IEC 61189-2-805

Edition 1.0 2024-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 2-805: X/Y CTE test for thin base materials by TMA

Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles – Partie 2-805: Essai à faible CDT X/Y par TMA pour matériaux de base minces



IEC 61189-2-805:2024-04(en-fr)



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-805: X/Y CTE test for thin base materials by TMA

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IEC 61189-2-805 has been prepared IEC technical committee 91: Electronics assembly technology. It is an International Standard.

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

Draft	Report on voting
91/1755/CDV	91/1782/RVC

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 61189 series, published under the general title *Test methods for electrical materials, printed boards and other interconnection structures and assemblies*, can be found on the IEC website.

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

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

Part 2-805: X/Y CTE test for thin base materials by TMA

1 Scope

This part of IEC 61189 defines the method to be followed for the determination of the X/Y coefficient of thermal expansion of thin electrical insulating materials via the use of a thermomechanical analyser (TMA). This method is applicable to materials that are solid for the entire range of temperature used, and that retain sufficient rigidity over the temperature range so that so that irreversible indentation of the specimen by the sensing probe does not occur.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

4 Test specimens

4.1 Preparation

The test specimen shall be between 0,01 mm and 0,5 mm thick. The effective length of the sample clamped in the fixture shall be 8 mm and the recommended length of the sample is 60 mm, The sample width shall be 4 mm.

NOTE The test results will vary based upon the layup used, the resin to glass ratio and the ultimate cure of the laminated stack.

4.2 Number

One specimen shall be prepared unless noted otherwise for each direction X and Y.

4.3 Form

The test specimen shall be cut to the specified size using appropriate procedures and equipment to minimize thermal shock and mechanical stress. The edges shall be smooth and without tears.