

Double-Balanced Mixer

Rev. V2

Features

- LO 800 TO 3500 MHz
- RF 1000 TO 2200 MHz
- IF DC TO 1500 MHz
- LO DRIVE +7 dBm (nominal)
- HIGH ISOLATION 30 dB (TYP.)

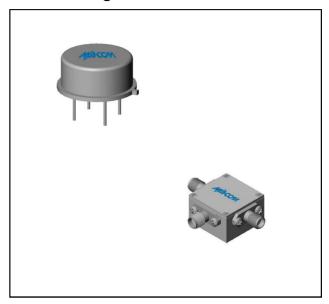
Description

The M2G 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 is available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Ordering Information

Part Number	Package
M2G	TO-8
M2GC	SMA Connectorized

Product Image



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

Parameter	Test Conditions	Units	Typical	Guaranteed	
Parameter				+25°C	-54° to +85°C *
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 1000 to 2200 MHz, fL =800 to 3500 MHz, fl =10 to 1500 MHz	dB	8.0	9.5	10.0
Isolation, L to R (min)	fL = 800 to 2000 MHz fL = 2000 to 3000 MHz fL = 3000 to 3500 MHz	dB dB dB	40 25 20	25 20 17	23 18 18
Isolation, L to I (min)	fL = 800 to 3500 MHz	dB	25	20	18

^{*} The M2GC specification limits apply at 0°C to +50°C.

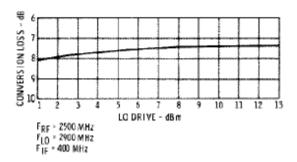


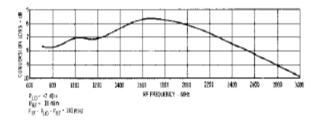
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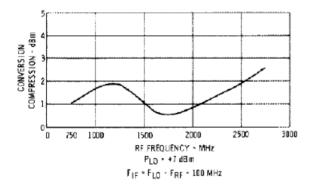
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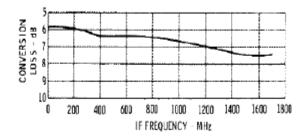
Typical Performance Curves

Conversion Loss

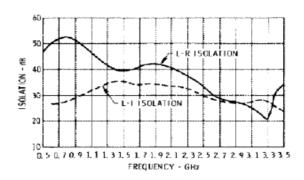




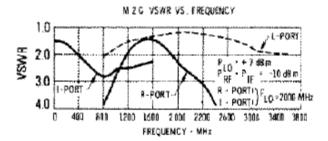


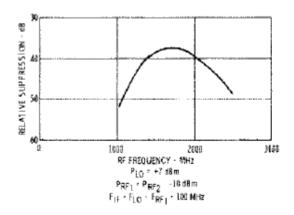


Isolation



VSWR







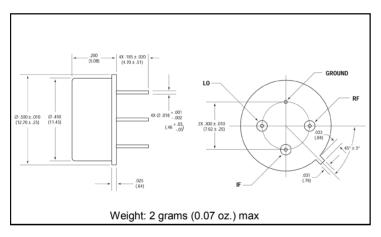
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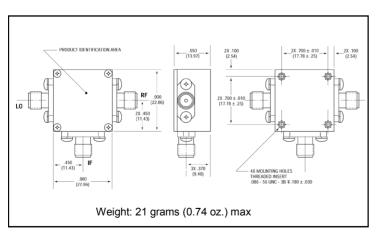
Absolute Maximum Ratings

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 *



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

M2G / M2GC



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