

Triple-Balanced Mixer

MY50/MY50C

V2

Features

- LO 2.0 to 26 GHz
- RF 2.0 to 26 GHz
- IF 1.0 to 15 GHz
- LO Drive +10 dBm (nominal)
- High Compression Point
- Very Wide Bandwidth

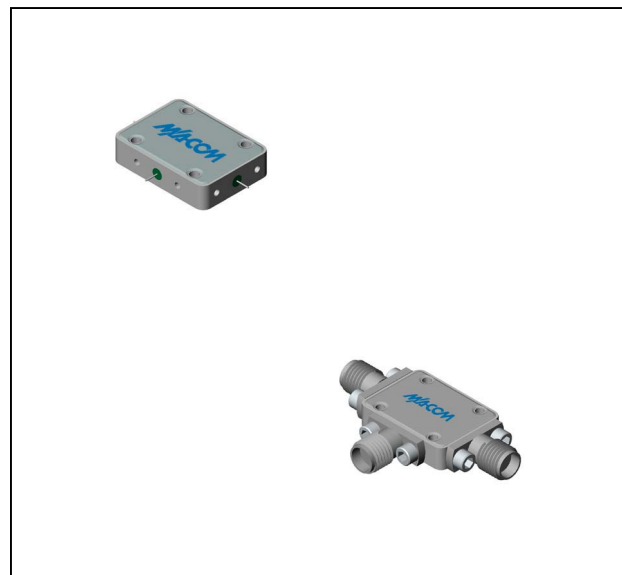
Description

MY50 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
MY50	Versapac
MY50C	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)	fR = 2.5 to 18 GHz, fL = 2 to 18 GHz, fI = 2 to 10 GHz fR = 2 to 18 GHz, fL = 2 to 26 GHz, fI = 2 to 12 GHz fR = 2 to 26 GHz, fL = 2 to 26 GHz, fI = 1 to 15 GHz	dB	7.5 8.0 9.0	9.5 10.5 11.5	10.0 11.0 12.0
SSB Noise Figure (max)	Within 1 db of conversion loss	dB	—	—	—
Isolation, L to R (min)	fL = 2 to 3 GHz fL = 3 to 26 GHz	dB	30 22	20 15	18 13
Isolation, L to I (min)	fL = 2 to 7 GHz fL = 7 to 26 GHz	dB	30 22	20 15	18 13
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 = 25 GHz at -6 dBm, fR2 = 25.01 GHz at -6 dBm, fL = 15 GHz at +10 dBm	dBm	+15 +15		

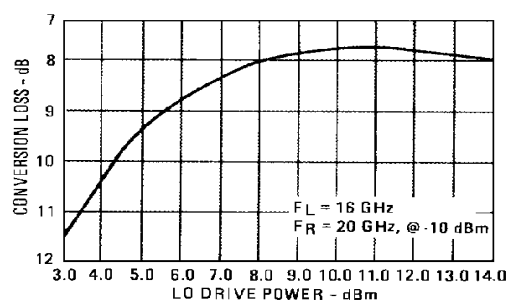
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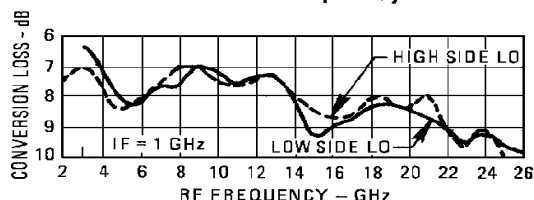
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Typical Performance Curves

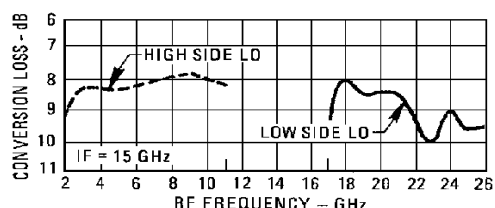
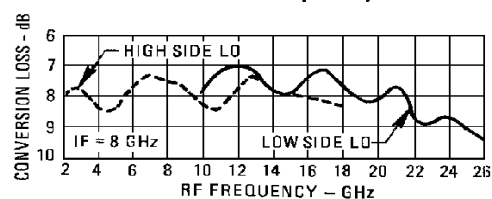
Conversion Loss vs. LO Drive Level



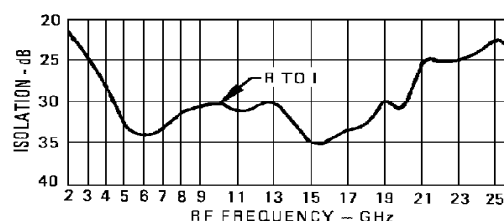
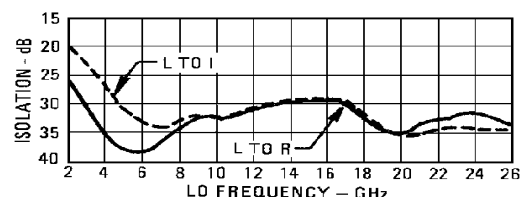
Conversion Loss vs. Frequency



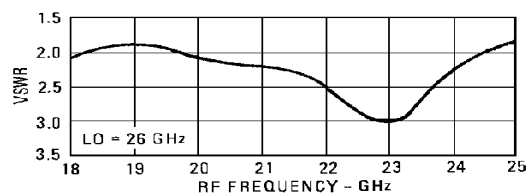
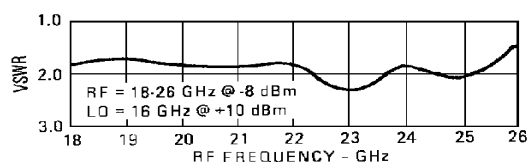
Conversion Loss vs. Frequency



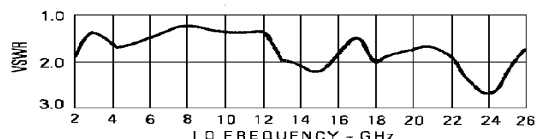
Isolation vs. Frequency



R-Port VSWR



L-Port VSWR



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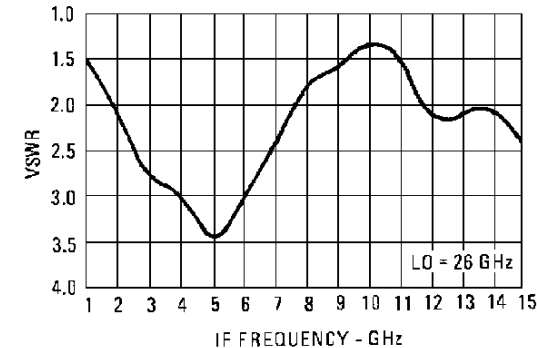
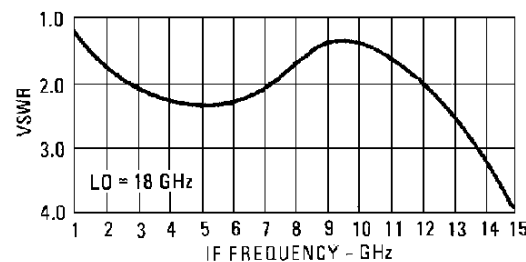
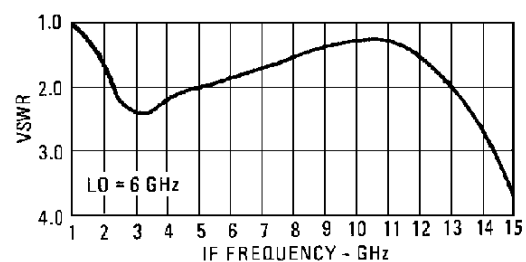
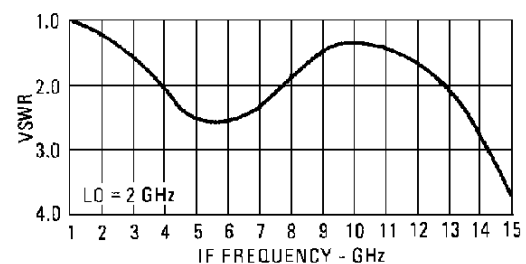
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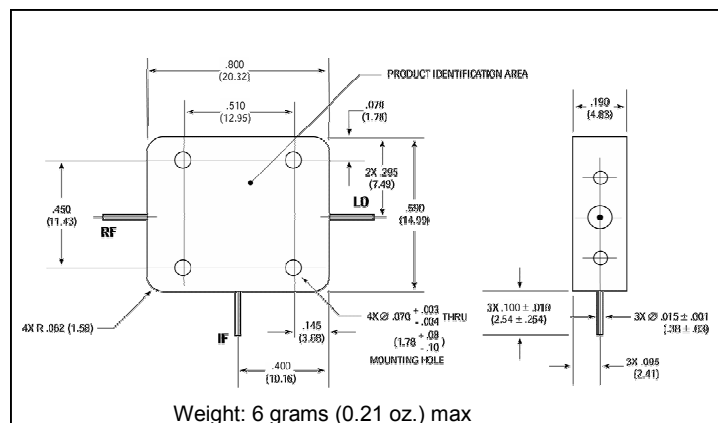
Absolute Maximum Ratings

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	100 mA DC

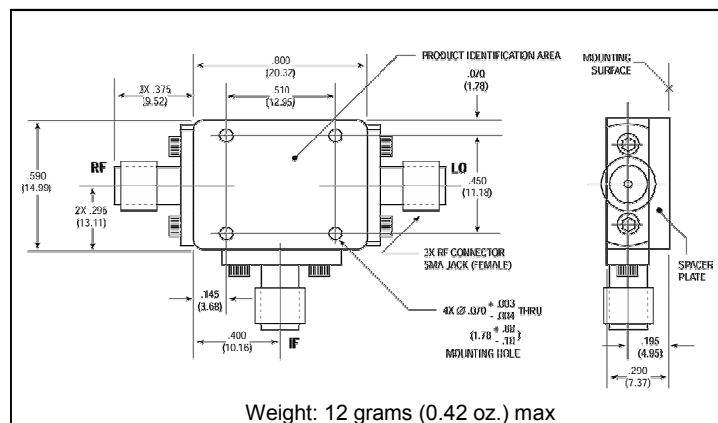
I-Port VSWR



Outline Drawing: Versapac *



Outline Drawing: SMA Connectorized *



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