

**IMT cellular networks;
Harmonized EN covering the essential requirements
of article 3.2 of the R&TTE Directive;
Part 15: Evolved Universal Terrestrial Radio Access
(E-UTRA FDD) (Repeaters)**

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI EN 301 908-15 V5.2.1 \(2011-07\)](https://standards.iteh.ai/catalog/standards/etsi/2dade5fc-c067-4365-b246-73178c9b8cae/etsi-en-301-908-15-v5-2-1-2011-07)

<https://standards.iteh.ai/catalog/standards/etsi/2dade5fc-c067-4365-b246-73178c9b8cae/etsi-en-301-908-15-v5-2-1-2011-07>



ReferenceREN/MSG-TFES-008-15

Keywords

3G, 3GPP, cellular, digital, IMT, IMT-2000,
mobile, radio, regulation, repeater, UMTS,
WCDMA, E-UTRA, LTE

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

(<https://standards.iteh.ai>)
Document Preview

Important notice

Individual copies of the present document can be downloaded from:
<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2011.
All rights reserved.

DECT™, PLUGTESTS™, UMTS™, TIPHON™, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

LTE™ is a Trade Mark of ETSI currently being registered for the benefit of its Members and of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	5
Foreword.....	5
Introduction	6
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references	8
3 Definitions, symbols and abbreviations	8
3.1 Definitions	8
3.2 Symbols	9
3.3 Abbreviations	10
4 Technical requirements specifications	10
4.1 Environmental profile.....	10
4.2 Conformance requirements	10
4.2.1 Introduction.....	11
4.2.2 Operating band unwanted emissions	11
4.2.2.1 Definition	11
4.2.2.2 Limit.....	11
4.2.2.2.1 General operating band unwanted emissions.....	12
4.2.2.2.2 Protection of the BS receiver in the operating band	16
4.2.2.2.3 Co-existence with services in adjacent frequency bands	16
4.2.2.2.4 Protection of DTT.....	17
4.2.2.3 Conformance	17
4.2.3 Spurious emissions	17
4.2.3.1 Definition	17
4.2.3.2 Limit.....	17
4.2.3.2.1 Spurious emissions	18
4.2.3.2.2 Co-existence with other systems in the same geographical area	18
4.2.3.3 Conformance	19
4.2.4 Maximum output power.....	19
4.2.4.1 Definition	19
4.2.4.2 Limit.....	19
4.2.4.3 Conformance	20
4.2.5 Input intermodulation	20
4.2.5.1 Definition	20
4.2.5.2 Limit.....	20
4.2.5.2.1 General input intermodulation requirement.....	20
4.2.5.2.2 Co-existence with other systems	21
4.2.5.3 Conformance	22
4.2.6 Out of band gain	22
4.2.6.1 Definition	22
4.2.6.2 Limits	22
4.2.6.3 Conformance	22
4.2.7 Adjacent Channel Rejection Ratio	22
4.2.7.1 Definition	22
4.2.7.2 Limit.....	23
4.2.7.2.1 ACRR	23
4.2.7.2.2 Co-existence with UTRA	23
4.2.7.3 Conformance	23
4.2.8 Output intermodulation	23
4.2.8.1 Definition	23
4.2.8.2 Limit.....	24
4.2.8.3 Conformance	24

5	Testing for compliance with technical requirements.....	24
5.1	Environmental conditions for testing	24
5.2	Interpretation of the measurement results	24
5.3	Essential radio test suites.....	26
5.3.1	Operating band unwanted emissions	26
5.3.1.1	Initial conditions	26
5.3.1.2	Procedures.....	26
5.3.2	Spurious emissions	27
5.3.2.1	Initial conditions	27
5.3.2.2	Procedures.....	27
5.3.3	Maximum output power.....	28
5.3.3.1	Initial conditions	28
5.3.3.2	Procedures.....	28
5.3.4	Input intermodulation	28
5.3.4.1	Initial conditions	28
5.3.4.2	Procedures.....	29
5.3.5	Out of band gain	29
5.3.5.1	Initial conditions	29
5.3.5.2	Procedures.....	29
5.3.6	Adjacent Channel Rejection Ratio.....	30
5.3.6.1	Initial conditions	30
5.3.6.2	Procedures.....	30
5.3.7	Output intermodulation.....	30
5.3.7.1	Initial conditions	30
5.3.7.2	Procedures.....	30
Annex A (normative):	HS Requirements and conformance Test specifications Table (HS-RTT).....	32
Annex B (normative):	Repeater configurations	34
B.1	Power supply.....	34
B.2	Power supply options	34
B.3	Combining of Repeaters.....	34
Annex C (normative):	Repeater stimulus signal spectral purity requirements.....	35
Annex D (informative):	Environmental profile specification	36
Annex E (informative):	The EN title in the official languages	37
Annex F (informative):	Bibliography.....	38
History		39

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This final draft Harmonized European Standard (EN) has been produced by ETSI Technical Committee Mobile Standards Group (MSG), and is now submitted for the Vote phase of the ETSI standards Two-step Approval Procedure.

The present document has been produced by ETSI in response to mandate M/284 from the European Commission issued under Council Directive 98/34/EC [i.1] (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The title and reference to the present document are intended to be included in the publication in the Official Journal of the European Union of titles and references of Harmonized Standard under the Directive 1999/5/EC [i.2].

See article 5.1 of Directive 1999/5/EC [i.2] for information on presumption of conformity and Harmonised Standards or parts thereof the references of which have been published in the Official Journal of the European Union.

The requirements relevant to Directive 1999/5/EC [i.2] are summarised in annex A.

The present document is part 15 of a multi-part deliverable covering the essential requirements under article 3.2 of Directive 1999/5/EC [i.2] (R&TTE Directive) for Base Stations (BS), Repeaters and User Equipment (UE) for IMT cellular networks, as identified below:

- Part 1: "Introduction and common requirements";
- Part 2: "CDMA Direct Spread (UTRA FDD) User Equipment (UE)";
- Part 3: "CDMA Direct Spread (UTRA FDD) Base Stations (BS)";
- Part 4: "CDMA Multi-Carrier (cdma2000) User Equipment (UE)";
- Part 5: "CDMA Multi-Carrier (cdma2000) Base Stations (BS)";
- Part 6: "CDMA TDD (UTRA TDD) User Equipment (UE)";
- Part 7: "CDMA TDD (UTRA TDD) Base Stations (BS)";
- Part 8: "Harmonized EN for IMT-2000, TDMA Single-Carrier (UWC 136) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 9: "Harmonized EN for IMT-2000, TDMA Single-Carrier (UWC 136) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 10: "Harmonized EN for IMT-2000, FDMA/TDMA (DECT) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 11: "CDMA Direct Spread (UTRA FDD) (Repeaters)";
- Part 12: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (Repeaters) covering the essential requirements of article 3.2 of the R&TTE Directive";
- Part 13: "Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)";