

FEATURES

- 2-8 GHz Frequency Coverage
- FM/Phase-Lock Port
- Miniature Size
- High Reliability
- Reduced Cost

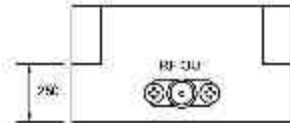
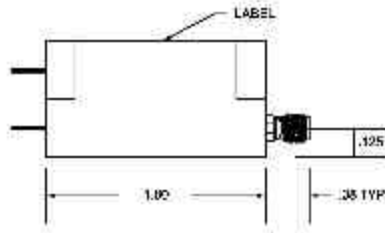
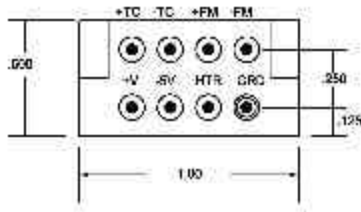
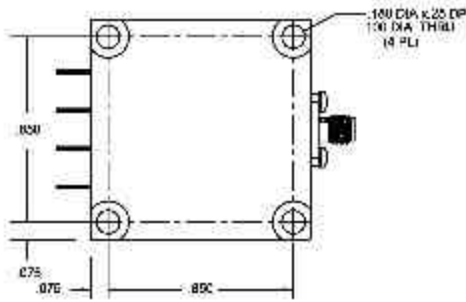

DESCRIPTION

The MICRO LAMBDA MLMY-Series Miniature 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. Standard output power levels of +15 dBm over the specified frequency band including the temperature range of 0° to +65°C is provided. These oscillators are available in standard 1 " x 1 " x .5" configuration and have field replaceable SMA connectors.

ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

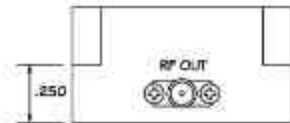
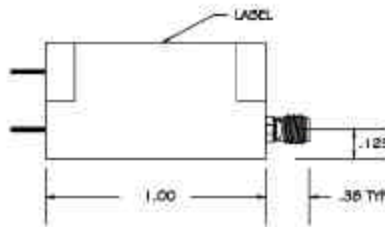
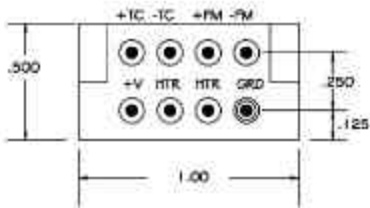
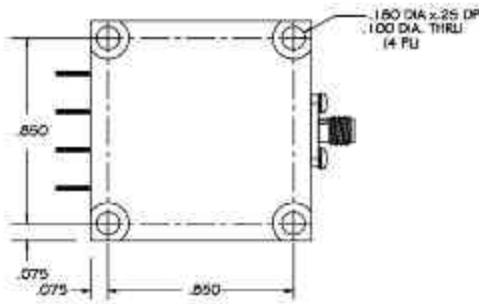
Model No.	MLMY-0702	MLMY-0204	MLMY-0408	MLMY-0208
Frequency Range, Min.	.7-2 GHz	2-4 GHz	4-8 GHz	2-8 GHz
Power Output, Min.	+15 dBm	+15 dBm	+14 dBm	+13 dBm
Power Output Variation, Max.	+/- 2 dB	+/- 2 dB	+/- 2 dB	+/- 2 dB
Frequency Drift over Temperature, Max.	10 MHz	10 MHz	10 MHz	15 MHz
Pulling Figure (12 dB RL), Typ.	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
-5 Vdc Supply, Typ.	N/A	1 MHz/V	1 MHz/V	1 MHz/V
Magnetic Susceptibility @ 60 Hz, Typ.	110 kHz/gauss	110 kHz/gauss	110 kHz/gauss	110 kHz/gauss
2nd Harmonic, Min.	-8 dBc	-12 dBc	-12 dBc	-12 dBc
3rd Harmonic, Min.	-12 dBc	-20 dBc	-20 dBc	-20 dBc
Spurious Output, Min.	-60 dBc	-70 dBc	-70 dBc	-70 dBc
Phase Noise @ 10kHz Offset	-80 dBc/Hz	-98 dBc/Hz	-98 dBc/Hz	-98 dBc/Hz
@ 100kHz Offset	-105 dBc/Hz	-120 dBc/Hz	-120 dBc/Hz	-120 dBc/Hz
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 %	+/- 0.1 %
Hysteresis, Typ.	3 MHz	3 MHz	3 MHz	5 MHz
Input Impedance @ 1 kHz, Typ.	35 Ohm / 17 mH	17 Ohm / 17 mH	17 Ohm / 17 mH	17 Ohm / 17 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.	+/- 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
DC Circuit Power, Max.+12 Vdc +/- 5%	100 mA	100 mA	100 mA	100 mA
-5 Vdc +/- 5%	N/A	50 mA	50 mA	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	81-041-2	81-041-1	81-041-1	81-041-1



REV	DESCRIPTION	DATE	APPROVED

WEIGHT: 1 Oz.

DRAWN BY: H. NOLTYN CHECKED BY: H. NOLTYN DATE: 11/10/58		CONTRACT NO. MICRO LAMBDA WIRELESS, INC.	
PART NO. ORNG3 REV. NO. 1		MINIATURE OSCILLATOR (DUAL SUPPLY)	
QTY	DATE	REV. NO.	REV.
		ORNG3	81-041-1



REV	DESCRIPTION	DATE	APPROVED

WEIGHT: 1 Oz.

DRAWN BY: H. NOLTYN CHECKED BY: H. NOLTYN DATE: 11/10/58		CONTRACT NO. MICRO LAMBDA, INC.	
PART NO. ORNG3 REV. NO. 2		MINIATURE OSCILLATOR (+V ONLY)	
QTY	DATE	REV. NO.	REV.
		ORNG3	81-041-2