MICRO LAMBDA WIRELESS, INC.

YIG TUNED MULTIPLIERS WITH COMMERCIAL ANALOG DRIVERS PA SERIES

FEATURES

- 1 GHz to 18 GHz
- Compensation for Temperature Drift
- Input Regulators for Improved Stability
  - Versus Power Supply Variations
- 0 to 10 Volt Tuning
- 0º C to +65º C Temperature Range

DESCRIPTION

MICRO LAMBDA YIG Multipilers, model type MLHG Series are available with integrated analog driver circuits.

MICRO LAMBDA 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 that peak performance will be achieved at the time of manufacture. Alignment and compensation with the particular YIG multiplier can be maximized down to the component level.

All drivers in this series provide input voltage regulators, and compensation circuits to improve frequency drift.

STANDARD POSITIVE INPUT ANALOG DRIVER SELECTION GUIDE: PA SERIES

YIG TUNED MULTIPLIERS WITH COMMERCIAL ANALOG DRIVERS

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)	See Table
Tuning Speed (Note 1)	2 mS for 1 GHz step to within +/-10 MHz.
Sweep Speed (Note 2) (0-10 Volt Ramp)	50 mS up / 10 mS retrace for 1 GHz, Linearity @ 0.1%
Main Driver Inputs	
Supply Voltage & Current	+15 V +/- .5 V @ Multiplier Tuning Current + 50 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 from 2 kHz to 3 MHz
Ground	Chassis Ground
YIG Heater Voltage & Current	+24 Vdc ±4 Vdc @ 750 mA surge for 2 seconds, 150 mA steady state Polarity independent : ±12 Vdc or ±15 Vdc acceptable
Input Impedance	> 10 k-Ohms
Common Rejection Mode	> 40 dB

Note 1: Optional .5 mS Tuning Speeds Available

2: Optional 5 mS Sweep Speed Available

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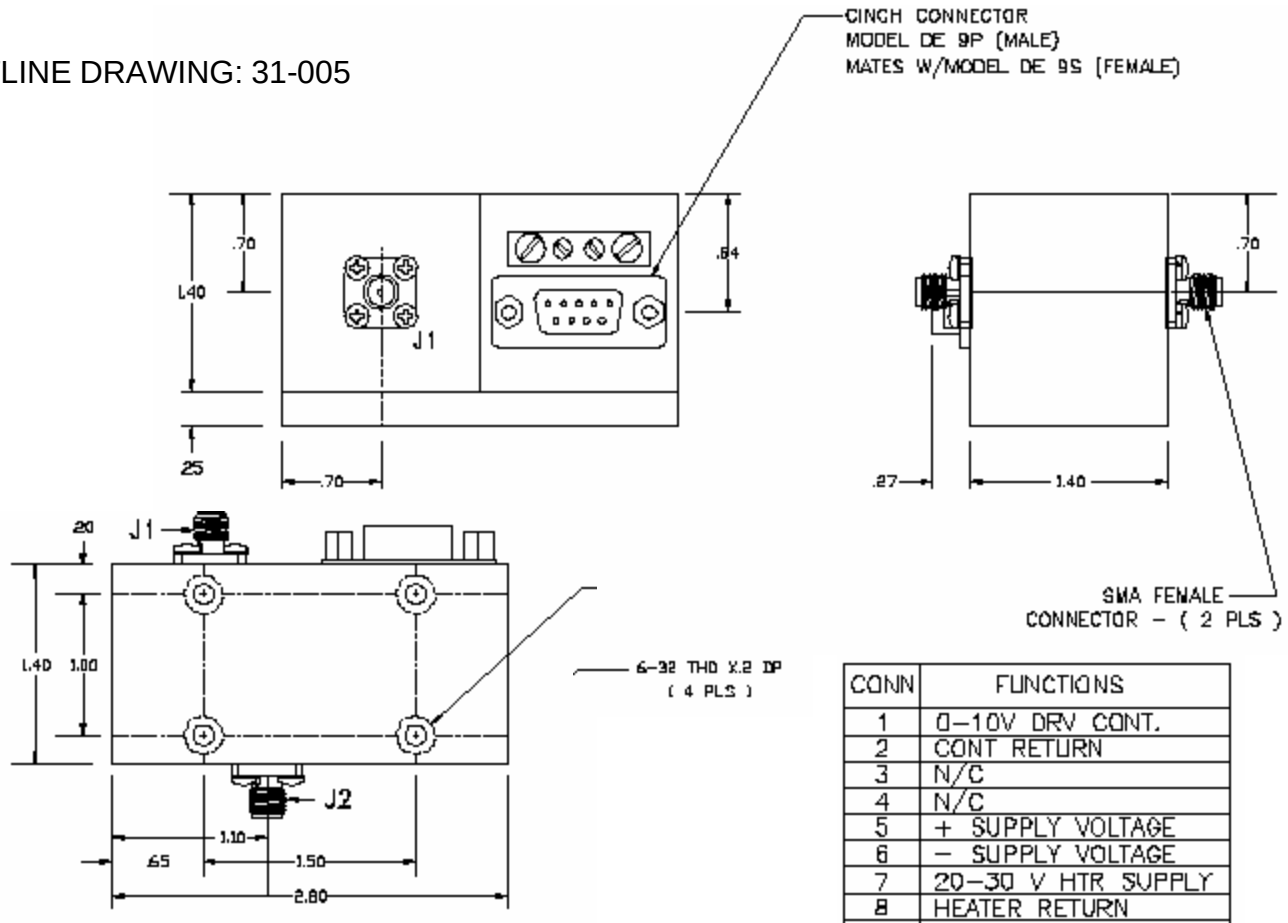
YIG TUNED MULTIPLIERS WITH COMMERCIAL ANALOG DRIVERS PA SERIES – CONTINUED

MODEL NUMBER	Output Freq. (GHz)	Input Freq. (MHz)	Output Power (dBm)	Accuracy (MHz) *	Current +15V (mA)	Current -15V (mA)	Outline Drawing
Multi-Octave Bands							
MLHG-1212PA	1.0-12.4	100	-30	±15	720	100	31-005
MLHG-2212PA	1.0-12.4	200	-25	±15	720	100	31-005
MLHG-5212PA	1.0-12.4	500	-13	±15	720	100	31-005
MLHG-1312PA	1.0-12.4	1000	-15	±15	720	100	31-005
Wideband							
MLHG-1218PA	1-18	100	-40	±25	1000	100	31-005
MLHG-2218PA	1-18	200	-35	±25	1000	100	31-005
MLHG-5218PA	1-18	500	-28	±25	1000	100	31-005
MLHG-1018PA	2-18	100	-37	±20	1000	100	31-005
MLHG-2018PA	2-18	200	-30	±20	1000	100	31-005

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

OUTLINE DRAWING: 31-005



CONN	FUNCTIONS
1	0–10V DRV CONT.
2	CONT RETURN
3	N/C
4	N/C
5	+ SUPPLY VOLTAGE
6	– SUPPLY VOLTAGE
7	20–30 V HTR SUPPLY
8	HEATER RETURN
9	GND
J1	RF INPUT
J2	RF OUTPUT