



SLOVENSKI STANDARD

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BUdfUj Y`fUh_Y[UXcgY[U!`7 YghUhfUbgdcfHbU]b`dfca YfbUH`Ya Uj_UfFHHŁ!
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Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices - Road Transport and Traffic Telematics (RTTT) - Short range radar equipment operating in the 24 GHz range - Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

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Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Short Range Devices;
Road Transport and Traffic Telematics (RTTT);
Short range radar equipment operating in the 24 GHz range;
Part 2: Harmonized EN covering the essential requirements
of article 3.2 of the R&TTE Directive**

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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
Sous-Préfecture de Grasse (06) N° 7803/88

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Contents

Intellectual Property Rights	4
Foreword.....	4
Introduction	4
1 Scope	5
2 References	5
3 Definitions, symbols and abbreviations	6
3.1 Definitions	6
3.2 Symbols.....	6
3.3 Abbreviations	6
4 Technical requirements specifications	6
4.1 Environmental conditions.....	6
4.1.1 Environmental profile	6
4.2 Conformance requirements	6
4.2.1 Transmitter requirements	6
4.2.1.1 Limits for transmitters in the range from 22,0 GHz to 26,65 GHz	6
4.2.1.1.1 Permitted range of operating frequencies	6
4.2.1.1.2 Maximum radiated average power density (e.i.r.p.)	6
4.2.1.1.3 Maximum radiated peak power density (e.i.r.p.)	7
4.2.1.2 Limits for transmitters in the range from 24,050 GHz to 24,250 GHz	7
4.2.1.2.1 Permitted range of operating frequencies	7
4.2.1.2.2 Equivalent isotropically radiated power (e.i.r.p.)	7
4.2.1.3 Vertical plane emission limits in the range from 23,6 GHz to 24,0 GHz.....	7
4.2.1.4 Transmitter spurious and out-of-band emissions	7
4.2.2 Receiver requirements	7
4.2.2.1 Receiver spurious emissions	7
4.2.2.3 Installation requirements	7
5 Testing for compliance with technical requirements.....	7
5.1 Environmental conditions for testing	7
5.2 Essential radio test suites.....	8
5.2.1 Transmitter test suites	8
5.2.1.1 Transmitters operating in the 22,0 GHz to 26,65 GHz band.....	8
5.2.1.1.1 Permitted range of frequencies	8
5.2.1.1.2 Maximum radiated average power density (e.i.r.p.)	8
5.2.1.1.3 Maximum radiated peak power density (e.i.r.p.)	8
5.2.1.2 Transmitters operating in the 24,050 GHz to 24,250 GHz band.....	8
5.2.1.2.1 Permitted range of frequencies	8
5.2.1.2.2 Equivalent isotropically radiated power (e.i.r.p.)	8
5.2.1.3 Vertical plane transmitter emissions	8
5.2.1.4 Transmitter spurious and out-of-band emissions	8
5.2.2 Receiver test suites.....	8
5.2.2.1 Receiver spurious emissions	8
5.2.3 Installation requirements.....	8
5.3 Interpretation of results and measurement uncertainty.....	8
Annex A (normative): HS Requirements and conformance Test specifications Table (HS-RTT).....	10
Annex B (informative): The EN title in the official languages	12
Annex C (informative): Bibliography.....	14
History	15

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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 (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 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 2 of a multi-part deliverable covering Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices, Road Transport and Traffic Telematics (RTTT); Short range radar equipment operating in the 24 GHz range, as identified below:

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

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

National transposition dates	
Date of adoption of this EN:	10 August 2007
Date of latest announcement of this EN (doa):	30 November 2007
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 May 2008
Date of withdrawal of any conflicting National Standard (dow):	31 May 2009

Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the R&TTE Directive [1]. The modular structure is shown in EG 201 399 (see bibliography).

1 Scope

The present document applies to Short Range Devices (SRDs) in Road Transport and Traffic Telematics (RTTT) systems as described in the scope of EN 302 288-1 [2]:

- with an integral antenna;
- for ultra low power motion and distance monitoring radars for mobile applications only;
- operating in the 22 GHz to 26,65 GHz frequency range.

The applicability of the present document covers only the 24 GHz Short Range Radar (SRR) for road vehicles. The present document does not necessarily include all the characteristics which may be required by a user, nor does it necessarily represent the optimum performance achievable.

NOTE: Member States of the European Union are required to prohibit the taking into service of equipment covered by the present document after a date defined in Commission Decision 2005/50/EC (see bibliography).

The present document covers transmitters intended to operate in a temporary frequency designation under the 24 GHz ECC decision ECC/DEC/(04)10 (see bibliography). The application is also subject to the EU Commission decision on 24 GHz SRR EC 2005/50/EC (see bibliography).

The present document is intended to cover the provisions of Directive 1999/5/EC (R&TTE Directive) article 3.2, 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".

The present document responds to the EC mandate M/329 for Harmonized Standards covering Ultrawide band (UWB) applications.

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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>.

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

- [1] Void.
- [2] ETSI EN 302 288-1 (V1.2.2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Short range radar equipment operating in the 24 GHz range; Part 1: Technical requirements and methods of measurement".
- [3] Void.
- [4] Void.
- [5] ETSI TR 100 028 (V1.4.1) (all parts): "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, EN 302 288-1 [2] and the following apply:

environmental profile: range of environmental conditions under which equipment within the scope of the present document is required to comply with the provisions of the present document

3.2 Symbols

For the purposes of the present document, the symbols given in EN 302 288-1 [2] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 302 288-1 [2] apply.

4 Technical requirements specifications

4.1 Environmental conditions

4.1.1 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 provider. 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 Limits for transmitters in the range from 22,0 GHz to 26,65 GHz

4.2.1.1.1 Permitted range of operating frequencies

The permitted range of operating frequencies shall not exceed the limits specified in clause 7.1.1.3 of EN 302 288-1 [2].

4.2.1.1.2 Maximum radiated average power density (e.i.r.p.)

The maximum radiated average power density (e.i.r.p.) shall not exceed the limits specified in clause 7.1.2.3 of EN 302 288-1 [2].

4.2.1.1.3 Maximum radiated peak power density (e.i.r.p.)

The maximum radiated peak power density (e.i.r.p.) shall not exceed the limits specified in clause 7.1.3.4 of EN 302 288-1 [2].

4.2.1.2 Limits for transmitters in the range from 24,050 GHz to 24,250 GHz

4.2.1.2.1 Permitted range of operating frequencies

The permitted range of operating frequencies shall not exceed the limits specified in clause 7.1.4.2.4 of EN 302 288-1 [2].

4.2.1.2.2 Equivalent isotropically radiated power (e.i.r.p.)

The equivalent isotropically radiated power (e.i.r.p.) shall not exceed the limits specified in clause 7.1.4.1.3 of EN 302 288-1 [2], table 3.

4.2.1.3 Vertical plane emission limits in the range from 23,6 GHz to 24,0 GHz

The vertical emission limits shall not exceed the limits specified in clause 7.1.5.3 of EN 302 288-1 [2].

4.2.1.4 Transmitter spurious and out-of-band emissions

The transmitter unwanted emissions, i.e. spurious and out-of-band emissions, shall not exceed the limits specified in clause 7.2.4 of EN 302 288-1 [2], tables 5 and 6.

4.2.2 Receiver requirements

4.2.2.1 Receiver spurious emissions

The receiver spurious emissions shall not exceed the limits specified in clause 8.1.3 of EN 302 288-1 [2].

4.2.3 Installation requirements

The installation requirements as defined in EN 302 288-1 [2], annex D, shall be applied.

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5 Testing for compliance with technical requirements

5.1 Environmental conditions for testing

Tests defined in the present document shall be carried out at representative points within the boundary limits of the declared operational environmental profile.

Where technical performance varies subject to environmental conditions, tests shall be carried out under a sufficient variety of environmental conditions (within the boundary limits of the declared operational environmental profile) to give confidence of compliance for the affected technical requirements.

5.2 Essential radio test suites

5.2.1 Transmitter test suites

5.2.1.1 Transmitters operating in the 22,0 GHz to 26,65 GHz band

5.2.1.1.1 Permitted range of frequencies

The test defined in clause 7.1.1.2 of EN 302 288-1 [2] shall be carried out.