

High-Level Termination-Insensitive Mixer

1 - 2800 MHz

MD-/MDC-174

V2.00

Features

- Intermodulation Ratio Insensitive to Port Mismatches
- Typical Midband VSWR < 2.0:1
- LO Drive to +27 dBm

Guaranteed Specifications* (From -55°C to +85°C)

Frequency Range	RF, LO Ports IF Port	1-2800 MHz 1-2000 MHz	
Conversion Loss**			
	5-1200 MHz	7.5 dB Max	7.5 Max
	5-2000 MHz	8.5 dB Max	8.0 Max
	1-2800 MHz	9.5 dB Max	9.0 Max
Isolation			
LO to RF	(1-1000 MHz)	30 dB Min	
	(1-2000 MHz)	20 dB Min	
	(1-2800 MHz)	15 dB Min	
LO to IF	(1-1500 MHz)	30 dB Min	
	(1-2800 MHz)	25 dB Min	
RF to IF	(5-1000 MHz)	25 dB Min	
	(1-2000 MHz)	20 dB Min	
	(1-2800 MHz)	15 dB Min	

Operating Characteristics

Impedance	50 Ohms Nominal
Maximum Input Total Power	0.5 Watt Max @ 25°C Derated to 85°C @ 3.2 mW/°C
LO Power	+27 dBm
RF Input 1 dB Compression 1 dB Desensitization	+ 16 dBm Typical + 14 dBm Typical
SSB Noise Figure	Within 1 dB of Conversion Loss Max
Typical Two-Tone IM Ratio (with 0 dBm Input, each tone and 10 MHz IF)	60 dB @ 100 MHz 55 dB @ 1000 MHz 52 dB @ 2800 MHz
Environmental MIL-STD-883 screening available.	
Pin Configuration	RF; P10, LO; P6, IF; P5 Case and all other pins are ground.

*All specifications apply when operated at +20 dBm available LO power with 50 ohm source and load impedance.

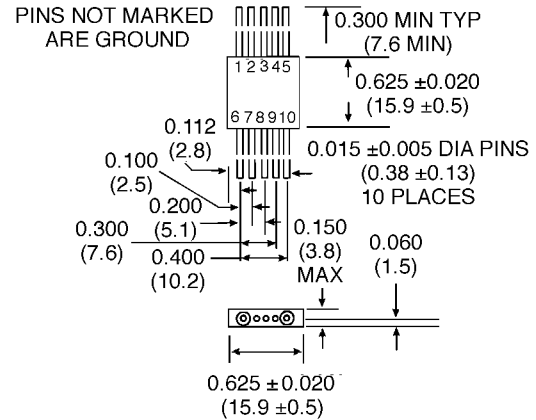
** Conversion loss for 60 MHz IF.

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

Ordering Information

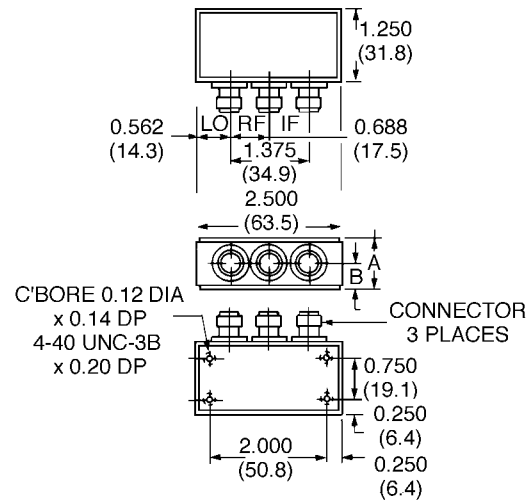
Model No.	Package
MD-174 PIN	Flatpack
MDC-174 SMA	Connectorized

FP-3



Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)
WEIGHT (APPROX.): 0.12 OUNCES 3.4 GRAMS

C-9



Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.015 (.x = ±0.4)
WEIGHT (APPROX.): 3 OUNCES 85 GRAMS

MD-174	
A	0.770 ± 0.020 (19.6 ± 0.5)
B	0.375 ± 0.020 (9.5 ± 0.5)

Specifications Subject to Change Without Notice.

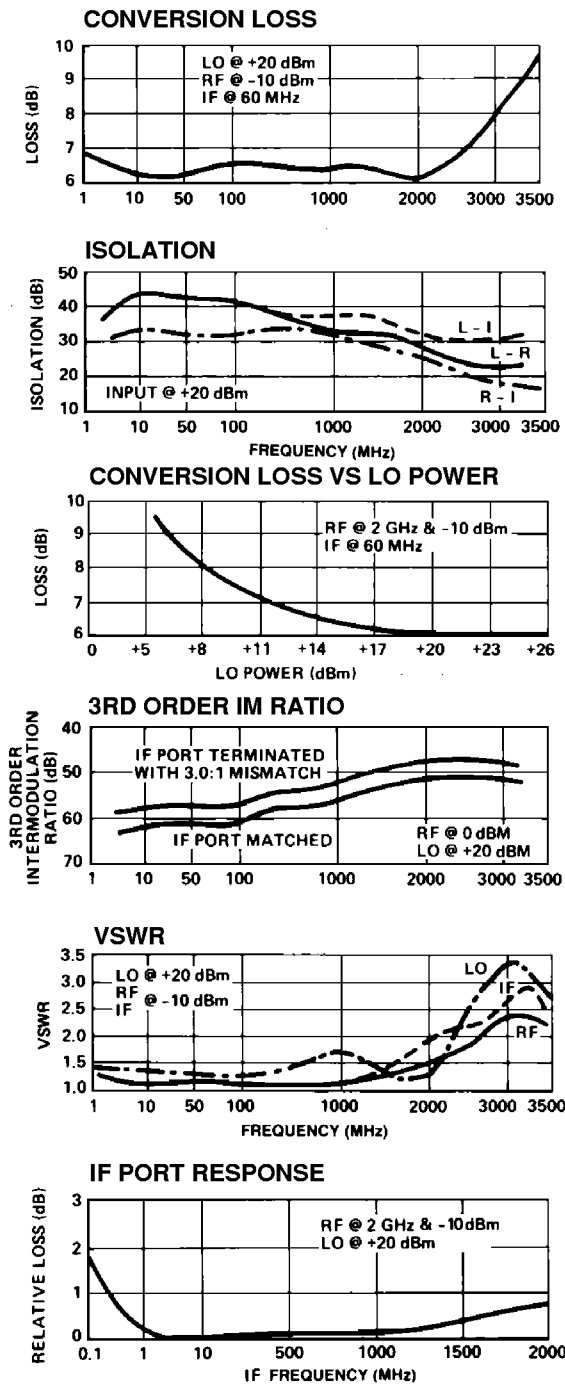
M/A-COM, Inc.

North America: Tel. (800) 366-2266
Fax (800) 618-8883

Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

Typical Performance



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