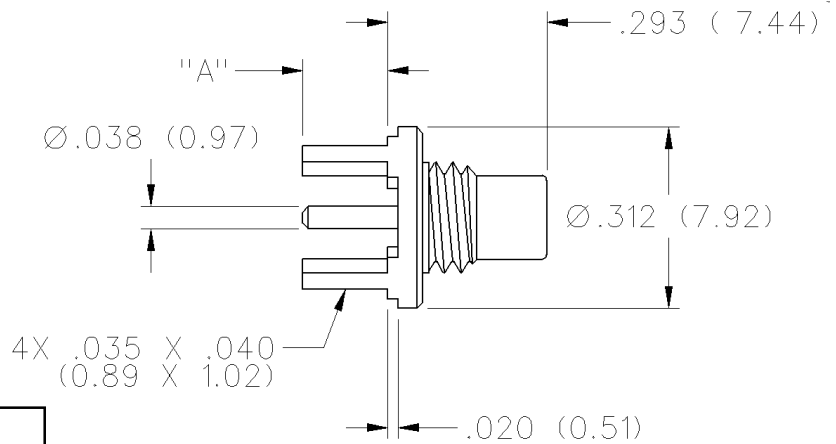


# 50 Ohm SMC Straight Jack PC Mount Receptacle

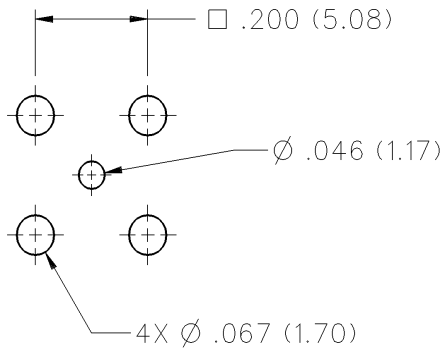


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



"A"	GOLD PLATED	NICKEL PLATED	IR COMPATIBLE*
.110 (2.79)	131-6701-211	131-6701-216	131-6701-215*

\*Tin/Lead Solder dipped legs for IR Reflow Compatibility.  
Mounting hole layout



# SMC - 50 Ohm Connectors

## Specifications



INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

### ELECTRICAL RATINGS

**Impedance:** 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:	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 include 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/Disengagement 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 exceeds 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

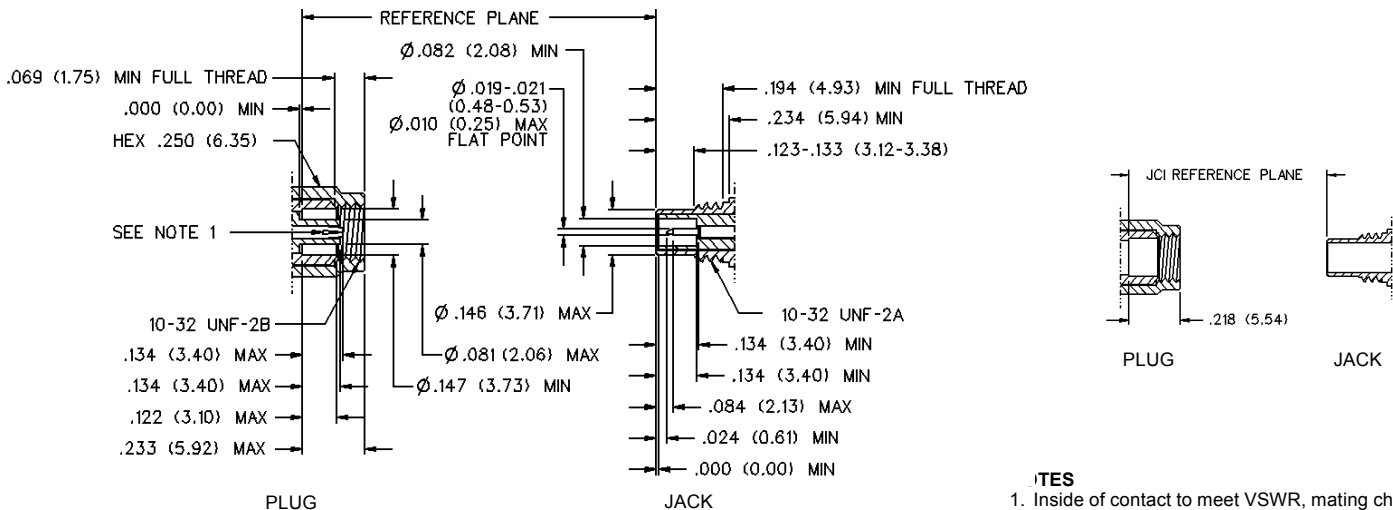
**Insulators:** PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457

**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.