AXIOM70

OCXO WITH HCMOS OUTPUT

FEATURES

- 5-pin thru hole package, size 25.8 x 25.8 x 12.7 mm.
- HCMOS Output logic
- Supply Voltage 5.0V or 3.3V
- Standard Frequencies: 10.0 / 12.8 / 19.44 MHz

Parameter | min. | typ. | max. | Unit | Condition
--- | --- | --- | --- | --- | ---
Frequency Range | 10 | 40 | MHz
Standard frequencies | 10.000 / 12.800 / 19.440 | MHz
Frequency stability
Initial tolerance at delivery | ± 500 | ppm | @+25°C @Vc = centre
| ± 200 | ppm | Option II = “200”
| ± 100 | ppm | Option II = “100”
| ± 50 | ppm | Option II = “50”
| ± 25 | ppm | Option II = “25”
| ± 10 | ppm | Option II = “10”
Operating temperature range | -10 | °C | Note 2
Supply voltage variation | ± 10 | ppm | VV ± 5%
Load change | ± 10 | ppm | RL ± 5%
Long term (aging) per day, after 30 days operation | ± 5 | ppm | Option II = “200”
| ± 1 | ppm | Option II = “100”
Long term (aging) 1st year, after 30 days operation | ± 200 | ppm | Option II = “200”
| ± 100 | ppm | Option II = “50”
Frequency adjustment range
Electronic Frequency Control (EFC) range | ± 3 | ppm | Option II = “200”
| ± 0.8 | ppm | Option II = “100”
| ± 1 | ppm | Option II = “50”
EFC voltage Vc | 0.15 | 3.15 | V | Option I = “33”
| 0.25 | 4.75 | V | Option I = “50”
EFC slope (Df / DVc) | | positive |
EFC input impedance | 100 | kΩ |
RF output
Signal waveform | HCMOS |
Load | 15 | pF |
Rise & decay time | 10 | ns |
Symmetry (duty cycle) | 40 | % |
Warm-up time | 5 | min | Df_sub / f0 < ±0.1 ppm |
Reference voltage VREF output | 3.0 | V | Note 3
Supply voltage Vc | 3.15 | 3.3 | 3.45 | V | Option I = “33”
| 4.75 | 5.0 | 5.25 | V | Option I = “50”
Current consumption (steady state) @ +25°C | 350 | mA | Option I = “33”
| 250 | mA | Option I = “50”
Current consumption (warm-up) | 900 | mA | Option I = “33”
| 600 | mA | Option I = “50”
Operable temperature range | -20 | °C |
| +70 | °C |
Storage temperature range | -40 | °C |
| +85 | °C |
Enclosure (see drawing) (LxWxH) | 25.8x25.8x12.7 max. | mm |
Weight | 10 | gram |
Packing | Palette |

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

FCD-Tech B.V.
Stationsplein 99/259
1703 WE Heerhugowaard
Netherlands

Website: www.fcd-tech.com
Email: sales@fcd-tech.com
Phone: +31 (0)20 8932140
Datasheet

THRU HOLE OCXO

AXIOM70 | OCXO WITH HCMOS 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>AXIOM70</td>
<td>50</td>
<td>25</td>
<td>10.000</td>
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Enclosure drawing

Pin connections

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Symbol</th>
<th>Function</th>
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<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>
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<tr>
<td>3</td>
<td>Vc</td>
<td>Control Voltage (EFC)</td>
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<tr>
<td>4</td>
<td>VREF</td>
<td>Reference Voltage</td>
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<tr>
<td>5</td>
<td>Vs</td>
<td>Supply Voltage</td>
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Environmental conditions

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<tr>
<th>Test</th>
<th>IEC 60068 Part ...</th>
<th>IEC 60679-1 clause ...</th>
<th>Test conditions</th>
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<td>Sealing tests</td>
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<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>
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<tr>
<td>Resistance to soldering heat</td>
<td>2-58</td>
<td>4.6.3</td>
<td>Test Tb Method 1A, 5s</td>
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<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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</tbody>
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Endurance tests

- ageing
  - extended aging
  
<table>
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<tr>
<th></th>
<th>4.7.1</th>
<th>4.7.2</th>
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Other environmental conditions on request

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