SOL-36316-28-G1

Rev. 1.0

Ka-Band Volume Production Oscillator, 35.5 GHz, +16 dBm, ±1 GHz

Description:

Model SOL-36316-28-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 ±1.0 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		35.5 GHz	
Power Output	+15 dBm	+16 dBm	
Mechanical Tuning Range	±500 MHz	±1,000 MHz	
Harmonic Emissions		-20 dBc	
Spurious Emissions		-30 dBc	
Phase Noise @ 100 KHz offset		-95 dBc/Hz	
Frequency Stability			-0.3 MHz/°C
Power Output Stability			-0.03 dB/°C
Bias Voltage	+4.8 Vdc	+5.5 V_{DC}	+6 V_{DC}
Bias Current		350 mA	400 mA
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Note: Actual tuning bandwidth is wider, ±2.0 GHz typical.

Mechanical Specifications:

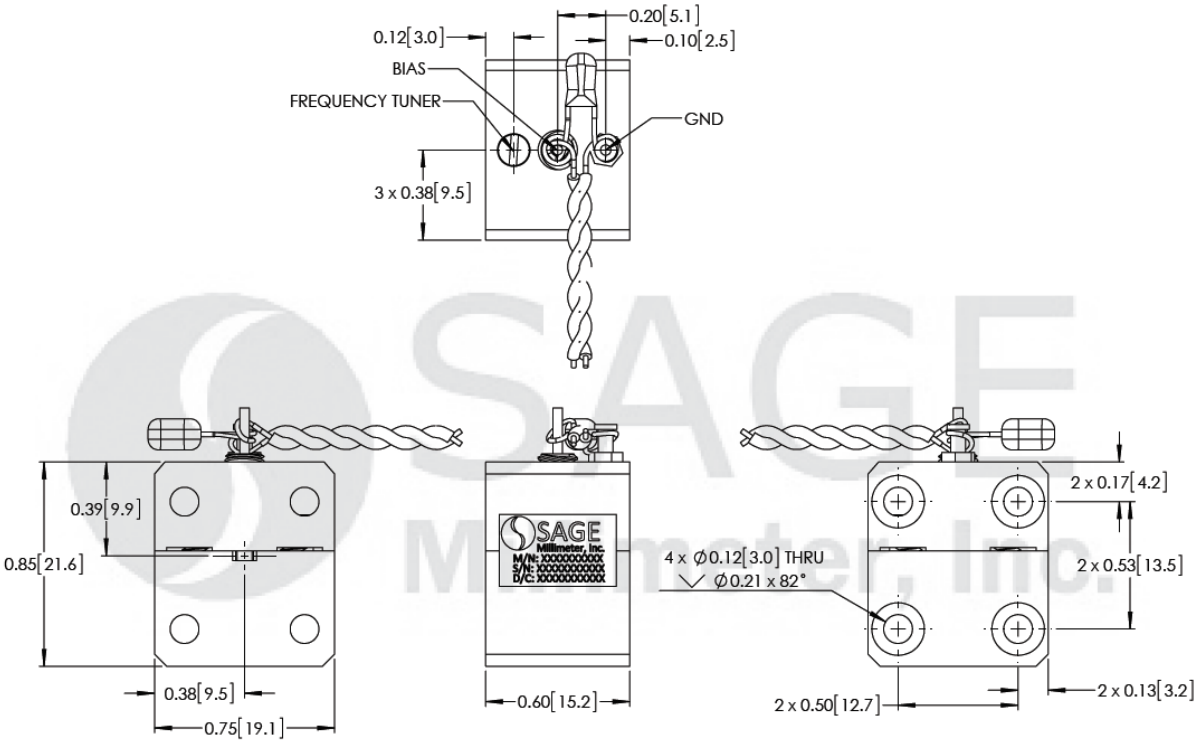
Item	Specification
RF Port	WR-28 Waveguide with UG-599/U Flange
Cavity Material	Aluminum
Finish	Chem Film
Weight	0.6 Oz
Outline	OL-A1

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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 32 to 36 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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