

Process management for avionics — Atmospheric radiation effects —

Part 3: Optimising system design to accommodate the Single Event Effects (SEE) of atmospheric radiation

ICS 31.020; 49.060

National foreword

This Draft for Development is the UK implementation of IEC/PAS 62396-3:2007.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application can be obtained.

A PAS is a Technical Specification not fulfilling the requirements for a standard, but made available to the public and established in an organization operating under a given procedure.

A review of this Draft for Development will be carried out not later than three years after its publication.

Notification of the start of the review period, with a request for the submission of comments from users of this Draft for Development, will be made in an announcement in the appropriate issue of *Update Standards*. According to the replies received, the responsible BSI Committee will judge whether the validity of the PAS should be extended for a further three years or what other action should be taken and pass their comments on to the relevant international committee.

Observations which it is felt should receive attention before the official call for comments will be welcomed. These should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted to Technical Committee GEL/107, Process management for avionics.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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PUBLICLY AVAILABLE SPECIFICATION PRE-STANDARD

**Process management for avionics – Atmospheric radiation effects –
Part 3: Optimising system design to accommodate the Single Event Effects
(SEE) of atmospheric radiation**

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PROCESS MANAGEMENT FOR AVIONICS – ATMOSPHERIC RADIATION EFFECTS –

Part 3: Optimising system design to accommodate the Single Event Effects (SEE) of atmospheric radiation

1 Scope and object

This PAS is intended to provide guidance to those involved in the design of avionic systems and equipment. It builds on the initial guidance on the system level approach to Single Event Effects in IEC/TS 62396-1, considers some avionic systems and provides basic methods to accommodate SEE so that System Hardware Assurance levels may be met.

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*

IEC/TS 62239, *Process management for avionics – Preparation of an electronic components management plan*

3 Terms and definitions

For the purpose of this document, the terms and definitions of IEC/TS 62396-1 and IEC/TS 62239 apply.

4 Avionic Systems

In IEC/TS 62396-1, it was detailed that systems for which failure may have the most severe impact on the aircraft are classified as level A and require the most rigorous approach to single event effects and parts control. Two examples of avionic systems are provided for the purposes of clarification.