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

GB/T 7581-2026

Replacing GB/T 7581-1987

Outline dimensions of discrete semiconductor devices

半导体分立器件外形尺寸

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Table of Contents

- 1 Scope
- 3 Terms and Definitions
- 4 Package outline
- 6 Package Outline Code
- 7 Product outline drawing and dimensional parameters
- 7.4 Metal Outline Package Dimensions

1 Scope

GB/T 7581-2026 is the Chinese national standard covering the package outlines of discrete semiconductors - every TO, SOT, SOD and DPAK case with its drawing and dimensions, which is what a board designer lays out a footprint from. At 63,500 words it is a drawing catalogue, and it replaces GB/T 7581-1987 after thirty-nine years. In force since 1 October 2026. It was issued on 31 March 2026 and takes effect on 1 October 2026, replacing GB/T 7581-1987. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the external dimensions of discrete semiconductor devices. This document applies to the packaging design of discrete semiconductor devices.

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Package outline

4.1 Metal Packaging The main categories of metal packaging are as follows:

- a) Metal cylindrical package;
- b) Metal flange mounting and encapsulation;
- c) Metal screw/bolt mounting and encapsulation;
- d) Metal elongated package.

4.2 Plastic Encapsulation The main categories of plastic packaging are as follows:

- a) Plastic cylindrical packaging;

- b) Plastic flange sealing;
- c) Plastic screw/bolt enclosure;
- d) Plastic flat-plate packaging;
- e) Plastic through-hole package;
- f) Long plastic package;
- g) Plastic disc-shaped button packaging;
- h) Small outline plastic package;

6 Package Outline Code

6.1 General Provisions The package outline coding rules are in accordance with the provisions applicable to semiconductor discrete devices in GB/T 15879.4-2019. Note

1. For TO, SMD, and SOT classes, which have industry-standard shape codes, this document will continue to use these industry-standard codes for ease of understanding and use. Naming conventions, such as TO-220, SMD-1, SOT-23, etc., where there are two or more general outline codes for the same package shape, are separated by "\". Note

2. The old encoding content is indicated in parentheses after the encoding in this document. It does not belong to the new encoding content and is only for reference.

6.2 Composition of Shape Coding The external dimension code in this document consists of the following parts.

- 1. Encapsulation material, represented by the letters C, G, and L.
- b) Part Two. Lead-out positions, indicated by the letters A, B, and D.
- c) Part Three. Package Outline Type, represented by the letters CC, CP, and CY.
- d) Part Four. Lead-out form, represented by the letter codes A, B, and C.
- 5. Number of leads, represented by numbers 1 to 999.
- 6. Cross-sectional shape of the lead-out end, represented by the letters F and Y.
- 7. Package size specifications, indicated by numbers 01 to 99.

7 Product outline drawing and dimensional parameters

7.1 General Rules The dimensions listed in this document are in millimeters (mm); dimensions marked with "-" are theoretically correct to ensure mechanical interchangeability and should be adjusted accordingly. The dimensions should be marked according to the maximum material principle for geometric tolerances in GB/T 1182; the L1 dimension marked in the external dimensions refers to the dimension within this section.

The wire diameter is not limited to allow for some filler material overflow, lead coating, and minor surface irregularities that may exist outside the lead itself; in terms of external dimensions... The specified length L^2 is the minimum axial length required for device installation after the lead wire is bent at a right angle.

7.2 Explanation of Dimension Symbols on Outline Drawings All dimensions of the components listed in this document, except for angular dimensions which are directly labeled, are indicated by symbols. Specific symbol explanations are provided below. See Table 2.

7.3 Lead-out terminal numbering in external dimensions The lead numbers of the components listed in this document are all labeled sequentially as 1, 2, 3, etc. The polarity of the leads is indicated in the outline standard. The regulations do not specify this; the device manufacturer should indicate the corresponding lead polarity on the product drawing (design specification) according to the design and usage requirements. Symbols. For polarized base plates, bolts are not numbered.

7.4 Metal Outline Package Dimensions

7.4.1 The external dimensions of the metal cylindrical package are shown in Figures 1 to 10.

7.4.3 The external dimensions of the metal screw/bolt mounting package are shown in Figures 18 to 25.

7.4.4 The external dimensions of the metal elongated mounting package are shown in Figures 26 and 27. GB/T 7581-2026. Dimensions of Discrete Semiconductor Devices ICS

40 National Standards of the People's Republic of China Replaces GB/T 7581-1987 Semiconductor discrete device outline dimensions Published on 2026-03-

31 Implemented on October 1, 2026 State Administration for Market Regulation The State Administration for Standardization issued a statement.