

## 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.)

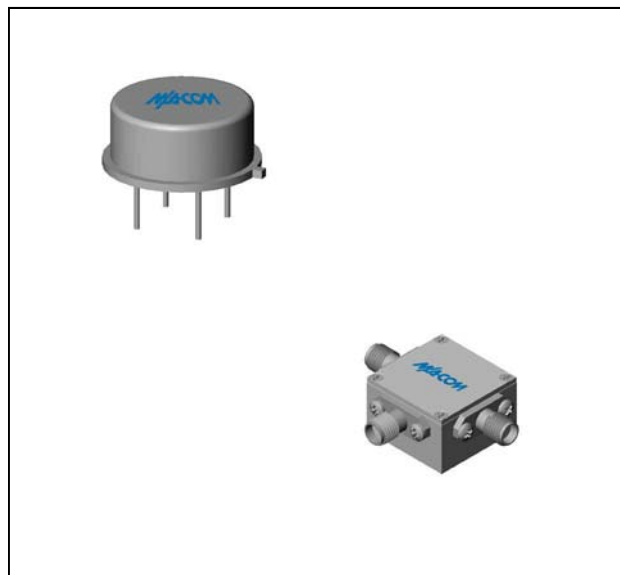
### Description

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



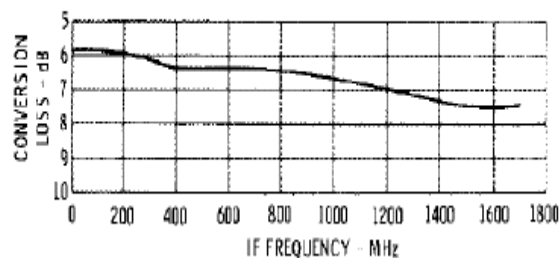
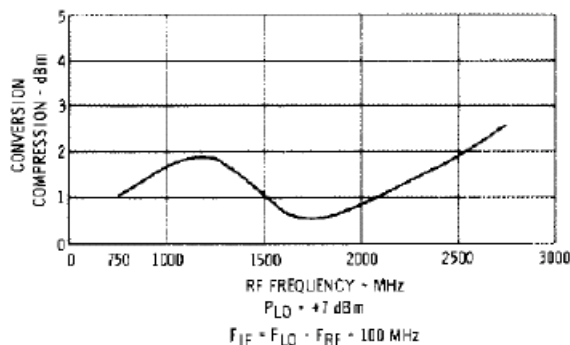
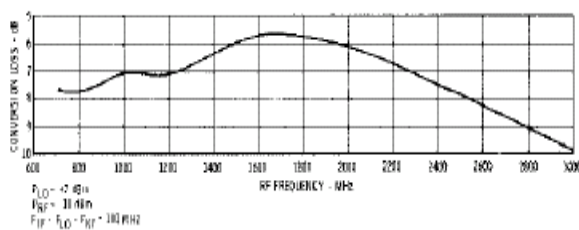
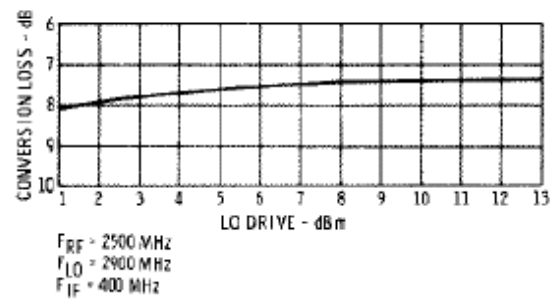
### Electrical Specifications: $Z_0 = 50\Omega$ $L_o = +7$ dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25°C	-54° to +85°C *
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 1000 to 2200 MHz, fL = 800 to 3500 MHz, fI = 10 to 1500 MHz	dB	8.0	9.5	10.0
Isolation, L to R (min)	fL = 800 to 2000 MHz	dB	40	25	23
	fL = 2000 to 3000 MHz	dB	25	20	18
	fL = 3000 to 3500 MHz	dB	20	17	18
Isolation, L to I (min)	fL = 800 to 3500 MHz	dB	25	20	18
1 dB Conversion Comp.					
Input IP3					

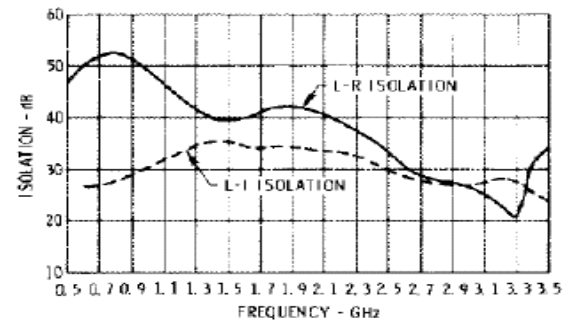
\* The M2GC specification limits apply at 0°C to +50°C.

### Typical Performance Curves

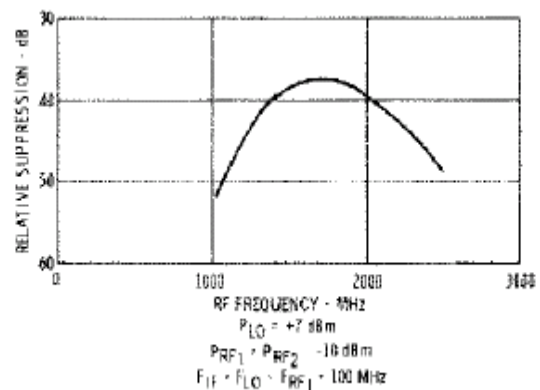
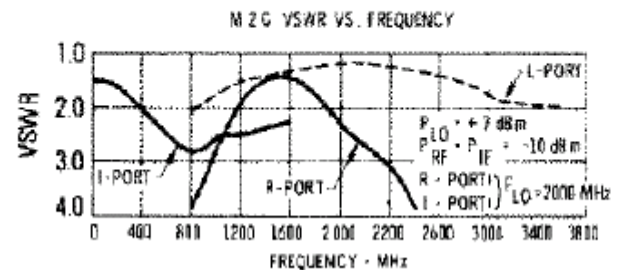
#### Conversion Loss



#### Isolation



#### VSWR



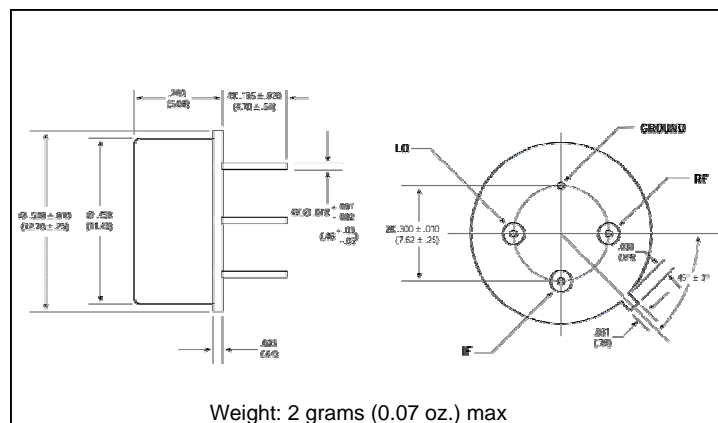
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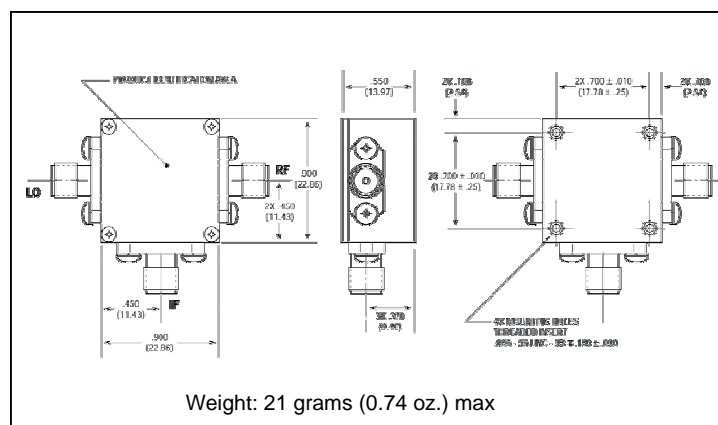
### Absolute Maximum Ratings

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)  $\pm 0.015$  (0.38) unless otherwise specified.