Features

- LO 2 TO 26 GHz
- RF 2 TO 18 GHz
- IF 1 TO 12 GHz
- LO DRIVE +10 dBm (nominal)
- HIGH COMPRESSION POINT

Description

MY50A is a triple balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric baluns to attain excellent performance. The use of high temperature solder assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MY50A</td>
<td>Versapac</td>
</tr>
<tr>
<td>MY50AC</td>
<td>SMA Connectorized</td>
</tr>
</tbody>
</table>

Electrical Specifications: \( Z_0 = 50\Omega \)  \( Lo = +10 \mathrm{dBm} \) (Downconverter Application only)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Units</th>
<th>Typical</th>
<th>Guaranteed</th>
</tr>
</thead>
</table>
| SSB Conversion Loss (max) & SSB Noise Figure (max) | IR = 2.5 to 18 GHz, fL = 2 to 18 GHz, fI = 1 to 10 GHz  
IR = 2 to 18 GHz, fL = 2 to 26 GHz, fI = 1 to 12 GHz | dB dB | 7.5 8.0 | 9.5 10.5 11.0 |
| Isolation, L to R (min)         | fL = 2 to 3 GHz  
 fL = 3 to 26 GHz | dB dB | 22 30 | 15 20 |
| Isolation, L to I (min)         | fL = 7 to 26 GHz  
 fL = 2 to 7 GHz | dB dB | 30 22 | 20 15 |
| 1 dB Conversion Comp.           | fL = +10 dBm | dBm dBm | +5 | +5 |
| Input IP3                       | R1 = 5 GHz at -6 dBm, R2 = 5.01 GHz at -6 dBm, fL = 8 GHz at +10 dBm  
R1 = 15 GHz at -6 dBm, fL = 25 GHz at +10 dBm | dBm dBm | +15 12 |
Typical Performance Curves

**Drive Level**

Conversion Loss vs. Frequency

Conversion Loss vs. Frequency

Isolation vs. Frequency

Isolation vs. Frequency

L-Port VSWR

L-Port VSWR

R-Port VSWR

R-Port VSWR
Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-54°C to +100°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-65°C to +100°C</td>
</tr>
<tr>
<td>Peak Input Power</td>
<td>+26 dBm max @ +25°C</td>
</tr>
<tr>
<td></td>
<td>+22 dBm max @ +100°C</td>
</tr>
<tr>
<td>Peak Input Current</td>
<td>mA DC</td>
</tr>
</tbody>
</table>

Outline Drawing: Versapac *

Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

Outline Drawing: SMA Connectorized *

Weight: 6 grams (0.21 oz.) max

Weight: 12 grams (0.42 oz.) max

 visita www.macom.com for additional data sheets and product information.
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