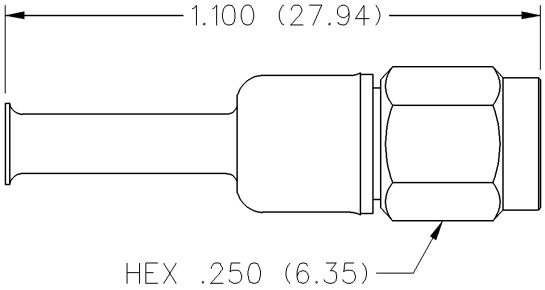
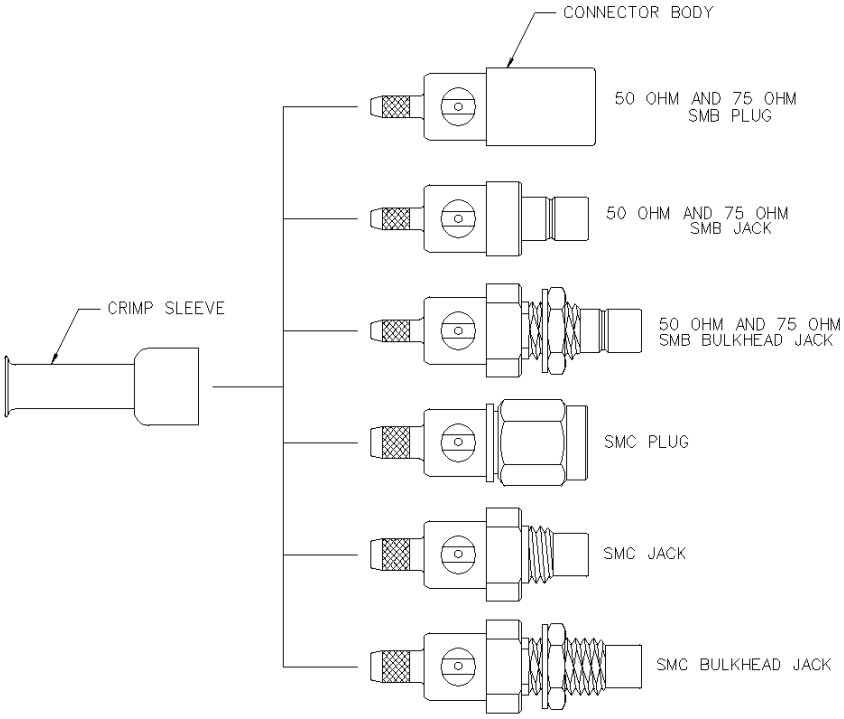
50 Ohm SMC
Straight Crimp Type Plug - Captivated Contact

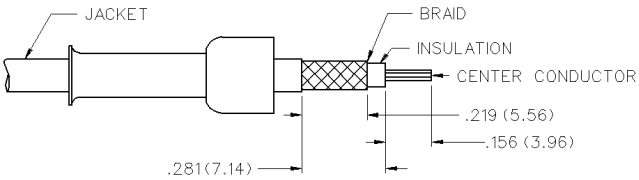
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

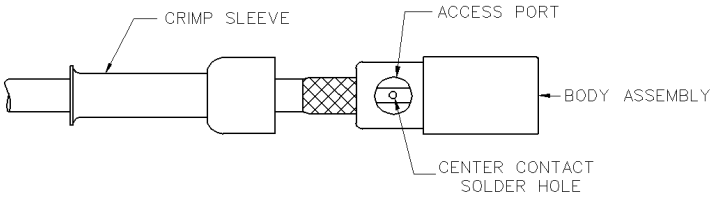


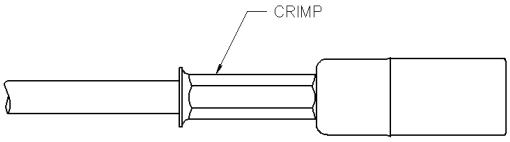
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG-316 DS, 188 DS	131-6404-001	131-6404-006



CABLE GROUP	PART NUMBER	CRIMP HEX
RG-316DS, 188DS	131-6404-001/006	.151 (3.83)







1. Identify connector parts. (2 piece parts - except bulkhead)
2. Strip cable to dimensions shown. Do not nick braid or center conductor. A wire stripper of correct size is recommended for this step. Twist stranded center conductor into tight bundle and tin. Slide crimp sleeve onto cable as shown.
3. Flare braid and slide cable into body making certain that the cable insulation bottoms in center contact.
   Solder Attachment: Solder center conductor to contact through the side access ports and hole in center contact. Use a minimum amount of solder for a full fillet joint. **.020 (0.51) diameter solder is recommended**.
   Crimp 50 Ohm connector contacts with 141-0000-911 dieset in 144-900 tool frame. Crimp 75 Ohm connector contacts with 141-0000-924 dieset in 144-0000-900 tool frame.

Cinch Connectivity Solutions
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SMC - 50 Ohm Connectors

Specifications

INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

ELECTRICAL RATINGS

Impedence: 50 ohms
Frequency Range: 0-10 GHz

VSWR: (f = GHz)	Straight Cabled	Right Angle Cabled
RG-178 cable	1.25 + .04f	1.40 + .06f
RG-316 and .086 semi-rigid cable	1.20 + .04f	1.30 + .04f
Uncabled receptacles	N/A	
Adapters	1.20 + .04f	

Working Voltage: (Vrms maximum)†

Connectors for Cable Type	Sea Level	70K Feet
RG-178	250	60
RG-316, .086 semi-rigid uncabled receptacles, adapters	335	85

Dielectric Withstanding Voltage: (VRMS minimum at sea level)†
- Connectors for RG-178 750
- Connectors for RG-316, .086 semi-rigid uncabled receptacles, adapters 1000

Corona Level: (Volts minimum at 70,000 feet)†
- Connectors for RG-178 185
- Connectors for RG-316, .086 semi-rigid 250
- Uncabled receptacles and adapters ..... N/A

Insertion Loss: (dB maximum, tested at 4 GHz)
- Straight cable connectors ..... 0.25 dB
- Right angle cable connectors ..... 0.50 dB
- Uncabled receptacles and adapters ..... N/A

Insulation Resistance: 1000 megohms minimum

Contact Resistance: (milliohms maximum)

	Initial	After Environmental
Center contact (straight cabled connectors and uncabled receptacles)	6.0	8.0
Center contact (right angle cabled connectors and adapters)	12.0	16.0
Outer contact (gold plated connectors)	1.0	N/A
Outer contact (nickel plated connectors)	2.5	N/A
Braid to body (gold plated connectors)	1.0	N/A
Braid to body (nickel plated connectors)	2.5	N/A

RF Leakage: (dB minimum tested at 2.5 GHz)
- Cable connectors ..... -55 dB
- Uncabled receptacles and adapters ..... N/A

** All gold plated parts inlcude a .00005" min. nickel underplate barrier layer.

Avoid user injury due to misapplication. See safety advisory definitions inside front cover.

RF High Potential Withstanding Voltage: (Vrms minimum, tested at 4 and 7 MHz)†
- Connectors for RG-178 500
- Connectors for RG-316 700
- Uncabled receptacles and adapters 600

MECHANICAL RATINGS

Engagement Design: MIL-C-39012, Series SMC
Engagement/Disengagment Force: 16 inch-ounce maximum torque
Mating Torque: 35 to 50 inch-ounce
Coupling Proof Torque: 100 inch-ounce minimum
Coupling Nut Retention: 35 pounds minimum
Contact Retention: 4 lbs. minimum axial force (captivated contacts)
1 inch-ounce minimum torque (uncabled receptacles)

Cable Retention:	Axial Force* (pounds)	Torque (in-oz)
Connectors for RG-178	10	N/A
Connectors for RG-316	20	N/A
Connectors for .086 semi-rigid	30	16

* or cable breaking strength whichever is less

Durability: 500 cycles minimum

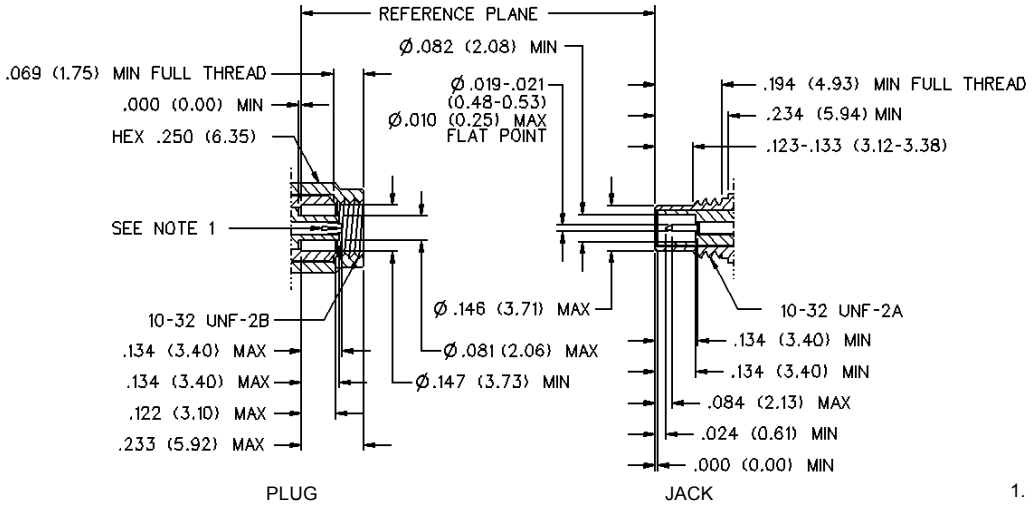
ENVIRONMENTAL RATINGS (Meets or exceed the applicable paragraph of MIL-C-39012

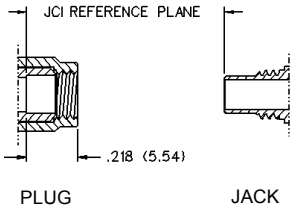
Temperature Range: - 65°C to + 165°C
Thermal Shock: MIL-STD-202, Method 107, Condition B
Corrosion: MIL-STD-202, Method 101, Condition B
Shock: MIL-STD-210, Method 213, Condition C
Vibration: MIL-STD-202, Method 204, Condition D

MATERIAL SPECIFICATIONS

Bodies: Brass per QQ-B-626, gold plated** per MIL-G-45204 .00001" min or nickel plated per QQ-N-290
Contacts: Male - brass per QQ-B-626, gold plated per MIL-G-45204 .00003" min.
Female - beryllium copper per QQ-C-530, gold plated per MIL-G-45204 .00003" min.
Nut Retention Spring: Beryllium copper per QQ-C-533, unplated
Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457
Expansion Caps: Brass per QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290
Crimp Sleeves: Copper per WW-T-799, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290
Mounting Hardware: Brass (nuts) per QQ-B-626 or phosphor bronze (lockwashers) per QQ-B-750, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

MATING ENGAGEMENT FOR SMC SERIES PER MIL-C-39012





NOTES

1. Inside of contact to meet VSWR, mating characteristics and connector durability when mated with a dia .019/.021 (0.48/0.53) male contact.