



Test report No.
Page
Issued date
FCC ID

: 13977035M-C-R1
: 1 of 177
: March 15, 2022
: A269ZUA165

RADIO TEST REPORT

Test Report No. : 13977035M-C-R1

Applicant : ALPS ALPINE CO., LTD.
Type of EUT : Head unit
Model Number of EUT : AH00ICB
FCC ID : A269ZUA165
Test regulation : FCC Part 15 Subpart E: 2021
* Wireless LAN 5 GHz band
Test item : Radiated Spurious Emission test
Test result : Complied (Refer to SECTION 3)

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by the A2LA accreditation body.
6. This test report covers Radio technical requirements.
It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. The all test items in this test report are conducted by UL Japan, Inc. Kashima EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 13977035M-C. 13977035M-C is replaced with this report.
11. For original test report(s) referred in this report, the latest version (including any revisions) is always referred.

Date of test: October 21 to December 14, 2021

Representative test engineer:

Kazuhiro Ando
Engineer

Approved by:

Kenichi Suda
Manager



CERTIFICATE 1266.01

- ☐ 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.: 13977035M-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13977035M-C	January 31, 2022	-	-
1	13977035M-C-R1	March 15, 2022	P.17, P.18	Add the following description; * This Burst rate confirmation data is quoted from the data of Report No.13977035S-C-R1 (Antenna Terminal Conducted Tests).
1	13977035M-C-R1	March 15, 2022	P.115	Add the following description; 1 GHz - 10 GHz: $20\log(3.89\text{ m} / 3.0\text{ m}) = 2.26\text{ dB}$ (No.11 site)

Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	LIMS	Laboratory Information Management System
AC	Alternating Current	MCS	Modulation and Coding Scheme
AFH	Adaptive Frequency Hopping	MRA	Mutual Recognition Arrangement
AM	Amplitude Modulation	N/A	Not Applicable
Amp, AMP	Amplifier	NIST	National Institute of Standards and Technology
ANSI	American National Standards Institute	NS	No signal detect.
Ant, ANT	Antenna	NSA	Normalized Site Attenuation
AP	Access Point	OBW	Occupied BandWidth
ASK	Amplitude Shift Keying	OFDM	Orthogonal Frequency Division Multiplexing
Atten., ATT	Attenuator	P/M	Power meter
AV	Average	PCB	Printed Circuit Board
BPSK	Binary Phase-Shift Keying	PER	Packet Error Rate
BR	Bluetooth Basic Rate	PHY	Physical Layer
BT	Bluetooth	PK	Peak
BT LE	Bluetooth Low Energy	PN	Pseudo random Noise
BW	BandWidth	PRBS	Pseudo-Random Bit Sequence
Cal Int	Calibration Interval	PSD	Power Spectral Density
CCK	Complementary Code Keying	QAM	Quadrature Amplitude Modulation
Ch., CH	Channel	QP	Quasi-Peak
CISPR	Comite International Special des Perturbations Radioelectriques	QPSK	Quadrature Phase Shift Keying
CW	Continuous Wave	RBW	Resolution BandWidth
DBPSK	Differential BPSK	RDS	Radio Data System
DC	Direct Current	RE	Radio Equipment
D-factor	Distance factor	RF	Radio Frequency
DFS	Dynamic Frequency Selection	RMS	Root Mean Square
DQPSK	Differential QPSK	RNSS	Radio Navigation Satellite Service
DSSS	Direct Sequence Spread Spectrum	RSS	Radio Standards Specifications
DUT	Device Under Test	Rx	Receiving
EDR	Enhanced Data Rate	SA, S/A	Spectrum Analyzer
EIRP, e.i.r.p.	Equivalent Isotropically Radiated Power	SG	Signal Generator
EMC	ElectroMagnetic Compatibility	SVSWR	Site-Voltage Standing Wave Ratio
EMI	ElectroMagnetic Interference	TR, T/R	Test Receiver
EN	European Norm	Tx	Transmitting
ERP, e.r.p.	Effective Radiated Power	VBW	Video BandWidth
ETSI	European Telecommunications Standards Institute	Vert.	Vertical
EU	European Union	WLAN	Wireless LAN
EUT	Equipment Under Test		
Fac.	Factor		
FCC	Federal Communications Commission		
FHSS	Frequency Hopping Spread Spectrum		
FM	Frequency Modulation		
Freq.	Frequency		
FSK	Frequency Shift Keying		
GFSK	Gaussian Frequency-Shift Keying		
GNSS	Global Navigation Satellite System		
GPS	Global Positioning System		
Hori.	Horizontal		
ICES	Interference-Causing Equipment Standard		
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		
ISO	International Organization for Standardization		
JAB	Japan Accreditation Board		
LAN	Local Area Network		

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SECTION 1: Customer information

Company Name : ALPS ALPINE CO., LTD.
Address : 20-1 Yoshima Industrial park, Iwaki, Fukushima Prefecture 970-1192 Japan
Telephone Number : +81-246-36-4111
Contact Person : Kenji Nagase

The information provided from the customer is as follows;

- Applicant, Type of EUT, Model Number of EUT, 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 (EUT) other than the Receipt Date
- SECTION 4: Operation of EUT 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 (EUT)

2.1 Identification of EUT

Type : Head unit
Model Number : AH00ICB
Serial Number : Refer to SECTION 4.2
Receipt Date : October 19, 2021
Condition : Engineering prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Modification : No Modification by the test lab.

2.2 Product Description

Model: AH00ICB (referred to as the EUT in this report) is a Head unit.

The EUT has following similar model:

Model Name	Details
AH00ICB (EUT)	External amplifier model
AH00ICB 1	Internal amplifier model

General Specification

Rating : DC 13.2 V
Operating Temperature : -30 deg. C - +70 deg. C

Radio Specification

Bluetooth

Radio Type	: Transceiver
Frequency of Operation	: 2402 MHz - 2480 MHz
Antenna type	: Internal Chip Antenna
Modulation	: FHSS (GFSK, $\pi/4$ -DQPSK, 8DPSK)
Antenna Gain	: -0.2 dBi

Bluetooth Low Energy

Radio Type	: Transceiver
Frequency of Operation	: 2402 MHz - 2480 MHz
Antenna type	: Internal Chip Antenna
Modulation	: GFSK
Antenna Gain	: -0.2 dBi

WLAN 2.4 GHz (IEEE802.11b/g/n-20)

Radio Type	: Transceiver
Frequency of Operation	: 2412 MHz - 2462 MHz
Antenna type	: Internal Chip Antenna
Modulation	: DSSS (CCK, DQPSK, DBPSK) OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Gain	: -0.2 dBi

WLAN 5 GHz (IEEE802.11a/n-20/n-40/ac-20/ac-40/ac-80)

Radio Type	: Transceiver
Frequency of Operation	: 5180 MHz - 5825 MHz
Antenna type	: Internal Chip Antenna
Modulation	: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Antenna Gain	: +2.71 dBi (Chain 1) +2.71 dBi (Chain 2)

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart E
FCC Part 15 final revised on May 3, 2021 and effective July 2, 2021

Title : FCC 47 CFR Part 15 Radio Frequency Device Subpart E
Unlicensed National Information Infrastructure Devices
Section 15.407 General technical requirements

* Also the EUT complies with FCC Part 15 Subpart B.

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Spurious Emission Restricted Band Edge	FCC: ANSI C63.10-2013 KDB Publication Number 789033 ISED: -	FCC: 15.407 (b), 15.205 and 15.209 ISED: RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2	2.3 dB 5150.000 MHz, AV, Vert.	Complied# a)	Radiated (> 30 MHz) *1)
Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422. *1) Radiated test was selected over 30 MHz based on FCC 15.407 (b) and KDB 789033 D02 G.3.b).					
a) Refer to APPENDIX 1 (data of Radiated Spurious Emission)					
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.					

* In case any questions arise about test procedure, ANSI C63.10: 2013 is also referred.

FCC Part 15.31 (e)

The EUT provides stable voltage constantly to the RF Part regardless of input voltage. Instead of a new battery, DC power supply was used for the test. That does not affect the test result, therefore the 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. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to standard

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

3.4 Uncertainty

There is no applicable rule of uncertainty in this applied standard. Therefore, the following results are derived depending on whether 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	Required Uncertainty (+/-)	Uncertainty (+/-)
3 m	9 kHz to 30 MHz	Not Defined	2.9 dB
	30 MHz to 200 MHz	6.3 dB	6.1 dB
	200 MHz to 1000 MHz		6.2 dB
	1 GHz to 6 GHz	5.2 dB	5.0 dB
	6 GHz to 18 GHz	5.5 dB	5.4 dB
	18 GHz to 40 GHz	Not Defined	5.5 dB
1 m	1 GHz to 18 GHz	Not Defined	5.4 dB
	18 GHz to 40 GHz		5.6 dB
0.5 m	26.5 GHz to 40 GHz	Not Defined	5.9 dB

3.5 Test Location

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A2LA Certificate Number: 1266.01 / FCC Test Firm Registration Number: 910230

ISED Lab Company Number: 4659A / CAB identifier: JP0006

Test site	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Open site	6.0 x 5.5 x 2.5	20 x 40	10 m
No.5 Open site	8.6 x 7.1 x 2.4	18 x 23	10 m
No.1 Shielded room	5.4 x 4.5 x 2.3	-	-
No.5 Shielded Room	4.2 x 3.1 x 2.5	-	-
No.9 Shielded Room	6.1 x 3.6 x 2.8	-	-
No.6 Semi-anechoic Chamber	8.5 x 5.5 x 5.2	-	3 m
No.10 Semi-anechoic Chamber	18.4 x 9.9 x 7.7	-	10 m
No.11 Semi-anechoic Chamber	9.0 x 6.5 x 5.2	-	3 m
No.1 Measurement room	5.0 x 3.7 x 2.6	-	-
No.2 Measurement room	4.3 x 4.4 x 2.7	-	-
No.3 Measurement room	4.5 x 5.3 x 2.7	-	-

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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SECTION 4: Operation of EUT during testing

4.1 Operating Mode(s)

Test operating mode was determined as follows according to “Section 1 of 6 802.11 a/b/g/n testing - Managing Complex Regulatory Approvals -” of TCB Council Workshop October 2009 and also was judged the necessity of 802.11ac mode by the pre-test.

Mode	Remarks*
Transmitting (Tx), IEEE 802.11a SISO (11a(SISO))	18 Mbps (Chain1), PN9
Transmitting (Tx), IEEE 802.11ac SISO 20 MHz BW (11ac-20(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11n SISO 40 MHz BW (11n-40(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11ac SISO 40 MHz BW (11ac-40(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11ac SISO 80 MHz BW (11ac-80(SISO))	MCS 5 (Chain1), PN9
*The worst antenna (Chain1) and condition was determined based on the test result of Maximum Conducted Output Power.	
*Power of the EUT was set by the software as follows; Power settings: (SISO) 11a/11n-20/11n-40:10 dBm, 11ac-20/11ac-40/11ac-80:6 dBm (MIMO) 11a/11n-20/11n-40:7 dBm, 11ac-20/11ac-40/11ac-80:3 dBm Software: QRCT (Qualcomm Radio Control Toolkit) v4.0.00195.0 (Date: 2021.10.19, Storage location: Driven by connected PC)	
*This setting of software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product.	
* SISO: Single input single output, MIMO: Multi input multi output	

*The details of Operation mode(s)

Test Item	Operating Mode	Tested Antenna *2)	Tested Frequency
Radiated Spurious Emission (Below 1 GHz) *1)	Tx 11a (SISO)	Chain1	5700 MHz
	Tx 11a (SISO) with 11g 2462 MHz Tx 11a (SISO) with BT Hopping On 3DH5 Tx 11a (SISO) with BT LE 2440 MHz	Chain2	5785 MHz
Radiated Spurious Emission (Above 1 GHz)	Tx 11a (SISO)	Chain1	5180 MHz, 5240 MHz, 5320 MHz, 5500 MHz, 5580 MHz, 5700 MHz, 5745 MHz, 5785 MHz, 5825 MHz
	Tx 11ac-20 (SISO)	Chain1	5180 MHz, 5320 MHz, 5500 MHz, 5700 MHz, 5745 MHz, 5825 MHz
	Tx 11n-40 (SISO)	Chain1	5190 MHz, 5230 MHz, 5310 MHz, 5510 MHz, 5550 MHz, 5670 MHz, 5755 MHz, 5795 MHz
	Tx 11ac-40 (SISO)	Chain1	5190 MHz, 5310 MHz, 5510 MHz, 5670 MHz, 5755 MHz, 5795 MHz
	Tx 11ac-80 (SISO)	Chain1	5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5690 MHz, 5775 MHz
	Tx 11a (SISO) with 11g 2462 MHz Tx 11ac-20 (SISO) with 11g 2462 MHz	Chain1	5180 MHz, 5320 MHz, 5500 MHz, 5700 MHz, 5745 MHz, 5825 MHz
	Tx 11n-40 (SISO) with 11g 2462 MHz Tx 11ac-40 (SISO) with 11g 2462 MHz	Chain1	5190 MHz, 5310 MHz, 5510 MHz, 5670 MHz, 5755 MHz, 5795 MHz
	Tx 11ac-80 (SISO) with 11g 2462 MHz	Chain1	5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5775 MHz
	Tx 11a (SISO) with BT Hopping On 3DH5	Chain2	5180 MHz, 5320 MHz, 5500 MHz, 5700 MHz, 5745 MHz, 5785MHz, 5825 MHz
	Tx 11ac-20 (SISO) with BT Hopping On 3DH5	Chain2	5180 MHz, 5320 MHz, 5500 MHz, 5700 MHz, 5745 MHz, 5825 MHz
	Tx 11n-40 (SISO) with BT Hopping On 3DH5 Tx 11ac-40 (SISO) with BT Hopping On 3DH5	Chain2	5190 MHz, 5310 MHz, 5510 MHz, 5670 MHz, 5755 MHz, 5795 MHz
	Tx 11ac-80 (SISO) with BT Hopping On 3DH5	Chain2	5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5775 MHz
	Tx 11a (SISO) with BT LE 2440 MHz	Chain2	5180 MHz, 5320 MHz, 5500 MHz, 5700 MHz, 5745 MHz, 5785MHz, 5825 MHz
	Tx 11ac-20 (SISO) with BT LE 2440 MHz	Chain2	5180 MHz, 5320 MHz, 5500 MHz, 5700 MHz, 5745 MHz, 5825 MHz
	Tx 11n-40 (SISO) with BT LE 2440 MHz Tx 11ac-40 (SISO) with BT LE 2440 MHz	Chain2	5190 MHz, 5310 MHz, 5510 MHz, 5670 MHz, 5755 MHz, 5795 MHz
	Tx 11ac-80 (SISO) with BT LE 2440 MHz	Chain2	5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5775 MHz

*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.
 *2) The test was performed with the antenna that had higher power as a representative.
 Wireless LAN 2.4 GHz is transmitted with only Test antenna (Chain 1).
 Bluetooth and Bluetooth low energy are transmitted with only Test antenna (Chain 2).

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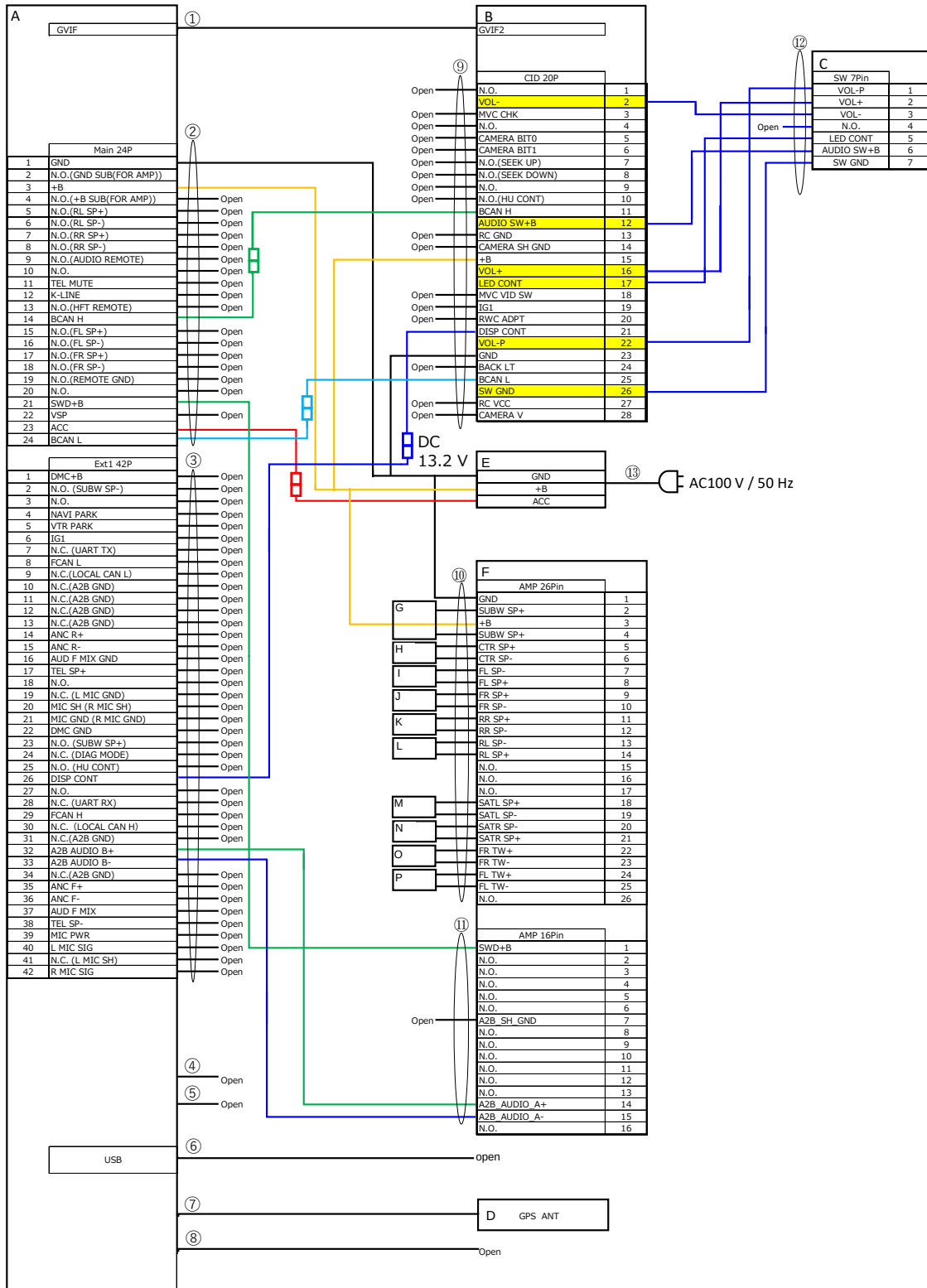
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4.2 Configuration and peripherals



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

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Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Head unit	AH00ICB	60	ALPS ALPINE CO., LTD.	EUT
B	Display	QH00159A	109	ALPS ALPINE CO., LTD.	-
C	Switch Unit	SP008GB	-	ALPS ALPINE CO., LTD.	-
D	GPS Antenna	8B550-T20-A11	0993	YOKOWO	-
E	DC Power Supply	GSV3000	2010221559	DIAMOND ANTENNA	-
F	Amplifier	8A400-30AA-A01-M1	86427800200496-21118119	BOSE	-
G	Speaker	KFC-RS101	-	JVC KENWOOD	-
H	Speaker	KFC-RS101	-	JVC KENWOOD	-
I	Speaker	KFC-RS101	-	JVC KENWOOD	-
J	Speaker	KFC-RS101	-	JVC KENWOOD	-
K	Speaker	KFC-RS101	-	JVC KENWOOD	-
L	Speaker	KFC-RS101	-	JVC KENWOOD	-
M	Speaker	KFC-RS101	-	JVC KENWOOD	-
N	Speaker	KFC-RS101	-	JVC KENWOOD	-
O	Speaker	VSP-10	-	AUTOBACS	-
P	Speaker	VSP-10	-	AUTOBACS	-

List of cables used

No.	Name	Length (m)	Shielded	Remark
1	GVIF Cable	2.4	Shielded	-
2	Main Harness	2.0	Unshielded	-
3	EXT1 Harness	2.0	Unshielded	-
4	Ethernet Cable	2.0	Unshielded	-
5	EXT2 Cable	2.0	Unshielded	-
6	USB Cable	2.3	Shielded	-
7	GPS Antenna Cable	7.2	Shielded	-
8	Tuner Cable (Main/Sub)	2.2	Shielded	-
9	Display Harness	0.5	Shielded	-
10	Amplifier Harness	0.5	Unshielded	-
11	Amplifier Harness	0.5	Unshielded	-
12	Switch Unit Harness	0.5	Unshielded	-
13	AC Power Cable	2.0	Unshielded	-

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SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1GHz >

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.

< Above 1GHz >

EUT was placed on a urethane platform of nominal size, 0.5 m by 0.5 m, raised 1.5 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane.

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

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.

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

The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).

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.

< Below 1GHz >

The result also satisfied with the general limits specified in section 15.209 (a).

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p. *) in the Section 15.407 (b) (1) (2) (3).

For W58 Bandedge

-27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge in the section 15.407(b)(4)(i).

Restricted band edge:

Apply to limit in the Section 15.209 (a).

Since this limit is severer than the limit of the inside of restricted bands.

*Electric field strength to e.i.r.p. conversion:

$$E = \frac{1000000 \sqrt{30P}}{3} \text{ (uV/m)} \quad : P \text{ is the e.i.r.p. (Watts)}$$

Test Antennas are used as below;

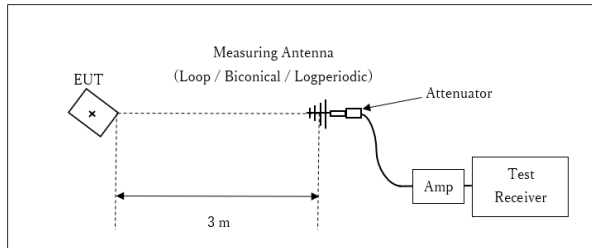
Frequency	Below 1 GHz	Above 1 GHz
Antenna Type	Hybrid	Horn

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method VB *1) RBW: 1 MHz VBW: 1/T MHz (T: Burst length, refer to Appendix) Detector: Peak Trace mode: Max hold

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E".

Figure 1: Test Setup

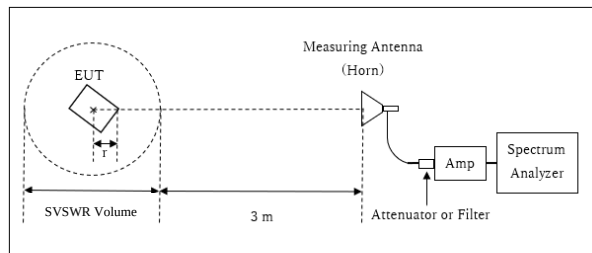
Below 1 GHz



x : Center of turn table

Test Distance: 3 m

1 GHz - 10 GHz



r : Radius of an outer periphery of EUT

x : Center of turn table

[No.10 Test site]

Distance Factor: $20 \times \log (4.39 \text{ m} / 3 \text{ m}) = 3.31 \text{ dB}$

*Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 4.39 \text{ m}$

SVSWR Volume: 3 m

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

r= 0.11 m

[No.11 Test site]

Distance Factor: $20 \times \log (3.89 \text{ m} / 3 \text{ m}) = 2.26 \text{ dB}$

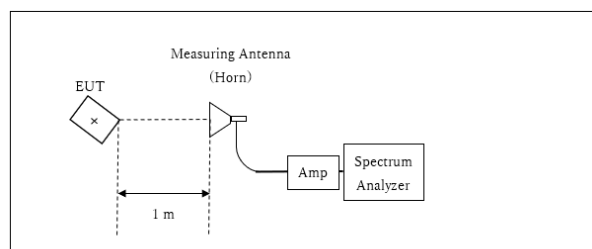
*Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.89 \text{ m}$

SVSWR Volume: 2 m

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

r= 0.11 m

10 GHz - 26.5 GHz

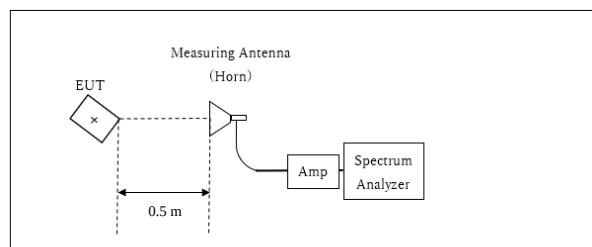


x : Center of turn table

Distance Factor: $20 \times \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$

*Test Distance: 1 m

26.5 GHz - 40 GHz



x : Center of turn table

Distance Factor: $20 \times \log (0.5 \text{ m} / 3.0 \text{ m}) = -15.56 \text{ dB}$

*Test Distance: 0.5 m

The test was made on EUT at the normal use position.

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

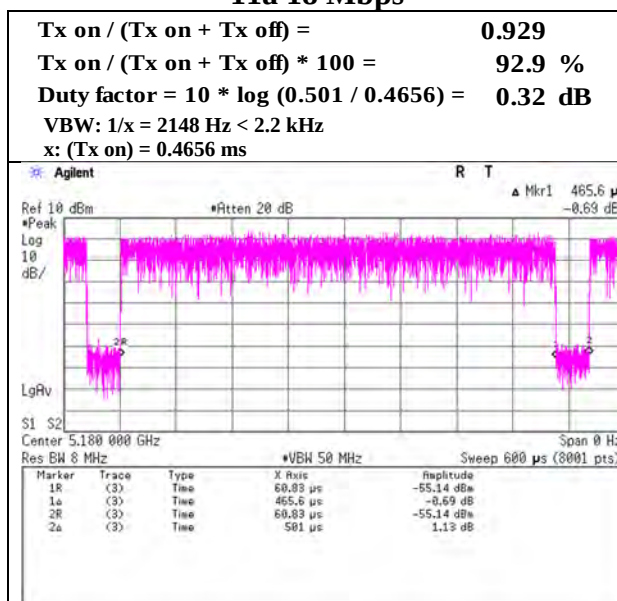
Measurement range	: 30 MHz - 40 GHz
Test data	: APPENDIX
Test result	: Pass

APPENDIX 1: Test data

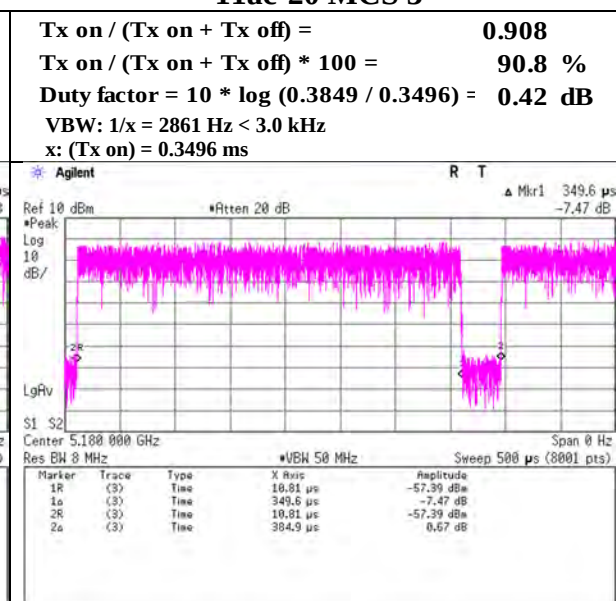
Burst rate confirmation

Report No.	13977035M-C	
	Shonan EMC Lab. No.5 Shielded Room	
Date	October 21, 2021	October 28, 2021
Temperature / Humidity	24 deg. C / 43 % RH	24 deg. C / 46 % RH
Engineer	Kenichi Adachi	Kenichi Adachi
Mode	Tx	

11a 18 Mbps



11ac-20 MCS 3

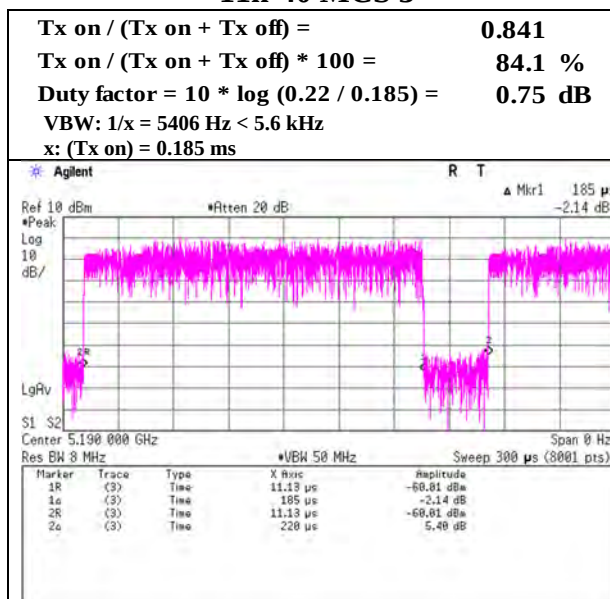


* This Burst rate confirmation data is quoted from the data of Report No.13977035S-C-R1 (Antenna Terminal Conducted Tests).

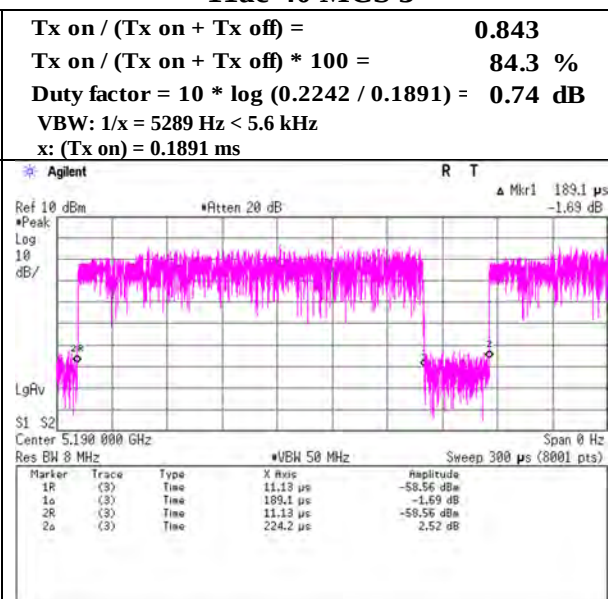
Burst rate confirmation

Report No.	13977035M-C
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 28, 2021
Temperature / Humidity	24 deg. C / 46 % RH
Engineer	Kenichi Adachi
Mode	Tx

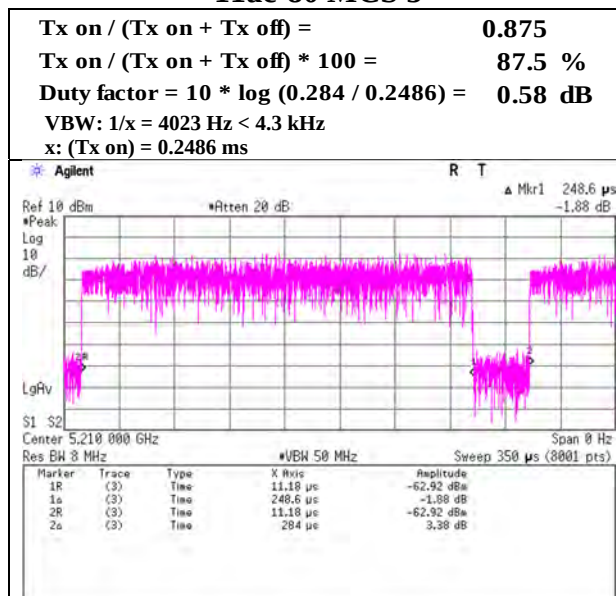
11n-40 MCS 3



11ac-40 MCS 3



11ac-80 MCS 5



* This Burst rate confirmation data is quoted from the data of Report No.13977035S-C-R1 (Antenna Terminal Conducted Tests).

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Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5180 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.00	32.74	15.26	45.32	3.31	55.99	73.9	17.9	381	22	
Hori.	15540.000	PK	43.40	38.30	9.75	39.56	-9.54	42.35	73.9	31.5	150	0	
Hori.	5150.000	AV	39.70	32.74	15.26	45.32	3.31	45.69	53.9	8.2	381	22	VBW: 2.2 kHz
Hori.	15540.000	AV	32.10	38.30	9.75	39.56	-9.54	31.05	53.9	22.8	150	0	VBW: 2.2 kHz
Vert.	5150.000	PK	50.30	32.74	15.26	45.32	3.31	56.29	73.9	17.6	323	20	
Vert.	15540.000	PK	42.90	38.30	9.75	39.56	-9.54	41.85	73.9	32.0	150	0	
Vert.	5150.000	AV	39.60	32.74	15.26	45.32	3.31	45.59	53.9	8.3	323	20	VBW: 2.2 kHz
Vert.	15540.000	AV	32.40	38.30	9.75	39.56	-9.54	31.35	53.9	22.5	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	42.70	38.54	7.93	37.96	-9.54	41.67	-53.55	-27.0	26.5	150	0	
Vert.	6906.650	PK	45.20	36.62	6.48	39.94	2.26	50.62	-44.60	-27.0	17.6	199	342	*1)
Vert.	10360.000	PK	42.80	38.54	7.93	37.96	-9.54	41.77	-53.45	-27.0	26.4	262	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG}((\{10^{\frac{1}{2}}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{(-6)} * \text{Distance:3[m]} \}^2) / 30) * 10^3)$

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Kashima EMC Lab.

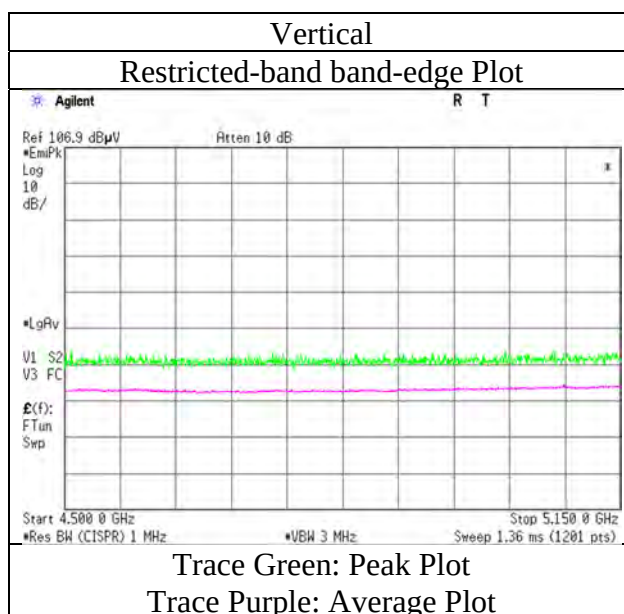
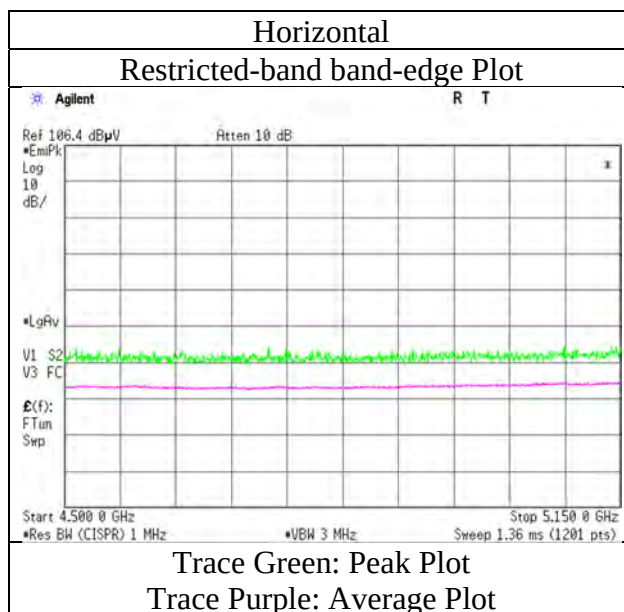
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5180 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5240 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	15720.000	PK	43.44	38.66	9.80	39.49	-9.54	42.87	73.9	31.0	150	0	
Hori.	15720.000	AV	32.40	38.66	9.80	39.49	-9.54	31.83	53.9	22.0	150	0	VBW: 2.2 kHz
Vert.	15720.000	PK	42.80	38.66	9.80	39.49	-9.54	42.23	73.9	31.6	150	0	
Vert.	15720.000	AV	32.20	38.66	9.80	39.49	-9.54	31.63	53.9	22.2	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	42.20	38.74	7.98	37.91	-9.54	41.47	-53.75	-27.0	26.7	150	0	
Vert.	6986.670	PK	46.50	36.76	6.49	39.87	2.26	52.14	-43.08	-27.0	16.0	256	340	*1)
Vert.	10480.000	PK	43.30	38.74	7.98	37.91	-9.54	42.57	-52.65	-27.0	25.6	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ $10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]}^2$ } / 30) * $10^{\wedge} 3$)

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5320 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.50	33.09	15.38	45.45	3.31	56.83	73.9	17.0	359	20	
Hori.	10640.000	PK	43.20	38.82	8.08	37.83	-9.54	42.73	73.9	31.1	150	0	
Hori.	15960.000	PK	42.40	38.98	9.87	39.32	-9.54	42.39	73.9	31.5	150	0	
Hori.	5350.000	AV	39.50	33.09	15.38	45.45	3.31	45.83	53.9	8.0	359	20	VBW: 2.2 kHz
Hori.	10640.000	AV	31.80	38.82	8.08	37.83	-9.54	31.33	53.9	22.5	150	0	VBW: 2.2 kHz
Hori.	15960.000	AV	32.40	38.98	9.87	39.32	-9.54	32.39	53.9	21.5	150	0	VBW: 2.2 kHz
Vert.	5350.000	PK	50.90	33.09	15.38	45.45	3.31	57.23	73.9	16.6	357	27	
Vert.	10640.000	PK	42.30	38.82	8.08	37.83	-9.54	41.83	73.9	32.0	150	0	
Vert.	15960.000	PK	42.50	38.98	9.87	39.32	-9.54	42.49	73.9	31.4	150	0	
Vert.	5350.000	AV	39.40	33.09	15.38	45.45	3.31	45.73	53.9	8.1	357	27	VBW: 2.2 kHz
Vert.	10640.000	AV	31.90	38.82	8.08	37.83	-9.54	31.43	53.9	22.4	150	0	VBW: 2.2 kHz
Vert.	15960.000	AV	32.50	38.98	9.87	39.32	-9.54	32.49	53.9	21.4	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Vert.	7093.333	PK	45.70	37.03	6.58	39.81	2.26	51.76	-43.46	-27.0	16.4	220	0	*1)

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm]) = $10 \times \log \left(\left(10^{\frac{\text{Electric Field Strength [dBuV/m]}{20}} \right) \times 10^{-6} \times \text{Distance:3[m]} \right)^2 / 30 \times 10^3$

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

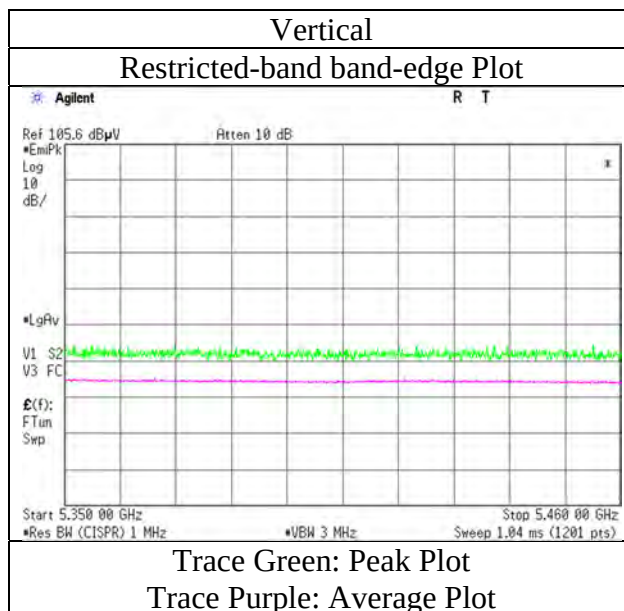
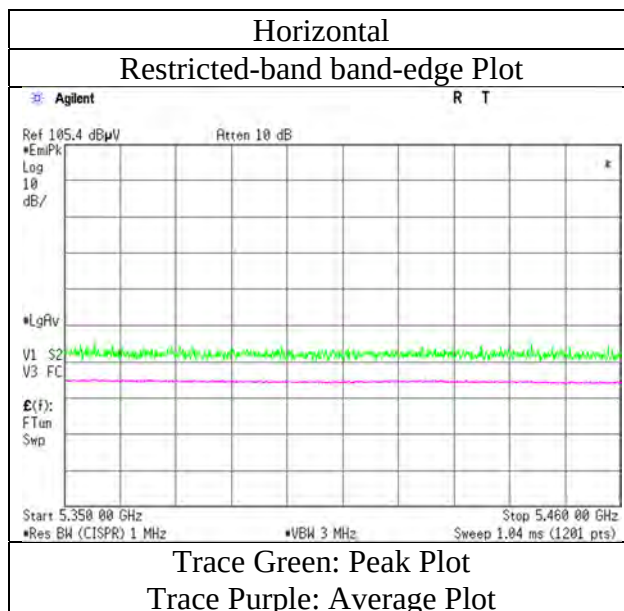
Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11a 5320 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5500 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.80	33.29	15.44	45.47	3.31	57.37	73.9	16.5	311	17	
Hori.	11000.000	PK	43.00	38.71	8.17	37.77	-9.54	42.57	73.9	31.3	150	0	
Hori.	5460.000	AV	40.30	33.29	15.44	45.47	3.31	46.87	53.9	7.0	311	17	VBW: 2.2 kHz
Hori.	11000.000	AV	32.20	38.71	8.17	37.77	-9.54	31.77	53.9	22.1	150	0	VBW: 2.2 kHz
Vert.	5460.000	PK	51.20	33.29	15.44	45.47	3.31	57.77	73.9	16.1	306	28	
Vert.	7333.333	PK	45.20	37.54	6.75	39.65	2.26	52.10	73.9	21.8	245	334	
Vert.	11000.000	PK	43.60	38.71	8.17	37.77	-9.54	43.17	73.9	30.7	150	0	
Vert.	5460.000	AV	39.90	33.29	15.44	45.47	3.31	46.47	53.9	7.4	306	28	VBW: 2.2 kHz
Vert.	7333.333	AV	34.90	37.54	6.75	39.65	2.26	41.80	53.9	12.1	245	334	VBW: 2.2 kHz *1)
Vert.	11000.000	AV	33.10	38.71	8.17	37.77	-9.54	32.67	53.9	21.2	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.00	33.30	15.45	45.47	3.31	57.59	-37.63	-27.0	10.6	311	17	
Hori.	16500.000	PK	43.60	40.06	9.98	38.83	-9.54	45.27	-49.95	-27.0	22.9	150	0	
Vert.	5470.000	PK	50.80	33.30	15.45	45.47	3.31	57.39	-37.83	-27.0	10.8	306	28	
Vert.	16500.000	PK	43.20	40.06	9.98	38.83	-9.54	44.87	-50.35	-27.0	23.3	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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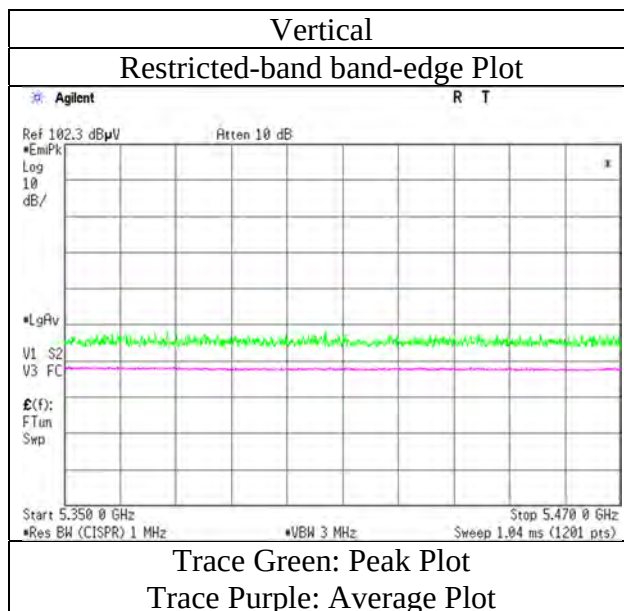
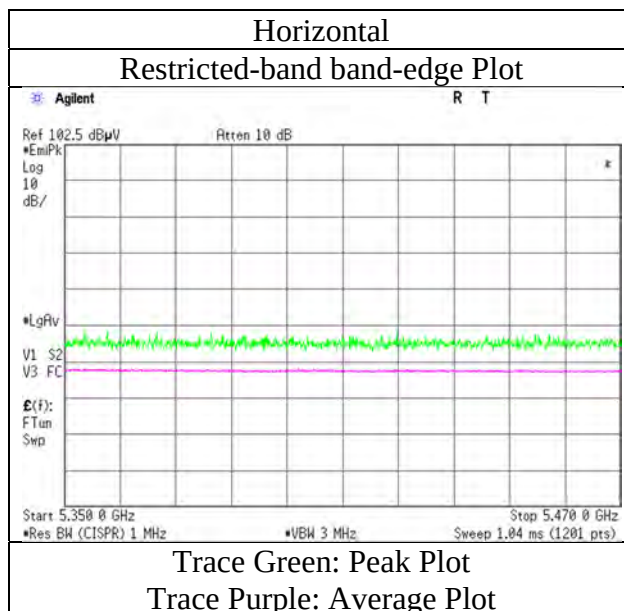
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11a 5500 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5580 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11160.000	PK	42.90	38.62	8.19	37.76	-9.54	42.41	73.9	31.4	150	0	VBW: 2.2 kHz
Hori.	11160.000	AV	31.90	38.62	8.19	37.76	-9.54	31.41	53.9	22.4	150	0	
Vert.	7440.000	PK	44.90	37.51	6.78	39.58	2.26	51.87	73.9	22.0	237	336	VBW: 2.2 kHz *1)
Vert.	11160.000	PK	43.20	38.62	8.19	37.76	-9.54	42.71	73.9	31.1	150	0	
Vert.	7440.000	AV	34.80	37.51	6.78	39.58	2.26	41.77	53.9	12.1	237	336	VBW: 2.2 kHz
Vert.	11160.000	AV	31.20	38.62	8.19	37.76	-9.54	30.71	53.9	23.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	16740.000	PK	43.20	40.30	10.06	38.59	-9.54	45.43	-49.79	-27.0	22.7	150	0	
Vert.	16740.000	PK	43.80	40.30	10.06	38.59	-9.54	46.03	-49.19	-27.0	22.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

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26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Radiated Spurious Emission

Report No.	13977035M-C					
Test place	Kashima EMC Lab.					
Semi Anechoic Chamber	No.10	No.10	No.11	No.11	No.10	No.11
Date	December 8, 2021	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	23 deg. C / 41 % RH	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Kazuhiro Ando	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5700 MHz					

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	321.247	QP	37.50	14.10	7.68	32.00	0.00	27.28	46.0	18.7	100	121	
Hori.	949.461	QP	26.50	24.15	9.97	31.02	0.00	29.60	46.0	16.4	100	154	
Hori.	11400.000	PK	42.60	38.77	8.25	37.82	-9.54	42.26	73.9	31.6	150	0	
Hori.	11400.000	AV	31.70	38.77	8.25	37.82	-9.54	31.36	53.9	22.5	150	0	VBW: 2.2 kHz
Vert.	35.653	QP	39.00	12.86	5.73	32.21	0.00	25.38	40.0	14.6	100	271	
Vert.	54.011	QP	27.50	13.76	5.94	32.20	0.00	15.00	40.0	25.0	100	95	
Vert.	306.650	QP	35.80	13.70	7.61	32.01	0.00	25.10	46.0	20.9	100	253	
Vert.	438.801	QP	30.10	16.86	8.22	31.98	0.00	23.20	46.0	22.8	100	299	
Vert.	743.345	QP	29.90	21.99	9.33	31.99	0.00	29.23	46.0	16.7	100	17	
Vert.	942.081	QP	24.90	24.13	9.94	31.08	0.00	27.89	46.0	18.1	101	15	
Vert.	7600.000	PK	46.00	37.39	6.79	39.50	2.26	52.94	73.9	20.9	252	339	
Vert.	11400.000	PK	42.40	38.77	8.25	37.82	-9.54	42.06	73.9	31.8	150	0	
Vert.	7600.000	AV	37.10	37.39	6.79	39.50	2.26	44.04	53.9	9.8	252	339	VBW: 2.2 kHz *1)
Vert.	11400.000	AV	31.70	38.77	8.25	37.82	-9.54	31.36	53.9	22.5	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.90	33.77	15.58	45.41	3.31	59.15	-36.07	-27.0	9.0	355	297	
Hori.	17100.000	PK	44.50	40.93	10.21	38.24	-9.54	47.86	-47.36	-27.0	20.3	150	0	
Vert.	5725.000	PK	50.60	33.77	15.58	45.41	3.31	57.85	-37.37	-27.0	10.3	308	255	
Vert.	17100.000	PK	43.90	40.93	10.21	38.24	-9.54	47.26	-47.96	-27.0	20.9	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) *10^3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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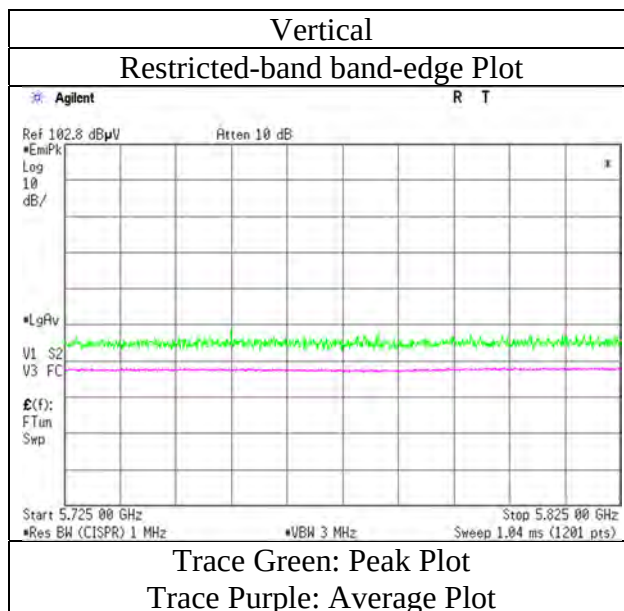
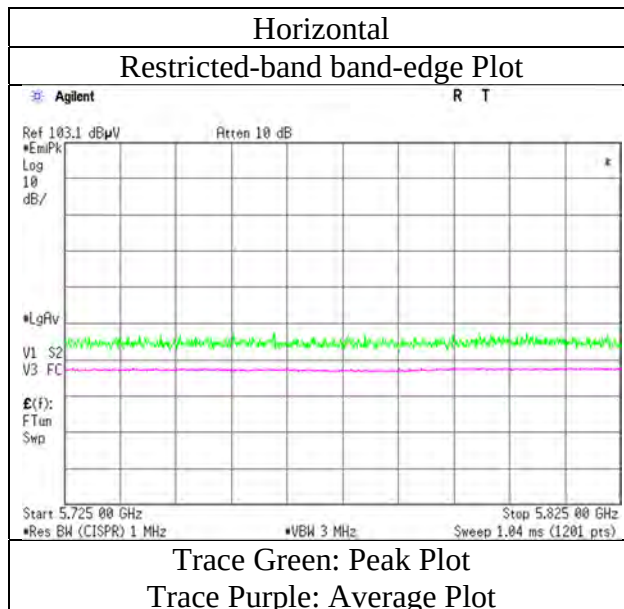
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11a 5700 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5745 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11490.000	PK	42.80	38.77	8.26	37.86	-9.54	42.43	73.9	31.4	150	0	VBW: 2.2 kHz
Hori.	11490.000	AV	31.80	38.77	8.26	37.86	-9.54	31.43	53.9	22.4	150	0	
Vert.	7660.000	PK	46.00	37.34	6.77	39.48	2.26	52.89	73.9	21.0	236	331	VBW: 2.2 kHz *1)
Vert.	11490.000	PK	42.10	38.77	8.26	37.86	-9.54	41.73	73.9	32.1	150	0	
Vert.	7660.000	AV	36.40	37.34	6.77	39.48	2.26	43.29	53.9	10.6	236	331	VBW: 2.2 kHz
Vert.	11490.000	AV	31.80	38.77	8.26	37.86	-9.54	31.43	53.9	22.4	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.90	33.59	15.54	45.45	3.31	58.89	-36.33	-27.0	9.3	311	305	
Hori.	5700.000	PK	50.80	33.74	15.57	45.42	3.31	58.00	-37.22	10.0	47.2	311	305	
Hori.	5720.000	PK	51.00	33.76	15.58	45.41	3.31	58.24	-36.98	15.6	52.5	311	305	
Hori.	5725.000	PK	54.20	33.77	15.58	45.41	3.31	61.45	-33.77	27.0	60.7	311	305	
Hori.	17235.000	PK	43.40	41.23	10.23	38.08	-9.54	47.24	-47.98	-27.0	20.9	150	0	
Vert.	5650.000	PK	51.00	33.59	15.54	45.45	3.31	57.99	-37.23	-27.0	10.2	285	277	
Vert.	5700.000	PK	50.70	33.74	15.57	45.42	3.31	57.90	-37.32	10.0	47.3	285	277	
Vert.	5720.000	PK	50.70	33.76	15.58	45.41	3.31	57.94	-37.28	15.6	52.8	285	277	
Vert.	5725.000	PK	54.60	33.77	15.58	45.41	3.31	61.85	-33.37	27.0	60.3	285	277	
Vert.	17235.000	PK	43.90	41.23	10.23	38.08	-9.54	47.74	-47.48	-27.0	20.4	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

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26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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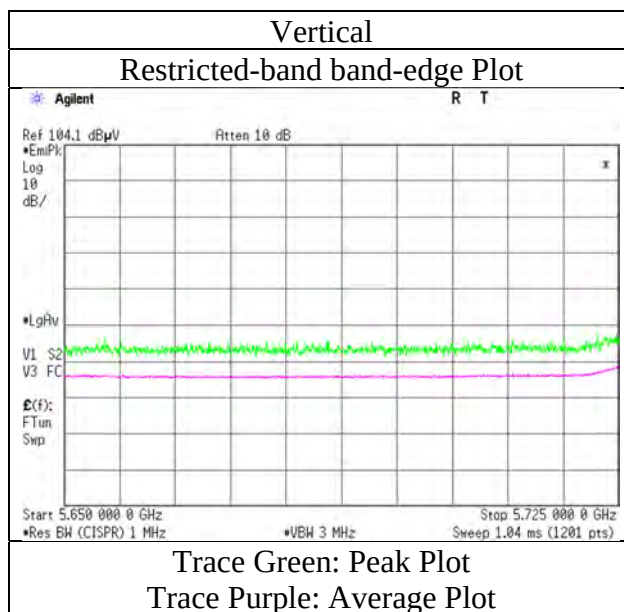
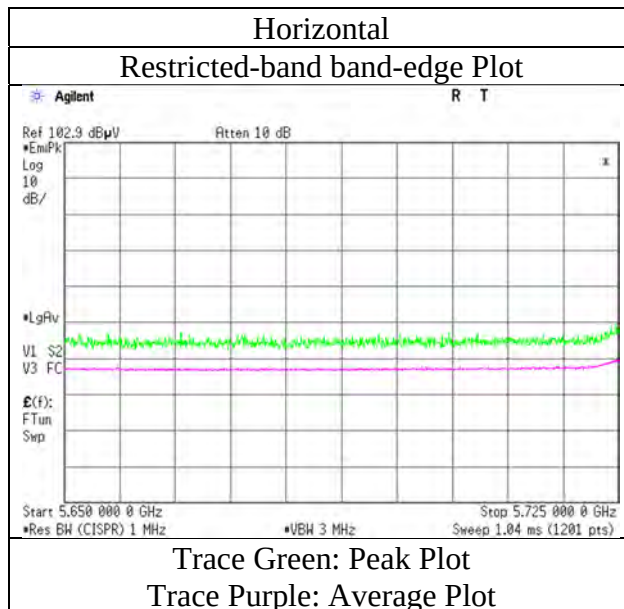
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11a 5745 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5785 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11570.000	PK	42.20	38.76	8.30	37.90	-9.54	41.82	73.9	32.0	150	0	VBW: 2.2 kHz
Hori.	11570.000	AV	32.00	38.76	8.30	37.90	-9.54	31.62	53.9	22.2	150	0	
Vert.	7713.333	PK	45.30	37.21	6.78	39.45	2.26	52.10	73.9	21.8	242	335	
Vert.	11570.000	PK	42.90	38.76	8.30	37.90	-9.54	42.52	73.9	31.3	150	0	
Vert.	7713.333	AV	35.30	37.21	6.78	39.45	2.26	42.10	53.9	11.8	242	335	
Vert.	11570.000	AV	31.70	38.76	8.30	37.90	-9.54	31.32	53.9	22.5	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	17355.000	PK	43.90	41.56	10.29	37.93	-9.54	48.28	-46.94	-27.0	19.9	150	0	
Vert.	17355.000	PK	43.70	41.56	10.29	37.93	-9.54	48.08	-47.14	-27.0	20.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) * 10^3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.11
Date	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5825 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	44.10	38.79	8.32	37.93	-9.54	43.74	73.9	30.1	150	0	
Hori.	11650.000	AV	33.30	38.79	8.32	37.93	-9.54	32.94	53.9	20.9	150	0	VBW: 2.2 kHz
Vert.	11650.000	PK	43.00	38.79	8.32	37.93	-9.54	42.64	73.9	31.2	150	0	
Vert.	11650.000	AV	31.80	38.79	8.32	37.93	-9.54	31.44	53.9	22.4	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	332	299	
Hori.	5855.000	PK	50.60	34.32	15.63	45.36	3.31	58.50	-36.72	15.6	52.3	332	299	
Hori.	5875.000	PK	51.00	34.49	15.65	45.34	3.31	59.11	-36.11	10.0	46.1	332	299	
Hori.	5925.000	PK	51.20	34.76	15.68	45.30	3.31	59.65	-35.57	-27.0	8.5	332	299	
Hori.	17475.000	PK	43.90	41.69	10.33	37.79	-9.54	48.59	-46.63	-27.0	19.6	150	0	
Vert.	5850.000	PK	50.50	34.28	15.63	45.36	3.31	58.36	-36.86	27.0	63.8	308	272	
Vert.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	308	272	
Vert.	5875.000	PK	51.70	34.49	15.65	45.34	3.31	59.81	-35.41	10.0	45.4	308	272	
Vert.	5925.000	PK	50.90	34.76	15.68	45.30	3.31	59.35	-35.87	-27.0	8.8	308	272	
Vert.	7766.666	PK	44.00	37.07	6.78	39.43	2.26	50.68	-44.54	-27.0	17.5	235	332	*1)
Vert.	17475.000	PK	43.60	41.69	10.33	37.79	-9.54	48.29	-46.93	-27.0	19.9	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Kashima EMC Lab.

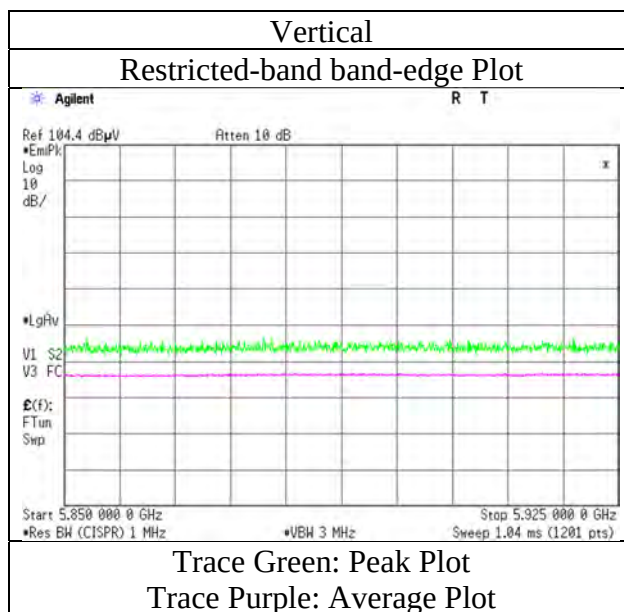
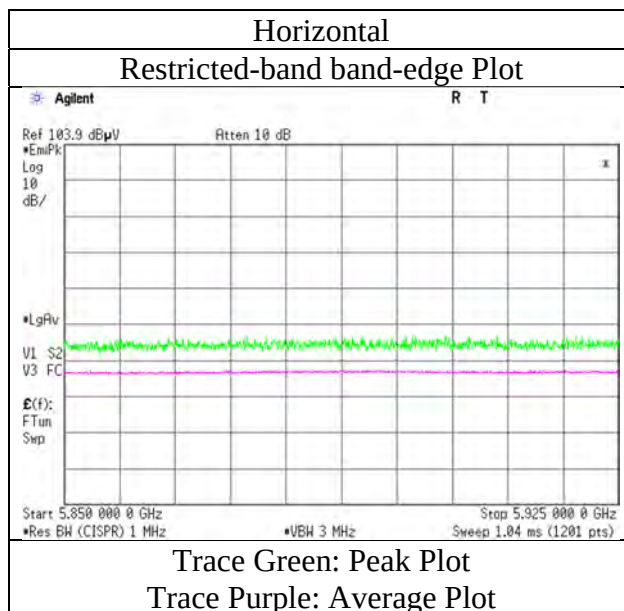
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11a 5825 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 18, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	19 deg. C / 49 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5180 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.80	32.74	15.26	45.32	3.31	56.79	73.9	17.1	385	2	
Hori.	15540.000	PK	43.20	38.30	9.75	39.56	-9.54	42.15	73.9	31.7	150	0	
Hori.	5150.000	AV	39.80	32.74	15.26	45.32	3.31	45.79	53.9	8.1	385	2	VBW: 3.0 kHz
Hori.	15540.000	AV	32.00	38.30	9.75	39.56	-9.54	30.95	53.9	22.9	150	0	VBW: 3.0 kHz
Vert.	5150.000	PK	50.90	32.74	15.26	45.32	3.31	56.89	73.9	17.0	344	346	
Vert.	15540.000	PK	43.40	38.30	9.75	39.56	-9.54	42.35	73.9	31.5	150	0	
Vert.	5150.000	AV	39.80	32.74	15.26	45.32	3.31	45.79	53.9	8.1	344	346	VBW: 3.0 kHz
Vert.	15540.000	AV	32.10	38.30	9.75	39.56	-9.54	31.05	53.9	22.8	150	0	VBW: 3.0 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	42.80	38.54	7.93	37.96	-9.54	41.77	-53.45	-27.0	26.4	150	0	
Vert.	6906.666	PK	44.30	36.62	6.48	39.94	2.26	49.72	-45.50	-27.0	18.5	253	4	*1)
Vert.	10360.000	PK	42.70	38.54	7.93	37.96	-9.54	41.67	-53.55	-27.0	26.5	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG}((\{10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)\} * 10^{\wedge}(-6) * \text{Distance:3[m]}^{\wedge}2) / 30) * 10^{\wedge}3)$

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

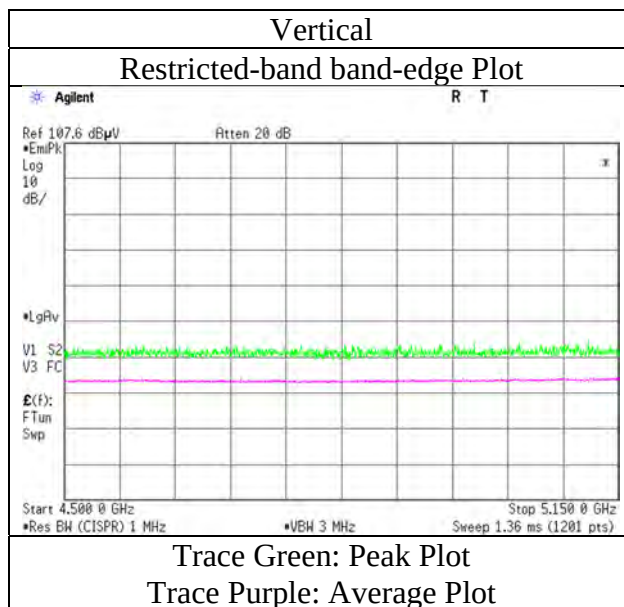
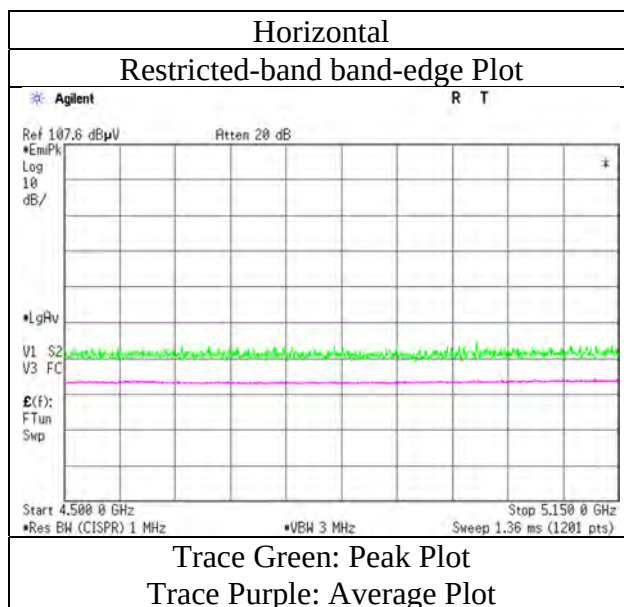
Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5180 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-20 5320 MHz

(above 1 GHz Inside of the restricted band)

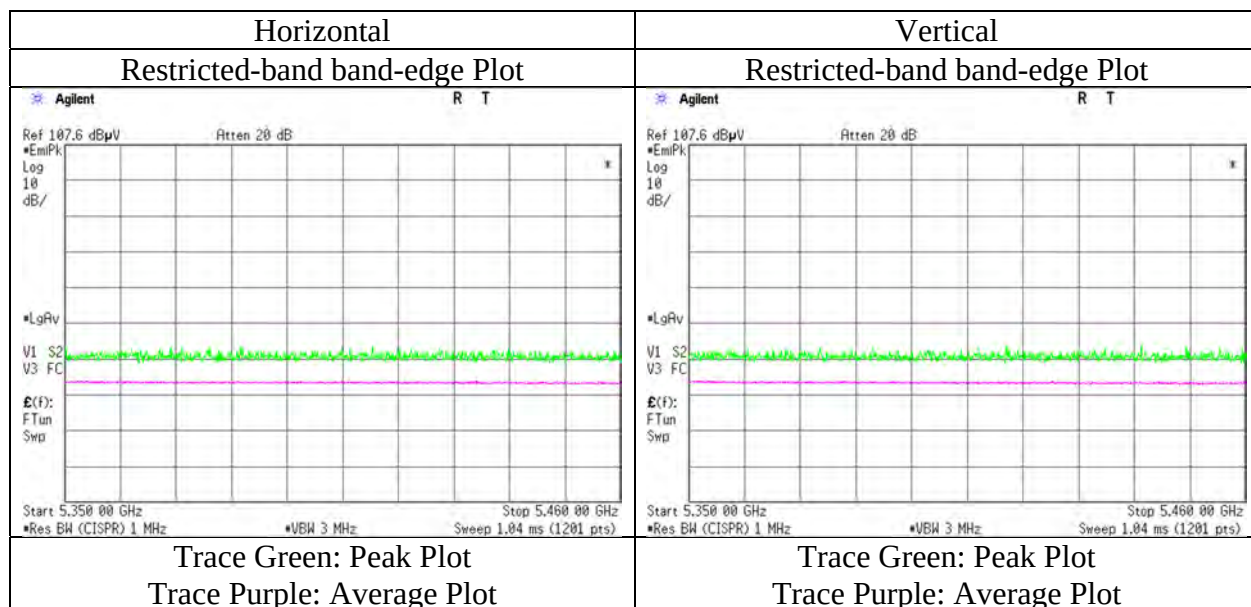
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	144	298	VBW: 3.0 kHz
Hori.	5350.000	AV	39.60	33.09	15.38	45.45	3.31	45.93	53.9	7.9	144	298	
Vert.	5350.000	PK	50.90	33.09	15.38	45.45	3.31	57.23	73.9	16.6	361	9	
Vert.	5350.000	AV	39.80	33.09	15.38	45.45	3.31	46.13	53.9	7.7	361	9	VBW: 3.0 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+ (Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-20 5500 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.90	33.29	15.44	45.47	3.31	57.47	73.9	16.4	313	18	VBW: 3.0 kHz
Hori.	5460.000	AV	39.80	33.29	15.44	45.47	3.31	46.37	53.9	7.5	313	18	
Vert.	5460.000	PK	50.50	33.29	15.44	45.47	3.31	57.07	73.9	16.8	367	34	
Vert.	5460.000	AV	40.00	33.29	15.44	45.47	3.31	46.57	53.9	7.3	367	34	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+ (Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

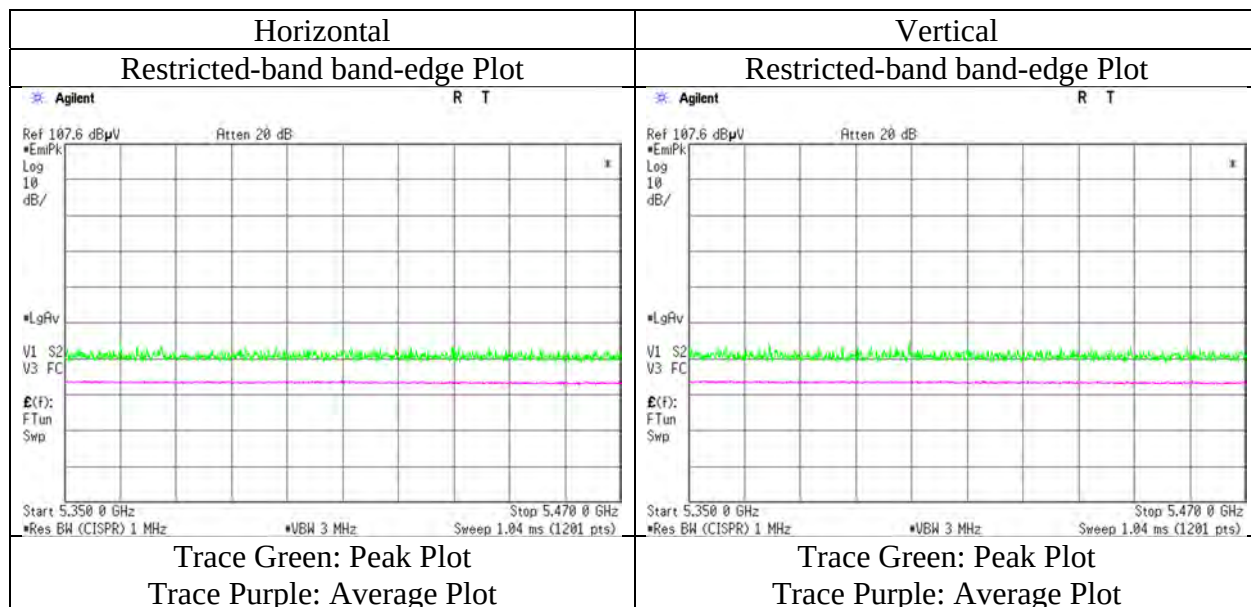
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	50.30	33.30	15.45	45.47	3.31	56.89	-38.33	-27.0	11.3	313	18	
Vert.	5470.000	PK	51.10	33.30	15.45	45.47	3.31	57.69	-37.53	-27.0	10.5	367	34	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+ (Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 18, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	19 deg. C / 49 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5700 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11400.000	PK	43.10	38.77	8.25	37.82	-9.54	42.76	73.9	31.1	150	0	VBW: 3.0 kHz
Hori.	11400.000	AV	31.40	38.77	8.25	37.82	-9.54	31.06	53.9	22.8	150	0	
Vert.	7600.000	PK	44.40	37.39	6.79	39.50	2.26	51.34	73.9	22.5	257	0	
Vert.	11400.000	PK	42.30	38.77	8.25	37.82	-9.54	41.96	73.9	31.9	150	0	VBW: 3.0 kHz *1)
Vert.	7600.000	AV	36.80	37.39	6.79	39.50	2.26	43.74	53.9	10.1	257	0	
Vert.	11400.000	AV	31.40	38.77	8.25	37.82	-9.54	31.06	53.9	22.8	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.70	33.77	15.58	45.41	3.31	57.95	-37.27	-27.0	10.2	298	306	
Hori.	17100.000	PK	43.30	40.93	10.21	38.24	-9.54	46.66	-48.56	-27.0	21.5	150	0	
Vert.	5725.000	PK	50.60	33.77	15.58	45.41	3.31	57.85	-37.37	-27.0	10.3	303	276	
Vert.	17100.000	PK	43.80	40.93	10.21	38.24	-9.54	47.16	-48.06	-27.0	21.0	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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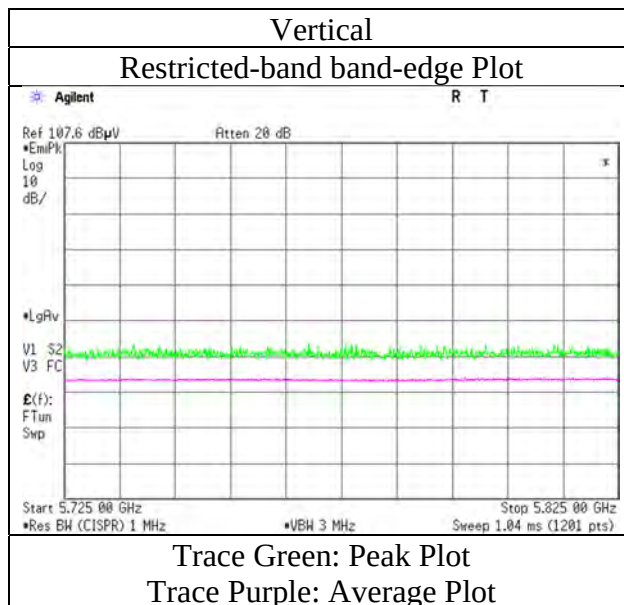
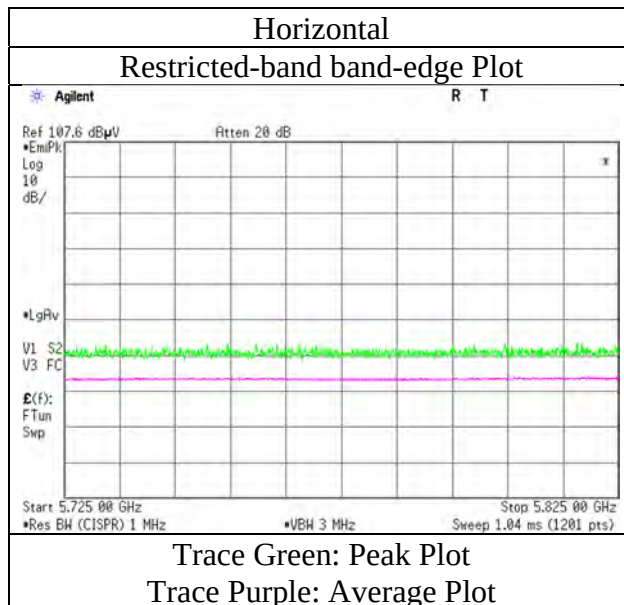
1614, Mushiata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 18, 2021
Temperature / Humidity	19 deg. C / 49 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-20 5700 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5745 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11490.000	PK	42.70	38.77	8.26	37.86	-9.54	42.33	73.9	31.5	150	0	VBW: 3.0 kHz
Hori.	11490.000	AV	31.50	38.77	8.26	37.86	-9.54	31.13	53.9	22.7	150	0	
Vert.	7660.000	PK	44.60	37.34	6.77	39.48	2.26	51.49	73.9	22.4	254	0	
Vert.	11490.000	PK	43.00	38.77	8.26	37.86	-9.54	42.63	73.9	31.2	150	0	VBW: 3.0 kHz *1)
Vert.	7660.000	AV	36.50	37.34	6.77	39.48	2.26	43.39	53.9	10.5	254	0	
Vert.	11490.000	AV	31.10	38.77	8.26	37.86	-9.54	30.73	53.9	23.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.30	33.59	15.54	45.45	3.31	57.29	-37.93	-27.0	10.9	310	303	
Hori.	5700.000	PK	50.40	33.74	15.57	45.42	3.31	57.60	-37.62	10.0	47.6	310	303	
Hori.	5720.000	PK	50.50	33.76	15.58	45.41	3.31	57.74	-37.48	15.6	53.0	310	303	
Hori.	5725.000	PK	51.00	33.77	15.58	45.41	3.31	58.25	-36.97	27.0	63.9	310	303	0
Hori.	17235.000	PK	43.80	41.23	10.23	38.08	-9.54	47.64	-47.58	-27.0	20.5	150	0	
Vert.	5650.000	PK	50.60	33.59	15.54	45.45	3.31	57.59	-37.63	-27.0	10.6	319	273	
Vert.	5700.000	PK	50.70	33.74	15.57	45.42	3.31	57.90	-37.32	10.0	47.3	319	273	273
Vert.	5720.000	PK	50.90	33.76	15.58	45.41	3.31	58.14	-37.08	15.6	52.6	319	273	
Vert.	5725.000	PK	51.10	33.77	15.58	45.41	3.31	58.35	-36.87	27.0	63.8	319	273	
Vert.	17235.000	PK	43.60	41.23	10.23	38.08	-9.54	47.44	-47.78	-27.0	20.7	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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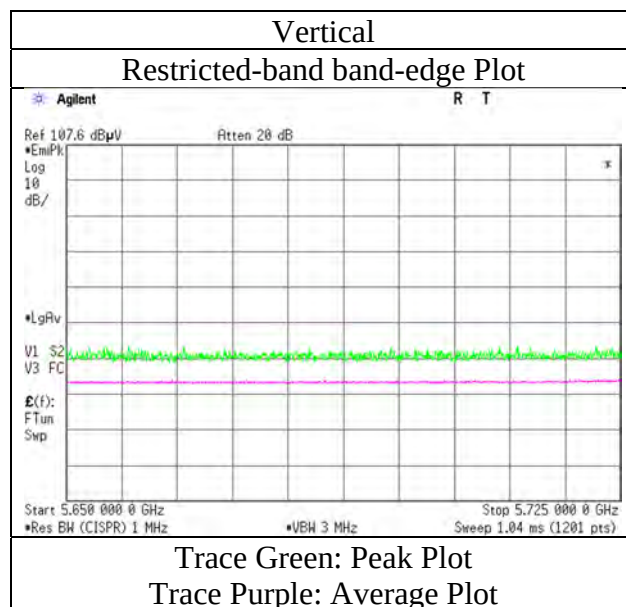
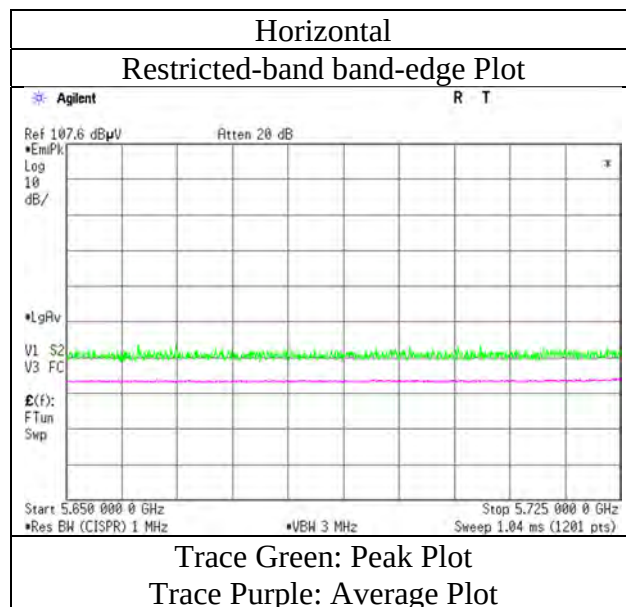
1614, Mushiata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11ac-20 5745 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11ac-20 5825 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

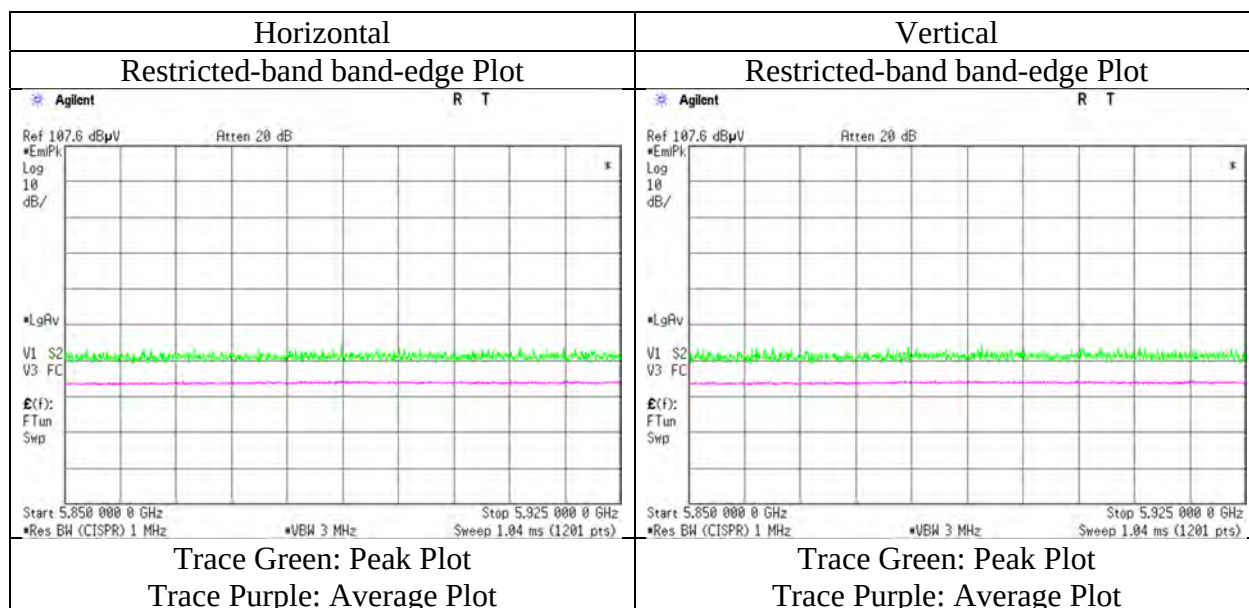
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	376	307	
Hori.	5855.000	PK	50.00	34.32	15.63	45.36	3.31	57.90	-37.32	15.6	52.9	376	307	
Hori.	5875.000	PK	49.60	34.49	15.65	45.34	3.31	57.71	-37.51	10.0	47.5	376	307	
Hori.	5925.000	PK	49.70	34.76	15.68	45.30	3.31	58.15	-37.07	-27.0	10.0	376	307	
Vert.	5850.000	PK	51.00	34.28	15.63	45.36	3.31	58.86	-36.36	27.0	63.3	236	281	
Vert.	5855.000	PK	50.90	34.32	15.63	45.36	3.31	58.80	-36.42	15.6	52.0	236	281	
Vert.	5875.000	PK	50.00	34.49	15.65	45.34	3.31	58.11	-37.11	10.0	47.1	236	281	
Vert.	5925.000	PK	50.00	34.76	15.68	45.30	3.31	58.45	-36.77	-27.0	9.7	236	281	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB (No.10 site), 1 GHz - 10 GHz : 20log (3.89m / 3.0 m) = 2.26 dB (No.11 site)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5190 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	54.30	32.74	15.26	45.32	3.31	60.29	73.9	13.6	153	302	
Hori.	15570.000	PK	43.50	38.35	9.77	39.55	-9.54	42.53	73.9	31.3	150	0	
Hori.	5150.000	AV	43.50	32.74	15.26	45.32	3.31	49.49	53.9	4.4	153	302	VBW: 5.6 kHz
Hori.	15570.000	AV	33.40	38.35	9.77	39.55	-9.54	32.43	53.9	21.4	150	0	VBW: 5.6 kHz
Vert.	5150.000	PK	57.10	32.74	15.26	45.32	3.31	63.09	73.9	10.8	319	28	
Vert.	15570.000	PK	43.20	38.35	9.77	39.55	-9.54	42.23	73.9	31.6	150	0	
Vert.	5150.000	AV	45.60	32.74	15.26	45.32	3.31	51.59	53.9	2.3	319	28	VBW: 5.6 kHz
Vert.	15570.000	AV	33.30	38.35	9.77	39.55	-9.54	32.33	53.9	21.5	150	0	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10380.000	PK	42.30	38.61	7.96	37.95	-9.54	41.38	-53.84	-27.0	26.8	150	0	
Vert.	6920.000	PK	43.90	36.64	6.48	39.93	2.26	49.35	-45.87	-27.0	18.8	257	0	*1)
Vert.	10380.000	PK	43.10	38.61	7.96	37.95	-9.54	42.18	-53.04	-27.0	26.0	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG}((\{10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)\cdot 10^{\wedge}(-6)\cdot \text{Distance:3[m]}^2\} / 30)\cdot 10^{\wedge}3)$

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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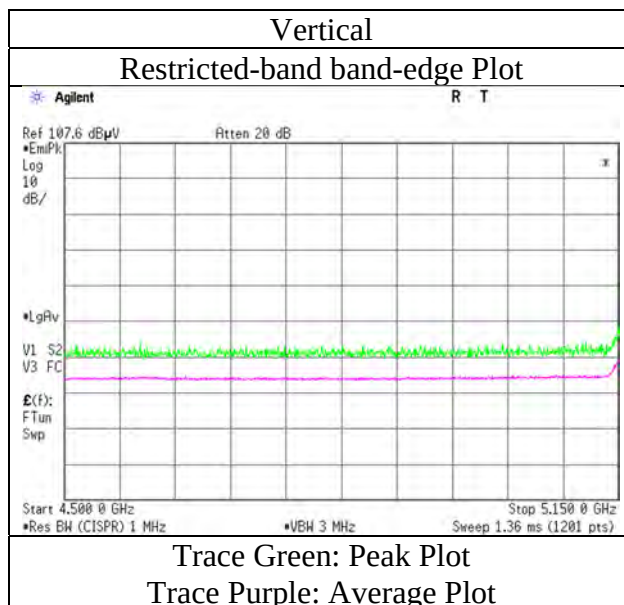
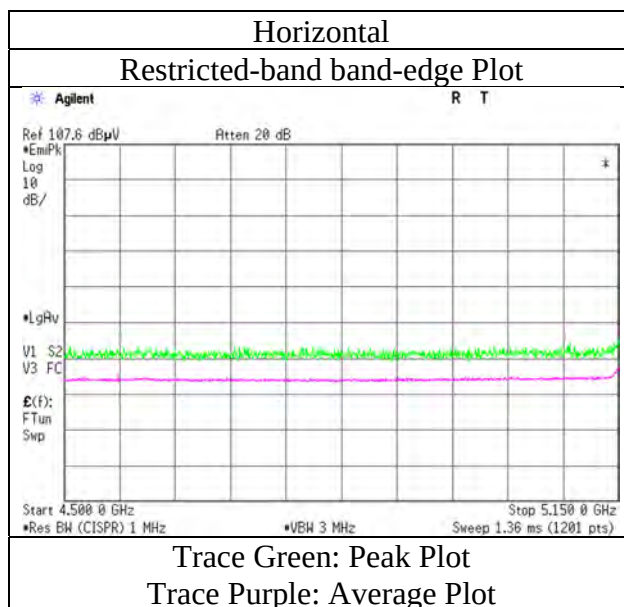
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5190 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5230 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	15690.000	PK	43.10	38.61	9.80	39.50	-9.54	42.47	73.9	31.4	150	0	
Hori.	15690.000	AV	33.20	38.61	9.80	39.50	-9.54	32.57	53.9	21.3	150	0	VBW: 5.6 kHz
Vert.	15690.000	PK	43.60	38.61	9.80	39.50	-9.54	42.97	73.9	30.9	150	0	
Vert.	15690.000	AV	33.00	38.61	9.80	39.50	-9.54	32.37	53.9	21.5	150	0	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	42.00	38.71	7.97	37.92	-9.54	41.22	-54.00	-27.0	27.0	150	0	
Vert.	6973.333	PK	44.20	36.74	6.49	39.88	2.26	49.81	-45.41	-27.0	18.4	258	0	*1)
Vert.	10460.000	PK	42.30	38.71	7.97	37.92	-9.54	41.52	-53.70	-27.0	26.7	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ $10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]})^2 } / 30) * 10^{\wedge} 3$)

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5310 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.60	33.09	15.38	45.45	3.31	56.93	73.9	16.9	144	305	
Hori.	10620.000	PK	42.00	38.83	8.07	37.84	-9.54	41.52	73.9	32.3	150	0	
Hori.	15930.000	PK	42.50	38.95	9.85	39.34	-9.54	42.42	73.9	31.4	150	0	
Hori.	5350.000	AV	40.70	33.09	15.38	45.45	3.31	47.03	53.9	6.8	144	305	VBW: 5.6 kHz
Hori.	10620.000	AV	32.20	38.83	8.07	37.84	-9.54	31.72	53.9	22.1	150	0	VBW: 5.6 kHz
Hori.	15930.000	AV	33.30	38.95	9.85	39.34	-9.54	33.22	53.9	20.6	150	0	VBW: 5.6 kHz
Vert.	5350.000	PK	51.90	33.09	15.38	45.45	3.31	58.23	73.9	15.6	308	14	
Vert.	10620.000	PK	42.20	38.83	8.07	37.84	-9.54	41.72	73.9	32.1	150	0	
Vert.	15930.000	PK	42.80	38.95	9.85	39.34	-9.54	42.72	73.9	31.1	150	0	
Vert.	5350.000	AV	41.30	33.09	15.38	45.45	3.31	47.63	53.9	6.2	308	14	VBW: 5.6 kHz
Vert.	10620.000	AV	32.20	38.83	8.07	37.84	-9.54	31.72	53.9	22.1	150	0	VBW: 5.6 kHz
Vert.	15930.000	AV	32.90	38.95	9.85	39.34	-9.54	32.82	53.9	21.0	150	0	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Vert.	7080.000	PK	44.40	37.00	6.57	39.82	2.26	50.41	-44.81	-27.0	17.8	255	0	*1)

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP)[dBm]=10*LOG (({ $10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)$ } * $10^{\wedge}(-6)$ * Distance:3[m]) $^{\wedge}2$ } / 30) * $10^{\wedge}3$)

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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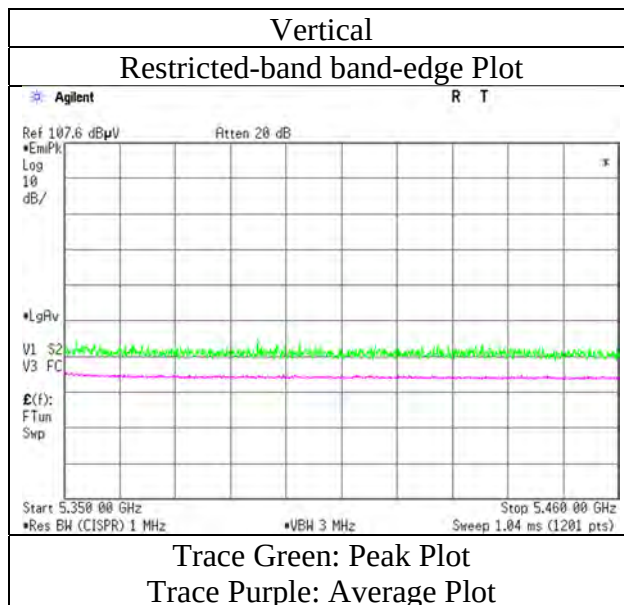
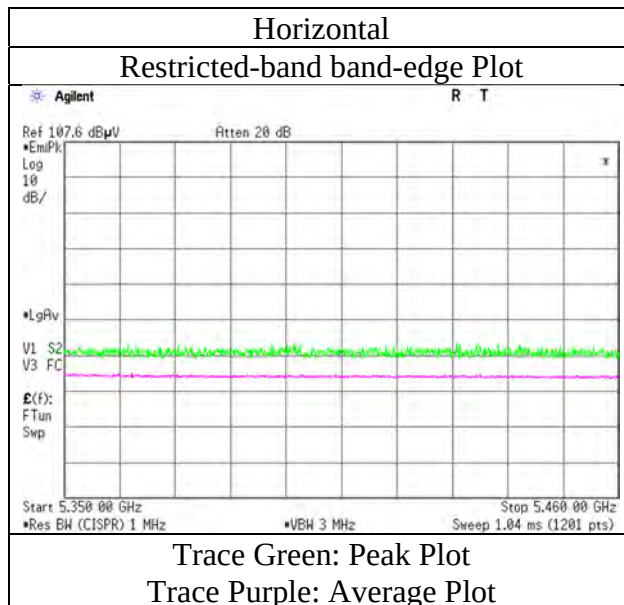
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11n-40 5310 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 22, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5510 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.80	33.29	15.44	45.47	3.31	57.37	73.9	16.5	361	22	
Hori.	11020.000	PK	43.00	38.71	8.17	37.77	-9.54	42.57	73.9	31.3	150	0	
Hori.	5460.000	AV	40.30	33.29	15.44	45.47	3.31	46.87	53.9	7.0	361	22	VBW: 5.6 kHz
Hori.	11020.000	AV	32.50	38.71	8.17	37.77	-9.54	32.07	53.9	21.8	150	0	VBW: 5.6 kHz
Vert.	5460.000	PK	50.60	33.29	15.44	45.47	3.31	57.17	73.9	16.7	302	29	
Vert.	7346.333	PK	44.00	37.55	6.77	39.63	2.26	50.95	73.9	22.9	259	0	
Vert.	11020.000	PK	43.20	38.71	8.17	37.77	-9.54	42.77	73.9	31.1	150	0	
Vert.	5460.000	AV	40.40	33.29	15.44	45.47	3.31	46.97	53.9	6.9	302	29	VBW: 5.6 kHz
Vert.	7346.333	AV	34.00	37.55	6.77	39.63	2.26	40.95	53.9	12.9	259	0	VBW: 5.6 kHz *1)
Vert.	11020.000	AV	32.20	38.71	8.17	37.77	-9.54	31.77	53.9	22.1	150	0	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	50.00	33.30	15.45	45.47	3.31	56.59	-38.63	-27.0	11.6	361	22	
Hori.	16530.000	PK	44.40	40.10	10.00	38.80	-9.54	46.16	-49.06	-27.0	22.0	150	0	
Vert.	5470.000	PK	51.30	33.30	15.45	45.47	3.31	57.89	-37.33	-27.0	10.3	302	29	
Vert.	16530.000	PK	43.10	40.10	10.00	38.80	-9.54	44.86	-50.36	-27.0	23.3	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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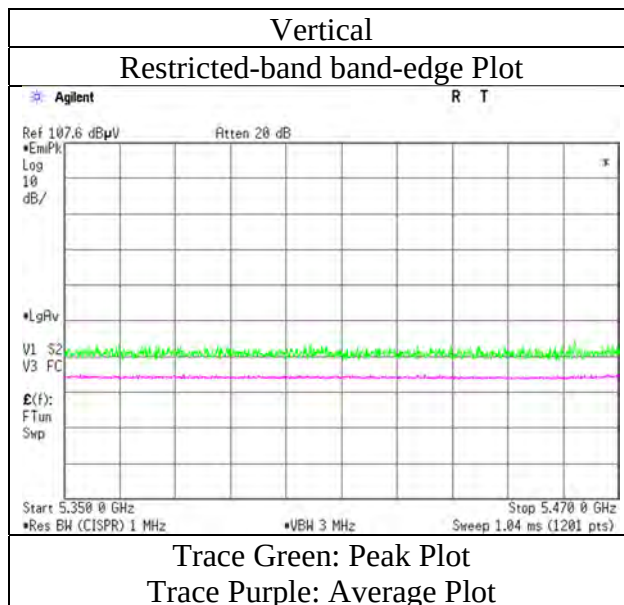
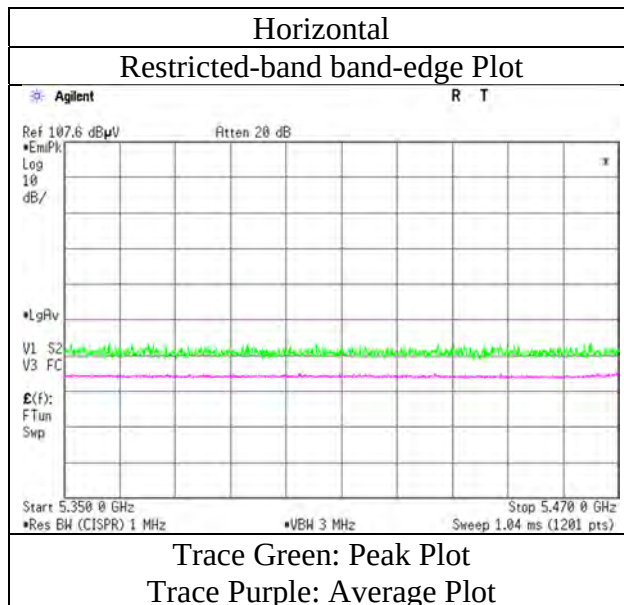
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11n-40 5510 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5550 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11100.000	PK	43.30	38.58	8.20	37.76	-9.54	42.78	73.9	31.1	150	0	VBW: 5.6 kHz
Hori.	11100.000	AV	32.80	38.58	8.20	37.76	-9.54	32.28	53.9	21.6	150	0	
Vert.	7400.000	PK	44.80	37.46	6.75	39.60	2.26	51.67	73.9	22.2	256	0	
Vert.	11100.000	PK	43.10	38.58	8.20	37.76	-9.54	42.58	73.9	31.3	150	0	VBW: 5.6 kHz *1)
Vert.	7400.000	AV	34.70	37.46	6.75	39.60	2.26	41.57	53.9	12.3	256	0	
Vert.	11100.000	AV	32.70	38.58	8.20	37.76	-9.54	32.18	53.9	21.7	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	16650.000	PK	43.20	40.21	10.06	38.69	-9.54	45.24	-49.98	-27.0	22.9	150	0	
Vert.	16650.000	PK	43.20	40.21	10.06	38.69	-9.54	45.24	-49.98	-27.0	22.9	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]} \}^2 \right) / 30 \right) * 10^{\wedge} 3$

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5670 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11340.000	PK	43.70	38.61	8.26	37.81	-9.54	43.22	73.9	30.6	150	0	VBW: 5.6 kHz
Hori.	11340.000	AV	32.30	38.61	8.26	37.81	-9.54	31.82	53.9	22.0	150	0	
Vert.	7560.000	PK	44.70	37.49	6.77	39.52	2.26	51.70	73.9	22.2	264	0	
Vert.	11340.000	PK	43.10	38.61	8.26	37.81	-9.54	42.62	73.9	31.2	150	0	VBW: 5.6 kHz *1)
Vert.	7560.000	AV	36.40	37.49	6.77	39.52	2.26	43.40	53.9	10.5	264	0	
Vert.	11340.000	AV	32.00	38.61	8.26	37.81	-9.54	31.52	53.9	22.3	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.30	33.77	15.58	45.41	3.31	57.55	-37.67	-27.00	10.6	361	305	
Hori.	17010.000	PK	44.00	40.77	10.14	38.33	-9.54	47.04	-48.18	-27.00	21.1	150	0	
Vert.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	-27.00	9.5	277	285	
Vert.	17010.000	PK	43.60	40.77	10.14	38.33	-9.54	46.64	-48.58	-27.00	21.5	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

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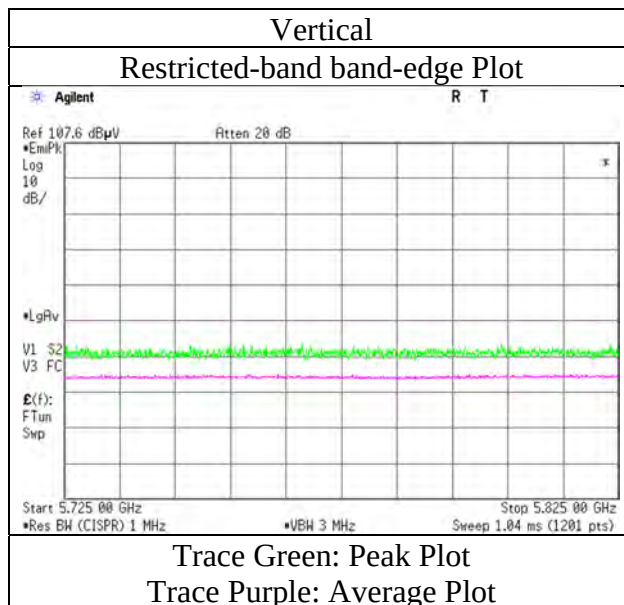
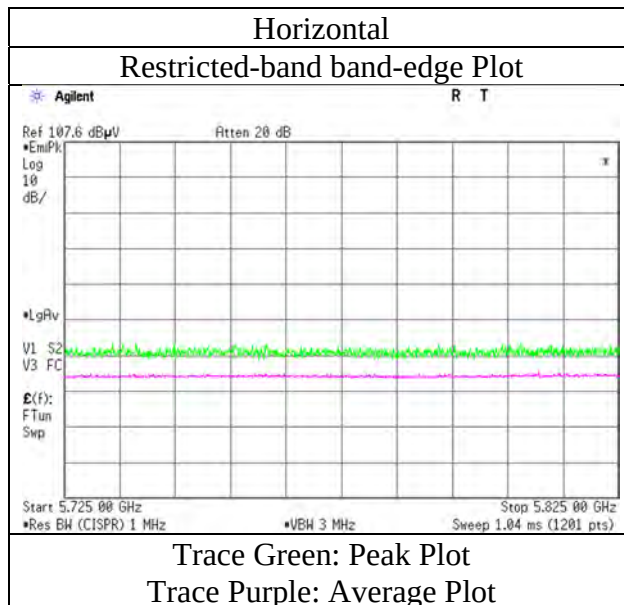
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11n-40 5670 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5755 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	41.80	38.77	8.28	37.87	-9.54	41.44	73.9	32.4	150	0	VBW: 5.6 kHz
Hori.	11510.000	AV	32.10	38.77	8.28	37.87	-9.54	31.74	53.9	22.1	150	0	
Vert.	7673.333	PK	45.30	37.31	6.77	39.47	2.26	52.17	73.9	21.7	261	0	
Vert.	11510.000	PK	42.80	38.77	8.28	37.87	-9.54	42.44	73.9	31.4	150	0	VBW: 5.6 kHz *1)
Vert.	7673.333	AV	37.40	37.31	6.77	39.47	2.26	44.27	53.9	9.6	261	0	
Vert.	11510.000	AV	31.90	38.77	8.28	37.87	-9.54	31.54	53.9	22.3	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.60	33.59	15.54	45.45	3.31	57.59	-37.63	-27.0	10.6	301	303	
Hori.	5700.000	PK	51.00	33.74	15.57	45.42	3.31	58.20	-37.02	10.0	47.0	301	303	
Hori.	5720.000	PK	53.70	33.76	15.58	45.41	3.31	60.94	-34.28	15.6	49.8	301	303	
Hori.	5725.000	PK	54.10	33.77	15.58	45.41	3.31	61.35	-33.87	27.0	60.8	301	303	0
Hori.	17265.000	PK	43.50	41.31	10.23	38.05	-9.54	47.45	-47.77	-27.0	20.7	150	0	
Vert.	5650.000	PK	49.70	33.59	15.54	45.45	3.31	56.69	-38.53	-27.0	11.5	242	278	
Vert.	5700.000	PK	50.20	33.74	15.57	45.42	3.31	57.40	-37.82	10.0	47.8	242	278	278
Vert.	5720.000	PK	53.40	33.76	15.58	45.41	3.31	60.64	-34.58	15.6	50.1	242	278	
Vert.	5725.000	PK	53.80	33.77	15.58	45.41	3.31	61.05	-34.17	27.0	61.1	242	278	
Vert.	17265.000	PK	44.10	41.31	10.23	38.05	-9.54	48.05	-47.17	-27.0	20.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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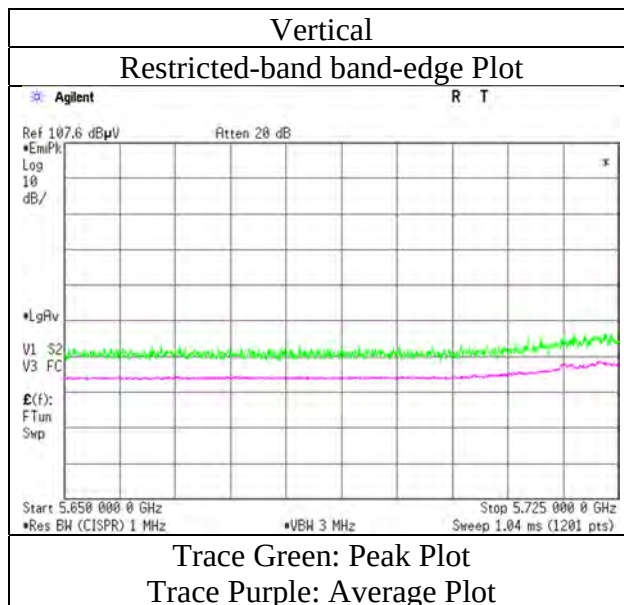
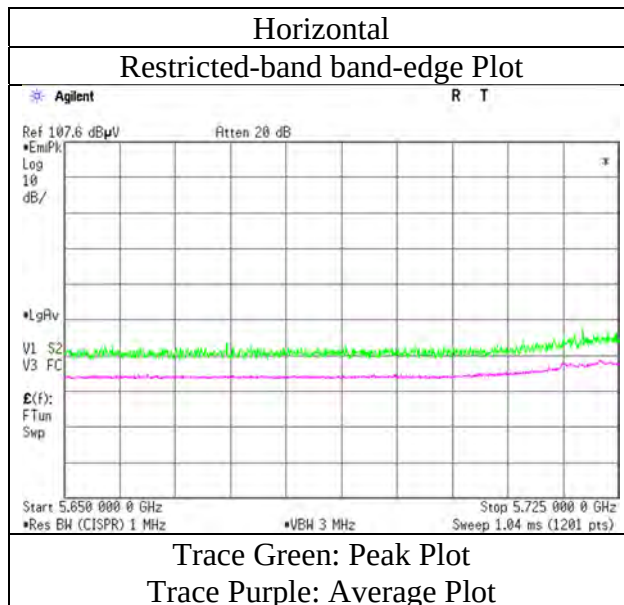
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11n-40 5755 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 12, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	22 deg. C / 52 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5795 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11590.000	PK	42.60	38.75	8.28	37.91	-9.54	42.18	73.9	31.7	150	0	VBW: 5.6 kHz
Hori.	11590.000	AV	32.20	38.75	8.28	37.91	-9.54	31.78	53.9	22.1	150	0	
Vert.	7726.666	PK	44.70	37.16	6.77	39.44	2.26	51.45	73.9	22.4	264	0	
Vert.	11590.000	PK	42.90	38.75	8.28	37.91	-9.54	42.48	73.9	31.4	150	0	VBW: 5.6 kHz *1)
Vert.	7726.666	AV	35.40	37.16	6.77	39.44	2.26	42.15	53.9	11.7	264	0	
Vert.	11590.000	AV	31.90	38.75	8.28	37.91	-9.54	31.48	53.9	22.4	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	335	294	294
Hori.	5855.000	PK	50.20	34.32	15.63	45.36	3.31	58.10	-37.12	15.6	52.7	335	294	
Hori.	5875.000	PK	50.40	34.49	15.65	45.34	3.31	58.51	-36.71	10.0	46.7	335	294	
Hori.	5925.000	PK	50.40	34.76	15.68	45.30	3.31	58.85	-36.37	-27.0	9.3	335	294	0
Hori.	17385.000	PK	42.00	41.58	10.29	37.90	-9.54	46.43	-48.79	-27.0	21.7	150	0	
Vert.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	259	275	
Vert.	5855.000	PK	51.30	34.32	15.63	45.36	3.31	59.20	-36.02	15.6	51.6	259	275	275
Vert.	5875.000	PK	50.80	34.49	15.65	45.34	3.31	58.91	-36.31	10.0	46.3	259	275	
Vert.	5925.000	PK	51.10	34.76	15.68	45.30	3.31	59.55	-35.67	-27.0	8.6	259	275	
Vert.	17385.000	PK	44.10	41.58	10.29	37.90	-9.54	48.53	-46.69	-27.0	19.6	150	0	0

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) * 10 ^ 3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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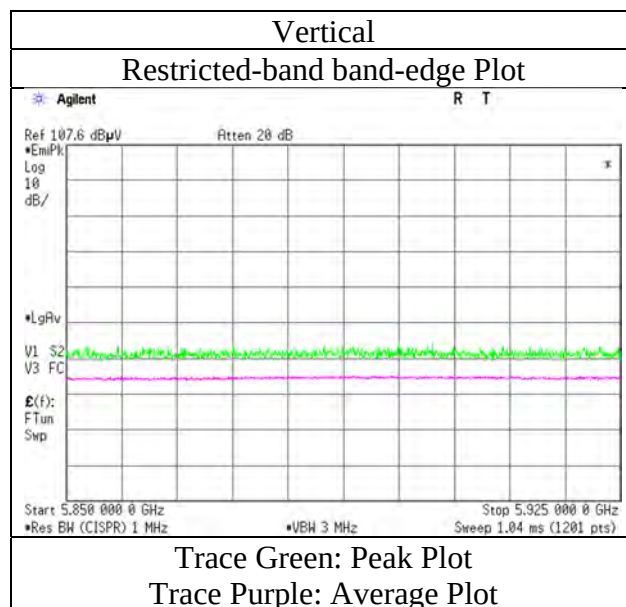
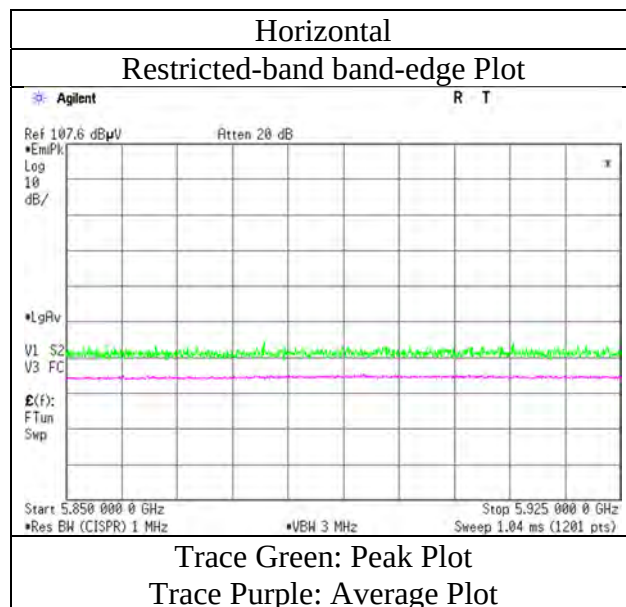
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11n-40 5795 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5190 MHz

(above 1 GHz Inside of the restricted band)

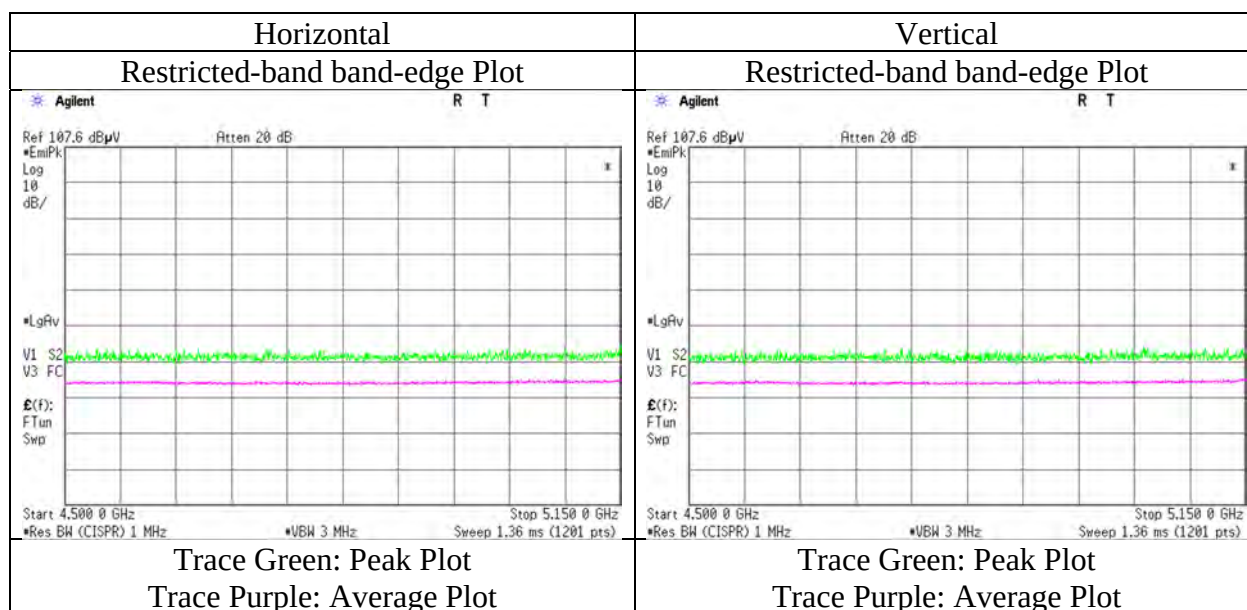
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.20	32.74	15.26	45.32	3.31	57.19	73.9	16.7	400	23	
Hori.	5150.000	AV	41.80	32.74	15.26	45.32	3.31	47.79	53.9	6.1	400	23	VBW: 5.6 kHz
Vert.	5150.000	PK	53.50	32.74	15.26	45.32	3.31	59.49	73.9	14.4	267	21	
Vert.	5150.000	AV	41.30	32.74	15.26	45.32	3.31	47.29	53.9	6.6	267	21	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-40 5310 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.50	33.09	15.38	45.45	3.31	57.83	73.9	16.0	348	25	
Hori.	10620.000	PK	42.90	38.83	8.07	37.84	-9.54	42.42	73.9	31.4	150	0	
Hori.	15930.000	PK	42.80	38.95	9.85	39.34	-9.54	42.72	73.9	31.1	150	0	
Hori.	5350.000	AV	40.80	33.09	15.38	45.45	3.31	47.13	53.9	6.7	348	25	VBW: 5.6 kHz
Hori.	10620.000	AV	32.20	38.83	8.07	37.84	-9.54	31.72	53.9	22.1	150	0	VBW: 5.6 kHz
Hori.	15930.000	AV	33.10	38.95	9.85	39.34	-9.54	33.02	53.9	20.8	150	0	VBW: 5.6 kHz
Vert.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	327	9	
Vert.	10620.000	PK	42.80	38.83	8.07	37.84	-9.54	42.32	73.9	31.5	150	0	
Vert.	15930.000	PK	44.00	38.95	9.85	39.34	-9.54	43.92	73.9	29.9	150	0	
Vert.	5350.000	AV	40.70	33.09	15.38	45.45	3.31	47.03	53.9	6.8	327	9	VBW: 5.6 kHz
Vert.	10620.000	AV	32.30	38.83	8.07	37.84	-9.54	31.82	53.9	22.0	150	0	VBW: 5.6 kHz
Vert.	15930.000	AV	33.10	38.95	9.85	39.34	-9.54	33.02	53.9	20.8	150	0	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Vert.	7080.000	PK	44.10	37.00	6.57	39.82	2.26	50.11	-45.11	-27.0	18.1	257	0	*1)

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ $10^{\wedge}$ (Electric Field Strength [dBuV/m] / 20) * $10^{\wedge}$ (-6) * Distance:3[m]) $^{\wedge}$ 2 } / 30) * $10^{\wedge}$ 3)

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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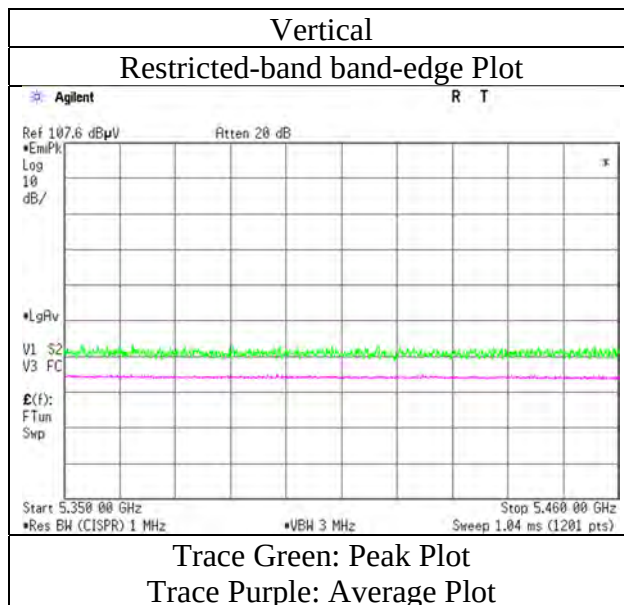
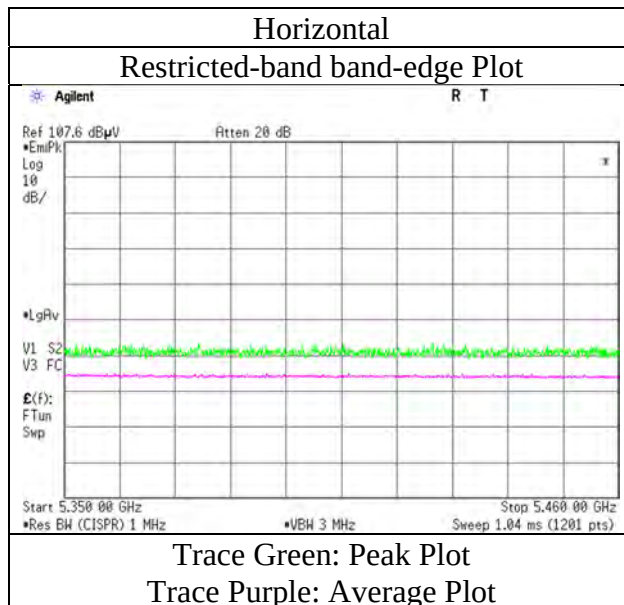
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-40 5310 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-40 5510 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.60	33.29	15.44	45.47	3.31	58.17	73.9	15.7	296	20	
Hori.	5460.000	AV	40.50	33.29	15.44	45.47	3.31	47.07	53.9	6.8	296	20	VBW: 5.6 kHz
Vert.	5460.000	PK	51.30	33.29	15.44	45.47	3.31	57.87	73.9	16.0	289	25	
Vert.	5460.000	AV	40.30	33.29	15.44	45.47	3.31	46.87	53.9	7.0	289	25	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

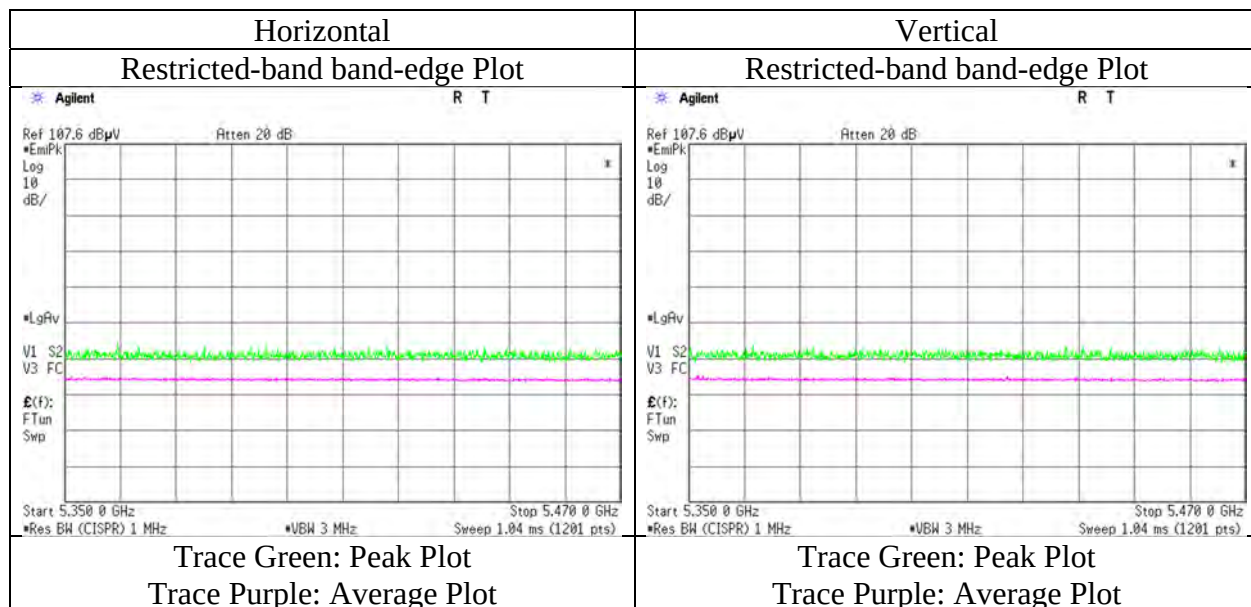
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	50.20	33.30	15.45	45.47	3.31	56.79	-38.43	-27.0	11.4	296	20	
Vert.	5470.000	PK	50.80	33.30	15.45	45.47	3.31	57.39	-37.83	-27.0	10.8	289	25	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5670 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11340.000	PK	41.90	38.61	8.26	37.81	-9.54	41.42	73.9	32.4	150	0	VBW: 5.6 kHz
Hori.	11340.000	AV	31.80	38.61	8.26	37.81	-9.54	31.32	53.9	22.5	150	0	
Vert.	7560.000	PK	44.80	37.49	6.77	39.52	2.26	51.80	73.9	22.1	265	0	
Vert.	11340.000	PK	41.40	38.61	8.26	37.81	-9.54	40.92	73.9	32.9	150	0	VBW: 5.6 kHz *1)
Vert.	7560.000	AV	36.80	37.49	6.77	39.52	2.26	43.80	53.9	10.1	265	0	
Vert.	11340.000	AV	32.10	38.61	8.26	37.81	-9.54	31.62	53.9	22.2	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.50	33.77	15.58	45.41	3.31	58.75	-36.47	-27.00	9.4	301	306	
Hori.	17010.000	PK	42.50	40.77	10.14	38.33	-9.54	45.54	-49.68	-27.00	22.6	150	0	
Vert.	5725.000	PK	51.60	33.77	15.58	45.41	3.31	58.85	-36.37	-27.00	9.3	307	275	
Vert.	17010.000	PK	43.00	40.77	10.14	38.33	-9.54	46.04	-49.18	-27.00	22.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) * 10 ^ 3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Kashima EMC Lab.

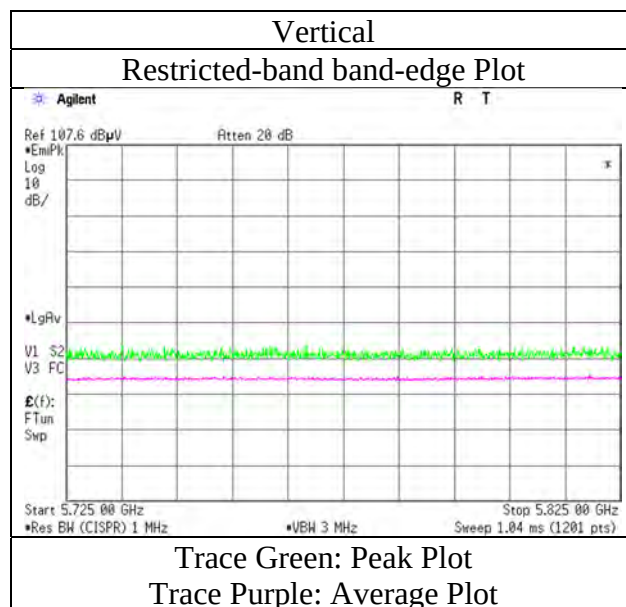
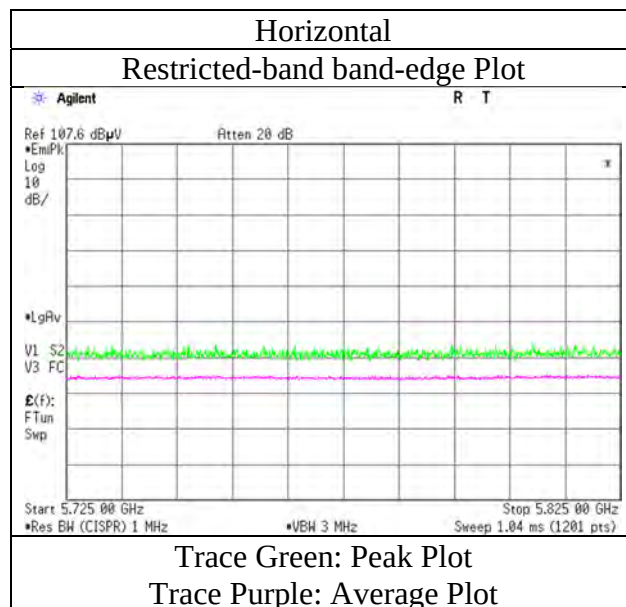
1614, Mushiata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-40 5670 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5755 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	42.30	38.77	8.28	37.87	-9.54	41.94	73.9	31.9	150	0	VBW: 5.6 kHz
Hori.	11510.000	AV	32.00	38.77	8.28	37.87	-9.54	31.64	53.9	22.2	150	0	
Vert.	7673.333	PK	44.40	37.31	6.77	39.47	2.26	51.27	73.9	22.6	256	0	
Vert.	11510.000	PK	42.30	38.77	8.28	37.87	-9.54	41.94	73.9	31.9	150	0	VBW: 5.6 kHz *1)
Vert.	7673.333	AV	37.30	37.31	6.77	39.47	2.26	44.17	53.9	9.7	256	0	
Vert.	11510.000	AV	32.50	38.77	8.28	37.87	-9.54	32.14	53.9	21.7	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.00	33.59	15.54	45.45	3.31	57.99	-37.23	-27.0	10.2	307	295	295
Hori.	5700.000	PK	51.30	33.74	15.57	45.42	3.31	58.50	-36.72	10.0	46.7	307	295	
Hori.	5720.000	PK	51.50	33.76	15.58	45.41	3.31	58.74	-36.48	15.6	52.0	307	295	
Hori.	5725.000	PK	51.60	33.77	15.58	45.41	3.31	58.85	-36.37	27.0	63.3	307	295	0
Hori.	17265.000	PK	43.20	41.31	10.23	38.05	-9.54	47.15	-48.07	-27.0	21.0	150	0	
Vert.	5650.000	PK	51.10	33.59	15.54	45.45	3.31	58.09	-37.13	-27.0	10.1	243	273	
Vert.	5700.000	PK	50.60	33.74	15.57	45.42	3.31	57.80	-37.42	10.0	47.4	243	273	273
Vert.	5720.000	PK	51.40	33.76	15.58	45.41	3.31	58.64	-36.58	15.6	52.1	243	273	
Vert.	5725.000	PK	51.80	33.77	15.58	45.41	3.31	59.05	-36.17	27.0	63.1	243	273	
Vert.	17265.000	PK	43.00	41.31	10.23	38.05	-9.54	46.95	-48.27	-27.0	21.2	150	0	0

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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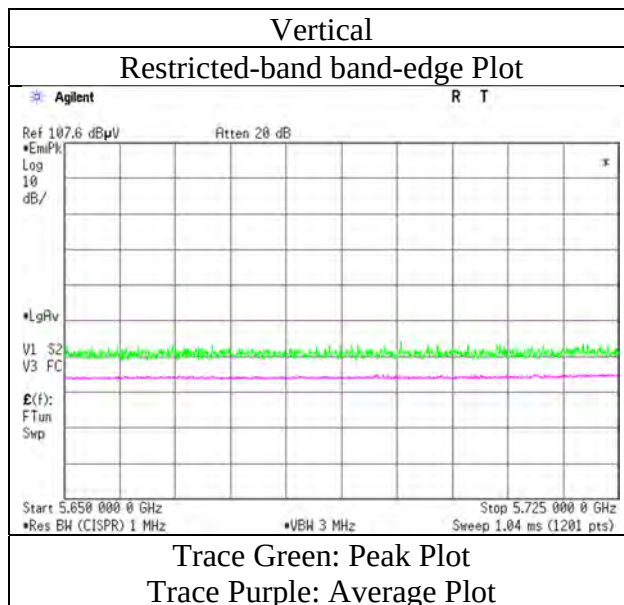
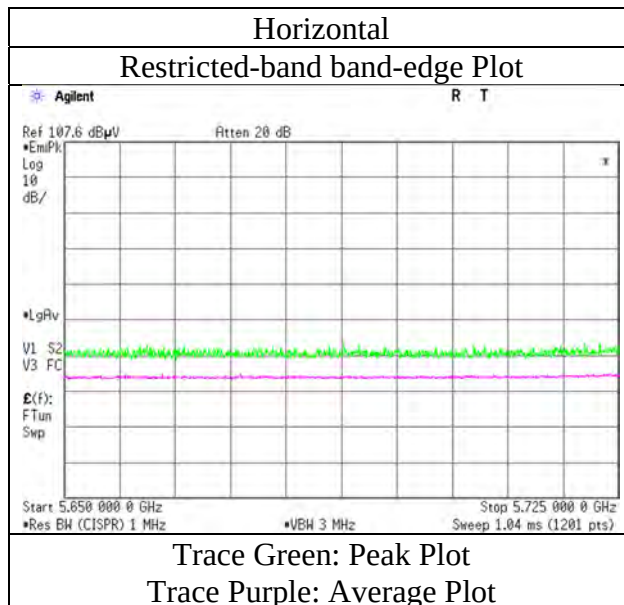
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-40 5755 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-40 5795 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

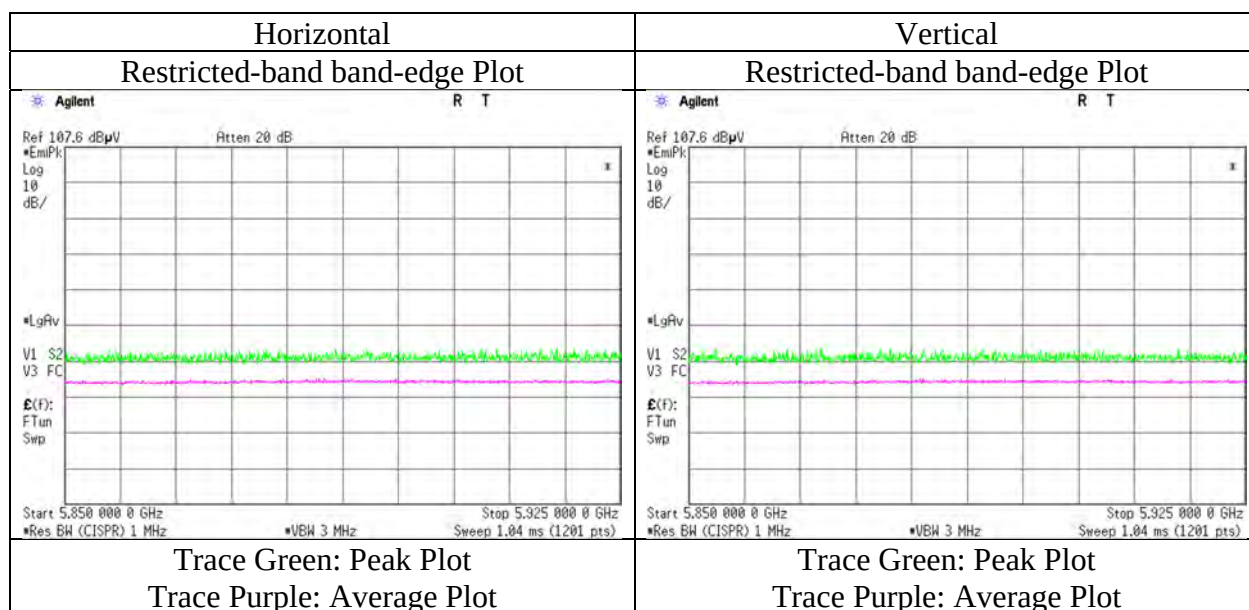
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	348	295	
Hori.	5855.000	PK	50.00	34.32	15.63	45.36	3.31	57.90	-37.32	15.6	52.9	348	295	
Hori.	5875.000	PK	50.30	34.49	15.65	45.34	3.31	58.41	-36.81	10.0	46.8	348	295	
Hori.	5925.000	PK	50.50	34.76	15.68	45.30	3.31	58.95	-36.27	-27.0	9.2	348	295	
Vert.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	317	266	
Vert.	5855.000	PK	50.30	34.32	15.63	45.36	3.31	58.20	-37.02	15.6	52.6	317	266	
Vert.	5875.000	PK	50.50	34.49	15.65	45.34	3.31	58.61	-36.61	10.0	46.6	317	266	
Vert.	5925.000	PK	50.50	34.76	15.68	45.30	3.31	58.95	-36.27	-27.0	9.2	317	266	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB (No.10 site), 1 GHz - 10 GHz : 20log(3.89m / 3.0 m) = 2.26 dB (No.11 site)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5210 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.80	32.74	15.26	45.32	3.31	56.79	73.9	17.1	395	25	
Hori.	15630.000	PK	43.30	38.47	9.79	39.53	-9.54	42.49	73.9	31.4	150	0	
Hori.	5150.000	AV	40.50	32.74	15.26	45.32	3.31	46.49	53.9	7.4	395	25	VBW: 4.3 kHz
Hori.	15630.000	AV	33.30	38.47	9.79	39.53	-9.54	32.49	53.9	21.4	150	0	VBW: 4.3 kHz
Vert.	5150.000	PK	52.80	32.74	15.26	45.32	3.31	58.79	73.9	15.1	353	18	
Vert.	15630.000	PK	43.40	38.47	9.79	39.53	-9.54	42.59	73.9	31.3	150	0	
Vert.	5150.000	AV	41.90	32.74	15.26	45.32	3.31	47.89	53.9	6.0	353	18	VBW: 4.3 kHz
Vert.	15630.000	AV	33.40	38.47	9.79	39.53	-9.54	32.59	53.9	21.3	150	0	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10420.000	PK	42.10	38.68	7.96	37.93	-9.54	41.27	-53.95	-27.0	26.9	150	0	
Vert.	6946.666	PK	45.30	36.68	6.48	39.91	2.26	50.81	-44.41	-27.0	17.4	271	0	*1)
Vert.	10420.000	PK	42.00	38.68	7.96	37.93	-9.54	41.17	-54.05	-27.0	27.0	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\log((\{10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance:3[m]}^{\wedge}2\} / 30) * 10^{\wedge}3)$

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

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UL Japan, Inc.

Kashima EMC Lab.

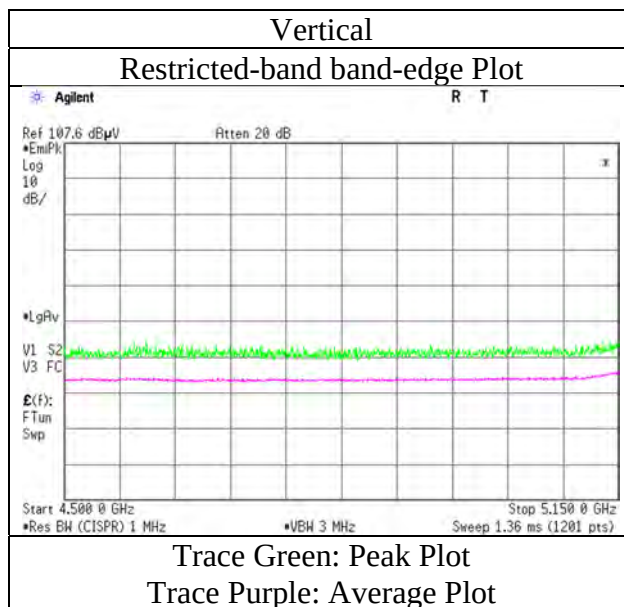
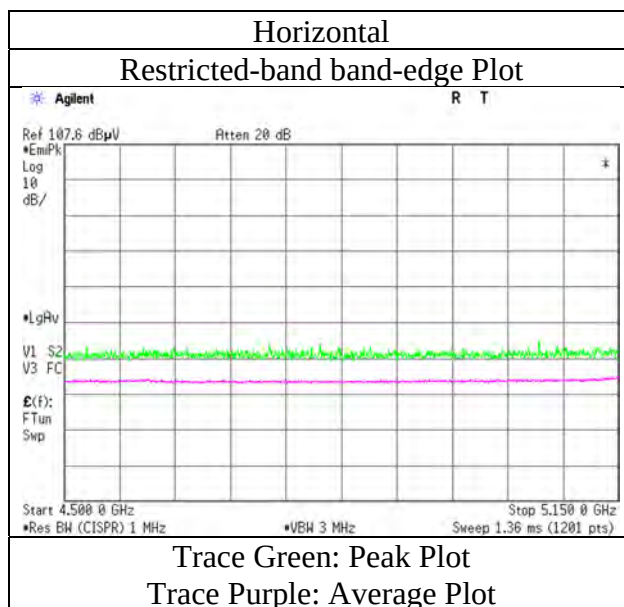
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5210 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5290 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.20	33.09	15.38	45.45	3.31	57.53	73.9	16.3	100	298	
Hori.	15870.000	PK	43.00	38.92	9.81	39.39	-9.54	42.80	73.9	31.1	150	0	
Hori.	5350.000	AV	40.50	33.09	15.38	45.45	3.31	46.83	53.9	7.0	100	298	VBW: 4.3 kHz
Hori.	15870.000	AV	32.90	38.92	9.81	39.39	-9.54	32.70	53.9	21.2	150	0	VBW: 4.3 kHz
Vert.	5350.000	PK	50.90	33.09	15.38	45.45	3.31	57.23	73.9	16.6	360	24	
Vert.	15870.000	PK	42.90	38.92	9.81	39.39	-9.54	42.70	73.9	31.2	150	0	
Vert.	5350.000	AV	39.80	33.09	15.38	45.45	3.31	46.13	53.9	7.7	360	24	VBW: 4.3 kHz
Vert.	15870.000	AV	32.80	38.92	9.81	39.39	-9.54	32.60	53.9	21.3	150	0	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10580.000	PK	42.80	38.81	8.04	37.86	-9.54	42.25	-52.97	-27.0	25.9	150	0	
Vert.	7053.333	PK	44.40	36.95	6.56	39.84	2.26	50.33	-44.89	-27.0	17.8	280	0	*1)
Vert.	10580.000	PK	42.60	38.81	8.04	37.86	-9.54	42.05	-53.17	-27.0	26.1	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ $10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)$ } * $10^{\wedge}(-6)$ * Distance:3[m]) $^{\wedge}2$ } / 30) * $10^{\wedge}3$)

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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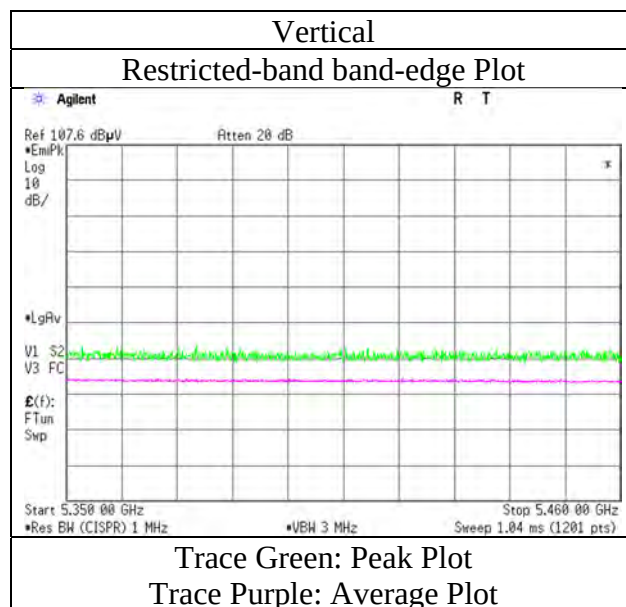
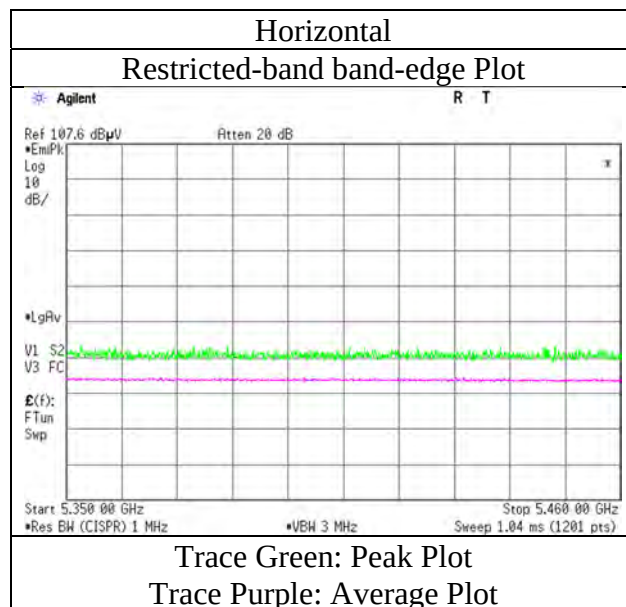
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-80 5290 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 19, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 52 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5530 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.00	33.29	15.44	45.47	3.31	57.57	73.9	16.3	310	23	
Hori.	11060.000	PK	43.20	38.69	8.17	37.78	-9.54	42.74	73.9	31.1	150	0	
Hori.	5460.000	AV	40.40	33.29	15.44	45.47	3.31	46.97	53.9	6.9	310	23	VBW: 4.3 kHz
Hori.	11060.000	AV	32.20	38.69	8.17	37.78	-9.54	31.74	53.9	22.1	150	0	VBW: 4.3 kHz
Vert.	5460.000	PK	50.80	33.29	15.44	45.47	3.31	57.37	73.9	16.5	287	26	
Vert.	7373.333	PK	43.70	37.51	6.76	39.62	2.26	50.61	73.9	23.2	400	0	
Vert.	11060.000	PK	42.70	38.69	8.17	37.78	-9.54	42.24	73.9	31.6	150	0	
Vert.	5460.000	AV	40.00	33.29	15.44	45.47	3.31	46.57	53.9	7.3	287	26	VBW: 4.3 kHz
Vert.	7373.333	AV	34.20	37.51	6.76	39.62	2.26	41.11	53.9	12.7	400	0	VBW: 4.3 kHz *1)
Vert.	11060.000	AV	32.50	38.69	8.17	37.78	-9.54	32.04	53.9	21.8	150	0	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	50.90	33.30	15.45	45.47	3.31	57.49	-37.73	-27.0	10.7	310	23	
Hori.	16590.000	PK	43.30	40.11	10.00	38.73	-9.54	45.14	-50.08	-27.0	23.0	150	0	
Vert.	5470.000	PK	50.30	33.30	15.45	45.47	3.31	56.89	-38.33	-27.0	11.3	287	26	
Vert.	16590.000	PK	43.10	40.11	10.00	38.73	-9.54	44.94	-50.28	-27.0	23.2	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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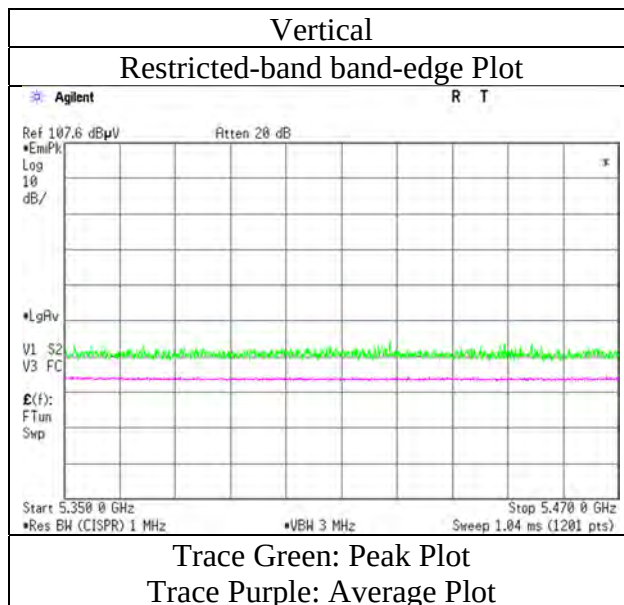
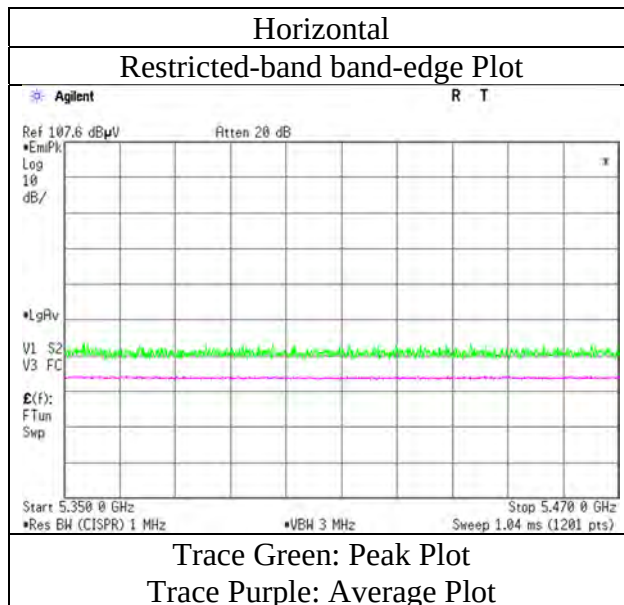
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Facsimile : +81 478 82 3373

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 19, 2021
Temperature / Humidity	20 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-80 5530 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Kashima EMC Lab.

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Facsimile : +81 478 82 3373

Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 26, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 44 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5610 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11220.000	PK	42.80	38.61	8.22	37.78	-9.54	42.31	73.9	31.5	150	0	VBW: 4.3 kHz
Hori.	11220.000	AV	31.80	38.61	8.22	37.78	-9.54	31.31	53.9	22.5	150	0	
Vert.	7480.000	PK	44.30	37.46	6.79	39.56	2.26	51.25	73.9	22.6	400	0	
Vert.	11220.000	PK	42.30	38.61	8.22	37.78	-9.54	41.81	73.9	32.0	150	0	VBW: 4.3 kHz *1)
Vert.	7480.000	AV	35.10	37.46	6.79	39.56	2.26	42.05	53.9	11.8	400	0	
Vert.	11220.000	AV	31.70	38.61	8.22	37.78	-9.54	31.21	53.9	22.6	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.10	33.77	15.58	45.41	3.31	57.35	-37.87	-27.00	10.8	303	307	
Hori.	16830.000	PK	42.90	40.47	10.10	38.50	-9.54	45.43	-49.79	-27.00	22.7	150	0	
Vert.	5725.000	PK	50.40	33.77	15.58	45.41	3.31	57.65	-37.57	-27.00	10.5	207	267	
Vert.	16830.000	PK	42.90	40.47	10.10	38.50	-9.54	45.43	-49.79	-27.00	22.7	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Kashima EMC Lab.

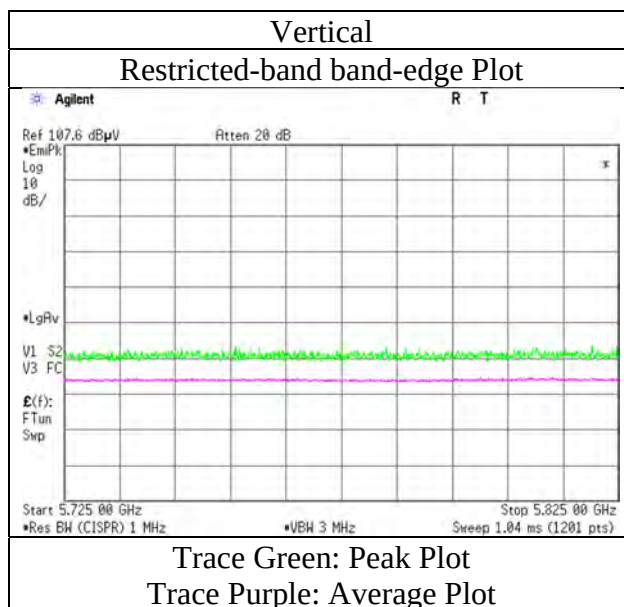
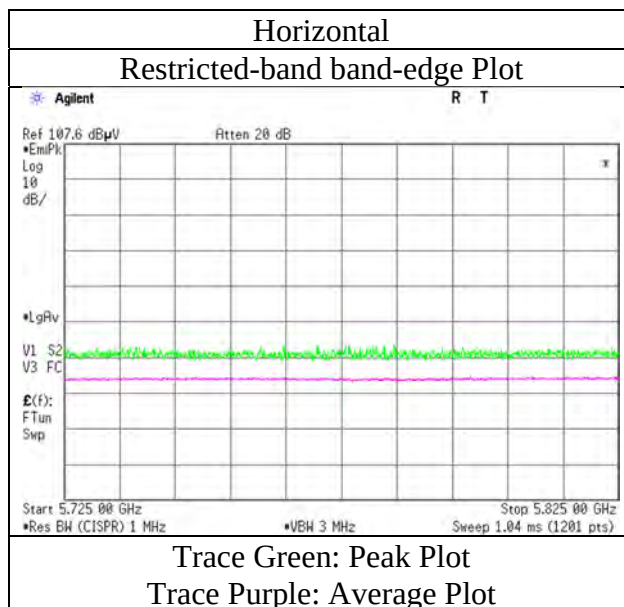
1614, Mushiata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 26, 2021
Temperature / Humidity	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-80 5610 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 26, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 44 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5690 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11380.000	PK	41.00	38.70	8.25	37.82	-9.54	40.59	73.9	33.3	150	0	
Hori.	11380.000	AV	31.30	38.70	8.25	37.82	-9.54	30.89	53.9	23.0	150	0	VBW: 4.3 kHz
Vert.	7586.666	PK	45.10	37.42	6.78	39.51	2.26	52.05	73.9	21.8	400	0	
Vert.	11380.000	PK	40.90	38.70	8.25	37.82	-9.54	40.49	73.9	33.4	150	0	
Vert.	7586.666	AV	37.50	37.42	6.78	39.51	2.26	44.45	53.9	9.4	400	0	VBW: 4.3 kHz *1)
Vert.	11380.000	AV	31.80	38.70	8.25	37.82	-9.54	31.39	53.9	22.5	150	0	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	17070.000	PK	41.70	40.88	10.18	38.27	-9.54	44.95	-50.27	-27.0	23.2	150	0	
Vert.	17070.000	PK	42.30	40.88	10.18	38.27	-9.54	45.55	-49.67	-27.0	22.6	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]} \}^{\wedge} 2 \right) / 30 \right) * 10^{\wedge} 3$

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Radiated Spurious Emission

Report No.	13977035M-C				
Test place	Kashima EMC Lab.				
Semi Anechoic Chamber	No.10	No.11	No.11	No.10	No.10
Date	November 26, 2021	November 15, 2021	November 16, 2021	November 18, 2021	November 26, 2021
Temperature / Humidity	20 deg. C / 44 % RH	20 deg. C / 49 % RH	20 deg. C / 49 % RH	19 deg. C / 51 % RH	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Kazuhiro Ando
	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5775 MHz				

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11550.000	PK	41.70	38.76	8.31	37.89	-9.54	41.34	73.9	32.5	150	0	VBW: 4.3 kHz
Hori.	11550.000	AV	31.90	38.76	8.31	37.89	-9.54	31.54	53.9	22.3	150	0	
Vert.	7700.000	PK	45.30	37.26	6.78	39.46	2.26	52.14	73.9	21.7	400	0	
Vert.	11550.000	PK	42.10	38.76	8.31	37.89	-9.54	41.74	73.9	32.1	150	0	VBW: 4.3 kHz *1)
Vert.	7700.000	AV	36.70	37.26	6.78	39.46	2.26	43.54	53.9	10.3	400	0	
Vert.	11550.000	AV	31.60	38.76	8.31	37.89	-9.54	31.24	53.9	22.6	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.80	33.59	15.54	45.45	3.31	57.79	-37.43	-27.0	10.4	315	303	
Hori.	5700.000	PK	51.60	33.74	15.57	45.42	3.31	58.80	-36.42	10.0	46.4	315	303	
Hori.	5720.000	PK	51.90	33.76	15.58	45.41	3.31	59.14	-36.08	15.6	51.6	315	303	
Hori.	5725.000	PK	52.10	33.77	15.58	45.41	3.31	59.35	-35.87	27.0	62.8	315	303	
Hori.	5850.000	PK	51.00	34.28	15.63	45.36	3.31	58.86	-36.36	27.0	63.3	315	303	
Hori.	5855.000	PK	50.40	34.32	15.63	45.36	3.31	58.30	-36.92	15.6	52.5	315	303	
Hori.	5875.000	PK	50.40	34.49	15.65	45.34	3.31	58.51	-36.71	10.0	46.7	315	303	
Hori.	5925.000	PK	50.10	34.76	15.68	45.30	3.31	58.55	-36.67	-27.0	9.6	315	303	
Hori.	17325.000	PK	43.60	41.48	10.28	37.97	-9.54	47.85	-47.37	-27.0	20.3	150	0	
Vert.	5650.000	PK	50.80	33.59	15.54	45.45	3.31	57.79	-37.43	-27.0	10.4	217	279	
Vert.	5700.000	PK	51.20	33.74	15.57	45.42	3.31	58.40	-36.82	10.0	46.8	217	279	
Vert.	5720.000	PK	51.50	33.76	15.58	45.41	3.31	58.74	-36.48	15.6	52.0	217	279	
Vert.	5725.000	PK	52.00	33.77	15.58	45.41	3.31	59.25	-35.97	27.0	62.9	217	279	
Vert.	5850.000	PK	53.00	34.28	15.63	45.36	3.31	60.86	-34.36	27.0	61.3	217	279	
Vert.	5855.000	PK	51.10	34.32	15.63	45.36	3.31	59.00	-36.22	15.6	51.8	217	279	
Vert.	5875.000	PK	50.40	34.49	15.65	45.34	3.31	58.51	-36.71	10.0	46.7	217	279	
Vert.	5925.000	PK	50.40	34.76	15.68	45.30	3.31	58.85	-36.37	-27.0	9.3	217	279	
Vert.	17325.000	PK	44.00	41.48	10.28	37.97	-9.54	48.25	-46.97	-27.0	19.9	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\log\left(\left(\{10^{\frac{1}{10}}\cdot\text{Electric Field Strength [dBuV/m]} / 20\right) * 10^{(-6)} * \text{Distance:3[m]} \right)^2 / 30\right) * 10^3$

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Kashima EMC Lab.

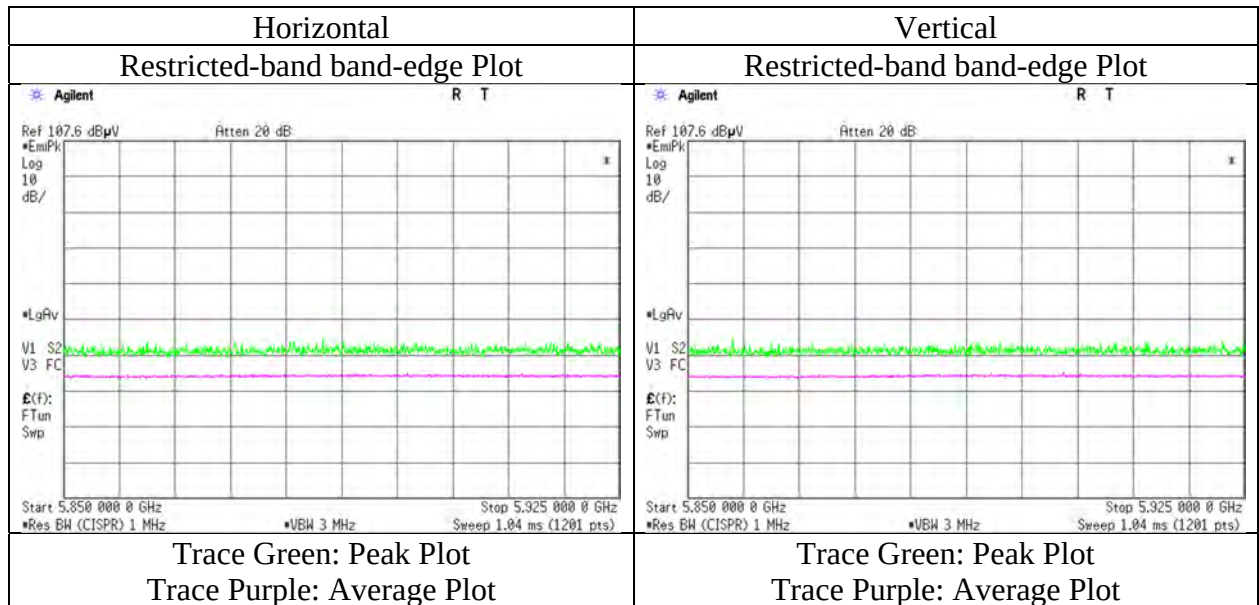
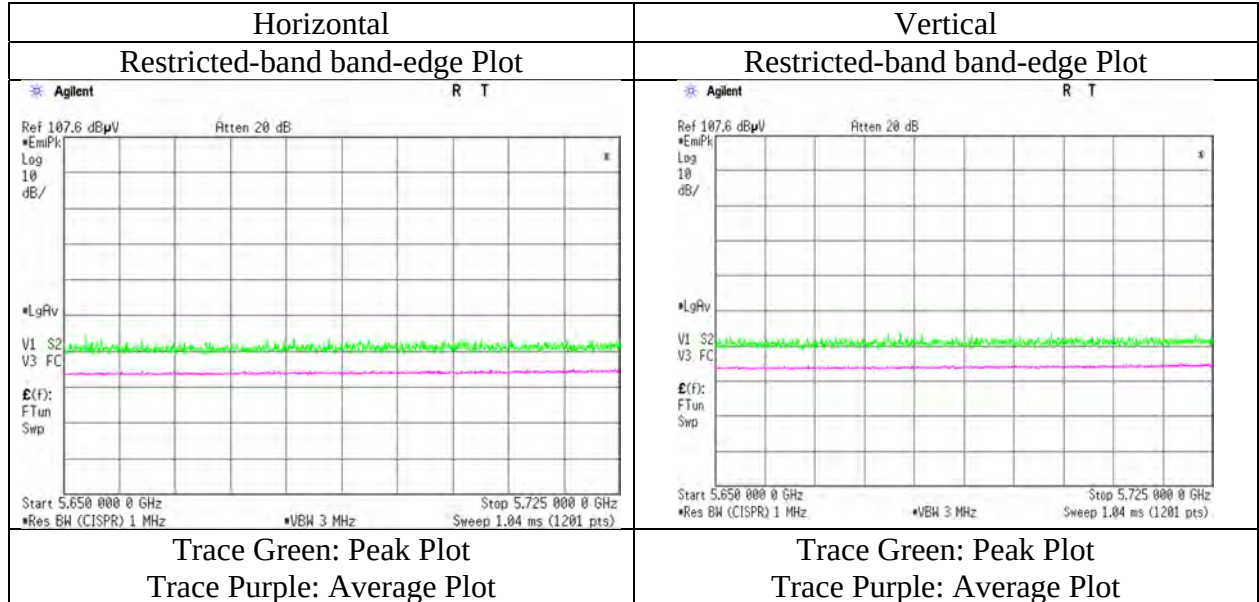
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 26, 2021
Temperature / Humidity	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11ac-80 5775 MHz



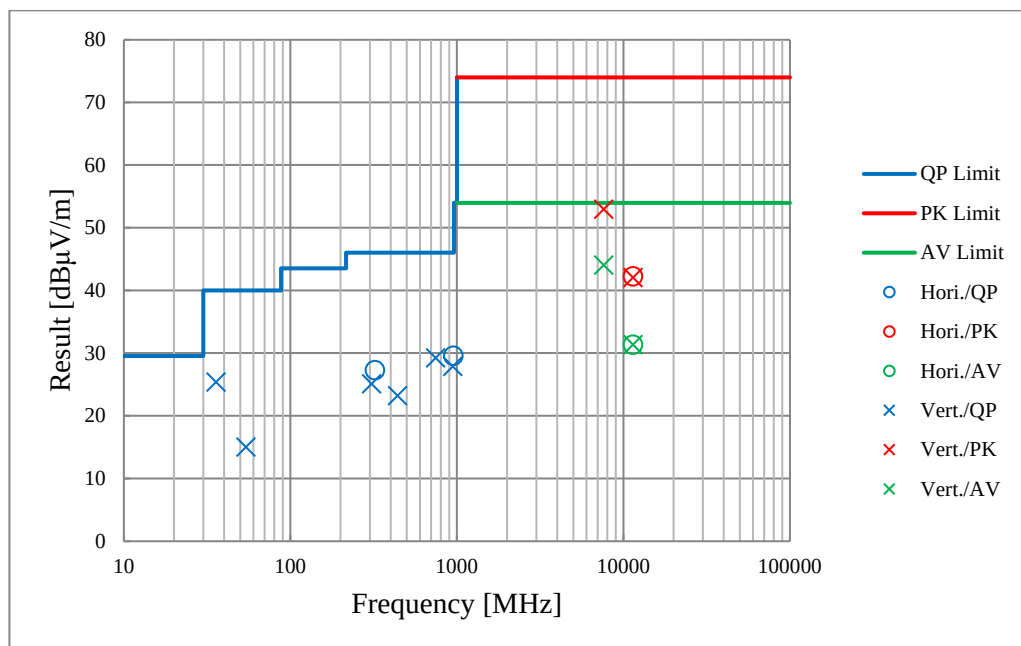
* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

(Plot data, Worst case mode for Maximum Conducted Output Power)

Report No.	13977035M-C					
Test place	Kashima EMC Lab.					
Semi Anechoic Chamber	No.10	No.10	No.11	No.11	No.10	No.11
Date	December 8, 2021	November 18, 2021	November 12, 2021	November 15, 2021	November 12, 2021	November 16, 2021
Temperature / Humidity	23 deg. C / 41 % RH	19 deg. C / 49 % RH	19 deg. C / 44 % RH	20 deg. C / 49 % RH	21 deg. C / 46 % RH	20 deg. C / 49 % RH
Engineer	Kazuhiro Ando	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5700 MHz					



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

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5180 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

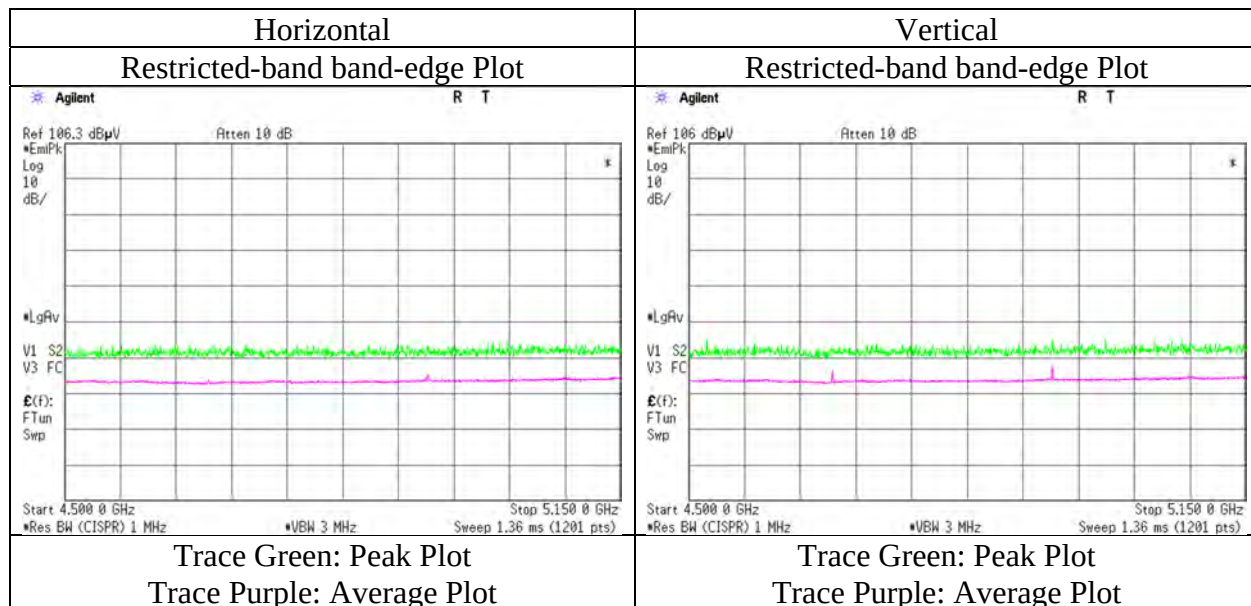
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.70	32.74	15.26	45.32	3.31	57.69	73.9	16.2	364	10	
Hori.	5150.000	AV	39.70	32.74	15.26	45.32	3.31	45.69	53.9	8.2	364	10	VBW: 2.2 kHz
Vert.	5150.000	PK	52.20	32.74	15.26	45.32	3.31	58.19	73.9	15.7	316	20	
Vert.	5150.000	AV	39.90	32.74	15.26	45.32	3.31	45.89	53.9	8.0	316	20	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5320 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

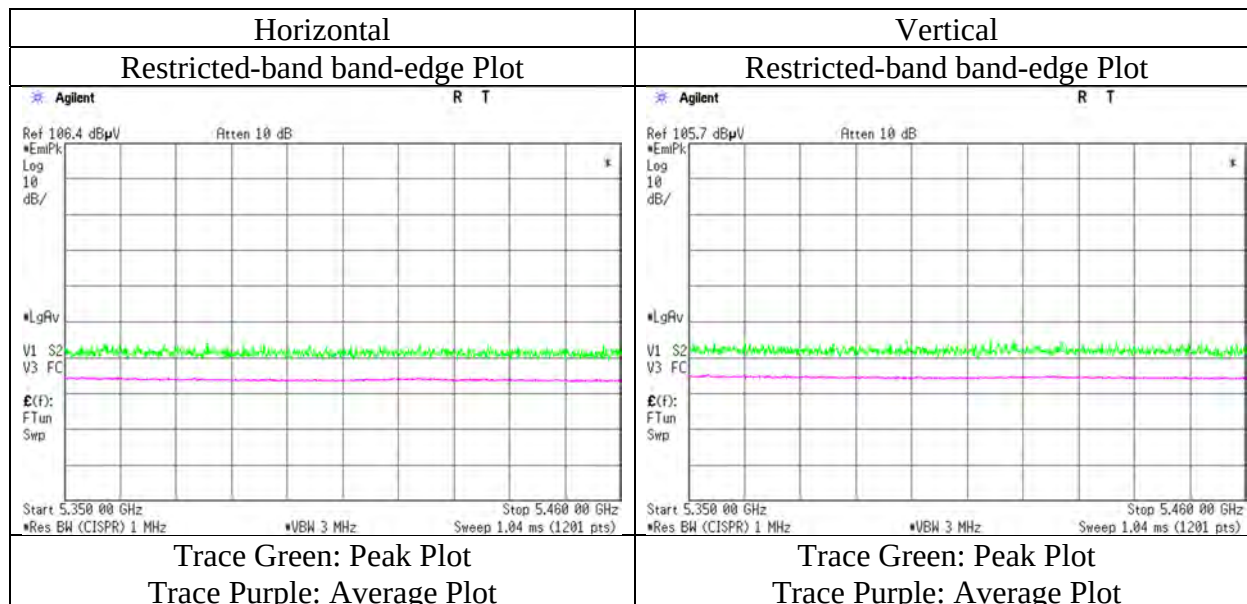
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.10	33.09	15.38	45.45	3.31	57.43	73.9	16.4	348	7	
Hori.	5350.000	AV	39.80	33.09	15.38	45.45	3.31	46.13	53.9	7.7	348	7	VBW: 2.2 kHz
Vert.	5350.000	PK	50.80	33.09	15.38	45.45	3.31	57.13	73.9	16.7	326	10	
Vert.	5350.000	AV	39.50	33.09	15.38	45.45	3.31	45.83	53.9	8.0	326	10	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5500 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.80	33.29	15.44	45.47	3.31	58.37	73.9	15.5	299	29	VBW: 2.2 kHz
Hori.	5460.000	AV	40.20	33.29	15.44	45.47	3.31	46.77	53.9	7.1	299	29	
Vert.	5460.000	PK	51.80	33.29	15.44	45.47	3.31	58.37	73.9	15.5	305	32	VBW: 2.2 kHz
Vert.	5460.000	AV	40.10	33.29	15.44	45.47	3.31	46.67	53.9	7.2	305	32	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

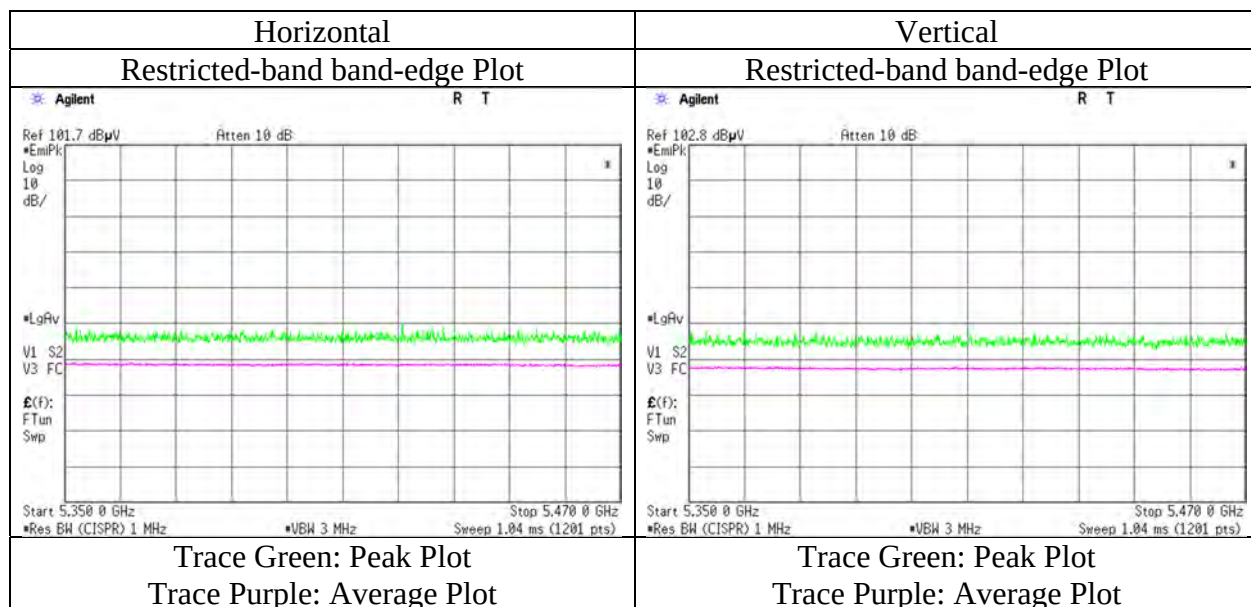
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.40	33.30	15.45	45.47	3.31	57.99	-37.23	-27.0	10.2	299	29	
Vert.	5470.000	PK	51.70	33.30	15.45	45.47	3.31	58.29	-36.93	-27.0	9.9	305	32	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10 \times \log \left(\left(\left(10^{\frac{\text{Electric Field Strength [dBuV/m]}{20}} \right) \times 10^{(-6)} \times \text{Distance:3[m]}^2 \right) / 30 \right) \times 10^3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No. 13977035M-C
Test place Kashima EMC Lab.
Semi Anechoic Chamber No.11 No.10 No.11 No.11 No.11 No.11 No.11
Date December 7, 2021 December 9, 2021 December 6, 2021 December 6, 2021 December 7, 2021 December 7, 2021
Temperature / Humidity 20 deg. C / 45 % RH 20 deg. C / 46 % RH 20 deg. C / 37 % RH 20 deg. C / 37 % RH 20 deg. C / 45 % RH 20 deg. C / 45 % RH
Engineer Hiromitsu Tanabe Kazuhiro Ando Hiromitsu Tanabe Hiromitsu Tanabe Hiromitsu Tanabe Hiromitsu Tanabe
(30 MHz - 1 GHz) (1 GHz - 6.4 GHz) (6.4 GHz - 10 GHz) (10 GHz - 18 GHz) (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode Tx 11a 5700 MHz with 11g 2462 MHz

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	314.062	QP	38.60	13.94	7.65	32.00	0.00	28.19	46.0	17.8	100	219	
Hori.	940.513	QP	28.00	24.13	9.94	31.09	0.00	30.98	46.0	15.0	100	175	
Hori.	11400.000	PK	47.40	38.77	8.25	42.62	-9.54	42.26	73.9	31.6	150	0	
Hori.	11400.000	AV	36.40	38.77	8.25	42.62	-9.54	31.26	53.9	22.6	150	0	VBW: 2.2 kHz
Vert.	35.662	QP	39.30	12.86	5.73	32.21	0.00	25.68	40.0	14.3	100	269	
Vert.	54.319	QP	29.00	13.72	5.94	32.20	0.00	16.46	40.0	23.5	249	114	
Vert.	313.278	QP	35.60	13.91	7.64	32.00	0.00	25.15	46.0	20.8	100	128	
Vert.	434.875	QP	31.70	16.76	8.20	31.98	0.00	24.68	46.0	21.3	149	202	
Vert.	737.930	QP	30.00	21.79	9.31	31.99	0.00	29.11	46.0	16.8	100	0	
Vert.	940.064	QP	28.10	24.13	9.93	31.09	0.00	31.07	46.0	14.9	122	191	
Vert.	7600.000	PK	50.10	37.39	6.79	43.20	2.26	53.34	73.9	20.5	249	343	
Vert.	11400.000	PK	48.40	38.77	8.25	42.62	-9.54	43.26	73.9	30.6	150	0	
Vert.	7600.000	AV	40.80	37.39	6.79	43.20	2.26	44.04	53.9	9.8	249	343	VBW: 2.2 kHz *1)
Vert.	11400.000	AV	37.00	38.77	8.25	42.62	-9.54	31.86	53.9	22.0	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP [dBm])	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	-27.0	9.5	357	296	
Hori.	17100.000	PK	49.70	40.93	10.21	45.03	-9.54	46.27	-48.95	-27.0	21.9	150	0	
Vert.	5725.000	PK	51.10	33.77	15.58	45.41	3.31	58.35	-36.87	-27.0	9.8	310	267	
Vert.	17100.000	PK	49.80	40.93	10.21	45.03	-9.54	46.37	-48.85	-27.0	21.8	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\left\{ 10^{\wedge} \left(\text{Electric Field Strength [dBuV/m]} / 20 \right) * 10^{\wedge} (-6) * \text{Distance:3[m]} \right\}^2 / 30 \right) * 10^{\wedge} 3 \right)$

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

UL Japan, Inc.

Kashima EMC Lab.

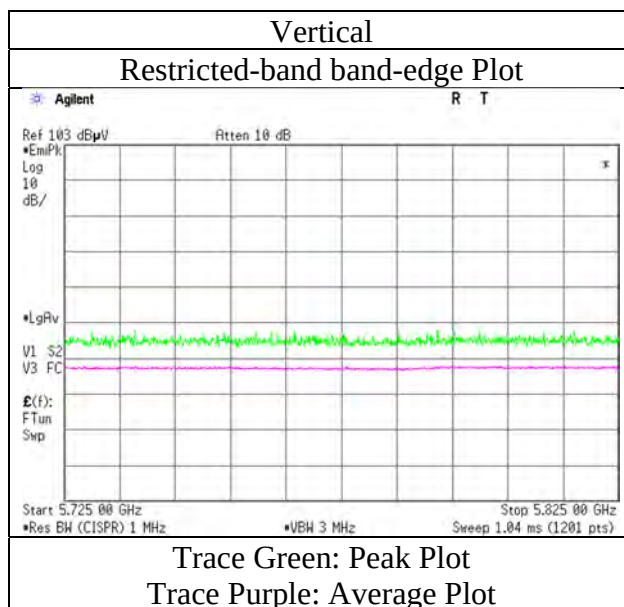
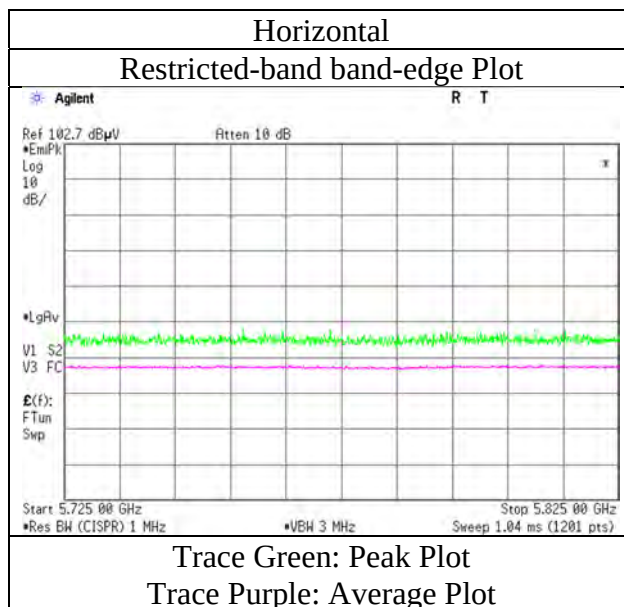
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11a 5700 MHz with 11g 2462 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5745 MHz with 11g 2462 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

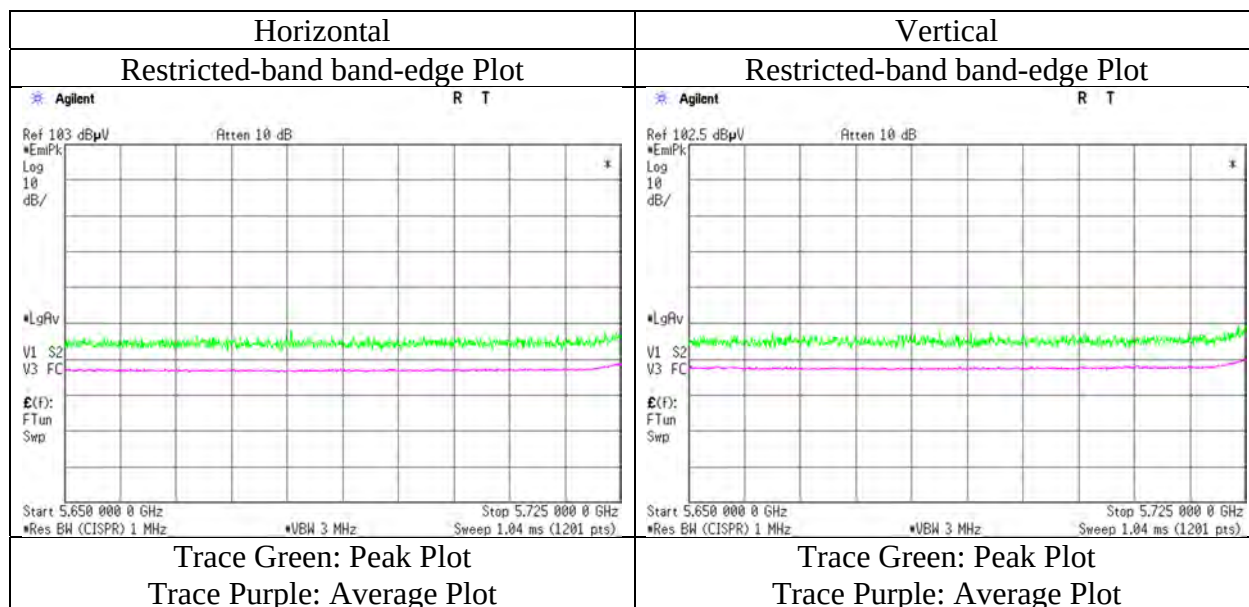
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.50	33.59	15.54	45.45	3.31	58.49	-36.73	-27.0	9.7	371	289	
Hori.	5700.000	PK	51.80	33.74	15.57	45.42	3.31	59.00	-36.22	10.0	46.2	371	289	
Hori.	5720.000	PK	50.60	33.76	15.58	45.41	3.31	57.84	-37.38	15.6	52.9	371	289	
Hori.	5725.000	PK	54.70	33.77	15.58	45.41	3.31	61.95	-33.27	27.0	60.2	371	289	
Vert.	5650.000	PK	51.10	33.59	15.54	45.45	3.31	58.09	-37.13	-27.0	10.1	314	276	
Vert.	5700.000	PK	52.20	33.74	15.57	45.42	3.31	59.40	-35.82	10.0	45.8	314	276	
Vert.	5720.000	PK	51.30	33.76	15.58	45.41	3.31	58.54	-36.68	15.6	52.2	314	276	
Vert.	5725.000	PK	55.00	33.77	15.58	45.41	3.31	62.25	-32.97	27.0	59.9	314	276	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5825 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

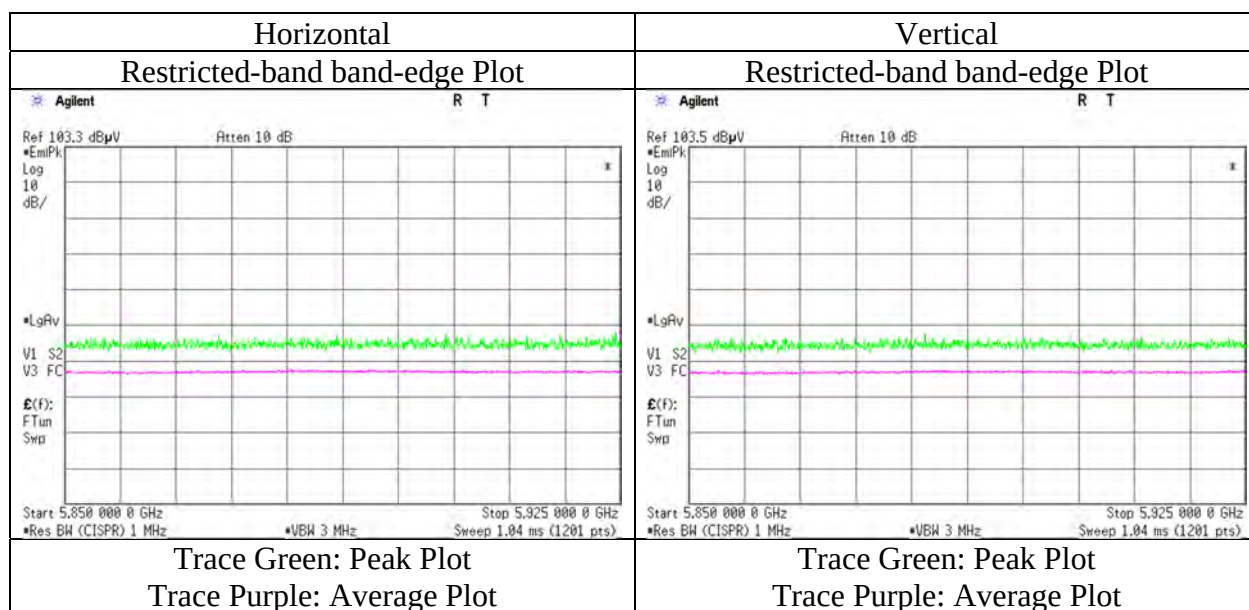
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	377	292	
Hori.	5855.000	PK	50.30	34.32	15.63	45.36	3.31	58.20	-37.02	15.6	52.6	377	292	
Hori.	5875.000	PK	51.00	34.49	15.65	45.34	3.31	59.11	-36.11	10.0	46.1	377	292	
Hori.	5925.000	PK	51.60	34.76	15.68	45.30	3.31	60.05	-35.17	-27.0	8.1	377	292	
Vert.	5850.000	PK	50.60	34.28	15.63	45.36	3.31	58.46	-36.76	27.0	63.7	311	277	
Vert.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	311	277	
Vert.	5875.000	PK	50.80	34.49	15.65	45.34	3.31	58.91	-36.31	10.0	46.3	311	277	
Vert.	5925.000	PK	51.10	34.76	15.68	45.30	3.31	59.55	-35.67	-27.0	8.6	311	277	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5180 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

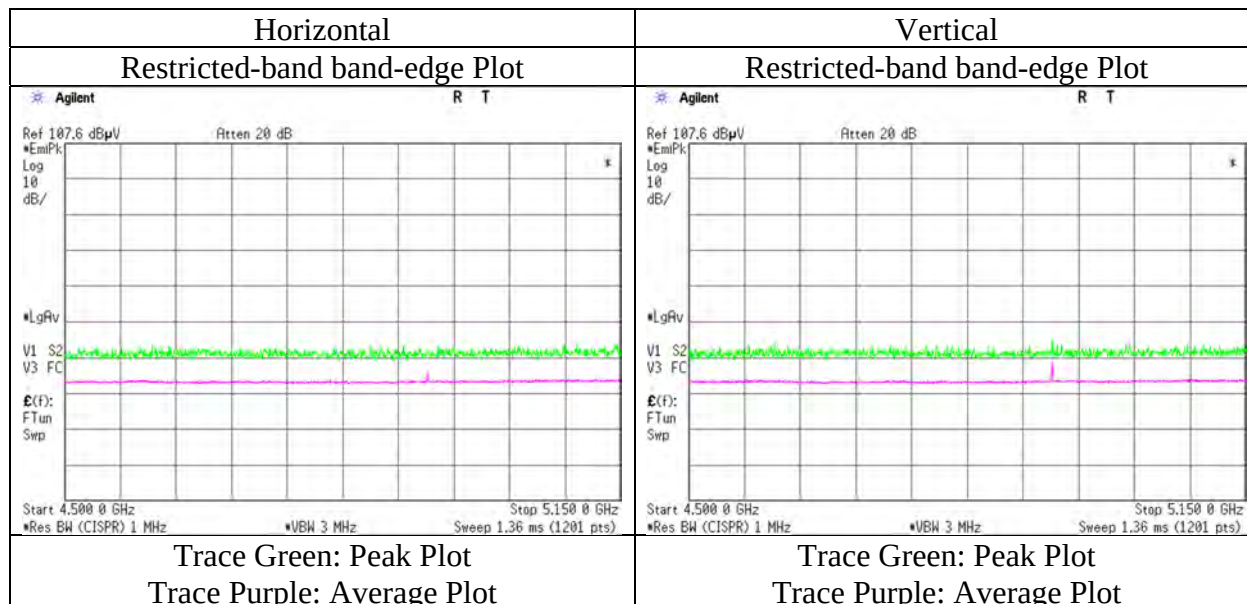
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.30	32.74	15.26	45.32	3.31	57.29	73.9	16.6	331	0	
Hori.	5150.000	AV	40.10	32.74	15.26	45.32	3.31	46.09	53.9	7.8	331	0	VBW: 3.0 kHz
Vert.	5150.000	PK	51.10	32.74	15.26	45.32	3.31	57.09	73.9	16.8	328	355	
Vert.	5150.000	AV	40.30	32.74	15.26	45.32	3.31	46.29	53.9	7.6	328	355	VBW: 3.0 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5320 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

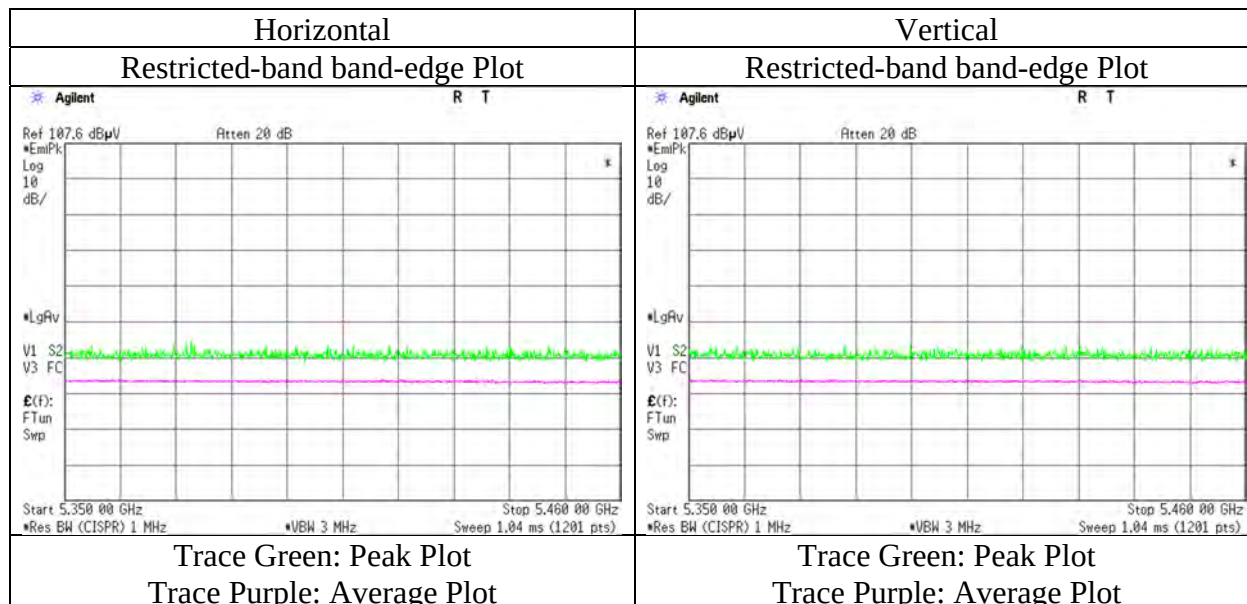
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.00	33.09	15.38	45.45	3.31	57.33	73.9	16.5	367	0	
Hori.	5350.000	AV	39.70	33.09	15.38	45.45	3.31	46.03	53.9	7.8	367	0	VBW: 3.0 kHz
Vert.	5350.000	PK	50.00	33.09	15.38	45.45	3.31	56.33	73.9	17.5	332	358	
Vert.	5350.000	AV	39.50	33.09	15.38	45.45	3.31	45.83	53.9	8.0	332	358	VBW: 3.0 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5500 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.00	33.29	15.44	45.47	3.31	57.57	73.9	16.3	332	5	VBW: 3.0 kHz
Hori.	5460.000	AV	40.60	33.29	15.44	45.47	3.31	47.17	53.9	6.7	332	5	
Vert.	5460.000	PK	51.50	33.29	15.44	45.47	3.31	58.07	73.9	15.8	360	349	
Vert.	5460.000	AV	40.80	33.29	15.44	45.47	3.31	47.37	53.9	6.5	360	349	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{ m} / 3.0\text{ m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

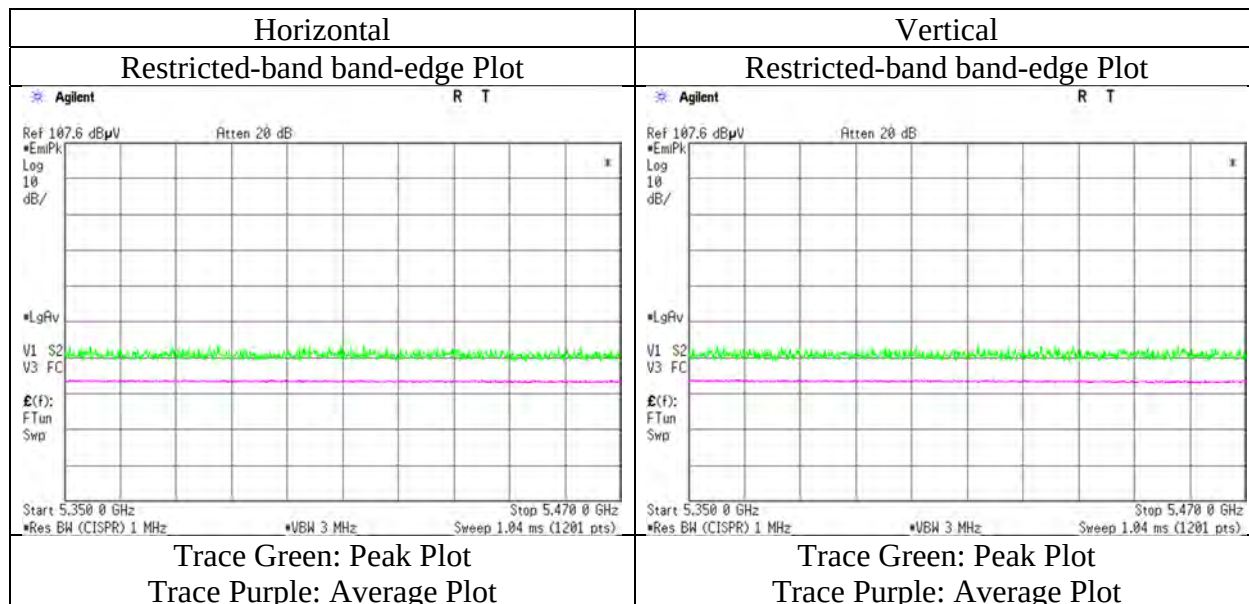
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.20	33.30	15.45	45.47	3.31	57.79	-37.43	-27.0	10.4	332	5	
Vert.	5470.000	PK	51.80	33.30	15.45	45.47	3.31	58.39	-36.83	-27.0	9.8	360	349	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm]) = $10 \cdot \log \left(\left(\left(10^{\left(\text{Electric Field Strength [dBuV/m]} / 20 \right)} \right) \cdot 10^{(-6)} \cdot \text{Distance:3[m]} \right)^2 / 30 \right) \cdot 10^{(3)}$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{ m} / 3.0\text{ m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5700 MHz with 11g 2462 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

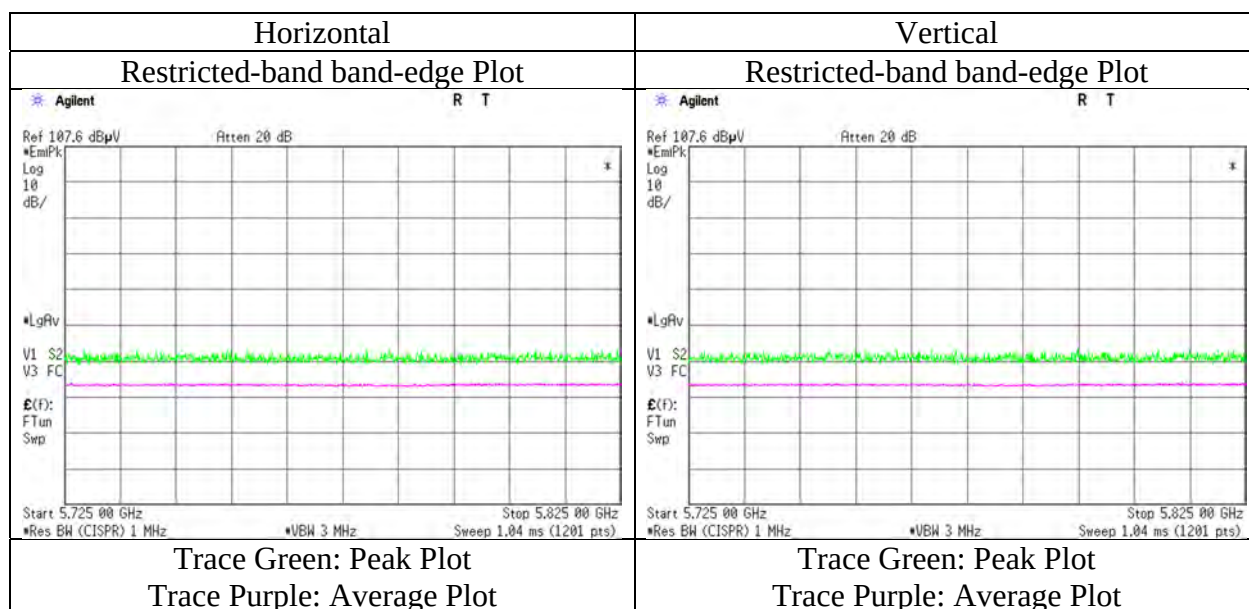
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.10	33.77	15.58	45.41	3.31	58.35	-36.87	-27.0	9.8	328	298	
Vert.	5725.000	PK	50.60	33.77	15.58	45.41	3.31	57.85	-37.37	-27.0	10.3	322	262	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5745 MHz with 11g 2462 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

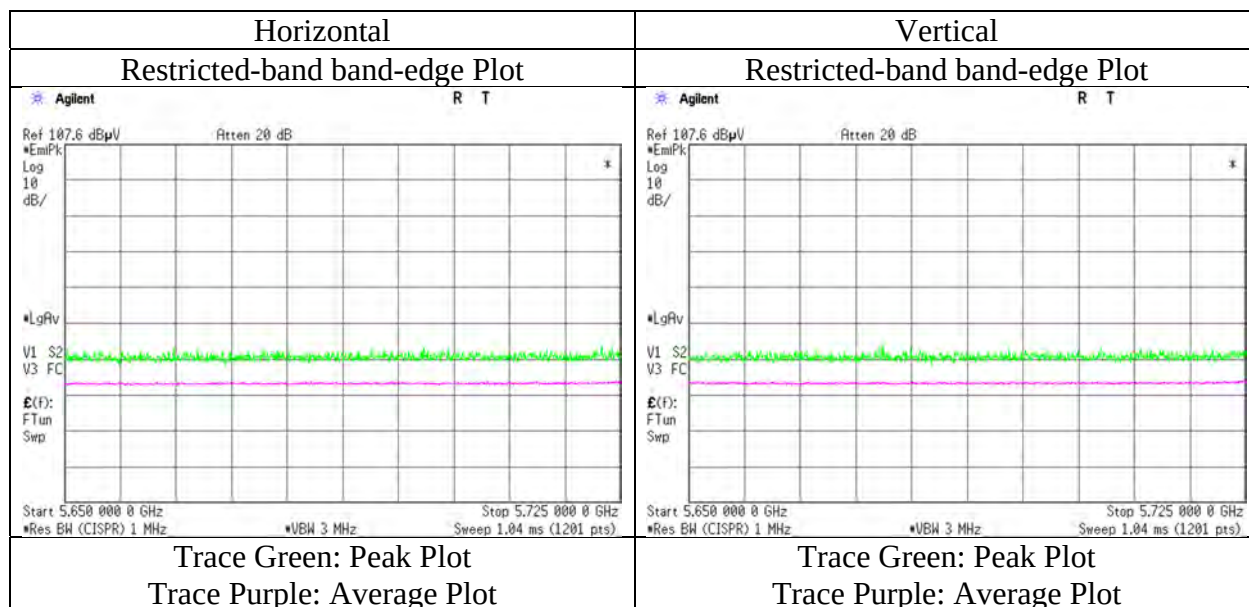
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.80	33.59	15.54	45.45	3.31	57.79	-37.43	-27.0	10.4	299	0	
Hori.	5700.000	PK	51.30	33.74	15.57	45.42	3.31	58.50	-36.72	10.0	46.7	299	0	
Hori.	5720.000	PK	51.00	33.76	15.58	45.41	3.31	58.24	-36.98	15.6	52.5	299	0	
Hori.	5725.000	PK	51.60	33.77	15.58	45.41	3.31	58.85	-36.37	27.0	63.3	299	0	
Vert.	5650.000	PK	51.00	33.59	15.54	45.45	3.31	57.99	-37.23	-27.0	10.2	303	277	
Vert.	5700.000	PK	51.40	33.74	15.57	45.42	3.31	58.60	-36.62	10.0	46.6	303	277	
Vert.	5720.000	PK	51.00	33.76	15.58	45.41	3.31	58.24	-36.98	15.6	52.5	303	277	
Vert.	5725.000	PK	51.20	33.77	15.58	45.41	3.31	58.45	-36.77	27.0	63.7	303	277	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	20 deg. C / 46 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5825 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

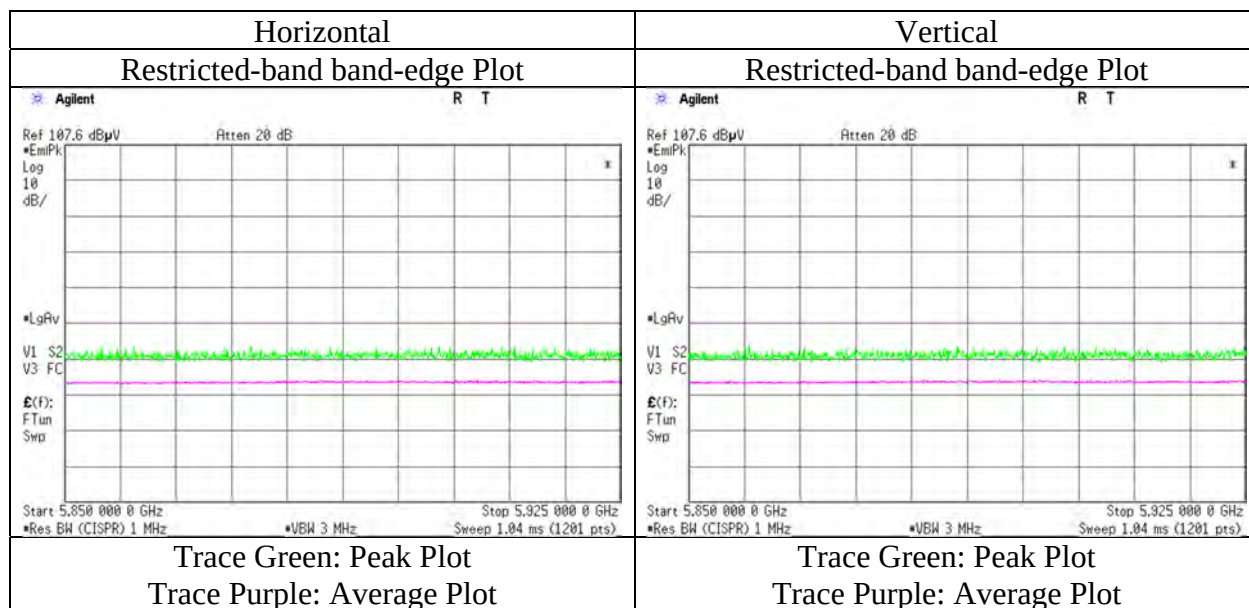
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.00	34.28	15.63	45.36	3.31	57.86	-37.36	27.0	64.3	319	0	
Hori.	5855.000	PK	50.60	34.32	15.63	45.36	3.31	58.50	-36.72	15.6	52.3	319	0	
Hori.	5875.000	PK	50.00	34.49	15.65	45.34	3.31	58.11	-37.11	10.0	47.1	319	0	
Hori.	5925.000	PK	51.20	34.76	15.68	45.30	3.31	59.65	-35.57	-27.0	8.5	319	0	
Vert.	5850.000	PK	50.50	34.28	15.63	45.36	3.31	58.36	-36.86	27.0	63.8	296	278	
Vert.	5855.000	PK	50.00	34.32	15.63	45.36	3.31	57.90	-37.32	15.6	52.9	296	278	
Vert.	5875.000	PK	50.70	34.49	15.65	45.34	3.31	58.81	-36.41	10.0	46.4	296	278	
Vert.	5925.000	PK	51.50	34.76	15.68	45.30	3.31	59.95	-35.27	-27.0	8.2	296	278	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5190 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

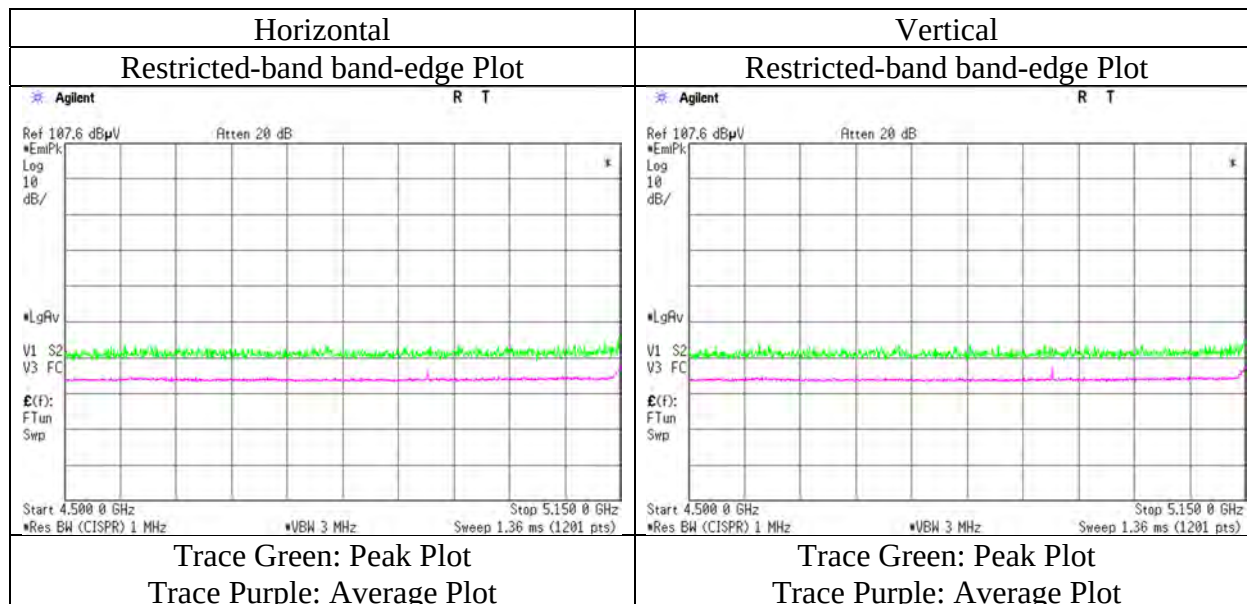
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	56.10	32.74	15.26	45.32	3.31	62.09	73.9	11.8	303	359	
Hori.	5150.000	AV	44.40	32.74	15.26	45.32	3.31	50.39	53.9	3.5	303	359	VBW: 5.6 kHz
Vert.	5150.000	PK	56.70	32.74	15.26	45.32	3.31	62.69	73.9	11.2	270	21	
Vert.	5150.000	AV	44.90	32.74	15.26	45.32	3.31	50.89	53.9	3.0	270	21	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5310 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

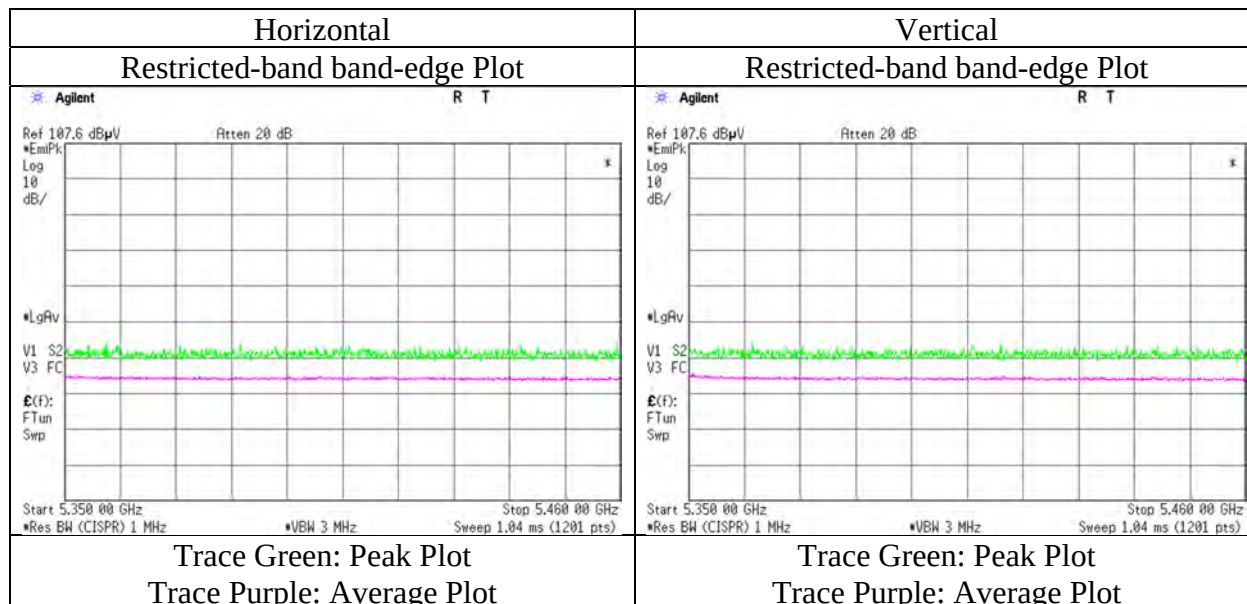
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.20	33.09	15.38	45.45	3.31	57.53	73.9	16.3	114	297	
Hori.	5350.000	AV	40.50	33.09	15.38	45.45	3.31	46.83	53.9	7.0	114	297	VBW: 5.6 kHz
Vert.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	321	9	
Vert.	5350.000	AV	41.10	33.09	15.38	45.45	3.31	47.43	53.9	6.4	321	9	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5510 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.70	33.29	15.44	45.47	3.31	58.27	73.9	15.6	360	18	VBW: 5.6 kHz
Hori.	5460.000	AV	41.30	33.29	15.44	45.47	3.31	47.87	53.9	6.0	360	18	
Vert.	5460.000	PK	51.40	33.29	15.44	45.47	3.31	57.97	73.9	15.9	298	36	VBW: 5.6 kHz
Vert.	5460.000	AV	41.60	33.29	15.44	45.47	3.31	48.17	53.9	5.7	298	36	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

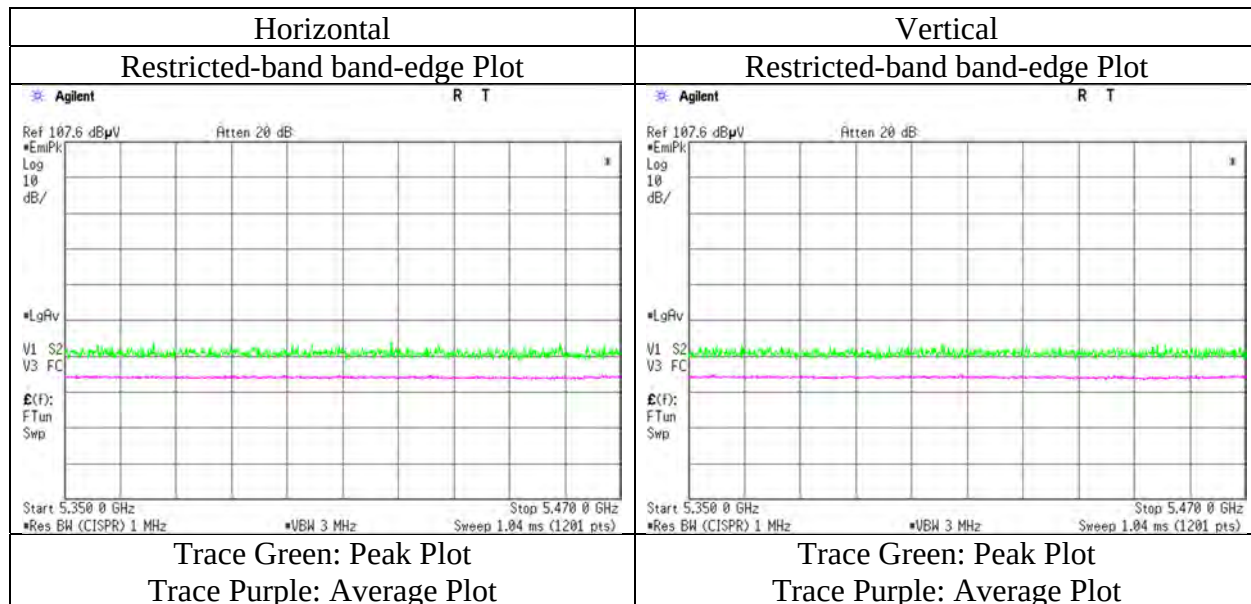
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	52.40	33.30	15.45	45.47	3.31	58.99	-36.23	-27.0	9.2	360	18	
Vert.	5470.000	PK	51.90	33.30	15.45	45.47	3.31	58.49	-36.73	-27.0	9.7	298	36	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\frac{1}{2}} \cdot \text{Electric Field Strength [dBuV/m]} / 20 \} \cdot 10^{(-6)} \cdot \text{Distance:3[m]} \right)^2 / 30 \right) \cdot 10^{(3)}$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5670 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

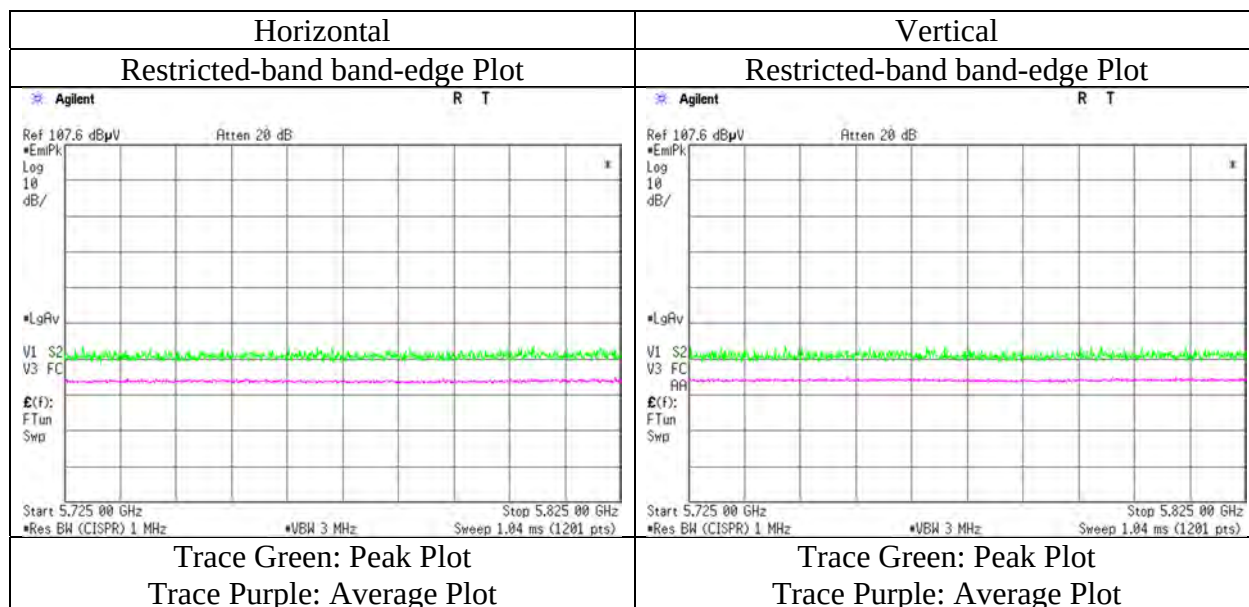
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	52.00	33.77	15.58	45.41	3.31	59.25	-35.97	-27.00	8.9	343	310	
Vert.	5725.000	PK	51.30	33.77	15.58	45.41	3.31	58.55	-36.67	-27.00	9.6	307	276	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5755 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

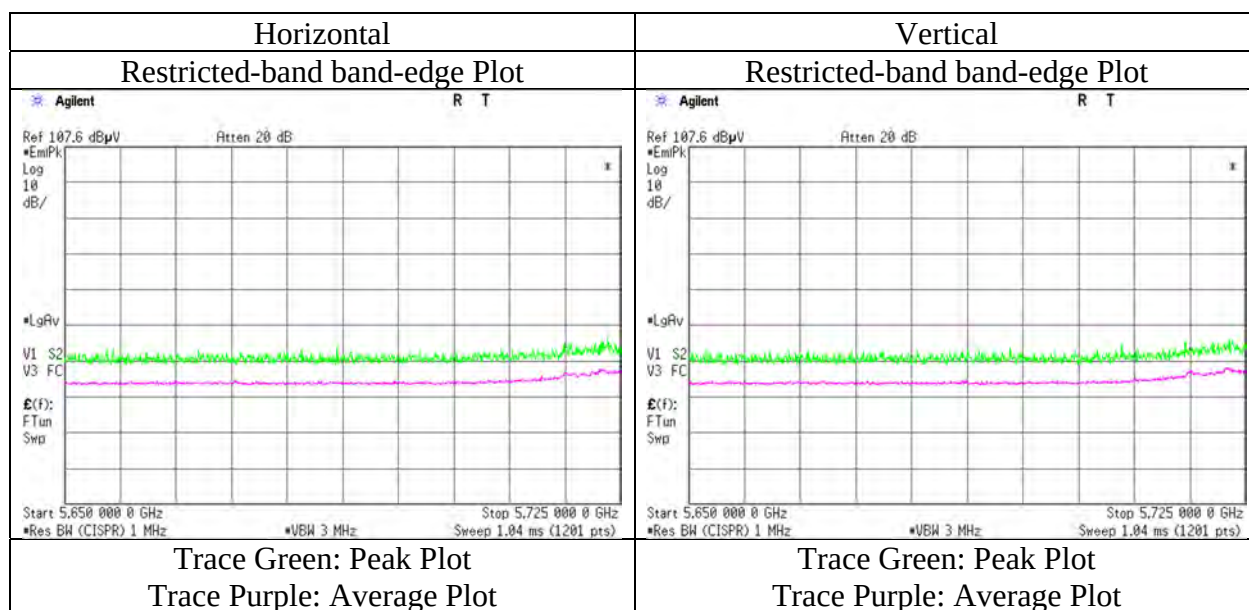
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.20	33.59	15.54	45.45	3.31	58.19	-37.03	-27.0	10.0	290	289	
Hori.	5700.000	PK	51.80	33.74	15.57	45.42	3.31	59.00	-36.22	10.0	46.2	290	289	
Hori.	5720.000	PK	53.50	33.76	15.58	45.41	3.31	60.74	-34.48	15.6	50.0	290	289	
Hori.	5725.000	PK	54.80	33.77	15.58	45.41	3.31	62.05	-33.17	27.0	60.1	290	289	
Vert.	5650.000	PK	50.90	33.59	15.54	45.45	3.31	57.89	-37.33	-27.0	10.3	100	0	
Vert.	5700.000	PK	51.40	33.74	15.57	45.42	3.31	58.60	-36.62	10.0	46.6	100	0	
Vert.	5720.000	PK	53.60	33.76	15.58	45.41	3.31	60.84	-34.38	15.6	49.9	100	0	
Vert.	5725.000	PK	54.00	33.77	15.58	45.41	3.31	61.25	-33.97	27.0	60.9	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5795 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

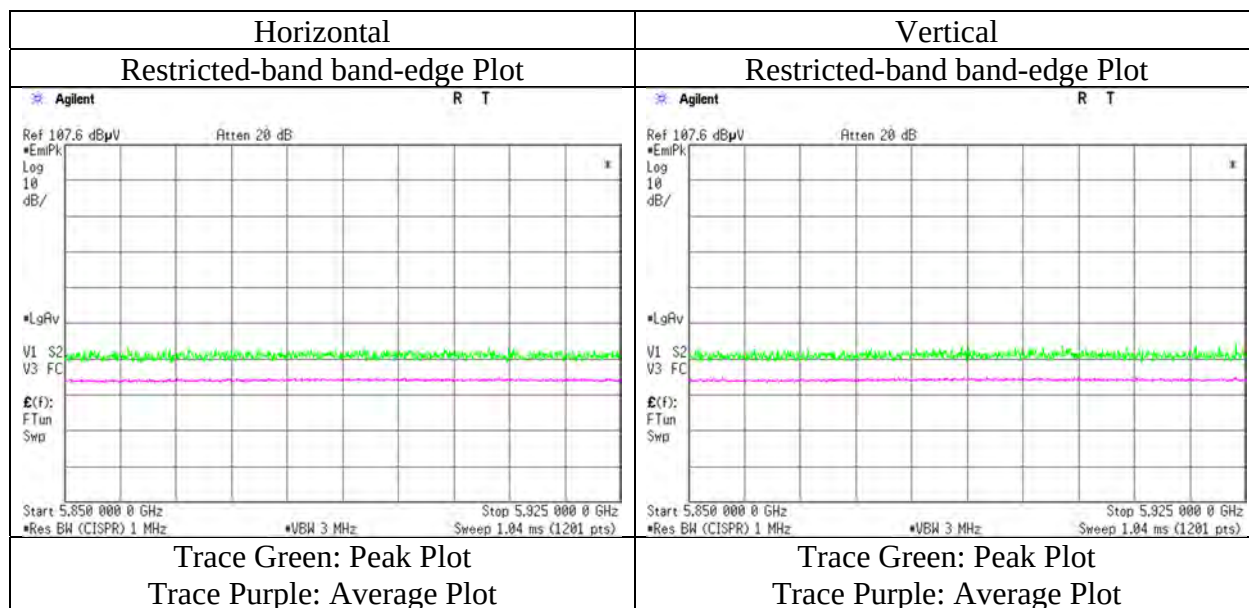
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.20	34.28	15.63	45.36	3.31	58.06	-37.16	27.0	64.1	100	0	
Hori.	5855.000	PK	49.90	34.32	15.63	45.36	3.31	57.80	-37.42	15.6	53.0	100	0	
Hori.	5875.000	PK	50.50	34.49	15.65	45.34	3.31	58.61	-36.61	10.0	46.6	100	0	
Hori.	5925.000	PK	51.70	34.76	15.68	45.30	3.31	60.15	-35.07	-27.0	8.0	100	0	
Vert.	5850.000	PK	49.80	34.28	15.63	45.36	3.31	57.66	-37.56	27.0	64.5	270	274	
Vert.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	270	274	
Vert.	5875.000	PK	50.30	34.49	15.65	45.34	3.31	58.41	-36.81	10.0	46.8	270	274	
Vert.	5925.000	PK	51.60	34.76	15.68	45.30	3.31	60.05	-35.17	-27.0	8.1	270	274	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5190 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

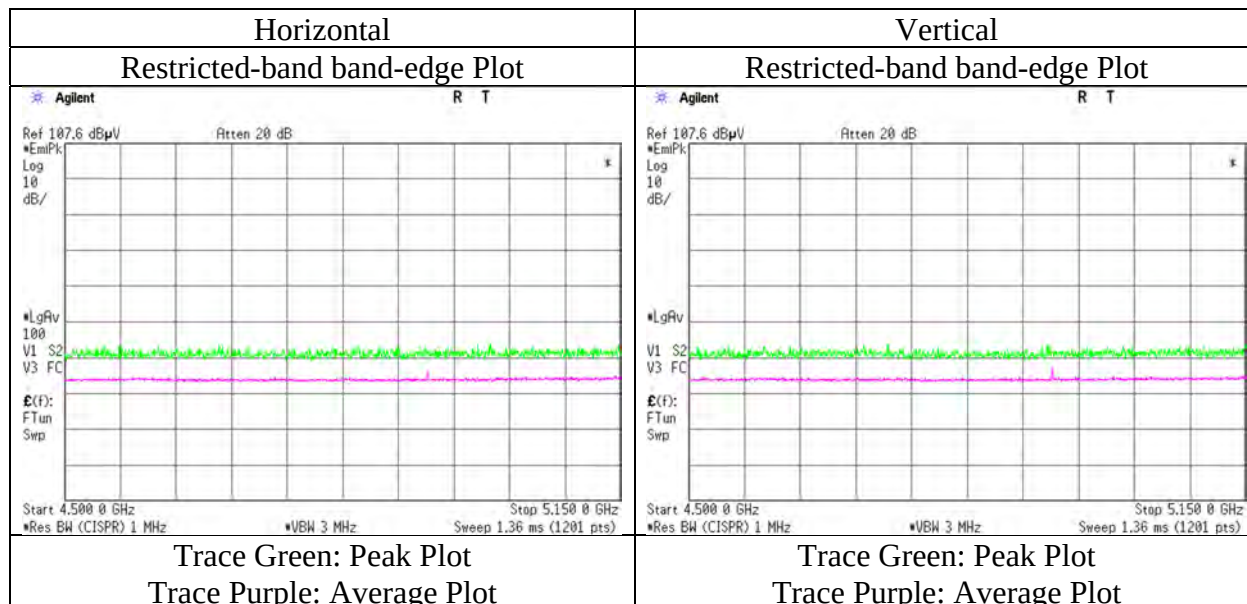
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.00	32.74	15.26	45.32	3.31	56.99	73.9	16.9	400	6	
Hori.	5150.000	AV	41.20	32.74	15.26	45.32	3.31	47.19	53.9	6.7	400	6	VBW: 5.6 kHz
Vert.	5150.000	PK	51.60	32.74	15.26	45.32	3.31	57.59	73.9	16.3	275	17	
Vert.	5150.000	AV	41.40	32.74	15.26	45.32	3.31	47.39	53.9	6.5	275	17	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5310 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

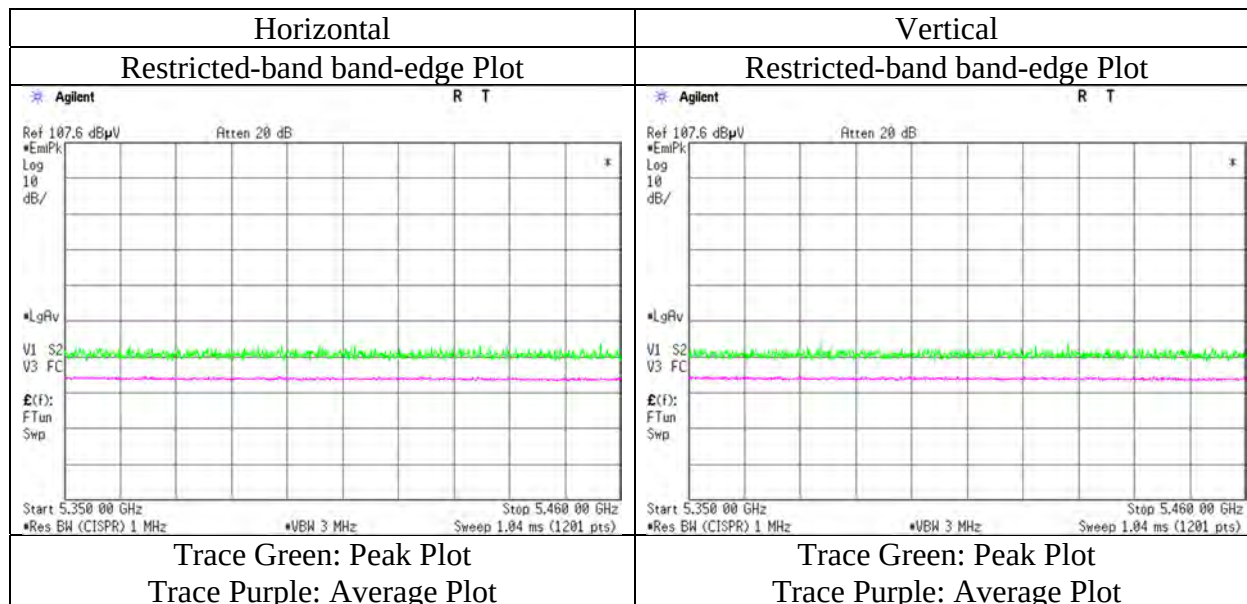
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.40	33.09	15.38	45.45	3.31	56.73	73.9	17.1	348	3	VBW: 5.6 kHz
Hori.	5350.000	AV	40.10	33.09	15.38	45.45	3.31	46.43	53.9	7.4	348	3	
Vert.	5350.000	PK	50.20	33.09	15.38	45.45	3.31	56.53	73.9	17.3	309	11	VBW: 5.6 kHz
Vert.	5350.000	AV	40.00	33.09	15.38	45.45	3.31	46.33	53.9	7.5	309	11	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5510 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.40	33.29	15.44	45.47	3.31	57.97	73.9	15.9	285	25	VBW: 5.6 kHz
Hori.	5460.000	AV	41.70	33.29	15.44	45.47	3.31	48.27	53.9	5.6	285	25	
Vert.	5460.000	PK	51.90	33.29	15.44	45.47	3.31	58.47	73.9	15.4	286	23	VBW: 5.6 kHz
Vert.	5460.000	AV	41.10	33.29	15.44	45.47	3.31	47.67	53.9	6.2	286	23	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

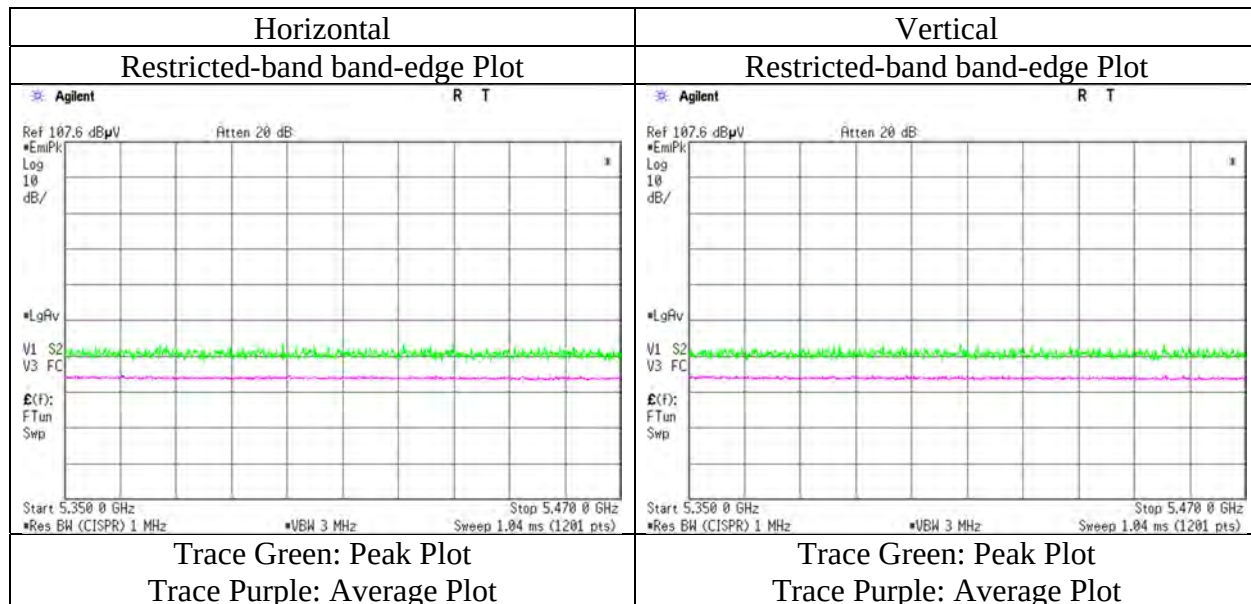
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.90	33.30	15.45	45.47	3.31	58.49	-36.73	-27.0	9.7	285	25	
Vert.	5470.000	PK	52.10	33.30	15.45	45.47	3.31	58.69	-36.53	-27.0	9.5	286	23	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]} \}^2 \right) / 30 \right) * 10^{\wedge} 3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5670 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

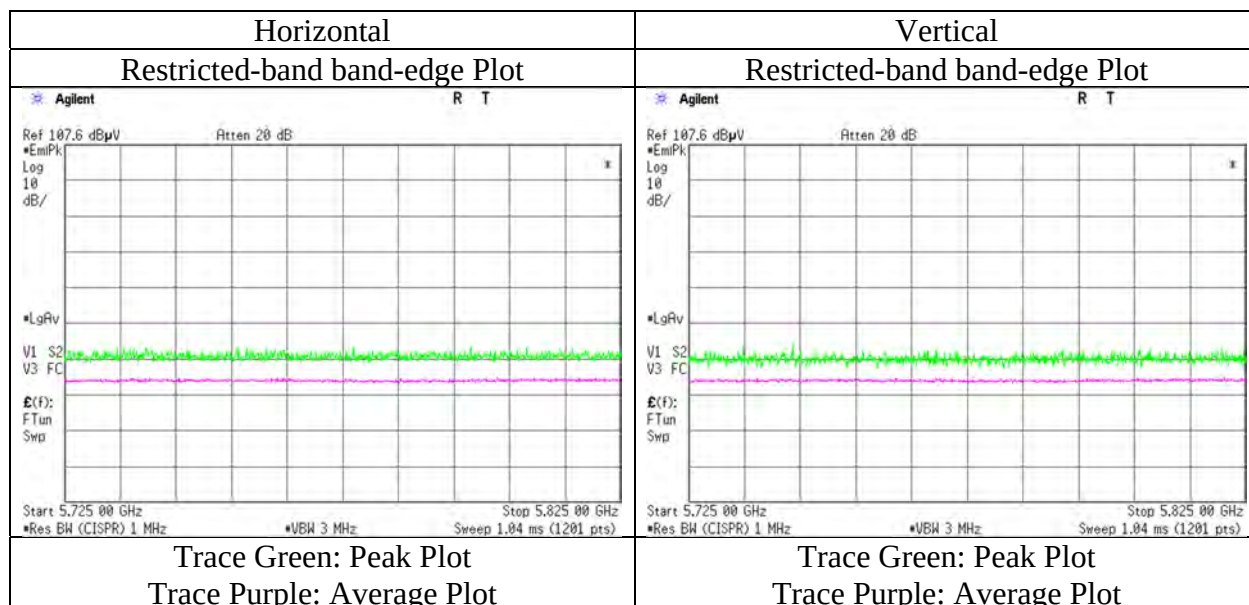
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	52.00	33.77	15.58	45.41	3.31	59.25	-35.97	-27.00	8.9	298	308	
Vert.	5725.000	PK	51.70	33.77	15.58	45.41	3.31	58.95	-36.27	-27.00	9.2	305	278	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5755 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

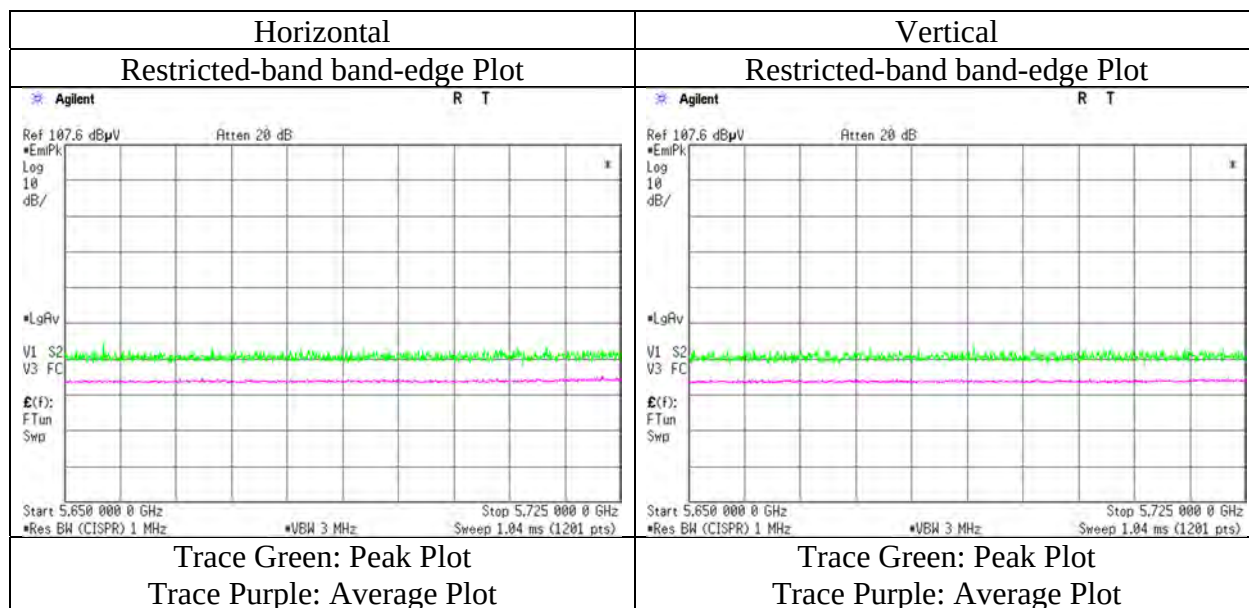
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.70	33.59	15.54	45.45	3.31	57.69	-37.53	-27.0	10.5	307	300	
Hori.	5700.000	PK	51.80	33.74	15.57	45.42	3.31	59.00	-36.22	10.0	46.2	307	300	
Hori.	5720.000	PK	51.20	33.76	15.58	45.41	3.31	58.44	-36.78	15.6	52.3	307	300	
Hori.	5725.000	PK	51.90	33.77	15.58	45.41	3.31	59.15	-36.07	27.0	63.0	307	300	
Vert.	5650.000	PK	51.30	33.59	15.54	45.45	3.31	58.29	-36.93	-27.0	9.9	311	284	
Vert.	5700.000	PK	51.50	33.74	15.57	45.42	3.31	58.70	-36.52	10.0	46.5	311	284	
Vert.	5720.000	PK	51.80	33.76	15.58	45.41	3.31	59.04	-36.18	15.6	51.7	311	284	
Vert.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	27.0	63.5	311	284	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5795 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

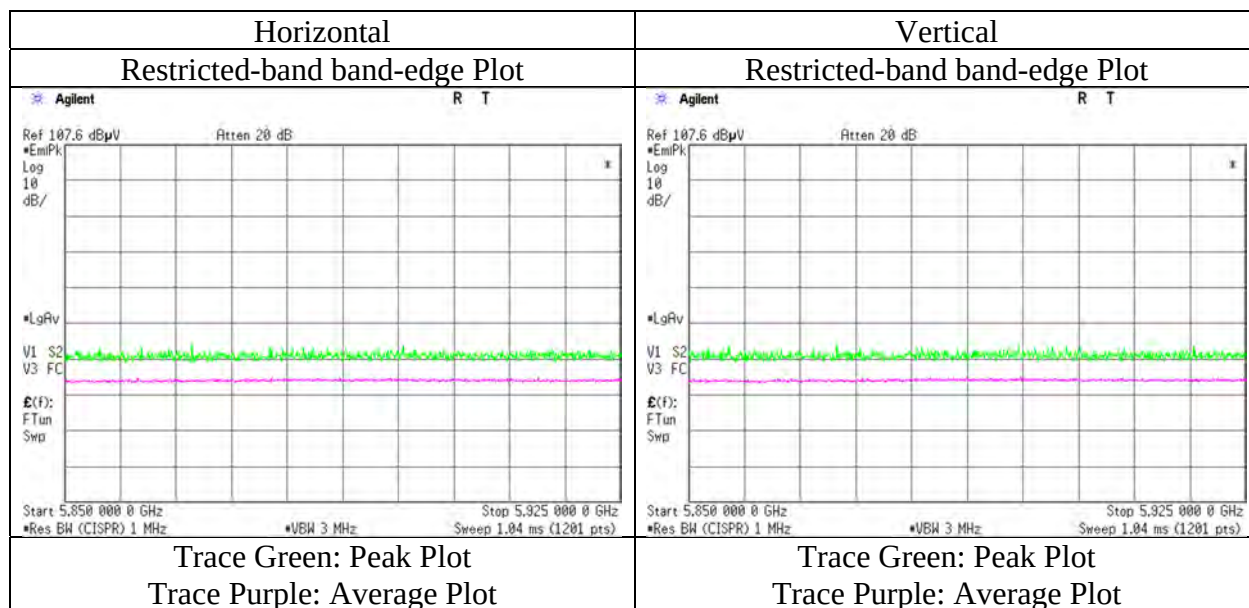
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.00	34.28	15.63	45.36	3.31	57.86	-37.36	27.0	64.3	289	0	
Hori.	5855.000	PK	50.30	34.32	15.63	45.36	3.31	58.20	-37.02	15.6	52.6	289	0	
Hori.	5875.000	PK	51.20	34.49	15.65	45.34	3.31	59.31	-35.91	10.0	45.9	289	0	
Hori.	5925.000	PK	51.00	34.76	15.68	45.30	3.31	59.45	-35.77	-27.0	8.7	289	0	
Vert.	5850.000	PK	50.90	34.28	15.63	45.36	3.31	58.76	-36.46	27.0	63.4	298	263	
Vert.	5855.000	PK	50.40	34.32	15.63	45.36	3.31	58.30	-36.92	15.6	52.5	298	263	
Vert.	5875.000	PK	50.40	34.49	15.65	45.34	3.31	58.51	-36.71	10.0	46.7	298	263	
Vert.	5925.000	PK	51.30	34.76	15.68	45.30	3.31	59.75	-35.47	-27.0	8.4	298	263	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5210 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

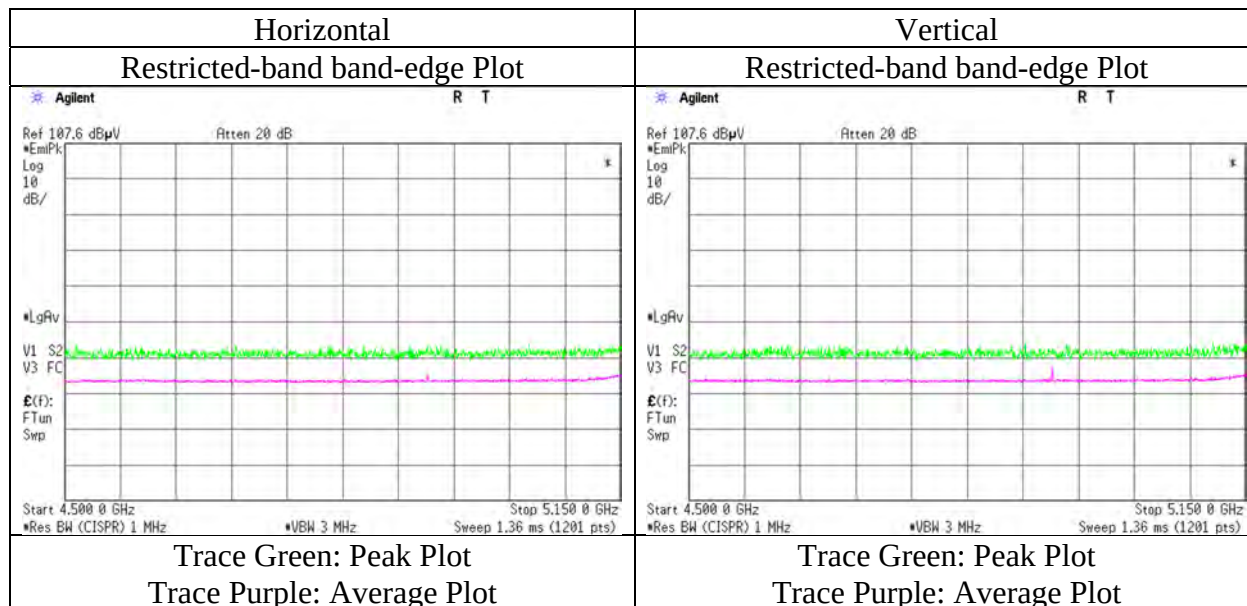
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	52.40	32.74	15.26	45.32	3.31	58.39	73.9	15.5	364	0	
Hori.	5150.000	AV	41.90	32.74	15.26	45.32	3.31	47.89	53.9	6.0	364	0	VBW: 4.3 kHz
Vert.	5150.000	PK	52.50	32.74	15.26	45.32	3.31	58.49	73.9	15.4	323	12	
Vert.	5150.000	AV	42.10	32.74	15.26	45.32	3.31	48.09	53.9	5.8	323	12	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5290 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

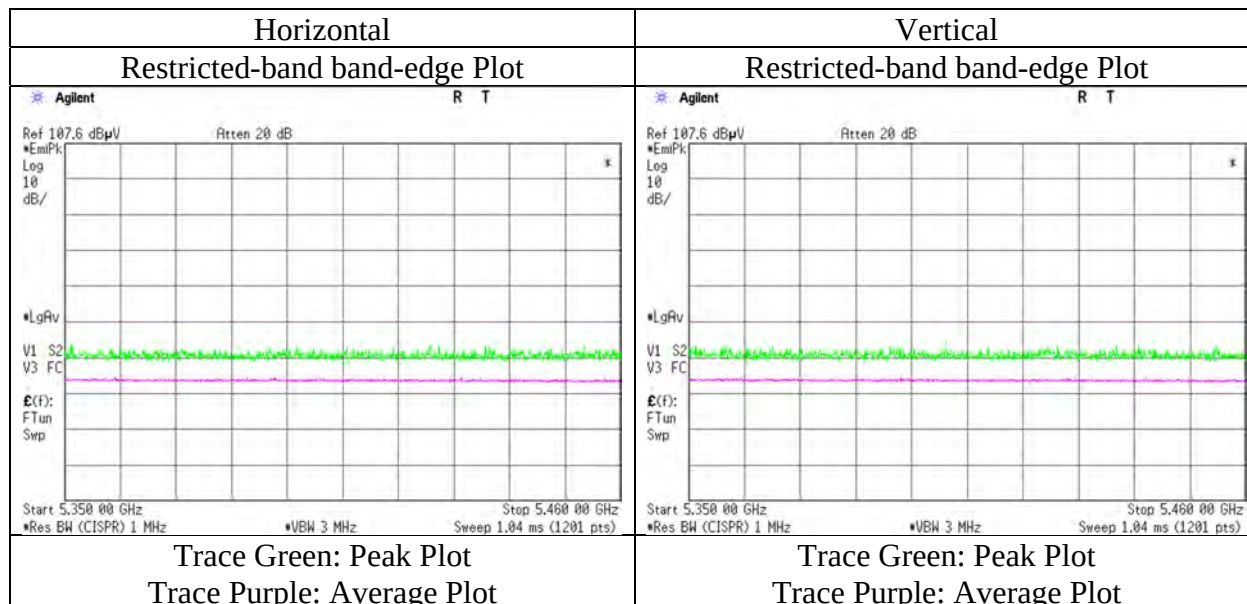
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.20	33.09	15.38	45.45	3.31	56.53	73.9	17.3	355	4	
Hori.	5350.000	AV	40.00	33.09	15.38	45.45	3.31	46.33	53.9	7.5	355	4	VBW: 4.3 kHz
Vert.	5350.000	PK	50.90	33.09	15.38	45.45	3.31	57.23	73.9	16.6	331	13	
Vert.	5350.000	AV	40.20	33.09	15.38	45.45	3.31	46.53	53.9	7.3	331	13	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5530 MHz with 11g 2462 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.40	33.29	15.44	45.47	3.31	57.97	73.9	15.9	360	0	VBW: 4.3 kHz
Hori.	5460.000	AV	41.50	33.29	15.44	45.47	3.31	48.07	53.9	5.8	360	0	
Vert.	5460.000	PK	51.30	33.29	15.44	45.47	3.31	57.87	73.9	16.0	281	342	VBW: 4.3 kHz
Vert.	5460.000	AV	41.20	33.29	15.44	45.47	3.31	47.77	53.9	6.1	281	342	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

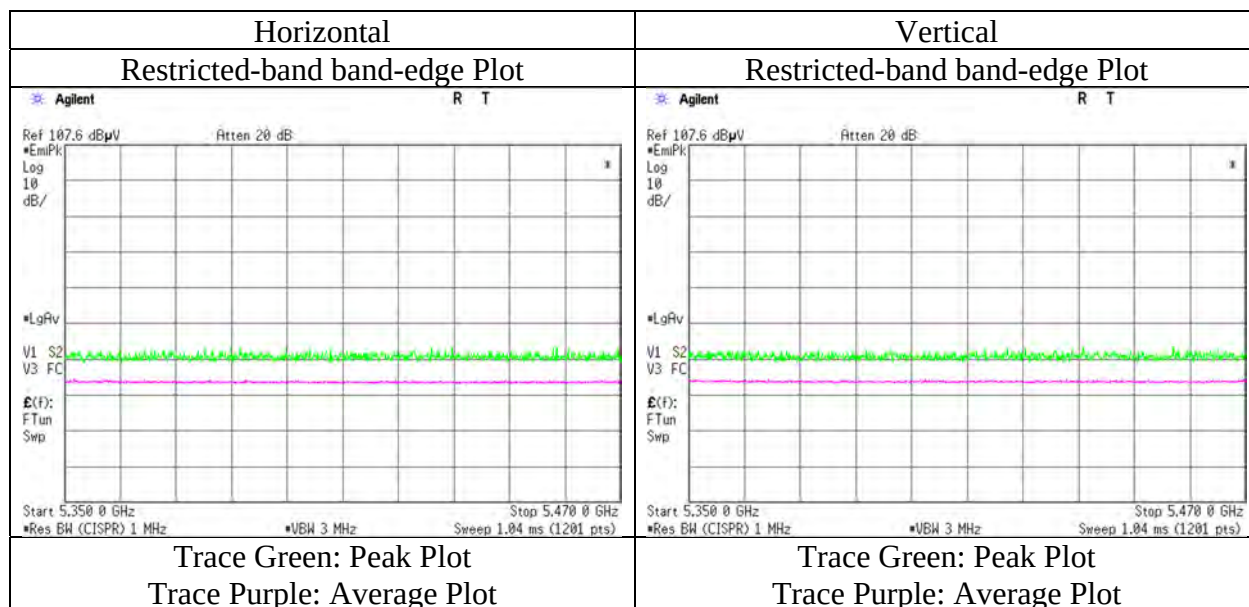
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.60	33.30	15.45	45.47	3.31	58.19	-37.03	-27.0	10.0	360	0	
Vert.	5470.000	PK	51.40	33.30	15.45	45.47	3.31	57.99	-37.23	-27.0	10.2	281	342	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\frac{1}{2}} \cdot \left(\frac{\text{Electric Field Strength [dBuV/m]}{20} \right) \cdot 10^{(-6)} \cdot \text{Distance:3[m]} \right)^2 \right) / 30 \right) \cdot 10^{\frac{1}{3}}$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5610 MHz with 11g 2462 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

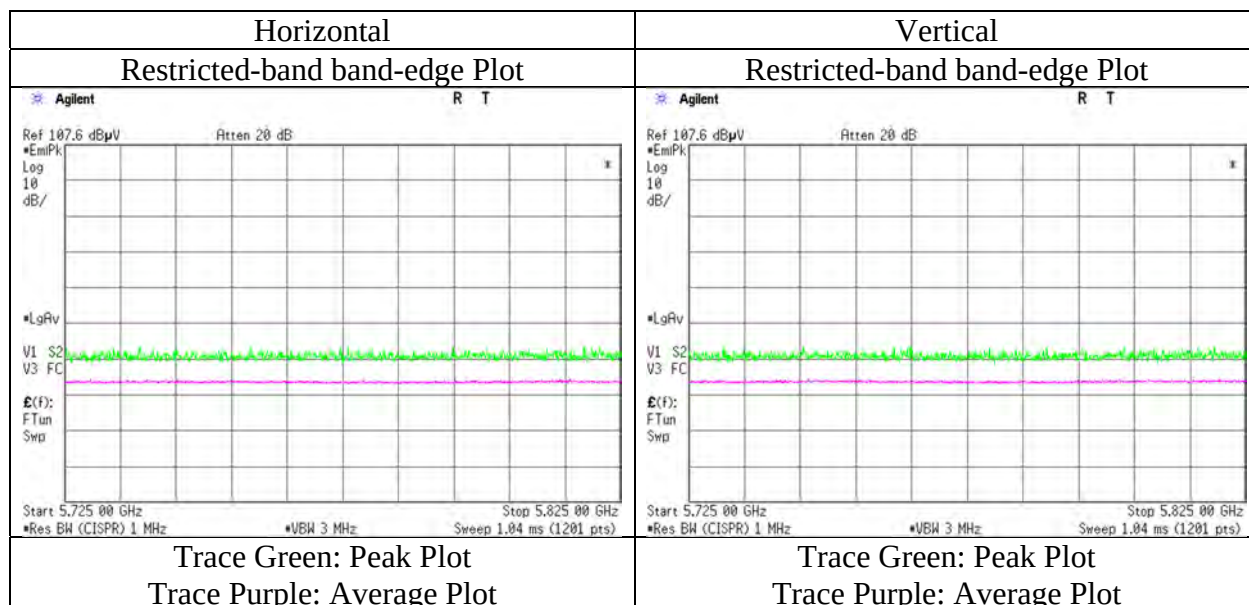
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.50	33.77	15.58	45.41	3.31	58.75	-36.47	-27.00	9.4	326	0	
Vert.	5725.000	PK	51.30	33.77	15.58	45.41	3.31	58.55	-36.67	-27.00	9.6	367	355	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5775 MHz with 11g 2462 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.60	33.59	15.54	45.45	3.31	58.59	-36.63	-27.0	9.6	368	302	
Hori.	5700.000	PK	51.80	33.74	15.57	45.42	3.31	59.00	-36.22	10.0	46.2	368	302	
Hori.	5720.000	PK	51.40	33.76	15.58	45.41	3.31	58.64	-36.58	15.6	52.1	368	302	
Hori.	5725.000	PK	51.70	33.77	15.58	45.41	3.31	58.95	-36.27	27.0	63.2	368	302	
Hori.	5850.000	PK	50.50	34.28	15.63	45.36	3.31	58.36	-36.86	27.0	63.8	368	302	
Hori.	5855.000	PK	50.00	34.32	15.63	45.36	3.31	57.90	-37.32	15.6	52.9	368	302	
Hori.	5875.000	PK	50.70	34.49	15.65	45.34	3.31	58.81	-36.41	10.0	46.4	368	302	
Hori.	5925.000	PK	50.80	34.76	15.68	45.30	3.31	59.25	-35.97	-27.0	8.9	368	302	
Vert.	5650.000	PK	51.60	33.59	15.54	45.45	3.31	58.59	-36.63	-27.0	9.6	378	280	
Vert.	5700.000	PK	51.70	33.74	15.57	45.42	3.31	58.90	-36.32	10.0	46.3	378	280	
Vert.	5720.000	PK	51.50	33.76	15.58	45.41	3.31	58.74	-36.48	15.6	52.0	378	280	
Vert.	5725.000	PK	51.90	33.77	15.58	45.41	3.31	59.15	-36.07	27.0	63.0	378	280	
Vert.	5850.000	PK	50.60	34.28	15.63	45.36	3.31	58.46	-36.76	27.0	63.7	378	280	
Vert.	5855.000	PK	51.00	34.32	15.63	45.36	3.31	58.90	-36.32	15.6	51.9	378	280	
Vert.	5875.000	PK	51.30	34.49	15.65	45.34	3.31	59.41	-35.81	10.0	45.8	378	280	
Vert.	5925.000	PK	51.30	34.76	15.68	45.30	3.31	59.75	-35.47	-27.0	8.4	378	280	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB

UL Japan, Inc.

Kashima EMC Lab.

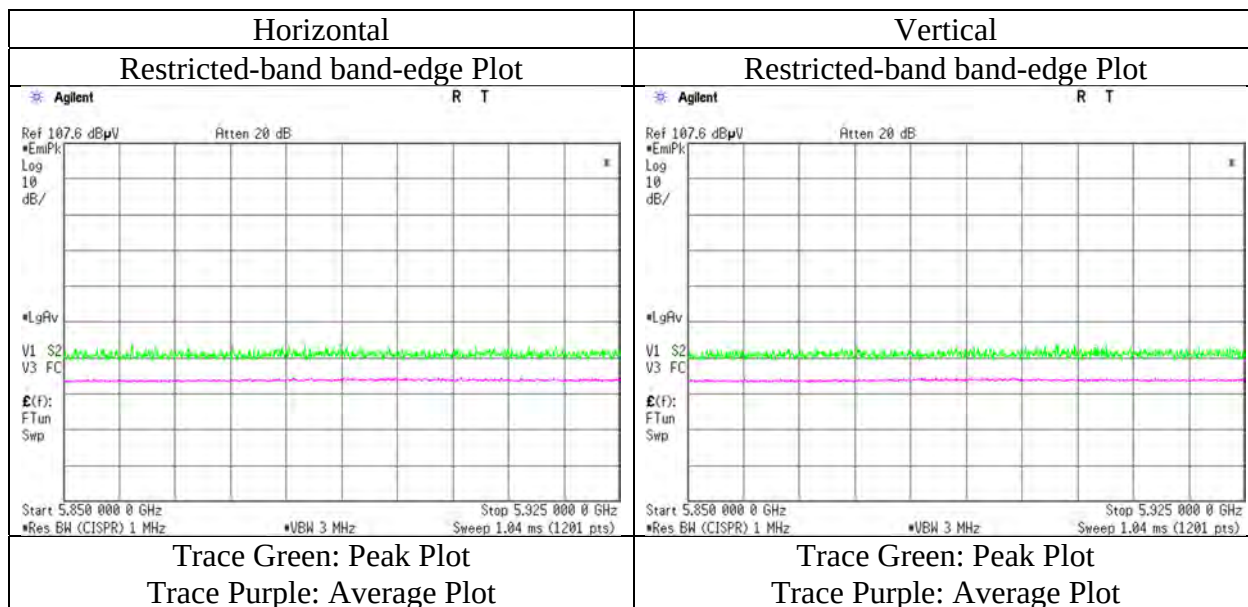
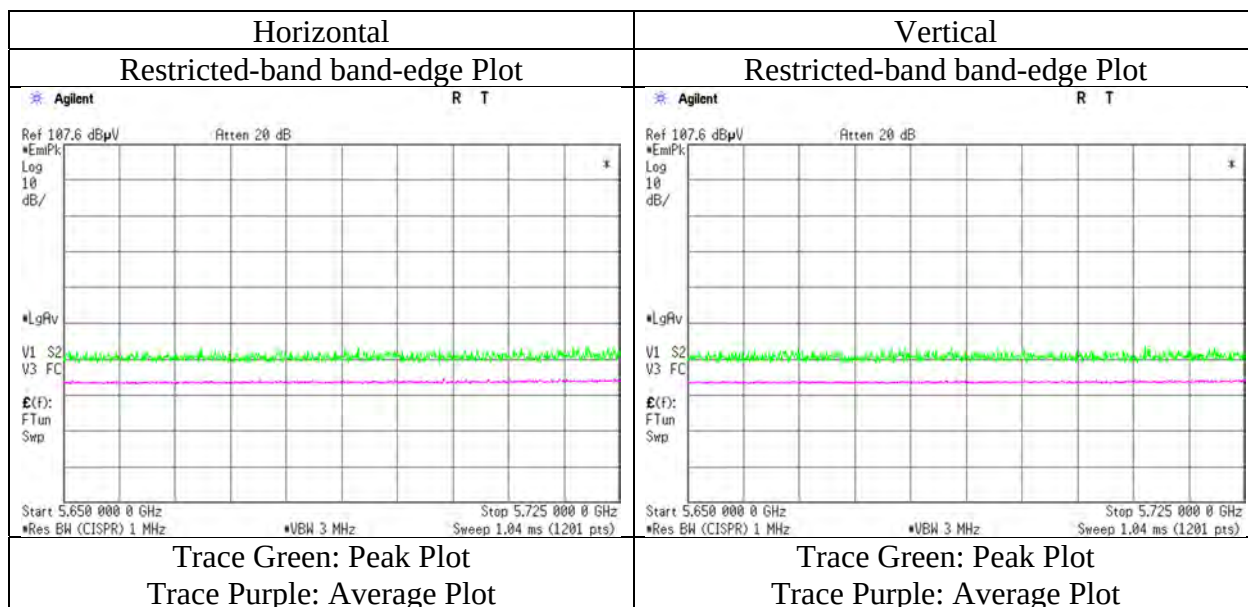
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 10, 2021
Temperature / Humidity	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5775 MHz with 11g 2462 MHz



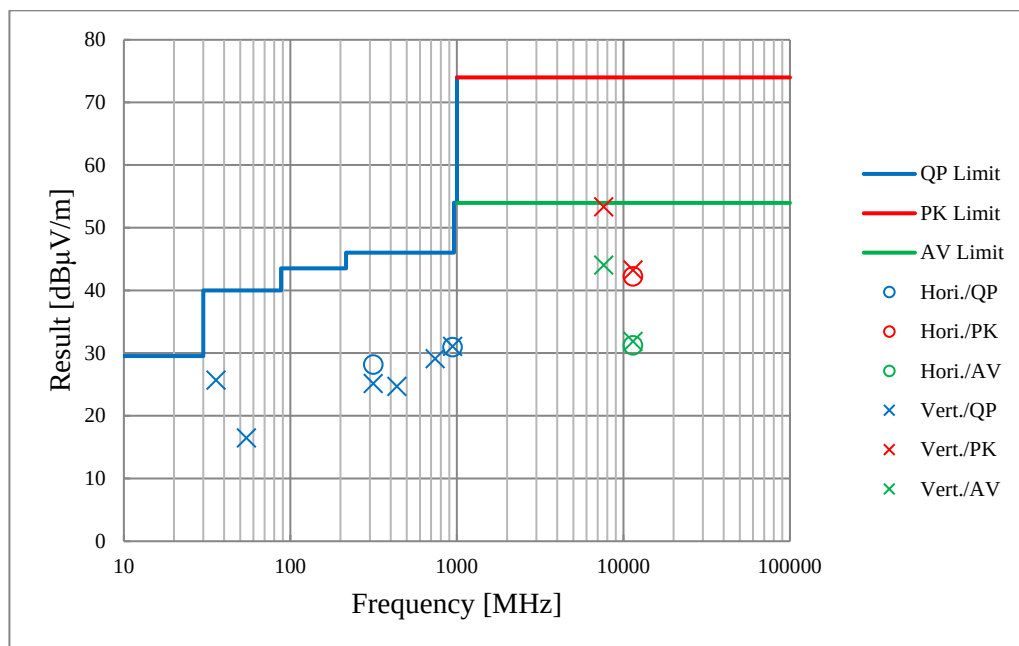
* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

(Plot data, Worst case mode for Maximum Conducted Output Power)

Report No.	13977035M-C					
Test place	Kashima EMC Lab.					
Semi Anechoic Chamber	No.11	No.10	No.11	No.11	No.11	No.11
Date	December 7, 2021	December 9, 2021	December 6, 2021	December 6, 2021	December 7, 2021	December 7, 2021
Temperature / Humidity	20 deg. C / 45 % RH	20 deg. C / 46 % RH	20 deg. C / 37 % RH	20 deg. C / 37 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5700 MHz with 11g 2462 MHz					



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

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5180 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

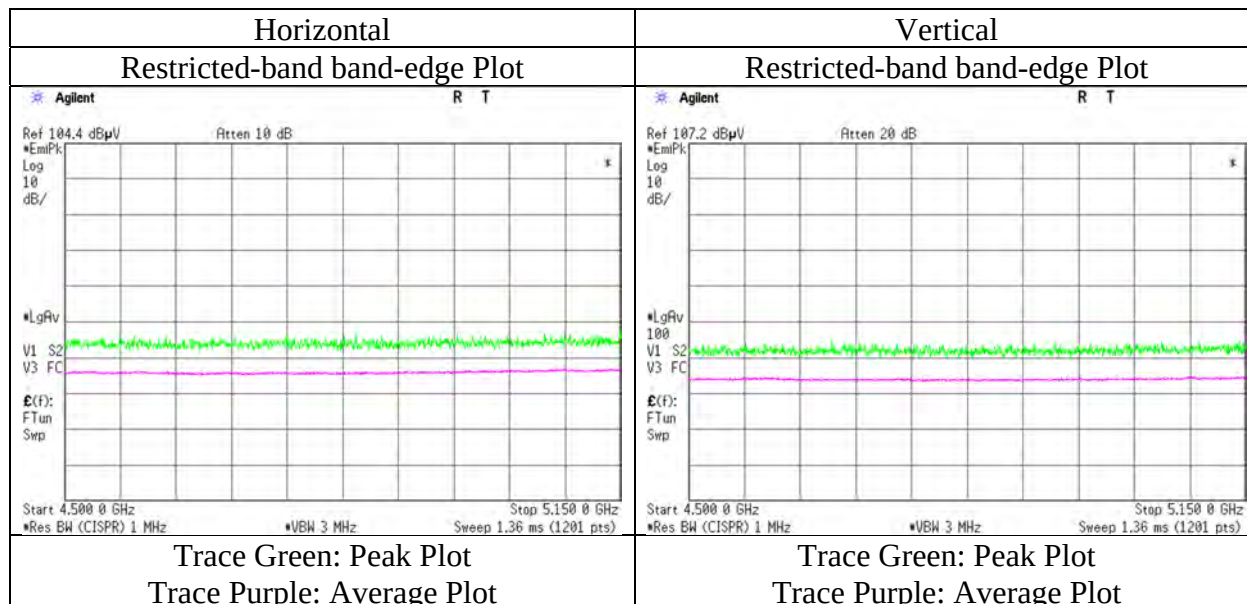
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.60	32.74	15.26	45.32	3.31	56.59	73.9	17.3	330	350	
Hori.	5150.000	AV	40.50	32.74	15.26	45.32	3.31	46.49	53.9	7.4	330	350	VBW: 2.2 kHz
Vert.	5150.000	PK	51.10	32.74	15.26	45.32	3.31	57.09	73.9	16.8	375	70	
Vert.	5150.000	AV	40.60	32.74	15.26	45.32	3.31	46.59	53.9	7.3	375	70	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{ m} / 3.0\text{ m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5320 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

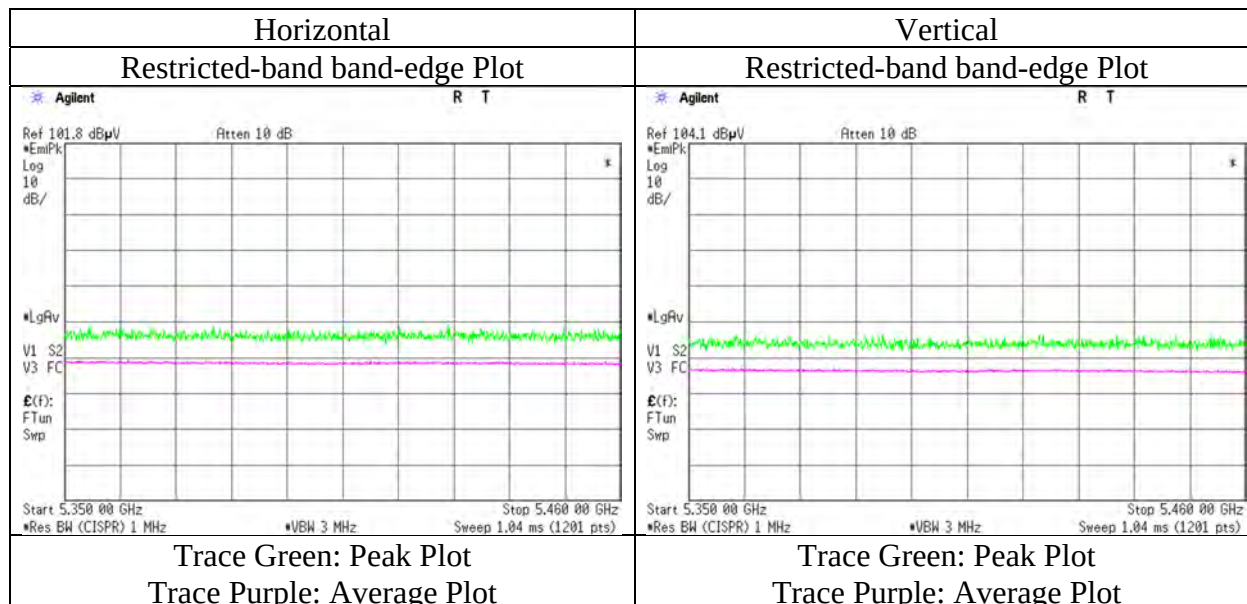
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.10	33.09	15.38	45.45	3.31	57.43	73.9	16.4	330	350	
Hori.	5350.000	AV	40.50	33.09	15.38	45.45	3.31	46.83	53.9	7.0	330	350	VBW: 2.2 kHz
Vert.	5350.000	PK	51.20	33.09	15.38	45.45	3.31	57.53	73.9	16.3	380	80	
Vert.	5350.000	AV	40.60	33.09	15.38	45.45	3.31	46.93	53.9	6.9	380	80	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5500 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.40	33.29	15.44	45.47	3.31	56.97	73.9	16.9	370	0	VBW: 2.2 kHz
Hori.	5460.000	AV	41.70	33.29	15.44	45.47	3.31	48.27	53.9	5.6	370	0	
Vert.	5460.000	PK	50.70	33.29	15.44	45.47	3.31	57.27	73.9	16.6	380	85	VBW: 2.2 kHz
Vert.	5460.000	AV	41.30	33.29	15.44	45.47	3.31	47.87	53.9	6.0	380	85	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

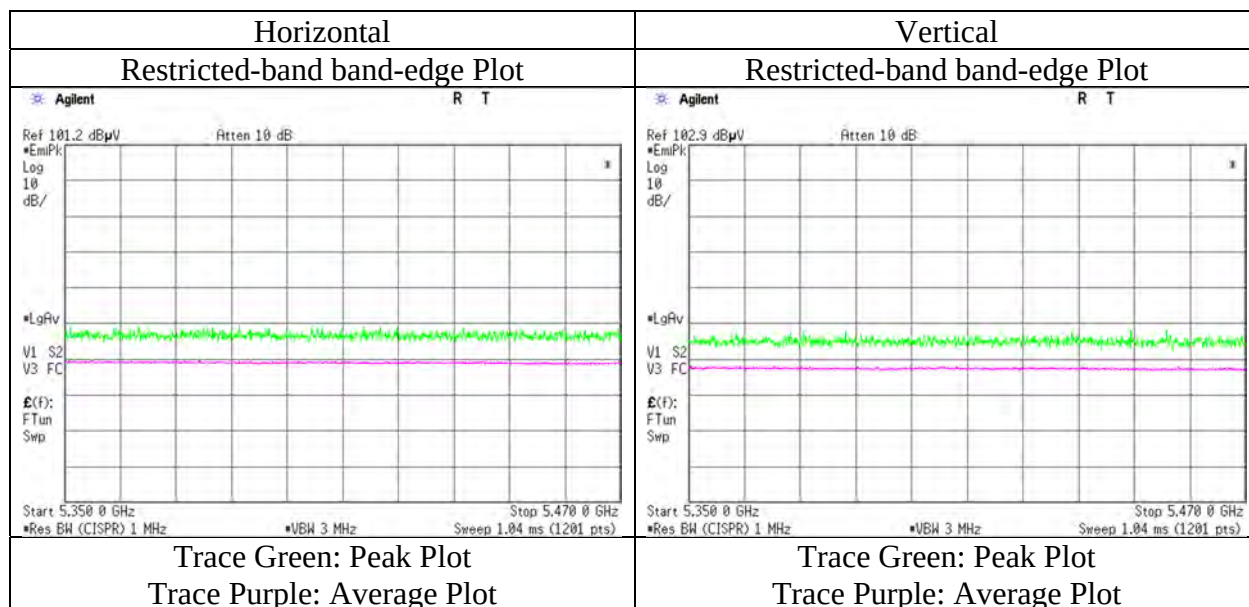
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	50.90	33.30	15.45	45.47	3.31	57.49	-37.73	-27.0	10.7	370	0	
Vert.	5470.000	PK	50.40	33.30	15.45	45.47	3.31	56.99	-38.23	-27.0	11.2	380	85	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ $10^{\frac{1}{10}} \times (\text{Electric Field Strength [dBuV/m]} / 20) \times 10^{(-6)}$ } * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
Mode	Tx 11a 5700 MHz with BT Hopping On 3DH5

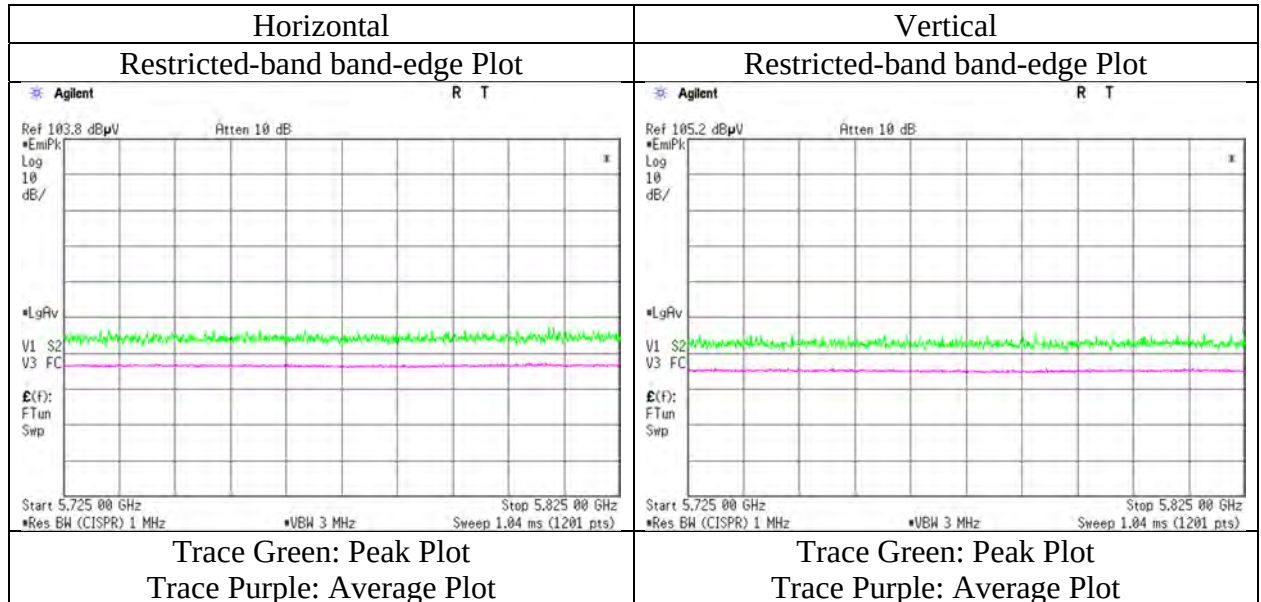
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.10	33.77	15.58	45.41	3.31	57.35	-37.87	-27.0	10.8	365	0	
Vert.	5725.000	PK	50.50	33.77	15.58	45.41	3.31	57.75	-37.47	-27.0	10.4	325	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5745 MHz with BT Hopping On 3DH5

(* PK: Peak, AV: Average, QP: Quasi-Peak)

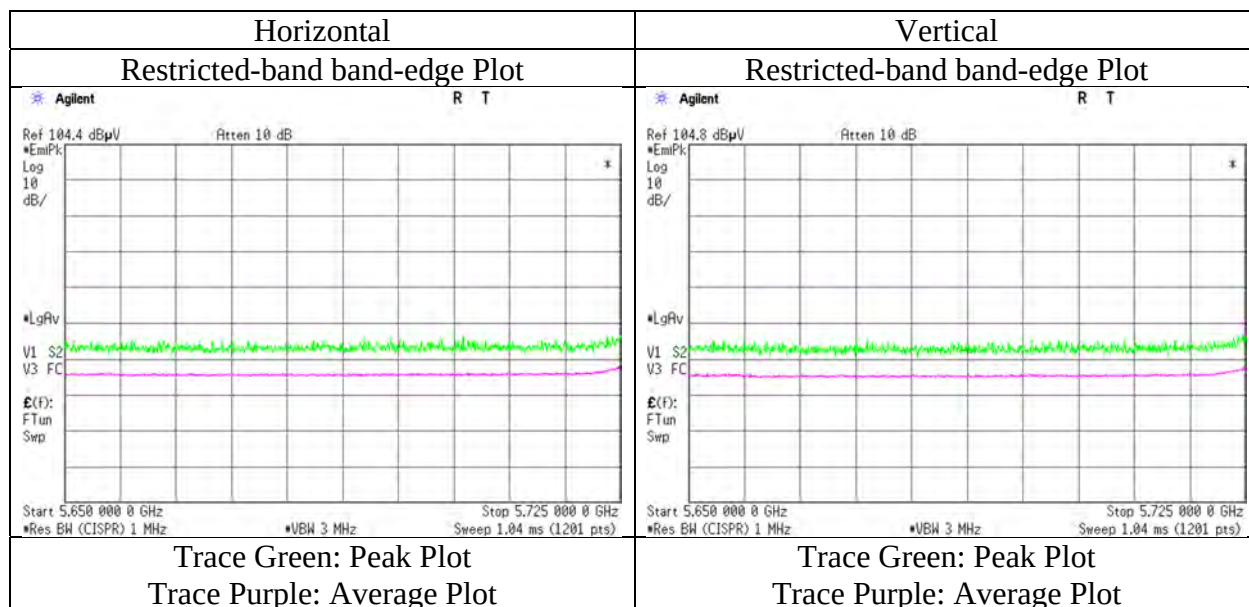
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.60	33.59	15.54	45.45	3.31	57.59	-37.63	-27.0	10.6	345	0	
Hori.	5700.000	PK	50.80	33.74	15.57	45.42	3.31	58.00	-37.22	10.0	47.2	345	0	
Hori.	5720.000	PK	50.70	33.76	15.58	45.41	3.31	57.94	-37.28	15.6	52.8	345	0	
Hori.	5725.000	PK	53.30	33.77	15.58	45.41	3.31	60.55	-34.67	27.0	61.6	345	0	
Vert.	5650.000	PK	51.20	33.59	15.54	45.45	3.31	58.19	-37.03	-27.0	10.0	280	90	
Vert.	5700.000	PK	51.10	33.74	15.57	45.42	3.31	58.30	-36.92	10.0	46.9	280	90	
Vert.	5720.000	PK	50.50	33.76	15.58	45.41	3.31	57.74	-37.48	15.6	53.0	280	90	
Vert.	5725.000	PK	54.20	33.77	15.58	45.41	3.31	61.45	-33.77	27.0	60.7	280	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C					
Test place	Kashima EMC Lab.					
Semi Anechoic Chamber	No.11	No.10	No.11	No.11	No.11	No.11
Date	December 8, 2021	December 12, 2021	December 6, 2021	December 6, 2021	December 7, 2021	December 7, 2021
Temperature / Humidity	23 deg. C / 41 % RH	22 deg. C / 52 % RH	20 deg. C / 37 % RH	20 deg. C / 37 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5785 MHz with BT Hopping On 3DH5					

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	346.262	QP	37.30	14.35	7.80	31.98	0.00	27.47	46.0	18.5	100	284	
Hori.	940.952	QP	28.40	24.13	9.94	31.09	0.00	31.38	46.0	14.6	100	187	
Hori.	11570.000	PK	48.30	38.76	8.30	43.00	-9.54	42.82	73.9	31.0	150	0	
Hori.	11570.000	AV	36.60	38.76	8.30	43.00	-9.54	31.12	53.9	22.7	150	0	VBW: 2.2 kHz
Vert.	35.634	QP	40.20	12.86	5.73	32.21	0.00	26.58	40.0	13.4	100	269	
Vert.	54.057	QP	28.60	13.75	5.94	32.20	0.00	16.09	40.0	23.9	279	108	
Vert.	347.167	QP	35.30	14.36	7.81	31.98	0.00	25.49	46.0	20.5	100	202	
Vert.	439.502	QP	30.90	16.88	8.22	31.98	0.00	24.02	46.0	21.9	100	291	
Vert.	744.058	QP	29.70	22.02	9.33	31.99	0.00	29.06	46.0	16.9	100	23	
Vert.	940.313	QP	28.90	24.13	9.94	31.09	0.00	31.88	46.0	14.1	109	186	
Vert.	7713.333	PK	49.30	37.21	6.78	43.08	2.26	52.47	73.9	21.4	355	0	
Vert.	11570.000	PK	47.60	38.76	8.30	43.00	-9.54	42.12	73.9	31.7	150	0	
Vert.	7713.333	AV	39.90	37.21	6.78	43.08	2.26	43.07	53.9	10.8	355	0	VBW: 2.2 kHz *1)
Vert.	11570.000	AV	36.80	38.76	8.30	43.00	-9.54	31.32	53.9	22.5	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	17355.000	PK	49.20	41.56	10.29	44.87	-9.54	46.64	-48.58	-27.0	21.5	150	0	
Vert.	17355.000	PK	49.30	41.56	10.29	44.87	-9.54	46.74	-48.48	-27.0	21.4	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ $10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]})^{\wedge} 2 } / 30) * 10^{\wedge} 3$)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5825 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

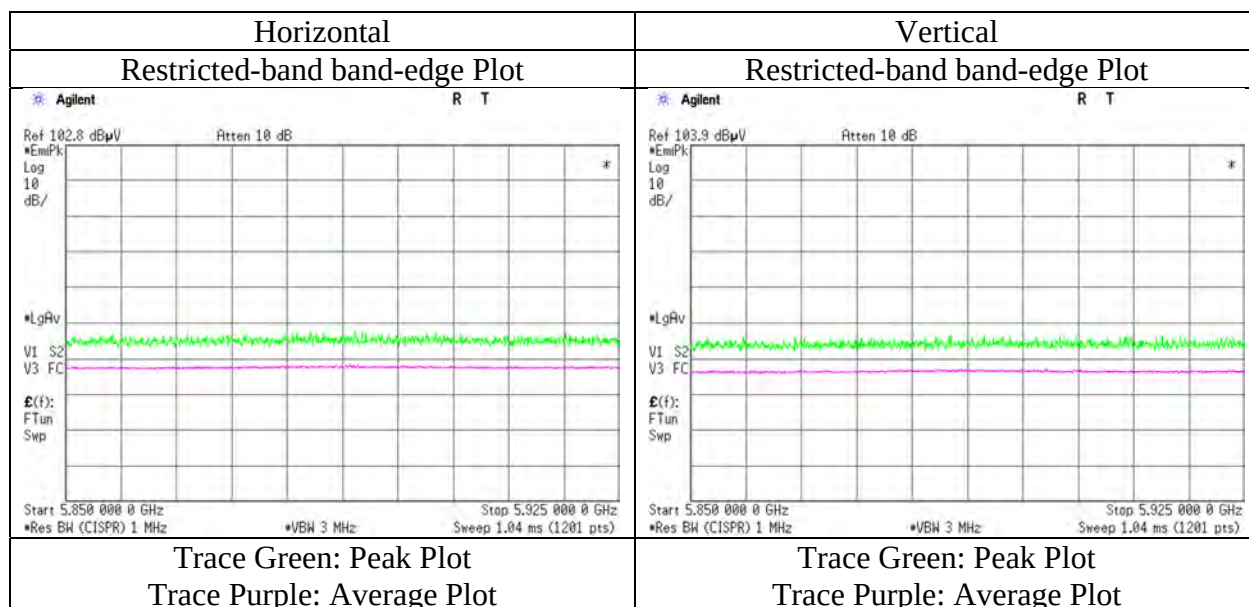
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	285	65	
Hori.	5855.000	PK	50.30	34.32	15.63	45.36	3.31	58.20	-37.02	15.6	52.6	285	65	
Hori.	5875.000	PK	50.10	34.49	15.65	45.34	3.31	58.21	-37.01	10.0	47.0	285	65	
Hori.	5925.000	PK	50.20	34.76	15.68	45.30	3.31	58.65	-36.57	-27.0	9.5	285	65	
Vert.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	270	90	
Vert.	5855.000	PK	50.40	34.32	15.63	45.36	3.31	58.30	-36.92	15.6	52.5	270	90	
Vert.	5875.000	PK	50.10	34.49	15.65	45.34	3.31	58.21	-37.01	10.0	47.0	270	90	
Vert.	5925.000	PK	50.50	34.76	15.68	45.30	3.31	58.95	-36.27	-27.0	9.2	270	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5180 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

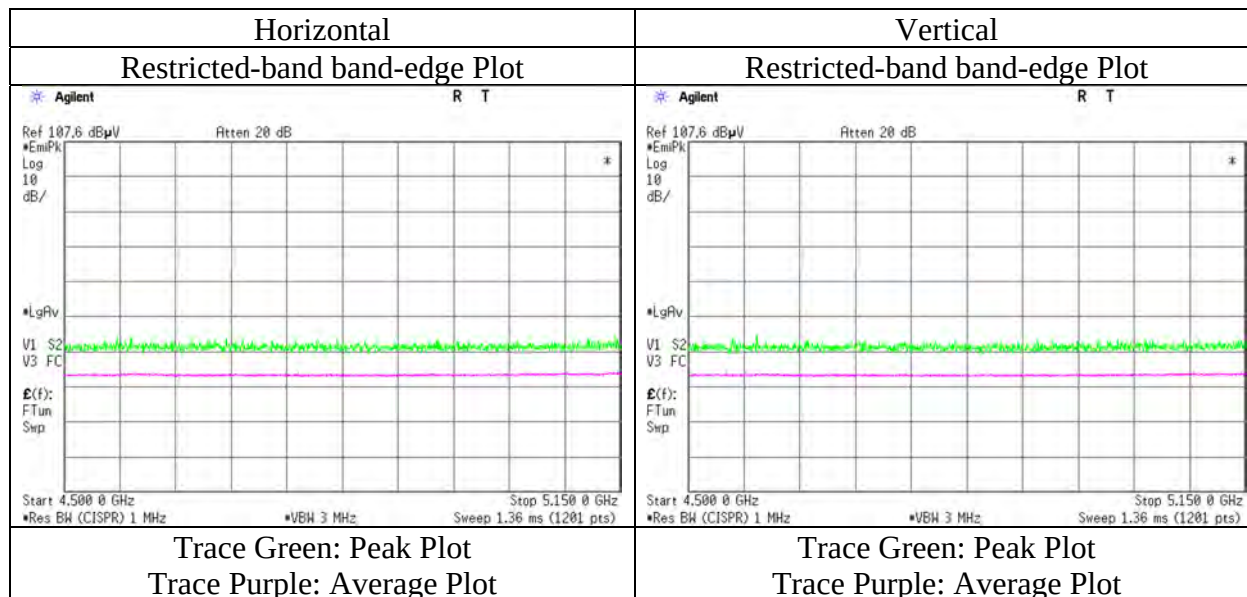
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.20	32.74	15.26	45.32	3.31	56.19	73.9	17.7	385	353	VBW: 3.0 kHz
Hori.	5150.000	AV	39.80	32.74	15.26	45.32	3.31	45.79	53.9	8.1	385	353	
Vert.	5150.000	PK	50.10	32.74	15.26	45.32	3.31	56.09	73.9	17.8	325	345	VBW: 3.0 kHz
Vert.	5150.000	AV	39.90	32.74	15.26	45.32	3.31	45.89	53.9	8.0	325	345	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{ m} / 3.0\text{ m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5320 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

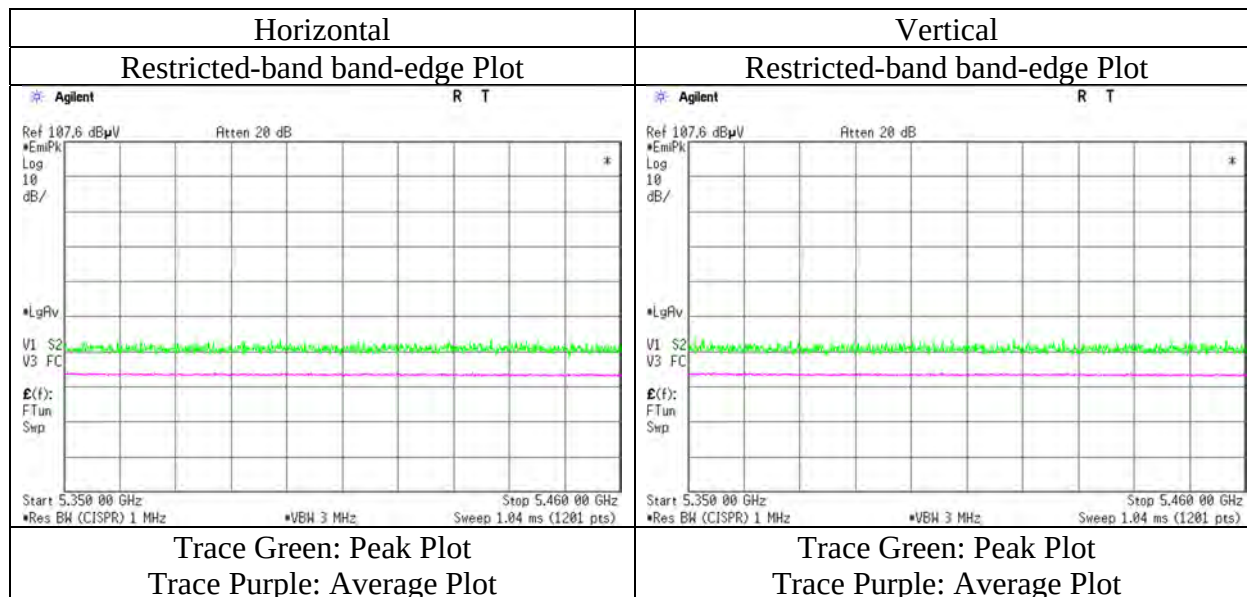
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.00	33.09	15.38	45.45	3.31	56.33	73.9	17.5	335	355	VBW: 3.0 kHz
Hori.	5350.000	AV	39.00	33.09	15.38	45.45	3.31	45.33	53.9	8.5	335	355	
Vert.	5350.000	PK	49.90	33.09	15.38	45.45	3.31	56.23	73.9	17.6	400	5	VBW: 3.0 kHz
Vert.	5350.000	AV	39.20	33.09	15.38	45.45	3.31	45.53	53.9	8.3	400	5	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5500 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.50	33.29	15.44	45.47	3.31	57.07	73.9	16.8	300	357	VBW: 3.0 kHz
Hori.	5460.000	AV	40.20	33.29	15.44	45.47	3.31	46.77	53.9	7.1	300	357	
Vert.	5460.000	PK	50.80	33.29	15.44	45.47	3.31	57.37	73.9	16.5	395	85	VBW: 3.0 kHz
Vert.	5460.000	AV	40.10	33.29	15.44	45.47	3.31	46.67	53.9	7.2	395	85	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

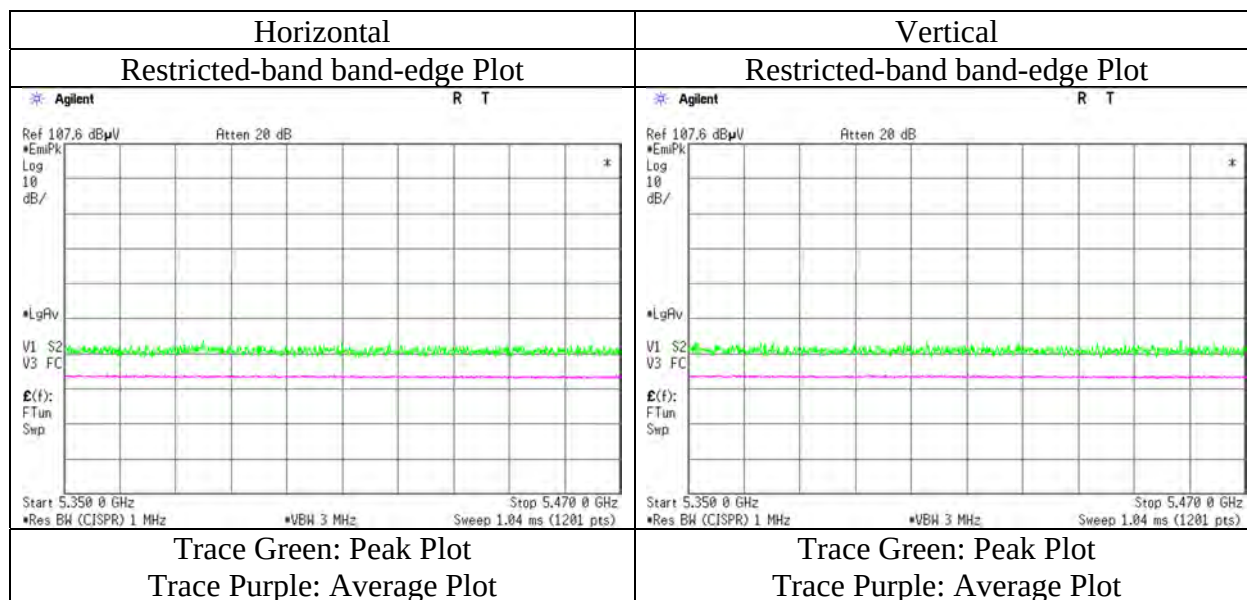
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	50.90	33.30	15.45	45.47	3.31	57.49	-37.73	-27.0	10.7	300	357	
Vert.	5470.000	PK	51.10	33.30	15.45	45.47	3.31	57.69	-37.53	-27.0	10.5	395	85	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10 \times \log \left(\left(\left(10^{\frac{\text{Electric Field Strength [dBuV/m]}{20}} \right) \times 10^{-6} \right) \times \text{Distance:3[m]}^2 \right) / 30 \times 10^3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 12, 2021
Temperature / Humidity	22 deg. C / 52 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5700 MHz with BT Hopping On 3DH5

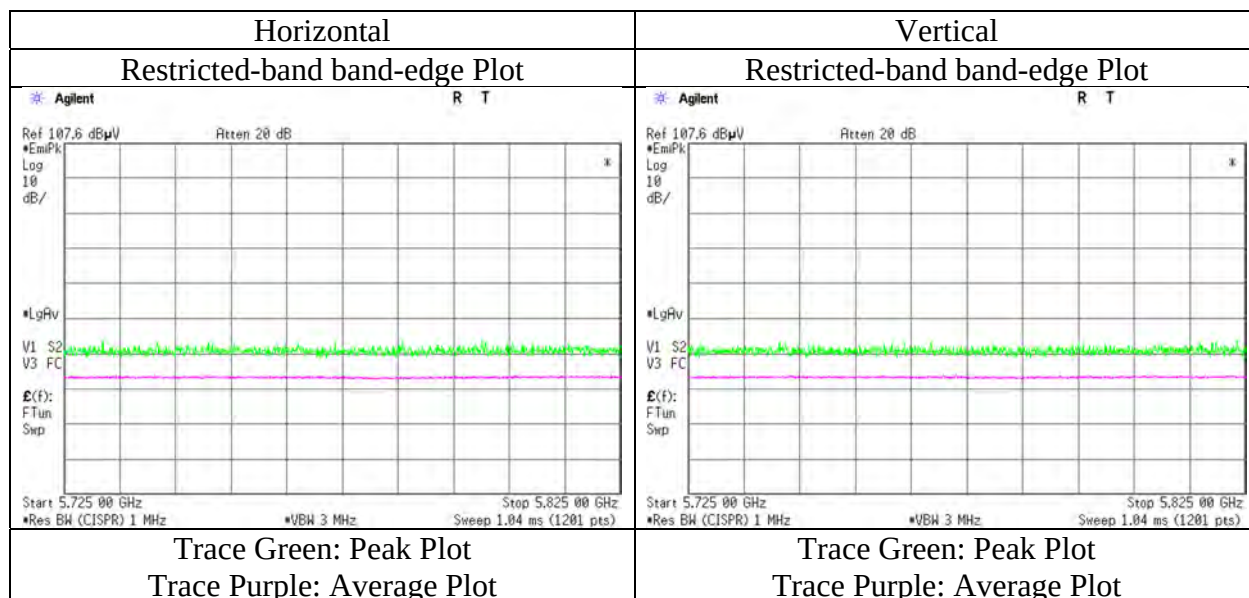
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.40	33.77	15.58	45.41	3.31	57.65	-37.57	-27.0	10.5	380	0	
Vert.	5725.000	PK	50.50	33.77	15.58	45.41	3.31	57.75	-37.47	-27.0	10.4	280	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5745 MHz with BT Hopping On 3DH5

(* PK: Peak, AV: Average, QP: Quasi-Peak)

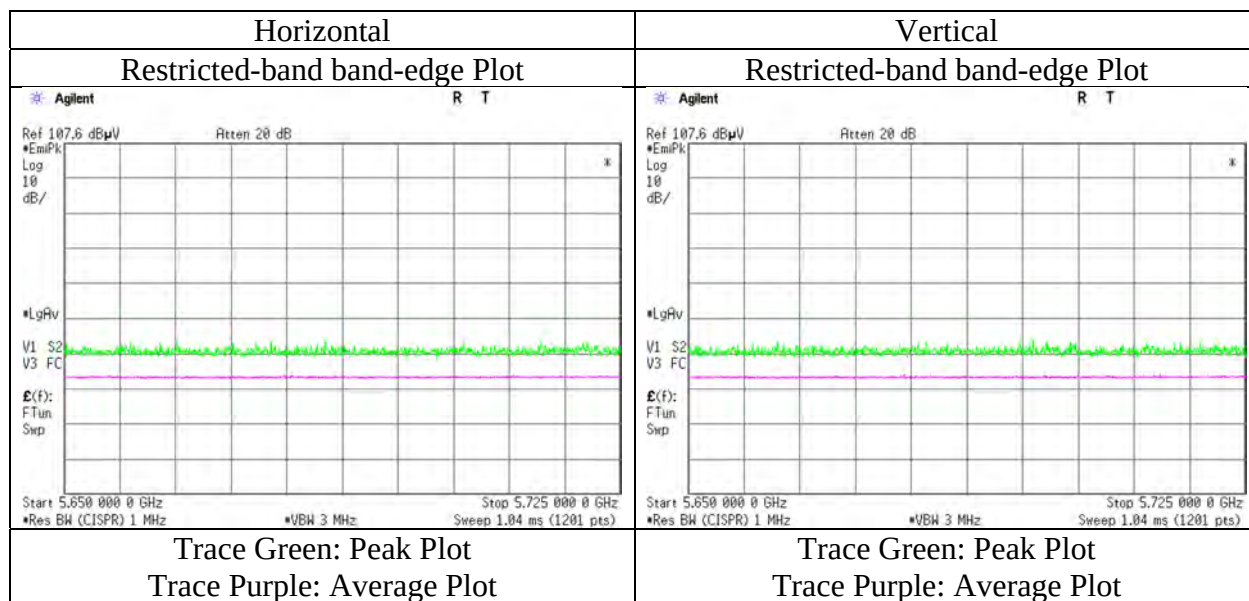
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.60	33.59	15.54	45.45	3.31	58.59	-36.63	-27.0	9.6	272	320	
Hori.	5700.000	PK	50.80	33.74	15.57	45.42	3.31	58.00	-37.22	10.0	47.2	272	320	
Hori.	5720.000	PK	52.10	33.76	15.58	45.41	3.31	59.34	-35.88	15.6	51.4	272	320	
Hori.	5725.000	PK	51.20	33.77	15.58	45.41	3.31	58.45	-36.77	27.0	63.7	272	320	
Vert.	5650.000	PK	51.80	33.59	15.54	45.45	3.31	58.79	-36.43	-27.0	9.4	305	297	
Vert.	5700.000	PK	51.40	33.74	15.57	45.42	3.31	58.60	-36.62	10.0	46.6	305	297	
Vert.	5720.000	PK	51.30	33.76	15.58	45.41	3.31	58.54	-36.68	15.6	52.2	305	297	
Vert.	5725.000	PK	51.50	33.77	15.58	45.41	3.31	58.75	-36.47	27.0	63.4	305	297	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5825 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

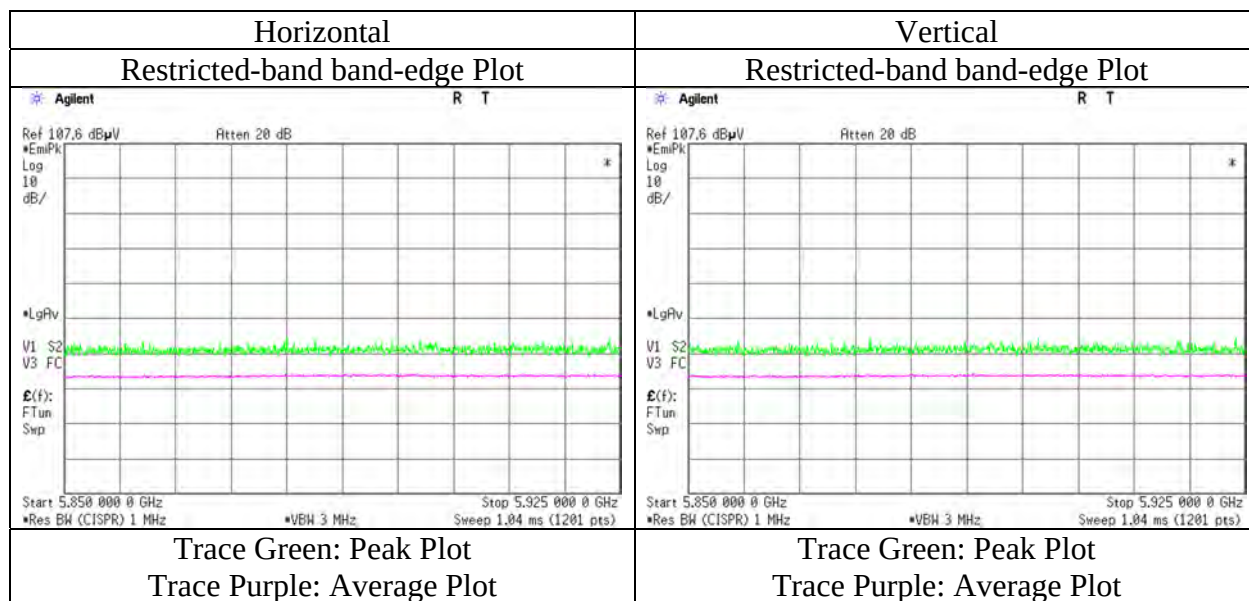
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	49.50	34.28	15.63	45.36	3.31	57.36	-37.86	27.0	64.8	363	32	
Hori.	5855.000	PK	51.00	34.32	15.63	45.36	3.31	58.90	-36.32	15.6	51.9	363	32	
Hori.	5875.000	PK	50.00	34.49	15.65	45.34	3.31	58.11	-37.11	10.0	47.1	363	32	
Hori.	5925.000	PK	51.20	34.76	15.68	45.30	3.31	59.65	-35.57	-27.0	8.5	363	32	
Vert.	5850.000	PK	49.70	34.28	15.63	45.36	3.31	57.56	-37.66	27.0	64.6	303	222	
Vert.	5855.000	PK	50.70	34.32	15.63	45.36	3.31	58.60	-36.62	15.6	52.2	303	222	
Vert.	5875.000	PK	50.20	34.49	15.65	45.34	3.31	58.31	-36.91	10.0	46.9	303	222	
Vert.	5925.000	PK	51.20	34.76	15.68	45.30	3.31	59.65	-35.57	-27.0	8.5	303	222	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5190 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

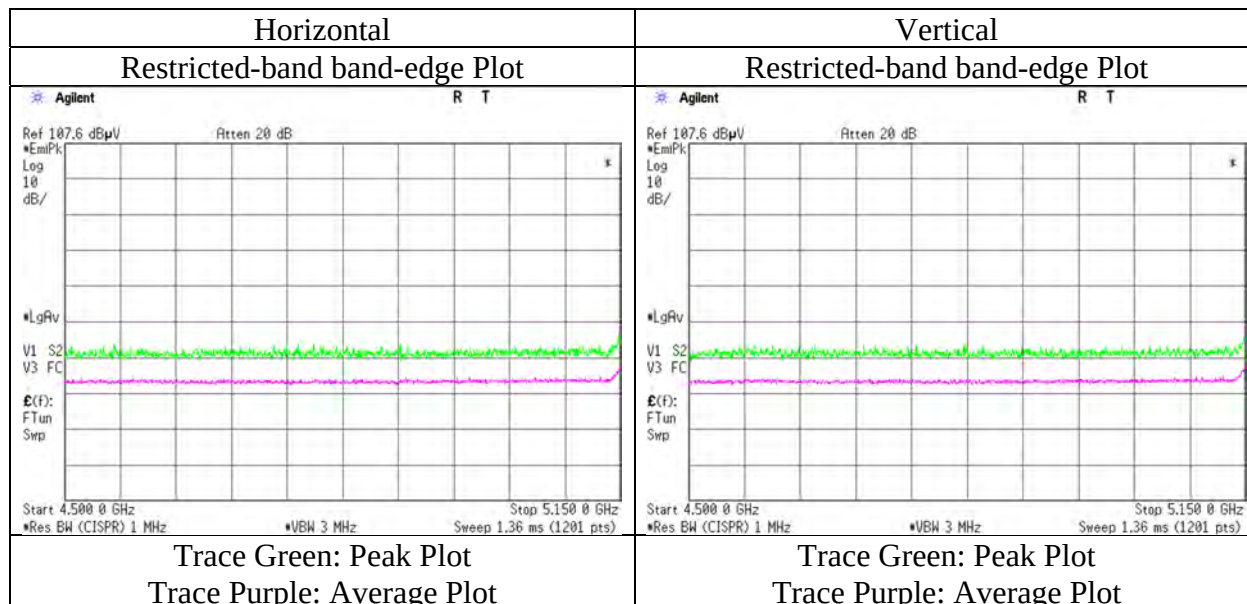
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	55.70	32.74	15.26	45.32	3.31	61.69	73.9	12.2	310	330	
Hori.	5150.000	AV	44.90	32.74	15.26	45.32	3.31	50.89	53.9	3.0	310	330	VBW: 5.6 kHz
Vert.	5150.000	PK	55.50	32.74	15.26	45.32	3.31	61.49	73.9	12.4	235	56	
Vert.	5150.000	AV	45.00	32.74	15.26	45.32	3.31	50.99	53.9	2.9	235	56	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5310 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

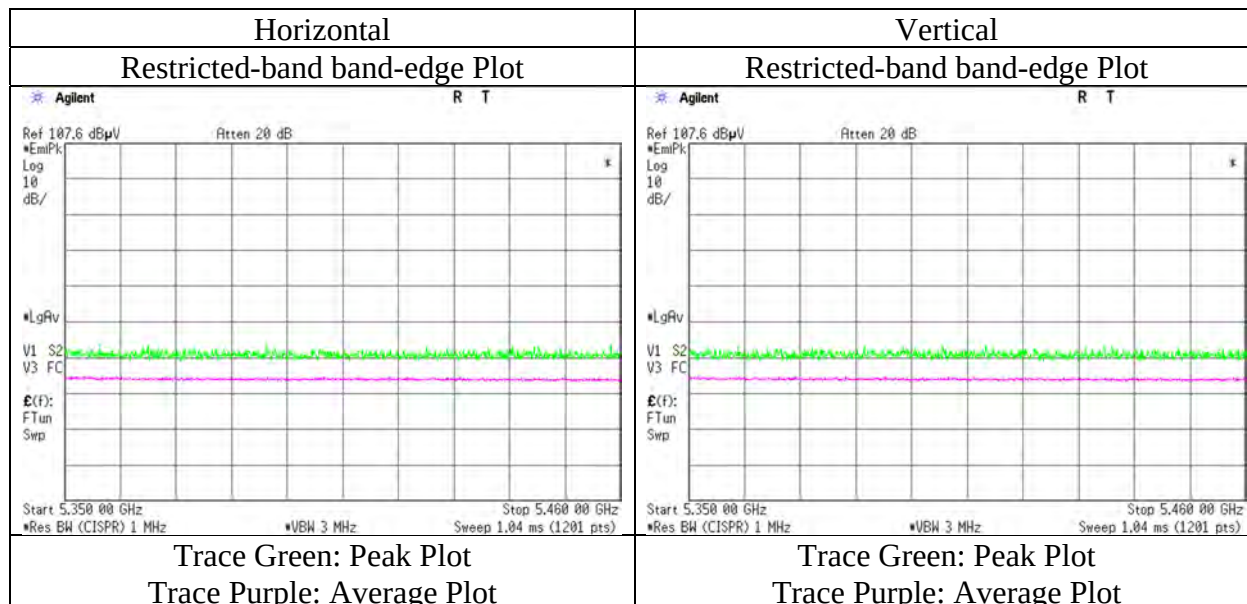
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.90	33.09	15.38	45.45	3.31	57.23	73.9	16.6	287	335	
Hori.	5350.000	AV	39.90	33.09	15.38	45.45	3.31	46.23	53.9	7.6	287	335	VBW: 5.6 kHz
Vert.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	272	57	
Vert.	5350.000	AV	40.40	33.09	15.38	45.45	3.31	46.73	53.9	7.1	272	57	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5510 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.50	33.29	15.44	45.47	3.31	58.07	73.9	15.8	318	62	VBW: 5.6 kHz
Hori.	5460.000	AV	41.10	33.29	15.44	45.47	3.31	47.67	53.9	6.2	318	62	
Vert.	5460.000	PK	51.00	33.29	15.44	45.47	3.31	57.57	73.9	16.3	293	69	VBW: 5.6 kHz
Vert.	5460.000	AV	41.40	33.29	15.44	45.47	3.31	47.97	53.9	5.9	293	69	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

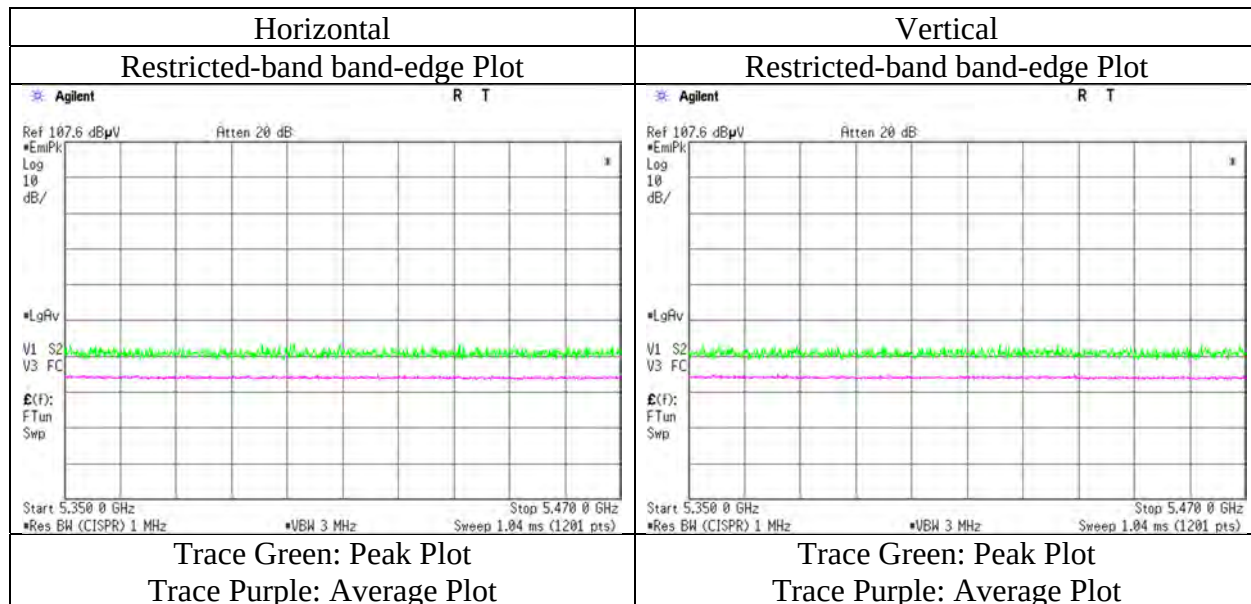
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.60	33.30	15.45	45.47	3.31	58.19	-37.03	-27.0	10.0	318	62	
Vert.	5470.000	PK	52.30	33.30	15.45	45.47	3.31	58.89	-36.33	-27.0	9.3	293	69	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\frac{1}{2}} \cdot \left(\frac{\text{Electric Field Strength [dBuV/m]}{20} \right) \cdot 10^{(-6)} \cdot \text{Distance:3[m]} \right)^2 \right) / 30 \right) \cdot 10^{\frac{1}{3}}$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5670 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

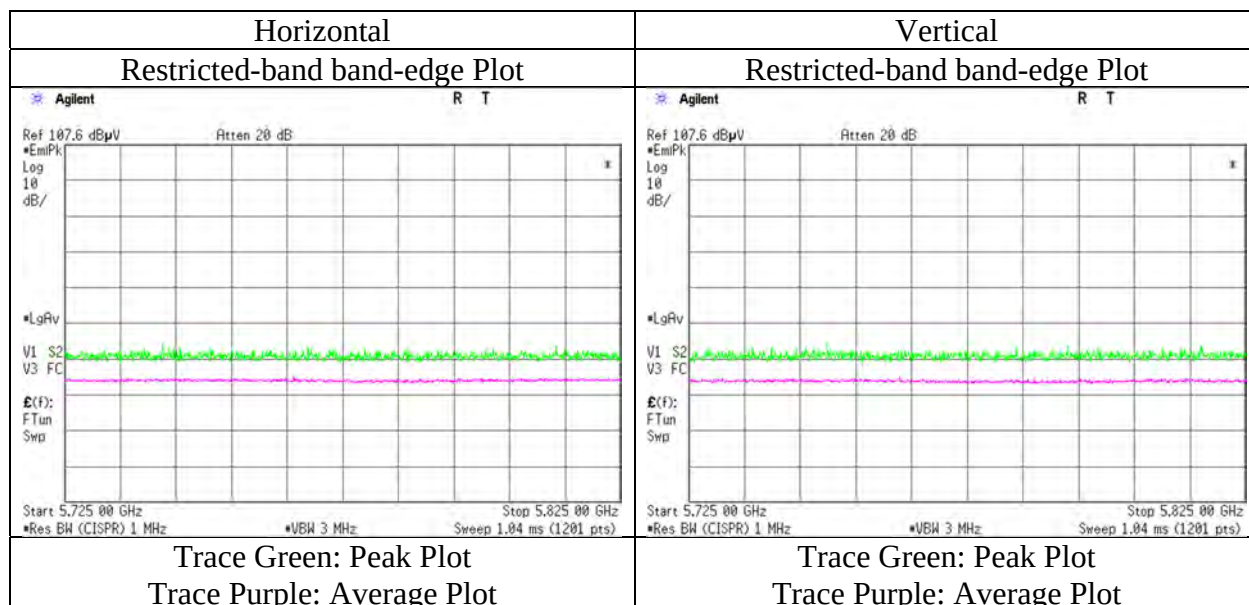
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.10	33.77	15.58	45.41	3.31	58.35	-36.87	-27.00	9.8	361	336	
Vert.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	-27.00	9.5	278	98	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5755 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

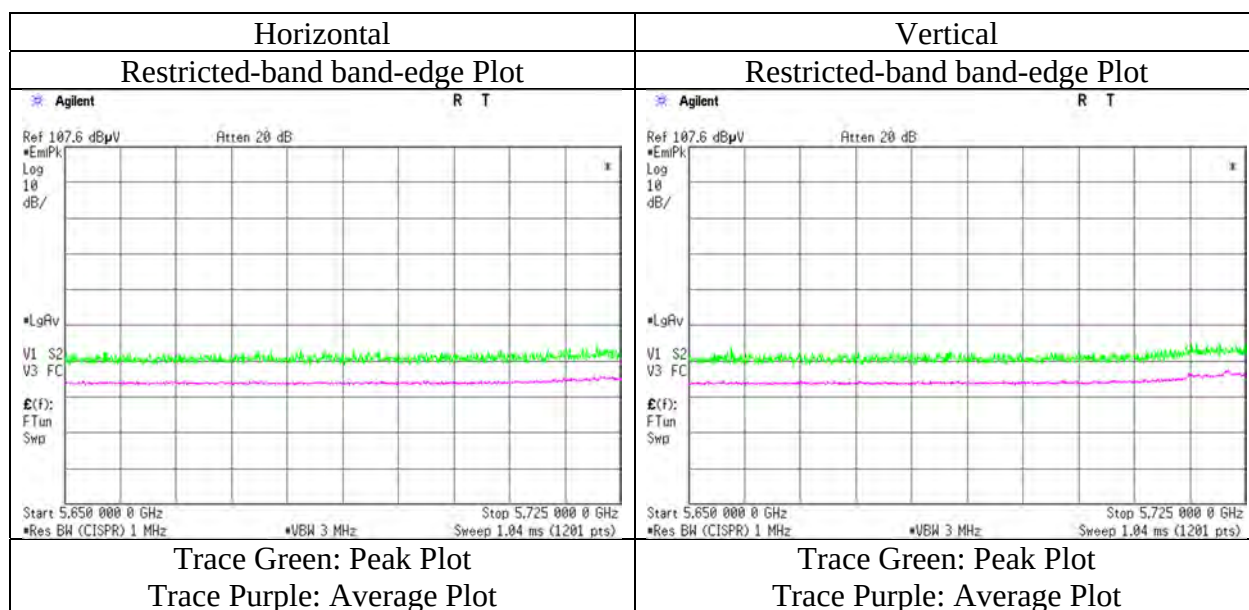
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.70	33.59	15.54	45.45	3.31	57.69	-37.53	-27.0	10.5	301	321	
Hori.	5700.000	PK	52.30	33.74	15.57	45.42	3.31	59.50	-35.72	10.0	45.7	301	321	
Hori.	5720.000	PK	52.20	33.76	15.58	45.41	3.31	59.44	-35.78	15.6	51.3	301	321	
Hori.	5725.000	PK	53.00	33.77	15.58	45.41	3.31	60.25	-34.97	27.0	61.9	301	321	
Vert.	5650.000	PK	51.00	33.59	15.54	45.45	3.31	57.99	-37.23	-27.0	10.2	345	311	
Vert.	5700.000	PK	51.70	33.74	15.57	45.42	3.31	58.90	-36.32	10.0	46.3	345	311	
Vert.	5720.000	PK	54.30	33.76	15.58	45.41	3.31	61.54	-33.68	15.6	49.2	345	311	
Vert.	5725.000	PK	53.80	33.77	15.58	45.41	3.31	61.05	-34.17	27.0	61.1	345	311	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	23 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5795 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

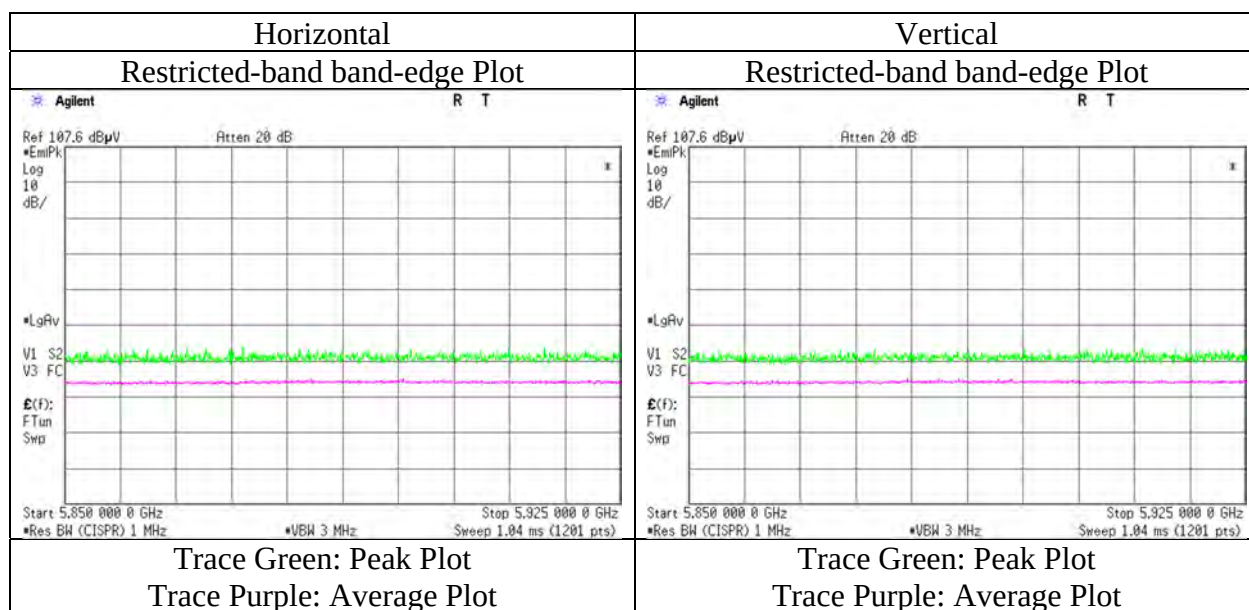
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	326	359	
Hori.	5855.000	PK	50.30	34.32	15.63	45.36	3.31	58.20	-37.02	15.6	52.6	326	359	
Hori.	5875.000	PK	50.60	34.49	15.65	45.34	3.31	58.71	-36.51	10.0	46.5	326	359	
Hori.	5925.000	PK	51.70	34.76	15.68	45.30	3.31	60.15	-35.07	-27.0	8.0	326	359	
Vert.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	310	315	
Vert.	5855.000	PK	49.90	34.32	15.63	45.36	3.31	57.80	-37.42	15.6	53.0	310	315	
Vert.	5875.000	PK	51.20	34.49	15.65	45.34	3.31	59.31	-35.91	10.0	45.9	310	315	
Vert.	5925.000	PK	51.80	34.76	15.68	45.30	3.31	60.25	-34.97	-27.0	7.9	310	315	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5190 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

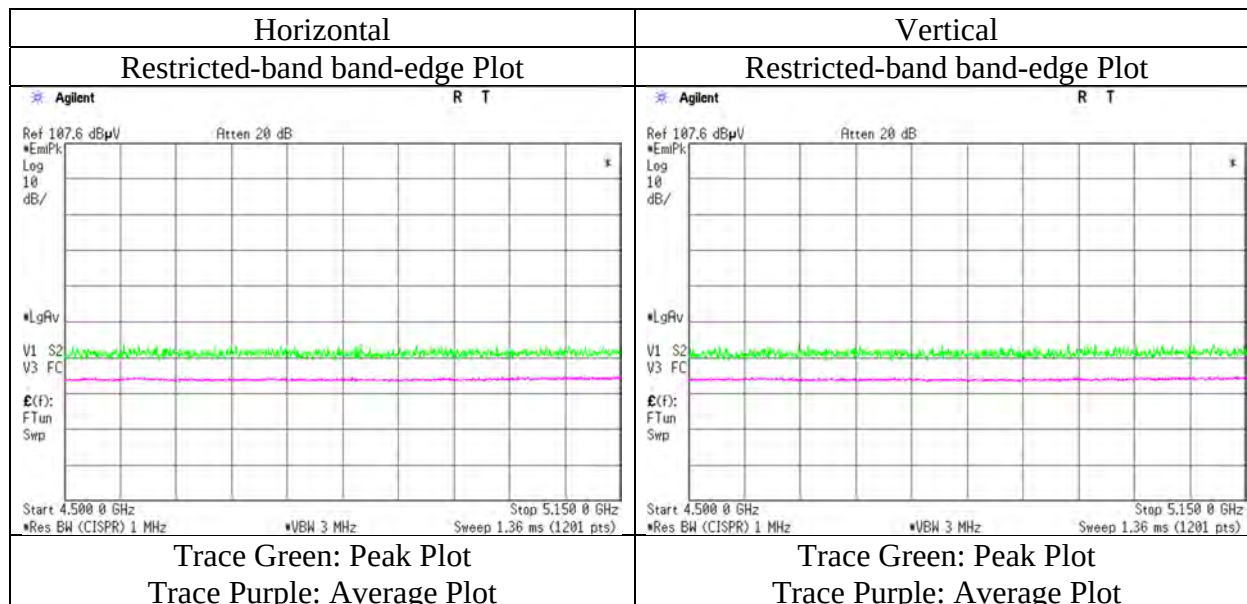
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.90	32.74	15.26	45.32	3.31	56.89	73.9	17.0	318	57	
Hori.	5150.000	AV	41.00	32.74	15.26	45.32	3.31	46.99	53.9	6.9	318	57	VBW: 5.6 kHz
Vert.	5150.000	PK	51.70	32.74	15.26	45.32	3.31	57.69	73.9	16.2	350	90	
Vert.	5150.000	AV	41.30	32.74	15.26	45.32	3.31	47.29	53.9	6.6	350	90	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5310 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

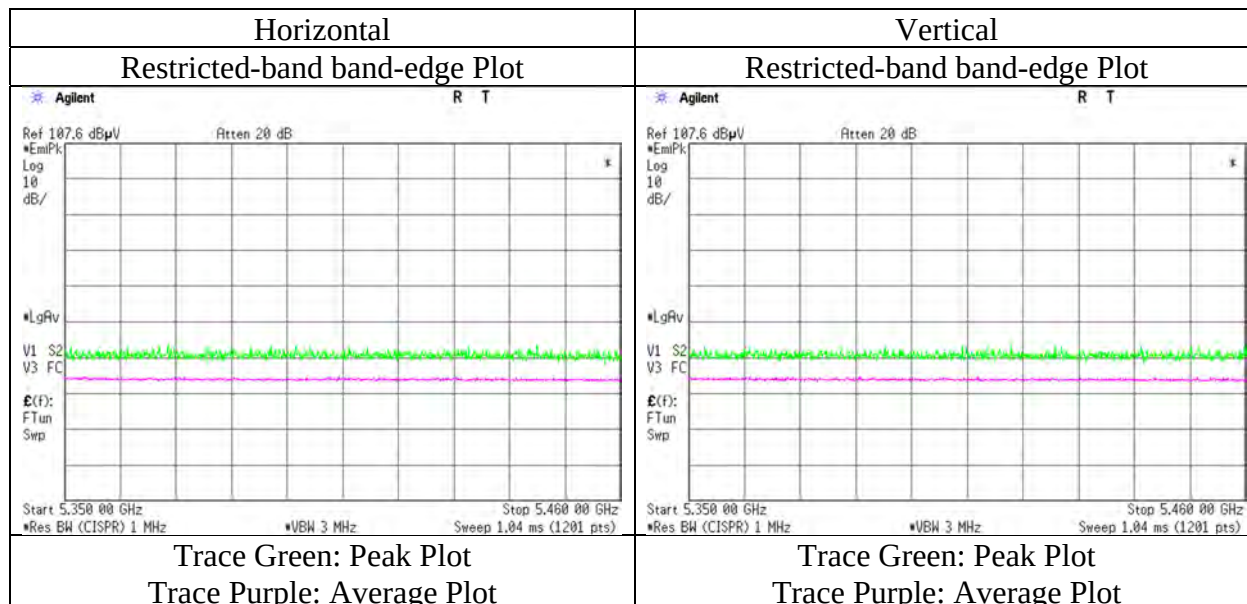
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.10	33.09	15.38	45.45	3.31	56.43	73.9	17.4	297	68	
Hori.	5350.000	AV	40.00	33.09	15.38	45.45	3.31	46.33	53.9	7.5	297	68	VBW: 5.6 kHz
Vert.	5350.000	PK	50.00	33.09	15.38	45.45	3.31	56.33	73.9	17.5	368	86	
Vert.	5350.000	AV	39.90	33.09	15.38	45.45	3.31	46.23	53.9	7.6	368	86	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5510 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.70	33.29	15.44	45.47	3.31	58.27	73.9	15.6	300	67	VBW: 5.6 kHz
Hori.	5460.000	AV	40.90	33.29	15.44	45.47	3.31	47.47	53.9	6.4	300	67	
Vert.	5460.000	PK	51.40	33.29	15.44	45.47	3.31	57.97	73.9	15.9	348	90	VBW: 5.6 kHz
Vert.	5460.000	AV	41.20	33.29	15.44	45.47	3.31	47.77	53.9	6.1	348	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

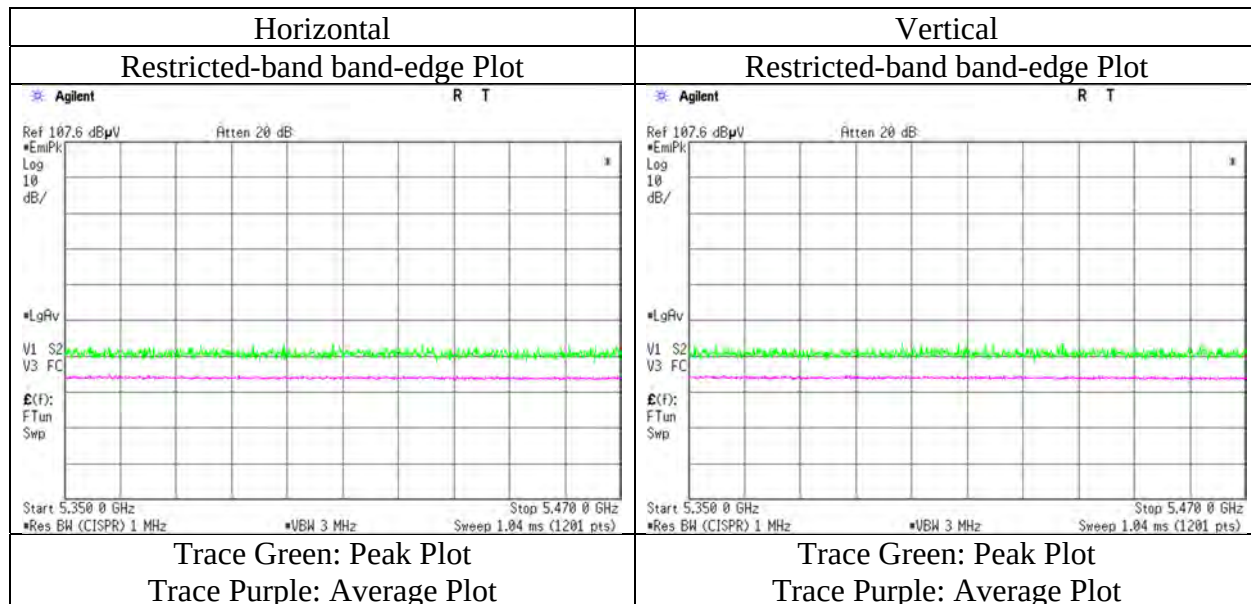
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.30	33.30	15.45	45.47	3.31	57.89	-37.33	-27.0	10.3	300	67	
Vert.	5470.000	PK	51.80	33.30	15.45	45.47	3.31	58.39	-36.83	-27.0	9.8	348	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]} \}^2 \right) / 30 \right) * 10^{\wedge} 3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5670 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

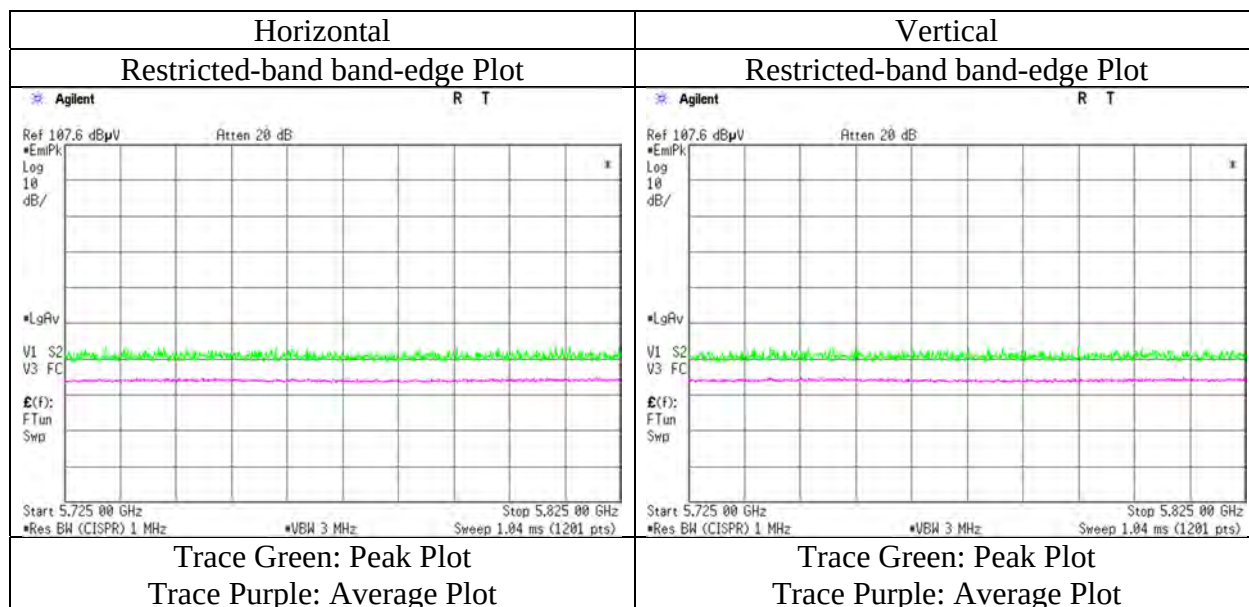
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	-27.00	9.5	348	60	
Vert.	5725.000	PK	51.30	33.77	15.58	45.41	3.31	58.55	-36.67	-27.00	9.6	362	92	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5755 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

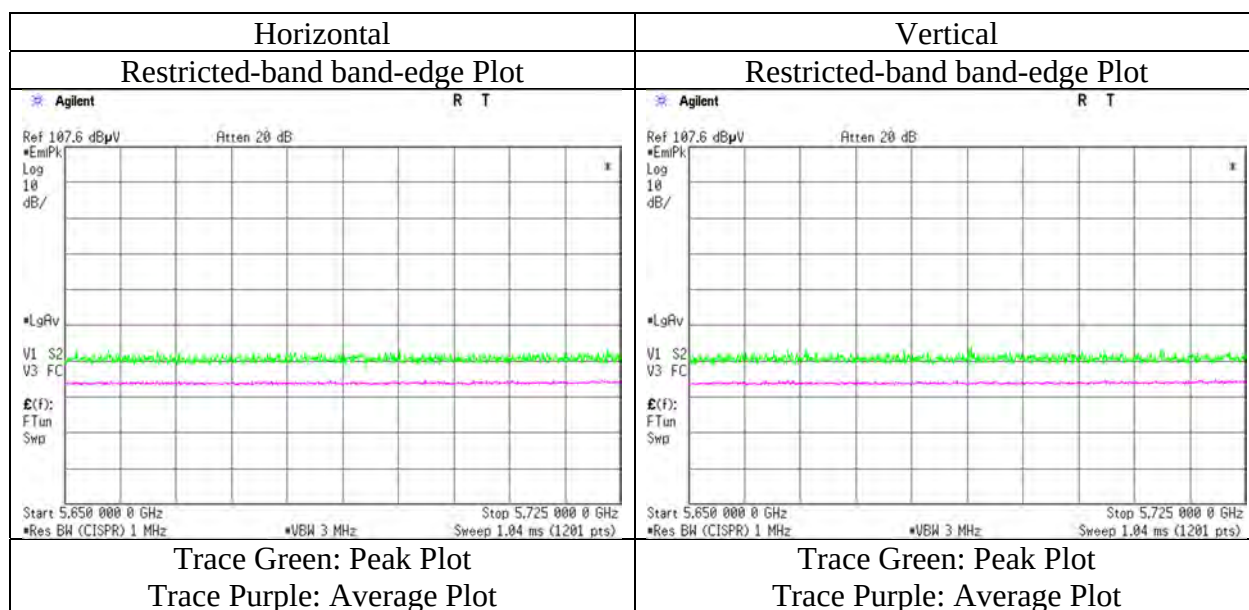
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.00	33.59	15.54	45.45	3.31	57.99	-37.23	-27.0	10.2	353	60	
Hori.	5700.000	PK	51.60	33.74	15.57	45.42	3.31	58.80	-36.42	10.0	46.4	353	60	
Hori.	5720.000	PK	51.60	33.76	15.58	45.41	3.31	58.84	-36.38	15.6	51.9	353	60	
Hori.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	27.0	63.5	353	60	
Vert.	5650.000	PK	50.60	33.59	15.54	45.45	3.31	57.59	-37.63	-27.0	10.6	320	96	
Vert.	5700.000	PK	51.60	33.74	15.57	45.42	3.31	58.80	-36.42	10.0	46.4	320	96	
Vert.	5720.000	PK	51.90	33.76	15.58	45.41	3.31	59.14	-36.08	15.6	51.6	320	96	
Vert.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	27.0	63.5	320	96	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2) / 30) * 10 ^ 3

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5795 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

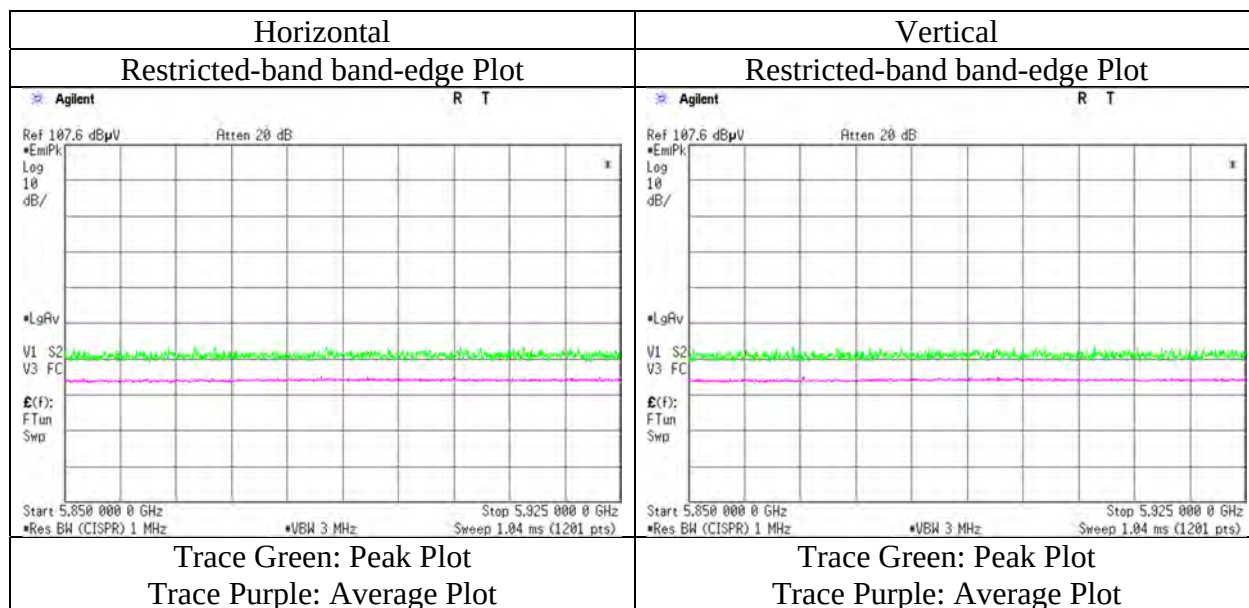
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	321	67	
Hori.	5855.000	PK	49.90	34.32	15.63	45.36	3.31	57.80	-37.42	15.6	53.0	321	67	
Hori.	5875.000	PK	50.00	34.49	15.65	45.34	3.31	58.11	-37.11	10.0	47.1	321	67	
Hori.	5925.000	PK	51.50	34.76	15.68	45.30	3.31	59.95	-35.27	-27.0	8.2	321	67	
Vert.	5850.000	PK	49.70	34.28	15.63	45.36	3.31	57.56	-37.66	27.0	64.6	315	97	
Vert.	5855.000	PK	50.10	34.32	15.63	45.36	3.31	58.00	-37.22	15.6	52.8	315	97	
Vert.	5875.000	PK	50.30	34.49	15.65	45.34	3.31	58.41	-36.81	10.0	46.8	315	97	
Vert.	5925.000	PK	50.80	34.76	15.68	45.30	3.31	59.25	-35.97	-27.0	8.9	315	97	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5210 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

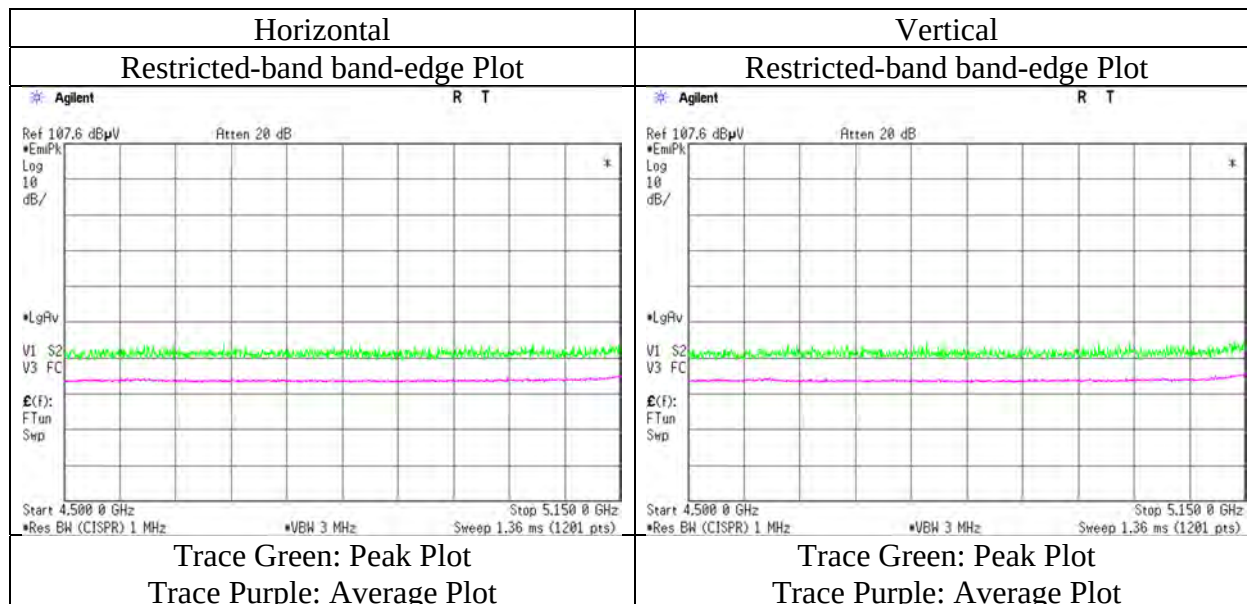
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	52.10	32.74	15.26	45.32	3.31	58.09	73.9	15.8	258	62	
Hori.	5150.000	AV	40.80	32.74	15.26	45.32	3.31	46.79	53.9	7.1	258	62	VBW: 4.3 kHz
Vert.	5150.000	PK	53.00	32.74	15.26	45.32	3.31	58.99	73.9	14.9	303	87	
Vert.	5150.000	AV	41.40	32.74	15.26	45.32	3.31	47.39	53.9	6.5	303	87	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5290 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

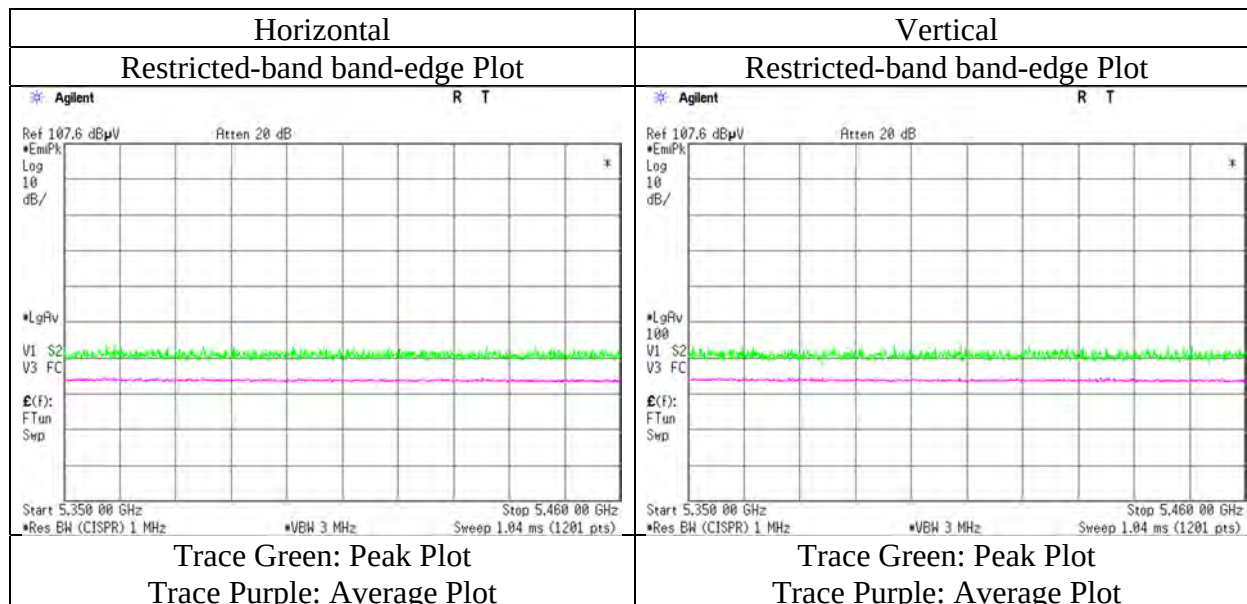
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.00	33.09	15.38	45.45	3.31	57.33	73.9	16.5	233	61	
Hori.	5350.000	AV	39.50	33.09	15.38	45.45	3.31	45.83	53.9	8.0	233	61	VBW: 4.3 kHz
Vert.	5350.000	PK	50.30	33.09	15.38	45.45	3.31	56.63	73.9	17.2	338	90	
Vert.	5350.000	AV	39.60	33.09	15.38	45.45	3.31	45.93	53.9	7.9	338	90	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5530 MHz with BT Hopping On 3DH5

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.50	33.29	15.44	45.47	3.31	58.07	73.9	15.8	345	60	VBW: 4.3 kHz
Hori.	5460.000	AV	41.10	33.29	15.44	45.47	3.31	47.67	53.9	6.2	345	60	
Vert.	5460.000	PK	51.30	33.29	15.44	45.47	3.31	57.87	73.9	16.0	398	91	VBW: 4.3 kHz
Vert.	5460.000	AV	41.00	33.29	15.44	45.47	3.31	47.57	53.9	6.3	398	91	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz) - Gain(Amplifier) + Distance factor

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

Distance factor: 1 GHz - 10 GHz: $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.50	33.30	15.45	45.47	3.31	58.09	-37.13	-27.0	10.1	345	60	
Vert.	5470.000	PK	51.30	33.30	15.45	45.47	3.31	57.89	-37.33	-27.0	10.3	398	91	

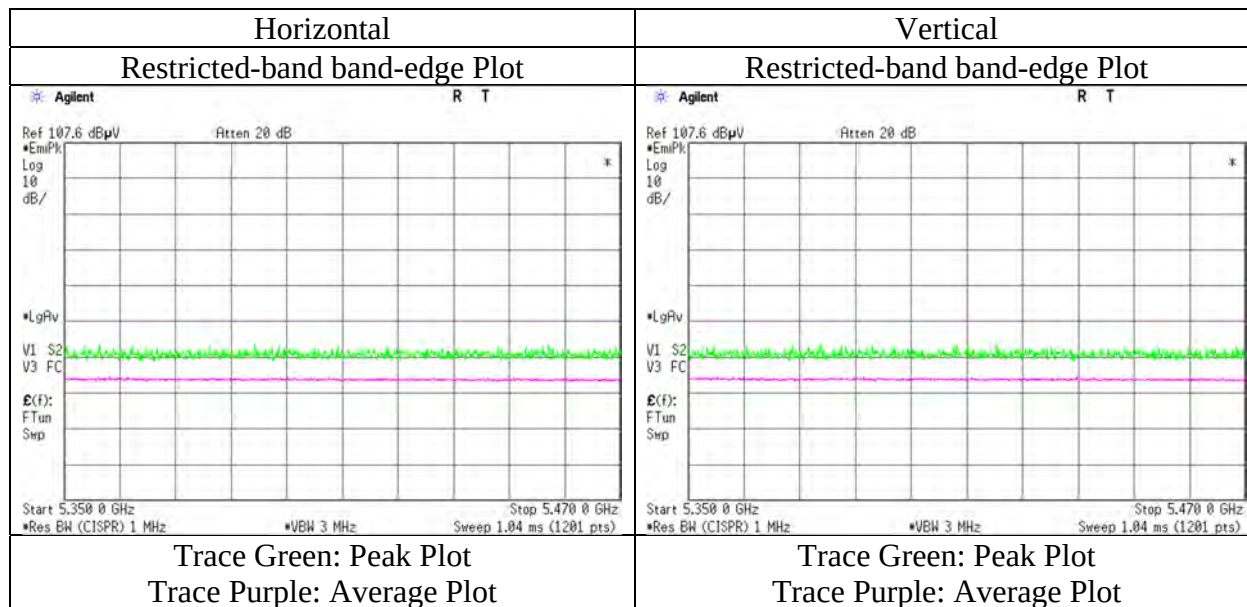
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\log\left(\left(\left(10^{\left(\text{Electric Field Strength [dBuV/m]} / 20\right)}\right) * 10^{(-6)} * \text{Distance: [m]}^2\right) / 30\right) * 10^{(3)}$

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor: 1 GHz - 10 GHz: $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5610 MHz with BT Hopping On 3DH5

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

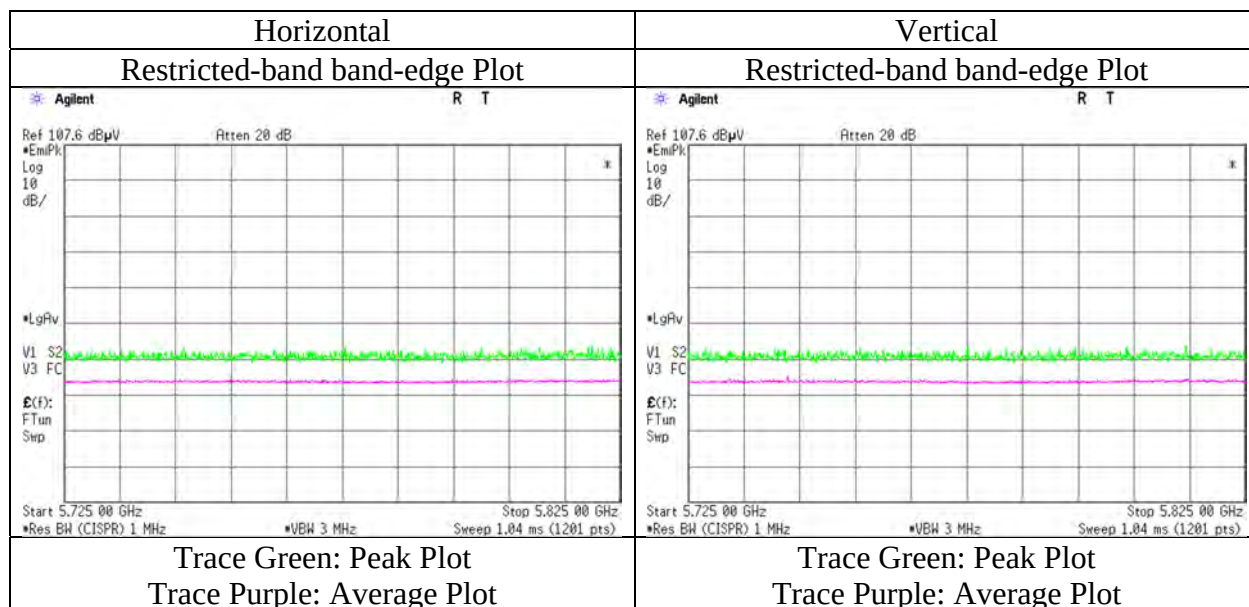
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.60	33.77	15.58	45.41	3.31	58.85	-36.37	-27.00	9.3	349	61	
Vert.	5725.000	PK	51.00	33.77	15.58	45.41	3.31	58.25	-36.97	-27.00	9.9	363	95	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5775 MHz with BT Hopping On 3DH5

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.70	33.59	15.54	45.45	3.31	57.69	-37.53	-27.0	10.5	354	70	
Hori.	5700.000	PK	52.00	33.74	15.57	45.42	3.31	59.20	-36.02	10.0	46.0	354	70	
Hori.	5720.000	PK	52.20	33.76	15.58	45.41	3.31	59.44	-35.78	15.6	51.3	354	70	
Hori.	5725.000	PK	51.80	33.77	15.58	45.41	3.31	59.05	-36.17	27.0	63.1	354	70	
Hori.	5850.000	PK	50.70	34.28	15.63	45.36	3.31	58.56	-36.66	27.0	63.6	354	70	
Hori.	5855.000	PK	50.20	34.32	15.63	45.36	3.31	58.10	-37.12	15.6	52.7	354	70	
Hori.	5875.000	PK	49.90	34.49	15.65	45.34	3.31	58.01	-37.21	10.0	47.2	354	70	
Hori.	5925.000	PK	51.00	34.76	15.68	45.30	3.31	59.45	-35.77	-27.0	8.7	354	70	
Vert.	5650.000	PK	51.10	33.59	15.54	45.45	3.31	58.09	-37.13	-27.0	10.1	334	93	
Vert.	5700.000	PK	51.80	33.74	15.57	45.42	3.31	59.00	-36.22	10.0	46.2	334	93	
Vert.	5720.000	PK	52.00	33.76	15.58	45.41	3.31	59.24	-35.98	15.6	51.5	334	93	
Vert.	5725.000	PK	52.80	33.77	15.58	45.41	3.31	60.05	-35.17	27.0	62.1	334	93	
Vert.	5850.000	PK	50.20	34.28	15.63	45.36	3.31	58.06	-37.16	27.0	64.1	334	93	
Vert.	5855.000	PK	50.00	34.32	15.63	45.36	3.31	57.90	-37.32	15.6	52.9	334	93	
Vert.	5875.000	PK	51.00	34.49	15.65	45.34	3.31	59.11	-36.11	10.0	46.1	334	93	
Vert.	5925.000	PK	51.10	34.76	15.68	45.30	3.31	59.55	-35.67	-27.0	8.6	334	93	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB

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Kashima EMC Lab.

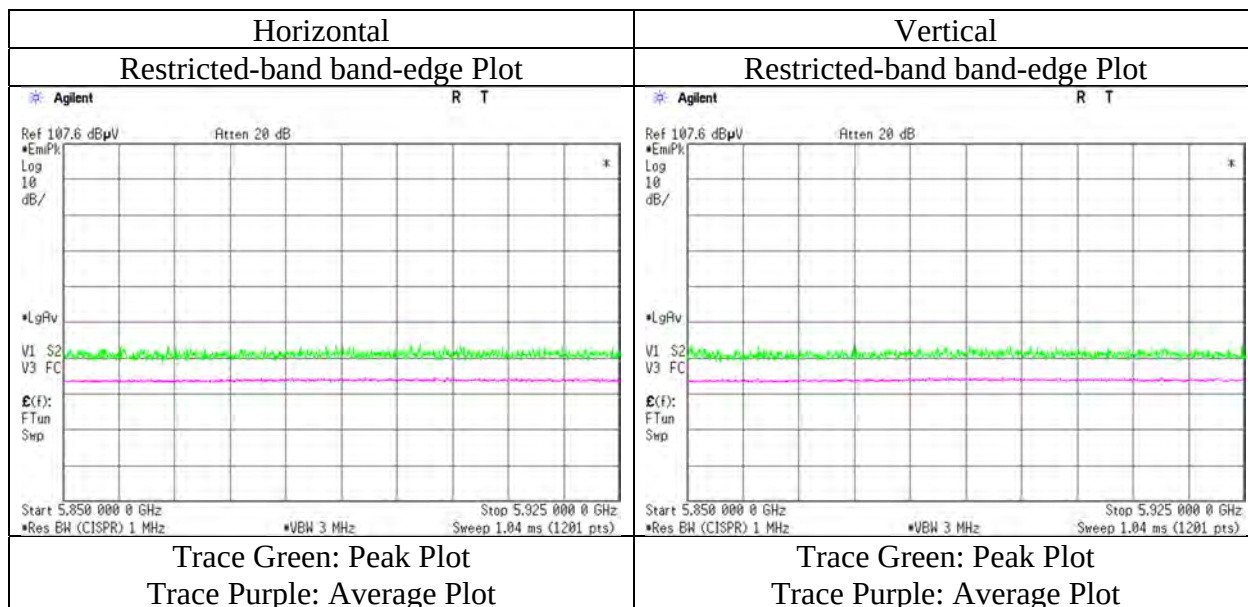
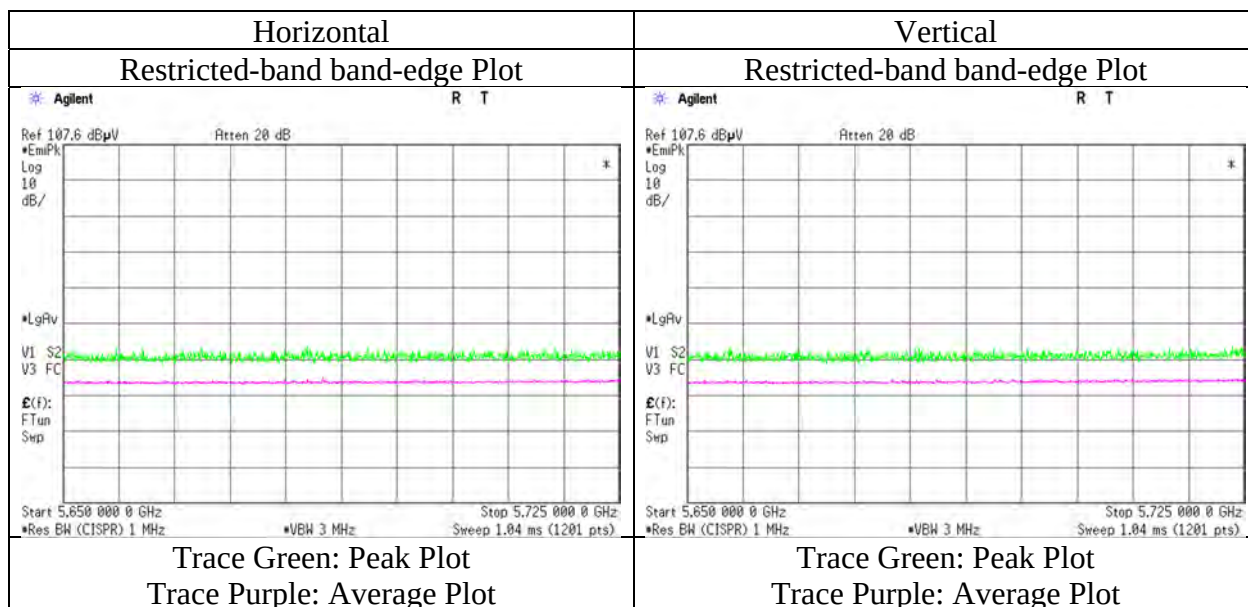
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 13, 2021
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5775 MHz with BT Hopping On 3DH5



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

1614, Mushiata, Katori-shi, Chiba-ken, 289-0341 Japan

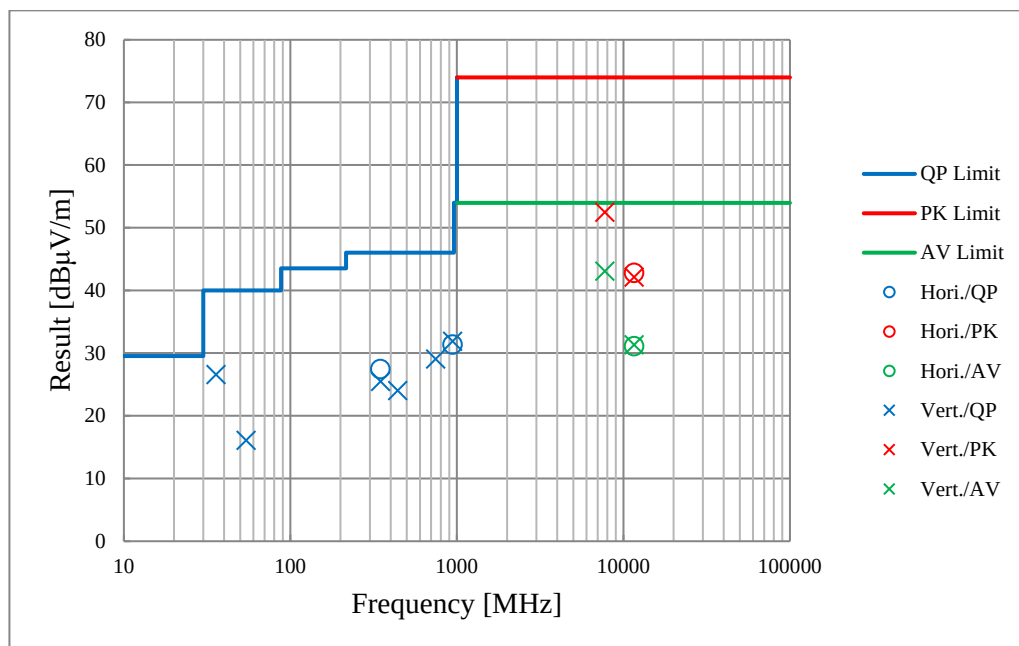
Telephone : +81 478 88 6500

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Radiated Spurious Emission

(Plot data, Worst case mode for Maximum Conducted Output Power)

Report No.	13977035M-C					
Test place	Kashima EMC Lab.					
Semi Anechoic Chamber	No.11	No.10	No.11	No.11	No.11	No.11
Date	December 8, 2021	December 12, 2021	December 6, 2021	December 6, 2021	December 7, 2021	December 7, 2021
Temperature / Humidity	23 deg. C / 41 % RH	22 deg. C / 52 % RH	20 deg. C / 37 % RH	20 deg. C / 37 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5785 MHz with BT Hopping On 3DH5					



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

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5180 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

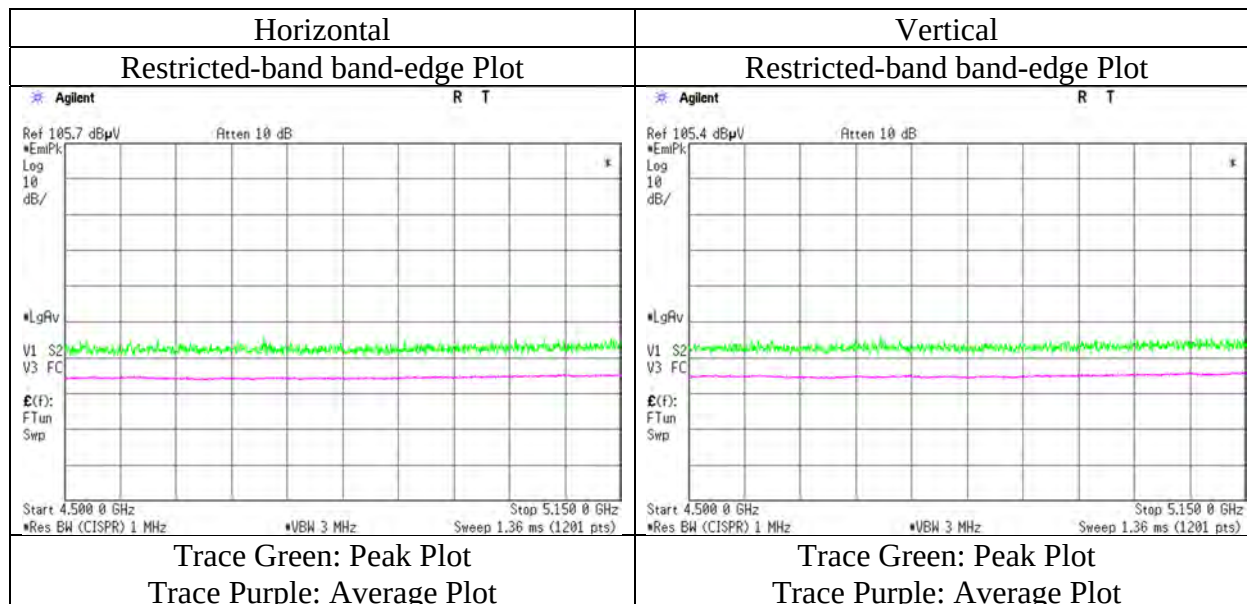
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.60	32.74	15.26	45.32	3.31	57.59	73.9	16.3	265	60	
Hori.	5150.000	AV	39.70	32.74	15.26	45.32	3.31	45.69	53.9	8.2	265	60	VBW: 2.2 kHz
Vert.	5150.000	PK	51.50	32.74	15.26	45.32	3.31	57.49	73.9	16.4	281	58	
Vert.	5150.000	AV	39.90	32.74	15.26	45.32	3.31	45.89	53.9	8.0	281	58	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5320 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

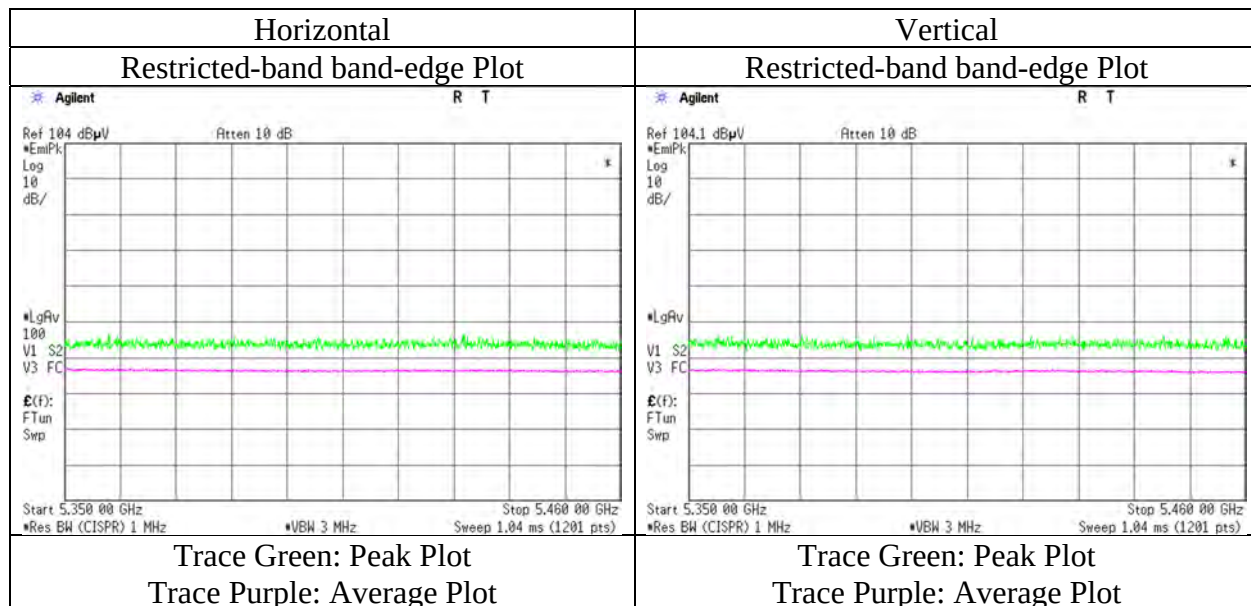
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.30	33.09	15.38	45.45	3.31	57.63	73.9	16.2	265	60	
Hori.	5350.000	AV	38.90	33.09	15.38	45.45	3.31	45.23	53.9	8.6	265	60	VBW: 2.2 kHz
Vert.	5350.000	PK	50.90	33.09	15.38	45.45	3.31	57.23	73.9	16.6	284	93	
Vert.	5350.000	AV	38.90	33.09	15.38	45.45	3.31	45.23	53.9	8.6	284	93	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{ m} / 3.0\text{ m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5500 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	52.00	33.29	15.44	45.47	3.31	58.57	73.9	15.3	287	63	VBW: 2.2 kHz
Hori.	5460.000	AV	40.20	33.29	15.44	45.47	3.31	46.77	53.9	7.1	287	63	
Vert.	5460.000	PK	51.60	33.29	15.44	45.47	3.31	58.17	73.9	15.7	337	71	VBW: 2.2 kHz
Vert.	5460.000	AV	39.90	33.29	15.44	45.47	3.31	46.47	53.9	7.4	337	71	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

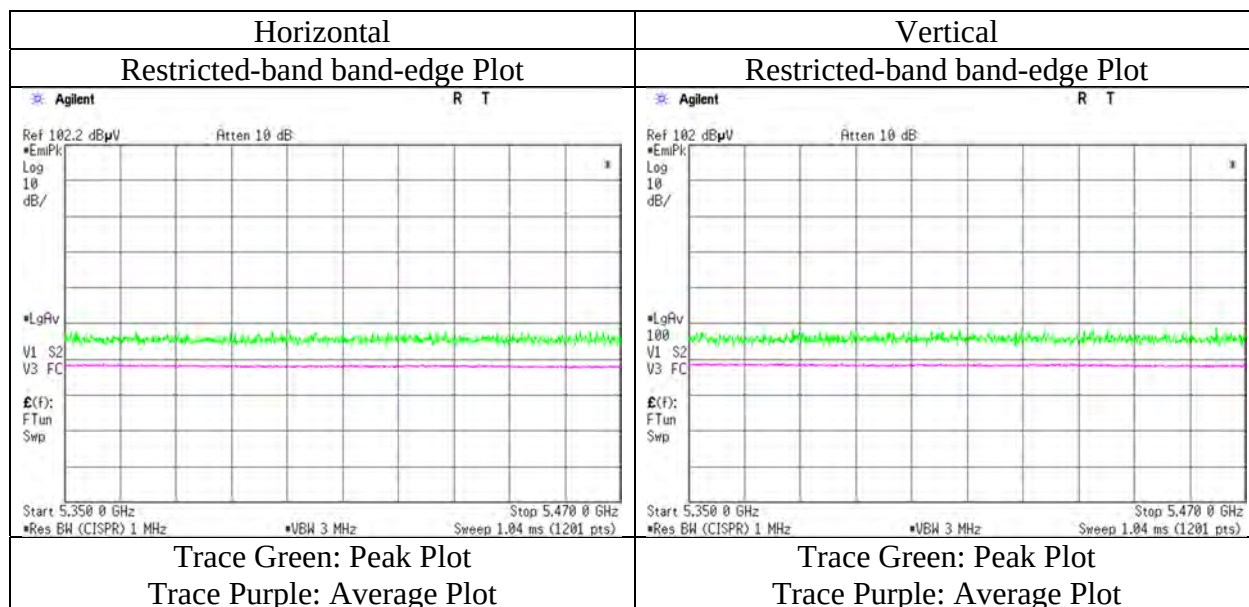
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	52.30	33.30	15.45	45.47	3.31	58.89	-36.33	-27.0	9.3	287	63	
Vert.	5470.000	PK	51.70	33.30	15.45	45.47	3.31	58.29	-36.93	-27.0	9.9	337	71	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10 \times \log \left(\left(\left(10^{\frac{\text{Electric Field Strength [dBuV/m]}{20}} \right) \times 10^{-(6)} \times \text{Distance:3[m]} \right)^2 / 30 \right) \times 10^3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Kazuhiro Ando
Mode	Tx 11a 5700 MHz with BLE 2440 MHz

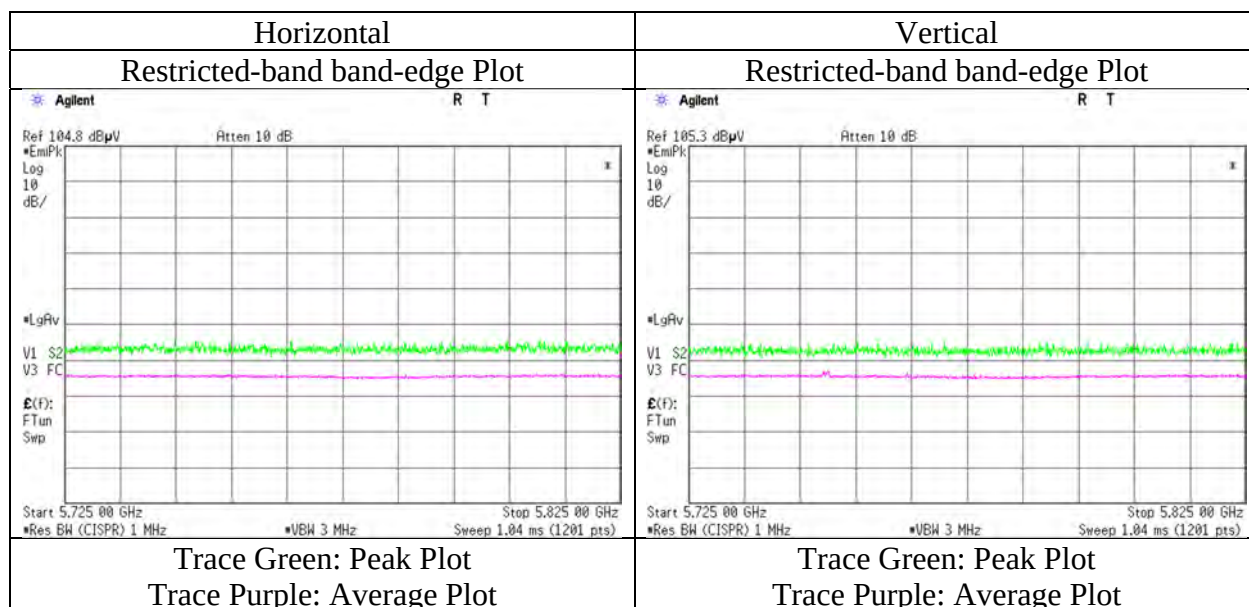
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.30	33.77	15.58	45.41	3.31	58.55	-36.67	-27.0	9.6	362	67	
Vert.	5725.000	PK	51.70	33.77	15.58	45.41	3.31	58.95	-36.27	-27.0	9.2	293	96	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) * 10^3

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5745 MHz with BLE 2440 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

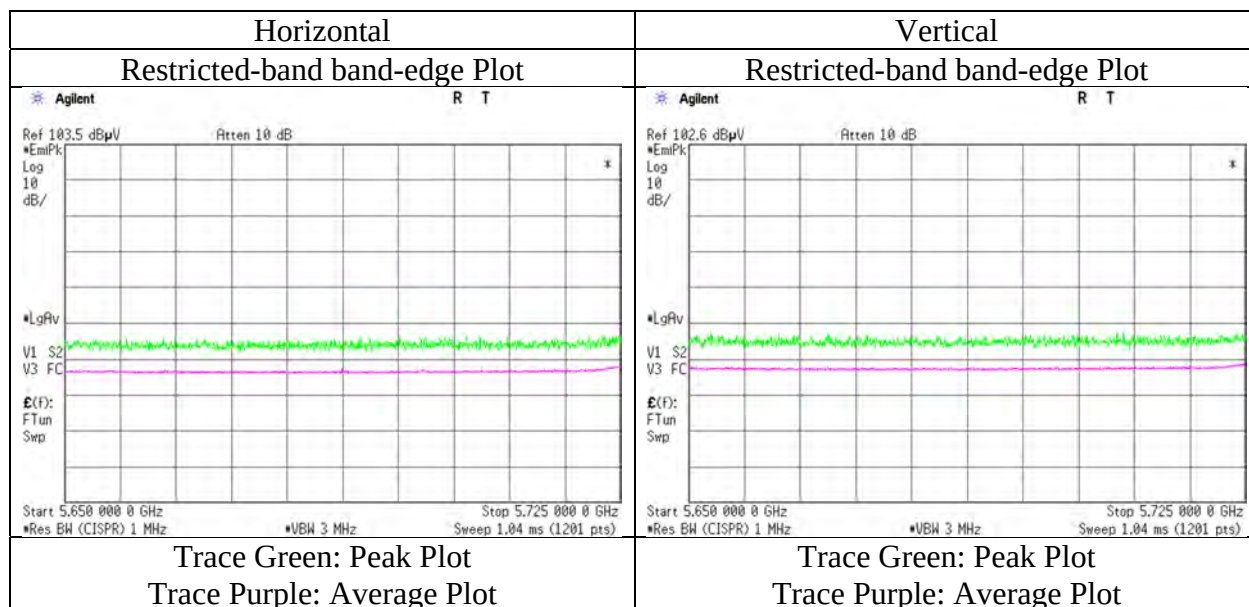
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.80	33.59	15.54	45.45	3.31	57.79	-37.43	-27.0	10.4	356	343	
Hori.	5700.000	PK	50.90	33.74	15.57	45.42	3.31	58.10	-37.12	10.0	47.1	356	343	
Hori.	5720.000	PK	51.30	33.76	15.58	45.41	3.31	58.54	-36.68	15.6	52.2	356	343	
Hori.	5725.000	PK	53.60	33.77	15.58	45.41	3.31	60.85	-34.37	27.0	61.3	356	343	
Vert.	5650.000	PK	50.30	33.59	15.54	45.45	3.31	57.29	-37.93	-27.0	10.9	316	348	
Vert.	5700.000	PK	52.10	33.74	15.57	45.42	3.31	59.30	-35.92	10.0	45.9	316	348	
Vert.	5720.000	PK	51.90	33.76	15.58	45.41	3.31	59.14	-36.08	15.6	51.6	316	348	
Vert.	5725.000	PK	53.20	33.77	15.58	45.41	3.31	60.45	-34.77	27.0	61.7	316	348	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	13977035M-C						
Test place	Kashima EMC Lab.						
Semi Anechoic Chamber	No.11	No.10	No.11	No.11	No.11	No.11	No.11
Date	December 8, 2021	December 14, 2021	December 6, 2021	December 6, 2021	December 7, 2021	December 7, 2021	December 7, 2021
Temperature / Humidity	23 deg. C / 41 % RH	18 deg. C / 40 % RH	20 deg. C / 37 % RH	20 deg. C / 37 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)	
Mode	Tx 11a 5785 MHz with BLE 2440 MHz						

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	329.657	QP	37.30	14.28	7.72	31.99	0.00	27.31	46.0	18.6	100	292	
Hori.	940.000	QP	28.60	24.13	9.93	31.09	0.00	31.57	46.0	14.4	100	180	
Hori.	11570.000	PK	48.20	38.76	8.30	43.00	-9.54	42.72	73.9	31.1	150	0	
Hori.	11570.000	AV	36.40	38.76	8.30	43.00	-9.54	30.92	53.9	22.9	150	0	VBW: 2.2 kHz
Vert.	35.667	QP	40.10	12.86	5.73	32.21	0.00	26.48	40.0	13.5	100	251	
Vert.	54.033	QP	28.80	13.76	5.94	32.20	0.00	16.30	40.0	23.7	306	130	
Vert.	327.285	QP	35.90	14.24	7.71	31.99	0.00	25.86	46.0	20.1	100	180	
Vert.	435.758	QP	31.30	16.79	8.21	31.98	0.00	24.32	46.0	21.6	100	283	
Vert.	742.788	QP	30.00	21.97	9.32	31.99	0.00	29.30	46.0	16.7	100	15	
Vert.	939.848	QP	26.80	24.13	9.93	31.10	0.00	29.76	46.0	16.2	105	185	
Vert.	7713.333	PK	49.50	37.21	6.78	43.08	2.26	52.67	73.9	21.2	352	0	
Vert.	11570.000	PK	48.30	38.76	8.30	43.00	-9.54	42.82	73.9	31.0	150	0	
Vert.	7713.333	AV	40.10	37.21	6.78	43.08	2.26	43.27	53.9	10.6	352	0	VBW: 2.2 kHz *1)
Vert.	11570.000	AV	36.60	38.76	8.30	43.00	-9.54	31.12	53.9	22.7	150	0	VBW: 2.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

*The 4th harmonic was not seen so the result was its base noise level.

*1) This noise has the same duty cycle as the carrier.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	17355.000	PK	49.20	41.56	10.29	44.87	-9.54	46.64	-48.58	-27.0	21.5	150	0	
Vert.	17355.000	PK	49.70	41.56	10.29	44.87	-9.54	47.14	-48.08	-27.0	21.0	150	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$ (No.10 site), 1 GHz - 10 GHz : $20\log(3.89\text{m} / 3.0\text{m}) = 2.26\text{ dB}$ (No.11 site)

10 GHz - 26.5 GHz : $20\log(1.0\text{m} / 3.0\text{m}) = -9.54\text{ dB}$

26.5 GHz - 40 GHz : $20\log(0.5\text{m} / 3.0\text{m}) = -15.56\text{ dB}$

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5825 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

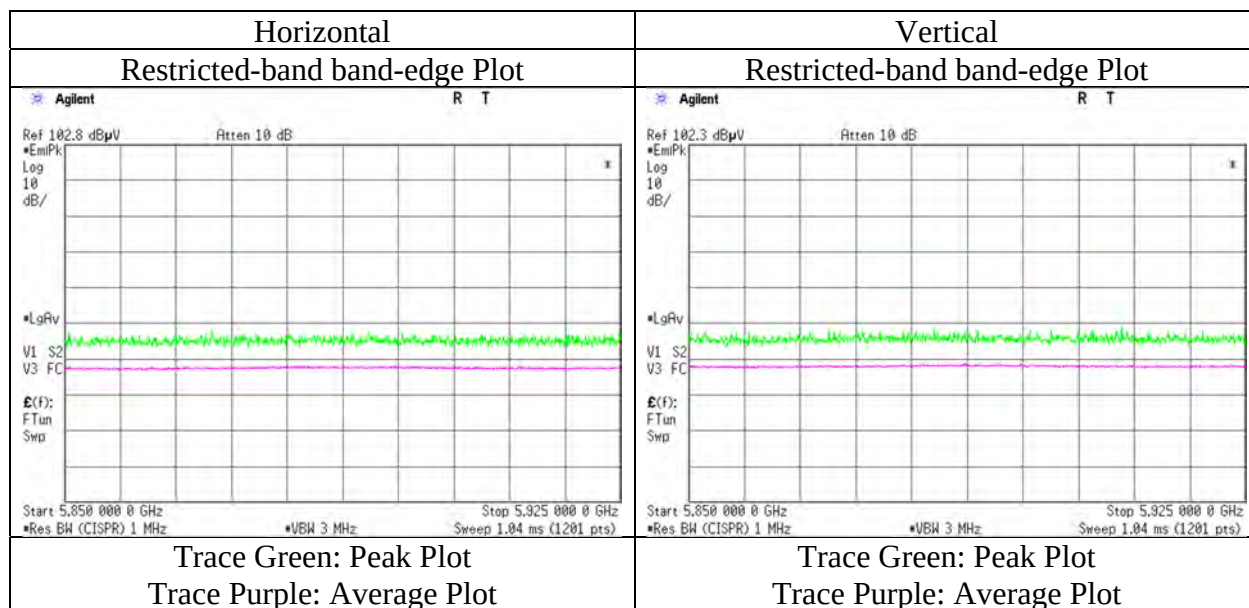
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.20	34.28	15.63	45.36	3.31	58.06	-37.16	27.0	64.1	316	351	
Hori.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	316	351	
Hori.	5875.000	PK	51.00	34.49	15.65	45.34	3.31	59.11	-36.11	10.0	46.1	316	351	
Hori.	5925.000	PK	51.10	34.76	15.68	45.30	3.31	59.55	-35.67	-27.0	8.6	316	351	
Vert.	5850.000	PK	50.50	34.28	15.63	45.36	3.31	58.36	-36.86	27.0	63.8	295	307	
Vert.	5855.000	PK	50.20	34.32	15.63	45.36	3.31	58.10	-37.12	15.6	52.7	295	307	
Vert.	5875.000	PK	51.30	34.49	15.65	45.34	3.31	59.41	-35.81	10.0	45.8	295	307	
Vert.	5925.000	PK	51.00	34.76	15.68	45.30	3.31	59.45	-35.77	-27.0	8.7	295	307	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5180 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

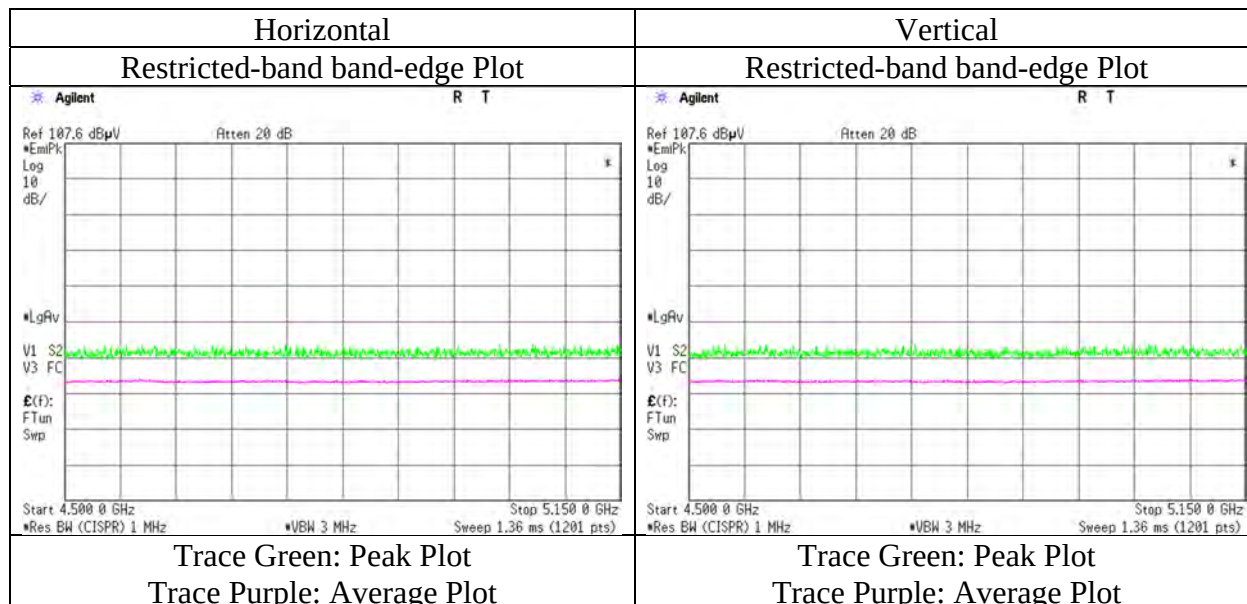
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.20	32.74	15.26	45.32	3.31	57.19	73.9	16.7	400	61	
Hori.	5150.000	AV	39.90	32.74	15.26	45.32	3.31	45.89	53.9	8.0	400	61	VBW: 3.0 kHz
Vert.	5150.000	PK	51.10	32.74	15.26	45.32	3.31	57.09	73.9	16.8	324	341	
Vert.	5150.000	AV	40.00	32.74	15.26	45.32	3.31	45.99	53.9	7.9	324	341	VBW: 3.0 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{ m} / 3.0\text{ m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5320 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

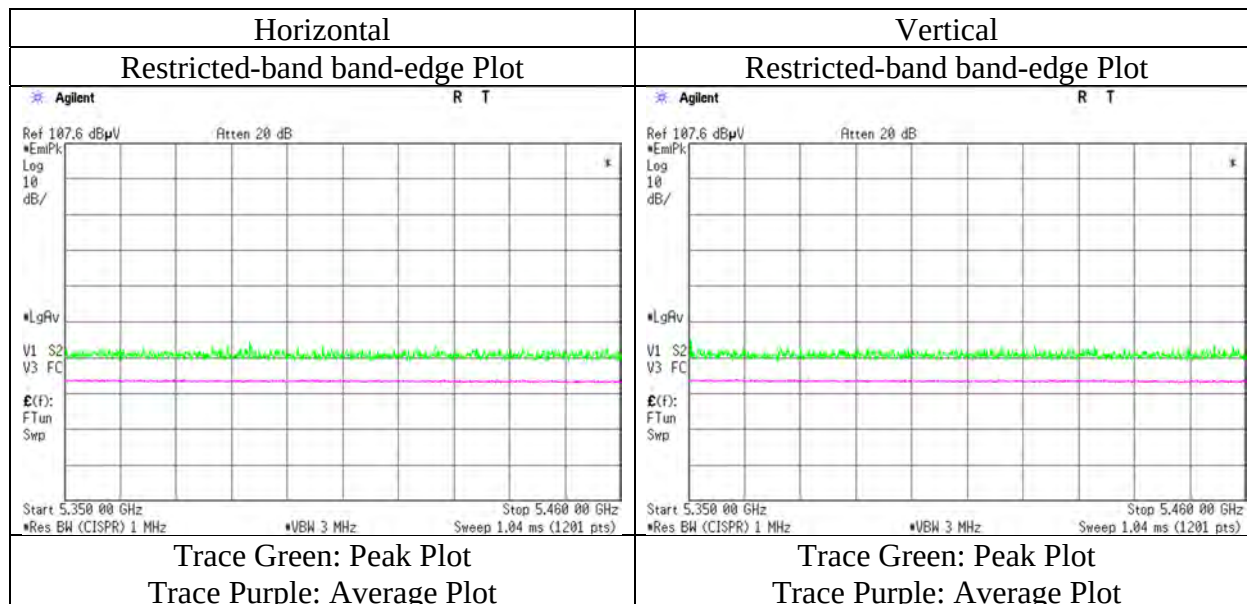
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.30	33.09	15.38	45.45	3.31	56.63	73.9	17.2	331	335	
Hori.	5350.000	AV	39.10	33.09	15.38	45.45	3.31	45.43	53.9	8.4	331	335	VBW: 3.0 kHz
Vert.	5350.000	PK	51.00	33.09	15.38	45.45	3.31	57.33	73.9	16.5	400	10	
Vert.	5350.000	AV	39.40	33.09	15.38	45.45	3.31	45.73	53.9	8.1	400	10	VBW: 3.0 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5500 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.40	33.29	15.44	45.47	3.31	57.97	73.9	15.9	363	347	VBW: 3.0 kHz
Hori.	5460.000	AV	40.10	33.29	15.44	45.47	3.31	46.67	53.9	7.2	363	347	
Vert.	5460.000	PK	51.20	33.29	15.44	45.47	3.31	57.77	73.9	16.1	303	88	VBW: 3.0 kHz
Vert.	5470.000	AV	40.40	33.29	15.44	45.47	3.31	46.97	53.9	6.9	303	88	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

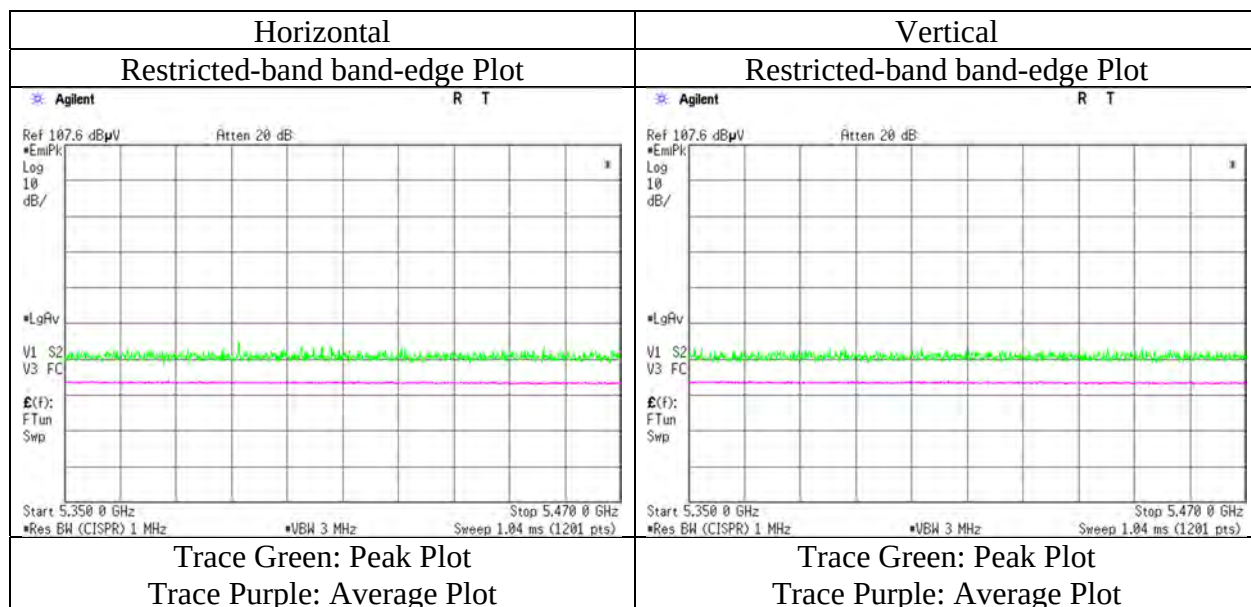
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.80	33.30	15.45	45.47	3.31	58.39	-36.83	-27.0	9.8	363	347	
Vert.	5470.000	PK	51.70	33.30	15.45	45.47	3.31	58.29	-36.93	-27.0	9.9	303	88	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\left(10^{\frac{\text{Electric Field Strength [dBuV/m]}{20}} \right) \cdot 10^{(-6)} \cdot \text{Distance:3[m]}^2 \right) / 30 \right) \cdot 10^3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39 \text{ m} / 3.0 \text{ m}) = 3.31 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5700 MHz with BLE 2440 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

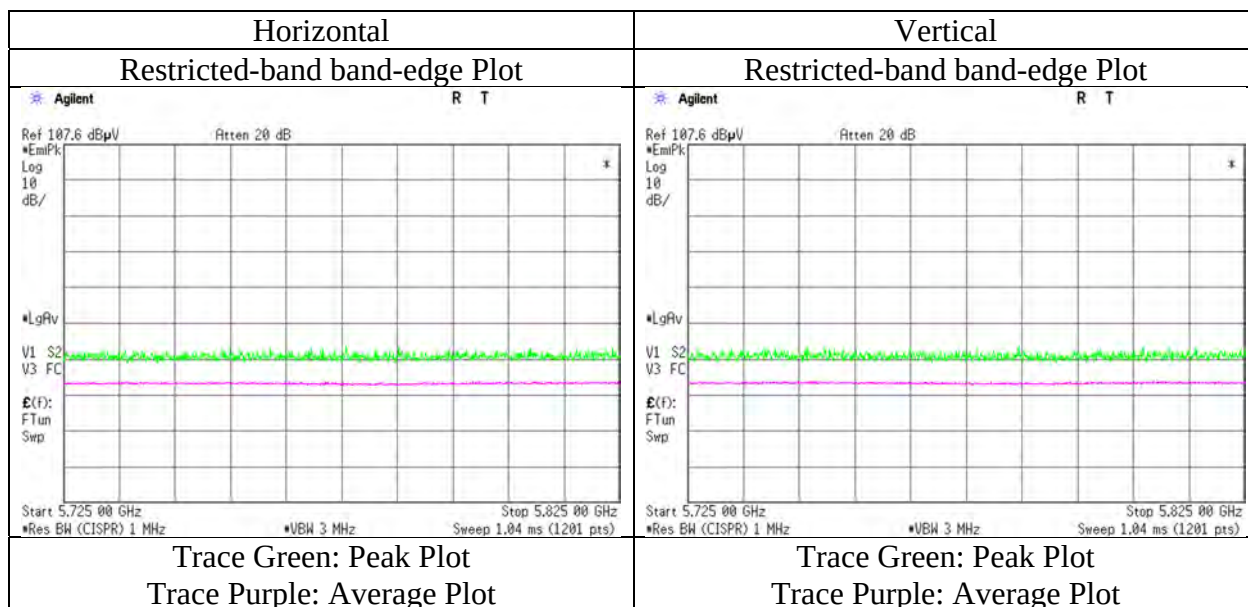
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.90	33.77	15.58	45.41	3.31	58.15	-37.07	-27.00	10.0	289	336	
Vert.	5725.000	PK	50.40	33.77	15.58	45.41	3.31	57.65	-37.57	-27.00	10.5	320	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+ (Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5745 MHz with BLE 2440 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

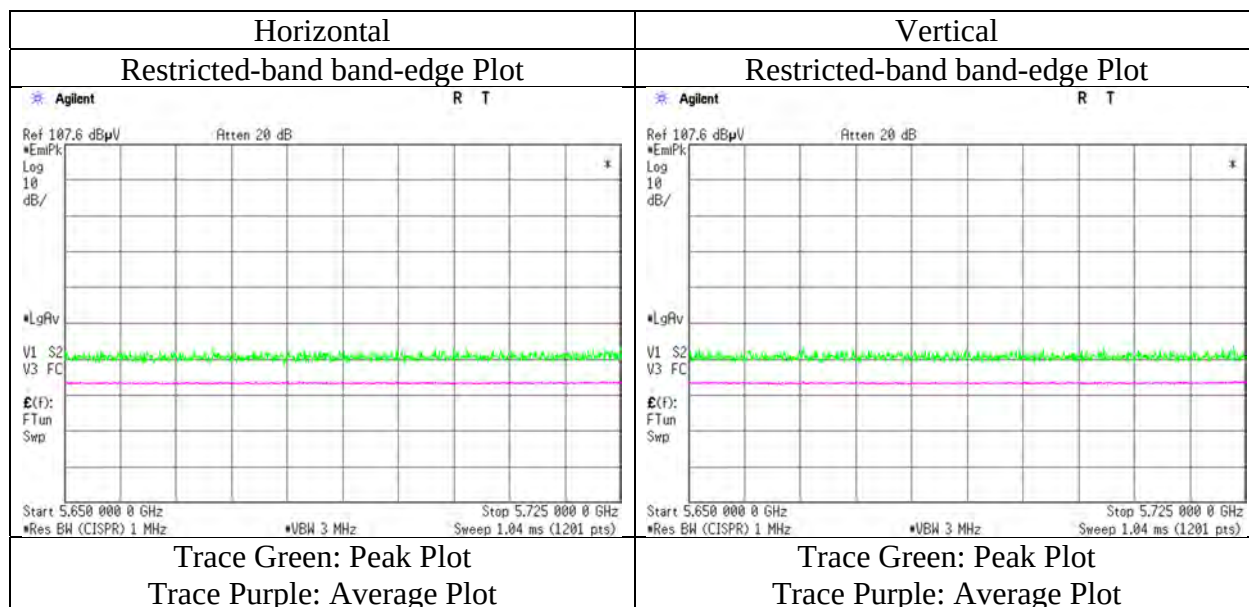
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.10	33.59	15.54	45.45	3.31	58.09	-37.13	-27.0	10.1	394	0	
Hori.	5700.000	PK	51.30	33.74	15.57	45.42	3.31	58.50	-36.72	10.0	46.7	394	0	
Hori.	5720.000	PK	51.20	33.76	15.58	45.41	3.31	58.44	-36.78	15.6	52.3	394	0	
Hori.	5725.000	PK	51.40	33.77	15.58	45.41	3.31	58.65	-36.57	27.0	63.5	394	0	
Vert.	5650.000	PK	51.50	33.59	15.54	45.45	3.31	58.49	-36.73	-27.0	9.7	305	89	
Vert.	5700.000	PK	51.30	33.74	15.57	45.42	3.31	58.50	-36.72	10.0	46.7	305	89	
Vert.	5720.000	PK	51.40	33.76	15.58	45.41	3.31	58.64	-36.58	15.6	52.1	305	89	
Vert.	5725.000	PK	51.80	33.77	15.58	45.41	3.31	59.05	-36.17	27.0	63.1	305	89	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-20 5825 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

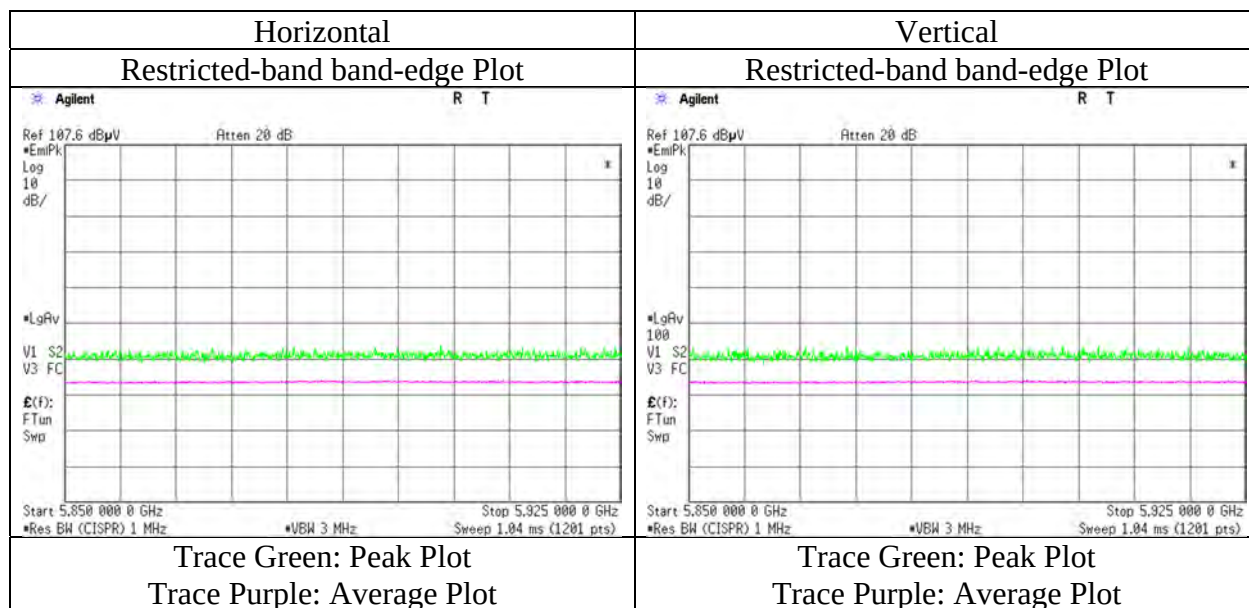
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.20	34.28	15.63	45.36	3.31	58.06	-37.16	27.0	64.1	400	0	
Hori.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	400	0	
Hori.	5875.000	PK	50.80	34.49	15.65	45.34	3.31	58.91	-36.31	10.0	46.3	400	0	
Hori.	5925.000	PK	51.30	34.76	15.68	45.30	3.31	59.75	-35.47	-27.0	8.4	400	0	
Vert.	5850.000	PK	50.40	34.28	15.63	45.36	3.31	58.26	-36.96	27.0	63.9	298	89	
Vert.	5855.000	PK	50.70	34.32	15.63	45.36	3.31	58.60	-36.62	15.6	52.2	298	89	
Vert.	5875.000	PK	50.50	34.49	15.65	45.34	3.31	58.61	-36.61	10.0	46.6	298	89	
Vert.	5925.000	PK	51.20	34.76	15.68	45.30	3.31	59.65	-35.57	-27.0	8.5	298	89	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39 m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5190 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

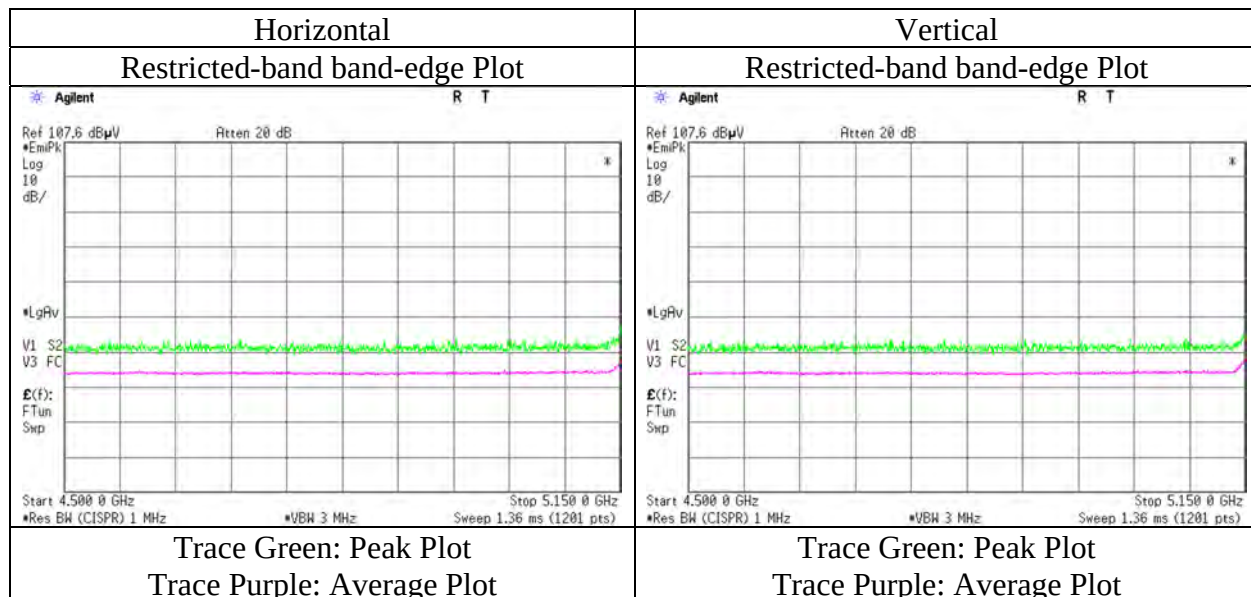
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	55.50	32.74	15.26	45.32	3.31	61.49	73.9	12.4	248	57	
Hori.	5150.000	AV	44.90	32.74	15.26	45.32	3.31	50.89	53.9	3.0	248	57	VBW: 5.6 kHz
Vert.	5150.000	PK	55.90	32.74	15.26	45.32	3.31	61.89	73.9	12.0	233	63	
Vert.	5150.000	AV	45.10	32.74	15.26	45.32	3.31	51.09	53.9	2.8	233	63	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m}/3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5310 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

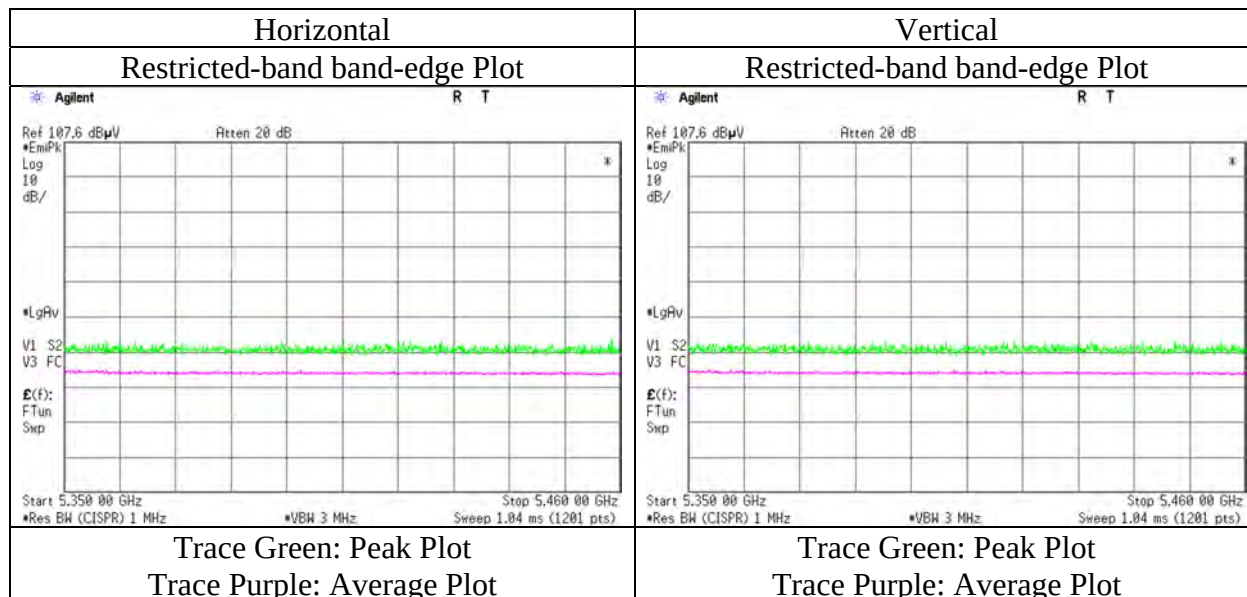
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	361	72	
Hori.	5350.000	AV	40.30	33.09	15.38	45.45	3.31	46.63	53.9	7.2	361	72	VBW: 5.6 kHz
Vert.	5350.000	PK	51.30	33.09	15.38	45.45	3.31	57.63	73.9	16.2	150	60	
Vert.	5350.000	AV	40.80	33.09	15.38	45.45	3.31	47.13	53.9	6.7	150	60	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 14, 2021
Temperature / Humidity	18 deg. C / 40 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5510 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	52.20	33.29	15.44	45.47	3.31	58.77	73.9	15.1	371	9	VBW: 5.6 kHz
Hori.	5460.000	AV	41.50	33.29	15.44	45.47	3.31	48.07	53.9	5.8	371	9	
Vert.	5460.000	PK	52.80	33.29	15.44	45.47	3.31	59.37	73.9	14.5	357	316	VBW: 5.6 kHz
Vert.	5460.000	AV	41.50	33.29	15.44	45.47	3.31	48.07	53.9	5.8	357	316	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

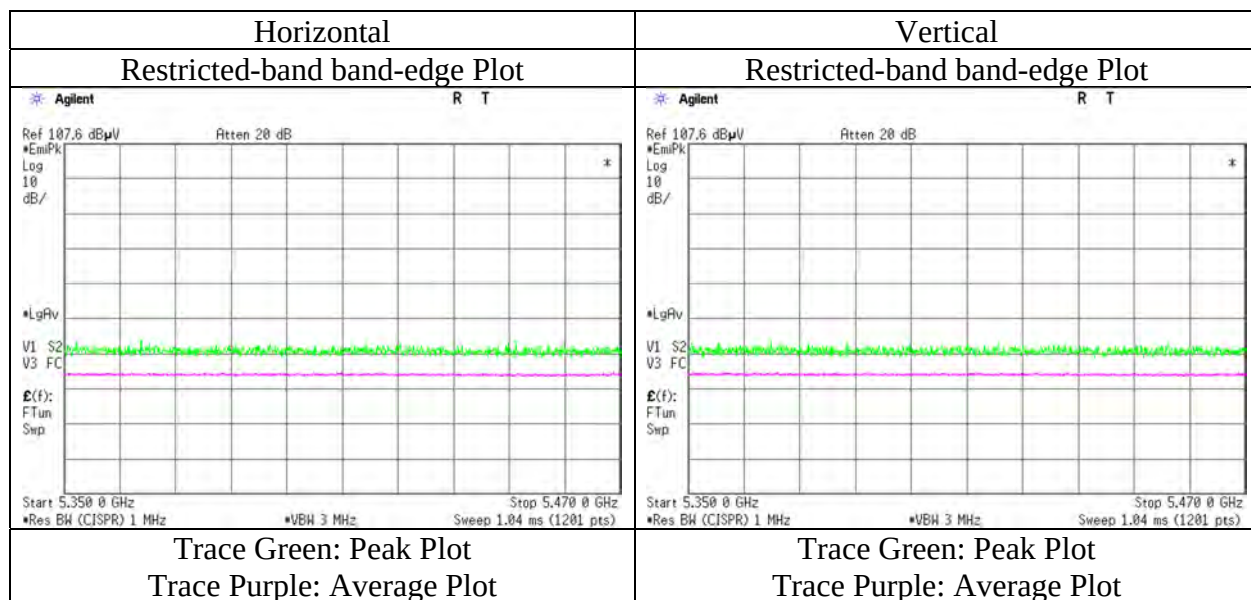
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.90	33.30	15.45	45.47	3.31	58.49	-36.73	-27.0	9.7	371	9	
Vert.	5470.000	PK	51.80	33.30	15.45	45.47	3.31	58.39	-36.83	-27.0	9.8	357	316	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) \} * 10^{\wedge} (-6) * \text{Distance:3[m]} \right)^{\wedge} 2 \right) / 30) * 10^{\wedge} 3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5670 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

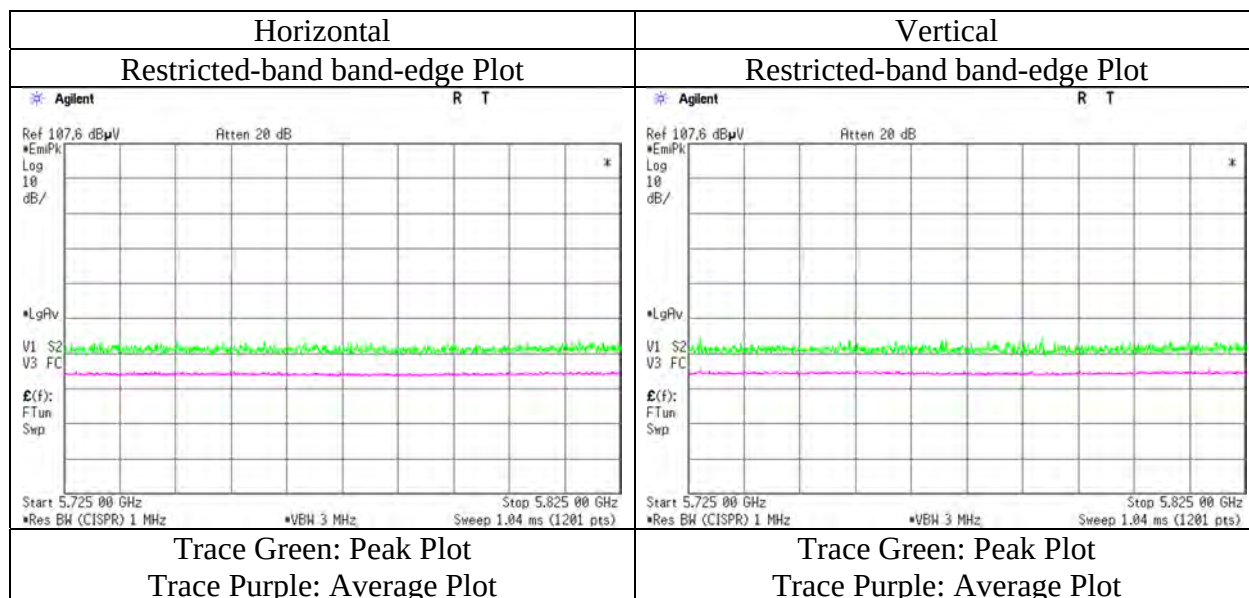
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.30	33.77	15.58	45.41	3.31	58.55	-36.67	-27.00	9.6	329	57	
Vert.	5725.000	PK	51.50	33.77	15.58	45.41	3.31	58.75	-36.47	-27.00	9.4	358	90	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5755 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

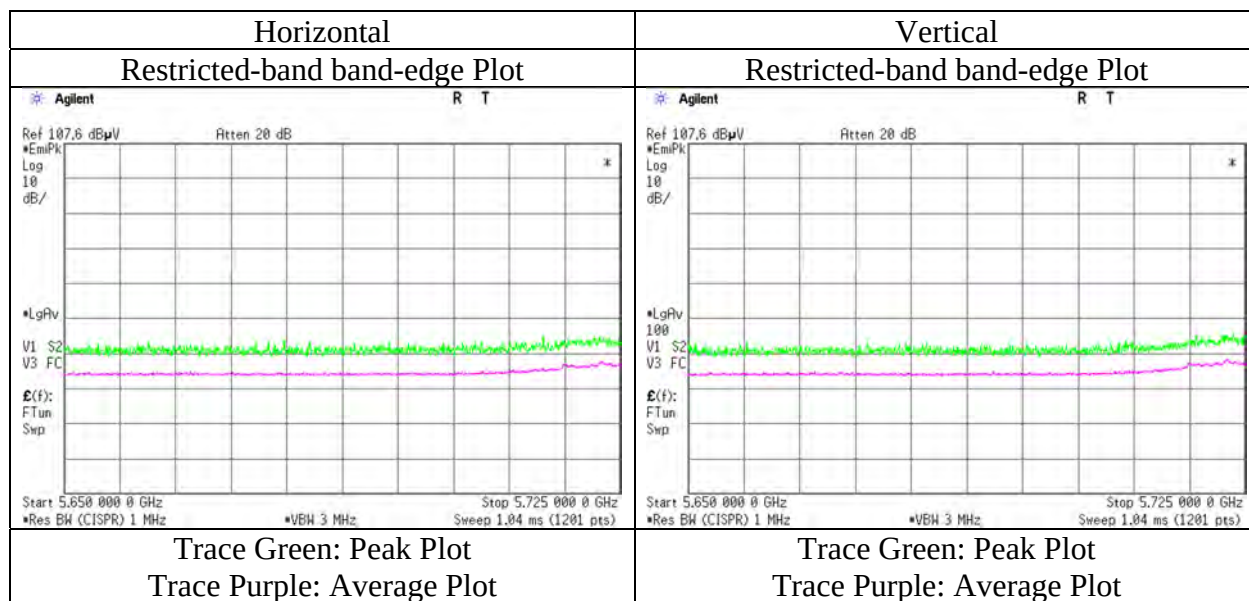
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.00	33.59	15.54	45.45	3.31	57.99	-37.23	-27.0	10.2	348	359	
Hori.	5700.000	PK	51.60	33.74	15.57	45.42	3.31	58.80	-36.42	10.0	46.4	348	359	
Hori.	5720.000	PK	53.60	33.76	15.58	45.41	3.31	60.84	-34.38	15.6	49.9	348	359	
Hori.	5725.000	PK	54.50	33.77	15.58	45.41	3.31	61.75	-33.47	27.0	60.4	348	359	
Vert.	5650.000	PK	50.60	33.59	15.54	45.45	3.31	57.59	-37.63	-27.0	10.6	306	101	
Vert.	5700.000	PK	51.70	33.74	15.57	45.42	3.31	58.90	-36.32	10.0	46.3	306	101	
Vert.	5720.000	PK	54.60	33.76	15.58	45.41	3.31	61.84	-33.38	15.6	48.9	306	101	
Vert.	5725.000	PK	54.60	33.77	15.58	45.41	3.31	61.85	-33.37	27.0	60.3	306	101	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11n-40 5795 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

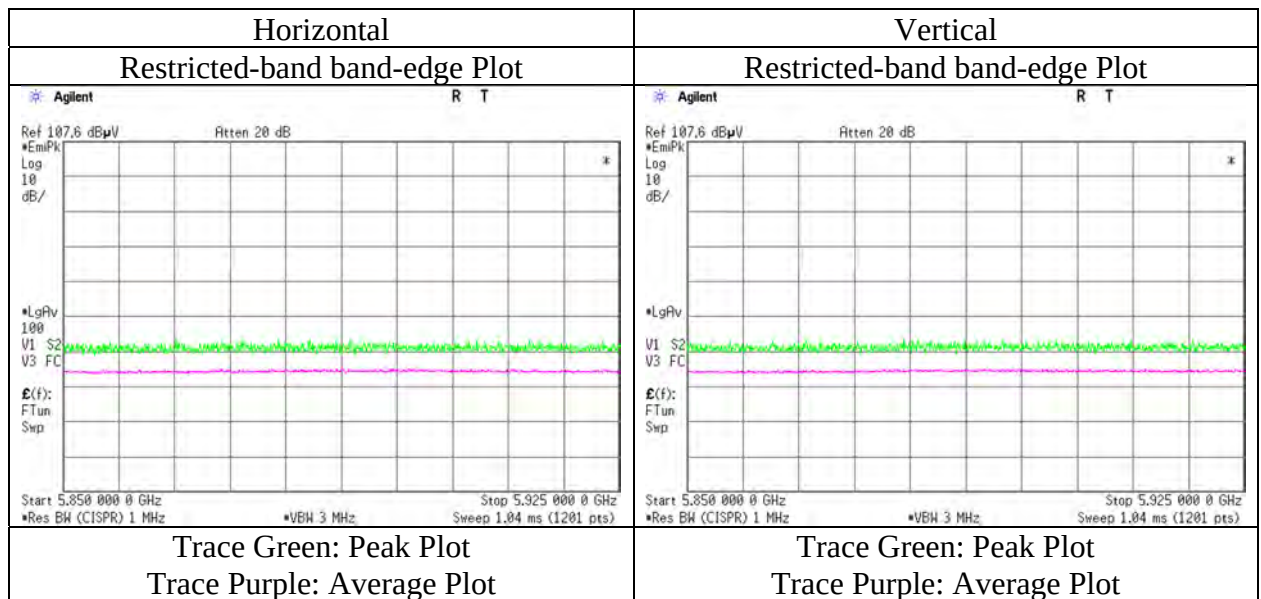
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.20	34.28	15.63	45.36	3.31	58.06	-37.16	27.0	64.1	318	359	
Hori.	5855.000	PK	50.00	34.32	15.63	45.36	3.31	57.90	-37.32	15.6	52.9	318	359	
Hori.	5875.000	PK	50.70	34.49	15.65	45.34	3.31	58.81	-36.41	10.0	46.4	318	359	
Hori.	5925.000	PK	51.30	34.76	15.68	45.30	3.31	59.75	-35.47	-27.0	8.4	318	359	
Vert.	5850.000	PK	51.00	34.28	15.63	45.36	3.31	58.86	-36.36	27.0	63.3	332	93	
Vert.	5855.000	PK	50.20	34.32	15.63	45.36	3.31	58.10	-37.12	15.6	52.7	332	93	
Vert.	5875.000	PK	50.30	34.49	15.65	45.34	3.31	58.41	-36.81	10.0	46.8	332	93	
Vert.	5925.000	PK	51.40	34.76	15.68	45.30	3.31	59.85	-35.37	-27.0	8.3	332	93	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5190 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

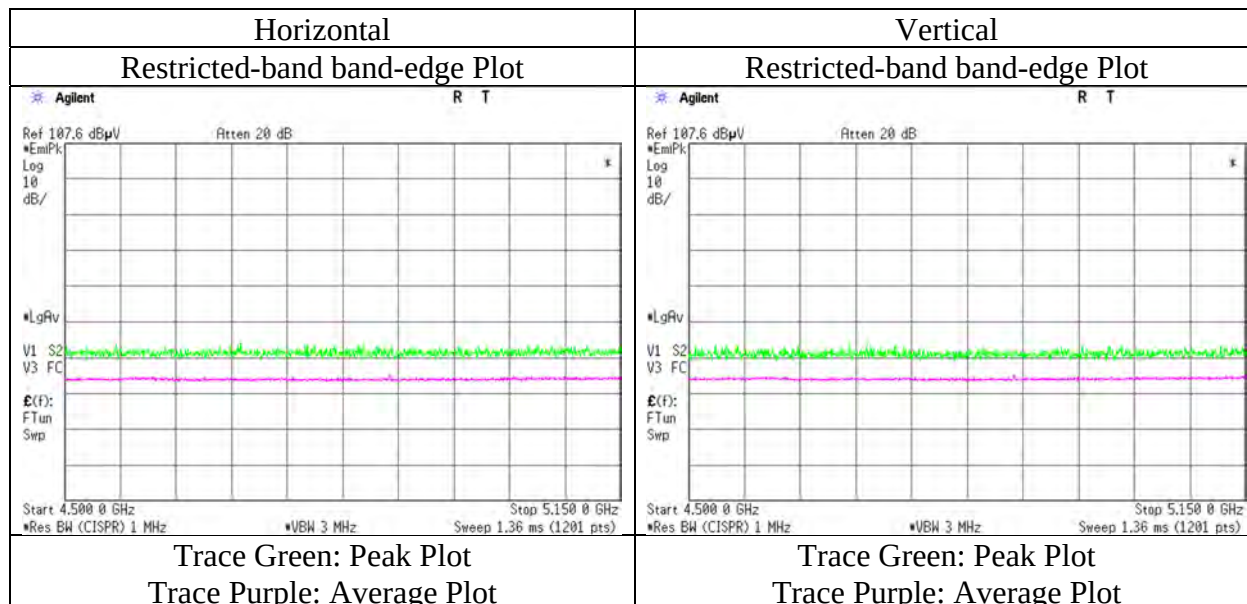
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.20	32.74	15.26	45.32	3.31	57.19	73.9	16.7	358	53	
Hori.	5150.000	AV	41.10	32.74	15.26	45.32	3.31	47.09	53.9	6.8	358	53	VBW: 5.6 kHz
Vert.	5150.000	PK	52.10	32.74	15.26	45.32	3.31	58.09	73.9	15.8	289	56	
Vert.	5150.000	AV	41.30	32.74	15.26	45.32	3.31	47.29	53.9	6.6	289	56	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5310 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

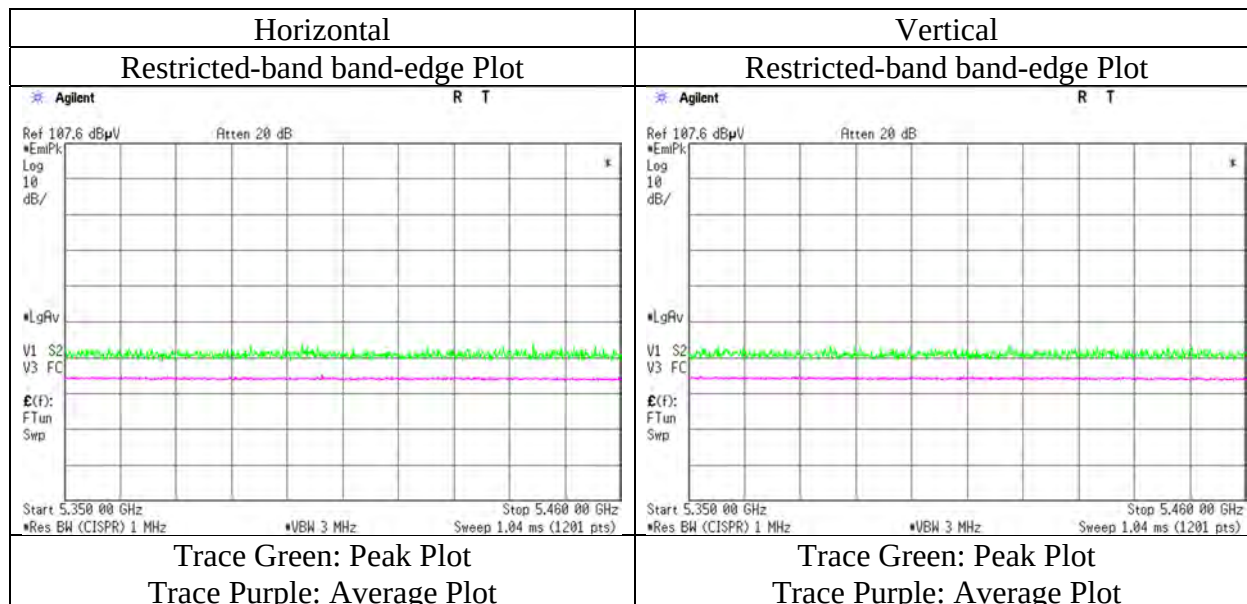
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	290	63	
Hori.	5350.000	AV	40.20	33.09	15.38	45.45	3.31	46.53	53.9	7.3	290	63	VBW: 5.6 kHz
Vert.	5350.000	PK	50.70	33.09	15.38	45.45	3.31	57.03	73.9	16.8	271	57	
Vert.	5350.000	AV	40.00	33.09	15.38	45.45	3.31	46.33	53.9	7.5	271	57	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5510 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	52.20	33.29	15.44	45.47	3.31	58.77	73.9	15.1	311	70	VBW: 5.6 kHz
Hori.	5460.000	AV	41.20	33.29	15.44	45.47	3.31	47.77	53.9	6.1	311	70	
Vert.	5460.000	PK	51.20	33.29	15.44	45.47	3.31	57.77	73.9	16.1	311	84	VBW: 5.6 kHz
Vert.	5460.000	AV	41.30	33.29	15.44	45.47	3.31	47.87	53.9	6.0	311	84	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

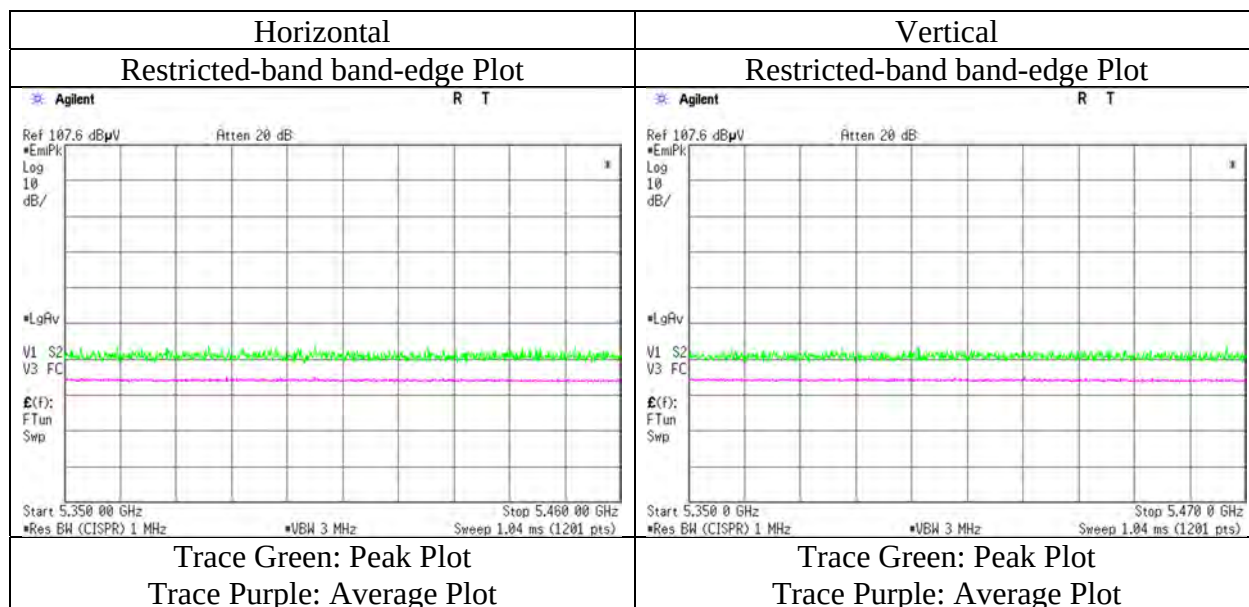
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.60	33.30	15.45	45.47	3.31	58.19	-37.03	-27.0	10.0	311	70	
Vert.	5470.000	PK	51.60	33.30	15.45	45.47	3.31	58.19	-37.03	-27.0	10.0	311	84	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\left(10^{\frac{\text{Electric Field Strength [dBuV/m]}{20}} \right) \cdot 10^{(-6)} \cdot \text{Distance:3[m]}^2 \right) / 30 \right) \cdot 10^{(3)}$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5670 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

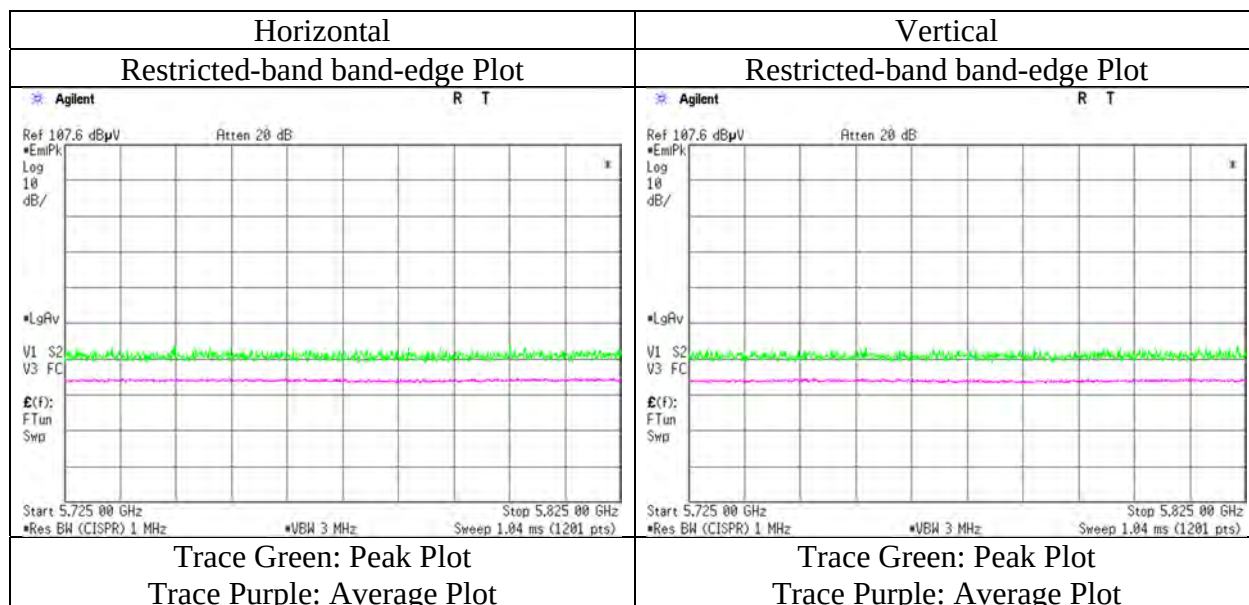
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.60	33.77	15.58	45.41	3.31	58.85	-36.37	-27.00	9.3	363	60	
Vert.	5725.000	PK	51.10	33.77	15.58	45.41	3.31	58.35	-36.87	-27.00	9.8	304	98	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5755 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

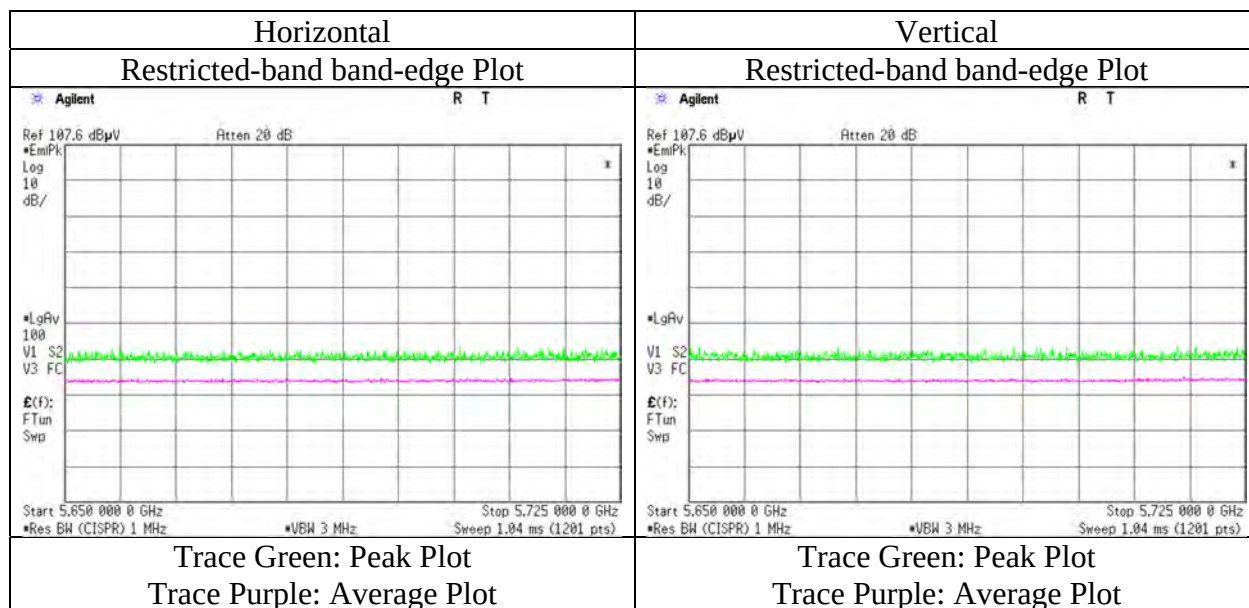
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.20	33.59	15.54	45.45	3.31	57.19	-38.03	-27.0	11.0	338	81	
Hori.	5700.000	PK	50.60	33.74	15.57	45.42	3.31	57.80	-37.42	10.0	47.4	338	81	
Hori.	5720.000	PK	51.30	33.76	15.58	45.41	3.31	58.54	-36.68	15.6	52.2	338	81	
Hori.	5725.000	PK	51.00	33.77	15.58	45.41	3.31	58.25	-36.97	27.0	62.9	338	81	
Vert.	5650.000	PK	50.20	33.59	15.54	45.45	3.31	57.19	-38.03	-27.0	11.0	350	98	
Vert.	5700.000	PK	51.00	33.74	15.57	45.42	3.31	58.20	-37.02	10.0	47.0	350	98	
Vert.	5720.000	PK	51.30	33.76	15.58	45.41	3.31	58.54	-36.68	15.6	52.2	350	98	
Vert.	5725.000	PK	52.00	33.77	15.58	45.41	3.31	59.25	-35.97	27.0	62.9	350	98	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-40 5795 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

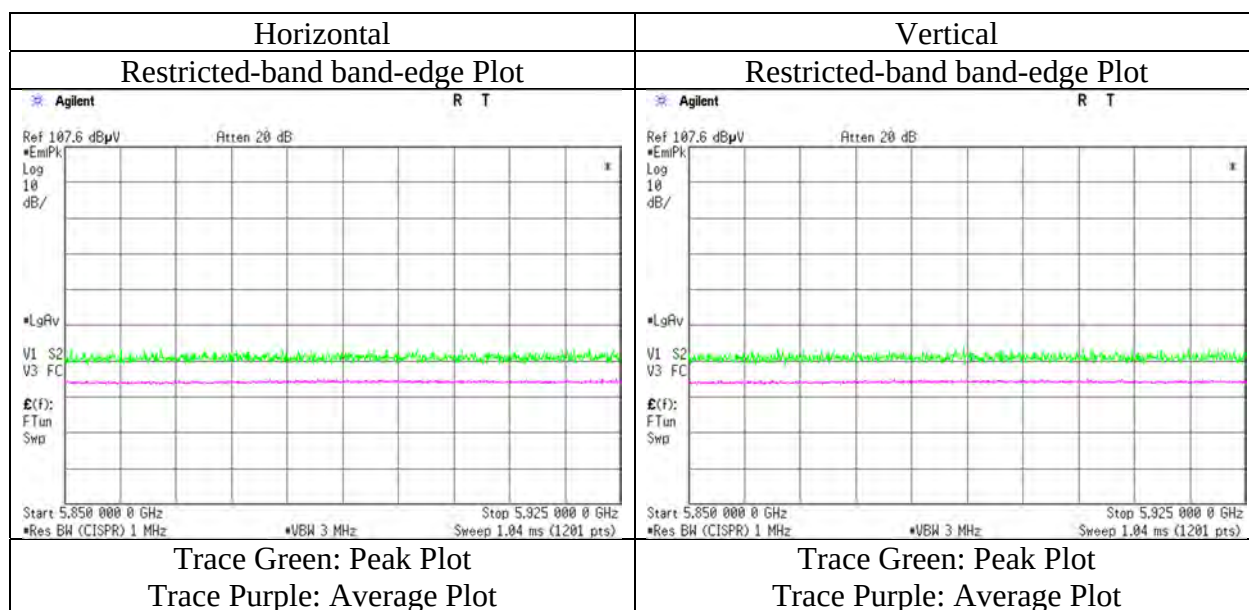
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	50.60	34.28	15.63	45.36	3.31	58.46	-36.76	27.0	63.7	344	359	
Hori.	5855.000	PK	50.10	34.32	15.63	45.36	3.31	58.00	-37.22	15.6	52.8	344	359	
Hori.	5875.000	PK	50.30	34.49	15.65	45.34	3.31	58.41	-36.81	10.0	46.8	344	359	
Hori.	5925.000	PK	51.40	34.76	15.68	45.30	3.31	59.85	-35.37	-27.0	8.3	344	359	
Vert.	5850.000	PK	50.10	34.28	15.63	45.36	3.31	57.96	-37.26	27.0	64.2	331	99	
Vert.	5855.000	PK	50.70	34.32	15.63	45.36	3.31	58.60	-36.62	15.6	52.2	331	99	
Vert.	5875.000	PK	50.60	34.49	15.65	45.34	3.31	58.71	-36.51	10.0	46.5	331	99	
Vert.	5925.000	PK	51.10	34.76	15.68	45.30	3.31	59.55	-35.67	-27.0	8.6	331	99	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m/3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Kazuhiro Ando
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5210 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

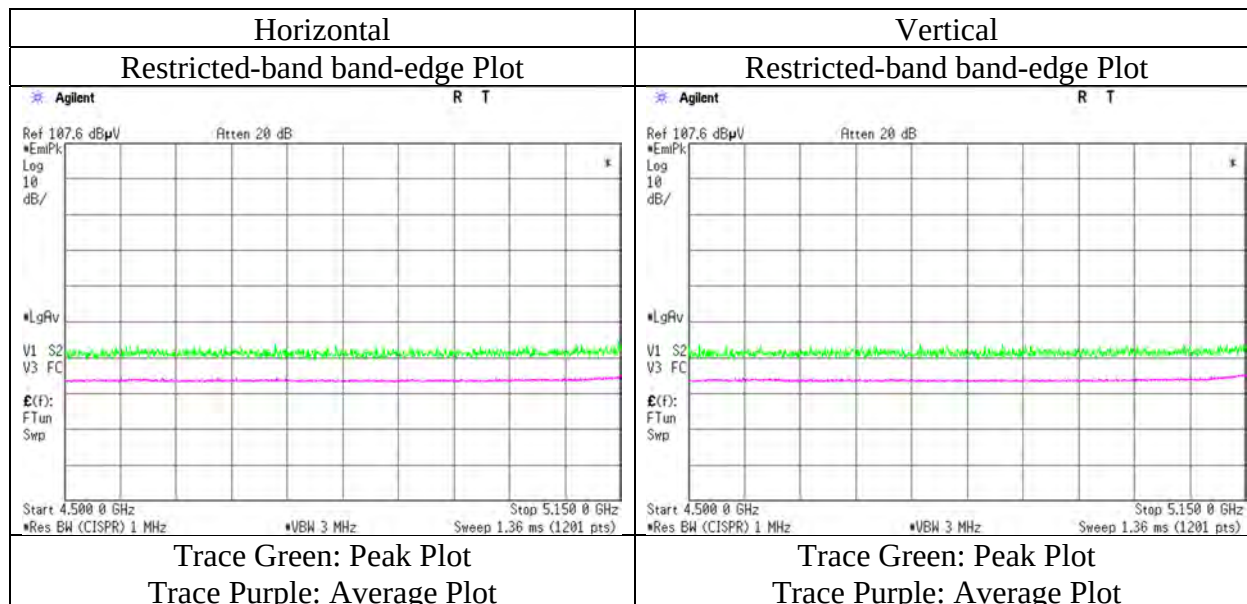
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	52.00	32.74	15.26	45.32	3.31	57.99	73.9	15.9	282	60	
Hori.	5150.000	AV	41.40	32.74	15.26	45.32	3.31	47.39	53.9	6.5	282	60	VBW: 4.3 kHz
Vert.	5150.000	PK	52.80	32.74	15.26	45.32	3.31	58.79	73.9	15.1	242	58	
Vert.	5150.000	AV	41.60	32.74	15.26	45.32	3.31	47.59	53.9	6.3	242	58	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5290 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

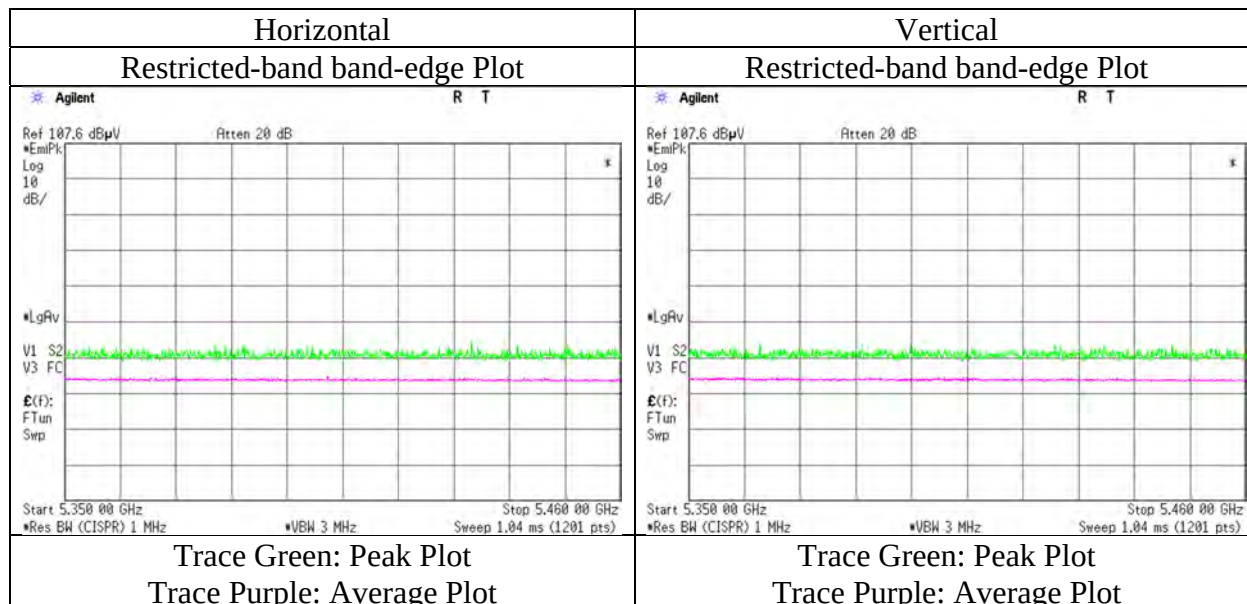
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.10	33.09	15.38	45.45	3.31	57.43	73.9	16.4	337	329	
Hori.	5350.000	AV	40.20	33.09	15.38	45.45	3.31	46.53	53.9	7.3	337	329	VBW: 4.3 kHz
Vert.	5350.000	PK	51.70	33.09	15.38	45.45	3.31	58.03	73.9	15.8	327	76	
Vert.	5350.000	AV	39.90	33.09	15.38	45.45	3.31	46.23	53.9	7.6	327	76	VBW: 4.3 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : 20log(4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Kashima EMC Lab.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5530 MHz with BLE 2440 MHz

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.70	33.29	15.44	45.47	3.31	58.27	73.9	15.6	400	354	VBW: 4.3 kHz
Hori.	5460.000	AV	41.30	33.29	15.44	45.47	3.31	47.87	53.9	6.0	400	354	
Vert.	5460.000	PK	52.00	33.29	15.44	45.47	3.31	58.57	73.9	15.3	367	96	VBW: 4.3 kHz
Vert.	5460.000	AV	41.10	33.29	15.44	45.47	3.31	47.67	53.9	6.2	367	96	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

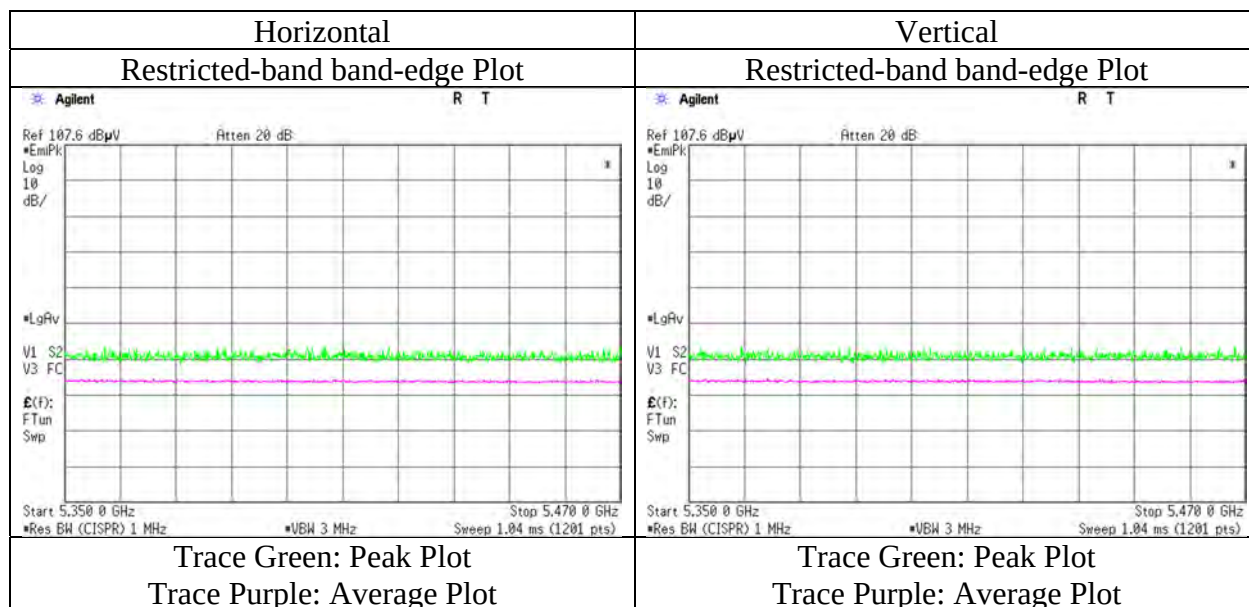
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.90	33.30	15.45	45.47	3.31	58.49	-36.73	-27.0	9.7	400	354	
Vert.	5470.000	PK	51.70	33.30	15.45	45.47	3.31	58.29	-36.93	-27.0	9.9	367	96	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])= $10\cdot\text{LOG} \left(\left(\{ 10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance:3[m]} \}^2 \right) / 30 \right) * 10^{\wedge} 3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(4.39\text{m} / 3.0\text{m}) = 3.31\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5610 MHz with BLE 2440 MHz

(Calculation) (above 1 GHz Outside of the restricted band)

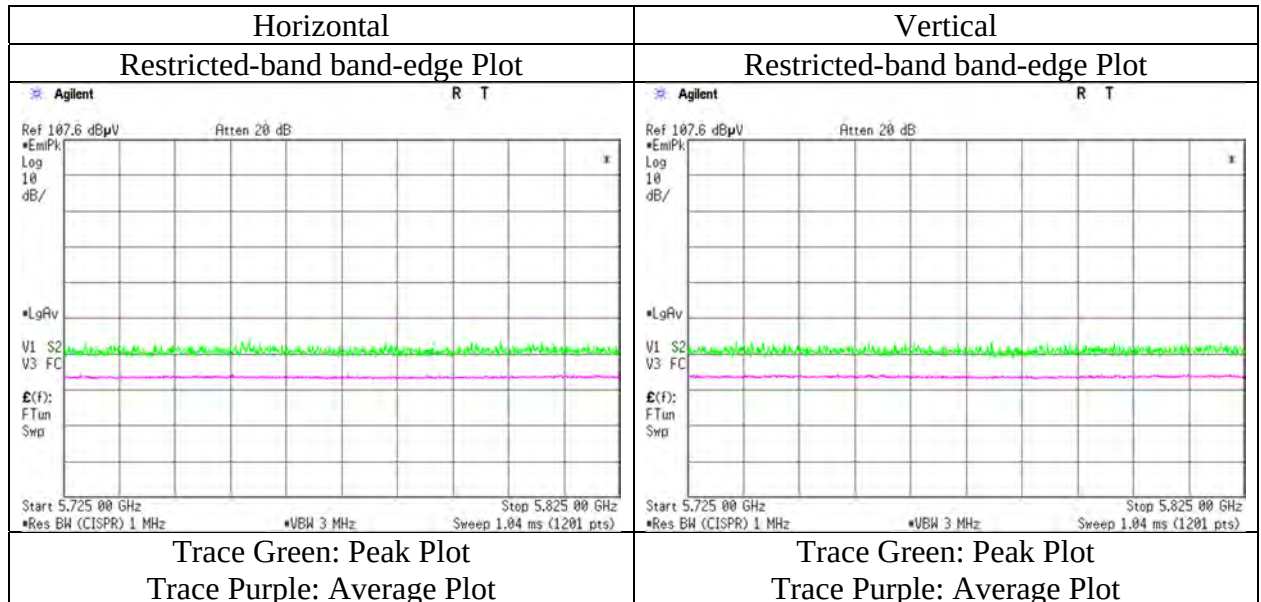
(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	50.60	33.77	15.58	45.41	3.31	57.85	-37.37	-27.00	10.3	171	79	
Vert.	5725.000	PK	51.90	33.77	15.58	45.41	3.31	59.15	-36.07	-27.00	9.0	400	86	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
 Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5775 MHz with BLE 2440 MHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result(EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.30	33.59	15.54	45.45	3.31	57.29	-37.93	-27.0	10.9	338	351	
Hori.	5700.000	PK	52.60	33.74	15.57	45.42	3.31	59.80	-35.42	10.0	45.4	338	351	
Hori.	5720.000	PK	51.80	33.76	15.58	45.41	3.31	59.04	-36.18	15.6	51.7	338	351	
Hori.	5725.000	PK	52.20	33.77	15.58	45.41	3.31	59.45	-35.77	27.0	62.7	338	351	
Hori.	5850.000	PK	50.60	34.28	15.63	45.36	3.31	58.46	-36.76	27.0	63.7	338	351	
Hori.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	338	351	
Hori.	5875.000	PK	50.70	34.49	15.65	45.34	3.31	58.81	-36.41	10.0	46.4	338	351	
Hori.	5925.000	PK	52.00	34.76	15.68	45.30	3.31	60.45	-34.77	-27.0	7.7	338	351	
Vert.	5650.000	PK	51.30	33.59	15.54	45.45	3.31	58.29	-36.93	-27.0	9.9	349	88	
Vert.	5700.000	PK	53.00	33.74	15.57	45.42	3.31	60.20	-35.02	10.0	45.0	349	88	
Vert.	5720.000	PK	52.70	33.76	15.58	45.41	3.31	59.94	-35.28	15.6	50.8	349	88	
Vert.	5725.000	PK	53.80	33.77	15.58	45.41	3.31	61.05	-34.17	27.0	61.1	349	88	
Vert.	5850.000	PK	51.40	34.28	15.63	45.36	3.31	59.26	-35.96	27.0	62.9	349	88	
Vert.	5855.000	PK	50.50	34.32	15.63	45.36	3.31	58.40	-36.82	15.6	52.4	349	88	
Vert.	5875.000	PK	50.50	34.49	15.65	45.34	3.31	58.61	-36.61	10.0	46.6	349	88	
Vert.	5925.000	PK	51.90	34.76	15.68	45.30	3.31	60.35	-34.87	-27.0	7.8	349	88	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 10 GHz : 20log (4.39m / 3.0 m) = 3.31 dB

UL Japan, Inc.

Kashima EMC Lab.

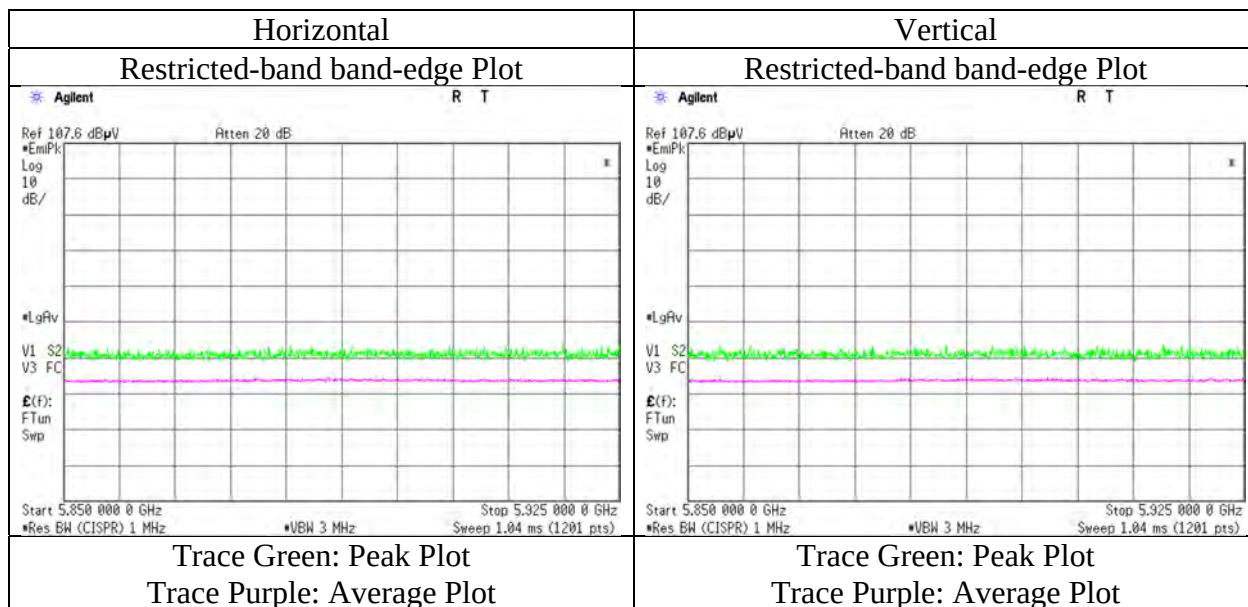
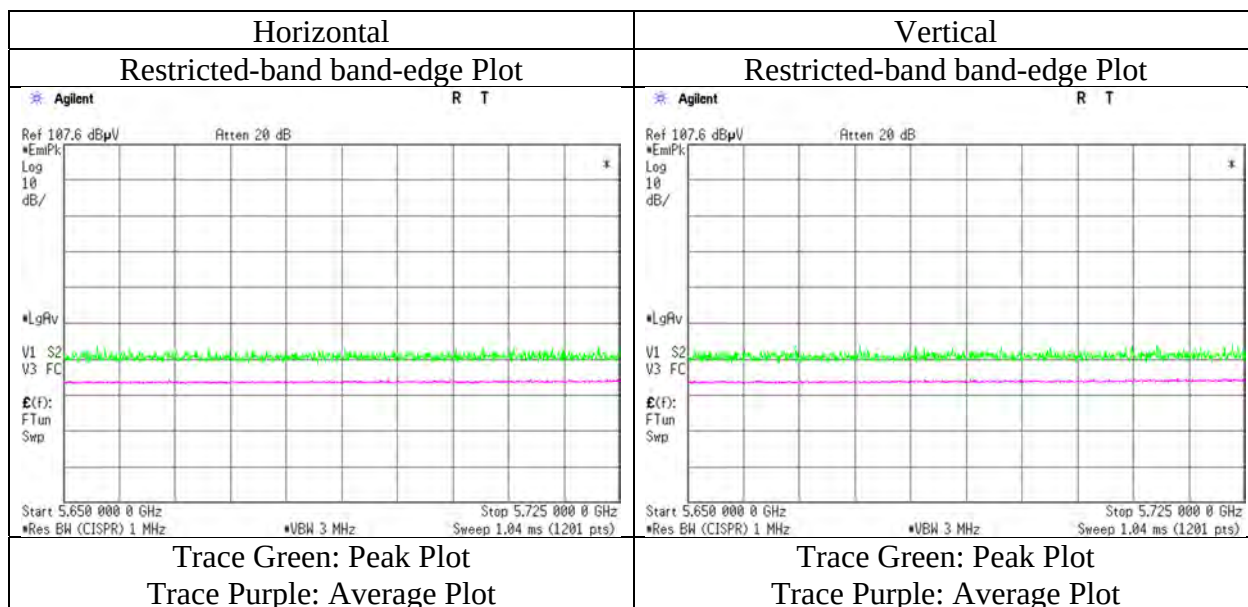
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Radiated Spurious Emission

Report No.	13977035M-C
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 15, 2021
Temperature / Humidity	20 deg. C / 41 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz - 6.4 GHz)
Mode	Tx 11ac-80 5775 MHz with BLE 2440 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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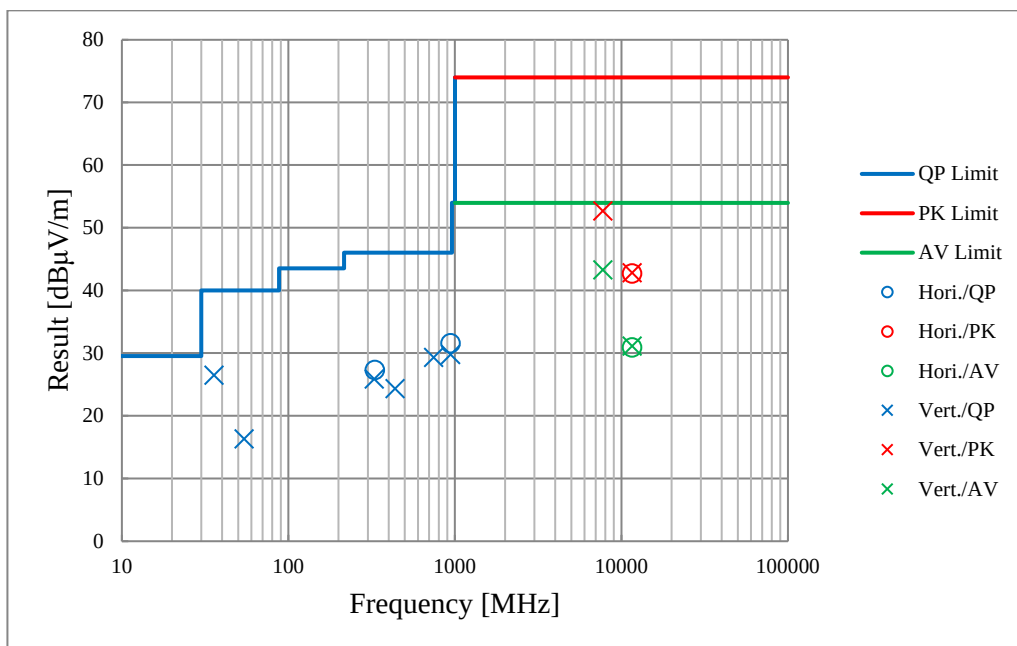
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Radiated Spurious Emission

(Plot data, Worst case mode for Maximum Conducted Output Power)

Report No.	13977035M-C					
Test place	Kashima EMC Lab.					
Semi Anechoic Chamber	No.11	No.10	No.11	No.11	No.11	No.11
Date	December 8, 2021	December 14, 2021	December 6, 2021	December 6, 2021	December 7, 2021	December 7, 2021
Temperature / Humidity	23 deg. C / 41 % RH	18 deg. C / 40 % RH	20 deg. C / 37 % RH	20 deg. C / 37 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Kazuhiro Ando	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz - 1 GHz)	(1 GHz - 6.4 GHz)	(6.4 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5785 MHz with BLE 2440 MHz					



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

APPENDIX 2: Test instruments

Test equipment

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	CBL-08	143121	LOGBICON	Schwarzbeck Mess-Elektronik OHG	VULB 9168	343	2021/04/26	12
RE	CAT5-03	178806	5dB Fixed Atten.	Pasternack Enterprises	PE7047-5	none	2021/04/21	12
RE	CCC-S10-R3	143165	10 Site RE 3m System	UL Japan Inc.	none	none	2021/08/10	12
RE	CAF-28	183880	Pre-Amplifier	UL Japan Inc.	ZKL-2	001	2021/04/26	12
RE	CTR-09	144199	Test Receiver	Keysight Technologies Inc	N9038A	MY53290016	2021/07/16	12
RE	CCC-S11-R	143169	11Site RE 3m System	None	none(No.11 RE)	none	2021/11/06	12
RE	CBL-09	143122	LOGBICON	Schwarzbeck Mess-Elektronik OHG	VULB 9168	508	2021/04/19	12
RE	CAT5-04	178807	5dB Fixed Atten.	Pasternack Enterprises	PE7047-5	none	2021/04/21	12
RE	CAF-16	142936	Pre-Amplifier	SONOMA INSTRUMENT	310N	325015	2021/05/27	12
RE	CTR-01	144193	Test Receiver	Rohde & Schwarz	ESU40	100426	2021/04/23	12
RE(GHz)	CHA-24	143455	Double Ridged Wave Guide	ETS-Lindgren (Cedar Park, Texas)	3115	00204569	2021/02/06	12
RE(GHz)	CAF-18	142908	Pre-Amplifier	TOYO	TPA0118-36	A-1001	2021/02/08	12
RE(GHz)	CAF-22	142940	Pre-Amplifier	Micro Wave Factory	MPR-1G26.5-35	161399	2021/06/11	12
RE(GHz)	CCC-G16	192243	Microwave Cable	Huber+Suhner	SF104/11N /11PC35/8000MM	808995/4	2021/01/19	12
RE(GHz)	CCC-G13	171928	Microwave Cable	Huber+Suhner	SF102/SKm/1000mm	801389/2	2021/08/03	12
RE(GHz)	CAT10-17	143023	10dB Fixed Atten.	Weinschel - API Technologies Corp	54A-10	56251	2021/05/14	12
RE(GHz)	CHF-05	143443	HPF	MICRO-TRONICS	HPM50112-02	006	2021/05/14	12
RE(GHz)	CSA-07	143643	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY52490024	2021/06/08	12
RE(GHz)	CTR-01	144193	Test Receiver	Rohde & Schwarz	ESU40	100426	2021/04/23	12
RE(GHz)	CHA-07	143438	Double Ridged Horn	ETS-Lindgren (Cedar Park, Texas)	3160-09	00166043	2021/06/05	12
RE(GHz)	CAF-19	142937	Pre-Amplifier	TOYO	HAP18-26W	00000035	2021/06/23	12
RE(GHz)	CCC-W09	143113	Micro Wave Cable	Suhner	SUCOFLEX104	MY588/4	2021/08/03	12
RE(GHz)	TSA-01	143642	Spectrum Analyzer	Keysight Technologies Inc	N9030A	MY53310670 Version A.13.12	2021/05/24	12
RE(GHz)	CHA-28	146356	Horn Antenna	ETS-Lindgren	3116	46543	2021/02/09	12
RE(GHz)	KAF-06	144880	Pre Amplifier	TSJ (Techno Science Japan)	MLA-1840B02-35	-	2021/04/08	12
RE(GHz)	CCC-W10	142992	Micro Wave Cable	Suhner	SUCOFLEX102	MY010/2A	2021/08/03	12
RE(GHz)	CCC-W01	143109	Micro Wave Cable	Suhner	SUCOFLEX102	MY3662/2	2021/05/27	12
RE	CSCL-12	143653	Ruler	TAJIMA	L19-55	none	-	-
RE	COS-10	143542	Temperature & Humidity Indicator	HIOKI E.E. CORPORATION	3641/9680-50	090999895 /090905406	2021/06/24	12
RE	CBM-10	143133	Barometer	Sunoh	SBR-151	001439	2021/11/24	36
RE	CTS-14	144216	Digital Multimeter	Fluke Corporation	115	994460954	2021/10/20	12
RE	CSCL-16	143655	Ruler	TAJIMA	G3 gold	none	-	-
RE	COS-26	200033	Temperature & Humidity Logger	HIOKI E.E. CORPORATION	LR5001/LR9504	200636447 /200699543	2021/07/20	12
RE	CTS-13	144215	Digital Multimeter	Fluke Corporation	FLK-83-V	14610320	2021/10/20	12
RE	CBM-02	143125	Barometer	OTA	No.11	15408	2021/11/24	36
RE	COTS-CEMI-03	178804	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3 (RE,CE,ME,PE)	Ver 3.1.0484	-	-

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***Hyphens for Last Calibration 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.

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

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

Test item:

RE: Radiated Emission