Model CVS575S-500 is a 500 MHz voltage-controlled SAW (surface acoustic wave) 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, 3.3 V input voltage, 0°C to +70°C operating temperature, and 5×7.5 mm SMT package. The oscillator has no sub-harmonic and the second harmonic is typically -14 dBc.

Applications include PLL frequency translation, test and measurement, avionics, point-to-point radios, and multi-point radios.
CVS575S-500.000
SineWave
SAW Based VCSO
5×7.5mm SMD
3.3 Volts

Frequency: 500 MHz
Operating Temperature Range: 0°C to 70°C
Storage Temperature Range: -45°C to 90°C
Input Voltage: 3.3V ±0.15V
Control Voltage Range: 0V to 3.3V
Settability At Nominal (25°C): 0.5V to 2.0V
Freq. vs Temperature: +100ppm, -150ppm Typical
Input Current: 20mA Typical, 25mA Max

Output: SineWave
Pullability APR: ±50ppm Min
Linearity: ±20% Max
Output Power: +7dBm Min into 50 Ω Load
Start-up time: 2ms Typical, 10ms Max
2nd Harmonic: -14dBc Typical, -10dBc Max
Sub-harmonics: None
Modulation BW: >20 kHz @ -3dB
Phase Jitter: 12 kHz~80 MHz <1ps RMS (1-sigma) Max

Specifications subject to change without notice.
CVS575S-500.000  
SineWave  
SAW Based VCSO  
5×7.5mm SMD  
3.3 Volts

RECOMMENDED REFLOW SOLDERING PROFILE

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Time</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>217°C</td>
<td>8 Min</td>
<td>Max.</td>
</tr>
<tr>
<td>260°C for</td>
<td>10 Secs</td>
<td>Max.</td>
</tr>
<tr>
<td>Critical Temperature Zone</td>
<td>Ramp-Up, 3°C/Sec Max.</td>
<td></td>
</tr>
<tr>
<td>Ramp-Down, 6°C/Sec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>260°C for</td>
<td>10 Secs</td>
<td>Max.</td>
</tr>
<tr>
<td>Preheat</td>
<td>180 Secs Max.</td>
<td></td>
</tr>
</tbody>
</table>

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

- **Frequency VS Temperature**

- **Parameter** | **Conditions**
  - Mechanical Vibration | MIL-STD-883, Method 2007, Condition A
  - Solderability | MIL-STD-883, Method 2003
  - Resistance to Solvents | MIL-STD-202, Method 215
  - Resistance to Soldering Heat | MIL-STD-202, Method 210, Condition I or J
  - Thermal Shock | MIL-STD-883, Method 1011, Condition A
  - Moisture Resistance | MIL-STD-883, Method 1004

Date: 02-Oct-2017  
Rev: M