MY50A / MY50AC

Triple-Balanced Mixer

Rev. V2

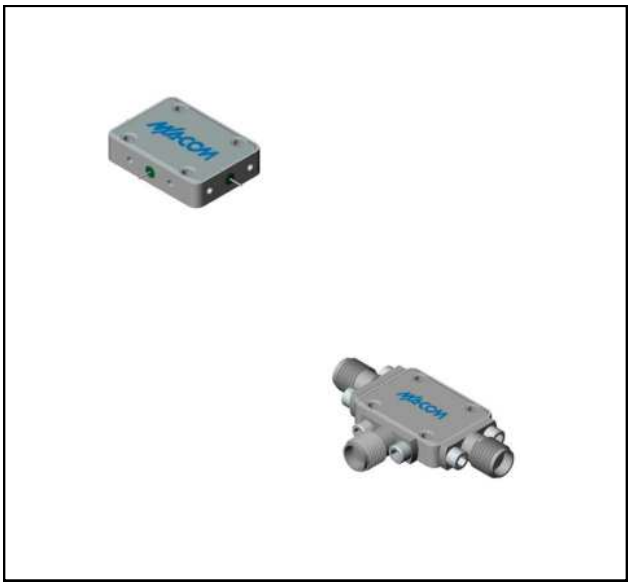
Features

- LO 2 TO 26 GHz
- RF 2 TO 18 GHz
- IF 1 TO 12 GHz
- LO DRIVE +10 dBm (nominal)
- HIGH COMPRESSION POINT

Description

MY50A 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
MY50A	Versapac
MY50AC	SMA Connectorized

Electrical Specifications: Z_0 = 50Ω Lo = +10 dBm (Downconverter Application only)

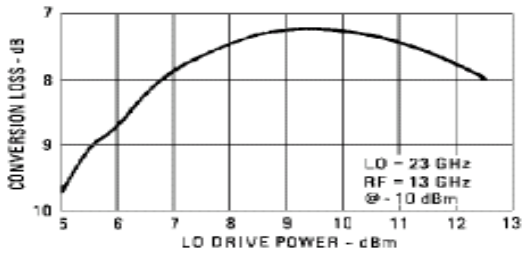
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 2.5 to 18 GHz, fL = 2 to 18 GHz, fI = 1 to 10 GHz fR = 2 to 18 GHz, fL = 2 to 26 GHz, fI = 1 to 12 GHz	dB dB	7.5 8.0	9.5 10.5	10.0 11.0
Isolation, L to R (min)	fL = 2 to 3 GHz fL = 3 to 26 GHz	dB dB	22 30	15 20	
Isolation, L to I (min)	fL = 7 to 26 GHz fL = 2 to 7 GHz	dB dB	30 22	20 15	
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 = 15 GHz at –6 dBm, fR2 = 15.01 GHz at –6 dBm, fL =25 GHz at +10 dBm	dBm dBm	+15 +12		

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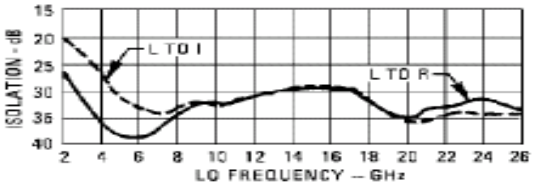
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Typical Performance Curves

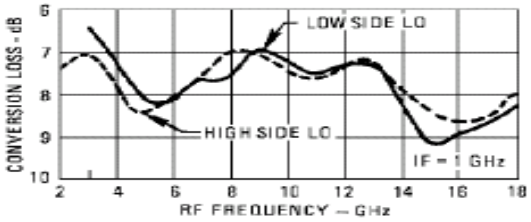
Drive Level

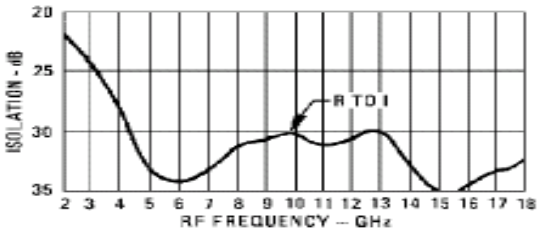


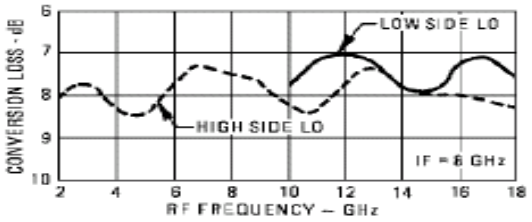
Isolation vs. Frequency



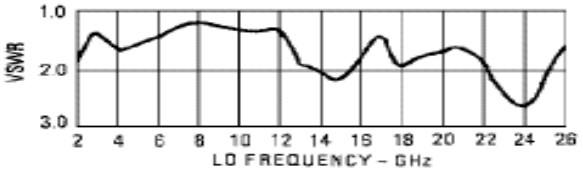
Conversion Loss vs. Frequency LO @ +10 dBm

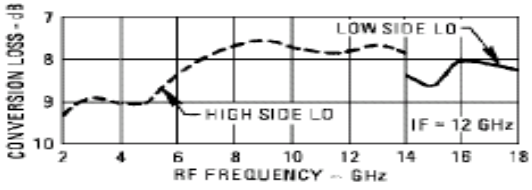




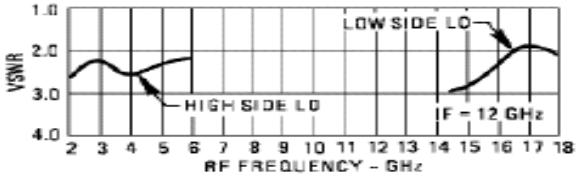


L-Port VSWR





R-Port VSWR



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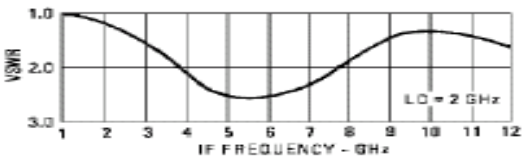
Triple-Balanced Mixer

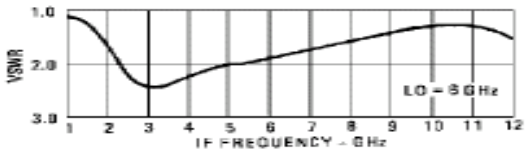
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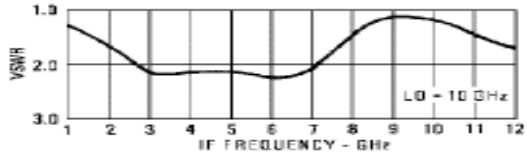
Absolute Maximum Ratings

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

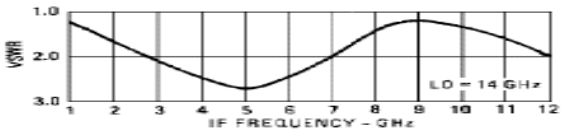
I-Port VSWR vs. Frequency, LO @ +10 dBm

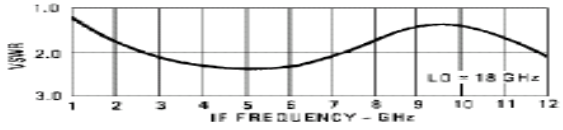


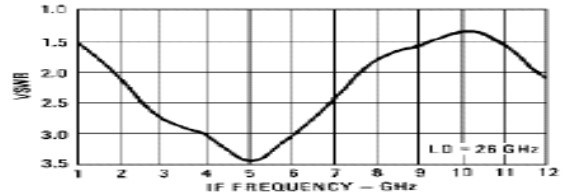




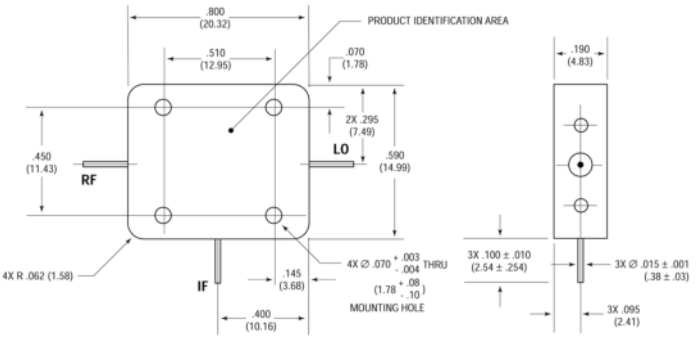
I-Port VSWR





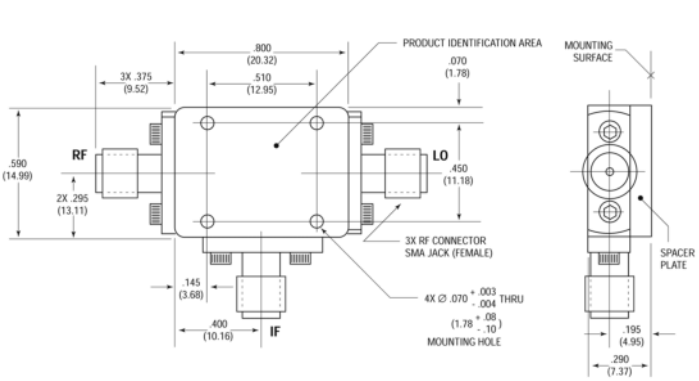


Outline Drawing: Versapac *



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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