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**Preskusne metode za električne materiale, tiskana vezja ter druge povezovalne strukture in sestave - 5-502. del: Splošne preskusne metode za materiale in sestave - Preskušanje površinske izolacijske upornosti sestavov**

Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 5-502: General test methods for materials and assemblies - Surface insulation resistance (SIR) testing of assemblies

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**ICS:**

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

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN IEC 61189-5-502**

March 2021

ICS 31.180

English Version

**Test methods for electrical materials, printed board and other  
interconnection structures and assemblies - Part 5-502: General  
test methods for materials and assemblies - Surface insulation  
resistance (SIR) testing of assemblies  
(IEC 61189-5-502:2021)**

Méthodes d'essai pour les matériaux électriques, les cartes  
imprimées et autres structures d'interconnexion et  
ensembles - Partie 5-502: Méthodes d'essai générales pour  
les matériaux et les ensembles - Essais de résistance  
d'isolement en surface (RIS) des ensembles  
(IEC 61189-5-502:2021)

Prüfverfahren für Elektromaterialien, Leiterplatten und  
andere Verbindungsstrukturen und Baugruppen - Teil 5-  
502: Allgemeine Prüfverfahren für Materialien und  
Baugruppen - Prüfung des  
Oberflächenisolationswiderstands (SIR) von Baugruppen  
(IEC 61189-5-502:2021)

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European Committee for Electrotechnical Standardization  
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**EN IEC 61189-5-502:2021 (E)****European foreword**

The text of document 91/1646/CDV, future edition 1 of IEC 61189-5-502, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61189-5-502:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-12-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-03-10

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61189-1	NOTE	Harmonized as EN 61189-1
IEC 61189-3	NOTE	Harmonized as EN 61189-3
IEC 61189-5 (series)	NOTE	Harmonized as EN IEC 61189-5 (series)
IEC 61189-6	NOTE	Harmonized as EN 61189-6
IEC 61190-1-1	NOTE	Harmonized as EN 61190-1-1
IEC 61190-1-2	NOTE	Harmonized as EN 61190-1-2
IEC 61249-2-7	NOTE	Harmonized as EN 61249-2-7
IEC 62137-4:2014	NOTE	Harmonized as EN 62137-4:2014 (not modified)
ISO 9001	NOTE	Harmonized as EN ISO 9001
ISO 9455-1	NOTE	Harmonized as EN 29455-1
ISO 9455-2	NOTE	Harmonized as EN ISO 9455-2

## Annex ZA

### (normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-20	-	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	EN 60068-2-20	-
IEC 60068-2-58	-	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	EN 60068-2-58	-
IEC 60068-2-67	-	Environmental testing - Part 2-67: Tests - Test Cy: Damp heat, steady state, accelerated test primarily intended for components	EN 60068-2-67	-
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	-
IEC 60194	-	Printed board design, manufacture and assembly - Terms and definitions	-	-
IEC 61190-1-3	-	Attachment materials for electronic assembly - Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solder for electronic soldering applications	EN IEC 61190-1-3	-

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IEC 61189-5-502

Edition 1.0 2021-02

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Test methods for electrical materials, printed board and other interconnection structures and assemblies –  
Part 5-502: General test methods for materials and assemblies – Surface Insulation Resistance (SIR) testing of assemblies**

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**Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles –  
Partie 5-502: Méthodes d'essai générales pour les matériaux et les ensembles –  
Essais de résistance d'isolement en surface (RIS) des ensembles**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARD AND  
OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –****Part 5-502: General test methods for materials and assemblies –  
Surface Insulation Resistance (SIR) testing of assemblies**

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IEC 61189-5-502 has been prepared by 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
91/1646/CDV	91/1673/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://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 board 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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