

## Low PIM RA N Male to N Female Bulkhead Cable 1/4 inch Superflexible Coax in 48 Inch

The RA type N male to type N female bulkhead 48 inch cable using 1/4 inch superflexible coax, part number FMCA2259-48, from Fairview Microwave is in-stock and ships same day. This Fairview type N to type N cable assembly has a male to female gender configuration with 50 ohm corrugated 1/4" superflexible 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 FMCA2259-48 type N male to type N female cable assembly operates to 6 GHz. The right angle type N interface on the 1/4" Superflexible cable allows for easier connections in tight spaces. Our RF cable assembly with type N bulkhead interface allows designers to create external connections on their product enclosures, and can be used in a variety of other rack mount and panel mount applications.

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  |              | 6     | GHz                              |
| VSWR                          |     |              | 1.5:1 |                                  |
| Velocity of Propagation       |     | 82           |       | %                                |
| RF Shielding                  | 120 |              |       | dB                               |
| Passive Intermodulation       |     |              | -150  | dBc                              |
| Capacitance                   |     | 24.4 [80.05] |       | pF/ft [pF/m]                     |
| Inductance                    |     | 0.059 [0.19] |       | uH/ft [uH/m]                     |
| DC Resistance Inner Conductor |     | 3.2 [10.5]   |       | $\Omega$ /1000ft [ $\Omega$ /Km] |
| DC Resistance Outer Conductor |     | 2.53 [8.3]   |       | $\Omega$ /1000ft [ $\Omega$ /Km] |
| Jacket Spark                  |     |              | 2,000 | Vrms                             |

### Performance by Frequency

| Description           | F1   | F2   | F3  | F4   | F5   | Units |
|-----------------------|------|------|-----|------|------|-------|
| Frequency             | 0.1  | 0.25 | 0.5 | 1    | 3    | GHz   |
| Insertion Loss (Typ.) | 0.31 | 0.35 | 0.4 | 0.48 | 0.67 | 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 0.15 dB for the right angle connector and 0.1 dB for the straight connector.



### Configuration:

- N Male Right Angle
- N Female Bulkhead
- 1/4" Superflexible

### Features:

- Max Frequency 6 GHz
- Low PIM: -150 dBc Max
- Shielding Effectivity > 120 dB
- 82% Phase Velocity
- PE Jacket
- Low PIM and Low Loss
- 100% Tested with PIM Test Results Marked on Cable

### Applications:

- General Purpose
- Laboratory Use
- Low PIM Applications
- Distributed Antenna Systems (DAS)
- Low PIM Applications and PIM Testing

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## Mechanical Specifications

### Cable Assembly

Length\* 48 in [121.92 cm]

### Cable

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Cable Type                           | 1/4" Superflexible               |
| Impedance                            | 50 Ohms                          |
| Inner Conductor Type                 | Solid                            |
| Inner Conductor Material and Plating | Copper Clad Aluminum             |
| Dielectric Type                      | PE (F)                           |
| Number of Shields                    | 1                                |
| Shield Layer 1                       | Helically Corrugated Copper Tube |
| Jacket Material                      | PE, Black                        |
| Jacket Diameter                      | 0.303 in [7.7 mm]                |
| One Time Minimum Bend Radius         | 0.5 in [12.7 mm]                 |
| Repeated Minimum Bend Radius         | 1 in [25.4 mm]                   |
| Typical Flex Cycles                  | 20                               |
| Tensile Strength                     | 79 lbs [35.83 Kg]                |

### Connectors

| Description                     | Connector 1      | Connector 2      |
|---------------------------------|------------------|------------------|
| Type                            | N Male           | N Female         |
| Mount Method                    |                  | Bulkhead         |
| Specification                   | IEC 61169-16     | IEC 61169-16     |
| Impedance                       | 50 Ohms          | 50 Ohms          |
| Contact Material & Plating      | Brass, Silver    | Bronze, Silver   |
| Dielectric Type                 | PTFE             | PTFE             |
| Body Material & Plating         | Brass, Tri-Metal | Brass, Tri-Metal |
| Coupling Nut Material & Plating | Brass, Tri-Metal |                  |

## 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:

**FMCA2259 - xx uu**

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

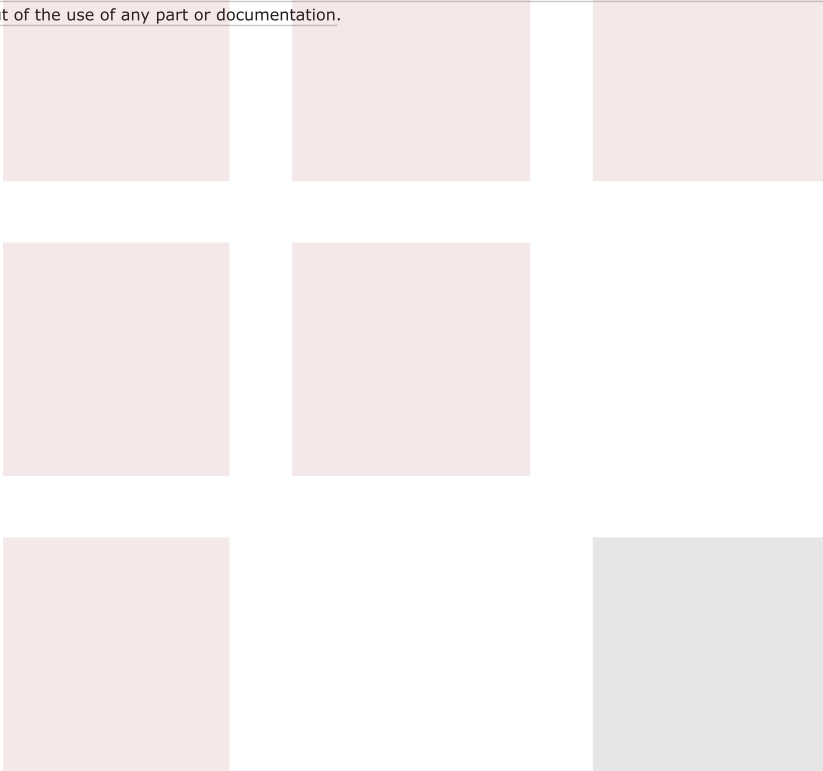
Example: FMCA2259-12 = 12 inches long cable  
 FMCA2259-100cm = 100 cm long cable

Low PIM RA N Male to N Female Bulkhead Cable 1/4 inch Superflexible Coax in 48 Inch 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.

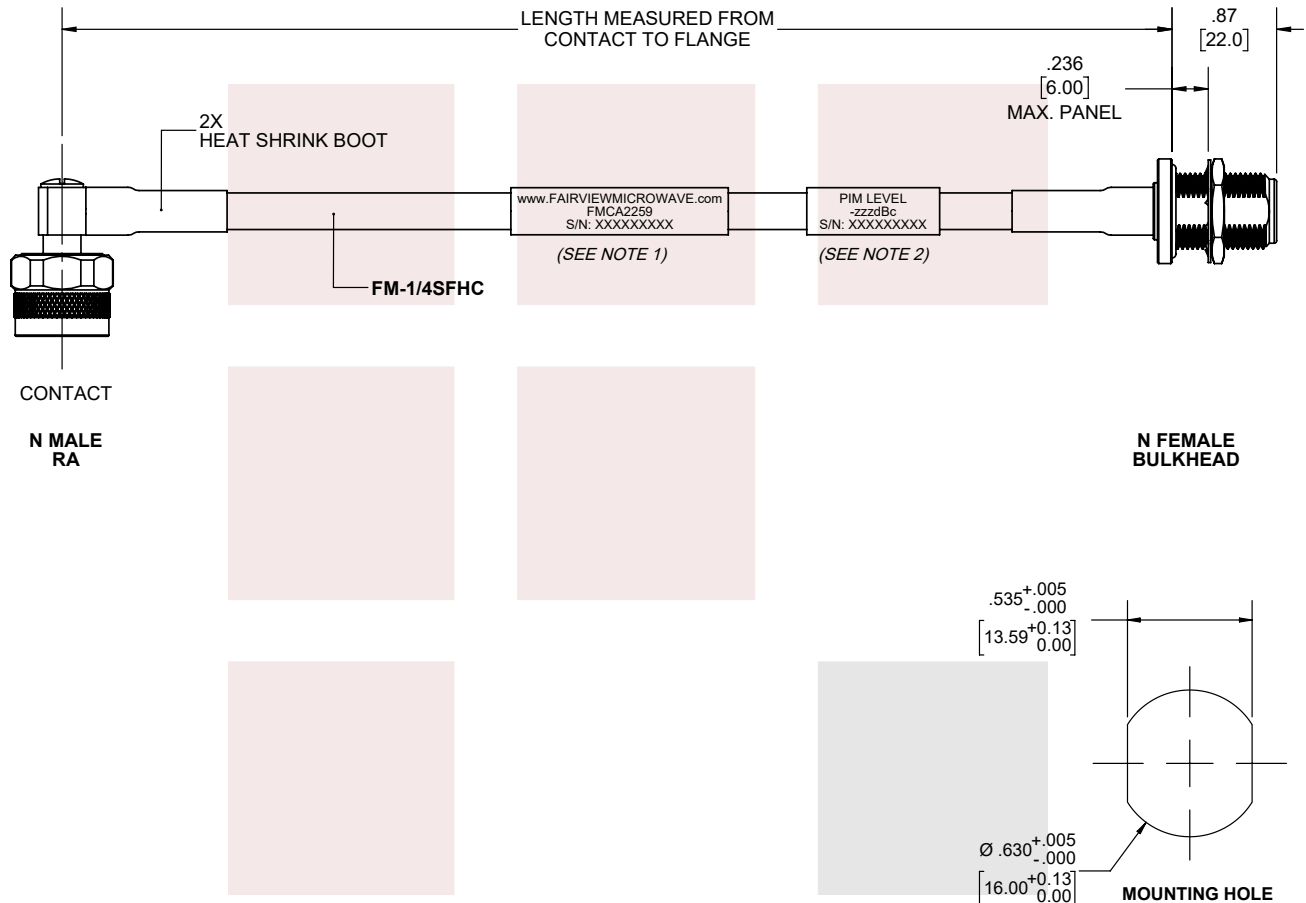
Click the following link to obtain additional part information: [Low PIM RA N Male to N Female Bulkhead Cable 1/4 inch Superflexible Coax in 48 Inch FMCA2259-48](#)

URL: <https://www.fairviewmicrowave.com/low-pim-ra-n-male-n-female-cable-fm-1-4-sfhc-coax-fmca2259-48-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.



| REVISIONS |                 |           |          |
|-----------|-----------------|-----------|----------|
| REV.      | DESCRIPTION     | DATE      | APPROVED |
| A         | INITIAL RELEASE | 1/19/2021 | S.ELLIS  |



**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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| TITLE                                                                                                                                                                                           |                 | Low PIM RA N Male to N Female Bulkhead Cable 1/4 inch Superflexible Coax in 48 Inch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   | ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. |  | SHEET 1 OF 1 |  | SCALE N/A |  |
| SIZE A                                                                                                                                                                                          | CAGE CODE 3FKR5 | DRAWN BY K.DANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ITEM NO. FMCA2259 | REV A                                        |  |              |  |           |  |

T-Rev.D