

CFPS-107, -108, -109 SMD CLOCK OSCILLATORS

ISSUE 2; 1 NOVEMBER 2008 - RoHS 2002/95/EC

Description

- A range of tight stability surface mount oscillators in a ceramic package with a hermetically sealed metal lid providing the standard watch crystal frequency of 32.768kHz

Package Outline

- 2.5 x 2mm

Frequency Range

- 32.768kHz

Output Compatibility & Load

- Tri-state CMOS
- Drive Capability 15pF max

Frequency Stabilities

- $\pm 20\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$
(Inclusive of tolerance and operating temperature range)

Operating Temperature Ranges

- 0 to 70°C (CFPS-107, 108, 109)
- 40 to 85°C (CFPS-107I, 108I, 109I)

Storage Temperature Range

- 55 to 125°C

Tri-state Operation

- Logic '1' to pad 1 enables oscillator output
- Logic '0' 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

Supply Voltage

- 1.8V CFPS-107
- 2.5V CFPS-108
- 3.3V CFPS-109

Ageing

- $\pm 3\text{ppm}$ max per year

Environmental

- Shock: MIL-STD-883F : 2002.4, 1500G, 0.5ms, 3 times in each X, Y & Z axes
- Vibration: MIL-STD-883F : 2007.3, frequency range 20-2000Hz, 1.52mm amplitude, peak acceleration 20G

Marking Includes

- Model Number

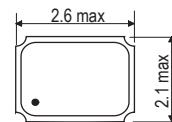
Packaging

- Bulk or Tape and Reel

Minimum Order Information Required

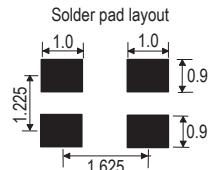
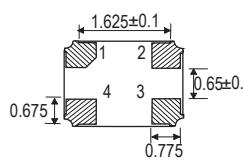
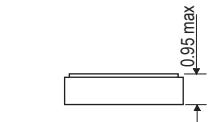
- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

Outline (mm)

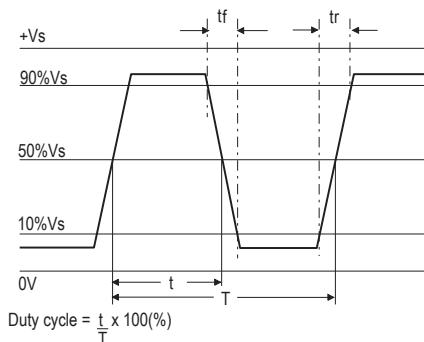


Pad Connections

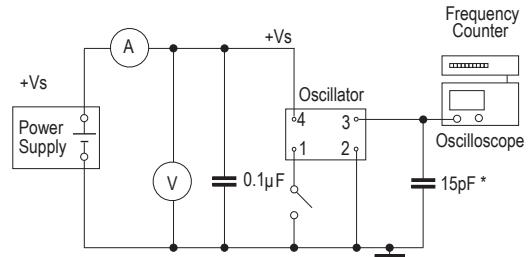
- Enable/Disable
- GND
- Output
- +Vs



Output Waveform



Test Circuit



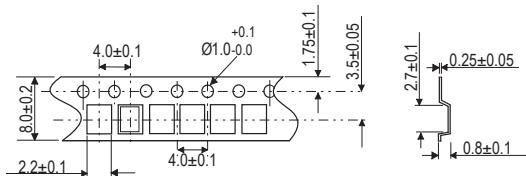
* Inclusive of jigging and equipment capacitance

Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
32.768kHz	$\pm 20\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	1.8V $\pm 5\%$	1.5mA	50ns	50ns	40/60%	CFPS-107
		2.5V $\pm 5\%$	2.5mA				CFPS-107I
		3.3V $\pm 5\%$	3.5mA				CFPS-108 CFPS-108I
							CFPS-109 CFPS-109I

Ordering Example
 Frequency _____ 32.768kHz
 Model No. _____ CFPS-109
 Operating Temperature Code: I = -40 to 85°C; not applicable for 0 to 70°C _____ C
 Frequency Stability: G = $\pm 20\text{ppm}$, A = $\pm 25\text{ppm}$, B = $\pm 50\text{ppm}$, C = $\pm 100\text{ppm}$ _____

Tape (mm)



Reel (mm)

