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

GB/T 19405.3-2025

**Surface mounting technology - Part 3: Standard method for the
specification of components for through hole reflow(THR)
soldering**

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 3 of GB/T 19405 Surface Mount Technology. GB/T 19405 has been published in the following parts.

- Part 1: Standard method for specification of surface mount components (SMDs);
- Part 2: Transportation and storage conditions for surface mount components --- Application guidance;
- Part 3: Standard method for specification of components for through-hole reflow soldering.

This document is modified to adopt the standard method of IEC 61760-3:2021 "Surface Mount Technology Part 3: Specification for Through-hole Reflow Components" Law".

This document has made the following structural adjustments compared to IEC 61760-3:2021.

- Delete the fifth-level items under 5.5.2.1 in IEC 61760-3:2021, and change the sixth-level items to list items;
- Terms 3.10 to 3.13 correspond to terms 3.11 to 3.14 of IEC 61760-3:2021.

The technical differences between this document and IEC 61760-3:2021 and their reasons are as follows.

- Replace IEC 60068 (all parts) (see 4.8) with the normative reference GB/T 2423 (all parts) to adapt to the technical requirements of my country Technical conditions and increase operability;
- Replace IEC 60068-2-77 with GB/T 2423.52 and IEC 60068-2-21 with GB/T 2423.60 (see 4.7), replace IEC 60749-20 (see 4.2) with the normative reference GB/T 4937.20, and replace IEC 60749-20 (see 4.2) with the normative reference GB/T 4937.20 GB/T 19247.3 replaces IEC 61191-3 (see Chapter 7) and replaces GB/T 19405.2 with the normative reference IEC 61760-2 (see 4.5), replace IEC 60286-3 (see 4.2) with the normative reference GB/T 28162.3 to adapt to my country Technical conditions and increase operability;
- Replace IEC 61188-6-4 (see 4.6.1) with the normative reference GB/T 4588.3 to adapt to my country's technical conditions and increase the Operability;
- Replace IEC 62090 (see 4.3) with the normative reference GB/T 45638 to adapt to my country's technical conditions and increase operability Sexuality;

---Replace IEC 60194-1 (see Chapter 3) with the normative reference SJ/T 10668-2023 to adapt to my country's technical conditions and increase Increase operability;

--- Delete the term "auxiliary terminal auxiliaryterminal" because it is only cited once in the text;

---Change the note in 4.3 of IEC 61760-3:2021 to the main text, because information such as "quantity" should be included on the product packaging label content.

The following editorial changes were made to this document.

--- Delete the statement about the purpose of the standard in Chapter 1.

Introduction

Surface mounting is the basic component technology of electronic products, and surface mounting technology is the basic technology of electronic manufacturing.

Improve the product quality of various electronic components installed, promote the development of surface mounting technology, and establish unified surface mounting technology requirements and components Product specification is the primary task of surface mounting. my country has established a national standard system for surface mounting.

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

GB/T 19405 aims to specify the requirements for various components that are generally applicable to surface mounting processes and is intended to consist of the following parts.

--- Part 1: Standard method for specification of surface mount components (SMDs). The purpose is to specify the the process conditions and corresponding test conditions of a specification, sub-specification or detailed specification.

--- Part 2: Transportation and storage conditions for surface mounted components --- Application Guide. The purpose is to specify various active or passive Transportation and storage conditions for surface mount components.

--- Part 3: Standard method for specification of components for through-hole reflow soldering. The purpose is to specify various types of leaded components for through-hole reflow soldering.

Specifications, sub-specifications or detail specifications for devices and surface mount components, and process conditions and corresponding test conditions.

--- Part 4: Classification, packaging, labeling and handling of moisture-sensitive components. The purpose is to specify the classification, packaging, labeling and handling of moisture-sensitive surface mount components.

Packaging, labelling and handling requirements.

Surface mount technology Part 3: Through-hole reflow Standard method for specifying components for welding

1 Scope

This document specifies the process conditions and corresponding test conditions for specifications, sub-specifications or detail specifications of electronic components for through-hole reflow soldering.

This document applies to all types of leaded components and surface mount components for through-hole reflow soldering.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 2423 (all parts) Environmental testing for electrical and electronic products [IEC 60068 (all parts)] GB/T 2423.28-2005 Environmental testing for electric and electronic products Part 2: Test methods Test T. Soldering (IEC 60068-2-20:1979, IDT) Note. There is no technical difference between the referenced content of GB/T 2423.28-2005 and the referenced content of IEC 60068-2-20:2008.

GB/T 2423.30-2013 Environmental testing for electric and electronic products Part 2: Test XA. Immersion in cleaning agent (IEC 60068-2-45:1980/Amd1.1993, MOD) Note. There is no technical difference between the referenced content of GB/T 2423.30-2013 and the referenced content of IEC 60068-2-45:1980/Amd1.1993.

GB/T 2423.52 Environmental testing for electric and electronic products Part 2: Test methods Test 77. Structural strength and impact (GB/T 2423.52-2003, IEC 60068-2-77:1999, IDT) GB/T 2423.60 Environmental testing for electric and electronic products Part 2: Test methods Test U. Strength of lead terminals and integral mounting parts Degree (GB/T 2423.60-2008, IEC 60068-2-21:2006, IDT) GB/T 4588.3 Design and use of printed boards (GB/T 4588.3-2002, eqv IEC 60326-3.1991) GB/T 4937.20 Mechanical and climatic test methods for semiconductor devices Part 20: Resistance of plastic encapsulated surface mount devices to moisture and soldering Comprehensive effect of heat exposure (GB/T 4937.20-2018, IEC 60749-20:2008, IDT) GB/T 19247.3 Printed board assembly Part 3: Sectional specification Requirements for through-hole mounting soldering assembly (GB/T 19247.3-2003, IEC 61191-3:1998, IDT) GB/T 19405.2