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

GB/T 17626.7-2017

**Electromagnetic compatibility -- Testing and measurement techniques -- General
guide on harmonics and inter-harmonics measurements and instrumentation, for
power supply systems and equipment connected thereto**

(English Translation)

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Foreword

GB/T 17626 "Electromagnetic compatibility test and measurement technology" series of standards currently includes the following parts.

Electromagnetic compatibility (EMC) - Test and measurement techniques - Tests for immunity test; GB/T 17626.1-2006;

Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity test; GB/T 17626.2-2006;

Electromagnetic compatibility - Testing and measurement techniques - Radiofrequency electromagnetic field radiation immunity test; GB/T 17626.3-2006;

Electromagnetic compatibility (EMC) - Testing and measurement techniques - Electrical fast transient burst immunity test; GB/T 17626.4-2008;

Electromagnetic compatibility - Testing and measurement techniques - Surge (impact) immunity test; GB/T 17626.5-2008;

Electromagnetic compatibility (EMC) - Testing and measurement techniques - Radio disturbance - induced conducted disturbance immunity;

Quantities and measuring instruments;

Electromagnetic compatibility (EMC) - Testing and measurement techniques - Power frequency magnetic field immunity test; GB/T 17626.8-2006;

GB/T 17626.9-2011 Electromagnetic compatibility test and measurement techniques - Pulse magnetic field immunity test;

Electromagnetic compatibility - Test and measurement techniques - Damping oscillations - Magnetic field immunity test; GB/T 17626.10-1998;

--- GB/T 17626.11-2008 Electromagnetic compatibility test and measurement technology Voltage sags, short interruptions and voltage variations Disturbance test Electromagnetic compatibility - Testing and measurement techniques - Oscillographic wave immunity test; GB/T 17626.12-2013;

GB/T 17626.13-2006 Electromagnetic compatibility test and measurement technology AC power port Harmonics, interharmonics and power networks Low frequency immunity test;

Electromagnetic compatibility - Testing and measurement techniques - Voltage fluctuation immunity test; GB/T 17626.14-2005;

Electromagnetic compatibility - Testing and measurement techniques - Scintillator functions and design specifications; GB/T 17626.15-2011;

GB/T 17626.16-2007 Electromagnetic compatibility test and measurement technology 0Hz

~ 150kHz Common mode conducted disturbance immunity test;

Electromagnetic compatibility - Testing and measurement techniques - DC power input - port ripple immunity test; GB/T 17626.17-2005;

Electromagnetic compatibility test and measurement techniques - Transmissive and immunity in transverse electromagnetic wave (TEM) waveguides GB/T 17626.20-2014 Degree test Electromagnetic compatibility test and measurement techniques - Mixing chamber test method; GB/T 17626.21-2014;

GB/T 17626.24-2012 Electromagnetic compatibility test and measurement technology HEMP conducted harassment protection device test method;

Electromagnetic compatibility - Testing and measurement techniques - Three - phase voltage unbalance immunity test; GB/T 17626.27-2006;

Electromagnetic compatibility (EMC) - Test and measurement techniques - Frequency immunity - Frequency immunity test;

--- GB/T 17626.29-2006 Electromagnetic compatibility test and measurement technology DC power input port voltage sag, short time Breaking and voltage changes in the immunity test;

Electromagnetic compatibility - Testing and measurement techniques - Power quality measurement methods; GB/T 17626.30-06;

--- GB/T 17626.34-2012 Electromagnetic compatibility test and measurement technology Main power supply per phase current greater than 16A Pressure drop, short interruptions, and voltage variations immunity test.

This part is part 7 of GB/T 17626.

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

This part replaces GB/T 17626.7-2008 "Electromagnetic compatibility test and measurement technology Power supply system and connected equipment Harmonics, Guidelines for Measuring and Measuring Instruments for Wave ". This section compares with GB/T 17626.7-2008, except for editorial changes, the main technical changes as follows.

--- Added references to IEC 60038, IEC 61000-2-2 and IEC 61000-3-12 (see Chapter 2);

- the definition of "the definition of frequency analysis", "the definition of harmonics", "the definition of the distortion factor", the " (See Chapter 3), the parameters of the other chapters are modified accordingly;

--- modified the characteristics of the measured signal (see 4.1);

- modified the time window and the weighted requirements, modified the general structure

of the measuring instrument (see 4.4.1);

- Modifications to the accuracy requirements for current, voltage and power measurements (see 5.3);

- Increases the supply voltage for transmission evaluation with input current greater than 16A and less than or equal to 75A per phase (see 5.4);

- modified harmonic emission assessment, voltage harmonic subgroup evaluation requirements (see 5.5 and 5.6);

- modified the requirements and description of the transition period (see Chapter 7);

- Modification of interharmonic measurement requirements (see Appendix A);

- The measurement requirements for signals with frequencies below 9 kHz and higher than harmonics are modified (see Appendix B).

This part uses the translation method equivalent to IEC 61000-4-7.:2009 "Electromagnetic compatibility (EMC) Part 4-7. Test and measurement techniques Power supply system and connected equipment harmonics, interharmonics measurement and measurement equipment guide ".

In this part of the normative reference to the international documents have a consistent correspondence between the following documents.

- GB/T 156-2007 standard voltage (IEC 60038.:2002, MOD) GB/T 4365-2003 Electrotechnical terminology Electromagnetic compatibility (IEC 60050-161.:1990, IDT) GB/T 18039.3-2003 Electromagnetic compatibility environment Common low-voltage power supply system Low-frequency conducted disturbance and signal transmission and Capacity level (IEC 61000-2-2.:1990, IDT)

- GB 17625.1-2003 Electromagnetic compatibility limits Harmonic current emission limits (input current per phase $\leq 16A$) (IEC 61000-3-2.:2001, IDT)

- GB/T 17625.8-2015 Electromagnetic Compatibility Limits Input current per phase greater than 16A Less than or equal to 75A Connected to the public Harmonic current limits (IEC 61000-3-12.:2004, IDT) with low voltage system equipment this section makes the following editorial changes.

- for the harmonization of national standards with this series, the standard name of this part to "electromagnetic compatibility test and measurement technology power supply system Harmonization of connected equipment harmonics, inter-harmonic measurement and measurement equipment guide. " this part of the National Electromagnetic Compatibility Standardization Technical Committee (SAC/TC246) proposed and centralized.

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