

**Customer Part:**

**Description**

- Simple Packaged Crystal Oscillator (SPXO) with an LVPECL output in a hermetically sealed ceramic package with a metal lid.
- Model IQXO-439-25
- Model Issue number 2

**Frequency Parameters**

- Frequency 125.0MHz
- 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 @  $25^\circ\text{C}$
- Frequency Stability: Inclusive of tolerance @  $25^\circ\text{C}$ , operating temperature range, supply voltage variation, load variation and 1 year ageing.

**Electrical Parameters**

- Supply Voltage  $2.5\text{V} \pm 5\%$
- Current Draw  $45.000\text{mA}$

**Output Details**

- Output Compatibility LVPECL
- Drive Capability  $50\Omega$  Vs-2.0V
- Rise and Fall Time  $0.6\text{ns}$  max
- Duty Cycle 45/55%
- Output Voltage Levels:  
Level '1' VoH: Vs-1.025V to Vs-0.88V  
Level '0' VoL: Vs-1.81V to Vs-1.62V

**Output Control**

- Start-Up Time: 10ms max

**Noise Parameters**

- Phase Jitter (12kHz to 20MHz):  $0.5\text{ps}$  RMS max
- Clock Jitter (n=50000 cycles):  $5\text{ps}$  RMS max

**Environmental Parameters**

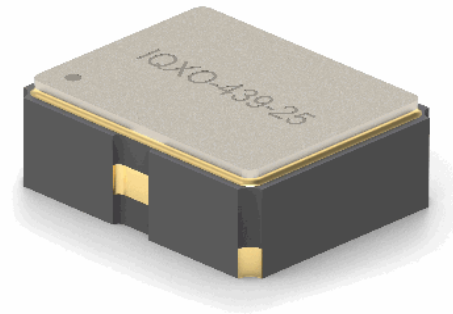
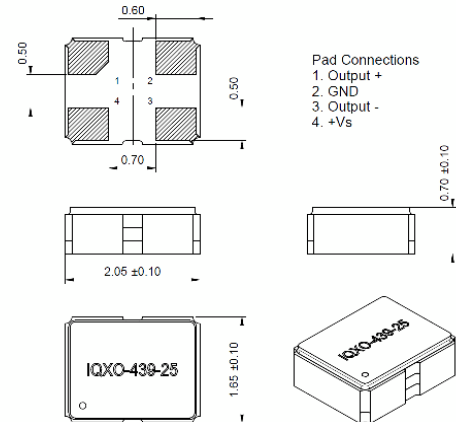
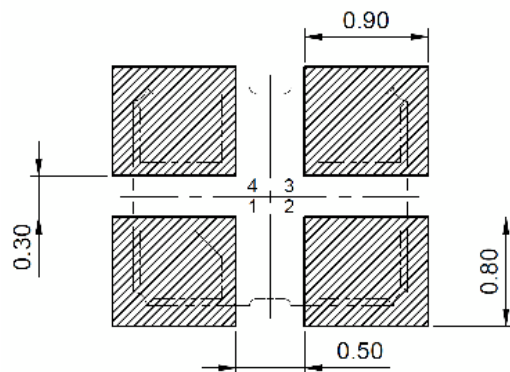
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Drop: 30cm free drop (3 times) onto a hard wooden board.
- Vibration: MIL-STD-202F, Method 201A, frequency range 10Hz~55Hz, 1.52mm amplitude, X, Y, Z axis, 2 hours in each axis ( 6 hours total).

**Manufacturing Details**

- Note: a  $0.01\mu\text{F}$  capacitor should be connected as close to the oscillator as possible between +Vs and GND. A large value capacitor should also be located at the power supply.
- RoHS Terminations NiAu
- RoHS Reflow Temp  $255^\circ\text{C} \pm 5^\circ\text{C}$  for 40s max

**Compliance**

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 1


**Outline (mm)**

**Recommended Solder Pad Layout**

**Sales Office Contact Details:**

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**Customer Part:**

**Packaging Details**

- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 3,000
- *Alternative packing option available*

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