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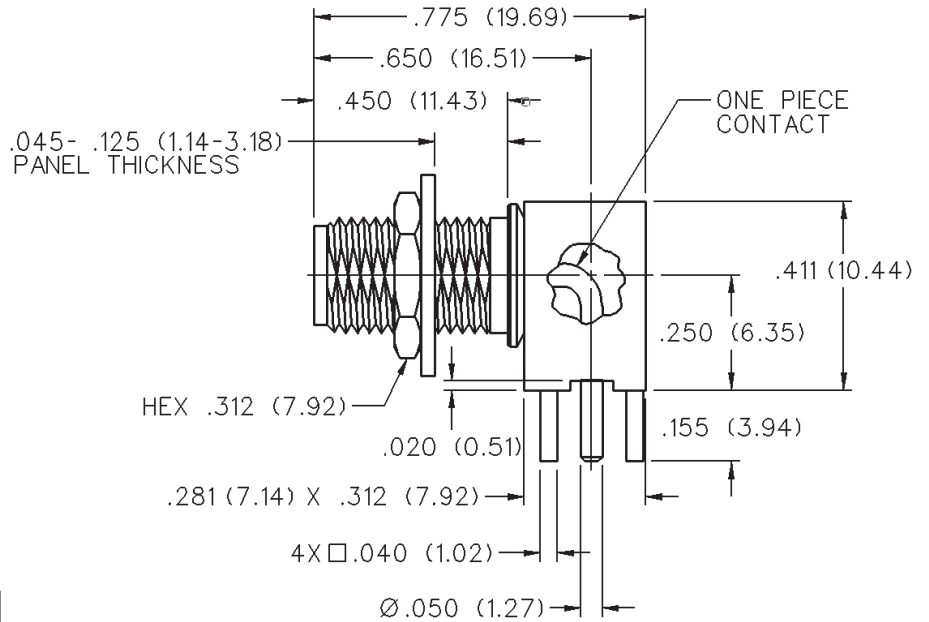
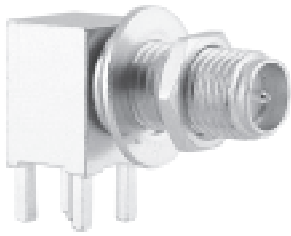
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# SMA 50 Ohm Reverse Polarity Right Angle Bulkhead Jack Receptacle

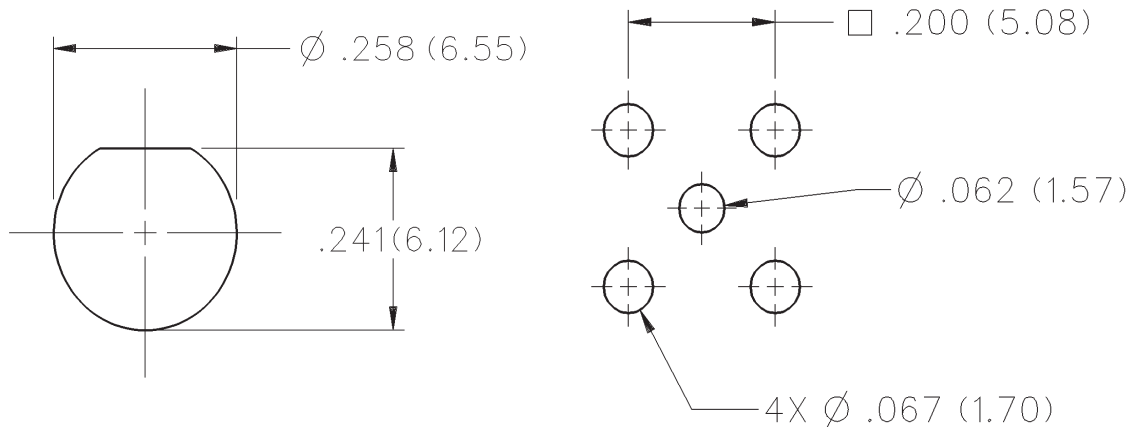


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



| GOLD PLATED  | NICKEL PLATED |
|--------------|---------------|
| 142-4701-501 | 142-4701-506  |

Mounting hole layouts



# SMA Reverse Polarity - 50 Ohm



## Specifications

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

### ELECTRICAL RATINGS

**Impedance:** 50 ohms

#### Frequency Range:

Flexible cable connectors ..... 0-12.4 GHz  
Uncabled receptacles ..... 0-18.0 GHz

#### VSWR: (f = GHz)

|                              | Straight<br>Cabled Connectors | Right Angle<br>Cabled Connectors |
|------------------------------|-------------------------------|----------------------------------|
| RG-316, LMR-100 cable .....  | 1.15 + .02f                   | 1.15 + .03f                      |
| RG-58, LMR-195 cable .....   | 1.17 + .025f                  | 1.17 + .06f                      |
| RG-142 cable .....           | 1.17 + .02f                   | 1.15 + .03f                      |
| LMR-200, LMR-240 cable ..... | 1.10 + .03f                   | 1.10 + .06f                      |

Uncabled receptacles ..... N/A

#### Working Voltage: (Vrms maximum)†

| Connectors for Cable Type                       | Sea Level | 70K Feet |
|---|-----------|----------|
| RG-316; LMR-100, 195, 200 .....                 | 250       | 65       |
| RG-58, RG-142, LMR-240, uncabled receptacles .. | 335       | 85       |

#### Dielectric Withstanding Voltage: (VRMS minimum at sea level)†

Connectors for RG-316; LMR-100, 195, 200 ..... 750  
Connectors for RG-58, RG-142, LMR-240, uncabled receptacles . 1000

#### Corona Level: (Volts minimum at 70,000 feet)†

Connectors for RG-316, LMR-100, 195, 200 ..... 190  
Connectors for RG-58, RG-142, LMR-240, uncabled receptacles ... 250

#### Insertion Loss: (dB maximum)

|  |      |                                   |
|--|------|-----------------------------------|
| Straight flexible cable connectors .....             | .06  | $\sqrt{f}$ (GHz), tested at 6 GHz |
| Right angle flexible cable connectors .....          | 0.15 | $\sqrt{f}$ (GHz), tested at 6 GHz |
| Low loss flexible straight cable connectors .....    | 0.06 | $\sqrt{f}$ (GHz), tested at 1 GHz |
| Low loss flexible right angle cable connectors ..... | 0.15 | $\sqrt{f}$ (GHz), tested at 1 GHz |
| Uncabled receptacles, field replaceable .....        |      | N/A                               |

#### Insulation Resistance: 5000 megohms minimum

#### Contact Resistance: (milliohms maximum)

|  | Initial | After Environmental |
|--|---------|---------------------|
| Center contact (straight cabled connectors and uncabled receptacles) ..... | 3.0*    | 4.0*                |
| Center contact (right angle cabled connectors) .....                       | 4.0     | 6.0                 |
| Outer contact (all connectors) .....                                       | 2.0     | N/A                 |
| Braid to body (gold plated connectors) .....                               | 0.5     | N/A                 |
| Braid to body (nickel plated connectors) .....                             | 5.0     | N/A                 |

#### RF Leakage: (dB minimum, tested at 2.5 GHz)

Flexible cable connectors ..... -60 dB  
Uncabled receptacles and adapters ..... N/A

#### RF High Potential Withstanding Voltage: (Vrms minimum, tested at 4 and 7 MHz)†

Connectors for RG-316; LMR-100, 195, 200 ..... 500  
Connectors for RG-58, RG-142, LMR-240, uncabled receptacles ... 670

### MECHANICAL RATINGS

#### Engagement Design: MIL-C-39012, Series SMA

#### Engagement/Disengagement Force: 2 inch-pounds maximum

#### Mating Torque: 7 to 10 inch-pounds

#### Bulkhead Mounting Nut Torque: 15 inch-pounds

#### Coupling Proof Torque: 15 inch-pounds minimum

#### Coupling Nut Retention: 60 pounds minimum

#### Contact Retention:

6 lbs. minimum axial force (captivated contacts)  
4 inch-ounce minimum torque (uncabled receptacles)

| Cable Retention:                     | Axial Force*<br>(pounds) | Torque<br>(in-oz) |
|--------------------------------------|--------------------------|-------------------|
| Connectors for RG-316, LMR-100 ..... | 20                       | N/A               |
| Connectors for LMR195, 200 .....     | 30                       | N/A               |
| Connectors for RG-58, LMR-240 .....  | 40                       | N/A               |
| Connectors for RG-142 .....          | 45                       | N/A               |

\*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-202, Method 213, Condition I

#### Vibration: MIL-STD-202, Method 204, Condition D

#### Moisture Resistance: MIL-STD-202, Method 106

### 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

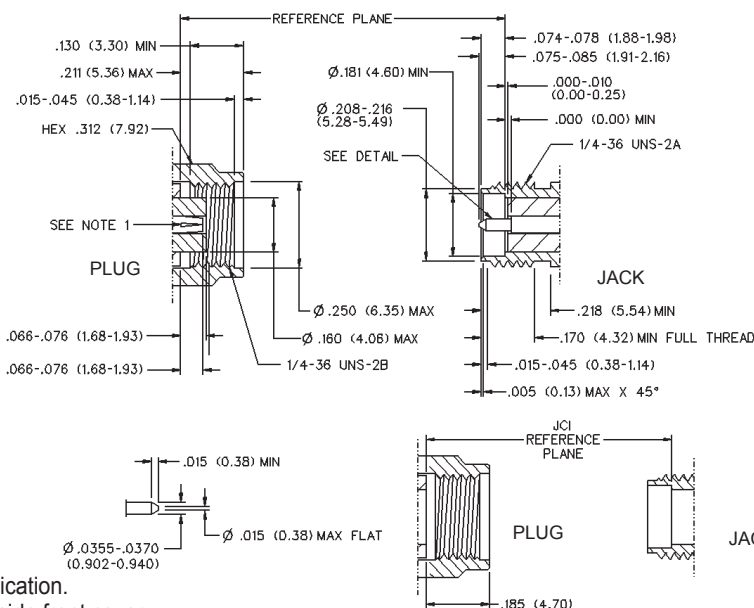
**Insulators:** PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457 or Tefzel per ASTM D 3159

**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 or brass per QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

**Mounting Hardware:** Brass per QQ-B-626 or QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

### MATING ENGAGEMENT FOR SMA REVERSE POLARITY SERIES PER FCC RULE 15 NON-STANDARD INTERFACE



#### NOTES

1. ID OF CONTACT TO MEET VSWR, CONTACT RESISTANCE AND INSERTION WITHDRAWAL FORCES WHEN MATED WITH DIA .0355-.0370 MALE PIN.

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