



Crystal Clock Oscillator Specification

IQD Part No. + Packaging: LFSPXO056300Reel

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 $\pm 50.00\text{ppm}$
- Operating Temperature Range -40.00 to 85.00°C
- Ageing $\pm 3\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Supply Voltage $3.3\text{V} \pm 10\%$
- 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): $10\%V_s$ max
Output High (VoH): $90\%V_s$ min
- Start Up Time: 10ms max

Output Control

- Stand-by 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.
- Stand-by Current: $10\mu\text{A}$ max

Noise Parameters

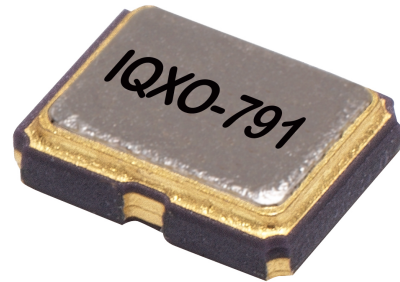
- Period Jitter (pk-pk): $\pm 80\text{ps}$ typ
- Period Jitter (1σ): $\pm 10\text{ps}$ typ
- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

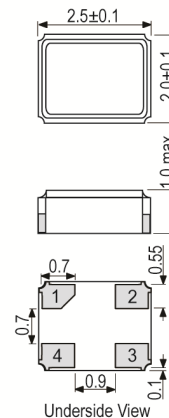
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213. Or comparable.
- Vibration: MIL-STD-883, Method 2007, Condition A. Or comparable.

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)

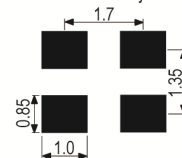


Pad Connections

1. Enable/Disable
2. GND
3. Output
4. $+V_s$

Note: Connect bypass capacitor $0.1\mu\text{F}$ or $0.01\mu\text{F}$ between $+V_s$ and GND

Solder Pad Layout



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



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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

Product Catalog:

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
Web: www.we-online.com

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