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

**GB/Z 6113.403-2020**

Replacing GB/Z 6113.403-2007

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**Specification for radio disturbance and immunity measuring apparatus and methods -  
Part 4-3: Uncertainties, statistics and limit modelling - Statistical considerations in the  
determination of EMC compliance of mass-produced products**

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## Foreword

GB/T 6113 "Specifications for Radio Disturbance and Immunity Measurement Equipment and Measurement Methods" is the basic electromagnetic compatibility standard, which consists of the following four parts.

Part 1. Radio disturbance and immunity measurement equipment

---Part 1-1. Radio disturbance and immunity measuring equipment measuring equipment;

---Part 1-2. Coupling device for conducting disturbance measurement of radio disturbance and immunity measuring equipment;

---Part 1-3. Radio disturbance and immunity measuring equipment auxiliary equipment disturbance power;

---Part 1-4. Antennas and test sites for radio disturbance and immunity measurement equipment radiation disturbance measurement;

---Part 1-5. Radio disturbance and immunity measurement equipment 5MHz~18GHz antenna calibration site and reference test site;

---Part 1-6. Radio disturbance and immunity measurement equipment EMC antenna calibration.

Part 2. Radio disturbance and immunity measurement methods

---Part 2-1. Radio disturbance and immunity measurement method conducted disturbance measurement;

---Part 2-2. Radio disturbance and immunity measurement method disturbance power measurement;

---Part 2-3. Radio disturbance and immunity measurement method Radiated disturbance

measurement;

---Part 2-4.Radio disturbance and immunity measurement methods, immunity measurement;

---Part 2-5.Field measurement of large-scale equipment disturbance launch.

Part 3.Radio disturbance and immunity measurement technical report

---Part 3.Radio disturbance and immunity measurement technical report.

Part 4.Uncertainty, Statistics and Limit Modeling

---Part 4-1.Uncertainty of uncertainty, statistics and limit modeling standardized EMC test;

---Part 4-2.Uncertainty, statistics and limit modelling uncertainty of measuring equipment and facilities;

---Part 4-3.Statistical considerations for the determination of EMC compliance of batch products in uncertainty, statistics and limit modeling;

---Part 4-4.Uncertainty, statistics and limit modeling complaint statistics and limit calculation model;

---Part 4-5.Uncertainty, statistics and limit modeling alternative test method use conditions.

This part is part 4-3 of GB/T 6113.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB /Z 6113.403-2007 "Radio disturbance and immunity measurement equipment and measurement method specification Part 4-3.

Uncertainty, Statistics, and Limit Modeling Statistical Considerations for the Determination of EMC Conformity of Batch Products", and GB /Z 6113.403-2007

In comparison, the main technical changes are as follows.

---Modified the normative reference documents (see Chapter 2, Chapter 2 of the.2007 edition);

---Added the estimation of sample acceptance probability (see Appendix D).

The translation method used in this part is equivalent to the adoption of CISPR16-4-3/TR.2007 "Regulations for Radio Disturbance and Immunity Measurement Equipment and Measurement Methods"

Part 4-3.Uncertainty, Statistics and Limit Modeling. Statistical Considerations for the Determination of EMC Conformity of Batch Products."

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 6113.402-2018 Radio disturbance and immunity measurement equipment and measurement method specification Part 4-2.Uncertainty

Degree, Statistics and Limit Modeling Uncertainty of Measuring Equipment and Facilities (CISPR16-4-2.2014, IDT)

This section has made the following editorial changes.

---In order to facilitate the quotation in the text, the table number and header have been added to some tables (see Table 1, Table 2, Table A.1, Table A.2 and Table A.3).

---Added reference CISPR/T R16-4-1.

This part is proposed and managed by the National Radio Interference Standardization Technical Committee (SAC/TC79).

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## 1 Scope

This part of GB/T 6113 describes statistical considerations for determining the electromagnetic compatibility (EMC) compliance of bulk products.

Reasons for this statistical consideration.

- a) The purpose of reducing interference is to make most qualified products not cause interference;
- b) The International Special Committee on Radio Interference (CISPR) limit must not only be suitable for the type approval of a single product, but also suitable for batch

Type approval of the product;

- c) Statistical techniques need to be applied to ensure that batch products meet CISPR limits;
- d) Every country should have the same understanding of the meaning of these limits, which is very important for international trade;

e) The national committees of IEC participating in CISPR cooperation shall strive to seek the recognition of the country where they are located.

Therefore, this section specifies requirements and provides guidance based on statistical techniques. The EMC compliance of bulk products needs to be based on statistical techniques

For applications, this technology should assure consumers that 80% of the products of the researched type meet the emission or immunity requirements with 80% confidence.

Chapter 4 gives the general requirements of the 80%/80% criterion. Chapter 5 gives more specific aspects of the 80%/80% criterion applied to launch tests.

Claim. Chapter 6 gives guidelines for the application of CISPR 80%/80% criteria to immunity tests. 80%/80% guidelines protect consumers from

Products that do not meet the limit requirements will be obtained, but this does not represent the probability of acceptance of a sampled batch of products. But the probability of acceptance

Is very important. Appendix A gives more information about the probability of acceptance (manufacturer's risk).

## 2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 4365-2003 Electrotechnical terminology electromagnetic compatibility

CISPR16-4-2 Specification for Radio Disturbance and Immunity Measurement Equipment and Measurement Methods Part 4-2.Uncertainty, Statistics and

Limit modelling the uncertainty of measuring equipment and facilities

## 3 Terms, definitions and symbols

The terms, definitions and symbols defined in GB/T 4365-2003 apply to this document.

## 4 General requirements

The following explains the CISPR limit and the statistical sampling method to make batch products comply with the limit.