

ICS 29.160.30

CCS K 24



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

GB/T 13537-2024

Replacing GB/T 13537-2009

**General specification for electric motors for electronic
household appliances**

电子类家用电器用电动机通用技术规范

Issued on: August 23, 2024

Implemented on: August 23, 2024

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

Table of Contents

1 Scope ...	1
2 Normative references ...	1
3 Terms and Definitions ...	1
4 Model naming and technical parameters ...	2
5 Technical requirements and test methods ...	3
6 Inspection Rules ...	18
7 Delivery Preparation ...	21
8 User Service ...	22

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 for standardization documents" Drafting is required. This document replaces GB/T 13537-2009 "General Technical Requirements for Electric Motors for Electronic Household Appliances" and is consistent with GB/T 13537-2009. In addition to structural adjustments and editorial changes, the main technical changes are as follows: Changed the scope (see Chapter 1, Chapter 1 of the.2009 edition);

a) Added terms and definitions (see Chapter 3);

b) In the "Power Frequency and Voltage Level Classification", three voltage levels, "140, 280, 310", are added to the "DC" type. The voltage level "110" has been deleted from the "AC" type (see Table 1, Table 1 of the.2009 edition);

c) Increased heat resistance level (see 4.4);

d) The technical requirements for appearance and assembly quality have been changed (see 5.1.1,

4.1.1 of the.2009 edition);

e) The technical requirements and test methods for radial runout of shaft extension have been changed (see 5.5,

4.4 of the.2009 edition);

f) The coaxiality of the mounting mating surface and the perpendicularity of the mounting mating end surface have been changed (see 5.6, 5.7,

4.5 of the.2009 edition);

g) Modified insulation resistance and insulation dielectric strength (see 5.9, 5.10, 4.8, 4.9 of the.2009 edition);

h) Added leakage current technical requirements and test methods (see 5.11);

1 Scope

China's national general specification for the small electric motors used in electronic household appliances - the motors in disc and tape drives, in printers, in kitchen and personal care appliances, in fans and pumps inside consumer equipment, and in the mechanisms of countless products where the motor is a component bought to a specification rather than designed in. It specifies the model nomenclature, the technical parameters and the technical requirements of electric motors for electronic household appliances, describes the corresponding test methods, and sets the inspection rules, the delivery preparation and the user services. What makes a specification for small motors worth having is that they are bought in enormous numbers by manufacturers who are not motor engineers, on the basis of a data sheet. Fixing what the parameters on that data sheet mean - and how each is measured - is what makes two suppliers comparable and what makes a second source possible. The technical requirements cover the electrical parameters and the rated conditions, the mechanical output and the speed-torque characteristic, the starting behaviour, the efficiency, the insulation and dielectric strength, the temperature rise and the class of insulation that limits it, the noise and vibration - which in a household appliance is often the property that decides whether a product is acceptable at all - the electromagnetic compatibility, both what the motor emits and what it must tolerate, the life and reliability, and the environmental requirements. The clauses on delivery preparation and user services are what a component standard needs and a product standard does not: what documentation accompanies the motor, and what the supplier must provide to the manufacturer designing it in. Issued on 23 August 2024, it replaces GB/T 13537-2009.

This document specifies the model nomenclature, technical parameters and technical requirements of electric motors for electronic household appliances, and describes the corresponding test methods. The law stipulates inspection rules, delivery preparation and user services. This document applies to electronic household electrical appliances such as AC induction motors, permanent magnet DC motors, permanent magnet brushless DC motors, Machine, synchronous motor, stepper motor, etc. This document is used together with the specific product standards for electric motors for electronic household appliances. Special requirements are specified in specific product standards.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB/T 755 Ratings and performance of rotating electrical machines

GB/T 2423.1-2008 Environmental testing for electric and electronic products Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Axial end play A specified force is applied axially in two directions, resulting in a changing distance between the end face of the shaft extension and the mounting surface of the motor.