

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

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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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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.

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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

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- 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
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This document supersedes EN 60749-26:2014.

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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

FOREWORD.....	5
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Apparatus and required equipment.....	10
4.1 Waveform verification equipment	10
4.2 Oscilloscope	11
4.3 Additional requirements for digital oscilloscopes	11
4.4 Current transducer (inductive current probe).....	11
4.5 Evaluation loads	11
4.6 Human body model simulator	12
4.7 HBM test equipment parasitic properties	12
5 Stress test equipment qualification and routine verification	12
5.1 Overview of required HBM tester evaluations	12
5.2 Measurement procedures.....	13
5.2.1 Reference pin pair determination	13
5.2.2 Waveform capture with current probe	13
5.2.3 Determination of waveform parameters.....	14
5.2.4 High voltage discharge path test.....	17
5.3 HBM tester qualification	17
5.3.1 HBM ESD tester qualification requirements	17
5.3.2 HBM tester qualification procedure.....	17
5.4 Test fixture board qualification for socketed testers	18
5.5 Routine waveform check requirements.....	19
5.5.1 Standard routine waveform check description	19
5.5.2 Waveform check frequency.....	19
5.5.3 Alternate routine waveform capture procedure.....	20
5.6 High voltage discharge path check.....	20
5.6.1 Relay testers	20
5.6.2 Non-relay testers	20
5.7 Tester waveform records.....	20
5.7.1 Tester and test fixture board qualification records.....	20
5.7.2 Periodic waveform check records	20
5.8 Safety	21
5.8.1 Initial set-up.....	21
5.8.2 Training	21
5.8.3 Personnel safety.....	21
6 Classification procedure	21
6.1 Devices for classification	21
6.2 Parametric and functional testing	21
6.3 Device stressing	21
6.4 Pin categorization	22
6.4.1 General	22
6.4.2 No connect pins.....	22
6.4.3 Supply pins.....	23
6.4.4 Non-supply pins.....	23

6.5	Pin groupings.....	24
6.5.1	Supply pin groups.....	24
6.5.2	Shorted non-supply pin groups.....	24
6.6	Pin stress combinations.....	24
6.6.1	Pin stress combination categorization.....	24
6.6.2	Non-supply and supply to supply combinations (1, 2, ... N).....	26
6.6.3	Non-supply to non-supply combinations.....	27
6.7	HBM stressing with a low-parasitic simulator.....	28
6.7.1	Low-parasitic HBM simulator.....	28
6.7.2	Requirements for low parasitics.....	28
6.8	Testing after stressing.....	28
7	Failure criteria.....	28
8	Component classification.....	28
	Annex A (informative) HBM test method flow chart.....	30
	Annex B (informative) HBM test equipment parasitic properties.....	33
B.1	Optional trailing pulse detection equipment / apparatus.....	33
B.2	Optional pre-pulse voltage rise test equipment.....	34
B.3	Open-relay tester capacitance parasitics.....	36
B.4	Test to determine if an HBM simulator is a low-parasitic simulator.....	36
	Annex C (informative) Example of testing a product using Table 2, Table 3, or Table 2 with a two-pin HBM tester.....	38
C.1	General.....	38
C.2	Procedure A (following Table 2):.....	39
C.3	Alternative procedure B (following Table 3):.....	40
C.4	Alternative procedure C (following Table 2):.....	41
	Annex D (informative) Examples of coupled non-supply pin pairs.....	43
	Annex E (normative) Cloned non-supply (I/O) pin sampling test method.....	44
E.1	Purpose and overview.....	44
E.2	Pin sampling overview and statistical details.....	44
E.3	IC product selections.....	45
E.4	Randomly selecting and testing cloned I/O pins.....	46
E.5	Determining if sampling can be used with the supplied Excel spreadsheet.....	46
E.5.1	Using the supplied Excel spreadsheet.....	46
E.5.2	Without using the Excel spreadsheet.....	46
E.6	HBM testing with a sample of cloned I/O pins.....	46
E.7	Examples of testing with sampled cloned I/Os.....	47
	Bibliography.....	50
	Figure 1 – Simplified HBM simulator circuit with loads.....	12
	Figure 2 – Current waveform through shorting wires.....	15
	Figure 3 – Current waveform through a 500 Ω resistor.....	16
	Figure 4 – Peak current short circuit ringing waveform.....	17
	Figure A.1 – HBM test method flow chart (1 of 3).....	30
	Figure B.1 – Diagram of trailing pulse measurement setup.....	33
	Figure B.2 – Positive stress at 4 000 V.....	34
	Figure B.3 – Negative stress at 4 000 V.....	34

Figure B.4 – Illustration of measuring voltage before HBM pulse with a Zener diode or a device 35

Figure B.5 – Example of voltage rise before the HBM current pulse across a 9,4 V Zener diode 35

Figure B.6 – Diagram of a 10-pin shorting test device showing current probe..... 37

Figure C.1 – Example to demonstrate the idea of the partitioned test..... 38

Figure E.1 – SPL, V1, VM, and z with the Bell shape distribution pin failure curve 45

Figure E.2 – I/O sampling test method flow chart 49

Table 1 – Waveform specification 19

Table 2 – Preferred pin combinations sets 25

Table 3 – Alternative pin combinations sets 26

Table 4 – HBM ESD component classification levels 29

Table C.1 – Product testing in accordance with Table 2 40

Table C.2 – Product testing in accordance with Table 3 41

Table C.3 – Alternative product testing in accordance with Table 2..... 42

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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).