

## DOUBLE-BALANCED MIXERS

**M4-0165**



### Features

- LO/RF 1.0 to 65.0 GHz
- IF DC to 400 MHz
- 9.5 dB Typical Conversion Loss
- 27 dB Typical LO to RF Isolation
- Super-Broadband RF and LO
- 2.40 mm RF/LO Connectors

Note: This part is being discontinued. The replacement part is [M4-0150](#).

**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)	1.0-65.0	1.0-65.0	DC-250		9.5	17.0	
	1.0-65.0	1.0-65.0	DC-400		10.5	18.0	
Isolation (dB)							
LO-RF	1.0-65.0	1.0-65.0			27		
LO-IF	1.0-65.0	1.0-65.0			27		
RF-IF	1.0-65.0	1.0-65.0			25		
Input 1 dB Compression (dBm)	1.0-65.0	1.0-65.0			+3		L (+10 to +13)
Input Two-Tone Third Order Intercept Point (dBm)	1.0-65.0	1.0-65.0			+13		L (+10 to +13)

### Part Number Options

<i>Please specify diode level and package style by adding to model number.</i>		
Package Style(s)	RoHS Compliant	Example
<a href="#">KVM</a>	No	M4-0165LKVM
<a href="#">KVM-LF</a>	Yes	M4-0165LKVM-LF



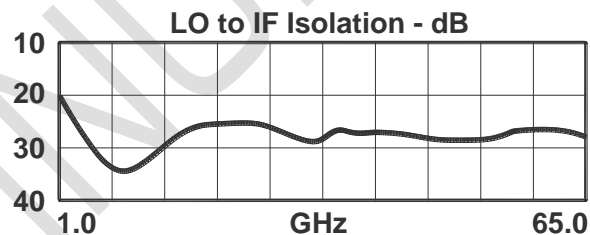
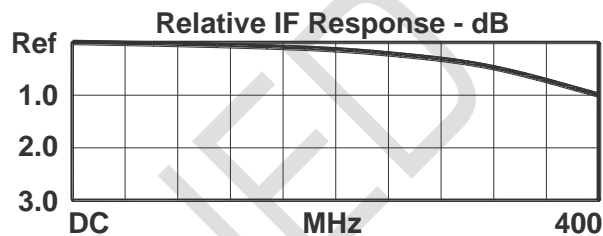
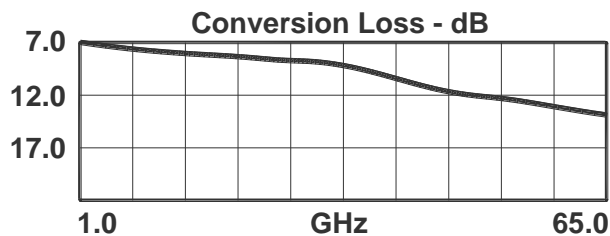
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IF DC to 400 MHz

Typical Performance



DATA SHEET NOTES:

1. Mixer Conversion Loss Plot is done with an IF frequency of 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 +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. 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.

Revision History

Revision Code	Revision Date	Comment
-	May 2007	Initial Draft
A	July 2019	Added Lead Free Version

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