Voltage Controlled Oscillator
Low Noise Bipolar Transistor
Model TOM9338
180 to 220 MHz

Features
- Low Noise Bipolar Transistor
- Broad Tuning Range
- Operating Case Temp. -40 °C to +85 °C
- Environmental Screening Available

Specifications

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>TYPICAL Ta = +25 °C</th>
<th>MIN/MAX Ta = -40 °C to +85 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>180 - 220 MHz</td>
<td>180 - 220 MHz</td>
</tr>
<tr>
<td>Output Power (dBm)</td>
<td>+17.5</td>
<td>+15.0 Min.</td>
</tr>
<tr>
<td>Power Flatness (dBm)</td>
<td>±0.25</td>
<td>±0.5 Max.</td>
</tr>
<tr>
<td>Tuning Voltage Range (V)</td>
<td>4.0 to 9.0</td>
<td>0.0 to 12.0</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>9.0</td>
<td>3.0 Min.</td>
</tr>
<tr>
<td>Sensitivity (MHz/V)</td>
<td>20.0</td>
<td>10.0 Max.</td>
</tr>
<tr>
<td>3dB Modulation BW,</td>
<td>5 MHz Min.</td>
<td>Zg = 50 Ohms</td>
</tr>
<tr>
<td>Pushing (MHz/V)</td>
<td>0.5</td>
<td>2.0 Max.</td>
</tr>
<tr>
<td>Pulling (MHz); 14 dB RL</td>
<td>5.0</td>
<td>10.0 Max.</td>
</tr>
<tr>
<td>Frequency Drift (MHz/°C)</td>
<td>10 Max.</td>
<td></td>
</tr>
<tr>
<td>Power Vdc</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>mA</td>
<td>26.0</td>
<td>30.0 Max.</td>
</tr>
</tbody>
</table>

Maximum Ratings
- Ambient Operating Temperature .................. -40 °C to +85 °C
- Storage Temperature .............................. -62 °C to +125 °C
- Case Temperature .................................. +125 °C
- DC Voltage ........................................ +15 Volts
- Maximum DC Tuning Voltage ....................... +15 Volts
- Minimum DC Tuning Voltage ....................... 0 Volts

Packaging Options (see Appendix)
- TOM9338, 4 Pin TO-8 (T4)
- T09338, 4 Pin Surface Mount (SM3)
- B09338, Connectorized Housing (H1)

Note: Care should always be taken to effectively ground the case of each unit.

Typical Performance Data

Graphs showing
- Output Power (dBm) vs. Tuning Voltage (Volts)
- Frequency (MHz) vs. Tuning Voltage (Volts)

Legend
- +25 °C
- +50 °C
- 0 °C

Notes:
1. Phase Noise is measured using the Aeroflex PN9000.
2. Worst case phase noise @ 100KHz offset across frequency range and temperature extremes is -120dBc/Hz