

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

ISSUE 3; 29 NOVEMBER 2011 - RoHS 2002/95/EC



Description

- Suitable for real time clock applications
- 32.768kHz output crystal oscillators
- Ceramic package with a seam sealed metal lid, hermetically sealed
- Stock parts listed at the beginning of this chapter

Frequency Range

- 32.768kHz

Output Compatibility & Load

- CMOS
- Drive Capability 15pF max

Supply Voltages

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

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)

Note: $\pm 20\text{ppm}$ is not available over -40 to 85°C

Operating Temperature Ranges

- 0 to 70°C
- -40 to 85°C

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

Ageing

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

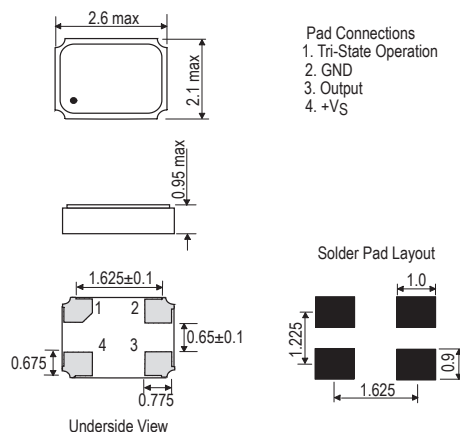
Environmental

- Shock: MIL-STD-883F, Method 2002.4: 1500G, 0.5ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: MIL-STD-883F, Method 2007.3: 20G (20Hz-2000Hz), 1.52mm amplitude

Packaging

- Loose in bulk pack, 100pcs per pack
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see Application Notes)

Outline (mm)



Pad Connections
 1. Tri-State Operation
 2. GND
 3. Output
 4. +V_S

Ordering Information (*minimum required)

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage

Example

- 32.768kHz CFPS-109
 CMOS $\pm 50\text{ppm}$ 0 to 70°C 3.3V

Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr) (10-90%)	Fall Time (tf) (90-10%)	Duty Cycle	Model Number
32.768kHz	±20ppm ±25ppm ±50ppm ±100ppm	1.8V±5%	1.5mA	50ns	50ns	40/60%	CFPS-107
		2.5V±5%	2.5mA				CFPS-108
		3.3V±5%	3.5mA				CFPS-109
Note: For other frequency/specification combinations, please contact our sales offices							

Test Circuit

Output Waveform

