INTERNATIONAL STANDARD

IEC 61182-2

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Printed board assembly products – Manufacturing description data and transfer methodology –

Part 2: Generic requirements

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
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 61182-2 has been prepared by IEC technical committee 93: Design automation.

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

CDV	Report on voting
93/211/CDV	93/231/RVC

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 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- withdrawn,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 standard may be issued at a later date.

PRINTED BOARD ASSEMBLY PRODUCTS – MANUFACTURING DESCRIPTION DATA AND TRANSFER METHODOLOGY –

Part 2: Generic requirements

1 Scope and object

This part of IEC 61182 specifies the XML Schema that represents the intelligent data file format used to describe printed board and printed board assembly products with details sufficient for tooling, manufacturing, assembly, and inspection requirements. This format may be used for transmitting information between a printed board designer and a manufacturing or assembly facility. The data is most useful when the manufacturing cycle includes computer-aided processes and numerical control machines.

The data can be defined in either English or International System of Units (SI) units.

1.1 Focus and intent

The generic format requirements are provided in a series of standards focused on printed board manufacturing, assembly, and inspection testing. This standard series consists of a generic standard (IEC 61182-2) that contains all the general requirements. There are four sectional standards that are focused on the XML details necessary to accumulate information in the single file, that addresses the needs of the design, fabrication, assembly and test disciplines producing a particular product.

The sectional standards (IEC 61182-2-1 through IEC 61182-2-4) paraphrase the important requirements and provide suggested usage and examples for the topic covered by the sectional standard.

1.2 Notation

Although the data would be contained in a single file, the file can have different purposes as described in Clause 4. The XML Schema used for this standard follows the notations set forth by the W3C and is as follows:

element – Element appears exactly one time

element? – element may appear 0 or 1 times

element* – element may appear 0 or more times

element+ – element may appear 1 or more times

Any IEC 61182-2 file is composed of a high level element IEC 61182-2 that contains up to six sub-elements:

Content – information about the contents of the 258X file

LogisticHeader – information pertaining to the order and supply data

HistoryRec – change information of the file

Bom – Bill of Materials (Material List) information

Ecad – Computer Aided Design (engineering) information

Avl – Approved Vendors List information

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 60194, *Printed board design, manufacture and assembly – Terms and definitions*

IEC 61188-5-1, *Printed boards and printed board assemblies – Design and use – Part 5-1: Attachment (land/joint) considerations – Generic requirements*

IEC 61188-5-2, *Printed boards and printed board assemblies – Design and use – Part 5-2: Attachment (land/joint) considerations – Discrete components*

IEC 61188-5-3, *Printed boards and printed board assemblies – Part 5-3: Sectional design and use requirements – Attachment (land/joint) considerations – Components with Gull-wing leads on two sides*[1]

IEC 61188-5-4, *Printed boards and printed board assemblies – Design and use – Part 5-4: Sectional requirements – Attachment (land/joint) consideration – Components with J leads on two sides*[2]

IEC 61188-5-5, *Printed boards and printed board assemblies – Design and use – Part 5-5: Sectional requirements – Attachment (land/joint) considerations – Components with Gull-wing leads on four sides*[2]

IEC 61188-5-6, *Printed boards and printed board assemblies – Design and use – Part 5-6: Attachment (land/joint) considerations – Chip carriers with J-leads on four sides*

IEC 61188-5-8, *Printed boards and printed board assemblies – Design and use – Part 5-8 : Sectional Requirement – Attachment (land/joint) considerations – Area array components (BGA, FBGA, CGA, LGA)*[2]

[1] To be published.