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**Integrirana vezja – Meritve elektromagnetnega sevanja, od 150 kHz do 1 GHz –  
1. del: Splošni pogoji in definicije (IEC 61967-1:2002)**

Integrated circuits – Measurement of electromagnetic emissions, 150 kHz to 1 GHz  
– Part 1: General conditions and definitions (IEC 61967-1:2002)

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EUROPEAN STANDARD

**EN 61967-1**

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EUROPÄISCHE NORM

June 2002

ICS 31.200

English version

**Integrated circuits -  
Measurement of electromagnetic emissions,  
150 kHz to 1 GHz  
Part 1: General conditions and definitions  
(IEC 61967-1:2002)**

Circuits intégrés -  
Mesure des émissions électromagnétiques,  
150 kHz à 1 GHz  
Partie 1: Conditions générales et définitions  
(CEI 61967-1:2002)

Integrierte Schaltungen -  
Messung von elektromagnetischen  
Ausstrahlungen im Frequenzbereich  
von 150 kHz bis 1 GHz  
Teil 1: Allgemeine Bedingungen  
und Definitionen  
(IEC 61967-1:2002)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat 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 Central Secretariat has the same status as the official versions.

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**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 47A/632/FDIS, future edition 1 of IEC 61967-1, prepared by SC 47A, Integrated circuits, of IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61967-1 on 2002-05-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-05-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annex ZA is normative and annexes A, B and C are informative.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61967:2002 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 61000-4-3 | NOTE | Harmonized as EN 61000-4-3:1996 (modified).<br><a href="http://standards.iteh.ai/catalog/standards/sist/en-61967-1-2005">SIST EN 61967-1:2005</a>  |
| IEC 61000-4-6 | NOTE | Harmonized as EN 61000-4-6:1996 (not modified).<br><a href="http://standards.iteh.ai/catalog/standards/sist/61000-4-6-1996-4cc8-ba9e-c984ce7e5f55/sist-en-61967-1-2005">http://standards.iteh.ai/catalog/standards/sist/61000-4-6-1996-4cc8-ba9e-c984ce7e5f55/sist-en-61967-1-2005</a> |
| IEC 61967-4   | NOTE | Harmonized as EN 61967-4:2002 (not modified).  |

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## Annex ZA (normative)

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

| <u>Publication</u> | <u>Year</u>     | <u>Title</u>   | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-----------------|--|--------------|-------------|
| IEC 60050-161      | - <sup>1)</sup> | International Electrotechnical Vocabulary (IEV)<br>Chapter 161: Electromagnetic compatibility  | -            | -           |
| CISPR 16-1         | 1999            | Specification for radio disturbance and immunity measuring apparatus and methods<br>Part 1: Radio disturbance and immunity measuring apparatus | -            | -           |
| CISPR 25           | 1995            | Limits and methods of measurement of radio disturbance characteristics for the protection of receivers used on board vehicles                  | -            | -           |
| ANSI C63.2         | 1996            | American standard for electromagnetic noise and field strength instrumentation, 10 Hz to 40 GHz - Specifications                               | -            | -           |

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<sup>1)</sup> Undated reference.

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INTERNATIONALE  
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CEI  
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61967-1

Première édition  
First edition  
2002-03

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**Circuits intégrés –  
Mesure des émissions électro-  
magnétiques, 150 kHz à 1 GHz –**

**Partie 1:**

**Conditions générales et définitions**

(standards.iteh.ai)

**Integrated circuits –  
Measurement of electromagnetic  
emissions, 150 kHz to 1 GHz**

**Part 1:**

**General conditions and definitions**

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INTEGRATED CIRCUITS –  
 MEASUREMENT OF ELECTROMAGNETIC EMISSIONS,  
 150 kHz to 1 GHz –**

**Part 1: General conditions and definitions**

**FOREWORD**

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter. <https://standards.iteh.ai/catalog/standards/sist/0e50c68e-c2fe-4cc8-ba9e-c984ee7c5f5/sist-61967-1-2005>
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61967-1 has been prepared by subcommittee 47A: Integrated circuits, of IEC technical committee 47: Semiconductor devices.

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

|              |                  |
|--------------|------------------|
| FDIS         | Report on voting |
| 47A/632/FDIS | 47A/643/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Annexes A, B and C are for information only.

IEC 61967 consists of the following parts<sup>1)</sup>, under the general title *Integrated circuits – Measurement of electromagnetic emissions, 150 kHz to 1 GHz*:

Part 1: General conditions and definitions

Part 2: Measurement of radiated emissions – TEM-cell method<sup>2)</sup>

Part 3: Measurement of radiated emissions – Surface scan method<sup>2)</sup>

Part 4: Measurement of conducted emissions – 1  $\Omega$ /150  $\Omega$  direct coupling method<sup>1)</sup>

Part 5: Measurement of conducted emissions – Workbench Faraday cage method<sup>1)</sup>

Part 6: Measurement of conducted emissions – Magnetic probe method<sup>1)</sup>

The committee has decided that the contents of this publication will remain unchanged until 2012. At this date, the publication will be

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

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1) To be published.

2) Under consideration.

# INTEGRATED CIRCUITS – MEASUREMENT OF ELECTROMAGNETIC EMISSIONS, 150 kHz to 1 GHz –

## Part 1: General conditions and definitions

### 1 Scope

This part of IEC 61967 provides general information and definitions on measurement of conducted and radiated electromagnetic disturbances from integrated circuits. It also provides a description of measurement conditions, test equipment and set-up as well as the test procedures and content of the test reports. A test method comparison table is included as annex A to assist in selecting the appropriate measurement method(s).

The object of this standard is to describe general conditions in order to establish a uniform testing environment and obtain a quantitative measure of RF disturbances from integrated circuits (IC). Critical parameters that are expected to influence the test results are described. Deviations from this standard are noted explicitly in the individual test report. The measurement results can be used for comparison or other purposes.

Measurement of the voltage and current of conducted RF emissions or radiated RF disturbances, coming from an integrated circuit under controlled conditions, yields information about the potential for RF disturbances in an application of the integrated circuit.

### 2 Normative references

[SIST EN 61967-1:2005](https://standards.iteh.ai/catalog/standards/sist/0e50c68e-c2fe-4cc8-ba9e-c984ce7c5f55/sist-en-61967-1-2005)

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The following referenced documents are indispensable for the application 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.

IEC 60050(161), *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

CISPR 16-1:1999, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1: Radio disturbance and immunity measuring apparatus*

CISPR 25:1995, *Limits and methods of measurement of radio disturbance characteristics for the protection of receivers used on board vehicles*

ANSI C63.2:1996, *American Standard for Electromagnetic Noise and Field Strength Instrumentation, 10 Hz to 40 GHz – Specifications*