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(IEC 61076-4 : 1995)

(JEITA)

**Connectors for electronic equipment—
Part 4 : Printed board connectors with
assessed quality—Sectional specification**

ICS 31.220.10

Reference number : JIS C 5401-4 : 2005 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from Japan Electronics and Information Technology Industries Association (JEITA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

This Standard has been made based on **IEC 61076-4:1995** *Connectors with assessed quality, for use in d.c., low-frequency analogue and in digital high-speed data applications—Part 4 : Sectional specification—Printed board connectors* for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

JIS C 5401 series consists of the following 7 parts under the general title “*Connectors for electronic equipment*”:

Part 1 : Generic specification

Part 2 : Circular connectors with assessed quality—Sectional specification

Part 2-001 : Circular connectors—Blank detail specification

Part 3 : Rectangular connectors with assessed quality—Sectional specification

Part 3-001 : Rectangular connectors with assessed quality—Blank detail specification

Part 4 : Printed board connectors with assessed quality—Sectional specification

Part 4-001 : Printed Board Connectors with assessed quality—Blank detail specification

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Connectors for electronic equipment— Part 4 : Printed board connectors with assessed quality— Sectional specification

Introduction This Japanese Industrial Standard has been prepared based on the first edition of IEC 61076-4 *Connectors with assessed quality, for use in d.c., low-frequency analogue and in digital high-speed data applications—Part 4 : Sectional specification—Printed board connectors* published in 1995 without modifying the technical contents.

1 General

1.1 Scope This part of JIS C 5401 establishes uniform specifications, type testing requirements and quality assessment procedures for a sub-family of connectors for printed board applications.

It contains a choice of all test methods and sequences, severities and preferred values for dimensions and characteristics.

It gives guidance on the rules for the preparation of detail specifications (DS) for printed board connectors of assessed quality, used in electronic and electrical equipment.

It should be used in conjunction with the generic specification JIS C 5401-1 and with relevant detail specifications.

In the event of conflict between the sectional specification and the detail specification, the requirements of the detail specification should prevail.

NOTES 1 Connectors designed for use at radio frequencies are not covered in this Standard.

2 As this family of connectors is suitable to be used in mechanical structures in accordance with JIS C 6010-1, a guide will be provided in the blank detail specification, future JIS C 5401-4-001.

Remarks : The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21.

IEC 61076-4: 1995 *Connectors with assessed quality, for use in d.c., low-frequency analogue and in digital high-speed data applications—Part 4 : Sectional specification—Printed board connectors* (IDT)

1.2 Normative references The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. If the indication of the year of publication is given to these referred standards, only the edition of the indicated year constitutes the provisions of this Standard but revision and amendment made thereafter do not apply. The normative references without the indication of the year of coming into effect apply only to the most recent edition (including amendments).

JIS C 5401-1 *Connectors for electronic equipment—Part 1 : Generic specification*

Remarks : IEC 61076-1:1995 *Connectors with assessed quality, for use in d.c., low-frequency analogue and in digital high speed data applications—Part 1 : Generic specification*, Amendment 1 (1996) and Amendment 2 (2001) are identical with the said standard.

JIS C 5402-1-100 *Connectors for electronic equipment—Tests and measurements—Part 1-100: General—Applicable publications*

Remarks : IEC 60512-1-100:2001 *Connectors for electronic equipment—Tests and measurements—Part 1-100 : General—Applicable publications* is identical with the said standard.

JIS C 6010-1 *Modular order for the development of mechanical structures for electronic equipment practices—Part 1: Generic standard for modular order for the development of mechanical structures for electronic equipment practice*

Remarks : IEC 60917-1:1998 *Modular order for the development of mechanical structures for electronic equipment practices—Part 1 : Generic standard* is identical with the said standard.

JIS C 6010-2 *Modular order for the development of mechanical structures for electronic equipment practices—Part 2: Sectional specification—Interface co-ordination dimensions for the 25 mm equipment practice*

Remarks : IEC 60917-2-2:1994 *Modular order for the development of mechanical structures for electronic equipment practices—Part 2 : Sectional specification—Interface co-ordination dimensions for the 25 mm equipment practice—Section 2 : Detail specification—Dimensions for subracks, chassis, backplanes, front panels and plug-in units* is identical with the said standard.

JIS C 60068-1 *Environmental testing Part 1 : General and guidance*

Remarks : IEC 60068-1:1988 *Environmental testing—Part 1 : General and guidance* is identical with the said standard.

IEC 60352-1:1983 *Solderless connections—Part 1: Solderless wrapped connections—General requirements, test methods and practical guidance*

IEC 60352-2:1990 *Solderless connections—Part 2 : Solderless crimped connections—General requirements, test methods and practical guidance*

IEC 60352-3:1993 *Solderless connections—Part 3 : Solderless accessible insulation displacement connections—General requirements, test methods and practical guidance*

IEC 60352-4:1994 *Solderless connections—Part 4 : Solderless non-accessible insulation displacement connections—General requirements, test methods and practical guidance*

IEC 60352-5:1995 *Solderless connections—Part 5 : Solderless press-in connections—General requirements, test method and practical guidance*

2 Technical information

2.1 Terminology The terminology used in and applicable to this specification is stated in 2.1 of JIS C 5401-1.

2.2 Classification into climatic categories Unless otherwise impractical, the lower and upper temperatures and the duration of the damp heat, steady state test should be selected from the preferred values stated in 2.2 of JIS C 5401-1.

2.3 Creepage and clearance distances The detail specification shall specify creepage and clearance distances in accordance with the requirements of 2.3 of JIS C 5401-1.

2.4 Current-carrying capacity The detail specification shall specify the current-carrying capacity of connectors in accordance with the requirements of 2.4 of JIS C 5401-1.

2.5 JIS type designation Connectors to which this Standard applies shall be designated by the following indications and in the order given:

- a) The letters “JIS”.
- b) The number of the detail specification (without spaces and dashes), being eight characters (e.g. C 54014101).
- c) A letter denoting the style of the connector (the system shall be specified in the detail specification).
- d) The number of contacts of connectors or of contact cavities of connector bodies, the number of digits used shall be in accordance with the maximum possible number of contacts or cavities.
- e) A letter denoting the type of contact of two-part connectors or the number of electrically independent rows of edge-socket connectors. The following letters shall be used:

— Two-part connector	F female contact
	H hermaphroditic contact
	M male contact
— Edge-socket connector	D double row (separated)
	S single row

- f) A number, being a combination of three digits describing the contact arrangement, which may include:
- pre-mating contact levels;
 - loaded contact rows;
 - loaded contact patterns.
- g) A letter denoting the basic type of the terminations, followed by a character defining the variation.

The following letters shall be used:

A	screw	S	solder
C	crimp	T	tab
I	insulation displacement/piercing		
M	surface mount	U	plug-up plus wrap
P	press-in	W	wrap
R	press-in plus rear plug-up	Z	no terminations

- h) If prescribed in the detail specification, the type designation may optionally be extended to cover further information, such as climatic category, printed board dimensions, and contact finish.
- i) Where the detail specification provides for a variation of performance and assessment levels, a single digit and a letter shall be used to denote performance level (PL) and assessment level (AL) respectively. The digit and letter shall be prescribed in the detail specification and shall be included as the final characters of the type designation.

It may optionally be extended to cover further information, such as contact finish.

- j) Grouping of information The indications a) to i) shall be grouped to clarify the type of entity:

basic description:	a), b), c), d), and e);
— contact arrangement:	f);
— terminations:	g);
— performance:	h) and i).

2.6 Marking Each connector and its associated package shall be marked in accordance with the requirements specified in 2.6 of JIS C 5401-1.

3 Quality assessment procedures See clause 3 of JIS C 5401-1.