

**DOUBLE-BALANCED MIXERS****M4-0140****Features**

- LO/RF 1.0 to 40.0 GHz
- IF DC to 700 MHz
- 8.5 dB Typical Conversion Loss
- 30 dB Typical LO to RF Isolation
- Super-Broadband RF and LO
- Available with 2.40 or 2.92 mm Connectors

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)	1.0-40.0	1.0-40.0	DC-300		8.5	11.0	
	1.0-40.0	1.0-40.0	DC-500		9.5	12.0	
	1.0-40.0	1.0-40.0	DC-700		11.0	14.0	
Isolation (dB)							
LO-RF	1.0-40.0	1.0-40.0		20	30		
LO-IF	1.0-40.0	1.0-40.0			27		
RF-IF	1.0-40.0	1.0-40.0			25		
Input 1 dB Compression (dBm)	1.0-40.0	1.0-40.0			+3 +9		L (+10 to +13) H (+16 to +19)
Input Two-Tone Third Order Intercept Point (dBm)	1.0-40.0	1.0-40.0			+13 +19		L (+10 to +13) H (+16 to +19)

Part Number Options

Please specify diode level and package style by adding to model number.	
Package Style(s)	Example
<u>K</u> (2.92 mm), <u>KV</u> (2.40 mm)	M4-0140 <u>L</u> <u>K</u>

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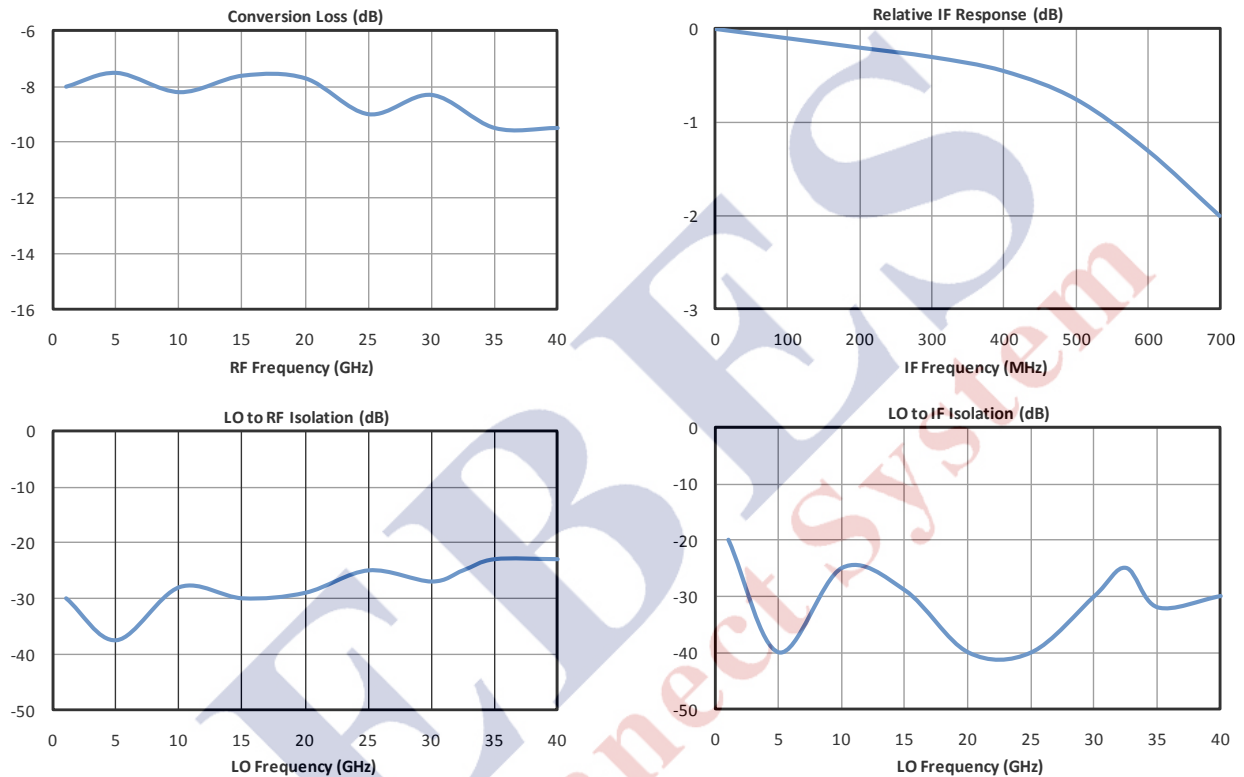
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M4-0140

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IF DC to 700 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 $+100^{\circ}\text{C}$ and improves less than 0.5 dB at -55°C .
5. Maximum input power is +23 dBm at $+25^{\circ}\text{C}$, derated linearly to +20 dBm at $+100^{\circ}\text{C}$.
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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