



Fire Rated N Male to N Female Low PIM Cable 100 CM Length Using SPF-250 Coax Using Times Microwave Parts

RF Cable Assemblies Technical Data Sheet

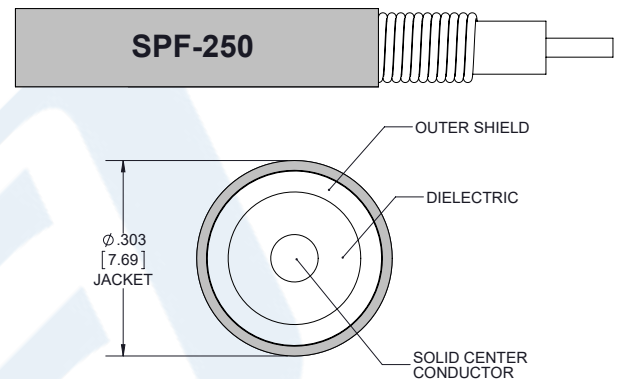
PE3C8491-100CM

**Configuration**

- Connector 1: N Male
- Connector 2: N Female
- Cable Type: SPF-250

**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
- CMR Riser Rated Applications
- Distributed Antenna Systems (DAS)
- Multi-Carrier Communication Systems
- PIM Testing

**Description**

Pasternack's PE3C8491-100CM type N male to type N female 100 cm cable using SPF-250 coax is part of our full line of RF components available for same-day shipping. Pasternack's corrugated RF cable assemblies are ideal for applications where durability and high power are needed. This Pasternack type N to type N cable assembly has a male to female gender configuration with 50 ohm corrugated SPF-250 coax. The PE3C8491-100CM type N male to type N female cable assembly operates to 5.8 GHz. Our low PIM design also offers excellent passive intermodulation performance with PIM levels better than -160 dBc.

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 available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. 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 |         |         | -160    | dBc   |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Fire Rated N Male to N Female Low PIM Cable 100 CM Length Using SPF-250 Coax Using Times Microwave Parts PE3C8491-100CM](#)



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|             |              |              |
|-------------|--------------|--------------|
| 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             | 0.25 | 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] |
| Diameter | 0 in [0 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                     |
| Outer Conductor 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                                  | N Male                  | N Female             |
| Impedance                             | 50 Ohms                 | 50 Ohms              |
| Mating Cycles                         |                         | 500                  |
| Contact Material and Plating          | Phosphor Bronze, Silver | Brass, Silver        |
| Contact Plating Specification         | 196 µin                 | 200 µin              |
| Dielectric Type                       | PTFE                    | PTFE                 |
| Outer Conductor Material and Plating  |                         | Brass, Tri-Metal     |
| Outer Conductor Plating Specification |                         | 100 µin              |
| Body Material and Plating             | Brass, Tri-Metal        | Brass, Tri-Metal     |
| Body Plating Specification            | 118 µin                 | 100 µin              |
| Coupling Nut Material and Plating     | Brass, Tri-Metal        |                      |
| Coupling Nut Plating Specification    | 118 µin                 |                      |
| Torque                                | 7.08 in-lbs [0.8 Nm]    | 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:

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**How to Order**

Part Number Configuration:

**PE3C8491**

- **xx**

**uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3C8491-12 = 12 inches long cable  
PE3C8491-100cm = 100 cm long cable

Fire Rated N Male to N Female Low PIM Cable 100 CM Length Using SPF-250 Coax Using Times Microwave Parts from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Fire Rated N Male to N Female Low PIM Cable 100 CM Length Using SPF-250 Coax Using Times Microwave Parts PE3C8491-100CM](https://www.pasternack.com/n-male-n-female-spf250-cable-assembly-pe3c8491-100cm-p.aspx)

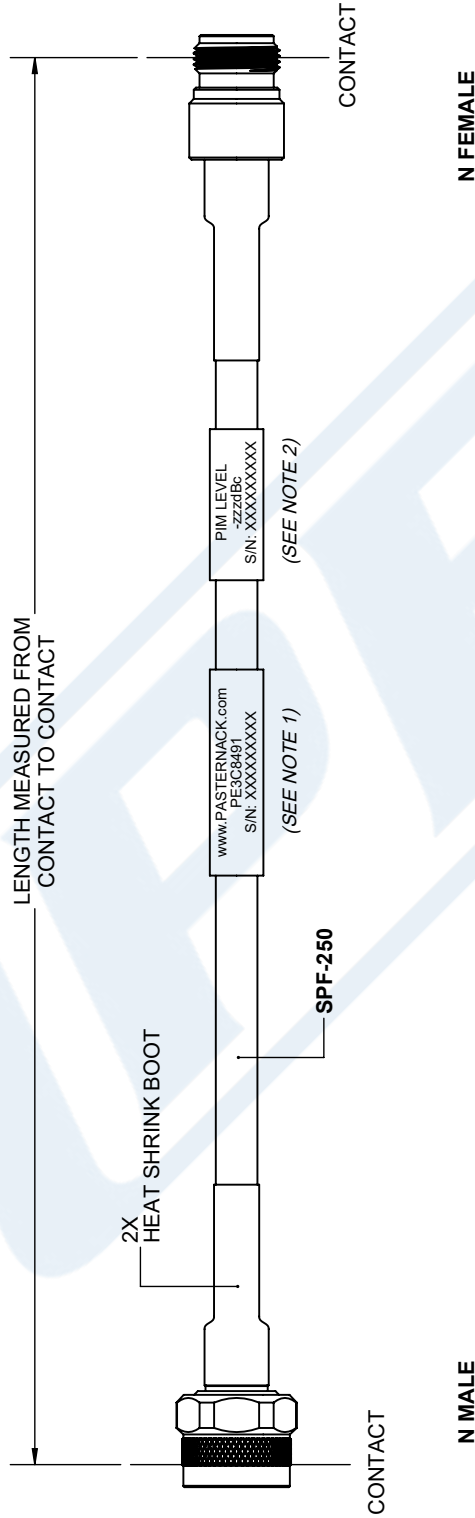
URL: <https://www.pasternack.com/n-male-n-female-spf250-cable-assembly-pe3c8491-100cm-p.aspx>

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE3C8491-100CM CAD Drawing

Fire Rated N Male to N Female Low PIM Cable 100 CM Length  
Using SPF-250 Coax Using Times Microwave Parts

| 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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|                                                                                            |                |
|--------------------------------------------------------------------------------------------|----------------|
| UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS |                |
| TOLERANCES:                                                                                | FRACTIONS      |
| .X = ± .2 [ .508]                                                                          | ± 1/32         |
| .XX = ± .02 [ .51]                                                                         | ± 1/32         |
| .XXX = ± .005 [ .13]                                                                       | ANGLES ± 1°    |
| CABLE LENGTH (L), TOLERANCES:                                                              |                |
| L ≤ 12 [305]                                                                               | ± 1 [25] / -0  |
| 12 [305] < L ≤ 60 [1524]                                                                   | ± 2 [51] / -0  |
| 60 [1524] < L ≤ 120 [3048]                                                                 | ± 4 [102] / -0 |
| 120 [3048] < L ≤ 300 [7620]                                                                | ± 6 [152] / -0 |
| 300 [7620] < L                                                                             | ± 5% / -0      |
| ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.                                               |                |



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| SHEET 1 OF 1           | SCALE N/A                                                                                                 |
| REV                    | REV A                                                                                                     |

|        |                 |                 |                   |
|--------|-----------------|-----------------|-------------------|
| SIZE A | CAGE CODE 53919 | DRAWN BY K.DANG | ITEM NO. PE3C8491 |
|--------|-----------------|-----------------|-------------------|