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Electromagnetic compatibility - Testing and measurement techniques - Part 33: Measurement methods for high-power transient parameters

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Table of Contents

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 33 of GB/T (Z) 17626 "Electromagnetic Compatibility Test and Measurement Technology": GB/T (Z) 17626 has been issued

the following sections:

---GB/T 17626:1-2006 Electromagnetic Compatibility Test and Measurement Technology Immunity Test General;

---GB/T 17626:2-2018 Electromagnetic Compatibility Test and Measurement Technology Electrostatic Discharge Immunity Test;

---GB/T 17626:3-2016 Electromagnetic Compatibility Test and Measurement Technology Radio Frequency Electromagnetic Field Radiation Immunity Test;

---GB/T 17626:4-2018 Electromagnetic Compatibility Test and Measurement Technology Electrical Fast Transient Burst Immunity Test;

---GB/T 17626:5-2019 Electromagnetic compatibility test and measurement technology surge (shock) immunity test;

---GB/T 17626:6-2017 Electromagnetic Compatibility Test and Measurement Technology Conducted Disturbance Immunity of Radio Frequency Field Induction;

---GB/T 17626:7-2017 Electromagnetic Compatibility Test and Measurement Technology Power Supply System and Connected Equipment Harmonics and Interharmonics Measurement

Guidelines for quantities and measuring instruments;

---GB/T 17626:8-2006 Electromagnetic Compatibility Test and Measurement Technology Power Frequency Magnetic Field Immunity Test;

---GB/T 17626:9-2011 Electromagnetic Compatibility Test and Measurement Technology Pulse Magnetic Field Immunity Test;

---GB/T 17626:10-2017 Electromagnetic Compatibility Test and Measurement Technology Damped Oscillating Magnetic Field Immunity Test;

---GB/T 17626:11-2023 Electromagnetic Compatibility Test and Measurement Technology Part 11: For each phase input current less than or equal

Immunity tests for voltage dips, short interruptions and voltage changes for 16A equipment;

---GB/T 17626:12-2023 Electromagnetic compatibility test and measurement technology Part 12: Ring wave immunity test;

---GB/T 17626:13-2006 Electromagnetic compatibility test and measurement technology AC power port harmonics, interharmonics and power grid signal

No: low frequency immunity test;

---GB/T 17626:14-2005 Electromagnetic Compatibility Test and Measurement Technology Voltage Fluctuation Immunity Test;

---GB/T 17626:15-2011 Electromagnetic compatibility test and measurement technology scintillator function and design specifications;

---GB/T 17626:16-2007 Electromagnetic Compatibility Test and Measurement Technology 0Hz~150kHz Common Mode Conducted Disturbance Immunity

test;

---GB/T 17626:17-2005 Electromagnetic compatibility test and measurement technology DC power input port ripple immunity test;

---GB/T 17626:18-2016 Electromagnetic Compatibility Test and Measurement Technology Damped Oscillatory Wave Immunity Test;

---GB/T 17626:19-2022 Electromagnetic Compatibility Test and Measurement Technology Part 19: AC Power Port 2kHz~

150kHz differential mode conduction disturbance and communication signal immunity test

---GB/T 17626:20-2014 Electromagnetic Compatibility Test and Measurement Technique Transverse Electromagnetic (TEM) Waveguide Emission and Immunity

degree test;

---GB/T 17626:21-2014 Electromagnetic compatibility test and measurement technology mixing chamber test method;

---GB/T 17626:22-2017 Electromagnetic Compatibility Test and Measurement Technology Radiated Emission and Immunity in Fully Anechoic Chamber

Measurement;

---GB/T 17626:24-2012 Electromagnetic Compatibility Test and Measurement Technology HEMP Conducted Disturbance Protection Device Test

method;

---GB/T 17626:27-2006 Electromagnetic Compatibility Test and Measurement Technology Three-phase Voltage Unbalance Immunity Test;

---GB/T 17626:28-2006 Electromagnetic Compatibility Test and Measurement Technology Power Frequency Frequency Change Immunity Test;

---GB/T 17626:29-2006 Electromagnetic compatibility test and measurement technology DC power input port voltage sag, short-term

Immunity test for interruption and voltage change;

---GB/T 17626:30-2012 Electromagnetic compatibility test and measurement technology power quality measurement method;

---GB/T 17626:31-2021 Electromagnetic Compatibility Test and Measurement Technology Part 31: AC Power Port Broadband Conduction

Disturbance immunity test;

---GB/T 17626:34-2012 Electromagnetic compatibility test and measurement technology for equipment with main power supply current greater than 16A per phase

Voltage dips, short interruptions and voltage variations immunity tests:

This document is equivalent to IEC 61000-4-33:2005 "Electromagnetic Compatibility (EMC) Part 4-33: Test and measurement techniques for high power

Transient Parameter Measurement Methods": The document type is adjusted from the IEC standard to the national standardization guiding technical document of our country:

The following minimal editorial changes have been made to this document:

--- In order to maintain unity with the name of the standard system, the name of the standard is changed to "Electromagnetic Compatibility Testing and Measurement Technology Part 33: High

Power Transient Parameter Measurement Method":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

Electromagnetic compatibility is the ability of electrical and electronic equipment or systems to function properly in their electromagnetic environment without causing adverse effects to anything in that environment:

Ability to withstand electromagnetic disturbances: Electromagnetic compatibility is one of the important factors affecting the environment and product quality, and its standardization work has

aroused widespread attention at home and abroad: In this regard, the IEC 61000 series of publications developed by the International Electrotechnical Commission (IEC)

Common standards in the fields of industry, electrical engineering and energy, transportation, social undertakings and health, quality and safety of consumer goods, etc:, divided into

There are 6 categories: generalization, environment, limit values, testing and measurement techniques, installation and mitigation guidelines, and general standards: my country has launched a series of publications

The domestic transformation work has been carried out, and the corresponding national standard system has been established:

In this standard system, GB/T (Z) 17626 "Electromagnetic Compatibility Test and Measurement Technology" is about the field of electromagnetic compatibility test and measurement

The basic standard in terms of technology, which aims to describe the immunity test of electromagnetic compatibility phenomena such as conduction disturbance and radiation disturbance, etc:, is proposed to be composed of 39

Partial composition:

--- Part 1: General remarks on immunity test: The purpose is to provide usability guidelines for testing and measurement techniques in EMC standards

guide and provide general advice on the selection of relevant tests:

--- Part 2: Electrostatic discharge immunity test: The purpose is to establish a common and reproducible benchmark for evaluating electrical and electronic devices

performance of equipment subjected to electrostatic discharge:

--- Part 3: RF electromagnetic field radiation immunity test: The purpose is to establish when electrical and electronic equipment is radiated by radio frequency electromagnetic