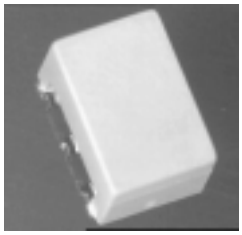
AMP M/A-COM

# E-Series Surface Mount Mixer
# 5 – 1500 MHz

## Features

- LO Power +7 dBm
- Up to +1 dBm RF
- Surface Mount

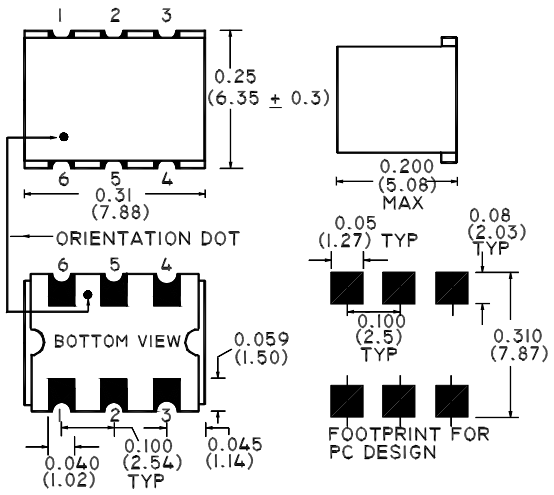


## Description

M/A-COM's ELCM-5 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-5 is available in an SM-87 surface mount package and reflows using standard soldering reflow profiles.

## SM-87 Package

Note: Non Hermetic Package




## Electrical Specifications @ +25°C, $Z_0$ = 50 Ohms, LO = +7dBm

| Parameter | Units | Minimum | Typical | Maximum |
|---|---|---|---|---|
| Frequency Range | | | | |
| RF 5 - 1500 | MHz | — | — | — |
| LO 5 - 1500 | MHz | — | — | — |
| IF DC - 1000 | MHz | — | — | — |
| Conversion Loss | | | | |
| 10 - 750 | dB | — | 6.5 | 7.5 |
| 5 - 1500 | dB | — | 7.5 | 9.5 |
| Isolation (LO - RF) | | | | |
| 5 - 50 | MHz | 40 | 60 | — |
| 50 - 750 | MHz | 20 | 40 | — |
| 750 - 1500 | MHz | 18 | 30 | — |
| Isolation (LO - IF) | | | | |
| 5 - 50 | MHz | 30 | 55 | — |
| 50 - 750 | MHz | 18 | 30 | — |
| 750 - 1500 | MHz | 8 | 15 | — |
| RF Input for 1dB Compression | dBm | — | — | +1 |



M/A-COM Division of AMP Incorporated ■ North America: Tel. (800) 366-2266, Fax (800) 618-8883 ■ Asia/Pacific: Tel.+85 2 2111 8088, Fax +85 2 2111 8087 ■ Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

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## Absolute Maximum Ratings

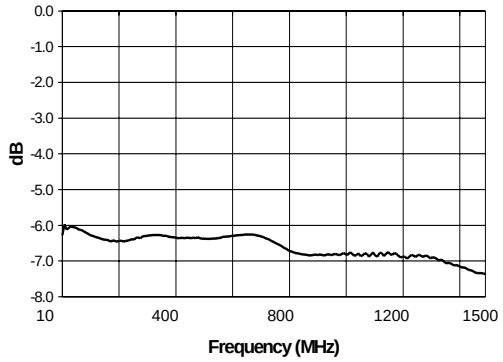
| Parameter | Absolute Maximum |
|---|---|
| RF Power | 150 mW |
| Peak IF Current | 40 mA |
| Storage Temperature | -55°C to +100°C |
| Operating Temperature | -55°C to +100°C |
| Pin Temperature (10 Seconds) | 260°C |

## Functional Configuration

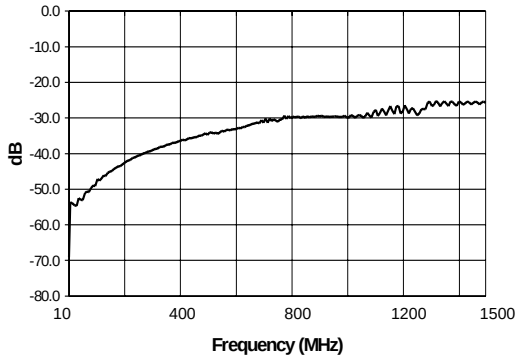
| Function | Pin No. |
|---|---|
| LO | 1 |
| RF | 4 |
| IF | 5 |
| Ground | 2, 3, 6 |
| Case Ground | — |
| Unconnected | — |

## Typical Performance @ +25°C

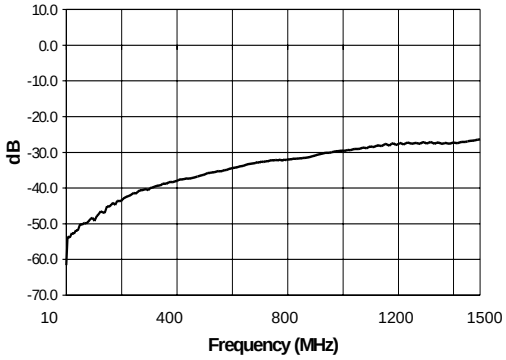
### Conversion Loss




### L-R Isolation




### L-I Isolation



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