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

GB/T 17626.20-2014

**Electromagnetic compatibility -- Testing and measurement
techniques -- Emission and immunity testing in transverse
electromagnetic (TEM) waveguide**

电磁兼容 试验和测量技术 横电磁波 (TEM) 波导中的发射和抗扰度试验
(English Translation)

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Foreword

GB/T 17626 "electromagnetic compatibility test and measurement technology" currently includes the following components.

GB/T 17626.1-2006 Electromagnetic compatibility - Testing and measurement techniques - Overview of immunity tests
GB/T 17626.2-2006 Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity test
GB/T 17626.3-2006 Electromagnetic compatibility - Testing and measurement techniques RFEMS test
GB/T 17626.4-2008 Electromagnetic compatibility - Testing and measurement techniques - Electrical fast transient burst immunity test
GB/T 17626.5-2008 Electromagnetic compatibility - Testing and measurement techniques - Surge (impact) immunity test
GB/T 17626.6-2008 Electromagnetic compatibility - Testing and measurement techniques Immunity to conducted disturbances induced field
GB/T 17626.7-2008 Electromagnetic compatibility - Testing and measurement techniques - power supply systems and equipment connected harmonics, interharmonics measurements and Measuring Instruments Guide
GB/T 17626.8-2006 Electromagnetic compatibility - Testing and measurement techniques - Power frequency magnetic field immunity test
GB/T 17626.9-2011 Electromagnetic compatibility - Testing and measurement techniques - Pulse magnetic field immunity test
GB/T 17626.10-1998 electromagnetic compatibility test and measurement techniques - Damped oscillatory magnetic field immunity test
GB/T 17626.11-2008 Electromagnetic compatibility Testing and measurement techniques -

Voltage dips, short interruptions and voltage variations immunity test GB/T 17626.12-2013
electromagnetic compatibility test and measurement techniques - Oscillatory waves
immunity test GB/T 17626.13-2006 electromagnetic compatibility test and measurement
technology AC power port harmonics and interharmonics including mains signaling Low
frequency immunity tests GB/T 17626.14-2005 Electromagnetic compatibility Testing and
measurement techniques - Voltage fluctuation immunity test GB/T 17626.15-2011
electromagnetic compatibility test and measurement technology scintillation Functional and
design specifications GB/T 17626.16-2007 electromagnetic compatibility test and
measurement technology 0Hz ~ 150kHz common mode conducted disturbances immunity
test GB/T 17626.17-2005 electromagnetic compatibility test and measurement technology
dc input power port immunity test ripple test GB/T 17626.24-2012 electromagnetic
compatibility test and measurement techniques - Test methods HEMP conducted
disturbance protection devices GB/T 17626.27-2006 Electromagnetic compatibility Testing
and measurement techniques - Unbalance, immunity test GB/T 17626.28-2006
electromagnetic compatibility test and measurement techniques - Variation of power
frequency, immunity test GB/T 17626.29-2006 electromagnetic compatibility test and
measurement technology dc input power port voltage dips, short interruptions and Voltage
variations immunity tests GB/T 17626.30-2012 electromagnetic compatibility test and
measurement techniques - Power quality measurement methods GB/T 17626.34-2012
electromagnetic compatibility test and measurement technology main power greater than
16A per phase current voltage equipment Dips, short interruptions and voltage variations
immunity tests this section is GB/T Part of 2,017,626.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section identical with the international standard IEC 61000-4-20:2010 (2nd edition)
"Electromagnetic compatibility (EMC) - Part 4-20. Tests and measurement techniques -
transverse electromagnetic (TEM) waveguides emission and immunity test. " Consistency
correspondence between this part of international documents and normative references of
our files are as follows.

--- GB/T 4365-2003 Electrotechnical terminology Electromagnetic compatibility [IEC 60050
(161).1990, IDT]

--- GB/T 6113.101-2008 radio disturbance and immunity measuring apparatus and
methods - Part 1-1. Radio Disturbance and immunity measuring apparatus - Measuring
apparatus (CISPR16-1-1.2006, IDT)

--- GB/T 6113.104-2008 radio disturbance and immunity measuring apparatus and
methods - Part 1-4. Radio Disturbance and immunity measuring apparatus - Ancillary
equipment - Radiated disturbances (CISPR16-1-4.2005, IDT)

--- GB/T 6113.203-2008 radio disturbance and immunity measuring apparatus and
methods - Part 2-3. Radio Disturbance and immunity measuring method for measuring

radiation harassment (CISPR16-2-3.2003, IDT)

--- GB 9254-2008 Limits and methods of measurement of radio disturbance of information technology equipment (CISPR22.2006, IDT) this section makes the following editorial changes.

--- 5.2.3.2 step d) a reference to correct the formula (3);

--- Fixed 5.3.2 of the formula (8);

--- Formula (A.12) in gi, f description changed to "gi, f --- TEM waveguide method from the measurement result obtained by converting OATS equivalent field Strong value in volts per meter (V/m)";

(1) the amount of interpretation of symbols --- supplemented formula;

--- The original text before and after "verification" and "validation" of inconsistent use, this section unified "TEM verification" "field uniformity Confirm" area;

--- Number of references were correct, and change the text in the corresponding reference number at.

Electromagnetic Compatibility This part of the National Standardization Technical Committee (SAC/TC246) and focal points.

This section is drafted. Southeast University, Shanghai Entry-Exit Inspection and Quarantine Bureau, China Electric Power Research Institute, Shanghai Measurement and Testing Technology Institute Study Institute, China Electronics Standardization Institute, China Institute of Metrology.

1 Scope and purpose

GB/T 17626 in this section gives a method of using a variety of TEM waveguide electronic and electrical equipment emission and immunity testing.

TEM waveguide with open (for example, stripline and electromagnetic pulse (EMP) simulators) and closed (for example, TEM chamber), may further Divided into single-port, dual-port and multi-port waveguide. TEM waveguide frequency range depends on the specific application of the test requirements and TEM waveguides Specific type.

The purpose of this section is given by.

--- TEM waveguide properties, including typical frequency ranges and limits on the size of the EUT;

--- Confirmation method for electromagnetic compatibility, TEM waveguide (EMC) test;

--- EUT (ie EUT housing and connection cable) definition;

--- Test arrangement radiated emission tests, procedures and requirements in the TEM

waveguide;

--- Test arrangement radiated immunity test, the procedures and requirements in the TEM waveguide.

NOTE: Test methods specified in this part of the electromagnetic radiation device for immunity and radiated emission measurements are concerned. Simulation and measurement of electromagnetic radiation for Quantitatively determine the final installation EME use state is not accurate enough, the main purpose of the provisions of the test method is to ensure the qualitative analysis of electromagnetic effects the obtained test results of different test equipment used repeatability.

The purpose of this section is not applicable to test methods specified any particular product or system, but for all interested product committees Provide universal basic reference. For radiated emissions tests, the product should refer to the Commission the International Special Committee on Radio Interference (CISPR) Standard 1) select emission limits and test methods. For radiation immunity test, the Commission is responsible for the product selected equipment within its jurisdiction Select the appropriate test methods and immunity limits. This part of the test method described is independent of the GB/T 17626.32).

1) In the international electromagnetic compatibility standards, the standards for radiated emission test is part of CISPR standards.

2) Product Board, after consultation with "National Standardization Technical Committee on Radio Interference" and "National Standardization Technical Committee Electromagnetic Compatibility", and can be specified Using these different test methods.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

IEC 60050 (161) International Electrotechnical Vocabulary Chapter 161 electromagnetic compatibility (Internationalelectrotechnical vocabulary-Chapter161.

Electromagneticcompatibility) IEC 61000-2-11:1999 Electromagnetic compatibility - Part 2-11. Classification of environmental HEMP environment [Electromagneticcom-patibility (EMC) -Part 2-11. Environment-ClassificationofHEMPenvironments] IEC 61000-4-23

Electromagnetic compatibility - Part 4-23. Testing and measurement techniques - HEMP and other radiated disturbances protective devices Measurement Method [Electromagneticcompatibility (EMC) -Part 4-23.

Testingandmeasurementtechniques-TestmethodsforprotectivedevicesforHEMPandotherradi ateddisturbances] IEC/T R61000-4-32 Electromagnetic compatibility - Part 4-32. Testing and measurement techniques - HEMP simulator before [Electro-