

# GW-15-67.5-10-16

## V-Band Wide Mechanical Tuning Bandwidth Gunn Oscillator, 62.5 to 72.5 GHz

### Description:

**Model GW-15-67.5-10-16** is a V-Band, wide mechanical tuning bandwidth Gunn oscillator that utilizes a high performance GaAs Gunn diode and proprietary cavity design to deliver 16.0 dBm typical power with low AM/FM noise and harmonic emissions. The oscillator has a center frequency of 67.5 GHz and a mechanical tuning range of  $\pm 5.0$  GHz. Compared to its multiplier-based counterparts, the Gunn oscillator is a lower cost alternative and a cleaner source. The Gunn oscillator is equipped with a two independent micrometers. The frequency micrometer allows adjustment of frequency; the power micrometer allows optimization of output power. A small amount of bias voltage will provide electronic frequency tuning. The performance of the oscillator can be further enhanced by adding an optional integrated isolator, Gunn oscillator modulator/regulator, and temperature heater.



### Features:

- Low AM/FM Noise and Harmonics
- Broad Mechanical Tuning Bandwidth
- Micrometer Tuner

### Applications:

- Test Sources
- Signal Generation
- Lab Test Setups

### Electrical Specifications:

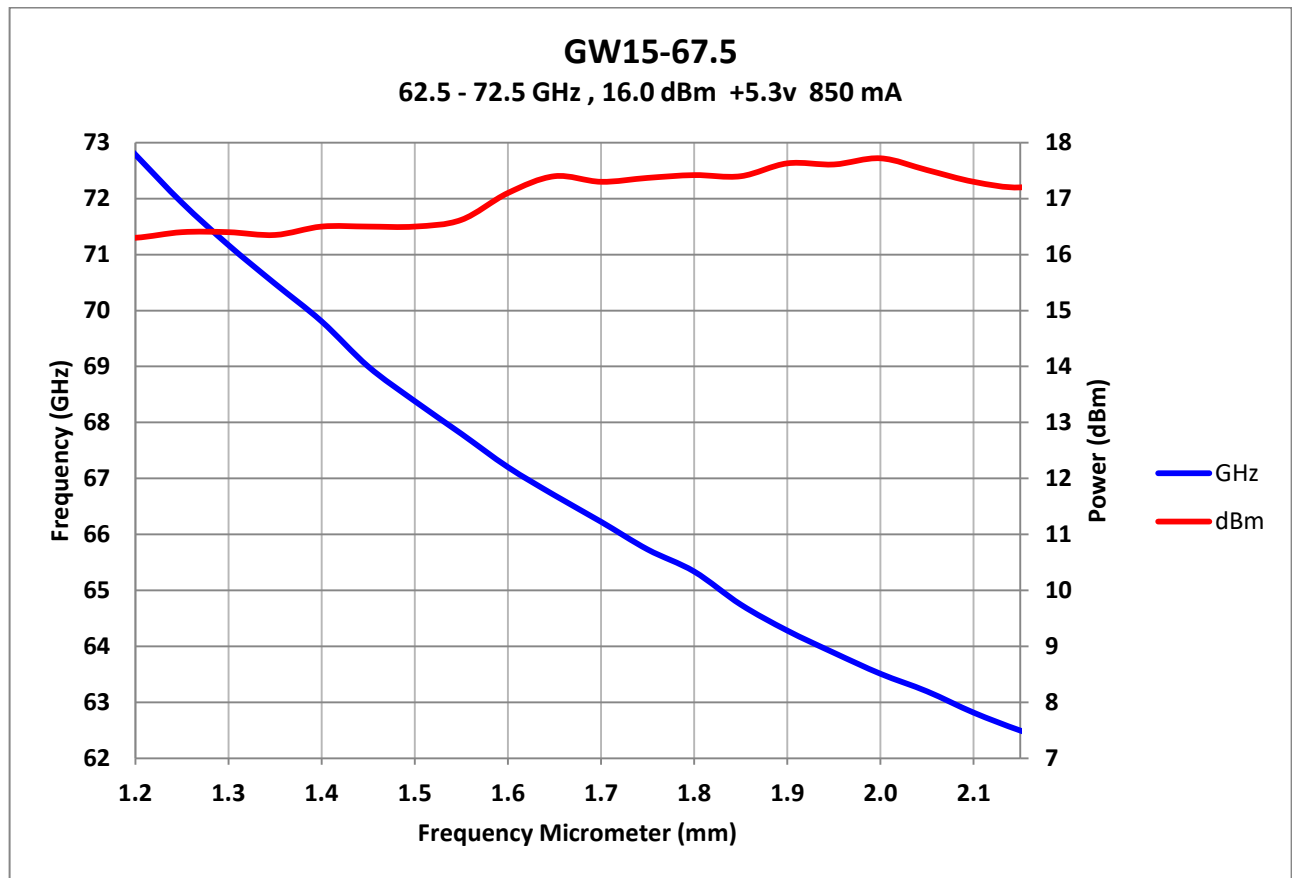
| Parameter                 | Minimum | Typical              | Maximum              |
|---------------------------|---------|----------------------|----------------------|
| Center Frequency          |         | 67.5 GHz             |                      |
| Mechanical Tuning Range   |         | $\pm 5.0$ GHz        |                      |
| Output Power              |         | 16.0 dBm             |                      |
| Bias Voltage              |         | +5.3 V <sub>DC</sub> | +6.0 V <sub>DC</sub> |
| Bias Current              |         | 1.0 A                |                      |
| Specification Temperature |         | +30 °C               |                      |
| Case Temperature          | +10 °C  |                      | +50 °C               |

### Mechanical Specifications:

| Item          | Specification                          |
|---------------|--|
| RF Port       | WR-15 Waveguide with UG-387/U-M Flange |
| Bias Port     | SMA (F)                                |
| Case Material | Aluminum                               |
| Finish        | Natural                                |
| Weight        | 230 g                                  |
| Size          | 30 (W) X 30 (L) x 77 (H) mm            |
| Outline       | GW-DT-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 +35 ° C.
- Always set micrometer reading to around 67.5 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 +6.0 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)

