RF Jumpers 50 Ω, Low-Loss Cable Assemblies

VERSATILE HIGH-PERFORMANCE COAX CABLE ASSEMBLIES

Carlisle Interconnect Technologies (CarlisleIT) offers RF cable jumpers in multiple configurations to cater to most applications. We currently supply 1.85 mm, 2.40 mm, 2.92 mm, and 3.50 mm connector types on 0.079" coax, but if you are looking for a length or configuration not found in the options below, please contact us to enquire about custom orders. We aim to provide an end-to-end solution that encompasses Precision RF Connectors, RF Jumpers, and Adapters.

### SPECIFICATIONS & PERFORMANCE

<table>
<thead>
<tr>
<th>Connector 1 Type</th>
<th>Cable</th>
<th>Connector 2 Type</th>
<th>Freq. Range</th>
<th>VSWR (Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85 mm Male or Female</td>
<td>1.85 mm Male or Female</td>
<td>DC - 65 GHz</td>
<td>1.40:1 @ 65 GHz</td>
<td></td>
</tr>
<tr>
<td>1.85 mm Female</td>
<td>2.92 mm Male</td>
<td>DC - 40 GHz</td>
<td>1.35:1 @ 40 GHz</td>
<td></td>
</tr>
<tr>
<td>2.40 mm Male or Female</td>
<td>2.40 mm Male or Female</td>
<td>DC - 50 GHz</td>
<td>1.40:1 @ 50 GHz</td>
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</tr>
<tr>
<td>2.40 mm Female</td>
<td>3.50 mm Male or Female</td>
<td>DC - 26.5 GHz</td>
<td>1.30:1 @ 26.5 GHz</td>
<td></td>
</tr>
<tr>
<td>2.92 mm Male or Female</td>
<td>2.92 mm Male or Female</td>
<td>DC - 40 GHz</td>
<td>1.35:1 @ 40 GHz</td>
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</tr>
<tr>
<td>3.50 mm Male or Female</td>
<td>3.50 mm Male or Female</td>
<td>DC - 26.5 GHz</td>
<td>1.30:1 @ 26.5 GHz</td>
<td></td>
</tr>
</tbody>
</table>

### ORDERING INFORMATION

Standard Part Number Guide for RF Jumper Cables

Fill in the part number to the right.

- **Cable Type:**
  - 7: 0.079" Coax

- **Strain Relief:**
  - S: Short
  - M: Medium
  - L: Long

- **Connector 1 Type:**
  - 4: 2.40 mm
  - 5: 3.5 mm
  - 8: 1.85 mm
  - 9: 2.92 mm
  - ST: SecureThread SSMP (SMPM)

- **Connector 1 Gender:**
  - M: Male
  - F: Female

- **Connector 1 Orientation:**
  - S: Straight (No Mounting)
  - 2: 2 Hole Flange
  - 4: 4 Hole Flange

- **Connector 2 Type:**
  - 4: 2.40 mm
  - 5: 3.5 mm
  - 8: 1.85 mm
  - 9: 2.92 mm
  - ST: SecureThread SSMP (SMPM)

- **Phase Matching (Pairs):**
  - Null: +/- 2ps
  - D: +/- 1ps
  - E: +/- 0.5ps

- **Length in cm:**
  - 999: 2 or 3 digit cm

- **Standard/Custom Connectors:**
  - 00: Standard
  - XX: Custom

- **Connector 2 Orientation:**
  - S: Straight (No Mounting)
  - 2: 2 Hole Flange
  - 4: 4 Hole Flange

- **Connector 2 Gender:**
  - M: Male
  - F: Female

Learn more: CarlisleIT.com/markets/test-measurement/rf-products
RF Jumpers

WHY CHOOSE RF COAX JUMPERS FROM CARLISLEIT?

» Versatile low-loss cables offering outstanding performance in almost any environment
» RF cables supporting frequencies up to 70 GHz
» Lower loss than competition and precise phase matching
» Light weight; less than 5 g/ft
» Minimum static bend radius of 0.130"
» High flex life of 3,000 cycles
» Wide operating temperature range of -65 °C to 165 °C

<table>
<thead>
<tr>
<th>Product Feature</th>
<th>Customer Benefit</th>
</tr>
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</table>
| Industry leader in RF cable manufacturing | » Low risk in supply chain
|                                   | » High-quality products                   |
| Wide range of technology         | » Flexibility                            |
|                                   | » One-stop-shop for all RF connectivity needs |
| Standard & custom cable solutions | Address unique needs in different applications |

Low insertion loss and VSWR of CIT’s coax jumpers indicate their high quality and performance. VSWR and insertion loss performance of 24" of 0.079" coax cable assemblies, with 2.4 mm RF connectors across the frequency range of DC to 50 GHz, is shown for reference in Figure 1. Low VSWR of <1.2 indicates a uniform impedance profile across the length of the cable assembly with minimal unwanted standing waves and reflections. Keeping the insertion loss less than -3 dB across the 50 GHz frequency spectrum ensures that the signal loss in the cable is very small.

Fig. 1: VSWR and insertion loss performance of 0.079" coax cable assembly samples