MY76 / MY76C

Double-Balanced Mixer

Rev. V3

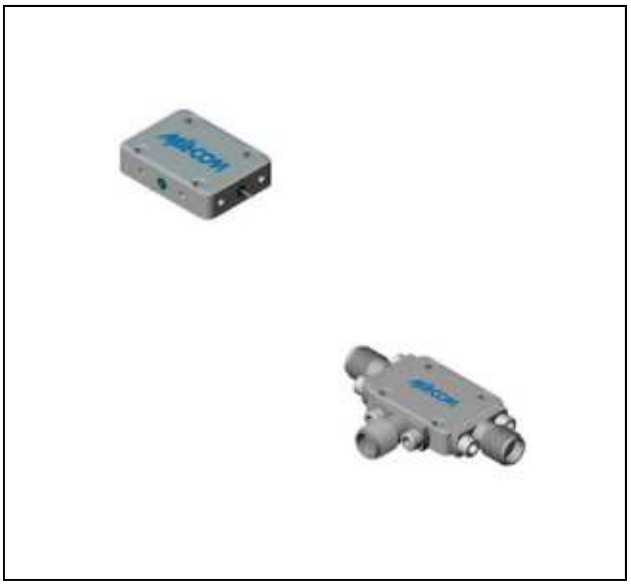
Features

- LO 2.5 TO 11.5 GHz
- RF 4.5 TO 9.5 GHz
- IF DC TO 2.0 GHz
- LO DRIVE: +10 dBm (NOMINAL)
- LOW NOISE FIGURE 5.5 dB (TYP.)

Description

The MY76 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 and ferrite 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
MY76	Versapac
MY76C	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 = 6 to 8 GHz, fL = 4 to 9 GHz, fI = 0.03 to 2 GHz fR = 5 to 9 GHz, fL = 4 to 9 GHz, fI = 0.03 to 1 GHz fR = 4.5 to 9.5 GHz, fL = 2.5 to 11.5 GHz, fI = 0.03 to 2 GHz	dB dB dB	5.5 5.5 6.0	7.0 7.0 8.0	7.5 7.5 8.5
Isolation, L to R (min)	fL = 2.5 to 9 GHz fL = 9 to 11.5 GHz	dB dB	40 30	25 20	23 18
Isolation, L to I (min)	fL = 4 to 11.5 GHz fL = 2.5 to 4 GHz	dB dB	25 20	15 10	13 8
1 dB Conversion Comp.	fL = +10 dBm	dBm	+3		
Input IP3	fR1 = 7 GHz at –6 dBm, fR2 = 7.01 GHz at –6 dBm, fL = 8 GHz at +10 dBm	dBm	+13		

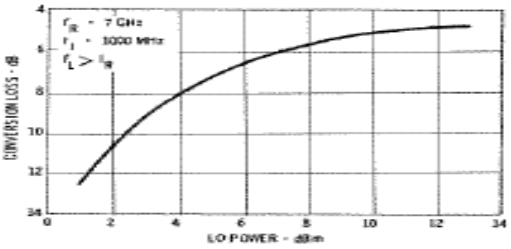
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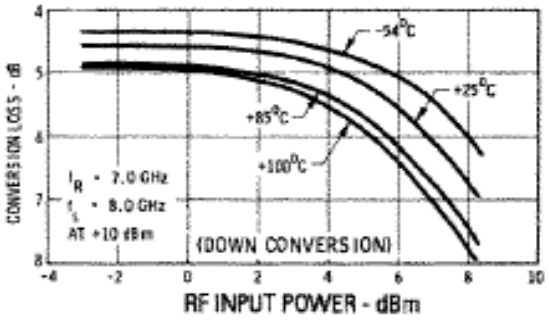
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Typical Performance Curves

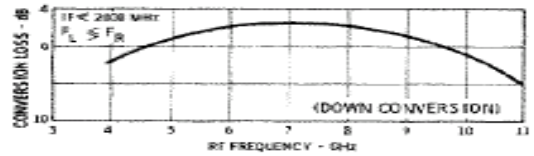
Conversion Loss Vs. LO Drive

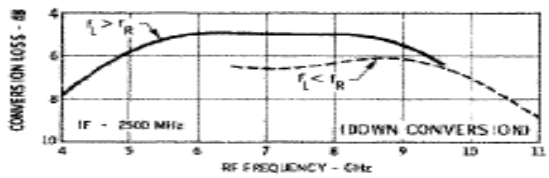


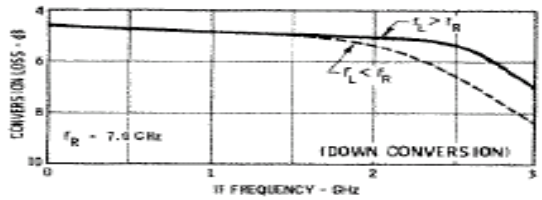
Conversion Loss vs. RF Input Power



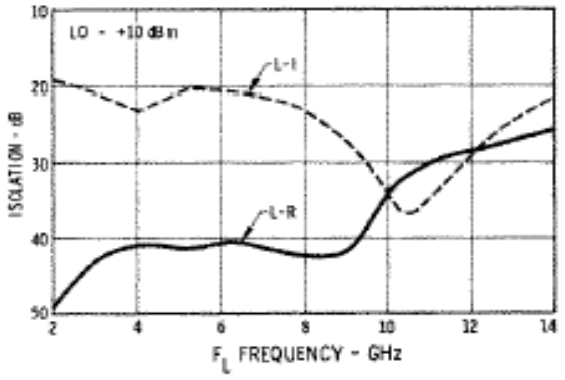
Conversion Loss vs. Frequency

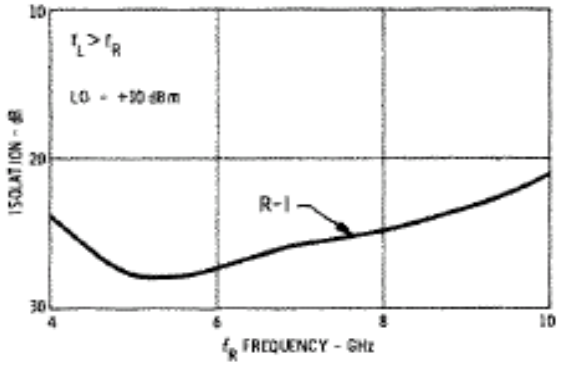




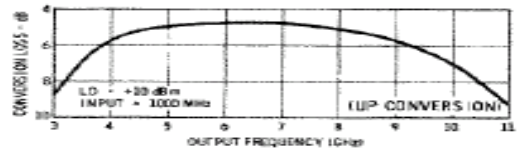


Isolation vs. Frequency





Conversion Loss vs. Output Frequency



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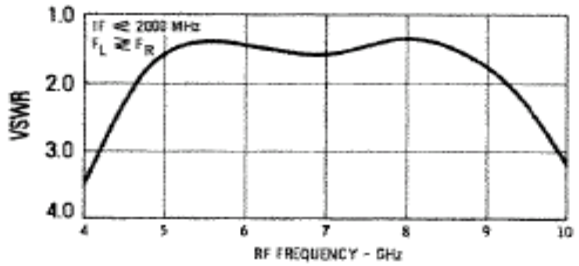
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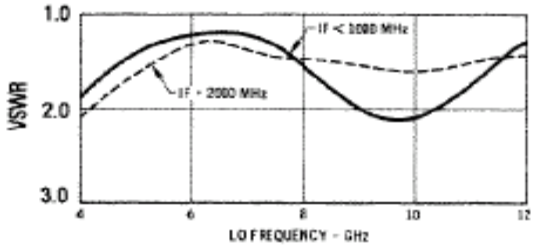
Absolute Maximum Ratings

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

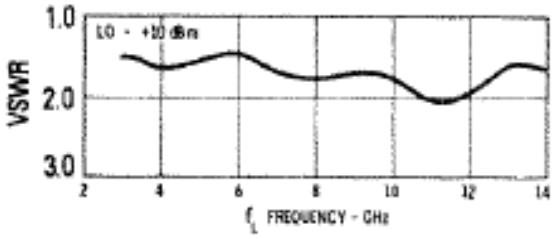
R-Port VSWR vs. Frequency



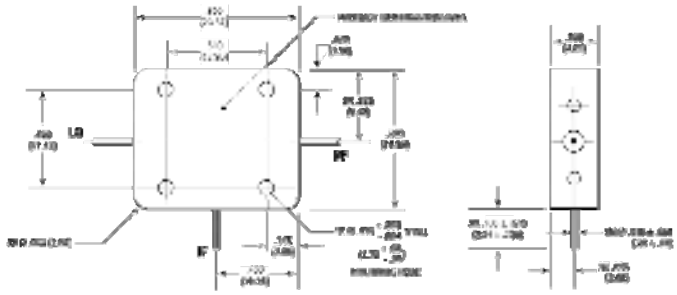
I-Port VSWR vs. f_L



L-Port VSWR vs. Frequency

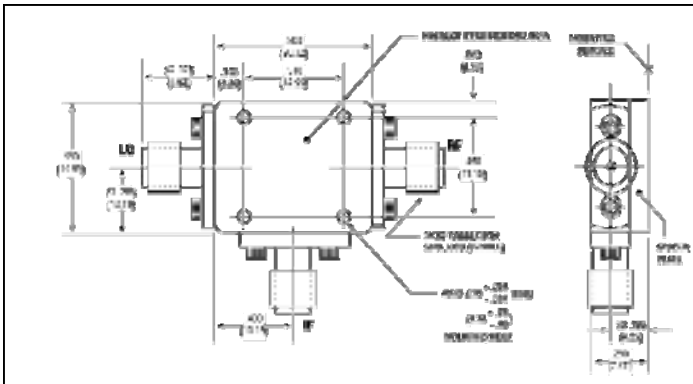


Outline Drawing: Versapac *



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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