



FEATURES

- 2-14 GHz Frequency Coverage
- Customer Selected Fixed Frequency
- FM/Phase-Lock Port
- Miniature Size
- High Reliability
- Bi-Polar



DESCRIPTION

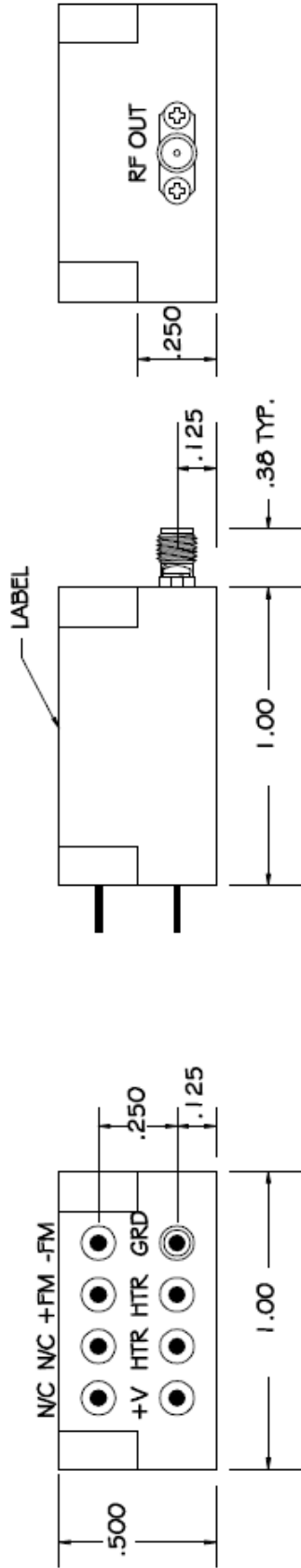
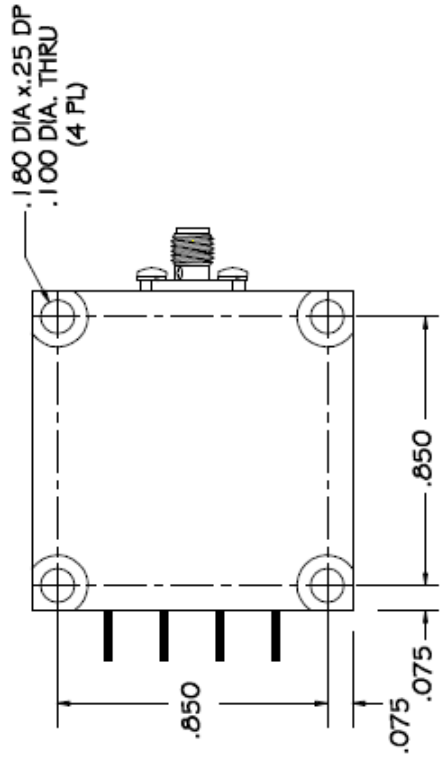
The MICRO LAMBDA *MLPF*-Series Permanent Magnet YIG-Tuned Oscillators cover the frequency range of 2-14 GHz. They are available at customer selected fixed frequencies and are fitted with a FM coil for phase locking. All units operate from a single +12 Volt supply and operate over the -20° to + 70°C temperature range. Units are compliant with ANSI/ETSI thermal, shock and vibration requirements. They are ideal for local oscillators where low phase noise is the prime consideration.

Bi-Polar technology is available 2-14 GHz for superior fundamental and frequency multiplied phase noise. Units are available in a standard 1" x 1" x .5" configuration with a field replaceable RF connector and weigh one ounce.

ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

Model No. (Bi-Polar)	MLPF-0400	MLPF-0600	MLPF-0800	MLPF-1000	MLPF-1200	MLPF-1400
Free Run Frequency	4 GHz	6 GHz	8 GHz	10 GHz	12 GHz	14 GHz
Free Run Frequency Accuracy	+/- 20 MHz	+/- 20 MHz	+/- 20 MHz	+/- 20 MHz	+/- 20 MHz	+/- 20 MHz
Power Output, Min.	+14 dBm	+14 dBm	+13 dBm	+13 dBm	+13 dBm	+13 dBm
Power Output Variation, Max.	+/- 1 dB	+/- 1 dB	+/- 1 dB	+/- 1 dB	+/- 1 dB	+/- 1 dB
Freq. Drift over Temp., Max.	20 MHz	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	1 MHz
Pushing Figure +12 Vdc, Typ.	0.1 MHz/V	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	-12 dBc
3rd Harmonic, Min.	-20 dBc	-20 dBc	-20 dBc	-20 dBc	-20 dBc	-20 dBc
Spurious Output, Min.	-70 dBc	-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	-98 dBc/Hz
@ 100kHz Offset min	-125 dBc/Hz	-125 dBc/Hz	-125 dBc/Hz	-125 dBc/Hz	-125 dBc/Hz	-123 dBc/Hz
@ 100kHz Offset typ.	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-128 dBc/Hz	-125 dBc/Hz
FM Coil						
Sensitivity, Typ.	310 kHz/mA	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	400 kHz
Deviation @ 400 kHz, Min.	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz	+/- 50 MHz
Impedance @ 1 MHz, Typ.	1 Ohm/2 uH	1 Ohm/2 uH	1 Ohm/2 uH	1 Ohm/2 uH	1 Ohm/2 uH	1 Ohm/2 uH
DC Power, Max. +12 Vdc	100 mA	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	+15 Vdc
Current Surge/Steady State	250 mA/50 mA	250 mA/50 mA	250 mA/50 mA	250 mA/50 mA	250 mA/50 mA	250 mA/50 mA
Case Style	61-040-6	61-040-6	61-040-6	61-040-6	61-040-6	61-040-6



WEIGHT: 1 Oz.

REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		CONTRACT NO.	
FRACTIONS	DECIMALS	APPROVALS	DATE
MATERIAL		DRAWN N. NGUYEN 8/24/98	
FINISH		CHECKED	
		ISSUED	
DO NOT SCALE DRAWING		SCALE	
		CAGE NO.	DWG. NO.
		ORNG3	61-040-6
		REV.	REV.
		MICRO LAMBDA, INC.	
		P.M.O. (FM + V ONLY)	