

ISSUE 1; July 2016

**Description**

- The IQXC-137 is a low profile SMD AT-cut quartz crystal in a ceramic package with a 2.5 x 2.0mm footprint.
- Applications:  
Feature phone  
GPS
- Features:  
Excellent shock and vibration performance  
Low ageing

**Frequency Parameters**

- Frequency 16.368MHz to 52.0MHz
- Frequency Tolerance  $\pm 10.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Tolerance Condition @ 25°C  $\pm 2^\circ\text{C}$
- Frequency Stability  $\pm 10.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Ageing  $\pm 1\text{ppm}$  max per year @ 25°C
- Reflow shift (Two consecutive reflow as per profile after 4 hours recovery at 25°C):  $\pm 1\text{ppm}$  max
- Frequency stability over temperature referenced to frequency reading at 25°C and the specified load capacitance.
- Frequency perturbations (Peak-to-peak deviation from the frequency versus temperature curve fit 5th order. Minimum of 1 frequency reading every 3°C over operating temperature range): 1ppm max
- Static temperature hysteresis (Frequency change after reciprocal temperature ramped over the operating range. Frequency measured before and after at 25°C):  $\pm 0.4\text{ppm}$  max

**Electrical Parameters**

- Load Capacitance (CL) 5.0pF to 50.0pF
- Shunt Capacitance (C0) 0.5 to 3pF
- Drive Level 50µW max

**Operating Temperature Ranges**

- -40 to 85°C

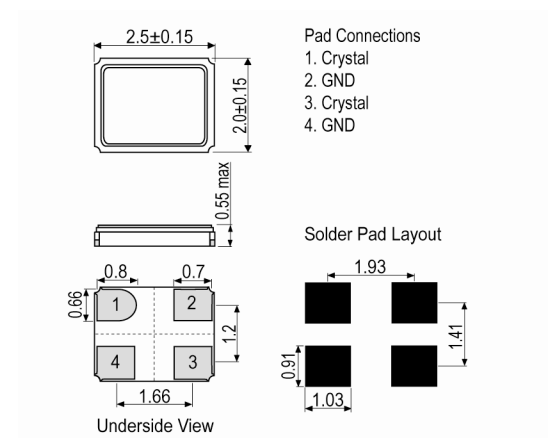
**Environmental Parameters**

- g Sensitivity Gamma vector of all three axes from 30Hz to 1500Hz: 2ppb/g max
- Insulation Resistance (100V  $\pm 15\text{V}$  at 25°C): 500MΩ min
- Shock: Half sine-wave acceleration of 100G peak amplitude for 11ms duration, 3 cycles in each plane
- Humidity: After 48 hours at 85°C 85% relative humidity non-condensing
- Thermal shock: Exposed at -40°C for 30 minutes then to 85°C for 30 minutes constantly for a period of 5 days
- Vibration: 10G RMS 30 Hz to 1500 Hz duration for 6 hours
- Storage temperature: -55 to 105°C

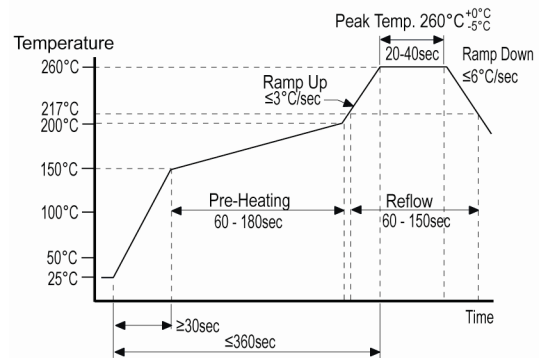
**Ordering Information**

- \*minimum information required  
Frequency\*  
Model\*  
Frequency Tolerance\*  
Frequency Stability\*  
Operating Temperature Range\*  
Load Capacitance\*

**Outline (mm)**



**Pb-Free Reflow**



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#### Compliance

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

#### Packaging Details

- Pack Style: Reel      Tape & Reel in accordance with EIA-481-D  
Pack Size: 3,000

#### Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
16.368MHz	52.0MHz	-40 to 85	±10	Fundamental	60

\*Stability Maximum values ±50ppm

*This document was correct at the time of printing; please contact your local sales office for the latest version.*

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