

Data requirements for semiconductor die —

Part 4-2: Specific requirements and recommendations — Handling and storage

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National foreword

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Cross-references

The British Standards which implement international publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

Summary of pages

This document comprises a front cover, an inside front cover, the ES title page, pages 2 to 10, an inside back cover and a back cover.

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EUROPEAN SPECIFICATION

ES 59008-4-2

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September 2000

English version

Data requirements for semiconductor die
Part 4-2: Specific requirements and recommendations
Handling and storage

This European Specification was approved by CENELEC on 2000-05-25.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Specification has been prepared by the CENELEC BTTF 97-1, Known good die.

It was submitted to the vote during the meeting of BTTF 97-1 and approved by CENELEC as ES 59008-4-2 on 2000-05-25.

The following date was fixed:

- latest date by which the existence of the ES
has to be announced at national level (doa) 2000-10-01

The structure of this European Specification is as follows.

ES 59008	Data requirements for semiconductor die
Part 1	General requirements
Part 2	Vocabulary
Part 3	Mechanical, material and connectivity requirements
Part 4	Specific requirements and recommendations
	Part 4-1: Test and quality
	Part 4-2: Handling and storage
	Part 4-3: Thermal
	Part 4-4: Electrical simulation
Part 5	Particular requirements and recommendations for die types
	Part 5-1: Bare die
	Part 5-2: Bare die with added connection structures
	Part 5-3: Minimally-packaged die
Part 6	Exchange data formats and data dictionary
	Part 6-1: Data exchange - DDX file format
	Part 6-2: Data dictionary

Introduction

This European Specification has been developed so that the selection of unpackaged and minimally packaged semiconductor die, with or without connection structures, can be carried out in a constructive way so that the designer and procurer of the components can save both design and procurement time.

It is a data specification which defines the requirements for :

- product identity
- product data
- die mechanical information
- test, quality and reliability information
- handling, storage and mounting information
- thermal data and electrical simulation data.

This document was prepared by CENELEC Task Force CLC/BTTF 97-1 Known Good Die. Other organisations that helped prepare it were: the ESPRIT GOOD-DIE project, EECA, Sematech; DPC and EIAJ.

The specification was derived from the work carried out in the ESPRIT 4th Framework project GOOD-DIE. This project was set up to develop a database for the selection of unpackaged and minimally packaged semiconductor die, with or without connection structures, and for the downloading of information to CAD design stations to facilitate the layout and simulation of MCMs and hybrid circuits. During the early part of this project the need became apparent for standard ways of presenting information for the selection and procurement of these components.

1 Scope

This series of European Specifications specifies requirements for the exchange of data pertaining to bare semiconductor die, with or without connection structures, and minimally packaged semiconductor die.

This Specification also gives recommendations for general industry good practice in the use of bare die with or without connection structures, and minimally-packaged die.

ES 59008-4-2 specifies the requirements for the exchange of data needed for delivery, specifically handling and storage of unpackaged and minimally packaged semiconductor die. The standard also specifies the requirements for the exchange of data to control product traceability and change notification. Recommendation for general industry good practice for handling, storage and labelling are contained in Parts 5-1, 5-2 and 5-3 of ES 59008.

This specification is for use by semiconductor manufacturers, suppliers, die processors and users of semiconductor die.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this European Specification. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this European Specification are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below.

ES 59008-1:1999, *Data requirements for semiconductor die -- Part 1: General requirements*

ES 59008-2:1999, *Data requirements for semiconductor die -- Part 2: Vocabulary*

ES 59008-3:1999, *Data requirements for semiconductor die -- Part 3: Mechanical, material and connectivity requirements*

prES 59008-5-1*, *Data requirements for semiconductor die -- Part 5-1: Particular requirements and recommendations for die types – Bare die*

prES 59008-5-2*, *Data requirements for semiconductor die -- Part 5-2: Particular requirements and recommendations for die types - Bare die with connection structures*

prES 59008-5-3*, *Data requirements for semiconductor die -- Part 5-3: Particular requirements and recommendations for die types – Minimally packaged die*

EIA/JESD49:1996, *Procurement Standard for Known Good Die (KGD)*

FED-STD-209, *Clean Room and Workstation Requirements, Controlled Environments*

3 Definitions

For the purpose of this European Specification, the definitions as given in ES 59008-2 apply. In addition, the following terms are used in this part.

3.1

primary packing

the packing material immediately surrounding the device. This applies to any of the packing forms including but not limited to chip trays, tape and reel or component tube

3.2

secondary packing

the packing material and method that contains one or more primary packing units. This packing material normally affords additional ESD, environmental and mechanical protection for devices during handling and shipping

* in preparation