

ETSI EN 300 330-2 V1.3.1 (2006-04)

Candidate Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Short Range Devices (SRD);
Radio equipment in the frequency range
9 kHz to 25 MHz and inductive loop systems
in the frequency range 9 kHz to 30 MHz;
Part 2: Harmonized EN under article 3.2
of the R&TTE Directive**



Reference

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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 is part 2 of a multi-part deliverable covering the Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz, as identified below:

Part 1: "Technical characteristics and test methods";

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

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [4] (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").

Technical specifications relevant to Directive 1999/5/EC [1] are given in annex A.

National transposition dates	
Date of adoption of this EN:	24 March 2006
Date of latest announcement of this EN (doa):	30 June 2006
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 December 2006
Date of withdrawal of any conflicting National Standard (dow):	31 December 2007

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.

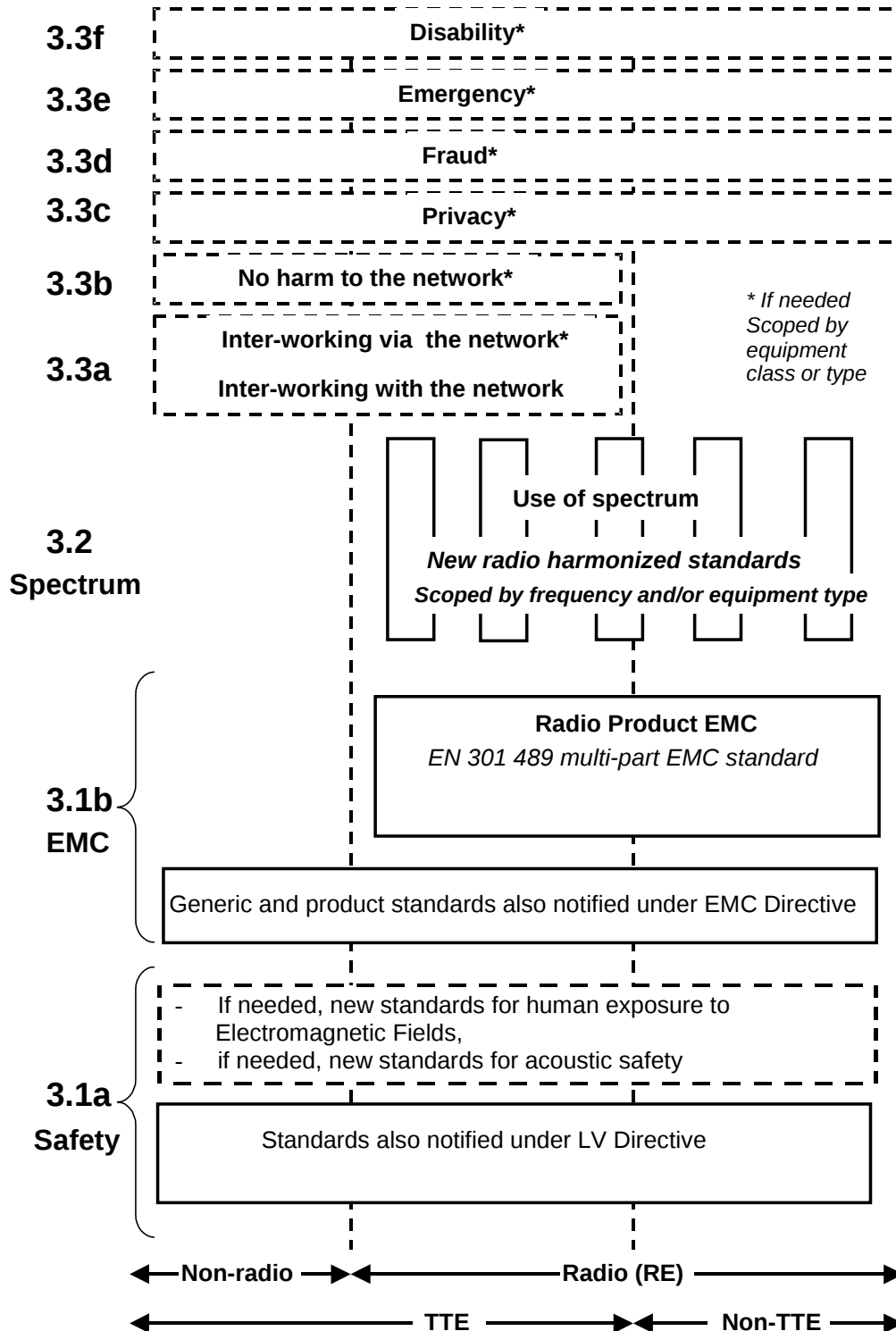


Figure 1: Modular structure for the various standards used under the R&TTE Directive [1]

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 (see bibliography).

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 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 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 decisionswithout 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 Short Range Devices (SRDs) transmitters and receivers as described in the scope of EN 300 330-1 [2].

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".

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.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

- | | |
|-----|--|
| [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 (R&TTE Directive). |
| [2] | ETSI EN 300 330-1 (V1.3.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Part 1: Technical characteristics and test methods". |
| [3] | ETSI TR 100 028 (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics". |
| [4] | Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations. |

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 300 330-1 [2] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 300 330-1 [2] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 300 330-1 [2] apply.

4 Technical requirements 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 supplier. 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 Conformance requirements

4.2.1 Transmitter requirements

4.2.1.1 Radiated H-field

The radiated H-field, as defined in EN 300 330-1 [2], clause 7.2.1.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.2.1.3, table 4.

This requirement applies to transmitters with an integral or dedicated loop antenna.

4.2.1.2 RF carrier current

The RF carrier current, as defined in EN 300 330-1 [2], clause 7.2.2.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.2.2.3, table 5.

This requirement only applies to Product Class 3, as defined in EN 300 330-1 [2], clause 7.1.4.

4.2.1.3 Radiated E-field

The radiated E-field, as defined in EN 300 330-1 [2], clause 7.2.3.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.2.3.3. This requirement only applies to Product Class 4, as defined in EN 300 330-1 [2], clause 7.1.4.

4.2.1.4 Permitted frequency range of the modulation bandwidth

The permitted range of operation frequencies, as defined in EN 300 330-1 [2], clause 7.3.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.3.3.

4.2.1.5 Spurious emissions

4.2.1.5.1 Conducted spurious emissions at frequencies below 30 MHz

The conducted spurious emissions below 30 MHz, as defined in EN 300 330-1 [2], clause 7.4.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.4.2.2.

This requirement only applies to Product Class 3 as defined in EN 300 330-1 [2], clause 7.1.4.

4.2.1.5.2 Conducted spurious emissions at frequencies ≥ 30 MHz

The conducted spurious emissions at or above 30 MHz, as defined in EN 300 330-1 [2], clause 7.4.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.4.2.4, table 6.

This requirement only applies to Product Class 3 as defined in EN 300 330-1 [2], clause 7.1.4.

4.2.1.5.3 Radiated spurious emissions at frequencies below 30 MHz

The radiated spurious emissions below 30 MHz, as defined in EN 300 330-1 [2], clause 7.4.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.4.3.2, table 7.

This requirement applies to all transmitters.

4.2.1.5.4 Radiated spurious emissions at frequencies $\geq$ 30 MHz

The radiated spurious emissions at or above 30 MHz, as defined in EN 300 330-1 [2], clause 7.4.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.4.4.2, table 8.

This requirement applies to all transmitters.

4.2.1.6 Duty cycle

The duty cycle, as defined in EN 300 330-1 [2], clause 7.5.1, shall not exceed the limits in EN 300 330-1 [2], clause 7.5.3, table 9.

This requirement applies to all transmitters.

4.2.2 Receiver requirements

4.2.2.1 Adjacent channel selectivity - in band

The adjacent channel selectivity in-band, as defined in EN 300 330-1 [2], clause 8.1.1, shall not be less than the limits in EN 300 330-1 [2], clause 8.1.3, table 10.

This requirement applies to receiver class 1, when invoked, as defined in EN 300 330-1 [2], clauses 4.1.1 and 8.1.

4.2.2.2 Blocking or desensitization

The blocking or desensitization, as defined in EN 300 330-1 [2], clause 8.2.1, shall not be less than the limits in EN 300 330-1 [2], clause 8.2.3, table 11.

This requirement applies to class 1 and class 2 receivers, when invoked, as defined in EN 300 330-1 [2], clause 4.1.1.

4.2.2.3 Receiver spurious radiations

4.2.2.3.1 Radiated emissions below 30 MHz

The spurious radiations below 30 MHz, as defined in EN 300 330-1 [2], clause 8.3.1, shall not exceed the limits in EN 300 330-1 [2], clause 8.3.3.1, table 12.

4.2.2.3.2 Radiated emissions $\geq$ 30 MHz

The spurious radiations at 30 MHz or above, as defined in EN 300 330-1 [2], clause 8.3.1, shall not exceed the limits in EN 300 330-1 [2], clause 8.3.3.2.

5 Testing for compliance with technical requirements

5.1 Description of testing for compliance with technical requirements

5.1.1 Environmental conditions for testing

5.1.1.1 Normal and extreme test-conditions

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

The test conditions shall be as specified in EN 300 330-1 [2], clauses 5.3, 5.4.1.1 and 5.4.2.

5.1.1.2 Test power source

The test power source shall meet the requirements of EN 300 330-1 [2], clause 5.2.

5.1.2 Choice of samples for test suites

Measurement shall be performed, according to the present document, on samples of equipment defined in EN 300 330-1 [2], clauses 4.2.1 to 4.2.4.

5.1.3 Transmitter test suites

5.1.3.1 Radiated H-field

- The test specified in EN 300 330-1 [2], clause 7.2.1.2, shall be carried out.

This test suite applies for Product Class 1 transmitters with an integral or dedicated antenna and class 2 transmitters with a customized antenna.

5.1.3.2 RF carrier current

- The test specified in EN 300 330-1 [2], clause 7.2.2.2, shall be carried out.

This test suite applies for Product Class 3 transmitters supplied without antenna.

5.1.3.3 Radiated E-field

- The test specified in EN 300 330-1 [2], clause 7.2.3.2, shall be carried out.

This test suite applies for Product Class 4 transmitters with an integral or dedicated antenna.

5.1.3.4 Permitted frequency range of the modulation bandwidth

- The test specified in EN 300 330-1 [2], clause 7.3.2, shall be carried out.

This test suite applies to all transmitters.

5.1.3.5 Conducted spurious emissions at frequencies below 30 MHz

- The test specified in EN 300 330-1 [2], clause 7.4.2.1 shall be carried out.

This test suite only applies to Product Class 3 as defined in EN 300 330-1 [2], clause 7.1.4.

5.1.3.6 Conducted spurious emissions at frequencies ≥ 30 MHz

- The test specified in EN 300 330-1 [2], clause 7.4.2.3 shall be carried out.

This test suite only applies to Product Class 3 as defined in EN 300 330-1 [2], clause 7.1.4.

5.1.3.7 Radiated spurious emissions at frequencies below 30 MHz

- The test specified in EN 300 330-1 [2], clause 7.4.3.1 shall be carried out.

This test suite applies to all transmitters.

5.1.3.8 Radiated spurious emissions at frequencies ≥ 30 MHz

- The test specified in EN 300 330-1 [2], clause 7.4.4.1, shall be carried out.

This test suite applies to all transmitters.

5.1.4 Receiver test suites

5.1.4.1 Adjacent channel selectivity- in band

- The test specified in EN 300 330-1 [2], clause 8.1.2, shall be carried out.

This test suite applies to all Class 1 receivers.

5.1.4.2 Blocking and desensitization

- The test specified in EN 300 330-1 [2], clause 8.2.2, shall be carried out.

This test suite applies to all Class 1 and Class 2 receivers.

5.1.4.3 Receiver spurious radiation

- The test specified in EN 300 330-1 [2], clause 8.3.2, shall be carried out.

This test suite applies to all receivers.

5.2 Interpretation of measurement results

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

- the measured value related to the corresponding limit shall 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 separately 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.

Table 1: Measurement uncertainty

Radio frequency	$\pm 1 \times 10^{-7}$
RF power, conducted	± 1 dB
Conducted emission of receivers	± 1 dB
Radiated emission of transmitter	± 6 dB
Radiated emission of receiver	± 6 dB
Temperature	± 1 degree
Humidity	± 5 %

For the test methods, according to the present document the uncertainty figures shall be calculated according to the methods described in the 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 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.

Annex A (normative): EN Requirements Table (EN-RT)

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the EN-RT proforma in this annex so that it can be used for its intended purposes and may further publish the completed EN-RT.

The EN Requirements Table (EN-RT) in table A.1 below serves a number of purposes, as follows:

- it provides a statement of all the essential requirements in words and by cross reference to a specific clause in the present document or to a specific clause in a specific referenced document;
- it provides a statement of all the test procedure corresponding to those essential requirements by cross reference to specific clause(s) in the present document or to a specific clause(s) in specific referenced document(s);
- it qualifies each requirement to be either:
 - Unconditional - meaning that the requirement applies in all circumstances, or
 - Conditional - meaning that the requirement is dependent on the supplier having chosen to support optional functionality defined within the schedule;
- in the case of Conditional requirements, it associates the requirement with the particular optional service or functionality;
- it qualifies each test procedure to be either:
 - Essential: meaning that it is included with the Essential Radio Test Suite and therefore the requirement shall be demonstrated to be met in accordance with the referenced procedures;
 - Other: meaning that the test procedure is illustrative but other means of demonstrating compliance with the requirement are permitted;
- when the schedule is completed in respect of a particular equipment including the testing outcomes, including a completed version of table A.1 it provides a means to assert the "presumption of conformity" with the HS.

Table A.1: EN Requirements Table (EN-RT)

Harmonized Standard EN 300 330-2 The following technical requirements and test specifications are relevant to the presumption of conformity under article 3.2 of the R&TTE Directive							
Technical Requirement reference			Technical Requirement Conditionality		Test Specification		
No	Description	Reference: Clause No	U/C	Condition	E/O	Reference: Clause No	Observations
1	Radiated H-field	4.2.1.1	C	Applies to transmitters with an integral or dedicated loop antenna.	E	5.1.3.1	
2	RF carrier current	4.2.1.2	C	Applies to Product Class 3, as defined in EN 300 330-1 [2], clause 7.1.4.	E	5.1.3.2	
3	Radiated E-field	4.2.1.3	C	Applies to Product Class 4, as defined in EN 300 330-1 [2], clause 7.1.4.	E	5.1.3.3	
4	Permitted frequency range of the modulation bandwidth	4.2.1.4	U		E	5.1.3.4	
5	Conducted spurious emissions at frequencies below 30 MHz	4.2.1.5.1	C	Applies to Product Class 3 as defined in EN 300 330-1 [2], clause 7.1.4.	E	5.1.3.5	
6	Conducted spurious emissions at frequencies ≥ 30 MHz	4.2.1.5.2	C	Applies to Product Class 3 as defined in EN 300 330-1 [2], clause 7.1.4.	E	5.1.3.6	
7	Radiated spurious emissions at frequencies below 30 MHz	4.2.1.5.3	U		E	5.1.3.7	
8	Radiated spurious emissions at frequencies ≥ 30 MHz	4.2.1.5.4	U		E	5.1.3.8	
9	Duty cycle	4.2.1.6	U		X		
10	Adjacent channel selectivity - in band	4.2.2.1	C	Applies to receiver class 1, when invoked, as defined in EN 300 330-1 [2], clauses 4.1.1 and 8.1.	O	5.1.4.1	
11	Blocking or desensitization	4.2.2.2	C	Applies to class 1 and class 2 receivers, when invoked, as defined in EN 300 330-1 [2], clause 4.1.1	O	5.1.4.2	
12	Radiated emissions below 30 MHz	4.2.2.3.1	U		E	5.1.4.3	
13	Radiated emissions ≥ 30 MHz	4.2.2.3.2	U		E	5.1.4.4	

Key to columns:**Essential Requirement:****No**

A unique identifier for one row of the table which may be used to identify an essential requirement or its test specification.

Description

A textual reference to the Essential Requirement.

Reference: Clause Number

Identification of clause(s) defining the essential requirement in the present document unless another document is referenced explicitly.

Conditionality:

U/C	Indicates whether the requirement is to be <i>unconditionally</i> applicable (U) or is <i>conditional</i> upon the suppliers claimed functionality of the equipment (C).
Condition	Explains the conditions when the requirement shall or shall not be applicable for a requirement which is classified "conditional".

Test Specification:

E/O	Indicates whether the test specification forms part of the <i>Essential Radio Test Suite</i> (E) or whether it is one of the <i>Other Test Suite</i> (O).
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NOTE: All tests whether 'E' or 'O' are relevant to essential requirements. Tests designated 'E' collectively make up the Essential Radio Test Suite; those designated 'O' make up the Other Test Suite. For those requirements for which no test specification applies are designated 'X'. All tests classified 'E' shall be performed as specified with satisfactory outcomes in order to allow a presumption of conformity. Requirements associated with tests classified 'O' or 'X' must be complied with although the requirement shall be complied with as demonstrated by an equivalent test or by assertion by the supplier and asserted to be complied with to allow presumption of conformity.

Reference: Clause Number	Identification of clause(s) defining the test specification in the present, document unless another document is referenced explicitly. Where no test is specified (that is, where the previous field is 'X') this field remains blank.
Observations:	Remains blank in the HS but is available for use for users of the standard to record the outcome of tests against each requirement.

Annex B (informative):

The EN title in the official languages

Language	EN title
Czech	Elektromagnetická kompatibilita a rádiové spektrum (ERM) - Zařízení krátkého dosahu (SRD) - Rádiová zařízení pracující v kmitočtovém rozsahu 9 kHz až 25 MHz a systémy s indukční smyčkou v kmitočtovém rozsahu 9 kHz až 30 MHz - Část 2: Harmonizovaná EN podle článku 3.2 Směrnice R&TTE
Danish	Elektromagnetisk kompatibilitet og spektrumanliggende (ERM) - Apparater med kort rækkevidde (SRD) - Radioudstyr som benytter frekvenser mellem 9 kHz og 25 MHz samt induktive sløjfer mellem 9 kHz og 30 MHz - Del 2: Harmoniseret EN, som dækker de væsentlige krav i R&TTE-direktivets artikel 3.2
Dutch	Elektromagnetische compatibiliteit en radiospectrumzaken (ERM); apparatuur ten behoeve van kortafstandcommunicatie (SRD); radioapparatuur in het frequentiegebied van 9 kHz tot 25 MHz en systemen gebruikmakend van een inductieve lus in het frequentiegebied van 9 kHz tot 30 MHz; deel 2: Geharmoniseerde EN onder artikel 3, lid 2, van Richtlijn 1999/5/EG
English	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
Estonian	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed; Raadiosagedusala 9 kHz kuni 25 MHz töötavad raadioseadmed ja sagedusala 9 kHz kuni 30 MHz töötavad induktiivseadmed; Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
Finnish	Sähkömagneettinen yhteensopivuus ja radiospektriasiat (ERM); Lyhyen kantaman laitteet; Taajuusalueella 9 kHz - 25 MHz toimivat radiolaitteet sekä taajuusalueella 9 kHz - 30 MHz toimivat induktiosilmukajärjestelmät; Osa 2: R&TTE-direktiivin artiklaan 3.2 perustuva yhdenmukaistettu standardi
French	Télécommunications - CEM et spectre radioélectrique (ERM) - Appareils à faible portée (SRD) - Équipements radioélectriques dans la bande de fréquences 9 kHz à 25 MHz et systèmes à boucle d'induction de 9 kHz à 30 MHz - Partie 2 : EN harmonisée couvrant l'article 3.2 de la Directive R&TTE
German	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM) - Funkanlagen mit geringer Reichweite (SRD) - Funkgeräte im Frequenzbereich 9 kHz bis 25 MHz und induktive Schleifensysteme im Frequenzbereich 9 kHz bis 30 MHz; Teil 2: Harmonisierte EN nach Artikel 3.2 der R&TTE-Richtlinie
Greek	Ηλεκτρομαγνητική συμβατότητα και θέματα ραδιοφάσματος (ERM) – Συσκευές μικρής εμβέλειας (SRD) – Ραδιοεξοπλισμός στην περιοχή συχνοτήτων 9 kHz ως 25 MHz και συστήματα επαγωγικού βρόχου στην περιοχή συχνοτήτων 9 kHz ως 30 MHz - Μέρος 2: Εναρμονισμένο EN για την κάλυψη του Άρθρου 3.2 της Οδηγίας R&TTE
Hungarian	Elektromágneses összeférhetőségi és rádióspektrumügyek (ERM). Kis hatótávolságú eszközök (SRD). A 9 kHz - 25 MHz-es sáv rádióberendezései és a 9 kHz - 30 MHz-es sáv induktív hurkos rendszerei. 2. rész: Az R&TTE-irányelv 3.2. cikkelye alá tartozó, harmonizált európai szabvány
Icelandic	Þættir sem varða rafsegulsviðssamhæfi og fjarskiptatíðni (ERM); Skammtdræg tæki (SRD); Þráðlaus fjarskiptabúnaður á tíðnisviðinu 9 kHz til 25 MHz og með spanlykkjukerfi á tíðnisviðinu 9 kHz til 30 MHz; 2. hluti: Samræmdur Evrópustaðall skv. 2. mgr. 3. gr. í tilskipun 1999/5/EC um fjarskiptabúnað og endabúnað til fjarskipta
Italian	Compatibilità elettromagnetica e Questioni relative allo spettro delle radiofrequenze (ERM); Dispositivi a breve portata (SRD); apparecchiature radio da utilizzare nella gamma di frequenze da 9 kHz a 25 MHz e sistemi con spire induttive nella gamma di frequenza da 9 kHz a 30 MHz; Parte 2: Norma armonizzata relativa ai requisiti essenziali dell'articolo 3.2 della direttiva R&TTE
Latvian	Elektromagnētiskā saderība un radiofrekvenču spektra jautājumi (ERM). Maza darbības attāluma ierīces (SRD). Radioiekārtas frekvenču joslā no 9 kHz līdz 25 MHz un induktīvās cilpas sistēmas frekvenču joslā no 9 kHz līdz 30 MHz. 2.daļa: Harmonizēts Eiropas standarts (EN), kas atbilst R&TTE Direktīvas 3.2.punktam
Lithuanian	Elektromagnetinio suderinamumo ir radijo dažnių spektro dalykai. Mažoji nuotolio įranga (MNĮ). Radijo ryšio įranga, veikianti nuo 9 kHz iki 25 MHz dažnių diapazone, ir induktyviosios kilpos sistemos, veikiančios nuo 9 kHz iki 30 MHz dažnių diapazone. 2 dalis. Darnusis Europos standartas pagal 1999/5/EC* direktyvos 3.2 straipsnį
Maltese	Kompatibilità elettromanjetika u materji relatati ma' spettru radjofoniku (ERM); Apparati ta' Medda Qasira (SRD); Tagħmir radjofoniku fil-medda tal-frekwenzi 9 kHz sa 25 MHz u sistemi induttivi ta' kontroll ta' rġiġh lura ta' sinjali mibgħuta fil-medda ta' frekwenzi 9 kHz sa 30 MHz Parti 2: EN armonizzata taħt l-artiklu 3.2 tad-Direttiva R&TTE
Norwegian	Elektromagnetisk kompatibilitet og radiospektrumspørsmål (ERM); Kortdistanseutstyr (SRD); Radioutstyr i frekvensområdet 9 kHz til 25 MHz og induktive sløyfesystemer i frekvensområdet 9 kHz til 30 MHz; Del 2: Harmonisert EN under R&TTE-direktivets artikkel 3.2

Language	EN title
Polish	Kompatybilność elektromagnetyczna i zagadnienia widma radiowego (ERM) – Urządzenia bliskiego zasięgu (SRD) – Urządzenia radiowe pracujące w zakresie częstotliwości od 9 kHz do 25 MHz i systemy z pętlą indukcyjną pracujące w zakresie częstotliwości od 9 kHz do 30 MHz – Część 2: Zharmonizowana EN zgodna z wymaganiami artykułu 3.2 dyrektywy R&TTE
Portuguese	Assuntos de Espectro Radioelétrico e Compatibilidade Electromagnética (ERM); Equipamento de curto alcance (SRD); Equipamento de rádio para a faixa de frequências de 9 kHz a 25 MHz e sistemas indutivos na faixa de frequências de 9 kHz a 30 MHz; Parte 2: EN Harmonizada no âmbito do artigo 3º, nº 2, da Directiva R&TTE
Slovak	Elektromagnetická kompatibilita a záležitosti rádiového spektra (ERM). Zariadenia s krátkym dosahom (SRD). Rádiové zariadenia vo frekvenčnom rozsahu od 9 kHz do 25 MHz a systémy s indukčnou slučkou vo frekvenčnom rozsahu od 9 kHz do 30 MHz. Časť 2: Harmonizovaná EN podľa článku 3.2 smernice R&TTE
Slovenian	Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) – Naprave kratkega dosega (SRD) – Radijska oprema v frekvenčnem območju od 9 kHz do 25 MHz in sistemi z indukcijsko zanko v frekvenčnem območju od 9 kHz do 30 MHz – 2. del: Harmonizirani EN v skladu s členom 3.2 direktive R&TTE
Spanish	
Swedish	Elektromagnetisk kompatibilitet och radiospektrumfrågor (ERM); Kortdistansutrustningar (SRD); Radioutrustning i frekvensområdet 9 kHz till 25 MHz och induktiva slingsystem i frekvensområdet 9 kHz till 30 MHz; Del 2: Harmoniserad EN enligt artikel 3.2 i R&TTE-direktivet

Annex C (informative): Bibliography

- ETSI EN 301 489-1: "Electromagnetic compatibility and Radio spectrum matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements".
- ETSI EN 301 489-3: "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz".
- ERC/DEC(01)13: "ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency bands 9 - 59.750 kHz, 59.750 - 60.250 kHz, 60.250 - 70 kHz, 70 - 119 kHz, 119 - 135 kHz".
- ERC/DEC(01)14: "ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency bands 6765 - 6795 kHz, 13.553 - 13.567 MHz".
- ERC/DEC(01)15: "ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency band 7400 - 8800 kHz".
- ERC/DEC(01)16: "ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for inductive applications operating in the frequency band 26.957 - 27.283 MHz".
- 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).

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