

ICS 29.280

CCS S 35



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

GB/T 24338.2-2018

**Railway applications -- Electromagnetic compatibility -- Part 2:
Emission of the whole railway system to the outside world**

Issued on: June 7, 2018

Implemented on: January 1, 2019

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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4.2 and Chapter 5 to simplify the standard structure (see Appendix A).

1 Scope

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Foreword

GB/T 24338 "Tracking Electromagnetic Compatibility" consists of the following parts.

--- Part 1. General;

--- Part 2. The launch of the entire track system to the outside world;

--- Part 3-1. Locomotive trains and complete vehicles;

--- Part 3-2. Locomotive and rolling stock equipment;

--- Part 4. Emission and immunity of signal and communication equipment;

--- Part 5. Emission and immunity of ground-based equipment and systems.

This part is the second part of GB/T 24338.

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

This part replaces GB/T 24338.2-2011 "Electromagnetic compatibility of rail transit Part 2.

The entire rail system is sent to the outside world

Shooting, compared with GB/T 24338.2-2011, the main technical changes are as follows.

--- Removed the description of the upper and lower areas of the line in Chapter 1, the entire rail transit system has been covered and the text is not specifically

Propose the requirements for the upper and lower areas;

--- Removed the terms "external interface" and "railway transmission line", not applied in the text (see.2011, 3.3, 3.5);

--- Added normative reference document GB/T 6113.104 (see Chapter 2);

--- Revised the limits of the 9kHz ~ 0.15MHz range of emission requirements and related test content, changed to informative Appendix D, considering

Poor repeatability, not as a limit requirement, the "emitter limit" in the corresponding figure

is changed to "emission value" (see Chapter 4, 5.1.1, 5.1.1.3, 5.1.1.4, Figure 3, B.2);

--- Deleted Note 3 of 4.1, the detection method has been clearly identified as peak detection; (see 4.1 of.2011 edition);

--- Removed the requirement for overhead contact network launch, and the rail transit system launch measurement covered the launch of the overhead contact network (see.2011)

Version 4.3);

--- Increased the uncertainty requirements of measuring instruments (see 5.1.1.2);

--- Increased combination antenna type (see 5.1.1.3);

---Modified the measuring device for the receiver, computer, graphic recorder and printer in Figure 3~5, because the measuring device now

There are different types and multiple functions (see 5.1.1.6);

--- Increased requirements for measuring sites to facilitate site selection (see 5.1.1.6);

--- Revised the environmental noise requirements to make the measurement results more credible (see 5.1.1.7,.2011 edition 5.1.12);

--- Increased fixed frequency method to ensure accurate measurement at higher train speeds (see 5.2.1 and 5.2.2);

--- Increased scan rate requirements to adapt the method to measurements at different train speeds (see Table 2);

--- Revised the normative Appendix A as an informative appendix (see Appendix A, Appendix A of the.2011 edition).

This section uses the redrafting method to modify the use of IEC 62236-2.2008 "railway electromagnetic compatibility part 2. the entire track system

The launch of the outside world.

This section is structurally adjusted compared to IEC 62236-2.2008. Appendix A gives this section and IEC 62236-2.2008

The chapter number comparison list.

There are technical differences between this part and IEC 62236-2.2008, and the terms involved in these differences have been passed on the outside margins.

The vertical single line (|) of the position is marked. The specific technical differences and their causes are as follows.

--- Revised the scope of application of the standard to rationalize system launch requirements;

---About the normative reference documents, this part has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory References", and the specific adjustments are as follows.

- * Replace IEC 60050-161 with GB/T 4365 equivalent to the international standard;
- * Replace CISPR16-1-1 with GB/T 6113.101 equivalent to the international standard;
- * Replace IEC 62236-1 with GB/T 24338.1 modified to adopt international standards;
- * Removed IEC 62236-3-1;
- * CISPR22 has been deleted;
- * Added reference to GB/T 6113.104.

--- Revised the requirements of the emission measurement method to improve the test enforceability (see Chapter 1);

--- Removed the terms "external interface" and "railway transmission line", not applied in the text (see international standards 3.3 and 3.5);

--- Revised the limits of the 9kHz ~ 0.15MHz range of emission requirements and related test content, changed to informative Appendix D, considering

Poor repeatability, not as a limit requirement, the "emitter limit" in the corresponding figure is changed to "emission value" to meet the test repeatability requirement.

(See Chapter 4, 5.1.1.1, 5.1.1.3, 5.1.1.4, Figure 3, B.2);

--- Increased the uncertainty requirements of the measuring instrument to ensure the validity of the measured data (see 5.1.1.2);

--- Increased the type of combined antenna, increasing the range of antenna selection under the premise of meeting the technical requirements (see 5.1.1.3);

---Modified the measuring device for the receiver, computer, graphic recorder and printer in Figure 3~5, because the measuring device now

There are different types and multiple functions (see 5.1.1.6);

--- Increased requirements for measuring sites to facilitate site selection (see 5.1.1.6);

--- Revised the environmental noise requirements to make the measurement results more reliable (see 5.1.1.7);

--- Increase the requirements of the three-track receiver measuring point to standardize the

three-track flow-through line measurement method (see 5.1.2);

--- Added a fixed frequency scanning method to optimize the measurement method according to the running speed of the rolling stock (see 5.2.1 and 5.2.2);

--- Increased scan rate requirements to adapt the method to measurements at different train speeds (see 5.2.1);

--- Modified the frequency sweep and gave an operational measurement method (see 5.2.3);

--- Revised the normative Appendix A for the informative Appendix A, and revised it to the chapter terms and conditions, the original normative content moved into

4.2 and Chapter 5 to simplify the standard structure (see Appendix A).

This section also made the following editorial changes.

--- Revised the description of the measurement points in Chapter 1, and moved to 4.1 and 4.2 respectively;

--- Removed the description of the measured distance of the traction substation in Chapter 1, 4.2 has more detailed provisions;

--- Deleted the description of the measurement assumptions and the correspondence of the limits in Chapter 1, which are not in the scope of Chapter 1, and the text is also relevant.

content;

--- Removed the description of the upper and lower areas of the line in Chapter 1, the entire rail transit system has been covered and the text is not specifically

Propose the requirements for the upper and lower areas;

--- Removed 4.1 non-electrical line limit description, moved into the C limit curve description in Figure 1;

--- Removed 4.1 limits for urban rolling stock, and repeated with the C limit curve in Figure 1;

---Modified the position of Figure 1~5;

--- Deleted Figure B.1;

---Modified the legend of Figure 1;

--- Revised IEC 62236-2:2008 informative Appendix B;

--- Added informative Appendix D to explain the emission below 0.15MHz;

--- Added the informational Appendix E, giving the measurement results conversion reference method for peak detection and quasi-peak detection;