



## Quartz Crystal Specification

*IQD Part No. + Packaging: LFX TAL082118Reel*

*Würth Part No. 830108211801*



### Description

- Very low height 1.27 x 1.05mm SMD crystal in a hermetically sealed ceramic package with a sealed metal lid. Suitable for Real Time Clock applications.
- Model IQXC-146
- Model Issue number 1

### Frequency Parameters

- Frequency 32.7680kHz
- Frequency Tolerance  $\pm 20.00\text{ppm}$
- Tolerance Condition @ 25°C  $\pm 5^\circ\text{C}$
- Overtone Order Fundamental
- Ageing  $\pm 5\text{ppm}$  max in 1st year @ 25°C  $\pm 3^\circ\text{C}$
- Turnover Temperature 25°C  $\pm 5^\circ\text{C}$
- Frequency Stability Coefficient:  $(-0.036\text{ppm} \pm 10\%) / ^\circ\text{C}^2$

### Electrical Parameters

- Load Capacitance (CL) 7.00pF
- Shunt Capacitance (C0) 1.4pF typ
- Drive Level 0.1  $\mu\text{W}$  typ, 0.3  $\mu\text{W}$  max
- ESR 90.00k $\Omega$  max

### Environmental Parameters

- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Shock: 100g dummy dropped 10 times in 3 axis from a height of 1500mm onto concrete.
- Vibration: 1.5mm amplitude, 10~60Hz, 15mins cycle time in X, Y and Z axis, 2hrs each axis.
- High Temperature Storage:  $125^\circ\text{C}$  for 1000hrs
- Low Temperature Storage:  $-55^\circ\text{C}$  for 1000hrs
- Humidity:  $85^\circ\text{C} \pm 2^\circ$  at 85% RH for 1000hrs
- Thermal Shock Resistance:  $-55^\circ\text{C}$  to  $125^\circ\text{C}$  for 30mins, 100 cycles.

### Manufacturing Details

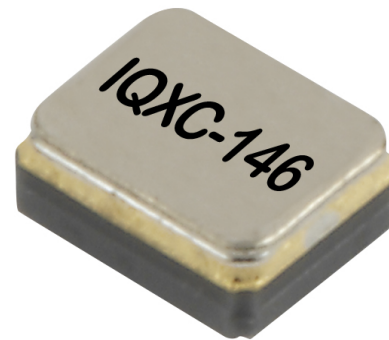
- Note: the use of ultrasonic cleaning must be tested by the customer to check suitability as the device can be destroyed by this method depending upon the frequency, power, time and position in the bath.
- RoHS Terminations AuNi
- RoHS Reflow Temp  $250^\circ\text{C} \pm 10^\circ\text{C}$  for 10sec max.

### Compliance

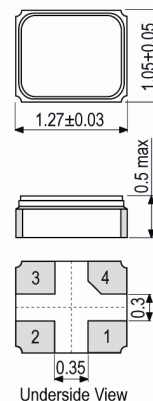
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

### Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
- Pack Size: 5,000



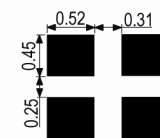
### Outline (mm)



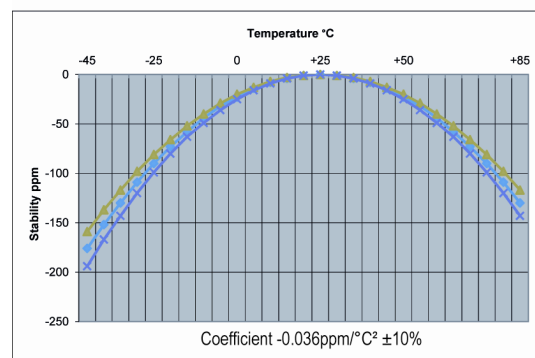
### Pad Connections

- Crystal
  - GND(Lid)
  - Crystal
  - Do not connect
- Note: do not place any tracks under the device on the PCB.

### Solder Pad Layout



### Example F/T Characteristics



### CONTACT INFORMATION:

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- *Alternative packing option available*

### 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)

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