SLOVENSKI STANDARD
SIST EN IEC/IEEE 63195-2:2025

01-maj-2025

Ocenjevanje gostote moči izpostavljenosti človeka radiofrekvenčnim poljem brezžičnih naprav v neposredni bližini glave in telesa (frekvenčno območje 6 GHz do 300 GHz) - 2. del: Izračunski postopek

Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) - Part 2: Computational procedure

Bewertung der Leistungsdichte der Exposition des Menschen gegenüber hochfrequenten Feldern von drahtlosen Geräten in unmittelbarer Nähe des Kopfes und des Körpers (Frequenzbereich von 6 GHz bis 300 GHz) - Teil 2: Berechnungsverfahren

Évaluation de la densité de puissance de l'exposition humaine aux champs radiofréquences provenant de dispositifs sans fil à proximité immédiate de la tête et du corps (plage de fréquences de 6 GHz à 300 GHz) - Partie 2: Procédure de calcul

Ta slovenski standard je istoveten z: **EN IEC/IEEE 63195-2:2023**

ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities

SIST EN IEC/IEEE 63195-2:2025 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC/IEEE 63195-2

January 2023

ICS 17.220.20

English Version

Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) - Part 2: Computational procedure (IEC/IEEE 63195-2:2022)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC/IEEE 63195-2:2023 E

European foreword

This document (EN IEC/IEEE 63195-2:2023) consists of the text of document IEC/IEEE 63195-2:2022, prepared by IEC/TC 106 "Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure".

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2024-01-09
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2026-01-09

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The text of the International Standard IEC/IEEE 63195-2:2022 was approved by CENELEC as a European Standard without any modification.

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IEC/IEEE 62209-1528:2020 NOTE Harmonized as EN IEC/IEEE 62209-1528:2021 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC/IEEE 62704-1	2017	Determining the peak spatial-average specific absorption rate (SAR) in the human body from wireless communications devices, 30 MHz to 6 GHz - Part 1: General requirements for using the finite difference time-domain (FDTD) method for SAR calculations	-	-
IEC/IEEE 62704-4	2020	Determining the peak spatial-average specific absorption rate (SAR) in the human body from wireless communication devices, 30 MHz to 6 GHz - Part 4: General requirements for using the finite element method for SAR calculations	-	-
IEC/IEEE 63195-1	2022	Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz) - Part 1: Measurement procedure	EN IEC/IEEE 63195-1	2023
IEEE 145	-	Definitions of terms for antennas	-	-

IEC/IEEE 63195-2

Edition 1.0 2022-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 17.220.20 ISBN 978-2-8322-0184-8

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Part 2: Computational procedure

FOREWORD

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IEC/IEEE 63195-2 was prepared by IEC technical committee 106: Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure, in cooperation with the International Committee on Electromagnetic Safety (ICES) of the IEEE Standards Association, under the IEC/IEEE Dual Logo Agreement between IEC and IEEE. It is an International Standard.

This document is published as an IEC/IEEE Dual Logo standard.

This publication contains supplemental files that are required for the code verification according to Annex A. Download links and checksums for these files can be found in Annex I.

The text of this International Standard is based on the following IEC documents:

Draft	Report on voting
106/564/FDIS	106/569/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with the rules given in the ISO/IEC Directives, Part 2, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC/IEEE 63195 series, published under the general title *Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body*, can be found on the IEC website.

The IEC Technical Committee and IEEE Technical Committee have decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This document provides a method to evaluate the human exposure from wireless devices using computational methods. This document was developed to provide procedures for the numerical modelling and evaluation of such wireless devices operating close to the head, held in the hand or in front of the face, mounted on the body or embedded in garments. It applies to individual transmitters as well as to transmitters operating simultaneously with other transmitters within a product. The choice of technique, i.e. FDTD or FEM, is optional but can be influenced by the application. The advantages of computational procedures include the capability to provide repeatable, non-intrusive methods for determining exposure in or near an object and without the need for expensive hardware equipment. Device categories covered include but are not limited to mobile telephones, radio transmitters in personal computers, desktop and laptop devices, and multi-band and multi-antenna devices. This document specifies:

- requirements on the numerical software (Clause 5);
- model development and validation (Clause 7);
- power density computation and averaging (Clause 8);
- uncertainty evaluation (Clause 9);
- reporting requirements (Clause 10).

To develop this document, IEC Technical Committee 106 (TC 106) and IEEE International Committee on Electromagnetic Safety (ICES), Technical Committee 34 (TC 34) Subcommittee 1 (SC 1) formed Joint Working Group 11 (JWG 11) on computational methods to assess the power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body.