

**E-Series Surface Mount Mixer
1-1000MHz**

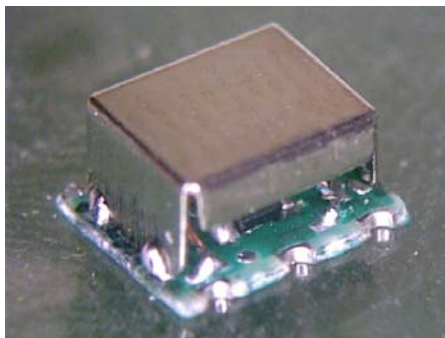
**MAMX-008174-CXD860
V1**

Features

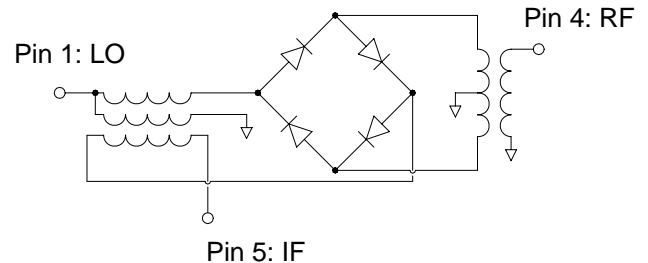
- LO Power +7dBm
- RF power up to +1dBm
- Surface Mount
- Low Profile
- 260°C Reflow Compatible
- RoHS* Compliant
- RoHS version of MAMXES0028
- Available on Tape and Reel. Reel quantity 900

Description

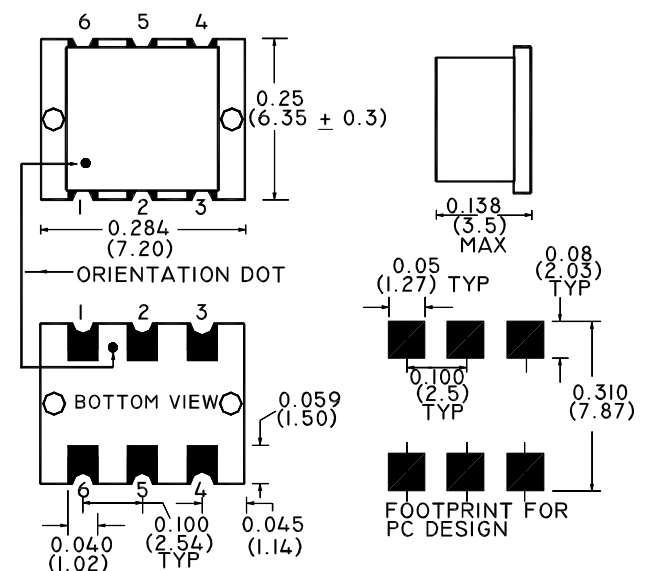
M/A-COM's MAMX-008174-CXD860 is a low cost, Broadband high performance double balance mixer designed for use in high volume wireless applications. The device has been optimised by careful selection of the Schottky diode and balun transformer.



Schematic



Case Style: SM-134



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

Pin Configuration

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

Note: Reference Application Note **M513** for reel size information.

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

Ordering Information

Part Number	Package
MAMX-008174-CXD860	900
MAMX-008174-CXD8TB	Customer test board

- **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 for additional data sheets and product information.

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Electrical specifications: @ 25°C, Z₀ = 50Ω, LO = +7dBm

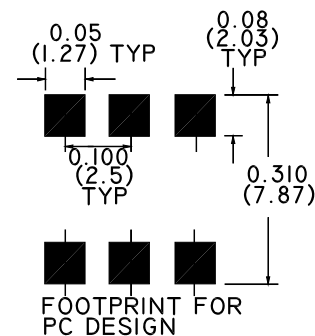
Parameter	Frequency	Units	Min	Typ	Max
Frequency	RF 1 - 1000 MHz LO 1 - 1000 MHz IF DC - 1000 MHz	- - -	- - -	- - -	- - -
Conversion Loss	1 - 500 MHz 500 - 1000 MHz	dB dB	- -	6.5 7.5	7.5 8.5
Isolation (LO - RF)	1 - 5 MHz 5 - 250 MHz 250 - 500 MHz	dB dB dB	50 35 25	55 45 30	- - -
Isolation (LO - IF)	1 - 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 ^{1,2}

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

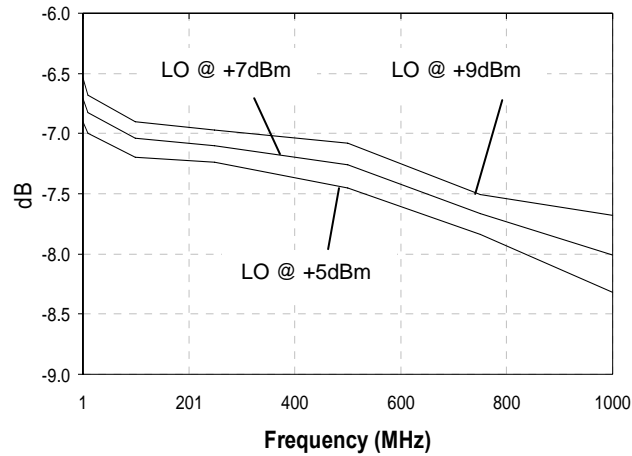
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration

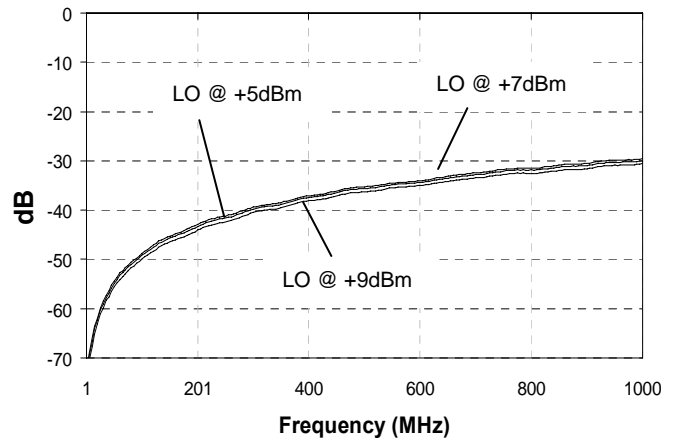


Typical performance curves: @ 25°C, Z₀ = 50Ω, LO = +7dBm

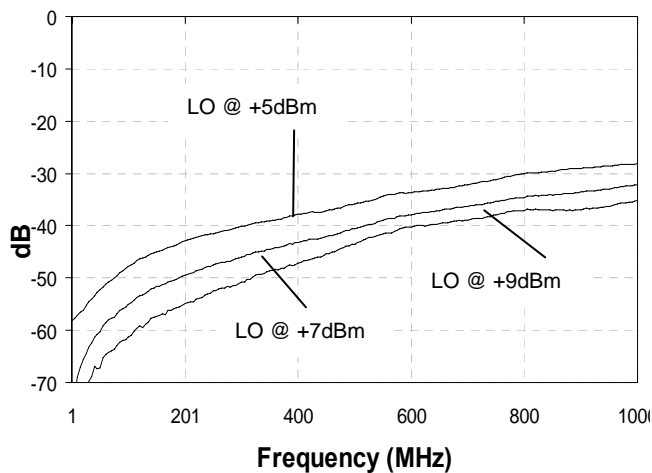
Conversion loss



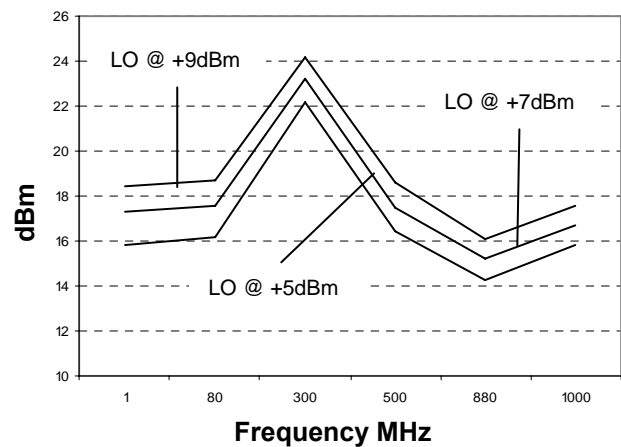
L - R Isolation



L - I Isolation

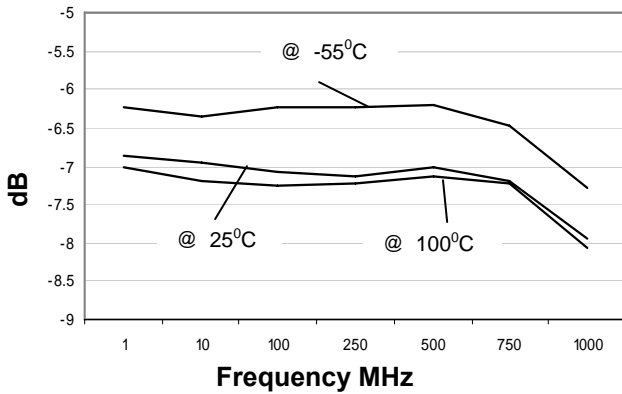


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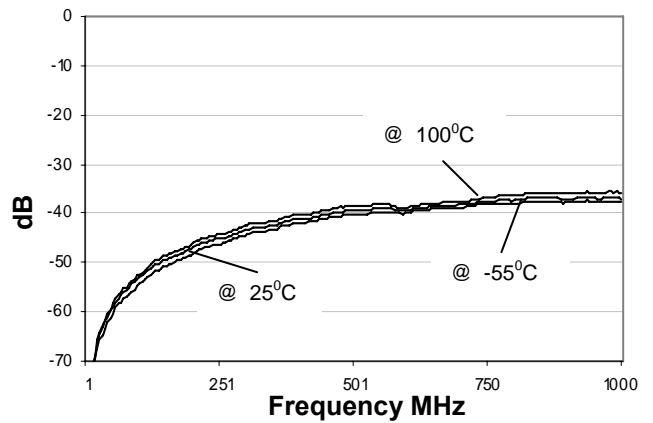


Typical performance curves over temperature: @ -55°C, +25°C, +100°C

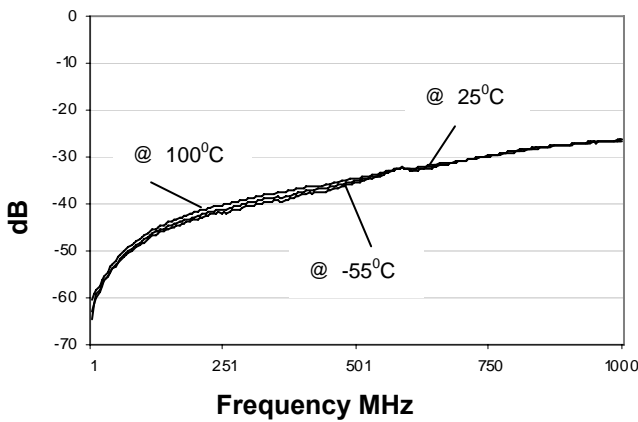
Conversion loss



L - R Isolation



L - I Isolation



IIP3

