

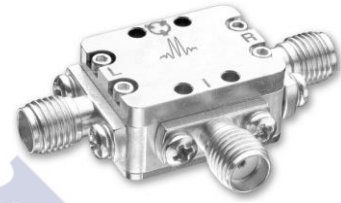


TRIPLE-BALANCED MIXERS

M2-0220

Features

- LO/RF 2.0 to 20.0 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	
	2.0-20.0	2.0-20.0	2.0-4.0		8.0	10.5	
	2.0-20.0	2.0-20.0	4.0-6.0		8.5	11.5	
Isolation (dB)							
	LO-RF	2.0-20.0		12	25		
	LO-RF	4.0-20.0		18	27		
	LO-IF	2.0-20.0			27		
Input 1 dB Compression (dBm)							
	2.0-20.0	2.0-20.0			+5		L (+10 to +13)
					+8		M (+13 to +16)
					+11		N (+16 to +19)
Input Two-Tone Third Order Intercept Point (dBm)					+14		H (+19 to +22)
	2.0-20.0	2.0-20.0			+15		L (+10 to +13)
					+18		M (+13 to +16)
					+21		N (+16 to +19)
					+24		H (+19 to +22)

Part Number Options

Please specify diode level and package style by adding to model number.					
Package Options		Examples			
Connectorized	<u>P</u>	M2-0220LP			
Package Options Not Recommended for New Designs		Examples			
Microstrip ^{1,2}	<u>E</u>	<u>M2-0220</u>	<u>L</u>	<u>E</u>	<u>-2</u>
		(Model)	(Diode Option)	(Package)	(I-Port Configuration)

¹Connectorized test fixtures available for most microstrip packages. Consult factory.

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



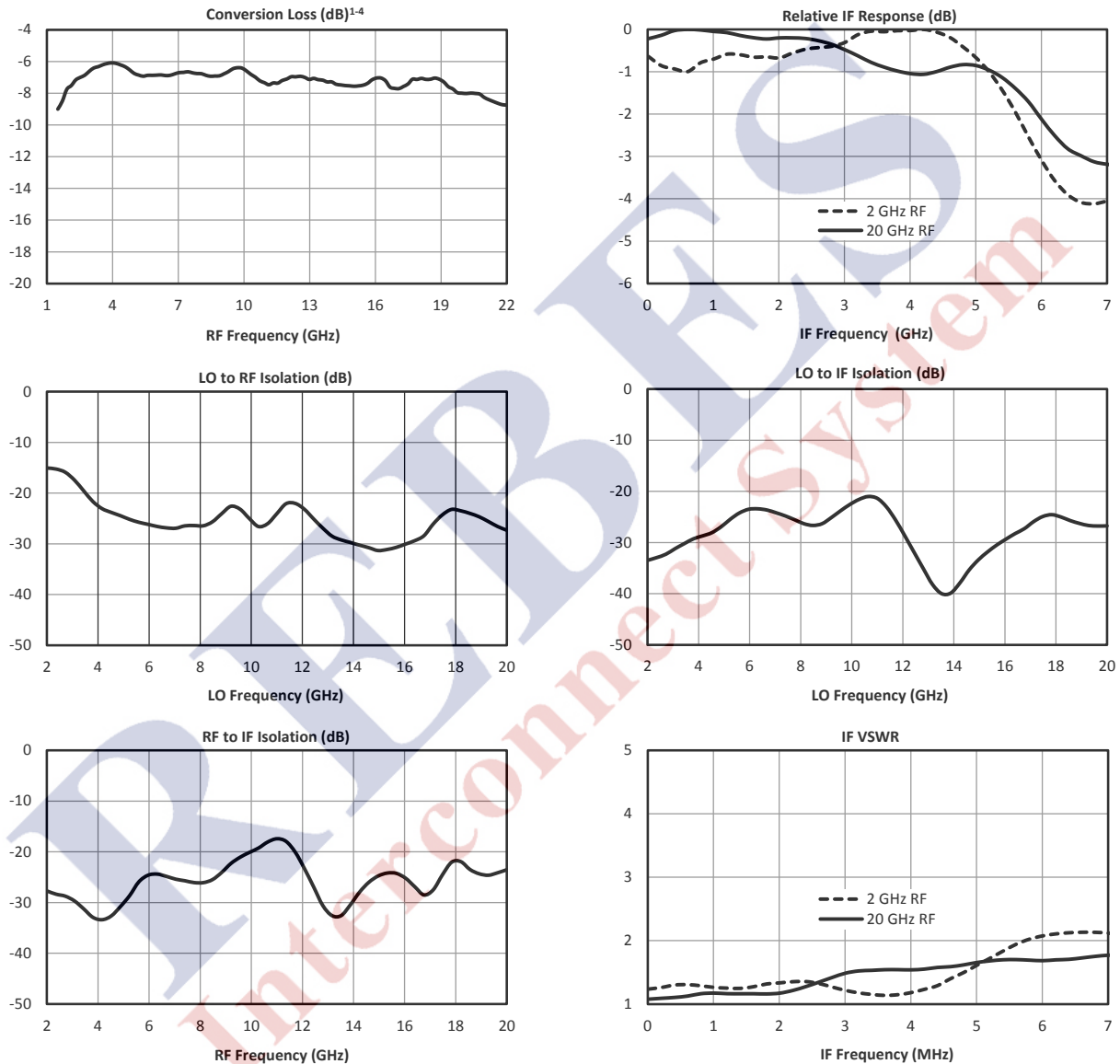
TRIPLE-BALANCED MIXERS

Page 2

M2-0220

**LO/RF 2.0 to 20.0 GHz
IF .001 to 6.0 GHz**

Typical Performance



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8/11/15



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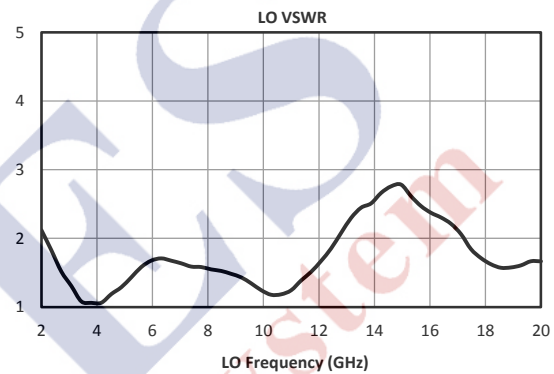
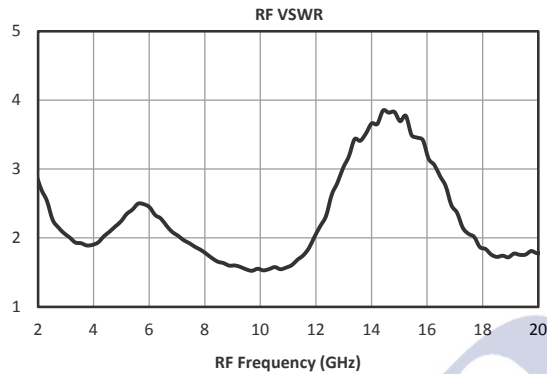
Page 3

M2-0220

LO/RF 2.0 to 20.0 GHz

IF .001 to 6.0 GHz

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, 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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