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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62396-2, which is a technical specification, has been prepared by IEC technical committee 107: Process management for avionics.

This standard cancels and replaces IEC/PAS 62396-2 published in 2007. This first edition constitutes a technical revision.

The text of this standard is based on the following documents:

Enquiry draft	Report on voting
107/80/DTS	107/86/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62396 series, under the general title *Process management for avionics – Atmospheric radiation effects*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended

A bilingual edition of this document may be issued at a later date.

INTRODUCTION

This industry-wide technical specification provides additional guidance to avionics systems designers, electronic equipment component manufacturers and their customers to determine the susceptibility of microelectronic devices to single event effects. It expands on the information and guidance provided in IEC/TS 62396-1.

Guidance is provided on the use of existing single event effects (SEE), SEE data, sources of data and the types of accelerated radiation sources used. Where SEE data is not available considerations for testing is introduced including the suitable radiation sources for providing avionics SEE data. The conversion of data obtained from differing radiation sources into avionics SEE rates is detailed.

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1 Scope

The purpose of this technical specification is to provide guidance related to the testing of microelectronic devices for purposes of measuring their susceptibility to single event effects (SEE) induced by the atmospheric neutrons. Since the testing can be performed in a number of different ways, using different kinds of radiation sources, it also shows how the test data can be used to estimate the SEE rate of devices and boards due to the atmospheric neutrons in the atmosphere at aircraft altitudes.

2 Normative references

The following referenced documents are indispensable for the application of this document, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC/TS 62396-1, *Process management for avionics – Atmospheric radiation effects – Part 1: Accommodation of atmospheric radiation effects via single event effects within avionics electronic equipment*