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

GB/T 42968.2-2024

**Integrated circuits - Measurement of electromagnetic immunity
- Part 2: Measurement of radiated immunity - TEM cell and
wideband TEM cell method**

集成电路 电磁抗扰度测量 第2部分：辐射抗扰度测量 TEM小室和宽带TEM小室法
(English Translation)

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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 2 of GB/T 42968 "Measurement of electromagnetic immunity of integrated circuits". GB/T 42968 has been published as follows part.

- Part 1: General conditions and definitions;
- Part 2: Radiated immunity measurement - TEM cell and broadband TEM cell method;
- Part 4: Radio frequency power direct injection method;
- Part 8: Radiated immunity measurement IC stripline method.

This document is equivalent to IEC 62132-2:2010 "Integrated circuit electromagnetic immunity measurement Part 2: Radiated immunity measurement" TEM cell and broadband TEM cell method".

Introduction

To standardize the electromagnetic immunity measurement of integrated circuits and provide different electromagnetic immunity measurement methods for integrated circuit manufacturers and testing institutions GB/T 42968 specifies the general conditions, definitions, test procedures and test methods for electromagnetic immunity of integrated circuits.

The test requirements are planned to consist of 7 parts.

- Part 1: General conditions and definitions. The purpose is to specify the general conditions and definitions for the measurement of electromagnetic immunity of integrated circuits.
- Part 2: Radiated immunity measurement TEM cell and broadband TEM cell method. The purpose is to specify the TEM cell and broadband Test procedures and test requirements with TEM chamber method.
- Part 3: Bulk current injection (BCI) method. The purpose is to specify the test procedures and test requirements of the bulk current injection method.
- Part 4: Radio frequency power direct injection method. The purpose is to specify the test procedures and test requirements for the radio frequency power direct injection method.
- Part 5: Bench Faraday cage method. The purpose is to specify the test procedures and test requirements of the bench Faraday cage method.
- Part 8: Radiated immunity measurement IC stripline method. The purpose is to specify the test procedures and test requirements of the stripline method.
- Part 9: Radiated immunity measurement - Surface scanning method. The purpose is to specify the test procedures and test requirements of the surface scanning method.

Integrated circuit electromagnetic immunity measurement Part 2: Measurement of radiated

immunity TEM cell and broadband TEM cell method

1 Scope

This document describes a method for measuring the immunity of integrated circuits (ICs) to radio frequency (RF) radiated electromagnetic disturbances.

This document applies to frequencies between 150kHz and 1GHz or frequencies determined by the characteristics of TEM cells and broadband TEM cells.

scope.

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.

(IEV)-Part 131: Circuit theory) Note. GB/T 2900.74-2008 Electrical terminology - Circuit theory (IEC 60050-131:2002, MOD) Note. GB/T 4365-2003 Electrical terminology - Electromagnetic compatibility (idt IEC 60050-161.1990) IEC 61967-2 Integrated circuit electromagnetic emission measurements (150 kHz to 1 GHz) Part 2: Radiated emission measurements using a TEM chamber IEC 62132-1:2006 Integrated circuits - Electromagnetic immunity test - 150kHz to 1GHz - Part 1: General conditions and definitions Note. GB/T 42968.1-2023 Integrated circuit electromagnetic immunity measurement Part 1: General conditions and definitions (IEC 62132-1:2015, IDT)

3 Terms and Definitions

For the purposes of this document, the terms and definitions defined in IEC 62132-1, IEC 60050-131, IEC 60050-161 and the following apply.

A waveguide mode in which the electric and magnetic field components in the propagation direction are much smaller than the components in the main direction of the cross section.

TEM waveguide

An open or closed transmission line system in which electromagnetic waves are transmitted in TEM wave (mode) to generate a specific field that meets the test needs.