

### ISSUE 1; May 2023

#### Description

- 1.6 x 1.0mm SMD crystal in a hermetically sealed ceramic package.  
Suitable for real time clock applications.

#### Frequency Parameters

- Frequency: 32.768kHz
- Frequency Tolerance:  $\pm 20.00\text{ppm}$
- Tolerance Condition: @ 25°C  $\pm 5^\circ\text{C}$
- Ageing:  $\pm 3\text{ppm}$  max in 1st year @ 25°C  $\pm 3^\circ\text{C}$
- Frequency Stability Coefficient:  $-0.036\text{ppm}/^\circ\text{C}^2 \pm 10\%$

#### Electrical Parameters

- Load Capacitance (CL): 4.0pF to 12.5pF
- Shunt Capacitance (C0): 1.2pF typ
- Drive Level: 500nW max

#### Operating Temperature Ranges

- 40 to 85°C

#### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Drop: 100g dummy, 150cm drop (3 directions x 10 times) onto concrete
- Vibration: 1.5mm amplitude, 10Hz-60Hz, 15mins in 3 mutually perpendicular planes, duration 2hrs each plane

#### Ordering Information

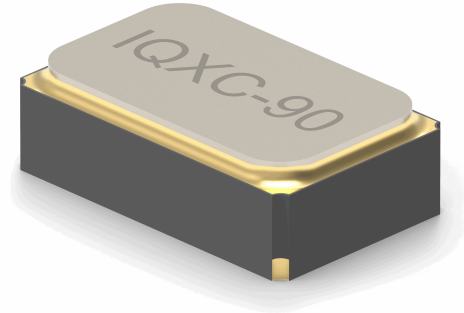
- Frequency  
Model\*  
Frequency Tolerance (@ 25°C)  
Load Capacitance\*  
(\*minimum required)
- Example  
32.768kHz IQXC-90  
20/-/12.5

#### Compliance

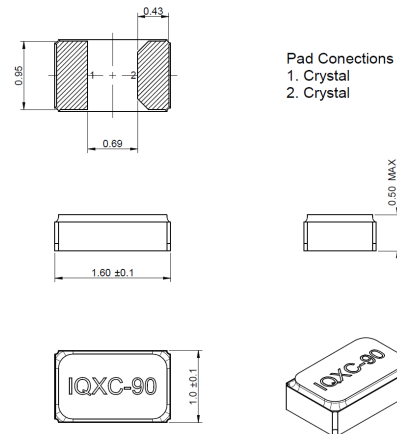
- RoHS Status (2015/863/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

#### Packaging Details

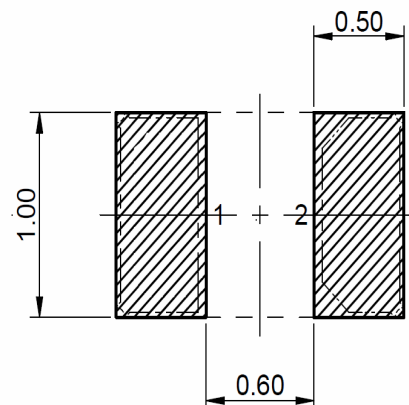
- Pack Style: Reel: Tape & reel in accordance with EIA-481-D  
Pack Size: 5,000
- Pack Style: Cutt: Cut tape  
Pack Size: 100



#### Outline (mm)



#### Recommended Solder Pad Layout



#### Sales Office Contact Details:

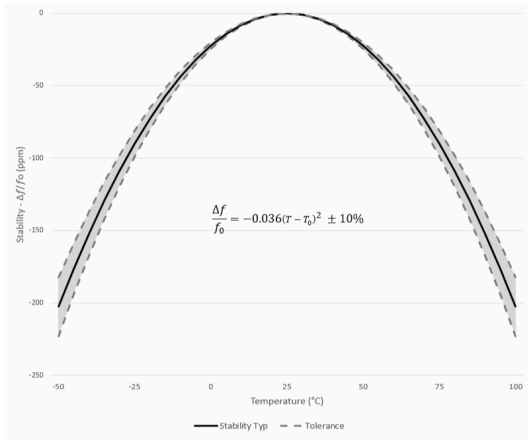
UK: +44 (0)1460 270200

USA: +1.760 668 8935

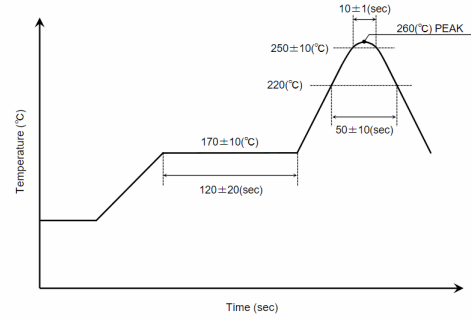
Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

**Typical Frequency Stability Characteristics**



**Reflow Profile**



Note:  
(1) The temperature used herein means the temperature on the circuit board.  
(2) Reflow is permitted 2 times.

**Electrical Specification - maximum limiting values**

Frequency Min	Temperature Range	Stability (Min)	Over Tone Order	ESR
	°C	ppm		Ω
32.768000kHz	-40 to 85	-	Fundamental	90,000

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