AXIOM75

OCXO WITH SINE WAVE OUTPUT, LOW PHASE NOISE

25.8 x 25.8 x 12.7 mm max.

FEATURES

- Thru Hole package, size 25.8 x 25.8 x 12.7 mm
- Sine Wave Output of +7 dBm (R 50Ω)
- Low Phase Noise till -160 dBc/Hz @ 100 KHz
- Standard Frequencies: 10.0 / 12.8 / 100.0 MHz

Parameter | min. | typ. | max. | Unit | Condition
--- | --- | --- | --- | --- | ---
Frequency Range | 10 | 125 | | MHz | @+25°C @Vc = VREF/2
Standard frequencies | | | 10.000 / 12.800 / 100.000 | MHz |
Frequency stability | | | | |
vs. operating temperature range (steady state) | ± 500 | ± 200 | ± 100 | ± 50 | ± 25 | ± 10 | ppm | Option II = “200” | “100” | “50” | “25” | “10” |
operating temperature range | -10 | +60 | °C | Note 2 |
vs. supply voltage variation | ± 10 | ppm | Vc ± 5% |
vs. load change | ± 5 | ppm | RL ± 5% |
Long term (aging) per day, after 30 days operation | ± 5 | ± 10 | ppm | Option II = “200”, “100” |
Long term (aging) 1st year, after 30 days operation | ± 1 | ± 2 | ppm | Option II = “50”, “25”, “10” |
Frequency adjustment range | | | | | |
Electronic Frequency Control (EFC) | ± 3 | ppm | Option II = “200”, “100” |
EFC voltage (Vc) | 0 | V | VREF |
EFC slope (ΔF / ΔVc) | | | | positive |
EFC input impedance | 100 | kΩ |
RF output | | | | |
Signal waveform | | | Sine wave | | |
Output level | | | + 7 | dBm |
Harmonics | | | -30 | dBc |
Spurious | | | -90 | dBc |
Warm-up time | | | 5 min | Dfmax/f0 < ±0.1 ppm |
Phase noise @ 10.000 MHz | | | | | |
-140 | -150 | -155 | -160 | dBC/Hz | @ 100 Hz | @ 1kHz | @ 10 kHz |
Reference voltage (Vref) output | | | | | |
Supply voltage (Vc) | 4.75 | 5.0 | 5.25 | V | Option I = “50” |
| 11.4 | 12 | 12.6 | V | Option I = “12” |
Current consumption (steady state) | | | | | |
@ +25°C | 250 | mA | Option I = “50” |
| 100 | mA | Option I = “12” |
Current consumption (warm-up) | | | | | |
@ +25°C | 600 | mA | Option I = “50” |
| 250 | mA | Option I = “12” |
Operable temperature range | | | | | |
-20 | +70 | °C |
Storage temperature range | | | | | |
-40 | +85 | °C |
Enclosure (see drawing) (LxWxH) | 25.8x25.8x12.7 max. | mm |
Weight | 10 | gram |

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**THRU HOLE OCXO**  
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### AXIOM75  
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**Notes:**
1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated.
2. Other operating temperature range on request.
3. Other reference voltage on request.

**Ordering Part Number Code:**

<table>
<thead>
<tr>
<th>Model (Specification)</th>
<th>Revision</th>
<th>Option I</th>
<th>Option II</th>
<th>Frequency [MHz]</th>
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<tbody>
<tr>
<td>AXIOM75</td>
<td>Rev.4.0</td>
<td>12</td>
<td>25</td>
<td>10.000</td>
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</table>

### Enclosure drawing

**Pin connections**

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Symbol</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RF OUT</td>
<td>RF Output</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
<td>Ground, case</td>
</tr>
<tr>
<td>3</td>
<td>Vc</td>
<td>Control Voltage (EFC)</td>
</tr>
<tr>
<td>4</td>
<td>VREF</td>
<td>Reference Voltage</td>
</tr>
<tr>
<td>5</td>
<td>Vs</td>
<td>Supply Voltage</td>
</tr>
</tbody>
</table>

**Environmental conditions**

<table>
<thead>
<tr>
<th>Test</th>
<th>IEC 60068 Part ...</th>
<th>IEC 60679-1 clause ...</th>
<th>Test conditions</th>
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<tbody>
<tr>
<td>Sealing tests</td>
<td>2-17</td>
<td>4.6.2</td>
<td>Gross leak: Test Qc, Fine leak: Test Qk</td>
</tr>
<tr>
<td>Solderability</td>
<td>2-20</td>
<td>4.6.3</td>
<td>Test Ta (235 ± 5)°C Method 1</td>
</tr>
<tr>
<td>Shock*</td>
<td>2-58</td>
<td>4.6.4</td>
<td>Test Tb Method 1A, 5s</td>
</tr>
<tr>
<td>Vibration, sinusoidal*</td>
<td>2-27</td>
<td>4.6.8</td>
<td>Test Ea, 3 x per axes 100g, 6 ms half-sine pulse</td>
</tr>
<tr>
<td>Endurance tests</td>
<td>2-6</td>
<td>4.6.7</td>
<td>Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g</td>
</tr>
</tbody>
</table>

- ageing
- extended aging

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