

## Outdoor Rated Low PIM 7/16 DIN Male to RA N Male Cable SPO-250 Coax in 200 cm Using Times Microwave Parts

The 7/16 DIN male to RA type N male 200 cm cable using SPO-250 coax, part number FMCA2013-200CM, from Fairview Microwave is in-stock and ships same day. This Fairview 7/16 DIN to type N cable assembly has a male to male gender configuration with 50 ohm corrugated SPO-250 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 FMCA2013-200CM 7/16 DIN male to type N male cable assembly operates to 5.8 GHz. The right angle type N interface on the SPO-250 cable allows for easier connections in tight spaces. Times Microwave cable is used in each assembly and TMS components are used to form connections with the super flexible low PIM cable. These cable assemblies are expertly built to satisfy your specific need with high quality Times Microwave Systems manufactured parts.

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 |     | 83           |       | %            |
| Passive Intermodulation |     | -165         | -160  | dBc          |
| Capacitance             |     | 24 [78.74]   |       | pF/ft [pF/m] |
| Inductance              |     | 0.054 [0.18] |       | uH/ft [uH/m] |

### Performance by Frequency

| Description           | F1   | F2   | F3   | F4  | F5   | Units |
|-----------------------|------|------|------|-----|------|-------|
| Frequency             | 0.45 | 0.7  | 1    | 2.5 | 5.8  | GHz   |
| Insertion Loss (Max.) | 0.41 | 0.51 | 0.61 | 1   | 1.58 | dB    |

#### Electrical Specification Notes:

PIM test results vary between cables

The Insertion Loss data above is based on the performance specifications of the coax used in this assembly. The Insertion Loss includes an estimated insertion loss of  $0.1 * \sqrt{FGHz}$  dB per connector.

### Mechanical Specifications

#### Cable Assembly

Length\* 78.74 in [200 cm]

#### Cable

Cable Type SPO-250



### Configuration:

- 7/16 DIN Male
- TC-250-716M-LP
- N Male Right Angle
- TC-SPO250-NM-RA-LP
- SPO-250

### Features:

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- 83% Phase Velocity
- PE Jacket
- 100% Tested with PIM Test Results Marked on Cable
- Lightweight and Extremely Flexible
- Low Loss with Excellent VSWR
- IP67 (when mated)
- Using Times Microwave Components

### Applications:

- General Purpose
- Laboratory Use
- Low PIM Applications
- Distributed Antenna Systems (DAS)
- Multi-Carrier Communication Systems
- PIM Testing

### Cable Diagram:

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|                                      |                                  |
|--------------------------------------|----------------------------------|
| Impedance                            | 50 Ohms                          |
| Inner Conductor Type                 | Solid                            |
| Inner Conductor Material and Plating | Copper Clad Aluminum             |
| Dielectric Type                      | Foam PE                          |
| Number of Shields                    | 1                                |
| Shield Layer 1                       | Helically Corrugated Copper Tube |
| Outer Conductor Material and Plating | Copper                           |
| Jacket Material                      | PE, Black                        |
| Jacket Diameter                      | 0.303 in [7.7 mm]                |
| One Time Minimum Bend Radius         | 1.25 in [31.75 mm]               |
| Bending Moment                       | 0.5 lbs-ft [0.68 N-m]            |

**Connectors**

| Description                     | Connector 1         | Connector 2         |
|---------------------------------|---------------------|---------------------|
| Type                            | 7/16 DIN Male       | N Male              |
| Impedance                       | 50 Ohms             | 50 Ohms             |
| Contact Material & Plating      | Brass, Silver       | Brass, Silver       |
| Contact Plating Spec.           | 200 µin             | 200 µin             |
| Dielectric Type                 | PTFE                | PTFE                |
| Body Material & Plating         | Brass, Tri-Metal    | Brass, Tri-Metal    |
| Body Plating Spec.              | 80 µin              | 80 µin              |
| Coupling Nut Material & Plating | Brass, Nickel       | Brass, Tri-Metal    |
| Coupling Nut Plating Spec.      | 80 µin              | 80 µin              |
| Torque                          | 22.127 ft-lbs 30 Nm | 15.05 in-lbs 1.7 Nm |

**Environmental Specifications**
**Temperature**

|                 |                   |
|-----------------|-------------------|
| Operating Range | -55 to +200 deg C |
| Storage Range   | -55 to +200 deg C |

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

**Plotted and Other Data**

- Notes:
- Values at 25°C, sea level.

**How to Order**

Part Number Configuration:

**FMCA2013 - xx uu**

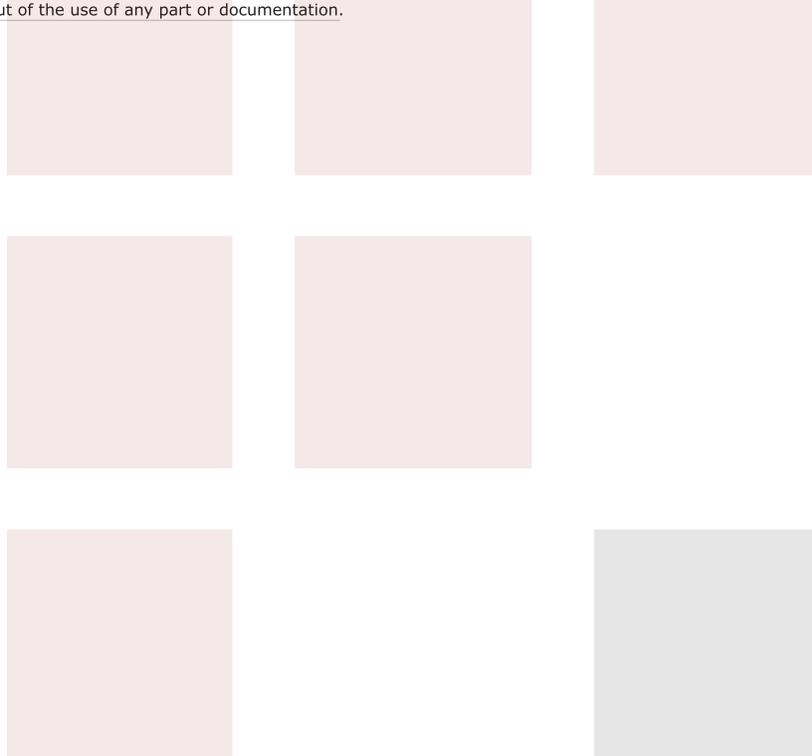

Example: FMCA2013-12 = 12 inches long cable  
 FMCA2013-100cm = 100 cm long cable

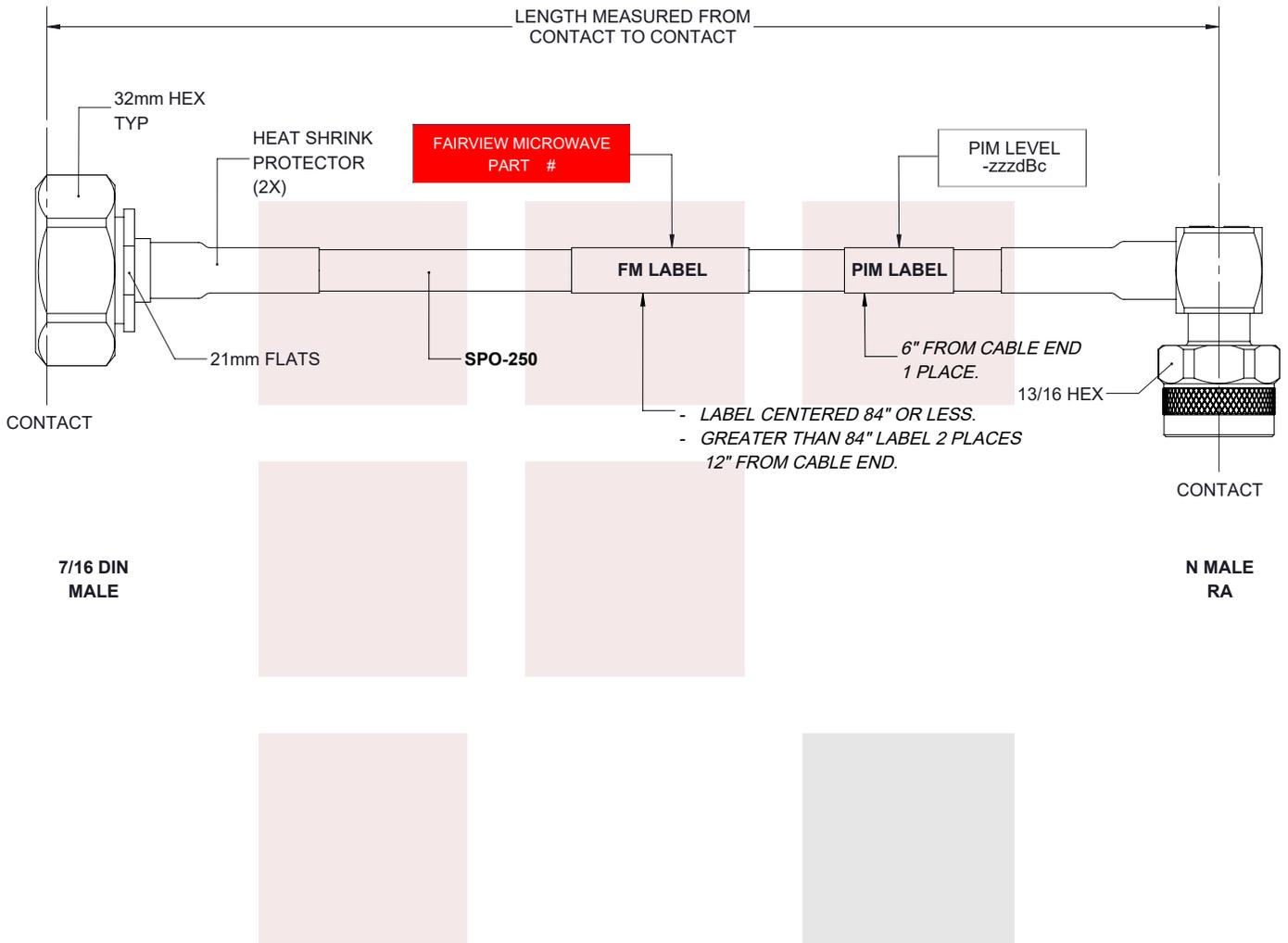
Outdoor Rated Low PIM 7/16 DIN Male to RA N Male Cable SPO-250 Coax in 200 cm Using Times Microwave Parts from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [Outdoor Rated Low PIM 7/16 DIN Male to RA N Male Cable SPO-250 Coax in 200 cm Using Times Microwave Parts FMCA2013-200CM](#)

URL: <https://www.fairviewmicrowave.com/low-pim-7-16-din-male-ra-n-male-cable-spo250-coax-fmca2013-200cm-p.aspx>

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| STANDARD TOLERANCES |        |
|---------------------|--------|
| .X                  | ±0.2   |
| .XX                 | ±0.01  |
| .XXX                | ±0.005 |

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

|                                                                                                                            |          |                                                                                                                                                                                               |        |                            |     |      |   |      |
|----------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------|-----|------|---|------|
| <p><b>Fairview Microwave</b><br/>an INFINIT<sup>®</sup> brand</p>                                                          |          | <p>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].</p> |        |                            |     |      |   |      |
| <p>TITLE<br/>Outdoor Rated Low PIM 7/16 DIN Male to RA N Male Cable SPO-250 Coax in 200 cm Using Times Microwave Parts</p> |          | <p>DWG NO<br/>FMCA2013</p>                                                                                                                                                                    |        | <p>CAGE CODE<br/>3FKR5</p> |     |      |   |      |
| CAD FILE                                                                                                                   | 06/05/19 | SHEET                                                                                                                                                                                         | 1 OF 1 | SCALE                      | N/A | SIZE | A | 7361 |