

Mechanically Tuned Gunn Diode Oscillators

Bulletin No. OGM

FEATURES

- ❖ High output power
- ❖ Wide mechanical tuning range
- ❖ Bias tuning ability
- ❖ Excellent frequency stability
- ❖ Low AM and FM noise

APPLICATIONS

- ❖ Test benches
- ❖ Local oscillators
- ❖ Multiplier drivers
- ❖ Subsystems

DESCRIPTION

OGM series mechanically tuned Gunn oscillators combine proprietary circuit design capability and experience with either GaAs or InP Gunn diode to cover the frequency range of 18 to 150 GHz in nine waveguide bands. The oscillators are especially designed for high output power, wide mechanical tuning range, bias tuning ability and low AM/FM noise characteristics. The standard oscillators are equipped with a self-locking screw for system integration, while a micrometer driver can be provided instead of a self-locking screw to enhance convenient frequency tuning and reliable frequency resetting. The models with micrometer driver are ideally suited for bench test sources. The oscillators can be supplied with optional integrated isolator, voltage regulator and temperature heater. While waveguide is standard interface, the oscillators are available with coaxial interface as an option. The operating temperature range of the standard unit is 0 to +50°C.

SPECIFICATIONS

Frequency Range (GHz)	Output Power (dBm)	Mechanical Tuning Range (GHz)	Bias Voltage Range	Bias Current Range (A)	Waveguide size	Frequency Stability (MHz/°C)	Power Stability (dB/°C)	Outline Drawing
18-26.5	10-27	0.05-6	4-12	0.2-2.5	WR-42	-2.0	-0.02	WT-G-1,2
26.5-40	10-26	0.05-10	4-12	0.3-2.5	WR-28	-2.5	-0.02	WT-G-1,2,4
33-50	10-25	0.05-10	4-11	0.3-2.0	WR-22	-3.0	-0.03	WT-G-1,2,3
40-60	10-24	0.05-12	3-10	0.3-2.0	WR-19	-4.0	-0.03	WT-G-1,2,3
50-75	10-23	0.05-20	3-10	0.3-1.5	WR-15	-4.5	-0.03	WT-G-1,2,3,6
60-90	10-20	0.05-20	3-10	0.25-1.5	WR-12	-5.0	-0.03	WT-G-1,2,3,6
75-110	10-19	0.05-20	4-10	0.25-1.5	WR-10	-6.0	-0.03	WT-G-1,2,3,6
90-140	10-15	0.05-20	4-10	0.25-1.5	WR-8	-7.0	-0.04	WT-G-1,2,3,6
110-150	5-13	0.05-4	4-10	0.25-1.5	WR-6	-8.0	-0.04	WT-G-1,2,3
Temperature Range		0 to +50 °C						

HOW TO ORDER

Specify Model Number

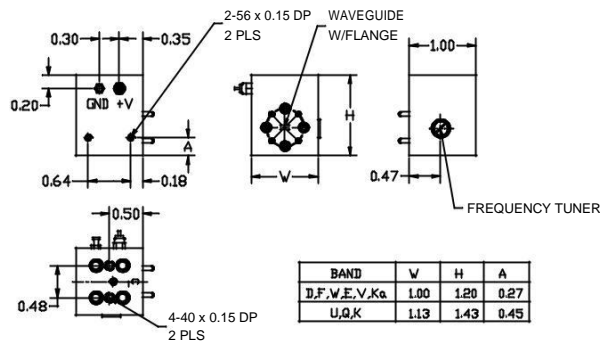
OGM-CO CF BW PP - XX ← Factory Reserve

RF Connector Type →
Center Frequency in GHz →
Output Power in dBm →
Bandwidth in GHz →

Example: To order a center frequency 60 GHz mechanically tuned Gunn oscillator with WR-15 waveguide interface, 4 GHz tuning bandwidth 17 dBm output power, specify OGM-15600417-XX.

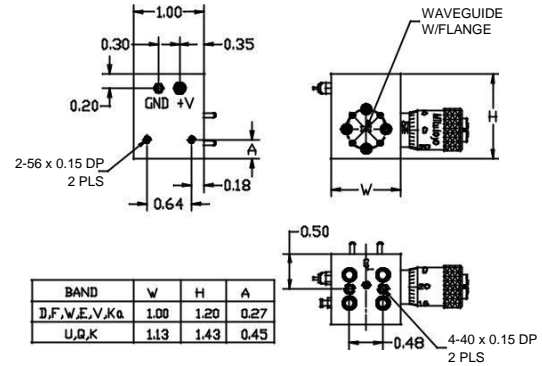
Oscillator Outline Drawings #1

WT-G-1



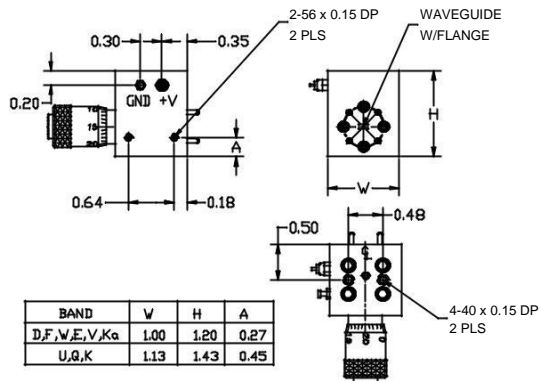
Dimensions are in inches

WT-G-2



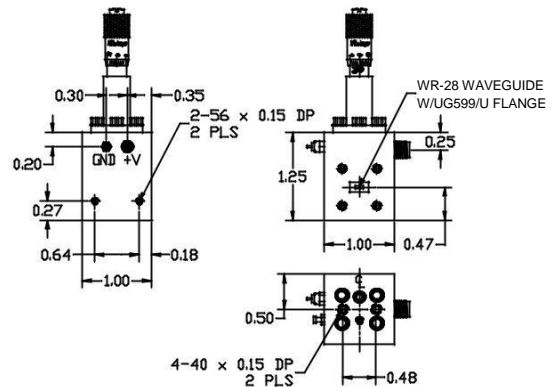
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WT-G-3



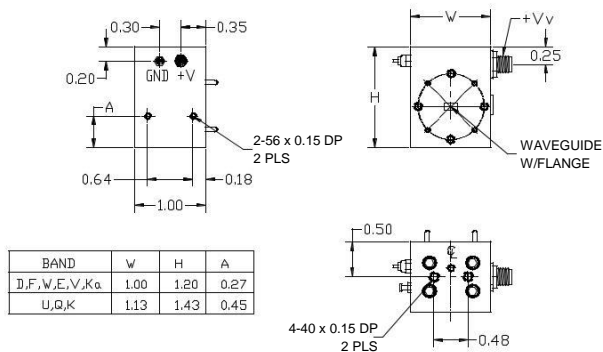
Dimensions are in inches

WT-G-4



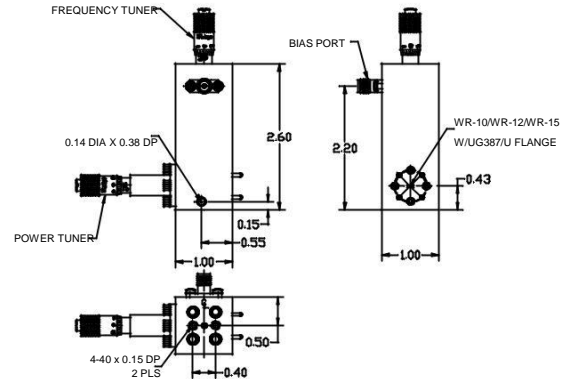
Dimensions are in inches

WT-G-5



Dimensions are in inches

WT-G-6



Dimensions are in inches

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.