

CFPT-141 SMD TCVCXO

ISSUE 7; 1 NOVEMBER 2008 - RoHS 2002/95/EC

Description

- Surface mount temperature compensated voltage controlled crystal oscillator (TCVCXO) providing a high degree of frequency stability over a wide temperature range in a hermetically sealed ceramic package and is particularly suited to applications where space is at a premium

Package Outline

- 5 x 3.2mm

Standard Frequencies

- 12.8, 13, 19.2, 20, 26MHz

Output Compatibility & Load

- Clipped Sine, 0.8V pk-pk min
- $10k\Omega // 10pF \pm 10\%$

Frequency Tolerance

- $\pm 0.5ppm$ max @ 25°C

Frequency Stability

- See table

Supply Voltage Variation

- $\pm 0.2ppm$ (5% change)

Load Variation

- $\pm 0.2ppm$ max (10% change)

Storage Temperature Range

- -55 to 125°C

Frequency Adjustment

- $\pm 3ppm$ min to $\pm 7ppm$ max (positive sense)

Voltage Control

- 1.5V $\pm 1.0V$ applied to pad 1
- Input Impedance $> 1.0M\Omega$

Phase Noise (typical @ 13MHz)

- -80dBc/Hz @ 10Hz
- -105dBc/Hz @ 100Hz
- -130dBc/Hz @ 1kHz
- -140dBc/Hz @ 10kHz

Ageing

- $\pm 1ppm$ typical in first year @ 25°C

Environmental

- Shock: MIL-STD-883D 2002.3 Condition B (1500g, 1/2 sine, 0.5ms, 3 planes, 3 times)
- Vibration: MIL-STD-883D 2005.2 Condition B (20-2000Hz, 1.5mm amplitude, 20g X, Y & Z planes, 4 hrs in each planes)

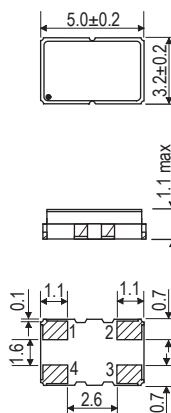
Marking Includes

- Model number + Frequency

Packaging

- Bulk or Tape & Reel

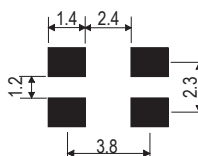
Outline (mm)



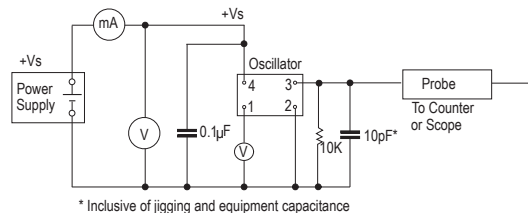
Pad Connections

1. Voltage Control
2. GND
3. Output
4. +Vs

Solder pad layout



Test Circuit



Minimum Order Information Required

- Frequency + Model Number + Frequency Stability + Operating Temperature

Electrical Specification - maximum limiting values

Frequency Range	Supply Voltage	Supply Current	Frequency Adjustment	Output Waveform	Output	Model Number
10.0 to 30.0MHz	3.0V $\pm$ 0.15V	2.0mA	$\pm$ 3ppm min/ $\pm$ 7ppm max.	Clipped Sine	0.8 V pk-pk min	CFPT-141

Frequency Stabilities over Operating Temperature Range

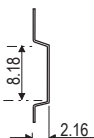
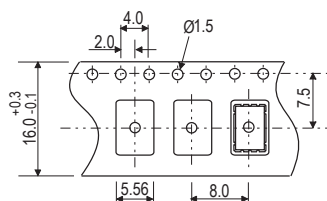
Operating Temperature Ranges	Frequency Stabilities v Operating Temperature Range			
	$\pm$ 1.5ppm	$\pm$ 2.0ppm	$\pm$ 2.5ppm	$\pm$ 5ppm
0 to 50°C	Code CP	Code GP	Code HP	Code KP
-10 to 60°C	Code CR	Code GR	Code HR	Code KR
-20 to 70°C	-	Code GS	Code HS	Code KS
-30 to 85°C	-	-	Code HW*	Code KW
-40 to 85°C	-	-	Code HX	Code KX

*Please note Code HW is the standard frequency stability vs operating temperature range

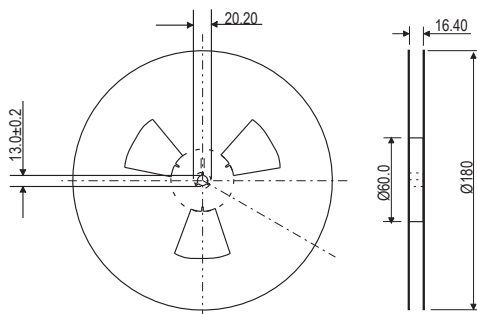
Ordering Example 13.0MHz CFPT-141 HW
 Frequency _____
 Model No. _____
 Frequency Stability vs Operating Temperature Code _____

Note. Other frequencies / specifications may be available, please contact our sales office.

Tape (mm)



Reel (mm)



TCXOs