

ICS 43.040.10
CCS T 36



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

GB/T 28045-2011

**Road vehicles -- Electrical and electronic equipment for a
supply voltage of 42 V -- Electrical loads
(English Translation)**

Issued on: October 31, 2011

Implemented on: February 1, 2012

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and definitions parameter code
- 4 Tests and requirements
- 4.1 Supply voltage

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard uses redrafted Law Amendment uses ISO 21848:2005 "Road vehicles - 42V supply voltage of electrical and electronic equipment Electrical load "were developed.

This standard is based on ISO 21848:2005 redrafted.

This standard and ISO 21848:2005 technical differences and the reasons are as follows.

--- Remove the 4.3 is not well understood and the corresponding ISO 16750-2 also did not write "Check DUT undesired resonance mode and Due to thermal stress ";

--- Reference to ISO 16750-2, the title of Chapter 4 to test and requirements, subject to 4.1 supply voltage;

--- Rules for preparation according to national standards, the original terms are defined in Chapter 3 of the definitions of the terms and parameters to the code;

--- Rules for preparation according to national standards, increase in scope. This standard applies to 42V automotive electrical and electronic systems/components.

The relative standard ISO 21848:2005 editorial changes as follows.

--- Remove introduction of international standards;

--- Delete the original international standard reference documents;

--- Note to Figure 2 complement each device.

This standard was proposed by the National Development and Reform Commission.

This standard by the National Automotive Standardization Technical Committee (SAC/TC114) centralized.

This standard was drafted. China Automotive Technology and Research Center, Suzhou Tai

Site Electronic Technology Co., Ltd., Changsha Automobile Electric Institute, East Wind Commercial Vehicle Technical Center, Shanghai Institute of Quality Supervision, Inspection, Shenzhen Hang Shing Electronics Co., Ltd., Shanghai Kostal Huayang Auto Electric Co., Ltd., Zhengzhou Yue Bo Auto Electric Co., Ltd.

Drafters of this standard. Xu Xiu Xiang, Sun Chengming, Hu Meng Jiao, He Yujun, Lu Zhaoming, Wangxi Bin, high-Zhi Biao, Zhang Yongying.

Road vehicles 42V supply voltage and electrical Electronic equipment, electrical load

1 Scope

This standard describes the electrical and electronic systems and components of electrical load power supply voltage of 42V, and provides single or multiple voltage systems Tests and requirements. This standard also provides a 42V voltage systems interact with other design guidelines.

This standard applies to electrical and electronic 42V automotive systems/components.

Note: The electrical load has nothing to do with the installation location.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Electrical disturbances Part 2 GB/T 21437.2 road vehicles from conduction and coupling. electrical transients along supply lines of conduction (GB/T 21437.2-2008, ISO 7637-2:2004, IDT) GB/T 28046.1 Environmental conditions and testing - Part 1 road vehicle electrical and electronic equipment. general provisions (GB/T 28046.1-2011, ISO 16750-1:2006, MOD) GB/T 28046.2 road vehicle electrical and electronic equipment - Environmental conditions and testing - Part 2. Electrical loads (GB/T 28046.2-2011, ISO 16750-2:2006, MOD) GB/T 28046.4 road vehicle electrical and electronic equipment - Environmental conditions and testing - Part 4. Climatic loads (GB/T 28046.4-2011, ISO 16750-4:2006, MOD) UL94 apparatus and appliance parts in plastic material flammability test

3 Terms and definitions parameter code

Terms and definitions in GB/T 28046.1 given apply to this document.

U_{high} normal upper limit voltage DC power supply range.

U_{low} lower voltage DC power supply normal range.

U_{max}, the maximum dynamic load dump dyn generator over-voltage generated.

UT predetermined conditions using the test voltage can be static or transient voltages.

Us starting pulse at the minimum allowable dynamic undervoltage.

When the engine starts UA minimum allowable steady-state voltage (including ripple voltage may be present).

4.1.1 Objective

Check function test device (DUT) within the minimum and maximum supply voltage range.