

# Scope of Accreditation

(Measurement Method)

**Accreditation Number : VLAC-008-3**

**Expiration Date : December 31, 2023**

[Name of Laboratory]

**Intertek Japan K.K.**

[Test site name]

**Matsuda Laboratory**

[Test site Address]

**1283 Yadoriki, Matsuda-machi, Ashigarakami-gun, Kanagawa-ken,  
258-0001 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] **On the reference ground plane: In-vehicle equipment test (1m Method)**

**Measurement Frequency Range : 150 kHz - 2.5GHz**

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

**Disturbance magnetic field strength measurement**

[Test condition] **Loop Antenna, Three axis loop antenna**

**Disturbance power measurement [Test condition] Absorbing 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, Capacitive voltage probe**

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

**Conducted disturbance Measurement: DC power line port**

**Conductive interference test against in-vehicle equipment**

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

**Conducted disturbance Measurement:**

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

**Wanted signal and disturbance voltage test at the RF output, Selective voltmeter**

## **Immunity test**

**Electro static discharge test**

**Contact discharge, Air discharge, Direct discharge**

**Radiated electromagnetic field strength  
against in-vehicle equipment**

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

**Measurement frequency:200 MHz – 4 GHz**

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

**Mains port, Telecommunication/Signal port,  
against in-vehicle equipment**

**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: 20 MHz – 200 MHz**

**Radiated magnetic field**

**Interruptions and Voltage variations**

## **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)  
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)  
Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) (Part 80 / Part 87)  
Based on Canadian standards  
Based on European standards

**Telecommunication equipment performance 2**  
Magnetic field strength [Test condition] Magnetic probe  
Electric field strength [Test condition] Electric field probe

**Environment (Power consumption)**  
Standard power consumption level TEC method  
Operation method OM method

**Voluntary EMC Laboratory Accreditation Center Inc.**

# Scope of Accreditation

(Test standards)

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**1283 Yadoriki, Matsuda-machi, Ashigarakami-gun, Kanagawa-ken,  
258-0001 Japan**

[Test Standards]

## Emission test

VCCI Technical Requirements : VCCI-CISPR 32<sup>\*1\*2</sup>

Technical requirements under the Electrical Appliances and Materials safety Act appendix 10 Chapter 2, 4, 5, 7 and 9

J55014-1, J55015, J55032<sup>\*1\*2</sup>, CISPRJ 15, CISPRJ 32<sup>\*1\*2</sup>

JIS C 61000-6-3, JIS C 61000-6-4

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

JIS T 0601-1-2, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-10/-2-16/-2-18/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39/-2-40/

-2-47/-2-63/-2-64/-2-65/-2-66/-2-68/-2-201/-2-202/-2-203/-2-204/-2-205/-2-206/-2-207/-2-208,

JIS T 60601-2-47/-2-63/-2-65/-2-68, JIS T 80601-2-55/-2-60/-2-61

FCC 47 CFR Part 15 Subpart B : ANSI C63.4-2014 (Up to 40 GHz)

FCC 47 CFR Part 15 Subpart B : ANSI C63.4a-2017 (Up to 40 GHz)

FCC 47 CFR Part 18 : FCC MP-5 (Up to 40 GHz)

CISPR 11, CISPR 14-1, CISPR 15, CISPR 22, CISPR 25, CISPR 32<sup>\*1\*2</sup>, ISO 7637-2

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

IEC 61131-2, IEC 61800-3, IEC 62236-3-2

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

IEC 60601-1-2, IEC 60601-2-1/-2-2/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-16/-2-17/-2-18/-2-19/

-2-20/-2-21/-2-22/-2-23/-2-24/-2-25/-2-26/-2-27/-2-28/-2-29/-2-31/-2-33/-2-34/-2-36/-2-37/-2-39/-2-40/

-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/-2-50/-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-66/-2-68/-2-75/

-2-76/-2-83, IEC 80601-2-26/-2-30/-2-35/-2-49/-2-58/-2-59/-2-60/-2-71/-2-77/-2-78, ISO 80601-2-12/-2-13/

-2-55/-2-56/-2-61/-2-67/-2-69/-2-70/-2-72/-2-74/-2-79/-2-80

EN 55011, EN IEC 55014-1, EN IEC 55015, EN 55022, EN 55025, EN 55032<sup>\*1\*2</sup>, EN 55103-1

EN 50121-3-2, EN 61131-2, EN IEC 61800-3

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

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

EN 60601-1-2, EN 60601-2-1/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-17/-2-18/-2-19/-2-21/-2-23/

-2-24/-2-25/-2-26/-2-27/-2-29/-2-33/-2-34/-2-36/-2-37/-2-40/-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/-2-50/

-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-68, EN IEC 60601-2-2/-2-16/-2-20/-2-22/-2-28/-2-31/-2-39/

-2-66/-2-75/-2-76/-2-83, EN 80601-2-35/-2-58, EN IEC 80601-2-30/-2-49/-2-59/-2-60/-2-71

BS EN 55011, BS EN IEC 55014-1, BS EN IEC 55015, BS EN 55022, BS EN 55025, BS EN 55032\*<sup>1</sup>\*<sup>2</sup>  
BS EN 50121-3-2, BS EN 61131-2, BS EN IEC 61800-3  
BS EN IEC 61000-6-3, BS EN IEC 61000-6-4, BS EN IEC 61000-6-8  
BS EN IEC 61326-1, BS EN IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6  
BS EN 60601-1-2, BS EN 60601-2-1/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-17/-2-18/-2-19/-2-21/  
-2-23/-2-24/-2-25/-2-26/-2-27/-2-29/-2-33/-2-34/-2-36/-2-37/-2-40/-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/  
-2-50/-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-68, BS EN IEC 60601-2-2/-2-16/-2-20/-2-22/-2-28/  
-2-31/-2-39/-2-66/-2-75/-2-76/-2-83, BS EN 80601-2-35/-2-58, BS EN IEC 80601-2-30/-2-49/-2-59/-2-60/  
-2-71

AS CISPR 11, AS CISPR 14.1, AS CISPR 15, AS/NZS CISPR 22, AS/NZS CISPR 32\*<sup>1</sup>\*<sup>2</sup>  
AS/NZS 3200.1.2, AS/NZS 61000.6.3, AS/NZS 61000.6.4  
CNS 13803, CNS 13438, CNS 13783-1, CNS 15936  
ICES-001, ICES-003, ICES-005, ICES-Gen  
KS C 9610-6-3, KS C 9610-6-4, KS C 9800-3, KS C 9811, KS C 9832\*<sup>1</sup>\*<sup>2</sup>  
SANS 211, SANS 214-1, SANS 215, SANS 222, SANS 2332, SANS 60601-1-2, SANS 61326-1  
SANS 61000-6-3, SANS 61000-6-4

\*<sup>1</sup> Except for measurement in a FAR, \*<sup>2</sup> Except for broadcast radio receivers

### Immunity test

CISPR 14-2, CISPR 24, CISPR 35\*<sup>3</sup>, ISO 11452-2, ISO 11452-4, ISO 7637-2  
IEC 61547, IEC 61800-3, IEC 62236-3-2  
IEC 61000-6-1, IEC 61000-6-2  
IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11, IEC 61000-4-39 (Frequency Range 9 kHz - 26 MHz)  
IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6  
IEC 60601-1-2, IEC 60601-2-1/-2-2/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-16/-2-17/-2-18/-2-19/  
-2-20/-2-21/-2-22/-2-23/-2-24/-2-25/-2-26/-2-27/-2-28/-2-29/-2-31/-2-33/-2-34/-2-36/-2-37/-2-39/-2-40/  
-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/-2-50/-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-66/-2-68/-2-75/  
-2-76/-2-83, IEC 80601-2-26/-2-30/-2-35/-2-49/-2-58/-2-59/-2-60/-2-71/-2-77/-2-78, ISO 80601-2-12/-2-13/  
-2-55/-2-56/-2-61/-2-67/-2-69/-2-70/-2-72/-2-74/-2-79/-2-80

EN IEC 55014-2, EN 55024, EN 55035\*<sup>3</sup>, EN 55103-2  
EN 50121-3-2, EN 50130-4, EN 61547, EN IEC 61800-3  
EN IEC 61000-6-1, EN IEC 61000-6-2  
EN 61000-4-2/-4-4/-4-5/-4-6/-4-8, EN IEC 61000-4-3/4-11  
IEC 61000-4-39 (Frequency Range 9 kHz - 26 MHz)  
EN IEC 61326-1, EN IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6  
EN 60601-1-2, EN 60601-2-1/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-17/-2-18/-2-19/-2-21/-2-23/  
-2-24/-2-25/-2-26/-2-27/-2-29/-2-33/-2-34/-2-36/-2-37/-2-40/-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/-2-50/  
-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-68, EN IEC 60601-2-2/-2-16/-2-20/-2-22/-2-28/-2-31/-2-39/  
-2-46/-2-66/-2-75/-2-76/-2-83, EN 80601-2-35/-2-58, EN IEC 80601-2-30/-2-49/-2-59/-2-60/-2-71

BS EN 50121-3-2, BS EN 50130-4, BS EN IEC 55014-2, BS EN 55024, BS EN 55035\*<sup>3</sup>, BS EN 55103-2  
BS EN 61547, BS EN IEC 61800-3  
BS EN IEC 61000-6-1, BS EN IEC 61000-6-2  
BS EN 61000-4-2/-4-4/-4-5/-4-6/-4-8, BS EN IEC 61000-4-3/4-11  
BS EN 61000-4-39 (Frequency Range 9 kHz - 26 MHz)  
BS EN IEC 61326-1, BS EN IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6  
BS EN 60601-1-2, BS EN 60601-2-1/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-17/-2-18/-2-19/-2-21/  
-2-23/-2-24/-2-25/-2-26/-2-27/-2-29/-2-33/-2-34/-2-36/-2-37/-2-40/-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/  
-2-50/-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-68, BS EN IEC 60601-2-2/-2-16/-2-20/-2-22/-2-28/  
-2-31/-2-39/-2-66/-2-75/-2-76/-2-83, BS EN 80601-2-35/-2-58, BS EN IEC 80601-2-30/-2-49/-2-59/-2-60/  
-2-71

AS/NZS CISPR 14.2, AS/NZS CISPR 24, AS/NZS 3200.1.2, AS/NZS 61000.6.1, AS/NZS 61000.6.2  
KN 24, KS C 9610-6-1/-6-2, KS C 9610-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11, KS C 9800-3, KS C 9835\*<sup>3</sup>  
SANS 214-2, SANS 224, SANS 2335, SANS 60601-1-2, SANS 61326-1, SANS 61547  
SANS 61000-6-1/-6-2, SANS 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11

JIS C 61000-6-1, JIS C 61000-6-2  
JIS C 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-11  
JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-3/-2-6  
JIS T 0601-1-2, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-10/-2-16/-2-18/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39/-2-40/  
-2-47/-2-63/-2-64/-2-65/-2-66/-2-68/-2-201/-2-202/-2-203/-2-204/-2-205/-2-206/-2-207/-2-208,  
JIS T 60601-2-47/-2-63/-2-65/-2-68, JIS T 80601-2-55/-2-60/-2-61

\*<sup>3</sup> Except for Annex A (Broadcast reception function), Annex H (Telephony function) and xDSL Equipments

## Harmonic Test in Public Low Voltage Systems

IEC 61000-3-2, IEC 61000-3-3  
IEC 61000-6-3, IEC 61000-6-8  
IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/2-4/-2-5/-2-6  
IEC 60601-1-2, IEC 60601-2-1/-2-2/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-16/-2-17/-2-18/-2-19/  
-2-20/-2-21/-2-22/-2-23/-2-24/-2-25/-2-26/-2-27/-2-28/-2-29/-2-31/-2-33/-2-34/-2-36/-2-37/-2-39/-2-40/  
-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/-2-50/-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-66/-2-68/-2-75/  
-2-76/-2-83, IEC 80601-2-26/-2-30/-2-35/-2-49/-2-58/-2-59/-2-60/-2-71/-2-77/-2-78, ISO 80601-2-12/-2-13/  
-2-55/-2-56/-2-61/-2-67/-2-69/-2-70/-2-72/-2-74/-2-79/-2-80

EN IEC 61000-3-2, EN 61000-3-3  
EN IEC 61000-6-3, EN IEC 61000-6-8  
EN IEC 61326-1, EN IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6  
EN 60601-1-2, EN 60601-2-1/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-17/-2-18/-2-19/-2-21/-2-23/  
-2-24/-2-25/-2-26/-2-27/-2-29/-2-33/-2-34/-2-36/-2-37/-2-40/-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/-2-50/  
-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-68, EN IEC 60601-2-2/-2-16/-2-20/-2-22/-2-28/-2-31/-2-39/  
-2-66/-2-75/-2-76/-2-83, EN 80601-2-35/-2-58, EN IEC 80601-2-30/-2-49/-2-59/-2-60/-2-71

BS EN IEC 61000-3-2, BS EN 61000-3-3  
BS EN IEC 61000-6-3, BS EN IEC 61000-6-8  
BS EN IEC 61326-1, BS EN IEC 61326-2-1/-2-2/-2-3/-2-4/-2-5/-2-6  
BS EN 60601-1-2, BS EN 60601-2-1/-2-3/-2-4/-2-5/-2-6/-2-8/-2-10/-2-11/-2-12/-2-17/-2-18/-2-19/-2-21/  
-2-23/-2-24/-2-25/-2-26/-2-27/-2-29/-2-33/-2-34/-2-36/-2-37/-2-40/-2-41/-2-43/-2-44/-2-45/-2-47/-2-49/  
-2-50/-2-52/-2-54/-2-57/-2-62/-2-63/-2-64/-2-65/-2-68, BS EN IEC 60601-2-2/-2-16/-2-20/-2-22/-2-28/  
-2-31/-2-39/-2-46/-2-66/-2-75/-2-76/-2-83, BS EN 80601-2-35/-2-58, BS EN IEC 80601-2-30/-2-49/-2-59/  
-2-60/-2-71

AS/NZS 3200.1.2, AS/NZS 61000.3.2, AS/NZS 61000.3.3  
KS C 9610-3-2, KS C 9800-3  
SANS 61000-3-2, SANS 61000-3-3, SANS 61000-6-3

JIS C 61000-3-2, JIS C 61000-6-3  
JIS C 61326-1, JIS C 61326-2-1/-2-2/-2-3/-2-6  
JIS T 0601-1-2, JIS T 0601-2-2/-2-3/-2-5/-2-6/-2-10/-2-16/-2-18/-2-21/-2-24/-2-25/-2-35/-2-37/-2-39/  
-2-40/-2-47/-2-63/-2-64/-2-65/-2-66/-2-68/-2-201/-2-202/-2-203/-2-204/-2-205/-2-206/-2-207/-2-208,  
JIS T 60601-2-47/-2-63/-2-65/-2-68, JIS T 80601-2-55/-2-60/-2-61

## Vehicle /In-vehicle equipment test

ECE R-10 Clause 6.5/ 6.6/ 6.8/ 6.9, EN 50498

## Telecommunication characteristic 1

Intentional Radiators (FCC Part 15 Subpart C) :ANSI C63.10-2013 (Up to 26.5 GHz)  
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 (Up to 10 GHz)  
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 (Up to 10 GHz)  
Maritime and Aviation Radio Services (FCC Licensed Radio Service Equipment) (Part 80 / Part 87) :  
ANSI/TIA-603-E-2016, ANSI C63.26-2015 (Up to 10 GHz)

**IC RSS-Gen, IC RSS-119, IC RSS-134, IC RSS-135, IC RSS-210, IC RSS-215, IC RSS-247  
IC RSS-310  
EN 300 328, EN 300 330 (Class1,13.56MHzのみ), EN 300 440  
EN 301 489-1/-3/-5/-15/-17/-19, EN 303 413**

**Telecommunication characteristic 2**

**FCC OET65/Supplement C (MPS method only)  
IC RSS-102 (MPS method only)  
IEC 62233, IEC 62311, IEC 62479  
EN 50371, EN 62233, EN 62311, EN 62479**

**Environment (Power consumption)**

**International Energy Star Program operational byelaw: Imaging Equipment  
USA Energy Star program operational byelaw: Imaging Equipment**

**Voluntary EMC Laboratory Accreditation Center Inc.**