

**M/A-COM
PROPRIETARY AND PRIVATE**

The information contained in this document or item is the property of M/A-COM, Inc. and or its subsidiaries/affiliates (collectively "M/A-COM") and shall be kept in strict confidence except with written permission of M/A-COM. Such information or items shall not be published, disclosed to others, or used for manufacture or sale, or for any purpose; and this document or item shall not be reproduced in whole or in part. If permission is granted for reproduction, this legend shall be included in any such reproduction. This document or item shall be returned to M/A-COM upon request or completion of the use for which it was made available to recipient, or termination of relationship with recipient, whichever first occurs. Any recipient so agrees by acceptance of this document or item.

REVISION HISTORY			
Rev	Description	Date	Appv'd
-	Initial release per ECO 20066831	See Below	



M/A-COM, Inc.
1011 Pawtucket Blvd.
Lowell, MA 01853-3295
Cage Code: 96341

**ATTENTION
USER OF THIS DOCUMENT IS
RESPONSIBLE FOR
DETERMINING CURRENT
REVISION LEVEL BEFORE
USING DOCUMENT.**

Prepared By: Samantha Perez Date 4/19/07
Documentation Specialist

Approved By: Tom Woodward Date 4/20/07
Engineer

Approved By: Robert Moore Date 4/19/07
Manufacturing Engineer

Approved By: Mark Donoghue Date 4/30/07
QA Engineer

PRODUCTION

TITLE: Product Specification,MACS-007802-0M1R1D	
DWG. NO: PS-MACS-007802-0M1R1D	REV. - SHEET 1 OF 2

The MACS-007802-0M1R1D is a RoHS Compliant K-Band Doppler Stereo Transceiver consisting of a Gunn Diode Oscillator and two Schottky barrier Diode mixers assembled into a diecast waveguide package, designed for commercial applications in directional motion sensing.

ELECTRICAL SPECIFICATIONS


Fo:	24.145 GHz \pm 4 MHz @+25°C
Frequency Stability:	1 MHz/°C maximum
Output Power:	4.0 mW minimum @ +25°C
Operating Voltage:	+5.0 VDC
Operating Current:	100 mA maximum @ +25°C 110 mA maximum @ -30°C
Mixer Noise: (3)	6 mV R.M.S. maximum
Transceiver Sensitivity: (3) (4)	75 mV R.M.S. minimum
Mixer Phasing: (Phase difference of I.F. output signals)	50° - 120° (non-adjustable)
Mixer Load Resistor: (not supplied)	1000 ohms is recommended
Temperature Range:	-30°C to +70°C

MECHANICAL SPECIFICATIONS

Outline Drawing:	Per MACS-007802-0M1R1D
D.C. Bias (Gunn):	Solder Pin
Mixer Output:	Solder Pin
R.F. Output:	WR-42 waveguide mates with UG 595/U flange

NOTES:

1. Maximum solder temperature to pins is 250°C max for a 5 second duration.
2. Units are extremely ESD sensitive. Parts should only be handled in an appropriate ESD protected manner.
Failure to do so may void manufacturer warranty.
3. As measured at the output of a standard low noise amplifier with a 3 dB bandpass of 10 Hz to 750 Hz, an impedance of 10,000 ohms and a voltage gain of times 1000 (60 dB).
4. After applying a stimulus derived from a standard K-band test stand (M/A-COM). The minimum mixer diode signal output level of 75 mV is measured after carrier is attenuated 70 dB and returned to the transceiver.

	CAGE CODE: 96341	DWG. NO.: PS-MACS-007802-0M1R1D
	SHEET 2 OF 2	REV. -