

## Low Loss Test 1.85mm Male to 1.85mm Male Cable FM-TC142A Coax

### FMCA11036

#### Configuration

- Connector 1: 1.85mm Male
- Connector 2: 1.85mm Male
- Cable Type: FM-TC142A
- Coax Flex Type: Flexible

#### Features

- Max Frequency 67 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 1.85mm male to 1.85mm male cable using FM-TC142A coax, part number FMCA11036, from Fairview Microwave is in-stock and ships same day. This Fairview 1.85mm to 1.85mm cable assembly has a male to male gender configuration with 50 ohm flexible FM-TC142A coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA11036 1.85mm male to 1.85mm male cable assembly operates to 67 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      |         | 67      | GHz     |
| VSWR                         |         |         | 1.5:1   |         |
| Velocity of Propagation      |         | 77      |         | %       |
| Phase Stability with Flexure |         | 19      |         | Degrees |
| Loss Stability with Flexure  |         | 0.1     |         | dB      |

#### Specifications by Frequency

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| Part Number     | Length                   | Description           | F1    | F2    | F3    | F4    | F5    | Units | Weight (lbs) |
|-----------------|--------------------------|-----------------------|-------|-------|-------|-------|-------|-------|--------------|
|                 |                          | Frequency             | 5000  | 10000 | 20000 | 40000 | 67000 | MHz   |              |
| FMCA11036       | Custom Lengths Available | Insertion Loss (Typ.) | 0.456 | 0.655 | 0.98  | 1.439 | 1.925 | dB/ft |              |
|                 |                          |                       | 1.5   | 2.15  | 3.22  | 4.73  | 6.32  | dB/m  |              |
| FMCA11036-12    | 12 In                    | Insertion Loss (Typ.) | 0.68  | 0.98  | 1.43  | 2.08  | 2.75  | dB    | 0.416        |
| FMCA11036-24    | 24 In                    | Insertion Loss (Typ.) | 1.14  | 1.63  | 2.41  | 3.52  | 4.67  | dB    | 0.432        |
| FMCA11036-36    | 36 In                    | Insertion Loss (Typ.) | 1.6   | 2.29  | 3.39  | 4.95  | 6.6   | dB    | 0.448        |
| FMCA11036-100CM | 100 CM                   | Insertion Loss (Typ.) | 1.72  | 2.47  | 3.67  | 5.36  | 7.14  | dB    | 0.452        |
| FMCA11036-150CM | 150 CM                   | Insertion Loss (Typ.) | 2.47  | 3.54  | 5.28  | 7.72  | 10.3  | dB    | 0.478        |

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: 0.416 pounds

Additional Weight per Inch: 0.00133 pounds

### Mechanical Specifications

#### Cable Assembly

|                |                      |
|----------------|----------------------|
| Width/Diameter | 0.5 in [12.7 mm]     |
| Weight         | 0.416 lbs [188.69 g] |

#### Cable

|                                      |                            |
|--------------------------------------|----------------------------|
| Cable Type                           | FM-TC142A                  |
| 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                      | 0.141 in [3.58 mm]         |
| Repeated Minimum Bend Radius         | 0.98 in [24.89 mm]         |

### Connectors

| Description                       | Connector 1                | Connector 2                |
|-----------------------------------|----------------------------|----------------------------|
| Type                              | 1.85mm Male                | 1.85mm Male                |
| Impedance                         | 50 Ohms                    | 50 Ohms                    |
| Configuration                     | Straight                   | Straight                   |
| Contact Material and Plating      | Beryllium Copper, Gold     | Beryllium Copper, Gold     |
| Dielectric Type                   | Polystyrene                | Polystyrene                |
| Body Material and Plating         | Passivated Stainless Steel | Passivated Stainless Steel |
| Coupling Nut Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |

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#### Environmental Specifications

Operating Range Temperature -40 to +85 deg C

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

#### Plotted and Other Data

Notes:

#### Typical Performance Data

#### How to Order

Part Number Configuration: **FMCA11036 - xx uu**

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

Length

Base Number

Example: FMCA11036-12 = 12 inches long cable  
FMCA11036-100cm = 100 cm long cable

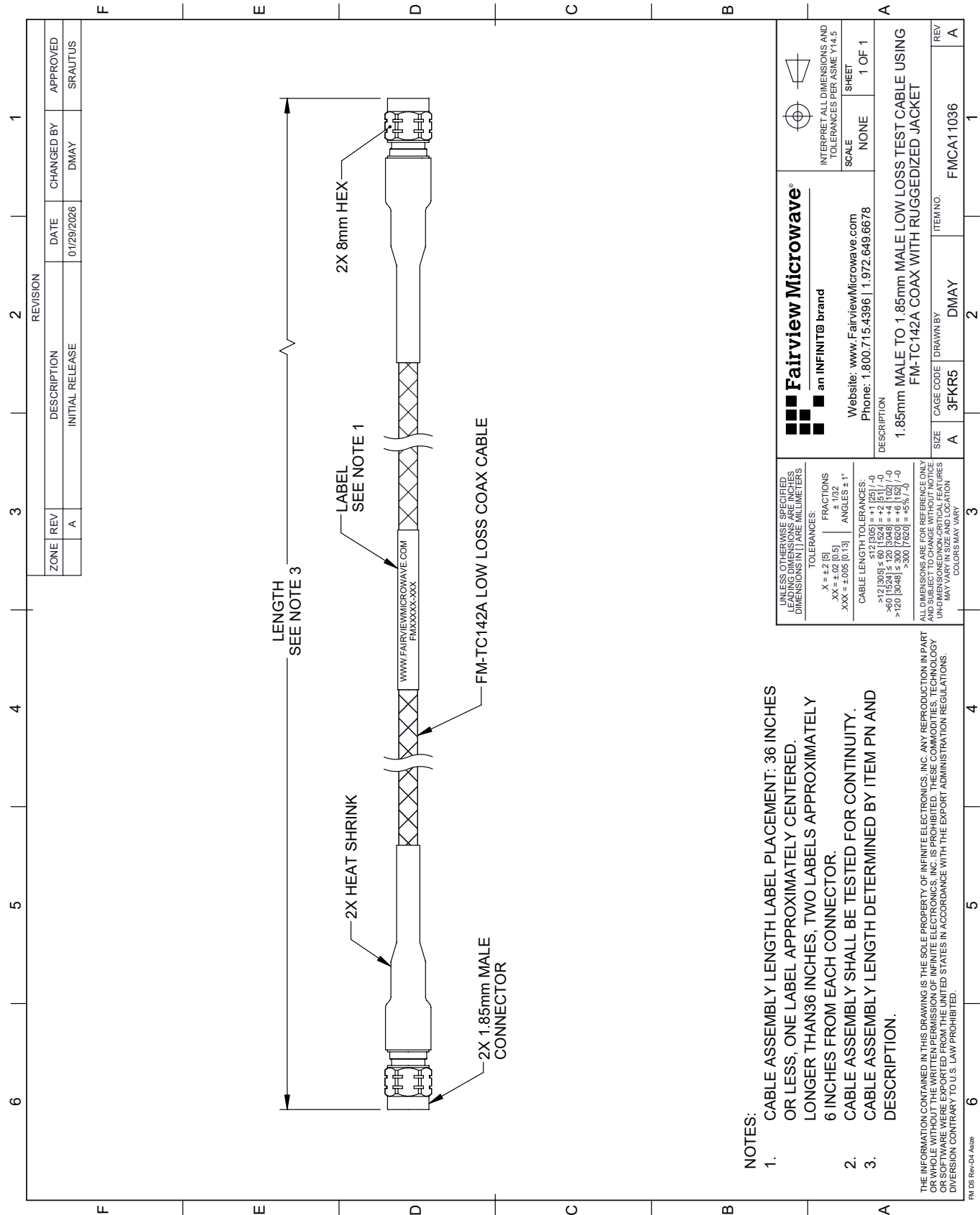
Low Loss Test 1.85mm Male to 1.85mm Male Cable FM-TC142A Coax from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Low Loss Test 1.85mm Male to 1.85mm Male Cable FM-TC142A Coax FMCA11036](#)

URL: <https://www.fairviewmicrowave.com/low-loss-test-1.85mm-male-to-1.85mm-male-cable-fm-tc142a-coax-fm-ca11036-p.aspx>

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FMCA11036 CAD Drawing
Low Loss Test 1.85mm Male to 1.85mm Male Cable FM-TC142A Coax



- 1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED. LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
- 2. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
- 3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5
SCALE NONE SHEET 1 OF 1

| DESCRIPTION                                                                                |           |          |           |
|--------------------------------------------------------------------------------------------|-----------|----------|-----------|
| 1.85mm MALE TO 1.85mm MALE LOW LOSS TEST CABLE USING FM-TC142A COAX WITH RUGGEDIZED JACKET |           |          |           |
| SIZE                                                                                       | CAGE CODE | DRAWN BY | ITEM NO.  |
| A                                                                                          | 3FKR5     | DMAY     | FMCA11036 |
| REV                                                                                        |           |          |           |
| A                                                                                          |           |          |           |

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. DIMENSIONS IN [ ] ARE MILLIMETERS.
TOLERANCES:
X = ±.2 [5]
XX = ±.02 [0.5]
XXX = ±.005 [0.13]
FRACTIONS:
± 1/32
ANGLES ± 1°
CABLE LENGTH TOLERANCES:
>12 [305] ≤ 60 [1524] = ±.1 [25] / -0
>60 [1524] ≤ 120 [3048] = ±.4 [102] / -0
>120 [3048] ≤ 300 [7620] = ±.6 [152] / -0
>300 [7620] = ±.8% / -0
ALL DIMENSIONS ARE FOR REFERENCE ONLY. DIMENSIONS OF INDIVIDUAL PARTS MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.