

## Fire Rated Low PIM RA 4.3-10 Male to 4.3-10 Female Cable SPF-250 Coax in 60 Inch Using Times Microwave Parts

### FMCA2019-60

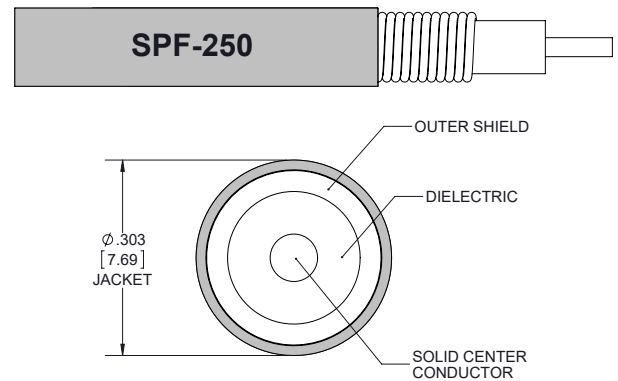


#### Configuration

- Connector 1: 4.3-10 Male Right Angle TC-250-4310M-RA-LP
- Connector 2: 4.3-10 Female TC-SPP250-4310F-LP
- Cable Type: SPF-250
- Coax Flex Type: Corrugated

#### Features

- Max Frequency 5.8 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 RA 4.3-10 male to 4.3-10 female 60 inch cable using SPF-250 coax, part number FMCA2019-60, from Fairview Microwave is in-stock and ships same day. This Fairview 4.3-10 to 4.3-10 cable assembly has a male to female gender configuration with 50 ohm corrugated SPF-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 FMCA2019-60 4.3-10 male to 4.3-10 female cable assembly operates to 5.8 GHz. The right angle 4.3-10 interface on the SPF-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                                | Minimum | Typical | Maximum | Units |
|--------------------------------------------|---------|---------|---------|-------|
| Frequency Range                            | DC      |         | 5.8     | 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] |
| Inductance  |         | 0.054 [0.18] |         | uH/ft [uH/m] |

#### Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 0.45 | 0.7  | 1    | 2.5  | 5.8  | GHz   |
| Insertion Loss (Max.) | 0.34 | 0.43 | 0.52 | 0.84 | 1.32 | 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         | 60 in [152.4 cm]  |
| Width/Diameter | .78 in [19.81 mm] |

##### Cable

|                                        |                                  |
|----------------------------------------|----------------------------------|
| Cable Type                             | SPF-250                          |
| 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                        | 0.303 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]            |

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#### Connectors

| Description                           | Connector 1             | Connector 2             |
|---------------------------------------|-------------------------|-------------------------|
| Type                                  | 4.3-10 Male Right Angle | 4.3-10 Female           |
| Impedance                             | 50 Ohms                 | 50 Ohms                 |
| Configuration                         | Right Angle             | Straight                |
| Contact Material and Plating          | Brass, Silver           | Phosphor Bronze, Silver |
| Contact Plating Specification         | 200 µin                 | 200 µin                 |
| Dielectric Type                       | PTFE                    | PTFE                    |
| Outer Conductor Material and Plating  |                         | Brass, Tri-Metal        |
| Outer Conductor Plating Specification |                         | 80 µin                  |
| Body Material and Plating             | Brass, Tri-Metal        | Brass, Tri-Metal        |
| Body Plating Specification            | 80 µin                  | 80 µin                  |
| Coupling Nut Material and Plating     | Brass, Nickel           |                         |
| Coupling Nut Plating Specification    | 200 µin                 |                         |
| Torque                                | 15.05 in-lbs 1.7 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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## FMCA2019-60

### Typical Performance Data



## Fire Rated Low PIM RA 4.3-10 Male to 4.3-10 Female Cable SPF-250 Coax in 60 Inch Using Times Microwave Parts



### FMCA2019-60

#### How to Order

Part Number Configuration:

**FMCA2019**      **- xx**      **uu**

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

\_\_\_\_\_ Length

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

Example: FMCA2019-12 = 12 inches long cable  
FMCA2019-100cm = 100 cm long cable

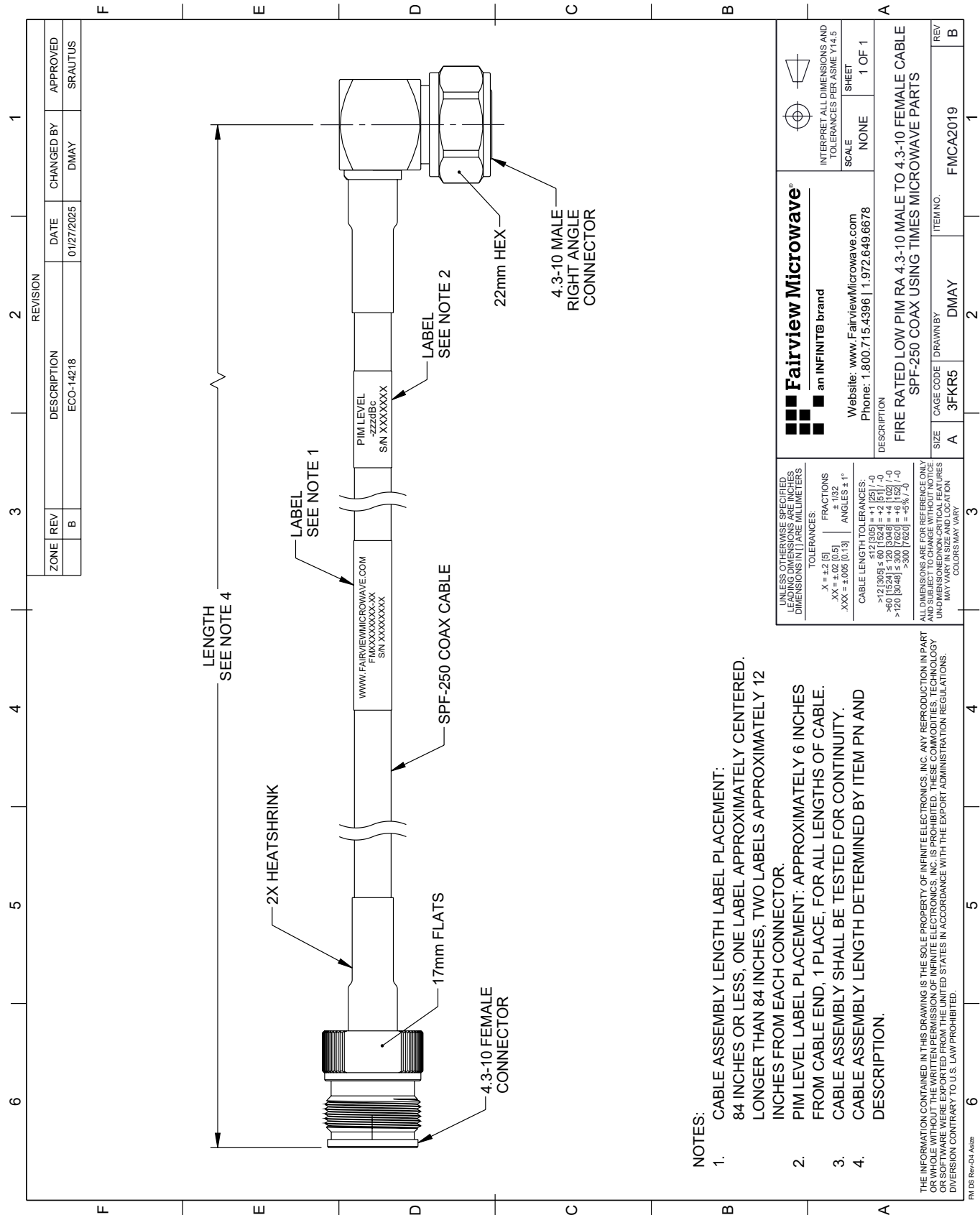
Fire Rated Low PIM RA 4.3-10 Male to 4.3-10 Female Cable SPF-250 Coax in 60 Inch Using Times Microwave Parts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Fire Rated Low PIM RA 4.3-10 Male to 4.3-10 Female Cable SPF-250 Coax in 60 Inch Using Times Microwave Parts FMCA2019-60](https://www.fairviewmicrowave.com/low-pim-ra-4.3-10-male-4.3-10-female-cable-spf250-coax-fmca2019-60-p.aspx)

URL: <https://www.fairviewmicrowave.com/low-pim-ra-4.3-10-male-4.3-10-female-cable-spf250-coax-fmca2019-60-p.aspx>

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FMCA2019-60 CAD Drawing
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- NOTES:
- 1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 84 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED. LONGER THAN 84 INCHES, TWO LABELS APPROXIMATELY 12 INCHES FROM EACH CONNECTOR.
- 2. PIM LEVEL LABEL PLACEMENT: APPROXIMATELY 6 INCHES FROM CABLE END, 1 PLACE, FOR ALL LENGTHS OF CABLE.
- 3. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
- 4. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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