



Double-Balanced Mixer 10-1500 MHz

MD-/MDS-148

- Fully Hermetic Package (MDS-148)
- +5 dBm 1 dB Compression Point
- 6 dB Typical Midband Conversion Loss
- 40 dB Typical Midband LO-RF, LO-IF Isolation

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	RF, LO Ports	10-1500 MHz	
	IF Port	DC-1500 MHz	
Conversion Loss	10-800 MHz	7.5 dB Max	
	800-1500 MHz	10 dB Max	
Isolation	LO to RF	(10-100 MHz)	35 dB Min
		(100-1000 MHz)	25 dB Min
		(1000-1500 MHz)	20 dB Min
	LO to IF	(10-100 MHz)	35 dB Min
		(100-1000 MHz)	20 dB Min
		(1000-1500 MHz)	12 dB Min
RF to IF	(10-100 MHz)	30 dB Min	
	(100-1000 MHz)	18 dB Min	
	(1000-1500 MHz)	8 dB Min	

Operating Characteristics

Impedance	50 Ohms Nominal
Maximum Input	
Total Power	300 mW Max @ 25°C Derated to 85°C @ 3.2 mW/°C
X Port Current	50 mA Max
DC Polarity	Negative
DC Offset	< 10 mV Typical
RF Input	
1 dB Compression	+ 5 dBm Typical
1 dB Desensitization	+ 3 dBm Typical
SSB Noise Figure	Within 1 dB of Conversion Loss Max
Typical Two-Tone IM Ratio** (with -10 dBm input, each input, 50 MHz and 60 MHz IF)	≥ 50 dB @ 1500 MHz
Environmental	See Appendix for MIL-STD-883 screening option.

*All specifications apply when operated at +10 dBm available LO power with 50 ohm source and load impedance.

**Measured at 1500 MHz

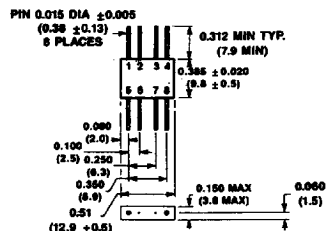
Ordering Information

Model No.	Package
MD-148 PIN	Flatpack
MDS-148 PIN	Surface Mount

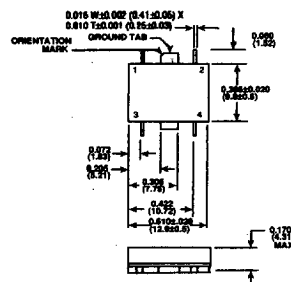
Specifications Subject to Change Without Notice.

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FP-2



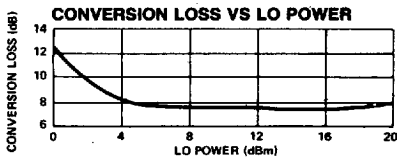
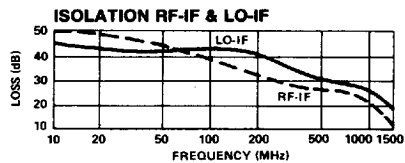
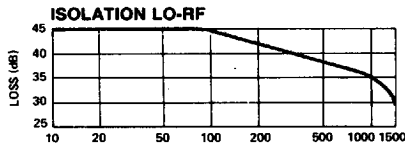
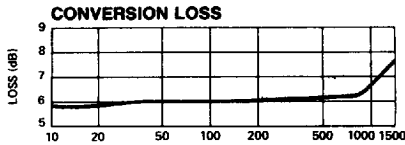
SF-1



Dimensions in () are in mm.

See Appendix for complete physical dimensions.

Typical Performance



Pin Configuration

MD-148

Pin Number	Description
1	Ground
2	Ground
3	Ground
4	IF
5	LO
6	Ground
7	Ground
8	RF

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1	Ground
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