



FEATURES

- Up to 13 GHz Frequency Coverage
- FM/Phase-Lock Port
- Surface Mount Package
- High Reliability



DESCRIPTION

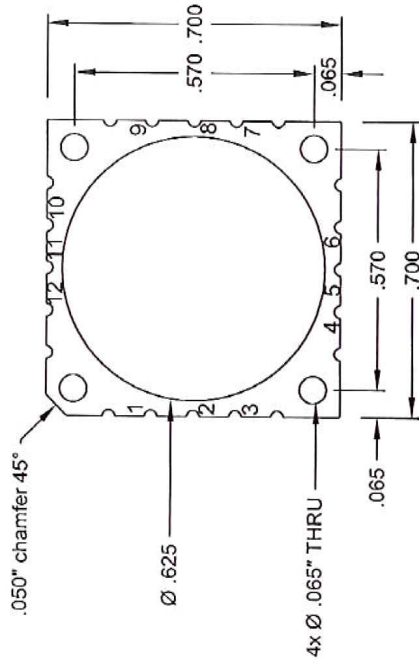
The MICRO LAMBDA **MLSMO**-Series Permanent Magnet YIG-Tuned Oscillators cover the frequency range of 2-13 GHz. They are available in customer selected tuning ranges and are fitted with a low power main coil, and FM coil for phase locking. All units operate from a +8 Volt and -5 Volt supply and operate over the 0° to + 65°C temperature range. Units do not require a heater.

ELECTRICAL AND PERFORMANCE SPECIFICATIONS

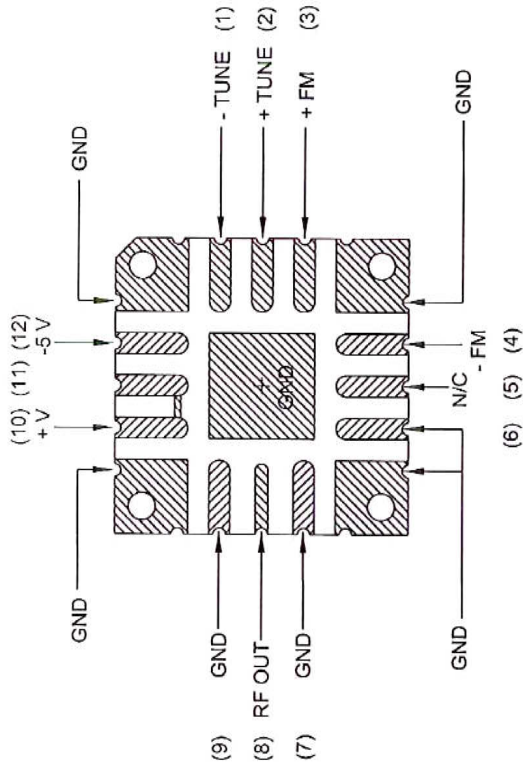
Guaranteed Specifications at 0° to +65° C Case Temperature

Model No.	MLSMO-50204	MLSMO-50306	MLSMO-50308	MLSMO-50409	MLSMO-50613
Frequency Range, Min.	2-4 GHz	3-6 GHz	3-8 GHz	4-9 GHz	6.5-13 GHz
Free Run Frequency	3 GHz	4.5 GHz	5.5 GHz	6.5 GHz	9.6 GHz
Free Run Frequency Settability	+/- 200 MHz	+/- 200 MHz	+/- 200 MHz	+/- 200 MHz	+/- 200 MHz
Power Output, Min.	+8 dBm	+8 dBm	+8 dBm	+8 dBm	+8 dBm
Power Output Variation, Max.	4 dB	4 dB	4 dB	4 dB	4 dB
Freq. Drift over Temp., Max.	+/-10 MHz	+/-10 MHz	+/-10 MHz	+/-25 MHz	+/-20 MHz
Pulling Figure (12 dB RL), Typ.	2 MHz	2 MHz	2 MHz	2 MHz	2 MHz
Pushing Figure +8 Vdc, Typ.	2 MHz/V	2 MHz/V	2 MHz/V	2 MHz/V	2 MHz/V
Harmonics, Min.	-15 dBc	-15 dBc	-15 dBc	-12 dBc	-12 dBc
Spurious Output, Min.	-70 dBc	-70 dBc	-70 dBc	-70 dBc	-70 dBc
Phase Noise @ 10kHz Offset Min.	-103 dBc/Hz	-103 dBc/Hz	-103 dBc/Hz	-103 dBc/Hz	-100 dBc/Hz
@ 100kHz Offset Min.	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-125 dBc/Hz
Main Coil					
Sensitivity, Typ.	9.7 MHz/ma	9.7 MHz/ma	9.7 MHz/ma	9.7 MHz/ma	12 MHz/ma
Linearity, Typ.	+/-4 MHz	+/-6 MHz	+/-9 MHz	+/-9 MHz	+/-6 MHz
Hysteresis, Typ.	4 MHz	6 MHz	8 MHz	8 MHz	17 MHz
Impedance @ 1 kHz, Typ.	9 Ohm/30 mH	9 Ohm/30 mH	9 Ohm/30 mH	9 Ohm/30 mH	25 Ohm/30 mH
FM Coil					
Sensitivity, Typ.	300 kHz/ma	300 kHz/ma	300 kHz/ma	300 kHz/ma	230 kHz/ma
3 dB Bandwidth, Typ.	1 MHz	1 MHz	1 MHz	1 MHz	1 MHz
Deviation @ 400 kHz, Min.	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz
Impedance @ 1 MHz, Typ.	.7 Ohm/1 uH	.7 Ohm/1 uH	.7 Ohm/1 uH	.7 Ohm/1.0 uH	1.0 Ohm/1.0 uH
DC Power, Max. +8.0 Vdc +/- 0.5 V	60 mA	60 mA	60 mA	60 mA	60 mA
-5.0 Vdc +/- 0.25 V	15 mA	15 mA	15 mA	15 mA	15 mA
Case Style	99-0091-009	99-0091-009	99-0091-009	99-0091-009	99-0091-009

TOP VIEW



BOTTOM VIEW



WEIGHT: .56 Oz. [16g]

NOTES:

1. PCB LAYOUT INFO. AVAILABLE ON REQUEST.
2. TWO +V PINS ARE AVAILABLE FOR CONNECTION [PIN'S 10 & 11], ONLY ONE IS REQ. FOR OPERATION.
3. ALL PCB TRACES ARE GOLD PLATED.
4. HAND SOLDER OR MOUNT WITH (4) #0-80 SCREWS AND #0 LIGHT SPLIT LOCK WASHER/STAINLESS STEEL.
5. NO REFLOW SOLDER OR SUBMERSED CLEANING.

ABSOLUTE MAXIMUM RATINGS:

+ V = -0.3V TO +8.5V ; -V = +0.3V TO -5.5V
 FM COIL ≤ 250mA ; TUNE COIL ≤ 1200mA

REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE: FRACTIONS DECIMALS ANGLES * .XX ±.02 * .XXX ±.010		CONTRACT NO.	
MATERIAL		APPROVALS	DATE
FINISH		DRAWN N. NGUYEN	3/27/12
DO NOT SCALE DRAWING		CHECKED DS	3/27/12
		ISSUED	
		SCALE	SHEET
		CAGE No. 0RN63	DWG. NO. 99-0091-009
		SIZE	REV.
		MICRO LAMBDA WIRELESS, INC.	
		SURFACE MOUNT YIG OSC. (.7" X .7 X .562" HIGH)	