

ICS 31.180
CCS L30



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

GB/T 16315-2017

Replacing GB/T 16315-1996

**Polymide woven glass fabric copper clad laminated sheets for
printed circuits**

印制电路用覆铜箔聚酰亚胺玻纤布层压板

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Standardization Administration of China**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 16315-1996 "printed circuit with a limited flammability of copper clad polyimide glass cloth laminate" and GB/T 16317-1996 "multi-layer printed circuit with a limited flammability of the copper-clad polyimide glass cloth laminate," and GB/T 16315-1996 and GB/T 16317-1996 compared to the main technical changes are as follows:

- CFIGC-61F glass transition temperature from 200 °C to 200 °C ~ 250 °C (see Table 1);
- Increased 915mm x 1220mm, 1020mm x 1220mm, 1065mm x 1280mm, 1065mm x 1155mm, 1220mm x 1245mm five recommended board size specifications (see Table 2);
- Increased 0.05mm ~ 0.10mm, 0.10mm ~ 0.15mm, 0.15mm ~ 0.30mm, 0.3mm ~ 0.5mm four Nominal thickness specifications; Increased C-class thickness tolerances for various nominal thickness specifications in the 0.05 mm to 6.4 mm range Standard (see Table 4);
- "Bow and twist" instead of "warpage" and improve the indicators (see Table 5);
- "Water absorption" instead of "water absorption", "surface resistivity" instead of "surface resistance"; Remove the "pull-off strength" "Copper foil resistance" "Surface corrosion" "edge corrosion" indicators; increased breakdown voltage, arc resistance, high temperature bending strength and thermal expansion coefficient, heat Decomposition temperature, thermal stratification time (see Table 6);
- Improve the bending strength, flammability, peel strength, water absorption, dielectric constant, dielectric loss factor and other performance indicators (see Table 6);
- Added references. This standard proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This standard by the National Standardization Technical Committee printed circuit board (SAC/TC47) centralized. This standard was drafted. Xianyang Reid Electronic Technology Co., The main drafters of this

standard. Sword British, Gao Yan Ru, Wang Aijong, Wang Jinlong, Yan Xiaoxiong. This standard replaces the standards previously issued as.

--- GB/T 16315-1996;

--- GB/T 16317-1996. Printed circuit with copper foil polyimide glass fiber cloth laminate

1 Scope

GB/T 16315-2017 is the Chinese national standard on polyimide woven glass fabric copper clad laminated sheets for printed circuits, in the field of electronics. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 July 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 February 2018. Classification: ICS 31.180, CCS L30. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the printed circuit with copper foil polyimide glass fiber cloth laminate (hereinafter referred to as CCL) product classification, technical requirements, Test methods, quality assurance requirements, packaging, marking, transport and storage requirements. This standard applies to modified or unmodified polyimide resin as a binder, E glass fiber cloth as a reinforcing material made of a thickness of 0.05mm ~ 6.4mm CCL.

2 Normative references

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

GB/T 4721 printed circuit board with copper clad laminate general rules Test method for rigid copper clad laminates for printed circuits GB/T

GB/T 5230 electrolytic copper foil

GB/T 18373 PCB with E glass fiber cloth

3 Product categories

3.1 models and characteristics This standard includes the CCL model and its characteristics are shown in Table 1. CCL domestic and international model comparison example see Appendix A. Table A.1. Table

1 Model and its characteristics a Model b characteristics CFIGC-61F glass transition temperature (T_g). $200\text{ }^{\circ}\text{C} \sim 250\text{ }^{\circ}\text{C}$ CFIGC-62F glass transition temperature (T_g) $\geq 250\text{ }^{\circ}\text{C}$
aCFIGC-61F is modified polyimide CCL, CFIGC-62F is unmodified polyimide CCL. b standard model by the provisions of GB/T 4721.

3.2 Materials

3.2.1 E glass fiber cloth E glass fiber cloth should be consistent with the provisions of GB/T 18373.

3.2.2 copper foil Copper foil should be consistent with the provisions of GB/T 5230.