

Customer Part:



Description

- Standard 1.6 x 1.2mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid.
- Model IQXO-642
- Model Issue number 4

Frequency Parameters

- Frequency 48.0MHz
- Frequency Stability $\pm 50.00\text{ppm}$
- Operating Temperature Range -40.00 to 85.00°C
- Ageing $\pm 5\text{ppm max/yr @ } 25^\circ\text{C}$

Electrical Parameters

- Supply Voltage $1.8\text{V} \pm 10\%$
- Current Draw 5.000mA

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Rise and Fall Time 4.5ns max
- Duty Cycle $45/55\%$
- Output Voltage Low (Vol): $10\%V_s$ max
- Output Voltage High (Voh): $90\%V_s$ min

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: $10\mu\text{A max}$

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: IEC 60068-2-27: 1000g , 1ms , 3 times in each of 3 mutually perpendicular planes.
- Vibration: IEC 60068-2-6: 1.5mm amplitude, $10\text{Hz}-55\text{Hz}$, 1min in 3 mutually perpendicular planes, duration 2hrs each plane (total 6hrs).

Manufacturing Details

- RoHS Terminations $\text{W}(15\pm 4\mu\text{m})$, $\text{Ni}(8\sim 20\mu\text{m})$, $\text{Au}(0.2\sim 260\pm 5^\circ\text{C for } 5\text{s max})$
- RoHS Reflow Temp $260\pm 5^\circ\text{C for } 5\text{s max}$

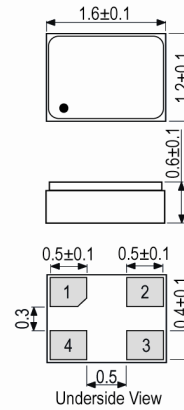
Compliance

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

Packaging Details

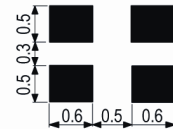
- Pack Style: **Cutt** Cut tape
- Pack Size: 100
- Alternative packing option available

Outline (mm)

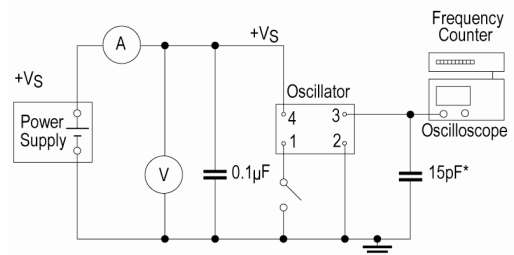


- Pad Connections
- Standby Operation
 - GND
 - Output
 - +Vs

Solder Pad Layout



Test Circuit



* Inclusive of jigging and equipment capacitance

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