

Semiconductor devices - Mechanical and climatic test methods - Part 26: Electrostatic discharge (ESD) sensitivity testing - Human body model (HBM)

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN IEC 60749-26:2018 sisaldab Euroopa standardi EN IEC 60749-26:2018 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 60749-26:2018 consists of the English text of the European standard EN IEC 60749-26:2018.
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English Version

Semiconductor devices - Mechanical and climatic test methods -  
Part 26: Electrostatic discharge (ESD) sensitivity testing -  
Human body model (HBM)  
(IEC 60749-26:2018)

Dispositifs à semiconducteurs - Méthodes d'essais  
mécaniques et climatiques - Partie 26: Essai de sensibilité  
aux décharges électrostatiques (DES) - Modèle du corps  
humain (HBM)  
(IEC 60749-26:2018)

Halbleiterbauelemente - Mechanische und klimatische  
Prüfverfahren - Teil 26: Prüfung der Empfindlichkeit gegen  
elektrostatische Entladungen (ESD) - Human Body Model  
(HBM)  
(IEC 60749-26:2018)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

## European foreword

The text of document 47/2438/FDIS, future edition 4 of IEC 60749-26, prepared by IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60749-26:2018.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-02-19

This document supersedes EN 60749-26:2014.

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The text of the International Standard IEC 60749-26:2018 was approved by CENELEC as a European Standard without any modification.

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

IEC 60749 (series)	NOTE	Harmonized as EN 60749 (series).
IEC 60749-27	NOTE	Harmonized as EN 60749-27.

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## SEMICONDUCTOR DEVICES – MECHANICAL AND CLIMATIC TEST METHODS –

### Part 26: Electrostatic discharge (ESD) sensitivity testing – Human body model (HBM)

#### 1 Scope

This part of IEC 60749 establishes the procedure for testing, evaluating, and classifying components and microcircuits according to their susceptibility (sensitivity) to damage or degradation by exposure to a defined human body model (HBM) electrostatic discharge (ESD).

The purpose of this document is to establish a test method that will replicate HBM failures and provide reliable, repeatable HBM ESD test results from tester to tester, regardless of component type. Repeatable data will allow accurate classifications and comparisons of HBM ESD sensitivity levels.

ESD testing of semiconductor devices is selected from this test method, the machine model (MM) test method (see IEC 60749-27) or other ESD test methods in the IEC 60749 series. Unless otherwise specified, this test method is the one selected.

#### 2 Normative references

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.

There are no normative references in this document.

#### 3 Terms and definitions

For the purposes 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 <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

##### 3.1

##### **associated non-supply pin**

non-supply pin (typically an I/O pin) associated with a supply pin group

Note 1 to entry A non-supply pin is considered to be associated with a supply pin group if either:

- a) the current from the supply pin group (i.e., VDDIO) is required for the function of the electrical circuit(s) (I/O driver) that connect(s) (high/low impedance) to that non-supply pin;
- b) a parasitic path exists between non-supply and supply pin group (e.g., open-drain type non-supply pin to a VCC supply pin group that connects to a nearby N-well guard ring).