

## Low PIM 4.1/9.5 Mini DIN Male to 7/16 DIN Female 4 Hole Flange Cable TFT-402 Coax in 48 Inch Using Times Microwave Components

The 4.1/9.5 Mini DIN male to 7/16 DIN female 4 hole flange 48 inch cable using TFT-402 coax, part number FMCA2417-48, from Fairview Microwave is in-stock and ships same day. This Fairview 4.1/9.5 Mini DIN to 7/16 DIN cable assembly has a male to female gender configuration with 50 ohm flexible TFT-402 coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. Our low PIM design offers excellent passive intermodulation performance with PIM levels better than -160 dBc. The FMCA2417-48 4.1/9.5 Mini DIN male to 7/16 DIN female cable assembly operates to 3 GHz. Our RF cable assembly with 7/16 DIN 4 hole flange interface allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications. The double shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than -80 dB.

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  |             | 3     | GHz                              |
| VSWR                          |     |             | 1.4:1 |                                  |
| Velocity of Propagation       |     | 76          |       | %                                |
| RF Shielding                  | -80 |             |       | dB                               |
| Passive Intermodulation       |     |             | -160  | dBc                              |
| Capacitance                   |     | 26.7 [87.6] |       | pF/ft [pF/m]                     |
| DC Resistance Inner Conductor |     | 8.5 [27.89] |       | $\Omega$ /1000ft [ $\Omega$ /Km] |
| DC Resistance Outer Conductor |     | 5.6 [18.37] |       | $\Omega$ /1000ft [ $\Omega$ /Km] |

### Performance by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 0.1  | 0.25 | 0.5  | 1    | 3    | GHz   |
| Insertion Loss (Typ.) | 0.33 | 0.41 | 0.51 | 0.64 | 0.96 | dB    |

#### Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax and connectors used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.1 dB per connector.

### Mechanical Specifications

#### Cable Assembly

|          |                   |
|----------|-------------------|
| Length*  | 48 in [121.92 cm] |
| Diameter | 1.26 in [32 mm]   |



### Configuration:

- 4.1/9.5 Mini DIN Male
- 7/16 DIN Female 4 Hole Flange
- TFT-402

### Features:

- Max Frequency 3 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > -80 dB
- 76% Phase Velocity
- Double Shielded
- FEP Jacket

### Applications:

- General Purpose
- Laboratory Use
- Low PIM Applications
- Indoor and Outdoor Use
- Plenum Rated Applications

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**Cable**

|                                      |                            |
|--------------------------------------|----------------------------|
| Cable Type                           | TFT-402                    |
| Impedance                            | 50 Ohms                    |
| Inner Conductor Type                 | Solid                      |
| Inner Conductor Material and Plating | Copper, Silver             |
| Dielectric Type                      | PTFE                       |
| Number of Shields                    | 2                          |
| Shield Layer 1                       | Silver Plated Copper Braid |
| Shield Layer 2                       | Tinned Copper Braid        |
| Jacket Material                      | FEP, Blue                  |
| Jacket Diameter                      | 0.16 in [4.06 mm]          |

One Time Minimum Bend Radius 0.75 in [19.05 mm]

**Connectors**

| Description                     | Connector 1           | Connector 2            |
|---------------------------------|-----------------------|------------------------|
| Type                            | 4.1/9.5 Mini DIN Male | 7/16 DIN Female        |
| Mount Method                    |                       | 4 Hole Flange          |
| Impedance                       | 50 Ohms               | 50 Ohms                |
| Contact Material & Plating      | Brass, Silver         | Brass, Silver          |
| Contact Plating Spec.           | 5 µm                  | 5 µm                   |
| Dielectric Type                 | PTFE                  | PTFE                   |
| Outer Cond Material & Plating   |                       | Brass, Tri-Metal       |
| Outer Cond Plating Spec.        |                       | 3 µm                   |
| Body Material & Plating         | Brass, Tri-Metal      | Brass, Tri-Metal       |
| Body Plating Spec.              | 2 µm                  | 3 µm                   |
| Coupling Nut Material & Plating | Brass, Nickel         |                        |
| Coupling Nut Plating Spec.      | 5 µm                  |                        |
| Torque                          | 106 in-lbs 11.98 Nm   | 22.083 ft-lbs 29.95 Nm |

**Environmental Specifications**
**Temperature**

Operating Range -40 to +85 deg C

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

**Plotted and Other Data**

Notes:

**How to Order**

Part Number Configuration:

**FMCA2417 - xx uu**

cm = Centimeters

<blank> = Inches

Length

Example: FMCA2417-12 = 12 inches long cable  
 FMCA2417-100cm = 100 cm long cable

Low PIM 4.1/9.5 Mini DIN Male to 7/16 DIN Female 4 Hole Flange Cable TFT-402 Coax in 48 Inch Using Times Microwave Components 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.

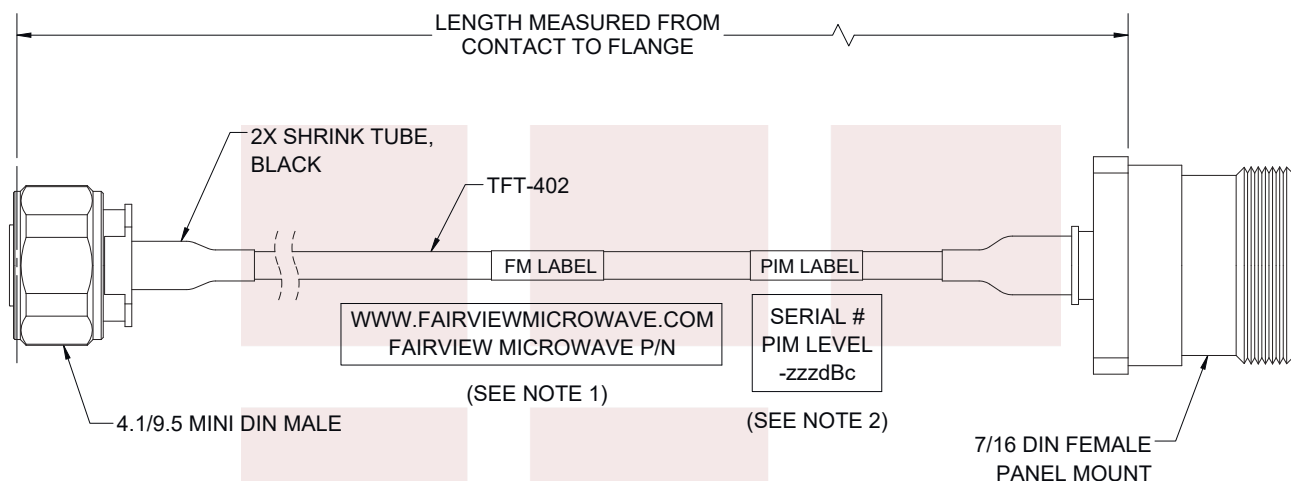
Click the following link to obtain additional part information: [Low PIM 4.1/9.5 Mini DIN Male to 7/16 DIN Female 4 Hole Flange Cable TFT-402 Coax in 48 Inch Using Times Microwave Components FMCA2417-48](https://www.fairviewmicrowave.com/low-pim-4.1-9.5-mini-din-male-7-16-din-female-cable-tft-402-coax-fmca2417-48)

URL: <https://www.fairviewmicrowave.com/low-pim-4.1-9.5-mini-din-male-7-16-din-female-cable-tft-402-coax-fmca2417-48-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.



| REVISIONS |                 |         |          |
|-----------|-----------------|---------|----------|
| REV.      | DESCRIPTION     | DATE    | APPROVED |
| A         | INITIAL RELEASE | 7/30/21 | SRAUTUS  |



**NOTES:**

1. CABLES 84" AND UNDER HAVE 1 LABEL CENTERED. CABLES OVER 84" HAVE 2 LABELS, ONE AT EACH END 12" FROM THE FRONT OF THE CONNECTOR.
2. PIM LABEL 6" FROM CABLE END 1 PLACE.

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TITLE

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4 Hole Flange Cable TFT-402 Coax in 48 Inch Using  
Times Microwave Components

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

**TOLERANCES:**

.X = ±.2 [5.08] FRACTIONS  
.XX = ±.02 [51] ± 1/32  
XXX = ±.005 [13] ANGLES ± 1°

**CABLE LENGTH (L) TOLERANCES:**

L ≤ 12 [305] = +1 [25] / -0  
12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
300 [7620] < L = +5%L / -0

**THIRD-ANGLE PROJECTION**



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SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

| SIZE | CAGE CODE | DRAWN BY | ITEM NO. | REV |
|------|-----------|----------|----------|-----|
| A    | 3FKR5     | DMAY     | FMCA2417 | A   |

T-Rev.D