

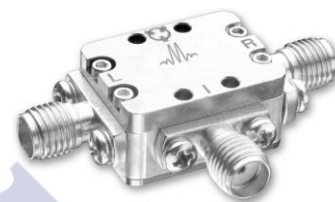


## TRIPLE-BALANCED MIXERS

**M2-0226**

### Features

- LO/RF 2.0 to 26.5 GHz
- IF .001 to 6.0 GHz
- 7.5 dB Typical Conversion Loss
- 25 dB Typical LO to RF Isolation
- Ultra-Broadband RF, LO, and IF



**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	.001-2.0		7.5	10.0	
	20.0-26.5	20.0-26.5	.001-2.0		9.5	12.0	
	2.0-20.0	2.0-20.0	2.0-4.0		8.5	11.0	
	20.0-26.5	20.0-26.5	2.0-4.0		10.5	13.0	
	2.0-20.0	2.0-20.0	4.0-6.0		9.5	12.0	
	20.0-26.5	20.0-26.5	4.0-6.0		11.5	14.0	
Isolation (dB)							
	LO-RF	2.0-26.5	2.0-26.5	12	25		
	LO-RF	4.0-19.0	4.0-19.0	18	28		
	LO-IF	2.0-26.5	2.0-26.5		28		
RF-IF	2.0-26.5	2.0-26.5		30			
Input 1 dB Compression (dBm)	2.0-26.5	2.0-26.5			+5		L (+10 to +13)
					+8		M (+13 to +16)
Input Two-Tone Third Order Intercept Point (dBm)	2.0-26.5	2.0-26.5			+15		L (+10 to +13)
					+18		M (+13 to +16)

### Part Number Options

Please specify diode level and package style by adding to model number.							
Package Options			Examples				
Connectorized		<u>P</u>	M2-0226LP				
Package Options Not Recommended for New Designs			Examples				
Microstrip <sup>1,2</sup>		<u>E</u>	M2-0226 (Model)	<u>L</u> (Diode Option)	<u>E</u> (Package)	<u>-2</u> (I-Port Configuration)	

<sup>1</sup>Connectorized test fixtures available for most microstrip packages. Consult factory.

<sup>2</sup>For non-connectorized packages, specify I-port configuration by adding -1 or -2 suffix to model number. Default is -2 configuration when not specified.

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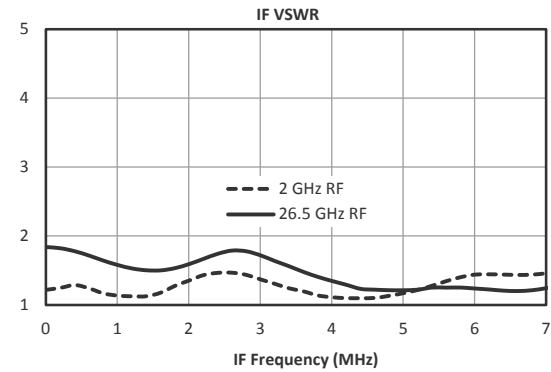
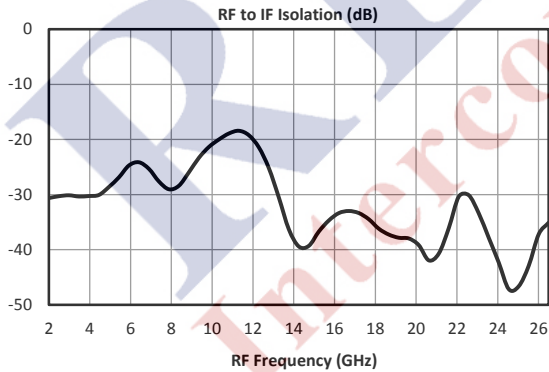
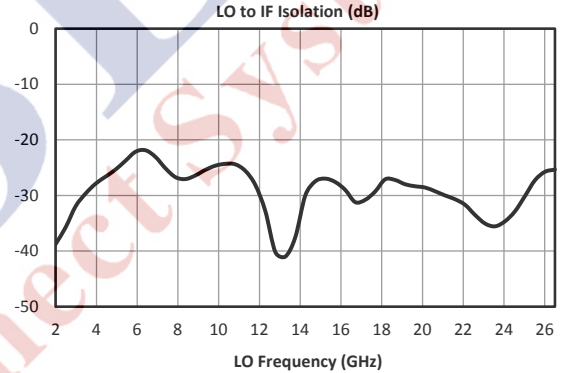
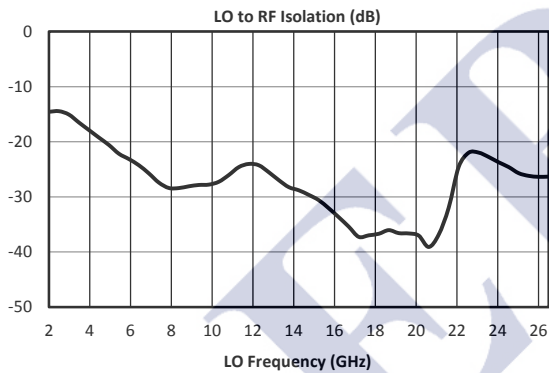
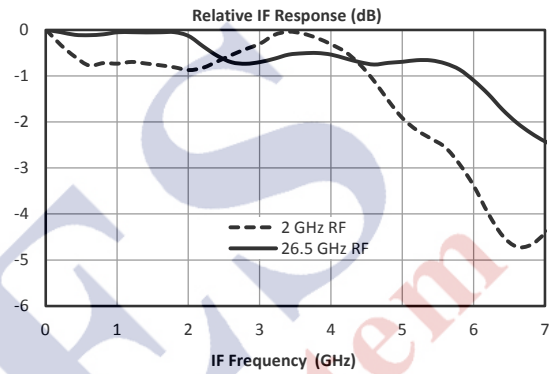
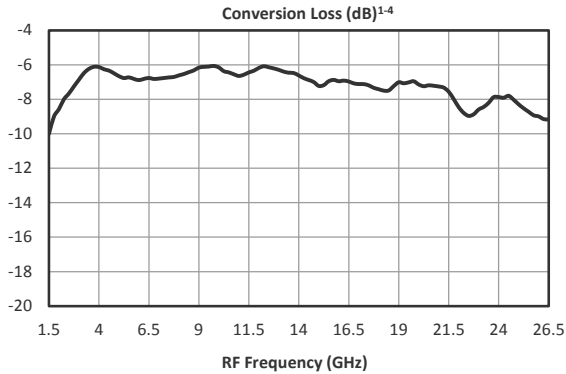
**TRIPLE-BALANCED MIXERS**

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Page 2

**LO/RF 2.0 to 26.5 GHz  
IF .001 to 6.0 GHz**

Typical Performance



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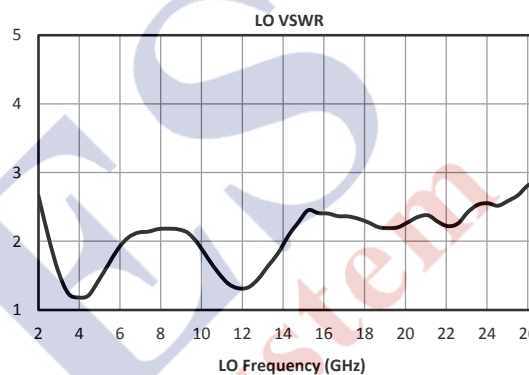
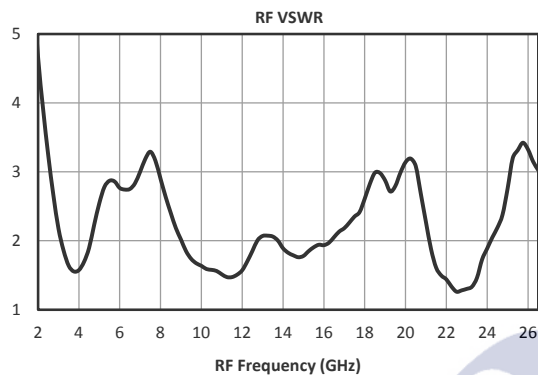
## TRIPLE-BALANCED MIXERS

Page 3

**M2-0226**

**LO/RF 2.0 to 26.5 GHz**  
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Typical Performance (cont.)



### 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 +26 dBm at +25°C, derated linearly to +23 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 and B 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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