Scope of Accreditation

（Measurement Method）

Accreditation Number: VLAC-001-2
Expiration Date: April 30, 2026

〔Name of Laboratory〕

Japan Quality Assurance Organization

〔Test site name〕

Kitakansai Testing Center, Saito EMC Branch

〔Test site Address〕

7-3-10, Saito Asagi, Ibaraki-shi, Osaka-fu

〔Measurement Method〕

Emission test

Radiated disturbance: Enclosure Port

Disturbance electric field test

[Test condition] On the reference ground plane, Measurement distance: 3 m / 10 m
Measurement Frequency Range: 9 kHz – 1 GHz

[Test condition] On the reference ground plane, In-vehicle equipment test (1m Method)
Measurement Frequency Range: 150 kHz - 6 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 power measurement

[Test condition] Absorbing Clamp

Conducted disturbance Measurement: AC mains port

Voltage measurement [Test condition] AMN, High impedance probe

Conducted disturbance Measurement: Telecommunication port

Voltage measurement [Test condition] AAN, Capacitive voltage probe

Current measurement [Test condition] Current probe

Conducted disturbance Measurement: DC power line port

Voltage measurement [Test condition] AMN, High impedance probe

Conductive interference test against in-vehicle equipment

Electrical transient conduction along supply lines

Conducted disturbance Measurement: PLC power line port

Current measurement [Test condition] Current probe

Disturbance electric field test Antenna port / RF Modulator output power / Tuner port / Fiber port

Voltage test [Test condition] AAN, Capacitive voltage probe

Current test [Test condition] Current probe

Wanted signal and Voltage test at the RF output [Test condition] Selective voltmeter

Local oscillator power at the input terminal of the outdoor unit

Immunity test

Electro static discharge test	**Contact discharge, Air discharge, Indirect discharge**
Radiated electromagnetic field strength	**Measurement Frequency Range: 26 MHz – 6 GHz**
against in-vehicle	**Measurement Frequency Range: 200 MHz – 6 GHz**
TEM CELL	**Measurement Frequency Range: 1 MHz – 400 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 – 230 MHz

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

Bulk current injection test, measurement frequency range: 100 kHz – 2 GHz

Road vehicles - Portable transmitters, measurement frequency range: 28 MHz – 6 GHz

Conducted Common mode disturbances

Radiated magnetic field

Interruptions and Voltage variations

Low frequency immunity **Mains Harmonics and Interharmonics**

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

Harmonic current

Harmonic current test

Voltage changes, Voltage fluctuations and Flicker test

Vehicle /In-vehicle equipment test

ESA（In-vehicle equipment）Emission

ESA（In-vehicle equipment）Immunity

Telecommunication equipment performance 1

Intentional Radiators (FCC Part 15 Subpart C)

U-NII without DFS Intentional Radiators (FCC Part 15 Subpart E)

U-NII with DFS Intentional Radiators (FCC Part 15 Subpart E)

Commercial Mobile Services (FCC licensed Radio Service Equipment)
(Part 22/Part 24/Part 25/Part 27)

General Mobile Radio Services (FCC Licensed Radio Service Equipment)
(Part 22/Part 90/Part 95/Part 97/Part 101)

Test based on Canadian standards

Test based on European standards

Telecommunication equipment performance 2

Exposure to electric, magnetic, and electromagnetic fields SAR
[Test condition] Artificial Body Phantom + Electric field probe

Magnetic field strength **[Test condition] Magnetic probe**

Electric field strength **[Test condition] Electric field probe**

Voluntary EMC Laboratory Accreditation Center Inc.

Scope of Accreditation

（Test standards）

Accreditation Number: VLAC-001-2
Expiration Date: April 30, 2026

〔Name of Laboratory〕

Japan Quality Assurance Organization.

〔Test site name〕

Kitakansai Testing Center, Saito EMC Branch

〔Test site Address〕

7-3-10, Saito Asagi, Ibaraki-shi, Osaka-fug

〔Test standards〕

Emission test

VCCI Technical requirements: VCCI-CISPR 32:2016
J55011(H27), J55014-1(H27), J55015(H29), J55032(H29), CISPRJ 15:2017, CISPRJ 32:2017
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 46.2 Paragraph 1 Item 4 (Broad band electric power line carrier communication facility) / Notification 520 of the Ministry of Posts and Telecommunications (H18.10.4)
Regulations for Enforcement of the Radio Law: Article 46.7 (Microwave Oven or IH Cooking Heater) / Separate Table 8
FCC 47 CFR Part 15 Subpart B: ANSI C63.4-2014, ANSI C63.4a-2017
FCC 47 CFR Part 18: FCC MP-5 (February 1986) (up to 200 GHz)

CISPR 11:2015+A1:2016+A2:2019 / 2024, CISPR 12:2007+A1:2009, CISPR 13:2009+A1:2015
CISPR 14-1:2020, CISPR 15:2018, CISPR 32:2015+A1:2019
CISPR 16-2-1:2014+A1:2017, CISPR 16-2-2:2010, CISPR 16-2-3:2016+A1:2019
EN 55011:2016+A1:2017+A11:2020+A2:2021, EN 55012:2007+A1:2009, EN 55014-1:2017+A11:2020
EN IEC 55014-1:2021, EN IEC 55015:2019+A11:2020, EN 55032:2015+A11:2020+A1:2020
EN 55016-2-1:2014+A1:2017, EN 55016-2-2:2011, EN 55016-2-3:2010+A1:2010+AC:2013+A2:2014
EN 55016-2-3:2017+A1:2019
AS CISPR 11:2017, AS/NZS CISPR 12:2013, AS/NZS CISPR 14.1:2021, AS CISPR 15:2017
AS/NZS CISPR 32:2015+A1:2020
KS C 9811:2019, KS C 9814-1:2022, KS C 9815:2019, KS C 9832:2019
KS C 9816-2-1:2020 /-2-2:2020 /-2-3:2020
ICES-Gen(Issue 1+A1:2021), ICES-001(Issue 5), ICES-003(Issue 7), ICES-005(Issue 5)
BETS-7(Issue 3), BETS-7(Issue 4)
GB 4824:2019, GB 4343.1:2018, GB 17743:2007, GB/T 9254.1:2021
CNS 13803:2003 / 2018, CNS 13439:2004, CNS 13783-1:2013 / 2019, CNS 14115:2016
CNS 13438:2006, CNS 15936:2016
SANS 211:2010, SANS 214-1:2020, SANS 2332:2017

IEC 61000-6-3:2020, IEC 61000-6-4:2018, IEC 61000-6-8:2020
EN 61000-6-3:2007+A1:2011, EN IEC 61000-6-3:2021, EN 61000-6-4:2007+A1:2011
EN IEC 61000-6-4:2019, EN IEC 61000-6-8:2020
AS/NZS 61000.6.3:2021, AS 61000.6.4:2020, KS C 9610-6-3:2017, KS C 9610-6-4:2022

JIS F 8081:2022, IACS UR E10:2021+COR1:2022 / 2023
Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use: Article 7 Chapter 1
IEC 60945:2002+COR1:2008, EN 60945:2002

IEC 62236-3-2:2018, EN 50121-3-2:2016+A1:2019
EN 50155(12.2.9.2 項):2021, JIS E 5006(12.2.9.2 項):2017
IEC 61131-2:2017, EN 61131-2:2007, KN 61131-2:2018, KS C IEC 61131-2:2017,
IEC 60947-5-2:2019, EN IEC 60947-5-2:2020+A11:2022, EN 50370-1:2005

The scopes of the following standards groups are limited to emission tests, immunity tests, and harmonic current tests. [refer to Note.1]

IEC 61326-1: 2005 / 2012 / 2020, IEC 61326-2-1:2020 /-2-2:2012 /-2-2:2020 /-2-3:2006 /-2-3:2012 /-2-3:2020 /-2-4:2020 /-2-5:2020 /-2-6:2005 /-2-6:2012 /-2-6:2020
EN 61326-1:2013, EN 61326-2-1:2013 /-2-2:2013 /-2-3:2013 /-2-4:2013 /-2-5:2013 /-2-6:2013
EN IEC 61326-1:2021, EN IEC 61326-2-1:2021 /-2-2:2021 /-2-3:2021 /-2-4:2021 /-2-5:2021 /-2-6:2021
JIS C 61326-1:2017 / 2022, JIS C 61326-2-1:2022 /-2-2:2024 /-2-3:2024 /-2-6:2019 /-2-6:2023
KS C IEC 61326-1:2018, KS C IEC 61326-2-1:2018 /-2-3:2019, SANS 61326-1:2007

JIS T 9206:2017
IEC 60974-10:2020, EN 60974-10:2014+A1:2015, EN IEC 60974-10:2021, SANS 60974-10:2015
IEC 62040-2:2016+ISH1:2018, EN IEC 62040-2:2018
IEC 61204-3:2016, EN IEC 61204-3:2018
IEC 61800-3:2017 / 2022, EN IEC 61800-3:2018 / 2023
EN 50270:2015+AC:2016, ISO 13482:2014
IEC 61851-21-1:2017+AC:2017 /-21-2:2018, EN IEC 61851-21-2:2021

IEC 60601-1-2:2014+A1:2020, IEC 60601-2-2:2017+A1:2023 / -2-5:2009 /-2-6:2012+A1:2016+A2:2022 /-2-8:2010+A1:2015 /-2-10:2012+A1:2016+A2:2023 /-2-16:2018 /-2-17:2013 /-2-18:2009 /-2-21:2020 /-2-23:2011 /-2-24:2012 /-2-25:2011 /-2-27:2011+COR1:2012 /-2-29:2008 /-2-33:2022 /-2-34:2011 /-2-35:2020 /-2-36:2014 /-2-37:2007+A1:2015 /-2-39:2018 /-2-40:2016 /-2-41:2021 /-2-43:2022 /-2-44:2009+A1:2012+A2:2016 /-2-45:2011+A1:2015+A2:2022 /-2-46:2023 /-2-47:2012 /-2-49:2011 /-2-50:2020 /-2-52:2009+A1:2015 /-2-54:2022 /-2-57:2023 /-2-63:2012+A1:2017+A2:2021 /-2-65:2012+A1:2017+A2:2021, IEC 60601-1-11:2015+A1:2020 , IEC 80601-2-26:2019+COR1:2021 /-2-30:2018 /-2-60:2019 /-2-77:2019 /-2-78:2019 , ISO 80601-2-12:2020 /-2-55:2018 /-2-56:2017+A1:2018 /-2-61:2017

EN 60601-1-2:2015+A1:2021, EN 60601-2-5:2015 /-2-6:2015+A1:2016 /-2-8:2015+A1:2016 /-2-10:2015+A1:2016 /-2-17:2015 /-2-18:2015 /-2-23:2015 /-2-24:2015 /-2-25:2015 /-2-27:2014 /-2-29:2008+A11:2021 /-2-33:2010+A11:2011+A1:2015+A2:2015+A12:2016 /-2-34:2014 /-2-36:2015 /-2-37:2008+A11:2011+A1:2015 /-2-40:2019 /-2-43:2010+A1:2018+A2:2020 /-2-44:2009+A11:2011+A1:2012+A2:2016 /-2-45:2011+A1:2015 /-2-47:2015 /-2-49:2015 /-2-52:2010+A1:2015 /-2-54:2009+A1:2015+A2:2019 /-2-57:2011 /-2-63:2015+A1:2019+A2:2021 /-2-65:2013+A1:2020+A2:2021, EN 60601-1-11:2015+A1:2021, EN ISO 80601-2-12:2020 /-2-55:2018 /-2-56:2017+A1:2020 /-2-61:2019, EN IEC 60601-2-2:2018 /-2-16:2019 /-2-21:2021 /-2-35:2021 /-2-39:2019 /-2-41:2021 /-2-43:2023 /-2-46:2019 /-2-50:2021, EN IEC 80601-2-26:2020+AC:2021 /-2-30:2019 /-2-49:2019 /-2-60:2020 /-2-77:2021 /-2-78:2020

JIS T 0601-1-2:2018 / 2023, JIS T 0601-2-2:2023 /-2-5:2015 /-2-6:2015 /-2-10:2015 /-2-16:2022 /-2-18:2013 /-2-21:2019 /-2-24:2018 /-2-25:2014 /-2-35:2015 /-2-37:2018 /-2-39:2013 /-2-39:2023 /-2-201:2015 /-2-202:2015 /-2-203:2015 /-2-204:2015 /-2-205:2015 /-2-206:2015 /-2-207:2015 /-2-208:2015, JIS T 60601-2-47:2018 /-2-63:2019 /-2-65:2019, JIS T 80601-2-55:2014 /-2-60:2021 /-2-61:2014 /-2-78:2022, JIS T 1115:2023, JIS T 1140:2014, JIS T 1203:1998, JIS T 1304:1998 , JIS T 5753:2017, JIS T 9205:2016, JIS T 9254:2016, JIS Z 4620:1999 , JIS Z 4751-2-29:2005 /-2-43:2021 /-2-44:2018 /-2-45:2017 /-2-54 :2021, JIS Z 4951:2017

KS C IEC 60601-1-2:2020, KS C IEC 60601-2-2:2017 /-2-5:2011 /-2-6:2016 /-2-8:2015 /-2-10:2016 /-2-16:2018 /-2-17:2013 /-2-21:2020 /-2-23:2011 /-2-24:2012 /-2-25:2011 /-2-29:2008 /-2-33:2015 /-2-34:2015 /-2-36:2014 /-2-37:2015 /-2-39:2018 /-2-40:2016 /-2-41:2013 /-2-43:2017 /-2-44:2016 /-2-45:2015 /-2-46:2016 /-2-47:2012 /-2-50:2020 /-2-52:2015 /-2-54:2018 /-2-63:2017 /-2-65:2017

YY 0505:2012, YY 9706.102:2021

[Note 2] In emission testing, In-Situ are outside the scope of accreditation.

Immunity test **[Including the test standards listed in Note 1.]**

CISPR 14-2:2020, CISPR 35:2016[*1]
EN 55014-2 :2015, EN IEC 55014-2:2021, EN 55035[*1]:2017+A11:2020
KS C 9814-2:2020, KS C 9835:2019[*1], SANS 214-2:2009, SANS 2335:2018[*1]
IEC 61547:2020, EN 61547:2009, EN IEC 61547:2023, KS C 9547:2020

IEC 61000-4-2:2008 /-4-3:2020 /-4-4:2012 /-4-5:2014+A1:2017 /-4-6:2013+COR1:2015 /-4-8:2009 /-4-11:2020+COR1:2020+COR2:2022 /-4-13:2002+A1 :2009+A2:2015 /-4-16:2015 /-4-29:2000 /-4-39:2017, IEC TR 60601-4-2:2016
EN 61000-4-2:2009 /-4-4:2012 /-4-5:2014+A1:2017 /-4-6:2014+AC:2015 /-4-8:2010 /4-13:2002+A1:2009+A2:2016 /-4-16:2016 /-4-29:2000 /-4-39:2017, EN IEC 61000-4-3:2020 /-4-11:2020+AC:2022
JIS C 61000-4-2:2012 /-4-3:2022 /-4-4:2015 /-4-5:2018 /-4-6:2017 /-4-8:2016 /-4-11:2021 /-4-16 2017
KS C 9610-4-2:2017 /-4-3:2017 /-4-4:2020 /-4-5:2020 /-4-6:2020 /-4-8:2017 /-4-11:2020

IEC 61000-6-1:2016, IEC 61000-6-2:2016, IEC 61000--6-7:2014
EN 61000-6-1:2007, EN IEC 61000-6-1:2019, EN 61000-6-2:2005+AC:2005, EN IEC 61000-6-2:2019 EN 61000-6-7:2015
JIS C 61000-6-1:2019, JIS C 61000-6-2:2019, JIS C 61000-6-7:2020
KS C 9610-6-1:2019, KS C 9610-6-2:2019

JIS F 8081:2022, IACS UR E10:2021+COR1:2022 / 2023
Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use: Article 7 Chapter 1
IEC 60945:2002+COR1:2008, EN 60945:2002
IEC 62236-3-2:2018, EN 50121-3-2:2016+A1:2019
EN 50155(section 12.2.8 and 12.2.9.1):2021, JIS E 5006(section 12.2.8 and 12.2.9.1):2017
IEC 61131-2:2017, EN 61131-2:2007, KN 61131-2:2018, KS C IEC 61131-2:2017
IEC 60947-5-2:2019, EN IEC 60947-5-2:2020+A11:2022

IEC 62599-2:2010, EN 50130-4:2011 +A1:2014, EN 50370-2:2003
IEC 60335-1(section 19.11.4):2020+COR1:2021
EN 60335-1(section 19.11.4):2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021+A16:2023
IEC 61496-1(section 4.3.2 and 5.4.3):2020, EN IEC 61496-1(section 4.3.2 and 5.4.3):2020
JIS B 9704-1(section 4.3.2 and 5.4.3):2015, JIS B 7611-2(Appendix B.3):2015, GB4343.2:2020
IEC 61326-3-1:2017, EN 61326-3-1:2017, JIS C 61326-3-1:2020
JEITA ET-2201:2021[*1]

[*1] : Except for "Broadband impulsive conducted disturbances"

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

IEC 61000-3-2:2018+A1:2020, EN 61000-3-2:2014, EN IEC 61000-3-2:2019+A1:2021
AS/NZS IEC 61000.3.2:2023, JIS C 61000-3-2:2019, GB 17625.1:2022 ,SANS 61000-3-2:2009
IEC 61000-3-3:2013+A1:2017+A2:2021, EN 61000-3-3:2013+A1:2019+A2:2021
AS/NZS IEC 61000.3.3:2023, SANS 61000-3-3:2009
IEC 61000-3-11:2017, EN IEC 61000-3-11:2019
IEC 61000-3-12:2011+A1:2021, EN 61000-3-12:2011
IEC 61000-6-3:2020, EN 61000-6-3:2007+A1:2011, EN IEC 61000-6-3:2021, AS/NZS 61000.6.3:2021

Vehicle /In-vehicle equipment test

EU Directive 2004/104/EC, Annex I Clause 6.5/ 6.6/ 6.7/ 6.8/ 6.9
ECE R-10 (Clause 6.5, 6.6, 6.7, 6.8, 6.9, 7.10-7.19):Rev6+A1:2020+A2:2022
CISPR 25 (Except for Vehicle):2021, EN 50498:2010
ISO 7637-2:2011, ISO 7637-3:2016
ISO 11452-1:2015, ISO 11452-2:2019, ISO 11452-3:2016, ISO 11452-4:2020, ISO 11452-9:2021, ISO 10605:2008+A1:2014

Telecommunication characteristic test 1

Intentional Radiators (FCC Part 15 Subpart C): ANSI C63.10-2013 (up to 200 GHz)
Intentional Radiators (FCC Part 15 Subpart C): ANSI C63.10-2020 +Cor.1-2023 (up to 200 GHz)
U-NII without DFS Intentional Radiators (FCC Part 15 Subpart E): ANSI C63.10-2013
U-NII without DFS Intentional Radiators (FCC Part 15 Subpart E): ANSI C63.10-2020 +Cor.1-2023
U-NII with DFS Intentional Radiators (FCC Part 15 Subpart E): FCC KDB Publication 905462 D02 U-NII DFS Compliance Procedures New Rules v02 (April 8, 2016)
Commercial Mobile Services (FCC licensed Radio Service Equipment) (Part 22 /Part 24 /Part 25 /Part 27): ANSI/TIA-603-E-2016, ANSI/TIA-102.CAAA-E-2016, ANSI C63.26-2015
General Mobile Radio Services (FCC Licensed Radio Service Equipment) (Part 22 /Part 90 /Part 95 /Part 97 /Part 101): ANSI/TIA-603-E-2016, ANSI/TIA-102.CAAA-E-2016, ANSI C63.26-2015

EN 300 220-1:V.3.1.1, EN 300 220-2:V.3.2.1, EN 300 220-3-1:V.2.1.1, EN 300 220-3-2:V.1.1.1
EN 300 220-4:V.1.1.1, EN 300 328:V.2.2.2, EN 300 330:V.2.1.1, EN 300 440:V.2.2.1
EN 301 091-1:V.2.1.1, EN 301 091-2:V.2.1.1, EN 301 091-3:V.1.1.1
EN 301 489-1:V.2.2.3, EN 301 489-3:V.2.3.2, EN 301 489-9:V.2.2.1
EN 301 489-17:V.3.2.4 / V.3.2.6(Draft), EN 301 489-19:V.2.2.1, EN 301 489-34:V.2.2.1
EN 301 893:V.2.1.1 / V.2.2.0(Draft)
EN 302 208:V.3.3.1 / V.3.4.1, EN 302 264:V.2.1.1, EN 302 502:V.2.1.1 / V.2.1.3(Draft)
EN 303 345-1:V.1.1.1, EN 303 345-2:V.1.1.1 / V.1.2.1, EN 303 345-3:V.1.1.1, EN 303 345-4:V.1.1.1
EN 303 340:V.1.1.2 / V.1.2.1, EN 303 372-2:V.1.1.1 / V.1.2.1, EN 303 396:V.1.1.1
EN 303 413:V.1.2.1, EN 303 417:V.1.1.1, EN 303 687:V.1.1.1
EN 304 220-1:V.1.1.0(Draft), EN 304 220-2:V.1.1.0(Draft)
EN 305 550:V.2.1.0(Draft)

RSS-Gen(Issue 5+A1:2019+A2:2021), RSS-132(Issue 4), RSS-133(Issue 6+A1:2018)
RSS-210(Issue 10+A1:2020), RSS-216(Issue 2+A1:2020), RSS-247(Issue 3), RSS-248(Issue 2)
RSS-310(Issue 5)

Telecommunication equipment performance 2

RF Exposure (Devices subject to SAR requirements) : IEEE Std 1528™-2013 (up to 6 GHz)
IEC 62209-1:2016, IEC 62209-2:2010+A1:2019, IEC/IEEE 62209-1528:2020
IEC 62233:2005, IEC 62311:2019, IEC 62479:2010, IEC 62493:2015+A1:2022
EN 62209-1:2016, EN 62209-2:2010+A1:2019, EN IEC/IEEE 62209-1528:2021
EN 62233:2008, EN 62311:2008, EN IEC 62311:2020, EN 62479:2010, EN 62493:2022
EN 50360:2017+A1:2023, EN 50566:2017+A1:2023, EN 50663:2017, EN 50665:2017
RSS-102(Issue 5+A1:2021), ARIB STD-T56:2019, EN 50364:2018
ACMA Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard
Ordinance Regulating Radio Equipment: Article 14.2 (Specific Absorption Rate) / Notification 324 of the Ministry of Posts and Telecommunications (H25.8.23)

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 (5.1,2024).