**AXIOM15**

OCXO IN SMD PACKAGE WITH SINE WAVE OUTPUT

**FEATURES**

- SMD holder size 25.6 x 22.2 x 13 mm.
- SINE WAVE output
- Till +/-5 ppb stability over temperature range
- Standard Frequency 10.00 MHz

<table>
<thead>
<tr>
<th>Parameter</th>
<th>min.</th>
<th>typ.</th>
<th>max.</th>
<th>Unit</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range</td>
<td>10</td>
<td>120</td>
<td>MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard frequencies</td>
<td>10.0000</td>
<td>MHz</td>
<td></td>
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<tr>
<td>Frequency stability</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>Initial tolerance @+25°C</td>
<td>± 500 ppm</td>
<td>ppm</td>
<td>Option II = “100”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vs. operating temperature range</td>
<td>± 100 ppm</td>
<td>ppm</td>
<td>Option II = “50”</td>
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<td></td>
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<tr>
<td>(steady state)</td>
<td>± 50 ppm</td>
<td>ppm</td>
<td>Option II = “25”</td>
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<tr>
<td>Long term (aging) per day,</td>
<td>± 25 ppm</td>
<td>ppm</td>
<td>Option II = “10”</td>
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<td></td>
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<tr>
<td>after 30 days operation</td>
<td>± 10 ppm</td>
<td>ppm</td>
<td>Option II = “05”</td>
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</tr>
<tr>
<td>Long term (aging) 1st year,</td>
<td>± 5 ppm</td>
<td>ppm</td>
<td>ppm</td>
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</tr>
<tr>
<td>@ +40°C, after 30 days</td>
<td></td>
<td></td>
<td>ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>operating temperature range</td>
<td>-10</td>
<td>+60 °C</td>
<td></td>
<td>Note 2</td>
<td></td>
</tr>
<tr>
<td>vs. supply voltage variation</td>
<td>± 10</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>vs. load change</td>
<td>± 10</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Long term (aging) per day,</td>
<td>± 1</td>
<td>± 2</td>
<td>ppm</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>after 30 days operation</td>
<td>± 10</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>long term (aging) 1st year,</td>
<td>± 200 ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td></td>
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<tr>
<td>@ +40°C, after 30 days</td>
<td>± 100 ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
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<tr>
<td>Frequency adjustment</td>
<td></td>
<td></td>
<td>ppm</td>
<td>ppm</td>
<td></td>
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<tr>
<td>Electronic Frequency Control (EFC)</td>
<td>± 2</td>
<td>± 5</td>
<td>ppm</td>
<td>All other Options II</td>
<td></td>
</tr>
<tr>
<td>EFC voltage Vc</td>
<td>0.25</td>
<td>2.5</td>
<td>V</td>
<td>All other Options II</td>
<td></td>
</tr>
<tr>
<td>EFC slope (DF / DVc)</td>
<td>4.75</td>
<td></td>
<td>ppm</td>
<td>ppm</td>
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<tr>
<td>EFC input impedance</td>
<td>100</td>
<td>kΩ</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>RF output</td>
<td></td>
<td></td>
<td>ppm</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Signal waveform</td>
<td>Sine wave</td>
<td></td>
<td>ppm</td>
<td>ppm</td>
<td></td>
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<tr>
<td>Load</td>
<td>50</td>
<td>Ω</td>
<td>± 10 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output level</td>
<td>+3</td>
<td>dBM</td>
<td></td>
<td>Note 4</td>
<td></td>
</tr>
<tr>
<td>Harmonics</td>
<td>-20</td>
<td>dBC</td>
<td></td>
<td></td>
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<tr>
<td>Warm-up time</td>
<td>5</td>
<td>min</td>
<td>Df(W)/f0 &lt; ±0.1 ppm</td>
<td></td>
<td></td>
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<tr>
<td>Supply voltage Vc</td>
<td>4.75</td>
<td>11.6</td>
<td>V</td>
<td>Option I = “50”</td>
<td></td>
</tr>
<tr>
<td>(steady state, @ +25°C)</td>
<td>5.0</td>
<td>12.0</td>
<td>V</td>
<td>Option I = “12”</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>5.25</td>
<td>12.6</td>
<td>V</td>
<td>Option I = “10”</td>
<td></td>
</tr>
<tr>
<td>(steady state, @ +25°C)</td>
<td>5.0</td>
<td>12.0</td>
<td>V</td>
<td>Option I = “12”</td>
<td></td>
</tr>
<tr>
<td>Current consumption (warm-up)</td>
<td>600</td>
<td>250</td>
<td>mA</td>
<td>Option I = “10”</td>
<td></td>
</tr>
<tr>
<td>(steady state, @ +25°C)</td>
<td>250</td>
<td>125</td>
<td>mA</td>
<td>Option I = “12”</td>
<td></td>
</tr>
<tr>
<td>Operable temperature range</td>
<td>-20</td>
<td>+70 °C</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Storage temperature range</td>
<td>-40</td>
<td>+85 °C</td>
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<tr>
<td>Enclosure (see drawing) (LxWxH)</td>
<td>25.6x22.2x13 max.</td>
<td>mm</td>
<td>IEC 61837 CO 28</td>
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<tr>
<td>Note3</td>
<td>10</td>
<td>gram</td>
<td>IEC 60286-3</td>
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</table>

**Notes:**

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Other operating temperature range on request
3. Lower height H on request
4. Higher output level on request

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Datasheet

AXIOM15

OCXO IN SMD PACKAGE WITH SINE WAVE OUTPUT

Ordering Code:

<table>
<thead>
<tr>
<th>Model (Specification)</th>
<th>Option I</th>
<th>Option II</th>
<th>Frequency [MHz]</th>
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<tbody>
<tr>
<td>AXIOM15</td>
<td>50</td>
<td>100</td>
<td>10.000</td>
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Pin connections

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Symbol</th>
<th>Function</th>
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<tbody>
<tr>
<td>1</td>
<td>(V_C)</td>
<td>Control Voltage (EFC)</td>
</tr>
<tr>
<td>2</td>
<td>N.C.</td>
<td>No Connection</td>
</tr>
<tr>
<td>3</td>
<td>(V_S)</td>
<td>Supply Voltage</td>
</tr>
<tr>
<td>4</td>
<td>RF OUT</td>
<td>RF Output</td>
</tr>
<tr>
<td>5</td>
<td>N.C.</td>
<td>No Connection</td>
</tr>
<tr>
<td>6</td>
<td>N.C.</td>
<td>No Connection</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
<td>Ground</td>
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</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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</thead>
<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>(if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solderability</td>
<td>2-20</td>
<td>4.6.3</td>
<td>Test Ta ((235 \pm 5))°C Method 1</td>
</tr>
<tr>
<td>Resistance to soldering heat</td>
<td>2-58</td>
<td></td>
<td>Test Tb Method 1A, 5s</td>
</tr>
<tr>
<td>Shock*</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>Vibration, sinusoidal*</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>
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<tr>
<td>Endurance tests</td>
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<tr>
<td>- ageing</td>
<td></td>
<td></td>
<td>4.7.1 30 days @ 85°C, OCXO @25°C</td>
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<td>- extended aging</td>
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<td>4.7.2 1000h, 2000h, 8000h @85°C</td>
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</tbody>
</table>

Other environmental conditions on request

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