REVISION HISTORY

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

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PRODUCTION

TITLE:

Product Specification,MACS-007802-0M1R1D

DWG. NO:	REV. -
PS-MACS-007802-0M1R1D	SHEET 1 0F 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 ± 4 MHz @+25ºC
Frequency Stability:	1 MHz/°C maximum
Output Power:	4.0 mW minimum @ +25ºC
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 250ºC 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.