

Broadband Double-Balanced Mixer 0.3-5 GHz

MD-/MDC-154

- Broadband Frequency Coverage
- 6.5 dB Typical Midband Conversion Loss

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	RF, LO Ports IF Port	0.3-5 GHz 0.1-3000 MHz	
Conversion Loss†	0.3-4 GHz 0.3-5 GHz	9 dB Max 10 dB Max**	
Isolation	LO to RF	(0.8-2 GHz)	20 dB Min
		(0.5-5 GHz)	14 dB Min
		(0.3-0.5 GHz)	11 dB Min
	LO to IF	(0.8-2 GHz)	20 dB Min
		(0.3-5 GHz)	15 dB Min
	RF to IF	(0.5-4 GHz) (0.3-5 GHz)	20 dB Min 17dB Min

Operating Characteristics

Impedance	50 Ohms Nominal	
Maximum Input	Total Power	600 mW Max @ 25°C Derated to 85°C @ 3.2 mW/°C
	IF Port Current	50 mA Max
DC Polarity	Negative	
DC Offset	<3 mV Typical	
RF Input	1 dB Compression	+ 7 dBm Typical
	1 dB Desensitization	+ 4.5 dBm Typical
SSB Noise Figure	Within 1 dB of Conversion Loss Max	
Typical Two-Tone IM Ratio (with -10 dBm input each tone and 10 MHz IF)	62 dB Typical @ 400 MHz	
	57 dB Typical @ 1500 MHz	

Environmental

See Appendix for MIL-STD-883 screening option.

Pin Configuration RF; P10, LO; P6, IF; P5.
 Case and all other pins are ground.

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

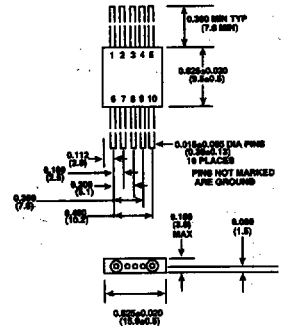
**11 dB for MDC-154.

†For IF Frequencies to 500 MHz.

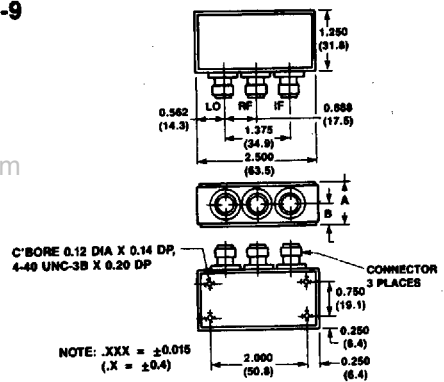
Ordering Information

Model No.	Package
MD-154 PIN	Flatpack
MDC-154 SMA	Connectorized

FP-3



C-9

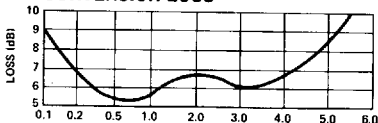


Dimensions in () are in mm.

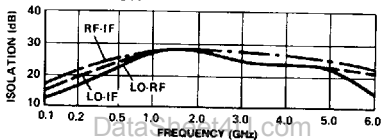
See Appendix for complete physical dimensions.

Typical Performance

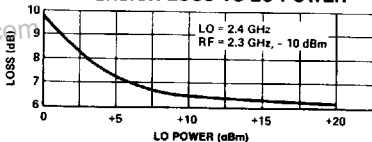
CONVERSION LOSS



ISOLATION



CONVERSION LOSS VS LO POWER



IF PORT RESPONSE

