



RADIO TEST REPORT

Test Report No. : 11085508M-B-R1

Applicant : PIONEER CORPORATION
Type of Equipment : Car Audio with Bluetooth / WLAN
Model No. : PVH-5248
FCC ID : AJDK095
Test regulation : FCC Part 15 Subpart C: 2015
(Bluetooth)
Test Result : Complied

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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 above regulation.
4. The test results in this report are traceable to the national or international standards.
5. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
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. This report is a revised version of 11085508M-B. 11085508M-B is replaced with this report.

Date of test: January 8, 10-12, 14, 2016

Representative test engineer:

Kazuhiro Ando

Engineer

Consumer Technology Division

Approved by:

Masanori Nishiyama

Manager

Consumer Technology Division



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.: 11085508M-B

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CONTENTS	PAGE
SECTION 1: Customer information.....	4
SECTION 2: Equipment under test (E.U.T.).....	4
SECTION 3: Test specification, procedures & results.....	5
SECTION 4: Operation of E.U.T. during testing.....	8
SECTION 5: Radiated Spurious Emission	12
SECTION 6: Antenna Terminal Conducted Tests.....	13
APPENDIX 1: Test data	14
20dB Bandwidth and Carrier Frequency Separation.....	14
Number of Hopping Frequency	17
Dwell time.....	19
Maximum Peak Output Power	22
Average Output Power	23
Radiated Spurious Emission	25
Conducted Spurious Emission	36
Conducted Emission Band Edge compliance	42
99%Occupied Bandwidth	44
APPENDIX 2: Test instruments	46
APPENDIX 3: Photographs of test setup	47
Radiated Spurious Emission	47
Worst Case Position (Angle : 0 deg.).....	49

SECTION 1: Customer information

Company Name : PIONEER CORPORATION
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Facsimile Number : +81-49-228-6493
Contact Person : Tomoyuki Tanaka

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

2.1 Identification of E.U.T.

Type of Equipment : Car Audio with Bluetooth / WLAN
Model No. : PVH-5248
Serial No. : Refer to Section 4, Clause 4.2
Rating : DC 13.2 V
Receipt Date of Sample : December 25, 2015
Country of Mass-production : Thailand
Condition of EUT : Engineering prototype
(Not for sale: This sample is not mass-produced items.)
Modification of EUT : No Modification by the test lab

2.2 Product Description

Model: PVH-5248 (referred to as the EUT in this report) is a Car Audio with Bluetooth / WLAN.

General Specification

Clock frequency(ies) in the system : CPU: 26 MHz

Radio specification

<Bluetooth part>

Equipment type : Transceiver
Frequency of operation : 2402-2480MHz
Bandwidth & channel spacing : 79MHz & 1MHz
Type of modulation : GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna type : Pattern inverted F type
Antenna gain : -2.51dBi
Operation temperature range : -20 to +65 deg.C.

<W-LAN part>

Equipment type : Transceiver
Frequency of operation : 2412-2462MHz
Bandwidth & channel spacing : 5MHz
Type of modulation : DSSS, OFDM
Antenna type : Pattern inverted F type
Antenna gain : -2.78dBi
Antenna connector type : U.FL-LP-066
Operation temperature range : -20 to +65 deg.C.

*This test report applies for Bluetooth part.

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart C: 2015, final revised on November 23, 2015
*Some parts are effective on and after December 17, 2015 or December 23, 2015. The revision does not affect the test specification applied to the EUT.

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz

3.2 Procedures and results

Item	Test Procedure	Specification	Worst Margin	Results	Remarks
Conducted Emission	FCC: ANSI C63.10-2013 6. Standard test methods IC: RSS-Gen 8.8	FCC: Section 15.207 IC: RSS-Gen 8.8	-	N/A *1)	-
Carrier Frequency Separation	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1) IC: RSS-247 5.1 (2)	See data.	Complied	Conducted
20dB Bandwidth	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1) IC: RSS-247 5.1 (1)		-	Conducted
Number of Hopping Frequency	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1)(iii) IC: RSS-247 5.1 (4)		Complied	Conducted
Dwell time	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1)(iii) IC: RSS-247 5.1 (4)		Complied	Conducted
Maximum Peak Output Power	FCC: FCC Public Notice DA 00-705 IC: RSS-Gen 6.12	FCC: Section15.247(a)(b)(1) IC: RSS-247 5.4 (2)		Complied	Conducted
Spurious Emission & Band Edge Compliance	FCC: FCC Public Notice DA 00-705 IC: RSS-Gen 6.13	FCC: Section15.247(d) IC: RSS-247 5.5 RSS-Gen 8.9 RSS-Gen 8.10	3.6 dB 960.000 MHz, QP, Vertical.	Complied	Conducted/ Radiated (above 30 MHz) *2)

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

*1) The test is not applicable since the EUT has no AC mains.

*2) Radiated test was selected over 30 MHz based on section 15.247(d).

* 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 (DC 3.3 V) constantly to the wireless transmitter 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, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

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3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
99% Occupied Bandwidth	IC: RSS-Gen 6.6	IC: -	N/A	-	Conducted

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

3.4 Uncertainty

EMI

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

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Item	Frequency range	Uncertainty (+/-)
		No. 1 SAC / SR
Radiated emission (Measurement distance: 3m)	30MHz - 300MHz	4.7dB
	300MHz - 1GHz	3.6dB
	1GHz - 13GHz	5.1dB
Radiated emission (Measurement distance: 1m)	13GHz - 18GHz	5.7dB
	18GHz - 26.5GHz	5.1dB

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1GHz	0.7dB
Spurious emission (Conducted) below 1GHz	1.6dB
Spurious emission (Conducted) 1GHz - 3GHz	1.4dB
Spurious emission (Conducted) 3GHz - 18GHz	2.8dB
Spurious emission (Conducted) 18GHz - 26.5GHz	2.5dB
Bandwidth Measurement	5.4%

Radiated emission test

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

3.5 Test Location

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A2LA Accreditation No. 1266.01

Test site	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Open site	90558	4659A-1	6.0 x 5.5 x 2.5	20 x 40	10 m
No.2 Open site	510504	4659A-2	4.4 x 4.4 x 2.15	18 x 20	10 m
No.5 Open site	99356	4659A-5	8.6 x 7.1 x 2.4	18 x 23	10 m
No.1 Shielded room	90558	4659A-1	5.4 x 4.5 x 2.3	-	-
No.2 Shielded room	510504	4659A-2	3.6 x 2.7 x 2.3	-	-
No.3 Shielded room	-	-	5.4 x 3.6 x 2.3	-	-
No.4 Shielded Room	-	-	6.1 x 6.1 x 3.1	-	-
No.5 Shielded Room	99356	4659A-5	4.2 x 3.1 x 2.5	-	-
No.3 Fully Anechoic Chamber	-	-	7.0 x 3.5 x 3.5	-	-
No.6 Semi-anechoic Chamber	372431	4659A-6	8.5 x 5.5 x 5.2	-	3 m
No.10 Semi-anechoic Chamber	682397	4659A-10	18.4 x 9.9 x 7.7	-	10 m
No.11 Semi-anechoic Chamber	718605	4659A-7	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	-	-	4.3 x 4.4 x 2.7	-	-

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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

4.1 Operating Mode(s)

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

Details of Operating Mode(s)

Test Item	Mode	Tested frequency
Conducted Emission, Spurious Emission (Conducted/Radiated)	Tx (Hopping Off) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
Carrier Frequency Separation	Tx (Hopping On) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
20dB Bandwidth	Tx (Hopping Off) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
Number of Hopping Frequency	Tx (Hopping On) DH5, 3DH5	-
Dwell time	Tx (Hopping On), -DH1, DH3, DH5 -3DH1, 3DH3, 3DH5	-
Maximum Peak Output Power	Tx (Hopping Off) DH5, 2DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
Band Edge Compliance (Conducted)	Tx DH5, 3DH5 -Hopping On -Hopping Off	2402 MHz 2480 MHz
99% Occupied Bandwidth	Tx DH5, 3DH5 -Hopping On -Hopping Off	2402 MHz 2441 MHz 2480 MHz
*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. Power setting: Fixed Firmware version: 1.001410		

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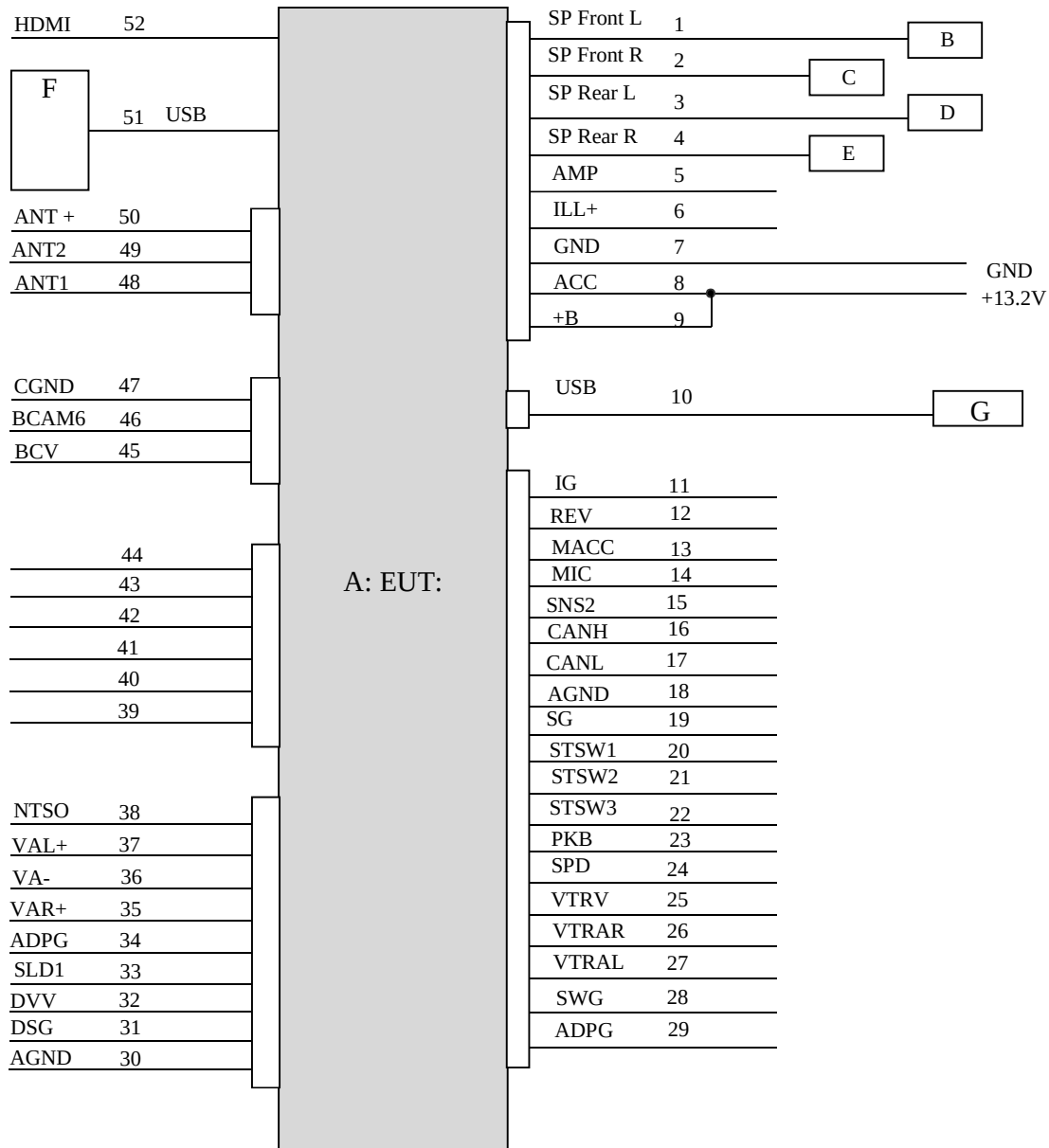
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4.2 Configuration and peripherals



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

* The testing was performed with DC 13.2 V only.

The voltage which the car battery mounted in the car outputs was selected as a test voltage according to the customer's request.

As the stable voltage (DC3.3V) is provided to RF module via the internal regulator, it does not influence on the test result.

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Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Car Audio with Bluetooth/WLAN	PVH-5248	OETM000220ID *1) OETM000431ID *2)	PIONEER	EUT
B	Speaker	KFC-RS101	-	KENWOOD	-
C	Speaker	KFC-RS101	-	KENWOOD	-
D	Speaker	KFC-RS101	-	KENWOOD	-
E	Speaker	KFC-RS101	-	KENWOOD	-
F	iPod nano	A1446	DCYMM6W5F0GT	Apple	-
G	USB memory	BUF-C128M/U2	B4111613725	BUFFALO	-

*1) Used for Antenna Terminal conducted test

*2) Used for Conducted Emission test and Radiated Emission test

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	SP Front L	0.5 + 1.0	Unshielded	Unshielded	10 P + 6 P connector
2	SP Front R	0.5 + 1.0	Unshielded	Unshielded	10 P + 6 P connector
3	SP Rear L	0.5 + 1.0	Unshielded	Unshielded	10 P + 6 P connector
4	SP Rear R	0.5 + 1.0	Unshielded	Unshielded	10 P + 6 P connector
5	AMP	0.5	Unshielded	Unshielded	10 P + 6 P connector
6	ILL +	0.5	Unshielded	Unshielded	10 P + 6 P connector
7	GND	0.5 + 2.0	Unshielded	Unshielded	10 P + 6 P connector
8	ACC	0.5 + 2.0	Unshielded	Unshielded	10 P + 6 P connector
9	+B	0.5	Unshielded	Unshielded	10 P + 6 P connector
10	USB	1.0	Shielded	Shielded	-
11	IG	0.5	Unshielded	Unshielded	28 P connector
12	REV	0.5	Unshielded	Unshielded	28 P connector
13	MACC	0.5	Unshielded	Unshielded	28 P connector
14	MIC	0.5	Unshielded	Unshielded	28 P connector
15	SNS2	0.5	Unshielded	Unshielded	28 P connector
16	CANH	0.5	Unshielded	Unshielded	28 P connector
17	CANL	0.5	Unshielded	Unshielded	28 P connector
18	AGND	0.5	Unshielded	Unshielded	28 P connector
19	SG	0.5	Unshielded	Unshielded	28 P connector
20	STSW1	0.5	Unshielded	Unshielded	28 P connector
21	STSW2	0.5	Unshielded	Unshielded	28 P connector
22	STSW3	0.5	Unshielded	Unshielded	28 P connector
23	PKB	0.5	Unshielded	Unshielded	28 P connector
24	SPD	0.5	Unshielded	Unshielded	28 P connector
25	VTRV	0.5	Unshielded	Shielded	28 P connector
26	VTRAR	0.5	Unshielded	Shielded	28 P connector
27	VTRAL	0.5	Unshielded	Shielded	28 P connector
28	SWG	0.5	Unshielded	Unshielded	28 P connector
29	ADPG	0.5	Unshielded	Unshielded	28 P connector

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No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
30	AGND	0.5	Unshielded	Unshielded	12 P connector
31	DSG	0.5	Unshielded	Unshielded	12 P connector
32	DVV	0.5	Unshielded	Unshielded	12 P connector
33	SLD1	0.5	Unshielded	Unshielded	12 P connector
34	ADPG	0.5	Unshielded	Unshielded	12 P connector
35	VAR+	0.5	Unshielded	Unshielded	12 P connector
36	VA-	0.5	Unshielded	Unshielded	12 P connector
37	VAL+	0.5	Unshielded	Unshielded	12 P connector
38	NTSO	0.5	Unshielded	Unshielded	12 P connector
39	IG	0.35	Unshielded	Unshielded	6 P connector
40	SS-IN	0.35	Unshielded	Unshielded	6 P connector
41	SS+IN	0.35	Unshielded	Unshielded	6 P connector
42	TRIG	0.35	Unshielded	Unshielded	6 P connector
43	SS-OUT	0.35	Unshielded	Unshielded	6 P connector
44	SS+OUT	0.35	Unshielded	Unshielded	6 P connector
45	BCV	0.5	Unshielded	Unshielded	24 P connector
46	BCAM6	0.5	Unshielded	Unshielded	24 P connector
47	CGND	0.5	Unshielded	Unshielded	24 P connector
48	ANT 1	0.2	Shielded	Shielded	-
49	ANT 2	0.2	Shielded	Shielded	-
50	ANT+	0.2	Unshielded	Unshielded	-
51	USB	1.0	Shielded	Shielded	-
52	HDMI	2.0	Shielded	Shielded	-

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SECTION 5: Radiated Spurious Emission

Test Procedure

[For below 1GHz]

EUT was placed on a urethane platform of nominal size, 1.5 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.

[For 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.

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 (IC) and outside the restricted band of FCC15.205 / Table 6 of RSS-Gen 8.10 (IC).

Frequency	Below 1 GHz	Above 1 GHz		20 dBc
Instrument used	Test Receiver	Spectrum Analyzer		Spectrum Analyzer
Detector	QP	PK	AV	PK
IF Bandwidth	BW 120 kHz	RBW: 1 MHz VBW: 3 MHz	RBW: 1 MHz VBW: 10 Hz *1)	RBW: 100 kHz VBW: 300 kHz
Test Distance	3 m	3.8 m*2) (below 10 GHz), 1 m*3) (above 10 GHz)		3.8 m*2) (below 10 GHz), 1 m*3) (above 10 GHz)

*1) Although DA 00-705 accepts VBW = 10 Hz for AV measurements, it was confirmed that superfluous smoothing was not performed.

*2) Distance Factor: $20 \times \log (3.8 \text{ m} / 3.0 \text{ m}) = 2.1 \text{ dB}$

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

The carrier level and noise levels were confirmed at angle of 0 to 30 deg. based on the product specification to see the position of maximum noise, and the test was made at the position (0 deg.) that has the maximum noise.

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

Measurement range : 30 M - 26 GHz
 Test data : APPENDIX
 Test result : Pass

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SECTION 6: Antenna Terminal Conducted Tests

Test Procedure

The tests were made with below setting connected to the antenna port.

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used
20dB Bandwidth	3 MHz	30 kHz	100 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
99% Occupied Bandwidth *1)	Enough width to display emission skirts	1 to 5 % of OBW	Three times of RBW	Auto	Peak	Max Hold *1)	Spectrum Analyzer
Maximum Peak Output Power	-	-	-	Auto	Peak Average *3)	-	Power Meter (Sensor: 160MHz BW)
Carrier Frequency Separation	3 MHz	30 kHz	100 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Number of Hopping Frequency	30 MHz	300 kHz	1 MHz	Auto	Peak	Max Hold	Spectrum Analyzer
Dwell Time	Zero Span	100 kHz, 1 MHz	300 kHz, 3 MHz	As necessary capture the entire dwell time per hopping channel	Peak	Clear Write	Spectrum Analyzer
Conducted Spurious Emission *2)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	10 kHz	30 kHz				
	30 MHz to 25 GHz	100 kHz	300 kHz				
Conducted Spurious Emission Band Edge compliance	10 MHz	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
*1) The measurement was performed with Max Hold since the duty cycle was not 100 %. Peak hold was applied as Worst-case measurement. *2) In the frequency range below 30MHz, RBW was narrowed to separate the noise contents. Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart. (9 kHz -150 kHz: RBW = 200 Hz, 150 kHz - 30 MHz: RBW = 10 kHz) *3) Reference data							

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

Test data : APPENDIX
 Test result : Pass

APPENDIX 1: Test data

20dB Bandwidth and Carrier Frequency Separation

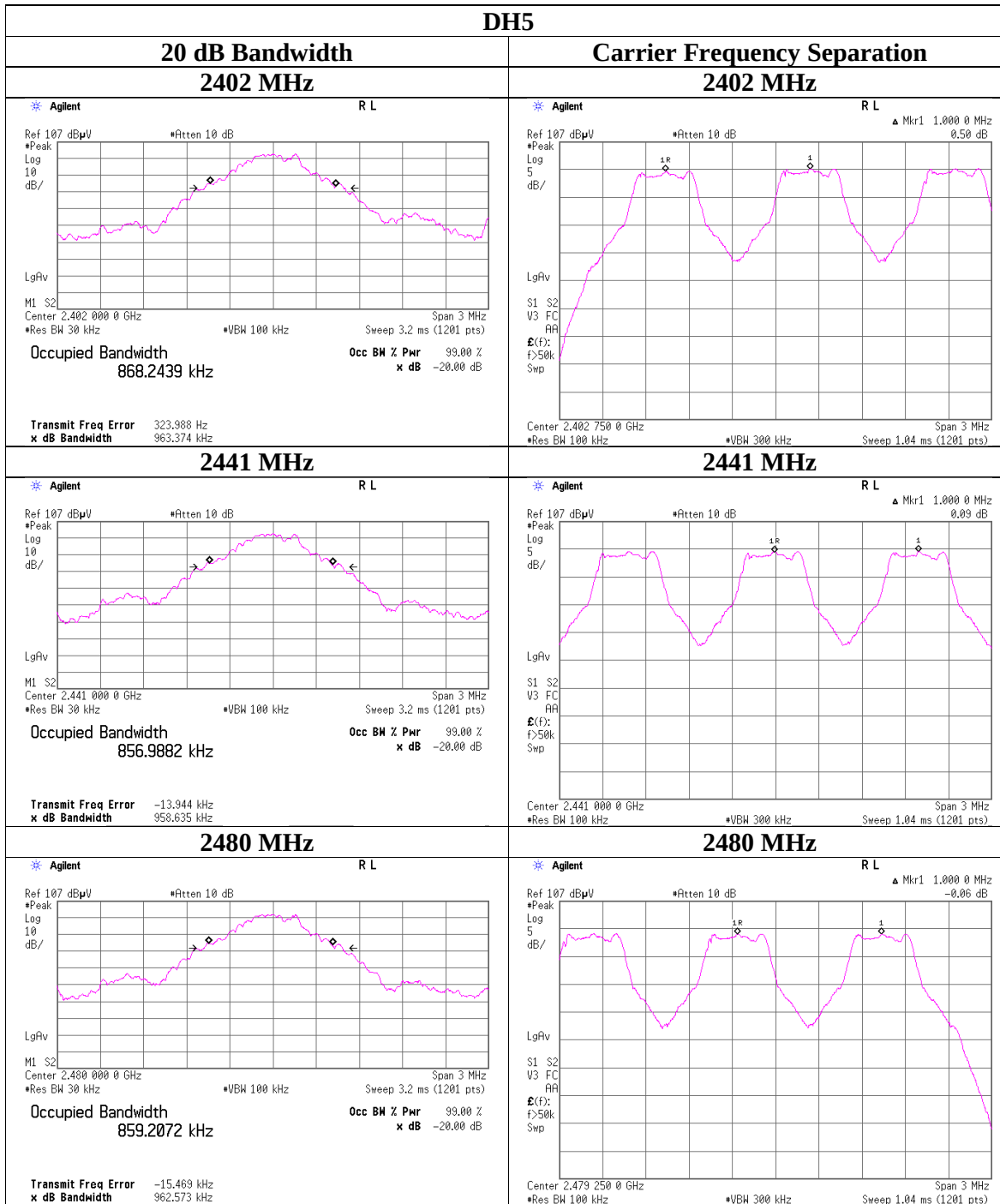
Test place Kashima EMC Lab. No.2 Measurement Room
Report No. 11085508M
Date January 8, 2016
Temperature / Humidity 21 deg. C / 39% RH
Engineer Kazuhiro Ando
Mode Tx, Hopping Off

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.963	1.000	>= 0.642
DH5	2441.0	0.959	1.000	>= 0.639
DH5	2480.0	0.963	1.000	>= 0.642
3DH5	2402.0	1.301	1.000	>= 0.867
3DH5	2441.0	1.296	1.000	>= 0.864
3DH5	2480.0	1.293	1.000	>= 0.862

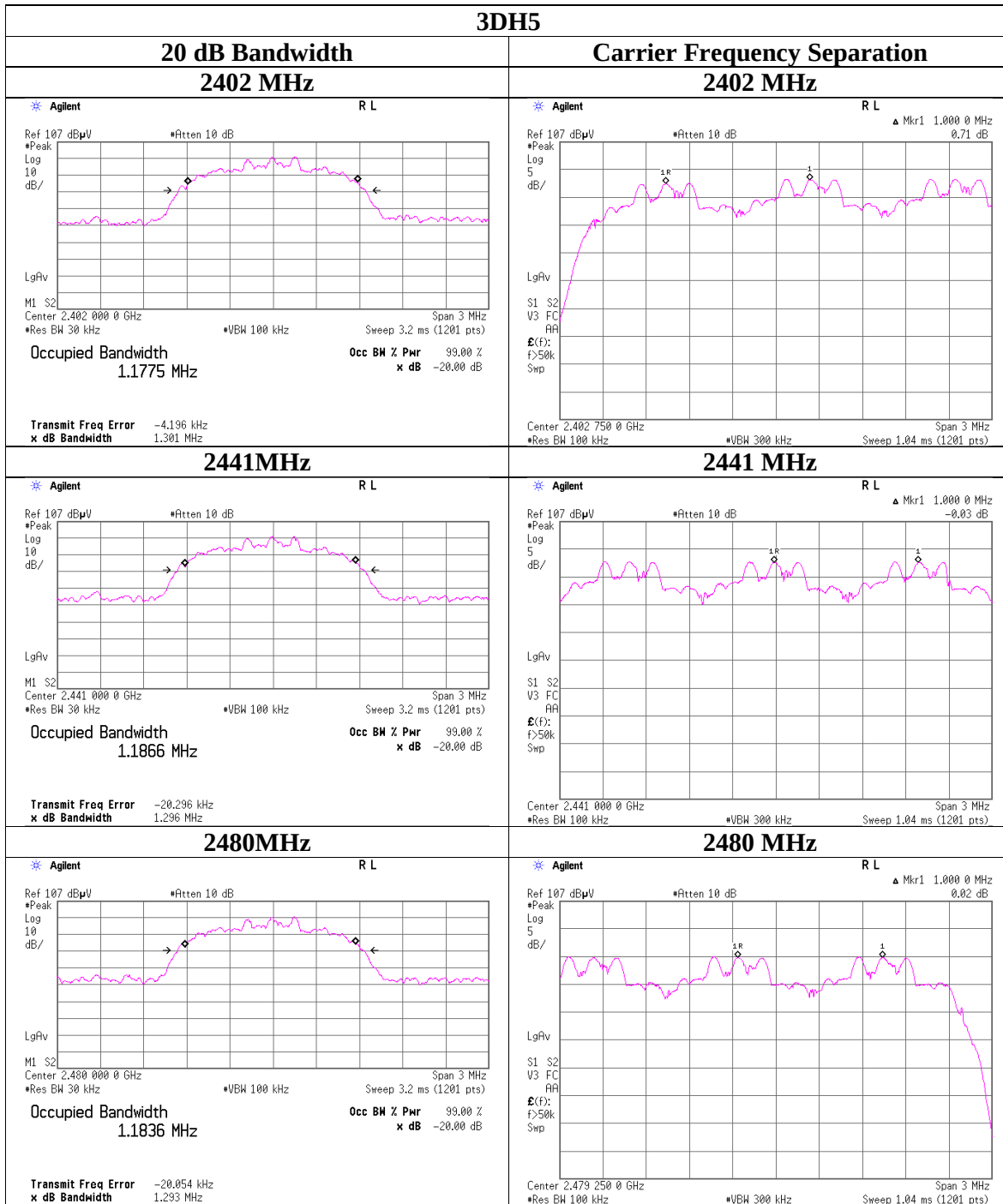
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).

No limit applies to 20dB Bandwidth.

20dB Bandwidth and Carrier Frequency Separation



20dB Bandwidth and Carrier Frequency Separation



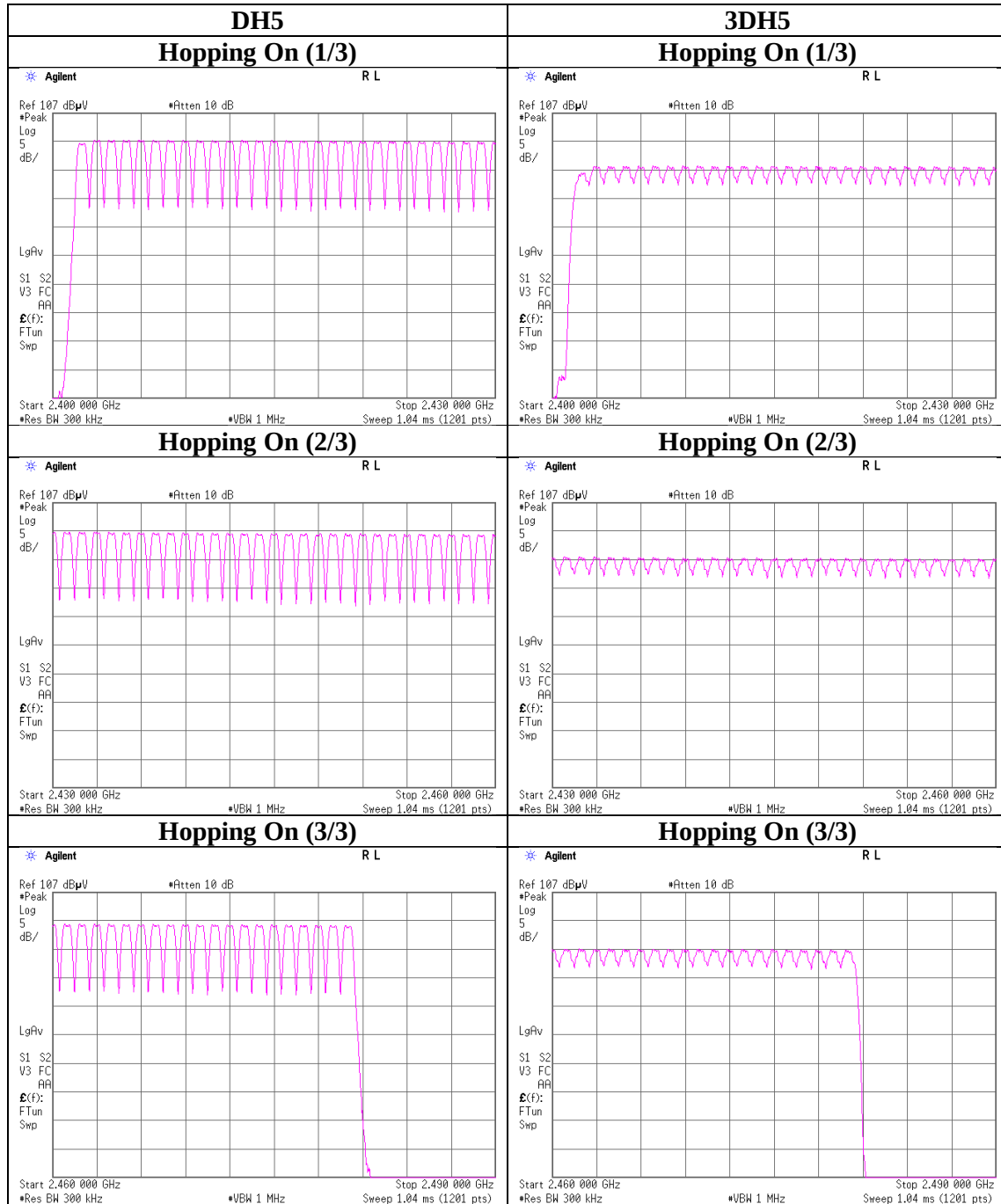
Number of Hopping Frequency

Test place Kashima EMC Lab. No.2 Measurement Room
Report No. 11085508M
Date January 8, 2016
Temperature / Humidity 21deg. C / 39 % RH
Engineer Kazuhiro Ando
Mode Tx, Hopping On

Mode	Number of channel [channels]	Limit [channels]
DH5	79	>= 15
3DH5	79	>= 15

Test was not performed at AFH mode whose number of hopping channel is 20 channels because this Bluetooth radio is in compliance of Bluetooth Specification.

Number of Hopping Frequency



Dwell time

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping On

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8 (32 Hopping x 0.4) second period				Length of transmission [msec]	Result [msec]	Limit [msec]
DH1	51.0 times	/	5 sec.	x 31.6 sec. = 323 times	0.421	136	400
DH3	26.0 times	/	5 sec.	x 31.6 sec. = 165 times	1.678	277	400
DH5	17.0 times	/	5 sec.	x 31.6 sec. = 108 times	2.927	316	400
3DH1	51.0 times	/	5 sec.	x 31.6 sec. = 323 times	0.434	140	400
3DH3	26.0 times	/	5 sec.	x 31.6 sec. = 165 times	1.685	278	400
3DH5	17.0 times	/	5 sec.	x 31.6 sec. = 108 times	2.936	317	400

Sample Calculation

Result = Number of transmission x Length of transmission

*Average data of 5 tests.(except Inquiry)

Mode	Sampling [times]					Average [times]
	1	2	3	4	5	
DH1	51	51	51	51	51	51
DH3	26	26	26	26	26	26
DH5	17	17	17	17	17	17
3DH1	51	51	51	51	51	51
3DH3	26	26	26	26	26	26
3DH5	17	17	17	17	17	17

Sample Calculation

Average = Summation (Sampling 1 to 5) / 5

This device complies with the Bluetooth protocol for FHSS operation, employing a pseudo random channel selection and hopping rate to ensure that the occupancy time in $N \times 0.4s$, where N is the number of channels being used in the hopping sequence ($20 \leq N \leq 79$), is always less than $0.4s$ regardless of packet size. This is confirmed in the test report for $N = 79$.

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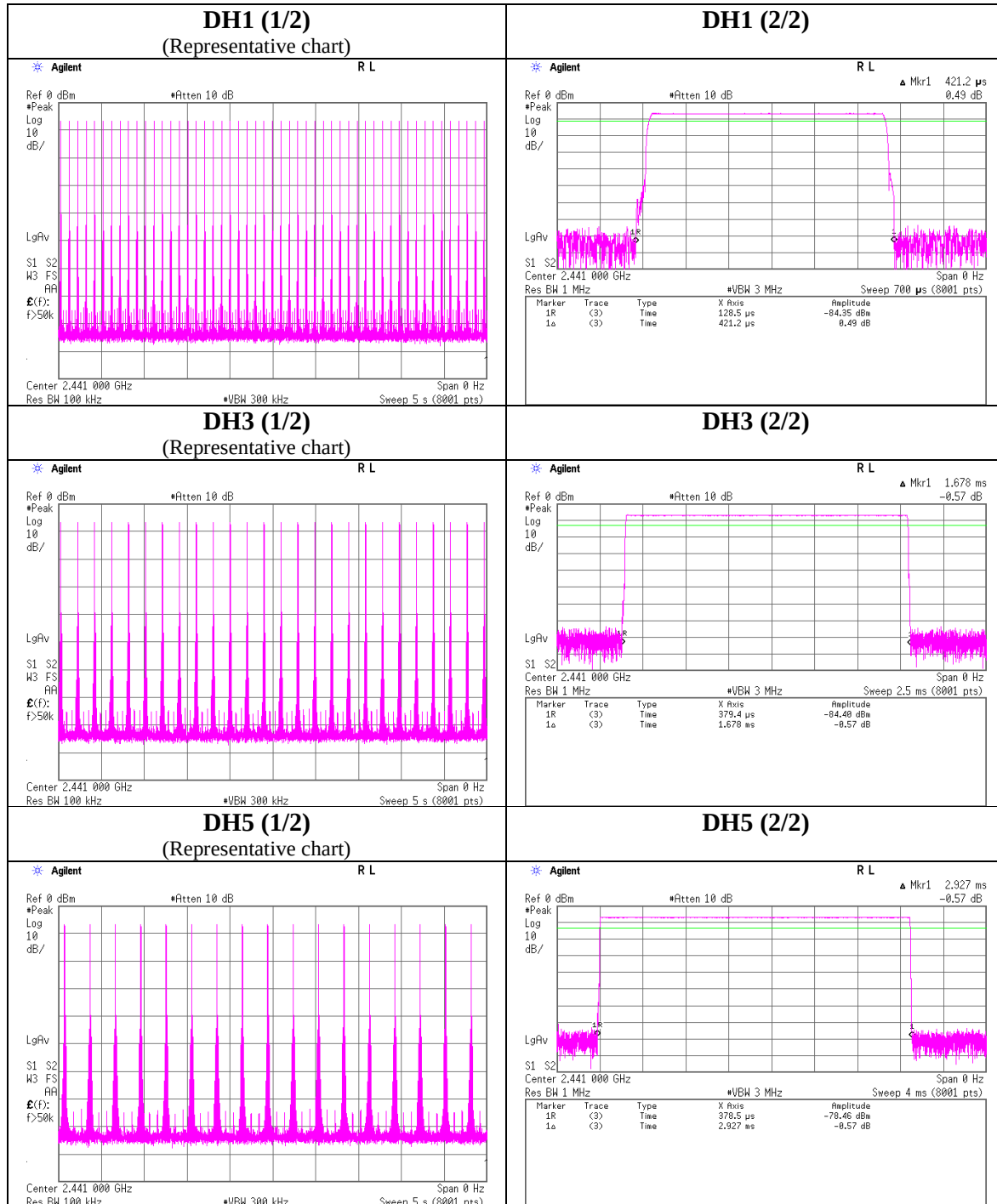
Kashima EMC Lab.

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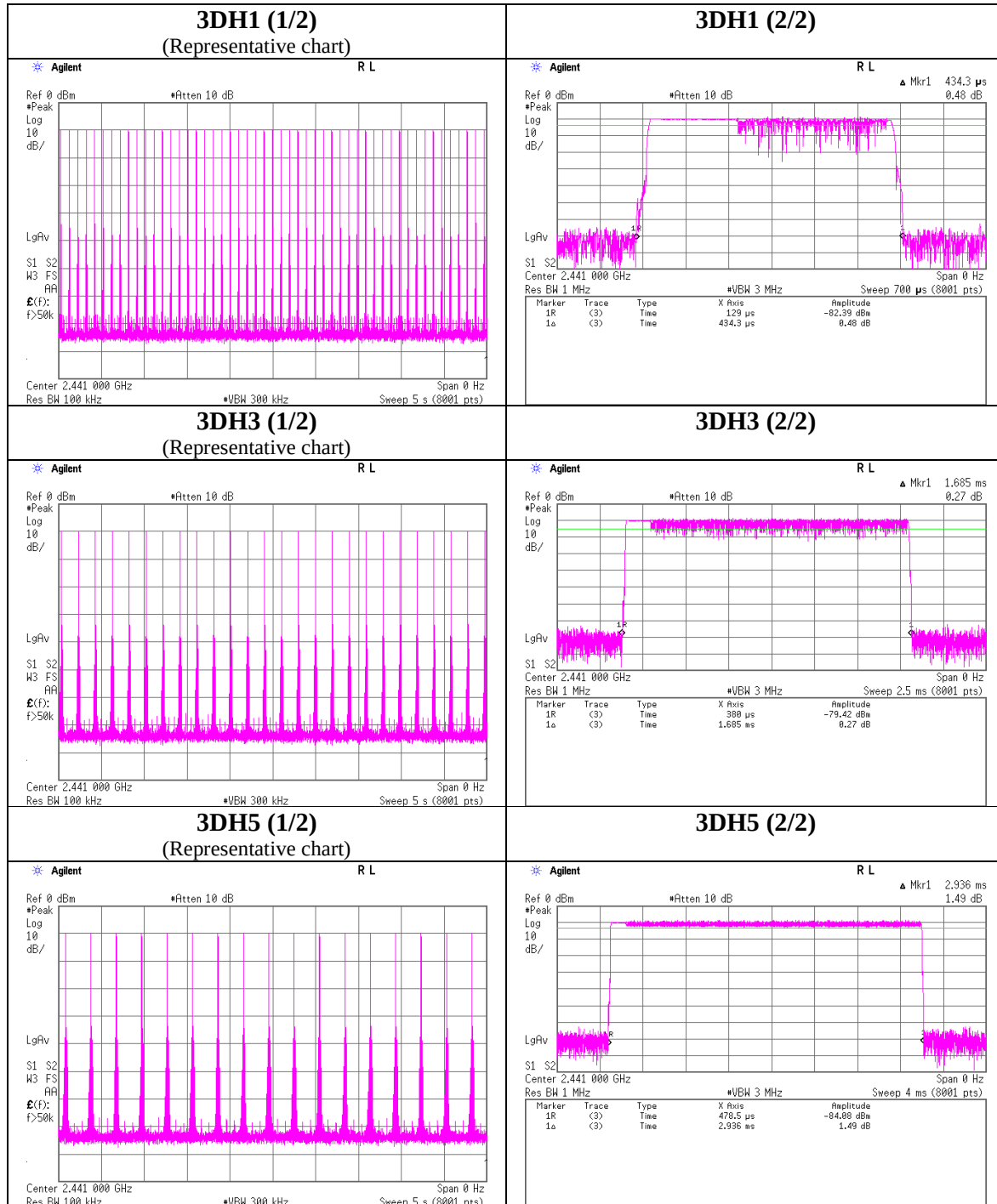
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Dwell time



Dwell time



Maximum Peak Output Power

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off

Mode	Freq.	Reading	Cable Loss	Atten. Loss	Result		Limit		Margin
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
DH5	2402.0	-5.01	0.72	10.03	5.74	3.75	20.96	125	15.22
DH5	2441.0	-5.11	0.73	10.03	5.65	3.67	20.96	125	15.31
DH5	2480.0	-5.63	0.73	10.03	5.13	3.26	20.96	125	15.83
2DH5	2402.0	-6.32	0.72	10.03	4.43	2.77	20.96	125	16.53
2DH5	2441.0	-6.20	0.73	10.03	4.56	2.86	20.96	125	16.40
2DH5	2480.0	-6.79	0.73	10.03	3.97	2.49	20.96	125	16.99
3DH5	2402.0	-6.01	0.72	10.03	4.74	2.98	20.96	125	16.22
3DH5	2441.0	-5.97	0.73	10.03	4.79	3.01	20.96	125	16.17
3DH5	2480.0	-6.46	0.73	10.03	4.30	2.69	20.96	125	16.66

Sample Calculation:

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator Loss

*The equipment and cables were not used for factor 0 dB of the data sheets.

Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.

As this device had AFH mode and frequency separation could not meet the requirement of over 20dB BW without 2/3 relaxation, 125mW power limit was applied to it.

UL Japan, Inc.

Kashima EMC Lab.

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Average Output Power
(Reference data for RF Exposure)

Test place Kashima EMC Lab. No.2 Measurement Room
Report No. 11085508M
Date January 8, 2016
Temperature / Humidity 21 deg. C / 39 % RH
Engineer Kazuhiro Ando
Mode Tx, Hopping Off

Mode	Freq.	Reading	Cable Loss	Atten. Loss	Result (Frame power)	
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
DH5	2402.0	-6.46	0.72	10.03	4.29	2.69
DH5	2441.0	-6.52	0.73	10.03	4.24	2.65
DH5	2480.0	-7.03	0.73	10.03	3.73	2.36
2DH5	2402.0	-9.65	0.72	10.03	1.10	1.29
2DH5	2441.0	-9.34	0.73	10.03	1.42	1.39
2DH5	2480.0	-9.97	0.73	10.03	0.79	1.20
3DH5	2402.0	-9.69	0.72	10.03	1.06	1.28
3DH5	2441.0	-9.37	0.73	10.03	1.39	1.38
3DH5	2480.0	-10.01	0.73	10.03	0.75	1.19

Sample Calculation:

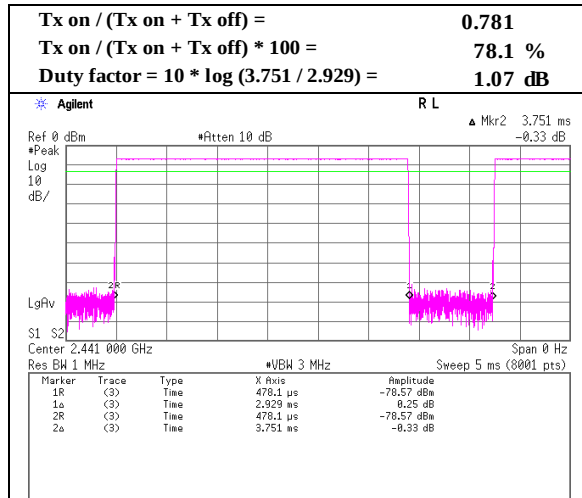
Result (Frame power) = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator Loss

*The equipment and cables were not used for factor 0 dB of the data sheets.

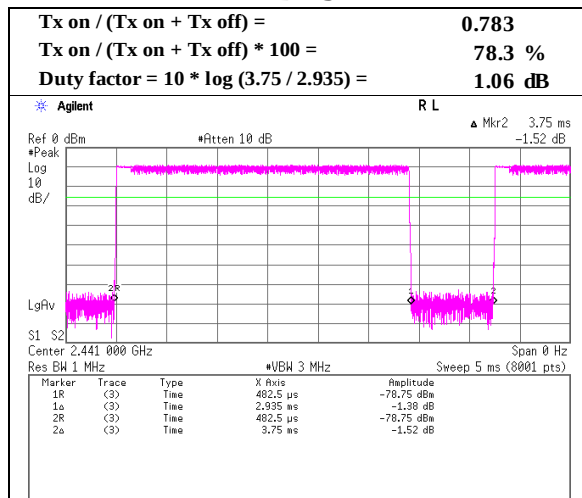
Burst Rate Confirmation

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off

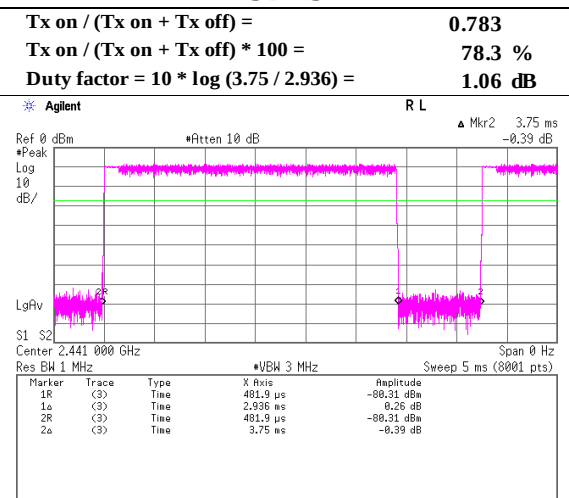
DH5



2DH5



3DH5



Radiated Spurious Emission

Test place : Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No. : 11085508M
Date : January 11, 2016 January 10, 2016 January 14, 2016
Temperature / Humidity : 19 deg. C / 40 % RH 20 deg. C / 38 % RH 20 deg. C / 36 % RH
Engineer : Kazuhiro Ando Kazuhiro Ando Kazuhiro Ando
(30 - 1000 MHz) (1- 10 GHz) (10 - 26 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.	348.048	QP	38.2	14.5	6.0	32.3	0.0	26.4	46.0	19.6	100	256	
Hori.	499.502	QP	34.0	17.9	6.7	32.3	0.0	26.3	46.0	19.7	100	295	
Hori.	720.038	QP	32.3	21.2	7.7	32.3	0.0	28.9	46.0	17.1	109	286	
Hori.	792.003	QP	32.0	22.3	7.9	32.1	0.0	30.1	46.0	15.9	100	30	
Hori.	900.016	QP	31.6	23.4	8.3	31.5	0.0	31.8	46.0	14.2	100	245	
Hori.	960.000	QP	40.2	23.9	8.5	31.1	0.0	41.5	46.0	4.5	100	251	
Hori.	1980.000	PK	48.9	25.8	13.6	38.1	2.1	52.3	73.9	21.6	128	0	
Hori.	2390.000	PK	43.4	27.6	14.0	38.3	2.1	48.8	73.9	25.1	147	350	
Hori.	2558.000	PK	46.4	27.6	14.2	38.4	2.1	51.9	73.9	22.0	144	172	
Hori.	3360.150	PK	48.4	28.2	5.7	38.8	2.1	45.6	73.9	28.3	113	175	
Hori.	4804.000	PK	46.3	31.3	6.1	39.3	2.1	46.5	73.9	27.4	132	355	
Hori.	7206.000	PK	42.5	36.3	7.5	38.4	2.1	50.0	73.9	23.9	100	0	Floor Noise
Hori.	1980.000	AV	41.2	25.8	13.6	38.1	2.1	44.6	53.9	9.3	128	0	
Hori.	2390.000	AV	31.3	27.6	14.0	38.3	2.1	36.7	53.9	17.2	147	350	
Hori.	2558.000	AV	34.5	27.6	14.2	38.4	2.1	40.0	53.9	13.9	144	172	
Hori.	3360.150	AV	43.2	28.2	5.7	38.8	2.1	40.4	53.9	13.5	113	175	
Hori.	4804.000	AV	34.2	31.3	6.1	39.3	2.1	34.4	53.9	19.5	132	355	
Hori.	7206.000	AV	30.3	36.3	7.5	38.4	2.1	37.8	53.9	16.1	100	0	Floor Noise
Vert.	79.395	QP	34.8	9.6	4.2	32.5	0.0	16.1	40.0	23.9	100	42	
Vert.	125.515	QP	38.4	11.5	4.6	32.4	0.0	22.1	43.5	21.4	100	142	
Vert.	207.493	QP	38.2	10.1	5.2	32.4	0.0	21.1	43.5	22.4	100	0	
Vert.	499.503	QP	36.3	17.9	6.7	32.3	0.0	28.6	46.0	17.4	100	175	
Vert.	688.503	QP	31.4	20.8	7.6	32.3	0.0	27.5	46.0	18.5	100	10	
Vert.	960.000	QP	41.1	23.9	8.5	31.1	0.0	42.4	46.0	3.6	110	182	
Vert.	1980.000	PK	47.5	25.8	13.6	38.1	2.1	50.9	73.9	23.9	122	330	
Vert.	2390.000	PK	44.8	27.6	14.0	38.3	2.1	50.2	73.9	23.7	144	102	
Vert.	2558.000	PK	47.5	27.6	14.2	38.4	2.1	53.0	73.9	20.9	211	97	
Vert.	3360.150	PK	46.8	28.2	5.7	38.8	2.1	44.0	73.9	29.9	148	172	
Vert.	4804.000	PK	45.5	31.3	6.1	39.3	2.1	45.7	73.9	28.2	100	0	Floor Noise
Vert.	7206.000	PK	42.5	36.3	7.5	38.4	2.1	50.0	73.9	23.9	100	0	Floor Noise
Vert.	1980.000	AV	38.8	25.8	13.6	38.1	2.1	42.2	53.9	11.7	122	330	
Vert.	2390.000	AV	31.2	27.6	14.0	38.3	2.1	36.6	53.9	17.3	144	102	
Vert.	2558.000	AV	34.4	27.6	14.2	38.4	2.1	39.9	53.9	14.0	211.0	97.0	
Vert.	3360.150	AV	38.0	28.2	5.7	38.8	2.1	35.2	53.9	18.7	148.0	172.0	
Vert.	4804.000	AV	33.2	31.3	6.1	39.3	2.1	33.4	53.9	20.5	100.0	0.0	Floor Noise
Vert.	7206.000	AV	30.3	36.3	7.5	38.4	2.1	37.8	53.9	16.1	100.0	0.0	Floor Noise

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

Distance factor : 1 GHz - 10 GHz : 20log (3.8 m / 3.0 m) = 2.1 dB

10 GHz - 26 GHz : 20log (1.0 m / 3.0 m) = -9.5 dB

These results have sufficient margin without taking account Dwell time 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	93.5	27.6	14.0	38.3	2.1	98.9	-	-	Carrier
Hori.	2400.000	PK	50.7	27.6	14.0	38.3	2.1	56.1	78.9	22.8	
Vert.	2402.000	PK	96.3	27.6	14.0	38.3	2.1	101.7	-	-	Carrier
Vert.	2400.000	PK	53.3	27.6	14.0	38.3	2.1	58.7	81.7	23.0	

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

Distance factor : 1 GHz - 10 GHz : 20log (3.8 m / 3.0 m) = 2.1 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.5 dB

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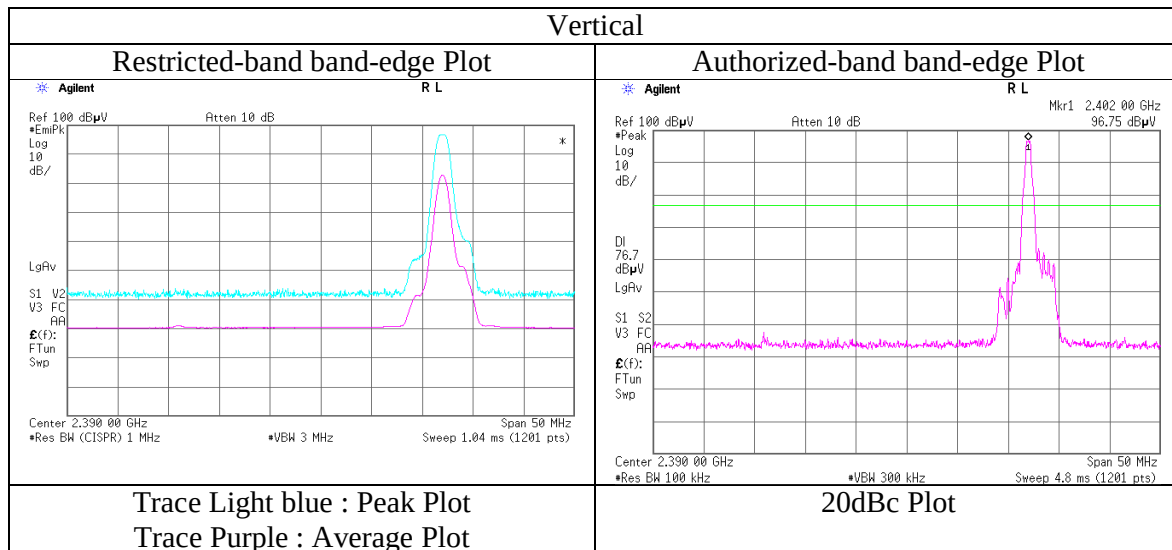
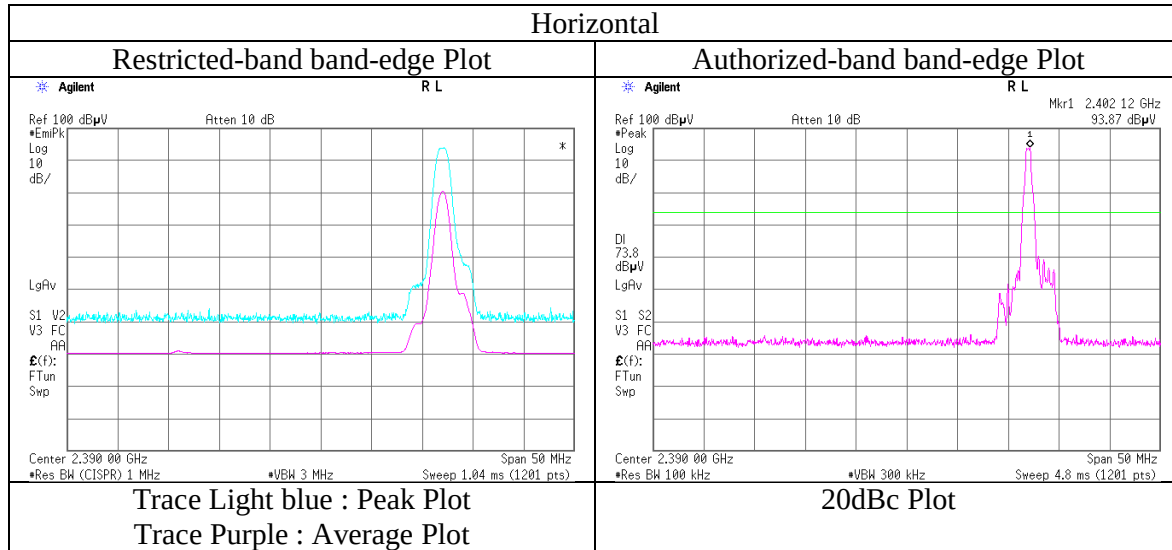
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Radiated Spurious Emission (Reference Plot for band-edge)

Test place	Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No.	11085508M
Date	January 10, 2016
Temperature / Humidity	20 deg. C / 38 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, DH5 2402 MHz



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

Radiated Spurious Emission

Test place : Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No. : 11085508M
Date : January 11, 2016 January 10, 2016 January 14, 2016
Temperature / Humidity : 19 deg. C / 40 % RH 20 deg. C / 38 % RH 20 deg. C / 36 % RH
Engineer : Kazuhiro Ando Kazuhiro Ando Kazuhiro Ando
(30 - 1000 MHz) (1- 10 GHz) (10 - 26 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.	348.048	QP	39.0	14.5	6.0	32.3	0.0	27.2	46.0	18.8	100	260	
Hori.	499.507	QP	34.1	17.9	6.7	32.3	0.0	26.4	46.0	19.6	100	293	
Hori.	719.996	QP	32.2	21.2	7.7	32.3	0.0	28.8	46.0	17.2	110	286	
Hori.	792.006	QP	31.9	22.3	7.9	32.1	0.0	30.0	46.0	16.0	100	29	
Hori.	900.012	QP	31.6	23.4	8.3	31.5	0.0	31.8	46.0	14.2	100	244	
Hori.	960.000	QP	40.3	23.9	8.5	31.1	0.0	41.6	46.0	4.4	100	248	
Hori.	1980.000	PK	48.8	25.8	13.6	38.1	2.1	52.2	73.9	21.7	135	0	
Hori.	2285.000	PK	47.2	27.9	14.0	38.3	2.1	52.9	73.9	21.0	160	354	
Hori.	3360.150	PK	47.5	28.2	5.7	38.8	2.1	44.7	73.9	29.2	130	162	
Hori.	4882.000	PK	45.8	31.2	6.2	39.3	2.1	46.0	73.9	27.9	170	290	
Hori.	7323.000	PK	42.0	36.5	7.8	38.4	2.1	50.0	73.9	23.9	100	0	Floor Noise
Hori.	1980.000	AV	42.7	25.8	13.6	38.1	2.1	46.1	53.9	7.8	135	0	
Hori.	2285.000	AV	38.2	27.9	14.0	38.3	2.1	43.9	53.9	10.0	160	354	
Hori.	3360.150	AV	41.6	28.2	5.7	38.8	2.1	38.8	53.9	15.1	130	162	
Hori.	4882.000	AV	33.7	31.2	6.2	39.3	2.1	33.9	53.9	20.0	170	290	
Hori.	7323.000	AV	30.0	36.5	7.8	38.4	2.1	38.0	53.9	15.9	100	0	Floor Noise
Vert.	79.395	QP	34.8	9.6	4.2	32.5	0.0	16.1	40.0	23.9	100	45	
Vert.	125.504	QP	37.8	11.5	4.6	32.4	0.0	21.5	43.5	22.0	100	131	
Vert.	207.501	QP	37.7	10.1	5.2	32.4	0.0	20.6	43.5	22.9	100	0	
Vert.	499.503	QP	36.4	17.9	6.7	32.3	0.0	28.7	46.0	17.3	100	179	
Vert.	688.505	QP	31.4	20.8	7.6	32.3	0.0	27.5	46.0	18.5	100	12	
Vert.	960.000	QP	41.0	23.9	8.5	31.1	0.0	42.3	46.0	3.7	168	343	
Vert.	1980.000	PK	47.0	25.8	13.6	38.1	2.1	50.4	73.9	23.5	128	338	
Vert.	2285.000	PK	46.7	27.9	14.0	38.3	2.1	52.4	73.9	21.5	189	90	
Vert.	3360.150	PK	46.4	28.2	5.7	38.8	2.1	43.6	73.9	30.3	157	182	
Vert.	4882.000	PK	44.2	31.2	6.2	39.3	2.1	44.4	73.9	29.5	100	0	Floor Noise
Vert.	7323.000	PK	43.0	36.5	7.8	38.4	2.1	51.0	73.9	22.9	100	0	Floor Noise
Vert.	1980.000	AV	38.8	25.8	13.6	38.1	2.1	42.2	53.9	11.7	128	338	
Vert.	2285.000	AV	37.9	27.9	14.0	38.3	2.1	43.6	53.9	10.3	189	90	
Vert.	3360.150	AV	39.7	28.2	5.7	38.8	2.1	36.9	53.9	17.0	157	182	
Vert.	4882.000	AV	32.5	31.2	6.2	39.3	2.1	32.7	53.9	21.2	100	0	Floor Noise
Vert.	7323.000	AV	30.7	36.5	7.8	38.4	2.1	38.7	53.9	15.2	100	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 : $20\log(3.8\text{ m} / 3.0\text{ m}) = 2.1\text{ dB}$

10 GHz - 26 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

These results have sufficient margin without taking account Dwell time factor.

UL Japan, Inc.

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Telephone : +81-478-88-6500

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Radiated Spurious Emission

Test place : Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No. : 11085508M
Date : January 11, 2016 January 12, 2016 January 14, 2016
Temperature / Humidity : 19 deg. C / 40 % RH 20 deg. C / 35 % RH 20 deg. C / 36 % RH
Engineer : Kazuhiro Ando Kazuhiro Ando Kazuhiro Ando
(30 - 1000 MHz) (1- 10 GHz) (10 - 26 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.	348.189	QP	40.0	14.5	6.0	32.3	0.0	28.2	46.0	17.8	100	254	
Hori.	499.505	QP	33.6	17.9	6.7	32.3	0.0	25.9	46.0	20.1	100	293	
Hori.	719.971	QP	31.9	21.2	7.7	32.3	0.0	28.5	46.0	17.5	115	286	
Hori.	792.002	QP	30.6	22.3	7.9	32.1	0.0	28.7	46.0	17.3	100	26	
Hori.	900.014	QP	31.1	23.4	8.3	31.5	0.0	31.3	46.0	14.7	100	239	
Hori.	960.000	QP	40.2	23.9	8.5	31.1	0.0	41.5	46.0	4.5	100	251	
Hori.	1980.000	PK	48.7	25.8	13.6	38.1	2.1	52.1	73.9	21.8	137	47	
Hori.	2324.000	PK	48.5	27.8	14.0	38.3	2.1	54.1	73.9	19.8	209	0	
Hori.	2483.500	PK	45.8	27.5	14.1	38.4	2.1	51.1	73.9	22.8	170	103	
Hori.	3360.150	PK	48.9	28.2	5.7	38.8	2.1	46.1	73.9	27.8	145	157	
Hori.	4960.000	PK	44.6	31.4	6.2	39.3	2.1	45.0	73.9	28.9	148	0	
Hori.	7440.000	PK	43.5	36.7	7.7	38.3	2.1	51.7	73.9	22.2	100	0	Floor Noise
Hori.	1980.000	AV	41.4	25.8	13.6	38.1	2.1	44.8	53.9	9.1	137	47	
Hori.	2324.000	AV	40.9	27.8	14.0	38.3	2.1	46.5	53.9	7.4	209	0	
Hori.	2483.500	AV	34.8	27.5	14.1	38.4	2.1	40.1	53.9	13.8	170	103	
Hori.	3360.150	AV	43.8	28.2	5.7	38.8	2.1	41.0	53.9	12.9	145	157	
Hori.	4960.000	AV	32.4	31.4	6.2	39.3	2.1	32.8	53.9	21.1	148	0	
Hori.	7440.000	AV	31.1	36.7	7.7	38.3	2.1	39.3	53.9	14.6	100	0	Floor Noise
Vert.	79.406	QP	35.0	9.6	4.2	32.5	0.0	16.3	40.0	23.7	100	34	
Vert.	125.521	QP	37.5	11.5	4.6	32.4	0.0	21.2	43.5	22.3	100	133	
Vert.	207.492	QP	37.8	10.1	5.2	32.4	0.0	20.7	43.5	22.8	100	0	
Vert.	499.495	QP	36.4	17.9	6.7	32.3	0.0	28.7	46.0	17.3	100	177	
Vert.	688.501	QP	31.5	20.8	7.6	32.3	0.0	27.6	46.0	18.4	100	19	
Vert.	960.000	QP	40.9	23.9	8.5	31.1	0.0	42.2	46.0	3.8	110	194	
Vert.	1980.000	PK	47.1	25.8	13.6	38.1	2.1	50.5	73.9	23.4	111	336	
Vert.	2324.000	PK	47.7	27.8	14.0	38.3	2.1	53.3	73.9	20.6	157	97	
Vert.	2483.500	PK	49.8	27.5	14.1	38.4	2.1	55.1	73.9	18.8	167	107	
Vert.	3360.150	PK	47.0	28.2	5.7	38.8	2.1	44.2	73.9	29.7	157	161	
Vert.	4960.000	PK	45.5	31.4	6.2	39.3	2.1	45.9	73.9	28.0	160	216	
Vert.	7440.000	PK	43.8	36.7	7.7	38.3	2.1	52.0	73.9	21.9	100	0	Floor Noise
Vert.	1980.000	AV	38.2	25.8	13.6	38.1	2.1	41.6	53.9	12.3	111	336	
Vert.	2324.000	AV	39.8	27.8	14.0	38.3	2.1	45.4	53.9	8.5	157	97	
Vert.	2483.500	AV	36.1	27.5	14.1	38.4	2.1	41.4	53.9	12.5	167	107	
Vert.	3360.150	AV	38.8	28.2	5.7	38.8	2.1	36.0	53.9	17.9	157	161	
Vert.	4960.000	AV	33.6	31.4	6.2	39.3	2.1	34.0	53.9	19.9	160	216	
Vert.	7440.000	AV	31.5	36.7	7.7	38.3	2.1	39.7	53.9	14.2	100	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 : $20\log(3.8\text{ m} / 3.0\text{ m}) = 2.1\text{ dB}$

10 GHz - 26 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

These results have sufficient margin without taking account Dwell time factor.

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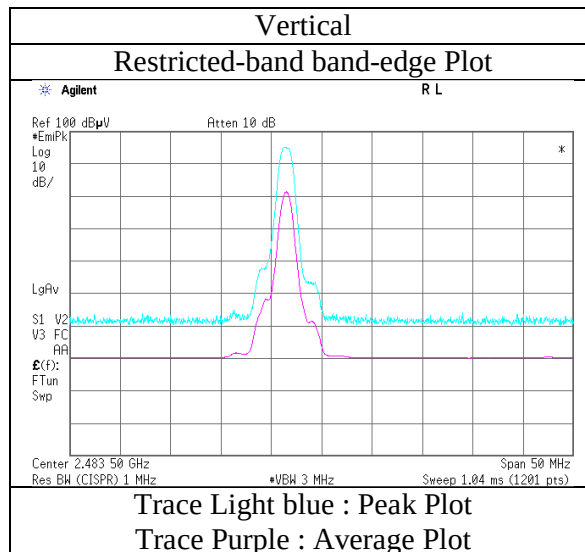
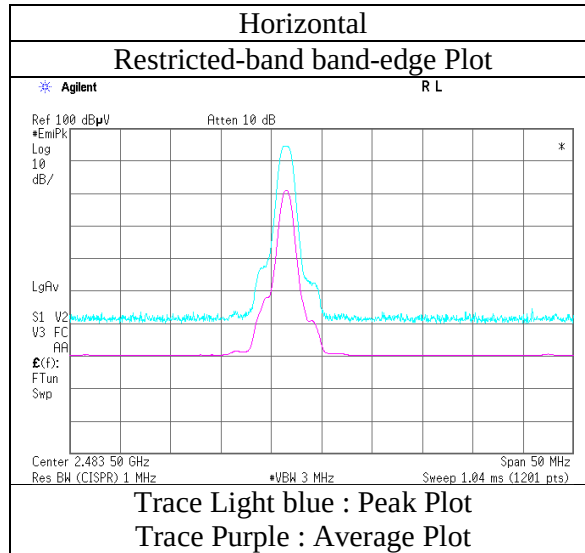
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Radiated Spurious Emission (Reference Plot for band-edge)

Test place	Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No.	11085508M
Date	January 12, 2016
Temperature / Humidity	20 deg. C / 35 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, DH5 2480 MHz



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

Radiated Spurious Emission

Test place : Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No. : 11085508M
Date : January 11, 2016 January 10, 2016 January 14, 2016
Temperature / Humidity : 19 deg. C / 40 % RH 20 deg. C / 38 % RH 20 deg. C / 36 % RH
Engineer : Kazuhiro Ando Kazuhiro Ando Kazuhiro Ando
(30 - 1000 MHz) (1- 10 GHz) (10 - 26 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.	348.142	QP	40.6	14.5	6.0	32.3	0.0	28.8	46.0	17.2	100	251	
Hori.	499.494	QP	33.8	17.9	6.7	32.3	0.0	26.1	46.0	19.9	100	289	
Hori.	720.018	QP	34.1	21.2	7.7	32.3	0.0	30.7	46.0	15.3	122	20	
Hori.	791.997	QP	30.4	22.3	7.9	32.1	0.0	28.5	46.0	17.5	100	29	
Hori.	900.015	QP	31.1	23.4	8.3	31.5	0.0	31.3	46.0	14.7	100	245	
Hori.	960.000	QP	40.2	23.9	8.5	31.1	0.0	41.5	46.0	4.5	100	250	
Hori.	1980.000	PK	48.7	25.8	13.6	38.1	2.1	52.1	73.9	21.8	131	0	
Hori.	2390.000	PK	44.6	27.6	14.0	38.3	2.1	50.0	73.9	23.9	175	355	
Hori.	2558.000	PK	45.7	27.6	14.2	38.4	2.1	51.2	73.9	22.7	140	175	
Hori.	3360.150	PK	48.6	28.2	5.7	38.8	2.1	45.8	73.9	28.1	106	173	
Hori.	4804.000	PK	45.3	31.3	6.1	39.3	2.1	45.5	73.9	28.4	100	0	Floor Noise
Hori.	7206.000	PK	42.5	36.3	7.5	38.4	2.1	50.0	73.9	23.9	100	0	Floor Noise
Hori.	1980.000	AV	41.1	25.8	13.6	38.1	2.1	44.5	53.9	9.4	131	0	
Hori.	2390.000	AV	31.0	27.6	14.0	38.3	2.1	36.4	53.9	17.5	175	355	
Hori.	2558.000	AV	34.8	27.6	14.2	38.4	2.1	40.3	53.9	13.6	140	175	
Hori.	3360.150	AV	43.3	28.2	5.7	38.8	2.1	40.5	53.9	13.4	106	173	
Hori.	4804.000	AV	33.3	31.3	6.1	39.3	2.1	33.5	53.9	20.4	100	0	Floor Noise
Hori.	7206.000	AV	30.3	36.3	7.5	38.4	2.1	37.8	53.9	16.1	100	0	Floor Noise
Vert.	79.414	QP	34.4	9.6	4.2	32.5	0.0	15.7	40.0	24.3	100	62	
Vert.	125.524	QP	37.9	11.5	4.6	32.4	0.0	21.6	43.5	21.9	100	130	
Vert.	207.484	QP	38.0	10.1	5.2	32.4	0.0	20.9	43.5	22.6	100	0	
Vert.	499.497	QP	36.5	17.9	6.7	32.3	0.0	28.8	46.0	17.2	100	180	
Vert.	688.503	QP	31.5	20.8	7.6	32.3	0.0	27.6	46.0	18.4	100	15	
Vert.	960.000	QP	40.9	23.9	8.5	31.1	0.0	42.2	46.0	3.8	109	189	
Vert.	1980.000	PK	46.7	25.8	13.6	38.1	2.1	50.1	73.9	23.8	109	325	
Vert.	2390.000	PK	44.0	27.6	14.0	38.3	2.1	49.4	73.9	24.5	138	95	
Vert.	2558.000	PK	46.0	27.6	14.2	38.4	2.1	51.5	73.9	22.4	200	100	
Vert.	3360.150	PK	46.6	28.2	5.7	38.8	2.1	43.8	73.9	30.1	152	182	
Vert.	4804.000	PK	45.5	31.3	6.1	39.3	2.1	45.7	73.9	28.2	100	0	Floor Noise
Vert.	7206.000	PK	42.5	36.3	7.5	38.4	2.1	50.0	73.9	23.9	100	0	Floor Noise
Vert.	1980.000	AV	37.9	25.8	13.6	38.1	2.1	41.3	53.9	12.6	109	325	
Vert.	2390.000	AV	31.1	27.6	14.0	38.3	2.1	36.5	53.9	17.4	138	95	
Vert.	2558.000	AV	34.4	27.6	14.2	38.4	2.1	39.9	53.9	14.0	200	100	
Vert.	3360.150	AV	39.4	28.2	5.7	38.8	2.1	36.6	53.9	17.3	152	182	
Vert.	4804.000	AV	33.2	31.3	6.1	39.3	2.1	33.4	53.9	20.5	100	0	Floor Noise
Vert.	7206.000	AV	30.3	36.3	7.5	38.4	2.1	37.8	53.9	16.1	100	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 : 20log (3.8 m / 3.0 m) = 2.1 dB

10 GHz - 26 GHz : 20log (1.0 m / 3.0 m) = -9.5 dB

These results have sufficient margin without taking account Dwell time 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	92.3	27.6	14.0	38.3	2.1	97.7	-	-	Carrier
Hori.	2400.000	PK	43.5	27.6	14.0	38.3	2.1	48.9	77.7	28.8	
Vert.	2402.000	PK	93.5	27.6	14.0	38.3	2.1	98.9	-	-	Carrier
Vert.	2400.000	PK	44.2	27.6	14.0	38.3	2.1	49.6	78.9	29.3	

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

Distance factor : 1 GHz - 10 GHz : 20log (3.8 m / 3.0 m) = 2.1 dB

10 GHz - 26 GHz : 20log (1.0 m / 3.0 m) = -9.5 dB

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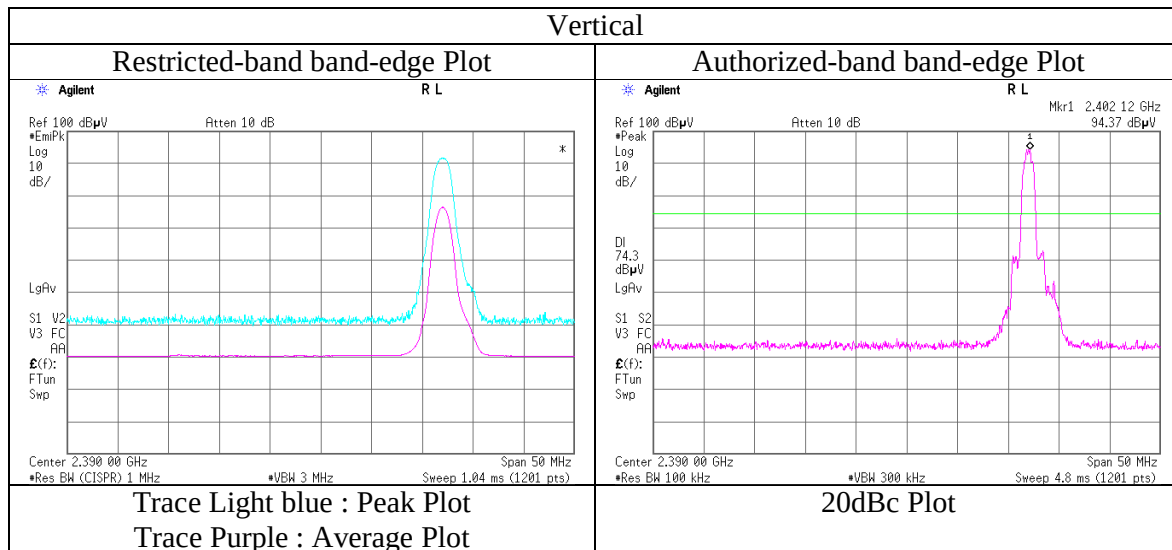
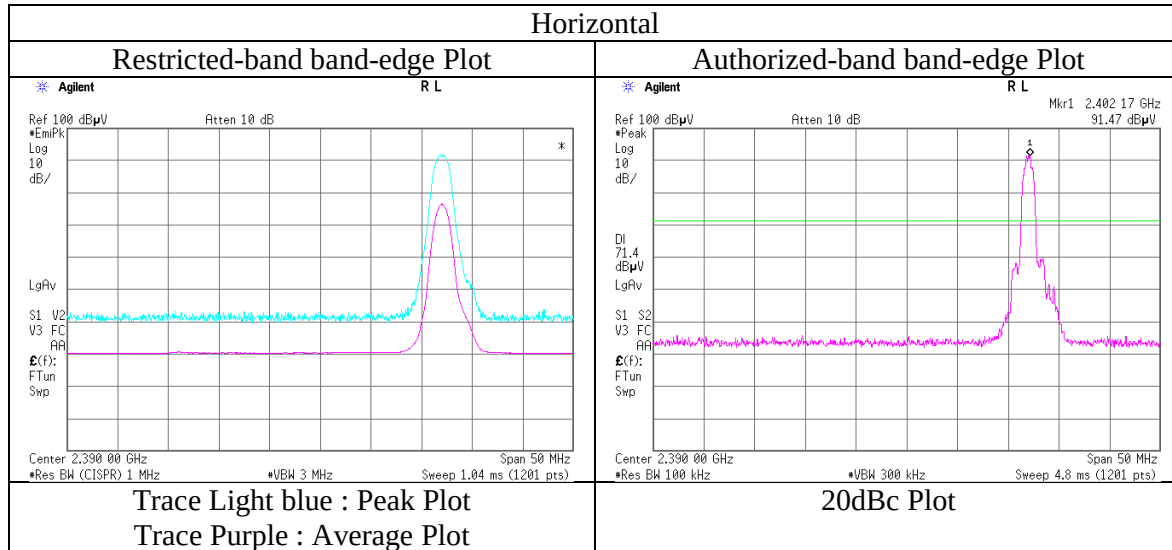
1614, Mushihata, Katori-shi, Chiba-ken, 289-0341 Japan

Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Radiated Spurious Emission (Reference Plot for band-edge)

Test place	Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No.	11085508M
Date	January 10, 2016
Temperature / Humidity	20 deg. C / 38 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, 3DH5 2402 MHz



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

Radiated Spurious Emission

Test place : Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No. : 11085508M
Date : January 11, 2016 January 10, 2016 January 14, 2016
Temperature / Humidity : 19 deg. C / 40 % RH 20 deg. C / 38 % RH 20 deg. C / 36 % RH
Engineer : Kazuhiro Ando Kazuhiro Ando Kazuhiro Ando
(30 - 1000 MHz) (1- 10 GHz) (10 - 26 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.	348.142	QP	40.7	14.5	6.0	32.3	0.0	28.9	46.0	17.1	100	251	
Hori.	499.498	QP	33.4	17.9	6.7	32.3	0.0	25.7	46.0	20.3	100	289	
Hori.	719.973	QP	33.9	21.2	7.7	32.3	0.0	30.5	46.0	15.5	127	23	
Hori.	792.007	QP	30.5	22.3	7.9	32.1	0.0	28.6	46.0	17.4	100	26	
Hori.	900.016	QP	31.0	23.4	8.3	31.5	0.0	31.2	46.0	14.8	100	244	
Hori.	960.000	QP	40.3	23.9	8.5	31.1	0.0	41.6	46.0	4.4	100	254	
Hori.	1980.000	PK	47.7	25.8	13.6	38.1	2.1	51.1	73.9	22.8	111	0	
Hori.	3360.150	PK	47.8	28.2	5.7	38.8	2.1	45.0	73.9	28.9	169	163	
Hori.	4882.000	PK	44.5	31.2	6.2	39.3	2.1	44.7	73.9	29.2	100	0	Floor Noise
Hori.	7323.000	PK	42.0	36.5	7.8	38.4	2.1	50.0	73.9	23.9	100	0	Floor Noise
Hori.	1980.000	AV	42.1	25.8	13.6	38.1	2.1	45.5	53.9	8.4	111	0	
Hori.	3360.150	AV	42.1	28.2	5.7	38.8	2.1	39.3	53.9	14.6	169	163	
Hori.	4882.000	AV	32.4	31.2	6.2	39.3	2.1	32.6	53.9	21.3	100	0	Floor Noise
Hori.	7323.000	AV	30.0	36.5	7.8	38.4	2.1	38.0	53.9	15.9	100	0	Floor Noise
Vert.	79.423	QP	34.1	9.6	4.2	32.5	0.0	15.4	40.0	24.6	100	73	
Vert.	125.514	QP	38.2	11.5	4.6	32.4	0.0	21.9	43.5	21.6	100	132	
Vert.	207.493	QP	38.1	10.1	5.2	32.4	0.0	21.0	43.5	22.5	100	0	
Vert.	499.499	QP	35.9	17.9	6.7	32.3	0.0	28.2	46.0	17.8	100	177	
Vert.	688.499	QP	31.7	20.8	7.6	32.3	0.0	27.8	46.0	18.2	100	10	
Vert.	960.000	QP	40.9	23.9	8.5	31.1	0.0	42.2	46.0	3.8	110	190	
Vert.	1980.000	PK	46.6	25.8	13.6	38.1	2.1	50.0	73.9	23.9	155	327	
Vert.	3360.150	PK	47.3	28.2	5.7	38.8	2.1	44.5	73.9	29.4	152	182	
Vert.	4882.000	PK	44.2	31.2	6.2	39.3	2.1	44.4	73.9	29.5	100	0	Floor Noise
Vert.	7323.000	PK	43.0	36.5	7.8	38.4	2.1	51.0	73.9	22.9	100	0	Floor Noise
Vert.	1980.000	AV	38.2	25.8	13.6	38.1	2.1	41.6	53.9	12.3	155	327	
Vert.	3360.150	AV	40.8	28.2	5.7	38.8	2.1	38.0	53.9	15.9	152	182	
Vert.	4882.000	AV	32.5	31.2	6.2	39.3	2.1	32.7	53.9	21.2	100	0	Floor Noise
Vert.	7323.000	AV	30.7	36.5	7.8	38.4	2.1	38.7	53.9	15.2	100	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 : $20\log(3.8\text{ m} / 3.0\text{ m}) = 2.1\text{ dB}$

10 GHz - 26 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

These results have sufficient margin without taking account Dwell time factor.

Radiated Spurious Emission

Test place : Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No. : 11085508M
Date : January 11, 2016 January 12, 2016 January 14, 2016
Temperature / Humidity : 19 deg. C / 40 % RH 20 deg. C / 35 % RH 20 deg. C / 36 % RH
Engineer : Kazuhiro Ando Kazuhiro Ando Kazuhiro Ando
(30 - 1000 MHz) (1- 10 GHz) (10 - 26 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.	348.244	QP	40.0	14.5	6.0	32.3	0.0	28.2	46.0	17.8	100	257	
Hori.	499.502	QP	33.4	17.9	6.7	32.3	0.0	25.7	46.0	20.3	100	277	
Hori.	720.008	QP	34.3	21.2	7.7	32.3	0.0	30.9	46.0	15.1	125	17	
Hori.	792.004	QP	30.7	22.3	7.9	32.1	0.0	28.8	46.0	17.2	100	31	
Hori.	900.015	QP	31.0	23.4	8.3	31.5	0.0	31.2	46.0	14.8	100	247	
Hori.	960.000	QP	40.2	23.9	8.5	31.1	0.0	41.5	46.0	4.5	100	251	
Hori.	1980.000	PK	49.0	25.8	13.6	38.1	2.1	52.4	73.9	21.5	130	0	
Hori.	2324.000	PK	47.1	27.8	14.0	38.3	2.1	52.7	73.9	21.2	214	0	
Hori.	2483.500	PK	45.7	27.5	14.1	38.4	2.1	51.0	73.9	22.9	175	106	
Hori.	3360.150	PK	47.6	28.2	5.7	38.8	2.1	44.8	73.9	29.1	144	162	
Hori.	4960.000	PK	44.4	31.4	6.2	39.3	2.1	44.8	73.9	29.1	100	0	Floor Noise
Hori.	7440.000	PK	43.0	36.7	7.7	38.3	2.1	51.2	73.9	22.7	100	0	Floor Noise
Hori.	1980.000	AV	41.9	25.8	13.6	38.1	2.1	45.3	53.9	8.6	130	0	
Hori.	2324.000	AV	37.4	27.8	14.0	38.3	2.1	43.0	53.9	10.9	214	0	
Hori.	2483.500	AV	31.8	27.5	14.1	38.4	2.1	37.1	53.9	16.8	175	106	
Hori.	3360.150	AV	41.5	28.2	5.7	38.8	2.1	38.7	53.9	15.2	144	162	
Hori.	4960.000	AV	32.1	31.4	6.2	39.3	2.1	32.5	53.9	21.4	100	0	Floor Noise
Hori.	7440.000	AV	31.0	36.7	7.7	38.3	2.1	39.2	53.9	14.7	100	0	Floor Noise
Vert.	79.405	QP	34.4	9.6	4.2	32.5	0.0	15.7	40.0	24.3	100	65	
Vert.	125.511	QP	38.1	11.5	4.6	32.4	0.0	21.8	43.5	21.7	100	134	
Vert.	207.471	QP	38.1	10.1	5.2	32.4	0.0	21.0	43.5	22.5	100	0	
Vert.	499.500	QP	35.6	17.9	6.7	32.3	0.0	27.9	46.0	18.1	100	181	
Vert.	688.507	QP	32.1	20.8	7.6	32.3	0.0	28.2	46.0	17.8	100	15	
Vert.	960.000	QP	41.0	23.9	8.5	31.1	0.0	42.3	46.0	3.7	108	190	
Vert.	1980.000	PK	46.7	25.8	13.6	38.1	2.1	50.1	73.9	23.8	109	340	
Vert.	2324.000	PK	46.5	27.8	14.0	38.3	2.1	52.1	73.9	21.8	168	94	
Vert.	2483.500	PK	44.3	27.5	14.1	38.4	2.1	49.6	73.9	24.3	141	97	
Vert.	3360.150	PK	46.4	28.2	5.7	38.8	2.1	43.6	73.9	30.3	105	118	
Vert.	4960.000	PK	44.2	31.4	6.2	39.3	2.1	44.6	73.9	29.3	100	0	Floor Noise
Vert.	7440.000	PK	43.0	36.7	7.7	38.3	2.1	51.2	73.9	22.7	100	0	Floor Noise
Vert.	1980.000	AV	38.1	25.8	13.6	38.1	2.1	41.5	53.9	12.4	109	340	
Vert.	2324.000	AV	37.0	27.8	14.0	38.3	2.1	42.6	53.9	11.3	168	94	
Vert.	2483.500	AV	31.9	27.5	14.1	38.4	2.1	37.2	53.9	16.7	141	97	
Vert.	3360.150	AV	39.1	28.2	5.7	38.8	2.1	36.3	53.9	17.6	105	118	
Vert.	4960.000	AV	32.1	31.4	6.2	39.3	2.1	32.5	53.9	21.4	100	0	Floor Noise
Vert.	7440.000	AV	31.0	36.7	7.7	38.3	2.1	39.2	53.9	14.7	100	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 : $20\log(3.8\text{ m} / 3.0\text{ m}) = 2.1\text{ dB}$

10 GHz - 26 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

These results have sufficient margin without taking account Dwell time factor.

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Kashima EMC Lab.

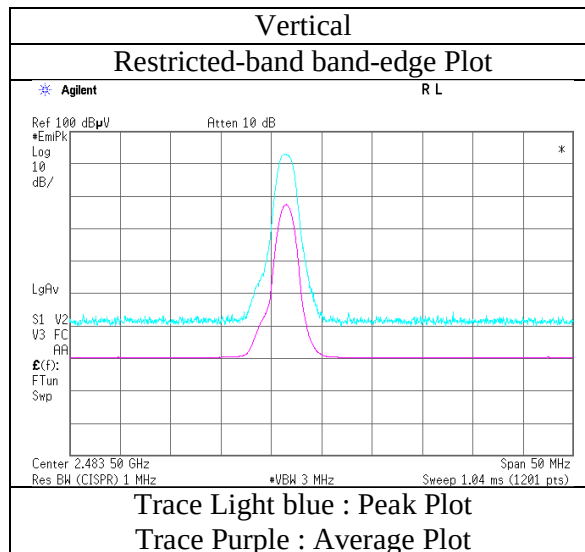
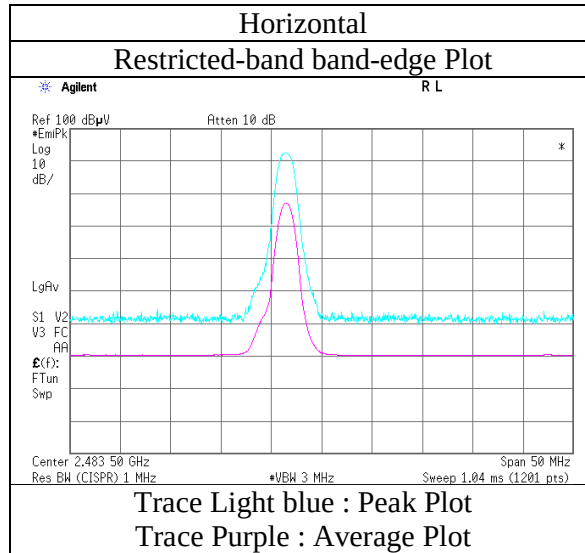
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Facsimile : +81-478-82-3373

Radiated Spurious Emission (Reference Plot for band-edge)

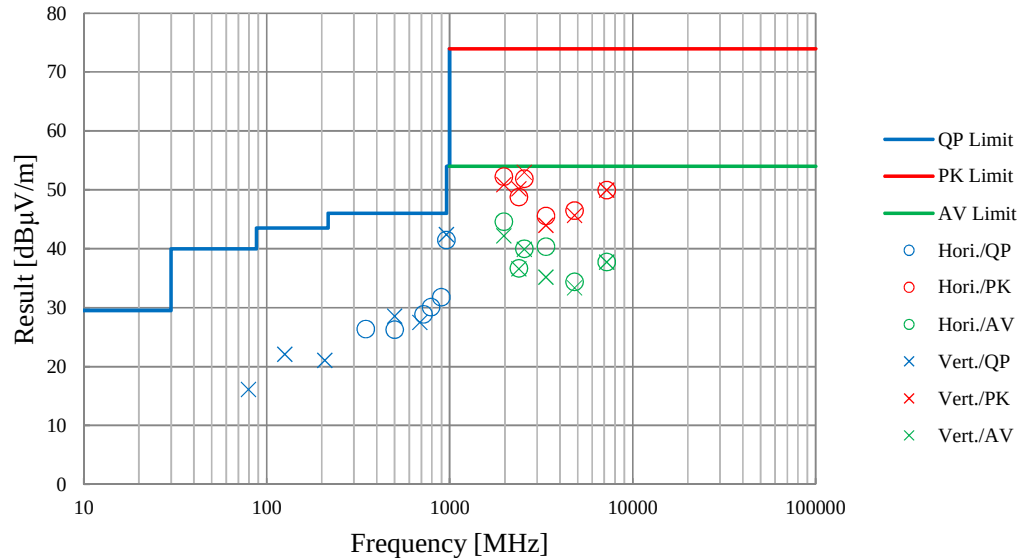
Test place	Kashima EMC Lab. No.6 Semi Anechoic Chamber
Report No.	11085508M
Date	January 12, 2016
Temperature / Humidity	20 deg. C / 35 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, 3DH5 2480 MHz



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

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Kashima EMC Lab. No.6 Semi Anechoic Chamber		
Report No.	11085508M		
Date	January 11, 2016	January 10, 2016	January 14, 2016
Temperature / Humidity	19 deg. C / 40 % RH	20 deg. C / 38 % RH	20 deg. C / 36 % RH
Engineer	Kazuhiro Ando	Kazuhiro Ando	Kazuhiro Ando
	(30 - 1000 MHz)	(1 - 10 GHz)	(10 - 26 GHz)
Mode	Tx, Hopping Off, DH5 2402 MHz		

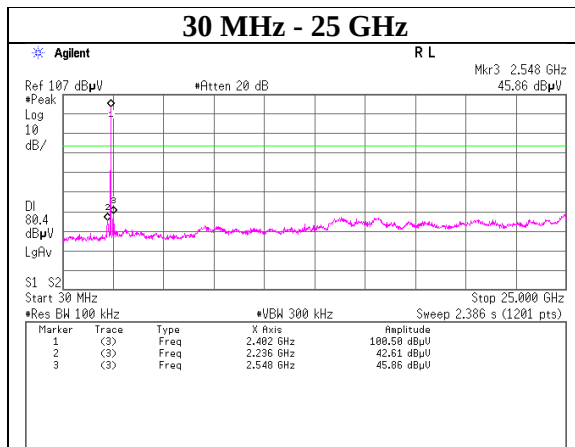
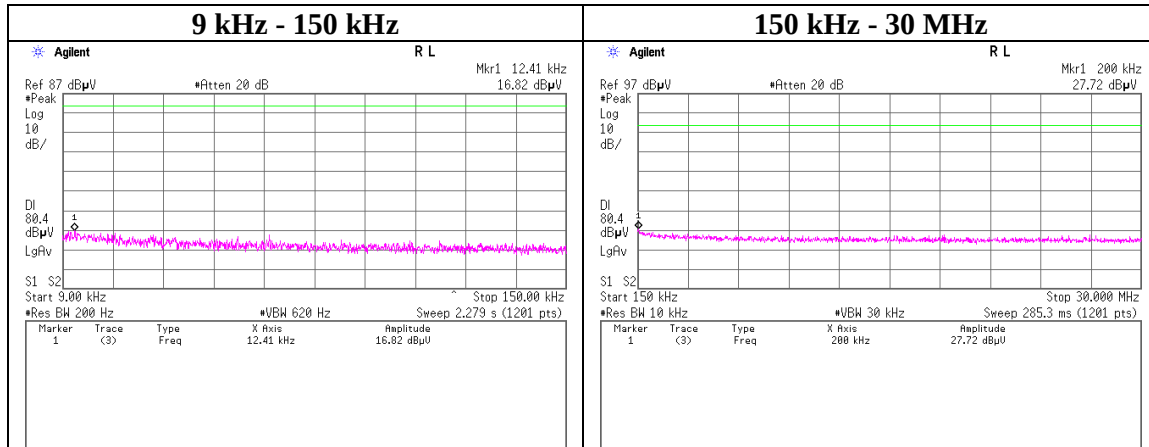


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Conducted Spurious Emission

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off, DH5

2402 MHz



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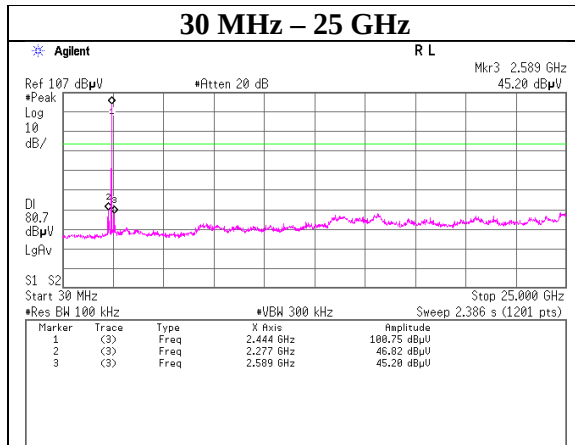
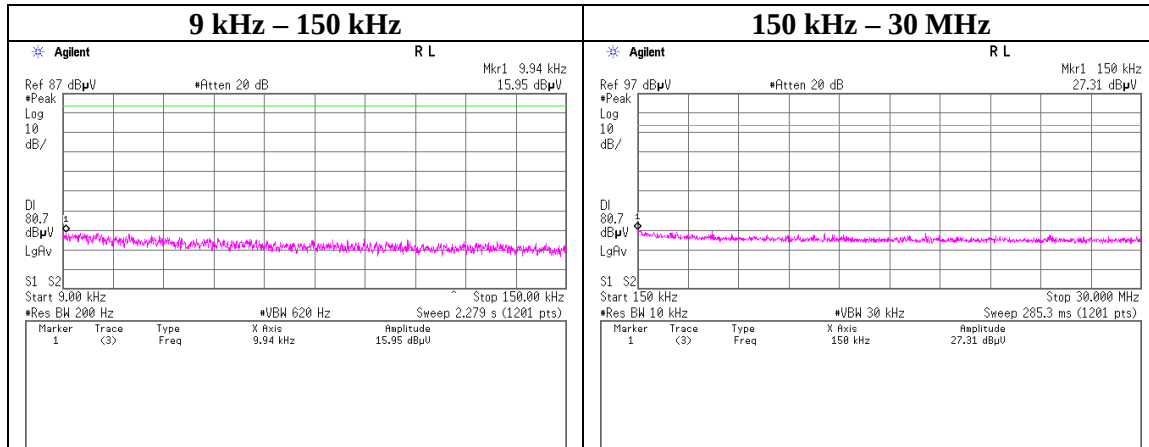
Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

Conducted Spurious Emission

Test place	Kashima EMC Lab. No.2 Measurement Room
Report No.	11085508M
Date	January 8, 2016
Temperature / Humidity	21 deg. C / 39 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, DH5

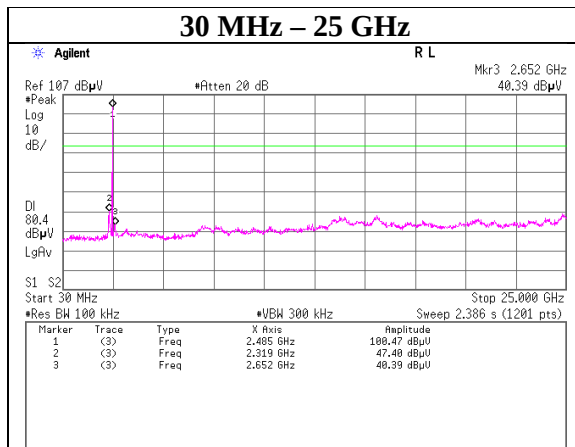
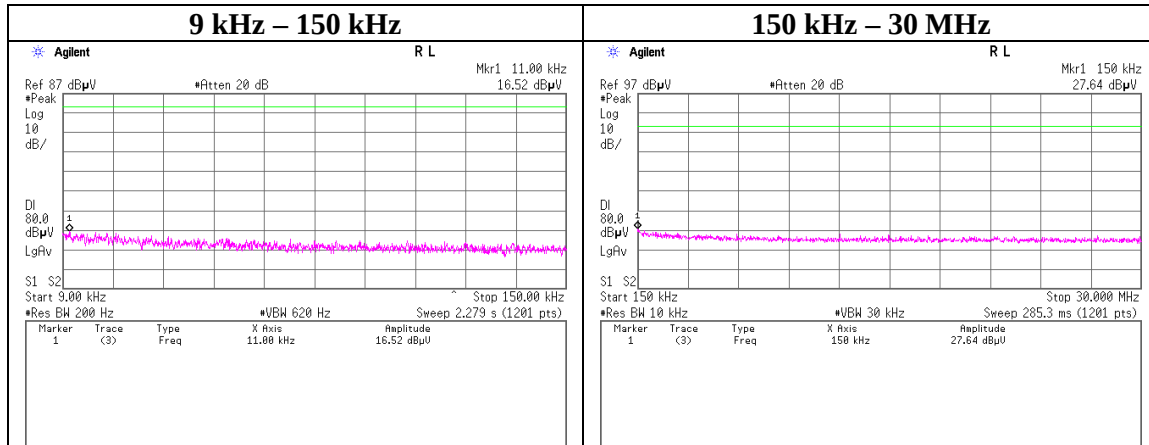
2441 MHz



Conducted Spurious Emission

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off, DH5

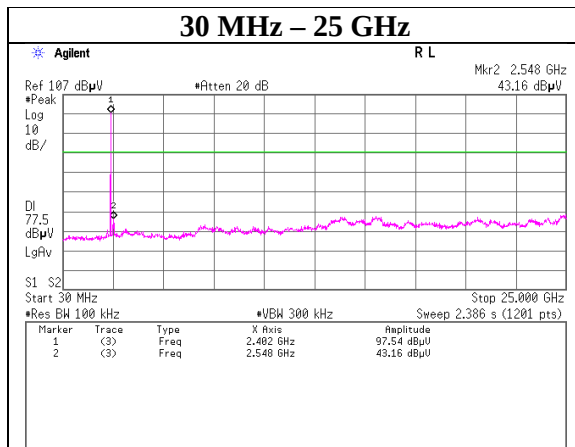
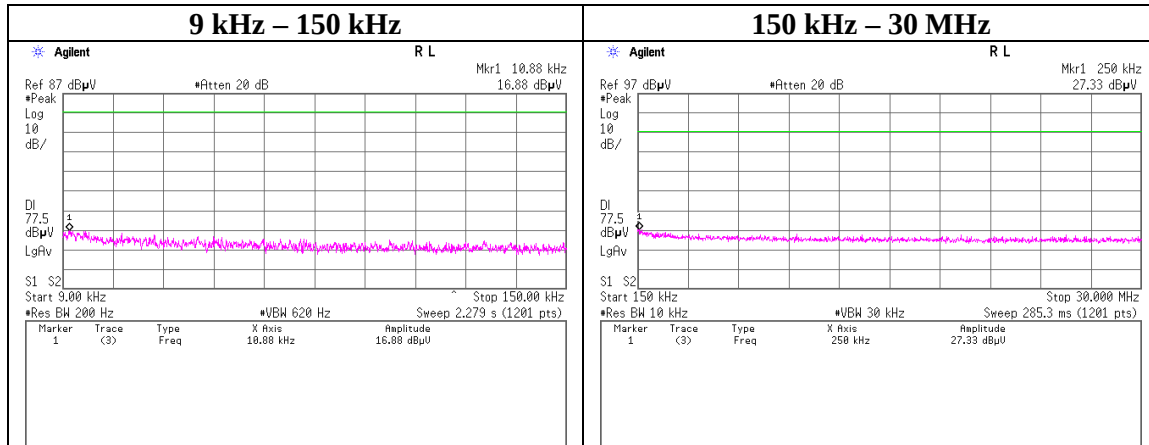
2480 MHz



Conducted Spurious Emission

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off, 3DH5

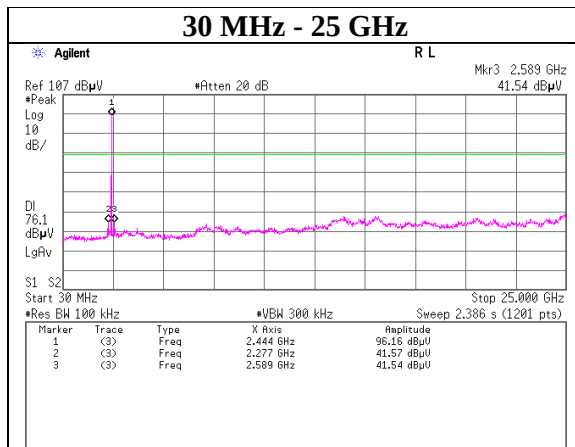
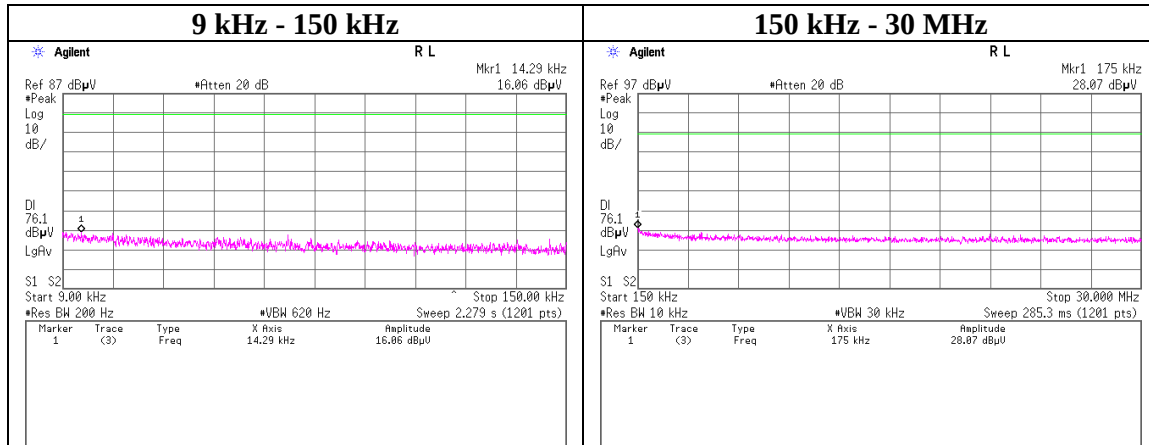
2402 MHz



Conducted Spurious Emission

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off, 3DH5

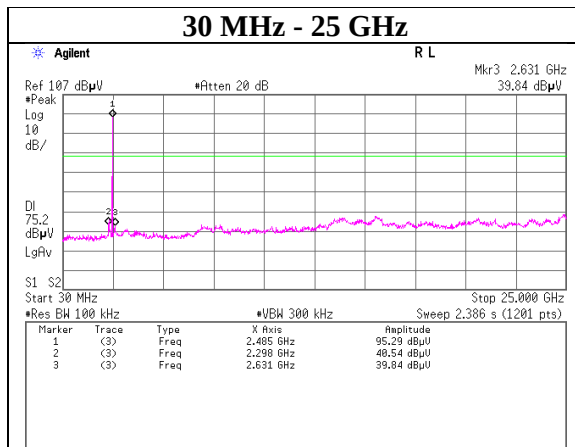
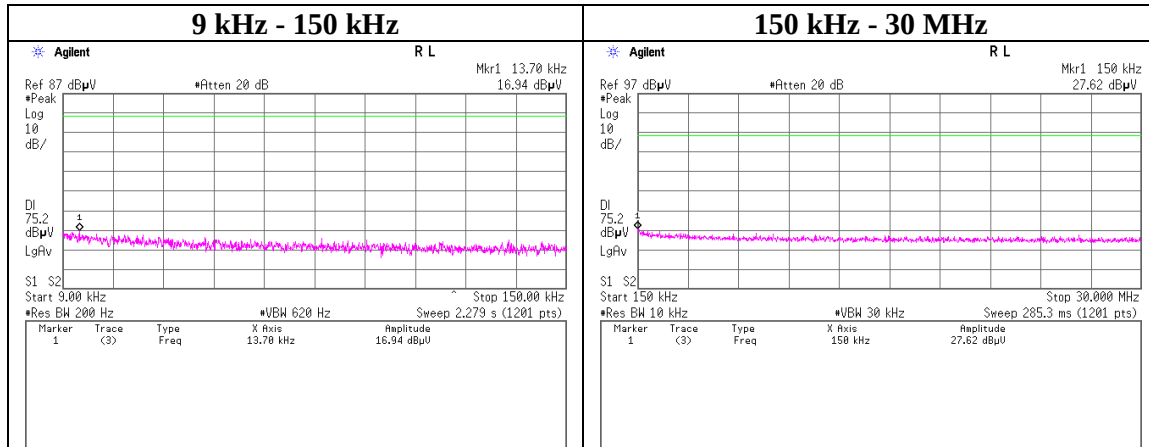
2441 MHz



Conducted Spurious Emission

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping Off, 3DH5

2480 MHz



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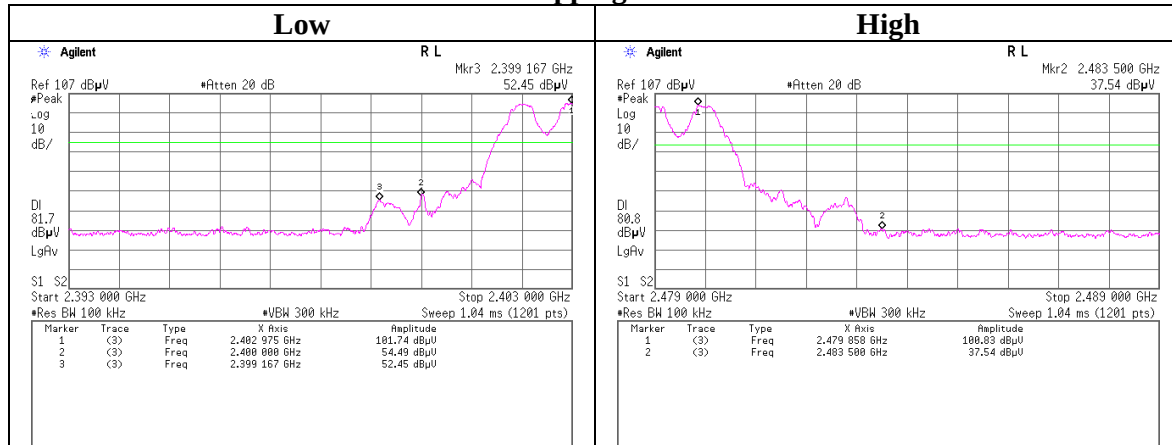
Telephone : +81-478-88-6500

Facsimile : +81-478-82-3373

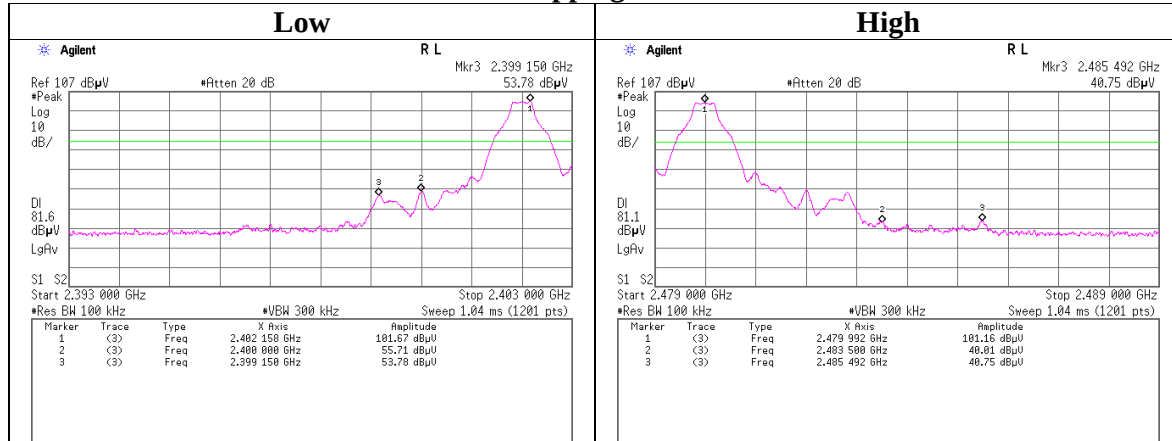
Conducted Emission Band Edge compliance

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping On/Off, DH5

Hopping On



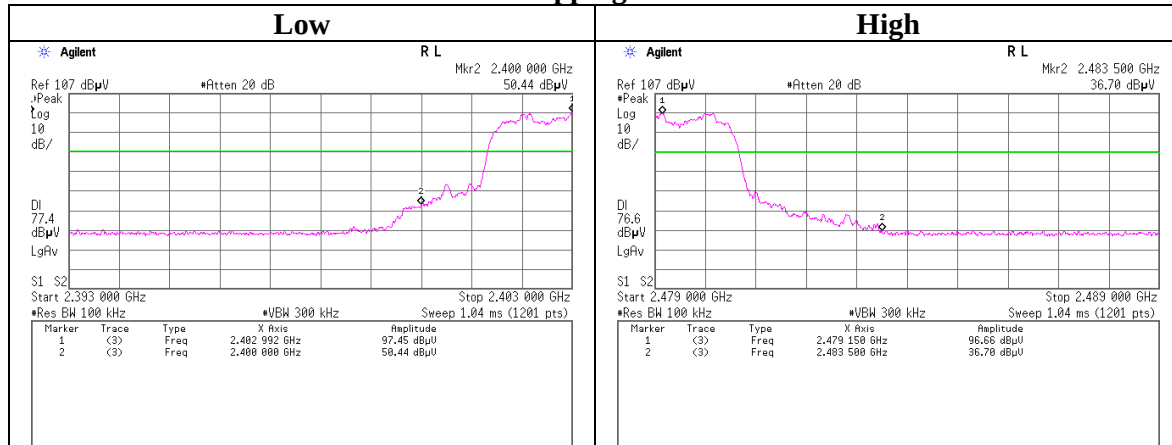
Hopping Off



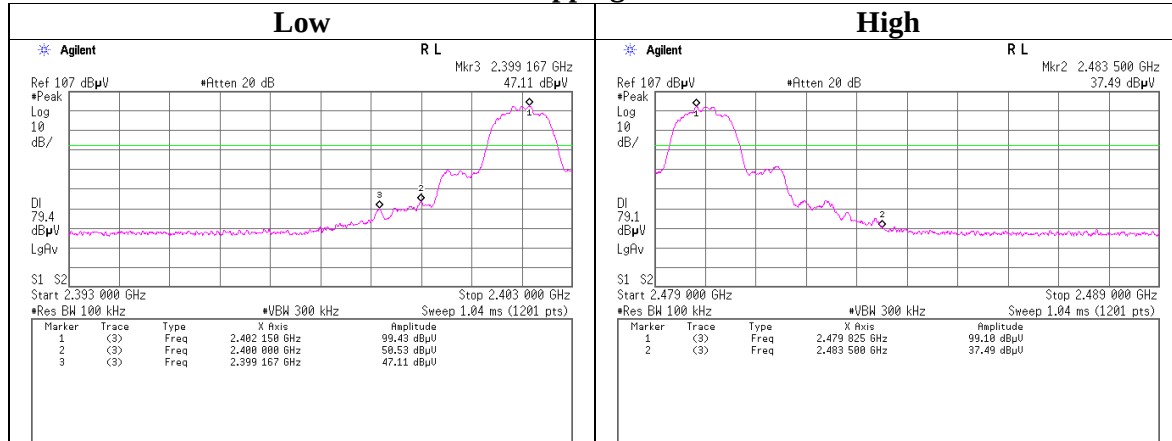
Conducted Emission Band Edge compliance

Test place : Kashima EMC Lab. No.2 Measurement Room
Report No. : 11085508M
Date : January 8, 2016
Temperature / Humidity : 21 deg. C / 39 % RH
Engineer : Kazuhiro Ando
Mode : Tx, Hopping On/Off, 3DH5

Hopping On



Hopping Off

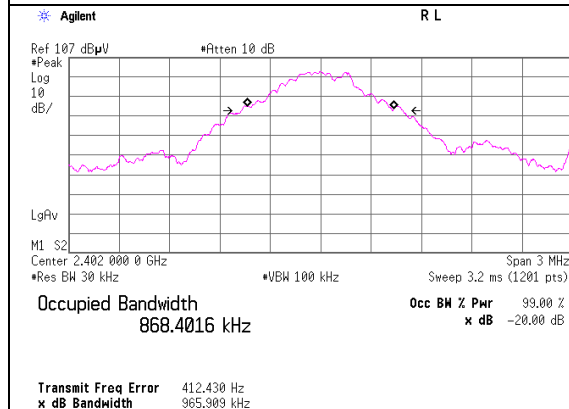


99% Occupied Bandwidth

Test place	Kashima EMC Lab. No.2 Measurement Room
Report No.	11085508M
Date	January 8, 2016
Temperature / Humidity	21 deg. C / 39 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, 3DH5

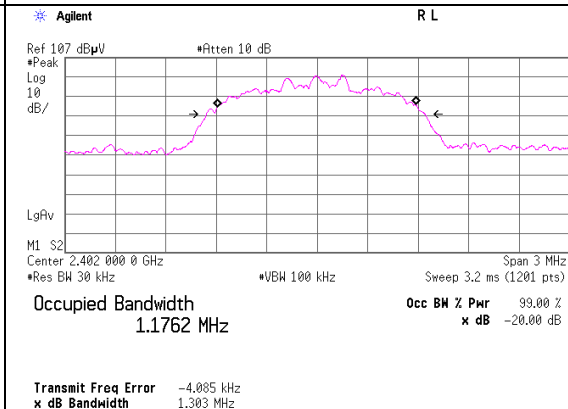
Hopping Off, DH5

2402 MHz

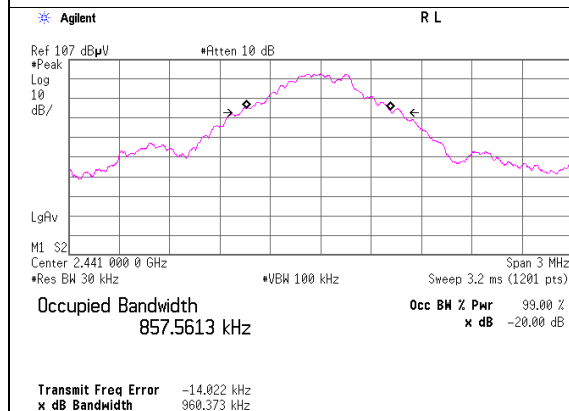


Hopping Off, 3DH5

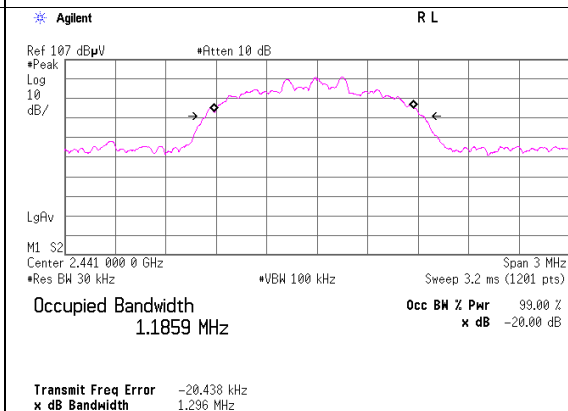
2402 MHz



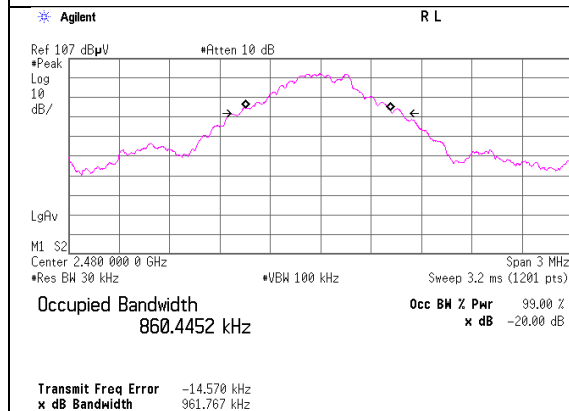
2441 MHz



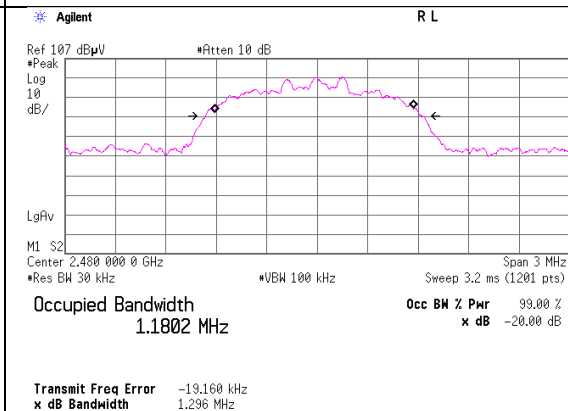
2441 MHz



2480 MHz



2480 MHz



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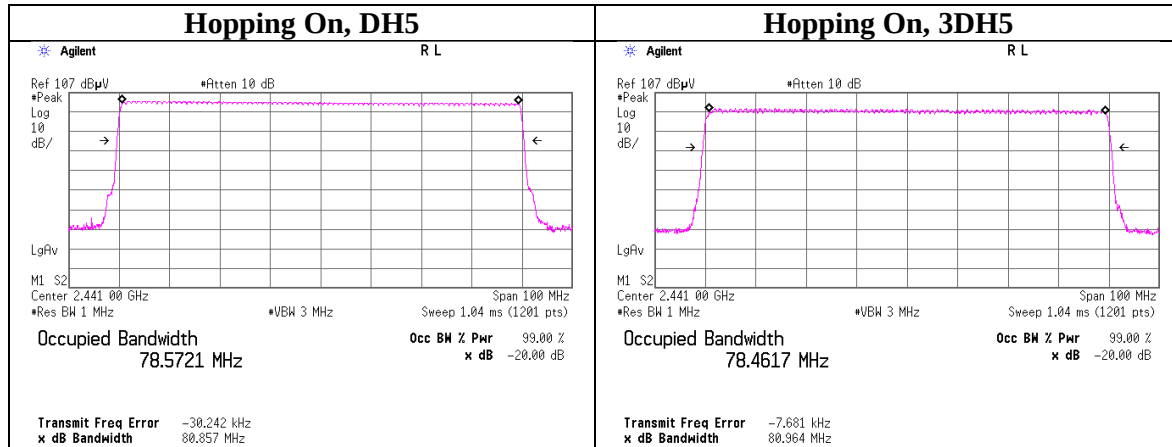
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99% Occupied Bandwidth

Test place	Kashima EMC Lab. No.2 Measurement Room
Report No.	11085508M
Date	January 8, 2016
Temperature / Humidity	21 deg. C / 39 % RH
Engineer	Kazuhiro Ando
Mode	Tx, Hopping Off, 3DH5



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APPENDIX 2: Test instruments

Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
CTR-04	Test Receiver	Rohde & Schwarz	ESCI	100053 Rev 4.32	RE	2015/10/01 * 12
CCC-S6-R(1/9/ 10/CATS-07-08 /11/12/13)	Coaxial Cable	Fujikura, Suhner, Suhner, Agilent, Suhner, -, Suhner	15DSFA, SF106, SF104, 8496B+8494B, SF104, -, SF104	MY41110308, 2550 A11724(Step Att)	RE	2015/12/22 * 12
CBL-07	LOGBICON	Schwarzbeck	VULB 9168	166	RE	2015/04/09 * 12
CAT3-19	3dB Fixed Atten.	JFW	50HF-003N	none	RE	2015/06/03*12
CAF-07	Pre-Amplifier	Sonoma Instrument	310N	240505	RE	2015/11/02 * 12
CSCL-08	Ruler	Tajima	L25-55	none	RE	2015/02/18 * 12
COS-06	Temperature & Humidity Indicator	HIOKI	3641/9680-50	070727010/070799296	RE	2015/05/17 * 12
COTS-CEMI-02	EMI Software	TSJ	TEPTO-DV(RE, CE, MF, PE)	Ver, RE: 2.5.0131, CE: 2.5.0131, ME: 2.5.0129, PE: 2.5.0129	RE	-
CSA-06	Spectrum Analyzer	Agilent	N9030A	MY53310670 Version A.13.12	RE	2015/05/28 * 12
CHA-20	Broad Band Horn	Schwarzbeck	BBHA 9120D	9120D-1270	RE	2015/07/31 * 12
CHA-07	Double Ridged Horn	ETS-Lindgren	3160-09	00166043	RE	2015/06/28 * 12
CAF-19	Pre-Amplifier	TOYO	HAP18-26W	00000035	RE	2015/06/28 * 12
CAF-18	Pre-Amplifier	TOYO	TPA0118-36	A-1001	RE	2015/07/15 * 12
CAT10-16	10dB Fixed Atten.	Weinschel	54A-10	56246	RE	2015/05/26 * 12
CHF-03	HPF	Micro-Tronics	HPM50111-02	008	RE	2015/05/25 * 12
CCC-W05	Micro Wave Cable	Junkosha	MWX241	MRA-12-14-145	RE	2015/05/26 * 12
CCC-W07	Micro Wave Cable	Junkosha	MWX221	MRA-12-14-148	RE	2015/05/26 * 12
CCC-W09	Micro Wave Cable	SUHNER	SUCOFLEX104	MY588/4	RE	2015/07/13 * 12
CSA-07	Spectrum Analyzer	Agilent	E4448A	MY52490024 Version A.11.21	AT	2015/05/28 * 12
CAT10-17	10dB Fixed Atten.	Weinschel	54A-10	56251	AT	2015/05/26 * 12
CCC-W06	Micro Wave Cable	Junkosha	MWX241	MRA-12-14-146	AT	2015/05/26 * 12
CPM-16	Peak Power Analyzer	Agilent	8990B	MY51000276	AT	2015/06/16 * 12
CPSO-24	Power Sensor	Agilent	N1923A	MY54070024	AT	2015/06/16 * 12
COS-12	Temperature & Humidity Indicator	A&D	AD-5681	6876017	AT	2015/07/13 * 12

The expiration date of the calibration is the end of the expired month.
All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

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

Test Item: RE: Radiated Emission test
AT: Antenna Terminal Conducted test

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