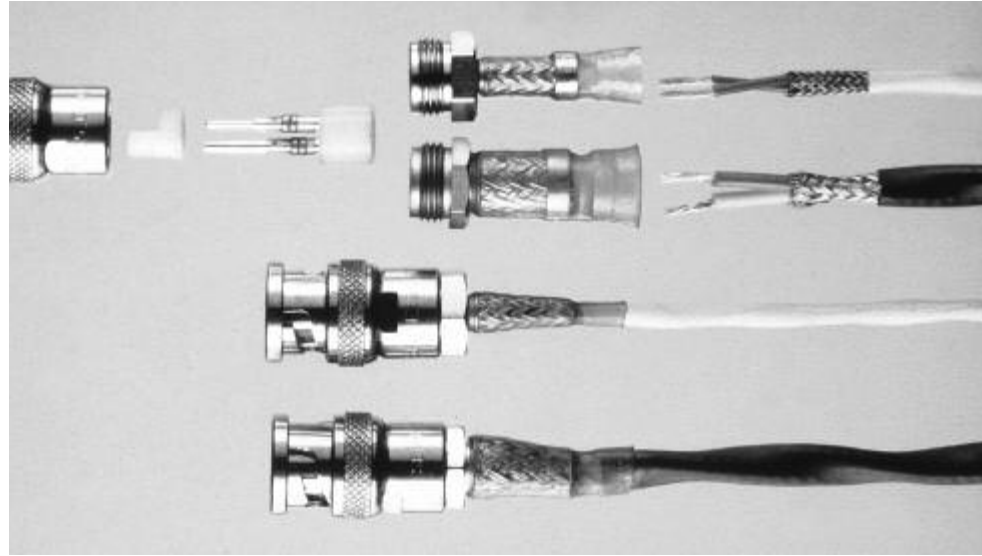


RF One-Step BNC/TNC Connectors

Product Facts

- Easy, quick installation
- Outstanding cable-retention force
- Solder-solder connection type (center conductor and braid)
- One-step termination for easy, quick installation and lower installed cost
- Exceptional cable retention force to withstand high vibration and frequent mates and unmates
- Fully soldered center conductor and braid
- Excellent built-in strain relief against vibration and excessive handling
- Long-term reliability
- Controlled soldering termination
- Use with standard RG/U cables and Raychem Cheminax cables
- Three product sizes to accommodate a wide range of cables
- Meets performance requirements of MIL-C-39012 up to 2.8 GHz



Applications

One-Step BNC/TNC connectors are single-piece assemblies for terminating the center conductor and the braid of a broad range of coaxial cables.

The connectors are fully intermateable with MIL-C-39012 connectors and are available in 50-ohm and 75-ohm versions.

| Specifications    | Installation   |
|-------------------|--|
| Raychem<br>RB-115 | For proper installation of these devices, the correct heating tool and reflector attachment must be used.<br>Any one of the following Raychem heating tools is recommended:<br>• Steinel® Model HL1802E<br>• CV-1981 |
|                   | Refer to Raychem installation procedure RPIP 683-00 for detailed instructions.   |

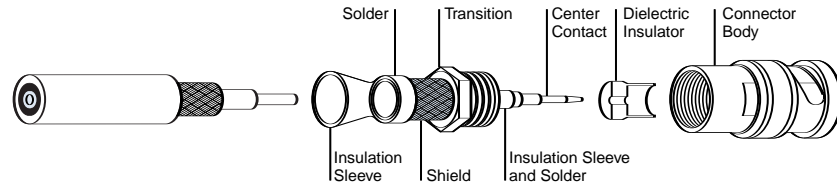
|               |   |
|---------------|---|
| Available in: |   |
| Americas      | ■ |
| Europe        | ■ |
| Asia Pacific  | ■ |

Product Options and Part Numbering System

| RXX - XX - X - XX | Connector Style                                     |                        | Connector Type  |                 |  |
|-------------------|---|------------------------|-----------------|-----------------|--|
|                   | Dash No. -XX  | Style                  | TNC             | BNC             |  |
|                   | -00   | Straight plug          |                 |                 |  |
|                   | -01   | Right-angle plug       |                 |                 |  |
|                   | -02   | Straight bulkhead jack |                 |                 |  |
|                   | -03   | Straight jack          |                 |                 |  |
|                   | -04   | Straight panel jack    |                 |                 |  |
|                   | Connector size                                      |                        | 4 x M2.5 x 0.45 | 4 x M2.5 x 0.45 |  |
|                   | L = Large   |                        |                 |                 |  |
|                   | M = Medium  |                        |                 |                 |  |
|                   | S = Small   |                        |                 |                 |  |
|                   | 50 = 50 ohms  |                        |                 |                 |  |
|                   | 75 = 75 ohms  |                        |                 |                 |  |
|                   | D = Nickel-plated brass body, gold-plated brass pin |                        |                 |                 |  |
|                   | B = BNC   |                        |                 |                 |  |
|                   | T = TNC   |                        |                 |                 |  |

Example: RBD-50-L-00 is a BNC connector, 50 ohms, large size, with straight plug body.

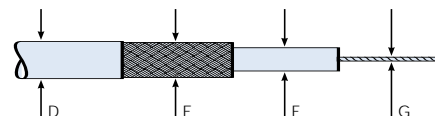
Product Characteristics



| Material                         |  |
|----------------------------------|--|
| Center contact                   | Gold-plated beryllium copper (female)  |
|                                  | Gold-plated brass (male)   |
| Dielectric insulator             | PTFE   |
| Transition                       | Silver-plated brass  |
| Connector body                   | Nickel-plated brass  |
| Solder and flux                  | Sn63Pb37, RMA flux   |
| Braided shield                   | Tin-plated copper wire per ASTM B3   |
| Insulation sleeve                | Radiation-crosslinked, heat-shrinkable polyvinylidene fluoride, transparent blue |
| Strain relief/sealing sleeve     | Radiation-crosslinked, heat-shrinkable modified polyolefin with adhesive, black  |
| Typical Performance              |  |
| Dielectric withstand voltage     | 1500 V   |
| Insulation resistance            | 5000 megohms   |
| Temperature rating               | -55°C to 150°C [-67°F to 302°F]  |
| Contact resistance-straight      | Inner = 1.5 milliohms, outer = 1.0 milliohm                                      |
| Contact resistance — right-angle | Inner = 2.5 milliohms, outer = 1.5 milliohms                                     |
| Cable retention force            | 295N (66 lb) to 822N (196 lb)  |
| Voltage rating                   | 500 V RMS  |
| Connector durability             | 500 mating cycles minimum  |
| Electrical Performance           |  |
| Nominal impedance                | 50 and 75 ohms   |
| Frequency range                  | Up to 2.8 GHz  |

Part Selection Process

1. From Product Options and Part Numbering System on page 8-56, select the connector style you need (BNC or TNC, plug or jack, male or female contacts).
2. From the tables that follow, find the appropriate table for the connector style you selected.
3. From the appropriate table, select the connector part number based on the RG cable type or Raychem cable part number. For cable types not shown use the cable dimensions.  
Note: The cable dimensions in each table are keyed to the diagram below.



| Impedance (ohms)                                    | Cable Type                               |                                 | Cable Dimensions          |                            |                |                | Part No.    |
|---|--|---------------------------------|---------------------------|----------------------------|----------------|----------------|-------------|
|   | RG Cables                                | Raychem Cables                  | D (Min.-Max.)             | E (Min.-Max.)              | F (Max.)       | G (Max.)       |             |
| <b>BNC Straight Plugs, Male Contacts</b>            |  |                                 |                           |                            |                |                |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316   | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-50-S-00 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400    | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.00<br>[.118] | 1.25<br>[.050] | RBD-50-M-00 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214   | 5012F3332, 5012A3311            | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-50-L-00 |
| 75  | RG-179, RG-187                           | 7530A1317                       | 1.50-5.00<br>[.060-.217]  | 5 0.90-3.00<br>[.035-.118] | 1.55<br>[.060] | 0.65<br>[.025] | RBD-75-S-00 |
| 75  | —  | 7524A1311, 7528A1317            | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.70<br>[.126] | 1.25<br>[.050] | RBD-75-M-00 |
| 75  | RG-6, RG-11, RG-12, RG-59 RG-144, RG-216 | —                               | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.3<br>[.287]  | 2.45<br>[.100] | RBD-75-L-00 |
| <b>BNC Right-Angle Plugs, Male Contacts</b>         |  |                                 |                           |                            |                |                |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316   | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-50-S-01 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400    | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.00<br>[.118] | 1.25<br>[.050] | RBD-50-M-01 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214   | 5012F3332, 5012A3311            | 5.00-12.50<br>[.197-.500] | 4.1-9.50<br>[.161-.375]    | 7.30<br>[.287] | 2.45<br>[.100] | RBD-50-L-01 |
| 75  | RG-179, RG-187                           | 7530A1317                       | 1.50-5.50<br>[.060-.217]  | 0.9-3.00<br>[.035-.118]    | 1.55<br>[.060] | 0.65<br>[.025] | RBD-75-S-01 |
| 75  | —  | 524A1311, 7528A1317             | 3.50-7.00<br>[.138-.276]  | 2.1-5.00<br>[.083-.197]    | 3.70<br>[.146] | 1.25<br>[.050] | RBD-75-M-01 |
| 75  | RG-6, RG-11, RG-12, RG-59 RG-144, RG-216 | —                               | 5.00-12.50<br>[.197-.500] | 4.1-9.50<br>[.161-.375]    | 7.30<br>[.287] | 2.45<br>[.100] | RBD-75-L-01 |
| <b>BNC Straight Bulkhead Jacks, Female Contacts</b> |  |                                 |                           |                            |                |                |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316   | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-50-S-02 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400    | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.00<br>[.118] | 1.25<br>[.050] | RBD-50-M-02 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214   | 5012F3332, 5012A3311            | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-50-L-02 |
| 75  | RG-179, RG-187                           | 7530A1317                       | 1.50-5.00<br>[.060-.217]  | 5 0.90-3.00<br>[.035-.118] | 1.55<br>[.060] | 0.65<br>[.025] | RBD-75-S-02 |
| 75  | —  | 75 7524A1311, 7528A1317         | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.70<br>[.146] | 1.25<br>[.050] | RBD-75-M-02 |
| 75  | RG-6, RG-11, RG-12, RG-59 RG-144, RG-216 | —                               | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-75-L-02 |
| <b>BNC Straight Jacks, Female Contacts</b>          |  |                                 |                           |                            |                |                |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316   | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-50-S-03 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400    | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.00<br>[.118] | 1.25<br>[.050] | RBD-50-M-03 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214   | 5012F3332, 5012A3311            | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-50-L-03 |
| 75  | RG-179, RG-187                           | 7530A1317                       | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-75-S-03 |
| 75  | —  | 75 7524A1311, 7528A1317         | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.70<br>[.146] | 1.25<br>[.050] | RBD-75-M-03 |
| 75  | RG-6, RG-11, RG-12, RG-59 RG-144, RG-216 | —                               | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-75-L-03 |
| <b>BNC Straight Panel Jacks, Female Contacts</b>    |  |                                 |                           |                            |                |                |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316   | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-50-S-04 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400    | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.00<br>[.118] | 1.25<br>[.050] | RBD-50-M-04 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214   | 5012F3332, 5012A3311            | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-50-L-04 |
| 75  | RG-179, RG-187                           | 7530A1317                       | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RBD-75-S-04 |
| 75  | —  | 7524A1311, 7528A1317            | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197]   | 3.70<br>[.146] | 1.25<br>[.050] | RBD-75-M-04 |
| 75  | RG-6, RG-11, RG-12, RG-59 RG-144, RG-216 | —                               | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375]   | 7.30<br>[.287] | 2.45<br>[.100] | RBD-75-L-04 |

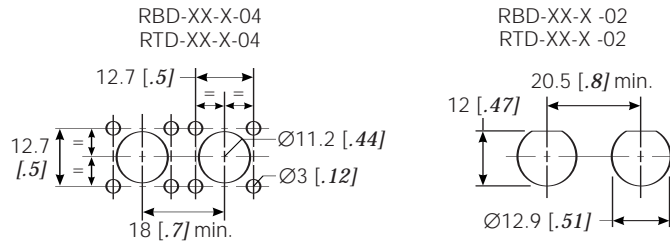
TNC Coaxial Connectors

| Impedance (ohms)                                 | Cable Type                                |                                 | Cable Dimensions          |                          |                |                | Part No.    |
|--|---|---------------------------------|---------------------------|--------------------------|----------------|----------------|-------------|
|  | RG Cables                                 | Raychem Cables                  | D (Min.-Max.)             | E (Min.-Max.)            | F (Max.)       | G (Max.)       |             |
| <b>TNC Straight Plugs, Male Contacts</b>         |   |                                 |                           |                          |                |                |             |
| 50   | RG-174, RG-178, RG-188, RG-196, RG-316    | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118] | 1.55<br>[.060] | 0.65<br>[.025] | RTD-50-S-00 |
| 50   | RG-58, RG-141, RG-142, RG-303, RG-400     | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197] | 3.00<br>[.118] | 1.25<br>[.050] | RTD-50-M-00 |
| 50   | RG-165, RG-215, RG-213, RG-225, RG-214    | 5012F3332, 5012A3311            | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375] | 7.30<br>[.287] | 2.45<br>[.100] | RTD-50-L-00 |
| 75   | RG-179, RG-187                            | 7530A1317                       | 1.50-5.50<br>[.060-.217]  | 0.90-3.00<br>[.035-.118] | 1.55<br>[.060] | 0.65<br>[.025] | RTD-75-S-00 |
| 75   | —   | 7524A1311, 7528A1317            | 3.50-7.00<br>[.138-.276]  | 2.10-5.00<br>[.083-.197] | 3.70<br>[.146] | 1.25<br>[.050] | RTD-75-M-00 |
| 75   | RG-6, RG-11, RG-12, RG-59, RG-144, RG-216 | —                               | 5.00-12.50<br>[.197-.500] | 4.10-9.50<br>[.161-.375] | 7.30<br>[.287] | 2.45<br>[.100] | RTD-75-L-00 |
| <b>TNC Straight Jacks, Female Contacts</b>       |   |                                 |                           |                          |                |                |             |
| 50   | RG-174, RG-178, RG-188, RG-196, RG-316    | 5026A1311, 5028A1317, 5030A1317 | 1.5-5.5<br>[.060-.217]    | 0.9-3.0<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RTD-50-S-03 |
| 50   | RG-58, RG-141, RG-142, RG-303, RG-400     | 5019D3318, 5021D1331, 5020A1311 | 3.5-7.0<br>[.138-.276]    | 2.1-5.0<br>[.083-.197]   | 3.0<br>[.118]  | 1.25<br>[.050] | RTD-50-M-03 |
| 50   | RG-165, RG-215, RG-213, RG-225, RG-214    | 5012F3332, 5012A3311            | 5.0-12.5<br>[.197-.500]   | 4.1-9.5<br>[.161-.375]   | 7.3<br>[.287]  | 2.45<br>[.100] | RTD-50-L-03 |
| 75   | RG-179, RG-187                            | 7530A1317                       | 1.5-5.5<br>[.060-.217]    | 0.9-3.0<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RTD-75-S-03 |
| 75   | —   | 7524A1311, 7528A1317            | 3.5-7.0<br>[.138-.276]    | 2.1-5.0<br>[.083-.197]   | 3.7<br>[.146]  | 1.25<br>[.050] | RTD-75-M-03 |
| 75   | RG-6, RG-11, RG-12, RG-59, RG-144, RG-216 | —                               | 5.0-12.5<br>[.197-.500]   | 4.1-9.5<br>[.161-.375]   | 7.3<br>[.287]  | 2.45<br>[.100] | RTD-75-L-03 |
| <b>TNC Straight Panel Jacks, Female Contacts</b> |   |                                 |                           |                          |                |                |             |
| 50   | RG-174, RG-178, RG-188, RG-196, RG-316    | 5026A1311, 5028A1317, 5030A1317 | 1.5-5.5<br>[.060-.217]    | 0.9-3.0<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RTD-50-S-04 |
| 50   | RG-58, RG-141, RG-142, RG-303, RG-400     | 5019D3318, 5021D1331, 5020A1311 | 3.5-7.0<br>[.138-.276]    | 2.1-5.0<br>[.083-.197]   | 3.0<br>[.118]  | 1.25<br>[.050] | RTD-50-M-04 |
| 50   | RG-165, RG-215, RG-213, RG-225, RG-214    | 5012F3332, 5012A3311            | 5.0-12.5<br>[.197-.500]   | 4.1-9.5<br>[.161-.375]   | 7.3<br>[.287]  | 2.45<br>[.100] | RTD-50-L-04 |
| 75   | RG-179, RG-187                            | 7530A1317                       | 1.5-5.5<br>[.060-.217]    | 0.9-3.0<br>[.035-.118]   | 1.55<br>[.060] | 0.65<br>[.025] | RTD-75-S-04 |
| 75   | —   | 7524A1311, 7528A1317            | 3.5-7.0<br>[.138-.276]    | 2.1-5.0<br>[.083-.197]   | 3.7<br>[.146]  | 1.25<br>[.050] | RTD-75-M-04 |
| 75   | RG-6, RG-11, RG-12, RG-59, RG-144, RG-216 | —                               | 5.0-12.5<br>[.197-.500]   | 4.1-9.5<br>[.161-.375]   | 7.3<br>[.287]  | 2.45<br>[.100] | RTD-75-L-04 |



TNC Coaxial Connectors

Panel thickness: 3.2 [.125] max.



| Impedance (ohms)                                    | Cable Type                                |                                 | Cable Dimensions       |                       |             |             | Part No.    |
|---|---|---------------------------------|------------------------|-----------------------|-------------|-------------|-------------|
|   | RG Cables                                 | Raychem Cables                  | D (Min.-Max.)          | E (Min.-Max.)         | F (Max.)    | G (Max.)    |             |
| <b>TNC Straight Bulkhead Jacks, Female Contacts</b> |   |                                 |                        |                       |             |             |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316    | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50 [.060-.217]  | 0.90-3.00 [.035-.118] | 1.55 [.060] | 0.65 [.025] | RTD-50-S-02 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400     | 5019D3318, 5021D1331, 5020A1311 | 3.5-7.0 [.138-.276]    | 2.10-5.00 [.083-.197] | 3.00 [.118] | 1.25 [.050] | RTD-50-M-02 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214    | 5012F3332, 5012A3311            | 5.0-12.5 [.197-.500]   | 4.10-9.50 [.161-.375] | 7.30 [.287] | 2.45 [.100] | RTD-50-L-02 |
| 75  | RG-179, RG-187                            | 7530A1317                       | 1.5-5.5 [.060-.217]    | 0.90-3.00 [.035-.118] | 1.55 [.060] | 0.65 [.025] | RTD-75-S-02 |
| 75  | —   | 7524A1311, 7528A1317            | 3.5-7.0 [.138-.276]    | 2.10-5.00 [.083-.197] | 3.70 [.146] | 1.25 [.050] | RTD-75-M-02 |
| 75  | RG-6, RG-11, RG-12, RG-59, RG-144, RG-216 | —                               | 5.0-12.5 [.197-.500]   | 4.10-9.50 [.161-.375] | 7.30 [.287] | 2.45 [.100] | RTD-75-L-02 |
| <b>TNC Right-Angle Plugs, Male Contacts</b>         |   |                                 |                        |                       |             |             |             |
| 50  | RG-174, RG-178, RG-188, RG-196, RG-316    | 5026A1311, 5028A1317, 5030A1317 | 1.50-5.50 [.060-.217]  | 0.90-3.00 [.035-.118] | 1.55 [.060] | 0.65 [.025] | RTD-50-S-01 |
| 50  | RG-58, RG-141, RG-142, RG-303, RG-400     | 5019D3318, 5021D1331, 5020A1311 | 3.50-7.00 [.138-.276]  | 2.10-5.00 [.083-.197] | 3.00 [.118] | 1.25 [.050] | RTD-50-M-01 |
| 50  | RG-165, RG-215, RG-213, RG-225, RG-214    | 5012F3332, 5012A3311            | 5.00-12.50 [.197-.500] | 4.10-9.50 [.161-.375] | 7.30 [.287] | 2.45 [.100] | RTD-50-L-01 |
| 75  | RG-179, RG-187                            | 7530A1317                       | 1.50-5.50 [.060-.217]  | 0.90-3.00 [.035-.118] | 1.55 [.060] | 0.65 [.025] | RTD-75-S-01 |
| 75  | —   | 7524A1311, 7528A1317            | 3.50-7.00 [.138-.276]  | 2.10-5.00 [.083-.197] | 3.70 [.146] | 1.25 [.050] | RTD-75-M-01 |
| 75  | RG-6, RG-11, RG-12, RG-59, RG-144, RG-216 | —                               | 5.0-12.5 [.197-.500]   | 4.10-9.50 [.161-.375] | 7.30 [.287] | 2.45 [.100] | RTD-75-L-01 |