

ICS 49.035
CCS V 25



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

GB/T 46748-2025

**Comprehensive evaluation method for the application
validation of space application components**

宇航用元器件应用验证综合评价方法

Issued on: December 2, 2025

Implemented on: April 1, 2026

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

Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4.General Principles and Requirements	2
4.1 Comprehensive Evaluation Content	2
4.2 Comprehensive Evaluation Requirements	2
4.3 Comprehensive Evaluation Principles	2
4.4 Comprehensive Evaluation Workflow	2
5.Construction and Value Selection Rules of the Evaluation Index System	4
5.1 Construction of Evaluation Index System	4
5.1.1 Construction Requirements	4
5.1.2 Building the program	4
5.2 Value Selection Rules	5
6.1.1 Data Collection	6
6.1.2 Data Analysis	6
6.3 Evaluation Implementation	6
6.4 Issue preliminary evaluation conclusions	6
6.5 Review and Conclusion Acceptance	7
6.6 Forming the final evaluation conclusion	7

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Aerospace Technology and Its Applications (SAC/TC425). This document was drafted by: China Academy of Space Technology, Beijing Branch of Aerospace Times Electronics Technology Co., Ltd., and China Aerospace Standards. Standardization Institute, China Aerospace Science and Technology Corporation Commercial Satellite Co., Ltd., Beijing Institute of Space Electromechanical Engineering, Lanzhou Institute of Space Technology

Physics Shandong Aerospace Electronic Technology Research Institute, China Academy of Launch Vehicle Technology, Shanghai Institute of Space Technology Basic Research, China Aerospace Science and Industry Corporation Defense Technology Research Institute Research and Experiment Center, Innovation Academy for Microsatellites of the Chinese Academy of Sciences, Beijing Institute of Microelectronics Technology, China Star Network Innovation Research Institute Co., Ltd. The company, the 58th Research Institute of China Electronics Technology Group Corporation, Chongqing Jixin Technology Co., Ltd., the Institute of Microelectronics of the Chinese Academy of Sciences, Shijiazhuang Zhuang Tianlin Shiwuer Electronics Co., Ltd. The main drafters of this document are. Ji Li, Zhang Leihao, Zheng Xuesong, Wang Zhe, Zhang Jingze, Mei Bo, Zhang Hongwei, Wang Wenyan, Yang Zhibo, Liu Hui, and Luo Lei. Zhang Haiming, Zhang Yanwei, Li Qiang, Zhang Lei, Sun Ming, Zhou Dexiang, Xiong Yuanyuan, Tian Zhiwen, Ni Weixing, Zhao Ruiming, Hou Tianming, Yang Kuining, Cui Desheng Wang Bo, Chen Bo, Zhang Dongdong, Li Xinyun, Zhao Li, Zhu Renlong, Wu Xue, Li Bo, Zhao Yuling. Comprehensive Evaluation Method for Application Verification of Aerospace Components

1 Scope

GB/T 46748-2025 is the Chinese national standard covering proving a component in its actual application rather than in the abstract - the mission profile it will see, the tests that reproduce it, the margins demonstrated and the judgement that the part is fit for that use and not merely qualified in general. First edition, with GB/T 46556-2025 and GB/T 46560-2025 on component grades and process control. Issued on 2 December 2025, it has been in force since 1 April 2026.

This document specifies the general principles and requirements for the comprehensive evaluation of the application verification of aerospace components, as well as the construction and value rules of the evaluation index system. The rules governing the evaluation process and the formation of results. This document applies to the comprehensive evaluation of application verification of aerospace components (hereinafter referred to as "comprehensive evaluation").

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 19000 Quality Management Systems. Fundamentals and Vocabulary

3 Terms and Definitions

The terms and definitions defined in GB/T 19000 and the following terms and definitions apply to this document.

3.1 A series of tests, evaluations, and comprehensive assessments are conducted on components before their engineering application to determine the maturity of the component development. The work involves determining the applicability of the technology in engineering projects and conducting a comprehensive analysis and evaluation to determine its usability.

3.2 validation level Based on the technical characteristics of aerospace components and the application requirements of aerospace equipment, resources are allocated to realize or simulate the application state of components, based on verification. The job level is determined by the amount of resources allocated during the work process.

Note. The verification levels for aerospace components are divided into. component level, board level, single-machine level, subsystem level, and system level.

3.3 Based on the technical characteristics of aerospace components and the application requirements of aerospace equipment, and after comprehensively identifying influencing factors, this study aims to guide application verification tests. The evaluation index set is constructed by classifying and classifying the application verification of aerospace components, including project design and comprehensive evaluation.

Note. The verification index system for aerospace components includes four aspects. production factors, functional performance, quality reliability, and application adaptability.

3.4 The verification results of components at different verification levels are comprehensively analyzed according to the verification index system to determine the availability of components for aerospace applications. This is a task that has been undertaken.