



DOUBLE-BALANCED MIXERS

M4-0020



Features

- LO/RF .5 to 20.0 GHz
- IF DC to 300 MHz
- 7.0 dB Typical Conversion Loss
- 30 dB Typical LO to RF Isolation
- Ultra-Broadband RF and LO

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

Parameter	LO (GHz)	RF (GHz)	IF (MHz)	Min	Typ	Max	Diode Option LO drive level (dBm)
Conversion Loss (dB)	.5-20.0 .5-20.0	.5-20.0 .5-20.0	DC-100 100-300		7.0 8.0	8.5 9.5	
Isolation (dB)				18			
LO-RF	.5-20.0	.5-20.0			30		
LO-IF	.5-20.0	.5-20.0			25		
RF-IF	.5-20.0	.5-20.0			30		
Input 1 dB Compression (dBm)	.5-20.0	.5-20.0			+3 +6		L (+10 to +13) M (+13 to +16)
Input Two-Tone Third Order Intercept Point (dBm)	.5-20.0	.5-20.0			+13 +16		L (+10 to +13) M (+13 to +16)

Part Number Options

Please specify diode level and package style by adding to model number.	
Package Style(s)	Example
↓	M4-0020 <u>L</u> <u>↓</u>

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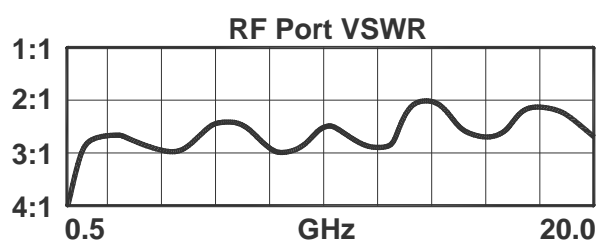
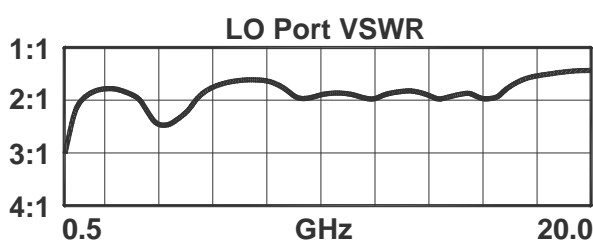
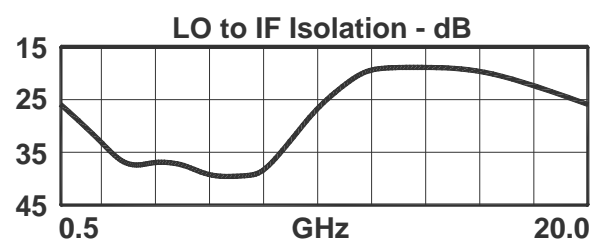
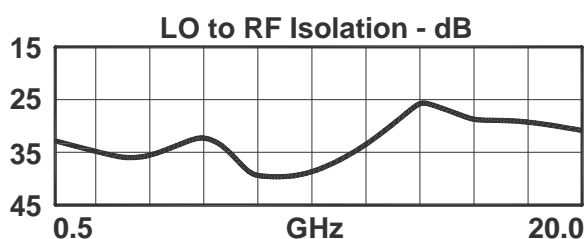
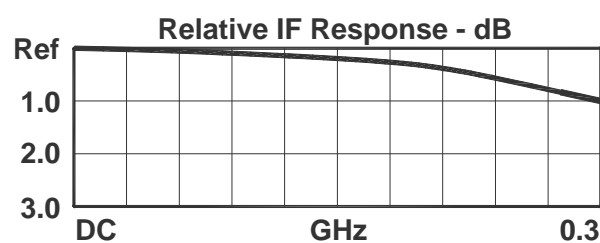
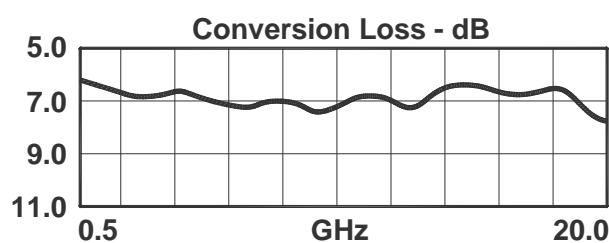
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IF DC to 300 MHz

Typical Performance



DATA SHEET NOTES:

1. Mixer Conversion Loss Plots are done with an IF frequency of 100 MHz unless otherwise specified.
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. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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215 Vineyard Court, Morgan Hill, CA 95037 | Ph: 408.778.4200 | Fax 408.778.4300 | info@markimicrowave.com

www.markimicrowave.com