

ISSUE 7; September 2021

Description

- Standard 7 x 5mm Voltage Controlled Crystal Oscillator
Ceramic package with a seam sealed metal lid, hermetically sealed
For pulling of ± 100 ppm please see our CFPV-43 range
For pulling of ± 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 ± 25.00 ppm to ± 100.00 ppm

Electrical Parameters

- Supply Voltage 5.0V ± 0.25 V
- Start-Up Time: 10ms max

Frequency Adjustment

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

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF max
- 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

Noise Parameters

- Phase Jitter: 20MHz max 1ps rms (12kHz - 1MHz)

Environmental Parameters

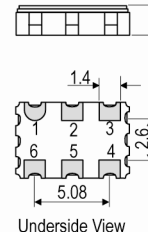
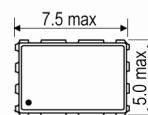
- Storage Temperature Range: -40 to 85°C
- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: Sinewave, frequency range 10-55Hz, amplitude 1.52mm, 2hrs in X, Y, Z axes (total 6 hrs)

Manufacturing Details

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

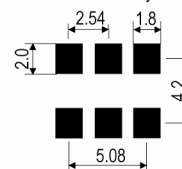


Outline (mm)



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

Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Ordering Information

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

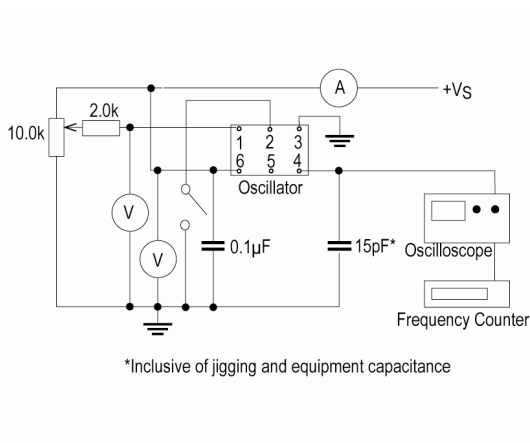
Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

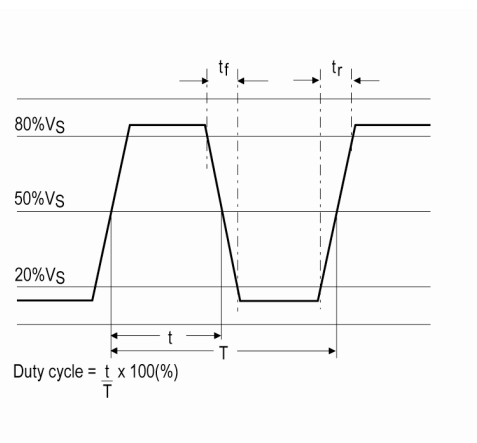
Packaging Details

- 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: 100
- Pack Style: Bulk Loose in bulk pack
- Pack Size: 100

Test Circuit



Wave Form



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Electrical Specification - maximum limiting values 5.0V \pm 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	\pm 25.0	20	5	40/60%
		-40 to 85	\pm 25.0	20	5	40/60%
18.000001MHz	30.0MHz	-10 to 70	\pm 25.0	30	5	40/60%
		-40 to 85	\pm 25.0	30	5	40/60%
30.000001MHz	36.0MHz	-10 to 70	\pm 25.0	30	5	40/60%
		-40 to 85	\pm 25.0	30	5	40/60%
36.000001MHz	52.0MHz	-10 to 70	\pm 25.0	40	5	40/60%
		-40 to 85	\pm 25.0	40	5	40/60%
52.000001MHz	80.0MHz	-10 to 70	\pm 50.0	50	5	40/60%
		-40 to 85	\pm 50.0	50	5	40/60%

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