

ISSUE 7; January 2019

## Description

- Standard 7 x 5mm Voltage Controlled Crystal Oscillator  
Ceramic package with a seam sealed metal lid, hermetically sealed  
For pulling of  $\pm 50$ ppm please see our CFPV-42 range  
For pulling of  $\pm 100$ ppm min APR please see our CFPV-45 range  
For a 5.0V version, please see our CFPV-43 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  $\pm 100$ ppm min
- Control Voltage 1.65V  $\pm 1.5$ V
- Input Impedance 1-80MHz 100k $\Omega$  typ, >80-125MHz 5

## 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

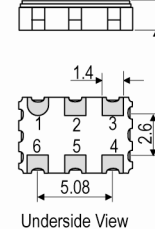
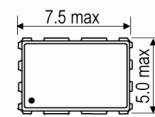
- Storage Temperature Range: -40 to 85°C
- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: Sinewave, frequency range 10-55Hz, amplitude 1.52mm, 2hrs in X, Y, Z axes (total 6 hrs)

## Manufacturing Details

- RoHS Terminations Au 0.4 $\mu$ m over Ni  
1.27 $\mu$ m~8.89 $\mu$ m
- RoHS Reflow 260degC 10s

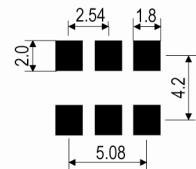


## Outline (mm)



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

## Solder Pad Layout



## Sales Office Contact Details:

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### Ordering Information

- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- Pullability  
(\*minimum required)
- Example  
20.0MHz CFPV-44  
HCMOS  $\pm 50$ ppm  $-40$  to  $85$ C  $3.3$ V  $\pm 100$ ppm min

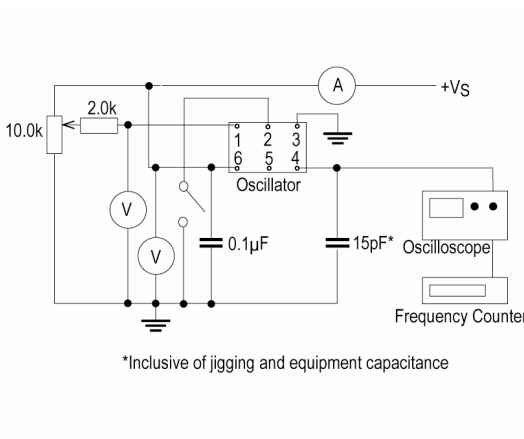
### Compliance

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

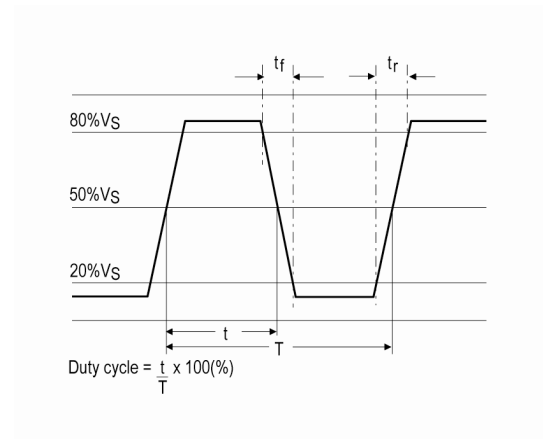
### Packaging Details

- Pack Style: Cutt            In tape, cut from a reel  
Pack Size: 100
- 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

### Test Circuit



### Wave Form



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Electrical Specification - maximum limiting values 3.3V  $\pm$ 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	$\pm$ 25.0	15	5	40/60%
		-40 to 85	$\pm$ 25.0	15	5	40/60%
30.000001MHz	52.0MHz	-10 to 70	$\pm$ 25.0	25	5	40/60%
		-40 to 85	$\pm$ 25.0	25	5	40/60%
52.000001MHz	125.0MHz	-10 to 70	$\pm$ 50.0	35	5	40/60%
		-40 to 85	$\pm$ 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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