MY51 / MY51C



Triple-Balanced Mixer

Rev. V3

Features

- LO 2.0 TO 24 GHz
- RF 2.0 TO 24 GHz
- IF 1.0 TO 15 GHz
- LO DRIVE: +10 dBm (NOMINAL)
- HIGH COMPRESSION POINT

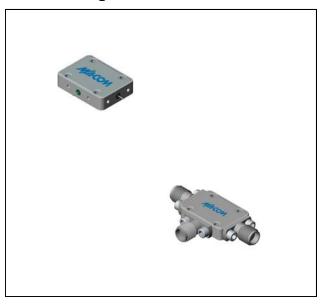
Description

MY51 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		
MY51	Versapac		
MY51C	SMA Connectorized		

Product Image



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

Paramatan	Test Conditions	Units	Typical	Guaranteed	
Parameter				+25°C	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Fig- ure (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 24 GHz, fI = 1 to 12 GHz fR = 2 to 24 GHz, fL = 2 to 24 GHz, fI = 1 to 15 GHz	dB dB dB	7.5 8.0 9.0	9.5 10.5 11.5	10.0 11.0 12.0
Isolation, L to R (min)	fL = 2 to 3 GHz fL = 3 to 24 GHz	dB dB	20 30	15 20	13 18
Isolation, L to I (min)	fL = 2 to 7 GHz fL = 7 to 24 GHz	dB dB	22 30	15 20	13 18
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 = 16 GHz at -6 dBm, fR2 = 16.01 GHz at -6 dBm, fL = 18 GHz at +10 dBm	dBm dBm	+15 +15		

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Visit www.macomtech.com for additional data sheets and product information.

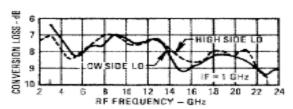


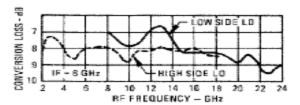
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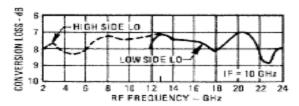
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Typical Performance Curves

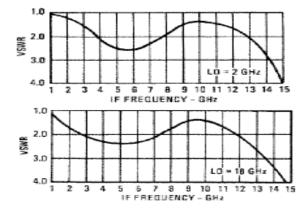
Conversion Loss vs. Frequency LO @ +10 dBm

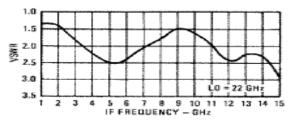




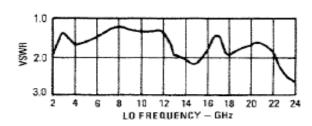


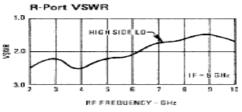
I-Port VSWR

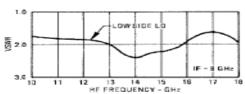




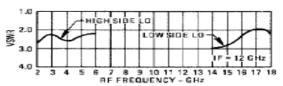
L-Port VSWR

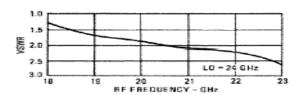




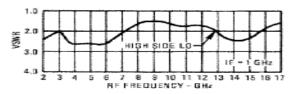


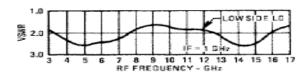
R-Port VSWR





R-Port VSWR LO @ +10 dBm





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.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and or test user may be available. Commitment to produce in volume is not guaranteed.

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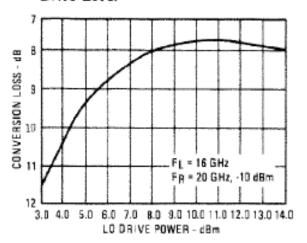
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Absolute Maximum Ratings

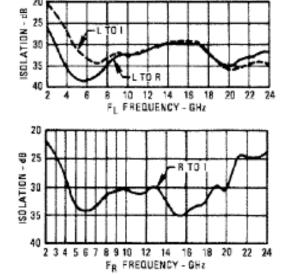
Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+26 dBm max @ +25°C +22 dBm max @ +100°C		

Drive Level

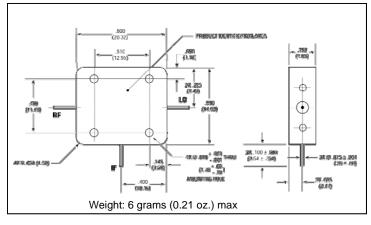


Isolation vs. Frequency

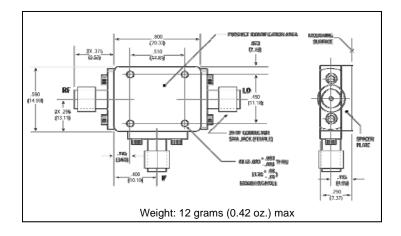
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Outline Drawing: Versapac *



Outline Drawing: SMA Connectorized *



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

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