

# PHASE-LOCKED COAXIAL RESONATOR OSCILLATOR

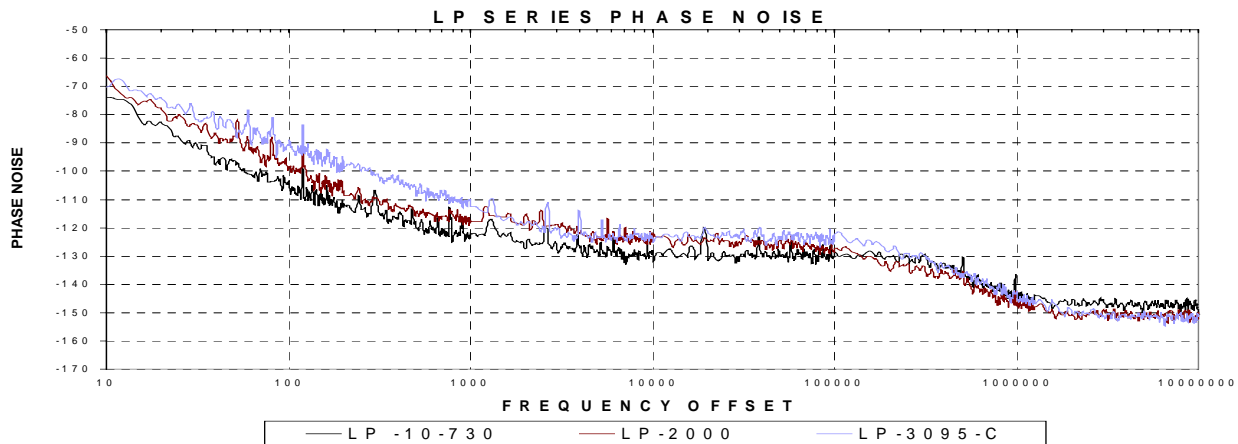
## LP SERIES: 500 – 3200 MHz

### FEATURES

- High Q ceramic resonator
- Low phase noise
- Low susceptibility to vibration
- Three-year warranty
- 100% burn-in and temperature testing

### OPTIONS

- Higher output power
- 1 – 20 MHz input reference (dual-loop design)
- Internal crystal reference
- Integrated relay alarm
- Mounting plate (specify with order)



### ELECTRICAL SPECIFICATIONS

Output frequency range	500 – 3200 MHz
Output power	+13 dBm minimum
Output power variation	±1.5 dB maximum
Phase noise	See graphs
Harmonic output	-20 dBc maximum
Spurious output	-70 dBc maximum
Input reference frequency	50 – 550 MHz (Reference Option A) 1 – 20 MHz (optional)
Input power level	0 ±3 dBm
Input impedance	50 ohms
Load VSWR	1.5:1 nominal
DC power requirements (Notes 1 and 2)	+12,+15, +20 volts @ 250 mA

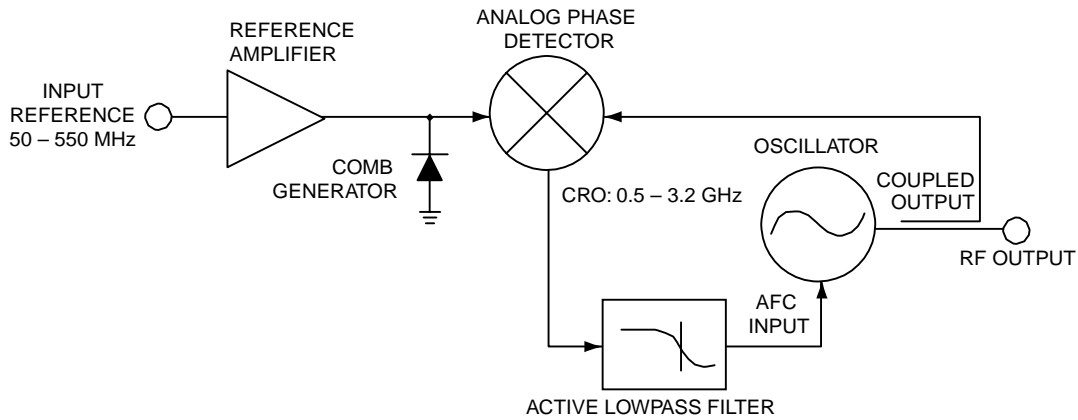
Notes:

1. Add 50 mA @ +V for internal crystal reference.
2. Add 120 mA @ +V and 220 mA @ +5 volts for external 1–20 MHz reference.



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## BLOCK DIAGRAM



## ORDERING INFORMATION

Standard (input reference 50 – 550 MHz) Add B for internal reference option from table below.

LP -  -  -  -  -  P

Reference freq. (MHz)      Output freq. (MHz)      Ref. Option      Alarm Option      Supply Voltage

Optional (dual loop, input reference 1 – 20 MHz)

LP -  -  -  -  -  -  P

Input freq. (MHz)      Reference freq. (MHz)      Output freq. (MHz)      Ref. Option      Alarm Option      Supply Voltage

## REFERENCE OPTIONS

A. External reference (50–550 MHz).

B.  $\pm 5$  ppm (-20 to +70°C).

Note: For Option B specify output frequency to 6 decimal places.

1 to 20 MHz Ref. Input: (0 to +60°C).

## ALARM OPTIONS

0. 0 volts in-lock, +V out-of-lock.

3. TTL Low in lock, High out of lock

4. TTL High in lock, Low out of lock

## MECHANICAL SPECIFICATIONS

Outline drawings ..... 165654  
 Weight ..... 250 grams nominal  
 RF connectors ..... SMA female  
 DC connectors ..... Feedthru filter

## ENVIRONMENTAL SPECIFICATIONS

Temperature  
 Operating ..... see reference option  
 Storage ..... -45 to +85°C  
 Humidity ..... 95% at 40°C noncondensing  
 Shock (survival) ..... 30 g's, 10 ms pulse  
 Vibration (survival) ..... 20 to 2000 Hz random to 4 g's

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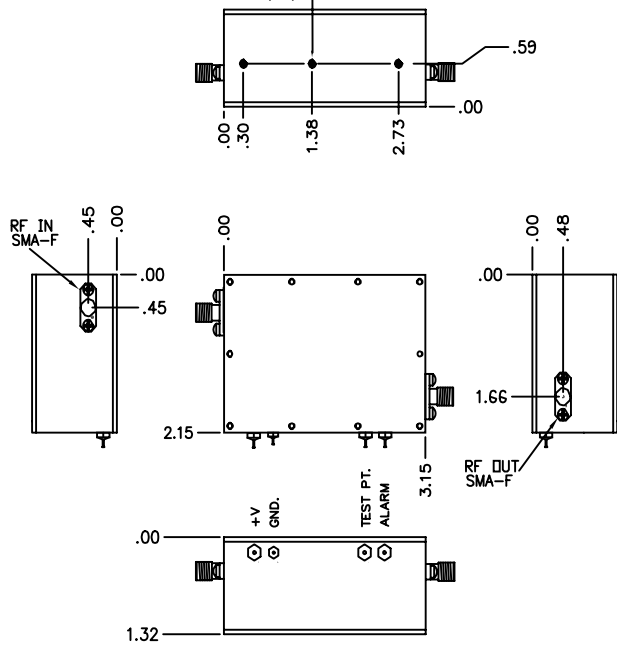
## Outline Drawings

165654

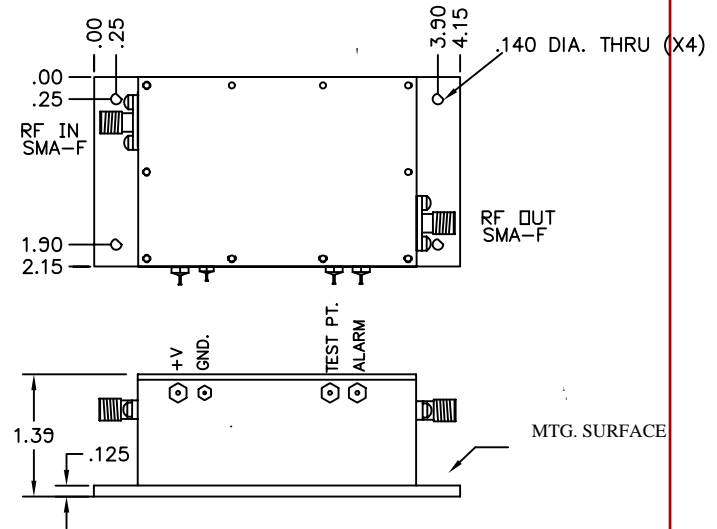
LP SERIES

### OPTION A (EXTERNAL REF.)

MOUNTING: 4-40 X .20 D. (X3)



### OPTIONAL MOUNTING PLATE CONFIGURATION



### OPTION B,C (INTERNAL REF.)

MOUNTING: 4-40 X .20 D. (X3)

