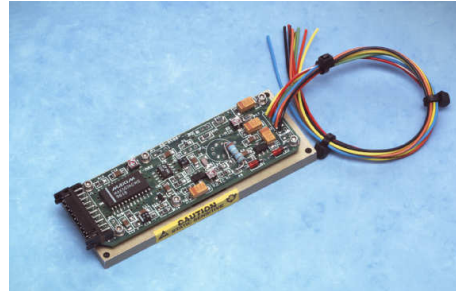


FEATURES

- All Miniature Oscillators and Filters
- MLYM Series "Mini" Oscillators
- MLFI Series "Mini" Filters
- Compensation for Temperature Drift
- Voltage Regulators for Improved Stability
- 12 Bit Tuning Resolution
- Remote Oscillator/Driver Location


DESCRIPTION

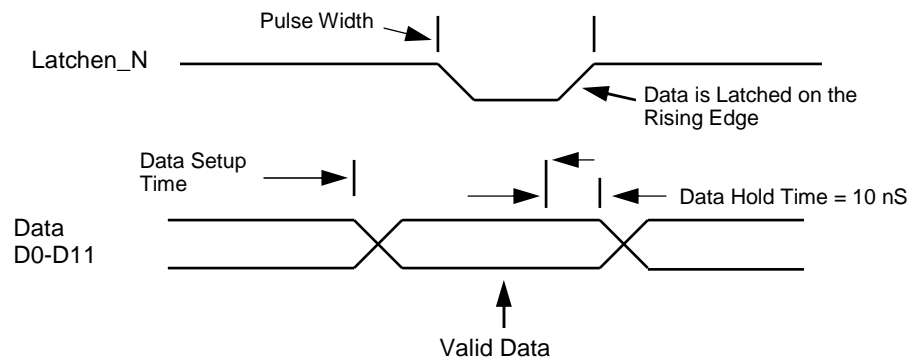
All Micro Lambda Series Miniature YIG Devices are available with remotely located digital driver circuits. These drivers eliminate the need for customers to design or develop their own circuits and sophisticated test and alignment procedures. These remote drivers can be aligned at Micro Lambda's factory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

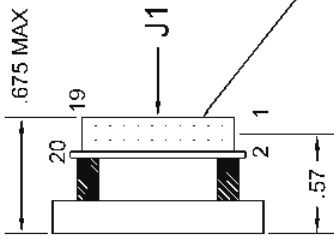
All drivers in this series provide input voltage regulators and compensation circuits to improve frequency drift. All voltages required by the YIG Device, except the heater inputs are supplied by the voltage regulators.

COMMERCIAL DIGITAL DRIVERS	.5-10 GHz MINIATURE DEVICE, DIGITAL REMOTE SERIES
DRIVER INPUT & RESPONSE	SPECIFICATION (0 to + 65 deg. C)
Tuning Command	Start Word (all 0's) = Lowest Frequency Stop Word (all 1's) = Highest Frequency
Tuning Resolution	12 BIT Positive Logic (Fmax-Fmin)/4095 Resolution All Data Bits have Internal 10K ohm Pull-up Resistor to +5 V YIG Device Accuracy +2 MHz
Frequency Accuracy (Note 1) (excluding hysteresis)	
Tuning Speed	5 mSec for 1 GHz step to within +/-10 MHz.
Main Driver Inputs	
Supply Voltage & Current	Device Tuning Current + 50 mA, Max. 50 mA, (Plus Oscillator -5 Vdc Current if any) Max.
+15 V +/- .5 V	+/- .2%MHz Max. @ .5Vdc (2-3000 kHz)
-15 V +/- .5 V	10 mV Ripple Pk-Pk from 2 kHz to 3 MHz
Supply Voltage Pushing	Chassis Ground
Supply Voltage Ripple	750 mA surge for 2 seconds, 150 mA steady state
Ground	Polarity independent : ±12 Vdc or ±15 Vdc acceptable
YIG Heater Voltage & Current (Note 2)	LATCHEN_N is a TTL, 5V CMOS control line. It has an internal 10k-ohm pull-up resistor to +5 V. It is used to transfer the data on the bus to the digital driver circuit.
+24 Vdc ±4 Vdc	TTL high = data ignored. Connect to Ground if enable is not required. If the unit is to be used on a computer data bus, the timing Diagram below applies. (All times = Minimum) 10 nS rise/fall latch transitions.
Latch Enable	

Note 1. Accuracy Includes Temperature Drift & Linearity.

Note 2. See particular YIG Device specification for heater current requirements.

TIMING DIAGRAM


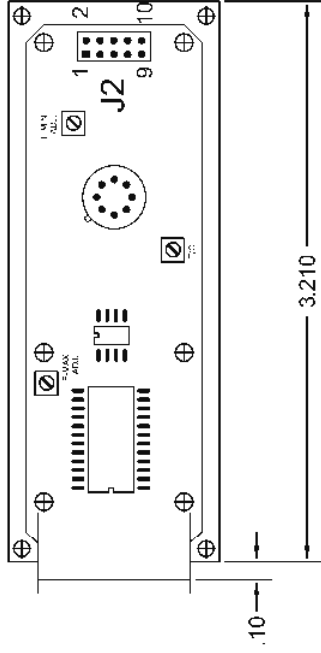


2MM DUAL ROW TERMINAL STRIP

DIGIKEY P/N: H0269-ND

MATING WITH: H2027-ND

CRIMP CONTACT: HZ139-ND



J2 - CONNECTIONS (OUTPUT)

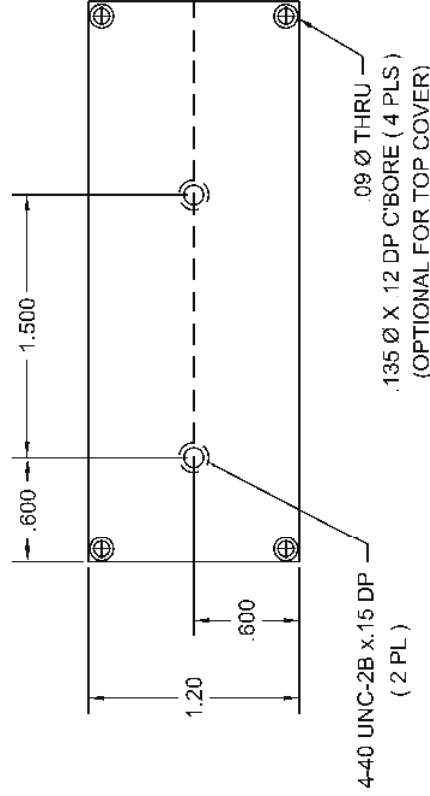
PIN NO	FUNCTION	WIRE COLOR IF SUPPLIED
1	+ TUNE COIL	YELLOW
2	CSCILLATOR VCC (+V) (*)	BLUE
3	- TUNE COIL	YELLOW/BLACK
4	-5V (OPTIONAL) (*)	GREEN
5	+ FM COIL (*)	RED/WHITE
6	HEATER +	ORANGE
7	- FM COIL (*)	RED/BLACK
8	HEATER -	ORANGE/BLACK
9	N/C	—
10	GROUND (*)	BLACK

(*) = OSCILLATOR ONLY

* RECOMMENDED WIRE SIZE = 24-26 AWG

DATA 000= F-MIN LATCHEN 0 = DATA ACTIVE

FFF= F-MAX 1 = DATA LATCHED



J1 - CONNECTIONS (INPUT)

PIN NO	FUNCTION	PIN NO	FUNCTION
1	DATA BIT 0	11	DATA BIT 10
2	DATA BIT 1	12	DATA BIT 11(MSB)
3	DATA BIT 2	13	LATCHEN_N
4	DATA BIT 3	14	GND
5	DATA BIT 4	15	+ SUPPLY
6	DATA BIT 5	16	- SUPPLY
7	DATA BIT 6	17	HEATER (+V)
8	DATA BIT 7	18	HEATER (GND)
9	DATA BIT 8	19	FM + (*)
10	DATA BIT 9	20	FM - (*)

(*) = OSCILLATOR ONLY

REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPEC'ED DIMENS ONS ARE IN INCHES TOLERANCE ARE:
 FRACTIONS DECIMALS ANGLES
 * .xx #.02
 * .xxx #.010

CONTRACT NO.
 APPROVALS
 DRAWN N NGUYEN
 CHECKED
 ISSUED
 DATE 3/22/04

MATERIAL
 FINISH
 DO NOT SCALE DRAWING



MICRO LAMBDA WIRELESS, INC.

REMOTE MINI DIGITAL DRV. (OPEN BOARD)

SIZE	CAGE	DWG. NO.	REV.
	ORN63	51 - 004	B

SHEET