SMA 50 Ohm
Straight Crimp Type Plug (3-piece) - Solder or Crimp Captivated Contact

1. Identify piece parts. (4 piece parts plus nut and washer for bulkhead.)
2. Strip cable jacket and braid to dimensions shown. Do not nick braid during strip operations.
3. Slide crimp insert over braid and against jacket. Fold braid around crimp insert as shown. Strip dielectric to dimension shown. If cable is being manually stripped the rear insulator can be assembled and used as a guide. Do not nick center conductor during strip operation. Tin center conductor if contact is to be solder attached. Do not tin center conductor if contact is to be crimp attached.
4. Assemble rear insulator over cable dielectric and contact over center conductor as shown.

**Solder attachment:** Solder contact to center conductor using 60/40 tin/lead solder. Care should be taken that excess solder is not applied.

**Crimp attachment:** Crimp contact to center conductor using production tooling or hand tool 144-0000-910, setting #2 with positioner 141-0000-907. Crimp location should be centered between end of contact and x-hole. Crimp attachment to solid center conductor cables is not recommended.
5. Slide body assembly over contact, rear insulator and crimp insert. Crimp body using recommended crimp tool. Maintain forward pressure on cable while crimping.

Body crimp die hex: .105 (2.67) hex

**INCHES (MILLIMETERS)**
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

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<table>
<thead>
<tr>
<th>CABLE TYPE</th>
<th>VSWR &amp; FREQ. RANGE</th>
<th>GOLD PLATED</th>
<th>NICKEL PLATED</th>
<th>&quot;A&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG-178/U, 196</td>
<td>1.20 + .0251 (GHz) 0-12.4 GHz</td>
<td>142-0402-011</td>
<td>142-0402-016</td>
<td>.591 (15.01)</td>
</tr>
</tbody>
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**Cable Group**

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EMERSON NETWORK POWER CONNECTIVITY SOLUTIONS

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)
- Straight Cabled Connectors: 1.05 + 0.005f
- Right Angle Cabled Connectors: 1.07 + 0.008f
- Straight Uncabled Connectors: 1.035 + 0.005f
- Right Angle Uncabled Connectors: 1.05 + 0.008f

RF Leakage: (dB minimum, tested at 2.5 GHz)
- Center contact (straight cabled connectors and adapters) | 0 dB
- Center contact (right angle cabled connectors and adapters) | 0 dB
- Braid to body (gold plated connectors) | 0 dB
- Braid to body (nickel plated connectors) | 0 dB

RF High Potential Withstanding Voltage: (Vrms minimum, tested at 4 and 7 MHz)
- Connectors for RG-178 | 335 Vrms
- Connectors for RG-316; LMR-100, 195, 200 | 720 Vrms
- Connectors for RG-316, LMR-100, 195, 200 | 500 Vrms
- Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact | 670 Vrms
- Connectors for .141 semi-rigid with contact and adapters | 1000 Vrms

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 minutes minimum |
| Contact Retention: | 6 lbs. minimum axial force (captivated contacts)
| 4 inch-ounce minimum torque (uncabled receptacles) |

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 |

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

*Or cable breaking strength whichever is less.
**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:** Brass per QQ-B-626 or 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.