

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-43 range
- For pulling of  $\pm 100$ ppm min APR please see our CFPV-46 range
- For a 3.3V version, please see our CFPV-42 range



**Frequency Parameters**

- Frequency 1.0MHz to 80.0MHz
- Frequency Stability  $\pm 25.00$ ppm to  $\pm 100.00$ ppm

**Electrical Parameters**

- Supply Voltage 5.0V  $\pm 0.25$ V
- Start-Up Time: 10ms max

**Frequency Adjustment**

- Pulling  $\pm 50$ ppm min
- Control Voltage 2.5V  $\pm 2.0$ V
- Input Impedence 100k $\Omega$  typ
- Linearity: Positive  $\pm 10\%$  max
- Modulation Bandwidth: 20kHz min

**Operating Temperature Ranges**

- 10 to 70°C
- 40 to 85°C

**Output Details**

- Output Compatability 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**

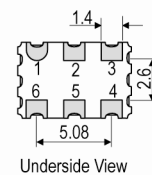
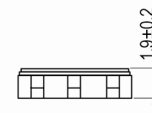
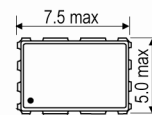
- Storage Temperature Range: -40 to 85°C
- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: Sinewave, frequency range 10-55Hz, amplitude 1.52mm, 2hrs in X, Y, Z axes (total 6 hrs)

**Ordering Information**

- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- Pullability
- (\*mininum required)
- Example
- 20.0MHz CFPV-41
- HCMOS  $\pm 50$ ppm -40 to 85C 5.0V  $\pm 50$ ppm min

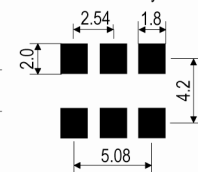


**Outline (mm)**



- Pad Connections
- Voltage Control
  - Tri-State Operation
  - GND
  - Output
  - N/C
  - +Vs

**Solder Pad Layout**



**Sales Office Contact Details:**

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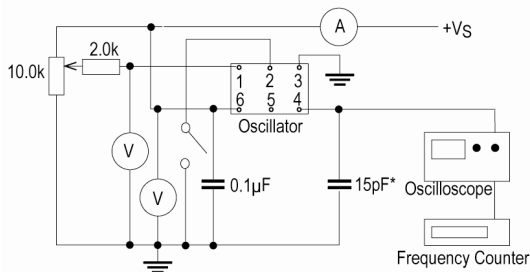
**Compliance**

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

**Packaging Details**

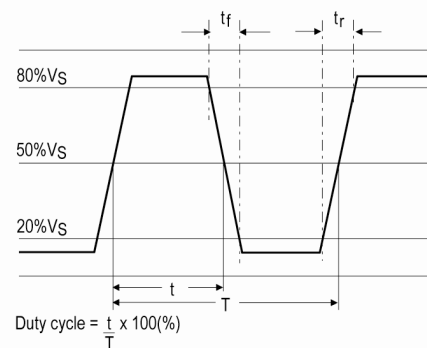
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Pack Style: Cutt      In tape, cut from a reel  
Pack Size: 1
- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 100

**Test Circuit**



\*Inclusive of jigging and equipment capacitance

**Wave Form**



**Electrical Specification - maximum limiting values 5.0V ±0.25V**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	18.0MHz	-10 to 70	±25.0	20	5	40/60%
		-40 to 85	±25.0	20	5	40/60%
18.000001MHz	30.0MHz	-10 to 70	±25.0	30	5	40/60%
		-40 to 85	±25.0	30	5	40/60%
30.000001MHz	36.0MHz	-10 to 70	±25.0	30	5	40/60%
		-40 to 85	±25.0	30	5	40/60%
36.000001MHz	52.0MHz	-10 to 70	±25.0	40	5	40/60%
		-40 to 85	±25.0	40	5	40/60%
52.000001MHz	80.0MHz	-10 to 70	±50.0	50	5	40/60%
		-40 to 85	±50.0	50	5	40/60%

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