



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005**

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**ELECTROMAGNETIC  
COMPATIBILITY &  
TELECOMMUNICATIONS**

**NVLAP LAB CODE 200063-0**

**Emissions**

**Designation**

**Description**

Additional Test Location	The laboratory performs testing at the Open Area Test Site (OATS) facilities located at 2337 Troutdale Drive, Agoura, CA 91301.
EN 55011 (2007) + A2 (2007)	Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
EN 55011 (2009) + A1 (2010)	Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
EN 55013 (2013)	Sound and television broadcast receivers and associated equipment. Radio disturbance characteristics. Limits and methods of measurement
EN 55013 (2001) + A1 (2003) + A2 (2006)	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement
EN 55015 (2013)	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 55015 (2000) + A1 (2001)	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 55022 (2010)	Information technology equipment. Radio disturbance characteristics. Limits and methods of measurement

*John S. Laman*

*For the National Voluntary Laboratory Accreditation Program*

## ELECTROMAGNETIC COMPATIBILITY & TELECOMMUNICATIONS

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EN 55032 (2015)	Electromagnetic compatibility of multimedia equipment. Emission Requirements
EN 55032 (2012-05)	Electromagnetic compatibility of multimedia equipment. Emission requirements
EN 55103-1 (2009)	Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 1: Emission
EN 61000-3-2 (2014)	Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current = 16 A per phase)
IEC 61000-3-2, Ed. 4.0 (2014-05)	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq$ 16 A per phase)
EN 61000-3-2 (2006) + A1 (2009) + A2 (2009)	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq$ 16 A per phase)
EN 61000-3-2 (2006)	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)
EN 61000-3-3, Ed. 2.0 (2008-09)	EMC- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low- voltage supply systems, for equipment with rated current $\leq$ 16 A per phase and not subject to conditional connection
EN 61000-3-3 (2013)	EMC- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low- voltage supply systems, for equipment with rated current $\leq$ 16 A per phase and not subject to conditional connection
IEC 61000-3-3 Ed. 2.0 (2008)	EMC- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current =16 A per phase and not subject to conditional connection
EN 61000-6-3 (2007) + A1 (2011) + AC (2012)	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
IEC 61000-6-3 (2006-06)	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-3 (2001) + A1 (2004)	Electromagnetic compatibility (EMC) - Part 6-3: Generic standard - Emission standard for residential, commercial and light industrial environments
EN 61000-6-3 (2007)	Electromagnetic compatibility (EMC) - Part 6-3: Generic standard - Emission standard for residential, commercial and light industrial environments
EN 61000-6-3 (2007) + A1 (2011)	Electromagnetic compatibility (EMC) - Part 6-3: Generic standard - Emission standard for residential, commercial and light industrial environments
IEC 61000-6-4 (2006-07)	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
EN 61000-6-4 (2007) + A1 (2011)	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

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IEC/EN 61204-3 (2001)	Low-voltage power supplies, d.c. output - Part 3: Electromagnetic compatibility (EMC)
IEC 61326-1 (2005-12)	Electrical equipment for measurement, control and laboratory use - EMC requirements
IEC 61326-2-1 (2005)	EMC requirements. Particular requirements. Test configurations, operational conditions and performance criteria for EMC unprotected applications
IEC 61326-2-2 (2005)	EMC requirements. 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 (2013)	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
IEC 61326-2-3 (2006)	EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
CNS 13438 (2006) (up to 6GHz)	Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
IEC/CISPR 11 + A1 (1997), EN 55011 (1998), AS/NZS CISPR 11 (2002), and CNS 13803 (1997)	Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical Radio-Frequency Equipment
AS/NZS CISPR 11 (2011)	Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
IEC/CISPR 11 Ed. 5.1 (2010)	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement
CISPR 15 (Ed 8.0 2013)	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
AS/NZS CISPR 22, 3rd Edition (2006)	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
AS/NZS CISPR 22 (2009)	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
AS/NZS CISPR 22 (2009) +A1 (2010)	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
CISPR 32 (2015)	Electromagnetic compatibility of multimedia equipment - Emission requirements
AS/NZS CISPR 32 (2013)	Electromagnetic compatibility of multimedia equipment - Emission requirements
AS/NZS CISPR 32 (2015)	Electromagnetic compatibility of multimedia equipment - Emission requirements
CISPR 32, Ed. 1 (2012-01)	Electromagnetic compatibility of multimedia equipment - Emission requirements



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ANSI C63.4 (2014)	Unintentional Radiators in 47 CFR FCC Part 15, Subpart B
ANSI C63.10 (2013)	Intentional Radiators in 47 CFR FCC Part 15, Subpart C
DA 00-705 - March 30, 2000 and KDB Pub. No. 558074	47 CFR FCC Part 15, Subpart C: Intentional Radiators - (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 with FCC Method - 15 CFR Part 15, Subpart C	Intentional Radiators
ANSI C63.10 (2013)	Unlicensed National Information Infrastructure Devices without DFS Intentional Radiators in 47 CFR FCC Part 15, Subpart E
FCC OST/MP-5 (1986)	FCC Methods of Measurement of Radio Noise Emissions for ISM Equipment (cited in 47 CFR FCC Part 18 - Industrial, Scientific, and Medical Equipment)
ICES-001	Industrial, Scientific and Medical (ISM) Radio Frequency Generators
ICES-003 Issue 6 (2016)	Information Technology Equipment (ITE) - Limits and methods of measurement
KCC Notice 2008-39	Korea Technical Requirements Electromagnetic Interference (EMI)
KN 22 with RRL Notice No. 2005-82 (Sept. 29, 2005)	RRL Notice No. 2005-82: Technical Requirements for Electromagnetic Interference Annex 8 (KN-22), RRL Notice No. 2005-131: Conformity Assessment Procedures for Electromagnetic Interference
KN 22 (Annex 5) with RRA Announce 2010-5 (Dec 24, 2010)	Conformity Assessment Procedure for Electromagnetic Interference; With KN 22 (Annex 5)
KN 22 (Annex 5) with RRA Announce 2011-30 (Dec 23, 2011)	Conformity Assessment Procedure for Electromagnetic Interference; With KN 22 (Annex 5). K Only
KN 22 (Annex 8) with RRL Notice No. 2006-128 (Dec. 29, 2006)	Conformity Assessment Procedure for Electromagnetic Interference; With KN 22 (Annex 8)
KN 22 (Annex 8) with RRL Notice No. 2006-126 (Dec. 29, 2006)	Technical Requirements for Electromagnetic Interference; With KN22 (Annex 8)
KN 22 (Annex 8) with RRA Announce 2008-11 (Dec. 16, 2008)	Conformity Assessment Procedure for Electromagnetic Interference; With KN 22 (Annex 8)
KN 22 (Annex 8) with RRA Announce 2009-9 (Dec. 21, 2009)	Conformity Assessment Procedure for Electromagnetic Interference; With KN 22 (Annex 8)
KN 32:2015 (Annex 11)	Test Methods of radio disturbance for multimedia equipment
RRA Announce 2009-9, Dec 21, 2009	Conformity Assessment Procedure for Electromagnetic Interference, K only
RRA Public Notification 2011-05 (Jan. 19, 2011)	Technical requirements for Electromagnetic Interference; Korea only

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RRA Public Notification 2011-18 (July 05, 2011)	Technical Requirements for Electromagnetic Interference; Korea only
RRA Public Notification 2011-24 (Dec. 23, 2011)	Technical Requirements for Electromagnetic Interference; Korea only
RRA 2012-13 and RRA 2012-21, June 28, 2012, K only	Technical Requirements and Test Methods for Electromagnetic Interference; K only (See specific Annexes listed on scope)
RRA 2013-3 and 2013-24, June 17, 2013, Korean only	Technical Requirements and Test Methods for Electromagnetic Interference; K only (See specific Annexes listed on scope)
RRA 2014-8 and RRA 2014-37 (June 23, 2014)	Technical Requirements and Test Methods for Electromagnetic Interference; K only (See specific Annexes listed on scope)
VCCI-CISPR 32 (Nov 2016)	Agreement of VCCI Council - Technical Requirements: VCCI-CISPR 32:2016 (including radiated disturbance above 1 GHz)
Agreement of VCCI V-3 (2014.04)	Agreement of VCCI Council - Technical Requirements: V-3/2014.04 (including radiated disturbance above 1 GHz)
Agreement of VCCI V-3 (2015.04)	Agreement of VCCI Council - Technical Requirements: V-3/2015.04 (including radiated disturbance above 1 GHz)
Agreement of VCCI V-3 (2008.04)	Agreement of Voluntary Control Council for Interference by Information Technology Equipment - Technical Requirements: V-3/2008.04
Agreement of VCCI V-3 (2011.04)	Agreement of VCCI Council - Technical Requirements: V-3/2011.04 (including radiated disturbance above 1 GHz)
Agreement of VCCI V-3 (2012.04)	Agreement of VCCI Council - Technical Requirements: V-3/2012.04 (including radiated disturbance above 1 GHz)
Agreement of VCCI V-3 (2013.04)	Agreement of VCCI Council - Technical Requirements: V-3/2013.04 (including radiated disturbance above 1 GHz)

### Immunity

#### Designation

EN 50130-4 (1995) + A1(1998) & A2(2003)

EN 50130-4 (2011)

EN 55024 (2010)

EN 55103-2 (2009)

#### Description

Alarm systems - Part 4. Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder and social alarm systems

Alarm systems. Electromagnetic compatibility. Product family standard. Immunity requirements for components of fire, intruder, hold up, CCTV, access control and social alarm systems

Information technology equipment. Immunity characteristics. Limits and methods of measurement

Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 2: Immunity

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IEC 61000-4-2, Ed. 1.2 (2001); EN 61000-4-2	Electrostatic Discharge Immunity Test
IEC 61000-4-2, Ed. 2.0 (2008-12)	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test
IEC/EN 61000-4-3, Ed. 2.1 (2002), A1 (2002); EN 61000-4-3	Radiated, radio-frequency, electromagnetic field immunity test
IEC 61000-4-3, Ed. 3.0 (2006-02)	Electromagnetic compatibility (EMC) - Part 4-3: Testing measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test
IEC 61000-4-3, Ed. 3.0 (2006-02) + A1 (2007)	Electromagnetic compatibility (EMC) - Part 4-3: Testing measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4 (2007)	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical Fast Transient/Burst Immunity Test
IEC 61000-4-4, Ed. 2.0 (2004-07)	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
IEC 61000-4-4, Ed. 2.0; C1 (2006)	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
IEC 61000-4-4 (2012-04)	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
IEC 61000-4-5 Ed. 3.0 (May 2014)	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
IEC 61000-4-5, Ed. 1.1 (2001-04); EN 61000-4-5	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
BS EN 61000-4-5 (2006)	Electromagnetic compatibility (EMC). Testing and measurement techniques. Surge immunity test
IEC 61000-4-6, Ed. 2.2 (2006-05)	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
IEC 61000-4-6 Ed. 3.0 (2008)	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
IEC 61000-4-6 Ed. 4.0 (2013)	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
IEC 61000-4-8 (2001), A1(2000); EN 61000-4-8 (2001),A1(2000)	Power Frequency Magnetic Field Immunity Test
IEC 61000-4-8 (2009)	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
IEC 61000-4-11, Ed. 2 (2004-03) & EN 61000-4-11	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests



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IEC 61000-4-11 (2004)	Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
EN 61000-6-1 (2007)	Electromagnetic compatibility (EMC) - Part 6 - 1: Generic standards - Immunity for residential, commercial and light-industrial environments
EN 61000-6-2 (2005)	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
EN 61326-1(2006)	Electrical equipment for measurement, control and laboratory use - EMC requirements
EN 61326-1 (2013)	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
IEC 61326-2-6, Ed. 1.0 (2005-12)	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-6: Particular requirements - In vitro diagnostic (IVD) medical equipment
EN 61547 (2009)	Equipment for general lighting purposes. EMC immunity requirements
IEC 61547 ed2.0 (2009)	Equipment for general lighting purposes - EMC immunity requirements
IEC/CISPR 24 (1997) and EN 55024 (1998) + A1(2001), A2(2003)	Information technology equipment - Immunity characteristics - Limits and methods of measurement
KCC Notice 2008-38	Korea Technical Requirements for Electromagnetic Susceptibility (EMS)
KN 24 (December 2005) with RRL Notice No. 2006-127	Information technology equipment - Immunity characteristics - Limits and methods of measurement
KN 24 (Annex 5) with RRA Announce 2010-6 (Dec. 24, 2010)	Conformity Assessment Procedure for EMS (Information technology equipment - Immunity characteristics - Limits and methods of measurement)
KN 24 (Annex 5) with RRA Announce 2011-31 (Dec. 23, 2011)	Conformity Assessment Procedure for Electromagnetic Susceptibility; with KN24 (Annex 5). K Only
KN 24 (Annex 11) RRA Announce 2008-12 (Dec. 16, 2008)	Conformity Assessment Procedure for EMS (Information technology equipment - Immunity characteristics - Limits and methods of measurement)
KN 24 (Annex 11) RRA Announce 2009-10 (Dec. 21, 2009)	Conformity Assessment Procedure for EMS (Information technology equipment - Immunity characteristics - Limits and methods of measurement)
KN 35:2015 (Annex 11-2)	Testing method of electromagnetic wave endurance of multimedia device
Korea RRL Notice No. 31 (2004)	Conformity Assessment Procedures for Electromagnetic Susceptibility using KN 61000-4-2, KN 61000-4-3, KN 61000-4-4, KN 61000-4-5, KN 61000-4-8, KN 61000-4-11, KN 20, KN 41, and KN 50.
Korea RRL Notice 70 (2004)	Technical Requirements for Electromagnetic Susceptibility using KN 61000-4-2, KN 61000-4-3, KN61000-4-4, KN 61000-4-5, KN 61000-4-6, KN 61000-4-8, KN 20, KN 41, and KN 51
RRA Announce 2009-10, Dec 21, 2009	Conformity Assessment Procedure for Electromagnetic Susceptibility, K only

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RRA Public Notification 2011-06 (Jan. 19, 2011)	Technical Requirements for Electromagnetic Susceptibility; Korea only
RRA Public Notification 2011-17 (July 05, 2011)	Technical Requirements for Electromagnetic Susceptibility; Korea only
RRA Public Notification 2011-25 (Dec. 23, 2011)	Technical Requirements for Electromagnetic Susceptibility; Korea only
RRA 2012-14 and RRA 2012-22 (June 28, 2012) K only	Technical Requirements and Test Methods for Electromagnetic Susceptibility; K only (See specific Annexes listed on scope)
RRA 2013-04 and RRA 2013-25, June 17, 2013, Korean only	Technical Requirements and Test Methods for Electromagnetic Susceptibility; Korean only (See specific Annexes listed on scope)
RRA 2014-09 and RRA 2014-38 (June 23, 2014) K only	Technical Requirements and Test Methods for Electromagnetic Susceptibility; Korean only (See specific annexes listed on scope)

### Product Safety

#### Designation

IEC 60601-1-2, Ed. 4, (2014-02)

IEC 60601-1-2, Ed. 1 (1993); Ed. 2  
(2001-09); JIS T0601-1-2 (2002.7)

IEC 60601-1-2, Ed 2.1 (2004-11) &  
EN 60601-1-2 (2002)

EN 60601-1-2 (2007)

EN 60601-1-2 (2001) + A1(2006)

AS/NZS 4117 (1999)

#### Description

Medical electrical equipment-Part 1-2: General requirements for basic safety and essential performance-Collateral Standard: Electromagnetic disturbances-Requirements and tests

Medical electrical equipment - Part 1 and Part 1-2: General requirements for safety:  
Collateral standard: EMC - Requirements and tests

Medical electrical equipment - Part 1-2: General requirements for safety - Collateral  
standard: Electromagnetic compatibility - Requirements and tests

Medical electrical equipment - Part 1-2: General requirements for safety - Collateral  
standard: EMC - Requirements and tests

Medical electrical equipment - Part 1-2: General requirements for safety - Collateral  
standard: EMC - Requirements and tests

Surge protective devices for telecommunications applications

### Radio

#### Designation

ACMA Radiocommunications  
(Short Range Devices) Standard  
2014

ACMA Radiocommunications  
(Short Range Devices) Standard  
2004

AS/NZS 4268 (2008)

#### Description

For technical performance matters using AS/NZS 4268

For technical performance matters using AS/NZS 4268.

Radio equipment and systems - Short range devices - Limits and methods of measurement



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AS/NZS 4771 (2000) + Amendment No. 1	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
IDA TS SRD Issue 1 Rev 6, May 2011	Technical Specification for Short Range Devices
KCC Public Notification 2009-27, Nov 5, 2009	Technical Requirements for the Human Protection against Electromagnetic Waves, K only
RSS-210, Issue 9 (August 2016)	Licence-Exempt Radio Apparatus: Category I Equipment
RSS-247, Issue 2 (February 2017)	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
RSS-310, Issue 4 (July 2015)	Licence-Exempt Radio Apparatus: Category II Equipment
RSS-310, Issue 3 (December 2010)	Licence-exempt Radio Apparatus (All Frequency Bands): Category II Equipment
RSS-Gen, Issue 4 (November 2014)	General Requirements for Compliance of Radio Apparatus
RSS-Gen, Issue 5 (April 2018)	General Requirements for Compliance of Radio Apparatus

**Telecommunications**

**Designation**

**Description**

EN 300 386 V1.3.2 (2003-05)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; ElectroMagnetic Compatibility (EMC) requirements
ETSI EN 300 386 V1.6.1 (2012-09)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; ElectroMagnetic Compatibility (EMC) requirements