TRIPLE-BALANCED MIXERS M2-0218

Features

- LO/RF 2.0 to 18.0 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

NOTE: This product is not recommended for new designs in Microstrip and Surface Mount packages. Please see this letter for more information.

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)	2.0-18.0	2.0-18.0	.001-2.0		7.5	9.5	
	2.0-18.0	2.0-18.0	2.0-4.0		8.0	10.0	
	2.0-18.0	2.0-18.0	4.0-6.0		8.5	11.0	
Isolation (dB)							
LO-RF	2.0-18.0	2.0-18.0		12	25		
LO-RF	4.0-18.0	4.0-18.0		18	27		
LO-IF	2.0-18.0	2.0-18.0			27		
RF-IF	2.0-18.0	2.0-18.0			25		
Input 1 dB Compression (dBm)	2.0-18.0	2.0-18.0			+5		L (+10 to +13)
					+8		M (+13 to +16)
					+11		N (+16 to +19)
					+14		H (+19 to +22)
Input Two-Tone Third Order Intercept Point (dBm)	2.0-18.0	2.0-18.0			+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	A	M2-0218LA

Package Options Not Recommended for New Designs		Examples			
Microstrip [1,2,3]	E	M2-0218	L	E	-2
Surface Mount [1,2,3]	EZ	(Model)	(Diode Option)	(Package)	(I-Port Configuration)

[1]Connectorized test fixtures available for most microstrip and surface mount packages. Consult factory.
[2]For non-connectorized packages, specify I-port configuration by adding –1 or –2 suffix to model number. Default is –2 configuration when not specified.
[3]EZ/E packages are offered in support of designed in projects only.Expected obsolescence date is 2017. For new designs consult the T3 Mixer catalog.

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Page 2

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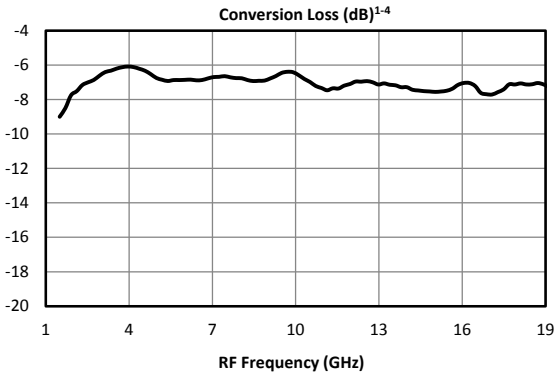
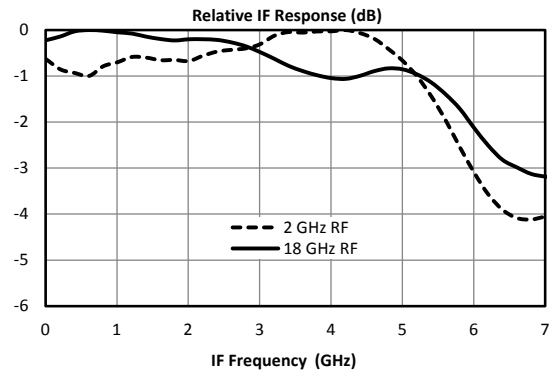
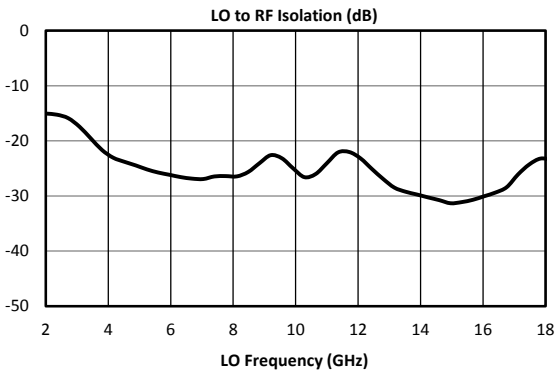
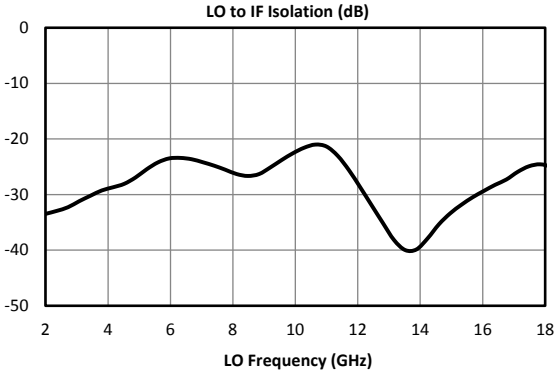
IF .001 to 6.0 GHz

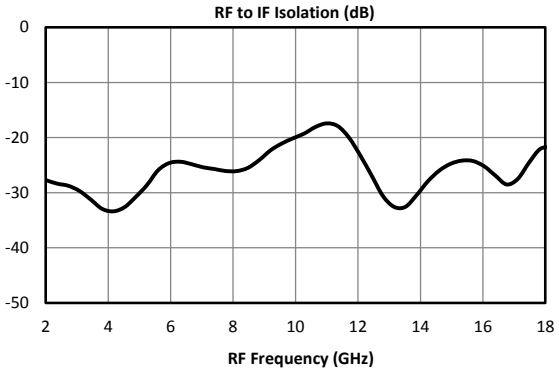
Typical Performance

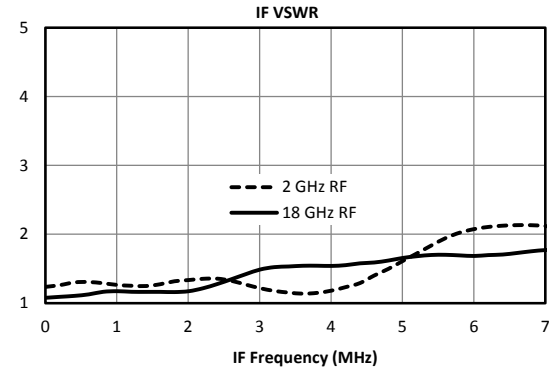












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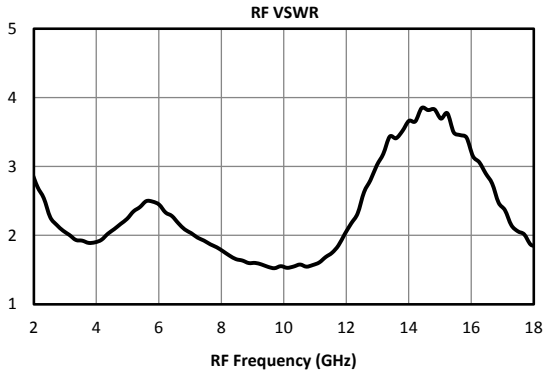
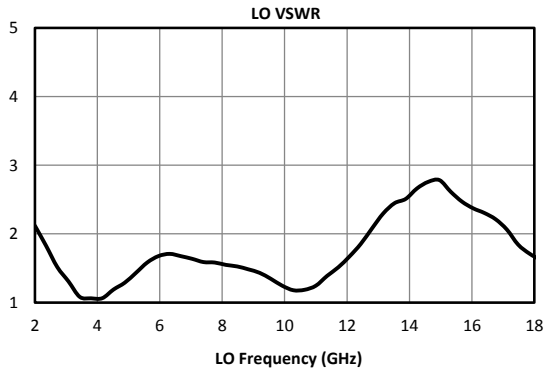
Typical Performance (cont.)





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, 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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