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**GB**

NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

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**GB/T 33014.7-2020**

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**Road vehicles - Component test methods for  
electrical/electronic disturbances from narrowband  
radiated electromagnetic energy - Part 7: Direct radio  
frequency power injection**

道路车辆 电气/电子部件对窄带辐射电磁能的抗扰性试验方法

第7部分：射频功率直接注入法

[ISO 11452-7:2003, Road vehicles - Component test methods for electrical  
disturbances from narrowband radiated electromagnetic energy - Part 7:

Direct radio frequency (RF) power injection, MOD]

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**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC.**

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## Foreword

GB/T 33014 "Road vehicles - Component test methods for electrical/electronic disturbances from narrowband radiated electromagnetic energy" is intended to include the following parts:

- Part 1: General;
- Part 2: Absorber-lined shielded enclosure;
- Part 3: Transverse electromagnetic (TEM) cell;
- Part 4: Bulk current injection (BCI);
- Part 5: Strip line;
- Part 7: Direct injection of radio frequency power;
- Part 8: Magnetic field immunity method;
- Part 9: Portable transmitter method;
- Part 10: Immunity to conducted disturbances in the extended audio frequency range;
- Part 11: Reverberation chamber method.

This Part is Part 7 of GB/T 33014.

This Part is drafted in accordance with the rules given in GB/T 1.1-2009.

This Part uses the redraft law to modify and adopt ISO 11452-7:2003+AMD1:2013 "Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 7: Direct radio frequency (RF) power injection".

The technical differences between this Part and ISO 11452-7:2003+AMD1:2013 and their reasons are as follows:

- As for the normative references, this Part has made adjustments with technical differences, to adapt to the technical conditions of China. The adjustments are mainly reflected in Clause 2 "Normative references". The specific adjustments are as follows:
  - Replace ISO 11452-1 with GB/T 33014.1, which modifies and adopts the international standard.

- Delete the core type and company trademark in Annex A.
- Adjust the paragraphs in Table A.5 to Table A.7 to notes.
- Modify the frequency band of Table B.1.

This Part has made the following editorial changes:

- In order to be consistent with China's technical standard system, change the standard name to "Road vehicles - Component test methods for electrical/electronic disturbances from narrowband radiated electromagnetic energy - Part 7: Direct radio frequency power injection";
- According to GB/T 1.1, standardize the writing of ISO 11452-7:2003 Clause 1;
- Delete "CAUTION" and "NOTE" between 6.2 and 6.2.1 of the international standard;
- Delete the note before A.1 in Annex A of the international standard;
- Delete the bibliography of the international standard.

This Part was proposed by Ministry of Industry and Information Technology of the PRC.

This Part shall be under the jurisdiction of National Technical Committee of Auto Standardization (SAC/TC 114).

Drafting organizations of this Part: China Automotive Technology and Research Center Co., Ltd.; China Electronics Standardization Institute; Xiangyang Da An Automobile Test Center Co., Ltd.; Suzhou 3ctest Electronic Co., Ltd.; Shanghai Electrical Apparatus Research Institute; Changchun Automotive Test Center Co., Ltd.; SAIC Volkswagen Automotive Co., Ltd.; Technical Center of SAIC Motor Corporation Limited; FAW-Volkswagen Automotive Co., Ltd.; Zhengzhou Yutong Bus Co., Ltd.; SAIC GM Wuling Automobile Co., Ltd.; Brilliance Auto Group Holdings Co., Ltd.; Chery Automobile Co., Ltd.; Great Wall Motor Co., Ltd.; The Fifth Electronics Research Institute of the Ministry of Industry and Information Technology; Geely Automobile Research Institute (Ningbo) Co., Ltd.; Shaanxi Heavy Duty Automobile Co., Ltd.; Centre Testing International (Ningbo) Co., Ltd.; Anhui Jianghuai Automobile Group Corp., Ltd.; China FAW Group Co., Ltd.; Dekra Certification Services (Suzhou) Co., Ltd.; United Automotive Electronic Systems Co., Ltd.; Bosch Automotive Products (Suzhou) Co., Ltd.; Volkswagen (China) Investment Co., Ltd.; Jaguar Land Rover (China) Investment Co., Ltd.; Peugeot Citroen (Shanghai) Management Co., Ltd.

# Road vehicles - Component test methods for electrical/electronic disturbances from narrowband radiated electromagnetic energy - Part 7: Direct radio frequency power injection

## 1 Scope

This Part of GB/T 33014 specifies component test methods for electrical/electronic disturbances from continuous narrowband radiated electromagnetic energy - direct radio frequency power injection.

This Part applies to electrical/electronic components used in category M, N, O, L vehicles (regardless of vehicle power systems, such as spark-ignition engine, diesel engine, electric motor).

## 2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 33014.1 Road vehicles - Component test methods for electrical/electronic disturbances from narrowband radiated electromagnetic energy - Part 1: General (GB/T 33014.1-2016, ISO 11452-1:2005, MOD)

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 33014.1 apply.

## 4 Test conditions

### 4.1 Standard test conditions

Test temperature, supply voltage, modulation, dwell time and frequency step size shall be in accordance with GB/T 33014.1.

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Contact: Wayne Zheng, [Sales@ChineseStandard.net](mailto:Sales@ChineseStandard.net)

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

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