

## Surface Mount Mixer 700 - 1000 MHz

### MD22-0002-MUC

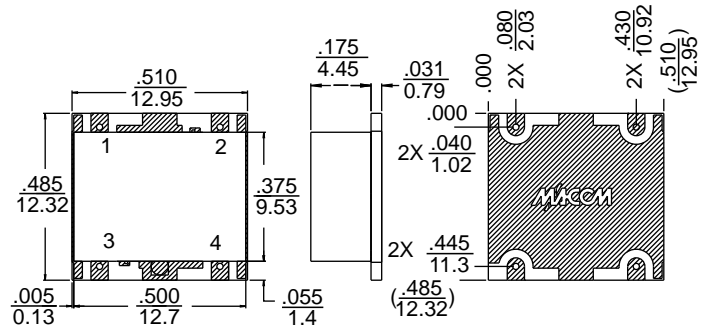
V1.00

#### 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

Part No.	Package
MD22-0002-MUC	SM-41

#### 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.

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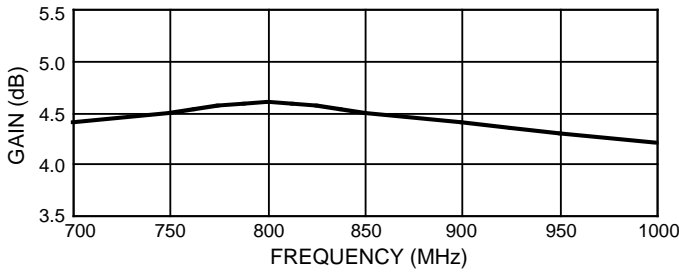
**Absolute Maximum Rating<sup>1</sup>**

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

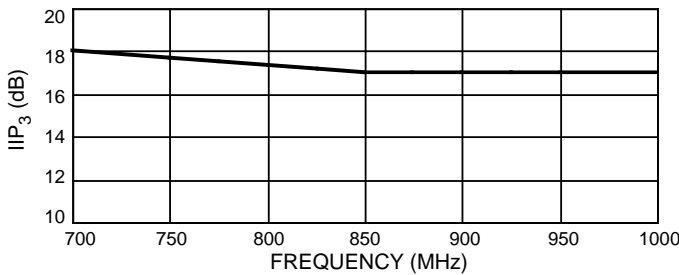
1. Exceeding these limits may cause permanent damage.
2. Ambient temperature ( $T_A$ ) = +25°

**Typical Performance**

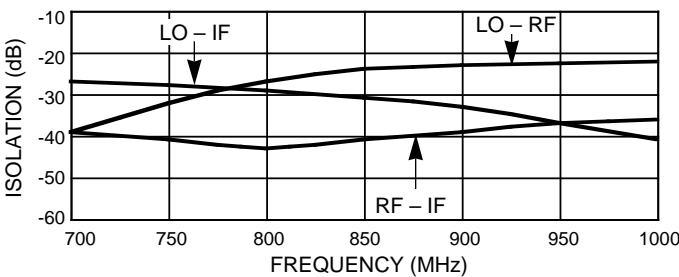
**CONVERSION GAIN vs FREQUENCY**



**INPUT INTERCEPT POINT vs FREQUENCY**



**ISOLATION vs FREQUENCY**



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