

.047 Low Loss Semi-Rigid Coax Cable with Tin Plated Copper Outer Conductor and Microporous PTFE 76.5 pct VoP Dielectric, Straight Sections

Low loss 047 semi-rigid coax cable, part number FMBC002, from Fairview Microwave is in-stock and ships same day. This .047 inch diameter semi-rigid cable features a microporous PTFE dielectric and operates to a maximum frequency of 115 GHz. The outer conductor of this semirigid low loss coaxial cable is constructed from a continuous copper tube which minimizes attenuation and maximizes RF shielding performance. The microporous (low density) PTFE dielectric also reduces attenuation and offers the added benefits of phase stability vs. temperature and improved thermal stability.

Improved thermal stability of this microporous semi-rigid cable allows it to be soldered with minimal dielectric expansion and stress on the connectors. Fairview's low loss semi-rigid coax with microporous PTFE, FMBC002, datasheet with specifications and outline drawing are shown in the PDF below. Our extensive offering of RF, microwave and millimeter wave connections allow designers to configure and customize their signals however they like. From creating phase stable connections to reducing cable attenuation, Fairview Microwave has the right cable solutions to meet your needs.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	DC		115	GHz
Impedance		50 ±2		Ohms
Velocity of Propagation		76.5		%

Performance by Frequency Band

Description	F1	F2	F3	F4	F5	Units
Frequency	0.5	5	10	18	26.5	GHz
Attenuation, Typ	21 68.9	68 223.1	96 314.96	130 426.51	160 524.93	dB/100ft dB/100m
Power In (CW), Max	110	32	21	16	13	Watts

Mechanical Specifications

Min. Bend Radius (Installation) 0.125 in [3.18 mm]

Construction Specifications

Description	Material and Plating	Diameter
Inner Conductor	Copper, Silver, 1 Strands ASTM B-298	0.013 in [0.33 mm]
Conductor Type	Solid	
Dielectric	Microporous PTFE	0.037 in [0.94 mm]
Outer Conductor	Copper, Tin MIL-T-10727	0 in [0 mm]



Configuration:

- Low Loss Semi-Rigid Cable
- 1 Shield(s)

Features:

- Continuous Copper Outer Conductor
- Phase Stability vs. Temperature
- Low Density PTFE Dielectric
- Reduces Stress on Connectors
- High Isolation
- Supplied in 5 foot maximum straight lengths

Applications:

- Microporous Cable Assemblies
- Low Loss Interconnects
- High Isolation Cables
- Surface Mount
- Semi-Rigid Coaxial Cables

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Environmental Specifications

Temperature

Operating Range -65 to +225 deg C

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

Plotted and Other Data

Notes:

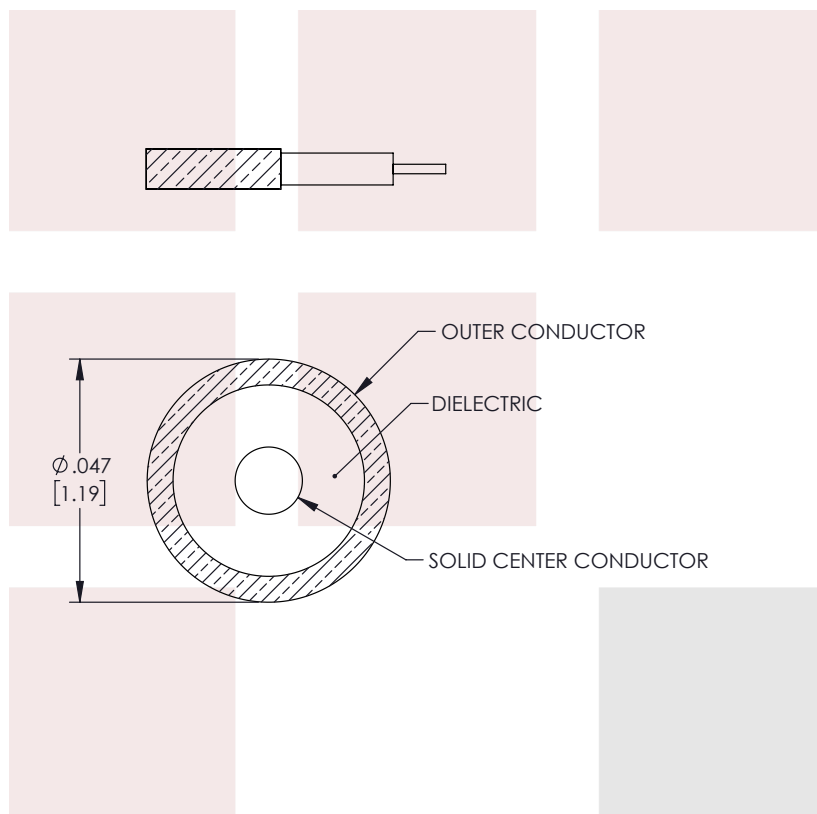
.047 Low Loss Semi-Rigid Coax Cable with Tin Plated Copper Outer Conductor and Microporous PTFE 76.5 pct VoP Dielectric, Straight Sections from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [.047 Low Loss Semi-Rigid Coax Cable with Tin Plated Copper Outer Conductor and Microporous PTFE 76.5 pct VoP Dielectric, Straight Sections FMBC002-FT](#)

URL: <https://www.fairviewmicrowave.com/047-low-loss-semirigid-coax-cable-tin-plated-copper-straight-fmbc002-ft-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	03/24/2022	AGANWANI



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an INFINITE brand

TITLE

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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

CABLE LENGTH (L) TOLERANCES:

.X = ±.2	[.508]	FRACTIONS
.XX = ±.02	[.51]	± 1/32
.XXX = ±.005	[.13]	ANGLES ± 1°

$$\begin{aligned} L \leq 12 \text{ [305]} &= +1 \text{ [25]} / -0 \\ 12 \text{ [305]} < L \leq 60 \text{ [1524]} &= +2 \text{ [51]} / -0 \\ 60 \text{ [1524]} < L \leq 120 \text{ [3048]} &= +4 \text{ [102]} / -0 \\ 120 \text{ [3048]} < L \leq 300 \text{ [7620]} &= +6 \text{ [152]} / -0 \\ 300 \text{ [7620]} < L &= +5\% L / -0 \end{aligned}$$

THIRD-ANGLE PROJECTION



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DESIGN IN THIS DOCUMENT
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SHEET 1 OF 1

SCALE	N/A
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ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE	A
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CAGE CODE	3FK
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DRAWN BY
DZINN

ITEM NO.	
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FMBC002-FT

REV	A
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