

K-Band Gunn Oscillator

MA86790

V2.00

Features

- 10 mW (24.150 GHz) Fundamental Oscillator
- Low Voltage Operation
- Low AM and FM Noise Oscillator
- Can be Directly Attached to a Horn Antenna
- Low Cost

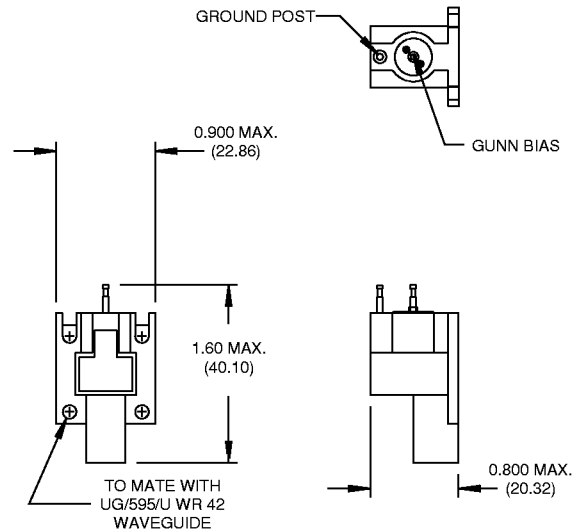
Description

The MA86790 Gunn oscillator is useful as an inexpensive and reliable source of microwave power at 24.150 GHz. This oscillator is useful for local oscillators or low power transmitters for CW Doppler radar systems such as speed radars, braking systems, traffic control, industrial process control, intrusion alarms, and motion detection systems.

This oscillator can be factory set for other frequencies close to 24.150 GHz.

This oscillator may also be factory modified to operate as a pulsed oscillator for industrial applications such as range measurement, liquid level controls, identification and amplitude sensitive security systems. It may also be used for the transmitter of "instant-on" police radar systems.

The factory can also supply oscillators with improved temperature compensation or higher output power up to 100mW and operating voltages upon request. Contact factory for more information.



Dimensions in () are in mm.
Case is electrical ground.

Specifications Subject to Change Without Notice.

M/A-COM, Inc.

North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 ■ Europe: Tel. +44 (1344) 869 595
 Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

Specifications @ 25°C

Parameter	Symbol	Units	Specification
Frequency (Mechanical Tuning) ¹	F	GHz	24.150 ±25 MHz
Power Output (-30°C to +70°C)	P _{OUT}	mW	10 Min., 50 Max.
Voltage Operating Range (Gunn) ²	V _{OP} /GUNN	VDC	+3.5 to +6.5 Fixed ³
Operating Current (Gunn) (-30°C to +70°C)	I _{OP}	mA	250 Max.
Startup Current (Gunn) (-30°C to +70°C)	I _{TH}	mA	300 Max.
Change Frequency vs. Temperature	ΔF/ΔT	MHz	55 Max.
Recommended Output Load Parameter	LOAD (SWR)	SWR	1.5:1 Max., All Phases
Operating Temperature Range (Ambient) ³	TOP	°C	-30 to +70
Waveguide Size/Flange			WR-42, UG-595/U

1. Factory set.
2. Operating voltage is factory specified and marked on each oscillator. The oscillator must be operated at that voltage ±0.25 V.
3. The ambient temperature is defined as ambient/chassis temperature.
4. A 1μF to 10μF capacitor is required between the Gunn pin and ground pin to suppress bias oscillations.
5. Power levels up to 100 mW are available. Contact factory.

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