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Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
ElectroMagnetic Compatibility (EMC)
standard for radio equipment;
Part 17: Specific conditions for 2,4 GHz
wideband transmission systems,
5 GHz high performance RLAN equipment and
5,8 GHz Broadband Data Transmitting Systems**



Reference

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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
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Foreword

This 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 [3] (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 Council Directive 1999/5/EC [2] 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").

The present document is part 17 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

National transposition dates	
Date of adoption of this EN:	11 April 2008
Date of latest announcement of this EN (doa):	31 July 2008
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1 Scope

The present document, together with EN 301 489-1 [1], covers the assessment of the 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN (including HIPERLAN 1 and 2 and other) including Broadband Data Transmitting System equipment, in respect of ElectroMagnetic Compatibility (EMC).

Technical specifications related to the antenna port and emissions from the enclosure port of the radio equipment are not included in the present document. Such technical specifications are found in the relevant product standards for the effective use of the radio spectrum.

The present document specifies the applicable test conditions, performance assessment and performance criteria for wideband data communication systems.

Examples of types of wide band data communications systems covered by the present document are given in annex A.

In case of differences (for instance concerning special conditions, definitions, abbreviations) between the present document and EN 301 489-1 [1], the provisions of the present document take precedence.

The environmental classification and the emission and immunity requirements used in the present document are as stated in EN 301 489-1 [1], except for any special conditions included in the present document.

2 References

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.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

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

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

- [1] ETSI EN 301 489-1 (V1.7.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

- [2] 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).
- [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.
- [4] ETSI EN 300 328-1: "Electromagnetic compatibility and Radio Spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Part 1: Technical characteristics and test conditions".
- [5] ETSI EN 301 893: "Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive".
- [6] ETSI EN 302 502: "Broadband Radio Access Networks (BRAN); 5,8 GHz fixed broadband data transmitting systems; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 301 489-1 [1], clause 3 and the following apply:

Equipment Under Test (EUT): equipment under test and subject to the performance requirements of the present document

fixed station: equipment intended for use in a fixed location and fitted with one or more antennas

NOTE: The equipment may be fitted with either antenna socket(s) or integral antenna(s) or both.

hand-portable station: equipment normally used on a stand-alone basis and to be carried by a person

NOTE: The equipment may be fitted with one or more antennas. The equipment may be fitted with either antenna socket(s) or integral antenna(s) or both.

host: any equipment which has complete user functionality when not connected to the radio equipment part and to which the radio equipment part provides additional functionality and to which connection is necessary for the radio equipment part to offer functionality

plug-in radio device: equipment, including slide-in radio cards, intended to be used with or within a variety of host systems, using their control functions and power supply

stand-alone radio equipment: equipment that is intended primarily as communications equipment and that is normally used on a stand-alone basis

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACK	ACKnowledgement
ARQ	Automatic Retransmission reQuest
CR	Continuous phenomena applied to Receivers
CT	Continuous phenomena applied to Transmitters
EMC	ElectroMagnetic Compatibility
EUT	Equipment Under Test
HIPERLAN	HIgh PErformance Radio Local Area Network
MUS	Maximum Usable Sensitivity
NACK	Not ACKnowledgement
RF	Radio Frequency
TR	Transient phenomena applied to Receivers
TT	Transient phenomena applied to Transmitters

4 Test conditions

4.1 General

For the purposes of the present document, the test conditions of EN 301 489-1 [1], clause 4, shall apply as appropriate. Further product related test conditions for wideband data communications systems are specified in clauses 4.2 to 4.5.

The radio equipment may take forms which may require special software and/or test fixtures. Equipment which requires connection to a host equipment to function shall use the test configuration as defined by the manufacturer. In all cases the EUT shall be exercised in a manner representative of normal intended use.

4.2 Arrangements for test signals

The provisions of EN 301 489-1 [1], clause 4.2 shall apply.

4.2.1 Arrangements for test signals at the input of transmitters

The provisions of EN 301 489-1 [1], clause 4.2.1 shall apply with the following modifications.

The wanted signals and/or controls required to establish a communications link shall be defined by the manufacturer. The transmitter shall be operated at maximum rated power.

4.2.2 Arrangements for test signals at the output of transmitters

The provisions of EN 301 489-1 [1], clause 4.2.2 shall apply with the following modifications.

The manufacturer may provide a suitable companion receiver that can be used to receive messages or to set up a communication link.

4.2.3 Arrangements for test signals at the input of receivers

The provisions of EN 301 489-1 [1], clause 4.2.3 shall apply with the following modifications.

The wanted signals required to establish a communications link shall be defined by the manufacturer.

The level of the wanted signal at the input of the receiver shall be at least 30 dB above the declared Maximum Usable Sensitivity (MUS).

4.2.4 Arrangements for test signals at the output of receivers

The measuring equipment for the output signal from the receiver under test shall be located outside the test environment.

It shall be possible to assess the performance of the equipment by appropriately monitoring the receiver output.

If the receiver has an output connector or port providing the wanted output signal, then this port shall be used via a cable, consistent with the standard cable used in normal operation, connected to the external measuring equipment outside the test environment. The measuring equipment may be supplied by the manufacturer.

Precautions shall be taken to ensure that any effect on the test due to the coupling means is minimized.

The manufacturer may provide a suitable companion transmitter that can be used to transmit messages or to set up a communication link.

4.2.5 Arrangements for testing transmitter and receiver together (as a system)

The provisions of EN 301 489-1 [1], clause 4.2.5 shall apply.

The manufacturer may provide a suitable companion transceiver or transmitter and receiver that can be used to send and receive messages or to set up a communication link.

Both the EUT and the companion equipment shall transmit the normal test modulation. Further, the output of the radio equipment under test shall be monitored by the test system.

4.3 Exclusion bands

The frequencies on which the transmitter part of the EUT is intended to operate shall be excluded from conducted and radiated emission measurements when performed in transmit mode of operation.

There shall be no frequency exclusion band applied to emission measurements of the receiver part of transceivers or the stand alone receiver under test, and/or associated ancillary equipment.

The emission measurement and immunity test exclusions are referred to as "exclusion bands" and are defined in the clauses 4.3.1, 4.3.2 and 4.3.3 of the present document.

4.3.1 2,45 GHz RLAN equipment

The exclusion band for the transmitter and/or receiver part of the 2,45 GHz RLAN equipment under test shall extend from 2 280 MHz to 2 607,675 MHz.

4.3.2 5 GHz RLAN equipment

The exclusion band for the transmitter part of the 5 GHz RLAN equipment under test shall extend from 4 892,5 MHz to 6 011,25 MHz.

No exclusion bands applies to receive only products and the receiver part of products covered by the present document.

4.3.3 5,8 GHz Broadband data transmitting systems

The exclusion band for the transmitter part of the 5,8 GHz Broadband data transmitting systems under test shall extend from 5 438,75 MHz to 6 168,75 MHz.

No exclusion bands applies to receive only products and the receiver part of products covered by the present document.

4.4 Narrow band responses on receivers or receivers which are part of transceivers

The provision of EN 301 489-1 [1], clause 4.4 shall apply.

4.5 Normal test modulation

The modulated test signal shall represent normal intended use, and may contain data formatting, error detection and correction information.

5 Performance assessment

5.1 General

The provision of EN 301 489-1 [1], clause 5.1 shall apply with the following modification.

The manufacturer shall supply at the time of submission of the equipment for test, the information required in EN 301 489-1 [1], clause 5.1 and the following which shall be recorded in the test report:

- the operating frequency range(s) of the equipment and, where applicable, band(s) of operation;
- the type of the equipment, for example: stand-alone or plug-in radio device;
- the host equipment to be combined with the radio equipment for testing;
- the minimum performance level under the application of EMC stress (see clause 6.2);
- the normal test modulation, the format, the type of error correction and any control signals e.g. ACKnowledgement (ACK)/Not ACKnowledgement (NACK) or Automatic Retransmission request (ARQ).

5.2 Arrangements for the assessment of host dependant equipment and plug-in cards

For equipment parts for which integration with a host equipment is necessary in order to offer functionality, two alternative approaches defined in clauses 5.2.1 and 5.2.2 may be used. The manufacturer shall declare which alternative shall be used.

5.2.1 Alternative A: composite equipment

A combination of the radio equipment part and a specific type of host equipment may be used for assessment according to the present document.

Where a specific combination of host equipment and a radio equipment part is tested as a composite system for compliance, repeat testing shall not be required for:

- those other combinations of hosts and radio equipment parts which are based on substantially similar host models in the circumstance that the variations in mechanical and electrical properties between such host models are unlikely to significantly influence the intrinsic immunity and unwanted emissions of the radio equipment part;
- the radio equipment part which cannot be used without mechanical, electrical, or software modification in variations of host equipment different from those represented by the units for which compliance to the present document has been demonstrated.

For all other combinations, each combination shall be tested separately.

5.2.2 Alternative B: use of a test jig or host

Where the radio equipment part is intended for use with a variety of host systems, the manufacturer shall supply a suitable test configuration consisting of either a host system intended for normal use or a test jig that is representative of the range of host systems in which the device may be used. The test jig shall allow the radio equipment part to be powered and stimulated in a way similar to the way it would be powered and stimulated when connected to or inserted into host equipment.

5.3 Assessment procedures

The performance assessment shall be based upon:

- maintenance of function(s);
- the way the eventual loss of function(s) can be recovered;
- unintentional behaviour of the EUT.

The test system shall set up a communications link in the same manner as the Equipment Under Test's (EUT) normal intended use.

Any user defined data fields in the memory or storage of the EUT shall be filled in a way representative of normal intended use.

The assessment procedure shall verify that the communications link is maintained and that there is no loss of user control functions as declared by the manufacturer or loss of the stored user defined data.

5.4 Ancillary equipment

The provision of EN 301 489-1 [1], clause 5.4 shall not apply as ancillary equipment is outside the scope of the present document.

5.5 Equipment classification

Hand portable equipment, or combinations of equipment, declared as capable of being powered for intended use by the main battery of a vehicle shall additionally be considered as vehicular mobile equipment.

Hand portable or mobile equipment, or combinations of equipment, declared as capable of being powered for intended use by ac mains shall additionally be considered as fixed station equipment.

6 Performance criteria

6.1 General performance criteria

The performance criteria are:

- performance criteria A for immunity tests with phenomena of a continuous nature;
- performance criteria B for immunity tests with phenomena of a transient nature;
- performance criteria C for immunity tests with power interruptions exceeding a certain time.

The equipment shall meet the minimum performance criteria as specified in the following clauses.

6.2 Performance table

Table 1: Performance criteria

Criteria	During test	After test
A	Shall operate as intended May show degradation of performance (see note 1) Shall be no loss of function Shall be no unintentional transmissions	Shall operate as intended Shall be no degradation of performance (see note 2) Shall be no loss of function Shall be no loss of stored data or user programmable functions
B	May show loss of function (one or more) May show degradation of performance (see note 1) No unintentional transmissions	Functions shall be self-recoverable Shall operate as intended after recovering Shall be no degradation of performance (see note 2) Shall be no loss of stored data or user programmable functions
C	May be loss of function (one or more)	Functions shall be recoverable by the operator Shall operate as intended after recovering Shall be no degradation of performance (see note 2)
<p>NOTE 1: Degradation of performance during the test is understood as a degradation to a level not below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.</p> <p>NOTE 2: No degradation of performance after the test is understood as no degradation below a minimum performance level specified by the manufacturer for the use of the apparatus as intended. In some cases the specified minimum performance level may be replaced by a permissible degradation of performance. After the test no change of actual operating data or user retrievable data is allowed. If the minimum performance level or the permissible performance degradation is not specified by the manufacturer then either of these may be derived from the product description and documentation (including leaflets and advertising) and what the user may reasonably expect from the apparatus if used as intended.</p>		

6.3 Performance criteria for Continuous phenomena applied to Transmitters (CT)

The performance criteria A shall apply.

Tests shall be repeated with the EUT in standby mode (if applicable) to ensure that unintentional transmission does not occur. In systems using acknowledgement signals, it is recognized that an ACKnowledgement (ACK) or Not ACKnowledgement (NACK) transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

6.4 Performance criteria for Transient phenomena applied to Transmitters (TT)

The performance criteria B shall apply, except for voltage dips of 100 ms and voltage interruptions of 5 000 ms duration, for which performance criteria C shall apply.

Tests shall be repeated with the EUT in standby mode (if applicable) to ensure that unintentional transmission does not occur. In systems using acknowledgement signals, it is recognized that an acknowledgement (ACK) or not-acknowledgement (NACK) transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

6.5 Performance criteria for Continuous phenomena applied to Receivers (CR)

The performance criteria A shall apply.

Where the EUT is a transceiver, under no circumstances, shall the transmitter operate unintentionally during the test. In systems using acknowledgement signals, it is recognized that an ACK or NACK transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

6.6 Performance criteria for Transient phenomena applied to Receivers (TR)

The performance criteria B shall apply, except for voltage dips of 100 ms and voltage interruptions of 5 000 ms duration for which performance criteria C shall apply.

Where the EUT is a transceiver, under no circumstances, shall the transmitter operate unintentionally during the test. In systems using acknowledgement signals, it is recognized that an ACK or NACK transmission may occur, and steps should be taken to ensure that any transmission resulting from the application of the test is correctly interpreted.

7 Applicability overview

7.1 Emission

7.1.1 General

EN 301 489-1 [1], table 1 contains the applicability of EMC emission measurements to the relevant ports of radio equipment.

7.1.2 Special conditions

No special conditions shall apply to radio equipment in the scope of the present document.

7.2 Immunity

7.2.1 General

EN 301 489-1 [1], table 2, contains the applicability of EMC immunity measurements to the relevant ports of radio equipment.

7.2.2 Special conditions

No special conditions are relevant for products covered in the present document.

Annex A (informative): Examples of radio equipment in the scope of the present document

The present document covers radio wideband transmission systems as set out below.

A.1 Wideband transmission systems operating in the 2,4 GHz ISM band using spread spectrum techniques

Wideband transmission systems are defined in EN 300 328-1 [4].

A.2 Radio Local Area Networks equipment operating in the 5 GHz frequency band

5 GHz high performance RLAN systems are those within the scope and compliant with EN 301 893 [5].

A.3 Broadband Data Transmitting Systems operating in the band 5 725 MHz to 5 875 MHz

Broadband Data Transmitting systems are those within the scope and compliant with EN 302 502 [6].

Annex B (informative): The EN title in the official languages

Language	EN title
Bulgarian	Електромагнитна съвместимост и въпроси на радиоспектъра (ERM). Стандарт за електромагнитна съвместимост (EMC) на радиосъоръжения. Част 17: Специфични условия за широколентови системи за предаване на 2,4 GHz, висококачествени съоръжения за RLAN локални радиомрежи за предаване на 5 GHz и широколентови системи за предаване на данни на 5,8 GHz
Czech	Elektromagnetická kompatibilita a rádiové spektrum (ERM) – Norma pro elektromagnetickou kompatibilitu (EMC) rádiových zařízení a služeb – Část 17: Specifické podmínky pro širokopásmové přenosové systémy 2,4 GHz, vysokovýkonná zařízení RLAN 5 GHz a širokopásmové datové přenosové systémy 5,8 GHz
Danish	Elektromagnetisk kompatibilitet og Radiospektrum Anliggender (ERM); Elektromagnetisk kompatibilitet (EMC) for radioudstyr; Del 17: Særlige krav til 2,4 GHz bredbånds transmissionssystemer, 5 GHz højtydende RLAN udstyr samt 5,8 GHz bredbånds datatransmissionsudstyr
Dutch	Elektromagnetische compatibiliteit en radiospectrumaangelegenheden (ERM); Elektromagnetische compatibiliteit (EMC) norm voor radioapparatuur ;Deel 17 Specifieke omstandigheden voor de 2,4 GHz breedband transmissiesystemen, 5 GHz hoge-prestatie RLAN apparatuur en 5,8 GHz breedband gegevenstransmissiesystemen
English	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for 2,4 GHz wideband transmission systems, 5 GHz high performance RLAN equipment and 5,8 GHz Broadband Data Transmitting Systems
Estonian	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Raadioseadmete elektromagnetilise ühilduvuse (EMC) standard; Osa 17: Eritingimused raadiosagedusalas 2,4 GHz lairiba edastussüsteemidele, raadiosagedusalas 5 GHz suure edastuskiirusega RLAN seadmetele ja 5,8 GHz lairiba andmeedastussüsteemidele
Finnish	Sähkömagneettinen yhteensopivuus ja radiospektriasiat (ERM); Sähkömagneettinen yhteensopivuusstandardi radiolaitteille; Osa 17: Erytisehdot 2,4 GHz:n, 5 GHz:n ja 5,8 GHz:n laajakaistaisille datasiirtojärjestelmille
French	Télécommunications - CEM et spectre radioélectrique (ERM) - Partie 17 : conditions spécifiques pour les systèmes de transmission à large bande de 2,4 GHz, les équipements de haute performance RLAN de 5 GHz et les systèmes de transmission à large bande de 5,8 GHz
German	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM) - Elektromagnetische Verträglichkeit für Funkeinrichtungen und -dienste - Teil 17: Spezifische Bedingungen für Breitbandübertragungssysteme im 2,4 GHz Band, Einrichtungen in lokalen Hochleistungs-Funknetzen (RLAN) im 5 GHz Band und Breitband-Datenübertragungssysteme im 5,8 GHz Band
Greek	Ηλεκτρομαγνητική συμβατότητα και Θέματα Ραδιοφάσματος (ERM) – Πρότυπο Ηλεκτρομαγνητικής Συμβατότητας (EMC) για ραδιοεξοπλισμό και ραδιοϋπηρεσίες – Μέρος 17: Είδη ειδικές για ευρυζωνικά συστήματα μετάδοσης 2,4 GHz, εξοπλισμό RLAN υψηλής επίδοσης 5 GHz και συστήματα μετάδοσης ευρυζωνικών δεδομένων 5,8 GHz
Hungarian	Elektromágneses összeférhetőségi és rádióspektrumügyek (ERM). Rádióberendezések elektromágneses összeférhetőségi (EMC) szabványa. 17. rész: A 2,4 GHz-es széles sávú átviteli rendszerek, az 5 GHz-es nagy teljesítőképességű RLAN-berendezések és az 5,8 GHz-es széles sávú adatátviteli rendszerek sajátos feltételei
Icelandic	Þættir sem varða rafsegulsviðssamhæfi og fjarskiptatíðni (ERM); Staðall um rafsegulsviðssamhæfi (EMC) fyrir þráðlausan fjarskiptabúnað; 17. hluti: Sérstök skilyrði um 2,4 GHz víðbandssendingarkerfi og 5 GHz hággæða RLAN búnað og 5,8 GHz breiðbands gagnasendingarkerfi
Italian	Compatibilità elettromagnetica e questioni relative allo spettro delle radiofrequenze (ERM); Norma di compatibilità elettromagnetica (EMC) per apparati radio; Parte 17: Condizioni specifiche per sistemi di trasmissione a banda larga nella banda 2,4 GHz, per apparecchiature RLAN ad alte prestazioni nella banda 5 GHz e per sistemi che trasmettono dati a banda stretta nella banda 5,8 GHz
Latvian	Elektromagnetiska saderība un radiofrekvencu spektra jautajumi (ERM). Radioiekartu elektromagnetiskas saderības (EMC) standarts; 17. daļa: Ipašie nosacījumi 2,4 GHz plašjoslas parrāides sistēmām, 5 GHz augstas veiktspējas vietejo radiopiekluves tīklu (RLAN) iekartām un 5,8 GHz platjoslas datu parrāides sistēmām
Lithuanian	
Maltese	Kompatibilità elettromanjetika u materji relatati ma' spettru radjofoniku (ERM); Standard ta' Kompatibilità ElektroManjetika (EMC) għal tagħmir radjofoniku; Parti 17: Kondizzjonijiet speċifiċi għal sistemi ta' trasmissjoni fuq frekwenza wiesgħa 2,4 GHz, tagħmir RLAN ta' kapacità operattiva għolja 5 GHz u sistemi li jittrasmettu data fuq frekwenza 5,8 GHz

Language	EN title
Norwegian	Elektromagnetisk kompatibilitet og radiospektrumsaker (ERM); Elektromagnetisk kompatibilitet (EMC) standard for radioutstyr; Del 17: Spesifikke forhold for 2,4 GHz bredbnds transmisjonssystemer, 5 GHz hyttelses RLAN-utstyr og 5,8 GHz bredbnds transmisjonssystemer
Polish	Kompatybilność elektromagnetyczna i zagadnienia widma radiowego (ERM) – Norma kompatybilności elektromagnetycznej (EMC) dotycząca urządzeń radiowych - Część 17: Warunki określone dla szerokopasmowych systemów transmisyjnych o częstotliwości 2,4 GHz, urządzeń RLAN wysokiej jakości o częstotliwości 5 GHz i szerokopasmowych systemów w transmisji danych o częstotliwości 5,8 GHz
Portuguese	
Romanian	
Slovak	Elektromagnetická kompatibilita a závislosti rádiového spektra (ERM). Elektromagnetická kompatibilita (EMC), norma na rádiové zariadenia. Časť 17: Osobitné podmienky na širokopásmové prenosové systémy v pásme 2,4 GHz, zariadenia vysokovýkonnej RLAN v pásme 5 GHz a širokopásmové dátové prenosové systémy v pásme 5,8 GHz
Slovenian	Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) - Standard elektromagnetne združljivosti (EMC) za radijsko opremo - 17. del: Posebni pogoji za širokopasovne prenosne sisteme na frekvenci 2,4 GHz, visokozmogljivo opremo RLAN na frekvenci 5 GHz in širokopasovne sisteme za prenos podatkov na frekvenci 5,8 GHz
Spanish	
Swedish	Elektromagnetisk kompatibilitet och radiospektrumfrgor (ERM), Elektromagnetisk kompatibilitetsstandard (EMC) fr radioutrustning och tjnster; Del 17: Specifika villkor fr 2,4 GHz bredbands transmissionssystem och 5 GHz hg prestanda RLAN-utrustning

Annex C (informative): Bibliography

- ETSI ETS 300 836-1: "Broadband Radio Access Networks (BRAN); High Performance Radio Local Area Network (HIPERLAN) Type 1; Conformance testing specification; Part 1: Radio type approval and Radio Frequency (RF) conformance test specification".

History

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