


**Description**

- Surface mount temperature compensated voltage controlled oscillator (TCVCXO) providing a high degree of frequency stability over a wide temperature range in a hermetically sealed ceramic package
- Model CFPT-126
- Model Issue number 5

**Frequency Parameters**

- Frequency 20.0MHz
- Frequency Stability  $\pm 0.50\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing  $\pm 1\text{ppm}$  typical in 1st year @  $25^\circ\text{C}$

**Electrical Parameters**

- Supply Voltage  $3.3\text{V} \pm 5\%$
- Current Draw (Typical):  $3\text{mA}$  @ 20MHz
- Supply Voltage Variation:  
 $<30\text{MHz} \pm 0.3\text{ppm}$   
 $30\text{MHz to } 40\text{MHz} \pm 0.4\text{ppm}$
- Load Variation:  $\pm 0.2\text{ppm}$  (@15pF  $\pm 10\%$ )  
 After Reflow:  $\pm 1.0\text{ppm}$

**Frequency Adjustment**

- Pulling  $\pm 5\text{ppm}$  min
- Control Voltage  $1.65\text{V} \pm 1.0\text{V}$

**Output Details**

- Output Compatibility HCMOS
- Drive Capability  $15\text{pF}$  nom
- Rise and Fall Time  $8.0\text{ns}$  max
- Duty Cycle  $45/55\%$

**Environmental Parameters**

- Shock: IEC 60068-2-27, Test Ea:  $980\text{m/s}^2$  acceleration for 6ms, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc, Procedure B4: 10Hz-60Hz 1.5mm displacement, 60-2000Hz at  $98.1\text{m/s}^2$ , 30mins in 3 mutually perpendicular planes at 1 oct/min
- Solderability: MIL-STD-202, Method 208, Category 3
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$

**Manufacturing Details**

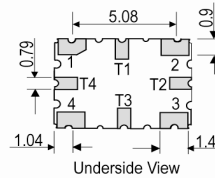
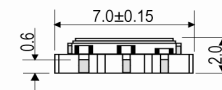
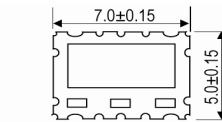
- Soldering: Suitable for Convection Reflow soldering. Peak temperature  $260^\circ\text{C}$ , 60sec max above  $220^\circ\text{C}$
- Washing: Able to withstand aqueous washing

**Compliance**

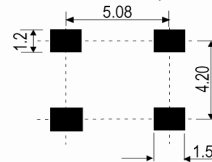
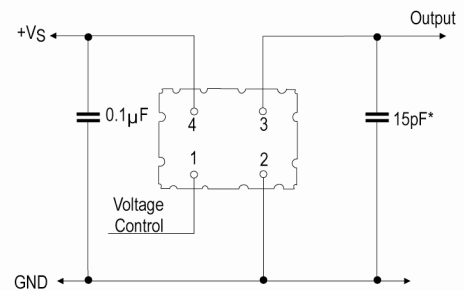
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 1

**Packaging Details**

- Pack Style: Bulk Loose in bulk pack
- Pack Size: 100
- *Alternative packing option available*


**Outline (mm)**

**Pad Connections**

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

**Solder Pad Layout**

**Test Circuit**


\* Inclusive of probe and jig capacitance

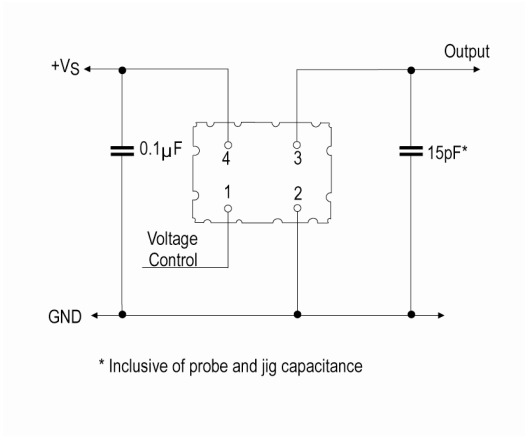
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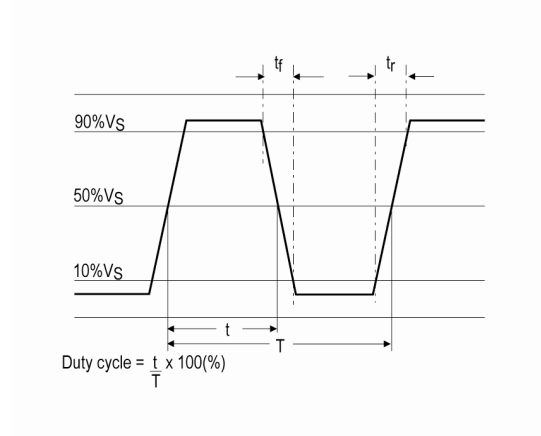
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**Test Circuit**



**Wave Form**



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