SLOVENSKI STANDARD
SIST EN 50566:2013

01-julij-2013

Standard za proizvod za prikaz skladnosti radiofrekvenčnih polj, ki jih sevajo ročne in na telo pripete brezžične komunikacijske naprave, ki jih uporablja prebivalstvo (30 MHz–6 GHz)

Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 MHz - 6 GHz)

Produktnorm zum Nachweis der Übereinstimmung von hochfrequenten Feldern von handgehaltenen und am Körper getragenen schnurlosen Kommunikationsgeräten, die durch die Allgemeinbevölkerung verwendet werden (30 MHz bis 6 GHz)

Norme produit pour démontrer la conformité des champs radiofréquence produits par les dispositifs de communication sans fil tenus à la main ou portés près du corps (30 MHz - 6 GHz)

Ta slovenski standard je istoveten z: **EN 50566:2013**

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17.240	Merjenje sevanja	Radiation measurements
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EUROPEAN STANDARD

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ICS 17.240; 33.070.01

English version

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Contents

Foreword

This document (EN 50566:2013) has been prepared by CLC/TC 106X, "Electromagnetic fields in the human environment".

The following dates are fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-02-11
- latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2016-02-11

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1 Scope

This European Standard applies to any wireless communication devices intended to be used with the radiating part in close proximity to the human body (i.e. less than 200 mm) including devices operated in front of the face. The frequency range covered is 30 MHz to 6 GHz.

The objective of this product standard is to demonstrate the compliance of such devices with the basic restrictions related to general public exposure to radio frequency electromagnetic fields.

Devices used next to the ear are covered by EN 50360.

Low power exclusion criteria are specified in EN 62479.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 62209-2:2010, *Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices — Human models, instrumentation, and procedures — Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz) (IEC 62209-2:2010 + corrigendum 2010)*

EN 62479:2010, *Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz) (IEC 62479:2010, modified)*

Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (Official Journal L 199 of 30 July 1999)

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
basic restrictions
restrictions on exposure to time-varying electric, magnetic, and electromagnetic fields that are based directly on established health effects

Note 1 to entry: Concerning the frequency range of this standard, the physical quantity used is the Specific Absorption Rate (SAR).

3.2
wireless communication devices
equipment within the scope of this standard

Note 1 to entry: Categorisation of the devices covered by the scope of this product standard is given in Clause 3 (Terms and definitions) of EN 62209-2:2010.

3.3
Specific Absorption Rate
SAR
time derivative of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of given mass density (ρ)

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dV}\right)$$

SAR is expressed in units of watt per kilogram (W/kg)

Note 1 to entry: It is a physical quantity on which the basic restrictions of exposure protection guidelines are based in the frequency range specified in the scope.

Note 2 to entry: SAR can be calculated by either:

$$SAR = \frac{\sigma E_i^{\,2}}{\rho}$$

$$SAR = c_i \frac{dT}{dt} \quad (t=0)$$

where

E_i is the r.m.s. value of the electric field strength in the tissue in V/m;

σ is the conductivity of body tissue in S/m;

ρ is the density of body tissue in kg/m³;

c_i is the heat capacity of body tissue in J/kg K;

$\frac{dT}{dt}$ is the time derivative of temperature in body tissue in K/s.

4 Exposure Limits

The wireless communication device shall comply with the basic restriction as specified in Council Recommendation 1999/519/EC on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz), Annex II.

5 Measurement method

SAR measurements shall be performed according to EN 62209-2.

6 Documentation

The SAR measurement test details and results shall be reported according to Clause 8 of EN 62209-2:2010.

Further to the reporting requirement mentioned above, if a minimum separation distance to the body is specified by the manufacturer, the test report shall include a separate clause providing the rationale behind the choice of separation distance used in the measurement performed according to Clause 5.

At minimum the additional clause shall cover:

- The information about SAR, separation distance and intended use condition(s) provided in the user guide;
- The rationale of the separation distance relative to the intended use of the device.

7 Evaluation of compliance to limits

The wireless communication device is deemed to fulfil the requirements of this standard if:

- the measured values performed according to Clause 5, are less than or equal to the limit; and
- the separation distance used during the test is, if relevant, documented according to the Clause 6.