

## CFPV-32 SMD VCXO

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### Description

- LVPECL output Voltage Controlled Crystal Oscillator
- Using PPL technology to give a very wide frequency range
- Pulling range of  $\pm 80$ ppm min
- Ceramic package with a seam sealed metal lid, hermetically sealed
- For a wider pulling range please see our CFPV-55

### Frequency Range

- 50 to 700MHz

### Output Compatibility & Load

- Tri-state LVPECL
- Output load  $50\Omega$  terminated to +1.3V

### Frequency Stabilities

- $\pm 25$ ppm,  $\pm 50$ ppm  
Note:  $\pm 25$ ppm not available over  $-40$  to  $85^\circ\text{C}$

### Operating Temperature Ranges

- $-10$  to  $70^\circ\text{C}$
- $-40$  to  $85^\circ\text{C}$

### Tri-state Operation

- Logic '1' to pad 1 disables oscillator output; when disabled the oscillator goes to the high impedance state ( $>V_S - 1.10\text{V}$ )
- Logic '0' to pad 1 enables oscillator output ( $<V_S - 1.60\text{V}$ )
- No connection to pad 1 enables oscillator output

### Output Voltage

- '0' Level  $V_{OL} + 1.7\text{V}$  max
- '1' Level  $V_{OH} + 2.2\text{V}$  min

### Voltage Control (pad 1)

- $+1.65\text{V} \pm 1.5\text{V}$  (positive sense)

### Pullability

- $\pm 80$ ppm min

### Input Impedance (voltage control, pad 1)

- $60\text{k}\Omega$  min

### Phase Noise (max)

- $-37\text{dBc}/\text{Hz}$  @ 10Hz
- $-75\text{dBc}/\text{Hz}$  @ 100Hz
- $-105\text{dBc}/\text{Hz}$  @ 1kHz
- $-107\text{dBc}/\text{Hz}$  @ 10kHz
- $-145\text{dBc}/\text{Hz}$  @ 100kHz
- $-145\text{dBc}/\text{Hz}$  @ 1MHz

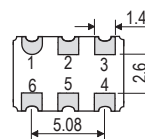
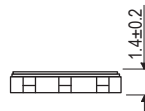
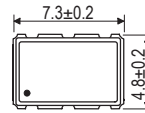
### Phase Jitter

- 1ps rms max (12kHz - 20MHz)

### Storage Temperature Range

- $-40$  to  $85^\circ\text{C}$

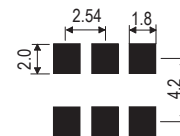
### Outline (mm)



Underside View

Pad Connections  
 1. Voltage Control  
 2. Tri-State Operation  
 3. GND  
 4. Output +  
 5. Output -  
 6.  $+V_S$

### Solder Pad Layout



### Environmental

- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: MIL-STD-202F, Method 204D, Test Condition D 20G, frequency range 10-2000Hz, 4 hrs in X, Y & Z axes (total 12hrs)

### Packaging

- Loose in bulk pack, 100pcs per pack
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

### Ordering Information (\*minimum required)

- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage
- Pullability

### Example

- 200.0MHz CFPV-32  
LVPECL  $\pm 50$ ppm  $-40$  to  $85^\circ\text{C}$  3.3V  $\pm 80$ ppm min

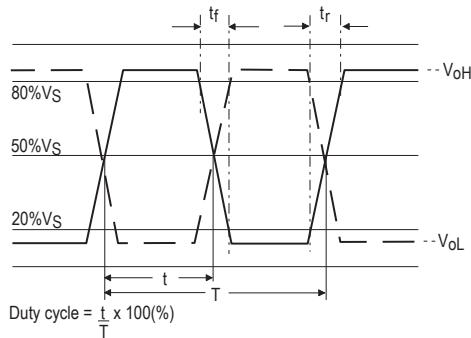


**Electrical Specification - maximum limiting values**

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Pullability	Rise Time (tr) (20-80%)	Fall Time (tf) (80-20%)	Duty Cycle	Model Number
50.0 to 700.0MHz	±25ppm ±50ppm	3.3V±5%	120mA	±80ppm min	0.5ns	0.5ns	40/60%	CFPV-32

Note: For other frequency / specification combinations, please contact our sales offices

**Output Waveform**



**Test Circuit**

