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

GB/T 17626.1-2006

**[Replaced by GB/Z 17626.1-2024] Electromagnetic compatibility
-- Testing and measurement techniques -- Overview of immunity
tests**

(English Translation)

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Quarantine**

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Foreword

GB/T 17626 Electromagnetic compatibility - Testing and measurement techniques series standards consist of the following parts:

- 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 - Radiated radio-frequency electromagnetic field immunity test
- GB/T 17626.4-1998 Electromagnetic compatibility - Testing and measurement techniques - Electrical fast transient/burst immunity test
- GB/T 17626.5-1999 Electromagnetic compatibility - Testing and measurement techniques - Surge immunity test
- GB/T 17626.6-1998 Electromagnetic compatibility - Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
- GB/T 17626.7-1998 Electromagnetic compatibility - Testing and measurement techniques - General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto
- GB/T 17626.8-2006 Electromagnetic compatibility - Part 8: Testing and measurement

techniques - Power frequency magnetic field immunity test

--- GB/T 17626.9-1998 Electromagnetic compatibility - Testing and measurement

techniques - Pulse magnetic field immunity test

--- GB/T 17626.10-1998 Electromagnetic compatibility - Testing and measurement

techniques - Damped oscillatory magnetic field immunity test

--- GB/T 17626.11-1999 Electromagnetic compatibility - Testing and measurement

techniques - Voltage dips, short interruptions and voltage variations immunity tests

--- GB/T 17626.12-1998 Electromagnetic compatibility - Testing and measurement

techniques - Oscillatory waves immunity test

--- GB/T 17626.13-2006 Electromagnetic compatibility - Testing and measurement

techniques - Harmonics and interharmonics including mains signaling at a.c. power port
low frequency immunity test

--- GB/T 17626.14-2005 Electromagnetic Compatibility - Testing and measurement

techniques - Voltage fluctuation immunity test

--- GB/T 17626.17-2005 Electromagnetic Compatibility - Testing and measurement

techniques - Ripple on d.c. input power port immunity test

--- GB/T 17626.27-2006 Electromagnetic compatibility - Testing and measurement

techniques - Unbalance immunity test

--- GB/T 17626.28-2006 Electromagnetic compatibility - Testing and measurement

techniques - Variation of power frequency immunity test

--- GB/T 17626.29-2006 Electromagnetic compatibility - Testing and measurement

techniques - Voltage dips short interruptions and voltage variations on d.c. input power
port immunity tests

This Part is Part 1 of GB/T 17626.

This Part equivalently adopts IEC 61000-4-1(2000) Electromagnetic compatibility (EMC) -

Part 4: Testing and measurement techniques - Part 1: Overview of immune tests. This Part
gives practical guidance on test and measurement techniques and provides general advice
on

the selection of relevant tests.

This Part replaced GB/T 17626.1-1998 Electromagnetic compatibility - Testing and measurement techniques - Overview of immunity tests since the date of implementation.

Compared with GB/T 17626.1-1998, the major changes of this Part are as follows:

- Delete Clause 6 Environmental Conditions, Clause 8 Selection of Severity Levels, and Clause 9 Evaluation of Test Results;
- Delete Appendix A brief description of the immunity test and Appendix B the characteristics of the conducted transient test;
- Add Table 1 select the immunity test according to the installation location (environment);
- Add Table 2 scope of application of the immunity test based on the EUT port.

This Part was proposed by China Electricity Council.

This Part shall be under the jurisdiction of National Technical Committee on Electromagnetic

Compatibility of Standardization Administration of China (SAC/TC 246).

Drafting organization of this Part: State Grid Wuhan High Voltage Research Institute.

Chief drafting staffs of this Part: Wang Qin, Wu Xiong, Wan Baoquan, Zhang Guangzhou, and

Lu Yao.

Electromagnetic Compatibility - Testing and Measurement

Techniques - Overview of immunity Tests

1 Scope

This Part covers testing and measuring techniques for electric and electronic equipment (apparatus and systems) in its electromagnetic environment.

The object of this Part is to give applicability assistance to the technical committees of IEC or

other bodies, users and manufacturers of electrical and electronic equipment on EMC standards

within the GB/T 17626 series on testing and measurement techniques and to provide general

recommendations concerning the choice of relevant tests.

2 Normative References

The provisions in following documents become the provisions of this Part through reference in

this Part of GB/T 17626. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Part, however, parties who reach an agreement

based on this Part are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

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

GB/T 17624.1-1998 Electromagnetic compatibility - General - Application and interpretation of fundamental definitions and terms (idt IEC 61000-1-1:1992)

GB 17625.1-2003 Electromagnetic compatibility - Limits - Limits for harmonic current emissions (equipment input current $\leq$ 16A per phase) (IEC 61000-3-2:2001, IDT)

GB 17625.2-1999 Electromagnetic compatibility - limits - Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current $\leq$ 16A (idt IEC 61000-3-3:1994)

GB/Z 17625.3-2000 Electromagnetic compatibility - Limits - Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16A (idt IEC 61000-3-5:1994)

GB/Z 17625.6-2003 Electromagnetic compatibility - Limits - Limitation of emission of

In general, this test should be limited to products which are susceptible to magnetic fields (for

example Hall effect devices, CRT and special products to be installed in high magnetic field environments). Exclusions include equipment which is intended for use in a low magnetic field

environment.

lambda Test according to GB/T 17626.9 (Pulse magnetic field immunity test)

This test is mainly applicable to products to be installed in electrical plants (for example