



K Band Phase Locked Oscillator, 20.5 GHz, Externally Referenced

Description:

Model SOP-21301110-SF-E1 is a phase locked oscillator with a typical output frequency of 20.5 GHz and a minimum output power of +10 dBm. The phase noise is proportional to the phase noise of the external reference specified in the electrical specifications below. The oscillator has a maximum harmonic suppression of -20 dBc and spurious of -70 dBc. The oscillator requires a 10 MHz reference at +0 dBm typical. The oscillator requires a 10 MHz reference at +0 dBm typical. The required DC power supply is +12 V_{DC}/450 mA.



Features:

- Low Phase Noise
- Low Harmonic Components

Applications:

- Radar Systems
- Communication Links
- Transmitters and Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency		20.5 GHz	
Output Power	+10 dBm		
Phase Noise	Reference Noise + 20*log(N) + 3 dB		
Harmonic Suppression		-25 dBc	
Spurious		-75 dBc	
External Reference Frequency		10 MHz	
External Reference Input Power		+0 dBm	
DC Voltage (DRVCO + Reference Bias)		+12 V _{DC}	+15 V _{DC}
DC Supply Current		450 mA	
Lock		TTL "1"	
Unlock		TTL "0"	
Frequency Stability		Same as reference	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

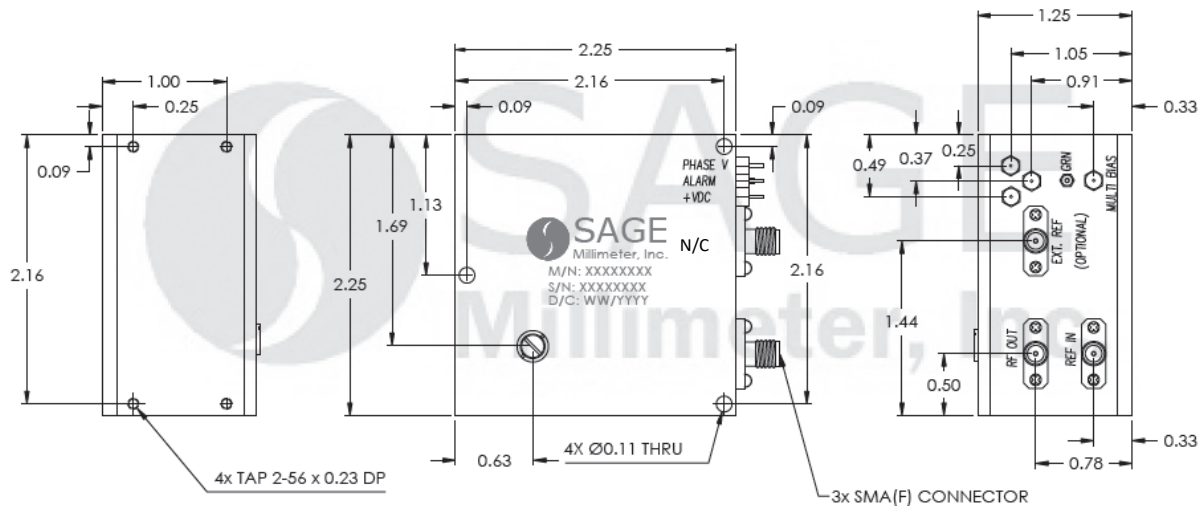
Item	Specification
Output Port	SMA (F)
DC Bias Port	Solder Pin
Reference Input	SMA (F)
Case Material	Aluminum
Finish	Nickel Plated
Weight	5.6 oz
Size	2.25" (W) 2.25" (L) X 1.25" (H)
Outline	OP-EA-P1





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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



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 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.**

