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

**GB/T 14860.4-2012**

Replacing GB/T 15184-1994

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**Transformers and inductors for use in electronic and telecommunication  
equipment -- Part 4: Sectional specification for power transformers for switched  
mode power supplies (SMPS) on the basis of the capability approval procedure**

**电子和通信设备用变压器和电感器 第4部分：按能力批准程序评定质量的开关电  
源变压器分规范**

**(English Translation)**

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### Foreword

GB/T 14860 "electronic and telecommunication equipment transformers and inductors for" approval procedure is based on the ability to assess the quality of the electronic and communications equipment Transformers and inductors standard, divided into the following seven sections.

- Part 1. Generic specification;
- Part 2. Evaluation of the capability approval procedure quality specification for signal transformers;
- Part 3. Evaluation of the capability approval procedure quality specification for power transformers;
- Part 4. Evaluation of the quality of the capability approval procedure switch specification for power transformers;
- Part 5. Evaluation of the capability approval procedure quality specification for pulse transformers;
- Part 6. the capability approval procedure inductors of assessed quality specification;
- Part 7. Evaluation of the quality of the capability approval procedure of the high-frequency inductors and intermediate frequency transformers.

This is Part 4 GB/T 14860 in.

Rules in this section in accordance with GB/T 1.1-2009 given draft.

This Part replaces GB/T 15184-1994 "quality capability approval of electronic switching equipment specification for power transformers." Compared to major changes in this part of GB/T 15184-1994 as follows.

- Standard number has been adjusted by the GB/T 15184 changed to GB/T 14860.4;
- Added some references, were made in refinement and part of the standard part of the corresponding national standards (See Chapter 2);
- In the preparation of "detailed specification" clause, the increase in the terms of usage (see Chapter 5).

The partial modification of the use of IEC 61248-4:1996 "electronic and telecommunication equipment transformers and inductors - Part 4. the capability approval process Order assessed quality switching power transformer specification "(in English).

For ease of use, this section of IEC 61248-4:1996 made minor modifications to modify its main content is to IEC 61248-4..

IEC 60068 environmental testing standard cited in 1996 adopted GB/T 2423 national standards instead of the corresponding country. It will also IEC 60410. 1973 "counter check sampling plan and procedures" with the GB/T 2828.1-2003 "Sampling procedures for inspection - Part 1. Press Acceptance quality limit (AQL) retrieval batch inspection sampling plan "instead.

For ease of use, IEC 61248-4:1996 This section also made the following editorial changes.

- "Normative references", the guide word according to GB/T 1.1-2009 provisions;
- References in some of the standard replaced by the use of international standards to national standards or industry standards;
- Delete the reference file IEC 102 guidelines. 1989, IEC QC001001. 1986, IEC QC001002. 1986, IEC QC001005 other standards;
- The "IEC 68-2-6" to "IEC 60068-2-6";
- Remove the IEC standard foreword.

This part is proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This part of the National Magnetic components and ferrite materials Standardization Technical Committee (SAC/TC89) centralized.

This section drafted by. Device Technology Co., Ltd. Sichuan Changhong.

## 1 Scope

This section GB/T 14860 provisions of the press GB/T 14860.1-2012 capability approval procedures specified in the release of the switching power supply transformer Detail specification Methodology This section includes a blank detail specification (BDS), Blank detail specification format suitable for this and pointed out Test class element; and the final

selection included checklists trials are decided by the authors of the specification This specification also provides appropriate.

Ratings and characteristics.

Working with elements specified in this part of the semiconductor device switching state together to transmit power, the input waveform is sinusoidal or Non-sinusoidal, symmetric or asymmetric waveform.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated edition applies to this article Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 2423.5-1995 Environmental testing for electric and electronic products Part 2. Test methods Test Ea and guidance. red Hit (idtIEC 60068-2-27. 1987) GB/T 2423.6-1995 Environmental testing for electric and electronic products Part 2. Test methods - Test Eb and guidance. touch Hit (idtIEC 60068-2-29. 1987) GB/T 2423.10-2008 Electrical and Electronic Products Environmental Testing Part 2. Test methods Test Fc. Vibration (n Chord) (IEC 60068-2-6:1995, IDT) GB/T 2423.28-2005 Electronic and Electrical Products Environmental Testing Part 2. Test methods - Test T. Soldering (IEC 60068-2-20. 1979, IDT) GB/T 2828.1-2003 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch test sample Program (ISO 2859-1:1999, IDT) GB/T 6109.4 enamelled round winding wires - Part 4. 130 solderable polyurethane enamelled round copper wire (IEC 60317-4, IDT) GB/T 8554-1998 electronic and telecommunication equipment transformers and inductors for measurement methods and test procedures (idtIEC 61007. 1994)

GB/T 9632.1-2002 communication transformer and inductor core measurements (idtIEC 60367-1. 1982) GB/T 14860.1-2012 electronic and telecommunication equipment transformers and inductors - Part 1. General specifications (IEC 61248-1. 1996, MOD)

IEC 60068-2-21:1992 Environmental testing for electric and electronic products Part 2. Test methods - Test U. Robustness of terminations and integral security Loading intensity (Environmentaltesting-Part 2-21. Tests-TestU Robustnesssofterminationsandintegral mountingdevices) IEC QC001004 quality assessment system for electronic components (IEC Q) specification list (Specificationslist) ISO 128. 1982 Technical drawings - basic principles (Technicaldrawings-Generalprinciplesofpresentation) ISO 129. 1985 Technical drawings Dimensions basic principles, definitions, painting and special labeling (Technicaldrawings-Dimen-