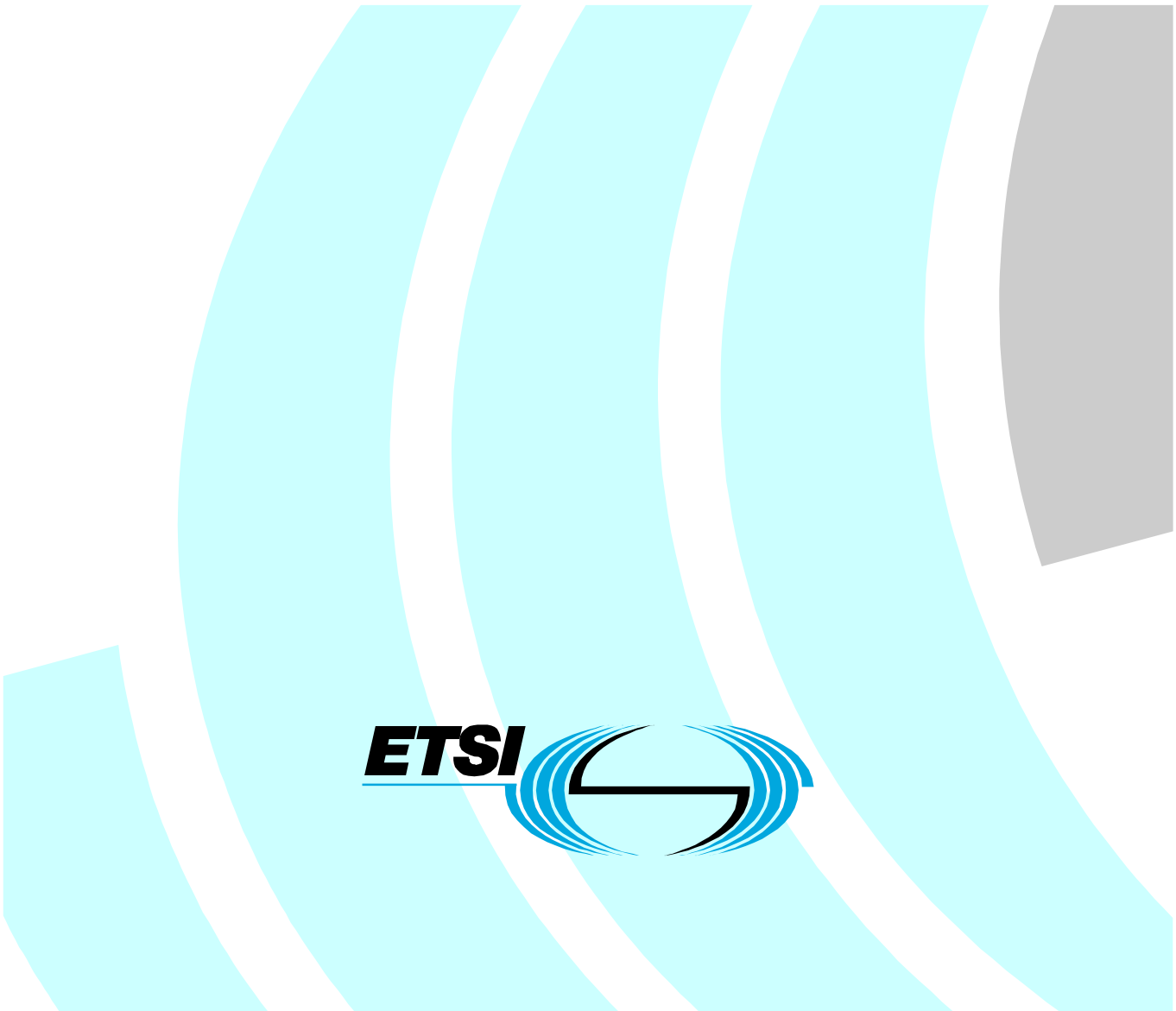
Final draft ETSI EN 300 220-2 V2.1.1 (2006-01)

Candidate Harmonized European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive



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Contents

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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), and is now submitted for the Vote phase of the ETSI standards Two-step Approval Procedure.

The present document is part 2 of a multi-part deliverable, covering the Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW, as identified below:

Part 1: "Technical characteristics and test methods";

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

NOTE: Version 2 of this multi-part deliverable consists of two parts. In contrast with earlier versions which consisted of three parts.

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [3] 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").

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	18 months after doa

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. Each standard is a module in the structure. The modular structure is shown in figure 1.

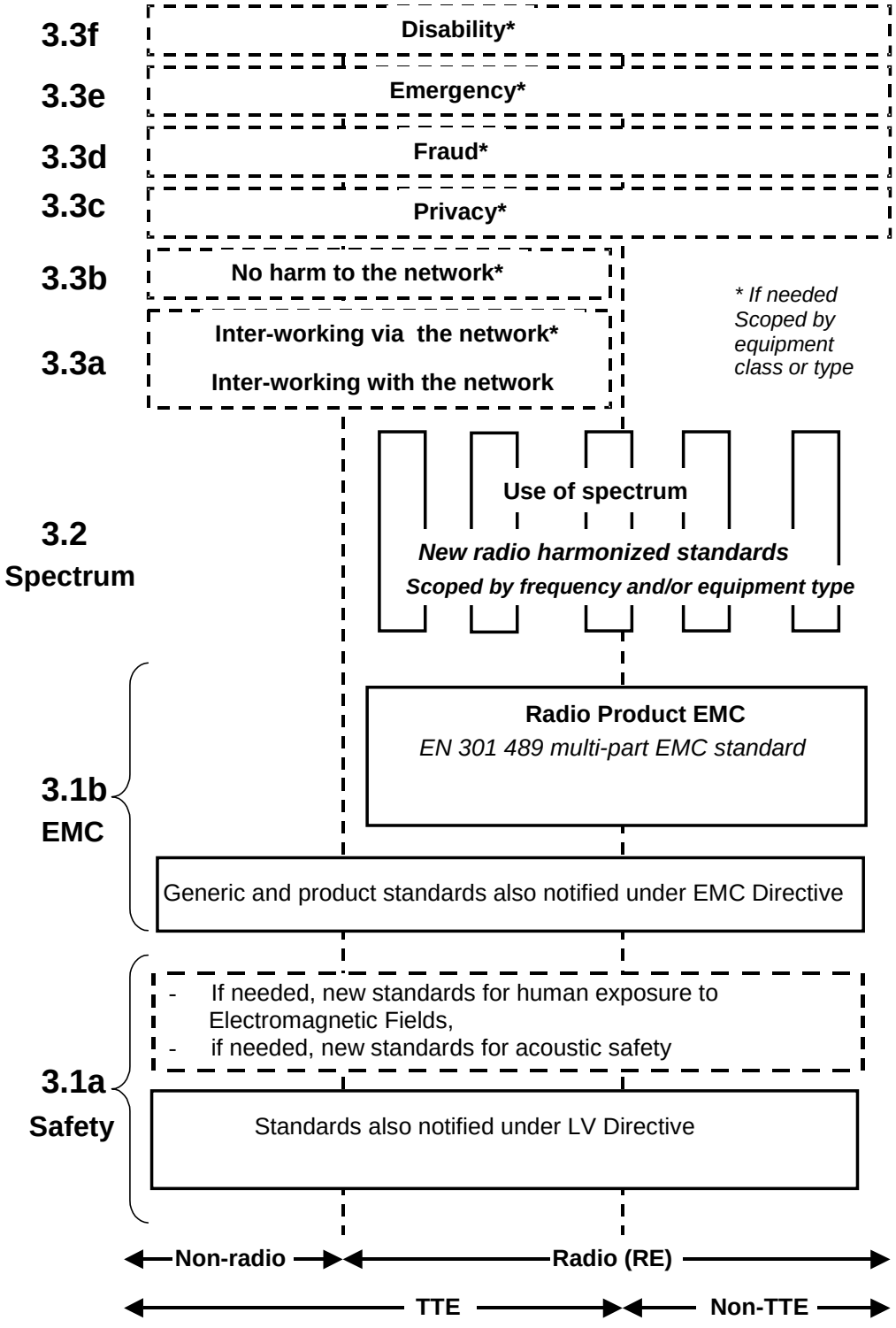

Figure 1: Modular structure for the various standards used under the R&TTE Directive [1]

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 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 short range device radio transmitters and receivers as described in the scope of EN 300 220-1 [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 300 220-1 (V2.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods".

[3] 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 300 220-1 [2] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 300 220-1 [2] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 300 220-1 [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 Frequency error and frequency drift

One of the following shall be met:

- the frequency error or frequency drift, as defined in EN 300 220-1 [2], clause 8.1.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.1.4, table 6a for narrow band or table 6b for wide band; or
- for narrow band equipment not capable of producing an unmodulated carrier, the adjacent and alternate channel power, as defined in EN 300 220-1 [2], clause 8.6.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.6.3 under extreme conditions.

This requirement applies to all transmitters.

4.2.1.2 Carrier power (conducted)

The carrier power (conducted), as defined in EN 300 220-1 [2], clause 8.2.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.2.3.

This requirement applies to transmitters which may be used without an integral or dedicated antenna.

4.2.1.3 Effective radiated power

The effective radiated power, as defined in EN 300 220-1 [2], clause 8.3.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.3.3.

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

4.2.1.4 Transient power

The transient power, as defined in EN 300 220-1 [2], clause 8.5.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.5.4.

This requirement applies to all transmitters.

4.2.1.5 Adjacent channel power

The adjacent channel power, as defined in EN 300 220-1 [2], clause 8.6.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.6.3.

This requirement applies to transmitters with a channel spacing of 200 kHz or less.

4.2.1.6 Modulation bandwidth for wide band equipment (> 200 kHz)

The range of modulation bandwidth, as defined in EN 300 220-1 [2], clause 8.7.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.7.3.

This requirement applies to transmitters using wide band as defined in EN 300 220-1 [2], clause 3.1.

4.2.1.7 Spurious emissions

The spurious emissions, as defined in EN 300 220-1 [2], clause 8.8.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.8.5.

This requirement applies to all transmitters.

4.2.1.8 Frequency stability under low-voltage conditions

The frequency stability under low-voltage conditions, as defined in EN 300 220-1 [2], clause 8.9.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.9.3.

This requirement applies to all battery-operated transmitters.

4.2.1.9 Duty cycle

The duty cycle, as defined in EN 300 220-1 [2], clause 8.10.1, shall not exceed the limits in EN 300 220-1 [2], clause 8.10.3.

This requirement applies to all transmitters excluding those with a listen before talk facility with AFA.

4.2.1.10 Listen Before Talk (LBT)

4.2.1.10.1 Minimum transmitter off-time

The minimum transmitter off-time, as defined in EN 300 220-1 [2], clause 8.11.1.2, shall not be less than the limits in EN 300 220-1 [2], clause 8.11.1.3.

This requirement applies to all transmitters using LBT.

4.2.1.10.2 Minimum listening time

The minimum listening time, as defined in EN 300 220-1 [2], clause 8.11.2.1 shall not shall not be less than the limits in EN 300 220-1 [2], clause 8.11.2.2.

This requirement applies to all transmitters using LBT.

4.2.1.10.3 Maximum transmitter on-time

The maximum transmitter on-time, as defined in EN 300 220-1 [2], clause 8.11.1.4.1 shall not exceed the limits in EN 300 220-1 [2], clause 8.11.4.1.2.

This requirement applies to all transmitters using LBT.

4.2.1.11 Types of spread spectrum modulation

4.2.1.11.1 Frequency hopping spread spectrum devices

The FHSS parameters, as declared in EN 300 220-1 [2], clause 8.4.1.1 shall not exceed the limits in EN 300 220-1 [2], clause 8.4.1.1 table 9 and indent a) to g).

This applies to all transmitters which employ FHSS.

4.2.1.11.2 Direct sequence or other spread spectrum than FHSS

The power density, as defined in EN 300 220-1 [2], clause 8.4.2.1 shall not exceed the limits in EN 300 220-1 [2], clause 8.4.2.2, table 10.

This applies to all transmitters which employ DSSS and other spread spectrum than FHSS.

4.3 Receiver requirements

4.3.1 Maximum usable sensitivity (conducted)

The receiver sensitivity as defined in EN 300 220-1 [2], clauses 9.1.1 and F.2.1, shall be shall be equal to or less than the limits in EN 300 220-1 [2], clauses 9.1.4 or F.2.2, as appropriate.

This requirement applies to all receivers with Listen Before Talk (LBT) facility.

4.3.2 Receiver LBT threshold and transmitter max on-time

a) The LBT threshold, as defined in EN 300 220-1 [2], clause 9.2.1, shall be equal to or less than the limits in EN 300 220-1 [2], clause 9.2.3, table 14.

b) The transmitter max on-time, as defined in EN 300 220-1 [2], clause 8.11.1.1, shall be equal to or less than the limits in EN 300 220-1 [2], clause 9.2.3, table 14.

This requirement applies to all receivers with listen before talk (LBT) facility.

4.3.3 Adjacent channel selectivity

The adjacent channel selectivity as defined in EN 300 220-1 [2], clause 9.3.1, shall be equal to or greater than the limits in EN 300 220-1 [2], clauses 9.3.3.1, table 15 and clause 9.3.3.2, table 16.

This requirement applies only to all class 1 receivers, as defined in EN 300 220-1 [2], clause 4.1.1.

4.3.4 Blocking or desensitization

The blocking or desensitization, as defined in EN 300 220-1 [2], clause 9.4.1, shall be equal to or greater than the limits in EN 300 220-1 [2], clause 9.4.3, table 17 and clause 9.4.3.3, table 18.

This requirement applies only to class 1 and class 2 receivers, as defined in EN 300 220-1 [2], clause 4.1.1.

The blocking or desensitization for receivers with listen before talk (LBT) facility, as defined in EN 300 220-1 [2], clause 9.4.1, shall be equal to or greater than the limits in EN 300 220-1 [2], clause 9.4.3.1.

Additionally, the blocking (saturation) for Class 1 receivers as defined in EN 300 220-1 [2], clause 9.4.1, shall be equal to or greater than the limits in EN 300 220-1 [2], clause 9.4.3.2.

4.3.5 Intermodulation response rejection

The intermodulation response rejection, as defined in EN 300 220-1 [2], clause 9.5.1, shall be equal to or greater than the limits in EN 300 220-1 [2], clause 9.5.3.

This requirement applies only to class 1 receivers, as defined in EN 300 220-1 [2], clause 4.1.1.

4.3.6 Spurious response rejection

The spurious response rejection, as defined in EN 300 220-1 [2], clause 9.6.1, shall be equal to or greater than the limits in EN 300 220-1 [2], clause 9.6.3.

This requirement applies only to class 1 receivers, as defined in EN 300 220-1 [2], clause 4.1.1.

4.3.7 Spurious radiations

The spurious radiations, as defined in EN 300 220-1 [2], clause 9.7.1, shall not exceed the limits in EN 300 220-1 [2], clause 9.7.5.

This requirement applies to all classes of receivers.

5 Testing for compliance with technical requirements

5.1 Description testing for compliance with technical requirements

5.1.1 Environmental conditions for testing

5.1.1.1 Normal and extreme test-conditions

Type 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 300 220-1 [2], clauses 5.3 to 5.4.

5.1.1.2 Test power source

The test power source shall meet the requirements of EN 300 220-1 [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 300 220-1 [2], clauses 4.2.1 to 4.2.13.2.

5.1.3 Transmitter test suites

5.1.3.1 Frequency error and drift

For narrow band equipment, either:

- the test specified in EN 300 220-1 [2], clause 8.1.2.1 shall be carried out; or
- the test specified in EN 300 220-1 [2], clause 8.6.2 shall be carried out under extreme test conditions.

The test specified in EN 300 220-1 [2], clause 8.1.3.1 shall be carried out on wide band equipment.

This test suite applies to all transmitters.

5.1.3.2 Carrier power (conducted)

The test specified in EN 300 220-1 [2], clause 8.2.2 shall be carried out.

This test suite applies to transmitters which may be used without an integral or dedicated antenna.

5.1.3.3 Effective radiated power

The test specified in EN 300 220-1 [2], clause 8.3.2 shall be carried out.

This test suite applies to transmitters with an integral or dedicated antenna.

5.1.3.4 Types of spread spectrum modulation

The declarations specified in EN 300 220-1 [2], clause 8.4.1.1 shall be carried out.

This applies to all transmitters employing FHSS modulation.

5.1.3.5 Transient power

The tests specified in EN 300 220-1 [2], clause 8.5.2 shall be carried out.

This test suite applies to all transmitters used for data transmission.

5.1.3.6 Adjacent channel power

The test specified in EN 300 220-1 [2], clause 8.6.2 shall be carried out.

This test suite applies to transmitters where a channel plan is used with a channel spacing of 200 kHz or less.

5.1.3.7 Modulation bandwidth for wide band equipment

The test specified in EN 300 220-1 [2], clause 8.7.2 shall be carried out.

This test suite applies to transmitters using wide band as defined in EN 300 220-1 [2], clause 3.1.

5.1.3.8 Spurious emissions

Either:

- the tests specified in EN 300 220-1 [2], clause 8.8.2 and EN 300 220-1 [2], clause 8.8.3 shall be carried out; or
- the test specified in EN 300 220-1 [2], clause 8.8.4 shall be carried out.

This test suite applies to all transmitters.

5.1.3.9 Frequency stability under low-voltage conditions

The test specified in EN 300 220-1 [2], clause 8.9.2 shall be carried out.

This test suite applies to all battery-operated transmitters.

5.1.4 Receiver test suites

5.1.4.1 Receiver sensitivity

The test specified in EN 300 220-1 [2], clause 9.1.2 or 9.1.3 shall be carried out.

This test suite applies to all receivers with a listen Before Talk Facility (LBT).

5.1.4.2 Receiver LBT threshold and transmitter max on-time

The test specified in EN 300 220-1 [2], clause 9.2.2 shall be carried out.

This test suite applies to all receivers with a listen Before Talk Facility (LBT).

5.1.4.3 Adjacent channel selectivity

The test specified in EN 300 220-1 [2], clause 9.3.2 shall be carried out.

This test suite applies to all Class 1 receivers.

5.1.4.4 Blocking or desensitization

The test specified in EN 300 220-1 [2], clause 9.4.2 shall be carried out.

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

This test suite applies to all receivers with a listen Before Talk Facility (LBT).

5.1.4.5 Intermodulation response rejection

The test specified in EN 300 220-1 [2], clause 9.5.2 shall be carried out.

This test suite applies to all Class 1 receivers.

5.1.4.6 Spurious response rejection

The test specified in EN 300 220-1 [2], clause 9.6.2 shall be carried out.

This test suite applies to all Class 1 receivers.

5.1.4.7 Spurious radiation

Either:

- the tests specified in EN 300 220-1 [2], clause 9.7.2 and EN 300 220-1 [2], clause 9.7.3 shall be carried out; or
- the test specified in EN 300 220-1 [2], clause 9.7.4 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 given in EN 300 220-1 [2] clause 7.

The EN Requirements Table (EN-RT)) in Table A1 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 A1 it provides a means to assert the "presumption of conformity" with the HS.

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

Harmonized Standard EN 300 220-2 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	Frequency error or frequency drift	4.2.1.1	U		E	5.1.3.1	
2	Carrier power (conducted)	4.2.1.2	C	Applies to transmitters which may be used without integral or dedicated antenna.	E	5.1.3.2	
3	Effective radiated power	4.2.1.3	C	Applies to transmitters with an integral or dedicated antenna.	E	5.1.3.3	
4	Transient power	4.2.1.4	U		E	5.1.3.5	
5	Adjacent channel power	4.2.1.5	C	Applies to transmitters with a channel spacing of 200 kHz or less	E	5.1.3.6	
6	Modulation bandwidth for wide-band equipment (>200 kHz)	4.2.1.6	C	Applies to transmitters using wide band as defined in EN 300 220-1 [2], clause 3.1	E	5.1.3.7	
7	Spurious emissions	4.2.1.7	U		E	5.1.3.8	
8	Frequency stability under low-voltage conditions	4.2.1.8	C	Applies to battery-operated transmitters.	E	5.1.3.9	
9	Duty cycle	4.2.1.9	C	Applies to transmitters excluding those with a listen before talk facility with AFA	X		
10	Minimum transmitter off-time	4.2.1.10.1	C	Applies to transmitters using LBT	X		
11	Minimum listening time	4.2.1.10.2	C	Applies to transmitters using LBT	X		
12	Maximum transmitter on-time	4.2.1.10.3	C	Applies to transmitters using LBT	X		
13	Frequency hopping spread spectrum devices	4.2.1.11.1	C	Applies to transmitters which employ FHSS	E	5.1.3.4	
14	Direct sequence or other spread spectrum than FHSS	4.2.1.11.2	C	Applies to transmitters which employ DSSS & other spread spectrum than FHSS	X		
15	Maximum usable sensitivity (conducted)	4.3.1	C	Applies to receivers with LBT	E	5.1.4.1	
16	Receiver LBT threshold & maximum TX on-time	4.3.2	C	Applies to receivers with LBT	E	5.1.4.2	
17	Adjacent channel selectivity	4.3.3	C	Applies to Class 1 receivers	E	5.1.4.3	
18	Blocking or desen-sitization	4.3.4	C	Applies to class 1 and Class 2 receivers and receivers with LBT	E	5.1.4.4	
19	Inter-modulation response rejection	4.3.5	C	Applies to class 1 receivers	E	5.1.4.5	
20	Receiver spurious response rejection	4.3.6	C	Applies to class 1 receivers	E	5.1.4.6	
21	Receiver spurious radiation	4.3.7	U		E	5.1.4.7	

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 *unconditionally* applicable (U) or is *conditional* 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 *Essential Radio Test Suite* (E) or whether it is one of the *Other Test Suite* (O).

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 classifies "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) - Přístroje krátkého dosahu (SRD) - Rádiová zařízení pro použití v kmitočtovém rozsahu 25 MHz až 1000 MHz s výkonem do 500 mW - Část 2: Harmonizovaná EN pokrývající základní požadavky podle článku 3.2. Směrnice R&TTE
Danish	Elektromagnetisk kompatibilitet og spektrumanliggender (ERM) - Apparater med kort rækkevidde (SRD) - Radioudstyr som benytter frekvenser mellem 25 MHz og 1000 MHz med sendeeffekter under 500 mW- 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 korteafstandscommunicatie (SRD); radioapparatuur te gebruiken inde frequentieband van 25 MHz tot 1 000 MHz en werkend met een vermogen tot hoogstens 500 mW; deel 2: Geharmoniseerde EN om te voldoen aan de essentiële vereisten onder artikel 3, lid 2, van Richtlijn 1999/5/EG
English	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
Estonian	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed (SRD); Raadiosagedusvahemikus 25 MHz kuni 1000 MHz kasutamiseks mõeldud võimsustasemetega kuni 500 mW raadioseadmed; Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
Finnish	Sähkömagneettinen yhteensopivuus ja radiospektriasiat (ERM); Lyhyen kantaman radiolaitteet (SRD); Taajuusalueella 25 MHz - 1 000 MHz toimivat radiolaitteet, joiden teho on enintään 500 mW; Osa 2: Yhdenmukaistettu standardi (EN), joka kattaa R&TTE-direktiivin artiklan 3.2 mukaiset olennaiset vaatimukset
French	
German	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM); Funkanlagen mit geringer Reichweite (SRD); Funkgeräte zur Verwendung im Frequenzbereich von 25 MHz bis 1 000 MHz mit Ausgangsleistungen bis 500 mW; Teil 2: Harmonisierte EN, die wesentliche Anforderungen nach Artikel 3.2 der R&TTE-Richtlinie enthält
Greek	Ηλεκτρομαγνητική Συμβατότητα και Θέματα Ραδιοφάσματος (ERM) - Συσκευές μικρής εμβέλειας (SRD) - Ραδιοεξοπλισμός που προορίζεται να χρησιμοποιείται στην περιοχή συχνοτήτων 25 MHz ως 1 000 MHz με στάθμες ισχύος μέχρι 500 mW; Μέρος 2: Εναρμονισμένο EN για την κάλυψη των ουσιωδών απαιτήσεων του Άρθρου 3.2 της Οδηγίας R&TTE
Hungarian	Elektromágneses összeférhetőségi és rádióspektrumügyek (ERM). Kis hatótávolságú eszközök (SRD). A 25 MHz-től 1 000 MHz-ig terjedő frekvenciasávban használt, legfeljebb 500 mW teljesítményű rádióberendezések. 2. rész: Az R&TTE-irányelv 3.2. cikkelyének alapvető követelményeit tartalmazó harmonizált európai szabvány
Italian	
Latvian	Natoinal title Elektromagnētiskā saderība un radiofrekvenču spektra lietas - Maza darbības attāluma iekārtas. Radioiekārtas, ko izmanto frekvenču joslā no 25 MHz līdz 1000 MHz, ar jaudu līdz 500 Mw - 1.daļa: Tehniskie parametri un pārbaudes metodes
Lithuanian	Elektromagnetinio suderinamumo ir radijo dažnių spektro dalykai. Mažojo nuotolio įranga. Radijo ryšio įranga, kuri naudojama nuo 25 MHz iki 1 000 MHz dažnių juostoje ir kurios galia neviršija 500 mW. 1 dalis. Techninės charakteristikos ir matavimo metodai
Maltese	Kompatibilità elettromanjetika u materji relatati ma' spettru radjofoniku (ERM); Apparati ta' medda qasira; Tagħmir radjofoniku biex jintużaw fil-medda ta' frekwenzi 25 MHz sa 1 000 MHz b'livelli ta' enerġija li jitilqgħu sa 500 mW; Parti 2: EN armonizzat li jkopri rekwiżiti essenzjali taħt l-artiklu 3.2 tad-Direttiva R&TTE
Polish	Kompatybilność elektromagnetyczna i zagadnienia widma radiowego (ERM) -Urządzenia bliskiego zasięgu (SRD) - Urządzenia radiowe pracujące w zakresie częstotliwości 25 MHz do 1 000 MHz z poziomami mocy do 500 mW - Część 2: Zharmonizowana EN zapewniająca spełnienie zasadniczych wymagań zgodnie z artykułem 3.2 dyrektywy R&TTE
Portuguese	
Slovak	Elektromagnetická kompatibilita a záležitosti rádiového spektra (ERM). Zariadenia s krátkym dosahom (SRD). Rádiové zariadenia používané vo frekvenčnom rozsahu od 25 MHz do 1 000 MHz s úrovňami výkonu do 500 mW. Časť 2: Harmonizovaná EN vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice R&TTE
Slovenian	Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) - Naprave kratkega dosega (SRD) - Radijska oprema, ki se uporablja v frekvenčnem območju od 25 MHz do 1000 MHz z močnostnimi nivoji do največ 500 mW - 2. del: Harmonizirani EN, ki zajema bistvene zahteve člena 3.2 direktive R&TTE
Spanish	

Language	EN title
Swedish	Elektromagnetisk kompatibilitet och radiospektrumfrågor (ERM); Kortdistansutrustningar (SRD); Radioutrustning för användning i fekvensområdet 25 MHz till 1000 MHz med effektnivåer upp till 500 mW; Del 2: Harmoniserad EN omfattande väsentliga krav enligt artikel 3.2 i R&TTE-direktivet.

Annex C (informative): Bibliography

CEPT/ERC Recommendation 70-03: "Relating to the use of Short Range Devices (SRD)".

ETSI TR 100 028 (Parts 1 and 2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

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).

History

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