RADIO TEST REPORT

Test Report No. : 12568533H-A-R1

Applicant	:	**ASAHI DENSO CO.,LTD**
Type of Equipment	:	**IMMOBILIZER**
Model No.	:	**CZ175**
FCC ID	:	**T8VCZ175**
Test regulation	:	**FCC Part 15 Subpart C: 2018**
Test Result	:	**Complied (Refer to SECTION 3.2)**

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio 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 12568533H-A. 12568533H-A is replaced with this report.

Date of test: November 25, 2018

Representative test engineer:
Ryota Yamanaka
Engineer
Consumer Technology Division

Approved by:
Motoya Imura
Leader
Consumer Technology Division

NVLAP TESTING
NVLAP LAB CODE: 200572-0

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".

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REVISION HISTORY

Original Test Report No.: 12568533H-A

Revision	Test report No.	Date	Page revised	Contents
- (Original)	12568533H-A	February 18, 2019	-	-
1	12568533H-A-R1	February 22, 2019	P.5	Correction of FCC Part 15.203 Antenna requirement in Clause 3.2
1	12568533H-A-R1	February 22, 2019	P.8	Correction of Item A) in Clause 4.2
1	12568533H-A-R1	February 22, 2019	P.13	Addition of following sentence under the test data; *Since the peak emission result satisfied the average limit, duty factor was omitted.

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SECTION 1: Customer information

Company Name	:	ASAHI DENSO CO.,LTD
Address	:	Somejidai, Hamakikaku-ku, Hamamatsu, Shizuoka 434-0046, Japan
Telephone Number	:	+81-53-586-7383
Facsimile Number	:	+81-53-584-1589
Contact Person	:	TAKAHIRO YAMAGUCHI

The information provided from the customer is as follows;
- Applicant, Type of Equipment, Model No. on the cover and other 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	:	IMMOBILIZER
Model No.	:	CZ175
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 12 V / 24 V
Receipt Date of Sample (Information from test lab.)	:	November 22, 2018
Country of Mass-production	:	Japan
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 No: CZ175, (referred to as the EUT in this report), is the IMMOBILIZER.

Radio Specification

[Transmitter part]

Radio Type	:	Transceiver
Frequency of Operation	:	134.2 kHz
Modulation	:	ASK
Antenna type	:	Loop Coil Antenna
Clock frequency (Maximum)	:	16 MHz(CPU)

[Receiver part]

Radio Type	:	Receiver
Frequency of Operation	:	134.7 kHz, 123.7 kHz

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart C
FCC Part 15 final revised on March 12, 2018 and effective April 11, 2018

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.209 Radiated emission limits; general requirements.

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted Emission	<FCC> ANSI C63.10:2013 6 Standard test methods <IC> RSS-Gen 8.8	<FCC> Section 15.207 <IC> RSS-Gen 8.8	-	N/A	N/A *1)	N/A
2	Electric Field Strength of Fundamental Emission	<FCC> ANSI C63.10:2013 6 Standard test methods <IC> RSS-Gen 6.5, 6.12	<FCC> Section 15.209 <IC> RSS-210 4.4 RSS-Gen 8.9	Radiated	N/A	28.3 dB 134.2 kHz 0 deg. PK with Duty factor	Complied a)
3	Electric Field Strength of Spurious Emission	<FCC> ANSI C63.10:2013 6 Standard test methods <IC> RSS-Gen 6.5, 6.6, 6.13	<FCC> Section 15.209 <IC> RSS-210 4.4 RSS-Gen 8.9	Radiated	N/A	13.6 dB 41.050 MHz Vertical, QP	Complied b)
4	-26dB Bandwidth	<FCC> ANSI C63.10:2013 6 Standard test methods <IC> -	<FCC> Reference data <IC> -	Radiated	N/A	N/A	N/A

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.
*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.

a) Refer to APPENDIX 1 (data of Radiated emission)
b) Refer to APPENDIX 1 (data of -26 dB Bandwidth)

Symbols:
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.

FCC 15.31 (e)
This EUT provides stable voltage constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement
It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT(Panel SW). Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to standard

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99 % Occupied Band Width	RSS-Gen 6.7	-	Radiated	N/A	N/A	Complied a)
Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422. a) Refer to APPENDIX 1 (data of 99 % Occupied Bandwidth)							
Symbols: 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.							

Other than above, no addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

EMI

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

Test distance	Radiated emission (+/-)
	9 kHz to 30 MHz
3 m	3.8 dB
10 m	3.6 dB

*Measurement distance

Polarity	Radiated emission (Below 1 GHz)			
	(3 m*)(+/-)		(10 m*)(+/-)	
	30 MHz to 200 MHz	200 MHz to 1000 MHz	30 MHz to 200 MHz	200 MHz to 1000 MHz
Horizontal	4.8 dB	5.2 dB	4.8 dB	5.0 dB
Vertical	5.0 dB	6.3 dB	4.9 dB	5.0 dB

Radiated emission (Above 1 GHz)				
(3 m*)(+/-)		(1 m*)(+/-)		(10 m*)(+/-)
1 GHz to 6 GHz	6 GHz to 18 GHz	10 GHz to 26.5 GHz	26.5 GHz to 40 GHz	1 GHz to 18 GHz
5.2 dB	5.5 dB	5.9 dB	5.9 dB	5.5 dB

* Measurement distance

Bandwidth
0.96 %

3.5 Test Location

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Telephone: +81 596 24 8999, Facsimile: +81 596 24 8124
NVLAP Lab. code: 200572-0 / FCC Test Firm Registration Number: 199967

Test site	IC Registration Number	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	2973C-1	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	2973C-2	7.5 x 5.8 x 5.2	4.0 x 4.0	-	3 m
No.3 semi-anechoic chamber	2973C-3	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	2973C-4	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.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 m x 2.0m 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.

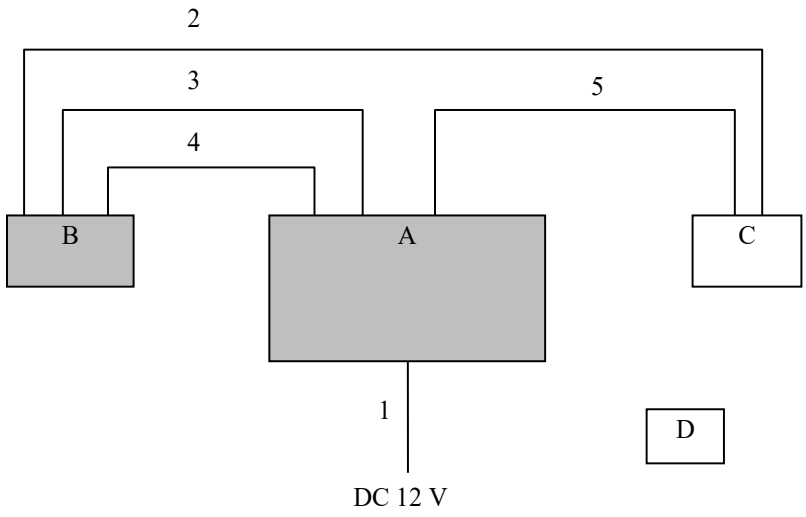
SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

Test mode	Remarks
Transmitting mode	-

Justification : The system was configured in typical fashion (as a user would normally use it) for testing.

4.2 Configuration and peripherals



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Panel SW (incl. Antenna)	FB147	001	ASAHI DENSO CO.,LTD	EUT
B	IMMOBILIZER	CZ175	001	ASAHI DENSO CO.,LTD	EUT
C	Relay Assy	CZ178	001	ASAHI DENSO CO.,LTD	-
D	Electronic key	FB147-904	001	ASAHI DENSO CO.,LTD	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC Cable	3.0	Unshielded	Unshielded	-
2	Signal Cable	0.5	Unshielded	Unshielded	-
3	Signal Cable	0.3	Unshielded	Unshielded	-
4	Signal Cable	0.3	Unshielded	Unshielded	-
5	Signal Cable	0.1	Unshielded	Unshielded	-

SECTION 5: Radiated emission (Fundamental and Spurious Emission)

Test Procedure

EUT was placed on a urethane platform of nominal size, 0.5 m by 1.0 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

Frequency : From 9 kHz to 30 MHz
The EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.
The measurements were performed for vertical polarization (antenna angle: 0 deg., 45 deg., 90 deg., and 180 deg.) and horizontal polarization.
*Refer to Figure 1 about Direction of the Loop Antenna.

Frequency: From 30 MHz to 1 GHz
The measuring antenna height 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.

The test was made with the detector (RBW / VBW) in the following table.
When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

Test Antennas are used as below;

Frequency	Below 30 MHz	30 MHz to 200 MHz	200 MHz to 1 GHz
Antenna Type	Loop	Biconical	Logperiodic

Frequency	From 9 kHz to 90 kHz and From 110 kHz to 150 kHz	From 90 kHz to 110 kHz	From 150 kHz to 490 kHz	From 490 kHz to 30 MHz	From 30 MHz to 1 GHz
Instrument used	Test Receiver				
Detector	PK / AV	QP	PK / AV	QP	QP
IF Bandwidth	200 Hz	200 Hz	9 kHz	9 kHz	120 kHz
Test Distance	3 m *1)	3 m *1)	3 m *1)	3 m *2)	3 m

*1) Distance Factor: 40 x log (3 m / 300 m) = -80 dB
*2) Distance Factor: 40 x log (3 m / 30 m) = -40 dB

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open field test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

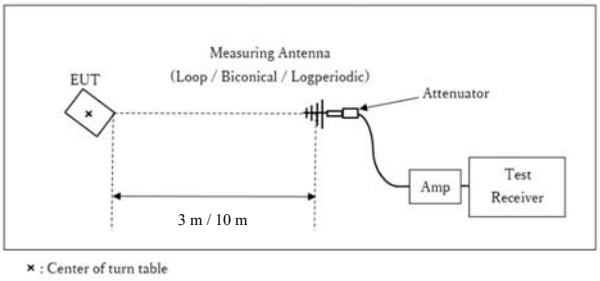
These tests were performed in semi anechoic chamber. Therefore the measured level of emissions may be higher than if measurements were made without a ground plane.
However test results were confirmed to pass against standard limit.

This EUT has two modes which mechanical key is inserted or not. The worst case was confirmed with and without mechanical key, as a result, the test without mechanical key was the worst case. Therefore the test without mechanical key was performed only.

It was confirmed that no difference was found between DC 12.0 V and DC 24 V at pre-check.
Therefore, the test was performed with DC 12.0 V as representative.

[Test Setup]

Below 1 GHz



Test Distance: 3 m / 10 m

- The carrier level and 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 the position that has the maximum noise.

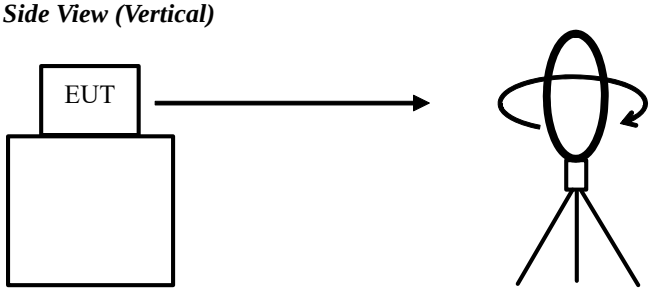
The test results and limit are rounded off to one decimal place, so some differences might be observed.

Measurement range : 9 kHz - 1 GHz
Test data : APPENDIX 1
Test result : Pass

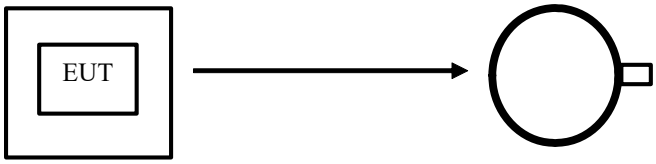
Date: November 25, 2018 Test engineer: Ryota Yamanaka

Figure 1: Direction of the Loop Antenna

Side View (Vertical)

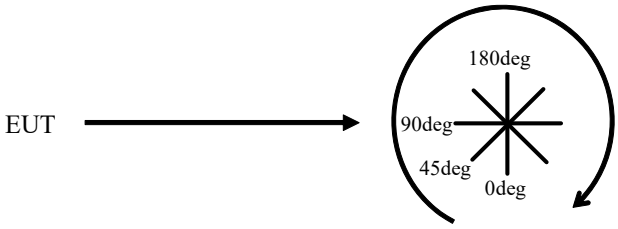


Top View (Horizontal)



Antenna was not rotated.

Top View (Vertical)



Front side: 0 deg.
Forward direction: clockwise

SECTION 6: -26dB Bandwidth

Test Procedure

The test was measured with a spectrum analyzer using a test fixture.

Test	Span	RBW	VBW	Sweep	Detector	Trace	Instrument used
-26 dB Bandwidth	100 kHz	1 kHz	3 kHz	Auto	Peak	Max Hold	Spectrum Analyzer

Test data : APPENDIX 1
Test result : Pass

SECTION 7: 99% Occupied Bandwidth

Test Procedure

The test was measured with a spectrum analyzer using a test fixture.

Test	Span	RBW	VBW	Sweep	Detector	Trace	Instrument used
99 % Occupied Bandwidth	Enough width to display emission skirts	1 to 5 % of OBW	Three times of RBW	Auto	Peak *1)	Max Hold *1)	Spectrum Analyzer
*1) The measurement was performed with Peak detector, Max Hold since the duty cycle was not 100 %. Peak hold was applied as Worst-case measurement.							

Test data : APPENDIX 1
Test result : Pass

APPENDIX 1: Test data

Radiated Emission below 30 MHz (Fundamental and Spurious Emission)

Report No.	1256833H
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Date	November 25, 2018
Temperature/ Humidity	21 deg. C / 48 % RH
Engineer	Ryota Yamanaka
Mode	Tx 134.2 kHz Without key

PK or QP

Ant Deg [deg] or Polarity [Hori/Vert]	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
0	0.13420	PK	83.3	19.7	-74.0	32.3	-	-3.3	45.0	48.3	Fundamental
0	0.26840	PK	43.8	19.7	-74.0	32.3	-	-42.8	39.0	81.8	
0	0.40260	PK	50.0	19.6	-73.9	32.2	-	-36.5	35.5	72.0	
0	0.53680	QP	32.3	19.6	-33.9	32.2	-	-14.2	33.0	47.2	
0	0.67100	QP	32.3	19.6	-33.9	32.2	-	-14.2	31.1	45.3	
0	0.80520	QP	31.9	19.6	-33.9	32.2	-	-14.6	29.5	44.1	
0	0.93940	QP	32.8	19.6	-33.9	32.2	-	-13.7	28.1	41.8	
0	1.07360	QP	30.8	19.6	-33.9	32.2	-	-15.7	26.9	42.6	
0	1.20780	QP	31.6	19.6	-33.9	32.2	-	-14.9	25.9	40.8	
0	1.34200	QP	30.5	19.6	-33.9	32.2	-	-16.0	25.0	41.0	

Result = Reading + Ant Factor + Loss (Cable + Attenuator + Filter + D.Factor) - Gain(Amprifier)

PK with Duty factor

Ant Deg [deg]	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
0	0.13420	PK	83.3	19.7	-74.0	32.3	0.0	-3.3	25.0	28.3	
0	0.26840	PK	43.8	19.7	-74.0	32.3	0.0	-42.8	19.0	61.8	
0	0.40260	PK	50.0	19.6	-73.9	32.2	0.0	-36.5	15.5	52.0	

Result = Reading + Ant Factor + Loss (Cable + Attenuator + Filter + D.Factor) - Gain(Amprifier) + Duty factor *

* Since the peak emission result satisfied the average limit, duty factor was omitted.

Result of the fundamental emission at 3m without Distance factor

PK or QP

Ant Deg [deg]	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
0	0.13420	PK	83.3	19.7	6.0	32.3	-	76.7	-	-	Fundamental

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter) - Gain(Amprifier)

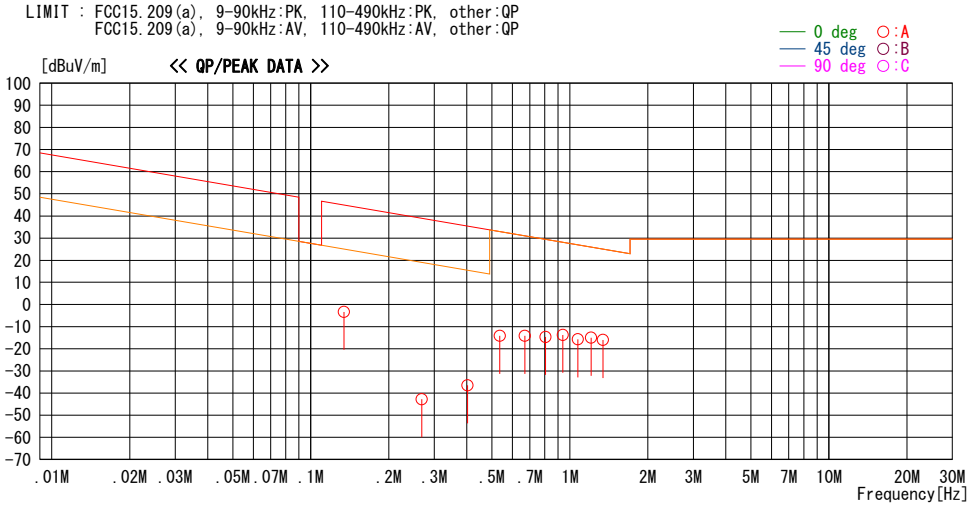
* All spurious emissions lower than this result.

* The pre amplifier used for carrier frequency measurement was not saturated.

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

Radiated Emission below 30 MHz (Fundamental and Spurious Emission)
(Plot data, Worst case)

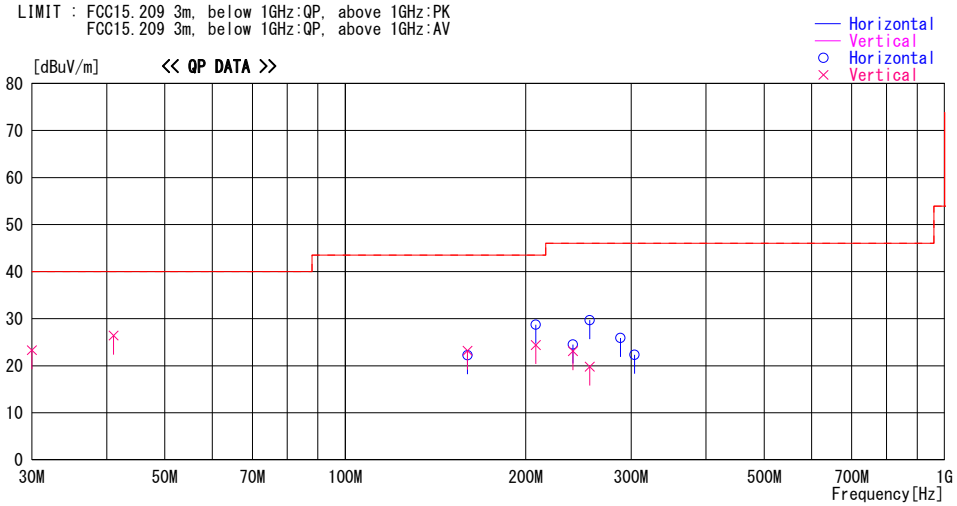
Report No.	1256833H
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Date	November 25, 2018
Temperature/ Humidity	21 deg. C / 48 % RH
Engineer	Ryota Yamanaka
Mode	Tx 134.2 kHz Without key



*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Radiated Emission above 30 MHz (Spurious Emission)

Report No.	1256833H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 25, 2018
Temperature / Humidity	21 deg. C / 48% RH
Engineer	Ryota Yamanaka
	(Below 1 GHz)
Mode	Tx 134.2 kHz Without key



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
30.000	30.0	QP	18.5	-25.2	23.3	0	100	Vert.	40.0	16.7	
41.050	36.9	QP	14.5	-25.0	26.4	188	100	Vert.	40.0	13.6	
159.909	31.0	QP	15.6	-23.4	23.2	262	100	Vert.	43.5	20.3	
159.909	30.0	QP	15.6	-23.4	22.2	266	100	Hori.	43.5	21.3	
207.872	40.2	QP	11.3	-22.8	28.7	10	100	Hori.	43.5	14.8	
207.872	35.9	QP	11.3	-22.8	24.4	228	100	Vert.	43.5	19.1	
239.840	35.3	QP	11.7	-22.5	24.5	351	172	Hori.	46.0	21.5	
239.840	33.9	QP	11.7	-22.5	23.1	218	100	Vert.	46.0	22.9	
255.856	40.0	QP	12.1	-22.4	29.7	14	100	Hori.	46.0	16.3	
255.856	30.1	QP	12.1	-22.4	19.8	12	100	Vert.	46.0	26.2	
287.812	34.6	QP	13.4	-22.1	25.9	151	100	Hori.	46.0	20.1	
303.804	30.5	QP	13.8	-22.0	22.3	131	100	Hori.	46.0	23.7	

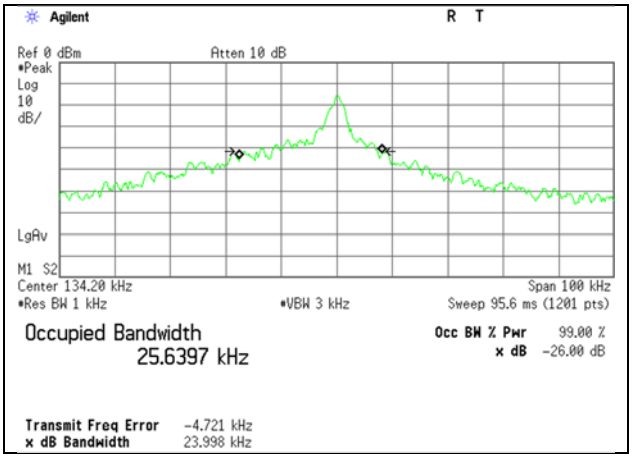
CHART: WITH FACTOR
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS & GAIN (CABLE + ATT - GAIN(AMP))

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

-26dB Bandwidth and 99% Occupied Bandwidth

Report No.	1256833H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 25, 2018
Temperature / Humidity	21 deg. C / 48% RH
Engineer	Ryota Yamanaka
Mode	Tx 134.2 kHz

-26 dB Bandwidth [kHz]	99 % Occupied Bandwidth [kHz]
23.998	25.6397



APPENDIX 2: Test instruments

Test Instruments

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Due Date	Cal Int
RE	148897	Attenuator	KEYSIGHT	8491A	MY52462349	12/18/2017	12/31/2018	12
RE	141949	Test Receiver	Rohde & Schwarz	ESCI	100767	8/6/2018	8/31/2019	12
RE	141216	Coaxial cable	Fujikura/Suhner/ TSJ	5D-2W/SFM14/ sucoform141-PE/421-010	-/00640	7/3/2018	7/31/2019	12
RE	141532	DIGITAL HiTESTER	HIOKI	3805	51201197	1/9/2018	1/31/2019	12
RE	141152	EMI measurement program	TSJ	TEPTO-DV	-	-	-	-
RE	141254	Loop Antenna	Rohde & Schwarz	HFH2-Z2	100017	10/11/2018	10/31/2019	12
RE	141582	Pre Amplifier	SONOMA INSTRUMENT	310	260834	2/27/2018	2/28/2019	12
RE	141554	Thermo-Hygrometer	CUSTOM	CTH-180	1301	1/24/2018	1/31/2019	12
RE	141424	Biconical Antenna	Schwarzbeck	BBA9106	1915	6/4/2018	6/30/2019	12
RE	141323	Coaxial cable	UL Japan	-	-	7/3/2018	7/31/2019	12
RE	141266	Logperiodic Antenna(200-1000MHz)	Schwarzbeck	VUSLP9111B	911B-191	6/4/2018	6/30/2019	12
RE	141884	Spectrum Analyzer	AGILENT	E4448A	MY44020357	11/2/2018	11/30/2019	12
RE	142183	Measure	KOMELON	KMC-36	-	-	-	-
RE	142008	AC3_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	6/26/2018	6/30/2020	24
RE	141413	Coaxial Cable	UL Japan	-	-	6/12/2018	6/30/2019	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: Spurious emission