

N Male to N Male Low PIM Cable Using 1/2 inch Superflexible Coax with HeatShrink



PE39981/HS

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
- Low PIM Applications

Description

Pasternack's PE39981/HS 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/HS type N male to type N male cable assembly operates to 3 GHz. Our low PIM design also offers excellent passive intermodulation performance.

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			1.1:1	
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]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		1.08 [3.54]		Ohms/1000ft [Ohms/Km]

Specifications by Frequency

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Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency	100	250	500	1000	3000	
PE39981/HS	Custom Lengths Available	Insertion Loss (Typ.)	0.01	0.02	0.02	0.03	0.06	dB/ft	
			0.04	0.05	0.08	0.12	0.21	dB/m	
PE39981/HS-24	24 inch	Insertion Loss (Typ.)	0.22	0.23	0.25	0.27	0.33	dB	0.459
PE39981/HS-48	48 inch	Insertion Loss (Typ.)	0.24	0.26	0.3	0.34	0.46	dB	0.667
PE39981/HS-60	60 inch	Insertion Loss (Typ.)	0.25	0.28	0.32	0.37	0.52	dB	0.771
PE39981/HS-150CM	150 cm	Insertion Loss (Typ.)	0.25	0.28	0.32	0.37	0.52	dB	0.762
PE39981/HS-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

Width/Diameter	0.5 in [12.7 mm]
Weight	0.354 lbs [160.57 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 1 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
Tensile Strength	79 lbs [35.83 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	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

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: PE39981/HS-12 = 12 inches long cable
PE39981/HS-100cm = 100 cm long cable

N Male to N Male Low PIM Cable Using 1/2 inch Superflexible Coax with HeatShrink 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.

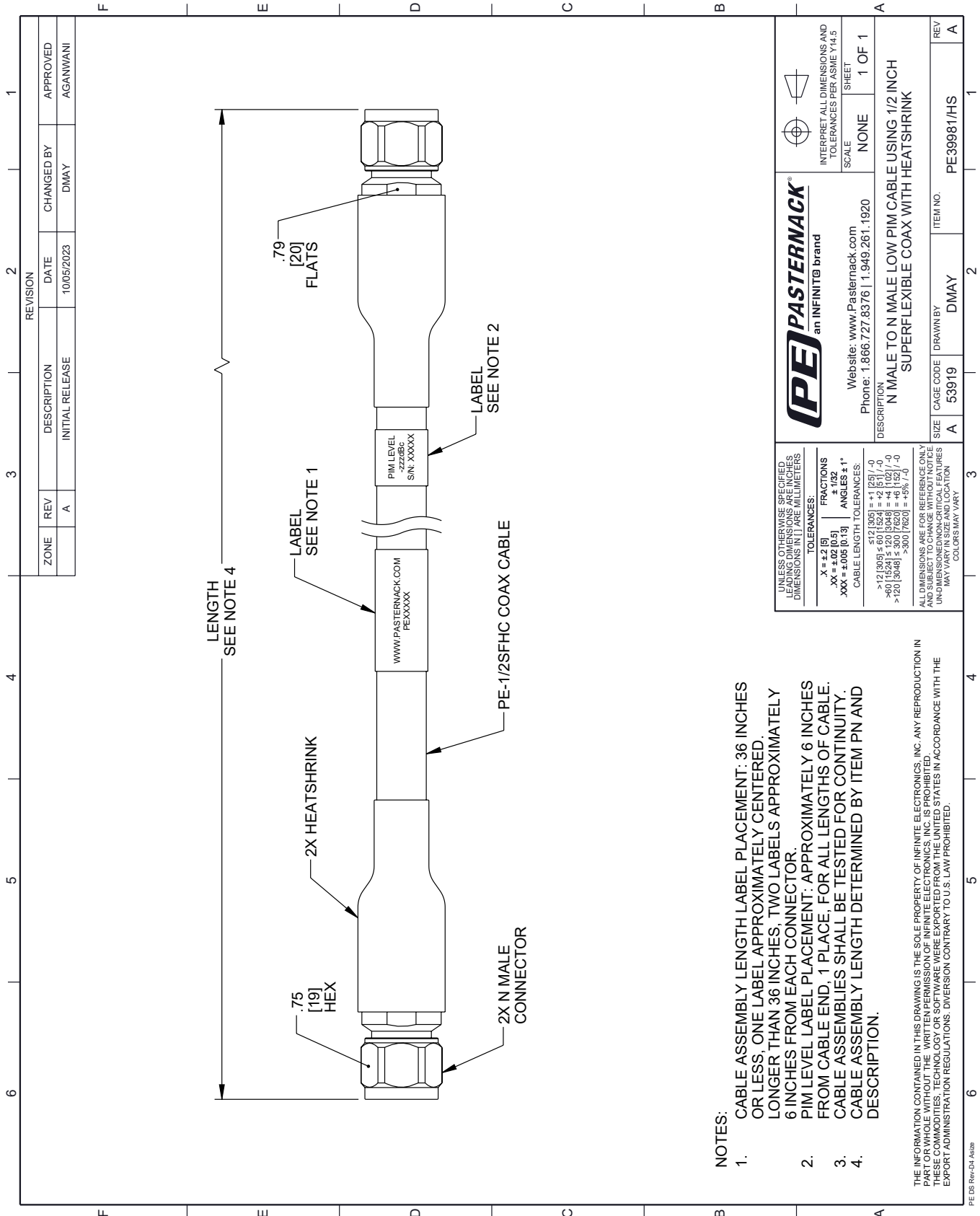
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male to N Male Low PIM Cable Using 1/2 inch Superflexible Coax with HeatShrink PE39981/HS](#)

URL: <https://www.pasternack.com/n-male-to-n-male-low-pim-cable-using-1-2-inch-superflexible-with-heatshrink-pe39981-hs.html>

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PE39981/HS CAD Drawing

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REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV	DESCRIPTION	INITIAL RELEASE	
	A		DMAY	AGANWANI

NOTES:

1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED, LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
2. PIM LEVEL LABEL PLACEMENT: APPROXIMATELY 6 INCHES FROM CABLE END, 1 PLACE FOR ALL LENGTHS OF CABLE.
3. CABLE ASSEMBLIES SHALL BE TESTED FOR CONTINUITY.
4. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

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<p>PASTERNAK an INFINITE brand</p> <p>Website: www.Pasternack.com Phone: 1.866.727.8376 1.949.261.1920</p>	<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p> <p>SCALE: NONE</p> <p>SHEET: 1 OF 1</p>
	<p>DESCRIPTION: N MALE TO N MALE LOW PIM CABLE USING 1/2 INCH SUPERFLEXIBLE COAX WITH HEATSHRINK</p>
<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [] ARE MILLIMETERS</p> <p>TOLERANCES: .X = ±.2 [5] .XX = ±.02 [0.5] .XXX = ±.005 [0.13]</p> <p>FRACTIONS: ± 1/32 ANGLES ± 1°</p> <p>CABLE LENGTH TOLERANCES: <12 [305] ±.60 [1524] = +1 [25] / -0 >12 [305] ±.60 [1524] = +2 [51] / -0 >40 [1024] ±.120 [3048] = +4 [102] / -0 >120 [3048] ±.300 [7620] = +5% / -4%</p>	<p>ITEM NO. PE39981/HS</p> <p>SIZE A</p> <p>DESCRIPTION A</p> <p>DATE DMAY</p> <p>DRAWN BY</p>