



SLOVENSKI STANDARD
oSIST prEN IEC 61189-2-803:2022
01-januar-2022

Preskusne metode za električne materiale, tiskana vezja in druge povezovalne strukture in sestave - 2-803. del: Metode za preskušanje raztezanja po osi Z tankih podložnih materialov

Test methods for electrical materials, printed board and other interconnection structures and assemblies - Part 2-803: Test methods for Z-Axis Expansion of base materials and printed board

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Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles - Partie 2-803: Méthodes d'essai pour la dilatation suivant l'axe Z des matériaux de base et des cartes imprimées

Ta slovenski standard je istoveten z: prEN IEC 61189-2-803:2021

ICS:

31.180 Tiskana vezja (TIV) in tiskane Printed circuits and boards plošče

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91/1760/CDV

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IEC TC 91 : ELECTRONICS ASSEMBLY TECHNOLOGY	
SECRETARIAT: Japan	SECRETARY: Mr Masahide Okamoto
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input checked="" type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

Test methods for electrical materials, printed board and other interconnection structures and assemblies – Part 2-803: Test methods for Z-Axis Expansion of base materials and printed board

PROPOSED STABILITY DATE: 2027

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CONTENTS

1		
2		
3	FOREWORD	3
4	1 Scope.....	5
5	2 Normative References.....	5
6	3 Terms and definitions	5
7	4 Preparation of Test Specimens.....	5
8	5 Test Specimens	5
9	6 Test Apparatus.....	6
10	7 Test Procedure.....	6
11	8 Calculation	6
12	9 Report.....	7
13		
14	Figure 1 – Example TMA Data Output	6
15		
16		

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Test methods for electrical materials, printed board and other interconnection structures and assemblies -

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Part 2-803: Test Methods for Z-Axis Expansion of Base Materials and Printed Board

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FOREWORD

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International Standard IEC 61189-2-803 has been prepared by subcommittee WG10 of IEC technical committee TC91

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The text of this International Standard is based on the following documents:

FDIS	Report on voting
XX/XX/FDIS	XX/XX/RVD

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

62 The committee has decided that the contents of this document will remain unchanged until the stability date
63 indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this
64 date, the document will be

- 65 • reconfirmed,
- 66 • withdrawn,
- 67 • replaced by a revised edition, or
- 68 • amended.

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TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARD AND OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –

Part 2-803: Test methods for Z-Axis Expansion of base materials and printed board

1 Scope

This International Standard specifies a test method to determine the Z-Axis Expansion of base materials and printed boards using a thermomechanical analyser (TMA).

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 60194-1, Printed board design, manufacture and assembly – Vocabulary – Part 1: Common usage in printed board and electronic assembly technologies
IPC-TM-650 No. 2.4.24, Glass Transition temperature and Z-Axis Thermal Expansion by TMA

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60194-1 apply. ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

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4 Preparation of Test Specimens

Unless otherwise specified, a minimum of two specimens shall be tested. These specimens shall be taken from random locations of the material to be evaluated.

The test specimens shall be verified to be free of particles.

5 Test Specimens

Test specimens shall be unclad laminate material or a printed circuit board. Multilayer printed boards may be tested but no internal conductors are to be present in the specimen.

All Cu shall be etched from the test specimens using standard industry methods.

The specimen shall be taken at a distance ≥ 25 mm from the edge of the material / circuit board being evaluated. The dimensions of the specimens shall be approximately 6.35mm x 6.35 mm and have a minimum thickness of 0.51mm.

The specimen needs to lie flat on the test surface, so all edges of the specimen shall be sanded, or equivalent, to make them smooth and free of burrs. Care should be taken that this process does not induce mechanical stresses or heat the specimen.

The specimen thickness shall be measured and recorded, to allow for the percentage of thermal expansion to be determined at the completion of the test.