

## DOUBLE-BALANCED MIXERS

## M1-0220

### Features

- LO/RF 2.0 to 20.0 GHz
- IF DC to 2.0 GHz
- 7.0 dB Typical Conversion Loss
- 35 dB Typical LO to RF Isolation
- Ultra-Broadband RF and LO
- For a list of recommended LO driver amps for all mixers and IQ mixers, see [here](#).



**Electrical Specifications** - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system.

Parameter	LO (GHz)	RF (GHz)	IF (GHz)	Min	Typ	Max	Diode Option LO drive level (dBm)
Conversion Loss (dB)	2.0-20.0 2.0-20.0	2.0-20.0 2.0-20.0	DC-1.0 1.0-2.0		7.0 8.0	9.0 10.0	
Isolation (dB)							
LO-RF	2.0-20.0	2.0-20.0		25	35		
LO-IF	2.0-20.0	2.0-20.0			25		
RF-IF	2.0-20.0	2.0-20.0			25		
Input 1 dB Compression (dBm)	2.0-20.0	2.0-20.0			+3 +6 +9		L (+10 to +13) M (+13 to +16) N (+16 to +19)
Input Two-Tone Third Order Intercept Point (dBm)	2.0-20.0	2.0-20.0			+13 +16 +19		L (+10 to +13) M (+13 to +16) N (+16 to +19)

### Part Number Options

<i>Please specify diode level and package style by adding to model number.</i>		
<b>Package Options</b>		<b>Examples</b>
Connectorized	<a href="#">P</a>	M1-0220LP

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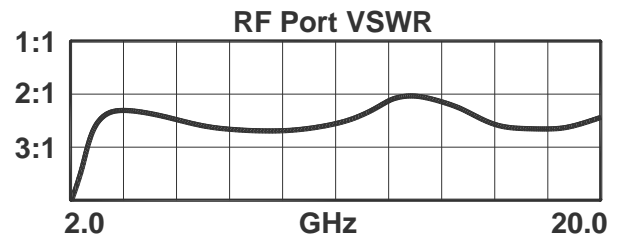
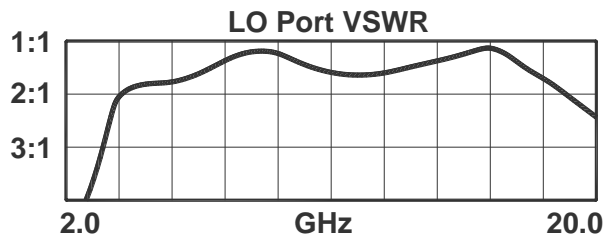
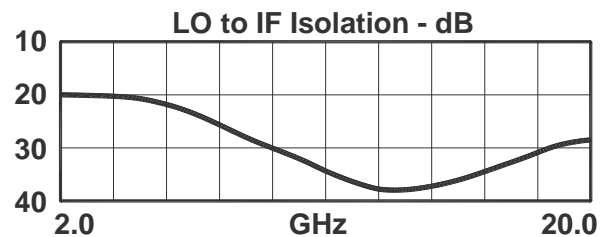
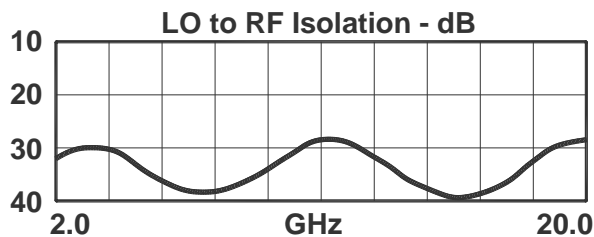
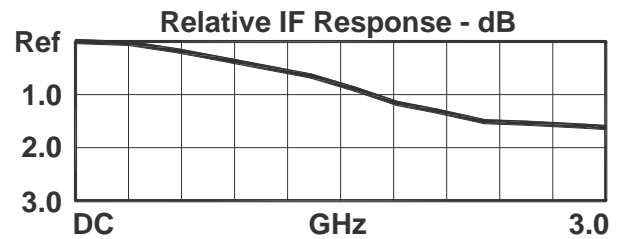
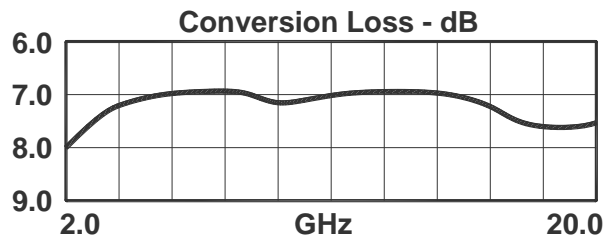
## DOUBLE-BALANCED MIXERS

Page 2

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LO/RF 2.0 to 20.0 GHz  
IF DC to 2.0 GHz

Typical Performance



### DATA SHEET NOTES:

1. Mixer Conversion Loss Plot IF frequency is 100 MHz.
2. Mixer Noise Figure typically measures within +0.5 dB of conversion loss for IF frequencies greater than 5 MHz.
3. Conversion Loss typically degrades less than 0.5 dB for LO drives 2 dB below the lowest and 3 dB above highest nominal LO drive levels.
4. Conversion Loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
5. Maximum input power is +23 dBm at +25°C, derated linearly to +20 dBm at +100°C.
6. Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.
7. Standard configuration for A, B, and C outlines are with connectors and bottom spacer.
8. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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