



SMA Calibrated Noise Source Module, Output
ENR of 23 dB, +28 VDC, 1 GHz to 18 GHz

Noise Generators Technical Data Sheet

PE85N1005

Features

- 1 GHz to 18 GHz Bandwidth
- Calibrated Frequencies: 1 GHz steps
- High ENR output: 23 dB min
- Typical Flatness +/- 2.0 dB
- Excellent Stability
- Noise Output Temperature Variation: <0.01 dB/°C
- Noise Output Variation <0.1 dB/%V
- Rugged Package Design supports output Female SMA connector
- Designed to meet MIL-STD-202F environmental test conditions
- Internal Voltage Regulation

Applications

- Noise Figure Measurements
- Built-In Test equipment for signal strength calibrators and radar applications
- Automatic Test Equipment (ATE)
- Jamming
- Baseband Signal Simulation
- Additive White Gaussian Noise (AWGN) source for Error Rate Measurements
- Increase dynamic range of A/D Converters
- SATCOM for bit error rate (BER) and noise figure
- Can be used as a Jitter source.

Description

The PE85N1005 is a coaxial packaged Noise Source module which operates over a wide frequency range from 1 GHz to 18 GHz. The design is calibrated in 1 GHz steps and is ideal for Noise Figure measurements and a variety of built-in test applications. This model operates at +28 Vdc and features a high output ENR level of 23 dB min, typical flatness across the entire frequency band is +/- 2.0 dB, and excellent stability. Performance is specified over -55°C to +85°C with Noise Output Temperature Variation <0.01 dB/°C, Noise Output Variation <0.1 dB/%V. The rugged package design supports an output Female SMA connector with an EMI/RFI filter voltage pin and ground tab. Additionally, the model is designed to meet a variety of demanding MIL-STD-202F environmental test conditions including Humidity, Thermal Shock, and Vibration for added confidence for highly reliable operation.

Electrical Specifications

RF Characteristics

Description	Minimum	Typical	Maximum	Units
Frequency Range	1		18	GHz
Impedance		50		Ohms
Output ENR	23			dB
Flatness		±2		dB
VSWR		3:1		
Output Variation vs Input Voltage			0.1	dB/%V
Output Variation vs Temperature			0.01	dB/deg C
Bias Voltage 1	22	28	30	Volts
Input Current 1			25	mA
Calibration Points		1 GHz Steps		

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Calibrated Noise Source Module, Output ENR of 23 dB, +28 VDC, 1 GHz to 18 GHz PE85N1005](#)



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Mechanical Specifications

Size

Length	1.25 in [31.75 mm]
Width/Dia.	0.75 in [19.05 mm]
Height	0.5 in [12.7 mm]
Weight	0.059 lbs [26.76 g]
Package Type	Connectorized Module

Connectors

DC Connector	Pin
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-55 to +85 °C
Storage Range	-65 to +125 °C

Environment

Humidity	MIL-STD-202F, Method 103, Cond B (96 hrs@95% R.H.)
Shock	MIL-STD-202F, Method 213, Cond B (100g, 6 msec)
Vibration	MIL-STD-202F, Method 204, Cond B (0.6" 2x ampl or 15g)
Altitude	MIL-STD-202F, Method 105, Condition B (50,000 ft)
Temperature Cycle	MIL-STD-202F, Method 105C, Condition D (5 cycles)
Thermal Shock	MIL-STD-202F, Method 107, Condition A (5 cycles)
ESD Sensitivity	ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.

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

Plotted and Other Data

Notes:

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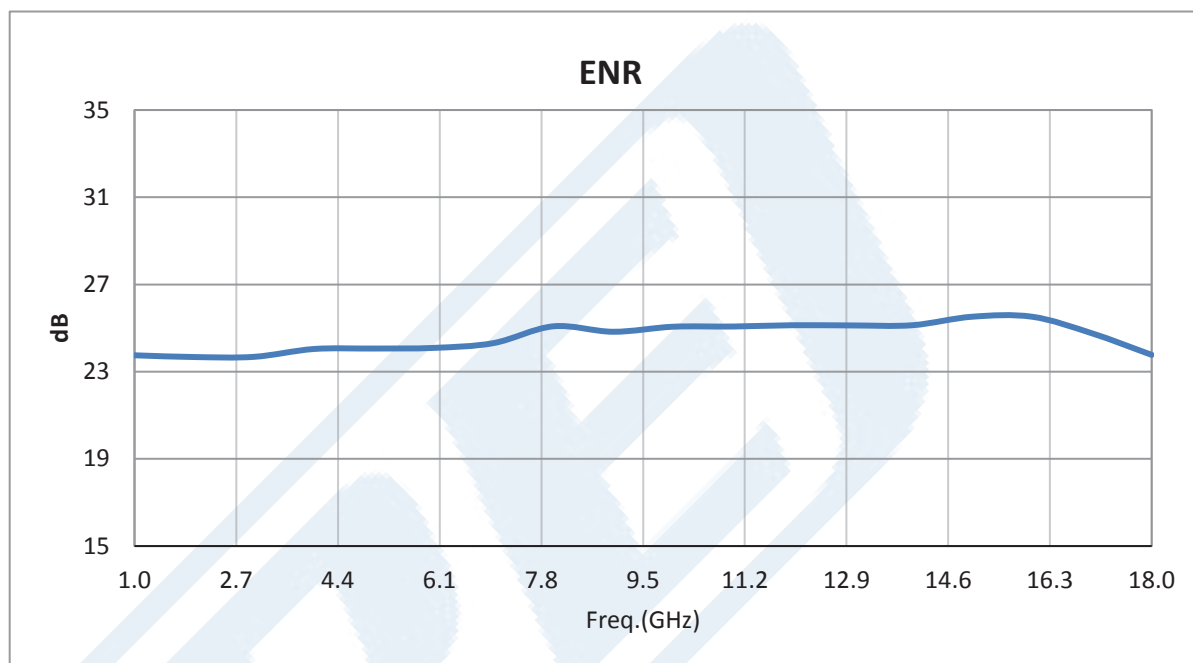


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Typical Performance Data



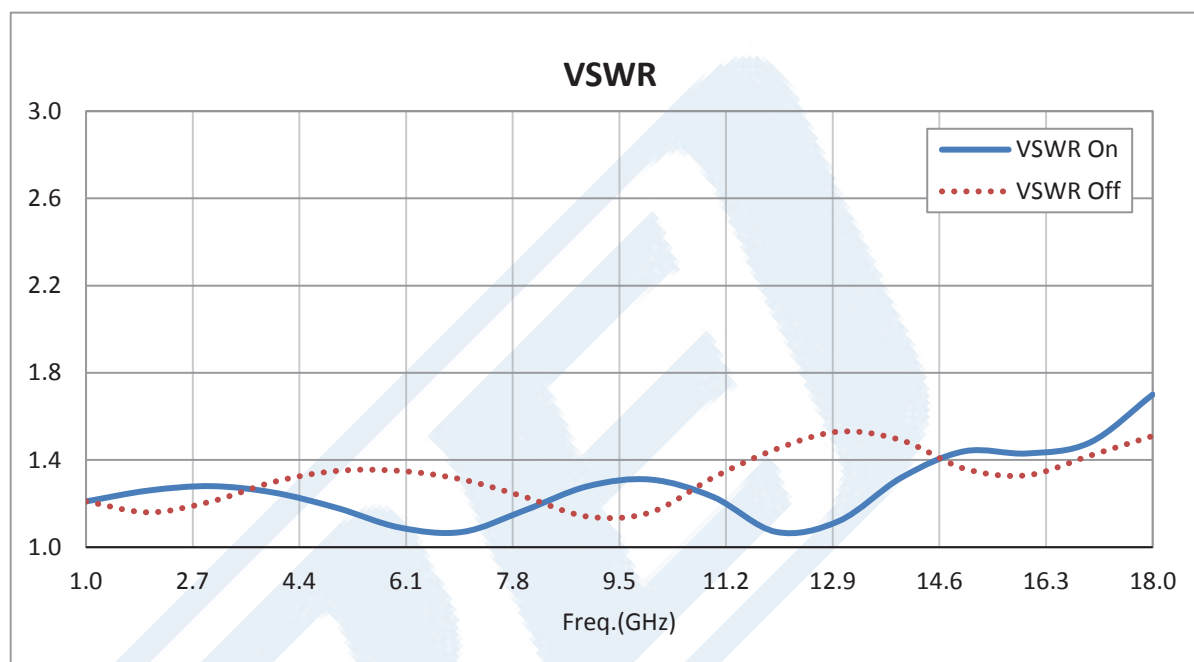
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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMA Calibrated Noise Source Module, Output ENR of 23 dB, +28 VDC, 1 GHz to 18 GHz PE85N1005](https://www.pasternack.com/sma-calibrated-noise-source-enr-23-db-18-ghz-pe85n1005-p.aspx)

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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.

PE85N1005 CAD Drawing

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