

N Male to N Male Cable Using 1/2 inch Superflexible Coax

RF Cable Assemblies Technical Data Sheet

PE39981

Configuration

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

Features

- Max Frequency 3 GHz
- Shielding Effectivity > 120 dB
- 82% Phase Velocity
- PE Jacket

Applications

- General Purpose
- Laboratory Use

Description

Pasternack's PE39981 type N male to type N male 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 PE39981 type N male to type N male cable assembly operates to 3 GHz.

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.

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 Cable Using 1/2 inch Superflexible Coax PE39981](#)

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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
VSWR			1.21:1	
Velocity of Propagation		82		%
RF Shielding	120			dB
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]		Ω/1000ft [Ω/Km]
DC Resistance Outer Conductor		1.08 [3.54]		Ω/1000ft [Ω/Km]

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.1	0.25	0.5	1	3	GHz
Insertion Loss (Max.)	1.0101	1.015285	1.023311	1.0341	1.063	dB/ft
	3.31	3.33	3.36	3.39	3.49	dB/m
VSWR (Max.)	1.21:1	1.21:1	1.21:1	1.21:1	1.21:1	
Return Loss (Max.)	20.44	20.444	20.444	20.444	20.444	dB

Mechanical Specifications
Cable Assembly

Weight 0.25 lbs [113.4 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
Outer Conductor Material and Plating	Helically Corrugated Copper Tube
Jacket Material	PE, Black
Jacket Diameter	0.519 in [13.18 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

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Tensile Strength

79 lbs [35.83 Kg]

Connectors

Description	Connector 1	Connector 2
Type	N Male	N Male
Specification	IEC 60169-16	IEC 60169-16
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Spring Copper, Silver	Spring Copper, Silver
Contact Plating Specification	5 µm minimum	5 µm minimum
Dielectric Type	TPX	TPX
Outer Conductor Material and Plating	Brass, Nickel	Brass, Nickel
Outer Conductor Plating Specification	5 µm minimum	5 µm minimum
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	2 µm minimum	2 µm minimum
Coupling Nut Material and Plating	Brass, Nickel	Brass, Nickel
Coupling Nut Plating Specification	5 µm minimum	5 µm minimum
Hex Size	20 mm	20 mm

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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RF Cable Assemblies Technical Data Sheet**PE39981****How to Order**

Part Number Configuration:

PE39981- **xx****uu**

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

Example: PE39981-12 = 12 inches long cable
PE39981-100cm = 100 cm long cable

N Male to N Male Cable Using 1/2 inch Superflexible Coax 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 Cable Using 1/2 inch Superflexible Coax PE39981](#)

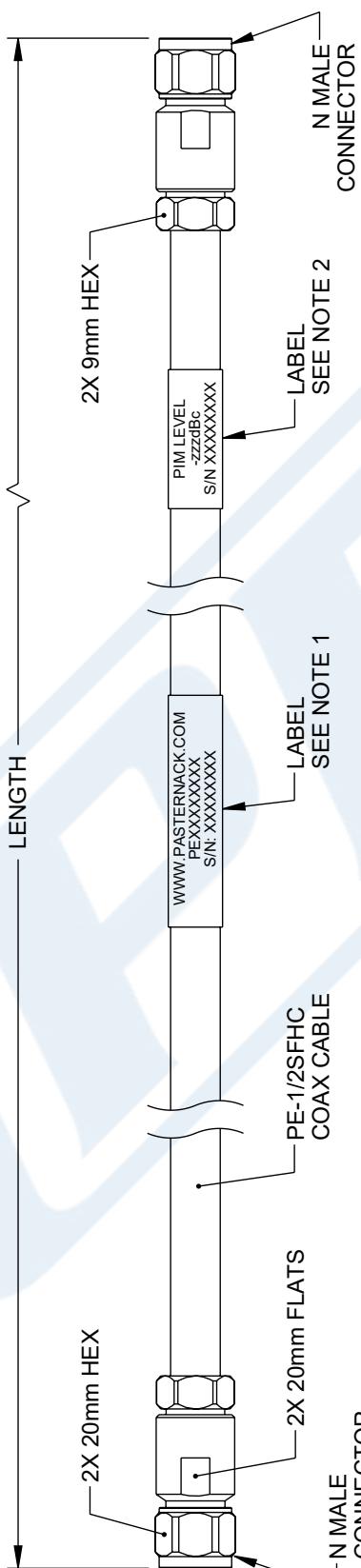
URL: <https://www.pasternack.com/n-male-to-n-male-cable-using-1/2-inch-superflexible-pe39981-p.aspx>

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.

PE39981 CAD Drawing

N Male to N Male Cable Using 1/2 inch Superflexible Coax

		REVISION			
ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	6/6/2023	KDANG	AGANWANI



NOTES:

1. CABLE ASSY LENGTH LABEL PLACEMENT: CABLES 84" OR LESS, ONE LABEL APPROX CENTERED. LONGER THAN 84 INCHES, TWO LABELS APPROX 12 INCHES FROM EACH CONNECTOR.
2. PIM LEVEL LABEL PLACEMENT: APPROX 6 INCHES FROM CABLE END, 1 PLACE, FOR ALL LENGTHS OF CABLE.
3. CABLES ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.

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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN 1/4 INCH MILLIMETERS	TOLERANCES:	
	$X = \pm 2$ [5] $.XX = \pm .02$ [.05] $XXX = \pm .005$ [.13]	FRACTIONS $\pm 1/32$ ANGLES $\pm 1^\circ$
CABLE LENGTH SPECIFICATIONS:	≤ 12 [305] = +1 [25] / -0 > 12 [305] ≤ 60 [1524] = +2 [51] / -0	DESCRIPTION PE PASTERNACK® an INFINITI® brand
	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE SHEET NONE	1 OF 1
WEBSITE: www.Pasternack.com PHONE: 1.866.727.8376 1.949.261.1920		N Male to N Male Cable Using 1/2 inch Superflexible Coax

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