

NC500SM

SURFACE MOUNT NOISE SOURCE SERIES

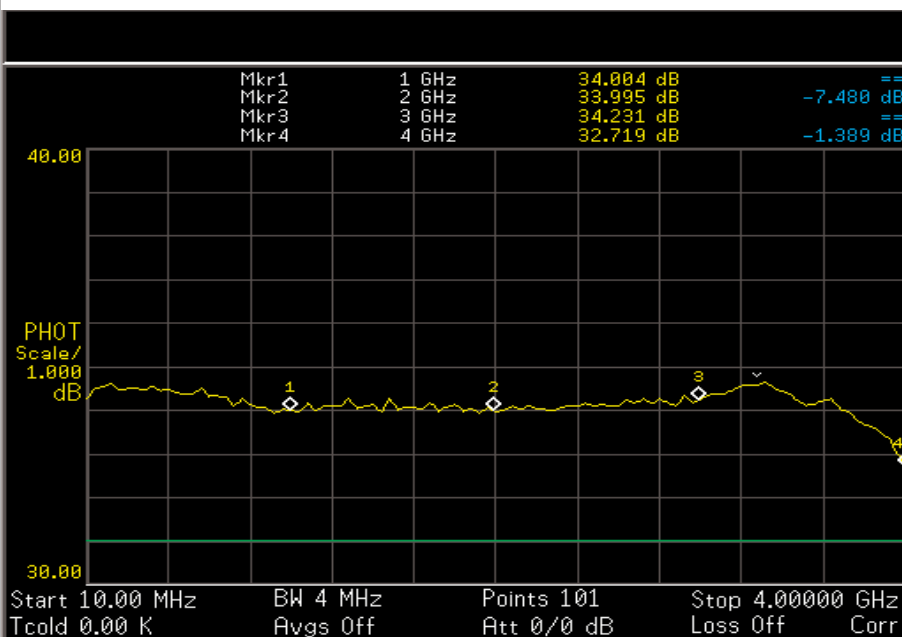
200 kHz TO 3.5 GHz

The NC500SM Noise Source series is an economical solution for built-in test applications. These small surface mount modules are self-contained with all the bias circuits, eliminating the need for external components.

Insensitive to temperature variations, these modules produce extremely flat output power versus frequency characteristics. The modules typically require <10 mA and produce a minimum of 31 dB ENR of white Gaussian noise.



NC504SM TYPICAL DATA



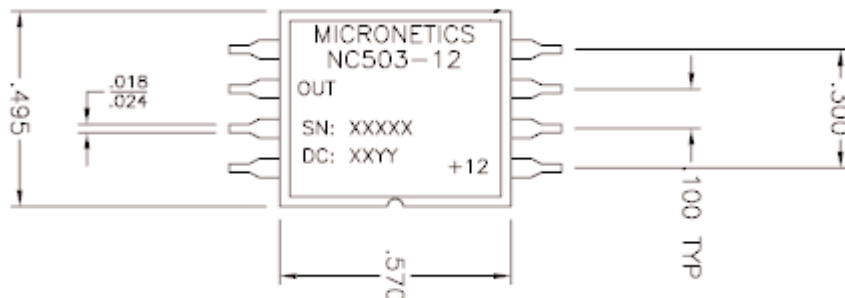
GENERAL SPECIFICATIONS

- Frequency: 200 kHz to 3.5 GHz
- Crest Factor: 5:1
- Temperature Coefficient: 0.015 dB/C°
- Supply Sensitivity: 0.2 dB / %V
- Operating Temperature: 0°C to +70°C
- Storage Temperature: -65°C to +125°C

AVAILABLE MODELS

Model +12V	Model +15V	Model +28V	Frequency Range	MINIMUM OUTPUT ENR (dB)	Ohms	OUTPUT FLATNESS (dB)	I (max) (mA)
NC501SM-12	NC501SM-15	NC501SM-28	200 kHz - 500 MHz	31	50	2	10
NC502SM-12	NC502SM-15	NC502SM-28	200 kHz - 1 GHz	31	50	2	10
NC503SM-12	NC503SM-15	NC503SM-28	200 kHz - 2 GHz	31	50	2	10
NC504SM-12	NC504SM-15	NC504SM-28	200 kHz - 3.5 GHz	31	50	2	10

Notes: place **Eval** at the end of the model number to order a connectorized evaluation board



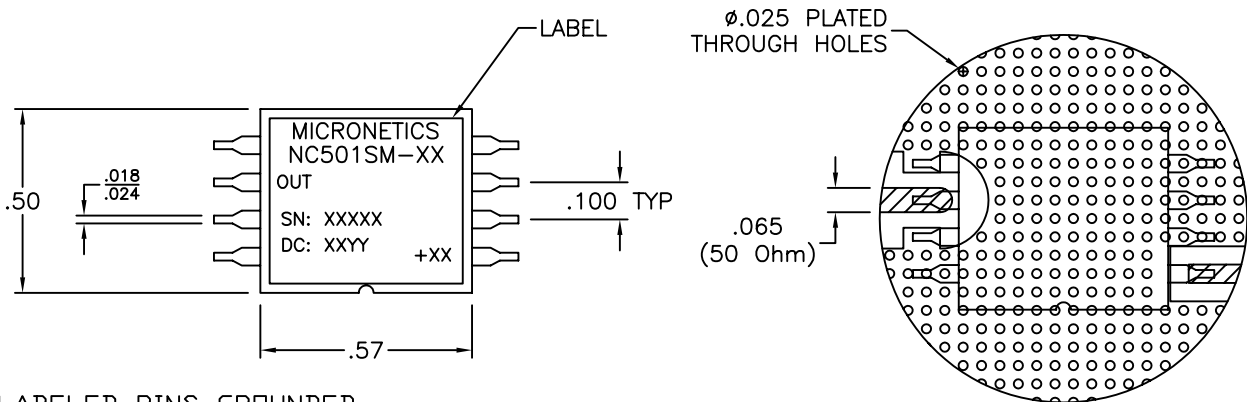
TYPICAL APPLICATIONS

Typical applications for Micronetics NC500SM Noise Source Series include:

- Built-in test equipment (BITE)
- Test signal strength in PCS, CATV
- Calibrators
- Radar warning receivers
- Spectrum analyzers
- Dithering A/D quantization error
- Gain-bandwidth product testing



REVISIONS					
ZONE	REV.	ECO NO.	DESCRIPTION	DATE	APPROVED ENG. QC. MFG.
	1		ENGINEERING RELEASE		



RECOMMENDED MOUNTING
PATTERN INCLUDES PLATED
THROUGH HOLES UNDER UNIT
DIMENSIONS ARE FOR
ROGERS 4350B .030 THICK
OTHER MATERIALS MAY BE USED

ELECTRICAL SPECIFICATIONS

FREQUENCY:	200 KHz - 500 MHz
ENR:	31 dB MIN.
ENR FLATNESS:	2 dB MAX.
BIAS (XX):	+12, 15, 28 V @ 10 mA MAX.
BIAS SENSITIVITY:	.2 dB / % ΔV
TEMP SENSITIVITY:	.015 dB / °C
OPERATING TEMP:	0 TO +70 °C
STORAGE TEMP:	-65 TO +125 °C

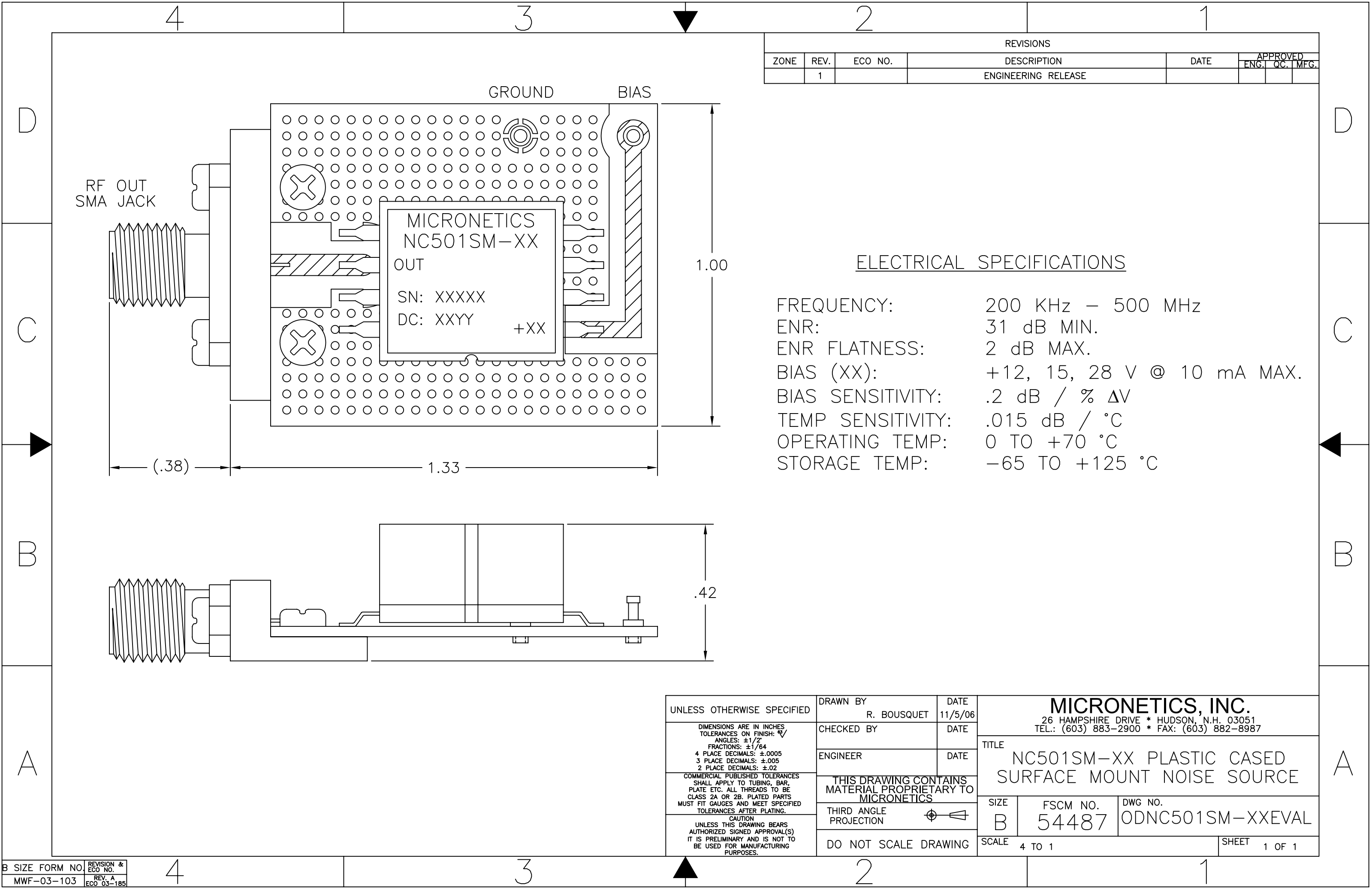
- NOTES:
1. PACKAGE MATERIAL: BLACK DAP
 2. LEAD MATERIAL / FINISH: TINNED ALLOY 42 OR EQUIVALENT

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FINISH: ANGLES: ±1/2° FRACTIONS: ±1/64 4 PLACE DECIMALS: ±.0005 3 PLACE DECIMALS: ±.010 2 PLACE DECIMALS: ±.02 COMMERCIAL PUBLISHED TOLERANCES SHALL APPLY TO TUBING, BAR, PLATE ETC. ALL THREADS TO BE CLASS 2A OR 2B. PLATED PARTS MUST FIT GAUGES AND MEET SPECIFIED TOLERANCES AFTER PLATING. CAUTION UNLESS THIS DRAWING BEARS AUTHORIZED SIGNED APPROVAL(S) IT IS PRELIMINARY AND IS NOT TO BE USED FOR MANUFACTURING PURPOSES.	DRAWN BY BA	DATE 3/3/06	MICRONETICS, INC. 26 HAMPSHIRE DRIVE * HUDSON, N.H. 03051 TEL: (603) 883-2900 * FAX: (603) 882-8987		
	CHECKED BY	DATE	TITLE NC501SM-XX PLASTIC CASED SURFACE MOUNT NOISE SOURCE		
	ENGINEER	DATE			
	THIS DRAWING CONTAINS MATERIAL PROPRIETARY TO MICRONETICS			SIZE A	FSCM NO. 54487
	THIRD ANGLE PROJECTION			DWG NO. 0DNC501SM-XX	DO NOT SCALE DRAWING
			SCALE 2 TO 1	SHEET 1 OF 1	

A SIZE FORM NO. MWF-03-101
 REVISION & ECO NO. REV. A ECO 03-185

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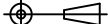
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REVISIONS							
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ELECTRICAL SPECIFICATIONS

FREQUENCY:	200 KHz – 500 MHz
ENR:	31 dB MIN.
ENR FLATNESS:	2 dB MAX.
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BIAS SENSITIVITY:	.2 dB / % ΔV
TEMP SENSITIVITY:	.015 dB / °C
OPERATING TEMP:	0 TO +70 °C
STORAGE TEMP:	–65 TO +125 °C

UNLESS OTHERWISE SPECIFIED	DRAWN BY R. BOUSQUET	DATE 11/5/06	MICRONETICS, INC. 26 HAMPSHIRE DRIVE * HUDSON, N.H. 03051 TEL.: (603) 883-2900 * FAX: (603) 882-8987			
	DIMENSIONS ARE IN INCHES TOLERANCES ON FINISH: $\sqrt[3]{}$ ANGLES: $\pm 1/2^{\circ}$ FRACTIONS: $\pm 1/64$ 4 PLACE DECIMALS: $\pm .0005$ 3 PLACE DECIMALS: $\pm .005$ 2 PLACE DECIMALS: $\pm .02$	CHECKED BY	DATE	TITLE NC501SM-XX PLASTIC CASED SURFACE MOUNT NOISE SOURCE		
	ENGINEER	DATE				
	COMMERCIAL PUBLISHED TOLERANCES SHALL APPLY TO TUBING, BAR, PLATE ETC. ALL THREADS TO BE CLASS 2A OR 2B. PLATED PARTS MUST FIT GAUGES AND MEET SPECIFIED TOLERANCES AFTER PLATING.	THIS DRAWING CONTAINS MATERIAL PROPRIETARY TO MICRONETICS		SIZE B	FSCM NO. 54487	DWG NO. ODNC501SM-XXEVAL
	CAUTION UNLESS THIS DRAWING BEARS AUTHORIZED SIGNED APPROVAL(S) IT IS PRELIMINARY AND IS NOT TO BE USED FOR MANUFACTURING PURPOSES.	THIRD ANGLE PROJECTION		SCALE 4 TO 1		SHEET 1 OF 1
DO NOT SCALE DRAWING						