



Termination-Insensitive Mixer 1-4000 MHz

MD-/MDC-179

- Intermodulation Ratio is insensitive to Port Mismatches
- Typical Midband VSWR < 2.0:1
- 35 dB Typical Midband Isolation

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	RF, LO Ports	1-4000 MHz	
	IF Port	5-1500 MHz	
Conversion Loss**†	5 - 1000 MHz	7.5 dB Max	
	5 - 2500 MHz	8.5 dB Max	
	5 - 3500 MHz	9.5 dB Max	
	1 - 4000 MHz	10.5 dB Max	
Isolation	LO to RF	(5-1000 MHz)	30 dB Min
		(1-4000 MHz)	20 dB Min
	LO to IF	(5-1000 MHz)	30 dB Min
		(1-4000 MHz)	20 dB Min
	RF to IF	(10-500 MHz)	30 dB Min
		(1-4000 MHz)	16 dB Min

Operating Characteristics

Impedance 50 Ohms Nominal

Maximum Input

Total Power 350 mW Max @ 25°C
Derated to 85°C @ 3.2 mW/°C
LO Power +24 dBm Max

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 49 dB @ 10 MHz
Input, each tone and 52 dB @ 500 MHz
60 MHz IF) 50 dB @ 3000 MHz

3rd Order Intermodulation

3 dB Typical @

Ratio Degradation

IF VSWR 3:1

Environmental

See Appendix for MIL-STD-883 screening option.

Pin Configuration

RF; P8, LO: P5, IF; P4.

Case and all other pins are ground.

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

**For IF frequencies of 5-300 MHz and an RF of -10 dBm or lower.

This product contains elements protected by United States Patent Number 4,224,572.

† For MDC-179, add 1.0 dB to conversion loss.

Ordering Information

Model No.

Package

MD-179 PIN

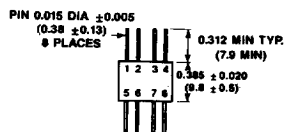
Flatpack

MDC-179 SMA

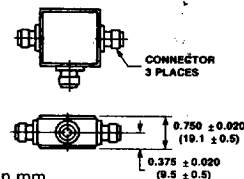
Connectorized

Specifications Subject to Change Without Notice.

FP-2



C-7



Dimensions in () are in mm.

See Appendix for complete physical dimensions.

Typical Performance

