Ultra-Low Phase Noise
Voltage Controlled
Crystal Oscillator

CVHD-925 Model
9×14 mm SMD, 3.3V, CMOS

Frequency Range: 131.000 to 160.000 MHz
Temperature Range: 0°C to 70°C
(Option X)
Storage: -40°C to 85°C
Input Voltage: 3.3V ±0.3V
Supply Pushing: 1.2ppm/V Typical
Input Current: 15mA Typical, 25mA Max
Output: CMOS

Symmetry: 45/55% Max @ 50% Vdd
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: >10 kHz @ -3dB
Impedance: 51 kΩ
Control Voltage: 1.65V ±1.65V
Tuning Sensitivity: +30ppm/V Typical
Frequency Pulling: ±20ppm APR Min
(Inclusive of frequency stability, calibration, and aging)
Linearity: ±5% Max
Phase Jitter (12kHz~20MHz): 50 fsec Typical @ 160 MHz
Phase Noise (Typical): See Plot
Sub-Harmonics: None
Aging: <3ppm 1st year, <1ppm every year thereafter

Available Frequencies (MHz):

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
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</thead>
<tbody>
<tr>
<td>155.520</td>
</tr>
<tr>
<td>156.250</td>
</tr>
<tr>
<td>160.000</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

<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>

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Date: 07-Jul-2020
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Crystek Part Number Guide

<table>
<thead>
<tr>
<th>CVHD-925 X - 160.000</th>
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</thead>
<tbody>
<tr>
<td>#1 Crystek 9×14 SMD CMOS VCXO</td>
</tr>
<tr>
<td>#2 Model 925</td>
</tr>
<tr>
<td>#3 Temp. Range: Blank = 0/70°C, X = -40/85°C</td>
</tr>
<tr>
<td>#4 Frequency in MHz: 3 or 6 decimal places</td>
</tr>
</tbody>
</table>

Example:
CVHD-925X-160.000 = 3.3V, 45/55, -40/85°C, 160.000 MHz

RECOMMENDED REFLOW SOLDERING PROFILE
900034 (See App Note listed on website)

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
Moisture Resistance: MIL-STD-883, Method 1004

Packaging:
Tape/Reel: 100ea, 250ea, 500ea 24mm Tape

SUGGESTED PAD LAYOUT

PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

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