# PHASE LOCKED OSCILLATOR

### **MODEL 621519** (1500 MHz)



#### **Features**

- Low Phase Noise: -134 dBc/Hz @ 100 kHz
- Low Spurious: -70 dBc Typical
- External Reference
- Environmental Screening Available

#### **Specifications**

| CHARACTERISTIC                      | TYPICAL   | MIN/MAX               |
|-------------------------------------|---|-----------------------|
|                                     | Ta= 25 °C   | Ta = -20 °C to +70 °C |
| Frequency                           | 1500 MHz  | 1500 MHz              |
| Output Power (dBm)                  | +13   | +12                   |
| Variation Over<br>Temperature (dBm) | +/- 0.75 dBm  | +/- 1 dBm             |
| Spurious (dBc)                      | -70   | -60                   |
| Phase Noise (dB)                    | -103 dBc/Hz @ 100 Hz<br>-126 dBc/Hz @ 1 kHz<br>-128 dBc/Hz @ 10 kHz<br>-126 dBc/Hz @ 30 kHz<br>-134 dBc/Hz @ 100 kHz<br>-145 dBc/Hz @ 1 MHz |                       |
| VSWR                                | 1.5   | 2.0                   |
| Harmonics (dBc)                     | -25   | -20                   |
| External Reference                  | 100 MHz   | 1 / 200 MHz           |
| Lock Indicator                      | TTL (High=Locked)   | TTL (Low=Unlocked)    |
| Storage Temperature                 | -55 °C  | +125 °C               |
| Supply Power DC<br>mA               | 15<br>120   | 15<br>125             |

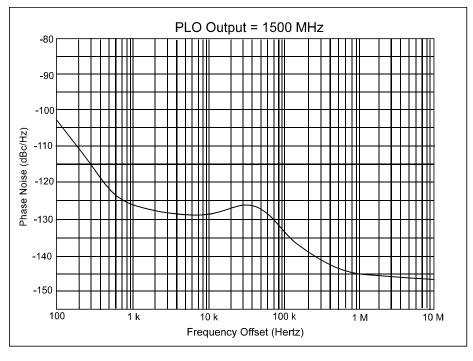
#### **Description**

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.

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



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#### **Outline Drawing**

