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ICS 49.025
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NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB/Z 41270.4-2026

Process management for avionics - Atmospheric radiation effects - Part 4: Design of high voltage aircraft electronics managing potential single event effects

航空电子过程管理 大气辐射影响 第4部分：控制潜在单粒子效应的飞机高压设备设计

(English Translation)

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Foreword

GB/Z 41270.4-2026 is a national guiding technical document (GB/Z) of the People's Republic of China, issued on 24 September 2026 by the State Administration for Market Regulation and the Standardization Administration of China.

The document adopts an international standard (ISO or IEC).

It is under the responsibility of the Standardization Administration of China.

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1 Scope

The subject of this guiding technical document is the design of high voltage aircraft electronics so that potential single event effects are managed. It forms Part 4 of the series on atmospheric radiation effects under process management for avionics. It is relevant to designers of aircraft power and high voltage electronic equipment, avionics manufacturers, reliability engineers and certification staff.

It adopts an international standard and was issued on 24 September 2026. As a GB/Z it offers guidance and is not a set of binding requirements. High voltage devices are particularly sensitive to energetic particles at flight altitude, since a single strike can trigger a destructive failure, which is why a dedicated part of the series addresses them. Engineers who need to consider how atmospheric radiation can influence high voltage electronics in aircraft can use it as a reference alongside the other parts of the series, each of which addresses a different aspect of the radiation environment.

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