



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

## RF Cable Assemblies - PE3VNA1802

### Configuration

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

### Features

- 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

- 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.

### 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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male to SMA Female Cable Using Ruggedized VNA Test Coax, RoHS PE3VNA1802](#)



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

## RF Cable Assemblies - PE3VNA1802

### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	6	12	18			GHz
Insertion Loss (Max.)	0.28	0.41	0.52			dB/ft [dB/m]
	[0.92]	[1.35]	[1.71]			
VSWR (Max.)	1.25:1	1.25:1	1.25:1			
Power Handling (Max.)			88			Watts

### Mechanical Specifications

#### Cable Assembly

One Time Minimum Bend Radius 4 in [101.6 mm]

#### 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]

#### Connectors

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

#### Mechanical Specification Notes:

Crush Resistance: 1,050 lbs.

Jacket Material is a PET weave over a spiral stainless steel sheath

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male to SMA Female Cable Using Ruggedized VNA Test Coax, RoHS PE3VNA1802](#)



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

## RF Cable Assemblies - PE3VNA1802

### Environmental Specifications

#### Temperature

Operating Range

+125 deg C

### Compliance Certifications (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant

Yes

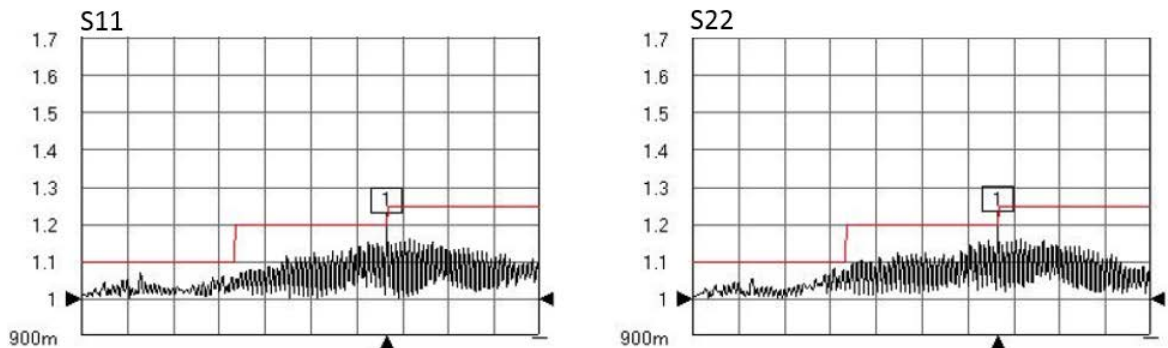
### Plotted and Other Data

Notes:

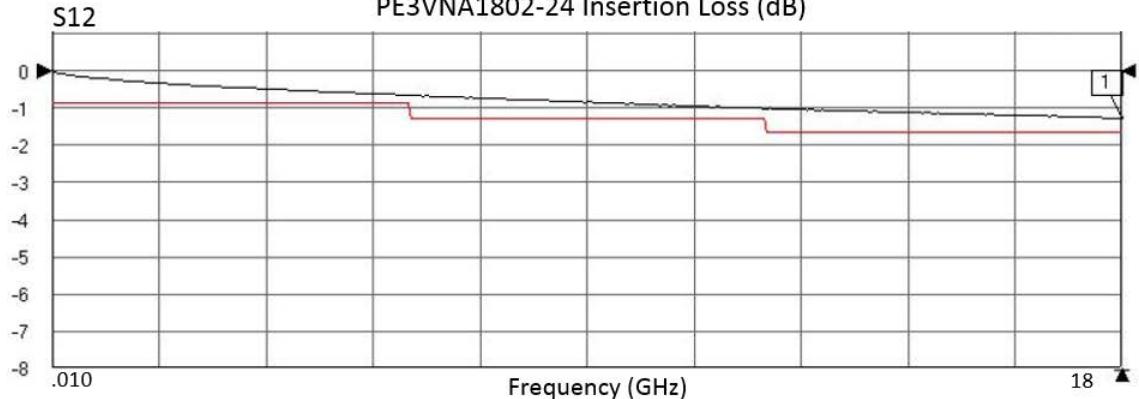
- Values at 25°C, sea level.

### Typical Performance Data

PE3VNA1802-24 VSWR



PE3VNA1802-24 Insertion Loss (dB)



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male to SMA Female Cable Using Ruggedized VNA Test Coax, RoHS PE3VNA1802](#)



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

## RF Cable Assemblies - PE3VNA1802

### How to Order

Part Number Configuration:

**PE3VNA1802**

- **xx**

**uu**

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

Example: PE3VNA1802-12 = 12 inches long cable  
PE3VNA1802-100cm = 100 cm long cable

VNA Ruggedized Test Cable SMA 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% availability and are part of the broadest selection in the industry.

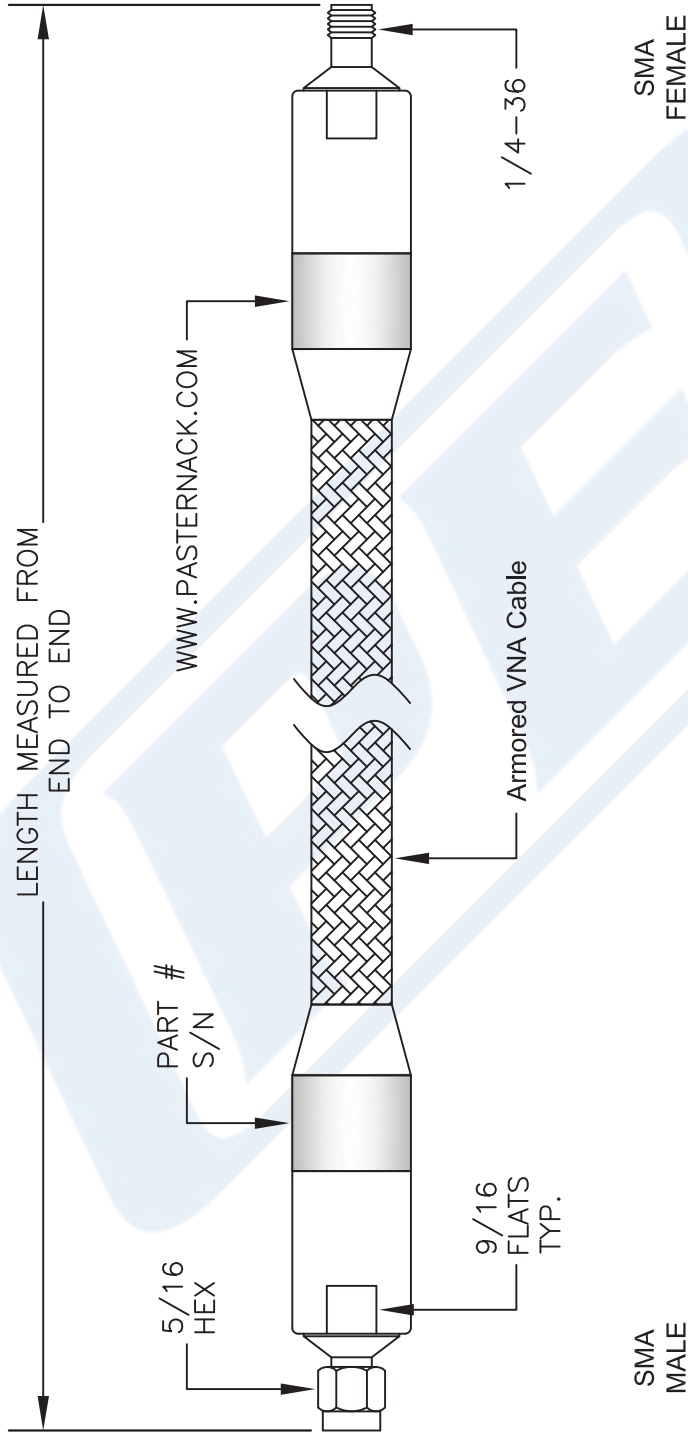
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Male to SMA Female Cable Using Ruggedized VNA Test Coax, RoHS PE3VNA1802](#)

URL: <http://www.pasternack.com/sma-male-sma-female-vna-cable-cable-assembly-pe3vna1802-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.

# PE3VNA1802 CAD Drawing

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



- NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
  2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
  3. DIMENSIONS ARE IN INCHES [mm].
  4. LENGTH TOLERANCE IS  $\pm 2\%$

DWG TITLE  
**PE3VNA1802**

**PE PASTERNAK**  
 THE ENGINEER'S RF SOURCE  
 Pasternack Enterprises, Inc.  
 P.O. Box 16759 | Irvine | CA | 92623  
 Phone: (949) 261-1920 | Fax: (949) 261-7451  
 Website: www.pasternack.com | E-Mail: sales@pasternack.com

2233

SIZE A

SCALE N/A

CAD FILE 072115

FSCM NO. 53919