

FEATURES

- 6-20 GHz Frequency Coverage
- **Revolutionary Phase Noise**
- FM/Phase-Lock Port
- Superb Linearity
- High Reliability

DESCRIPTION

MICRO LAMBDA **MLXS-Extreme Series** 1.75" cylinder YIG Tuned Oscillators cover multi-octave bands from 6 to 20 GHz for both commercial and defence applications. Utilizing Thin Film Technology for reliability and cost effectiveness, the standard "Extreme" series oscillators are specified to operate from 0 to 65 °C and provide unparalleled phase noise performance. Units provide -100 dBc/Hz @ 10 kHz offset and -123 dBc/Hz @ 100 kHz offset guaranteed performance! Typical performance is -128 dBc/Hz @ 100 kHz offset. These oscillators are ideal for synthesizers, receivers and specialized test equipment. Oscillators can be furnished with integrated or remote analog, digital TTL or serial drivers.



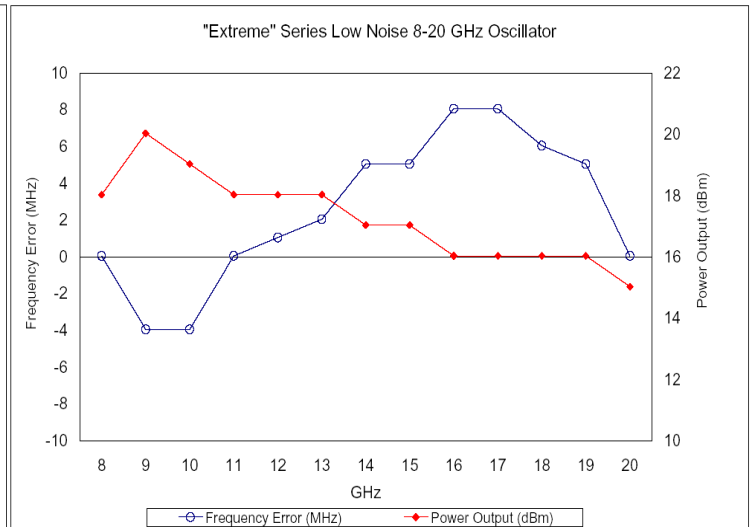
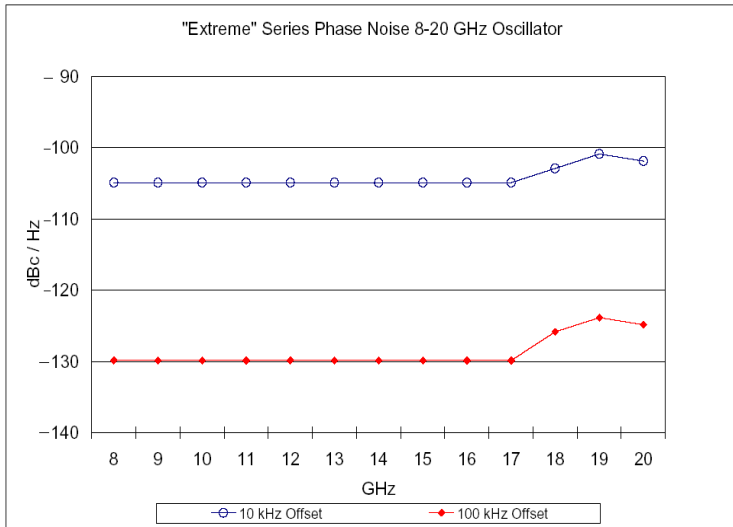
ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at 0 °C to +65 °C Case Temperature (Note 1)

Guaranteed Specifications at -0° to +65° C Case Temperature (Note 1)

Model No.	MLXS-0818	MLXS-0618	MLXS-0820
Frequency Range, Min.	8-18 GHz	6-18 GHz	8-20 GHz
Power Output, Min.	+15 dBm	+14 dBm	+14 dBm
Power Output Variation, Max.	5 dB	6 dB	6 dB
Frequency Drift over Temperature, Max.	20 MHz	20 MHz	25 MHz
Pulling Figure (12 dB RL), Typ.	1 MHz	1 MHz	1 MHz
Pushing Figure + Vdc Supply, Typ.	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V
-5 Vdc Supply, Typ.	1 MHz/V	1 MHz/V	1 MHz/V
Magnetic Susceptibility @ 60 Hz, Typ.	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss
Harmonics, Min.	-12 dBc	-12 dBc	-12 dBc
Spurious Output, Min.	-60 dBc	-60 dBc	-60 dBc
Phase Noise @ 100 kHz Offset Min.	-125 dBc/Hz	-123 dBc/Hz	-125 dBc/Hz
@ 100 kHz Offset Typ.	-130 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz
Main Coil			
Sensitivity, Typ.	20 MHz/mA	20 MHz/mA	20 MHz/mA
3 dB Bandwidth, Typ.	5 kHz	5 kHz	5 kHz
Linearity, Typ.	± 6 MHz	± 8 MHz	± 10 MHz
Hysteresis, Typ.	10 MHz	12 MHz	12 MHz
Input Impedance @ 1 kHz, Typ.	6 Ohm / 75 mH	6 Ohm / 75 mH	6 Ohm / 75 mH
FM Coil			
Sensitivity, Typ.	410 kHz/ma	410 kHz/ma	410 kHz/ma
3 dB Bandwidth, Typ.	2 MHz	2 MHz	2 MHz
Deviation @ 400 kHz Rate, Min.	40 MHz	40 MHz	40 MHz
Input Impedance @ 1 MHz, Typ.	1.0 Ohm / 10uH	1.0 Ohm / 10uH	1.0 Ohm / 10uH
DC Circuit Power +8 Vdc Min. +15 Vdc Max.			
	225 mA	225 mA	225 mA
-5 Vdc +/- 5%			
	20 mA	20 mA	20 mA
YIG Heater Power			
Input Voltage Range	+12 Vdc / +28 Vdc	+12 Vdc / +28 Vdc	+12 Vdc / +28 Vdc
Current Surge	150 mA / 250 mA	150 mA / 250 mA	150 mA / 250 mA
Steady State, Max.	60 mA/ 25 mA	60 mA/ 25 mA	60 mA/ 25 mA
Case Style	11-137	11-137	11-137

Note 1. Extended temperature range of -40 to +85 °C available.



Outline Drawing 11-137

