



## Crystal Clock Oscillator Specification

IQD Part No. + Packaging: LFSPXO082166RL3K

Würth Part No. 830208216609



### Description

- Standard 2 x 1.6 crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed
- Model IQXO-542
- Model Issue number 3

### Frequency Parameters

- Frequency 8.0MHz
- Frequency Stability  $\pm 25.00\text{ppm}$
- Operating Temperature Range  $-20.00$  to  $70.00^\circ\text{C}$
- Ageing  $\pm 5\text{ppm}$

### Electrical Parameters

- Supply Voltage  $1.8\text{V} \pm 10\%$
- Current Draw  $3.000\text{mA}$

### Output Details

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$  max
- Rise and Fall Time  $5.0\text{ns}$  max
- Duty Cycle  $45/55\%$
- Start up Time:  $10\text{ms}$  max.  
 $1.1\text{ms}$  typ to 90% of final amplitude (Under ideal conditions @  $25^\circ\text{C}$ )

### Output Control

- Standby Operation: Logic '1' ( $\geq 70\%V_S$ ) to pad 1 enables oscillator output  
 Logic '0' ( $\leq 30\%V_S$ ) 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
- Standby Current:  $10\mu\text{A}$  max,  $0.6\mu\text{A}$  typ @  $25^\circ\text{C}$

### Environmental Parameters

- Impact: Weight of  $10\text{g}$  dropped to centre of part from a height of  $6\text{mm}$
- Vibration: IEC 60068-2-6:  $1.5\text{mm}$  amplitude,  $10\text{Hz}$ - $55\text{Hz}$ ,  $1\text{min}$  in 3 mutually perpendicular planes, duration  $2\text{hrs}$  each plane (total  $6\text{hrs}$ )
- Storage Temperature Range:  $-40$  to  $85^\circ\text{C}$

### 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)

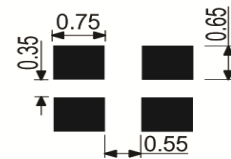


Underside View

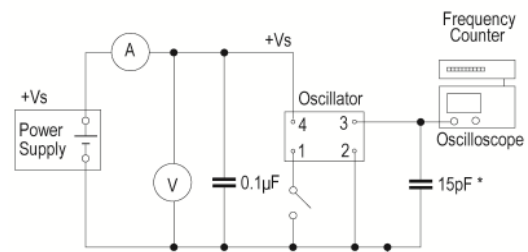
### Pad Connections

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



## Crystal Clock Oscillator Specification

*IQD Part No. + Packaging: LFSPXO082166RL3K*

*Würth Part No. 830208216609*



- *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)

---

#### 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)