



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

GB/T 33014.7-2020

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

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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).

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Main drafters of this Part. Xu Xiuxiang, Cui Qiang, Liu Ketao, Hu Xiaojun, Ding Yifu, Liu Yuan, Lin Yanping, Sun Chengming, Liu Xinliang, Wang Hongwu, Wu Dingchao, Lu Changjun, Deng Fuqi, Li Jiabo, Cao Shanggui, Chu Yangang, Mi Jincai, Ma Qian, Li Rui, Li Xingyu, Wang Hongchao, Li Qiankun, Wang Xiaogang, Chang Jing, Dong Qianqian, Lu Xiaorong.

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.

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 user should specify the test severity levels over the frequency range (see Annex B). These levels are expressed in terms of the equivalent root-mean-square value of the unmodulated sine wave.

5 Test facility

Figure 1 shows an example of a set-up of a direct RF power injection measurement system. The spectrum analyzer or power meter shall be capable of measuring levels provided by the sampling device with an uncertainty of ± 1 dB. If necessary to preclude interference with other test activities, this test shall be performed in a shielded room.

6 Test method

When required in the test plan, a test report shall include information regarding the test equipment, test site, systems tested, frequencies, power levels,