# Double Balanced Mixer
## Multi-Octave Band

### Model MM9xSMx
**RF 6.0 to 18.0 GHz**

#### Electrical Specifications (1):

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RF(GHz)</td>
<td>LO(GHz)</td>
</tr>
<tr>
<td><strong>SSB Conversion loss</strong></td>
<td>6.0-18.0</td>
<td>6.0-18.0</td>
</tr>
<tr>
<td></td>
<td>6.0-18.0</td>
<td>6.0-18.0</td>
</tr>
<tr>
<td><strong>Isolation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LO to RF:</td>
<td>6.0-18.0</td>
<td>6.0-13.0</td>
</tr>
<tr>
<td>LO to IF:</td>
<td>13.0-18.0</td>
<td>13.0-18.0</td>
</tr>
<tr>
<td>RF to IF:</td>
<td>6.0-18.0</td>
<td>6.0-18.0</td>
</tr>
<tr>
<td><strong>Input 1-dB Compression Point:</strong></td>
<td>6.0-18.0</td>
<td>6.0-18.0</td>
</tr>
<tr>
<td><strong>Input Third Order Intercept Point:</strong></td>
<td>6.0-18.0</td>
<td>6.0-18.0</td>
</tr>
<tr>
<td><strong>LO Power:</strong></td>
<td>6.0-18.0</td>
<td>6.0-18.0</td>
</tr>
</tbody>
</table>

**Notes:**
1. Specifications are guaranteed when tested as a downconverter in a 50 Ohm system at +25°C with the nominal LO power. Specifications indicated as typical are not guaranteed.
2. Noise figure is typically within ±0.5 dB of conversion loss for IF frequencies greater than 10 MHz.
3. Conversion loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
4. Usable LO drives are up to 2 dB below and 3 dB above nominal.
5. See Application Note M112, for aid in selecting the outline and for mounting and installation information.

**Typical Performance at 25°C**

- **Conversion Loss (200MHz IF)>dB**
- **Relative Conv. Loss vs. IF Freq.>dB**
- **LO VSWR**
- **RF VSWR**

**Outline:**
- **SMMC4A:** AS SHOWN
- **SMMC4B:** RF & LO REVERSED
- **SMMT4A:** AS SHOWN
- **SMMT4B:** RF & LO REVERSED

**MM9xSMD**

**MM9xSMH**

**MM9xSMx:** AS SHOWN

**MM9xSMx-14:** RF & LO REVERSED

**Drop-In Module or With SMA(F)**

**Connectors**

- **D = No Cover**
- **H = With Cover**

**NOTE:** See PC board footprint - FP1 on page 3-64

All dimensions are in inches and [mm].