

ISSUE 5; May 2024

### Description

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



### Frequency Parameters

- Frequency: 32.768kHz
- Frequency Stability:  $\pm 20.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  max per year

### Electrical Parameters

- Supply Voltage: 2.5V  $\pm 5\%$

### Operating Temperature Ranges

- 10 to 70°C
- 20 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max

### Output Control

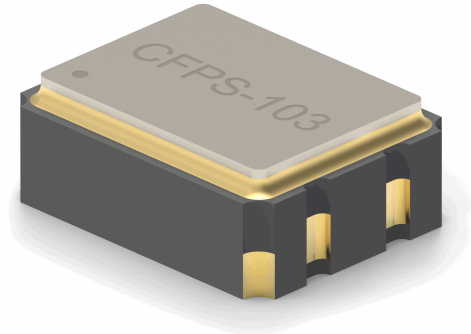
- Standby Operation:  
Logic '1' (>70% VS) to pad 1 enables oscillator output  
Logic '0' (<30% VS) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output
- Start-up Time: 35ms max  
2ms typ to 90% of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

### Environmental Parameters

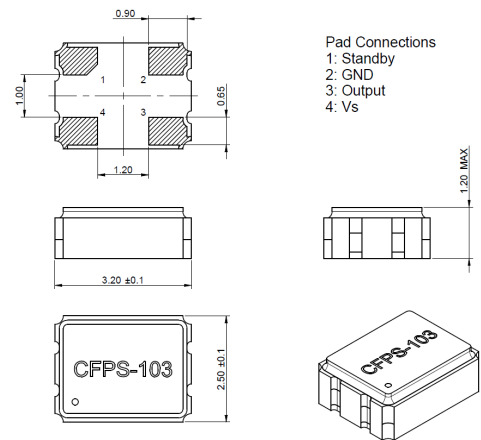
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-883F, Method 2002.4: 1500G, 0.5ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: MIL-STD-883F, Method 2007.3: 20G (20Hz-2000Hz), 1.52mm amplitude, 20mins in 3 mutually perpendicular planes (total 4hrs)

### Ordering Information

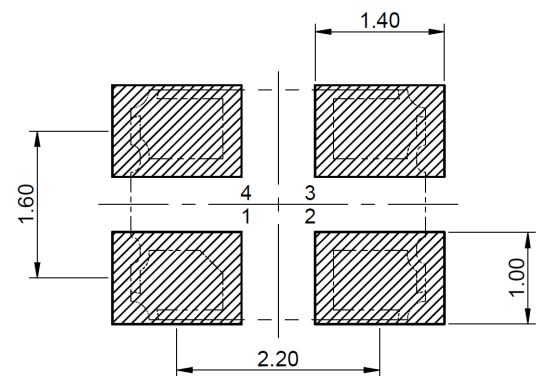
- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage  
(\*minimum required)
- Example  
32.768kHz CFPS-103  
CMOS  $\pm 50\text{ppm}$  -10 to 70C 2.5V



### Outline (mm)



### Recommended Solder Pad Layout



### Sales Office Contact Details:

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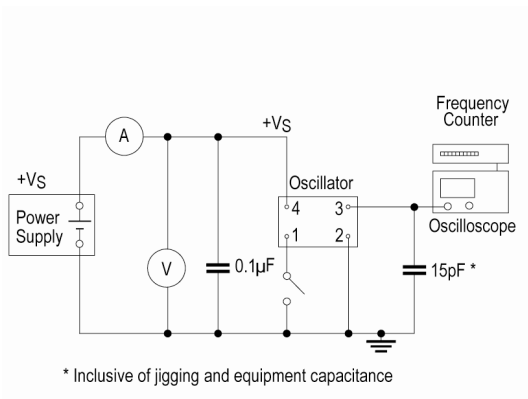
### Compliance

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

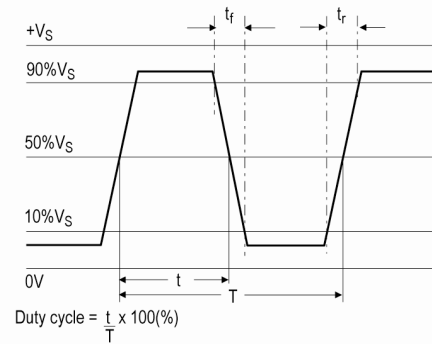
### Packaging Details

- Pack Style: Reel      Tape & reel in accordance with EIA-481  
Standard Pack Quantity: 1,000
- Pack Style: RL3K      Tape & reel in accordance with EIA-481  
Standard Pack Quantity: 3,000
- Pack Style: Cutt      In tape, cut from a reel  
Standard Pack Quantity: 100

### Test Circuit



### Wave Form



### Electrical Specification - maximum limiting values 2.50V ±5%

Frequency Min	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
32.768kHz	-40 to 85	±25.00	2.5	50	40/60%
	-20 to 70	±20.00	2.5	50	40/60%
	-10 to 70	±20.00	2.5	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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