

CFPV-41, -42, -43, -44 SMD VCXOs

ISSUE 7; 1 NOVEMBER 2010 - RoHS 2002/95/EC

Description

- Standard 7 x 5mm Voltage Controlled Crystal Oscillators
- Available in 5.0V or 3.3V supply
- Available with either ± 50 ppm min or ± 100 ppm min pulling
- Ceramic package with a seam sealed metal lid, hermetically sealed
- For pulling of ± 100 ppm min APR please see our CFPV-45 and CFPV-46

Frequency Range

- 1 to 80MHz

Output Compatibility & Load

- Tri-state HCMOS
- Load 15pF max

Supply Voltages

- 5.0V CFPV-41, -43
- 3.3V CFPV-42, -44

Frequency Stabilities

- ± 25 ppm, ± 50 ppm, ± 100 ppm (inclusive of supply voltage and output load variations over the operating temperature range)

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Tri-State Operation

- Logic '1' ($>70\%V_S$) to pad 2 enables oscillator output
- Logic '0' ($<30\%V_S$) to pad 2 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- No connection pad 2 enables oscillator output

Start-Up Time

- 10ms max

Voltage Control (pad 1)

- 2.5V \pm 2.0V (CFPV-41, -43)
- 1.65V \pm 1.5V (CFPV-42, -44)

Pullability

- ± 50 ppm min (CFPV-41, -42)
- ± 100 ppm min (CFPV-43, -44)

Linearity

- Positive $<\pm 10\%$

Modulation Bandwidth

- >20 kHz

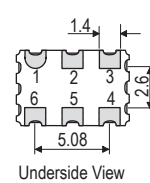
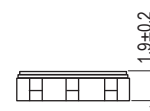
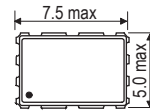
Phase Jitter

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

Storage Temperature Range

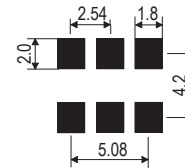
- 40 to 85°C

Outline (mm)



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

Solder Pad Layout



Environmental

- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: sinewave, frequency range 10-55Hz, amplitude 1.52mm, 2 hrs in X, Y, Z axes (total 6 hrs)

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

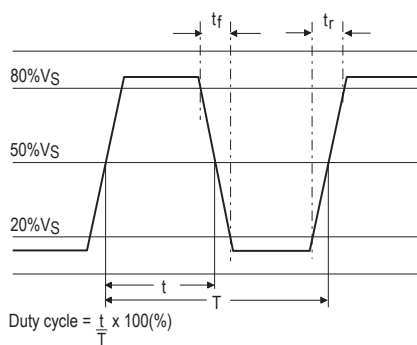
- 20.0MHz CFPV-43
HCMOS ± 50 ppm -40 to 85C 5.0V ± 100 ppm min

Electrical Specification - maximum limiting values

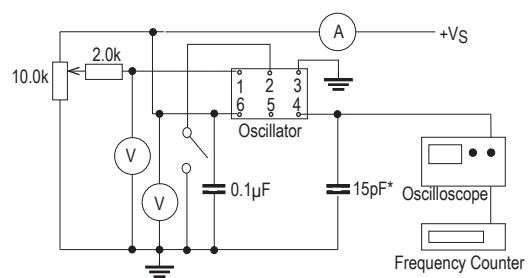
Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Pullability	Rise Time (tr) (20-80%)	Fall Time (tf) (80-20%)	Duty Cycle	Model Number
1.0 to 18.0MHz	±25ppm ±50ppm ±100ppm	5.0V±0.25V	20mA	±50ppm min	5ns	5ns	40/60%	CFPV-41
				±100ppm min				CFPV-43
		3.3V±0.3V	15mA	±50ppm min				CFPV-42
				±100ppm min				CFPV-44
> 18.0 to 30.0MHz		5.0V±0.25V	30mA	±50ppm min				CFPV-41
				±100ppm min				CFPV-43
		3.3V±0.3V	15mA	±50ppm min				CFPV-42
				±100ppm min				CFPV-44
> 30.0 to 36.0MHz		5.0V±0.25V	30mA	±50ppm min				CFPV-41
				±100ppm min				CFPV-43
		3.3V±0.3V	25mA	±50ppm min				CFPV-42
				±100ppm min				CFPV-44
> 36.0 to 52.0MHz		5.0V±0.25V	40mA	±50ppm min				CFPV-41
				±100ppm min				CFPV-43
		3.3V±0.3V	25mA	±50ppm min				CFPV-42
				±100ppm min				CFPV-44
> 52.0 to 80.0MHz	±50ppm ±100ppm	5.0V±0.25V	50mA	±50ppm min				CFPV-41
				±100ppm min				CFPV-43
		3.3V±0.3V	35mA	±50ppm min				CFPV-42
				±100ppm min				CFPV-44

Some combinations of specification may not be available, please check with our sales offices
 Note: For other frequency / specification combinations, please contact our sales offices

Output Waveform



Test Circuit



*Inclusive of jigging and equipment capacitance