**FEATURES**

- DIL14 holder size 20.7 x 13.1 x 8.5 mm.
- HCMOS output
- Till +/-50 ppb stability over temperature range
- Standard Frequencies 10 / 12.8 / 16.384 / 20.0 MHz

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**Parameter** | **min.** | **typ.** | **max.** | **Unit** | **Condition**
--- | --- | --- | --- | --- | ---
Frequency range | 10 | 80 | MHz | | |
Standard frequencies | 10 / 12.8 / 16.384 / 20.000 MHz | | | |
Frequency stability | ppm | | | | |
Initial tolerance vs. operating temperature range (steady state) | ± 500 | ± 50 | ± 10 | ± 200 | ± 300 | ± 500 | ppb | Option II = “50” | Option II = “100” | Option II = “200” | Option II = “300” | Option II = “500” |
operating temperature range | -10 | +60 | °C | | Note 2 |
vs. supply voltage variation | ± 10 | ppb | | | |
vs. load change | ± 20 | ppb | | | |
long term (aging) 1st year (Note 3) | ± 0.5 | ppm | | | @ +40°C, after 30 days |
Frequency adjustment range | | | | | |
Electronic Frequency Control (EFC) | ± 2 | ± 5 | ppm | | |
EFC voltage $V_C$ | 0.15 | 1.65 | 3.15 | V | Option I = “33” |
| | 0.25 | 2.5 | 4.75 | V | Option I = “50” |
EFC slope (DF / DV_C) | | | | | positive |
EFC linearity | | | % | | |
EFC input impedance | 100 | kΩ | | | |
RF output | | | | | |
Signal waveform | HCMOS | | | | |
Load | 15 | pF | | | |
Rise & decay time | 10 | ns | | | |
Symmetry | 40 | 60 | % | | |
Warm-up time | 2 | min | | | $Df_{final/f0} < ±0.1$ ppm |
Supply voltage $V_V$ | 3.13 | 3 | 3.47 | V | Option I = “33” |
| | 4.75 | 5 | 5.25 | V | Option I = “50” |
Current consumption (steady state) @ +25°C | 300 | mA | Option I = “33” |
| | 200 | mA | Option I = “50” |
Current consumption (warm-up) | 800 | mA | Option I = “33” |
| | 500 | mA | Option I = “50” |
Enable/disable function | | | | | |
Operable temperature range | -30 | +75 | °C | | |
Storage temperature range | -40 | +85 | °C | | |
Enclosure (see drawing) | 20.7x13.1x8.5 max. | mm | | | IEC 60679-3 CO 02 |
Weight | 5 | gram | | | |
Packing | Palette or tube | | | | |
ESD Sensitivity | 1500 | V | | | HBM, IEC 61000-4-2 |
**Datasheet**

**DIL14 OCXO**

**AXIOM20**

**OCXO IN DIL14 PACKAGE, HCMOS OUTPUT**

**Notes:**

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Other operating temperature range on request
3. Aging of ± 0.2 ppm / 1st year on request

**Ordering Code:**

<table>
<thead>
<tr>
<th>Model (Specification)</th>
<th>Option I</th>
<th>Option II</th>
<th>Frequency [MHz]</th>
</tr>
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<tbody>
<tr>
<td>AXIOM20</td>
<td>50</td>
<td>100</td>
<td>10.000</td>
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</tbody>
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**Enclosure drawing**

**Pin connections**

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Symbol</th>
<th>Function</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Vc</td>
<td>Voltage Control (EFC)</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>8</td>
<td>RF OUT</td>
<td>RF Output</td>
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<tr>
<td>14</td>
<td>VS</td>
<td>Supply Voltage</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 (if applicable)</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, 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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<tr>
<td>Endurance tests</td>
<td></td>
<td></td>
<td>30 days @ 85°C, OCXO @25°C</td>
</tr>
<tr>
<td>- ageing</td>
<td></td>
<td></td>
<td>1000h, 2000h, 8000h @85°C</td>
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<tr>
<td>- extended aging</td>
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</tbody>
</table>

**Other environmental conditions on request**

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