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

GB/T 33012.2-2016

**Road vehicles -- Vehicle test methods for electrical
disturbances from narrowband radiated electromagnetic energy
-- Part 2: Off-vehicle radiation sources**

道路车辆 车辆对窄带辐射电磁能的抗扰性试验方法 第2部分：车外辐射源法

(English Translation)

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Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Terms and definitions...	5
4 Test conditions...	5
5 Test location...	6
6 Test equipment...	7
7 Stimulation and monitoring of vehicle...	9
8 Test set-up...	10
9 Test procedure...	11
Annex A (informative) Functional performance statue classification (FPSC).	18

Foreword

GB/T 33012 "Road vehicles - Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy" consists of four parts.

- Part 1.General;
- Part 2.Off-vehicle radiation sources;
- Part 3.On-board transmitter simulation;
- Part 4.Bulk current injection (BCI).

This Part is Part 2 of GB/T 33012.

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

This Part uses the re-drafting method to amend and adopt ISO 11451-2:2005 "Road vehicles - Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1.Off-vehicle radiation sources".

Technical differences between this Part and ISO 11451-1:2005 and the causes are as follows.

- Clause 1 is normatively prepared according to the specifications of GB/T 1.1-2009;
- The normative reference ISO 11451-1:2001 is modified to GB/T 33012.1-2016

adopting ISO 11451-1:2005;

- In order to achieve the same understanding and presentation with Part 1, I, II, III, IV, V of Table A.1 are modified to L1, L2, etc., and I, II, III, etc. are understood as state I, II, III, etc.;
- To be consistent with other parts, the structure of Clause 6 is adjusted.

This Part also makes the following editorial modifications.

- The content which is not suitable for the emergence in Clause 1 (The electromagnetic disturbances are limited to narrowband electromagnetic fields.) in the original international standard is moved to Clause 4 "Test conditions";
- "a) Vertical polarization" and "b) Horizontal polarization" in "Figure 1 Example of absorber-lined shielded enclosure" of the original international standard are editorial errors, which are modified as "a) Front view" and "b) Top view" in this national standard;
- To be consistent with other parts, add "NOTE. See GB/T 33012.1-2016 for a detailed explanation of FPSC." in Annex A.

This Part is proposed by Ministry of Industry and Information Technology of the People's Republic of China.

This Part is under the jurisdiction of National Technical Committee on Automobiles of Standardization Administration of China (SAC/TC 114).

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Main drafters of this Part. Ding Yifu, Xu Xiuxiang, Cui Qiang, Sun Chengming, Pan Jingwen, Chen Yanlei, Ma Qian, Liu Xinliang, Lin Yanping, Wang Xibin, Li Lijuan, Wang Yhai, Cui Yanhua, Wu Meng, Zhao Wen and Wang Wei.

Road vehicles - Vehicle test methods for electrical
disturbances from narrowband radiated electromagnetic
energy - Part 2.Off-vehicle radiation sources

1 Scope

This Part of GB/T 33012 specifies the test conditions, test location, test equipment, stimulation and monitoring of vehicle, test set-up and test procedure for vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy - off-vehicle radiation sources.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the dated edition cited applies. For undated references, the latest edition of the referenced document (including all amendments) applies.

GB/T 33012.1-2016 Road vehicles - Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy - Part 1.General (ISO 11451-1.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 33012.1-

4 Test conditions

The applicable frequency range of this test method is 0.01 MHz to 18 000 MHz. Testing over the full frequency range could require different field-generating devices, but this does not imply that testing of overlapping frequency ranges is required.

5 Test location

The test should be performed in an absorber-lined shielded enclosure (simulated open field).

6 Test equipment

The field generating device may be an antenna or antennas, or a TLS, and whose construction and orientation shall be such that the generated field can be polarized in the mode specified in the test plan

7 Stimulation and monitoring of vehicle

The DUT shall be operated as required in the test plan by using actuators which have a minimum effect on the electromagnetic characteristics of the DUT, e.g. plastic blocks on the push-buttons, pneumatic actuators (with plastic tubes for gas supply).

8 Test set-up

No part of the radiating antenna shall be closer than 0.5 m to the outer body surface of the vehicle.

No part of a TLS, with the exception of the ground plane, shall be closer than 0.5 m to any part of the vehicle.

9 Test procedure

The test shall be carried out using the substitution method, which is based on the use of forward power as the reference parameter used for field calibration and during testing.

As required by the test plan, a test report shall be submitted detailing information regarding the test equipment, test site, test set-up, systems tested, frequencies, power levels, system interactions and any other information relevant to the test.

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