

**4.3-10 Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 Cable**

**Times Microwave Systems Connector Specification**

4.3-10 Male Low PIM Connector Solder/Solder Attachment for SPP-250-LLPL, SPF-250, SPO-250, 1/4" Superflexible and FM-1/4SFHC Cable, part number TC-250-4310M-LP, from Times Microwave offered by Fairview Microwave is in-stock and ships same day. This 4.3-10 male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.3:1. The 4.3-10 male connector also has low passive intermodulation (PIM) of -160 dBc.

Times Microwave's 4.3-10 male connector TC-250-4310M-LP datasheet specifications and outline drawing are shown in this PDF below. Our extensive offering of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. From providing an I/O for a board design to creating a custom cable assembly configuration, Fairview Microwave has a connector solution to meet your needs. Fairview Microwave also has the expertise to build your custom cable assemblies for you and ship them same-day.

**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	DC		6	GHz
VSWR			1.3:1	
Insertion Loss			0.25	dB
Passive Intermodulation			-160	dBc
DWV (AC)			1,500	Vrms
Insulation Resistance	10,000			MOhms

Electrical Specification Notes:  
Insertion Loss is  $0.1 * \sqrt{FGHz}$

**Mechanical Specifications**

<b>Size</b>	
Length	1.13 in [28.7 mm]
Width/Dia.	0.87 in [22.10 mm]
Height	0.87 in [22.1 mm]
Weight	0.116 lbs [52.62 g]
Mating Cycles	500 Cycles
Mating Torque	53.1 in-lbs [6 Nm]
Cable Retention Force	120 lbs [54.43 kg]

**Material Specifications**

Description	Material	Plating
Contact	Brass	Silver 200 µin
Insulation	PTFE	
Body	Brass	Tri-Metal 100 µin



**Configuration:**

- 4.3-10 Male Connector
- 50 Ohms
- Straight Body Geometry
- SPP-250-LLPL, SPF-250, SPO-250, 1/4" Superflexible, FM-1/4SFHC Interface Type
- Solder/Solder Attachment
- Low PIM Design

**Features:**

- Operating Frequency of 6 GHz Max.
- Good VSWR of 1.3:1
- PIM levels better than -160 dBc
- Silver Plated Brass Contact
- 200 µin contact plating

**Applications:**

- General Purpose Test
- Wireless Communications
- Custom Cable Assemblies
- Low PIM Applications
- Distributed Antenna Systems (DAS)

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[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

Coupling Nut	Brass	Tri-Metal 100 µin
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**Environmental Specifications**

**Temperature**

Operating Range	-40 to 125 deg C
Shock	MIL-STD 202, Method 213, Condition I
Vibration	MIL-STD 202, Method 204, Condition D
Thermal Shock	MIL-STD 202, Method 107, Condition B

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

**Plotted and Other Data**

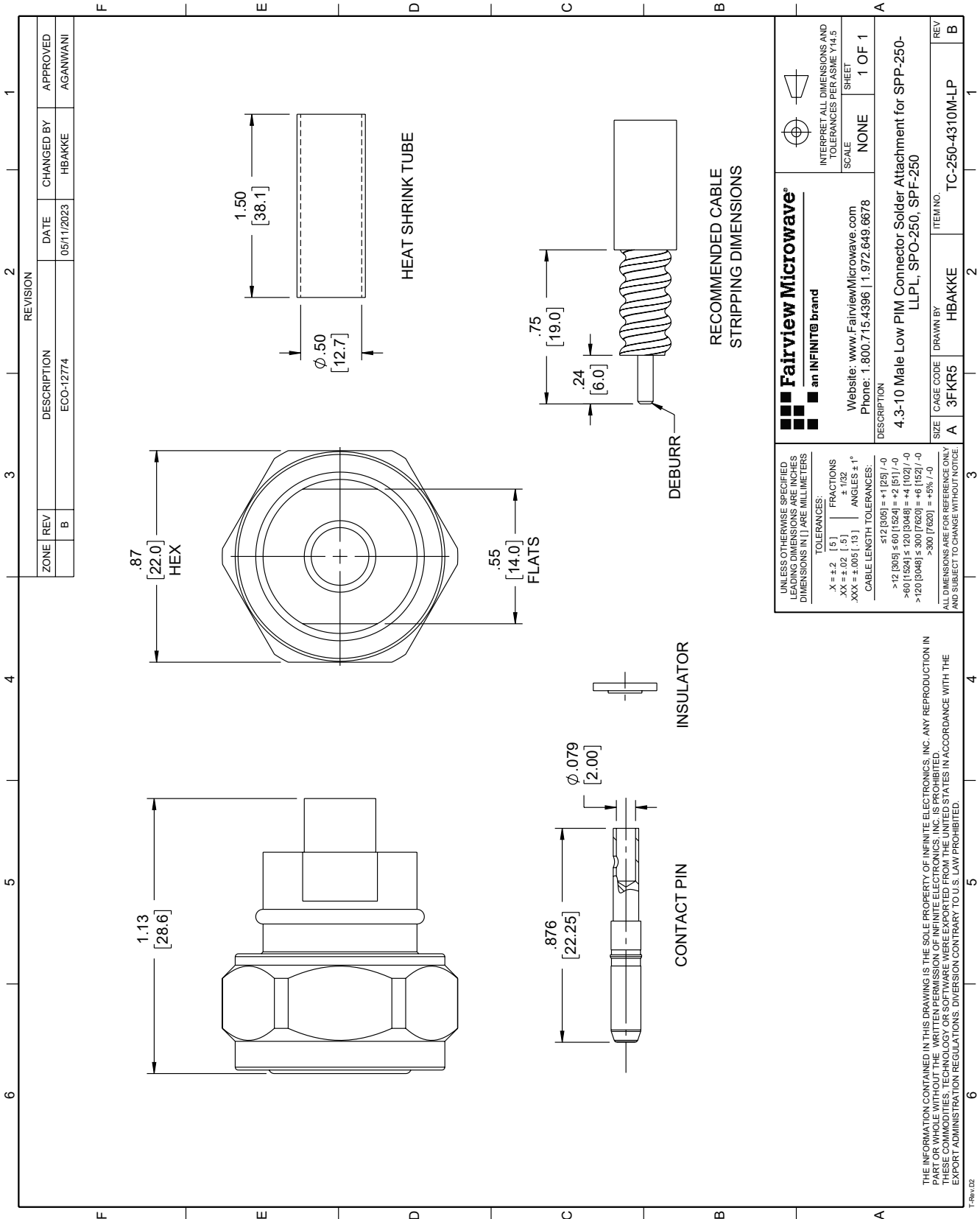
Notes:

4.3-10 Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 Cable 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: [4.3-10 Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250 Cable TC-250-4310M-LP](#)

URL: <https://www.fairviewmicrowave.com/4.3-10-male-spp-250-llpl-spo-250-spf-250-connector-tc-250-4310m-lp-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.



REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV	DESCRIPTION		
	B	ECO-12774	HBAKKE	AGANWANI

<p><b>Fairview Microwave</b> an INFINIT<sup>®</sup> brand</p> <p>Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a> 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>DESCRIPTION</p> <p>4.3-10 Male Low PIM Connector Solder Attachment for SPP-250-LLPL, SPO-250, SPF-250</p>		
SIZE	CAGE CODE	ITEM NO.
A	3FKR5	TC-250-4310M-LP
REV	REV	
B	B	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES AND DIMENSIONS IN LARGE MILLIMETERS.

**TOLERANCES:**

X = ±.2 [5] FRACTIONS  
 .XX = ±.02 [.5] ANGLES ± 1°  
 .XXX = ±.005 [.13]

**CABLE LENGTH TOLERANCES:**

≤ 12 [305] = ±.125 [3.18] / -0  
 > 12 [305] ≤ 60 [1524] = +.2 [5] / -0  
 > 60 [1524] ≤ 120 [3048] = +.4 [10.2] / -0  
 > 120 [3048] ≤ 300 [7620] = +.6 [15.2] / -0  
 > 300 [7620] = +.8% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE.

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## 4.1/9.5 Mini DIN Male Low PIM Connector Solder Attachment for FM-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 Cable

4.1/9.5 Mini DIN male connector with solder/solder attachment for FM-1/4SFHC, SPP-250-LLPL, SPO-250 and SPF-250, part number FMCN1690, from Fairview Microwave is in-stock and ships same day. This 4.1/9.5 Mini DIN male connector operates up to a maximum frequency of 6 GHz. The 4.1/9.5 Mini DIN male connector also has low passive intermodulation (PIM) of -160 dBc.

Fairview's 4.1/9.5 Mini DIN male connector FMCN1690 datasheet specifications and outline drawing are shown in this PDF below. Our extensive offering of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. From providing an I/O for a board design to creating a custom cable assembly configuration, Fairview Microwave has a connector solution to meet your needs. Fairview Microwave also has the expertise to build your custom cable assemblies for you and ship them same-day.

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	DC		6	GHz
Passive Intermodulation			-160	dBc
DWV (AC)			1,000	Vrms

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Freq. Range	DC to 3					GHz
VSWR, Max	1.15:1					

### Mechanical Specifications

<b>Size</b>	
Length	0.86 in [21.84 mm]
Width/Dia.	0.94 in [23.88 mm]
Weight	0.08 lbs [36.29 g]

### Material Specifications

Description	Material	Plating
Contact	Brass	Silver
Insulation	PTFE	
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal
O-Ring	Silicone	

Mechanical Specification Notes:  
Interface Conforms to IEC 61169-11



### Configuration:

- 4.1/9.5 Mini DIN Male Connector
- 50 Ohms
- Straight Body Geometry
- FM-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 Interface Type
- Solder/Solder Attachment
- Low PIM Design

### Features:

- Operating Frequency of 6 GHz Max.
- PIM levels better than -160 dBc
- Silver Plated Brass Contact

### Applications:

- General Purpose Test
- Wireless Communications
- Custom Cable Assemblies
- Low PIM Applications

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## Environmental Specifications

### Temperature

Operating Range -40 to +155 deg C

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

## Plotted and Other Data

Notes:

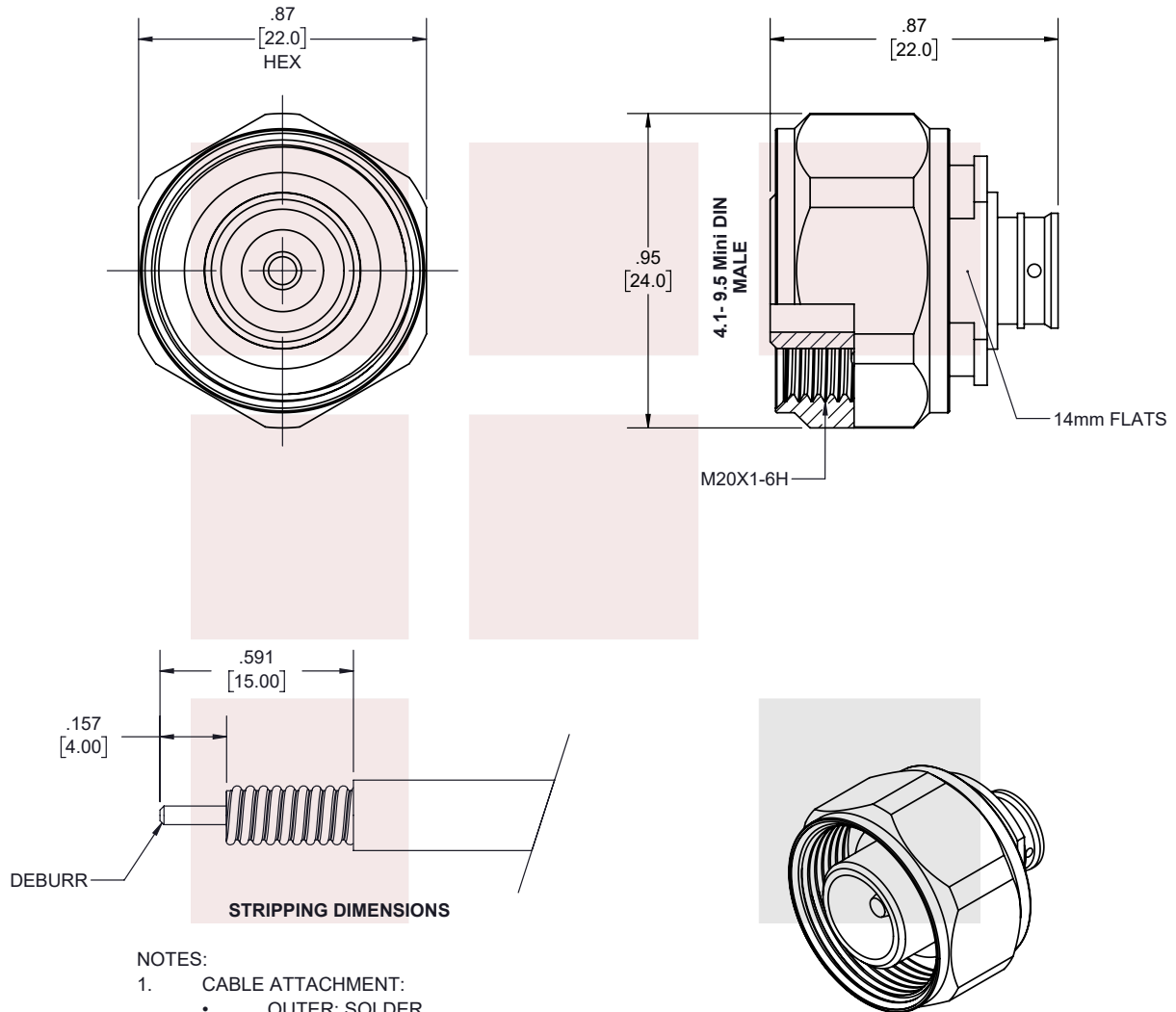
4.1/9.5 Mini DIN Male Low PIM Connector Solder Attachment for FM-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 Cable from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [4.1/9.5 Mini DIN Male Low PIM Connector Solder Attachment for FM-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 Cable FMCN1690](#)

URL: <https://www.fairviewmicrowave.com/4.1-9.5-mini-din-male-spp-250-llpl-spo-250-spf-250-connector-fmcn1690-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	1/8/2021	S.ELLIS



- NOTES:
- CABLE ATTACHMENT:
    - OUTER: SOLDER.
    - INNER: SOLDER.

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TITLE  
4.1/9.5 Mini DIN Male Low PIM Connector Solder Attachment for FM-1/4SFHC, SPP-250-LLPL, SPO-250, SPF-250 Cable

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

TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
.X = ±.2 [5.08]	FRACTIONS ± 1/32	L ≤ 12 [305] = +1 [25] / -0	
.XX = ±.02 [.51]		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	

THIRD-ANGLE PROJECTION  
THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.					SCALE	N/A
SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV		
A	3FKR5	K.DANG	FMCN1690	A		

T-Rev.D

## SPF-250 Low Loss Corrugated Coax Cable Black FRPE Jacket Superflexible Fire Rated

### Times Microwave Systems Coax Cable Specification

SPF-250 low loss, low PIM Fire Retardant coax cable by Times Microwave is part of our full line of RF components available for same-day shipping. The SPF-250 coaxial cable features a low loss dielectric with an 83% velocity of propagation (VoP), solid copper center conductor and a helically corrugated, copper outer conductor. This cable is UL listed, type CMR (riser) rated coax. These features combine to make the Times Microwave SPF-250 a super flexible, low PIM coax cable that is well suited for use as an antenna jumper cable, Distributed Antenna Systems (DAS), small cell, and other applications where Fire Rated material is required. The durable UV and sunlight resistant black flame retardant, non-halogen, polyethylene jacket makes this cable appropriate for a wide range of indoor or outdoor applications.

Our datasheet specifications and drawing with dimensions for Times Microwave SPF-250 coax cable are shown below in this PDF. Whether the need is to provide a low PIM jumper connection, low PIM feeder cable or simply create a custom cable assembly configuration, Fairview Microwave has the right SPF-250 low PIM cable assembly for the job. See our web site to find the right connector cable combination for your application.

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	DC		5.8	GHz
Impedance		50		Ohms
Velocity of Propagation		83		%
Passive Intermodulation			-160	dBc
Nominal Capacitance		24 [78.74]		pF/ft [pF/m]
Nominal Inductance		0.054 [0.18]		uH/ft [uH/m]

### Performance by Frequency Band

Description	F1	F2	F3	F4	F5	Units
Frequency	0.45	1.5	2	2.5	5.8	GHz
Attenuation, Typ	4.1 13.45	7.8 25.59	9.13 29.95	10.33 33.89	16.65 54.63	dB/100ft dB/100m
Power In (CW), Max	1,110	580	500	440	280	Watts

### Mechanical Specifications

Diameter	0.303 in [7.7 mm]
Weight	0.057 lbs/ft [0.08 Kg/m]
Min. Bend Radius (Installation)	1.25 in [31.75 mm]
Bending Moment	0.5 lbs-ft [0.68 N-m]



### Configuration:

- Low Loss Corrugated Cable
- 1 Shield(s)

### Features:

- PIM < -160 dBc
- UL Listed, Type CMR Riser Rated Cable
- Lightweight and Extremely Flexible
- Low Loss Dielectric 83% VoP
- Shielding > 100 dB
- Fire Rated Low Smoke Polyolefin Jacket

### Applications:

- Distributed Antenna Systems (DAS)
- UL Listed, Type CMR Riser Applications
- Low Smoke Requirements
- Small Cell
- Outdoor Applications
- Antenna Jumpers

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[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

**Construction Specifications**

Description	Material and Plating	Diameter
Inner Conductor	Copper Clad Aluminum, 1 Strands	0.075 in [1.91 mm]
Conductor Type	Solid	
Dielectric	Foam PE	0.177 in [4.5 mm]
Outer Conductor	Copper Corrugated	0.252 in [6.4 mm]
Jacket	FRPE, Black	0.303 in [7.7 mm]

**Environmental Specifications**
**Temperature**

Operating Range

-40 to +85 deg C

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

**Plotted and Other Data**

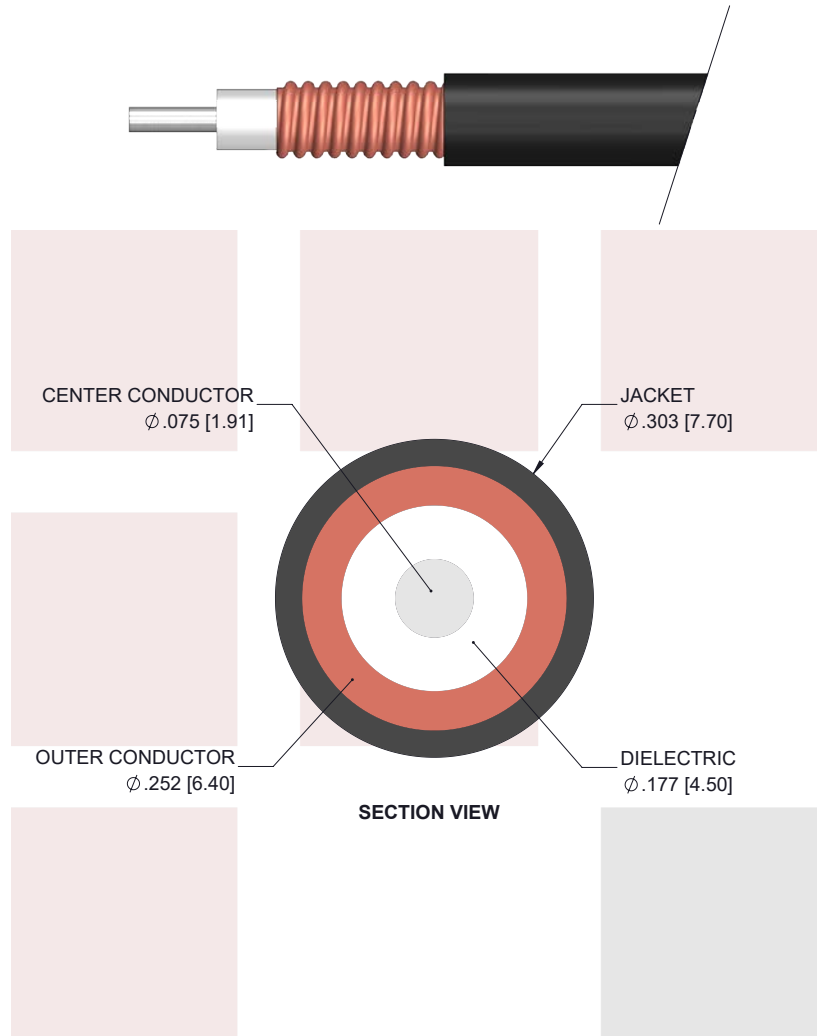
Notes:

SPF-250 Low Loss Corrugated Coax Cable Black FRPE Jacket Superflexible Fire Rated from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and fiber optic products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [SPF-250 Low Loss Corrugated Coax Cable Black FRPE Jacket Superflexible Fire Rated SPF-250](#)

URL: <https://www.fairviewmicrowave.com/spf250-low-loss-corrugated-coax-cable-frpe-jacket-spf-250-p.aspx>

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**STANDARD TOLERANCES**

- .X  $\pm 0.2$
- .XX  $\pm 0.01$
- .XXX  $\pm 0.005$

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

<p><b>Fairview Microwave</b> RF COMPONENTS ON DEMAND. <i>Done!</i></p>		<p>NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].</p>						
<p>TITLE SPF-250 Low Loss Corrugated Coax Cable Black FRPE Jacket Superflexible Fire Rated</p>		<p>DWG NO <b>SPF-250</b></p>			<p>CAGE CODE <b>3FKR5</b></p>			
CAD FILE	03/07/19	SHEET	1 OF 1	SCALE	N/A	SIZE	A	7361