

**E-Series Surface Mount Mixer**  
5 – 2500 MHz

**ELCM-25MH**  
**V5**

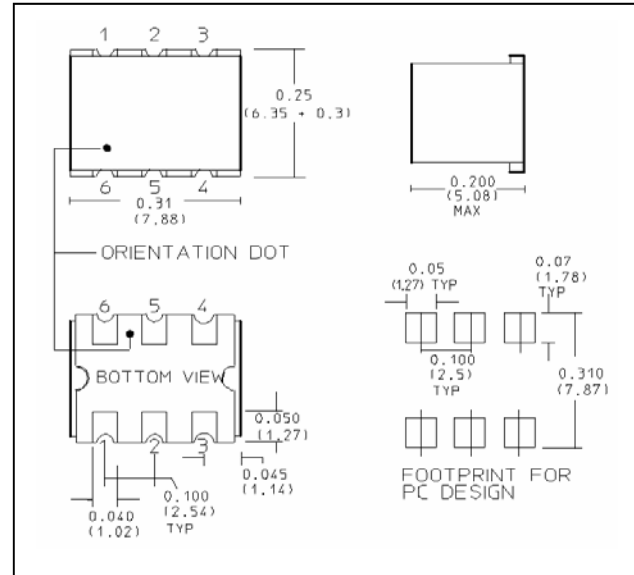
**Features**

- LO Power +13 dBm
- Up to +9 dBm RF
- Surface Mount
- Tape and reel packaging available

**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 reflow profiles. Parts are packaged in tape & reel.

**SM - 87 Package**



**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$ <sup>1</sup>, LO = +13 dBm**

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	5 - 2500	MHz	—	—	—
LO Frequency	—	5 - 2500	MHz	—	—	—
IF Frequency	—	5 - 1500	MHz	—	—	—
Conversion Loss	—	10 - 1250	dB	—	6.3	8.5
		5 - 2500	dB	—	7.3	9.8
Isolation	LO to RF	5 - 50	dB	28	45	—
		50 - 1250	dB	23	35	—
		1250 - 2500	dB	20	30	—
Isolation	LO to IF	5 - 50	dB	23	40	—
		50 - 1250	dB	20	30	—
		1250 - 2500	dB	17	25	—
VSWR	LO	5 - 1000	—	—	2.32	2.6
		1000 - 2500	—	—	2.67	3.1
VSWR	RF	5 - 1000	—	—	2.8	3.5
		1000 - 2500	—	—	3.8	4.5

**Ordering Information**

Part Number	Package
ELCM-25MHTR	Tape and Reel (900 piece Reel)

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Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

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Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
VSWR	IF	DC - 500	—	—	1.5	1.9
Input 1 dB Compression	—	5 - 2500	dBm	—	—	9
IIP3	—	5 - 50	dBm	22	22	—
		50 - 1250	dBm	19	20	—
		1250 - 2500	dBm	11	13	—

**Pin Configuration**

Pin No.	Function
1	LO
2	Ground
3	Ground
4	RF
5	IF
6	Ground

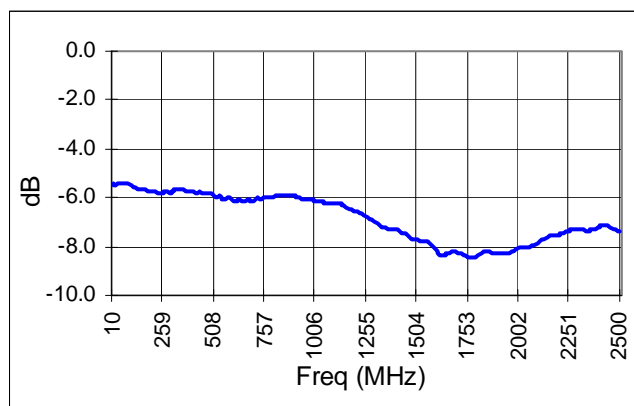
**Absolute Maximum Ratings<sup>1</sup>**

Parameter	Absolute Maximum
RF Power	50 mW
Peak IF Current	40 mA
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +125°C
Pin Temperature (10 seconds)	+260°C

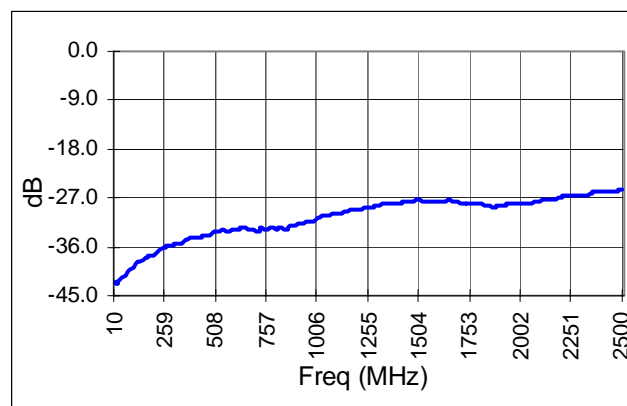
1. Operation of this device above any one of these parameters may cause permanent damage.

**Typical Performance Curves**

**Conversion Loss**

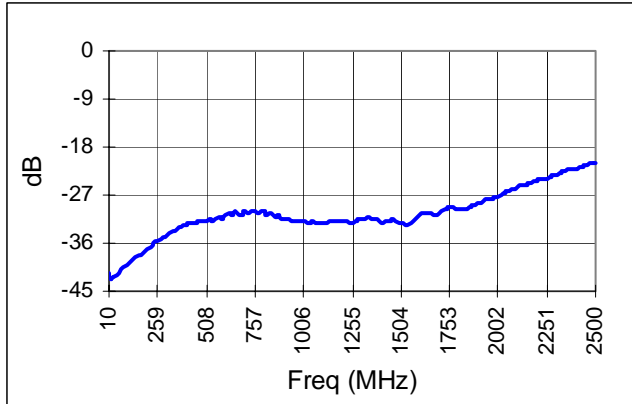


**LO - RF Isolation**

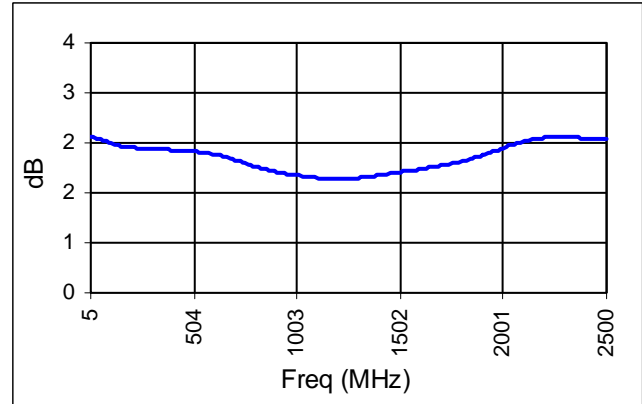


**Typical Performance Curves**

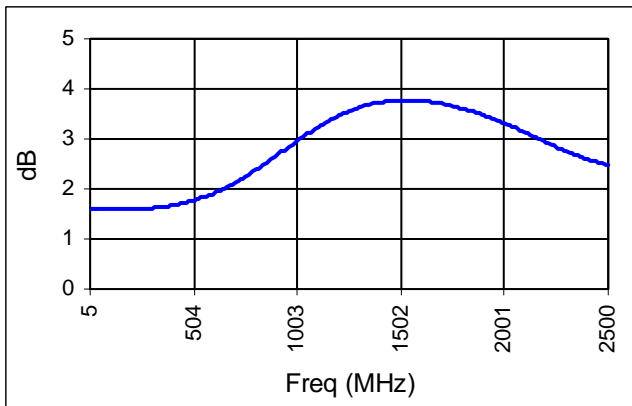
**LO - IF Isolation**



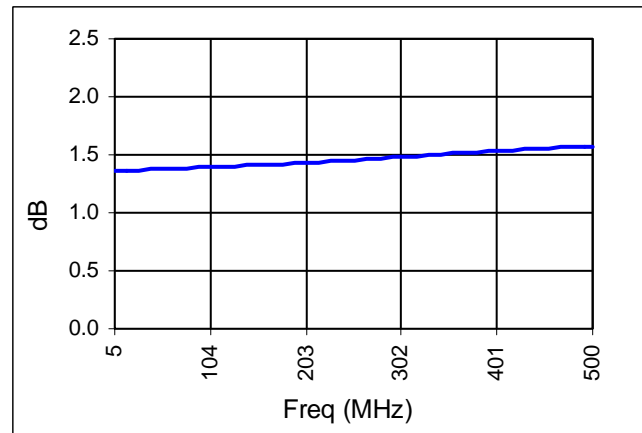
**LO VSWR**



**RF VSWR**



**IF VSWR**



**IP3**

