

ICS 97.040
CCS V85



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

GB/Z 41528-2022

Design guidelines of wireless power supplying kitchen system

无线供电厨房系统设计导则

Issued on: July 11, 2022

Implemented on: July 11, 2022

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part

1. Structure and Drafting Rules of Standardization Documents" drafted. Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents. This document is proposed by China National Light Industry Federation. This document is under the jurisdiction of the National Standardization Technical Committee for Household Appliances (SAC/TC46). This document is drafted by: Qingdao Haier Intelligent Technology R&D Co., Ltd., Qingdao Zhonghaihui Intelligent Source Technology Co., Ltd., China National Electrical Appliance Research Institute, Qingdao Product Quality Inspection Institute, Zhonghui Chuangzhi (Shenzhen) Wireless Power Supply Technology Co., Ltd., Suzhou Chunhua Life Electric Equipment Co., Ltd., Guangdong Xinbao Electric Co., Ltd., Hangzhou Customs Technology Center, Weikai Testing Technology Co., Ltd., China Information and Communication Research Institute Research Institute, the Fifth Electronics Research Institute of the Ministry of Industry and Information Technology, Beijing University of Posts and Telecommunications, Xi'an Qing'an Refrigeration Equipment Co., Ltd., Haier Group Technology R&D Center, China Electric Power Research Institute, Qingdao Haier Complete Appliance Service Co., Ltd. The main drafters of this document. Li Biao, Sun Hui, Wang Binhou, Nie Shengyuan, Li Li, Yan Ling, Chen Xian'e, Li Weiqing, Zhu Wenyin, Yang Bin, Du Jin, Xu Fang, Yu Cailing, Wang Hongbo, Liu Ronggui, Chen Jun, Li Shufang, Sha Lu, Qiu Ming.

The wireless power supply kitchen system provides a novel power supply mode for kitchen appliances, which effectively improves the convenience and convenience of the use of kitchen appliances. safety. This type of kitchen appliance can be directly placed on the kitchen countertop or dining table inlaid with the wireless power transmitter to obtain electric energy without the need for To obtain power through the power cord. The electrical energy of these new kitchen appliances comes from non-contact electromagnetic inductive power transmission, that is, in the transmitter. The inductive coil of the electric appliance

obtains energy from the main power supply, and transmits it to the coil located at a certain interval and located inside the kitchen appliance through the principle of electromagnetic induction. Then It is then converted into electrical energy or heat energy for cooking food.

Wireless Powered Kitchen System Design Guidelines

1 Scope

GB/Z 41528-2022 is the Chinese national standard on design guidelines of wireless power supplying kitchen system, in the field of domestic and commercial equipment, entertainment, sport. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 11 July 2022 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 97.040, CCS V85. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB 4343.1 Electromagnetic Compatibility Requirements for Household Appliances, Power Tools and Similar Appliances Part

GB 17625.1 Electromagnetic Compatibility Limits Harmonic Current Emission Limits (Each Phase Input Current of Equipment $\leq$ 16A)

GB/T 34439 Household Appliances Wireless Power Transmitter QB/T 4986 Safety Evaluation and Measurement Methods of Electromagnetic Fields for Household and Similar Electrical Appliances

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 A kitchen electrical system powered by wireless power transmission.

Note. The wireless power supply kitchen system mainly includes wireless power transmitters and wireless power supply kitchen appliances.

3.2 A transmitter that uses the principle of electromagnetic induction for wireless power transmission.

3.3 A kitchen functional appliance that uses wireless power transmission to provide working power.

4 Classification of Wireless Powered Kitchen Systems

Wirelessly powered kitchen systems can be divided into the following categories.

- a) Electric heating wireless power supply kitchen system. a wireless power supply kitchen system in which the kitchen appliances are electric heating appliances;
- b) Electric wireless power supply kitchen system. a wireless power supply kitchen system in which the kitchen appliances are electric appliances;
- c) Combined wireless power supply kitchen system. a wireless power supply kitchen system in which the kitchen appliances are electric and electric heating combined appliances;
- d) Other types of wireless power supply kitchen systems. kitchen appliances are wireless power supply kitchen systems other than the above categories.