



2.4mm Male to 2.4mm Male Precision Cable Using High Flex VNA Test Coax, RoHS

RF Cable Assemblies Technical Data Sheet

PE3TC0500

Configuration

- Connector 1: 2.4mm Male
- Connector 2: 2.4mm Male
- Cable Type: PE-VNA-HF

Features

- Max Frequency 50 GHz
- Shielding Effectivity > 100 dB
- 78% Phase Velocity
- Triple Shielded Designed for use as VNA test port extenders
- Highly flexible armored cable construction
- 1.30:1 VSWR to 50 GHz
- Excellent amplitude and phase stability with flexure
- Non-conductive protective Nomex outer sleeve
- Each serialized assembly comes with test data
- In-stock and ready to ship same-day

Applications

- General Purpose
- Laboratory Use Vector Network analyzer test port extenders
- Semiconductor probe testing
- Precise bench-top testing
- Lab and production testing

Description

Pasternack high performance high flex VNA test cables are designed to provide customers repeatable and accurate VNA measurements. These Test cables have excellent electrical properties including low Insertion Loss, low VSWR and phase stability of +/- 6° with flexure. The braided stainless steel armoring provides a rugged, but flexible cable with a life exceeding 100,000 flex cycles. The rugged connectors provide up to 5,000 mating cycles when attached with proper care. The flexibility of these cables makes it easier and safer to test your Device Under Test (DUT). 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: [2.4mm Male to 2.4mm Male Precision Cable Using High Flex VNA Test Coax, RoHS PE3TC0500](#)



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Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		50	GHz
VSWR			1.3:1	
Velocity of Propagation		78		%
RF Shielding	100			dB
Group Delay		1.34 [4.4]		ns/ft [ns/m]
Capacitance		25.9 [84.97]		pF/ft [pF/m]
Input Power (Average)			18	Watts
Phase Stability with Flexure		±6		Degrees

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	2.5	5	10	20	50	GHz
Insertion Loss (Max.)	0.35	0.48	0.68	1	1.65	dB/ft
	1.15	1.57	2.23	3.28	5.41	dB/m
Power Handling (Max.)					18	W

Electrical Specification Notes:
Values at 25°C, sea level.

Mechanical Specifications

Cable Assembly

Cable

Cable Type	PE-VNA-HF
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 Tape
Shield Layer 2	Silver Plated Copper Braid
Shield Layer 3	Silver Plated Copper Braid
Jacket Diameter	0.27 in [6.86 mm]
One Time Minimum Bend Radius	1 in [25.4 mm]
Flat Plate Crush	317 lbs/in [5.66 Kg/mm]

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Connectors

Description	Connector 1	Connector 2
Type	2.4mm Male	2.4mm Male
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Dielectric Type	ULTEM	ULTEM
Body Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Coupling Nut Material and Plating	Passivated Stainless Steel	Passivated Stainless Steel
Torque	8 in-lbs [0.9 Nm]	8 in-lbs [0.9 Nm]

Mechanical Specification Notes:

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

Environmental Specifications

Temperature

Operating Range -65 to +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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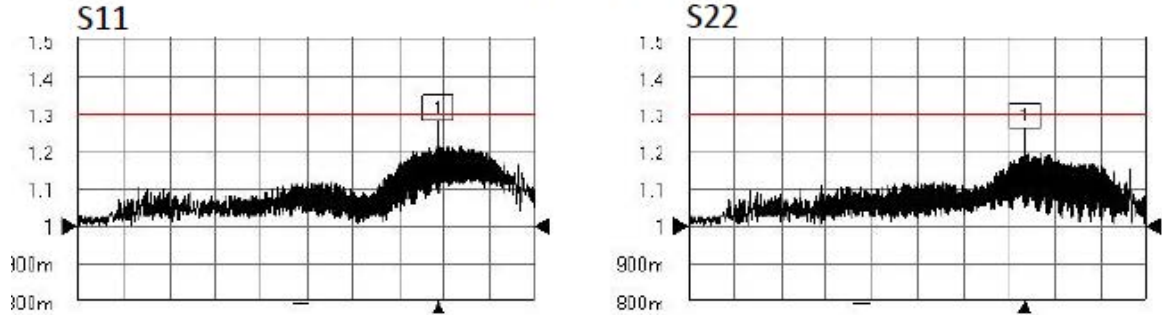
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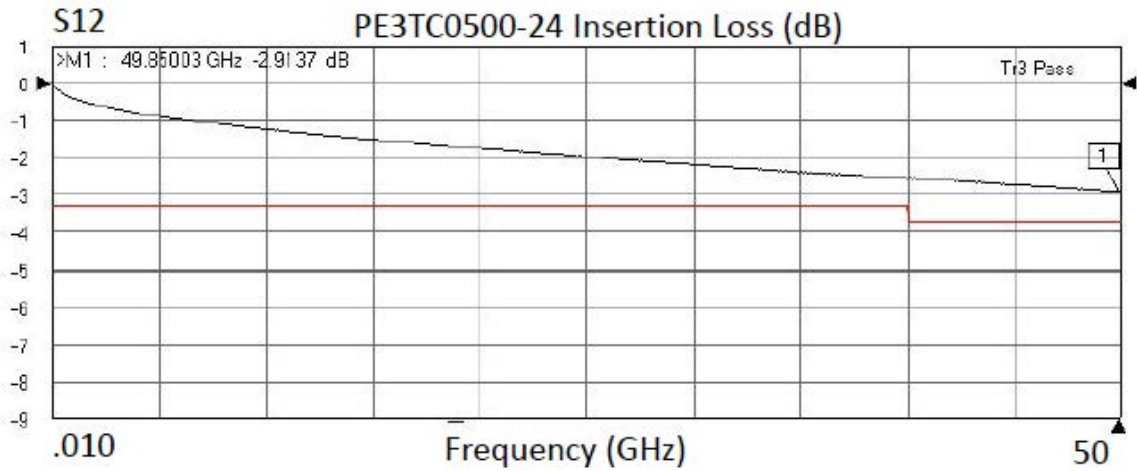
PE3TC0500

Typical Performance Data

PE3TC0500-24 VSWR



PE3TC0500-24 Insertion Loss (dB)



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PE3TC0500

How to Order

Part Number Configuration:

PE3TC0500

- **xx**

uu

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

Example: PE3TC0500-12 = 12 inches long cable
PE3TC0500-100cm = 100 cm long cable

2.4mm Male to 2.4mm Male Precision Cable Using High Flex VNA Test Coax, 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.

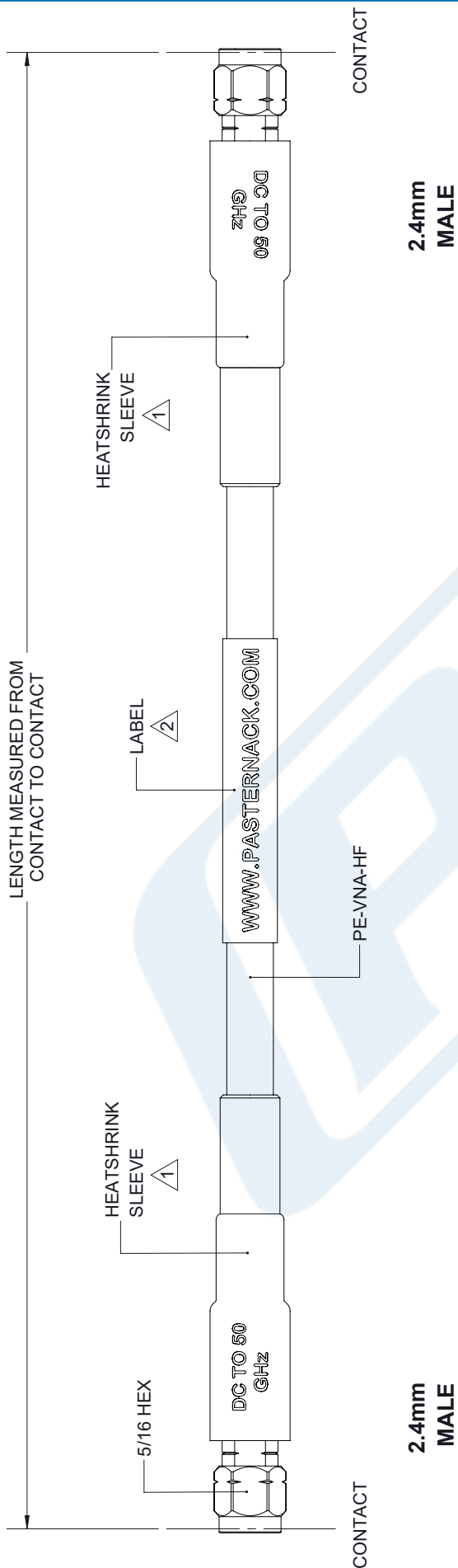
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

PE3TC0500 CAD Drawing

2.4mm Male to 2.4mm Male Precision Cable Using High Flex VNA Test Coax, RoHS




**2.4mm
MALE**

**2.4mm
MALE**

- NOTES:
1. DOUBLE LAYER HEAT SHRINK, BLUE OVER BLACK.
 2. LABEL:
 - WWW.PASTERNAK.COM
 - PART #
 - SERIAL #

STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

 <p>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</p>	DWG TITLE	PE3TC0500	NOTES:		
	CAGE CODE	53919	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].		
		CAD FILE	09/19/18	SCALE	N/A
				SIZE	A
					7361