

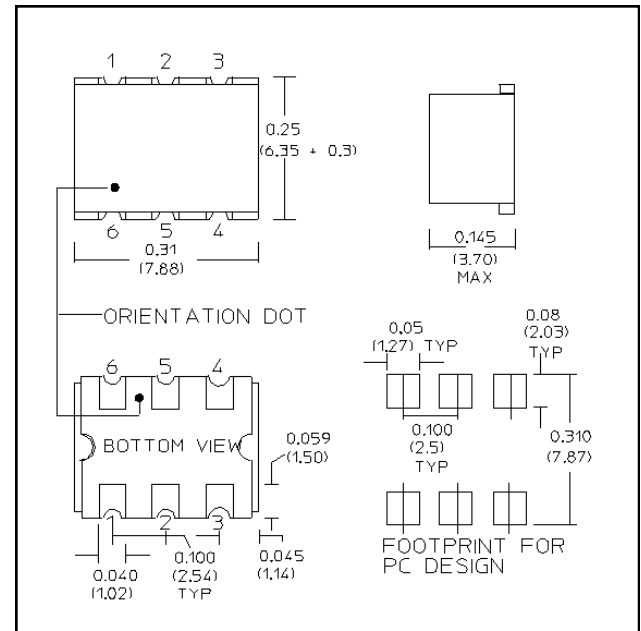
### Features

- LO Power +7 dBm
- Up to +1 dBm RF
- Surface Mount
- Low Profile
- RoHS\* Compliant, 260°C reflow compatible
- Tape and reel packaging available

### Description

M/A-COM's MAMXES0115 is a RoHS compliant, 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. The MAMXES0115 mixer is offered in an SM-89 surface mount package and is designed to be utilized in both standard reflow and high temperature soldering reflow profiles.

### Outline Drawing — SM-89



### Electrical Specifications: @ +25°C, Z<sub>0</sub> = 50 Ohms, LO = +7dBm

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	1 - 1000	MHz	—	—	—
LO Frequency	—	1 - 1000	MHz	—	—	—
IF Frequency	—	DC - 1000	MHz	—	—	—
Conversion Loss	—	1 - 500MHz 500 - 1000 MHz	dB dB	— —	6.5 7.0	7.5 8.5
Isolation (LO - RF)	—	1 - 5 MHz 5 - 500 MHz 500 - 1000 MHz	dB dB dB	50 25 18	55 35 25	— — —
Isolation (LO - IF)	—	1 - 5 MHz 5 - 500 MHz 500 - 1000 MHz	dB dB dB	50 25 15	55 30 20	— — —
RF Input for 1 dB Compression	—	—	dBm	—	—	+1
Input IP3	—	5 - 1000 MHz	dBm	14	18	-

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

### Pin Configuration

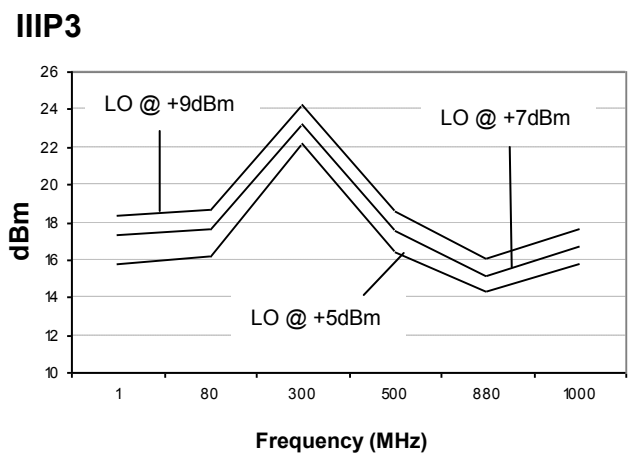
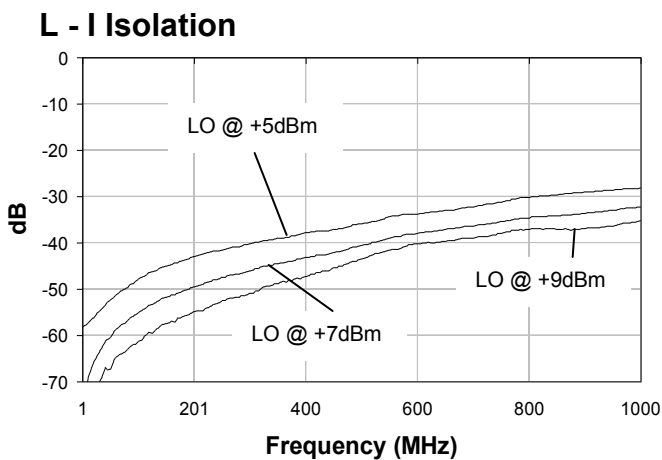
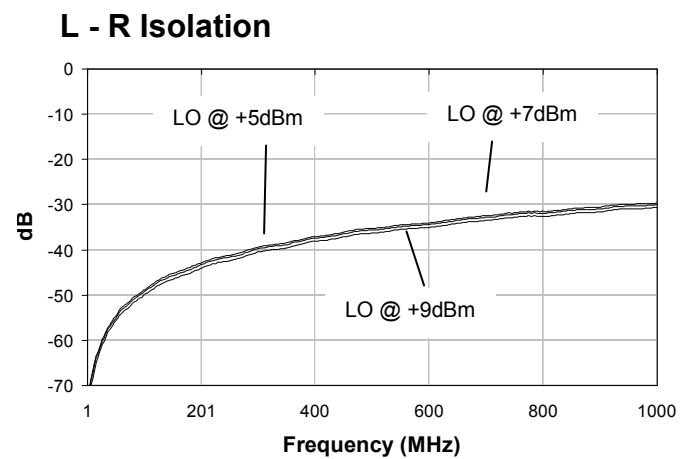
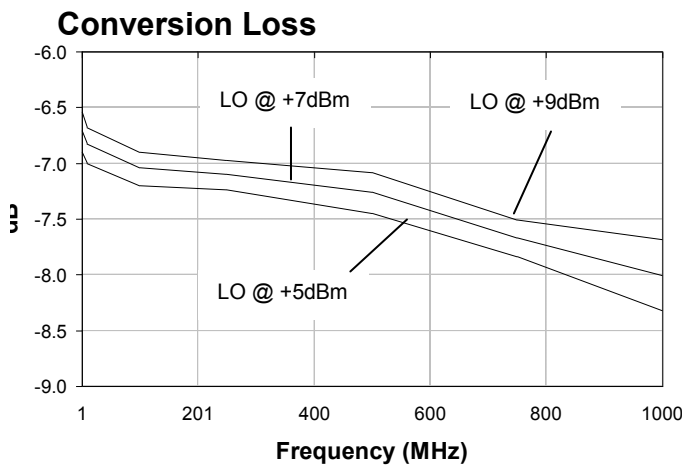
Pin No.	Function
1	LO
2	Ground
3	Ground
4	RF
5	IF
6	Ground

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

Parameter	Absolute Maximum
Max RF Power	50 mW
Peak IF Current	40 mA
Pin Temperature (10 seconds)	260° C
Operating Temperature	-55°C to +100°C
Storage Temperature	-65°C to +125°C

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

### Typical Performance Curves: @ 25°C, Z<sub>0</sub> = 50Ω, LO = +7dBm

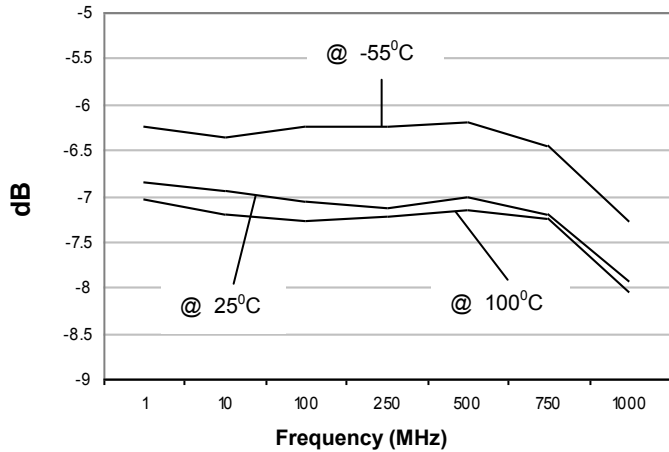


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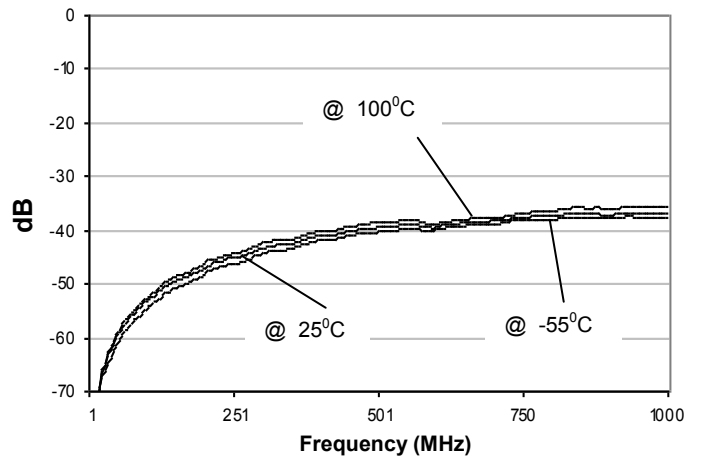
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### Typical Performance Curves over Temperature: @ -55°C, +25°C, +100°C

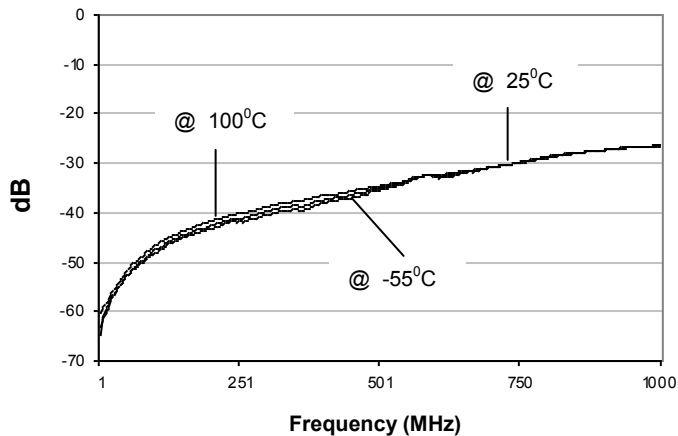
**Conversion Loss**



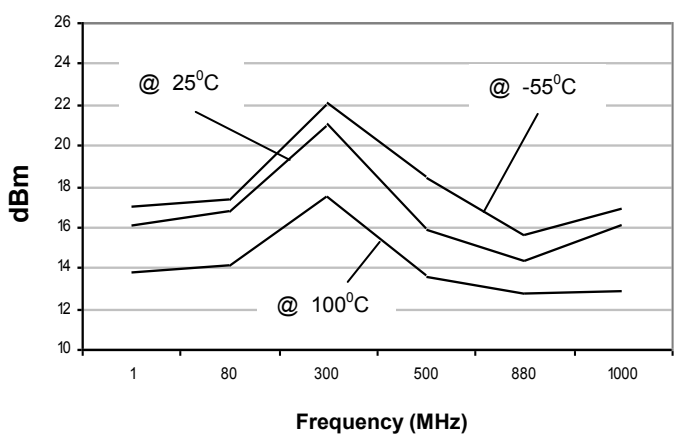
**L - R Isolation**



**L - I Isolation**



**IIP3**



# MAMXES0115



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

Rev. V6

### Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	7.01
Bo	mm	8.61
Ko	mm	5.23
Orientation	-	F2
Reference Application Note ANI-019 for orientation		

### Ordering Information

Part Number	Description
MAMXES0115	Tape and Reel (900 pieces/ Reel)

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