

ISSUE 3; August 2016

### Description

- Suitable for real time clock applications  
32.768kHz output crystal oscillators  
Ceramic package with a seam sealed metal lid, hermetically sealed

### Frequency Parameters

- Frequency 32.768kHz
- Frequency Stability  $\pm 20.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing  $\pm 3\text{ppm}$  max per year

### Electrical Parameters

- Supply Voltage 3.3V  $\pm 5\%$

### Operating Temperature Ranges

- 0 to 70°C
- -40 to 85°C

### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- 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

### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- 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

### Ordering Information

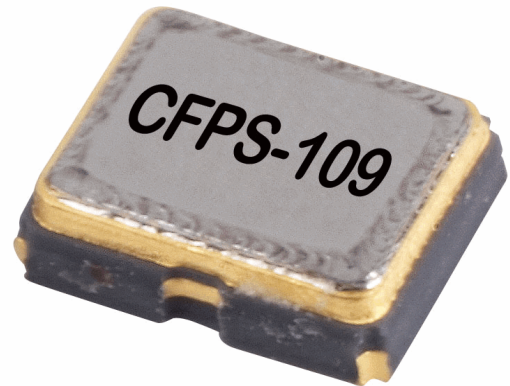
- Frequency\*  
Model\*  
Output  
Frequency Stability\*  
Operating Temperature Range\*  
Supply Voltage
- Example  
32.768kHz CFPS-109  
CMOS  $\pm 50\text{ppm}$  0 to 70C 3.3V

### Compliance

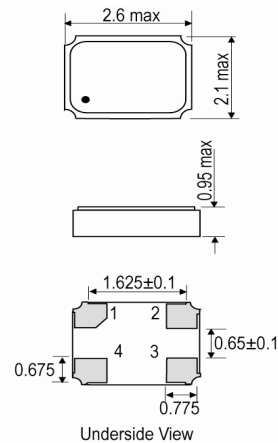
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

### Packaging Details

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

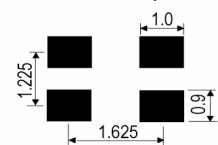


### Outline (mm)

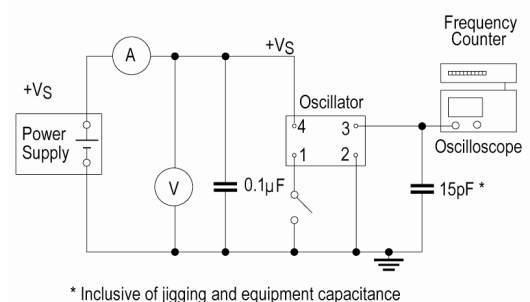


- Pad Connections
1. Tri-State Operation
  2. GND
  3. Output
  4. +VS

### Solder Pad Layout



### Test Circuit



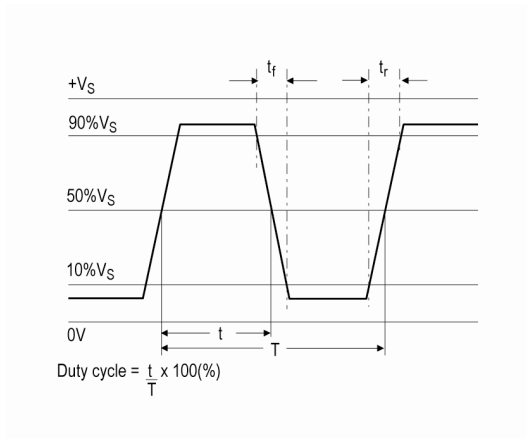
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**Wave Form**



**Electrical Specification - maximum limiting values 3.30V ±5%**

Frequency Min	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
32.768000kHz	-40 to 85	±25.00	3.5	50	40/60%
	0 to 70	±20.00	3.5	50	40/60%

*This document was correct at the time of printing; please contact your local sales office for the latest version.*  
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