

Fire Rated Low Loss RA SMA Male to RA SMA Male Cable LMR-240-FR Coax with Times Microwave Components

FMCA10050



Configuration

- Connector 1: SMA Male Right Angle
- Connector 2: SMA Male Right Angle
- Cable Type: LMR-240-FR
- Coax Flex Type: Flexible

Features

- Max Frequency 6 GHz
- Shielding Effectivity > 90 dB
- 83% Phase Velocity
- Double Shielded
- FRPE Jacket
- 500 Mating Cycles

Applications

- General Purpose
- Laboratory Use

Description

The RA SMA male to RA SMA male cable using LMR-240-FR coax, part number FMCA10050, from Fairview Microwave is in-stock and ships same day. This Fairview SMA to SMA cable assembly has a male to male gender configuration with 50 ohm flexible LMR-240-FR coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA10050 SMA male to SMA male cable assembly operates to 6 GHz. The right angle SMA interfaces on the LMR-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 90 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		83		%
RF Shielding	90			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		3.89 [12.76]		Ohms/1000ft [Ohms/Km]

Fire Rated Low Loss RA SMA Male to RA SMA Male Cable LMR-240-FR Coax with Times Microwave Components

FMCA10050



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	
FMCA10050	Custom Lengths Available	Insertion Loss (Typ.)	0.04	0.06	0.08	0.13	0.2	dB/ft	
			0.13	0.19	0.26	0.43	0.67	dB/m	
FMCA10050-12	12 Inch	Insertion Loss (Typ.)	0.54	0.56	0.58	0.63	0.71	dB	0.138
FMCA10050-24	24 Inch	Insertion Loss (Typ.)	0.58	0.61	0.66	0.76	0.91	dB	0.171
FMCA10050-36	36 Inch	Insertion Loss (Typ.)	0.62	0.67	0.74	0.89	1.12	dB	0.204
FMCA10050-48	48 Inch	Insertion Loss (Typ.)	0.66	0.72	0.82	1.02	1.32	dB	0.237
FMCA10050-60	60 Inch	Insertion Loss (Typ.)	0.7	0.78	0.9	1.15	1.52	dB	0.27

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:	0.138 pounds
Additional Weight per Inch:	0.15583 pounds

Mechanical Specifications

Cable Assembly

Width/Diameter	0.5 in [12.7 mm]
Weight	0.138 lbs [62.6 g]

Cable

Cable Type	LMR-240-FR
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper
Dielectric Type	Foam PE
Number of Shields	2
Shield Layer 1	Aluminum Tape
Shield Layer 2	Tinned Copper
Jacket Material	FRPE, 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]

Fire Rated Low Loss RA SMA Male to RA SMA Male Cable LMR-240-FR Coax with Times Microwave Components

FMCA10050



Connectors

Description	Connector 1	Connector 2
Type	SMA Male Right Angle	SMA 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 minimum	50 µin minimum
Dielectric Type	PTFE	PTFE
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Torque	7 in-lbs 0.79 Nm	7 in-lbs 0.79 Nm

Environmental Specifications

Operating Range Temperature -40 to +85 deg C

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

Plotted and Other Data

Notes:

Fire Rated Low Loss RA SMA Male to RA SMA Male Cable LMR-240-FR Coax with Times Microwave Components



FMCA10050

Typical Performance Data

How to Order

Part Number Configuration: **FMCA10050** **- xx** **uu**

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

Length
Base Number

Example: FMCA10050-12 = 12 inches long cable
FMCA10050-100cm = 100 cm long cable

Fire Rated Low Loss RA SMA Male to RA SMA Male Cable LMR-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 SMA Male to RA SMA Male Cable LMR-240-FR Coax with Times Microwave Components FMCA10050](#)

URL: <https://www.fairviewmicrowave.com/fire-rated-low-loss-ra-sma-male-to-ra-sma-male-cable-lmr-240-fr-coax-with-times-microwave-components-fmca10050-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

