



ISSUE 5; August 2012 - RoHS 2011/65/EU



**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

**Frequency Range**

■ Frequency 10.00 to 40.00MHz

**Supply Voltage**

■ Voltage 3.3V ±5%

**Ageing**

■ Ageing ±1ppm typical in 1st year @ 25°C

**Output Compatibility & Load**

■ Output Compatibility HCMOS

■ Drive Capability 15pF nom

■ Pulling ±5ppm min

■ Voltage Control 1.65V ±1.0V

**Frequency Stabilities**

■ Frequency Stability ±0.5ppm

**Operating Temperature Ranges**

■ -40 to 85°C

**Electrical Parameters**

■ Current Draw (Typical): 3mA @ 20MHz

■ Supply Voltage Variation:  
 <30MHz ±0.3ppm  
 30MHz to 40MHz ±0.4ppm

■ Load Variation: ±0.2ppm (@15pF ±10%)  
 After Reflow: ±1.0ppm

**Environmental Parameters**

■ Shock: IEC 60068-2-27, Test Ea: 980m/s<sup>2</sup> 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 98.1m/s<sup>2</sup>, 30mins in 3 mutually perpendicular planes at 1 oct/min

■ Solderability: MIL-STD-202, Method 208, Category 3

■ Storage Temperature Range: -55 to 125°C

**Manufacturing Details**

■ Soldering: Suitable for Convection Reflow soldering. Peak temperature 260°C, 60sec max above 220°C

■ Washing: Able to withstand aqueous washing

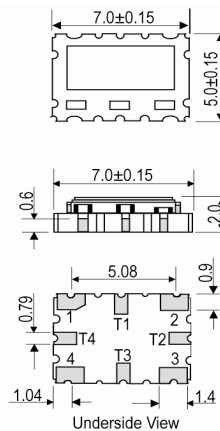
**Ordering Information (\*minimum required)**

■ Frequency\*  
 Model\*  
 Output  
 Frequency Stability (over operating temperature range)\*  
 Operating Temperature Range\*  
 Supply Voltage

■ Example  
 13.0MHz CFPT-126  
 HCMOS ±0.5ppm -40 to 85C 3.3V

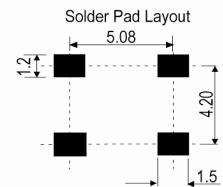


**Outline (mm)**

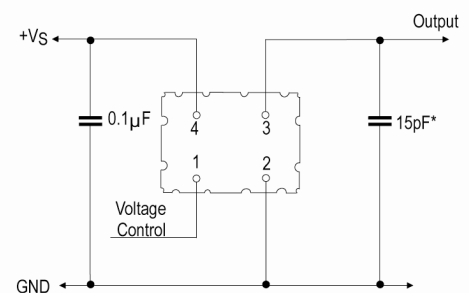


**Pad Connections**

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



**Test Circuit**



\* Inclusive of probe and jig capacitance

**Sales Office Contact Details:**

UK: +44 (0)1460 270200

Germany: +49 (0)7264 9145-0

France: +33 (0)5 34 50 91 18

USA: +1 (0)408.273.4530

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

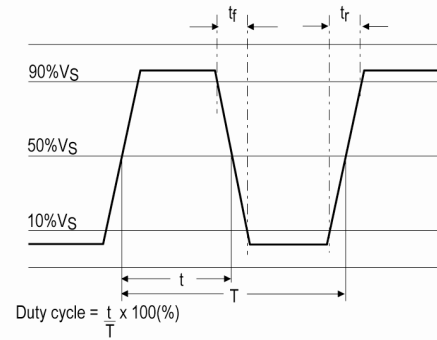
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)



**Packing Details**

- Pack Style: **Bulk**            Loose in bulk pack  
Pack Size                    100
- Pack Style: **Reel**            Tape and reel in accordance with EIA-481-D  
Pack Size                    1,000
- Alternative packing options available

**Output Waveform**



**Electrical Specification - maximum limiting values 3.3V ±5%**

Developed Frequencies	Temp Range	Stability	Pullability	Rise & Fall (10 to 90%)	Duty Cycle %
10.00MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
12.80MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
13.00MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
16.38MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
19.44MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
20.00MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
24.00MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
26.00MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
32.77MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%
40.00MHz	-40 to 85°C	±0.5ppm	±5ppm min	8ns	45/55%

*This document was correct at the time of printing; please contact your local sales office for the latest version*

**Sales Office Contact Details:**

UK: +44 (0)1460 270200  
Germany: +49 (0)7264 9145-0

France: +33 (0)5 34 50 91 18  
USA: +1 (0)408.273.4530

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)