SMA 50 Ohm
Straight Jack Receptacle -
Surface Mount

VSWR & FREQ. RANGE | GOLD PLATED | NICKEL PLATED | PACKAGING
--- | --- | --- | ---
VSWR: N/A 0-18 GHz | 142-0711-201 | 142-0711-205 | STOCK
| 142-0711-202 | 142-0711-206 | TAPE & REEL

Recommended Land Pattern

△ Connector Mounting Pads 60%/40% Tin/Lead Coated
(Solder Plated)
SMA - 50 Ohm Connectors

Specifications

ELECTRICAL RATINGS

Impedance: 50 ohms

Frequency Range:
- Dummy loads ................................................................. 0-2 GHz
- Flexible cable connectors ....................................... 0-12.4 GHz
- Uncabled receptacles, RA semi-rigid and adapters .... 0-18.0 GHz
- Straight semi-rigid cable connectors and field replaceable connectors ..................... 0-26.5 GHz

VSWR: (f = GHz)

<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Straight Cabled Connectors</th>
<th>Right Angle Cabled Connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG-178 cable</td>
<td>1.20 + .02f</td>
<td>1.20 + .03f</td>
</tr>
<tr>
<td>RG-316, LMR-100 cable</td>
<td>1.15 + .02f</td>
<td>1.15 + .03f</td>
</tr>
<tr>
<td>RG-58, LMR-195 cable</td>
<td>1.15 + .01f</td>
<td>1.15 + .02f</td>
</tr>
<tr>
<td>RG-142 cable</td>
<td>1.15 + .01f</td>
<td>1.15 + .02f</td>
</tr>
<tr>
<td>LMR-200, LMR-240 cable</td>
<td>1.10 + .03f</td>
<td>1.10 + .06f</td>
</tr>
<tr>
<td>.086 semi-rigid</td>
<td>1.07 + .008f</td>
<td>1.18 + .015f</td>
</tr>
<tr>
<td>.141 semi-rigid (w/contact)</td>
<td>1.05 + .008f</td>
<td>1.15 + .015f</td>
</tr>
<tr>
<td>.141 semi-rigid (w/o contact)</td>
<td>1.035 + .005f</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Field replaceable connectors with contact and adapters ................. 1500

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

- Connectors for .141 semi-rigid ................. 60 55
- Connectors for .086 semi-rigid ................. 30 16
- Connectors for RG-58, LMR-240 ............. 40 N/A
- Connectors for LMR-195, 200 .................. 30 N/A
- Connectors for RG-316, LMR-100 ........... 20 N/A
- Connectors for RG-178 ............................ 10 N/A

Power Rating (Dummy Load): 0.5 watt @ +25°C, derated to 0.25 watt @ +125°C

MECHANICAL RATINGS

Engagement Design: MIL-C-39012, Series SMA

Axis Torque: 7 to 10 inch-pounds

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*(lbs) Torque (in-oz)

- Connectors for RG-178 ......................... 10 N/A
- 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
- Connectors for .086 semi-rigid .......... 30 16
- Connectors for .141 semi-rigid .......... 60 55


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


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


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


†Avoid user injury due to misapplication. See safety advisory definitions inside front cover.
**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 or PFA 340 per ASTM  
**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  
**Seal Rings:** Silicone rubber per ZZ-R-765  
**EMI Gaskets:** Conductive silicone rubber per MIL-G-83528, Type M  

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

## Mating Engagement for SMA Series per MIL-C-39012

### JACK PLUG

- **REFERENCE PLANE**
  - .050 (1.27) Min  
  - .100 (2.54) Min  
  - .015 (0.38) Min

- **PLUG**
  - Ø .355 - .370 (0.902 - 0.940) Max FLAT  
  - .015 (0.38) Max FLAT

### JACK

- **REFERENCE PLANE**
  - .050 (1.27) Min

- **PLUG**
  - Ø .015 (0.38) MAX FLAT  
  - .109 (2.77)

- **REFERENCE PLANE**

### NOTES

1. ID OF CONTACT TO MEET VSWR, CONTACT RESISTANCE AND INSERTION WITHDRAWAL FORCES WHEN MATED WITH DIA .0355-0.370 MALE PIN.