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**REVISION HISTORY**

Rev	Description	Date	Appv'd
-	Initiated per ECO 20064435	<b>See below</b>	
A	ECO 20067755, new format, added Long Term Freq. Stability. SP	5/29/07	RM

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Revised By: Michael Moulton Date 1/25/07  
Documentation

Approved By: Tom Woodward Date 1/25/07  
Engineering

Approved By: Robert Moore Date 1/25/07  
Manufacturing

Approved By: Mark Donoghue Date 1/29/07  
Quality Assurance

**PRODUCTION**

TITLE: Product Specification,MACS-007802-0M1RL7

DWG NO:  
PS-MACS-007802-0M1RL7

REV: A

SHEET 1 of 2

The MACS-007802-0M1RL7 is a RoHS Compliant K-Band Doppler transceiver consisting of a Gunn Diode oscillator and two Schottky barrier mixers assembled into a diecast waveguide package, designed for commercial applications where directional motion sensing is desired.

### **ELECTRICAL SPECIFICATIONS**

Center Frequency:	24.125 GHz $\pm$ 25 MHz
Output Power :	4.5mW minimum @ 25°C
Operating Voltage:	+5.0 Vdc
Operating Current:	100mA maximum @ +25°C., 110mA maximum, at -30°C
Transceiver Sensitivity:	-90dBc minimum IF bandwidth 10Hz to 1KHz
Transceiver Noise:	5.0 microvolts maximum
Mixer Phasing: (Phase difference of I.F. output signals)	50° $\pm$ 120° (non-adjustable)
Mixer Load Resistor: (DC Return) (Not supplied)	1000 ohms recommended
Frequency Drift vs. Temperature Change:	1MHz/°C maximum
Operating Temperature Range:	-30°C to +70°C, ambient
Long Term Frequency Stability:	0.2 % change maximum, from original factory setting @ +25°C for 2 years

### **MECHANICAL SPECIFICATIONS**

Outline Dimensions:	Per MACS-007802-0M1RL7
D.C. Bias (Gunn):	Solder Pin
Mixer Output	Solder Pin
R.F. Output	WR-42 waveguide mates with UR-595/U flange
RoHS Status:	Compliant

### **NOTES**

1. Part is a direct replacement of M/A-COM Part Number MA86843-M07. This replacement is for RoHS compliancy and the form, fit and function of the end product has not changed. The conversion coatings were changed to meet RoHS standards. A new part number has been assigned to this product to track RoHS compliancy. Due to the length of the new part number a modified or reduced number will be put on the label. See Outline Drawing for modified part Number.