

SMA Series - Crimp

Plug and Jack



Plug



Jack

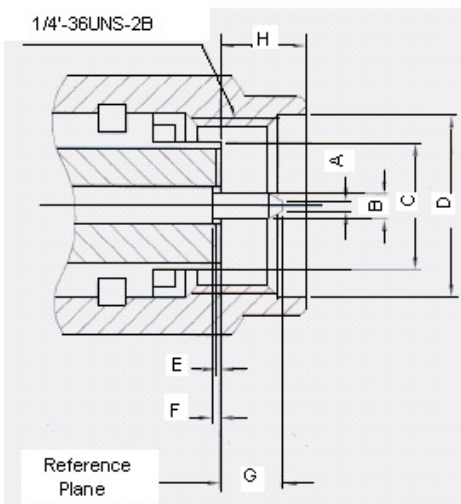


Features:

- SMA connectors are semi-precision, subminiature devices that provide repeatable electrical performance. These devices offer broadband performance with low reflection. 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 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 Dimensions:

Plug



Letter	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		0.25 (.010)
G	-	2.54 (.100)
H	-	3.43 (.135)

Dimensions : Millimetres (Inches)



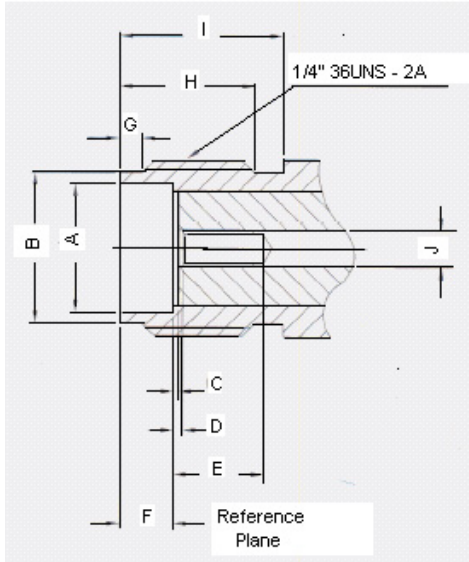
SMA Series - Crimp

Plug and Jack



Interface Dimensions:

Jack



Letter	Minimum	Maximum
A	4.60 (.1810)	4.67 (.1837)
B	5.28 (.208)	5.49 (.216)
C	0.00 (.000)	0.18 (.007)
D		0.25 (.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)

Dimensions : Millimetres (Inches)

Electrical:

Impedance	50Ω
Frequency Range	0 to 18.0GHz. • For flexible cable → maximum operation frequency of cable per MIL-C-17 (12.4GHz maximum)
Working Voltage	RG-58 → 500 volts rms maximum
Dielectric Withstanding Voltage	RG-58 → 1000 volts rms maximum
Contact Resistance	Centre contact = 3.0 Milli ohms maximum Outer contact = 2.0 Milli ohms maximum
Insertion Loss	0.06dB maximum x \sqrt{f} GHz at 6GHz
Insulation Resistance	5000 Mega ohms minimum

Mechanical and Environmental:

Mating	1/4" - 36 threaded coupling
Durability	500 matings
Coupling Nut Retention	60lbs minimum
Recommended Nut Mating Torque	7 to 10 inch-pounds
Cable Retention	RG-58 → 40lbs minimum
Temperature Range	-65 to +165°C
Vibration	MIL-STD-202 Method 204 Test Condition D
Salt Spray	MIL-STD-202 Method 101 Test Condition B
Thermal Shock	MIL-STD-202 Method 107 Test Condition B



SMA Series - Crimp

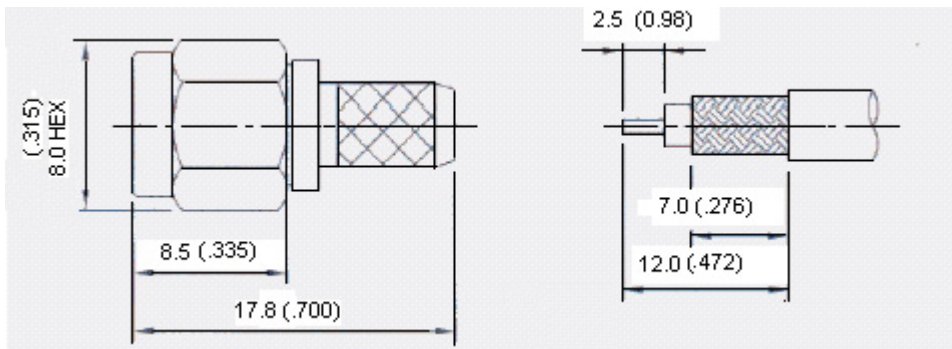
Plug and Jack



Material:

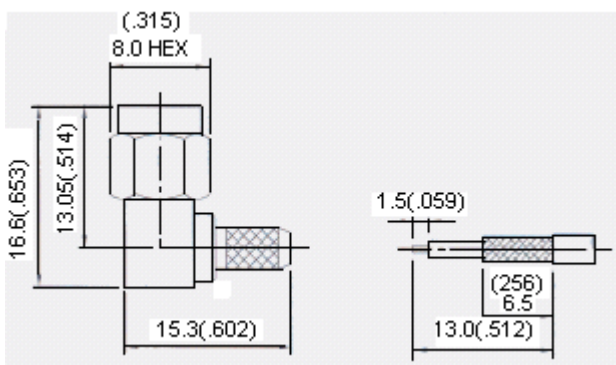
	Material	Plating
Connector Body	Stainless steel Brass	Passivated or gold Nickel or gold
Centre Contact	Male : Brass Female : Beryllium Copper	50µ" gold over 100µ" nickel
Insulation	Teflon	None
Gasket	Silicone Rubber	None
Crimp Ferrule	Annealed Copper	Same as Body

Straight Plug Crimp



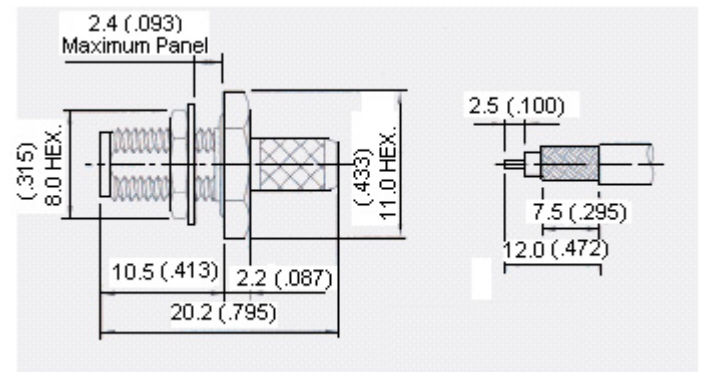
Dimensions : Millimetres (Inches)

Right Angle Plug Crimp



Dimensions : Millimetres (Inches)

Straight Bulkhead Jack Crimp



Dimensions : Millimetres (Inches)



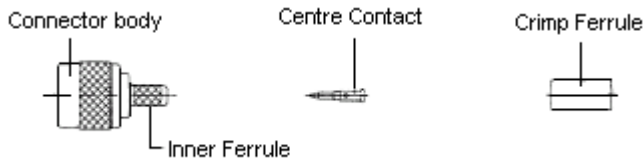
SMA Series - Crimp

Plug and Jack



Crimp Type Connectors

Straight Plug (19-03F-4-TGG) and SMA Straight Bulkhead Jack (19-04F-3-TGG)



1



Preparation of Cable

1. Slide crimp ferrule onto cable.
2. Strip cable to recommended dimensions.

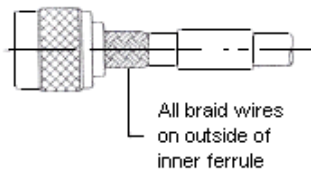
2



Solder Centre Contact to Cable Centre Conductor

1. Insert cable centre conductor into centre contact until it butts against cable dielectric.
2. Crimp centre contact.

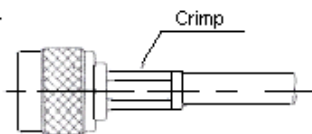
3



Attach Cable to Connector Body

1. Insert cable assembly into rear of connector body, with all braid wires on outside of inner ferrule.
2. Push cable assembly forward until contact snaps into place in insulator.

4



Final Assembly

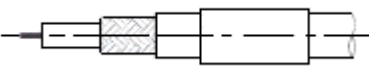
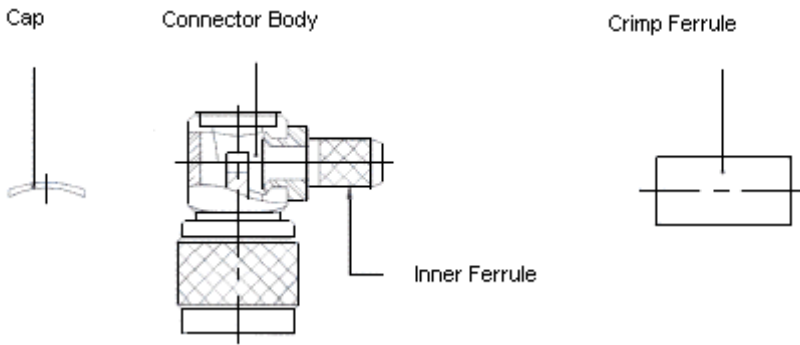
1. Slide Crimp ferrule forward until flush with connector body and crimp

SMA Series - Crimp

Plug and Jack

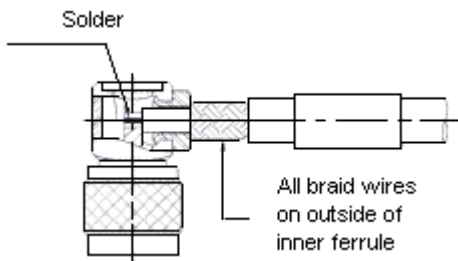
Crimp Type Connectors

SMA Right Angle Plugs (19-02F-8-TGG)



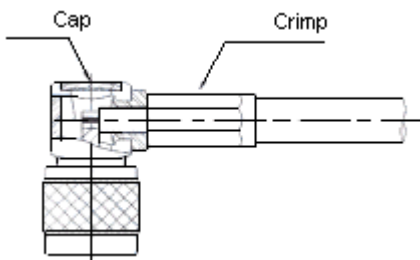
Preparation of Cable

1. Slide crimp ferrule onto cable.
2. Strip cable to recommended dimensions.



Solder Centre Contact to Cable Centre Conductor

1. Insert cable into connector body with centre conductor placed in contact slot, and with all braid wires on outside of inner ferrule.
2. Soft crimp centre contact to cable centre conductor.



Final Assembly

1. Slide crimp ferrule forward until flush with connector body and crimp.
2. Press cap into opening in rear of connector body.

Specifications

Type	Description	Applicable Cable	Part Number
Crimp	Right Angle Plug	RG58	19-02F-8-TGG
	Straight Plug		19-03F-4-TGG
	Straight Bulkhead Jack		19-04F-3-TGG