



MICRO LAMBDA WIRELESS, INC.

REMOTE SERIES DRIVER RAM "MINI" SERIES ANALOG FOR ELECTROMAGNETIC DEVICES .5-50 GHz



FEATURES

- All Electromagnetic Oscillators and Filters
- Voltage Regulators for Improved Stability
- 0 to 10 Volt Tuning Resolution
- Remote Device/Driver Location

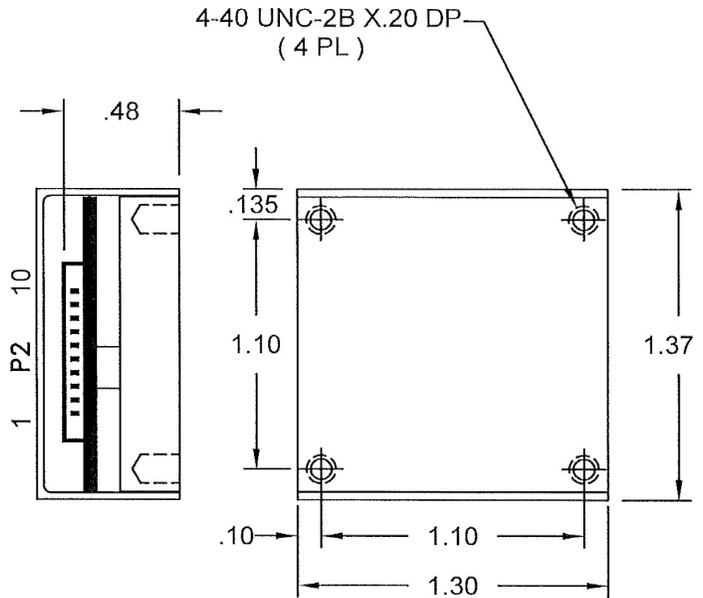
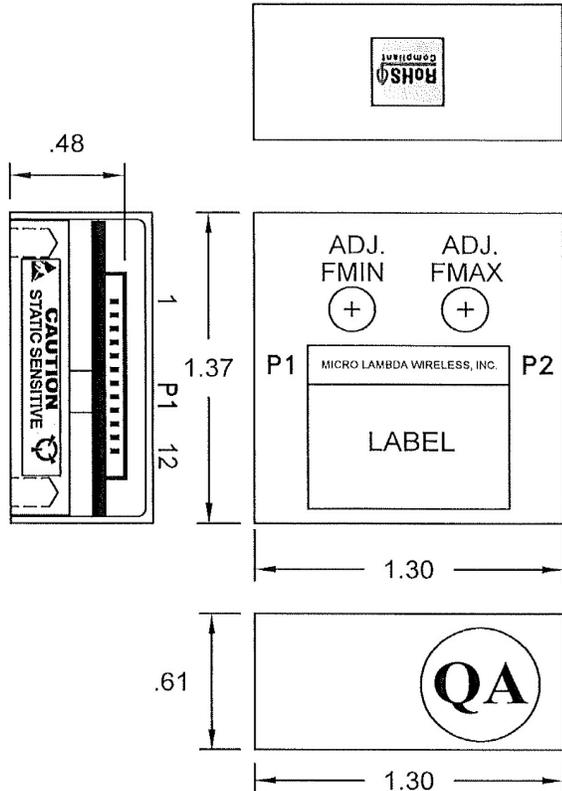
DESCRIPTION

All Micro Lambda Electromagnetic YIG Devices are available with remotely located analog driver circuits. These drivers eliminate the need for customers to design or develop their own circuits and sophisticated test and alignment procedures. These remote drivers can be aligned at Micro Lambda's factory to ensure peak performance. Alignment and compensation with the particular YIG Device can be maximized down to the component level.

All drivers in this series provide input voltage regulators. All voltages required by the YIG Device, except the heater inputs are supplied by the voltage regulators.

COMMERCIAL ANALOG DRIVERS	0.5-50 GHz YIG DEVICE, ANALOG REMOTE SERIES
DRIVER INPUT & RESPONSE	SPECIFICATION (0 to + 65 deg. C)
Main Coil Driver Function	
Tuning Command (P1-1&2)	0 Volts = Lowest Frequency 10 Volts = Highest Frequency
Input Impedance	10 k-Ohms
Common Rejection Mode	> 40 dB (Twisted Pair Leads)
Tuning Accuracy (Note 1) (excluding hysteresis)	YIG Device Accuracy +2 MHz
Tuning Speed	5 mS for 1 GHz step to within +/-10 MHz.
Sweep Speed (0 - 10 Volt Ramp)	50 mS Up / 10 mSec 1 GHz retrace, Linearity @ 0.1 %
Main Driver Inputs	
Supply Voltage & Current (Note 2)	YIG Device Tuning current @ Max. Frequency +100 mA
+15V +/- .5V (P1-6)	100 mA, Max. (Plus Oscillator -5 Vdc Current, if required)
-15V +/- .5V (P1-5)	+/- 0.2 MHz Max. @ +/- .5 Vdc
Supply Voltage Pushing	10 mV Ripple Pk-Pk from 2 kHz to 3 MHz
Supply Voltage Ripple	Chassis Ground
Ground (P1-4&12)	750 mA Surge for 2 Sec., 150 mA Steady State
Heater Voltage Inputs (Note 3)	Polarity Independent: ±12 Vdc or ±15 Vdc acceptable
+24 Vdc +/- 4 Vdc (P1-7&8)	Logic Input 3.3V / 5.0V Compatible,
Fast / Slow (P1-11)	High = Normal Switching Speed Low = Low Noise / Slow Switching Speed (Used for Oscillators)
FM Coil Driver (RFM Option)	
Voltage (P1-9&10)	+/- 10 V
Current	+/- 100 mA
Input Impedance	1 k-Ohms
Sensitivity	+/- 2.5 MHz/V
Frequency Deviation	+/- 25 MHz
Outline Drawing	99-0051-021 **with FM Driver 99-0051-022

Note 1: Accuracy includes Temperature Drift & Linearity.
 2. Some YIG Devices require higher voltages - Check with factory.
 3. See particular YIG Device specification for heater current requirements.



WEIGHT: 2.0 Oz / 56.7g

P1 CONNECTION (INPUT)

MOLEX PART # : 5040501291 (1.5MM)
 MATING WITH # : 5040511201
 CRIMP CONTACT : 5040520098

PIN	FUNCTIONS
1	CONTROL-V 0-10V
2	CONTROL RETURN
3	N/C
4	GROUND
5	-V SUPPLY
6	+V SUPPLY
7	HEATER 1
8	HEATER 2
9	+FM COIL (*)
10	-FM COIL (*)
11	FAST/SLOWh (*)
12	GROUND

P2 CONNECTION (TO YIG)

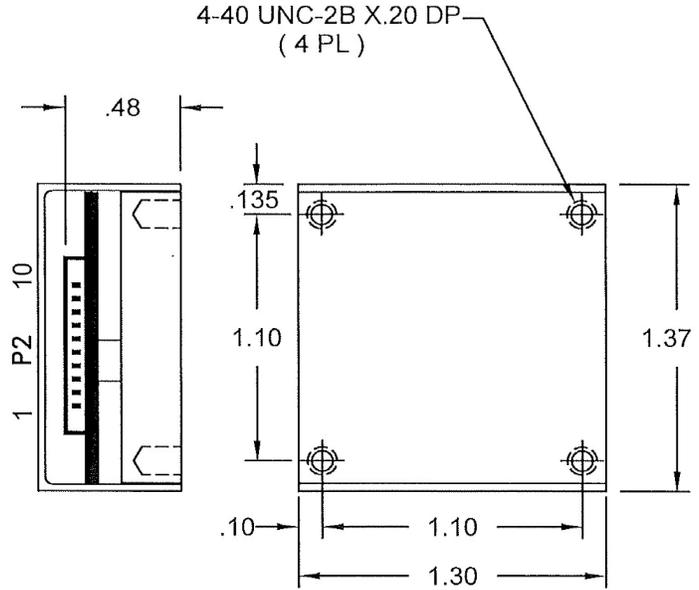
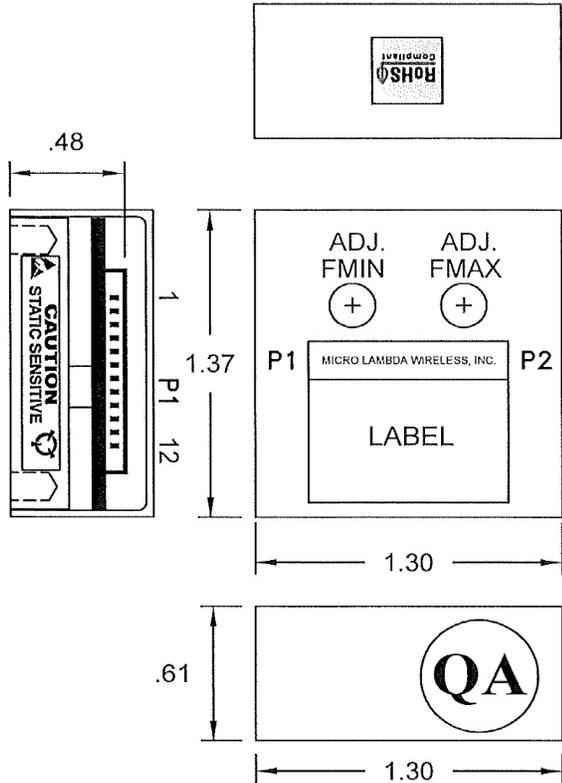
MOLEX PART # : 5040501091 (1.5MM)
 MATING WITH # : 5040511001
 CRIMP CONTACT : 5040520098

PIN	FUNCTIONS
1	+ TUNE COIL
2	- TUNE COIL
3	+FM COIL (*)
4	-FM COIL (*)
5	OSC. VCC (+V) (*)
6	OSC. - 5V (OPTIONAL) (*)
7	HEATER 1
8	HEATER 2
9	GROUND
10	N/C

NOTES:

- (*) : NOT USED FOR FILTER
- RECOMMENDED WIRE SIZE = 24 GAUGE
- PROPER HEAT-SINK REQUIRED FOR REMOTE DRIVER & FILTER TO DISSIPATE UP TO 37.5 WATTS, DEPENDING ON THE CONNECTED YIG DEVICES CURRENT CONSUMPTION.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE : FRACTIONS DECIMALS ANGLES .xx ± 0.02 ° .xxx ± 0.010	CONTRACT NO.		 MICRO LAMBDA WIRELESS, INC.								
	APPROVALS	DATE									
MATERIAL	DRAWN N.NGUYEN	8/12/2022	1.3" MINI REMOTE ANALOG DRIVER								
FINISH	CHECKED DS	8/12/22									
DO NOT SCALE DRAWING	ISSUED		<table border="1"> <tr> <td>SIZE</td> <td>CAGE No</td> <td>DWG. NO.</td> <td>REV.</td> </tr> <tr> <td></td> <td>ORN63</td> <td>99 - 0051 - 021</td> <td>B</td> </tr> </table>	SIZE	CAGE No	DWG. NO.	REV.		ORN63	99 - 0051 - 021	B
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 MATING WITH # : 5040511201
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PIN	FUNCTIONS
1	CONTROL-V 0-10V
2	CONTROL RETURN
3	N/C
4	GROUND
5	-V SUPPLY
6	+V SUPPLY
7	HEATER 1
8	HEATER 2
9	FM +/- 10V
10	FM RETURN
11	FAST/SLOWn
12	GROUND

P2 CONNECTION (TO YIG)

MOLEX PART # : 5040501091 (1.5MM)
 MATING WITH # : 5040511001
 CRIMP CONTACT : 5040520098

PIN	FUNCTIONS
1	+ TUNE COIL
2	- TUNE COIL
3	+FM COIL
4	-FM COIL
5	OSC. VCC (+V)
6	OSC. - 5V (OPTIONAL)
7	HEATER 1
8	HEATER 2
9	GROUND
10	N/C

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 * .XX ±.02
 * .XXX ±.010

CONTRACT NO.



MICRO LAMBDA WIRELESS, INC.

APPROVALS	DATE
DRAWN N. NGUYEN	8/12/2022
CHECKED DS	8/12/22
ISSUED	

1.3" MINI REMOTE ANALOG DRIVER W/FM

FINISH	SIZE	CAGE No	DWG. NO.	REV.
		ORN63	99 - 0051 - 022	B

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