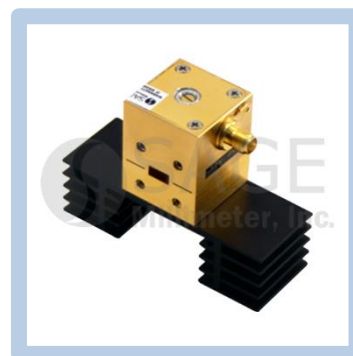




## Ka-Band Mechanically Tuned Gunn Oscillator, +20 dBm, 2 GHz Bandwidth

### Description:

**Model SOM-30302320-28-S1** is a Ka-band, mechanically tuned Gunn oscillator that utilizes a high-performance GaAs Gunn diode and proprietary cavity design to deliver +20 dBm typical power. The oscillator features a frequency tuning range of 29 to 31 GHz and delivers low AM/FM noise and harmonic emissions. Compared to its counterparts, such as multiplier based sources, the Gunn oscillator is a lower cost and cleaner source. The Gunn oscillator's frequency can also be tuned by varying the bias voltage, which is useful for phase-locking and electrical-tuning applications. The Gunn oscillator is equipped with a self-locking set screw for frequency trimming. Models with a micrometer for lab and test bench applications are available under a different model number. The performance of the oscillator can be further enhanced by adding an optional isolator, Gunn oscillator modulator/regulator and temperature heater.



### Features:

- Low AM/FM Noise and Harmonics
- Bias Tunable

### Applications:

- Test Sources
- Signal Generation
- Lab Test Setups

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Center Frequency	29 GHz	30 GHz	31 GHz
Power Output		+20 dBm	
Mechanical Tuning Range		±1.0 GHz*	
Bias Tuning Range (+4.5 to +5.5 V <sub>DC</sub> )		±10 MHz	
Bias Voltage		+4.5 V <sub>DC</sub>	+5.0 V <sub>DC</sub>
Bias Current		850 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°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
Bias Port	SMA (F)
Mechanical Tuning	Self-Locking Set Screw
Body Material	Aluminum
Finish	Gold Plated
Weight	3.0 Oz
Outline	OM-SA-C

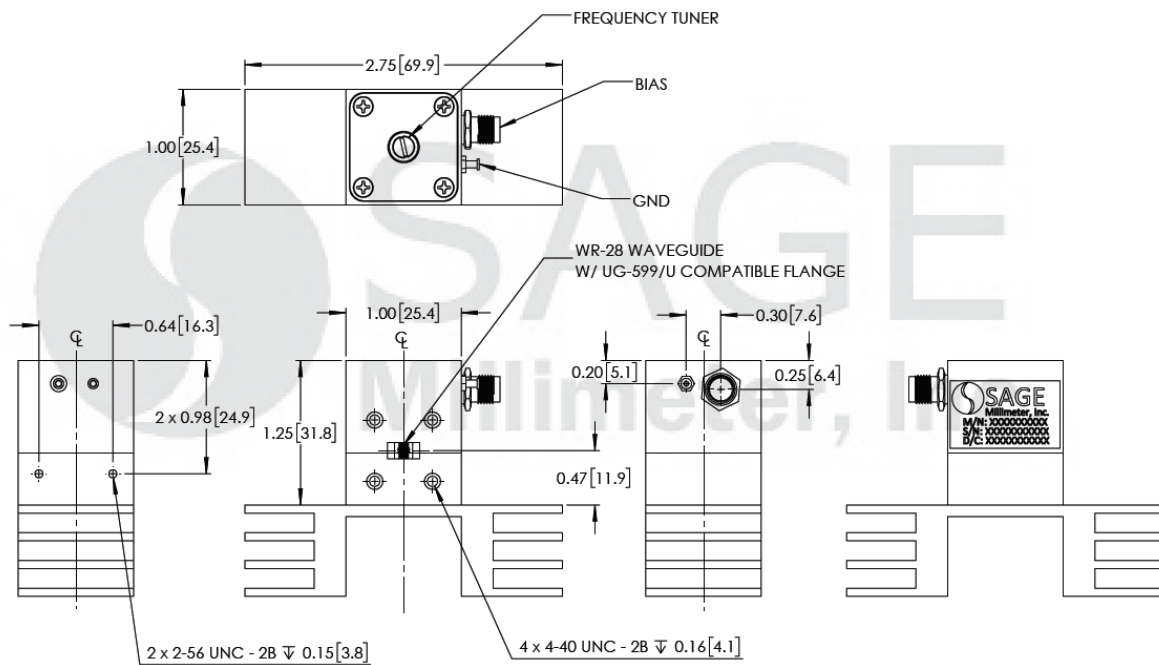


## Ka-Band Mechanically Tuned Gunn Oscillator, +20 dBm, 2 GHz Bandwidth

**Typical Mechanical Tuning Data:** (Bias: +5.0 V<sub>DC</sub>/850 mA)

Tuner Position	Frequency (GHz)	Power (dBm)
3/4 Clockwise Turn	29.0	19.5
Factory Set	30.0	20.0
1 Clockwise Turn	31.0	20.1

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



**Note:**

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- The data given above was tested under case temperature **35°C**.
- The SAGE Millimeter Gunn oscillator regulator **SOR-R3** is highly recommended for over voltage and reverse bias protection. The outline of the model SOR-R3 is shown in below.
- The bias tuning feature can be used for electrical tuning and phase lock loop applications.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.



