



MICRO LAMBDA WIRELESS, INC.

MINIATURE YTOs COMMERCIAL ANALOG DRIVERS CA-SERIES

FEATURES

- 500 MHz to 8 GHz
- Compensation for Temperature Drift
- Voltage Regulators for Improved Stability
- 0-10 Volt Tuning Resolution
- Remote Oscillator/Driver Location



DESCRIPTION

Micro Lambda *MLMY Series* Miniature 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 DRIVER INPUT & RESPONSE	.5- 8 GHz YTOs, CA & CF SERIES SPECIFICATION (0 to +65 deg. C)
Main Coil Driver Function	
Tuning Command	0 Volts = Lowest Frequency +10 Volts = Highest Frequency
Tuning Accuracy (excluding hysteresis)	See Table
Tuning Speed (Note 1)	5 mS for 1 GHz step to within +/-10 MHz. (residual FM is 10 kHz Pk-Pk)
Sweep Speed (Note 2) (0-10 Volt Ramp)	50 mS up / 10 mS 1 GHz retrace, Linearity @ 0.1% (residual FM is 10 kHz Pk-Pk)
Main Driver Inputs	
Supply Voltage & Current	+15 V +/- .5 V @ 500 mA, Max. -15 V +/- .5 V @ 50 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	+24 Vdc ±4 Vdc @ 300 mA surge for 2 seconds, 25 mA steady state Polarity independent : ±12 Vdc or ±15 Vdc acceptable
FM Coil Driver (CF Option)	
Voltage	+/- 10 V
Current	+/- 100 mA
Input Impedance	10 k-Ohms
Sensitivity (Note 3)	+/- 2.5 MHz/V
Frequency Deviation	+/- 25 MHz

Note 1: Optional 1mS Tuning Speeds Available.

2: Optional 10 mS Sweep Speed Available.

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

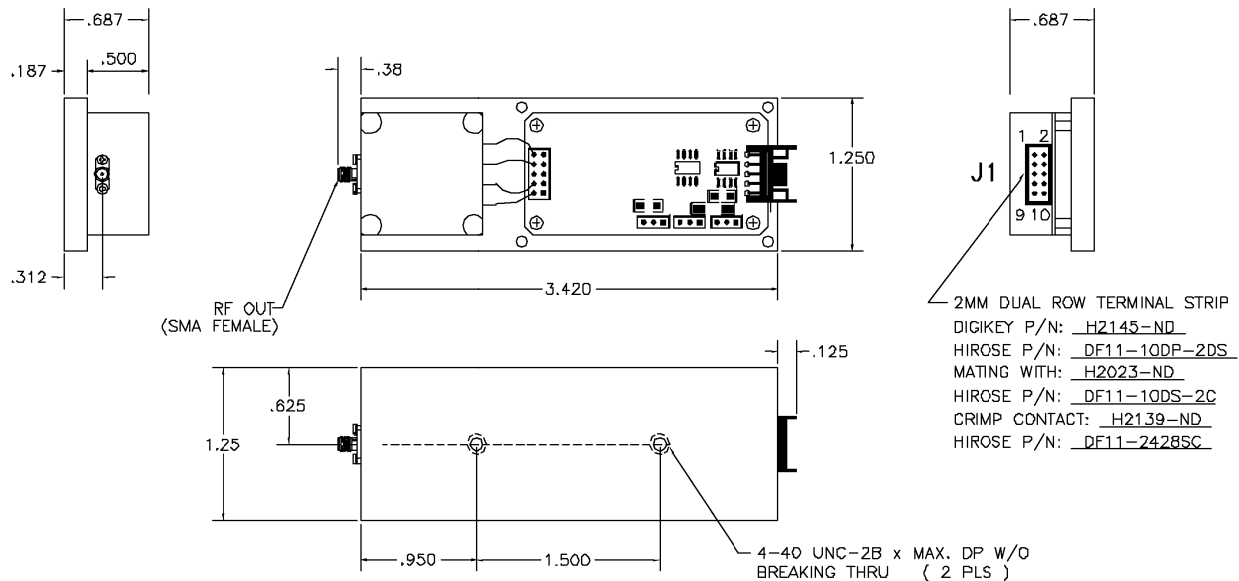
CA-SERIES — CONT.

VXI/VME YIG Oscillators with Positive Input Analog Drivers (0° C to +65° C)

Model	Frequency	Accuracy	Current	Current	Outline	Outline
Number	GHz	(MHz) *	+15 V (mA)	-15 V (mA)	Drawing	Drawing (CF-Option)
MLMY-0702CA	.7-2	+/- 5	200	50	81-070	81-071
MLMY-0204CA	2-4	+/- 6	300	100	81-070	81-071
MLMY-0306CA	3-6	+/- 9	400	100	81-070	81-071
MLMY-0408CA	4-8	+/- 12	500	100	81-070	81-071
MLMY-0206CA	2-6	+/- 9	400	100	81-070	81-071
MLMY-0208CA	2-8	+/- 12	500	100	81-070	81-071

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

Outline Drawing: 81-070 & 81-071



J1 — PIN CONNECTIONS

81-070

PIN NO	FUNCTION
1	CONTROL
2	CONTROL GND
3	GROUND
4	-SUPPLY
5	+SUPPLY
6	HEATER +
7	HEATER -
8	FM +
9	FM -
10	N/C

81-071

PIN NO	FUNCTION
1	CONTROL
2	CONTROL GND
3	GROUND
4	-SUPPLY
5	+SUPPLY
6	HEATER +
7	HEATER -
8	FM (±V INPUT)
9	FM GROUND
10	N/C

NOTE:

1. WIRE GAUGE = 22-24 A.W.G.
2. CONTROL — 0V = Fmin
10V = Fmax

WEIGHT: 3.5 oz.