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TECHNICAL REPORT

Semiconductor die products –
Part 4: Questionnaire for die users and suppliers

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FOREWORD

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The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC 62258-4, which is a technical report, has been prepared by IEC technical committee 47: Semiconductor devices.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
47/1884/DTR	47/1909/RVC

Full information on the voting for the approval of this technical report 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 list of all the parts of IEC 62258, under the general title *Semiconductor die products*, can be found on the IEC website.

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- withdrawn;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 technical report 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. Organizations that helped prepare this document included the ESPRIT ENCAST and ENCASIT projects, the Die Products Consortium, JEITA, JEDEC and ZVEI.

SEMICONDUCTOR DIE PRODUCTS –

Part 4: Questionnaire for die users and suppliers

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 technical report contains a questionnaire, based on the requirements of other parts of IEC 62258, which may be used in negotiations and contracts between suppliers and purchasers of die devices. It is intended to assist all those involved in the supply chain for die devices to comply with the requirements of the IEC 62258-1 and IEC 62258-2 standards.

It should be recognized that the tables contained in this technical report form a checklist of information that can potentially be supplied and that it may not be relevant or possible to complete all fields. Different markets may require different subsets of the information requested herein.

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 60050, *International Electrotechnical Vocabulary*

IEC 62258-1:2005, *Semiconductor die products – Part 1: Requirements for procurement and use*

IEC 62258-2:2005, *Semiconductor die products – Part 2: Exchange data formats*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050 and IEC 62258-2 apply.

4 General

To comply with IEC 62258-1, that standard requires that suppliers of die devices furnish information which is necessary and sufficient for users of the devices at all stages of design, procurement, manufacture and test of the products containing them. The questionnaire in Annex A provides a *pro forma* that can form a standard basis for supplying such information and is intended as an aid to compliance with the standard.

Where references are made in this technical report to clauses in IEC 62258-1 and IEC 62258-2, these references are only to the clauses in the 2005 editions. The tables in the annexes contain requirements for information that is not yet covered by those parts of the standard but which will be included in future issues. Furthermore, some of the terminology may not be exactly in accordance with those standards: for example, the term “pad” is replaced by “terminal” in this technical report.

Whilst it is expected that much of the information supplied will be in the public domain and available from such sources as manufacturers’ data sheets, neither the standard nor the questionnaire places an obligation on a supplier to make information public. Any information that a supplier considers to be proprietary or commercially sensitive may be supplied under the terms of a non-disclosure agreement.

5 Data exchange

In conjunction with the questionnaire tables in Annex A, a spreadsheet is available which allows the information to be supplied electronically. Use of the spreadsheet (47-62258-4-TR-E-worksheet.xls) will also enable computer-sensible descriptions of die devices to be generated that can then be converted to the DDX format as defined in IEC 62258-2, the XML format compliant with the schema in IEC 62258-7, the EXPRESS model schema as defined in IEC 62258-8 or other appropriate formats. Software is available to allow conversion from the spreadsheet tables into DDX, XML and SPF formats and may be available for other formats (see the attached Excel spreadsheet).

Compared to the printed form of the questionnaire as given in Annex A, use of the spreadsheet has the following advantages.

- Notes to the cells in the spreadsheet give the full text of the corresponding clauses in IEC 62258-1.
- Linked worksheets deal with the requirements for terminal and other information, including pad shape, size and position, terminal connections, fiducials, simulators, terminal grouping and permutability. Notes to the cells here give the requirements for the detailed terminal information as required for data exchange in IEC 62258-2.
- The format of the information is consistent with that required in IEC 62258-2 so that converting the spreadsheet data into a form suitable for data exchange is a fairly straightforward task.

The copyright conditions applying to the use of the spreadsheet are the same as those that apply to IEC database standards, which permit the use of such information in electronic form for *bona fide* e-commerce but do not permit its sale to third parties or other commercial use.

Annex A

Customer questionnaire on die devices

A.1 Customer/supplier information

Supplier	
Device	
Supplier part number	

Customer	
Project	
Customer part number	

Customer contact name	
Supplier contact name	

Date	
Revision	

Are terms and conditions and warranty information attached? (Yes/No)	

A.2 Die device information

In Tables A.1 to A.5, references in the first column are to clauses in IEC 62258-1:2005, which should be consulted for further details.

Insert the necessary information, or reference to attached documents that contain it, in the data column. If a question is not applicable or information is not available then insert N/A.

All dimensional values should be given in µm.