

## Features

- Low Cost
- High-Volume Design
- Various Output Power Levels
- Pulsed DC Input Voltage
- Low-Power Consumption
- FM CW Operation



## Applications

- Intrusion Alarm Systems
- Speed Radar
- Presence Sensing
- Traffic Control
- Level Sensing
- Weather Radar
- Amateur Communications

## Description

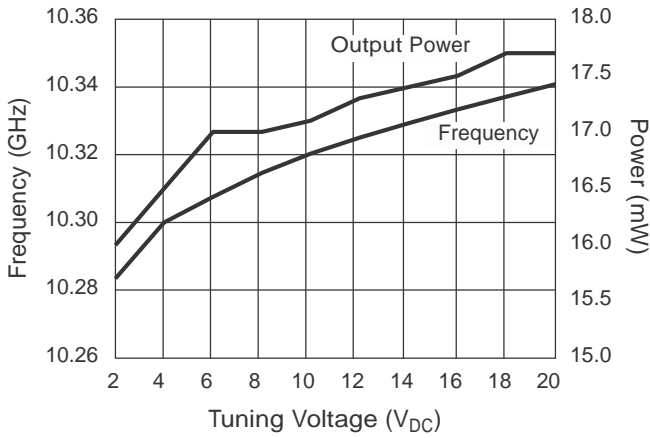
Microsemi's voltage Gunn controlled oscillators are designed to provide an affordable, frequency-modulated microwave power at a discrete frequency. The varactor tuning of the oscillator permits carrier frequency modulation for ranging information.

## Specifications @ 25°C

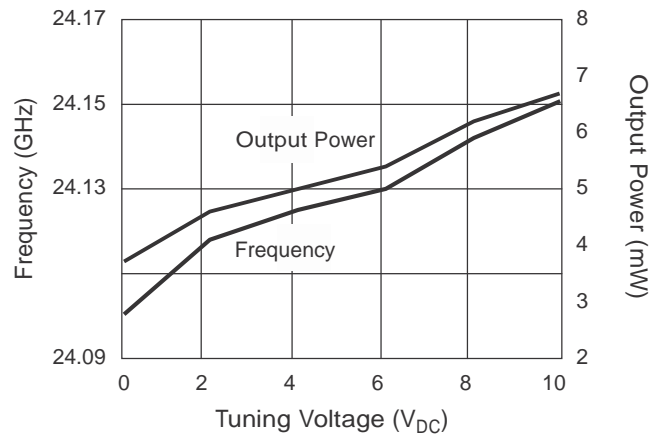
| Part Number                                   | Frequency (GHz) | Typ. Output Power (mW) | Freq. Drift/ Temperature (KHz/°C) | Min. Electronic Tuning Range (MHz) | Tuning Voltage (V <sub>DC</sub> ) | Operating Voltage (V <sub>DC</sub> ) | Max. Operating Current (mA) |
|---|-----------------|------------------------|-----------------------------------|------------------------------------|-----------------------------------|--------------------------------------|-----------------------------|
| <b>X Band Voltage Controlled Oscillators</b>  |                 |                        |                                   |                                    |                                   |                                      |                             |
| MO87108-1                                     | 10.300          | 15                     | 400                               | 40                                 | +1 to +20                         | +8.0 to +10.0                        | 200                         |
| MO87108-2                                     | 10.300          | 25                     | 400                               | 40                                 | +1 to +20                         | +8.0 to +10.0                        | 600                         |
| MO87108-3                                     | 10.300          | 40                     | 400                               | 40                                 | +1 to +20                         | +8.0 to +10.0                        | 600                         |
| MO87603B                                      | 9.405           | 7-25                   | 450                               | 63-100                             | 0 to +13                          | +10.5                                | 200                         |
| <b>K Band Voltage Controlled Oscillators</b>  |                 |                        |                                   |                                    |                                   |                                      |                             |
| MO9070  | 24.125          | 3                      | 1000                              | 25                                 | +2 to +10                         | +5.0                                 | 100                         |
| MO87828-1                                     | 21.500          | 10                     | 300                               | 40                                 | 0 to +15                          | +5.0 to +8.0                         | 400                         |
| MO87828-2                                     | 22.100          | 10                     | 300                               | 40                                 | 0 to +15                          | +5.0 to +8.0                         | 400                         |
| MO87828-3                                     | 22.700          | 10                     | 300                               | 40                                 | 0 to +15                          | +5.0 to +8.0                         | 400                         |
| MO87828-4                                     | 23.300          | 10                     | 300                               | 40                                 | 0 to +15                          | +5.0 to +8.0                         | 400                         |
| MO87827-1                                     | 21.500          | 60                     | 300                               | 30                                 | 0 to +10                          | +5.0 to +8.0                         | 1400                        |
| MO87827-2                                     | 22.100          | 60                     | 300                               | 30                                 | 0 to +10                          | +5.0 to +8.0                         | 1400                        |
| MO87827-3                                     | 22.700          | 60                     | 300                               | 30                                 | 0 to +10                          | +5.0 to +8.0                         | 1400                        |
| MO87827-4                                     | 23.300          | 60                     | 300                               | 30                                 | 0 to +10                          | +5.0 to +8.0                         | 1400                        |
| <b>Ka Band Voltage Controlled Oscillators</b> |                 |                        |                                   |                                    |                                   |                                      |                             |
| MO9405-1                                      | 34.000          | 15                     | 1250                              | 100                                | +1 to +20                         | +4.0 to +6.0                         | 350                         |

Other frequencies and power levels available upon request.  
 Operating temperature is -30°C to +70°C.

### Performance Characteristics

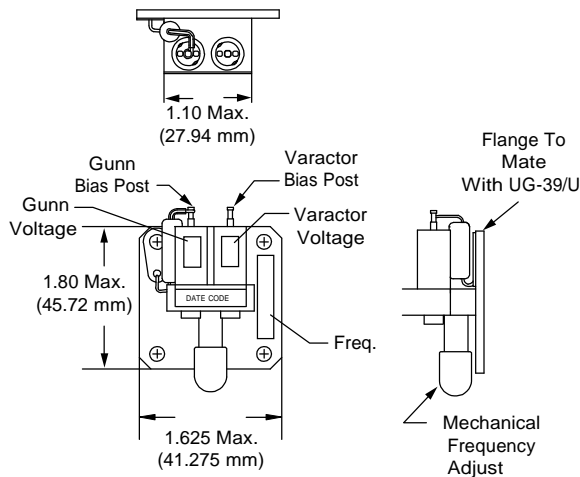


**MO87108 Series VCO**  
**Frequency and Power /Tuning Voltage**



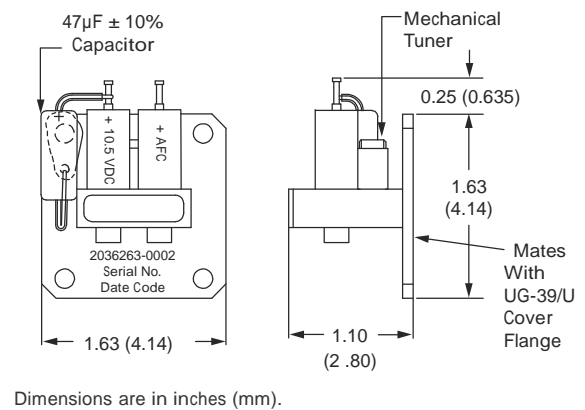
**MO9070 Series VCO**  
**Frequency and Power /Tuning Voltage**

### MO87108

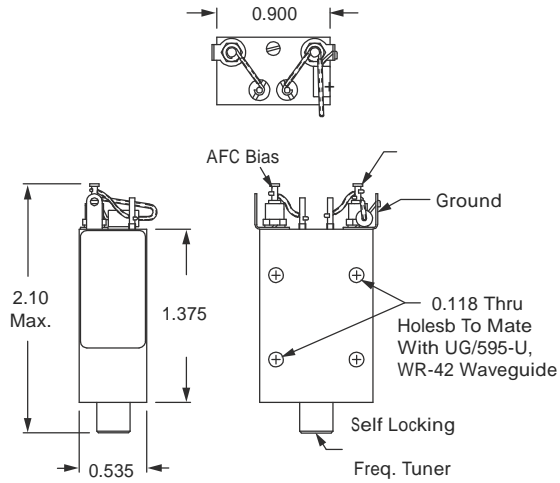


Dimensions are in inches (mm).

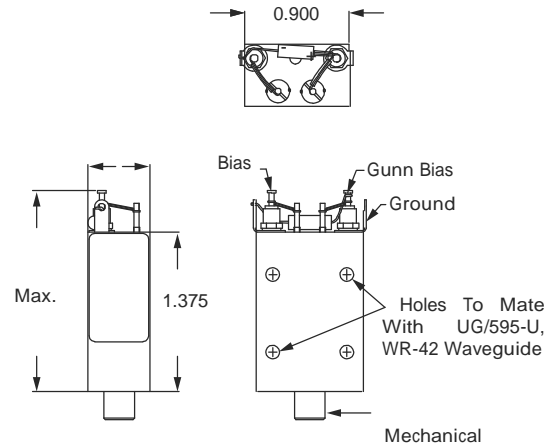
### MO87603B



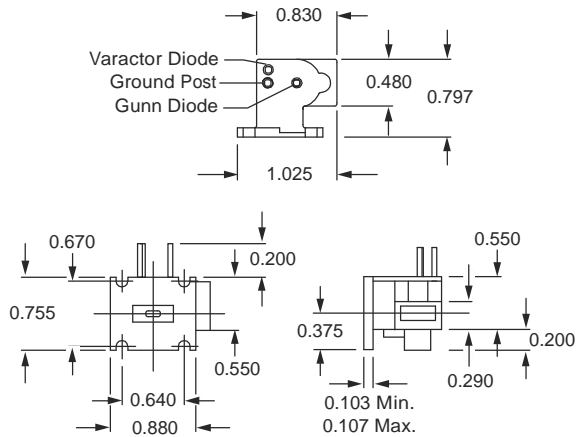
Dimensions are in inches (mm).

**MO87827**


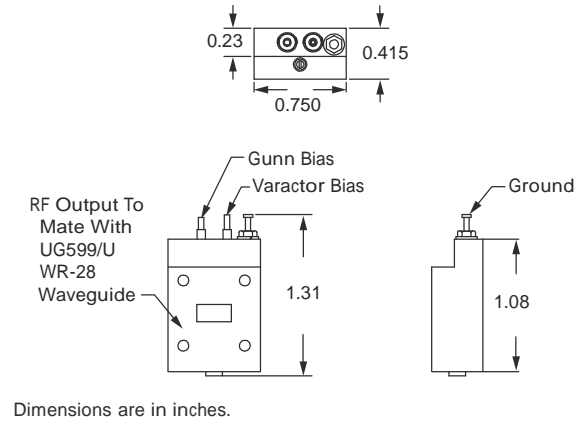
Dimensions are in inches.

**MO87828**


Dimensions are in inches.

**MO9070**


Dimensions are in inches.

**MO9405**


Dimensions are in inches.