

## Features

- LO Power +17 dBm
- Up to +13 dBm RF
- Surface Mount
- RoHS\* Compliant version of the EMRS-6HX1
- Tape and reel packaging

## Description

M/A-COM Technology Solutions MAMX-008786-ES0120 is a RoHS compliant device that is equivalent to the EMRS-6HX1 mixer.

This device is a Low Cost, High Drive, surface mount Mixer designed for use in high volume wireless applications.

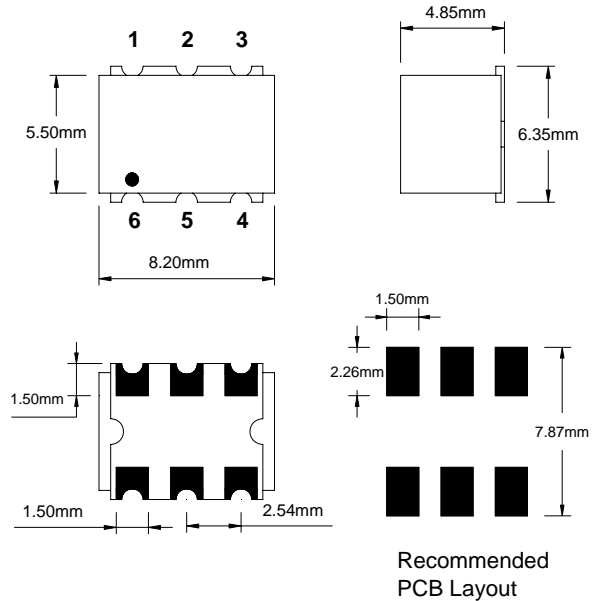
The MAMX-008786-ES0120 mixer is offered in a surface mount package and is designed to be utilized in both standard reflow and high temperature soldering reflow profiles.



## Pin Configuration

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

## Component Dimensions



Dimensions in mm, Tolerance: .xx ± 0.3 , unless otherwise stated. Drawing not to scale.

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

Parameter	Value
Max RF Power	50 mW
Peak IF Current	40 mA
Pin Temperature (10 seconds)	260° C
Operating Temperature	-10°C to +85°C
Storage Temperature	-55°C to +125°C

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

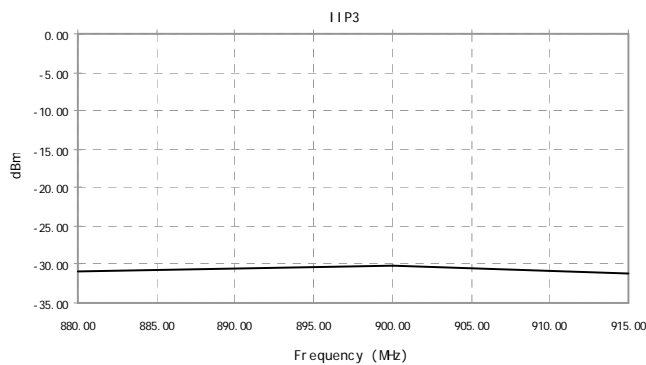
\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\ \text{Ohms}$ ,  $LO = +17\text{dBm}$**

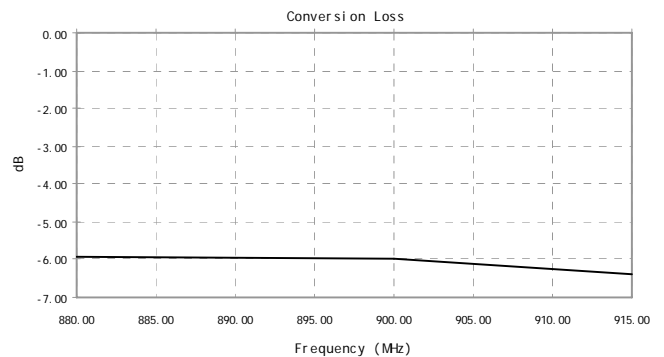
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	880 - 915	MHz	—	—	—
LO Frequency	—	1000 - 1130	MHz	—	—	—
IF Frequency	—	150 - 170	MHz	—	—	—
Conversion Loss	—	880 - 915 MHz	dB	—	5.5	8.0
Isolation (LO - RF)	—	1000 - 1130 MHz	dB	25	30	—
Isolation (LO - IF)	—	1000 - 1130 MHz	dB	25	30	—
RF Input for 1 dB Compression	—	—	dBm	—	—	+13
IIP3	—	880 - 915	dBm	23	27	—
RF VSWR	—	880 - 915	Ratio	1.7:1	2.0:1	2.3:1
LO VSWR	—	1000-1130	Ratio	1.3:1	1.5:1	1.8:1
IF VSWR	—	150-170	Ratio	1.0:1	1.2:1	1.4:1

## Typical Performance Curves @ +25°C

**IP3**

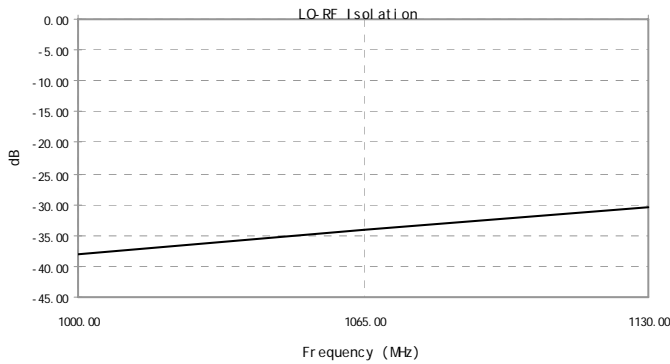


**Conversion Loss**

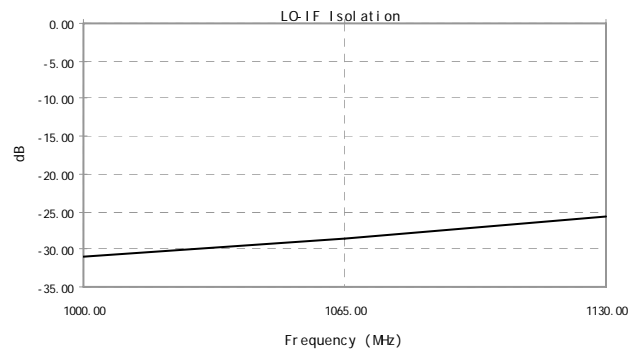


## Typical Performance Curves @ +25°C

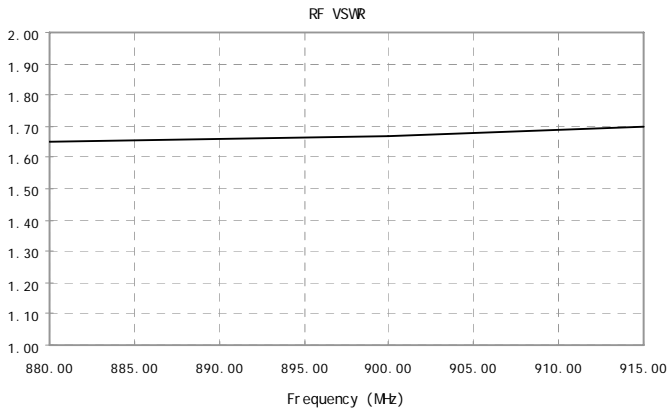
### LO - RF Isolation



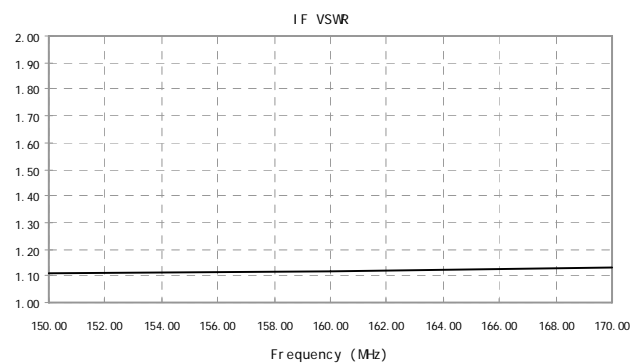
### LO - IF Isolation



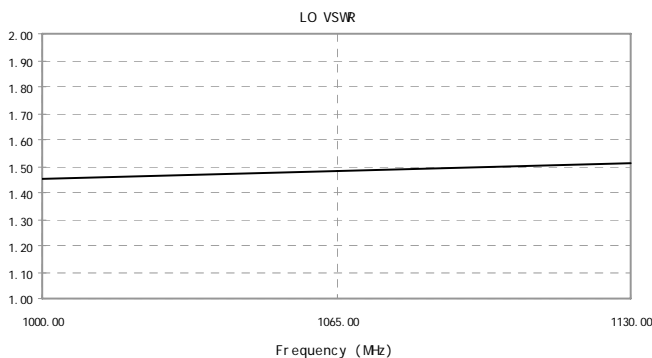
### RF VSWR



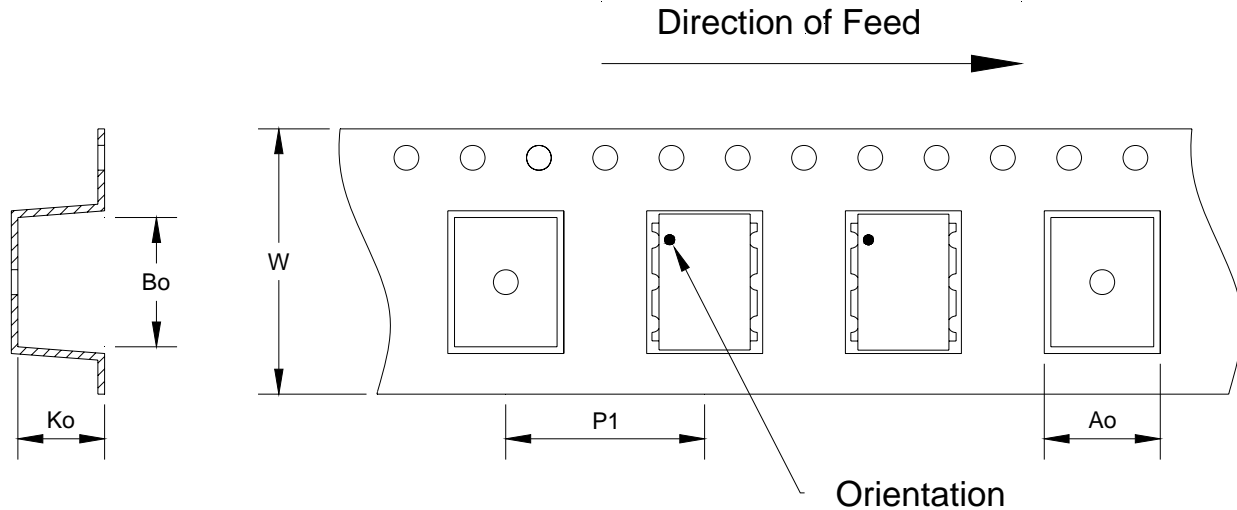
### IF VSWR



### LO VSWR



## Tape & Reel Information



Item	Dimension
Ao	7.00mm +/- 0.1mm
Bo	8.60mm +/- 0.1mm
Ko	5.23mm +/- 0.1mm
W	16.00mm +/- 0.3mm
P1	12.00mm +/- 0.1mm

## Ordering Information

Part Number	Package
MAMX-008786-ES0120	Tape and Reel 900 pieces