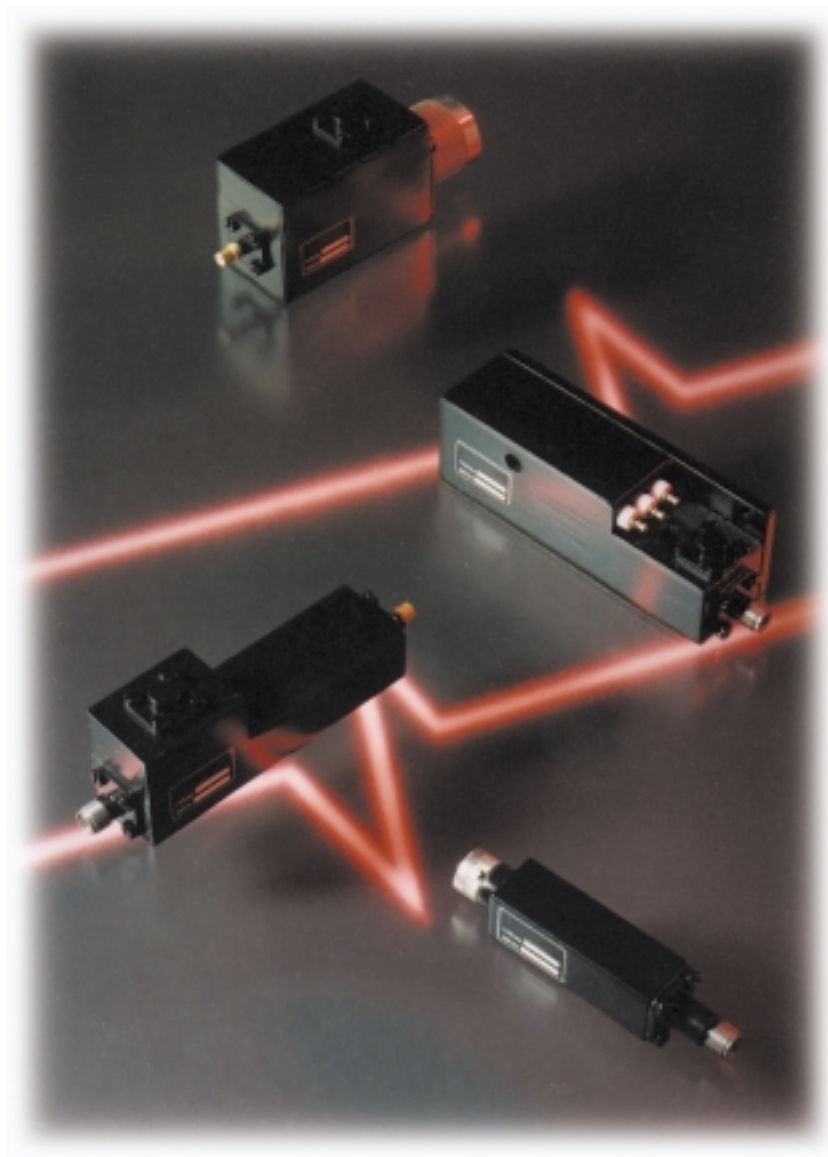


SOLID STATE NOISE SOURCES



GENERAL INFORMATION

Micronetics, Inc. acquired this product line from DML Microwave in 2003. Our current range includes narrow band and broadband devices in both Coaxial and Waveguide configurations. The Coaxial Noise Sources detailed here are highly versatile. Their miniature size, fast switching time, and durable construction makes them well suited to built-in test application in Radar, Avionics, Radio Astronomy, Electronic Counter Measures and Communication Systems.

FEATURES

- High Noise Output to 38dB ENR
- Small, Rugged Construction
- Integral Output Isolators
- Constant Current or Constant Voltage operation
- Fast Switching Time

SPECIFICATIONS

Frequency Range	1 to 18 GHz
Bandwidth	Spot Frequency to Octave
ENR	5 to 38 dB
ENR Flatness	+/- 0.25 dB Typ.
Switching Time	1.0 Microsecond (Option 200 nano-second)
Temperature Coefficient	0.02 dB/°C Typ. (Option - 0.01 dB/°C)
ENR Change with life	+/- 0.15 dB/2000h (Option +/- 0.12 dB/2000h)
Bias Condition	Constant Current (Option Constant Voltage)
Bias Ratings	40 mA Max. (Option 23 to 28V)

ADDITIONAL ELECTRICAL SPECIFICATION

Noise output is via an integral isolator which ensures an excellent output match. This enables maximum noise power to be transferred and minimises errors caused by local oscillator leakage.

NARROW BAND DEVICES

OPERATING TEMPERATURE RANGE -40 TO +85 ° C

Frequency GHz	Part No.	ENR (dB)	(Maximum Dimensions (mm))		
			Length	Width	Depth
1.20 - 1.40	CI600N	28.0	85.0	42.0	28.0
1.57 - 1.70	CI601	36.0	48.0	38.5	19.5
1.70 - 2.00	CI602	36.0	54.5	44.5	19.5
2.00 - 2.30	CI603	36.0	48.0	38.5	19.5
2.30 - 2.70	CI604	36.0	48.0	38.5	19.5
2.70 - 3.10	CI605	36.0	48.0	38.5	19.5
2.80 - 3.20	CI606	36.0	48.0	38.5	19.5
2.90 - 3.50	CI607	36.0	48.0	38.5	19.5
3.10 - 3.40	CI607C	35.0	68.0	31.5	19.5
3.35 - 3.85	CI608	36.0	48.0	38.5	19.5
3.70 - 4.20	CI609	36.0	48.0	38.5	19.5
4.00 - 4.70	CI610	36.0	48.0	38.5	19.5
4.40 - 5.20	CI612	36.0	48.0	38.5	19.5
5.00 - 5.50	CI613	36.0	48.0	38.5	19.5
5.25 - 5.85	CI6141	36.0	52.0	20.0	20.0
5.40 - 5.90	CI614	36.0	48.0	38.5	19.5
5.40 - 5.90	CI614N	32.5	52.0	20.0	20.0
5.90 - 6.50	CI615	36.0	48.0	38.5	19.5
6.40 - 7.10	CI616	36.0	48.0	38.5	19.5
6.90 - 7.80	CI617	36.0	48.0	38.5	19.5
7.50 - 9.00	CI701	36.0	42.0	32.0	19.5
8.40 - 10.00	CI702	36.0	42.0	32.0	19.5
8.50 - 9.60	CI8078	31.50	40.0	13.0	13.0
8.50 - 9.60	CI821	34.50	40.0	13.0	13.0

8.50 - 9.60	CI801	36.0	32.0	25.5	17.0
9.00 - 10.00	CI802	36.0	32.0	25.5	17.0
9.50 - 10.00	CI416	36.0	81.0	44.5	23.5
9.50 - 10.50	CI803	36.0	32.0	25.5	17.0
9.50 - 12.40	CI703	36.0	42.0	32.0	19.5
10.00 - 11.00	CI804	36.0	32.0	25.5	17.0
10.70 - 13.25	CI811	36.0	32.0	19.5	15.0
11.00 - 12.00	CI805	36.0	32.0	25.5	17.0
11.50 - 12.40	CI806	36.0	32.0	25.5	17.0

WIDE BAND DEVICES

OPERATING TEMPERATURE RANGE 0 TO +60 ° C

Frequency GHz	Part No.	ENR (dB)	(Maximum Dimensions (mm))		
			Length	Width	Depth
1.50 - 2.0	CI901	36.0	96.0	83.0	25.5
2.00 - 4.00	CI902	36.0	60.5	51.0	19.5
3.00 - 6.00	CI903	36.0	51.0	42.0	19.5
4.00 - 8.00	CI904	34.0	48.0	38.5	19.5
6.00 - 8.40	CI905	34.0	48.0	38.5	19.5
8.00 - 12.40	CI906	32.0	42.0	32.0	19.5

The values of ENR given above are nominal and measured at 25 °C. A small dc voltage may appear on the RF output unless a dc blocked connector is specified.

ENR is the Excess Noise Ration expressed as the ratio $10 \log^{10}$

$$\left[\frac{T-290}{290} \right] \text{ Where ENR is}$$

expressed in dB above 290K and T is the equivalent noise temperature of the source in Kelvin. These devices contain permanent magnets therefore the close proximity of magnetic material may effect operation. Minimum spacing between devices without magnetic shielding is 50mm for the applications above.