

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

The FMNSNS5002 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

Description	Min	Typ	Max	Units
Frequency Range	0.01		2	GHz
Impedance		50		Ohms
Flatness			$\pm 2$	dB
Thermal Sensitivity		0.025		dB/deg C
Output Power		-5		dBm
Noise Power Spectral Density		-98		dBm/Hz
Bias Voltage 1		15		Volts
Input Current 1			100	mA
Crest Factor		5:1		

### Mechanical Specifications

<b>Size</b>	
Length	0.87 in [22.1 mm]
Width/Dia.	0.498 in [12.65 mm]
Height	0.62 in [15.75 mm]
<b>Package Type</b>	Drop In
<b>Connectors</b>	
DC Connector	Pin

### Environmental Specifications

<b>Temperature</b>	
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:

### 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

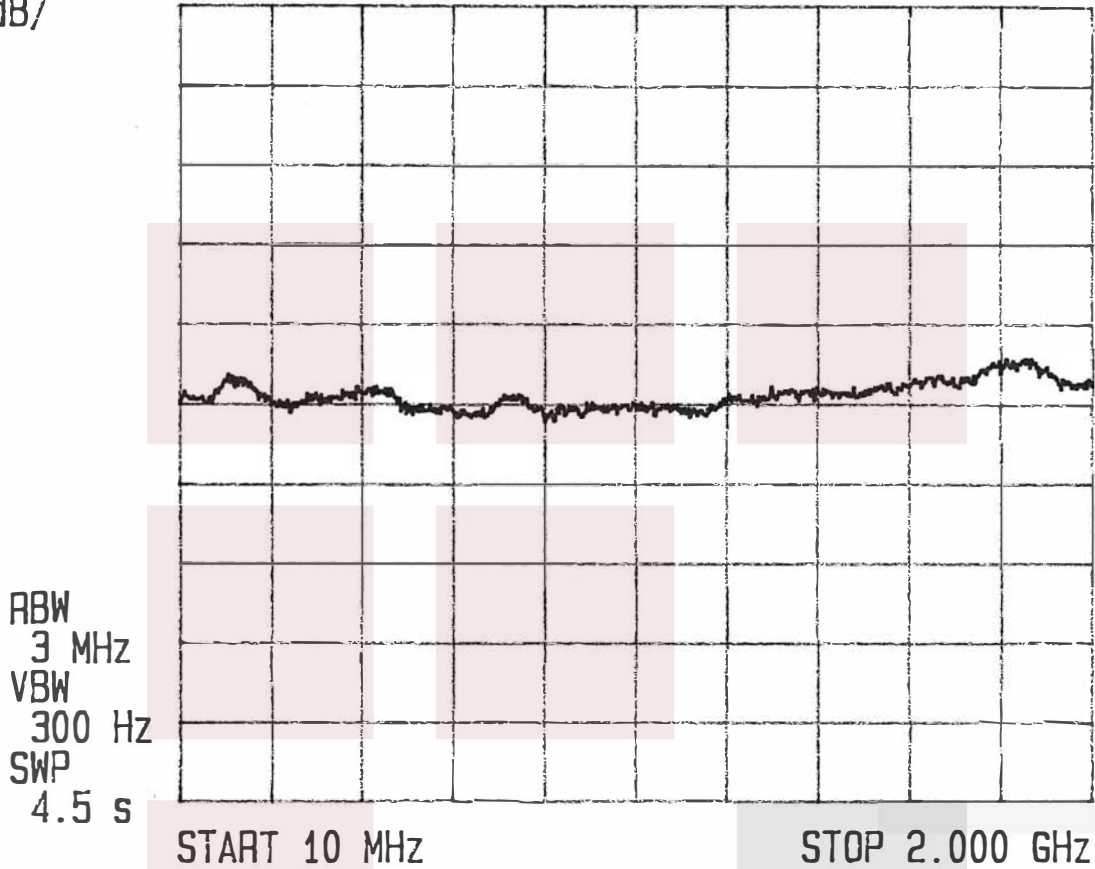
### Applications:

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

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**Typical Performance Data**

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



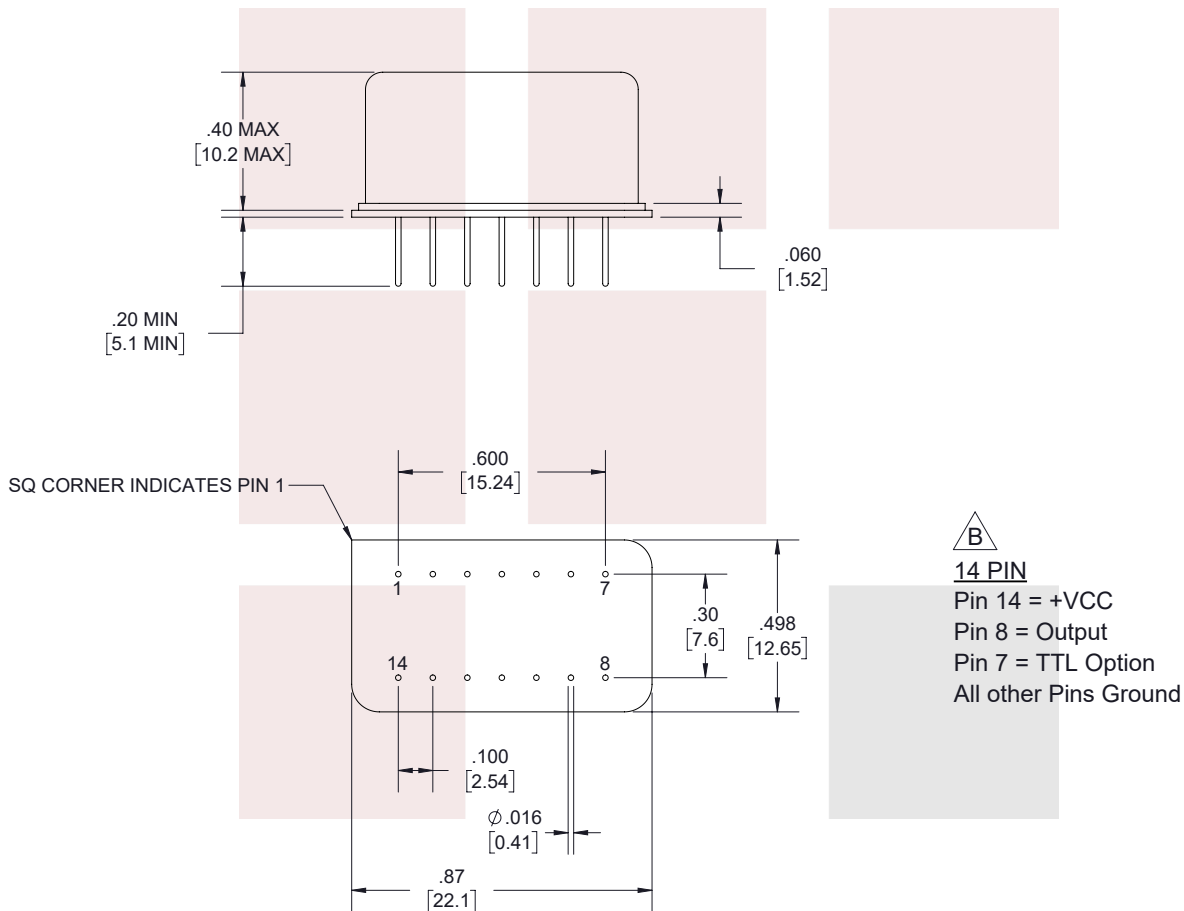
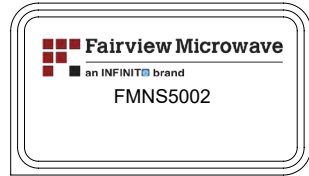
10 MHz to 2 GHz DIP Packaged Noise Source Module, Output Pout of -5 dBm, +15 VDC, 14 PIN from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

Click the following link to obtain additional part information: [10 MHz to 2 GHz DIP Packaged Noise Source Module, Output Pout of -5 dBm, +15 VDC, 14 PIN FMNS5002](https://www.fairviewmicrowave.com/noise-source-pout-negative-5-dbm-2-ghz-fmns5002-p.aspx)

URL: <https://www.fairviewmicrowave.com/noise-source-pout-negative-5-dbm-2-ghz-fmns5002-p.aspx>

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. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.

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



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TITLE

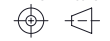
10 MHz to 2 GHz DIP Packaged Noise Source Module,  
Output Pout of -5 dBm, +15 VDC, 14 PIN

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

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY DZINN	ITEM NO. FMNS5002	REV B
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T-Rev.D