

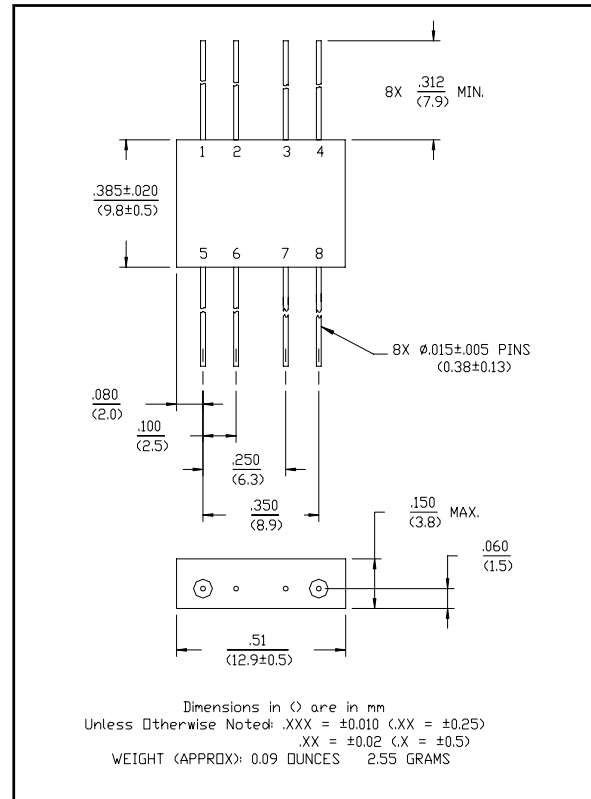
## Features

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

## 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

# Flatpack Double-Balanced Mixer, 0.6 - 3 GHz

Rev. V4

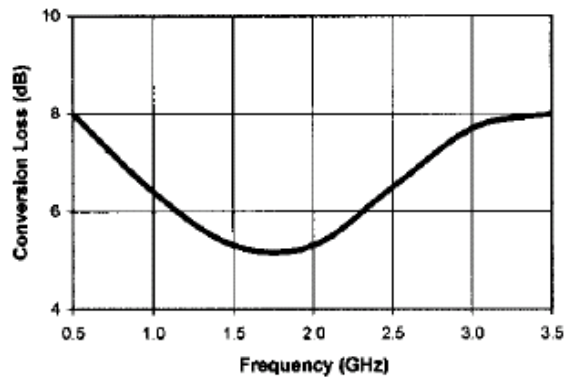
## Electrical Specifications<sup>1</sup>: $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Frequency Range	RF, LO Ports IF Port	600 - 3000 DC - 3000	MHz MHz	— —	— —	— —
Conversion Loss and SSB Noise Figure		800 - 2000 MHz 600 - 3000 MHz	dB dB	— —	— —	9.0 10.0
Isolation	LO to RF	600 – 2000 MHz 2000 - 3000 MHz	dB dB	25 20	— —	— —
	LO to IF	600 – 2000 MHz 2000 - 3000 MHz	dB dB	20 17	— —	— —
DC Polarity	Negative	—	—	—	—	—
DC Offset			mV	—	≤6	—
RF Input	1 dB Compression 1 dB Desensitization		dBm dBm	— —	0 -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	—

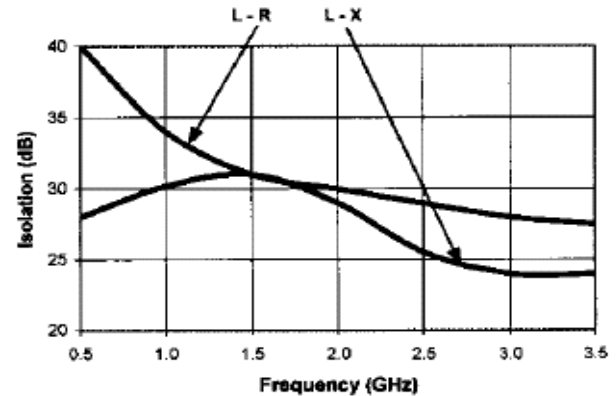
1. All specifications apply when operated at +7 dBm available LO power with 50 ohm source and load impedance.

## Typical Performance Curves

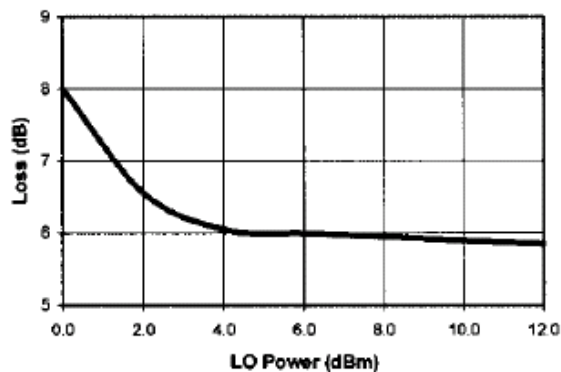
**Conversion Loss**



**Isolation**



**Conversion Loss vs. LO Power**



## Ordering Information

Part Number	Package
MD-156 PIN	FP-2

**IF Port Response**

