



## Crystal Clock Oscillator Specification

IQD Part No. + Packaging: LFSPX0056300Reel

Würth Part No. 831056300



### Description

- Standard 2.5 x 2.0 oscillator in a ceramic package with a hermetically sealed metal lid.
- Model IQXO-791
- Model Issue number 1

### Frequency Parameters

- Frequency 48.0MHz
- Frequency Stability  $\pm 50.00$ 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 10.000mA

### Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 10.0ns 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

### Output Control

- Stand-by Operation:  
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

### Noise Parameters

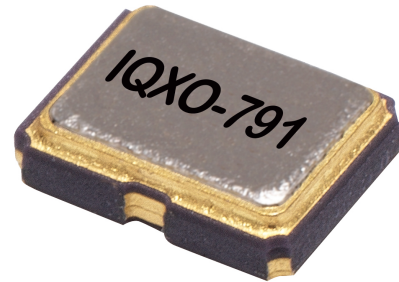
- Period Jitter (pk-pk):  $\pm 80$ ps typ
- Period Jitter ( $1\sigma$ ):  $\pm 10$ ps typ
- Phase Jitter (12kHz to 20MHz): 1ps rms max

### Environmental Parameters

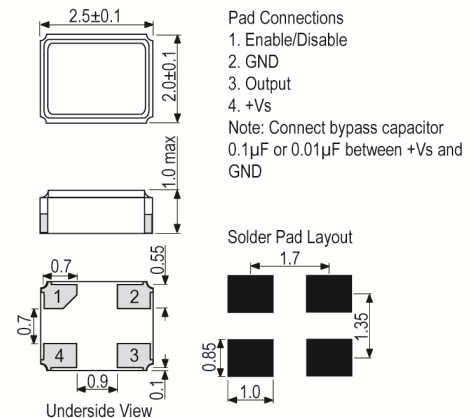
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213. Or comparable.
- Vibration: MIL-STD-883, Method 2007, Condition A. Or comparable.

### Manufacturing Details

- Maximum Process Temperature: 260°C (10secs max)
- 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)



### 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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