

## Fire Rated Low Loss RA TNC Male to RA TNC Male Cable TCOM-240-FR Coax With Times Microwave Components



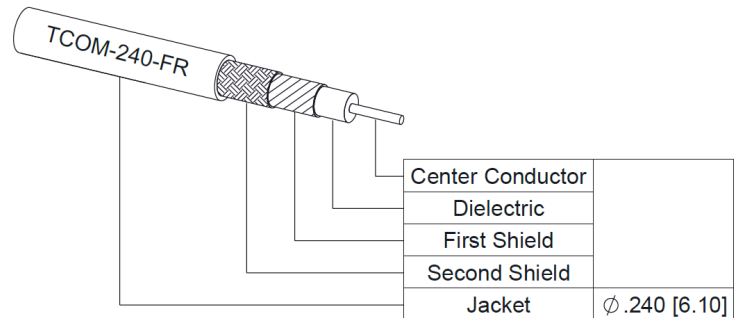
### FMCA100159

#### Configuration

- Connector 1: TNC Male Right Angle
- Connector 2: TNC Male Right Angle
- 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

#### Description

The RA TNC male to RA TNC male cable using TCOM-240-FR coax, part number FMCA100159, from Fairview Microwave is in-stock and ships same day. This Fairview TNC to TNC 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. The FMCA100159 TNC male to TNC male cable assembly operates to 6 GHz. The right angle TNC interfaces on the TCOM-240-FR cable allow for easier connections in tight spaces. 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]
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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**FMCA100159**

**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					MHz	
FMCA100159	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	
FMCA100159-12	12 inch	Insertion Loss (Typ.)	0.54	0.56	0.58	0.63	0.7	dB	0.177
FMCA100159-24	24 inch	Insertion Loss (Typ.)	0.58	0.61	0.66	0.75	0.9	dB	0.222
FMCA100159-36	36 inch	Insertion Loss (Typ.)	0.62	0.66	0.73	0.87	1.1	dB	0.267
FMCA100159-48	48 inch	Insertion Loss (Typ.)	0.65	0.71	0.81	1	1.29	dB	0.312
FMCA100159-60	60 inch	Insertion Loss (Typ.)	0.69	0.76	0.88	1.12	1.49	dB	0.357

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:	0.25 dB
Loss due to Connector 2:	0.25 dB
Base Weight:	0.177 pounds
Additional Weight per Inch:	0.00375 pounds

**Mechanical Specifications**

**Cable Assembly**

Width/Diameter	0.5 in [12.7 mm]
Weight	0.177 lbs [80.29 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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**FMCA100159**

**Connectors**

Description	Connector 1	Connector 2
Type	TNC Male Right Angle	TNC Male Right Angle
Impedance	50 Ohms	50 Ohms
Configuration	Right Angle	Right Angle
Mating Cycles	500	500
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	50 µin	50 µin
Dielectric Type	PTFE	PTFE
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	80 µin	80 µin
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Coupling Nut Plating Specification	80 µin	80 µin
Torque	8 in-lbs 0.9 Nm	8 in-lbs 0.9 Nm

**Environmental Specifications**

Operating Range Temperature -40 to +85 deg C

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

**Plotted and Other Data**

Notes:

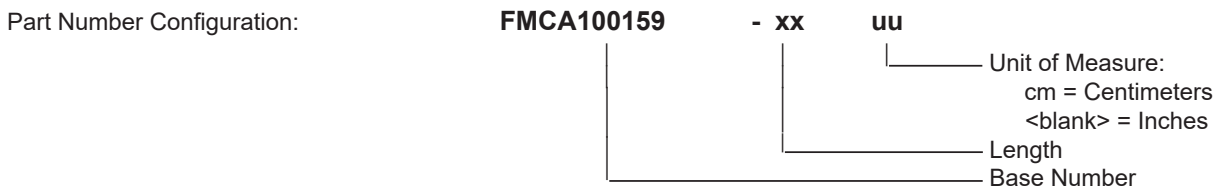
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**FMCA100159**

**Typical Performance Data**

**How to Order**



Example: FMCA100159-12 = 12 inches long cable  
FMCA100159-100cm = 100 cm long cable

Fire Rated Low Loss RA TNC Male to RA TNC 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.

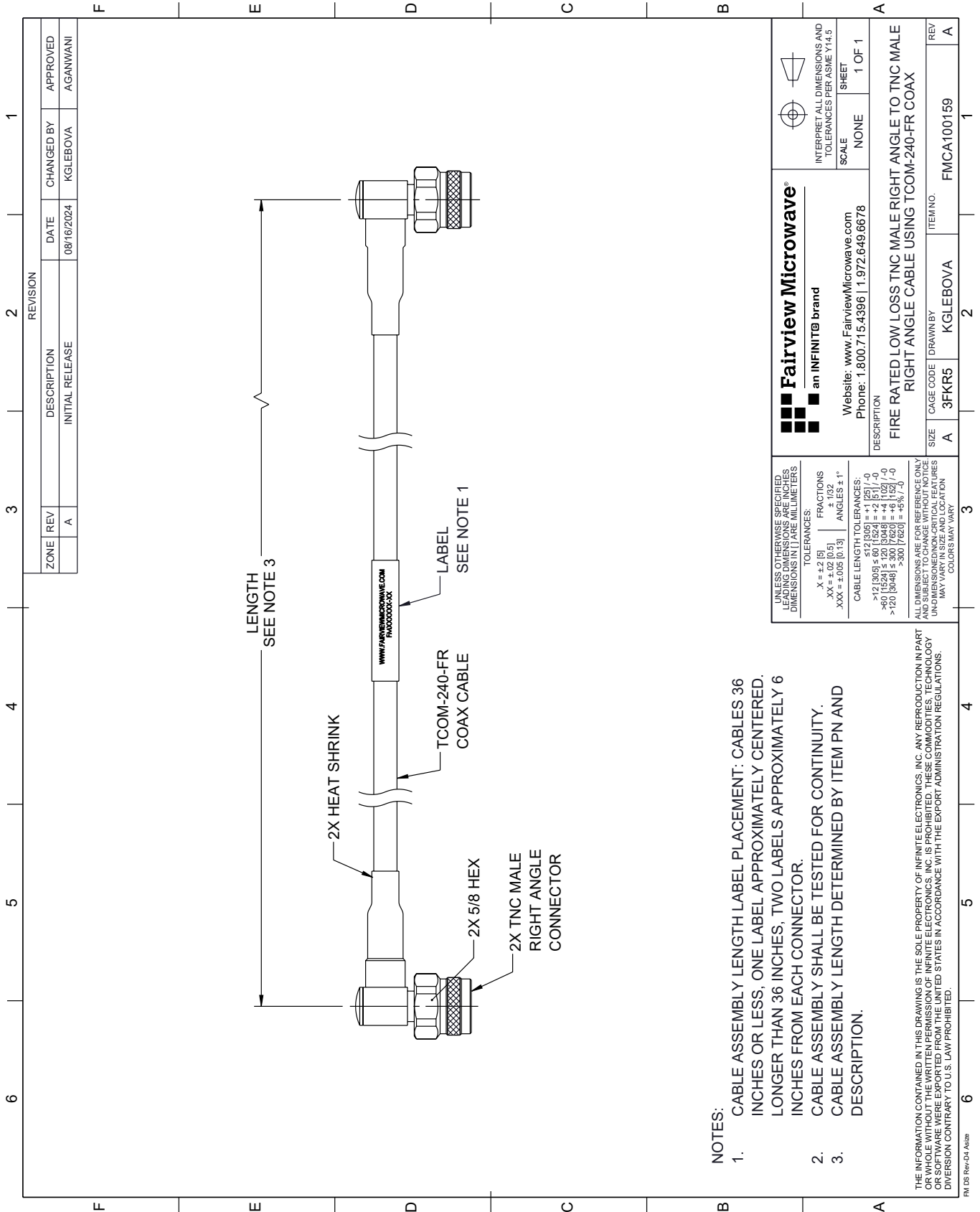
For additional information on this product, please click the following link: [Fire Rated Low Loss RA TNC Male to RA TNC Male Cable TCOM-240-FR Coax With Times Microwave Components FMCA100159](https://www.fairviewmicrowave.com/fire-rated-low-loss-ra-tnc-male-to-ra-tnc-male-cable-tcom-240-fr-coax-with-times-microwave-components-fmca100159)

URL: <https://www.fairviewmicrowave.com/fire-rated-low-loss-ra-tnc-male-to-ra-tnc-male-cable-tcom-240-fr-coax-with-times-microwave-components-fmca100159-p.aspx>

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# FMCA100159 CAD Drawing

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**NOTES:**

1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: CABLES 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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FM DS Rev-D4 Alt26

REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV			
	A	08/16/2024	KGLEBOVA	AGANWANI
DESCRIPTION				
INITIAL RELEASE				

 <b>Fairview Microwave®</b> an INFINIT® brand		Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a> Phone: 1.800.715.4396   1.972.649.6678	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE: NONE SHEET: 1 OF 1
DESCRIPTION <b>FIRE RATED LOW LOSS TNC MALE RIGHT ANGLE TO TNC MALE RIGHT ANGLE CABLE USING TCOM-240-FR COAX</b>			
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	KGLEBOVA	FMCA100159
REV			A

UNLESS OTHERWISE SPECIFIED, LEADING 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] = ±.125 [-0  
 >60 [1524] ≤ 120 [3048] = ±.102 [-0  
 >120 [3048] ≤ 300 [7620] = ±.08 [-0  
 >300 [7620] = ±.06 [-0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.