

CFPT-126

ISSUE 1 ; 7 JANUARY 2005

Delivery Options

- Please contact our sales office for details

Package Outline

- 7.0 x 5.0 x 2.0mm SMD (surface mount device)

Description

- CFPT-126 is a surface mount temperature compensated voltage controlled oscillator (TCVCO) providing a high degree of frequency stability over a wide temperature range

Supply Voltage

- 3.3V $\pm 5\%$

Frequency Stability

- Temperature $\pm 0.5\text{ppm}$ (code E)
- Supply Voltage Variation $\pm 0.3\text{ppm}$ *
- Load Variation ($15\text{pF} \pm 10\%$) $\pm 0.2\text{ppm}$
- After Reflow $\pm 1.0\text{ppm}$

* Supply Voltage Variation :
 $\geq 30.0\text{MHz}$ to $< 40.0\text{MHz}$, $\pm 0.4\text{ppm}$

Operating Temperature Range

- -40 to 85°C (code X)

Supply Current

- 3mA @ 20MHz typical

Output Compatibility

- HCMOS
- Load: 15pF nom.
- Vol: $< 10\%$ Vsupply
- Voh: $> 90\%$ Vsupply
- Duty Cycle: 45/55%
- Rise Time: 8ns
- Fall Time: 8ns

Ageing

- $\pm 1\text{ppm}$ / year typical in 1st year @ 25°C

Standard Stock Frequencies (MHz)

- 10, 12.8, 13.0, 16.384, 19.44, 20.0, 26.0, 32.768, 40.0MHz

Other frequencies may be available, please contact our sales office.

Frequency Adjustment

- $\pm 5\text{ppm}$ by means of 1.65 $\pm 1\text{V}$ control voltage

Marking

- CMAC and Batch Code
- Stab/Temp code + Frequency Code + Date Code

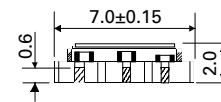
Minimum Ordering Information Required

- Frequency + Model Number (Example 10.0MHz CFPT-126)

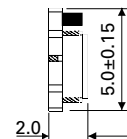
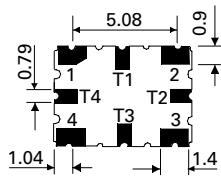
Environmental Specification

- Storage Temperature Range -55 to 125°C
- Vibration: IEC 60068-2-6 Test Fc Procedure B4, 10-60Hz 1.5mm displacement, at 98.1ms^{-2} , 30 minutes in each of three mutually perpendicular axes at 1 octave per minute
- Shock: IEC 60068-2-27 Test Ea, 980ms^{-2} acceleration for 6ms duration, 3 shocks in each direction along three mutually perpendicular axes
- Solderability: MIL-STD-202, Method 208, Category 3

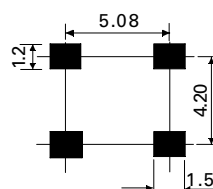
Outline in mm



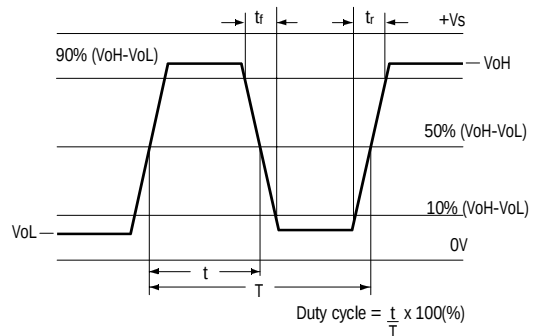
Pad Connections
1. Voltage Control
2. GND
3. Output
4. +Vs
T1, T2, T3, T4,
Do Not Connect



Solder pad layout



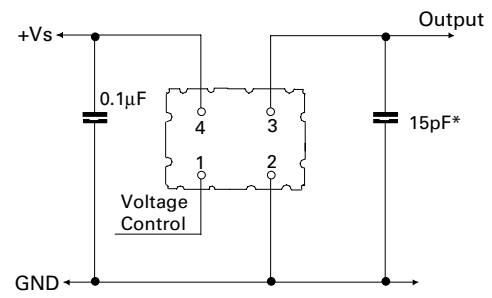
Output Waveform



Manufacturing Information

- Soldering: SMD product suitable for Convection Reflow soldering. Peak temperature 260°C. Maximum time above 220°C, 60 secs.
- Washing: Able to withstand aqueous washing process.
- Packaging: Tape and reel, details available on request.

Test Circuit



* inclusive of probe and jig capacitance