

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

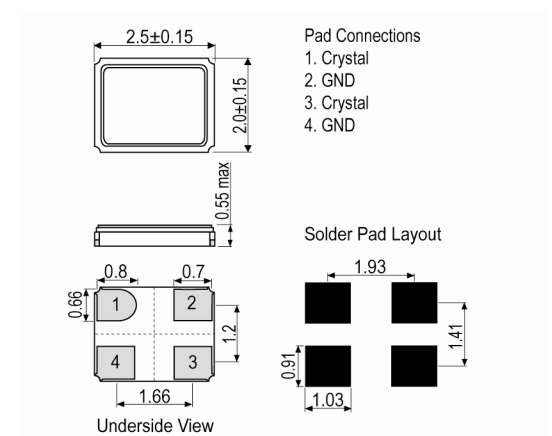
Environmental Parameters

- 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

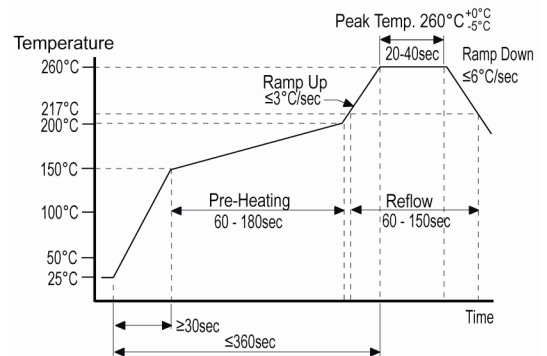
Ordering Information

- *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

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