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

**GB/T 17573-2026**

Replacing GB/T 17573-1998

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**Semiconductor devices - General**

半导体器件 总则

**(English Translation)**

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## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 17573-1998 "Semiconductor Devices - Discrete Devices and Integrated Circuits - Part 1: General Principles" and is consistent with...

Compared with GB/T 17573-1998, apart from structural adjustments and editorial changes, the main technical changes are as follows.

a) Removed "semiconductor", "transfer electron effect", "(semiconductor device) electrode", and "(hybrid integrated circuit) partially completed integrated circuit".

Terms such as "path", "equivalent thermal network thermal resistance", and "turn-on time (ton)" (see Section IV, 2, 3.1.1~3.1.3, in the 1998 edition) 3.1.6, 3.1.7, 3.1.10, 3.1.11, 3.2, 3.7.1, 3.7.3~3.7.6, 3.8, 3.9, 4, 5.1, 5.2.4, 5.2.6, 5.3.1, 5.3.3, Sections 5.3.5, 5.3.6, 5.4.1, 5.4.3~5.4.5, 5.5.3~5.5.4, 5.6, 6, 7.1.1, 7.1.3, and 7.2 have changed the term "passive component".

"Active devices" (see 3.2.1, 3.2.2, and 3.8.2 and 3.8.1 in Part IV of the 1998 edition);

b) The text symbols "equivalent input noise voltage (two-port)" and "equivalent input noise current (two-port)" have been removed (see [link]).

Section 4.5 of Part V in the 1998 edition removed the "Summary Table of Symbols for Current, Voltage, and Power" (see 1998 edition).

(Section V, 2.3)

c) Modified the examples of "Cycle Value Application Examples" and "Subscripts for Composite Devices" regarding "Current and Voltage Polarity Representation" and "Supplementary Information on Subscripts".

The content of the "Regulations" (see 4.2.1, 4.2.7, 4.2.8, and 2.4, 2.2.3.5, 2.5, and 2.2.3 in Part V of the 1998 edition) is added as follows.

It introduced "differentiation" (see 4.4.4), time subscripts (see 4.5.2), and "limit representation" (see 4.6);

d) The definition in section 3.1 (see section 3.1 in Part VI of the 1998 edition) has been removed. The base, emitter, and collector leads of bipolar transistors...

The location of the leads (see 8.1 in Part VI of the 1998 edition), the leads of a high-frequency bipolar transistor with four leads.

The location (see 8.2 in Part VI of the 1998 edition) has been changed, as has the identification of the lead-out terminal and lead-out polarity (see 5.5, 1998 edition).

Chapter 9 of Part VI), recommended temperature (see 5.8, Chapter 5 of Part VI in the 1998 edition), cooling conditions (see 5.7,...).

(See Chapter 4 of Part VI in the 1998 edition), Recommended voltage and current (see 5.9, Chapter 6 of Part VI in the 1998 edition).

Product discreteness and consistency (see 5.2.3, Chapter 11 of Part VI, 1998 edition), mechanical property "dimension" description (see...

5.11.1, 7.3 in Part VI of the 1998 edition), and composite semiconductor devices with common packages (see 5.12, 1998 edition).

Chapter 10 of Part VI has been expanded to include "Relationship between operating conditions, ratings, and characteristics" (see 5.2) and "Electrical ratings and characteristics".

"Sex" (see 5.6), "Installation Conditions" (see 5.10.2);

e) Changes were made to the test precision (see 6.3, 2.2 in Part VII of the 1998 edition) and the protection of devices and test equipment (see 6.4).

Section VII, 2.1 (1998 edition), thermal conditions of the test method (see 6.5, Section VII, 2.2.1 (1998 edition), test...

The accuracy of the circuit (see 6.6, Sections 2.2.2-2.2.5 and 2.3 in Part VII of the 1998 edition) has been improved, and alternative testing methods have been added.

(See 6.2);

f) After deleting the durability test table, durability test conditions, and durability test from the "Special Requirements (General Section)", the accepted judgment...

Determine failure characteristics and failure criteria, reliability test determination of failure characteristics and failure criteria, Table I "After durability test, accept test the criteria for determining failure characteristics and Table II, "Conditions for Durability Testing" (see Section VIII, 3.1-3.4, of the 1998 edition) are as follows.

3.6), changed the support point temperature requirements (see 7.2.3.1, 2.1.2 in Part VIII of the 1998 edition), and the column for test duration.

Indicates the example value (see 7.2.8, section VIII, 2.2.1 of the 1998 edition);

g) The precautions for handling electrostatic discharge (ESD) devices (see Chapter 1 of Part IX in the 1998 edition) have been removed, as well as the precautions for handling short-voltage pulse sensitive semiconductors.

Test methods for physical devices, test circuits and instructions, precautions to be followed, test procedures, and specified conditions (see 1998 edition).

(Sections IX, 3.2-3.5)

h) Added a product manufacturing termination notice (see Chapter 9).

This document is equivalent to IEC 60747-1:2006 "Semiconductor devices - Part 1: General".

The following minimal editorial changes have been made to this document.

---To align with my country's existing standards system, the standard's name has been changed to "General Principles for Semiconductor Devices";

---Incorporates amendments to IEC 60747-1:2006/AMD1.2010; the relevant clauses are indicated by vertical margins.

The double lines (||) are marked;

---In the example in Chapter 4.4.3, "log" should be corrected to "lg";

---Figures 4a) and 4b) in Chapter 8 are corrected to Figures 3a) and 3b) respectively.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

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

This document is under the jurisdiction of the National Semiconductor Device Standardization Technical Committee (SAC/TC78).