RADIO TEST REPORT

Test Report No. : 12219844H-C-R1

Applicant	:	**Sony Interactive Entertainment Inc.**
Type of Equipment	:	**Wireless communication module**
Model No.	:	**AW-CB319**
FCC ID	:	**AK8M18DAQ1**
Test regulation	:	**FCC Part 15 Subpart E: 2018** **For Permissive Change** **(Maximum Conducted Output Power, Maximum Power Spectral Density and Radiated Spurious Emission tests only)**
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. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
6. The all test items in this test report are conducted by UL Japan, Inc. Ise EMC Lab.
7. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
8. This report is a revised version of 12219844H-C. 12219844H-C is replaced with this report.

Date of test: January 23 to March 28, 2018

Representative test engineer:
Takumi Shimada
Engineer
Consumer Technology Division

Approved by:
Takayuki Shimada
Leader
Consumer Technology Division

NVLAP TESTING
NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
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☐ 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.: 12219884H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	12219844H-C	May 11, 2018	-	-
1	12219844H-C-R1	May 16, 2018	P.75	Correction of Limit and Margin (5725.000 MHz (Vert / PK)) : Limit: from 73.9 to 68.2 Margin: from 68.2 to 15.2

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SECTION 1: Customer information

Company Name	Sony Interactive Entertainment Inc.
Brand Name	SONY
Address	1-7-1 Konan, Minato-ku, Tokyo, 108-0075 Japan
Telephone Number	+81-50-3807-5639
Facsimile Number	+81-50-3807-9594
Contact Person	Kiyoto Sasaki

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

2.1 Identification of E.U.T.

Type of Equipment	Wireless communication module
Model No	AW-CB319
Serial No	Refer to Clause 4.2
Country of Manufacture	China/Japan
Receipt Date of Sample	January 20, 2018
Condition of EUT	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	No modification by the test lab.

2.2 Product Description

AW-CB319 is the Wireless communication module.

Product Specification

Clock frequency in the system (radio part)	26 MHz
Operating Temperature	-10 deg. C - +85 deg. C
Power Supply	DC 3.3 V, DC 1.8 V
Size	20 x 18 x 3.0 mm, 55pin LGA

Radio Specification

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

Equipment Type	Transceiver
Frequency of Operation	2412 MHz - 2462 MHz
Type of Modulation	DSSS, OFDM
Bandwidth & Channel spacing	Less than 20 MHz & 5 MHz
Method of frequency generation	Synthesizer
Antenna Type	PIFA (Antenna port WA for 2.4 GHz / Antenna port WB)
Antenna Gain: G_{ANT}	5.6 dBi (Antenna port WA for 2.4 GHz / Antenna port WB)
Directional Gain *1)	8.61 dBi

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

Equipment Type	Transceiver
Frequency of Operation	U-NII-1: 5180 MHz - 5240 MHz U-NII-2A: 5260 MHz - 5320 MHz U-NII-2C: 5500 MHz - 5700 MHz U-NII-3: 5745 MHz - 5825 MHz
Type of Modulation	OFDM
Bandwidth & Channel spacing	Less than 20 MHz / 40 MHz / 80 MHz & 20 MHz / 40 MHz / 80 MHz
Method of frequency generation	Synthesizer
Antenna Type	PIFA (Antenna port WA for 5 GHz / Antenna port WC for 5 GHz)
Antenna Gain: G_{ANT}	5.0 dBi (Antenna port WA for 5 GHz), 5.6 dBi (Antenna port WC for 5 GHz)
Directional Gain *1)	8.32 dBi

Bluetooth (BDR/EDR)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz - 2480 MHz
Type of Modulation	FHSS (GFSK, π/4DQPSK, 8DPSK)
Bandwidth & Channel spacing	79 MHz & 1 MHz
Method of frequency generation	Synthesizer
Antenna Type	PIFA (Antenna port WC for 2.4 GHz)
Antenna Gain	7.0 dBi (Antenna port WC for 2.4 GHz)

Bluetooth (Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz - 2480 MHz
Type of Modulation	GFSK
Bandwidth & Channel spacing	1 MHz & 2 MHz
Method of frequency generation	Synthesizer
Antenna Type	PIFA (Antenna port WC for 2.4 GHz)
Antenna Gain	7.0 dBi (Antenna port WC for 2.4 GHz)

*1) Directional antenna gain = $10\log\left(\left(10^{\frac{G_{ANT1}}{20}}+10^{\frac{G_{ANT2}}{20}}\right)^2/2\right)$

*This test report applies to WLAN (5 GHz band).

<Contents of the change from original model>
Test Report Number of original model is 12079941H-C (issued by UL Japan, Inc.)
Antenna was only changed from the original model, and other radio specification is identical to it.
In this report, Radiated Spurious Emission test was performed.
For Maximum Conducted Output Power and Maximum Power Spectral Density tests, test result from the original report and new antenna gain were used in the test data.
Information of antenna was updated in Section 2.2.

SECTION 3: Test specification, procedures & results

3.1 Test Specification

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

Title : FCC 47CFR Part15 Radio Frequency Device Subpart E
Unlicensed National Information Infrastructure Devices
Section 15.407 General technical requirements

* The revision on March 12, 2018, does not affect the test specification applied to the EUT.
* Also the EUT complies with FCC Part 15 Subpart B.

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Maximum Conducted Output Power	**FCC:** KDB Publication Number 789033 D02	**FCC:** 15.407 (a) (1) (2) (3)	See data	Complied	Conducted
	IC: -	**IC:** RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033 D02	**FCC :** 15.407 (a) (1) (2) (3)		Complied	Conducted
	IC: -	**IC:** RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1			
Spurious Emission Restricted Band Edge	**FCC:** ANSI C63.10-2013 KDB Publication Number 789033	**FCC:** 15.407 (b), 15.205 and 15.209	6.8 dB 5460.000 MHz, AV, Vertical	Complied	Radiated (> 30 MHz) *1)
	IC: -	**IC:** RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2			
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 FCC 15.407 (b) and KDB 789033 D02 G.3.b).					
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 has the power supply regulator. However one of the input voltages to RF part doesn't go through the regulator. The stable voltage will be supplied by the end product, which will be required to have a power supply regulator. Therefore, the EUT complies with the requirement.

FCC Part 15.203/212 Antenna requirement
The EUT has a unique coupling/antenna connector (U.FL). Therefore the equipment complies with the requirement of 15.203/212.

3.3 Addition to standard

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.

Ise EMC Lab.

Antenna Terminal test

Test Item		Uncertainty (+/-)
RF output power		1.3 dB
Antenna terminal conducted emission / Power dencity / Burst power		2.7 dB
Adjacent channnel power / Channnel power		
	Below 3GHz	1.9 dB
	3 GHz ot 6 GHz	2.1 dB

Radiated emission

Measurement distance	Frequency range	Uncertainty (+/-)
3 m	9 kHz to 30 MHz	3.3 dB
10 m		3.2 dB
3 m	30 MHz to 200 MHz (Horizontal)	4.8 dB
	30 MHz to 200 MHz (Vertical)	5.0 dB
	200 MHz to 1000 MHz (Horiozntal)	5.2 dB
	200 MHz to 1000 MHz (Vertical)	6.3 dB
10 m	30 MHz to 200 MHz (Horizontal)	4.8 dB
	30 MHz to 200 MHz (Vertical)	4.9 dB
	200 MHz to 1000 MHz (Horiozntal)	5.0 dB
	200 MHz to 1000 MHz (Vertical)	5.0 dB
3 m	1 GHz to 6 GHz	5.0 dB
	6 GHz to 18 GHz	5.3 dB
1 m	10 GHz to 26.5 GHz	5.8 dB
	26.5 GHz to 40 GHz	5.8 dB
10 m	1 GHz to 18 GHz	5.2 dB

3.5 Test Location

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

Test site	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms	Maximum measurement distance
No.1 semi-anechoic chamber	2973C-1	19.2 x 11.2 x 7.7	7.0 x 6.0	No.1 Power source room	10 m
No.2 semi-anechoic chamber	2973C-2	7.5 x 5.8 x 5.2	4.0 x 4.0	-	3 m
No.3 semi-anechoic chamber	2973C-3	12.0 x 8.5 x 5.9	6.8 x 5.75	No.3 Preparation room	3 m
No.3 shielded room	-	4.0 x 6.0 x 2.7	N/A	-	-
No.4 semi-anechoic chamber	2973C-4	12.0 x 8.5 x 5.9	6.8 x 5.75	No.4 Preparation room	3 m
No.4 shielded room	-	4.0 x 6.0 x 2.7	N/A	-	-
No.5 semi-anechoic chamber	-	6.0 x 6.0 x 3.9	6.0 x 6.0	-	-
No.6 shielded room	-	4.0 x 4.5 x 2.7	4.0 x 4.5	-	-
No.6 measurement room	-	4.75 x 5.4 x 3.0	4.75 x 4.15	-	-
No.7 shielded room	-	4.7 x 7.5 x 2.7	4.7 x 7.5	-	-
No.8 measurement room	-	3.1 x 5.0 x 2.7	N/A	-	-
No.9 measurement room	-	8.8 x 4.6 x 2.8	2.4 x 2.4	-	-
No.11 measurement room	-	6.2 x 4.7 x 3.0	4.8 x 4.6	-	-

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

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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

4.1 Operating Mode(s)

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

Mode	Remarks*
IEEE 802.11a (11a)	54 Mbps, PN9
IEEE 802.11n MIMO 20 MHz BW (11n-20)	MCS 7, PN9
IEEE 802.11ac MIMO 20 MHz BW (11ac-20)	MCS 7 (1Tx), PN9
IEEE 802.11n MIMO 40 MHz BW (11n-40)	MCS 7, PN9
IEEE 802.11ac MIMO 40 MHz BW (11ac-40)	MCS 7 (1Tx), PN9
IEEE 802.11ac MIMO 80 MHz BW (11ac-80)	MCS 7 (1Tx), PN9
*The worst antenna and condition was determined based on the test result of Maximum Conducted Output Power.	
*The power value of the EUT was set for testing as follows (setting value might be different from product specification value); Power settings: U-NII-1: Value = 12 U-NII-2A, U-NII-2C, U-NII-3: Value = 16 Software: MT_TEST_Tool_Ver6.3 *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.	

*The details of Operation mode(s)

Test Item	Operating Mode	Tested Antenna port	Tested Frequency			
			Lower Band	Middle Band	Additional Band	Upper Band
Maximum Conducted Output Power, Maximum Power Spectral Density	11a Tx 11n-20 Tx 11ac-20 Tx	WA+WC, WA, WC	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx	WA+WC, WA, WC	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	WA+WC, WA, WC	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
Radiated Spurious Emission (Below 1 GHz)	11ac-20 Tx *1)	WA+WC	-	-	5700 MHz	-
Radiated Spurious Emission (Above 1 GHz)	11ac-20 Tx *2)	WA+WC	5180 MHz	5260 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11ac-40 Tx *3)	WA+WC	5190 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	WA+WC	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz

*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.
*2) Since 11a, 11ac-20 and 11n-20 have the same modulation method and no differences in transmitting specification, test was performed on the representative mode that had the highest peak output power.
*3) Since 11n-40 and 11ac-40 have the same modulation method and no differences in transmitting specification, test was performed on the representative mode that had the highest peak output power.

*Simultaneously transmission

Test Item	Operating Mode *1)	Tested Antenna port	Tested Frequency			
			Lower Band	Middle Band	Additional Band	Upper Band
Radiated Spurious Emission	11ac-80 + Hopping on 3DH5	WA+WC	-	-	5530 MHz	-

*1) The mode was tested as a representative, because it had the worst margin of 5GHz at radiated emission test.

4.2 Configuration and peripherals

This page has been submitted for a separate exhibit.

SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1GHz >
EUT was placed on a urethane platform of nominal size, 0.5 m by 1.0 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

< Above 1GHz >
EUT was placed on a urethane platform of nominal size, 0.5 m by 0.5 m, raised 1.5 m above the conducting ground plane.
The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane.

The height of the measuring antenna varied between 1 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.

< Below 1GHz >

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

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

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

For U-NII-3 Bandedge
-27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge in the section 15.407(b)(4)(i).

Restricted band edge:

Apply to limit in the Section 15.209 (a).
Since this limit is severer than the limit of the inside of restricted bands.

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

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

Test Antennas are used as below;

Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method AD *1) RBW: 1 MHz VBW: 3 MHz Detector: Power Averaging (RMS) Trace: ≥ 100 traces If duty cycle was less than 98%, a duty factor was added to the results.
Test Distance	3 m	3 m (below 1 GHz), 4.4 m*2) (1 GHz - 10GHz), 1 m*3) (10 GHz - 40 GHz),	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E".
*2) Distance Factor: 20 x log (4.4 m/3.0 m) = 3.33 dB
*3) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.5 dB

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT (Antenna and Module) to see the position of maximum noise, and the test was made at the position that has the maximum noise.

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

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

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 and Test method
Maximum Conducted Output Power	-	-	-	Auto	Average	-	Power Meter (Sensor: 80 MHz BW) (Method PM)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 470 kHz *1)	≥ 3 RBW	Auto	RMS Power Averaging (200 times)	Clear Write	Spectrum Analyzer

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

*1) KDB 789033 D02 says that RBW is set to be 500 kHz for 5.725 GHz-5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor (10 log(500 kHz / 470 kHz)) was added to the test result.

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

Maximum Conducted Output Power

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 25, 2018
Temperature / Humidity	23deg. C / 20 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 54 Mbps

Antenna port WA + WC Applied limit: 15.407, mobile and portable client device

Tested	26 dB	99%	Conducted power						e.i.r.p.					
Frequency	EBW	OBW	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	(B for FCC)	(B for IC)	WA	WC	Sum				WA	WC	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	16.559	3.88	4.04	7.92	8.99	21.65	12.66	26.36	27.42	53.78	17.31	29.97	12.66
5220	-	16.589	3.78	3.85	7.62	8.82	21.65	12.83	25.64	26.12	51.77	17.14	29.97	12.83
5240	-	16.577	3.99	4.03	8.02	9.04	21.65	12.61	27.10	27.35	54.45	17.36	29.97	12.61
5260	19.727	16.558	6.65	5.48	12.14	10.84	21.63	10.79	45.19	37.24	82.42	19.16	29.97	10.81
5300	19.402	16.559	6.25	6.47	12.72	11.05	21.55	10.50	42.46	43.95	86.42	19.37	29.97	10.60
5320	19.428	16.658	6.21	6.30	12.50	10.97	21.56	10.59	42.17	42.76	84.93	19.29	29.97	10.68
5500	19.402	16.628	6.49	7.26	13.75	11.38	21.55	10.17	44.06	49.32	93.37	19.70	29.97	10.27
5580	19.223	16.607	7.31	7.50	14.81	11.71	21.51	9.80	49.66	50.93	100.59	20.03	29.97	9.94
5700	19.045	16.555	6.92	8.24	15.16	11.81	21.47	9.66	46.99	55.98	102.97	20.13	29.97	9.84
5745	-	-	6.37	8.51	14.88	11.73	27.68	15.95	43.25	57.81	101.06	20.05	36.00	15.95
5785	-	-	6.47	8.73	15.20	11.82	27.68	15.86	43.95	59.29	103.25	20.14	36.00	15.86
5825	-	-	6.64	7.64	14.28	11.55	27.68	16.13	45.08	51.88	96.96	19.87	36.00	16.13

		Antenna port WA						**Antenna port WC**					
Tested	Duty	Power	Cable	Atten.	Antenna	Result		Power	Cable	Atten.	Antenna	Result	
Frequency	Factor	Meter	Loss	Loss	Gain	Cond.	e.i.r.p.	Meter	Loss	Loss	Gain	Cond.	e.i.r.p.
		Reading				Power		Reading				Power	
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	0.00	-4.86	0.70	10.05	8.32	5.89	14.21	-4.77	0.70	10.13	8.32	6.06	14.38
5220	0.00	-4.98	0.70	10.05	8.32	5.77	14.09	-4.98	0.70	10.13	8.32	5.85	14.17
5240	0.00	-4.74	0.70	10.05	8.32	6.01	14.33	-4.78	0.70	10.13	8.32	6.05	14.37
5260	0.00	-2.52	0.70	10.05	8.32	8.23	16.55	-3.44	0.70	10.13	8.32	7.39	15.71
5300	0.00	-2.79	0.70	10.05	8.32	7.96	16.28	-2.73	0.70	10.14	8.32	8.11	16.43
5320	0.00	-2.83	0.70	10.06	8.32	7.93	16.25	-2.85	0.70	10.14	8.32	7.99	16.31
5500	0.00	-2.74	0.80	10.06	8.32	8.12	16.44	-2.33	0.80	10.14	8.32	8.61	16.93
5580	0.00	-2.22	0.80	10.06	8.32	8.64	16.96	-2.19	0.80	10.14	8.32	8.75	17.07
5700	0.00	-2.45	0.80	10.05	8.32	8.40	16.72	-1.77	0.80	10.13	8.32	9.16	17.48
5745	0.00	-2.81	0.80	10.05	8.32	8.04	16.36	-1.63	0.80	10.13	8.32	9.30	17.62
5785	0.00	-2.74	0.80	10.05	8.32	8.11	16.43	-1.51	0.80	10.12	8.32	9.41	17.73
5825	0.00	-2.63	0.80	10.05	8.32	8.22	16.54	-2.09	0.80	10.12	8.32	8.83	17.15

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Conducted Output Power

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 25, 2018
Temperature / Humidity	23deg. C / 20 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 MCS 7

Antenna port WA + WC

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power						e.i.r.p.					
			Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
			WA	WC	Sum				WA	WC	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.681	3.94	4.04	7.97	9.02	21.65	12.63	26.73	27.42	54.15	17.34	29.97	12.63
5220	-	17.723	3.99	4.04	8.03	9.05	21.65	12.60	27.10	27.42	54.52	17.37	29.97	12.60
5240	-	17.728	4.10	3.97	8.07	9.07	21.65	12.58	27.86	26.98	54.84	17.39	29.97	12.58
5260	19.897	17.759	6.50	5.37	11.87	10.75	21.65	10.90	44.16	36.48	80.63	19.07	29.97	10.90
5300	19.724	17.710	5.65	6.08	11.73	10.69	21.62	10.93	38.37	41.30	79.68	19.01	29.97	10.96
5320	19.828	17.739	5.70	6.18	11.88	10.75	21.65	10.90	38.73	41.98	80.70	19.07	29.97	10.90
5500	19.709	17.709	6.38	7.28	13.66	11.35	21.62	10.27	43.35	49.43	92.78	19.67	29.97	10.30
5580	19.982	17.718	7.31	7.50	14.81	11.71	21.65	9.94	49.66	50.93	100.59	20.03	29.97	9.94
5700	19.951	17.695	7.01	8.24	15.26	11.83	21.65	9.82	47.64	55.98	103.62	20.15	29.97	9.82
5745	-	-	6.47	8.38	14.85	11.72	27.68	15.96	43.95	56.89	100.84	20.04	36.00	15.96
5785	-	-	6.14	8.75	14.89	11.73	27.68	15.95	41.69	59.43	101.12	20.05	36.00	15.95
5825	-	-	6.59	7.53	14.13	11.50	27.68	16.18	44.77	51.17	95.94	19.82	36.00	16.18

		Antenna port WA						**Antenna port WC**					
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result		Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result	
						Cond. Power	e.i.r.p.					Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	0.00	-4.80	0.70	10.05	8.32	5.95	14.27	-4.77	0.70	10.13	8.32	6.06	14.38
5220	0.00	-4.74	0.70	10.05	8.32	6.01	14.33	-4.77	0.70	10.13	8.32	6.06	14.38
5240	0.00	-4.62	0.70	10.05	8.32	6.13	14.45	-4.84	0.70	10.13	8.32	5.99	14.31
5260	0.00	-2.62	0.70	10.05	8.32	8.13	16.45	-3.53	0.70	10.13	8.32	7.30	15.62
5300	0.00	-3.23	0.70	10.05	8.32	7.52	15.84	-3.00	0.70	10.14	8.32	7.84	16.16
5320	0.00	-3.20	0.70	10.06	8.32	7.56	15.88	-2.93	0.70	10.14	8.32	7.91	16.23
5500	0.00	-2.81	0.80	10.06	8.32	8.05	16.37	-2.32	0.80	10.14	8.32	8.62	16.94
5580	0.00	-2.22	0.80	10.06	8.32	8.64	16.96	-2.19	0.80	10.14	8.32	8.75	17.07
5700	0.00	-2.39	0.80	10.05	8.32	8.46	16.78	-1.77	0.80	10.13	8.32	9.16	17.48
5745	0.00	-2.74	0.80	10.05	8.32	8.11	16.43	-1.70	0.80	10.13	8.32	9.23	17.55
5785	0.00	-2.97	0.80	10.05	8.32	7.88	16.20	-1.50	0.80	10.12	8.32	9.42	17.74
5825	0.00	-2.66	0.80	10.05	8.32	8.19	16.51	-2.15	0.80	10.12	8.32	8.77	17.09

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Conducted Output Power

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 25, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-20

Antenna port WA + WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power						e.i.r.p.					
			Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
			WA	WC	Sum				WA	WC	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.690	4.11	3.92	8.03	9.05	21.65	12.60	27.93	26.61	54.53	17.37	29.97	12.60
5220	-	17.689	3.71	3.97	7.68	8.85	21.65	12.80	25.18	26.98	52.15	17.17	29.97	12.80
5240	-	17.675	3.68	3.72	7.41	8.70	21.65	12.95	25.00	25.29	50.30	17.02	29.97	12.95
5260	19.594	17.734	5.74	5.30	11.04	10.43	21.60	11.17	38.99	35.97	74.97	18.75	29.97	11.22
5300	19.814	17.681	5.78	5.94	11.72	10.69	21.64	10.95	39.26	40.36	79.63	19.01	29.97	10.96
5320	19.782	17.697	5.68	5.89	11.56	10.63	21.64	11.01	38.55	39.99	78.54	18.95	29.97	11.02
5500	19.947	17.690	6.32	6.89	13.21	11.21	21.65	10.44	42.95	46.77	89.73	19.53	29.97	10.44
5580	19.769	17.707	6.71	7.43	14.14	11.51	21.63	10.12	45.60	50.47	96.07	19.83	29.97	10.14
5700	19.699	17.708	7.10	8.20	15.30	11.85	21.62	9.77	48.19	55.72	103.91	20.17	29.97	9.80
5745	-	-	6.10	8.45	14.55	11.63	27.68	16.05	41.40	57.41	98.81	19.95	36.00	16.05
5785	-	-	5.65	8.53	14.18	11.52	27.68	16.16	38.37	57.94	96.31	19.84	36.00	16.16
5825	-	-	6.44	7.29	13.74	11.38	27.68	16.30	43.75	49.55	93.30	19.70	36.00	16.30

		Antenna port WA						**Antenna port WC**					
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result		Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result	
						Cond. Power	e.i.r.p.					Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	0.00	-4.61	0.70	10.05	8.32	6.14	14.46	-4.90	0.70	10.13	8.32	5.93	14.25
5220	0.00	-5.06	0.70	10.05	8.32	5.69	14.01	-4.84	0.70	10.13	8.32	5.99	14.31
5240	0.00	-5.09	0.70	10.05	8.32	5.66	13.98	-5.12	0.70	10.13	8.32	5.71	14.03
5260	0.00	-3.16	0.70	10.05	8.32	7.59	15.91	-3.59	0.70	10.13	8.32	7.24	15.56
5300	0.00	-3.13	0.70	10.05	8.32	7.62	15.94	-3.10	0.70	10.14	8.32	7.74	16.06
5320	0.00	-3.22	0.70	10.06	8.32	7.54	15.86	-3.14	0.70	10.14	8.32	7.70	16.02
5500	0.00	-2.85	0.80	10.06	8.32	8.01	16.33	-2.56	0.80	10.14	8.32	8.38	16.70
5580	0.00	-2.59	0.80	10.06	8.32	8.27	16.59	-2.23	0.80	10.14	8.32	8.71	17.03
5700	0.00	-2.34	0.80	10.05	8.32	8.51	16.83	-1.79	0.80	10.13	8.32	9.14	17.46
5745	0.00	-3.00	0.80	10.05	8.32	7.85	16.17	-1.66	0.80	10.13	8.32	9.27	17.59
5785	0.00	-3.33	0.80	10.05	8.32	7.52	15.84	-1.61	0.80	10.12	8.32	9.31	17.63
5825	0.00	-2.76	0.80	10.05	8.32	8.09	16.41	-2.29	0.80	10.12	8.32	8.63	16.95

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Conducted Output Power

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 25, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40

Antenna port WA +Antenna port WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna WA	Antenna WC	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna WA	Antenna WC	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.246	3.38	3.83	7.21	8.58	21.65	13.07	22.96	26.00	48.96	16.90	29.97	13.07
5230	-	36.343	3.75	3.72	7.47	8.73	21.65	12.92	25.47	25.23	50.70	17.05	29.97	12.92
5270	39.857	36.237	6.14	5.40	11.53	10.62	21.65	11.03	41.69	36.64	78.33	18.94	29.97	11.03
5310	40.063	36.226	5.78	5.90	11.68	10.68	21.65	10.97	39.26	40.09	79.35	19.00	29.97	10.97
5510	40.117	36.189	6.38	7.18	13.56	11.32	21.65	10.33	43.35	48.75	92.10	19.64	29.97	10.33
5550	40.690	36.231	6.27	7.05	13.31	11.24	21.65	10.41	42.56	47.86	90.42	19.56	29.97	10.41
5670	39.924	36.218	6.95	6.46	13.41	11.27	21.65	10.38	47.21	43.85	91.06	19.59	29.97	10.38
5755	-	-	6.10	8.09	14.19	11.52	27.68	16.16	41.40	54.95	96.35	19.84	36.00	16.16
5795	-	-	5.98	8.77	14.75	11.69	27.68	15.99	40.64	59.57	100.21	20.01	36.00	15.99

		Antenna port WA						**Antenna port WC**					
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	0.00	-5.46	0.70	10.05	8.32	5.29	13.61	-5.00	0.70	10.13	8.32	5.83	14.15
5230	0.00	-5.01	0.70	10.05	8.32	5.74	14.06	-5.13	0.70	10.13	8.32	5.70	14.02
5270	0.00	-2.87	0.70	10.05	8.32	7.88	16.20	-3.51	0.70	10.13	8.32	7.32	15.64
5310	0.00	-3.14	0.70	10.06	8.32	7.62	15.94	-3.13	0.70	10.14	8.32	7.71	16.03
5510	0.00	-2.81	0.80	10.06	8.32	8.05	16.37	-2.38	0.80	10.14	8.32	8.56	16.88
5550	0.00	-2.89	0.80	10.06	8.32	7.97	16.29	-2.46	0.80	10.14	8.32	8.48	16.80
5670	0.00	-2.43	0.80	10.05	8.32	8.42	16.74	-2.83	0.80	10.13	8.32	8.10	16.42
5755	0.00	-3.00	0.80	10.05	8.32	7.85	16.17	-1.85	0.80	10.13	8.32	9.08	17.40
5795	0.00	-3.08	0.80	10.05	8.32	7.77	16.09	-1.49	0.80	10.12	8.32	9.43	17.75

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Conducted Output Power

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 25, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-40

Antenna port WA +Antenna port WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power						e.i.r.p.					
			Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
			WA	WC	Sum				WA	WC	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.280	3.57	3.77	7.34	8.66	21.65	12.99	24.27	25.59	49.85	16.98	29.97	12.99
5230	-	36.237	3.50	3.83	7.33	8.65	21.65	13.00	23.77	26.00	49.77	16.97	29.97	13.00
5270	39.592	36.259	6.37	5.50	11.86	10.74	21.65	10.91	43.25	37.33	80.58	19.06	29.97	10.91
5310	39.886	36.275	5.53	6.08	11.61	10.65	21.65	11.00	37.58	41.30	78.89	18.97	29.97	11.00
5510	39.628	36.271	6.40	7.21	13.61	11.34	21.65	10.31	43.45	48.98	92.43	19.66	29.97	10.31
5550	40.157	36.236	6.34	6.97	13.30	11.24	21.65	10.41	43.05	47.32	90.37	19.56	29.97	10.41
5670	40.122	36.249	7.05	6.52	13.56	11.32	21.65	10.33	47.86	44.26	92.12	19.64	29.97	10.33
5755	-	-	6.15	8.63	14.78	11.70	27.68	15.98	41.78	58.61	100.40	20.02	36.00	15.98
5795	-	-	6.17	8.61	14.78	11.70	27.68	15.98	41.88	58.48	100.36	20.02	36.00	15.98

		Antenna port WA						**Antenna port WC**					
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result		Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result	
						Cond. Power	e.i.r.p.					Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	0.00	-5.22	0.70	10.05	8.32	5.53	13.85	-5.07	0.70	10.13	8.32	5.76	14.08
5230	0.00	-5.31	0.70	10.05	8.32	5.44	13.76	-5.00	0.70	10.13	8.32	5.83	14.15
5270	0.00	-2.71	0.70	10.05	8.32	8.04	16.36	-3.43	0.70	10.13	8.32	7.40	15.72
5310	0.00	-3.33	0.70	10.06	8.32	7.43	15.75	-3.00	0.70	10.14	8.32	7.84	16.16
5510	0.00	-2.80	0.80	10.06	8.32	8.06	16.38	-2.36	0.80	10.14	8.32	8.58	16.90
5550	0.00	-2.84	0.80	10.06	8.32	8.02	16.34	-2.51	0.80	10.14	8.32	8.43	16.75
5670	0.00	-2.37	0.80	10.05	8.32	8.48	16.80	-2.79	0.80	10.13	8.32	8.14	16.46
5755	0.00	-2.96	0.80	10.05	8.32	7.89	16.21	-1.57	0.80	10.13	8.32	9.36	17.68
5795	0.00	-2.95	0.80	10.05	8.32	7.90	16.22	-1.57	0.80	10.12	8.32	9.35	17.67

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Conducted Output Power

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 25, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80

Antenna port WA +Antenna port WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna 1	Antenna 2	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna 1	Antenna 2	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5210	-	75.896	3.41	4.09	7.50	8.75	21.65	12.90	23.17	27.80	50.97	17.07	29.97	12.90
5290	80.579	75.881	5.57	6.14	11.71	10.69	21.65	10.96	37.84	41.69	79.53	19.01	29.97	10.96
5530	80.365	75.814	6.56	6.68	13.24	11.22	21.65	10.43	44.57	45.39	89.96	19.54	29.97	10.43
5610	80.313	75.847	7.33	7.83	15.16	11.81	21.65	9.84	49.77	53.21	102.98	20.13	29.97	9.84
5775	-	-	5.87	8.71	14.58	11.64	27.68	16.04	39.90	59.16	99.06	19.96	36.00	16.04

		Antenna port WA				Result		**Antenna port WC**				Result	
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Cond. Power	e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5210	0.00	-5.42	0.70	10.05	8.32	5.33	13.65	-4.71	0.70	10.13	8.32	6.12	14.44
5290	0.00	-3.29	0.70	10.05	8.32	7.46	15.78	-2.95	0.70	10.13	8.32	7.88	16.20
5530	0.00	-2.69	0.80	10.06	8.32	8.17	16.49	-2.69	0.80	10.14	8.32	8.25	16.57
5610	0.00	-2.20	0.80	10.05	8.32	8.65	16.97	-1.99	0.80	10.13	8.32	8.94	17.26
5775	0.00	-3.16	0.80	10.05	8.32	7.69	16.01	-1.53	0.80	10.13	8.32	9.40	17.72

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

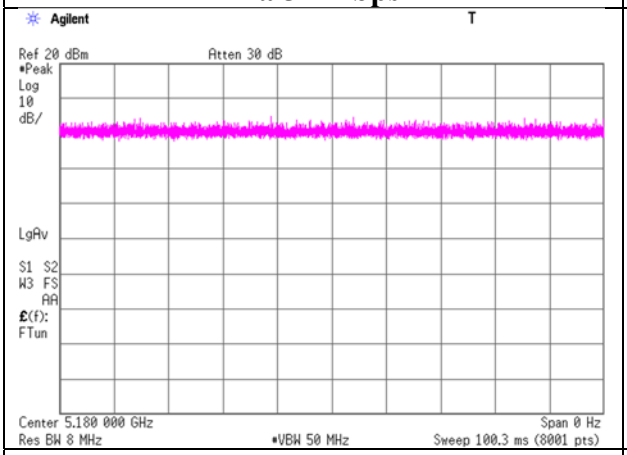
The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Burst rate confirmation

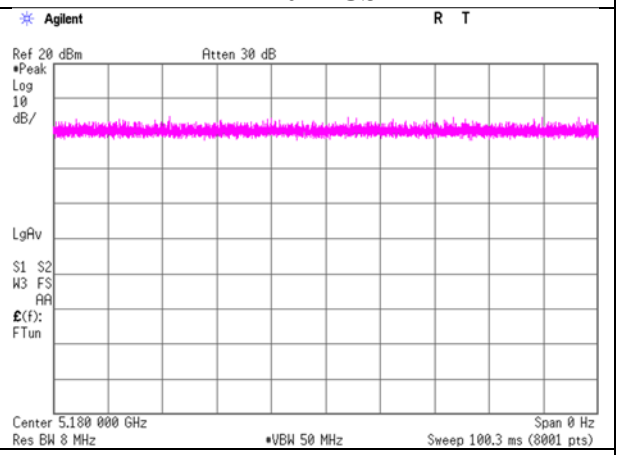
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx

Duty 100 %

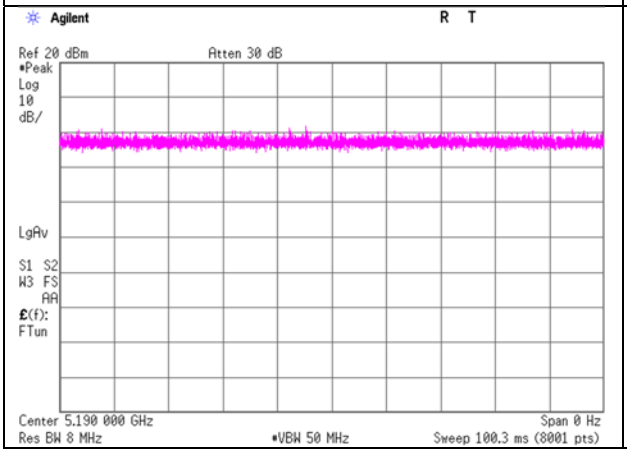
11a 54 Mbps



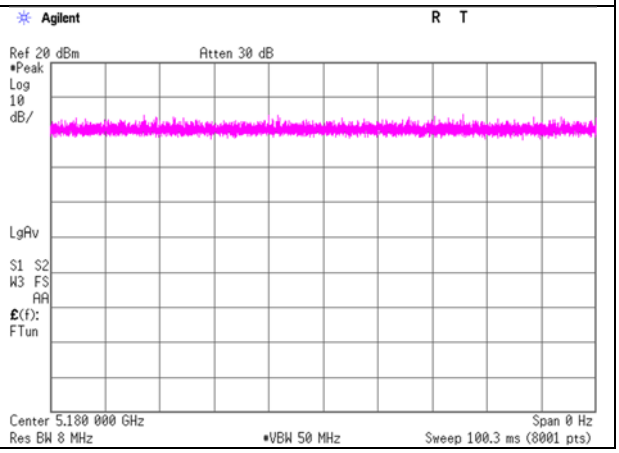
11n-20 MCS 7



11n-40 MCS 7



11ac-20 MCS 7

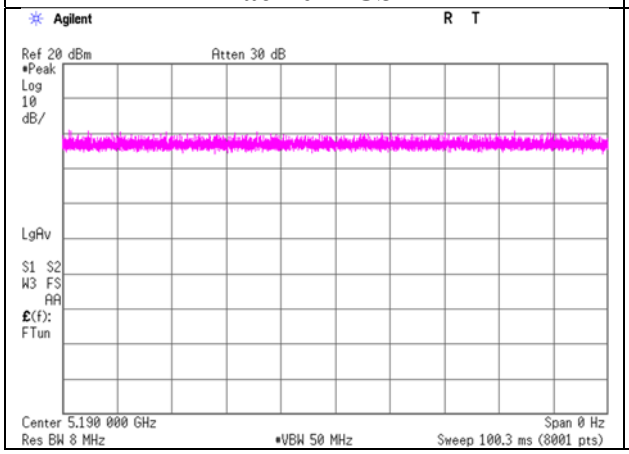


Burst rate confirmation

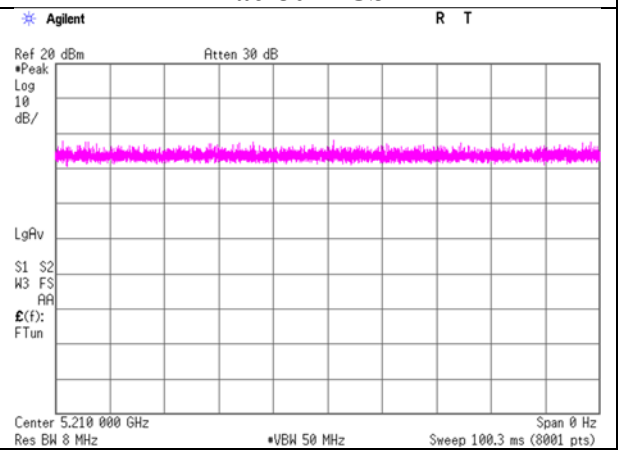
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx

Duty 100 %

11ac-40 MCS 7



11ac-80 MCS 7



Maximum Power Spectral Density

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11a

Antenna Port WA + WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.30	0.41	0.71	-1.49	8.68	10.17	2.04	2.78	4.82	6.83	17.00	10.17
5220	0.38	0.39	0.78	-1.10	8.68	9.78	2.61	2.66	5.27	7.22	17.00	9.78
5240	0.37	0.38	0.75	-1.25	8.68	9.93	2.49	2.61	5.10	7.07	17.00	9.93
5260	0.61	0.57	1.18	0.73	8.68	7.95	4.17	3.86	8.03	9.05	17.00	7.95
5300	0.54	0.60	1.14	0.58	8.68	8.10	3.67	4.10	7.77	8.90	17.00	8.10
5320	0.57	0.59	1.16	0.65	8.68	8.03	3.90	4.00	7.90	8.97	17.00	8.03
5500	0.59	0.67	1.26	1.01	8.68	7.67	4.00	4.57	8.57	9.33	17.00	7.67
5580	0.65	0.70	1.34	1.29	8.68	7.39	4.41	4.72	9.13	9.61	17.00	7.39
5700	0.64	0.73	1.37	1.36	8.68	7.32	4.33	4.97	9.30	9.68	17.00	7.32
5745	0.29	0.40	0.70	-1.57	27.68	29.25	2.00	2.73	4.73	6.75	36.00	29.25
5785	0.30	0.42	0.72	-1.40	27.68	29.08	2.04	2.88	4.92	6.92	36.00	29.08
5825	0.36	0.42	0.78	-1.10	27.68	28.78	2.45	2.83	5.28	7.22	36.00	28.78

			Antenna Port WA						**Antenna Port WC**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	0.00	0.00	-15.98	0.70	10.05	8.32	-5.23	3.09	-14.71	0.70	10.13	8.32	-3.88	4.44
5220	0.00	0.00	-14.91	0.70	10.05	8.32	-4.16	4.16	-14.89	0.70	10.13	8.32	-4.06	4.26
5240	0.00	0.00	-15.10	0.70	10.05	8.32	-4.35	3.97	-14.99	0.70	10.13	8.32	-4.16	4.16
5260	0.00	0.00	-12.87	0.70	10.05	8.32	-2.12	6.20	-13.28	0.70	10.13	8.32	-2.45	5.87
5300	0.00	0.00	-13.42	0.70	10.05	8.32	-2.67	5.65	-13.03	0.70	10.14	8.32	-2.19	6.13
5320	0.00	0.00	-13.17	0.70	10.06	8.32	-2.41	5.91	-13.14	0.70	10.14	8.32	-2.30	6.02
5500	0.00	0.00	-13.16	0.80	10.06	8.32	-2.30	6.02	-12.66	0.80	10.14	8.32	-1.72	6.60
5580	0.00	0.00	-12.73	0.80	10.06	8.32	-1.87	6.45	-12.52	0.80	10.14	8.32	-1.58	6.74
5700	0.00	0.00	-12.81	0.80	10.05	8.32	-1.96	6.36	-12.29	0.80	10.13	8.32	-1.36	6.97
5745	0.00	0.27	-16.42	0.80	10.05	8.32	-5.31	3.01	-15.16	0.80	10.13	8.32	-3.96	4.36
5785	0.00	0.27	-16.34	0.80	10.05	8.32	-5.22	3.10	-14.92	0.80	10.12	8.32	-3.73	4.59
5825	0.00	0.27	-15.54	0.80	10.05	8.32	-4.43	3.89	-15.00	0.80	10.12	8.32	-3.81	4.51

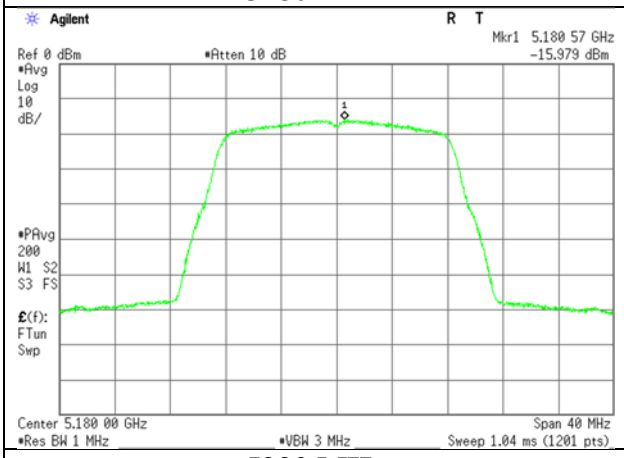
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

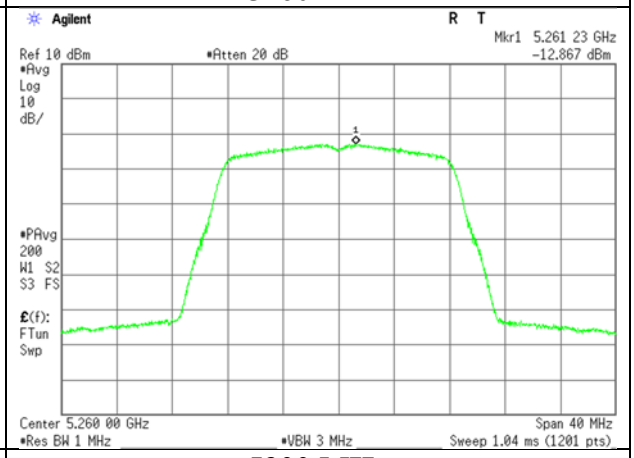
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11a

11a, Antenna port WA

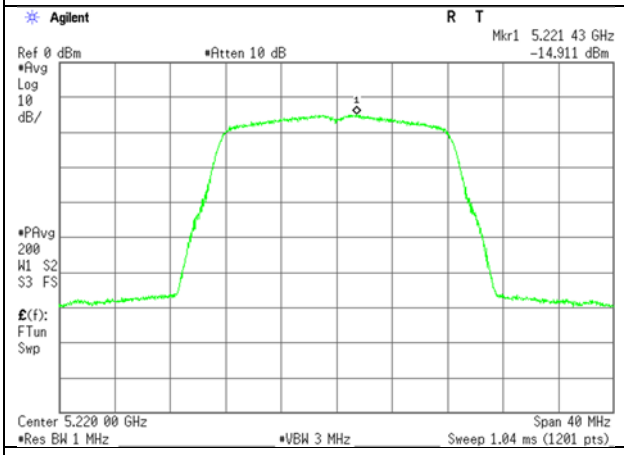
5180 MHz



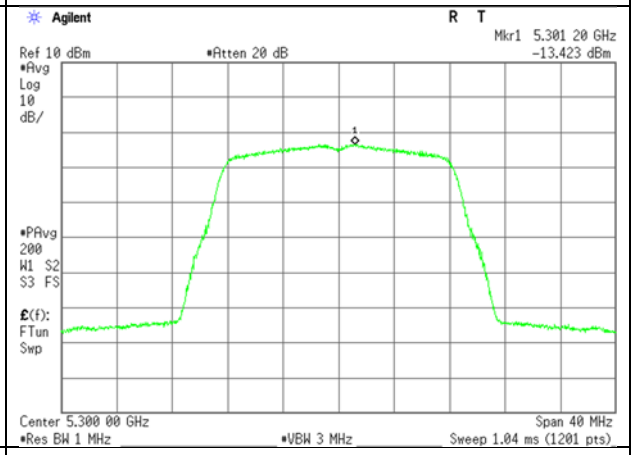
5260 MHz



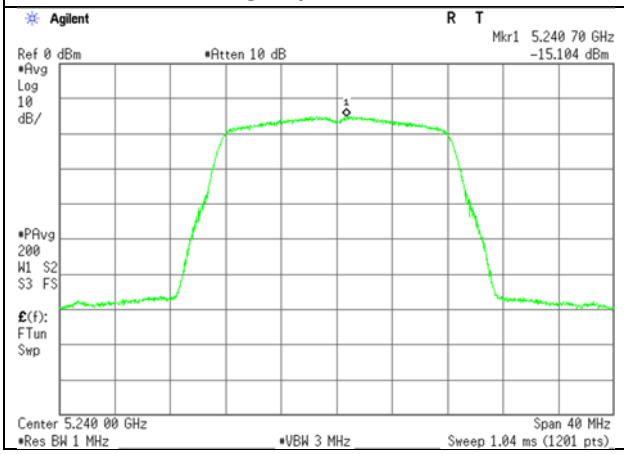
5220 MHz



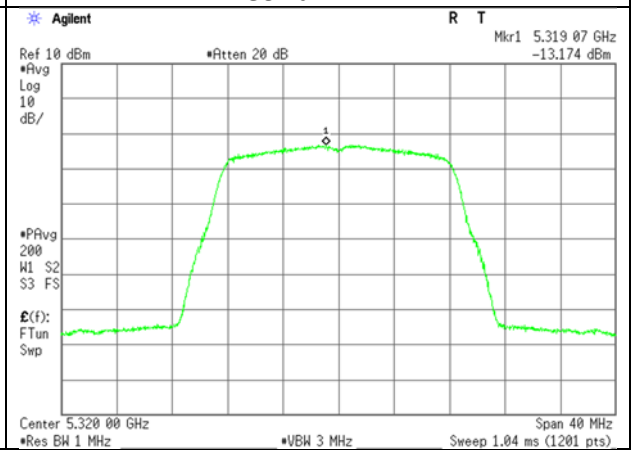
5300 MHz



5240 MHz



5320 MHz

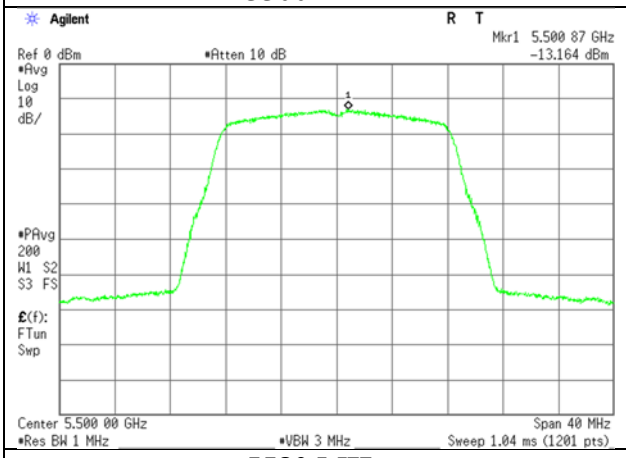


Maximum Power Spectral Density

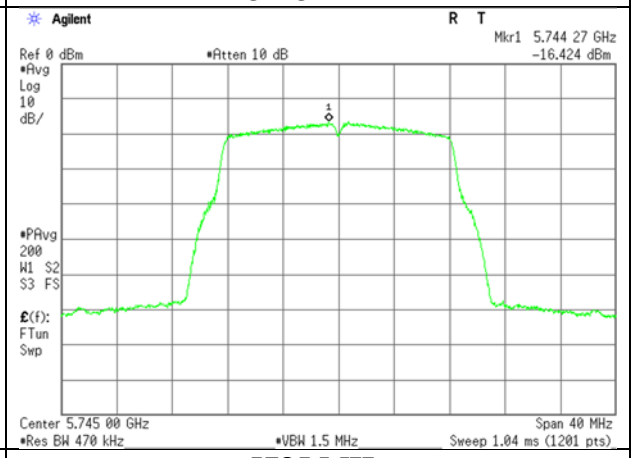
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11a

11a, Antenna port WA

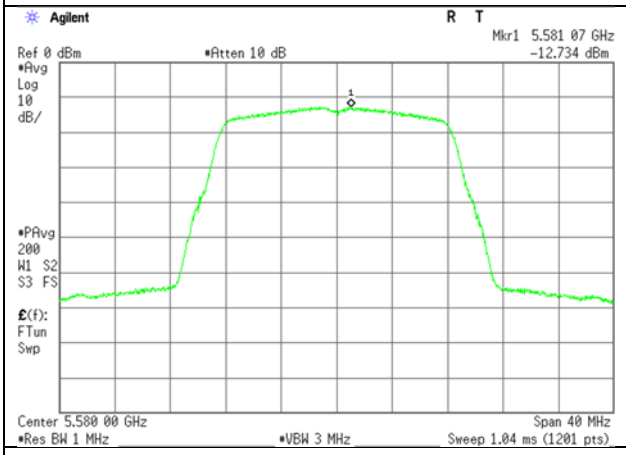
5500 MHz



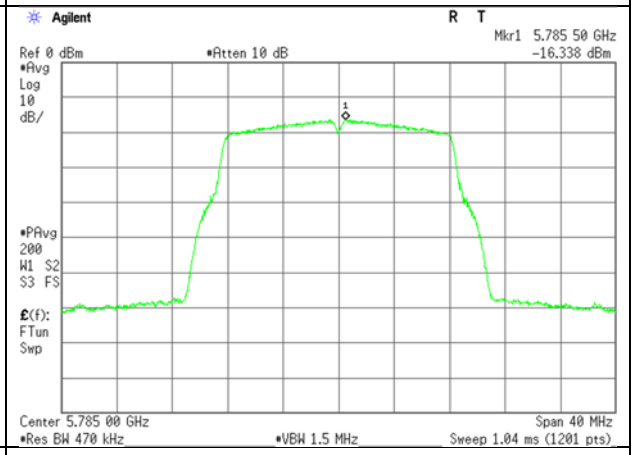
5745 MHz



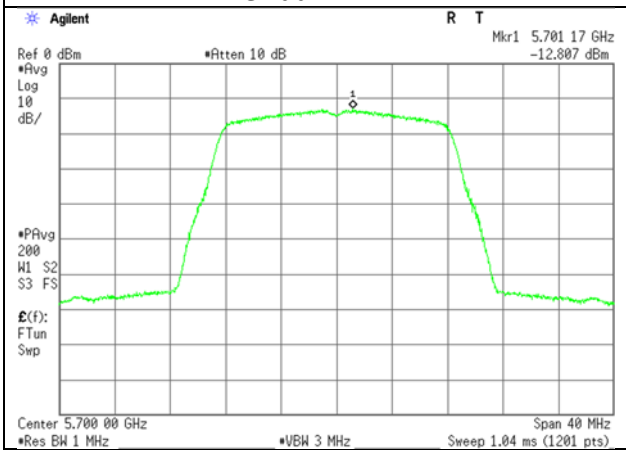
5580 MHz



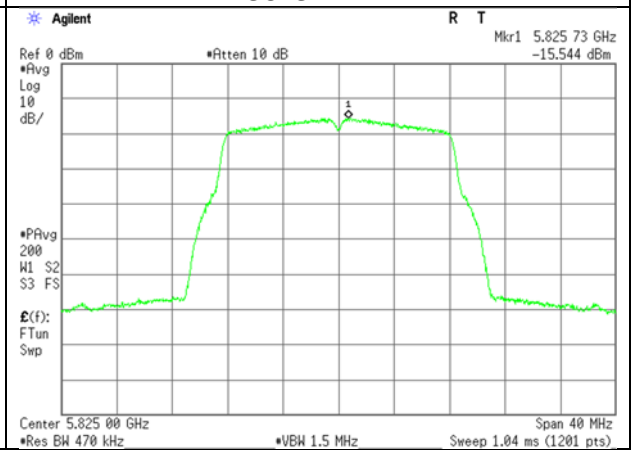
5785 MHz



5700 MHz



5825 MHz

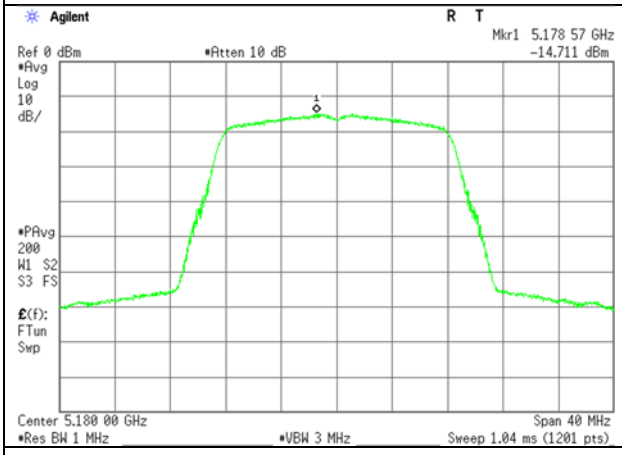


Maximum Power Spectral Density

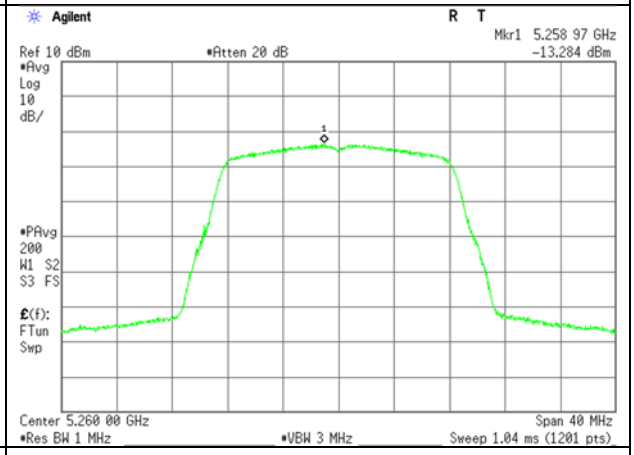
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11a

11a, Antenna port WC

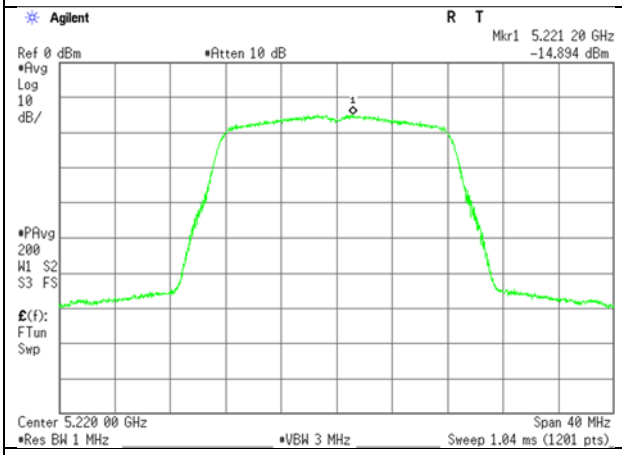
5180 MHz



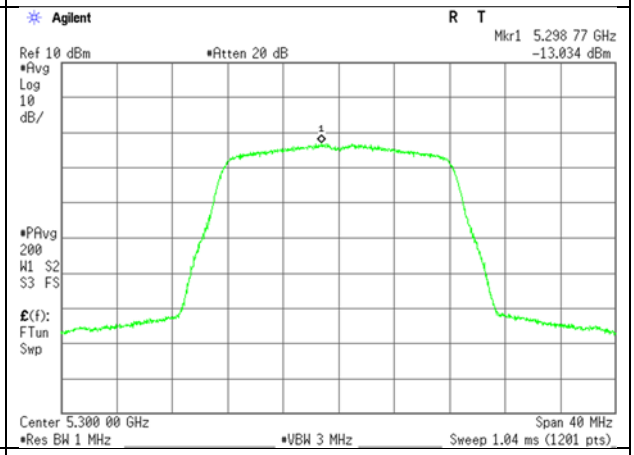
5260 MHz



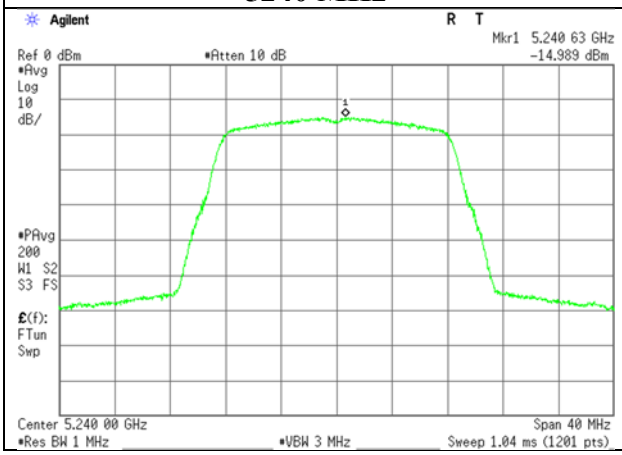
5220 MHz



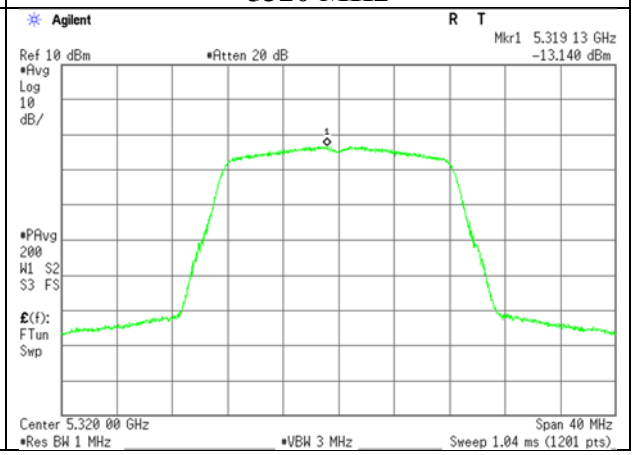
5300 MHz



5240 MHz



5320 MHz

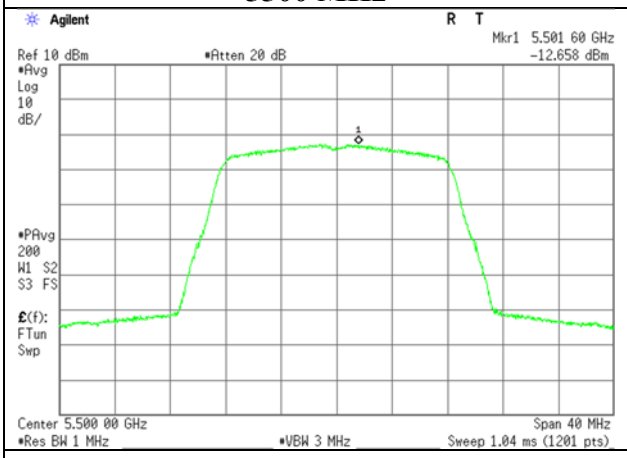


Maximum Power Spectral Density

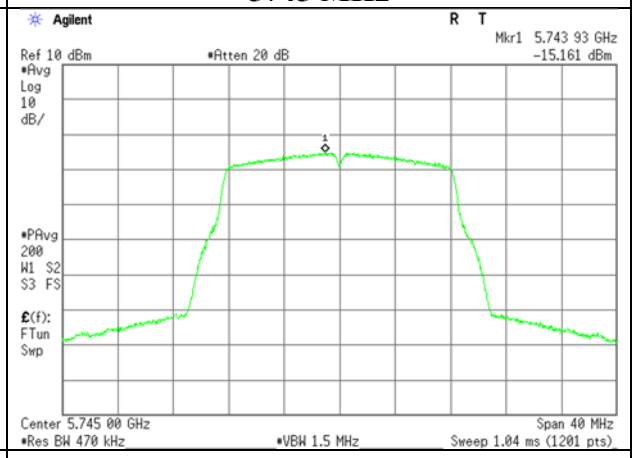
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11a

11a, Antenna port WC

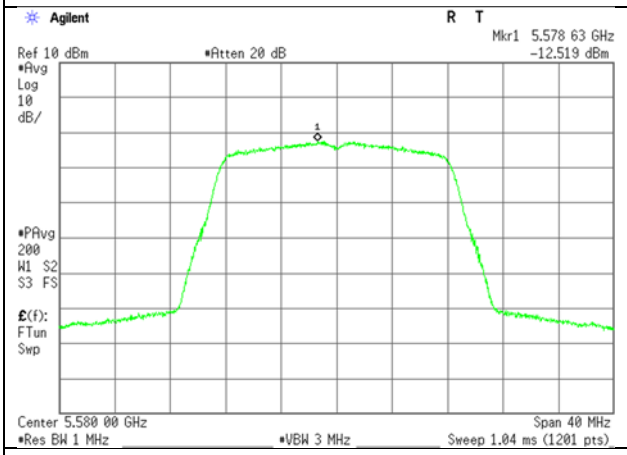
5500 MHz



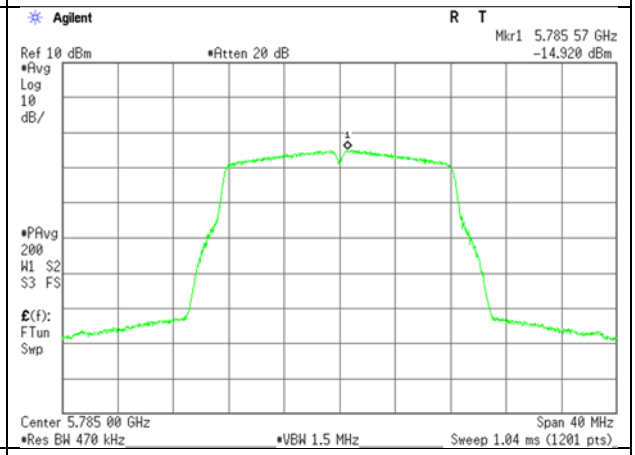
5745 MHz



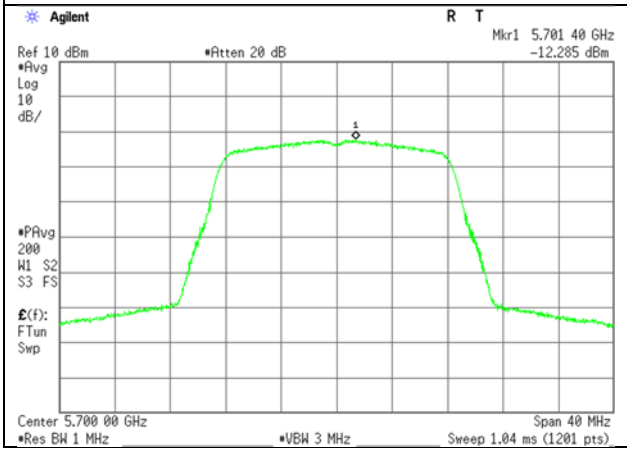
5580 MHz



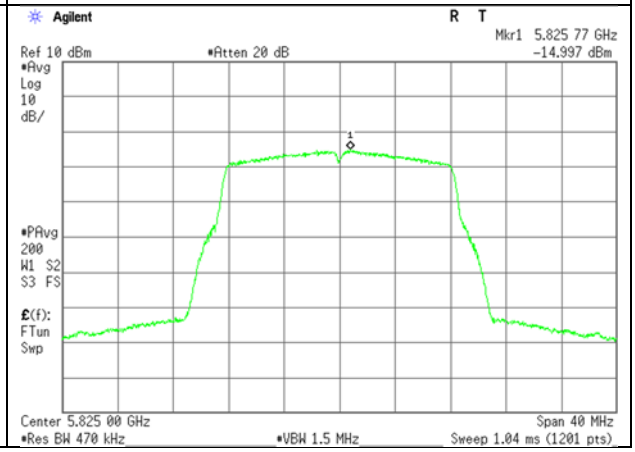
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

Antenna Port WA + WC

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.36	0.35	0.71	-1.48	8.68	10.16	2.46	2.38	4.83	6.84	17.00	10.16
5220	0.40	0.36	0.75	-1.22	8.68	9.90	2.69	2.44	5.12	7.10	17.00	9.90
5240	0.34	0.37	0.71	-1.50	8.68	10.18	2.31	2.50	4.81	6.82	17.00	10.18
5260	0.62	0.51	1.13	0.54	8.68	8.14	4.20	3.49	7.69	8.86	17.00	8.14
5300	0.56	0.56	1.12	0.49	8.68	8.19	3.79	3.81	7.60	8.81	17.00	8.19
5320	0.54	0.56	1.10	0.43	8.68	8.25	3.69	3.81	7.50	8.75	17.00	8.25
5500	0.57	0.73	1.31	1.16	8.68	7.52	3.89	4.98	8.87	9.48	17.00	7.52
5580	0.65	0.61	1.26	1.01	8.68	7.67	4.40	4.16	8.56	9.33	17.00	7.67
5700	0.58	0.71	1.30	1.13	8.68	7.55	3.95	4.86	8.80	9.45	17.00	7.55
5745	0.30	0.40	0.69	-1.60	27.68	29.28	2.01	2.69	4.70	6.72	36.00	29.28
5785	0.31	0.40	0.72	-1.45	27.68	29.13	2.14	2.73	4.86	6.87	36.00	29.13
5825	0.38	0.36	0.74	-1.30	27.68	28.98	2.61	2.43	5.04	7.02	36.00	28.98

			Antenna Port WA						**Antenna Port WC**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	0.00	0.00	-15.17	0.70	10.05	8.32	-4.42	3.90	-15.39	0.70	10.13	8.32	-4.56	3.77
5220	0.00	0.00	-14.78	0.70	10.05	8.32	-4.03	4.29	-15.28	0.70	10.13	8.32	-4.45	3.87
5240	0.00	0.00	-15.43	0.70	10.05	8.32	-4.68	3.64	-15.18	0.70	10.13	8.32	-4.35	3.97
5260	0.00	0.00	-12.84	0.70	10.05	8.32	-2.09	6.23	-13.73	0.70	10.13	8.32	-2.90	5.43
5300	0.00	0.00	-13.29	0.70	10.05	8.32	-2.54	5.78	-13.35	0.70	10.14	8.32	-2.51	5.81
5320	0.00	0.00	-13.41	0.70	10.06	8.32	-2.65	5.67	-13.35	0.70	10.14	8.32	-2.51	5.81
5500	0.00	0.00	-13.28	0.80	10.06	8.32	-2.42	5.90	-12.29	0.80	10.14	8.32	-1.35	6.97
5580	0.00	0.00	-12.74	0.80	10.06	8.32	-1.88	6.44	-13.07	0.80	10.14	8.32	-2.13	6.19
5700	0.00	0.00	-13.21	0.80	10.05	8.32	-2.36	5.96	-12.39	0.80	10.13	8.32	-1.46	6.86
5745	0.00	0.27	-16.40	0.80	10.05	8.32	-5.28	3.04	-15.23	0.80	10.13	8.32	-4.03	4.29
5785	0.00	0.27	-16.14	0.80	10.05	8.32	-5.02	3.30	-15.16	0.80	10.12	8.32	-3.97	4.35
5825	0.00	0.27	-15.27	0.80	10.05	8.32	-4.15	4.17	-15.66	0.80	10.12	8.32	-4.47	3.85

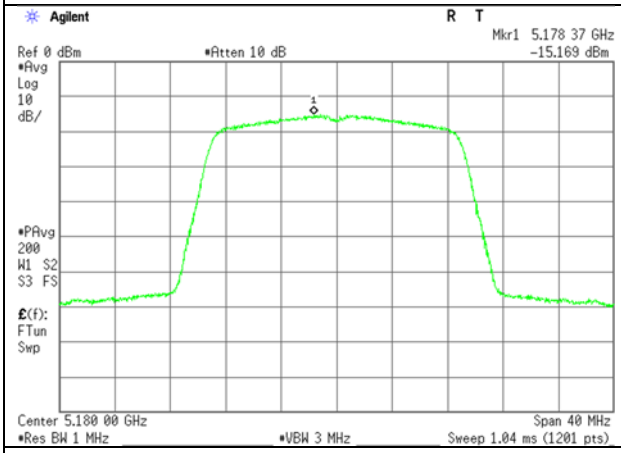
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

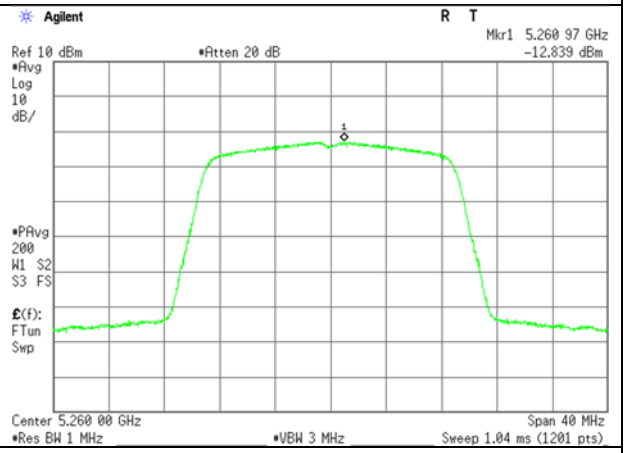
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WA

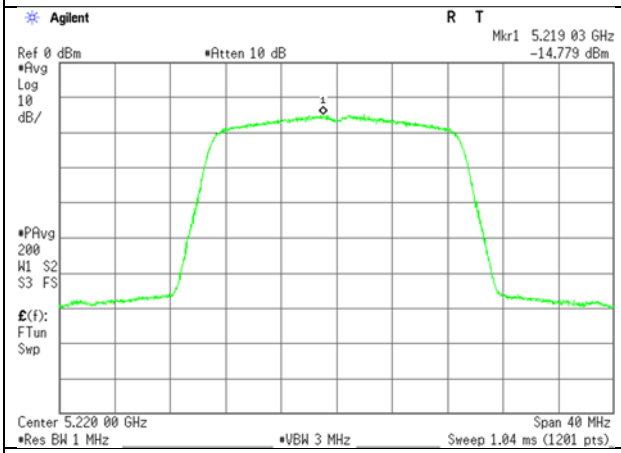
5180 MHz



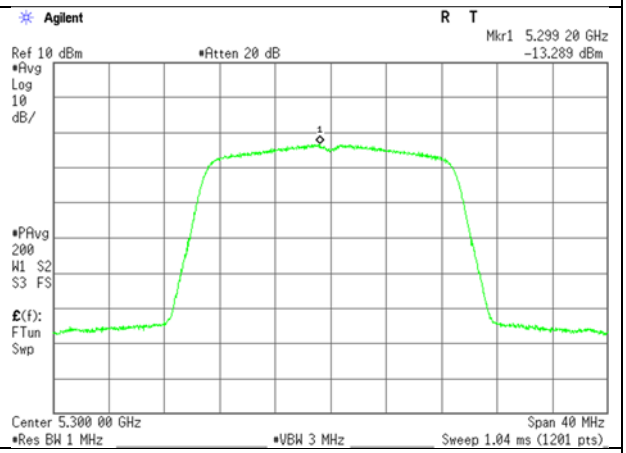
5260 MHz



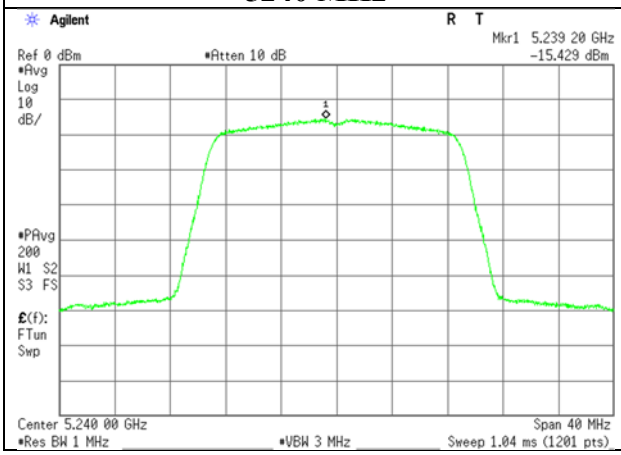
5220 MHz



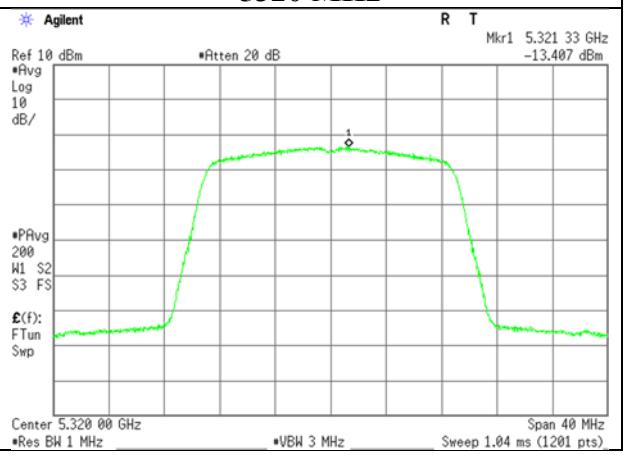
5300 MHz



5240 MHz



5320 MHz

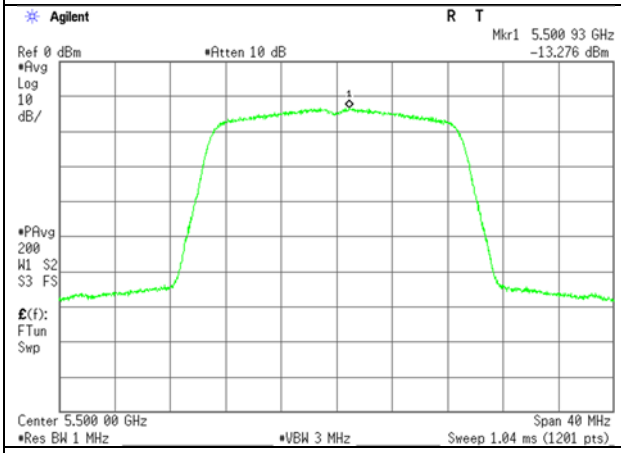


Maximum Power Spectral Density

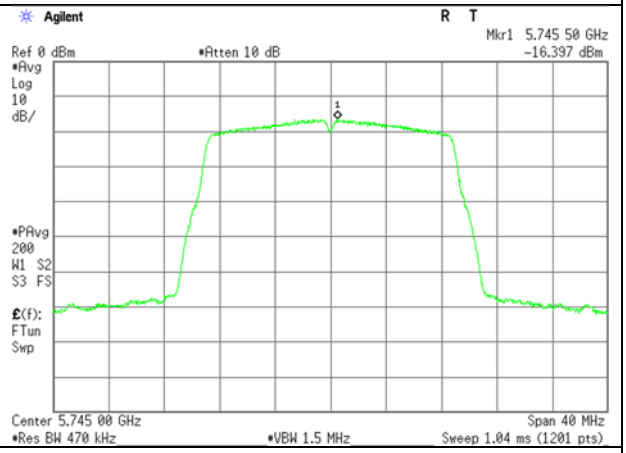
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WA

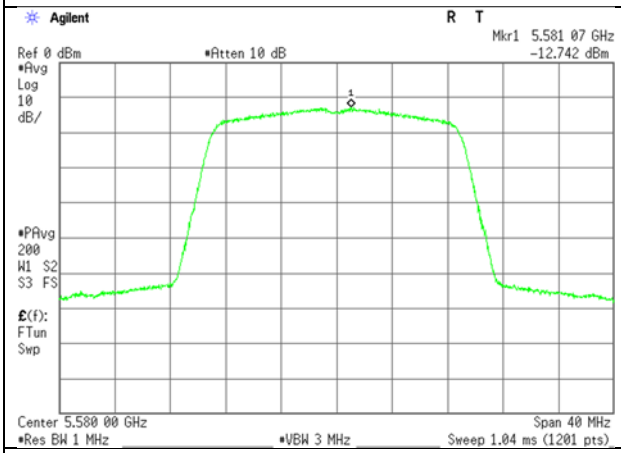
5500 MHz



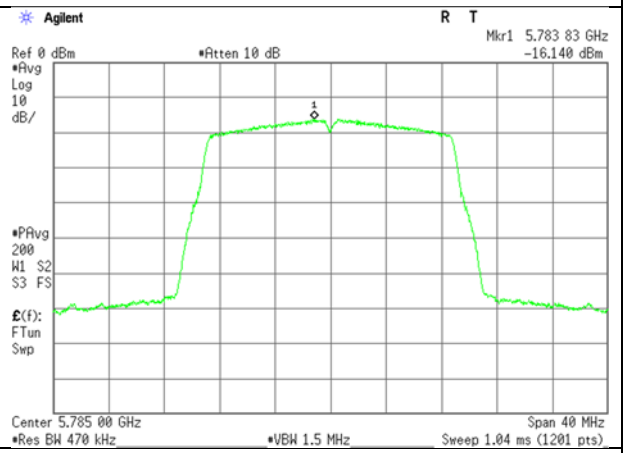
5745 MHz



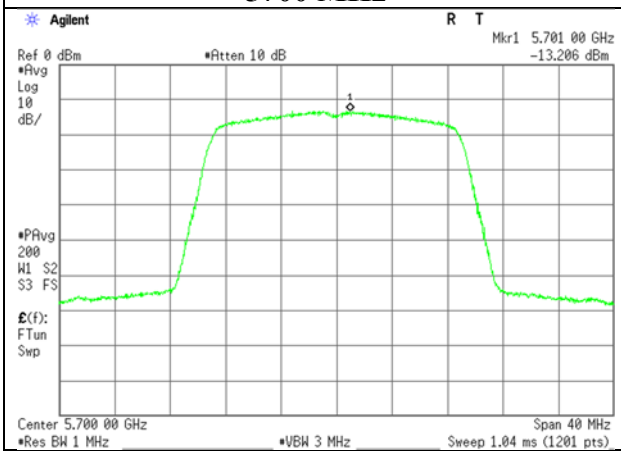
5580 MHz



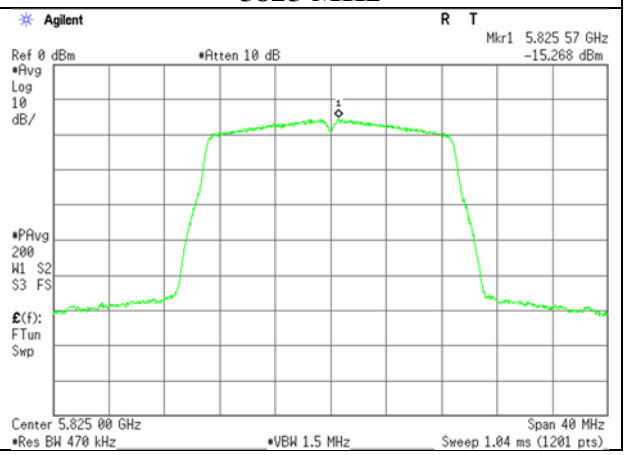
5785 MHz



5700 MHz



5825 MHz

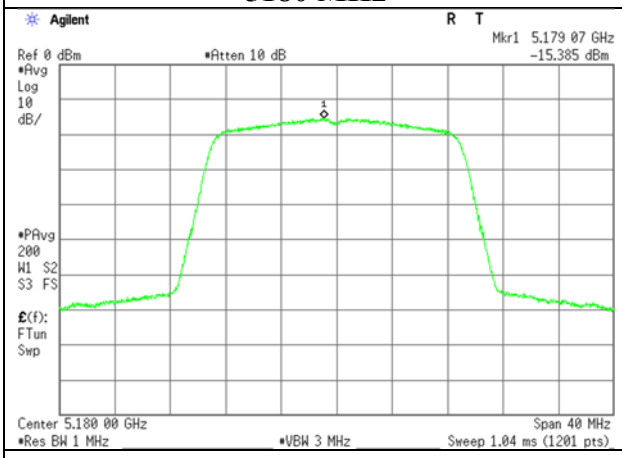


Maximum Power Spectral Density

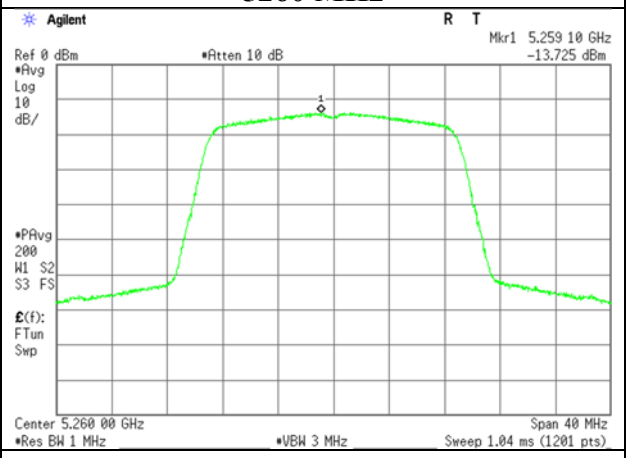
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WC

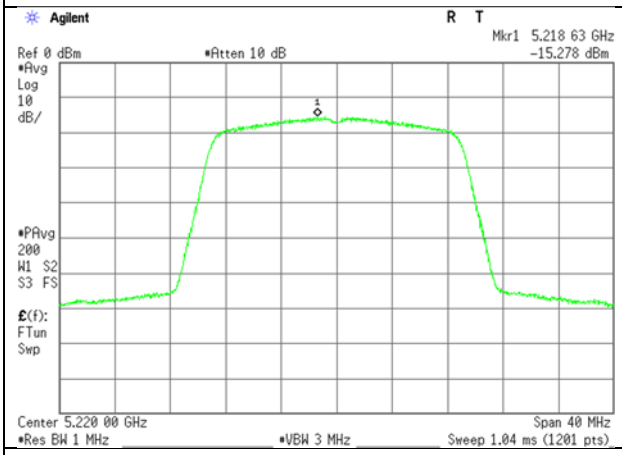
5180 MHz



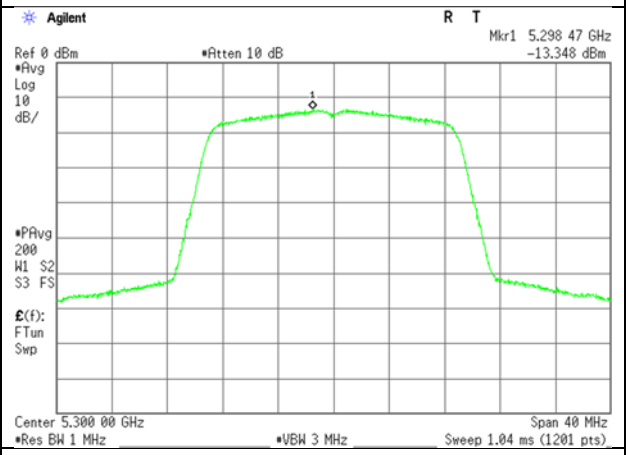
5260 MHz



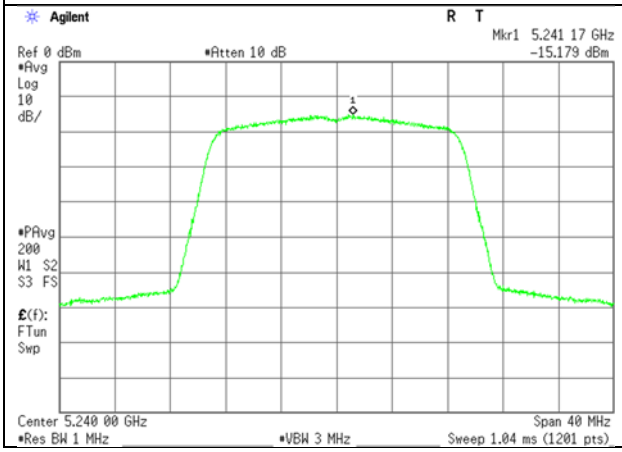
5220 MHz



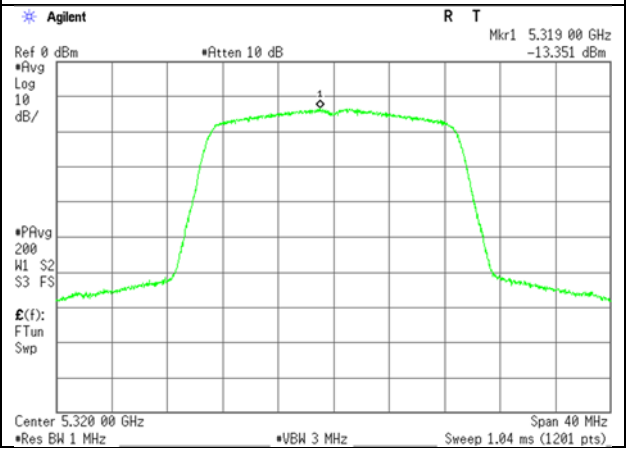
5300 MHz



5240 MHz



5320 MHz

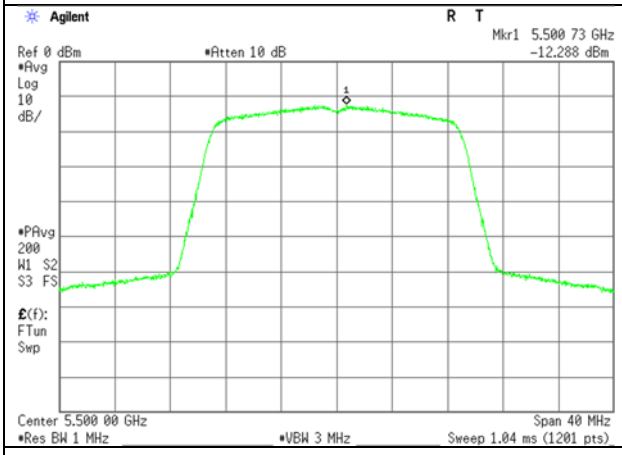


Maximum Power Spectral Density

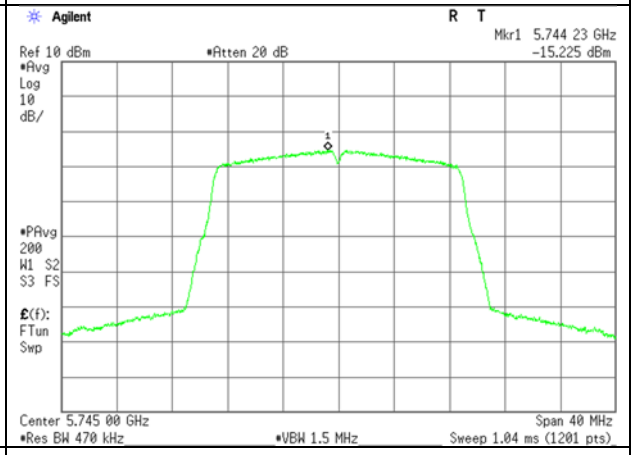
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 26, 2018
Temperature / Humidity	24deg. C / 20 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-20

11n-20, Antenna port WC

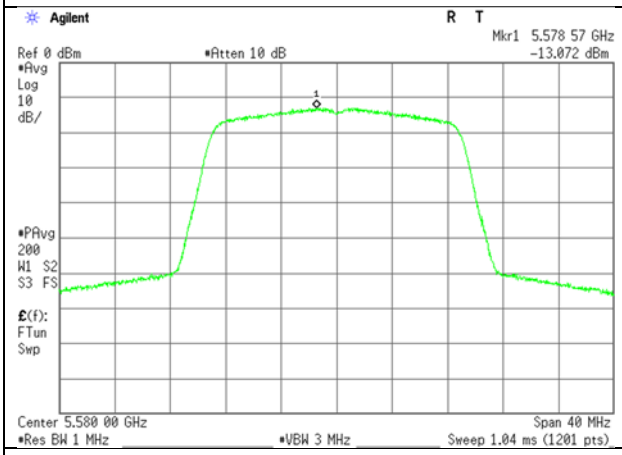
5500 MHz



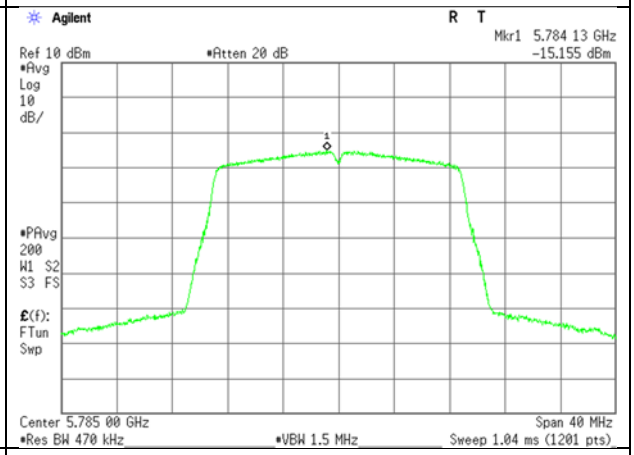
5745 MHz



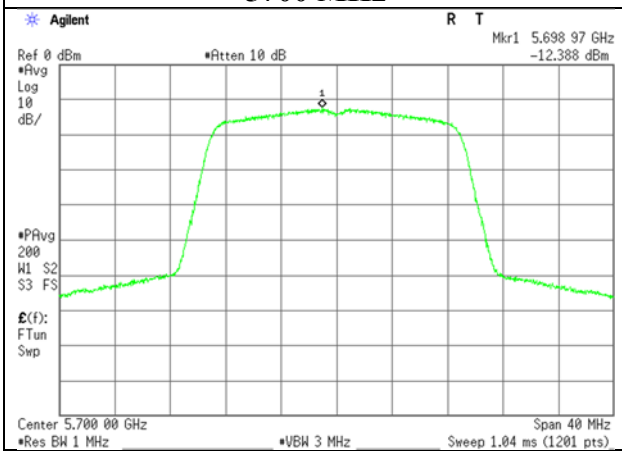
5580 MHz



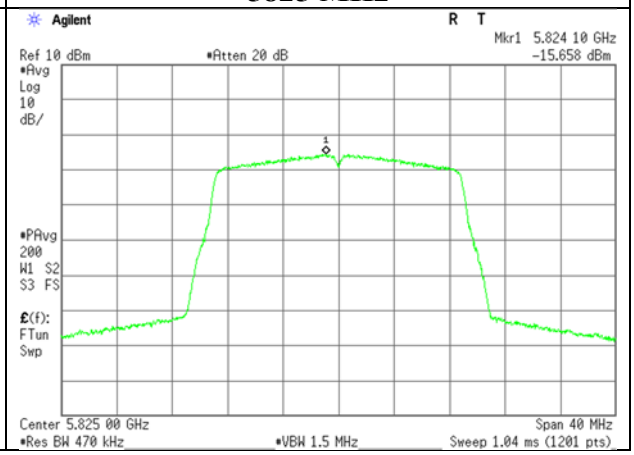
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

Antenna Port WA + WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.38	0.38	0.76	-1.20	8.68	9.88	2.56	2.59	5.15	7.12	17.00	9.88
5220	0.36	0.35	0.71	-1.46	8.68	10.14	2.47	2.39	4.86	6.86	17.00	10.14
5240	0.35	0.36	0.71	-1.51	8.68	10.19	2.37	2.43	4.80	6.81	17.00	10.19
5260	0.56	0.51	1.08	0.32	8.68	8.36	3.82	3.49	7.31	8.64	17.00	8.36
5300	0.52	0.56	1.08	0.35	8.68	8.33	3.55	3.80	7.36	8.67	17.00	8.33
5320	0.55	0.52	1.06	0.27	8.68	8.41	3.72	3.51	7.23	8.59	17.00	8.41
5500	0.65	0.64	1.28	1.08	8.68	7.60	4.38	4.32	8.70	9.40	17.00	7.60
5580	0.68	0.67	1.35	1.31	8.68	7.37	4.65	4.55	9.19	9.63	17.00	7.37
5700	0.59	0.72	1.31	1.16	8.68	7.52	4.00	4.87	8.87	9.48	17.00	7.52
5745	0.28	0.45	0.73	-1.38	27.68	29.06	1.90	3.04	4.94	6.94	36.00	29.06
5785	0.30	0.41	0.71	-1.48	27.68	29.16	2.02	2.81	4.83	6.84	36.00	29.16
5825	0.35	0.39	0.74	-1.29	27.68	28.97	2.37	2.67	5.05	7.03	36.00	28.97

			Antenna Port WA						**Antenna Port WC**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	0.00	0.00	-14.98	0.70	10.05	8.32	-4.23	4.09	-15.02	0.70	10.13	8.32	-4.19	4.13
5220	0.00	0.00	-15.14	0.70	10.05	8.32	-4.39	3.93	-15.37	0.70	10.13	8.32	-4.54	3.78
5240	0.00	0.00	-15.32	0.70	10.05	8.32	-4.57	3.75	-15.30	0.70	10.13	8.32	-4.47	3.85
5260	0.00	0.00	-13.25	0.70	10.05	8.32	-2.50	5.82	-13.73	0.70	10.13	8.32	-2.90	5.42
5300	0.00	0.00	-13.56	0.70	10.05	8.32	-2.81	5.51	-13.36	0.70	10.14	8.32	-2.52	5.80
5320	0.00	0.00	-13.37	0.70	10.06	8.32	-2.61	5.71	-13.71	0.70	10.14	8.32	-2.87	5.45
5500	0.00	0.00	-12.76	0.80	10.06	8.32	-1.90	6.42	-12.91	0.80	10.14	8.32	-1.97	6.35
5580	0.00	0.00	-12.51	0.80	10.06	8.32	-1.65	6.67	-12.68	0.80	10.14	8.32	-1.74	6.58
5700	0.00	0.00	-13.15	0.80	10.05	8.32	-2.30	6.02	-12.37	0.80	10.13	8.32	-1.44	6.88
5745	0.00	0.27	-16.65	0.80	10.05	8.32	-5.53	2.79	-14.69	0.80	10.13	8.32	-3.50	4.82
5785	0.00	0.27	-16.39	0.80	10.05	8.32	-5.27	3.05	-15.03	0.80	10.12	8.32	-3.84	4.48
5825	0.00	0.27	-15.69	0.80	10.05	8.32	-4.57	3.75	-15.24	0.80	10.12	8.32	-4.05	4.27

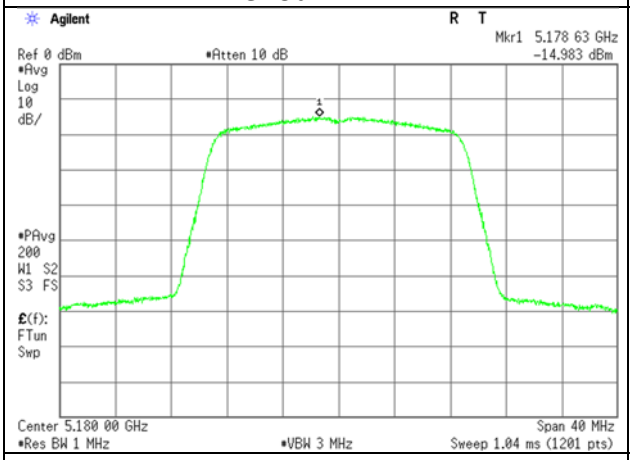
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

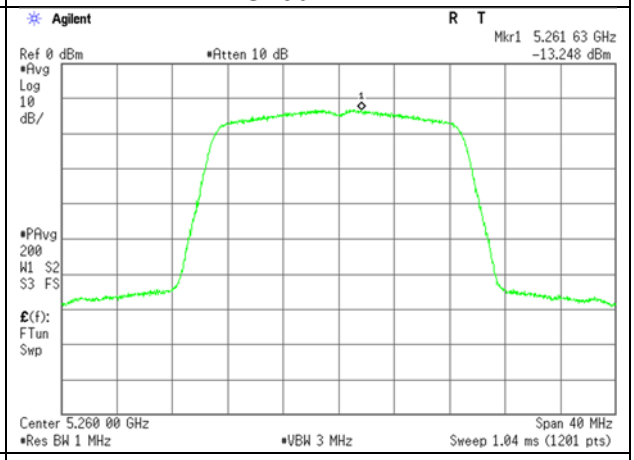
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WA

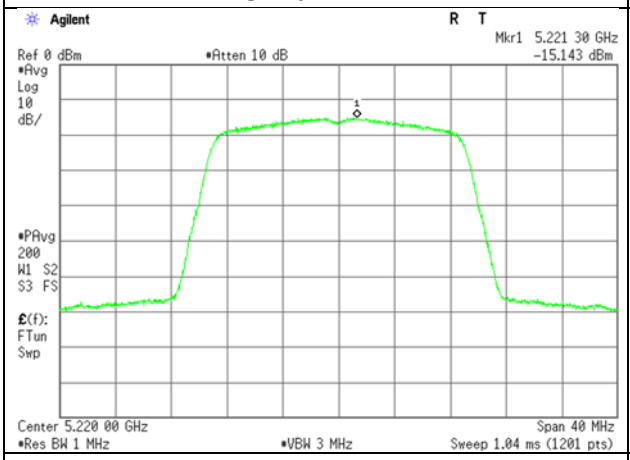
5180 MHz



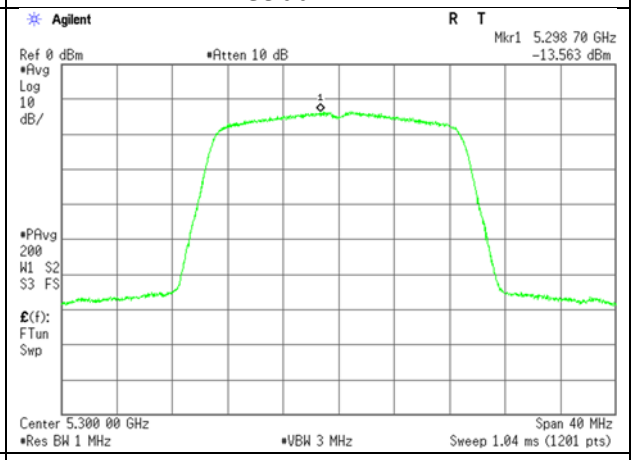
5260 MHz



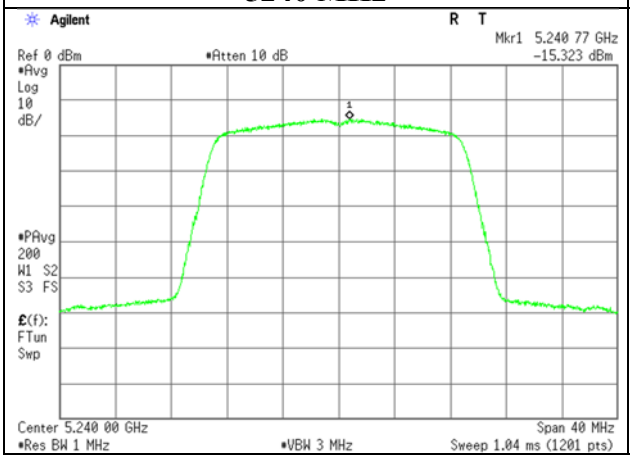
5220 MHz



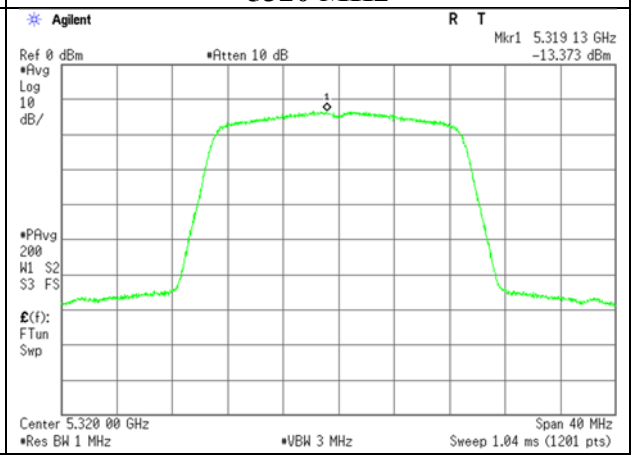
5300 MHz



5240 MHz



5320 MHz

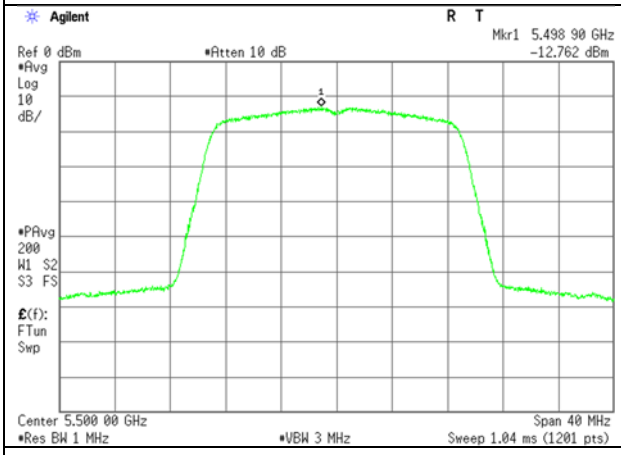


Maximum Power Spectral Density

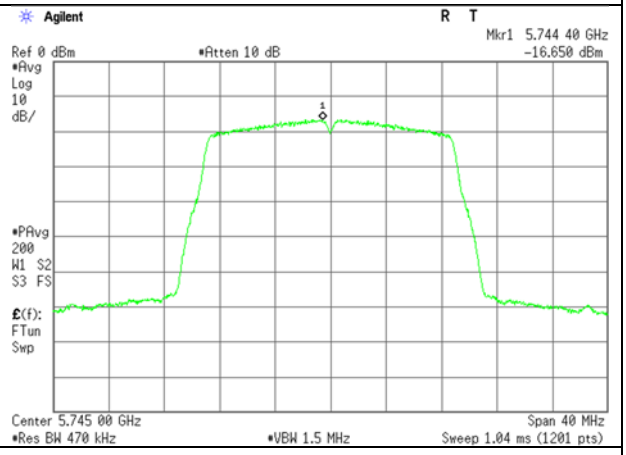
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WA

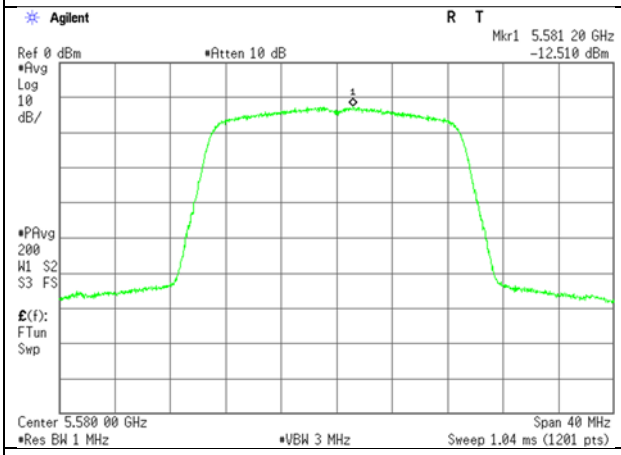
5500 MHz



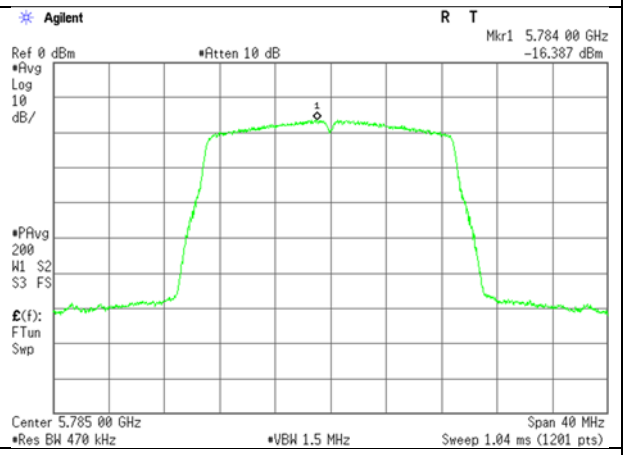
5745 MHz



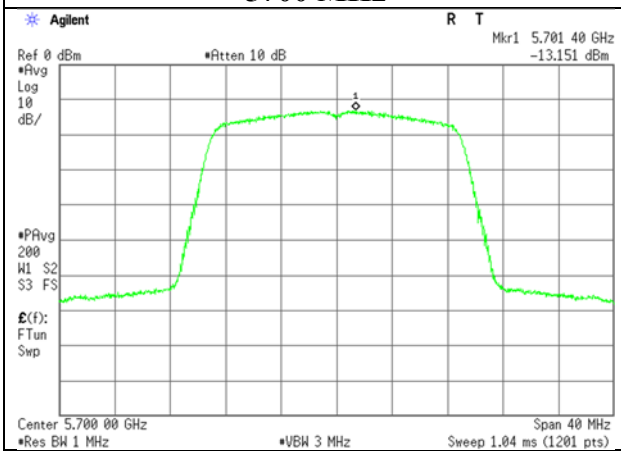
5580 MHz



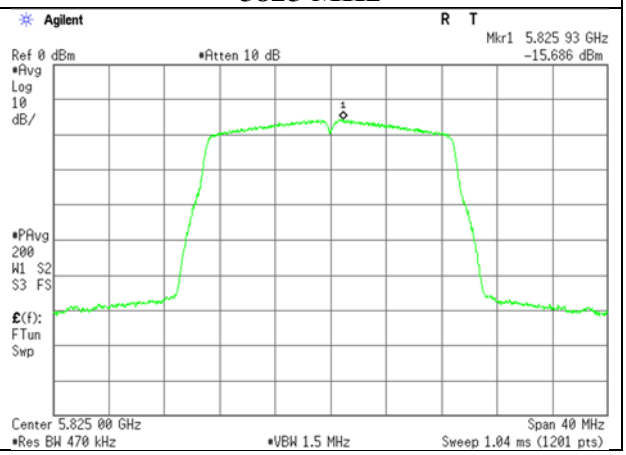
5785 MHz



5700 MHz



5825 MHz

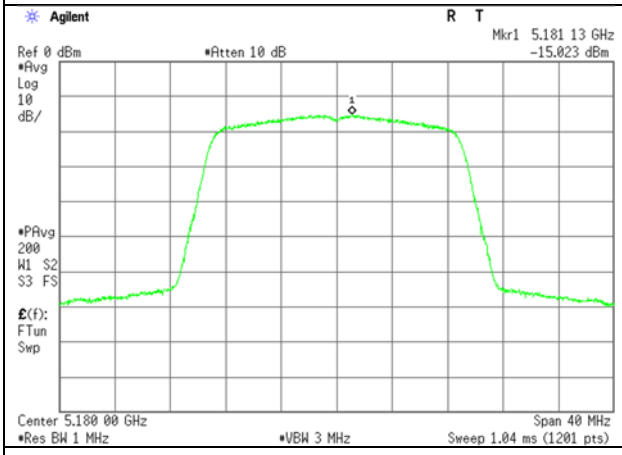


Maximum Power Spectral Density

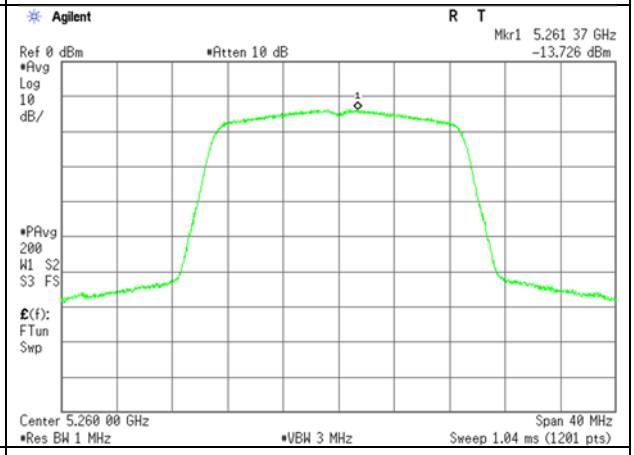
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WC

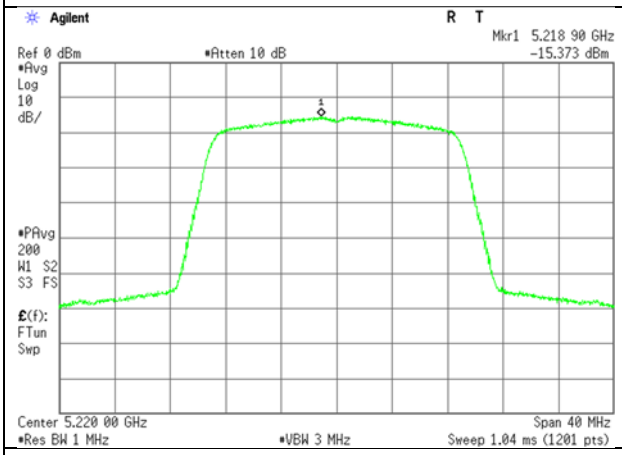
5180 MHz



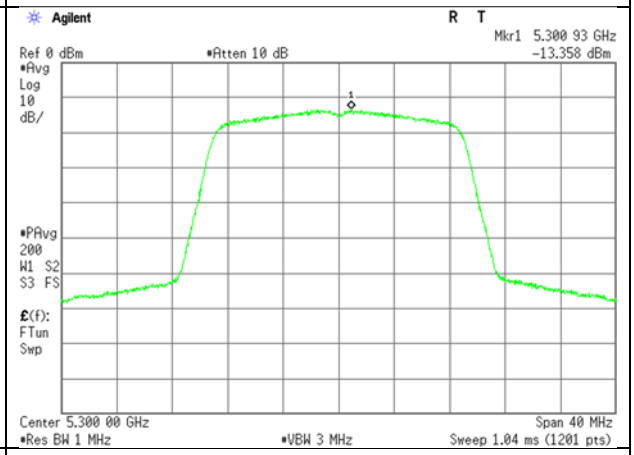
5260 MHz



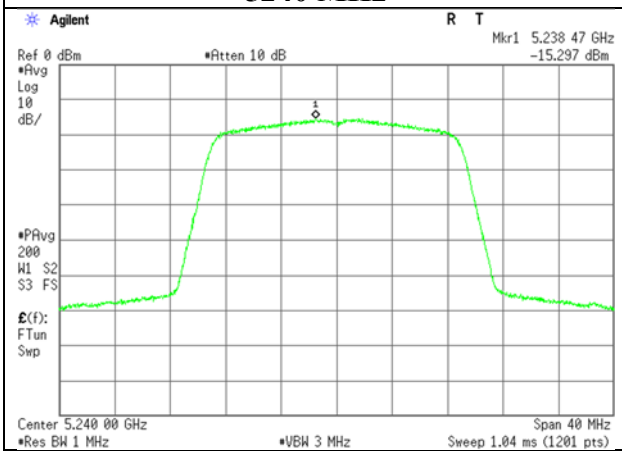
5220 MHz



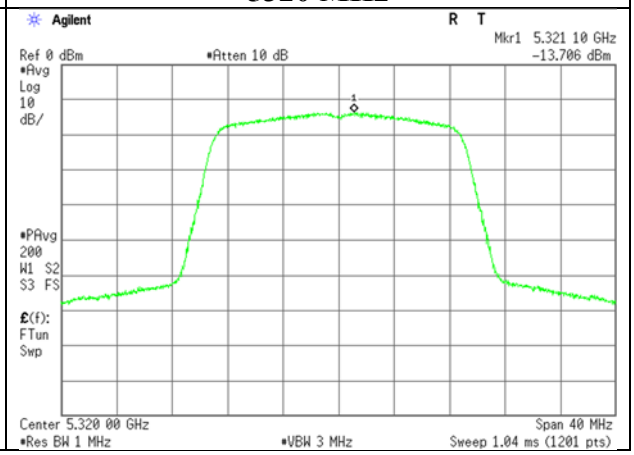
5300 MHz



5240 MHz



5320 MHz

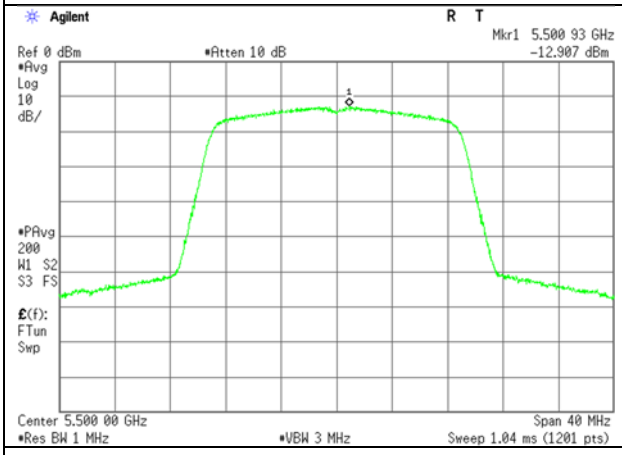


Maximum Power Spectral Density

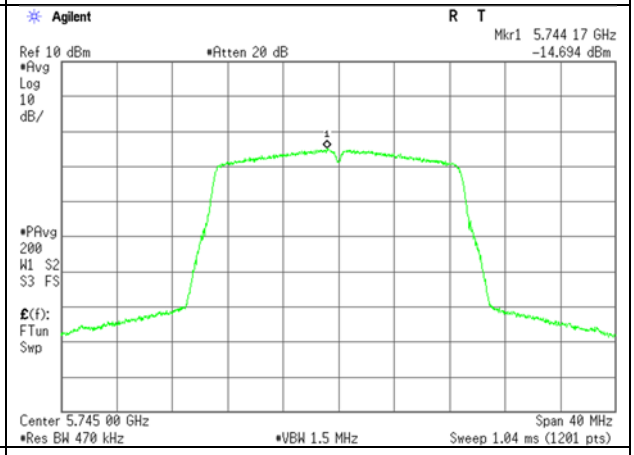
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WC

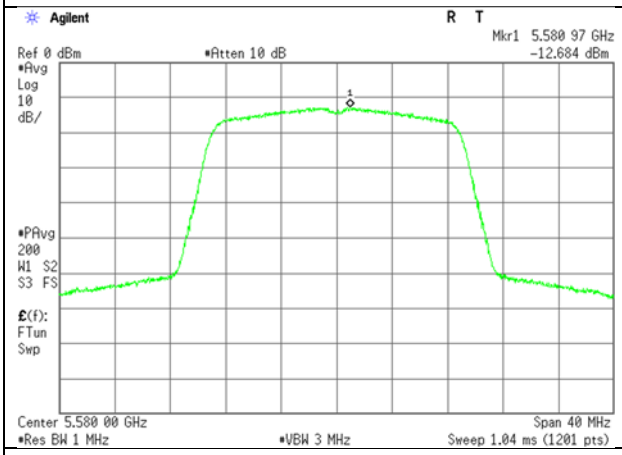
5500 MHz



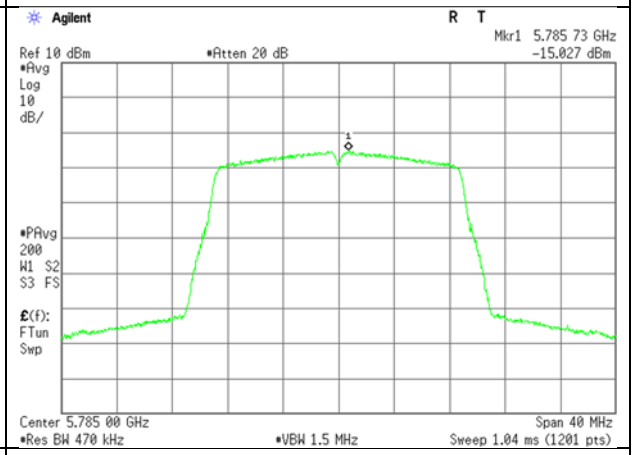
5745 MHz



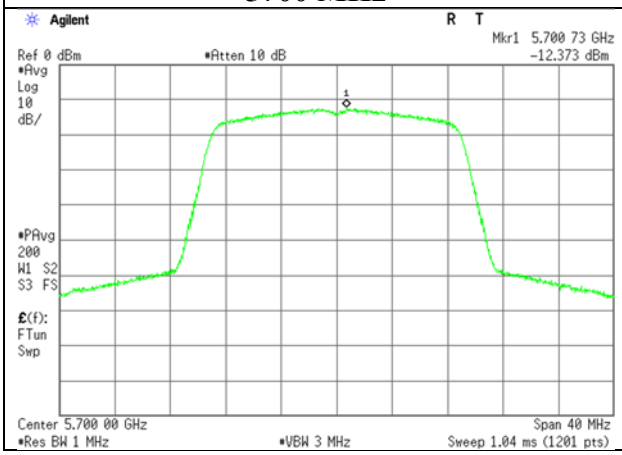
5580 MHz



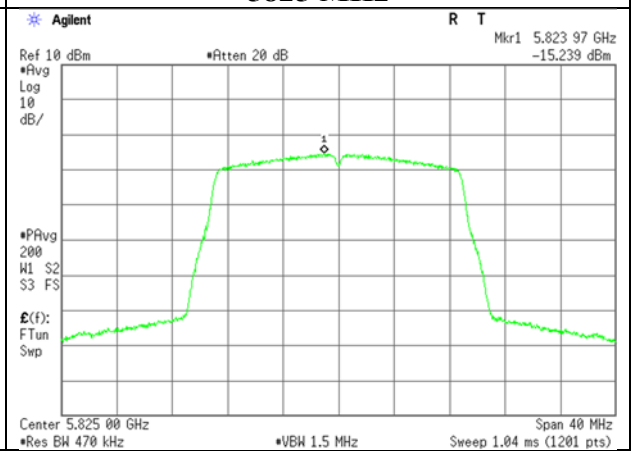
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

Antenna Port WA + WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.14	0.18	0.33	-4.86	8.68	13.54	0.97	1.25	2.22	3.46	17.00	13.54
5230	0.17	0.17	0.34	-4.65	8.68	13.33	1.16	1.17	2.33	3.67	17.00	13.33
5270	0.27	0.26	0.53	-2.73	8.68	11.41	1.87	1.75	3.62	5.59	17.00	11.41
5310	0.27	0.27	0.54	-2.65	8.68	11.33	1.84	1.84	3.69	5.67	17.00	11.33
5510	0.27	0.33	0.60	-2.22	8.68	10.90	1.81	2.26	4.07	6.10	17.00	10.90
5550	0.29	0.31	0.60	-2.24	8.68	10.92	1.97	2.09	4.06	6.08	17.00	10.92
5670	0.27	0.28	0.55	-2.62	8.68	11.30	1.82	1.89	3.71	5.70	17.00	11.30
5755	0.14	0.20	0.34	-4.69	27.68	32.37	0.92	1.38	2.31	3.63	36.00	32.37
5795	0.14	0.21	0.36	-4.49	27.68	32.17	0.97	1.45	2.42	3.83	36.00	32.17

			Antenna Port WA						**Antenna Port WC**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	0.00	0.00	-19.22	0.70	10.05	8.32	-8.47	-0.15	-18.18	0.70	10.13	8.32	-7.35	0.97
5230	0.00	0.00	-18.44	0.70	10.05	8.32	-7.69	0.63	-18.46	0.70	10.13	8.32	-7.63	0.69
5270	0.00	0.00	-16.36	0.70	10.05	8.32	-5.61	2.71	-16.73	0.70	10.14	8.32	-5.89	2.43
5310	0.00	0.00	-16.43	0.70	10.06	8.32	-5.67	2.66	-16.50	0.70	10.14	8.32	-5.66	2.66
5510	0.00	0.00	-16.60	0.80	10.06	8.32	-5.74	2.59	-15.72	0.80	10.14	8.32	-4.78	3.54
5550	0.00	0.00	-16.24	0.80	10.06	8.32	-5.38	2.94	-16.06	0.80	10.14	8.32	-5.12	3.20
5670	0.00	0.00	-16.57	0.80	10.05	8.32	-5.72	2.60	-16.48	0.80	10.13	8.32	-5.55	2.77
5755	0.00	0.27	-19.79	0.80	10.05	8.32	-8.67	-0.35	-18.10	0.80	10.12	8.32	-6.91	1.41
5795	0.00	0.27	-19.57	0.80	10.05	8.32	-8.45	-0.13	-17.91	0.80	10.12	8.32	-6.72	1.60

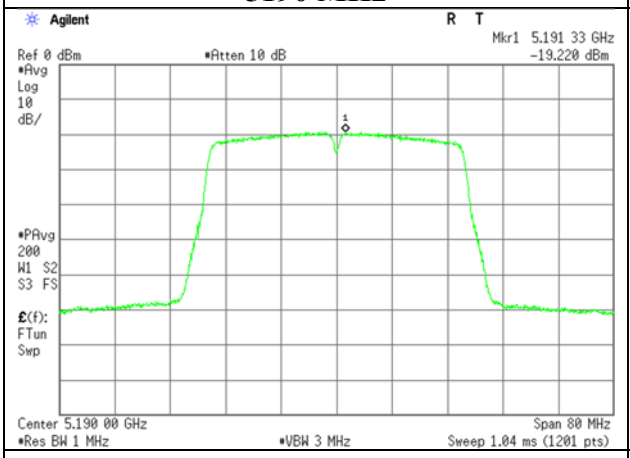
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

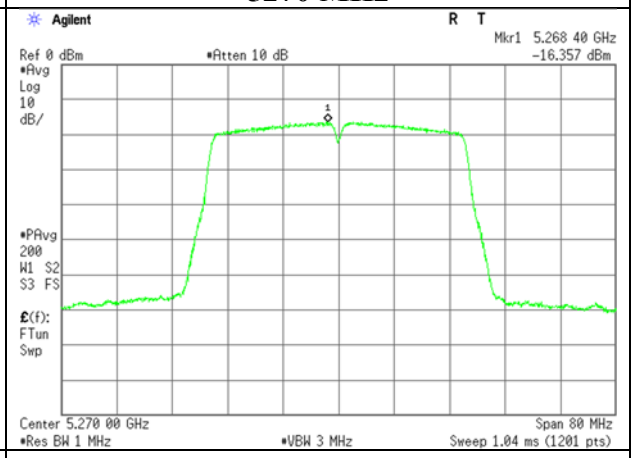
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WA

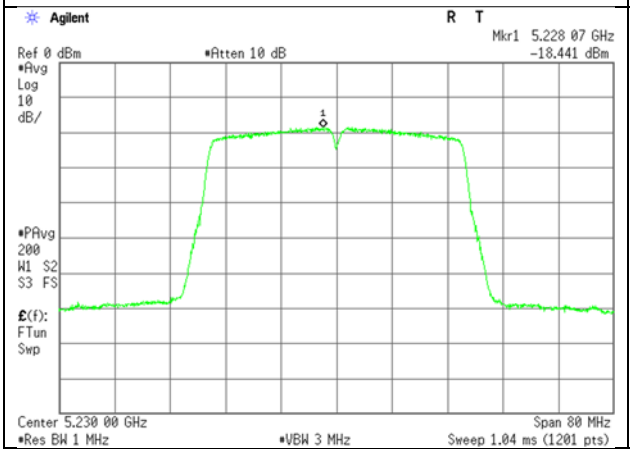
5190 MHz



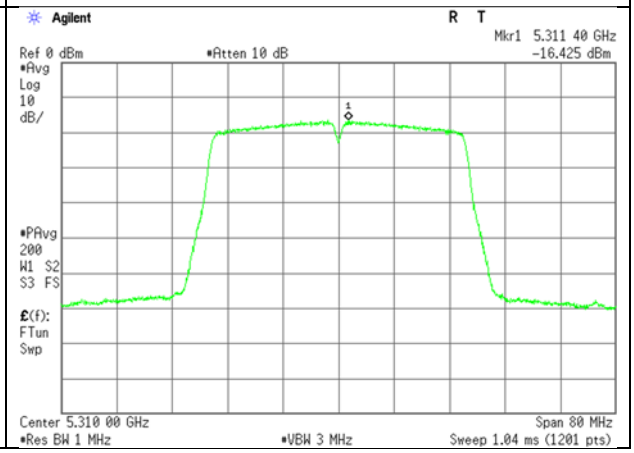
5270 MHz



5230 MHz



5310 MHz

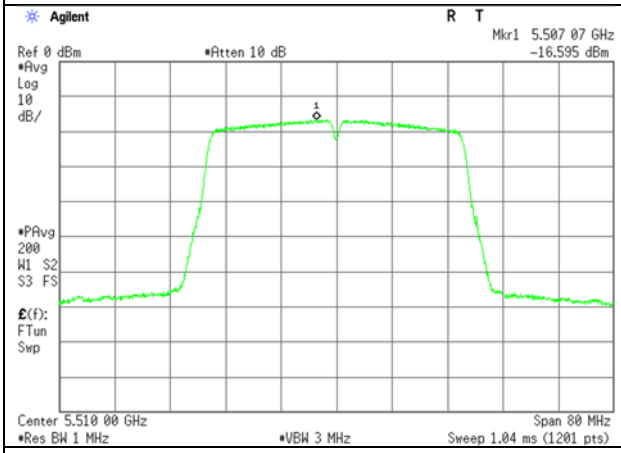


Maximum Power Spectral Density

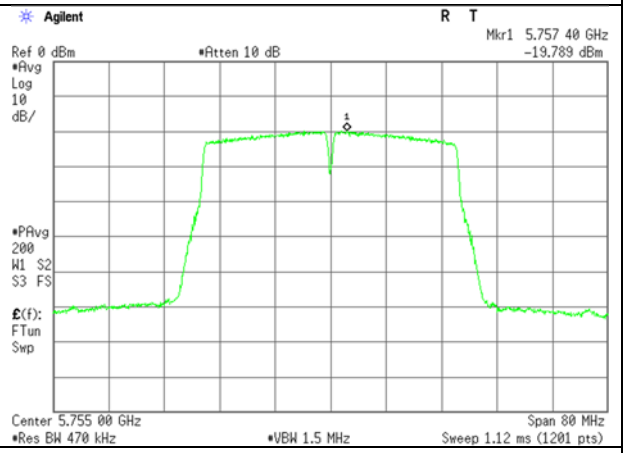
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WA

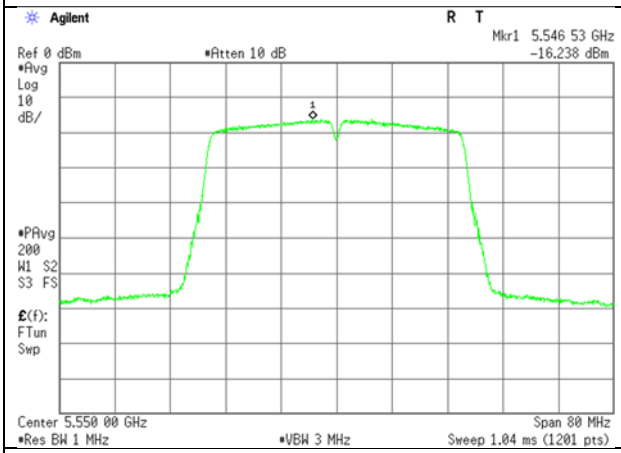
5510 MHz



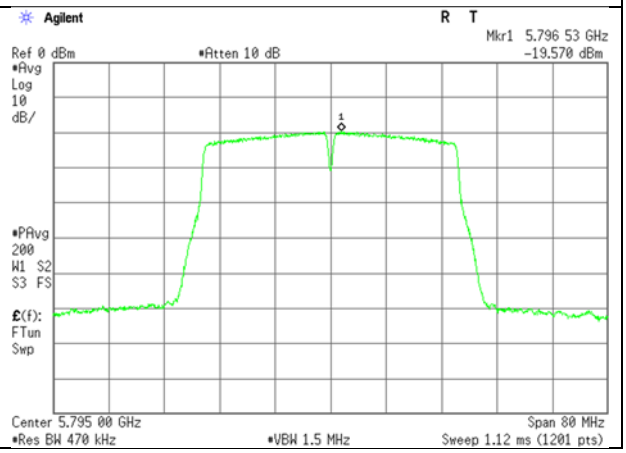
5755 MHz



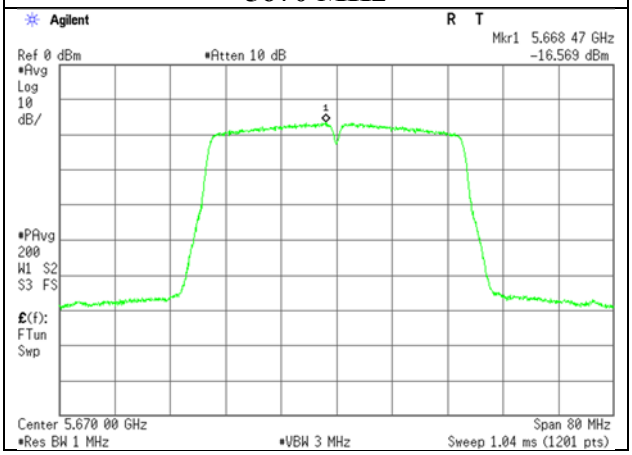
5550 MHz



5795 MHz



5670 MHz

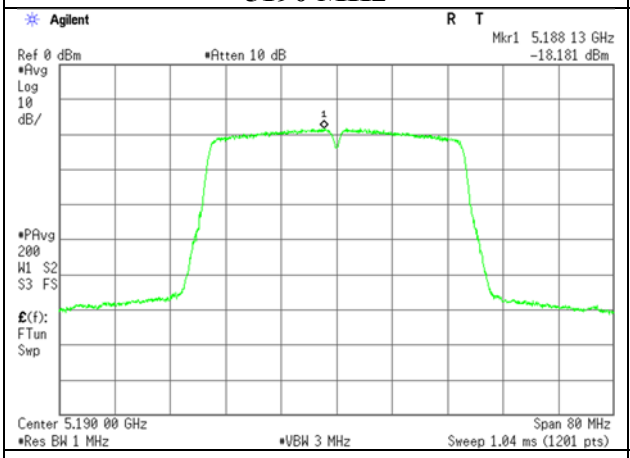


Maximum Power Spectral Density

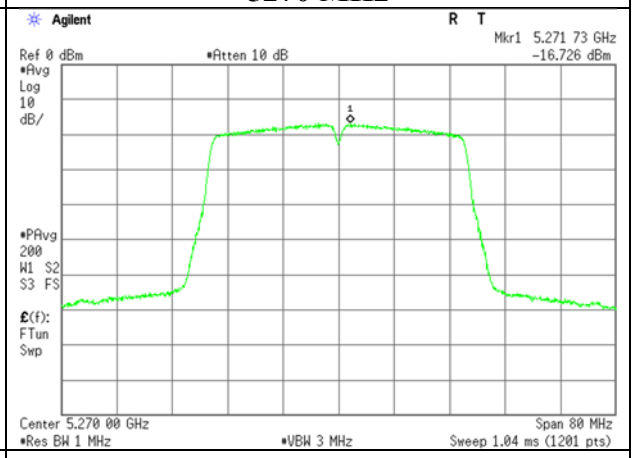
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WC

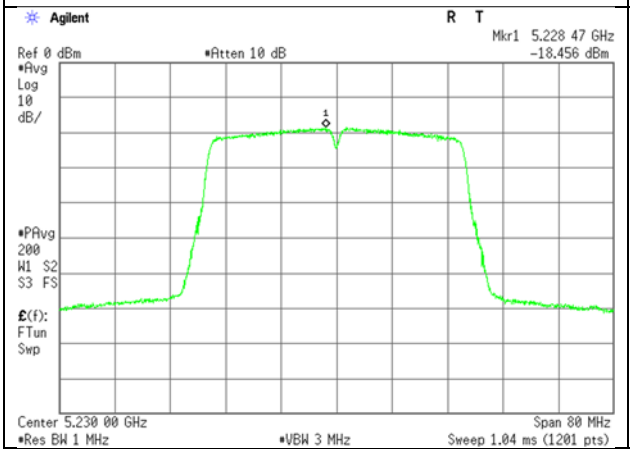
5190 MHz



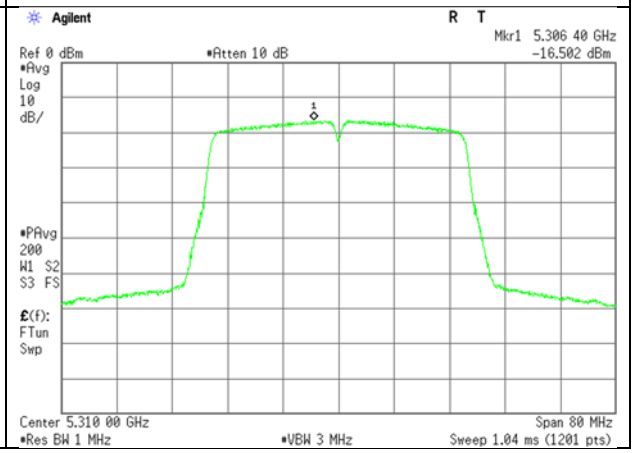
5270 MHz



5230 MHz



5310 MHz

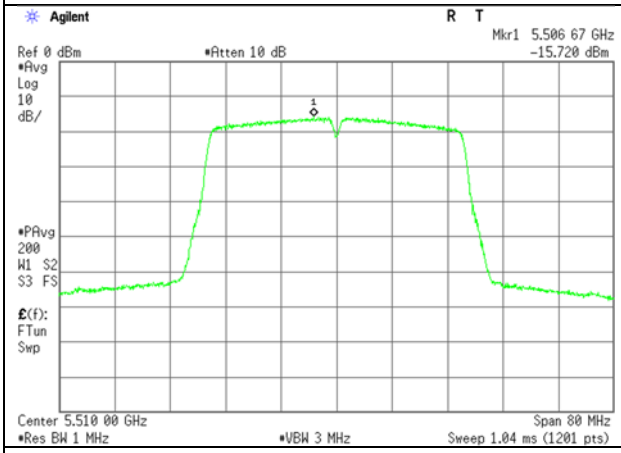


Maximum Power Spectral Density

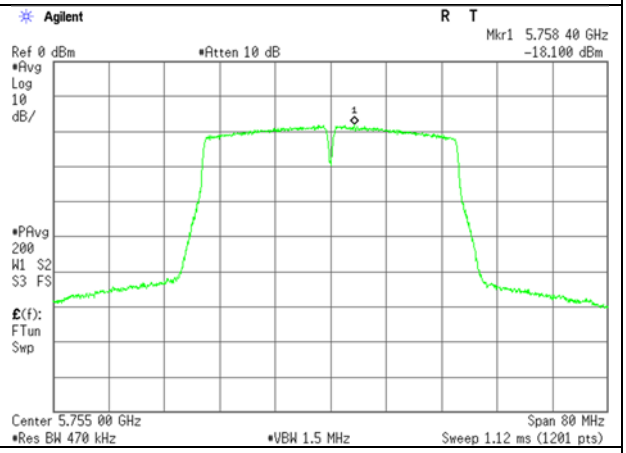
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

11n-40, Antenna port WC

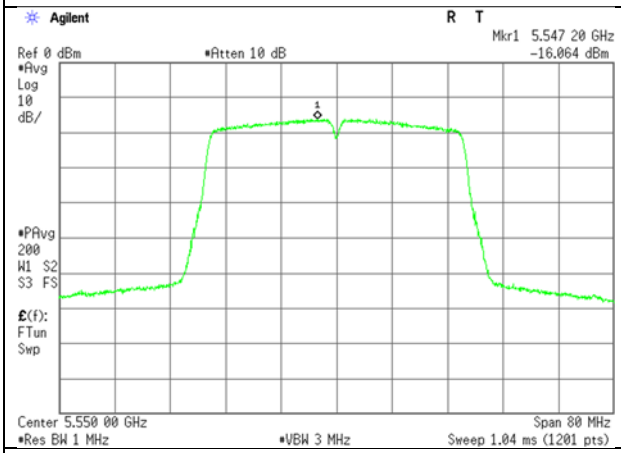
5510 MHz



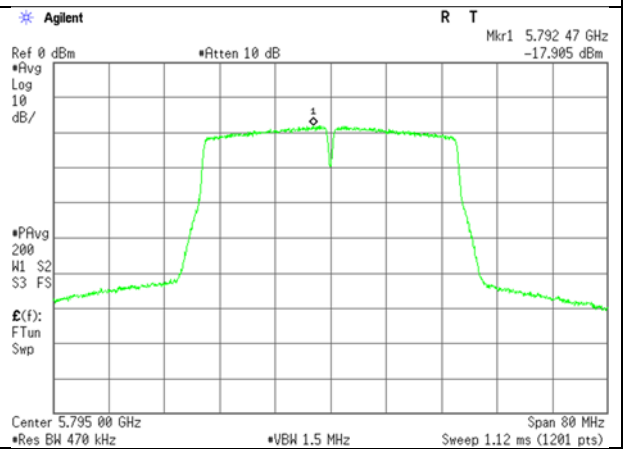
5755 MHz



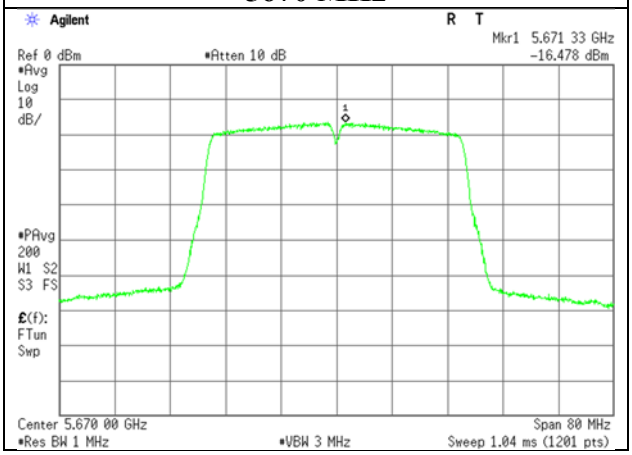
5550 MHz



5795 MHz



5670 MHz



Maximum Power Spectral Density

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

Antenna Port WA + WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.16	0.18	0.34	-4.74	8.68	13.42	1.09	1.19	2.28	3.58	17.00	13.42
5230	0.17	0.18	0.35	-4.56	8.68	13.24	1.19	1.19	2.38	3.76	17.00	13.24
5270	0.27	0.25	0.52	-2.80	8.68	11.48	1.84	1.72	3.56	5.52	17.00	11.48
5310	0.25	0.27	0.52	-2.85	8.68	11.53	1.70	1.83	3.53	5.47	17.00	11.53
5510	0.27	0.31	0.57	-2.41	8.68	11.09	1.83	2.07	3.90	5.91	17.00	11.09
5550	0.28	0.32	0.60	-2.21	8.68	10.89	1.90	2.18	4.08	6.11	17.00	10.89
5670	0.29	0.27	0.56	-2.54	8.68	11.22	1.96	1.82	3.79	5.78	17.00	11.22
5755	0.13	0.18	0.31	-5.03	27.68	32.71	0.88	1.25	2.13	3.29	36.00	32.71
5795	0.14	0.20	0.33	-4.78	27.68	32.46	0.93	1.33	2.26	3.54	36.00	32.46

			Antenna Port WA						**Antenna Port WC**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	0.00	0.00	-18.70	0.70	10.05	8.32	-7.95	0.37	-18.39	0.70	10.13	8.32	-7.56	0.76
5230	0.00	0.00	-18.33	0.70	10.05	8.32	-7.58	0.74	-18.39	0.70	10.13	8.32	-7.56	0.76
5270	0.00	0.00	-16.42	0.70	10.05	8.32	-5.67	2.65	-16.80	0.70	10.14	8.32	-5.96	2.36
5310	0.00	0.00	-16.78	0.70	10.06	8.32	-6.02	2.31	-16.54	0.70	10.14	8.32	-5.70	2.62
5510	0.00	0.00	-16.55	0.80	10.06	8.32	-5.69	2.63	-16.10	0.80	10.14	8.32	-5.16	3.16
5550	0.00	0.00	-16.39	0.80	10.06	8.32	-5.53	2.79	-15.87	0.80	10.14	8.32	-4.93	3.39
5670	0.00	0.00	-16.25	0.80	10.05	8.32	-5.40	2.93	-16.64	0.80	10.13	8.32	-5.71	2.61
5755	0.00	0.27	-19.99	0.80	10.05	8.32	-8.87	-0.55	-18.54	0.80	10.12	8.32	-7.35	0.97
5795	0.00	0.27	-19.76	0.80	10.05	8.32	-8.64	-0.32	-18.27	0.80	10.12	8.32	-7.08	1.24

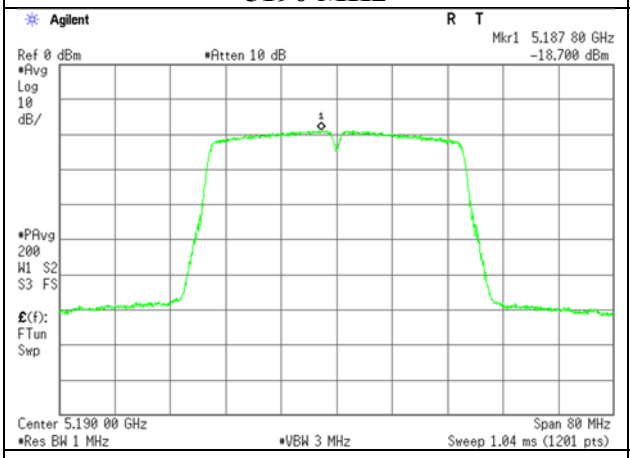
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

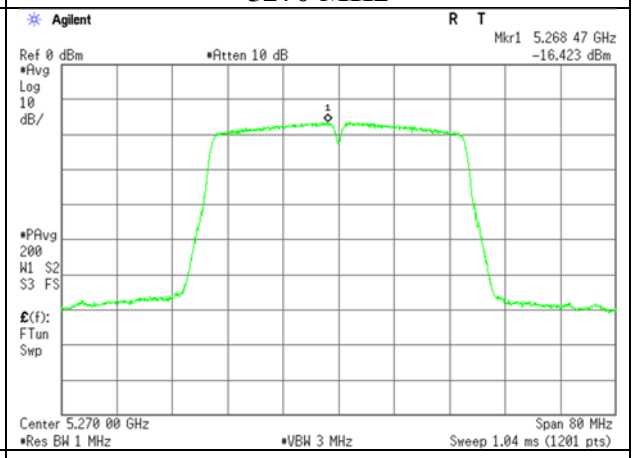
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WA

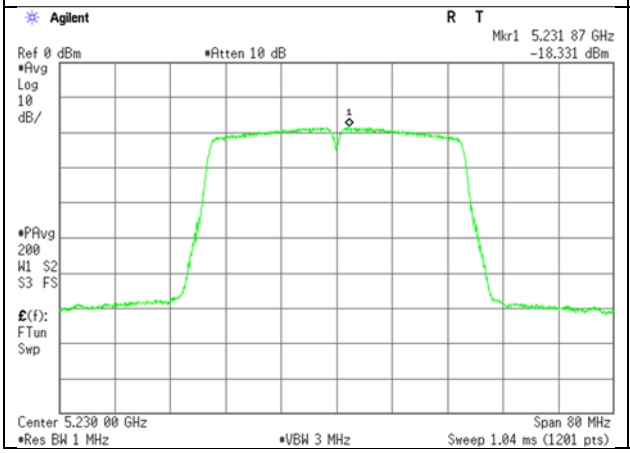
5190 MHz



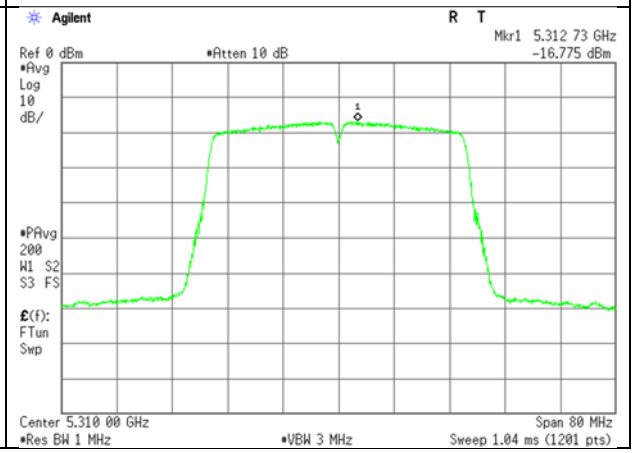
5270 MHz



5230 MHz



5310 MHz

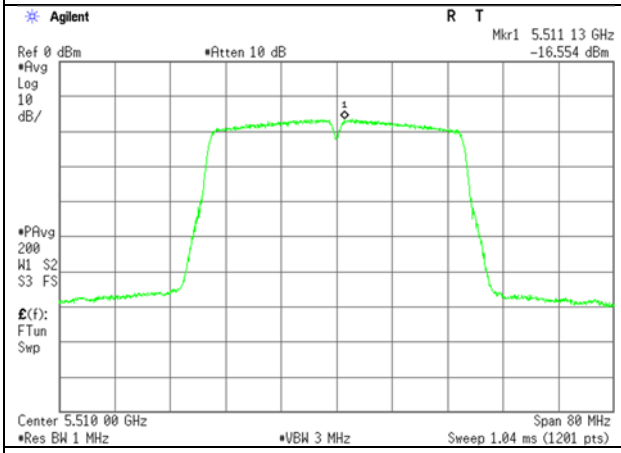


Maximum Power Spectral Density

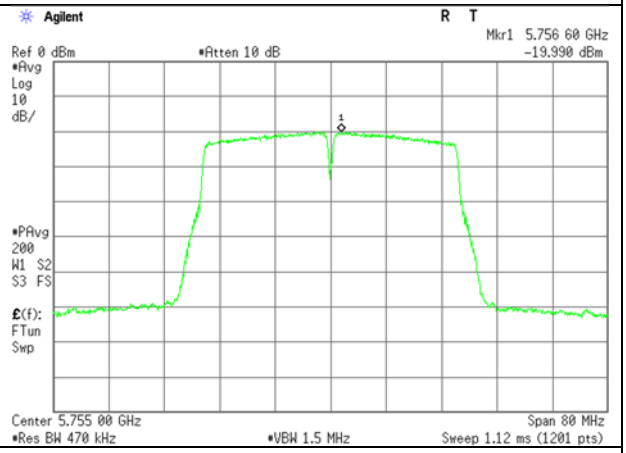
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WA

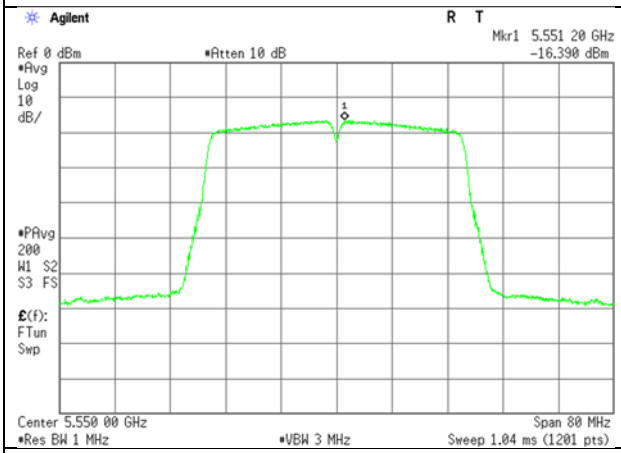
5510 MHz



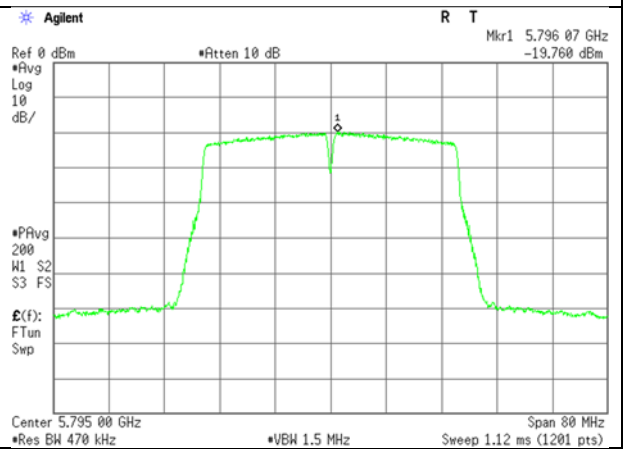
5755 MHz



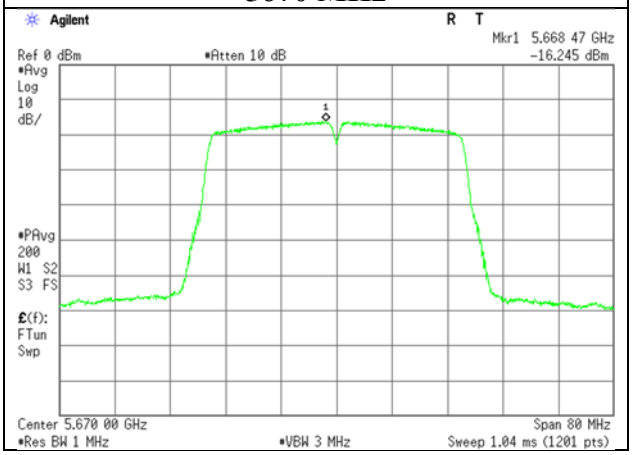
5550 MHz



5795 MHz



5670 MHz

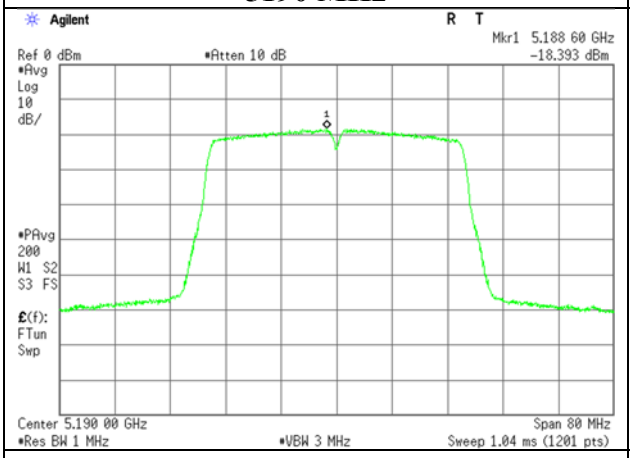


Maximum Power Spectral Density

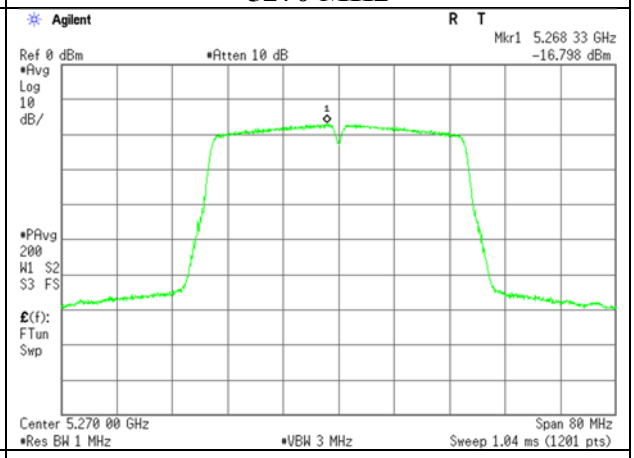
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WC

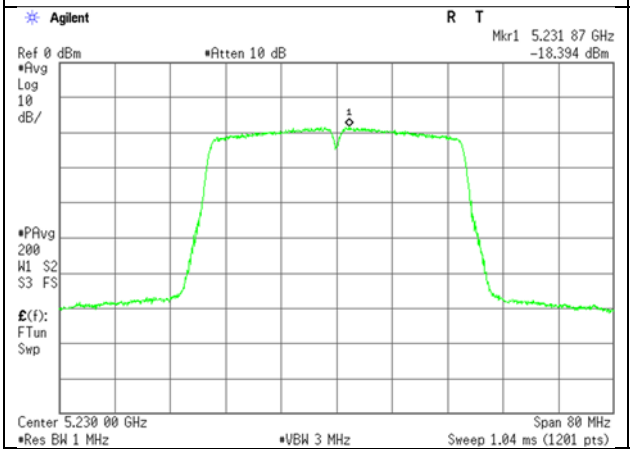
5190 MHz



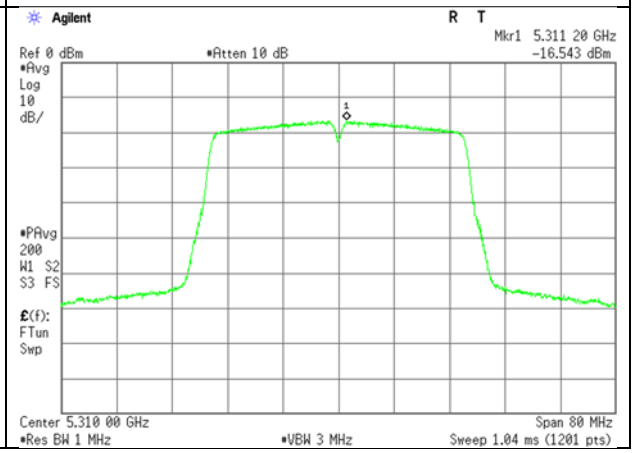
5270 MHz



5230 MHz



5310 MHz

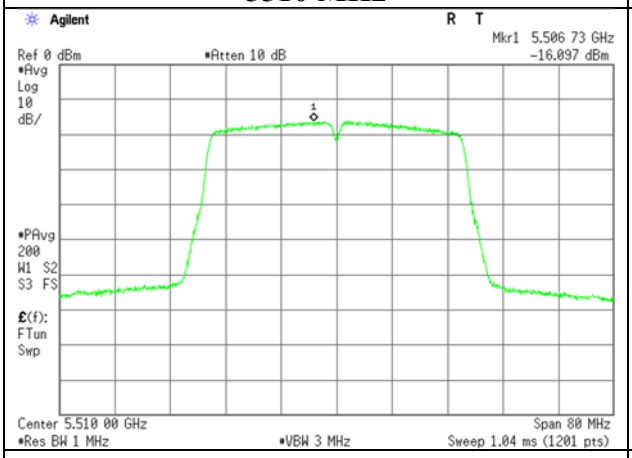


Maximum Power Spectral Density

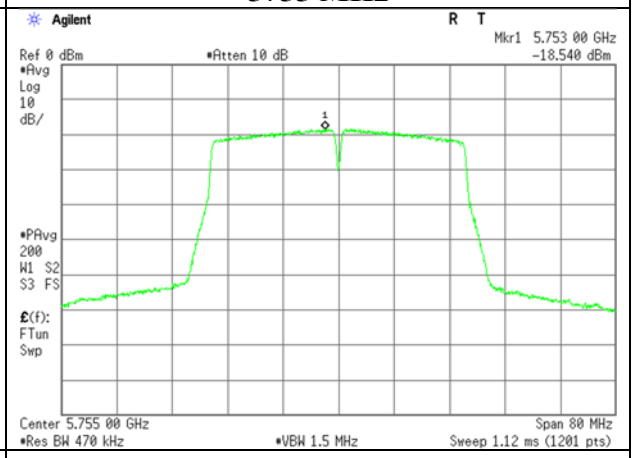
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

11ac-40, Antenna port WC

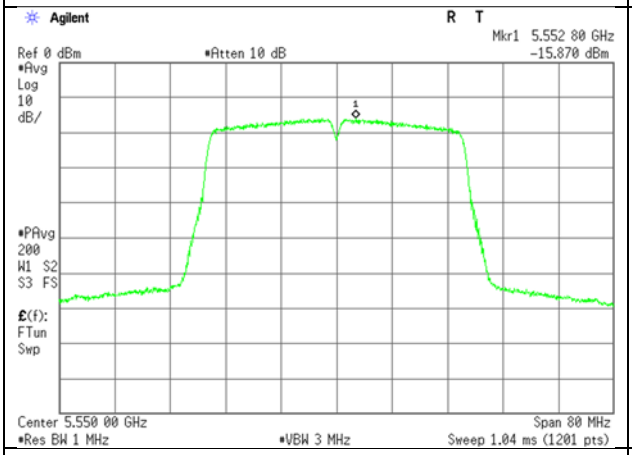
5510 MHz



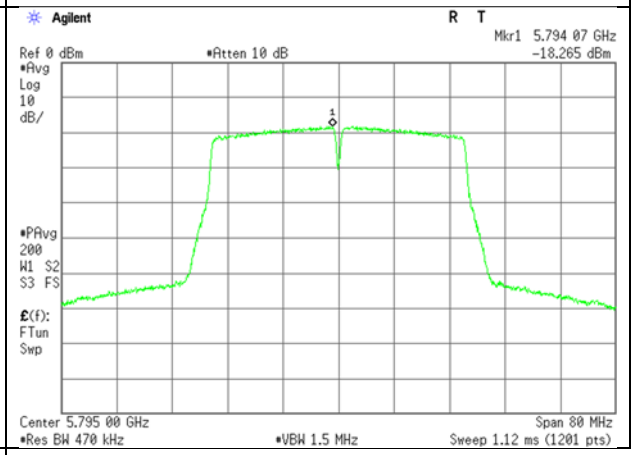
5755 MHz



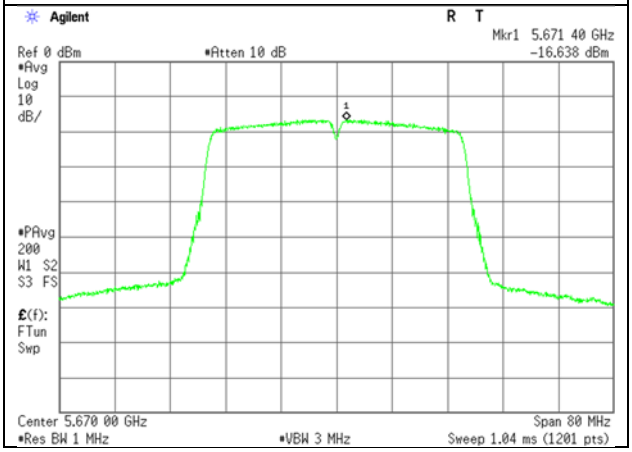
5550 MHz



5795 MHz



5670 MHz



Maximum Power Spectral Density

Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

Antenna Port WA + WC Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	1	2	Sum				1	2	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5210	0.08	0.08	0.16	-7.98	8.68	16.66	0.52	0.56	1.08	0.34	17.00	16.66
5290	0.10	0.12	0.22	-6.59	8.68	15.27	0.66	0.83	1.49	1.73	17.00	15.27
5530	0.13	0.13	0.25	-5.94	8.68	14.62	0.85	0.87	1.73	2.38	17.00	14.62
5610	0.14	0.14	0.28	-5.52	8.68	14.20	0.95	0.96	1.91	2.80	17.00	14.20
5775	0.06	0.09	0.15	-8.30	27.68	35.98	0.40	0.60	1.00	0.02	36.00	35.98

			Antenna Port WA						**Antenna Port WC**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	
							Cond.	e.i.r.p.					Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5210	0.00	0.00	-21.88	0.70	10.05	8.32	-11.13	-2.81	-21.68	0.70	10.13	8.32	-10.85	-2.53
5290	0.00	0.00	-20.91	0.70	10.06	8.32	-10.15	-1.83	-19.95	0.70	10.14	8.32	-9.11	-0.79
5530	0.00	0.00	-19.86	0.80	10.06	8.32	-9.00	-0.68	-19.84	0.80	10.14	8.32	-8.90	-0.58
5610	0.00	0.00	-19.41	0.80	10.05	8.32	-8.56	-0.24	-19.43	0.80	10.13	8.32	-8.50	-0.18
5775	0.00	0.27	-23.42	0.80	10.05	8.32	-12.30	-3.98	-21.70	0.80	10.12	8.32	-10.51	-2.19

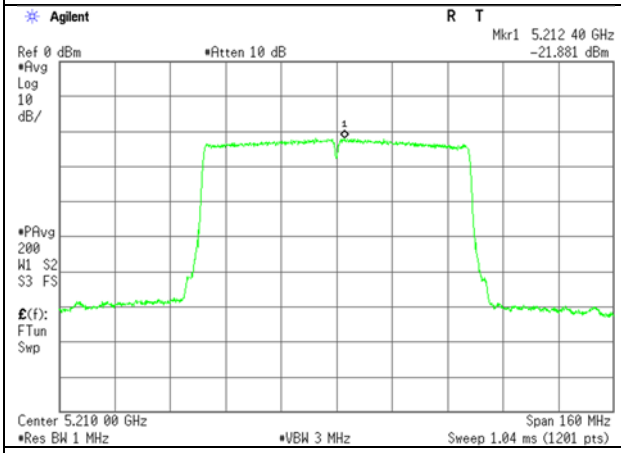
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for IC)

Maximum Power Spectral Density

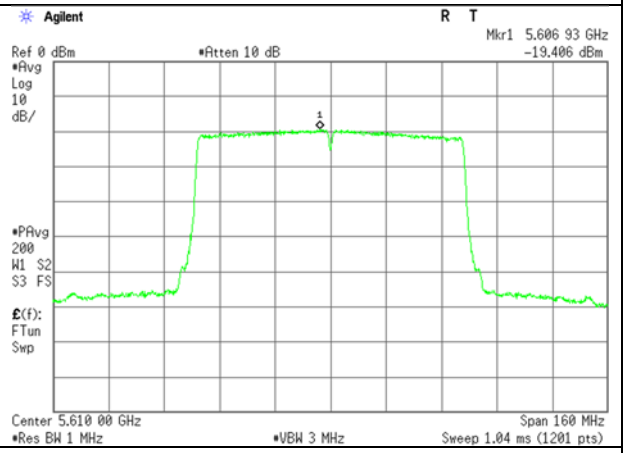
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

11ac-80, Antenna port WA

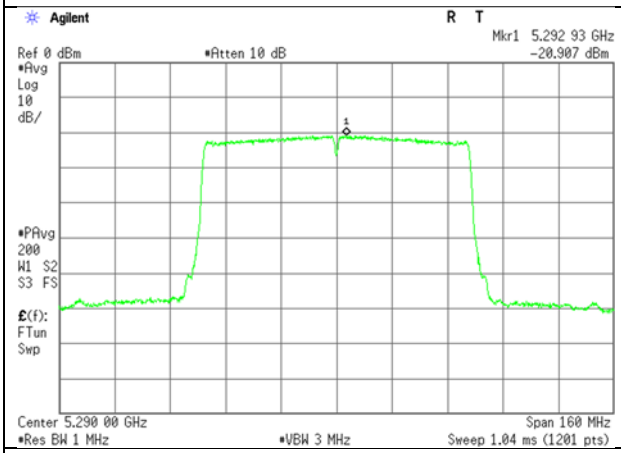
5210 MHz



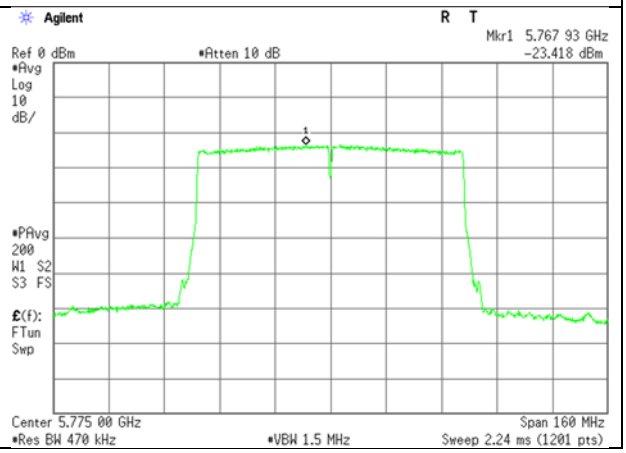
5610 MHz



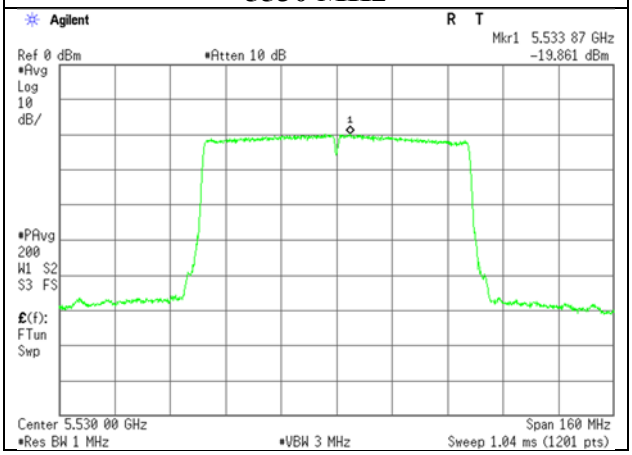
5290 MHz



5775 MHz



5530 MHz

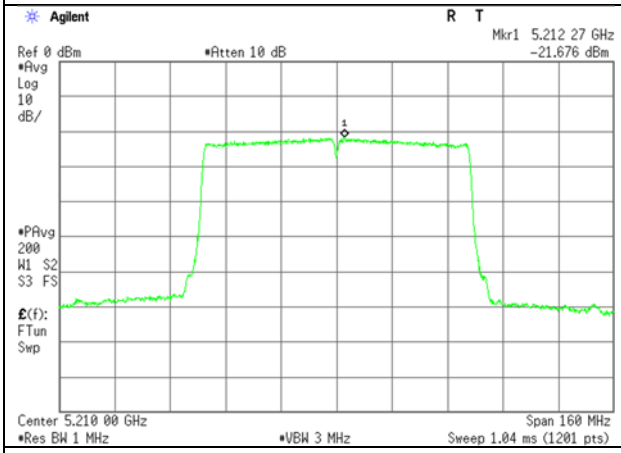


Maximum Power Spectral Density

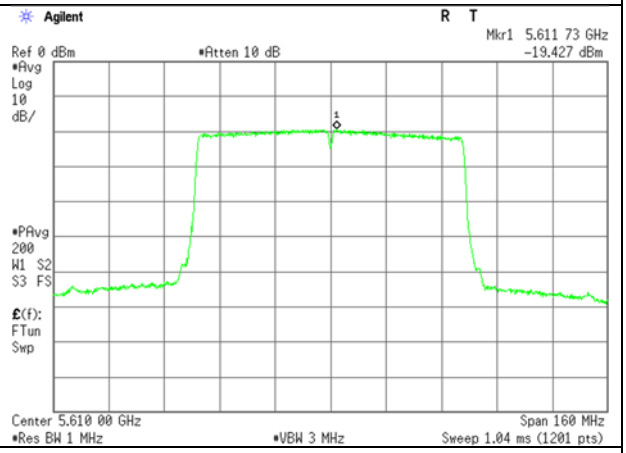
Report No.	12219844H
Test place	Ise EMC Lab. No.11 Measurement Room
Date	January 29, 2018
Temperature / Humidity	23deg. C / 32 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

11ac-80, Antenna port WC

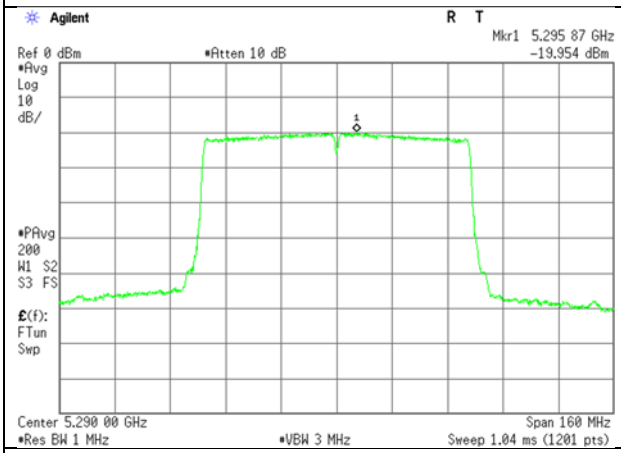
5210 MHz



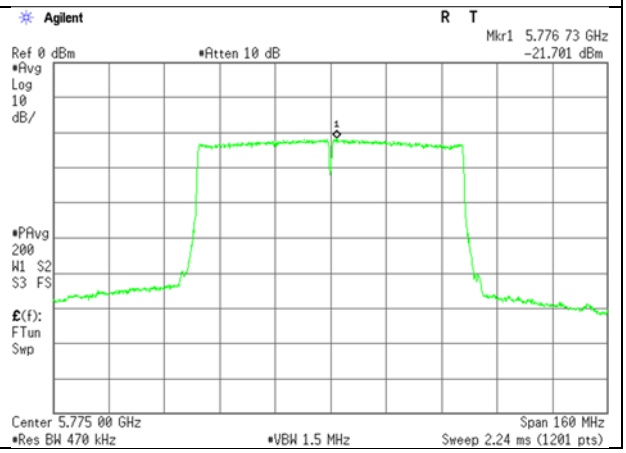
5610 MHz



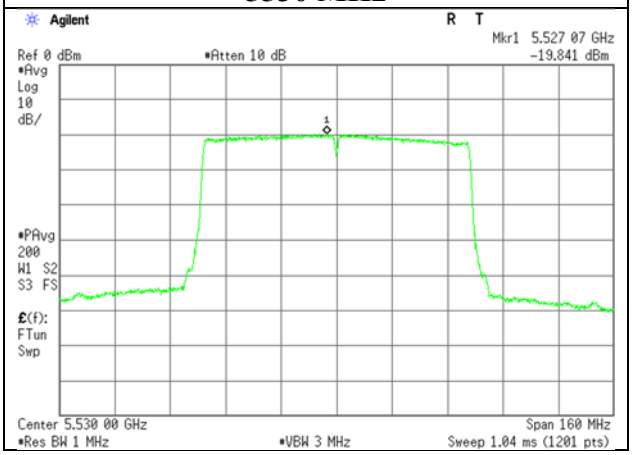
5290 MHz



5775 MHz



5530 MHz



Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5180 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3450.250	PK	44.8	29.4	6.5	32.3	-	48.4	73.9	25.5	
Hori	5150.000	PK	42.3	32.2	7.2	31.7	-	50.0	73.9	23.9	
Hori	10360.000	PK	42.6	39.5	-2.2	33.5	-	46.4	73.9	27.5	Floor noise
Hori	15540.000	PK	43.5	39.0	-0.4	33.0	-	49.1	73.9	24.8	Floor noise
Hori	3450.250	AV	39.4	29.4	6.5	32.3	-	43.0	53.9	10.9	
Hori	5150.000	AV	34.5	32.2	7.2	31.7	-	42.2	53.9	11.7	
Hori	10360.000	AV	33.4	39.5	-2.2	33.5	-	37.2	53.9	16.7	Floor noise
Hori	15540.000	AV	35.4	39.0	-0.4	33.0	-	41.0	53.9	12.9	Floor noise
Vert	3450.250	PK	43.7	29.4	6.5	32.3	-	47.3	73.9	26.6	
Vert	5150.000	PK	43.8	32.2	7.2	31.7	-	51.5	73.9	22.4	
Vert	10360.000	PK	42.0	39.5	-2.2	33.5	-	45.8	73.9	28.1	Floor noise
Vert	15540.000	PK	43.6	39.0	-0.4	33.0	-	49.2	73.9	24.7	Floor noise
Vert	3450.250	AV	37.8	29.4	6.5	32.3	-	41.4	53.9	12.5	
Vert	5150.000	AV	35.0	32.2	7.2	31.7	-	42.7	53.9	11.2	
Vert	10360.000	AV	33.7	39.5	-2.2	33.5	-	37.5	53.9	16.4	Floor noise
Vert	15540.000	AV	35.4	39.0	-0.4	33.0	-	41.0	53.9	12.9	Floor noise

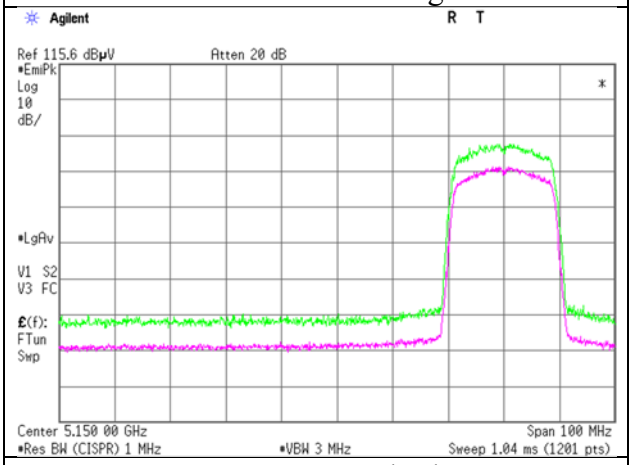
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

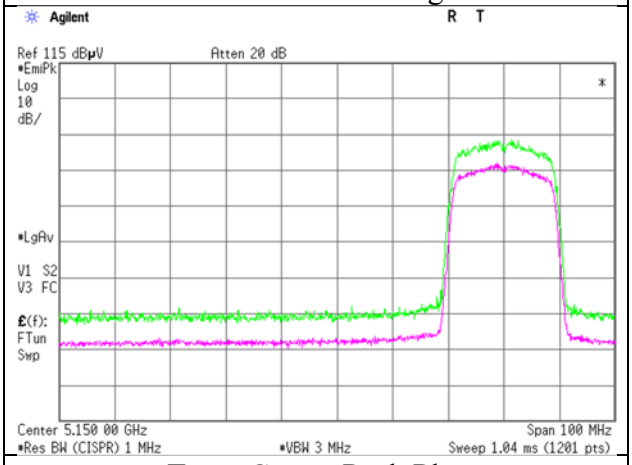
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5180 MHz

Horizontal
Restricted-band band-edge Plot

Trace Green: Peak Plot Trace Purple: Average Plot

Vertical
Restricted-band band-edge Plot

Trace Green: Peak Plot Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5260 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10520.000	PK	43.7	39.7	-2.3	33.5	-	47.6	73.9	26.3	Floor noise
Hori	15780.000	PK	42.4	38.3	-0.3	33.0	-	47.4	73.9	26.5	Floor noise
Hori	10520.000	AV	33.9	39.7	-2.3	33.5	-	37.8	53.9	16.1	Floor noise
Hori	15780.000	AV	35.4	38.3	-0.3	33.0	-	40.4	53.9	13.5	Floor noise
Vert	10520.000	PK	43.0	39.7	-2.3	33.5	-	46.9	73.9	27.0	Floor noise
Vert	15780.000	PK	43.1	38.3	-0.3	33.0	-	48.1	73.9	25.8	Floor noise
Vert	10520.000	AV	33.5	39.7	-2.3	33.5	-	37.4	53.9	16.5	Floor noise
Vert	15780.000	AV	35.2	38.3	-0.3	33.0	-	40.2	53.9	13.7	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada (1 GHz - 10 GHz)	Takumi Shimada (10 GHz - 18 GHz)	Ken Fujita (18 GHz - 26.5 GHz)	Takafumi Noguchi (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5320 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	43.8	32.1	7.3	31.8	-	51.4	73.9	22.5	
Hori	10640.000	PK	43.2	39.9	-2.3	33.6	-	47.2	73.9	26.7	Floor noise
Hori	15960.000	PK	43.5	37.8	-0.2	33.0	-	48.1	73.9	25.8	Floor noise
Hori	5350.000	AV	34.9	32.1	7.3	31.8	-	42.5	53.9	11.4	
Hori	10640.000	AV	34.0	39.9	-2.3	33.6	-	38.0	53.9	15.9	Floor noise
Hori	15960.000	AV	35.3	37.8	-0.2	33.0	-	39.9	53.9	14.0	Floor noise
Vert	5350.000	PK	43.8	32.1	7.3	31.8	-	51.4	73.9	22.5	
Vert	10640.000	PK	42.9	39.9	-2.3	33.6	-	46.9	73.9	27.0	Floor noise
Vert	15960.000	PK	44.1	37.8	-0.2	33.0	-	48.7	73.9	25.2	Floor noise
Vert	5350.000	AV	35.5	32.1	7.3	31.8	-	43.1	53.9	10.8	
Vert	10640.000	AV	34.1	39.9	-2.3	33.6	-	38.1	53.9	15.8	Floor noise
Vert	15960.000	AV	35.2	37.8	-0.2	33.0	-	39.8	53.9	14.1	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

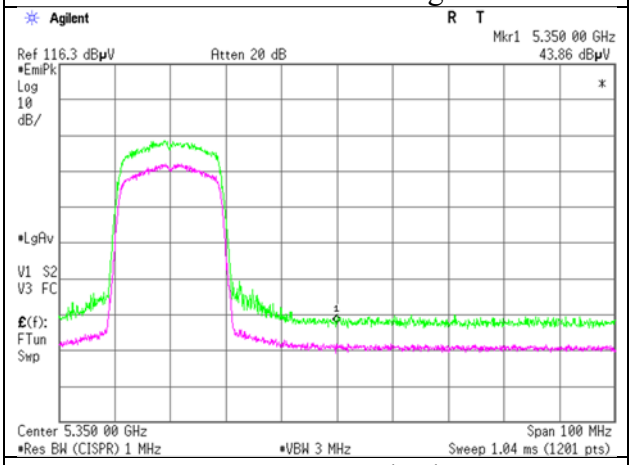
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5320 MHz

Horizontal

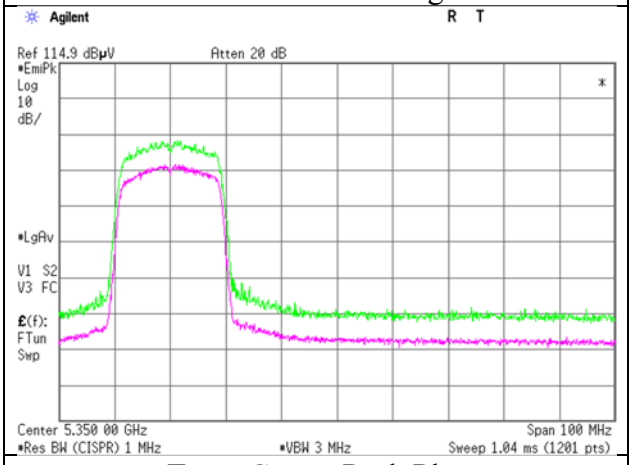
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5500 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3666.670	PK	44.0	29.6	6.6	32.2	-	48.0	73.9	25.9	
Hori	5460.000	PK	43.3	32.0	7.4	31.8	-	50.9	73.9	23.0	
Hori	5470.000	PK	45.1	32.0	7.4	31.8	-	52.7	68.2	15.5	
Hori	11000.000	PK	43.2	40.5	-2.2	33.6	-	47.9	73.9	26.0	Floor noise
Hori	16500.000	PK	44.1	39.3	0.0	33.0	-	50.4	73.9	23.5	Floor noise
Hori	3666.670	AV	37.7	29.6	6.6	32.2	-	41.7	53.9	12.2	
Hori	5460.000	AV	35.7	32.0	7.4	31.8	-	43.3	53.9	10.6	
Hori	11000.000	AV	34.2	40.5	-2.2	33.6	-	38.9	53.9	15.0	Floor noise
Hori	16500.000	AV	35.7	39.3	0.0	33.0	-	42.0	53.9	11.9	Floor noise
Vert	3666.670	PK	44.5	29.6	6.6	32.2	-	48.5	73.9	25.4	
Vert	5460.000	PK	43.7	32.0	7.4	31.8	-	51.3	73.9	22.6	
Vert	5470.000	PK	43.7	32.0	7.4	31.8	-	51.3	68.2	16.9	
Vert	11000.000	PK	43.0	40.5	-2.2	33.6	-	47.7	73.9	26.2	Floor noise
Vert	16500.000	PK	44.0	39.3	0.0	33.0	-	50.3	73.9	23.6	Floor noise
Vert	3666.670	AV	37.5	29.6	6.6	32.2	-	41.5	53.9	12.4	
Vert	5460.000	AV	35.0	32.0	7.4	31.8	-	42.6	53.9	11.3	
Vert	11000.000	AV	34.4	40.5	-2.2	33.6	-	39.1	53.9	14.8	Floor noise
Vert	16500.000	AV	35.5	39.3	0.0	33.0	-	41.8	53.9	12.1	Floor noise

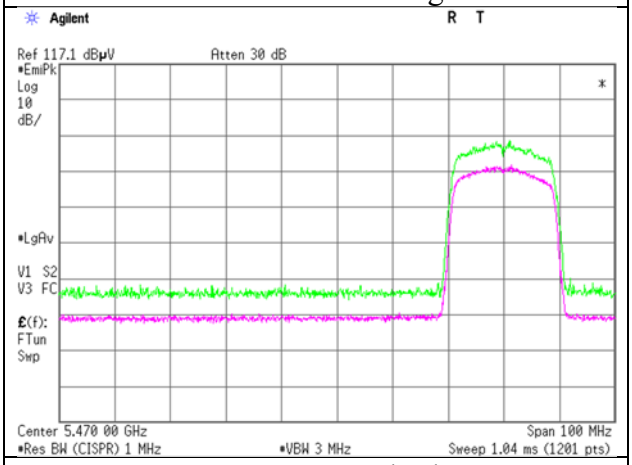
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

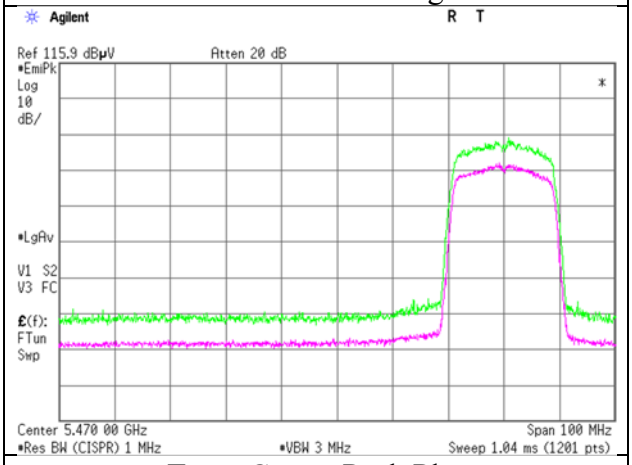
Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5500 MHz

Horizontal
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5580 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3719.857	PK	44.8	29.6	6.7	32.2	-	48.9	73.9	25.0	
Hori	11160.000	PK	42.3	40.4	-2.1	33.6	-	47.0	73.9	26.9	Floor noise
Hori	16740.000	PK	44.3	40.0	0.0	33.0	-	51.3	73.9	22.6	Floor noise
Hori	3719.857	AV	38.9	29.6	6.7	32.2	-	43.0	53.9	10.9	
Hori	11160.000	AV	34.3	40.4	-2.1	33.6	-	39.0	53.9	14.9	Floor noise
Hori	16740.000	AV	35.6	40.0	0.0	33.0	-	42.6	53.9	11.3	Floor noise
Vert	3719.857	PK	42.6	29.6	6.7	32.2	-	46.7	73.9	27.2	
Vert	11160.000	PK	42.8	40.4	-2.1	33.6	-	47.5	73.9	26.4	Floor noise
Vert	16740.000	PK	43.9	40.0	0.0	33.0	-	50.9	73.9	23.0	Floor noise
Vert	3719.857	AV	35.5	29.6	6.7	32.2	-	39.6	53.9	14.3	
Vert	11160.000	AV	34.3	40.4	-2.1	33.6	-	39.0	53.9	14.9	Floor noise
Vert	16740.000	AV	35.5	40.0	0.0	33.0	-	42.5	53.9	11.4	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H				
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber				
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018	March 28, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH	25 deg. C / 33 % RH
Engineer	Takumi Shimada (1 GHz - 10 GHz)	Takumi Shimada (10 GHz - 18 GHz)	Ken Fujita (18 GHz - 26.5 GHz)	Takafumi Noguchi (26.5 GHz - 40 GHz)	Masafumi Niwa (Below 1 GHz)
Mode	Tx 11ac-20 5700 MHz				

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	50.145	QP	24.8	10.6	7.5	32.2	-	10.7	40.0	29.3	
Hori	103.996	QP	36.1	10.6	8.2	32.2	-	22.7	43.5	20.8	
Hori	128.134	QP	33.7	13.4	8.5	32.2	-	23.4	43.5	20.1	
Hori	195.004	QP	34.5	16.5	9.1	32.1	-	28.0	43.5	15.5	
Hori	243.296	QP	32.0	11.5	9.6	32.0	-	21.1	46.0	24.9	
Hori	274.853	QP	36.8	12.5	9.8	32.0	-	27.1	46.0	18.9	
Hori	3799.000	PK	45.4	29.6	6.7	32.1	-	49.6	73.9	24.3	
Hori	5725.000	PK	44.2	32.3	7.5	31.8	-	52.2	68.2	16.0	
Hori	11400.000	PK	43.1	40.1	-2.1	33.5	-	47.6	73.9	26.3	Floor noise
Hori	17100.000	PK	44.3	41.4	0.1	32.9	-	52.9	73.9	21.0	Floor noise
Hori	3799.000	AV	40.5	29.6	6.7	32.1	-	44.7	53.9	9.2	
Hori	11400.000	AV	34.2	40.1	-2.1	33.5	-	38.7	53.9	15.2	Floor noise
Hori	17100.000	AV	36.3	41.4	0.1	32.9	-	44.9	53.9	9.0	Floor noise
Vert	50.145	QP	34.7	10.6	7.5	32.2	-	20.6	40.0	19.4	
Vert	103.996	QP	32.9	10.6	8.2	32.2	-	19.5	43.5	24.0	
Vert	128.134	QP	35.7	13.4	8.5	32.2	-	25.4	43.5	18.1	
Vert	195.004	QP	29.1	16.5	9.1	32.1	-	22.6	43.5	20.9	
Vert	243.296	QP	34.6	11.5	9.6	32.0	-	23.7	46.0	22.3	
Vert	274.853	QP	33.2	12.5	9.8	32.0	-	23.5	46.0	22.5	
Vert	3799.000	PK	44.3	29.6	6.7	32.1	-	48.5	73.9	25.4	
Vert	5725.000	PK	44.2	32.3	7.5	31.8	-	52.2	68.2	16.0	
Vert	11400.000	PK	42.9	40.1	-2.1	33.5	-	47.4	73.9	26.5	Floor noise
Vert	17100.000	PK	44.9	41.4	0.1	32.9	-	53.5	73.9	20.4	Floor noise
Vert	3799.000	AV	38.4	29.6	6.7	32.1	-	42.6	53.9	11.3	
Vert	11400.000	AV	34.1	40.1	-2.1	33.5	-	38.6	53.9	15.3	Floor noise
Vert	17100.000	AV	36.2	41.4	0.1	32.9	-	44.8	53.9	9.1	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

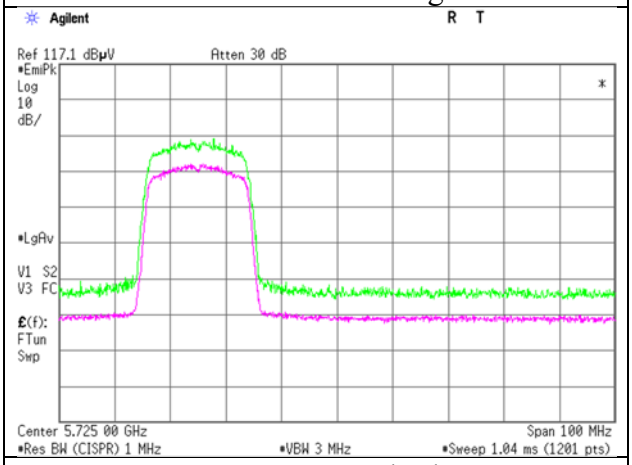
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5700 MHz

Horizontal

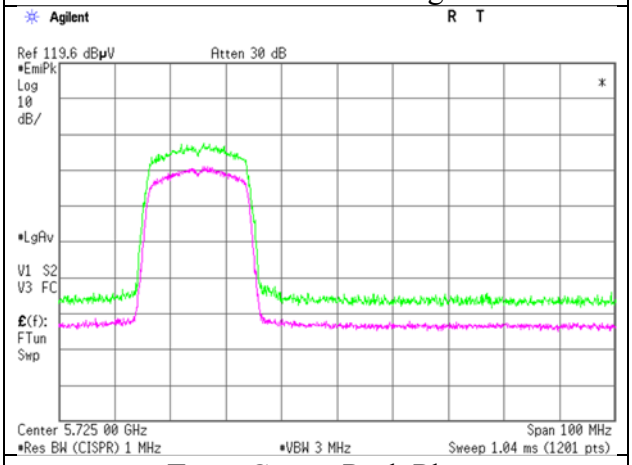
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5745 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3828.000	PK	45.9	29.7	6.7	32.1	-	50.2	73.9	23.7	
Hori	5650.000	PK	41.4	32.2	7.5	31.8	-	49.3	68.2	18.9	
Hori	5700.000	PK	42.3	32.3	7.5	31.8	-	50.3	105.2	54.9	
Hori	5720.000	PK	43.1	32.3	7.5	31.8	-	51.1	110.8	59.7	
Hori	5725.000	PK	49.7	32.3	7.5	31.8	-	57.7	122.2	64.5	
Hori	11490.000	PK	42.4	40.1	-2.0	33.5	-	47.0	73.9	26.9	Floor noise
Hori	17235.000	PK	44.5	42.2	0.1	32.9	-	53.9	73.9	20.0	Floor noise
Hori	3828.000	AV	41.6	29.7	6.7	32.1	-	45.9	53.9	8.0	
Hori	11490.000	AV	34.2	40.1	-2.0	33.5	-	38.8	53.9	15.1	Floor noise
Hori	17235.000	AV	36.4	42.2	0.1	32.9	-	45.8	53.9	8.1	Floor noise
Vert	3828.000	PK	44.8	29.7	6.7	32.1	-	49.1	73.9	24.8	
Vert	5650.000	PK	41.1	32.2	7.5	31.8	-	49.0	68.2	19.2	
Vert	5700.000	PK	42.3	32.3	7.5	31.8	-	50.3	105.2	54.9	
Vert	5720.000	PK	47.4	32.3	7.5	31.8	-	55.4	110.8	55.4	
Vert	5725.000	PK	58.1	32.3	7.5	31.8	-	66.1	122.2	56.1	
Vert	11490.000	PK	42.9	40.1	-2.0	33.5	-	47.5	73.9	26.4	Floor noise
Vert	17235.000	PK	45.0	42.2	0.1	32.9	-	54.4	73.9	19.5	Floor noise
Vert	3828.000	AV	39.7	29.7	6.7	32.1	-	44.0	53.9	9.9	
Vert	11490.000	AV	34.2	40.1	-2.0	33.5	-	38.8	53.9	15.1	Floor noise
Vert	17235.000	AV	36.3	42.2	0.1	32.9	-	45.7	53.9	8.2	Floor noise

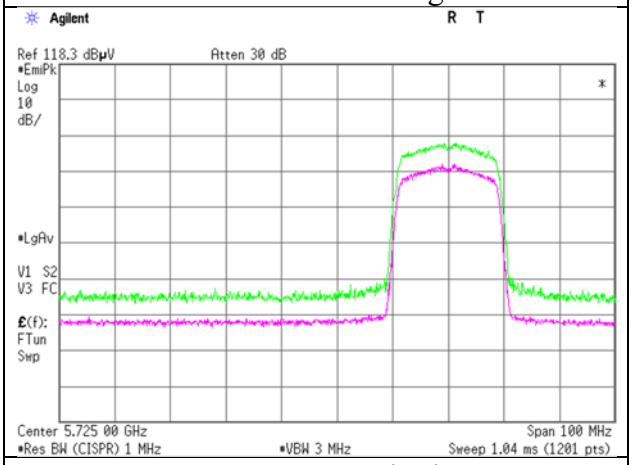
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

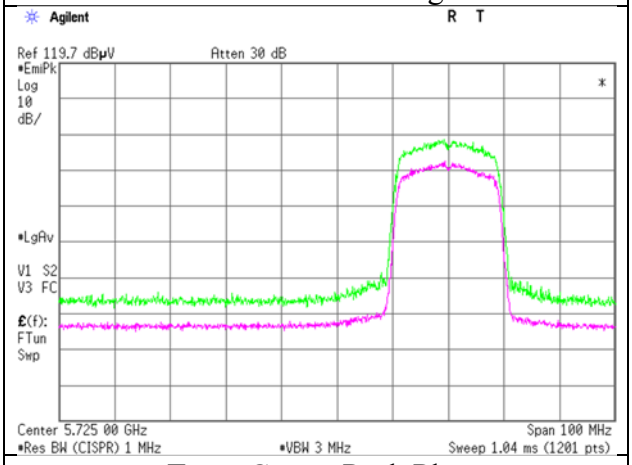
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5745 MHz

Horizontal
Restricted-band band-edge Plot

Trace Green: Peak Plot Trace Purple: Average Plot

Vertical
Restricted-band band-edge Plot

Trace Green: Peak Plot Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5785 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3855.184	PK	46.7	29.7	6.7	32.1	-	51.0	73.9	22.9	
Hori	11570.000	PK	42.5	40.0	-1.9	33.5	-	47.1	73.9	26.8	Floor noise
Hori	17355.000	PK	43.5	42.9	0.2	32.9	-	53.7	73.9	20.2	Floor noise
Hori	3855.184	AV	42.6	29.7	6.7	32.1	-	46.9	53.9	7.0	
Hori	11570.000	AV	34.2	40.0	-1.9	33.5	-	38.8	53.9	15.1	Floor noise
Hori	17355.000	AV	36.2	42.9	0.2	32.9	-	46.4	53.9	7.5	Floor noise
Vert	3855.184	PK	45.4	29.7	6.7	32.1	-	49.7	73.9	24.2	
Vert	11570.000	PK	42.6	40.0	-1.9	33.5	-	47.2	73.9	26.7	Floor noise
Vert	17355.000	PK	43.4	42.9	0.2	32.9	-	53.6	73.9	20.3	Floor noise
Vert	3855.184	AV	40.5	29.7	6.7	32.1	-	44.8	53.9	9.1	
Vert	11570.000	AV	34.2	40.0	-1.9	33.5	-	38.8	53.9	15.1	Floor noise
Vert	17355.000	AV	36.1	42.9	0.2	32.9	-	46.3	53.9	7.6	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5825 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3883.240	PK	47.1	29.7	6.7	32.1	-	51.4	73.9	22.5	
Hori	5850.000	PK	44.2	32.5	7.5	31.8	-	52.4	122.2	69.8	
Hori	5855.000	PK	43.0	32.5	7.5	31.8	-	51.2	110.8	59.6	
Hori	5875.000	PK	42.1	32.5	7.5	31.8	-	50.3	105.2	54.9	
Hori	5925.000	PK	41.4	32.6	7.6	31.8	-	49.8	68.2	18.4	
Hori	11650.000	PK	43.8	39.9	-1.9	33.4	-	48.4	73.9	25.5	Floor noise
Hori	17475.000	PK	44.5	43.6	0.2	32.9	-	55.4	73.9	18.5	Floor noise
Hori	3883.240	AV	42.5	29.7	6.7	32.1	-	46.8	53.9	7.1	
Hori	11650.000	AV	35.1	39.9	-1.9	33.4	-	39.7	53.9	14.2	Floor noise
Hori	17475.000	AV	35.2	43.6	0.2	32.9	-	46.1	53.9	7.8	Floor noise
Vert	3883.240	PK	46.2	29.7	6.7	32.1	-	50.5	73.9	23.4	
Vert	5850.000	PK	45.8	32.5	7.5	31.8	-	54.0	122.2	68.2	
Vert	5855.000	PK	44.0	32.5	7.5	31.8	-	52.2	110.8	58.6	
Vert	5875.000	PK	44.1	32.5	7.5	31.8	-	52.3	105.2	52.9	
Vert	5925.000	PK	42.0	32.6	7.6	31.8	-	50.4	68.2	17.8	
Vert	11650.000	PK	44.0	39.9	-1.9	33.4	-	48.6	73.9	25.3	Floor noise
Vert	17475.000	PK	44.8	43.6	0.2	32.9	-	55.7	73.9	18.2	Floor noise
Vert	3883.240	AV	41.4	29.7	6.7	32.1	-	45.7	53.9	8.2	
Vert	11650.000	AV	35.4	39.9	-1.9	33.4	-	40.0	53.9	13.9	Floor noise
Vert	17475.000	AV	34.9	43.6	0.2	32.9	-	45.8	53.9	8.1	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

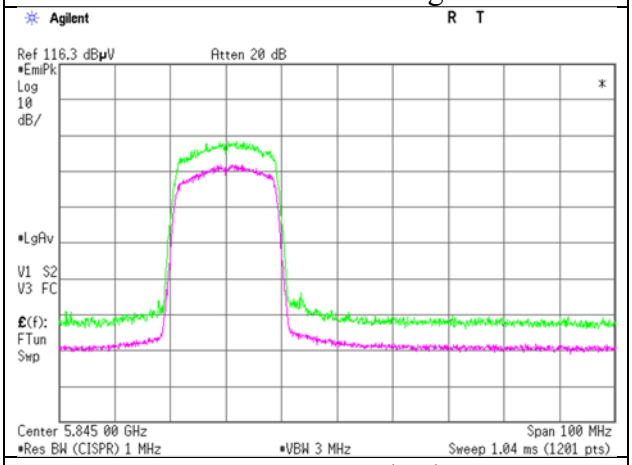
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5825 MHz

Horizontal

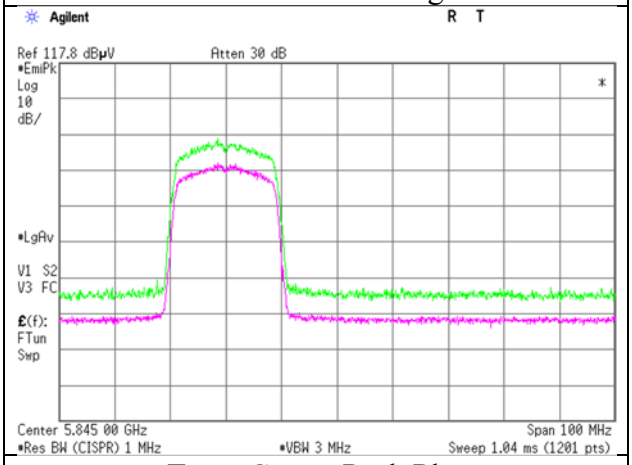
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5190 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	43.8	32.2	7.2	31.7	-	51.5	73.9	22.4	
Hori	10380.000	PK	44.0	39.5	-2.3	33.5	-	47.7	73.9	26.2	Floor noise
Hori	15570.000	PK	43.9	38.9	-0.4	33.0	-	49.4	73.9	24.5	Floor noise
Hori	5150.000	AV	35.4	32.2	7.2	31.7	-	43.1	53.9	10.8	
Hori	10380.000	AV	35.5	39.5	-2.3	33.5	-	39.2	53.9	14.7	Floor noise
Hori	15570.000	AV	34.8	38.9	-0.4	33.0	-	40.3	53.9	13.6	Floor noise
Vert	5150.000	PK	44.5	32.2	7.2	31.7	-	52.2	73.9	21.7	
Vert	10380.000	PK	43.5	39.5	-2.3	33.5	-	47.2	73.9	26.7	Floor noise
Vert	15570.000	PK	44.7	38.9	-0.4	33.0	-	50.2	73.9	23.7	Floor noise
Vert	5150.000	AV	35.3	32.2	7.2	31.7	-	43.0	53.9	10.9	
Vert	10380.000	AV	34.8	39.5	-2.3	33.5	-	38.5	53.9	15.4	Floor noise
Vert	15570.000	AV	35.1	38.9	-0.4	33.0	-	40.6	53.9	13.3	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

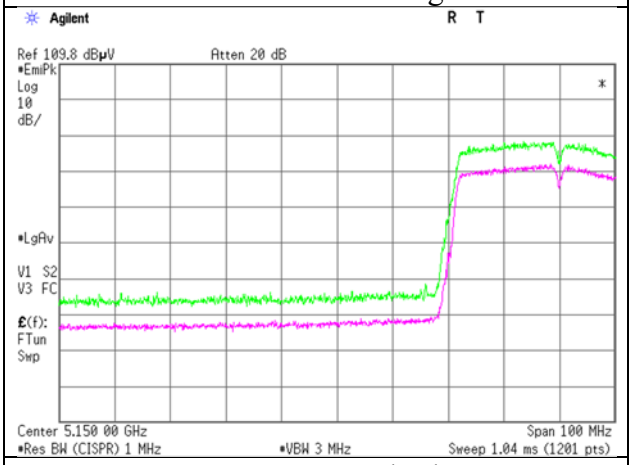
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5190 MHz

Horizontal

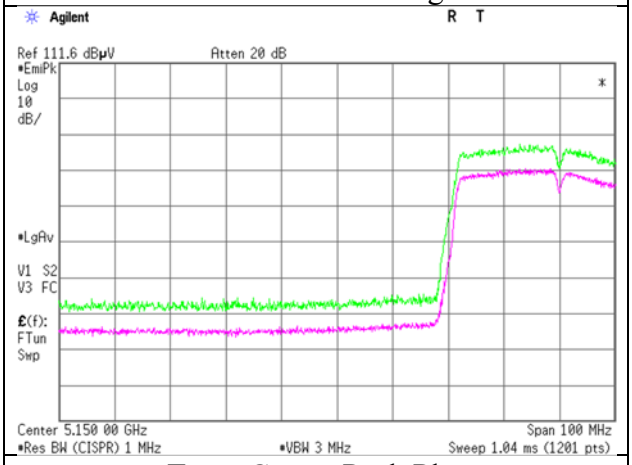
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5270 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10540.000	PK	42.7	39.8	-2.3	33.6	-	46.6	73.9	27.3	Floor noise
Hori	15810.000	PK	43.2	38.3	-0.3	33.0	-	48.2	73.9	25.7	Floor noise
Hori	10540.000	AV	34.0	39.8	-2.3	33.6	-	37.9	53.9	16.0	Floor noise
Hori	15810.000	AV	35.1	38.3	-0.3	33.0	-	40.1	53.9	13.8	Floor noise
Vert	10540.000	PK	42.9	39.8	-2.3	33.6	-	46.8	73.9	27.1	Floor noise
Vert	15810.000	PK	43.8	38.3	-0.3	33.0	-	48.8	73.9	25.1	Floor noise
Vert	10540.000	AV	34.4	39.8	-2.3	33.6	-	38.3	53.9	15.6	Floor noise
Vert	15810.000	AV	35.3	38.3	-0.3	33.0	-	40.3	53.9	13.6	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada (1 GHz - 10 GHz)	Takumi Shimada (10 GHz - 18 GHz)	Ken Fujita (18 GHz - 26.5 GHz)	Takafumi Noguchi (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5310 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	47.0	32.1	7.3	31.8	-	54.6	73.9	19.3	
Hori	10620.000	PK	42.8	39.9	-2.3	33.6	-	46.8	73.9	27.1	Floor noise
Hori	15930.000	PK	43.6	37.9	-0.2	33.0	-	48.3	73.9	25.6	Floor noise
Hori	5350.000	AV	35.7	32.1	7.3	31.8	-	43.3	53.9	10.6	
Hori	10620.000	AV	34.4	39.9	-2.3	33.6	-	38.4	53.9	15.5	Floor noise
Hori	15930.000	AV	35.3	37.9	-0.2	33.0	-	40.0	53.9	13.9	Floor noise
Vert	5350.000	PK	46.0	32.1	7.3	31.8	-	53.6	73.9	20.3	
Vert	10620.000	PK	43.0	39.9	-2.3	33.6	-	47.0	73.9	26.9	Floor noise
Vert	15930.000	PK	43.9	37.9	-0.2	33.0	-	48.6	73.9	25.3	Floor noise
Vert	5350.000	AV	35.7	32.1	7.3	31.8	-	43.3	53.9	10.6	
Vert	10620.000	AV	34.5	39.9	-2.3	33.6	-	38.5	53.9	15.4	Floor noise
Vert	15930.000	AV	35.4	37.9	-0.2	33.0	-	40.1	53.9	13.8	Floor noise

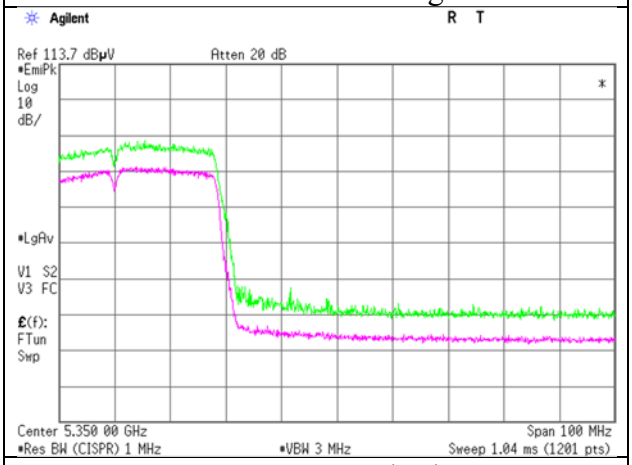
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

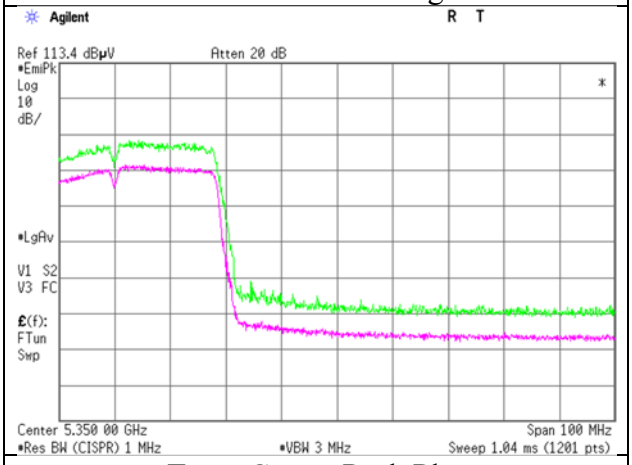
Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5310 MHz

Horizontal
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5510 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	44.0	32.0	7.4	31.8	-	51.6	73.9	22.3	
Hori	5470.000	PK	44.3	32.0	7.4	31.8	-	51.9	68.2	16.3	
Hori	11020.000	PK	42.6	40.5	-2.2	33.6	-	47.3	73.9	26.6	Floor noise
Hori	16530.000	PK	43.7	39.4	0.0	33.0	-	50.1	73.9	23.8	Floor noise
Hori	5460.000	AV	33.2	32.0	7.4	31.8	-	40.8	53.9	13.1	
Hori	11020.000	AV	34.5	40.5	-2.2	33.6	-	39.2	53.9	14.7	Floor noise
Hori	16530.000	AV	35.5	39.4	0.0	33.0	-	41.9	53.9	12.0	Floor noise
Vert	5460.000	PK	44.9	32.0	7.4	31.8	-	52.5	73.9	21.4	
Vert	5470.000	PK	45.3	32.0	7.4	31.8	-	52.9	68.2	15.3	
Vert	11020.000	PK	43.1	40.5	-2.2	33.6	-	47.8	73.9	26.1	Floor noise
Vert	16530.000	PK	44.2	39.4	0.0	33.0	-	50.6	73.9	23.3	Floor noise
Vert	5460.000	AV	35.9	32.0	7.4	31.8	-	43.5	53.9	10.4	
Vert	11020.000	AV	34.5	40.5	-2.2	33.6	-	39.2	53.9	14.7	Floor noise
Vert	16530.000	AV	35.6	39.4	0.0	33.0	-	42.0	53.9	11.9	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

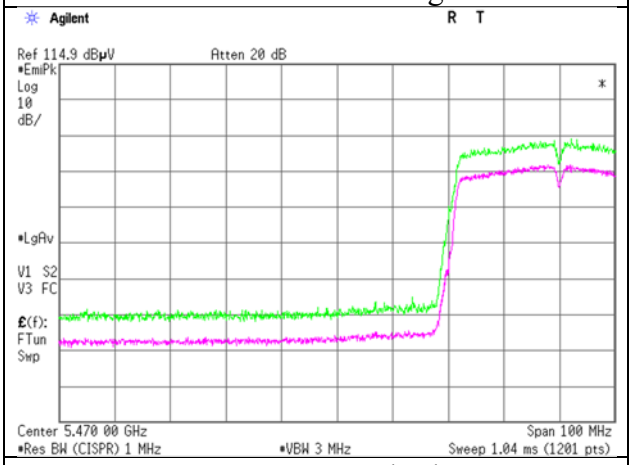
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5510 MHz

Horizontal

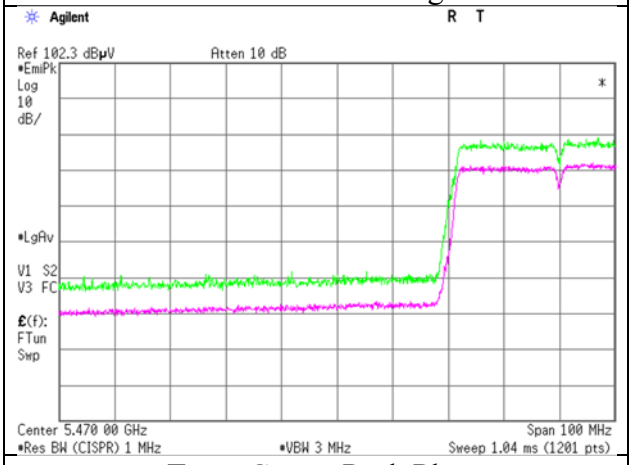
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5550 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3700.000	PK	44.2	29.6	6.6	32.2	-	48.2	73.9	25.7	
Hori	11100.000	PK	43.3	40.4	-2.2	33.6	-	47.9	73.9	26.0	Floor noise
Hori	16650.000	PK	43.9	39.8	0.0	33.0	-	50.7	73.9	23.2	Floor noise
Hori	3700.000	AV	37.6	29.6	6.6	32.2	-	41.6	53.9	12.3	
Hori	11100.000	AV	34.7	40.4	-2.2	33.6	-	39.3	53.9	14.6	Floor noise
Hori	16650.000	AV	35.2	39.8	0.0	33.0	-	42.0	53.9	11.9	Floor noise
Vert	3700.000	PK	43.4	29.6	6.6	32.2	-	47.4	73.9	26.5	
Vert	11100.000	PK	43.0	40.4	-2.2	33.6	-	47.6	73.9	26.3	Floor noise
Vert	16650.000	PK	44.1	39.8	0.0	33.0	-	50.9	73.9	23.0	Floor noise
Vert	3700.000	AV	36.7	29.6	6.6	32.2	-	40.7	53.9	13.2	
Vert	11100.000	AV	34.6	40.4	-2.2	33.6	-	39.2	53.9	14.7	Floor noise
Vert	16650.000	AV	35.4	39.8	0.0	33.0	-	42.2	53.9	11.7	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5670 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3780.000	PK	44.6	29.6	6.7	32.1	-	48.8	73.9	25.1	
Hori	5725.000	PK	43.8	32.3	7.5	31.8	-	51.8	68.2	16.4	
Hori	11340.000	PK	43.6	40.2	-2.0	33.5	-	48.3	73.9	25.6	Floor noise
Hori	17010.000	PK	44.3	40.9	0.1	32.9	-	52.4	73.9	21.5	Floor noise
Hori	3780.000	AV	39.7	29.6	6.7	32.1	-	43.9	53.9	10.0	
Hori	11340.000	AV	33.9	40.2	-2.0	33.5	-	38.6	53.9	15.3	Floor noise
Hori	17010.000	AV	34.8	40.9	0.1	32.9	-	42.9	53.9	11.0	Floor noise
Vert	3780.000	PK	43.6	29.6	6.7	32.1	-	47.8	73.9	26.1	
Vert	5725.000	PK	45.0	32.3	7.5	31.8	-	53.0	68.2	15.2	
Vert	11340.000	PK	43.1	40.2	-2.0	33.5	-	47.8	73.9	26.1	Floor noise
Vert	17010.000	PK	44.2	40.9	0.1	32.9	-	52.3	73.9	21.6	Floor noise
Vert	3780.000	AV	38.1	29.6	6.7	32.1	-	42.3	53.9	11.6	
Vert	11340.000	AV	34.3	40.2	-2.0	33.5	-	39.0	53.9	14.9	Floor noise
Vert	17010.000	AV	35.6	40.9	0.1	32.9	-	43.7	53.9	10.2	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

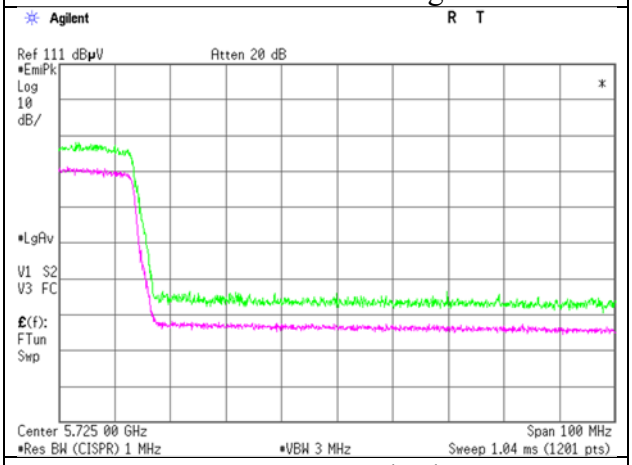
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5670 MHz

Horizontal

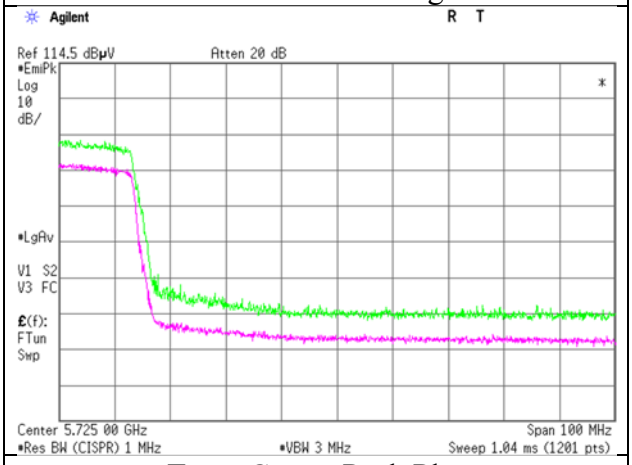
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5755 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3836.580	PK	46.7	29.7	6.7	32.1	-	51.0	73.9	22.9	
Hori	5650.000	PK	42.0	32.2	7.5	31.8	-	49.9	68.2	18.3	
Hori	5700.000	PK	41.9	32.3	7.5	31.8	-	49.9	105.2	55.3	
Hori	5720.000	PK	51.0	32.3	7.5	31.8	-	59.0	110.8	51.8	
Hori	5725.000	PK	53.3	32.3	7.5	31.8	-	61.3	122.2	60.9	
Hori	11550.000	PK	43.4	40.0	-1.9	33.5	-	48.0	73.9	25.9	Floor noise
Hori	17325.000	PK	44.8	42.7	0.2	32.9	-	54.8	73.9	19.1	Floor noise
Hori	3836.580	AV	40.5	29.7	6.7	32.1	-	44.8	53.9	9.1	
Hori	11550.000	AV	34.2	40.0	-1.9	33.5	-	38.8	53.9	15.1	Floor noise
Hori	17325.000	AV	35.2	42.7	0.2	32.9	-	45.2	53.9	8.7	Floor noise
Vert	3836.580	PK	45.0	29.7	6.7	32.1	-	49.3	73.9	24.6	
Vert	5650.000	PK	41.4	32.2	7.5	31.8	-	49.3	68.2	18.9	
Vert	5700.000	PK	43.3	32.3	7.5	31.8	-	51.3	105.2	53.9	
Vert	5720.000	PK	56.2	32.3	7.5	31.8	-	64.2	110.8	46.6	
Vert	5725.000	PK	58.3	32.3	7.5	31.8	-	66.3	122.2	55.9	
Vert	11550.000	PK	43.5	40.0	-1.9	33.5	-	48.1	73.9	25.8	Floor noise
Vert	17325.000	PK	44.5	42.7	0.2	32.9	-	54.5	73.9	19.4	Floor noise
Vert	3836.580	AV	39.0	29.7	6.7	32.1	-	43.3	53.9	10.6	
Vert	11550.000	AV	34.4	40.0	-1.9	33.5	-	39.0	53.9	14.9	Floor noise
Vert	17325.000	AV	35.6	42.7	0.2	32.9	-	45.6	53.9	8.3	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

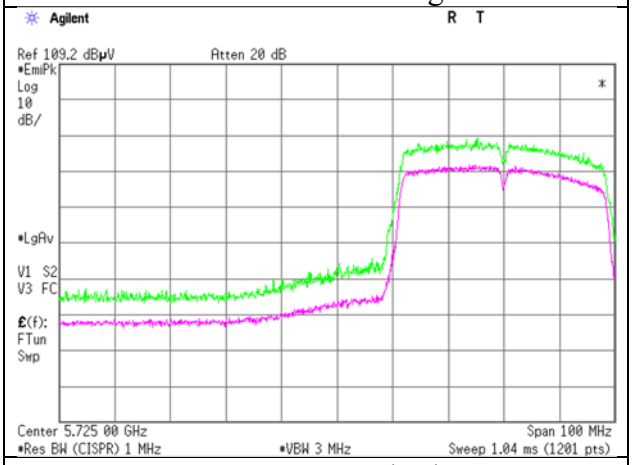
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5755 MHz

Horizontal

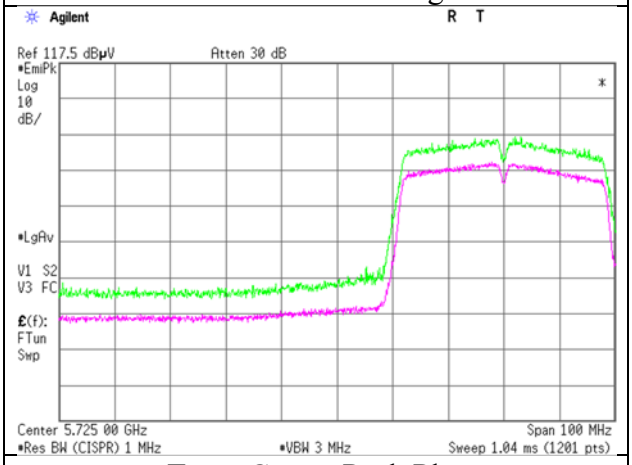
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5795 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3863.366	PK	46.2	29.7	6.7	32.1	-	50.5	73.9	23.4	
Hori	5850.000	PK	43.2	32.5	7.5	31.8	-	51.4	122.2	70.8	
Hori	5855.000	PK	42.1	32.5	7.5	31.8	-	50.3	110.8	60.5	
Hori	5875.000	PK	41.3	32.5	7.5	31.8	-	49.5	105.2	55.7	
Hori	5925.000	PK	40.7	32.6	7.6	31.8	-	49.1	68.2	19.1	
Hori	11590.000	PK	43.6	40.0	-1.9	33.5	-	48.2	73.9	25.7	Floor noise
Hori	17385.000	PK	44.6	43.1	0.2	32.9	-	55.0	73.9	18.9	Floor noise
Hori	3863.366	AV	42.1	29.7	6.7	32.1	-	46.4	53.9	7.5	
Hori	11590.000	AV	34.4	40.0	-1.9	33.5	-	39.0	53.9	14.9	Floor noise
Hori	17385.000	AV	35.2	43.1	0.2	32.9	-	45.6	53.9	8.3	Floor noise
Vert	3863.366	PK	46.1	29.7	6.7	32.1	-	50.4	73.9	23.5	
Vert	5850.000	PK	43.3	32.5	7.5	31.8	-	51.5	122.2	70.7	
Vert	5855.000	PK	43.8	32.5	7.5	31.8	-	52.0	110.8	58.8	
Vert	5875.000	PK	42.8	32.5	7.5	31.8	-	51.0	105.2	54.2	
Vert	5925.000	PK	41.3	32.6	7.6	31.8	-	49.7	68.2	18.5	
Vert	11590.000	PK	43.3	40.0	-1.9	33.5	-	47.9	73.9	26.0	Floor noise
Vert	17385.000	PK	44.2	43.1	0.2	32.9	-	54.6	73.9	19.3	Floor noise
Vert	3863.366	AV	41.0	29.7	6.7	32.1	-	45.3	53.9	8.6	
Vert	11590.000	AV	34.2	40.0	-1.9	33.5	-	38.8	53.9	15.1	Floor noise
Vert	17385.000	AV	35.1	43.1	0.2	32.9	-	45.5	53.9	8.4	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

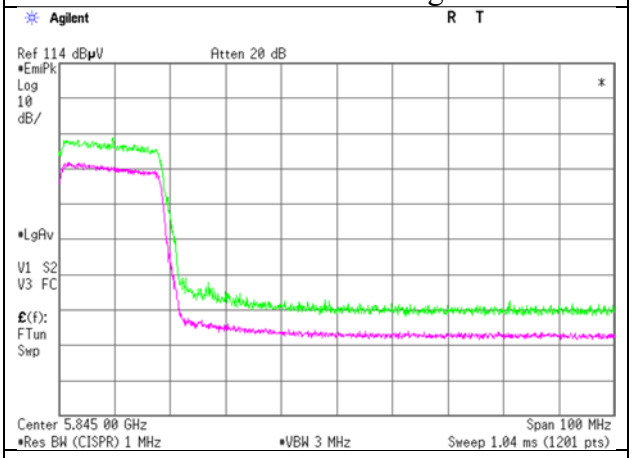
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5795 MHz

Horizontal

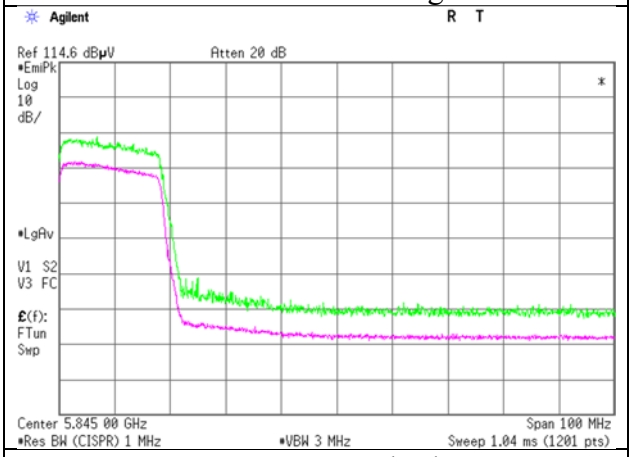
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5210 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5135.809	PK	44.7	32.2	7.2	31.7	-	52.4	73.9	21.5	
Hori	5150.000	PK	48.0	32.2	7.2	31.7	-	55.7	73.9	18.2	
Hori	10420.000	PK	42.6	39.6	-2.3	33.5	-	46.4	73.9	27.5	Floor noise
Hori	15630.000	PK	44.4	38.8	-0.4	33.0	-	49.8	73.9	24.1	Floor noise
Hori	5135.809	AV	36.7	32.2	7.2	31.7	-	44.4	53.9	9.5	
Hori	5150.000	AV	38.4	32.2	7.2	31.7	-	46.1	53.9	7.8	
Hori	10420.000	AV	33.8	39.6	-2.3	33.5	-	37.6	53.9	16.3	Floor noise
Hori	15630.000	AV	35.1	38.8	-0.4	33.0	-	40.5	53.9	13.4	Floor noise
Vert	5135.809	PK	45.0	32.2	7.2	31.7	-	52.7	73.9	21.2	
Vert	5150.000	PK	47.9	32.2	7.2	31.7	-	55.6	73.9	18.3	
Vert	10420.000	PK	42.8	39.6	-2.3	33.5	-	46.6	73.9	27.3	Floor noise
Vert	15630.000	PK	44.2	38.8	-0.4	33.0	-	49.6	73.9	24.3	Floor noise
Vert	5135.809	AV	36.2	32.2	7.2	31.7	-	43.9	53.9	10.0	
Vert	5150.000	AV	37.1	32.2	7.2	31.7	-	44.8	53.9	9.1	
Vert	10420.000	AV	33.3	39.6	-2.3	33.5	-	37.1	53.9	16.8	Floor noise
Vert	15630.000	AV	35.2	38.8	-0.4	33.0	-	40.6	53.9	13.3	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

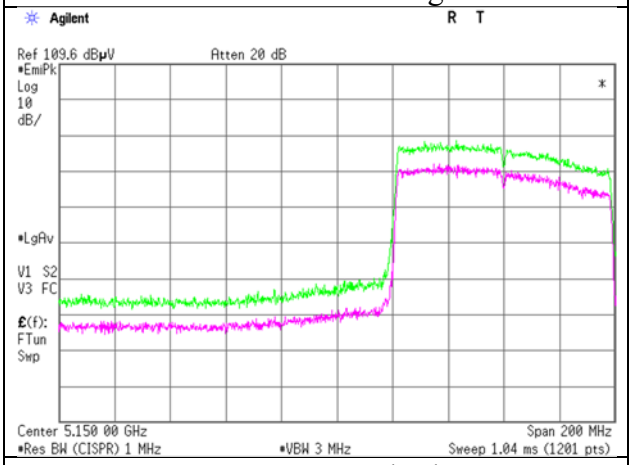
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5210 MHz

Horizontal

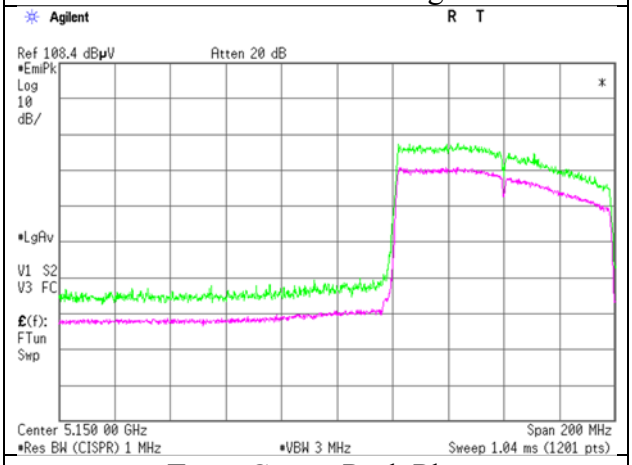
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5290 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	48.7	32.1	7.3	31.8	-	56.3	73.9	17.6	
Hori	10580.000	PK	42.4	39.8	-2.3	33.6	-	46.3	73.9	27.6	Floor noise
Hori	15870.000	PK	44.0	38.1	-0.2	33.0	-	48.9	73.9	25.0	Floor noise
Hori	5350.000	AV	36.8	32.1	7.3	31.8	-	44.4	53.9	9.5	
Hori	10580.000	AV	33.7	39.8	-2.3	33.6	-	37.6	53.9	16.3	Floor noise
Hori	15870.000	AV	35.2	38.1	-0.2	33.0	-	40.1	53.9	13.8	Floor noise
Vert	5350.000	PK	51.1	32.1	7.3	31.8	-	58.7	73.9	15.2	
Vert	10580.000	PK	42.6	39.8	-2.3	33.6	-	46.5	73.9	27.4	Floor noise
Vert	15870.000	PK	43.9	38.1	-0.2	33.0	-	48.8	73.9	25.1	Floor noise
Vert	5350.000	AV	39.3	32.1	7.3	31.8	-	46.9	53.9	7.0	
Vert	10580.000	AV	33.8	39.8	-2.3	33.6	-	37.7	53.9	16.2	Floor noise
Vert	15870.000	AV	35.2	38.1	-0.2	33.0	-	40.1	53.9	13.8	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

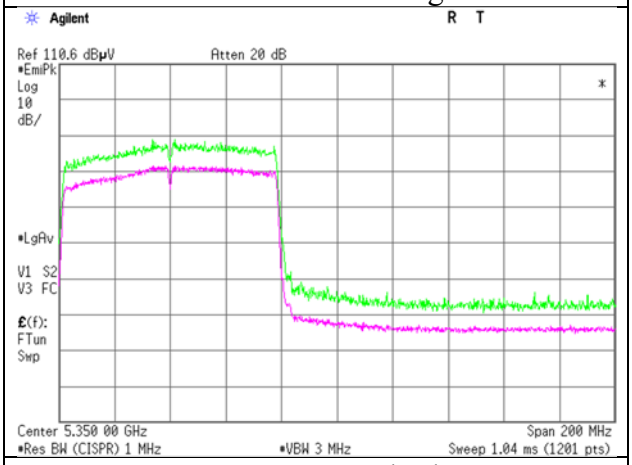
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5290 MHz

Horizontal

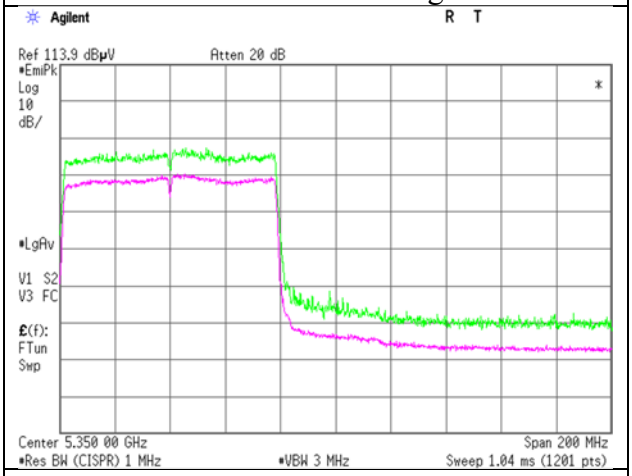
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5530 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	47.0	32.0	7.4	31.8	-	54.6	73.9	19.3	
Hori	5470.000	PK	47.8	32.0	7.4	31.8	-	55.4	68.2	12.8	
Hori	11060.000	PK	43.2	40.5	-2.2	33.6	-	47.9	73.9	26.0	Floor noise
Hori	16590.000	PK	44.2	39.6	0.0	33.0	-	50.8	73.9	23.1	Floor noise
Hori	5460.000	AV	36.7	32.0	7.4	31.8	-	44.3	53.9	9.6	
Hori	11060.000	AV	35.0	40.5	-2.2	33.6	-	39.7	53.9	14.2	Floor noise
Hori	16590.000	AV	35.3	39.6	0.0	33.0	-	41.9	53.9	12.0	Floor noise
Vert	5460.000	PK	47.9	32.0	7.4	31.8	-	55.5	73.9	18.4	
Vert	5470.000	PK	51.7	32.0	7.4	31.8	-	59.3	68.2	8.9	
Vert	11060.000	PK	42.9	40.5	-2.2	33.6	-	47.6	73.9	26.3	Floor noise
Vert	16590.000	PK	44.1	39.6	0.0	33.0	-	50.7	73.9	23.2	Floor noise
Vert	5460.000	AV	39.5	32.0	7.4	31.8	-	47.1	53.9	6.8	
Vert	11060.000	AV	34.8	40.5	-2.2	33.6	-	39.5	53.9	14.4	Floor noise
Vert	16590.000	AV	35.5	39.6	0.0	33.0	-	42.1	53.9	11.8	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

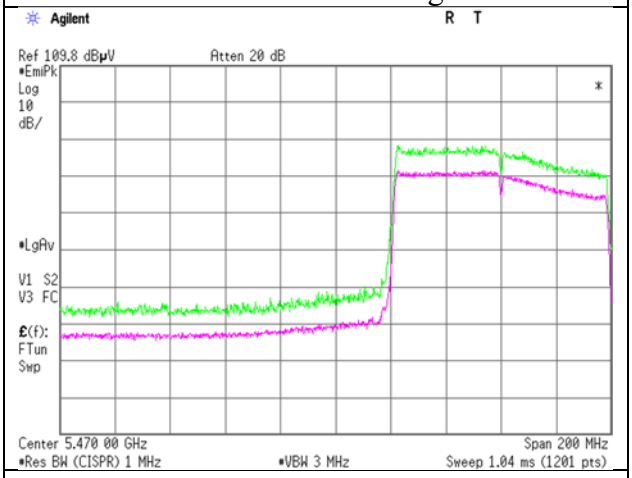
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5530 MHz

Horizontal

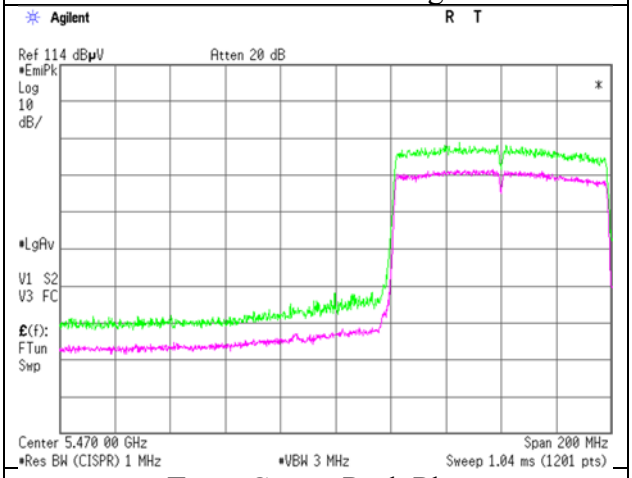
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada	Takumi Shimada	Ken Fujita	Takafumi Noguchi
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5610 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3740.016	PK	45.4	29.6	6.7	32.1	-	49.6	73.9	24.3	
Hori	5725.000	PK	41.3	32.3	7.5	31.8	-	49.3	68.2	18.9	
Hori	11220.000	PK	43.4	40.3	-2.1	33.6	-	48.0	73.9	25.9	Floor noise
Hori	16830.000	PK	43.8	40.3	0.1	33.0	-	51.2	73.9	22.7	Floor noise
Hori	3740.016	AV	39.5	29.6	6.7	32.1	-	43.7	53.9	10.2	
Hori	11220.000	AV	34.0	40.3	-2.1	33.6	-	38.6	53.9	15.3	Floor noise
Hori	16830.000	AV	35.4	40.3	0.1	33.0	-	42.8	53.9	11.1	Floor noise
Vert	3740.016	PK	42.9	29.6	6.7	32.1	-	47.1	73.9	26.8	
Vert	5725.000	PK	41.8	32.3	7.5	31.8	-	49.8	68.2	18.4	
Vert	11220.000	PK	42.8	40.3	-2.1	33.6	-	47.4	73.9	26.5	Floor noise
Vert	16830.000	PK	44.0	40.3	0.1	33.0	-	51.4	73.9	22.5	Floor noise
Vert	3740.016	AV	35.4	29.6	6.7	32.1	-	39.6	53.9	14.3	
Vert	11220.000	AV	33.9	40.3	-2.1	33.6	-	38.5	53.9	15.4	Floor noise
Vert	16830.000	AV	35.7	40.3	0.1	33.0	-	43.1	53.9	10.8	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

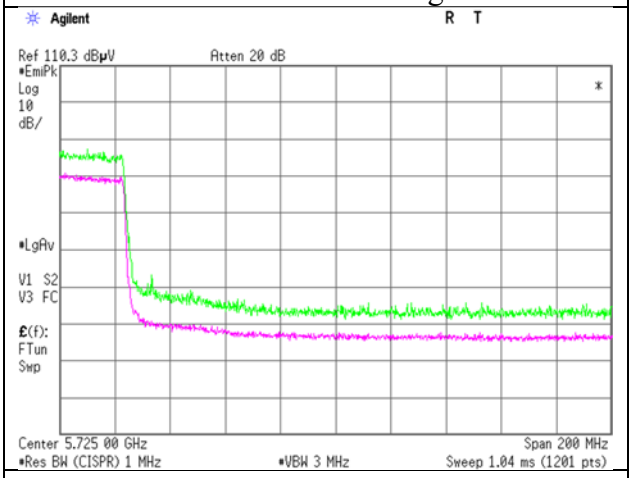
Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5610 MHz

Horizontal

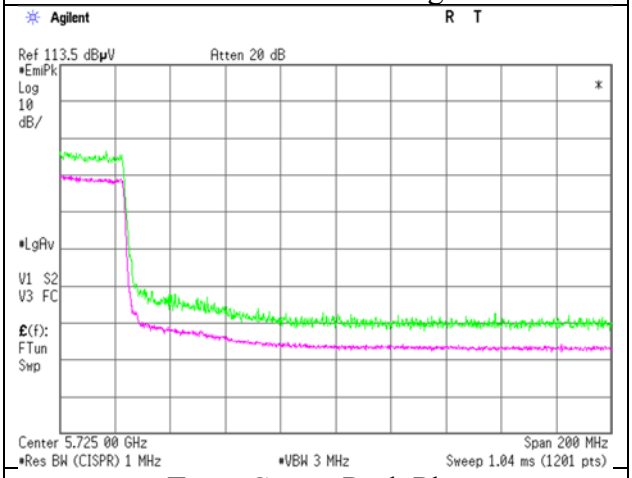
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12219844H			
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber			
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH
Engineer	Takumi Shimada (1 GHz - 10 GHz)	Takumi Shimada (10 GHz - 18 GHz)	Ken Fujita (18 GHz - 26.5 GHz)	Takafumi Noguchi (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5775 MHz			

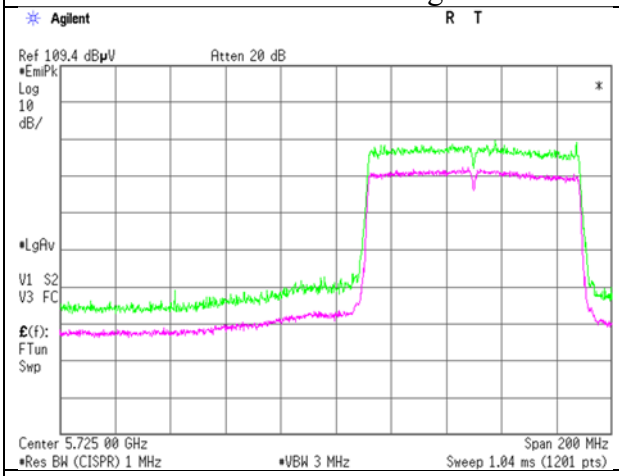
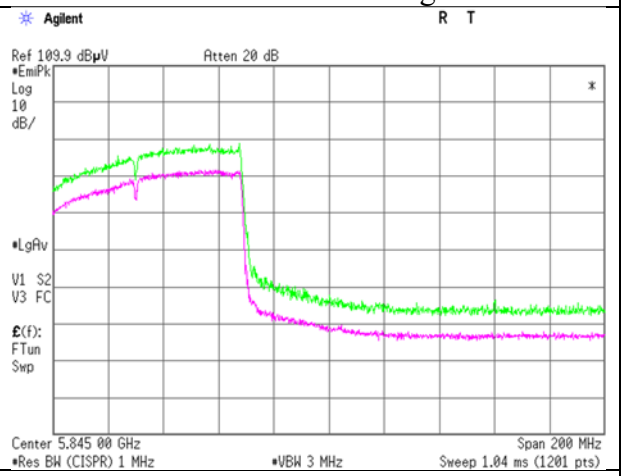
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	3850.000	PK	46.8	29.7	6.7	32.1	-	51.1	73.9	22.8	
Hori	5650.000	PK	41.6	32.2	7.5	31.8	-	49.5	68.2	18.7	
Hori	5700.000	PK	47.9	32.3	7.5	31.8	-	55.9	105.2	49.3	
Hori	5720.000	PK	52.9	32.3	7.5	31.8	-	60.9	110.8	49.9	
Hori	5725.000	PK	53.4	32.3	7.5	31.8	-	61.4	122.2	60.8	
Hori	5850.000	PK	46.3	32.5	7.5	31.8	-	54.5	122.2	67.7	
Hori	5855.000	PK	43.8	32.5	7.5	31.8	-	52.0	110.8	58.8	
Hori	5875.000	PK	41.9	32.5	7.5	31.8	-	50.1	105.2	55.1	
Hori	5925.000	PK	40.7	32.6	7.6	31.8	-	49.1	68.2	19.1	
Hori	11550.000	PK	43.5	40.0	-1.9	33.5	-	48.1	73.9	25.8	Floor noise
Hori	17325.000	PK	44.5	42.7	0.2	32.9	-	54.5	73.9	19.4	Floor noise
Hori	3850.000	AV	42.5	29.7	6.7	32.1	-	46.8	53.9	7.1	
Hori	11550.000	AV	34.2	40.0	-1.9	33.5	-	38.8	53.9	15.1	Floor noise
Hori	17325.000	AV	35.7	42.7	0.2	32.9	-	45.7	53.9	8.2	Floor noise
Vert	3850.000	PK	44.7	29.7	6.7	32.1	-	49.0	73.9	24.9	
Vert	5650.000	PK	42.7	32.2	7.5	31.8	-	50.6	68.2	17.6	
Vert	5700.000	PK	55.4	32.3	7.5	31.8	-	63.4	105.2	41.8	
Vert	5720.000	PK	58.7	32.3	7.5	31.8	-	66.7	110.8	44.1	
Vert	5725.000	PK	58.0	32.3	7.5	31.8	-	66.0	122.2	56.2	
Vert	5850.000	PK	48.8	32.5	7.5	31.8	-	57.0	122.2	65.2	
Vert	5855.000	PK	46.0	32.5	7.5	31.8	-	54.2	110.8	56.6	
Vert	5875.000	PK	42.3	32.5	7.5	31.8	-	50.5	105.2	54.7	
Vert	5925.000	PK	40.9	32.6	7.6	31.8	-	49.3	68.2	18.9	
Vert	11550.000	PK	43.2	40.0	-1.9	33.5	-	47.8	73.9	26.1	Floor noise
Vert	17325.000	PK	44.7	42.7	0.2	32.9	-	54.7	73.9	19.2	Floor noise
Vert	3850.000	AV	38.5	29.7	6.7	32.1	-	42.8	53.9	11.1	
Vert	11550.000	AV	34.4	40.0	-1.9	33.5	-	39.0	53.9	14.9	Floor noise
Vert	17325.000	AV	35.4	42.7	0.2	32.9	-	45.4	53.9	8.5	Floor noise

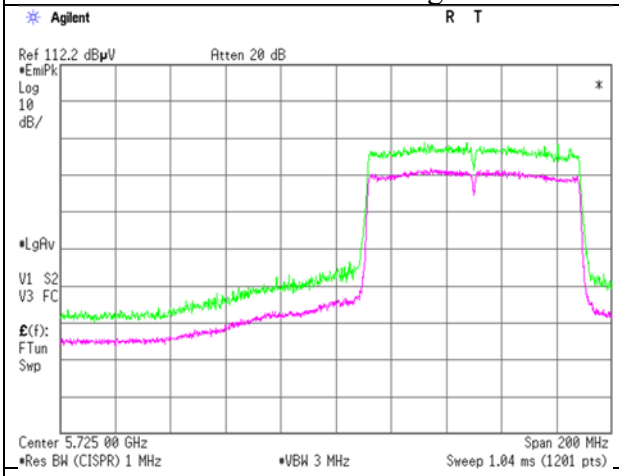
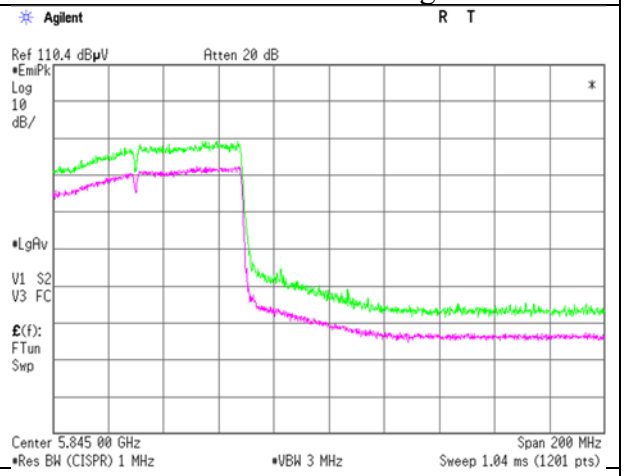
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	12219844H
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Date	March 16, 2018
Temperature / Humidity	23eg. C / 36 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5775 MHz

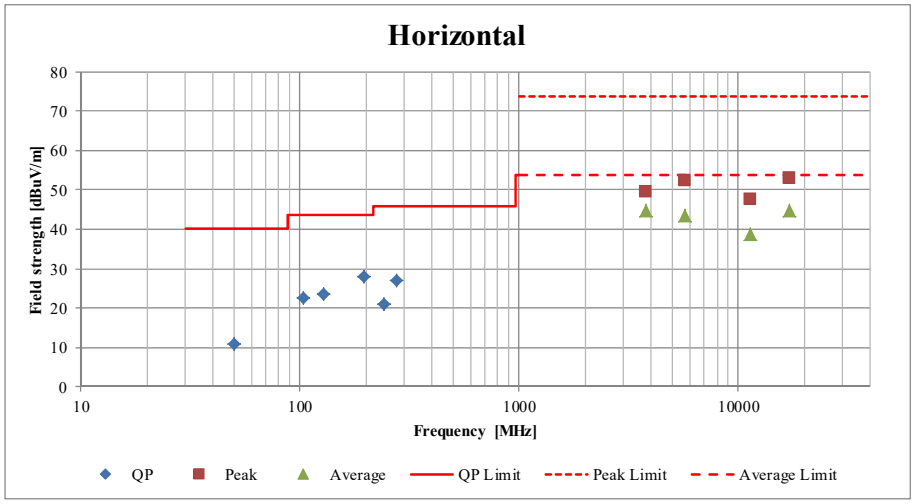
Horizontal	Horizontal
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

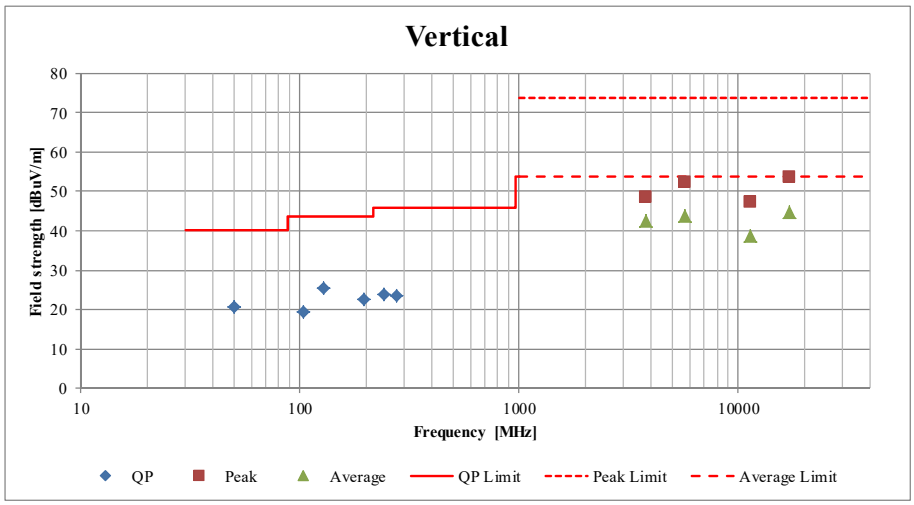
Vertical	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

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

Radiated Spurious Emission
(Plot data, Worst case)

Report No.	12219844H				
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber				
Date	March 16, 2018	March 23, 2018	March 24, 2018	March 25, 2018	March 28, 2018
Temperature / Humidity	23eg. C / 36 % RH	24eg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH	25 deg. C / 33 % RH
Engineer	Takumi Shimada (1 GHz - 10 GHz)	Takumi Shimada (10 GHz - 18 GHz)	Ken Fujita (18 GHz - 26.5 GHz)	Takafumi Noguchi (26.5 GHz - 40 GHz)	Masafumi Niwa (Below 1 GHz)
Mode	Tx 11ac-20 5700 MHz				





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

Radiated Spurious Emission

Report No.	12219844H				
Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber				
Date	March 21, 2018	March 23, 2018	March 24, 2018	March 25, 2018	March 28, 2018
Temperature / Humidity	20eg. C / 46 % RH	24 deg. C / 30 % RH	21 deg. C / 30 % RH	22 deg. C / 31 % RH	25 deg. C / 33 % RH
Engineer	Takumi Shimada (1 GHz - 10 GHz)	Takumi Shimada (10 GHz - 18 GHz)	Ken Fujita (18 GHz - 26.5 GHz)	Takafumi Noguchi (26.5 GHz - 40 GHz)	Masafumi Niwa (Below 1 GHz)
Mode	Tx 11ac-80 5530 MHz + Tx 3DH5 Hopping On				

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	50.145	QP	23.8	10.6	7.5	32.2	-	9.7	40.0	30.3	
Hori	103.996	QP	37.5	10.6	8.2	32.2	-	24.1	43.5	19.4	
Hori	128.134	QP	32.2	13.4	8.5	32.2	-	21.9	43.5	21.6	
Hori	195.004	QP	35.1	16.5	9.1	32.1	-	28.6	43.5	14.9	
Hori	243.296	QP	32.9	11.5	9.6	32.0	-	22.0	46.0	24.0	
Hori	274.853	QP	36.8	12.5	9.8	32.0	-	27.1	46.0	18.9	
Hori	5460.000	PK	43.7	32.0	7.4	31.8	-	51.3	73.9	22.6	
Hori	5470.000	PK	44.7	32.0	7.4	31.8	-	52.3	68.2	15.9	Floor noise
Hori	11060.000	PK	43.4	40.5	-2.2	33.6	-	48.1	73.9	25.8	Floor noise
Hori	16590.000	PK	44.1	39.6	0.0	33.0	-	50.7	73.9	23.2	Floor noise
Hori	5460.000	AV	33.4	32.0	7.4	31.8	-	41.0	53.9	12.9	Floor noise
Hori	11060.000	AV	35.5	40.5	-2.2	33.6	-	40.2	53.9	13.7	Floor noise
Hori	16590.000	AV	35.4	39.6	0.0	33.0	-	42.0	53.9	11.9	Floor noise
Vert	50.145	QP	33.1	10.6	7.5	32.2	-	19.0	40.0	21.0	
Vert	103.996	QP	34.6	10.6	8.2	32.2	-	21.2	43.5	22.3	
Vert	128.134	QP	34.0	13.4	8.5	32.2	-	23.7	43.5	19.8	
Vert	195.004	QP	29.2	16.5	9.1	32.1	-	22.7	43.5	20.8	
Vert	243.296	QP	32.9	11.5	9.6	32.0	-	22.0	46.0	24.0	
Vert	274.853	QP	32.0	12.5	9.8	32.0	-	22.3	46.0	23.7	
Vert	5460.000	PK	45.7	32.0	7.4	31.8	-	53.3	73.9	20.6	Floor noise
Vert	5470.000	PK	47.2	32.0	7.4	31.8	-	54.8	68.2	13.4	Floor noise
Vert	11060.000	PK	43.0	40.5	-2.2	33.6	-	47.7	73.9	26.2	Floor noise
Vert	16590.000	PK	44.1	39.6	0.0	33.0	-	50.7	73.9	23.2	Floor noise
Vert	5460.000	AV	34.1	32.0	7.4	31.8	-	41.7	53.9	12.2	Floor noise
Vert	11060.000	AV	35.0	40.5	-2.2	33.6	-	39.7	53.9	14.2	Floor noise
Vert	16590.000	AV	35.2	39.6	0.0	33.0	-	41.8	53.9	12.1	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (4.4 m / 3.0 m) = 3.33 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

APPENDIX 2: Test instruments

Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2017/10/31 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE	2018/01/24 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2017/11/07 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2017/05/22 * 12
MCC-167	Microwave Cable	Junkosha	MWX221	1404S374(1m) / 1405S074(5m)	RE	2017/05/29 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2018/03/13 * 12
MHA-17	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170307	RE	2017/06/30 * 12
MMM-08	DIGITAL HiTESTER	Hioki	3805	051201197	RE	2018/01/09 * 12
MHF-22	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCB	602	RE	2018/01/18 * 12
MCC-177	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S304	RE	2018/03/12 * 12
MCC-224	Coaxial Cable	Huber+Suhner	SUCOFLEX 102A	MY009/2A	RE	2017/11/08 * 12
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2017/09/15 * 12
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 / 1871328	RE	2017/09/07 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2017/08/22 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2017/10/02 * 12
MLA-22	Logperiodic Antenna (200-1000MHz)	Schwarzbeck	VUSLP9111B	911B-191	RE	2018/01/30 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2017/07/12 * 12
MAT-98	Attenuator	KEYSIGHT	8491A	MY52462349	RE	2017/12/14 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2017/03/27 * 12
MSA-15	Spectrum Analyzer	Agilent	E4440A	MY46187105	AT	2017/10/16 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2017/03/21 * 12
MAT-23	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2017/03/21 * 12
MPM-16	Power Meter	Agilent	8990B	MY51000271	AT	2017/04/28 * 12
MPSE-22	Power sensor	Agilent	N1923A	MY54070003	AT	2017/04/28 * 12
MPSE-23	Power sensor	Agilent	N1923A	MY54070004	AT	2017/04/28 * 12
MAT-10	Attenuator(10dB)	Weinschel Corp	2	BL1173	AT	2017/11/14 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2017/12/21 * 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
AT: Antenna Terminal Conducted test