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

GB/T 45980-2025

**Requirements for digital testing equipment for aircraft electrical
power characteristics**

飞机供电特性数字式测试要求
(English Translation)

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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.

This document is modified to adopt ISO 12384:2010 "General requirements for digital test equipment for electrical power supply characteristics of aerospace aircraft".

The technical differences between this document and ISO 12384:2010 and their reasons are as follows.

a) Added the terms "alternating current", "steady-state alternating current" and "steady-state direct current" and their definitions (see 3.1, 3.2 and 3.3);

b) Change the sampling frequency of AC and DC distortion coefficients from 200 kHz to 500 kHz (see 5.2.1.5, 5.2.1.7, 5.4.1.2, 6.2.5);

The sampling frequency of AC voltage transients is changed from 100kHz to 200kHz (see 5.2.2, 6.2.5); the sampling frequency of steady-state DC voltage is changed from 100kHz to 200kHz (see 5.2.2, 6.2.5);

The frequency is changed from 20kHz to 72kHz (see 5.4.1.1, 6.2.5); the sampling frequency of DC voltage ripple is changed from 20kHz to 200kHz (see 5.4.1.4, 6.2.5); the sampling frequency of DC voltage transient is changed from 80kHz to 200kHz (see 5.4.2, 6.2.5) to adapt to the current use and development of test equipment in my country.

The following editorial changes have been made to this document.

--- To coordinate with the existing standard, the name of the standard is changed to "Digital Test Requirements for Aircraft Power Supply Characteristics".

1 Scope

This document specifies the digital test methods and test equipment requirements for aircraft power supply characteristic parameters.

This document is applicable to the testing of power supply characteristics of aircraft power systems, power distribution systems, and power input terminals of electrical equipment.

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/T 30203 Aircraft Electrical System Characteristics (GB/T 30203-2013, ISO 1540:2006, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 30203 and the following apply to this document.

AC current

The RMS value of the phase current.

steadystateACcurrent the average value of the alternating current corresponding to the maximum integer number of current cycles in 1s.

steadystateDCcurrent the time average value of DC current within 1s.

sampling frequency

The reciprocal of the sampling interval.

Sampling time

The total sampling interval time.

4 Symbols

The symbols used in this document are shown in Table 1.