SMA 50 Ohm Straight Jack Receptacle

<table>
<thead>
<tr>
<th>VSWR &amp; FREQ. RANGE</th>
<th>GOLD PLATED</th>
<th>NICKEL PLATED</th>
<th>&quot;A&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSWR: N/A 0-18 GHz</td>
<td>142-0701-201</td>
<td>142-0701-206</td>
<td>.155 (3.94)</td>
</tr>
</tbody>
</table>

Mounting hole layout

Cinch Connectivity Solutions
299 Johnson Avenue SW, Waseca, MN 56093 USA • 800.247.8256 • +1 507 833 8822 • cinchconnectivity.com
# SMA - 50 Ohm Connectors

## Specifications

### ELECTRICAL RATINGS

<table>
<thead>
<tr>
<th>Impedance: 50 ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range:</td>
</tr>
<tr>
<td>Dummy loads ................................................................. 0.2 GHz</td>
</tr>
<tr>
<td>Flexible cable connectors ............................................ 0.12 GHz</td>
</tr>
<tr>
<td>Uncabled receptacles, RA semi-rigid and adapters .......... 0.18 GHz</td>
</tr>
<tr>
<td>straight semi-rigid cable connectors and field replaceable connectors ..................................... 0.26 GHz</td>
</tr>
</tbody>
</table>

**VSWR:** (f = GHz)  
- **Straight Cabled Connectors**  
  - **RG-178 cable**  
    - 1.20 + .25f  
    - 1.20 + .03f  
  - **RG-316, LMR-100 cable**  
    - 1.15 + .02f  
    - 1.15 + .03f  
  - **RG-58, LMR-195 cable**  
    - 1.15 + .03f  
    - 1.15 + .02f  
  - **RG-142 cable**  
    - 1.15 + .01f  
    - 1.15 + .02f  
  - **LMR-200, LMR-240 cable**  
    - 1.10 + .03f  
    - 1.10 + .06f  
  - **0.08 semi-rigid**  
    - 1.07 + .008f  
    - 1.18 + .015f  
  - **.141 semi-rigid (w/contact)**  
    - 1.05 + .008f  
    - 1.15 + .015f  
  - **.141 semi-rigid (w/contact)**  
    - 1.035 + .005f  

**Insulation Resistance:**  
- **5000 megohms minimum**  

**Contact Resistance:** (milliohms maximum)  
- **Initial**  
  - Center contact (straight cabled connectors and unencabled receptacles) .................. 3.0*  
  - Center contact (right angle cabled connectors and adapters) ............................ 4.0  
  - Field replaceable connectors ........................................................................... 6.0  
  - Outer contact (all connectors) ........................................................................... 2.0  
  - Braid to body (gold plated connectors) ....................................................... 0.5  
  - Braid to body (nickel plated connectors) ....................................................... 5.0  

* N/A where the cable center conductor is used as a contact

**RF Leakage:** (dB minimum, tested at 2.5 GHz)  
- Flexible cabled connectors, adapters and .141 semi-rigid connectors w/o contact .......................... -60 dB  
- Field replaceable w/o EMI gasket .................................................................. -70 dB  
- .086 semi-rigid connectors and .141 semi-rigid connectors with contact, and field replaceable with EMI Gasket ....................... -90 dB  
- Two-way adapters ......................................................................................... -90 dB  
- Uncabled receptacles, dummy loads ..................................................... N/A  

**RF High Potential Withstanding Voltage:** (Vrms minimum, tested at 4 and 7 MHz)  
- Connectors for RG-178 ........................................................................... 335  
- Connectors for RG-316; LMR-100, 195, 200 ........................................ 500  
- Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, .141 semi-rigid cable w/o contact, uncabled receptacles ............... 670  
- Connectors for .141 semi-rigid with contact and adapters .......... 1000  

**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 |
| 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 (uncaptured receptacles) |

### ENVIRONMENTAL RATINGS

| Temperature Range: -65°C to +165°C |
| Thermal Shock: MIL-STD-202, Method 107, Condition B |
| Corrosion: MIL-STD-202, Method 101, Condition B |

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

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**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.

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**NOTES**

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