



## 3.5mm General Purpose Calibration Kit Including Short Circuit, Open Circuit, Load and Thru Components Operating From DC to 26.5 GHz

### TECHNICAL DATA SHEET

PE5CK1000

Pasternack's PE5CK1000 Calibration Kit offers excellent performance characteristics that is specially designed for the fine-tuning and calibration of sensitive test equipment in engineering labs, production environments, and quality testing facilities. All of our calibration kits are built to withstand years of rigorous use and provide accurate RF equipment calibration for the life of the product. Pasternack's broad portfolio of test and measurement components offer users a variety of options that are technically and economically suitable for a broad spectrum of RF applications and environments.

As a leading solutions provider of RF calibration instruments and compatible RF components, you can rely on Pasternack to have all of the T&M products you need in-stock and available to ship same-day.

#### Features

- Functional from DC to 26.5 GHz
- Standard kit includes (9) 3.5mm short-open-load-thru (SOLT) components
- Suitable for many 50 Ohm network analyzers including, but not limited to:
  - Agilent / HP (N5222A/24A, N5225A/27A, N5232A, N5234A/35A, N5242A/44A, N5245/47A)
  - Rohde & Schwarz (ZVB, ZNB)
  - Anritsu (MS2038C, MS2028C, MS2027C, MS4640B)

#### Applications

- VNA, Full 2-Port CAL
- VNA, Thru CAL
- VNA, Substitution CAL Method
- Test & Measurement
- Lab Equipment Accessories
- Engineering Test and Evaluation
- General Purpose Test and Evaluation

#### Configuration

Connector	3.5mm
Impedance	50 Ohms
Frequency Range	DC to 26.5 GHz

#### PE5CK1000 Standard Kit Specifications

Part Number	Frequency Range	Connector Type	Connector Gender	Type	Impedance
PE5SC2000	DC - 26.5 GHz	3.5mm	Female	Open	50 Ohm
PE5SC2001	DC - 26.5 GHz	3.5mm	Male	Open	50 Ohm
PE5SC1000	DC - 26.5 GHz	3.5mm	Female	Short	50 Ohm
PE5SC1001	DC - 26.5 GHz	3.5mm	Male	Short	50 Ohm
PE5TR1000	DC - 26.5 GHz	3.5mm	Female	Load	50 Ohm
PE5TR1001	DC - 26.5 GHz	3.5mm	Male	Load	50 Ohm
PE5SC3000	DC - 26.5 GHz	3.5mm	Female to Female	Thru	50 Ohm
PE5SC3002	DC - 26.5 GHz	3.5mm	Female to Male	Thru	50 Ohm
PE5SC3001	DC - 26.5 GHz	3.5mm	Male to Male	Thru	50 Ohm

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [3.5mm General Purpose Calibration Kit Including Short Circuit, Open Circuit, Load and Thru Components Operating From DC to 26.5 GHz PE5CK1000](#)



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**PE5SC2000 3.5mm Female Open Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 26.5		GHz
Impedance		50		Ohm
Phase, DC - 3 GHz	0.65	Nominal	0.65	Degrees
Phase, 3 - 8 GHz	1.2	Nominal	1.2	Degrees
Phase, 8 - 26.5 GHz	2	Nominal	2	Degrees

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Female	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.394 [10] $\phi$ , 0.945 [24] L	Inch [mm]
Net Weight	8.4	g

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**PE5SC2001 3.5mm Male Open Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 26.5		GHz
Impedance		50		Ohm
Phase, DC - 3 GHz	0.65	Nominal	0.65	Degrees
Phase, 3 - 8 GHz	1.2	Nominal	1.2	Degrees
Phase, 8 - 26.5 GHz	2	Nominal	2	Degrees

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.394 [10] $\phi$ , 0.977 [24.8] L	Inch [mm]
Net Weight	9.8	g

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**PE5SC1000 3.5mm Female Short Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 26.5		GHz
Impedance		50		Ohm
Phase, DC - 3 GHz	0.65	Nominal	0.65	Degrees
Phase, 3 - 8 GHz	1.2	Nominal	1.2	Degrees
Phase, 8 - 26.5 GHz	2	Nominal	2	Degrees

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Female	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.394 [10] $\phi$ , 0.945 [24] L	Inch [mm]
Net Weight	9.1	g

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### PE5SC1001 3.5mm Male Short Specifications



#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 26.5		GHz
Impedance		50		Ohm
Phase, DC - 3 GHz	0.65	Nominal	0.65	Degrees
Phase, 3 - 8 GHz	1.2	Nominal	1.2	Degrees
Phase, 8 - 26.5 GHz	2	Nominal	2	Degrees

#### Mechanical Specifications

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.394 [10] $\phi$ , 0.973 [24.7] L	Inch [mm]
Net Weight	10.4	g

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**PE5TR1000 3.5mm Female Load Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC - 26.5			GHz
Impedance	50			Ohm
Return Loss, DC - 3 GHz	44	46		dB
Return Loss, 3 - 6 GHz	36	40		dB
Return Loss, 6 - 26.5 GHz	30	34		dB

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Female	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.394 [10] $\phi$ , 1.422 [36.1] L	Inch [mm]
Net Weight	14.6	g

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**PE5TR1001 3.5mm Male Load Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 26.5		GHz
Impedance		50		Ohm
Return Loss, DC - 3 GHz	44	46		dB
Return Loss, 3 - 6 GHz	36	40		dB
Return Loss, 6 - 26.5 GHz	30	34		dB

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.394 [10] $\phi$ , 1.449 [36.8] L	Inch [mm]
Net Weight	15.7	g

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**PE5SC3000 3.5mm Female to Female Thru Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 26.5		GHz
Impedance		50		Ohm
Insertion Loss, DC - 26.5 GHz		0.1	0.2	dB
Return Loss, DC - 8 GHz	30	34		dB
Return Loss, 8 - 18 GHz	28	32		dB
Return Loss, 18 - 26.5 GHz	26	30		dB

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Female (Both Ends)	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.335 [8.5] $\phi$ , 1.182 [30] L	Inch [mm]
Net Weight	8	g

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**PE5SC3002 3.5mm Female to Male Thru Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC - 26.5			GHz
Impedance	50			Ohm
Insertion Loss, DC - 26.5 GHz		0.1	0.2	dB
Return Loss, DC - 8 GHz	30	34		dB
Return Loss, 8 - 18 GHz	28	32		dB
Return Loss, 18 - 26.5 GHz	26	30		dB

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Female to Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.335 [8.5] $\phi$ , 1.213 [30.8] L	Inch [mm]
Net Weight	9.4	g

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**PE5SC3001 3.5mm Male to Male Thru Specifications**



**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC - 26.5			GHz
Impedance	50			Ohm
Insertion Loss, DC - 26.5 GHz		0.1	0.2	dB
Return Loss, DC - 8 GHz	30	34		dB
Return Loss, 8 - 18 GHz	28	32		dB
Return Loss, 18 - 26.5 GHz	26	30		dB

**Mechanical Specifications**

Item	Description	Units
Housing	Gold plated Copper	
Center Pin	Gold plated Beryllium	
Connector	50 Ohm 3.5mm Male (Both Ends)	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.335 [8.5] $\phi$ , 1.241 [31.5] L	Inch [mm]
Net Weight	10.6	g

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### General Instructions and Usage Notes

#	Notes
1	Keep provided protective blue caps installed when not in use.
2	Store in climate controlled environment.
3	Always keep connectors clean.
4	Avoid touching the connector interface.
5	Use caution when handling.
6	For female components, do not insert male pin greater than 0.037" [.94 mm]. <b>Failure to comply will result in damage to the female connector.</b>
7	When mating, always ensure that the components to be interconnected remain in a fixed position while rotating <b>only the coupling nut</b> slowly to mate the connectors.
8	When de-mating, always ensure that the interconnected components remain in a fixed position while rotating <b>only the coupling nut</b> slowly to de-mate the connectors.
9	Visually inspect the connector threads prior to use. If needed, clean the center conductor pin and outer conductor with alcohol to remove any debris that may be present. <b>Be sure to apply the alcohol in a circular motion with a lint-free cloth or applicator.</b>
10	Use at room temperature.
11	Torque wrench provided is intended for 3.5mm connector types and is calibrated to 8 in-lbs.

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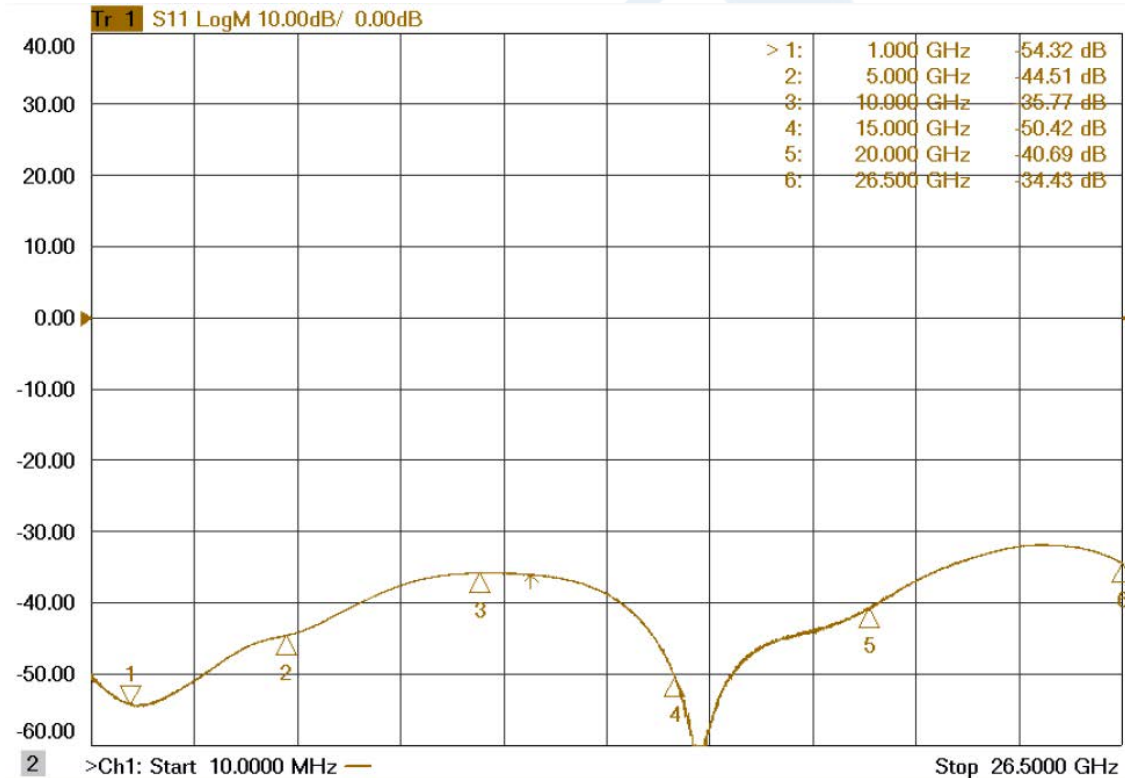


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Typical Performance Data

**PE5TR1000 Return Loss**  
**Span: 26.5 GHz**



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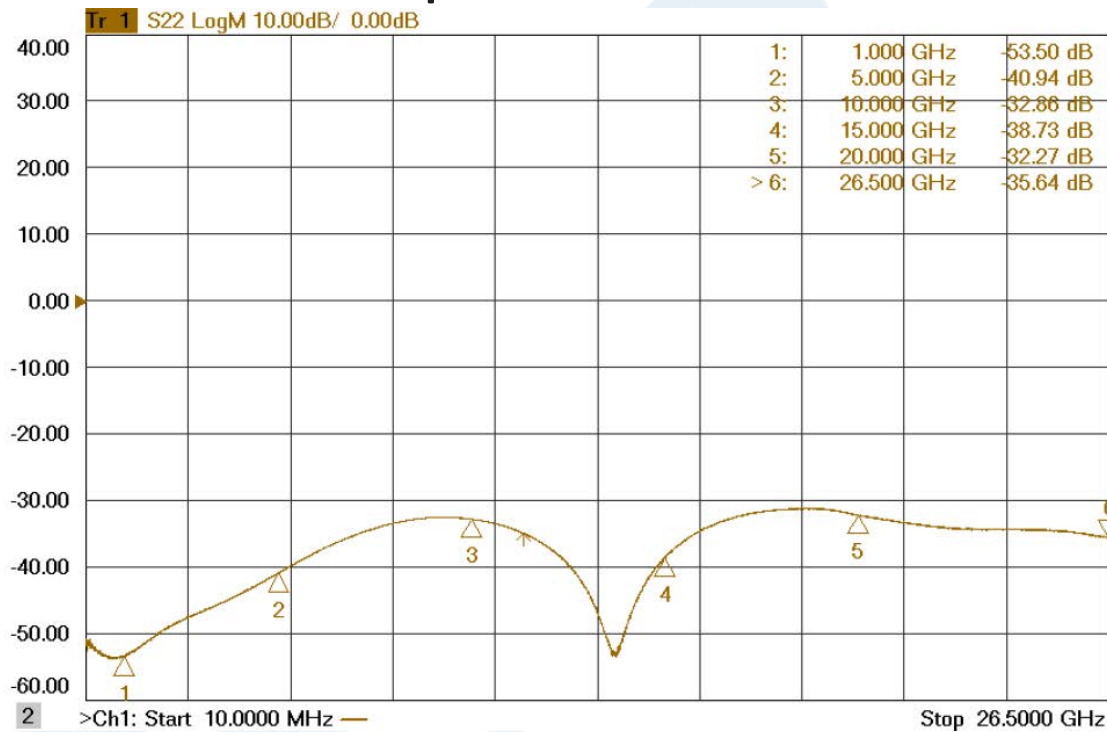


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**PE5TR1001 Return Loss**  
**Span: 26.5 GHz**



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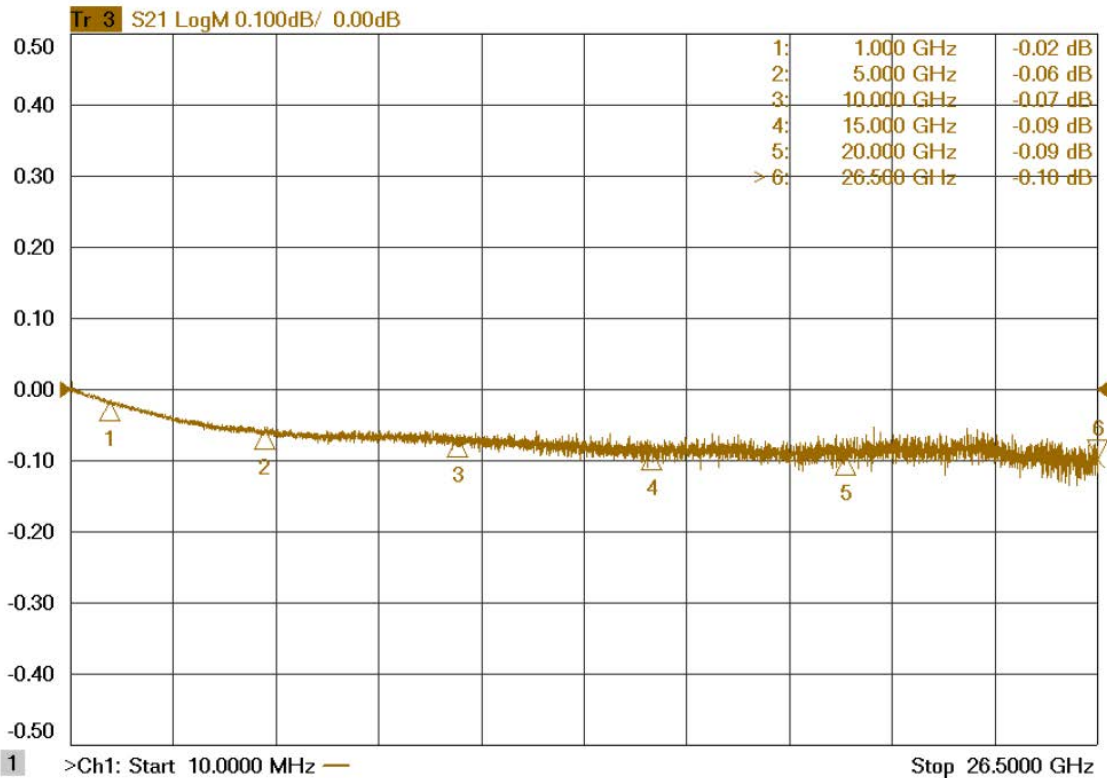


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**PE5SC3000 Insertion Loss**  
**Span: 26.5 GHz**



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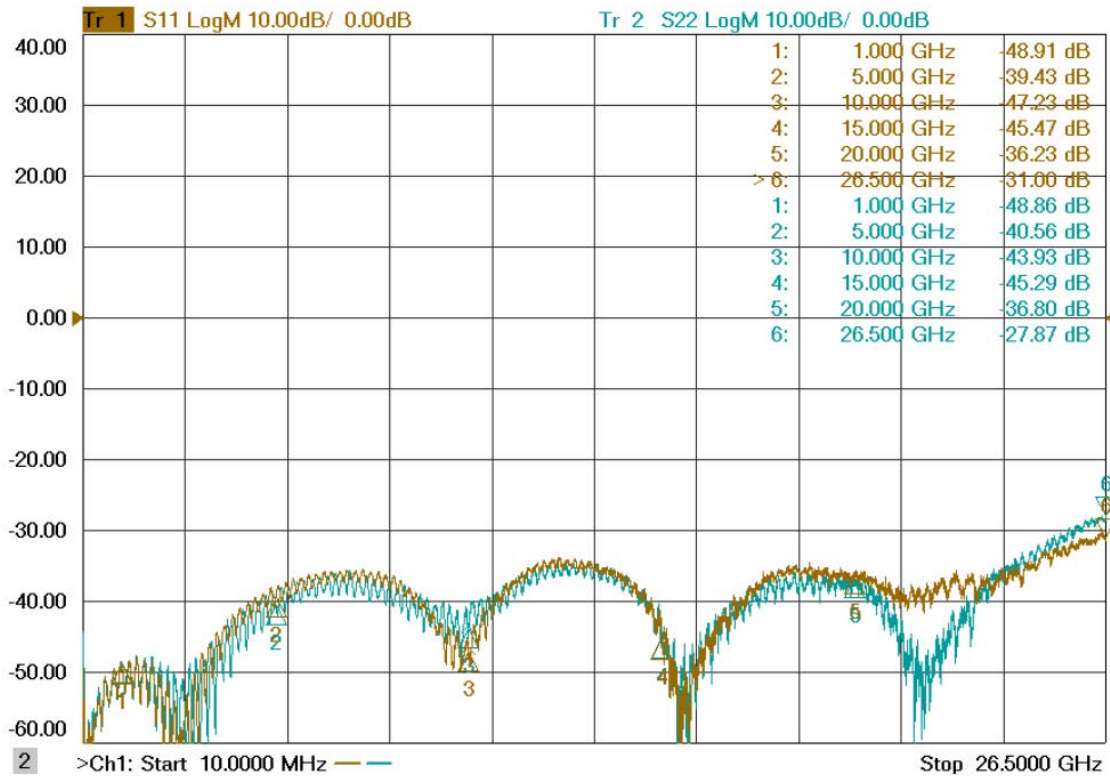


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**PE5SC3000 Return Loss**  
**Span: 26.5 GHz**



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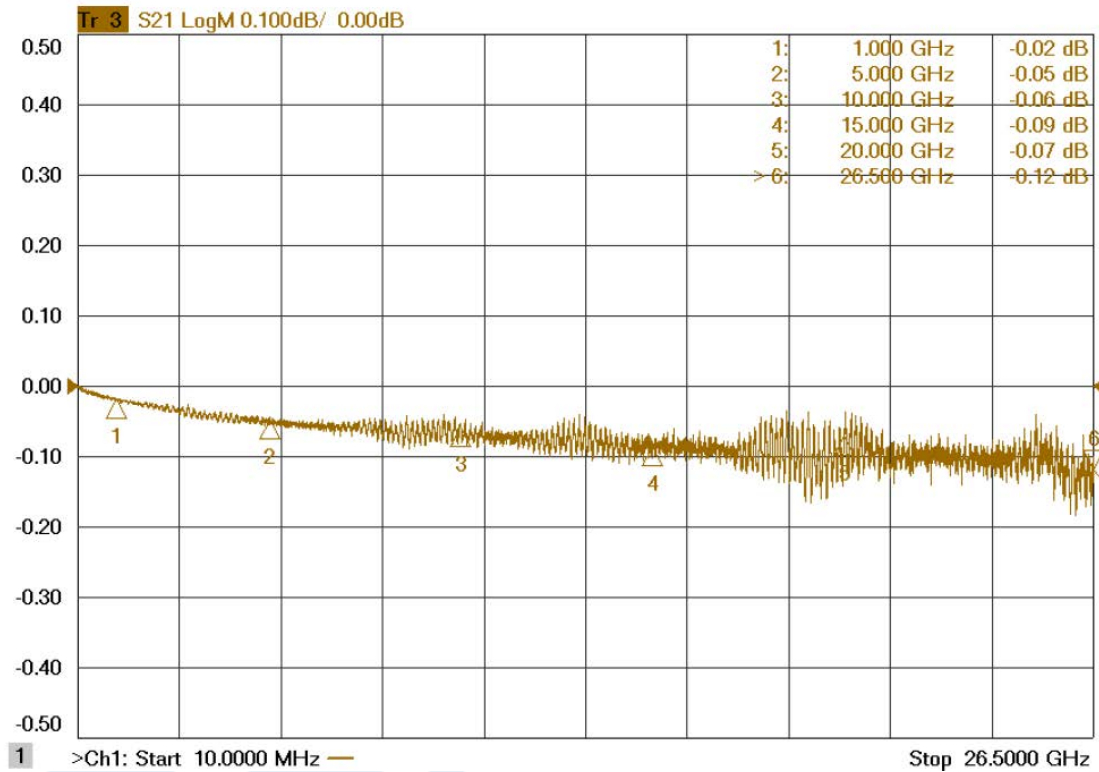


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**PE5SC3002 Insertion Loss**  
**Span: 26.5 GHz**



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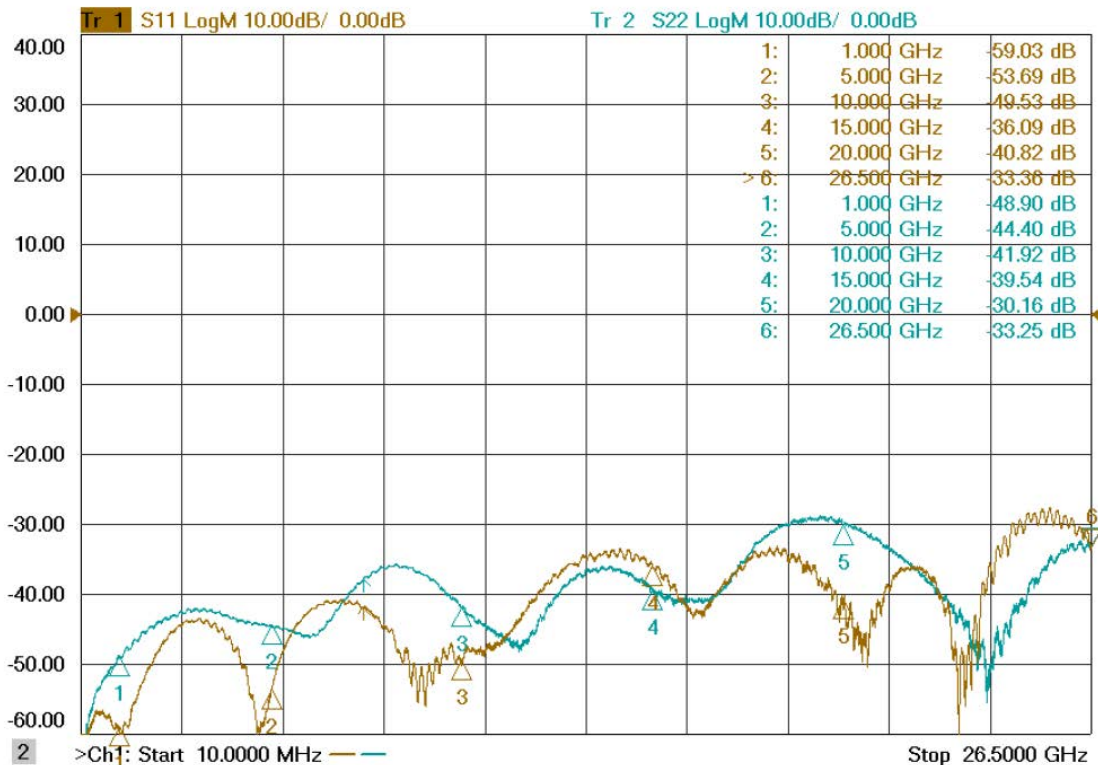


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**PE5SC3002 Return Loss**  
**Span: 26.5 GHz**



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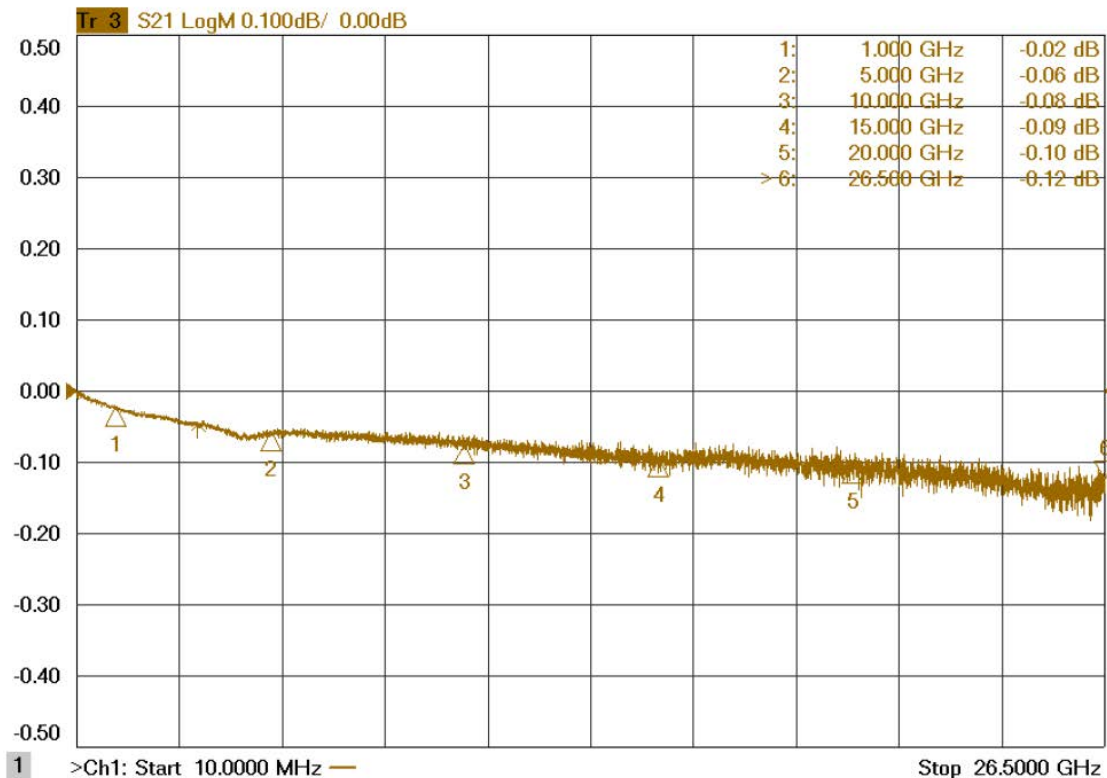


3.5mm General Purpose Calibration Kit Including Short Circuit, Open Circuit, Load and Thru Components Operating From DC to 26.5 GHz

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**PE5SC3001 Insertion Loss**  
**Span: 26.5 GHz**



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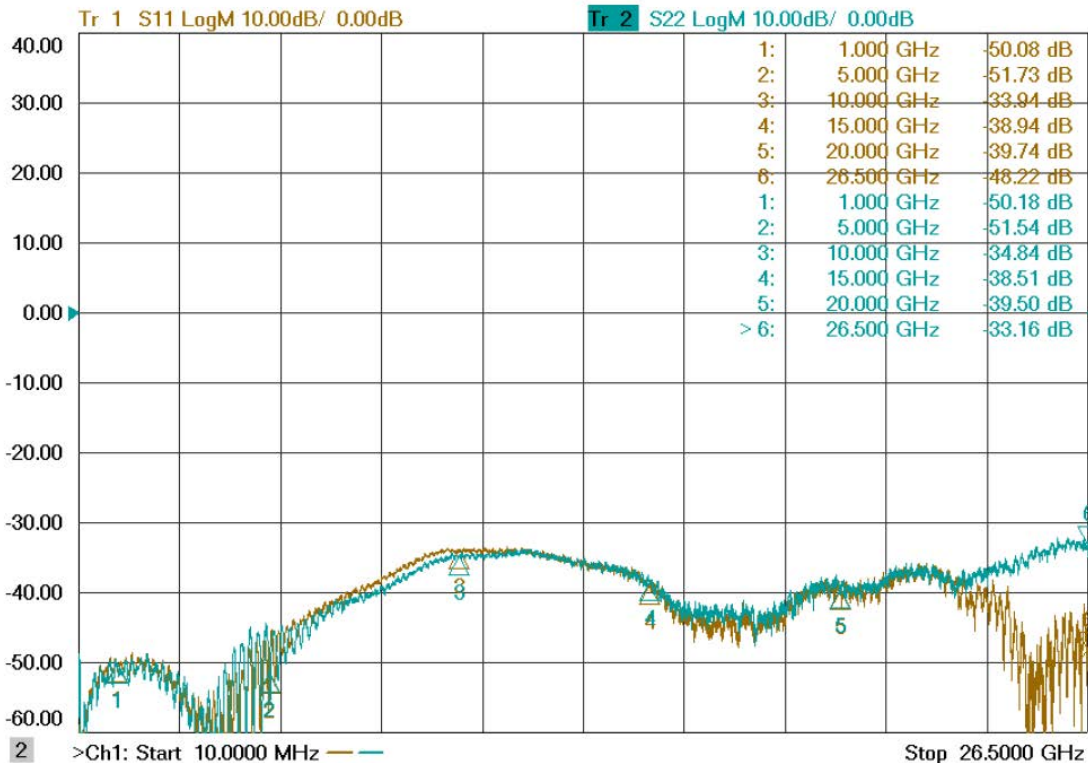


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**PE5SC3001 Return Loss**  
**Span: 26.5 GHz**



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

RoHS Compliant  
REACH Compliant

06/16/2014

**Plotted and Other Data**

- Notes:
- Values at +25 °C, sea level

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3.5mm General Purpose Calibration Kit Including Short Circuit, Open Circuit, Load and Thru Components Operating From DC to 26.5 GHz 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: [3.5mm General Purpose Calibration Kit Including Short Circuit, Open Circuit, Load and Thru Components Operating From DC to 26.5 GHz PE5CK1000](http://www.pasternack.com/50ohm-3.5mm-open-short-load-26.5-ghz-pe5ck1000-p.aspx)

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