

ICS 49.060

CCS V 70



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

GB/T 32304-2015

**Electrostatic discharge protection requirements for aerospace
electronic products**

航天电子产品静电防护要求

Issued on: December 31, 2015

Implemented on: July 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions, abbreviations
- 3.1 Terms and Definitions GB/T 15463 and

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Aerospace Science and Technology Corporation. This standard by the National Aerospace Technology and Application of Standardization Technical Committee (SAC/TC425) centralized. This standard was drafted. Beijing Oriental Institute of Metrology, Xi'an Institute of Space Radio Technology. The main drafters. Zhang Shufeng, Liu Min, Zhu Jianhua, Ma Zhiyi, Liu Zhihong, Xu Siwei, Zhiyong, Ji Kai Zheng, Lu Yun Xi, Cai Onion, Wang Nanguang, baicalensis, Pingwen Wu, Xu Lili, Tanghao Jun, Julio oak, Zhang Xu Jie.

With the rapid development of electronic technology, aerospace electronics products are used in a large number of static sensitive devices, electronic product development, production, use And other processes as well as tools and equipment used by the operator to carry an electrostatic charge may cause damage or even failure of electrostatic sensitive devices, will Aerospace electronic products to have serious quality problems. In order to prevent accidents due to the electronic product quality caused by electrostatic discharge, China's aerospace Electronic products electrostatic protection put forward a clear regulatory and technical requirements, and aerospace systems in electronics production unit operational implementation, has been Successfully verified and applications. The electrostatic protection standard will aerospace electronics product life cycles play an effective role in the guidance and control. Aerospace electronic products electrostatic protection requirements

1 Scope

China's national standard for electrostatic discharge protection in aerospace electronic products. It specifies the general requirements for that protection together with the detailed technical and administrative requirements for planning, training, the antistatic work area, packaging, marking, purchasing and outsourcing, monitoring and measurement, audit, management review and improvement. It applies to the procurement, production, inspection, testing, failure analysis, packaging, marking, maintenance, storage, distribution and transport of electrostatic discharge sensitive aerospace electronic products, and it can

also serve as the basis for evaluating or auditing an organisation's electrostatic protection management system. The reason it exists is stated plainly in its introduction: as electronics has advanced, aerospace products use a great many static-sensitive devices, and the tools, equipment and people involved in developing, producing and using them all carry electrostatic charge that can damage or destroy those devices and leave the product with a serious quality defect. What makes electrostatic damage particularly dangerous in this application is that it is often not immediate. A discharge can degrade a semiconductor junction without destroying it, leaving a device that passes every test and fails months later - which for a satellite means after launch, in a place where nothing can be repaired and where the failure of one component can end a mission that cost years to build. So the response is a management system rather than a design rule: the requirements here are about the work area, the people, the packaging, the suppliers and the audits, because static damage is prevented by controlling how the hardware is handled at every step rather than by any property of the hardware itself. Issued on 31 December 2015 and in force since 1 July 2016.

This standard specifies the general requirements for aerospace electronics static protection and planning, training, anti-static work area, packaging, labeling, procurement And outsourcing, monitoring and measurement, audit, management review and improvement detailed technical and administrative requirements. This standard applies to aerospace electrostatic discharge sensitive electronic products procurement, production, inspection, testing, failure analysis, packaging, labeling, maintenance, storage Storage, distribution and transportation, scientific research, production activities, but also as a basis for the organization of electrostatic protection management system evaluations or audits.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 15463 static security terms

GB/T 19000 Quality management systems Fundamentals and vocabulary

3.1 Terms and Definitions GB/T 15463 and

GB/T 19000 and defined by the following terms and definitions apply to this document.

3.1.1 Electrostatic discharge electrostaticdischarge Two objects with different electrostatic potential due to electrostatic charge of direct contact or induced by electrostatic field induced between two objects fast Transfer.

3.1.2 Electrostatic (discharge) protection electrostaticdischargeprotection anti-static Various techniques or methods to prevent electrostatic discharge protective measures taken to

occur.

3.1.3 Organization organization Electrostatic discharge sensitive disposal of electronic products plant by the company or other entity, including outsourcing units.

3.1.4 Static Protection policy electrostaticdischargeprotectionpolicy By the organization's top management official release on overall intentions and direction of the electrostatic protection areas.

3.1.5 Disposal handling Electrostatic discharge sensitive electronic products procurement, manufacturing, processing, assembly, fitted together, packaging, labeling, maintenance, failure analysis, testing, inspection, Environmental testing process, storage, distribution and transportation, the direct or indirect effect on the product activity.