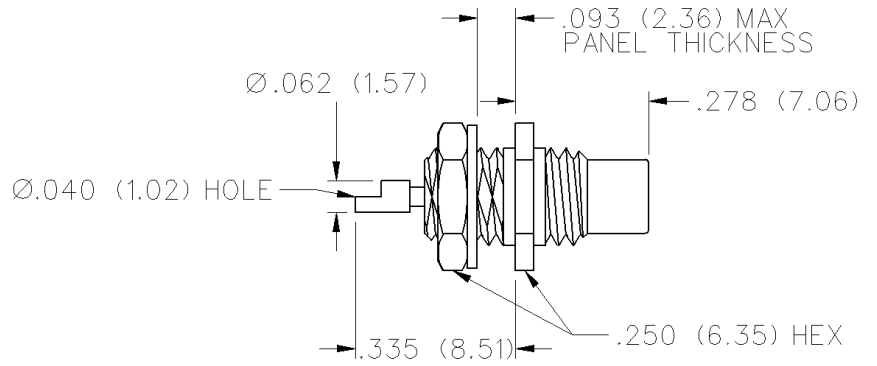


50 Ohm SMC Front Mount Bulkhead Jack Receptacle

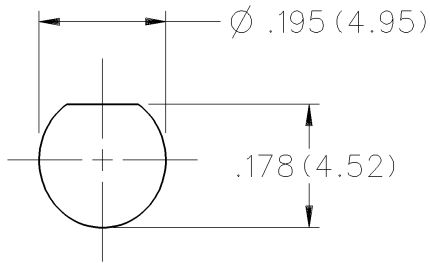


INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



| GOLD PLATED | NICKEL PLATED |
|--------------|---------------|
| 131-6701-411 | 131-6701-416 |

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: (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 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 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

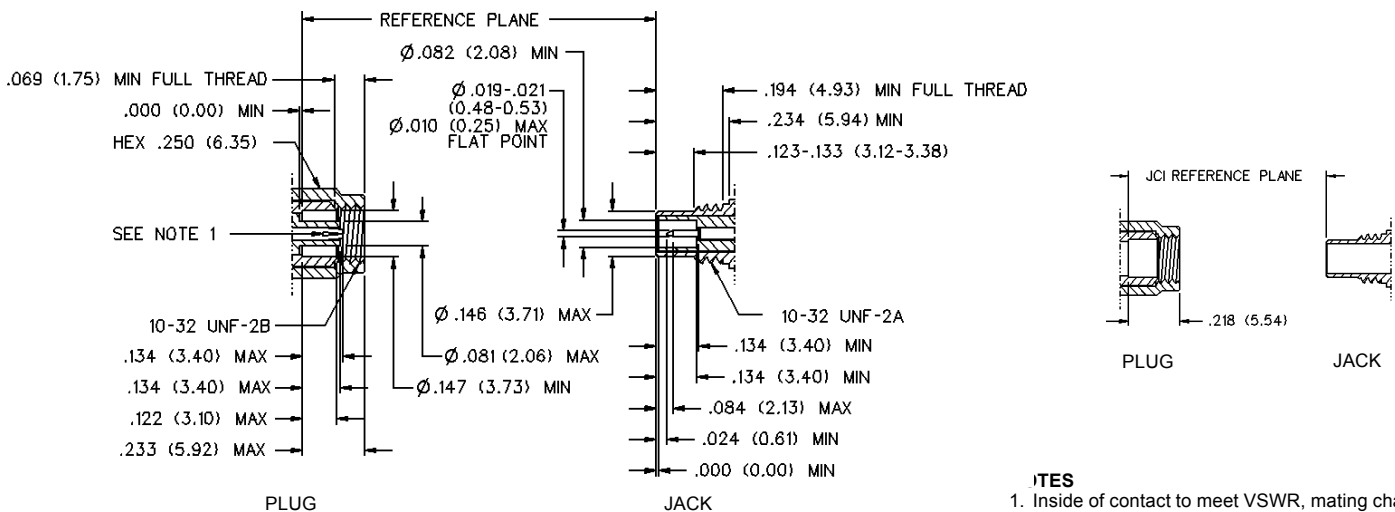
Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457

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.

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