



SLOVENSKI STANDARD
SIST EN 61189-1:2001/A1:2003
01-april-2003

**Test methods for electrical materials, interconnection structures and assemblies -
Part 1: General test methods and methodology**

Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 1: General test methods and methodology

Prüfverfahren für Elektromaterialien, Leiterplatten und andere Verbindungsstrukturen und Baugruppen - Teil 1: Allgemeine Prüfverfahren und -methodik

Méthodes d'essais pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles - Partie 1: Méthodes d'essai générales et méthodologie

<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003>

Ta slovenski standard je istoveten z: EN 61189-1:1997/A1:2001

ICS:

31.180	Tiskana vezja (TIV) in tiskane plošče	Printed circuits and boards
31.190	Sestavljeni elektronski elementi	Electronic component assemblies

SIST EN 61189-1:2001/A1:2003 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61189-1:2001/A1:2003](https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003)

<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003>

EUROPEAN STANDARD

EN 61189-1/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2001

ICS 31.180

English version

**Test methods for electrical materials, printed boards and
other interconnection structures and assemblies
Part 1: General test methods and methodology
(IEC 61189-1:1997/A1:2001)**

Méthodes d'essais pour les matériaux
électriques, les cartes imprimées et autres
structures d'interconnexion et ensembles
Partie 1: Méthodes d'essai générales et
méthodologie
(CEI 61189-1:1997/A1:2001)

Prüfverfahren für Elektromaterialien,
Leiterplatten und andere
Verbindungsstrukturen und Baugruppen
Teil 1: Allgemeine Prüfverfahren und
Methodik
(IEC 61189-1:1997/A1:2001)

STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61189-1:2001/A1:2003](https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003)

<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003>

This amendment A1 modifies the European Standard EN 61189-1:1997; it was approved by CENELEC on 2001-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 52/887/FDIS, future amendment 1 to IEC 61189-1:1997, prepared by IEC TC 52, Printed circuits, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 61189-1:1997 on 2001-10-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-07-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2004-10-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 1:2001 to the International Standard IEC 61189-1:1997 was approved by CENELEC as an amendment to the European Standard without any modification.

(standards.iteh.ai)

SIST EN 61189-1:2001/A1:2003

<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003>

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

Add:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-3	1969	Basic environmental testing procedures Part 2: Tests - Test Ca: Damp heat, steady state	HD 323.2.3 S2 ¹⁾	1987
IEC 60068-2-30	1980	Part 2: Tests - Test Db and guidance: Damp heat, cyclic (12 + 12 hour cycle)	EN 60068-2-30 ²⁾	1999

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 61189-1:2001/A1:2003](https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003)

<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003>

¹⁾ HD 323.2.3 S2 includes A1:1984 to IEC 60068-2-3.

²⁾ EN 60068-2-30 includes A1:1985 to IEC 60068-2-30.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61189-1:2001/A1:2003

<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003>

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

61189-1

1997

AMENDEMENT 1
AMENDMENT 1
2001-08

Amendement 1

**Méthodes d'essais pour les matériaux électriques,
les structures d'interconnexion et les ensembles –**

Partie 1:
Méthodes d'essai générales et méthodologie
(standards.iteh.ai)

Amendment 1
<https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7e53/sist-en-61189-1-2001-a1-2003>

**Test methods for electrical materials,
interconnection structures and assemblies –**

Part 1:
General test methods and methodology

© IEC 2001 Droits de reproduction réservés — Copyright - all rights reserved

International Electrotechnical Commission 3, rue de Varembe Geneva, Switzerland
Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

H

Pour prix, voir catalogue en vigueur
For price, see current catalogue

FOREWORD

This amendment has been prepared by IEC technical committee 52: Printed circuits.

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

FDIS	Report on voting
52/887/FDIS	52/889/RVD

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

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2005. At this date, the publication will be

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

iTeh STANDARD PREVIEW (standards.iteh.ai)

Page 9

2 Normative references

[SIST EN 61189-1:2001/A1:2003](https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003)

[https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-](https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003)

[3b0c9c7cee53/sist-en-61189-1-2001-a1-2003](https://standards.iteh.ai/catalog/standards/sist/8028f641-d31f-4e5a-9c2d-3b0c9c7cee53/sist-en-61189-1-2001-a1-2003)

Add the following new references:

IEC 60068-2-3:1969, *Environmental testing – Part 2: Tests – Test Ca: Damp heat, steady state*

IEC 60068-2-30:1980, *Environmental testing – Part 2: Tests – Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)*

Page 19

5 P: Preparation/conditioning test methods

Add, on page 21, after “5.2.6 Additional information”, the following new subclauses:

5.3 Test 1P03: Accelerated ageing, conditioning of printed boards – Method A

5.3.1 Object

The object of this procedure is to condition printed boards in a steam/oxygen atmosphere as an accelerated ageing procedure where a short overall test duration of the procedure is desirable.

The accelerated ageing conditions described in this test method have been demonstrated to be equivalent to a 10-day damp heat conditioning as detailed in IEC 60068-2-3: Test Ca, or IEC 60068-2-30: Test Db.

The test is intended to give information about the effect of storage duration on the solderability of printed boards.

An alternative acceptable conditioning technique is detailed in 5.4 as test method 1P04.

In case of dispute between the two alternative techniques, the referee method shall consist of exposure to the climatic conditions described in IEC 60068-2-3: Test Ca, or IEC 60068-2-30: Test Db, for a duration of 10 days.

5.3.2 Test specimen

The test specimen shall be as described in the appropriate sectional specification (SS) or customer detail specification (CDS) procurement documentation. The physical size of the conditioning and test apparatus is also a limiting factor.

5.3.3 Test apparatus and materials

The following test apparatus and materials shall be used:

- steam/oxygen ageing test apparatus (see figure 1);
- test chamber;

The chamber should be constructed to permit test specimens to be readily placed on an enclosed holder (carousel) during the test. The chamber should have a thermal insulating jacket and shall be constructed from materials which will not contaminate the test atmosphere, such as borosilicate glass or stainless steel.

- specimen holder;

The specimen holder design shall be able to

- hold the specimens in a vertical position;
- provide at least 6 mm separation between each specimen;
- eliminate the risk of steam/gas entrapment;
- permit even distribution of steam/gas over the specimens;
- prevent materials from contaminating the atmosphere, e.g. stainless steel or PTFE;
- be rotated by a suitable mechanism at 5 rev/min to 50 rev/min.

- steam generator;

A steam generator and a deionized water reservoir shall be capable of delivering steam into the test chamber. The steam inlet pipes shall be fitted with inlet valves.