

This is a preview - click here to buy the full publication

INTERNATIONAL STANDARD

IEC 62258-5

First edition
2006-08

Semiconductor die products –

Part 5: Requirements for information concerning electrical simulation

© IEC 2006 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

M

For price, see current catalogue

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 General.....	6
5 Requirements for information on electrical simulation models.....	7
5.1 Information on the electrical simulation model.....	7
5.2 Information on device connectivity.....	8
5.3 Information on the timing simulation model.....	8
5.4 Information on connection redistribution.....	8
5.5 Information on package terminals.....	9
Annex A (informative) Supporting information.....	10
Bibliography.....	12

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SEMICONDUCTOR DIE PRODUCTS –

**Part 5: Requirements for information
concerning electrical simulation**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62258-5 has been prepared by IEC technical committee 47: Semiconductor devices.

This standard should be read in conjunction with IEC 62258-1 and IEC 62258-2.

The text of this standard is based on the following documents:

FDIS	Report on voting
47/1869/FDIS	47/1882/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The structure of IEC 62258, as currently conceived, consists of the following parts under the general title *Semiconductor die products*:

- Part 1: Requirements for procurement and use
- Part 2: Exchange data formats
- Part 3: Recommendations for good practice in handling, packing and storage (Technical Report)
- Part 4: Questionnaire for die users and suppliers (Technical Report) (in preparation)
- Part 5: Requirements for information concerning electrical simulation
- Part 6: Requirements for information concerning thermal simulation
- Part 7: XML schema for data exchange (Technical Report) (in preparation)

Further parts may be added as required.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

This standard is based on the work carried out in the ESPRIT 4th Framework project GOODDIE which resulted in the publication of the ES 59008 series of European specifications. Organisations that helped prepare this part of IEC 62258 includes the ESPRIT ENCAST project, the Die Products Consortium, JEITA, JEDEC and ZVEI.

SEMICONDUCTOR DIE PRODUCTS –

Part 5: Requirements for information concerning electrical simulation

1 Scope

This part of IEC 62258 has been developed to facilitate the production, supply and use of semiconductor die products, including:

- wafers;
- singulated bare die;
- die and wafers with attached connection structures;
- minimally or partially encapsulated die and wafers.

This part of IEC 62258 specifies the information required to facilitate the use of electrical data and models for simulation of the electrical behaviour and verification of the correct functionality of electronic systems that include bare semiconductor die, with or without connection structures, and/or minimally packaged semiconductor die. It is intended to assist all those involved in the supply chain for die devices to comply with the requirements of IEC 62258-1 and IEC 62258-2.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62258-1, *Semiconductor die products – Part 1: Requirements for procurement and use*

IEC 62258-2, *Semiconductor die products – Part 2: Exchange data formats*