# VCXO Specification

## CFPV-45

### Issue 7; May 2015

### Description
- Standard 7 x 5mm Voltage Controlled Crystal Oscillators
  - Pulling of ±100ppm min APR
  - Ceramic package with a seam sealed metal lid, hermetically sealed

### Frequency Parameters
- **Frequency**: 1.5MHz to 80.0MHz
- **Frequency Stability**: ±100.00ppm

### Electrical Parameters
- **Supply Voltage**: 3.3V ±0.3V

### Frequency Adjustment
- **Pulling**: ±100ppm min APR
- **Control Voltage**: 1.65V ±1.65V
- **Input Impedence**: 50kΩ min
- **Modulation Bandwidth**: >10kHz (@-3dB, Vc=2.5V)
- **Linearity**: Positive < ±10%

### Operating Temperature Ranges
- 0 to 70°C

### Output Details
- **Output Compatibility**: HCMOS
- **Drive Capability**: 15pF max

### Output Control
- Logic '1' (>2.5V) to pad 2 enables oscillator output
- Logic '0' (<0.5V) to pad 2 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- No connection pad 2 enables oscillator output

### Noise Parameters
- **Phase Jitter**: 20ps max @ 1sigma

### Environmental Parameters
- **Operable Temperature Range**: -40 to 85°C
- **Shock**: MIL-STD-202, Method 213, Cond. E
- **Vibration**: MIL-STD-883, Method 2007, Cond. A
- **Storage Temperature Range**: –55 to 125°C

### Ordering Information
- **Example**
  - 20.0MHz CFPV-45
  - HCMOS ±100ppm 0 to 70C 3.3V ±100ppm min
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Compliance
- RoHS Status (2011/65/EU): Compliant
- REACh Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details
- Pack Style: Reel
  - Tape & reel in accordance with EIA-481-D
  - Pack Size: 1,000
- Pack Style: Bulk
  - Loose in bulk pack
  - Pack Size: 100
- Pack Style: Cutt
  - In tape, cut from a reel
  - Pack Size: 1

Test Circuit

Electrical Specification - maximum limiting values 3.3V ±0.3V

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Stability</th>
<th>Current Draw</th>
<th>Rise and Fall Time</th>
<th>Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>Max</td>
<td>Temperature</td>
<td>(Min)</td>
<td>Rise</td>
</tr>
<tr>
<td>°C</td>
<td>ppm</td>
<td>mA</td>
<td>ns</td>
<td>%</td>
</tr>
<tr>
<td>1.5MHz</td>
<td>80.0MHz</td>
<td>0 to 70</td>
<td>±100.0</td>
<td>50</td>
</tr>
</tbody>
</table>

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