

### *Features*

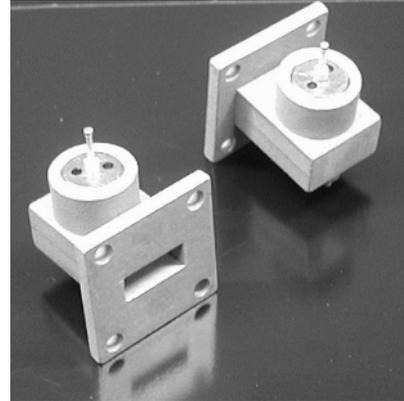
- Waveguide Assembly
- High Modulation Depth
- GaAs PIN Diode
- Low Drive Voltage
- For Low Cost Commercial Applications

### *Specifications @ 25°C*

- Insertion Loss: 1.5 dB Typ. @ 20 mA
- Modulation Depth: >90% Typ.
- Frequency of Operation: 24.125 GHz
- RF Bandwidth: 200 MHz
- Modulation Rate: 1 Hz–100 kHz
- Drive Voltage: 1.3 V @ 20 mA, Typ.

### *Maximum Ratings*

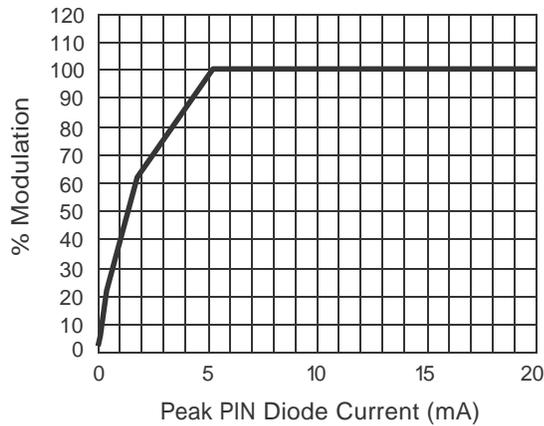
Operating Temperature	-30°C to +70°C
Storage Temperature	-40°C to +85°C
Drive Current	50 mA



### *Description*

Microsemi's MO9207 K-band modulator with integral GaAs PIN diode is designed for testing Doppler transceivers on the bench and in the field. Various radar cross sections may be simulated by attaching different size horn antennas to the modulator.

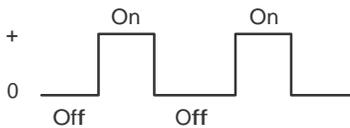
### Typical Performance Characteristics



**Modulation Characteristic**

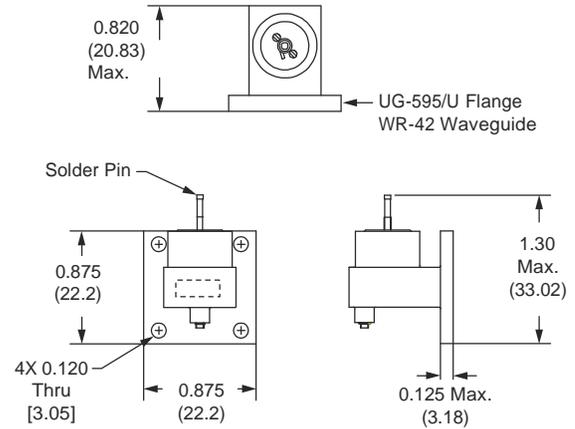
### Modulator Driver

The modulation driver should be current limited to 50 mA pulse current. For a drive current of 20 mA from a 50-ohm modulator operating at 5 volts a 120-ohm resistor should be inserted in series with the PIN diode.



Positive drive is applied to the solder pin on top of unit. Ground is any metallic contact on the waveguide.

### MO9207 K Band Waveguide Modulator



Dimensions are in inches (mm).

Flange mates with UG-595/U WR-42. Delivered with grounded buss wire for ESD protection.