QUADRATURE-IF DOUBLE-BALANCED MIXERS

IQ-1545

Features

- LO/RF 1.5 to 4.5 GHz
- IF DC to 500 MHz
- 5.5 dB Typical Conversion Loss
- 43 dB Typical LO to RF Isolation
- 3 degree Typ Quadrature Phase Deviation
- .3 dB Typical Amplitude Deviation
- Open Carrier or Connectorized

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)	1.5-4.5	1.5-4.5	DC-500		5.5	7.0	
Image Rejection (dB)	1.8-4.5	1.8-4.5	DC-500	18	25		
	1.5-4.5	1.5-4.5	DC-500	16	25		
I/Q Amplitude Deviation (dB)	1.5-4.5	1.5-4.5	DC-500		0.3		
I/Q Quadrature Phase Deviation (degrees)	1.5-4.5	1.5-4.5	DC-500		3		
Isolation (dB)							
LO-RF	1.5-4.5	1.5-4.5		37	43		
LO-IF	1.5-4.5	1.5-4.5			30		
RF-IF	1.5-4.5	1.5-4.5			30		
Input 1 dB Compression (dBm)	1.5-4.5	1.5-4.5			+4		L (+10 to +13)
					+6		M (+13 to +16)
Input Two-Tone Third Order Intercept Point (dBm)	1.5-4.5	1.5-4.5			+14		L (+10 to +13)
					+16		M (+13 to +16)

Part Number Options

Please specify diode level and package style by adding to model number.	
Package Style(s)[1]	**Example**
MP	IQ-1545 L MP

[1]Higher LO drive levels are available.

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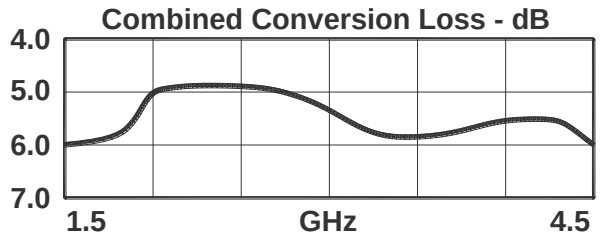
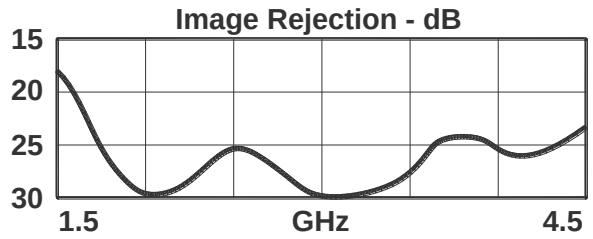
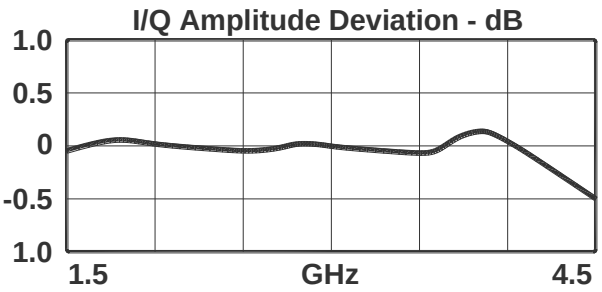
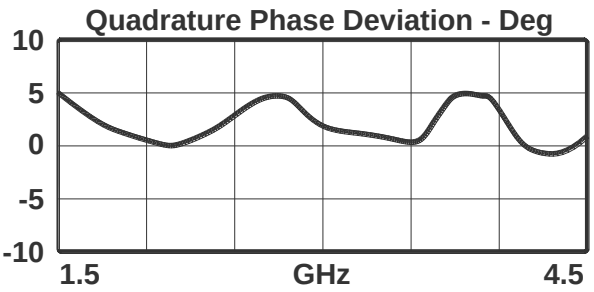
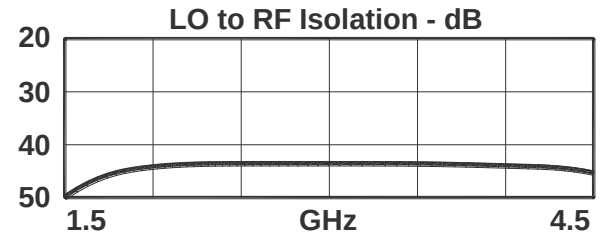
Typical Performance

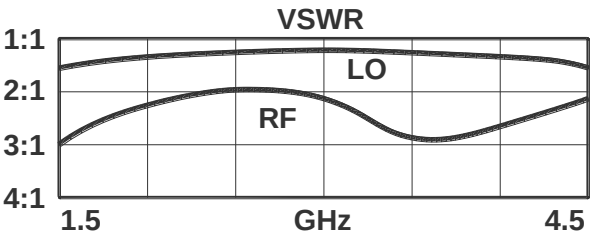












DATA SHEET NOTES:

1. Mixer Conversion Loss Plot IF frequency is 70 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. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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