

**Customer Part:**

**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 40.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range 0.00 to 70.00°C
- Ageing  $\pm 3\text{ppm}$  max per year @ 25°C

**Electrical Parameters**

- Supply Voltage 3.3V  $\pm 10\%$
- Current Draw 20.000mA

**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**

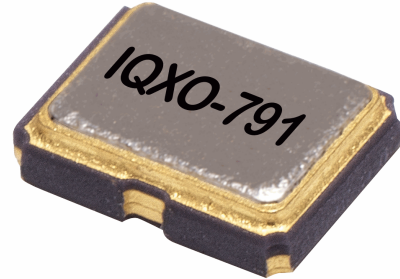
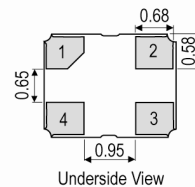
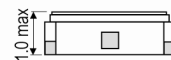
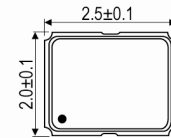
- Period Jitter (pk-pk):  $\pm 80\text{ps}$  typ
- Period Jitter ( $1\sigma$ ):  $\pm 10\text{ps}$  typ
- Phase Jitter (12kHz to 20MHz): 1ps rms max

**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).

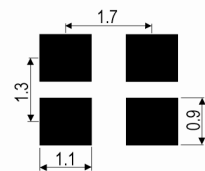
**Manufacturing Details**

- 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**

1. Enable/Disable
2. GND
3. Output
4. +Vs

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

**Solder Pad Layout**

**Sales Office Contact Details:**

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**Customer Part:****Compliance**

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

**Packaging Details**

- Pack Style: Cutt      Cut tape  
Pack Size: 100
- *Alternative packing option available*

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