**MMX013**

**GaAs MMIC**

**Mixer 18-32GHz**

**Features**

- RF/LO Frequency: 18-32 GHz
- IF Bandwidth: DC-10 GHz
- Conversion Loss: 8 dB
- LO-RF Isolation: 33 dB
- LO-IF Isolation: 30 dB
- RF-IF Isolation: 28 dB
- Local Oscillator Power: +13dBm~+15dBm
- Die Size: 1.05 x 0.70 x 0.1 mm

**Typical Applications**

- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Electrical Specifications**

TA = +25°C

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
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<tbody>
<tr>
<td>RF Frequency</td>
<td>18-32</td>
<td></td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Local Oscillator Frequency</td>
<td>18-32</td>
<td></td>
<td></td>
<td>GHz</td>
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<tr>
<td>IF Frequency</td>
<td></td>
<td>DC-10</td>
<td></td>
<td>GHz</td>
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<tr>
<td>Conversion Loss</td>
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<td>8</td>
<td>9</td>
<td>dB</td>
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<td>Isolation “LO to RF”</td>
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<td>dB</td>
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<tr>
<td>Isolation “LO to IF”</td>
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<td>Isolation “RF to IF”</td>
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<td>RF Input P1dB</td>
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<td>dBm</td>
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</table>

Parameters above are intended for down-conversion test. IF frequency is 1GHz; LO power +13dBm~+15dBm.
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**Outline Drawing:**

All Dimensions in um

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**Recommended Assembly Drawing:**

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**Notes:**

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die is grounded
6. No connection required for unlabeled bond pads

**Maximum Ratings:**

1. Max RF input power: +20dBm
2. Max local oscillator input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C