

### Features

- Low Cost
- Compact Size
- Gold Plated Solder Pins
- Rugged Die cast Construction
- 10Hz to 5000Hz IF Bandwidth
- Lead Free (RoHS Compliant)

### Description and Applications

M/A-COM's MACS-007801-0M1RM0 is a RoHS Compliant K-Band Mono Transceiver consisting of a Gunn Diode oscillator and Schottky Diode assembled into a die cast waveguide package. These Mono Transceivers are well suited for high volume applications where small size and reliability are required. Typical applications include police radar and presence sensing applications.

### Package Outline



### Product Specifications

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Operating Frequency	+25 °C	GHz	24.100	24.125	24.150
Output Power	+25 °C	mW	5.0		
Operating Current	+25 °C	mA	60	85	100
Operating Voltage	+25 °C	VDC		5.0	
Schottky Diode Noise	+25 °C	micro-Volts		2.5	5.0
Transceiver Sensitivity	+25 °C	-dBc	-93	-103	

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

### 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.

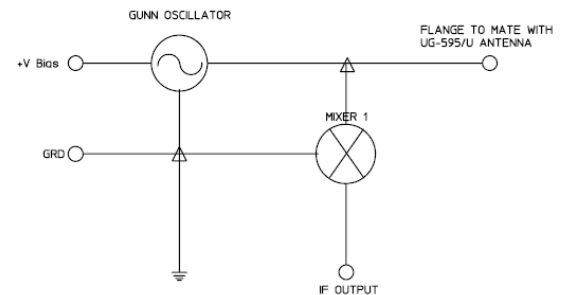
1. Exceeding these limits may cause permanent damage.

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

### PIN Configuration

PIN	Function
1	DC Input
2	GND
3	IF Output

### Functional Block Diagram

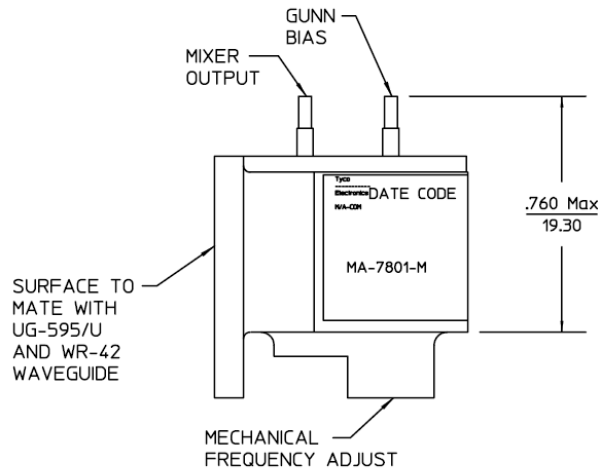
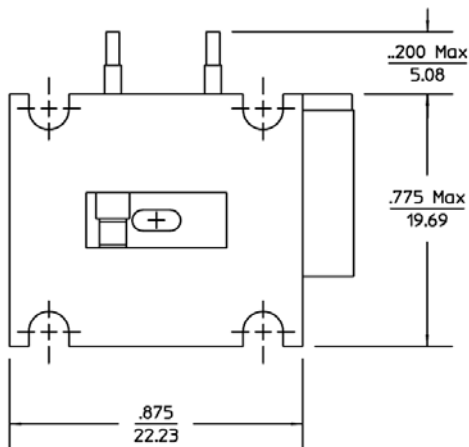
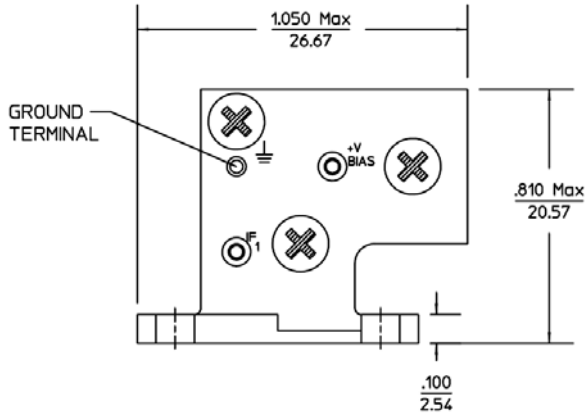


# MACS-007801-0M1RM0



Mono Doppler Transceiver  
24.125 GHz

Rev. V4



**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.  
**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400  
 • **India** Tel: +91.80.43537383 • **China** Tel: +86.21.2407.1588  
 Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.