

ICS 35.030
CCS M 04



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

GB/T 46891-2025

**Security assurance requirements for mobile communication
network equipment - Network functions in the 5G core network**

移动通信网络设备安全保障要求 5G核心网网络功能

Issued on: December 31, 2025

Implemented on: July 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	2
4.Abbreviations	2
5 General Safety Requirements	4
5.1 General safety function requirements	4
5.2 Safety Assurance Requirements	6
6.1 AMF Safety Function Requirements	7
6.2 UPF Security Function Requirements	9
6.3 UDM security function requirements	10
6.4 SMF Safety Function Requirements	10
6.5 AUSF Safety Functional Requirements	11
6.6 SEPP Safety Function Requirements	11
6.7 NRF security function requirements	13
6.8 NEF Safety Function Requirements	13
6.9 N3IWF Safety Function Requirements	14
6.10 NWDAF Safety Function Requirements	15
6.11 SCP Security Functional Requirements	15
6.12 NSSAAF Safety Functional Requirements	16

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 by the Ministry of Industry and Information Technology of the People's Republic of China. This document is under the jurisdiction of the National Telecommunications Standardization Technical Committee (SAC/TC485). This document was drafted by: China Academy of Information and Communications Technology, Huawei Technologies Co., Ltd., China Mobile Communications Group Co., Ltd., and China Telecom. Standardization Association, Bodin Shihua (Beijing) Technology Co., Ltd., China United Network Communications Group Co.,

Ltd., China Telecom Group Co., Ltd. Beijing Shouxin Technology Co., Ltd., Beijing QiMingXingChen Information Security Technology Co., Ltd., ZTE Corporation, and Shanghai Nokia Abel Co., Ltd., China Information and Communication Technology Group Corporation, BRICS Future Network Research Institute (Shenzhen, China), Ericsson Xin (China) Communications Co., Ltd., Inspur Software Technology Co., Ltd., and China Electronics Technology Network Information Security Co., Ltd. The main drafters of this document are. Yang Hongmei, Wu Rong, Han Dong, Wang Zhe, Zhuang Xiaojun, Zhang Zheng, Chen Tao, Xie Zecheng, Shen Jun, Li Xing, and Xu Shiqiang. Wang Jun, Zhang Leyi, You Shilin, Ping Jing, Xu Hui, Wang Xinlong, Jiang Faqun, Li Xiaohua. Security requirements for mobile communication network equipment 5G core network functions

1 Scope

GB/T 46891-2025 is the Chinese national standard covering the security assurance of the individual network functions inside a 5G core - the service-based interfaces between them, the authentication and authorisation of one function calling another, the subscriber data they hold and the isolation between network slices. First edition, and it is the 5G core part of the family whose general requirements are GB/T 47742.1-2026. It was issued on 31 December 2025 and has been in force since 1 July 2026, as a first edition. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the general security requirements for 5G core network function equipment, as well as the Access and Mobility Management (AMF) function and user... Face Function (UPF), Unified Data Management (UDM), Session Management Function (SMF), Authentication Service Function (AUSF), Secure Edge Protection Network Security Program (SEPP), Network Storage Function (NRF), Network Open Function (NEF), Non-3GPP Interoperability Function (N3IWF), Network Data Analysis Function Security function requirements for Network Slice Specific Authentication and Authorization Functions (NSSAAF), Service Communication Agent (SCP), and Network Slice Specific Authentication and Authorization Functions (NSSAAF). This document applies to the research, development, testing, and evaluation of security functions for 5G core network equipment.

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. YD/T 3628-2019 Security Technical Requirements for 5G Mobile Communication Networks YD/T 3807-2020 General Requirements for Security Assurance of Mobile Communication Network Equipment YD/T 4204-2023 Security Assurance Requirements for 5G Mobile Communication Network Equipment - Core Network Functions (3GPP TS)

33.326 v17.0.0 5G Security Assurance Specification (SCAS); Specific Network Slice Authentication and Authorization Function (NSSAAF) [5G system] 3GPP TS

33.513 v16.3.0 5G Security Assurance Specification (SCAS); User Plane Function (UPF) [5G Security Assurance] 3GPP TS

33.514 v16.5.0 5G Security Assurance Specification (SCAS); Unified Data Management (UDM) Network Products [5G Security] 3GPP TS

33.515 v16.4.0 5G Security Assurance Specification (SCAS); Session Management Function (SMF) Network Products [5G Security] 3GPP TS

33.517 v18.0.0 5G Security Assurance Specification (SCAS); Security Boundary Protection Proxy (SEPP) Network Product [5GSe-