

ISSUE 7; April 2016

### Description

- Standard 7 x 5mm Voltage Controlled Crystal Oscillator Ceramic package with a seam sealed metal lid, hermetically sealed
- For pulling of  $\pm 100$ ppm please see our CFPV-44 range
- For pulling of  $\pm 100$ ppm min APR please see our CFPV-45 range
- For a 5.0V version, please see our CFPV-41 range



### Frequency Parameters

- Frequency: 1.0MHz to 125.0MHz
- Frequency Stability:  $\pm 25.00$ ppm to  $\pm 100.00$ ppm

### Electrical Parameters

- Supply Voltage: 3.3V  $\pm 0.3$ V
- Start-Up Time: 10ms max
- Linearity: Positive  $\pm 10\%$  max
- Modulation Bandwidth: 20kHz min

### Frequency Adjustment

- Pulling:  $\pm 50$ ppm min
- Control Voltage: 1.65V  $\pm 1.5$ V
- Input Impedance: 1-80MHz 100k $\Omega$  typ, >80-125MHz  $\infty$

### Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: HCMOS
- Drive Capability: 15pF max
- Logic '1' (>70%VS) to pad 2 enables oscillator output
- Logic '0' (<30%VS) 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: 20MHz max 1ps rms (12kHz - 1MHz)

### Environmental Parameters

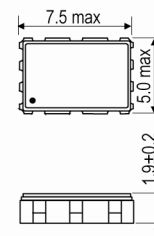
- Storage Temperature Range: -40 to 85°C
- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: Sinewave, frequency range 10-55Hz, amplitude 1.52mm, 2hrs in X, Y, Z axes (total 6 hrs)

### Ordering Information

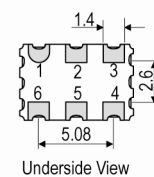
- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- Pullability
- (\*minimum required)
- Example
- 20.0MHz CFPV-42
- HCMOS  $\pm 50$ ppm -40 to 85C 3.3V  $\pm 50$ ppm min



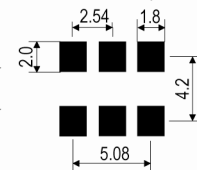
### Outline (mm)



Pad Connections  
 1. Voltage Control  
 2. Tri-State Operation  
 3. GND  
 4. Output  
 5. N/C  
 6. +Vs



### Solder Pad Layout



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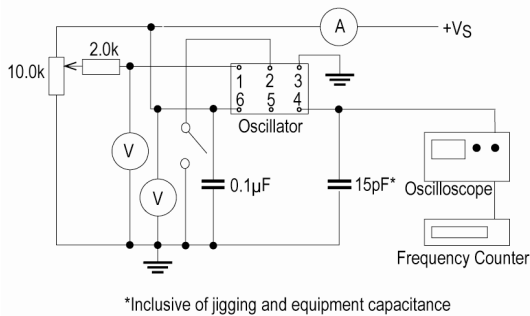
**Compliance**

- RoHS Status (2011/65/EU)      Compliant
- REACH Status                      Compliant
- MSL Rating (JEDEC-STD-033):    Not Applicable

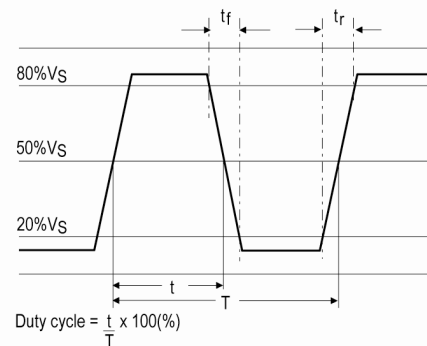
**Packaging Details**

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

**Test Circuit**



**Wave Form**



**Electrical Specification - maximum limiting values 3.3V ±0.3V**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	30.0MHz	-10 to 70	±25.0	15	5	40/60%
		-40 to 85	±25.0	15	5	40/60%
30.000001MHz	52.0MHz	-10 to 70	±25.0	25	5	40/60%
		-40 to 85	±25.0	25	5	40/60%
52.000001MHz	125.0MHz	-10 to 70	±50.0	35	5	40/60%
		-40 to 85	±50.0	35	5	40/60%

*This document was correct at the time of printing; please contact your local sales office for the latest version.*

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