

ICS 17.220
CCS N10



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

GB/T 25471-2010

**Measuring methods for electromagnetic shielding effectiveness
of coating**

电磁屏蔽涂料的屏蔽效能测量方法

Issued on: December 1, 2010

Implemented on: May 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1 Scope	
2 Normative references	
3 Terms and Definitions	
4 Overview 2	
5.2 Measuring receivers	
5.3 flange coaxial test apparatus	
5.4 Spectrum Analyzer	
5.5 Network Analyzer	
5.6 Attenuator	
5.7 cable and connector 3 PA 3 5.8 6 test samples (referred to as. Sample)	
7 Test Method	
7.1 Overview	
7.2 signal source (tracking generator)/receiver measurements	
7.3 signal source (tracking generator)/spectrum analyzer measurement method	
7.4 network analyzer measurement method 6 8 measurement program	
8.1 Instrument Preparation	
8.2 Test Procedure 7	
11 Figure A.9 partial assembly drawing	

Foreword

Appendix A of this standard is an informative annex. The standard proposed by China Machinery Industry Federation. This standard by the national industrial process measurement and control Standardization Technical Committee (SAC/TC124) centralized. This standard is drafted by: Shanghai Institute of Industrial Automation Instrumentation. Shanghai Automation Instrumentation System Inspection and Testing Institute, Shanghai Entry-Exit Inspection and Quarantine Bureau, Shanghai Material Research. the drafting of this standard to participate The Shanghai Bell Alcatel. The main drafters of this standard. Xu Jianping, Wang Ying, Hong Ji Ye, Zhang Xian, Li Minghua, Chen Nan, Maying Qi, Zhang Shunda. Electromagnetic shielding paint shielding effectiveness measurement method

1 Scope

GB/T 25471-2010 is the Chinese national standard on measuring methods for

electromagnetic shielding effectiveness of coating, in the field of metrology and measurement. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 1 December 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2011. Classification: ICS 17.220, CCS N10. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the flat plane for electromagnetic shielding paint electromagnetic shielding effectiveness measurement method. This standard specifies the following.

---Test Equipment;

--- Test samples;

---Measurement methods;

--- Measurement program. This standard applies to the measurement of electromagnetic shielding paint to the plane electromagnetic wave shielding effectiveness, but also for coating an electromagnetic shielding effect, Shielding effectiveness measurement and the conductive coating film and other flat materials. Test methods specified in this standard does not apply to cables or connectors. The purpose of this standard is to develop a common and reproducible basic measurement method to evaluate the electromagnetic shielding paint flat screen Shield effectiveness.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 4365-2003 Electrotechnical terminology Electromagnetic compatibility (

IEC 60050 (161).1990 A11997 A21998, IDT)

GB/T 6113.101 radio disturbance and immunity measuring apparatus and methods - Part 1-1. Radio disturbance and anti- Interference measuring equipment measuring equipment (

GB/T 6113.101-2008, CISPR16-1-1.2006, IDT)

IEC 61000-4-3.2008 Electromagnetic compatibility - Part 4-3. Testing and measurement

techniques - RFEMS test

3 Terms and Definitions

GB/T 4365-2003 and established the following terms and definitions apply to this standard.

3.1 Shielding effectiveness shielding effectiveness; SE In the same excitation level, the barrier coating and there is no shielding paint received specific power or voltage, and logarithmic. which is. $SE = 20\lg V_0/V$ (1) $SE = 10\lg P_0/P$ (2) Where. SE

--- shielding effectiveness, dB; V_0

--- no reception voltage when the shielding paint; V_1

--- have received when voltage shielding paint; P_0

--- no reception power when the barrier coating; P_1

--- have received power when the barrier coating. NOTE. The values taken in accordance with ATSM D4935, shielding effectiveness of shielding paint in case the received value than unshielded paint case received, the In shielding effectiveness is a negative value.