



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

## Noise Generators Technical Data Sheet

PE85NS5002

### Features

- Industry Standard 14 Pin DIP Packaged Noise Source module
- Frequency Range: 10 MHz to 2 GHz
- Noise Output Level: -5 dBm
- Internal Filtering to limit bandwidth
- Maximum Flatness:  $\pm 2$  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 PE85NS5002 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 14 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 of -5 dBm with maximum flatness  $\pm 2$  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			$\pm 2$	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: [14 Pin DIP Packaged Noise Source Module, Output Pout of -5 dBm, +15 VDC, 10 MHz to 2 GHz PE85NS5002](#)



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### Mechanical Specifications

#### Size

Length	0.87 in [22.1 mm]
Width/Dia.	0.498 in [12.65 mm]
Height	0.62 in [15.75 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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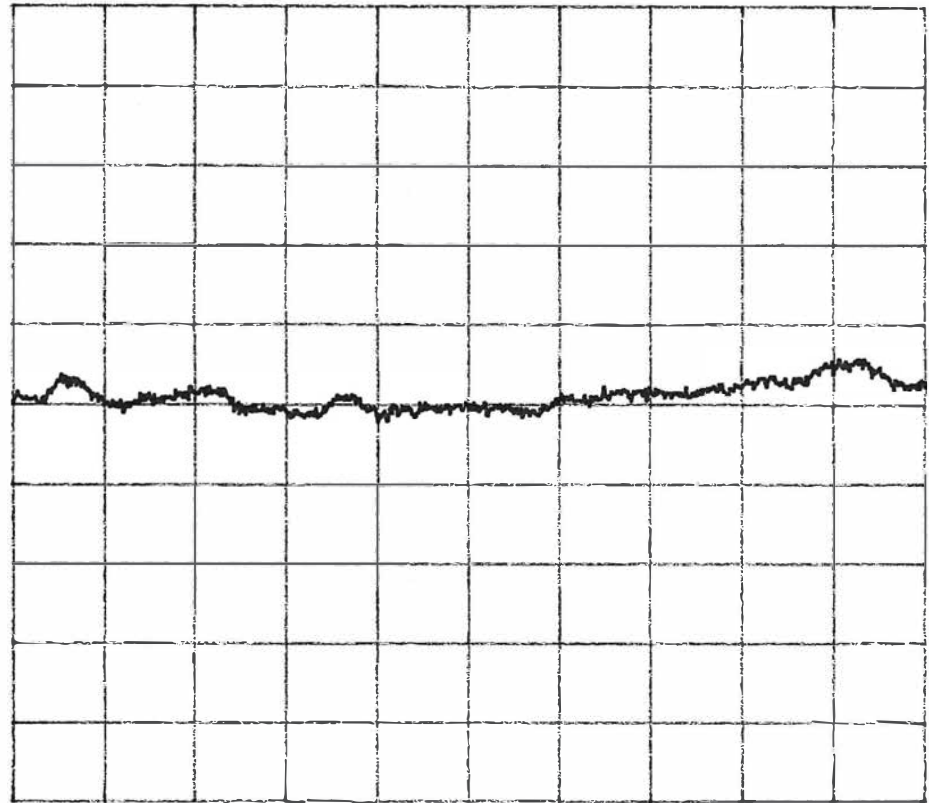
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PE85NS5002

Typical Performance Data

PE85NS5002 V001321202003110225 Wed Mar 11 10:33:34 2020  
REF -24.2 dBm ATT 10 dB A\_view B\_blank  
2dB/

RBW  
3 MHz  
VBW  
300 Hz  
SWP  
4.5 s



START 10 MHz

STOP 2.000 GHz

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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [14 Pin DIP Packaged Noise Source Module, Output Pout of -5 dBm, +15 VDC, 10 MHz to 2 GHz PE85NS5002](https://www.pasternack.com/noise-source-pout-negative-5-dbm-2-ghz-pe85ns5002-p.aspx)

URL: <https://www.pasternack.com/noise-source-pout-negative-5-dbm-2-ghz-pe85ns5002-p.aspx>

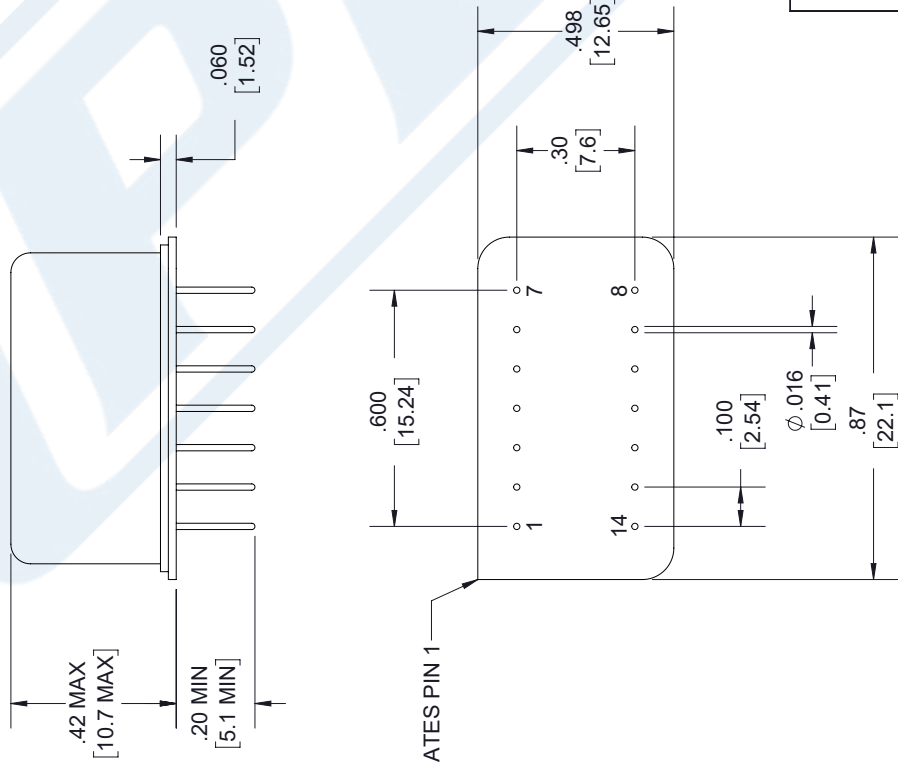
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# PE85NS5002 CAD Drawing

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### REVISIONS

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



**B**  
14 PIN  
Pin 14 = +VCC  
Pin 8 = 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 ±.1/32  
.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%L / -0

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.

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SHEET 1 OF 1  
SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	DZINN	PE85NS5002
REV	B		

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