

RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax

FMCA21890

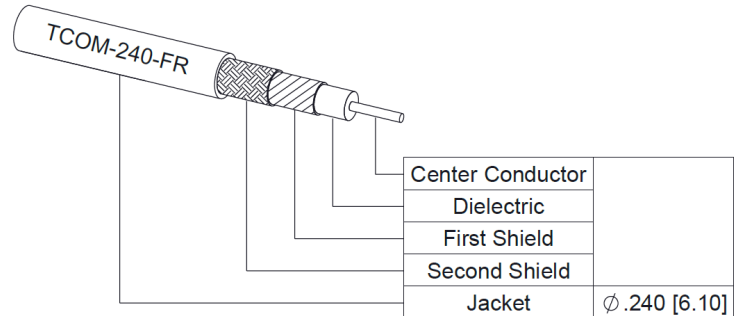


Configuration

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

Features

- Max Frequency 6 GHz
- Shielding Effectivity > 100 dB
- 84% Phase Velocity
- Triple Shielded
- FRPE Jacket



Applications

- General Purpose
- Laboratory Use

Description

The RA SMA male to RA SMA male cable using TCOM-240-FR coax, part number FMCA21890, 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 TCOM-240-FR coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA21890 SMA male to SMA male cable assembly operates to 6 GHz. The right angle SMA interfaces on the TCOM-240-FR cable allow for easier connections in tight spaces. The triple 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]

RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax

FMCA21890



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	
FMCA21890	Custom Lengths Available	Insertion Loss (Typ.)	0.037	0.055	0.079	0.131	0.208	dB/ft	
			0.13	0.19	0.26	0.43	0.69	dB/m	
FMCA21890-6	6 inch	Insertion Loss (Typ.)	0.47	0.48	0.49	0.52	0.56	dB	0.0665
FMCA21890-9	9 inch	Insertion Loss (Typ.)	0.48	0.5	0.51	0.55	0.61	dB	0.07775
FMCA21890-12	12 inch	Insertion Loss (Typ.)	0.49	0.51	0.53	0.59	0.66	dB	0.089
FMCA21890-18	18 inch	Insertion Loss (Typ.)	0.51	0.54	0.57	0.65	0.77	dB	0.1115
FMCA21890-24	24 inch	Insertion Loss (Typ.)	0.53	0.56	0.61	0.72	0.87	dB	0.134

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:	0.2 dB
Base Weight:	0.089 pounds
Additional Weight per Inch:	0.0037 pounds

Mechanical Specifications

Cable Assembly

Width/Diameter	0.88 in [22.35 mm]
Weight	0.089 lbs [40.37 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	3
Shield Layer 1	Silver Plated Copper Braid
Shield Layer 2	Tinned Copper Braid
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]

RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax

FMCA21890



Connectors

Description	Connector 1	Connector 2
Type	SMA Male Right Angle	SMA Male Right Angle
Specification	MIL-STD-348	
Impedance	50 Ohms	50 Ohms
Configuration	Right Angle	Right Angle
Mating Cycles	500	
Contact Material and Plating	Brass/Phosphor Bronze, Gold	Brass, Gold
Contact Plating Specification	50 µin minimum	50 µin minimum
Dielectric Type	Teflon	PTFE
Body Material and Plating	Brass, Tri-Metal	Brass, Gold
Body Plating Specification	80 µin minimum	3 µin minimum
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Gold
Coupling Nut Plating Specification	80 µin minimum	3 µin minimum
Hex Size	5/16 Inch	5/16 inch
Torque	7 in-lbs 0.79 Nm	3 in-lbs 0.34 Nm

Environmental Specifications

Operating Range Temperature-40 to +85 deg C

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

Plotted and Other Data

Notes:

RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax



FMCA21890

Typical Performance Data

How to Order

Part Number Configuration:

FMCA21890

- xx

uu

Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: FMCA21890-12 = 12 inches long cable
FMCA21890-100cm = 100 cm long cable

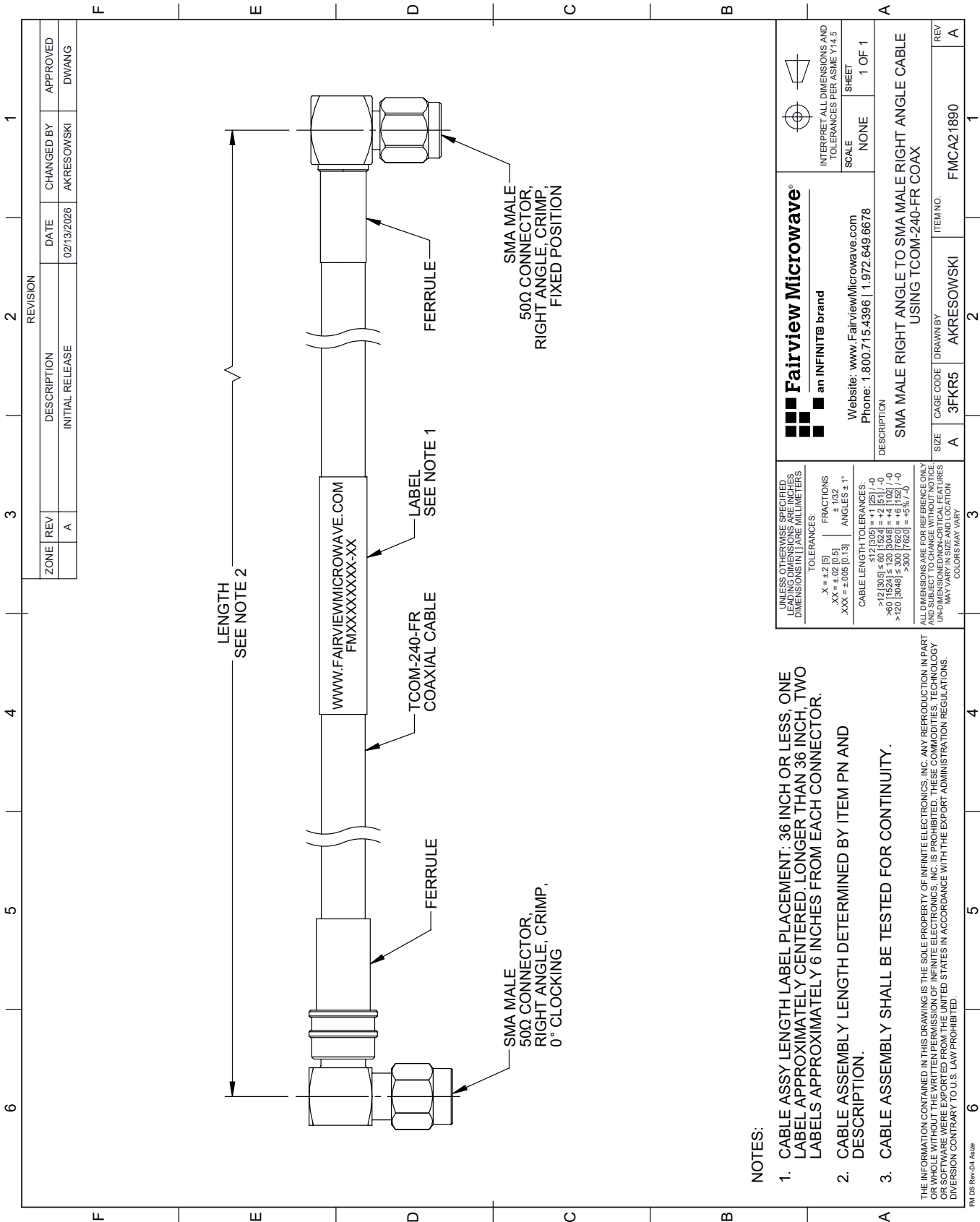
RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax FMCA21890](https://www.fairviewmicrowave.com/ra-sma-male-to-ra-sma-male-cable-tcom-240-fr-coax-fmca21890-p.aspx)

URL: <https://www.fairviewmicrowave.com/ra-sma-male-to-ra-sma-male-cable-tcom-240-fr-coax-fmca21890-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.

FMCA21890 CAD Drawing
RA SMA Male to RA SMA Male Cable TCOM-240-FR Coax



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

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVISION CONTRARY TO U.S. LAW PROHIBITED.

FM DS Rev-D4 Altuz