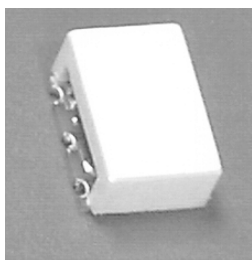


E-Series Surface Mount Mixer 2 – 500 MHz



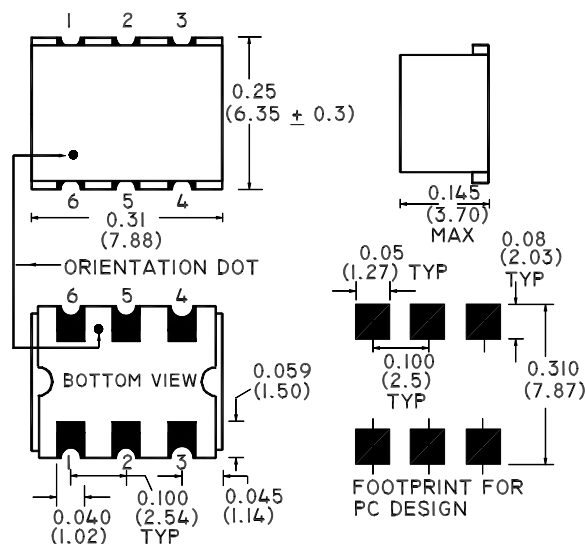
Features

- LO Power +13 dBm
- Up to +9 dBm RF
- Surface Mount
- Low Profile



SM-89 Package

Note: Non Hermetic Package



Description

M/A-COM's ELCM-1MH is a Low Cost, Broadband, high Performance Double Balanced Mixer designed for use in high volume wireless applications. The device has been optimised by careful selection of the Schottky Diode and Balun Transformer for excellent performance. ELCM-1MH is available in an SM-89 surface mount package and reflows using standard soldering reflow profiles.

Electrical Specifications @ +25°C, $Z_0 = 50 \text{ Ohms}$, LO = +7dBm

Parameter	Units	Minimum	Typical	Maximum
Frequency Range				
RF 2 - 500	MHz	—	—	—
LO 2 - 500	MHz	—	—	—
IF DC - 500	MHz	—	—	—
Conversion Loss				
2 - 250	dB	—	5.5	7.0
250 - 500	dB	—	6.0	8.0
Isolation (LO - RF)				
2 - 20	MHz	45	55	—
20 - 250	MHz	30	44	—
250 - 500	MHz	25	30	—
Isolation (LO - IF)				
2 - 20	MHz	40	55	—
20 - 250	MHz	25	35	—
250 - 500	MHz	25	29	—

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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Absolute Maximum Ratings

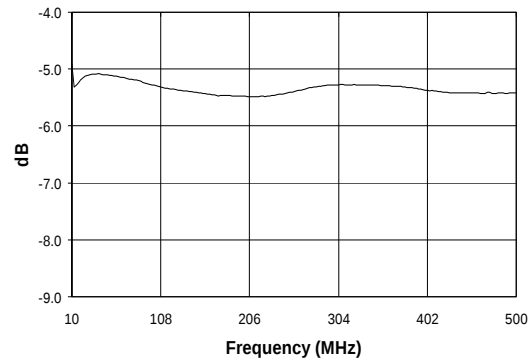
Parameter	Absolute Maximum
RF Power	50 mW
Peak IF Current	40 mA
Storage Temperature	-55°C to +100°C
Operating Temperature	-55°C to +100°C
Pin Temperature (10 Seconds)	260°C

Functional Configuration

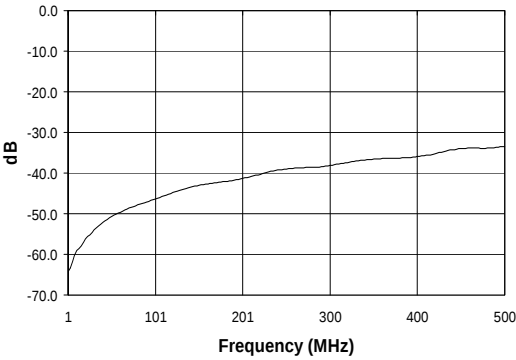
Function	Pin No.
LO	1
RF	4
IF	5
Ground	2, 3, 6
Case Ground	—
Unconnected	—

Typical Performance @ +25°C

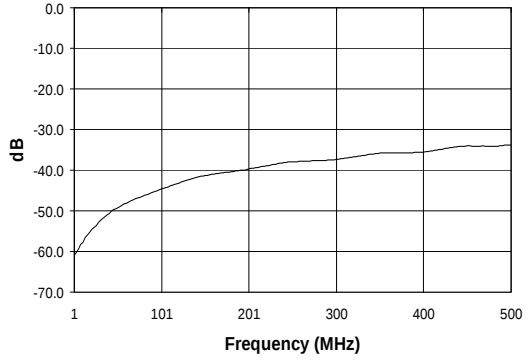
Conversion Loss



L-R Isolation



L-I Isolation



NOTES:

- 1. See M/A Com Soldering Reflow Guidelines AN-002.
- 2. Part constructed using a High Melting Point Solder (95.5Pb/3.5Sn/1.5Ag).
- 3. Qualified for application and reliability per industry standards including Reflow Simulation, Temperature Cycle, High Temperature life and Temperature/Humidity.
- 4. This part has an Average Outgoing Quality Level of 4.5 Sigma.

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