

ETSI EN 301 908-3 V5.2.1 (2011-07)

Harmonized European Standard

**IMT cellular networks;
Harmonized EN covering the essential requirements
of article 3.2 of the R&TTE Directive;
Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)**

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

[ETSI EN 301 908-3 V5.2.1 \(2011-07\)](https://standards.itih.ai/catalog/standards/etsi/e5510bd0-ff15-48f4-9b08-4dd7c0a76f78/etsi-en-301-908-3-v5-2-1-2011-07)

<https://standards.itih.ai/catalog/standards/etsi/e5510bd0-ff15-48f4-9b08-4dd7c0a76f78/etsi-en-301-908-3-v5-2-1-2011-07>



Reference

REN/MSG-TFES-006-3

Keywords3G, 3GPP, cellular, digital, IMT-2000, mobile,
radio, regulation, UMTS, UTRA, WCDMA**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

iteh Standards
(<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.

DECTTM, PLUGTESTSTM, UMTSTM and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPPTM and LTETM are Trade Marks of ETSI 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	6
Foreword.....	6
Introduction	7
1 Scope	8
2 References	8
2.1 Normative references	8
2.2 Informative references	9
3 Definitions, symbols and abbreviations	9
3.1 Definitions	9
3.2 Symbols	11
3.3 Abbreviations	11
4 Technical requirements specifications	12
4.1 Environmental profile.....	12
4.2 Conformance requirements	12
4.2.1 Introduction.....	12
4.2.2 Spectrum emissions mask.....	13
4.2.2.1 Definition	13
4.2.2.2 Limit.....	13
4.2.2.3 Conformance.....	15
4.2.3 Adjacent channel leakage power ratio (ACLR).....	15
4.2.3.1 Definition	15
4.2.3.2 Limits	15
4.2.3.3 Conformance.....	16
4.2.4 Transmitter spurious emissions.....	16
4.2.4.1 Definition	16
4.2.4.2 Limits	16
4.2.4.2.1 Spurious emissions	16
4.2.4.2.2 Co-existence with other systems	17
4.2.4.2.3 Co-existence with services in adjacent frequency bands	18
4.2.4.2.4 Protection of the BS receiver of own or different BS	18
4.2.4.2.5 Co-existence with Home BS operating in other bands	19
4.2.4.3 Conformance	19
4.2.5 Base Station maximum output power	19
4.2.5.1 Definition	19
4.2.5.2 Limit.....	20
4.2.5.3 Conformance.....	20
4.2.6 Transmit intermodulation	20
4.2.6.1 Definition	20
4.2.6.2 Limit.....	20
4.2.6.3 Conformance.....	20
4.2.7 Receiver spurious emissions	21
4.2.7.1 Definition	21
4.2.7.2 Limit.....	21
4.2.7.3 Conformance.....	21
4.2.8 Blocking characteristics	21
4.2.8.1 Definition	21
4.2.8.2 Limit.....	21
4.2.8.3 Conformance.....	25
4.2.9 Receiver intermodulation characteristics	25
4.2.9.1 Definition	25
4.2.9.2 Limit.....	25
4.2.9.3 Conformance.....	27
4.2.10 Receiver adjacent channel selectivity	27

4.2.10.1	Definition	27
4.2.10.2	Limit.....	27
4.2.10.3	Conformance.....	28
4.2.11	Home BS output power for adjacent channel protection	28
4.2.11.1	Definition	28
4.2.11.2	Limit.....	28
4.2.11.3	Conformance.....	29
5	Testing for compliance with technical requirements.....	29
5.1	Environmental conditions for testing	29
5.2	Interpretation of the measurement results	29
5.3	Essential radio test suites.....	30
5.3.1	Spectrum emission mask	30
5.3.1.1	Initial conditions	31
5.3.1.2	Procedures	31
5.3.2	Adjacent Channel Leakage power Ratio (ACLR)	31
5.3.2.1	Initial conditions	31
5.3.2.2	Procedure	31
5.3.3	Transmitter spurious emissions.....	32
5.3.3.1	Initial conditions	32
5.3.3.2	Procedure	32
5.3.4	Base Station maximum output power	32
5.3.4.1	Initial conditions	32
5.3.4.2	Procedure	32
5.3.5	Transmit intermodulation	33
5.3.5.1	Initial conditions	33
5.3.5.2	Procedures	33
5.3.6	Receiver spurious emissions.....	33
5.3.6.1	Initial conditions	33
5.3.6.2	Procedure	34
5.3.7	Blocking characteristics.....	34
5.3.7.1	Initial conditions	34
5.3.7.2	Procedure	34
5.3.8	Receiver intermodulation characteristics	35
5.3.8.1	Initial conditions	35
5.3.8.2	Procedures	35
5.3.9	Adjacent Channel Selectivity (ACS)	35
5.3.9.1	Initial conditions	35
5.3.9.2	Procedure	36
5.3.10	Home BS output power for adjacent channel protection	36
5.3.10.1	Initial conditions	36
5.3.10.2	Procedure	36

Annex A (normative):	HS Requirements and conformance Test specifications Table (HS-RTT).....	37
-----------------------------	--	-----------

Annex B (normative):	Base Station configurations.....	39
-----------------------------	---	-----------

B.1	Receiver diversity	39
B.2	Duplexers	39
B.3	Power supply options	39
B.4	Ancillary RF amplifiers.....	40
B.5	BS using antenna arrays	40
B.5.1	Receiver tests.....	41
B.5.2	Transmitter tests	41
B.6	Transmit diversity and MIMO transmission	41
B.7	BS with integrated Iuant BS modem.....	42

Annex C (informative):	Environmental profile specification	43
-------------------------------	--	-----------

Annex D (informative):	The EN title in the official languages	44
Annex E (informative):	Bibliography	45
History		46

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

[ETSI EN 301 908-3 V5.2.1 \(2011-07\)](#)

<https://standards.iteh.ai/catalog/standards/etsi/e5510bd0-ff15-48f4-9b08-4dd7c0a76f78/etsi-en-301-908-3-v5-2-1-2011-07>

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://ipr.etsi.org>).

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 Harmonized European Standard (EN) has been produced by ETSI Technical Committee Mobile Standards Group (MSG).

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 3 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)";