

Scope of Accreditation

(Measurement Method)

Accreditation Number: VLAC-017-2

Expiration Date: June 15, 2026

[Name of Laboratory]

TÜV Rheinland Japan Ltd.

[Test site name]

Mobility Technology Center

[Test site Address]

2-22 Nagata, Chiryu-shi, Aichi, Japan

[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: 30 MHz - 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

Conducted disturbance Measurement: AC mains port

Voltage Measurement [Test condition] AMN

Conducted disturbance Measurement: DC power line port

Voltage Measurement [Test condition] AMN

Conductive interference test against in-vehicle equipment

Electrical transient conduction along supply lines

Immunity test

Electro static discharge test

Contact discharge, Air discharge, Indirect discharge

Radiated electromagnetic field strength

Measurement Frequency Range: 80 MHz – 6 GHz

against in-vehicle

Measurement Frequency Range: 80 MHz – 6 GHz

TEM cell

Measurement Frequency Range: 10 kHz – 400 MHz

Stripline

Measurement Frequency Range: 10 kHz – 500 MHz

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

RF conducted interference

Mains port, measurement frequency range: 150 kHz – 80 MHz

Telecommunication/Signal port, measurement frequency range: 150 kHz – 80 MHz

Bulk current injection test, measurement frequency range: 100 kHz – 500 MHz

Vehicle /In-vehicle equipment test

ESA (In-vehicle equipment) Emission

ESA (In-vehicle equipment) Immunity

Telecommunication equipment performance 1

Based on European standards

Voluntary EMC Laboratory Accreditation Center Inc.

Scope of Accreditation

(Test standards)

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[Test standards]

Emission test

FCC 47 CFR Part 15 Subpart B: ANSI C63.4-2014

ICES-003(Issue 7)

[Note-1] In emission testing, In-Situ are outside the scope of accreditation.

Immunity test

IEC 61000-4-2:2008 /-4-3:2020 /-4-4:2004+A1:2010 /-4-4:2012 /-4-5:2005 /-4-5:2014+A1:2017 /-4-6:2013+COR1:2015

EN 61000-4-2:2009 /-4-3:2006+A1:2008+A2:2010 /-4-4:2012 /-4-5:2014+A1:2017 /-4-6:2014

EN IEC 61000-4-3:2020

Electronic equipment in vehicles

ECE R-10 6.5/6.6/6.7/6.8/6.9/7.10/7.13/7.15/7.16/7.17/7.18/7.19: 1997 / 2008 / 2012 / 2014 / 2019

CISPR 25:2002^{*1} / 2008^{*2} / 2016^{*2} / 2021^{*3}

EN 55025:2003^{*1} / 2008^{*2} / 2017^{*2} / 2022^{*3}, EN IEC 55025:2022

AS/NZS CISPR 25: 2004^{*1} / 2010^{*2}

EN 50498:2010

ISO 11452-2:2004 / 2019 (80 MHz - 6 GHz)

ISO 11452-3:2001 / 2016

ISO 11452-4:2005 / 2011^{*4} / 2020^{*4}

ISO 11452-5:2002

ISO 10605:1994 / 2001 / 2008 / 2023^{*5} (Except for vehicle test)

ISO 7637-2:2004 / 2011

ISO 7637-3:1995 / 2007 / 2016

ISO 16750-2(Clauses 4.6.3 and 4.6.4):2012

^{*1}: Except for vehicle test and TEM cell method (component/module measurement)

^{*2}: Except for vehicle test, TEM cell method (component/module measurement) and Stripline method (component/module measurement)

^{*3}: Except for vehicle test and Stripline method (component/module measurement)

^{*4}: Except for TWC test method

^{*5}: Except for Set-up with field coupling plane

Telecommunication equipment performance 1

EN 300 220-1:V3.1.1^{*6}, EN 300 220-2:V3.1.1^{*6} / V3.2.1^{*6}, EN 300 328:V.2.1.1^{*6} / V.2.2.2^{*6}

EN 300 330:V2.1.1^{*6}, EN 300 330-1:V1.8.1^{*6}, EN 300 330-2:V1.6.1^{*6}, EN 300 440:V2.1.1^{*6} / V2.2.1^{*6}

EN 301 489-1:V1.9.2 / V2.2.3, EN 301 489-3:V1.6.1 / V2.1.1, EN 301 489-17:V3.2.4

EN 301 489-19:V.1.2.1 / V2.1.1, EN 301 893:V.2.1.1^{*6}

^{*6}: Radiated spurious emission only.

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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 (6.16, 2024).