



## Crystal Clock Oscillator Specification

*IQD Part No. + Packaging: LFSPX0073700Reel*

*Würth Part No. 830207370001*



### Description

- 32.768kHz miniature 2 x 1.6mm crystal oscillator in an hermetically sealed ceramic package with a seam sealed metal lid.
- Model IQXO-402
- Model Issue number 3

### Frequency Parameters

- Frequency 32.7680kHz
- Frequency Stability  $\pm 30.00$ ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing  $\pm 3$ ppm max per year @ 25°C

### Electrical Parameters

- Supply Voltage 3.3V  $\pm 10\%$
- Current Draw 0.200mA

### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF
- Rise and Fall Time 100.0ns max
- Duty Cycle 40/60%

### 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 $\mu$ A max @ -40 to 85°C  
20 $\mu$ A max @ -40 to 125°C
- Start-up Time: 10ms max  
0.3ms typ to 90% of final amplitude (under ideal conditions @ 25°C)

### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock : 1500G, 0.5ms, 3 times for each surface, total 18 times.
- Vibration: Frequency range: 20~2000Hz, peak to peak amplitude 1.52mm, peak acceleration:20G (196m/s<sup>2</sup>), 3 directions (X, Y,Z), each cycle: 20min, 4 cycles for each direction.

### Manufacturing Details

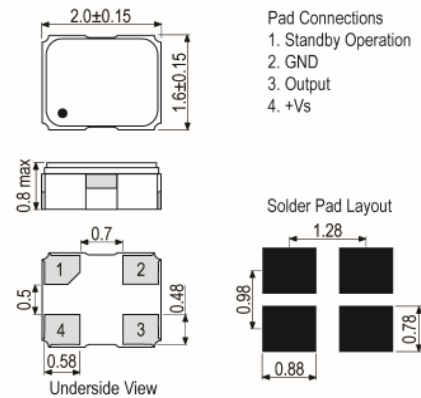
- RoHS Terminations Au over Ni
- RoHS Reflow Temp 260°C max for 10s max

### Compliance

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



### Outline (mm)



- Pad Connections
1. Standby Operation
  2. GND
  3. Output
  4. +Vs

### Solder Pad Layout

### CONTACT INFORMATION:

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### Packaging Details

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

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