

## DOUBLE-BALANCED MIXERS

**M1-0218**

### Features

- LO/RF 2.0 to 18.0 GHz
- IF DC to 2.0 GHz
- 7.0 dB Typical Conversion Loss
- 35 dB Typical LO to RF Isolation
- Ultra-Broadband LO and RF
- For a list of recommended LO driver amps for all mixers and IQ mixers, see [here](#).



**Electrical Specifications** - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system.

| Parameter  | LO<br>(GHz)          | RF<br>(GHz)          | IF<br>(GHz)       | Min | Typ               | Max         | Diode Option<br>LO drive level (dBm)               |
|--|----------------------|----------------------|-------------------|-----|-------------------|-------------|--|
| Conversion Loss (dB)                             | 2.0-18.0<br>2.0-18.0 | 2.0-18.0<br>2.0-18.0 | DC-1.0<br>1.0-2.0 |     | 7.0<br>8.0        | 9.0<br>10.0 |  |
| Isolation (dB)                                   |                      |                      |                   |     |                   |             |  |
| LO-RF  | 2.0-18.0             | 2.0-18.0             |                   | 25  | 35                |             |  |
| LO-IF  | 2.0-18.0             | 2.0-18.0             |                   |     | 25                |             |  |
| RF-IF  | 2.0-18.0             | 2.0-18.0             |                   |     | 25                |             |  |
| Input 1 dB Compression (dBm)                     | 2.0-18.0             | 2.0-18.0             |                   |     | +3<br>+6<br>+9    |             | L (+10 to +13)<br>M (+13 to +16)<br>N (+16 to +19) |
| Input Two-Tone Third Order Intercept Point (dBm) | 2.0-18.0             | 2.0-18.0             |                   |     | +13<br>+16<br>+19 |             | L (+10 to +13)<br>M (+13 to +16)<br>N (+16 to +19) |

### Part Number Options

|  |                   |                 |
|--|-------------------|-----------------|
| <i>Please specify diode level and package style by adding to model number.</i> |                   |                 |
| <b>Package Options</b>   |                   | <b>Examples</b> |
| Connectorized  | <a href="#">P</a> | M1-0218LP       |

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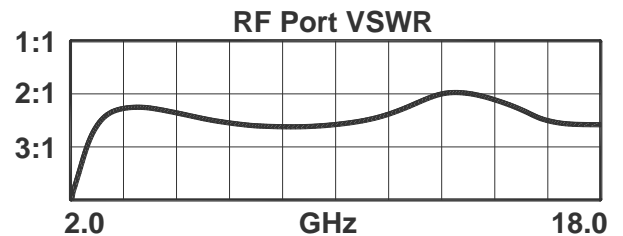
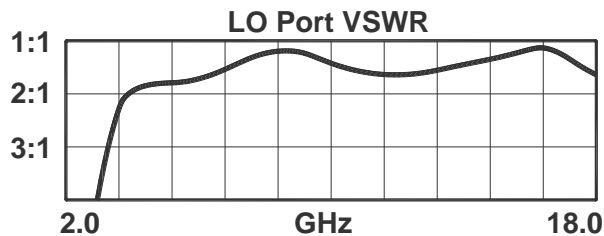
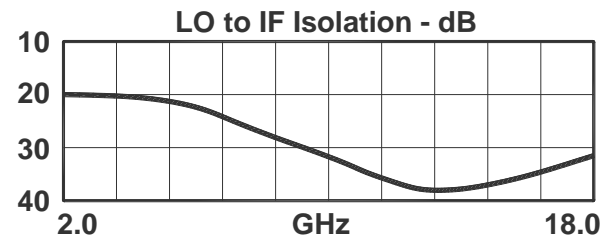
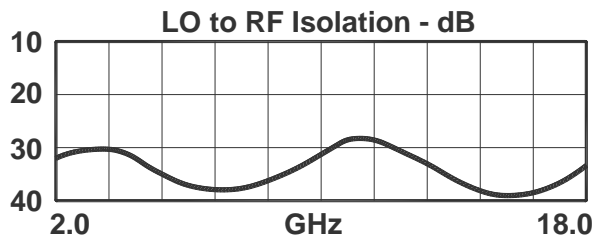
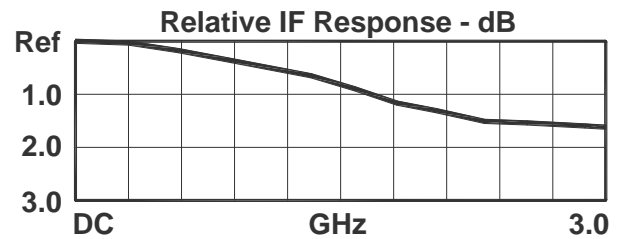
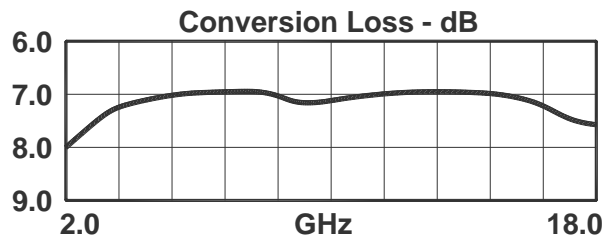
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LO/RF 2.0 to 18.0 GHz  
IF DC to 2.0 GHz

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°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.

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