



Newsletter

October 2024

Digital & Product Solutions
Business Line **EMC & RF**

innovating safety & security



Europe (EU-27 and UK)

ETSI RED Workprogramme New Standard Versions Updates

ETSI is continuously evolving the EMC/RF Test Standards, table below summarizes the latest updates for most common Test Standards during Q3/2024:

Test Standard	Title	Comments
Draft EN 300 220-2 V3.2.2	Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz with power levels ranging up to 500 mW e.r.p. Part 2: Harmonised Standard for access to radio spectrum for non specific radio equipment	Final Draft. Public Enquiry completed and comments addressed. Under Technical Body approval. New version includes the following updates with regard to v3.2.1: - Separation of OBW requirement from frequency stability (drift) clauses. - Clarifications in Spectrum mask at permitted frequency band edges. - Addition of receiver parameters according to ETSI guide EG 203336 v1.2.1. - Addition of tests for timing compliance of equipment using polite spectrum access.
Draft EN 300 422-4 V0.0.6	Wireless Microphones Audio PMSE up to 3 GHz Part 4: Assistive Listening Devices including: Cochlear Implants, personal sound amplifiers and inductive systems up to 3 GHz	Stable Draft. European Commission first assessment received. Standard shows lack of compliance and it requires a redrafting with substantial changes.
Draft ETSI EN 300 440-1 V3.1.1_0.0.6	Short Range Devices (SRD) operating in 1 GHz to 40 GHz Part 1: Radiocommunication equipment in the frequency ranges 2,4 GHz to 2,4835 GHz and 5,725 GHz to 5,875 GHz	Early Draft. Test Standard development work is progressing.
Draft EN 300 440-2 V3.1.1_0.0.21	Short Range Devices (SRD) Part 2: Radiodetermination equipment for location tracking applications operating in the frequency range 2,4 GHz to 2,4835 GHz	Early Draft. Under Working Group approval process.
Draft EN 300 487 V2.2.0	Satellite Earth Stations and Systems (SES) Receive-Only Mobile Earth Stations (ROMES) providing data communications operating in the 1,5 GHz frequency band	Draft. Approved by Technical Body. Initiating Deliverable approval procedure.
Draft EN 301 406-1 V3.1.13	Digital Enhanced Cordless Telecommunications (DECT) Part 1: DECT, DECT Evolution and DECT ULE	Stable Draft. Test Standard development work is progressing.
Draft EN 301 783 V0.0.10	Commercially available amateur radio equipment	Early Draft. Test Standard development work is progressing.



Draft ETSI EN 301 893 V2.2.1	5 GHz WAS/RLAN	Final Draft. Under final ETSI approval process.
Draft EN 301 908-13 V17.1.1_0.0.13	IMT cellular networks Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)	Draft. Approved by Technical Body. Ready to initiate Deliverable approval procedure.
Draft EN 301 908-18 V17.1.1_15.0.13	IMT cellular networks Part 18: NR, E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)	Draft. Approved by Technical Body. Ready to initiate Deliverable approval procedure.
Draft EN 301 908-25 V0.0.23	IMT cellular networks Part 25: New Radio (NR) User Equipment (UE)	Draft. Approved by Technical Body. Closing Deliverable approval procedure.
Draft EN 302 064 V2.1.3	Wireless Digital Video Links operating in the 1,3 GHz to 50 GHz frequency band	Draft. Approved by Technical Body. Initiating Deliverable approval procedure.
Draft EN 302 065-3-1 V3.1.0_0.2.11	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Part 3: UWB devices installed in motor and railway vehicles Sub-part 1: Requirements for UWB devices for vehicular access systems within 3,8 GHz to 4,2 GHz or 6 GHz to 8,5 GHz	Draft. Approved by Technical Body. Closing Deliverable approval procedure.
Draft EN 302 065-3-3 V1.1.1_0.1.2	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Part 3: UWB devices installed in road and rail vehicles Sub-part 3: Requirements for UWB radiodetermination applications operating within 6,0 GHz to 8,5 GHz	Stable Draft. Test Standard development work is progressing.
Draft EN 302 065-4-1 V2.1.1	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Part 4: Material Sensing devices Sub-part 1: Building material analysis below 10,6 GHz	Draft. Ready to start the Deliverable approval procedure for the second time (during first time Public Enquiry, several comments were received).
Draft EN 302 065-4-4 V2.1.1_0.1.2	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Part 4: Material Sensing devices	Stable Draft. Test Standard development work is progressing.
Draft EN 302 372 V3.1.1_0.1.0	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Tank Level Probing Radar (TLPR) equipment operating in the frequency ranges 4,5 GHz to 7 GHz, 8,5 GHz to 10,6 GHz, 24,05 GHz to 27 GHz, 57 GHz to 64 GHz, 75 GHz to 85 GHz	Stable Draft. Test Standard development work is progressing.



Draft EN 302 729-1 V1.0.0	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Part 1: Level Probing Radar (LPR) equipment operating in the frequency ranges 6 GHz to 8,5 GHz, 24,05 GHz to 26,5 GHz, 57 GHz to 64 GHz, 75 GHz to 85 GHz for strictly vertical downward installation	Draft. Second European Commission assessment completed and comments addressed. Initiating Deliverable approval procedure.
Draft EN 302 194-1 V2.2.1_0.0.30	Navigational radars used on inland waterways; Part 1: Magnetron Radars	Draft. Second European Commission assessment completed and comments addressed. Initiating Deliverable approval procedure.
Draft EN 302 217-2 V3.4.1_0.0.5	Fixed Radio Systems Characteristics and requirements for point-to-point equipment and antennas Part 2: Digital systems operating in frequency bands from 1 GHz to 174,8 GHz	Stable Draft. Ready for first European Commission assessment.
Draft EN 302 326-2 V2.2.1_0.0.6	Fixed Radio Systems Multipoint Equipment and Antennas Part 2: Harmonised Standard for access to radio spectrum	Stable Draft. Test Standard development work is progressing. European Commission first assessment received.
Draft EN 302 571 V2.1.1_0.0.26	Intelligent Transport Systems (ITS) Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band	Stable Draft. First European Commission assessment completed and currently addressing the comments.
EN 303 354 V1.1.1	Amplifiers and active antennas for TV broadcast reception in domestic premises	Completed Deliverable approval procedure. Some comments received.
Draft EN 303 851 V0.0.9	Radio Frequency Identification Equipment operating in the band 2 446 MHz to 2 454 MHz with power levels up to a maximum of 500 mW e.i.r.p. and up to a maximum of 4 W e.i.r.p.	Draft. Second European Commission assessment completed and comments addressed.
Draft EN 303 940-1 V1.1.1_0.0.8	Short Range Devices (SRD) using Ultra Wide Band technology (UWB) Part 1: Millimeter Wave Security Scanners operating in 60-82 GHz	Early Draft. Test Standard development work is progressing.
Draft EN 304 220-1 V1.2.0	Wideband data transmission SRD operating in the frequency range 25 MHz to 1 000 MHz Part 1: Wideband data transmission devices: network access points operating in designated bands	Already published by ETSI and delivered to European Commission for final assessment. Waiting for its publication as Harmonised Standard in OJEU.
EN 304 220-2 V1.2.1	Wideband data transmission SRD operating in the frequency range 25 MHz to 1 000 MHz Part 2: Wideband data transmission devices: terminal node operating in designated bands	Already published by ETSI and delivered to European Commission for final assessment. Waiting for its publication as Harmonised Standard in OJEU.



Draft EN 303 978 V2.2.0	Satellite Earth Stations and Systems (SES) Earth Stations on Mobile Platforms (ESOMP) communicating with satellites in geostationary orbit, operating in the 27,5 GHz to 30,0 GHz and 17,3 GHz to 20,2 GHz frequency bands	Draft. First European Commission assessment completed and comments addressed. Initiating Deliverable approval procedure.
Draft EN 305 550-5 V1.1.1_0.1.5	Short Range Devices (SRD) to be used in the 40 GHz to 260 GHz frequency range Part 5: Ultra Short Range Communication Device (USRCD) within 57 GHz to 64 GHz	Stable Draft. Test Standard development work is progressing.
Draft EN 305 550-6 V1.1.0	Short Range Devices (SRD) to be used in the 40 GHz to 260 GHz frequency range Part 6: Specific radiodetermination applications - Tank Level Probing Radar (TLPR) and Level Probing Radar (LPR) equipment operating in the frequency ranges 116 GHz to 148,5 GHz; 167 GHz to 182 GHz and 231,5 GHz to 250 GHz	Draft. First European Commission assessment completed and comments addressed. Initiating Deliverable approval procedure.
Draft EN 300 386 V2.2.6	Telecommunication network equipment Harmonised Standard for ElectroMagnetic Compatibility (EMC) requirements	Final Draft. Under final ETSI approval process. Once it is completed, the final assessment form European Commission is required.
Draft EN 301 489-5 V2.2.8	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 5: Specific conditions for Private land Mobile Radio (PMR) and ancillary equipment (speech and non-speech) and Terrestrial Trunked Radio (TETRA)	Draft. Approved by Technical Body. Initiating Deliverable approval procedure.
Draft EN 301 489-9 V2.2.1_0.0.2	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 9: Specific conditions for wireless microphones, similar Radio Frequency (RF) audio link equipment, cordless audio, in-ear monitoring, Cochlear Implant and assistive listening devices	Early Draft. Test Standard development work is just starting.



EN 301 489-17 V3.3.1	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 17: Specific conditions for Broadband and Wideband Data Transmission Systems	Already published by ETSI and delivered to European Commission for final assessment. Waiting for its publication as Harmonised Standard in OJEU. New version includes the following updates with regard to v3.2.2: <ul style="list-style-type: none">- Removal of flicker and fluctuations requirements as these are covered by EN 61000-3-2 and EN 61000-3-3.- Scope increased to cover equipment operating in the 57 GHz to 71 GHz band that falls with the scope of article 3.2 standards ETSI EN 303 722.- Scope and title amended to cover both Broadband and Wideband equipment.- Scope of radiated emissions requirements expanded to cover enclosure port of radio equipment.- Annex A aligned with content of standard.
Draft ETSI EN 301 489-28 V2.1.1	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 28: Specific conditions for wireless digital video links	Final Draft. Under final ETSI approval process. Once it is completed, the final assessment form European Commission is required. New version includes the following updates with regard to v1.1.1 (former R&TTE harmonised standard): <ul style="list-style-type: none">- Alignment with EN 301 489-1 V2.2.3.- New methods to determine the QEF threshold.- Removing manufacturer defined test conditions.- Added emission requirements for signal and control ports.- Excluding emission requirement below 9 kHz.
Draft EN 301 489-50 V2.4.1_0.0.12	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment	Stable Draft. Test Standard development work is progressing.
Draft EN 301 489-52 V1.2.5	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment	Draft. Approved by Technical Body. Initiating Deliverable approval procedure. Includes in the scope 5G FR2.



Draft EN 301 489-55 V0.0.12	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services Part 55: Specific conditions for ground based equipment for air navigation operating on 1030 MHz and 1090 MHz	Stable Draft. Test Standard development work is progressing.
EN 301 843-2 V2.3.1_0.0.2	ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services Part 2: Specific conditions for VHF radiotelephone transmitters and receivers	Early Draft. Test Standard development work is just starting.
Draft EN 301 843-8 V1.1.1_0.0.4	ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services Part 8: Specific conditions for radio beacons and locating devices	Stable Draft. Test Standard development work is progressing.

ETSI has updated UWB Measurement techniques for transmitter and receiver requirements

In August, 2024 ETSI published and updated version of European Standards (EN) for UWB Measurement techniques for transmitter and receiver requirements. Those standards define possible measurement techniques and procedures for the conformance measurement of various signal formats (e.g. UWB) in order to comply with the given transmission limits given in the current regulation and to address the spectrum efficiency requirements set out in article 3.2 of the RED:

- **EN 303 883-1 V2.1.1:** Short Range Devices (SRD) and Ultra Wide Band (UWB); Part 1: Measurement techniques for transmitter requirements
- **EN 303 883-2 V2.1.1:** Short Range Devices (SRD) and Ultra Wide Band (UWB); Part 2: Measurement techniques for receiver requirements

Those standards will not be harmonised under Radio Equipment Directive, but they are referenced in many harmonised or candidates to be harmonised standards for UWB or SRD at high frequency ranges, such as:

- **EN 305 550-X:** Short Range Devices (SRD) to be used in the 40 GHz to 260 GHz frequency range
- **EN 303 940-X:** Security Scanning devices
- **EN 303 661:** Ground Based Synthetic Aperture Radar (GBSAR) in the frequency range 17,1 GHz to 17,3 GHz and High Definition Ground Based Synthetic Aperture Radar (HD-GBSAR) in the frequency range 76 GHz to 77 GHz
- **EN 302 729-X:** Level Probing Radar (LPR) equipment
- **EN 302 372:** Tank Level Probing Radar (TLPR) equipment
- **EN 302 065-2-X:** Ultra Wide Band location tracking devices
- **EN 302 065-3-X:** Ultra Wide Band devices installed in road and rail vehicles
- **EN 302 065-4-X:** Material Sensing devices
- **EN 302 065-6-X:** Ultra Wide Band radio-determination for radar sensing devices



North America (USA and Canada)

FCC KDBs Updates

Main KDBs published/updated during Q3/2024:

KDB	Status	Question	Comments
986446	Update	The FCC recently adopted FCC 22-84 on Protecting Against National Security Threats to the Communications Supply Chain through the Equipment Authorization Program. How does that affect the FCC equipment authorization process?	Add new guidance. Covered List has been updated to include Kaspersky cybersecurity and anti-virus software and therefore any equipment that integrates cybersecurity or anti-virus software produced or provided by Kaspersky, or any of its successors or assignees, is prohibited from obtaining an equipment authorization from the FCC.
273109	Update	What is the equipment authorization guidance for Part 25 Transceivers?	Clarify that the expiration of the temporary waiver process will be announced in a public notice.
996369	Update	What is the FCC guidance for equipment authorization of transmitter module devices, and equipment that incorporates transmitter modules?	Revised guidance on Antennas specifically for licensed client modules. Previous version (revised in April 2024) required licensed client modules to be treated like Part 15 Modules (unlicensed module). After considering comments from the TCB module committee, this updated version aligns with how limited client modules have been certified in the past.
987594	Update	What are the requirements for obtaining a Certification for U-NII 6 GHz devices operating in the 5.925-7.125 GHz band under Part 15, Subpart E?	Updated to add guidance for new unlicensed rules by permitting very low power (VLP) devices under equipment class 6VL in the U-NII-5 (5.925 – 6.425 GHz) and U-NII-7 (6.525 – 6.875 GHz) portions of the 6 GHz band.
388624	Update	What devices require FCC guidance prior to a TCB issuing a grant of equipment authorization, and what are the procedures to obtain this guidance?	Clarify the procedure for Permissive Changes to devices with approved PAGs. PAG List updated: - Updated HAC5GS, MODLIM and RDR255 - Removed DRGAIN, MEDRAD, UMFLEX and UN5GHz - Replaced PWRDYN, PWRRED and TXSENS with PWRCNG

FCC ET Docket No. 19-138 (C-V2X) update

On July 19, 2024 the FCC granted a waiver to companies listed below following the same requirements as for “C-V2X Joint Waiver Parties”:

- North American Subaru, Inc.
- Keysight Technologies Inc
- Innowireless Co. Ltd.
- Autotalks Ltd.



The following entities have filled recently a waiver request to use C-V2X technology in 5.905 - 5.925 GHz Band and proposed similar technical requirements as proposed in “C-V2X Joint Waiver Parties”:

- LG Electronics Inc.
- City of Fremont, California

Additional Information:

- ET Docket No. 19-138: [https://www.fcc.gov/ecfs/search/search-filings/results?q=\(proceedings.name:\(%2219-138%22\)\)](https://www.fcc.gov/ecfs/search/search-filings/results?q=(proceedings.name:(%2219-138%22)))

FCC has adopted initial rules for UAS/Drone operations in 5 GHz band

On August 29, 2024 the FCC adopted new rules to enable initial drone operations in the 5 GHz spectrum band for wireless communications necessary to safely control the flights of uncrewed aircraft systems (UAS).

FCC has established initial service rules that allow operators to obtain direct frequency assignments in a portion of the 5030 – 5091 MHz band for non-networked operations. The new rules rely on dynamic frequency management systems to manage and coordinate access to the spectrum and enable its safe and efficient use.

To enable operations in the band during the period before the dynamic frequency management systems are in operation, the rules establish an interim access mechanism in which operators seeking to transmit in the band first submit a request to the Federal Aviation Administration for deconfliction and approval, and, upon FAA authorization, complete an online registration form with the FCC.

The Report and Order adopted by FCC includes the provision to add a New Part 88 inside Title 47 of the CFR to define the regulations governing the use of the 5030 – 5091 MHz band by UAS.

Additional Information:

- Press Release: <https://docs.fcc.gov/public/attachments/DOC-405124A1.pdf>
- Report and Order: <https://docs.fcc.gov/public/attachments/FCC-24-91A1.pdf>



ISED Updates

ISED Radio Standards updated in Q3/2024:

Test Standard	Status	Title	Comments
RSS-123 Issue 5	Update	Wireless Microphones and Wireless Multichannel Audio Systems	New standard version has a 6 months transition period. Main updates are: <ul style="list-style-type: none">- Add Wireless Multichannel Audio Systems.- Update the unwanted emissions requirements.
RSS-133 Issue 7	Update	Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz	New standard version has a 6 months transition period. Main updates are: <ul style="list-style-type: none">- Add maximum transmitter power requirements for fixed station, base station and subscriber equipment.- Add total radiated power requirements for active antenna system (AAS) equipment.- Add unwanted emissions limits.- Remove the section on receiver spurious emission, because this is a requirement found in RSS-Gen.
RSS-216 Issue 3	Update	Wireless Power Transfer Devices	New standard version has a 6 months transition period. Main updates are: <ul style="list-style-type: none">- Increase the maximum separation distance from 10 cm to 50 cm in case of wireless power transfer (WPT) systems for electric vehicles.- Increase the maximum operation frequency from 400 MHz to 40 GHz and added limits for radiated emissions above 1 GHz.- Add specific requirements for WPT devices that can operate while implanted in or worn on the human body.- Adopt ANSI C63.30-2021, with deviations.- Include the limits in RSS-216, instead of referring to ICES-001.- Clarify what equipment is considered industrial, scientific, and medical (ISM) equipment.
RSS-248 Issue 3	Update	Radio Local Area Network (RLAN) Devices Operating in the 5925-7125 MHz Band	New standard version has a 6 months transition period. Main updates are: <ul style="list-style-type: none">- Add new equipment class: very low-power devices.- Added definitions, power limits, and operational requirements for very low-power devices equipment class.

ISED main General Notices published in Q3/2024:



Notice	Description	Comments
Notice 2024-DRS0004	Guidance on curve-fitting techniques related to measurements associated with nerve stimulation compliance	<p>Provides further guidelines on curve-fitting techniques being used in accordance with section 5.3.1 of RSS-102.NS.MEAS or 7.1.1 of SPR-002 issue 2.</p> <p>Includes an example step by step with different Regression Models explaining how to perform the Curve-Fitting Analysis.</p> <p>Guidance has been updated on July 30, 2024.</p>
Notice 2024-DRS0010	Guidance on the scope and application of RSS-135 – Digital Scanner Receivers (Issue 2), and RSS-215 – Analogue Scanner Receivers (Issue 2)	<p>Guidance provides the following clarifications:</p> <ul style="list-style-type: none">- Any radio apparatus that has been certified to RSS-135 or RSS-215 must not be capable of transmitting a radiocommunication signal.- No person shall install, operate or possess a digital scanner receiver without first obtaining a license.- Drone detection systems and equipment which utilize frequency scanning and signal interception for the purposes of locating, tracking or identifying remotely piloted aircraft systems do not fall under the intended scope of RSS-135. While these systems do not require certification, they are still subject to the general receiver requirements of RSS-Gen and to licensing requirements.
Notice 2024-DRS0012	Adoption of ANSI C63.2-2023 and ANSI C63.10a-2024	<p>ISED proposes to adopt the following standards:</p> <ul style="list-style-type: none">- ANSI C63.2-2023 with a transition period of six months, because this standard includes the existing requirements in ANSI C63.4-2014 and CISPR 16-1-1 editions adopted in various ISED standards.- ANSI C63.10a-2024 with a transition period of one year. This amendment extends the frequency range to 750 GHz and updates various procedures: frequency stability, emissions maximization for millimeter wave devices, ultrawideband devices, unlicensed national information infrastructure devices.



Standards Development Organizations (SDO)

International Electrotechnical Commission (IEC)

Main IEC Publications related with EMC/RF released in Q3/2024:

Publication	Scope
CISPR 15:2018+AMD1:2024 CSV	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
IEC 61000-2-4:2024 RLV	Electromagnetic compatibility (EMC) - Part 2-4: Environment - Compatibility levels in power distribution systems in industrial locations for low-frequency conducted disturbances
IEC 60601-2-37:2024 RLV	Medical electrical equipment - Part 2-37: Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment
IEC 61674:2024 CMV	Medical electrical equipment - Dosimeters with ionization chambers and/or semiconductor detectors as used in X-ray diagnostic imaging
IEC 80601-2-49:2018+AMD1:2024 CSV	Medical electrical equipment - Part 2-49: Particular requirements for the basic safety and essential performance of multifunction patient monitors
IEC 61786-1:2013+AMD1:2024 CSV	Measurement of DC magnetic, AC magnetic and AC electric fields from 1 Hz to 100 kHz with regard to exposure of human beings - Part 1: Requirements for measuring instruments
IEC 62463:2024	Radiation protection instrumentation - X-ray systems for the security screening of persons
IEC 60947-2:2024	Low-voltage switchgear and controlgear - Part 2: Circuit-breakers
IEC 62271-100:2021+AMD1:2024 CSV	High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers
IEC TS 62271-318:2024 EXV	High-voltage switchgear and controlgear - Part 318: DC gas-insulated metal-enclosed switchgear for rated voltages including and above 100 kV
IEC 62305-4:2024	Protection against lightning - Part 4: Electrical and electronic systems within structures
IEC 62933-5-1:2024	Electrical energy storage (EES) systems - Part 5-1: Safety considerations for grid-integrated EES systems - General specification
IEC 63272:2024	Nuclear facilities - Electrical power systems - AC interruptible power supply systems
IEC 60512-28-100:2024	Connectors for electrical and electronic equipment - Tests and measurements - Part 28-100: Signal integrity tests up to 2 000 MHz - Tests 28a to 28g
IEC 61196-1-111:2024 RLV	Coaxial communication cables - Part 1-111: Electrical test methods - Stability of phase test methods
IEC 61196-1-113:2024	Coaxial communication cables - Part 1-113: Electrical test methods - Test for attenuation constant
IEC TR 63167:2024 RLV	Assessment of contact current related to human exposure to electric, magnetic and electromagnetic fields



Publication	Scope
IEC TR 63368:2024	Control and protection systems for high-voltage direct current (HVDC) power transmission systems - Off-site real-time simulation testing
IEC TR 63519:2024	Aspects and understanding of measurement uncertainty - Background information on measurement uncertainty based on the example of IEC TC 85 (Measuring equipment for electrical and electromagnetic quantities)

Additional Information:

- IEC Standards Search: <https://webstore.iec.ch/en/products/>

CEN-CENELEC

Main CEN-CENELEC Publications related with EMC/RF released in Q3/2024:

Publication	Scope
EN 50065-2-3:2024	Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz - Part 2-3: Immunity requirements for mains communicating equipment operating in the range of frequencies 3 kHz to 95 kHz and intended for use by electricity suppliers and distributors
EN 60730-1:2016/A11:2024	Automatic electrical controls - Part 1: General requirements
EN IEC 60730-1:2024	Automatic electrical controls - Part 1: General requirements
EN IEC 61000-2-4:2024	Electromagnetic compatibility (EMC) - Part 2-4: Environment - Compatibility levels in power distribution systems in industrial locations for low-frequency conducted disturbances
EN IEC 61812-1:2024	Time relays and coupling relays for industrial and residential use - Part 1: Requirements and tests
EN IEC 61869-1:2024	Instrument transformers - Part 1: General requirements
EN IEC 62053-41:2024	Electricity metering equipment - Particular requirements - Part 41: Static meters for DC energy (classes 0,5 and 1)
EN IEC 62752:2024	In-cable control and protection device (IC-CPD) for mode 2 charging of electric road vehicles
EN IEC 63044-5-1:2019/A1:2024	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up
EN IEC 63044-5-2:2019/A1:2024	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light-industrial environments
EN IEC 63044-5-3:2019/A1:2024	Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-3: EMC requirements for HBES/BACS used in industrial environments
EN 60601-2-10:2015/A2:2024	Medical electrical equipment - Part 2-10: Particular requirements for the basic safety and essential performance of nerve and muscle stimulators
EN 60601-2-3:2015/A2:2024	Medical electrical equipment - Part 2-3: Particular requirements for the basic safety and essential performance of short-wave therapy equipment



Publication	Scope
EN 60601-2-45:2011/A2:2024	Medical electrical equipment - Part 2-45: Particular requirements for the basic safety and essential performance of mammographic X-ray equipment and mammographic stereotactic devices
EN 60601-2-6:2015/A2:2024	Medical electrical equipment - Part 2-6: Particular requirements for the basic safety and essential performance of microwave therapy equipment
EN IEC 60601-2-2:2018/A1:2024	Medical electrical equipment - Part 2-2: Particular requirements for the basic safety and essential performance of high frequency surgical equipment and high frequency surgical accessories
EN IEC 60601-2-33:2024	Medical electrical equipment - Part 2-33: Particular requirements for the basic safety and essential performance of magnetic resonance equipment for medical diagnosis
EN IEC 60601-2-46:2024	Medical electrical equipment - Part 2-46: Particular requirements for the basic safety and essential performance of operating tables
EN IEC 60601-2-54:2024	Medical electrical equipment - Part 2-54: Particular requirements for the basic safety and essential performance of X-ray equipment for radiography and radioscopy
EN IEC 60601-2-75:2019/A1:2024	Medical electrical equipment - Part 2-75: Particular requirements for the basic safety and essential performance of photodynamic therapy and photodynamic diagnosis equipment
EN IEC 80601-2-49:2019/A1:2024	Medical electrical equipment - Part 2-49: Particular requirements for the basic safety and essential performance of multifunction patient monitors
EN IEC 80601-2-58:2024	Medical electrical equipment - Part 2-58: Particular requirements for the basic safety and essential performance of lens removal devices and vitrectomy devices for ophthalmic surgery
EN IEC 80601-2-78:2020/A1:2024	Medical electrical equipment - Part 2-78: Particular requirements for basic safety and essential performance of medical robots for rehabilitation, assessment, compensation or alleviation
EN 61786-1:2014/A1:2024	Measurement of DC magnetic, AC magnetic and AC electric fields from 1 Hz to 100 kHz with regard to exposure of human beings - Part 1: Requirements for measuring instruments
CEN/TS 18078:2024	Electronic fee collection - Measurement of interferences on tolling and tachograph devices from radio local area network devices operating in the 5,8 GHz frequency range - Test suite structure and test purposes

Additional Information:

- CEN-CENELEC Standards Search: <https://standards.cenelec.eu/dyn/www/f?p=CEN:105::RESET:::>



SAE International

Main SAE International Publications related with EMC released in Q3/2024:

Publication	Status	Scope
AIR1255	Reaffirmed	Spectrum Analyzers for Electromagnetic Interference Measurements
AIR1209	Reaffirmed	Construction and Calibration of Parallel Plate Transmission Line for Electromagnetic Interference Susceptibility Testing
J2954_202408	Revised	Wireless Power Transfer for Light-Duty Plug-in/Electric Vehicles and Alignment Methodology
J180_202410	Revised	Electrical Charging Systems for Off-Road Work Machines

Additional Information:

- SAE Standards List for EMC Standards: <https://www.sae.org/standards/?topics=50144>

International Organization for Standardization (ISO)

Main ISO Publications related with EMC/RF released in Q3/2024:

Publication	Scope
IEC 80601-2-49:2018/ Amd 1:2024	Medical electrical equipment Part 2-49: Particular requirements for the basic safety and essential performance of multifunction patient monitoring equipment Amendment 1
ISO 80601-2-79:2024	Medical electrical equipment Part 2-79: Particular requirements for basic safety and essential performance of ventilatory support equipment for ventilatory impairment
ISO 80601-2-80:2024	Medical electrical equipment Part 2-80: Particular requirements for basic safety and essential performance of ventilatory support equipment for ventilatory insufficiency

Additional Information:

- ISO Standards Search: <https://www.iso.org/advanced-search/x/>



CTIA – The Wireless Association

Main CTIA Publications related with Over-the-Air (OTA) Performance released in Q3/2024:

Publication	Scope
CTIA 01.01	Test Scope, Requirements, and Applicability v8.0.0 (September 2024)
CTIA 01.03	Normative Reporting Tables v8.0.0 (September 2024)
CTIA 01.04	Informative Reporting Tables v8.0.0 (September 2024)
CTIA 01.20	Test Methodology, SISO, Anechoic Chamber v8.0.0 (September 2024)
CTIA 01.21	Test Methodology, SISO, Reverberation Chamber v8.0.0 (September 2024)
CTIA 01.22	Test Methodology, SISO, Millimeter Wave v8.0.0 (September 2024)
CTIA 01.40	Test Methodology, MIMO, Static Channel Model, Multi-Probe Anechoic Chamber v8.0.0 (September 2024)
CTIA 01.41	Test Methodology, MIMO, Static Channel Model, Radiated Two Stage v8.0.0 (September 2024)
CTIA 01.50	Wireless Technology, 3GPP Radio Access Technologies v8.0.0 (September 2024)
CTIA 01.51	Wireless Technology, Location Based Technologies v8.0.0 (September 2024)
CTIA 01.52	Wireless Technology, Non-3GPP Radio Access Technologies v8.0.0 (September 2024)
CTIA 01.70	Measurement Uncertainty v8.0.0 (September 2024)
CTIA 01.71	Device Setup and Positioning Guidelines v8.0.0 (September 2024)
CTIA 01.72	Near-Field Phantoms v8.0.0 (September 2024)
CTIA 01.73	Supporting Procedures v8.0.0 (September 2024)
CTIA 01.90	Informative Reference Material v8.0.0 (September 2024)

Additional Information:

- CTIA Test Plans: <https://ctiacertification.org/test-plans/>