

SMA Series

Description

SMA connectors are adaptable to interconnection requirements of both systems and components. S-Conn offers a wide variety of cable connectors, receptacles, feed thru, end launches, and precision adapters to allow for interfacing with other connector.

Applications

- Civil & Military Telecommunication
- Instrumentation
- Wireless
- Process Control
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 / 1111.
- Gold or stainless steel passivated finish available.
- Interface according to IEC 169-15, EN 122110, MIL-C-39012 SMA, MIL-STD-348A

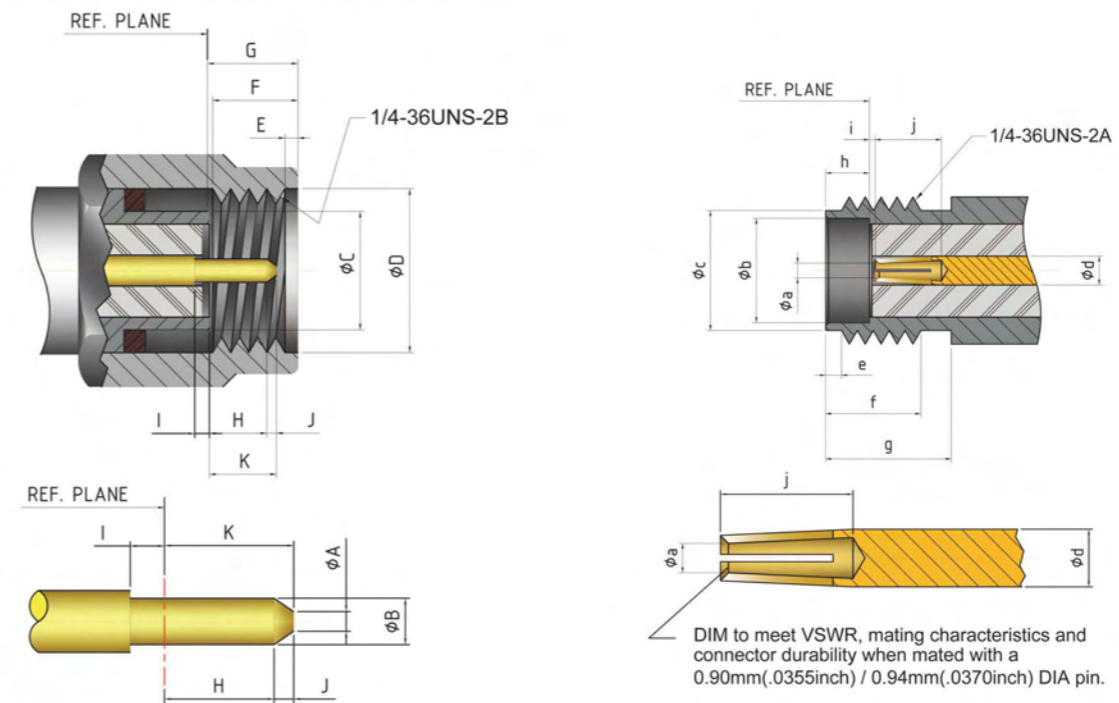
Specification

SMA 50 ohm 0-18 GHZ

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 stripliness to coaxial cable.

Interface Mating Dimensions

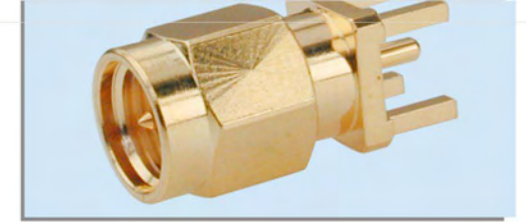
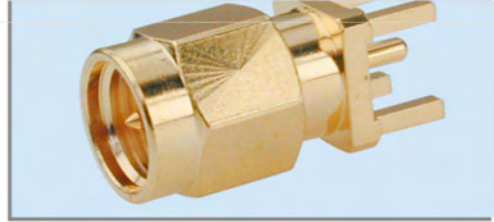


PLUG

Letter	Millimeters (inches)	
	Minimum	Maximum
A	—	0.38(.015)
B	0.90(.0355)	0.94(.037)
C	—	4.59(.1808)
D	6.35(.025)	—
E	0.38(.015)	1.15(.045)
F	3.30(.130)	—
G	—	3.43(.135)
H	1.27(.050)	—
I	0.00(.000)	0.245(.010)
J	—	0.38(.015)
K	—	2.54(.100)


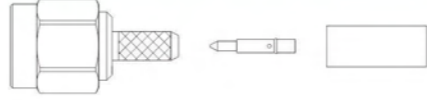
JACK

Letter	Millimeters (inches)	
	Minimum	Maximum
a	0.90(.0355)	0.94(.037)
b	4.60(.181)	—
c	5.28(.208)	5.49(.216)
d	1.25(.049)	1.30(.051)
e	0.38(.015)	1.15(.045)
f	4.32(.170)	—
g	5.54(.218)	—
h	1.88(.074)	1.98(.078)
i	0.00(.000)	0.25(.010)
j	2.92(.115)	—


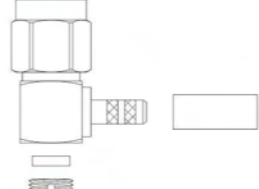


Crimp Termination for Flexible Cable


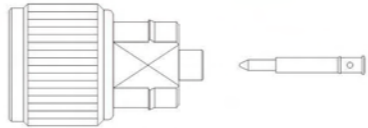
SMA Straight Crimp Plug

		Hand Tool	See Appendix B
		Cable	RG8/U, 8/X, 58/U, 174/U, 213/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E


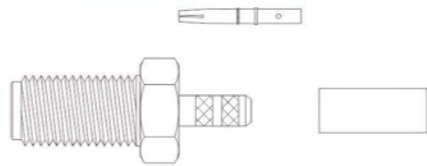
SMA R/A Crimp Plug

		Hand Tool	See Appendix B
		Cable	Mini Coaxial Cable, RG8/X, 58/U, 174/U, 178/U, 316/U
		Cable Assembly Instruction	See Appendix A Code H


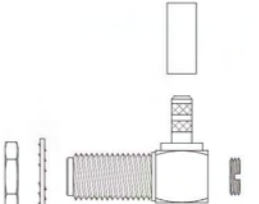
SMA Straight Crimp Plug for Antenna

		Hand Tool	See Appendix B
		Cable	Mini Coaxial Cable, RG178/U
		Cable Assembly Instruction	See Appendix A

SMA Straight Bulkhead Crimp Jack

		Hand Tool	See Appendix B
		Cable	RG8/X, 58/U, 174/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E

SMA R/A Crimp Jack

		Hand Tool	See Appendix B
		Cable	Mini Coaxial Cable, RG174/U, 178/U, 316/U
		Cable Assembly Instruction	See Appendix A Code H

Electrical

Impedance	50Ω
Frequency Range	0 to 18 GHz
VSWR	≅ 1.2 + .03 f (GHz)
RF Leakage	≧ 60 dB
Dielectric Withstanding Voltage	1000 V rms
Voltage Rating	≧ 500 V rms (depending on cable)
Center Contact Resistance	≧ 3 mΩ
Outer Contact Resistance	≧ 2.5 mΩ
Insulation Resistance	≧ 5 GΩ

Mechanical

Mating	1/4-36 UNS Screw-on Coupling
Connector Durability	≧ 500 Cycles (for beryllium copper female contact only)
Recommended Mating Torque	7.1 lbs ~ 9.7 lbs
Coupling Nut Retention Force	≧ 60.7 lbs
Cable Retention Force	≧ 7.3 lbs (for RG178) ≧ 12.1 lbs (for RG316) ≧ 28.7 lbs (for RG58)

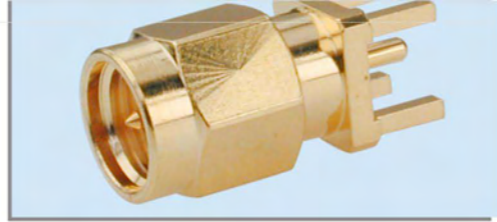
Environmental

Temperature Range	-65° C to 165° C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Cond. B
Vibration	MIL-STD-202, Method 204, Cond. D
Thermal Shock	MIL-STD-202, Method 107, Cond. B
Mechanical Shock	MIL-STD-202, Method 213, Cond. I

Material


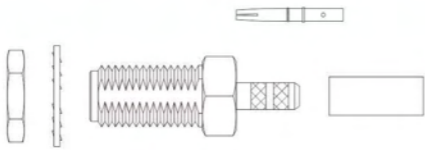
Parts Name	Material	Plating
Body	Stainless steel Brass	Passivated or Gold Nickel or Gold
Center Contact	Male: Brass Female: Beryllium Copper Phosphor Bronze	Gold
Insulator	PTFE	None
Gasket	Silicone Rubber	None
Crimp Ferrule	Annealed Copper	Same as Body

Note: Other Material/Finish is Available on Request.


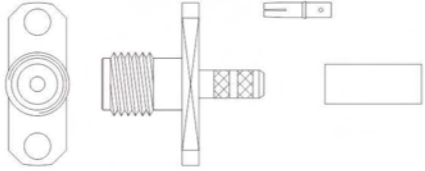


Crimp Termination for Flexible Cable


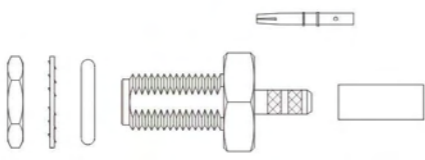
SMA Straight Bulkhead Crimp Jack

		Hand Tool	See Appendix B
		Cable	RG8/U, 8/X, 58/U, 174/U, 213/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E


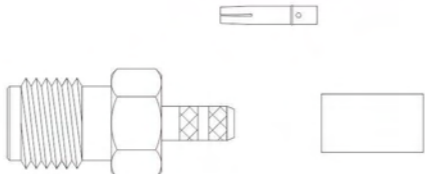
SMA Panel Mount Crimp Jack, 2 Hole Flange

		Hand Tool	See Appendix B
		Cable	Mini Coaxial Cable, RG58/U, 174/U, 178/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E


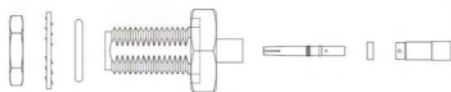
SMA Straight Bulkhead Crimp Jack with O-Ring

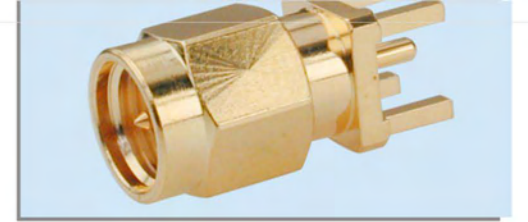
		Hand Tool	See Appendix B
		Cable	Mini Coaxial Cable, RG58/U, 174/U, 178/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E

SMA Straight Crimp Jack

		Hand Tool	See Appendix B
		Cable	RG58/U, 174/U, 316/U
		Cable Assembly Instruction	See Appendix A Code E


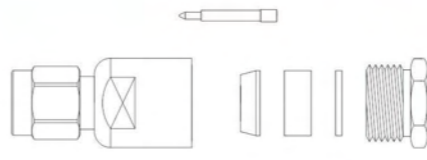
SMA Straight Clamp Plug

		Hand Tool	See Appendix B
		Cable	Mini Coaxial Cable
		Cable Assembly Instruction	See Appendix A Code I




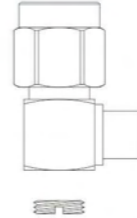
Clamp Termination for Flexible Cable

SMA Straight Clamp Plug


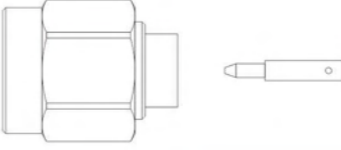
		Hand Tool	Nil
		Cable	RG58/U, 174/U, 316/U
		Cable Assembly Instruction	See Appendix A Code L

Direct Solder for Semi-Rigid Cable


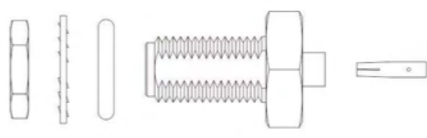
SMA R/A Plug

		Hand Tool	Nil
		Cable	RG402/U, 405/U
		Cable Assembly Instruction	See Appendix A


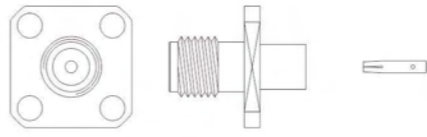
SMA Straight Plug

		Hand Tool	Nil
		Cable	RG402/U, 405/U
		Cable Assembly Instruction	See Appendix A Code M

SMA Straight Bulkhead Jack

		Hand Tool	Nil
		Cable	RG402/U, 405/U
		Cable Assembly Instruction	See Appendix A Code M

SMA Panel Mount Crimp Jack, 4-Hole Flange

		Hand Tool	Nil
		Cable	RG402/U, 405/U
		Cable Assembly Instruction	See Appendix A Code M