E-Series Surface Mount Mixer 880 – 915 MHz

#### Features

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

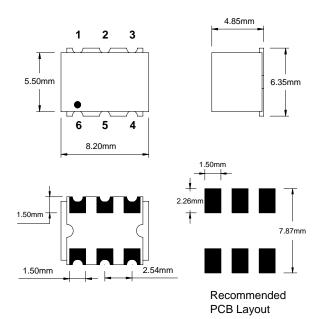
#### Description

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.

## **Component Dimensions**



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

## Pin Configuration

Commitment to produce in volume is not guaranteed.

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

## 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.

 M/A-COM Technology Solutions does not recommend sustained operation near these survivability limits.

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

- North America Tel: 800.366.2266
  Europe Tel: +353.21.244.6400
  India Tel: +91.80.43537383
  China Tel: +86.21.2407.1588
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## MAMX-008786-ES0120



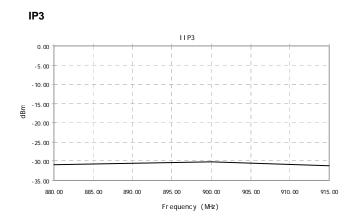
## E-Series Surface Mount Mixer

## 880 – 915 MHz

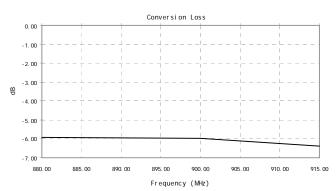
## Electrical Specifications: $T_A = 25^{\circ}C$ , $Z_0 = 50$ Ohms, LO = +17dBm

Parameter	Test Conditions	Frequency	Units	Min	Тур	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



#### **Conversion Loss**



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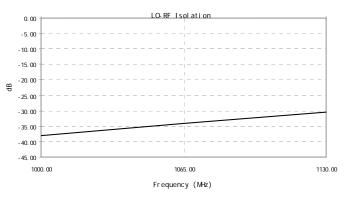
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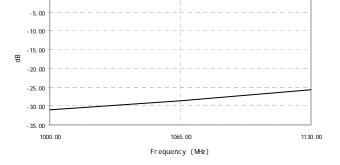


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### Typical Performance Curves @ +25°C

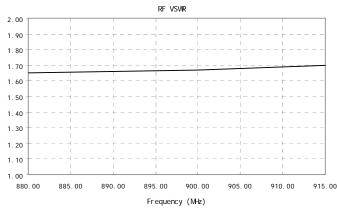
#### LO - RF Isolation





LO-IF Isolation

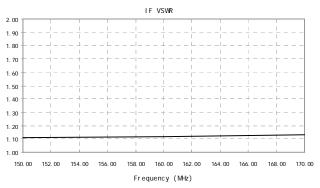
#### **RF VSWR**



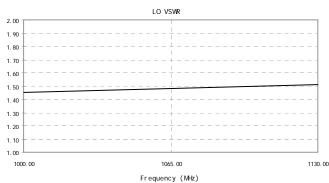
#### IF VSWR

LO - IF Isolation

0.00



#### LO VSWR



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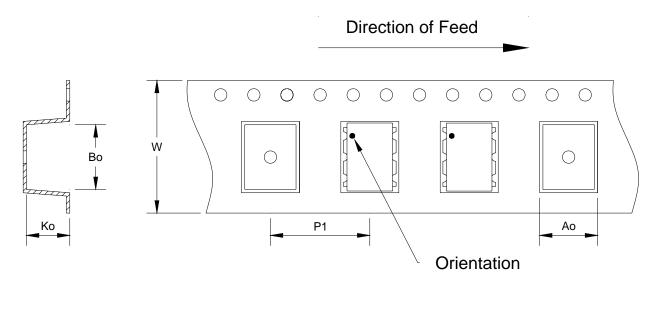
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### Tape & Reel Information



ltem	Dimension
Ao	7.00mm +/- 0.1mm
Во	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

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