

STN	EMC IC modelovanie Časť 2: Modely integrovaných obvodov na simuláciu správania EMI Modelovanie vyžarovania šíreného vedením (ICEM-CE)	STN EN 62433-2 35 8728
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EMC IC modelling - Part 2: Models of integrated circuits for EMI behavioural simulation - Conducted emissions modelling (ICEM-CE)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/17

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English Version

EMC IC modelling -
Part 2: Models of integrated circuits for EMI behavioural
simulation - Conducted emissions modelling (ICEM-CE)
(IEC 62433-2:2017)

Modèles de circuits intégrés pour la CEM - Partie 2:
Modèles de circuits intégrés pour la simulation du
comportement lors de perturbations électromagnétiques -
Modélisation des émissions conduites (ICEM-CE)
(IEC 62433-2:2017)

EMV-IC-Modellierung - Teil 2: Modelle integrierter
Schaltungen für die Simulation des Verhaltens bei
elektromagnetischer Beeinflussung - Modellierung
leitungsgeführter Aussendungen (ICEM-CE)
(IEC 62433-2:2017)

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European foreword

The text of document 47A/999/FDIS, future edition 2 of IEC 62433-2, prepared by SC 47A "Integrated circuits", of IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62433-2:2017.

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IEC 61967	NOTE	Harmonized in EN 61967 series.
IEC 61967-4	NOTE	Harmonized as EN 61967-4.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TS 62433-1	2011	EMC IC modelling - Part 1: General modelling framework	-	-
CISPR 17	-	Methods of measurement of the suppression characteristics of passive EMC filtering devices	EN 55017	-



INTERNATIONAL STANDARD

NORME INTERNATIONALE



**EMC IC modelling –
Part 2: Models of integrated circuits for EMI behavioural simulation – Conducted
emissions modelling (ICEM-CE)**

**Modèles de circuits intégrés pour la CEM –
Partie 2: Modèles de circuits intégrés pour la simulation du comportement lors
de perturbations électromagnétiques – Modélisation des émissions conduites
(ICEM-CE)**





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INTERNATIONAL STANDARD

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**EMC IC modelling –
Part 2: Models of integrated circuits for EMI behavioural simulation – Conducted
emissions modelling (ICEM-CE)**

**Modèles de circuits intégrés pour la CEM –
Partie 2: Modèles de circuits intégrés pour la simulation du comportement lors
de perturbations électromagnétiques – Modélisation des émissions conduites
(ICEM-CE)**

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EMC IC MODELLING –

Part 2: Models of integrated circuits for EMI behavioural simulation – Conducted emissions modelling (ICEM-CE)

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International Standard IEC 62433-2 has been prepared by subcommittee 47A: Integrated Circuits, of IEC technical committee 47: Semiconductor devices.

This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

Incorporation of an XML based exchange format for model representation.

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

FDIS	Report on voting
47A/999/FDIS	47A/1007/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.

A list of all parts in the IEC 62433 series, published under the general title *EMC IC modelling*, can be found on the IEC website.

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

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EMC IC MODELLING –

Part 2: Models of integrated circuits for EMI behavioural simulation – Conducted emissions modelling (ICEM-CE)

1 Scope

This part of IEC 62433 specifies macro-models for an Integrated Circuit (IC) to simulate conducted electromagnetic emissions on a printed circuit board. The model is commonly called Integrated Circuit Emission Model – Conducted Emission (ICEM-CE).

The ICEM-CE macro-model can also be used for modelling an IC-die, a functional block and an Intellectual Property (IP) block.

The ICEM-CE macro-model can be used to model both digital and analogue ICs.

Basically, conducted emissions have two origins:

- conducted emissions through power supply terminals and ground reference structures;
- conducted emissions through input/output (I/O) terminals.

The ICEM-CE macro-model addresses those two types of origins in a single approach.

This standard defines structures and components of the macro-model for EMI simulation taking into account the IC's internal activities.

This part of IEC 62433 has two main parts:

- the first is the electrical description of ICEM-CE macro-model elements along with the specific requirements for information.
- the second part proposes a universal data exchange format called CEML based on XML. This format allows encoding the ICEM-CE in a more useable and generic form for simulating the conducted emissions.

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.

IEC TS 62433-1:2011, *EMC IC modelling – Part 1: General modelling framework*

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