



**MICRO LAMBDA
WIRELESS, INC.**

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

FEATURES

- 2-9 GHz Frequency Coverage
- FM/Phase-Lock Port
- TO-8 Package
- High Reliability



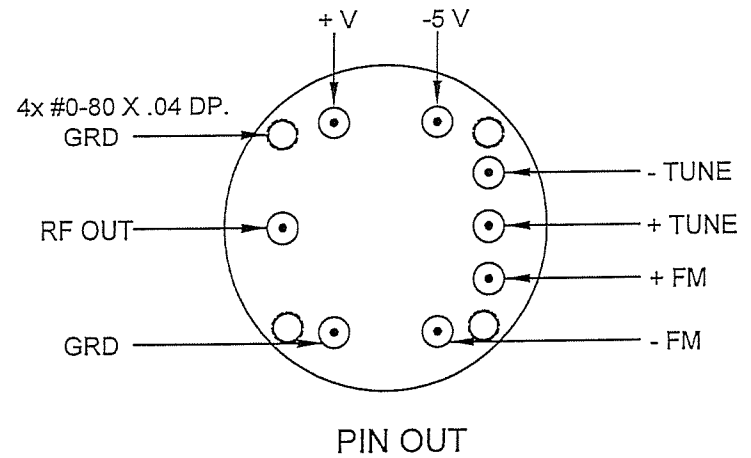
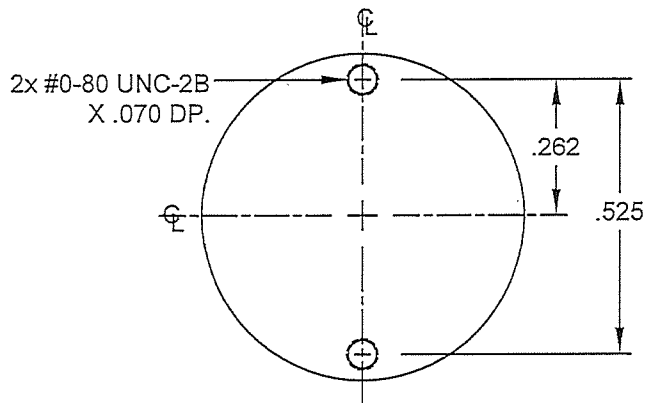
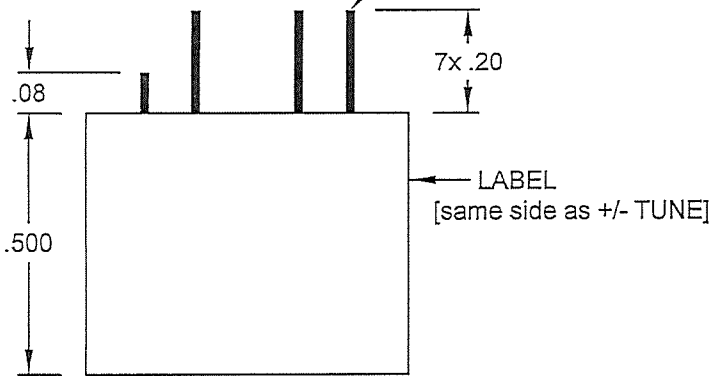
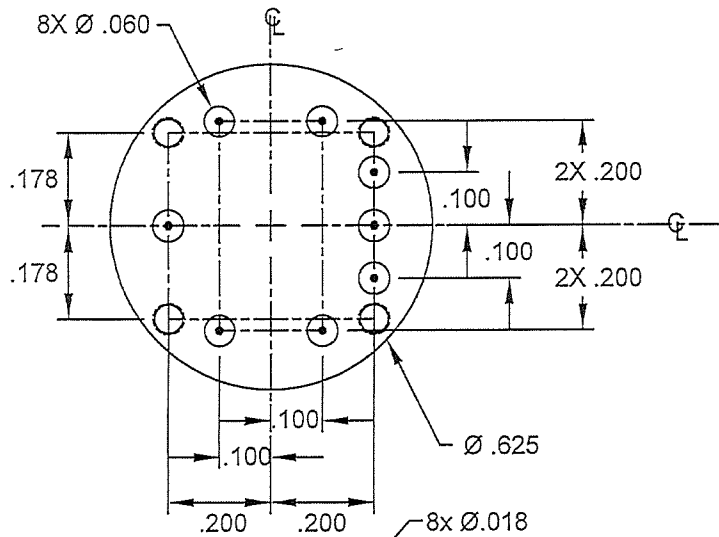
DESCRIPTION

The MICRO LAMBDA **MLTO**-Series Permanent Magnet YIG-Tuned Oscillators cover the frequency range of 2-9 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.	MLTO-50204	MLTO-50306	MLTO-50365	MLTO-50308	MLTO-50409
Frequency Range, Min.	2-4 GHz	3-6 GHz	3.0-6.5 GHz	3-8 GHz	4.0-9.0 GHz
Free Run Frequency	3 GHz	4.5 GHz	4.7 GHz	5.5 GHz	6.5 GHz
Free Run Frequency Settability	+/- 300 MHz	+/- 300 MHz	+/- 300 MHz	+/- 300 MHz	+/- 300 MHz
Power Output, Min.	+10 dBm	+10 dBm	+10 dBm	+9 dBm	+9 dBm
Power Output Variation, Max.	3 dB	3 dB	3 dB	4 dB	4 dB
Freq. Drift over Temp., Max.	+/-10 MHz	+/-10 MHz	+/-25 MHz	+/-10 MHz	+/-25 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	-12 dBc	-15 dBc	-12 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.	9.7 MHz/ma	9.7 MHz/ma	9 MHz/ma	9.7 MHz/ma	15 MHz/ma
Linearity, Typ.	+/-4 MHz	+/-6 MHz	+/-6 MHz	+/-9 MHz	+/-9 MHz
Hysteresis, Typ.	4 MHz	6 MHz	6 MHz	8 MHz	8 MHz
Impedance @ 1 kHz, Typ.	9 Ohm/30 mH	9 Ohm/30 mH	6 Ohm/10 mH	9 Ohm/30 mH	20 Ohm/30 mH
FM Coil					
Sensitivity, Typ.	300 kHz/ma	300 kHz/ma	150 kHz/ma	300 kHz/ma	150 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	1.0 Ohm/1.0 uH	.7 Ohm/1 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	20 mA	15 mA	20 mA
Case Style	99-0091-021	99-0091-021	99-0091-021	99-0091-021	99-0091-021



WEIGHT: .56 Oz (16g)

REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE : FRACTIONS DECIMALS ANGLES * .xx ±.010 * .xxx ±.005	CONTRACT NO.		 MICRO LAMBDA WIRELESS, INC.
	APPROVALS	DATE	
MATERIAL	DRAWN	N.NGUYEN	12/15/22
FINISH	CHECKED	<i>John Nguyen</i>	12-15-22
DO NOT SCALE DRAWING	ISSUED		
		SIZE	CAGE No.
			0RN63
		DWG. NO.	99-0091-021
		REV.	F
SCALE			SHEET

PC MOUNT OSCILLATOR
 (Ø .625" X .500" HIGH W/ 4 MTG. SCREWS)