Irish Standard
I.S. EN 62433-3:2017

EMC IC modelling - Part 3: Models of Integrated Circuits for EMI behavioural simulation - Radiated emissions modelling (ICEM-RE)

I.S. EN 62433-3:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62433-3

June 2017

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English Version

EMC IC modelling - Part 3: Models of Integrated Circuits for EMI behavioural simulation - Radiated emissions modelling (ICEM-RE)
(IEC 62433-3:2017)

Modèles de circuits intégrés pour la CEM - Partie 3: Modèles de circuits intégrés pour la simulation du comportement lors de perturbations électromagnétiques - Modélisation des émissions rayonnées (ICEM-RE)
(IEC 62433-3:2017)

EMV-IC-Modellierung - Teil 3: Modelle integrierter Schaltungen für die Simulation des Verhaltens bei elektromagnetischer Beeinflussung - Modellierung von abgestrahlten Aussendungen (ICEM-RE)
(IEC 62433-3:2017)

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European foreword

The text of document 47A/1000/FDIS, future edition 1 of IEC 62433-3, 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 62433-3:2017.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2017-12-03
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-03-03

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ISO 8879:1986	NOTE	Harmonized as EN 28879:1990[1)]

1) Withdrawn publication

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.

Publication	Year	Title	EN/HD	Year
IEC 61967-1	-	Integrated circuits - Measurement of electromagnetic emissions, 150 kHz to 1 GHz -- Part 1: General conditions and definitions	EN 61967-1	-
IEC 62433-2	-	EMC IC modelling - Part 2: Models of integrated circuits for EMI behavioural simulation - Conducted emissions modelling (ICEM-CE)	FprEN 62433-2	-
IEC/TS 61967-3	-	Integrated circuits - Measurement of electromagnetic emissions - Part 3: Measurement of radiated emissions - Surface scan method	-	-
IEC/TS 62433-1:2011	-	EMC IC modelling - Part 1: General modelling framework	-	-
ANSI INCITS 4	-	Information Systems - Coded Character Sets - 7-Bit American National Standard Code for Information Interchange (7-Bit ASCII)	-	-

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IEC 62433-3

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INTERNATIONAL STANDARD

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EMC IC modelling –
Part 3: Models of integrated circuits for EMI behavioural simulation – Radiated emissions modelling (ICEM-RE)

Modèles de circuits intégrés pour la CEM –
Partie 3: Modèles de circuits intégrés pour la simulation du comportement lors de perturbations électromagnétiques – Modélisation des émissions rayonnées (ICEM-RE)

IEC 62433-3:2017-01(en-fr)

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IEC 62433-3

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INTERNATIONAL STANDARD

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EMC IC MODELLING –

Part 3: Models of integrated circuits for EMI behavioural simulation – Radiated emissions modelling (ICEM-RE)

FOREWORD

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International Standard IEC 62433-3 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/1000/FDIS	47A/1008/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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- replaced by a revised edition, or
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EMC IC MODELLING –

Part 3: Models of integrated circuits for EMI behavioural simulation – Radiated emissions modelling (ICEM-RE)

1 Scope

This part of IEC 62433 provides a method for deriving a macro-model to allow the simulation of the radiated emission levels of an Integrated Circuit (IC). This model is commonly called Integrated Circuit Emission Model – Radiated Emission, ICEM-RE. The model is intended to be used for modelling a complete IC, with or without its associated package, a functional block and an Intellectual Property (IP) block of both analogue and digital ICs (input/output pins, digital core and supply), when measured or simulated data cannot be directly imported into simulation tools.

The proposed IC macro-model will be inserted in 3D electromagnetic simulation tools so as to:

- predict the near-radiated emissions from the IC
- evaluate the effect of the radiated emissions on neighbouring ICs, cables, transmission lines, etc.

This part of IEC 62433 has two main parts:

- the first is the electrical description of ICEM-RE macro-model elements,
- the second part proposes a universal data exchange format called REML based on XML. This format allows encoding the ICEM-RE in a more useable and generic form for emission simulation.

2 Normative references

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

IEC TS 61967-3, *Integrated circuits – Measurement of electromagnetic emissions – Part 3: Measurement of radiated emissions – Surface scan method*

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