TRIPLE-BALANCED MIXERS

M2-0208

Features
- LO/RF 2.0 to 8.0 GHz
- IF .001 to 6.0 GHz
- 7.0 dB Typical Conversion Loss
- 20 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 (GHz) | RF (GHz) | IF (GHz) | Min | Typ | Max | Diode Option
|------------------------------------------------|----------|----------|----------|-----|-----|-----|----------------
| Conversion Loss (dB)                          | 2.0-8.0  | 2.0-8.0  | .001-2.0 | 7.0 | 7.5 | 8.0 | LO drive level (dBm)
| Isolation (dB)                                 | 2.0-8.0  | 2.0-8.0  | 2.0-4.0  | 8.5 | 9.5 | 8.5 |
| LO-RF                                          | 4.0-8.0  | 4.0-8.0  |          | 15  | 18  | 20  |
| LO-IF                                          | 2.0-8.0  | 2.0-8.0  |          | 30  |     | 30  |
| RF-IF                                          | 2.0-8.0  | 2.0-8.0  |          | 20  |     | 20  |
| Input 1 dB Compression (dBm)                   | 2.0-8.0  | 2.0-8.0  |          | +5  |     |     |
| Input Two-Tone Third Order Intercept Point (dBm)| 2.0-8.0  | 2.0-8.0  |          | +15 |     |     |

Part Number Options

Please specify diode level and package style by adding to model number.

<table>
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<tr>
<th>Package Options</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Connectorized</td>
<td>P</td>
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</table>

Examples

<table>
<thead>
<tr>
<th>Package Options Not Recommended for New Designs</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microstrip 1,2</td>
<td>M2-0208 (Model)</td>
</tr>
<tr>
<td>E</td>
<td>L (Diode Option)</td>
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<tr>
<td></td>
<td>E (Package)</td>
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<tr>
<td></td>
<td>-2 (I-Port Configuration)</td>
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</table>

1 Connectorized test fixtures available for most microstrip packages. Consult factory.
2 For non-connectorized packages, specify I-port configuration by adding –1 or –2 suffix to model number. Default is –2 configuration when not specified.

Marki microwave

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LO/RF 2.0 to 8.0 GHz
IF .001 to 6.0 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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