

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.

Ordering Information

Part Number	Package
MY50A	Versapac
MY50AC	SMA Connectorized

Product Image



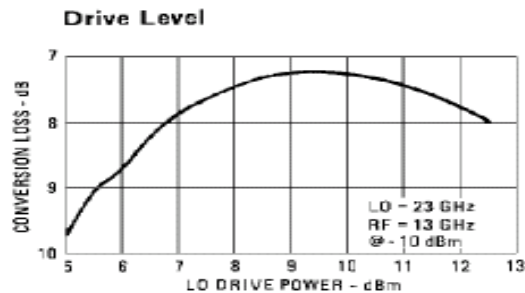
Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +10$ dBm (Downconverter Application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C
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		

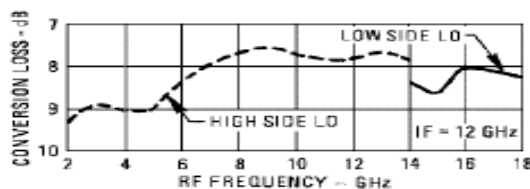
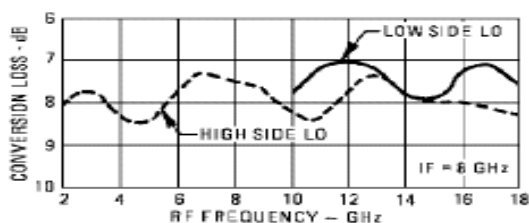
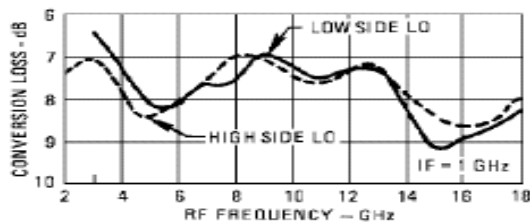
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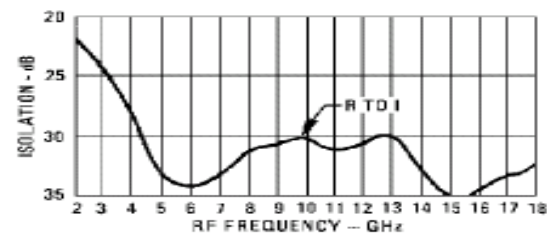
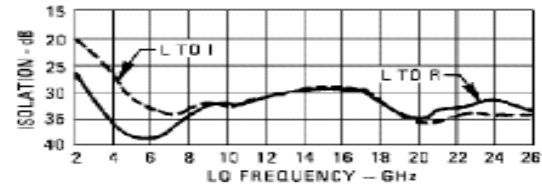
Typical Performance Curves



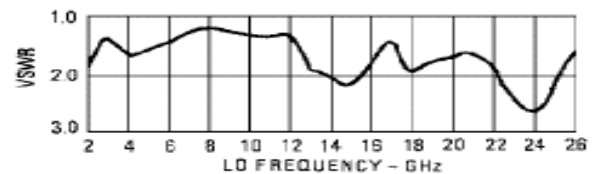
Conversion Loss vs. Frequency
LO @ +10 dBm



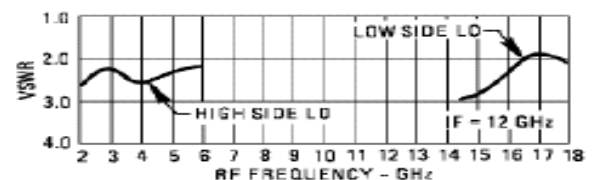
Isolation vs. Frequency



L-Port VSWR



R-Port VSWR



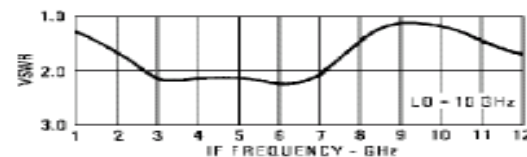
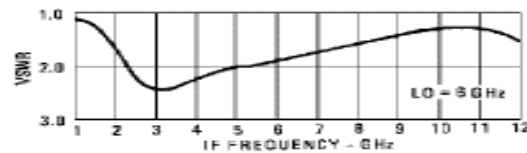
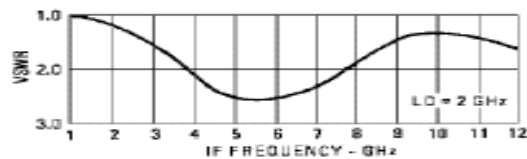
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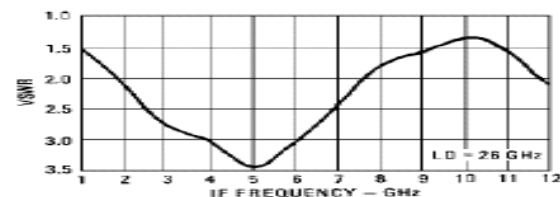
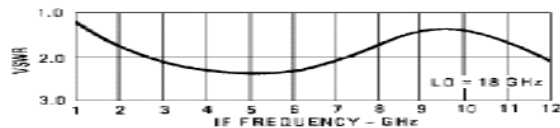
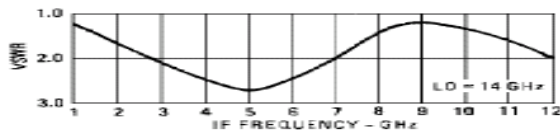
Absolute Maximum Ratings

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
Peak Input Current	mA DC

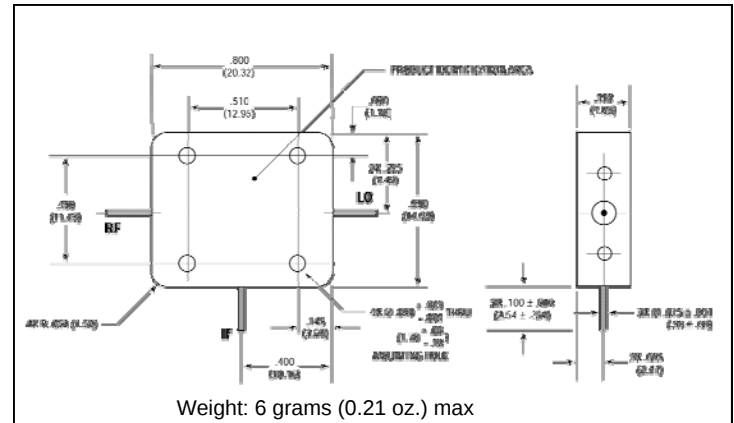
**I-Port VSWR vs. Frequency,
LO @ +10 dBm**



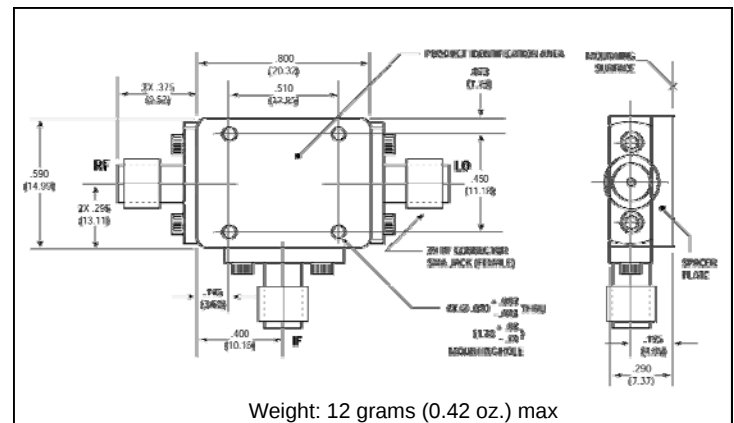
I-Port VSWR



Outline Drawing: Versapac *



Outline Drawing: SMA Connectorized *



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