

ETSI EN 300 113-2 V1.2.1 (2002-04)

Candidate Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Land mobile service;
Radio equipment intended for the transmission
of data (and/or speech) using constant or non-constant
envelope modulation and having an antenna connector;
Part 2: Harmonized EN covering essential requirements
under article 3.2 of the R&TTE Directive**



Reference

REN/ERM-RP02-054-2

Keywords

antenna, data, radio, regulation, speech, mobile,
PMR

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

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, send your comment to:

editor@etsi.fr

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 2002.
All rights reserved.

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

Contents

Intellectual Property Rights	5
Foreword.....	5
Introduction	6
1 Scope	8
2 References	8
3 Definitions, symbols and abbreviations	9
3.1 Definitions	9
3.2 Symbols.....	9
3.3 Abbreviations	9
4 Technical specifications	9
4.1 Environmental profile.....	9
4.2 Transmitter requirements	9
4.2.1 Frequency error.....	9
4.2.1.1 Definition	9
4.2.1.2 Limit.....	9
4.2.1.3 Method of measurement.....	9
4.2.2 Carrier power (conducted).....	9
4.2.2.1 Definition	9
4.2.2.2 Limit.....	9
4.2.2.3 Method of measurement.....	10
4.2.3 Effective radiated power.....	10
4.2.3.1 Definition	10
4.2.3.2 Limit.....	10
4.2.3.3 Method of measurement.....	10
4.2.4 Adjacent channel power.....	10
4.2.4.1 Definition	10
4.2.4.2 Limit.....	10
4.2.4.3 Method of measurement.....	10
4.2.5 Spurious emissions	10
4.2.5.1 Definition	10
4.2.5.2 Limit.....	10
4.2.5.3 Method of measurement.....	10
4.2.6 Intermodulation attenuation	10
4.2.6.1 Definition	10
4.2.6.2 Limit.....	10
4.2.6.3 Method of measurement.....	11
4.2.7 Transmitter attack time	11
4.2.7.1 Definition	11
4.2.7.2 Limit.....	11
4.2.7.3 Method of measurement.....	11
4.2.8 Transmitter release time.....	11
4.2.8.1 Definition	11
4.2.8.2 Limit.....	11
4.2.8.3 Method of measurement.....	11
4.2.9 Transient frequency behaviour of the transmitter	11
4.2.9.1 Definition	11
4.2.9.2 Limit.....	11
4.2.9.3 Method of measurement.....	11
4.3 Receiver requirements	11
4.3.1 Sensitivity (data or messages).....	11
4.3.1.1 Definition	11
4.3.1.2 Limit.....	12
4.3.1.3 Method of measurement.....	12

4.3.2	Co-channel rejection.....	12
4.3.2.1	Definition	12
4.3.2.2	Limit.....	12
4.3.2.3	Method of measurement.....	12
4.3.3	Adjacent channel selectivity	12
4.3.3.1	Definition	12
4.3.3.2	Limit.....	12
4.3.3.3	Method of measurement.....	12
4.3.4	Spurious response rejection	12
4.3.4.1	Definition	12
4.3.4.2	Limit.....	12
4.3.4.3	Method of measurement.....	12
4.3.5	Intermodulation response rejection.....	12
4.3.5.1	Definition	12
4.3.5.2	Limit.....	13
4.3.5.3	Method of measurement.....	13
4.3.6	Blocking or desensitization.....	13
4.3.6.1	Definition	13
4.3.6.2	Limit.....	13
4.3.6.3	Method of measurement.....	13
4.3.7	Spurious radiations	13
4.3.7.1	Definition	13
4.3.7.2	Limit.....	13
4.3.7.3	Method of measurement.....	13
4.3.8	Desensitization and sensitivity (duplex)	13
4.3.8.1	Definition	13
4.3.8.2	Limit.....	13
4.3.8.3	Method of measurement.....	13
4.3.9	Spurious response rejection (duplex).....	13
4.3.9.1	Definition	13
4.3.9.2	Limit.....	14
4.3.9.3	Methods of measurement	14
5	Testing for compliance with technical requirements.....	14
5.1	Environmental conditions for testing	14
5.1.1	Normal and extreme test-conditions	14
5.1.2	Test power source	14
5.1.3	Choice of samples for test suites.....	14
5.2	Interpretation of the measurement results	14
5.3	Essential radio test suites.....	15
5.3.1	Frequency error.....	15
5.3.2	Carrier power (conducted).....	15
5.3.3	Effective radiated power	15
5.3.4	Adjacent channel power.....	15
5.3.5	Spurious emissions	15
5.3.6	Intermodulation attenuation.....	15
5.3.7	Transmitter attack time	15
5.3.8	Transmitter release time.....	15
5.3.9	Transient frequency behaviour of the transmitter	16
5.4	Other radio test suites	16
5.4.1	Sensitivity (data or messages).....	16
5.4.2	Co-channel rejection.....	16
5.4.3	Adjacent channel selectivity	16
5.4.4	Spurious response rejection	16
5.4.5	Intermodulation response rejection.....	16
5.4.6	Blocking or desensitization.....	16
5.4.7	Spurious radiations	16
5.4.8	Desensitization and sensitivity (duplex)	16
5.4.9	Spurious response rejection (duplex).....	16
	Annex A (informative): Bibliography.....	17
	History	18

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 Candidate Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

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

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 1999/5/EC [1] of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive" [1]).

The present document is part 2 of a multi-part deliverable covering the Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector, as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive".

The present version (version 1.2.1) covers equipment designed according to version 1.4.1 of EN 300 113-1 [2].

National transposition dates	
Date of adoption of this EN:	29 March 2002
Date of latest announcement of this EN (doa):	30 June 2002
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 December 2002
Date of withdrawal of any conflicting National Standard (dow):	31 December 2003

Introduction

The present document is part of a set of standards designed to fit in a modular structure to cover all radio and telecommunications terminal equipment under the R&TTE Directive [1]. Each standard is a module in the structure. The modular structure is shown in figure 1.

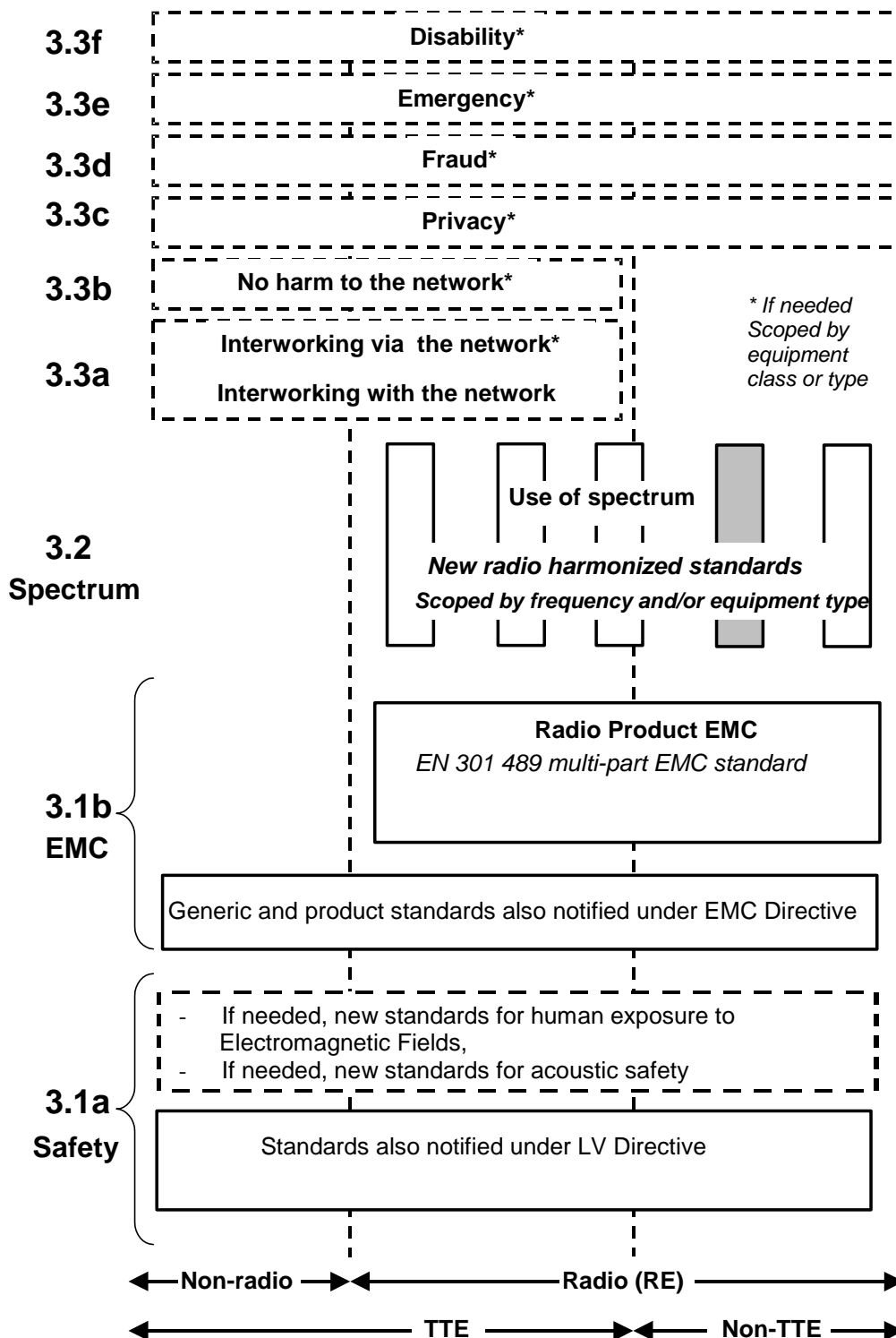


Figure 1: Modular structure for the various standards used under the R&TTE Directive

The left hand edge of the figure shows the different clauses of article 3 of the Directive.

Explanation of figure 1:

The left hand edge of the figure 1 shows the different clauses of article 3 of the R&TTE Directive [1].

For article 3.3 various horizontal boxes are shown. Dotted lines indicate that at the time of publication of the present document essential requirements in these areas have to be adopted by the Commission. If such essential requirements are adopted, and as far and as long as they are applicable, they will justify individual standards whose scope is likely to be specified by function or interface type.

The vertical boxes show the standards under article 3.2 for the use of the radio spectrum by radio equipment. The scopes of these standards are specified either by frequency (normally in the case where frequency bands are harmonized) or by radio equipment type.

For article 3.1b the diagram shows EN 301 489, the multi-part product EMC standard for radio used under the EMC Directive.

For article 3.1a the diagram shows the existing safety standards currently used under the LV Directive and new standards covering human exposure to electromagnetic fields. New standards covering acoustic safety may also be required.

The bottom of the figure shows the relationship of the standards to radio equipment and telecommunications terminal equipment. A particular equipment may be radio equipment, telecommunications terminal equipment or both. A radio spectrum standard will apply if it is radio equipment. An article 3.3 standard will apply as well only if the relevant essential requirement under the R&TTE Directive [1] is adopted by the Commission and if the equipment in question is covered by the scope of the corresponding standard. Thus, depending on the nature of the equipment, the essential requirements under the R&TTE Directive [1] may be covered in a set of standards.

The modularity principle has been taken because:

- it minimizes the number of standards needed. Because equipment may, in fact, have multiple interfaces and functions it is not practicable to produce a single standard for each possible combination of functions that may occur in an equipment;
- it provides scope for standards to be added:
 - under article 3.2 when new frequency bands are agreed; or
 - under article 3.3 should the Commission take the necessary decisions without requiring alteration of standards that are already published;
- it clarifies, simplifies and promotes the usage of Harmonized Standards as the relevant means of conformity assessment.

1 Scope

The present document applies to either constant envelope angle modulation systems or to non-constant envelope modulation systems for use in the land mobile service, using the available bandwidth, operating on radio frequencies between 30 MHz and 1 GHz, with channel separations of 12,5 kHz, 20 kHz and 25 kHz, intended for data transmissions. It applies to digital and combined analogue and digital radio equipment with an internal or external antenna connector intended for the transmission of data and/or speech.

The types of equipment covered by the present document are as follows:

- base station (equipment fitted with an antenna socket, intended for use in a fixed location);
- mobile station (equipment fitted with an antenna socket, normally used in a vehicle or as a transportable);
- and those hand portable stations:
 - a) fitted with an antenna socket; or
 - b) without an external antenna socket (integral antenna equipment), but fitted with a permanent internal or a temporary internal 50 Ω RF connector which allows access to the transmitter output and the receiver input.

Hand portable equipment without an external or internal RF connector and without the possibility of having a temporary internal 50 Ω RF connector is not covered by the present document.

The present document is intended to cover the provisions of article 3.2, of Directive 1999/5/EC [1] (R&TTE Directive), which states that "..... radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive [1] may apply to equipment within the scope of the present document.

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.
- [2] ETSI EN 300 113-1 (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector; Part 1: Technical characteristics and methods of measurement".
- [3] ETSI TR 100 028 (V1.3.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [1], and EN 300 113-1 [2] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 300 113-1 [2] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations defined in EN 300 113-1 [2] apply.

4 Technical specifications

4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the equipment, which shall be declared by the manufacturer of the equipment. The equipment shall comply with all the technical requirements of the present document at all times when operating within the boundary limits of the declared operational environmental profile.

4.2 Transmitter requirements

4.2.1 Frequency error

4.2.1.1 Definition

The frequency error is defined in EN 300 113-1 [2], clause 8.1.1.

4.2.1.2 Limit

The frequency error shall not exceed the limits in EN 300 113-1 [2], table 1.

4.2.1.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.1.2 shall be carried out.

4.2.2 Carrier power (conducted)

4.2.2.1 Definition

The carrier power (conducted) is defined in EN 300 113-1 [2], clause 8.2.1.

4.2.2.2 Limit

The carrier power (conducted) shall not exceed the limits in EN 300 113-1 [2], clause 5.1.2.

4.2.2.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.2.2 shall be carried out.

4.2.3 Effective radiated power

4.2.3.1 Definition

The effective radiated power is defined in EN 300 113-1 [2], clause 8.3.1.

4.2.3.2 Limit

The effective radiated power shall not exceed the limits in EN 300 113-1 [2], clause 5.1.3.

4.2.3.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.3.2 shall be carried out.

4.2.4 Adjacent channel power

4.2.4.1 Definition

The adjacent channel power is defined in EN 300 113-1 [2], clause 8.5.1.

4.2.4.2 Limit

The adjacent channel power shall not exceed the limits in EN 300 113-1 [2], clause 5.1.4.

4.2.4.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.5.2 shall be carried out.

4.2.5 Spurious emissions

4.2.5.1 Definition

The spurious emissions are defined in EN 300 113-1 [2], clause 8.6.1.

4.2.5.2 Limit

The spurious emissions shall not exceed the limits in EN 300 113-1 [2], tables 2 and 3.

4.2.5.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clauses 8.6.1, 8.6.2 and 8.6.3 shall be carried out.

4.2.6 Intermodulation attenuation

4.2.6.1 Definition

The intermodulation attenuation is defined in EN 300 113-1 [2], clause 8.7.1.

4.2.6.2 Limit

The intermodulation attenuation shall not exceed the limits in EN 300 113-1 [2], clause 5.1.6.

4.2.6.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.7.2 shall be carried out.

4.2.7 Transmitter attack time

4.2.7.1 Definition

The transmitter attack time is defined in EN 300 113-1 [2], clause 8.8.1.

4.2.7.2 Limit

The transmitter attack time shall not exceed the limits in EN 300 113-1 [2], clause 5.1.7.

4.2.7.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.8.2 shall be carried out.

4.2.8 Transmitter release time

4.2.8.1 Definition

The transmitter release time are defined in EN 300 113-1 [2], clause 8.9.1.

4.2.8.2 Limit

The transmitter release time shall not exceed the limits in EN 300 113-1 [2], clause 5.1.8.

4.2.8.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.9.2 shall be carried out.

4.2.9 Transient frequency behaviour of the transmitter

4.2.9.1 Definition

The transient frequency behaviour of the transmitter is defined in EN 300 113-1 [2], clause 8.10.1.

4.2.9.2 Limit

The transient frequency behaviour of the transmitter shall not exceed the limits in EN 300 113-1 [2], clauses 5.1.9.1 and 5.1.9.2.

4.2.9.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 8.10.3 shall be carried out.

4.3 Receiver requirements

4.3.1 Sensitivity (data or messages)

4.3.1.1 Definition

The sensitivity is defined in EN 300 113-1 [2], clause 9.1.1 (conducted) and clause 9.2 (field strength).

4.3.1.2 Limit

The sensitivity shall not exceed the limits in EN 300 113-1 [2] clause 5.2.1 (conducted) and clause 5.2.2 (field strength).

4.3.1.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 9.1.2 (data) or 9.1.3 (messages), and 9.2 (field strength), as appropriate, shall be carried out.

4.3.2 Co-channel rejection

4.3.2.1 Definition

The co-channel rejection is defined in EN 300 113-1 [2], clause 9.5.1.

4.3.2.2 Limit

The co-channel rejection shall not exceed the limits in EN 300 113-1 [2], clause 5.2.4.

4.3.2.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 9.5.2 or 9.5.3 shall be carried out.

4.3.3 Adjacent channel selectivity

4.3.3.1 Definition

The adjacent channel selectivity is defined in EN 300 113-1 [2], clause 9.6.1.

4.3.3.2 Limit

The adjacent channel selectivity shall not exceed the limits in EN 300 113-1 [2], table 4.

4.3.3.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 9.6.2 or 9.6.3 shall be carried out.

4.3.4 Spurious response rejection

4.3.4.1 Definition

The spurious response rejection is defined in EN 300 113-1 [2], clause 9.7.1.

4.3.4.2 Limit

The spurious response rejection shall not exceed the limits in EN 300 113-1 [2], clause 5.2.6.

4.3.4.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 9.7.4 or 9.7.5 shall be carried out.

4.3.5 Intermodulation response rejection

4.3.5.1 Definition

The intermodulation response rejection is defined in EN 300 113-1 [2], clause 9.8.1.

4.3.5.2 Limit

The intermodulation response rejection shall not exceed the limits in EN 300 113-1 [2], clause 5.2.7.

4.3.5.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 9.8.2 or 9.8.3 shall be carried out.

4.3.6 Blocking or desensitization

4.3.6.1 Definition

The blocking or desensitization is defined in EN 300 113-1 [2], clause 9.9.1.

4.3.6.2 Limit

The blocking or desensitization shall not exceed the limits in EN 300 113-1 [2], clause 5.2.8.

4.3.6.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 9.9.2 or 9.9.3 shall be carried out.

4.3.7 Spurious radiations

4.3.7.1 Definition

The spurious radiations are defined in EN 300 113-1 [2], clause 9.10.1.

4.3.7.2 Limit

The spurious radiations shall not exceed the limits in EN 300 113-1 [2], tables 5 and 6.

4.3.7.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clauses 9.10.2 and 9.10.3 shall be carried out.

4.3.8 Desensitization and sensitivity (duplex)

4.3.8.1 Definition

The receiver desensitization and sensitivity is defined in EN 300 113-1 [2], clause 10.1.1.

4.3.8.2 Limit

The receiver desensitization and sensitivity shall meet the requirements of EN 300 113-1 [2], clause 5.3.1.

4.3.8.3 Method of measurement

The measurements specified in EN 300 113-1 [2], clause 10.1.2 or 10.1.3 shall be carried out.

4.3.9 Spurious response rejection (duplex)

4.3.9.1 Definition

The spurious response rejection is defined in EN 300 113-1 [2], clause 10.2.1.

4.3.9.2 Limit

The spurious response rejection shall not exceed the limits in EN 300 113-1 [2], clause 5.3.2.

4.3.9.3 Methods of measurement

The measurements specified in EN 300 113-1 [2], clause 10.2.2 shall be carried out.

5 Testing for compliance with technical requirements

5.1 Environmental conditions for testing

5.1.1 Normal and extreme test-conditions

Measurements shall be made under normal test conditions, and also, where stated, under extreme test conditions.

The test conditions and procedures shall be as specified in EN 300 113-1 [2], clauses 6.3, 6.4 and 6.5.

5.1.2 Test power source

The test power source shall meet the requirements of EN 300 113-1 [2], clause 6.2.

5.1.3 Choice of samples for test suites

Measurement shall be performed, according to the present document, on samples of equipment defined in EN 300 113-1 [2], clause 4.1.

5.2 Interpretation of the measurement results

The interpretation of the results recorded in a test report for the measurements described in the present document shall be as follows:

- the measured value related to the corresponding limit will be used to decide whether an equipment meets the requirements of the present document;
- the value of the measurement uncertainty for the measurement of each parameter shall be included in the test report;
- the value of the measurement uncertainty shall be, for each measurement, equal to or lower than the figures in table 1.

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028 [3] and shall correspond to an expansion factor (coverage factor) $k = 1,96$ or $k = 2$ (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Table 1 is based on such expansion factors.

The particular expansion factor used for the evaluation of the measurement uncertainty shall be stated.

Table 1: Absolute measurement uncertainties: maximum values

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power, conducted (up to 160 W)	$\pm 0,75$ dB
Radiated RF power	± 6 dB
Adjacent channel power	± 5 dB
Sensitivity	± 3 dB
Two-signal measurement, valid up to 4 GHz	± 4 dB
Three-signal measurement	± 3 dB
Conducted spurious emission of transmitter, valid up to 12,75 GHz	± 4 dB
Conducted spurious emission of receiver, valid up to 12,75 GHz	± 3 dB
Radiated emission of the transmitter, valid up to 4 GHz	± 6 dB
Radiated emission of receiver, valid up to 4 GHz	± 6 dB
Transmitter transient frequency (frequency difference)	± 250 Hz
Transmitter transient time	± 20 %
Values valid up to 1 GHz for the RF parameters unless otherwise stated.	

5.3 Essential radio test suites

The following radio test suites shall be used to assess the performance of equipment.

5.3.1 Frequency error

The measurements specified in EN 300 113-1 [2], clause 8.1.2 shall be carried out.

5.3.2 Carrier power (conducted)

The measurements specified in EN 300 113-1 [2], clause 8.2.2 shall be carried out.

5.3.3 Effective radiated power

The measurements specified in EN 300 113-1 [2], clause 8.3.2 shall be carried out.

5.3.4 Adjacent channel power

The measurements specified in EN 300 113-1 [2], clause 8.5.2 shall be carried out.

5.3.5 Spurious emissions

The measurements specified in EN 300 113-1 [2], clauses 8.6.1, 8.6.2 and 8.6.3 shall be carried out.

5.3.6 Intermodulation attenuation

The measurements specified in EN 300 113-1 [2], clause 8.7.2 shall be carried out.

5.3.7 Transmitter attack time

The measurements specified in EN 300 113-1 [2], clause 8.8.2 shall be carried out.

5.3.8 Transmitter release time

The measurements specified in EN 300 113-1 [2], clause 8.9.2 shall be carried out.

5.3.9 Transient frequency behaviour of the transmitter

The measurements specified in EN 300 113-1 [2], clause 8.10.3 shall be carried out.

5.4 Other radio test suites

The following radio test suites will be used to assess the performance of equipment.

5.4.1 Sensitivity (data or messages)

The measurements specified in EN 300 113-1 [2], clause 9.1.2 or 9.1.3, and 9.2, as appropriate, shall be carried out.

5.4.2 Co-channel rejection

The measurements specified in EN 300 113-1 [2], clause 9.5.2 or 9.5.3 shall be carried out.

5.4.3 Adjacent channel selectivity

The measurements specified in EN 300 113-1 [2], clause 9.6.2 or 9.6.3 shall be carried out.

5.4.4 Spurious response rejection

The measurements specified in EN 300 113-1 [2], clause 9.7.4 or 9.7.5 shall be carried out.

5.4.5 Intermodulation response rejection

The measurements specified in EN 300 113-1 [2], clause 9.8.2 or 9.8.3 shall be carried out.

5.4.6 Blocking or desensitization

The measurements specified in EN 300 113-1 [2], clause 9.9.2 or 9.9.3 shall be carried out.

5.4.7 Spurious radiations

The measurements specified in EN 300 113-1 [2], clauses 9.10.2 and 9.10.3 shall be carried out.

5.4.8 Desensitization and sensitivity (duplex)

The measurements specified in EN 300 113-1 [2], clause 10.1.2 or 10.1.3 shall be carried out.

5.4.9 Spurious response rejection (duplex)

The measurements specified in EN 300 113-1 [2], clause 10.2.2 shall be carried out.

Annex A (informative): Bibliography

Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive).

Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (LV Directive).

History

Document history		
V1.1.1	March 2001	Publication
V1.2.1	November 2001	One-step Approval Procedure OAP 20020329; 2001-11-28 to 2002-03-29
V1.2.1	April 2002	Publication