

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

The 7/16 DIN female to type N male 7 inch cable using SPO-250 coax, part number FMCA2561, from Fairview Microwave is in-stock and ships same day. This Fairview 7/16 DIN to type N cable assembly has a female 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 FMCA2561 7/16 DIN female to type N male 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 | | 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.) | 0.03 | 0.043 | 0.062 | 0.103 | 0.167 | dB |

Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as $0.1 * \text{SQRT}(\text{FGHz})$ dB per connector.

Mechanical Specifications

Cable Assembly

| | |
|---------|-----------------------|
| Length* | 7 in [177.8 mm] |
| Weight | 0.3035 lbs [137.67 g] |

Cable

| | |
|--------------------------------------|----------------------|
| Cable Type | SPO-250 |
| Impedance | 50 Ohms |
| Inner Conductor Type | Solid |
| Inner Conductor Material and Plating | Copper Clad Aluminum |
| Dielectric Type | Foam PE |
| Number of Shields | 1 |
| Outer Conductor Material and Plating | Copper |
| Jacket Material | PE, Black |



Configuration:

- 7/16 DIN Female
- N Male
- 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

Cable Diagram:

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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 Female | N Male |
| Impedance | 50 Ohms | 50 Ohms |
| Contact Material & Plating | Phosphor Bronze, Silver | Phosphor Bronze, Silver |
| Contact Plating Spec. | 196 µin | 196 µin |
| Dielectric Type | PTFE | PTFE |
| Outer Cond Material & Plating | Brass, Tri-Metal | |
| Outer Cond Plating Spec. | 118 µin | |
| Body Material & Plating | Brass, Tri-Metal | Brass, Tri-Metal |
| Body Plating Spec. | 118 µin | 118 µin |
| Coupling Nut Material & Plating | | Brass, Tri-Metal |
| Coupling Nut Plating Spec. | | 118 µin |
| Torque | | 7.08 in-lbs 0.8 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:

FMCA2561 - xx uu

cm = Centimeters
 <blank> = Inches
 Length

Example: FMCA2561-12 = 12 inches long cable
 FMCA2561-100cm = 100 cm long cable

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

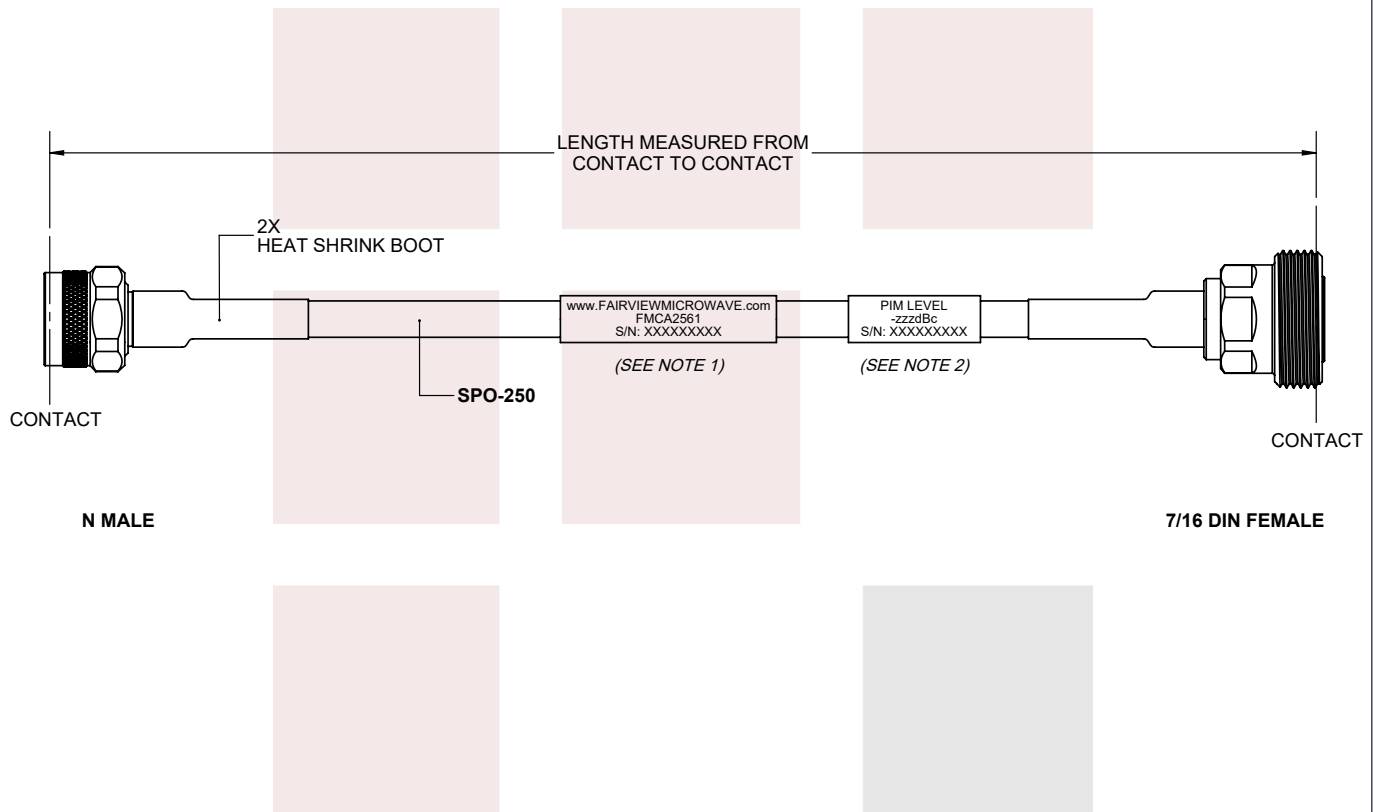
Click the following link to obtain additional part information: [Outdoor Rated Low PIM 7/16 DIN Female to N Male Cable SPO-250 Coax in 7 Inch Using Times Microwave Parts FMCA2561](https://www.fairviewmicrowave.com/outdoor-rated-low-pim-7-16-din-female-to-n-male-cable-spo-250-coax-in-7-inch-using-times-microwave-parts-fmca2561)

URL: <https://www.fairviewmicrowave.com/outdoor-rated-low-pim-7-16-din-female-to-n-male-cable-spo-250-coax-in-7-inch-using-times-microwave-parts-fmca2561-p.aspx>

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



NOTES:

1. 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.
2. 6" FROM CABLE END 1 PLACE FOR ALL LENGTHS OF CABLE.

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| <p>TITLE</p> | | <p>TOLERANCES:</p> | | <p>CABLE LENGTH (L) TOLERANCES:</p> | |
| <p>Outdoor Rated Low PIM 7/16 DIN Female to N Male Cable SPO-250 Coax in 7 Inch Using Times Microwave Parts</p> | | <p> $.X = \pm .2$ [.08] FRACTIONS $\pm 1/32$ $.XX = \pm .02$ [.51] ANGLES $\pm 1^\circ$ $.XXX = \pm .005$ [.13] </p> | | <p> $L \leq 12$ [305] = ± 1 [25] / -0 12 [305] < $L \leq 60$ [1524] = ± 2 [51] / -0 60 [1524] < $L \leq 120$ [3048] = ± 4 [102] / -0 120 [3048] < $L \leq 300$ [7620] = ± 6 [152] / -0 300 [7620] < L = $\pm 5\%$ L / -0 </p> | |
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| | | <p>SIZE A CAGE CODE 3FKR5 DRAWN BY K.DANG ITEM NO. FMCA2561 REV A</p> | | <p>SHEET 1 OF 1 SCALE N/A</p> | |

T-Rev.D