

# Scope of Accreditation

(Measurement Method)

Accreditation Number : VLAC-025

Expiration Date : July 14, 2023

[Name of Laboratory]

**ISHIKAWA Co., Ltd.**

[Test site name]

**ISHIKAWA Co., Ltd. EMC Laboratory**

[Test site Address]

**2-3-18, Namamugi, Tsurumi-ku, Yokohama, Kanagawa 230-0052 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 - 1 GHz**

[Test condition] **Quasi Free Space, Measurement Frequency Range : 1 GHz - 40 GHz<sup>\*1</sup>**

**Disturbance magnetic field strength measurement**

[Test condition] **Loop Antenna , 3-Axis Large Loop Antenna**

**Disturbance Power measurement**

[Test condition] **Absorbing Clamp**

**Conducted disturbance Measurement: AC/DC mains port**

**Voltage measurement [Test condition] AMN, High Impedance Probe**

**Conducted disturbance Measurement: Telecommunication port**

**Voltage measurement [Test condition] ISN, AAN, Capacitive Voltage Probe**

**Current measurement [Test condition] Current probe**

**Conducted disturbance Measurement:**

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

**Voltage measurement [Test condition] Capacitive voltage probe**

**Current measurement [Test condition] Current probe**

**\*1: Frequency range expanded as of December 21, 2021**

## Immunity test

**Electro static discharge test**

**Contact discharge, Air discharge, Indirect discharge**

**Radiated electromagnetic field strength**

**Measurement frequency range:26 MHz – 6 GHz**

**Electrical fast transient/burst (EFT/B)**

**Mains port, Telecommunication/Signal port**

**Immunity to transient disturbances conducted along supply lines / other than supply lines**

**Surge**

**Mains port, Telecommunication/Signal port**

**RF conducted interference**

**Mains port measurement frequency range : 0.15 MHz - 230 MHz**

**Telecommunication port measurement frequency range : 0.15 MHz - 230 MHz**

**Radiated magnetic field**

**Pulse magnetic field immunity test**

**Interruptions and Voltage variations**

## Harmonic current

**Harmonic current test**

**Voltage changes, Voltage fluctuations and Flicker test**

## Telecommunication equipment performance 1

**Based on European Standards : EMC Test only**

**Voluntary EMC Laboratory Accreditation Center Inc.**

# Scope of Accreditation

(Test standards)

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[Name of Laboratory]

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[Test standards]

## **Emission test**

**VCCI Technical Requirements : VCCI-CISPR 32\*<sup>1</sup>**

**FCC 47CFR Part15 Subpart B : ANSI C63.4 -2014**

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

**CISPR 11, CISPR 13\*<sup>2</sup>, CISPR 14-1, CISPR 15, CISPR 22, CISPR 32\*<sup>1</sup>**

**EN 55011, EN 55013\*<sup>2</sup>, EN 55014-1, EN 55015, EN 55022, EN 55032\*<sup>1</sup>**

**AS CISPR 11, AS/NZS CISPR 13\*<sup>2</sup>, AS CISPR 14.1, AS CISPR 15**

**AS/NZS CISPR 22, AS/NZS CISPR 32\*<sup>1</sup>, AS/NZS 61000.6.3, AS/NZS 61000.6.4**

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

**J55011, J55014-1, J55015, J55032\*<sup>1</sup>, CISPRJ 15, CISPRJ 32\*<sup>1</sup>**

**IEC 61000-6-3, IEC 61000-6-4, IEC 61000-6-8, EN 61000-6-3, EN 61000-6-4, EN 61000-6-8**

**ICES-003, BETS-7, CNS 13803, CNS 13438, CNS 13783-1**

**IEC 62236-3-2, IEC 62236-4, EN 50121-3-2, EN 50121-4**

**IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/-2-6**

**EN 61326-1, EN 61326-2-1/-2-2/-2-3/-2-6**

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

**IEC 60601-1-2, IEC 60601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39**

**EN 60601-1-2, EN 60601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39**

**JIS T 0601-1-2, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39**

**AS/NZS 3200.1.2, AS/NZS 3200.2.2/.2.5/.2.6/.2.16/.2.21/.2.24/.2.25/.2.35/.2.39**

**\*<sup>1</sup>: Except for broadcast radio receivers**

**\*<sup>2</sup>: Test for Auxiliary equipment only**

## **Immunity test**

CISPR 14-2, CISPR 20<sup>\*2</sup>, CISPR 24, CISPR 35  
EN 55014-2, EN 55020<sup>\*2</sup>, EN 55024, EN 55035  
IEC 61000-6-1, IEC 61000-6-2, EN 61000-6-1, EN 61000-6-2  
JIS C 61000-6-1, JIS C 61000-6-2  
IEC 62236-3-2, EN 50121-3-2, IEC 62236-4, EN 50121-4  
IEC 61547, EN 61547, EN 50130-4  
AS/NZS CISPR 14.2, AS/NZS CISPR 20<sup>\*2</sup>, AS/NZS CISPR 24  
AS/NZS 61000.6.1, AS/NZS 61000.6.2  
IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9/-4-11  
EN 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9/-4-11  
JIS C 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11  
IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/-2-6  
EN 61326-1, EN 61326-2-1/-2-2/-2-3/-2-6  
JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-3/-2-6  
IEC 60601-1-2<sup>\*3</sup>, IEC 60601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39  
EN 60601-1-2, EN 60601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39  
JIS T 0601-1-2, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39  
AS/NZS 3200.1.2, AS/NZS 3200.2.2/.2.5/.2.6/.2.16/.2.21/.2.24/.2.25/.2.35/.2.39  
<sup>\*2</sup>: Test for Auxiliary equipment only  
<sup>\*3</sup>: Except for Radiated fields in close proximity

## **Harmonic Test in Public Low Voltage Systems**

IEC 61000-3-2, IEC 61000-3-3, IEC 61000-3-11,  
EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, JIS C 61000-3-2  
IEC 61000-6-3, EN 61000-6-3, IEC 61000-6-8, EN 61000-6-8  
AS/NZS 61000.3.2, AS/NZS 61000.3.3, AS/NZS 61000.3.11  
IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/-2-6  
EN 61326-1, EN 61326-2-1/-2-2/-2-3/-2-6  
JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-3/-2-6  
IEC 60601-1-2, IEC 60601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39  
EN 60601-1-2, EN 60601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39  
JIS T 0601-1-2, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-16/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39  
AS/NZS 3200.1.2, AS/NZS 3200.2.2/.2.5/.2.6/.2.16/.2.21/.2.24/.2.25/.2.35/.2.39

## **Telecommunication characteristic test 1**

EN 301 489-1, EN 301 489-3, EN 301 489-4, EN 301 489-17, EN 301 489-19

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