

## N Male to N Male Low PIM Cable 48 Inch Length Using 1/2 inch Superflexible Coax, LF Solder



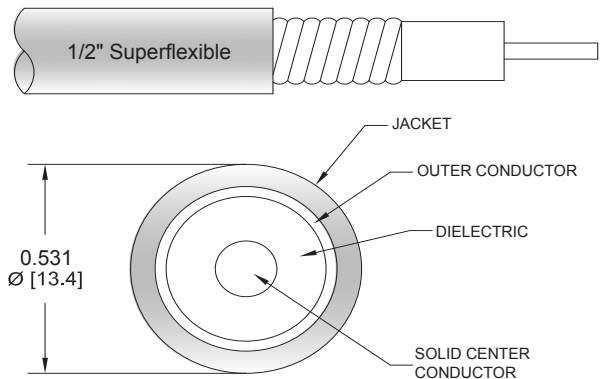
### PE39981LF-48

#### Configuration

- Connector 1: N Male
- Connector 2: N Male
- Cable Type: 1/2" Superflexible
- Coax Flex Type: Corrugated

#### Features

- Max Frequency 3 GHz
- Low PIM: -160 dBc Max
- Shielding Effectivity > 120 dB
- 82% Phase Velocity
- PE Jacket



#### Applications

- General Purpose
- Laboratory Use
- Low PIM Applications

#### Description

Pasternack's PE39981LF-48 type N male to type N male 48 inch cable using 1/2 inch superflexible 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 male gender configuration with 50 ohm corrugated 1/2" superflexible coax. The PE39981LF-48 type N male to type N male cable assembly operates to 3 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		3	GHz
VSWR			1.4:1	
Velocity of Propagation		82		%
RF Shielding	120			dB
Passive Intermodulation			-160	dBc
IM3 (2x43dBm Tones) at 850 MHz or 1900 MHz using 2x20W tones				
Capacitance		25.3 [83.01]		pF/ft [pF/m]
Inductance		0.059 [0.19]		uH/ft [uH/m]
DC Resistance Inner Conductor		0.91 [2.99]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		1.08 [3.54]		Ohms/1000ft [Ohms/Km]

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**PE39981LF-48**

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Operating Voltage (AC)			1,700	Vrms
Dielectric Withstanding Voltage (AC)			2,500	Vrms

**Specifications by Frequency**

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
		Frequency	100	250	500	1000	3000	MHz	
PE39981LF	Custom Lengths Available	Insertion Loss (Typ.)	0.01	0.015	0.023	0.034	0.063	dB/ft	
			0.04	0.05	0.08	0.12	0.21	dB/m	
PE39981LF-24	24 inch	Insertion Loss (Typ.)	0.22	0.23	0.25	0.27	0.33	dB	0.459
PE39981LF-48	48 inch	Insertion Loss (Typ.)	0.24	0.26	0.3	0.34	0.46	dB	0.667
PE39981LF-60	60 inch	Insertion Loss (Typ.)	0.25	0.28	0.32	0.37	0.52	dB	0.771
PE39981LF-150CM	150 CM	Insertion Loss (Typ.)	0.25	0.28	0.32	0.37	0.52	dB	0.762
PE39981LF-200CM	200 CM	Insertion Loss (Typ.)	0.27	0.3	0.36	0.43	0.62	dB	0.933

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1:	0.1 dB
Loss due to Connector 2:	0.1 dB
Base Weight:	0.354 pounds
Additional Weight per Inch:	0.00867 pounds

**Mechanical Specifications**

**Cable Assembly**

Length	48 in [121.92 cm]
Width/Diameter	0.5 in [12.7 mm]
Weight	0.667 lbs [302.55 g]

**Cable**

Cable Type	1/2" Superflexible
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper Clad Aluminum
Dielectric Type	PE (F)
Number of Shields	1
Shield Layer 1	Helically Corrugated Copper Tube
Jacket Material	PE, Black
Jacket Diameter	0.535 in [13.59 mm]
One Time Minimum Bend Radius	0.6 in [15.24 mm]
Repeated Minimum Bend Radius	1.18 in [29.97 mm]
Typical Flex Cycles	20
Tensile Strength	157 lbs [71.21 Kg]

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**Connectors**

Description	Connector 1	Connector 2
Type	N Male	N Male
Specification	IEC 60169-16	IEC 60169-16
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Spring Copper, Silver	Spring Copper, Silver
Contact Plating Specification	200 [5] $\mu$ in. [ $\mu$ m] minimum	200 [5] $\mu$ in. [ $\mu$ m] minimum
Dielectric Type	TPX	TPX
Outer Conductor Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Outer Conductor Plating Specification	78 [2] $\mu$ in. [ $\mu$ m] minimum	78 [2] $\mu$ in. [ $\mu$ m] minimum
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	78 [2] $\mu$ in. [ $\mu$ m] minimum	78 [2] $\mu$ in. [ $\mu$ m] minimum
Coupling Nut Material and Plating	Brass, Nickel	Brass, Nickel
Coupling Nut Plating Specification	200 [5] $\mu$ in. [ $\mu$ m] minimum	200 [5] $\mu$ in. [ $\mu$ m] minimum
Hex Size	20 mm	20 mm

**Environmental Specifications**

Operating Range Temperature -40 to +85 deg C

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

**Plotted and Other Data**

Notes:

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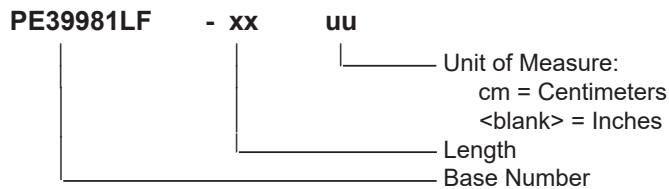


## PE39981LF-48

### Typical Performance Data

### How to Order

Part Number Configuration:



Example: PE39981LF-12 = 12 inches long cable  
PE39981LF-100cm = 100 cm long cable

N Male to N Male Low PIM Cable 48 Inch Length Using 1/2 inch Superflexible Coax, LF Solder 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.

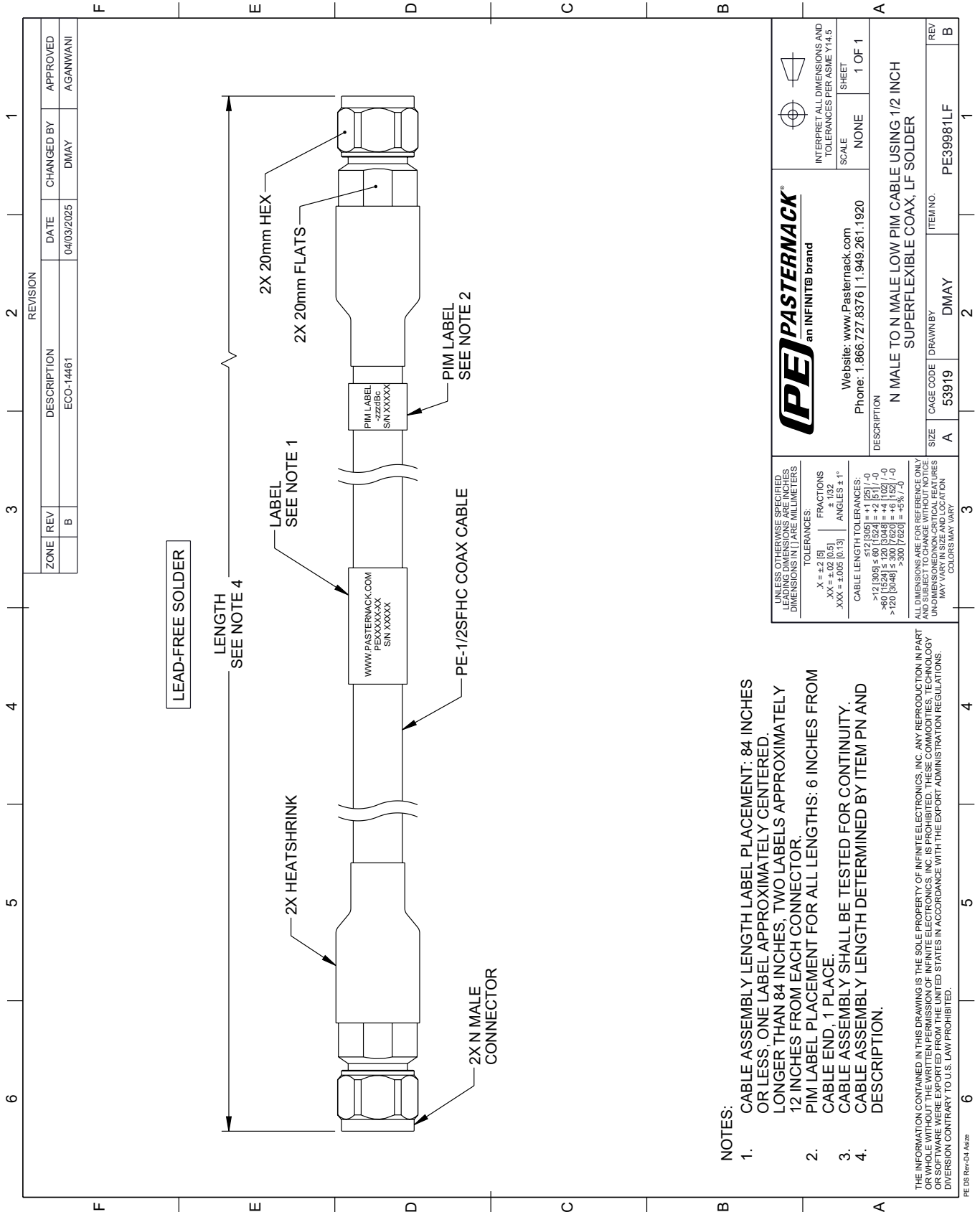
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Male Low PIM Cable 48 Inch Length Using 1/2 inch Superflexible Coax, LF Solder PE39981LF-48](#)

URL: <https://www.pasternack.com/n-male-to-n-male-low-pim-cable-48-inch-length-using-1-2-inch-superflexible-lf-solder-pe39981lf-48-p.aspx>

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# PE39981LF-48 CAD Drawing

N Male to N Male Low PIM Cable 48 Inch Length Using 1/2 inch Superflexible Coax, LF Solder



**NOTES:**

- 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.
- PIM LABEL PLACEMENT FOR ALL LENGTHS: 6 INCHES FROM CABLE END, 1 PLACE.
- CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
- CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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