

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

The RA 7/16 DIN male to type N female 100 cm cable using SPO-250 coax, part number FMCA2559-100CM, from Fairview Microwave is in-stock and ships same day. This Fairview 7/16 DIN to type N cable assembly has a male to female 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 FMCA2559-100CM 7/16 DIN male to type N female cable assembly operates to 5.8 GHz. The right angle 7/16 DIN interface on the SPO-250 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 |     | 83  |       | %     |
| Passive Intermodulation |     |     | -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             | 0.25 | 0.5  | 1    | 2.5  | 5.8  | GHz   |
| Insertion Loss (Typ.) | 0.2  | 0.29 | 0.41 | 0.66 | 1.03 | dB    |

#### Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax and connectors 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* | 39.37 in [100 cm]    |
| Weight  | 0.339 lbs [153.77 g] |

#### Cable

|                                      |                      |
|--------------------------------------|----------------------|
| Cable Type                           | SPO-250              |
| Impedance                            | 50 Ohms              |
| Inner Conductor Type                 | Solid                |
| Inner Conductor Material and Plating | Copper Clad Aluminum |



### Configuration:

- 7/16 DIN Male Right Angle
- N Female
- 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
- Outdoor Rated Applications
- Distributed Antenna Systems (DAS)
- Multi-Carrier Communication Systems
- PIM Testing

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|                                      |                       |
|--------------------------------------|-----------------------|
| Dielectric Type                      | Foam PE               |
| Number of Shields                    | 1                     |
| 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 Female           |
| Impedance                       | 50 Ohms       | 50 Ohms            |
| Mating Cycles                   |               | 500                |
| Contact Material & Plating      | Brass, Silver | Brass, Silver      |
| Contact Plating Spec.           | 196 µin       | 200 µin            |
| Dielectric Type                 | PTFE          | PTFE               |
| Outer Cond Material & Plating   |               | Brass, Tri-Metal   |
| Outer Cond Plating Spec.        |               | 100 µin            |
| Body Material & Plating         | Brass, Nickel | Brass, Tri-Metal   |
| Body Plating Spec.              | 118 µin       | 100 µin            |
| Coupling Nut Material & Plating | Brass, Nickel |                    |
| Coupling Nut Plating Spec.      | 118 µin       |                    |
| Torque                          |               | 9.74 in-lbs 1.1 Nm |

### Environmental Specifications

#### Temperature

Operating Range -40 to +85 deg C

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

### Plotted and Other Data

Notes:

### How to Order

Part Number Configuration:

**FMCA2559 - xx uu**

\_\_\_\_\_ cm = Centimeters  
 \_\_\_\_\_ <blank> = Inches  
 \_\_\_\_\_ Length

Example: FMCA2559-12 = 12 inches long cable  
 FMCA2559-100cm = 100 cm long cable

Outdoor Rated Low PIM RA 7/16 DIN Male to N Female Cable SPO-250 Coax 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.

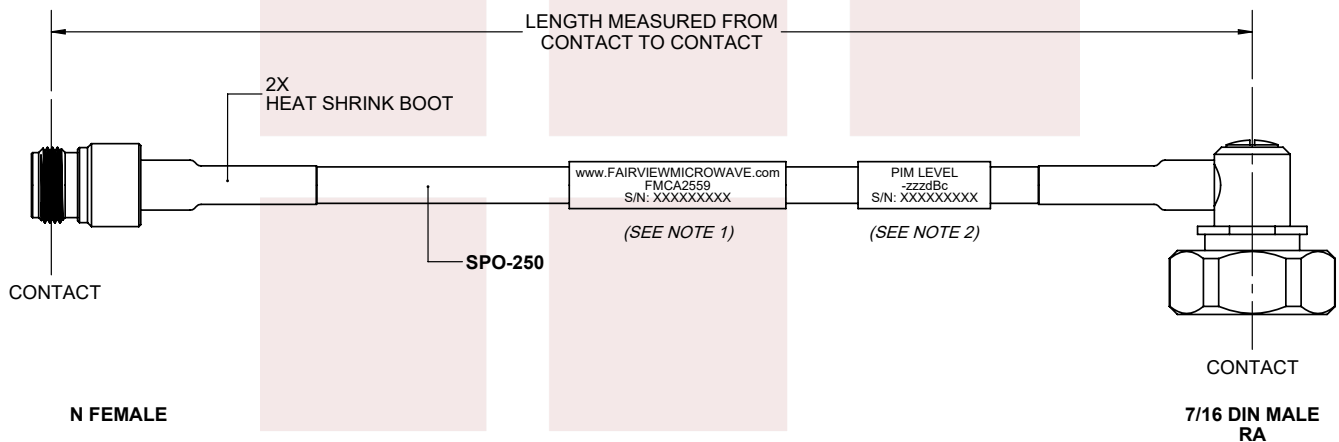
Click the following link to obtain additional part information: [Outdoor Rated Low PIM RA 7/16 DIN Male to N Female Cable SPO-250 Coax Using Times Microwave Parts FMCA2559-100CM](https://www.fairviewmicrowave.com/outdoor-rated-low-pim-ra-7-16-din-male-to-n-female-cable-spo-250-coax-using-times-microwave-parts-fmca2559-100cm-p.aspx)

URL: <https://www.fairviewmicrowave.com/outdoor-rated-low-pim-ra-7-16-din-male-to-n-female-cable-spo-250-coax-using-times-microwave-parts-fmca2559-100cm-p.aspx>

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| REVISIONS |                 |           |            |
|-----------|-----------------|-----------|------------|
| REV.      | DESCRIPTION     | DATE      | APPROVED   |
| A         | INITIAL RELEASE | 9/21/2021 | A. GANWANI |



**NOTES:**

- CABLES 84" AND UNDER HAVE 1 LABEL CENTERED. CABLES OVER 84" HAVE 2 LABELS, ONE AT EACH END 12.0" FROM THE END OF THE CONNECTOR.
- 6" FROM CABLE END 1 PLACE FOR ALL LENGTHS OF CABLE.

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|----------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
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| <p>TITLE</p>                                                                                             |  | <p>TOLERANCES:</p>                                                                                      |  | <p>CABLE LENGTH (L) TOLERANCES:</p>                                                                                                                                                                                      |  |
| <p>Outdoor Rated Low PIM RA 7/16 DIN Male to N Female Cable SPO-250 Coax Using Times Microwave Parts</p> |  | <p>.X = ± .2 [ .51 ] FRACTIONS<br/>.XX = ± .02 [ .51 ] ± 1/32<br/>.XXX = ± .005 [ .13 ] ANGLES ± 1°</p> |  | <p>L ≤ 12 [305] = +1 [25] / -0<br/>12 [305] &lt; L ≤ 60 [1524] = +2 [51] / -0<br/>60 [1524] &lt; L ≤ 120 [3048] = +4 [102] / -0<br/>120 [3048] &lt; L ≤ 300 [7620] = +6 [152] / -0<br/>300 [7620] &lt; L = +5%L / -0</p> |  |
| <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>                                                      |  | <p>SCALE</p>                                                                                            |  | <p>SHEET 1 OF 1</p>                                                                                                                                                                                                      |  |
| <p>SIZE A</p>                                                                                            |  | <p>CAGE CODE 3FKR5</p>                                                                                  |  | <p>DRAWN BY K.DANG</p>                                                                                                                                                                                                   |  |
| <p>ITEM NO. FMCA2559</p>                                                                                 |  | <p>REV A</p>                                                                                            |  | <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.</p>                                                                                               |  |

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