

Low PIM RA 4.1/9.5 Mini DIN Male to QMA Male Plenum Cable SPP-250-LLPL Coax with LF Solder

The RA 4.1/9.5 Mini DIN male to QMA male cable using SPP-250-LLPL coax, part number FMCA1780, from Fairview Microwave is in-stock and ships same day. This Fairview 4.1/9.5 Mini DIN to QMA cable assembly has a male to male 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 -150 dBc. The FMCA1780 4.1/9.5 Mini DIN male to QMA male cable assembly operates to 5.8 GHz. The right angle 4.1/9.5 Mini DIN interface on the SPP-250-LLPL cable allows for easier connections in tight spaces.

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 | | | -150 | 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] | | Ω /1000ft [Ω /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.) | 0.038 | 0.048 | 0.057 | 0.094 | 0.148 | dB/ft |
| | 0.12 | 0.16 | 0.19 | 0.31 | 0.49 | dB/m |

Electrical Specification Notes:

Insertion loss does not include the loss of the connectors. Insertion loss is estimated as $0.04 \cdot \sqrt{\text{FGHz}}$ dB per connector.

Mechanical Specifications

Cable Assembly

Length* 0 in [0 mm]

Cable

Cable Type SPP-250-LLPL
 Impedance 50 Ohms



Configuration:

- 4.1/9.5 Mini DIN Male Right Angle
- QMA Male
- SPP-250-LLPL

Features:

- Max Frequency 5.8 GHz
- Low PIM: -150 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 Lightweight

Applications:

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

Cable Diagram:

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| | |
|--------------------------------------|-----------------------|
| Inner Conductor Type | Solid |
| Inner Conductor Material and Plating | Copper |
| 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 | QMA Male |
| Impedance | 50 Ohms | 50 Ohms |
| Contact Material & Plating | Brass, Silver | Brass, Silver |
| Dielectric Type | PTFE | PTFE |
| Outer Cond Material & Plating | | Phosphor Bronze, Tri-Metal |
| Body Material & Plating | Brass, Tri-Metal | Brass, Tri-Metal |
| Coupling Nut Material & Plating | | 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:

FMCA1780 - xx uu

cm = Centimeters
 <blank> = Inches

Length

Example: FMCA1780-12 = 12 inches long cable
 FMCA1780-100cm = 100 cm long cable

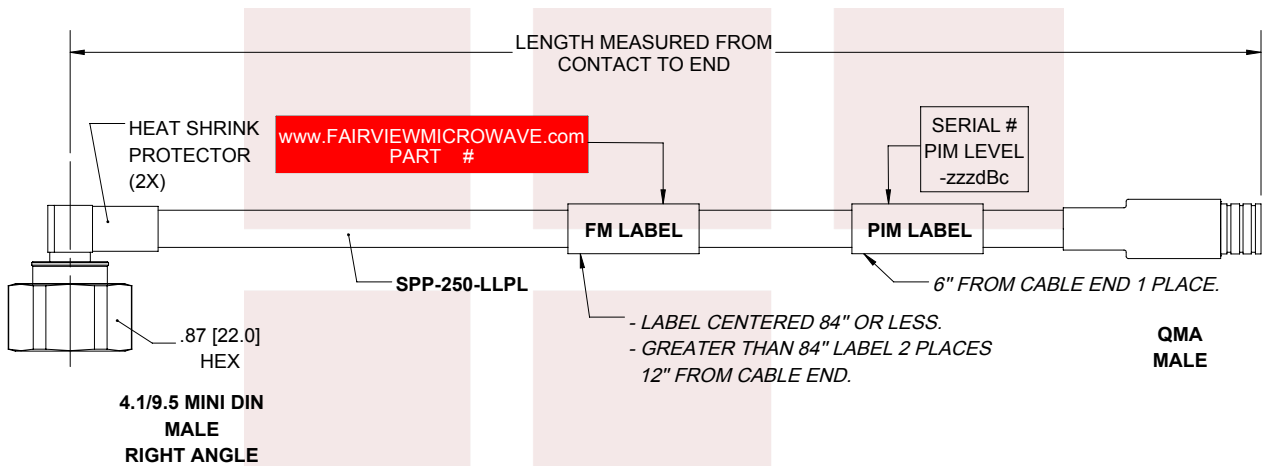
Low PIM RA 4.1/9.5 Mini DIN Male to QMA Male Plenum Cable SPP-250-LLPL Coax with LF Solder from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [Low PIM RA 4.1/9.5 Mini DIN Male to QMA Male Plenum Cable SPP-250-LLPL Coax with LF Solder FMCA1780](https://www.fairviewmicrowave.com/ra-4.1-9.5-mini-din-male-qma-male-cable-spp250llpl-coax-fmca1780-p.aspx)

URL: <https://www.fairviewmicrowave.com/ra-4.1-9.5-mini-din-male-qma-male-cable-spp250llpl-coax-fmca1780-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

| | | | | | | |
|---|---|--------------|-----------|--------------------|--------|--------------------|
|  | 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]. | | | | | |
| | TITLE Low PIM RA 4.1/9.5 Mini DIN Male to QMA Male Plenum Cable SPP-250-LLPL Coax with LF Solder | | | DWG NO FMCA1780 | | CAGE CODE 3FKR5 |
| | CAD FILE 12/27/18 | SHEET 1 OF 1 | SCALE N/A | SIZE A | CN2379 | |