E-Series Surface Mount Mixer
2 – 500 MHz

ELCM-1MH
V2

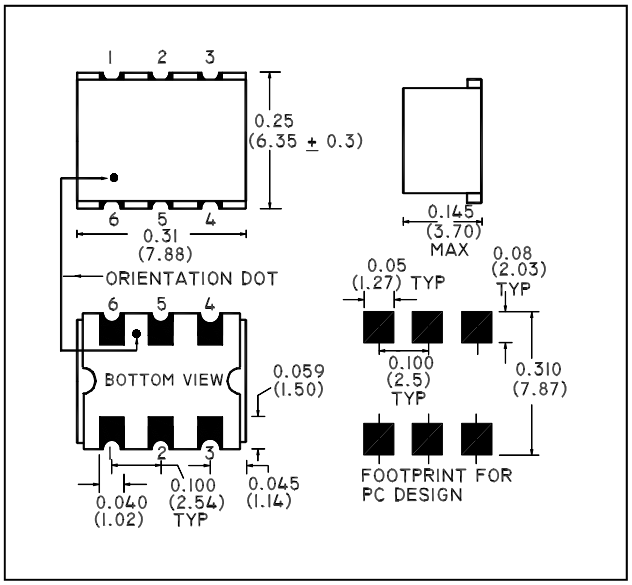
Features

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

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. Parts are packaged in tape & reel.

SM - 89 Package



Electrical Specifications: T_A = 25°C, Z_0 = 50Ω [1], LO = +13 dBm

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	2 - 500	MHz	—	—	—
LO Frequency	—	2 - 500	MHz	—	—	—
IF Frequency	—	DC - 500	MHz	—	—	—
Conversion Loss	—	2 - 250 250 - 500	dB dB	— —	5.5 6.0	7.0 8.0
Isolation	LO to RF	2 - 20 20 - 250 250 – 500	dB dB dB	45 30 25	55 44 30	— — —
Isolation	LO to IF	2 - 20 20 - 250 250 – 500	dB dB dB	40 25 25	55 35 29	— — —
Input 1 dB Compression	—	0.5 - 500	dBm	—	—	9

Ordering Information

Part Number	Package
ELCM-1MHTR	Tape and Reel (900 piece Reel)

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Pin Configuration

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

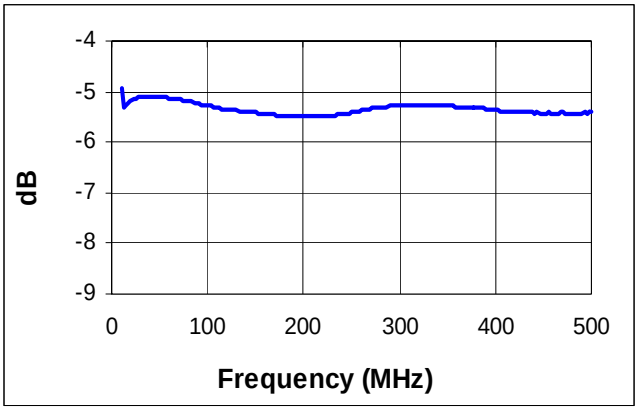
Absolute Maximum Ratings [1]

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

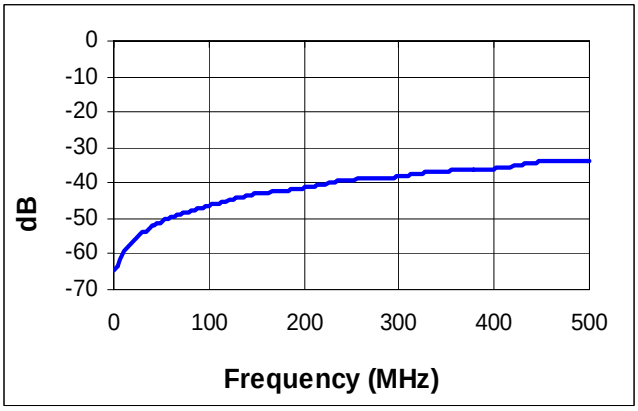
1. Operation of this device above any one of these parameters may cause permanent damage.

Typical Performance Curves

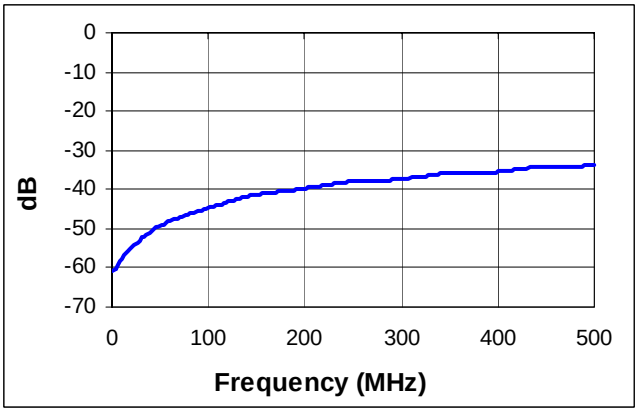
Conversion Loss



LO - RF Isolation



LO - IF Isolation



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