

E-Series Surface Mount Mixer 5 – 2500 MHz

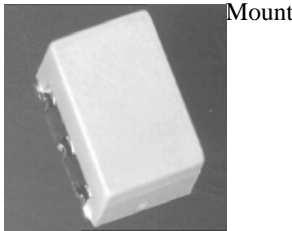


SM-87 Package

Note: Non Hermetic Package

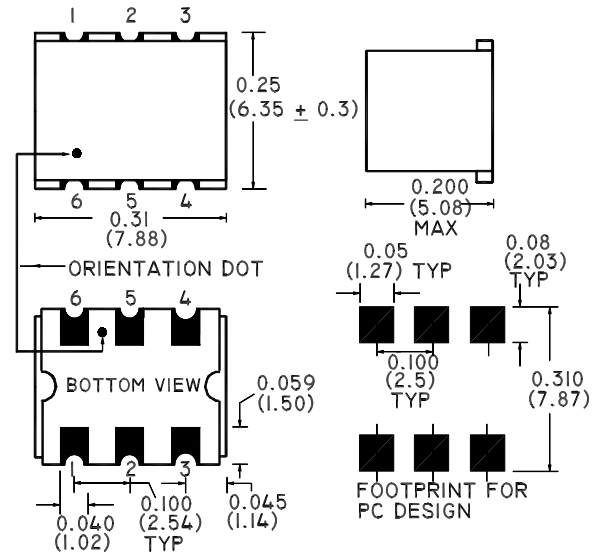
Features

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



Description

M/A-COM's ELCM-25MH 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-25MH is available in an SM-87 surface mount package and reflows using standard soldering



Electrical Specifications @ +25°C, Z₀ = 50 Ohms, LO = +13dBm

Parameter	Units	Minimum	Typical	Maximum
Frequency Range				
RF	5 - 2500	—	—	—
LO	5 - 2500	—	—	—
IF	DC - 1500	—	—	—
Conversion Loss				
10 - 1250	dB	—	6.3	8.5
Isolation (LO - RF)				
5 - 50	MHz	28	45	—
50 - 1250	MHz	23	35	—
1250 - 2500	MHz	20	30	—
Isolation (LO - IF)				
5 - 50	MHz	23	40	—
50 - 1250	MHz	20	30	—
1250 - 2500	MHz	17	25	—
LO VSWR	5 - 1000 MHz	—	2.32	2.60
RF VSWR	5 - 1000 MHz	—	2.80	3.50
IF VSWR	DC - 500 MHz	—	1.50	1.90
RF Input for 1dB Compression	dBm	—	—	+9
IIP3	5-1000 MHz	22	22	—
	1000-2000 MHz	19	20	—
	2000 –2500 MHz	11	13	—

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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.

- North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400
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Absolute Maximum Ratings

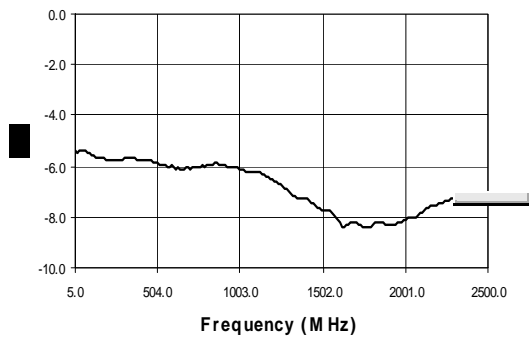
Parameter	Absolute Maximum
RF Power	150 mW
Peak IF Current	40 mA
Storage Temperature	-55°C to +100°C
Operating Temperature	-55°C to +100°C
Pin Temperature (10 Seconds)	260°C

Functional Configuration

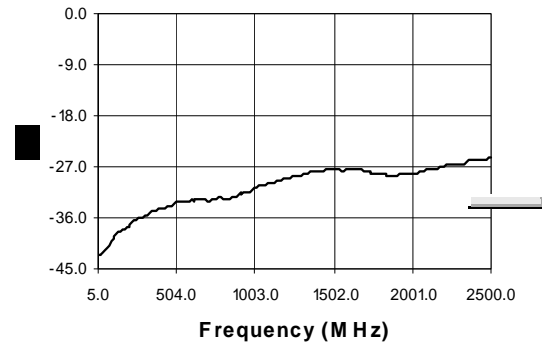
Function	Pin No.
LO	1
RF	4
IF	5
Ground	2, 3, 6
Case Ground	—
Unconnected	—

Typical Performance @ +25°C

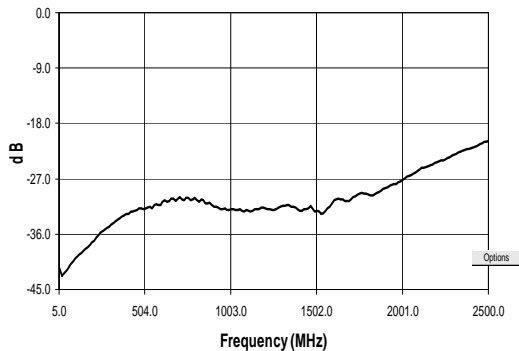
Conversion Loss



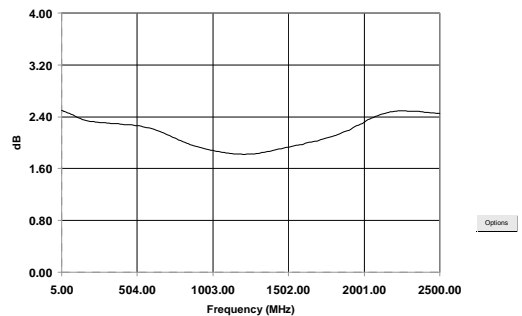
L-R Isolation



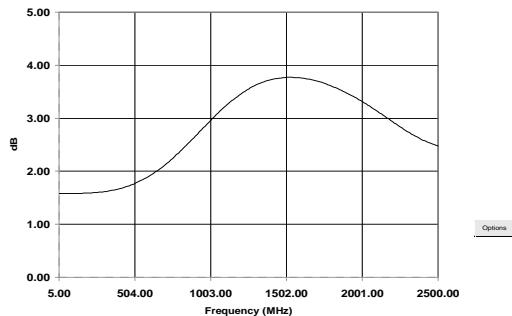
L-X Isolation



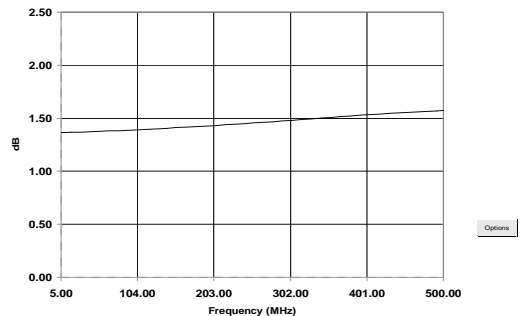
LO VSWR



RF VSWR



IF VSWR



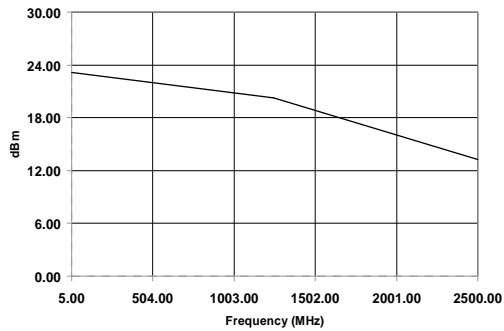
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Typical Performance @ +25°C

IP3



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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