



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 ± 25.00 ppm
- Operating Temperature Range -20.00 to 70.00°C
- Ageing ± 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 μ A max, 1.0 μ A typ @ 25°C

Noise Parameters

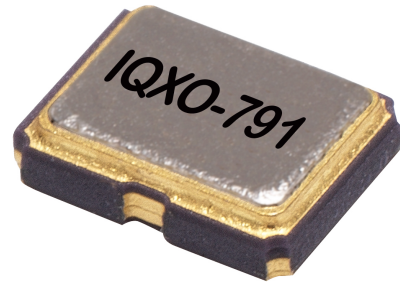
- Period Jitter (pk-pk): ± 80 ps typ
- Period Jitter (1 σ): ± 10 ps typ
- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

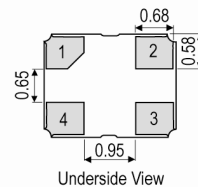
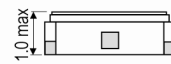
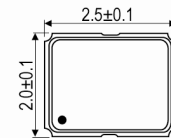
- Storage Temperature Range: -55 to 125°C
- Mechanical Shock: MIL-STD-883, Method 2002, Condition B (or comparable).
- Vibration: MIL-STD-883, Method 2007, Condition A (or comparable).

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)

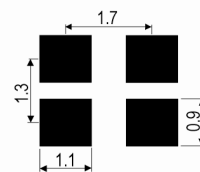


Pad Connections

- Enable/Disable
- GND
- Output
- +Vs

Note: Connect bypass capacitor 0.1 μ 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

Product Catalog:

www.we-online.com/products

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