

## Customer Part:



### Description

- 32.768kHz output crystal oscillator in a ceramic package, hermetically sealed with a seam sealed metal lid. Suitable for real time clock applications.
- Model: CFPS-102
- Model Issue number: 4

### Frequency Parameters

- Frequency: 32.7680kHz
- Frequency Stability:  $\pm 50.00\text{ppm}$
- Operating Temperature Range:  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing:  $\pm 3\text{ppm}$  max per year

### Electrical Parameters

- Supply Voltage:  $1.8\text{V} \pm 5\%$
- Current Draw:  $1.500\text{mA}$

### Output Details

- Output Compatibility: CMOS
- Drive Capability:  $15\text{pF}$  max
- Rise and Fall Time:  $50.0\text{ns}$  max
- Duty Cycle: 40/60%

### Output Control

- Standby Operation: Logic '1' ( $>70\%$  VS) to pad 1 enables oscillator output  
Logic '0' ( $<30\%$  VS) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output.
- Start-up Time:  $35\text{ms}$  max  
 $2\text{ms}$  typ to 90% of final amplitude (under ideal conditions @  $25^\circ\text{C}$ )
- Standby Current:  $20\mu\text{A}$  max,  $1.7\mu\text{A}$  typ @  $25^\circ\text{C}$

### Environmental Parameters

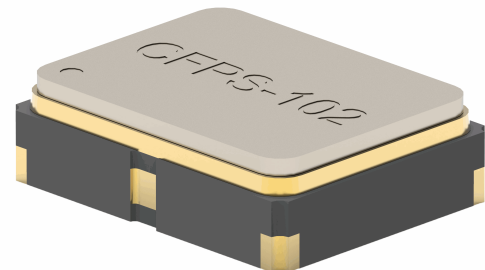
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Shock: MIL-STD-883F, Method 2002.4:  $1500\text{G}$ ,  $0.5\text{ms}$ , 3 times in each of 3 mutually perpendicular planes
- Vibration: MIL-STD-883F, Method 2007.3: 20G ( $20\text{Hz}$ - $2000\text{Hz}$ ),  $1.52\text{mm}$  amplitude, 20mins in 3 mutually perpendicular planes (total 4hrs)

### Compliance

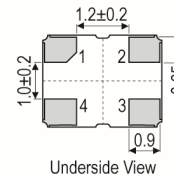
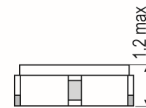
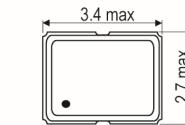
- RoHS Status (2015/863/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

### Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Alternative packing option available



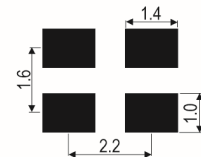
### Outline (mm)



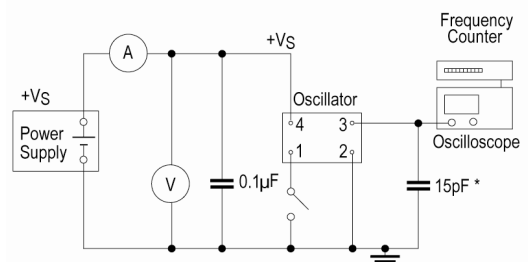
#### Pad Connections

- Standby Operation
- GND
- Output
- +Vs

#### Solder Pad Layout



### Test Circuit



\* Inclusive of jigging and equipment capacitance

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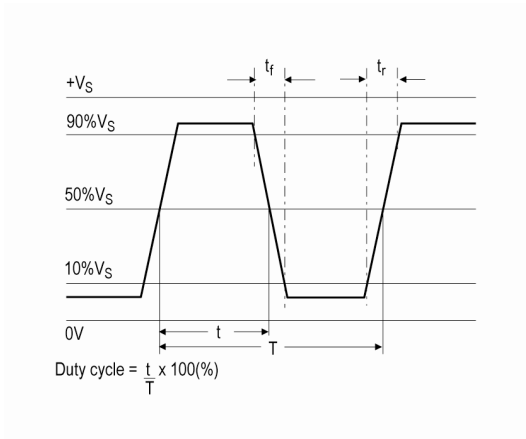
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Wave Form



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