

FEATURES

- 2 GHz to 22 GHz
- Compensation for Temperature Drift
- Voltage Regulators for Improved Stability
- 0-10 Volt Tuning Resolution
- Remote Oscillator/Driver Location



DESCRIPTION

Micro Lambda *MLPM Series* Permanent Magnet YIG Oscillators are available with integrated analog driver circuits. These drivers eliminate the need for customers to design or develop their own driver circuits and sophisticated test and alignment procedures. Integrating a driver at Micro Lambda's factory ensures peak performance. Alignment and compensation with the particular YIG oscillator can be maximized down to the component level.

All drivers in this series provide input voltage regulators and compensation circuits to improve frequency drift. All voltages required by the YIG oscillator, except the heater inputs are supplied by the voltage regulators.

COMMERCIAL ANALOG DRIVERS	Permanent Magnet YTOs, BA & BF SERIES	
DRIVER INPUT & RESPONSE	SPECIFICATION	(0 to +65 deg. C)
Main Coil Driver Function		
Tuning Command	0 Volts = Lowest Frequency	
	+10 Volts = Highest Frequency	
Tuning Accuracy (excluding hysteresis)	+/- 10 MHz	
Tuning Speed (Note 1)	10 mS for 1 GHz step to within +/-10 MHz. (residual FM is 10 kHz Pk-Pk)	
Sweep Speed (Note 2) (0-10 Volt Ramp)	100 mS up / 10 mS 1 GHz retrace, Linearity @ 0.1% (residual FM is 10 kHz Pk-Pk)	
Main Driver Inputs		
Supply Voltage & Current (Note 3)	+12 V or +15 V +/- .5 V @ 265 mA, Max. -12 V or -15 V +/- .5 V @ 165 mA, Max.	
Supply Voltage Pushing	+/- 100 kHz, Max. @ +/- .5 Vdc	
Supply Voltage Ripple	10 mV Ripple Pk-Pk over 2 kHz to 3 MHz	
Ground	Chassis Ground	
Input Impedance	> 10 k-Ohms	
Common Rejection Mode	> 40 dB	
YIG Heater Voltage & Current	+15 Vdc \pm 4 Vdc @ 300 mA surge for 2 seconds, 50 mA steady state Polarity independent : \pm 12 Vdc or \pm 15 Vdc acceptable	
FM Coil Driver (BF Option)		
Voltage	+/- 10 V	
Current	+/- 100 mA	
Input Impedance	10 k-Ohms	
Sensitivity (Note 4)	+/- 2.5 MHz/V	
Frequency Deviation	+/- 25 MHz	

Note 1: Optional 1mS Tuning Speeds Available.

Note 2: Optional 10 mS Sweep Speed Available.

Note 3: Some YIG devices require higher voltages - Check with factory.

Note 4: FM Coil Sensitivity Adjustment Available. Sensitivity Stated is Average Over Frequency Range.

BA-SERIES — CONT.

Permanent Magnet YIG Oscillators with Positive Input Analog Drivers (0° C to +65° C)

Model Number	Frequency GHz	Accuracy (MHz) *	Current +12 V (mA)	Current -12 V (mA)	Outline Drawing	Outline Drawing (BF Option)
Bi-Polar						
MLPM-0204BA	2-4	+/- 10	265	165	61-064	61-064-1
MLPM-0305BA	3-5	+/- 10	265	165	61-064	61-064-1
MLPM-0406BA	4-6	+/- 10	265	165	61-064	61-064-1
MLPM-0507BA	5-7	+/- 10	265	165	61-064	61-064-1
MLPM-0608BA	6-8	+/- 10	265	165	61-064	61-064-1
MLPM-0709BA	7-9	+/- 10	265	165	61-064	61-064-1
MLPM-0810BA	8-10	+/- 10	265	165	61-064	61-064-1
MLPM-0911BA	9-11	+/- 10	265	165	61-064	61-064-1
MLPM-1012BA	10-12	+/- 10	265	165	61-064	61-064-1
MLPM-1113BA	11-13	+/- 10	265	165	61-064	61-064-1
MLPM-1214BA	12-14	+/- 10	265	165	61-064	61-064-1
Model Number	Frequency GHz	Accuracy (MHz) *	Current +15 V (mA)	Current -15 V (mA)	Outline Drawing	Outline Drawing (BF Option)
Ultra-Wide Tuning Range						
MLPW-0812BA	8-12	+/- 15	315	215	61-063	61-087
MLPW-1014BA	10-14	+/- 15	315	215	61-063	61-087
MLPW-1418BA	14-18	+/- 15	315	215	61-063	61-087
MLPW-1822BA	18-22	+/- 15	315	215	61-063	61-087

* Accuracy includes frequency drift and linearity errors over the temperature range.



