ICS 49.035
CCS V76

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 43927-2024

Safety design and control requirements for spacecraft Li-ion batteries

航天器用锂离子蓄电池组安全设计与控制要求

Issued on: April 25, 2024 **Implemented on: August 1, 2024**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents"

Drafting is required:

Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents:

This document was proposed and coordinated by the National Technical Committee for Standardization of Aerospace Technology and Its Applications (SAC/TC425):

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Safety of Lithium-ion Battery Packs for Spacecraft

Design and control requirements

1 Scope

This document specifies the overall requirements for safety design, general requirements for safety design and control, and safety

Detailed requirements for safety design and control and safety verification requirements:

This document applies to lithium-ion battery packs (hereinafter referred to as "battery packs") for spacecraft such as satellites and space stations:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document:

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document:

GB 2894 Safety signs and their use guidelines

3 Terms, definitions and abbreviations

3:1 Terms and Definitions

The following terms and definitions apply to this document:

The product has the ability to not cause personal injury, equipment damage, property loss, or endanger human health and the environment:

Possible accident conditions:

A combined measure of the likelihood and severity of a hazard:

The shortest distance through air between two conductive parts:

[Source: GB/T 4943:1-2022, 3:3:12:1] 3:1:5 Electrical distance

The shortest spatial distance measured between the coatings of two current-carrying conductors with insulating coatings:

Parallel block celpackage

The battery pack consists of two or more single batteries connected in parallel to obtain a suitable capacity: