

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

YD/T 1484-2011

**Measurement method for radiated RF power and receiver
performance of mobile stations**

移动台空间射频辐射功率和接收机性能测量方法

(English Translation)

Issued on: May 18, 2011

Implemented on: June 1, 2012

Issued by: Ministry of Industry and Information Technology of People's

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 "Directives for standardization- Part 1: Structure and drafting of standards" and GB/T 1.2-2002 "Directives for standardization - Part 2: Methodology for the content of normative technical elements in standards".

The following standards are relevant to the technical content of this standard, AND it also takes into account of the harmonization with the following standards during the development of this standard.

YD/T 1214-2002 900/1800MH. TDMA digital cellular mobile telecommunication network technical requirement for general packet radio service (GPRS) equipment. Mobile stations;

YDC 023-2003 Test specification of mobile station (MS) for 800MHz CDMA 1X digital cellular mobile telecommunication network - Part 1: Minimum standard, function, and performance this standard is a revised version of YD/T 1484-2006, and the main technical differences with the original standard are as follows.

- 1.ADD the GPRS/EDGE related test requirements;
- 2.ADD the CDMA 1xRTT related test requirements;
- 3.ADD the cdma2000 related test requirements;
- 4.ADD the test requirements for notebook configuration;
- 5.ADD the hand model related test requirements;
- 6.UPDATE the standard limits.

This standard was proposed by AND shall be under the jurisdiction of the China Communications Standardization Association.

1 Scope

This standard specifies the measurement method for radiated RF power and receiver performance of mobile stations, including the frequency range and limits.

This standard is applicable to the portable and on-board mobile stations. It is also applicable to mobile stations powered by AC power sources and used in fixed locations, AND the data devices connected to portable computers via interfaces such as USB

interface, Express interface and PCMCIA interface, etc.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this Standard.

3GPP2 C.S0011-B.2002 Recommended minimum performance standards for cdma2000 spread spectrum mobile stations 3GPP2 C.S0033-0.2004 Recommended minimum performance standards for cdma2000 high rate packet IEEE 1528 Recommended practice for determining the peak spatial-average specific absorption rate (SAR) in the human head from wireless communication devices - Measurement techniques 3GPP TS 51.010 Mobile station (MS) conformance specification for GAN enhancements 3GPP TS 05.05 Digital cellular telecommunications system (Phase 2+);

Radio transmission and reception

3.1 Terms and definitions

The following terms and definitions apply to this document.

FER. Frame error rate MS. Mobile station MCS. Modulation coding scheme PER. Packet error ratio RF. Radio frequency RMS. Root mean square

4 Test conditions

To measure the three-dimensional radio frequency radiated power and receiver performance of the mobile station, this standard specifies the spherical equivalent isotropic radiated power of the mobile station, which is shortly referred as total isotropic radiated power (TIRP) AND the spherical equivalent isotropic radiation sensitivity, which is shortly referred as total isotropic radiated sensitivity (TIRS). Since the measurement results of the mobile station in the free space state may be different from the measurement results in the various test states such as the left and right ears of the head model and the hand model, this standard requires conducting respectively the test under all the test states as specified by the corresponding chapters on various communication systems. For mobile stations that support multiple typical operating states, it is only required to conduct test under the main machine mode.

As for the performance test methods for the radio frequency radiation power and receiver of new systems which appear with the development of technology, FOLLOW the corresponding product family test methods. In the absence of relevant product family criteria, it shall make reference to the general test methods in clause 5.2 and 6.1 of this standard.

4.1 Coordinate system

Figure 1 is a typical spherical coordinate system, Phi (phi) axis is the Z axis,

Theta angle is defined as the angle between the measured point and the +Z axis, AND the Phi angle is defined as the angle between the projection of the measuring point on the XY plane and the +X axis.

- monitor

- The angle setting of notebook or ultra-portable mobile PC (notebook shape) - The angle from the horizontal base to the front end of the monitor LCD is $110^{\circ} \pm 5^{\circ}$ - The position as located by manufacturer close to 110° - The tablet needs to be parallel to the X-Y plane - The transmission state of the wireless signal in addition to the wireless modules used, TURN off other embedded modules, such as wireless LAN modules, Bluetooth modules, etc.

- Receive diversity - closed - Power management settings Computer screen protection - none Turn off t...