

CFPT-141 SMD TCVCXO

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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

Standard Frequencies

- 12.8, 13, 19.2, 20, 26MHz

Output Compatibility & Load

- Clipped Sine, 0.8V_{pk-pk} min
- 10k Ω // 10pF \pm 10%

Frequency Tolerance

- \pm 0.5ppm max

Frequency Stability

- See table

Supply Voltage Variation

- \pm 0.2ppm (5% change)

Load Variation

- \pm 0.2ppm max (10% change)

Ageing

- \pm 1ppm typical in 1st year @ 25°C

Voltage Control

- 1.5V \pm 1.0V applied to pad 1

Frequency Adjustment

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

Input Impedance

- 1.0M Ω min

Phase Noise (typical @ 13MHz)

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

Storage Temperature Range

- 55 to 125°C

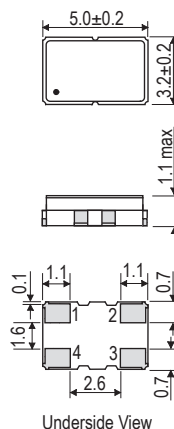
Environmental

- Shock: MIL-STD-883D, Method 2002.3, Test Condition B: 1500G, 0.5ms, 1/2 sine wave, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: MIL-STD-883D, Method 2005.2, Test Condition B: 20G (20Hz-2000Hz), 1.5mm amplitude, in 3 mutually perpendicular planes, 4hrs in each plane

Packaging

- Loose in bulk pack, 100pcs per pack
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

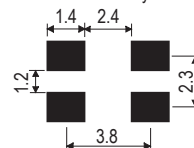
Outline (mm)



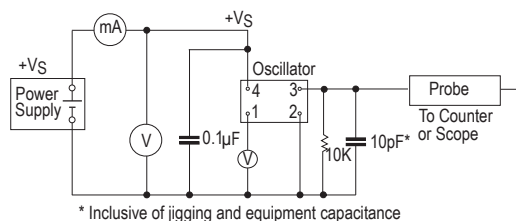
Pad Connections

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

Solder Pad Layout



Test Circuit



Ordering Information (*minimum required)

- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage

Example

- 13.0MHz CFPT-141
Clipped Sine \pm 2.5ppm -30 to 85C 3V



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±0.15V	2mA	±3ppm min/±7ppm max.	Clipped Sine	0.8 V _{pk-pk} min	CFPT-141
Note. Other frequencies / specification combinations, please contact our sales offices						

Frequency Stabilities over Operating Temperature Range

Operating Temperature Ranges	Frequency Stabilities v Operating Temperature Range			
	±1.5ppm	±2.0ppm	±2.5ppm	±5ppm
0 to 50°C	✓	✓	✓	✓
-10 to 60°C	✓	✓	✓	✓
-20 to 70°C	–	✓	✓	✓
-30 to 85°C	–	–	Standard*	✓
-40 to 85°C	–	–	✓	✓
* Note: ±2.5ppm over -30 to 85°C is the standard frequency stability vs operating temperature range				

