

## 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 20.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-20.00$  to  $70.00^\circ\text{C}$
- Ageing  $\pm 5\text{ppm max/yr @ } 25^\circ\text{C}$

### Electrical Parameters

- Supply Voltage  $1.8\text{V} \pm 10\%$
- Current Draw  $3.000\text{mA}$

### Output Details

- Output Compatibility CMOS
- Drive Capability  $15\text{pF max}$
- Rise and Fall Time  $4.5\text{ns max}$
- 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  $125^\circ\text{C}$
- Shock: IEC 60068-2-27:  $1000\text{g}$ ,  $1\text{ms}$ , 3 times in each of 3 mutually perpendicular planes.
- Vibration: IEC 60068-2-6:  $1.5\text{mm}$  amplitude,  $10\text{Hz}-55\text{Hz}$ ,  $1\text{min}$  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  $260\pm 5^\circ\text{C for } 5\text{s max}$

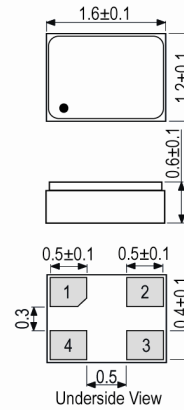
### Compliance

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

### Packaging Details

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

### Outline (mm)

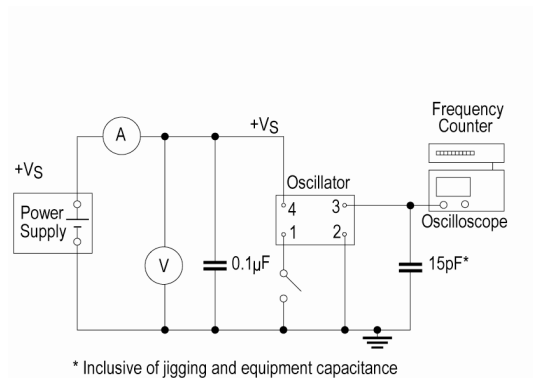


- Pad Connections
- Standby Operation
  - GND
  - Output
  - +Vs

### Solder Pad Layout



### Test Circuit



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