



## Crystal Clock Oscillator Specification

*IQD Part No. + Packaging: LFSPXO082201Reel*

*Würth Part No. 830208220101*



### Description

- Standard 2.5 x 2.0 oscillator in a ceramic package with a hermetically sealed metal lid.
- Model IQXO-791
- Model Issue number 2

### Frequency Parameters

- Frequency 12.2880MHz
- Frequency Stability  $\pm 25.00$ ppm
- Operating Temperature Range -20.00 to 70.00°C
- Ageing  $\pm 3$ ppm max per year @ 25°C

### Electrical Parameters

- Supply Voltage 3.3V  $\pm 10\%$
- Current Draw 7.000mA

### Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 7.0ns max
- Duty Cycle 40/60%
- Output Voltage Levels:  
Output Low (VoL): 10%Vs max  
Output High (VoH): 90%Vs min
- Start Up Time: 10ms max  
0.7ms typ to 90% of final amplitude (under ideal conditions @ 25°C)

### Output Control

- Enable/Disable:  
Logic '1' ( $\geq 70\%$  Vs) to pad 1 enables oscillator output.  
Logic '0' ( $\leq 30\%$  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.
- Stand-by Current: 10 $\mu$ A max, 1.0 $\mu$ A typ @ 25°C

### Noise Parameters

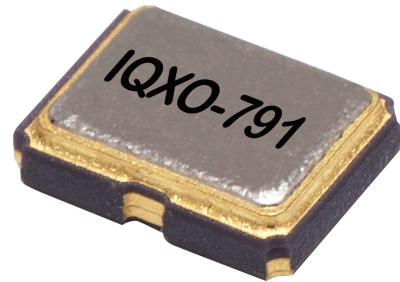
- Period Jitter (pk-pk):  $\pm 80$ ps typ
- Period Jitter (1 $\sigma$ ):  $\pm 10$ ps typ
- Phase Jitter (12kHz to 20MHz): 1ps rms max

### Environmental Parameters

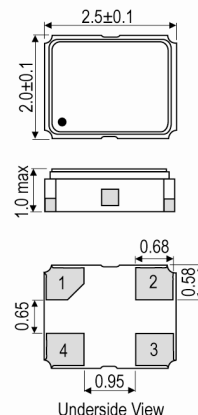
- Storage Temperature Range: -55 to 125°C
- Mechanical Shock: MIL-STD-883, Method 2002, Condition B (or comparable).
- Vibration: MIL-STD-883, Method 2007, Condition A (or comparable).

### Manufacturing Details

- Note: Do not connect inductor or bead between pad 2 and GND as it can make the output unstable.
- RoHS Terminations
- RoHS Reflow Temp 260°C max for 10secs max



### Outline (mm)

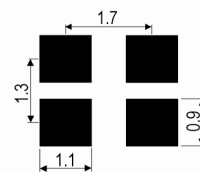


### Pad Connections

- Enable/Disable
- GND
- Output
- +Vs

Note: Connect bypass capacitor 0.1 $\mu$ F between +Vs and GND

### Solder Pad Layout



### CONTACT INFORMATION:

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### Compliance

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

### Packaging Details

- Pack Style: Reel      Tape & reel in accordance with EIA-481D  
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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