SOL-24314-42-G1

Rev. 1.0

K-Band Volume Production Oscillator

Description:

Model SOL-24314-42-G1 is a volume-production ready, K 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		24.125 GHz	
Power Output	+13 dBm	+14 dBm	
Mechanical Tuning Range	± 500 MHz	± 1,000 MHz	
Harmonic Emissions		-20 dBc	
Phase Noise @ 100 KHz offset		-98 dBc/Hz	
Frequency Stability			-0.8 MHz/°C
Power Output Stability			-0.02 dB/°C
Bias Voltage		+5 V_{DC}	+6 V_{DC}
Bias Current		350 mA	
Specification Temperature		+25˚C	
Operating Temperature	-40˚C		+85˚C

Mechanical Specifications:

Item	Specification
RF Port	WR-42 Waveguide with UG-595/U Flange
Cavity Material	Die Casted Zink
Finish	Chem Film
Weight	1 Oz
Outline	OL-K1

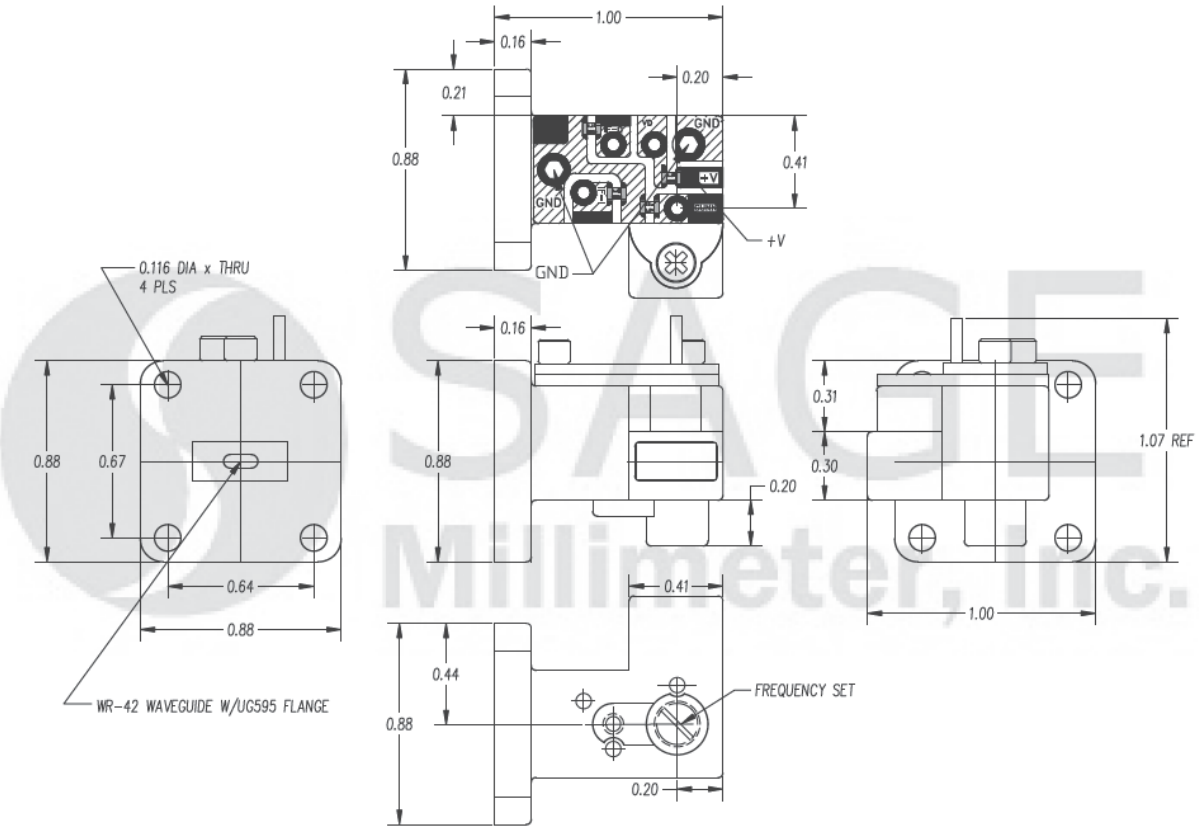
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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

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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