

NC500SM

SURFACE MOUNT NOISE SOURCE SERIES

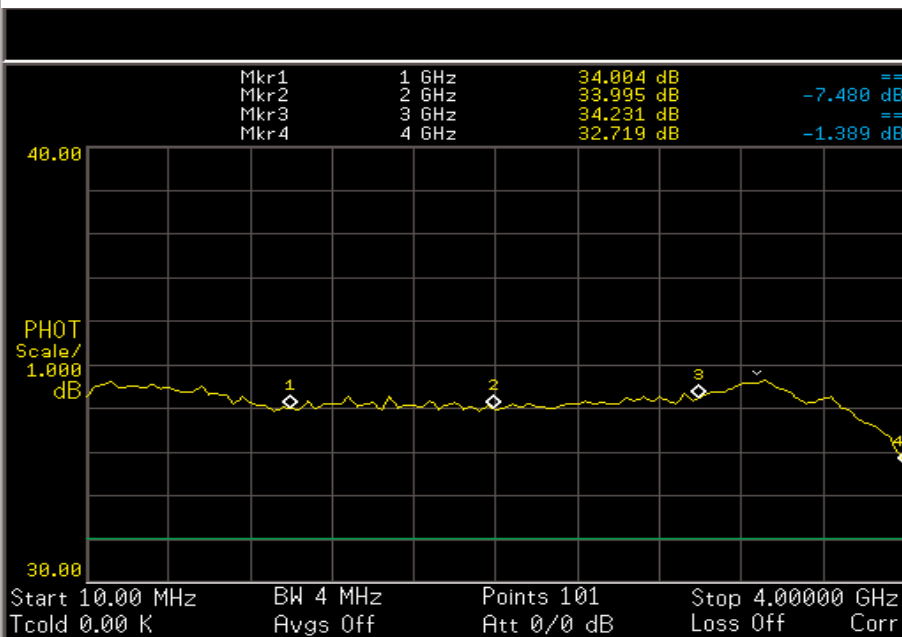
200 kHz TO 3.5 GHz

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

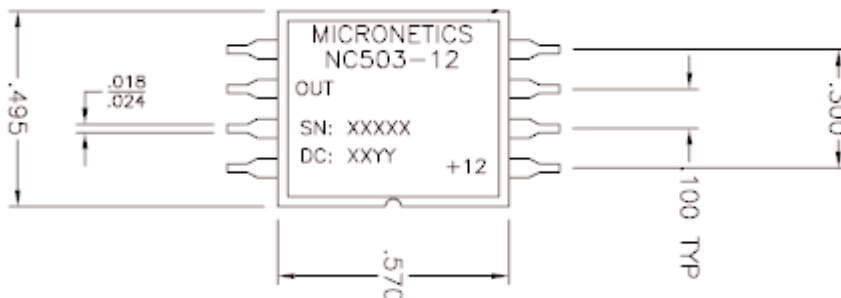
Model +12V	Model +15V	Model +28V	Frequency Range	MINIMUM OUTPUT		OUTPUT FLATNESS (dB)	I (max) (mA)
				ENR (dB)	Ohms		
NC501SM-12	NC501SM-15	NC501SM-28	200 kHz - 500 MHz	31	50	2	10
NC502SM-12	NC502SM-15	NC502SM-28	200 kHz - 1 GHz	31	50	2	10
NC503SM-12	NC503SM-15	NC503SM-28	200 kHz - 2 GHz	31	50	2	10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

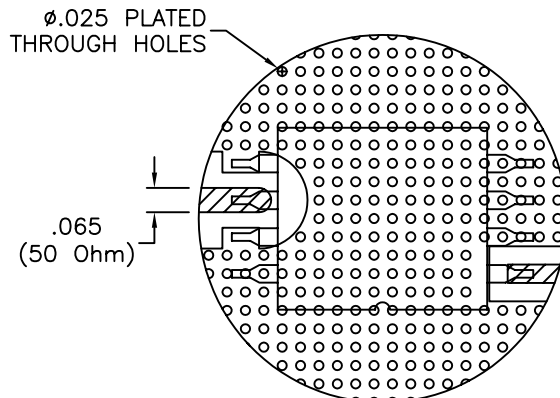
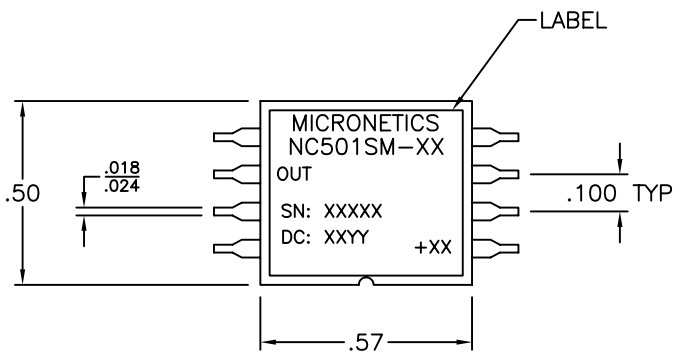


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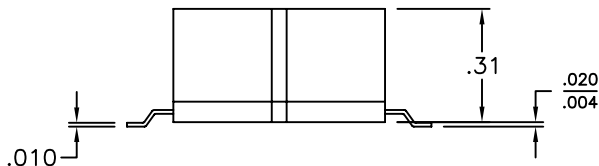
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REVISIONS

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



ALL UNLABELED PINS GROUNDED



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	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				
	ENGINEER	DATE	TITLE NC501SM-XX PLASTIC CASED SURFACE MOUNT NOISE SOURCE			
	THIS DRAWING CONTAINS MATERIAL PROPRIETARY TO MICRONETICS			SIZE A	FSCM NO. 54487	DWG NO. 0DNC501SM-XX
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.			THIRD ANGLE PROJECTION		SCALE 2 TO 1	SHEET 1 OF 1
DO NOT SCALE DRAWING						

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

RF OUT SMA JACK

GROUND

BIAS

MICRONETICS
NC501SM-XX
OUT
SN: XXXXX
DC: XXYY +XX

ELECTRICAL SPECIFICATIONS

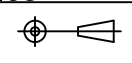
FREQUENCY: 200 KHz - 500 MHz
 ENR: 31 dB MIN.
 ENR FLATNESS: 2 dB MAX.
 BIAS (XX): +12, 15, 28 V @ 10 mA MAX.
 BIAS SENSITIVITY: .2 dB / % ΔV
 TEMP SENSITIVITY: .015 dB / °C
 OPERATING TEMP: 0 TO +70 °C
 STORAGE TEMP: -65 TO +125 °C

1.00

(.38)

1.33

.42

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FINISH: $\sqrt{\text{V}}$ ANGLES: $\pm 1/64$ FRACTIONS: $\pm 1/64$ 4 PLACE DECIMALS: $\pm .0005$ 3 PLACE DECIMALS: $\pm .005$ 2 PLACE DECIMALS: $\pm .02$ 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 R. BOUSQUET	DATE 11/5/06	MICRONETICS, INC. 26 HAMPSHIRE DRIVE * HUDSON, N.H. 03051 TEL.: (603) 883-2900 * FAX: (603) 882-8987		
	CHECKED BY	DATE			
	ENGINEER	DATE	SIZE B		
	THIRD ANGLE PROJECTION 	DO NOT SCALE DRAWING		FSCM NO. 54487	DWG NO. ODNC501SM-XXEVAL

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