

ISSUE 7; June 2017

Description

- Standard 7 x 5mm Voltage Controlled Crystal Oscillator Ceramic package with a seam sealed metal lid, hermetically sealed
- For pulling of $\pm 100\text{ppm}$ please see our CFPV-44 range
- For pulling of $\pm 100\text{ppm}$ 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: $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$

Electrical Parameters

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

Frequency Adjustment

- Pulling: $\pm 50\text{ppm}$ min
- Control Voltage: $1.65\text{V} \pm 1.5\text{V}$
- Input Impedance: 1-80MHz 100k Ω 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

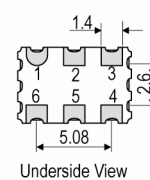
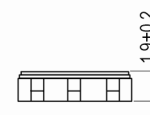
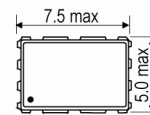
- Storage Temperature Range: -40 to 85°C
- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: Sinewave, frequency range 10-55Hz, amplitude 1.52mm, 2hrs in X, Y, Z axes (total 6 hrs)

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 $\pm 50\text{ppm}$ -40 to 85C 3.3V $\pm 50\text{ppm}$ min

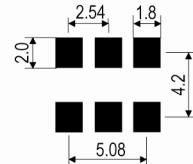


Outline (mm)



- 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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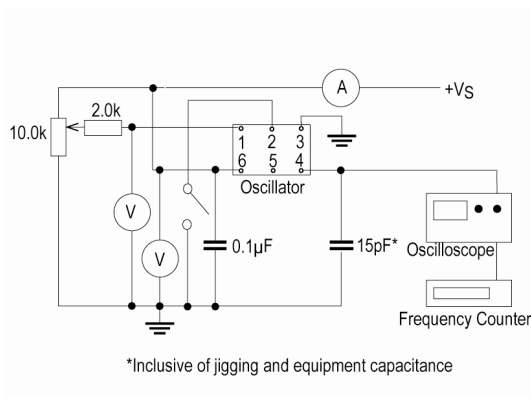
Compliance

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

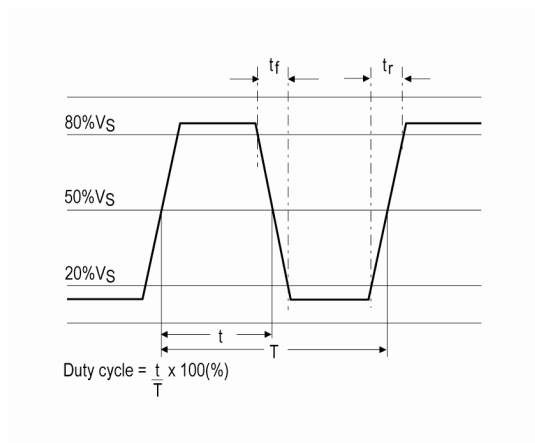
Packaging Details

- 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: 100
- 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% |

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