



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

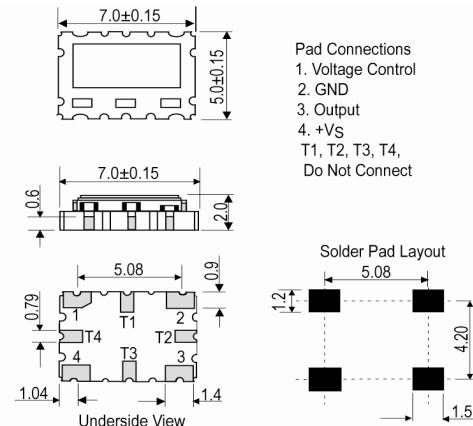
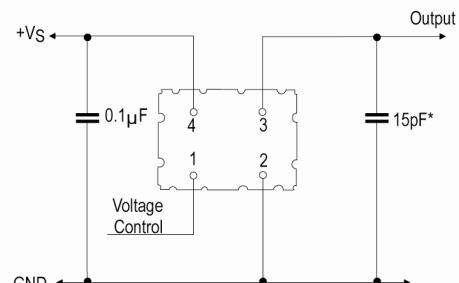
- Shock: IEC 60068-2-27, Test Ea: 980m/s² acceleration for 6ms, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc, Procedure B4: 10Hz-60Hz 1.5mm displacement, 60-2000Hz at 98.1m/s², 30mins in 3 mutually perpendicular planes at 1 oct/min
- Solderability: MIL-STD-202, 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)****Test Circuit**

* Inclusive of probe and jig capacitance

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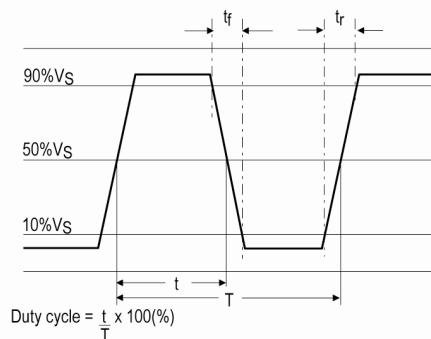
Web: www.iqdfrequencyproducts.com



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% |

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