# MICRO LAMBDA WIRELESS, INC.

## YIG DEVICE (RA SERIES) DRIVERS
## ANALOG REMOTE SERIES
## FOR ELECTROMAGNETIC DEVICES
## .5-50 GHz

### FEATURES

- All Electromagnetic Oscillators and Filters
- Compensation for Temperature Drift
- 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 and compensation circuits to improve frequency drift. 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 | 0 Volts = Lowest Frequency<br>10 Volts = Highest Frequency |
| Tuning Accuracy (Note 1)<br>(excluding hysteresis) | YIG Device Accuracy +2 MHz |
| Tuning Speed | 5 mS for 1 GHz step to within +/-10 MHz. |
| Sweep Speed<br>(0 - 10 Volt Ramp) | 50 mS Up / 10 mSec 1 GHz retrace, Linearity @ 0.1 % |
| **Main Driver Inputs** | |
| Supply Voltage & Current (Note 2) | |
| +15V +/-.5V | YIG Device Tuning current @ Max. Frequency +100 mA |
| -15V +/-.5V | 100 mA, Max. (Plus Oscillator -5 Vdc Current, if required) |
| Supply Voltage Pushing | +/- 0.2 MHz Max.@ +/- .5 Vdc |
| Supply Voltage Ripple | 10 mV Ripple Pk-Pk from 2 kHz to 3 MHz |
| Ground | Chassis Ground |
| Heater Voltage Inputs (Note 3) | 750 mA Surge for 2 Sec., 150 mA Steady State |
| +24 Vdc +/- 4 Vdc | Polarity Independent: ±12 Vdc or ±15 Vdc acceptable |
| Input Impedance | 10 k-Ohms |
| Common Rejection Mode | > 40 dB (Twisted Pair Leads) |

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.

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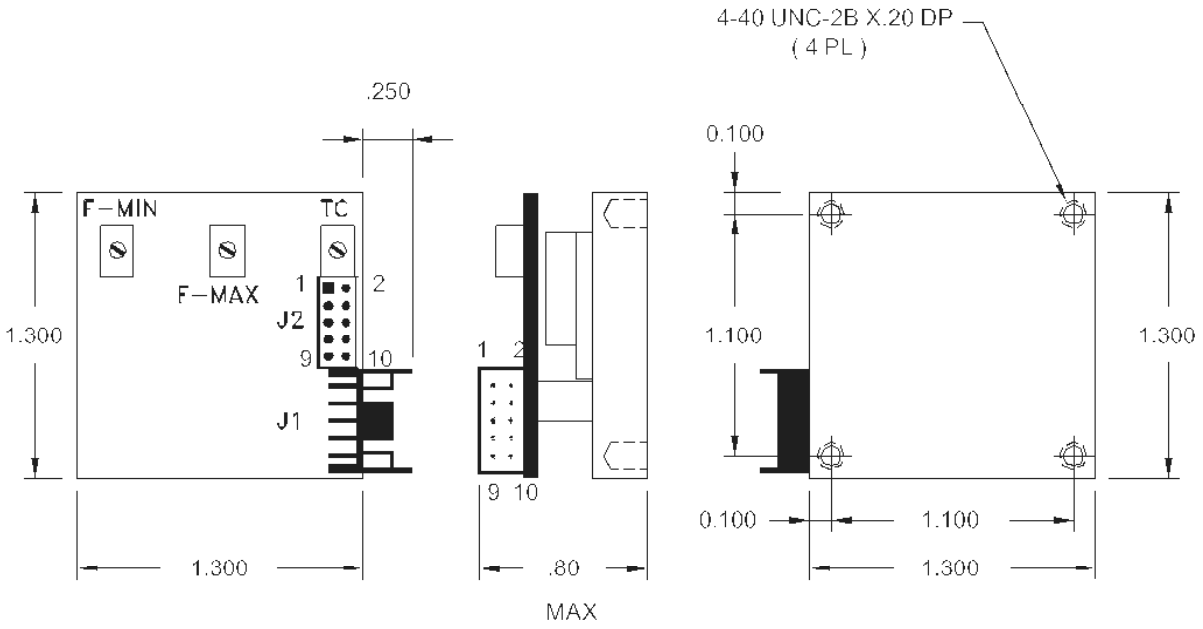


*WEIGHT:* 5 Oz

## J1 CONNECTION ( INPUT )

DIGIKEY PART # : H2145-ND(2MM. DUAL ROW)

MATING WITH # : H2023-ND OR H2031-ND

CRIMP CONTACT : H2139-ND

| *PIN* | *FUNCTIONS* | |
|---|---|---|
| 1 | CONTROL 0-10V | |
| 2 | CTRL RTN | |
| 3 | GND | |
| 4 | -SUPPLY | |
| 5 | +SUPPLY | |
| 6 | HEATER + | |
| 7 | HEATER - | |
| 8 | FM + | (*) |
| 9 | FM - | (*) |
| 10 | GND | |

## J2 CONNECTION ( TO YIG )

| *PIN* | *FUNCTIONS* | |
|---|---|---|
| 1 | TUNE + | |
| 2 | TUNE - | |
| 3 | FM + | (*) |
| 4 | FM - | (*) |
| 5 | OSC. VCC (+15V) | (*) |
| 6 | - 5V (OPTIONAL) | (*) |
| 7 | HEATER + | |
| 8 | HEATER - | |
| 9 | GND | |
| 10 | +5V (OPTIONAL) | (*) |

*NOTES:*

1- (*) : NOT USED FOR FILTER

2- RECOMMENDED WIRE SIZE = 20-22 GAUGE

| | | | | | |
|---|---|---|---|---|---|
| | | | MICRO LAMBDA, INC. | | |
| | | | 4337 CLIPPER COURT, FREMONT, CA 94538 *** PHONE (510) 770-9221 | | |
| | | | *1.3" ANALOG DRIVER (1.3 X 1.3 X .80")* | | |
| | | | 0RN63 | 51 - 003 | B |