

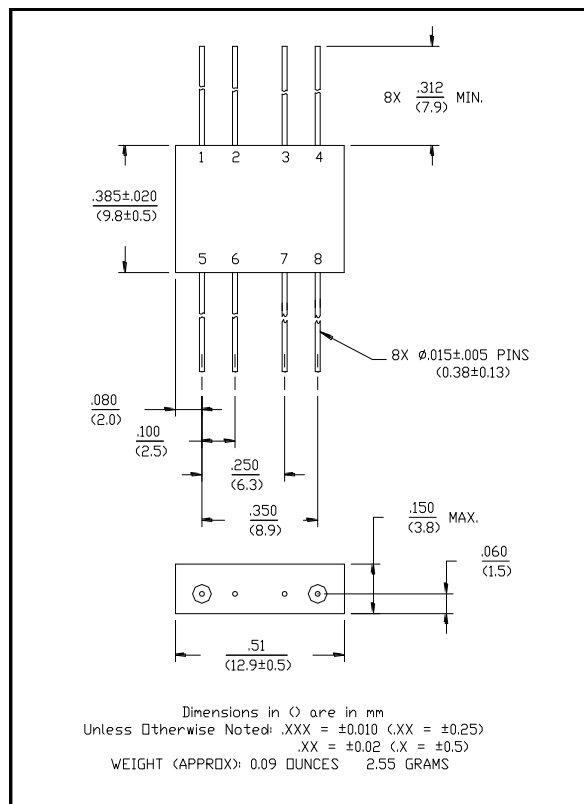
### Features

- 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	5	LO
2	GND	6	GND
3	GND	7	GND
4	IF	8	RF

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

Rev. V3

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

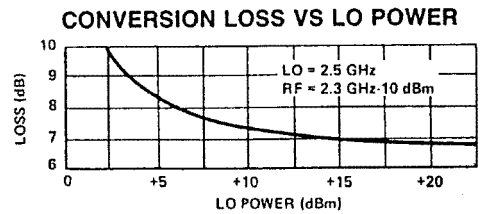
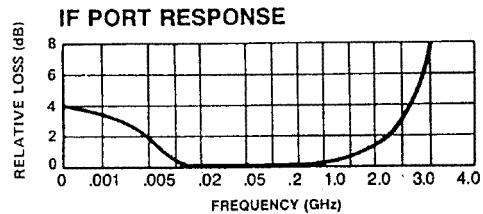
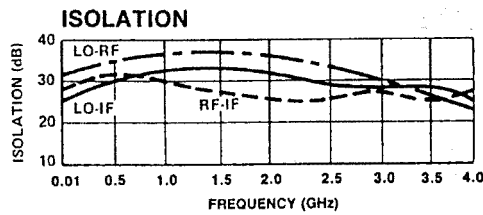
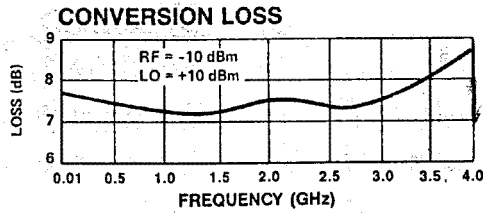
Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Frequency Range	RF, LO Ports IF Port	0.01 - 3 GHz	GHz	—	—	—
		0.01 - 3 GHz	GHz	—	—	—
Conversion Loss			dB	—	—	8.0
Isolation	LO to RF	10 - 500 MHz	dB	25	—	—
		500 - 1000 MHz	dB	30	—	—
		1000 - 3000 MHz	dB	25	—	—
	LO to IF	10 - 500 MHz	dB	20	—	—
		500 - 1000 MHz	dB	25	—	—
		1000 - 3000 MHz	dB	25	—	—
RF to IF	10 - 500 MHz	dB	20	—	—	
	500 - 1000 MHz	dB	25	—	—	
	1000 - 3000 MHz	dB	20	—	—	
DC Polarity	Negative	—	—	—	—	—
DC Offset			mV	—	$\leq 7$	—
RF Input	1 dB Compression 1 dB Desensitization		dBm	—	+7	—
			dBm	—	+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.

## Typical Performance Curves

## Ordering Information

Part Number	Package
MD-123 PIN	FP-2



M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.