

ISSUE 2; March 2016

**Description**

- Ceramic package with a hermetically seam sealed metal lid suitable for automotive applications. Qualified to AEC-Q200 and with TS16949 release.
- -A 2 pad
- -B 4 pad

**Frequency Parameters**

- Frequency 10.0MHz to 70.0MHz
- Frequency Tolerance  $\pm 10.00\text{ppm}$  to  $\pm 50.00\text{ppm}$  @ 25°C
- Tolerance Condition @ 25°C
- Frequency Stability  $\pm 15.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing  $\pm 5\text{ppm}$  max per year @ 25°C

**Electrical Parameters**

- Load Capacitance (CL) 8.0pF to 75.0pF
- Shunt Capacitance (C0) 7pF max
- Drive Level 50µW standard

**Operating Temperature Ranges**

- -40 to 85°C
- -40 to 125°C

**Environmental Parameters**

- Storage Temperature Range: -40 to 150°C
- Qualified to AEC-Q200

**Ordering Information**

- Frequency\*
- Model\*
- Variant\*
- Frequency Tolerance (@ 25°C)\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone\*
- (\*minimum required)
- Example  
10.0MHz IQXC-228 AUTO - B  
50/100/-40 to 125C/8 FUND

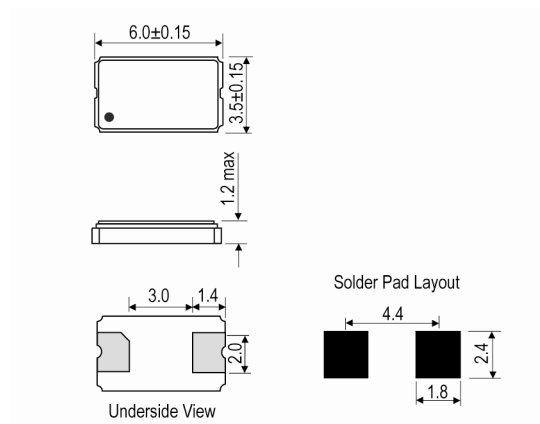
**Compliance**

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

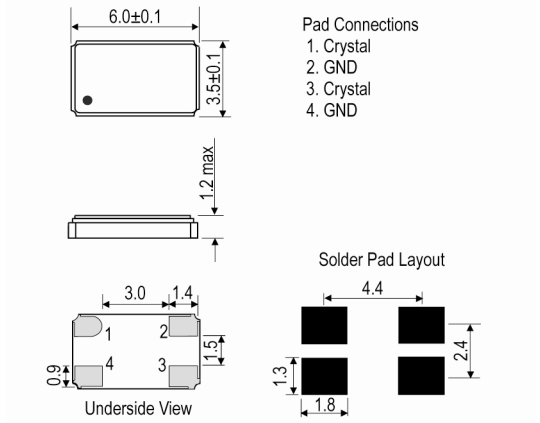
**Packaging Details**

- Pack Style: Reel Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Pack Style: Bulk Loose in bulk pack  
Pack Size: 100

**Outline (mm) -A = 2 pad**



**Outline (mm) -B = 4 pad**



- Pad Connections
1. Crystal
  2. GND
  3. Crystal
  4. GND

Solder Pad Layout

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**Electrical Specification - maximum limiting values**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
10.0MHz	11.0MHz	-40 to 85 -40 to 125	±15 ±50	Fundamental	80
11.000001MHz	12.0MHz	-40 to 85 -40 to 125	±15 ±50	Fundamental	50
12.000001MHz	40.0MHz	-40 to 85 -40 to 125	±15 ±50	Fundamental	40
40.0MHz	70.0MHz	-40 to 85 -40 to 125	±15 ±50	3rd Overtone	70

\*Stability Maximum values ±100ppm

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

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