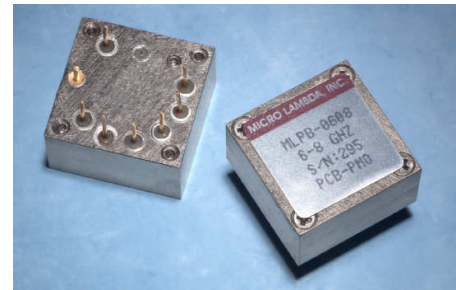




FEATURES

- 2-8 GHz Frequency Coverage
- FM/Phase-Lock Port
- Miniature Size
- High Reliability
- PC Board Mount Compatible



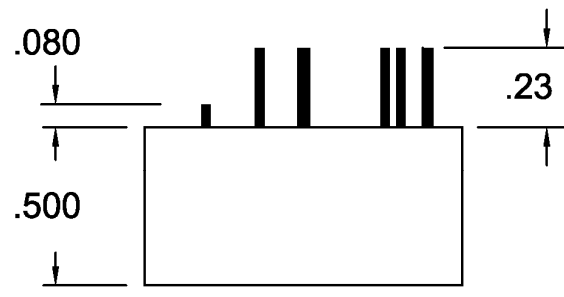
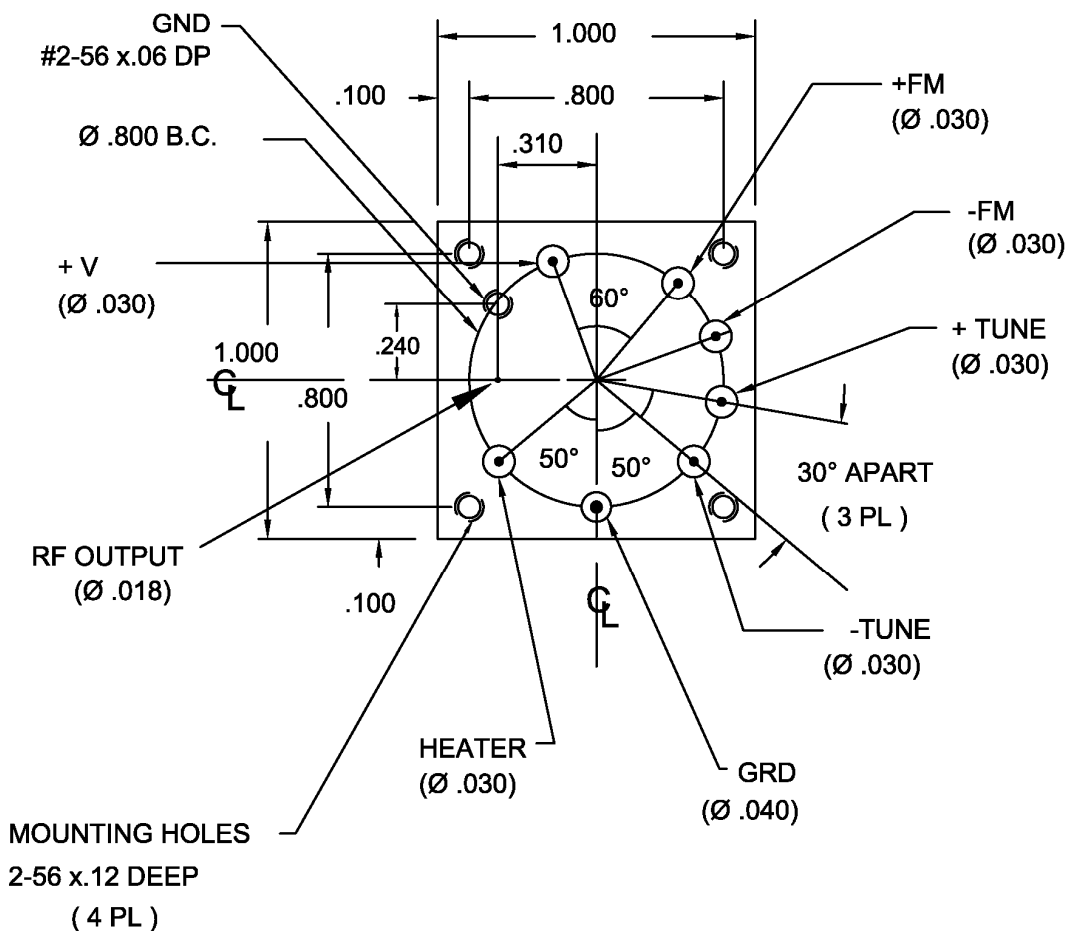
DESCRIPTION

The MICRO LAMBDA MLPB-Series Miniature Permanent Magnet YIG-Tuned oscillators are signal sources covering the frequency range of 2-8 GHz. These oscillators have been designed specifically for commercial applications where small size at low cost is the primary consideration. The oscillator utilizes a bipolar transistor coupled to a YIG sphere in a thin-film oscillator circuit. YIG heaters with low surge currents are used to maintain temperature stability. These oscillators have been designed specifically for mounting to industry standard PC board mediums. Standard size is 1 " x 1 " x .5" and weigh one ounce.


ELECTRICAL AND PERFORMANCE SPECIFICATIONS

Guaranteed Specifications at -20° to +70° C Case Temperature

Model No.	MLPB-0204	MLPB-0305	MLPB-0406	MLPB-0507	MLPB-0608
Frequency Range, Min.	2-4 GHz	3-5 GHz	4-6 GHz	5-7 GHz	6-8 GHz
Free Run Frequency (w/o Main Coil)	3 GHz	4 GHz	5 GHz	6 GHz	7 GHz
Power Output, Min.	+15 dBm	+14 dBm	+14 dBm	+14 dBm	+14 dBm
Power Output Variation, Max.	+/- 1 dB	+/- 1 dB	+/- 1 dB	+/- 1 dB	+/- 1 dB
Frequency Drift over Temperature, Max.	20 MHz	20 MHz	20 MHz	20 MHz	20 MHz
Pulling Figure (12 dB RL), Typ.	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz
Pushing Figure +12 Vdc Supply, Typ.	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V
2nd Harmonic, Min.	-12 dBc	-12 dBc	-12 dBc	-12 dBc	-12 dBc
3rd Harmonic, Min.	-20 dBc	-20 dBc	-20 dBc	-20 dBc	-20 dBc
Spurious Output, Min.	-70 dBc	-70 dBc	-70 dBc	-70 dBc	-70 dBc
Phase Noise @ 10kHz Offset min	-100 dBc/Hz	-100 dBc/Hz	-100 dBc/Hz	-100 dBc/Hz	-100 dBc/Hz
@ 100kHz Offset min	-125 dBc/Hz	-125 dBc/Hz	-125 dBc/Hz	-125 dBc/Hz	-125 dBc/Hz
@ 100kHz Offset typ.	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz
Main Coil					
Sensitivity, Typ.	9 MHz/mA	9 MHz/mA	9 MHz/mA	9 MHz/mA	9 MHz/mA
Linearity, Typ.	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz
Hysteresis, Typ.	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz
Input Impedance @ 1 kHz, Typ.	70 Ohm / 15 mH	70 Ohm / 15 mH	70 Ohm / 15 mH	70 Ohm / 15 mH	70 Ohm / 15 mH
FM Coil					
Sensitivity, Typ.	310 kHz/ma	310 kHz/ma	310 kHz/ma	310 kHz/ma	310 kHz/ma
3 dB Bandwidth, Typ.	400 kHz	400 kHz	400 kHz	400 kHz	400 kHz
Deviation @ 400 kHz Rate, Min.	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz
Input Impedance @ 1 MHz, Typ.	1.0 Ohm / 2.0uH	1.0 Ohm / 2.0uH	1.0 Ohm / 2.0uH	1.0 Ohm / 2.0uH	1.0 Ohm / 2.0uH
DC Circuit Power, Max.+12 Vdc +/- 5%	100 mA	100 mA	100 mA	100 mA	100 mA
YIG Heater Power					
Input Voltage Range	+15 Vdc	+15 Vdc	+15 Vdc	+15 Vdc	+15 Vdc
Current Surge/Steady State, Max.	250 mA / 50 mA	250 mA / 50 mA	250 mA / 50 mA	250 mA / 50 mA	250 mA / 50 mA
Case Style	61-053	61-053	61-053	61-053	61-053



WEIGHT: 1 Oz.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE:		CONTRACT NO.		 MICRO LAMBDA, INC.	
FRACTIONS	DECIMALS	ANGLES			
<small> # .xx ±.01 * .xxx ±.005 </small>			APPROVALS	DATE	
MATERIAL	CARPENTER 49	DRAWN	N. NGUYEN	10/10/01	
FINISH		CHECKED			
		ISSUED			
DO NOT SCALE DRAWING		SIZE	CAGE No 0RN63	DWG. NO. 61 - 053	REV. E

PCB MOUNTABLE PMO