



Outdoor Rated N Male to N Female Bulkhead Low PIM Cable Using SPO-250 Coax Using Times Microwave Parts

RF Cable Assemblies Technical Data Sheet

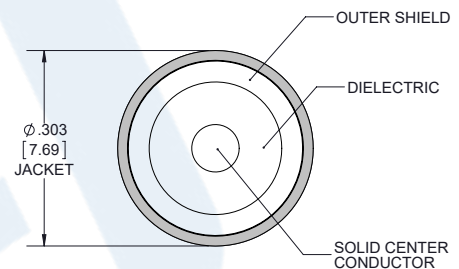
PE3C8509

Configuration

- Connector 1: N Male
- Connector 2: N Female Bulkhead
- Cable Type: SPO-250

Features

- Max Frequency 5.8 GHz
- Low PIM: -160 dBc Max
- 83% Phase Velocity
- PE 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
- Outdoor Rated Applications
- Distributed Antenna Systems (DAS)
- Multi-Carrier Communication Systems
- PIM Testing

Description

Pasternack's PE3C8509 type N male to type N female bulkhead cable using SPO-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 SPO-250 coax. The PE3C8509 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. 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 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: [Outdoor Rated N Male to N Female Bulkhead Low PIM Cable Using SPO-250 Coax Using Times Microwave Parts PE3C8509](#)



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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]
Weight	0.39 lbs [176.9 g]

Cable

Cable Type	SPO-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	PE, 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 Bulkhead
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Phosphor Bronze, Silver	Phosphor Bronze, Silver
Contact Plating Specification	196 µin	196 µin
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating		Brass, Tri-Metal
Outer Conductor Plating Specification		118 µin
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	118 µin	118 µin
Coupling Nut Material and Plating	Brass, Tri-Metal	
Coupling Nut Plating Specification	118 µin	
Torque	7.08 in-lbs [0.8 Nm]	6 in-lbs [0.68 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:

PE3C8509

- **xx**

uu

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

Example: PE3C8509-12 = 12 inches long cable
PE3C8509-100cm = 100 cm long cable

Outdoor Rated N Male to N Female Bulkhead Low PIM Cable Using SPO-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: [Outdoor Rated N Male to N Female Bulkhead Low PIM Cable Using SPO-250 Coax Using Times Microwave Parts PE3C8509](https://www.pasternack.com/n-male-n-female-spo250-cable-assembly-pe3c8509-p.aspx)

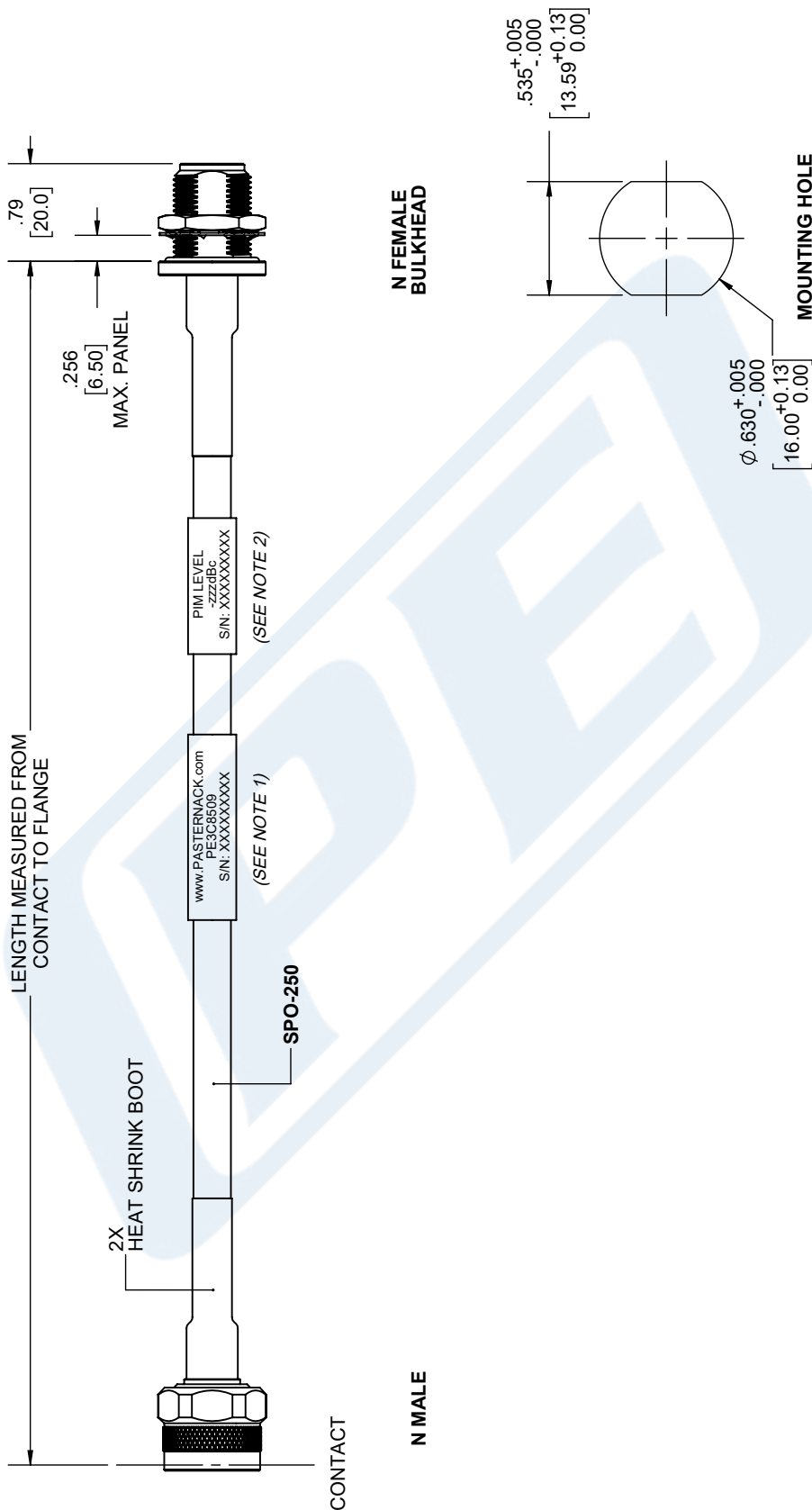
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PE3C8509 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	9/21/2021	A. GANWANI



<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <p>.X = ±.2 [.508] FRACTIONS .XX = ±.02 [.51] ±.1/32 .XXX = ±.005 [.13] ANGLES ± 1°</p> <p>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</p> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>	<p>THIRD-ANGLE PROJECTION</p> <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED.</p> <p>SHEET 1 OF 1</p> <p>SCALE N/A</p>
<p>SIZE A</p> <p>CAGE CODE 53919</p> <p>DRAWN BY K.DANG</p> <p>ITEM NO. PE3C8509</p>	<p>REV A</p>

- 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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