

YD

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

YD/T 1539-2006

**Technical Requirements and Testing Methods for Reliability of
Mobile Telecommunication Handset
(English Translation)**

Issued on: December 11, 2006

Implemented on: January 1, 2006

**Issued by: Ministry of Industry Information Technology, the People's
Republic of China**

Table of Contents

Preface...	3
1 Scope...	5
2 Quoted Standards...	5
3 Technical requirements...	6
3.1 Environment Test...	6
3.2 Mechanical stress test...	7
4 Test methods...	9
4.1 Environment test methods...	9
4.2 Mechanical stress test methods...	12

Preface

This Standard is developed by referencing the following environmental testing specifications for electric and electronic products.

1. GB/T 2423.1 Environmental Test Specification for Electric and Electronic Products
- Part 2. Test method Test A. Low Temperature
2. GB/T 2423.2 Environmental Test Specification for Electric and Electronic Products
- Part 2. Test method Test B. High Temperature
3. GB/T 2423.3 Basic Environmental Test Specification for Electrical and Electronic Products - Test Ca. Constant-Damp-and-Heat Test Method
4. GB/T 2423.5 Environmental Test Specification for Electric and Electronic Products
- Part 2. Test method Test Ea and Guide Rule. Shock
5. GB/T 2423.6 Environmental Test Specification for Electric and Electronic Products
- Part 2. Test Method Test Eb and Guide Rule. Collision
6. GB/T 2423.8 Environmental testing for electric and electronic products - Part 2.
Test method Test Ed. free fall
7. GB/T 2423.11 Environmental Test Specification for Electric and Electronic Products -
Part 2. Test Method Test Fd. Broadband Random Vibration --General Requirements

8. GB/T 2423.13 Environmental Test Specification for Electric and Electronic Products - Part

2 Test Method Test Fdb. Broadband Random Vibration

--Reproductivity

9. GB/T 2423.18 Environmental Test Specification for Electric and Electronic Products

- Part 2. Test Method Test Kb. Salt Fog, Alternating (sodium chloride solution)

10 GB/T 2423.22 Basic environmental testing specification for electric and electronic

products - Part 2. Test method Test N. temperature change

11 GB/T 2423.43 Environmental testing for electric and electronic products - Part 2. Test

method - Mounting of components, equipment and other articles for dynamic tests including shock (Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ca) and guidance

12 GB/T 2423.44 Basic Environmental Test Specification for Electric and Electronic

Products - Part 2. Test Method Test Eg. Spring Hammer for Knock Test

This Standard is the definition of the reliability for China Mobile Communication Handset. If the reliability-related contents in the original published specification are different from that in this specification, all are based on this Standard.

This Standard is proposed and managed by China Communications Standards Association (CCSA).

This Standard is drafted by. China MIIT Telecommunication Institute.

This Standard is written by. Yuan Weijun and He Guili.

Technical Requirement and Test Method for Reliability of Mobile Telecommunication Handset

1 Scope

This Standard defines the technical requirements and test methods for the adaptability of the

environment and mechanical stress for mobile telecommunication handsets.

It is applicable for mobile telecommunication handset and it is also the reference for other mobile telecommunication terminals in addition to the handset.

2 Quoted Standards

The following standards contribute the stipulations of this Standard after being quoted. All the revision versions (excluding correction version) of the quoted standards specified with date are

not applicable for the document. Users are encouraged to explore the possibility to use the latest

version of the following standards. The latest versions of the quoted documents without date

specified are applicable to the standard.

GB/T 2421 Environmental Test Specification for Electrical and Electronic Products

Part 1.General

GB/T 2423.1 Environmental Test Specification for Electric and Electronic Products -

Part 2.Test method Test A. Low Temperature

GB/T 2423.2 Environmental Test Specification for Electric and Electronic Products -

Part 2.Test method Test B. High Temperature

GB/T 2423.3 Basic Environmental Test Specification for Electrical and Electronic

Products - Test Ca. Constant-Damp-and-Heat Test Method

GB/T 2423.5 Environmental Test Specification for Electric and Electronic Products -

Part 2.Test method Test Ea and Guide Rule. Shock

GB/T 2423.6 Environmental Test Specification for Electric and Electronic Products -

Part 2.Test Method Test Eb and Guide Rule. Collision

GB/T 2423.8 Environmental testing for electric and electronic products - Part 2.Test

method Test Ed. free fall

GB/T 2423.11 Environmental Test Specification for Electric and Electronic Products - Part 2.

Test Method Test Fd. Broadband Random Vibration - General Requirements

GB/T 2423.13 Environmental Test Specification for Electric and Electronic Products - Part 2.

Test Method Test Fdb. Broadband Random Vibration - Reproducibility

GB/T 2423.18 Environmental Test Specification for Electric and Electronic Products - Part 2. Test Method Test Kb. Salt Fog, Alternating (sodium chloride solution)

GB/T 2423.22 Environmental Test Specification for Electric and Electronic Products - Part 2. Test Method Test N. temperature change

GB/T 2423.43 Environmental testing for electric and electronic products - Part 2. Test method - Mounting of components, equipment and other articles for dynamic tests including shock

(Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ca) and guidance

GB/T 2423.44 Environmental Test Specification for Electric and Electronic Products - Part 2. Test method Test Eg. Spring Hammer for Knock Test

GB/T 2424.10 Environmental Test Specification for Electrical and Electronic Products - General Rule for Atmospheric Corrosion Acceleration Test

GB/T 9286-1998 Paints and Varnishes - Cross-cut test for films

3.1.1.1 Low temperature storage

Mobile telecommunication handset in power-off state is stored by $(-40 \pm 3)^{\circ}\text{C}$ low temperature

for 16h. After the normal atmospheric condition is recovered, the RF performance, functions,

outlook and assembly shall comply with the related requirements.

3.1.1.2 Low temperature operation

After the mobile telecommunication handset in power-on state is tested by $(-10 \pm 3)^{\circ}\text{C}$ low

temperature for 2h, the RF performance shall comply with the related requirements.