

CFPT-123 SMD TCVCXO

ISSUE 6; 1 NOVEMBER 2008 - RoHS 2002/95/EC

Description

- Surface mount temperature compensated voltage controlled crystal oscillator (TCVCXO) in a hermetically sealed ceramic package

Package Outline

- 7 x 5mm

Standard Frequencies

- 10, 12.8, 13, 14.4, 15.36, 19.2, 19.44, 19.68, 20, 26MHz

Output Compatibility & Load

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

Frequency Adjustment

- $\pm$ 5ppm min

Voltage Control

- 1.5V $\pm$ 1.0V applied to pad 1 (frequency movement is positive sense)

Input Impedance

- >1.0M Ω

Frequency Stability

- Temperature (see table)
- Tolerance $\pm$ 0.5ppm max@ 25°C
- Supply Voltage Variation: $\pm$ 0.2ppm (5% change)
- Load Variation: $\pm$ 0.2ppm (10% change)
- Ageing $\pm$ 1ppm typical first year @ 25°C

Storage Temperature Range

- 55 to 125°

Phase Noise (typical @ 10MHz)

- 90dBc/Hz @ 10Hz
- 110dBc/Hz @ 100Hz
- 140dBc/Hz @ 1kHz
- 145dBc/Hz @ 10kHz

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

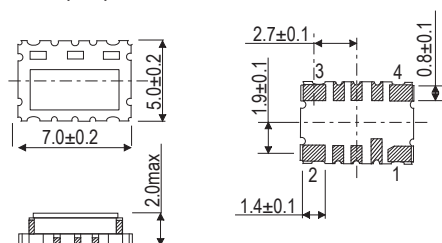
Packaging

- Bulk or Tape & Reel

Minimum Order Information Required

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

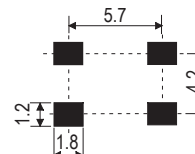
Outline (mm)



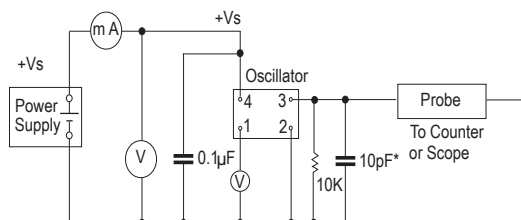
Solder pad layout

Pad Connections

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

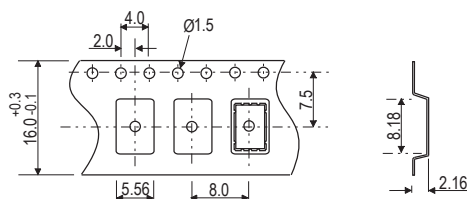


Test Circuit



* Inclusive of jigging and equipment capacitance

Tape (mm)



Electrical Specification - maximum limiting values

Frequency Range	Supply Voltage	Supply Current	Frequency Adjustment	Output Waveform	Output	Model Number
10.0 to 26.0MHz	3.0V±0.3V	2.5mA	±5.0ppm min. / 1.5V±1.0V	Clipped Sine	0.8V pk-pk min	CFPT-123

Frequency Stabilities over Operating Temperature Range

Operating Temperature Ranges	Frequency Stabilities v Operating Temperature Range			
	±1.5ppm	±2.0ppm	±2.5ppm	±5.0ppm
0 to 50°C	CP	GP	HP	KP
-10 to 60°C	CR	GR	HR	KR
-20 to 70°C	-	GS	HS	KS
-30 to 80°C	-	GV	HV*	KV
-30 to 85°C	-	-	HW	KW
-40 to 85°C	-	-	HX	KX

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

Ordering Example	12.8MHz	CFPT-123	HV
Frequency			
Model No.			
Frequency Stability vs Operating Temperature Code			
Note. Other frequencies may be available, please contact our sales office.			

Reel (mm)