



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

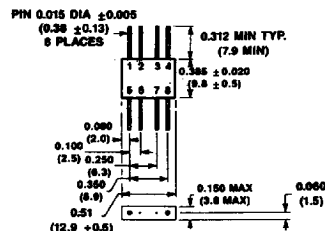
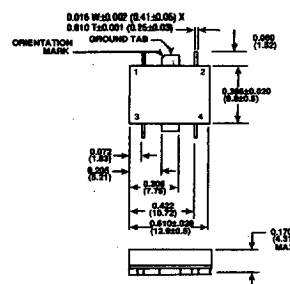
Ordering Information

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

Specifications Subject to Change Without Notice.

M/A-COM Inc. ■ 1011 Pawtucket Boulevard, Lowell, MA 01853 USA

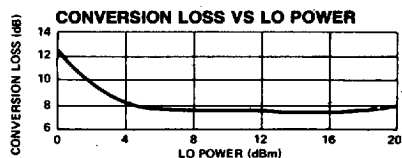
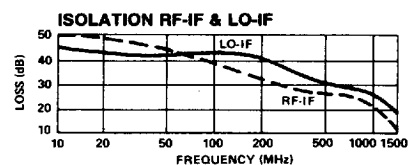
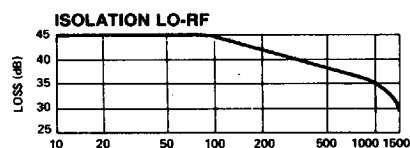
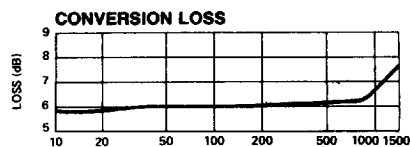
■ Telephone: 800-366-2266

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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Pin Number	Description
1	Ground
2	IF
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