

Scope of Accreditation

(Measurement Method)

Accreditation Number: VLAC-013

Expiration Date: July 3, 2025

[Name of Laboratory]

TÜV SÜD Japan Ltd.

[Test site name]

Yonezawa Testing Center

[Test site Address]

5-4149-7, Hachimanpara, Yonezawa-shi, Yamagata, 992-1128, Japan

[Measurement Method]

Emission test

Radiated disturbance: Enclosure Port

Disturbance electric field test

[Test condition] On the reference ground plane, Measurement distance : 3m/10m
Measurement Frequency Range: 30 MHz - 2 GHz

[Test condition] Quasi Free Space, Measurement Frequency Range: 1GHz - 40 GHz

Disturbance magnetic field strength measurement [Test condition] Loop Antenna

Disturbance power measurement [Test condition] Absorption clamp

Conducted disturbance Measurement: AC mains port

Voltage measurement [Test condition] AMN, High impedance voltage probe

Conducted disturbance Measurement: Telecommunication port

Voltage measurement [Test condition] ISN, AAN

Current measurement [Test condition] Current probe

Conductive interference DC power line port

Voltage measurement [Test condition] AMN, High impedance voltage probe

Antenna port, RF modulator output port, Tuner port, Fiber port

Current measurement [Test condition] Current probe

Immunity test

Electro static discharge test Contact discharge, Air discharge, Indirect discharge

Radiated electromagnetic field strength Measurement frequency : 80 MHz - 6 GHz

Radiated fields in close proximity Measurement Frequency Range: 9 kHz – 26 MHz

Electrical fast transient/burst (EFT/B) Mains port, Telecommunication/Signal port

Surge Mains port, Telecommunication/Signal port

RF conducted interference Mains port measurement frequency range: 150 kHz – 80 MHz

Telecommunication port measurement frequency range: 150 kHz – 80 MHz

Test for immunity to conducted, common mode disturbances in the frequency range: DC - 150 kHz

Radiated magnetic field

Pulse magnetic immunity test

Interruptions and Voltage variations

Low frequency immunity Mains Harmonics and Interharmonics

Harmonic current

Harmonic current test

Voltage changes, Voltage fluctuations and Flicker test

Telecommunication equipment performance 1

Based on European Standards: EMC Test only

Telecommunication equipment performance 2

Magnetic field strength [Test condition] Magnetic probe

Electric field strength [Test condition] Electric probe

Voluntary EMC Laboratory Accreditation Center Inc.

Scope of Accreditation

(Test standards)

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[Name of Laboratory]

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5-4149-7, Hachimanpara, Yonezawa-shi, Yamagata, 992-1128, Japan

[Test standards]

Emission test

VCCI Technical Requirement: VCCI-CISPR 32*¹

Technical requirements under the Electrical Appliances and Materials safety Act appendix 10 Chapter 2, 4, 5, and 7

J55011, J55014-1, J55032*¹, CISPRJ 32*¹

FCC 47CFR Part15 Subpart B: ANSI C63.4 -2014*¹, ANSI C63.4a-2017*¹

FCC 47CFR Part18: FCC MP-5 (February 1986)

CISPR11, CISPR14-1, CISPR 32*¹

EN 55011:2016+A1:2017+A2:2021 / 2016+A11:2020, EN 55014-1:2017+A11:2020

EN IEC 55014-1, EN 55032*¹:2015+A1:2020 / 2015+A11:2020

ICES-001, ICES-003, CNS 13438, CNS 13783-1, CNS 15936*¹, GB/T 9254.1

AS CISPR 11, AS CISPR 14.1, AS/NZS CISPR 14.1, AS/NZS CISPR 32*¹

AS 61000.6.4, AS/NZS 61000.6.3, AS/NZS 61000.6.4

KS C 9811, KS C 9610-6-4

IEC 61000-6-3, EN 61000-6-3:2007+A1:2011, EN IEC 61000-6-3

IEC 61000-6-4, EN 61000-6-4:2007+A1:2011, EN IEC 61000-6-4

IEC 61000-6-8, EN IEC 61000-6-8

IEC 60945 (section 9 and 10), EN 60945 (section 9 and 10), IEC 61131-2, EN 61131-2

EN 12015:2014 / 2020

IEC 61800-3, EN 61800-3:2004+A1:2012, EN IEC 61800-3, EN 50370-1

IEC 62236-3-2, IEC 62236-4, IEC 62236-5, EN 50121-3-2:2016 / 2016+A1:2019

EN 50121-4:2016 / 2016+A1:2019, EN 50121-5:2017 / 2017+A1:2019

IEC 60947-5-2 (section 8.2.6 and 9.6), EN IEC 60947-5-2 (section 8.2.6 and 9.6)

*¹: Except for broadcast receiver equipment.

The following groups of test standards are included in Emission tests, Immunity tests and Harmonic Test in Public Low Voltage Systems. [Note.1]

IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6

EN 61326-1:2013, EN 61326-2-1:2013 /-2-2:2013 /-2-3:2013 /-2-4:2013 /-2-5:2013 /-2-6:2006 /-2-6:2013, EN IEC 61326-1, EN IEC 61326-2-1 /-2-2 /-2-3 /-2-4 /-2-5 /-2-6

JIS C 61326-1, JIS C 61326-2-1 /-2-2 /-2-3 /-2-6

IEC 60601-1-2:2014 / 2014+A1:2020, IEC 60601-2-2/-2-3/-2-4/-2-5/-2-6/-2-10/-2-16/-2-18/-2-21 /-2-24/-2-25/-2-37

EN 60601-1-2:2015 / 2015+A1:2021, EN 60601-2-2:2009+A11:2011 /-2-3:1993+A1:1998

/-2-3:2015+A1:2016 /-2-4:2003 /-2-4:2011+A1:2019 /-2-5:2000 /-2-5:2015 /-2-6:2015+A1:2016

/-2-10:2000+A1:2001 /-2-10:2015+A1:2016 /-2-16:1998 /-2-16:2015 /-2-18:1996+A1:2000

/-2-18:2015 /-2-21:2009 /-2-21:2009+A1:2016 /-2-24:1998 /-2-24:2015 /-2-25:1995+A1:1999

/-2-25:2015 /-2-37:2008 /-2-37:2008+A1:2015, EN IEC 60601-2-2:2018 /-2-16:2019 /-2-21:2021

JIS T 0601-1-2:2018 / 2023, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-10/-2-16/-2-18/-2-21/-2-24/-2-25/-2-37

Immunity test

[Including the test standards listed in Note 1.]

IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9/-4-11/-4-13/-4-16/-4-39 (9 kHz - 26 MHz)

EN 61000-4-2/-4-4/-4-5/-4-6/-4-8/-4-9/-4-13/-4-16/-4-39 (9 kHz - 26 MHz), EN IEC 61000-4-3/-4-11

EN 61000-4-3:2006+A1:2008+A2:2010, EN 61000-4-11:2004+A1:2017

CISPR 14-2, CISPR 35*²,

EN 55014-2:1997+A1:2001+A2:2008 / 2015, EN IEC 55014-2, EN 55035*²:2017 / 2017+A11:2020

IEC 61000-6-1, EN 61000-6-1:2007, EN IEC 61000-6-1, JIS C 61000-6-1

IEC 61000-6-2, EN 61000-6-2:2005, EN IEC 61000-6-2, JIS C 61000-6-2, KS C 9610-6-2

IEC 61000-6-7, EN 61000-6-7

IEC 60945 (section 9 and 10), EN 60945 (section 9 and 10),

IEC 61131-2, EN 61131-2, IEC 61131-6(section 12.5), EN 61131-6(section 12.5), EN 12016

IEC 61800-3, EN 61800-3:2004+A1:2012, EN IEC 61800-3

IEC 61800-5-2(section 9.3 and Annex E), EN 61800-5-2(section 9.3 and Annex E)

IEC 61326-3-1, EN 61326-3-1, JIS C 61326-3-1, IEC 61326-3-2, EN IEC 61326-3-2

EN 50130-4:2011 / 2011+A1:2014, EN 50370-2

IEC 62236-3-2, IEC 62236-4, IEC 62236-5, EN 50121-3-2:2016 / 2016+A1:2019

EN 50121-4:2016 / 2016+A1:2019, EN 50121-5:2017 / 2017+A1:2019

IEC 60335-1 (section 19.11.4):2010+A1:2013+A2:2016 / 2020, EN 60335-1 (section 19.11.4)

IEC 61496-1 (section 4.3.2 and 5.4.3), EN IEC 61496-1 (section 4.3.2 and 5.4.3)

IEC 60947-5-2 (section 8.2.6 and 9.6), EN IEC 60947-5-2 (section 8.2.6 and 9.6)

IEC 60947-5-3 (section 7.3.3), EN 60947-5-3 (section 7.3.3)

*²: Except for Annex A, Annex E and Broad band impulse noise disturbances.

Harmonic Test in Public Low Voltage Systems [Including the test standards listed in Note 1.]

IEC 61000-3-2, EN 61000-3-2:2014, EN IEC 61000-3-2:2019 / 2019+A1:2021

IEC 61000-3-3, EN 61000-3-3: 2013 / 2013+A1:2019+A2:2021

IEC 61000-3-11, EN 61000-3-11:2000, EN IEC 61000-3-11

IEC 61000-3-12, EN 61000-3-12, JIS C 61000-3-2, GB 17625.1

IEC 61000-6-3, EN 61000-6-3:2007+A1:2011, EN IEC 61000-6-3

IEC 61000-6-8, EN IEC 61000-6-8

Telecommunication characteristic test 1

EN 301 489-1 (Except for section 9.6): V2.2.3, EN 301 489-3: V2.1.1 / V2.3.2, EN 301 489-17: V3.2.4

EN 301 489-52: V1.2.1

EN 301 843-1: V2.2.1, EN 301 843-2: V2.2.1, EN 301 843-5: V2.2.1

Telecommunication characteristic test 2

IEC 62233, EN 62233

IEC 62311, EN 62311:2008, EN IEC 62311

IEC 62479, EN 62479

EN 50364^{*3}: 2010 / 2018, EN 50663, EN 50664, EN 50665

***3: Except for contact and limb currents**

Voluntary EMC Laboratory Accreditation Center Inc.

**The laboratory is only accredited for testing activities outlined within the test methods listed above.
If test standards do not include the edition, it means the latest one at the date of renewal (7.4, 2023).**