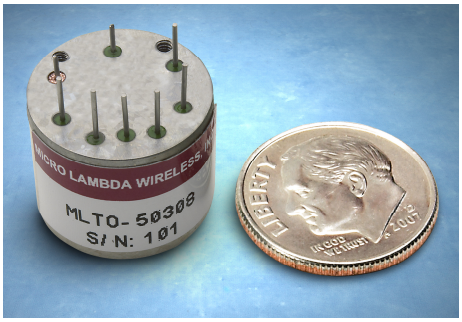
MICRO LAMBDA WIRELESS, INC.

SECOND GENERATION
MLTO SERIES (TO-8 .5")
PERMANENT MAGNET YTO's



FEATURES

- Up to 13 GHz Frequency Coverage
- FM/Phase-Lock Port
- TO-8 Package
- High Reliability

DESCRIPTION

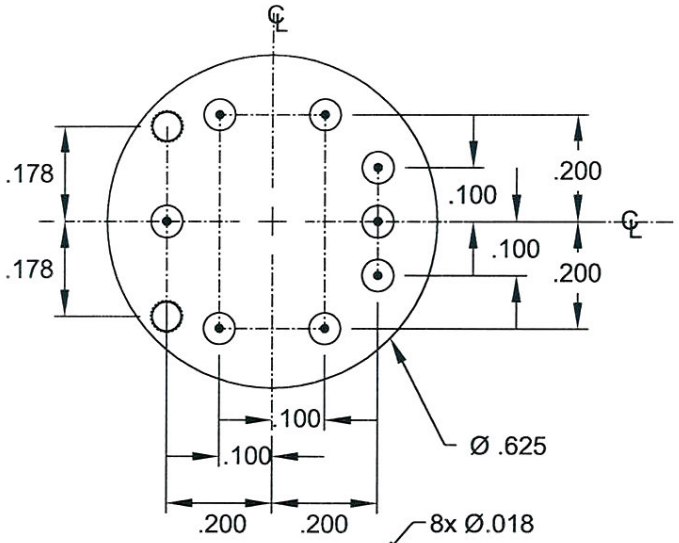
The MICRO LAMBDA **MLTO**-Series Permanent Magnet YIG-Tuned Oscillators cover the frequency range of 3-13 GHz. They are available in customer selected tuning ranges and are fitted with a low power main coil, and FM coil for phase locking. All units operate from a +8 Volt and –5 Volt supply and operate over the 0º to + 65ºC temperature range. Units do not require a heater.

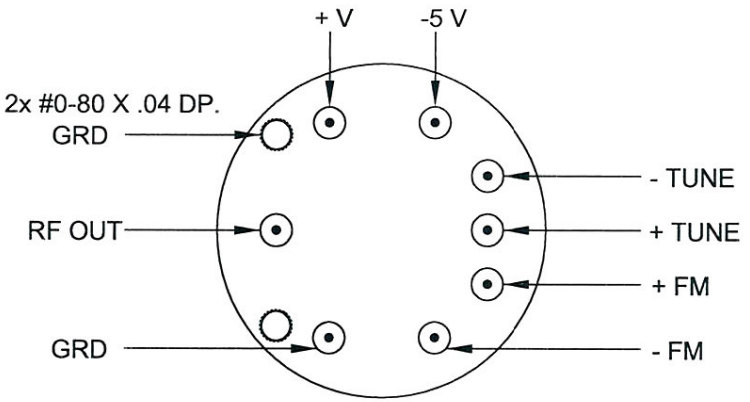
ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

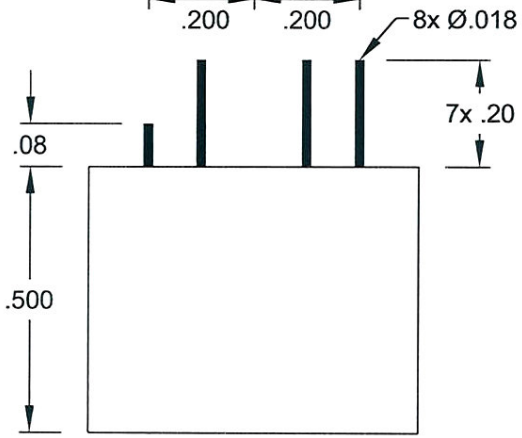
Model No.	MLTO-50365	MLTO-50409	MLTO-50613
Frequency Range, Min.	3.0-6.5 GHz	4.0-9.0 GHz	6.5-13.0 GHz
Free Run Frequency	4.7 GHz	6.5 GHz	9.6 GHz
Free Run Frequency Settability	+/- 200 MHz	+/- 200 MHz	+/- 200 MHz
Power Output, Min.	+10 dBm	+9 dBm	+9 dBm
Power Output Variation, Max.	3 dB	4 dB	4 dB
Freq. Drift over Temp., Max.	+/-25 MHz	+/-25 MHz	+/-20 MHz
Pulling Figure (12 dB RL), Typ.	2 MHz	2 MHz	2 MHz
Pushing Figure +8 Vdc, Typ.	2 MHz/V	2 MHz/V	2 MHz/V
Harmonics, Min.	-12 dBc	-12 dBc	-12 dBc
Spurious Output, Min.	-70 dBc	-70 dBc	-70 dBc
Phase Noise @ 10kHz Offset, Typ.	-100 dBc/Hz	-100 dBc/Hz	-98 dBc/Hz
@ 100kHz Offset, Min.	-125 dBc/Hz	-125 dBc/Hz	-124 dBc/Hz
@ 100 kHz Offset, Typ	-128 dBc/Hz	-128 dBc/Hz	-126 dBc/Hz
Main Coil			
Sensitivity, Typ.	9 MHz/mA	15 MHz/mA	12 MHz/mA
Linearity, Typ.	+/-6 MHz	+/-9 MHz	+/-6 MHz
Hysteresis, Typ.	6 MHz	8 MHz	17 MHz
Impedance @ 1 kHz, Typ.	6 Ohm/10 mH	20 Ohm/30 mH	25 Ohm/25 mH
FM Coil			
Sensitivity, Typ.	150 kHz/ma	150 kHz/ma	230 kHz/ma
3 dB Bandwidth, Min.	1 MHz	1 MHz	1 MHz
Deviation @ 400 kHz, Min.	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz
Impedance @ 1 MHz, Typ.	1.0 Ohm/1.0 uH	1.0 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
-5.0 Vdc +/- 0.25 V	20 mA	20 mA	15 mA
Case Style	91-001	91-001	91-001

Micro Lambda Wireless, Inc. - 46515 Landing Parkway, Fremont California 94538 * Phone (510) 770-9221 * Fax (510) 770-9213

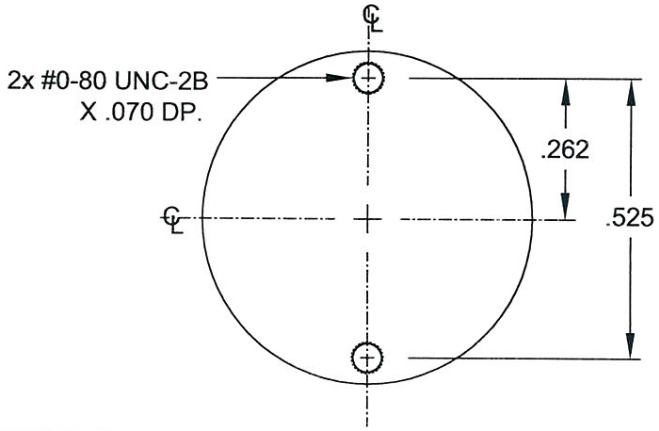




PIN OUT



WEIGHT: .56 Oz (16g)



REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECCIFIED DIMENSIONS ARE IN INCHES
TOLERANCE ARE :
FRACTIONS DECIMALS ANGLES
± .xx ±.010
± .xxx ±.005

MATERIAL

FINISH

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS	DATE
DRAWN N.NGUYEN	11/18/09
CHECKED	11/18/09
ISSUED	

MICRO LAMBDA WIRELESS, INC.

PC MOUNT OSCILLATOR
(ø .625" X .500" HIGH)

SIZE	CAGE No.	DWG. NO.	REV.
	0RN63	91 - 001	

SCALE SHEET