



24 Pin DIP Packaged Noise Source Module, Output
Pout of -5 dBm, +15 VDC, 10 MHz to 2 GHz

Noise Generators Technical Data Sheet

PE85NS5000

Features

- Industry Standard 24 Pin DIP Packaged Noise Source module
- Frequency Range: 10 MHz to 3 GHz
- Noise Output Level: -5 dBm
- Internal Filtering to limit bandwidth
- Maximum Flatness: ± 2 dB
- White Gaussian Noise Output
- Minimum power level -98 dBm/Hz
- DC Voltage: +15 Vdc
- -55°C to +125°C Operating Temperature
- Crest Factor: 5:1

Applications

- Noise Figure Test & Measurement
- Built-In Test Equipment
- Dithering for Increased Dynamic Range for A/D Converters
- Source for Bit Error Rate Testing

Description

The PE85NS5000 is a dual in-line packaged (DIP) noise source module which operates over a frequency range from 10 MHz to 2 GHz. The industry standard 24 pin DIP package is particularly useful in circuit board applications used for built-in test equipment, dithering for increased dynamic range of A/D converters, and as a source for bit error rate testing. The design utilizes internal filtering to limit bandwidth and operates at +15 Vdc. Noise Output level is -5 dBm with maximum flatness of ± 2 dB. The output White Gaussian Noise has a minimum power level of -98 dBm/Hz and a Crest Factor of 5:1. Operating temperature range is -55°C to +125°C with a temperature coefficient of 0.025 dB/°C.

Electrical Specifications

RF Characteristics

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.01		2	GHz
Impedance		50		Ohms
Flatness			± 2	dB
Output Variation vs Temperature		0.025		dB/deg C
Output Power		-5		dBm
Output Power Spectral Density		-98		dBm/Hz
Bias Voltage 1		15		Volts
Input Current 1			100	mA
Crest Factor		5:1		

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [24 Pin DIP Packaged Noise Source Module, Output Pout of -5 dBm, +15 VDC, 10 MHz to 2 GHz PE85NS5000](#)



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Mechanical Specifications

Size

Length	1.38 in [35.05 mm]
Width/Dia.	0.795 in [20.19 mm]
Height	0.7 in [17.78 mm]

Package Type	Drop In
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Environmental Specifications

Temperature

Operating Range	-55 to +125 °C
Storage Range	-65 to +150 °C

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

Plotted and Other Data

Notes:

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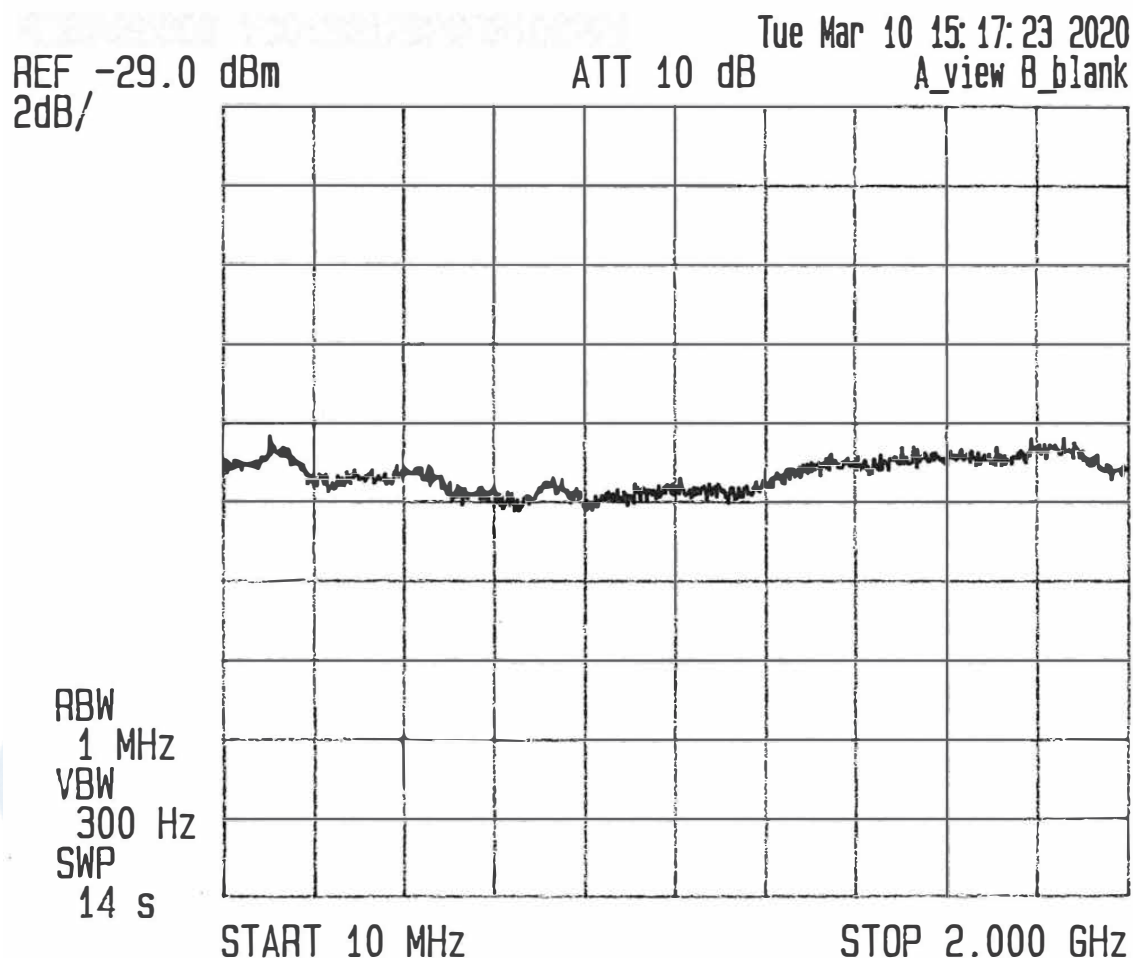


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Typical Performance Data



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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: [24 Pin DIP Packaged Noise Source Module, Output Pout of -5 dBm, +15 VDC, 10 MHz to 2 GHz PE85NS5000](https://www.pasternack.com/noise-source-pout-negative-5-dbm-2-ghz-pe85ns5000-p.aspx)

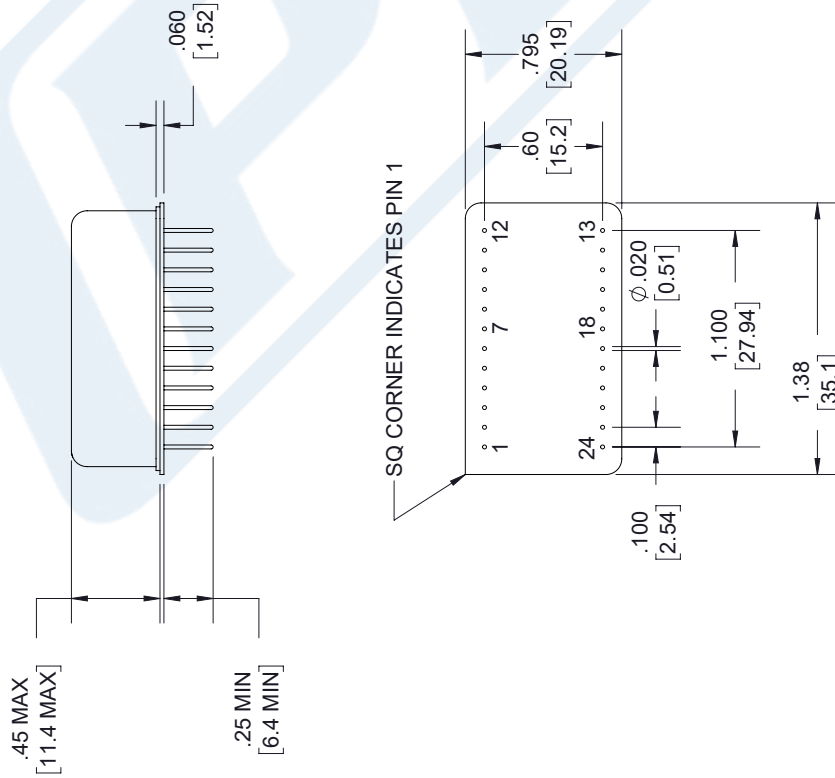
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PE85NS5000 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02/18/2020	TGALLA
B	ADDED PIN DESCRIPTIONS	08/11/2020	TGALLA



24 PIN
Pin 18 = +VCC
Pin 13 = Output
Pin 7 = TTL Option
All other Pins Ground

UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ± .2 [5.08] FRACTIONS
.XX = ± .02 [.51] ± 1/32
.XXX = ± .005 [.13] ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = ± 1 [25] / -0

12 [305] < L ≤ 60 [1524] = ± 2 [51] / -0

60 [1524] < L ≤ 120 [3048] = ± 4 [102] / -0

120 [3048] < L ≤ 300 [7620] = ± 6 [152] / -0

300 [7620] < L = ± 5% / -0

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.



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SHEET 1 OF 1

SCALE N/A

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