

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

MDS-222

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 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		

ı	OND	3	LO		Unless Other WEIGHT (A		Dillierisions III / 0 de II			
2	IF	4	RF							
Electrical S	pecifica	ations¹: T	4 = -55°C to	o +85°C						
Parameter		Test Conditions		Freque	ency	Units	Min	Тур	Max	
Frequency Ran	ge	RF, LO P IF Por		0.2 - 200 DC - 200		MHz MHz	_	_	_	
Conversion Los	ss		0.2 - 50 MHz 50 - 200 MHz		dB dB	_	_	6.0 7.5		
Isolation		LO to RF		0.2 - 50 50 - 200		dB dB	35 30	_	_	
		LO to I	F	0.2 - 50 50 - 200		dB dB	35 25	_	_	
		RF to I	F	0.2 - 50 50 - 200		dB dB	25 20	_	_	
DC Polarity		Negativ	/e	_		_	_	_	_	
DC Offset		_		_		mV	_	<u><</u> 3	_	
RF Input ²		1 dB Compr 1 dB Desens		_		dBm dBm	_	+2 0	_	
SSB Noise Figu	ure W	ithin 1 dB of Cor	n 1 dB of Conversion Loss Max			_	_	_	_	

100 - 200 MHz

200 - 300 MHz

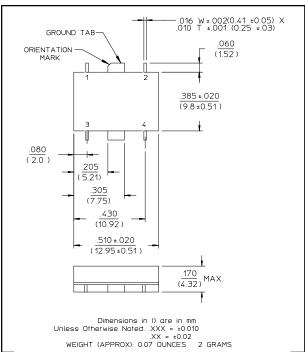
- 1. All specifications apply when operated at +7 dBm available LO power with 50 ohm source and load impedance.
- 2. Measured at 100 MHz.

information.

Typical Two-Tone IM

Ratio

SF-1



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products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or

with a -10 dBm input, each input,

25 MHz and 35 MHz IF

dΒ

dB

50

36

M/A-COM Inc. and its affiliates reserve the right to make changes to the

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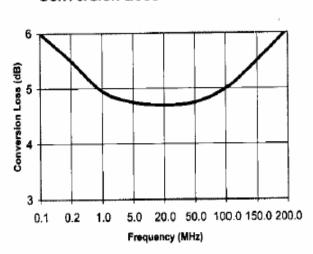
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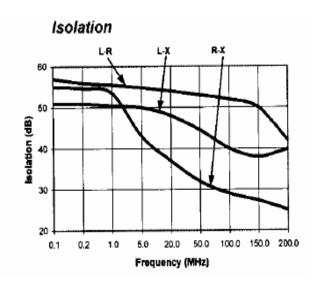
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MDS-222 V4

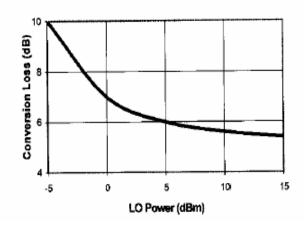
Typical Performance Curves

Conversion Loss

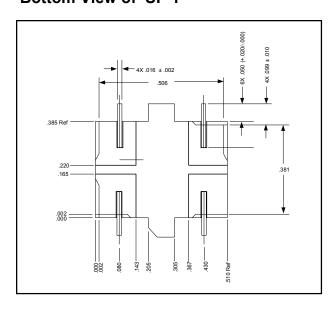




Conversion Loss vs. LO Power



Bottom View of SF-1



Ordering Information

Part Number	Package		
MDS-222 PIN	SF-1		

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