

## Ka-Band Volume Production Oscillator, 35 GHz, 4 GHz Tuning Bandwidth

## Description:

**Model SOL-35312-28-G1-1** 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  $\pm 2.0$  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:

- Traffic Control Systems
- Communication Systems
- Radar Systems

## Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Center Frequency	33 GHz	35 GHz	37 GHz
Power Output	+10 dBm	+12 dBm	
Mechanical Tuning Range	$\pm 1,000$ MHz	$\pm 2,000$ MHz	
Harmonic Emissions		-20 dBc	
Phase Noise @ 100 KHz offset		-95 dBc/Hz	
Frequency Stability			-0.3 MHz/ $^{\circ}$ C
Power Output Stability			-0.03 dB/ $^{\circ}$ C
Bias Voltage		+5.5 V <sub>DC</sub>	+6 V <sub>DC</sub>
Bias Current		250 mA	
Specification Temperature		+25 $^{\circ}$ C	
Operating Temperature	-40 $^{\circ}$ C		+85 $^{\circ}$ C

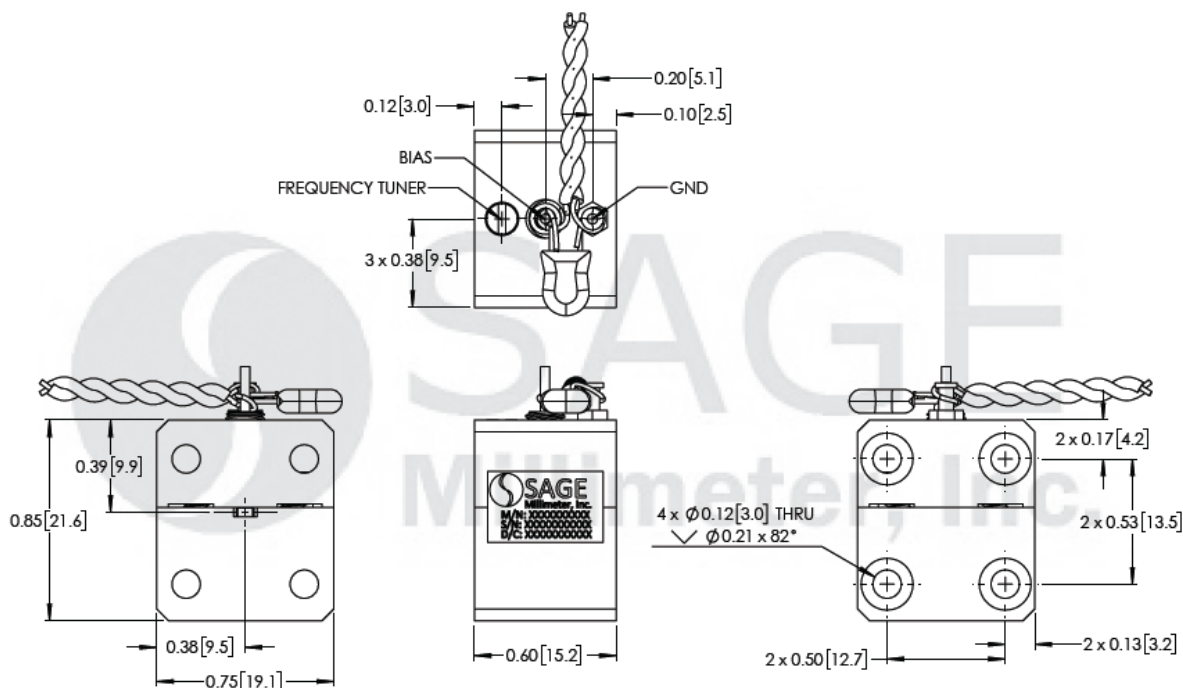
## Mechanical Specifications:

Item	Specification
RF Port	WR-28 Waveguide with UG-599/U Flange
Cavity Material	Aluminum
Finish	Chem Film
Weight	0.6 Oz
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 33 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.

