

# CFPS-80 SMD CLOCK OSCILLATORS

ISSUE 3; 1 NOVEMBER 2008 - RoHS 2002/95/EC

## Description

- Surface mount oscillator in a ceramic package with a hermetically sealed metal lid providing the standard watch crystal frequency of 32.768kHz

## Package Outline

- 4 x 2.5mm

## Standard Frequency

- 32.768kHz

## Output Compatibility & Load

- CMOS
- Drive Capability 15pF max

## Frequency Tolerance

- +5 to -20ppm (3.3V, +25°C)

## Frequency Stability & Operating Temperature Range

- Over Operating Temperature Range -20 to 70°C  
Typically +10 to -90ppm (ref to 25°C reading)
- Over Operating Temperature Range -40 to 85°C  
Typically +10 to -140ppm (ref to 25°C reading)

## Storage Temperature Range

- 55 to 125°C

## Tri-state Operation

- Logic '0' to pad 1 disables oscillator output, when disabled the oscillator output goes to the high impedance state
- Logic '1' to pad 1 enables oscillator
- Connect to logic 1 when tri-state function is not required

## Output Levels

- VOL '0' Level, 0.4V max
- VOH '1' Level, Vs-0.4V min

## Standby Current

- 250nA max (@25°C)

## Start up Time

- 1s max

## Ageing

- +5ppm max (1st year)

## Environmental

- Drop: natural drop, 3 times, from 100cm onto a hard wooden plate (30mm thick)
- Vibration: 10 to 55Hz, 1.5mm displacement (10Hz-36Hz), 4G (36Hz-55Hz) sweep time 1min/oct, duration 2hrs for each X, Y & Z axes

## Marking Includes

- Frequency + Date Code

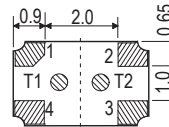
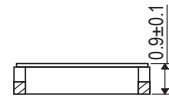
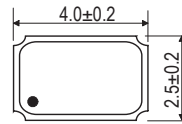
## Packaging

- Bulk or Tape and Reel

## Minimum Order Information Required

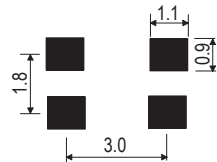
- Frequency + Model Number

## Outline (mm)

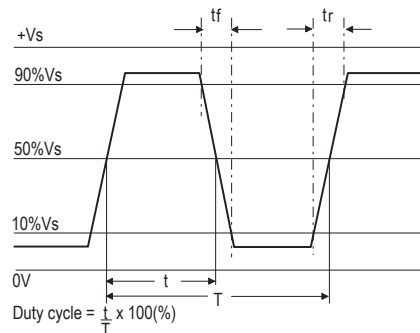


- Pad Connections
- Enable / Disable
  - GND
  - Output
  - +Vs
- T1. Do not connect  
T2. Do not connect

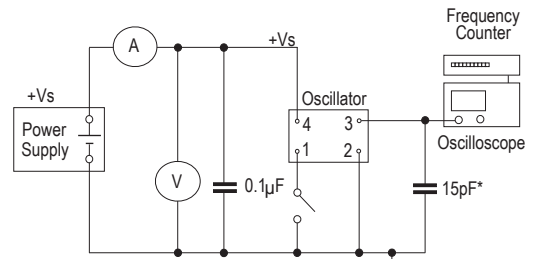
## Solder pad layout



## Output Waveform



## Test Circuit

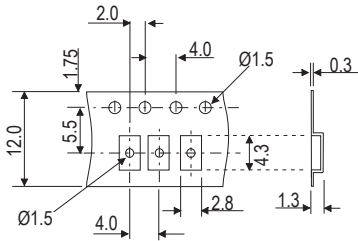


\*Inclusive of jigging and equipment capacitance

**Electrical Specifications - maximum limiting values**

Frequency Range	Supply Voltage	Supply Current (no load)	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
32.768kHz	3.3V±10%	1.5μA	200ns	200ns	40/60%	CFPS-80

**Tape (mm)**



**Reel (mm)**

