

ICS 33.060.20

CCS M36



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

GB/T 44195-2024

**Test methods for LTE mobile terminals supporting BDS
positioning**

LTE移动通信终端支持北斗定位的测试方法

Issued on: July 24, 2024

Implemented on: November 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

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Test Method

1 Scope

GB/T 44195-2024 gives the test methods for LTE mobile terminals that support BeiDou positioning. A phone's positioning performance is not a property of its GNSS chip alone: it depends on the antenna sharing space with the cellular radios, on the interference the transmitter generates while the receiver is trying to acquire, and on the assistance data the network supplies, which is why positioning has to be tested on the terminal in a cellular test environment rather than on the receiver in isolation. The standard sets the test conditions, including the test environment and the test system, then the RF minimum performance tests for autonomous positioning - GPS, BeiDou, and BeiDou/GPS dual mode - and for network-assisted positioning in the same three configurations, covering sensitivity, accuracy and time to first fix under the specified signal conditions, together with the protocol conformance aspects of the assistance data. It took effect on 1 November 2024.

This document describes the test method for mobile communication terminals to support BeiDou positioning based on LTE control plane, involving support for BeiDou positioning on the control plane Protocol testing of LTE terminals, network-assisted Beidou positioning performance testing, and performance testing that supports autonomous Beidou positioning. This document is applicable to the design, development and maintenance of LTE Phase 3 and above mobile communication terminals (hereinafter referred to as "terminals") that support Beidou positioning. Development, production and testing.

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. 3GPPTS37.571-1V16.11.0(2021-12) Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC) User Equipment (UE) Positioning Conformance Specification Part

1.Conformance Test Specification

[UniversalTerrestrialRadioAccess(UTRA)andEvolvedUTRA (E-UTRA)andEvolvedPacket Core(EPC);UserEquipment(UE)conformancespecificationforUEpositioning;Part

1.Conform- ancetestspecification] 3GPPTS37.571-2V16.10.0(2021-12) Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC) User Equipment (UE) Positioning Conformance Specification Part

2.Protocol Conformance [UniversalTerrestrialRadioAccess(UTRA)andEvolvedUTRA

(E-UTRA) and Evolved Packet

Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part

2. Protocol conformance 3GPP TS 37.571-5V16.7.0 (2021-12) Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC) User Equipment (UE) Positioning Conformance Specification Part

5. Test scenarios and auxiliary data According to

[Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Abbreviations

The following abbreviations apply to this document. AWGN. Additive White Gaussian Noise
BDS. BeiDou Navigation Satellite System