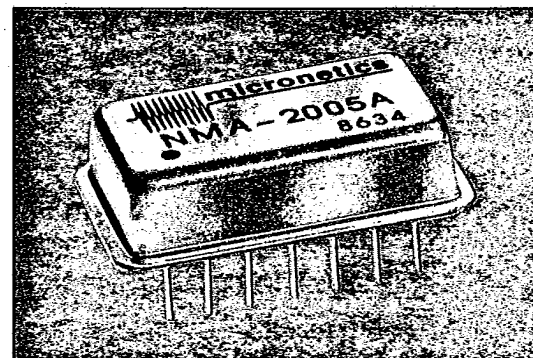


**micronetics inc.**  
A Quantech Company

# NMA-2000 SERIES μ-NOISE MODULES

## Features:

- True White Symmetrical Gaussian Noise
- 14 Pin DIP
- 5:1 Peak Factor (Voltage) 14 dB
- Ultra Compact Size .875" x .5" x .24"
- High Level Noise Output To 500 MHz
- Optional Supply Voltages Available



## OUTPUT CHARACTERISTICS-50 OHM LOAD

| Model    | Frequency Range | Noise Output Level |         |                   |          |        |         |
|----------|-----------------|--------------------|---------|-------------------|----------|--------|---------|
|          |                 | Flatness           | mV/band | $\mu V/\sqrt{Hz}$ | dBm/band | dBm/Hz | ENR(dB) |
| NMA-2001 | 100Hz-100kHz    | $\pm .5$ dB        | 5       | 15.8              | -32      | -82    | 91.0    |
| NMA-2002 | 100Hz-300kHz    | $\pm .5$ dB        | 10      | 18.2              | -27      | -82    | 92.2    |
| NMA-2003 | 100Hz-1MHz      | $\pm .5$ dB        | 10      | 10.0              | -27      | -87    | 87.0    |
| NMA-2004 | 100Hz-3MHz      | $\pm .5$ dB        | 10      | 5.8               | -27      | -92    | 82.2    |
| NMA-2005 | 100Hz-10MHz     | $\pm .5$ dB        | 10      | 3.2               | -27      | -97    | 77.0    |
| NMA-2006 | 100Hz-30MHz     | $\pm .5$ dB        | 5       | .91               | -33      | -108   | 66.2    |
| NMA-2007 | 500Hz-100MHz    | $\pm .75$ dB       | 2.5     | .25               | -39      | -119   | 55.0    |
| NMA-2008 | 500Hz-300MHz    | $\pm 1.0$ dB       | 4.4     | .25               | -34      | -119   | 55.0    |
| NMA-2009 | 500Hz-500MHz    | $\pm 1.5$ dB       | 5.6     | .25               | -32      | -119   | 55.0    |

## OUTPUT CHARACTERISTICS-600 OHM LOAD

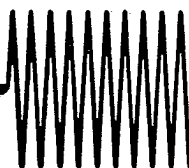
| Model        | Frequency Range | Noise Output Level |         |                   |          |        |         |
|--------------|-----------------|--------------------|---------|-------------------|----------|--------|---------|
|              |                 | Flatness           | mV/band | $\mu V/\sqrt{Hz}$ | dBm/band | dBm/Hz | ENR(dB) |
| NMA-2001-600 | 100Hz-100kHz    | $\pm .5$ dB        | 10      | 31.6              | -38      | -88    | 86.2    |
| NMA-2002-600 | 100Hz-300kHz    | $\pm .5$ dB        | 10      | 18.2              | -38      | -93    | 81.4    |
| NMA-2003-600 | 100Hz-1MHz      | $\pm .5$ dB        | 10      | 10.0              | -38      | -98    | 76.2    |
| NMA-2004-600 | 100Hz-3MHz      | $\pm .5$ dB        | 10      | 5.8               | -38      | -103   | 71.4    |
| NMA-2005-600 | 100Hz-10MHz     | $\pm .5$ dB        | 10      | 3.2               | -38      | -108   | 66.2    |
| NMA-2006-600 | 100Hz-30MHz     | $\pm .5$ dB        | 10      | 1.8               | -38      | -113   | 61.4    |

## Specifications:

Load Impedance 50 Ohm, 600 Ohm  
 Noise Symmetry 95% Typ, 90% Min  
 Peak Factor 5:1 Min (Voltage)  
 Operating Temperature -55°C to 85°C  
 Temp. Coefficient .025 dB/°C Typ.  
 Voltage Supply  
 Sensitivity .4 dB/100 mV  
 Maximum Storage Temperature -62°C to 150°C

## Power Requirements:

NMA 2001-2006 +15V 12 mA  
 NMA 2007-2009 +15V 25 mA  
 Same For 600  $\Omega$  Modules  
 Maximum Supply Voltage +18 VDC



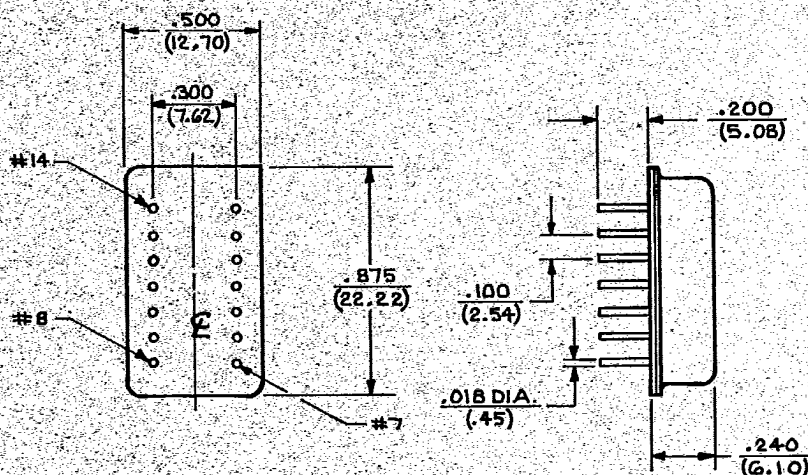
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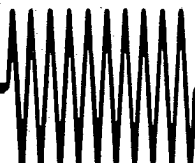
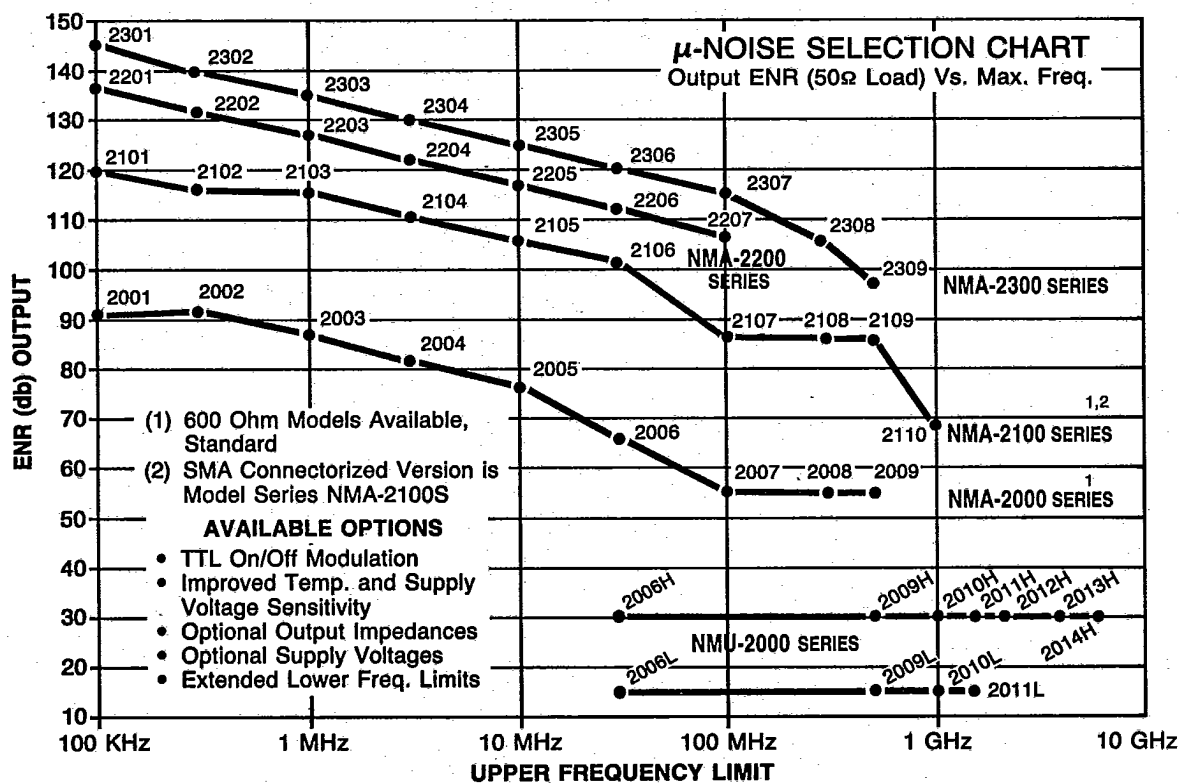
1/87 Preliminary Data Sheet

# Outline Dimensions <sup>Inches</sup> (mm)

| PIN | FUNCTION       |
|-----|----------------|
| 7   | GROUND         |
| 8   | NOISE OUTPUT   |
| 14  | SUPPLY VOLTAGE |



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