

Fire Rated Low PIM N Male to N Male Cable TCOM-240-FR Coax With Times Microwave Components

FMCA100103

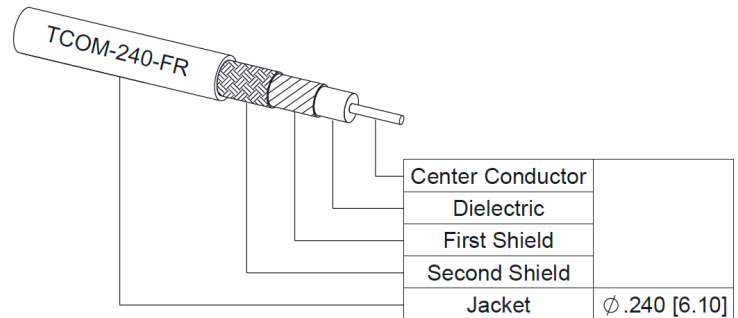


Configuration

- Connector 1: N Male
- Connector 2: N Male
- Cable Type: TCOM-240-FR
- Coax Flex Type: Flexible

Features

- Max Frequency 6 GHz
- Shielding Effectivity > 100 dB
- 84% Phase Velocity
- Double Shielded
- PE Jacket
- 500 Mating Cycles



Applications

- General Purpose
- Laboratory Use
- Low PIM Applications

Description

The type N male to type N male cable using TCOM-240-FR coax, part number FMCA100103, from Fairview Microwave is in-stock and ships same day. This Fairview type N to type N cable assembly has a male to male gender configuration with 50 ohm flexible TCOM-240-FR 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. The FMCA100103 type N male to type N male cable assembly operates to 6 GHz. The double shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than 100 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 | Minimum | Typical | Maximum | Units |
|--|---------|-------------|---------|-----------------------|
| Frequency Range | DC | | 6 | GHz |
| VSWR | | | 1.4:1 | |
| Velocity of Propagation | | 84 | | % |
| RF Shielding | 100 | | | dB |
| Group Delay | | 1.21 [3.97] | | ns/ft [ns/m] |
| Passive Intermodulation | | -155 | | dBc |
| IM3 (2x43dBm Tones) at 850 MHz or 1900 MHz | | | | |
| Capacitance | | 24.2 [79.4] | | pF/ft [pF/m] |
| Inductance | | 0.06 [0.2] | | uH/ft [uH/m] |
| DC Resistance Inner Conductor | | 3.2 [10.5] | | Ohms/1000ft [Ohms/Km] |
| DC Resistance Outer Conductor | | 2.06 [6.76] | | Ohms/1000ft [Ohms/Km] |

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Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|--------------|---------|---------|---------|-------|
| Jacket Spark | | | 5,000 | Vrms |

Specifications by Frequency

| Part Number | Length | Description | F1 | F2 | F3 | F4 | F5 | Units | Weight (lbs) |
|---------------|--------------------------|-----------------------|-------|-------|-------|-------|-------|-------|--------------|
| | | Frequency | 250 | 500 | 1000 | 2500 | 6000 | MHz | |
| FMCA100103 | Custom Lengths Available | Insertion Loss (Typ.) | 0.037 | 0.052 | 0.076 | 0.123 | 0.197 | dB/ft | |
| | | | 0.13 | 0.18 | 0.25 | 0.41 | 0.65 | dB/m | |
| FMCA100103-12 | 12 inch | Insertion Loss (Typ.) | 0.53 | 0.55 | 0.57 | 0.62 | 0.69 | dB | 0.225 |
| FMCA100103-24 | 24 inch | Insertion Loss (Typ.) | 0.57 | 0.6 | 0.65 | 0.74 | 0.89 | dB | 0.27 |
| FMCA100103-36 | 36 inch | Insertion Loss (Typ.) | 0.61 | 0.65 | 0.72 | 0.86 | 1.09 | dB | 0.315 |
| FMCA100103-48 | 48 inch | Insertion Loss (Typ.) | 0.64 | 0.7 | 0.8 | 0.99 | 1.28 | dB | 0.36 |
| FMCA100103-60 | 60 inch | Insertion Loss (Typ.) | 0.68 | 0.75 | 0.87 | 1.11 | 1.48 | dB | 0.405 |

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: | 0.245 dB |
| Loss due to Connector 2: | 0.245 dB |
| Base Weight: | 0.225 pounds |
| Additional Weight per Inch: | 0.00375 pounds |

Mechanical Specifications

Cable Assembly

| | |
|----------------|----------------------|
| Width/Diameter | 0.5 in [12.7 mm] |
| Weight | 0.225 lbs [102.06 g] |

Cable

| | |
|--------------------------------------|----------------------------|
| Cable Type | TCOM-240-FR |
| Impedance | 50 Ohms |
| Inner Conductor Type | Solid |
| Inner Conductor Material and Plating | Copper |
| Dielectric Type | PE (F) |
| Number of Shields | 2 |
| Shield Layer 1 | Silver Plated Copper Braid |
| Shield Layer 2 | Tinned Copper Braid |
| Jacket Material | PE, Black |
| Jacket Diameter | 0.24 in [6.1 mm] |
| One Time Minimum Bend Radius | 0.75 in [19.05 mm] |
| Repeated Minimum Bend Radius | 2.5 in [63.5 mm] |
| Bending Moment | 0.25 lbs-ft [0.34 N-m] |
| Flat Plate Crush | 20 lbs/in [0.36 Kg/mm] |
| Tensile Strength | 80 lbs [36.29 Kg] |

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Connectors

| Description | Connector 1 | Connector 2 |
|-----------------------------------|------------------|------------------|
| Type | N Male | N Male |
| Impedance | 50 Ohms | 50 Ohms |
| Configuration | Straight | Straight |
| Mating Cycles | 500 | 500 |
| Contact Material and Plating | Brass, Silver | Brass, Silver |
| Dielectric Type | PTFE | PTFE |
| Body Material and Plating | Brass, Tri-Metal | Brass, Tri-Metal |
| Coupling Nut Material and Plating | Brass, Tri-Metal | Brass, Tri-Metal |

Environmental Specifications

Operating Range Temperature-40 to +85 deg C

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

Plotted and Other Data

Notes:

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FMCA100103

Typical Performance Data

How to Order

Part Number Configuration: **FMCA100103** **- xx** **uu**

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

Length

Base Number

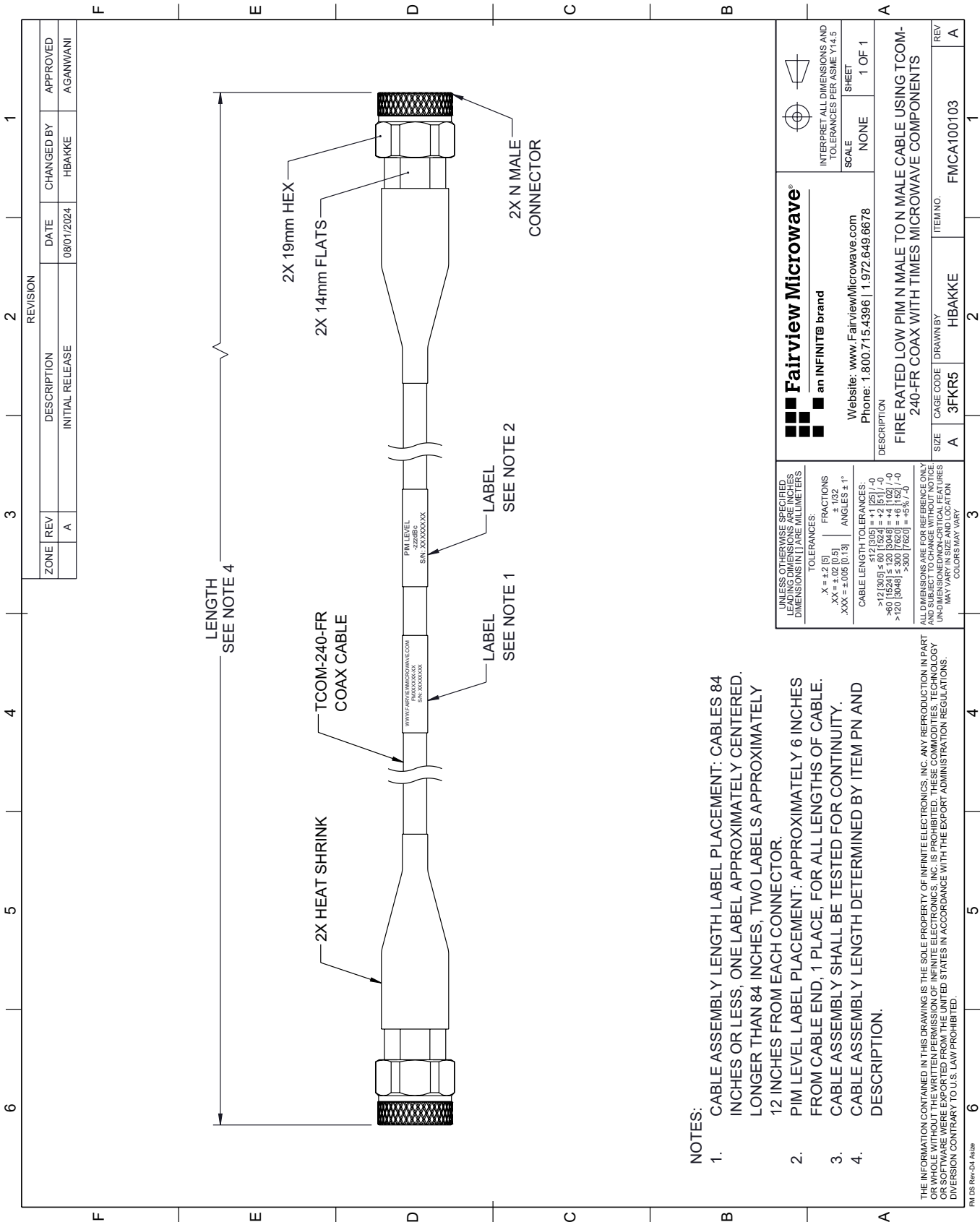
Example: FMCA100103-12 = 12 inches long cable
FMCA100103-100cm = 100 cm long cable

Fire Rated Low PIM N Male to N Male Cable TCOM-240-FR Coax With Times Microwave Components 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: [Fire Rated Low PIM N Male to N Male Cable TCOM-240-FR Coax With Times Microwave Components FMCA100103](#)

URL: <https://www.fairviewmicrowave.com/fire-rated-low-pim-n-male-to-n-male-cable-tcom-240-fr-coax-with-times-microwave-components-fmca100103-p.aspx>

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1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: CABLES 84 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED. LONGER THAN 84 INCHES, TWO LABELS APPROXIMATELY 12 INCHES FROM EACH CONNECTOR.

2. PIM LEVEL LABEL PLACEMENT: APPROXIMATELY 6 INCHES FROM CABLE END, 1 PLACE, FOR ALL LENGTHS OF CABLE.

3. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.

4. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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