

### Description

- Standard 2 x 1.6mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid
- Model IQXO-542
- Model Issue number 7

### Frequency Parameters

- Frequency 19.440MHz
- Frequency Stability  $\pm 50.00$ ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing  $\pm 5$ ppm per year

### Electrical Parameters

- Supply Voltage 1.8V  $\pm 10\%$
- Current Draw 15.000mA max

### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Rise and Fall Time 7.0ns max
- Duty Cycle 40/60 max
- Start up Time:  
1.1ms typ to 90% of final amplitude (under ideal conditions @25°C)  
10ms max

### 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:  
0.6 $\mu$ A typ @25°C  
10 $\mu$ A max

### Output Levels

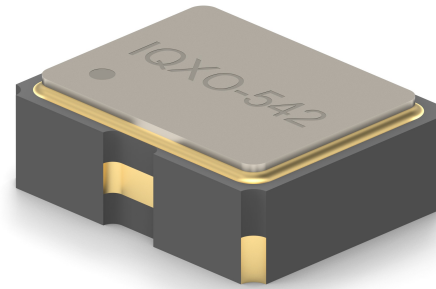
- Output High (VoH): 90% of  $V_s$  min  
Output Low (VoL): 10% of  $V_s$  max

### Environmental Parameters

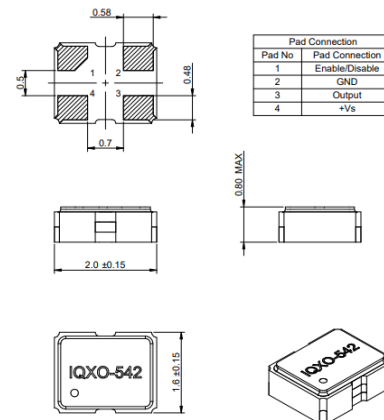
- Storage Temperature Range: -55 to 125°C
- Shock: Half sine shock pulse with peak acceleration 500g; Pulse duration: 0.3ms
- Vibration: MIL-STD-202 Method 204. 5g for 20 minutes, 12 cycles in each of the 3 orientations, 10 ~ 2000 Hz. As per Table 11 of AEC-Q200.

### Manufacturing Details

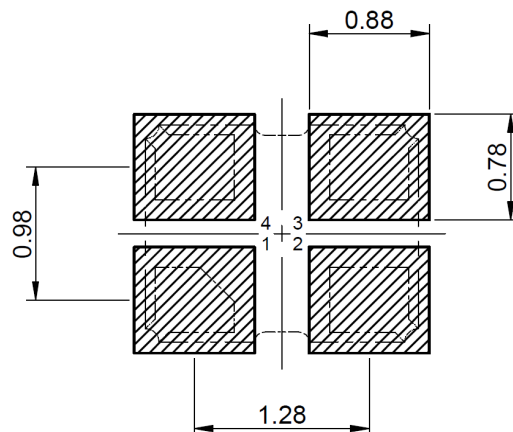
- RoHS Terminations Ni, Au & TI
- RoHS Reflow Temp 260°C max for 10 seconds



### Outline (mm)



### Recommended Solder Pad Layout



### CONTACT INFORMATION:

Würth Elektronik eiSos GmbH & Co. KG  
Max-Eyth-Str. 1, 74638 Waldenburg, Germany  
Tel: +49(0) 7942 945-0

Email: eiSos@we-online.de  
Web: www.we-online.com

### 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 Quantity: 3,000 Pieces

### USEFUL LINKS

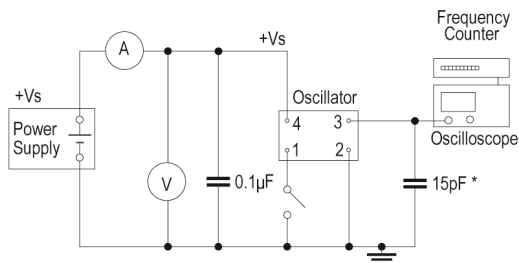
**Toolbox:**

[www.we-online.com/toolbox](http://www.we-online.com/toolbox)

**Product Catalog:**

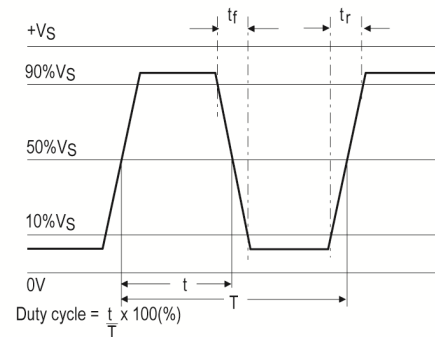
[www.we-online.com/products](http://www.we-online.com/products)

### Test Circuit



\* Inclusive of jigging and equipment capacitance

### Waveform



### CONTACT INFORMATION:

Würth Elektronik eiSos GmbH & Co. KG  
Max-Eyth-Str. 1, 74638 Waldenburg, Germany  
Tel: +49(0) 7942 945-0

Email: [eiSos@we-online.de](mailto:eiSos@we-online.de)  
Web: [www.we-online.com](http://www.we-online.com)