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## Packaging of components for automatic handling

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Part 6-1: Bulk case packaging for miniaturized surface mounting components

## National foreword

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The UK participation in its preparation was entrusted to Technical Committee W/-, Consumer Products and Services Sector Policy and Strategy Committee.

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# IEC TS 60286-6-1

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# TECHNICAL SPECIFICATION



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## Packaging of components for automatic handling – Part 6-1: Bulk case packaging for miniaturized surface mounting components

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –****Part 6-1: Bulk case packaging for miniaturized  
surface mounting components**

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IEC TS 60286-6-1 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment. It is a Technical Specification.

The text of this Technical Specification is based on the following documents:

Draft	Report on voting
40/3038/DTS	40/3066/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [https://www.iec.ch/members\\_experts/refdocs](https://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at <https://www.iec.ch/standardsdev/publications>.

A list of all parts in the IEC 60286 series, published under the general title *Packaging of components for automatic handling*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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- amended.

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## INTRODUCTION

This Technical Specification was developed by the Technical Committee 40 Working group 36 on Components Packaging, in which the members such as assembly machine manufacturers, component manufacturers and packaging material manufacturers had proposed, considered and discussed the possible standardization on the application of a new type of bulk case to contain smaller sizes of SMD, aiming to supplement IEC 60286-6 Edition 2.0, issued in 2004.

NOTE For size limitations of components, see Annex A, Table A.1 and Table A.2.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning “storage case for surface mounting electronic components”<sup>1</sup>.

IEC takes no position concerning the evidence, validity and scope of this patent right.

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<sup>1</sup> Patent Application No.: PCT/JP2021/023093, published 17.06.2021

## PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –

### Part 6-1: Bulk case packaging for miniaturized surface mounting components

#### 1 Scope

This part of IEC 60286 specifies a bulk case capable of containing miniaturized surface mount components of sizes within the range of 0402M to 1005M (see Table 1 for explanation of the codes). The bulk case is designed for transport and storage of components and to supply of components directly or by an appropriate feeder to the placement machine. The bulk case is equipped with a coupling interface to enable its automatic handling, e.g. by a robot or automatic handling machines.

#### 2 Normative references

There are no normative references in this document.

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

##### 3.1

##### component size

<metric> component dimensions expressed by a metric code

Note 1 to entry: For identification the size code is followed by a capital M.

Note 2 to entry: For comparison with inch-based size codes, an equivalency table is shown in Table 1.

**Table 1 – Size codes for components**

Metric size code	Inch size code
0402M	01005
0603M	0201
1005M	0402

#### 4 Requirements for the bulk case

##### 4.1 Case outline

Figure 1 shows the general outline of the bulk case. Figure 2 shows the photographic view of the bulk case.