IEC 62433-1

Edition 1.0 2019-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

EMC IC modelling –
Part 1: General modelling framework

Modèles de circuits intégrés pour la CEM –
Partie 1: Cadre de modèle général

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EMC IC MODELLING –

Part 1: General modelling framework

FOREWORD

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International Standard IEC 62433-1 has been prepared by subcommittee 47A: Integrated circuits, of IEC technical committee 47: Semiconductor devices.

This bilingual version (2020-07) corresponds to the monolingual English version, published in 2019-05.

IEC 62433-1 cancels and replaces IEC TS 62433-1 published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC TS 62433 1:2011:

– Incorporation of a data exchange format for an integrated circuit's model representation.

The text of this International Standard is based on the following documents:

CDV	Report on voting
47A/1042/CDV	47A/1055/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

The French version of this standard has not been voted upon.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

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

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- withdrawn,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

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EMC IC MODELLING –

Part 1: General modelling framework

1 Scope

This part of IEC 62433 specifies the framework and methodology for EMC IC macro-modelling. Terms that are commonly used in IEC 62433 (all parts), different modelling approaches, requirements and data-exchange format for each model category that is standardized in this series are defined in this document.

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 62433 (all parts), *EMC IC modelling*

ISO 8879, *Information processing – Text and office systems – Standard Generalized Markup Language (SGML)*

ANSI INCITS 4:1986, *Information Systems – Coded Character Sets – 7-Bit American National Standard Code for Information Interchange (7-Bit ASCII)*

3 Terms, definitions, abbreviated terms and conventions

3.1 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

3.1.1
ICEM-CE
Integrated Circuit Emission Model – Conducted Emissions
macro-model of an integrated circuit (IC) to simulate the conducted electromagnetic emissions

Note 1 to entry: An ICEM-CE macro-model can be used for modelling an IC-die, a functional block and an Intellectual Property (IP) block.

3.1.2
ICEM-RE
Integrated Circuit Emission Model – Radiated Emissions
macro-model of an integrated circuit (IC) to simulate the radiated electromagnetic emissions