

## FEATURES

- .7-20 GHz Frequency Coverage
- FM/Phase-Lock Port
- Excellent Phase Noise
- Superb Linearity
- High Reliability



## DESCRIPTION

MICRO LAMBDA MLOB-Series 1.25" square YIG Tuned Oscillators cover octave and multi-octave bands from .7 to 20 GHz for both the commercial and defence applications. Utilizing Thin Film Technology for reliability and cost effectiveness, our standard oscillators are specified to operate from 0 to 65°C. However, all of MICRO LAMBDA oscillators can be furnished to military specifications and an operating temperature range of -54°C to +85°C. With proprietary designs on magnetic circuitry, oscillator circuitry and on coupling techniques, MICRO LAMBDA oscillator products offer excellent Tuning Linearity and Extended Tuning Bandwidth. Oscillators can be furnished with integrated or remote analog or digital drivers.

## ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at -0° to +65° C Case Temperature

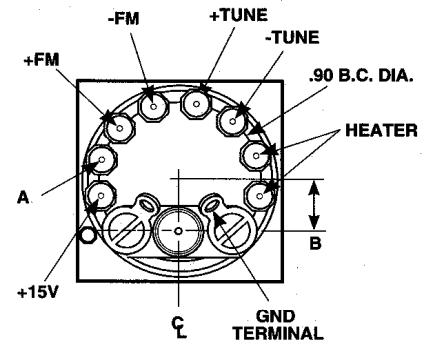
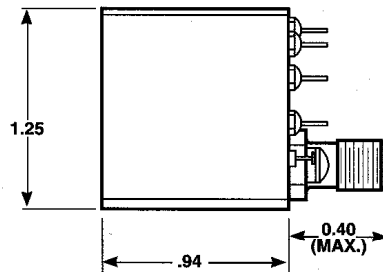
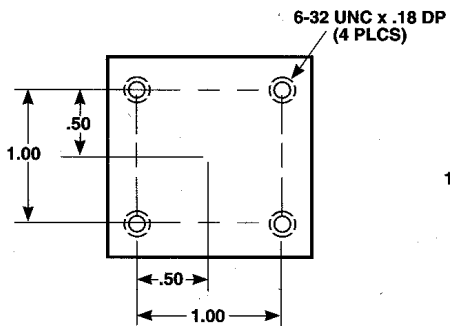
Model No.	MLOB-0702	MLOB-0704	MLOB-0208	MLOB-0212
Frequency Range, Min.	.7-2 GHz	.7-4 GHz	2-8 GHz	2-12.4 GHz
Power Output, Min.	+14 dBm	+14 dBm	+14 dBm	+14 dBm
Power Output Variation, Max.	+/- 2 dB	+/- 3 dB	+/- 3 dB	+/- 3 dB
Frequency Drift over Temperature, Max.	10 MHz	10 MHz	15 MHz	15 MHz
Pulling Figure (12 dB RL), Typ.	1 MHz	1 MHz	1 MHz	1 MHz
Pushing Figure +15 Vdc Supply, Typ.	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V
-5 Vdc Supply, Typ.	-	-	-	1 MHz/V
Magnetic Susceptibility @ 60 Hz, Typ.	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss
2nd Harmonic, Min.	-8 dBc	-8 dBc	-12 dBc	-12 dBc
3rd Harmonic, Min.	-12 dBc	-12 dBc	-15 dBc	-15 dBc
Spurious Output, Min.	-70 dBc	-70 dBc	-70 dBc	-70 dBc
Main Coil				
Sensitivity, Typ.	20 MHz/mA	20 MHz/mA	20 MHz/mA	20 MHz/mA
3 dB Bandwidth, Typ.	5 kHz	5 kHz	5 kHz	5 kHz
Linearity, Typ.	+/- 0.1 %	+/- 0.1 %	+/- 0.1 %	+/- 0.25 %
Hysteresis, Typ.	2 MHz	3 MHz	8 MHz	10 MHz
Input Impedance @ 1 kHz, Typ.	10 Ohm / 75 mH	10 Ohm / 75 mH	10 Ohm / 75 mH	10 Ohm / 75 mH
FM Coil				
Sensitivity, Typ.	310 kHz/ma	310 kHz/ma	310 kHz/ma	310 kHz/ma
3 dB Bandwidth, Typ.	400 kHz	400 kHz	400 kHz	400 kHz
Deviation @ 400 kHz Rate, Min.	15 MHz	20 MHz	40 MHz	40 MHz
Input Impedance @ 1 MHz, Typ.	1.0 Ohm / 10uH	1.0 Ohm / 10uH	1.0 Ohm / 10uH	1.0 Ohm / 10uH
DC Circuit Power, Max.+15 Vdc +/- 5%	100 mA	100 mA	100 mA	100 mA
-5 Vdc +/- 5%	-	-	-	50 mA
YIG Heater Power				
Input Voltage Range	+24 +/- 4 Vdc	+24 +/- 4 Vdc	+24 +/- 4 Vdc	+24 +/- 4 Vdc
Current Surge/Steady State, Max.	250 mA / 25 mA	250 mA / 25 mA	250 mA / 25 mA	250 mA / 25 mA
Case Style	11-030	11-030	11-030	11-023

# ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at -0° to +65° C Case Temperature

Model No.	MLOB-0412	MLOB-0716	MLOB-0618	MLOB-0820
Frequency Range, Min.	4-12.4 GHz	7-16 GHz	6-18 GHz	8-20 GHz
Power Output, Min.	+14 dBm	+13 dBm	+13 dBm	+13 dBm
Power Output Variation, Max.	+/- 3 dB	+/- 3 dB	+/- 3 dB	+/- 3 dB
Frequency Drift over Temperature, Max.	15 MHz	20 MHz	30 MHz	20 MHz
Pulling Figure (12 dB RL), Typ.	1 MHz	1 MHz	1 MHz	1 MHz
Pushing Figure +15 Vdc Supply, Typ.	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V
-5 Vdc Supply, Typ.	1 MHz/V	-	-	-
Magnetic Susceptibility @ 60 Hz, Typ.	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss
2nd Harmonic, Min.	-12 dBc	-12 dBc	-12 dBc	-12 dBc
3rd Harmonic, Min.	-15 dBc	-20 dBc	-20 dBc	-20 dBc
Spurious Output, Min.	-70 dBc	-70 dBc	-70 dBc	-70 dBc
<b>Main Coil</b>				
Sensitivity, Typ.	20 MHz/mA	18 MHz/mA	18 MHz/mA	18 MHz/mA
3 dB Bandwidth, Typ.	5 kHz	5 kHz	5 kHz	5 kHz
Linearity, Typ.	+/- 0.15 %	+/- 0.1 %	+/- 0.15 %	+/- 0.15 %
Hysteresis, Typ.	8 MHz	10 MHz	12 MHz	15 MHz
Input Impedance @ 1 kHz, Typ.	10 Ohm / 75 mH	10 Ohm / 75 mH	10 Ohm / 75 mH	10 Ohm / 75 mH
<b>FM Coil</b>				
Sensitivity, Typ.	310 kHz/ma	410 kHz/ma	410 kHz/ma	410 kHz/ma
3 dB Bandwidth, Typ.	400 kHz	400 kHz	400 kHz	400 kHz
Deviation @ 400 kHz Rate, Min.	40 MHz	40 MHz	40 MHz	40 MHz
Input Impedance @ 1 MHz, Typ.	1.0 Ohm / 10uH	1.0 Ohm / 10uH	1.0 Ohm / 10uH	1.0 Ohm / 10uH
<b>DC Circuit Power, Max.+15 Vdc +/- 5%</b>				
-5 Vdc +/- 5%	100 mA	100 mA	100 mA	100 mA
	50 mA	-	50 mA	-
<b>YIG Heater Power</b>				
Input Voltage Range	+24 +/- 4 Vdc	+24 +/- 4 Vdc	+24 +/- 4 Vdc	+24 +/- 4 Vdc
Current Surge/Steady State, Max.	250 mA / 25 mA	250 mA / 25 mA	250 mA / 25 mA	250 mA / 25 mA
Case Style	11-023	11-030	11-023	11-030

Drawings: 11-023 / 11-030



Case	A	B
023	-5	.310
030	N/C	.415

WEIGHT: 6 oz

Dimensions are in inches