

NMA 2500 SERIES DUAL BIAS NOISE MODULES

10 MHz to 8.5 GHz

5V and 12V Bias

REV 6.2008



DESCRIPTION

The NMA 2500 Dual Bias Noise Module is a compact high power noise source ideal for applications in jamming, dithering, built-in test and calibration. The dual bias voltage allows for greater flexibility in system integration and lower power consumption. The NMA 2500 is packaged in a sealed housing for ease of integration into a wide range of military and commercial applications.

NMA 2500 MODULES RF SPECIFICATIONS BY MODEL NUMBER

MODEL	FREQUENCY	NOISE OUTPUT LEVEL			
		FLATNESS * (window)	dBm/BAND (min)	dBm/Hz (min)	ENR(dB) (min)
NMA2510	10MHz - 1.0GHz	2.0dB	0	-90.0	84.0
NMA2511	10MHz - 1.5GHz	2.0dB	0	-91.8	82.2
NMA2512	10MHz - 2.0GHz	3.0dB	0	-93.0	81.0
NMA2513	10MHz - 4.0GHz	4.0dB	0	-96.0	78.0**
NMA2514	100MHz - 6.0GHz	4.0dB	-3	-100.0	74.0
NMA2515	30MHz - 3.0GHz	3.0dB	-1	-96.0	78.0
NMA2516	7.8GHz - 8.5GHz	2.0dB	-11	-100.0	74.0
NMA2517	2.0GHz - 8.0GHz	4.0dB	-2	-100.0	74.0

* Flatness is defined as the decibel ratio of the highest amplitude peak minus the lowest across the frequency band.

**90 mA max.

SPECIFICATIONS

- Operating Temperature: -30 to +85°C
- Storage Temperature: -65 to +95°C
- Supply Voltage: Dual Bias +5.0 V Bias
 - Voltage Range: +/- 3%
 - Current Draw @ 300 mA max +12 V Bias
 - Voltage Range: +11.8 to 18.0 V
 - Current Draw @ 25 mA max
- Output Impedance: 50 ohm
- Peak Factor: 5:1

specifications subject to change based on technological advances

PERFORMANCE TEST DATA

Each unit ships standard with a spectrum analyzer plot of the noise output.

Upon special request, Micronetics can supply tabular data in text file format on CD-ROM or floppy disk. The data points consist of power spectral density at discrete frequency points across the frequency band.

USEFUL NOISE CONVERSIONS

0 dB ENR = -174 dBm/Hz (equ 1)
 Power (dBm) = $N_0 + 10_{\log}(\text{BW})$ (equ 2)

where:

N_0 = Noise spectral density in dBm/Hz
 BW = Bandwidth in Hz

INSTALLATION NOTES

- (1) Should be mounted to a thermally conductive baseplate
- (2) Select style code T for mechanical clearance of mating SMA (m) connector nut with respect to thermally conductive baseplate
- (3) Warning: when using a narrow band filter following the noise module, use a 3 dB or greater pad to prevent damage caused by reflective power.

HOW TO ORDER

NMA 25XX-XX

Option

1 = Std
 2 = TTL*

Package

S=Pkg Style S
 T=Pkg Style T

* "1" noise on (internal pull-up)
 "0" noise off

APPLICATIONS

- Frequency response built-in-test (BIT) for communication receivers
- Antenna/RF front end testing
- 70/140 MHz & L-Band modem BER testing
- Noise and interference simulation
- Jamming / jamming simulation
- Power distribution calibration of multiple receiver systems

MICRONETICS
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