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

GB 4943.1-2022

**Audio/video, information and communication technology
equipment-Part 1: Safety requirements**

音视频、信息技术和通信技术设备 第1部分：安全要求

(English Translation)

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Foreword

This document is drafted in accordance with GB/T 1.1-2020 "Directives for standardization - Part 1.Rules for the structure and drafting of standardizing documents".

This document is Part 1 of GB 4943.GB 4943 has issued the following part.

- Part 1.Safety requirements.

This document replaces GB 4943.1-2011 "Information technology equipment - Safety - Part 1.General requirements" and GB 8898-2011 "Audio, video and similar electronic apparatus - Safety requirements". Compared with GB 4943.1-2011 and GB 8898-2011, in addition to structural adjustment and editorial changes, the main technical changes are as follows.

- Add energy source classification tests; specify different limits and safeguard requirements (see 5.2, 6.2, 8.2, 9.2, 10.2);
- Delete the definition of TNV circuit (see 1.2.8.11 of GB 4943.1-2011 and Annex B of GB 8898-2011);
- Add the definition and requirements of insulating liquid (see 3.3.5.4, 4.4.4, 5.4.12, 6.4.9);
- Add and change the requirements for equipment containing liquid (see 4.1.8, B.3.1, F.4, G.15, and P.3; 4.3.10, 4.3.11, and 4.3.12 of GB 4943.1-2011);

- Add requirements for equipment containing coin / button cell batteries (see 4.8);
- Change the test requirements or limits of some safety requirements (see Table 4, 5.4.2, 5.4.9, 5.5.2.2, and Table 38, etc.; 5.1, 2.10.3, 5.2, 2.1.1.7, and Table 4C, etc. of GB 4943.1-2011; 9.1.1.1, 13.3, 10.3, 9.1.6, and Table 3, etc. of GB 8898-2011);
- Add requirements for backfeed (see 5.8);
- Add test requirements for power source circuits (see 6.2);
- Change the requirements and test methods for combustible materials (see 6.4 and Annex S; 4.7 and Annex A of GB 4943.1-2011; Clause 20 and Annex G of GB 8898-2011);
- Change the requirements for enclosure openings (see 6.4.8.3 and P.2; 4.6 of GB 4943.1-2011; 9.1.3 of GB 8898-2011);
- Add requirements for large equipment (see 8.5.4);
- Change the test method for equipment mounted to a wall or ceiling (see 8.7; 4.2.10 of GB 4943.1-2011; 19.6 of GB 8898-2011);
- Add requirements for slide-rail mounted equipment (see 8.11);
- Add requirements for wireless transmitters (see 9.6);
- Change the requirements for optical radiation (see Table 39, 10.3, and 10.4;

4.3.13.5 of GB 4943.1-2011; 6.2 of GB 8898-2011);

- Add requirements for acoustic radiation (see 10.6);
- Add requirements for the input signal of the display (see B.2.5);
- Add new identification symbols for Class II equipment with a functional earthing connection (see F.3.6.2);
- Add requirements for transformers using fully insulated winding wire (see G.5.3.4);
- Add requirements for liquid filled components (see G.15);
- Add requirements for integrated circuits and integrated circuits with X-capacitor function (see G.16);
- Add and change the requirements for equipment containing batteries and their protection circuits (see Annex M);

- Add the limited short-circuit test (see Annex R);
- Delete the spring impact hammer test (see 12.1.3 of GB 8898-2011);
- Add the children test probe and wedge probe (see Annex V);
- Add requirements for outdoor equipment (see Annex Y).

This document modifies and adopts IEC 62368-1:2018 "Audio/video, information and communication technology equipment - Part 1: Safety requirements".

Compared with IEC 62368-1:2018, this document has technical differences, which are marked with a vertical single line (|) in the outer margin of the clauses involved. These technical differences and their reasons are as follows.

a) Scope of application

IEC 62368-1:2018 applies to equipment intended to be used at an altitude of 2000 m and below. Due to the particularity of China's geographical conditions and the distribution characteristics of ethnic minority populations, after the revision of some clauses of IEC 62368-1:2018, this document is applicable to equipment Audio/video, information and communication technology equipment - Part 1: Safety requirements

1 Scope

This document specifies the safety requirements of electrical and electronic equipment within the field of audio, video, information and communication technology, and business and office machines. It does not include requirements for performance or functional characteristics of equipment.

This document is applicable to the above electrical and electronic equipment with a rated voltage not exceeding 600 V.

2 Normative references

The contents of the following documents, through normative references in this text, constitute indispensable provisions of this document. Among them, for dated references, only the edition corresponding to that date applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 261 Determination of flash point - Pensky-Martens closed cup method (GB/T 261-2021, ISO 2719.2016, MOD)

GB/T 528 Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties (GB/T 528-2009, ISO 37.2005, IDT)

GB/T 1002 Single phase plugs and socket-outlets for household and similar purposes - Types, basic parameters and dimensions

GB/T 1003 Three phases plugs and socket-outlets for household and similar purposes - Types, basic parameters and dimensions

GB/T 1040 (all parts) Plastics - Determination of tensile properties [ISO 527 (all parts)]

3.1 Energy source abbreviations

The following abbreviations apply to this document.

4.1.1 Application of requirements and acceptance of materials, components and subassemblies

Requirements are specified in the relevant clauses and, where referenced in those clauses, in the relevant annexes.

Where compliance of materials, components or subassemblies is demonstrated by inspection, such compliance may be by review of published data or previous test results.

4.1.2 Use of components

Where the component, or a characteristic of a component, is a safeguard or a part of a safeguard, components shall comply with the requirements of this document or, where specified in a requirements clause, with the safety aspects of the relevant national, industry or IEC component standards.

The use of components shall meet the requirements of the corresponding altitude of the equipment.