



ISSUE 2; July 2012 - RoHS 2011/65/EU



Description

- Surface mount temperature compensated crystal oscillator (TCXO) in a miniature ceramic package

Frequency Range

- Frequency 13.000 to 38.400MHz

Supply Voltage

- Voltage 1.8V ±5%
- Frequency Tolerance ±2.0ppm

Ageing

- Ageing ±1ppm max per year @25±2°C

Output Compatibility & Load

- Output Compatibility Clipped Sine

Frequency Stabilities

- Frequency Stability ±0.50ppm

Operating Temperature Ranges

- -30 to 85°C

Frequency Parameters

- Supply Voltage Variation: ±0.2ppm max
- Load Variation: ±0.1ppm max

Output Details

- Output Compatibility & Load: Clipped Sine 0.8pk-pk minimum, 10kΩ // 10pF ±10%

Noise Parameter

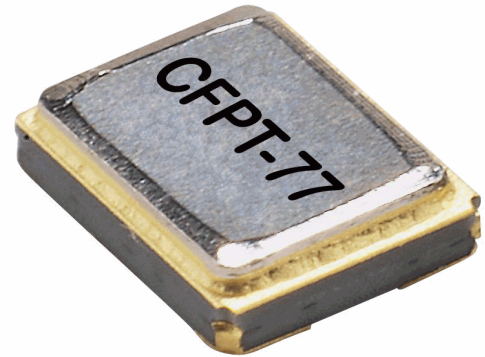
- Phase Noise (typical)
 - 80dBc/Hz @ 10Hz
 - 105dBc/Hz @ 100Hz
 - 130dBc/Hz @ 1kHz
 - 145dBc/Hz @ 10kHz
- Harmonics: -5dBc max

Environmental Parameters

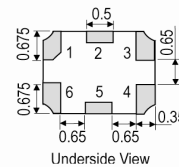
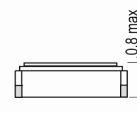
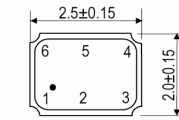
- Storage Temperature Range: -40 to 85°C
- Drop: 150cm drop (6 directions x 3 times) onto hard wooden board
- Vibration: 1.5mm amplitude, 10Hz-55Hz-10Hz, sweep rate 1min in 3 mutually perpendicular planes, duration 2hrs each plane
- MSL 1

Manufacturing Details

- Soldering: Suitable for Convection Reflow soldering. Peak temperature 260°C for 10sec max
- Washing: Not recommended



Outline (mm)



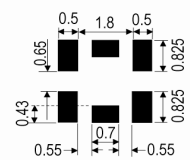
Pad Connections

1. GND
2. N/C
3. GND
4. Output
5. N/C
6. +Vs

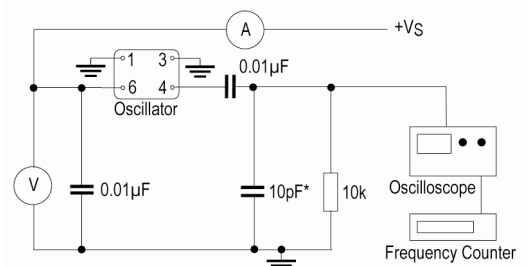
Note 1: a capacitor of 0.01µF between +Vs and GND is recommended.

Note 2: a DC bias cut capacitor of 0.01µF at the output is recommended.

Solder Pad Layout



Test Circuit



* Inclusive of jiggling and equipment capacitance

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Ordering Information (*minimum required)

- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Example
- 13.0MHz CFPT-77
- Clipped Sine ±2ppm -30 to 85C 1.8V

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 3,000
- Alternative packing options available

Electrical Specification - maximum limiting values 1.8V ±5%

Developed Frequencies	Temp Range	Stability	Output Waveform	Supply Current
13.000MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
16.368MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
16.369MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
19.200MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
26.000MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
27.456MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
30.000MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA
38.400MHz	-30 to 85°C	±0.50ppm	Clipped Sine	2.0mA

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

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