M63H / M63HC



Double-Balanced Mixer

Rev. V3

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 THIRD-ORDER IP +22 dBm (TYP.)

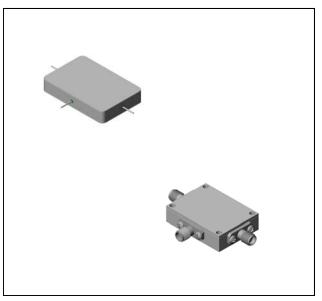
Description

The M63H 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.

Ordering Information

Part Number	Package	
M63H	Minpac	
М63НС	SMA Connectorized	

Product Image



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

Parameter	Parameter Test Conditions		Typical	Guaranteed	
rarameter rest Conditions		Units		+25°C	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 3 to 5 GHz, $fL = 3 to 5.5 GHz$, $fI = 0.03 to 0.5 GHz$ $fR = 2.5 to 6.5 GHz$, $fL = 2.5 to 7.5 GHz$, $fI = 0.03 to 1.5 GHz$	dB dB	5.8 6.0	6.5 7.5	6.8 7.8
Isolation, L to R (min)	fL = 2.5 to 6.5 GHz fL = 6.5 to 7.5 GHz	dB dB	42 32	30 26	29 25
Isolation, L to I (min)	fL = 3 to 5.5 GHz fL = 5.5 to 7.5 GHz fL = 2.5 to 3 GHz	dB dB dB	24 18 21	19 13 17	18 12 16
1 dB Conversion Comp. fL = +20 dBm		dBm	+14		
Input IP3	fR1=4 GHz at 0 dBm,fR2=3.99 GHz at 0 dBm, fL = 5 GHz at = 20 dBm	dBm	+22		

Solutions has under development. Performance is based on engineering tests. Specifications are

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not du

[•] North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

India Tel: +91.80.4155721
China Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

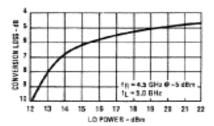


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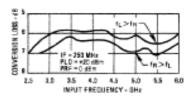
Typical Performance Curves

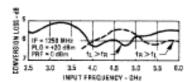
Drive Level



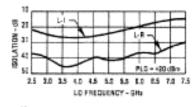
Drive Level: The maximum recommended drive level is +23 dBm.

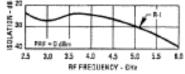
Conversion Loss



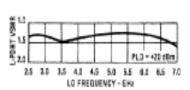


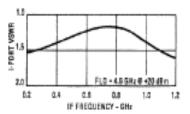
Isolation

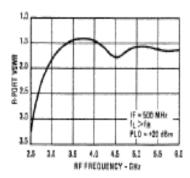




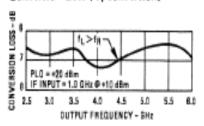
VSWR







Conversion Loss (Upconversion)



PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples Commitment to produce in volume is not guerra

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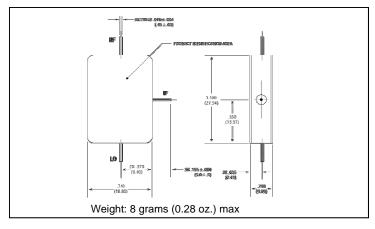
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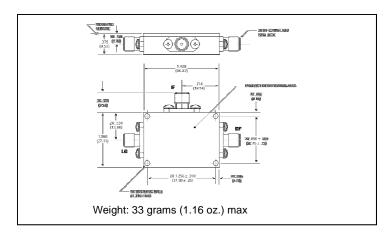
Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+25 dBm max @ +25°C +21 dBm max @ +100°C		
Peak Input Current	100 mA DC		

Outline Drawing: Minpac *



Outline Drawing: SMA Connectorized *



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

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