



### 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.

■ Model	CFPT-141
■ Model Issue number	8

### Frequency Parameters

■ Frequency	20.0MHz
■ Frequency Tolerance @ 25°C	±0.50ppm
■ Frequency Stability	±2.50ppm
■ Operating Temperature Range	-30.00 to 85.00°C
■ Ageing	±1ppm typ in 1st year @ 25°C
■	
■	

### Electrical Parameters

■ Supply Voltage	3.0V
■ Supply Voltage Tolerance	±0.15V
■ Current Draw	2.00mA max
■ Supply Voltage Variation: ±0.2ppm (5% change)	
■ Load Variation: ±0.2ppm max (10% change)	

### Frequency Adjustment

■ Pulling	±3ppm min to ±7ppm max
■ Control Voltage Details	1.5V ±1.0V
■ Input Impedance (Pad1): 1.0MΩ min	

### Output Details

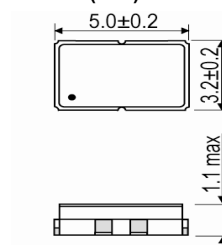
■ Output Compatibility	Clipped Sine
■ Output Load	10kΩ // 10pF ±10%
■ Output: 0.8Vpk-pk min	

### Noise Parameters

■ Phase Noise (typical @ 13MHz)	
–80dBc/Hz @ 10Hz	
–105dBc/Hz @ 100Hz	
–130dBc/Hz @ 1kHz	
–140dBc/Hz @ 10kHz	

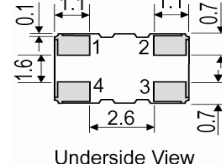
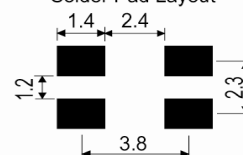


### Outline (mm)



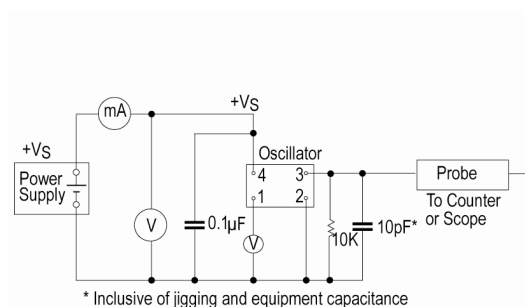
Pad Connections  
1. Voltage Control  
2. GND  
3. Output  
4. +VS

### Solder Pad Layout



Underside View

### Test Circuit



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### **Environmental Parameters**

- 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
- Storage Temperature Range: -55 to 125°C
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### **Manufacturing Details**

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### **Compliance**

- |                |           |
|----------------|-----------|
| ▪ RoHS Status  | Compliant |
| ▪ REACH Status | Compliant |

### **Packaging**

- |                   |                    |
|-------------------|--------------------|
| ▪ Pack Type: Bulk | Loose in bulk pack |
| Pack Size         | 100                |
- Alternative packing option available

*This document is correct at the time of printing; please contact your local office for the latest version.*

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