



Double-Balanced Mixer

M8H-7/M8HC-7

Features

- LO 2 TO 6 GHz
- RF 2.4 TO 6 GHz
- IF 0 TO 2000 MHz
- LO DRIVE +7 dBm (nominal)
- HIGH ISOLATION 40 dB (TYP.)

Description

The M8H-7 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
M8H-7	TO-8
M8HC-7	SMA Connectorized

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +7 dBm (Downconverter Application only)

Parameter	Parameter Test Conditions		Typical	Guaranteed	
ratallieter rest Conditions		Units	25°C	0° to 50°C	-54° to +85°C
SSB Conversion Loss & SSB Noise Figure (max)	fR=3.7 to 4.2 GHz, fL=2 to 6 GHz, fI=0.03 to 2 GHz fR=2.4 to 6 GHz, fL=2 to 6 GHz, fI=0.03 to 2 GHz	dB dB	5.0 7.0	7.0 9.0	7.5 9.5
Isolation, L to R (min)	fL = 2 to 4 GHz fL = 4 to 6 GHz	dB dB	42 37	32 25	30 23
Isolation, L to I (min)	fL = 2 to 6 GHz	dB	21	16	14
1 dB Conversion Compression	fL @ +7 dBm	dBm	+0		
Input IP3		dBm	+13		

[•] North America Tel: 800.366.2266 / Fax: 978.366.2266

[•] Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300

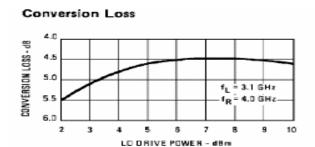
Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298

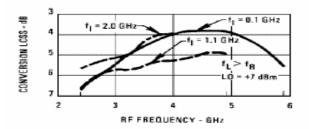




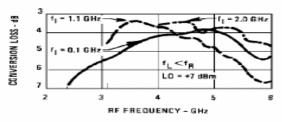
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Typical Performance Curves

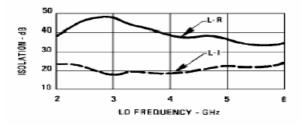




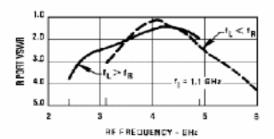
Conversion Loss

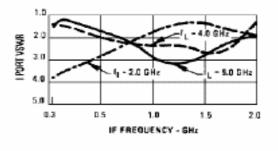


Isolation



VSWR L PORT VSWR 1.5 2.0 25 2 LO FREQUENCY - GHz





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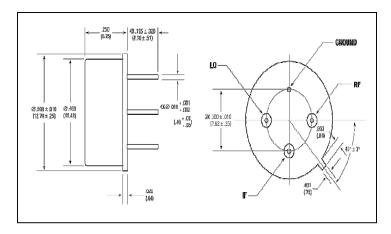
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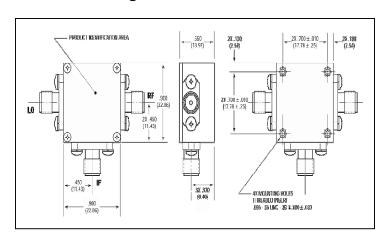
Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54 C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+23 dBm max @ +25°C +17 dBm max @ +100°C		
Peak Input Current	50 mA DC		

Outline Drawing: TO-8



Outline Drawing: SMA Connectorized



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