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

**GB/T 28162.4-2026**

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**Packaging of components for automatic handling - Part 4: Stick  
magazines for electronic components encapsulated in  
packages of different forms  
(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 28162 "Packaging of Components for Automatic Assembly". GB/T 28162 has the following publications.

---Part 1: Tape Packaging of Axial Lead Components on Continuous Tape;

---Part 2: Tape Packaging of Unidirectional Lead Components on Continuous Tape;

---Part 4: Roller-shaped magazines for electronic components in different packaging forms.

This document is equivalent to IEC 60286-4:2013 "Packaging of electronic components for automated assembly - Part 4: Electronic components in different packages".

"Stick-shaped magazine for the device".

The following minimal editorial changes have been made to this document.

---The chamfer unit "mm" in Figure A.1 should be corrected to "°".

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 Technical Committee on Standardization of Resistor and Capacitor Components for Electronic Equipment (SAC/TC165).

## Introduction

Resistors and capacitors are the most basic electronic components, widely used in electronic equipment and instruments. This series of documents aims to provide a basis for the development of electronic components in my country.

The packaging of mass-produced resistors and capacitors provides standardized and regulated technical requirements, while also providing a basis for automated assembly or automatic insertion of components in complete machines.

The device provides convenient conditions. Resistor and capacitor components are mainly available in two mounting forms. leadless and led.

GB/T 28162 is proposed to consist of 4 parts.

Tape and reel technology requirements for components used with equipment for lead preforming, automated assembly, insertion, and other assembly processes, and the taping and reeling of components.

Required dimensions.

---Part 2: Tape Packaging of Unidirectional Lead Components on Continuous Tape. The purpose is to determine the use of unidirectional leaded components in electronic equipment.

Tape and reel technology used with equipment for lead preforming, automated assembly, insertion, and other assembly processes for components with more than one unidirectional

lead wires.

Requirements and the necessary dimensions for component tape and reeling.

---Part 3: Packaging of Surface Mount Components on Continuous Strips. The purpose is to identify leadless or strip-based connections for electronic circuits.

The dimensions required for tape packaging and component taping of electronic components with lead posts; also including those for single-chip products [including bare die].

Requirements for packaging of wafer and bumped chip (flip chip)

---Part 4: Roller-shaped magazines for electronic components in different packaging forms. The purpose is to determine the intended use for storing electronic components...

From manufacturer-to-customer transport and within the manufacturing plant, rod-shaped magazines (including end stops) are also used.

Provides automatic feeding for surface mount and through-hole mounting of electronic components.

Packaging of components for automated assembly Part 4: Electronics in Different Forms of Packaging Component rod-shaped magazine box

## 1 Scope

This document specifies the shape, dimensions, materials, mechanical stability, end stops, and gaskets for rod-shaped magazines (including end stops).

Requirements for the orientation and marking of components in a stick-shaped magazine.

This document applies to roller magazine cassettes (including end stoppers). These roller magazine cassettes are intended for the storage of electronic components, from manufacturing...

It is used for both shipping to customers and within manufacturing plants, and also to provide self-contained power for surface mount and through-hole mount electronic components.

## 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 17573-2026 Semiconductor devices - Part 1: General principles (IEC 60747-1:2006, IDT) IEC 60191-3:1999 Mechanical standardization of semiconductor devices - Part 3: General rules for drawing outlines of integrated circuits

### 3.1 Terms and Definitions

The following terms and definitions apply to this document.

#### 3.1.1

stick magazine box stickmagazine A slender container with a suitable cross-section to accommodate components.

**Note:** Alternative terms such as sleeve, rail, and magazine can be used.

#### 3.1.2

endstoppers

Mechanisms located at both ends of the stick-shaped magazine box to prevent components from falling out of the magazine box.

**Note:** Alternative terms such as pin, plug, end plug, nail, retainer ring, etc. may be used, but in this document, "end stop plug" shall be used.

### 3.2 Conventions

All dimensions in the tables and graphs are in millimeters (mm). All dimensions representing angles in the tables and graphs are in degrees (°).