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

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.03.2018.	Date of Availability of the European standard is 23.03.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 31.080.01

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60749-26

March 2018

ICS 31.080.01

Supersedes EN 60749-26:2014

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)

This European Standard was approved by CENELEC on 2018-02-19. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

European Committee for Electrotechnical Standardization
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.

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)	2018-11-19
• 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

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.

CONTENTS

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).