

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



FMCA10051

Configuration

- Connector 1: SMA Male
- 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

Applications

- General Purpose
- Laboratory Use

Description

The SMA male to RA SMA male cable using LMR-240-FR coax, part number FMCA10051, 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 FMCA10051 SMA male to SMA male cable assembly operates to 6 GHz. The right angle SMA interface on the LMR-240-FR cable allows 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]

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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					MHz	
FMCA10051	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	
FMCA10051-12	12 Inch	Insertion Loss (Typ.)	0.39	0.41	0.43	0.48	0.56	dB	0.102
FMCA10051-24	24 Inch	Insertion Loss (Typ.)	0.43	0.46	0.51	0.61	0.76	dB	0.135
FMCA10051-36	36 Inch	Insertion Loss (Typ.)	0.47	0.52	0.59	0.74	0.97	dB	0.168
FMCA10051-48	48 Inch	Insertion Loss (Typ.)	0.51	0.57	0.67	0.87	1.17	dB	0.201
FMCA10051-60	60 Inch	Insertion Loss (Typ.)	0.55	0.63	0.75	1	1.37	dB	0.234

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:	0.1 dB
Loss due to Connector 2:	0.25 dB
Base Weight:	0.102 pounds
Additional Weight per Inch:	0.15583 pounds

Mechanical Specifications

Cable Assembly

Width/Diameter	0.5 in [12.7 mm]
Weight	0.102 lbs [46.27 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]

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Connectors

Description	Connector 1	Connector 2
Type	SMA Male	SMA Male Right Angle
Specification	MIL-STD-348	
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Right Angle
Mating Cycles		500
Contact Material and Plating	Beryllium Copper, Gold	Brass, Gold
Contact Plating Specification	ASTM B488	50 µin minimum
Dielectric Type	Teflon	PTFE
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Body Plating Specification	SAE-AMS-2700	
Coupling Nut Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Plating Specification	SAE-AMS-2700	
Torque		7 in-lbs 0.79 Nm

Environmental Specifications

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

Plotted and Other Data

Notes:

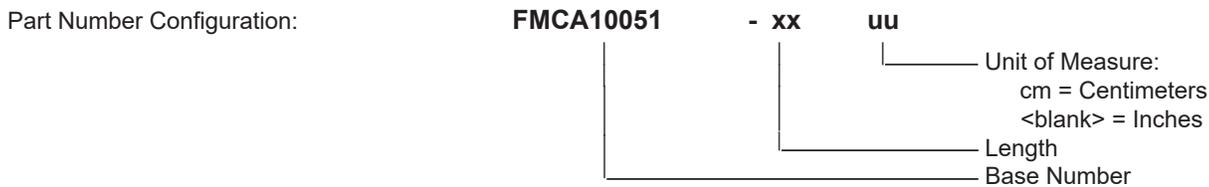
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Typical Performance Data

How to Order



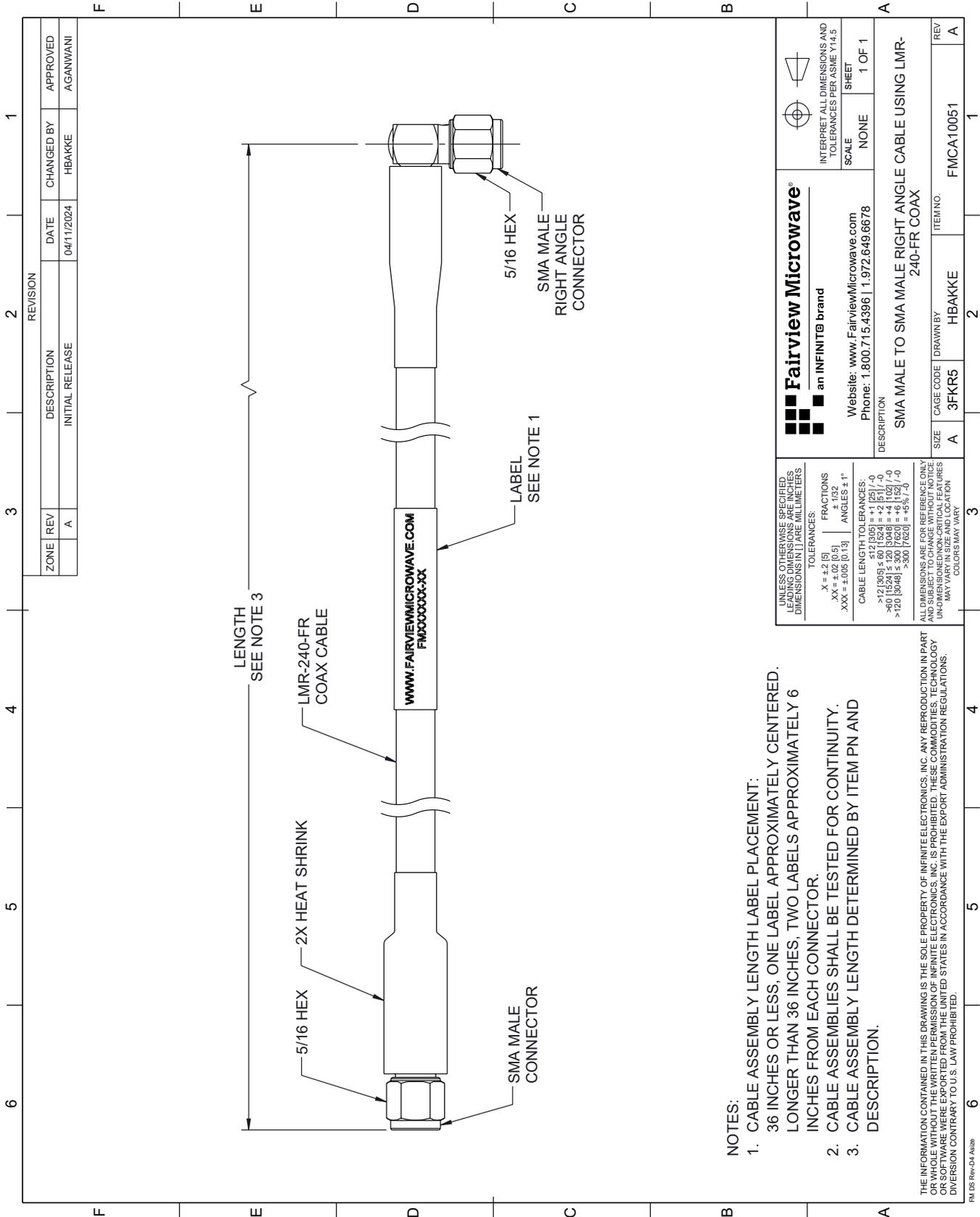
Example: FMCA10051-12 = 12 inches long cable
FMCA10051-100cm = 100 cm long cable

Fire Rated Low Loss 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 SMA Male to RA SMA Male Cable LMR-240-FR Coax with Times Microwave Components FMCA10051](https://www.fairviewmicrowave.com/fire-rated-low-loss-sma-male-to-ra-sma-male-cable-lmr-240-fr-coax-with-times-microwave-components-fmca10051)

URL: <https://www.fairviewmicrowave.com/fire-rated-low-loss-sma-male-to-ra-sma-male-cable-lmr-240-fr-coax-with-times-microwave-components-fmca10051-p.aspx>

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NOTES:

1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED, LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
2. CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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FM DS Rev-D4 Alt2b

REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV			
	A	04/11/2024	HBAKKE	AGANWANI
DESCRIPTION				
INITIAL RELEASE				

<p>Fairview Microwave® an INFINIT® brand</p> <p>Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678</p>		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p> <p>SCALE: NONE</p> <p>SHEET: 1 OF 1</p>
<p>UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES AND TRAILING DIMENSIONS ARE IN MILLIMETERS</p> <p>TOLERANCES:</p> <p>.X = ±.2 [5] FRACTIONS ± 1/32</p> <p>.XX = ±.02 [0.5] ANGLES ± 1°</p> <p>.XXX = ±.005 [0.13]</p> <p>CABLE LENGTH TOLERANCES:</p> <p><12 [305] ≤ 60 [1524] = ±.1 [25] / -0</p> <p>>60 [1524] ≤ 120 [3048] = ±.4 [102] / -0</p> <p>>120 [3048] ≤ 300 [7620] = ±.6 [152] / -0</p>		
<p>ALL DIMENSIONS ARE FOR REFERENCE ONLY. DIMENSIONS SHALL BE TO UNDIMENSIONED/NON-CRITICAL FEATURES. DIMENSIONS MAY VARY. COLORS MAY VARY.</p>		
DESCRIPTION	SIZE	ITEM NO.
SMA MALE TO SMA MALE RIGHT ANGLE CABLE USING LMR-240-FR COAX	A	FMCA10051
CAGE CODE	DRAWN BY	REV
3FKR5	HBAKKE	A