

MAMX-009646-23DBML



E-Series Surface Mount Mixer 2 MHz - 2200 MHz

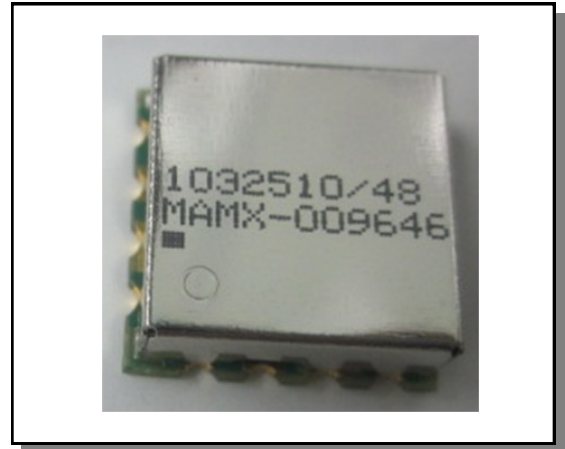
Rev. V5

Features

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

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.



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	—

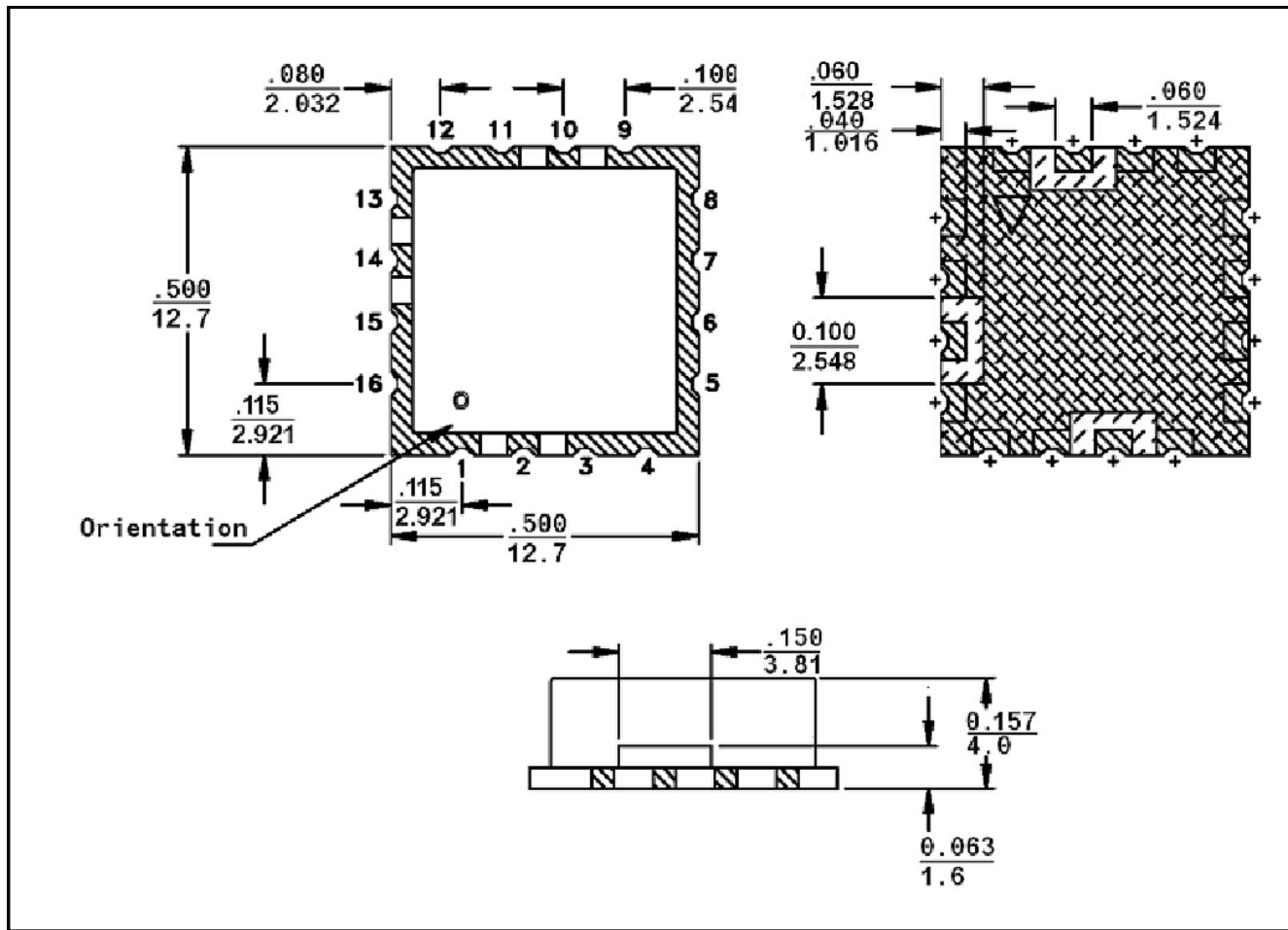
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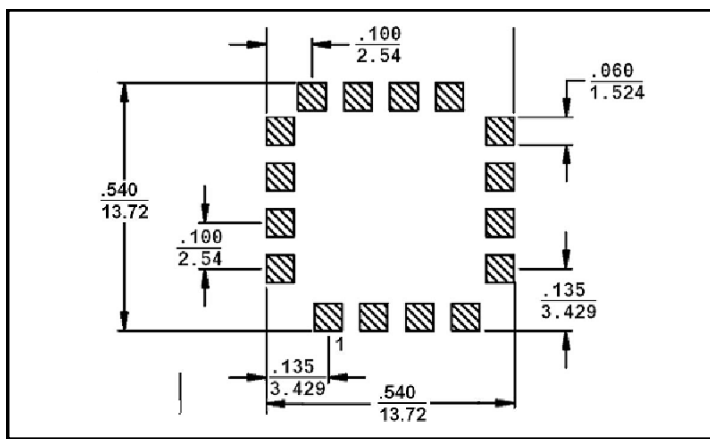
Outline Drawing



Notes:

1. Dimensions in inches/mm.
2. Tolerance: ± 0.15 in/ 0.2mm unless otherwise noted.
3. Model number and lot code are printed on the unit.
4. Substrate: FR4.
5. Cover: mild steel
6. RF shield should be a minimum of 6mm above the top of the unit.

Recommended Footprint



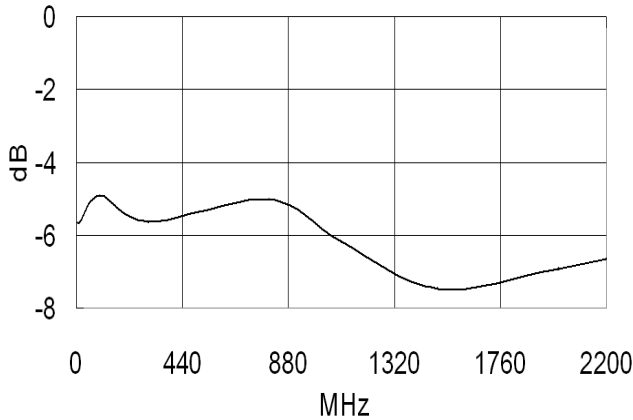
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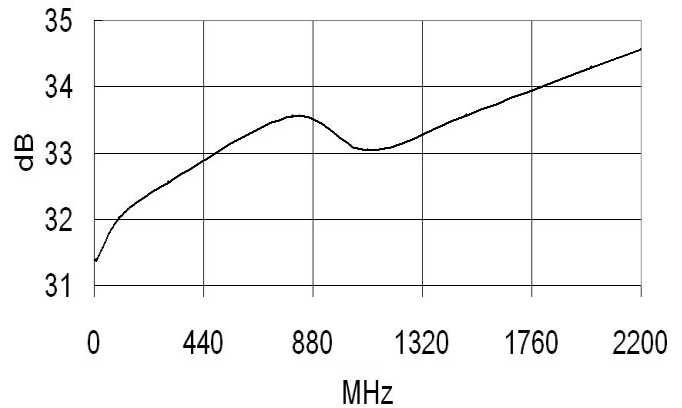
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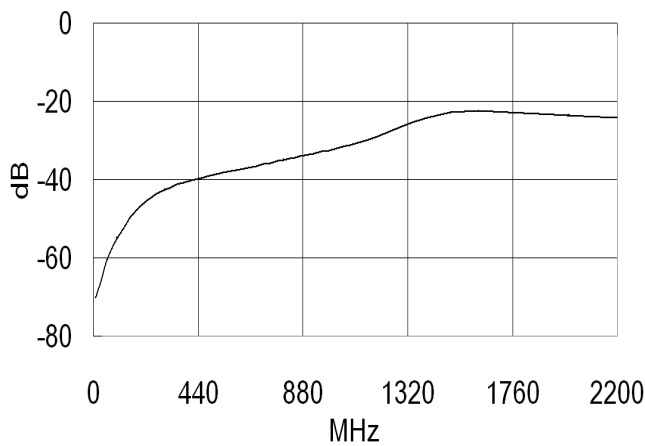
Conversion Loss



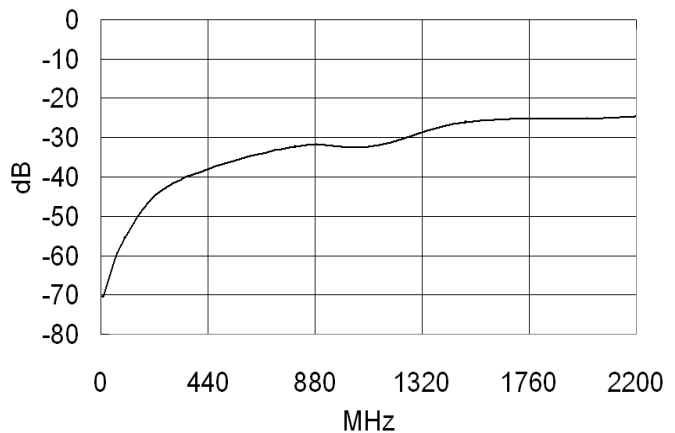
IIP3



LO RF Isolation



LO IF Isolation



Note: Data shown is @ 25°C, P_{in} = 0dBm.

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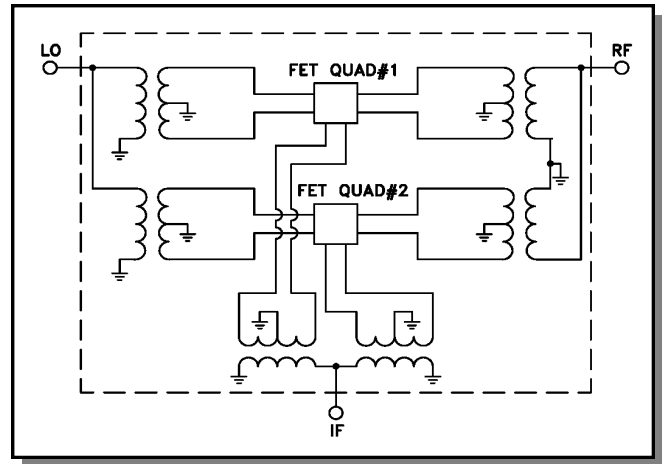
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Pin Configuration

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

Schematic Diagram



Recommended Maximum Ratings

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.

Ordering Information

Part Number	Package
MAMX-009646-23DBML	Tape and Reel (500 piece Reel)
Orientation	F2*

* See ANI-019 for orientation details.

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