

## CFPV-55 SMD VCXO

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### Description

- LVPECL output Voltage Controlled Crystal Oscillator
- Using PPL technology to give a very wide frequency range
- Wide pulling range of  $\pm 150$ ppm min
- Ceramic package with a seam sealed metal lid, hermetically sealed
- For more a controllable smaller pulling range please see our CFPV-32

### Frequency Range

- 12 to 700MHz

### Output Compatibility & Load

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

### Frequency Stabilities

- $\pm 25$ ppm,  $\pm 50$ ppm (inclusive of supply voltage and output load variations over the operating temperature range)  
Note:  $\pm 25$ ppm not available over -40 to 85°C

### Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C

### Tri-state Operation

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

### Voltage Control (pad 1)

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

### Pullability

- $\pm 150$ ppm min

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

- $60k\Omega$  min

### Phase Noise (max)

- -45dBc/Hz @ 10Hz
- -65dBc/Hz @ 100Hz
- -95dBc/Hz @ 1kHz
- -120dBc/Hz @ 10kHz
- -117dBc/Hz @ 100kHz
- -115dBc/Hz @ 1MHz
- -135dBc/Hz @ 10MHz

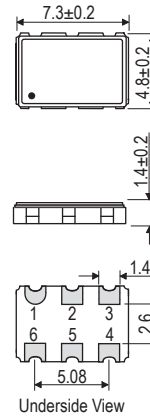
### Phase Jitter

- 5ps rms max (12kHz - 20MHz)

### Storage Temperature Range

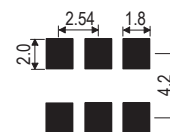
- -40 to 85°C

### Outline (mm)



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

### 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 (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- Pullability

### Example

- 100.0MHz CFPV-55  
LVPECL  $\pm 50$ ppm -10 to 70C 3.3V  $\pm 150$ ppm min

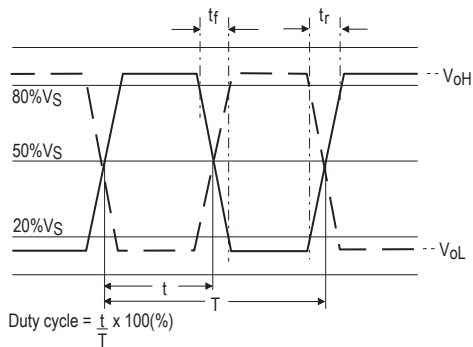


**Electrical Specification - maximum limiting values**

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Pullability	Rise Time (tr) (20-80%)	Fall Time (tf) (80-20%)	Duty Cycle	Model Number
12.0 to < 100.0MHz	±25ppm ±50ppm	3.3V±5%	120mA	±150ppm min	1ns	1ns	40/60%	CFPV-55
100.0 to 700.0MHz					0.5ns	0.5ns		

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

**Output Waveform**



**Test Circuit**

