

2.4mm Male to 2.4mm Male Cable FM-P047 Coax

FMCA9971



Configuration

- Connector 1: 2.4mm Male
- Connector 2: 2.4mm Male
- Cable Type: FM-P047
- Coax Flex Type: Flexible

Features

- Max Frequency 50 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Double Shielded
- FEP Jacket

Applications

- General Purpose
- Laboratory Use

Description

The 2.4mm male to 2.4mm male cable using FM-P047 coax, part number FMCA9971, from Fairview Microwave is in-stock and ships same day. This Fairview 2.4mm to 2.4mm cable assembly has a male to male gender configuration with 50 ohm flexible FM-P047 coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA9971 2.4mm male to 2.4mm male cable assembly operates to 50 GHz. 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		50	GHz
VSWR			1.4:1	
Velocity of Propagation		70		%
RF Shielding	90			dB
Capacitance		29 [95.14]		pF/ft [pF/m]

Specifications by Frequency

2.4mm Male to 2.4mm Male Cable FM-P047 Coax



FMCA9971

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency	2500	5000	10000	20000	50000	
FMCA9971	Custom Lengths Available	Insertion Loss (Typ.)	0.31	0.46	0.675	1.005	1.548	dB/ft	
			1.03	1.5	2.22	3.3	5.08	dB/m	
FMCA9971-6	6 inch	Insertion Loss (Typ.)	0.29	0.41	0.6	0.87	1.34	dB	0.017
FMCA9971-12	12 inch	Insertion Loss (Typ.)	0.44	0.64	0.93	1.37	2.12	dB	0.018
FMCA9971-24	24 inch	Insertion Loss (Typ.)	0.76	1.1	1.61	2.37	3.67	dB	0.022
FMCA9971-36	36 inch	Insertion Loss (Typ.)	1.07	1.55	2.28	3.38	5.21	dB	0.026
FMCA9971-48	48 inch	Insertion Loss (Typ.)	1.38	2.01	2.96	4.38	6.76	dB	0.03

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: 0.04 x sqrt(fGHz) dB

Loss due to Connector 2: 0.04 x sqrt(fGHz) dB

Base Weight: 0.018 pounds

Additional Weight per Inch: 0.00031 pounds

Mechanical Specifications

Cable Assembly

Weight 0.018 lbs [8.16 g]

Cable

Cable Type FM-P047
Impedance 50 Ohms
Inner Conductor Type Solid
Inner Conductor Material and Plating Copper, Silver
Dielectric Type FEP
Number of Shields 2
Shield Layer 1 Silver Plated Copper Tape
Shield Layer 2 Silver Plated Copper Braid
Jacket Material FEP, Blue
Jacket Diameter 0.056 in [1.42 mm]
One Time Minimum Bend Radius 0.2 in [5.08 mm]
Repeated Minimum Bend Radius 0.4 in [10.16 mm]

2.4mm Male to 2.4mm Male Cable FM-P047 Coax



FMCA9971

Connectors

Description	Connector 1	Connector 2
Type	2.4mm Male	2.4mm Male
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Beryllium Copper, Gold over Nickel	Beryllium Copper, Gold over Nickel
Contact Plating Specification	50 µin minimum	50 µin minimum
Dielectric Type	PEI	PEI
Body Material and Plating	Beryllium Copper, Gold over Nickel	Beryllium Copper, Gold over Nickel
Body Plating Specification	50 µin minimum	50 µin minimum
Coupling Nut Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Plating Specification	ASTM-A582	ASTM-A582
Hex Size	5/16 inch	5/16 inch
Torque	8 in-lbs 0.9 Nm	8 in-lbs 0.9 Nm
Seal Gasket Material	Silicone Rubber	Silicone Rubber

Environmental Specifications

Operating Range Temperature -65 to +150 deg C

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

Plotted and Other Data

Notes:

2.4mm Male to 2.4mm Male Cable FM-P047 Coax



FMCA9971

Typical Performance Data

How to Order

Part Number Configuration:

FMCA9971

- xx

uu

Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: FMCA9971-12 = 12 inches long cable
FMCA9971-100cm = 100 cm long cable

2.4mm Male to 2.4mm Male Cable FM-P047 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.

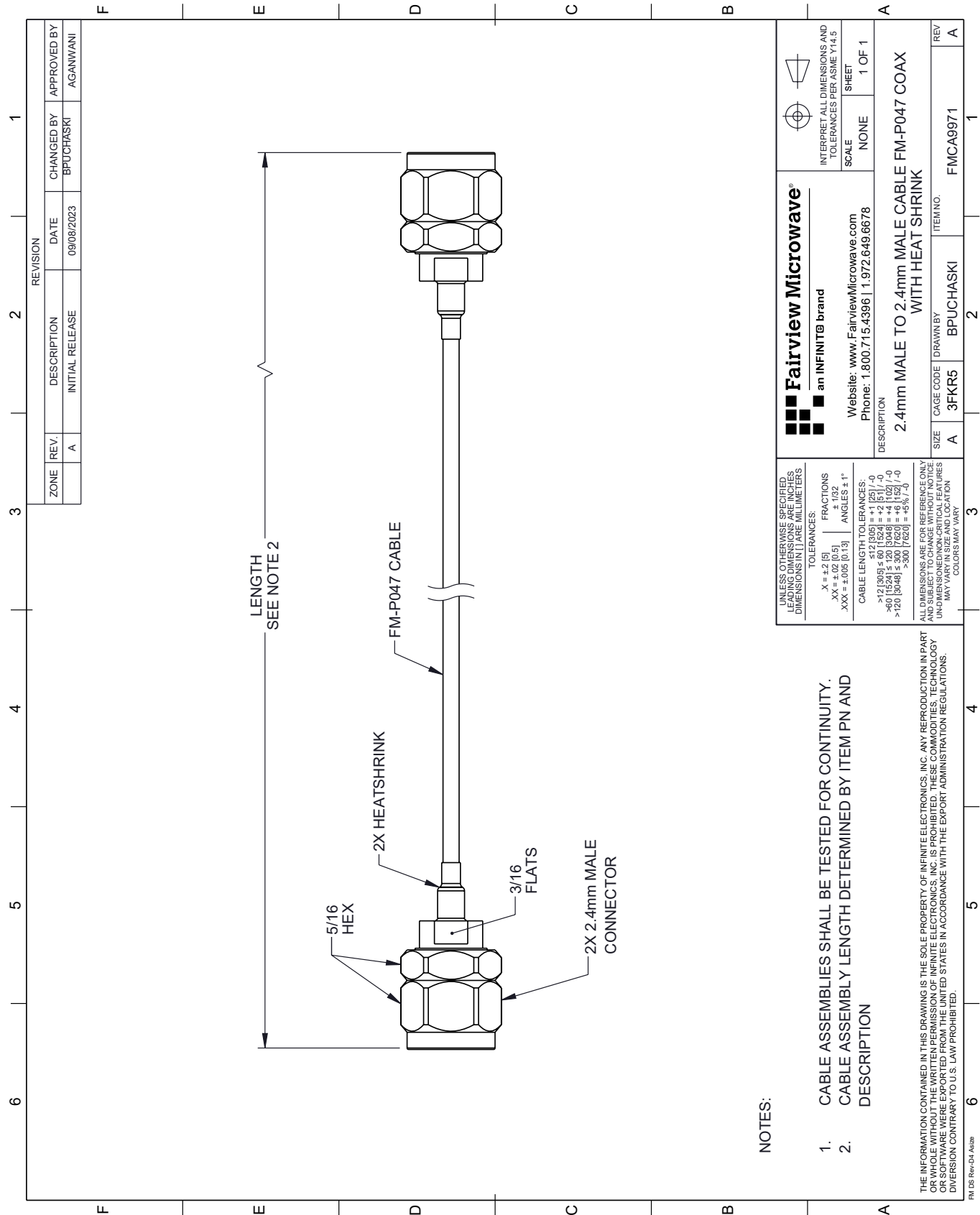
For additional information on this product, please click the following link: [2.4mm Male to 2.4mm Male Cable FM-P047 Coax FMCA9971](#)

URL: <https://www.fairviewmicrowave.com/2.4mm-male-to-2.4mm-male-cable-fm-p047-coax-fmca9971-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.

FMCA9971 CAD Drawing

2.4mm Male to 2.4mm Male Cable FM-P047 Coax



NOTES:

- 1. CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
- 2. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION

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 NOT EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVISION CONTRARY TO U.S. LAW PROHIBITED.

FM DS Rev-D4 Addis

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS		Fairview Microwave® an INFINITI® brand		INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	
TOLERANCES: X = ±.2 [5] .XX = ±.02 [0.5] XXX = ±.005 [0.13]		FRACTIONS ± 1/32 ANGLES ± 1°		SCALE NONE	
CABLE LENGTH TOLERANCES: ≤12 [305] = ±.125 [-0] >12 [305] ≤ 60 [1524] = ±.102 [-0] >60 [1524] ≤ 120 [3048] = ±.1 [0] >120 [3048] ≤ 300 [7620] = ±.125 [-0] >300 [7620] = ±.15 [-0]		Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678		SHEET 1 OF 1	
DESCRIPTION 2.4mm MALE TO 2.4mm MALE CABLE FM-P047 COAX WITH HEAT SHRINK					
SIZE A	CAGE CODE 3FKR5	DRAWN BY BPUCHASKI	ITEM NO. FMCA9971	REV A	