

# MACS-007802-0M1R1V

## Stereo Voltage Controlled Doppler Transceiver 24.125 GHz

Rev. V1

### Features

- Low Cost
- 8.0mW Output Power
- Detects Direction of Motion
- 300MHz of Electronic Tuning
- Rugged Die cast Construction
- 10Hz - 5000Hz IF Bandwidth
- Lead Free (RoHS\* Compliant)

### Description and Applications

M/A-COM's MACS-007802-0M1R1V is a RoHS Compliant K-Band Stereo Doppler Transceiver consisting of a Gunn Diode oscillator, two Schottky Diode mixers and a Varactor Diode assembled into a diecast waveguide package. These Transceivers are well suited for high volume applications where small size and reliability are required.

### Product Specifications

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Operating Frequency	+25 °C	GHz	24.10	24.125	24.15
Output Power	+25 °C	mW	8.0		
Operating Current	+25 °C	mA	140	175	200
Operating Voltage	+25 °C	VDC		5	
Schottky Diode Noise	+25 °C	microVolts		2.5	5
Transceiver Sensitivity	+25 °C	-dBc	-93	-103	
Mixer Phasing	+25 °C	Degrees	50		120
Electronic Tuning	+25 °C	MHz	300		
Electronic Tuning Voltage	+25 °C	VDC	0.5		10

Operating temperature to full specification -30°C to +70°C

### Absolute Maximum Ratings<sup>1</sup>

Parameter	Maximum Ratings
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-65 °C to +150 °C
Incident RF Input Power	+20 dBm
DC Input (Gunn Diode)	+5.5VDC
Soldering Temperature	+260 °C max.

1. Exceeding these limits may cause permanent damage.

**Note: Device is ESD Sensitive. Proper ESD Precautions should be used when handling this Device..**

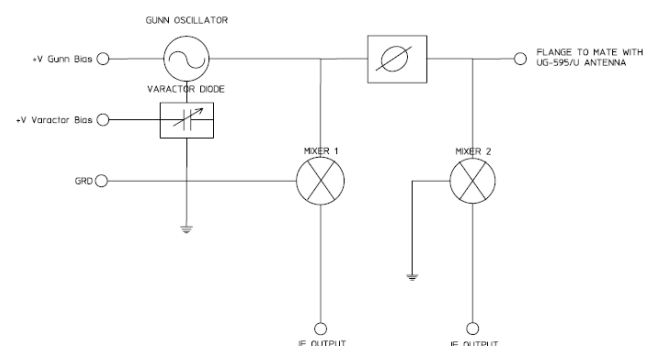
### Package Outline



### PIN Configuration

PIN	Function
1	DC Input
2	GND
3	IF Output (Mixer 1)
4	IF Output (Mixer 2)
5	Vtune input

### Functional Block Diagram



\*Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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