SOB-61305217-12-S1

E-Band Bias Tuned Gunn Oscillator, 61 GHz, ±250 MHz, +17 dBm

SOB-61305217-12-S1 is an E-band, bias tuned Gunn oscillator that utilizes a high performance GaAs Gunn diode and proprietary cavity design to deliver +17 dBm typical power, useful for phase-locking and electrical tuning applications. The oscillator features a bias frequency tuning range of ±250 MHz 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 mechanically. The Gunn oscillator is equipped with a self-locking set screw for frequency trimming. The performance of the oscillator can be further enhanced by adding an optional isolator, Gunn oscillator modulator/regulator and a temperature heater.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Center Frequency		61 GHz	
Power Output		+17 dBm	
Mechanical Tuning Range		±100 MHz	
Bias Tuning Range (+5.0 to +6.0 V_{DC})		±250 MHz	
Bias Voltage	+4.5 V _{DC}	+5.5 V _{DC}	+6.0 V _{DC}
Bias Tuning Speed		100 µS	
Bias Current		750 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Port	WR-12 Waveguide with UG-387/U Anti-Cocking Flange
External Bias	Solder Pin
Mechanical Tuning	Self-Locking Set Screw
Body Material	Aluminum
Finish	Gold Plated
Weight A	3.0 Oz
Outline	OM-SE-A-C

ECCN

EAR99

FEATURES

- Low AM/FM Noise and Harmonics
- Mechanical Tunable
- Temperature Range: 0 to +50 °C

APPLICATIONS

- Test Sources
- Signal Generation
- FMCW Radar

SUPPLEMENTAL DETAILS

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Typical Frequency and Power Output vs. Bias Voltage

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WR-12 WAVEGUIDE

W/UG-387/U ANTI-COCKING FLANGE

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NOTE:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- The data given above was tested under case temperature +35 °C.
- The bias tuning feature is used for electrical tuning and phase lock loop applications.
- The tuning speed can be improved per request.
- The mechanical tuning feature is provided for frequency trimming only. To tune the oscillator more than the specified bandwidth mechanically will damage or degrade the oscillator.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Reversing polarity will destroy the device.
- Ensure that bias voltage never exceeds +6.0 Volts.
- Keep a fan on if necessary. The case temperature should never exceed +55 °C.

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