

## FEATURES

- 1-18 GHz Frequency Coverage
- FM/Phase-Lock Port
- Excellent Phase Noise
- Superb Linearity
- High Reliability



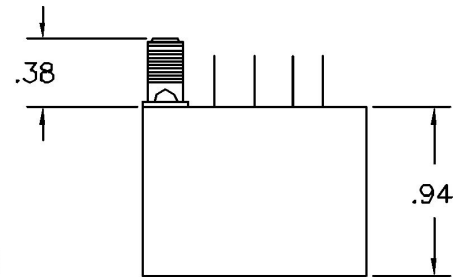
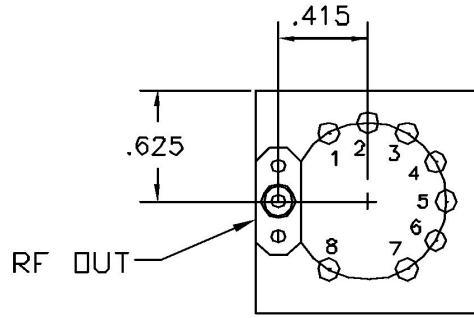
## DESCRIPTION

MICRO LAMBDA MLOB-Series 1.25" square YIG Tuned Oscillators cover octave and multi-octave bands from 1-18 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, 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.

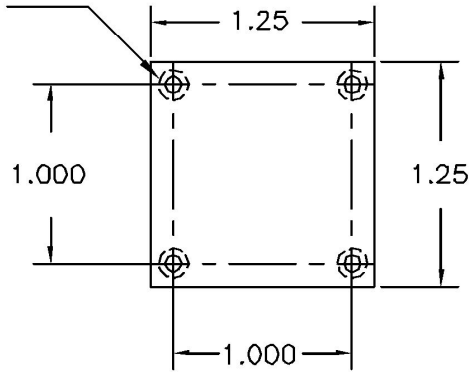
## ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

Model No.	MLOB-0102	MLOB-0204	MLOB-0408	MLOB-0812	MLOB-1218
Frequency Range, Min.	1-2 GHz	2-4 GHz	4-8 GHz	8-12.4 GHz	12-18 GHz
Power Output, Min.	+14 dBm	+14 dBm	+14 dBm	+13 dBm	+13 dBm
Power Output Variation, Max.	+/- 2 dB	+/- 2 dB	+/- 2 dB	+/- 2 dB	+/- 2 dB
Frequency Drift over Temperature, Max.	10 MHz	10 MHz	15 MHz	15 MHz	15 MHz
Pulling Figure (12 dB RL), Typ.	1 MHz	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	0.1 MHz/V
-5 Vdc Supply, Typ.	-	-	-	-	-
Magnetic Susceptibility @ 60 Hz, Typ.	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss	50 kHz/gauss
2nd Harmonic, Min.	-8 dBc	-8 dBc	-12 dBc	-12 dBc	-12 dBc
3rd Harmonic, Min.	-12 dBc	-12 dBc	-15 dBc	-15 dBc	-20 dBc
Spurious Output, Min.	-70 dBc	-70 dBc	-70 dBc	-70 dBc	-70 dBc
Main Coil					
Sensitivity, Typ.	20 MHz/mA	20 MHz/mA	20 MHz/mA	20 MHz/mA	20 MHz/mA
3 dB Bandwidth, Typ.	5 kHz	5 kHz	5 kHz	5 kHz	5 kHz
Linearity, Typ.	+/- 0.1 %	+/- 0.1 %	+/- 0.1 %	+/- 0.1 %	+/- 0.1 %
Hysteresis, Typ.	2 MHz	3 MHz	8 MHz	8 MHz	8 MHz
Input Impedance @ 1 kHz, Typ.	10 Ohm / 75 mH	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	410 kHz/ma	410 kHz/ma
3 dB Bandwidth, Typ.	400 kHz	400 kHz	400 kHz	400 kHz	400 kHz
Deviation @ 400 kHz Rate, Min.	15 MHz	20 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	1.0 Ohm / 10uH
DC Circuit Power, Max.+15 Vdc +/- 5%	100 mA	100 mA	100 mA	100 mA	100 mA
-5 Vdc +/- 5%	-	-	-	-	-
YIG Heater Power					
Input Voltage Range	+24 +/- 4 Vdc	+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	250 mA / 25 mA
Case Style	11-030	11-030	11-030	11-030	11-030



6-32 UNC-2B  
 x .18 DP MIN.  
 (4 PLC)



POS	FUNCTION	POS	FUNCTION
1	+ 15V	5	+ TUNE
2	GRD	6	- TUNE
3	+ FM	7	HTR
4	- FM	8	HTR

**WEIGHT: 8 Oz.**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:  
 FRACTIONS DECIMALS ANGLES  
 . . . . .  
 . . . . .  
 . . . . .

MATERIAL CARPENTER 49  
 FINISH  
 DO NOT SCALE DRAWING

CONTRACT NO.	
APPROVALS	DATE
DRAWN N. NGUYEN	8/18/83
CHECKED	
ISSUED	



**MICRO LAMBDA, INC.**

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**1.25" OSCILLATOR**

SIZE	CAGE No	QTY. NO.	REV.
	0RN63	11 - 030	