



## TRIPLE-BALANCED MIXERS

M2-0006



### Features

- LO/RF .2 to 6.0 GHz
- IF .0002 to 3.0 GHz
- 7.0 dB Typical Conversion Loss
- 25 dB Typical LO to RF Isolation
- Ultra-Broadband RF, LO, and IF

**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)                             | .2-6.0<br>.2-6.0 | .2-6.0<br>.2-6.0 | .0002-1.0<br>.0002-3.0 |     | 7.0<br>7.5        | 8.5<br>10.5 |                                                    |
| Isolation (dB)                                   |                  |                  |                        | 18  |                   |             |                                                    |
| LO-RF                                            | .2-6.0           | .2-6.0           |                        |     | 25                |             |                                                    |
| LO-IF                                            | .2-6.0           | .2-6.0           |                        |     | 30                |             |                                                    |
| RF-IF                                            | .2-6.0           | .2-6.0           |                        |     | 30                |             |                                                    |
| Input 1 dB Compression (dBm)                     | .2-6.0           | .2-6.0           |                        |     | +5<br>+8<br>+11   |             | L (+13 to +16)<br>M (+16 to +19)<br>N (+19 to +22) |
| Input Two-Tone Third Order Intercept Point (dBm) | .2-6.0           | .2-6.0           |                        |     | +18<br>+21<br>+24 |             | L (+13 to +16)<br>M (+16 to +19)<br>N (+19 to +22) |

### Part Number Options

| Please specify diode level and package style by adding to model number.                                                |                           |
|------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Package Style(s) <sup>1, 2</sup>                                                                                       | Example                   |
| <a href="#">A</a> , <a href="#">B</a> , <a href="#">C</a> , <a href="#">E</a> , <a href="#">EZ</a> , <a href="#">P</a> | M2-0006 <u>L</u> <u>A</u> |

<sup>1</sup>Connectorized test fixtures available for most carrier and surface mount packages. Consult factory.

<sup>2</sup>For 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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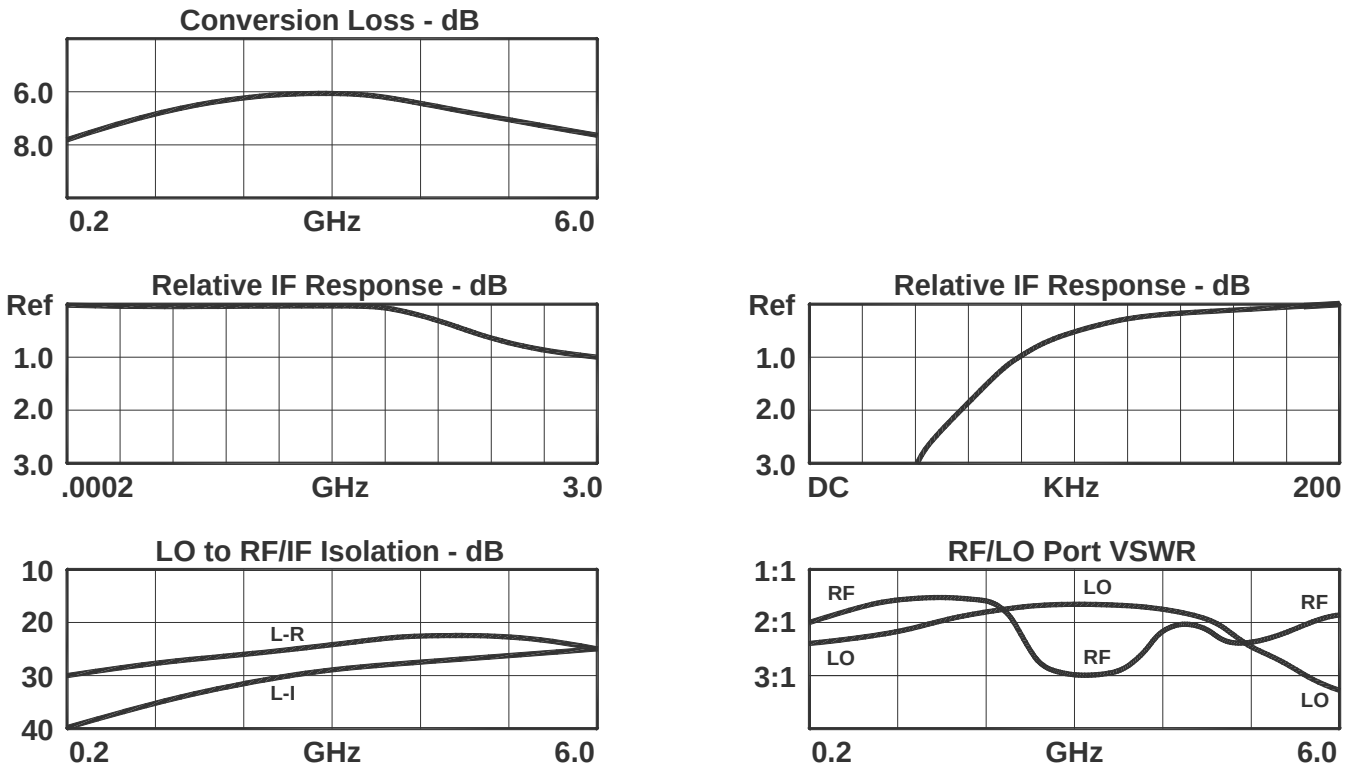
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LO/RF .2 to 6.0 GHz  
IF .0002 to 3.0 GHz

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 +26 dBm at +25°C, derated linearly to +23 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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