

Scope of Accreditation

(Measurement Method)

Accreditation Number : VLAC-005-2

Expiration Date : July 22, 2023

[Name of Laboratory]

KEC Electronic Industry Development Center

[Test site name]

Testing Division Ikoma 1st Test Site

[Test site Address]

12128 Takayama-cho Ikoma City Nara 630-0101 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

Disturbance magnetic field strength measurement

[Test Condition] Loop Antenna, 3-axis loop antenna

Disturbance electric power measurement

[Test Condition] Absorption clamp

Conducted disturbance measurement : AC mains port

Disturbance voltage measurement [Test Condition] AMN, High impedance probe

Conductive interference measurement : Telecommunication port

Disturbance voltage measurement [Test Condition] AMN, AAN, Capacitive voltage probe

Disturbance current measurement [Test Condition] Current probe

Conductive interference measurement : DC power line port

Disturbance voltage measurement [Test Condition] AMN, High impedance probe

Antenna port, RF modulator output port, Tuner port

Disturbance voltage measurement [Test Condition] AMN, High impedance probe

Disturbance current measurement [Test Condition] Current probe

Wanted signal and disturbance voltage test at the RF output [Test Condition] Selective voltmeter

Local oscillator power at the input terminal of the outdoor unit

Immunity test

Electro discharge test

Contact discharge, Air discharge, Indirect discharge

Radiated electromagnetic field test

Measurement frequency: 80 MHz – 6 GHz

Electrical fast transient/burst (EFT/B) test

Mains port, Telecommunication/Signal port

Surge test

Mains port, Telecommunication/Signal port

RF conducted disturbances test

Mains port measurement frequency range: 150 kHz – 230 MHz

Telecommunication/Signal port measurement frequency range: 150 kHz – 230 MHz

Power Frequency magnetic field test

Pulse magnetic test

Damped oscillatory Magnetic Field test

Voltage Dip, Short Interruptions and Voltage variations test

Ring Wave test

Low frequency immunity - Mains Harmonics and Interharmonics test

Common mode disturbances test

Damped oscillatory wave test
Ripple on d.c. input power port test

Harmonic current

Harmonic current test
Voltage changes, Voltage fluctuations and Flicker test

Telecommunication equipment performance 1

Intentional Radiators (FCC Part 15 Subpart C)
U-NII without DFS International Radiators (FCC Part 15 Subpart E)
U-NII with DFS International Radiators (FCC Part 15 Subpart E)
Based on European standards
Based on Canadian standards

Voluntary EMC Laboratory Accreditation Center Inc.

Scope of Accreditation

(Test standards)

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[Test standards]

Emission test

Technical requirements under the Electrical Appliances and Materials safety Act appendix 10 Chapter 2/3/4/5

Enforcement rule of Radio Law : Article 46.7

**Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use: Article 7 Chapter 1
VCCI Technical Requirements: VCCI-CISPR 32**

AS CISPR 11, AS/NZS CISPR 12, AS/NZS CISPR 13, AS CISPR 14.1

AS CISPR 15, AS/NZS CISPR 22, AS/NZS CISPR 32, AS/NZS 61000.6.3, AS/NZS 61000.6.4

CISPR 11, CISPR 12, CISPR 13, CISPR 14-1, CISPR 15, CISPR 22, CISPR 32

CISPR 16-1-2/-1-3/-1-4, CISPR 16-2-1/-2-2/-2-3

EN 12015, EN 50121-3-2, EN 50121-4, EN 50121-5, EN 55011, EN 55012, EN 55013

EN IEC 55014-1, EN IEC 55015, EN 55032, EN 55103-1

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

EN 60601-1-2, EN 60601-2-5/-2-18/-2-21/-2-24/-2-35/-2-37, EN IEC 60601-2-16/-2-39

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

EN 60945, EN IEC 61800-3, EN 61851-21-1, EN 61851-21-2, EN IEC 62040-2

BS EN 12015, BS EN 50121-3-2, BS EN 50121-4, BS EN 50121-5, BS EN 55011, BS EN 55012

BS EN 55013, BS EN IEC 55014-1, BS EN IEC 55015, BS EN 55032, BS EN 55103-1

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

BS EN 60601-1-2, BS EN 60601-2-5/-2-18/-2-21/-2-24/-2-35/-2-37, BS EN IEC 60601-2-16/-2-39

BS EN 61326-1, BS EN 61326-2-1/-2-2/-2-6

BS EN 60945, BS EN IEC 61800-3, BS EN 61851-21-1, BS EN 61851-21-2, BS EN IEC 62040-2

FCC 47CFR Part15 Subpart B: ANSI C63.4 -2014(up to 40 GHz)

FCC 47CFR Part15 Subpart B : ANSI C 63.4a-2017(up to 40 GHz)

FCC 47CFR Part15 Subpart B: FCC MP-2

FCC 47CFR Part18: FCC MP-5(up to 40 GHz)

GOST 30805.22, IACS E10, ICES-001, ICES-002, ICES-003, ICES-005, BETS-7

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

IEC 60601-1-2, IEC 60601-2-5/2-16/-2-18/-2-21/-2-24/-2-35/-2-37/-2-39

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

IEC 60945, IEC 61800-3, IEC 61851-21-1, IEC 61851-21-2, IEC 62040-2

IEC 62236-3-2, IEC 62236-4, IEC 62236-5

J55011, J55014-1, J55015, CISPRJ 15, J55032, CISPRJ 32
JIS C 4411-2, JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-6
JIS T 0601-1-2, JIS T 0601-2-2/-2-5/-2-16/-2-18/-2-21/-2-24/-2-35/-2-37/-2-39/-2-201/-2-202/-2-203
/-2-204/-2-205/-2-206/-2-207/-2-208
JIS F 0808

Immunity test

Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use: Article 7 Chapter 1
AS/NZS CISPR 14.2, AS/NZS CISPR 24, AS/NZS 61000.6.1, AS/NZS 61000.6.2
CISPR 14-2, CISPR 24, CISPR 35

EN 50121-3-2, EN 50121-4, EN 50130-4, EN 55103-2, EN IEC 55014-2, EN 55024, EN 55035
EN 61000-4-2/-4-4/-4-5/-4-8/-4-9/-4-10/-4-12/-4-13/-4-16/-4-17/-4-29/-4-34/-4-39(above 380 MHz)
EN IEC 61000-4-3/-4-6/-4-11/-4-18
EN 60945, EN IEC 61000-6-1, EN IEC 61000-6-2, EN 61000-6-7
EN 61547, EN IEC 61800-3, EN 61851-21-1, EN 61851-21-2
EN 60601-1-2, EN 60601-2-5/-2-18/-2-21/-2-24/-2-35/-2-37, EN IEC 60601-2-16/-2-39
EN 61326-1, EN 61326-2-1/-2-2/-2-6, EN 61326-3-1, EN 61326-3-2

BS EN 50121-3-2, BS EN 50121-4, BS EN 50130-4, BS EN 55103-2, BS EN IEC 55014-2
BS EN 55024, BS EN 55035
BS EN 61000-4-2/-4-4/-4-5/-4-8/-4-9/-4-10/-4-12/-4-13/-4-16/-4-17/-4-29/-4-34/-4-39(above 380 MHz)
BS EN IEC 61000-4-3/-4-6/-4-11/-4-18
BS EN 60945, BS EN IEC 61000-6-1, BS EN IEC EN 61000-6-2, BS EN 61000-6-7
BS EN 61547, BS EN IEC 61800-3, BS EN 61851-21-1, BS EN IEC 61851-21-2
BS EN 60601-1-2, BS EN 60601-2-5/-2-18/-2-21/-2-24/-2-35/-2-37, BS EN IEC 60601-2-16/-2-39
BS EN 61326-1, BS EN 61326-2-1/-2-2/-2-6, BS EN 61326-3-1, BS EN IEC 61326-3-2

GOST CISPR 24, IACS E10

IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9/-4-10/4-11/-4-12/-4-13/-4-16/4-17/-4-18/-4-29/-4-34
/-4-39(above 380 MHz)
IEC 60945, IEC 61000-6-1, IEC 61000-6-2, IEC61000-6-7
IEC 61547, IEC 61800-3, IEC 61851-21-1, IEC 61851-21-2
IEC 60601-1-2, IEC 60601-2-5/2-16/-2-18/-2-21/-2-24/-2-35/-2-37/-2-39
IEC 61326-1, IEC 61326-2-1/-2-2/-2-6, IEC 61326-3-1, IEC 61326-3-2
IEC 62040-2, IEC 62236-3-2, IEC 62236-4, IEC 62236-5

JIS C 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11/-4-16/-4-17
JIS C 61000-6-1, JIS C 61000-6-2
JIS C 4411-2, JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-6
JIS T 0601-1-2, JIS T 0601-2-2/-2-5/-2-16/-2-18/-2-21/-2-24/-2-35/-2-37/-2-39/-2-201/-2-202/-2-203
/-2-204/-2-205/-2-206/-2-207/-2-208
JIS F 0808

Harmonic Test in Public Low Voltage Systems

AS/NZS 61000.3.2, AS/NZS 61000.3.3, AS/NZS 61000.3.11, AS/NZS 61000.3.12, AS/NZS 61000.6.3

EN IEC 61000-3-2, EN 61000-3-3, EN IEC 61000-3-11, EN 61000-3-12, EN IEC 61000-6-3
EN IEC 61000-6-8
EN 60601-1-2, EN 60601-2-5/-2-18/-2-21/-2-24/-2-35/-2-37, EN IEC 60601-2-16/-2-39
EN 61326-1, EN 61326-2-1/-2-2/-2-6

BS EN IEC 61000-3-2, BS EN 61000-3-3, BS EN IEC 61000-3-11, BS EN IEC 61000-3-12
BS EN IEC 61000-6-3, BS EN IEC 61000-6-8
BS EN 60601-1-2, BS EN 60601-2-5/-2-18/-2-21/-2-24/-2-35/-2-37, BS EN IEC 60601-2-16/-2-39
BS EN 61326-1, BS EN 61326-2-1/-2-2/-2-6

**IEC 61000-3-2, IEC 61000-3-3, IEC 61000-3-11, IEC 61000-3-12, IEC 61000-6-3, IEC 61000-6-8
IEC 60601-1-2, IEC 60601-2-5/2-16/-2-18/-2-21/-2-24/-2-35/-2-37/-2-39
IEC 61326-1, IEC 61326-2-1/-2-2/-2-6**

JIS C 61000-3-2

JIS C 4411-2, JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-6

**JIS T 0601-1-2, JIS T 0601-2-2/-2-5/-2-16/-2-18/-2-21/-2-24/-2-35/-2-37/-2-39/-2-201/-2-202/-2-203
/-2-204/-2-205/-2-206/-2-207/-2-208**

Telecommunication characteristic test 1

IC RSS-Gen, IC RSS-210, IC RSS-247

EN 300 328, EN 300 330, EN 300 440(up to 40 GHz)

EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 301 489-19, EN 301 893

EN 303 413

ANSI C63.10-2013(up to 40 GHz)

**FCC KDB Publication 905462 D02 U-NII DFS Compliance Procedures New Rules v02 (April 8, 2016)
(up to 40 GHz)**

Voluntary EMC Laboratory Accreditation Center Inc.