



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

### RF Cable Assemblies Technical Data Sheet

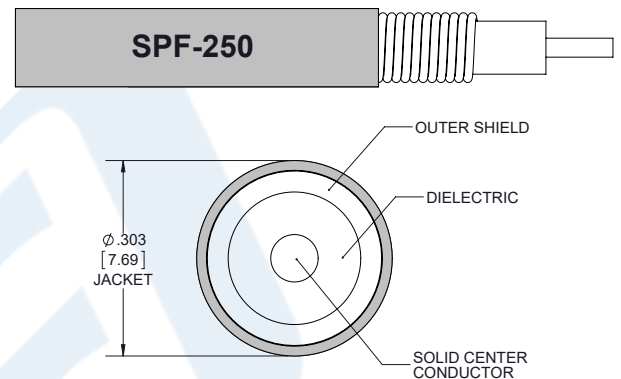
PE3C8491

#### 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 type N male to type N female 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 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 Using SPF-250 Coax Using Times Microwave Parts PE3C8491](#)



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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.)	0.03	0.043	0.062	0.103	0.167	dB
	0.1	0.14	0.2	0.34	0.55	

#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as  $0.1 \cdot \sqrt{FGHz}$  dB per connector.

#### Mechanical Specifications

##### Cable Assembly

Length*	0 in [0 mm]
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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## Fire Rated N Male to N Female Low PIM Cable Using SPF-250 Coax Using Times Microwave Parts

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PE3C8491

#### 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 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 Using SPF-250 Coax Using Times Microwave Parts PE3C8491](#)

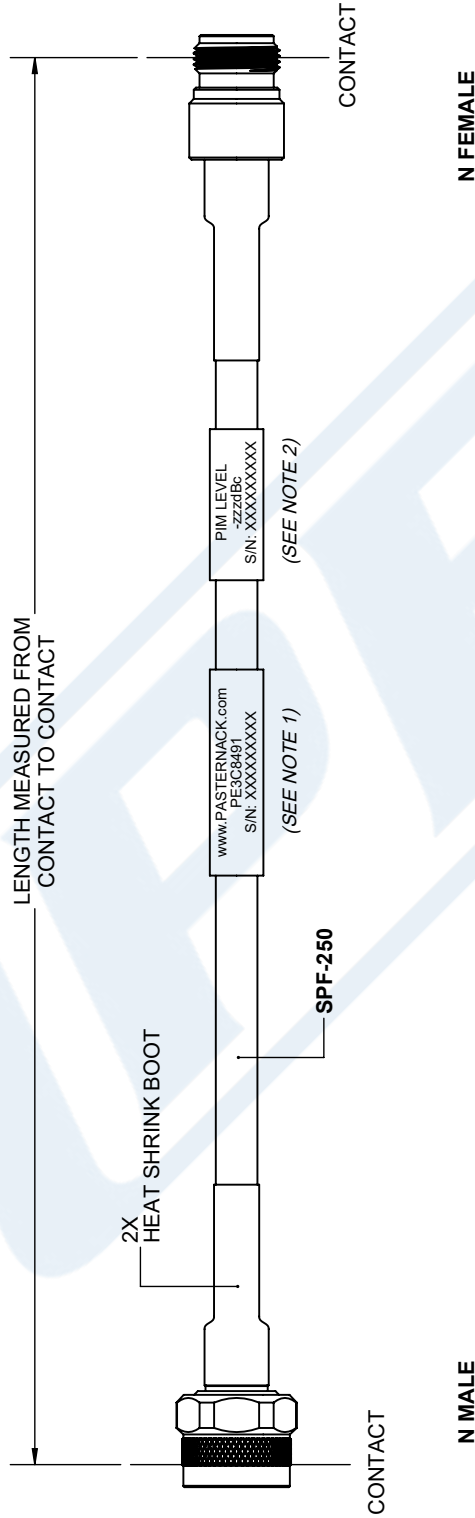
URL: <https://www.pasternack.com/n-male-n-female-spf250-cable-assembly-pe3c8491-p.aspx>

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 CAD Drawing

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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.

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
.X = ±.2 [ .008]	±.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	ITEM NO.
A	PE3C8491

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E-mail: sales@pasternack.com

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

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