

ICS 49.020

CCS V 40



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

GB/T 37312.1-2019

**Process management for avionics -- Electronic components for aerospace,
defence and high performance (ADHP) applications -- Part 1: General
requirements for high reliability integrated circuits and discrete semiconductors**

Issued on: March 25, 2019

Implemented on: October 1, 2019

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

Foreword

GB/T 37312 "Avionics Process Management Aerospace, Defense and Other High Performance Applications (ADHP) Electronic Components"

Divided into the following sections.

--- Part 1. General requirements for high-reliability integrated circuits and discrete semiconductor devices;

--- Part 2. General requirements for passive components.

This part is the first part of GB/T 37312.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the translation method equivalent to IEC TS62686-1.2015 "Avionics Process Management Aerospace, Defense and Other High

Performance Applications (ADHP) Electronic Components Part 1. General Requirements for Highly Reliable Integrated Circuits and Discrete Semiconductor Devices.

This section has made the following editorial changes.

--- Removed the TL9000 from the canonical reference file and moved it to the reference (the original TL9000 is in the reference file, but not in the positive

Cited in the text);

--- Increase the informative Appendix NA (reference standard domestic and foreign comparison).

This part is proposed and managed by the National Aeronautical Electronic Process Management Standardization Technical Committee (SAC/TC427).

This section drafted by. China Aviation Integrated Technology Research Institute, Beijing Shengtaoping Experimental Engineering Technology Research Institute Co., Ltd., China

Aviation Industry Group Co., Ltd. First Aircraft Design and Research Institute.

Introduction

This section contains all the requirements of the third revision of the STACK specification S/0001, version 14 and the corresponding IEC test.

Updated version of the law and additional test information.

This section supplements the IEC TS62564-1 standard for aerospace, defense, and other high performance applications (ADHP) applications.

Where additional data outside of the data sheet is required (eg, additional thermal performance data is required for applications in harsh thermal environments)

Situation, or in flight critical applications requiring complex devices to comply with additional verification data for RTCADO-254/EUROCAEED-80

Case).

This part can also be used for the evaluation of "General Appraisal Requirements Compliance" in the IEC TS62564-1 standard.

IEC TS62239-1 standard.

Note. By adopting the 3rd change order of the STACK specification S/0001 14th edition, all existing STACK certified manufacturers will be reviewed by IEC Q.

Yes, it can be reviewed using the newly established STACK-IEC Q joint agency.

Avionics Process Management Aerospace, Defense and

Other high performance applications (ADHP) electronics

Components Part 1. Highly reliable integrated circuits and

General requirements for discrete semiconductor devices

1 Scope

This part of GB/T 37312 defines general commercial shelf production in aerospace, defense and other high performance applications (ADHP).

Minimum requirements for products (COTS) integrated circuits and discrete semiconductor devices.

This section applies to ADHP applications that operate within the specified parameters specified in the published data sheet and are compliant with IEC TS.

All devices of the 62239-1 (ECMP) standard. This section can also be applied to high-reliability, high-performance devices used in other industries, but it requires ?

Don't use it.

In addition to complying with this section, the design product should be improved or further tested to verify it in accordance with the corresponding ECMP procedure document.

Suitability to meet the requirements of ADHP applications. In addition, devices conforming to the IEC TS62564-1 standard may also be more suitable for ADHP applications.

Claim.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

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

ISO 9001 Quality Management System Requirements
(Qualitymanagementsystems-requirement)

ISO TS16949 Quality Management System Automotive Production and Related
Accessories Organizational Applications ISO 9001.2008 Special Requirements
(Qualitymanagementsystems-ParticularrequirementsfortheapplicationofISO
9001.2008forau-

Tomotiveproductionandrelevantervicepartorganizations)

ANSI/EIA-556 Freight Outer Packaging Bar Code Label Standard
(OuterShippingContainerBarCodeLabelStand-

Ard)

Packaging Materials Standard for For ANSI/ESDS541 ESD Sensitive Products (Packaging
MaterialsStandardsforESD

sensitivItems)

AS/EN/JISQ9100 Quality Management System Aerospace and Defense Organization
Requirements (Aerospaceseries-Qualityman-

agementsystems-Requirementsforaviation,spaceanddefenceorganizations)

IPC/JEDECJ-STD-020 Non-hermetic solid surface mount device moisture/reflow soldering
grading (Moisture/Reflow

SensitivityClassificationforNonhermeticSolidStateSurfaceMountDevices)

IPC/JEDECJ-STD-033 Operation, Packaging, Transportation and Use of Water
Vapor/Reflow Solderable Surface Mount Devices (Handling,

Packing, ShippingandUseofMoisture/ReflowSensitiveSurfaceMountDevices)

Lead (Pb), lead-free (Pb-free) and other properties in IPC/JEDECJ-STD-609 devices, printed boards and printed board assemblies

And label [MarkingandLabelingofcomponents, PCBsandPCBAstoidentifyLead(Pb), Lead-Free

(Pb-Free)andOtherAttributes]

JEDEC/IPC/ECIAJ-STD-048 Product Break Notification Standard

(NotificationStandardforProductDiscontin-

Ance)