



Double-Balanced Mixer 10-1500 MHz

MD-/MDC-/MDS-149

- Over Two-Decade Frequency Range
- 6 dB Typical Midband Conversion Loss
- 40 dB Typical Midband LO-RF Isolation
- Fully Hermetic Package (MDS-149)

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	RF, LO Ports		10-1500 MHz
	IF Port		DC-1500 MHz
Conversion Loss	10-1000 MHz		7.5 dB Max
	1000-1500 MHz		10 dB Max
Isolation	LO to RF	(10-100 MHz)	35 dB Min
		(100-1000 MHz)	30 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 Derated to 85°C @ 3.2 mW/°C
IF Port Current		50 mA Max
DC Polarity		Negative
DC Offset		< 4 mV Typical
RF Input	1 dB Compression	0 dBm Typ
	1 dB Desensitization	-2.0 dBm Typ

SSB Noise Figure		Within 1 dB of Conversion Loss Max
Typical Two-Tone IM Ratio		100-500 MHz > 48 dB
(with -10 dBm input, each)		500-1000 MHz > 43 dB
Input, 25 MHz and 35 MHz IF)		1000-1500 MHz > 35 dB

Environmental

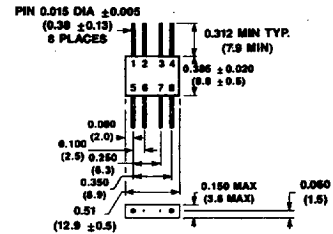
See Appendix for MIL-STD-883 screening option.

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

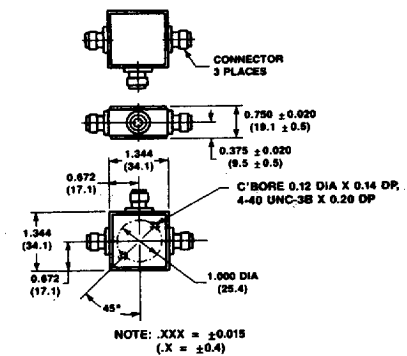
Ordering Information

Model No.	Package
MD-149 PIN	Flatpack
MDC-149 SMA	Connectorized
MDS-149 PIN	Surface Mount

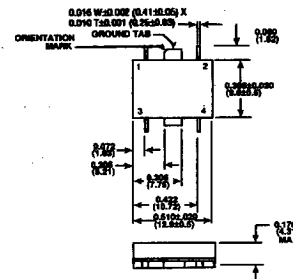
FP-2



C-7



SF-1



Dimensions in () are in mm.

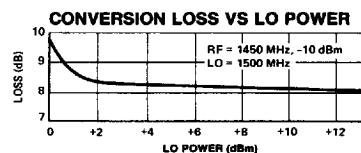
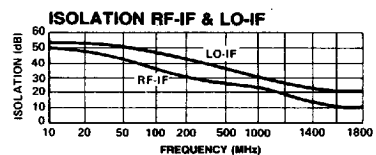
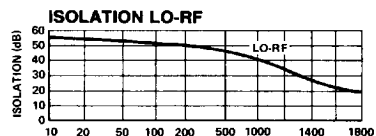
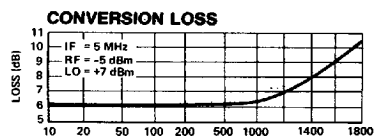
See Appendix for complete physical dimensions.

Specifications Subject to Change Without Notice.

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

Telephone: 800-366-2266

Typical Performance



Pin Configuration

MD-149

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
2	IF
3	LO
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