# PHASE LOCKED OSCILLATOR

## *MODEL 611238 (2000 MHz)*

## Features

- **Low Phase Noise: -131 dBc/Hz @ 100 kHz**
- **Low Spurious: -70 dBc Typical**
- **Internal Reference Design**
- **Environmental Screening Available**

## Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 ºC | MIN/MAX Ta = -20 ºC to +70 ºC |
|---|---|---|
| Frequency (MHz) | 2000 | 2000 |
| Output Power (dBm) | +10 | +9 |
| Variation Over Temperature (dBm) | ±0.75 | ±1 |
| Spurious (dBc) | -70 | -60 |
| Phase Noise (dB) | -84 dBc/Hz @ 100 Hz<br>-113 dBc/Hz @ 1 kHz<br>-121 dBc/Hz @ 10 kHz<br>-119 dBc/Hz @ 30 kHz<br>-131 dBc/Hz @ 100 kHz<br>-143 dBc/Hz @ 1 MHz | |
| VSWR | 1.5 | 2.0 |
| Harmonics (dBc) | -25 | -20 |
| Lock Indicator | TTL (High=Locked) | TTL (Low=Unlocked) |
| Stability (ppm) | ±1 | ±15 |
| Storage Temperature | -55 ºC | +125 ºC |
| Supply Power DC<br>mA | 15<br>150 | 15<br>160 |

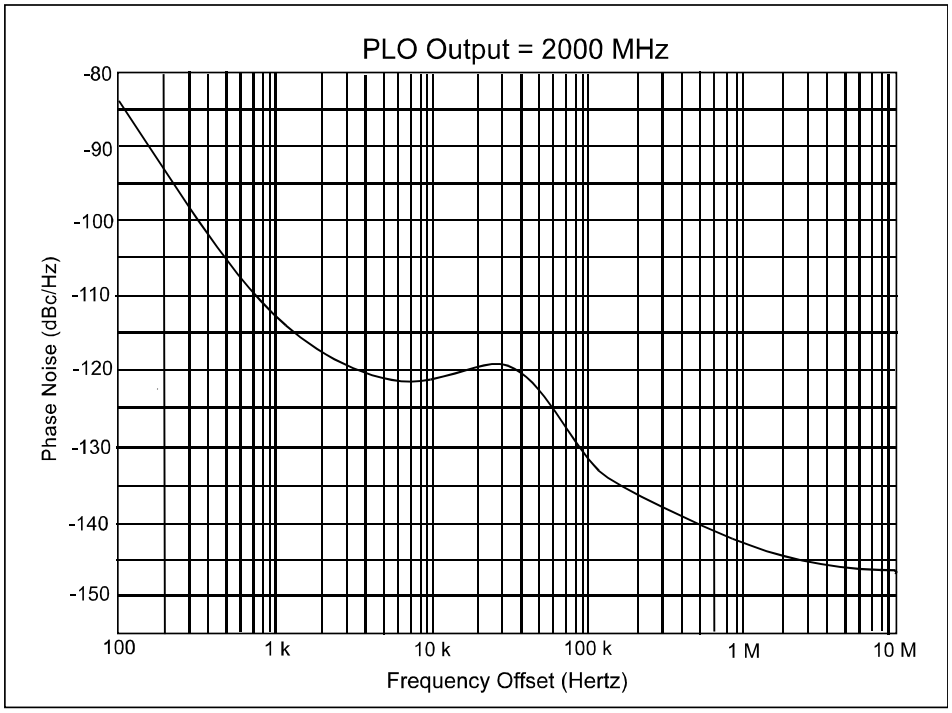
## Description

Spectrum Microwave's Series 600 Phase Locked Oscillators use a High "Q" Coaxial Resonator in the resonant circuit. The circuit is lightly loaded to obtain the lowest phase noise possible.

The resonator is soldered to a printed circuit board and well grounded to minimize modulation sidebands during shock and vibration.

Buffer amplifiers are used to provide isolation from load VSWRs; Regulators filter noise on the DC input voltage.

External reference models are also available. A lock indicator circuit is provided to signal an out-of-lock condition.



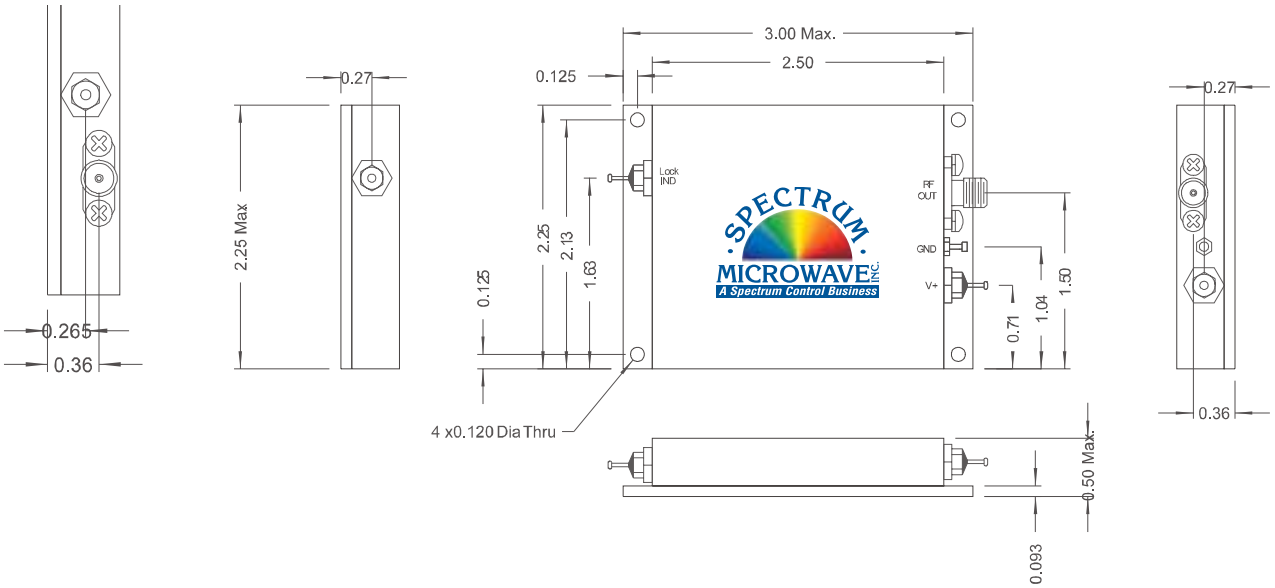

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## Outline Drawing





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