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

GB/Z 127.1-2025

**Process management for avionics - Aerospace qualified
electronic components (AQEC) - Part 1: Integrated circuits and
discrete semiconductors**

航空电子过程管理 航空航天合格电子元器件（AQEC）第1部分：集成电路和半
导体分立器件

(English Translation)

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Foreword

This document is a standard or guiding technical document.

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document is Part 1 of GB /Z 127 "Aerospace Qualified Electronic Components (AQEC) - Aerospace Electronics Process Management". GB /Z 127 has published the following parts.

---Part 1: Integrated Circuits and Discrete Semiconductor Devices.

This document is equivalent to IEC TS62564-1:2016 "Aerospace Electronics Process Management - Aerospace Qualified Electronic Components (AQEC)".

Part 1: Integrated Circuits and Discrete Semiconductor Devices. The document type has been changed from an IEC technical specification to my country's national standardization guidance. Sexual technology documents.

Introduction

GB /Z 127 specifies the minimum requirements for being designated as an aerospace qualified electronic component (AQEC). It is proposed to consist of one part.

---Part 1: Integrated Circuits and Discrete Semiconductor Devices. The purpose is to be designated as aerospace-qualified electronic components. Minimum requirements for integrated circuits and discrete semiconductor devices (AQEC).

The Aerospace Qualified Electronic Components (AQEC) program is established by the manufacturer and documents compliance with AQEC requirements, specifying... The purpose of AQEC is.

- a) Provide AQEC users with information and channels for AQEC manufacturers' commercial off-the-shelf (COTS) components;
- b) Enable AQEC users to evaluate whether these components can operate reliably in their applications;
- c) Minimize deviations from AQEC manufacturer COTS products;
- d) Minimal impact on AQEC manufacturers' standard operating procedures or business processes;

- e) Facilitate communication between AQEC manufacturers and users.

1 Scope

This document specifies the minimum requirements for integrated circuits and discrete semiconductor devices designated as Aerospace Qualified Electronic Components (AQEC). Require.

This document applies to integrated circuits and discrete semiconductor devices with the following characteristics.

- a) The component manufacturer provides the minimum requirements or information that allows the component manufacturer to designate it as a standard commercial shelf item for AQEC. COTS (Choose-Owned Components) devices.
- b) COTS components where the component manufacturer uses the standard datasheet as the minimum requirement for design, manufacturing, packaging/assembly, and testing. Device.
- c) Components manufactured by AQEC-certified companies whose quality systems include the manufacturer's standards, operating procedures, and technical specifications. COTS devices. This information should be provided if necessary.
- d) Components manufactured by the same process before meeting AQEC requirements.
- e) Other attributes of components designated as AQEC (supporting AQEC users) are given in Appendix B.

Note: Components conforming to military specifications (except those used only for "logistics support") are considered AQEC; the remainder of this document pertains only to non-military components.

Components meeting AEC-Q100 standards (levels 0 to 3) are considered AQEC. For components suitable for a temperature range of 0°C to 70°C... The Class 4 components used are also considered AQEC. Users provide documentation according to IEC TS62239-1 to demonstrate that the class of components used complies with AQEC standards. Application requirements.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

Note: GB/T 19001-2016 Quality Management System Requirements (ISO 9001:2015, IDT)

3.1 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1 AQEC Specification

Documents describing AQEC products prepared by the manufacturer or for them.