

Triple-Balanced Mixer

Rev. 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: $Z_0 = 50\Omega$ $L_o = +10$ dBm (Downconverter Application only)

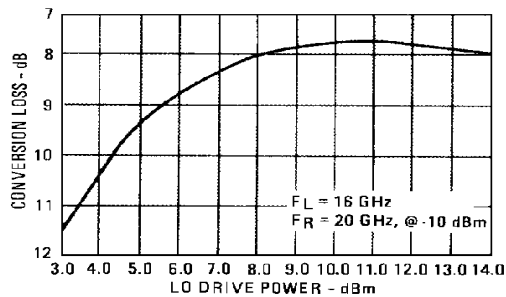
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C
SSB Conversion Loss (max)	f _R = 2.5 to 18 GHz, f _L = 2 to 18 GHz, f _I = 2 to 10 GHz f _R = 2 to 18 GHz, f _L = 2 to 26 GHz, f _I = 2 to 12 GHz f _R = 2 to 26 GHz, f _L = 2 to 26 GHz, f _I = 1 to 15 GHz	dB	7.5 8.0 9.0	9.5 10.5 11.5	10.0 11.0 12.0
SSB Noise Figure (max)	Within 1 db of conversion loss	dB	—	—	—
Isolation, L to R (min)	f _L = 2 to 3 GHz f _L = 3 to 26 GHz	dB	30 22	20 15	18 13
Isolation, L to I (min)	f _L = 2 to 7 GHz f _L = 7 to 26 GHz	dB	30 22	20 15	18 13
1 dB Conversion Comp.	f _L = +10 dBm	dBm	+5		
Input IP3	f _{R1} = 5 GHz at -6 dBm, f _{R2} = 5.01 GHz at -6 dBm, f _L = 8 GHz at +10 dBm f _{R1} = 25 GHz at -6 dBm, f _{R2} = 25.01 GHz at -6 dBm, f _L = 15 GHz at +10 dBm	dBm	+15 +15		

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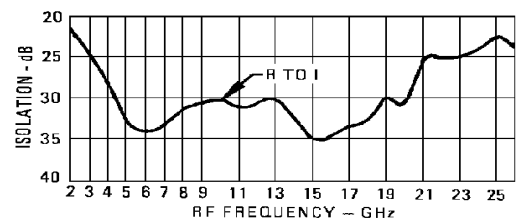
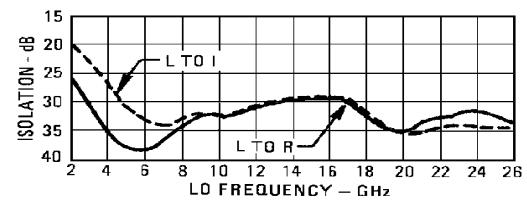
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Typical Performance Curves

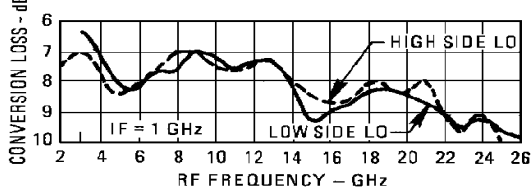
Conversion Loss vs. LO Drive Level



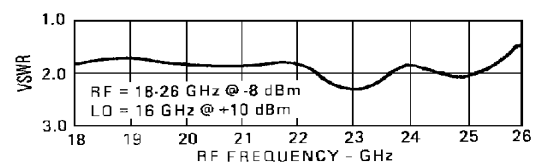
Isolation vs. Frequency



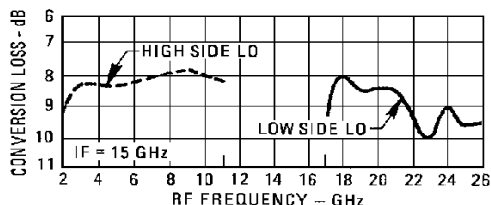
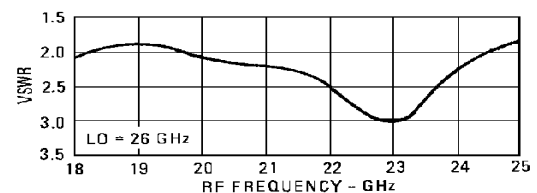
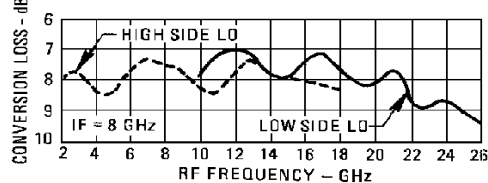
Conversion Loss vs. Frequency



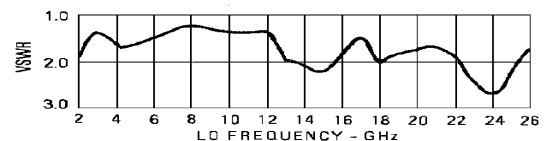
R-Port VSWR



Conversion Loss vs. Frequency



L-Port VSWR



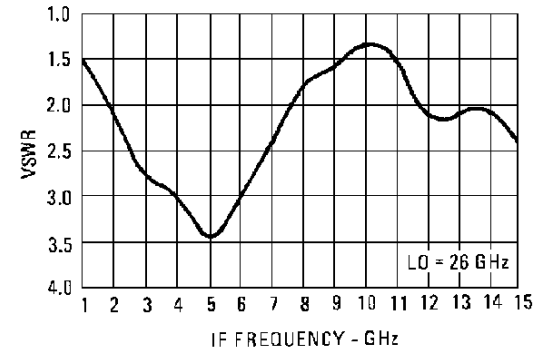
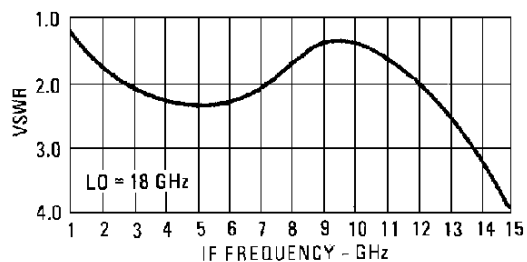
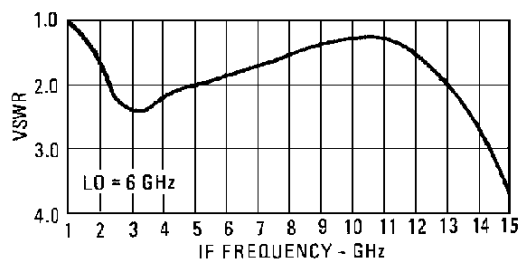
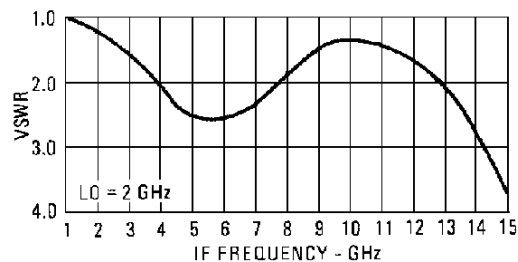
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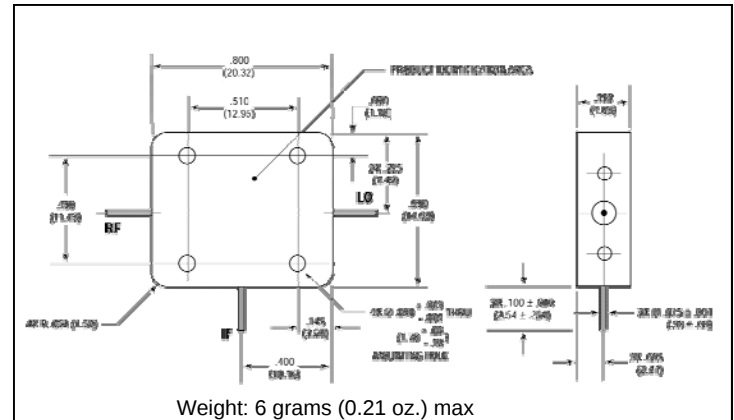
Absolute Maximum Ratings

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	100 mA DC

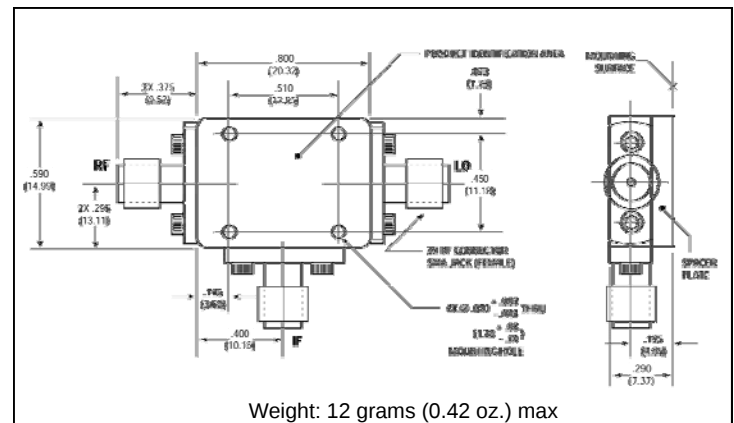
I-Port VSWR



Outline Drawing: Versapac *



Outline Drawing: SMA Connectorized *



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