

Flatpack Double-Balanced Mixer, 0.6 - 3 GHz

MD-156

Features

- Noise Figure: 6.5 Typical
- LO-RF Isolation: 30 dB Typical
- Impedance: 50 Ohms Nominal
- Maximum Input Power: 300 mW max. @ 25°C, Derated to 85°C @ 3.2 mW/°C
- IF Port Current: 50 mA Max.
- MIL-STD-883 Screening Available

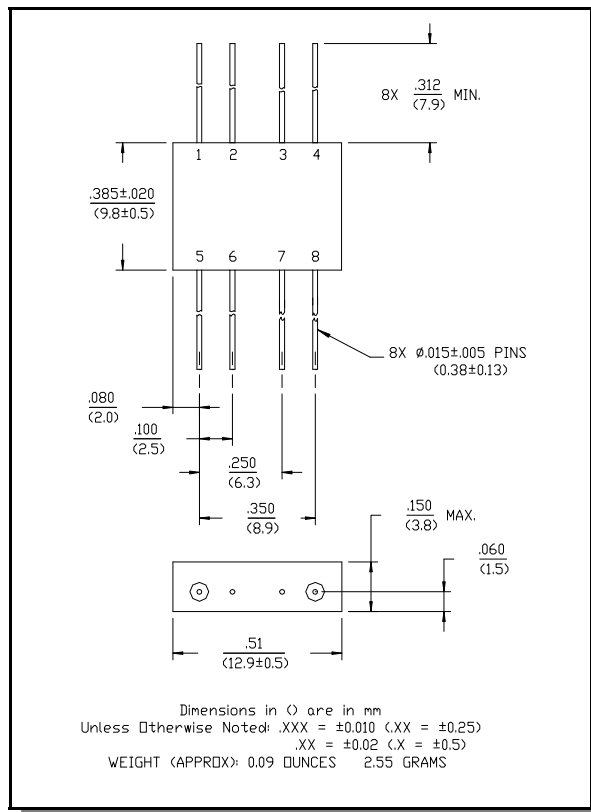
Description

Transformers convert to the LO and RF paths to balanced lines connecting a low barrier, Schottky diode ring quad. These transformers help provide excellent isolation between ports. Conversion loss is low. The direct connection of the IF port to the diode quad allows these mixers to be used as phase detectors and bi-phase modulators.

Pin Configuration

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

FP-2



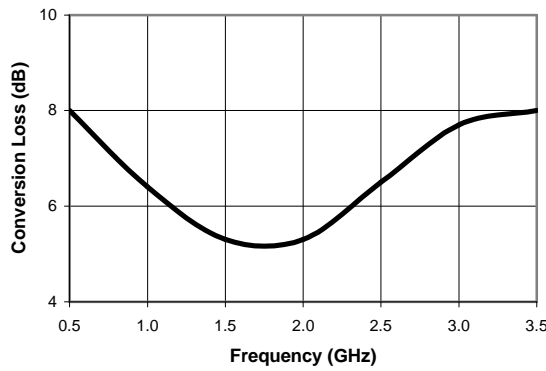
Electrical Specifications¹: T_A = -55°C to +85°C

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Frequency Range	RF, LO Ports IF Port	600 - 3000 DC - 1000	MHz MHz	— —	— —	— —
Conversion Loss and SSB Noise Figure		800 - 2000 MHz 600 - 3000 MHz	dB dB	— —	— —	8.0 9.0
Isolation	LO to RF	600 - 2000 MHz	dB	25	—	—
		2000 - 3000 MHz	dB	20	—	—
	LO to IF	600 - 2000 MHz	dB	20	—	—
		2000 - 3000 MHz	dB	17	—	—
DC Polarity	Negative	—	—	—	—	
DC Offset	—	—	mV	—	≤6	—
RF Input	1 dB Compression 1 dB Desensitization		dBm	—	0	—
			dBm	—	-4	—
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	800 MHz	dB	—	44	—
		1500 MHz	dB	—	40	—
		2500 MHz	dB	—	40	—

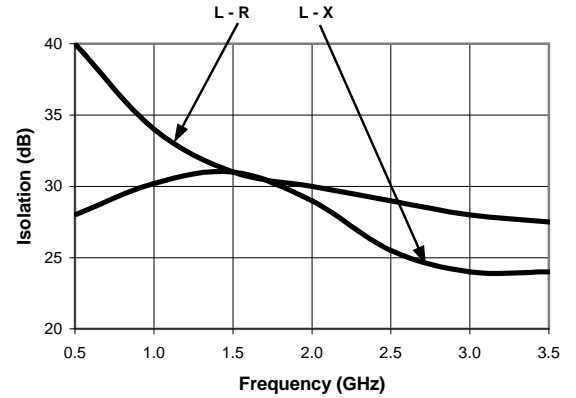
1. All specifications apply when operated at +7 dBm available LO power with 50 ohm source and load impedance.

Typical Performance Curves

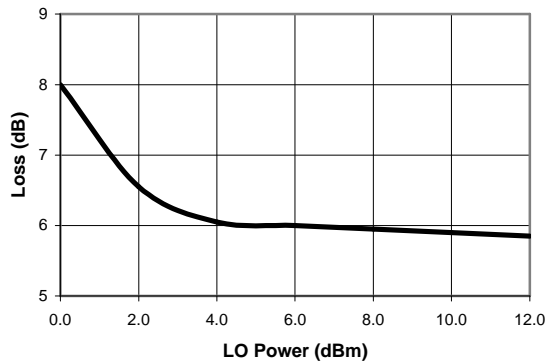
Conversion Loss



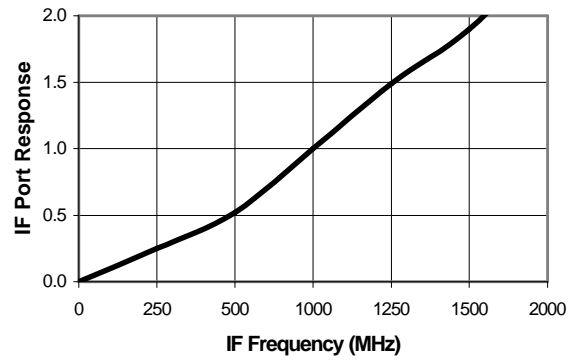
Isolation



Conversion Loss vs. LO Power



IF Port Response



Ordering Information

Part Number	Package
MD-156 PIN	FP-2

Specifications subject to change without notice.

- North America: Tel. (800) 366-2266
- Asia/Pacific: Tel.+81-44-844-8296, Fax +81-44-844-8298
- Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

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