

## Low PIM 7/16 DIN Male to RA QMA Male Plenum Cable SPP-250-LLPL Coax in 48 Inch with LF Solder

The 7/16 DIN male to RA QMA male 48 inch cable using SPP-250-LLPL coax, part number FMCA1803-48, from Fairview Microwave is in-stock and ships same day. This Fairview 7/16 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 -145 dBc. The FMCA1803-48 7/16 DIN male to QMA male cable assembly operates to 5.8 GHz. The right angle QMA 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       |     |              | -145  | 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.) | 0.21 | 0.26 | 0.31 | 0.51 | 0.79 | 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\* 48 in [121.92 cm]

#### Cable

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



### Configuration:

- 7/16 DIN Male
- QMA Male Right Angle
- SPP-250-LLPL

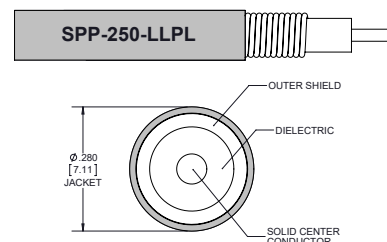
### Features:

- Max Frequency 5.8 GHz
- Low PIM: -145 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                            | 7/16 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 | 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:

**FMCA1803 - xx uu**

cm = Centimeters  
 <blank> = Inches

Length

Example: FMCA1803-12 = 12 inches long cable  
 FMCA1803-100cm = 100 cm long cable

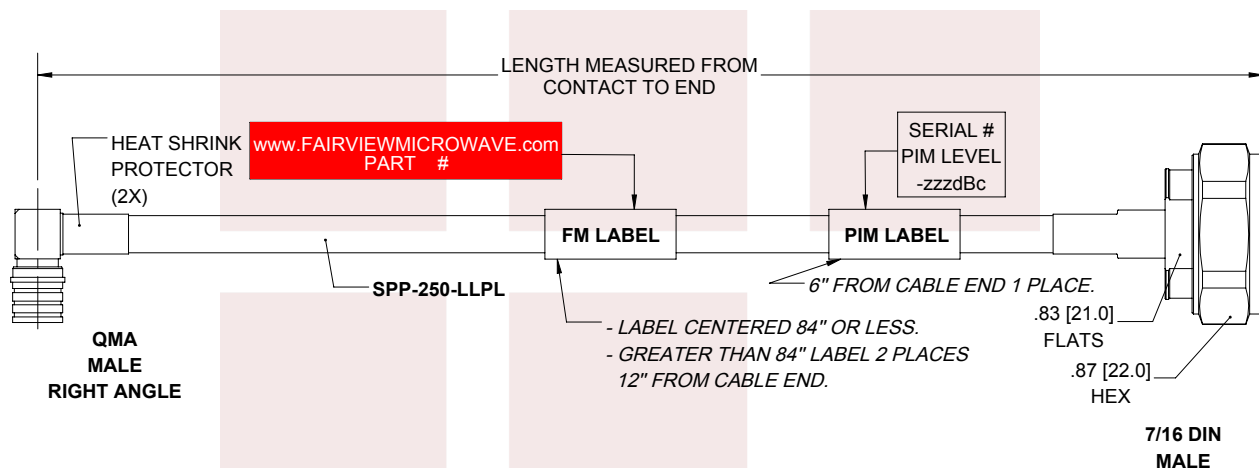
Low PIM 7/16 DIN Male to RA QMA Male Plenum Cable SPP-250-LLPL Coax in 48 Inch with LF Solder from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [Low PIM 7/16 DIN Male to RA QMA Male Plenum Cable SPP-250-LLPL Coax in 48 Inch with LF Solder FMCA1803-48](https://www.fairviewmicrowave.com/7-16-din-male-ra-qma-male-cable-spp250llpl-coax-fmca1803-48-p.aspx)

URL: <https://www.fairviewmicrowave.com/7-16-din-male-ra-qma-male-cable-spp250llpl-coax-fmca1803-48-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 7/16 DIN Male to RA QMA Male Plenum Cable<br>SPP-250-LLPL Coax in 48 Inch with LF Solder |  | <b>DWG NO</b><br>FMCA1803                                                                                                                                                           |                  | <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 |