



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

GB 17625.1-2022

**Electromagnetic compatibility - Limits - Part 1: Limits for
harmonic current emissions(equipment input current ≤ 16 A
per phase)**

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020, Directives for standardization - Part 1. Rules for the structure and drafting of standardizing documents.

This document is part 1 of Electromagnetic compatibility - Limits. The following parts have been released for GB 17625.

- Part 1.Limits for harmonic current emissions (equipment input current ≤ 16 A per phase);
 - Part 2.Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase;
 - Part 3.Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16 A;
 - Part 4.Assessment of emission limits for distorting loads in MV and HV power systems;
 - Part 5.Assessment of emission limits for fluctuating loads in MV and HV power systems;
 - Part 6.Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16 A;
 - Part 7.Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤ 75 A and subject to conditional connection;
 - Part 8.Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase;
 - Part 9.Signalling on low-voltage electrical installations - Emission levels, frequency bands and electromagnetic disturbance levels;
 - Part 13.Assessment of emission limits for the connection of unbalanced installations to MV, HV and EHV power systems;
 - Part 14.Assessment of emission limits for harmonics, interharmonics, voltage fluctuations and unbalance for the connection of disturbing installations to LV power systems;
 - Part 15.Assessment of low frequency electromagnetic immunity and emission requirements for dispersed generation systems in LV network.
- This document replaces GB 17625.1-2012 Electromagnetic compatibility - Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase).

Compared with GB 17625.1-2012, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Change the scope of application, to be consistent with GB/T 17625.8, by changing "an input current up to and including 16 A per phase" to "a rated input current up to and including 16 A per phase" (see Clause 1; Clause 1 of the 2012 edition);
- b) Add terms and definitions of "integrated lamp" and "variable speed drive"; simply and clarify the terminology used for "lighting equipment" (see Clause 3);
- c) Classify refrigerators and freezers having one or more variable-speed drives to Class D (see 5.1);
- d) Add the classification of professional luminaires for stage lighting and studios (see 5.2);
- e) Add a description for the classification of lighting equipment (see 5.2);
- f) Add a description for the classification of external power supplies (see 5.3);
- g) Add requirements for the multifunction equipment (see 6.5);
- h) Add a threshold of 5 W under which no emission limits apply to all lighting equipment (see 7.1);
- i) Modify the requirements applying to the dimmers when operating non-incandescent lamps (see 7.1; Clause 7 of the 2012 edition);
- j) Add a clarification for lighting equipment including one control module with an active input power ≤ 2 W (see 7.4.1);
- k) Add limit requirements for Class C equipment under different rated power (see

7.4.2 and 7.4.3);

- l) Modify the emission limits for lighting equipment with a rated power ≤ 25 W (see 7.4.3; 7.3 of the 2012 edition);
- m) Add compliance with this document (see Clause 8);
- n) Adjust the requirements for measurement equipment to Annex A (see Annex A; Annex B of the 2012 edition);
- o) Modify the test conditions for television receiver (see B.2; C.2 of the 2012 edition);