RADIO TEST REPORT

Test Report No. : 11155194H-C-R3

Applicant	:	**Sony Interactive Entertainment Inc.**
Type of Equipment	:	**Wireless communication module**
Model No.	:	**J20H091**
FCC ID	:	**AK8M16DFL1**
Test regulation	:	**FCC Part 15 Subpart E: 2015 (Except for DFS test)**
Test Result	:	**Complied**

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
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 must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
6. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. This report is a revised version of 11155194H-C-R2. 11155194H-C-R2 is replaced with this report.

Date of test: February 9 to April 28, 2016

Representative test engineer:
Tomoki Matsui
Engineer
Consumer Technology Division

Approved by:
Takayuki Shimada
Engineer
Consumer Technology Division

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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REVISION HISTORY

Original Test Report No.: 11155194H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	11155194H-C	April 6, 2016	-	-
1	11155194H-C-R1	April 8, 2016	P.9	Correction of explanatory note for software
1	11155194H-C-R1	April 8, 2016	P.179	Correction of Test Configuration and peripherals
2	11155194H-C-R2	April 25, 2016	P.5	Correction of antenna gain (Antenna port WC for 5GHz)
2	11155194H-C-R2	April 25, 2016	P.5	Correction of directional gain of 5GHz
2	11155194H-C-R2	April 25, 2016	P.9	Correction of power setting value
2	11155194H-C-R2	April 25, 2016	P.10, 171	Deletion of word “Reference data”
2	11155194H-C-R2	April 25, 2016	P.14, 15	Update of KDB Version
2	11155194H-C-R2	April 25, 2016	P.45-47, 56-58, 64-78	Correction of test data
3	11155194H-C-R3	April 28, 2016	P.5	Correction of formula for directional antenna gain
3	11155194H-C-R3	April 28, 2016	P.6	Correction of Worst Margin due to retest
3	11155194H-C-R3	April 28, 2016	P.10	Correction of test mode
3	11155194H-C-R3	April 28, 2016	P.16, 92-133, 171, 172	Change of test data due to retest
3	11155194H-C-R3	April 28, 2016	P.174	Correction of test instruments

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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	+81-3-6748-6333
Facsimile Number	+81-3-6748-6383
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	J20H091
Serial No	Refer to Clause 4.2
Country of Manufacture	China/Japan
Receipt Date of Sample	February 6, 2016
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

J20H091 is the Wireless communication module.

Product Specification

Clock frequency in the system (radio part)	40MHz
Operating Temperature	-10 - +85 deg. C
Power Supply	DC 3.3 V, DC 1.8 V
Size	20 x 18 x 3.6 mm, 55pin LGA

Radio Specification

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

Equipment Type	Transceiver
Frequency of Operation	2412-2462MHz
Type of Modulation	DSSS, OFDM
Bandwidth & Channel spacing	Less than 20MHz & 5MHz
Method of frequency generation	Synthesizer
Power Supply (inner)	DC 3.3 V / DC 1.8 V / DC 1.1 V
Antenna Type	PIFA (Antenna port WA for 2.4GHz / Antenna port WB)
Antenna Gain: G_{ANT}	5.6dBi (Antenna port WA for 2.4GHz / Antenna port WB)
Directional Gain *1)	8.61dBi

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

Equipment Type	Transceiver
Frequency of Operation	W52: 5180-5240MHz W53: 5260-5320MHz W56: 5500-5700MHz W58: 5745-5825MHz
Type of Modulation	OFDM
Bandwidth & Channel spacing	Less than 20MHz/40MHz/80MHz&20MHz/40MHz/80MHz
Method of frequency generation	Synthesizer
Power Supply (inner)	DC 3.3 V / DC 1.8 V / DC 1.1 V
Antenna Type	PIFA (Antenna port WA for 5GHz / Antenna port WC for 5GHz)
Antenna Gain: G_{ANT}	5.0dBi (Antenna port WA for 5GHz)
	3.5dBi (Antenna port WC for 5GHz)
Directional Gain *1)	7.29dBi

Bluetooth (BDR/EDR)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	FHSS (GFSK, π/4DQPSK, 8DPSK)
Bandwidth & Channel spacing	79MHz & 1MHz
Method of frequency generation	Synthesizer
Power Supply (inner)	DC 3.3 V / DC 1.8 V / DC 1.1 V
Antenna Type	PIFA (Antenna port WC for 2.4 GHz)
Antenna Gain	6.4dBi (Antenna port WC for 2.4 GHz)

Bluetooth (Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	GFSK
Bandwidth & Channel spacing	1MHz & 2MHz
Method of frequency generation	Synthesizer
Power Supply (inner)	DC 3.3 V / DC 1.8 V / DC 1.1 V
Antenna Type	PIFA (Antenna port WC for 2.4 GHz)
Antenna Gain	6.4dBi (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).

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification	:	FCC Part 15 Subpart E: 2015, final revised on November 23, 2015 *Some parts are effective on and after December 17, 2015 or December 23, 2015. The revision does not affect the test specification applied to the EUT.
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements

* The EUT complies with FCC Part 15 Subpart B: 2015, final revised on November 23, 2015

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (b) (6) / 15.207	**QP** 22.5 dB, 0.15000 MHz, L **AV** 36.6 dB, 0.80975 MHz, L	Complied	-
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
26 dB Emission Bandwidth	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)	See data	N/A	Conducted
	IC: -	**IC:** -			
Maximum Conducted Output Power	**FCC:** KDB Publication Number 789033	**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)			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033	**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	3.0 dB 5350.000 MHz, AV, Hori.	Complied	Conducted (< 30 MHz) / Radiated (> 30 MHz) *1)
	IC: -	**IC:** RSS-247 6.2.1 (2) 6.2.2 (2) 6.2.3 (2) 6.2.4 (2)			
6 dB Emission Bandwidth	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (e)	See data	Complied	Conducted
	IC: -	**IC:** RSS-247 6.2.4 (1)			

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.
* For DFS tests, please see the test report number 11155194H-D-R2 issued by UL Japan, Inc.
*1) Radiated test was selected over 30 MHz based on section FCC 15.407 (b) and KDB 789033 D02 G.3.b).

* 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

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

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

3.4 Uncertainty

EMI

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

Antenna terminal test Uncertainty (+/-)							
Power meter		Conducted emission and Power density			Conducted emission		Channel power
Below 1 GHz	Above 1 GHz	Below 1 GHz	1 GHz -3 GHz	3 GHz -18 GHz	18 GHz -26.5 GHz	26.5 GHz -40 GHz	
0.9 dB	1.0 dB	1.4 dB	1.7 dB	2.8 dB	2.8 dB	2.9 dB	2.6 dB

Frequency range	Conducted emission using AMN(LISN) (±dB)
0.009 – 0.15MHz	3.5 dB
0.15 – 30MHz	2.9 dB

Test distance	Radiated emission (±dB) 9 kHz - 30 MHz
3m	3.8 dB
10m	3.7 dB

Polarity	Radiated emission (Below 1GHz)			
	(3 m*)(±dB)		(10 m*)(±dB)	
	30 – 300 MHz	300 – 1000MHz	30 – 300 MHz	300 – 1000MHz
Horizontal	4.8 dB	5.2 dB	4.8 dB	5.0 dB
Vertical	4.5 dB	5.9 dB	4.8 dB	5.1 dB

Radiated emission				
(3 m*)(±dB)		(1 m*)(±dB)	(0.5 m*)(±dB)	(10 m*)(±dB)
1 – 6GHz	6 – 18GHz	10 – 26.5 GHz	26.5 – 40GHz	1 -18 GHz
5.1 dB	5.3 dB	5.1 dB	5.1 dB	5.3 dB

*Measurement distance

Conducted Emission test
The data listed in this test report has enough margin, more than the site margin.

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

3.5 Test Location

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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)	6 Mbps, PN9
IEEE 802.11n MIMO 20 MHz BW (11n-20)	MCS 0, PN9
IEEE 802.11ac MIMO 20 MHz BW (11ac-20)	MCS 0 (1Tx), PN9
IEEE 802.11n MIMO 40 MHz BW (11n-40)	MCS 0, PN9
IEEE 802.11ac MIMO 40 MHz BW (11ac-40)	MCS 0 (1Tx), PN9
IEEE 802.11ac MIMO 80 MHz BW (11ac-80)	MCS 0 (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: 20 M band: 8 dBm 40 M band: 5 dBm 80 M band: 3 dBm Software: Opro_DOS_Labtool_Ver2.0.0.84 *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
Conducted emission, Radiated Spurious Emission (Below 1 GHz)	11n-20 Tx *1)	WA+WC	5180 MHz	-	-	-
26 dB Emission Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	WA	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	11n-40 Tx 11ac-40 Tx	WA	-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
	11ac-80 Tx	WA	-	5290 MHz	5530 MHz 5610 MHz	-
99 % Occupied Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	WA	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	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	WA	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
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	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
6 dB Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	WA	-	-	-	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx					5755 MHz 5795 MHz
	11ac-80 Tx					5775 MHz
Radiated Spurious Emission (Above 1 GHz)	11a Tx 11n-20 Tx	WA+WC	5180 MHz	5260 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11ac-20 Tx	WA+WC	5180 MHz	5320 MHz	5500 MHz 5700 MHz	5745 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx	WA+WC	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	WA	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
Conducted Spurious Emission	11n-20 Tx *1)	WA	5180 MHz	-	-	-
*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.						

*Simultaneously transmission

Test Item	Operating Mode *1)	Tested Antenna port	Tested Frequency			
			Lower Band	Middle Band	Additional Band	Upper Band
Radiated Spurious Emission	Hopping on 3DH5 + 11ac-80	WA+WC	-	5290 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: Conducted Emission

Test Procedure and conditions

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 rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN) / Artificial mains Network (AMN) and excess AC cable was bundled in center.

For the tests on EUT with other peripherals (as a whole system)
I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane. All unused 50 ohm connectors of the LISN (AMN) were resistivity terminated in 50 ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber.
The EUT was connected to a LISN (AMN).
An overview sweep with peak detection has been performed.

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

Detector	**: QP and CISPR Average**
Measurement range	**: 0.15 MHz-30 MHz**
Test data	**: APPENDIX**
Test result	**: Pass**

SECTION 6: 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 1.0 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).
Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) or
78.2 dBuV/m, 3 m (-17 dBm e.i.r.p.*) in the Section 15.407 (b).

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:

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

Test Antennas are used as below;

Frequency	30 MHz to 300 MHz	300 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	4.45 m*2) (1 GHz – 10GHz), 1 m*3) (10 GHz – 26.5 GHz), 0.5 m*4) (26.5 GHz – 40 GHz)	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r02 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on April 8, 2016)".
*2) Distance Factor: 20 x log (4.45 m/3.0 m) = 3.42 dB
*3) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.5 dB
*4) Distance Factor: 20 x log (0.5 m/3.0 m) = -15.6 dB

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT (Module and Antenna) 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 7: 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
26 dB Bandwidth	Enough to capture the emission	Close to 1 % of EBW	> RBW	Auto	Peak	Max Hold	Spectrum Analyzer
99 % Occupied Bandwidth *1)	Enough width to display emission skirts	1 % to 5 % of OBW	≥ 3 RBW	Auto	Peak	Max Hold	Spectrum Analyzer
6 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
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 *2)	≥ 3 RBW	Auto	RMS Power Averaging (200 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3)	9 kHz – 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz – 30 MHz	9.1 kHz	27 kHz				

* The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r02 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on April 8, 2016)".
*1) Peak hold was applied as Worst-case measurement.
*2) FCC standard 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 10log(470 kHz) was added to the test result.
*3) In the frequency range below 30 MHz, RBW was narrowed to separate the noise contents.
Then, wide-band noise near the limit was checked separately, however the noise was low enough as shown in the chart.
(9 kHz-150 kHz: RBW = 200 Hz, 150 kHz-30 MHz: RBW = 9.1 kHz).

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

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

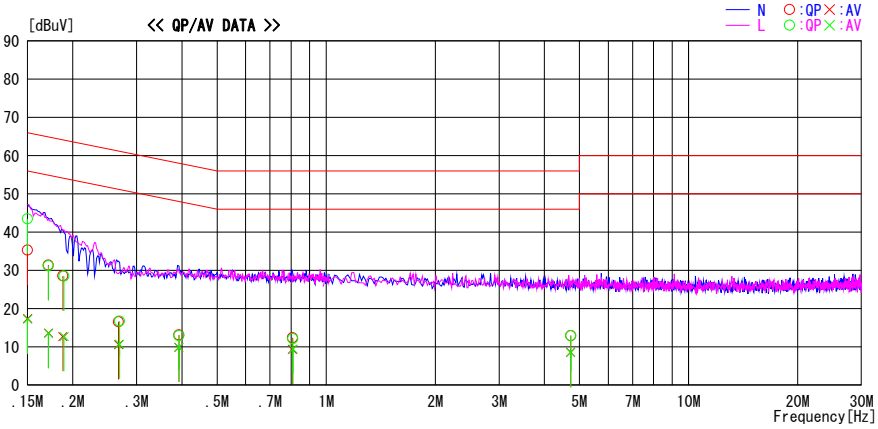
UL Japan, Inc. Ise EMC Lab. No.3 Semi Anechoic Chamber
Date : 2016/04/28

Report No. : 11155194H

Temp./Humi. : 20deg. C / 52% RH
Engineer : Ken Fujita

Mode / Remarks : WLAN 5GHz (Tx 11n-20 5180MHz)

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.15000	22.1	4.2	13.2	35.3	17.4	66.0	56.0	30.7	38.6	N	
0.15000	30.3	4.0	13.2	43.5	17.2	66.0	56.0	22.5	38.8	L	
0.17121	18.2	0.4	13.2	31.4	13.6	64.9	54.9	33.5	41.3	N	
0.17132	18.0	0.3	13.2	31.2	13.5	64.9	54.9	33.7	41.4	L	
0.18770	15.4	-0.5	13.2	28.6	12.7	64.1	54.1	35.5	41.4	N	
0.18915	15.3	-0.5	13.2	28.5	12.7	64.1	54.1	35.6	41.4	L	
0.26745	3.4	-2.6	13.2	16.6	10.6	61.2	51.2	44.6	40.6	N	
0.26890	3.5	-2.5	13.2	16.7	10.7	61.2	51.2	44.5	40.5	L	
0.39215	-0.4	-3.4	13.3	12.9	9.9	58.0	48.0	45.1	38.1	L	
0.39215	-0.2	-3.4	13.3	13.1	9.9	58.0	48.0	44.9	38.1	N	
0.80685	-0.9	-4.0	13.3	12.4	9.3	56.0	46.0	43.6	36.7	N	
0.80975	-1.2	-3.9	13.3	12.1	9.4	56.0	46.0	43.9	36.6	L	
4.72894	-0.7	-5.1	13.6	12.9	8.5	56.0	46.0	43.1	37.5	L	
4.72894	-0.7	-5.0	13.6	12.9	8.6	56.0	46.0	43.1	37.4	N	

CHART : WITH FACTOR, Peak hold data. CALCULATION : RESULT = READING + C.F (LISN + ATTEN + CABLE)
Except for the above table : adequate margin data below the limits.

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

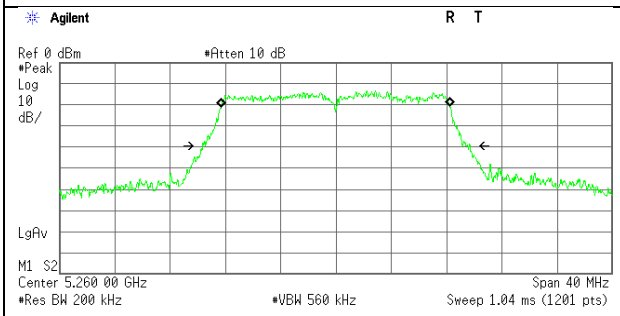
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 16, 2016
Temperature / Humidity	23deg. C / 34 % RH	20deg. C / 34 % RH
Engineer	Tomoki Matsui	Takafumi Noguchi
Mode	Tx 11a	

Antenna port	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
Antenna port WA	5180	-	16.769	-
	5220	-	16.799	-
	5240	-	16.750	-
	5260	19.343	16.821	-
	5300	19.409	16.783	-
	5320	19.298	16.831	-
	5500	19.417	16.845	-
	5580	19.411	16.807	-
	5700	19.161	16.822	-
	5745	-	16.830	-
	5785	-	16.765	-
	5825	-	16.839	-

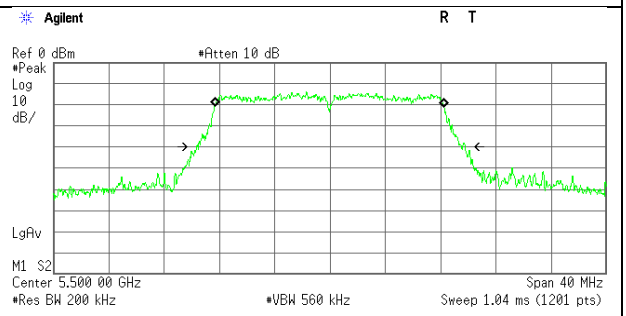
26 dB Emission Bandwidth

11a, Antenna port WA

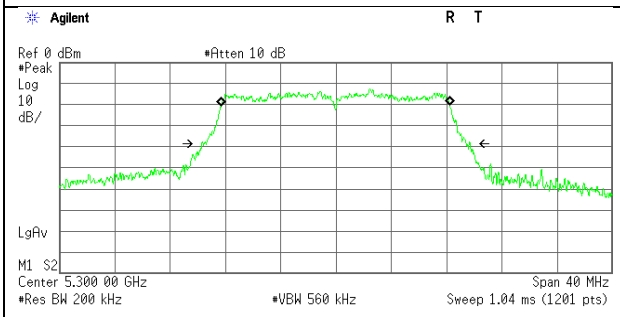
5260 MHz



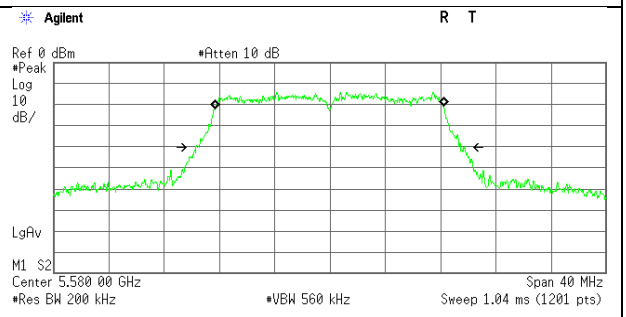
5500 MHz



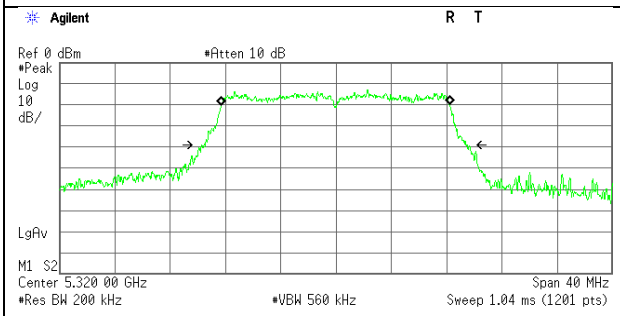
5300 MHz



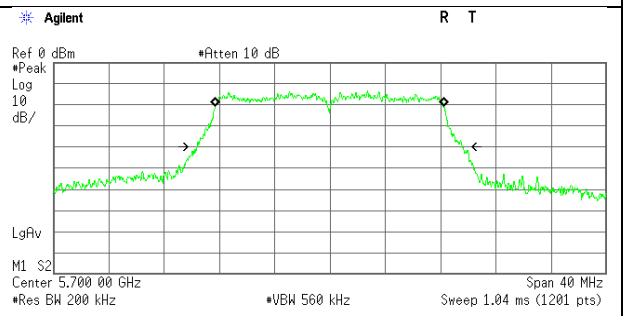
5580 MHz



5320 MHz



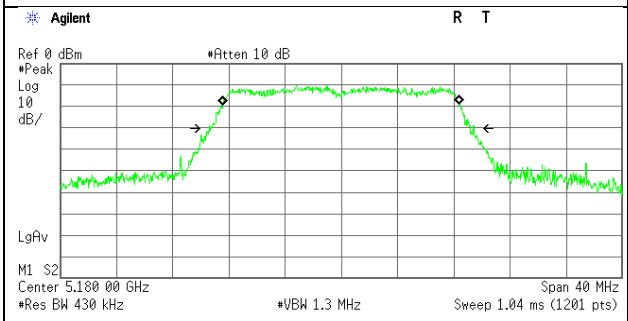
5700 MHz



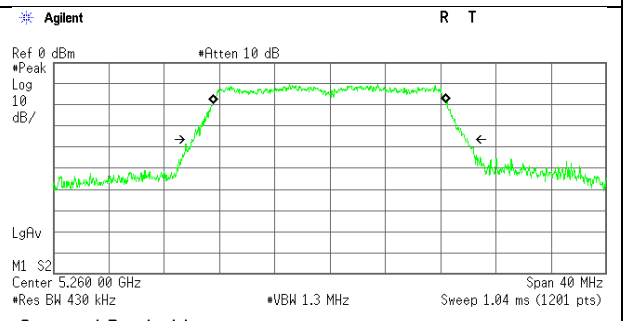
99 % Occupied Bandwidth

11a, Antenna port WA

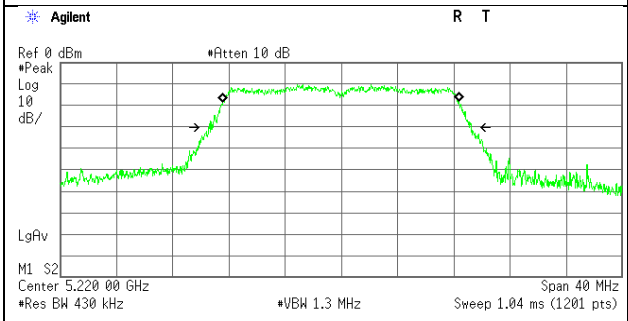
5180 MHz



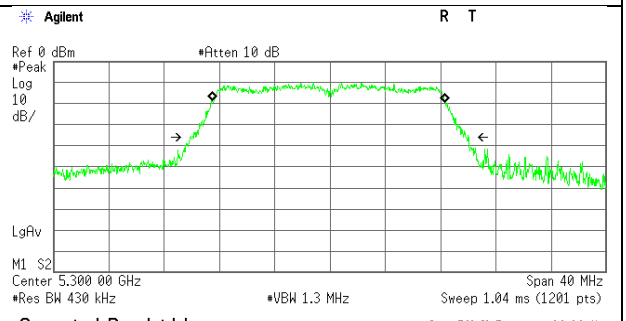
5260 MHz



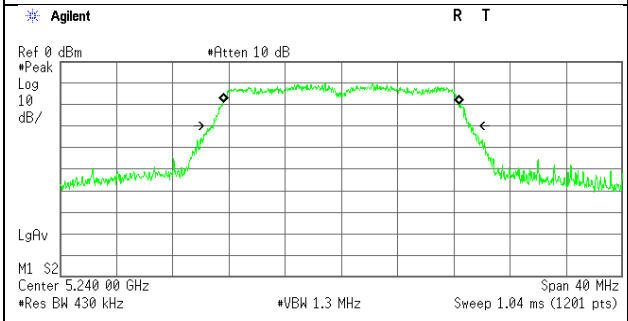
5220 MHz



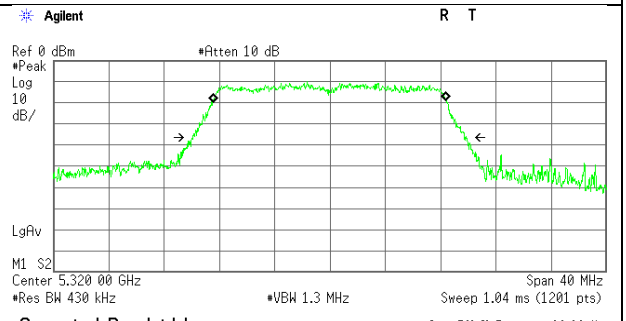
5300 MHz



5240 MHz



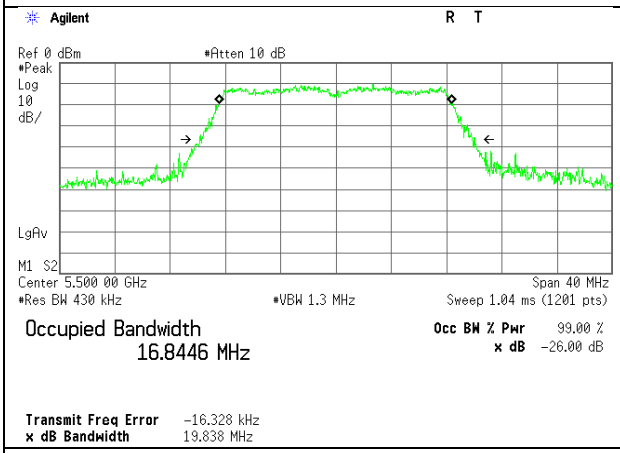
5320 MHz



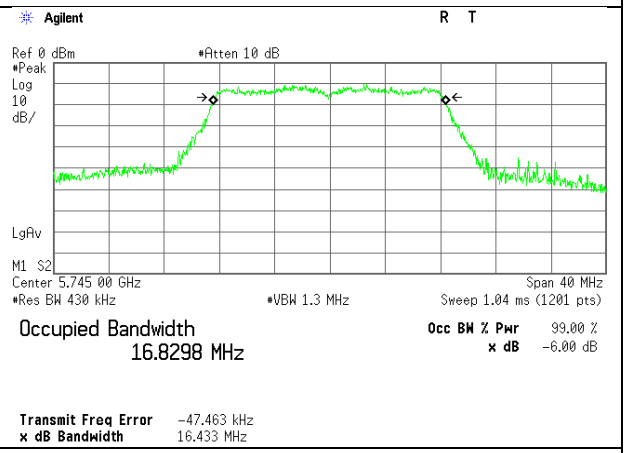
99 % Occupied Bandwidth

11a, Antenna port WA

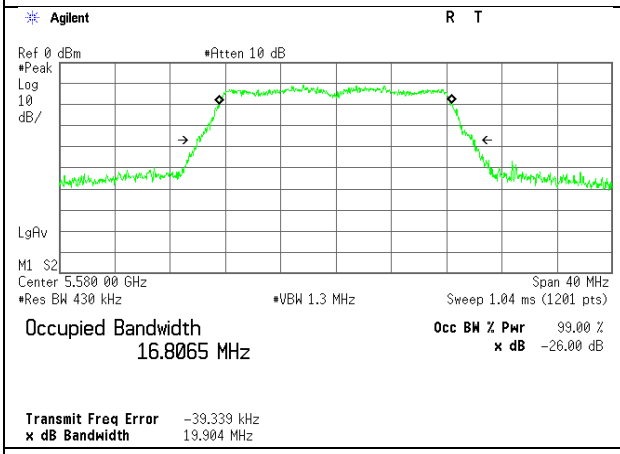
5500 MHz



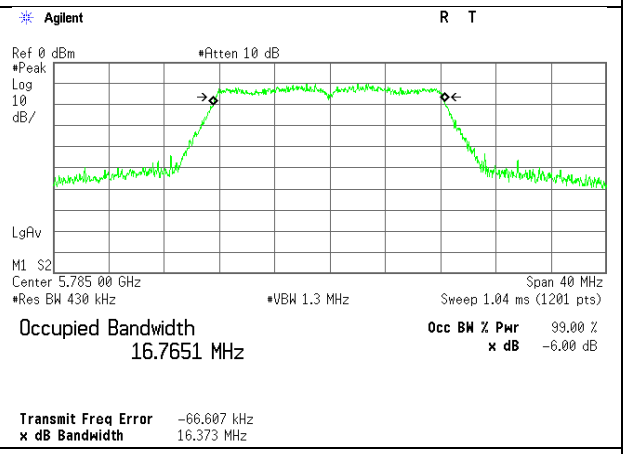
5745 MHz



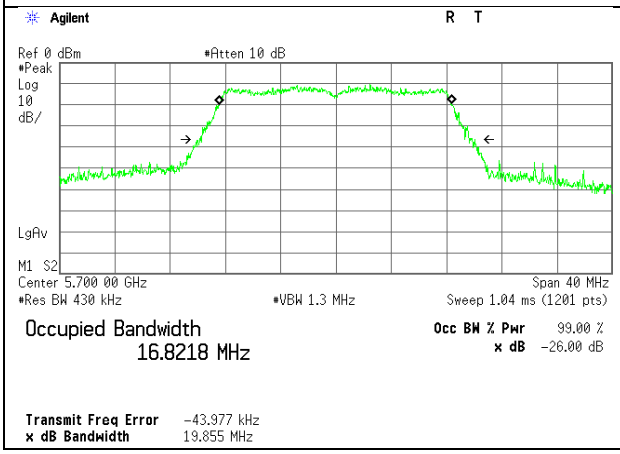
5580 MHz



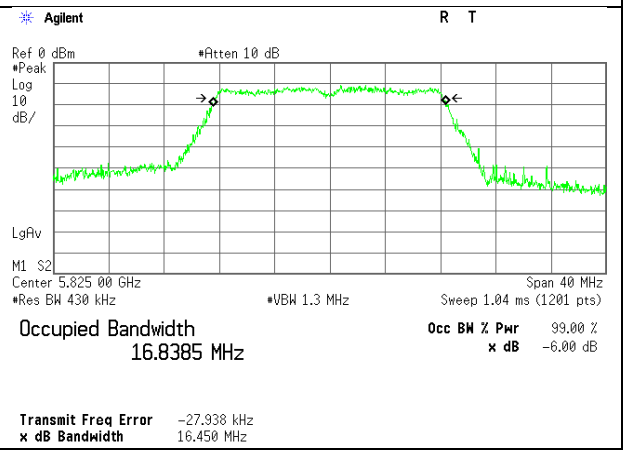
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

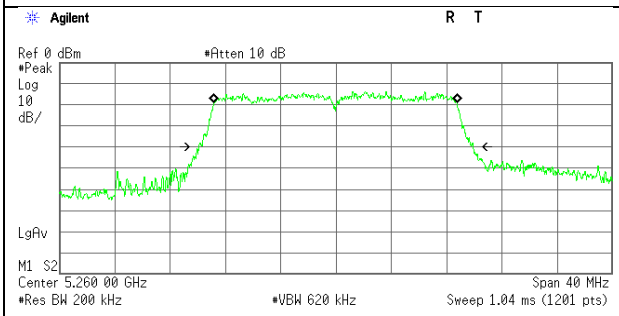
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 16, 2016
Temperature / Humidity	23deg. C / 34 % RH	20deg. C / 34 % RH
Engineer	Tomoki Matsui	Takafumi Noguchi
Mode	Tx 11n-20	

Antenna port	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
Antenna port WA	5180	-	17.758	-
	5220	-	17.693	-
	5240	-	17.745	-
	5260	19.820	17.740	-
	5300	19.836	17.771	-
	5320	19.671	17.736	-
	5500	19.711	17.715	-
	5580	19.870	17.712	-
	5700	20.029	17.759	-
	5745	-	17.757	-
	5785	-	17.734	-
	5825	-	17.768	-

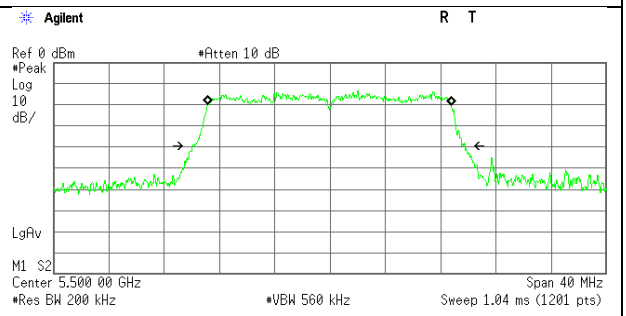
26 dB Emission Bandwidth

11n-20, Antenna port WA

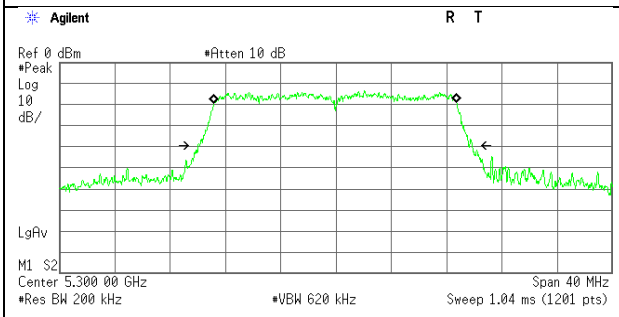
5260 MHz



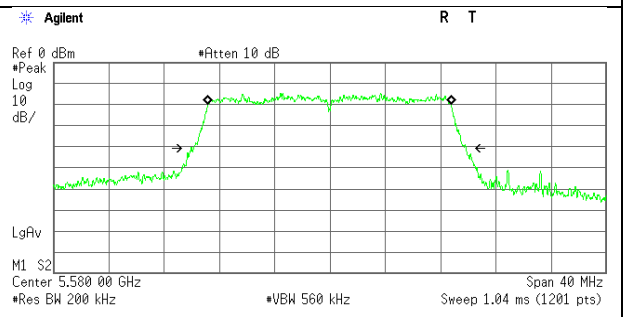
5500 MHz



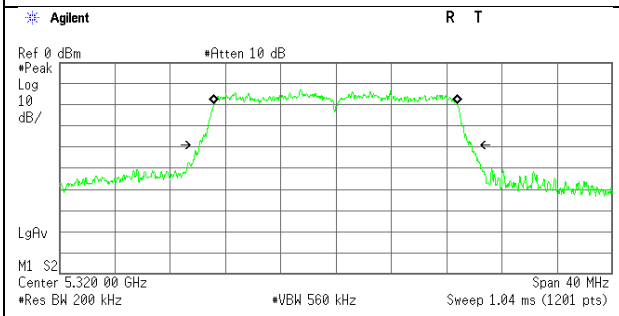
5300 MHz



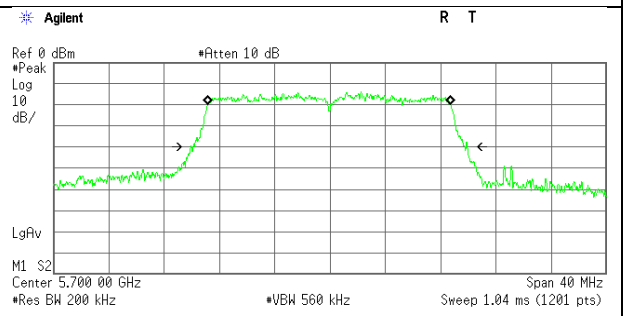
5580 MHz



5320 MHz



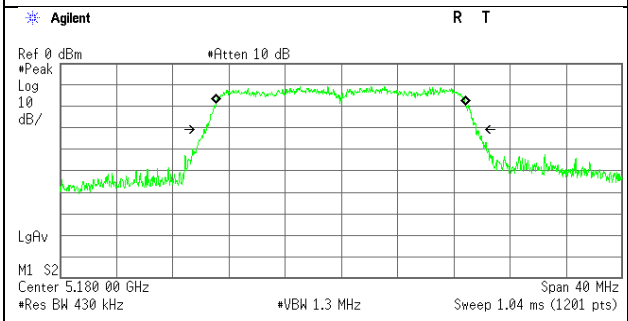
5700 MHz



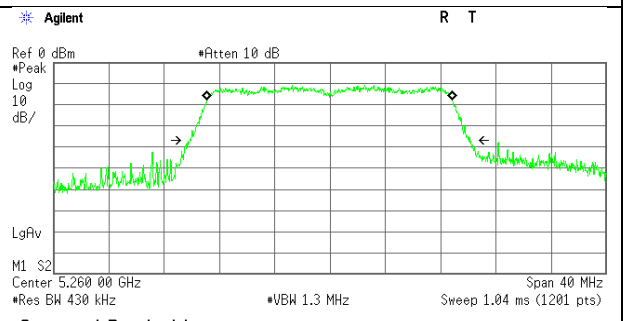
99 % Occupied Bandwidth

11n-20, Antenna port WA

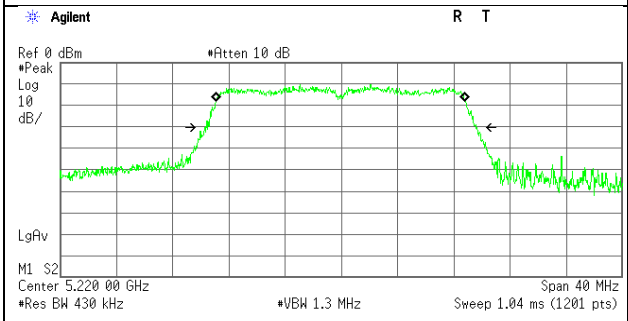
5180 MHz



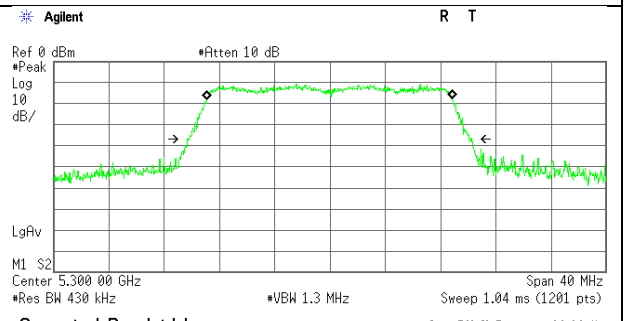
5260 MHz



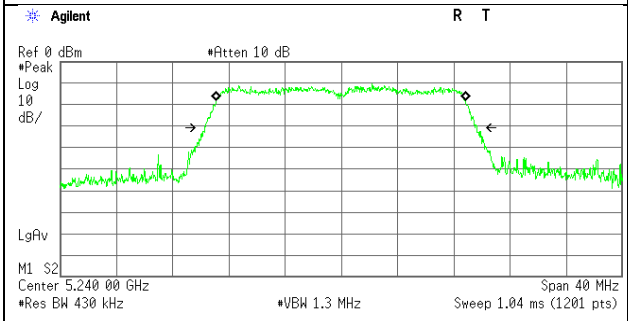
5220 MHz



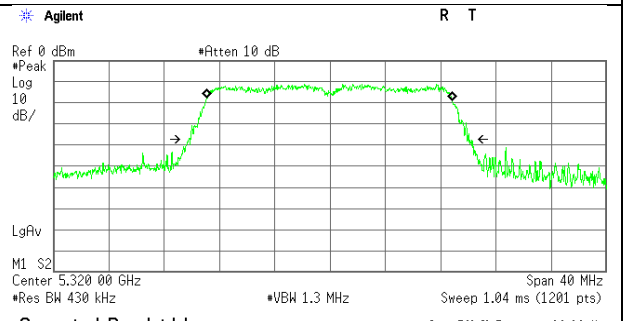
5300 MHz



5240 MHz



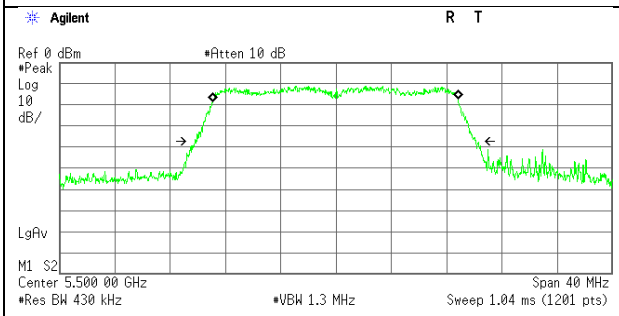
5320 MHz



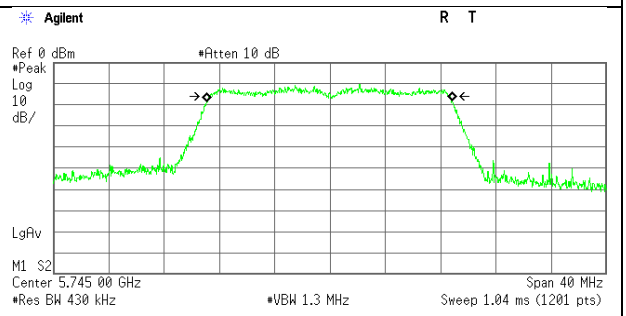
99 % Occupied Bandwidth

11n-20, Antenna port WA

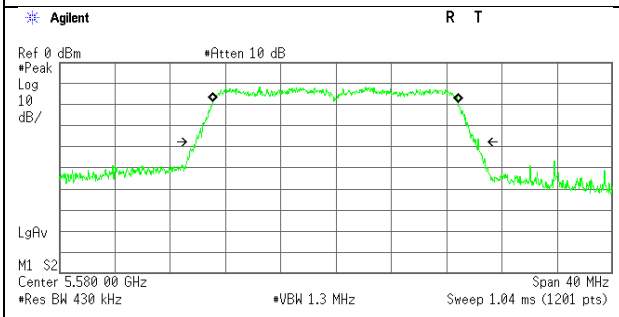
5500 MHz



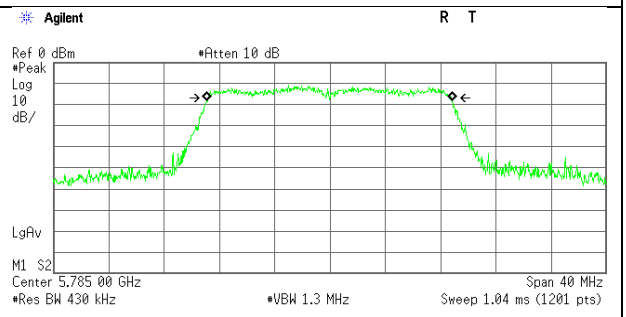
5745 MHz



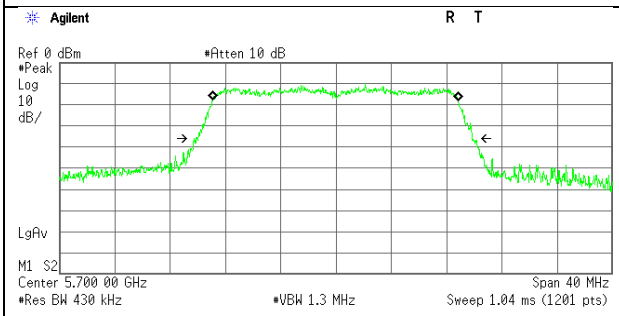
5580 MHz



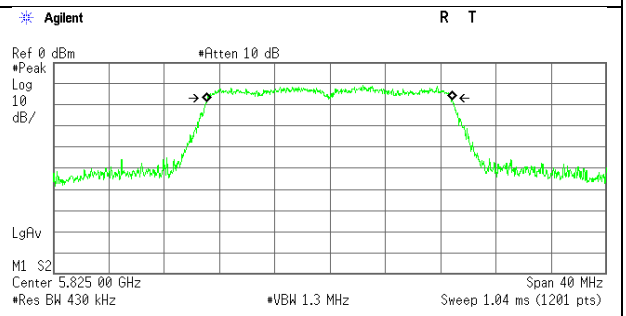
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

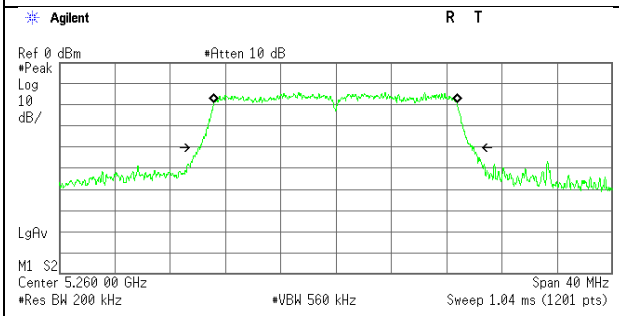
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 16, 2016
Temperature / Humidity	23deg. C / 34 % RH	20deg. C / 34 % RH
Engineer	Tomoki Matsui	Takafumi Noguchi
Mode	Tx 11ac-20	

Antenna port	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
Antenna port WA	5180	-	17.760	-
	5220	-	17.749	-
	5240	-	17.753	-
	5260	19.857	17.764	-
	5300	19.528	17.711	-
	5320	19.680	17.730	-
	5500	19.598	17.774	-
	5580	19.765	17.750	-
	5700	19.856	17.782	-
	5745	-	17.773	-
	5785	-	17.771	-
	5825	-	17.742	-

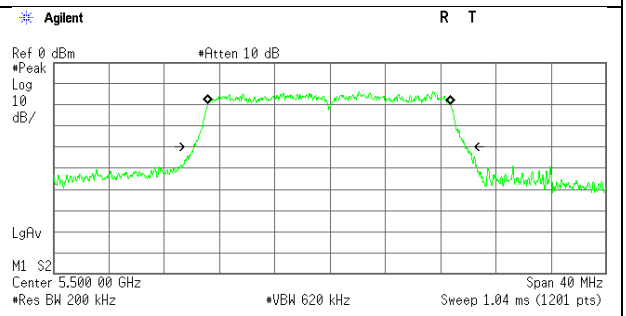
26 dB Emission Bandwidth

11ac-20, Antenna port WA

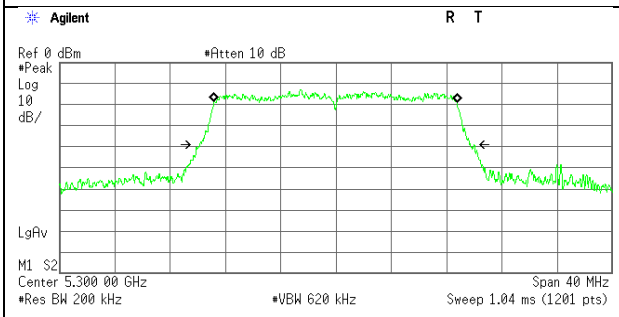
5260 MHz



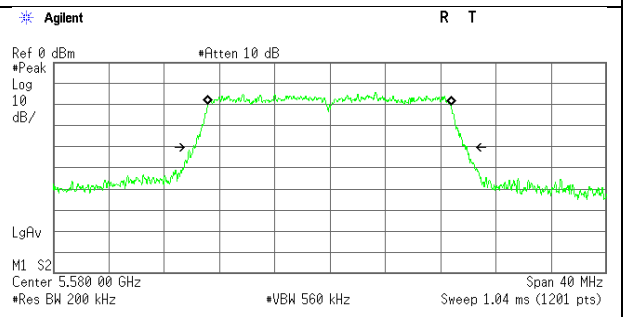
5500 MHz



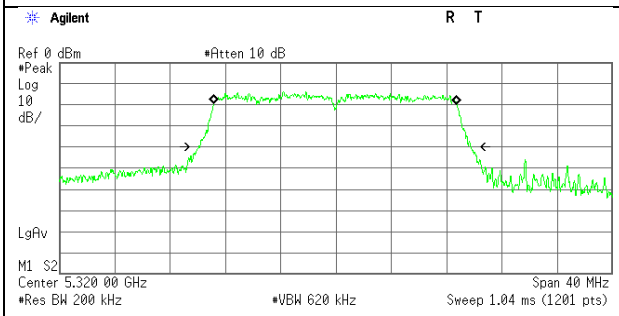
5300 MHz



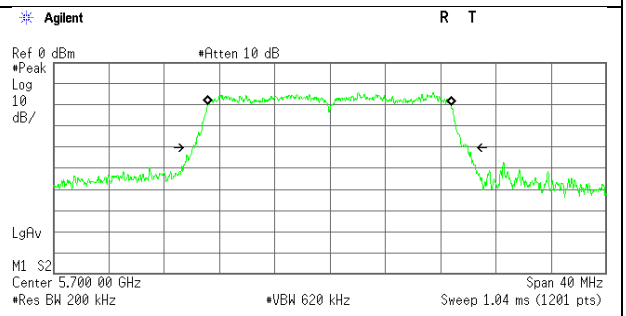
5580 MHz



5320 MHz



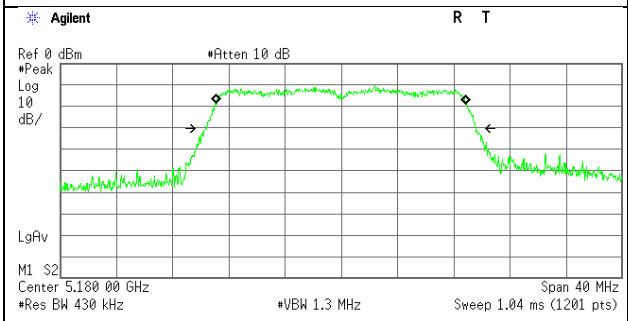
5700 MHz



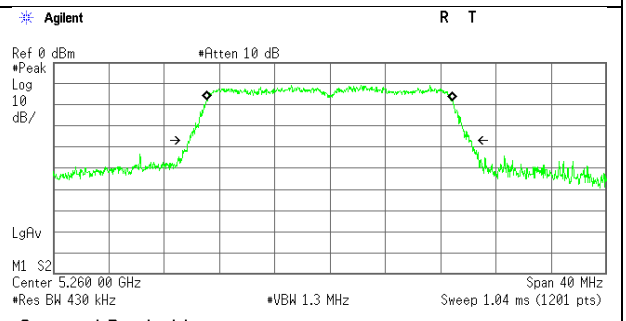
99 % Occupied Bandwidth

11ac-20, Antenna port WA

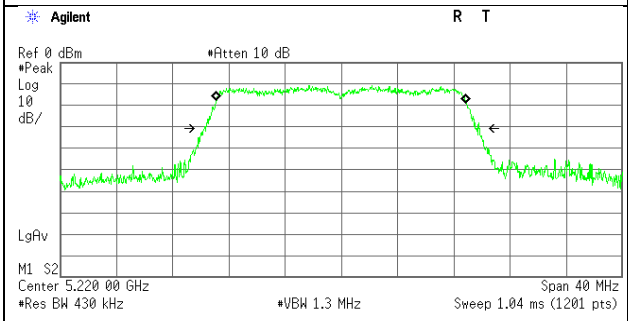
5180 MHz



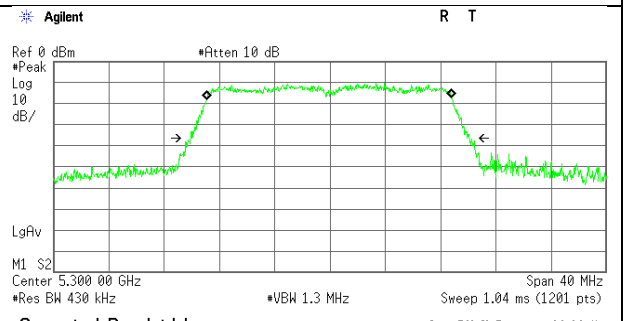
5260 MHz



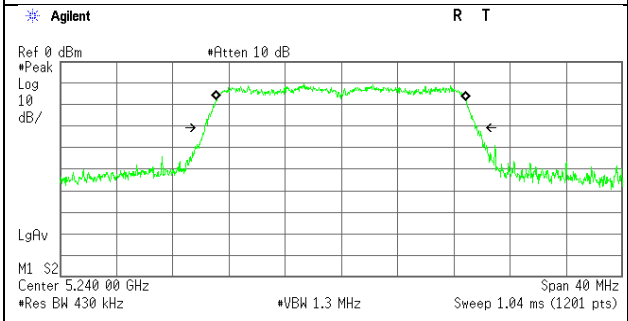
5220 MHz



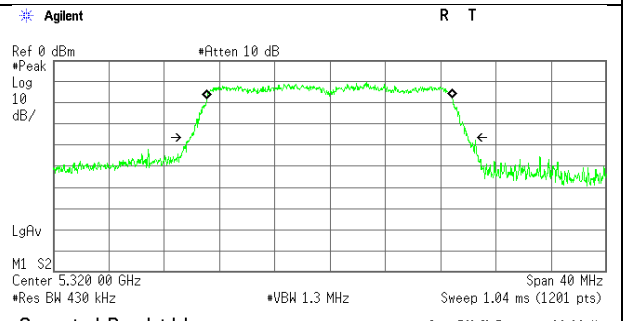
5300 MHz



5240 MHz



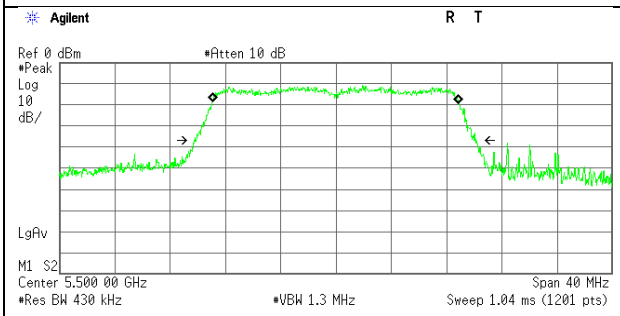
5320 MHz



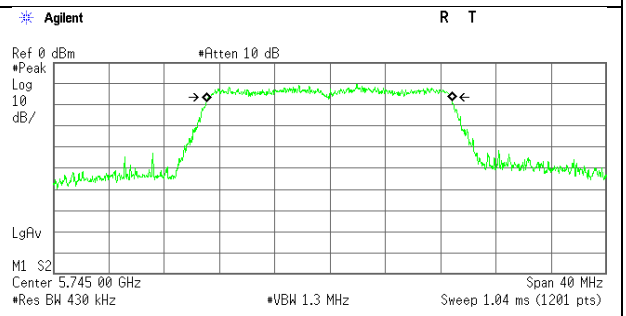
99 % Occupied Bandwidth

11ac-20, Antenna port WA

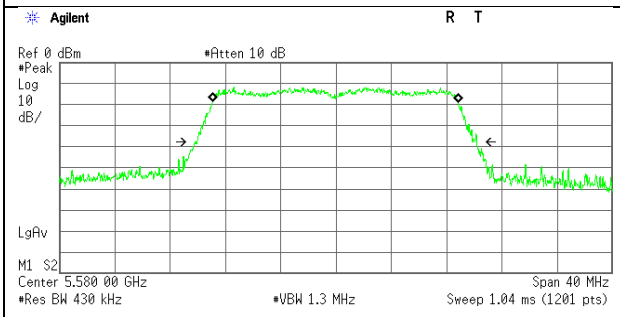
5500 MHz



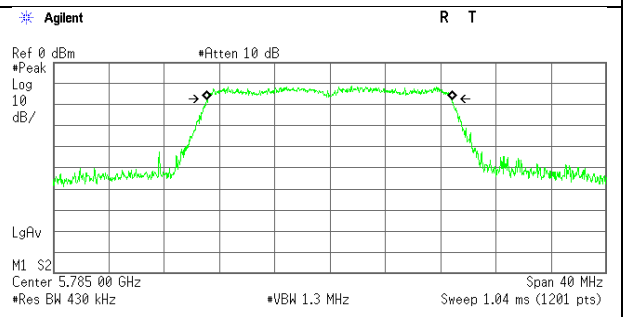
5745 MHz



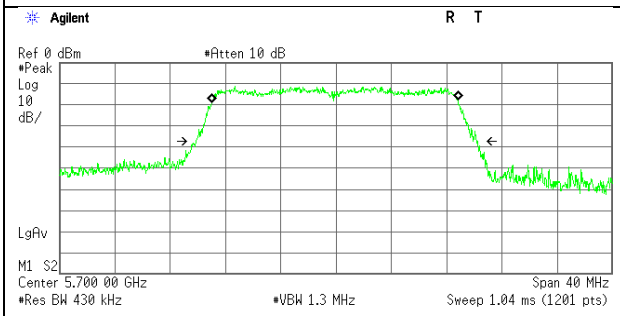
5580 MHz



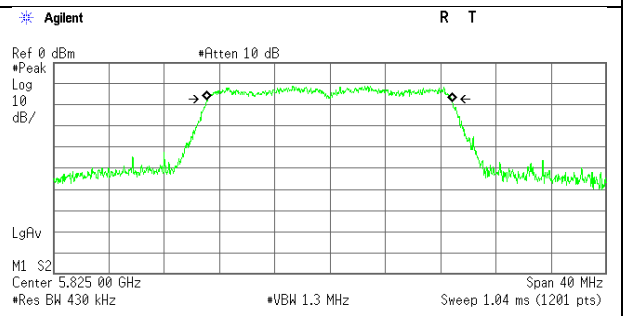
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

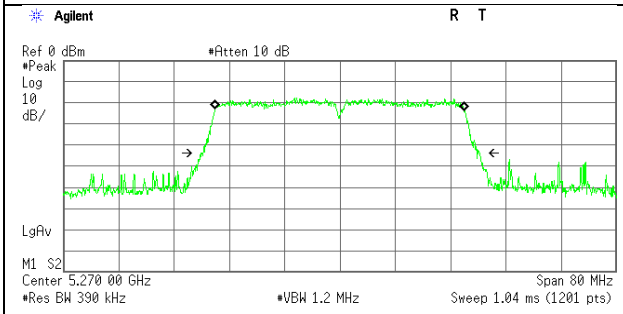
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 16, 2016
Temperature / Humidity	23deg. C / 34 % RH	20deg. C / 34 % RH
Engineer	Tomoki Matsui	Takafumi Noguchi
Mode	Tx 11n-40	

Antenna port	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
Antenna port WA	5190	-	36.197	-
	5230	-	36.191	-
	5270	40.129	36.127	-
	5310	40.218	36.153	-
	5510	39.755	36.200	-
	5550	40.122	36.200	-
	5670	39.834	36.158	-
	5755	-	36.170	-
	5795	-	36.181	-

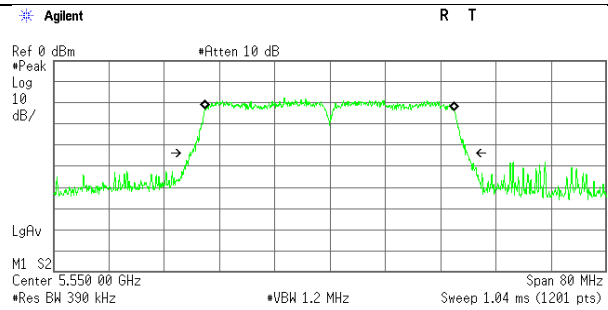
26 dB Emission Bandwidth

11n-40 Antenna port WA

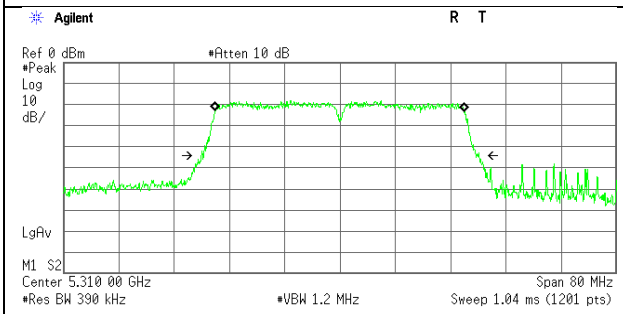
5270MHz



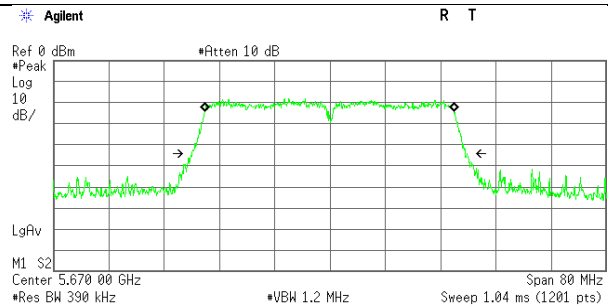
5550MHz



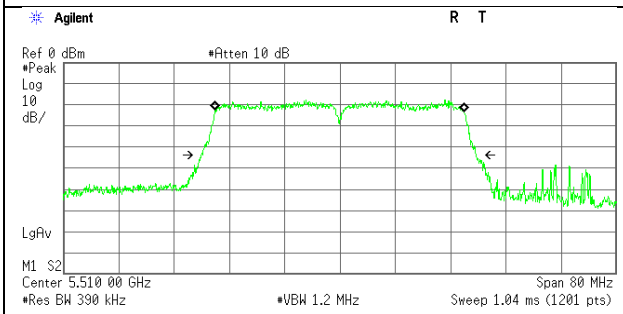
5310MHz



5670MHz



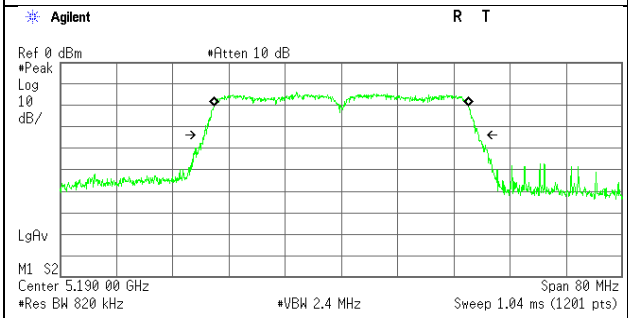
5510MHz



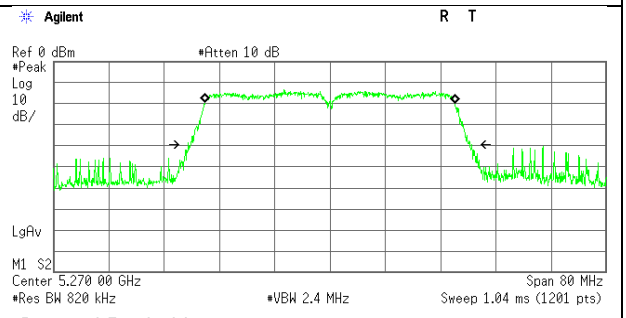
99 % Occupied Bandwidth

11n-40, Antenna port WA

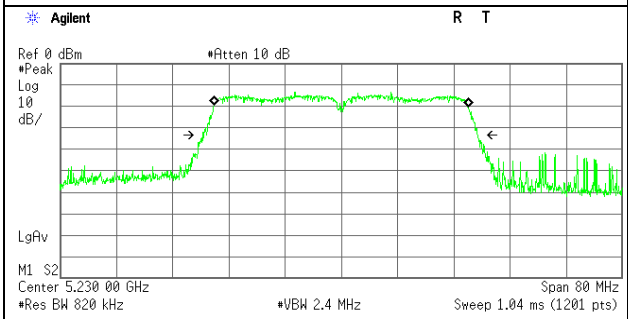
5190 MHz



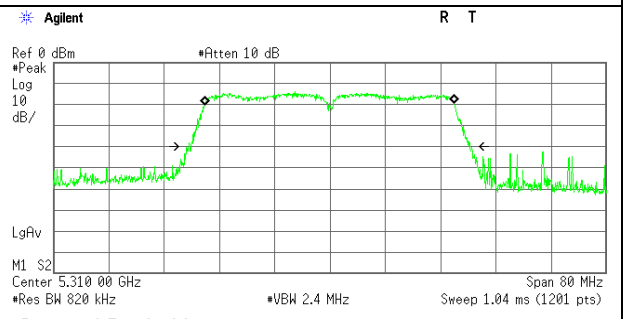
5270 MHz



5230 MHz



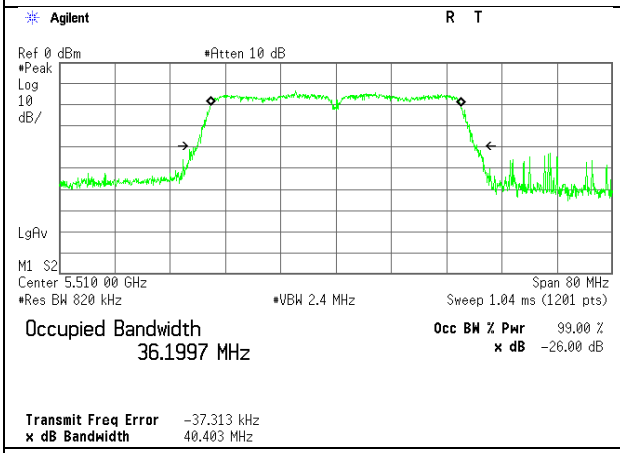
5310 MHz



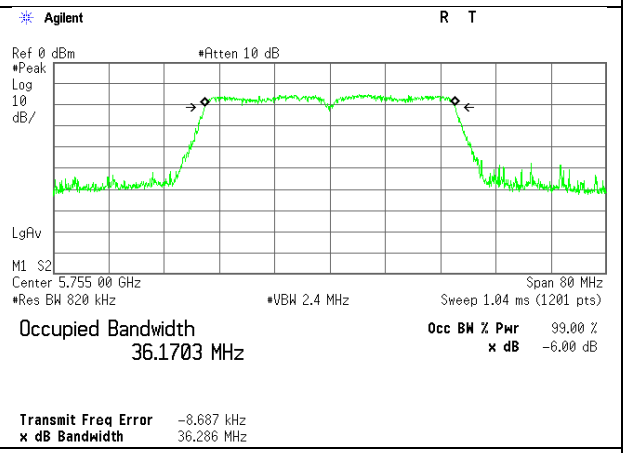
99 % Occupied Bandwidth

11n-40, Antenna port WA

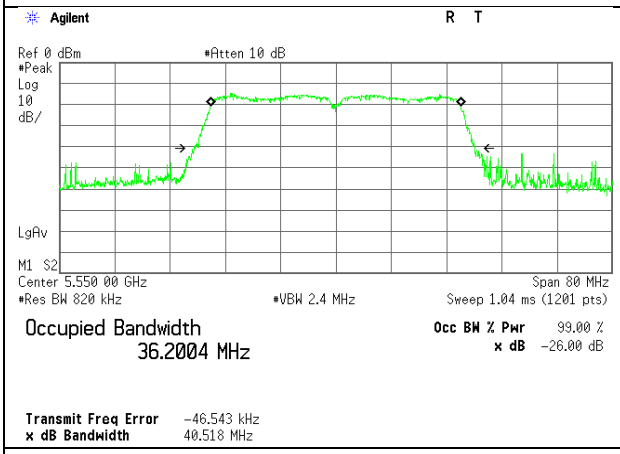
5510 MHz



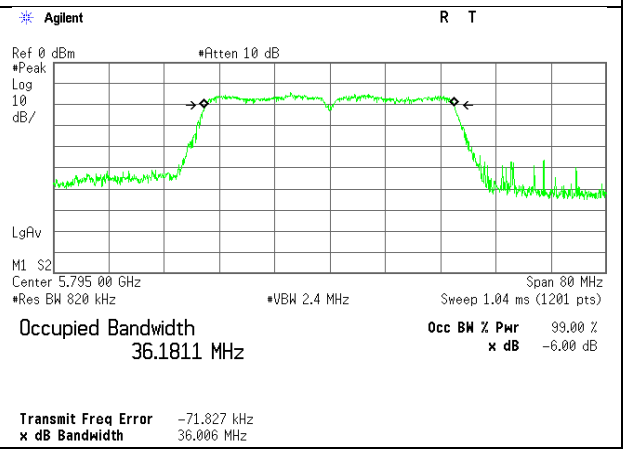
5755 MHz



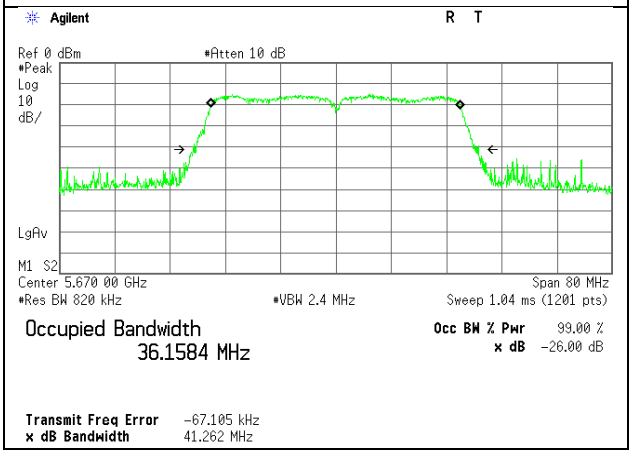
5550 MHz



5795 MHz



5670 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

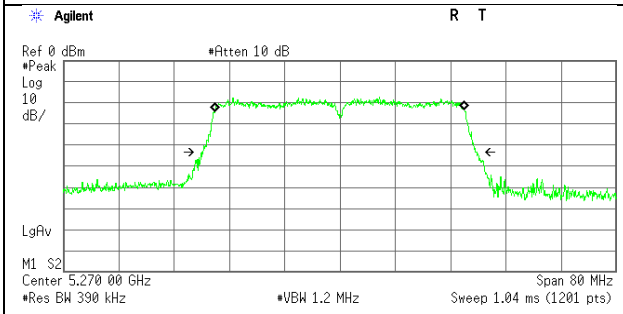
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 16, 2016
Temperature / Humidity	23deg. C / 34 % RH	20deg. C / 34 % RH
Engineer	Tomoki Matsui	Takafumi Noguchi
Mode	Tx 11ac-40	

Antenna port	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
Antenna port WA	5190	-	36.143	-
	5230	-	36.114	-
	5270	39.569	36.114	-
	5310	40.752	36.153	-
	5510	39.731	36.208	-
	5550	39.872	36.163	-
	5670	39.902	36.171	-
	5755	-	36.153	-
	5795	-	36.195	-

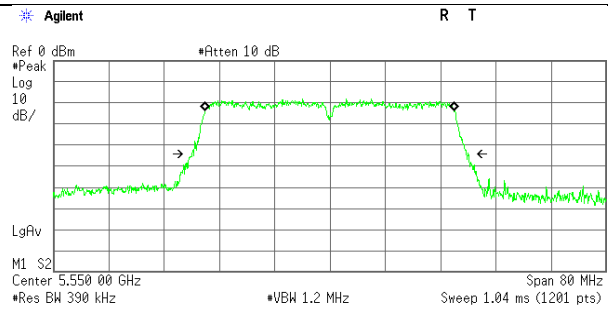
26 dB Emission Bandwidth

11ac-40 Antenna port WA

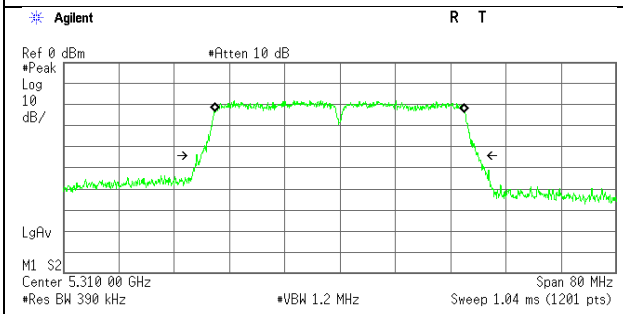
5270MHz



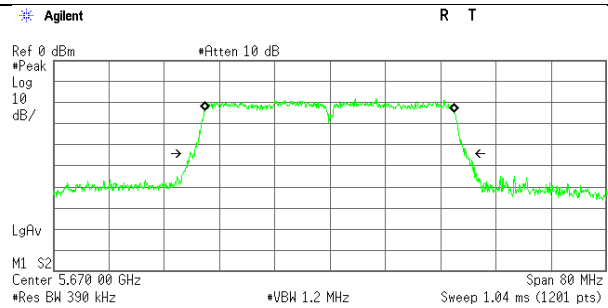
5550MHz



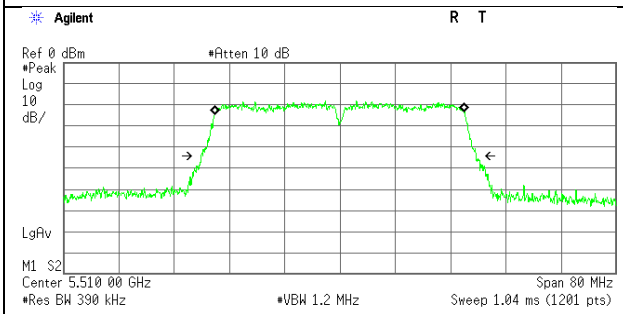
5310MHz



5670MHz



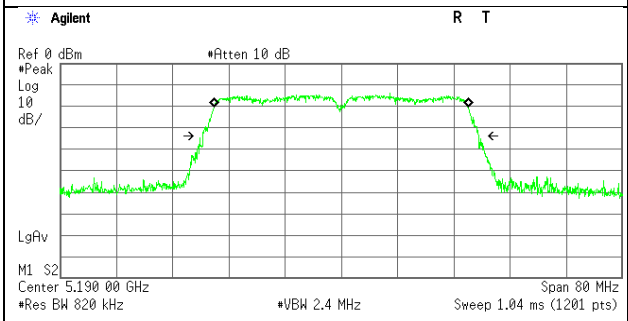
5510MHz



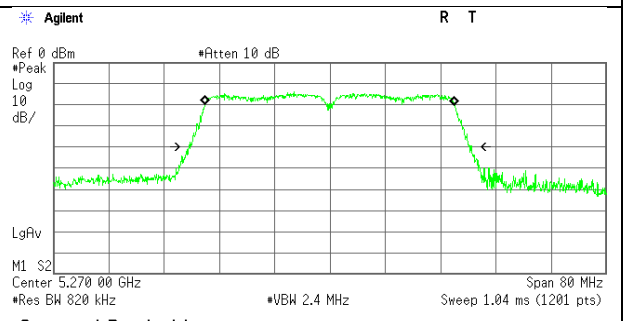
99 % Occupied Bandwidth

11ac-40, Antenna port WA

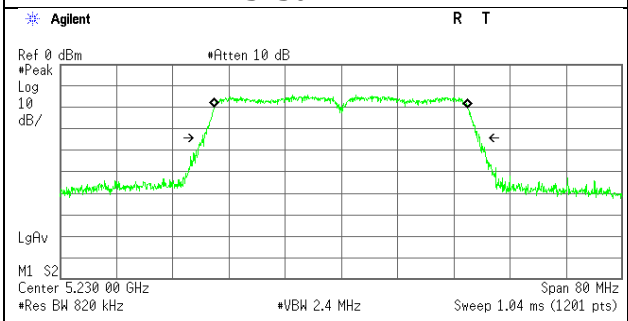
5190 MHz



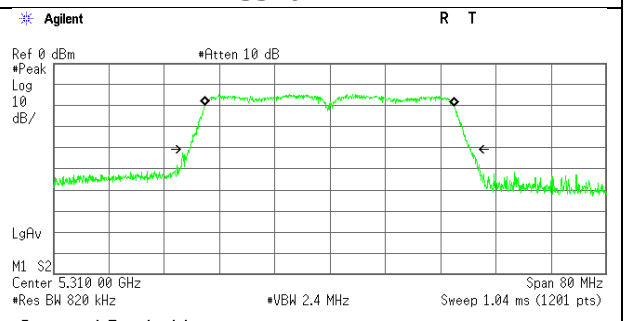
5270 MHz



5230 MHz



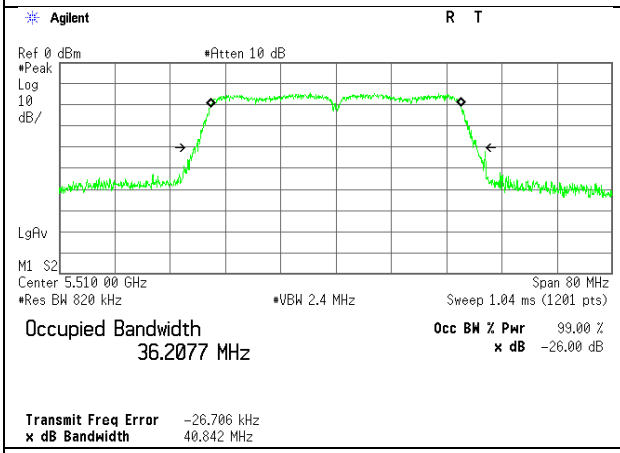
5310 MHz



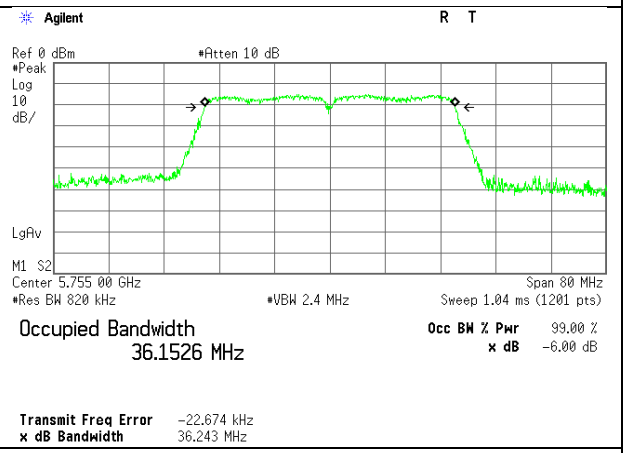
99 % Occupied Bandwidth

11ac-40, Antenna port WA

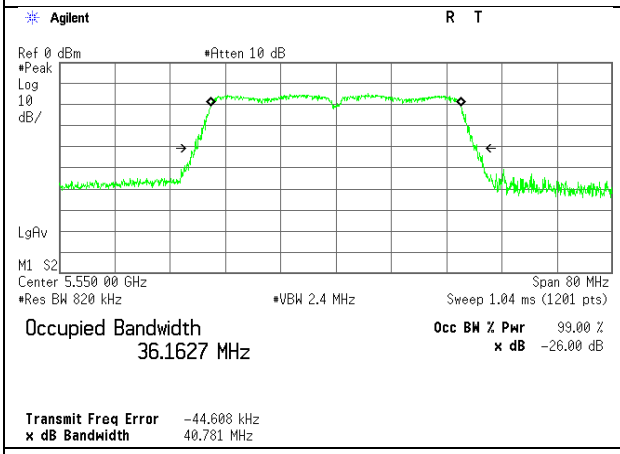
5510 MHz



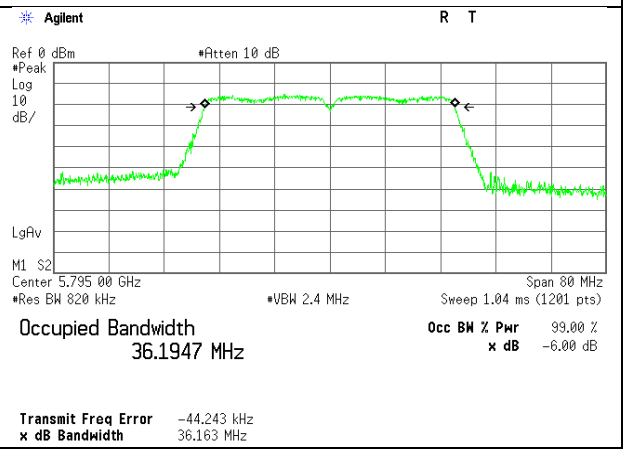
5755 MHz



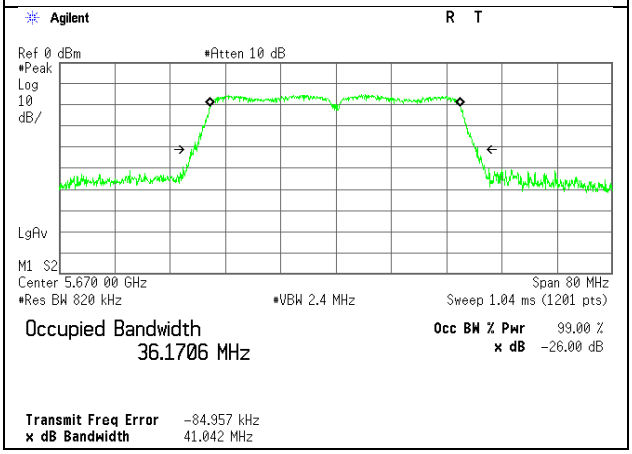
5550 MHz



5795 MHz



5670 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

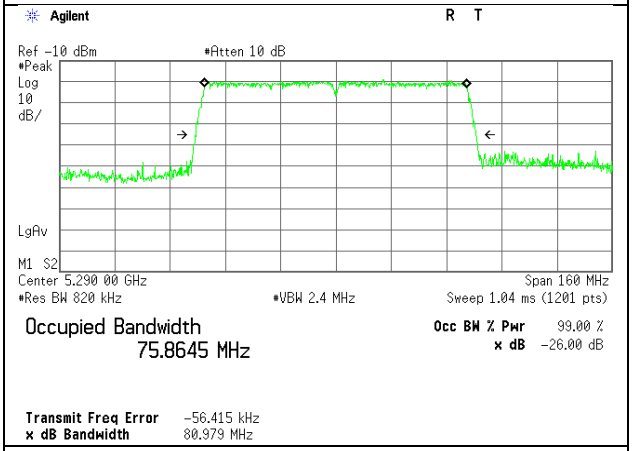
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 16, 2016
Temperature / Humidity	23deg. C / 34 % RH	20deg. C / 34 % RH
Engineer	Tomoki Matsui	Takafumi Noguchi
Mode	Tx 11ac-80	

Antenna port	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
Antenna port WA	5210	-	76.229	-
	5290	80.979	76.220	-
	5530	81.100	76.184	-
	5610	82.712	76.028	-
	5775	-	76.210	-

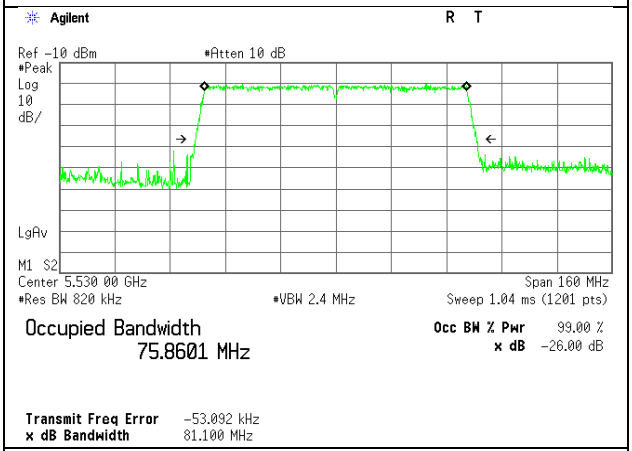
26 dB Emission Bandwidth

11ac-80, Antenna port WA

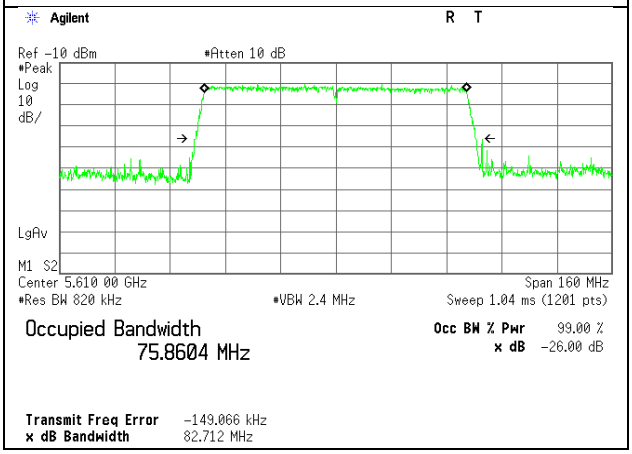
5290 MHz



5530 MHz



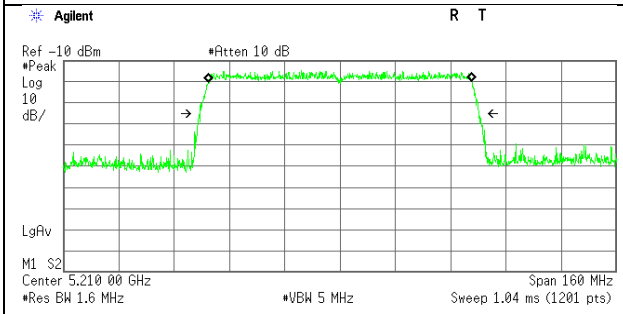
5610 MHz



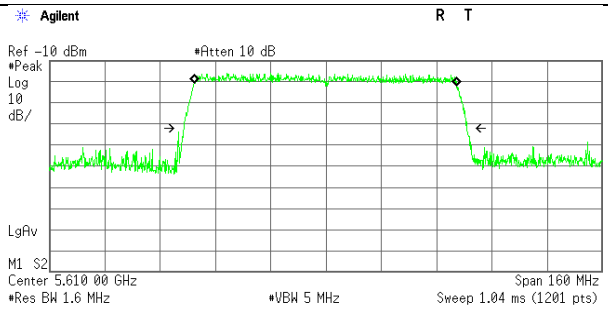
99 % Occupied Bandwidth

11ac-80 Antenna port WA

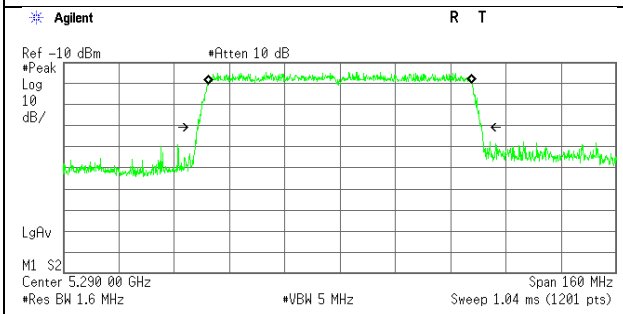
5210MHz



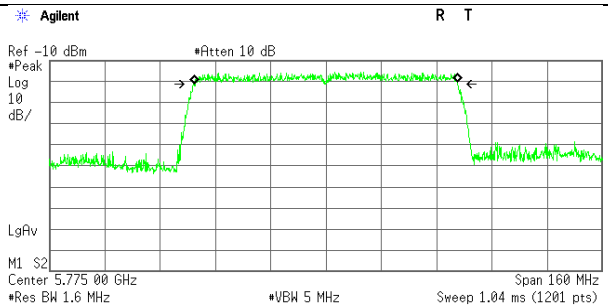
5610MHz



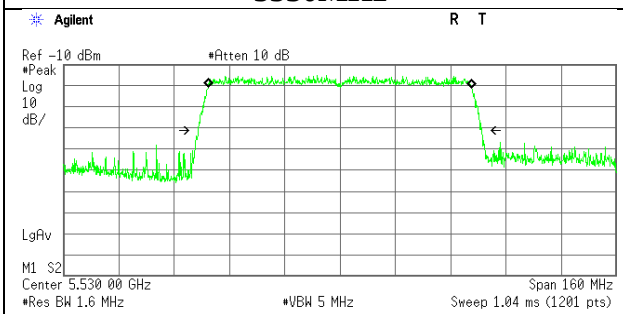
5290MHz



5775MHz



5530MHz



6 dB Bandwidth

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx

11a

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	16.395	> 500
5785	16.462	> 500
5825	16.390	> 500

11n-20

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	17.399	> 500
5785	17.338	> 500
5825	17.626	> 500

11ac-20

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	17.427	> 500
5785	17.653	> 500
5825	17.605	> 500

11n-40

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5755	35.512	> 500
5795	35.144	> 500

11ac-40

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5755	35.222	> 500
5795	35.640	> 500

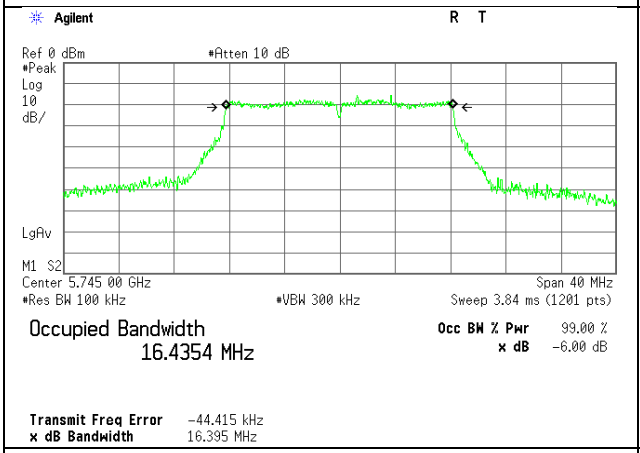
11ac-80

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5775	76.432	> 500

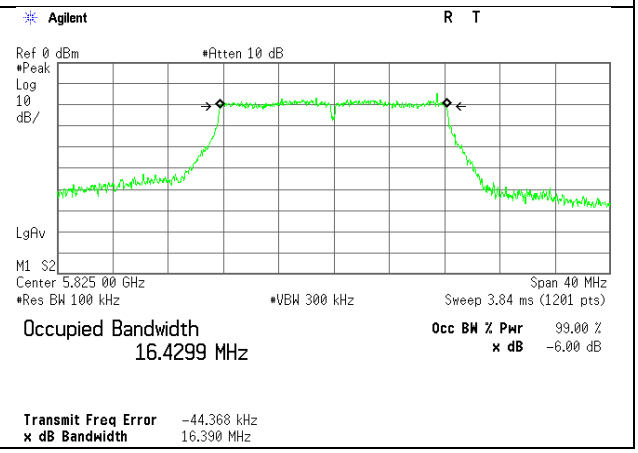
6dB Bandwidth

11a Antenna port WA

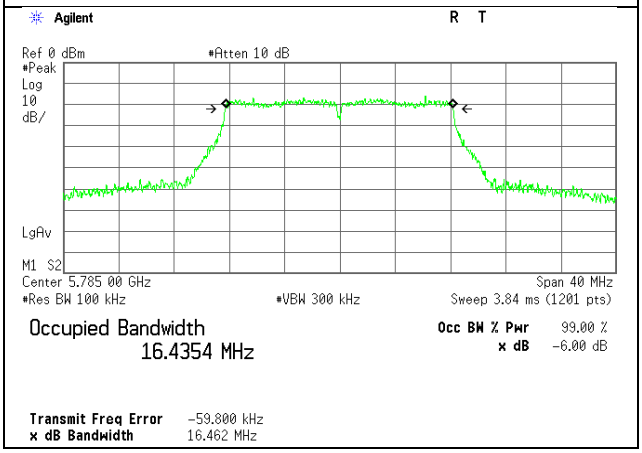
5745MHz



5825MHz



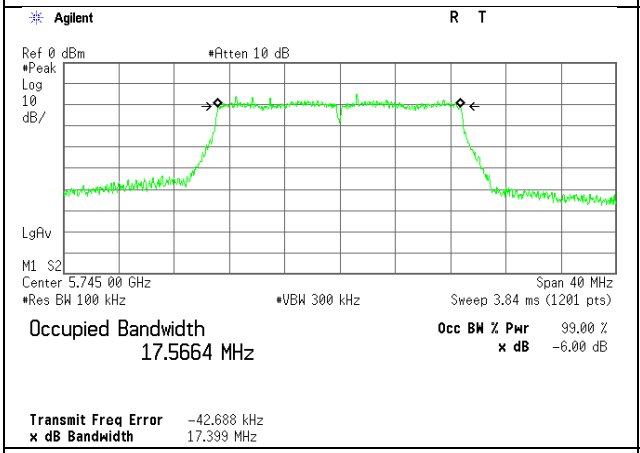
5785MHZ



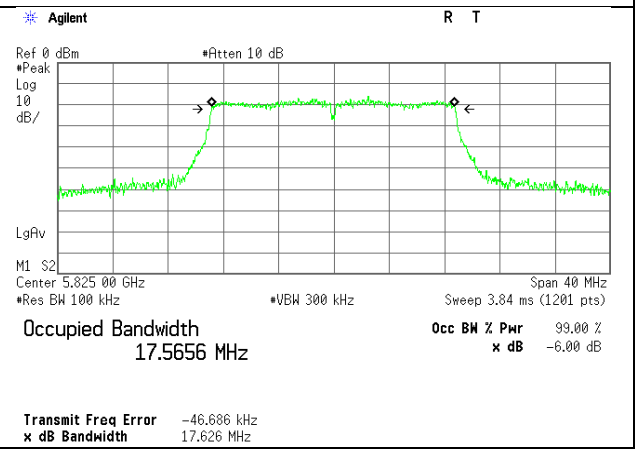
6dB Bandwidth

11n-20 Antenna port WA

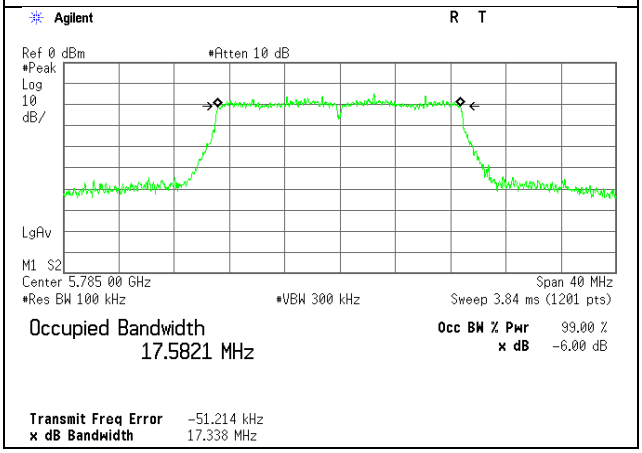
5745MHz



5825MHz



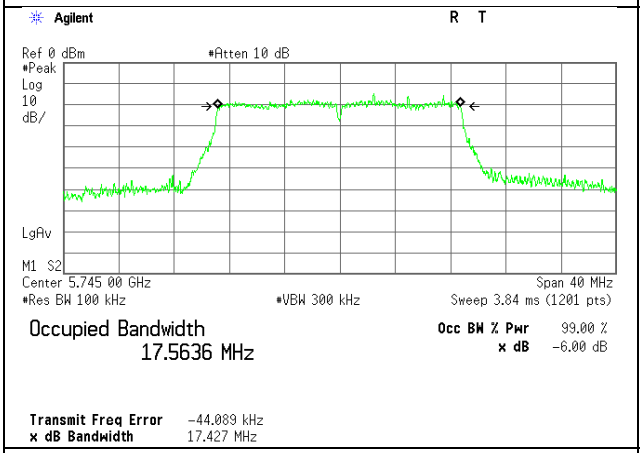
5785MHZ



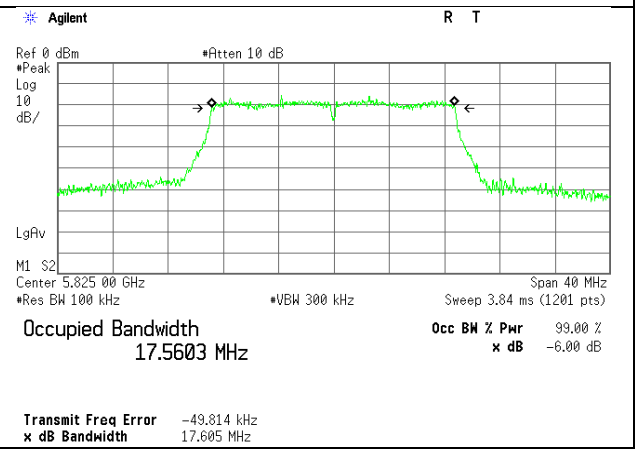
6dB Bandwidth

11ac-20 Antenna port WA

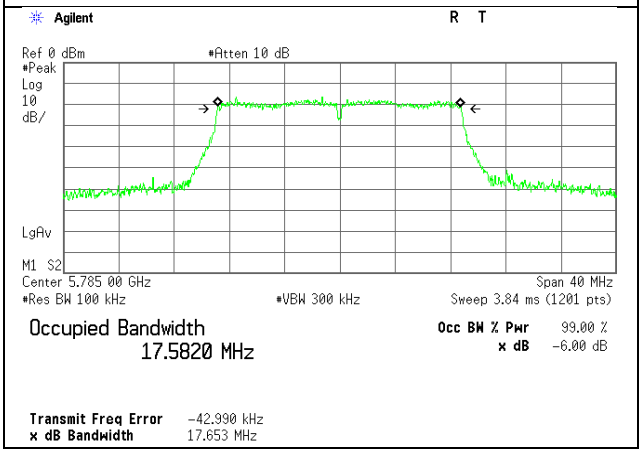
5745MHz



5825MHz



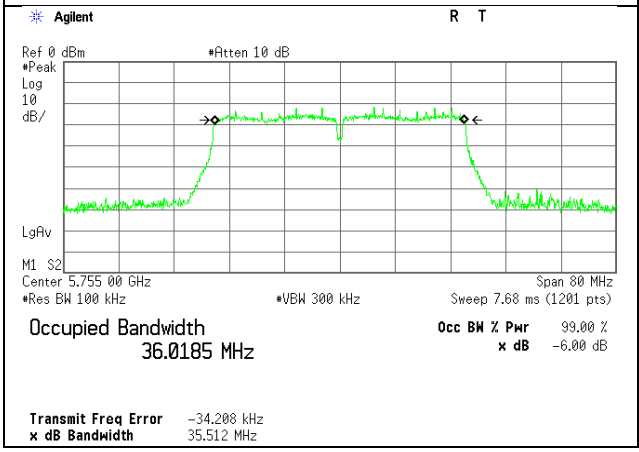
5785MHZ



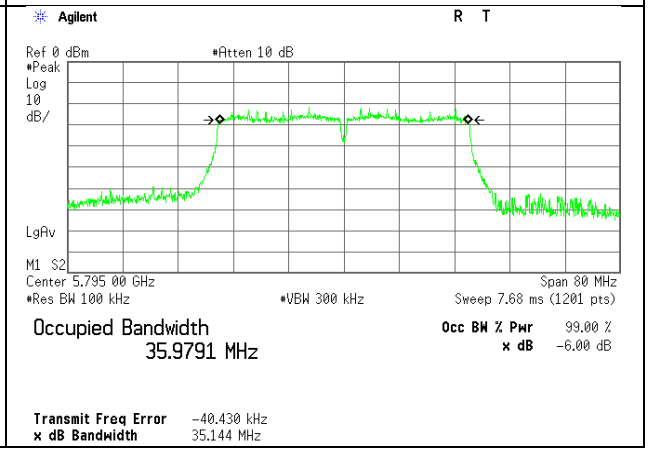
6dB Bandwidth

11n-40 Antenna port WA

5755MHz

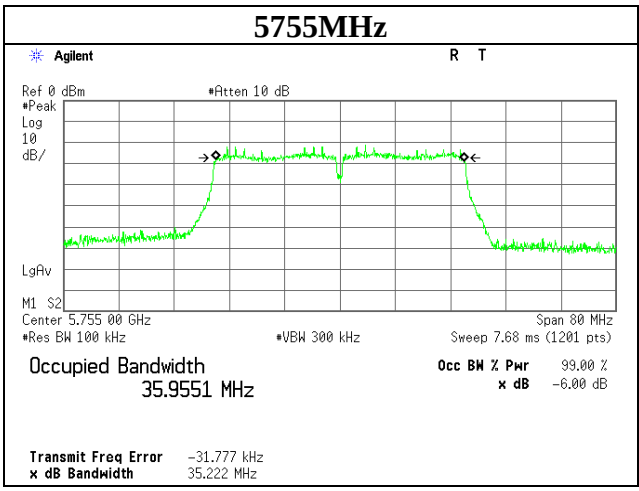


5795MHz

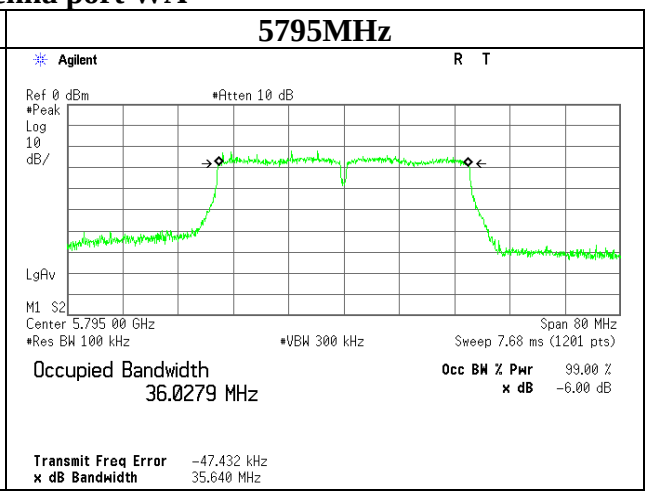


11ac-40 Antenna port WA

5755MHz

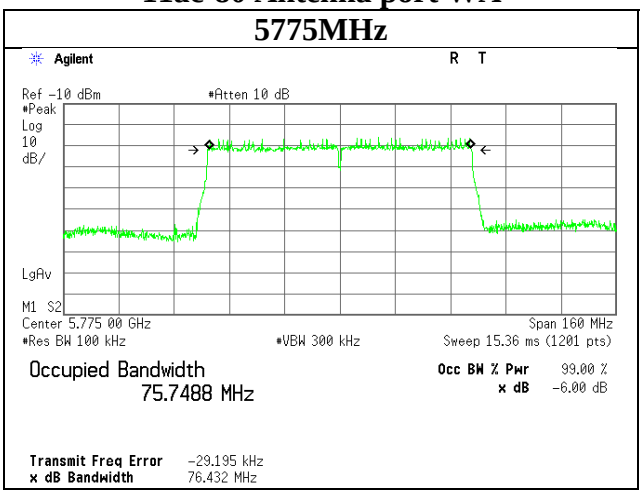


5795MHz



11ac-80 Antenna port WA

5775MHz



Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 20, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

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 port			Result	Limit	Margin	Antenna port			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	-	16.769	8.26	7.21	15.47	11.90	22.68	10.78	44.26	38.64	82.90	19.19	29.97	10.78
5220	-	16.799	7.73	7.19	14.92	11.74	22.68	10.94	41.40	38.55	79.95	19.03	29.97	10.94
5240	-	16.750	8.02	7.05	15.06	11.78	22.68	10.90	42.95	37.76	80.71	19.07	29.97	10.90
5260	19.343	16.821	7.87	7.06	14.93	11.74	22.57	10.83	42.17	37.84	80.01	19.03	29.97	10.94
5300	19.409	16.783	7.78	6.75	14.53	11.62	22.59	10.97	41.69	36.14	77.83	18.91	29.97	11.06
5320	19.298	16.831	7.82	6.76	14.58	11.64	22.56	10.92	41.88	36.22	78.10	18.93	29.97	11.04
5500	19.417	16.845	7.93	7.33	15.25	11.83	22.59	10.76	42.46	39.26	81.73	19.12	29.97	10.85
5580	19.411	16.807	7.19	7.21	14.41	11.59	22.59	11.00	38.55	38.64	77.18	18.88	29.97	11.09
5700	19.161	16.822	7.29	7.31	14.61	11.65	22.53	10.88	39.08	39.17	78.26	18.94	29.97	11.03
5745	-	-	7.23	7.26	14.49	11.61	28.71	17.10	38.73	38.90	77.63	18.90	36.00	17.10
5785	-	-	6.59	7.14	13.74	11.38	28.71	17.33	35.32	38.28	73.60	18.67	36.00	17.33
5825	-	-	6.81	7.01	13.82	11.41	28.71	17.30	36.48	37.58	74.06	18.70	36.00	17.30

		Antenna port WA						**Antenna port WC**					
Tested	Duty	Power	Cable	Atten.	Antenna	Result		Power	Cable	Atten.	Antenna	Result	
Frequency	Factor	Meter Reading	Loss	Loss	Gain	Cond. Power	e.i.r.p.	Meter Reading	Loss	Loss	Gain	Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	0.02	-3.26	2.25	10.16	7.29	9.17	16.46	-3.85	2.25	10.16	7.29	8.58	15.87
5220	0.02	-3.56	2.26	10.16	7.29	8.88	16.17	-3.87	2.26	10.16	7.29	8.57	15.86
5240	0.02	-3.42	2.27	10.17	7.29	9.04	16.33	-3.98	2.27	10.17	7.29	8.48	15.77
5260	0.02	-3.50	2.27	10.17	7.29	8.96	16.25	-3.97	2.27	10.17	7.29	8.49	15.78
5300	0.02	-3.56	2.28	10.17	7.29	8.91	16.20	-4.18	2.28	10.17	7.29	8.29	15.58
5320	0.02	-3.55	2.29	10.17	7.29	8.93	16.22	-4.18	2.29	10.17	7.29	8.30	15.59
5500	0.02	-3.56	2.33	10.20	7.29	8.99	16.28	-3.90	2.33	10.20	7.29	8.65	15.94
5580	0.02	-3.98	2.34	10.19	7.29	8.57	15.86	-3.97	2.34	10.19	7.29	8.58	15.87
5700	0.02	-3.91	2.35	10.17	7.29	8.63	15.92	-3.90	2.35	10.17	7.29	8.64	15.93
5745	0.02	-3.95	2.35	10.17	7.29	8.59	15.88	-3.93	2.35	10.17	7.29	8.61	15.90
5785	0.02	-4.34	2.35	10.16	7.29	8.19	15.48	-3.99	2.35	10.16	7.29	8.54	15.83
5825	0.02	-4.21	2.36	10.16	7.29	8.33	15.62	-4.08	2.36	10.16	7.29	8.46	15.75

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

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 20, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-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 port			Result	Limit	Margin	Antenna port			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	-	17.758	8.30	7.23	15.53	11.91	22.68	10.77	44.46	38.73	83.19	19.20	29.97	10.77
5220	-	17.693	7.76	7.23	14.99	11.76	22.68	10.92	41.59	38.73	80.32	19.05	29.97	10.92
5240	-	17.745	8.00	7.06	15.06	11.78	22.68	10.90	42.85	37.84	80.70	19.07	29.97	10.90
5260	19.820	17.740	7.80	7.14	14.94	11.74	22.68	10.94	41.78	38.28	80.07	19.03	29.97	10.94
5300	19.836	17.771	7.62	7.01	14.64	11.65	22.68	11.03	40.83	37.58	78.42	18.94	29.97	11.03
5320	19.671	17.736	7.80	6.79	14.59	11.64	22.64	11.00	41.78	36.39	78.17	18.93	29.97	11.04
5500	19.711	17.715	7.98	7.24	15.22	11.83	22.65	10.82	42.76	38.82	81.57	19.12	29.97	10.85
5580	19.870	17.712	7.18	7.23	14.41	11.59	22.68	11.09	38.46	38.73	77.18	18.88	29.97	11.09
5700	20.029	17.759	7.18	7.46	14.64	11.66	22.68	11.02	38.46	39.99	78.45	18.95	29.97	11.02
5745	-	-	7.19	7.28	14.47	11.61	28.71	17.10	38.55	38.99	77.54	18.90	36.00	17.10
5785	-	-	6.85	7.23	14.08	11.49	28.71	17.22	36.73	38.73	75.45	18.78	36.00	17.22
5825	-	-	7.06	7.14	14.21	11.53	28.71	17.18	37.84	38.28	76.13	18.82	36.00	17.18

		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	0.03	-3.25	2.25	10.16	7.29	9.19	16.48	-3.85	2.25	10.16	7.29	8.59	15.88
5220	0.03	-3.55	2.26	10.16	7.29	8.90	16.19	-3.86	2.26	10.16	7.29	8.59	15.88
5240	0.03	-3.44	2.27	10.17	7.29	9.03	16.32	-3.98	2.27	10.17	7.29	8.49	15.78
5260	0.03	-3.55	2.27	10.17	7.29	8.92	16.21	-3.93	2.27	10.17	7.29	8.54	15.83
5300	0.03	-3.66	2.28	10.17	7.29	8.82	16.11	-4.02	2.28	10.17	7.29	8.46	15.75
5320	0.03	-3.57	2.29	10.17	7.29	8.92	16.21	-4.17	2.29	10.17	7.29	8.32	15.61
5500	0.03	-3.54	2.33	10.20	7.29	9.02	16.31	-3.96	2.33	10.20	7.29	8.60	15.89
5580	0.03	-4.00	2.34	10.19	7.29	8.56	15.85	-3.97	2.34	10.19	7.29	8.59	15.88
5700	0.03	-3.99	2.35	10.17	7.29	8.56	15.85	-3.82	2.35	10.17	7.29	8.73	16.02
5745	0.03	-3.98	2.35	10.17	7.29	8.57	15.86	-3.93	2.35	10.17	7.29	8.62	15.91
5785	0.03	-4.18	2.35	10.16	7.29	8.36	15.65	-3.95	2.35	10.16	7.29	8.59	15.88
5825	0.03	-4.06	2.36	10.16	7.29	8.49	15.78	-4.01	2.36	10.16	7.29	8.54	15.83

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

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 20, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

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 port			Result	Limit	Margin	Antenna port			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	-	17.760	7.43	7.18	14.61	11.65	22.68	11.03	39.81	38.46	78.27	18.94	29.97	11.03
5220	-	17.749	7.36	6.97	14.33	11.56	22.68	11.12	39.45	37.33	76.77	18.85	29.97	11.12
5240	-	17.753	7.60	7.06	14.67	11.66	22.68	11.02	40.74	37.84	78.58	18.95	29.97	11.02
5260	19.857	17.764	7.66	7.05	14.70	11.67	22.68	11.01	41.02	37.76	78.78	18.96	29.97	11.01
5300	19.528	17.711	7.48	6.87	14.35	11.57	22.61	11.04	40.09	36.81	76.90	18.86	29.97	11.11
5320	19.680	17.730	7.26	6.71	13.98	11.45	22.65	11.20	38.90	35.97	74.88	18.74	29.97	11.23
5500	19.598	17.774	7.57	7.16	14.73	11.68	22.63	10.95	40.55	38.37	78.92	18.97	29.97	11.00
5580	19.765	17.750	6.95	7.19	14.14	11.51	22.66	11.15	37.24	38.55	75.79	18.80	29.97	11.17
5700	19.856	17.782	7.26	7.28	14.54	11.63	22.68	11.05	38.90	38.99	77.90	18.92	29.97	11.05
5745	-	-	7.13	7.18	14.31	11.56	28.71	17.15	38.19	38.46	76.65	18.85	36.00	17.15
5785	-	-	6.79	7.29	14.09	11.49	28.71	17.22	36.39	39.08	75.48	18.78	36.00	17.22
5825	-	-	7.05	7.14	14.19	11.52	28.71	17.19	37.76	38.28	76.04	18.81	36.00	17.19

		Antenna port WA						**Antenna port WC**					
Tested	Duty	Power	Cable	Atten.	Antenna	Result		Power	Cable	Atten.	Antenna	Result	
Frequency	Factor	Meter Reading	Loss	Loss	Gain	Cond. Power	e.i.r.p.	Meter Reading	Loss	Loss	Gain	Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	0.02	-3.72	2.25	10.16	7.29	8.71	16.00	-3.87	2.25	10.16	7.29	8.56	15.85
5220	0.02	-3.77	2.26	10.16	7.29	8.67	15.96	-4.01	2.26	10.16	7.29	8.43	15.72
5240	0.02	-3.65	2.27	10.17	7.29	8.81	16.10	-3.97	2.27	10.17	7.29	8.49	15.78
5260	0.02	-3.62	2.27	10.17	7.29	8.84	16.13	-3.98	2.27	10.17	7.29	8.48	15.77
5300	0.02	-3.73	2.28	10.17	7.29	8.74	16.03	-4.10	2.28	10.17	7.29	8.37	15.66
5320	0.02	-3.87	2.29	10.17	7.29	8.61	15.90	-4.21	2.29	10.17	7.29	8.27	15.56
5500	0.02	-3.76	2.33	10.20	7.29	8.79	16.08	-4.00	2.33	10.20	7.29	8.55	15.84
5580	0.02	-4.13	2.34	10.19	7.29	8.42	15.71	-3.98	2.34	10.19	7.29	8.57	15.86
5700	0.02	-3.93	2.35	10.17	7.29	8.61	15.90	-3.92	2.35	10.17	7.29	8.62	15.91
5745	0.02	-4.01	2.35	10.17	7.29	8.53	15.82	-3.98	2.35	10.17	7.29	8.56	15.85
5785	0.02	-4.21	2.35	10.16	7.29	8.32	15.61	-3.90	2.35	10.16	7.29	8.63	15.92
5825	0.02	-4.06	2.36	10.16	7.29	8.48	15.77	-4.00	2.36	10.16	7.29	8.54	15.83

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

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

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 port			Result	Limit	Margin	Antenna port			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]
5190	-	36.197	3.95	3.49	7.45	8.72	22.68	13.96	21.18	18.71	39.89	16.01	29.97	13.96
5230	-	36.191	3.87	3.31	7.18	8.56	22.68	14.12	20.75	17.74	38.49	15.85	29.97	14.12
5270	40.129	36.127	3.92	3.21	7.13	8.53	22.68	14.15	20.99	17.22	38.21	15.82	29.97	14.15
5310	40.218	36.153	3.78	3.21	7.00	8.45	22.68	14.23	20.28	17.22	37.50	15.74	29.97	14.23
5510	39.755	36.200	3.73	3.48	7.21	8.58	22.68	14.10	20.00	18.62	38.62	15.87	29.97	14.10
5550	40.122	36.200	3.43	3.59	7.02	8.46	22.68	14.22	18.37	19.23	37.60	15.75	29.97	14.22
5670	39.834	36.158	3.48	3.46	6.93	8.41	22.68	14.27	18.62	18.54	37.16	15.70	29.97	14.27
5755	-	-	3.30	3.40	6.69	8.26	28.71	20.45	17.66	18.20	35.86	15.55	36.00	20.45
5795	-	-	3.18	3.48	6.67	8.24	28.71	20.47	17.06	18.66	35.72	15.53	36.00	20.47

		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]
5190	0.05	-5.01	0.80	10.13	7.29	5.97	13.26	-5.52	0.80	10.10	7.29	5.43	12.72
5230	0.05	-5.10	0.80	10.13	7.29	5.88	13.17	-5.75	0.80	10.10	7.29	5.20	12.49
5270	0.05	-5.05	0.80	10.13	7.29	5.93	13.22	-5.88	0.80	10.10	7.29	5.07	12.36
5310	0.05	-5.20	0.80	10.13	7.29	5.78	13.07	-5.88	0.80	10.10	7.29	5.07	12.36
5510	0.05	-5.27	0.80	10.14	7.29	5.72	13.01	-5.55	0.80	10.11	7.29	5.41	12.70
5550	0.05	-5.64	0.80	10.14	7.29	5.35	12.64	-5.40	0.80	10.10	7.29	5.55	12.84
5670	0.05	-5.57	0.80	10.13	7.29	5.41	12.70	-5.55	0.80	10.09	7.29	5.39	12.68
5755	0.05	-5.79	0.80	10.12	7.29	5.18	12.47	-5.62	0.80	10.08	7.29	5.31	12.60
5795	0.05	-5.94	0.80	10.12	7.29	5.03	12.32	-5.51	0.80	10.08	7.29	5.42	12.71

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

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

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 port			Result	Limit	Margin	Antenna port			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]
5190	-	36.143	3.78	3.46	7.24	8.60	22.68	14.08	20.28	18.54	38.81	15.89	29.97	14.08
5230	-	36.114	3.85	3.28	7.13	8.53	22.68	14.15	20.61	17.58	38.19	15.82	29.97	14.15
5270	39.569	36.114	3.93	3.14	7.07	8.49	22.68	14.19	21.04	16.83	37.86	15.78	29.97	14.19
5310	40.752	36.153	3.78	3.21	6.99	8.45	22.68	14.23	20.28	17.18	37.46	15.74	29.97	14.23
5510	39.731	36.208	3.56	3.31	6.87	8.37	22.68	14.31	19.05	17.74	36.80	15.66	29.97	14.31
5550	39.872	36.163	3.50	3.51	7.01	8.46	22.68	14.22	18.75	18.79	37.54	15.75	29.97	14.22
5670	39.902	36.171	3.33	3.47	6.79	8.32	22.68	14.36	17.82	18.58	36.40	15.61	29.97	14.36
5755	-	-	3.16	3.32	6.47	8.11	28.71	20.60	16.90	17.78	34.69	15.40	36.00	20.60
5795	-	-	3.22	3.43	6.65	8.23	28.71	20.48	17.26	18.37	35.62	15.52	36.00	20.48

		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]
5190	0.06	-5.21	0.80	10.13	7.29	5.78	13.07	-5.57	0.80	10.10	7.29	5.39	12.68
5230	0.06	-5.14	0.80	10.13	7.29	5.85	13.14	-5.80	0.80	10.10	7.29	5.16	12.45
5270	0.06	-5.05	0.80	10.13	7.29	5.94	13.23	-5.99	0.80	10.10	7.29	4.97	12.26
5310	0.06	-5.21	0.80	10.13	7.29	5.78	13.07	-5.90	0.80	10.10	7.29	5.06	12.35
5510	0.06	-5.49	0.80	10.14	7.29	5.51	12.80	-5.77	0.80	10.11	7.29	5.20	12.49
5550	0.06	-5.56	0.80	10.14	7.29	5.44	12.73	-5.51	0.80	10.10	7.29	5.45	12.74
5670	0.06	-5.77	0.80	10.13	7.29	5.22	12.51	-5.55	0.80	10.09	7.29	5.40	12.69
5755	0.06	-5.99	0.80	10.12	7.29	4.99	12.28	-5.73	0.80	10.08	7.29	5.21	12.50
5795	0.06	-5.90	0.80	10.12	7.29	5.08	12.37	-5.59	0.80	10.08	7.29	5.35	12.64

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

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

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 port			Result	Limit	Margin	Antenna port			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]
5210	-	76.229	2.62	2.49	5.11	7.09	22.68	15.59	14.06	13.34	27.40	14.38	29.97	15.59
5290	80.979	76.220	2.63	2.28	4.91	6.91	22.68	15.77	14.09	12.19	26.28	14.20	29.97	15.77
5530	81.100	76.184	2.45	2.41	4.86	6.87	22.68	15.81	13.12	12.91	26.03	14.16	29.97	15.81
5610	82.712	76.028	2.22	2.40	4.63	6.65	22.68	16.03	11.91	12.88	24.79	13.94	29.97	16.03
5775	-	-	2.21	2.37	4.58	6.61	28.71	22.10	11.86	12.71	24.56	13.90	36.00	22.10

	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]
5210	0.11	-6.85	0.80	10.13	7.29	4.19	11.48	-7.05	0.80	10.10	7.29	3.96	11.25
5290	0.11	-6.84	0.80	10.13	7.29	4.20	11.49	-7.44	0.80	10.10	7.29	3.57	10.86
5530	0.11	-7.16	0.80	10.14	7.29	3.89	11.18	-7.20	0.80	10.11	7.29	3.82	11.11
5610	0.11	-7.57	0.80	10.13	7.29	3.47	10.76	-7.20	0.80	10.10	7.29	3.81	11.10
5775	0.11	-7.58	0.80	10.12	7.29	3.45	10.74	-7.24	0.80	10.08	7.29	3.75	11.04

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

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11155194H
Date	February 8, 2016
Temperature / Humidity	23deg. C / 40 % RH
Engineer	Kazuya Yoshioka
Mode	Tx

5180 MHz

mode	Rate	Antenna port WA Reading Average		Antenna port WC Reading Average		Total Reading Power		Remark
	[Mbps]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]
11a	6	9.6	9.12	9.5	8.91	12.56	18.03	*
	9	9.3	8.51	9.2	8.32	12.26	16.83	
	12	9.4	8.71	9.2	8.32	12.31	17.03	
	18	9.5	8.91	9.3	8.51	12.41	17.42	
	24	9.5	8.91	9.3	8.51	12.41	17.42	
	36	9.2	8.32	9.1	8.13	12.16	16.45	
	48	9.5	8.91	9.4	8.71	12.46	17.62	
	54	9.4	8.71	9.2	8.32	12.31	17.03	

*: Worst Rate

*1)The test was conducted by the use of Gate function.

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11155194H
Date	February 8, 2016
Temperature / Humidity	23deg. C / 40 % RH
Engineer	Kazuya Yoshioka
Mode	Tx

5180 MHz

mode	MCS Number	Antenna port WA Reading Average		Antenna port WC Reading Average		Total Reading Power		Remark
		[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
11n-20	0	9.7	9.33	9.6	9.12	12.66	18.45	*
	1	9.6	9.12	9.5	8.91	12.56	18.03	
	2	9.5	8.91	9.4	8.71	12.46	17.62	
	3	9.7	9.33	9.3	8.51	12.51	17.84	
	4	9.7	9.33	9.4	8.71	12.56	18.04	
	5	9.6	9.12	9.3	8.51	12.46	17.63	
	6	9.6	9.12	9.3	8.51	12.46	17.63	
	7	9.7	9.33	9.4	8.71	12.56	18.04	
	8	9.7	9.33	9.4	8.71	12.56	18.04	
	9	9.7	9.33	9.2	8.32	12.47	17.65	
	10	9.7	9.33	9.3	8.51	12.51	17.84	
	11	9.7	9.33	9.3	8.51	12.51	17.84	
	12	9.7	9.33	9.2	8.32	12.47	17.65	
	13	9.7	9.33	9.3	8.51	12.51	17.84	
	14	9.7	9.33	9.5	8.91	12.61	18.25	
	15	9.7	9.33	9.5	8.91	12.61	18.25	

*Worst MCS
*1)The test was conducted by the use of Gate function.
All comparison were carried out on same frequency and measurement factors.

5180 MHz

mode	MCS Number	Antenna port WA Reading Average		Antenna port WC Reading Average		Total Reading Power		Remark
		[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
11ac-20 1TX	0	9.7	9.33	9.3	8.51	12.51	17.84	*
	1	9.6	9.12	9.3	8.51	12.46	17.63	
	2	9.6	9.12	9.3	8.51	12.46	17.63	
	3	9.6	9.12	9.3	8.51	12.46	17.63	
	4	9.6	9.12	9.3	8.51	12.46	17.63	
	5	9.6	9.12	9.3	8.51	12.46	17.63	
	6	9.5	8.91	9.2	8.32	12.36	17.23	
	7	9.5	8.91	9.2	8.32	12.36	17.23	
	8	9.5	8.91	9.5	8.91	12.51	17.83	
11ac-20 2TX	0	9.7	9.33	9.2	8.32	12.47	17.65	
	1	9.7	9.33	9.2	8.32	12.47	17.65	
	2	9.5	8.91	9.3	8.51	12.41	17.42	
	3	9.7	9.33	9.2	8.32	12.47	17.65	
	4	9.5	8.91	9.4	8.71	12.46	17.62	
	5	9.5	8.91	9.5	8.91	12.51	17.83	
	6	9.5	8.91	9.5	8.91	12.51	17.83	
	7	9.6	9.12	9.3	8.51	12.46	17.63	
	8	9.5	8.91	9.4	8.71	12.46	17.62	

*Worst MCS
*1)The test was conducted by the use of Gate function.
All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11155194H
Date	February 8, 2016
Temperature / Humidity	23deg. C / 40 % RH
Engineer	Kazuya Yoshioka
Mode	Tx

5190 MHz

mode	MCS Number	Antenna port WA Reading Average		Antenna port WC Reading Average		Total Reading Power		Remark
		[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
11n-40	0	5.7	3.72	5.4	3.47	8.56	7.18	*
	1	5.6	3.63	5.4	3.47	8.51	7.10	
	2	5.5	3.55	5.2	3.31	8.36	6.86	
	3	5.6	3.63	5.2	3.31	8.41	6.94	
	4	5.7	3.72	5.3	3.39	8.51	7.10	
	5	5.6	3.63	5.4	3.47	8.51	7.10	
	6	5.5	3.55	5.4	3.47	8.46	7.02	
	7	5.5	3.55	5.4	3.47	8.46	7.02	
	8	5.4	3.47	5.2	3.31	8.31	6.78	
	9	5.3	3.39	5.2	3.31	8.26	6.70	
	10	5.4	3.47	5.2	3.31	8.31	6.78	
	11	5.4	3.47	5.4	3.47	8.41	6.93	
	12	5.5	3.55	5.4	3.47	8.46	7.02	
	13	5.5	3.55	5.4	3.47	8.46	7.02	
	14	5.5	3.55	5.4	3.47	8.46	7.02	
	15	5.6	3.63	5.4	3.47	8.51	7.10	

*Worst MCS

*1)The test was conducted by the use of Gate function.

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11155194H
Date	February 8, 2016
Temperature / Humidity	23deg. C / 40 % RH
Engineer	Kazuya Yoshioka
Mode	Tx

5190 MHz

mode	MCS Number	Antenna port WA Reading Average		Antenna port WC Reading Average		Total Reading Power		Remark
		[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
11ac-40 1TX	0	5.4	3.47	5.3	3.39	8.36	6.86	*
	1	5.4	3.47	5.2	3.31	8.31	6.78	
	2	5.3	3.39	5.1	3.24	8.21	6.62	
	3	5.3	3.39	5.3	3.39	8.31	6.78	
	4	5.3	3.39	5.3	3.39	8.31	6.78	
	5	5.4	3.47	5.2	3.31	8.31	6.78	
	6	5.3	3.39	5.3	3.39	8.31	6.78	
	7	5.4	3.47	5.2	3.31	8.31	6.78	
	8	5.3	3.39	5.3	3.39	8.31	6.78	
	9	5.3	3.39	5.3	3.39	8.31	6.78	
11ac-40 2TX	0	5.3	3.39	5.1	3.24	8.21	6.62	
	1	5.3	3.39	5.2	3.31	8.26	6.70	
	2	5.3	3.39	5.3	3.39	8.31	6.78	
	3	5.3	3.39	5.3	3.39	8.31	6.78	
	4	5.3	3.39	5.3	3.39	8.31	6.78	
	5	5.3	3.39	5.3	3.39	8.31	6.78	
	6	5.3	3.39	5.3	3.39	8.31	6.78	
	7	5.4	3.47	5.2	3.31	8.31	6.78	
	8	5.3	3.39	5.3	3.39	8.31	6.78	
	9	5.3	3.39	5.3	3.39	8.31	6.78	

*Worst MCS

*1)The test was conducted by the use of Gate function.

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11155194H
Date	February 8, 2016
Temperature / Humidity	23deg. C / 40 % RH
Engineer	Kazuya Yoshioka
Mode	Tx

5210 MHz

mode	MCS Number	Antenna port WA Reading Average		Antenna port WC Reading Average		Total Reading Power		Remark
		[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
11ac-80 1TX	0	4.1	2.57	3.9	2.45	7.01	5.03	*
	1	4.1	2.57	3.6	2.29	6.87	4.86	
	2	4.0	2.51	3.6	2.29	6.81	4.80	
	3	3.7	2.34	3.6	2.29	6.66	4.64	
	4	3.9	2.45	3.5	2.24	6.71	4.69	
	5	4.0	2.51	3.5	2.24	6.77	4.75	
	6	3.9	2.45	3.5	2.24	6.71	4.69	
	7	4.1	2.57	3.6	2.29	6.87	4.86	
	8	4.1	2.57	3.6	2.29	6.87	4.86	
	9	4.1	2.57	3.6	2.29	6.87	4.86	
11ac-80 2TX	0	4.1	2.57	3.6	2.29	6.87	4.86	
	1	4.1	2.57	3.6	2.29	6.87	4.86	
	2	4.1	2.57	3.8	2.40	6.96	4.97	
	3	4.1	2.57	3.8	2.40	6.96	4.97	
	4	4.1	2.57	3.8	2.40	6.96	4.97	
	5	4.1	2.57	3.8	2.40	6.96	4.97	
	6	4.1	2.57	3.8	2.40	6.96	4.97	
	7	4.1	2.57	3.8	2.40	6.96	4.97	
	8	4.1	2.57	3.8	2.40	6.96	4.97	
	9	4.1	2.57	3.7	2.34	6.91	4.91	

*Worst MCS

*1)The test was conducted by the use of Gate function.

All comparison were carried out on same frequency and measurement factors.

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 20, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

	Antenna port WA				**Antenna port WC**				**Antenna port WA+WC**			
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Result (Timed average) Antenna port WA	WC	Sum WA+WC	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[mW]	[mW]	[dBm]
5180	-3.26	2.25	10.16	9.15	-3.85	2.25	10.16	8.56	8.22	7.18	15.40	11.88
5220	-3.56	2.26	10.16	8.86	-3.87	2.26	10.16	8.55	7.69	7.16	14.85	11.72
5240	-3.42	2.27	10.17	9.02	-3.98	2.27	10.17	8.46	7.98	7.01	14.99	11.76
5260	-3.50	2.27	10.17	8.94	-3.97	2.27	10.17	8.47	7.83	7.03	14.87	11.72
5300	-3.56	2.28	10.17	8.89	-4.18	2.28	10.17	8.27	7.74	6.71	14.46	11.60
5320	-3.55	2.29	10.17	8.91	-4.18	2.29	10.17	8.28	7.78	6.73	14.51	11.62
5500	-3.56	2.33	10.20	8.97	-3.90	2.33	10.20	8.63	7.89	7.29	15.18	11.81
5580	-3.98	2.34	10.19	8.55	-3.97	2.34	10.19	8.56	7.16	7.18	14.34	11.57
5700	-3.91	2.35	10.17	8.61	-3.90	2.35	10.17	8.62	7.26	7.28	14.54	11.63
5745	-3.95	2.35	10.17	8.57	-3.93	2.35	10.17	8.59	7.19	7.23	14.42	11.59
5785	-4.34	2.35	10.16	8.17	-3.99	2.35	10.16	8.52	6.56	7.11	13.67	11.36
5825	-4.21	2.36	10.16	8.31	-4.08	2.36	10.16	8.44	6.78	6.98	13.76	11.39

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 20, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

	Antenna port WA				**Antenna port WC**				**Antenna port WA+WC**			
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Result (Timed average) Antenna port		Sum WA+WC	
									WA	WC		
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[mW]	[mW]	[dBm]
5180	-3.25	2.25	10.16	9.16	-3.85	2.25	10.16	8.56	8.24	7.18	15.42	11.88
5220	-3.55	2.26	10.16	8.87	-3.86	2.26	10.16	8.56	7.71	7.18	14.89	11.73
5240	-3.44	2.27	10.17	9.00	-3.98	2.27	10.17	8.46	7.94	7.01	14.96	11.75
5260	-3.55	2.27	10.17	8.89	-3.93	2.27	10.17	8.51	7.74	7.10	14.84	11.71
5300	-3.66	2.28	10.17	8.79	-4.02	2.28	10.17	8.43	7.57	6.97	14.53	11.62
5320	-3.57	2.29	10.17	8.89	-4.17	2.29	10.17	8.29	7.74	6.75	14.49	11.61
5500	-3.54	2.33	10.20	8.99	-3.96	2.33	10.20	8.57	7.93	7.19	15.12	11.80
5580	-4.00	2.34	10.19	8.53	-3.97	2.34	10.19	8.56	7.13	7.18	14.31	11.56
5700	-3.99	2.35	10.17	8.53	-3.82	2.35	10.17	8.70	7.13	7.41	14.54	11.63
5745	-3.98	2.35	10.17	8.54	-3.93	2.35	10.17	8.59	7.14	7.23	14.37	11.58
5785	-4.18	2.35	10.16	8.33	-3.95	2.35	10.16	8.56	6.81	7.18	13.99	11.46
5825	-4.06	2.36	10.16	8.46	-4.01	2.36	10.16	8.51	7.01	7.10	14.11	11.50

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 20, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

	Antenna port WA				**Antenna port WC**				**Antenna port WA+WC**			
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Result (Timed average) Antenna port		Sum WA+WC	
									WA	WC		
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[mW]	[mW]	[dBm]
5180	-3.72	2.25	10.16	8.69	-3.87	2.25	10.16	8.54	7.40	7.14	14.54	11.63
5220	-3.77	2.26	10.16	8.65	-4.01	2.26	10.16	8.41	7.33	6.93	14.26	11.54
5240	-3.65	2.27	10.17	8.79	-3.97	2.27	10.17	8.47	7.57	7.03	14.60	11.64
5260	-3.62	2.27	10.17	8.82	-3.98	2.27	10.17	8.46	7.62	7.01	14.64	11.65
5300	-3.73	2.28	10.17	8.72	-4.10	2.28	10.17	8.35	7.45	6.84	14.29	11.55
5320	-3.87	2.29	10.17	8.59	-4.21	2.29	10.17	8.25	7.23	6.68	13.91	11.43
5500	-3.76	2.33	10.20	8.77	-4.00	2.33	10.20	8.53	7.53	7.13	14.66	11.66
5580	-4.13	2.34	10.19	8.40	-3.98	2.34	10.19	8.55	6.92	7.16	14.08	11.49
5700	-3.93	2.35	10.17	8.59	-3.92	2.35	10.17	8.60	7.23	7.24	14.47	11.61
5745	-4.01	2.35	10.17	8.51	-3.98	2.35	10.17	8.54	7.10	7.14	14.24	11.54
5785	-4.21	2.35	10.16	8.30	-3.90	2.35	10.16	8.61	6.76	7.26	14.02	11.47
5825	-4.06	2.36	10.16	8.46	-4.00	2.36	10.16	8.52	7.01	7.11	14.13	11.50

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

	Antenna port WA				**Antenna port WC**				**Antenna port WA+WC**			
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Result (Timed average) Antenna port		Sum WA+WC	
									WA	WC		
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[mW]	[mW]	[dBm]
5190	-5.01	0.80	10.13	5.92	-5.52	0.80	10.10	5.38	3.91	3.45	7.36	8.67
5230	-5.10	0.80	10.13	5.83	-5.75	0.80	10.10	5.15	3.83	3.27	7.10	8.51
5270	-5.05	0.80	10.13	5.88	-5.88	0.80	10.10	5.02	3.87	3.18	7.05	8.48
5310	-5.20	0.80	10.13	5.73	-5.88	0.80	10.10	5.02	3.74	3.18	6.92	8.40
5510	-5.27	0.80	10.14	5.67	-5.55	0.80	10.11	5.36	3.69	3.44	7.13	8.53
5550	-5.64	0.80	10.14	5.30	-5.40	0.80	10.10	5.50	3.39	3.55	6.94	8.41
5670	-5.57	0.80	10.13	5.36	-5.55	0.80	10.09	5.34	3.44	3.42	6.86	8.36
5755	-5.79	0.80	10.12	5.13	-5.62	0.80	10.08	5.26	3.26	3.36	6.62	8.21
5795	-5.94	0.80	10.12	4.98	-5.51	0.80	10.08	5.37	3.15	3.44	6.59	8.19

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

	Antenna port WA				**Antenna port WC**				**Antenna port WA+WC**			
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Result (Timed average) Antenna port		Sum WA+WC	
									WA	WC		
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[mW]	[mW]	[dBm]
5190	-5.21	0.80	10.13	5.72	-5.57	0.80	10.10	5.33	3.73	3.41	7.14	8.54
5230	-5.14	0.80	10.13	5.79	-5.80	0.80	10.10	5.10	3.79	3.24	7.03	8.47
5270	-5.05	0.80	10.13	5.88	-5.99	0.80	10.10	4.91	3.87	3.10	6.97	8.43
5310	-5.21	0.80	10.13	5.72	-5.90	0.80	10.10	5.00	3.73	3.16	6.89	8.39
5510	-5.49	0.80	10.14	5.45	-5.77	0.80	10.11	5.14	3.51	3.27	6.77	8.31
5550	-5.56	0.80	10.14	5.38	-5.51	0.80	10.10	5.39	3.45	3.46	6.91	8.40
5670	-5.77	0.80	10.13	5.16	-5.55	0.80	10.09	5.34	3.28	3.42	6.70	8.26
5755	-5.99	0.80	10.12	4.93	-5.73	0.80	10.08	5.15	3.11	3.27	6.39	8.05
5795	-5.90	0.80	10.12	5.02	-5.59	0.80	10.08	5.29	3.18	3.38	6.56	8.17

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

	Antenna port WA				**Antenna port WC**				**Antenna port WA+WC**			
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	Result (Timed average) Antenna port WA	WC	Sum WA+WC	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[mW]	[mW]	[dBm]
5210	-6.85	0.80	10.13	4.08	-7.05	0.80	10.10	3.85	2.56	2.43	4.99	6.98
5290	-6.84	0.80	10.13	4.09	-7.44	0.80	10.10	3.46	2.56	2.22	4.78	6.80
5530	-7.16	0.80	10.14	3.78	-7.20	0.80	10.11	3.71	2.39	2.35	4.74	6.76
5610	-7.57	0.80	10.13	3.36	-7.20	0.80	10.10	3.70	2.17	2.34	4.51	6.54
5775	-7.58	0.80	10.12	3.34	-7.24	0.80	10.08	3.64	2.16	2.31	4.47	6.50

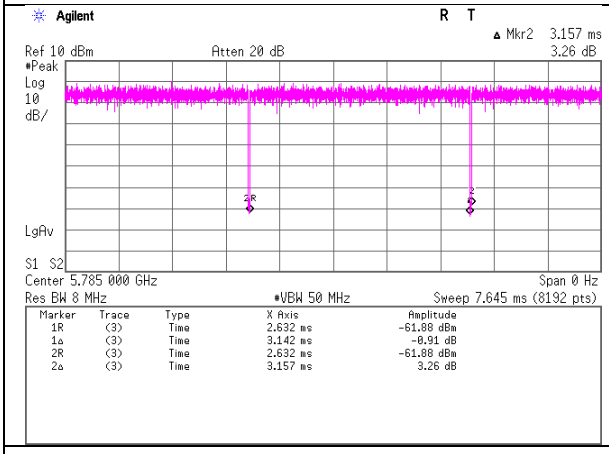
Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Burst rate confirmation

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx

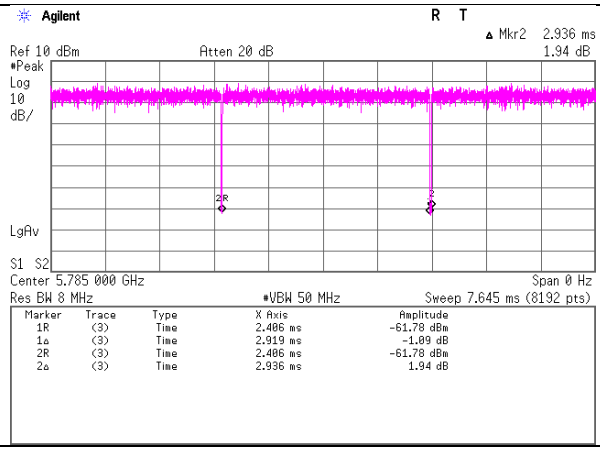
11a 6Mbps

Tx on / (Tx on + Tx off) =	**0.995**
Tx on / (Tx on + Tx off) * 100 =	**99.5 %**
Duty factor = 10 * log (3.157 / 3.142) =	**0.02 dB**



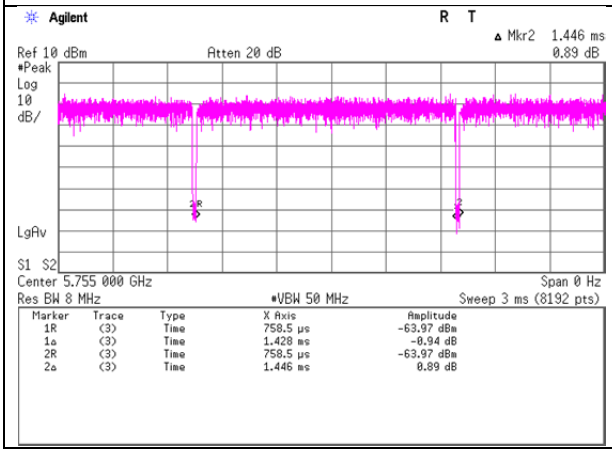
11n-20 MCS0

Tx on / (Tx on + Tx off) =	**0.994**
Tx on / (Tx on + Tx off) * 100 =	**99.4 %**
Duty factor = 10 * log (2.936 / 2.919) =	**0.03 dB**



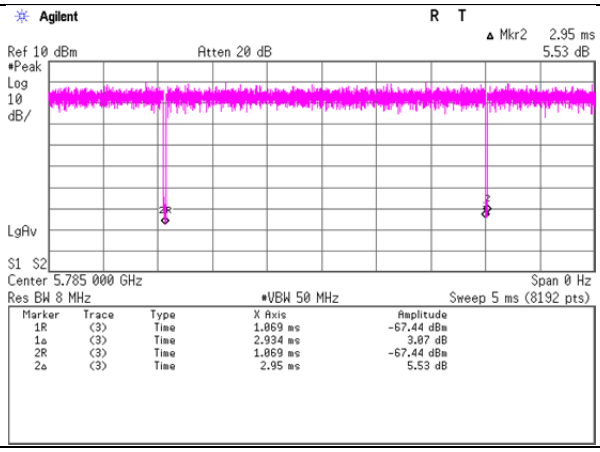
11n-40 MCS0

Tx on / (Tx on + Tx off) =	**0.988**
Tx on / (Tx on + Tx off) * 100 =	**98.8 %**
Duty factor = 10 * log (1.446 / 1.428) =	**0.05 dB**



11ac-20 MCS0

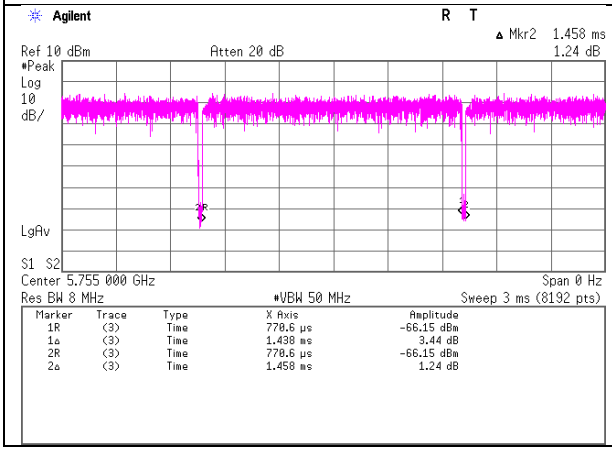
Tx on / (Tx on + Tx off) =	**0.995**
Tx on / (Tx on + Tx off) * 100 =	**99.5 %**
Duty factor = 10 * log (2.95 / 2.934) =	**0.02 dB**

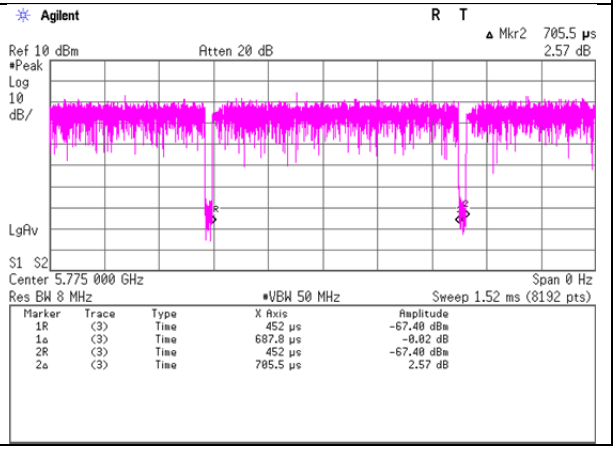


Burst rate confirmation

Test place	Ise EMC Lab. No.3 Measurement Room
Report No.	11155194H
Date	February 16, 2016
Temperature / Humidity	20deg. C / 34 % RH
Engineer	Takafumi Noguchi
Mode	Tx

11ac-40 MCS0		11ac-80 MCS0	
Tx on / (Tx on + Tx off) =	**0.986**	**Tx on / (Tx on + Tx off) =**	**0.975**
Tx on / (Tx on + Tx off) * 100 =	**98.6 %**	**Tx on / (Tx on + Tx off) * 100 =**	**97.5 %**
Duty factor = 10 * log (1.458 / 1.438) =	**0.06 dB**	**Duty factor = 10 * log (0.7055 / 0.6878) =**	**0.11 dB**





Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

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

Tested	PSD (Conducted)						PSD (e.i.r.p.)					
Frequency	Antenna port			Result	Limit	Margin	Antenna port			Result	Limit	Margin
	WA	WC	Sum				WA	WC	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	0.68	0.67	1.35	1.31	9.71	8.40	3.66	3.59	7.25	8.60	17.00	8.40
5220	0.65	0.62	1.27	1.03	9.71	8.68	3.49	3.31	6.80	8.32	17.00	8.68
5240	0.74	0.57	1.31	1.19	9.71	8.52	3.99	3.06	7.04	8.48	17.00	8.52
5260	0.68	0.63	1.31	1.16	9.71	8.55	3.63	3.37	7.00	8.45	17.00	8.55
5300	0.65	0.59	1.24	0.93	9.71	8.78	3.50	3.14	6.64	8.22	17.00	8.78
5320	0.65	0.59	1.24	0.94	9.71	8.77	3.46	3.19	6.65	8.23	17.00	8.77
5500	0.62	0.57	1.19	0.76	9.71	8.95	3.32	3.06	6.39	8.05	17.00	8.95
5580	0.60	0.60	1.20	0.80	9.71	8.91	3.21	3.22	6.43	8.09	17.00	8.91
5700	0.68	0.60	1.28	1.09	9.71	8.62	3.67	3.22	6.88	8.38	17.00	8.62
5745	0.32	0.30	0.61	-2.11	28.71	30.82	1.69	1.60	3.29	5.18	36.00	30.82
5785	0.31	0.32	0.63	-2.04	28.71	30.75	1.65	1.70	3.35	5.25	36.00	30.75
5825	0.31	0.31	0.62	-2.06	28.71	30.77	1.65	1.68	3.33	5.23	36.00	30.77

			Antenna port WA						**Antenna port WC**					
Tested	Duty	RBW	PSD	Cable	Atten.	Antenna	PSD Result		PSD	Cable	Atten.	Antenna	PSD Result	
Frequency	Factor	Correction Factor	Reading	Loss	Loss	Gain	Cond.	e.i.r.p.	Reading	Loss	Loss	Gain	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	0.02	0.00	-14.09	2.25	10.16	7.29	-1.66	5.63	-14.17	2.25	10.16	7.29	-1.74	5.55
5220	0.02	0.00	-14.30	2.26	10.16	7.29	-1.86	5.43	-14.53	2.26	10.16	7.29	-2.09	5.20
5240	0.02	0.00	-13.74	2.27	10.17	7.29	-1.28	6.01	-14.90	2.27	10.17	7.29	-2.44	4.85
5260	0.02	0.00	-14.15	2.27	10.17	7.29	-1.69	5.60	-14.47	2.27	10.17	7.29	-2.01	5.28
5300	0.02	0.00	-14.32	2.28	10.17	7.29	-1.85	5.44	-14.79	2.28	10.17	7.29	-2.32	4.97
5320	0.02	0.00	-14.38	2.29	10.17	7.29	-1.90	5.39	-14.74	2.29	10.17	7.29	-2.26	5.04
5500	0.02	0.00	-14.63	2.33	10.20	7.29	-2.08	5.21	-14.98	2.33	10.20	7.29	-2.43	4.86
5580	0.02	0.00	-14.77	2.34	10.19	7.29	-2.22	5.07	-14.76	2.34	10.19	7.29	-2.21	5.08
5700	0.02	0.00	-14.19	2.35	10.17	7.29	-1.65	5.64	-14.76	2.35	10.17	7.29	-2.22	5.08
5745	0.02	0.27	-17.81	2.35	10.17	7.29	-5.00	2.29	-18.05	2.35	10.17	7.29	-5.25	2.04
5785	0.02	0.27	-17.92	2.35	10.16	7.29	-5.12	2.17	-17.78	2.35	10.16	7.29	-4.98	2.31
5825	0.02	0.27	-17.92	2.36	10.16	7.29	-5.11	2.18	-17.84	2.36	10.16	7.29	-5.03	2.26

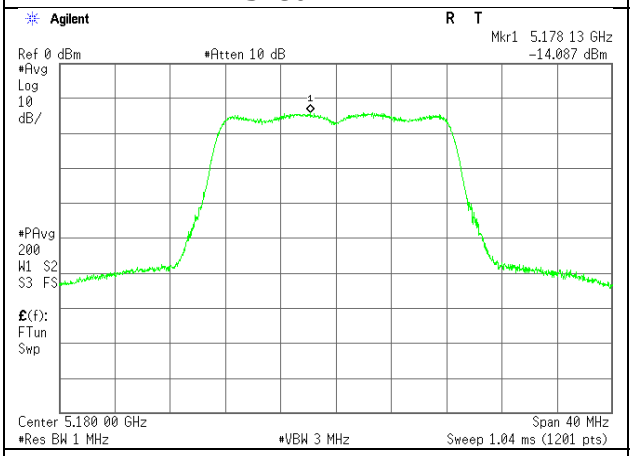
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty 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

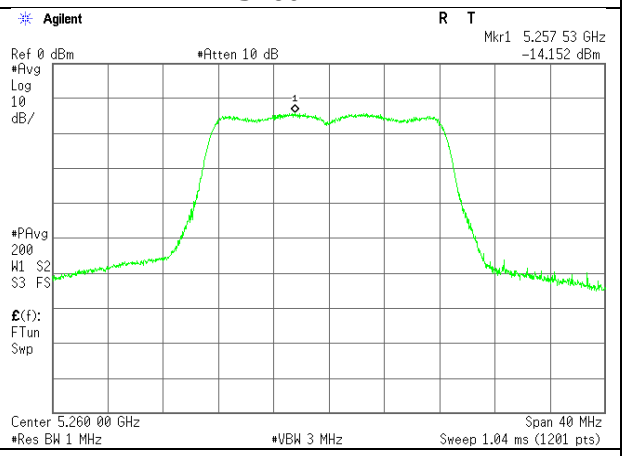
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

11a, Antenna port WA

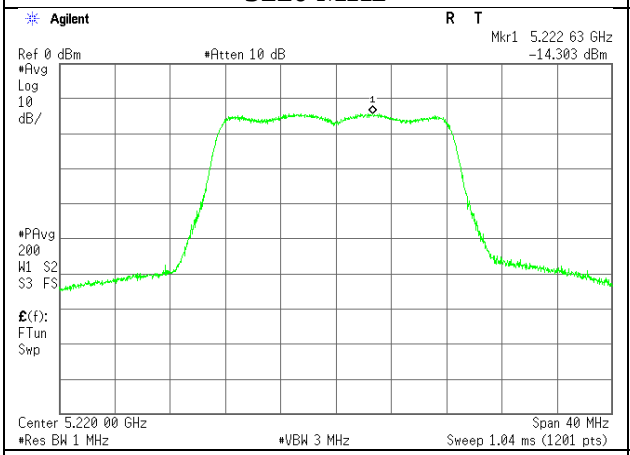
5180 MHz



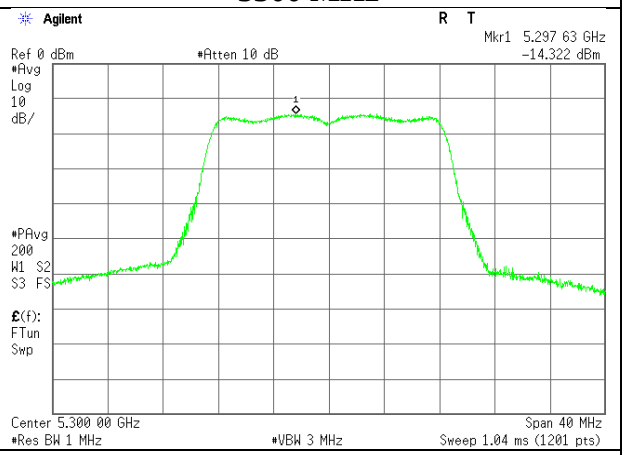
5260 MHz



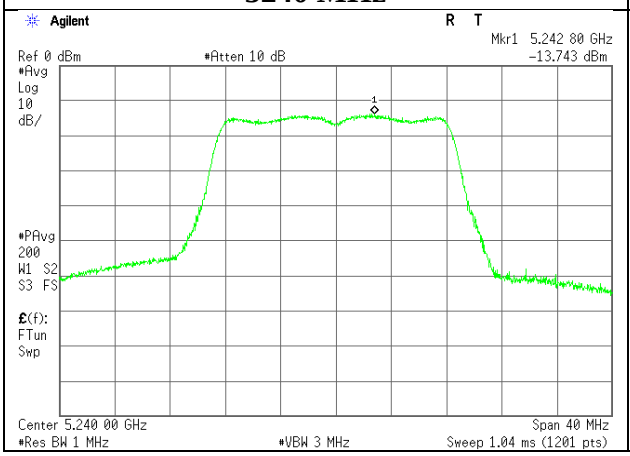
5220 MHz



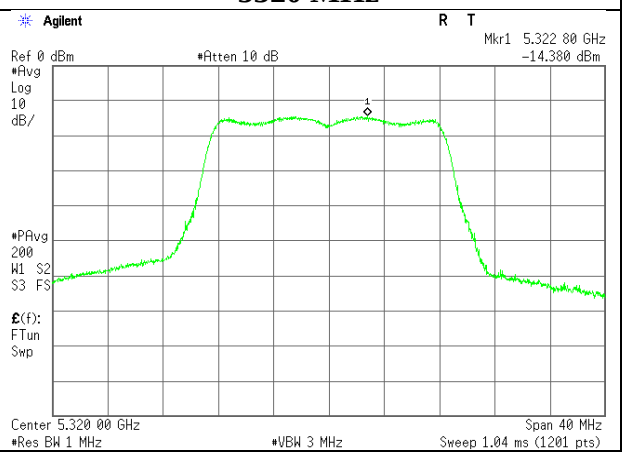
5300 MHz



5240 MHz



5320 MHz

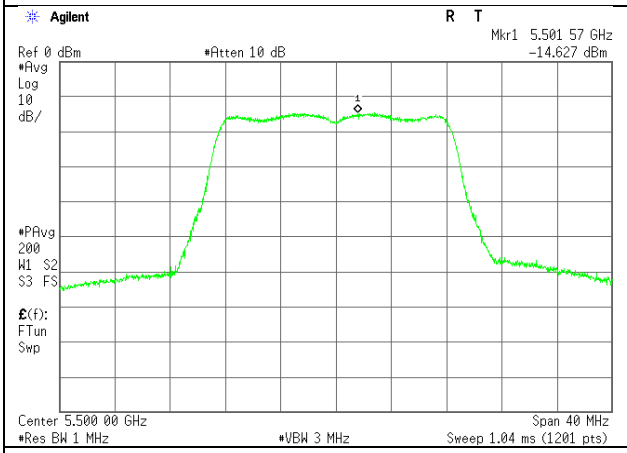


Maximum Power Spectral Density

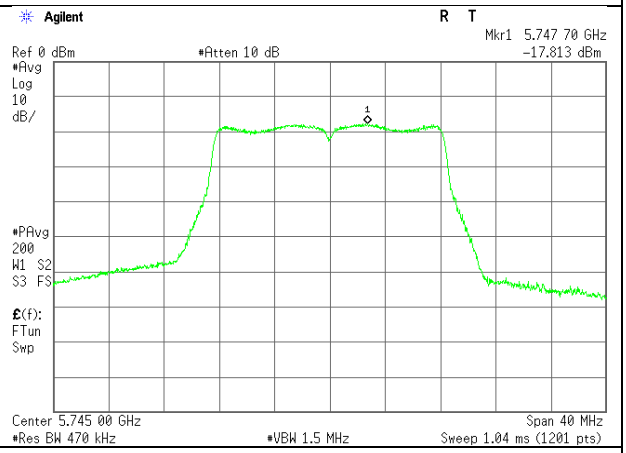
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

11a, Antenna port WA

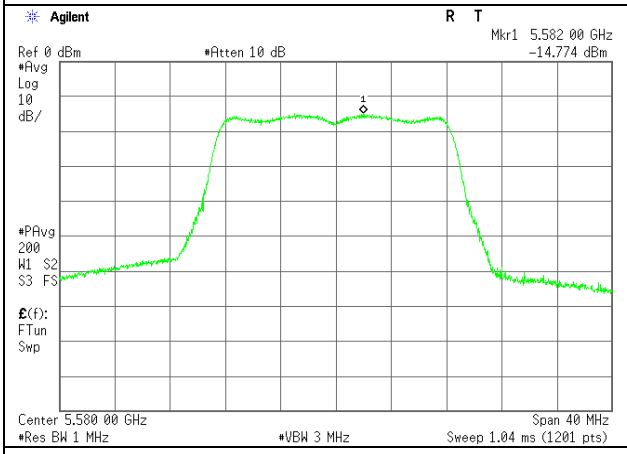
5500 MHz



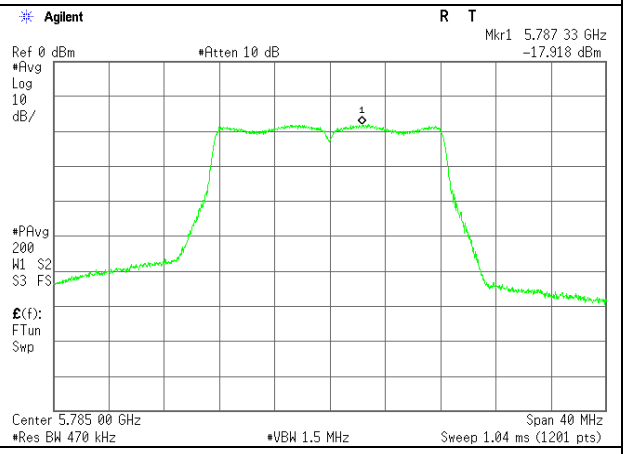
5745 MHz



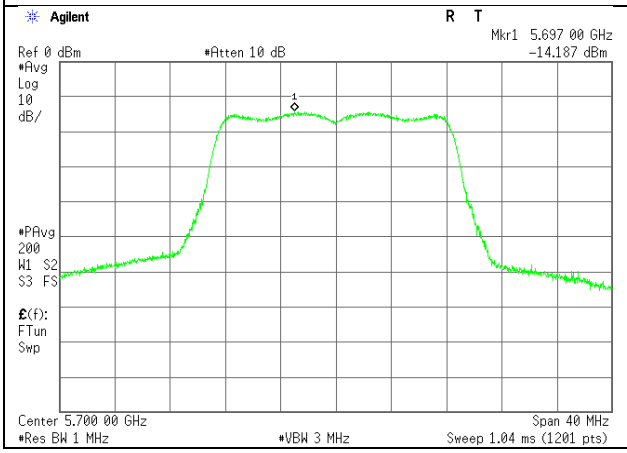
5580 MHz



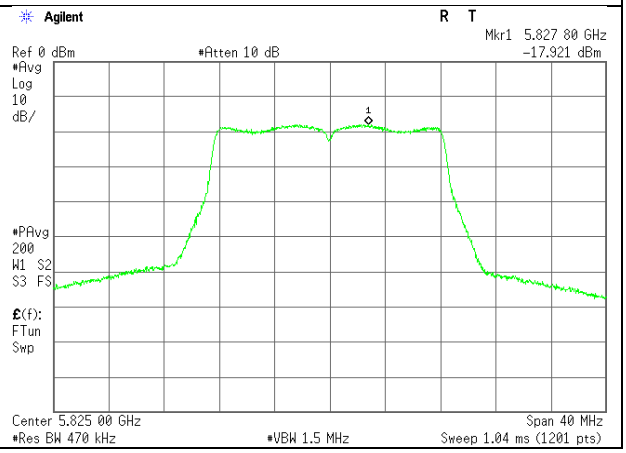
5785 MHz



5700 MHz



5825 MHz

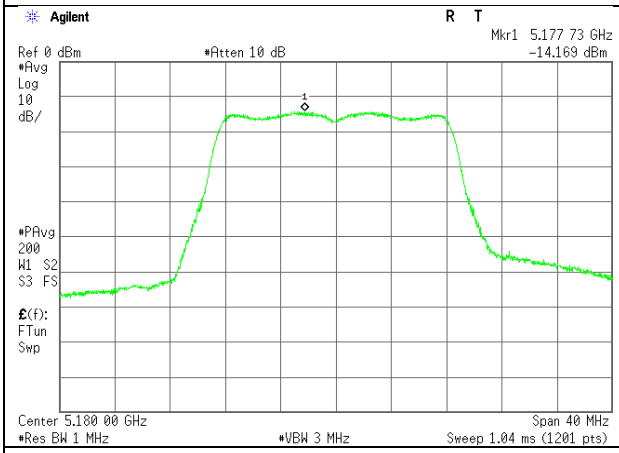


Maximum Power Spectral Density

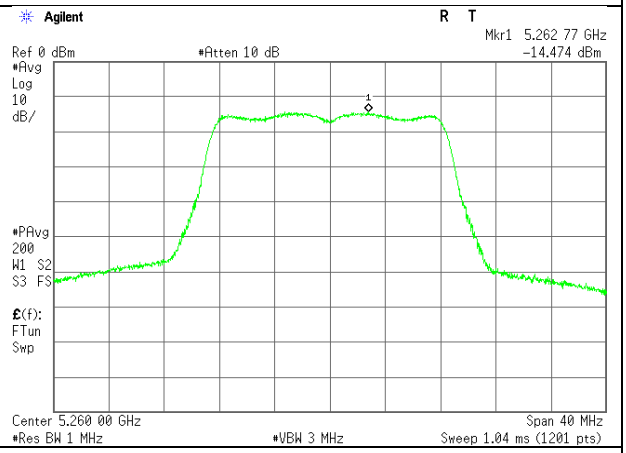
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

11a, Antenna port WC

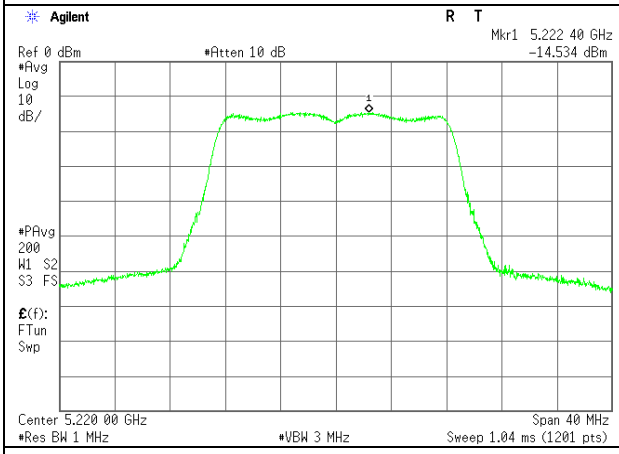
5180 MHz



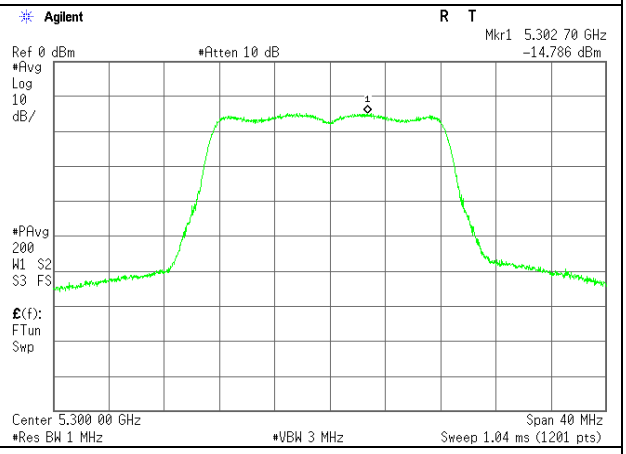
5260 MHz



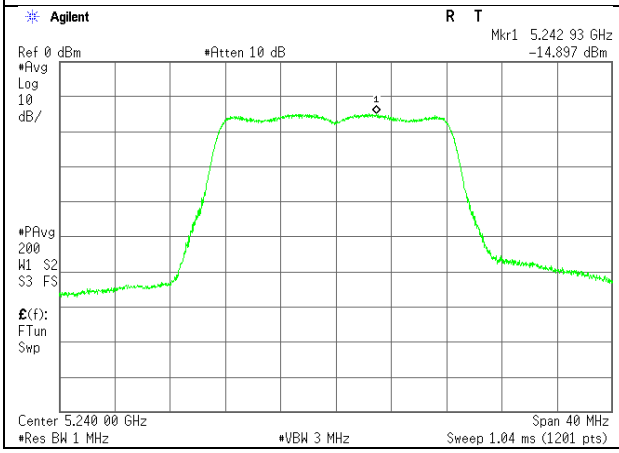
5220 MHz



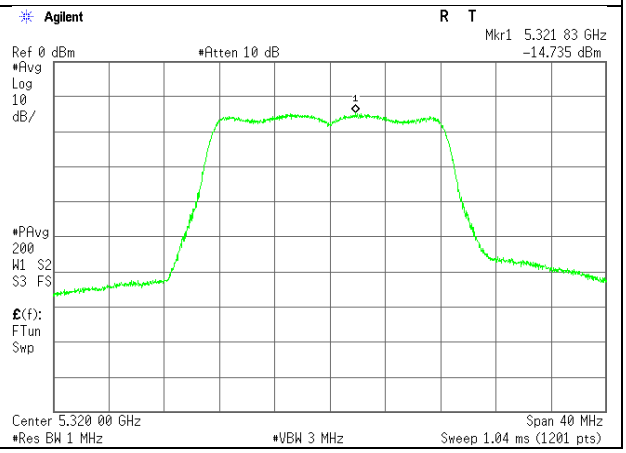
5300 MHz



5240 MHz



5320 MHz

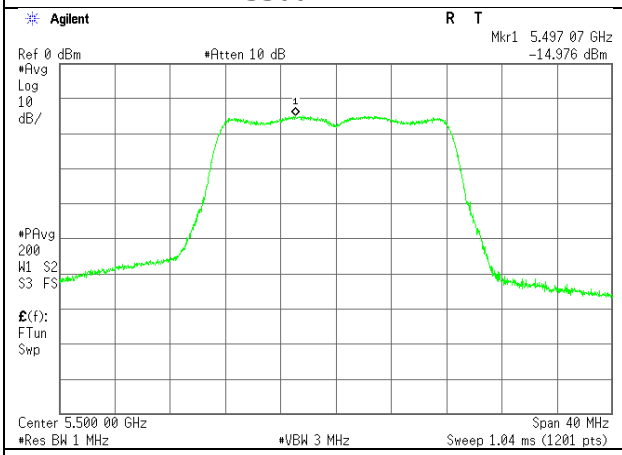


Maximum Power Spectral Density

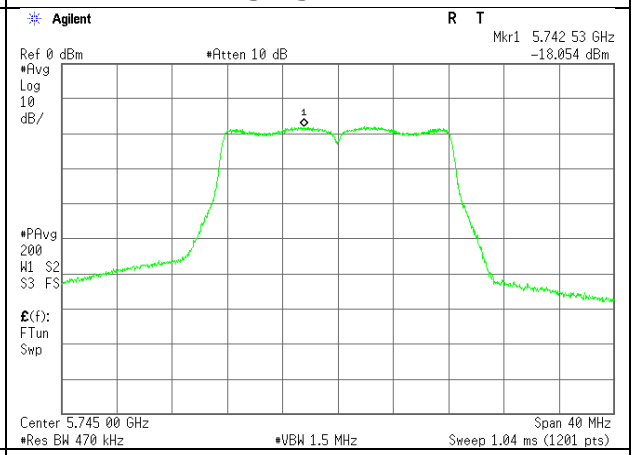
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a

11a, Antenna port WC

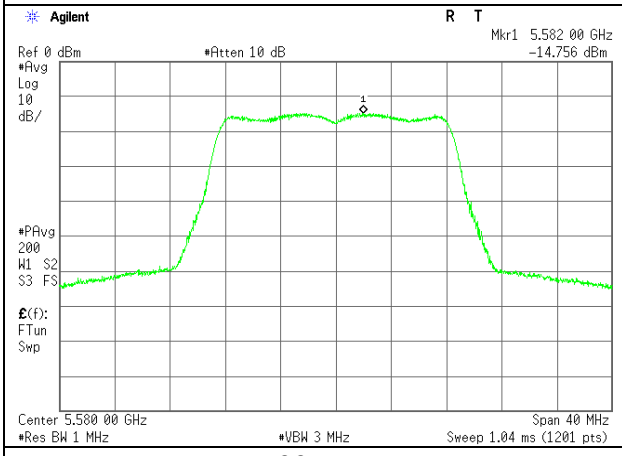
5500 MHz



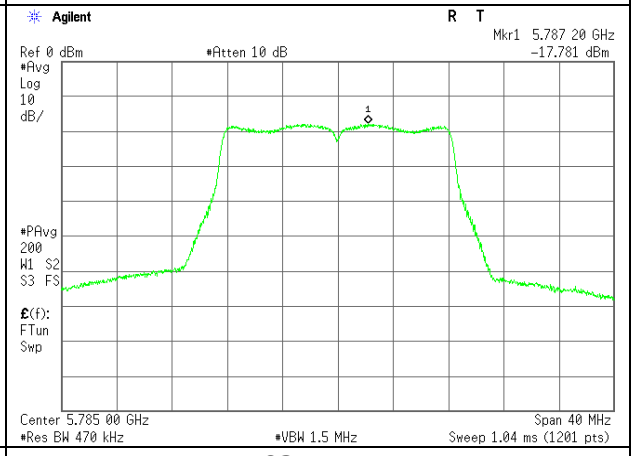
5745 MHz



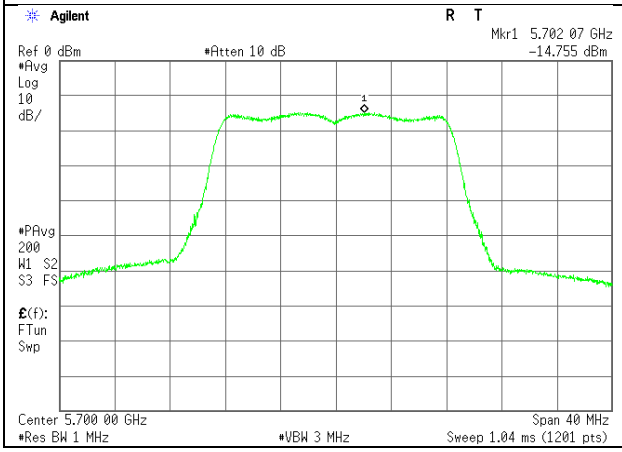
5580 MHz



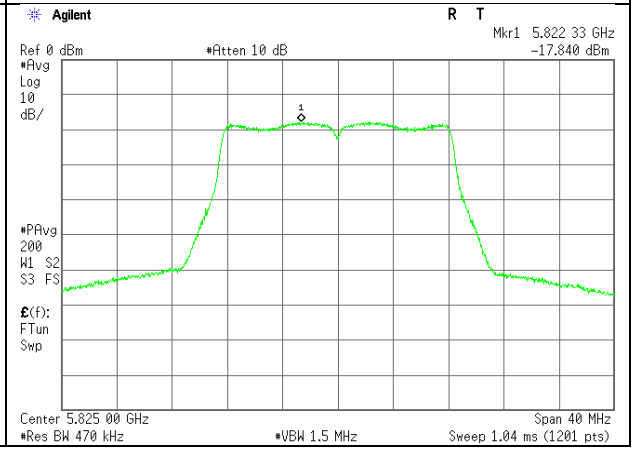
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
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 port			Result	Limit	Margin	Antenna port			Result	Limit	Margin
	WA	WC	Sum				WA	WC	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	0.61	0.65	1.26	1.02	9.71	8.69	3.28	3.49	6.77	8.31	17.00	8.69
5220	0.59	0.58	1.17	0.69	9.71	9.02	3.14	3.13	6.27	7.98	17.00	9.02
5240	0.62	0.57	1.20	0.77	9.71	8.94	3.34	3.06	6.40	8.06	17.00	8.94
5260	0.64	0.57	1.21	0.83	9.71	8.88	3.43	3.06	6.48	8.12	17.00	8.88
5300	0.62	0.57	1.19	0.76	9.71	8.95	3.31	3.07	6.38	8.05	17.00	8.95
5320	0.61	0.54	1.15	0.61	9.71	9.10	3.27	2.90	6.17	7.90	17.00	9.10
5500	0.56	0.59	1.15	0.62	9.71	9.09	3.02	3.17	6.19	7.91	17.00	9.09
5580	0.53	0.59	1.12	0.50	9.71	9.21	2.86	3.15	6.01	7.79	17.00	9.21
5700	0.64	0.57	1.21	0.84	9.71	8.87	3.44	3.06	6.50	8.13	17.00	8.87
5745	0.31	0.29	0.60	-2.24	28.71	30.95	1.64	1.56	3.20	5.05	36.00	30.95
5785	0.28	0.30	0.59	-2.31	28.71	31.02	1.52	1.62	3.14	4.98	36.00	31.02
5825	0.31	0.31	0.63	-2.03	28.71	30.74	1.68	1.67	3.36	5.26	36.00	30.74

			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	0.03	0.00	-14.57	2.25	10.16	7.29	-2.13	5.16	-14.31	2.25	10.16	7.29	-1.87	5.43
5220	0.03	0.00	-14.77	2.26	10.16	7.29	-2.32	4.98	-14.78	2.26	10.16	7.29	-2.33	4.96
5240	0.03	0.00	-14.52	2.27	10.17	7.29	-2.05	5.24	-14.90	2.27	10.17	7.29	-2.43	4.86
5260	0.03	0.00	-14.41	2.27	10.17	7.29	-1.94	5.35	-14.90	2.27	10.17	7.29	-2.43	4.86
5300	0.03	0.00	-14.57	2.28	10.17	7.29	-2.09	5.20	-14.90	2.28	10.17	7.29	-2.42	4.87
5320	0.03	0.00	-14.63	2.29	10.17	7.29	-2.14	5.15	-15.16	2.29	10.17	7.29	-2.67	4.62
5500	0.03	0.00	-15.05	2.33	10.20	7.29	-2.49	4.80	-14.85	2.33	10.20	7.29	-2.29	5.00
5580	0.03	0.00	-15.28	2.34	10.19	7.29	-2.72	4.57	-14.87	2.34	10.19	7.29	-2.31	4.98
5700	0.03	0.00	-14.48	2.35	10.17	7.29	-1.93	5.36	-14.98	2.35	10.17	7.29	-2.43	4.86
5745	0.03	0.27	-17.95	2.35	10.17	7.29	-5.13	2.16	-18.19	2.35	10.17	7.29	-5.37	1.92
5785	0.03	0.27	-18.27	2.35	10.16	7.29	-5.46	1.83	-18.00	2.35	10.16	7.29	-5.19	2.10
5825	0.03	0.27	-17.85	2.36	10.16	7.29	-5.03	2.26	-17.87	2.36	10.16	7.29	-5.05	2.24

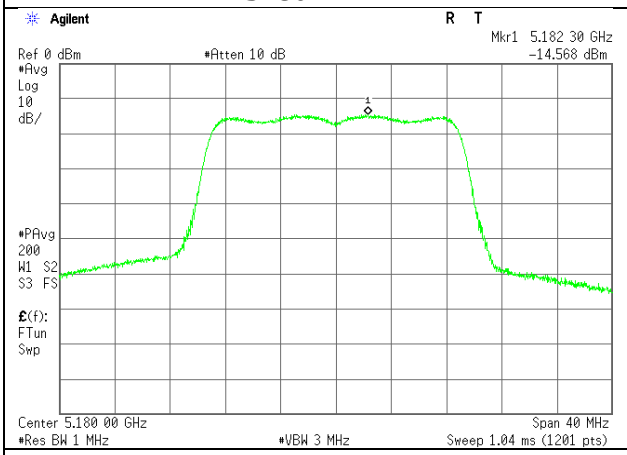
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty 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

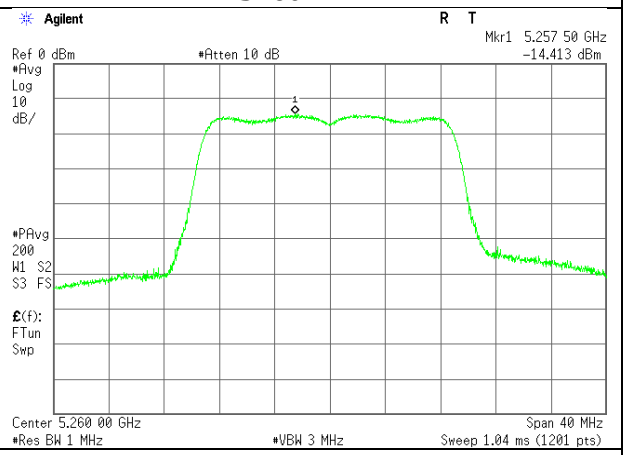
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

11n-20, Antenna port WA

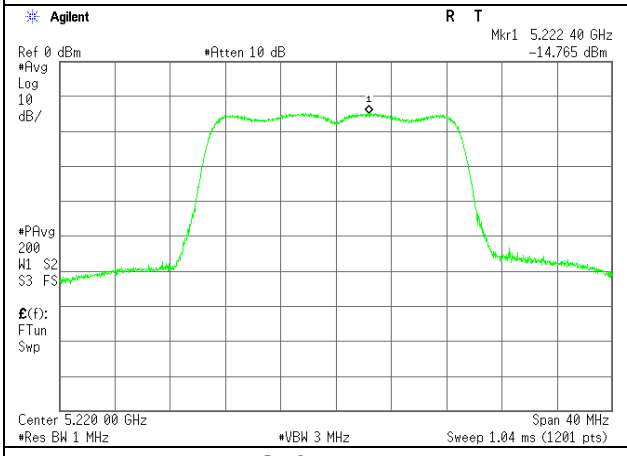
5180 MHz



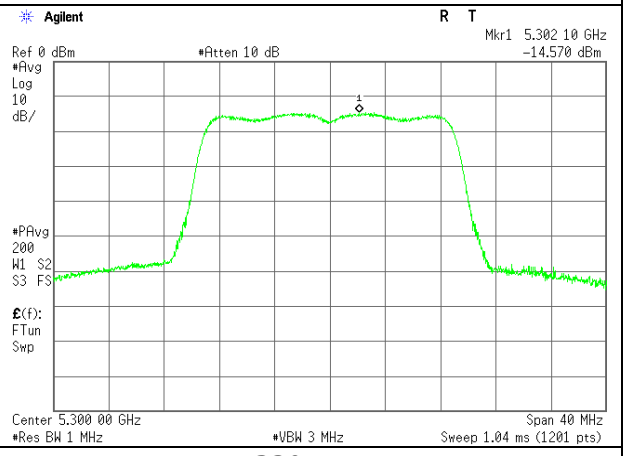
5260 MHz



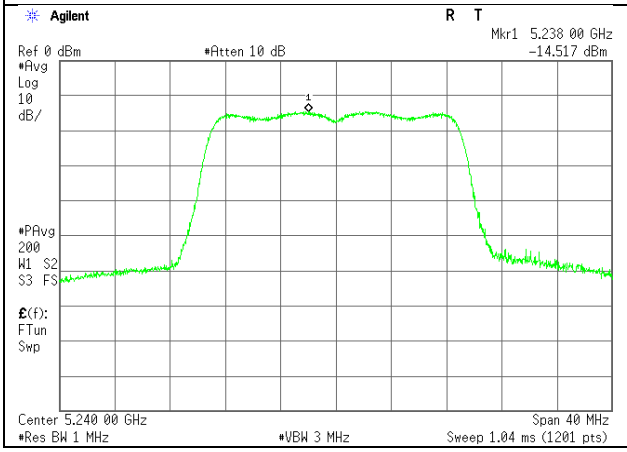
5220 MHz



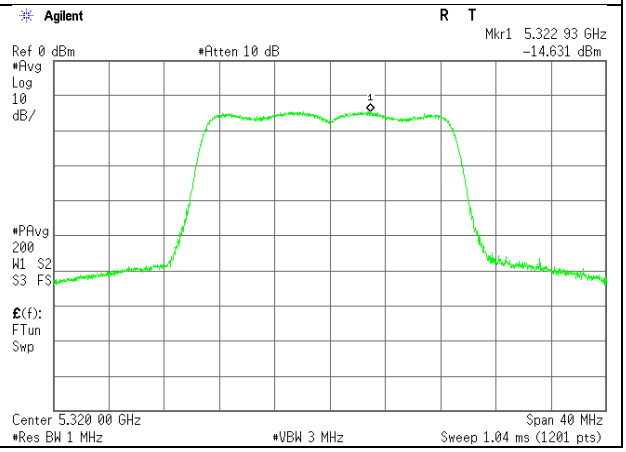
5300 MHz



5240 MHz



5320 MHz

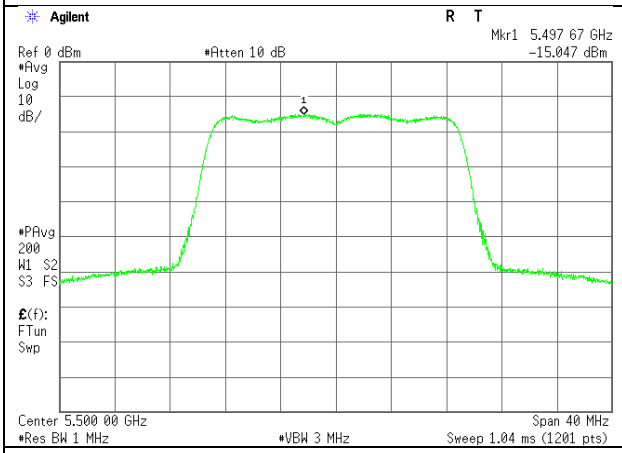


Maximum Power Spectral Density

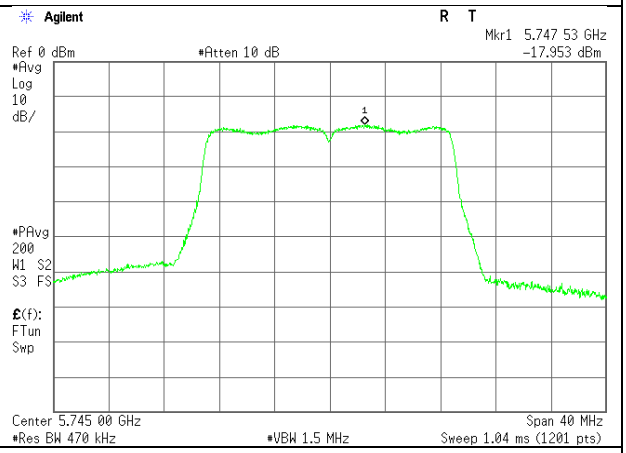
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

11n-20, Antenna port WA

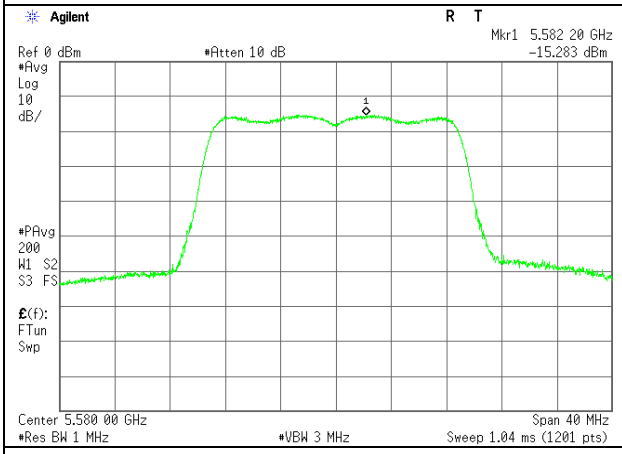
5500 MHz



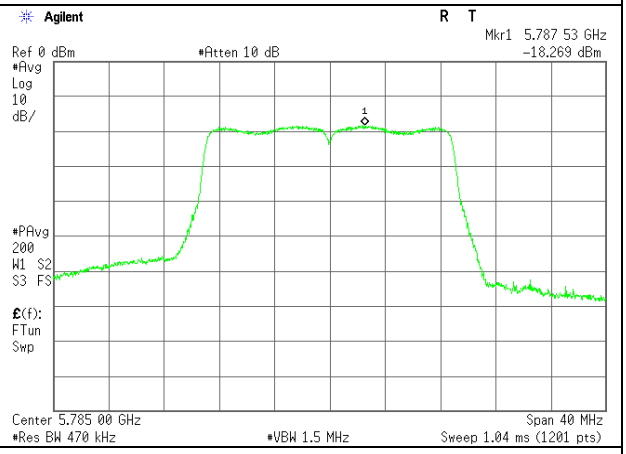
5745 MHz



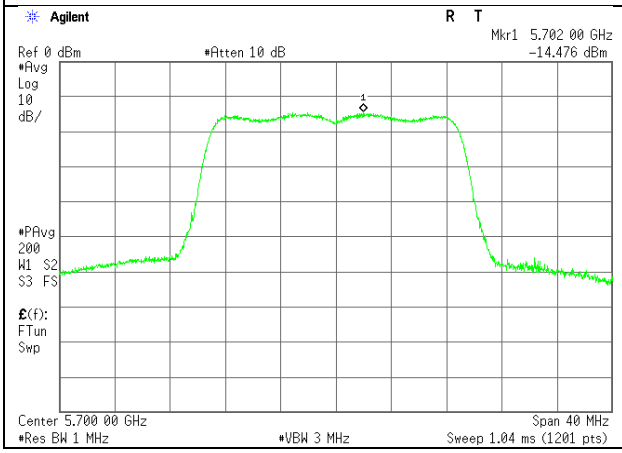
5580 MHz



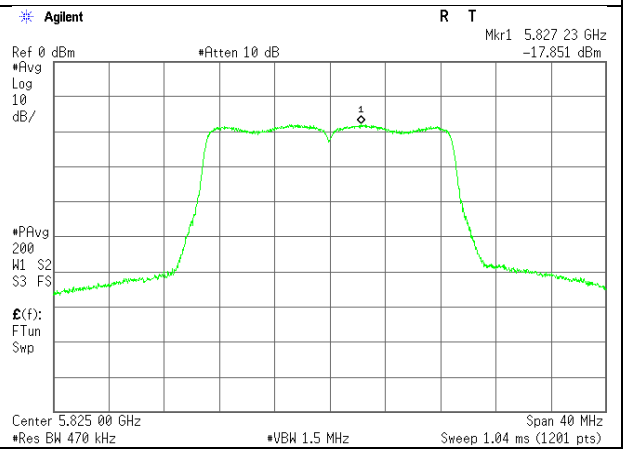
5785 MHz



5700 MHz



5825 MHz

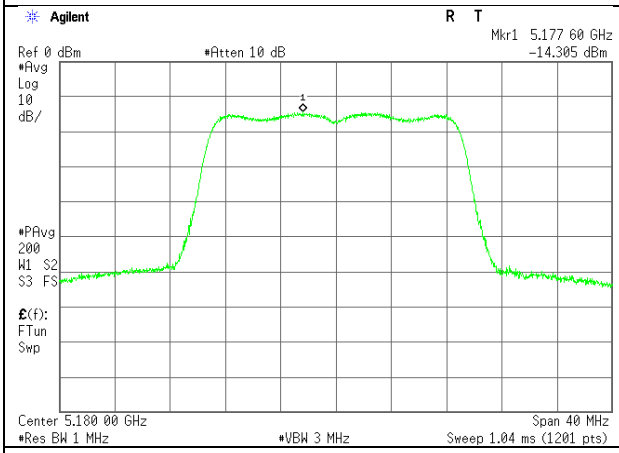


Maximum Power Spectral Density

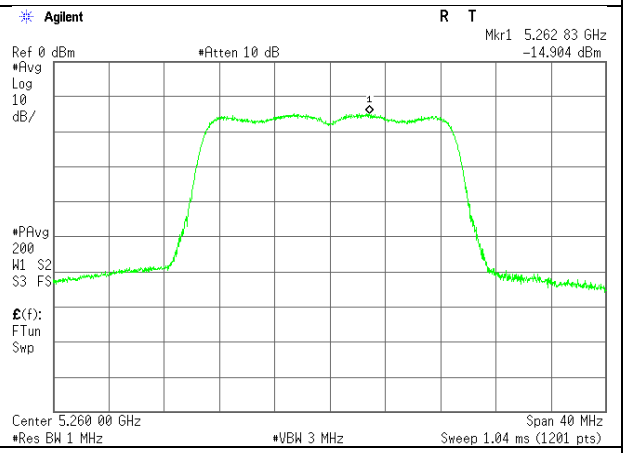
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

11n-20, Antenna port WC

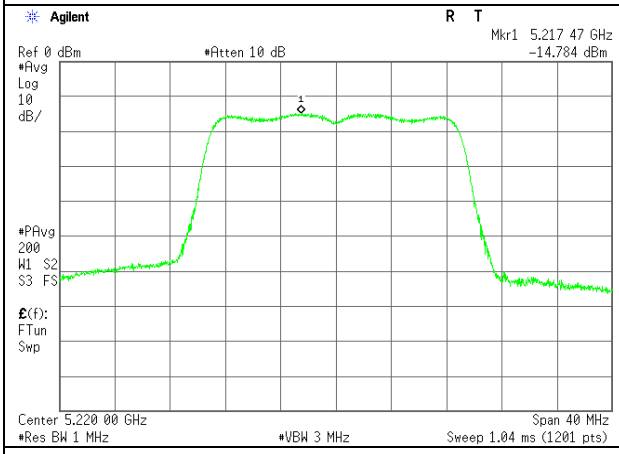
5180 MHz



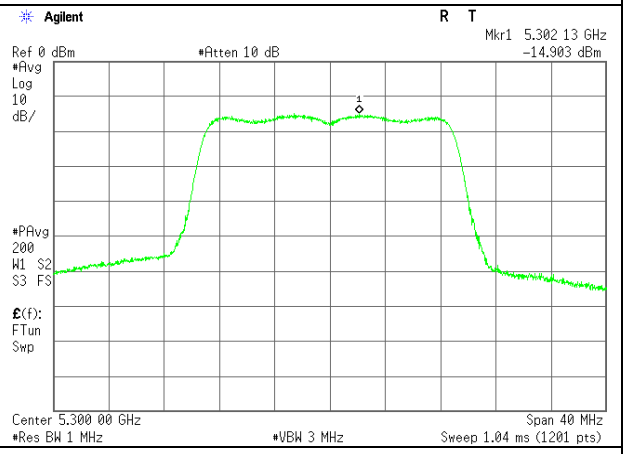
5260 MHz



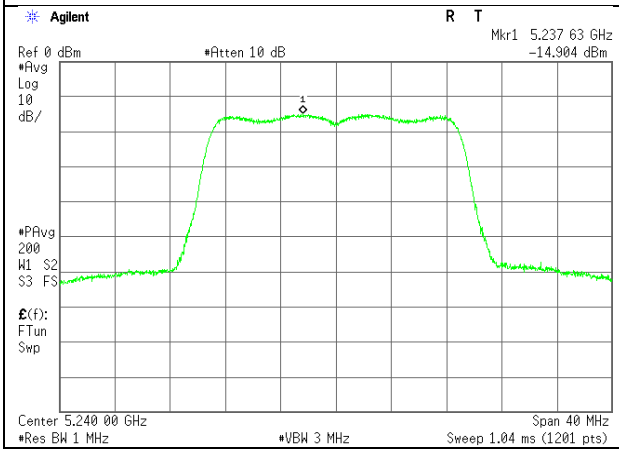
5220 MHz



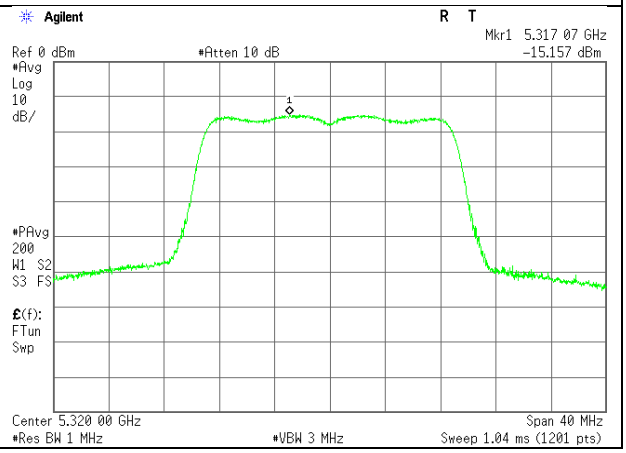
5300 MHz



5240 MHz



5320 MHz

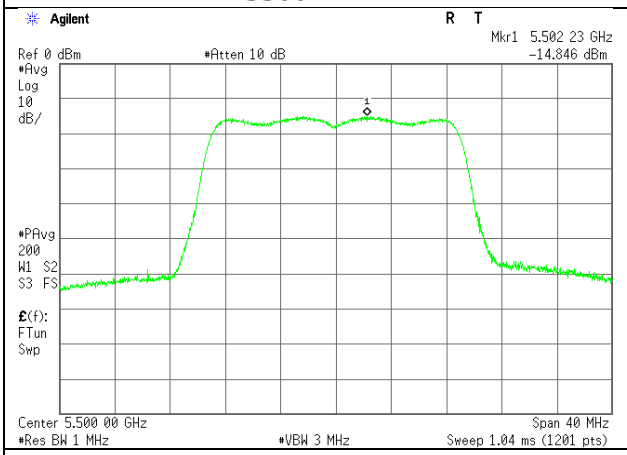


Maximum Power Spectral Density

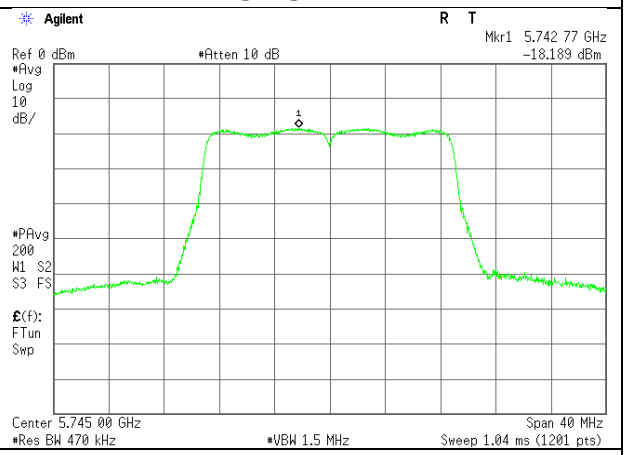
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

11n-20, Antenna port WC

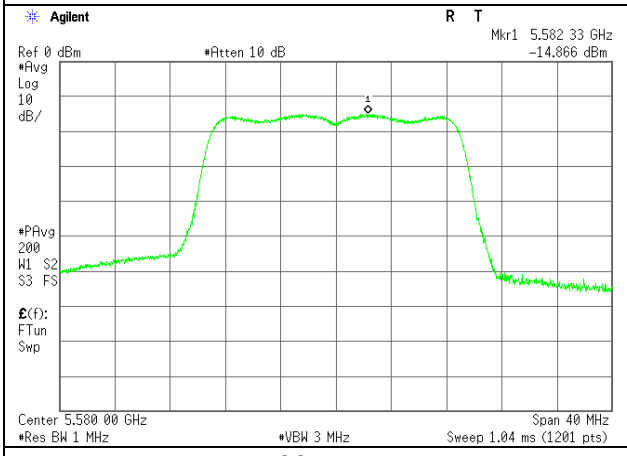
5500 MHz



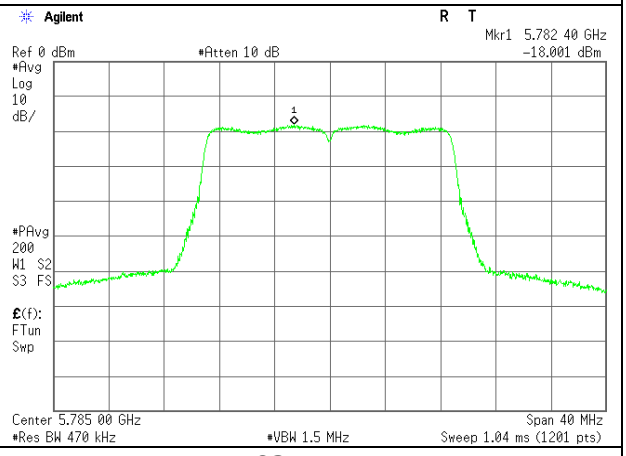
5745 MHz



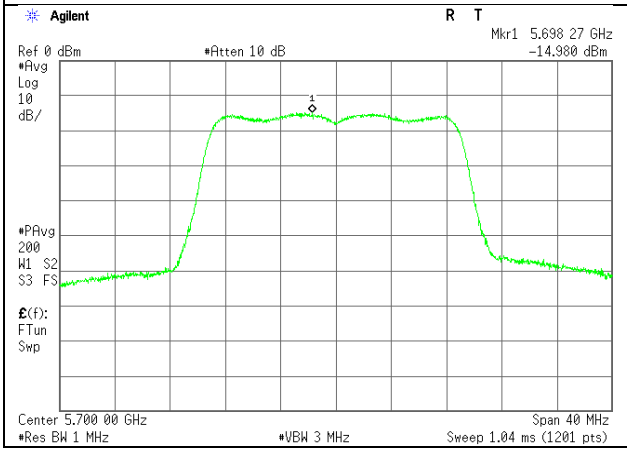
5580 MHz



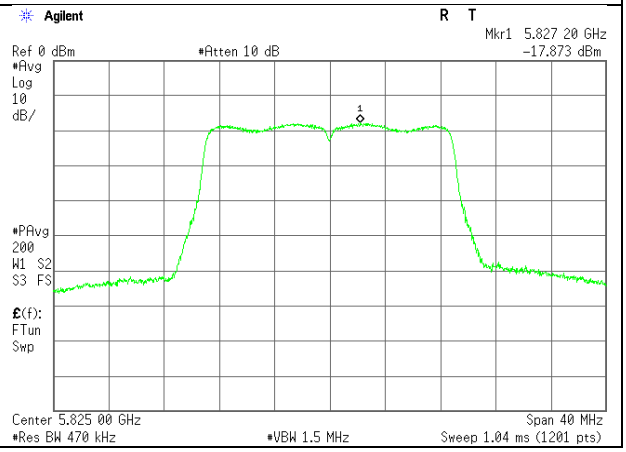
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % 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 port			Result	Limit	Margin	Antenna port			Result	Limit	Margin
	WA	WC	Sum				WA	WC	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	0.66	0.61	1.27	1.05	9.71	8.66	3.56	3.26	6.82	8.34	17.00	8.66
5220	0.65	0.59	1.24	0.93	9.71	8.78	3.47	3.17	6.64	8.22	17.00	8.78
5240	0.66	0.57	1.23	0.89	9.71	8.82	3.54	3.03	6.57	8.18	17.00	8.82
5260	0.67	0.63	1.31	1.17	9.71	8.54	3.61	3.40	7.01	8.46	17.00	8.54
5300	0.61	0.56	1.17	0.69	9.71	9.02	3.27	3.01	6.28	7.98	17.00	9.02
5320	0.61	0.55	1.16	0.63	9.71	9.08	3.25	2.94	6.19	7.92	17.00	9.08
5500	0.62	0.52	1.14	0.57	9.71	9.14	3.32	2.79	6.10	7.86	17.00	9.14
5580	0.59	0.54	1.14	0.56	9.71	9.15	3.18	2.92	6.10	7.85	17.00	9.15
5700	0.59	0.57	1.16	0.65	9.71	9.06	3.15	3.07	6.22	7.94	17.00	9.06
5745	0.30	0.29	0.59	-2.31	28.71	31.02	1.60	1.54	3.14	4.98	36.00	31.02
5785	0.27	0.30	0.58	-2.40	28.71	31.11	1.46	1.62	3.08	4.89	36.00	31.11
5825	0.31	0.32	0.63	-2.01	28.71	30.72	1.68	1.69	3.37	5.28	36.00	30.72

			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	0.02	0.00	-14.21	2.25	10.16	7.29	-1.78	5.52	-14.58	2.25	10.16	7.29	-2.15	5.14
5220	0.02	0.00	-14.32	2.26	10.16	7.29	-1.88	5.41	-14.72	2.26	10.16	7.29	-2.28	5.01
5240	0.02	0.00	-14.26	2.27	10.17	7.29	-1.80	5.49	-14.94	2.27	10.17	7.29	-2.48	4.81
5260	0.02	0.00	-14.17	2.27	10.17	7.29	-1.71	5.58	-14.44	2.27	10.17	7.29	-1.98	5.31
5300	0.02	0.00	-14.62	2.28	10.17	7.29	-2.15	5.14	-14.97	2.28	10.17	7.29	-2.50	4.79
5320	0.02	0.00	-14.65	2.29	10.17	7.29	-2.17	5.12	-15.09	2.29	10.17	7.29	-2.61	4.68
5500	0.02	0.00	-14.63	2.33	10.20	7.29	-2.08	5.21	-15.39	2.33	10.20	7.29	-2.84	4.45
5580	0.02	0.00	-14.81	2.34	10.19	7.29	-2.26	5.03	-15.19	2.34	10.19	7.29	-2.64	4.65
5700	0.02	0.00	-14.85	2.35	10.17	7.29	-2.31	4.98	-14.96	2.35	10.17	7.29	-2.42	4.87
5745	0.02	0.27	-18.04	2.35	10.17	7.29	-5.24	2.05	-18.22	2.35	10.17	7.29	-5.42	1.87
5785	0.02	0.27	-18.44	2.35	10.16	7.29	-5.64	1.65	-17.99	2.35	10.16	7.29	-5.19	2.10
5825	0.02	0.27	-17.86	2.36	10.16	7.29	-5.05	2.24	-17.81	2.36	10.16	7.29	-5.00	2.29

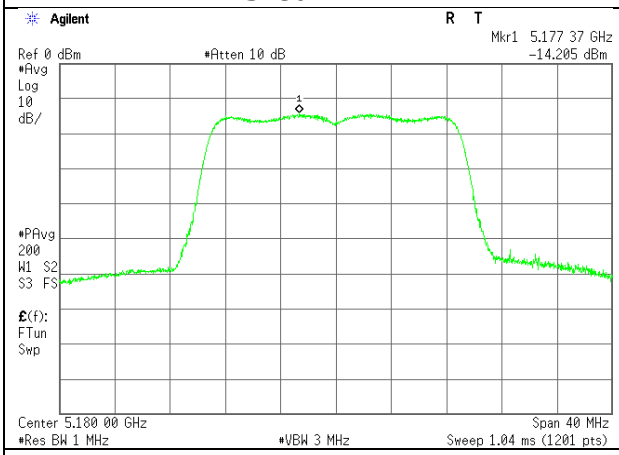
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty 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

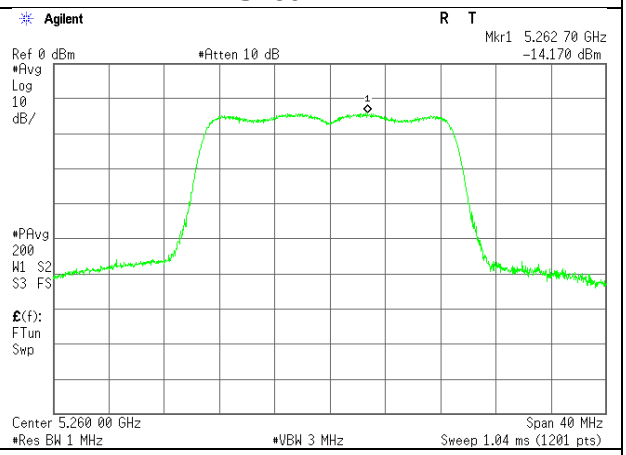
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WA

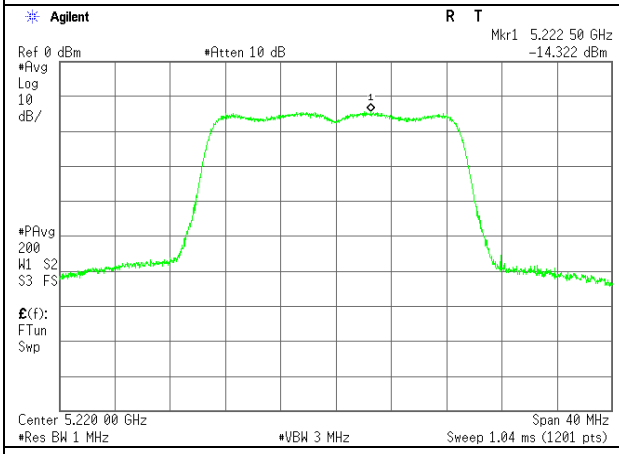
5180 MHz



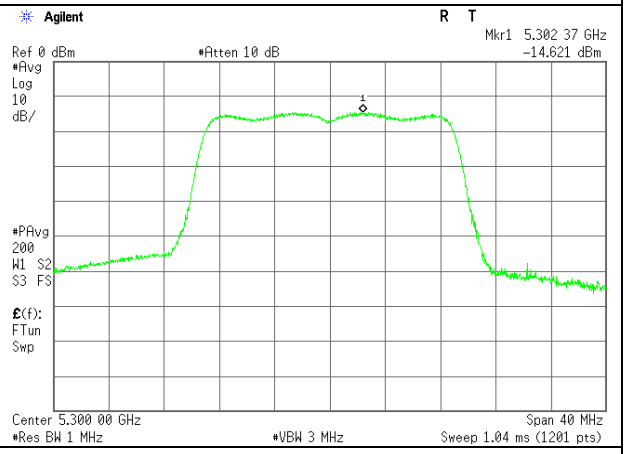
5260 MHz



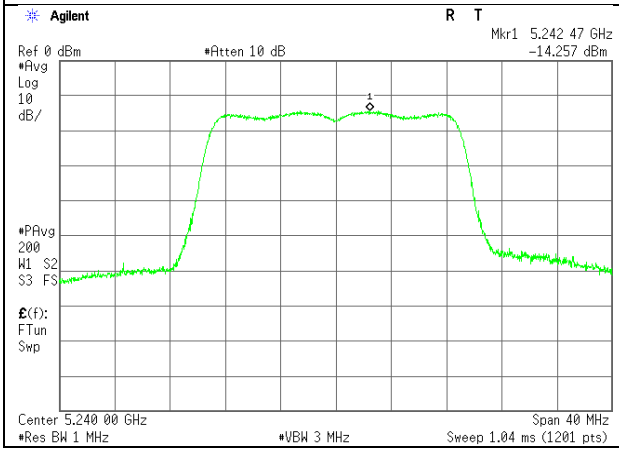
5220 MHz



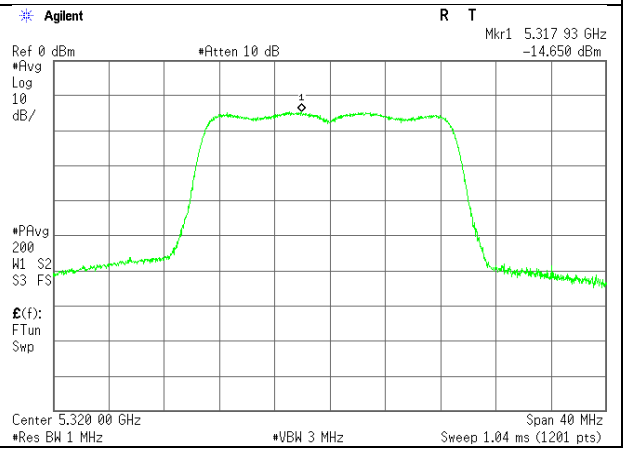
5300 MHz



5240 MHz



5320 MHz

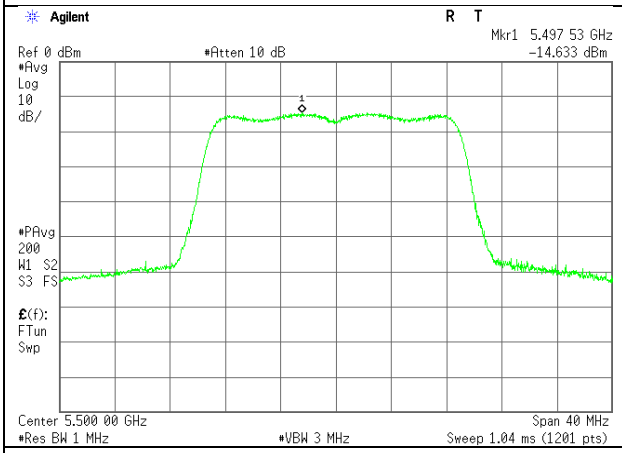


Maximum Power Spectral Density

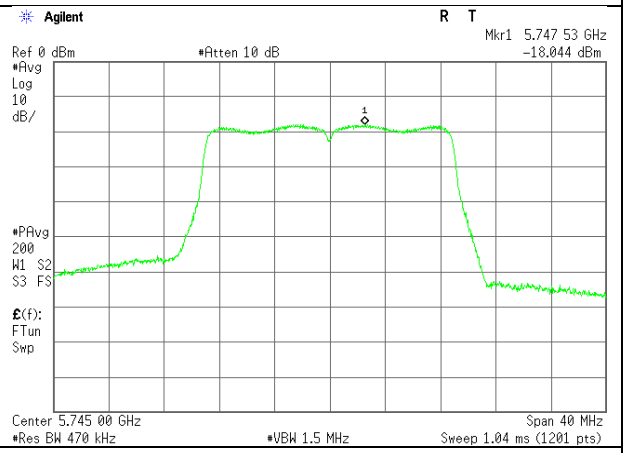
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WA

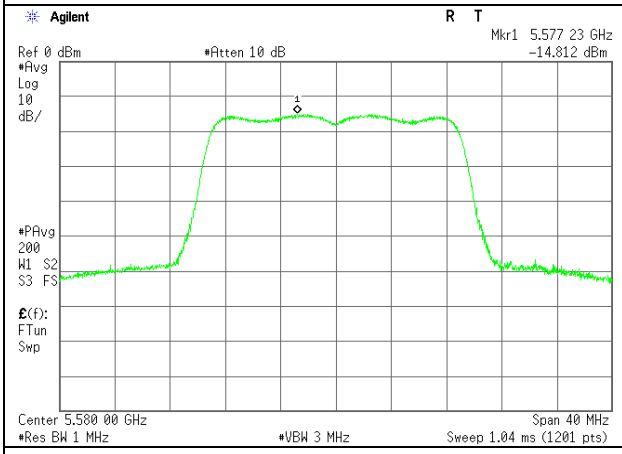
5500 MHz



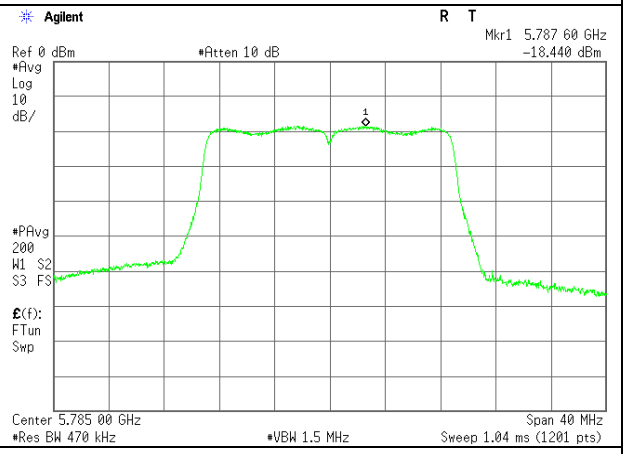
5745 MHz



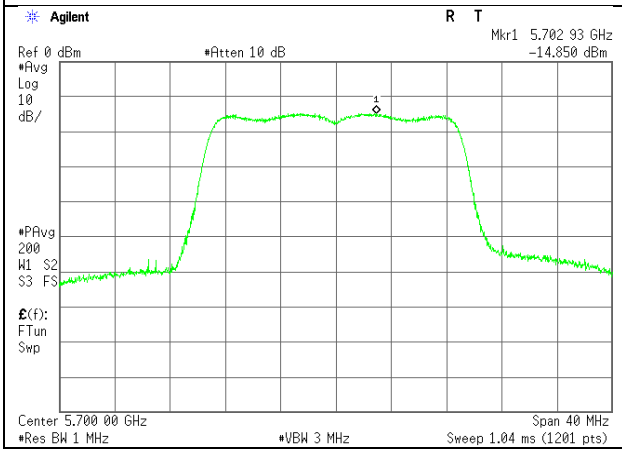
5580 MHz



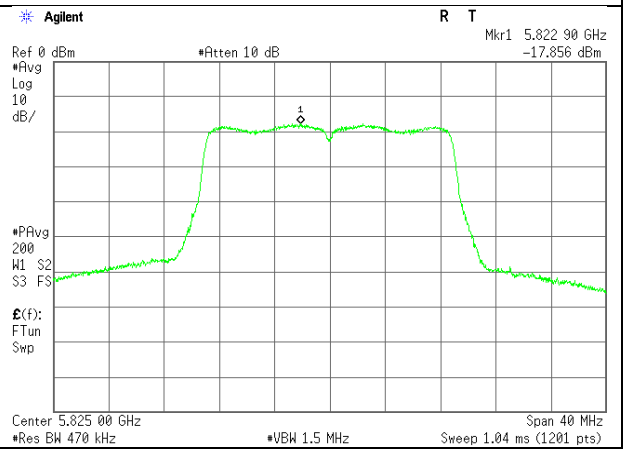
5785 MHz



5700 MHz



5825 MHz

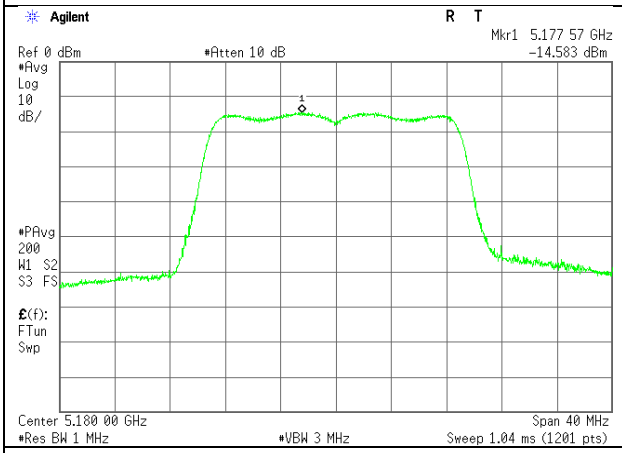


Maximum Power Spectral Density

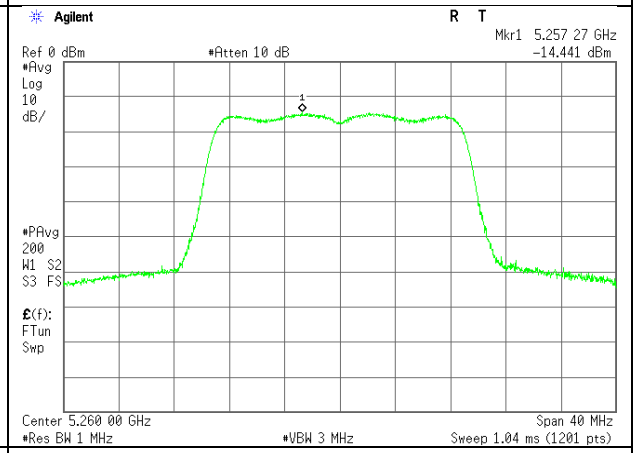
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WC

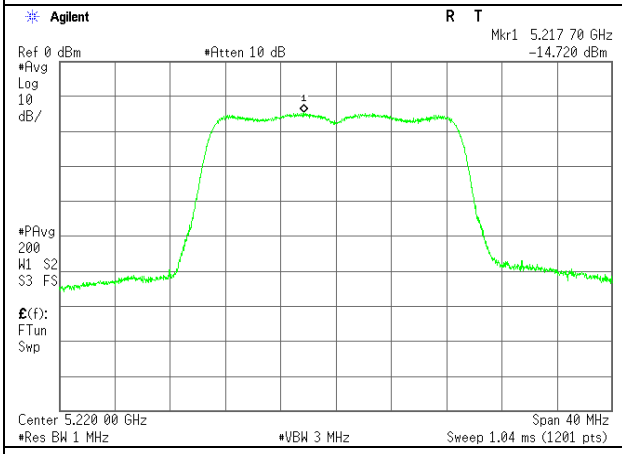
5180 MHz



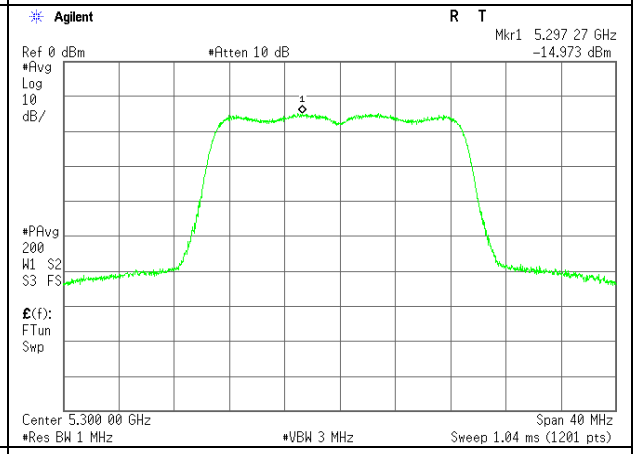
5260 MHz



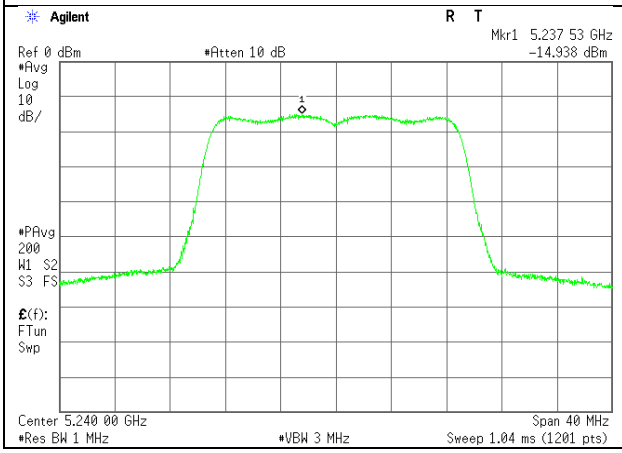
5220 MHz



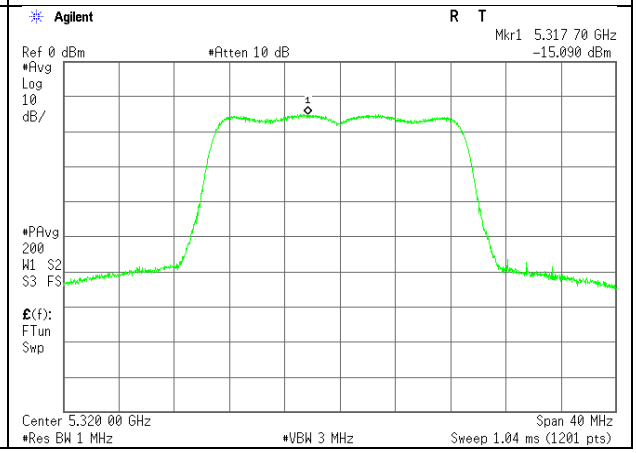
5300 MHz



5240 MHz



5320 MHz

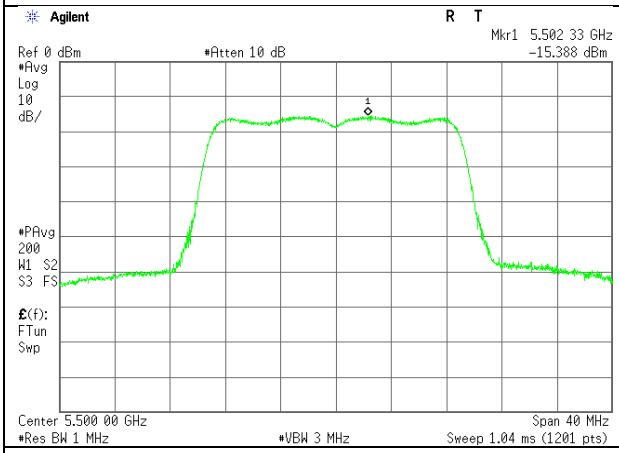


Maximum Power Spectral Density

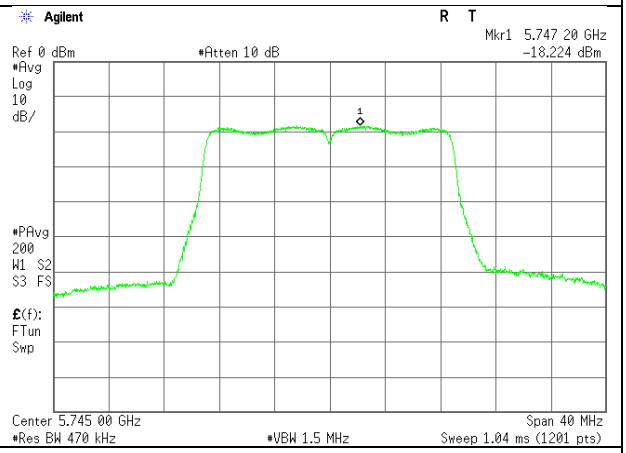
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 21, 2016
Temperature / Humidity	25deg. C / 51 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

11ac-20, Antenna port WC

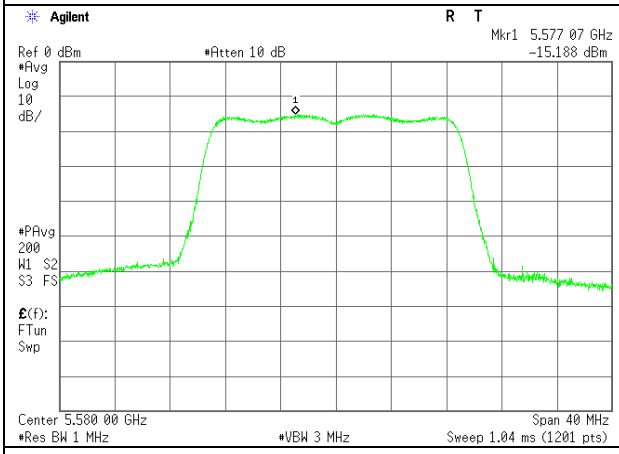
5500 MHz



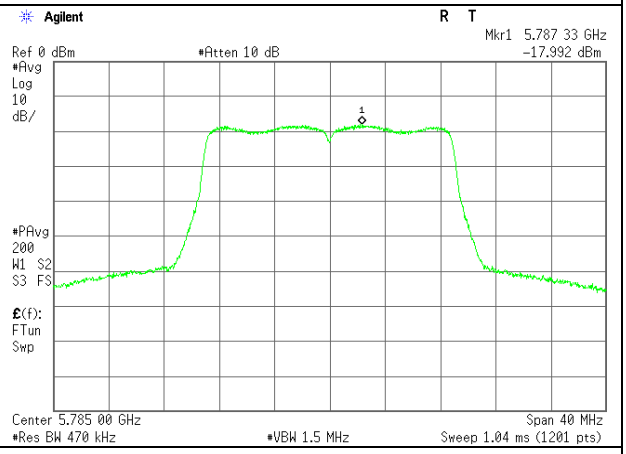
5745 MHz



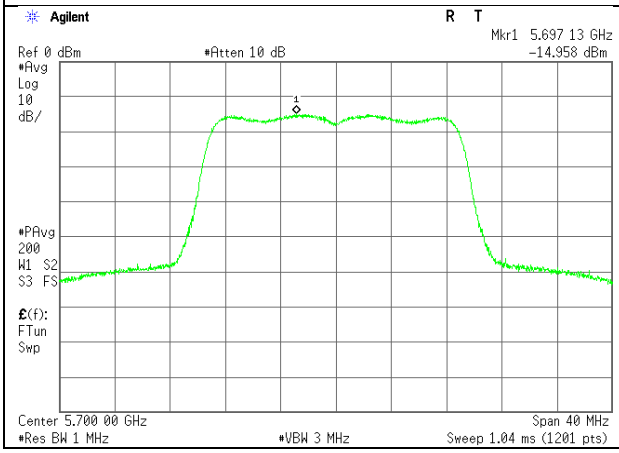
5580 MHz



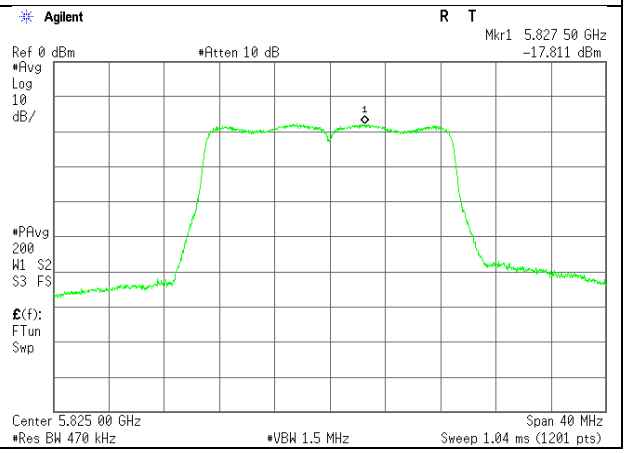
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11n-40	

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

Tested	PSD (Conducted)						PSD (e.i.r.p.)					
Frequency	Antenna port			Result	Limit	Margin	Antenna port			Result	Limit	Margin
	WA	WC	Sum				WA	WC	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	0.15	0.15	0.29	-5.31	9.71	15.02	0.80	0.78	1.58	1.98	17.00	15.02
5230	0.16	0.14	0.30	-5.26	9.71	14.97	0.84	0.76	1.59	2.03	17.00	14.97
5270	0.16	0.13	0.28	-5.46	9.71	15.17	0.83	0.69	1.52	1.83	17.00	15.17
5310	0.15	0.13	0.29	-5.39	9.71	15.10	0.83	0.72	1.55	1.90	17.00	15.10
5510	0.15	0.14	0.29	-5.37	9.71	15.08	0.82	0.73	1.55	1.92	17.00	15.08
5550	0.13	0.14	0.27	-5.62	9.71	15.33	0.71	0.76	1.47	1.67	17.00	15.33
5670	0.13	0.13	0.26	-5.86	9.71	15.57	0.67	0.72	1.39	1.43	17.00	15.57
5755	0.07	0.07	0.14	-8.68	28.71	37.39	0.36	0.37	0.73	-1.39	36.00	37.39
5795	0.07	0.08	0.14	-8.48	28.71	37.19	0.35	0.41	0.76	-1.19	36.00	37.19

			Antenna port WA						**Antenna port WC**					
Tested	Duty	RBW	PSD	Cable	Atten.	Antenna	PSD Result		PSD	Cable	Atten.	Antenna	PSD Result	
Frequency	Factor	Correction Factor	Reading	Loss	Loss	Gain	Cond.	e.i.r.p.	Reading	Loss	Loss	Gain	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	0.05	0.00	-21.11	2.71	10.10	7.29	-8.25	-0.96	-21.27	2.71	10.13	7.29	-8.38	-1.09
5230	0.05	0.00	-20.94	2.72	10.10	7.29	-8.07	-0.78	-21.40	2.72	10.13	7.29	-8.50	-1.21
5270	0.05	0.00	-20.96	2.72	10.10	7.29	-8.09	-0.80	-21.79	2.72	10.13	7.29	-8.89	-1.60
5310	0.05	0.00	-20.99	2.73	10.10	7.29	-8.11	-0.82	-21.63	2.73	10.13	7.29	-8.72	-1.43
5510	0.05	0.00	-21.08	2.78	10.11	7.29	-8.14	-0.85	-21.61	2.78	10.14	7.29	-8.64	-1.35
5550	0.05	0.00	-21.73	2.78	10.10	7.29	-8.80	-1.51	-21.44	2.78	10.14	7.29	-8.47	-1.18
5670	0.05	0.00	-21.96	2.80	10.09	7.29	-9.02	-1.73	-21.71	2.80	10.13	7.29	-8.73	-1.44
5755	0.05	0.27	-24.93	2.81	10.08	7.29	-11.72	-4.43	-24.91	2.81	10.12	7.29	-11.66	-4.37
5795	0.05	0.27	-25.04	2.81	10.08	7.29	-11.83	-4.54	-24.42	2.81	10.12	7.29	-11.17	-3.88

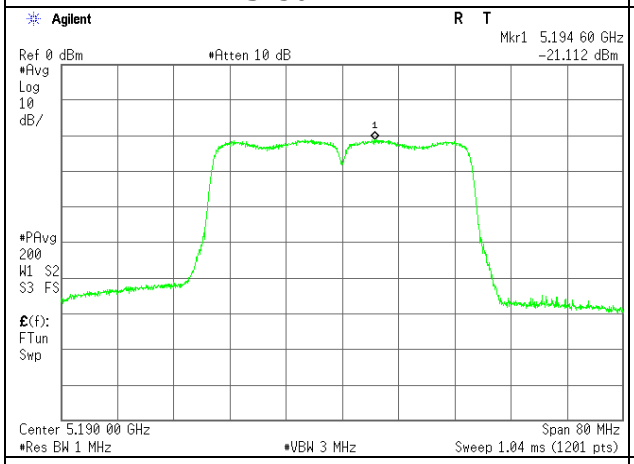
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty 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

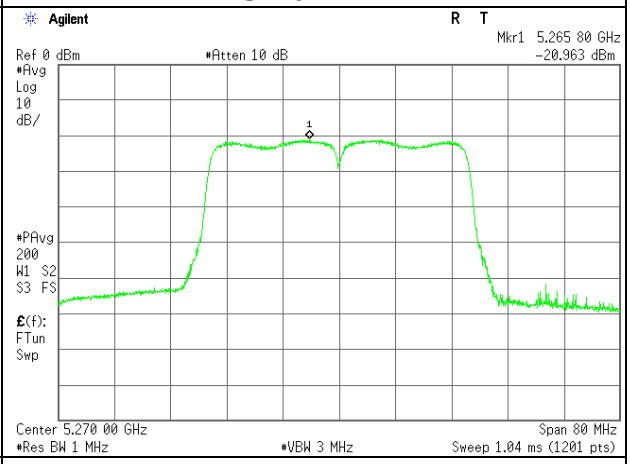
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11n-40	

11n-40, Antenna port WA

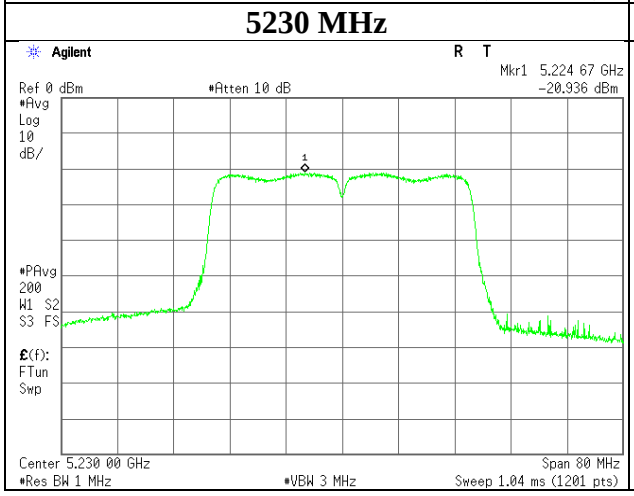
5190 MHz



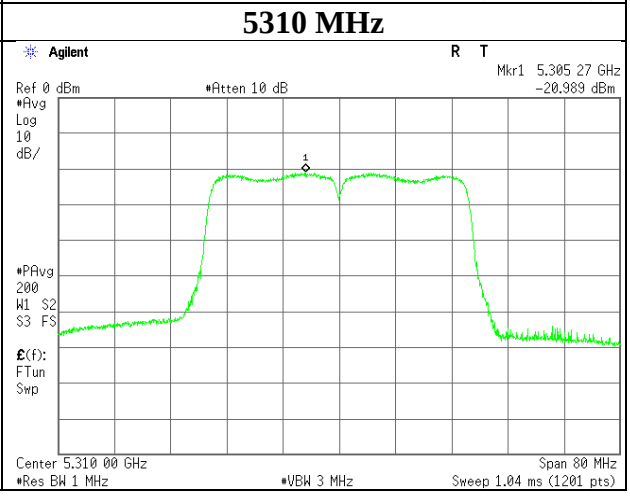
5270 MHz



5230 MHz



5310 MHz

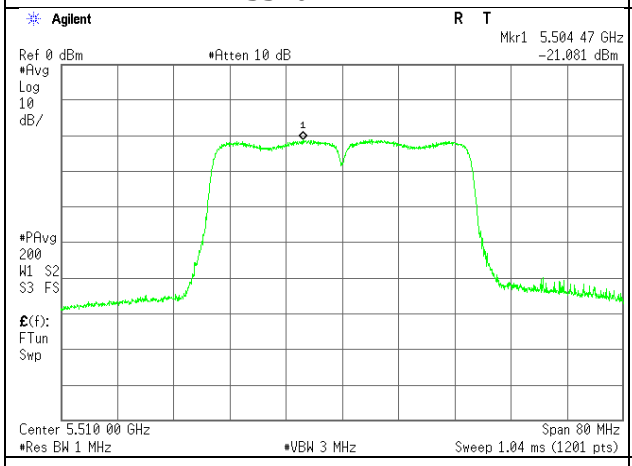


Maximum Power Spectral Density

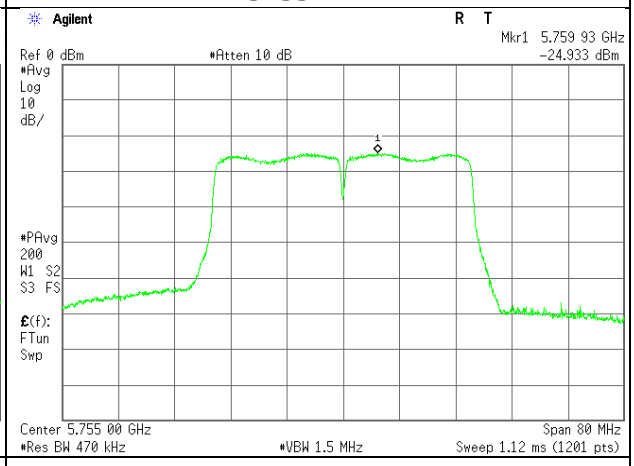
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11n-40	

11n-40, Antenna port WA

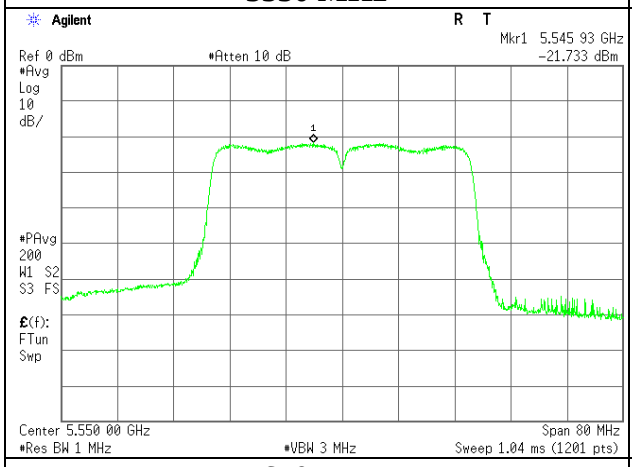
5510 MHz



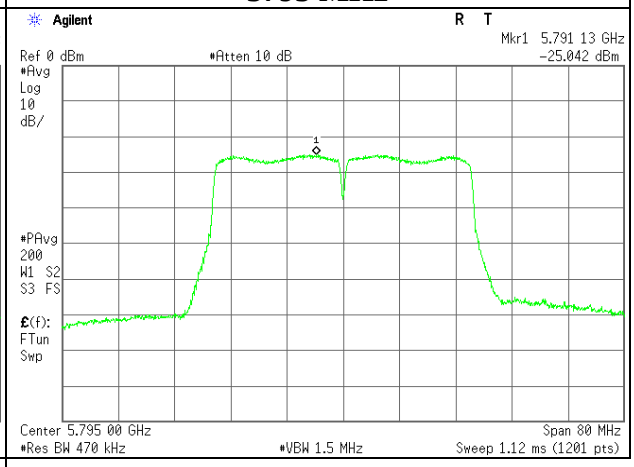
5755 MHz



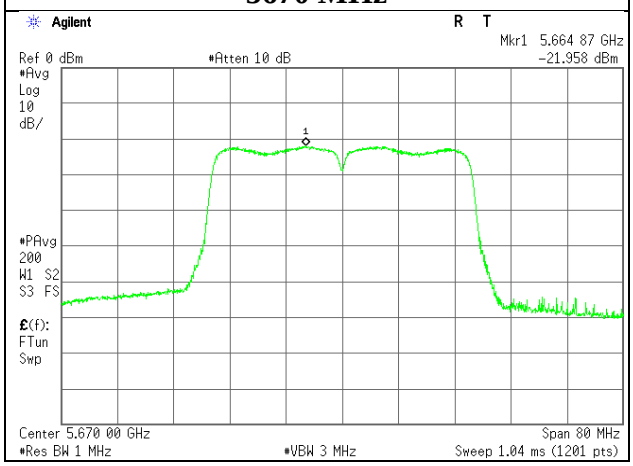
5550 MHz



5795 MHz



5670 MHz

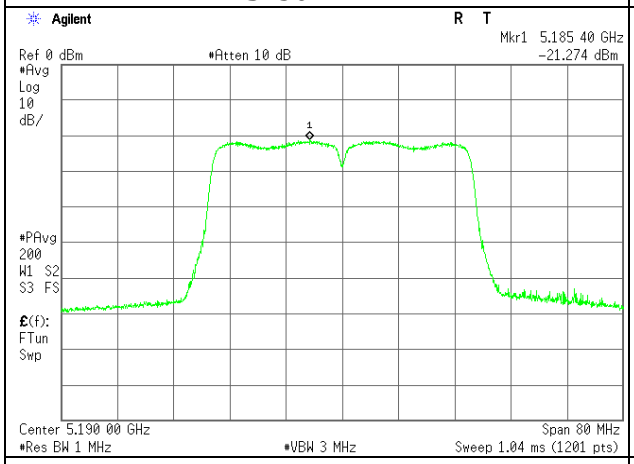


Maximum Power Spectral Density

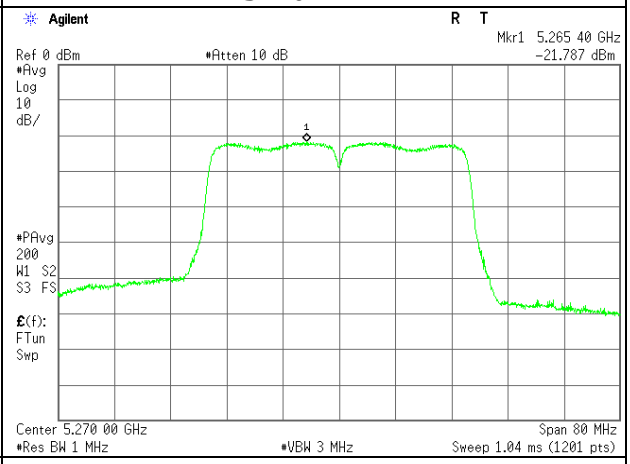
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11n-40	

11n-40, Antenna port WC

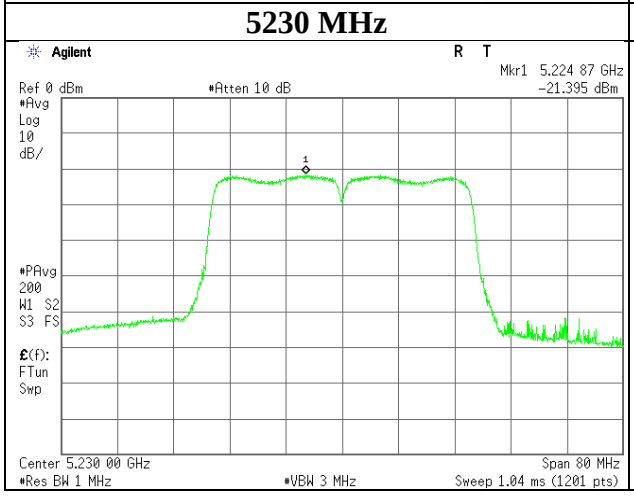
5190 MHz



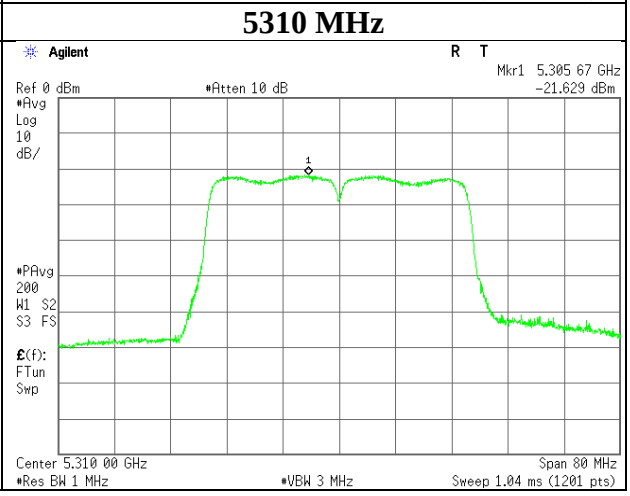
5270 MHz



5230 MHz



5310 MHz

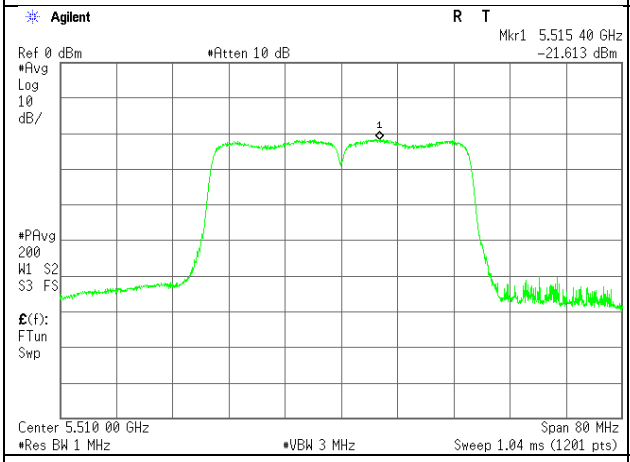


Maximum Power Spectral Density

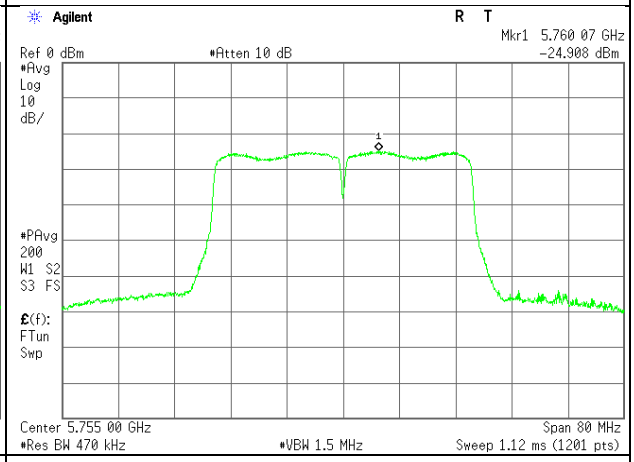
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11n-40	

11n-40, Antenna port WC

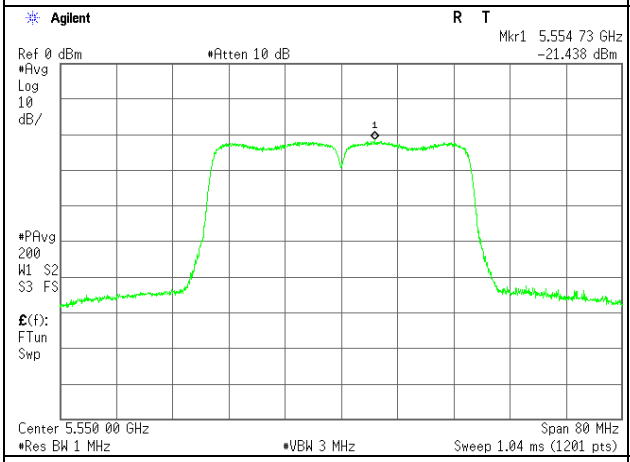
5510 MHz



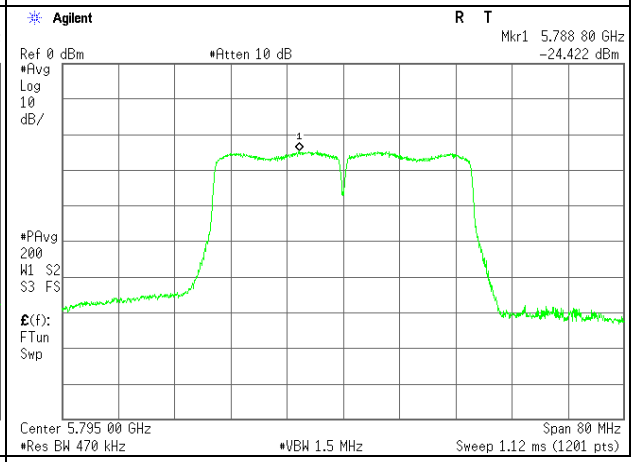
5755 MHz



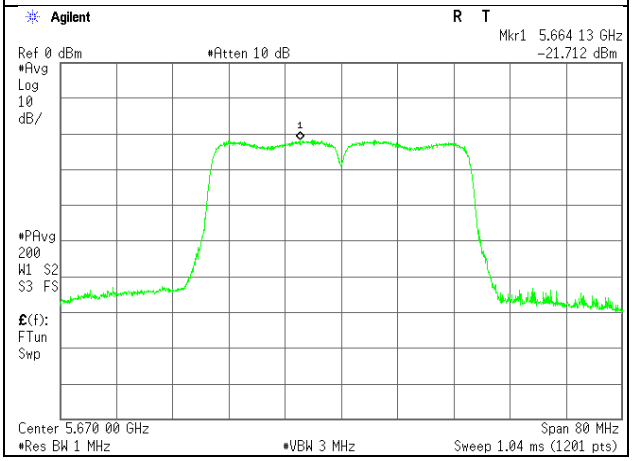
5550 MHz



5795 MHz



5670 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
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 port			Result	Limit	Margin	Antenna port			Result	Limit	Margin
	WA	WC	Sum				WA	WC	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	0.15	0.15	0.30	-5.21	9.71	14.92	0.81	0.81	1.62	2.08	17.00	14.92
5230	0.15	0.13	0.29	-5.40	9.71	15.11	0.83	0.72	1.55	1.89	17.00	15.11
5270	0.15	0.14	0.29	-5.35	9.71	15.06	0.82	0.74	1.56	1.94	17.00	15.06
5310	0.15	0.15	0.30	-5.19	9.71	14.90	0.81	0.81	1.62	2.10	17.00	14.90
5510	0.14	0.14	0.28	-5.50	9.71	15.21	0.77	0.74	1.51	1.79	17.00	15.21
5550	0.14	0.14	0.28	-5.58	9.71	15.29	0.73	0.76	1.48	1.71	17.00	15.29
5670	0.12	0.14	0.26	-5.88	9.71	15.59	0.66	0.73	1.38	1.41	17.00	15.59
5755	0.06	0.07	0.13	-8.85	28.71	37.56	0.34	0.36	0.70	-1.56	36.00	37.56
5795	0.06	0.07	0.14	-8.67	28.71	37.38	0.34	0.39	0.73	-1.38	36.00	37.38

			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	0.06	0.00	-21.08	2.71	10.10	7.29	-8.21	-0.92	-21.13	2.71	10.13	7.29	-8.23	-0.94
5230	0.06	0.00	-20.99	2.72	10.10	7.29	-8.11	-0.82	-21.65	2.72	10.13	7.29	-8.74	-1.45
5270	0.06	0.00	-21.02	2.72	10.10	7.29	-8.14	-0.85	-21.51	2.72	10.13	7.29	-8.60	-1.31
5310	0.06	0.00	-21.07	2.73	10.10	7.29	-8.18	-0.89	-21.14	2.73	10.13	7.29	-8.22	-0.93
5510	0.06	0.00	-21.36	2.78	10.11	7.29	-8.41	-1.12	-21.60	2.78	10.14	7.29	-8.62	-1.33
5550	0.06	0.00	-21.62	2.78	10.10	7.29	-8.68	-1.39	-21.48	2.78	10.14	7.29	-8.50	-1.21
5670	0.06	0.00	-22.06	2.80	10.09	7.29	-9.11	-1.82	-21.66	2.80	10.13	7.29	-8.67	-1.38
5755	0.06	0.27	-25.16	2.81	10.08	7.29	-11.94	-4.65	-25.05	2.81	10.12	7.29	-11.79	-4.50
5795	0.06	0.27	-25.17	2.81	10.08	7.29	-11.95	-4.66	-24.68	2.81	10.12	7.29	-11.42	-4.13

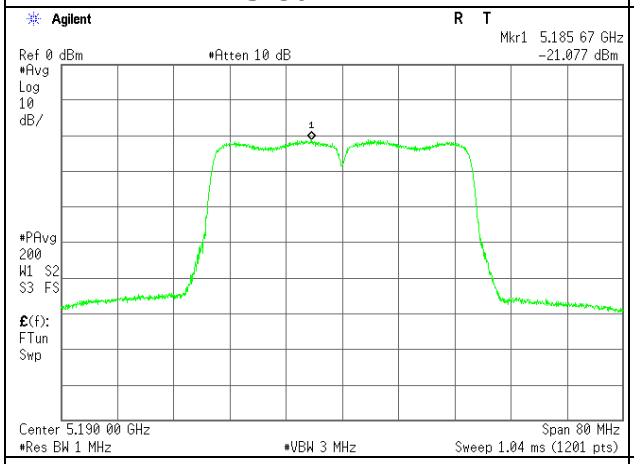
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty 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

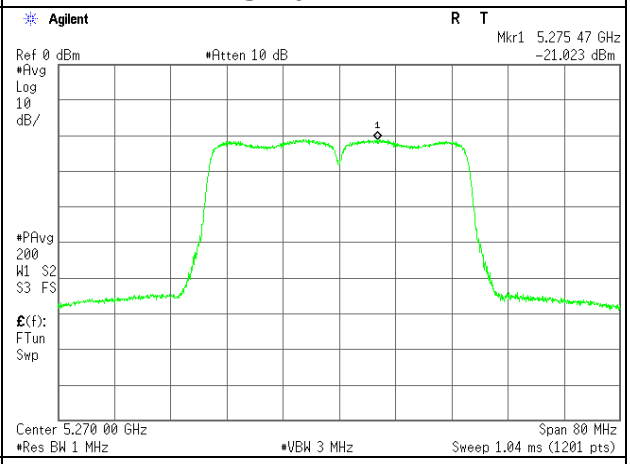
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11ac-40	

11ac-40, Antenna port WA

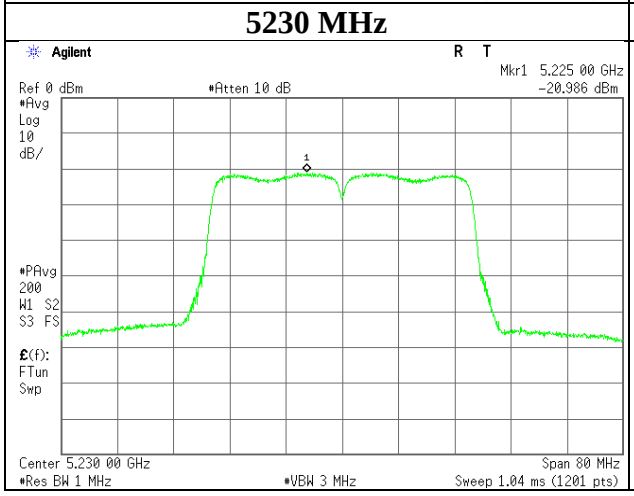
5190 MHz



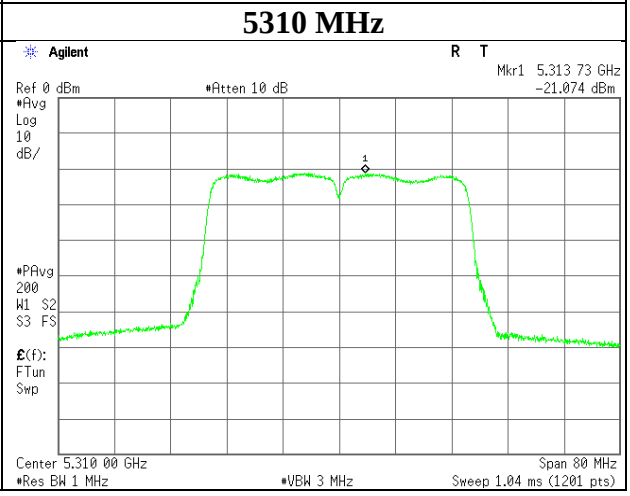
5270 MHz



5230 MHz



5310 MHz

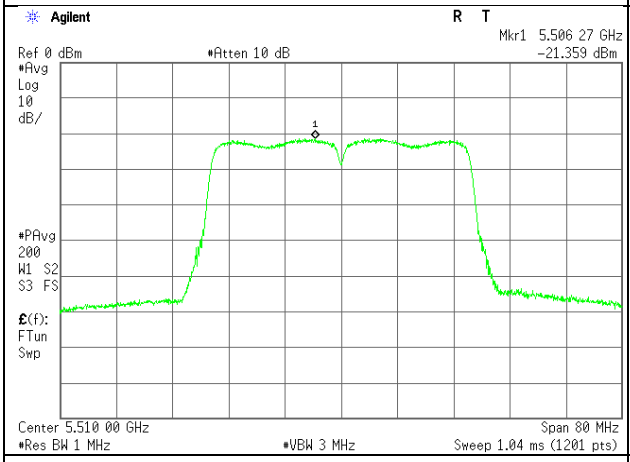


Maximum Power Spectral Density

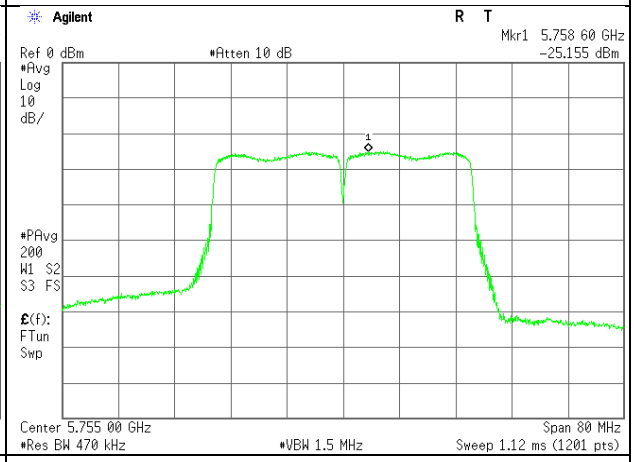
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11ac-40	

11ac-40, Antenna port WA

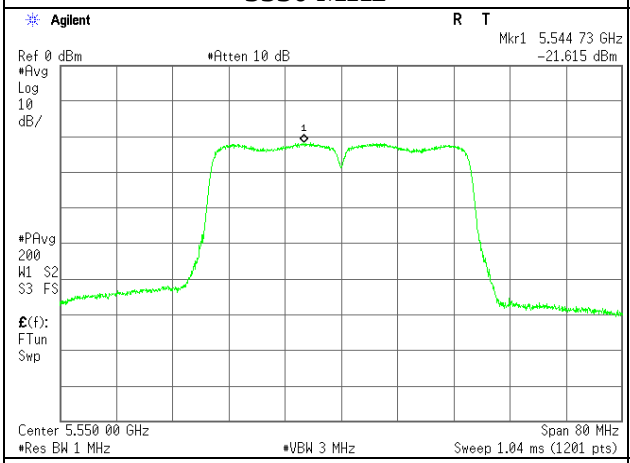
5510 MHz



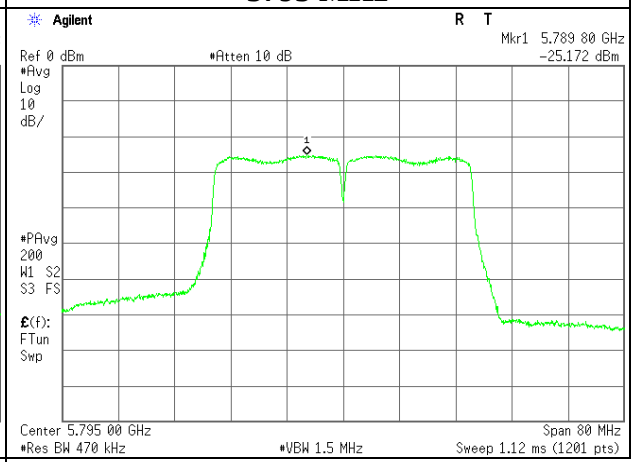
5755 MHz



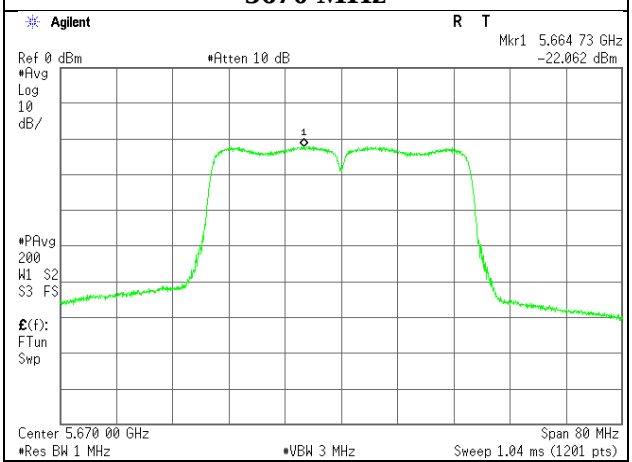
5550 MHz



5795 MHz



5670 MHz

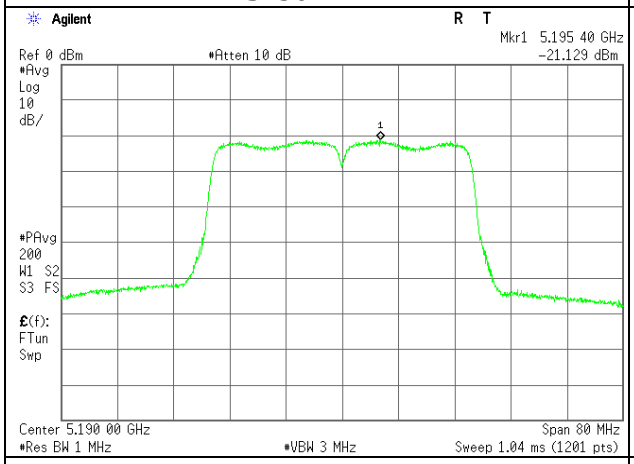


Maximum Power Spectral Density

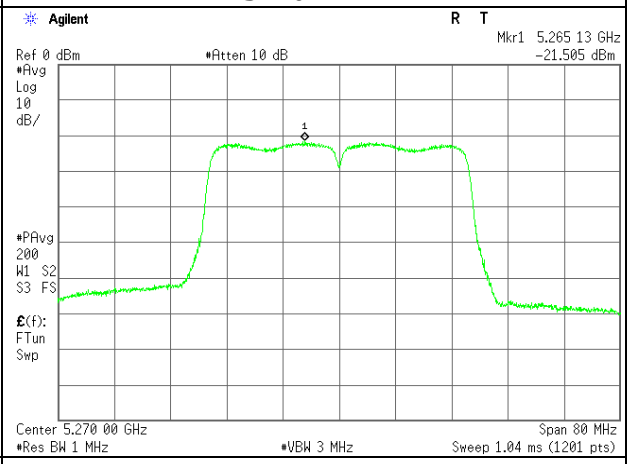
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11ac-40	

11ac-40, Antenna port WC

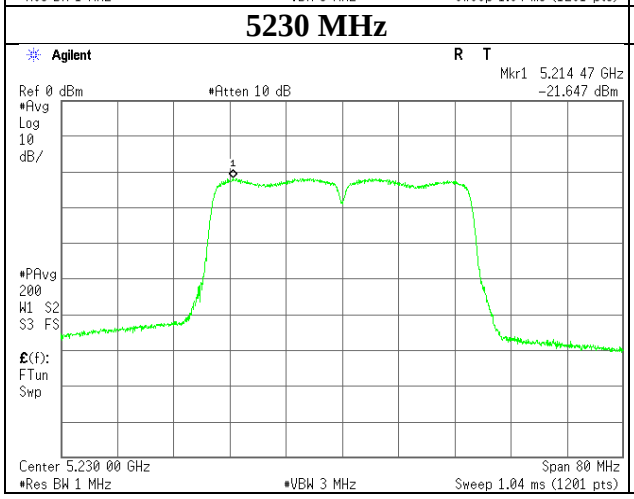
5190 MHz



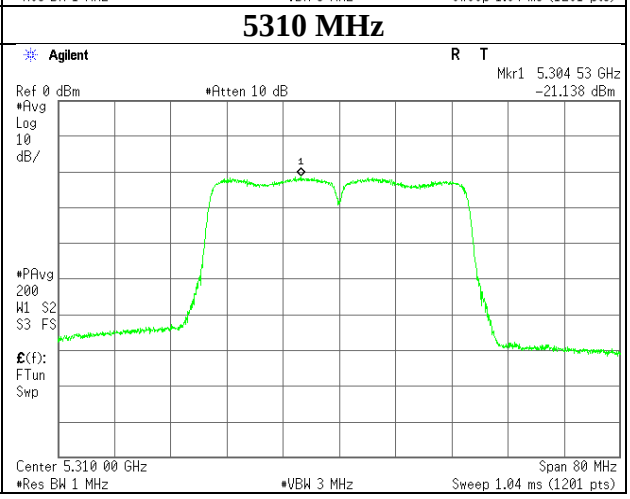
5270 MHz



5230 MHz



5310 MHz

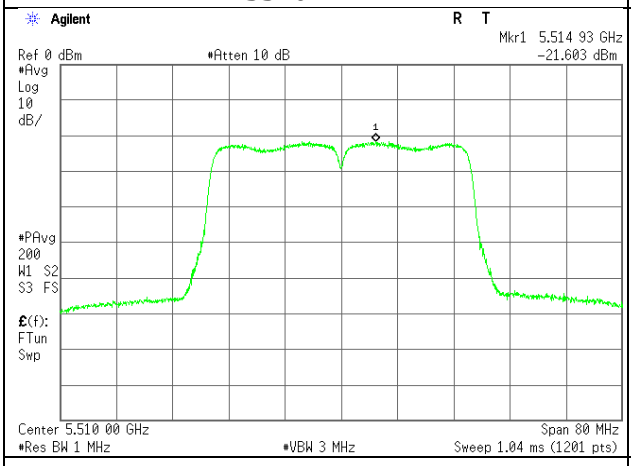


Maximum Power Spectral Density

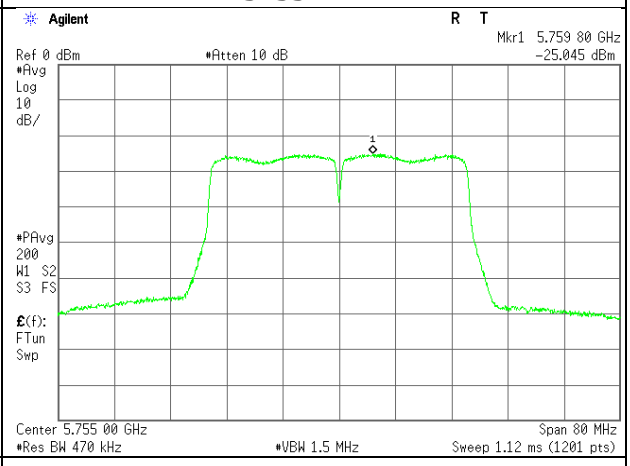
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11ac-40	

11ac-40, Antenna port WC

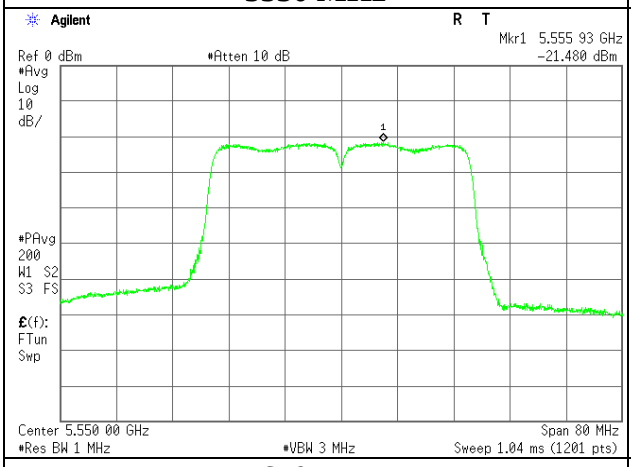
5510 MHz



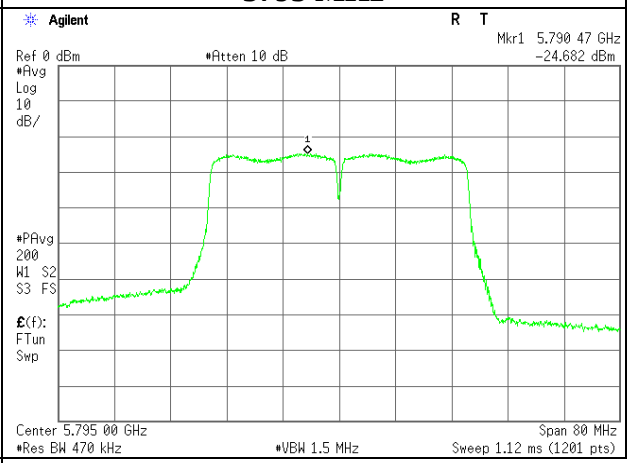
5755 MHz



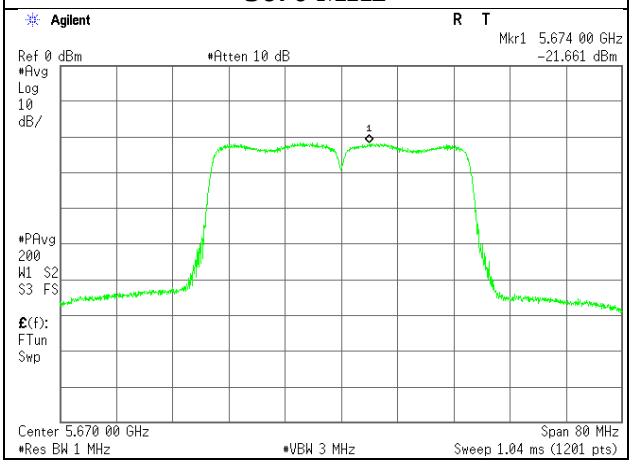
5550 MHz



5795 MHz



5670 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
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 port			Result	Limit	Margin	Antenna port			Result	Limit	Margin
	WA	WC	Sum				WA	WC	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	0.05	0.04	0.09	-10.50	9.71	20.21	0.26	0.22	0.48	-3.21	17.00	20.21
5290	0.05	0.04	0.08	-10.72	9.71	20.43	0.25	0.21	0.45	-3.43	17.00	20.43
5530	0.04	0.04	0.08	-11.13	9.71	20.84	0.20	0.21	0.41	-3.84	17.00	20.84
5610	0.04	0.04	0.07	-11.27	9.71	20.98	0.20	0.20	0.40	-3.98	17.00	20.98
5775	0.02	0.02	0.04	-13.64	28.71	42.35	0.11	0.12	0.23	-6.35	36.00	42.35

Tested Frequency	Duty Factor	RBW Correction Factor	**Antenna port WA**						**Antenna port WC**					
			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	0.11	0.00	-26.02	2.71	10.10	7.29	-13.10	-5.81	-26.91	2.71	10.13	7.29	-13.96	-6.67
5290	0.11	0.00	-26.27	2.73	10.10	7.29	-13.33	-6.04	-27.14	2.73	10.13	7.29	-14.17	-6.88
5530	0.11	0.00	-27.30	2.78	10.11	7.29	-14.30	-7.01	-27.02	2.78	10.14	7.29	-13.99	-6.70
5610	0.11	0.00	-27.26	2.79	10.10	7.29	-14.26	-6.97	-27.33	2.79	10.13	7.29	-14.30	-7.01
5775	0.11	0.27	-30.11	2.81	10.08	7.29	-16.84	-9.55	-29.77	2.81	10.12	7.29	-16.46	-9.17

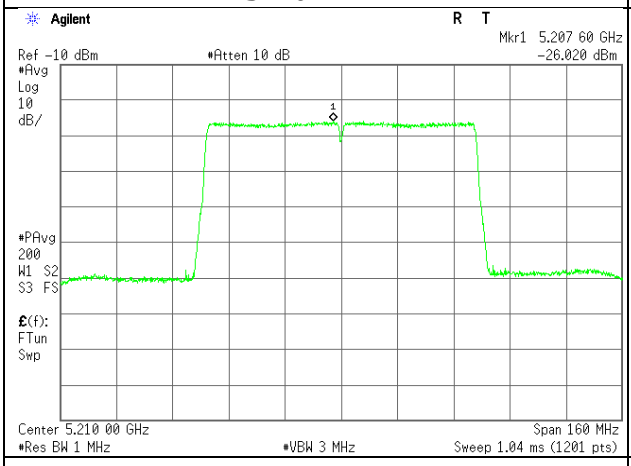
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty 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

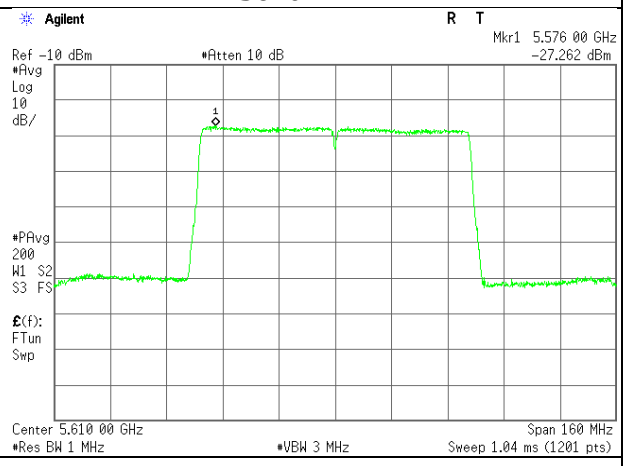
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11ac-80	

11ac-80, Antenna port WA

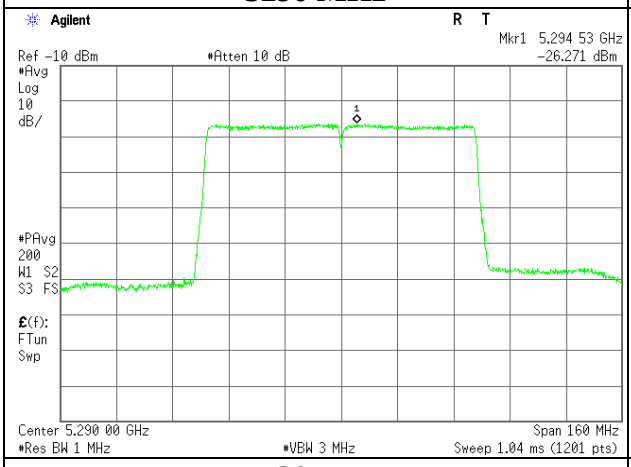
5210 MHz



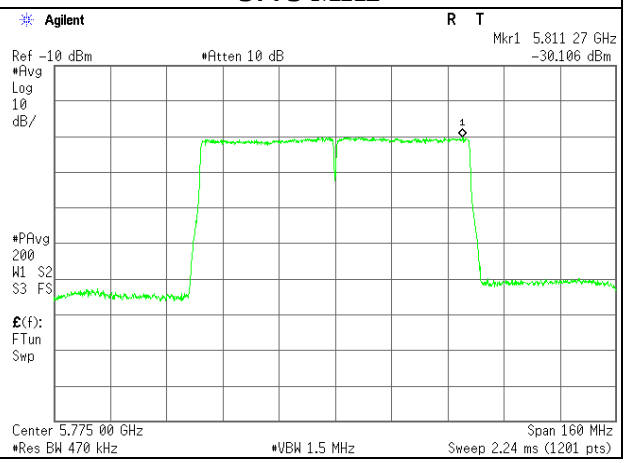
5610 MHz



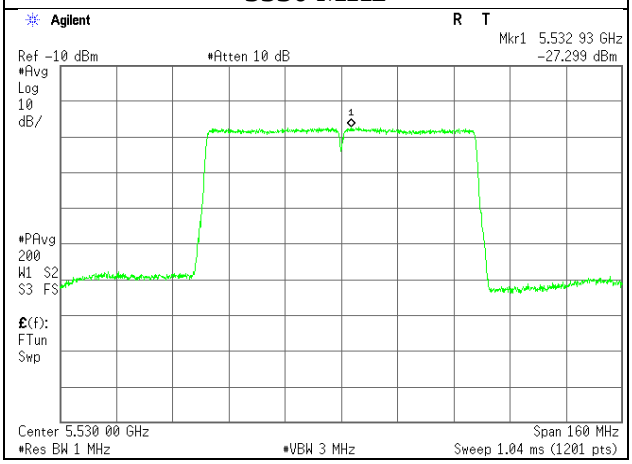
5290 MHz



5775 MHz



5530 MHz

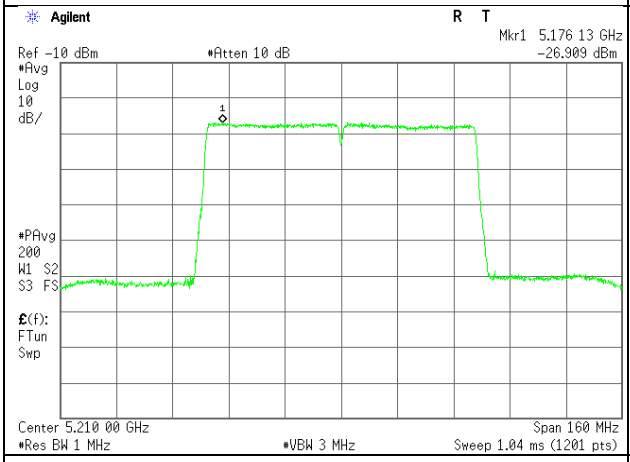


Maximum Power Spectral Density

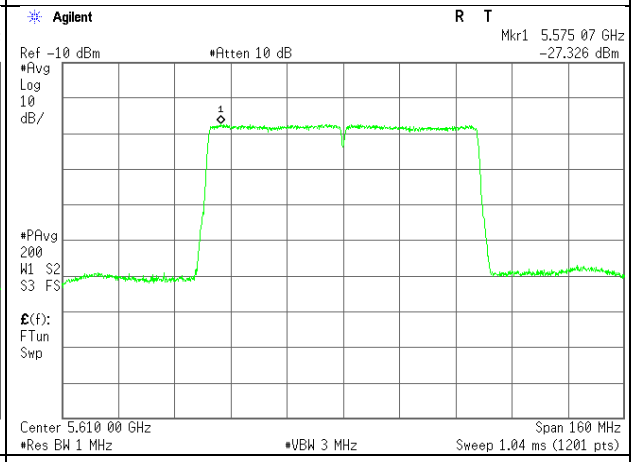
Test place	Ise EMC Lab. No.3 Preparation Room	
Report No.	11155194H	
Date	February 16, 2016	February 17, 2016
Temperature / Humidity	23deg. C / 34 % RH	24deg. C / 34 % RH
Engineer	Tomoki Matsui	Tomoki Matsui
Mode	Tx 11ac-80	

11ac-80, Antenna port WC

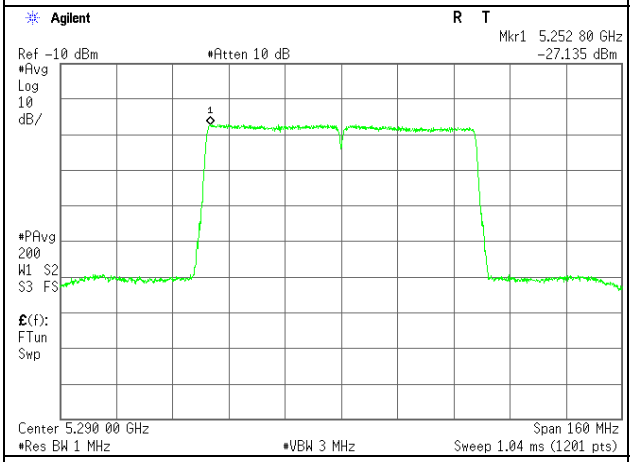
5210 MHz



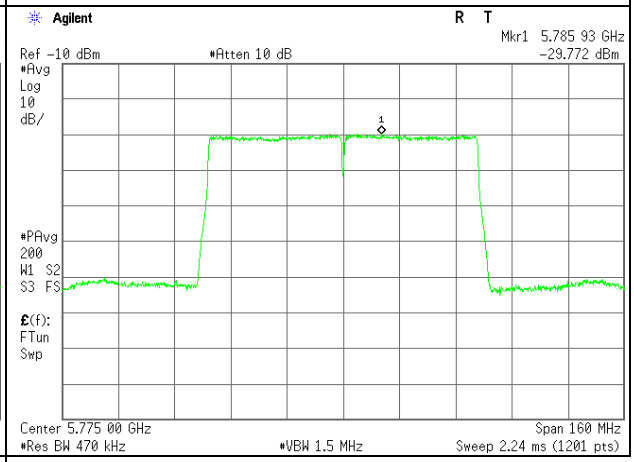
5610 MHz



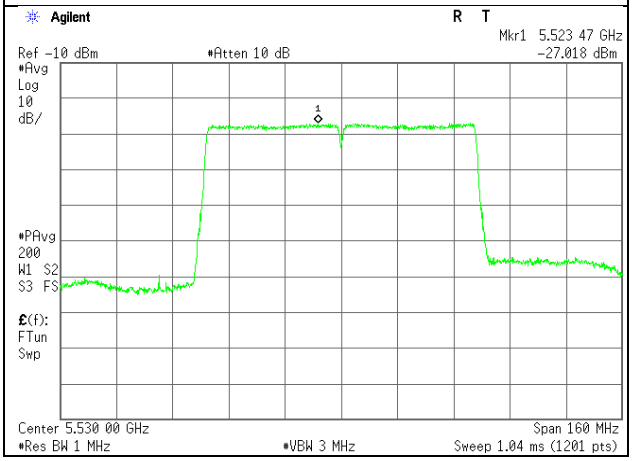
5290 MHz



5775 MHz



5530 MHz



Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	5150.000	PK	46.7	32.2	7.3	31.7	-	54.5	73.9	19.4	
Hori	10360.000	PK	42.9	38.7	-2.0	33.5	-	46.1	73.9	27.8	Floor Noise
Hori	15540.000	PK	43.2	39.8	-0.2	32.7	-	50.1	73.9	23.8	Floor Noise
Hori	5150.000	AV	34.3	32.2	7.3	31.7	-	42.1	53.9	11.8	
Hori	10360.000	AV	32.9	38.7	-2.0	33.5	-	36.1	53.9	17.8	Floor Noise
Hori	15540.000	AV	33.0	39.8	-0.2	32.7	-	39.9	53.9	14.0	Floor Noise
Vert	5150.000	PK	45.9	32.2	7.3	31.7	-	53.7	73.9	20.2	
Vert	10360.000	PK	42.5	38.7	-2.0	33.5	-	45.7	73.9	28.2	Floor Noise
Vert	15540.000	PK	43.4	39.8	-0.2	32.7	-	50.3	73.9	23.6	Floor Noise
Vert	5150.000	AV	35.2	32.2	7.3	31.7	-	43.0	53.9	10.9	
Vert	10360.000	AV	32.0	38.7	-2.0	33.5	-	35.2	53.9	18.7	Floor Noise
Vert	15540.000	AV	33.2	39.8	-0.2	32.7	-	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 20dB).

Distance factor:

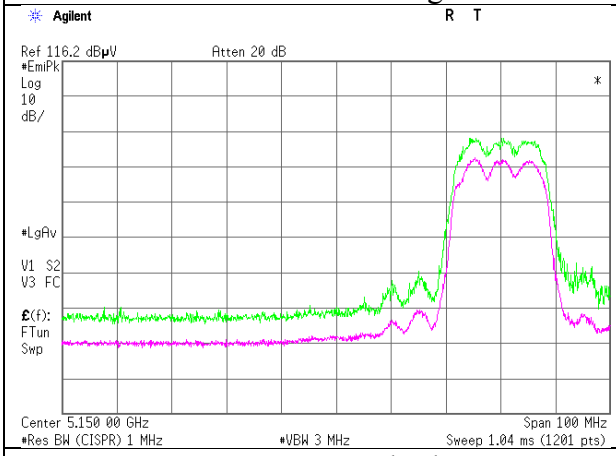
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 5180 MHz

Horizontal

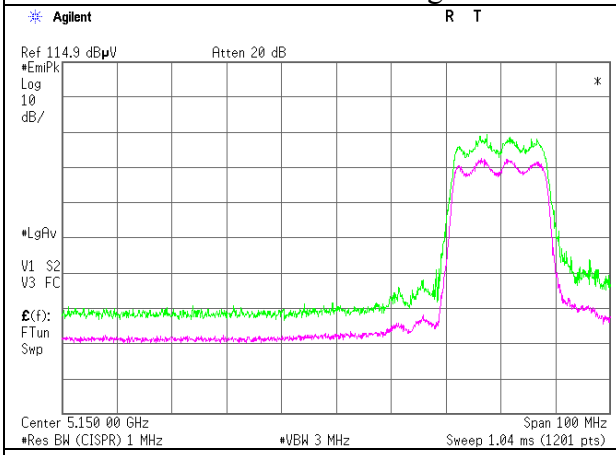
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	42.0	38.9	-2.0	33.5	-	45.4	73.9	28.5	Floor Noise
Hori	15780.000	PK	44.0	39.6	-0.1	32.8	-	50.7	73.9	23.2	Floor Noise
Hori	10520.000	AV	33.2	38.9	-2.0	33.5	-	36.6	53.9	17.3	Floor Noise
Hori	15780.000	AV	33.4	39.6	-0.1	32.8	-	40.1	53.9	13.8	Floor Noise
Vert	10520.000	PK	42.2	38.9	-2.0	33.5	-	45.6	73.9	28.3	Floor Noise
Vert	15780.000	PK	43.4	39.6	-0.1	32.8	-	50.1	73.9	23.8	Floor Noise
Vert	10520.000	AV	32.0	38.9	-2.0	33.5	-	35.4	53.9	18.5	Floor Noise
Vert	15780.000	AV	33.2	39.6	-0.1	32.8	-	39.9	53.9	14.0	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 20dB).

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	46.5	32.2	7.4	31.8	-	54.3	73.9	19.6	
Hori	10640.000	PK	41.5	39.1	-2.0	33.5	-	45.1	73.9	28.8	Floor Noise
Hori	15960.000	PK	43.5	39.4	0.1	32.9	-	50.1	73.9	23.8	Floor Noise
Hori	5350.000	AV	35.7	32.2	7.4	31.8	-	43.5	53.9	10.4	
Hori	10640.000	AV	32.4	39.1	-2.0	33.5	-	36.0	53.9	17.9	Floor Noise
Hori	15960.000	AV	33.4	39.4	0.1	32.9	-	40.0	53.9	13.9	Floor Noise
Vert	5350.000	PK	46.9	32.2	7.4	31.8	-	54.7	73.9	19.2	
Vert	10640.000	PK	41.4	39.1	-2.0	33.5	-	45.0	73.9	28.9	Floor Noise
Vert	15960.000	PK	43.4	39.4	0.1	32.9	-	50.0	73.9	23.9	Floor Noise
Vert	5350.000	AV	36.1	32.2	7.4	31.8	-	43.9	53.9	10.0	
Vert	10640.000	AV	32.4	39.1	-2.0	33.5	-	36.0	53.9	17.9	Floor Noise
Vert	15960.000	AV	33.5	39.4	0.1	32.9	-	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 20dB).

Distance factor:

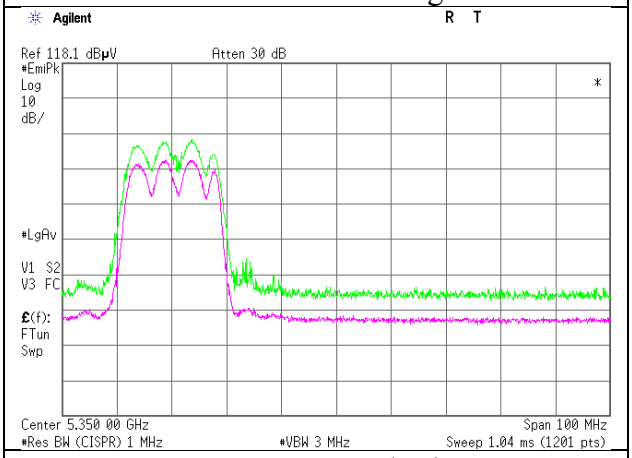
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 5320 MHz

Horizontal

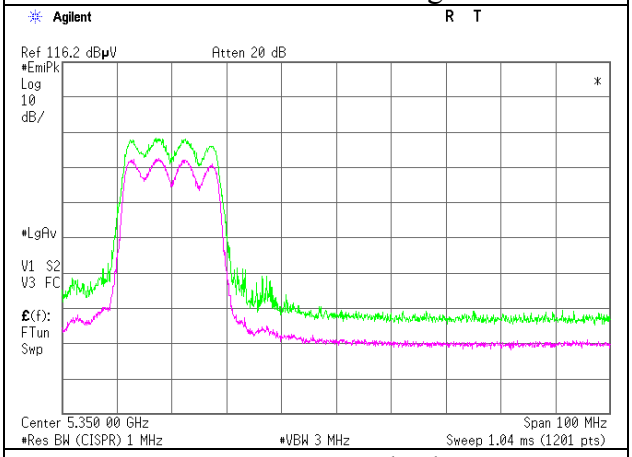
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	5470.000	PK	46.3	32.2	7.4	31.8	-	54.1	73.9	19.8	
Hori	11000.000	PK	41.5	39.9	-2.0	33.6	-	45.8	73.9	28.1	Floor Noise
Hori	16500.000	PK	42.5	40.4	-0.1	32.8	-	50.0	73.9	23.9	Floor Noise
Hori	5470.000	AV	35.0	32.2	7.4	31.8	-	42.8	53.9	11.1	
Hori	11000.000	AV	33.4	39.9	-2.0	33.6	-	37.7	53.9	16.2	Floor Noise
Hori	16500.000	AV	33.4	40.4	-0.1	32.8	-	40.9	53.9	13.0	Floor Noise
Vert	5470.000	PK	45.1	32.2	7.4	31.8	-	52.9	73.9	21.0	
Vert	11000.000	PK	41.6	39.9	-2.0	33.6	-	45.9	73.9	28.0	Floor Noise
Vert	16500.000	PK	42.4	40.4	-0.1	32.8	-	49.9	73.9	24.0	Floor Noise
Vert	5470.000	AV	33.4	32.2	7.4	31.8	-	41.2	53.9	12.7	
Vert	11000.000	AV	33.2	39.9	-2.0	33.6	-	37.5	53.9	16.4	Floor Noise
Vert	16500.000	AV	33.5	40.4	-0.1	32.8	-	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 20dB).

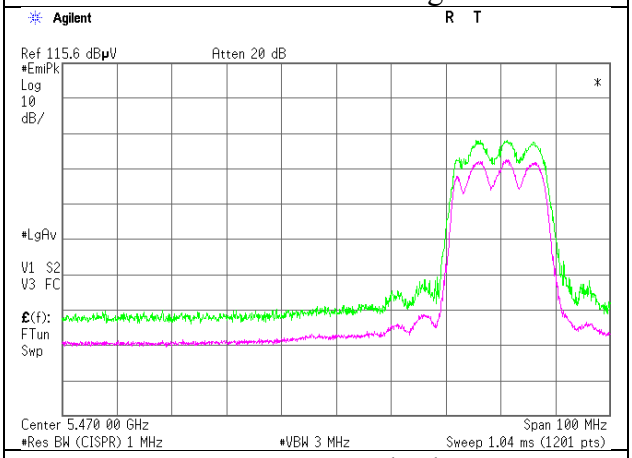
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 5500 MHz

Horizontal

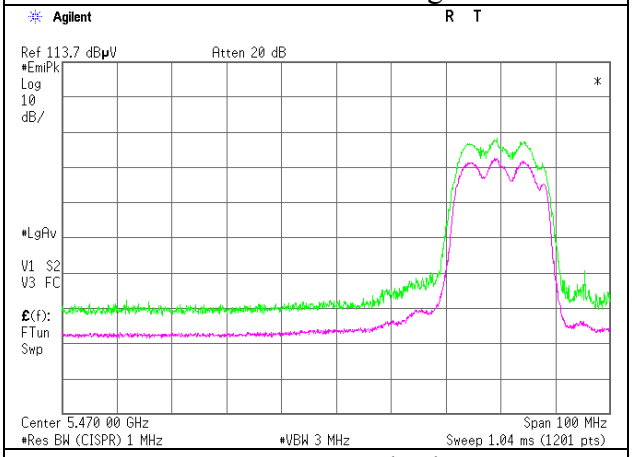
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	11600.000	PK	41.5	40.8	-1.6	33.4	-	47.3	73.9	26.6	Floor Noise
Hori	16740.000	PK	42.5	40.9	-0.1	32.8	-	50.5	73.9	23.4	Floor Noise
Hori	11600.000	AV	32.4	40.8	-1.6	33.4	-	38.2	53.9	15.7	Floor Noise
Hori	16740.000	AV	33.3	40.9	-0.1	32.8	-	41.3	53.9	12.6	Floor Noise
Vert	11600.000	PK	41.5	40.8	-1.6	33.4	-	47.3	73.9	26.6	Floor Noise
Vert	16740.000	PK	42.4	40.9	-0.1	32.8	-	50.4	73.9	23.5	Floor Noise
Vert	11600.000	AV	32.3	40.8	-1.6	33.4	-	38.1	53.9	15.8	Floor Noise
Vert	16740.000	AV	33.5	40.9	-0.1	32.8	-	41.5	53.9	12.4	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 20dB).

Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	5725.000	PK	51.3	32.6	7.6	31.8	-	59.7	73.9	14.2	
Hori	11400.000	PK	40.5	40.8	-1.7	33.4	-	46.2	73.9	27.7	Floor Noise
Hori	17100.000	PK	42.5	41.8	-0.2	32.8	-	51.3	73.9	22.6	Floor Noise
Hori	5725.000	AV	34.4	32.6	7.6	31.8	-	42.8	53.9	11.1	
Hori	11400.000	AV	32.4	40.8	-1.7	33.4	-	38.1	53.9	15.8	Floor Noise
Hori	17100.000	AV	33.3	41.8	-0.2	32.8	-	42.1	53.9	11.8	Floor Noise
Vert	5725.000	PK	52.9	32.6	7.6	31.8	-	61.3	73.9	12.6	
Vert	11400.000	PK	40.8	40.8	-1.7	33.4	-	46.5	73.9	27.4	Floor Noise
Vert	17100.000	PK	41.3	41.8	-0.2	32.8	-	50.1	73.9	23.8	Floor Noise
Vert	5725.000	AV	36.2	32.6	7.6	31.8	-	44.6	53.9	9.3	
Vert	11400.000	AV	32.3	40.8	-1.7	33.4	-	38.0	53.9	15.9	Floor Noise
Vert	17100.000	AV	33.5	41.8	-0.2	32.8	-	42.3	53.9	11.6	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 20dB).

Distance factor:

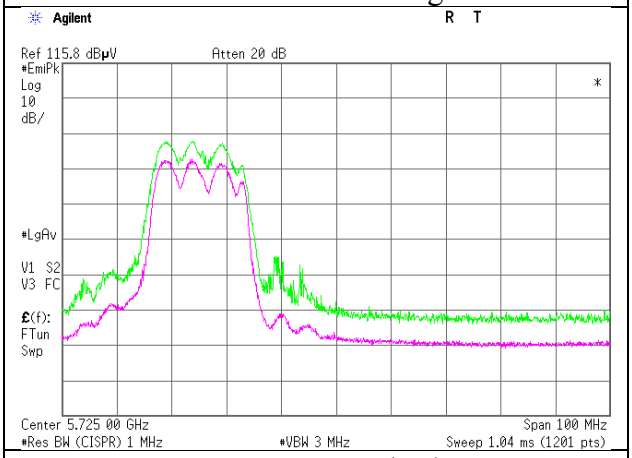
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 5700 MHz

Horizontal

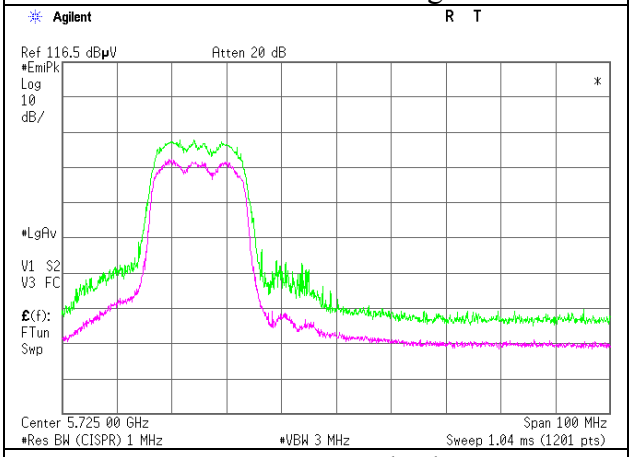
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	5715.000	PK	47.6	32.6	7.5	31.8	-	55.9	68.2	12.3	
Hori	5725.000	PK	53.9	32.6	7.6	31.8	-	62.3	78.2	15.9	
Hori	11490.000	PK	40.5	41.0	-1.7	33.4	-	46.4	73.9	27.5	Floor Noise
Hori	17235.000	PK	41.7	42.4	-0.1	32.7	-	51.3	73.9	22.6	Floor Noise
Hori	11490.000	AV	32.4	41.0	-1.7	33.4	-	38.3	53.9	15.6	Floor Noise
Hori	17235.000	AV	34.2	42.4	-0.1	32.7	-	43.8	53.9	10.1	Floor Noise
Vert	5715.000	PK	48.6	32.6	7.5	31.8	-	56.9	68.2	11.3	
Vert	5725.000	PK	56.5	32.6	7.6	31.8	-	64.9	78.2	13.3	
Vert	11490.000	PK	40.4	41.0	-1.7	33.4	-	46.3	73.9	27.6	Floor Noise
Vert	17235.000	PK	41.5	42.4	-0.1	32.7	-	51.1	73.9	22.8	Floor Noise
Vert	11490.000	AV	32.3	41.0	-1.7	33.4	-	38.2	53.9	15.7	Floor Noise
Vert	17235.000	AV	34.5	42.4	-0.1	32.7	-	44.1	53.9	9.8	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 20dB).

Distance factor:

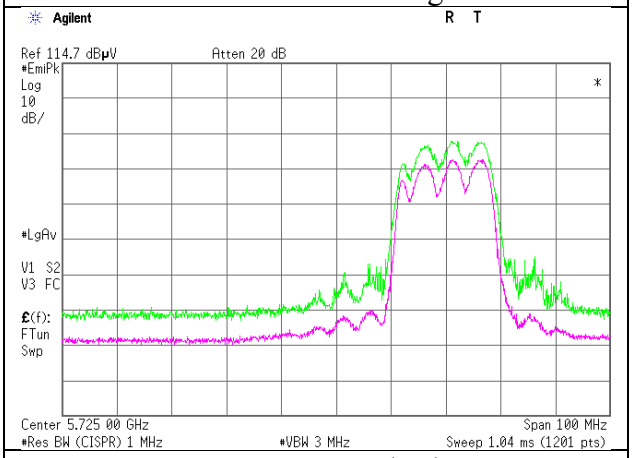
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 5745 MHz

Horizontal

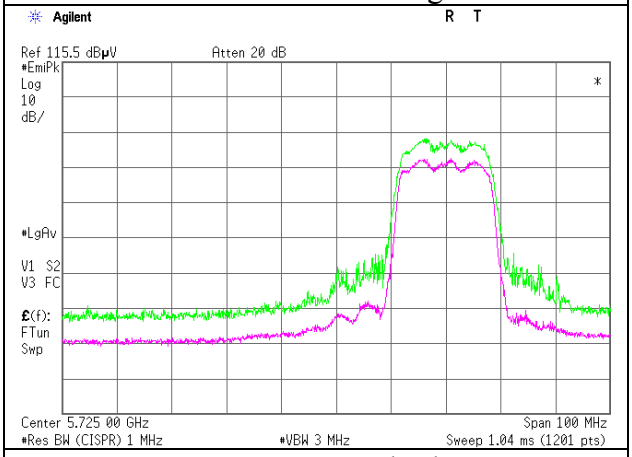
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	11570.000	PK	40.7	40.9	-1.7	33.4	-	46.5	73.9	27.4	Floor Noise
Hori	17355.000	PK	41.4	42.9	0.0	32.7	-	51.6	73.9	22.3	Floor Noise
Hori	11570.000	AV	32.6	40.9	-1.7	33.4	-	38.4	53.9	15.5	Floor Noise
Hori	17355.000	AV	33.2	42.9	0.0	32.7	-	43.4	53.9	10.5	Floor Noise
Vert	11570.000	PK	40.8	40.9	-1.7	33.4	-	46.6	73.9	27.3	Floor Noise
Vert	17355.000	PK	41.0	42.9	0.0	32.7	-	51.2	73.9	22.7	Floor Noise
Vert	11570.000	AV	32.8	40.9	-1.7	33.4	-	38.6	53.9	15.3	Floor Noise
Vert	17355.000	AV	33.9	42.9	0.0	32.7	-	44.1	53.9	9.8	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 20dB).

Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11a 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	5850.000	PK	47.8	32.8	7.6	31.8	-	56.4	78.2	21.8	
Hori	5860.000	PK	43.7	32.8	7.6	31.8	-	52.3	68.2	15.9	
Hori	11650.000	PK	40.5	40.8	-1.5	33.4	-	46.4	73.9	27.5	Floor Noise
Hori	17475.000	PK	41.4	43.4	0.2	32.7	-	52.3	73.9	21.6	Floor Noise
Hori	11650.000	AV	32.6	40.8	-1.5	33.4	-	38.5	53.9	15.4	Floor Noise
Hori	17475.000	AV	33.2	43.4	0.2	32.7	-	44.1	53.9	9.8	Floor Noise
Vert	5850.000	PK	44.9	32.8	7.6	31.8	-	53.5	78.2	24.7	
Vert	5860.000	PK	44.5	32.8	7.6	31.8	-	53.1	68.2	15.1	
Vert	11650.000	PK	40.6	40.8	-1.5	33.4	-	46.5	73.9	27.4	Floor Noise
Vert	17475.000	PK	41.1	43.4	0.2	32.7	-	52.0	73.9	21.9	Floor Noise
Vert	11650.000	AV	32.8	40.8	-1.5	33.4	-	38.7	53.9	15.2	Floor Noise
Vert	17475.000	AV	34.5	43.4	0.2	32.7	-	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 20dB).

Distance factor:

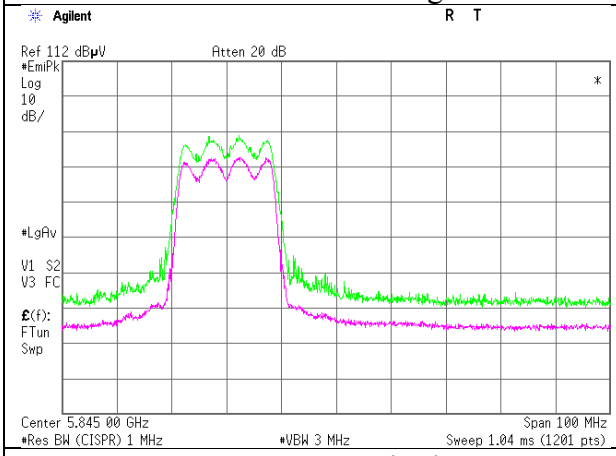
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11a 5825 MHz

Horizontal

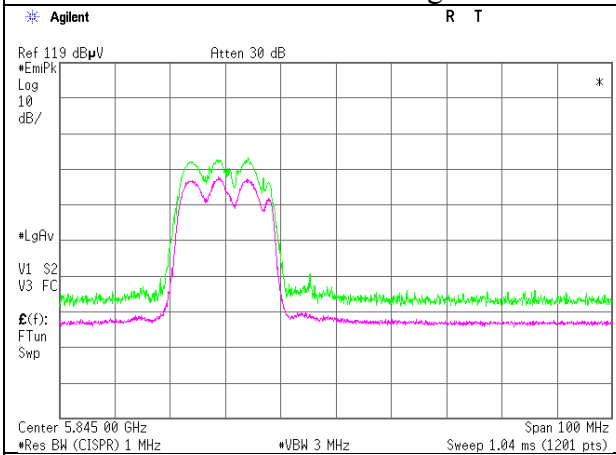
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	11155194H	
Date	April 27, 2016	April 28, 2016
Temperature / Humidity	23deg. C / 54 % RH	23deg. C / 61 % RH
Engineer	Takumi Shimada	Ken Fujita
	(1 GHz-40 GHz)	(Below 1GHz)
Mode	Tx 11n-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	36.800	QP	24.4	15.0	7.1	32.2	-	14.3	40.0	25.7	
Hori	55.783	QP	24.6	8.3	7.4	32.2	-	8.1	40.0	31.9	
Hori	74.767	QP	24.1	6.0	7.7	32.2	-	5.6	40.0	34.4	
Hori	88.367	QP	26.2	7.9	7.9	32.2	-	9.8	43.5	33.7	
Hori	302.589	QP	31.1	13.6	9.9	31.9	-	22.7	46.0	23.3	
Hori	404.767	QP	24.6	15.7	10.6	31.9	-	19.0	46.0	27.0	
Hori	5150.000	PK	46.4	32.2	7.3	31.7	-	54.2	73.9	19.7	
Hori	10360.000	PK	43.0	38.7	-2.0	33.5	-	46.2	73.9	27.7	Floor Noise
Hori	15540.000	PK	43.1	39.8	-0.2	32.7	-	50.0	73.9	23.9	Floor Noise
Hori	5150.000	AV	34.5	32.2	7.3	31.7	-	42.3	53.9	11.6	
Hori	10360.000	AV	33.1	38.7	-2.0	33.5	-	36.3	53.9	17.6	Floor Noise
Hori	15540.000	AV	32.7	39.8	-0.2	32.7	-	39.6	53.9	14.3	Floor Noise
Vert	37.650	QP	27.2	14.7	7.1	32.2	-	16.8	40.0	23.2	
Vert	55.783	QP	24.3	8.3	7.4	32.2	-	7.8	40.0	32.2	
Vert	74.200	QP	24.4	6.0	7.7	32.2	-	5.9	40.0	34.1	
Vert	87.517	QP	25.3	7.7	7.9	32.2	-	8.7	40.0	31.3	
Vert	302.589	QP	27.5	13.6	9.9	31.9	-	19.1	46.0	26.9	
Vert	404.767	QP	24.5	15.7	10.6	31.9	-	18.9	46.0	27.1	
Vert	5150.000	PK	46.0	32.2	7.3	31.7	-	53.8	73.9	20.1	
Vert	10360.000	PK	42.4	38.7	-2.0	33.5	-	45.6	73.9	28.3	Floor Noise
Vert	15540.000	PK	43.4	39.8	-0.2	32.7	-	50.3	73.9	23.6	Floor Noise
Vert	5150.000	AV	34.5	32.2	7.3	31.7	-	42.3	53.9	11.6	
Vert	10360.000	AV	32.0	38.7	-2.0	33.5	-	35.2	53.9	18.7	Floor Noise
Vert	15540.000	AV	33.3	39.8	-0.2	32.7	-	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 20dB).

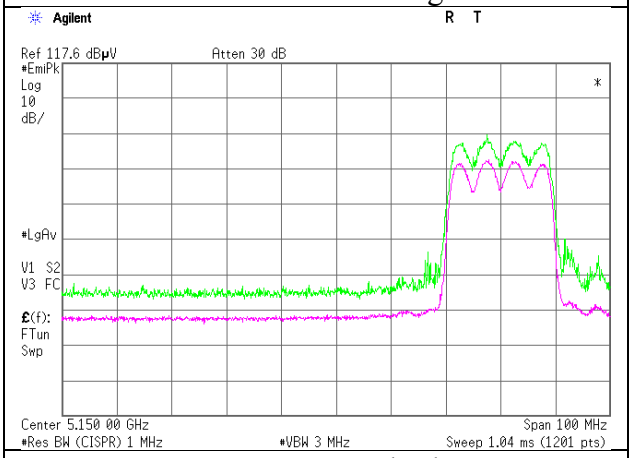
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5180 MHz

Horizontal

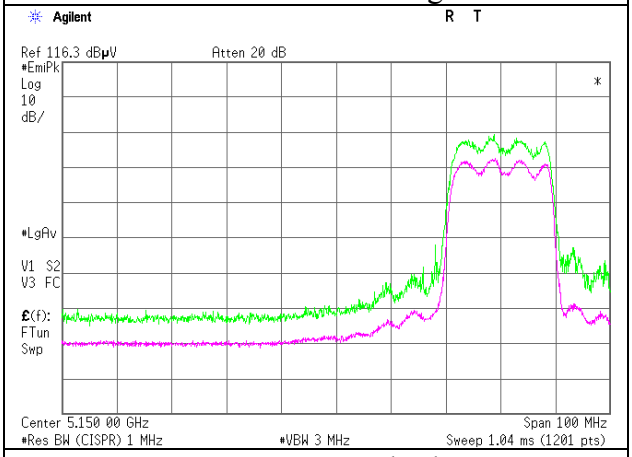
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	42.2	38.9	-2.0	33.5	-	45.6	73.9	28.3	Floor Noise
Hori	15780.000	PK	43.9	39.6	-0.1	32.8	-	50.6	73.9	23.3	Floor Noise
Hori	10520.000	AV	33.1	38.9	-2.0	33.5	-	36.5	53.9	17.4	Floor Noise
Hori	15780.000	AV	33.5	39.6	-0.1	32.8	-	40.2	53.9	13.7	Floor Noise
Vert	10520.000	PK	42.1	38.9	-2.0	33.5	-	45.5	73.9	28.4	Floor Noise
Vert	15780.000	PK	43.4	39.6	-0.1	32.8	-	50.1	73.9	23.8	Floor Noise
Vert	10520.000	AV	32.0	38.9	-2.0	33.5	-	35.4	53.9	18.5	Floor Noise
Vert	15780.000	AV	33.3	39.6	-0.1	32.8	-	40.0	53.9	13.9	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 20dB).

Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	46.2	32.2	7.4	31.8	-	54.0	73.9	19.9	
Hori	10640.000	PK	41.3	39.1	-2.0	33.5	-	44.9	73.9	29.0	Floor Noise
Hori	15960.000	PK	43.6	39.4	0.1	32.9	-	50.2	73.9	23.7	Floor Noise
Hori	5350.000	AV	35.2	32.2	7.4	31.8	-	43.0	53.9	10.9	
Hori	10640.000	AV	32.2	39.1	-2.0	33.5	-	35.8	53.9	18.1	Floor Noise
Hori	15960.000	AV	33.5	39.4	0.1	32.9	-	40.1	53.9	13.8	Floor Noise
Vert	5350.000	PK	46.1	32.2	7.4	31.8	-	53.9	73.9	20.0	
Vert	10640.000	PK	41.3	39.1	-2.0	33.5	-	44.9	73.9	29.0	Floor Noise
Vert	15960.000	PK	43.4	39.4	0.1	32.9	-	50.0	73.9	23.9	Floor Noise
Vert	5350.000	AV	33.5	32.2	7.4	31.8	-	41.3	53.9	12.6	
Vert	10640.000	AV	32.3	39.1	-2.0	33.5	-	35.9	53.9	18.0	Floor Noise
Vert	15960.000	AV	33.3	39.4	0.1	32.9	-	39.9	53.9	14.0	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 20dB).

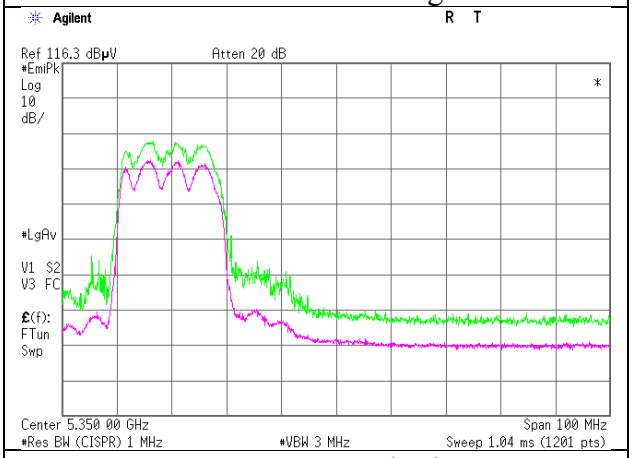
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5320 MHz

Horizontal

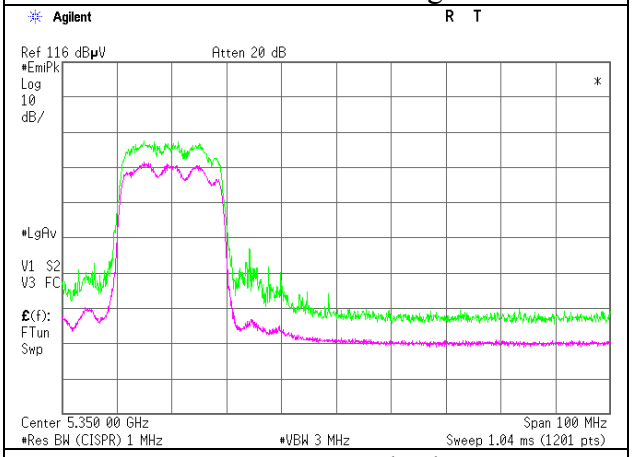
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	5470.000	PK	44.0	32.2	7.4	31.8	-	51.8	73.9	22.1	
Hori	11000.000	PK	41.3	39.9	-2.0	33.6	-	45.6	73.9	28.3	Floor Noise
Hori	16500.000	PK	42.6	40.4	-0.1	32.8	-	50.1	73.9	23.8	Floor Noise
Hori	5470.000	AV	33.7	32.2	7.4	31.8	-	41.5	53.9	12.4	
Hori	11000.000	AV	33.2	39.9	-2.0	33.6	-	37.5	53.9	16.4	Floor Noise
Hori	16500.000	AV	33.3	40.4	-0.1	32.8	-	40.8	53.9	13.1	Floor Noise
Vert	5470.000	PK	43.7	32.2	7.4	31.8	-	51.5	73.9	22.4	
Vert	11000.000	PK	41.5	39.9	-2.0	33.6	-	45.8	73.9	28.1	Floor Noise
Vert	16500.000	PK	42.4	40.4	-0.1	32.8	-	49.9	73.9	24.0	Floor Noise
Vert	5470.000	AV	33.3	32.2	7.4	31.8	-	41.1	53.9	12.8	
Vert	11000.000	AV	33.2	39.9	-2.0	33.6	-	37.5	53.9	16.4	Floor Noise
Vert	16500.000	AV	33.3	40.4	-0.1	32.8	-	40.8	53.9	13.1	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 20dB).

Distance factor:

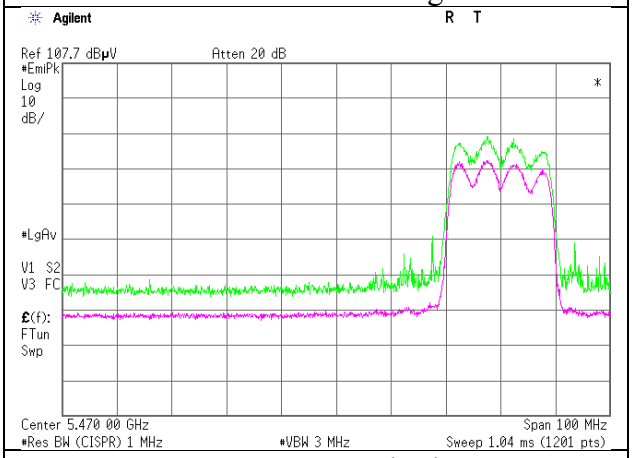
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5500 MHz

Horizontal

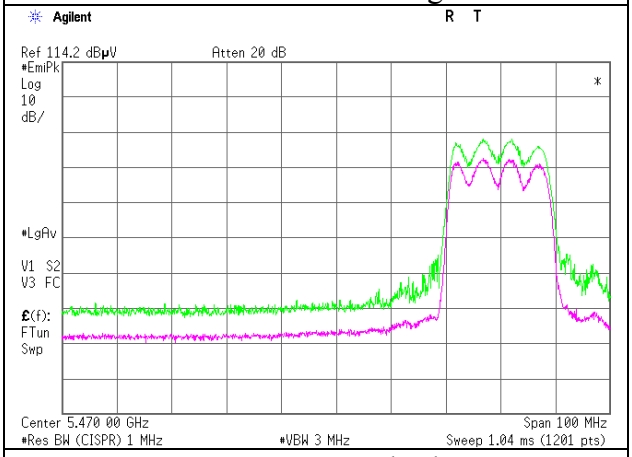
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	11600.000	PK	41.4	40.8	-1.6	33.4	-	47.2	73.9	26.7	Floor Noise
Hori	16740.000	PK	42.6	40.9	-0.1	32.8	-	50.6	73.9	23.3	Floor Noise
Hori	11600.000	AV	32.3	40.8	-1.6	33.4	-	38.1	53.9	15.8	Floor Noise
Hori	16740.000	AV	33.3	40.9	-0.1	32.8	-	41.3	53.9	12.6	Floor Noise
Vert	11600.000	PK	41.6	40.8	-1.6	33.4	-	47.4	73.9	26.5	Floor Noise
Vert	16740.000	PK	42.4	40.9	-0.1	32.8	-	50.4	73.9	23.5	Floor Noise
Vert	11600.000	AV	32.2	40.8	-1.6	33.4	-	38.0	53.9	15.9	Floor Noise
Vert	16740.000	AV	33.4	40.9	-0.1	32.8	-	41.4	53.9	12.5	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 20dB).

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	5725.000	PK	53.4	32.6	7.6	31.8	-	61.8	73.9	12.1	
Hori	11400.000	PK	40.9	40.8	-1.7	33.4	-	46.6	73.9	27.3	Floor Noise
Hori	17100.000	PK	42.6	41.8	-0.2	32.8	-	51.4	73.9	22.5	Floor Noise
Hori	5725.000	AV	36.6	32.6	7.6	31.8	-	45.0	53.9	8.9	
Hori	11400.000	AV	32.5	40.8	-1.7	33.4	-	38.2	53.9	15.7	Floor Noise
Hori	17100.000	AV	33.3	41.8	-0.2	32.8	-	42.1	53.9	11.8	Floor Noise
Vert	5725.000	PK	53.4	32.6	7.6	31.8	-	61.8	73.9	12.1	
Vert	11400.000	PK	40.7	40.8	-1.7	33.4	-	46.4	73.9	27.5	Floor Noise
Vert	17100.000	PK	41.4	41.8	-0.2	32.8	-	50.2	73.9	23.7	Floor Noise
Vert	5725.000	AV	37.2	32.6	7.6	31.8	-	45.6	53.9	8.3	
Vert	11400.000	AV	32.2	40.8	-1.7	33.4	-	37.9	53.9	16.0	Floor Noise
Vert	17100.000	AV	33.4	41.8	-0.2	32.8	-	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 20dB).

Distance factor:

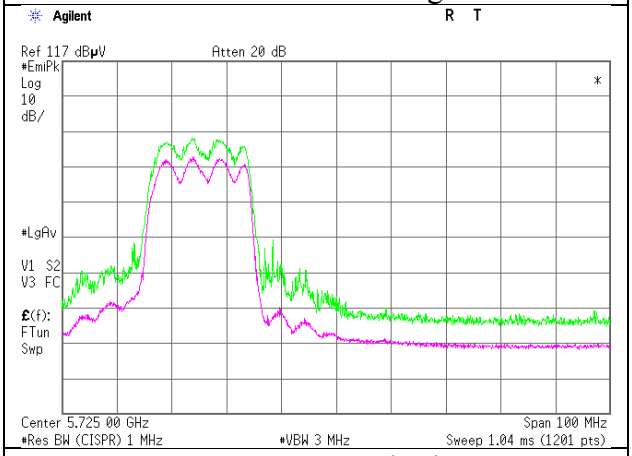
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5700 MHz

Horizontal

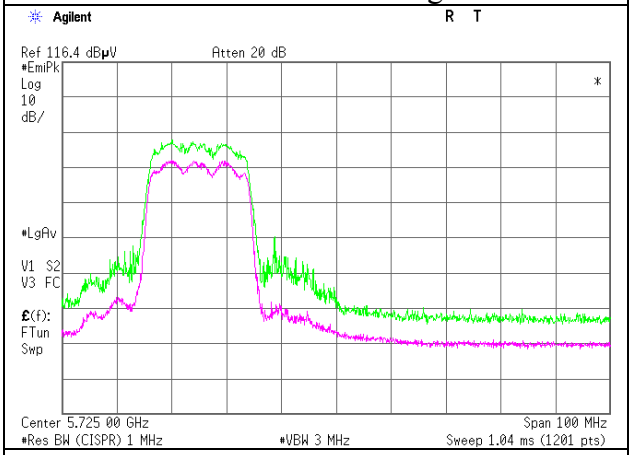
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	5715.000	PK	47.3	32.6	7.5	31.8	-	55.6	68.2	12.6	
Hori	5725.000	PK	55.9	32.6	7.6	31.8	-	64.3	78.2	13.9	
Hori	11490.000	PK	40.7	41.0	-1.7	33.4	-	46.6	73.9	27.3	Floor Noise
Hori	17235.000	PK	41.6	42.4	-0.1	32.7	-	51.2	73.9	22.7	Floor Noise
Hori	11490.000	AV	32.3	41.0	-1.7	33.4	-	38.2	53.9	15.7	Floor Noise
Hori	17235.000	AV	33.3	42.4	-0.1	32.7	-	42.9	53.9	11.0	Floor Noise
Vert	5715.000	PK	48.8	32.6	7.5	31.8	-	57.1	68.2	11.1	
Vert	5725.000	PK	58.2	32.6	7.6	31.8	-	66.6	78.2	11.6	
Vert	11490.000	PK	40.6	41.0	-1.7	33.4	-	46.5	73.9	27.4	Floor Noise
Vert	17235.000	PK	41.4	42.4	-0.1	32.7	-	51.0	73.9	22.9	Floor Noise
Vert	11490.000	AV	32.2	41.0	-1.7	33.4	-	38.1	53.9	15.8	Floor Noise
Vert	17235.000	AV	34.4	42.4	-0.1	32.7	-	44.0	53.9	9.9	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 20dB).

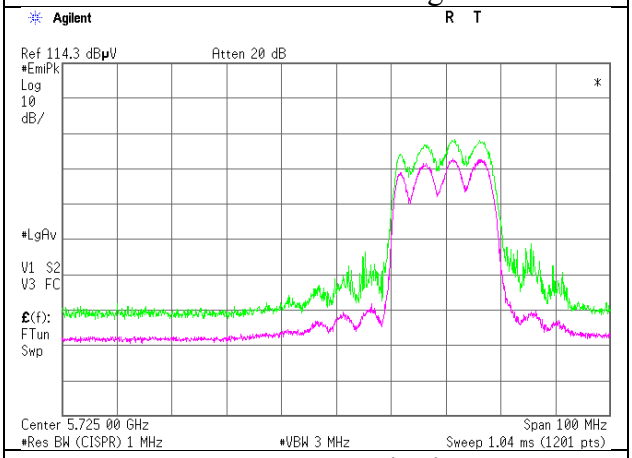
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5745 MHz

Horizontal

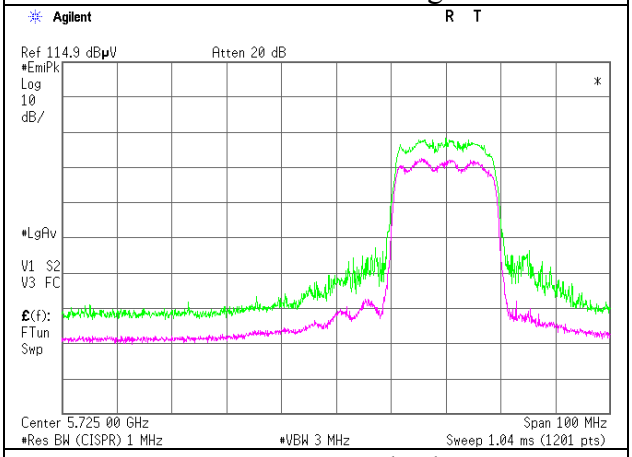
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	11570.000	PK	40.6	40.9	-1.7	33.4	-	46.4	73.9	27.5	Floor Noise
Hori	17355.000	PK	41.3	42.9	0.0	32.7	-	51.5	73.9	22.4	Floor Noise
Hori	11570.000	AV	32.2	40.9	-1.7	33.4	-	38.0	53.9	15.9	Floor Noise
Hori	17355.000	AV	33.8	42.9	0.0	32.7	-	44.0	53.9	9.9	Floor Noise
Vert	11570.000	PK	40.7	40.9	-1.7	33.4	-	46.5	73.9	27.4	Floor Noise
Vert	17355.000	PK	41.2	42.9	0.0	32.7	-	51.4	73.9	22.5	Floor Noise
Vert	11570.000	AV	32.8	40.9	-1.7	33.4	-	38.6	53.9	15.3	Floor Noise
Vert	17355.000	AV	33.9	42.9	0.0	32.7	-	44.1	53.9	9.8	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 20dB).

Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-40 GHz)
Mode	Tx 11n-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	5850.000	PK	50.9	32.8	7.6	31.8	-	59.5	78.2	18.7	
Hori	5860.000	PK	43.6	32.8	7.6	31.8	-	52.2	68.2	16.0	
Hori	11650.000	PK	40.5	40.8	-1.5	33.4	-	46.4	73.9	27.5	Floor Noise
Hori	17475.000	PK	41.5	43.4	0.2	32.7	-	52.4	73.9	21.5	Floor Noise
Hori	11650.000	AV	32.2	40.8	-1.5	33.4	-	38.1	53.9	15.8	Floor Noise
Hori	17475.000	AV	33.3	43.4	0.2	32.7	-	44.2	53.9	9.7	Floor Noise
Vert	5850.000	PK	45.3	32.8	7.6	31.8	-	53.9	78.2	24.3	
Vert	5860.000	PK	44.1	32.8	7.6	31.8	-	52.7	68.2	15.5	
Vert	11650.000	PK	40.6	40.8	-1.5	33.4	-	46.5	73.9	27.4	Floor Noise
Vert	17475.000	PK	41.3	43.4	0.2	32.7	-	52.2	73.9	21.7	Floor Noise
Vert	11650.000	AV	32.8	40.8	-1.5	33.4	-	38.7	53.9	15.2	Floor Noise
Vert	17475.000	AV	34.1	43.4	0.2	32.7	-	45.0	53.9	8.9	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 20dB).

Distance factor:

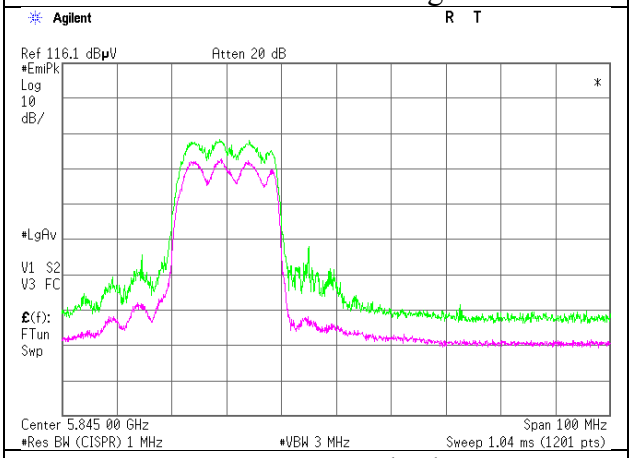
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5825 MHz

Horizontal

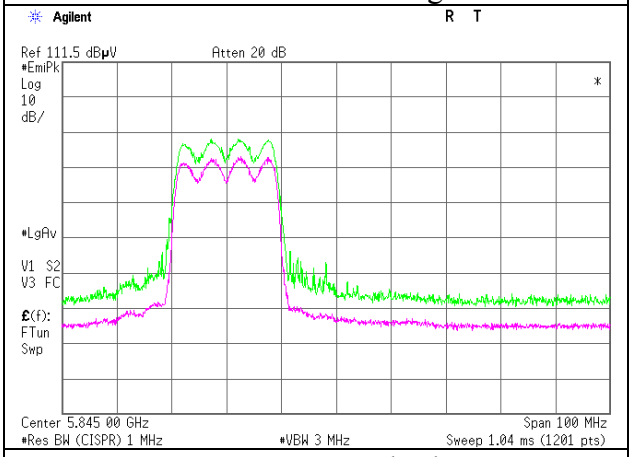
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-10 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	5150.000	PK	47.7	32.2	7.3	31.7	-	55.5	73.9	18.4	
Hori	5150.000	AV	35.4	32.2	7.3	31.7	-	43.2	53.9	10.7	
Vert	5150.000	PK	47.3	32.2	7.3	31.7	-	55.1	73.9	18.8	
Vert	5150.000	AV	34.4	32.2	7.3	31.7	-	42.2	53.9	11.7	

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 20dB).

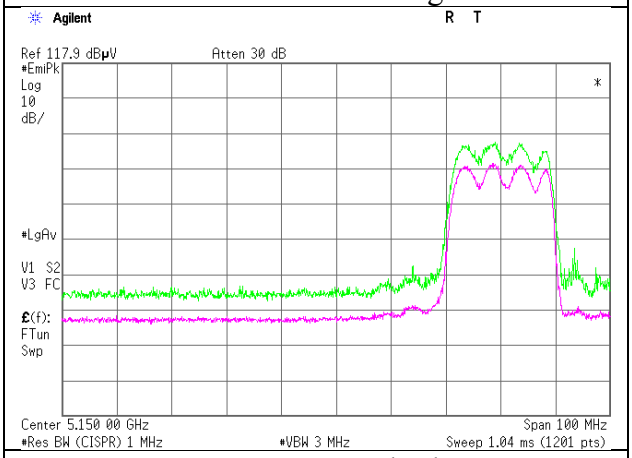
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5180 MHz

Horizontal

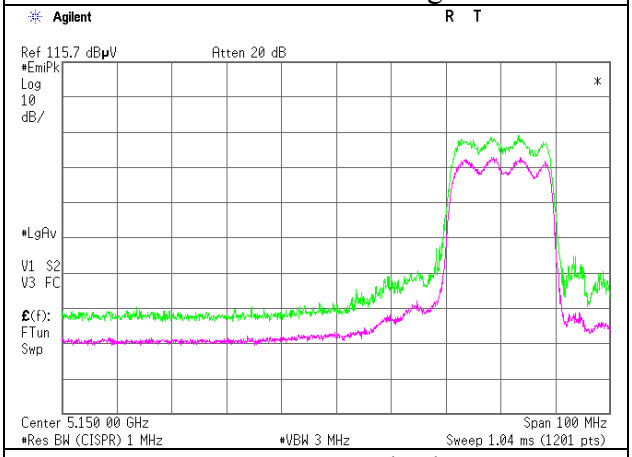
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-10 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	47.3	32.2	7.4	31.8	-	55.1	73.9	18.8	
Hori	5350.000	AV	35.9	32.2	7.4	31.8	-	43.7	53.9	10.2	
Vert	5350.000	PK	47.7	32.2	7.4	31.8	-	55.5	73.9	18.4	
Vert	5350.000	AV	33.5	32.2	7.4	31.8	-	41.3	53.9	12.6	

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 20dB).

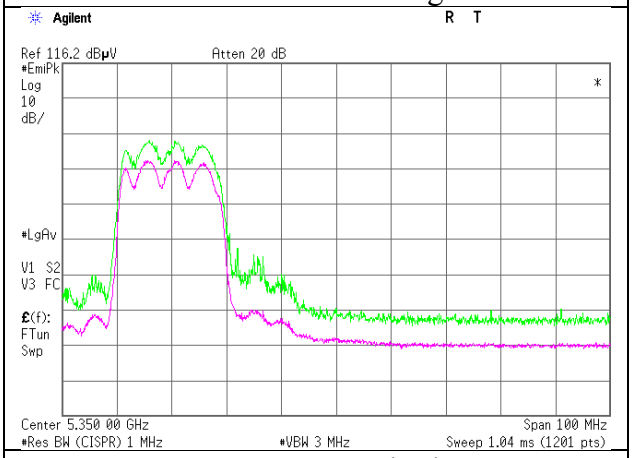
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5320 MHz

Horizontal

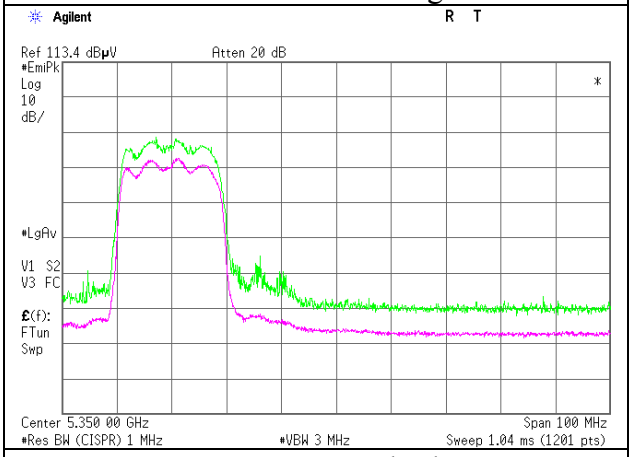
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-10 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	5470.000	PK	48.2	32.2	7.4	31.8	-	56.0	73.9	17.9	
Hori	5470.000	AV	34.0	32.2	7.4	31.8	-	41.8	53.9	12.1	
Vert	5470.000	PK	46.8	32.2	7.4	31.8	-	54.6	73.9	19.3	
Vert	5470.000	AV	33.2	32.2	7.4	31.8	-	41.0	53.9	12.9	

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 20dB).

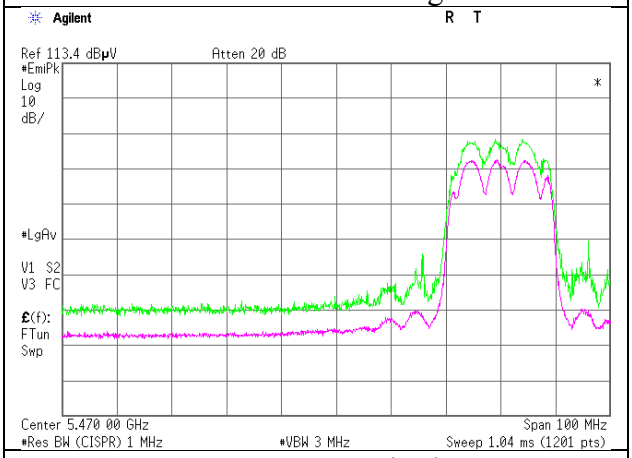
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5500 MHz

Horizontal

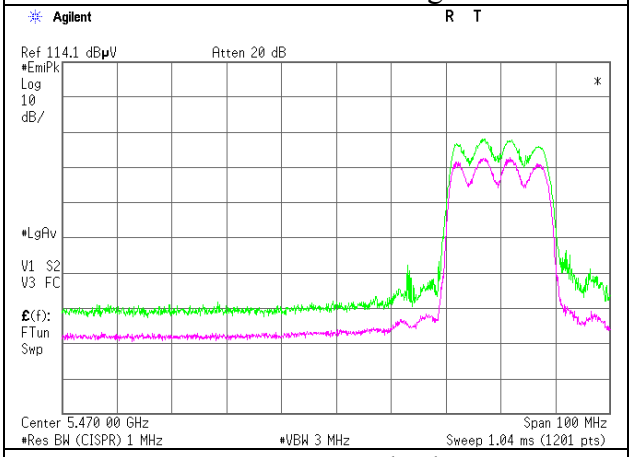
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-10 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	5725.000	PK	53.3	32.6	7.6	31.8	-	61.7	73.9	12.2	
Hori	5725.000	AV	34.6	32.6	7.6	31.8	-	43.0	53.9	10.9	
Vert	5725.000	PK	55.2	32.6	7.6	31.8	-	63.6	73.9	10.3	
Vert	5725.000	AV	37.2	32.6	7.6	31.8	-	45.6	53.9	8.3	

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 20dB).

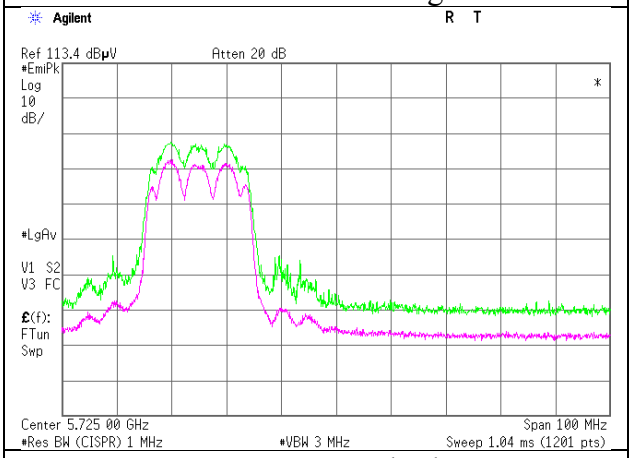
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5700 MHz

Horizontal

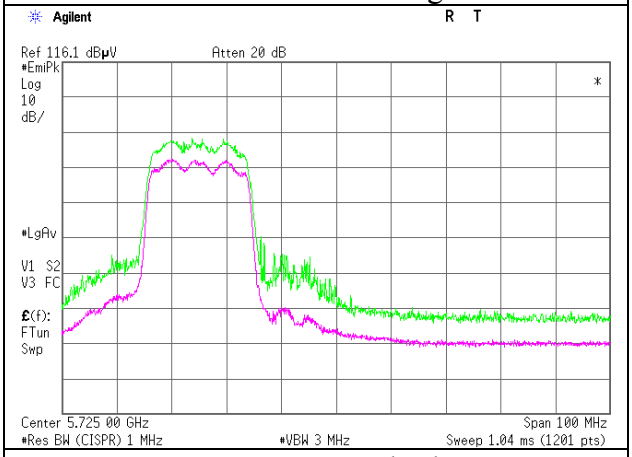
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-10 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
Vert	5715.000	PK	49.3	32.6	7.5	31.8	-	57.6	68.2	10.6	
Vert	5725.000	PK	56.9	32.6	7.6	31.8	-	65.3	78.2	12.9	
Hori	5715.000	PK	47.6	32.6	7.5	31.8	-	55.9	68.2	12.3	
Hori	5725.000	PK	55.4	32.6	7.6	31.8	-	63.8	78.2	14.4	

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 20dB).

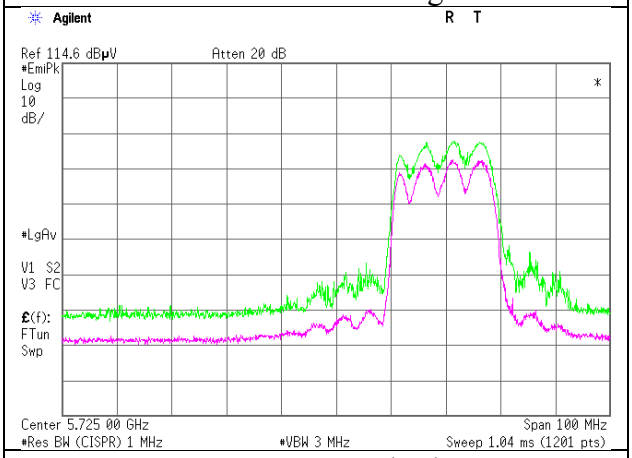
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5745 MHz

Horizontal

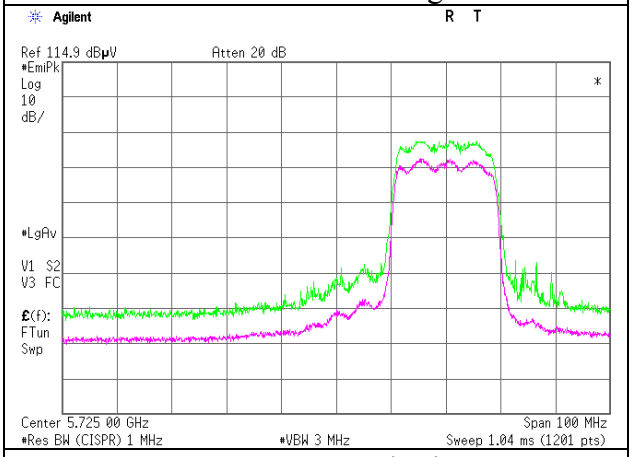
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
	(1 GHz-10 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	5850.000	PK	50.1	32.8	7.6	31.8	-	58.7	78.2	19.5	
Hori	5860.000	PK	43.9	32.8	7.6	31.8	-	52.5	68.2	15.7	
Vert	5850.000	PK	45.2	32.8	7.6	31.8	-	53.8	78.2	24.4	
Vert	5860.000	PK	43.8	32.8	7.6	31.8	-	52.4	68.2	15.8	

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 20dB).

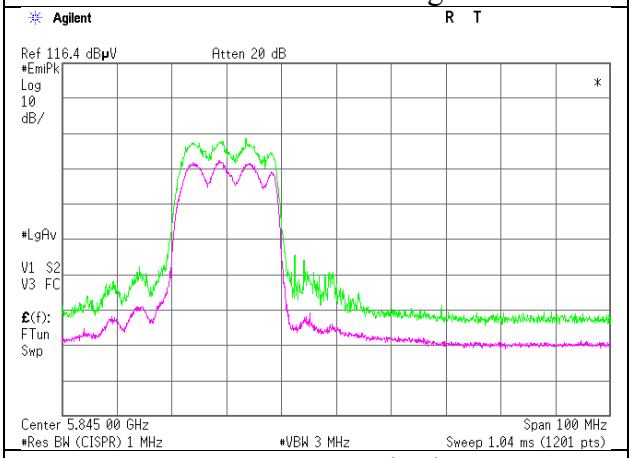
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	April 27, 2016
Temperature / Humidity	23deg. C / 54 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-20 5825 MHz

Horizontal

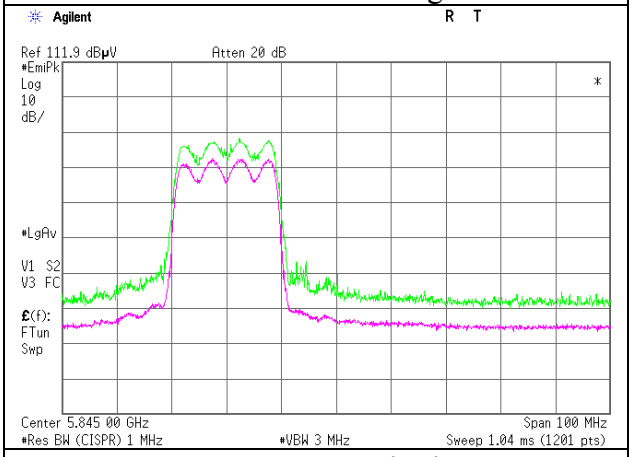
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya	Yuta Moriya	Tomoki Matsui
	(1 GHz-10 GHz)	(10 GHz-18 GHz)	(18GHz-40GHz)
Mode	Tx 11n-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	50.7	32.2	7.3	31.2	-	59.0	73.9	14.9	
Hori	10380.000	PK	40.5	38.7	-2.0	32.7	-	44.5	73.9	29.4	Floor Noise
Hori	15570.000	PK	41.5	39.8	-0.2	32.0	-	49.1	73.9	24.8	Floor Noise
Hori	5150.000	AV	39.1	32.2	7.3	31.2	-	47.4	53.9	6.5	
Hori	10380.000	AV	31.2	38.7	-2.0	32.7	-	35.2	53.9	18.7	Floor Noise
Hori	15570.000	AV	33.2	39.8	-0.2	32.0	-	40.8	53.9	13.1	Floor Noise
Vert	5150.000	PK	49.2	32.2	7.3	31.2	-	57.5	73.9	16.4	
Vert	10380.000	PK	41.1	38.7	-2.0	32.7	-	45.1	73.9	28.8	Floor Noise
Vert	15570.000	PK	42.0	39.8	-0.2	32.0	-	49.6	73.9	24.3	Floor Noise
Vert	5150.000	AV	37.8	32.2	7.3	31.2	-	46.1	53.9	7.8	
Vert	10380.000	AV	31.4	38.7	-2.0	32.7	-	35.4	53.9	18.5	Floor Noise
Vert	15570.000	AV	32.2	39.8	-0.2	32.0	-	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 20dB).

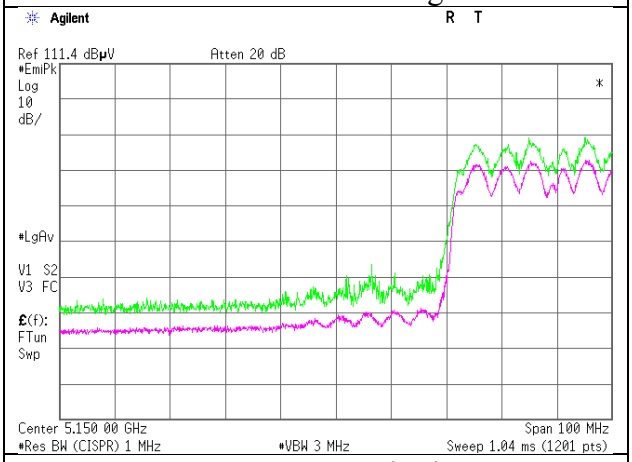
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40 5190 MHz

Horizontal

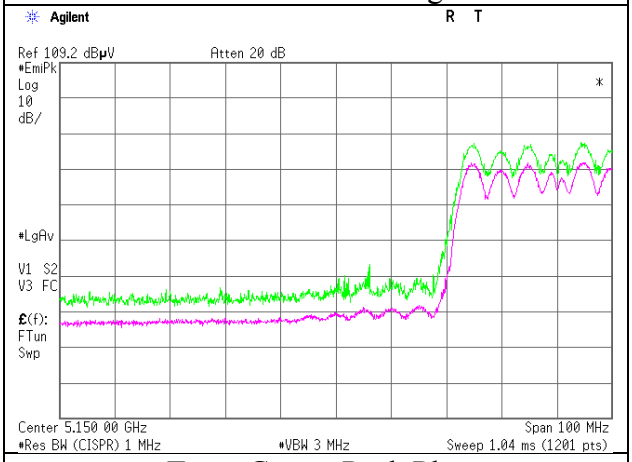
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	40.8	38.9	-2.0	32.8	-	44.9	73.9	29.0	Floor Noise
Hori	15810.000	PK	41.8	39.5	-0.1	32.3	-	48.9	73.9	25.0	Floor Noise
Hori	10540.000	AV	31.1	38.9	-2.0	32.8	-	35.2	53.9	18.7	Floor Noise
Hori	15810.000	AV	32.6	39.5	-0.1	32.3	-	39.7	53.9	14.2	Floor Noise
Vert	10540.000	PK	41.5	38.9	-2.0	32.8	-	45.6	73.9	28.3	Floor Noise
Vert	15810.000	PK	41.0	39.5	-0.1	32.3	-	48.1	73.9	25.8	Floor Noise
Vert	10540.000	AV	31.2	38.9	-2.0	32.8	-	35.3	53.9	18.6	Floor Noise
Vert	15810.000	AV	32.4	39.5	-0.1	32.3	-	39.5	53.9	14.4	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 20dB).

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	55.0	32.2	7.4	31.2	-	63.4	73.9	10.5	
Hori	10620.000	PK	41.0	39.1	-2.0	32.8	-	45.3	73.9	28.6	Floor Noise
Hori	15930.000	PK	41.3	39.4	0.1	32.4	-	48.4	73.9	25.5	Floor Noise
Hori	5350.000	AV	39.6	32.2	7.4	31.2	-	48.0	53.9	5.9	
Hori	10620.000	AV	31.0	39.1	-2.0	32.8	-	35.3	53.9	18.6	Floor Noise
Hori	15930.000	AV	32.2	39.4	0.1	32.4	-	39.3	53.9	14.6	Floor Noise
Vert	5350.000	PK	56.5	32.2	7.4	31.2	-	64.9	73.9	9.0	
Vert	10620.000	PK	41.4	39.1	-2.0	32.8	-	45.7	73.9	28.2	Floor Noise
Vert	15930.000	PK	41.2	39.4	0.1	32.4	-	48.3	73.9	25.6	Floor Noise
Vert	5350.000	AV	40.5	32.2	7.4	31.2	-	48.9	53.9	5.0	
Vert	10620.000	AV	31.0	39.1	-2.0	32.8	-	35.3	53.9	18.6	Floor Noise
Vert	15930.000	AV	32.1	39.4	0.1	32.4	-	39.2	53.9	14.7	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 20dB).

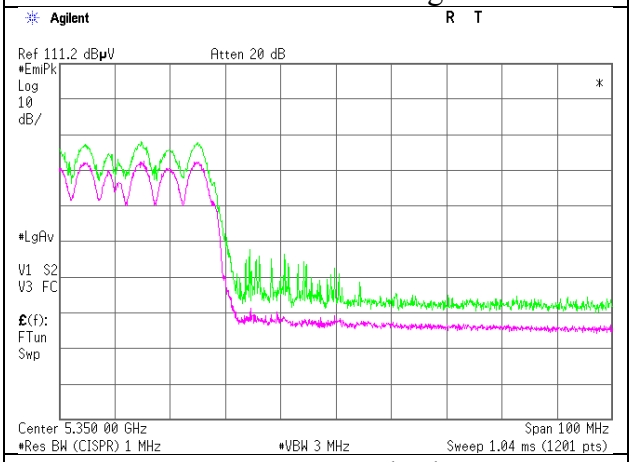
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40 5310 MHz

Horizontal

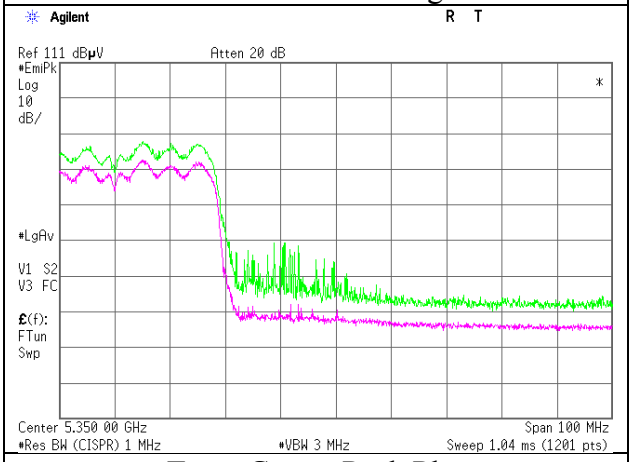
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	5470.000	PK	50.0	32.2	7.4	31.2	-	58.4	73.9	15.5	
Hori	11020.000	PK	41.0	39.9	-2.0	33.0	-	45.9	73.9	28.0	Floor Noise
Hori	16530.000	PK	41.3	40.5	-0.1	32.2	-	49.5	73.9	24.4	Floor Noise
Hori	5470.000	AV	38.8	32.2	7.4	31.2	-	47.2	53.9	6.7	
Hori	11020.000	AV	32.0	39.9	-2.0	33.0	-	36.9	53.9	17.0	Floor Noise
Hori	16530.000	AV	33.7	40.5	-0.1	32.2	-	41.9	53.9	12.0	Floor Noise
Vert	5470.000	PK	47.7	32.2	7.4	31.2	-	56.1	73.9	17.8	
Vert	11020.000	PK	41.4	39.9	-2.0	33.0	-	46.3	73.9	27.6	Floor Noise
Vert	16530.000	PK	41.1	40.5	-0.1	32.2	-	49.3	73.9	24.6	Floor Noise
Vert	5470.000	AV	37.1	32.2	7.4	31.2	-	45.5	53.9	8.4	
Vert	11020.000	AV	31.9	39.9	-2.0	33.0	-	36.8	53.9	17.1	Floor Noise
Vert	16530.000	AV	33.3	40.5	-0.1	32.2	-	41.5	53.9	12.4	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 20dB).

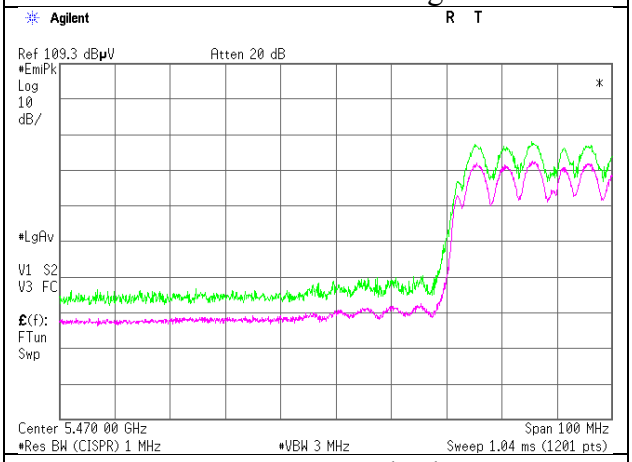
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40 5510 MHz

Horizontal

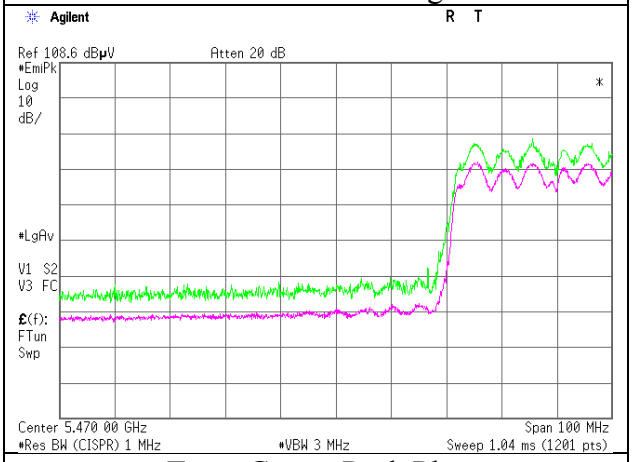
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	11100.000	PK	40.5	40.1	-2.0	33.0	-	45.6	73.9	28.3	Floor Noise
Hori	16650.000	PK	41.1	40.7	0.0	32.2	-	49.6	73.9	24.3	Floor Noise
Hori	11100.000	AV	31.8	40.1	-2.0	33.0	-	36.9	53.9	17.0	Floor Noise
Hori	16650.000	AV	33.2	40.7	0.0	32.2	-	41.7	53.9	12.2	Floor Noise
Vert	11100.000	PK	40.7	40.1	-2.0	33.0	-	45.8	73.9	28.1	Floor Noise
Vert	16650.000	PK	41.0	40.7	0.0	32.2	-	49.5	73.9	24.4	Floor Noise
Vert	11100.000	AV	32.0	40.1	-2.0	33.0	-	37.1	53.9	16.8	Floor Noise
Vert	16650.000	AV	33.4	40.7	0.0	32.2	-	41.9	53.9	12.0	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 20dB).

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	5725.000	PK	43.6	32.6	7.6	31.2	-	52.6	73.9	21.3	
Hori	11340.000	PK	40.5	40.7	-1.8	32.8	-	46.6	73.9	27.3	Floor Noise
Hori	17010.000	PK	41.5	41.5	-0.2	32.0	-	50.8	73.9	23.1	Floor Noise
Hori	5725.000	AV	35.2	32.6	7.6	31.2	-	44.2	53.9	9.7	
Hori	11340.000	AV	32.0	40.7	-1.8	32.8	-	38.1	53.9	15.8	Floor Noise
Hori	17010.000	AV	33.8	41.5	-0.2	32.0	-	43.1	53.9	10.8	Floor Noise
Vert	5725.000	PK	44.8	32.6	7.6	31.2	-	53.8	73.9	20.1	
Vert	11340.000	PK	40.6	40.7	-1.8	32.8	-	46.7	73.9	27.2	Floor Noise
Vert	17010.000	PK	41.4	41.5	-0.2	32.0	-	50.7	73.9	23.2	Floor Noise
Vert	5725.000	AV	35.6	32.6	7.6	31.2	-	44.6	53.9	9.3	
Vert	11340.000	AV	32.0	40.7	-1.8	32.8	-	38.1	53.9	15.8	Floor Noise
Vert	17010.000	AV	33.5	41.5	-0.2	32.0	-	42.8	53.9	11.1	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 20dB).

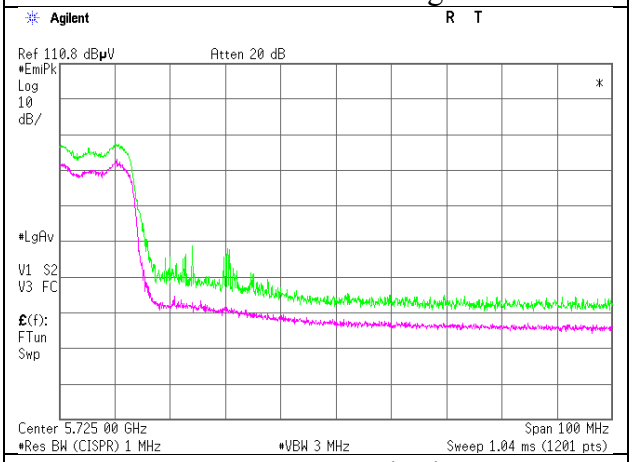
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40 5670 MHz

Horizontal

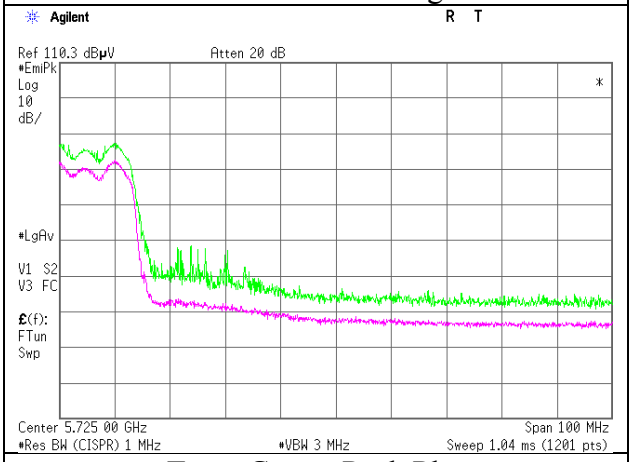
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	5715.000	PK	56.1	32.6	7.5	31.2	-	65.0	68.2	3.2	
Hori	5725.000	PK	58.4	32.6	7.6	31.2	-	67.4	78.2	10.8	
Hori	11510.000	PK	41.6	41.0	-1.6	32.7	-	48.3	73.9	25.6	Floor Noise
Hori	17265.000	PK	42.5	42.5	0.0	31.9	-	53.1	73.9	20.8	Floor Noise
Hori	11510.000	AV	33.1	41.0	-1.6	32.7	-	39.8	53.9	14.1	Floor Noise
Hori	17265.000	AV	34.3	42.5	0.0	31.9	-	44.9	53.9	9.0	Floor Noise
Vert	5715.000	PK	52.5	32.6	7.5	31.2	-	61.4	68.2	6.8	
Vert	5725.000	PK	54.8	32.6	7.6	31.2	-	63.8	78.2	14.4	
Vert	11510.000	PK	41.5	41.0	-1.6	32.7	-	48.2	73.9	25.7	Floor Noise
Vert	17265.000	PK	42.0	42.5	0.0	31.9	-	52.6	73.9	21.3	Floor Noise
Vert	11510.000	AV	33.1	41.0	-1.6	32.7	-	39.8	53.9	14.1	Floor Noise
Vert	17265.000	AV	34.0	42.5	0.0	31.9	-	44.6	53.9	9.3	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 20dB).

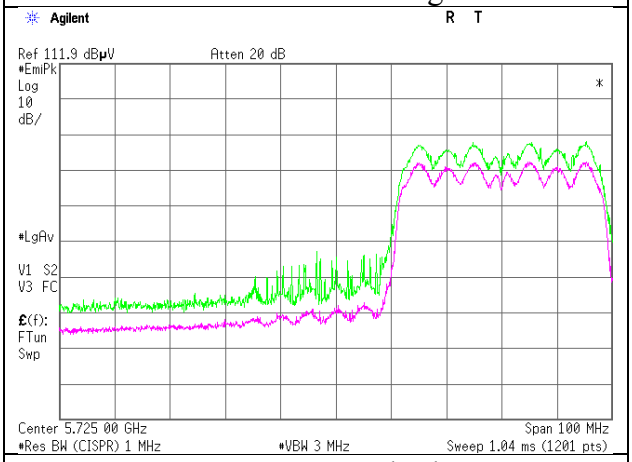
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40 5755 MHz

Horizontal

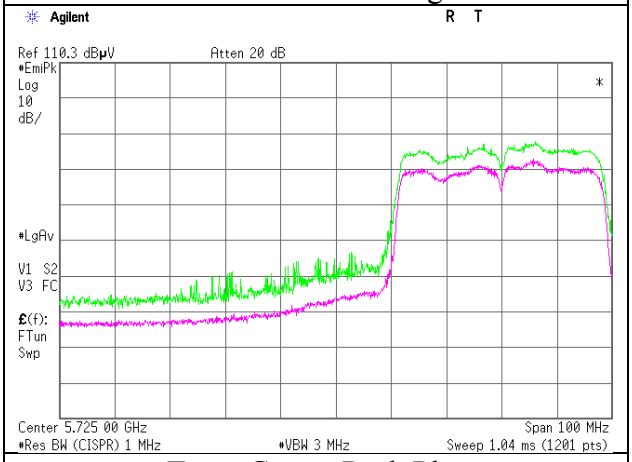
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11n-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	5850.000	PK	40.7	32.8	7.6	31.2	-	49.9	78.2	28.3	
Hori	5860.000	PK	39.8	32.8	7.6	31.2	-	49.0	68.2	19.2	
Hori	11590.000	PK	41.8	40.9	-1.5	32.6	-	48.6	73.9	25.3	Floor Noise
Hori	17385.000	PK	42.4	43.0	0.1	31.8	-	53.7	73.9	20.2	Floor Noise
Hori	11590.000	AV	33.7	40.9	-1.5	32.6	-	40.5	53.9	13.4	Floor Noise
Hori	17385.000	AV	34.0	43.0	0.1	31.8	-	45.3	53.9	8.6	Floor Noise
Vert	5850.000	PK	40.3	32.8	7.6	31.2	-	49.5	78.2	28.7	
Vert	5860.000	PK	38.4	32.8	7.6	31.2	-	47.6	68.2	20.6	
Vert	11590.000	PK	41.9	40.9	-1.5	32.6	-	48.7	73.9	25.2	Floor Noise
Vert	17385.000	PK	42.1	43.0	0.1	31.8	-	53.4	73.9	20.5	Floor Noise
Vert	11590.000	AV	33.3	40.9	-1.5	32.6	-	40.1	53.9	13.8	Floor Noise
Vert	17385.000	AV	34.1	43.0	0.1	31.8	-	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 20dB).

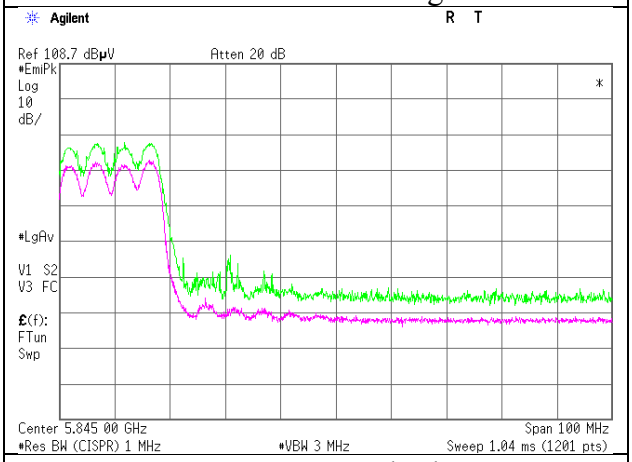
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11n-40 5795 MHz

Horizontal

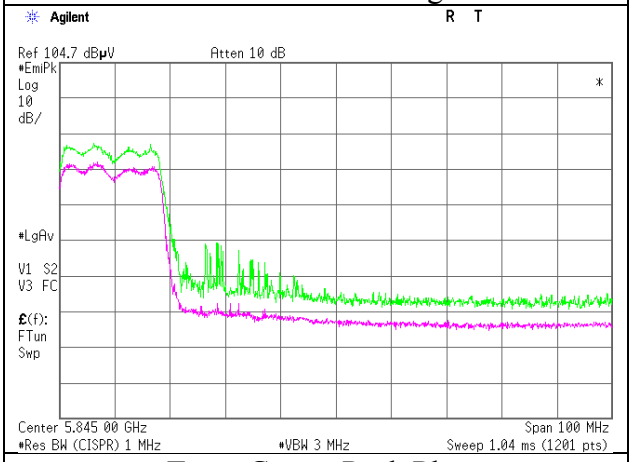
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
	(1 GHz-10 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	53.0	32.2	7.3	31.2	-	61.3	73.9	12.6	
Hori	5150.000	AV	41.0	32.2	7.3	31.2	-	49.3	53.9	4.6	
Vert	5150.000	PK	48.8	32.2	7.3	31.2	-	57.1	73.9	16.8	
Vert	5150.000	AV	38.0	32.2	7.3	31.2	-	46.3	53.9	7.6	

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 20dB).

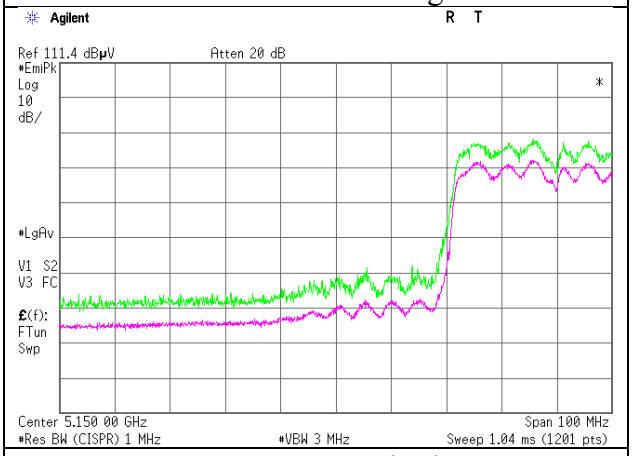
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 5190 MHz

Horizontal

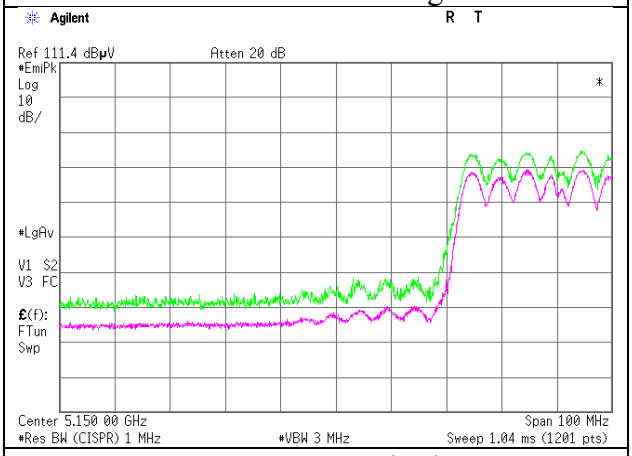
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
	(1 GHz-10 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	51.7	32.2	7.4	31.2	-	60.1	73.9	13.8	
Hori	5350.000	AV	38.0	32.2	7.4	31.2	-	46.4	53.9	7.5	
Vert	5350.000	PK	51.3	32.2	7.4	31.2	-	59.7	73.9	14.2	
Vert	5350.000	AV	37.7	32.2	7.4	31.2	-	46.1	53.9	7.8	

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 20dB).

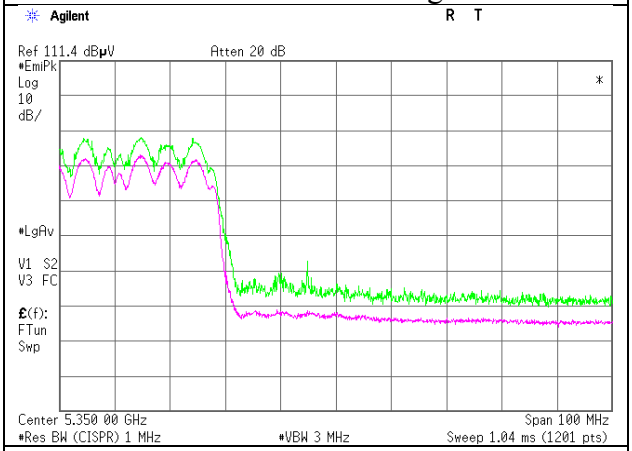
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 5310 MHz

Horizontal

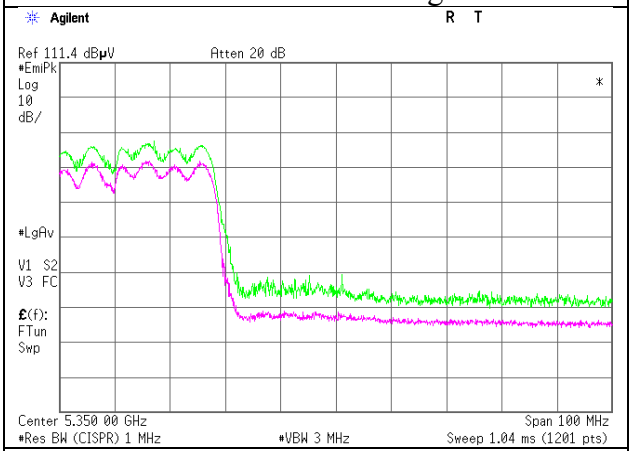
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
	(1 GHz-10 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	5470.000	PK	48.9	32.2	7.4	31.2	-	57.3	73.9	16.6	
Hori	5470.000	AV	38.5	32.2	7.4	31.2	-	46.9	53.9	7.0	
Vert	5470.000	PK	47.4	32.2	7.4	31.2	-	55.8	73.9	18.1	
Vert	5470.000	AV	36.9	32.2	7.4	31.2	-	45.3	53.9	8.6	

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 20dB).

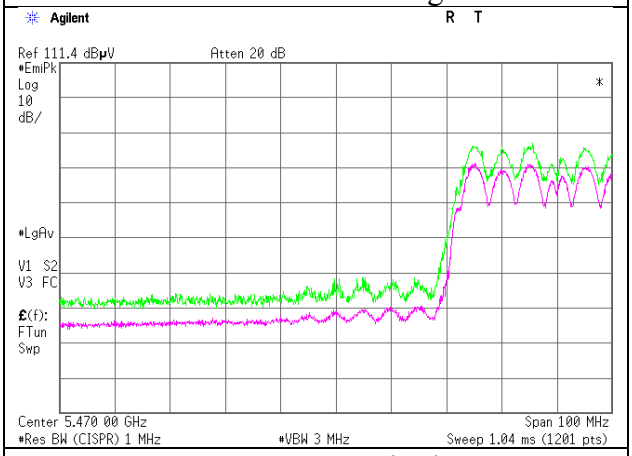
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 5510 MHz

Horizontal

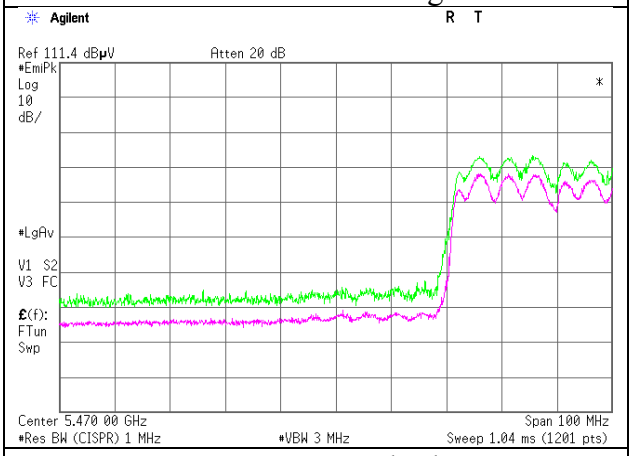
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
	(1 GHz-10 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	5725.000	PK	43.5	32.6	7.6	31.2	-	52.5	73.9	21.4	
Hori	5725.000	AV	34.1	32.6	7.6	31.2	-	43.1	53.9	10.8	
Vert	5725.000	PK	43.7	32.6	7.6	31.2	-	52.7	73.9	21.2	
Vert	5725.000	AV	34.4	32.6	7.6	31.2	-	43.4	53.9	10.5	

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 20dB).

Distance factor:

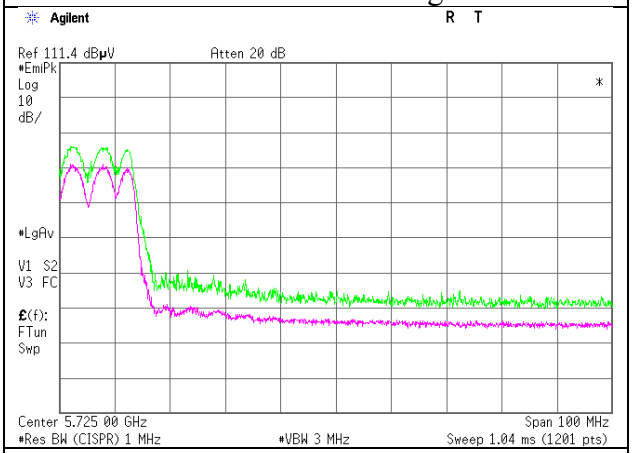
1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 5670 MHz

Horizontal

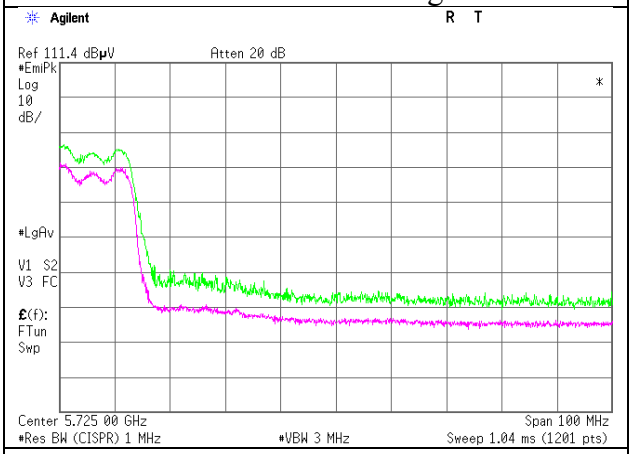
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
	(1 GHz-10 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	5715.000	PK	50.5	32.6	7.5	31.2	-	59.4	68.2	8.8	
Hori	5725.000	PK	57.5	32.6	7.6	31.2	-	66.5	78.2	11.7	
Vert	5715.000	PK	48.5	32.6	7.5	31.2	-	57.4	68.2	10.8	
Vert	5725.000	PK	51.5	32.6	7.6	31.2	-	60.5	78.2	17.7	

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 20dB).

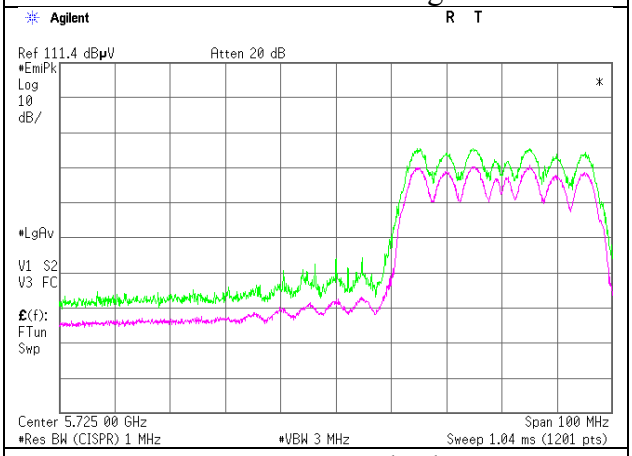
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 5755 MHz

Horizontal

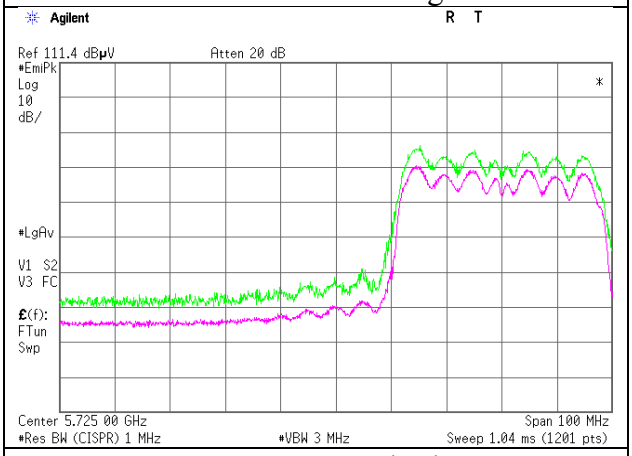
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
	(1 GHz-10 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	5850.000	PK	42.6	32.8	7.6	31.2	-	51.8	78.2	26.4	
Hori	5860.000	PK	40.7	32.8	7.6	31.2	-	49.9	68.2	18.3	
Vert	5850.000	PK	41.8	32.8	7.6	31.2	-	51.0	78.2	27.2	
Vert	5860.000	PK	41.1	32.8	7.6	31.2	-	50.3	68.2	17.9	

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 20dB).

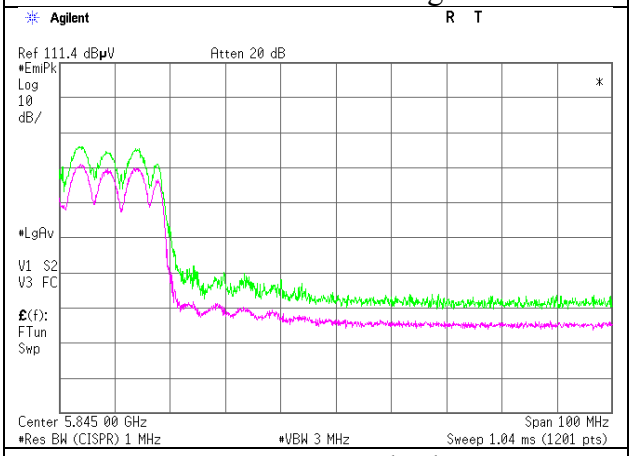
Distance factor:	1GHz-10GHz	20log(4.45m/3.0m)= 3.42dB
	10GHz-26.5GHz	20log(1.0m/3.0m)= -9.5dB
	26.5GHz-40GHz	20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 18, 2016
Temperature / Humidity	24deg. C / 28 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 5795 MHz

Horizontal

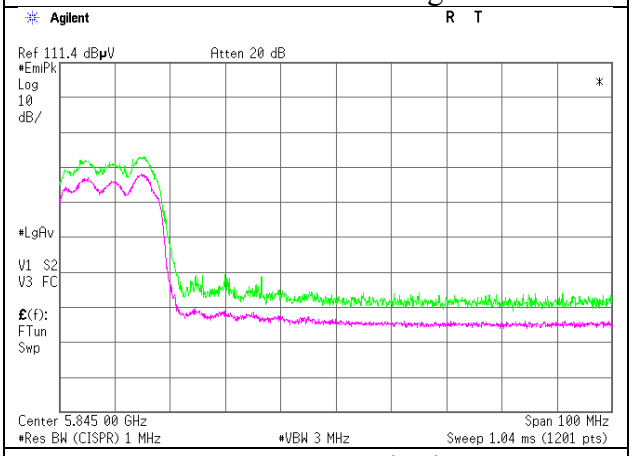
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
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	5146.168	PK	54.7	32.2	7.3	31.2	-	63.0	73.9	10.9	
Hori	5150.000	PK	54.3	32.2	7.3	31.2	-	62.6	73.9	11.3	
Hori	10420.000	PK	41.2	38.7	-2.1	32.7	-	45.1	73.9	28.8	Floor Noise
Hori	15630.000	PK	41.4	39.7	-0.1	32.1	-	48.9	73.9	25.0	Floor Noise
Hori	5146.168	AV	39.8	32.2	7.3	31.2	0.1	48.2	53.9	5.7	*1)
Hori	5150.000	AV	41.0	32.2	7.3	31.2	0.1	49.4	53.9	4.5	*1)
Hori	10420.000	AV	31.3	38.7	-2.1	32.7	-	35.2	53.9	18.7	Floor Noise
Hori	15630.000	AV	32.5	39.7	-0.1	32.1	-	40.0	53.9	13.9	Floor Noise
Vert	5146.168	PK	55.5	32.2	7.3	31.2	-	63.8	73.9	10.1	
Vert	5150.000	PK	54.5	32.2	7.3	31.2	-	62.8	73.9	11.1	
Vert	10420.000	PK	41.1	38.7	-2.1	32.7	-	45.0	73.9	28.9	Floor Noise
Vert	15630.000	PK	41.9	39.7	-0.1	32.1	-	49.4	73.9	24.5	Floor Noise
Vert	5146.168	AV	41.7	32.2	7.3	31.2	0.1	50.1	53.9	3.8	*1)
Vert	5150.000	AV	41.2	32.2	7.3	31.2	0.1	49.6	53.9	4.3	*1)
Vert	10420.000	AV	31.6	38.7	-2.1	32.7	-	35.5	53.9	18.4	Floor Noise
Vert	15630.000	AV	32.2	39.7	-0.1	32.1	-	39.7	53.9	14.2	Floor Noise

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

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

Distance factor: 1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

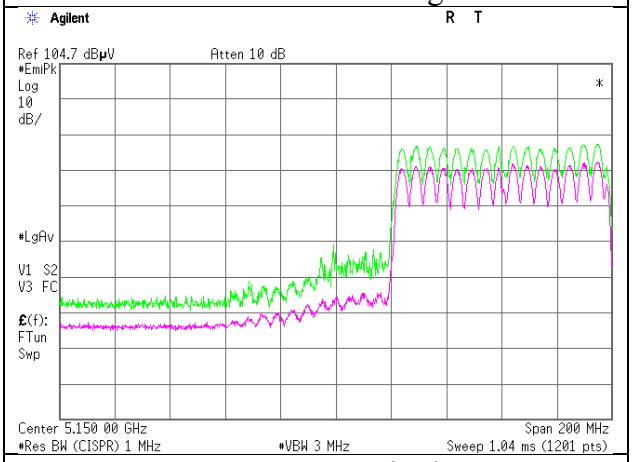
*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5210 MHz

Horizontal

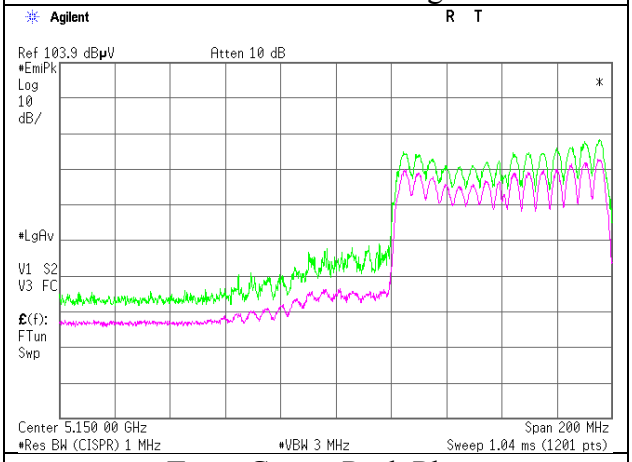
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
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	53.0	32.2	7.4	31.2	-	61.4	73.9	12.5	
Hori	5354.800	PK	53.9	32.2	7.4	31.2	-	62.3	73.9	11.6	
Hori	10580.000	PK	41.4	39.0	-2.0	32.8	-	45.6	73.9	28.3	Floor Noise
Hori	15870.000	PK	41.4	39.5	0.1	32.4	-	48.6	73.9	25.3	Floor Noise
Hori	5350.000	AV	42.4	32.2	7.4	31.2	0.1	50.9	53.9	3.0	*1)
Hori	5354.800	AV	42.3	32.2	7.4	31.2	0.1	50.8	53.9	3.1	*1)
Hori	10580.000	AV	31.5	39.0	-2.0	32.8	-	35.7	53.9	18.2	Floor Noise
Hori	15870.000	AV	32.3	39.5	0.1	32.4	-	39.5	53.9	14.4	Floor Noise
Vert	5350.000	PK	52.9	32.2	7.4	31.2	-	61.3	73.9	12.6	
Vert	5354.800	PK	53.5	32.2	7.4	31.2	-	61.9	73.9	12.0	
Vert	10580.000	PK	41.7	39.0	-2.0	32.8	-	45.9	73.9	28.0	Floor Noise
Vert	15870.000	PK	41.4	39.5	0.1	32.4	-	48.6	73.9	25.3	Floor Noise
Vert	5350.000	AV	41.5	32.2	7.4	31.2	0.1	50.0	53.9	3.9	*1)
Vert	5354.800	AV	42.2	32.2	7.4	31.2	0.1	50.7	53.9	3.2	*1)
Vert	10580.000	AV	31.3	39.0	-2.0	32.8	-	35.5	53.9	18.4	Floor Noise
Vert	15870.000	AV	32.6	39.5	0.1	32.4	-	39.8	53.9	14.1	Floor Noise

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

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

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

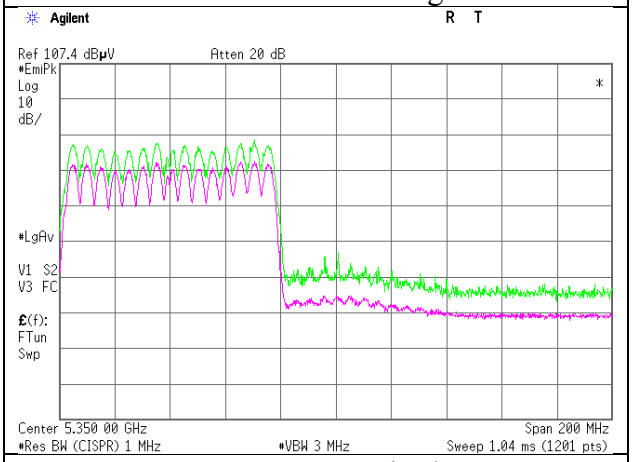
*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5290 MHz

Horizontal

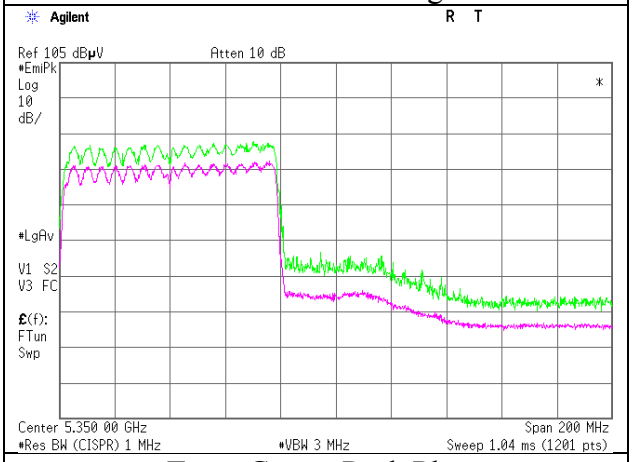
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
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	5457.549	PK	48.5	32.2	7.4	31.2	-	56.9	73.9	17.0	
Hori	5470.000	PK	45.3	32.2	7.4	31.2	-	53.7	73.9	20.2	
Hori	11060.000	PK	41.6	40.0	-2.0	33.0	-	46.6	73.9	27.3	Floor Noise
Hori	16590.000	PK	41.7	40.6	-0.1	32.2	-	50.0	73.9	23.9	Floor Noise
Hori	5457.549	AV	36.9	32.2	7.4	31.2	0.1	45.4	53.9	8.5	*1)
Hori	5470.000	AV	36.1	32.2	7.4	31.2	0.1	44.6	53.9	9.3	*1)
Hori	11060.000	AV	31.8	40.0	-2.0	33.0	-	36.8	53.9	17.1	Floor Noise
Hori	16590.000	AV	32.7	40.6	-0.1	32.2	-	41.0	53.9	12.9	Floor Noise
Vert	5457.549	PK	45.5	32.2	7.4	31.2	-	53.9	73.9	20.0	
Vert	5470.000	PK	43.4	32.2	7.4	31.2	-	51.8	73.9	22.1	
Vert	11060.000	PK	41.5	40.0	-2.0	33.0	-	46.5	73.9	27.4	Floor Noise
Vert	16590.000	PK	41.4	40.6	-0.1	32.2	-	49.7	73.9	24.2	Floor Noise
Vert	5457.549	AV	34.7	32.2	7.4	31.2	0.1	43.2	53.9	10.7	*1)
Vert	5470.000	AV	34.6	32.2	7.4	31.2	0.1	43.1	53.9	10.8	*1)
Vert	11060.000	AV	31.8	40.0	-2.0	33.0	-	36.8	53.9	17.1	Floor Noise
Vert	16590.000	AV	32.7	40.6	-0.1	32.2	-	41.0	53.9	12.9	Floor Noise

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

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

Distance factor: 1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

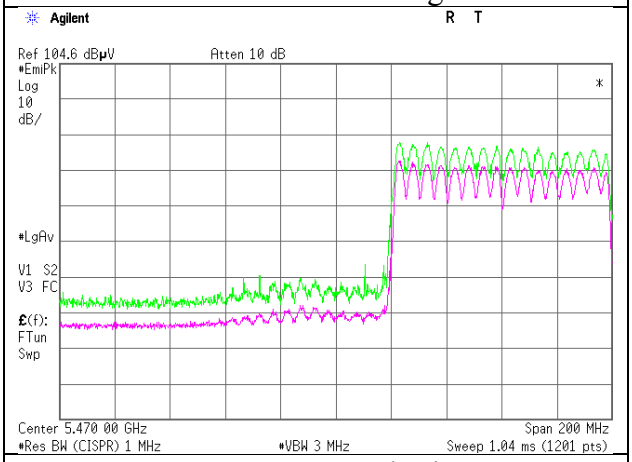
*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5530 MHz

Horizontal

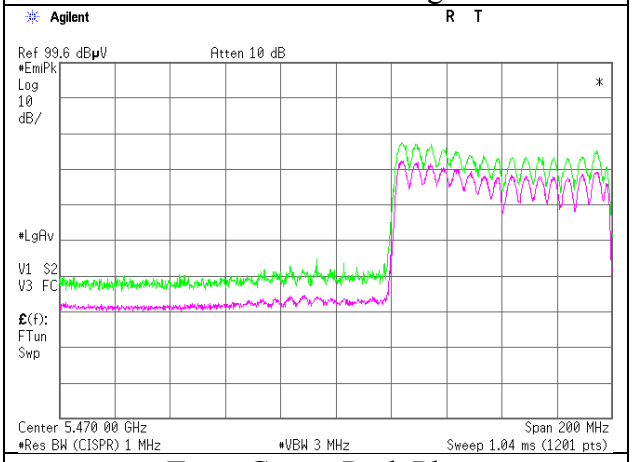
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
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	5725.000	PK	39.6	32.6	7.6	31.2	-	48.6	73.9	25.3	
Hori	11220.000	PK	40.0	40.4	-1.8	32.9	-	45.7	73.9	28.2	Floor Noise
Hori	16830.000	PK	42.0	41.1	-0.3	32.1	-	50.7	73.9	23.2	Floor Noise
Hori	5725.000	AV	32.4	32.6	7.6	31.2	0.1	41.5	53.9	12.4	*1)
Hori	11220.000	AV	32.6	40.4	-1.8	32.9	-	38.3	53.9	15.6	Floor Noise
Hori	16830.000	AV	33.8	41.1	-0.3	32.1	-	42.5	53.9	11.4	Floor Noise
Vert	5725.000	PK	39.8	32.6	7.6	31.2	-	48.8	73.9	25.1	
Vert	11220.000	PK	39.9	40.4	-1.8	32.9	-	45.6	73.9	28.3	Floor Noise
Vert	16830.000	PK	41.6	41.1	-0.3	32.1	-	50.3	73.9	23.6	Floor Noise
Vert	5725.000	AV	31.3	32.6	7.6	31.2	0.1	40.4	53.9	13.5	*1)
Vert	11220.000	AV	32.3	40.4	-1.8	32.9	-	38.0	53.9	15.9	Floor Noise
Vert	16830.000	AV	33.3	41.1	-0.3	32.1	-	42.0	53.9	11.9	Floor Noise

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

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

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

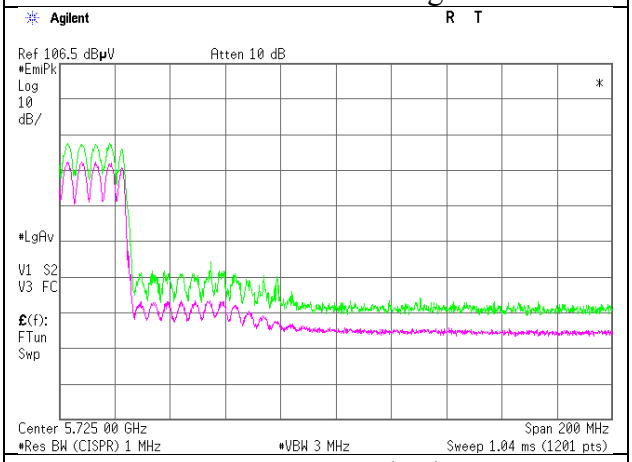
*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5610 MHz

Horizontal

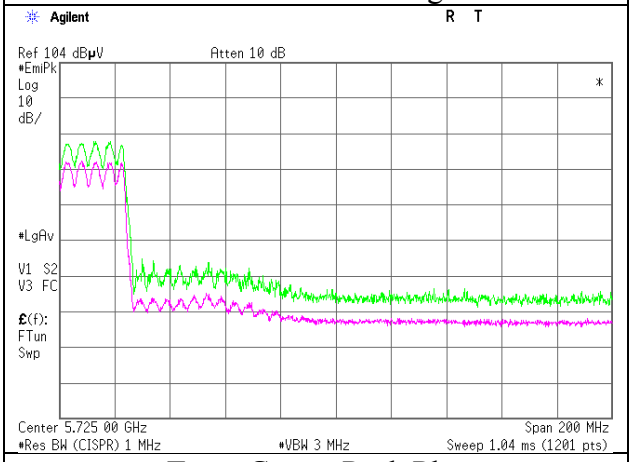
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 11, 2016	February 15, 2016
Temperature / Humidity	22deg. C / 30 % RH	25deg. C / 25 % RH	18deg. C / 43 % RH
Engineer	Yuta Moriya (1 GHz-10 GHz)	Yuta Moriya (10 GHz-18 GHz)	Tomoki Matsui (18GHz-40GHz)
Mode	Tx 11ac-80 5775 MHz		

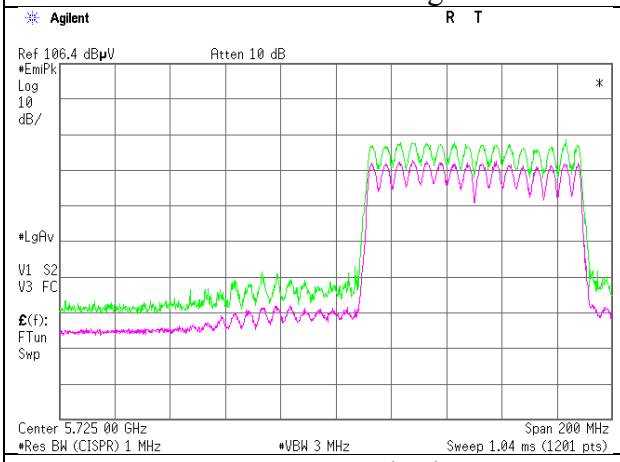
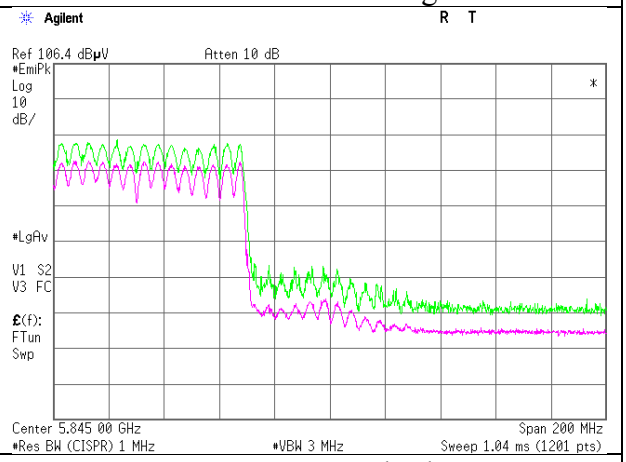
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5703.458	PK	51.4	32.5	7.5	31.2	-	60.2	68.2	8.0	
Hori	5715.000	PK	46.4	32.6	7.5	31.2	-	55.3	68.2	12.9	
Hori	5725.000	PK	47.3	32.6	7.6	31.2	-	56.3	78.2	21.9	
Hori	5850.000	PK	52.0	32.8	7.6	31.2	-	61.2	78.2	17.0	
Hori	5860.000	PK	46.1	32.8	7.6	31.2	-	55.3	68.2	12.9	
Hori	11550.000	PK	41.4	40.9	-1.6	32.6	-	48.1	73.9	25.8	Floor Noise
Hori	17325.000	PK	42.1	42.8	0.0	31.9	-	53.0	73.9	20.9	Floor Noise
Hori	11550.000	AV	32.7	40.9	-1.6	32.6	-	39.4	53.9	14.5	Floor Noise
Hori	17325.000	AV	33.5	42.8	0.0	31.9	-	44.4	53.9	9.5	Floor Noise
Vert	5703.458	PK	48.2	32.5	7.5	31.2	-	57.0	68.2	11.2	
Vert	5715.000	PK	44.2	32.6	7.5	31.2	-	53.1	68.2	15.1	
Vert	5725.000	PK	45.4	32.6	7.6	31.2	-	54.4	78.2	23.8	
Vert	5850.000	PK	49.5	32.8	7.6	31.2	-	58.7	78.2	19.5	
Vert	5860.000	PK	46.6	32.8	7.6	31.2	-	55.8	68.2	12.4	
Vert	11550.000	PK	41.5	40.9	-1.6	32.6	-	48.2	73.9	25.7	Floor Noise
Vert	17325.000	PK	41.7	42.8	0.0	31.9	-	52.6	73.9	21.3	Floor Noise
Vert	11550.000	AV	32.3	40.9	-1.6	32.6	-	39.0	53.9	14.9	Floor Noise
Vert	17325.000	AV	33.3	42.8	0.0	31.9	-	44.2	53.9	9.7	Floor Noise

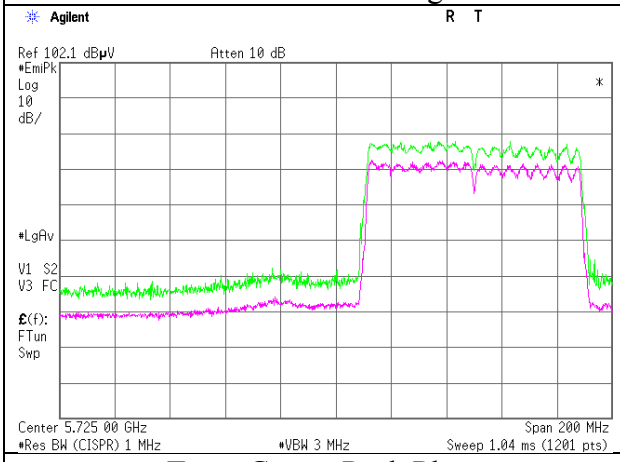
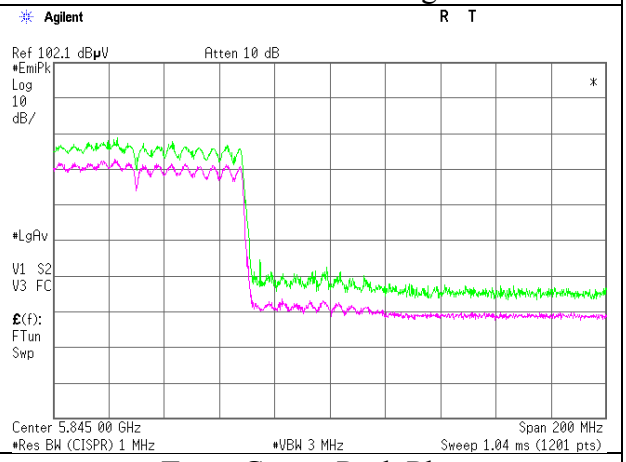
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11155194H
Date	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5775 MHz

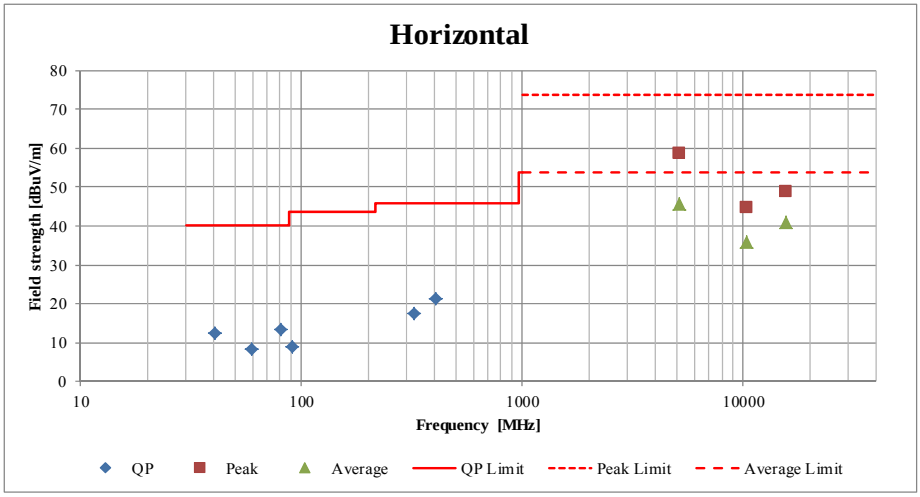
Horizontal	Horizontal
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

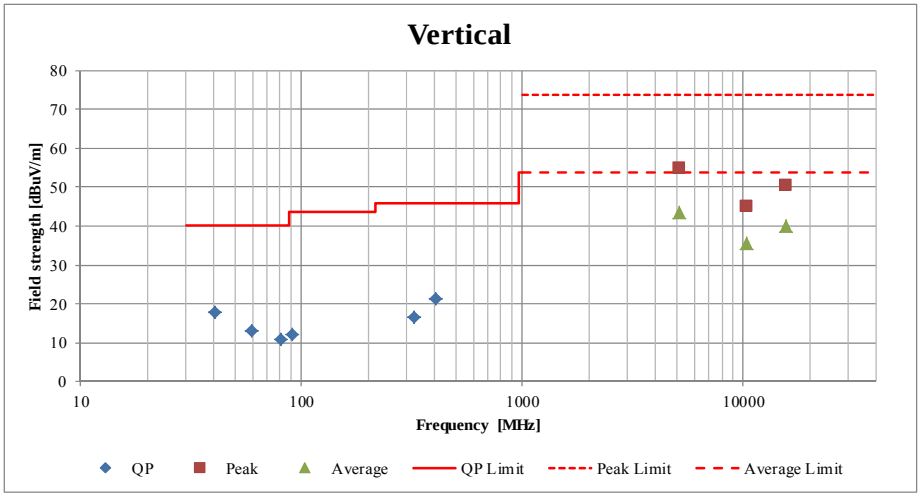
Vertical	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

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

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber		
Report No.	11155194H		
Date	February 9, 2016	February 9, 2016	February 9, 2016
Temperature / Humidity	22deg. C / 30 % RH	22deg. C / 30 % RH	22deg. C / 30 % RH
Engineer	Takafumi Noguchi (1 GHz-10 GHz)	Takafumi Noguchi (1 GHz-10 GHz)	Takafumi Noguchi (1 GHz-10 GHz)
Mode	Tx 11n-20 5180MHz		





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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	11155194H	
Date	April 27, 2016	April 28, 2016
Temperature / Humidity	23deg. C / 54 % RH	23 deg. C / 61 % RH
Engineer	Takumi Shimada	Ken Fujita
	(Above 1GHz)	(Below 1GHz)
Mode	Tx, Hopping On, 3DH5 and 11ac-80 5290MHz	

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	37.650	QP	23.1	14.7	7.1	32.2	-	12.7	40.0	27.3	
Hori	61.733	QP	32.1	6.8	7.5	32.2	-	14.2	40.0	25.8	
Hori	86.950	QP	25.7	7.6	7.9	32.2	-	9.0	40.0	31.0	
Hori	91.231	QP	25.6	8.4	7.9	32.2	-	9.7	43.5	33.8	
Hori	302.519	QP	31.0	13.6	9.9	31.9	-	22.6	46.0	23.4	
Hori	404.721	QP	24.5	15.7	10.6	31.9	-	18.9	46.0	27.1	
Hori	5350.000	PK	52.5	32.2	7.4	31.8	-	60.3	73.9	13.6	
Hori	5354.800	PK	53.5	32.2	7.4	31.8	-	61.3	73.9	12.6	
Hori	10580.000	PK	40.9	40.8	-1.7	33.4	-	46.6	73.9	27.3	Floor Noise
Hori	15870.000	PK	42.4	41.8	-0.2	32.8	-	51.2	73.9	22.7	Floor Noise
Hori	5350.000	AV	41.8	32.2	7.4	31.8	0.1	49.7	53.9	4.2	
Hori	5354.800	AV	41.9	32.2	7.4	31.8	0.1	49.8	53.9	4.1	
Hori	10580.000	AV	32.3	40.8	-1.7	33.4	-	38.0	53.9	15.9	Floor Noise
Hori	15870.000	AV	33.2	41.8	-0.2	32.8	-	42.0	53.9	11.9	Floor Noise
Vert	37.650	QP	27.4	14.7	7.1	32.2	-	17.0	40.0	23.0	
Vert	62.017	QP	30.1	6.7	7.5	32.2	-	12.1	40.0	27.9	
Vert	86.667	QP	26.7	7.6	7.9	32.2	-	10.0	40.0	30.0	
Vert	91.231	QP	23.0	8.4	7.9	32.2	-	7.1	43.5	36.4	
Vert	302.519	QP	27.3	13.6	9.9	31.9	-	18.9	46.0	27.1	
Vert	404.721	QP	24.3	15.7	10.6	31.9	-	18.7	46.0	27.3	
Vert	5350.000	PK	52.5	32.2	7.4	31.8	-	60.3	73.9	13.6	
Vert	5354.800	PK	53.3	32.2	7.4	31.8	-	61.1	73.9	12.8	
Vert	10580.000	PK	41.0	40.8	-1.7	33.4	-	46.7	73.9	27.2	Floor Noise
Vert	15870.000	PK	41.2	41.8	-0.2	32.8	-	50.0	73.9	23.9	Floor Noise
Vert	5350.000	AV	41.4	32.2	7.4	31.8	0.1	49.3	53.9	4.6	
Vert	5354.800	AV	42.0	32.2	7.4	31.8	0.1	49.9	53.9	4.0	
Vert	10580.000	AV	32.4	40.8	-1.7	33.4	-	38.1	53.9	15.8	Floor Noise
Vert	15870.000	AV	33.5	41.8	-0.2	32.8	-	42.3	53.9	11.6	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 20dB).

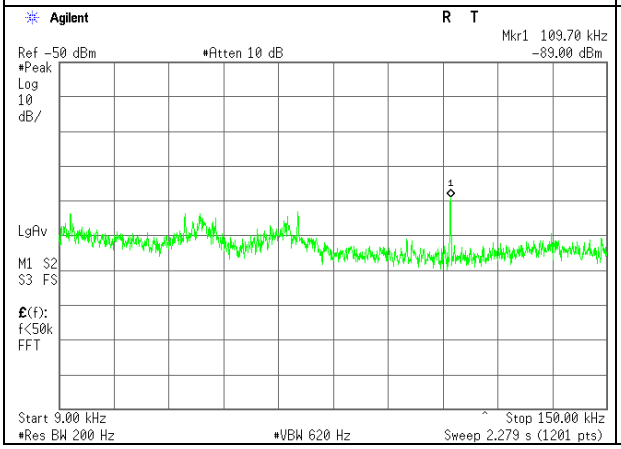
Distance factor:
1GHz-10GHz 20log(4.45m/3.0m)= 3.42dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Conducted Spurious Emission

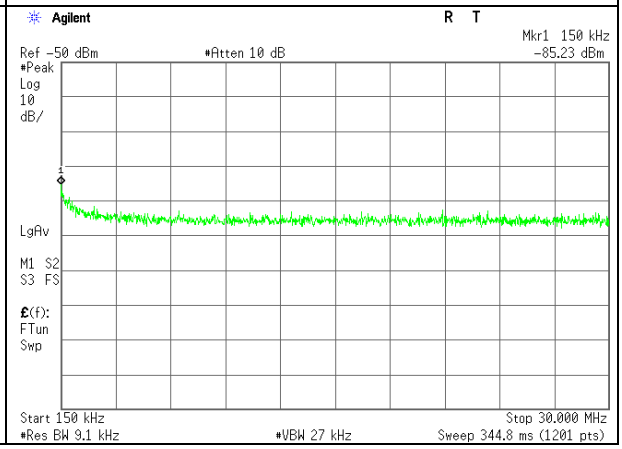
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11155194H
Date	April 28, 2016
Temperature / Humidity	23deg. C / 61 % RH
Engineer	Ken Fujita
Mode	Tx 11n-20 5180 MHz

Antenna port WA

9 kHz-150 kHz



150 kHz-30 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenator [dB]	Antenna Gain [dBi]	N (Number of Output	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
109.70	-89.0	0.81	10.0	7.3	2	-67.9	300	6.0	-6.6	26.8	33.4	
150.00	-85.2	0.81	10.0	7.3	2	-64.1	300	6.0	-2.9	24.0	26.9	

E = EIRP - 20*log(D) + Ground bounce + 104.8 [dBuV/m]

EIRP = Reading + Cable Loss + Attenator + Antenna Gain + 10*log(N)

APPENDIX 2: Test instruments

Test equipment (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-17	Power Meter	DARE!! Instruments	RPR3006W	14I00048SNO081	AT	2015/11/09 * 12
MPM-18	Power Meter	DARE!! Instruments	RPR3006W	14I00048SNO082	AT	2015/11/09 * 12
MAT-80	Attenuator	Weinschel Associates	WA1-20-33	100130	AT	2015/05/04 * 12
MAT-82	Attenuator	Weinschel Associates	WA1-20-33	100132	AT	2015/05/04 * 12
MTA-46	Terminator	Mini-Circuits	ANNE-50X+	MUU3460143	AT	Pre Check
MMM-12	DIGITAL HiTESTER	Hioki	3805	060500120	AT	2015/02/05 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	1401	AT	2016/01/21 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2015/10/01 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE/CE	2016/01/21 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE/CE	2015/05/18 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2015/05/18 * 12
MCC-167	Microwave Cable	Junkosha	MWX221	1404S374(1m) / 1405S074(5m)	RE	2015/05/21 * 12
MMM-08	DIGITAL HiTESTER	Hioki	3805	051201197	RE/CE	2016/01/13 * 12
MHF-22	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCB	602	RE	2016/01/19 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2015/05/19 * 12
MCC-54	Microwave Cable	Suhner	SUCOFLEX101	2873(1m) / 2876(5m)	RE	2015/03/09 * 12
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2015/09/04 * 12
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 /1871328	RE	2015/09/03 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2015/10/11 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	174	RE	2015/10/11 * 12
MSA-14	Spectrum Analyzer	Agilent	E4440A	MY48250080	AT	2015/10/07 * 12
MAT-57	Attenuator(10dB)	Suhner	6810.19.A	-	AT	2016/01/18 * 12
MAT-58	Attenuator(10dB)	Suhner	6810.19.A	-	AT	2016/01/18 * 12
MCC-138	Microwave cable	HUBER+SUHNER	SUCOFLEX 102	37953/2	AT	2015/10/08 * 12
MTA-36	Terminator	-	50ΩSMA	-	AT	Pre Check
MTA-43	Terminator	Mini-Circuits	ANNE-50X+	MUU3460140	AT	Pre Check
MLS-23	LISN(AMN)	Schwarzbeck	NSLK8127	8127-729	CE(EUT)	2015/07/10 * 12
MCC-112	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(3m)/sucoform141-PE(1m)/421-010(1.5m)/RFM-E321(Switcher)	-/00640	CE	2015/07/02 * 12
MAT-66	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2016/01/14 * 12
MOS-29	Thermo-Hygrometer	Custom	CTH-201	2901	AT	2016/01/21 * 12
MPM-16	Power Meter	Agilent	8990B	MY51000271	AT	2015/04/01 * 12
MPSE-22	Power sensor	Agilent	N1923A	MY54070003	AT	2015/04/01 * 12
MPSE-23	Power sensor	Agilent	N1923A	MY54070004	AT	2015/04/01 * 12

Test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	RE/CE	2016/02/24 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2016/03/24 * 12
MCC-177	Microwave Cable	Junkosha	MMX221-00500D MSDMS	1502S304	RE	2016/03/10 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE/CE	2015/09/02 * 12
MLA-22	Logperiodic Antenna(200-1000MHz)	Schwarzbeck	VUSLP9111B	911B-191	RE	2016/01/30 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2015/07/13 * 12
MAT-70	Attenuator(6dB)	Agilent	8491A-006	MY52460153	RE	2016/04/05 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2016/03/24 * 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: **CE: Conducted Emission**
RE: Radiated Emission
AT: Antenna Terminal Conducted test