# MACOM

# TO-5 Double-Balanced Mixer, 0.2 - 200 MHz

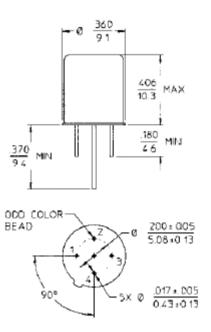
#### Features

- Convenient Microstrip or Stripline Mounting
- Low Conversion Loss: -6 dB
- Impedance: 50 Ohms Nominal
- Maximum Input Power: 300 mW max. @ 25°C, Derated linearly to 85°C @ 3.2 mW/°C
- IF Port Current: 50 mA Max.
- MIL-STD-883 Screening Available

#### Description

Transformers convert the LO and RF paths to balanced lines connecting to a low barrier, Schottky diode ring quad. These transformers help provide excellent isolation between ports. Conversion Loss is low. The direct connection of the IF port to the diode quad allows these mixers to be used as phase detectors and bi-phase modulators.





Lower dimensions are in mm Unless otherwise noted. XXX =  $\pm 0.10$  LXX =  $\pm 0.251$ .XX =  $\pm .02$  (X =  $\pm 0.5$ ) .Weight (Approx.) 0.11 Ounces - 3 Grams

## **Pin Configuration**

Pin No.	Function	Pin No.	Function	
1	LO	3	RF	
2	IF	4	GND	

1

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit <u>www.macom.com</u> for additional data sheets and product information.

Rev. V3



## TO-5 Double-Balanced Mixer, 0.2 - 200 MHz

Rev. V3

# Electrical Specifications<sup>1</sup>: $T_A = -55^{\circ}C$ to +85°C

Parameter	Test Conditions	Frequency	Units	Min	Тур	Max
Frequency Range	RF, LO Ports IF Port	0.2 - 200 DC - 200	MHz MHz	_	_	_
Conversion Loss		—	dB	—	—	6.0
Isolation	LO to RF	0.2 - 50 MHz 50 - 200 MHz	dB dB	35 25	_	_
	LO to IF	0.2 - 50 MHz 50 - 200 MHz	dB dB	35 25	_	_
	RF to IF	0.2 - 50 MHz 50 - 200 MHz	dB dB	25 20	_	_
DC Polarity	Negative	_	_	_	_	—
DC Offset			mV	_	<u>&lt;</u> 1	_
RF Input <sup>2</sup>	1 dB Compression 1 dB Desensitization		dBm dBm	—	+1 -3	—
SSB Noise Figure	Within 1 dB of Conversion Loss Max.	_	_	_	_	—

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

2. Measured at 100 MHz

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

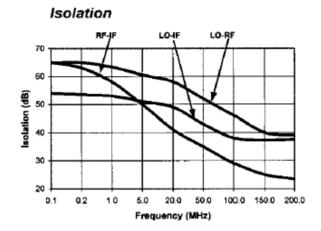


TO-5 Double-Balanced Mixer, 0.2 - 200 MHz

Rev. V3

#### **Typical Performance Curves**

Conversion Loss



**Ordering Information** 

Part Number	Package
MAC-50 PIN	TO-5-2

Conversion Loss vs. LO Power

