Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; User Equipment (UE) / Mobile Station (MS) Over The Air (OTA) antenna performance; Conformance testing (3GPP TS 34.114 version 9.3.0 Release 9)
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Foreword

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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;
2 presented to TSG for approval;
3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.
1 Scope

The present document describes the test procedure for the radiated performances measurements of the 3G/2G user equipment/mobile stations (UE/MS) in active mode in both the up- and the downlink. The FDD UE test procedure is based on the test method developed as a result of COST 273 Sub-Working Group (SWG) 2.2 members’ contributions. Background work has also been made in the former COST259 project. The TDD UE test procedure is based on the test method developed as a result of CCSA TC9 WG1 members’ contributions. Background work has been made in the former CCSA TC9 project.

The measurement procedure explained in this document applies to UE/MS used under the “speech mode” conditions that correspond to predefined positions for voice application when the handset is held close to the user’s head. This method is also applicable to free space measurements and for testing data applications.

The testing methodology applies to any single or multi-mode (GSM / UMTS / TD-SCDMA) terminals.

The radio tests considered here are:

1. The measurement of the Total Radiated Power (TRP)
2. The measurement of the Total Radiated Sensitivity (TRS)

The test procedure described in this document measures the performance of the transmitter and the receiver, including the antenna and also the effects of the user.

The major parts of this test procedure are based on the 3-D pattern measurement method. It has been considered necessary to define some items and components in the test procedure in detail, such as test channels and phantom set-ups, in order to make the testing in different laboratories harmonized. The procedure is, however, not limited to some specific antenna chambers or positioners.
2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same release as the present document.


[14] 3GPP TS 34.114 Release 10: "User Equipment (UE) / Mobile Station (MS) Over The Air (OTA) antenna performance; Conformance testing".

3 Definitions, symbols, abbreviations and equations

Void

4 General

The requirements of the present document are provided in 3GPP TS 34.114 Release 10 [14].

5 to 6 Void
Annex A to H:
Void
Annex I (informative):
Bibliography

- V. Vigneras, “Elaboration and characterization of biological tissues equivalent liquids in the frequency range 0.9-3 GHz”, Final report, PIOM Laboratory, University of Bordeaux, France, November 2001.
- NIST Technical Note 1297: “Guidelines for Evaluating and Expressing the Uncertainty of NIST measurement Results”
- J. Krogerus, "On the phantom and tissue simulating liquid to be used in handset antenna performance testing", COST 273 TD(02) 024, Guildford, UK, January 2002.

Annex J (informative):
Change history

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