

DOUBLE-BALANCED MIXERS

M1-0818

Features

- LO/RF 8.0 to 18.0 GHz
- IF DC to 4.0 GHz
- 6.0 dB Typical Conversion Loss
- 35 dB Typical LO to RF Isolation
- Broadband RF and LO



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)	8.0-18.0 8.0-18.0	8.0-18.0 8.0-18.0	DC-2.0 2.0-4.0		6.0 7.0	7.5 8.5	
Isolation (dB)							
LO-RF	8.0-18.0	8.0-18.0		25	35		
LO-IF	8.0-18.0	8.0-18.0			30		
RF-IF	8.0-18.0	8.0-18.0			25		
Input 1 dB Compression (dBm)	8.0-18.0	8.0-18.0			+2 +5 +8 +11 +14		L (+7 to +10) M (+10 to +13) N (+13 to +16) H (+16 to +19) S (+19 to +22)
Input Two-Tone Third Order Intercept Point (dBm)	8.0-18.0	8.0-18.0			+12 +15 +18 +21 +24		L (+7 to +10) M (+10 to +13) N (+13 to +16) H (+16 to +19) S (+19 to +22)

Part Number Options

Please specify diode level and package style by adding to model number.					
Package Styles		Examples			
Connectorized	<u>A</u>	M1-0818LA, M1-0818LE-2			
Microstrip ^{1,2}	<u>E</u>	<u>M1-0818</u> (Model)	<u>L</u> (Diode Option)	<u>E</u> (Package)	<u>-2</u> (I-Port Configuration)
Surface Mount ^{1,2}	<u>EZ</u>				

¹Connectorized test fixtures available for most microstrip and surface mount packages. Consult factory.

²For non-connectorized packages, specify I-port configuration by adding -1 or -2 suffix to model number. Default is -2 configuration when not specified.

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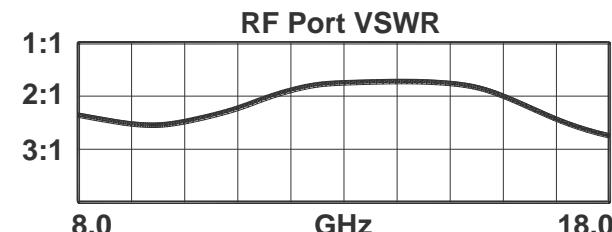
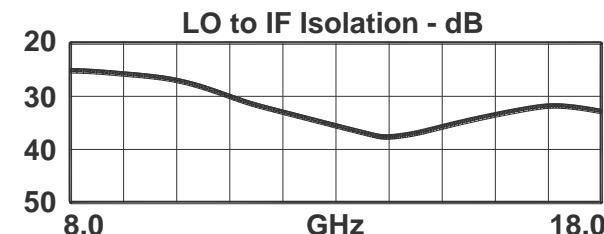
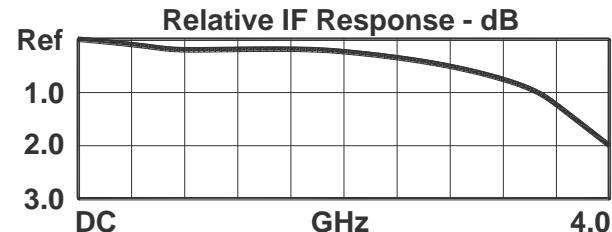
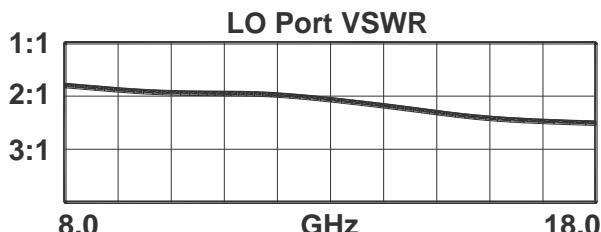
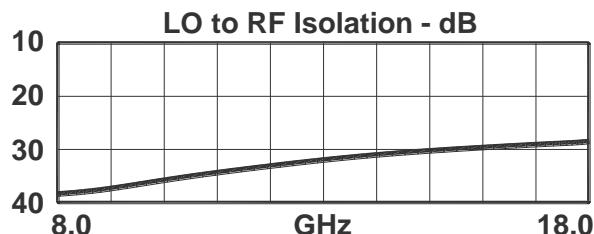
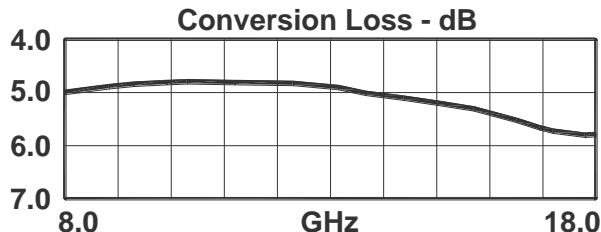
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IF DC to 4.0 GHz**

Typical Performance



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 $+100^{\circ}\text{C}$ 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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215 Vineyard Court, Morgan Hill, CA 95037 | Ph: 408.778.4200 | Fax 408.778.4300 | info@markimicrowave.com

www.markimicrowave.com