



EMI TEST REPORT

Test Report No. : 13016121H-R2

Applicant : OMRON Automotive Electronics Co. Ltd
Type of Equipment : Body Control Module
Model No. : K56RA
FCC ID : OUCK56RA
Test regulation : FCC Part 15 Subpart B: 2019 Class B
Test Result : Complied (Refer to SECTION 3.2)

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report covers EMC technical requirements. It does not cover administrative issues such as Manual or non-EMC test related Requirements. (if applicable)
6. The all test items in this test report are conducted by UL Japan, Inc. Ise EMC Lab.
7. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
8. The information provided from the customer for this report is identified in SECTION 1.
9. This report is a revised version of 13016121H-R1. 13016121H-R1 is replaced with this report.

Date of test: September 2, 2019

Representative test engineer:

Hiroyuki Furutaka
Engineer

Consumer Technology Division

Approved by:

Shinichi Miyazono
Engineer

Consumer Technology Division



This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
*As for the range of Accreditation in NVLAP, you may refer to the WEB address,
http://japan.ul.com/resources/emc_accredited/

- ☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan.
☒ There is no testing item of "Non-accreditation".

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

REVISION HISTORY

Original Test Report No.: 13016121H

[illegible]

Reference: Abbreviations (Including words undescribed in this report)

AAN	Asymmetric Artificial Network	ISN	Impedance Stabilization Network
AC	Alternating Current	ISO	International Organization for Standardization
AM	Amplitude Modulation	JAB	Japan Accreditation Board
AMN	Artificial Mains Network	LAN	Local Area Network
Amp, AMP	Amplifier	LCL	Longitudinal Conversion Loss
ANSI	American National Standards Institute	LIMS	Laboratory Information Management System
Ant, ANT	Antenna	LISN	Line Impedance Stabilization Network
AP	Access Point	MRA	Mutual Recognition Arrangement
ASK	Amplitude Shift Keying	NIST	National Institute of Standards and Technology
Atten., ATT	Attenuator	NS	No signal detect.
AV	Average	NSA	Normalized Site Attenuation
BPSK	Binary Phase-Shift Keying	NVLAP	National Voluntary Laboratory Accreditation Program
BR	Bluetooth Basic Rate	OBW	Occupied Band Width
BT	Bluetooth	OFDM	Orthogonal Frequency Division Multiplexing
BT LE	Bluetooth Low Energy	PK	Peak
BW	BandWidth	PLT	long-term flicker severity
C.F	Correction Factor	POHC(A)	Partial Odd Harmonic Current
Cal Int	Calibration Interval	Pol., Polar.	Polarization
CAV	CISPR AV	PR-ASK	Phase Reversal ASK
CCK	Complementary Code Keying	Pst	short-term flicker severity
CDN	Coupling Decoupling Network	QAM	Quadrature Amplitude Modulation
Ch., CH	Channel	QP	Quasi-Peak
CISPR	Comite International Special des Perturbations Radioelectriques	QPSK	Quadri-Phase Shift Keying
Corr.	Correction	r.m.s., RMS	Root Mean Square
CPE	Customer premise equipment	RBW	Resolution Band Width
CW	Continuous Wave	RE	Radio Equipment
DBPSK	Differential BPSK	REV	Reverse
DC	Direct Current	RF	Radio Frequency
DET	Detector	RFID	Radio Frequency Identifier
Dmax	maximum absolute voltage change during an observation period	Rx	Receiving
DQPSK	Differential QPSK	SINAD	Ratio of (Signal + Noise + Distortion) to (Noise + Distortion)
DSSS	Direct Sequence Spread Spectrum	S/N	Signal to Noise ratio
EDR	Enhanced Data Rate	SA, S/A	Spectrum Analyzer
e.i.r.p., EIRP	Equivalent Isotropically Radiated Power	SG	Signal Generator
EM clamp	Electromagnetic clamp	SVSWR	Site-Voltage Standing Wave Ratio
EMC	ElectroMagnetic Compatibility	THC(A)	Total Harmonic Current
EMI	ElectroMagnetic Interference	THD(%)	Total Harmonic Distortion
EMS	ElectroMagnetic Susceptibility	TR	Test Receiver
EN	European Norm	Tx	Transmitting
e.r.p., ERP	Effective Radiated Power	VBW	Video BandWidth
EU	European Union	Vert.	Vertical
EUT	Equipment Under Test	WLAN	Wireless LAN
Fac.	Factor	xDSL	Generic term for all types of DSL technology (DSL: Digital Subscriber Line)
FCC	Federal Communications Commission		
FHSS	Frequency Hopping Spread Spectrum		
FM	Frequency Modulation		
Freq.	Frequency		
FSK	Frequency Shift Keying		
Fund	Fundamental		
FWD	Forward		
GFSK	Gaussian Frequency-Shift Keying		
GNSS	Global Navigation Satellite System		
GPS	Global Positioning System		
Hori.	Horizontal		
I/O	Input/Output		
IEC	International Electrotechnical Commission		
IEEE	Institute of Electrical and Electronics Engineers		
IF	Intermediate Frequency		
ILAC	International Laboratory Accreditation Conference		
ISED	Innovation, Science and Economic Development Canada		

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

CONTENTS	PAGE
-----------------	-------------

SECTION 1: Customer information	5
SECTION 2: Equipment under test (E.U.T.).....	5
SECTION 3: Test specification, procedures & results	6
SECTION 4: Operation of E.U.T. during testing.....	8
SECTION 5: Radiated Emission.....	9
APPENDIX 1: Test data	11
Radiated Emission	11
APPENDIX 2: Test instruments	13
APPENDIX 3: Photographs of test setup	14
Radiated Emission	14
Worst Case Position (Horizontal: X-axis / Vertical: X-axis).....	16

SECTION 1: Customer information

Company Name	:	OMRON Automotive Electronics Co. Ltd
Address	:	6368 NENJOZAKA OKUSA KOMAKI AICHI, 485-0802 JAPAN
Telephone Number	:	+81-568-78-6159
Facsimile Number	:	+81-568-78-7659
Contact Person	:	Takashi Betsui

The information provided from the customer is as follows;

- Applicant, Type of Equipment, Model No. FCC ID on the cover and other relevant pages
 - Operating/Test Mode(s) (Mode(s)) on all the relevant pages
 - SECTION 1: Customer information
 - SECTION 2: Equipment under test (E.U.T.)
 - SECTION 4: Operation of E.U.T. during testing
- * The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment	:	Body Control Module
Model No.	:	K56RA
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 12.0 V
Receipt Date of Sample (Information from test lab.)	:	August 30, 2019
Country of Mass-production	:	Japan and India
Condition of EUT	:	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No Modification by the test lab

2.2 Product Description

Model: K56RA (referred to as the EUT in this report) is a Body Control Module.

General Specification

Clock frequency in the system	:	8 MHz (CPU)
-------------------------------	---	-------------

Radio Specification

Frequency of operation	:	433.92 MHz
Local Oscillator Frequency	:	21.948717 MHz
Type of modulation	:	FSK
Antenna Type	:	Receiving:PWB pattern antenna
Operating Temperature	:	-40 deg. C to 85 deg. C

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart B
FCC Part 15 final revised on July 19, 2019 and effective August 19, 2019 except 15.258
Title : FCC 47CFR Part15 Radio Frequency Device
Subpart B Unintentional Radiators

3.2 Procedures and results

[Receiver]

Receiver

Item	Test Procedure	Limits	Deviation	Worst margin	Result	Remarks				
Conducted emission	FCC: ANSI C63.4: 2014 7. AC power - line conducted emission measurements	FCC: Part 15 Subpart B 15.107(a)	N/A	N/A	N/A	*1)				
	ISED: RSS-Gen 7.1	ISED: RSS-Gen 7.2								
Radiated emission	FCC: ANSI C63.4: 2014 8. Radiated emission measurements	FCC: Part 15 Subpart B 15.109(a)	N/A	27.77 dB 444.620 MHz, Vertical, QP	Complied a)	-				
	ISED: RSS-Gen 7.1	ISED: RSS-Gen 7.3								
Antenna Terminal	FCC: ANSI C63.4: 2014 12. Measurement of unintentional radiators other than ITE	FCC: Part 15 Subpart B 15.111(a)	N/A	N/A	N/A	*2)				
	ISED: - RSS-Gen 7.1	ISED: RSS-Gen 7.4								
*Note: UL Japan, Inc's EMI Work Procedure 13-EM-W0420. *1) The test is not applicable since the EUT is not the device that is designed to be connected to the public utility (AC) power line. *2) The receiving antenna (of this EUT) is installed inside the EUT and cannot be removed (permanently attached). Therefore, Radiated emission test was performed. a) Refer to APPENDIX 1 (data of Radiated Emission) Symbols: <table><tr><td>Complied</td><td>The data of this test item has enough margin, more than the measurement uncertainty.</td></tr><tr><td>Complied#</td><td>The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.</td></tr></table>							Complied	The data of this test item has enough margin, more than the measurement uncertainty.	Complied#	The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.
Complied	The data of this test item has enough margin, more than the measurement uncertainty.									
Complied#	The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.									

3.3 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

3.4 Uncertainty

There is no applicable rule of uncertainty in this applied standard. Therefore, the results are derived depending on whether or not laboratory uncertainty is applied.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k = 2$.

Radiated emission

Measurement distance	Frequency range	Uncertainty (+/-)
3 m	30 MHz to 200 MHz (Horizontal)	4.8 dB
		5.0 dB
	200 MHz to 1000 MHz (Horizontal)	5.2 dB
		6.3 dB
3 m	1 GHz to 6 GHz	5.0 dB
	6 GHz to 18 GHz	5.3 dB

3.5 Test Location

UL Japan, Inc. Ise EMC Lab.

*NVLAP Lab. code: 200572-0 / FCC Test Firm Registration Number: 199967 / ISED Lab Company Number: 2973C

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone: +81 596 24 8999, Facsimile: +81 596 24 8124

Test site	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms	Maximum measurement distance
No.1 semi-anechoic chamber	19.2 x 11.2 x 7.7	7.0 x 6.0	No.1 Power source room	10 m
No.2 semi-anechoic chamber	7.5 x 5.8 x 5.2	4.0 x 4.0	-	3 m
No.3 semi-anechoic chamber	12.0 x 8.5 x 5.9	6.8 x 5.75	No.3 Preparation room	3 m
No.3 shielded room	4.0 x 6.0 x 2.7	N/A	-	-
No.4 semi-anechoic chamber	12.0 x 8.5 x 5.9	6.8 x 5.75	No.4 Preparation room	3 m
No.4 shielded room	4.0 x 6.0 x 2.7	N/A	-	-
No.5 semi-anechoic chamber	6.0 x 6.0 x 3.9	6.0 x 6.0	-	-
No.5 measurement room	6.4 x 6.4 x 3.0	6.4 x 6.4	-	-
No.6 shielded room	4.0 x 4.5 x 2.7	4.0 x 4.5	-	-
No.6 measurement room	4.75 x 5.4 x 3.0	4.75 x 4.15	-	-
No.7 shielded room	4.7 x 7.5 x 2.7	4.7 x 7.5	-	-
No.8 measurement room	3.1 x 5.0 x 2.7	3.1 x 5.0	-	-
No.9 measurement room	8.8 x 4.6 x 2.8	2.4 x 2.4	-	-
No.11 measurement room	6.2 x 4.7 x 3.0	4.8 x 4.6	-	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0 m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

SECTION 4: Operation of E.U.T. during testing

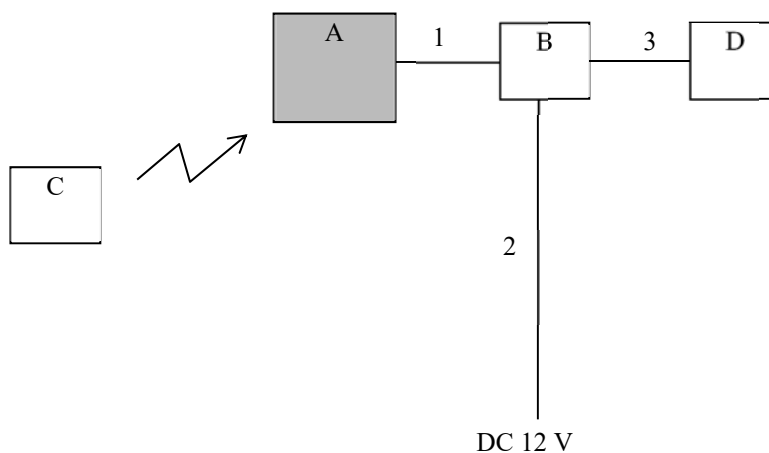
4.1 Operating Mode(s)

Mode	Remarks
1) Receiving mode (Rx) 433.92 MHz	-

*The test signal level was confirmed to be sufficient to stabilize the local oscillator of the EUT.

* It was confirmed by using LED of Jig that the EUT receives the signal from the transmitter (pair of EUT).

4.2 Configuration and peripherals



* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.

*Item No. A includes Receiver Antenna.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Body Control Module	K56RA	001	OMRON Automotive Electronics Co. Ltd.	EUT
B	Switch Box	RV494	04	OMRON Automotive Electronics Co. Ltd.	-
C	Transmitter	T55R2	18	OMRON Automotive Electronics Co. Ltd.	-
D	Immobilizer	I55R0	009	OMRON Automotive Electronics Co. Ltd.	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC and Signal Cable	2.0	Unshielded	Unshielded	-
2	DC Cable	1.8	Unshielded	Unshielded	-
3	DC and Signal Cable	2.4	Unshielded	Unshielded	-

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

SECTION 5: Radiated Emission

5.1. Operating environment

Test place : No.4 semi anechoic chamber
Temperature : See data
Humidity : See data

5.2. Test configuration

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.

The EUT was set on the center of the tabletop.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

Photographs of the set up are shown in Appendix 3.

5.3. Test conditions

Frequency range : 30 MHz - 200 MHz (Biconical antenna) / 200 MHz - 1000 MHz (Logperiodic antenna)
1000 MHz - 2000 MHz (Horn antenna)
Test distance : 3 m
EUT position : Table top
EUT operation mode : See Clause 4.1

5.4. Test procedure

The height of the measuring antenna varied between 1 and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver.

The radiated emission measurements were made with the following detector function of the Test Receiver.

For above 1 GHz, test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

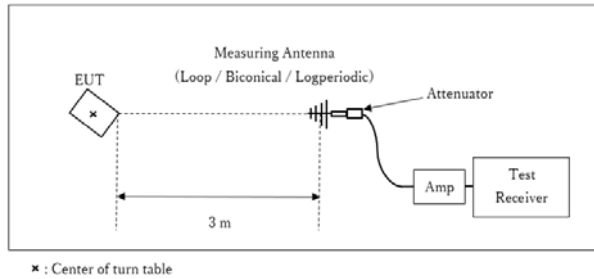
Frequency	Below 1GHz	Above 1GHz *1)
Instrument used	Test Receiver	Test Receiver
IF Bandwidth	QP: BW 120 kHz	PK: BW 1 MHz, CISPR AV: BW 1 MHz

*1) The measurement data was adjusted to a 3 m distance using the following Distance Factor.

Distance Factor: $20 \times \log (3.60 \text{ m} / 3 \text{ m}) = 1.59 \text{ dB}$

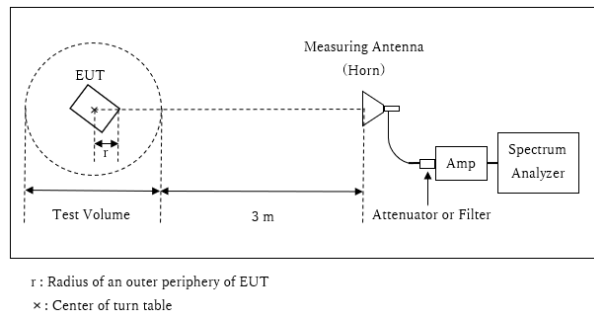
Figure 2: Test Setup

Below 1 GHz



Test Distance: 3 m

1 GHz - 13 GHz



Distance Factor: $20 \times \log (3.60 \text{ m}^*/3.0 \text{ m}) = 1.59 \text{ dB}$

* Test Distance: $(3 + \text{Test Volume} / 2) - r = 3.6 \text{ m}$

Test Volume: 2 m

(Test Volume has been calibrated based on CISPR 16-1-4.)

$r = 0.40 \text{ m}$

The noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at representative X-axis since no difference was found among each position.

5.5. Test result

Summary of the test results: Pass

The limit is rounded down to one decimal place.

The test result is rounded off to one or two decimal places, so some differences might be observed.

Date: September 2, 2019

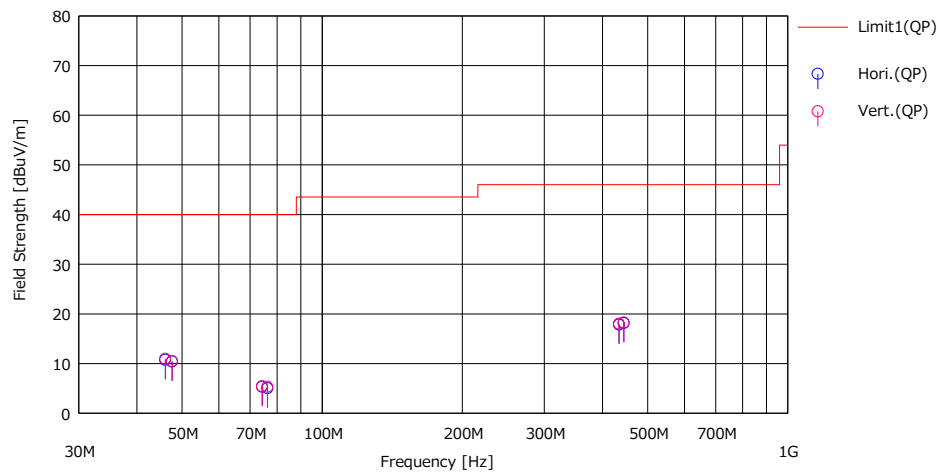
Test engineer: Hiroyuki Furutaka

APPENDIX 1: Test data

Radiated Emission

Report No. 13016121H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 2, 2019
Temperature / Humidity 24 deg. C / 45 % RH
Engineer Hiroyuki Furutaka
(Below 1 GHz)
Mode Mode 1

Limit : FCC_Part 15 Subpart B(15.109)_Class B



No.	Freq. [MHz]	Reading [dBUV]	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result [dBUV/m]	Limit [dBUV/m]	Margn [dB]	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
1	46.031	22.80	12.37	7.73	32.17	10.73	40.00	29.27	Hori.	300	0	BC	
2	47.597	23.00	11.80	7.75	32.17	10.38	40.00	29.62	Hori.	300	0	BC	
3	74.313	23.20	6.13	8.13	32.14	5.32	40.00	34.68	Hori.	300	0	BC	
4	76.329	22.70	6.30	8.15	32.13	5.02	40.00	34.98	Hori.	300	0	BC	
5	434.194	22.60	16.18	10.99	31.96	17.81	46.00	28.19	Hori.	100	0	LA23	
6	444.620	22.70	16.34	11.05	31.96	18.13	46.00	27.87	Hori.	100	0	LA23	
7	46.031	23.00	12.37	7.73	32.17	10.93	40.00	29.07	Vert.	100	0	BC	
8	47.597	23.10	11.80	7.75	32.17	10.48	40.00	29.52	Vert.	100	0	BC	
9	74.313	23.30	6.13	8.13	32.14	5.42	40.00	34.58	Vert.	100	0	BC	
10	76.329	23.00	6.30	8.15	32.13	5.32	40.00	34.68	Vert.	100	0	BC	
11	434.194	22.80	16.18	10.99	31.96	18.01	46.00	27.99	Vert.	100	0	LA23	
12	444.620	22.80	16.34	11.05	31.96	18.23	46.00	27.77	Vert.	100	0	LA23	

* Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

CHART: WITH FACTOR

ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN

CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

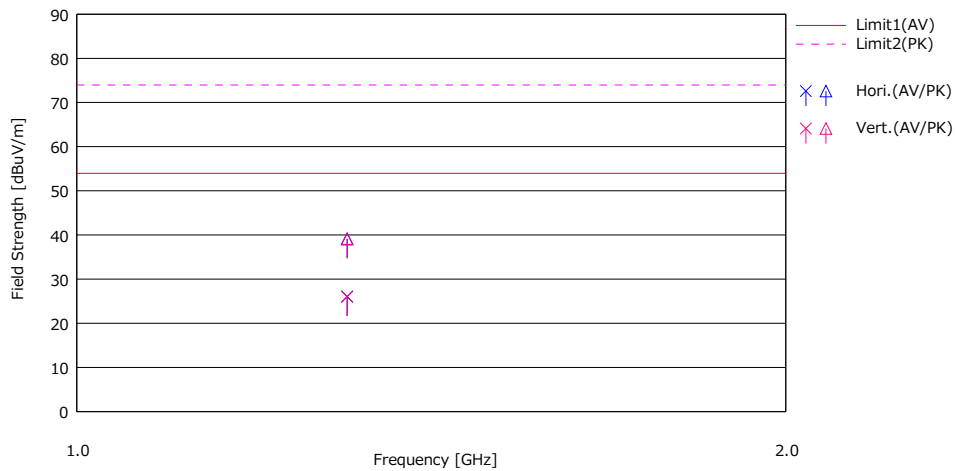
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Emission

Report No. 13016121H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 2, 2019
Temperature / Humidity 24 deg. C / 45 % RH
Engineer Hiroyuki Furutaka
(Above 1 GHz)
Mode Mode 1

Limit : FCC_Part 15 Subpart B(15.109)_Class B



No.	Freq. [MHz]	Reading		Ant.Fac. [dB]	Loss [dB]	Gain [dB]	Result		Limit		Margin		Pola [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
		(AV) [dBuV]	(PK) [dBuV]				(AV) [dBuV/m]	(PK) [dBuV/m]	(AV) [dBuV/m]	(PK) [dBuV/m]	(AV) [dB]	(PK) [dB]					
1	1302.582	30.50	43.60	25.24	3.55	33.30	25.99	39.09	54.00	74.00	28.01	34.91	Hori.	100	0	H21	
2	1302.582	30.60	43.70	25.24	3.55	33.30	26.09	39.19	54.00	74.00	27.91	34.81	Vert.	100	0	H21	

* Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

CHART: WITH FACTOR

ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

APPENDIX 2: Test instruments

Test Instruments

Test item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Due Date	Cal Int
RE	142017	AC4_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-10005	04/04/2019	04/30/2021	24
RE	141583	Pre Amplifier	SONOMA INSTRUMENT	310	260833	02/08/2019	02/29/2020	12
RE	141152	EMI measurement program	TSJ	TEPTO-DV	-	-	-	-
RE	141508	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	9120D-557	05/16/2019	05/31/2020	12
RE	141950	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	06/27/2019	06/30/2020	12
RE	142227	Measure	KOMELON	KMC-36	-	-	-	-
RE	141581	MicroWave System Amplifier	AGILENT	83017A	650	10/04/2018	10/31/2019	12
RE	141412	Microwave Cable	Junkosha	MWX221	1305S002R(1m) / 1405S146(5m)	06/17/2019	06/30/2020	12
RE	142011	AC4_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	06/28/2018	06/30/2020	24
RE	141562	Thermo-Hygrometer	CUSTOM	CTH-201	0010	01/11/2019	01/31/2020	12
RE	148898	Attenuator	KEYSIGHT	8491A	MY52462282	10/03/2018	10/31/2019	12
RE	141425	Biconical Antenna	Schwarzbeck	VHA9103+BBA9106	1302	08/24/2019	08/31/2020	12
RE	141397	Coaxial Cable	UL Japan	-	-	06/18/2019	06/30/2020	12
RE	141267	Logperiodic Antenna(200-1000MHz)	Schwarzbeck	VUSLP9111B	9111B-192	08/24/2019	08/31/2020	12
RE	141545	DIGITAL HiTESTER	HIOKI	3805	51201148	01/29/2019	01/31/2020	12

*Hyphens for Last Calibration Date, Calibration Due Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

Test item:

RE: Radiated emission

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124