Ultra-Low Phase Noise
SineWave VCXO

CVSS-945 Model
9×14 mm SMD, 5.0V, SineWave

Frequency Range: 10 MHz to 125 MHz
Temperature Range: 0°C to 70°C
(Option X)
-40°C to 85°C
Storage: -45°C to 90°C

Input Voltage: 5.0V ± 0.5V
Control Voltage: 2.5V ± 2.5V
Settability At Nominal: 2.5V ± 0.5V
Tuning Sensitivity (Kv): +25 ppm/V Typical (Positive Slope)
Input Current: 35mA Max

Output: True SineWave
Pullability APR: ±20ppm Min
Linearity: ±10% Max
Output Power: +5 dBm Min, +7 dBm Typical
Start-up time: 2ms Typical, 5ms Max
Load: 50 Ω

2nd Harmonic: -25 dBc Typical
Sub-harmonics: None
Modulation BW: >10kHz @ -3dB
Phase Noise Typical: @100MHz
10kHz: -85 dBc/Hz
100kHz: -120 dBc/Hz
1MHz: -175 dBc/Hz

Aging:
<3ppm 1st year, <1ppm every year thereafter

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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50 MHz

Signal Frequency 100.000644 MHz
Signal Level 6.50 dBm
RBW 10 %
XO Ki Factor 5U
Meas. Time ~20 s

Noise Spectrum

2 Integrated Measurements
Range 1
Trace 1
Start Offset 12.000 kHz
Stop Offset 20.000 MHz
Weighting
Int Noise
DM
FM / AM
Litter

Date: 23-Jun-2020
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SineWave VCXO

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Crystek Part Number Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>SVSS-945 X-125.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Crystek 9×14 SMD SineWave VCXO</td>
</tr>
<tr>
<td>#2</td>
<td>Model 945 = Ultra Low Noise 5.0V</td>
</tr>
<tr>
<td>#3</td>
<td>Temp. Range: Blank = 0/70°C, X = -40/85°C</td>
</tr>
<tr>
<td>#4</td>
<td>Frequency in MHz: 3 or 6 decimal places</td>
</tr>
</tbody>
</table>

Example: CVSS-945X-125.000 = 5.0V, -40/85°C, 125.000 MHz

SUGGESTED PAD LAYOUT

<table>
<thead>
<tr>
<th>Pad</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volt Cont.</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
</tr>
<tr>
<td>3</td>
<td>OUT</td>
</tr>
<tr>
<td>4</td>
<td>Vdd</td>
</tr>
</tbody>
</table>

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

Standard Frequencies MHz

- 10.000
- 50.000
- 80.000
- 100.000
- 122.880
- 125.000

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

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

Rev: R
Date: 23-Jun-2020

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