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**REPUBLIC OF CHINA**

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GB/T 18488.2-2006

Replace GB/T 18488.2-2001

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**The Electrical Machines and Controllers for Electric  
Vehicles—**

**Part 2: Test methods**

**电动汽车用电机及其控制器**

**第 2 部分：试验方法**

**Issued on December 01, 2006**

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**General Administration of Quality Supervision, Inspection and  
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## Foreword

GB/T 18488 *The electrical machines and controllers for electric vehicles* is divided into two Parts:

- Part 1: General specification
- Part 2: Test methods.

This Standard is part 2 of GB/T 18488.

This Standard is revision of GB/T 18488.2-2001, will replace GB/T 18488.2-2001 *Test procedures of the electrical machines and controllers for electric vehicles* since implementation date.

Main changes of this Standard are as follows:

- 1) Added relevant Normative References, mainly includes GB/T 1032-2005, JB/T 9615.1-2000 and GB/T 13422-1992.
- 2) Detailed description of test items specified in Clause 4 to Clause 9, mainly adjusted and supplemented the routine inspection item in Clause 4 to Clause 7 specified in previous version..

This Standard was proposed by National Technical Committee on Road Vehicles of Standardization Administration of China.

This Standard was under the jurisdiction of National Technical Committee on Road Vehicles of Standardization Administration of China.

Draft units of this Standard are Institute of Electrical Engineering, CAS, BIT (Beijing Institute of Technology) and Zhuzhou Electric Locomotive Research Institute.

Main drafters of this Standard are Wen Xuhui, Liu Tongyan, Guo Shuying, Zhang Chengning, Liu Jun and Ju Long.

The previous edition of the part replaced by these following one:

- GB/T 18488.2-2001.

# **The Electrical Machines and Controllers for Electric Vehicles—**

## **Part 2: Test Methods**

### **1 Scope**

This Standard specifies the instruments, meters, test preparation and general test methods of the electrical machines and controllers for electric vehicles.

This Standard is applicable to electrical machines and controllers for electric vehicles.

### **2 Normative References**

The articles contained in the following documents have become this standard of GB/T 18488 when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 755-2000 Rotating electrical machines--Rating and performance (idt IEC 60034-1: 1996)

GB/T 1029-2005 Test procedures for three-phase synchronous machines (IEC 60034-2: 1972)

GB/T 1032-2005 Test procedures for three-phase induction motors

GB/T 2423.17-1993 Basic environmental testing procedures for electric and electronic products Test Ka: Salt mist (eqv IEC 60068-2-11: 1981)

GB/T 3859.1-1993 Semiconductor convertors—Specification of basic requirements (eqv IEC 60146-1-1: 1991)

GB/T 4942.1-2006 Degrees of protection provided by the integral design of rotating electrical machines (IP code) – Classification (IEC 60947-1: 2000, IDT)

GB/T 4942.2-1993 Degrees of protection provided by enclosures for low-voltage apparatus (eqv IEC 60947-1: 1988)

GB 10068-2000 Mechanical vibration of certain machines with shaft heights 56mm and higher--Measurement, evaluation and limits of vibration (idt IEC 60034-14: 1996)

GB 10069.1-2006 Measurement of airborne noise emitted by rotating electrical machines and the noise limits Part 1: Method for the measurement of airborne noise emitted by rotating electrical machines (ISO 1680: 1999, MOD)

GB/T 12665-1990 Requirements of damp-heat testing of electrical machine for service in general environmental condition

GB/T 13422-1992 Power semiconductor converters—Electrical test methods

GB 14023-2006 Vehicles boats and internal combustion engine driven devices—Radio disturbance characteristics — Limits and methods of measurement (CISPR 12: 2005, IDT)

GB 14711-2006 Safety requirements of small and medium size rotating electrical machines

GB/T 17619-1998 Limits and methods of testing for immunity of electrical / electronic sub-assemblies in vehicles to electromagnetic radiation

JB/T 9615.1-2000 Test methods of the interturn insulation on random wound winding for AC low-voltage machines

JB/T 9615.2-2000 Test limits of the interturn insulation on random wound winding for AC low-voltage machines



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