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YD

Telecommunication Industry Standard Of the People's Republic of China

YD/T 1215-2006

Replacing YD/T 1215-2002

Testing Methods of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations

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Preface

This Standard is one of the serial standards for 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations. The names and structure of the series of standards are shown as follows:

1. YD/T 1214-2006 Technical Requirements of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations
2. YD/T 1215-2006 Test Methods of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations

This Standard is used along with “YD/T 1214-2006 Technical Requirements of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations”.

It replaces “YD/T 1215-2002 Test Methods of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations”.

Main changes of this Standard are shown as follows, compared with YD/T 1215-2002:

a) Add the following Chapters:

Chapter 7 Layer 2 Signaling Function Test

Chapter 8 Layer 3 Function Test

Chapter 9 SIM/ME Interface Test

Chapter 10 Auto Calling Restriction Test

Chapter 11 Bearer Services Test

Chapter 12 Supplementary Services Test

Chapter 13 Voice Code Conversion Function

Chapter 14 SMS Services Test

Chapter 15 Low-voltage Detection

Chapter 16 GPRS Initiated Call, Establishment/Release of TBF and DCCH Related Procedure

Chapter 17 Media Access Control (MAC) Protocol Test

Chapter 18 Radio Link Control (RLC) Test Items

Chapter 19 Requirements of GPRS Mobility Management Test Items

Chapter 20 Session Manager

Chapter 21 LLC and SMDCP Test

Chapter 22 Dual-transmission Mode

b) The numbering rule of all quoted international norms changes to 3GPP from original ETSI, and the corresponding version number is deleted.

c) The original requirements for items, such as audio performance, environmental adaptability, life cycle test etc. are deleted and the corresponding industrial standards are quoted directly.

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

This Standard is drafted by organizations: The Telecommunications Research Institute of the Ministry of Information Industry (MII), ZTE Corporation, and Nokia Capitel Telecommunications Co., Ltd

This Standard is written by: Ma Xin, Wei Ran, Liu Jun and Li Bo.

Since initially released on June, 2002, this Standard is the first revision.

Test Methods of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations

1 Scope

The specification defines the test methods on services, functions, performance, electromagnetic compatibility and environmental adaptability and others of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations (MS).

The specification applies to the test of 900/1800MHz TDMA Digital Cellular Mobile Telecommunication Network General Packet Radio Service (GPRS) Equipment: Mobile Stations (MS). The contents except for GPRS related ones are not applicable to GSM mobile station that does not support GPRS.

2 Quoted Standards

The following standards contribute to the stipulation of this Standard after being quoted. All the revision versions (excluding correction version) of the quoted standards specified with date are not applicable for this document. However, parties that have come to agreements based on this document are encouraged to explore the possibility to use the latest versions of the following standards. The latest version of the quoted documents without date specified is applicable for this Standard .

GB/T 18287	General Specification of Li-Ion Battery for Cellular Phone
GB/T 18288	General Specification of Metal Hydride Nickel Battery for Cellular Phone
GB/T 18289	General Specification of Ni-CD Battery for Cellular Phone
YD 1268	Safety Requirement and Test Method of Li-Ion Battery and Charger for Mobile Phone
YD/T 965	Safety Requirement and Test Method of Telecommunication Terminal Equipment
	Reliability Requirement and Test Method of Mobile Phone
	Audio Performance Requirement and Test Method of Mobile Digital

storage card.

5.3.22.2 Expected Test Result

The storage card can be successfully removed and inserted, and the operations of data invoking, storage, modification and deletion are normal.

5.3.23 Battery Capacity Indication and Alarm

5.3.23.1 Test Method

- a) Check the screen information of the MS under test in standby state.
- b) Install one battery with insufficient capacity on the MS under test, and start alarm prompt according to the manufacturer manual instruction. Check the screen information in standby and calling states, and observe whether the MS sounds a warning.
- c) When the MS under test is in power-off and standby states, charge the MS with a dedicated travel charger and check the information on the screen.

5.3.23.2 Expected Test Result

- a) The MS under test shall display the used capacity of battery in graphic manner, and the indication shall be identical to the instructions on the product specification.
- b) In standby and calling states, the MS under test shall provide an alarm in text and sounds the alarm in audible tone. The indication shall be identical to the instructions on the product specification.
- c) The MS under test shall correctly indicate the prompt information that the battery is being charged, and indicate the progress in graphic manner. These indications shall be identical to the instructions on the product specification.

5.3.24 Battery Recharge

5.3.24.1 Test Method

- a) Equip the MS under test with a battery in low voltage that is unable to power on in normal condition, and press the power key.
- b) Connect the MS under test with the power adaptor that is connected to the public power distribution network.
- c) After 10-minute charging, press the power key of the MS under test, and the MS can operate normally after powering on. Charge the MS until the battery is full.
- d) Remove the battery and measure its voltage.

5.3.24.2 Expected Test Result

- a) The MS under test can't power on.
- b) There shall be charging indication on the MS, and the MS remains in power off state.
- c) The MS under test shall be able to power on normally. After powering on, the MS can accept and process the operations made by the user. When the user does not perform the operation, the MS remains in power-on state; when the battery is full, the MS shall indicate that the batter is full, and automatically stop charging;
- d) The battery voltage shall not be lower than the voltage limit indicated in the battery identifier.

5.5.5 Network Access Control Function - Authentication

5.5.5.1 Test Method

a) Make sure that GPRS service is already activated in the network, the network sets the authentication procedure is enabled during GPRS attachment, and the MS is within GPRS coverage area.

- b) Power on the MS and perform GPRS attachment.
- c) Activate PDP context.
- d) Send data to the network.
- e) Deactivate PDP context.
- f) Power off the MS.

5.5.5.2 Expected Test Result

- a) The MS can perform GPRS attachment successfully and pass the authentication.
- b) The MS can perform PDP context activation properly.
- c) The MS can deactivate PDP context properly.
- d) The MS can perform GPRS detachment properly.

5.5.6 Packet Routing and Transfer Functions

5.5.6.1 Test Method

a) Make sure that GPRS service is already activated in the network, and the MS is within GPRS coverage area.

- b) Power on the MS and perform GPRS attachment.
- c) Activate PDP context.
- d) Perform file transfer and Internet browsing.
- e) Deactivate PDP context.
- f) Power off the MS.

5.5.6.2 Expected Test Result

- a) The MS can perform GPRS attachment successfully.
- b) The MS can activate PDP context properly.
- c) File transfer and Internet browsing can be performed properly.
- d) The MS can deactivate PDP context properly.
- e) The MS can perform GPRS detachment properly.

5.5.7 Encryption

5.5.7.1 Test Method

a) Make sure that GPRS service is already activated in the network, the encryption mode is enabled, and the MS is within GPRS/GSM coverage area.

- b) Power on the MS and perform GPRS attachment.
- c) Activate PDP context.
- d) Perform file transfer and Internet browsing.
- e) Deactivate PDP context.
- f) Power off the MS.

5.5.7.2 Expected Test Result

- a) The MS can perform GPRS attachment successfully.
- b) The MS can activate PDP context properly.
- c) File transfer and Internet browsing can be performed properly, and the encryption mode can be enabled properly.
- d) The MS can deactivate PDP context properly.
- e) The MS can perform GPRS detachment properly.

5.5.8 Combined Packet and Circuit Services on Class A MS

5.5.8.1 Test Method

- a) Make sure that GPRS service is already activated in the network, and the MS is within GPRS/GSM coverage area.
- b) Attach the MS to GPRS and GSM networks simultaneously.
- c) Access to Internet through GPRS (Reference 5.4.1) and initiate a voice call.
- d) End the packet and circuit communication in step c).
- e) Call this MS (voice call). The MS answers the call and accesses to WAP website through GPRS (Reference 5.4.2).
- f) End the packet and circuit communication in step e).

5.5.8.2 Expected Test Result

The MS can perform the packet and circuit services simultaneously in any case.

5.5.9 Alternative Packet and Circuit Services on Class B MS

5.5.9.1 Test Method

- a) Make sure that GPRS service is already activated in the network, and the MS is within GPRS/GSM coverage area.
- b) Attach the MS to GPRS and GSM networks simultaneously.
- c) Access to Internet through GPRS (Reference 5.4.1) and initiate a voice call after the establishment of communication.
- d) End the voice call and continue accessing to Internet through GPRS.
- e) Call this MS (voice call), and the MS answers the call.
- f) End the voice call and continue accessing to Internet through GPRS.

5.5.9.2 Expected Test Result

The MS can switch between the packet service and the circuit service successfully in any case.

6 Performance Test

6.1 Band and Channel Allocation

This test is implicitly performed in Item 6.2.

6.2 RF Performance

6.2.1 Overview

	SIM card, charger, earphone and data cable connector are contacted well
	The display shows in whole, the brightness and color are even.
	There is no obvious rusting on metal surface
Identity	The identities on product or its package shall include product quality inspection certificate, name of product, manufacturer or company name, factory address or company address
