NATIONAL STANDARD OF THE

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GB/T 33014.10-2020

Road vehicles. Component test methods for electrical/electronic disturbances from narrowband radiated electromagnetic energy - Part 10: Immunity to conducted disturbances in the extended audio frequency range

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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 10 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 11452-10.2009 "Road vehicles - Component test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 10.Immunity to conducted disturbances in the extended audio frequency range".

The technical differences between this Part and ISO 11452-10.2009 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.

- Modify the notes in Table A.1.

- ADD annotations for category 1, category 2, and category 3 in Annex A.

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 10.Immunity to conducted disturbances in the extended audio frequency range";

- In accordance with the requirements of GB/T 1.1-2009, standardize the writing of Clause 1;

- Simplify the title of Figure 1.

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; Beijing Audeco Auto Electronic Product Testing Co., Ltd.; Changchun Automotive Test Center Co., Ltd.; SAIC Volkswagen Automotive Co., Ltd.; Technical Center of SAIC Motor Corporation Limited; Xiangyang Da An Automobile Test Center Co., Ltd.; Shanghai Electrical Apparatus Research Institute; 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.; Commercial Vehicle Technical Center of SAIC Motor Corporation Limited; The Fifth Electronics Research Institute of the Ministry of Industry and Information Technology; Geely Automobile Research Institute (Ningbo) Co., Ltd.; Centre Testing International (Ningbo) Co., Ltd.; Anhui Jianghuai Automobile Group Corp., Ltd.; China FAW Group Co., Ltd.; Shanghai NIO Automobile Co., Ltd.; Hangzhou Branch of Zhejiang Zotye Automobile Manufacturing Co., Ltd.; South East (Fujian) Motor Corp., Ltd.; Daimler Greater China Ltd.; Nissan (China) Investment Co., Ltd.; Chery Jaguar Land Rover Automotive Co., Ltd.; Qoros Automotive Co., Ltd.

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Road vehicles - Component test methods for electrical/electronic disturbances from narrowband radiated electromagnetic energy - Part 10.Immunity to conducted disturbances in the extended audio frequency range

1 Scope

This Part of GB/T 33014 specifies component test methods for electrical/electronic (ESA) disturbances from continuous narrowband radiated electromagnetic energy - immunity to conducted disturbances in the extended audio frequency range.

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

4 Test conditions

The applicable frequency range of immunity to conducted disturbances in the extended audio frequency range is 15 Hz~250 kHz. The user shall specify the test severity level or levels over the frequency bands (see Annex A).

5 Test location

This test does not require special grounding or shielding in the laboratory.

6 Test apparatus

A 100 μF capacitor may be used (for lines other than power lines) to shunt the source end of the isolation transformer to ground if difficulty is encountered in obtaining sufficient test voltage. Verification shall be made that desired signals are not excessively disturbed by the 100 μF capacitor.