

## Fire Rated Low PIM N Male to N Male Cable SPF-500 Coax in 50 cm Using Times Microwave Parts

### FMCA2044-50CM

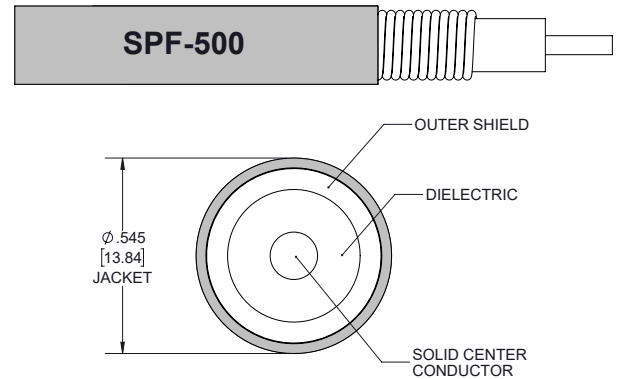


#### Configuration

- Connector 1: N Male TC-500-NM-LP
- Connector 2: N Male TC-500-NM-LP
- Cable Type: SPF-500
- Coax Flex Type: Corrugated

#### Features

- Max Frequency 6 GHz
- Low PIM: -160 dBc Max
- 83% Phase Velocity
- FRPE 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

#### Description

The type N male to type N male 50 cm cable using SPF-500 coax, part number FMCA2044-50CM, from Fairview Microwave is in-stock and ships same day. This Fairview type N to type N cable assembly has a male to male gender configuration with 50 ohm corrugated SPF-500 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 FMCA2044-50CM type N male to type N male cable assembly operates to 6 GHz. 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                                | Minimum | Typical | Maximum | Units |
|--------------------------------------------|---------|---------|---------|-------|
| Frequency Range                            | DC      |         | 6       | GHz   |
| VSWR                                       |         |         | 1.4:1   |       |
| Velocity of Propagation                    |         | 83      |         | %     |
| Passive Intermodulation                    |         | -165    | -160    | dBc   |
| IM3 (2x43dBm Tones) at 850 MHz or 1900 MHz |         |         |         |       |

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Electrical Specifications

| Description | Minimum | Typical    | Maximum | Units        |
|-------------|---------|------------|---------|--------------|
| Capacitance |         | 24 [78.74] |         | pF/ft [pF/m] |

Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5 | Units |
|-----------------------|------|------|------|------|----|-------|
| Frequency             | 0.5  | 1    | 2    | 6    |    | GHz   |
| Insertion Loss (Max.) | 0.19 | 0.26 | 0.37 | 0.65 |    | 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

19.685 in [500 mm]

Cable

Cable Type

SPF-500

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 1 Material and Plating

Copper

Jacket Material

FRPE, Black

Jacket Diameter

0.545 in [13.84 mm]

One Time Minimum Bend Radius

2.25 in [57.15 mm]

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#### Connectors

| Description                        | Connector 1       | Connector 2       |
|------------------------------------|-------------------|-------------------|
| Type                               | N Male            | N Male            |
| Impedance                          | 50 Ohms           | 50 Ohms           |
| Configuration                      | Straight          | Straight          |
| Contact Material and Plating       | Brass, Silver     | Brass, Silver     |
| Contact Plating Specification      | 200 µin           | 200 µin           |
| Dielectric Type                    | PTFE              | PTFE              |
| Body Material and Plating          | Brass, Tri-Metal  | Brass, Tri-Metal  |
| Body Plating Specification         | 80 µin            | 80 µin            |
| Coupling Nut Material and Plating  | Brass, Tri-Metal  | Brass, Tri-Metal  |
| Coupling Nut Plating Specification | 80 µin            | 80 µin            |
| Torque                             | 10 in-lbs 1.13 Nm | 10 in-lbs 1.13 Nm |

#### Environmental Specifications

|                                                              |                   |
|--------------------------------------------------------------|-------------------|
| Operating Range Temperature                                  | -55 to +200 deg C |
| Storage Range Temperature                                    | -55 to +200 deg C |
| Environmental Specification Notes:<br>CMR (Riser) Fire Rated |                   |

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

#### Plotted and Other Data

Notes:  
Values at 25°C, sea level.

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#### Typical Performance Data



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### FMCA2044-50CM



#### How to Order

Part Number Configuration:

**FMCA2044**      **- xx**      **uu**

\_\_\_\_\_ Unit of Measure:  
cm = Centimeters  
<blank> = Inches

\_\_\_\_\_ Length

\_\_\_\_\_ Base Number

Example: FMCA2044-12 = 12 inches long cable  
FMCA2044-100cm = 100 cm long cable

Fire Rated Low PIM N Male to N Male Cable SPF-500 Coax in 50 cm Using Times Microwave Parts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Fire Rated Low PIM N Male to N Male Cable SPF-500 Coax in 50 cm Using Times Microwave Parts FMCA2044-50CM](https://www.fairviewmicrowave.com/low-pim-n-male-n-male-cable-spf500-coax-fmca2044-50cm-p.aspx)

URL: <https://www.fairviewmicrowave.com/low-pim-n-male-n-male-cable-spf500-coax-fmca2044-50cm-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

FMCA2044-50CM CAD Drawing

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