M88H / M88HC

Triple-Balanced Mixer

Features
- LO 2 TO 18 GHz
- RF 2 TO 18 GHz
- IF 2 TO 8 GHz
- LO DRIVE +21 dBm (nominal)
- WIDE BANDWIDTH
- HIGH THIRD-ORDER I.P. +24 dBm (TYP.)

Description

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>M88H</td>
<td>Minpac</td>
</tr>
<tr>
<td>M88HC</td>
<td>SMA Connectorized</td>
</tr>
</tbody>
</table>

Electrical Specifications: $Z_0 = 50\Omega$  $Lo = +21$ 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>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>+25°C</td>
<td>-54° to +85°C</td>
</tr>
</tbody>
</table>
| SSB Conversion Loss (max) & SSB Noise Figure (max) | $f_R = 2$ to 10 GHz, $f_L = 2$ to 18 GHz, $f_I = 2$ to 8 GHz  
$f_R = 10$ to 18 GHz, $f_L = 2$ to 18 GHz, $f_I = 2$ to 8 GHz | dB  | dB 7.5  | 10.0       | 10.3       |
| Isolation, L to R (min)            | $f_L = 2$ to 18 GHz |      | 28      | 15     | 14       |
| Isolation, L to I (min)            | $f_L = 2$ to 18 GHz |      | 32      | 17     | 16       |
| 1 dB Conversion Comp.              | $f_L = +21$ dBm  | dBm  | +17     |         |          |
| Input IP3                          | $f_{R1} = 6$ GHz at 0 dBm, $f_{R2} = 6.01$ GHz at 0 dBm, $f_L = 8$ GHz at +21 dBm  
$f_{R1} = 14$ GHz at 0 dBm, $f_{R2} = 14.01$ GHz at 0 dBm, $f_L = 10$ GHz at +21 dBm | dBm  | dBm +26 |         | +24      |
Typical Performance Curves

- **Conversion Loss vs Lo Drive Power**
  - The maximum recommended drive level is +24 dBm.

- **Conversion Loss vs Input Frequency**
  - **Lo @ +21 dBm**

- **R-Port VSWR Lo @ +21 dBm**
  - **F<sub>1</sub> = 2.0 GHz**
  - **F<sub>L</sub> = 6.0 GHz**

For further information and support please visit: [https://www.macom.com/support](https://www.macom.com/support)
**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>+27 dBm max @ +25°C</td>
</tr>
<tr>
<td></td>
<td>+24 dBm max @ +100°C</td>
</tr>
<tr>
<td>Peak Input Current</td>
<td>100 mA DC</td>
</tr>
</tbody>
</table>

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

**Outline Drawing: Minpac *  
Weight: 8 grams (0.28 oz.) max**

**Outline Drawing: SMA Connectorized *  
Weight: 29 grams (1.02 oz.) max**

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

**L-Port VSWR @ +21 dBm**

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