

Varactor Controlled Oscillator

21.20 - 23.60 GHz

MA87828

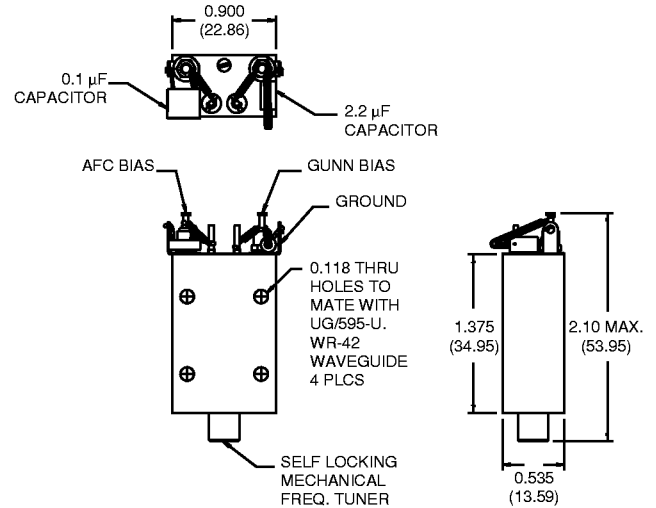
V3.00

Features

- Small and Lightweight
- Low AM and FM Noise
- Electronic Tuning Allows Automatic Frequency Control (AFC)
- Suitable for Digital or Analog Microwave Radio Applications

Description

A mechanically and electronically tunable Gunn oscillator designed to generate RF power in the range of 21.2 to 23.6 GHz. This VCO is suitable as the local oscillator in a receiver assembly for a point-to-point microwave radio. A Gunn diode and GaAs abrupt varactor diode are coupled in a single high Q cavity to provide low AM/FM noise, excellent frequency and power stability with respect to changes in operating temperature.



Dimensions in () are in mm.

Specifications @ 25°C

Parameter	Symbol	Units	Specification
Frequency Range ¹	F	GHz	21.20 to 23.60
Power Output	P _{OUT}	mW	10 Min. Over T _{OP}
Electronic Tuning Range	ΔF/ΔV	MHz	40 Min.
Voltage Operating Range (Gunn) ²	V _{OP} /GUNN	VDC	+4.5 to +8.0
Operating Current (Gunn)	I _{OP}	mA	500 Max.
Startup Current (Gunn)	I _{TH}	mA	650 Max.
Voltage Operating Range (Tuning)	V _{OP} /TUNING	VDC	0 to +15.0
Change Frequency vs. Temperature	ΔF/ΔT	MHz	±10 Max.
Recommended Output Load Parameter	LOAD (SWR)	SWR	< 1.5:1 Max., Any Phase
Operating Temperature Range (Ambient) ³	T _{OP}	°C	-30 to +70
Waveguide Size/Flange			WR-42, UG-595/U

1. Available in 600 MHz mechanically tuned bands.
2. Specific voltage assigned by factory. Power supply should be held to ±0.10 V.
3. The ambient temperature is defined as air temperature.
4. A 2.2 microfarad capacitor is supplied between the Gunn bias pin and ground to suppress bias line oscillations.

Specifications Subject to Change Without Notice.

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