# **MY50A / MY50AC**

## **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.



**Product Image** 

#### **Ordering Information**

Part Number	Package	
MY50A	Versapac	
MY50AC	SMA Connectorized	

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

Deremeter	Test Canditions	Units	Typical	Guaranteed	
Parameter	Parameter Test Conditions U			+25°C	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Fig- ure (max)	fR = 2.5 to 18 GHz, fL = 2 to 18 GHz, fl = 1 to 10 GHz fR = 2 to 18 GHz, fL = 2 to 26 GHz, fl = 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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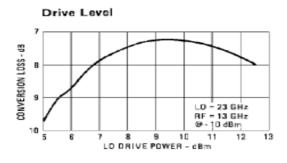
# **MY50A / MY50AC**

## **Triple-Balanced Mixer**

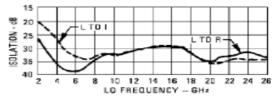
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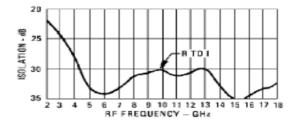
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### **Typical Performance Curves**

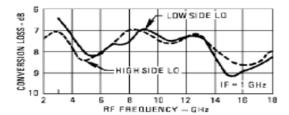


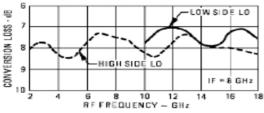
#### Isolation vs. Frequency



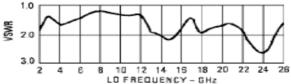


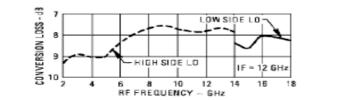
Conversion Loss vs. Frequency LO @ +10 dBm



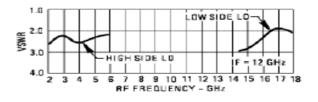








R-Port VSWR



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# **MY50A / MY50AC**

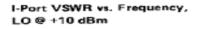


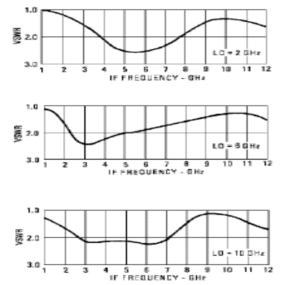
# **Triple-Balanced Mixer**

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### **Absolute Maximum Ratings**

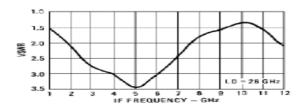
Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+26 dBm max @ +25°C +22 dBm max @ +100°C		
Peak Input Current	mA DC		





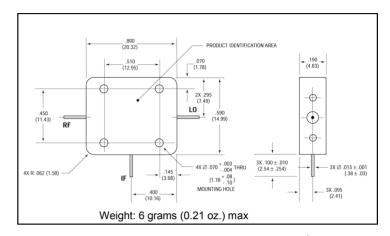
I-Port VSWR



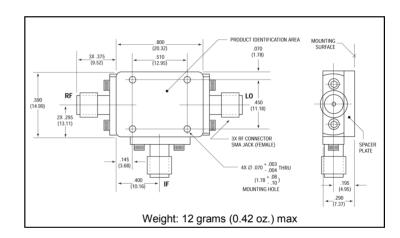


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Outline Drawing: Versapac



# Outline Drawing: SMA Connectorized \*



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

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