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

GB/T 19405.4-2025

**Surface mounting technology - Part 4: Classification,
packaging, labelling and handling of moisture sensitive devices**

表面安装技术 第4部分：湿敏器件的处理、标记、包装和分类

(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 is Part 4 of GB/T 19405 "Surface Mount Technology". GB/T 19405 has the following parts published.

---Part 1: Standard Methodology for Surface Mount Components (SMDs) Specification;

---Part 2: Transportation and Storage Conditions for Surface Mount Components---Application Guidelines;

---Part 3: Standard Methods for Component Specifications in Through-Hole Reflow Soldering;

---Part 4: Handling, marking, packaging and sorting of humidity-sensitive devices.

This document is modified to adopt IEC 61760-4:2018 "Surface mount technology - Part 4: Handling, marking, packaging and maintenance of moisture-sensitive devices".

Classification".

Compared with IEC 61760-4:2018, this document has undergone the following structural adjustments.

---Chapter 9 corresponds to Chapter 9 of IEC 61760-4:2018, where 9.1 and 9.2 both correspond to 9.1 of IEC 61760-4:2018;

---6.2 corresponds to 6.2 and Annex B of IEC 61760-4:2018;

---Appendix A (Informative) on the humidity sensitivity of electronic components and Appendix B (Informative) on the analysis of mass changes have been deleted;

---Appendix A (Normative) corresponds to Appendix D (Normative) in IEC 61760-4:2018;

---Appendix B (Informative) corresponds to Appendix C (Informative) in IEC 61760-4:2018.

The technical differences between this document and IEC 61760-4:2018, and the reasons therefor, are as follows.

---IEC 60068-1 (see 4.3) has been replaced by the normatively referenced GB/T 2421, and IEC 61760-2 has been replaced by GB/T 19405.2.

(See 8.1.1) to adapt to my country's technological conditions and increase operability;

---Added normative references to GB/T 2036 (see Chapter 3), GB/T 4677-2002 (see 6.6.2), and SJ/T 11200-2016 (see 6.4.2, 6.4.3), improved operability;

---The term "humidity indicator desiccant" and its definition have been removed because this term does not conform to the types of desiccants commonly used in the industry (see Chapter 3);

---The terms "shelf life" and "moisture sensitivity label" and their definitions have been added. These are key terms that will be used (see Chapter 3).

---The visual inspection requirements in section 6.6.2 have been revised, changing the requirement that "external cracks and bulges must be inspected at 40x magnification" to include more specific details.

The inspection conditions were changed to conform to GB/T 4588.4 regarding magnification and precision measurement requirements with dimensional requirements (see Chapter 6).

This allows for more precise inspection of requirements that cannot be verified using a 40x magnifying glass according to international standards;

---Figure 2a) has been modified, replacing the 20%, 30%, and 40% humidity indicators with the industry-standard 10% and 20%.

A six-point humidity indicator card with readings of 30%, 40%, 50%, and 60% (see 7.2.3.1) is provided to adapt to my country's technical conditions.

---Figure 2b) has been changed to Figure 3, and the humidity indicator card has been changed from conforming to IEC 60749-20-1 to conforming to IPC/JEDECJ-STD-033B.

The diagram is designed to adapt to my country's technological conditions.

The following editorial changes have been made to this document.

---IEC 60749-20 has been replaced with GB/T 4937.20 (see Table 2) which is used for informational reference.

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).

Introduction

Surface mount technology is a fundamental component of electronic products, and surface mount processes are a basic process in electronic manufacturing. To ensure the safety of surface mount components...

Improve the quality of various electronic components, promote the development of surface mount technology, and establish unified surface mount technology requirements and component product standards.

Standardization is the primary task for surface mount technology. my country has established a national standard system for surface mount technology, within which GB/T 19405...

"Surface Mount Technology" is a fundamental and universal standard guiding the manufacturing and acceptance of surface mount components in my country. GB/T 19405 aims to...

The requirements for various components that are generally applicable to surface mount technology are proposed to consist of the following four parts.

---Part 1: Standard Methodology for Surface Mount Components (SMDs). The purpose is to define the specifications for various surface mount components.

Standardized, sub-standard, or detailed specifications of process conditions and corresponding test conditions.

---Part 2: Transportation and Storage Conditions for Surface Mount Components---Application Guidelines. The purpose is to specify the transportation and storage conditions for various active and passive components.

Transportation and storage conditions for surface mount components.

---Part 3: Standard Methods for Specification of Components for Through-Hole Reflow Soldering. The purpose is to specify the types of leaded components for through-hole reflow soldering.

The process conditions and corresponding test conditions for the specifications, sub-specifications or detailed specifications of devices and surface mount components.

---Part 4: Handling, Marking, Packaging, and Classification of Humidity-Sensitive Devices.