MY51 / MY51C

Triple-Balanced Mixer

Rev. V3

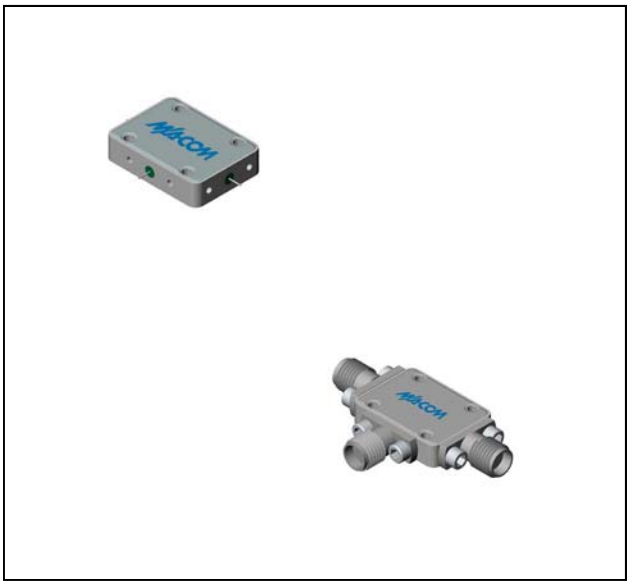
Features

- 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.

Product Image



Ordering Information

Part Number	Package
MY51	Versapac
MY51C	SMA Connectorized

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

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (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		

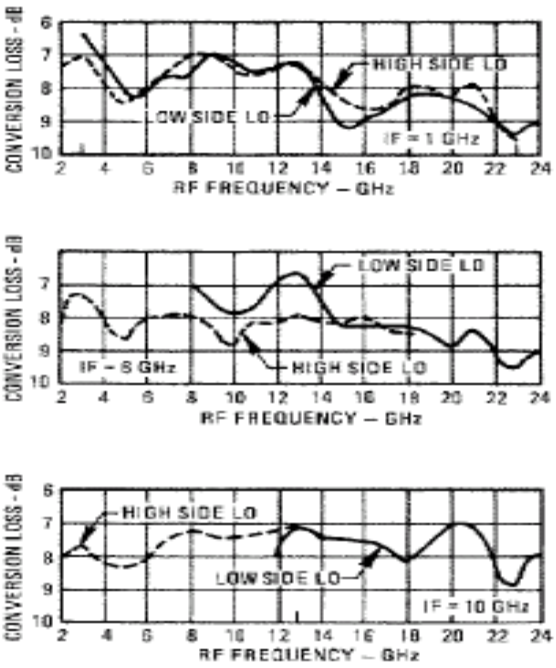
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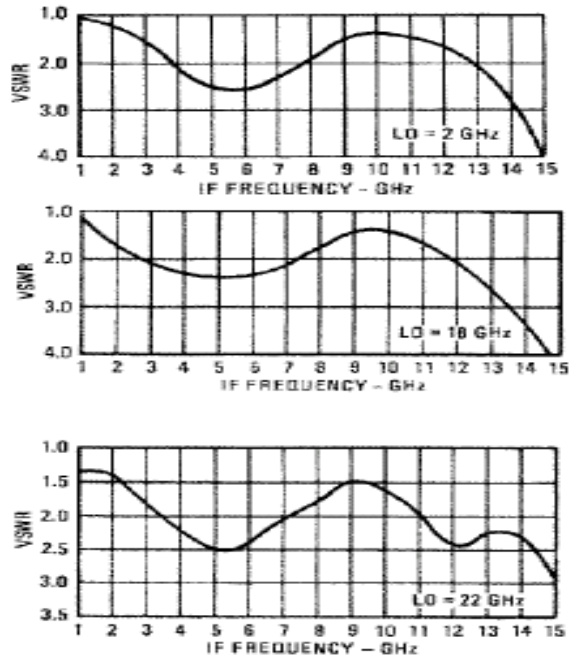
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Typical Performance Curves

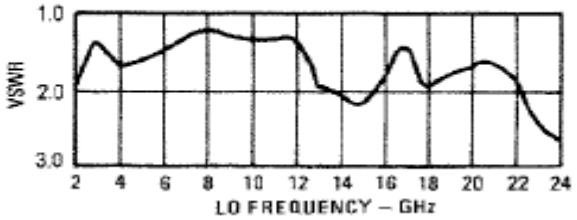
Conversion Loss vs. Frequency
LO @ +10 dBm



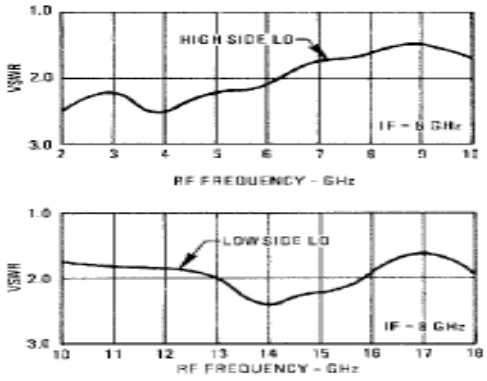
I-Port VSWR



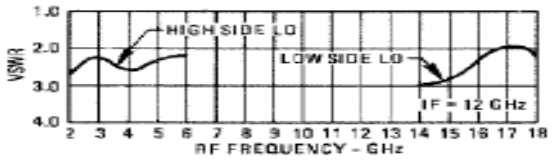
L-Port VSWR

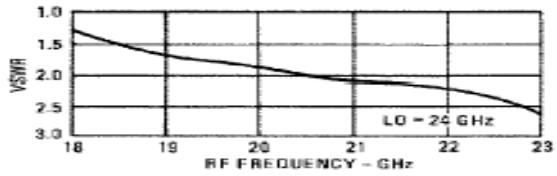


R-Port VSWR

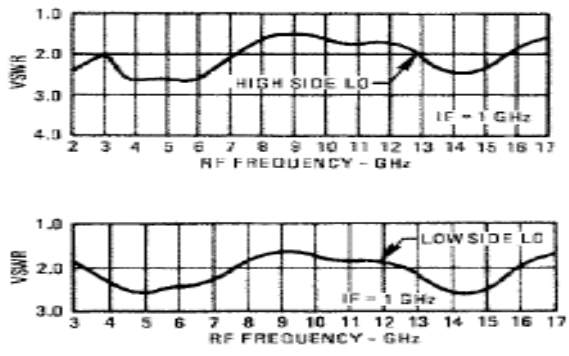


R-Port VSWR





R-Port VSWR LO @ +10 dBm



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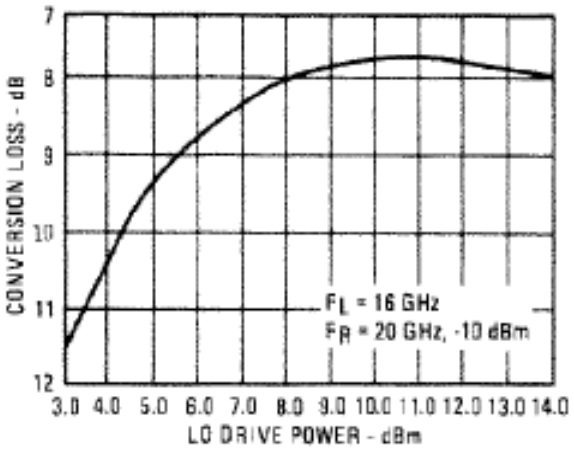
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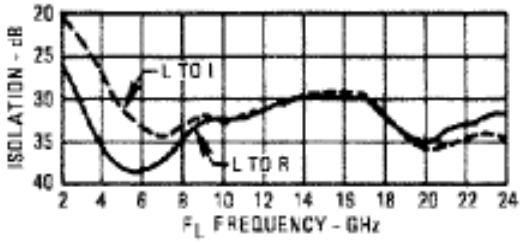
Absolute Maximum Ratings

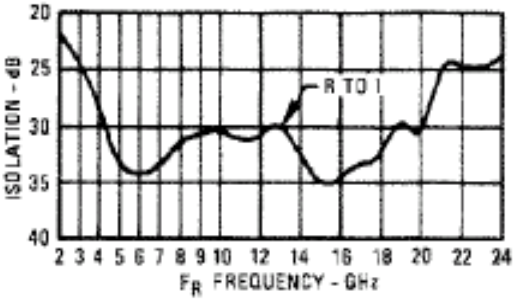
Parameter	Absolute Maximum
Operating Temperature	-54ºC to +100ºC
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+26 dBm max @ +25ºC +22 dBm max @ +100ºC

Drive Level

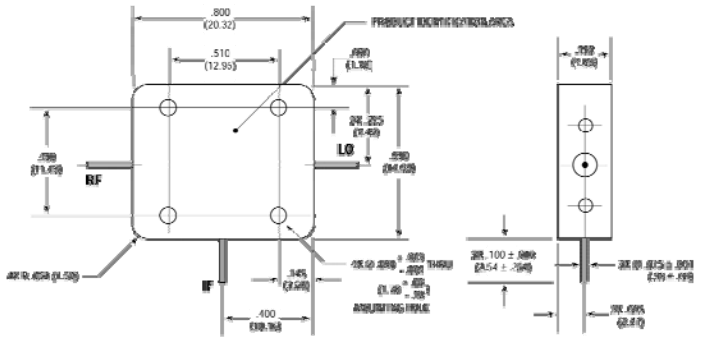


Isolation vs. Frequency



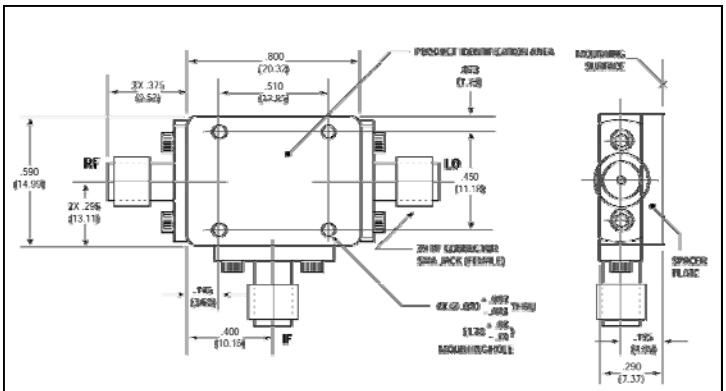


Outline Drawing: Versapac *



Weight: 6 grams (0.21 oz.) max

Outline Drawing: SMA Connectorized *



Weight: 12 grams (0.42 oz.) max

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

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