

N Male to N Male Low PIM Cable 24 Inch Length Using 1/2 inch Superflexible Coax, LF Solder



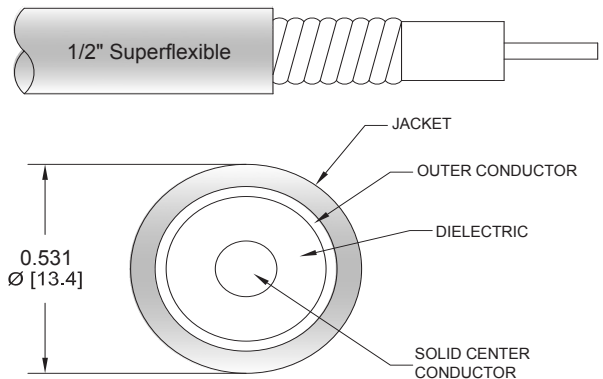
PE39981LF-24

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-24 type N male to type N male 24 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-24 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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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 | 24 in [609.6 mm] |
| Width/Diameter | 0.5 in [12.7 mm] |
| Weight | 0.459 lbs [208.2 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] μ in. [μ m] minimum | 200 [5] μ in. [μ m] minimum |
| Dielectric Type | TPX | TPX |
| Outer Conductor Material and Plating | Brass, Tri-Metal | Brass, Tri-Metal |
| Outer Conductor Plating Specification | 78 [2] μ in. [μ m] minimum | 78 [2] μ in. [μ m] minimum |
| Body Material and Plating | Brass, Tri-Metal | Brass, Tri-Metal |
| Body Plating Specification | 78 [2] μ in. [μ m] minimum | 78 [2] μ in. [μ m] minimum |
| Coupling Nut Material and Plating | Brass, Nickel | Brass, Nickel |
| Coupling Nut Plating Specification | 200 [5] μ in. [μ m] minimum | 200 [5] μ in. [μ 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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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 24 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 24 Inch Length Using 1/2 inch Superflexible Coax, LF Solder PE39981LF-24](#)

URL: <https://www.pasternack.com/n-male-to-n-male-low-pim-cable-24-inch-length-using-1-2-inch-superflexible-lf-solder-pe39981lf-24-p.aspx>

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PE39981LF-24 CAD Drawing

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