

ICS 31.180
CCS L 30



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

GB/T 4588.1-1996

Replacing GB/T 4588.1-1996, GB/T 4588.2-1996

**Sectional specification for single and double sided rigid printed
board**

(English Translation)

Issued on: December 2, 2025

Implemented on: July 1, 2026

Issued by: State Administration for Market Regulation

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Application Level
- 5 Requirements
- 5.1 General Rules

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 4588.1-1996 "Specifications for Single and Double-Sided Printed Circuit Boards without Metallized Holes" and GB/T 4588.2-1996 "Specifications for Single and Double-Sided Printed Circuit Boards with Metallized Holes".

"Specifications for Single- and Double-Sided Printed Circuit Boards with Metallized Holes". Compared with GB/T 4588.1-1996 and GB/T 4588.2-1996, the main technical changes are as follows.

The following is an explanation.

---The content of the scope chapter has been revised (see Chapter 1, Chapter 1 of GB/T 4588.1-1996 and GB/T 4588.2-1996);

---Added printed circuit board application level (see Chapter 4);

---Added priority order (see 5.2);

---Added requirements for printed circuit board materials to be reusable, recyclable, or environmentally friendly (see 5.3);

---Design requirements have been added (see 5.4);

---Added inspection methods (see 5.5.1), printed connectors (see 5.6.7), open and short circuits (see 5.7.4), and surface withstand voltage (see 5.7).

3) Adhesion (see 5.8.4), thermal shock resistance (see 5.10.1), flammability (see 5.9.2), etc.;

---Added quality assurance provisions (see Chapter 6);

---Delivery requirements have been added (see Chapter 7).

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 Printed Circuit Standardization Technical Committee (SAC/TC47).

1 Scope

This document specifies the application levels, requirements, quality assurance provisions, and delivery requirements for single- and double-sided rigid printed circuit boards (hereinafter referred to as "PCBs").

And so on, and described the corresponding testing methods.

This document applies to single- or double-sided rigid printed circuit boards with or without metallized vias.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 2036 Printed Circuit Terminology GB/T 2423.22 Environmental testing - Part 2: Test methods - Test N. Temperature change GB/T 4588.3 Design and use of printed circuit boards GB/T 4677-2002 Test Methods for Printed Circuit Boards GB/T 4725 Copper-clad epoxy fiberglass cloth laminate for printed circuit boards GB/T 16261-2017 General Specification for Printed Circuit Boards

3 Terms and Definitions

The terms and definitions defined in GB/T 2036 apply to this document.

4 Application Level

The products specified in this document are divided into three application levels. The requirements for each product level should be specified in the contract or procurement

documents, and if necessary...

Exceptions to specific parameters should be noted. The specific classifications are as follows.

a) Level 1. General electronic products.

Products with lower requirements for appearance but primarily requiring the printed circuit board to have complete functionality include consumer products and certain computer external components.

equipment.

b) Level 2. Durable electronic products.

Non-critical equipment products requiring high performance, long service life, and uninterrupted operation, including communication equipment and complex commercial equipment.

Machines and instruments.

c) Level 3. High reliability electronic products.

Critical equipment that operates continuously in harsh environments, cannot be shut down, or is used in life support systems and can be put into operation whenever needed.

Backup products have higher requirements for the materials, processes, inspection and testing used in the processing of printed circuit boards.

5.1 General Rules

Unless otherwise specified, single- or double-sided rigid printed circuit boards shall meet all requirements of the specific performance class specified in this document.