

Scope of Accreditation

(Measurement Method)

Accreditation Number : VLAC-001-4

Expiration Date : March 30, 2022

[Name of Laboratory]

Japan Quality Assurance Organization

[Test site name]

Tsuru EMC Branch

[Test site Address]

2096, Tambozawa, Ohata, Tsuru-shi, Yamanashi 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 – 26.5 GHz

Disturbance magnetic field strength measurement

[Test condition] **Loop Antenna, 3-axis loop antenna**

Disturbance power measurement

[Test condition] **CMAD**

Conducted disturbance Measurement: AC mains port

Voltage measurement [Test condition] AMN, High impedance probe

Conducted disturbance Measurement: Telecommunication port

Voltage measurement [Test condition] ISN/AAN

Current measurement [Test condition] Current probe

Conducted disturbance Measurement: DC power line port

Voltage measurement [Test condition] AMN, High impedance probe

Immunity test

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

Radiated electromagnetic field strength Measurement Frequency Range : 80 MHz – 6 GHz

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

Radiated magnetic field

Interruptions and Voltage variations

Harmonic current

Harmonic current test

Voltage changes, Voltage fluctuations and Flicker test

Telecommunication equipment performance 1

Test based on European Standards

Telecommunication equipment performance 2

Magnetic field strength [Test condition] Magnetic Field probe

Electrical field strength [Test condition] Electric Field probe

Voluntary EMC Laboratory Accreditation Center Inc.

Scope of Accreditation

(Test standards)

Accreditation Number : VLAC-001-4

Expiration Date : March 30, 2022

[Name of Laboratory]

Japan Quality Assurance Organization.

[Test site name]

Tsuru EMC Branch

[Test site Address]

2096, Tambozawa, Ohata, Tsuru-shi, Yamanashi Japan

[Test standards]

Emission test

VCCI Technical Requirements: VCCI-CISPR 32*1

FCC 47 CFR Part 15 Subpart B: ANSI C63.4-2014 (up to 26.5 GHz)

FCC 47 CFR Part 18: FCC MP-5 (up to 18 GHz)

CISPR 11, CISPR 12, CISPR 14-1, CISPR 15, CISPR 16-2-1/-2-2/-2-3, CISPR 22, CISPR 32*1

EN 55011, EN 55012, EN 55014-1, EN 55015, EN 55016-2-1/-2-2/-2-3, EN 55032

J55011, J55013*1, J55014-1, J55015, J55022, J55032*1, CISPRJ 32*1

Technical requirements under the Electrical Appliances and Materials safety Act appendix 10 Chapter 2/3/4/5/6/7/8/9

Regulations for Enforcement of the Radio Law: Article 46.7 (Microwave Oven or IH Cooking Heater)

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

AS CISPR 11, AS/NZS CISPR 12, AS CISPR 14.1, AS CISPR 15, AS/NZS CISPR 32

AS/NZS 61000.6.3, AS/NZS 61000.6.4

CNS 13803, CNS 13438, CNS 13439, CNS 13783-1

GB 4824, GB 13837, GB 4343.1, GB 17743, GB 9254

KN 11, KS C 9811*3, KN 12, KN14-1, KS C 9814-1*3, KN 15, KS C 9815*3, KN 32, KS C 9832*3

KN 16-2-1/-2-2/-2-3, KS C 9816-2-1/-2-2/-2-3*3, KN 61000-6-3/-6-4, KS C 9610-6-3/-6-4*3

YY 0505, JIS T 9206, IEC 60533, EN 60533, JIS F 8081, IACS UR E10

Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use : Article 7 Chapter 1

IEC 60945, EN 60945, IEC 60974-10, EN 60974-10, IEC 62040-2, EN 62040-2

IEC 61204-3, EN 61204-3, IEC 62236-3-2, EN 50121-3-2, IEC 61131-2, EN 61131-2, EN 50270

EN 50370-1, EN 50104, EN 60079-29-1, ICES-001, ICES-002, ICES-003

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/-2-5*4/-2-6*4/-2-10/-2-16*4/-2-18/-2-21/-2-24/-2-25/-2-26*4/-2-27*4/-2-34/-2-35*4/

-2-37/-2-40/-2-41*4/-2-46*4/-2-47*4/-2-49*4/-2-50*4, IEC 80601-2-26*4/-2-27*4/-2-30*4/-2-55*4/-2-56*4/-2-60*4/-2-61*4

, JIS T 1115*4

EN 60601-1-2, EN 60601-2-2/-2-5*4/-2-6*4/-2-10/-2-16*4/-2-18/-2-21/-2-24/-2-25/-2-26*4/-2-27*4/-2-34/-2-35*4/

-2-37/-2-40/-2-41*4/-2-46*4/-2-47*4/-2-49*4/-2-50*4

JIS T 0601-1-2, JIS T 0601-2-2/-2-18/-2-21/-2-24/-2-25/-2-34/-2-37, JIS T 80601-2-26*4/-2-27*4/-2-30*4/-2-55*4/

-2-56*4/-2-60*4/-2-61*4

KN 60601-1-2, KS C IEC 60601-1-2*3, KN 60601-2-2/-2-10/-2-18/-2-21/-2-24/-2-25/-2-34/-2-37/-2-40

JIS C 1806-1

*1 : Except for broadcast radio receivers

*3 : Added as of April 20, 2021

*4 : Added as of July 21, 2021

Immunity test

CISPR 14-2, CISPR 24, CISPR 35^{*2}, IEC 61547
IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11, IEC 61000-6-1/-6-2/-6-7
EN 55014-2, EN 55024, EN 55035^{*2}, EN 61547
EN 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11, EN 61000-6-1/-6-2/-6-7
JIS C 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11, JIS C 61000-6-1/-6-2
KN 14-2, KS C 9814-2^{*3}, KN 35^{*2}, KS C 9835^{*2, *3}, KN 61547, KS C 9547^{*3}
KN 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11, KS C 9610-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11^{*3}
KN 61000-6-1/-6-2, KS C 9610-6-1/-6-2^{*3}
YY 0505, JIS T 9206, IEC 60533, EN 60533, JIS F 8081, IACS UR E10
Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use : Article 7 Chapter 1
IEC 60945, EN 60945, IEC 60974-10, EN 60974-10, IEC 62040-2, EN 62040-2
IEC 61204-3, EN 61204-3, IEC 62236-3-2, EN 50121-3-2
EN 50370-2, JIS C 1806-1
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/-2-5^{*4}/-2-6^{*4}/-2-10/-2-16^{*4}/-2-18/-2-21/-2-24/-2-25/-2-26^{*4}/-2-27^{*4}/-2-34/-2-35^{*4}/
-2-37/-2-40/-2-41^{*4}/-2-46^{*4}/-2-47^{*4}/-2-49^{*4}/-2-50^{*4}, IEC 80601-2-26^{*4}/-2-27^{*4}/-2-30^{*4}/-2-55^{*4}/-2-56^{*4}/-2-60^{*4}/-2-61^{*4}
, JIS T 1115^{*4}
EN 60601-1-2, EN 60601-2-2/-2-5^{*4}/-2-6^{*4}/-2-10/-2-16^{*4}/-2-18/-2-21/-2-24/-2-25/-2-26^{*4}/-2-27^{*4}/-2-34/-2-35^{*4}/
-2-37/-2-40/-2-41^{*4}/-2-46^{*4}/-2-47^{*4}/-2-49^{*4}/-2-50^{*4}
JIS T 0601-1-2, JIS T 0601-2-2/-2-18/-2-21/-2-24/-2-25/-2-34/-2-37, JIS T 80601-2-26^{*4}/-2-27^{*4}/-2-30^{*4}/-2-55^{*4}/
-2-56^{*4}/-2-60^{*4}/-2-61^{*4}
KN 60601-1-2, KS C IEC 60601-1-2^{*3}, KN 60601-2-2/-2-10/-2-18/-2-21/-2-24/-2-25/-2-34/-2-37/-2-40
^{*2} : Except for “Broadband impulsive conducted disturbances”, Annex A, Annex G and Annex H
^{*3} : Added as of April 20, 2021 ^{*4} : Added as of July 21, 2021

Harmonic Test in Public Low Voltage Systems

IEC 61000-3-2, IEC 61000-3-3, EN 61000-3-2, EN 61000-3-3, JIS C 61000-3-2, GB 17625.1
IEC 61000-6-3, EN 61000-6-3, YY 0505, JIS T 9206, IEC 60974-10, EN 60974-10
IEC 62040-2, EN 62040-2, IEC 61204-3, EN 61204-3, IEC 62236-3-2, EN 50121-3-2
IEC 61131-2, EN 61131-2, EN 50270, GB 17625.1, GB 17799.3,
AS/NZS 61000.3.2, AS/NZS 61000.3.3,
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/-2-5^{*4}/-2-6^{*4}/-2-10/-2-16^{*4}/-2-18/-2-21/-2-24/-2-25/-2-26^{*4}/-2-27^{*4}/-2-34/-2-35^{*4}/
-2-37/-2-40/-2-41^{*4}/-2-46^{*4}/-2-47^{*4}/-2-49^{*4}/-2-50^{*4}, IEC 80601-2-26^{*4}/-2-27^{*4}/-2-30^{*4}/-2-55^{*4}/-2-56^{*4}/-2-60^{*4}/-2-61^{*4}
, JIS T 1115^{*4}
EN 60601-1-2, EN 60601-2-2/-2-5^{*4}/-2-6^{*4}/-2-10/-2-16^{*4}/-2-18/-2-21/-2-24/-2-25/-2-26^{*4}/-2-27^{*4}/-2-34/-2-35^{*4}/
-2-37/-2-40/-2-41^{*4}/-2-46^{*4}/-2-47^{*4}/-2-49^{*4}/-2-50^{*4}
JIS T 0601-1-2, JIS T 0601-2-2/-2-18/-2-21/-2-24/-2-25/-2-34/-2-37, JIS T 80601-2-26^{*4}/-2-27^{*4}/-2-30^{*4}/-2-55^{*4}/
-2-56^{*4}/-2-60^{*4}/-2-61^{*4}
KN 60601-1-2, KS C IEC 60601-1-2^{*3}, KN 60601-2-2/-2-10/-2-18/-2-21/-2-24/-2-25/-2-34/-2-37/-2-40
^{*3} : Added as of April 20, 2021 ^{*4} : Added as of July 21, 2021

Telecommunication equipment performance 1

EN 301 489-1/ -3/ -17/ -19

Telecommunication equipment performance 2

IEC 62233, IEC 62311, EN 62233, EN 62311, IEC 62493

Voluntary EMC Laboratory Accreditation Center Inc.