

# CNS7105

## COAXIAL AMPLIFIED NOISE SOURCE

available  
from stock

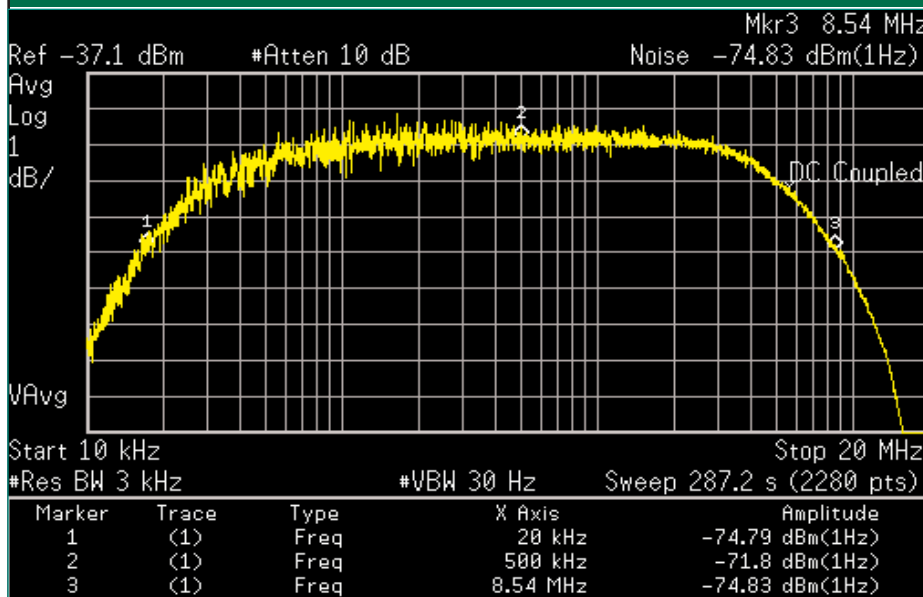
100 kHz TO 3 MHz



### DESCRIPTION

The CNS7105 noise module is designed for a wide range of applications. It features high noise output amplitude for uses ranging from encryption to jamming. All biasing and amplification circuitry is built-in making it easy to design into your system. It features a built-in voltage regulator for highly stable output even if your DC supply lines are not.

### CNS7105 TYPICAL DATA



### APPLICATIONS

#### Common Noise Applications

##### 1. Barrage Jamming:

The noise source is fed into the tuning port of a VCO via a bias tee and a positive DC voltage. The random nature of noise makes the output of the VCO to hop around in a given frequency band randomly making an ideal jamming signal. Further circuitry can be used between the noise source and tuning port to shape the noise probability density function (PDF) for the desired jamming effect.

##### 2. Random Number Generation for Encryption:

Noise sources being truly random (not pseudorandom) give the ultimate in secure communication because of their ability to generate a truly random number pattern. This can be used to seed an encryption key for authentication. The noise signal can be fed directly into an A/D converter for sampling or a simpler techniques might use a comparator. Further shaping of the noise is often employed whether either analog if in front of the A/D converter or afterwards using DSP.

### SPECIFICATIONS

- Frequency: 100 kHz to 3 MHz
- Noise Power Spectral Density (No): -73 dBm/Hz (min)
- Noise Power (N): -8 dBm
- Spectral Flatness: 1 dB (total window)
- Bias: 12 Vdc, Internally Regulated
- Current Draw: 35 mA Max
- Peak Factor: 5:1
- Operating Temp: -55 to +85 C
- Storage Temp: -55 to +125 C

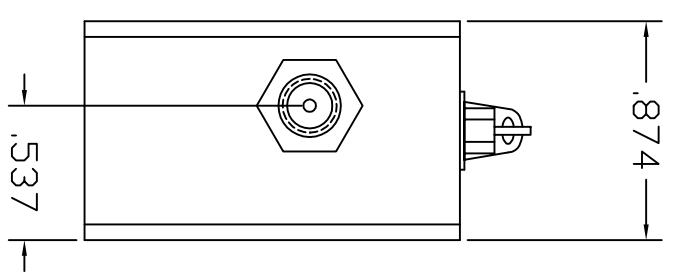
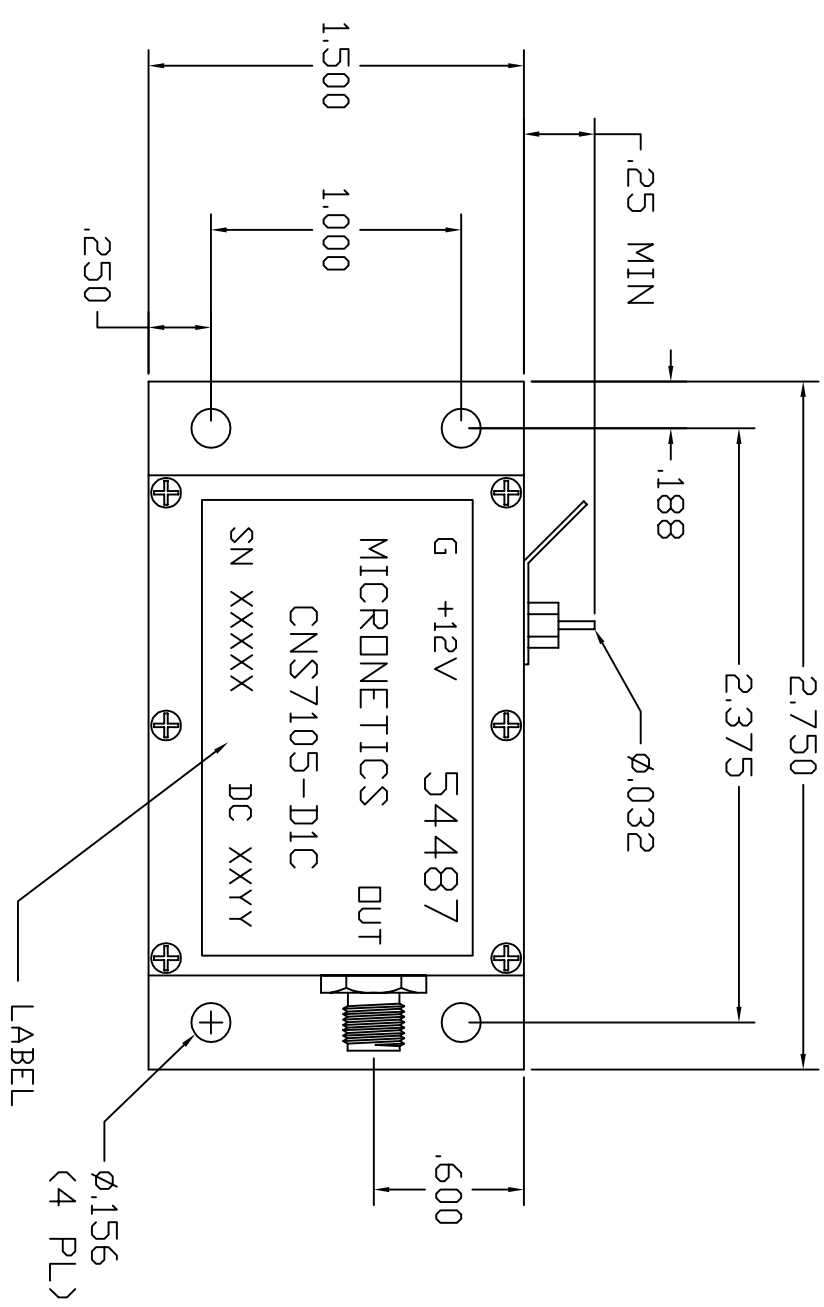
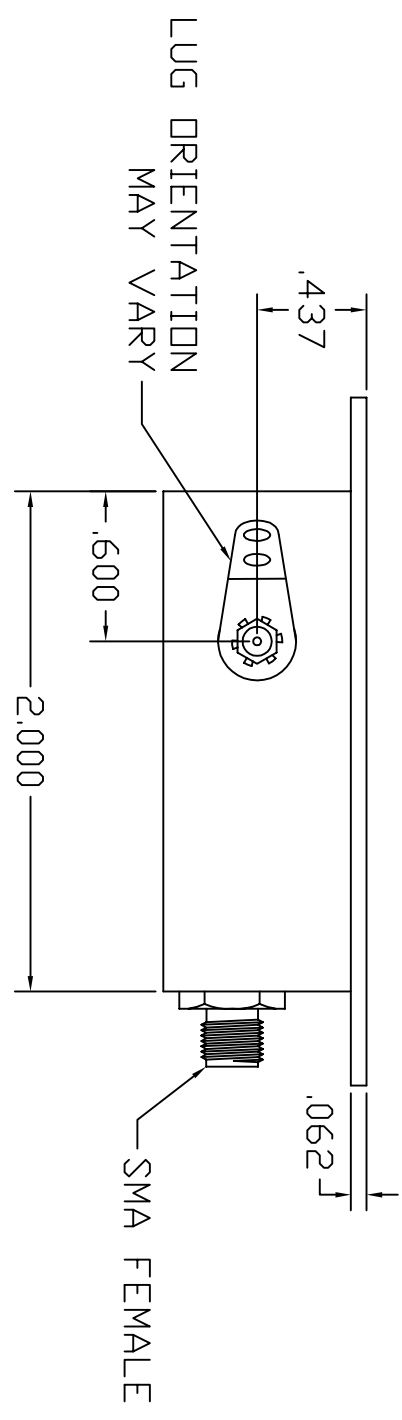
**MICRONETICS**  
NOISE PRODUCTS

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NOTES

1. FINISH: IRRIDITE

| REVISIONS |      |         |                     | APPROVED |       |     |     |
|-----------|------|---------|---------------------|----------|-------|-----|-----|
| ZONE      | REV. | ECD NO. | DESCRIPTION         | DATE     | ENGR. | QC. | MG. |
| 1         | 1    |         | ENGINEERING RELEASE |          |       |     |     |

|  |  |   |  |                 |  |  |  |
|--|--|---|--|-----------------|--|--|--|
| UNLESS OTHERWISE SPECIFIED   |  | DRAWN BY<br>B. ALEXANDER                                  |  | DATE<br>11/4/05 |  | TITLE<br><b>MICRONETICS, INC.</b><br>26 HAMPSHIRE DRIVE * HUDSON, NH, 03051<br>TEL: (603) 883-2900 * FAX: (603) 882-8987 |  |
| DIMENSIONS ARE IN INCHES<br>TOLERANCES ON FINISH:<br>ANGLES: ±1/2°<br>FRACTIONS: ±1/64<br>4 PLACE DECIMALS: ±.0005<br>3 PLACE DECIMALS: ±.003<br>2 PLACE DECIMALS: ±.03            |  | CHECKED BY<br>ENGINEER                                    |  | DATE            |  | MICRONETICS, INC.<br>26 HAMPSHIRE DRIVE * HUDSON, NH, 03051<br>TEL: (603) 883-2900 * FAX: (603) 882-8987                 |  |
| COMMERCIAL PUBLISHED TOLERANCES SHALL APPLY TO TUBING, BAR, PLATE ETC. ALL THREADS TO BE CLASS 2B UN. 2B PLATED PARTS MUST FIT DRIVES AND THEN SPECIFIED TOLERANCES AFTER PLATING. |  | THIS DRAWING CONTAINS MATERIAL PROPRIETARY TO MICRONETICS |  | DATE            |  | MICRONETICS, INC.<br>26 HAMPSHIRE DRIVE * HUDSON, NH, 03051<br>TEL: (603) 883-2900 * FAX: (603) 882-8987                 |  |
| UNLESS THE DRAWING BEARS AUTHORIZED SIGNED APPROVALS IT IS PRELIMINARY AND IS NOT TO BE USED FOR MANUFACTURING PURPOSES.   |  | THIRD ANGLE PROJECTION                                    |  | DATE            |  | MICRONETICS, INC.<br>26 HAMPSHIRE DRIVE * HUDSON, NH, 03051<br>TEL: (603) 883-2900 * FAX: (603) 882-8987                 |  |
| DO NOT SCALE DRAWING   |  | SCALE   |  | DATE            |  | MICRONETICS, INC.<br>26 HAMPSHIRE DRIVE * HUDSON, NH, 03051<br>TEL: (603) 883-2900 * FAX: (603) 882-8987                 |  |

B SIZE FORM NO. REV. A ECD NO. MWF-03-103

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