
**Integrirana vezja – Meritve elektromagnetne odpornosti od 150 kHz do 1 GHz –
1. del: Splošni pogoji in definicije (IEC 62132-1:2006)**

Integrated circuits - Measurement of electromagnetic immunity, 150 kHz to 1 GHz -
Part 1: General conditions and definitions (IEC 62132-1:2006)

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**Integrated circuits -
Measurement of electromagnetic immunity, 150 kHz to 1 GHz
Part 1: General conditions and definitions
(IEC 62132-1:2006)**

Circuits intégrés -
Mesure de l'immunité électromagnétique,
150 kHz à 1 GHz
Partie 1: Conditions générales
et définitions
(CEI 62132-1:2006)

Integrierte Schaltungen -
Messung der elektromagnetischen
Störfestigkeit im Frequenzbereich
von 150 kHz bis 1 GHz
Teil 1: Allgemeine Bedingungen
und Begriffe
(IEC 62132-1:2006)

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SIST EN 62132-1:2006
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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/734/FDIS, future edition 1 of IEC 62132-1, 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 62132-1 on 2006-02-01.

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) 2006-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-02-01

This European Standard makes reference to International Standards. Where the International Standard referred to has been endorsed as a European Standard or a home-grown European Standard exists, this European Standard shall be applied instead. Pertinent information can be found on the CENELEC web site.

Endorsement notice

The text of the International Standard IEC 62132-1:2006 was approved by CENELEC as a European Standard without any modification.

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**Circuits intégrés –
Mesure de l'immunité électromagnétique,
150 kHz à 1 GHz –**

**Partie 1:
Conditions générales et définitions**

(standards.iteh.ai)

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

**Part 1:
General conditions and definitions**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**INTEGRATED CIRCUITS –
MEASUREMENT OF ELECTROMAGNETIC IMMUNITY,
150 kHz TO 1 GHz –**
Part 1: General conditions and definitions

FOREWORD

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International Standard IEC 62132-1 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/734/FDIS | 47A/742/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 2.

IEC 62132 consists of the following parts, under the general title *Integrated circuits – Measurement of electromagnetic immunity, 150 kHz to 1 GHz*:

- Part 1: General conditions and definitions
- Part 2: (G-) TEM cell method¹
- Part 3: Bulk current injection (BCI) method¹
- Part 4: Direct RF power injection method
- Part 5: Workbench Faraday cage method

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

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¹ Under consideration.

INTEGRATED CIRCUITS – MEASUREMENT OF ELECTROMAGNETIC IMMUNITY, 150 kHz TO 1 GHz –

Part 1: General conditions and definitions

1 Scope and object

This part of IEC 62132 provides general information and definitions on measurement of conducted and radiated electromagnetic immunity of integrated circuits (ICs) to conducted and radiated disturbances. 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 in Annex A to assist in selecting the appropriate measurement method(s).

This standard describes general conditions required to obtain a quantitative measure of immunity of ICs in a uniform testing environment. 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 injected voltages and currents, together with the responses of the ICs tested at controlled conditions, yields information about the potential immunity of the IC to conducted and radiated RF disturbances in a given application.

2 Normative references

SIST EN 62132-1:2006

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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 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

3 Terms and definitions

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

3.1

amplitude modulation

AM

process by which a continuous high-frequency wave (carrier) is caused to vary in amplitude by the action of another wave containing information

[IEEE 100-1984]

3.2

artificial network

AN

agreed reference load impedance (simulated), presented to the DUT by networks (e.g. extended power or communication lines) across which the RF disturbance voltage is measured and which isolates the apparatus from the power supply or loads in that frequency range

[IEV 161-04-05, modified]

3.3

associated equipment

transducers (e.g. probes, networks and antennas) connected to a measuring receiver or test generator; also transducers which are used in the signal or disturbance transmission path between a DUT and measuring equipment or a (test-) signal generator

3.4

auxiliary equipment

AE

equipment not under test that is nevertheless indispensable for setting up all the functions and assessing the correct performance (operation) of the equipment under test (DUT) during its exposure to the disturbance

3.5

biasing tee

coupling device that allows the signal superposition of an RF signal to a DC signal to an output port without affecting the RF path

3.6

common mode voltage

asymmetrical disturbance voltage

mean of the phasor voltages appearing between each conductor and a specified reference, usually earth or frame

[IEV 161-04-09]

3.7

common mode current

vector sum of the currents flowing through two or more conductors at a specified cross-section of a “mathematical” plane intersected by these conductors