SOL-39312-28-G1

Rev. 1.0

Ka-Band Volume Production Oscillator, 39.0 GHz

Description:

Model SOL-39312-28-G1 is a volume-production ready, Ka Band Gunn oscillator that utilizes a high performance GaAs Gunn diode and high Q cavity to achieve excellent phase noise and power stability. The oscillator is designed for fixed frequency applications, however, the frequency can be adjusted by ±0.5 GHz using the self-locking set screw provided.



Features:

- Low Cost and Production Ready
- Mechanical tuning ability
- Low AM/FM Noise and Harmonics
- High Frequency and Power Stability

Applications:

- 5G Systems
- Traffic Control Systems
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Center Frequency		39.0 GHz	
Power Output	+10 dBm	+12 dBm	
Mechanical Tuning Range		±500 MHz	
Harmonic Emissions		-20 dBc	
Spurious Emissions		-30 dBc	
Phase Noise @ 100 KHz offset		-95 dBc/Hz	
Frequency Stability			-1 MHz/°C
Power Output Stability			-0.03 dB/°C
Bias Voltage			+5.5 V_{DC}
Bias Current			350 mA
Specification Temperature		+25˚C	
Operating Temperature	-40˚C		+85˚C

Mechanical Specifications:

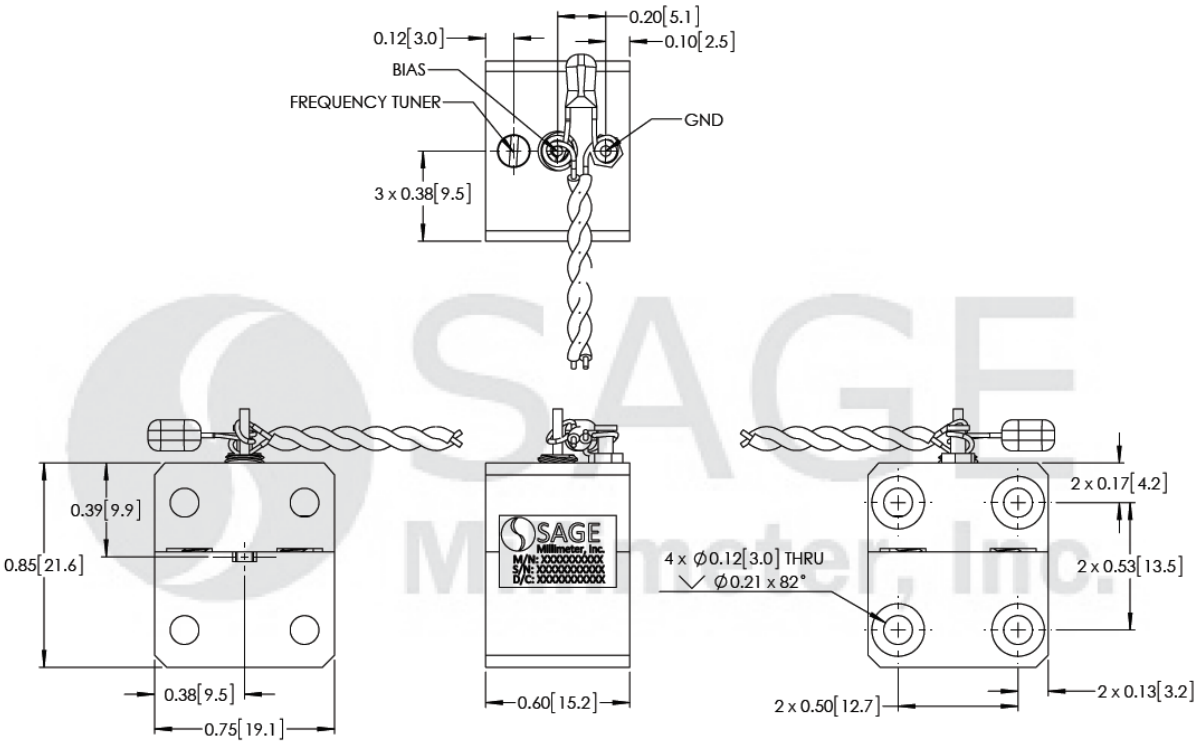
Item	Specification
RF Port	WR-28 Iris Coupled Waveguide
RF Port Flange	UG-599/U Flange
Cavity Material	Aluminum
Finish	Chem Film
Weight	0.6 Oz
Size	0.75”(W) X 0.60”(L) X 0.85” (H)
Outline	OL-A1

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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.
- The center frequency can be set at any frequency point in the range of 32 to 37 GHz.

Caution:

- Reversing polarity bias will destroy the device.
- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed **+85˚C**. Use an additional heatsink or fan if necessary.

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