

## Low PIM 4.1/9.5 Mini DIN Male to SMA Female Plenum Cable SPP-250-LLPL Coax in 50 cm with LF Solder

The 4.1/9.5 Mini DIN male to SMA female 50 cm cable using SPP-250-LLPL coax, part number FMCA1809-50CM, from Fairview Microwave is in-stock and ships same day. This Fairview 4.1/9.5 Mini DIN to SMA cable assembly has a male to female gender configuration with 50 ohm corrugated SPP-250-LLPL coax. Fairview Microwave's corrugated RF cable assemblies are ideal for applications where durability and high power are needed. Our low PIM design offers excellent passive intermodulation performance with PIM levels better than -160 dBc. The FMCA1809-50CM 4.1/9.5 Mini DIN male to SMA female cable assembly operates to 5.8 GHz.

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                  | 100 |              |       | dB                               |
| Passive Intermodulation       |     |              | -160  | dBc                              |
| Capacitance                   |     | 27 [88.58]   |       | pF/ft [pF/m]                     |
| Inductance                    |     | 0.067 [0.22] |       | uH/ft [uH/m]                     |
| DC Resistance Inner Conductor |     | 3 [9.84]     |       | $\Omega$ /1000ft [ $\Omega$ /Km] |

### Performance by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 0.45 | 0.7  | 1    | 2.5  | 5.8  | GHz   |
| Insertion Loss (Max.) | 0.12 | 0.15 | 0.18 | 0.29 | 0.44 | dB    |

#### Electrical Specification Notes:

The insertion loss data above is based on the performance specifications of the coax cable used in this assembly. The insertion loss includes an estimated insertion loss of  $0.04 * \text{SQRT}(\text{FGHz})$  dB maximum per connector.

### Mechanical Specifications

#### Cable Assembly

Length\* 19.685 in [500 mm]

#### Cable

Cable Type SPP-250-LLPL  
 Impedance 50 Ohms  
 Inner Conductor Type Solid  
 Inner Conductor Material and Plating Copper



### Configuration:

- 4.1/9.5 Mini DIN Male
- SMA Female
- SPP-250-LLPL

### Features:

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > 100 dB
- 76% Phase Velocity
- FEP Jacket
- IP67 (Mated)
- Low Loss with Excellent VSWR
- PIM Test Results Marked on Each Cable
- UL910 Plenum Rated Cable
- Extremely Flexible and Light-weight

### Applications:

- General Purpose
- Laboratory Use
- Low PIM Applications
- DAS
- Mobile Networks
- In-Building Wireless
- Small Cells
- PIM Testing

### Cable Diagram:



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|                                      |                       |
|--------------------------------------|-----------------------|
| Dielectric Type                      | PTFE                  |
| Number of Shields                    | 1                     |
| Outer Conductor Material and Plating | Copper                |
| Jacket Material                      | FEP, Blue             |
| Jacket Diameter                      | 0.28 in [7.11 mm]     |
| One Time Minimum Bend Radius         | 1.25 in [31.75 mm]    |
| Bending Moment                       | 0.8 lbs-ft [1.08 N-m] |

### Connectors

| Description                   | Connector 1           | Connector 2              |
|-------------------------------|-----------------------|--------------------------|
| Type                          | 4.1/9.5 Mini DIN Male | SMA Female               |
| Impedance                     | 50 Ohms               | 50 Ohms                  |
| Contact Material & Plating    | Brass, Silver         | Beryllium Copper, Silver |
| Dielectric Type               | PTFE                  | PTFE                     |
| Outer Cond Material & Plating |                       | Brass, Tri-Metal         |
| Body Material & Plating       | Brass, Tri-Metal      | Brass, Tri-Metal         |

### Environmental Specifications

#### Temperature

Operating Range -55 to +165 deg C

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

### Plotted and Other Data

Notes:

### How to Order

Part Number Configuration:

**FMCA1809 - xx uu**

cm = Centimeters  
 <blank> = Inches

Length

Example: FMCA1809-12 = 12 inches long cable  
 FMCA1809-100cm = 100 cm long cable

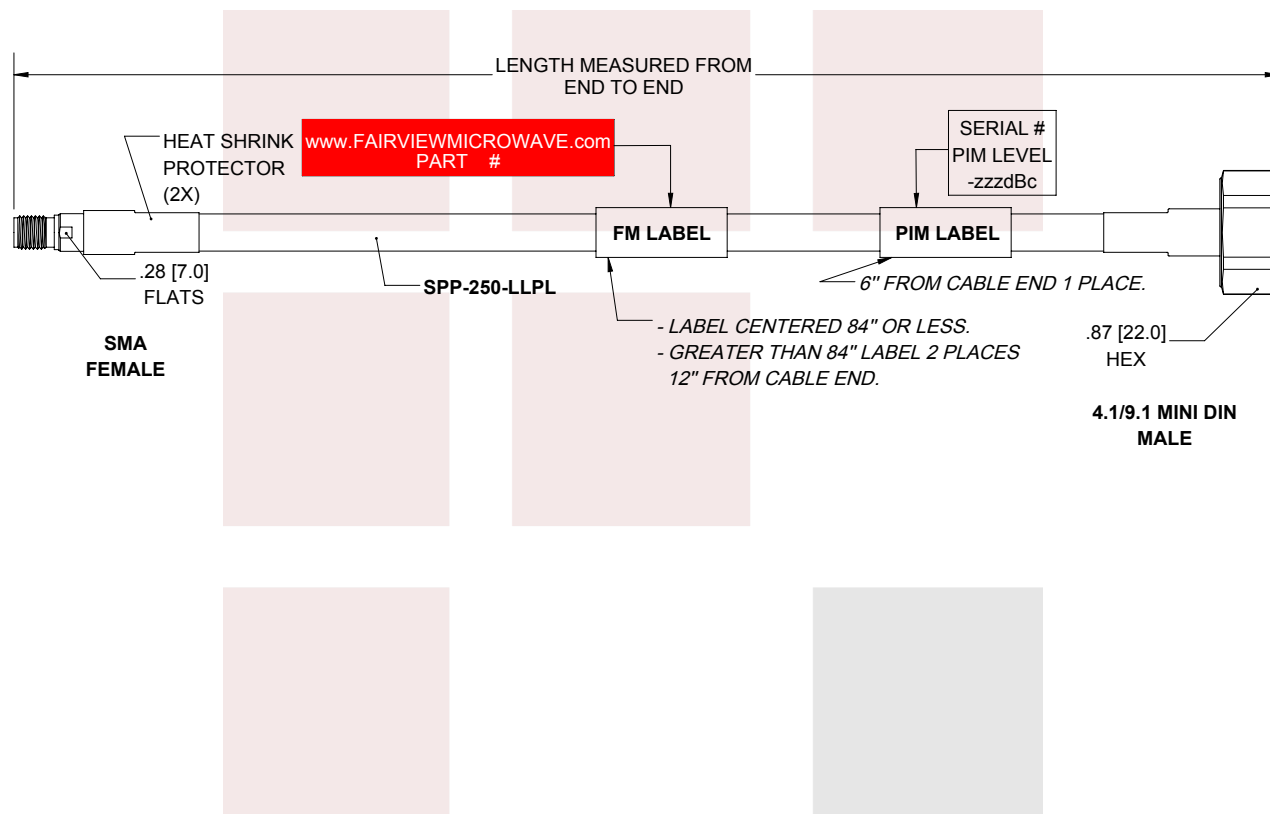
Low PIM 4.1/9.5 Mini DIN Male to SMA Female Plenum Cable SPP-250-LLPL Coax in 50 cm with LF Solder from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [Low PIM 4.1/9.5 Mini DIN Male to SMA Female Plenum Cable SPP-250-LLPL Coax in 50 cm with LF Solder FMCA1809-50CM](https://www.fairviewmicrowave.com/4.1-9.5-mini-din-male-sma-female-cable-spp250llpl-coax-fmca1809-50cm-p.aspx)

URL: <https://www.fairviewmicrowave.com/4.1-9.5-mini-din-male-sma-female-cable-spp250llpl-coax-fmca1809-50cm-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.





**STANDARD TOLERANCES**

.X ±0.2  
.XX ±0.01  
.XXX ±0.005

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES

|                                                                                                                    |  |                                                                                                                                                                                     |                  |                           |        |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|--------|
| <b>Fairview Microwave</b><br><b>RF COMPONENTS ON DEMAND.</b> <i>Done!</i>                                          |  | NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. |                  |                           |        |
| <b>TITLE</b><br>Low PIM 4.1/9.5 Mini DIN Male to SMA Female Plenum Cable SPP-250-LLPL Coax in 50 cm with LF Solder |  | <b>DWG NO</b><br>FMCA1809                                                                                                                                                           |                  | <b>CAGE CODE</b><br>3FKR5 |        |
| <b>CAD FILE</b> 12/27/18                                                                                           |  | <b>SHEET</b> 1 OF 1                                                                                                                                                                 | <b>SCALE</b> N/A | <b>SIZE</b> A             | CN2379 |