

ISSUE 5; June 2015

### Description

- Surface mount temperature compensated crystal oscillator (TCXO) providing a high degree of frequency stability over a wide temperature in a hermetically sealed ceramic package and is suitable for GPS applications

### Frequency Parameters

- Frequency: 16.32MHz to 33.6MHz
- Frequency Stability:  $\pm 0.50\text{ppm}$
- Ageing:  $\pm 1\text{ppm}$  typical in 1st year @25°C

### Electrical Parameters

- Supply Voltage:  $3.0\text{V} \pm 10\%$
- Current Draw (Typical):  $2\text{mA} @ 20\text{MHz}$
- Supply Voltage Variation:  $\pm 0.2\text{ppm}$
- Load Variation:  $\pm 0.2\text{ppm}$  ( $10\text{k}\Omega // 10\text{pF}$ )  
After Reflow:  $\pm 1.0\text{ppm}$

### Operating Temperature Ranges

- 40 to 85°C

### Output Details

- Output Compatibility: Clipped Sine
- Drive Capability:  $10\text{k}\Omega // 10\text{pF}$
- Output Waveform: 0.8 Vpk-pk min, DC-Coupled

### Environmental Parameters

- Shock: IEC 60068-2-27, Test Ea: 980m/s<sup>2</sup> acceleration for 6ms, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc, Procedure B4: 10Hz-60Hz 1.5mm displacement, 60-2000Hz at 98.1m/s<sup>2</sup>, 30mins in 3 mutually perpendicular planes at 1 oct/min
- Solderability: MIL-STD-202, Method 208, Category 3
- Storage Temperature Range: -55 to 125°C

### Manufacturing Details

- Soldering: Suitable for Convection Reflow soldering. Peak temperature 260°C for 10sec max
- Washing: Able to withstand aqueous washing

### Ordering Information

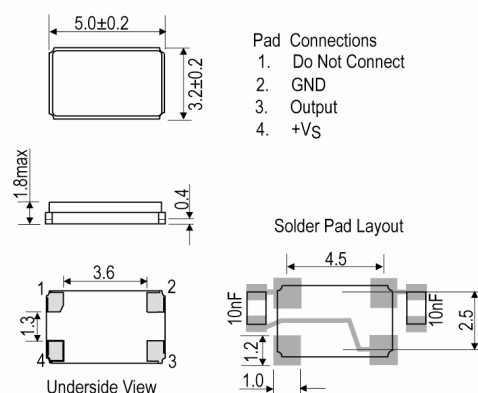
- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- Example  
26.0MHz CFPT-127  
Clipped Sine  $\pm 0.5\text{ppm}$  -40 to 85C 3V

### Compliance

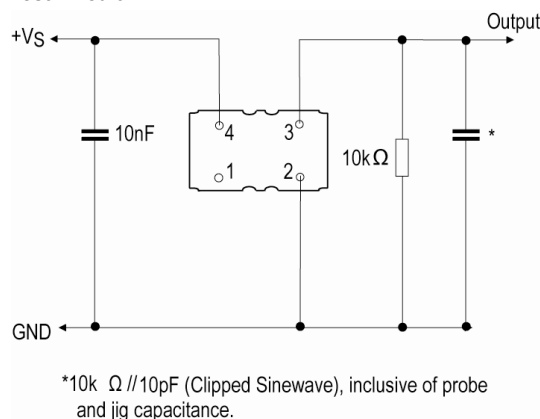
- RoHS Status (2011/65/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



### Outline (mm)



### Test Circuit



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**Packaging Details**

- Pack Style: Cutt      In tape, cut from a reel  
Pack Size: 1
- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 100
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000

**Electrical Specification - maximum limiting values 3.0V ±10%**

| Frequency<br>Min | Frequency<br>Max | Temperature<br>Range | Stability<br>(Min) | Current<br>Draw | Rise and Fall<br>Time | Duty Cycle |
|------------------|------------------|----------------------|--------------------|-----------------|-----------------------|------------|
|                  |                  | °C                   | ppm                | mA              | ns                    | %          |
| 16.32MHz         | 16.32MHz         | -40 to 85            | ±0.5               | -               | -                     | -          |
| 16.8MHz          | 16.8MHz          | -40 to 85            | ±0.5               | -               | -                     | -          |
| 19.2MHz          | 19.2MHz          | -40 to 85            | ±0.5               | -               | -                     | -          |
| 24.5535MHz       | 24.5535MHz       | -40 to 85            | ±0.5               | -               | -                     | -          |
| 26.0MHz          | 26.0MHz          | -40 to 85            | ±0.5               | -               | -                     | -          |
| 33.6MHz          | 33.6MHz          | -40 to 85            | ±0.5               | -               | -                     | -          |

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