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ASSOCIATION STANDARD

T/CSAE 63-2017

Electromagnetic compatibility test methods and requirements of electric components and subsystems (12v) of vehicle

汽车电器零部件及子系统（12V）电磁兼容性能测试方法及要求

(English Translation)

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Foreword

This standard is used as a quality control standard for automobile parts and components to ensure product quality and meet quality requirements after loading.

This standard categorizes car components in detail, and specifies the performance requirements for various types of components.

Conducted emission performance to ensure the good operation of the vehicle receiver. The radio frequency, conducted, and electrostatic discharge immunity performance is specified to ensure zero the safety level of the component. Specify test methods and limits for each emission test, test methods, test levels, Performance criteria. It also stipulates the running status of each product during testing to ensure that it can meet the requirements under severe conditions. in case Under specific working conditions, the special performance requirements and quality requirements index values need to be obtained from production experience accumulation, which can be obtained by manufacturers and After the auto company negotiates, the application of the standard is modified. This standard is prepared in accordance with the rules given in GB/T 1.1-2009.

This standard was approved by the Chinese Society of Automotive Engineers.

This standard was first issued in November.2017.

This standard was drafted. Shanghai Electric Research Institute, Chongqing Changan Automobile Co., Ltd., Shanghai Automobile Group Co., Ltd.

Company passenger car company, BYD Automobile Industry Co., Ltd., Zhejiang Geely Automobile Research Institute Co., Ltd., Chery Automobile Co., Ltd.

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GB/T 18655-2010 Vehicles, ships and internal combustion engines Radio disturbance characteristics Limits and measurement methods for protecting on-board receivers GB/T 21437.1-2008 Road vehicles. Electrical disturbances caused by conduction and coupling. Part 1. Definitions and general description GB/T 21437.2-2008 Road vehicles. Electrical disturbances caused by conduction and coupling. Part 2. Electrical transients along power lines Conduct GB/T 21437.3-2012 Road vehicles. Electrical disturbances caused by conduction and coupling. Part 3. Conductors other than power lines Electrical transient emission through capacitive and inductive coupling GB/T 6113.101-2008 Specification for radio disturbance and immunity measuring equipment and methods-Part 1-1. Radio disturbance Noise and immunity measurement equipment GB/T 33014.1-2016 Road vehicles. Test method for immunity of electrical/electronic components to narrowband radiated electromagnetic energy. Part 1 Section. General provisions GB/T 33014.2-2016 Road vehicles. Test method for immunity of electrical/electronic components to narrowband radiated electromagnetic energy. Part 2 Part. Anechoic Chamber Method GB/T 33014.3-2016 Road vehicles. Test method for immunity of electrical/electronic components to narrowband radiated electromagnetic energy. Part 3 Section. Transverse Electromagnetic Wave (TEM) Chamber Method GB/T 33014.4-2016 Road vehicles. Test method for immunity of electrical/electronic components to narrowband radiated electromagnetic energy Part. Large Current Injection (BCI) method GJB 151B-2013 Military equipment and subsystems Electromagnetic emission and sensitivity requirements and measurements ISO 11451-3.:2007 Road vehicles-Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy-Part 3. On-board transmitter simulation ISO 11452-1.:2008 Road vehicles-Component test methods for electrical disturbances from narrowband radiated electromagnetic energy-Part 1. General principles and terminology ISO 11452-8.:2008 Road vehicles-Component test methods for electrical disturbances from narrowband radiated electromagnetic energy-Part 8. Immunity to magnetic fields ISO 11452-9.:2012 Road vehicles-Component test methods for electrical disturbances from narrowband radiated electromagnetic energy-Part 9. Portable transmitters ISO 10605.:2008 Road vehicle-Test methods for electrical disturbances from electrostatic discharge ECE R10.REV5.0.2015 Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these

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Prescriptions

3.1 Terms and definitions

The terms and definitions defined in GB/T 4365 and GB/T 29259 apply to this document.

3.1.1

Acceptance criteria

Defines the margin of deviation of allowed functional performance of equipment under electromagnetic interference.

3.1.2

Active electronic module 14220-Automotive electrical components and subsystems (12V) electromagnetic compatibility performance test methods and requirements.indd 2.2017/11/7 9.58.41 an electronic module that operates using digital or analog circuits (including microprocessors, operational amplifiers, memory devices).

3.1.3

Artificial network (AN) A device used to provide a known impedance to the DUT power cord.

3.1.4

Bulk current injection (BCI) Method for coupling RF current into a wiring harness.

3.1.5

Component

A collective name for active electronic modules, motors, and passive and inductive devices.

3.1.6

Control circuits

Input/output circuits connected to vehicle batteries via switches, relays, or resistive/inductive loads.

Directly fed in, or by a battery with a switch.

3.1.7

Component, subsystem engineering specification Specification of all performance requirements of components or subsystems (mechanical, temperature, electromagnetic compatibility, etc.).

3.1.8

Disturbance

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