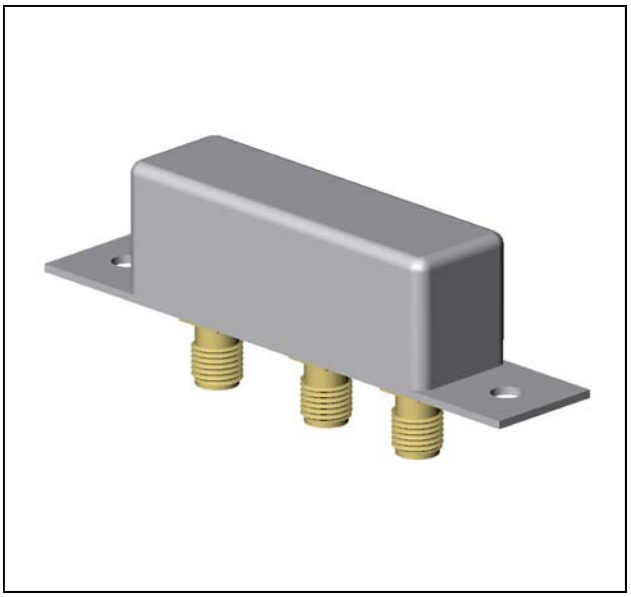
M1G

Double-Balanced Mixer

Rev. V2

Features

- LO and RF: 1.0 to 4.2 GHz
- IF: DC to 1 GHZ
- LO Drive +7 dBm (nominal)
- High Isolation 40 dB (Typ.)



Guaranteed Specifications[1]

Characteristics	Min	Typ.	Max.	Test Conditions
SSB Conversion Loss And SSB Noise Figure		6.5 dB 7.5 dB	8.5 dB 9.0 dB	fL & fR 1.5 to 4.2 GHz fI 0.01 to 1 GHz fL & fR 1.0 to 1.5 GHz fI 10 to 500 MHz
Isolation fL at R fL at I	 30 dB 20 dB	 40 dB 30 dB		 fL 1.0 to 4.2 GHz

Notes:
1. Measure in a 50-Ohm system with nominal LO drive and downconverter application only, unless otherwise specified. The I-Port frequency range extends to DC for phase detection, pulse modulation, or attenuator applications, I-Port VSWR degrades from a 50-Ohm system at low IF frequencies.

Absolute Maximum Ratings

Storage Temperature	-65°C to +100°C
Operating Temperature	-54°C to +100°C
Peak RF Input Power	+17 dBm
Peak Input Current at 25°C	50 mA DC

Weight 31 gram (1.1 oz) max.

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
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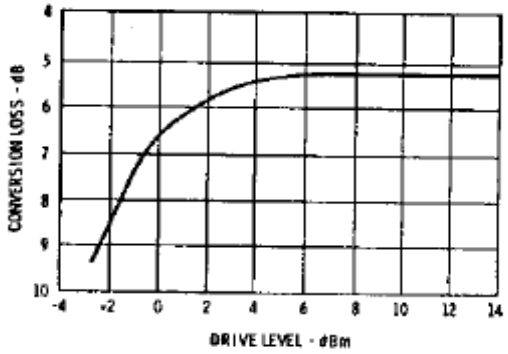
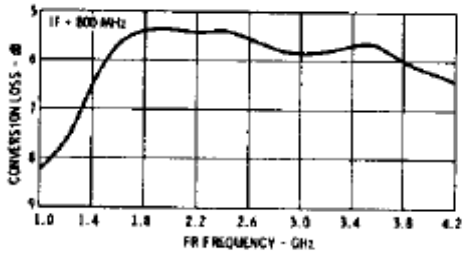
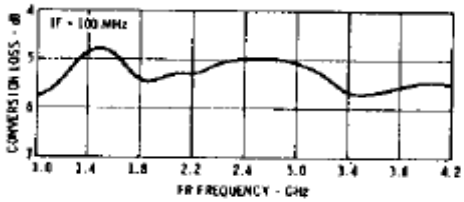
Typical Performance Curves at 25°C

Conversion Loss



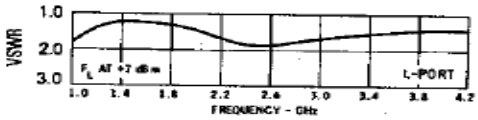
Conversion Loss vs. LO Drive Level: The minimum recommended drive level is +4 dBm. The maximum recommended drive level is +13 dBm.

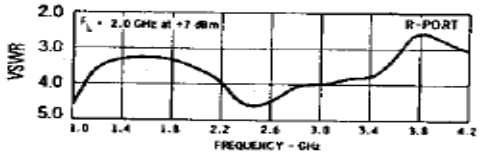


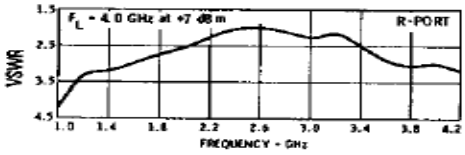


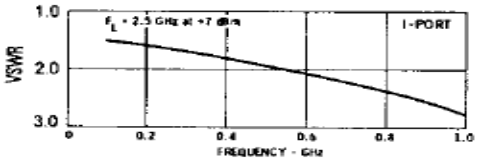
Conversion Loss vs. Input Frequency: Conversion loss of the mixer when used in an SSB system. The frequency ordinate refers to the R-port (f_R) with f_I at 100 MHz and 800 MHz. Data plotted with an f_L level of +7 dBm.

VSWR



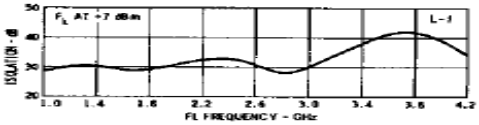


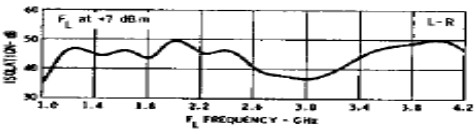




VSWR vs. Frequency: VSWR of the I- and R-ports in a 50-ohm system. Some variation in the R-port VSWR will occur as a function of the L-port frequency as shown above. Curves for R-port VSWR are plotted for L-port frequencies of 2 GHz and 4 GHz. For the best R-port VSWR, the f_L frequency should be greater than the input frequency at the R-port. A plot of I-port VSWR is also shown with f_R at 2 GHz and f_L greater than f_R.

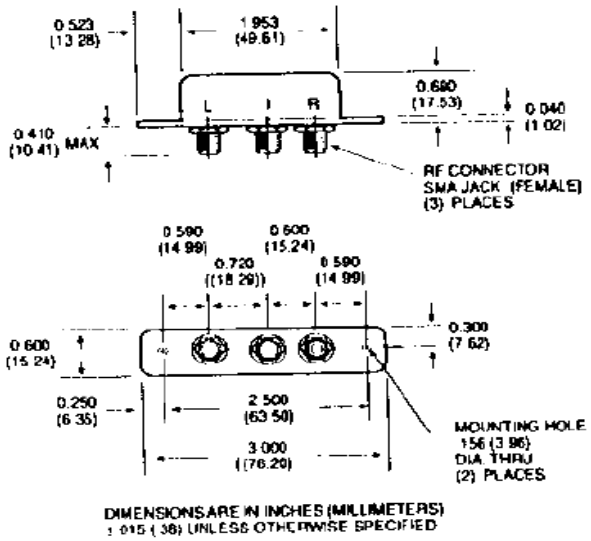
Isolation





Isolation vs. Frequency: Level of the f_L signal fed through to the R- and I-ports with respect to the level of the f_L signal at the L-port.

Outline Drawing: M1G



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