

Phase Locked Oscillator, 22 GHz, +18 dBm, Externally Referenced

Description:

Model SOP-22310118-SF-E1 is a 22 GHz phase locked oscillator that utilizes state-of-the-art planar circuits, a high performance three terminal device and dielectric resonator technology to generate a high-quality microwave signal. When the oscillator is phase locked to a high quality 100 MHz external reference, it offers superior phase noise performance. The oscillator delivers a typical output power of +18 dBm and has a maximum harmonic content of -20 dBc and typical spurious of -70 dBc. The oscillator has a built-in voltage regulator to further improve the signal quality and provide protection from over voltage operation.



Features:

- High Output Power
- Low Phase Noise
- Low Harmonic Content

Applications:

- Radar Systems
- Communication Links
- Transmitters/Receivers

Electrical Specifications:

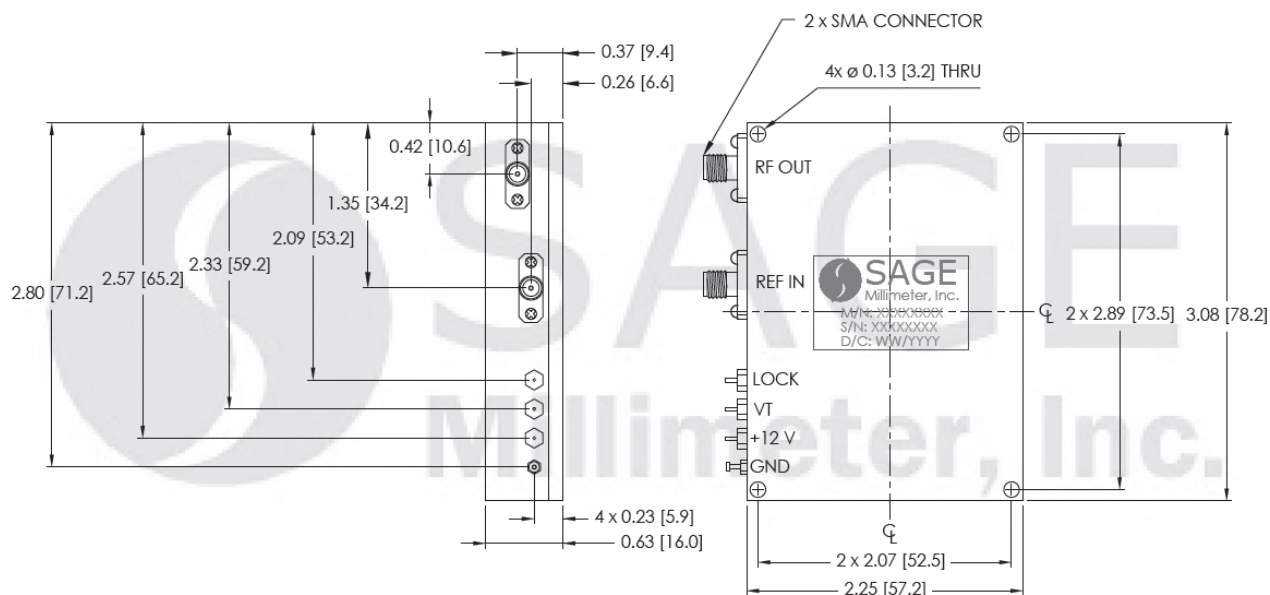
Parameter	Minimum	Typical	Maximum
Frequency		22 GHz	
Output Power		+18 dBm	
Phase Noise	Reference Source + 20 Log (N) + 3 dB		
Harmonic Suppression			-20 dBc
Spurious		-70 dBc	
External Reference Frequency		100 MHz	
External Reference Input Power	-3 dBm	+0 dBm	+3 dBm
Phase Locked Indicator (Lock)	TTL "High"		
Phase Voltage (VT)	+2 V _{DC}		+10 V _{DC}
DC Voltage/Current		+12 V _{DC} / 350 mA	+15 V _{DC}
Frequency Stability	Same as Reference		
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Output	SMA(F) Connector
REF Input	SMA(F) Connector
DC Bias, Lock and VT Ports	Feedthru Pins
Case Material	Aluminum
Finish	Nickel Plated
Weight	4.0 Oz
Size	0.63" (W) X 3.08" (L) X 2.25" (H)
Outline	OP-EC-P2



Phase Locked Oscillator, 22 GHz, +18 dBm, Externally Referenced

Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])**Note:**

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model number.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed **+50 °C**. Use additional heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

