECHANICAL RATINGS

Mating	¼"-36 threaded coupling	
	<i>Brass</i>	<i>Stainless Steel</i>
Durability	100 matings max	
Coupling Proof Torque	5.3 in-lbs	
Coupling Nut Retention Force	60.7 lbs min	
Contact Captivation – Axial	6.1 lbs min	
Cable Retention	12.1 lbs min	
	<i>RG-174, 188, 316</i>	
	<i>RG-178, 196</i>	
	7.3 lbs min	

ENVIRONMENTAL RATINGS

Temperature Range	-65°C to + 165°C
Thermal Shock	MIL-STD-202, Method 1017, Condition A
Vibration	MIL-STD-202, Method 204, Condition D
Corrosion	MIL-STD-202, Method 101, Condition B
Temperature Cycling	MIL-STD-202, Method 102, Condition C

MATERIALS

	<i>Material</i>	<i>Plating</i>
Connector Body	Brass per QQ-B-626	Gold/Nickel
Center Contact	<i>Male</i> Brass per QQ-B-626	Gold
	<i>Female</i> Beryllium Copper per QQ-C-530	Gold
Insulator	Teflon	None
Gasket	Silicone Rubber	None
Crimp Ferrule	Annealed Copper per WW-T-799	Same as body

VSWR

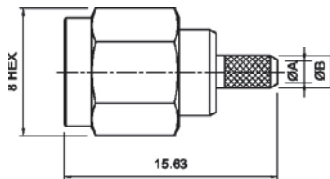
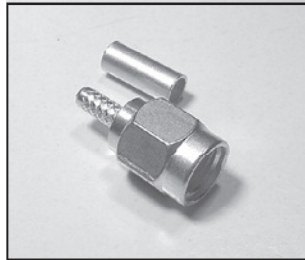
Cable Type	Frequency Range						
	1 GHz	3 GHz	6 GHz	10 GHz	12.4 GHz	18 GHz	
RG-55, 142, 223, 400	1.06	1.06	1.16	1.3	-	-	Typical VSWR for SMA straight connectors
RG-58	1.06	1.06	1.2	-	-	-	
RG-174, 188, 316	1.06	1.06	1.2	-	-	-	
RG-178, 196	1.06	1.06	1.15	-	-	-	
Semi-rigid .086"	1.03	1.03	1.03	1.1	1.3	-	
Semi-rigid .141"	1.03	1.03	1.03	1.1	1.25	1.3	
RG-55, 142, 223, 400	1.07	1.07	1.23	1.28	-	-	Typical VSWR for SMA right angle connectors
RG-58	1.07	1.07	1.23	-	-	-	
RG-174, 188, 316	1.07	1.1	1.3	-	-	-	
RG-178, 196	1.07	1.1	1.3	-	-	-	
Semi-rigid .086"	1.05	1.1	1.2	-	-	-	
Semi-rigid .141"	1.03	1.03	1.1	1.25	1.3	-	



Straight Crimp Plug

Part Number		Cable Type	Dimension	
Brass	Stainless Steel		A	B
LTI-SASM11GT-XXX	LTI-SASM11ST-XXX	RG-316,174,188;Q1,D316	1.6	2.35
LTI-SASM11GT-XXX	LTI-SASM11ST-XXX	RG-178,196	1.0	1.7

TO CREATE COMPLETE PART NUMBER: Fill in Cable Type where XXX is.
See Part Numbering Chart on page 3 for more info.
Nickel plated parts (LTI-SASM11NT-XXX) available. Call for min order reqs.

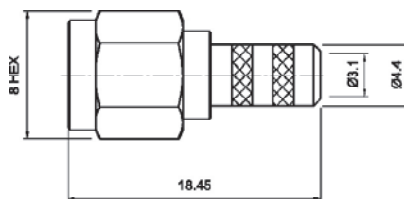
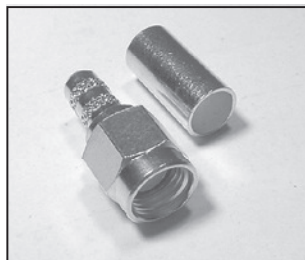


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Recommended Stripping DIMS:
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Straight Crimp Plug

Part Number		Cable Type
Brass	Stainless Steel	
LTI-SASM11GT-XXX	LTI-SASM11ST-XXX	RG-58,141,142,223,400

TO CREATE COMPLETE PART NUMBER: Fill in Cable Type where XXX is. See Part Numbering Chart on page 3 for more info.
Nickel plated parts (LTI-SASM11NT-XXX) available. Call for min order reqs.

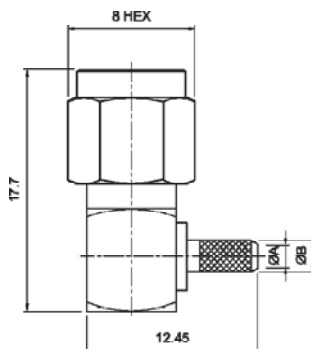


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Right Angle Crimp Plug

Part Number	Cable Type	Dimension	
LTI-SALM11GT-XXX	RG-316,174,188;Q1,D316	A: 1.6	B: 2.35
LTI-SALM11GT-XXX	RG-178,196	A: 1.0	B: 1.7

TO CREATE COMPLETE PART NUMBER: Fill in Cable Type where XXX is.
See Part Numbering Chart on page 3 for more info.
Nickel plated parts (LTI-SALM11NT-XXX) available. Call for min order reqs.



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