

### Description

- Standard 2.5 x 2.0 oscillator in a ceramic package with a hermetically sealed metal lid.
- Model IQXO-791
- Model Issue number 4

### Frequency Parameters

- Frequency 24.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing  $\pm 5\text{ppm max per year @ } 25^\circ\text{C}$

### Electrical Parameters

- Supply Voltage  $3.3\text{V} \pm 10\%$
- Current Draw  $25.000\text{mA max}$

### Output Details

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$
- Rise and Fall Time  $7.0\text{ns max}$
- Duty Cycle  $40/60 \text{ max}$
- Output Voltage Levels:  
Output Low (VoL):  $10\%V_s \text{ max}$   
Output High (VoH):  $90\%V_s \text{ min}$
- Start Up Time:  
 $0.7\text{ms typ}$  to 90% of final amplitude (under ideal conditions @  $25^\circ\text{C}$ )  
 $10\text{ms max}$

### Output Control

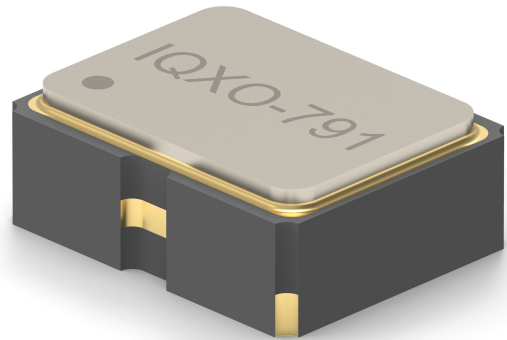
- Standby Operation:  
Logic '1' ( $\geq 70\% V_s$ ) to pad 1 enables oscillator output.  
Logic '0' ( $\leq 30\% V_s$ ) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state.  
No connection to pad 1 enables oscillator output.
- Standby Current:  
 $1.0\mu\text{A typ @ } 25^\circ\text{C}$   
 $10\mu\text{A max}$

### Noise Parameters

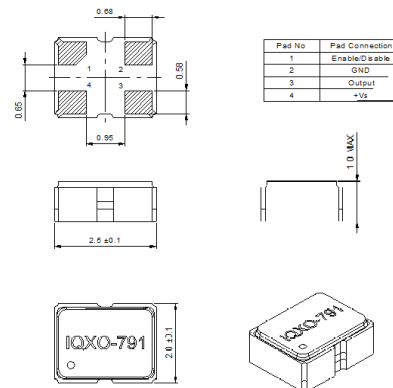
- Period Jitter (pk-pk):  $\pm 80\text{ps typ}$
- Period Jitter ( $1\sigma$ ):  $\pm 10\text{ps typ}$
- RMS Phase Jitter (12kHz to 20MHz):  $1\text{ps rms max}$

### Environmental Parameters

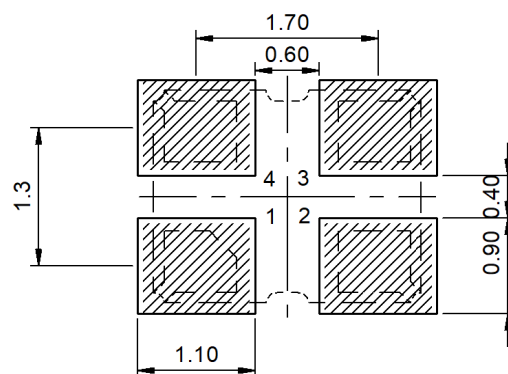
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Shock: Half Sine shock pulse with peak acceleration  $500\text{g}$ ;  
Pulse duration:  $0.3\text{ms}$
- Vibration: MIL-STD-202 Method 204.  $5\text{g}$  for 20 minutes, 12 cycles in each of the 3 orientations, 10 - 2000 Hz. As per Table 11 of AEC-Q200.
- RoHS Terminations
- RoHS Reflow Temp  $260^\circ\text{C max for } 10\text{secs max}$



### Outline (mm)



### Recommended Solder Pad Layout



### CONTACT INFORMATION:

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### Compliance

- RoHS Status (2015/863/EU)      Compliant
- REACH Status                      Compliant
- MSL Rating (JDEC-STD-033):    Not Applicable

### Packaging Details

- Tape & reel in accordance with EIA-481  
Quantities below the standard reel size to  
be supplied on cut tape.  
Standard Quantity: 3,000 Pieces

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### 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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