

# Phase Locked Oscillator, 16.0 GHz, Externally Referenced

### **Description:**

Model SOP-16301210-SF-E1 is a phase locked oscillator with a typical output frequency of 16.0 GHz and a nominal output power of +10 dBm. The PLO is externally referenced. The oscillator is phase locked to external reference with a frequency of 100 MHz and typical power of 0 dBm. The phase noise of the oscillator is dependent on the quality of the reference source. The oscillator has a minimum harmonic suppression of -25 dBc and spurious of -75 dBc.



### **Features:**

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

## **Applications:**

- Radar Systems
- Communication Links
- Transmitters and Receivers

### **Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency		16.0 GHz	
Output Power		+10 dBm	
Phase Noise	Reference Source + 20 Log (N) + 3 dB		
Harmonic Suppression		-25 dBc	
Spurious		-75 dBc	
External Reference Frequency		100 MHz	
External Reference Input Power		+0 dBm	+3 dBm
Phase Locked Indicator	TTL "High"		
DC Voltage	+11.5 V <sub>DC</sub>	+12 V <sub>DC</sub>	+15 V <sub>DC</sub>
DC Supply Current		250 mA	
Frequency Stability (Externally Referenced)	Same as reference		
Power Stability	//\ /	±1 dB	
Specification Temperature	// 1/	+25 °C	- 90
Operating Temperature	0 °C		+50 °C

# **Mechanical Specifications:**

Item	Specification	
RF Output Connector	SMA(F)	
REF Input Connector	SMA(F)	
Bias	Solder Pin	
Case Material	Aluminum	
Finish	Nickel Plated	
Weight	4 Oz	
Size	2.0" (W) X 2.0" (L) X 0.6" (H)	
Outline	OP-EC-NW2	



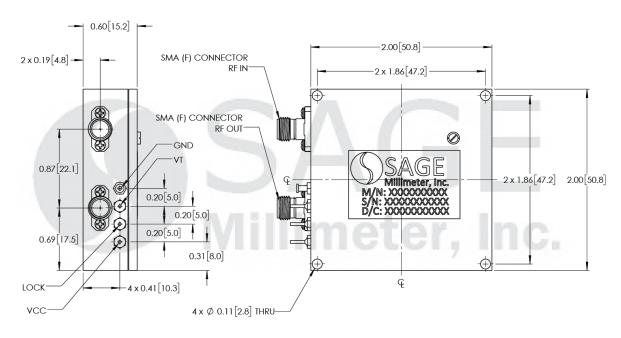
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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])



#### Note:

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

#### 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
- Proper torque,  $8.0 \pm 0.15$  inch-pounds (0.90  $\pm$  0.02 Nm), should be applied. **SAGE Millimeter** torque wrench, model SCH-08008-S1, is highly recommended.



