



SCOPE OF ACCREDITATION

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(Conforms with requirements of ISO/IEC 17025:2005)

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CLIENTS SERVED: All interested parties, some tests are available on-site.

FIELDS OF TESTING: Electrical/Electronic, Optics & Optical Radiation

INITIAL ACCREDITATION: 2018-12-14

MOST RECENT ACCREDITATION: 2018-12-14

ACCREDITATION VALID TO: 2022-12-14

ELECTRICAL PRODUCTS AND ELECTRONIC PRODUCTS

Communications Equipment and Systems:

(Electromagnetic Compatibility and Interference (EMC and EMI))

3GPP TS 36.113 (ETSI TS 136.113) * LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) and repeater ElectroMagnetic Compatibility (EMC)

3GPP TS 37.113 (ETSI TS 137.113)* 3rd Generation Partnership Project; Technical Specification Group Radio Access Network; E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) Electromagnetic Compatibility (EMC)

CISPR 11* Industrial, scientific and medical (ISM) radio-frequency
EN55011* equipment Radio disturbance characteristics Limits and methods of
KN 11* measurement
AS/NZS CISPR 11*



CISPR 13* EN55013* KN 13* AS/NZS CISPR 13*	Sound and television broadcast receivers and associated equipment - Radio Disturbance characteristics - Limits and methods of measurement
CISPR 14-1* EN55014-1* KN 14-1* AS/NZS CISPR 14-1*	Electromagnetic compatibility requirements for household appliances, electric tools and similar apparatus Part 1: Emission
CISPR 14-2* EN55014-2* KN 14-2* AS/NZS CISPR 14-2*	Electromagnetic compatibility requirements for household appliances, electric tools and similar apparatus Part 2: Immunity- Product family standard
CISPR 15* EN 55015* KN 15* AS/NZS CISPR 15*	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
CISPR 16-2-1*	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements
CISPR 16-2-2*	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-2: Methods of measurement of disturbances and immunity - Measurement of disturbance power
CISPR 16-2-3*	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements
CISPR 16-2-4*	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-4: Methods of measurement of disturbances and immunity - Immunity measurements
CISPR 16-2-5*	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-5: In situ measurements for disturbing emissions produced by physically large equipment
CISPR 20* EN 55020* KN 20* AS/NZS CISPR 20*	Sound and television broadcast receivers and associated equipment-Immunity characteristics -Limits and methods of measurement
CISPR 22* EN 55022* KN 22* AS/NZS CISPR 22* TCVN 7189:2009 (CISPR 22: 2006)*	Limits and methods of measurement of radio disturbance characteristics of information technology equipment



CISPR 24* EN 55024* KN 24* AS/NZS CISPR 24* TCVN 7317: 2003 (CISPR 24:1997)*	Information technology equipment Immunity characteristics Limits and methods of measurement
CISPR 32* EN 55032* KN 32* AS/NZS CISPR 32*	Electromagnetic compatibility of multimedia equipment – Emission requirements
QCVN 118 :2018 (CISPR 32 :2015)	National technical regulation on the Electromagnetic compatibility of MultiMedia Equipment (MME) – Emission requirements
CISPR 35* EN 55035* KN 35*	Electromagnetic Compatibility of Multimedia Equipment - Immunity Requirements
CNS 13438*	Taiwan EMC for information technology equipment
EN 15194*	Cycles - Electrically power assisted cycles - EPAC Bicycles
EN 300 386*	Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; Electromagnetic Compatibility (EMC) requirements
EN 300 386-2*	Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements; Part 2: Product family standard
EN 301 489-01 to EN 301 489-34* , KN 301 489-01 to KN 301 489-32*	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services
EN 50121-3-2*	Railway applications. Electromagnetic compatibility. Rolling stock. Apparatus
EN 50130-4*	Alarm Systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components for fire, intruder and social alarm systems
EN 50136-1*	Alarm systems - Alarm transmission systems and equipment -Part 1: General requirements for alarm transmission systems
EN 50136-2*	Alarm systems - Alarm transmission systems and equipment - Part 2: Requirements for Supervised Premises Transceiver (SPT) Only for: Clause 9.3: Reduced functional test
EN 50136-2-3*	Alarm systems - Alarm transmission systems and equipment Part 2-3: Requirements for equipment used in systems with digital communicators using the public switched telephone network Only for: Electrostatic discharge test in clause 6.3 Environmental testing



EN 50155*	Railway applications. Electronic equipment used on rolling stock
EN 50561-1*	Power line communication apparatus used in low-voltage installations - Radio disturbance characteristics - limits and methods of measurements - Part 1: Apparatus for In-Home Use
EN 60601-1-2* IEC 60601-1-2*	Limits and methods of measurement - Part 1: Apparatus for in-home use Medical electrical equipment - Part 1-2: General requirements for safety - Collateral standard : Electromagnetic compatibility - Requirements
EN 60730-1* IEC 60730-1*	Automatic electrical controls Part 1: General requirements Sections 23 and H.23 - Electromagnetic compatibility (EMC) requirements - emissions Section 26 and H.26 - Electromagnetic compatibility requirements - immunity
EN 60839-11-1* IEC 60839-11-1*	Alarm and electronic security systems - Part 11-1: Electronic access control systems - System and components requirements Only for: EMC in Clause 7 and Clause 8.2 (Reduced functional test)
EN 60945* IEC 60945*	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results Only for: EMC (Clauses 9 and 10)
EN 61000-3-2* IEC 61000-3-2* AS/NZS 61000.3.2*	Electromagnetic compatibility (EMC)- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16A per phase)
EN 61000-3-3* IEC 61000-3-3* AS/NZS 61000.3.3*	Electromagnetic compatibility (EMC)- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current 'less than or equal to' 16A per phase and not subject to conditional connection
EN 61000-4-11* IEC 61000-4-11* KN 61000-4-11*	Electromagnetic compatibility (EMC)- Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity test
EN 61000-4-2* IEC 61000-4-2* KN 61000-4-2*	Electromagnetic compatibility (EMC)- Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test
EN 61000-4-3* IEC 61000-4-3* KN 61000-4-3*	Electromagnetic compatibility (EMC)- Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity
EN 61000-4-4* IEC 61000-4-4* KN 61000-4-4*	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
EN 61000-4-5* IEC 61000-4-5* KN 61000-4-5*	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test



EN 61000-4-6* IEC 61000-4-6* KN 61000-4-6*	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
EN 61000-4-8* IEC 61000-4-8* KN 61000-4-8*	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
EN 61000-6-1* IEC 61000-6-1*	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
EN 61000-6-2* IEC 61000-6-2*	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
EN 61000-6-3* IEC 61000-6-3*	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-4* IEC 61000-6-4*	Electromagnetic compatibility (EMC)-Part 6-4: Generic standards- Emission standard for industrial environments
EN 61326-1* IEC 61326-1*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
EN 61326-2-1* IEC 61326-2-1*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1: Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications
EN 61326-2-2* IEC 61326-2-2*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2: Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems
EN 61326-2-3* IEC 61326-2-3*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
EN 61326-2-4* IEC 61326-2-4*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-4: Particular requirements - Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9
EN 61326-2-5* IEC 61326-2-5*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-5: Particular requirements - Test configurations, operational conditions and performance criteria for field devices with interfaces according to IEC 61784-1, CP 3/2
EN 61326-2-6* IEC 61326-2-6*	Electrical equipment for measurement, control and laboratory use- EMC requirements Part 2-6: Particular requirements- In vitro diagnostic (IVD) medical equipment



EN 61326-3-1* IEC 61326-3-1*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-1: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications
EN 61326-3-2* IEC 61326-3-2*	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-2: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - Industrial applications with specified electromagnetic environment
EN ISO 10535*	Hoists for the transfer of disabled persons - Requirements and test methods Only for: EMC Clause 4.3.2.23
EN50131-1*	Alarm systems - Intrusion and hold-up systems - Part 1: System requirements Only for: Clause 12.1 EMC requirements
EN50131-2-2*	Alarm systems - Intrusion and hold-up systems Part 2-2: Intrusion detectors - Passive infrared detectors Only for: EMC according to EN 50130-4 in clause 4.7.2 Immunity to environmental conditions
EN50131-2-4*	Alarm systems - Intrusion and hold-up systems Part 2-4: Requirements for combined passive infrared and microwave detectors Only for: EMC according to EN 50130-4 in clause 4.7.2 Immunity to environmental conditions
EN50131-2-6*	Alarm systems Intrusion and hold-up systems Part 2-6: Opening contacts (magnetic) Only for: EMC according to EN 50130-4 and EN 61000-6-3 in clause 4.7.2 Immunity to environmental conditions
EN50131-3*	Alarm systems Intrusion and hold-up systems Part 3: Control and indicating equipment Only for: EMC tests per EN 50130-4 in clause 11.14 Environmental and EMC tests
EN50131-4*	Alarm systems Intrusion and hold-up systems Part 4: Warning devices Only for: EMC tests per EN 50130-4 in clause 11.14 Environmental and EMC tests
EN50131-6*	Alarm systems - Intrusion and hold-up systems Part 6: Power supplies Only for: Clause 4.14 EMC
EN50136-2-1*	Alarm systems Alarm transmission systems and equipment Part 2-1: General requirements for alarm transmission equipment Only for: Clause 7 Electromagnetic Compatibility testing and requirements



ENV 50204*	Radiated electromagnetic field from digital radio telephones - Immunity test
ETS 300 086*	LMR-Land Mobile Radio
ETS 300 339*	General EMC for Radio Devices
ETS 300 385*	EMC for Radio Relay Systems @ 2 Mbps
ETS 300 683*	EMC 9 kHz - 25 GHz
FCC 12/CIS22: (IEC/CISPR 22:1993) *	Limits and methods of measurement of radio disturbance characteristics of information technology equipment
FCC 47 CFR 15**	Radio Frequency Devices
FCC Part 15 12/F01*	Digital Devices
FCC Part 15 12/F01a*	Conducted Emissions, Power Lines, 450 kHz to 30 MHz
FCC Part 15 12/F01b*	Radiated Emissions
FCC Part 15 12/T01*	Terminal Equipment Network Protection Standards
ICES 001*	Interference Causing Equipment Standards, Industrial, etc.
ICES-003*	Spectrum Management, Interference-Causing Equipment Standard Digital Apparatus
ICES-005*	Lighting Equipment
IDA TS EMC*	EMC requirements for Telecommunication Equipment
IEC 60571*	Railway applications - Electronic equipment used on rolling stock Only for EMC (Clauses 12.2.7, 12.2.8, 12.2.9)
IEC 60730-1*	Automatic electrical controls Part 1: General requirements
IEC 60947-1*	Low-voltage switchgear and control gear - Part 1: General rules Only for: EMC (Clauses 7.3 and 8.4)
IEC 62236-3-2*	Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock Apparatus
MIC Notice*	Republic of Korea - Technical Regulation Criteria for EMC
QCVN 18:2010/BTTTT*	National technical regulation on General Electromagnetic Compatibility for Radio Communications Equipment
RRA Notice*	Republic of Korea - Technical Regulation Test Method for EMC
RRA Notice*	Republic of Korea - Technical Requirements for Electromagnetic Compatibility
RRA Notice*	Republic of Korea - Test Methods for Electromagnetic Compatibility
TBR 26*	Satellite Earth Stations and Systems (SES); Low data rate Land Mobile satellite Earth Stations (LMES) operating in the 1,5/1,6 GHz frequency bands
VCCI*	Agreement of Voluntary Control Council for Interference by information technology equipment



(FCC Methods - Electromagnetic Compatibility & Telecommunications ^{*1, 2)})

DA 00-705 - March 2000 and KDB Pub No. 558074 with FCC method 47 CFR Part 15, Subpart C	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems and New Guidance on Measurements for Digital Transmission Systems in section 15.247 (SS-MP) Intentional Radiators
DA 02-2138 with FCC method 47 CFR Part 15 Subpart E	Unlicensed National Information Infrastructure Devices Measurement Procedure (UNII-MP)
FCC 47 CFR Part 15, Subpart E	Unlicensed National Information Infrastructure Devices (UNII) with DFS Intentional Radiators
FCC 47 CFR Part 15, Subpart E	Unlicensed National Information Infrastructure Devices (UNII) without DFS Intentional Radiators
FCC 47 CFR Part 15, Subpart F	Ultra-wideband Intentional Radiators
FCC 47 CFR Part 15, Subpart G	Broadband Over Power Line Intentional Radiators
FCC 47 CFR Part 15, Subpart H	White Space Device Intentional Radiators
FCC 47 CFR Part 96	Citizens Broadband Radio Services
FCC/OET MP-5 (February 1986)	FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific and Medical Equipment
KDB Pub No 200443	Millimeter Wave Test Procedure
KDB Publication 789033	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) devices part 15, subpart E
KDB Publication 905462 D02, v02 (April 08, 2016)	UNII DFS Compliance Procedures New Rules
KDB Publication 935210 D03, v04 (Feb. 12, 2016)	Signal Booster Measurements
KDB Publication 935210 D04, v02 (Feb. 12, 2016)	Provider Specific Booster Measurements
KDB Publication 935210 D05, v01r01 (Feb. 12, 2016)	Industrial Booster Basic Measurements
KDB Publication 971168	Measurement Guidance for Certification of Licensed Digital Transmitters



(Radio Telecommunication)

ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
ANSI C63.17-2013	American National Standard for methods of measurement of the Electromagnetic and Operational Compatibility of Unlicensed Personal Communications Services (UPCS) Devices
ANSI C63.26: 2015	American National Standard of procedures for compliance testing of transmitters used in licensed radio services
ANSI C63.4-2014	American National Standard for methods of measurement of radio-noise emissions for low voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
ANSI/TIA-603-D	Land Mobile FM or PM Communications Equipment. Measurement and performance standards
AS/NZS 4268	Radio equipment and systems - Short range devices - Limits and methods of measurement
AS/NZS 4771	Technical characteristics and test conditions for data transmission equipment operating in the 900 MHz, 2.4 GHz and 5.8 GHz bands and using spread spectrum modulation techniques
CBRSA-TS-9001	CBRS Alliance Certification Test Plan
ETS 300 279	LMR- Land Mobile Radio, EMC
ETS 300 487	Satellite earth stations and systems (SES); Receive-only mobile earth stations (ROMES) operating in the 1,5 GHz band providing data communications; Radio frequency (RF) specifications
ETSI EN 300 086	LMR-Land Mobile Radio Service
ETSI EN 300 113	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector; Part 2: Harmonized EN covering essential requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 300 113-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector; Part 1: Technical characteristics and methods of measurement
ETSI EN 300 219	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Radio equipment transmitting signals to initiate a specific response in the receiver; Part 2: Harmonized EN covering essential requirements under article 3.2 of the Directive 2014/53/EU



ETSI EN 300 219-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Radio equipment transmitting signals to initiate a specific response in the receiver; Part 1: Technical characteristics and methods of measurement
ETSI EN 300 220-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio Equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Technical characteristics and test methods
ETSI EN 300 220-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
ETSI EN 300 224-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); On-site paging service; Part 1: Technical and functional characteristics, including test methods
ETSI EN 300 224-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); On-site paging service; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
ETSI EN 300 296	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Radio equipment using integral antennas intended primarily for analogue speech; Part 2: Harmonized EN covering essential requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 300 296-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Land Mobile Service; Radio equipment using integral antennas intended primarily for analogue speech; Part 1: Technical characteristics and methods of measurement
ETSI EN 300 328	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 300 330-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Part 1: Technical characteristics and test methods
ETSI EN 300 330-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive



ETSI EN 300 373-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Maritime mobile transmitters and receivers for use in the MF and HF bands; Part 1: Technical characteristics and methods of measurement
ETSI EN 300 373-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Maritime mobile transmitters and receivers for use in the MF and HF bands; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
ETSI EN 300 373-3	Electromagnetic compatibility and Radio spectrum Matters (ERM); Maritime mobile transmitters and receivers for use in the MF and HF bands; Part 3: Harmonized EN covering essential requirements under article 3.3(e) of the R&TTE Directive
ETSI EN 300 422-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement
ETSI EN 300 422-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the Directive 2014/53/EU
ETSI EN 300 433-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated citizen's band radio equipment; Part 1: Technical characteristics and methods of measurement
ETSI EN 300 433-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated citizen's band radio equipment; Part 2: Harmonized EN covering essential requirements under article 3.2 of R&TTE Directive
ETSI EN 300 440-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 1: Technical characteristics and test methods SRD-Short Range Devices 1 GHz - 25 GHz
ETSI EN 300 440-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
ETSI EN 301 166	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Radio equipment for analogue and/or digital communication (speech and/or data) and operating on narrow band channels and having an antenna connector; Part 2: Harmonized EN covering essential requirements under article 3.2 of the Directive 2014/53/EU



ETSI EN 301 166-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Radio equipment for analogue and/or digital communication (speech and/or data) and operating on narrow band channels and having an antenna connector; Part 1: Technical characteristics and methods of measurement
ETSI EN 301 357-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; Part 1: Technical characteristics and test methods
ETSI EN 301 357-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; Consumer radio microphones and in-ear monitoring systems operating in the CEPT harmonized band 863 MHz to 865 MHz; Part 2: Harmonised EN under Article 3(2) of the R&TTE Directive
ETSI EN 301 360	Satellite Earth Stations and Systems (SES); Harmonised Standard for Satellite Interactive Terminals (SIT) and Satellite User Terminals (SUT) transmitting towards satellites in geostationary orbit, operating in the 27,5 GHz to 29,5 GHz frequency bands covering the essential requirements of article 3.2 of the Directive 2014/53/EU
ETSI EN 301 390	Fixed Radio Systems; Point-to-point and Multipoint Systems; Spurious emissions and receiver immunity limits at equipment/antenna port of Digital Fixed Radio Systems
ETSI EN 301 426	Satellite Earth Stations and Systems (SES); Harmonized EN for Low data rate Land Mobile satellite Earth Stations (LMES) and Maritime Mobile satellite Earth Stations (MMES) not intended for distress and safety communications operating in the 1,5/1,6 GHz frequency bands covering essential requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 301 428	Satellite Earth Stations and Systems (SES); Harmonized EN for Very Small Aperture Terminal (VSAT); Transmit-only, transmit/receive or receive -only satellite earth stations operating in the 11/12/14 GHz frequency bands covering essential requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 301 443	Satellite Earth Stations and Systems (SES); Harmonized EN for Very Small Aperture Terminal (VSAT); Transmit-only, transmit-and-receive, receive-only satellite earth stations operating in the 4 GHz and 6 GHz Frequency Bands Covering Essential Requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 301 459	Satellite Earth Stations and Systems (SES); Harmonized EN for Satellite Interactive Terminals (SIT); and Satellite User Terminals (SUT) transmitting towards satellites in geostationary orbit in the 29.5 to 30.0 GHz frequency bands Covering Essential Requirements Under Article 3.2 of the Directive 2014/53/EU



ETSI EN 301 489-50	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipments
ETSI EN 301 681	Satellite Earth Stations and Systems (SES); Harmonized EN for Mobile Earth Stations (MESs) of Geostationary mobile satellite systems, including handheld earth stations, for Satellite Personal Communications Networks (S-PCN) in the 1,5/1,6 GHz bands under the Mobile Satellite Service (MSS) covering essential requirements under article 3.2 of the Directive 2014/53/EU
ETSI EN 301 893	Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive
ETSI EN 301 908-1	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1: Introduction and common requirements
ETSI EN 301 908-18	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS)
ETSI EN 302 208	Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W; Part 2: Harmonized EN under article 3.2 of the Directive 2014/53/EU
ETSI EN 302 208-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W; Part 1: Technical requirements and methods of measurement
ETSI EN 302 217-1	Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 1: Overview and system-independent common characteristics
ETSI EN 302 217-2-1	Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 2-1: System-dependent requirements for digital systems operating in frequency bands where frequency co-ordination is applied
ETSI EN 302 217-2-2	Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 2-2: Harmonized EN covering essential requirements of Article 3.2 of R&TTE Directive for digital systems operating in frequency bands where frequency co-ordination is applied



ETSI EN 302 217-3	Fixed Radio Systems; Characteristics and requirements for point-to-point equipment and antennas; Part 3: Harmonized EN covering essential requirements of article 3.2 of R&TTE Directive for equipment operating in frequency bands where simplified or no frequency co-ordination procedures are applied
ETSI EN 302 291-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz; Part 1: Technical characteristics and test methods
ETSI EN 302 291-2	Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56 MHz; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
ETSI EN 302 326-1	Fixed Radio Systems; Multipoint Equipment and Antennas; Part 1: Overview and Requirements for Digital Multipoint Radio Systems
ETSI EN 302 326-2	Fixed Radio Systems; Multipoint Equipment and Antennas; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for Digital Multipoint Radio Equipment
ETSI EN 302 502	Broadband Radio Access Networks (BRAN);5,8 GHz fixed broadband data transmitting systems; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive
ETSI EN 303 978	Satellite Earth Stations and Systems (SES); Harmonised Standard for Earth Stations on Mobile Platforms (ESOMP) transmitting towards satellites in geostationary orbit, operating in the 27,5 GHz to 30,0 GHz frequency bands covering the essential requirements of article 3.2 of the Directive 2014/53/EU
ETSI TS 101 136	Satellite Earth Stations and Systems (SES); Guidance for general purpose earth stations transmitting in the 5,7 GHz to 30,0 GHz frequency bands towards geostationary satellites and not covered by other ETSI specifications or standards
FCC 47 CFR Part 101	Fixed Microwave services
FCC 47 CFR Part 11	Emergency Alert Systems
FCC 47 CFR Part 18	Industrial, Scientific and Medical Equipment
FCC 47 CFR Part 20.21	Signal Boosters
FCC 47 CFR Part 22	Public Mobile Services
FCC 47 CFR Part 24	Personal Communications Services
FCC 47 CFR Part 25	Satellite Communications
FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services
FCC 47 CFR Part 73	Radio Broadcast Services
FCC 47 CFR Part 74	Experimental Radio, Auxiliary and Special Broadcast
FCC 47 CFR Part 80	Stations in Maritime Services



FCC 47 CFR Part 87	Aviation Services
FCC 47 CFR Part 90	Private Land Mobile Radio Services
FCC 47 CFR Part 95	Personal Radio Services
FCC 47 CFR Part 97	Amateur Radio Service
HKCA 1048	Performance Specification for User Equipment for Use in the Third Generation (3G) Mobile Communications Services Employing CDMA Direct Spread (UTRA FDD)
HKCA 1052	Performance Specification for Medical Implant Communication Systems
HKCA 1053	Performance Specification for Base Station and Repeater Equipment for Use in the Third Generation (3G) Mobile Communications Services Employing cdma2000 Spread Spectrum
HKCA 1054	Performance Specification for Mobile Station for Use in the Third Generation (3G) Mobile Communications Services Employing CDMA2000 Spread Spectrum
HKCA 1056	Performance Specification for Base Station and Repeater Equipment for Use in Public Mobile Communications Services based on Evolved Universal Terrestrial Radio Access (E-UTRA) Frequency Division Duplex (FDD)
HKCA 1057	Performance Specification for User Equipment for Use in Public Mobile Communications Services based on Evolved Universal Terrestrial Radio Access (E-UTRA) Frequency Division Duplex (FDD)
HKCA 1061	Performance Specification for Short Range Devices Operating in the 433 MHz Band
HKCA 1063	Performance Specification for Digital Fixed Link Equipment Operating in the 26 GHz Frequency Band
HKCA 1064	Performance Specification for Global System for Mobile Communications – Railway (GSM-R) Radiocommunications Equipment
HKCA 1065	Performance Specification for Multi-Standard Radio (MSR) Base Station
HKCA 1066	Performance Specification for Ground-Based VHF Radio Equipment for the VHF Aeronautical Mobile Service
HKCA 1067	Performance Specification for Ground-Based VHF Digital Link (VDL) Mode 2 Radio Equipment
HKCA 1068	Performance Specification for Digital Fixed Link Equipment operating in the 11GHz Frequency Band
HKCA 1069	Performance Specification for On-site Radio Paging Equipment
HKCA 1070	Performance Specification for Digital Fixed Link Equipment operating in the 13 GHz Frequency Band



HKCA 1071	Performance Specification for Digital Fixed Link Equipment operating in the 18 GHz Frequency Band
HKTA 1002	Performance Specification for Angle Modulated Radio Transmitters and Receivers for Use as Base, Mobile and Portable Equipment in the Land Mobile Radio Service
HKTA 1005	Performance Specification for Angle Modulated VHF Maritime Band Radio Equipment for Voluntary Fitting in Small Craft
HKTA 1007	Performance Specification for Radio Interference Limits and Methods of Measurements for Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment (Excluding Surgical Diathermy Apparatus and RF Exciting Arc-Welding Machines)
HKTA 1008	Performance Specification for Low Power Radio Microphones, Including Associated Receiving Equipment
HKTA 1010	Performance Specification for Angle Modulated Radio Transmitters and Receivers for use as Base, Mobile and Portable Equipment in the Land Mobile Radio Service and intended primarily for data applications
HKTA 1015	Performance Specification for Cordless Telephone Operating in the 864.1 - 868.1 MHz Band
HKTA 1016	Performance Specification for Angle Modulated Radio Equipment for Use at Repeater, Base and Mobile Stations in 800 MHz Trunked Radio
HKTA 1035	Performance Specification for Low Power Device
HKTA 1036	Performance Specification for Digital Fixed Link Equipment Operating in the 38 GHz Frequency Band
HKTA 1037	Performance Specification for Digital Fixed Link Equipment Operating in the 23 GHz Frequency Band
HKTA 1039	Performance Specification for Radiocommunications Apparatus Operating in the 2.4 GHz or 5 GHz Band and Employing Frequency Hopping or Digital Modulation
HKTA 1041	Performance Specification for Radiocommunications Apparatus Operating in the 27 MHz Band for Private Use
HKTA 1042	Performance Specification for Radio Equipment Operating in the 5 GHz Band for Wireless Access
HKTA 1044	Performance Specification for Short-range Portable Radio operating in the 409 MHz Band
HKTA 1046	Method of Measurement for Radio Transmitter for Use in the Land Mobile Service
HKTA 1049	Performance Specification for Radio Frequency Identification (RFID) Equipment Operating in the 865 - 868 MHz and/or 920 - 925 MHz Bands



HKTA 1051	Performance specification for Radio Frequency Identification (RFID) equipment operating in the 433 MHz band
IDA TS LMR	Technical Specification for Land Mobile Radio Equipment
IDA TS RPG	Technical Specifications for Radio Pagers (Public Paging Service)
IDA TS SRD	Technical Specification for Short Range Devices
IDA TS WBA	Technical Specification for Wireless Broadband Access Equipment
IS2019	1.6/2.4GHz Satellite Personal Communications Networks (S PCN) Mobile Earth Stations (MESs) Technical Specifications
IS2034-1	Local Multipoint Distribution Service (LMDS) Microwave Base Station RF Equipment Type Equipment Approval Technical Specifications
IS2045-0	Base Station for Wireless Broadband Access Type Approval Technical Specification
Item 19 of Article 2 (Japan) using Test Method ARIB-STD T66	Radio equipment for low-power data communications system radio station using a radio wave of 2,400 -2,483.5 MHz
Item 19-3 of Article 2 (Japan) using Test Method ARIB-STD T71	Radio equipment for low-power data communications system radio station which uses indoors a radio wave of 5,170 MHz, 5,190 MHz, 5,210 MHz or 5,230 MHz
Item 8 of Article 2 (Japan)	Radio equipment for specified low-power radio station
KS X 3123	Republic of Korea - Conformity Assessment Procedure for Type Approval and Type Registration of Radio Equipment
LP0002	Low Power Radio Frequency Devices Technical Regulations
NOM-121-SCT1-2009	"Telecommunications - Radicommunication - Radiocommunication systems employing spread spectrum techniques - radiocommunication equipment with frequency hopping and digital modulation operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz - specifications, limits and test methods."
NOM-EM-016-SCFI-2015 (Technical Provision IFT-008-2015)	Radiocommunication systems employing spread spectrum techniques - Radiocommunication equipment with frequency hopping and digital modulation operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz - specifications, limits and test methods (Published October 16, 2015)
PLMN02	1900 MHz Digital Low Tier PHS Radio Terminal Equipment Technical Specifications
PLMN03	1900 MHz Digital Low Tier PACS Radio Terminal Equipment Technical Specifications
PLMN04	Trunked Radio Terminal Equipment Technical Specifications
PLMN05	Mobile Data Radio Terminal Equipment Technical Specifications



PLMN06	Paging Receiver Radio Terminal Equipment Technical Specifications
PLMN07	1880-1895MHz Wireless Private Exchange and Radio Terminal Equipment Technical Specifications
PLMN09	Subscriber Station for Wireless Broadband Access Type Approval Technical Specification
PLMN10	Technical Specifications for Mobile Broadband Subscriber Station
QCVN 54 : 2011/BTTTT	National technical regulation on radio equipment operating in the 2.4 GHz band and using spread spectrum modulation techniques
QCVN 55:2011/BTTTT	National technical regulation on short range devices - radio equipment in the frequency range 9 kHz to 25 MHz
RRL Notice	Republic of Korea - Technical Requirements for Radio Equipment of Maritime Mobile Service and Maritime Radio Navigation Service
RRL Notice	Republic of Korea - Technical Requirements for Measurement of Electromagnetic Field Strength
RRL Notice No.	Republic of Korea - Technical Requirements for Radio Equipment of Aeronautical Mobile Service and Aeronautical Radio Service
RRL Notice No.	Republic of Korea - Technical Requirements for Radio Equipment of Telecommunications Services
RRL Notice No.	Republic of Korea - Technical Requirements for Radio Equipment of Other Services than the Broadcasting, maritime, Aeronautical and Telecommunications Services
RSS 102	Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
RSS 111	Broadband Public Safety Equipment Operating in the Band 4940-4990 MHz
RSS 112	Land Mobile and Fixed Equipment Operating in the Band 1670-1675 MHz
RSS 117	Land And Coastal Station Transmitter Using A1, A2, A3 A2H Emission Operating In The Cellular Mobile Bands 824-849 MHz And 869-894 MHz
RSS 119	Land Mobile and Fixed Radio Transmitters and Receivers, 27.41 to 960.0 MHz
RSS 123	Lower Power Licensed Radiocommunication Devices
RSS 125	Land Mobile and Fixed Radio Transmitters and Receivers 1.705 to 50.0 MHz, Primarily Amplitude Modulated
RSS 127	Air-Ground Equipment Operating in the Bands 849-851 MHz and 894-896 MHz
RSS 130	Mobile Broadband Services (MBS) Equipment Operating in the Frequency Bands 698-756 MHz and 777-787 MHz



RSS 131	Zone Enhancers for the Land Mobile Service
RSS 132	800 MHz Cellular Telephones employing new Technologies
RSS 133	2 GHz Licensed Personal Communications Services
RSS 134	Narrowband 900 MHz Personal Communications Services
RSS 135	Digital Scanner Receivers
RSS 137	Location and Monitoring Service in 902-928 MHz Band
RSS 139	Advanced Wireless Services Equipment Operating in the Bands 1710-1755 MHz and 2110-2155 MHz
RSS 140	Equipment Operating in the Public Safety Broadband Frequency Bands 758-768 MHz and 788-798 MHz
RSS 141	Aeronautical Radiocommunication Equipment in the frequency band 117.975 MHz to 137 MHz
RSS 142	Narrowband Multipoint Communication Systems in the 1427-1430 MHz and 1493.5-1496.5 MHz Bands
RSS 170	Satellite Mobile Earth Stations
RSS 181	Coast and Ship Station Single Band Radiotelephones, Transmitters and Receivers operating in the 1605 – 28000 kHz Band
RSS 182	Maritime Radio Transmitter and Receivers in the Band 156-162.5 MHz
RSS 191	Local Multipoint Communications Systems in the 28 GHz; Point-To-Point and Point-To-Multipoint Broadband Communication Systems in the 24 & 38 GHz Bands
RSS 192	Fixed Wireless Access Systems in the Band 3400-3700 MHz
RSS 194	Fixed Wireless Access Equipment Operating in the Band 953-960 MHz
RSS 195	Wireless Communications Service Equipment Operating in the bands 2305 -2320 MHz and 2345 – 2360 MHz
RSS 196	Point-to-Multipoint Broadband Equipment Operating in the Bands 512-608 MHz and 614-698 MHz for Rural Remote Broadband Systems (RRBS) (TV Channels 21 to 51)
RSS 197	Wireless Broadband Access Equipment Operating in the Band 3650-3700 MHz
RSS 199	Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz
RSS 210	Low-Power License - Exempt Radiocommunication Devices
RSS 211	Level Probing Radar Equipment
RSS 213	2 GHz License-Exempt Personal Communications Service (LE-PCS) Devices
RSS 215	Analogue Scanner Receivers



RSS 216	Wireless Power Transfer Devices
RSS 220	Devices Using Ultra-Wideband (UWB) Technology
RSS 222	White Space Devices (WSDs)
RSS 236	Land and Mobile Station Radio Telephone Transmitters & Receivers operating in 26.960-27.410 MHz General Radio Service Band
RSS 238	Commercial Shipborne Radar in the 2900-3100 MHz, 5470-5650 MHz and 9225-9500 MHz Bands
RSS 243	Active Medical Implant Communications System Devices in the 402 MHz to 405 MHz Band
RSS 244	RSS-244 — Medical Devices Operating in the Band 413-457 MHz
RSS 247	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS 251	Field Disturbance Sensors in the Bands 46.7-46.9 GHz (Vehicular Radar) and 76-77 GHz (Vehicular and Airport Fixed Radar)
RSS 252	Intelligent Transportation Systems —Dedicated Short Range Communications (DSRC) — On-Board Unit (OBU)
RSS 287	Emergency Position Indicating Radio Beacons, Emergency Locator Transmitters and Personal Locator Beacons
RSS 288	Global Maritime Distress and Safety Systems (GMDSS)
RSS 310	Low-Power Licence-Exempt Radiocommunication Devices (All Frequency bands): Category II equipment
RSS GEN	General Requirements and Information for the Certification of Radiocommunication Equipment
RTTE01	2.4GHz Radio-frequency Telecommunications Terminal Equipment Technical Specification
TBR 41	Satellite Personal Communications Networks
TIA-102.CAAA-D	Digital C4FM/CQPSK Transceiver Measurement Methods
WINNF-TS-0122	WINNF Conformance and Performance Test Technical Specification

Notes:

- *- Marked test methods are also performed at sites away from the main location (on-site testing)
- ISO/IEC 17025:2005:** General Requirements for the Competence of Testing and Calibration Laboratories
- CISPR:** International Special Committee on Radio Interference
- VCCI:** Voluntary Control Council for Interference by Information Technology Equipment (Japan)
- KDB:** Knowledge Database (Federal Communications Commission)
- IDA:** Info-Communications Development Authority (Singapore)
- RSS:** Radio Standards Specifications (ISED)



Standards Council of Canada
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RTTE: Radio-frequency Telecommunications terminal equipment (National Communications Commission – Taiwan)

TBR: Technical Basis for Regulation (European Telecommunications Standards Institute)

TIA: Telecommunications Industry Association

RRL: Radio Research Laboratory (Korea)

PLMN: Public Land Mobile Network

QCVN: Quy Chuan Viet Nam

3GPP: 3rd Generation Partnership Project

IMDA: Infocomm Media Development Authority (Singapore)

KN: Korean National Standards

HKTA: Hong Kong Telecommunications Authority

HKCA: Hong Kong Communications Authority

ETSI: European Telecommunications Standards Institute

ETS: European Telecommunication Standard

MIC: Ministry of Information and Communication (Korea)

IS: National Communications Commission (Taiwan)

IC: Industry Canada (ISED)

AS/NZS Australia / New Zealand Standard

EN; European Standard

IEC: International Electrotechnical Commission

FCC: Federal Communications Commission

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