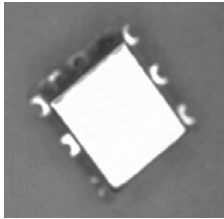


## E-Series Surface Mount Mixer 1 – 1000 MHz

Rev A

### Features

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

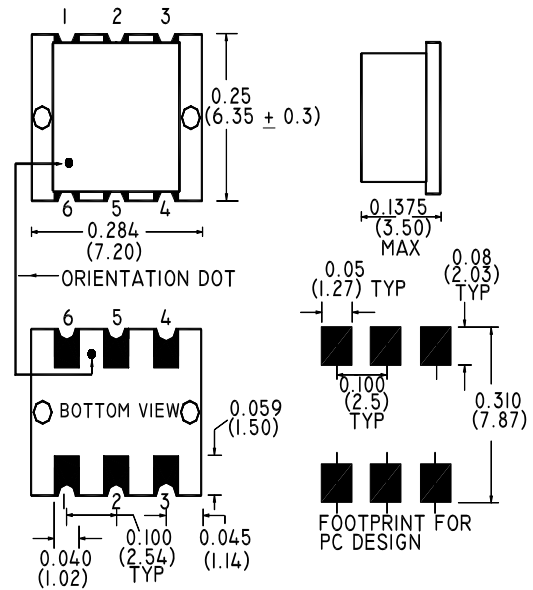


### Description

M/A-COM's MAMXES0028 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. MAMXES0028 is available in an SM-134 surface mount package and reflows using standard soldering reflow profiles.

### SM-134 Package

Note: Non Hermetic Package



### Electrical Specifications @ +25°C, Z<sub>0</sub> = 50 Ohms,

LO

| Parameter                    | Units    | Minimum | Typical | Maximum |
|------------------------------|----------|---------|---------|---------|
| Frequency Range              |          |         |         |         |
| RF                           | 1 - 1000 | —       | —       | —       |
| LO                           | 1 - 1000 | —       | —       | —       |
| IF                           | 1 - 1000 | —       | —       | —       |
| Conversion Loss              |          |         |         |         |
| 1 - 500                      | dB       | —       | 6.5     | 7.5     |
| 500-1000                     | dB       | —       | 7.5     | 8.5     |
| Isolation (LO - RF)          |          |         |         |         |
| 1 - 5                        | MHz      | 50      | 55      | —       |
| 5 - 250                      | MHz      | 35      | 45      | —       |
| 250 - 500                    | MHz      | 25      | 30      | —       |
| Isolation (LO - IF)          |          |         |         |         |
| 1 - 5                        | MHz      | 50      | 55      | —       |
| 5 - 250                      | MHz      | 35      | 45      | —       |
| 250 - 1000                   | MHz      | 25      | 30      | —       |
| RF Input for 1dB Compression | dBm      | —       | —       | +1      |
| Input IP3                    | dBm      | 14      | 18      | —       |

1

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S 1605 A V 1.0

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## E-Series Surface Mount Mixer 1 – 1000 MHz

Rev A

### Absolute Maximum Ratings

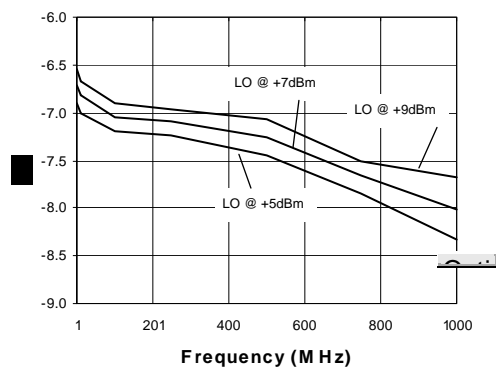
| Parameter                    | Absolute Maximum |
|------------------------------|------------------|
| RF Power                     | 50 mW            |
| Peak IF Current              | 40 mA            |
| Storage Temperature          | -55°C to +100°C  |
| Operating Temperature        | -55°C to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

### Functional Configuration

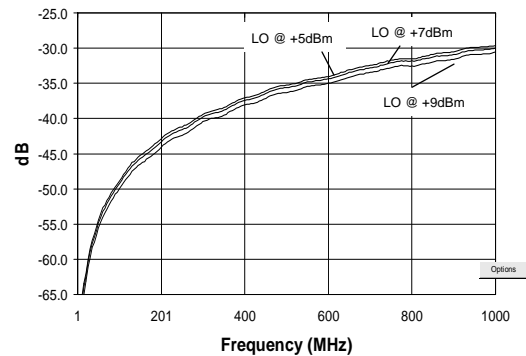
| Function    | Pin No. |
|-------------|---------|
| LO          | 1       |
| RF          | 4       |
| IF          | 5       |
| Ground      | 2, 3, 6 |
| Case Ground | —       |
| Unconnected | —       |

### Typical Performance @ +25°C

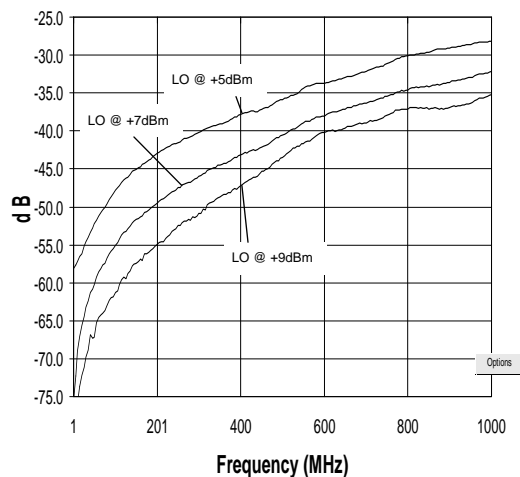
#### Conversion Loss



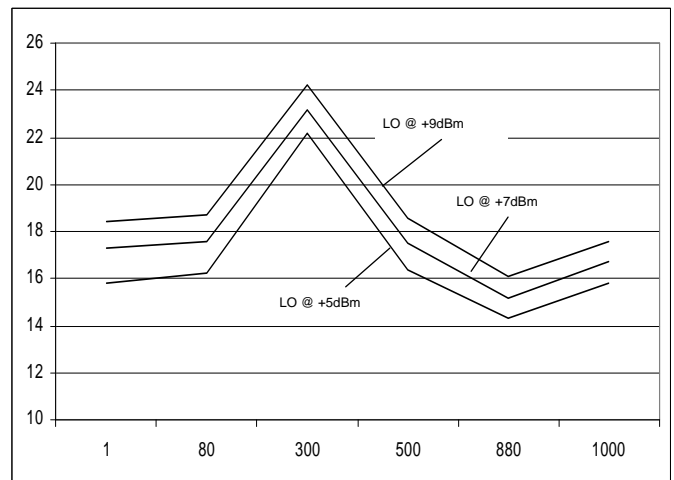
#### L-R Isolation



#### L-I Isolation



#### IIP3



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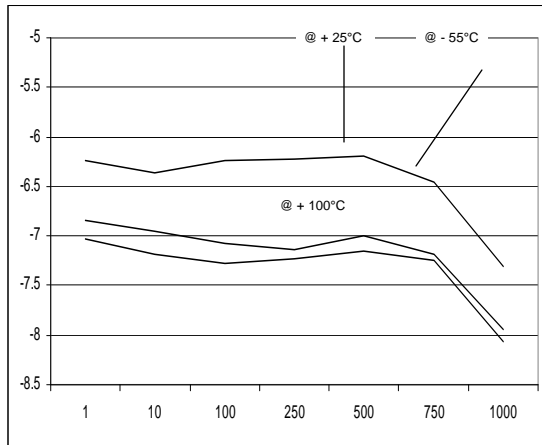
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## E-Series Surface Mount Mixer 1 – 1000 MHz

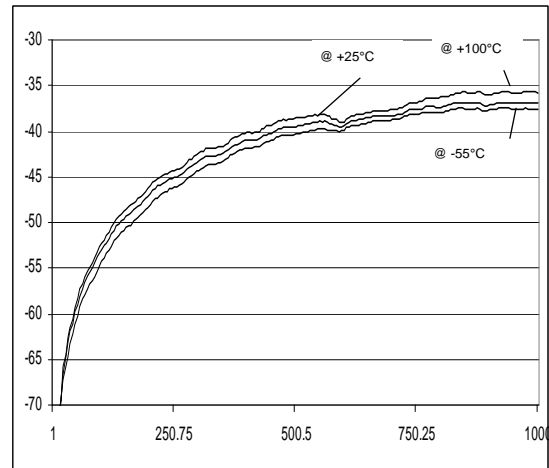
Rev A

### Typical Performance over Operating Temperatures

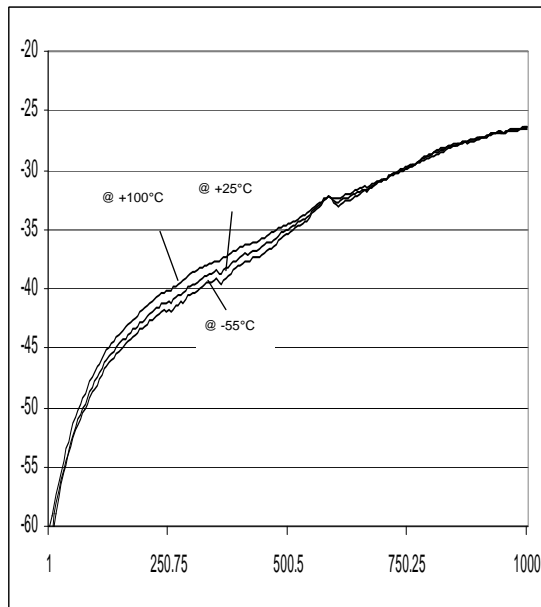
Conversion Loss



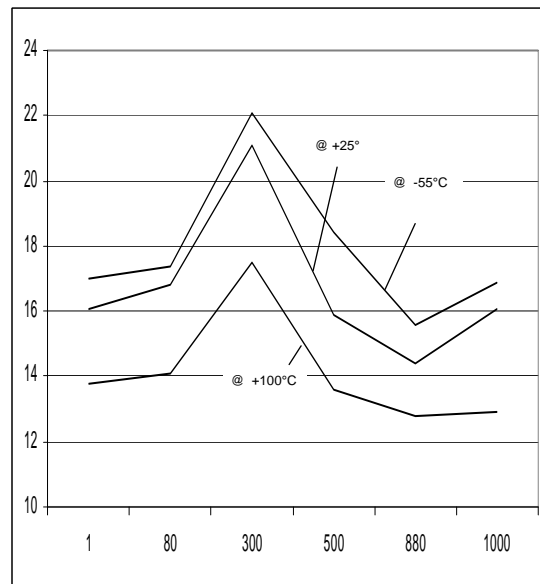
L-R Isolation



L-I Isolation



IIP3



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