

# MAMX-009646-23DBML



## E-Series Surface Mount Mixer 2-2200 MHz

M/A-COM Products  
Rev. V2

### Features

- LO Power +23 dBm
- Up to +23 dBm RF
- Surface Mount
- Tape and reel packaging available
- 260°C Reflow Compatible
- RoHS\* compliant

### Product Image



### Description

M/A-COM's MAMX-009646-23DBML is a RoHS Compliant Low Cost, Broadband, high performance Double Double Balanced Mixer designed for use in high volume wireless applications. The device has been optimized by careful selection of the FET and Balun Transformer for excellent performance. The MAMX-009646-23DBML is available in an SM-194 surface mount package and is designed to be utilized in both standard reflow and high temperature soldering reflow profiles. Parts are packaged in tape & reel.

### Ordering Information

| Part Number        | Package                        |
|--------------------|--------------------------------|
| MAMX-009646-23DBML | Tape and Reel (900 piece Reel) |

### Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 50\Omega$ , LO = +23 dBm

| Parameter              | Test Conditions | Frequency   | Units | Min | Typ | Max  |
|------------------------|-----------------|-------------|-------|-----|-----|------|
| RF Frequency           | —               | 2 - 2200    | MHz   | —   | —   | —    |
| LO Frequency           | —               | 2 - 2200    | MHz   | —   | —   | —    |
| IF Frequency           | —               | 2 - 2200    | MHz   | —   | —   | —    |
| Conversion Loss        | —               | 2 - 1100    | dB    | —   | 6.0 | 8.0  |
|                        |                 | 1100 - 2000 | dB    | —   | 7.3 | 8.5  |
|                        |                 | 2000 - 2200 | dB    | —   | 9.0 | 10.0 |
| Isolation              | LO to RF        | 2 - 1100    | dB    | 30  | 47  | —    |
|                        |                 | 1100 - 2200 | dB    | 20  | 25  | —    |
| Isolation              | LO to IF        | 2 - 1100    | dB    | 32  | 43  | —    |
|                        |                 | 1100 - 2200 | dB    | 25  | 28  | —    |
| Input 1 dB Compression | —               | 2 - 2200    | dBm   | —   | —   | 23   |
| IIP3                   | —               | 2 - 2200    | dB    | 30  | 33  | —    |

### Pin Configuration

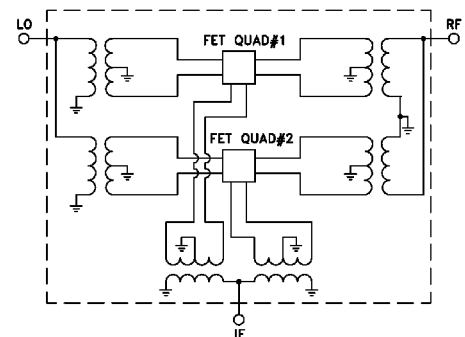
| Pin No.                            | Function |
|------------------------------------|----------|
| 10                                 | LO       |
| 2                                  | RF       |
| 14                                 | IF       |
| 1,3,4,5,6,7,8,9,<br>11,12,13,15,16 | Ground   |

### Absolute Maximum Ratings <sup>1,2</sup>

| Parameter             | Absolute Maximum |
|-----------------------|------------------|
| RF Power              | 150 mW           |
| Peak IF Current       | 40 mA            |
| Operating Temperature | -55°C to +85°C   |
| Storage Temperature   | -65°C to +125°C  |

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

### Schematic



**ADVANCED:** Data Sheets contain information regarding a product M/A-COM is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

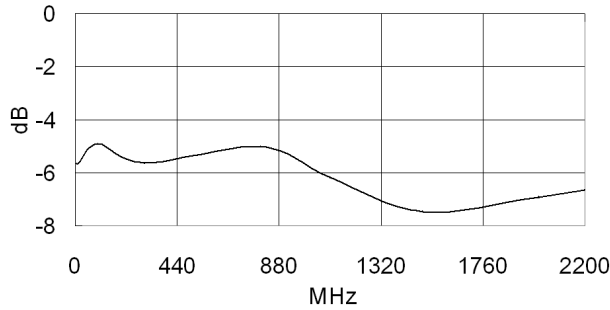
**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
  - **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
  - **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298
- Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

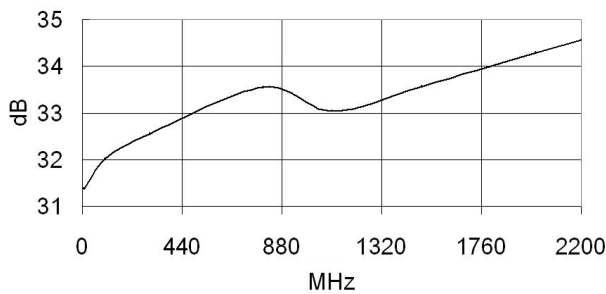
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**Typical Performance Curves at +25°C**

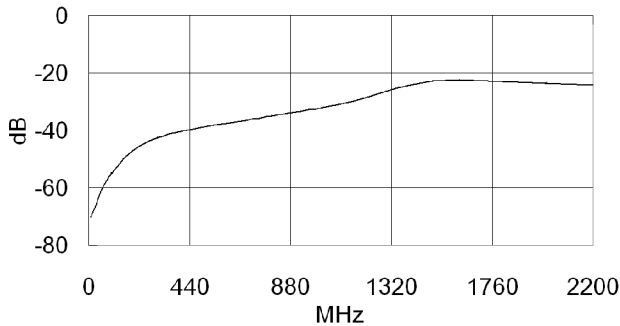
**Conversion Loss**



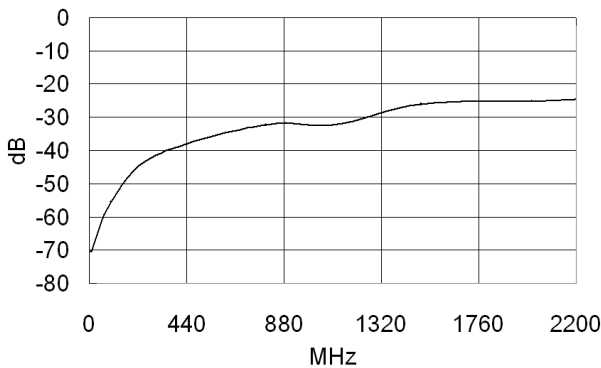
**IIP3**



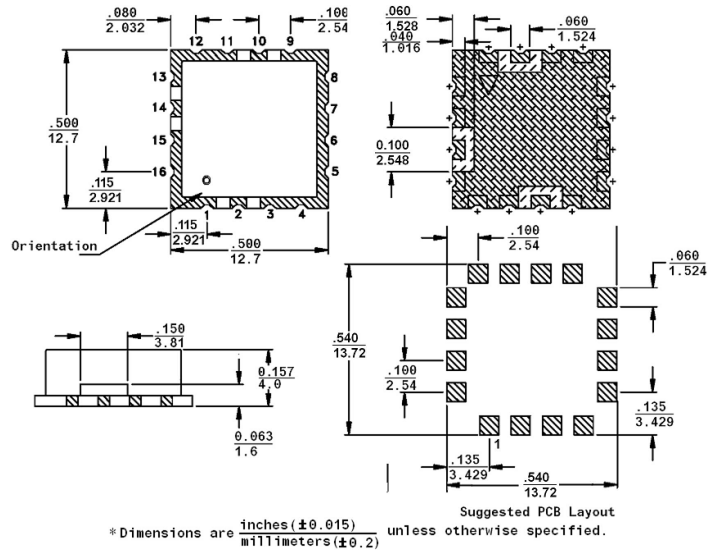
**LO-RF Isolation**



**LO-IF Isolation**



**SM-194 Package Outline Drawing**



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