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PEOPLE'S REPUBLIC OF CHINA**

GB/T 48008-2026

**Electromagnetic compatibility - General requirements for the
immunity risk assessment of equipment in residential,
commercial and light industrial environments**

电磁兼容 居住、商业和轻工业环境中设备的抗扰度风险评估通用要求

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Radio Interference Standardization (SAC/TC79). This document was drafted by: Shanghai Electrical Apparatus Research Institute, Shenzhen Ganzhen Intelligent Technology Co., Ltd., and Zhejiang Kangge Electric Co., Ltd. Shenzhen Zhiren Technology Co., Ltd., Zhejiang Qianjiang Robotics Co., Ltd., China Electric Power Research Institute Co., Ltd., Chengdu Xinxinshen Wind Power Zi Technology Co., Ltd., Hubei Provincial Institute of Medical Device Quality Supervision and Inspection, Shanghai Electric Research Institute Technology Co., Ltd., Shanghai Electrical Equipment Testing Co., Ltd., Jiangsu Provincial Institute of Electronic Information Product Quality Supervision and Inspection (Jiangsu Provincial Information Security Evaluation Center), and Weikai Testing Technology Co., Ltd. The company, Southeast University, Shanghai Electrical Apparatus Research Institute (Group) Co., Ltd., Shanghai Robotics Industry Technology Research Institute Co., Ltd., and China Shipbuilding Power. Research Institute Co., Ltd., Hunan Provincial Institute of Metrology and Testing, Zhongbao Auto Service Technology Co., Ltd., Dongguan Liyu Electronics Co., Ltd. Shenzhen Chenxutong Technology Co., Ltd., Shenzhen Youchuangyi Technology Co., Ltd., China Automotive Technology and Research Center (Changzhou) Co., Ltd., Shenzhen Dongguan Jilian Medical Technology Co., Ltd., Zhuhai Global Times Technology Co., Ltd., Shenzhen Hongrui Guangxiang Electronic Technology Co., Ltd., Dongguan Hai Hong Intelligent Technology Co., Ltd., Shenzhen Qianheng Electronics Co., Ltd., Shenzhen Xidian Precision Technology Co., Ltd., Shenzhen Yuanxing Technology Co., Ltd. Limited Liability Company, Xihua University, China Electronics Technology Testing & Research

Institute (Xi'an) Technology Service Co., Ltd., Shenzhen Shenan Sunshine Electronics Co., Ltd., Shenzhen Mairui Intelligent Technology Co., Ltd., Zhuhai Xinye Electronics Technology Co., Ltd., Yipin (Guiyang) Quality Technology Co., Ltd., Shenzhen Liangbiao Technology Co., Ltd. Boson Technology (Jiangxi) Co., Ltd., Suzhou Lier Microwave Technology Co., Ltd., Beijing Digital China Cloud Technology Co., Ltd., Shenzhen Rongdian Innovation Technology Co., Ltd., Yingzhi Technology (Changzhou) Co., Ltd., Shenzhen Lefu Weighing Instrument Co., Ltd., Hunan Transportation Vocational College Beijing Datang Shengxing Technology Development Co., Ltd., Hefei He'an Zhiwei Technology Co., Ltd., and Shenzhen Chaorui Automation Technology Co., Ltd. The main drafters of this document are. Zheng Junqi, Yin Jisheng, Shi Zhenzhong, Xu Chaoyang, Liu Chang, Yuan Tian, Wang Wei, Xu Yang, Fu Haitao, and Xuan Yuanyunjia. Guo Zijun, Xiong Yali, Chen Hao, Meng Fanjun, Chen Jun, Yu Chao, Zhou Xiang, Zhang Fengxian, Sun Zuoli, Peng Peiji, Gong Man, Chen Ning, Wang Xiaobin, Hu Shili Fan Jingbo, Li Ziqing, Tian Yongjun, Gong Guoneng, Ye Xinwen, Du Yalin, Yi Hongjian, Ding Shilin, Niu Lin, Jin Guangchao, Wang Yuan, He Minglu, Yuan Shiyong Jiang Wenbo, Lin Ronggang, Wang Lin, Zou Gaodi, Li Yong, Yu Bo, Jiao Huakun, Peng Jianwen, Wang Yi, Wang Chunjie, Wang Guizhou, Sun Qilong, Yu Huayun, Hu Yan Zhang Duohui, Sun Heng, Xiao Huanhuan. Electromagnetic compatibility in residential, commercial and light industrial environments General requirements for equipment immunity risk assessment

1 Scope

GB/T 48008-2026 is the Chinese national standard covering assessing immunity as a risk rather than as a pass or fail - what actually happens to the equipment when it is disturbed, how likely that disturbance is in a home or a shop, and what the consequence would be, which is the approach the generic immunity standards do not take. First edition. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the requirements for immunity risk assessment in the frequency range of 0Hz to 400GHz. This document applies to electrical and electronic equipment operating in the following locations.

---Living spaces (3.8), including indoor and outdoor spaces;

---Commercial, public and light industrial premises (3.9), including indoor and outdoor spaces. This document applies to equipment that is directly connected to a low-voltage public power grid or a dedicated DC power supply powered by a low-voltage public power grid. This document also applies to applications intended for use in the locations defined in

3.8 or 3.9, powered by batteries or by non-public, non-industrial low-voltage power

distribution. Equipment that supplies power to the system. If there is no specific product or product category EMC immunity risk assessment standard, this general EMC immunity risk assessment method applies. Evaluation standard.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 2900.83 Electrical Engineering Terminology. Electrical and Magnetic Devices

GB/T 4365 Electromagnetic Compatibility (Electrical Engineering Terminology)

GB/T 17799.1 Electromagnetic compatibility general standard. Immunity in residential, commercial and light industrial environments

GB/T 37150-2025 Basic Requirements for Electromagnetic Compatibility Risk Assessment

GB/T 38659.1 Electromagnetic compatibility risk assessment - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 4365, GB/T 17799.1 and GB/T 2900.83, as well as the following terms and definitions, apply to this document.

3.1 Assessment Port According to the EMC risk assessment mechanism, risk assessment refers to the specific interface between the equipment and the external electromagnetic environment or the interface affected by the external electromagnetic environment.

Note. An example of a relevant port is shown in Figure

1. Enclosure ports are the physical boundaries of a device (e.g., the enclosure). Enclosure ports are susceptible to radiation and electrostatic discharge (ESD). One port performs energy transfer, while other ports perform conductive energy transfer via direct injection or induction. Figure