

0.2 MHz to 3 GHz Surface Mount (SMT) Noise Source Module, Output ENR of 51 dB, +12 VDC, Pin Packaged

The FMNS4004 is a surface mount packaged noise source which operates over a frequency range from 200 KHz to 3 GHz. This module 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 operates at +12 Vdc and features a very high output ENR level of 51 dB. The output White Gaussian Noise has a minimum power level of -123 dBm/Hz. Maximum flatness across the entire frequency band is +/- 2 dB. Operating temperature range is -40°C to +85°C with a temperature coefficient of 0.01 dB/°C. The small surface mount package outline uses 8 gull wing leads. For the circuit board layout, a through hole mounting footprint diagram is included for reference.



Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	0.0002		3	GHz
Impedance		50		Ohms
Output ENR	51			dB
Flatness			±2	dB
Supply Voltage Sensitivity		0.1		dB/%V
Thermal Sensitivity		0.01		dB/deg C
Noise Power Spectral Density	-123			dBm/Hz
Bias Voltage 1		12		Volts
Damage Level for Bias 1			24	Volts
Input Current 1			25	mA
Crest Factor		5:1		

Mechanical Specifications

Size	
Length	0.815 in [20.7 mm]
Width/Dia.	0.595 in [15.11 mm]
Height	0.255 in [6.48 mm]
Weight	0.01 lbs [4.54 g]
Package Type	Surface Mount

Connectors	
DC Connector	Pin

Environmental Specifications

Temperature	
Operating Range	-40 to +85 °C
Storage Range	-65 to +150 °C

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

Plotted and Other Data

Notes:

Features:

- Surface Mount Packaged Noise Source module
- Frequency Range: 200 KHz to 3 GHz
- Very High Output ENR level: 51 dB
- White Gaussian Noise Output
- Minimum power level -123 dBm/Hz
- Maximum Flatness +/- 2 dB
- Small Package Outline with 8 gullwing leads
- DC Voltage: +12 Vdc
- -40°C to +85°C Operating Temperature
- Crest Factor: 5:1

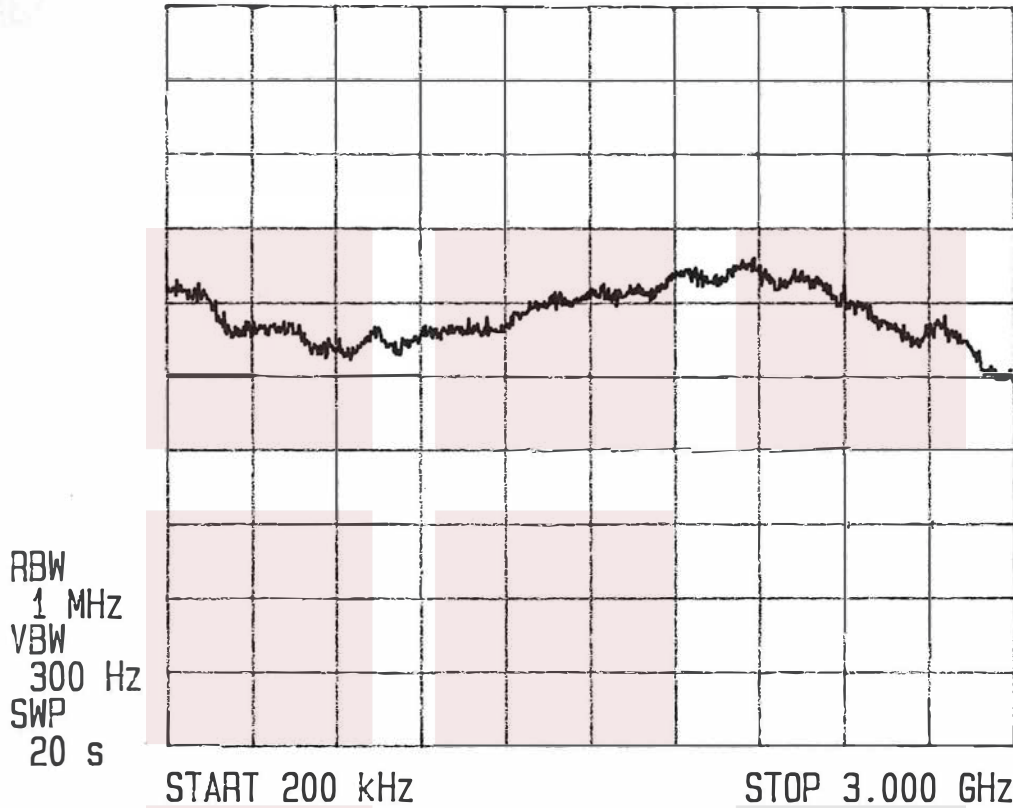
Applications:

- 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

REF -51.7 dBm Noise Power vs. Frequency Tue Mar 10 14:59:38 2020
 2dB/ ATT 10 dB A_view B_blank



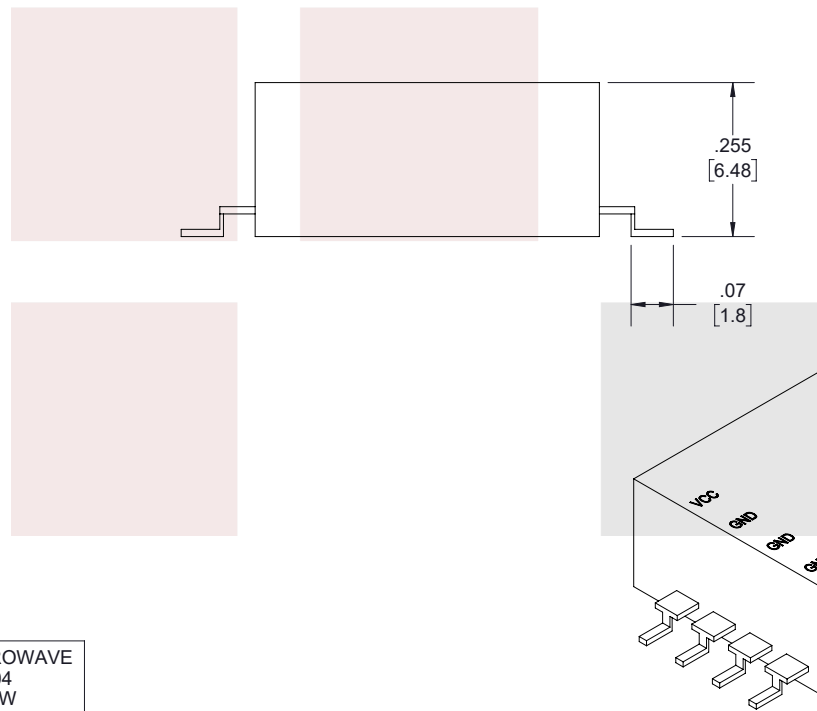
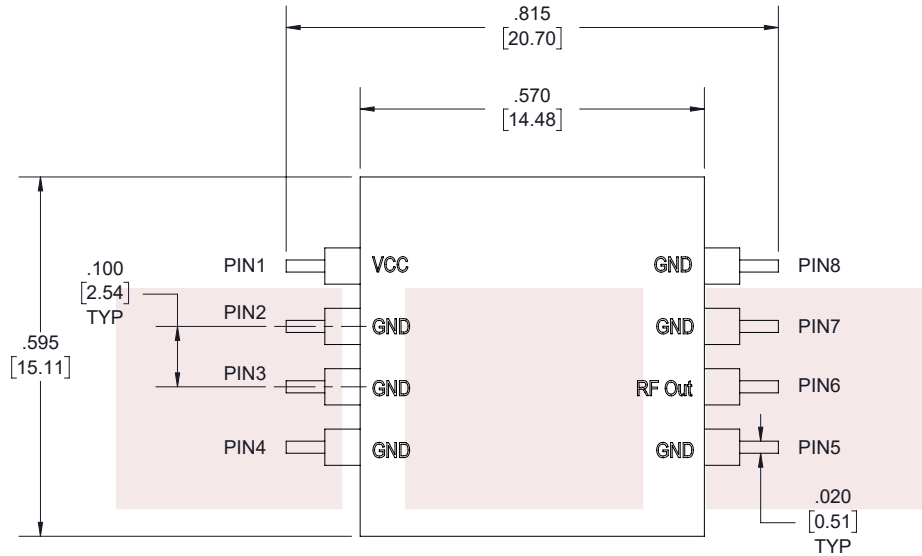
0.2 MHz to 3 GHz Surface Mount (SMT) Noise Source Module, Output ENR of 51 dB, +12 VDC, Pin Packaged from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

Click the following link to obtain additional part information: [0.2 MHz to 3 GHz Surface Mount \(SMT\) Noise Source Module, Output ENR of 51 dB, +12 VDC, Pin Packaged FMNS4004](https://www.fairviewmicrowave.com/noise-source-enr-51-db-3-ghz-fmns4004-p.aspx)

URL: <https://www.fairviewmicrowave.com/noise-source-enr-51-db-3-ghz-fmns4004-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	6/8/2020	TGALLA



LABEL:

FAIRVIEW MICROWAVE
FMNS4004
D/C: YYWW

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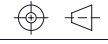
TITLE
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Module, Output ENR of 51 dB, +12 VDC, Pin Packaged

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 2

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMNS4004	REV A
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T-Rev.D

