

Double-Balanced Mixer

Rev. V3

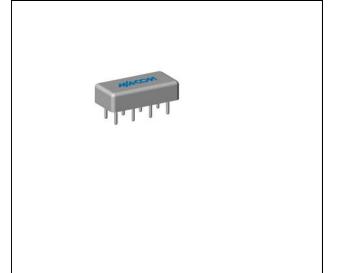
Features

- LO 0.05 TO 200 MHz
- RF 0.05 TO 200 MHz
- IF 0 TO 200 MHz
- LO DRIVE: +7 dBm (NOMINAL) HIGH ISOLATION: 45 dB (TYP.)

Description

The M6D-50 is a double balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband 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. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Product Image



Ordering Information

Part Number	Package
M6D-50	Relay Header

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

Parameter Test Conditions		Units	Typical	Guaranteed	
				+25°C	-54º to +85ºC
SSB Conversion Loss	$fR{=}0.0002~to~0.05~GHz~,~fL{=}0.0002~to~0.05~GHz~,~fl{=}0~to~0.05~GHz~\\ fR{=}~0.05~to~0.2~GHz~,~fL{=}~0.05~to~0.2~GHz~,~fl{=}~0.05~to~0.2~GHz~\\ fR{=}~0.00005~to~0.0002~GHz~,~fL{=}~0.00005~to~0.0002~GHz~,~fl{=}~0.00005~to~0.00000~to~0.0000~0~to$	dB	5.5	6.5	7.0
(max) & SSB Noise		dB	7.5	8.0	8.5
Figure (max)		dB	8.0	8.5	9.0
Isolation, L to R (min)	fL = 0.00005 to 0.03 GHz	dB	55	40	38
	fL = 0.03 to 0.2 GHz	dB	45	35	33
Isolation, L to I (min)	fL = 0.00005 to 0.03 GHz	dB	50	35	33
	fL = 0.03 to 0.2 GHz	dB	35	30	28

[•] 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.

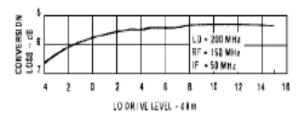


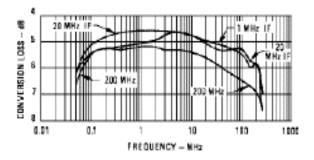
Double-Balanced Mixer

Rev. V3

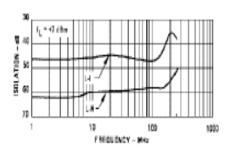
Typical Performance Curves

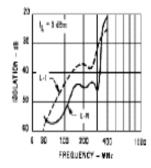
Conversion Loss



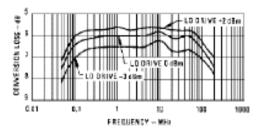


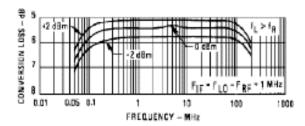
Isolation





Conversion Loss





is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.



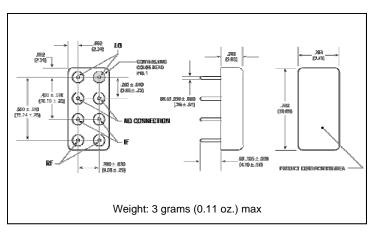
Double-Balanced Mixer

Rev. V3

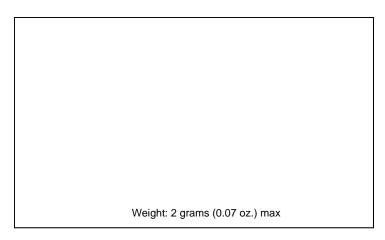
Absolute Maximum Ratings

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

Outline Drawing: Relay Header



Outline Drawing:



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

Commitment to produce in volume is not d