

STN	EMC IC modelovanie Časť 3: Modely integrovaných obvodov na simuláciu správania EMI Modelovanie vyžarovania šíreného žiarením (ICEM-RE)	STN EN 62433-3 35 8728
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EMC IC modelling - Part 3: Models of Integrated Circuits for EMI behavioural simulation - Radiated emissions modelling (ICEM-RE)

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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EUROPEAN STANDARD

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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:

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In the official version, for Bibliography, the following note has to be added for the standard indicated:

ISO 8879:1986

NOTE Harmonized as EN 28879:1990¹⁾

1) Withdrawn publication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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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)	-	-



INTERNATIONAL STANDARD

NORME INTERNATIONALE



**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)**





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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)**

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CONTENTS

FOREWORD.....	6
1 Scope.....	8
2 Normative references	8
3 Terms, definitions, abbreviations and conventions	9
3.1 Terms and definitions.....	9
3.2 Abbreviations.....	10
3.3 Conventions.....	10
4 Philosophy.....	10
5 ICEM-RE macro-model description	11
5.1 General.....	11
5.2 PDN description.....	12
5.3 IA description.....	16
5.4 Electromagnetic field calculation and simulation	16
6 REML format	17
6.1 General.....	17
6.2 REML structure.....	18
6.3 Global keywords	19
6.4 Header section.....	19
6.5 Frequency definitions.....	20
6.6 Coordinate system definition.....	20
6.7 Reference definition.....	21
6.8 Validity section	21
6.8.1 General	21
6.8.2 Attribute definitions.....	22
6.9 PDN.....	24
6.9.1 General	24
6.9.2 Attribute definitions.....	25
6.9.3 PDN of a single-frequency ICEM-RE.....	26
6.9.4 PDN for multi-frequency ICEM-RE	29
6.10 IA.....	32
6.10.1 General	32
6.10.2 Attribute definitions.....	33
6.10.3 IA of a single-frequency ICEM-RE	34
6.10.4 IA for multi-frequency ICEM-RE	37
7 Extraction	38
7.1 General.....	38
7.2 Environmental extraction constraints.....	39
7.3 Obtaining model parameters from near-field data.....	39
7.3.1 General	39
7.3.2 PDN	40
7.3.3 IA	42
7.4 Extraction based on ICEM-CE simulation	45
7.4.1 General	45
7.4.2 PDN	45
7.4.3 IA	46
8 Validation	46

Annex A (normative) Preliminary definitions for XML representation	48
A.1 XML basics	48
A.1.1 XML declaration.....	48
A.1.2 Basic elements	48
A.1.3 Root element.....	48
A.1.4 Comments	48
A.1.5 Line terminations	49
A.1.6 Element hierarchy.....	49
A.1.7 Element attributes	49
A.2 Keyword requirements	49
A.2.1 General	49
A.2.2 Keyword characters	49
A.2.3 Keyword syntax	50
A.2.4 File structure	50
A.2.5 Values	52
Annex B (informative) Electromagnetic fields radiated by an elementary electric and magnetic dipole	55
B.1 Electric dipole	55
B.2 Magnetic dipole.....	57
Annex C (informative) Example files	60
C.1 Minimum default ICEM-RE file	60
C.2 Microcontroller example in REML format.....	61
Annex D (normative) REML valid keywords and usage.....	63
D.1 Root element keywords.....	63
D.2 File header keywords.....	64
D.3 Validity section keywords	65
D.4 Global keywords	65
D.5 Pdn section keywords	66
D.6 Ia section keywords	67
Annex E (informative) ICEM-RE extraction methods	69
E.1 General.....	69
E.2 ICEM-RE Modelling methods	69
E.2.1 Model _{Hman}	69
E.2.2 Model _H	69
E.2.3 Model _{EM_Inv}	71
E.2.4 Model _{EM_Iter}	72
E.2.5 Model _{EM_TD}	72
E.2.6 Model selection guide	73
E.3 ICEM-RE modelling environment from near-field data	73
E.3.1 General	73
E.3.2 Modelling design-flow	74
E.3.3 ICEM-RE importation into 3D electromagnetic tools.....	75
E.4 ICEM-RE modelling from ICEM-CE	76
Annex F (informative) ICEM-RE model validation examples	78
F.1 General.....	78
F.2 Validation on a microcontroller.....	78
F.2.1 General	78
F.2.2 Details of the microcontroller	78

F.2.3	Case 1: Choosing manual model Model _{Hman}	78
F.2.4	Case 2: Choosing one of the automatic magnetic field models	79
F.3	Validation on an oscillator circuit.....	81
F.4	Example of validation on passive devices	84
F.5	Examples of validation on active devices	85
F.5.1	Extraction from near-field measurements.....	85
F.5.2	Extraction from ICEM-CE model	85
Annex G (informative)	ICEM-RE macro-model usage examples	86
G.1	General.....	86
G.2	Methodology for exploiting ICEM-RE macro-model.....	86
Bibliography	88
Figure 1	– General ICEM-RE model structure.....	12
Figure 2	– Geometrical representation of the ICEM-RE PDN.....	13
Figure 3	– Representation of an elementary dipole in the ICEM-RE PDN	13
Figure 4	– An elementary current loop of radius “a” in 3D space	14
Figure 5	– Duality theorem between a current loop and a magnetic dipole	14
Figure 6	– Example of referential points to describe the geometry	15
Figure 7	– PDN definition at three different frequencies	16
Figure 8	– REML inheritance hierarchy	18
Figure 9	– Format for defining PDN vector data in an external file.....	28
Figure 10	– Format for defining IA vector data in an external file.....	36
Figure 11	– Electromagnetic field measurement.....	39
Figure 12	– B_z field in nT measured at 3 mm above the microprocessor at 80 MHz.....	40
Figure 13	– Example of electromagnetic field emitted by an elementary current line	41
Figure 14	– Manual current mapping.....	41
Figure 15	– Model representation with N automatically detected dipoles	42
Figure 16	– Comparison between the modelled and measured EM fields at 2 mm above an oscillator.....	44
Figure 17	– A simple ICEM-CE PDN representing the package and the internal network impedance between the power rails	45
Figure 18	– Reconstructing the geometry of the package model (ICEM-RE PDN) from IBIS and its link with the electrical model (ICEM-CE PDN)	46
Figure 19	– Graphical representation of the example validation procedure.....	47
Figure A.1	– Multiple XML files	51
Figure A.2	– XML files with data files (*.dat)	51
Figure A.3	– XML files with additional files.....	52
Figure B.1	– An elementary current line in space	55
Figure B.2	– Elementary magnetic dipole in space	57
Figure C.1	– Microcontroller used for illustration	61
Figure C.2	– Data file representing the PDN information of the microcontroller	62
Figure C.3	– Data file representing the IA information of the microcontroller	62
Figure E.1	– Manually defined electric dipole array in Model _{Hman}	69
Figure E.2	– Electric and magnetic dipole array in Model _{EM_Inv}	71
Figure E.3	– Example of an ICEM-RE modelling environment	74

Figure E.4 – ICEM-RE modelling design-flow	75
Figure E.5 – Example of an imported ICEM-RE PDN and IA in a 3D simulation tool	76
Figure E.6 – Design-flow to obtain ICEM-RE from ICEM-CE model	77
Figure F.1 – Microcontroller circuit used for model validation	78
Figure F.2 – Manual dipoles representing the PDN of the microcontroller	79
Figure F.3 – Comparison between the modelled and measured fields at 4 mm above the microcontroller using $Model_{Hman}$	79
Figure F.4 – Validation of $Model_H$ on the microcontroller	80
Figure F.5 – Detection of dipoles representing the microcontroller using $Model_{EM_Iter}$	80
Figure F.6 – Validation of $Model_{EM_Iter}$ on the microcontroller	81
Figure F.7 – Oscillator circuit used for model validation	81
Figure F.8 – Schematic of the oscillator used for validation	82
Figure F.9 – Validation of the magnetic field predicted with $Model_{EM_Inv}$ and $Model_{EM_Iter}$ on the oscillator at 10 mm height	83
Figure F.10 – Validation of the electric field predicted with $Model_{EM_Inv}$ and $Model_{EM_Iter}$ on the oscillator at 10 mm height	83
Figure F.11 – Modelled maximum total magnetic field as a function of height (z) above the oscillator compared with measurements	84
Figure G.1 – Typical EMC issues at equipment and system level covered by ICEM-RE	87
Table 1 – PDN format	15
Table 2 – Definition of the <i>Validity</i> section	22
Table 3 – Definition of the <i>Submodel</i> section of the <i>Pdn</i> element	25
Table 4 – Definition of the <i>Vector</i> keyword in the <i>Pdn</i> section	25
Table 5 – Valid fields of the <i>Submodel</i> keyword for single-frequency PDN	27
Table 6 – Conditions for correct annotation of single-frequency PDN by the REM parser	27
Table 7 – Valid fields of the <i>Vector</i> keyword for single-frequency PDN	27
Table 8 – Valid file extensions in the <i>Pdn</i> section	29
Table 9 – Conditions for correct annotation of multi-frequency PDN by the REM parser	30
Table 10 – Definition of the <i>Submodel</i> section of the <i>Ia</i> element	32
Table 11 – Definition of the <i>Vector</i> keyword in the <i>Ia</i> section	33
Table 12 – Valid fields of the <i>Submodel</i> keyword for single-frequency IA	34
Table 13 – Conditions for correct annotation of single-frequency IA by the REM parser	34
Table 14 – Valid fields of the <i>Vector</i> keyword for single-frequency IA	35
Table 15 – Accepted file extensions in the <i>Ia</i> section	37
Table 16 – Conditions for correct annotation of multi-frequency IA by the REM parser	37
Table A.1 – Valid logarithmic units	53
Table E.1 – ICEM-RE model selection guide	73
Table F.1 – ICEM-RE model validation on passive structures	85

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EMC IC MODELLING –

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

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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.

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

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

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