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REVISIONS

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<th>REV</th>
<th>DESCRIPTION</th>
<th>DATE</th>
<th>APPV'D</th>
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<tbody>
<tr>
<td>-</td>
<td>Initial Release per ECO</td>
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<td>See Below</td>
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<td>A</td>
<td>Per ECO 20061968 Change operating current to 100mA</td>
<td>10/25/06</td>
<td>T. Woodward</td>
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PRODUCTION

TITLE: PRODUCT SPECIFICATION

REV: A

DWG NO: PS-MACS-007802-0M1RSF
SHEET 1 of 2
The MACS-007802-0M1RSF 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:** 24.125 GHz ± 25 MHz
- **Frequency Stability:** 1 MHz/°C maximum
- **Output Power:** 5.0 mW minimum @ 25°C
- **Operating Voltage:** +5.0 VDC
- **Operating Current:**
  - 100 mA maximum @ +25°C
  - 110 mA maximum @ -30°C
- **Mixer Noise:** (3) 5.0 millivolts Maximum
- **Transceiver Sensitivity:** -93 dBc, I.F. 10 Hz to 1 KHz
- **Mixer Phasing:**
  - (Phase difference of I.F. output signals) 50° - 120° (non-adjustable)
- **Mixer Load Resistor (not supplied):** 1000 ohms
- **Temperature Range:** -30°C to +70°C

**MECHANICAL SPECIFICATIONS**

- **Outline Drawing:** Per OD-MACS-007802-0M1RS0
- **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 voltage gain of 60 dB. Amplifier bandwidth is 10 Hz to 1000 Hz.