MY84 / MY84C

Double-Balanced Mixer

Rev. V3

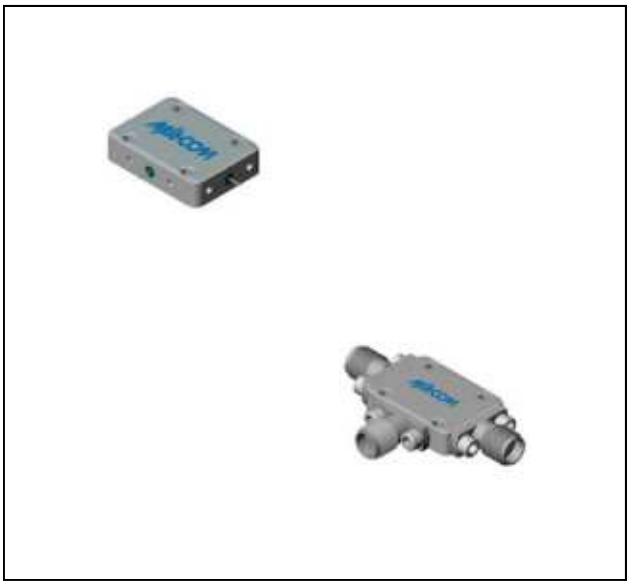
Features

- 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.

Product Image



Ordering Information

Part Number	Package
MY84	Versapac
MY84C	SMA Connectorized

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

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+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		

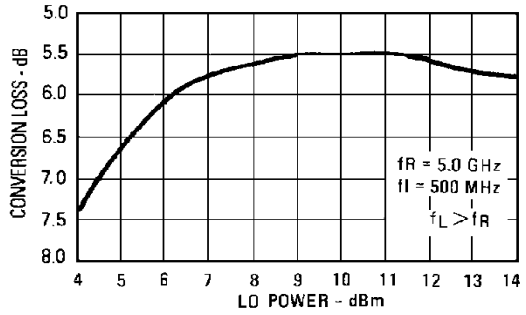
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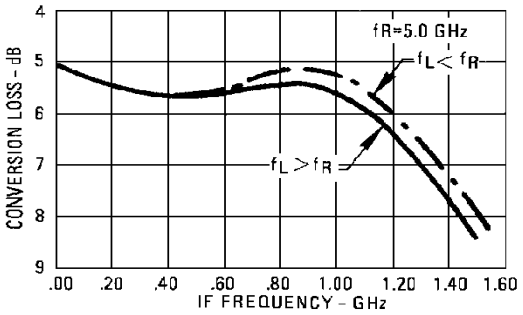
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Typical Performance Curves

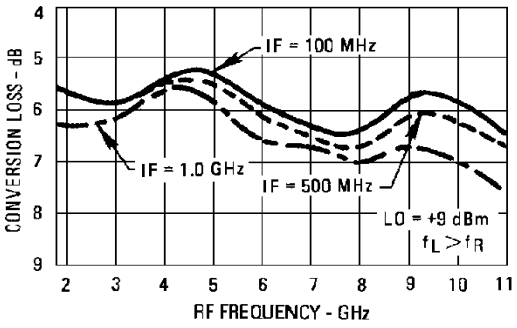
Conversion Loss vs. LO Drive Power



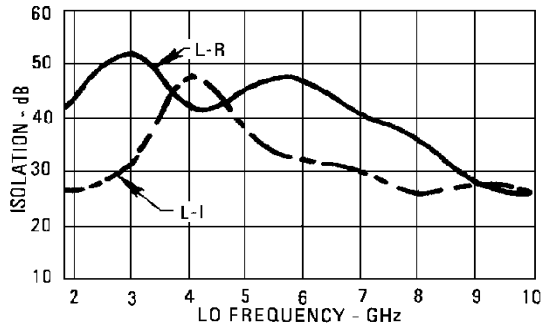
Conversion Loss

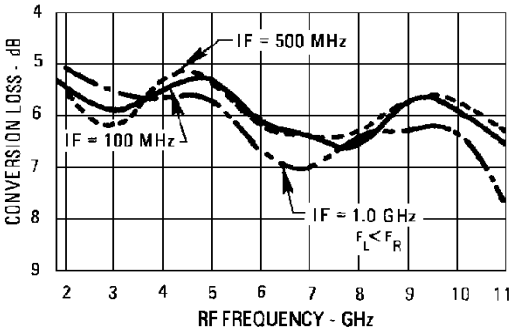


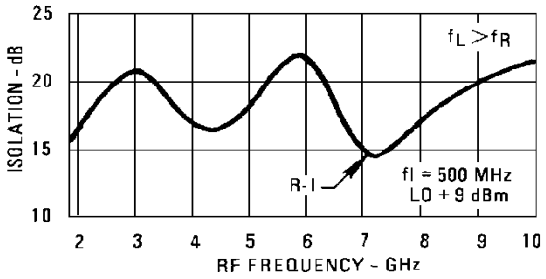
Conversion Loss

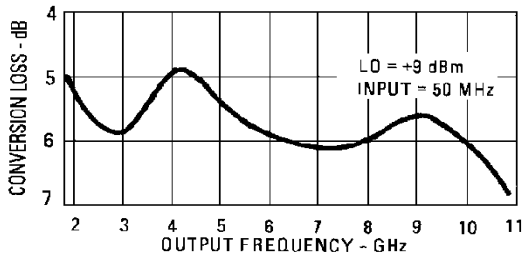


Isolation









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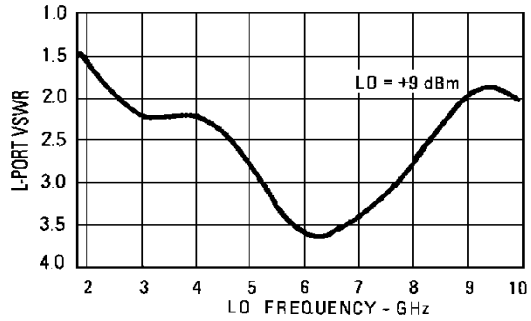
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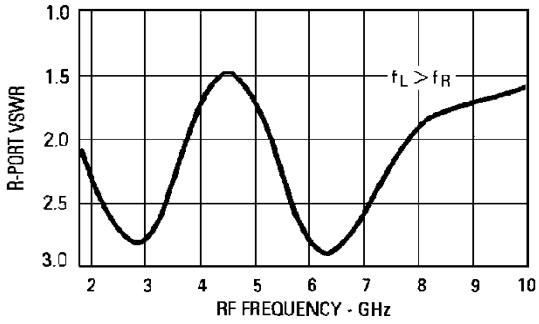
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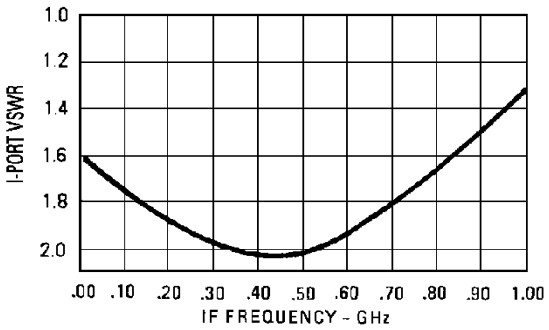
Absolute Maximum Ratings

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

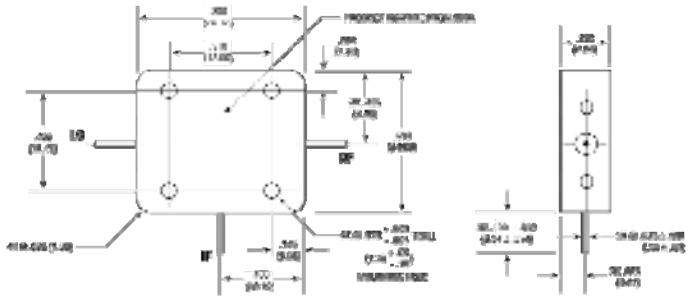
VSWR





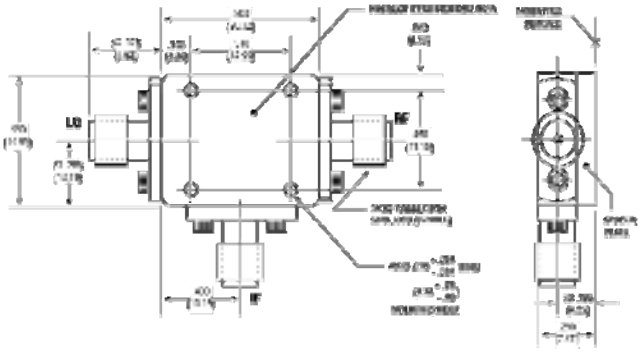


Outline Drawing: Versapac *



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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