



## VNA Ruggedized Test Cable N Male to SMA Female 18GHz, RoHS

### RF Cable Assemblies Technical Data Sheet

PE3VNA1806

#### Configuration

- Connector 1: N Male
- Connector 2: SMA Female
- Cable Type: PE-VNA-R

#### Features

- Max Frequency 18 GHz
- Shielding Effectivity > 90 dB
- 70% Phase Velocity
- Triple Shielded
- PET Jacket
- Designed for use as VNA Test Port extenders
- Excellent VSWR and Insertion Loss
- Stainless Steel Armoring provides crush resistance
- Non Conductive protective outer sleeve
- Torsion resistant connector heads
- Rugged connector interface with machined strain relief collar
- Excellent Amplitude and Phase stability with flexure
- Each Serialized assembly comes with test data
- In stock and ready to ship

#### Applications

- General Purpose
- Laboratory Use
- Vector Network Analyzer Test port extenders
- Precise Bench top testing
- Lab and Production testing

#### Description

Pasternack ruggedized VNA Test Cables are designed to provide customers with repeatable accurate VNA measurements. These Test cables have excellent electrical properties including low Insertion Loss, low VSWR and phase stability of +/- 2° with flexure. Torsion resistant connector heads are directly attached to stainless steel conduit style armoring providing a rugged design for up to 5,000 mattings cycles with proper care. The cable armoring enhances amplitude and phase stability by preventing stress due to over bending while maintaining the flexibility required for testing in a lab environment. When used with the appropriate calibration KIT these test cables effectively extend the test port of the VNA allowing for accurate measurements of devices that cannot be directly connected to a Network Analyzer test port.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [VNA Ruggedized Test Cable N Male to SMA Female 18GHz, RoHS PE3VNA1806](#)



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#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
VSWR			1.25:1	
Velocity of Propagation		70		%
RF Shielding	90			dB
Capacitance		29.4 [96.46]		pF/ft [pF/m]
Phase Stability with Flexure		2		Degrees

#### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	6	12	18			GHz
Insertion Loss (Max.)	0.435	0.66	0.85			dB/ft
	1.43	2.17	2.79			dB/m
Power Handling (Max.)			88			W

#### Mechanical Specifications

##### Cable Assembly

##### Cable

Cable Type	PE-VNA-R
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper, Silver
Dielectric Type	PTFE
Number of Shields	3
Shield Layer 1	Silver Plated Copper Braid
Shield Layer 2	Silver Plated Copper Tape
Shield Layer 3	Silver Plated Copper Braid
Jacket Material	PET
Jacket Diameter	0.43 in [10.92 mm]
One Time Minimum Bend Radius	4 in [101.6 mm]

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#### Connectors

Description	Connector 1	Connector 2
Type	N Male	SMA Female
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating		Passivated Stainless Steel
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material and Plating	Passivated Stainless Steel	

#### Mechanical Specification Notes:

\*All cable assemblies have a length tolerance of 1.5% or  $\pm 3/8$ ", whichever is greater.

Crush Resistance: 1,050 lbs.//Jacket Material is a PET weave over a spiral stainless steel sheath

#### Environmental Specifications

##### Temperature

Operating Range +125 deg C

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

#### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

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#### How to Order

Part Number Configuration:

**PE3VNA1806**

- **xx**

**uu**

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

Example: PE3VNA1806-12 = 12 inches long cable  
PE3VNA1806-100cm = 100 cm long cable

VNA Ruggedized Test Cable N Male to SMA Female 18GHz, RoHS 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: [VNA Ruggedized Test Cable N Male to SMA Female 18GHz, RoHS PE3VNA1806](https://www.pasternack.com/n-male-sma-female-vna-cable-cable-assembly-pe3vna1806-p.aspx)

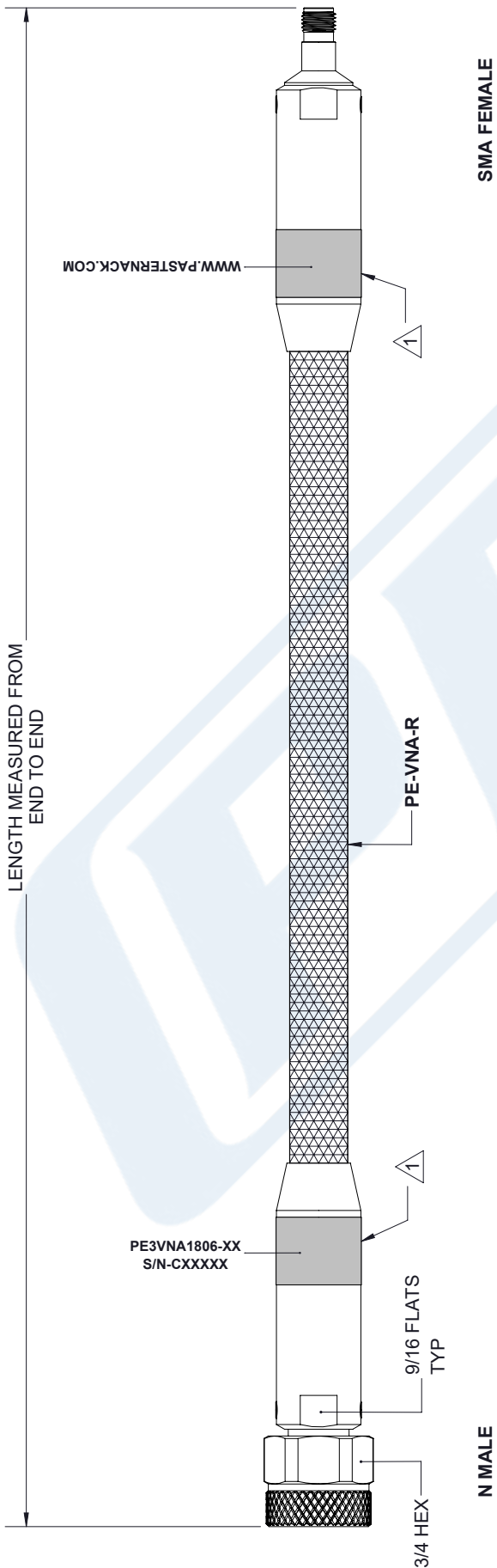
URL: <https://www.pasternack.com/n-male-sma-female-vna-cable-cable-assembly-pe3vna1806-p.aspx>

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# PE3VNA1806 CAD Drawing

VNA Ruggedized Test Cable N Male to SMA Female 18GHz, RoHS

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	03/26/19	S. ELLIS



<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <table border="0"> <tr> <td>X±.2</td> <td>[5.08]</td> <td>FRACTIONS</td> </tr> <tr> <td>.XX±.01</td> <td>[.25]</td> <td>±.132</td> </tr> <tr> <td>.XXX±.005</td> <td>[.13]</td> <td>ANGLES ± 1°</td> </tr> </table> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p> <p>THIRD-ANGLE PROJECTION</p>		X±.2	[5.08]	FRACTIONS	.XX±.01	[.25]	±.132	.XXX±.005	[.13]	ANGLES ± 1°	<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>	
X±.2	[5.08]	FRACTIONS										
.XX±.01	[.25]	±.132										
.XXX±.005	[.13]	ANGLES ± 1°										
<p><b>PE PASTERNAK</b> an INFINITO brand</p> <p>Pasternack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920   1.866.727.8376 Fax: 1.949.261.7451 www.pasternack.com   e-mail: sales@pasternack.com</p>		<p>REV A</p> <p>PART NUMBER PE3VNA1806</p>										
SIZE A	CAGE 53919	DRAWN BY K.DANG	REV A									

- NOTES:
- BLACK LETTERS ON SILVER LABEL.

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