

CFPT-69, -77 SMD TCXO

ISSUE 1 ; 2 DECEMBER 2009 - RoHS 2002/95/EC

Description

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

Package Outline

- 2.5 x 2.0mm

Standard Frequencies

- 13.0, 16.368, 16.369, 19.2, 26.0, 27.456, 38.4MHz

Output Compatibility & Load

- Clipped Sine 0.8V pk-pk minimum, 10k Ω // 10pF $\pm$ 10%

Harmonics

- 5dBc maximum

Frequency Stability

- Temperature (see table)
- Tolerance $\pm$ 2.0ppm @ 25°C $\pm$ 2°C
- Supply Voltage Variation $\pm$ 0.2ppm maximum
- Load Variation $\pm$ 0.1ppm maximum
- Ageing $\pm$ 1ppm maximum per year @ 25°C $\pm$ 2°C

Operating Temperature Range

- 30 to 85°C

Storage Temperature Range

- 40 to 85°C

Supply Voltages

- 3.0V $\pm$ 5% CFPT-69
- 1.8V $\pm$ 5% CFPT-77

Phase Noise (typical)

- 80dBc/Hz @ 10Hz
- 105dBc/Hz @ 100Hz
- 130dBc/Hz @ 1kHz
- 145dBc/Hz @ 10kHz

Environmental

- Drop: natural drop from 150cm onto a hard board, 3 times in each mutually perpendicular axis.
- Vibration: 10 to 55 to 10Hz, 1.5mm amplitude, 1 min sweep rate, 3 times in each axis, 2hrs duration per axis
- MSL 1
- Reflow Soldering Temp 260°C max for 10sec max
- Washing not recommended

Marking Includes

- Batch code

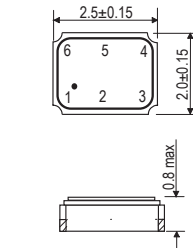
Packaging

- Loose in bulk pack or tape and reel to EIA-481

Minimum Order Information Required

- Frequency + Model Number + Operating Temperature
Code + Frequency Stability

Outline (mm)



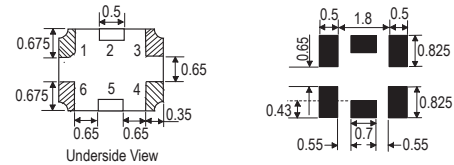
Pad Connections

- GND
- N/C
- GND
- Output
- N/C
- +Vs

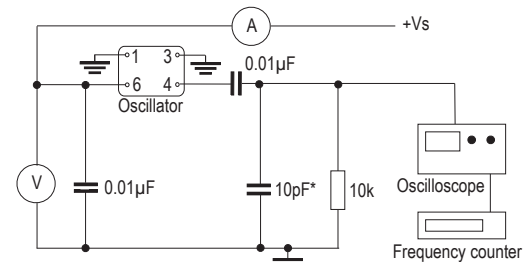
Note 1: a capacitor of 0.01 μ F between +Vs and GND is recommended.

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

Solder pad layout



Test Circuit



* Inclusive of jigging and equipment capacitance

Electrical Specification - maximum limiting values

Frequencies	Frequency Tolerance @ 25°C	Supply Voltage	Supply Current	Output Waveform	Output	Model Number
13.0, 16.368, 16.369, 19.2, 26.0, 27.456, 38.4MHz	±2.0ppm	3.0V ±5%	2mA	Clipped Sine	0.8V pk-pk min	CFPT-69
		1.8V ±5%				CFPT-77

Frequency Stabilities over Operating Temperature Range

Operating Temperature Range	Frequency Stabilities v Operating Temperature Range	
	±0.5ppm	±2.0ppm
-30 to 85°C	Code EW	Code GW
Ordering Example Frequency _____ Model No. _____ Frequency Stability vs Operating Temperature Code _____		
Other frequencies may be available, please contact our sales office.		