

## Double-Balanced Mixer

Rev. V1

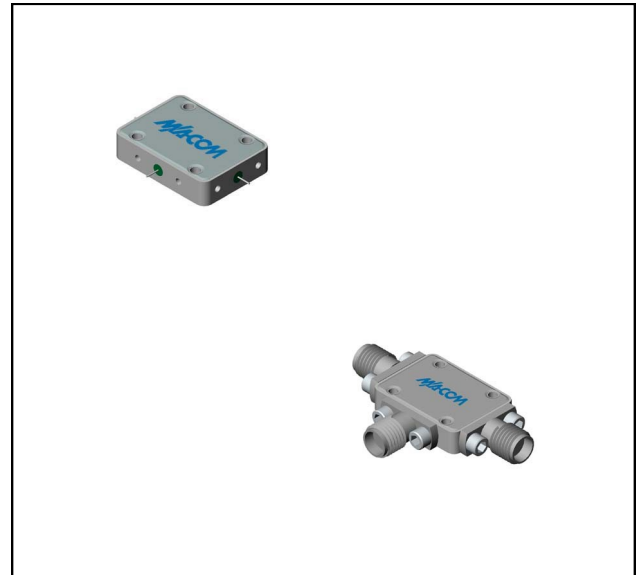
### Features

- LO 2.5 to 7.5 GHz
- RF 2.5 to 6.5 GHz
- IF DC to 1.5 GHz
- LO Drive +20 dBm (nominal)
- High Intercept Point +22 dBm (typ)
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### Description

The MY63H 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

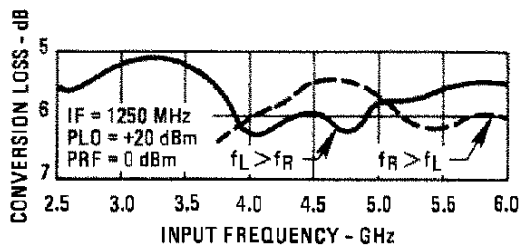
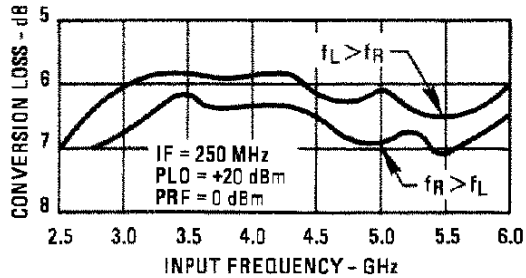
Part Number	Package
MY63H	Versapac
MY63HC	SMA Connectorized

### Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +20$ dBm (Downconverter application only)

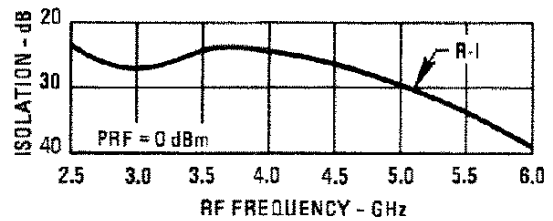
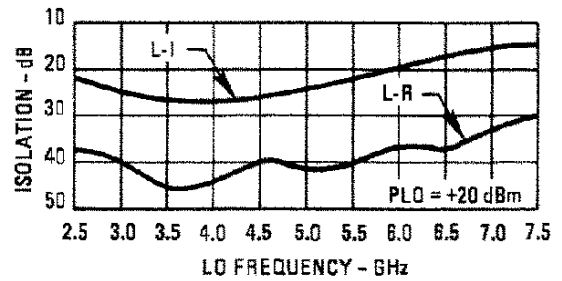
Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C
SSB Conversion Loss (max)	fR = 3.0 to 5.0 GHz, fL = 3.0 to 5.5 GHz, fl = 0.03 to 0.5 GHz fR = 2.5 to 6.5 GHz, fL = 2.5 to 7.5 GHz, fl = 0.03 to 1.5 GHz	dB	5.8	6.5	6.8
			6.0	7.5	7.8
SSB Noise Figure (max)	Within 1 db of conversion loss	dB	—	—	—
Isolation, L to R (min)	fL = 2.5 to 6.5 GHz	dB	42	30	29
	fL = 6.5 to 7.5 GHz		32	26	25
Isolation, L to I (min)	fL = 3.0 to 5.5 GHz	dB	24	19	18
	fL = 5.5 to 7.5 GHz		18	13	12
	fL = 2.5 to 3.0 GHz		21	17	16
1 dB Conversion Comp.	fL = +20 dBm	dBm	+14		
Input IP3	fR1 = 4.00 GHz at 0 dBm, fR2 = 3.99 GHz at 0 dBm, fL = 5.0 GHz at +20 dBm	dBm	+22		

### Typical Performance Curves

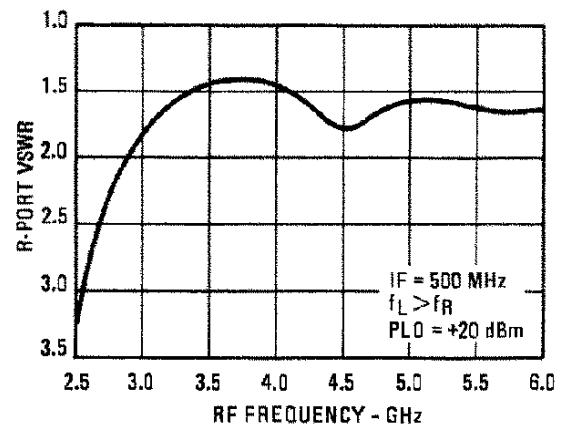
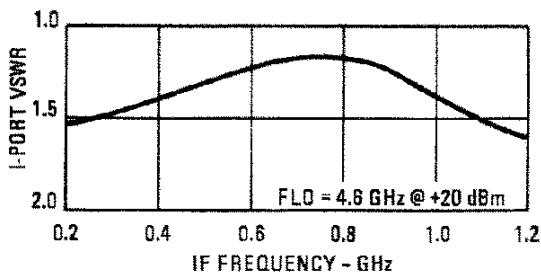
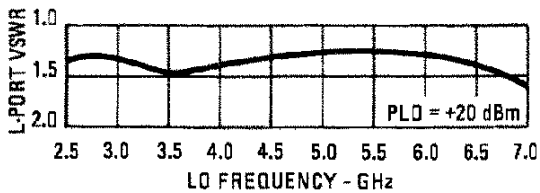
**Conversion Loss**



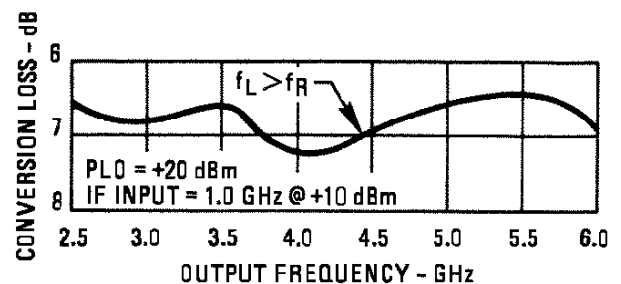
**Isolation**



**VSWR**



**Conversion Loss (Upconversion)**



# MY63H / MY63HC



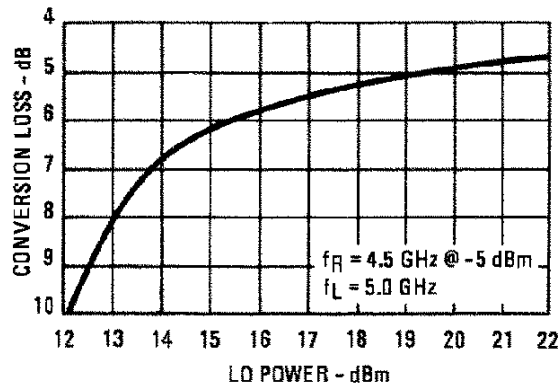
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### Absolute Maximum Ratings

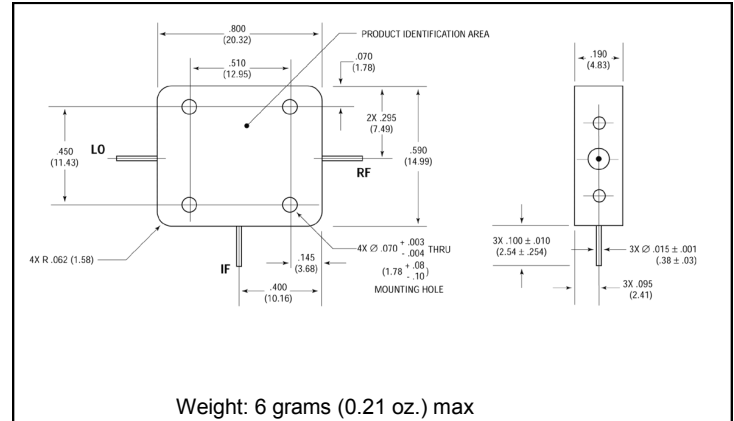
Parameter	Absolute Maximum
Operating Temperature	-54°C to +100°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+24.7 dBm max @ +25°C +20.9 dBm max @ +100°C
Peak Input Current	100 mA DC

### Drive Level

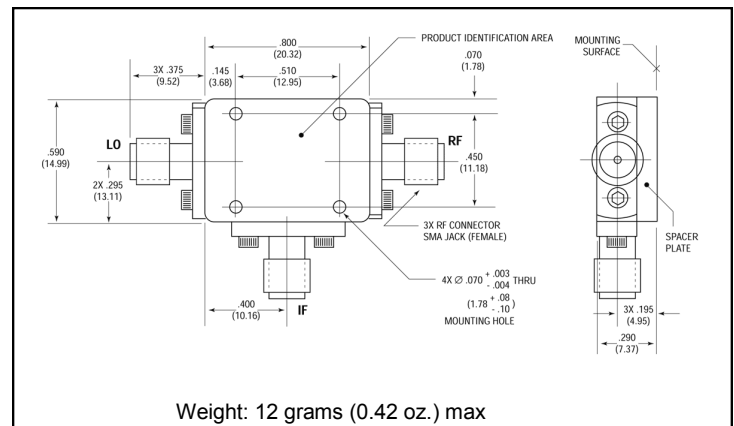


**Drive Level:** The maximum recommended drive level is +23 dBm.

### Outline Drawing: Versapac \*



### Outline Drawing: SMA Connectorized \*



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

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