

## Surface Mount Mixer 700 - 1000 MHz

### MD22-0002-MUC

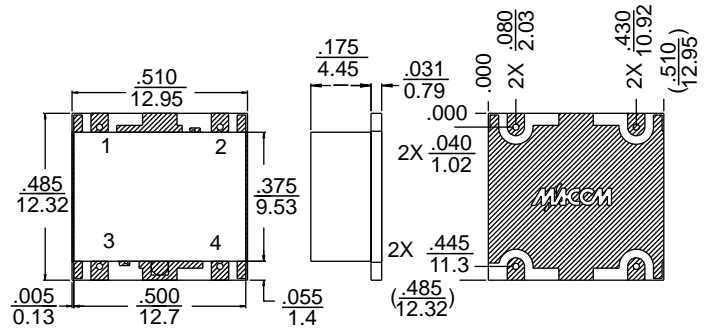
V1.00

#### Features

- Low Cost 0.510" x 0.485" Surface Mount Package
- 4.5 dB Conversion Gain
- High Input Third Order Intercept Point
- Low LO Power: +5 dBm
- 25 dB LO Leakage
- DC Supply +8 volts @ 75 mA Typical

#### Description

M/A-COM's MD22-0002-MUC is a low cost cellular band mixer preamp in a surface mount pc board package. This device offers conversion gain of 5 dB and excellent input third order intercept point for an input LO power of +5 dBm. Its price, size, and overall electrical performance make it an ideal choice for base station applications.



#### Ordering Information

<b>Part No.</b> MD22-0002-MUC	<b>Package</b> SM-41
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#### Pin Configuration

Function	Pin No.
LO Input	1
RF Input	2
DC Input	3
IF Output	4

#### Electrical Specifications

**Test Conditions:**  $T_A = +25^\circ\text{C}$ , Frequency: RF, LO Ports = 700 - 1000 MHz, IF Port = 10 - 150 MHz

Parameter	Test Conditions	Units	Min.	Typical
Conversion Gain	LO @ +5 dBm IF @ 60 MHz	dB	2.5	4.5
Isolation	LO to RF	dB	17	22
	LO to IF	dB	20	30
	RF to IF	dB	30	35
Input Compression (1dB)	LO @ +5 dBm, IF @ 60 MHz	dBm	-	+8
Input Intercept Point	LO @ +5 dBm IF @ 60 MHz	dBm	-	+17
DC Supply	@ 75 mA	Volts	-	+8

This Preliminary Specifications Data Sheet Contains Typical Electrical Specifications Which May Change Prior to Final Introduction.

**M/A-COM, Inc.**

North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 ■ Europe: Tel. +44 (1344) 869 595  
 Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

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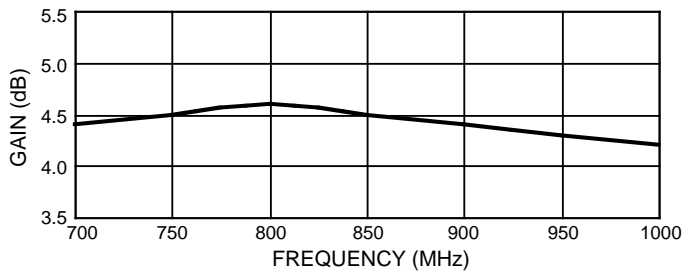
## Absolute Maximum Rating<sup>1</sup>

Parameter	Absolute Maximum
RF Power <sup>2</sup>	+22 dBm
LO Power <sup>2</sup>	+13 dBm
Total Power	+23 dBm
Operating Temp	-40°C to +85°C
Storage Temp	-65°C to +150°C
Max Current	120 mA

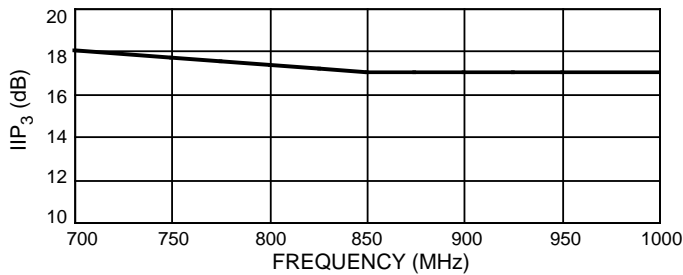
1. Exceeding these limits may cause permanent damage.
2. Ambient temperature ( $T_A$ ) = +25°

## Typical Performance

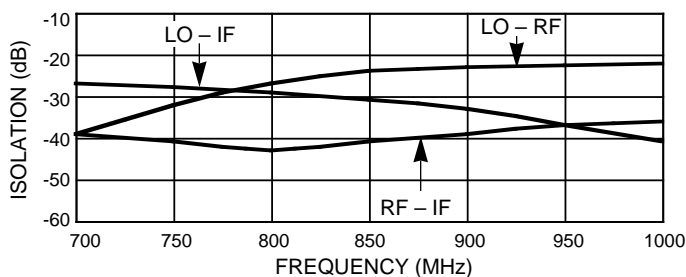
CONVERSION GAIN vs FREQUENCY



INPUT INTERCEPT POINT vs FREQUENCY



ISOLATION vs FREQUENCY



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