

# PHASE LOCKED OSCILLATOR

## MODEL 611220 (1100 MHz)



### Features

- Low Phase Noise: -135 dBc/Hz @ 100 kHz
- Low Spurious: -70 dBc Typical
- Internal Reference Design
- Environmental Screening Available

### Specifications

| CHARACTERISTIC                   | TYPICAL<br>Ta= 25 °C                                                                                                                       | MIN/MAX<br>Ta = -20 °C to +70 °C |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Frequency (MHz)                  | 1100                                                                                                                                       | 1100                             |
| Output Power (dBm)               | +10                                                                                                                                        | +9                               |
| Variation Over Temperature (dBm) | ±0.75                                                                                                                                      | ±1                               |
| Spurious (dBc)                   | -70                                                                                                                                        | -60                              |
| Phase Noise (dB)                 | -89 dBc/Hz @ 100 Hz<br>-118 dBc/Hz @ 1 kHz<br>-126 dBc/Hz @ 10 kHz<br>-124 dBc/Hz @ 30 kHz<br>-135 dBc/Hz @ 100 kHz<br>-146 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 °C                                                                                                                                     | +125 °C                          |
| Supply Power                     | DC                                                                                                                                         | 15                               |
|                                  | mA                                                                                                                                         | 150                              |

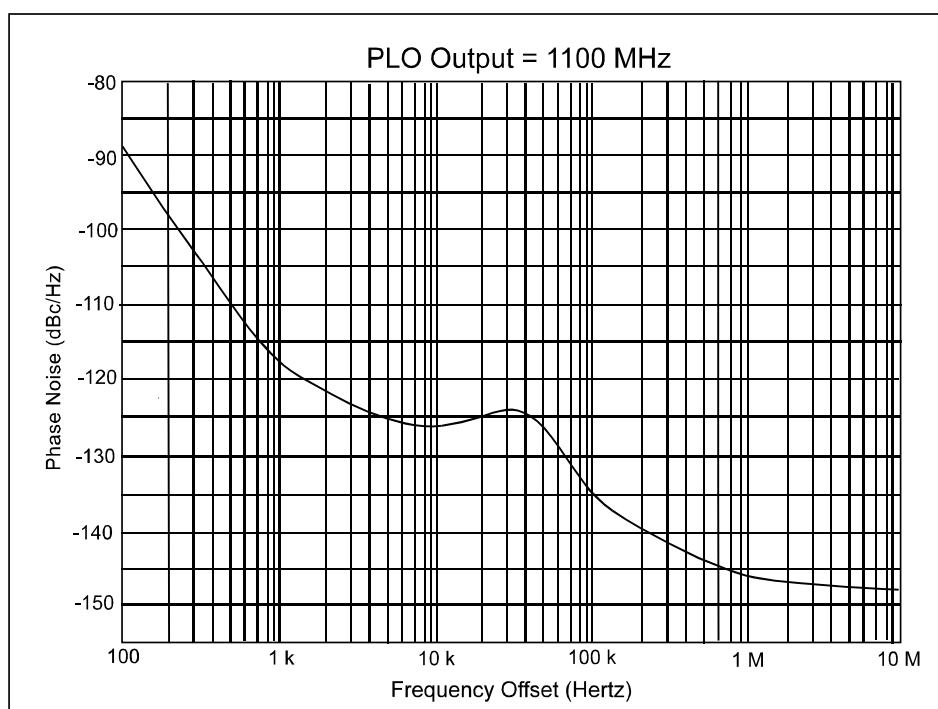
### Description

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

