

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

### FMCA100165

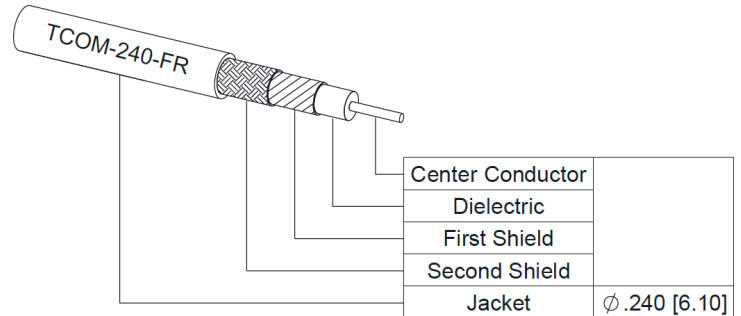


#### Configuration

- Connector 1: BNC Male Right Angle
- Connector 2: BNC 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 BNC male to RA BNC male cable using TCOM-240-FR coax, part number FMCA100165, from Fairview Microwave is in-stock and ships same day. This Fairview BNC to BNC 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 FMCA100165 BNC male to BNC male cable assembly operates to 6 GHz. The right angle BNC 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]
Dielectric Withstanding Voltage (DC)			1,500	Vdc

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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	
FMCA100165	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	
FMCA100165-12	12 inch	Insertion Loss (Typ.)	0.44	0.46	0.48	0.53	0.6	dB	0.245
FMCA100165-24	24 inch	Insertion Loss (Typ.)	0.48	0.51	0.56	0.65	0.8	dB	0.29
FMCA100165-36	36 inch	Insertion Loss (Typ.)	0.52	0.56	0.63	0.77	1	dB	0.335
FMCA100165-48	48 inch	Insertion Loss (Typ.)	0.55	0.61	0.71	0.9	1.19	dB	0.38
FMCA100165-60	60 inch	Insertion Loss (Typ.)	0.59	0.66	0.78	1.02	1.39	dB	0.425

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:	0.2 dB
Loss due to Connector 2:	0.2 dB
Base Weight:	0.245 pounds
Additional Weight per Inch:	0.00375 pounds

#### Mechanical Specifications

##### Cable Assembly

Width/Diameter	0.5 in [12.7 mm]
Weight	0.245 lbs [111.13 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	BNC Male Right Angle	BNC Male Right Angle
Impedance	50 Ohms	50 Ohms
Configuration	Right Angle	Right Angle
Mating Cycles	500	500
Contact Material and Plating	Brass, Gold over nickel	Brass, Gold over nickel
Contact Plating Specification	50 µin minimum	50 µin minimum
Dielectric Type	PTFE	PTFE
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	80 µin minimum	80 µin minimum

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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### FMCA100165

#### Typical Performance Data

#### How to Order

Part Number Configuration: **FMCA100165**    **- xx**    **uu**

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

Length

Base Number

Example: FMCA100165-12 = 12 inches long cable  
FMCA100165-100cm = 100 cm long cable

Fire Rated Low Loss RA BNC Male to RA BNC 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 BNC Male to RA BNC Male Cable TCOM-240-FR Coax With Times Microwave Components FMCA100165](https://www.fairviewmicrowave.com/fire-rated-low-loss-ra-bnc-male-to-ra-bnc-male-cable-tcom-240-fr-coax-with-times-microwave-components-fmca100165)

URL: <https://www.fairviewmicrowave.com/fire-rated-low-loss-ra-bnc-male-to-ra-bnc-male-cable-tcom-240-fr-coax-with-times-microwave-components-fmca100165-p.aspx>

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FMCA100165 CAD Drawing

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