

### Customer Part:

#### Description

- Standard 2.5 x 2.0 oscillator in a ceramic package with a hermetically sealed metal lid.
- Model IQXO-794
- Model Issue number 4

#### Frequency Parameters

- Frequency 8.0MHz
- Frequency Stability  $\pm 25.00\text{ppm}$
- Operating Temperature Range  $-20.00$  to  $70.00^\circ\text{C}$
- Ageing  $\pm 5\text{ppm}$  per year

#### Electrical Parameters

- Supply Voltage  $1.8\text{V} \pm 10\%$
- Current Draw  $10.000\text{mA}$

#### Output Details

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$  max
- Rise and Fall Time  $7.0\text{ns}$  max
- Duty Cycle 40/60
- Start Up Time:  
0.9ms typ to 90% of final amplitude (under ideal conditions @ $25^\circ\text{C}$ )  
10ms max
- Output Voltage Levels:  
Output Low (VoL): 10% Vs max  
Output High (VoH): 90% Vs min

#### 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.
- Standby Current:  
 $0.5\mu\text{A}$  typ @ $25^\circ\text{C}$   
 $10\mu\text{A}$  max

#### Noise Parameters

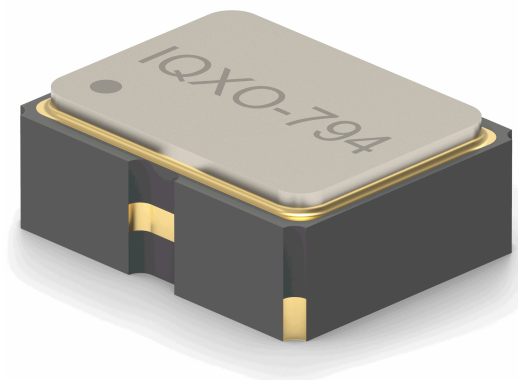
- Period Jitter (pk-pk):  $\pm 80\text{ps}$  typ
- Period Jitter ( $1\sigma$ ):  $\pm 10\text{ps}$  typ
- RMS Phase Jitter (12kHz to 20MHz):  $1\text{ps}$  max

#### Environmental Parameters

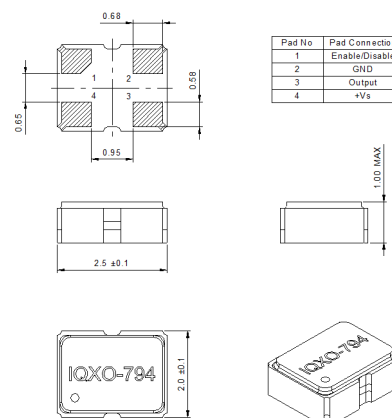
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Shock: Half Sine shock pulse with peak acceleration 500g; Pulse duration: 0.3ms
- Vibration: MIL-STD-202 Method 204. 5g for 20 minutes, 12 cycles in each of the 3 orientations, 10 ~ 2000 Hz. As per Table 11 of AEC-Q200.

#### Manufacturing Details

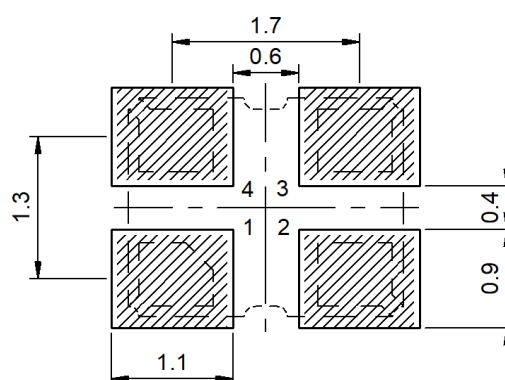
- RoHS Terminations NiAu
- RoHS Reflow Temp  $260^\circ\text{C}$  max for 10 seconds max



#### Outline (mm)



#### Recommended 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**

- Tape & reel in accordance with EIA-481  
Quantities below the standard reel size to be supplied on cut tape.

Standard Pack Quantity: 3,000

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