MY84 / MY84C



Double-Balanced Mixer

Rev. V3

Features

- LO 1.8 to 10 GHz
- RF 1.8 to 10 GHz
- IF DC to 1000 MHz
- LO Drive +9 dBm (nominal)
- Low Noise Figure

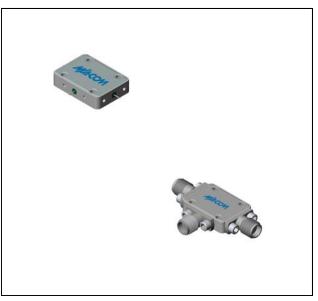
Description

The MY84 is a double 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. This mixer can also be used as a phase detector and/or bi-phase modulator since the IF port is DC coupled to the diodes. The use of high temperature solder and welded 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
MY84	Versapac
MY84C	SMA Connectorized

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +9 dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
raiametei Test Conditions		Units		+25ºC	-54º to +85ºC
SSB Conversion Loss (max)	fR = 1.8 to 5.5 GHz, fL = 1.8 to 6 GHz, fI = 0.03 to 0.5 GHz fR = 5.5 to 10 GHz, fL = 5 to 10 GHz, fI = 0.03 to 1 GHz	dB	6.0 6.5	7.5 8.5	8.0 9.0
SSB Noise Figure (max)	Within 1 dB of conversion loss	dB			
Isolation, L to R (min)	fL = 1.8 to 6 GHz fL = 6 to 10 GHz	dB	45 32	30 20	28 18
Isolation, L to I (min)	fL = 1.8 to 10 GHz	dB	30	18	16
1 dB Conversion Comp.	fL = +9 dBm	dBm	+4		
Input IP3	fR1 = 5 GHz at -10 dBm, fR2 = 5.01 GHz at -10 dBm, fL = 5.5 GHz at +9 dBm	dBm	+11		

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

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not du

- North America Tel: 800.366.2266 Europe Tel: +353.21.244.6400
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 Visit www.macomtech.com for additional data sheets and product information.

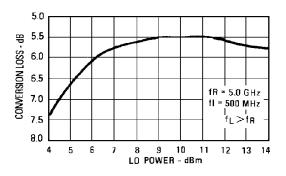


Double-Balanced Mixer

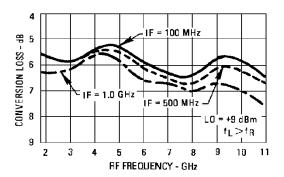
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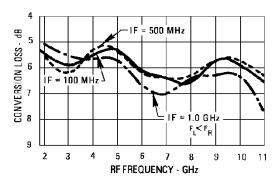
Typical Performance Curves

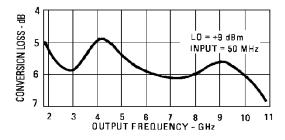
Conversion Loss vs. LO Drive Power



Conversion Loss

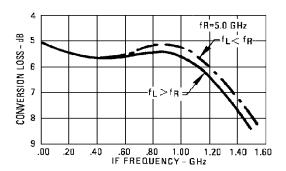




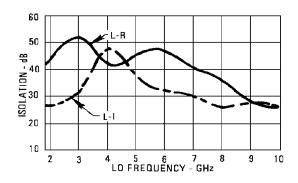


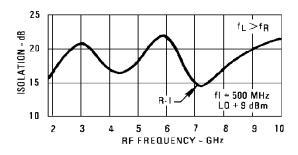
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Conversion Loss



Isolation





ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology
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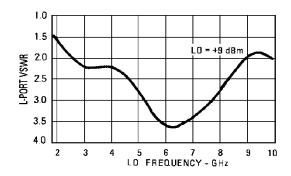
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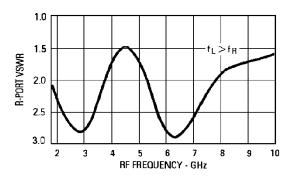
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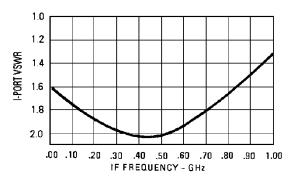
Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+23 dBm max @ +25°C +20 dBm max @ +100°C		
Peak Input Current	100 mA DC		

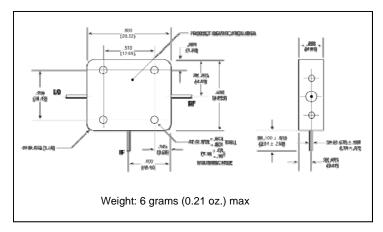
VSWR



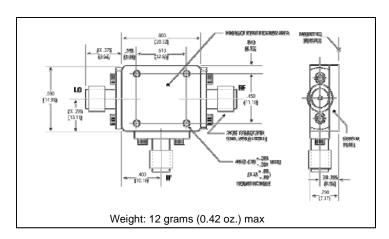




Outline Drawing: Versapac



Outline Drawing: SMA Connectorized *



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

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