
# Newsletter

## 2025 Q1

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

DEKRA Testing and Certification Co., Ltd. | Huaya (Taiwan) | SAR Measurement System Speag DASY8

# 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 Q4/2024:

| Test Standard | Title | Comments |
|---|---|---|
| Draft EN 300 220-2 V3.1.1_0.0.24 | 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.<br>Part 2: Harmonised Standard for access to radio spectrum for non specific radio equipment | Final Draft. European Commission assessment received and comments already addressed.<br>Approved by Technical Body. Under ETSI Deliverable approval process. Once it is completed, the final assessment form European Commission is required.<br>New version includes the following updates with regard to v3.2.1:<br>- Separation of OBW requirement from frequency stability (drift) clauses.<br>- Clarifications in Spectrum mask at permitted frequency band edges.<br>- Addition of receiver parameters according to ETSI guide EG 203336 v1.2.1.<br>- Addition of tests for timing compliance of equipment using polite spectrum access. |
| Draft EN 300 422-1 V2.3.1_0.0.2 | Wireless Microphones<br>Audio PMSE up to 3 GHz<br>Part 1: Audio PMSE Equipment up to 3 GHz | Early Draft. Test Standard development work is just starting. |
| Draft ETSI EN 300 440-1 V3.1.1_0.0.7 | Short Range Devices (SRD) operating in 1 GHz to 40 GHz<br>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_0.0.23 | Short Range Devices (SRD)<br>Part 2: Radiodetermination equipment for location tracking applications operating in the frequency range 2,4 GHz to 2,4835 GHz | Stable Draft. Test Standard development work is progressing. |
| EN 300 487 V2.2.1 | Satellite Earth Stations and Systems (SES)<br>Receive-Only Mobile Earth Stations (ROMES) providing data communications operating in the 1,5 GHz frequency band | Already published by ETSI and to be delivered to European Commission for final assessment.<br>New version includes changes in receiver blocking characteristics requirement. |
| Draft EN 301 406-1 V3.1.17 | Digital Enhanced Cordless Telecommunications (DECT)<br>Part 1: DECT, DECT Evolution and DECT ULE | Stable Draft. Test Standard development work is progressing. |

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| Draft EN 301 783 V0.0.12 | Commercially available amateur radio equipment | Early Draft. Test Standard development work is progressing. |
| EN 301 893 V2.2.1 | 5 GHz WAS/RLAN | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU.<br>New version includes the following updates:<br>- Add technical requirements and methods of measurement for U-NII-3 band (5.725 – 5.850 MHz).<br>- Add Adjacent Channel Selectivity Test Case.<br>- Add User Access Restrictions Test Case.<br>- Update Transmitter Unwanted Emissions to accommodate flexible use of spectrum for multi-channel operation and minimize interference.<br>- Update Energy Detection Threshold (EDT) requirements in Adaptivity Test Case for Frame Based Equipment (FBE) and Load Based Equipment (LBE).<br>- Remove the possibility of compliance by declaration for the Channel Access Mechanism and Maximum Channel Occupancy Time (COT). |
| EN 301 908-13 V13.3.1 | IMT cellular networks<br>Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE) | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU.<br>New version includes the following updates:<br>- Add Bands 41, 72, 87 and 88.<br>- Add LTE Carrier Aggregation CA_8-41, CA_41-41, CA_41-42, CA_41-46 and CA_3-41-42 bands combinations.<br>- Include additional spurious emissions limits for frequency range 470 to 694 MHz to protect Broadband Public Protection and Disaster Relief (BB-PPDR) and Digital Terrestrial Television (DTT) operations.<br>- Add requirements for Transmitter adjacent channel leakage power ratio for intraband non-contiguous Carrier Aggregation. |

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| Draft EN 301 908-14 V17.1.0 | IMT cellular networks<br>Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS) | Draft. Approved by Technical Body. Under ETSI Deliverable approval process. Once it is completed, the final assessment form European Commission is required. |
| Draft EN 301 908-18 V17.1.0 | IMT cellular networks<br>Part 18: NR, E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS) | Draft. Approved by Technical Body. Under ETSI Deliverable approval process. Once it is completed, the final assessment form European Commission is required. |
| EN 301 908-25 V15.1.1 | IMT cellular networks<br>Part 25: New Radio (NR) User Equipment (UE) | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU. |
| EN 302 064 V2.2.1 | Wireless Digital Video Links operating in the 1,3 GHz to 50 GHz frequency band | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU.<br>New version includes the following updates:<br>- Add a new transmitter category with enhanced ACPR performance.<br>- Introduce channel occupancy test to limit channel bandwidth. |
| Draft EN 302 065-2-5 V1.1.1_0.0.4 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 2: Ultra Wide Band location tracking devices<br>Sub-part 5: Requirements for enhanced indoor devices within 6,0 GHz to 8,5 GHz | Early Draft. Test Standard development work is just starting. |
| Draft EN 302 065-3-1 V3.2.0 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 3: UWB devices installed in motor and railway vehicles<br>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 | Final Draft. Approved by Technical Body. Under ETSI Deliverable approval process. Once it is completed, the final assessment form European Commission is required. |
| Draft EN 302 065-3-3 V1.1.1_0.1.3 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 3: UWB devices installed in road and rail vehicles<br>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. |

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| Draft EN 302 065-4-1 V2.1.1 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 4: Material Sensing devices<br>Sub-part 1: Building material analysis below 10,6 GHz | Draft. Approved by Technical Body. Under ETSI Deliverable approval process. Once it is completed, the final assessment form European Commission is required. |
| Draft EN 302 065-4-4 V2.1.1_0.1.6 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 4: Material Sensing devices | Draft. Ready to initiate the Working Group approval process. |
| Draft EN 302 372 V3.1.1_0.1.2 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>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. Ready for first European Commission assessment. |
| Draft EN 302 729-2 V3.1.1_0.1.0 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 2: Level Probing Radar (LPR) equipment operating in the frequency range 75 GHz to 85 GHz for tilted downward installation | Stable Draft. Test Standard development work is progressing. |
| Draft EN 302 208 V3.5.1_V0.0.2 | Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W | Draft. Ready to initiate the Working Group approval process. |
| Draft EN 302 217-2 V3.4.1_0.0.8 | Fixed Radio Systems<br>Characteristics and requirements for point-to-point equipment and antennas<br>Part 2: Digital systems operating in frequency bands from 1 GHz to 174,8 GHz | Stable Draft. European Commission first assessment completed and currently addressing the comments. |
| Draft EN 302 480 V0.0.9 | Mobile Communication On Board Aircraft (MCOBA) systems | Stable Draft. European Commission first assessment received. Comments addressed and under Working Group approval process. |
| Draft EN 302 571 V2.1.1_0.0.27 | Intelligent Transport Systems (ITS)<br>Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band | Stable Draft. European Commission first assessment completed and currently addressing the comments. |
| Draft EN 303 659 V0.0.20 | Short Range Devices (SRD) in Data Networks<br>Radio equipment to be used in the frequency ranges 865 MHz to 868 MHz and 915 MHz to 919,4 MHz | Draft. Approved by Technical Body. Under ETSI Deliverable approval process. Once it is completed, the final assessment form European Commission is required. |
| Draft EN 303 687 V1.1.6 | 6 GHz WAS/RLAN | Early Draft. Test Standard development work is progressing. |
| 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. Approved by Technical Body. Ready to initiate ETSI Deliverable approval process. |

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| Draft EN 303 940-1 V1.1.1_0.0.9 | Short Range Devices (SRD) using Ultra Wide Band technology (UWB)<br>Part 1: Millimeter Wave Security Scanners operating in 60-82 GHz | Early Draft. Test Standard development work is progressing. |
| EN 303 978 V2.2.1 | Satellite Earth Stations and Systems (SES)<br>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 | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU.<br>New version includes modification in Off-axis EIRP emission density within the band Test Case. |
| ETSI EN 301 489-28 V2.1.1 | ElectroMagnetic Compatibility (EMC) standard for radio equipment and services<br>Part 28: Specific conditions for wireless digital video links | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU.<br>New version includes the following updates with regard to v1.1.1 (former R&TTE harmonised standard):<br>- Alignment with EN 301 489-1 V2.2.3.<br>- New methods to determine the QEF threshold.<br>- Removing manufacturer defined test conditions.<br>- Added emission requirements for signal and control ports.<br>- Excluding emission requirement below 9 kHz. |
| EN 301 489-52 V1.3.1 | ElectroMagnetic Compatibility (EMC) standard for radio equipment and services<br>Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment | Already published by ETSI and delivered to European Commission for final assessment.<br>Waiting for its publication as Harmonised Standard in OJEU.<br>New version includes in the scope 5G FR2. |
| EN 301 843-2 V2.3.1_0.0.3 | ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services<br>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_0.0.5 | ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services<br>Part 8: Specific conditions for radio beacons and locating devices | Stable Draft. Test Standard development work is progressing. |

## ETSI has published a guidance on risk assessment for radio equipment

In October, 2024 ETSI published a Technical Report (ETSI TR 103 879 V1.1.1) that provides guidance on risk assessment for RED articles 3.1(b) (EMC) and 3.2 (RF) that are required as part of the conformity assessment for Radio Equipment Directive.

Document intends to help the manufacturer to find out whether a standard is a harmonised standard listed in the OJEU and what additional measures are to be taken if the manufacturer does not fully apply a harmonised standard.

Document also includes an example template on how a risk assessment could look like.

**Additional Information:**

- ETSI TR 103 879 V1.1.1: https://www.etsi.org/deliver/etsi_tr/103800_103899/103879/01.01.01_60/tr_103879v010101p.pdf

## European Commission Implementation Decision for harmonised use of radio spectrum in lower 6 GHz band for Very Low Power (VLP) WAS/RLAN devices

On June, 2021 the European Commission published Commission Implementing Decision (EU) 2021/1067 of 17 June 2021 on the harmonised use of radio spectrum in the 5.945 – 6.425 MHz frequency band for WAS/RLAN devices. This decision was subject to review by the end of 2024 considering additional studies and measurements as regards the maximum mean e.i.r.p. density limits for VLP WAS/RLAN out-of-band emissions below 5.935 MHz.

On December, 2024 European Commission published Commission Implementing Decision (EU) 2024/3157 to amend the previous one and deferring to December 31, 2025 the replacement of the limit – 45 dBm/MHz with the limit – 37 dBm/MHz for Very Low Power (VLP) devices). This decision shall be taken based on CEPT response to the Commission mandate of April 21, 2021.

**Additional Information:**

- Commission Implementing Decision (EU) 2021/1067 of 17 June 2021: https://eur-lex.europa.eu/eli/dec_impl/2021/1067/oj/eng
- Commission Implementing Decision (EU) 2024/3157 of 17 December 2024: https://eur-lex.europa.eu/eli/dec_impl/2024/3157/oj/eng

# North America (USA and Canada)

## FCC KDBs Updates

Main KDBs published/updated during Q4/2024:

| KDB | Status | Question | Comments |
|---|---|---|---|
| 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? | PAG List updated: Removed AGGREG (Carrier Aggregation). |
| 996369 | Update | What is the FCC guidance for equipment authorization of transmitter module devices, and equipment that incorporates transmitter modules? | Editorial changes only. No changes have been made to affect or change technical interpretations. |
| 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. |
| 935210 | Update | What is the Commission guidance for the evaluation of Signal Boosters? | Boosters cannot be certified to Part 96 as an End User Device (EUD). |
| 285076 | Update | What are the equipment authorization requirements for hearing aid compatibility of mobile handsets? | Interim process to establish 5G sub 6 VoLTE or OTT voice calls over 5G FR1 air interfaces is no longer permitted. |
| 206256 | Update | What procedures should be followed for approval of a wireless microphone? | Added requirements for Wireless Multichannel Audio Systems (WMAS).<br>Update references to updated to ETSI EN 300 422-1 v2.2.1. |

## FCC finalizes Regulatory Transition of Intelligent Transportation Systems to C-V2X Technology in the 5.9 GHz Band

On November 21, 2024 the FCC released the Second Report and Order adopting C-V2X technical parameters in the FCC rules, including power, emission limits and message prioritization.

New FCC rules shall be in force by February 11, 2025. After that date, it shall be possible to Test and Certify C-V2X devices without the requirement of a waiver. Moreover, new rules permit to devices that have already been authorized under C-V2X waivers to continue to be marketed and operated, and they provide a timeline for sunsetting existing DSRC-based technology.

Road Side Unit (RSU) falls inside FCC Part 90 and On-Board Unit (OBU) falls inside FCC Part 95.

**Additional Information:**

- FCC Announcement: https://docs.fcc.gov/public/attachments/DOC-407683A1.pdf

- New FCC Rules for Part 90 and Part 95: https://www.govinfo.gov/content/pkg/FR-2024-12-13/pdf/2024-28980.pdf

## FCC opens entire 6 GHz Band to Very Low Power (VLP) Device operations

On December 11, 2024 the FCC adopted new rules that permit the very low power (VLP) class of unlicensed devices to operate in the U-NII-6 (6,425 – 6,525 GHz) and U-NII-8 (6,875 - 7,125 GHz) portions of the 6 GHz band at the same power levels and technical/operational protections as recently approved for the U-NII-5 (5,925 – 6,425 GHz) and U-NII-7 (6,525 – 6,875 GHz) bands.

VLP devices will have no restriction on locations where they may operate and will not be required to operate under the control of an AFC system. To ensure the risk of interference remains insignificant, the devices will be required to employ a contention-based protocol and implement transmit power control while prohibited from operating as part of a fixed outdoor infrastructure.

**Additional Information:**

- FCC Announcement: https://docs.fcc.gov/public/attachments/DOC-408129A1.pdf
- Third Report and Order: https://docs.fcc.gov/public/attachments/FCC-24-125A1.pdf

## FCC requires all Mobile Phones to be Hearing Aid Compatible

On October 17, 2024 the FCC adopted new rules establishing that 100% of all mobile handsets must be compatible with hearing aids. New rules also revise labeling and website posting requirements to ensure consumers have access to the information for purchasing.

The FCC also established a Bluetooth coupling requirement ensuring more universal connectivity between mobile handsets and hearing aids, including over-the-counter hearing aids, by encouraging handset manufacturers to move from proprietary to Bluetooth coupling standards.

**Additional Information:**

- FCC Announcement: https://docs.fcc.gov/public/attachments/DOC-406697A1.pdf
- New Rules for Part 20: https://www.govinfo.gov/content/pkg/FR-2024-11-13/pdf/2024-25088.pdf

## FCC proposes a +700k USD fine to a Chinese manufacturer for providing false information related to U.S. Designated Agent

FCC proposes a penalty of 734.872 USD against Eken Group Ltd., a Chinese video doorbell manufacturer, for apparent violations of FCC rules that require the company to designate an agent located in the United States.

Following a news report alleging that Eken's video doorbells have significant privacy and security vulnerabilities, the FCC's Enforcement Bureau began an investigation into the company and discovered that the agent's address in Colorado Springs, Colorado, submitted by the company as recently as March 4, 2024, was a mailbox that had been inactive since 2019.

**Additional Information:**

- FCC Announcement: https://docs.fcc.gov/public/attachments/DOC-407668A1.pdf
- FCC Notice: https://docs.fcc.gov/public/attachments/FCC-24-122A1.pdf

## ISED Updates

ISED Radio Standards updated in Q4/2024:

| Test Standard | Status | Title | Comments |
|---|---|---|---|
| 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.<br>Main update has been to include the Very Low Power (VLP) device equipment class:<br>- Frequency Range: 5.925-7.125 MHz.<br>- Power Limits: Max E.I.R.P. spectral density -5 dBm/MHz, Max E.I.R.P. 14 dBm.<br>- Devices shall not employ fixed outdoor infrastructure.<br>- Devices shall prioritize operation on frequencies above 6.105 MHz to 7.125 MHz before operating on frequencies from 5.925 MHz to 6.105 MHz.<br>- Device might have peer-to-peer connection capability. |
| RSS-222 Issue 4 | Update | White Space Devices (WSDs) | New standard version has a 6 months transition period.<br>Main updates are:<br>- Add a new class of white space devices (WSDs) with less stringent first-adjacent channel unwanted emission limits.<br>- Allow the operation of mobile WSDs on channels 3 and 4 based on the Decision on New Access Licensing Framework, Changes to Subordinate Licensing and White Space to Support Rural and Remote Deployment. |

ISED main General Notices published in Q4/2024:

| Notice | Description | Comments |
|---|---|---|
| Notice 2024-DRS0014 | Additional guidance on nerve stimulation compliance assessment using curve-fitting techniques | Notice clarifies ISED's expectations regarding nerve stimulation compliance assessment where curve-fitting techniques are being used in accordance with section 5.3.1 of RSS-102.NS.MEAS or 7.1.1 of SPR-002.<br>ISED will accept curve-fitting techniques, without the need to submit an enquiry, if it includes all the information listed in this notice. Main information required is:<br>- Complete description of the coils.<br>- List of test configurations assessed.<br>- Summary of the exposure ratio results obtained for each assessment required as per RSS-102.NS.MEAS.<br>- Time-domain plots demonstrating the duty cycle for all test configurations.<br>- Maximum Field Strength and Accurate Measurements.<br>- Complete analysis of the regression models and comparison table.<br>- Photographs displaying the full test set-up. |

# Standards Development Organizations (SDO)

## International Electrotechnical Commission (IEC)

Main IEC Publications related with EMC/RF released in Q4/2024:

| Publication | Scope |
|---|---|
| CISPR PAS 39:2024 | Electromagnetic compatibility (EMC) - Conducted emission requirements on the low voltage AC mains port in the frequency range 9 kHz to 150 kHz for equipment intended to operate in residential environments |
| CISPR TR 16-4-6:2024 | Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-6: Uncertainties, statistics and limit modelling – Statistics on radio frequency interference (RFI) and verification by measurements in the field |
| CISPR TR 31:2024 | Description of the radio services database |
| IEC PAS 61980-5:2024 | Electric vehicle wireless power transfer (WPT) systems - Part 5: Interoperability and safety of dynamic wireless power transfer (D-WPT) for electric vehicles |
| IEC TR 63424-1:2024 | Validation of dynamic power control and exposure time-averaging algorithms - Part 1: Cellular network implementations for SAR at frequencies up to 6 GHz |
| IEC 61000-4-2:2024 PRV | Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test |
| IEC 61000-4-41:2024 | Electromagnetic compatibility (EMC) - Part 4-41: Testing and measurement techniques - Broadband radiated immunity tests |
| IEC 60601-2-34:2024 | Medical electrical equipment - Part 2-34: Particular requirements for the basic safety and essential performance of invasive blood pressure monitoring equipment |
| IEC 60601-2-39:2024 | Medical electrical equipment - Part 2-39: Particular requirements for the basic safety and essential performance of peritoneal dialysis equipment |
| IEC 60601-2-40:2024 RLV | Medical electrical equipment - Part 2-40: Particular requirements for the basic safety and essential performance of electromyographs and evoked response equipment |
| IEC 60670-1:2024 RLV | Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 1: General requirements |
| IEC 60670-21:2024 RLV | Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 21: Particular requirements for boxes and enclosures with provision for suspension means |
| IEC 60670-22:2024 RLV | Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 22: Particular requirements for connecting boxes and enclosures |
| IEC 60670-24:2024 EXV | Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 24: Particular requirements for enclosures for housing protective devices and other power dissipating electrical equipment |
| IEC 60947-2:2024 RLV | Low-voltage switchgear and controlgear - Part 2: Circuit-breakers |
| IEC 60947-4-2:2020+AMD1:2024 CSV | Low-voltage switchgear and controlgear - Part 4-2: Contactors and motor-starters - Semiconductor motor controllers, starters and soft-starters |

| Publication | Scope |
|---|---|
| IEC 61008-1:2024 | Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) - Part 1: General rules |
| IEC 61008-2-1:2024 | Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) - Part 2-1: RCCBs according to classification 4.1.1 |
| IEC 61009-1:2024 | Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) - Part 1: General rules |
| IEC 61009-2-2:2024 | Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) - Part 2-2: RCBOs according to classification 4.1.2, 4.1.3, 4.1.4, 4.1.5 and 4.1.6 |
| IEC 61557-1:2019+AMD1:2024 CSV | Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 1: General requirements |
| IEC 61643-01:2024 | Low-voltage surge protective devices - Part 01: General Requirements and test methods |
| IEC 63391:2024 | Active millimetre-wave systems for security screening of humans - General requirements |
| IEC TS 62271-316:2024 EXV | High-voltage switchgear and controlgear - Part 316: Direct current by-pass switches and paralleling switches |

**Additional Information:**

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

## CEN-CENELEC

Main CEN-CENELEC Publications related with EMC/RF released in Q4/2024:

| Publication | Scope |
|---|---|
| EN IEC 60601-2-34:2024 | Medical electrical equipment - Part 2-34: Particular requirements for the basic safety and essential performance of invasive blood pressure monitoring equipment |
| EN IEC 60601-2-37:2024 | Medical electrical equipment - Part 2-37: Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring 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 17860-5:2024 | Carrier cycles - Part 5: Electrical aspects |
| EN 50728:2024 | Railway applications - Rolling stock - Testing for electromagnetic compatibility with track circuits |
| EN IEC 60688:2024 | Electrical measuring transducers for converting AC and DC electrical quantities to analogue or digital signals |
| EN IEC 62052-31:2024 | Electricity metering equipment - General requirements, tests and test conditions - Part 31: Product safety requirements and tests |

| Publication | Scope |
|---|---|
| EN IEC 63404:2024 | Switchgear and controlgear and their assemblies for low voltage - Integration of radiocommunication device above 380 MHz into an equipment |
| EN IEC 62974-1:2024 | Monitoring and measuring systems used for data collection, aggregation and analysis - Part 1: Device requirements |
| EN IEC 62974-1:2024 | Monitoring and measuring systems used for data collection, aggregation and analysis - Part 1: Device requirements |
| EN IEC 60947-4-2:2023/A1:2024 | Low-voltage switchgear and controlgear - Part 4-2: Contactors and motor-starters - Semiconductor motor controllers, starters and soft-starters |
| EN IEC 60947-4-3:2024 | Low-voltage switchgear and controlgear - Part 4-3: Contactors and motor-starters - Semiconductor controllers and semiconductor contactors for non-motor loads |
| EN IEC 60947-9-2:2024 | Low-voltage switchgear and controlgear - Part 9-2: Active arc-fault mitigation systems - Optical-based internal arc-detection and mitigation devices |
| EN IEC 61439-3:2024 | Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO) |
| EN IEC 61557-13:2024 | Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 13: Hand-held and hand-manipulated current clamps and sensors for measurement of leakage currents in electrical distribution systems |
| EN IEC 61557-14:2024 | Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 14: Equipment for testing the safety of electrical equipment of machinery |
| EN IEC 61557-16:2024 | Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 16: Equipment for testing the effectiveness of the protective measures of electrical equipment and/or medical electrical equipment |
| EN IEC 61557-1:2021/A1:2024 | Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 1: General requirements |
| EN IEC 61812-1:2024 | Time relays and coupling relays for industrial and residential use - Part 1: Requirements and tests |
| EN IEC 62314:2024 | Solid-state relays - Safety requirements |

**Additional Information:**

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

## International Organization for Standardization (ISO)

Main ISO Publications related with EMC/RF released in Q4/2024:

| Publication | Scope |
|---|---|
| ISO 21498-2:2024 | Electrically propelled road vehicles - Electrical specifications and tests for voltage class B systems and components<br>Part 2: Electrical tests for components |
| ISO 23551-1:2024 | Safety and control devices for gas burners and gas-burning appliances<br>Particular requirements<br>Part 1: Automatic and semi-automatic shut-off valves |
| ISO 23551-11:2024 | Safety and control devices for gas burners and gas-burning appliances<br>Particular requirements<br>Part 11: Automatic and semi-automatic shut-off valves for operating pressure of above 500 kPa up to and including 6 300 kPa |
| ISO 19085-12:2024 | Woodworking machines - Safety<br>Part 12: Tenoning-profiling machines |

**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 Q4/2024:

| Publication | Scope |
|---|---|
| CTIA 01.01 | Test Scope, Requirements, and Applicabilityv6.0.4 (December 2024) |
| CTIA 01.20 | Test Methodology, SISO, Anechoic Chamber v6.0.3 (December 2024) |
| CTIA 01.40 | Test Methodology, MIMO, Static Channel Model, Multi-Probe Anechoic Chamber v6.0.1 (December 2024) |
| CTIA 01.50 | Wireless Technology, 3GPP Radio Access Technologies v6.0.3 (December 2024) |
| CTIA 01.51 | Wireless Technology, Location Based Technologies v6.0.4 (December 2024) |
| CTIA 01.70 | Measurement Uncertainty v6.0.3 (December 2024) |
| CTIA 01.73 | Supporting Procedures v6.0.4 (December 2024) |
| Wi-Fi CWG | Test Plan for RF Performance Evaluation of Wi-Fi® Mobile Converged Devices v6.0.1 (November 2024) |

**Additional Information:**

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