


**Description**

- Standard 2 x 1.6 crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed
- Model IQXO-542
- Model Issue number 3

**Frequency Parameters**

- Frequency 12.0MHz
- Frequency Stability  $\pm 25.00\text{ppm}$
- Operating Temperature Range  $-20.00$  to  $70.00^\circ\text{C}$
- Ageing  $\pm 5\text{ppm}$

**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  $5.0\text{ns}$  max
- Duty Cycle  $45/55\%$
- Start up Time:  $10\text{ms}$  max.  
 $1.1\text{ms}$  typ to 90% of final amplitude (Under ideal conditions @  $25^\circ\text{C}$ )

**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,  $0.6\mu\text{A}$  typ @  $25^\circ\text{C}$

**Environmental Parameters**

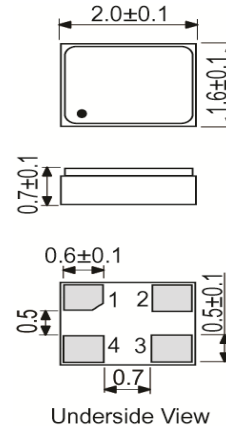
- Impact: Weight of 10g dropped to centre of part from a height of 6mm
- Vibration: IEC 60068-2-6: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane (total 6hrs)
- Storage Temperature Range:  $-40$  to  $85^\circ\text{C}$

**Compliance**

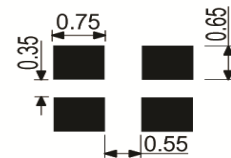
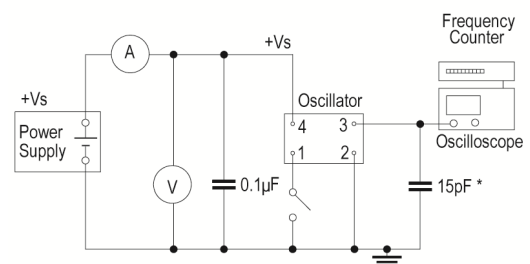
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

**Packaging Details**

- Pack Style: *Cutt* In tape, cut from a reel  
 Pack Size: 100
- *Alternative packing option available*

**Outline (mm)**

**Pad Connections**

1. Standby Operation
2. GND
3. Output
4. +Vs

**Solder Pad Layout**

**Test Circuit**


\* Inclusive of jigging and equipment capacitance

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