CMOS Voltage Controlled Crystal Oscillator

**CVHD-037X Model**
5×7 mm SMD, 3.3V, CMOS

**Frequency Range:** 30,000 to 170,000 MHz
**Operating Temperature Range:** -40°C to 85°C
**Storage Temperature Range:** -45°C to 90°C
**Input Voltage:** 3.3V ± 5%
**Control Voltage:** 1.65V ± 1.65V
**Input Current:** 15mA Max

**Output:** CMOS
- Symmetry: 45/55% Max @ 50% Vdd
- Rise/Fall Time: 3ns Max @ 10% to 90%
- Pullability APR: ±50ppm Min
- Linearity: 10%
- Load: 15pF Max
- Logic “1” Level: 0.9×Vdd Min
- Logic “0” Level: 0.1×Vdd Max

**Input Impedance:** 5-10 MΩ
**Enable Delay Time:** 2ms Max
**Disable Delay Time:** 200ns Max

**Phase Noise (Typical):**
- 10 Hz Offset: -75 dBc/Hz
- 100 Hz Offset: -100 dBc/Hz
- 1 kHz Offset: -130 dBc/Hz
- 10 kHz Offset: -145 dBc/Hz
- 100 kHz Offset: -155 dBc/Hz
- 1 MHz Offset: -160 dBc/Hz
- 10 MHz Offset: -160 dBc/Hz

**Part Number Example:** CVHD-037X-100.000 = 3.3V, ±50ppm APR, 100 MHz

**Dimensions (inches (mm))**
All dimensions are Max unless otherwise specified.

<table>
<thead>
<tr>
<th>PIN</th>
<th>Connection</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cont. Volt</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>E/D</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>NC</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Vcc</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function pin 2</th>
<th>Output pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;1&quot; level 0.7×Vdd Min</td>
<td>Active</td>
</tr>
<tr>
<td>&quot;0&quot; level 0.3×Vdd Max</td>
<td>High Z</td>
</tr>
</tbody>
</table>

**Standard Frequencies (MHz):**
- 80,000
- 100,000
- 122,880
- 125,000

**Environmental:**
- **Shock:** MIL-STD-883, Method 2002, Condition B
- **Solderability:** MIL-STD-883, Method 2003
- **Vibration:** MIL-STD-883, Method 2007, Condition A
- **Solvent Resistance:** MIL-STD-202, Method 215
- **Resistance to Soldering Heat:** MIL-STD-202, Method 210, Condition I or J

**Mechanical:**
- **Thermal Shock:** MIL-STD-883, Method 1011, Condition A
- **Moisture Resistance:** MIL-STD-883, Method 1004

**SUGGESTED PAD LAYOUT**

**RECOMMENDED REFLOW SOLDERING PROFILE**

Available on 16mm Tape and Reel in quantities of 1,000 pcs.

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Rev: H

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