



RADIO TEST REPORT

Test Report No. : 13977035M-B-R2

Applicant : ALPS ALPINE CO., LTD.
Type of EUT : Head unit
Model Number of EUT : AH00ICB
FCC ID : A269ZUA165
Test regulation : FCC Part 15 Subpart C: 2021
* Bluetooth BR/EDR part
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-B-R1. 13977035M-B-R1 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 25 to December 20, 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-B

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13977035M-B	January 31, 2022	-	-
1	13977035M-B-R1	February 2, 2022	P.7	Modify the value of worst margin from 14.4 dB, 35.645 MHz, QP, Ver. to 13.8 dB, 2483.500 MHz, AV, Hori.
2	13977035M-B-R2	March 15, 2022	P.14	Add the following description; * This Burst rate confirmation data is quoted from the data of Report No.13977035S-B (Antenna Terminal Conducted Tests).

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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 C
FCC Part 15 final revised on May 3, 2021 and effective July 2, 2021

Title : FCC 47 CFR Part 15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz,
and 5725-5850 MHz

* 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 & Band Edge Compliance	FCC: KDB 558074 D01 15.247 Meas Guidance v05r02 ISED: RSS-Gen 6.13	FCC: Section 15.247(d) ISED: RSS-247 5.5 RSS-Gen 8.9 RSS-Gen 8.10	13.8 dB 2483.500 MHz, AV, Hori.	Complied a)	Radiated (above 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 section 15.247(d). 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 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)

Bluetooth (BT): Transmitting (Tx), Payload: PRBS9

Details of Operating Mode(s)

Test Item	Mode	Tested Antenna	Tested frequency
Spurious Emission (Radiated)	Tx (Hopping Off) DH5, 3DH5	Chain 2	2402 MHz 2441 MHz 2480 MHz
	Tx (Hopping Off) DH5 with Tx 11a 5785 MHz	Chain 2	2402 MHz *1) 2480 MHz *1)
	Tx (Hopping Off) 3DH5 with Tx 11a 5785 MHz	Chain 2	2402 MHz *1) 2441 MHz 2480 MHz *1)

*As a result of preliminary test, the formal test was performed with the above modes, which had the maximum payload length (except Dwell time test)

*2DH mode (2Mb/s EDR: pi/4DQPSK) was excluded for other tests than power measurement by using 3DH mode (3 Mb/s EDR: 8DPSK) as a representative.

* It is considered that the non-tested packet type (e.g. inquiry) can be omitted as it is complied with above all the test items based on Bluetooth Core specification.

*EUT has the power settings by the software as follows;

Power settings: 8 (setting value)

Software: QRCT (Qualcomm Radio Control Toolkit) v4.0.00195.0
(Date: 2021.10.19, Storage location: Driven by connected PC)

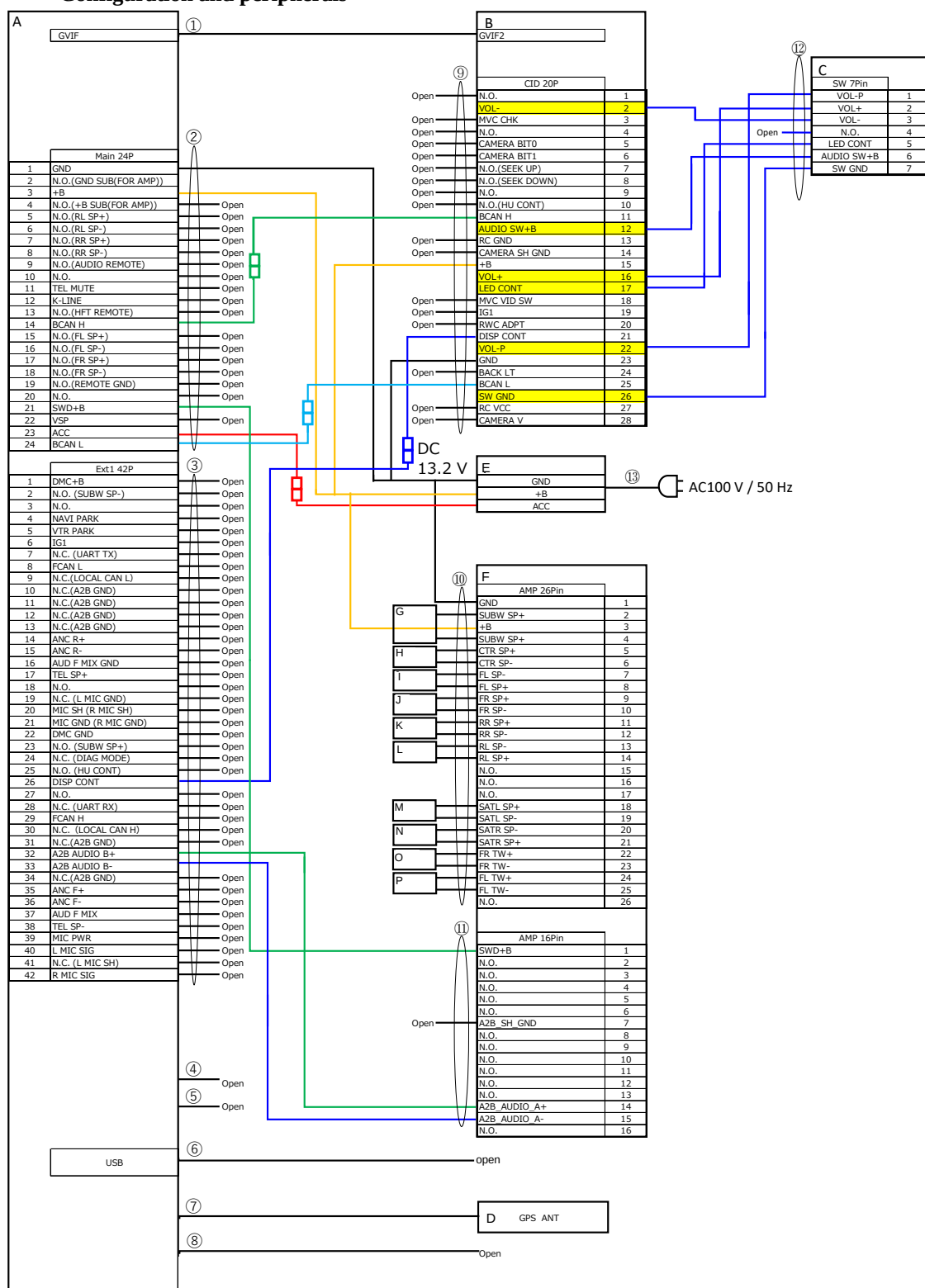
*This setting of software is the worst case.

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.

*1) Band-edge only

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

Test Procedure

[For below 1 GHz]

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

[For above 1 GHz]

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.

Test Antennas are used as below;

Frequency	Below 1 GHz	Above 1 GHz
Antenna Type	Hybrid	Horn

In any 100 kHz bandwidth outside the restricted band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

20 dBc was applied to the frequency over the limit of FCC 15.209 / Table 4 of RSS-Gen 8.9 (ISED) and outside the restricted band of FCC15.205 / Table 6 of RSS-Gen 8.10 (ISED).

Frequency	Below 1 GHz	Above 1 GHz		20 dBc
Instrument used	Test Receiver	Spectrum Analyzer		Spectrum Analyzer
Detector	QP	PK	AV *1)	PK
IF Bandwidth	BW 120 kHz	RBW: 1 MHz VBW: 3 MHz	RBW: 1 MHz VBW: 1/T (T: burst length, refer to Burst rate confirmation sheet) Detector: Peak	RBW: 100 kHz VBW: 300 kHz

*1) Average Power Measurement was performed based on KDB 558074 D01 15.247 Meas Guidance v05r02.

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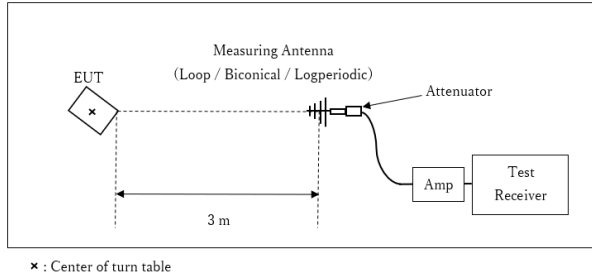
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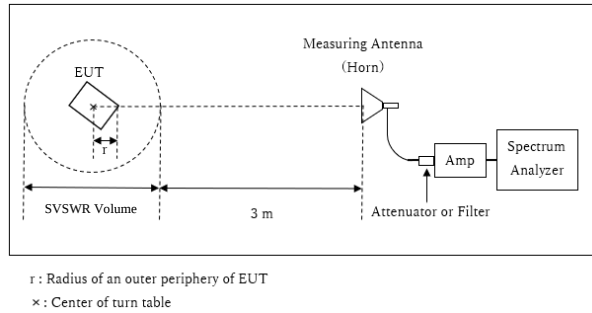
Figure 1: Test Setup

Below 1 GHz



Test Distance: 3 m

1 GHz to 10 GHz



[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.
 $r = 0.11 \text{ m}$

[No.11 Test site]

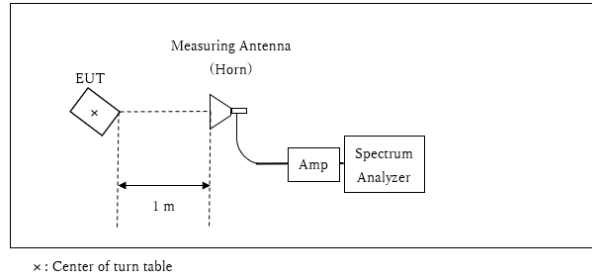
Distance Factor: $20 \times \log (3.89 \text{ m} / 3 \text{ m}) = 2.26 \text{ dB}$

*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.
 $r = 0.11 \text{ m}$

10 GHz to 26.5 GHz



Distance Factor: $20 \times \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

*Test Distance: 1 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 - 26.5 GHz
Test data	: APPENDIX
Test result	: Pass

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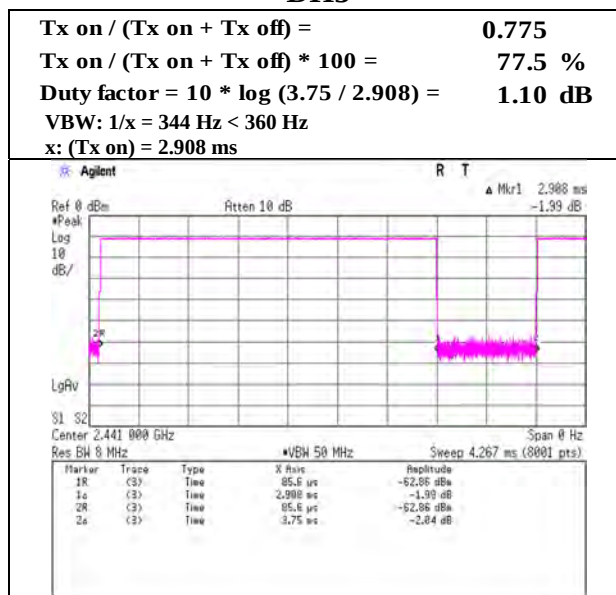
Facsimile : +81 478 82 3373

APPENDIX 1: Test data

Burst Rate Confirmation

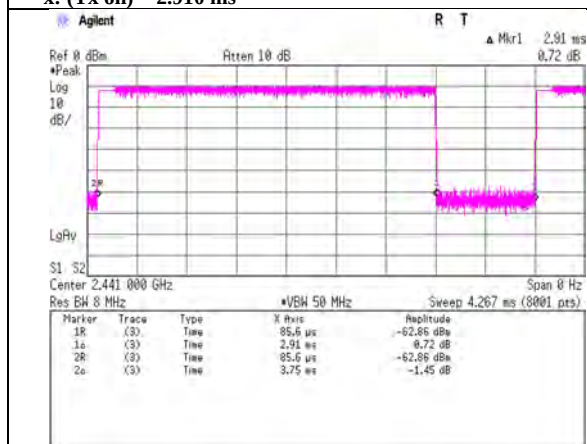
Report No.	13977035M-B
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 25, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Kenichi Adachi
Mode	Tx, Hopping Off

DH5



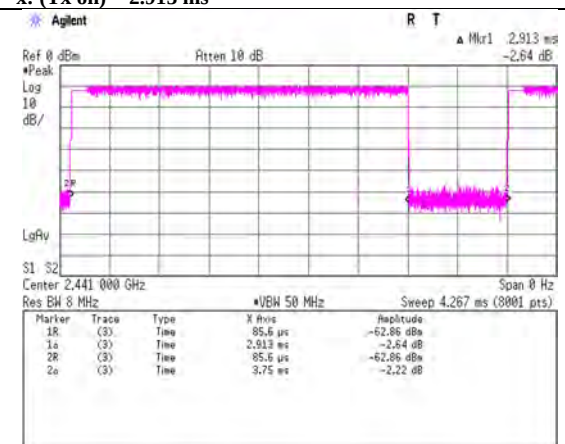
2DH5

Tx on / (Tx on + Tx off) =	0.776
Tx on / (Tx on + Tx off) * 100 =	77.6 %
Duty factor = 10 * log (3.75 / 2.91) =	1.10 dB
VBW: 1/x = 344 Hz < 360 Hz	
x: (Tx on) = 2.910 ms	



3DH5

Tx on / (Tx on + Tx off) =	0.777
Tx on / (Tx on + Tx off) * 100 =	77.7 %
Duty factor = 10 * log (3.75 / 2.913) =	1.10 dB
VBW: 1/x = 343 Hz < 360 Hz	
x: (Tx on) = 2.913 ms	



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

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Radiated Spurious Emission

Report No.	13977035M-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, DH5 2402 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	312.721	QP	36.98	13.85	8.86	31.34	0.00	28.35	46.0	17.6	100	197	
Hori.	429.762	QP	34.46	16.55	9.77	31.26	0.00	29.52	46.0	16.4	100	142	
Hori.	2390.000	PK	46.20	27.61	13.54	41.42	3.31	49.24	73.9	24.6	311	291	
Hori.	4804.000	PK	47.90	32.69	5.57	41.17	2.26	47.25	73.9	26.6	150	0	Floor noise
Hori.	7206.000	PK	45.00	37.26	6.90	39.72	2.26	51.70	73.9	22.2	150	0	Floor noise
Hori.	9608.000	PK	43.00	38.09	7.76	38.54	2.26	52.57	73.9	21.3	150	0	Floor noise
Hori.	2390.000	AV	34.80	27.61	13.54	41.42	3.31	37.84	53.9	16.0	311	291	VBW: 360 Hz
Hori.	4804.000	AV	36.00	32.69	5.57	41.17	2.26	35.35	53.9	18.5	150	0	Floor noise
Hori.	7206.000	AV	33.70	37.26	6.90	39.72	2.26	40.40	53.9	13.5	150	0	Floor noise
Hori.	9608.000	AV	32.10	38.09	7.76	38.54	2.26	41.67	53.9	12.2	150	0	Floor noise
Vert.	35.675	QP	35.67	12.74	5.97	31.64	0.00	22.74	40.0	17.2	100	249	
Vert.	43.748	QP	30.57	13.58	6.11	31.63	0.00	18.63	40.0	21.3	100	245	
Vert.	310.917	QP	35.83	13.80	8.84	31.34	0.00	27.13	46.0	18.8	100	257	
Vert.	358.143	QP	34.80	14.58	9.33	31.31	0.00	27.40	46.0	18.6	100	155	
Vert.	742.258	QP	27.77	21.76	11.31	31.01	0.00	29.83	46.0	16.1	100	14	
Vert.	944.333	QP	26.04	23.94	12.23	30.89	0.00	31.32	46.0	14.6	100	17	
Vert.	2390.000	PK	46.10	27.61	13.54	41.42	3.31	49.14	73.9	24.7	149	325	
Vert.	4804.000	PK	47.40	32.69	5.57	41.17	2.26	46.75	73.9	27.1	150	0	Floor noise
Vert.	7206.000	PK	45.60	37.26	6.90	39.72	2.26	52.30	73.9	21.6	150	0	Floor noise
Vert.	9608.000	PK	42.50	38.09	7.76	38.54	2.26	52.07	73.9	21.8	150	0	Floor noise
Vert.	2390.000	AV	34.90	27.61	13.54	41.42	3.31	37.94	53.9	15.9	149	325	VBW: 360 Hz
Vert.	4804.000	AV	36.10	32.69	5.57	41.17	2.26	35.45	53.9	18.4	150	0	Floor noise
Vert.	7206.000	AV	33.80	37.26	6.90	39.72	2.26	40.50	53.9	13.4	150	0	Floor noise
Vert.	9608.000	AV	31.90	38.09	7.76	38.54	2.26	41.47	53.9	12.4	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

20 dBc Data Sheet (RBW 100 kHz, VBW 300 kHz)

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]	Remark
Hori.	2402.000	PK	92.30	27.61	13.55	41.42	3.31	95.35	-	-	Carrier
Hori.	2400.000	PK	38.63	27.60	13.55	41.42	3.31	41.67	75.35	33.6	
Vert.	2402.000	PK	93.60	27.61	13.55	41.42	3.31	96.65	-	-	Carrier
Vert.	2400.000	PK	38.00	27.60	13.55	41.42	3.31	41.04	76.65	35.6	

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

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

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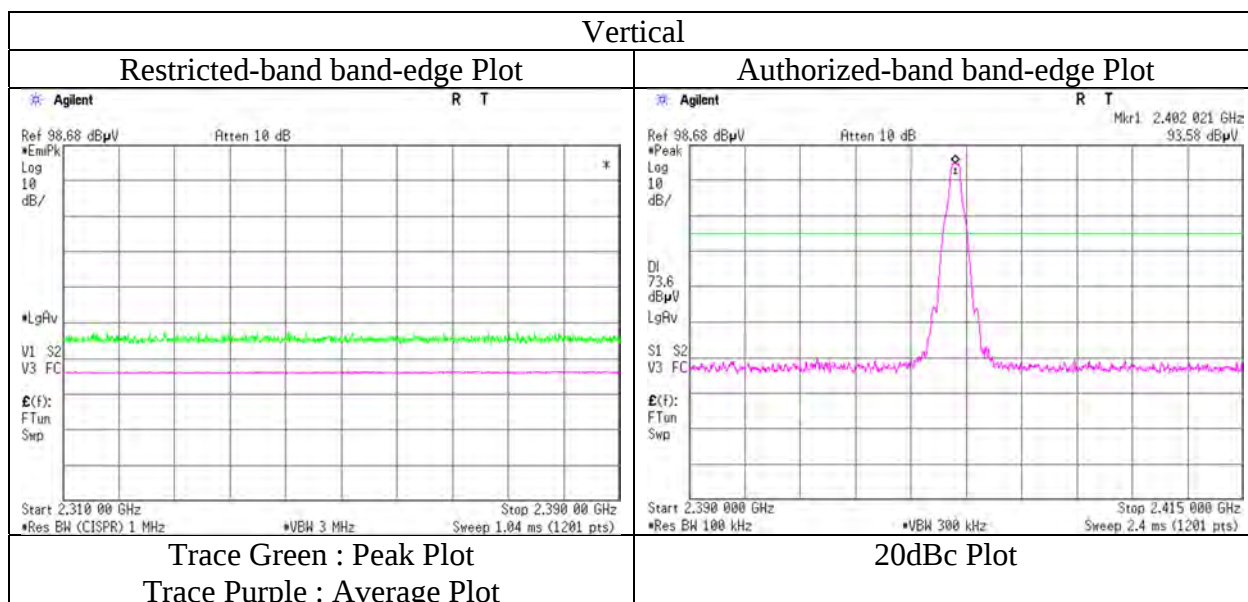
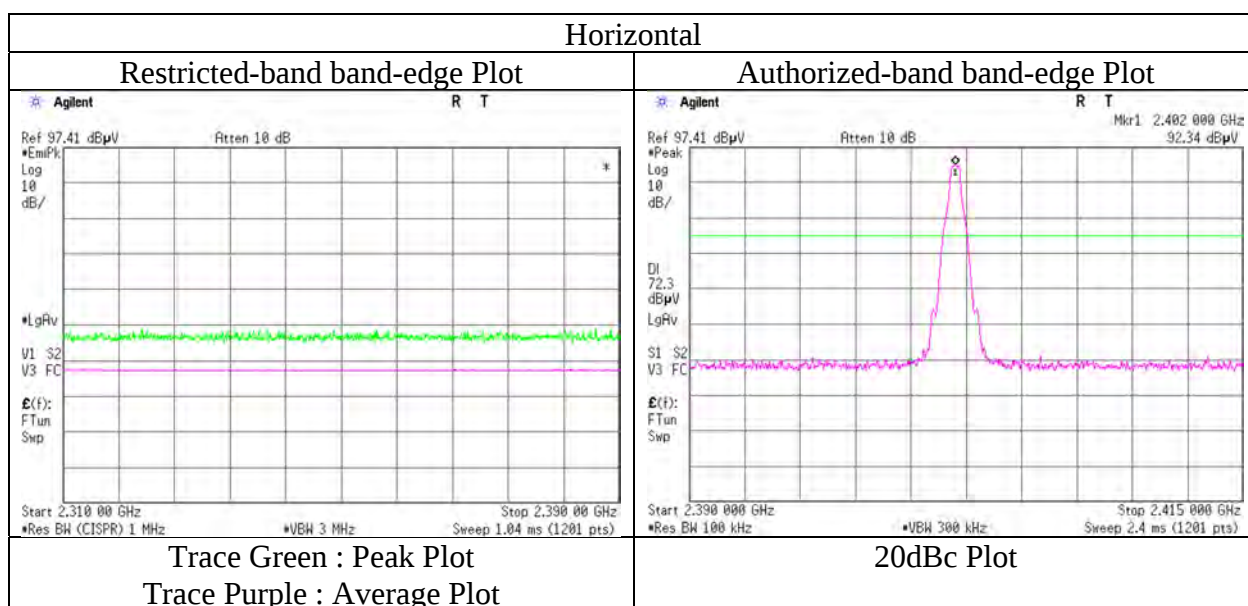
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Radiated Spurious Emission (Reference Plot for band-edge)

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 9, 2021
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, DH5 2402 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-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, DH5 2441 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	302.241	QP	35.77	13.52	8.74	31.35	0.00	26.68	46.0	19.3	100	192	
Hori.	364.820	QP	34.77	14.79	9.37	31.31	0.00	27.62	46.0	18.3	100	302	
Hori.	4882.000	PK	46.50	32.62	5.62	41.18	2.26	45.82	73.9	28.0	150	0	Floor noise
Hori.	7323.000	PK	45.60	37.54	6.93	39.66	2.26	52.67	73.9	21.2	150	0	Floor noise
Hori.	9764.000	PK	44.50	38.09	7.81	38.41	2.26	54.25	73.9	19.6	150	0	Floor noise
Hori.	4882.000	AV	34.90	32.62	5.62	41.18	2.26	34.22	53.9	19.6	150	0	Floor noise
Hori.	7323.000	AV	32.90	37.54	6.93	39.66	2.26	39.97	53.9	13.9	150	0	Floor noise
Hori.	9764.000	AV	31.90	38.09	7.81	38.41	2.26	41.65	53.9	12.2	150	0	Floor noise
Vert.	35.678	QP	35.67	12.74	5.97	31.64	0.00	22.74	40.0	17.2	100	249	
Vert.	42.688	QP	32.61	13.42	6.09	31.63	0.00	20.49	40.0	19.5	100	259	
Vert.	312.224	QP	35.81	13.84	8.85	31.34	0.00	27.16	46.0	18.8	100	255	
Vert.	357.422	QP	34.88	14.56	9.33	31.31	0.00	27.46	46.0	18.5	100	252	
Vert.	742.233	QP	27.71	21.76	11.31	31.01	0.00	29.77	46.0	16.2	100	12	
Vert.	944.842	QP	26.05	23.94	12.24	30.89	0.00	31.34	46.0	14.6	100	14	
Vert.	4882.000	PK	47.50	32.62	5.62	41.18	2.26	46.82	73.9	27.0	150	0	Floor noise
Vert.	7323.000	PK	44.70	37.54	6.93	39.66	2.26	51.77	73.9	22.1	150	0	Floor noise
Vert.	9764.000	PK	43.80	38.09	7.81	38.41	2.26	53.55	73.9	20.3	150	0	Floor noise
Vert.	4882.000	AV	34.80	32.62	5.62	41.18	2.26	34.12	53.9	19.7	150	0	Floor noise
Vert.	7323.000	AV	32.90	37.54	6.93	39.66	2.26	39.97	53.9	13.9	150	0	Floor noise
Vert.	9764.000	AV	31.70	38.09	7.81	38.41	2.26	41.45	53.9	12.4	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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Radiated Spurious Emission

Report No.	13977035M-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, DH5 2480 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	306.182	QP	35.36	13.65	8.78	31.35	0.00	26.44	46.0	19.5	100	161	
Hori.	405.016	QP	32.25	15.66	9.60	31.27	0.00	26.24	46.0	19.7	100	178	
Hori.	2483.500	PK	47.20	28.01	13.61	41.40	3.31	50.73	73.9	23.1	142	56	
Hori.	4960.000	PK	48.40	32.69	5.67	41.18	2.26	47.84	73.9	26.0	150	0	Floor noise
Hori.	7440.000	PK	45.60	37.51	6.98	39.58	2.26	52.77	73.9	21.1	150	0	Floor noise
Hori.	9920.000	PK	43.70	38.26	7.87	38.27	2.26	53.82	73.9	20.0	150	0	Floor noise
Hori.	2483.500	AV	35.10	28.01	13.61	41.40	3.31	38.63	53.9	15.2	142	56	VBW: 360 Hz
Hori.	4960.000	AV	35.40	32.69	5.67	41.18	2.26	34.84	53.9	19.0	150	0	Floor noise
Hori.	7440.000	AV	33.50	37.51	6.98	39.58	2.26	40.67	53.9	13.2	150	0	Floor noise
Hori.	9920.000	AV	31.40	38.26	7.87	38.27	2.26	41.52	53.9	12.3	150	0	Floor noise
Vert.	35.671	QP	36.70	12.74	5.97	31.64	0.00	23.77	40.0	16.2	100	247	
Vert.	42.688	QP	32.00	13.42	6.09	31.63	0.00	19.88	40.0	20.1	100	248	
Vert.	312.218	QP	35.71	13.84	8.85	31.34	0.00	27.06	46.0	18.9	100	253	
Vert.	357.421	QP	34.72	14.56	9.33	31.31	0.00	27.30	46.0	18.7	100	257	
Vert.	740.213	QP	27.70	21.71	11.30	31.02	0.00	29.69	46.0	16.3	100	13	
Vert.	947.841	QP	26.15	23.99	12.25	30.89	0.00	31.50	46.0	14.5	100	14	
Vert.	2483.500	PK	47.30	28.01	13.61	41.40	3.31	50.83	73.9	23.0	143	314	
Vert.	4960.000	PK	47.40	32.69	5.67	41.18	2.26	46.84	73.9	27.0	150	0	Floor noise
Vert.	7440.000	PK	44.80	37.51	6.98	39.58	2.26	51.97	73.9	21.9	150	0	Floor noise
Vert.	9920.000	PK	43.30	38.26	7.87	38.27	2.26	53.42	73.9	20.4	150	0	Floor noise
Vert.	2483.500	AV	35.30	28.01	13.61	41.40	3.31	38.83	53.9	15.0	143	314	VBW: 360 Hz
Vert.	4960.000	AV	35.70	32.69	5.67	41.18	2.26	35.14	53.9	18.7	150	0	Floor noise
Vert.	7440.000	AV	33.40	37.51	6.98	39.58	2.26	40.57	53.9	13.3	150	0	Floor noise
Vert.	9920.000	AV	31.40	38.26	7.87	38.27	2.26	41.52	53.9	12.3	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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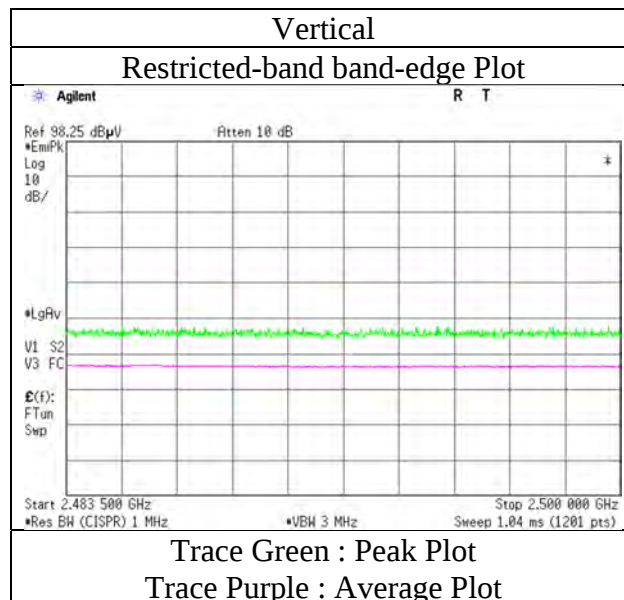
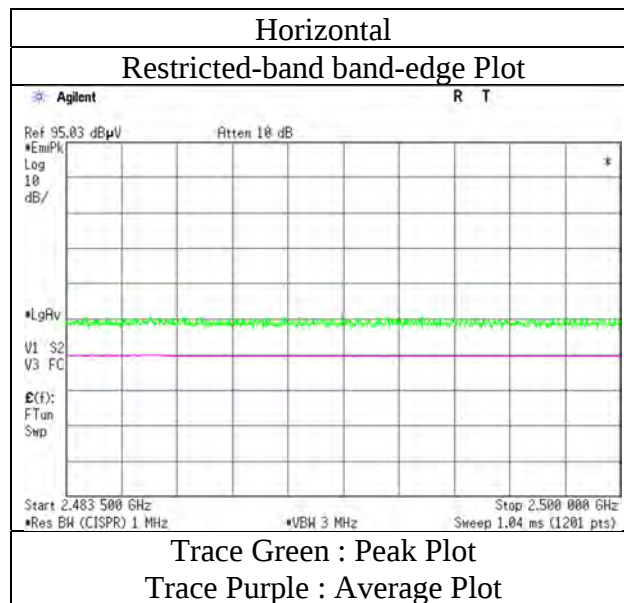
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Radiated Spurious Emission **(Reference Plot for band-edge)**

Report No. 13977035M-B
Test place Kashima EMC Lab.
Semi Anechoic Chamber No.10
Date November 9, 2021
Temperature / Humidity 24 deg. C / 54 % RH
Engineer Hiromitsu Tanabe
(1 GHz -2.8 GHz)
Mode Tx, Hopping Off, DH5 2480 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-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2402 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	312.522	QP	36.98	13.85	8.86	31.34	0.00	28.35	46.0	17.6	100	195	
Hori.	429.712	QP	34.46	16.55	9.77	31.26	0.00	29.52	46.0	16.4	100	139	
Hori.	2390.000	PK	47.00	27.61	13.54	41.42	3.31	50.04	73.9	23.8	308	292	
Hori.	4804.000	PK	47.00	32.69	5.57	41.17	2.26	46.35	73.9	27.5	150	0	Floor noise
Hori.	7206.000	PK	44.90	37.26	6.90	39.72	2.26	51.60	73.9	22.3	150	0	Floor noise
Hori.	9608.000	PK	43.10	38.09	7.76	38.54	2.26	52.67	73.9	21.2	150	0	Floor noise
Hori.	2390.000	AV	34.80	27.61	13.54	41.42	3.31	37.84	53.9	16.0	308	292	VBW: 360 Hz
Hori.	4804.000	AV	35.40	32.69	5.57	41.17	2.26	34.75	53.9	19.1	150	0	Floor noise
Hori.	7206.000	AV	33.40	37.26	6.90	39.72	2.26	40.10	53.9	13.8	150	0	Floor noise
Hori.	9608.000	AV	31.40	38.09	7.76	38.54	2.26	40.97	53.9	12.9	150	0	Floor noise
Vert.	35.664	QP	36.93	12.74	5.97	31.64	0.00	24.00	40.0	16.0	100	259	
Vert.	42.589	QP	31.96	13.42	6.09	31.63	0.00	19.84	40.0	20.1	100	243	
Vert.	302.692	QP	35.31	13.54	8.74	31.35	0.00	26.24	46.0	19.7	100	109	
Vert.	358.143	QP	34.70	14.58	9.33	31.31	0.00	27.30	46.0	18.7	100	155	
Vert.	742.248	QP	27.80	21.76	11.31	31.01	0.00	29.86	46.0	16.1	100	14	
Vert.	944.323	QP	26.05	23.94	12.23	30.89	0.00	31.33	46.0	14.6	100	17	
Vert.	2390.000	PK	46.60	27.61	13.54	41.42	3.31	49.64	73.9	24.2	145	324	
Vert.	4804.000	PK	47.40	32.69	5.57	41.17	2.26	46.75	73.9	27.1	150	0	Floor noise
Vert.	7206.000	PK	45.60	37.26	6.90	39.72	2.26	52.30	73.9	21.6	150	0	Floor noise
Vert.	9608.000	PK	43.60	38.09	7.76	38.54	2.26	53.17	73.9	20.7	150	0	Floor noise
Vert.	2390.000	AV	34.90	27.61	13.54	41.42	3.31	37.94	53.9	15.9	145	324	VBW: 360 Hz
Vert.	4804.000	AV	35.70	32.69	5.57	41.17	2.26	35.05	53.9	18.8	150	0	Floor noise
Vert.	7206.000	AV	33.30	37.26	6.90	39.72	2.26	40.00	53.9	13.9	150	0	Floor noise
Vert.	9608.000	AV	31.50	38.09	7.76	38.54	2.26	41.07	53.9	12.8	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

20 dBc Data Sheet (RBW 100 kHz, VBW 300 kHz)

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]	Remark
Hori.	2402.000	PK	90.50	27.61	13.55	41.42	3.31	93.55	-	-	Carrier
Hori.	2400.000	PK	37.30	27.60	13.55	41.42	3.31	40.34	73.55	33.2	
Vert.	2402.000	PK	92.00	27.61	13.55	41.42	3.31	95.05	-	-	Carrier
Vert.	2400.000	PK	37.50	27.60	13.55	41.42	3.31	40.54	75.05	34.5	

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

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

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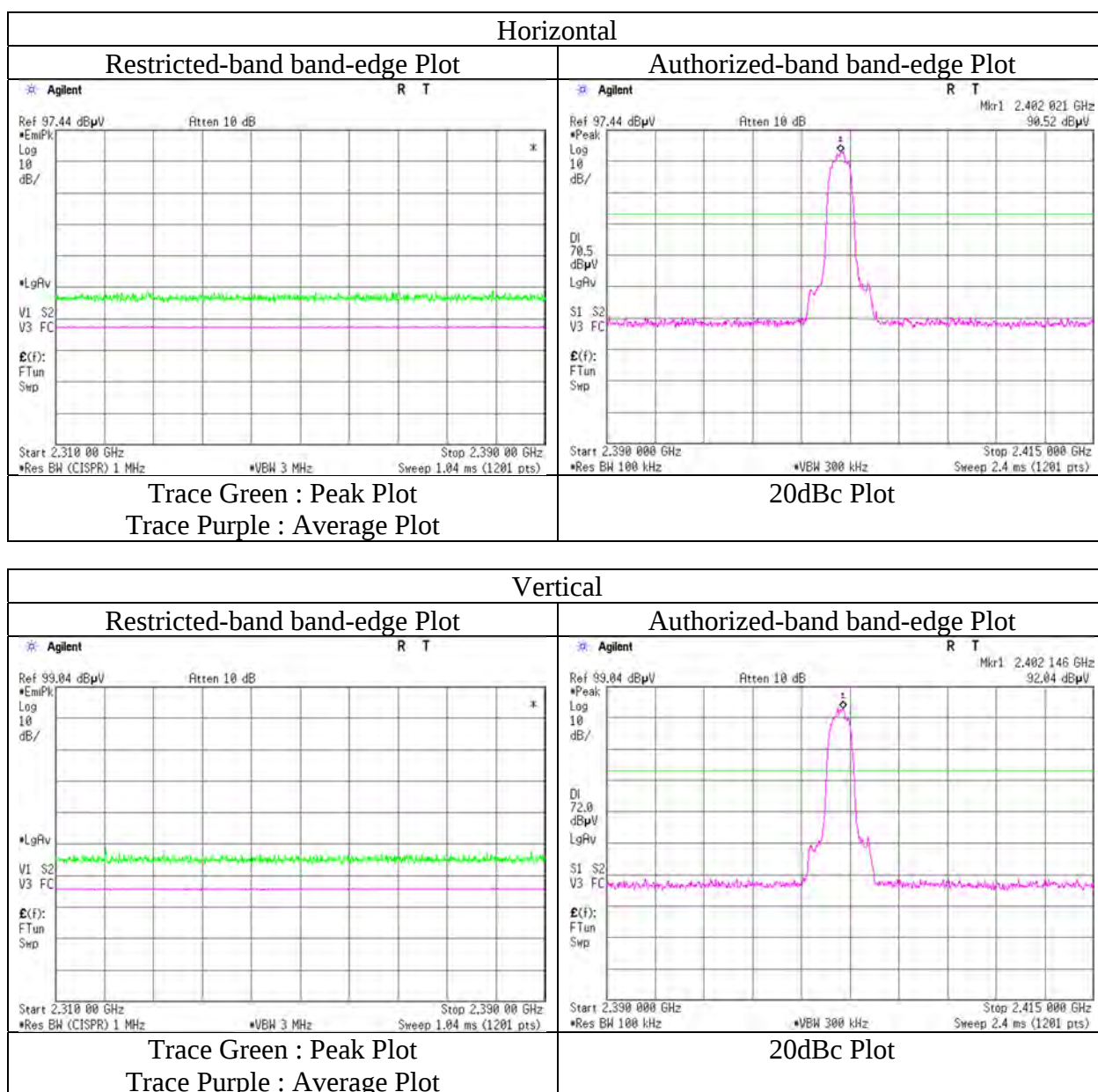
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

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Facsimile : +81 478 82 3373

Radiated Spurious Emission (Reference Plot for band-edge)

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 9, 2021
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, 3DH5 2402 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-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2441 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	312.881	QP	39.19	13.86	8.86	31.34	0.00	30.57	46.0	15.4	100	176	
Hori.	410.341	QP	33.75	15.80	9.63	31.27	0.00	27.91	46.0	18.0	100	294	
Hori.	4882.000	PK	46.40	32.62	5.62	41.18	2.26	45.72	73.9	28.1	150	0	Floor noise
Hori.	7323.000	PK	45.60	37.54	6.93	39.66	2.26	52.67	73.9	21.2	150	0	Floor noise
Hori.	9764.000	PK	43.30	38.09	7.81	38.41	2.26	53.05	73.9	20.8	150	0	Floor noise
Hori.	4882.000	AV	34.60	32.62	5.62	41.18	2.26	33.92	53.9	19.9	150	0	Floor noise
Hori.	7323.000	AV	33.10	37.54	6.93	39.66	2.26	40.17	53.9	13.7	150	0	Floor noise
Hori.	9764.000	AV	31.90	38.09	7.81	38.41	2.26	41.65	53.9	12.2	150	0	Floor noise
Vert.	35.681	QP	35.72	12.74	5.97	31.64	0.00	22.79	40.0	17.2	100	248	
Vert.	42.689	QP	32.62	13.42	6.09	31.63	0.00	20.50	40.0	19.5	100	258	
Vert.	312.226	QP	35.81	13.84	8.85	31.34	0.00	27.16	46.0	18.8	100	253	
Vert.	357.424	QP	34.90	14.56	9.33	31.31	0.00	27.48	46.0	18.5	100	248	
Vert.	742.242	QP	27.70	21.76	11.31	31.01	0.00	29.76	46.0	16.2	100	12	
Vert.	944.841	QP	26.05	23.94	12.24	30.89	0.00	31.34	46.0	14.6	100	14	
Vert.	4882.000	PK	46.40	32.62	5.62	41.18	2.26	45.72	73.9	28.1	150	0	Floor noise
Vert.	7323.000	PK	44.20	37.54	6.93	39.66	2.26	51.27	73.9	22.6	150	0	Floor noise
Vert.	9764.000	PK	43.40	38.09	7.81	38.41	2.26	53.15	73.9	20.7	150	0	Floor noise
Vert.	4882.000	AV	34.70	32.62	5.62	41.18	2.26	34.02	53.9	19.8	150	0	Floor noise
Vert.	7323.000	AV	33.10	37.54	6.93	39.66	2.26	40.17	53.9	13.7	150	0	Floor noise
Vert.	9764.000	AV	31.90	38.09	7.81	38.41	2.26	41.65	53.9	12.2	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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Radiated Spurious Emission

Report No.	13977035M-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2480 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	313.923	QP	39.12	13.89	8.87	31.34	0.00	30.54	46.0	15.4	100	292	
Hori.	400.011	QP	35.26	15.57	9.56	31.27	0.00	29.12	46.0	16.8	100	179	
Hori.	2483.500	PK	47.50	28.01	13.61	41.40	3.31	51.03	73.9	22.8	143	56	
Hori.	4960.000	PK	47.40	32.69	5.67	41.18	2.26	46.84	73.9	27.0	150	0	Floor noise
Hori.	7440.000	PK	45.00	37.51	6.98	39.58	2.26	52.17	73.9	21.7	150	0	Floor noise
Hori.	9920.000	PK	43.00	38.26	7.87	38.27	2.26	53.12	73.9	20.7	150	0	Floor noise
Hori.	2483.500	AV	35.00	28.01	13.61	41.40	3.31	38.53	53.9	15.3	143	56	VBW: 360 Hz
Hori.	4960.000	AV	35.50	32.69	5.67	41.18	2.26	34.94	53.9	18.9	150	0	Floor noise
Hori.	7440.000	AV	33.50	37.51	6.98	39.58	2.26	40.67	53.9	13.2	150	0	Floor noise
Hori.	9920.000	AV	31.50	38.26	7.87	38.27	2.26	41.62	53.9	12.2	150	0	Floor noise
Vert.	35.671	QP	36.60	12.74	5.97	31.64	0.00	23.67	40.0	16.3	100	244	
Vert.	42.689	QP	32.00	13.42	6.09	31.63	0.00	19.88	40.0	20.1	100	246	
Vert.	312.227	QP	35.70	13.84	8.85	31.34	0.00	27.05	46.0	18.9	100	250	
Vert.	357.413	QP	34.72	14.56	9.33	31.31	0.00	27.30	46.0	18.7	100	255	
Vert.	740.211	QP	27.70	21.71	11.30	31.02	0.00	29.69	46.0	16.3	100	12	
Vert.	947.834	QP	25.41	23.99	12.25	30.89	0.00	30.76	46.0	15.2	100	15	
Vert.	2483.500	PK	47.40	28.01	13.61	41.40	3.31	50.93	73.9	22.9	141	313	
Vert.	4960.000	PK	47.00	32.69	5.67	41.18	2.26	46.44	73.9	27.4	150	0	Floor noise
Vert.	7440.000	PK	45.20	37.51	6.98	39.58	2.26	52.37	73.9	21.5	150	0	Floor noise
Vert.	9920.000	PK	43.10	38.26	7.87	38.27	2.26	53.22	73.9	20.6	150	0	Floor noise
Vert.	2483.500	AV	35.10	28.01	13.61	41.40	3.31	38.63	53.9	15.2	141	313	VBW: 360 Hz
Vert.	4960.000	AV	35.70	32.69	5.67	41.18	2.26	35.14	53.9	18.7	150	0	Floor noise
Vert.	7440.000	AV	33.60	37.51	6.98	39.58	2.26	40.77	53.9	13.1	150	0	Floor noise
Vert.	9920.000	AV	31.40	38.26	7.87	38.27	2.26	41.52	53.9	12.3	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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Kashima EMC Lab.

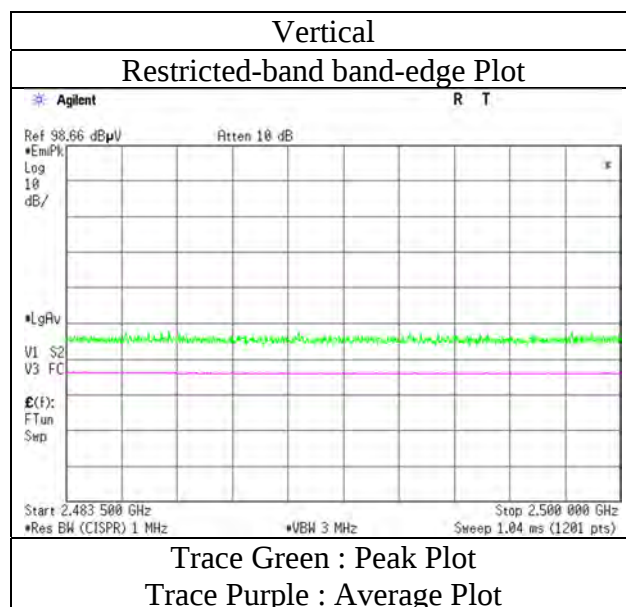
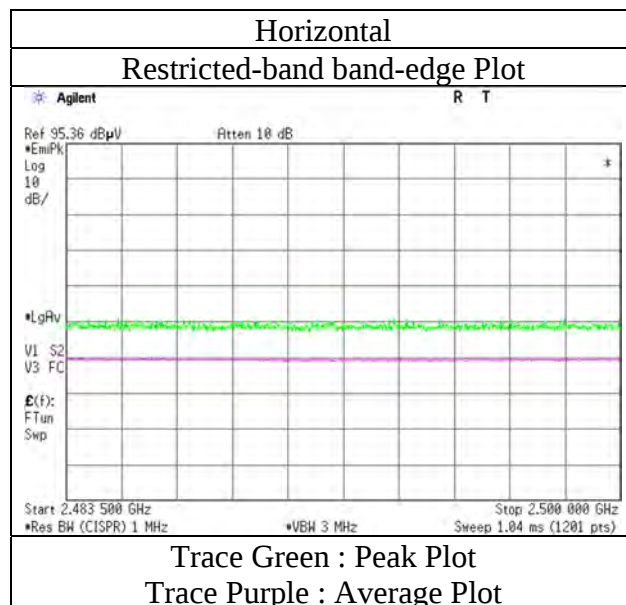
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Radiated Spurious Emission (Reference Plot for band-edge)

Report No. 13977035M-B
Test place Kashima EMC Lab.
Semi Anechoic Chamber No.10
Date November 9, 2021
Temperature / Humidity 24 deg. C / 54 % RH
Engineer Hiromitsu Tanabe
(1 GHz -2.8 GHz)
Mode Tx, Hopping Off, 3DH5 2480 MHz

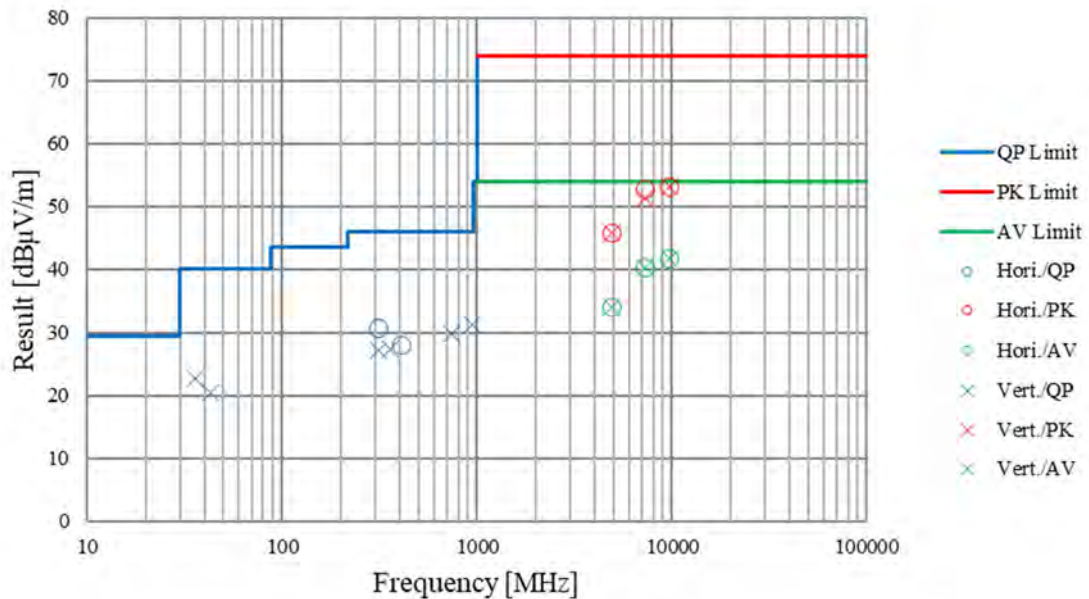


* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

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

Report No.	13977035M-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.10	No.10	No.11	No.11
Date	November 9, 2021	November 9, 2021	November 10, 2021	November 11, 2021
Temperature / Humidity	24 deg. C / 54 % RH	24 deg. C / 54 % RH	23 deg. C / 56 % RH	20 deg. C / 44 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -2.8 GHz)	(2.8 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2441 MHz			



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

Radiated Spurious Emission

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, DH5 2402 MHz with 11a 5785 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	2390.000	PK	49.90	27.61	13.54	43.88	3.31	50.48	73.9	23.4	297	60	VBW: 360 Hz
Hori.	2390.000	AV	37.90	27.61	13.54	43.88	3.31	38.48	53.9	15.4	297	60	
Vert.	2390.000	PK	50.00	27.61	13.54	43.88	3.31	50.58	73.9	23.3	147	322	
Vert.	2390.000	AV	37.70	27.61	13.54	43.88	3.31	38.28	53.9	15.6	147	322	

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

20 dBc Data Sheet (RBW 100 kHz, VBW 300 kHz)

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]	Remark
Hori.	2402.000	PK	94.20	27.61	13.55	43.88	3.31	94.79	-	-	Carrier
Hori.	2400.000	PK	39.50	27.60	13.55	43.88	3.31	40.08	74.79	34.7	
Vert.	2402.000	PK	95.10	27.61	13.55	43.88	3.31	95.69	-	-	Carrier
Vert.	2400.000	PK	41.40	27.60	13.55	43.88	3.31	41.98	75.69	33.7	

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

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

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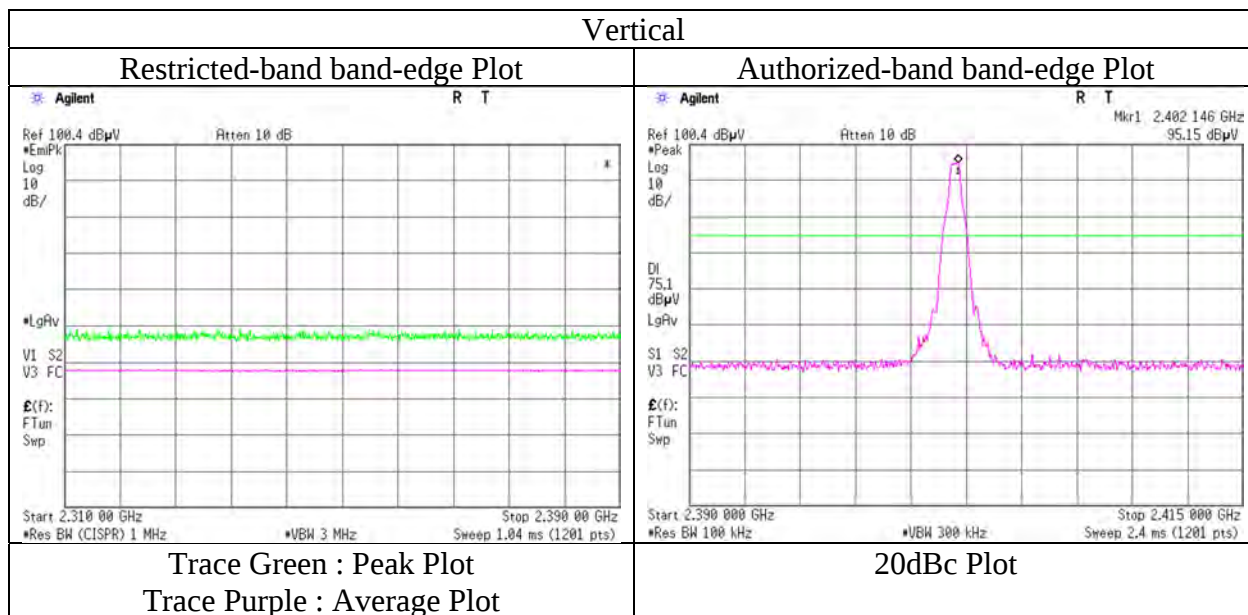
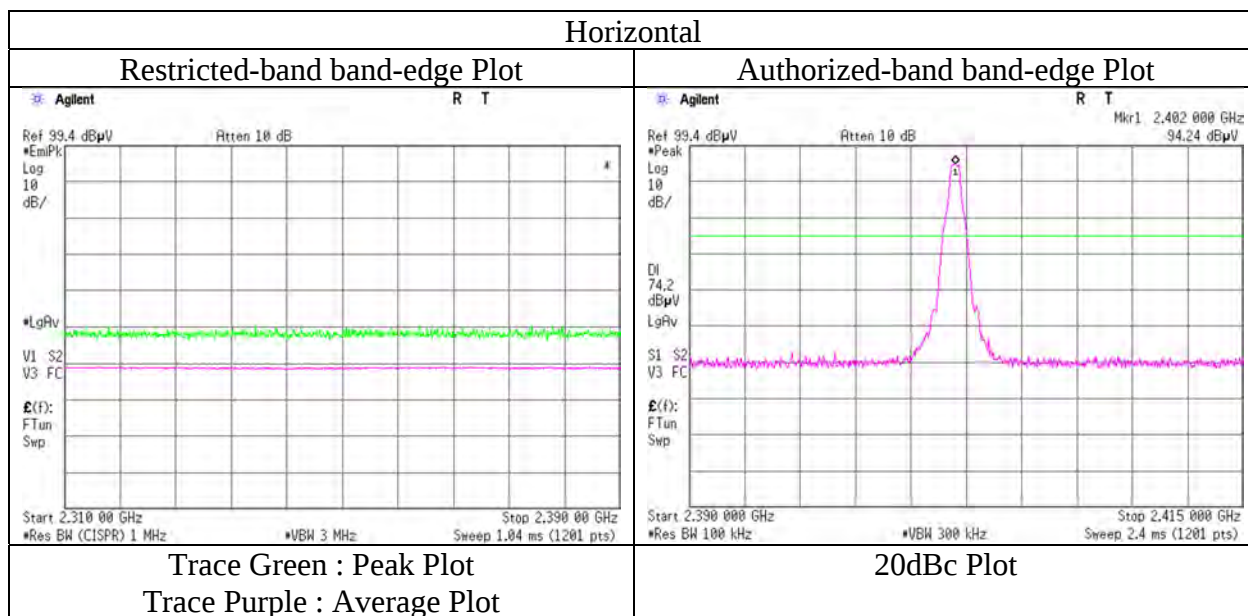
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Radiated Spurious Emission (Reference Plot for band-edge)

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, DH5 2402 MHz with 11a 5785 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-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, DH5 2480 MHz with 11a 5785 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	2483.500	PK	50.30	28.01	13.61	43.82	3.31	51.41	73.9	22.4	362	63	VBW: 360 Hz
Hori.	2483.500	AV	38.40	28.01	13.61	43.82	3.31	39.51	53.9	14.3	362	63	
Vert.	2483.500	PK	50.50	28.01	13.61	43.82	3.31	51.61	73.9	22.2	147	330	VBW: 360 Hz
Vert.	2483.500	AV	38.60	28.01	13.61	43.82	3.31	39.71	53.9	14.1	147	330	

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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Kashima EMC Lab.

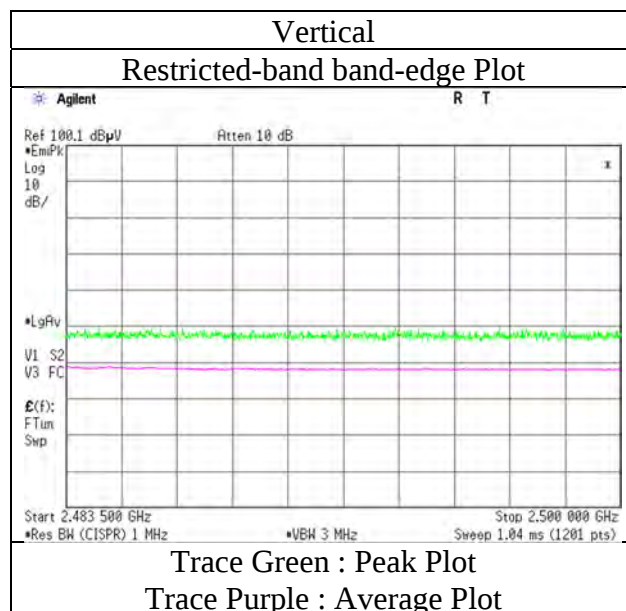
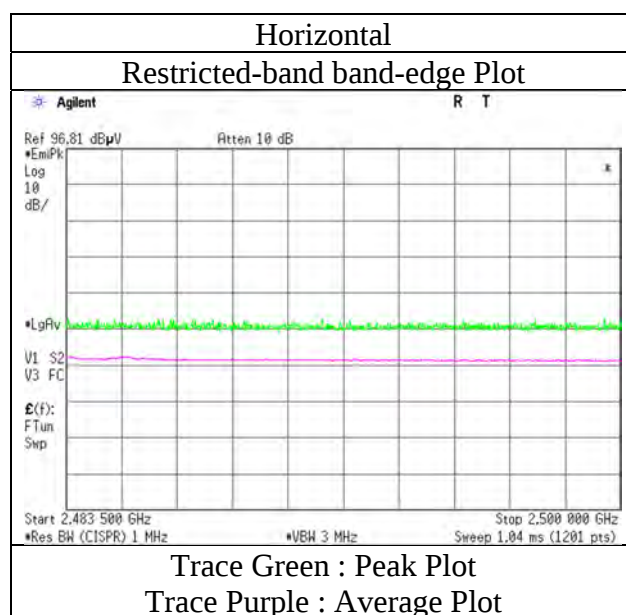
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Radiated Spurious Emission (Reference Plot for band-edge)

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe (1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, DH5 2480 MHz with 11a 5785 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-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, 3DH5 2402 MHz with 11a 5785 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	2390.000	PK	50.70	27.61	13.54	43.88	3.31	51.28	73.9	22.6	207	69	VBW: 360 Hz
Hori.	2390.000	AV	38.20	27.61	13.54	43.88	3.31	38.78	53.9	15.1	207	69	
Vert.	2390.000	PK	50.10	27.61	13.54	43.88	3.31	50.68	73.9	23.2	149	326	
Vert.	2390.000	AV	38.10	27.61	13.54	43.88	3.31	38.68	53.9	15.2	149	326	

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

20 dBc Data Sheet (RBW 100 kHz, VBW 300 kHz)

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]	Remark
Hori.	2402.000	PK	91.40	27.61	13.55	43.88	3.31	91.99	-	-	Carrier
Hori.	2400.000	PK	39.00	27.60	13.55	43.88	3.31	39.58	71.99	32.4	
Vert.	2402.000	PK	92.50	27.61	13.55	43.88	3.31	93.09	-	-	Carrier
Vert.	2400.000	PK	40.80	27.60	13.55	43.88	3.31	41.38	73.09	31.7	

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

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

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Kashima EMC Lab.

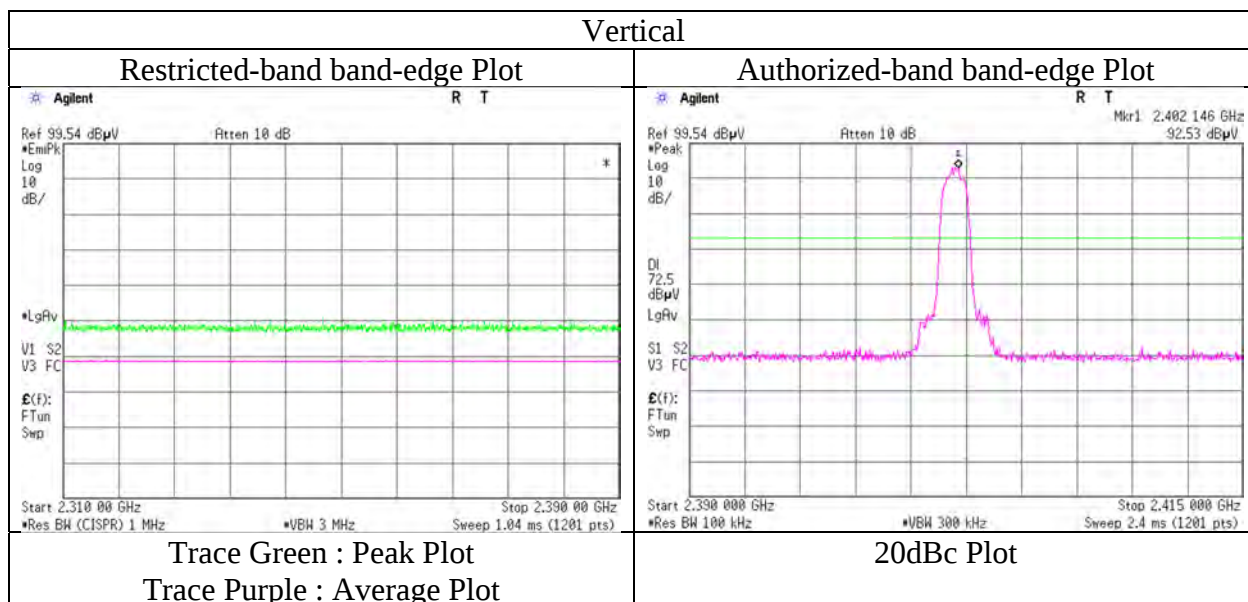
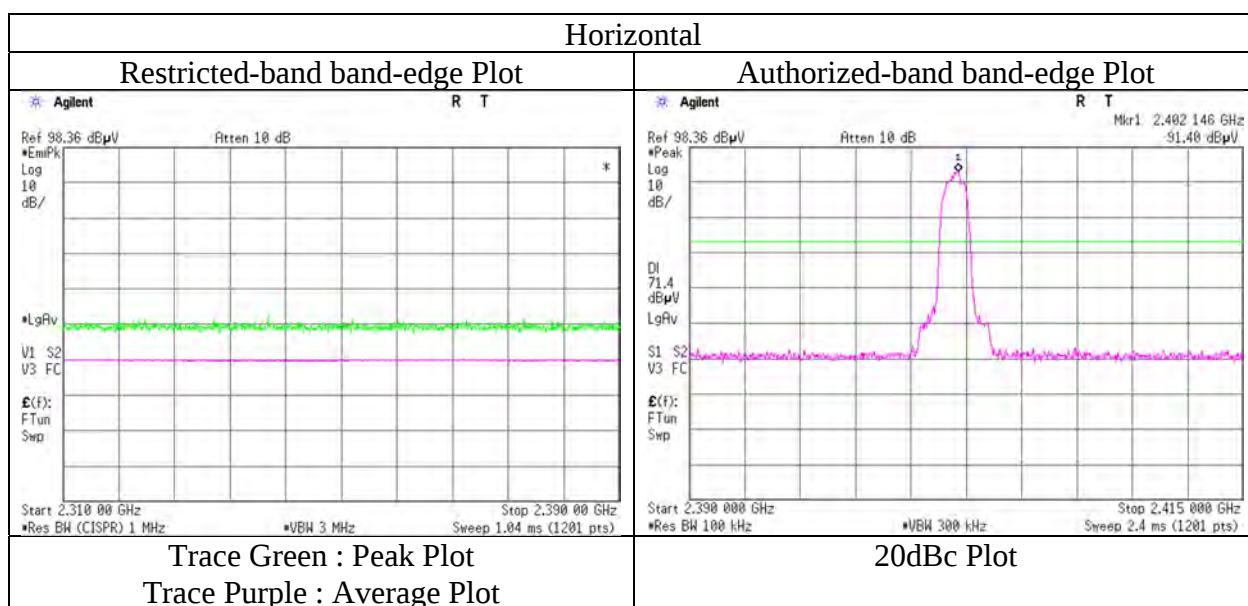
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Radiated Spurious Emission (Reference Plot for band-edge)

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	December 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, 3DH5 2402 MHz with 11a 5785 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-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.11	No.11	No.11	No.11
Date	December 8, 2021	December 20, 2021	December 7, 2021	November 7, 2021
Temperature / Humidity	23 deg. C / 41 % RH	21 deg. C / 43 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2441 MHz with 11a 5785 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	320.631	QP	37.60	14.09	7.68	32.00	0.00	27.37	46.0	18.6	100	123	
Hori.	950.235	QP	26.70	24.15	9.97	31.02	0.00	29.80	46.0	16.2	100	155	
Hori.	4882.000	PK	52.30	32.62	5.62	45.23	2.26	47.57	73.9	26.3	150	0	Floor noise
Hori.	7323.000	PK	48.60	37.54	6.93	43.81	2.26	51.52	73.9	22.3	150	0	Floor noise
Hori.	9764.000	PK	47.40	38.09	7.81	41.84	2.26	53.72	73.9	20.1	150	0	Floor noise
Hori.	4882.000	AV	40.00	32.62	5.62	45.23	2.26	35.27	53.9	18.6	150	0	Floor noise
Hori.	7323.000	AV	36.60	37.54	6.93	43.81	2.26	39.52	53.9	14.3	150	0	Floor noise
Hori.	9764.000	AV	35.30	38.09	7.81	41.84	2.26	41.62	53.9	12.2	150	0	Floor noise
Vert.	35.645	QP	39.20	12.86	5.73	32.21	0.00	25.58	40.0	14.4	100	274	
Vert.	53.979	QP	29.10	13.76	5.94	32.20	0.00	16.60	40.0	23.4	282	125	
Vert.	306.695	QP	35.80	13.70	7.61	32.01	0.00	25.10	46.0	20.9	100	249	
Vert.	434.665	QP	29.60	16.76	8.20	31.98	0.00	22.58	46.0	23.4	100	274	
Vert.	742.772	QP	30.00	21.97	9.32	31.99	0.00	29.30	46.0	16.7	100	16	
Vert.	945.595	QP	25.50	24.12	9.95	31.05	0.00	28.52	46.0	17.4	101	0	
Vert.	4882.000	PK	52.20	32.62	5.62	45.23	2.26	47.47	73.9	26.4	150	0	Floor noise
Vert.	7323.000	PK	48.00	37.54	6.93	43.81	2.26	50.92	73.9	22.9	150	0	Floor noise
Vert.	9764.000	PK	47.50	38.09	7.81	41.84	2.26	53.82	73.9	20.0	150	0	Floor noise
Vert.	4882.000	AV	39.90	32.62	5.62	45.23	2.26	35.17	53.9	18.7	150	0	Floor noise
Vert.	7323.000	AV	36.50	37.54	6.93	43.81	2.26	39.42	53.9	14.4	150	0	Floor noise
Vert.	9764.000	AV	35.30	38.09	7.81	41.84	2.26	41.62	53.9	12.2	150	0	Floor noise

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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Radiated Spurious Emission

Report No.	13977035M-B
Test place	Kashima EMC Lab.
Semi Anechoic Chamber	No.10
Date	November 9, 2021
Temperature / Humidity	22 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe
	(1 GHz -2.8 GHz)
Mode	Tx, Hopping Off, 3DH5 2480 MHz with 11a 5785 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]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	2483.500	PK	49.50	28.01	13.61	43.82	3.31	50.61	73.9	23.2	194	65	VBW: 360 Hz
Hori.	2483.500	AV	38.90	28.01	13.61	43.82	3.31	40.01	53.9	13.8	194	65	
Vert.	2483.500	PK	49.90	28.01	13.61	43.82	3.31	51.01	73.9	22.8	144	333	VBW: 360 Hz
Vert.	2483.500	AV	38.30	28.01	13.61	43.82	3.31	39.41	53.9	14.4	144	333	

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

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

* These results have sufficient margin without taking account Duty cycle correction factor.

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Kashima EMC Lab.

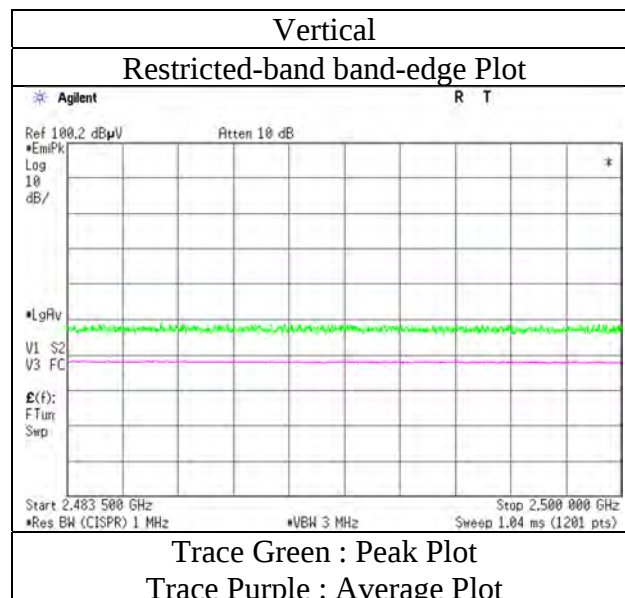
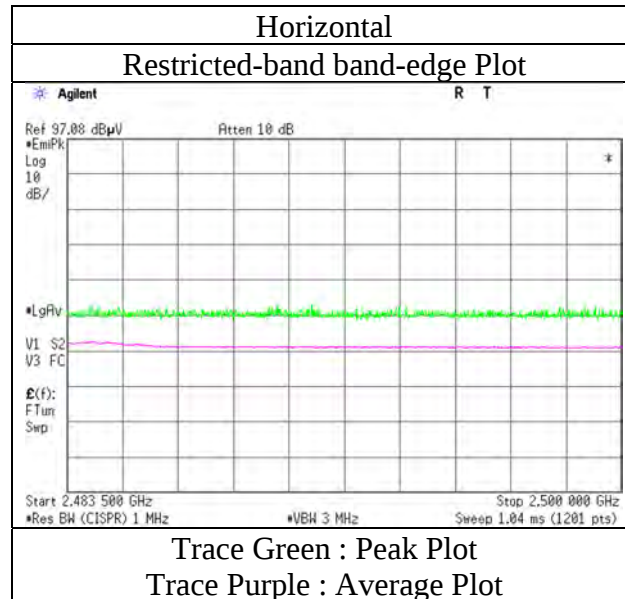
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Radiated Spurious Emission (Reference Plot for band-edge)

Report No. 13977035M-B
Test place Kashima EMC Lab.
Semi Anechoic Chamber No.10
Date November 9, 2021
Temperature / Humidity 22 deg. C / 45 % RH
Engineer Hiromitsu Tanabe
(1 GHz -2.8 GHz)
Mode Tx, Hopping Off, 3DH5 2480 MHz with 11a 5785 MHz

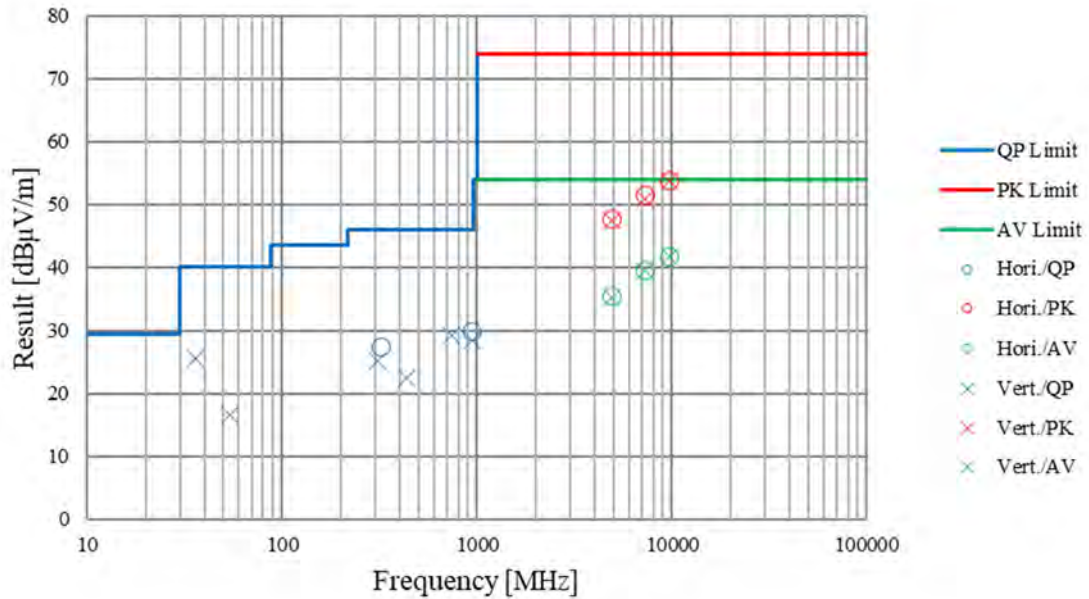


* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

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

Report No.	13977035M-B			
Test place	Kashima EMC Lab.			
Semi Anechoic Chamber	No.11	No.11	No.11	No.11
Date	December 8, 2021	December 20, 2021	December 7, 2021	November 7, 2021
Temperature / Humidity	23 deg. C / 41 % RH	21 deg. C / 43 % RH	20 deg. C / 45 % RH	20 deg. C / 45 % RH
Engineer	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe	Hiromitsu Tanabe
	(30 MHz -1000 MHz)	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2441 MHz with 11a 5785 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(GHz)	CAF-18	142908	Pre-Amplifier	TOYO	TPA0118-36	A-1001	2021/02/08	12
RE(GHz)	CHA-24	143455	Double Ridged Wave Guide	ETS-Lindgren (Cedar Park, Texas)	3115	00204569	2021/02/06	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/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-04	143442	HPF	MICRO-TRONICS	HPM50111-02	009	2021/05/14	12
RE(GHz)	TSA-01	143642	Spectrum Analyzer	Keysight Technologies Inc	N9030A	MY53310670 Version A.13.12	2021/05/24	12
RE(GHz)	CSA-07	143643	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY52490024	2021/06/08	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	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	COTS-CEMI-03	178804	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3 (RE,CE,ME,PE)	Ver 3.1.0484	-	-

*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

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