

## FEATURES

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

## DESCRIPTION

MICRO LAMBDA **MLXB-Extreme Series** 1.25" square 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.

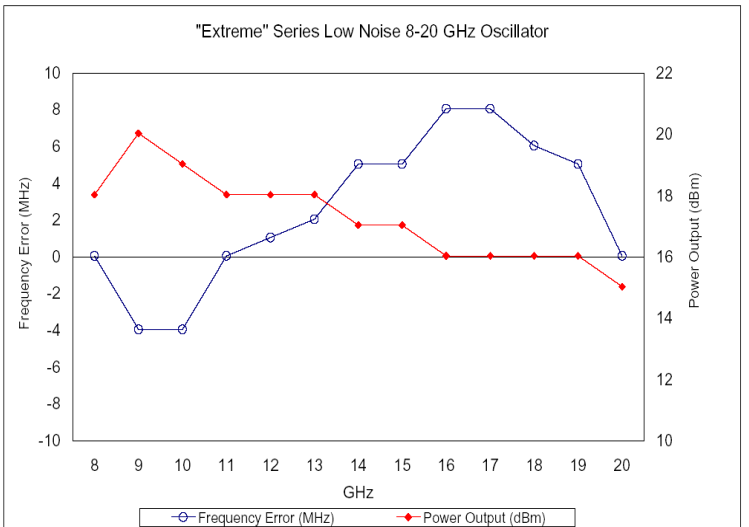
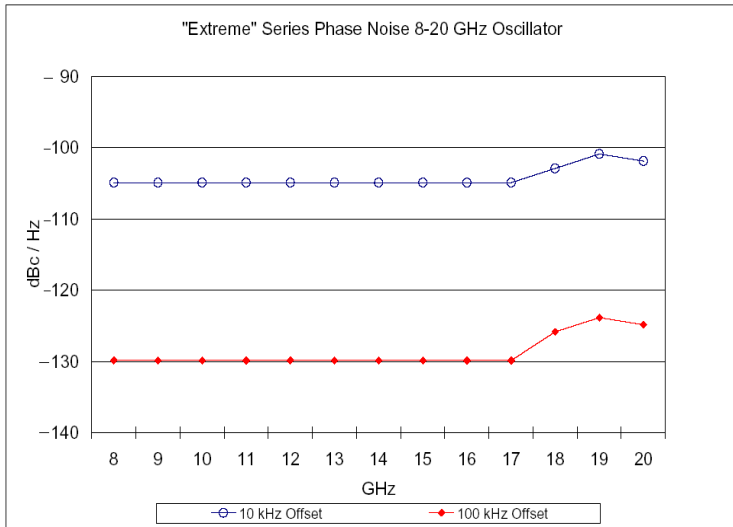


## ELECTRICAL AND PERFORMANCE SPECIFICATIONS

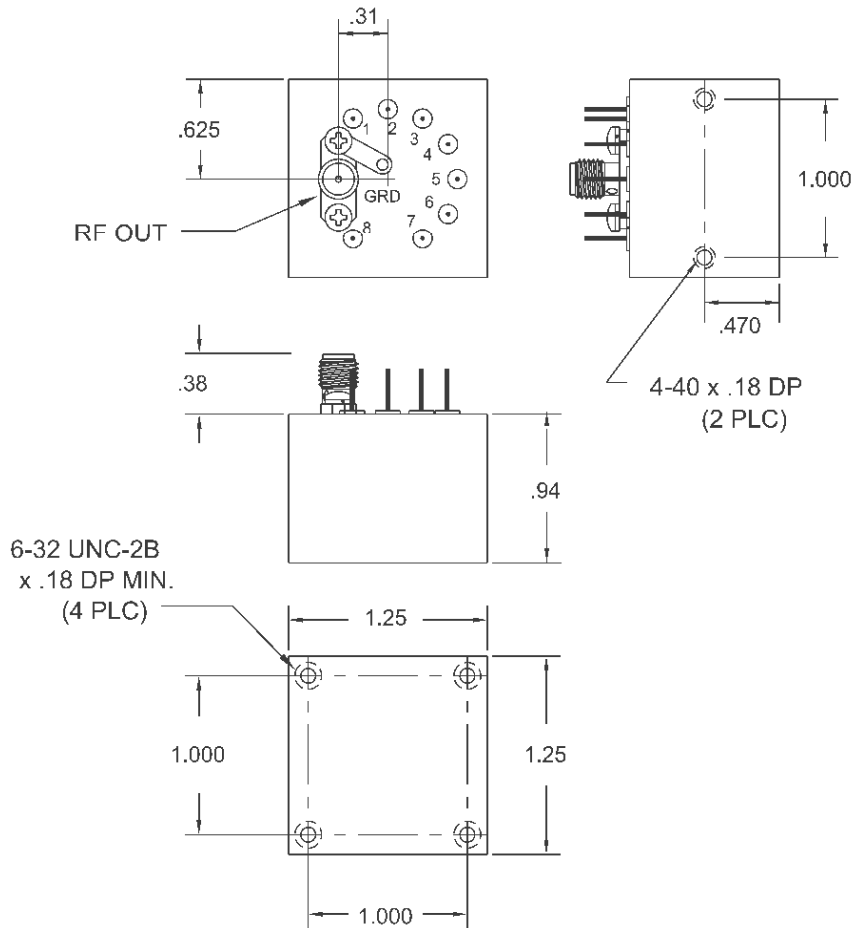
Guaranteed Specifications at 0 °C to +65 °C Case Temperature (Note 1)

Model No.	MLXB-0818	MLXB-0618	MLXB-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
<b>Main Coil</b>			
Sensitivity, Typ.	18 MHz/mA	18 MHz/mA	18 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.	7 Ohm / 40 mH	7 Ohm / 40 mH	7 Ohm / 40 mH
<b>FM Coil</b>			
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
<b>YIG Heater Power</b>			
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	11-023-1	11-023-1	11-023-1

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



Outline Drawing 11-023-1



POS	FUNCTION	POS	FUNCTION
1	+ V	5	+ TUNE
2	- 5V	6	- TUNE
3	+ FM	7	HTR
4	- FM	8	HTR

WEIGHT: 8 Oz.