



ULTRA-BROADBAND DOUBLE-BALANCED MIXER

M4-10M10


The M4-10M10 features 10 MHz to 10 GHz ultra-broadband LO/RF performance. While other M4 mixers are limited to about 500 MHz at the low end, the M4-10M10, with its ferrite-assisted broadband balun construction, performs down to 10 MHz. The multi-decade performance of the LO/RF makes this mixer ideal for Phase Detection, Phase Noise, Amplitude Noise, Noise Figure, and other measurements requiring broad bandwidth and low IF frequencies.



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)	.01-10	.01-10	DC-20 20-30		9 dB 10 dB	12.0 14.5	
Isolation (dB) LO-RF LO-IF RF-IF	.01-10	.01-10			See Plots		
Input 1 dB Compression (dBm)	.01-10	.01-10			+3 +6		L (+10 to +13) M (+13 to +16)
Input Two-Tone Third Order Intercept Point (dBm)	.01-10	.01-10			+13 +16		L (+10 to +13) M (+13 to +16)

Part Number Options

Please specify diode level and package style by adding to model number.				
Package Style		Example		
Connectorized		M4-10M10LJ		
		<u>M4-10M10</u> (Model)	<u>L</u> (Diode-Level)	<u>J</u> (Package)

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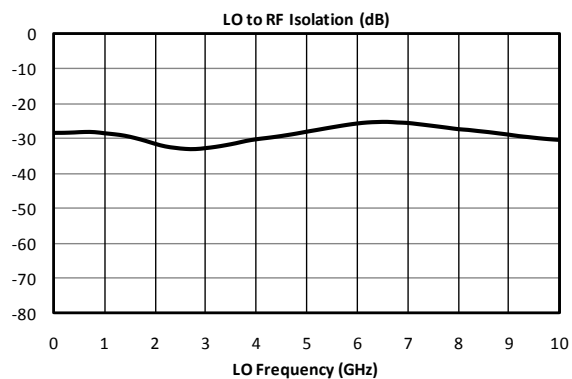
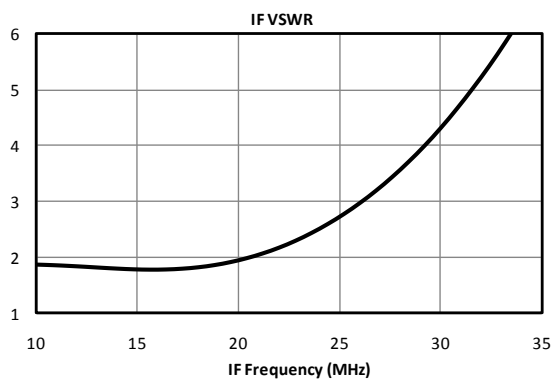
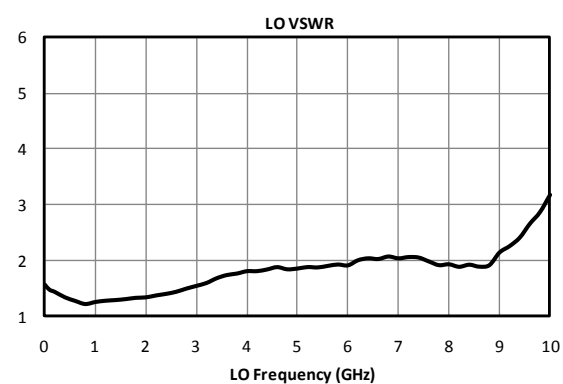
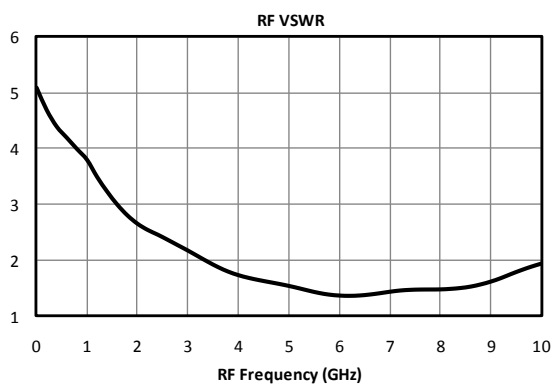
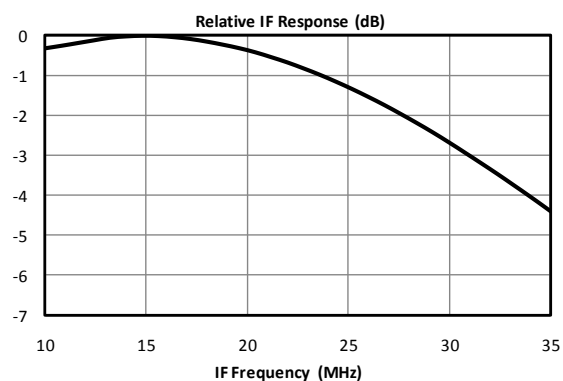
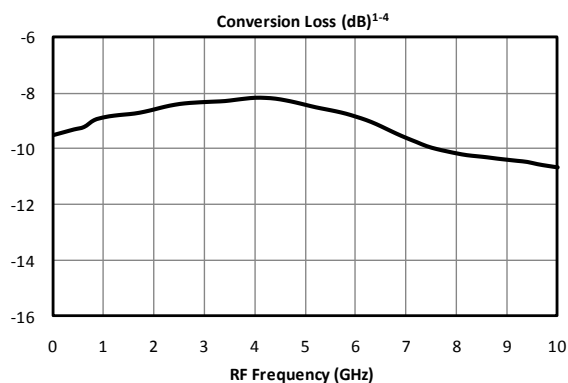
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LO/RF 10 MHz to 10 GHz
IF DC to 30 MHz

Typical Performance



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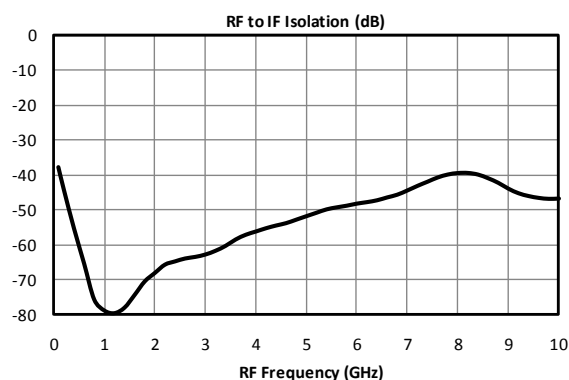
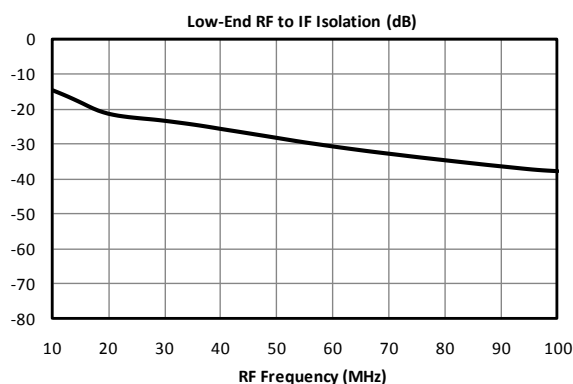
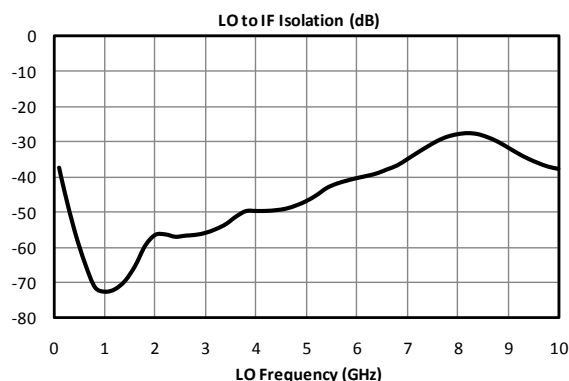
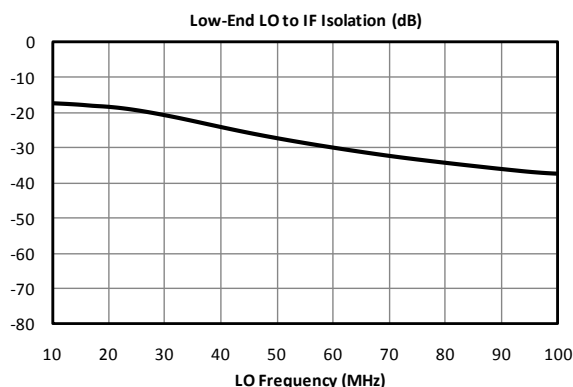


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LO/RF 10 MHz to 10 GHz
IF DC to 30 MHz



DATA SHEET NOTES:

1. Mixer Conversion Loss Plot is done with an IF frequency of 10 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. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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