## **Double-Balanced Mixer**, 10 MHz - 3 GHz

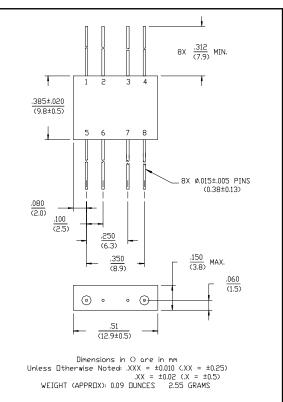
#### Features

- Usable to 4 GHz •
- Impedance: 50 Ohms Nominal
- Maximum Input Power: 600 mW max. @ 25°C, • Derated linearly to 85°C @ 3.2 mW/°C
- IF Port Current: 50 mA Max. •
- MIL-STD Screening Available

#### Description

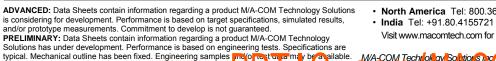
Transformers convert the LO and RF paths to balanced lines connecting to a low barrier, Schottky diode ring quad. These transformers help provide excellent isolation between ports.

# FP-2



### **Pin Configuration**

Pin No.	Function	Pin No.	Function	
1	GND	GND 5 I		
2	GND	6	GND	
3	GND	7	GND	
4	IF	8	RF	



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### Double-Balanced Mixer, 10 MHz - 3 GHz

Rev. V3

# Electrical Specifications<sup>1</sup>: $T_A = -55^{\circ}C$ to $+85^{\circ}C$

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Frequency Range	RF, LO Ports IF Port	0.01 - 3 GHz 0.01 - 3 GHz	GHz GHz	_	_	
Conversion Loss			dB	—	—	8.0
Isolation	LO to RF	10 - 500 MHz 500 - 1000 MHz 1000 - 3000 MHz	dB dB dB	25 30 25		
	LO to IF	10 - 500 MHz 500 - 1000 MHz 1000 - 3000 MHz	dB dB dB	20 25 25		
	RF to IF	10 - 500 MHz 500 - 1000 MHz 1000 - 3000 MHz	dB dB dB	20 25 20		
DC Polarity	Negative	—	—	—	—	—
DC Offset			mV	—	≤7	—
RF Input	1 dB Compression 1 dB Desensitization		dBm dBm	—	+7 +5	—
SSB Noise Figure	Within 1 dB of Conversion Loss Max.	_	_	—	—	—
Typical Two Tone IM Ratio	With –10 dBm input, each input 25 MHz and 35 MHz IF	100 - 2000 MHz	dB	—	>56	—

1. All specifications apply when operated at +10 to +13 dBm available LO power with 50 ohm source and load impedance.

2. Conversion Loss is specified for IF frequency of 10 MHz to 2 GHz. See IF port bandwidth graph.

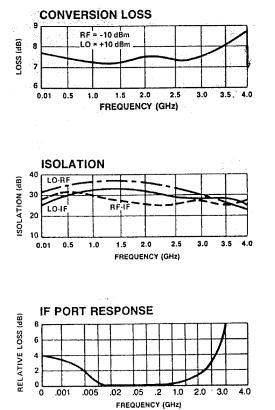
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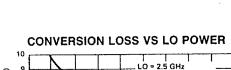
Rev. V3

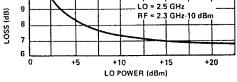
### **Typical Performance Curves**



#### **Ordering Information**

	Part Number	Package
MD-123 PIN		FP-2





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