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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46379-2025

Bismaleimide triazine (BT) base material for integrated circuit packaging

集成电路用双马来酰亚胺三嗪（BT）封装基材

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Standardization Administration of the PRC

Table of Contents

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. 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 and is under the jurisdiction of the National Technical Committee on Standardization of Semiconductor Equipment and Materials (SAC/TC203). This document was drafted by: Suzhou Shengyi Technology Co., Ltd., China Electronics Technology Standardization Institute, and Guangdong Shengyi Technology Co., Ltd. Company, Changshu Shengyi Technology Co., Ltd., Zhejiang Huazheng New Material Co., Ltd., Nanya New Material Technology Co., Ltd., Guangdong Yipas New Materials Technology Co., Ltd., Ruilong Materials Technology (Jiangsu) Co., Ltd., Guangzhou Xingsen Fast Circuit Technology Co.,

Ltd., Guangzhou Guangxin Packaging Substrate Co., Ltd., Shennan Circuits Co., Ltd., ZTE Corporation, Shenzhen Zhongke Sihe Technology Co., Ltd., Xiamen Sihe Microelectronics Co., Ltd., Sichuan Dongcai Technology Group Co., Ltd., Guangdong Yinghua New Material Technology Co., Ltd., Chengdu Zhongke Zhuoer Intelligent Technology Group Co., Ltd. The main drafters of this document are. Ding Ye, Dai Shankai, Cao Kewei, Liu Shenxing, Yuan Gao, Chu Zhengzhen, Chen Xiangxiu, Feng Chunting, Shi Zeyuan, and Tang Junqi. Tang Yueshuai, Wang Liang, He Xiaoling, Fang Jiangwei, Zhao Junsha, Wu Yiran, Zhang Baoshuai, Su Junhua, Zou Shuiping, He Yufang, Xiang Zhongrong, Qiao Shuxiao, Xu Jing Zhang Jing, Dai Jiong, Peng Wei, Ding Kunpeng, Huang Mian, Zhou You, He Lixiao, Yang Wei. Bismaleimide triazine (BT) for integrated circuits Encapsulation substrate

1 Scope

GB/T 46379-2025 is the Chinese national standard covering BT laminate for package substrates - the glass transition temperature and the coefficient of thermal expansion that has to match the die, the dielectric properties, the moisture absorption and the resistance to reflow delamination. First edition, in force from 1 February 2026. Issued on 31 October 2025, it has been in force since 1 February 2026.

This document specifies the product classification, materials, and specifications of bismaleimide triazine (BT) packaging substrates for integrated circuits (hereinafter referred to as "substrate"). Requirements, quality assurance, packaging and labeling, transportation and storage, and corresponding test methods are described. This document applies to double-sided coated steels with a base resin of bismaleimide triazine (BT) and an insulation layer thickness of

0.015 mm to

3.2 mm. Copper foil encapsulation substrate. Other copper-clad laminates for printed circuit boards used as encapsulation substrates should be referenced for further use.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. 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 4721-2021 General Rules for Rigid Copper-Clad Laminates for Printed Circuit Boards

GB/T 4722-2017 Test methods for rigid copper-clad laminates for printed circuits

GB/T 5230 Electrolytic Copper Foil for Printed Circuit Boards

GB/T 18373 E-fiberglass cloth for printed circuit boards

GB/T 43801 Test method for relative permittivity and loss tangent of copper-clad laminates in microwave band - Separated dielectric resonator method SJ/T 10668 Electronic Assembly Technology Terminology

3 Terms and Definitions

The terms and definitions defined in GB/T 2036 and SJ/T 10668 apply to this document.

4.Symbols and Abbreviations The following symbols and abbreviations apply to this document.

5 Product Categories

The substrate types and corresponding characteristics contained in this document conform to the specifications in Table

1.Substrate classification is based on a thickness (excluding copper foil) of

0.1 mm and one sheet.