Model CVCSO-914M3 is a voltage-controlled SAW (surface acoustic wave) Clock Oscillator (VCSO). SAW crystal technology provides low-noise and low-jitter performance with true sinewave output. Features include -135 dBC/Hz phase noise at 10 kHz offset, 3.3V input voltage, -40°C to +85°C operating temperature, and 9×14 mm SMT package. The oscillator has no sub-harmonic and the second harmonic is typically -20 dBC.

Applications include PLL frequency translation, test and measurement, avionics, point-to-point radios, and multi-point radios.
Ultra-Low Phase Noise SAW VCSO

Frequency Range: 240.000 MHz
Temperature Range: -40°C to +85°C
Storage: -40°C to 90°C
Input Voltage: 3.3V ±5%
Control Voltage Range: 0V to 3.3V
Settability At Nominal (25°C): +0.4V to 2.0V
Frequency vs Temperature: ±200ppm Typical
Tuning Sensitivity (Kv): +120ppm/V Typical
Input Current: 20mA Typical, 30mA Max

Output
Pullability APR: ±20ppm Min
Linearity: ±20% Max
Output Power: +8dBm Min into 50 Ω Load
Start-Up Time: 2mSec Typical, 10mSec Max
2nd Harmonic: None
Sub-Harmonics: >20kHz @ -3dB
Modulation BW: >20kHz @ -3dB
Phase Noise (Typical): See Plot
G-sensitivity: 0.9×10⁻⁹ per g

Specifications subject to change without notice.

SUGGESTED PAD LAYOUT

PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum
Ultra-Low Phase Noise SAW VCSO

CVCSO-914X3-240.000 True SineWave SAW Based VCSO 9×14mm SMD 3.3 Volt

RECOMMENDED REFLOW SOLDERING PROFILE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Vibration</td>
<td>MIL-STD-883, Method 2007, Condition A</td>
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<tr>
<td>Solderability</td>
<td>MIL-STD-883, Method 2003</td>
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<tr>
<td>Solvent Resistance</td>
<td>MIL-STD-202, Method 215</td>
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<tr>
<td>Resistance to Soldering Heat</td>
<td>MIL-STD-202, Method 210, Condition I or J</td>
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<tr>
<td>Thermal Shock</td>
<td>MIL-STD-883, Method 1011, Condition A</td>
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<tr>
<td>Moisture Resistance</td>
<td>MIL-STD-883, Method 1004</td>
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</tbody>
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NOTE: Reflow Profile with 240°C peak also acceptable.