

## Low Loss Test 2.4mm Female to 2.4mm Female Cable FM-TC177A Coax

### FMCA11035

#### Configuration

- Connector 1: 2.4mm Female
- Connector 2: 2.4mm Female
- Cable Type: FM-TC177A
- Coax Flex Type: Flexible

#### Features

- Max Frequency 50 GHz
- 77% Phase Velocity
- Double Shielded
- Ruggedized Aramid yarn Jacket
- Excellent Phase and Loss Stability with Flexure
- Low Loss Performance

#### Applications

- General Purpose
- Test & Measurement
- Laboratory Use
- VNA Test Port Extenders
- Semiconductor Probe Testing
- Precise Bench-Top Testing
- Lab and Production Testing

#### Description

The 2.4mm female to 2.4mm female cable using FM-TC177A coax, part number FMCA11035, from Fairview Microwave is in-stock and ships same day. This Fairview 2.4mm to 2.4mm cable assembly has a female to female gender configuration with 50 ohm flexible FM-TC177A coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA11035 2.4mm female to 2.4mm female cable assembly operates to 50 GHz. The double shielding of this Fairview cable assembly provides excellent shielding effectiveness.

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                  | Minimum | Typical | Maximum | Units   |
|------------------------------|---------|---------|---------|---------|
| Frequency Range              | DC      |         | 50      | GHz     |
| VSWR                         |         |         | 1.45:1  |         |
| Velocity of Propagation      |         | 77      |         | %       |
| Phase Stability with Flexure |         | 15      |         | Degrees |
| Loss Stability with Flexure  |         | 0.1     |         | dB      |

#### Specifications by Frequency

## Low Loss Test 2.4mm Female to 2.4mm Female Cable FM-TC177A Coax

### FMCA11035

| Part Number     | Length                   | Description           | F1    | F2    | F3    | F4    | F5    | Units | Weight (lbs) |
|-----------------|--------------------------|-----------------------|-------|-------|-------|-------|-------|-------|--------------|
|                 |                          | Frequency             | 2500  | 5000  | 10000 | 20000 | 50000 | MHz   |              |
| FMCA11035       | Custom Lengths Available | Insertion Loss (Typ.) | 0.224 | 0.326 | 0.473 | 0.686 | 1.178 | dB/ft |              |
|                 |                          |                       | 0.74  | 1.07  | 1.56  | 2.26  | 3.87  | dB/m  |              |
| FMCA11035-12    | 12 In                    | Insertion Loss (Typ.) | 0.39  | 0.55  | 0.79  | 1.14  | 1.89  | dB    | 0.422        |
| FMCA11035-24    | 24 In                    | Insertion Loss (Typ.) | 0.61  | 0.88  | 1.27  | 1.82  | 3.07  | dB    | 0.444        |
| FMCA11035-36    | 36 In                    | Insertion Loss (Typ.) | 0.84  | 1.21  | 1.74  | 2.51  | 4.25  | dB    | 0.466        |
| FMCA11035-100CM | 100 CM                   | Insertion Loss (Typ.) | 0.9   | 1.3   | 1.87  | 2.7   | 4.58  | dB    | 0.421        |
| FMCA11035-150CM | 150 CM                   | Insertion Loss (Typ.) | 1.27  | 1.83  | 2.65  | 3.83  | 6.51  | dB    | 0.508        |

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1: 0.05\*SQRT(FGHz) dB

Loss due to Connector 2: 0.05\*SQRT(FGHz) dB

Base Weight: 0.422 pounds

Additional Weight per Inch: 0.00183 pounds

### Mechanical Specifications

#### Cable Assembly

Width/Diameter 0.5 in [12.7 mm]  
 Weight 0.422 lbs [191.42 g]

#### Cable

Cable Type FM-TC177A  
 Impedance 50 Ohms  
 Inner Conductor Type Stranded  
 Inner Conductor Material and Plating Copper, Silver  
 Dielectric Type PTFE  
 Number of Shields 2  
 Shield Layer 1 Silver Plated Copper  
 Shield Layer 2 Silver Plated Copper Braid  
 Jacket Material Ruggedized Aramid yarn  
 Jacket Diameter 0.177 in [4.5 mm]  
 Repeated Minimum Bend Radius 0.98 in [24.89 mm]

### Connectors

| Description                          | Connector 1                | Connector 2                |
|--------------------------------------|----------------------------|----------------------------|
| Type                                 | 2.4mm Female               | 2.4mm Female               |
| Impedance                            | 50 Ohms                    | 50 Ohms                    |
| Configuration                        | Straight                   | Straight                   |
| Contact Material and Plating         | Beryllium Copper, Gold     | Beryllium Copper, Gold     |
| Dielectric Type                      | Polystyrene                | Polystyrene                |
| Outer Conductor Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |
| Body Material and Plating            | Passivated Stainless Steel | Passivated Stainless Steel |

## Low Loss Test 2.4mm Female to 2.4mm Female Cable FM-TC177A Coax

### FMCA11035

#### Environmental Specifications

Operating Range Temperature -40 to +100 deg C

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

#### Plotted and Other Data

Notes:

#### Typical Performance Data

#### How to Order

Part Number Configuration: **FMCA11035 - xx uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches

Length

Base Number

Example: FMCA11035-12 = 12 inches long cable  
FMCA11035-100cm = 100 cm long cable

Low Loss Test 2.4mm Female to 2.4mm Female Cable FM-TC177A Coax from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Low Loss Test 2.4mm Female to 2.4mm Female Cable FM-TC177A Coax FMCA11035](#)

URL: <https://www.fairviewmicrowave.com/low-loss-test-2.4mm-female-to-2.4mm-female-cable-fm-tc177a-coax-fm-ca11035-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

FMCA11035 CAD Drawing
Low Loss Test 2.4mm Female to 2.4mm Female Cable FM-TC177A Coax

