



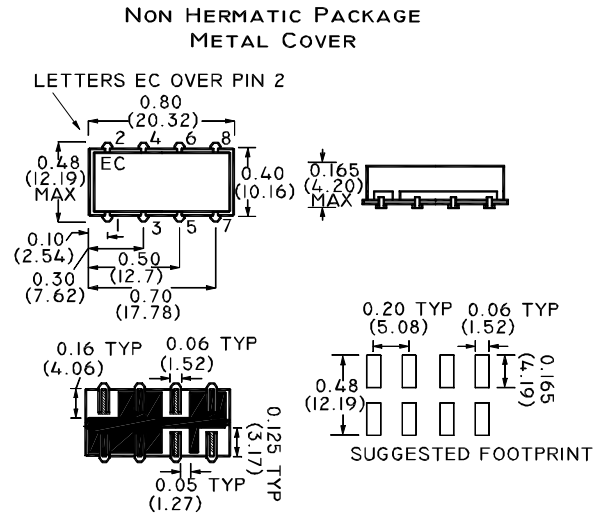
E-Series I/Q Demodulator 851-869 MHz

Features

- Excellent Phase and Amplitude Balance
- LO Power +10 dBm Typical
- Surface Mount



SM-92 Package



Description

M/A-COM's MAMDES0002 is a passive, surface mount I/Q Demodulator. Ideally suited for Direct Demodulation in PMR/TETRA applications.

Electrical Specifications @25°C

| Parameter | Units | Typical | Minimum | Maximum |
|---|------------|----------|----------|---------|
| Frequency Range LO / RF 851-869 I/Q DC - 10 | MHz MHz | — — | — — | — — |
| Amplitude Unbalance | dB | 0.2 | — | 0.3 |
| Phase Unbalance | Degrees | 2.0 | — | 3.0 |
| Isolation LO to RF LO to I/Q | dB dB | 55 30 | 20 20 | — — |
| Conversion Loss | dB | 6.4 | — | 8.0 |
| (LO) Carrier Power | dBm | +10 ± 1 | — | — |

Q= -90° for RF>LO

Absolute Maximum Ratings

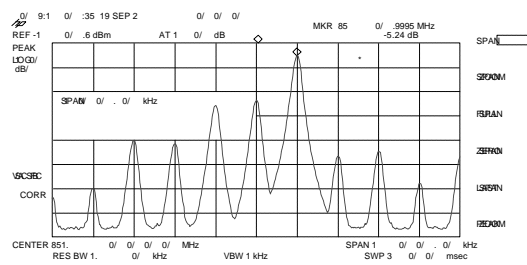
| Parameter | Absolute Maximum |
|----------------------------|------------------|
| Operating Temperature | -10°C to +70°C |
| Storage Temperature | -55°C to +100°C |
| Impedance | 50 Ohms Nominal |
| RF Power (1dB Compression) | 4 dBm Max |

Functional Configuration

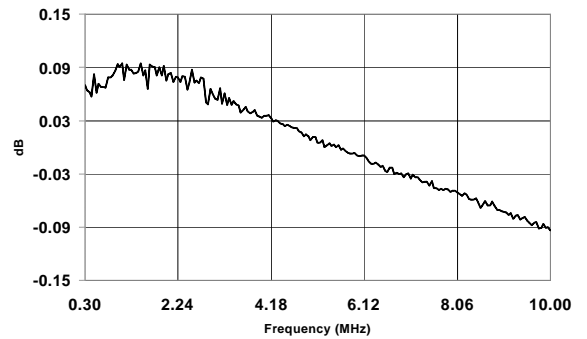
| Function | Pin No. |
|------------------|---------|
| LO | 1 |
| RF | 8 |
| I | 5 |
| Q | 6 |
| External 50 Ohms | — |
| Case Ground | 2,3,4,7 |
| Not Connected | — |

Typical Performance @ +25°C

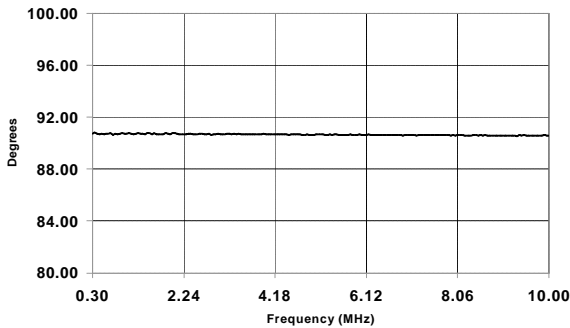
Conversion Loss



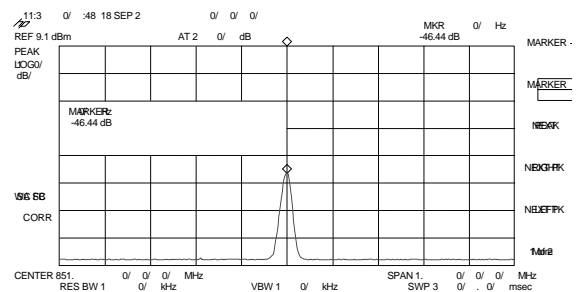
Amplitude Unbalance



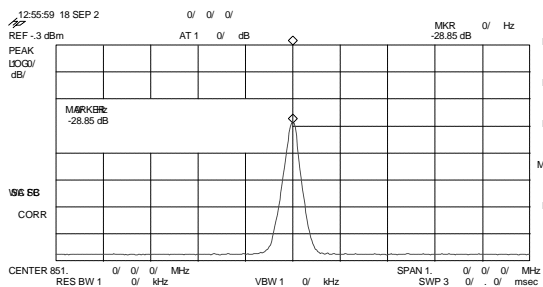
Phase Unbalance



L-R Isolation



L-I Isolation



L-Q Isolation

