

ICS 31.180
CCS L 30



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

GB/T 4588-2025

Replacing GB/T 4588.1-1996

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

单、双面刚性印制板分规范

Issued on: December 2, 2025

Implemented on: July 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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 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). This document was drafted by: Guangde Wangshi Intelligent Circuit Technology Co., Ltd., Jiangsu Guangxin Photosensitive New Materials Co., Ltd., and Lin'an, Zhejiang. Pengyu Electronics Co., Ltd., Guangzhou Guanghe Technology Co., Ltd., Zhuhai Fangzheng Printed Circuit Board Development Co., Ltd., Zhejiang Rochtech Technology Co., Ltd. Technology Co., Ltd., Fujian Ruihua Printed Circuit Board Co., Ltd., Anhui Oasis Hazardous Waste Comprehensive Utilization Co., Ltd., Wuxi Ruilong New Materials Co., Ltd. Materials Technology Co., Ltd., China Electronics Technology Standardization Institute, Jiangxi Zhongluo Electronics Co., Ltd., and Changshu Southeast Mutual Electronics Co., Ltd. The main drafters of this document are. Zhu Sujie, Zhu Min, Zhu Xiaodong, Zeng Hong, Su Xinhong, Lou Hongwei, Sun Yucheng, Yuan Shengqiao, Li Xiaoming, and An Fenglei. Cha Xiaoying, Wang Yazhou, Xue Chao, Li Xiaozhi, Chen Yiping. The release history of this document and the document it replaces is as follows:

---First published in.1996 as GB/T 4588.1-1996;

---First published in.1996 as GB/T 4588.2-1996;

---This is the first revision. Single-sided and double-sided rigid printed circuit board specifications

1 Scope

GB/T 4588-2025 is the Chinese national standard covering the single and double sided PCB - the base material and copper, the conductor width and spacing, the holes and their plating, the solderability and the acceptance criteria for the defects. It replaces GB/T 4588.1-1996, a specification twenty-nine years old. It was issued on 2 December 2025 and has been in force since 1 July 2026, replacing GB/T 4588.1-1996. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

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 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:

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.

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.

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 Requirements

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.