

ISSUE 2; August 2016

**Description**

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

**Frequency Parameters**

- Frequency 11.0MHz to 150.0MHz
- Frequency Tolerance  $\pm 10.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Tolerance Condition @25°C  $\pm 2^\circ\text{C}$
- Frequency Stability  $\pm 15.00\text{ppm}$  to  $\pm 150.00\text{ppm}$
- 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 50 $\mu\text{W}$  standard, 200 $\mu\text{W}$  max

**Operating Temperature Ranges**

- -40 to 85°C
- -40 to 125°C

**Environmental Parameters**

- Storage Temperature Range: -45°C to +130°C
- Qualified to AEC-Q200

**Manufacturing Details**

- Maximum Process Temperature: 260°C (10secs max)

**Ordering Information**

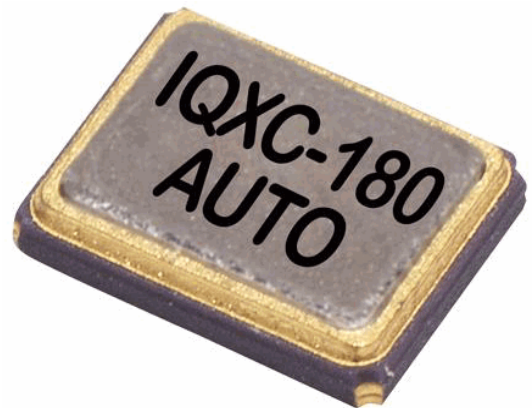
- Frequency\*  
Model\*  
Frequency Tolerance (@ 25°C)\*  
Frequency Stability (over operating temperature range)\*  
Operating Temperature Range\*  
Load Capacitance\*  
Overtone  
(\*minimum required)
- Example  
20.0MHz IQXC-180 AUTO-B  
50/100/-40 to 125C/8 FUND

**Compliance**

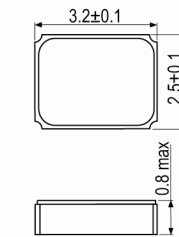
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

**Packaging Details**

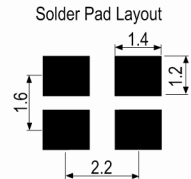
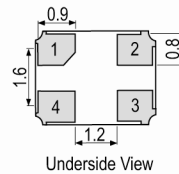
- Pack Style: Reel Tape & reel in accordance with EIA-481-D  
Pack Size: 3,000
- Pack Style: Cutt Cut tape  
Pack Size: 1



Outline (mm) -B = 4 pad



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



**Sales Office Contact Details:**

UK: +44 (0)1460 270200  
Germany: 0800 1808 443

France: 0800 901 383  
USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
11.0MHz	11.999999MHz	-40 to 85 -40 to 125	±15 ±100	Fundamental	300
12.0MHz	12.999999MHz	-40 to 85 -40 to 125	±15 ±100	Fundamental	200
13.0MHz	15.999999MHz	-40 to 85 -40 to 125	±15 ±100	Fundamental	150
16.0MHz	19.999999MHz	-40 to 85 -40 to 125	±15 ±100	Fundamental	80
20.0MHz	21.999999MHz	-40 to 85 -40 to 125	±15 ±100	Fundamental	60
22.0MHz	54.0MHz	-40 to 85 -40 to 125	±15 ±100	Fundamental	50
60.0MHz	150.0MHz	-40 to 85 -40 to 125	±15 ±100	3rd Overtone	300

\*Stability Maximum values ±150ppm

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