



ADVANCED NOISE TECHNOLOGY

MLS400 SERIES

Low Noise Microwave VCXO

Frequency Range: 5 GHz to 18 GHz
(Select operating frequency)



Output Performance

Output Power: +20.0 dBm (+13 dBm Option)
Harmonics: < -40 dBc
Coherent Spurious: < -50 dB
Non Coherent Spurious: < -90 dBc
Load Impedance: 50 Ohms

Frequency vs. Temperature Performance

Temperature	Stability
0° C to +50° C	±5 PPM
-20° C to +70° C	±10 PPM

Electrical Frequency Control

EFC Range: ±8.0 PPM
EFC Voltage: +6 VDC
Slope: Negative
Input Impedance: 5 K Ohms typical
(Ideal for Phase Noise Measurement)

Operating Supply Power

Input Voltage: +15 VDC ±5%
Power Consumption: 7.0 W typical

Mechanical Frequency Adjust

Compensation for 10 years aging

BOTH AM and PM Noise Graphs are provided with each unit. All units are 100% tested with data provided.

Aging Performance

<±1.0 PPM / 1st year;
<±10.0 PPM / 10 years

Phase Noise Performance (typical)

<u>(6.4 GHz typical)</u>		<u>(8.0 GHz typical)</u>		<u>(9.7 GHz typical)</u>	
100 Hz:	-82 dBc/Hz	100 Hz:	-79 dBc/Hz	100 Hz:	-75 dBc/Hz
1.0 KHz:	-112 dBc/Hz	1.0 KHz:	-109 dBc/Hz	1.0 KHz:	-105 dBc/Hz
10 KHz:	-127 dBc/Hz	10 KHz:	-125 dBc/Hz	10 KHz:	-125 dBc/Hz
100 KHz:	-135 dBc/Hz	100 KHz:	-136 dBc/Hz	100 KHz:	-134 dBc/Hz

AM Noise Performance

(9.7 GHz typical)
100 Hz: -127 dBc/Hz
1.0 KHz: -137 dBc/Hz
10 KHz: -145 dBc/Hz
100 KHz: -152 dBc/Hz
1 MHz: -155 dBc/Hz

The MLS400 Series has been designed to be a rugged low noise AM and PM noise Carrier Source. It is very useful as a very low noise source for RADAR applications. It incorporates an EFC feature to allow it to be Phase Locked. The low AM and PM Noise of the MLS400 makes it a valuable tool for many applications. See the MLS414S and NAL414 Series units for traceable AM – PM Noise Calibration Instrument.

Techtrol Cyclonetics Inc.

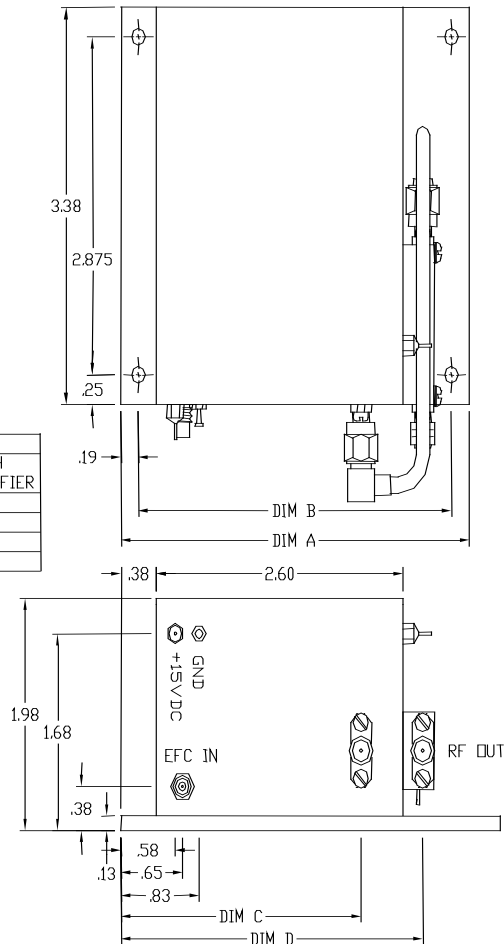
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MLS400 SERIES OUTLINE DRAWING

The MLS400 Series has several RF Output Power options. The Outline Drawing below is the standard configuration. It is recommended the unit be mounted to a chassis or heat sink for bench operation.

Dimensions: Inches

DIMENSION CHART		
	UNIT WITHOUT OUTPUT AMPLIFIER	UNIT WITH OUTPUT AMPLIFIER
DIM A	3.35	3.675
DIM B	2.975	3.487
DIM C	2.53	NOT USED
DIM D	NOT USED	3.19



CONTACT THE FACTORY FOR YOUR SPECIAL REQUIREMENT

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