SLOVENSKI STANDARD
SIST EN 301 091-2 V1.3.2:2007

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Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) - Naprave kratkega dosega - Cestna transportna in prometna telematika (RTTT) - Radarska oprema, ki deluje v frekvenčnem območju od 76 GHz do 77 GHz - 2. del: Harmonizirani EN, ki zajema bistvene zahteve člena 3.2 direktive R&TTE

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Radar equipment operating in the 76 GHz to 77 GHz range; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

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33.060.99	Druga oprema za radijske komunikacije	Other equipment for radiocommunications
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general
35.240.60	Uporabniške rešitve IT v transportu in trgovini	IT applications in transport and trade

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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); Radar equipment operating in the 76 GHz to 77 GHz range; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

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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 [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.

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); Radar equipment operating in the 76 GHz to 77 GHz range, as identified below:

Part 1: "Technical characteristics and test methods for radar equipment operating in the 76 GHz to 77 GHz range";

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

National transposition dates	
Date of adoption of this EN:	22 September 2006
Date of latest announcement of this EN (doa):	31 December 2006
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2007
Date of withdrawal of any conflicting National Standard (dow):	30 June 2008

1 Scope

The present document applies to Road Transport Traffic and Telematics (RTTT) systems:

- with an integral antenna;
- for mobile applications only;
- operating in the frequency range from 76 GHz to 77 GHz.

The applicability of the present document covers only the 76 GHz to 77 GHz automotive Radar equipment 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.

The present document applies to radio equipment intended to operate in a frequency designation as defined in CEPT/ECC/DEC (02)01 [7] and in CEPT/ERC/REC 70-03 [5] in all or in part of the service frequency band from 76 GHz to 77 GHz.

The present document is intended to cover the provisions of Directive 1999/5/EC [1] (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".

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

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

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] 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] 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) amended by Directive 91/263/EEC, Directive 92/31/EEC and Directive 93/68/EEC.

[3] 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).

[4] ETSI EN 301 091-1 (V1.3.2): "ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Short Range Devices; Road Transport and Traffic Telematics (RTTT); Radar equipment operating in the 76 GHz to 77 GHz range; Part 1: Technical characteristics and test methods for radar equipment operating in the 76 GHz to 77 GHz range".

[5] CEPT/ERC Recommendation 70-03 (November 17th, 2005): "Relating to the use of Short Range Devices (SRD)".

[6] ETSI EN 301 489 part 1 (V1.5.1) and part 3 (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services".

[7] CEPT/ECC/DEC(02)01: "ECC Decision of 15 March 2002 on the frequency bands to be designated for the co-ordinated introduction of Road Transport and Traffic Telematic Systems".

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], EN 301 091-1 [4] 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 301 091-1 [4] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 301 091-1 [4] apply.

4 Technical requirements specifications

4.1 Environmental conditions

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

4.2.1.1 Permitted range of operating frequencies

The permitted range of operating frequencies shall not exceed the limits specified in clause 7.1.3 of EN 301 091-1 [4].

4.2.1.2 Radiated spatial mean power density (e.i.r.p.)

The radiated spatial mean power density (e.i.r.p.) shall not exceed the limits specified in clause 7.2.3 of EN 301 091-1 [4].

4.2.1.3 Radiated spatial peak power (e.i.r.p.)

The radiated spatial peak power (e.i.r.p.) shall not exceed the limits specified in clause 7.2.3 of EN 301 091-1 [4].

4.2.1.4 Out-of-band emissions

The transmitter out-of-band emissions shall not exceed the limits specified in clause 7.3.4 of EN 301 091-1 [4], table 4.

4.2.1.5 Spurious emissions

The transmitter spurious emissions, shall not exceed the limits specified in clause 7.4.4 of EN 301 091-1 [4], table 5.

4.2.2 Receiver spurious emissions

The receiver spurious emissions shall not exceed the limits specified in clause 8.1.3 of EN 301 091-1 [4].

NOTE: Not required on receivers co-located with transmitters.

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

5.2.1.1 Permitted range of operating frequencies

The test defined in clause 7.1.2 of EN 301 091-1 [4] shall be carried out.

5.2.1.2 Radiated spatial mean power (e.i.r.p.)

The test defined in clause 7.2.2 of EN 301 091-1 [4] shall be carried out.

5.2.1.3 Radiated spatial peak power (e.i.r.p.)

The test defined in clause 7.2.2 of EN 301 091-1 [4] shall be carried out.

5.2.1.4 Out-of-band emissions

The test defined in clause 7.3.3 of EN 301 091-1 [4] shall be carried out.

5.2.1.5 Spurious emissions

The test defined in clause 7.4.3 of EN 301 091-1 [4] shall be carried out.