SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

UL JAPAN, INC. - KASHIMA EMC LABORATORY
1614 Mushihata, Katori-shi
Chiba-ken, 289-0341, JAPAN
Kenichi Suda (Authorized Representative) Phone: +81 478 88 6500
Email: Kenichi.Suda@ul.com
Yuuya Oota (Automotive EMC Technical Contact) Phone: +81 478 88 6500
Email: Yuuya.Oota@ul.com
Web Page: http://japan.ul.com/

ELECTRICAL (EMC)

Valid to: January 31, 2025 Certificate Number: 1266.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following automotive electromagnetic compatibility and other EMC/EMI tests:

Test Technology:	**Test Method(s) [1]:**
Automotive Standards	
Electrostatic Discharge (ESD)	SAE J1113-13; ISO 10605 (*excluding clause 10*)
Radiated Emissions	CISPR 25 (Only components and modules); EN 55025 (Only components and modules)
Conducted Emissions	CISPR 25 (Only components and modules); EN 55025 (Only components and modules)
Absorber-Lined Shielded Enclosure (ALSE)	ISO 11452-2 (*200 MHz to 6 GHz*); SAE J1113-21 (*200 MHz to 6 GHz*)
Transverse Electromagnetic (TEM) Cell	ISO 11452-3
Bulk Current Injection (BCI) (*excluding Section 6.2 TWC test method*)	ISO 11452-4
Stripline	ISO 11452-5
Immunity to Magnetic Fields	ISO 11452-8; SAE J1113-22; MIL-STD-461E, F (RS101)
Portable Transmitters	ISO 11452-9

Test Technology:	**Test Method(s) [1]:**
Automotive Standards	
Immunity to Conducted Disturbances in the Extended Audio Frequency Range	ISO 11452-10
Conducted Transients	ISO 7637-2; ISO 7637-3
Electrical Loads	ISO 16750-2
Tri-Plate Line Method	SAE J1113-25
Product Family Standard for Aftermarket Electronic Equipment in Vehicles	EN 50498
Radio Tests (*up to 40 GHz*) (*excluding DFS testing as applicable*)	CFR 47, FCC Part 15C (using ANSI C63.10:2013 and ANSI C63.10:2020); CFR 47, FCC Part 15E (using ANSI C63.10:2013 and ANSI C63.10:2020); RSS-GEN; RSS-210; RSS-247 Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN); RSS-248; ETSI EN 300 328; ETSI EN 300 330; ETSI EN 300 440; ETSI EN 301 893; ETSI EN 303 413; ETSI EN 301 489-1; ETSI EN 301 489-3; ETSI EN 301 489-17; ETSI EN 301 489-19; AS/NZS 4268
RF Exposure	RSS-102 measurement (RF Exposure Evaluation)
Emissions	
Conducted and Radiated *(Radiated up to 40 GHz)*	47 CFR, FCC Part 15B (using ANSI C63.4:2014); 47 CFR, FCC Part 18 (using FCC OST/MP-5:1986); ICES-001; ICES-003; CISPR 11; EN 55011; SANS 211; CISPR 14-1; EN 55014-1; EN IEC 55014-1; SANS 214-1; CISPR 14-2; EN 55014-2; EN IEC 55014-2; SANS 214-2; CISPR 15; EN 55015; EN IEC 55015; SANS 215; CISPR 22; EN 55022; CISPR 32; EN 55032; AS/NZS CISPR 32; SANS 2332

Test Technology:	**Test Method(s) [1]:**
Emissions (continued)	
Harmonics	IEC 61000-3-2; EN 61000-3-2; EN IEC 61000-3-2; SANS 61000-3-2
Flicker	IEC 61000-3-3; EN 61000-3-3; SANS 61000-3-3
Generic and Product Family Standards	IEC 61000-6-1; EN 61000-6-1; EN IEC 61000-6-1; SANS 61000-6-1; IEC 61000-6-2; EN 61000-6-2; EN IEC 61000-6-2; SANS 61000-6-2; IEC 61000-6-3; EN 61000-6-3; EN IEC 61000-6-3; SANS 61000-6-3; IEC 61000-6-4; EN 61000-6-4; EN IEC 61000-6-4; SANS 61000-6-4; IEC 61326-1; EN 61326-1; EN IEC 61326-1; SANS 61326-1; IEC 61326-2-1; EN 61326-2-1; EN IEC 61326-2-1; IEC 61326-2-2; EN 61326-2-2; EN IEC 61326-2-2; IEC 61326-2-3; EN 61326-2-3; EN IEC 61326-2-3; SANS 61326-2-3; IEC 61326-2-6; EN 61326-2-6; EN IEC 61326-2-6; IEC 60601-1-2; EN 60601-1-2; SANS 60601-1-2; IEC 61131-2; EN 61131-2; IEC 61547; EN 61547; SANS 61547; EN 50130-4; ICES-001; ICES-003; CISPR 24; EN 55024; CISPR 35; EN 55035; SANS 2335
Immunity	
Electrostatic Discharge (ESD)	IEC 61000-4-2; EN 61000-4-2; SANS 61000-4-2
Radiated Immunity *(up to 6GHz @ 10V/M)*	IEC 61000-4-3; EN 61000-4-3; EN IEC 61000-4-3; SANS 61000-4-3
Electrical Fast Transient / Burst	IEC 61000-4-4; EN 61000-4-4; SANS 61000-4-4
Surge	IEC 61000-4-5; EN 61000-4-5; SANS 61000-4-5
Conducted Immunity	IEC 61000-4-6; EN 61000-4-6; SANS 61000-4-6
Magnetic Field Immunity *(up to 30A/M)*	IEC 61000-4-8; EN 61000-4-8; SANS 61000-4-8
Dips, Short Interrupts, Voltage Variations	IEC 61000-4-11; EN 61000-4-11; EN IEC 61000-4-11;SANS 61000-4-11
Radiated Fields in Close Proximity	IEC 61000-4-39; EN 61000-4-39 (Up to 26MHz)

On the following products or types of products: Automotive, Industrial, Scientific, and Medical (ISM) Equipment; Information Technology Equipment (ITE); Household Appliances; Electric Tools, Alarm Systems, Power Supplies

[1] When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

Testing Activities Performed in Support of FCC Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1 [2]:		
Rule Subpart/Technology	**Test Method**	**Maximum Frequency (MHz)**
Unintentional Radiators		
Part 15B	ANSI C63.4:2014	40000
Industrial, Scientific, and Medical Equipment		
Part 18	FCC MP-5:1986	40000
Intentional Radiators		
Part 15C	ANSI C63.10:2013	40000
U-NII without DFS Intentional Radiators		
Part 15E	ANSI C63.10:2013	40000

[2] Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (https://apps.fcc.gov/oetcf/eas/) for a listing of FCC approved laboratories.

Accredited Laboratory

A2LA has accredited

UL JAPAN, INC. - KASHIMA EMC LABORATORY

Chiba-ken, Japan

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 22nd day of February 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1266.01
Valid to January 31, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.