

Features

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

Description and Applications

M/A-COM's MACS-007802-0M1RS0 is a RoHS Compliant K-Band Stereo Doppler transceiver consisting of a Gunn Diode oscillator and two Schottky Diode mixers assembled into a die cast waveguide package. These Transceivers are well suited for high volume applications where small size and reliability are required. Typical applications include automatic door openers, police radar and presence sensing applications, where Direction of motion is required.

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	
Mixer Phasing	+25 °C	Degrees	50		120

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

Absolute Maximum Ratings¹

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..

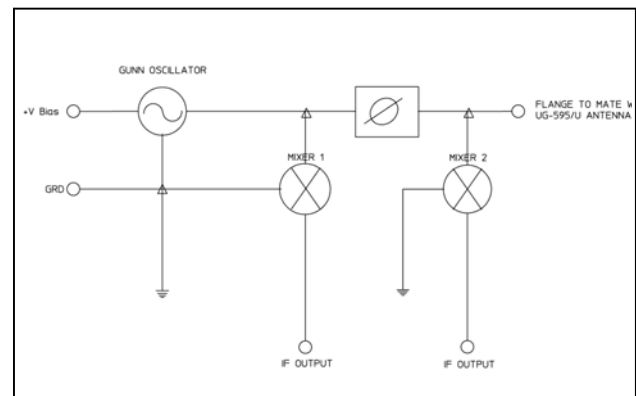
Package Outline



PIN Configuration

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

Functional Block Diagram



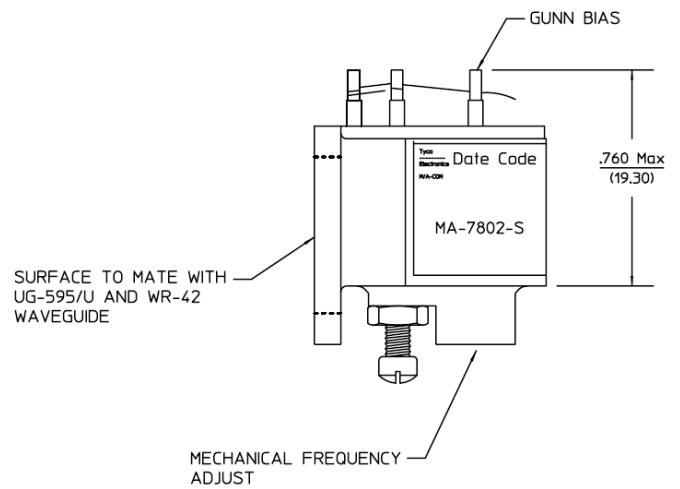
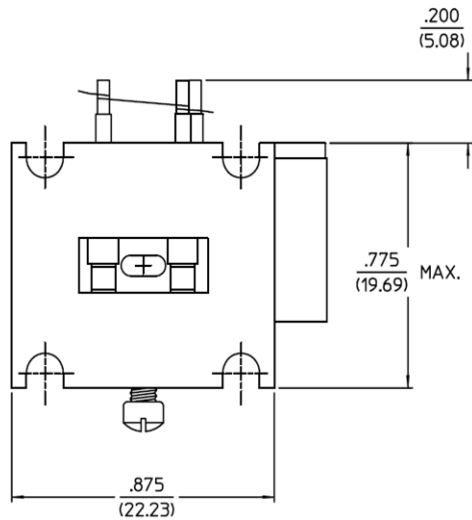
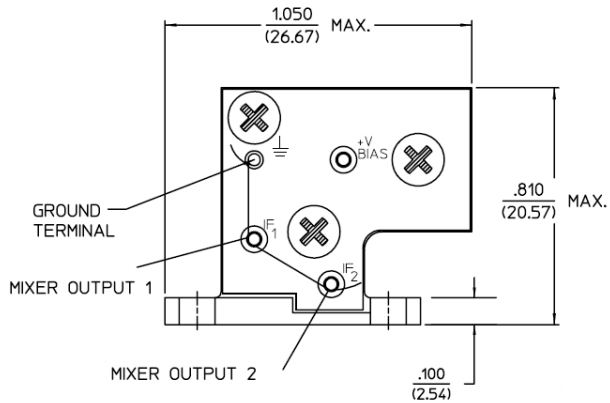
*Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

MACS-007802-0M1RS0



Stereo 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.

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