

## Low PIM 2.2-5 Male to 2.2-5 Female Cable TFT-402 Coax Using Times Microwave Components

The 2.2-5 male to 2.2-5 female cable using TFT-402 coax, part number FMCA2299, from Fairview Microwave is in-stock and ships same day. This Fairview 2.2-5 to 2.2-5 cable assembly has a male to female gender configuration with 50 ohm flexible TFT-402 coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. Our low PIM design offers excellent passive intermodulation performance with PIM levels better than -160 dBc. The FMCA2299 2.2-5 male to 2.2-5 female cable assembly operates to 5.8 GHz. The double shielding of this Fairview cable assembly provides excellent shielding effectiveness of better than -80 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	Min	Typ	Max	Units
Frequency Range	DC		5.8	GHz
VSWR			1.4:1	
Velocity of Propagation		76		%
RF Shielding	-80			dB
Passive Intermodulation			-160	dBc
Capacitance		26.7 [87.6]		pF/ft [pF/m]
DC Resistance Inner Conductor		8.5 [27.89]		$\Omega/1000\text{ft}$ [ $\Omega/\text{Km}$ ]
DC Resistance Outer Conductor		5.6 [18.37]		$\Omega/1000\text{ft}$ [ $\Omega/\text{Km}$ ]

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.25	0.5	1	2.5	5.8	GHz
Insertion Loss (Typ.)	0.05	0.07	0.1	0.17	0.26	dB
	0.16	0.23	0.33	0.56	0.85	

#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as  $0.1 * \text{SQRT}(\text{FGHz})$  dB per connector.

### Mechanical Specifications

#### Cable Assembly

Length\* 0 in [0 mm]  
Diameter 0.665 in [16.89 mm]

#### Cable

Cable Type TFT-402  
Impedance 50 Ohms



### Configuration:

- 2.2-5 Male
- 2.2-5 Female
- TFT-402

### Features:

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > -80 dB
- 76% Phase Velocity
- Double Shielded
- FEP Jacket
- 100 Mating Cycles

### Applications:

- General Purpose
- Laboratory Use
- Low PIM Applications
- Indoor and Outdoor Use
- Plenum Rated Applications

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Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper, Silver
Dielectric Type	PTFE
Number of Shields	2
Shield Layer 1	Silver Plated Copper Braid
Shield Layer 2	Tinned Copper Braid
Jacket Material	FEP, Blue
Jacket Diameter	0.16 in [4.06 mm]
One Time Minimum Bend Radius	0.75 in [19.05 mm]

## Connectors

Description	Connector 1	Connector 2
Type	2.2-5 Male	2.2-5 Female
Impedance	50 Ohms	50 Ohms
Mating Cycles	100	100
Contact Material & Plating	Beryllium Copper, Silver	Beryllium Copper, Silver
Contact Plating Spec.	200 µin	200 µin
Dielectric Type	PTFE	PTFE
Outer Cond Material & Plating		Beryllium Copper, Silver
Outer Cond Plating Spec.		100 µin
Body Material & Plating	Brass, Silver	Brass, Silver
Body Plating Spec.	100 µin	100 µin
Coupling Nut Material & Plating	Brass, Tri-Metal	
Coupling Nut Plating Spec.	100 µin	
Torque	26 in-lbs 2.94 Nm	26 in-lbs 2.94 Nm

## Environmental Specifications

### Temperature

Operating Range -40 to +125 deg C

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

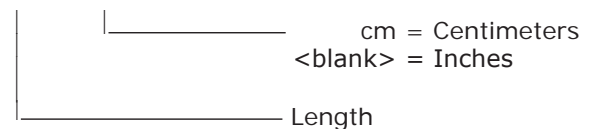
## Plotted and Other Data

Notes:

## How to Order

Part Number Configuration:

**FMCA2299 - xx uu**



Example: FMCA2299-12 = 12 inches long cable  
FMCA2299-100cm = 100 cm long cable

Low PIM 2.2-5 Male to 2.2-5 Female Cable TFT-402 Coax Using Times Microwave Components from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

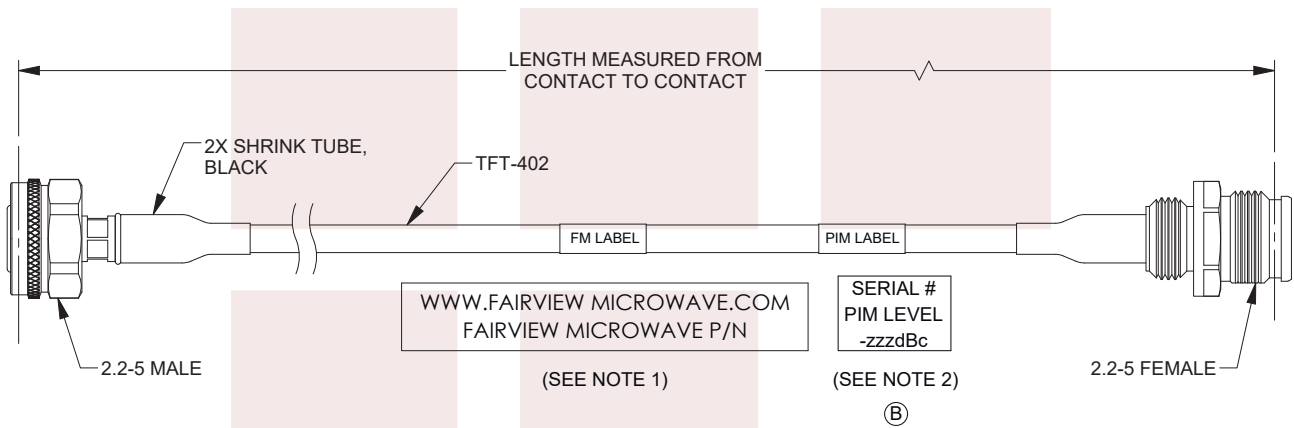
Click the following link to obtain additional part information: [Low PIM 2.2-5 Male to 2.2-5 Female Cable TFT-402 Coax Using Times Microwave Components FMCA2299](#)

URL: <https://www.fairviewmicrowave.com/low-pim-2.2-5-male-2.2-5-female-cable-tft-402-coax-fmca2299-p.aspx>

The information contained in 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 any liability arising out of the use of any part or documentation.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	04/07/2021	SELLIS
B	ADD PIM LABEL, UPDATE NOTES	7/12/21	SRAUTUS



**NOTES:**

1. CABLES 84" AND UNDER HAVE 1 LABEL CENTERED. CABLES OVER 84" HAVE 2 LABELS, ONE AT EACH END 12" FROM THE FRONT OF THE CONNECTOR.
2. PIM LABEL 6" FROM CABLE END 1 PLACE.

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<p><b>Fairview Microwave</b> an INFINIT<sup>®</sup> brand</p>	UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS		THIRD-ANGLE PROJECTION 	
	TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
.X = ±.2 [ .51]    FRACTIONS    L ≤ 12 [305] = +1 [25] / -0 .XX = ±.02 [ .51]    ± 1/32    12 [305] < L ≤ 60 [1524] = +2 [51] / -0 .XXX = ±.005 [ .13]    ANGLES ± 1°    60 [1524] < L ≤ 120 [3048] = +4 [102] / -0 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0 300 [7620] < L = +5%L / -0		THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.		
TITLE Low PIM 2.2-5 Male to 2.2-5 Female Cable TFT-402 Coax Using Times Microwave Components		ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.		SHEET 1 OF 1 SCALE N/A
SIZE A	CAGE CODE 3FKR5	DRAWN BY DFRISIELLO	ITEM NO. FMCA2299	REV B

T-Rev.D