



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 3.0V $\pm 5\%$
- Frequency Tolerance ± 2.0 ppm

Ageing

- Ageing ± 1 ppm max per year @ 25°C $\pm 2^\circ$ C

Output Compatibility & Load

- Output Compatibility Clipped Sine

Frequency Stabilities

- Frequency Stability ± 0.50 ppm

Operating Temperature Ranges

- 30 to 85°C

Frequency Parameters

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

Output Details

- Output: 0.8V pk-pk min

Noise Parameter

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

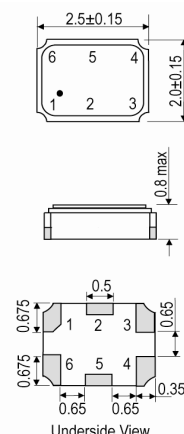
Environmental Parameters

- 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

Manufacturing Details

- MSL 1
- Soldering: Suitable for Convection Reflow soldering. Peak temperature 260°C for 10sec max
- Washing: Not recommended

Outline (mm)



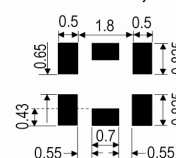
Pad Connections

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

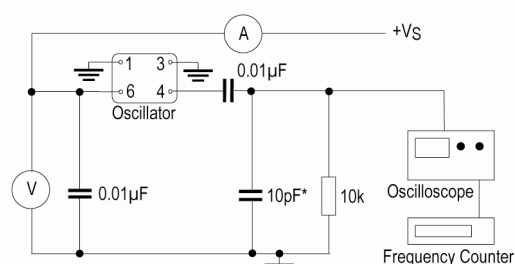
Note 1: a capacitor of 0.01 μ F between +Vs and GND is recommended.

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

Solder Pad Layout



Test Circuit



* Inclusive of jiggig 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
- (*minimum required)
- Example
- 13.0MHz CFPT-69
- Clipped Sine ± 2 ppm -30 to 85C 3.0V

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 3.0V $\pm 5\%$

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