

ICS 25.220.40

CCS A 29



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

GB/T 34648-2017

**Metallic and other inorganic coatings -- Autocatalytic nickel
over autocatalytic copper for electromagnetic shielding**

金属及其他无机覆盖层 电磁屏蔽用化学镀铜上化学镀镍

(English Translation)

Issued on: September 29, 2017

Implemented on: April 1, 2018

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

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Foreword

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

This standard uses redrafted law revision using ISO 17334:2008 "metal and other inorganic coatings with electromagnetic shielding of copper on the electroless nickel. " this standard ISO 17334:2008 compared with the technical differences and the reasons are as follows.

--- On normative references, this standard made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- Replace ISO 2080 with GB/T 3138 equivalent to international standards (see Chapter 3);
- Replace ISO 2177 with GB/T 4955 equivalent to international standards (see A.2);
- Replace ISO 2819 with GB/T 5270 equivalent to international standards (see 6.6.1);
- Replace ISO 3882 with GB/T 6463 equivalent to international standards (see A.1);
- Replace ISO 2064 with GB/T 12334 equivalent to international standards (see Chapter 3);
- Replace ISO 4525 with GB/T 12600 equivalent to international standards (see 6.8);
- Replace ISO 4519 (see Chapter 7) with GB/T 12609 equivalent to international standards;
- Replace ISO 4527 with GB/T 13913 equivalent to international standards (see 5.1);
- Replace ISO 3497 with GB/T 16921 equivalent to international standards (see A.4);
- Replace IEC 61587-3 (see 6.9) with GB/T 18663.3 equivalent to international standards;
- Replace GB/T 20018 equivalent to ISO 3543 (see A.3) with an equivalent international standard;
- Equivalent to the use of international standards GB/T 20631.2 instead of IEC 60454-2;
- Replace ISO 16348 with GB/T 34627 equivalent to international standards (see 6.2).

This standard is proposed by the China Machinery Industry Federation.

This standard by the National Metal and Nonmetallic Coating Standardization Technical Committee (SAC/TC57) centralized.

This standard was drafted unit. Wuhan Institute of Materials Protection, Wuhan material security electroplating productivity technology promotion center, Anhui Hongda Auto Electric Co., Ltd., Wuhan Kang Jie Technology Co., Ltd., Shandong Standardization Association.

Introduction

The widespread use of electronic devices requires a way to protect the shielded components from electromagnetic radiation. The dangers of electromagnetic radiation can be can cause computer and medical, navigation, blasting, telecommunications and other devices failure. The governments of all countries in the world have formulated the requirements for electromagnetic shielding Off the rules and regulations.

The use of a conductive enclosure, instrument cover or housing prevents the absorption or diffusion of electromagnetic radiation; therefore, the metal housing can reach Very effective

electromagnetic shielding effect. However, plastic has the advantages of cost and weight and is widely used in computers and various chassis cabinets.

Although plastic is non-conductive, it is possible to protect the components from electromagnetic radiation by covering the metal coating.

A layer of copper is deposited on the surface of the plastic shell by electroless plating, and a thin layer of electroless nickel plating is coated on the electroless copper plating to improve the durability and corrosion resistance, is a way to effectively protect the computer case from electromagnetic interference. Although this method was first used in computer plastic the material housing is now also suitable for other substrates. It is estimated that the use of electroless copper plating on electroless copper plating on the electromagnetic shielding method will make its use following Continued growth.

The purpose of the development of this standard is to facilitate the demand side designated by the plating substrate, supplier or processing side and to provide parts drawings, purchase orders.

Metal and other inorganic coatings Electromagnetic shielding Electroless nickel plating on electroless copper plating Caution --- The use of this standard may include hazardous materials, operations and equipment. However, this standard does not specifically point out in its application Relevant safety issues that arise. The users of this standard should determine the appropriate safety and health measures and make feasible rules prior to use Chapter restrictions.

1 Scope

This standard applies to plastic or metal parts to provide anti-electromagnetic interference (EMI) or electrostatic discharge (ESD) protection of the electroless copper plating over Cover the requirements of electroless nickel plating.

This standard does not apply to high-strength steel easily lead to hydrogen embrittlement.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3138 metal and other inorganic surface coating terminology (GB/T 3138-2015, ISO 2080:2008, IDT) GB/T 4955 Metallic coating thickness measurement Anodic dissolution coulometry (GB/T 4955-2005, ISO 2177.

2003, IDT)

GB/T 5270 Metallic base metal coating on the electrodeposited layer and chemical

deposited layer adhesion strength test methods Review (GB/T 5270-2005, ISO 2819:1980, IDT) GB/T 6463 Review of Methods for Measuring Thickness of Metals and Other Inorganic Coatings (GB/T 6463-2005, ISO 3882:2003, IDT) GB/T 12334 metal and other inorganic coatings on the thickness of the definition and general rules (GB/T 12334-2001, ISO 2064:1996, IDT) GB/T 12600 Metallic coatings Plastic Ni-Cr plating (GB/T 12600-2005, ISO 4525:2003, IDT) GB/T 12609 Electrodeposited metal coating and decorative count test procedures (GB/T 12609-2005, ISO 4519:1980, IDT) GB/T 13913 Metallic coatings - Specification and test methods for electroless nickel-phosphorus alloy coatings (GB/T 13913-2008, ISO 4527:2003, IDT) GB/T 16921 metal cover layer thickness measurement X-ray spectrometry (GB/T 16921-2005, ISO 3497.) 2000, IDT) GB/T 18663.3 Mechanical draft of electronic equipment - Tests for metric and imperial series - Part 3. Cabinets, racks and subracks Electromagnetic shielding performance test (GB/T 18663.3-2007, IEC 61587-3:2006, IDT) GB/T 20018 metal and non-metallic cover layer thickness measurement beta ray backscatter (GB/T 20018-2005, ISO 3543:2000, IDT) GB/T 20631.2 Pressure Sensitive Adhesives for Electrical Applications Part 2. Test Methods (GB/T 20631.2-2006, IEC 60454-2. 1994, IDT)