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INTERNATIONAL STANDARD

colour inside

Semiconductor devices – Flexible and stretchable semiconductor devices – Part 8: Test method for stretchability, flexibility, and stability of flexible resistive memory

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IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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SEMICONDUCTOR DEVICES – FLEXIBLE AND STRETCHABLE SEMICONDUCTOR DEVICES –

Part 8: Test method for stretchability, flexibility, and stability of flexible resistive memory

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

Draft	Report on voting
47/2786/FDIS	47/2793/RVD

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

The language used for the development of 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 62951 series, published under the general title *Semiconductor devices – Flexible and stretchable semiconductor devices*, can be found on the IEC website.

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- withdrawn,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

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SEMICONDUCTOR DEVICES – FLEXIBLE AND STRETCHABLE SEMICONDUCTOR DEVICES –

Part 8: Test method for stretchability, flexibility, and stability of flexible resistive memory

1 Scope

This part of IEC 62951 defines terms and specifies the test method for evaluating the stretchability, flexibility, and stability of flexible resistive memory. The test method descriptions include experimental procedures and the equipment to be used. It also includes general requirements for test conditions such as the temperature and relative humidity of the testing environment. The test method described in this document focuses on stability evaluation rather than reliability.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

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

3.1
flexible resistive memory
flexible device that works by changing the resistance between dielectric materials

3.2
bending radius
measured to the inside curvature, is the minimum radius one can bend a pipe, tube, sheet, cable or hose

3.3
resistance of low resistance state
LRS
one of stable resistance states induced by applying higher voltage (unipolar switching) or positive bias (bipolar switching)

3.4
resistance of high resistance state
HRS
one of stable resistance states induced by applying lower voltage (unipolar switching) or negative bias (bipolar switching)