

## Precision SMA Male to SMA Male Phase Stable Cable .80 Coax in 48 Inch with LF Solder

The SMA male to SMA male 48 inch cable using .80 coax, part number FMTC101-48, from Fairview Microwave is in-stock and ships same day. This Fairview SMA to SMA cable assembly has a male to male gender configuration with 50 ohm flexible FM-195TC coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMTC101-48 SMA male to SMA male cable assembly operates to 18 GHz. The triple shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than 100 dB. Fairview's Phase Stable Test Cables allow customers to make accurate repeatable measurements due to the cables phase and amplitude stability when flexed. The FM-195TC cable has a max phase deviation of +/- 2 degrees to 18 GHz and +/- 3 degrees at 27 GHz reducing any measurement error introduced by the test cables during product evaluation. The FM-195TC test cables use a solid PTFE dielectric core to help prevent any change in diameter under flexure resulting in good insertion loss and low VSWR. These cables are designed to exceed 5,000 mating cycles when handled with proper care. The larger 0.195 inch diameter has lower loss than smaller diameter flexible coax while still operating to 27 GHz with excellent phase and amplitude variation. This series of cables are an excellent choice for the laboratory or production environment when a more precise measurement is needed, especially when there is movement involved in the testing cycle.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other RF cable assembly value added services including connector orientation or clocking, heat shrink booting and labeling are also available. RF testing can also be performed to document the electrical performance of your cable assembly.

### Electrical Specifications

| Description                  | Min | Typ          | Max    | Units        |
|------------------------------|-----|--------------|--------|--------------|
| Frequency Range              | DC  |              | 18     | GHz          |
| VSWR                         |     |              | 1.25:1 |              |
| Velocity of Propagation      |     | 70           |        | %            |
| RF Shielding                 | 100 |              |        | dB           |
| Capacitance                  |     | 29.4 [96.46] |        | pF/ft [pF/m] |
| Phase Stability with Flexure |     | ±2           |        | Degrees      |

### Performance by Frequency

| Description           | F1  | F2   | F3   | F4 | F5 | Units |
|-----------------------|-----|------|------|----|----|-------|
| Frequency             | 6   | 12   | 18   |    |    | GHz   |
| Insertion Loss (Max.) | 1.7 | 2.57 | 3.33 |    |    | dB    |
| Power Handling (Max.) |     |      | 70   |    |    | W     |

### Mechanical Specifications

#### Cable Assembly

|         |                      |
|---------|----------------------|
| Length* | 48 in [121.92 cm]    |
| Weight  | 0.257 lbs [116.57 g] |



### Configuration:

- SMA Male
- SMA Male
- FM-195TC

### Features:

- Max Frequency 18 GHz
- Shielding Effectivity > 100 dB
- 70% Phase Velocity
- Triple Shielded
- FEP Jacket
- The 0.195 inch diameter has lower insertion loss
- Phase change with flexure +/-2° to 18 GHz
- Extended life with up to 5,000 mating cycles with proper care
- Flexible and durable cable with a minimum bend radius of 1 inch
- Strong Connector coax interface with heavy duty booting
- Test data provided with every cable assembly
- -65° to +125° temperature range
- All in-stock and available to ship same day

### Applications:

- General Purpose
- Laboratory Use
- RF test stations
- Bench-top lab testing
- Antenna testing
- Automated testing using multiple ports

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**Cable**

|                                      |                            |
|--------------------------------------|----------------------------|
| Cable Type                           | FM-195TC                   |
| Impedance                            | 50 Ohms                    |
| Inner Conductor Type                 | Solid                      |
| Inner Conductor Material and Plating | Copper, Silver             |
| Dielectric Type                      | PTFE                       |
| Number of Shields                    | 3                          |
| Shield Layer 1                       | Silver Plated Copper Braid |
| Shield Layer 2                       | Silver Plated Copper Tape  |
| Shield Layer 3                       | Silver Plated Copper Braid |
| Jacket Material                      | FEP                        |
| Jacket Diameter                      | 0.195 in [4.95 mm]         |

One Time Minimum Bend Radius 1 in [25.4 mm]

**Connectors**

| Description                     | Connector 1                | Connector 2                |
|---------------------------------|----------------------------|----------------------------|
| Type                            | SMA Male                   | SMA Male                   |
| Impedance                       | 50 Ohms                    | 50 Ohms                    |
| Contact Material & Plating      | Beryllium Copper, Gold     | Beryllium Copper, Gold     |
| Dielectric Type                 | PTFE                       | PTFE                       |
| Body Material & Plating         | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Material & Plating | Passivated Stainless Steel | Passivated Stainless Steel |

**Environmental Specifications**
**Temperature**

Operating Range -65 to +125 deg C

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

- Values at 25°C, sea level.

**How to Order**

Part Number Configuration:

**FMTC101 - xx uu**

cm = Centimeters

<blank> = Inches

Length

Example: FMTC101-12 = 12 inches long cable  
 FMTC101-100cm = 100 cm long cable

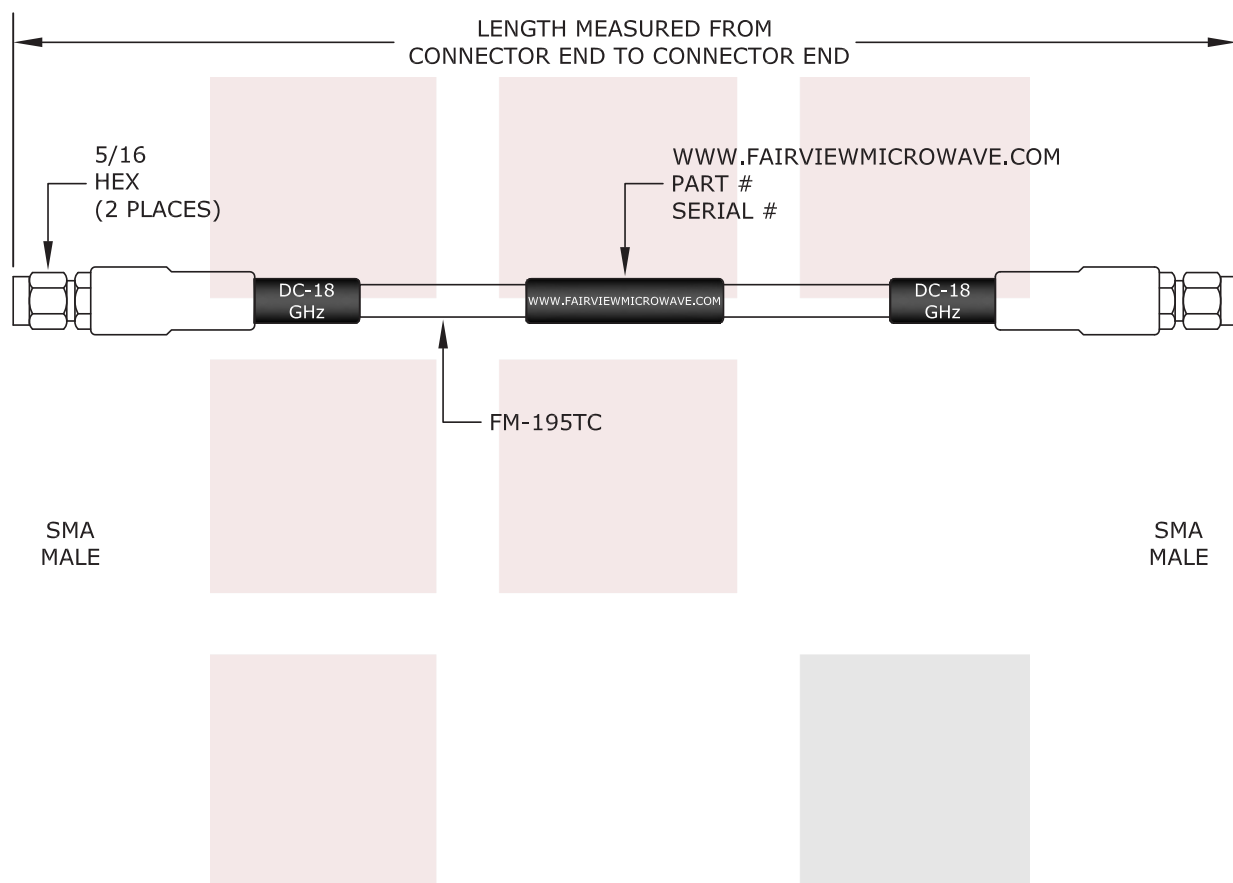
Precision SMA Male to SMA Male Phase Stable Cable .80 Coax in 48 Inch with LF Solder from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [Precision SMA Male to SMA Male Phase Stable Cable .80 Coax in 48 Inch with LF Solder FMTC101-48](https://www.fairviewmicrowave.com/sma-male-sma-male-cable-.80-coax-fmtc101-48-p.aspx)

URL: <https://www.fairviewmicrowave.com/sma-male-sma-male-cable-.80-coax-fmtc101-48-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.





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|--------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-------------|
| <b>FAIRVIEW MICROWAVE INC.</b><br>ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM                      |        | NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. |       |                    |             |
| TITLE<br>Precision SMA Male to SMA Male Phase Stable Cable<br>.80 Coax in 48 Inch with LF Solder |        | DWG NO<br>FMTC101                                                                                                                                                                   |       | CAGE CODE<br>3FKR5 |             |
| CAD FILE                                                                                         | 072015 | SHEET                                                                                                                                                                               | SCALE | N/A                | SIZE A 2233 |