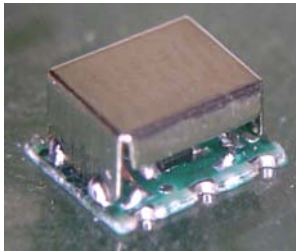


## Features

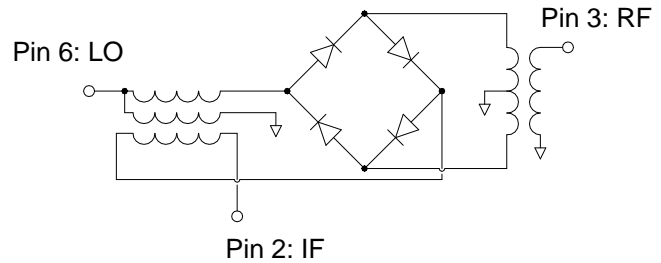
- Surface mount
- LO power +7dBm
- RF power up to +1dBm
- Low profile
- 260°C reflow compatible
- RoHS\* compliant
- RoHS version of MAMXES0028
- Available on tape and reel.

## Description

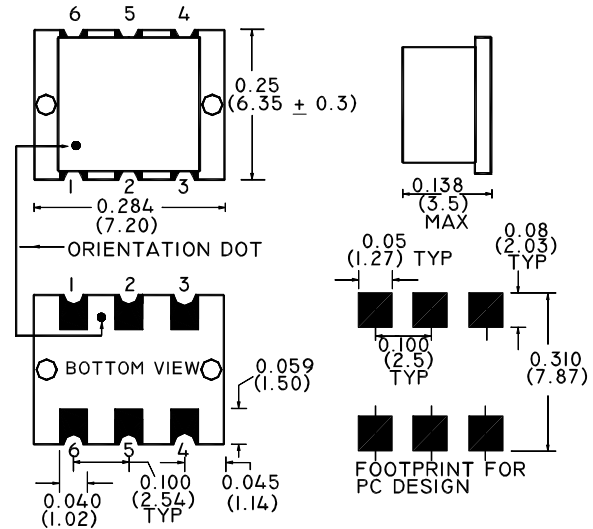
M/A COM's MAMX-008174-CXD860 is a low cost broadband high performance double balance mixer designed for use in high volume wireless applications. The device has been optimised by careful selection of the Schottky diode and balun transformer.



## Schematic



## Case style: SM-134



Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010, unless otherwise stated

## Pin configuration

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

Note: Reference application note **M513** for reel size information.

## Ordering information

Part number	Description
MAMX-008174-CXD860	900 piece reel
MAMX-008174-CXD8TB	Customer Test Board

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

1

**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions 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 Technology Solutions 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.

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

Parameter	Frequency	Units	Min	Typ	Max
Frequency	RF 1 - 1000 MHz LO 1 - 1000 MHz IF DC - 1000 MHz	- - -	- - -	- - -	- - -
Conversion Loss	1 - 500 MHz 500 - 1000 MHz	dB dB	- -	6.5 7.5	7.5 8.5
Isolation (LO - RF)	1 - 5 MHz 5 - 250 MHz 250 - 500 MHz	dB dB dB	50 35 25	55 45 30	- - -
Isolation (LO - IF)	1 - 5 MHz 5 - 250 MHz 250 - 500 MHz	dB dB dB	50 35 25	55 45 30	- - -
RF Input for 1dB Compression	5 - 1000 MHz	dBm	-	-	+1
Input IP3	5 - 1000 MHz	dBm	14	18	-

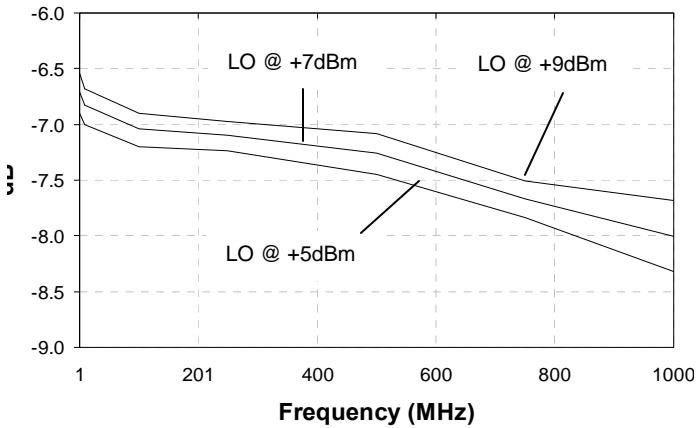
**Absolute Maximum Ratings** <sup>1,2</sup>

Parameter	Absolute maximum
RF power	50mW
Peak IF current	40mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

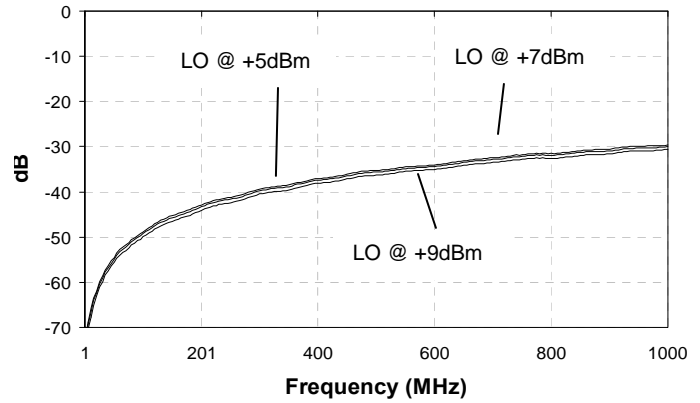
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

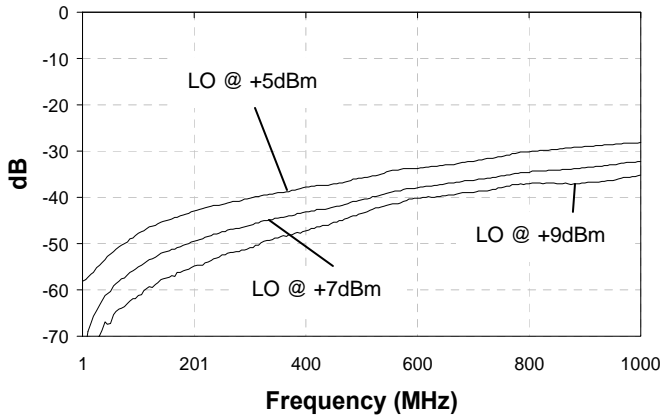
**Conversion Loss**



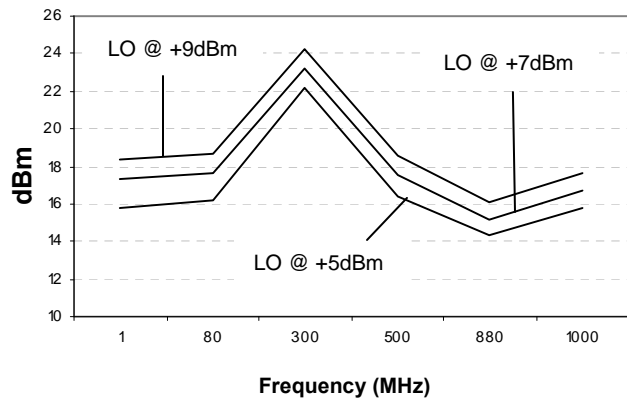
**L - R Isolation**



**L - I Isolation**

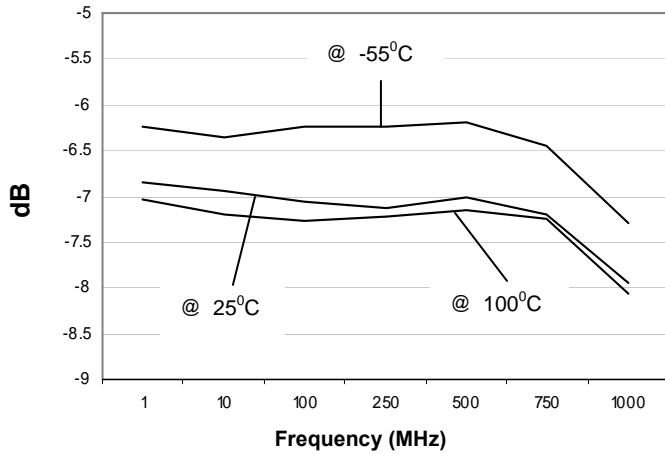


**IIP3**

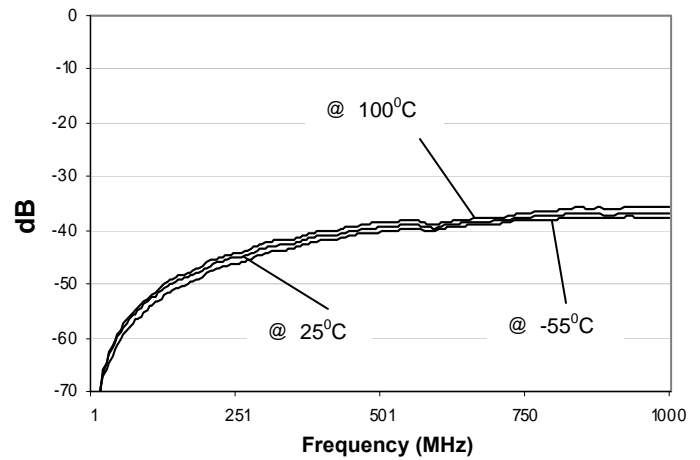


## Typical Performance Curves over Temperature: @ -55°C, +25°C, +100°C

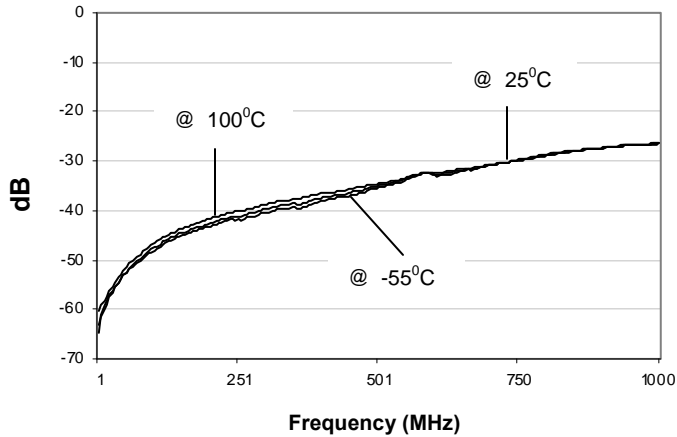
### Conversion Loss



### L - R Isolation



### L - I Isolation



### IIP3

