# MY50 / MY50C



# **Triple-Balanced Mixer**

Rev. V2

#### **Features**

- LO 2.0 to 26 GHz
- RF 2.0 to 26 GHz
- IF 1.0 to 15 GHz
- LO Drive +10 dBm (nominal)
- High Compression Point
- Very Wide Bandwidth

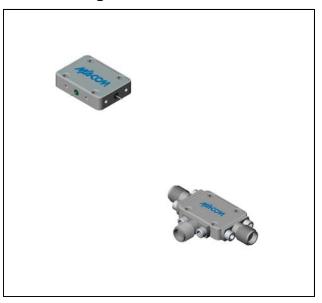
### **Description**

MY50 is a triple balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric baluns to attain excellent performance. The use of high temperature solder assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

## **Ordering Information**

Part Number	Package
MY50	Versapac
MY50C	SMA Connectorized

## Product Image



# Electrical Specifications: $Z_0 = 50\Omega$ Lo = +10 dBm (Downconverter Application only)

Donomotor	Test Conditions	Units	Typical	Guaranteed	
Parameter				+25°C	-54º to +85ºC
SSB Conversion Loss (max)	fR = 2.5 to 18 GHz, fL = 2 to 18 GHz, fI = 2 to 10 GHz fR = 2 to 18 GHz, fL = 2 to 26 GHz, fI = 2 to 12 GHz fR = 2 to 26 GHz, fL = 2 to 26 GHz, fI = 1 to 15 GHz	dB	7.5 8.0 9.0	9.5 10.5 11.5	10.0 11.0 12.0
SSB Noise Figure (max)	Within 1 db of conversion loss	dB			
Isolation, L to R (min)	fL = 2 to 3 GHz fL = 3 to 26 GHz	dB	30 22	20 15	18 13
Isolation, L to I (min)	fL = 2 to 7 GHz fL = 7 to 26 GHz	dB	30 22	20 15	18 13
1 dB Conversion Comp.	fL = +10 dBm	dBm	+5		
Input IP3	fR1 = 5 GHz at -6 dBm, fR2 = 5.01 GHz at -6 dBm, fL = 8 GHz at +10 dBm fR1 = 25 GHz at -6 dBm, fR2 = 25.01 GHz at -6 dBm, fL = 15 GHz at +10 dBm	dBm	+15 +15		

Commitment to produce in volume is not du

<sup>•</sup> North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

<sup>•</sup> India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.

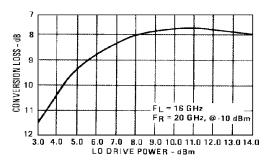


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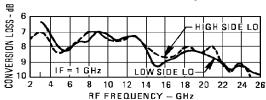
Rev. V2

## **Typical Performance Curves**

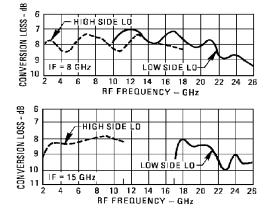
#### Conversion Loss vs. LO Drive Level



#### Conversion Loss vs. Frequency



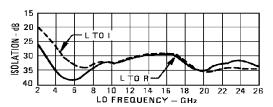
#### Conversion Loss vs. Frequency

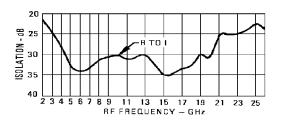


typical. Mechanical outline has been fixed. Engineering samples

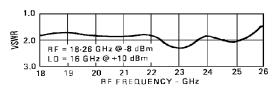
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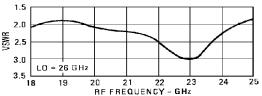
#### Isolation vs. Frequency



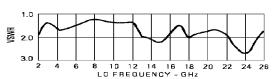


#### R-Port VSWR





#### L-Port VSWR



PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are • North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

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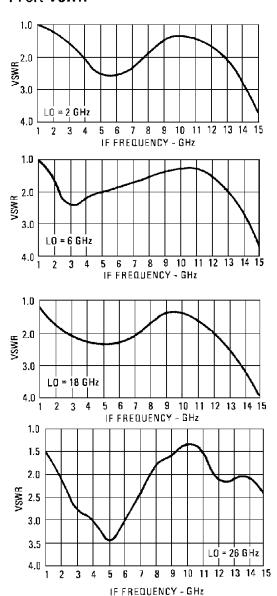
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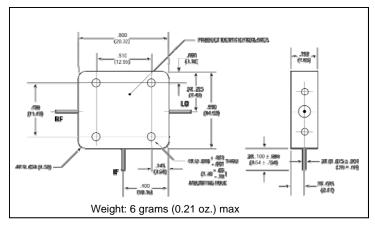
## **Absolute Maximum Ratings**

Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+26 dBm max @ +25°C +22 dBm max @ +100°C		
Peak Input Current	100 mA DC		

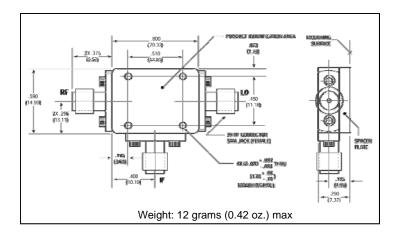
#### I-Port VSWR



## Outline Drawing: Versapac



## Outline Drawing: SMA Connectorized



\* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Solutions has under development. Performance is based on engineering tests. Specifications are

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