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

GB/T 17799.5-2012

**Electromagnetic compatibility (EMC) -- Generic standards --
HEMP immunity for indoor equipment**

电磁兼容 通用标准 室内设备高空电磁脉冲(HEMP)抗扰度

(English Translation)

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Foreword

GB/T 17799 "General Standard for Electromagnetic Compatibility" is divided into the following sections.

GB/T 17799.1-1999 Electromagnetic compatibility - General standards - Immunity test in residential, commercial and light industrial environments (IEC 61000-6-1.:1997, IDT);

GB/T 17799.2-2003 Electromagnetic compatibility - General standards - Immunity test in industrial environments (IEC 61000-6-2.

1999, IDT);

GB/T 17799.3-2001 General Standard for Electromagnetic Compatibility Standard for Launching in Residential, Commercial and Light Industrial Environments (IEC 61000-6-3.:1996, IDT);

GB/T 17799.4-2001 Electromagnetic compatibility - General standard emission standards in industrial environments (IEC 61000-6-4.:1997, IDT);

(IEC 61000-6-6.:2003, IDT).

This part is part 5 of GB/T 17799.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part is equivalent to the international standard IEC 61000-6-6.:2003 "General standard

indoor equipment High-altitude electromagnetic pulse (HEMP) anti Disturbance ".

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

This part is responsible for the drafting unit. Ministry of Industry and Information Technology Institute of Electronics Industry Standardization, State Grid Electric Power Research Institute.

This part of the main drafters. Zhou Kai, Hu Jingsen, Chen Shi Gang, Zhang Jian Gong, Li Ni.

Electromagnetic compatibility - General standard Indoor equipment High - altitude electromagnetic pulse (HEMP) immunity

1 Scope

This section specifies the high-altitude electromagnetic pulse (HEMP) immunity requirements for electrical and electronic equipment used indoors. Indoor high-altitude electromagnetic the pulse (HEMP) environment depends on the shielding quality of the facility and the protective capability of the conductive environment.

This section applies to all types of equipment, including residential, commercial, light industry, hospitals, heavy industry, power plants and power generation equipment.

This part is applicable to indoor equipment connected to low voltage (below 1kV) power supply network, communication network and/or external antenna.

The immunity test level is based on 90% of the IEC 61000-4-25 standard. Assume that all communication lines are entering the building There is a gas discharge tube at the entrance, and it is assumed that the insulation flashover voltage on the low voltage line is three times the lightning strike voltage. For connecting to internal power the cable's signal port, the harsh test level is based on the total length of the cable 10m, and the procedure dictates a longer cable.

This section covers large and small indoor equipment. The definition of a small device is given in IEC 61000-4-25. the stereoscopic of the object Size less than 1m x 1m x 1m. Examples of small equipment are cabinet-installed equipment and desktop personal computers. Large equipment includes three-dimensional Size greater than or equal to 1m x 1m x 1m equipment.

There is currently no product or product family standard for high-altitude electromagnetic pulse (HEMP) immunity to indoor equipment in IEC publications.

When the relevant product or product family standard occurs, the product or product family standard is preferred. It should be noted that high-altitude electromagnetic pulse (HEMP) the probability of occurrence of the environment is very low, so unless the owner of the

facility and the equipment manufacturer agree, this common standard is not mandatory.

This section does not specify the safety requirements of the equipment, such as electric shock protection, insulation fit and associated electrical strength test. However, this standard the description of the immunity test contains dangerous voltages, so high pressure precautions are necessary to protect the health and safety of testers.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 4365 Electrotechnical terminology Electromagnetic compatibility (GB/T 4365-2003, IEC 60050 (161)..1990, IDT) GB/T 17626.2 Electromagnetic compatibility test and measurement technology Electrostatic discharge immunity test (GB/T 17626.2-2006, IEC 61000-4-2.:2001, IDT) GB/T 17626.4 Electromagnetic compatibility test and measurement techniques Electrical fast transient burst immunity test (GB/T 17626.4-2008, IEC 61000-4-4.:2004, IDT) GB/T 17626.5 Electromagnetic compatibility test and measurement technology Surge (impact) immunity test (GB/T 17626.5-2008, IEC 61000-4-5.:2005, IDT) GB/T 17626.11 Electromagnetic compatibility test and measurement technology Voltage sags, short interruptions and voltage variations Immunity test (GB/T 17626.11-2008, IEC 61000-4-11.:2004, IDT) GB/T 17626.13 Electromagnetic compatibility test and measurement technology AC power port Harmonics, interharmonics and grid signal Low frequency immunity (GB/T 17626.13-2006, IEC 61000-4-13.:2002, IDT) GB/T 17799.2 Electromagnetic compatibility - General standards - Immunity test in industrial environments (GB/T 17799.2-2003, IEC 61000-6-2.:1999, IDT) IEC 61000-4-25 Electromagnetic compatibility test and measurement technology High-altitude electromagnetic pulse (HEMP) immunity test for equipment and systems