

# GVS-10-84-B1-14.8

## W-Band Varactor Tuned Gunn Oscillator, 84.0 GHz

### Description:

**Model GVS-10-84-B1-14.8** is a W-Band, varactor tuned Gunn oscillator that utilizes a high performance GaAs Gunn diode and proprietary cavity design to deliver 14.8 dBm typical power with low AM/FM noise and harmonic emissions. The oscillator has a center frequency of 84.0 GHz and a electronic tuning range of  $\pm 0.4$  GHz. Compared to its multiplier-based counterparts, the Gunn oscillator is a lower cost alternative and a cleaner source.

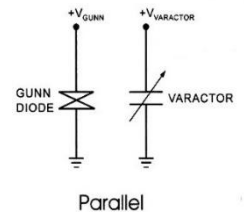


### Features:

- Low AM/FM Noise and Harmonics
- Electronic Tuning
- Robust circuit

### Applications:

- Test Sources
- Signal Generation
- Lab Test Setups



### Electrical Specifications:

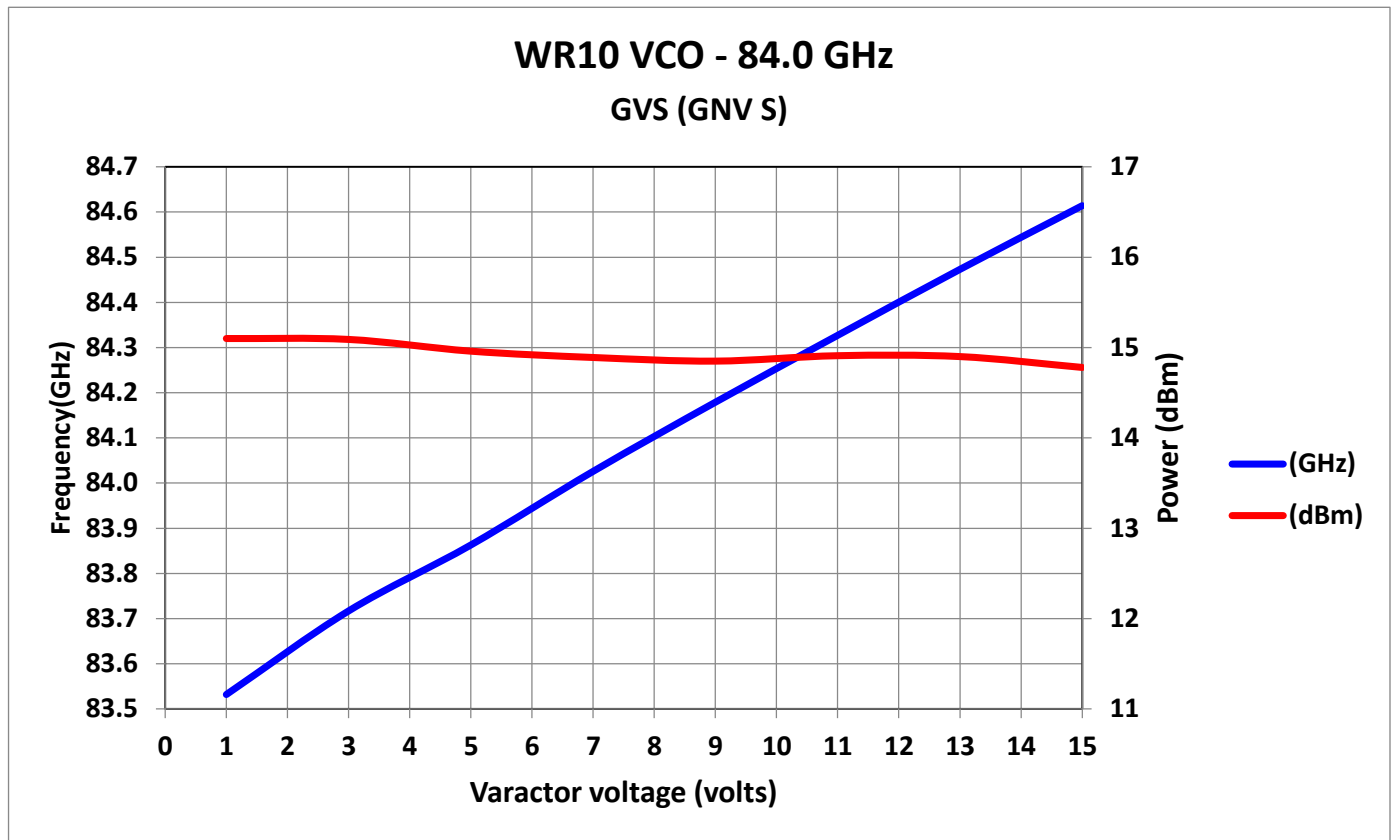
Parameter	Minimum	Typical	Maximum
Center Frequency		84.0 GHz	
Electronic Tuning Range	$\pm 0.25$ GHz	$\pm 0.4$ GHz	$\pm 0.5$ GHz
Output Power		+ 14.8 dBm	
Bias Voltage		+4.8 V <sub>DC</sub>	+5.1 V <sub>DC</sub>
Bias Current		1.0 A	
Specification Temperature		+30 °C	
Varactor tuner voltage	+0.5 v		+16v
Case Temperature	+10 °C		+50 °C

### Mechanical Specifications:

Item	Specification
RF Port	WR-10 Waveguide with UG-387/U-M Flange
Bias Port	Gunn is SMA (F) , Varactor is MCX
Case Material	Aluminum
Finish	Natural
Weight	90 g
Size	25 (W) X 25 (L) x 31.5 ( H) mm
Outline	G-1

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### Note:

- All data presented is collected from a sample lot. It is for illustration only. Actual data varies unit to unit.
- The data given above was tested under case temperature **+33 ° C**.
- Always set varactor voltage to around **84.0 GHz** when turning on the oscillator to ensure correct mode operation.
- Reserves the right to change the information presented without notice.

### Caution:

- Reversing polarity will destroy the device.
- Bias voltage should not exceed **+5.1 Volts**.
- The case temperature of the device should not exceed **+55 C**. Use an additional heatsink or fan if necessary.
- When handling coax connectors, proper torque,  $8.0 \pm 0.4$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied.

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

