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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 12273-1996

Replacing GB/T 12273-1996

**Quartz crystal units of assessed quality -- Part 1: Generic
specification
(English Translation)**

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Foreword

GB/T 12273 "Quality assessment of quartz crystal components" is divided into the following sections.

- Part 1. General specification;
- Part 2. Guidelines for use;
- Part 3. Standard profile and lead connection;
- Part 4. Subregional capacity approval;
- Part 4.1. Blank detail specification competence approval;
- Part 5. Sub - specification approval;
- Part 5.1. Blank detail specification approval.

This part is part 1 of GB/T 12273.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part of the replacement GB 12273-1996 "Quartz crystal components of electronic components quality assessment system specification Part 1. General regulations Fan ". This part compared with GB/T 12273-1996, in addition to editorial changes, the main changes are as follows.

- Standard number is adjusted according to different parts of the standard;
- standard name from the "quartz crystal components electronic components quality

assessment system" to "quality assessment of quartz crystal element Part 1. general specification";

--- According to the general requirements of quality certification of electronic components, amended the previous version of the provisions of the documents cited;

- replace the corresponding IEC 60068 with the national standard GB/T 2423 for environmental testing, which is not technical in the references to this section difference;

--- increase the piezoelectric resonator equivalent circuit symbol summary (see Table 1), the definition of the characteristics of the frequency, symbols and expression summary (See Table 2), a variety of piezoelectric quartz crystal components capacitance ratio minimum (see Table 3), series resonant frequency and the characteristics of the frequency Mathematical expressions of mathematical expressions, dynamic parameters (see Table 4);

--- increase the impedance, reactance and frequency of the corresponding relationship diagram (see Figure 2), an increase of admittance chart (see Figure 3);

- a reference to network analysis is added to the measurement of frequency and resonant resistance (see 4.7.1);

- Added a reference to the DLD test method (see 4.7.2).

This part uses the re-drafting method to modify IEC 60122-1.:2002 "Quality assessment of quartz crystal components Part 1. General regulations and Annex 1 to IEC 49/1015/CDIEC 60122-1..2002 as Appendix A.

This section changes the structure compared to IEC 60122-1.:2002, and a list of chapter numbers is given in Appendix B.

This section has technical differences compared to IEC 60122-1.:2002, and the terms involved in these differences have passed through the margin the vertical single line (|) of the location is identified. A list of the corresponding technical differences and their causes is given in Appendix C.

This part also makes the following editorial changes.

--- Added IEC 60122-1.:2002 Chapter 3 Suspension section of the title "3.1 General";

--- Remove references to international standards.

1.1 Scope

This part of GB/T 12273 specifies a test for the quality of quartz crystal components evaluated using a capability approval procedure or an accreditation procedure Methods and general requirements.

1.2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 2421.1-2008 Environmental test overview and guidance for electrical and electronic products (IEC 60068-1. 1988, IDT) GB/T 2423.1-2008 Environmental testing for electric and electronic products - Part 2. Test methods - Test A. Low temperature (IEC 60068-2-1.:2007, IDT) GB/T 2423.2-2008 Environmental testing for electric and electronic products - Part 2. Test methods - Test B. High temperature (IEC 60068-2-2.:2007, IDT) GB/T 2423.3-2006 Environmental testing for electric and electronic products - Part 2. Test methods - Test Cab. constant damp heat test (IEC 60068-2-78.:2001, IDT) GB/T 2423.4-2008 Environmental testing for electric and electronic products - Part 2. Test methods - Test Db. alternating damp heat (12 h 12h cycle) (IEC 60068-2-30.:2005, IDT) GB/T 2423.5-1995 Environmental testing for electric and electronic products - Part 2. Test methods - Test Ea and Guidance. Impact (idt IEC 60068-2-27. 1987) GB/T 2423.6-1995 Environmental testing for electric and electronic products - Part 2. Test methods - Test Eb and guidance. Collisions (idt IEC 60068-2-29. 1987) GB/T 2423.8-1995 Environmental testing for electric and electronic products - Part 2. Test method test Ed. Free drop (idt IEC 60068-2-32.:1990) GB/T 2423.10-2008 Environmental testing for electric and electronic products - Part 2. Test methods - Test Fc. Vibration (sinusoidal) (IEC 60068-2-6.:1995, IDT) GB/T 2423.15-2008 Environmental testing for electric and electronic products - Part 2. Test methods - Test Ga and guidance. steady state Speed (IEC 60068-2-7. 1986, IDT) GB/T 2423.21-2008 Environmental testing for electric and electronic products - Part 2. Test methods - Test M. Low pressure (IEC 60068-2-13. 1983, IDT) GB/T 2423.22-2002 Environmental testing for electric and electronic products - Part 2. Test methods - Test N. Temperature changes (IEC 60068-2-14. 1984, IDT) GB/T 2423.23-2013 Environmental tests - Part 2. Test methods - Test Q. Seal (IEC 60068-2-17.:1994, IDT) GB/T 2423.28-2005 Environmental testing for electric and electronic products - Part 2. Test methods - Test T. Soldering (IEC 60068-2-20. 1979, IDT) GB/T 2423.30-1999 Environmental testing for electric and electronic products - Part 2. Test methods - Test XA and guidelines.