

## Varactor Tuned Gunn Diode Oscillators

### FEATURES:

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

### APPLICATIONS:

- ❖ FMCW transceivers
- ❖ Phase locked oscillators
- ❖ AFC loops.



**CVG Series**

### DESCRIPTION:

**Cernexwave CVG Series** varactor tuned Gunn oscillators combine with a proprietary circuit design capability and the experience with either GaAs or InP Gunn diodes to cover the frequency range of 18 to 110 GHz in seven waveguide bands. The oscillators are especially designed for high output power, wide varactor tuning range, mechanically tuning ability and low AM/FM noise characteristics. The DC power is applied via a low pass EMI filter, while a female SMA connector is utilized for the varactor tuning voltage. The tuning rate can be as high as 50 MHz. The oscillators are ideally suited for FMCW transceivers, AFC loops and phase locked systems. The oscillators can be supplied with optional integrated isolator, voltage regulator and temperature heater. While waveguide is the standard interface, the oscillators are available with coaxial interface as an option.

### SPECIFICATIONS:

Frequency Range (GHz)	Output Power Range (dBm)	Varactor Tuning (GHz)	Bias Voltage Range (Volts)	Bias Current Range (A)	Waveguide Size	Frequency Stability (MHz/°C)	Power Stability (dB/°C)
8-20-12.40	10-25	0.05-0.25	4-12	0.2-2.5	WR-90	-0.5	-0.03
10.0-15.00	10-25	0.05-0.25	4-12	0.2-2.5	WR-75	-1.0	-0.03
12.40-18.00	10-25	0.05-0.25	4-12	0.2-2.5	WR-62	-1.5	-0.03
18-26.5	10-25	0.05-0.25	4-12	0.2-2.5	WR-42	-2.0	-0.03
26.5-40	10-24	0.05-0.25	4-12	0.3-2.5	WR-28	-2.5	-0.03
33-50	10-23	0.05-0.25	4-11	0.3-2.0	WR-22	-3.0	-0.03
40-60	10-22	0.05-0.25	3-10	0.3-2.0	WR-19	-4.0	-0.04
50-75	10-21	0.05-0.25	3-10	0.3-1.5	WR-15	-4.5	-0.04
60-90	10-19	0.05-0.25	3-10	0.25-1.5	WR-12	-5.0	-0.04
75-110	10-17	0.05-0.25	4-10	0.25-1.5	Wr-10	-6.0	-0.04

Note: Isolator, Heater, Regulator, K(F) & 2.4mm (F) connectors are available as options.

# CERNEXWAVE

## HOW TO ORDER:

Specify Model Number **CVG-WG LF HF PP - XX** ← To be specified by the factory

WG Size                      ↑                      ↑                      ↑                      ↑                      Output Power

Low End Frequency                      —————                      High End Frequency

**Example:** To order a Varactor tuned oscillator with a frequency band of 59-60GHz with a WR15 Waveguide interface, and an output power of 15dbm, specify CVG15596015-XX

CERNEXWAVE RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE