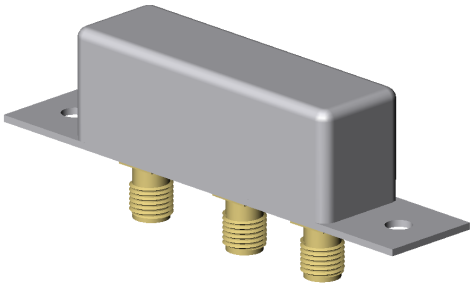
M1H

Double-Balanced Mixer

Rev. V2

Features

- LO and RF: 1.8 to 6.2 GHz
- IF: DC to 2 GHZ
- LO Drive +7 dBm (nominal)
- High Isolation 35 dB (Typ.)



Guaranteed Specifications[1]

Characteristics	Test Conditions	Units	Min	Typ.	Max.
SSB Conversion Loss And SSB Noise Figure	fL & fR 1.8 to 4.2 GHz, fI 0.01 to 1 GHz fL & fR 1.8 to 4.2 GHz, fI 0.01 to 2 GHz fL & fR 1.8 to 6.2 GHz, fI 0.01 to 2 GHz	dB	—	7.0 dB 8.5 dB 9.0 dB	8.5 dB 9.5 dB 10.0 dB
Isolation	fL at R, fL 1.8 to 4.2 GHz fL at I, fL 1.8 to 4.2 GHz fL at R, fL 4.2 to 6.2 GHz fL at I, fL 4.2 to 6.2 GHz	dB	25 dB 15 dB 18 dB 15 dB	40 dB 25 dB 25 dB 20 dB	—
Conversion Compression	fR = 0 dBm fL at +7 dB	dB	—	1.0 dB	—

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.

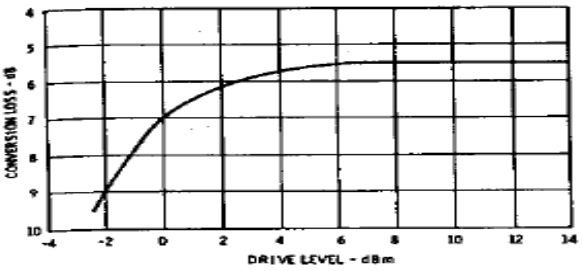
Absolute Maximum Ratings

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

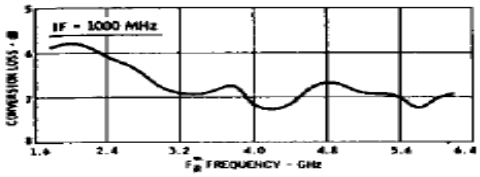
Weight 31 gram (1.1 oz) max.

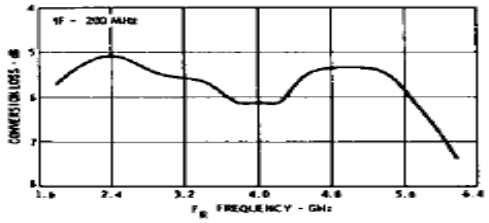
Typical Performance Curves at 25°C

Conversion Loss



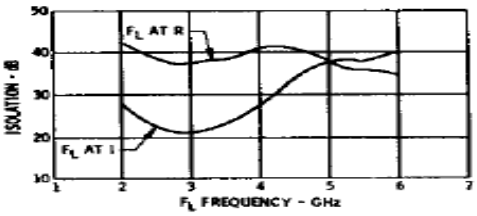
Conversion Loss vs. Drive Level: Conversion loss in an SSB system is a function of drive level (f_L with f_L and f_R at approximately 3 GHz and f_R level at -6 dBm.





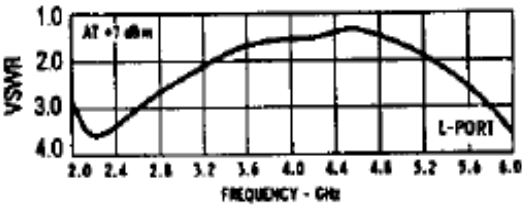
Conversion Loss vs. Input Frequency: The frequency ordinate refers to the report (f_R) with f_I at 200 MHz and 1000 MHz, data plotted with f_L at +7 dBm.

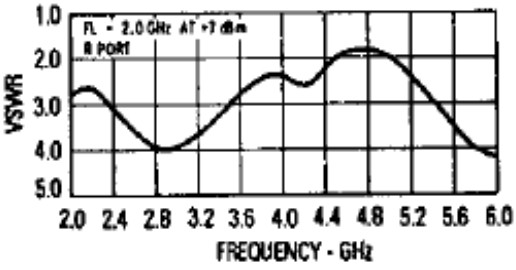
Isolation

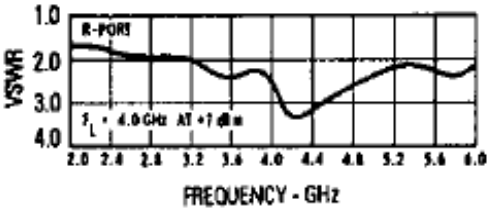


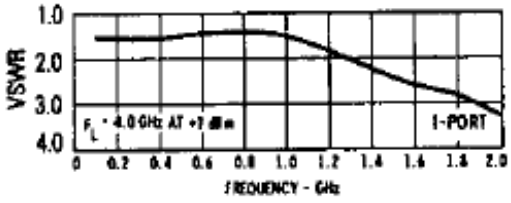
Isolation vs. Frequency: Level of the f_L signal fed through to the R- and I-ports with respect to the level of the f_L signal at the L-port.

VSWR



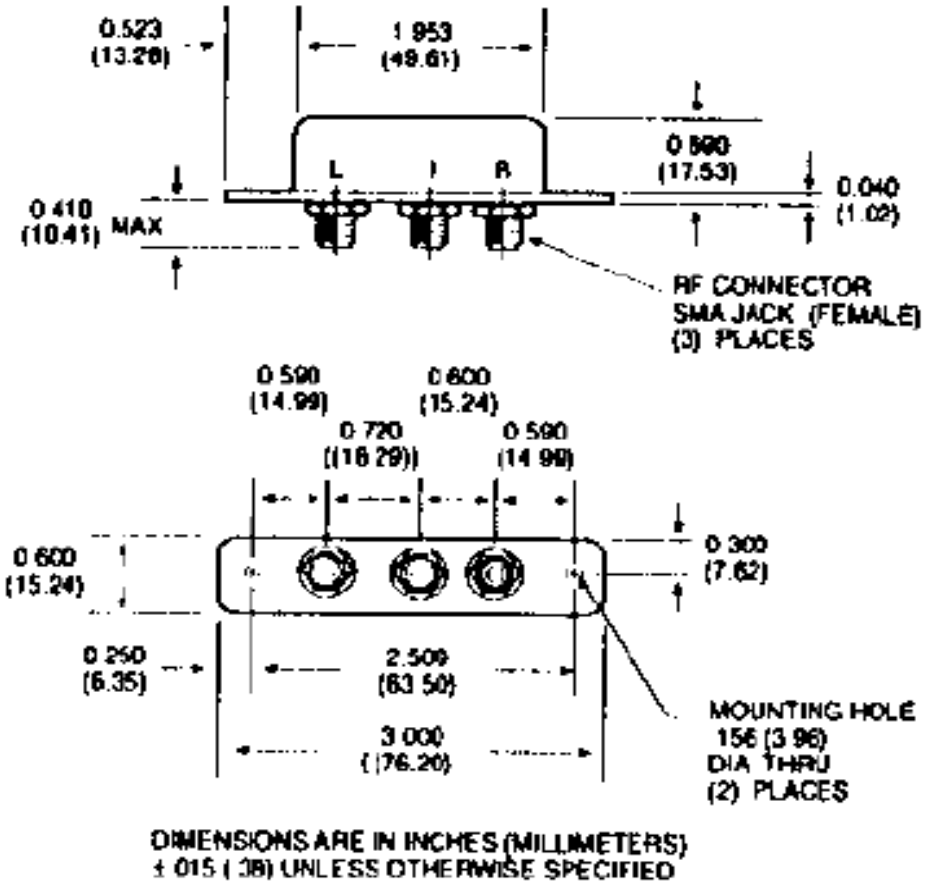






VSWR vs. Frequency: VSWR of the L-I- and R-ports in a 50-ohm system. Some variation in the R-port VSWR will occur as a function of the L-port frequency as shown above. Curves for R-port VSWR are plotted for L-port frequencies of 2 GHz and 4 GHz. A plot of I-port VSWR is also shown with f_L at 4 GHz.

Outline Drawing: M1H



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

MACOM:
M1H