



## Crystal Clock Oscillator Specification

IQD Part No. + Packaging: LFSPXO082283RL3K

Würth Part No. 830208228309



### Description

- 32.768kHz output crystal oscillator in a ceramic package, hermetically sealed with a seam sealed metal lid. Suitable for real time clock applications.
- Model CFPS-102
- Model Issue number 4

### Frequency Parameters

- Frequency 32.7680kHz
- Frequency Stability  $\pm 100.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $125.00^\circ\text{C}$
- Ageing  $\pm 3\text{ppm}$  max per year

### Electrical Parameters

- Supply Voltage  $1.8\text{V} \pm 5\%$
- Current Draw  $1.500\text{mA}$

### Output Details

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$  max
- Rise and Fall Time  $50.0\text{ns}$  max
- Duty Cycle 40/60%

### 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:  $35\text{ms}$  max  
 $2\text{ms}$  typ to 90% of final amplitude (under ideal conditions @  $25^\circ\text{C}$ )
- Standby Current:  $20\mu\text{A}$  max,  $1.7\mu\text{A}$  typ @  $25^\circ\text{C}$

### Environmental Parameters

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

### Compliance

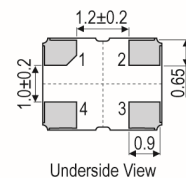
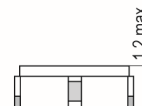
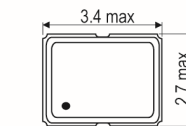
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

### Packaging Details

- Pack Style: RL3K Tape & reel in accordance with EIA-481-D  
Pack Size: 3,000

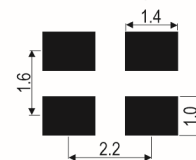


### Outline (mm)

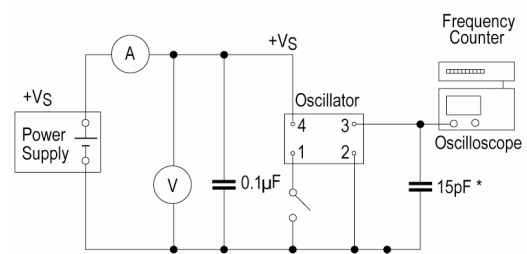


- Pad Connections
- Standby Operation
  - GND
  - Output
  - +Vs

### Solder Pad Layout



### Test Circuit



\* Inclusive of jigging and equipment capacitance

### CONTACT INFORMATION:

Würth Elektronik eiSos GmbH & Co. KG  
Max-Eyth-Str. 1, 74638 Waldenburg, Germany  
Tel: +49(0) 7942 945-0

Email: eiSos@we-online.de  
Web: www.we-online.com



## Crystal Clock Oscillator Specification

IQD Part No. + Packaging: LFSPXO082283RL3K

Würth Part No. 830208228309



- Alternative packing option available

### USEFUL LINKS

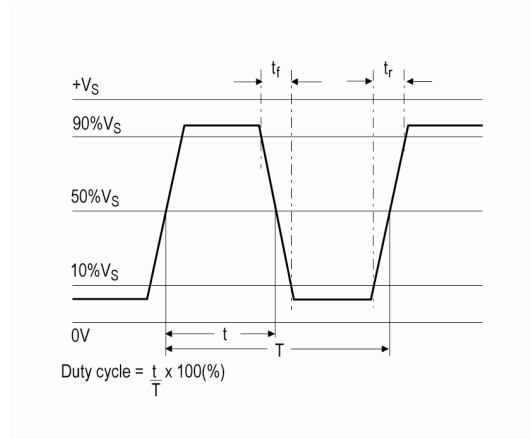
Toolbox:

[www.we-online.com/toolbox](http://www.we-online.com/toolbox)

Product Catalog:

[www.we-online.com/products](http://www.we-online.com/products)

### Wave Form



### CONTACT INFORMATION:

Würth Elektronik eiSos GmbH & Co. KG  
 Max-Eyth-Str. 1, 74638 Waldenburg, Germany  
 Tel: +49(0) 7942 945-0

Email: [eiSos@we-online.de](mailto:eiSos@we-online.de)  
 Web: [www.we-online.com](http://www.we-online.com)