



Surface Mount Double-Balanced Mixer, 200 KHz - 200 MHz

MDS-222 V4

Features

- Fully Hermetic Package
- Three Decade Coverage
- Impedance: 50 Ohms Nominal
- Maximum Input Power: 400 mW Max, Derated to 85°C @ 3.2 mW/°C
- X Port Current: 50 mA Max.
- MIL-STD-883 Screening Available

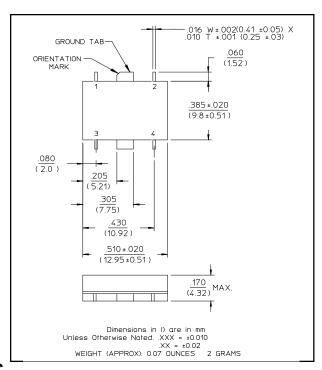
Description

Transformers convert the LO and RF paths to balanced lines connecting to a medium 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	3	LO
2	IF	4	RF

SF-1



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

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
				IVIIII	тур	IVIGA
Frequency Range	RF, LO Ports IF Port	0.2 - 200 DC - 200	MHz MHz	_	_	_
	11 1 010					
Conversion Loss		0.2 - 50 MHz	dB	_	_	6.0
		50 - 200 MHz	dB	_	_	7.5
Isolation	LO to RF	0.2 - 50 MHz	dB	35	_	_
		50 - 200 MHz	dB	30	_	_
	LO to IF	0.2 - 50 MHz	dB	35	_	_
	20 10	50 - 200 MHz	dB	25	_	_
	RF to IF	0.2 - 50 MHz	dB	25	_	_
		50 - 200 MHz	dB	20	_	_
DC Polarity	Negative	_	_	_	_	_
DC Offset	_	_	mV	_	<u><</u> 3	_
RF Input ²	1 dB Compression	_	dBm	_	+2	_
	1 dB Desensitization	_	dBm	_	0	_
SSB Noise Figure	Within 1 dB of Conversion Loss Max	_	_	_	_	_
Typical Two-Tone IM	with a -10 dBm input, each input,	100 - 200 MHz	dB	_	50	_
Ratio	25 MHz and 35 MHz IF	200 - 300 MHz	dB	_	36	_

- 1. All specifications apply when operated at +7 dBm available LO power with 50 ohm source and load impedance.
- 2. Measured at 100 MHz.

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information.

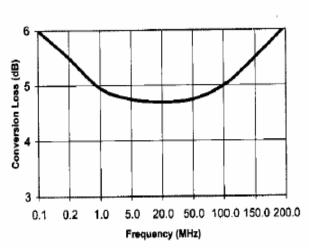


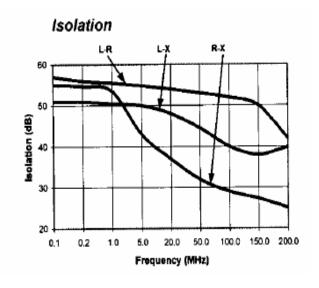
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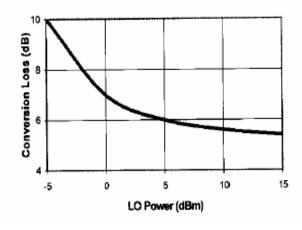
Typical Performance Curves



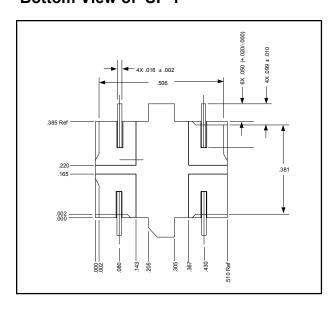




Conversion Loss vs. LO Power



Bottom View of SF-1



Ordering Information

Part Number	Package		
MDS-222 PIN	SF-1		

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