Model CVHD-575 is the industry’s lowest phase noise VCXO in a 5×7.5 mm package. Close-in phase noise is -90 dBc/Hz @ 10 Hz while its floor is at -165 dBc/Hz. This oscillator may be small in size but it packs a punch inside. Its output driver is capable of driving ±24mA.

Applications include:
- Digital Video, DACs, ADCs for HD Audio,
- Low Phase Signal Sources, Test and Measurement
CVHD-575
Ultra-Low Phase Noise VCXO

Frequency Range: 20 MHz to 54.240 MHz*
Temperature Range: 0°C to +70°C (standard)
(Option M) -20°C to +70°C
(Option X) -40°C to +85°C
Storage: -45°C to 90°C
Input Voltage: 3.3V ±0.3V
Input Current: 15mA Typical, 25mA Max
Output: HCMOS
Symmetry: 45/55% Max @ zero crossing point
Rise/Fall Time: 2ns Max @ 20% to 80% Vdd
Logic: “0” = 10% Vdd Max
“1” = 90% Vdd Min
Load: 15pF
Output Current: ±24mA Max

Input:
Modulation Bandwidth: >10kHz @ -3dB
Input Impedance: 51 kΩ
Control Voltage: 1.65V ±1.65V
Tuning Sensitivity: ±22ppm/V Typical
Frequency Pulling: ±20ppm APR Min
(Inclusive of frequency stability, calibration, and aging.)
Linearity: ±10% Max
Phase Jitter: (12kHz~20MHz) 125fs Typical @ 40 MHz
Phase Noise Typical: See plot
Phase Noise Floor: -165 dBC/Hz Typical, -162 dBC/Hz Max
Sub-harmonics: None
Aging: <3ppm 1st year, <1ppm thereafter

Part Number Example:
CVHD-575X-50.000 = 3.3V, 45/55, -40°C to +85°C, 50 MHz

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Rating</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Supply Voltage</td>
<td>+6.0</td>
<td>V</td>
</tr>
<tr>
<td>Input Control Voltage</td>
<td>+10.0</td>
<td>V</td>
</tr>
</tbody>
</table>
CVHD-575 Model
5×7.5 mm SMD, 3.3V, HCMOS

RECOMMENDED REFLOW SOLDERING PROFILE

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>260°C</td>
<td>90 Secs. Max.</td>
</tr>
<tr>
<td>217°C</td>
<td>180 Secs. Max.</td>
</tr>
<tr>
<td>200°C</td>
<td>8 Minutes Max.</td>
</tr>
<tr>
<td>150°C</td>
<td>260°C for 10 Secs. Max.</td>
</tr>
</tbody>
</table>

Preheat 3°C/Sec Max.
Critical Temperature Zone 6°C/Sec.
Ramp-Up 3°C/Sec Max.
Ramp-Down 6°C/Sec.

NOTE: Reflow Profile with 240°C peak also acceptable.

---

Mechanical:
- Vibration: MIL-STD-883, Method 2007, Condition A
- Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I or J

Environmental:
- Thermal Shock: MIL-STD-883, Method 1011, Condition A

---

Date: 02-Oct-2017
Page 3 of 3