



## 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  $\pm 1.0$  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	$\pm 500$ MHz	$\pm 1,000$ MHz	
Harmonic Emissions		-20 dBc	
Phase Noise @ 100 KHz offset		-98 dBc/Hz	
Frequency Stability			-0.8 MHz/ $^{\circ}$ C
Power Output Stability			-0.02 dB/ $^{\circ}$ C
Bias Voltage		+5 V <sub>DC</sub>	+6 V <sub>DC</sub>
Bias Current		350 mA	
Specification Temperature		+25 $^{\circ}$ C	
Operating Temperature	-40 $^{\circ}$ C		+85 $^{\circ}$ C

### Mechanical Specifications:

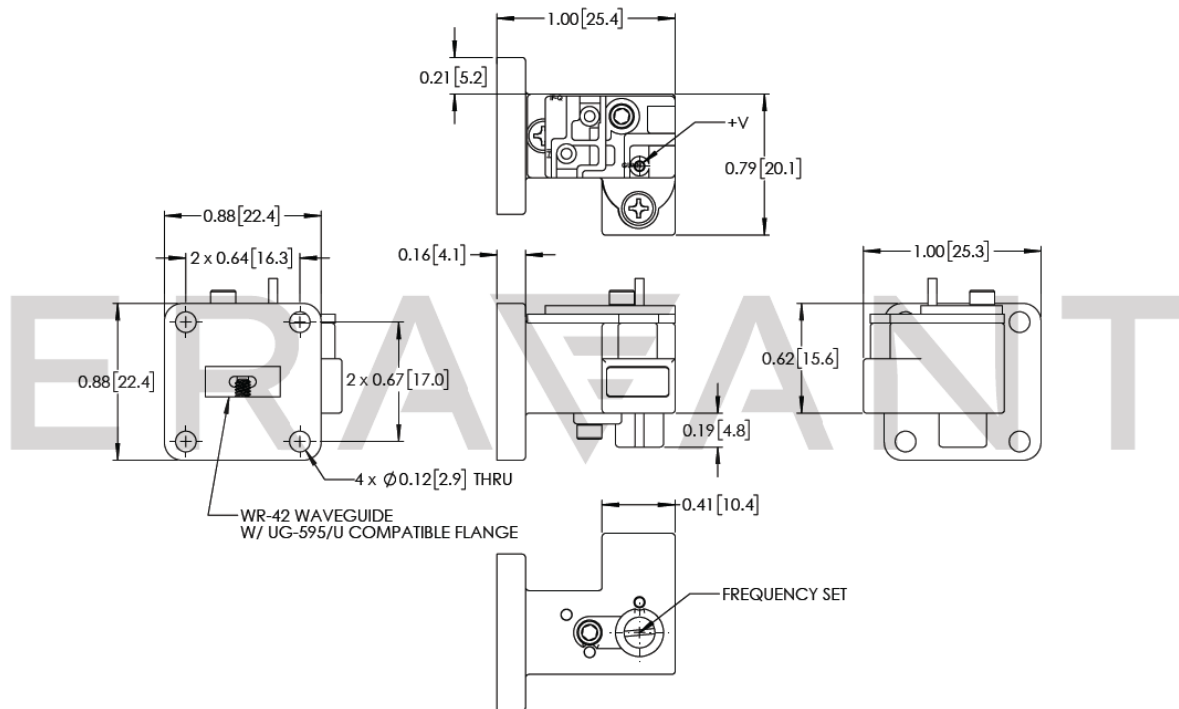
Item	Specification
RF Port	WR-42 Waveguide with UG-595/U Flange
Cavity Material	Die Casted Zink
Finish	Chem Film
Weight	1 Oz
Outline	OL-K1





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



**Note:**

- Eravant 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.

