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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44937.1-2025

**Integrated circuits - Measurement of electromagnetic emissions
- Part 1: General conditions and definitions**

集成电路 电磁发射测量 第1部分: 通用条件和定义

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 44937 "Measurement of Electromagnetic Emissions of Integrated Circuits". GB/T 44937 has been published as follows.

part.

---Part 1: General Conditions and Definitions;

---Part 2: Radiation Emission Measurement TEM Cell and Broadband TEM Cell Method;

---Part 3: Surface Scanning Method for Radiation Emission Measurement;

---Part 4: Conducted emission measurement using the 1ohm/150ohm direct coupling method;

---Part 5: Conducted Emission Measurement Stand Faraday Cage Method;

---Part 6: Conducted Emission Measurement Magnetic Field Probe Method;

---Part 8: Radiated Emission Measurement IC Stripline Method this document is equivalent to IEC 61967-1:2018 "Measurement of electromagnetic emission from integrated circuits - Part 1: General conditions and definitions".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This document is under the jurisdiction of the National Integrated Circuit Standardization Technical Committee (SAC/TC599).

Introduction

To standardize electromagnetic emission measurement for integrated circuits, and to provide different electromagnetic emission measurement methods for integrated circuit manufacturers and testing institutions, GB/T 44937, "Measurement of Electromagnetic Emissions of Integrated Circuits," specifies the general conditions, definitions, and different measurement methods for electromagnetic emission measurements of integrated circuits.

The proposed test procedures and requirements for the law consist of nine parts.

---Part 1: General Conditions and Definitions. The purpose is to define the general conditions and definitions for electromagnetic emission measurements of integrated circuits.

---Part 1-1. General Conditions and Definitions of Near-Field Scanning Data Exchange Format. The purpose is to specify the near-field scanning data exchange format.
Format.

---Part 2: Radiation Emission Measurement using TEM Cells and Broadband TEM Cells. The aim is to define the TEM cell and broadband TEM cell methods.
Test procedures and requirements for the TEM chamber method.

---Part 3: Surface Scanning Method for Radiation Emission Measurement. The purpose is to specify the test procedures and requirements for the surface scanning method.

---Part 4: Conducted Emission Measurement - 1ohm/150ohm Direct Coupling Method. The purpose is to define the 1ohm/150ohm direct coupling method.

Test procedures and test requirements.

---Part 4-1. Application Guidelines for Conducted Emission Measurements using the 1ohm/150ohm Direct Coupling Method. The aim is to provide guidance on the application of the 1ohm/150ohm direct coupling method.

Application guidelines for the coupling method.

---Part 5: Conducted Emission Measurement Stand Faraday Cage Method. The purpose is to define the test procedures for the stand Faraday cage method.

and testing requirements.

---Part 6: Conducted Emission Measurement Using Magnetic Field Probes. The purpose is

to specify the test procedures and requirements for the magnetic field probe method.

---Part 8: Radiated Emission Measurement - IC Stripline Method. The purpose is to specify the test procedures and requirements for the IC stripline method.

Electromagnetic emission measurement of integrated circuits Part 1: General Conditions and Definitions

1 Scope

This document provides general information and definitions for the measurement of conducted and radiated electromagnetic emissions from integrated circuits, and also gives the test conditions and procedures.

The document describes the testing equipment, test setup, test procedures, and test report content. Appendix A provides a comparison table of test methods to aid in selection.

Appropriate measurement methods.

The purpose of this document is to describe general conditions and establish a unified test environment for quantitative measurement of radio frequency signals from integrated circuits (ICs).

(RF) interference. This document describes the key parameters that affect the test results. Any deviations from the descriptions in this document must be clearly stated in the test report.

Please specify. The measurement results can be used for product comparison or other purposes.

By measuring the voltage and current of radiated or conducted radio frequency emissions generated by an IC under controlled conditions, the application process of the IC can be analyzed.

Information on radio frequency interference that may occur during the process.

Each part of IEC 61967 specifies the applicable frequency range.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

CISPR 16-1-1 Specification for apparatus and methods of measurement of radio