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**EMC IC modelling - Part 1: General modelling framework
(English Translation)**

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Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms, Definitions and Abbreviations
3.1 Terms and Definitions
3.2 Abbreviations
3.3 Agreement
4 Model Definition
4.1 Overview
4.2 Conducted Emission Model
4.3 Radiated Emission Model
4.4 Conducted Immunity Model
4.5 Radiated Immunity Model
4.6 Conducted Pulse Immunity Model
5 Modeling Methods
5.1 General Principles
5.2 Black Box Modeling Method
5.3 Equivalent Circuit Modeling Method
5.4 Other modeling methods
6 Model Description Requirements
7 Model Data Exchange Format
7.1 Overview
7.2 IC_EMCMML Structure
7.3 IC_EMCMML Composition
Appendix A (Normative) Requirements for the ICEMC Model
Appendix B (Normative) Basic Definitions of XML Representation
Appendix C (Normative) IC_EMCMML Valid Keywords and Usage
Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GB/T 44807 "Electromagnetic Compatibility Modeling of Integrated Circuits". GB/T 44807 has been published in the following parts.

--- Part 1: General modeling framework.

This document is equivalent to IEC 62433-1:2019 "Electromagnetic compatibility modeling of integrated circuits Part 1: General modeling framework".

Introduction

To standardize the electromagnetic compatibility modeling of integrated circuits and provide electromagnetic compatibility modeling methods and requirements for integrated circuit manufacturers, GB/T 44807 specifies the general framework, methods and requirements for electromagnetic compatibility modeling of integrated circuits, and is intended to consist of six parts.

--- Part 1: General modeling framework. The purpose is to specify the framework and methods for macro-modeling of electromagnetic compatibility of integrated circuits, common terms Definitions, different modeling approaches as well as standardized requirements and data exchange formats for each model category.

--- Part 2: Integrated Circuit Electromagnetic Interference Characteristics Simulation Model Conducted Emission Modeling (ICEM-CE). The purpose is to specify the integrated Circuit conducted emission modeling methods and requirements.

--- Part 2-1. Black box modeling theory of conducted emissions. The purpose is to give the black box modeling of integrated circuit conducted emissions theory.

--- Part 3: Integrated Circuit Electromagnetic Interference Characteristics Simulation Model Radiated Emission Modeling (ICEM-RE). The purpose is to specify the integrated Circuit radiated emissions modeling methods and requirements.

--- Part 4: Integrated Circuit RF Immunity Characteristics Simulation Model Conducted Immunity Modeling (ICIM-CI). The purpose is to specify Integrated circuit conducted immunity modeling methods and requirements.

--- Part 6: Integrated Circuit Pulse Immunity Characteristics Simulation Model Conducted Pulse Immunity Modeling (ICIM-CPI). The purpose is to Specifies the modeling methods and requirements for conducted pulse immunity of integrated circuits.

Integrated Circuit Electromagnetic Compatibility Modeling Part 1: General modeling

framework

1 Scope

This document specifies the framework and method for macro-modeling of electromagnetic compatibility (EMC) of integrated circuits (ICs) and specifies the requirements of other parts of IEC 62433.

Definitions of common terms, different modeling approaches, and standardized requirements and data exchange formats for each model category.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

IEC 62433 (all parts) Integrated Circuit Electromagnetic Compatibility Modeling (EMCICmodeling) Interchange (7-Bit ASCII)]

3.1 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1

Macromodel for simulating conducted electromagnetic emissions from ICs.

Note: ICEM-CE macromodels are used to model IC chips, functional blocks, and intellectual property (IP) blocks.

3.1.2

Macromodel for simulating radiated electromagnetic emissions from ICs.

3.1.3

Macromodel of an IC used to simulate the sensitivity level of conducted disturbances applied to the IC pins.

3.1.4

A macro model of an IC used to simulate the IC's sensitivity level to external radiated disturbances.

3.1.5

nity;ICIM-CPI

Macromodel of an IC used to simulate the sensitivity level of conducted pulse disturbances applied to the IC pins.