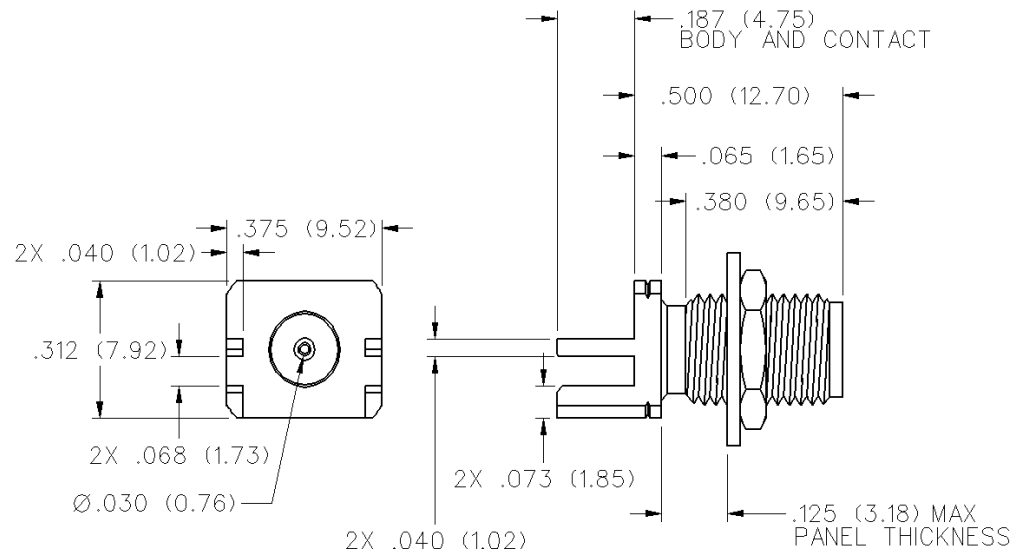
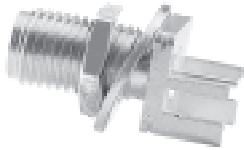


# SMA 50 Ohm - Reverse Thread End Launch Bulkhead Jack Receptacle - Round Contact



| GOLD PLATED  | NICKEL PLATED | BOARD THICKNESS |
|--------------|---------------|-----------------|
| 142-5701-811 | 142-5701-816  | .062 (1.57)     |

# SMA Reverse Thread - 50 Ohm

## Specifications

### 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 .....   | 1.15 + .01f                   | 1.15 + .02f                      |
| RG-142 cable .....           | 1.15 + .01f                   | 1.15 + .02f                      |
| 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       | 8        |

**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  | √ f (GHz), tested at 6 GHz |
| Right angle flexible cable connectors .....          | 0.15 | √ f (GHz), tested at 6 GHz |
| Low loss flexible straight cable connectors .....    | 0.06 | √ f (GHz), tested at 1 GHz |
| Low loss flexible right angle cable connectors ..... | 0.15 | √ 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 LMR-195, 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 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-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

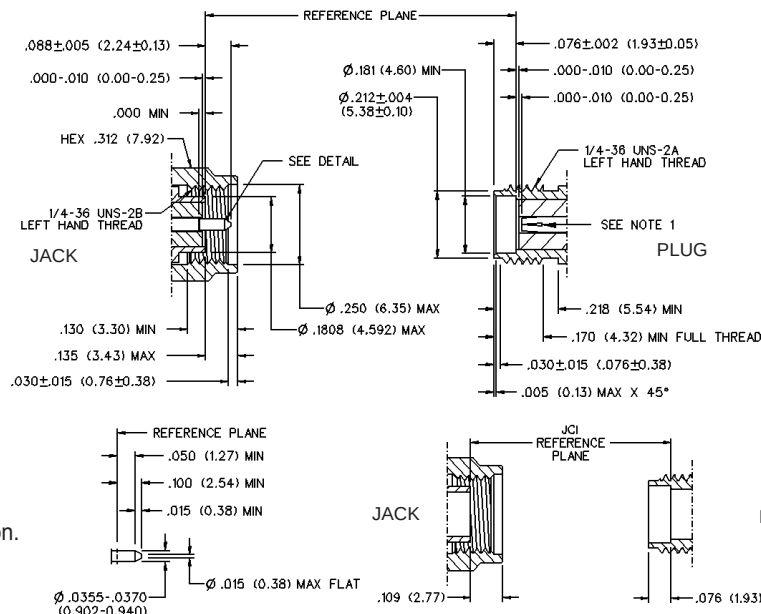
**Insulators:** PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457 or Tefzel per ASTM D 3159

**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 Thread 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.