RADIO TEST REPORT

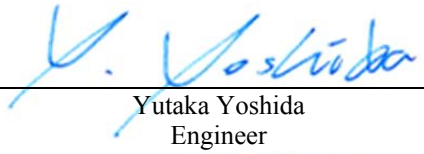
Test Report No. : 11182619H-C-R1

Applicant	:	**silex technology, Inc.**
Type of Equipment	:	**SDIO Wireless Module**
Model No.	:	**SX-SDMAC**
FCC ID	:	**N6C-SDMAC**
Test regulation	:	**FCC Part 15 Subpart E: 2016**
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 11182619H-C. 11182619H-C is replaced with this report.

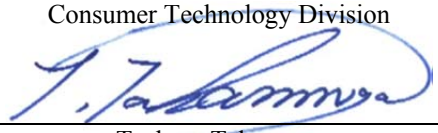
Date of test: March 31 to September 8, 2016

Representative test engineer:



Yutaka Yoshida
Engineer
Consumer Technology Division

Approved by:



Tsubasa Takayama
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.
*As for the range of Accreditation in NVLAP, you may refer to the WEB address,
http://japan.ul.com/resources/emc_accredited/

REVISION HISTORY

Original Test Report No.: 11182619H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	11182619H-C	September 27, 2016	-	-
1	11182619H-C-R1	November 7, 2016	P12	Addition of explanatory note about tested antenna.
1	11182619H-C-R1	November 7, 2016	P18	Addition of explanatory note about tested port.

CONTENTS **PAGE**

SECTION 1: Customer information

Company Name	:	silex technology, Inc.
Address	:	2-3-1 Hikaridai, Seika-cho, Kyoto 619-0237, Japan
Telephone Number	:	+81-774-98-3878
Facsimile Number	:	+81-774-98-3758
Contact Person	:	Toshiro Kometani

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

2.1 Identification of E.U.T.

Type of Equipment	:	SDIO Wireless Module
Model No.	:	SX-SDMAC
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 3.3 V
Receipt Date of Sample	:	March 7, 2016
Country of Mass-production	:	Japan
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

Model: SX-SDMAC (referred to as the EUT in this report) is a SDIO Wireless Module.

General Specification

Clock frequency(ies) in the system	:	48 MHz
Operating Temperature	:	-40 deg. C - +85 deg. C

Radio Specification

Radio Type	:	Transceiver
Method of Frequency Generation	:	Synthesizer
Power Supply (inner)	:	DC 1.1 V

	IEEE802.11b	IEEE802.11g/n (20 M band)	IEEE802.11a/n/ac (20 M band)	IEEE802.11n/ac (40 M band)	IEEE802.11ac (80 M band)	Bluetooth Ver.4.0 with EDR function
Frequency of operation	2412 MHz - 2462 MHz	2412 MHz - 2462 MHz	2412 MHz - 2462 MHz 5180 MHz - 5240 MHz *1) 5260 MHz - 5320 MHz *1) 5500 MHz - 5700 MHz *1) 5745 MHz - 5825 MHz *1)	2422 MHz - 2452 MHz 5190 MHz - 5230 MHz *1) 5270 MHz - 5310 MHz *1) 5510 MHz - 5670 MHz *1) 5755 MHz - 5795 MHz *1)	5210 MHz *1) 5290 MHz *1) 5530 MHz - 5610 MHz *1) 5775 MHz*1)	2402 MHz - 2480 MHz
Type of modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 11ac: OFDM (64QAM, 16QAM, QPSK, BPSK, 256QAM)			BT: FHSS (GFSK, π/4-DQPSK, 8-DPSK) LE: GFSK
Channel spacing	5 MHz		20 MHz	40 MHz	80 MHz	BT: 1 MHz LE: 2 MHz
Antenna type	[Antenna 1] Model Name: 146153 PCB antenna (Dipole antenna)					
	[Antenna 2] Model Name: H2U84W1H1S Chip Antenna					
Antenna Connector type	Antenna 1: U.FL Alternative connectorUFL Antenna 2: -none					
Antenna Gain	Antenna 1: 3.25 dBi (2.4 GHz Band), 5.0 dBi (5 GHz Band) Antenna 2: 1.40 dBi (2.4 GHz Band), 2.3 dBi (5 GHz Band)					

*1) This test report applies to IEEE802.11a / n-20 / n-40/ ac-20 / ac-40 / ac-80 (5GHz band).

* Spurious emission test was performed with two anntena type (PCB antenna (Dipole antenna) and Chip antenna).
** WLAN and Bluetooth do not transmit simultaneously.

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification	:	FCC Part 15 Subpart E FCC part 15 final revised on April 6, 2016.
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements

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** 14.4 dB, 0.46560 MHz, N **AV** 16.8 dB, 0.45440/ 0.46560 MHz, N	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	1.2 dB, 22320.000 MHz, AV, Vert.	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 11182619H-D 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 stable voltage (DC1.1V) was provided to the EUT during the tests.
Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

[PCB antenna (Dipole antenna)]
The EUT has a unique coupling/antenna connector (UFL). Therefore the equipment complies with the requirement of 15.203.
[Chip Antenna]
The antenna is not removable from the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to standard

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

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

3.4 Uncertainty

EMI

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

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) (+/-)
0.009 – 0.15MHz	3.5 dB
0.15 – 30MHz	3.0 dB

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

Polarity	Radiated emission (Below 1GHz)			
	(3 m*) (+/-)		(10 m*) (+/-)	
	30 – 200 MHz	200 – 1000MHz	30 – 200 MHz	200 – 1000MHz
Horizontal	5.0 dB	5.3 dB	5.0 dB	5.0 dB
Vertical	4.7 dB	5.9 dB	5.0 dB	5.1 dB

Radiated emission (Above 1GHz)				
(3 m*) (+/-)		(1 m*) (+/-)		(10 m*) (+/-)
1 – 6GHz	6 – 18GHz	10 – 26.5 GHz	26.5 – 40GHz	1 -18 GHz
5.2 dB	5.4 dB	5.5 dB	5.5 dB	5.4 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

UL Japan, Inc. Ise EMC Lab. *NVLAP Lab. code: 200572-0
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone: +81 596 24 8999, Facsimile: +81 596 24 8124

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)	24 Mbps, PN9
IEEE 802.11n 20MHz BW (11n-20)	MCS 0, PN9
IEEE 802.11n 40MHz BW (11n-40)	MCS 0, PN9
IEEE 802.11ac 20MHz BW (11ac-20)	MCS 0, PN9
IEEE 802.11ac 40MHz BW (11ac-40)	MCS 0, PN9
IEEE 802.11ac 80MHz BW (11ac-80)	MCS 0, PN9
*The worst condition was determined based on the test result of Maximum Conducted Output Power.	
*Power of the EUT was set by the software as follows (power setting value might be different from product specification value); Power settings: Refer to the following table Software: QRCT Version 3.0.197.0 *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.	

[Power setting]

	Power Setting	Power Setting
11a/ 11ac/ 11n-20/ 11ac-20	5180 MHz	9
	5220 MHz	12
	5240 MHz	12
	5260 MHz	12
	5300 MHz	12
	5320 MHz	8.5
	5500 MHz	8
	5580 MHz	8
	5700 MHz	8.5
	5745 MHz	9
	5785 MHz	9
	5825 MHz	9
11n-40/ 11ac-40	5190 MHz	7.5
	5230 MHz	11
	5270 MHz	11
	5310 MHz	8.5
	5510 MHz	8
	5550 MHz	8.5
	5670 MHz	8.5
	5755 MHz	8
	5795 MHz	8
11ac-80	5210 MHz	7.5
	5290 MHz	8
	5530 MHz	8
	5610 MHz	9
	5775 MHz	10

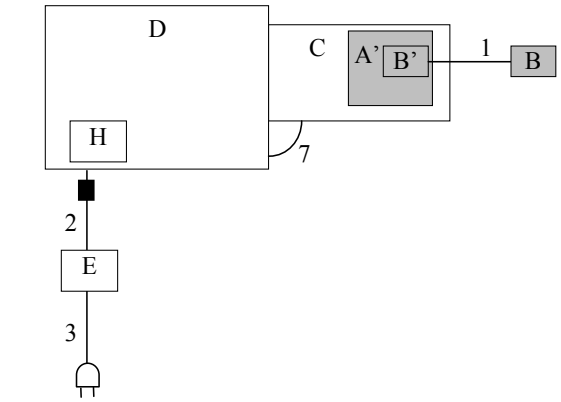
*The details of Operation mode(s)

Test Item	Operating Mode	Tested Frequency			
		Lower Band	Middle Band	Additional Band	Upper Band
Conducted emission *1)	11ac-20 Tx	-	5260 MHz	-	-
26dB Emission Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	11n-40 Tx 11ac-40 Tx	-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
	11ac-80 Tx	-	5290 MHz	5530 MHz 5610 MHz	-
99% Occupied Bandwidth,	11a Tx 11n-20 Tx 11ac-20 Tx	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	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
6dB Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	-	-	-	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx	-	-	-	5755 MHz 5795 MHz
	11ac-80 Tx	-	-	-	5755 MHz
Maximum Conducted Output Power, Maximum Power Spectral Density	11a Tx 11n-20 Tx 11ac-20 Tx	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	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
Radiated Spurious Emission (Below 1GHz) *1)	11ac-20 Tx	-	5260 MHz	-	-
Radiated Spurious Emission (Above 1GHz)	11ac-20 Tx *2)	5180 MHz	5260 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11ac-40 Tx *2)	5190 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
Conducted Spurious Emission *1)	11ac-20 Tx	-	5260 MHz	-	-

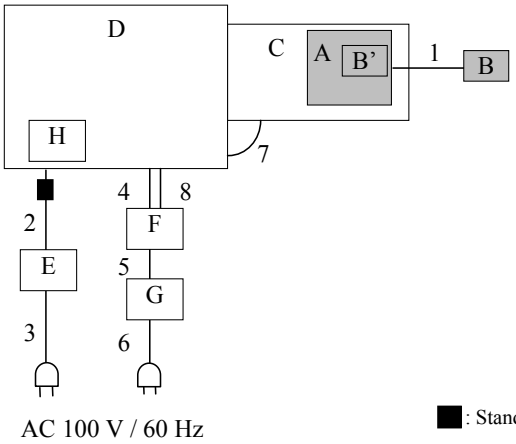
*In normal use, the external antenna might not be connected when the internal antenna is used.
Therefore, the test was performed under the worst condition based on the result of pre-testing.
*1) The operating mode and tested frequency were tested as a representative, because it had the highest power at antenna terminal test.
*2) Since 11a, 11n and 11ac have the same modulation method and no differences in transmitting specification, test was performed on the representative mode that had the highest peak output power.

4.2 Configuration and peripherals

[Conducted emission test]



[Radiated emission / Antenna Terminal Conducted test]



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

Description of EUT and Support Equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	SDIO Wireless Module	SX-SDMAC	84253F-011034	silex technology, Inc.	EUT
A'	SDIO Wireless Module	SX-SDMAC	84253F-011035	silex technology, Inc.	EUT
B	PCB Antenna	146153	-	MOLEX	EUT
B'	Chip Antenna	H2U84W1H1S	-	Unictron	-
C	Jig	PW102660	-	silex technology, Inc.	*1)
D	Jig	MCIMX6Q-SDB	-	silex technology, Inc.	-
E	AC Adapter	ATS030-A050	-	SCEPTER POWER	-
F	Laptop PC	E5540	HK42N12	DELL	-
G	AC Adapter	HA65NM130	CN-06TFFF-74661-4BO-06R0-A00	DELL	-
H	SD Card	SDHC Class4	-	San Disk	-

*1) The test was performed with the module that as normal assumed implementation conditions (without a solid ground)

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Antenna Cable	0.05	Unshielded	Unshielded	-
2	DC Cable	1.00	Unshielded	Unshielded	-
3	AC Cable	1.90	Unshielded	Unshielded	-
4	USB Cable	2.80	Shielded	Shielded	-
5	DC Cable	1.80	Unshielded	Unshielded	-
6	AC Cable	0.90	Unshielded	Unshielded	-
7	Flat Cable	0.15	Unshielded	Unshielded	-
8	LAN Cable	2.00	Shielded	Shielded	-

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.
The 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 0.5 m, raised 1.5 m above the conducting ground plane.
The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane.

The height of the measuring antenna varied between 1 and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.
The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.
The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).
The test was made with the detector (RBW/VBW) in the following table.
When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

< Below 1GHz >

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

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

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

-27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge in the KDB926956 D01.

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

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method AD *1) RBW: 1 MHz VBW: 3 MHz Detector: Power Averaging (RMS) Trace: ≥ 100 traces Duty factor was added to the results.
Test Distance	3 m	4.5m*2)/ 3.75m*3) (1 GHz - 10 GHz), 1 m*4) (10 GHz - 40 GHz)	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on January 8, 2016)".
*2) Distance Factor: 20 x log (4.5 m/3.0 m) = 3.53 dB
*3) Distance Factor: 20 x log (3.75 m/3.0 m) = 1.94 dB
*4) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.5 dB

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT (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 *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 v01r03 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on January 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(500 kHz/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.

*Antenna terminal conducted tests were performed on U.FL port because the structures of the route to both antennas are the same.

Test data : APPENDIX
Test result : Pass

APPENDIX 1: Test data

Conducted Emission

(Antenna : M/N 146153)

DATA OF CONDUCTED EMISSION TEST

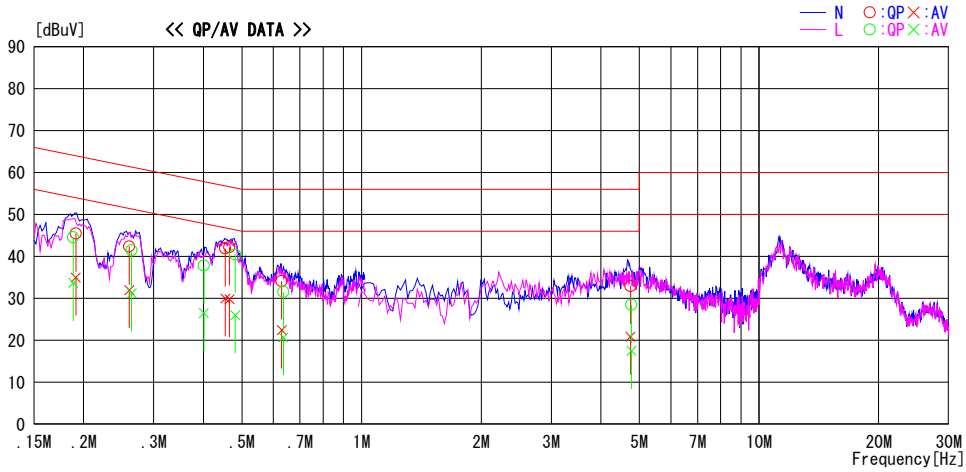
UL Japan, Inc. Ise EMC Lab. No.3 Semi Anechoic Chamber
Date : 2016/08/20

Report No. : 11182619H

Temp./Humi. : 21deg. C / 63% RH
Engineer : Kazuya Yoshioka

Mode / Remarks : 11ac20 5260 MHz

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]		
0.19096	32.3	21.8	13.2	45.5	35.0	64.0	54.0	18.5	19.0	N	
0.26036	29.1	18.7	13.3	42.4	32.0	61.4	51.4	19.0	19.4	N	
0.45440	28.6	16.7	13.3	41.9	30.0	56.8	46.8	14.9	16.8	N	
0.46560	28.9	16.5	13.3	42.2	29.8	56.6	46.6	14.4	16.8	N	
0.62980	20.8	9.1	13.3	34.1	22.4	56.0	46.0	21.9	23.6	N	
4.74680	19.0	7.0	13.9	32.9	20.9	56.0	46.0	23.1	25.1	N	
0.18830	31.4	20.5	13.2	44.6	33.7	64.1	54.1	19.5	20.4	L	
0.26387	28.2	17.9	13.3	41.5	31.2	61.3	51.3	19.8	20.1	L	
0.40103	24.5	13.2	13.3	37.8	26.5	57.8	47.8	20.0	21.3	L	
0.48090	27.2	12.7	13.3	40.5	26.0	56.3	46.3	15.8	20.3	L	
0.63630	18.3	7.4	13.3	31.6	20.7	56.0	46.0	24.4	25.3	L	
4.77200	14.6	3.6	13.9	28.5	17.5	56.0	46.0	27.5	28.5	L	

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.

Conducted Emission

(Antenna : M/N H2U84W1H1S)

DATA OF CONDUCTED EMISSION TEST

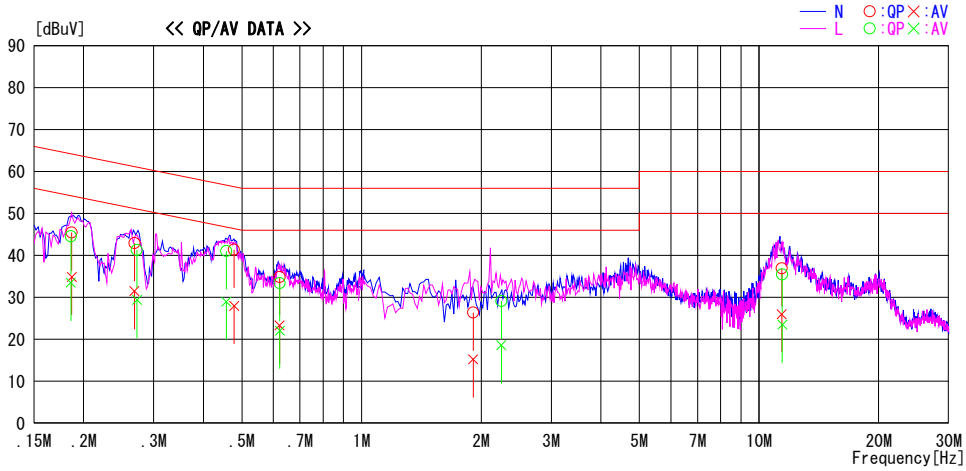
UL Japan, Inc. Ise EMC Lab. No.3 Semi Anechoic Chamber
Date : 2016/08/20

Report No. : 11182619H

Temp./Humi. : 21deg. C / 63% RH
Engineer : Kazuya Yoshioka

Mode / Remarks : 11ac20 5260 MHz

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]		
0.18670	32.3	21.7	13.2	45.5	34.9	64.2	54.2	18.7	19.3	N	
0.26852	29.6	18.2	13.3	42.9	31.5	61.2	51.2	18.3	19.7	N	
0.47791	28.1	14.7	13.3	41.4	28.0	56.4	46.4	15.0	18.4	N	
0.62232	21.5	10.0	13.3	34.8	23.3	56.0	46.0	21.2	22.7	N	
1.90880	12.9	1.7	13.5	26.4	15.2	56.0	46.0	29.6	30.8	N	
11.39960	22.5	11.6	14.4	36.9	26.0	60.0	50.0	23.1	24.0	N	
0.18572	31.4	20.3	13.2	44.6	33.5	64.2	54.2	19.6	20.7	L	
0.27220	28.0	16.1	13.3	41.3	29.4	61.1	51.1	19.8	21.7	L	
0.45656	27.7	15.7	13.3	41.0	29.0	56.8	46.8	15.8	17.8	L	
0.62249	20.1	8.8	13.3	33.4	22.1	56.0	46.0	22.6	23.9	L	
2.24640	15.5	5.0	13.6	29.1	18.6	56.0	46.0	26.9	27.4	L	
11.43440	21.0	9.0	14.5	35.5	23.5	60.0	50.0	24.5	26.5	L	

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

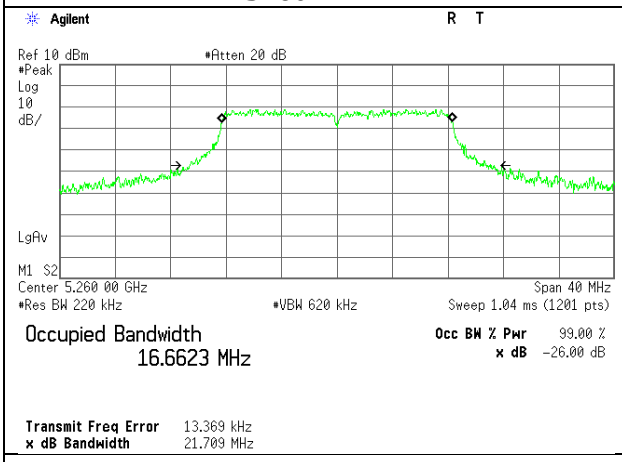
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11a

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.037	-
5220	-	17.084	-
5240	-	17.074	-
5260	21.709	17.036	-
5300	22.173	17.002	-
5320	21.850	17.043	-
5500	20.501	17.076	-
5580	21.803	17.062	-
5700	20.898	17.063	-
5745	-	17.087	-
5785	-	17.097	-
5825	-	17.119	-

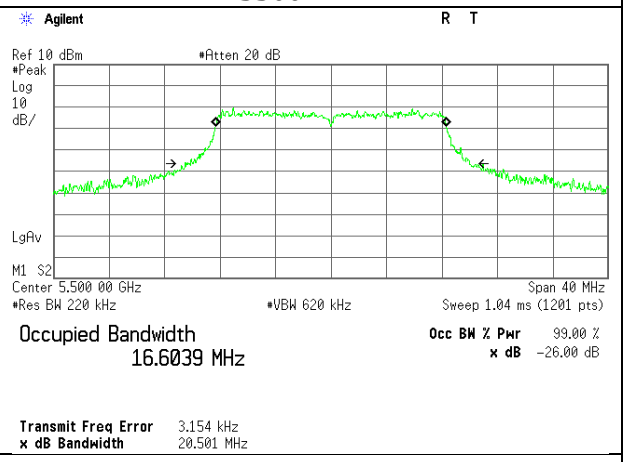
26 dB Emission Bandwidth

11a

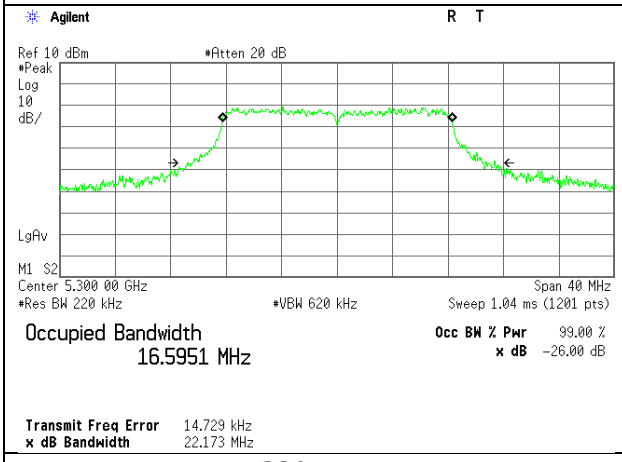
5260 MHz



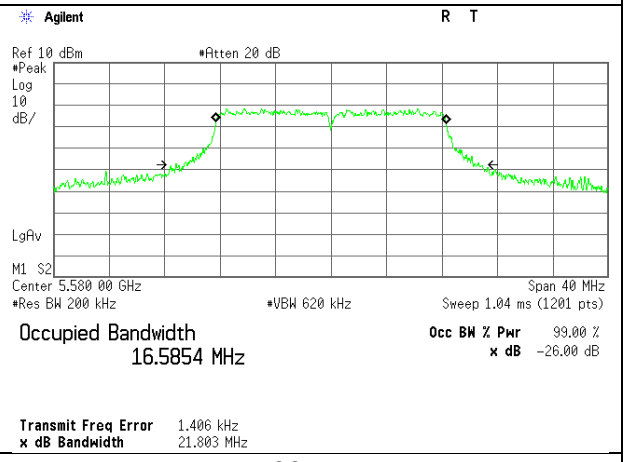
5500 MHz



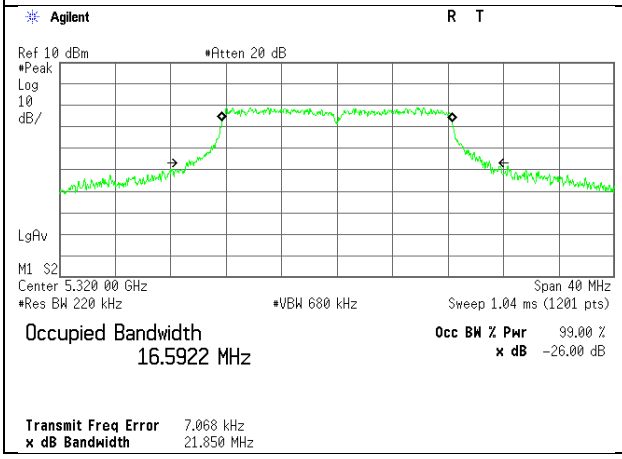
5300 MHz



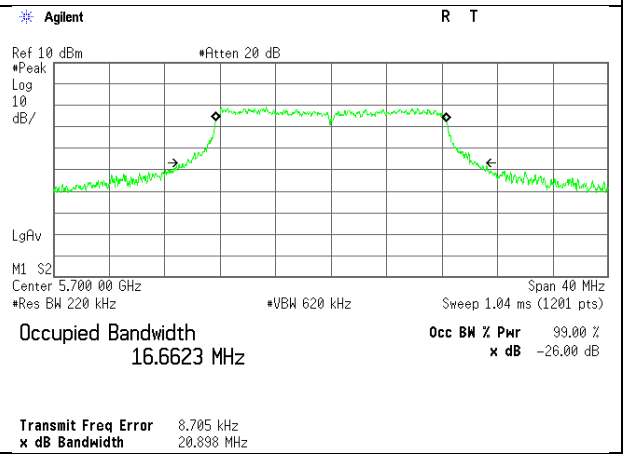
5580 MHz



5320 MHz



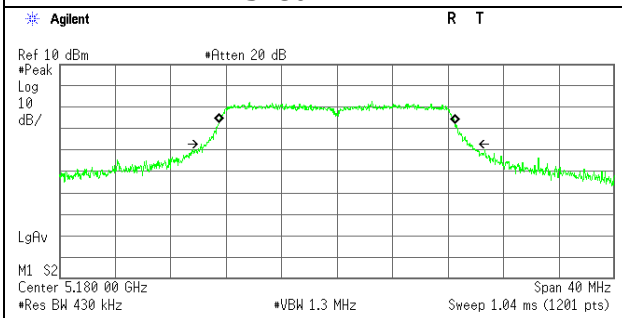
5700 MHz



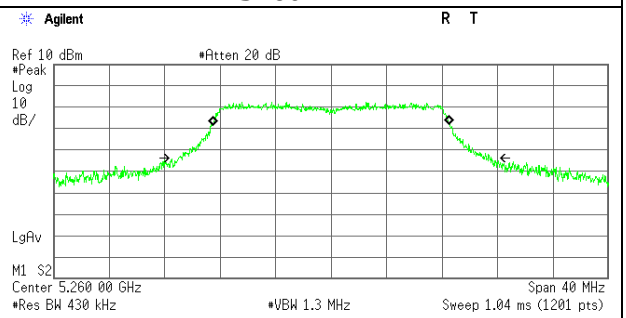
99 % Occupied Bandwidth

11a

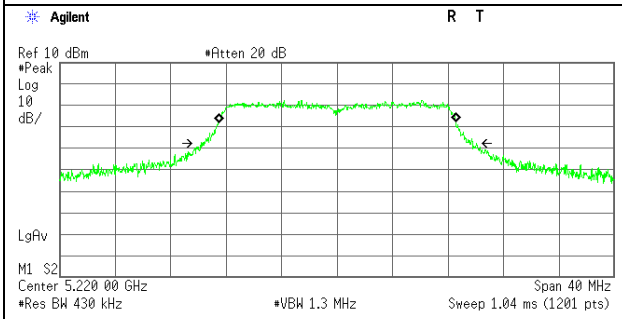
5180 MHz



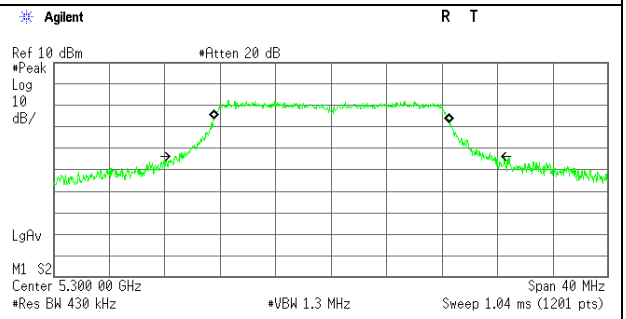
5260 MHz



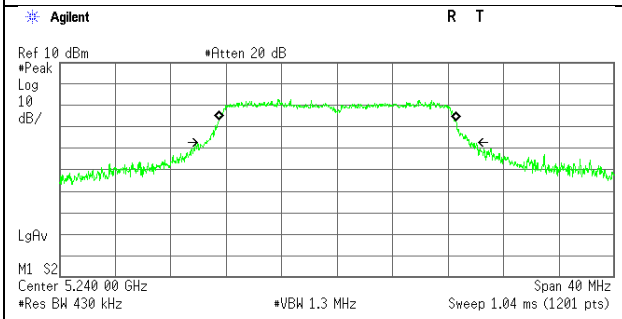
5220 MHz



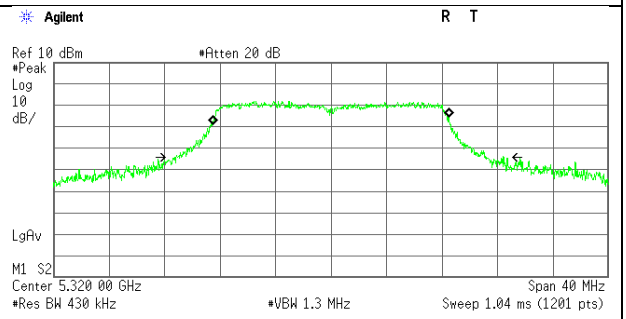
5300 MHz



5240 MHz



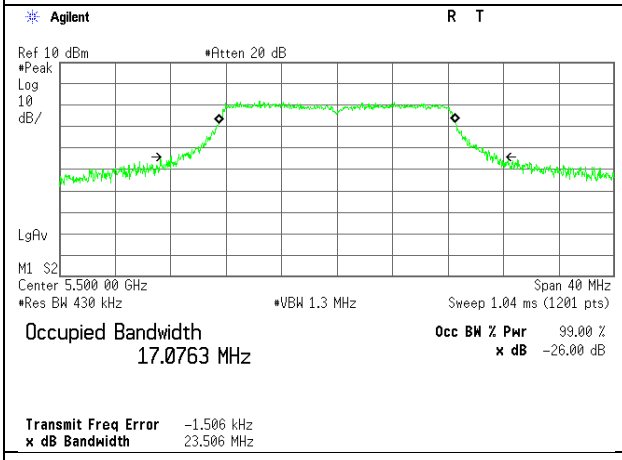
5320 MHz



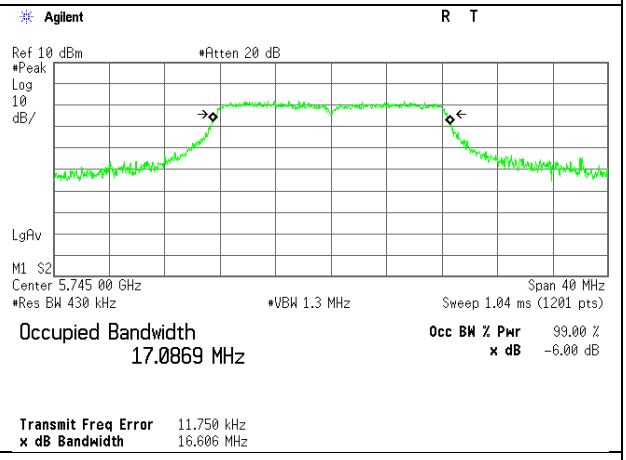
99 % Occupied Bandwidth

11a

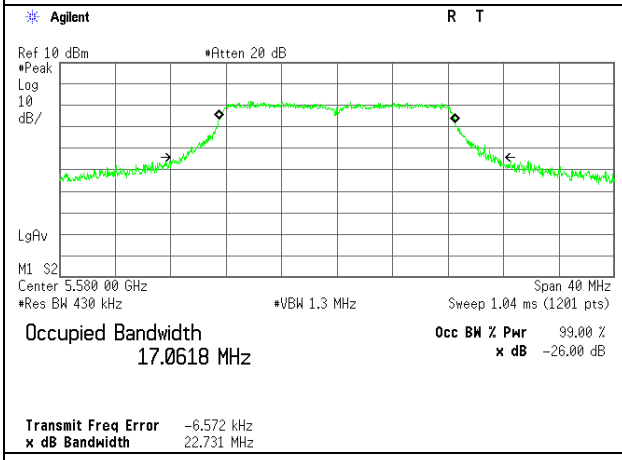
5500 MHz



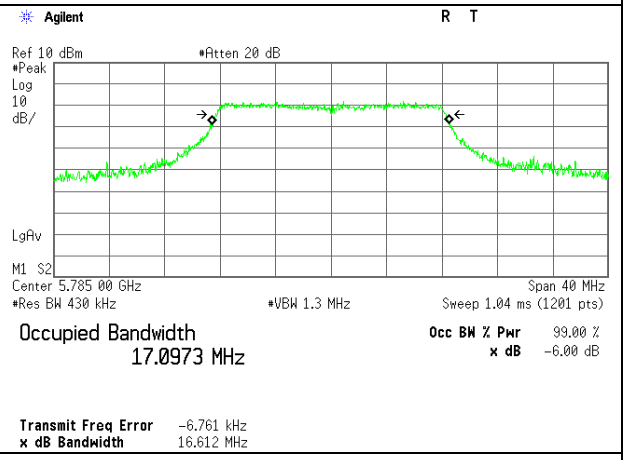
5745 MHz



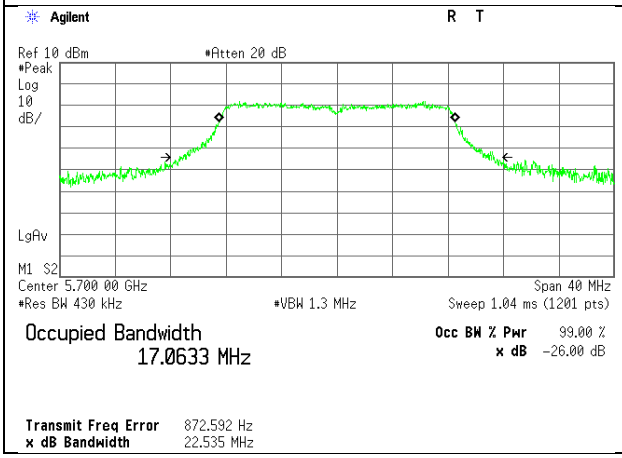
5580 MHz



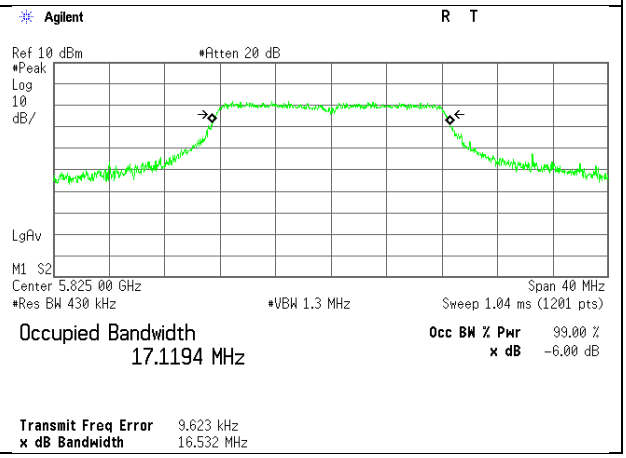
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

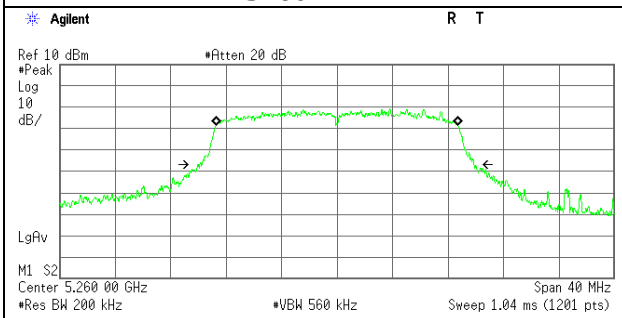
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11n-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.504	-
5220	-	17.479	-
5240	-	17.489	-
5260	19.905	17.464	-
5300	19.700	17.482	-
5320	19.567	17.485	-
5500	19.896	17.490	-
5580	19.515	17.510	-
5700	19.433	17.510	-
5745	-	17.499	-
5785	-	17.525	-
5825	-	17.481	-

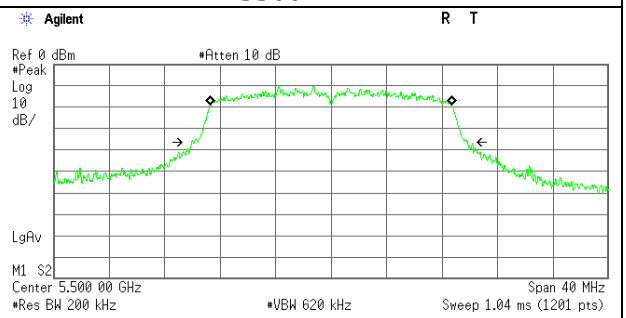
26 dB Emission Bandwidth

11n-20

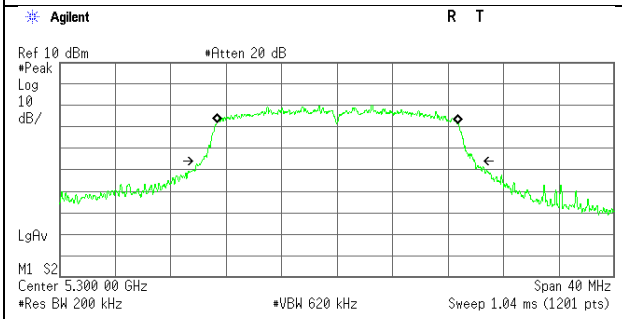
5260 MHz



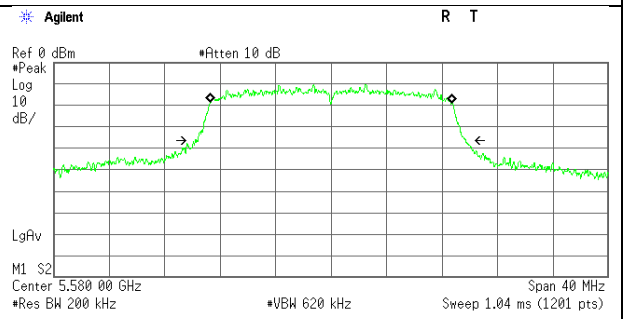
5500 MHz



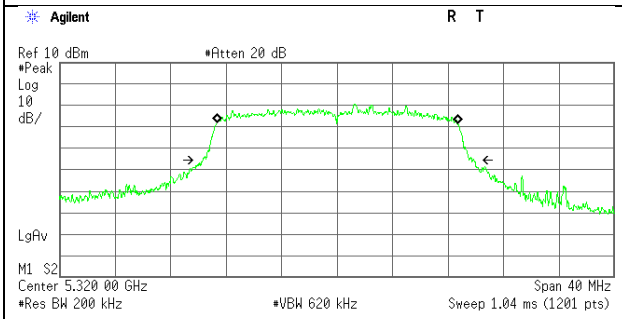
5300 MHz



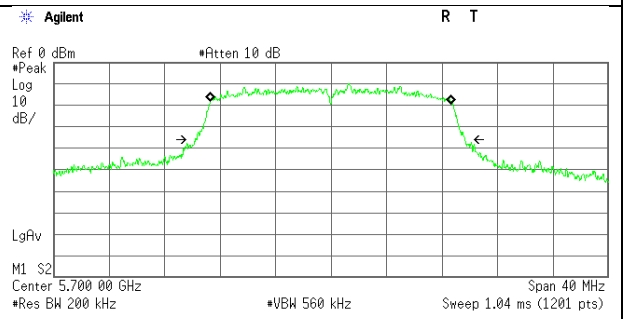
5580 MHz



5320 MHz



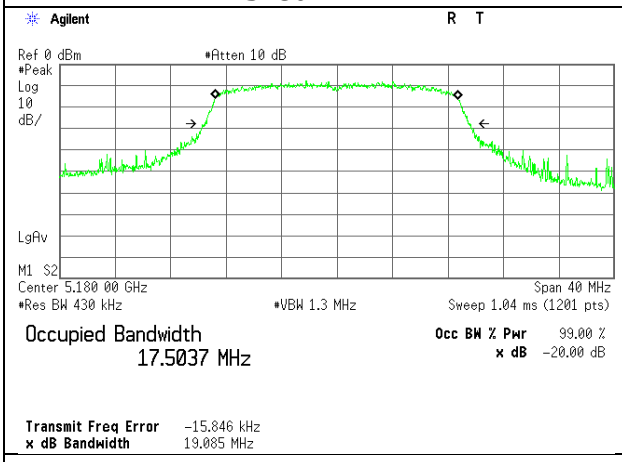
5700 MHz



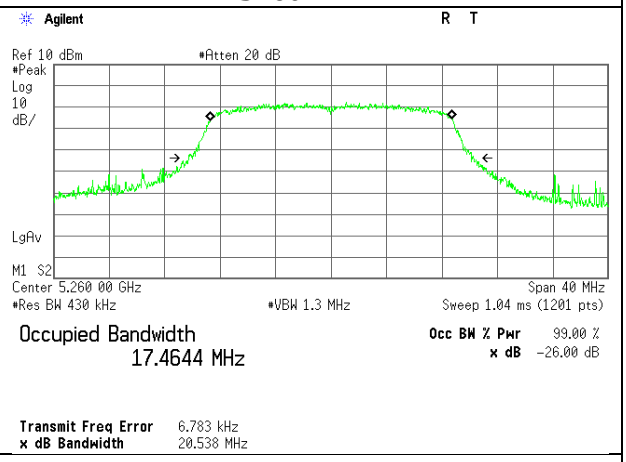
99 % Occupied Bandwidth

11n-20

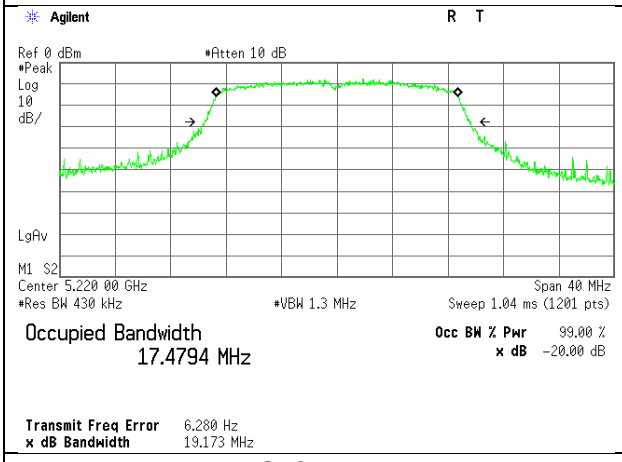
5180 MHz



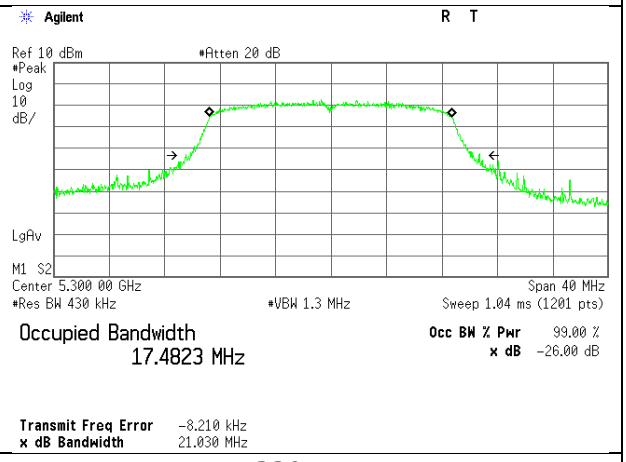
5260 MHz



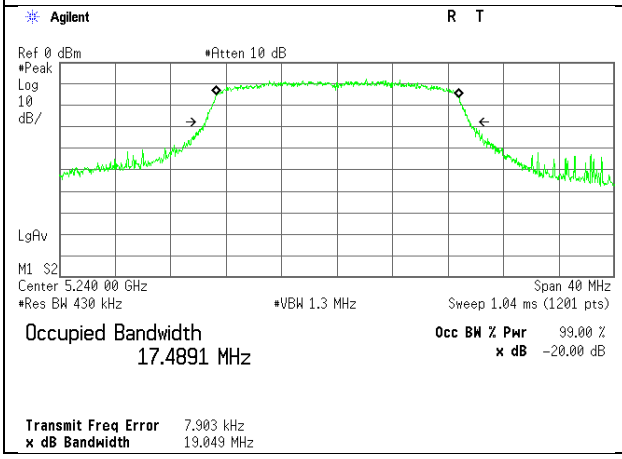
5220 MHz



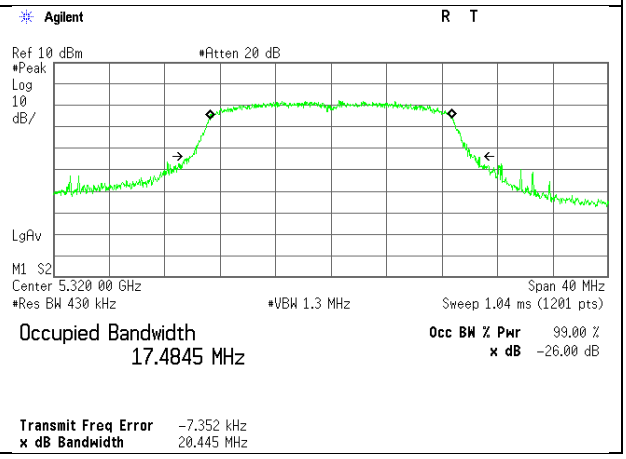
5300 MHz



5240 MHz



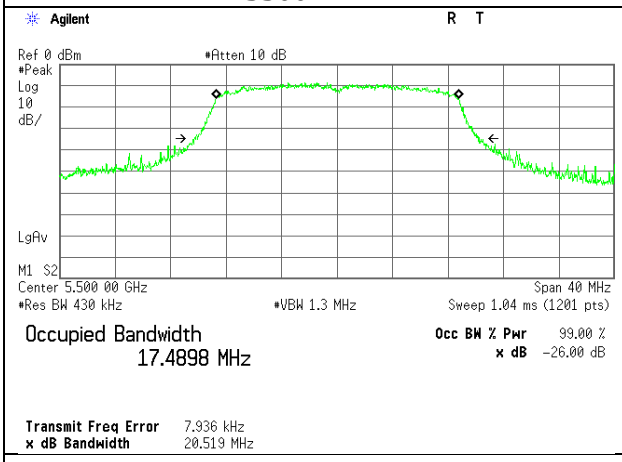
5320 MHz



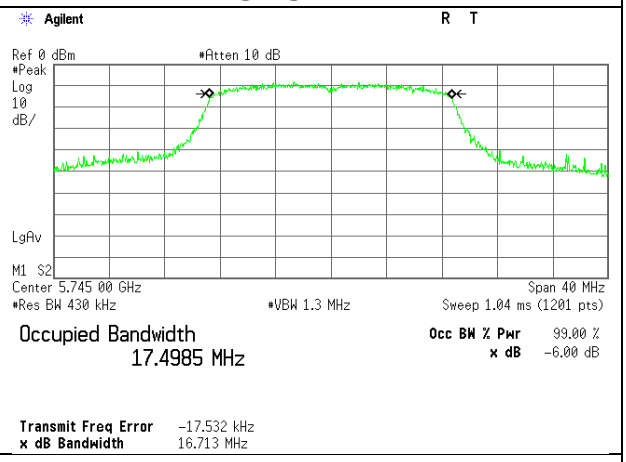
99 % Occupied Bandwidth

11n-20

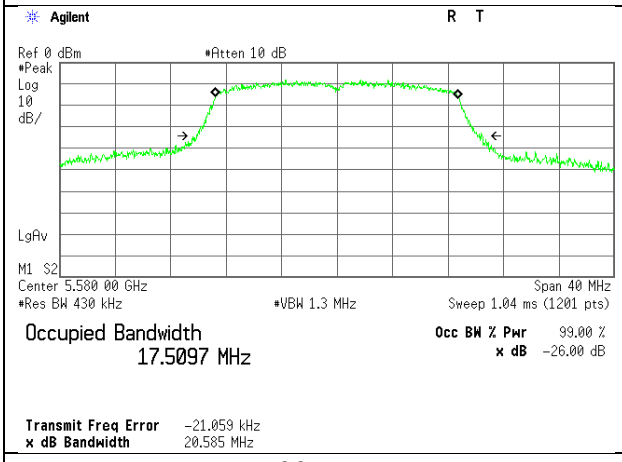
5500 MHz



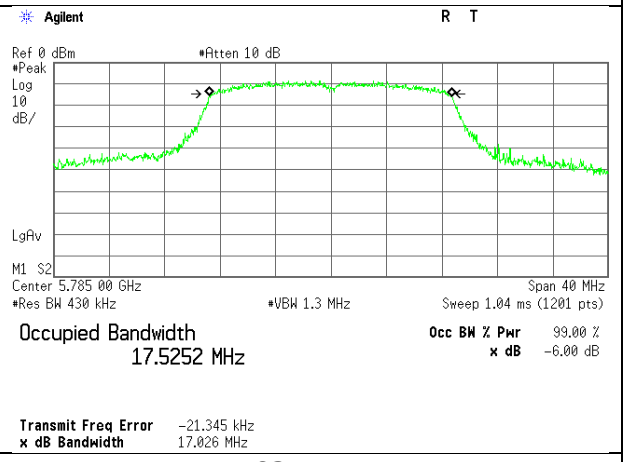
5745 MHz



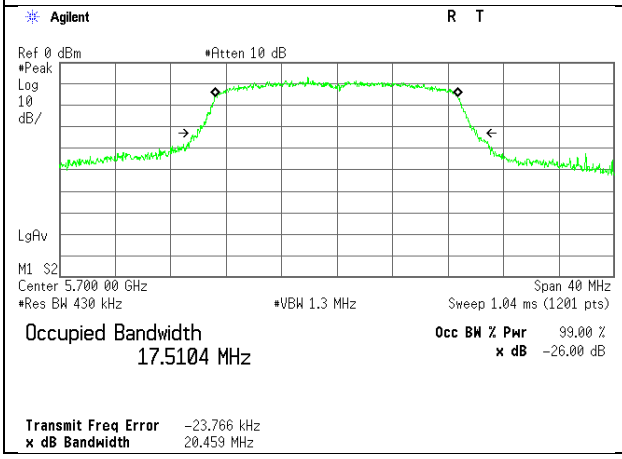
5580 MHz



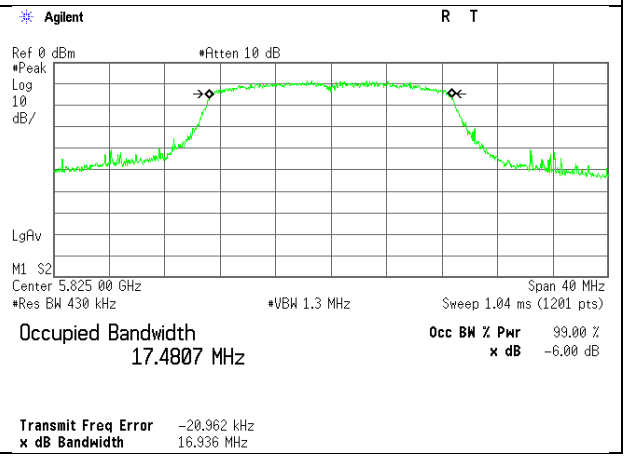
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

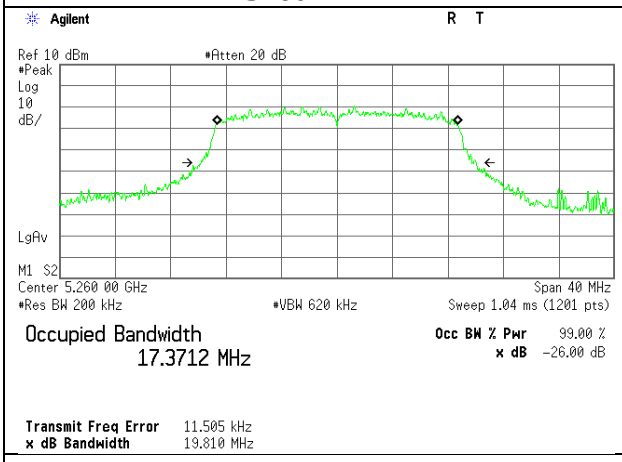
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11ac-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.510	-
5220	-	17.514	-
5240	-	17.483	-
5260	19.810	17.500	-
5300	19.576	17.527	-
5320	19.517	17.507	-
5500	19.754	17.491	-
5580	19.847	17.522	-
5700	19.467	17.484	-
5745	-	17.495	-
5785	-	17.523	-
5825	-	17.454	-

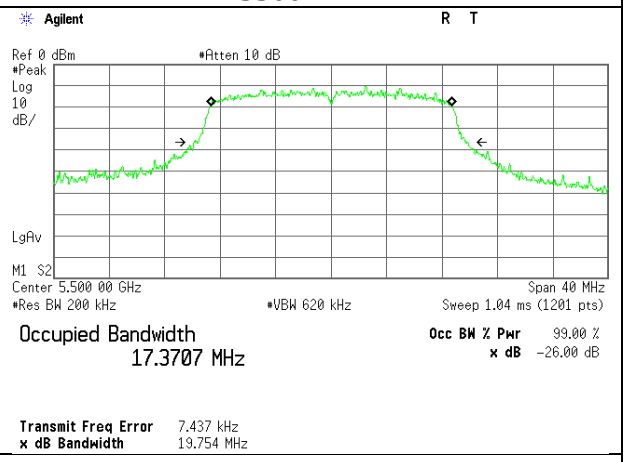
26 dB Emission Bandwidth

11ac-20

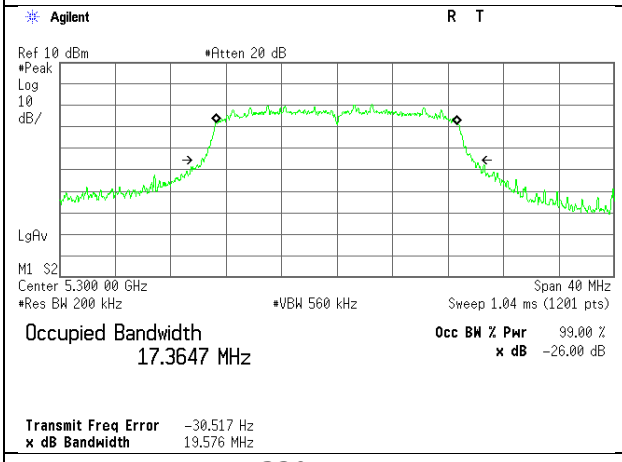
5260 MHz



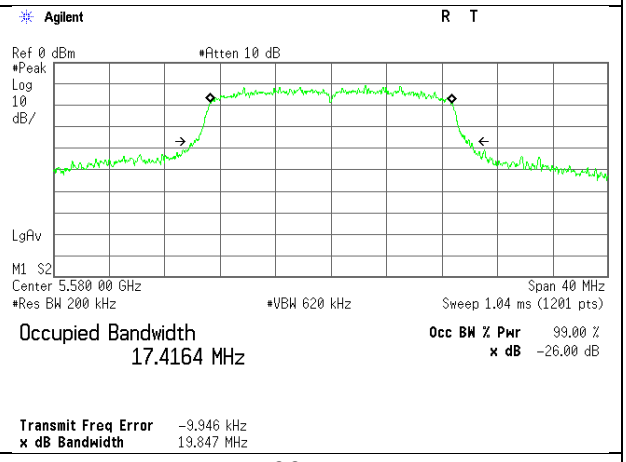
5500 MHz



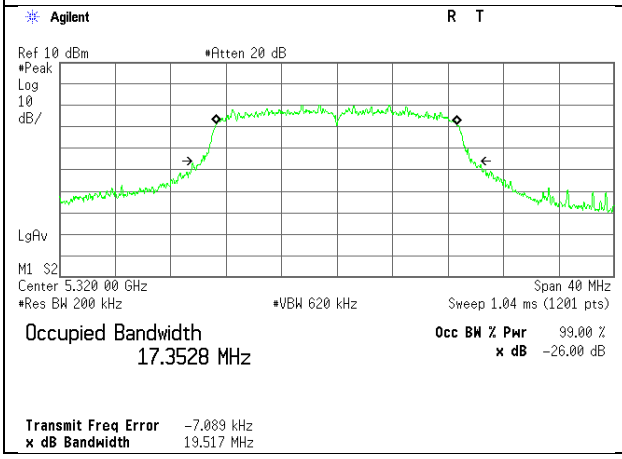
5300 MHz



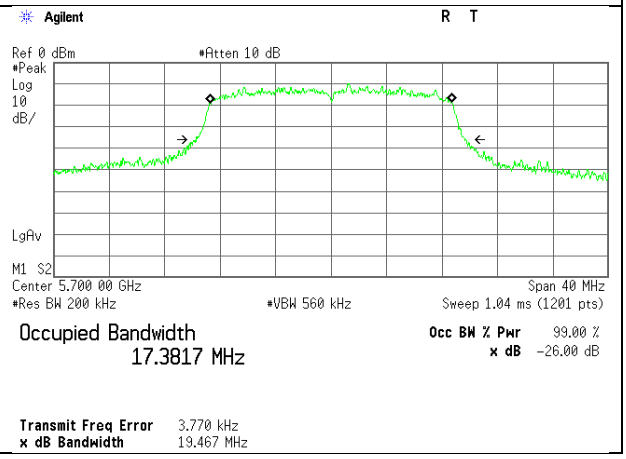
5580 MHz



5320 MHz



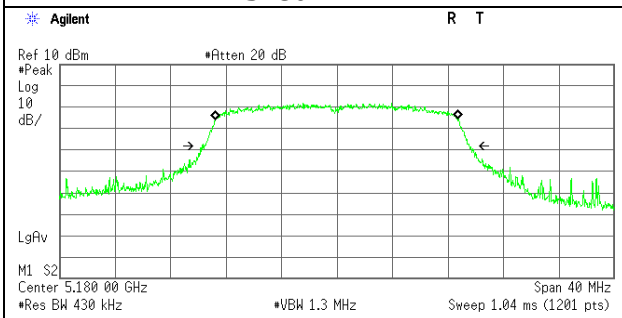
5700 MHz



99 % Occupied Bandwidth

11ac-20

5180 MHz

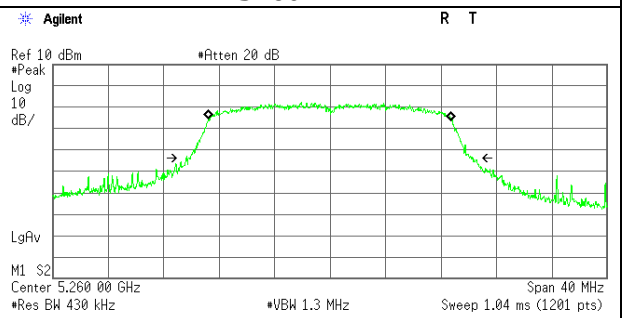


Occupied Bandwidth
17.5102 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -9.963 kHz
x dB Bandwidth 19.263 MHz

5260 MHz

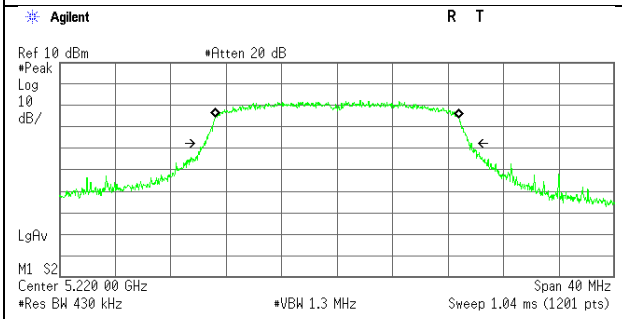


Occupied Bandwidth
17.4998 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -1.093 kHz
x dB Bandwidth 20.666 MHz

5220 MHz

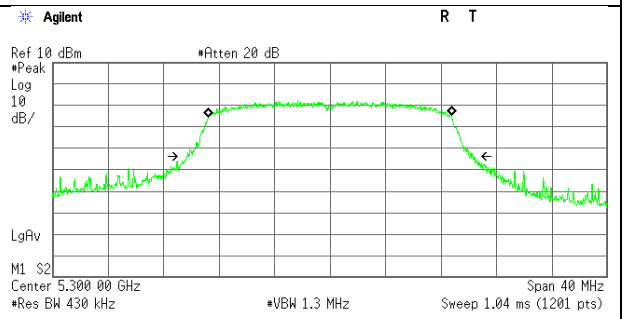


Occupied Bandwidth
17.5142 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -4.762 kHz
x dB Bandwidth 19.111 MHz

5300 MHz

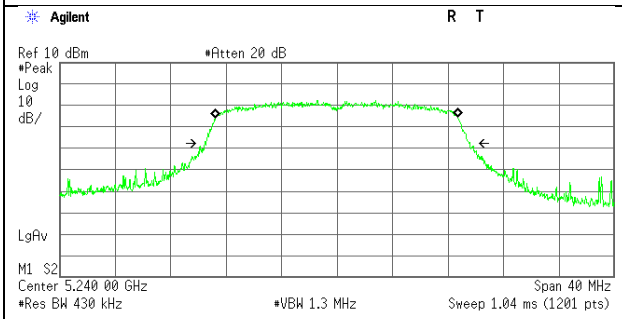


Occupied Bandwidth
17.5270 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -11.051 kHz
x dB Bandwidth 20.547 MHz

5240 MHz

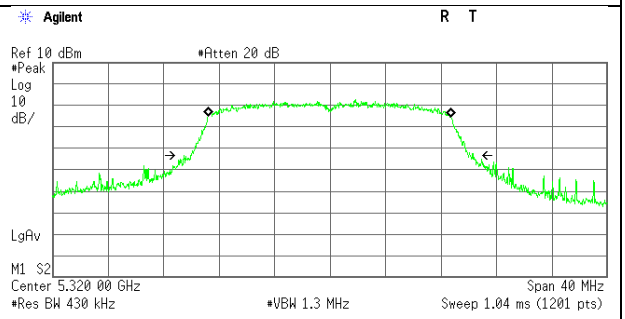


Occupied Bandwidth
17.4833 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -13.859 kHz
x dB Bandwidth 19.126 MHz

5320 MHz



Occupied Bandwidth
17.5071 MHz

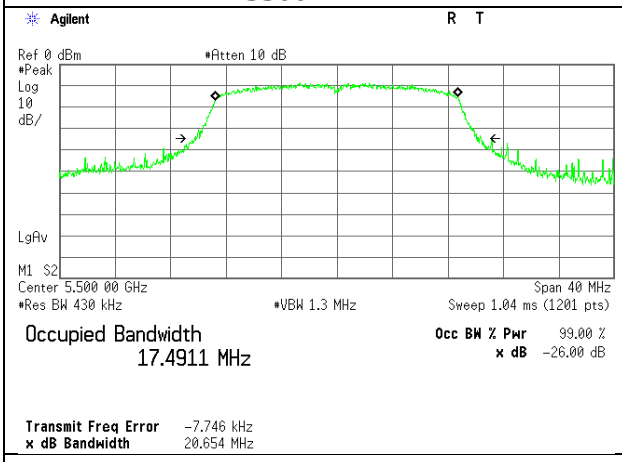
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -19.057 kHz
x dB Bandwidth 20.854 MHz

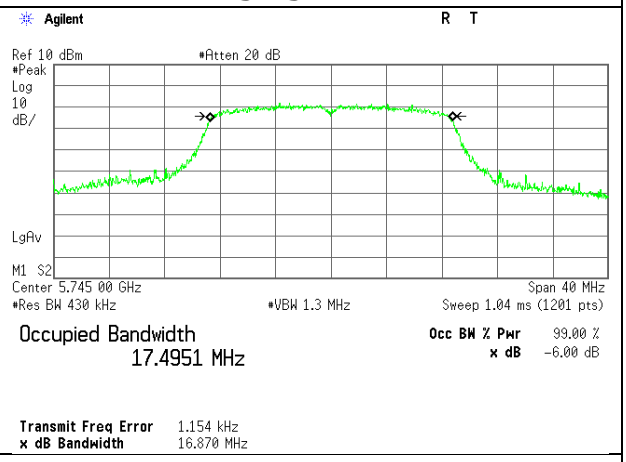
99 % Occupied Bandwidth

11ac-20

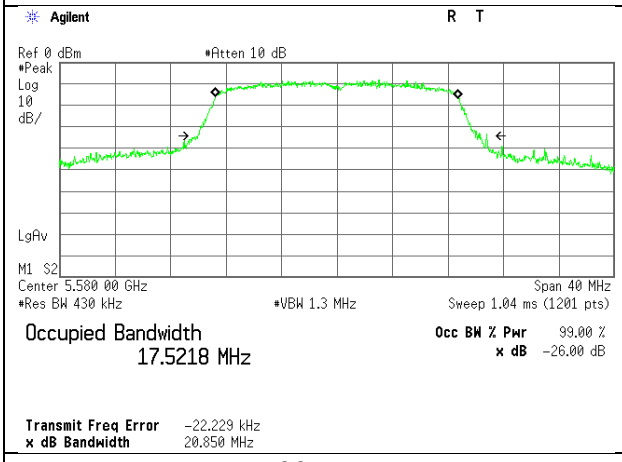
5500 MHz



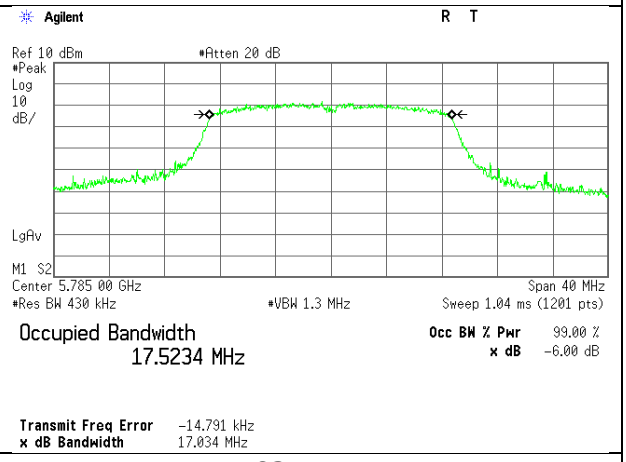
5745 MHz



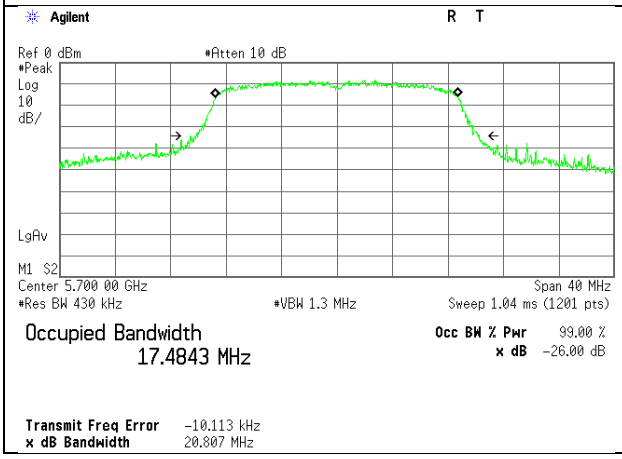
5580 MHz



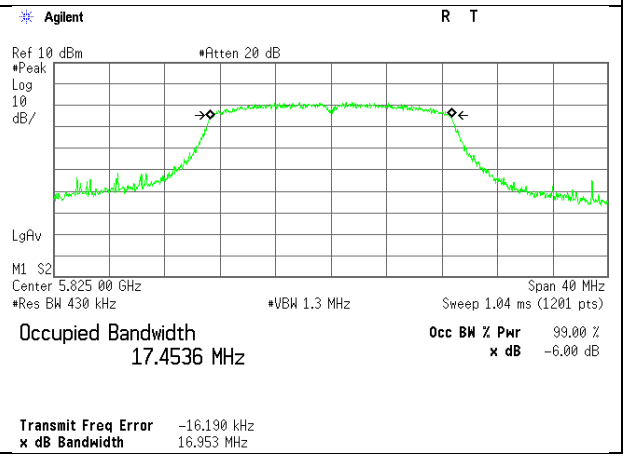
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

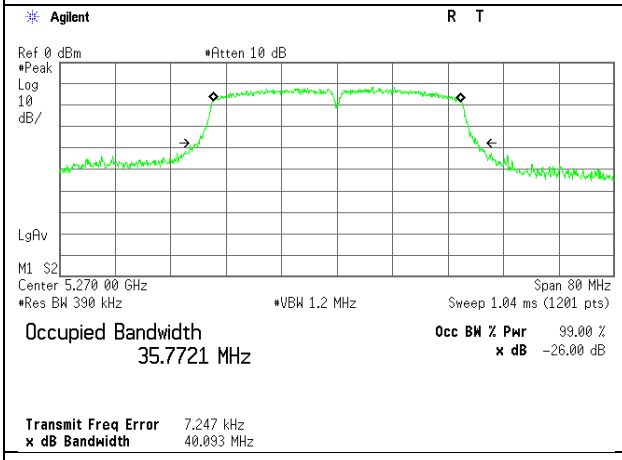
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11n-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	35.875	-
5230	-	35.875	-
5270	40.093	35.874	-
5310	40.530	35.886	-
5510	42.972	35.890	-
5550	39.982	35.944	-
5670	41.799	35.919	-
5755	-	35.859	-
5795	-	35.880	-

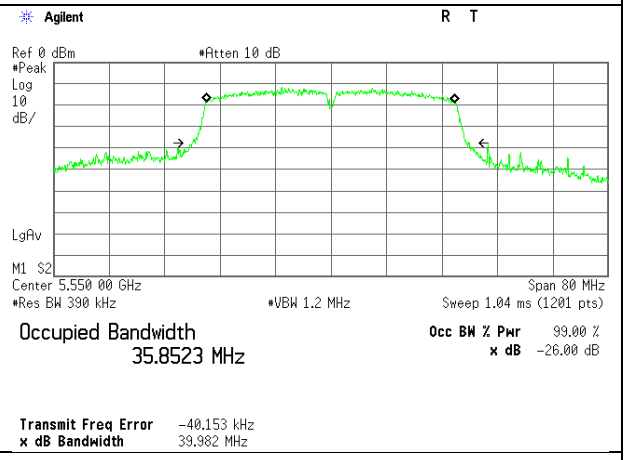
26 dB Emission Bandwidth

11n-40

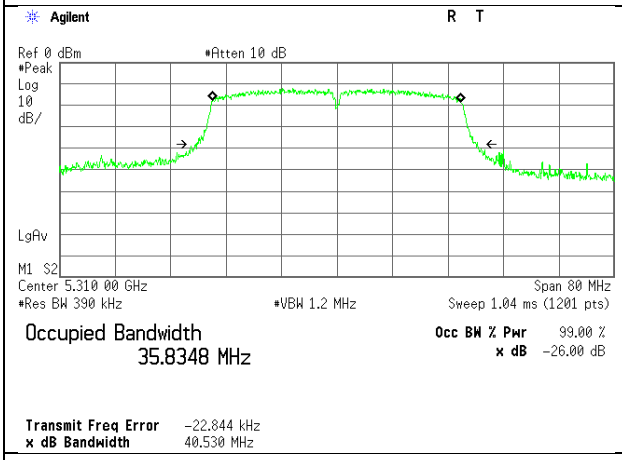
5270 MHz



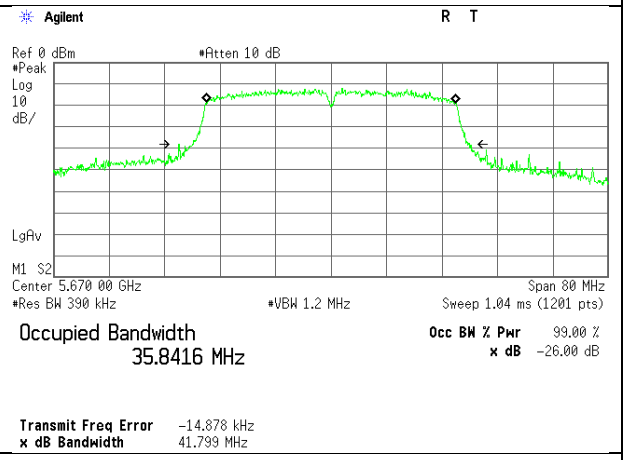
5550 MHz



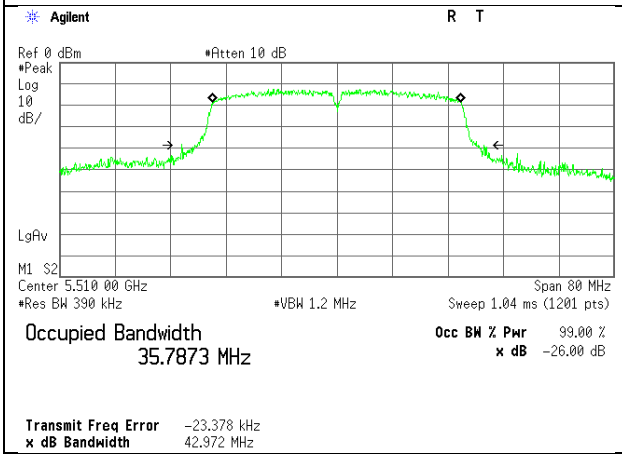
5310 MHz



5670 MHz



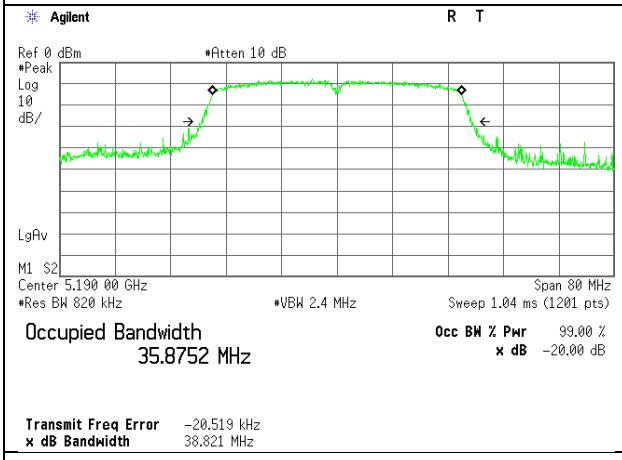
5510 MHz



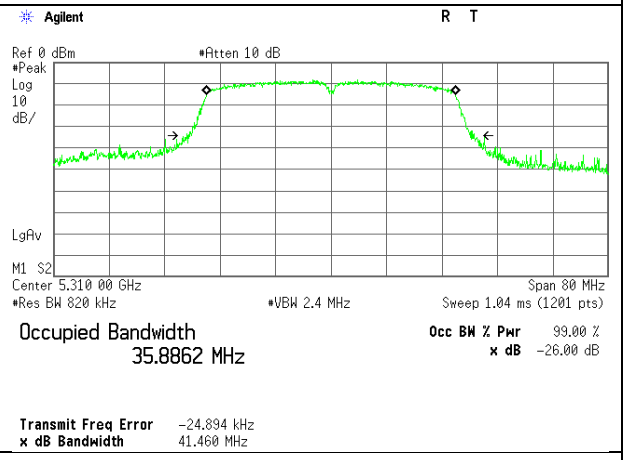
99 % Occupied Bandwidth

11n-40

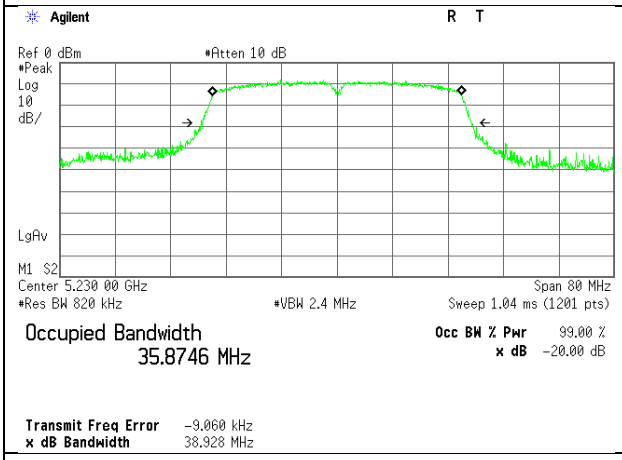
5190 MHz



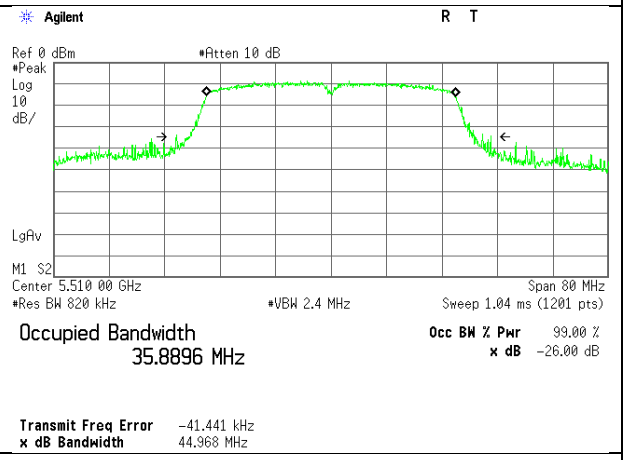
5310 MHz



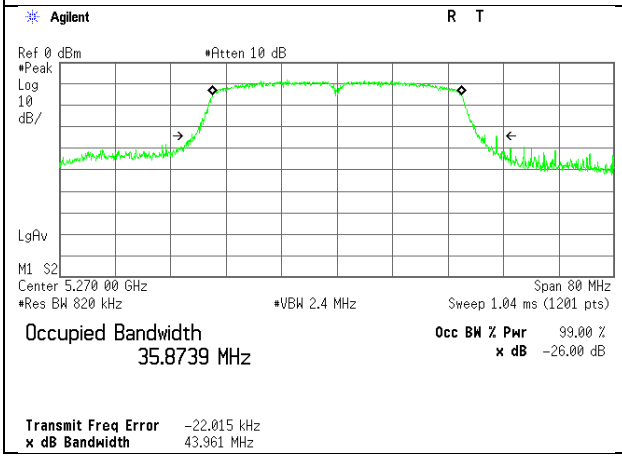
5230 MHz



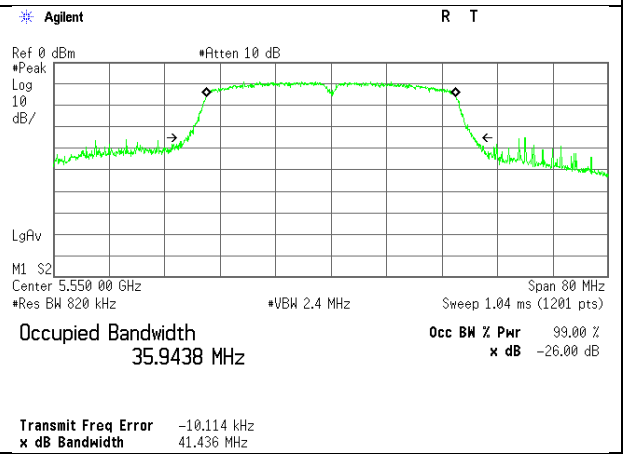
5510 MHz



5270 MHz



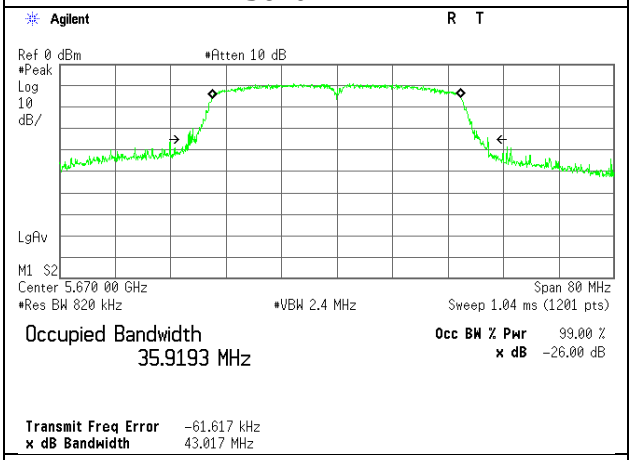
5550 MHz



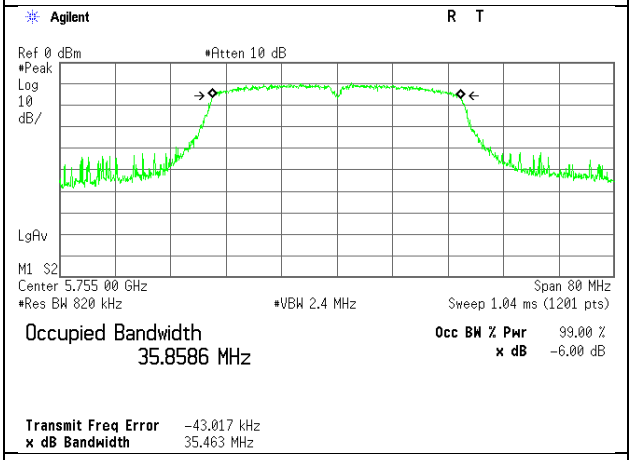
99 % Occupied Bandwidth

11n-40

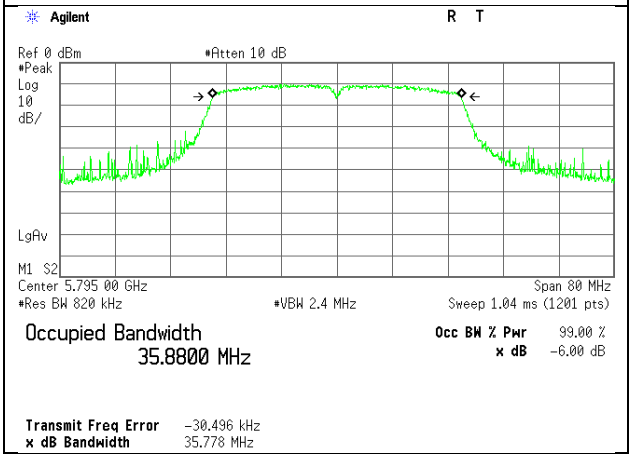
5670 MHz



5755 MHz



5795 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

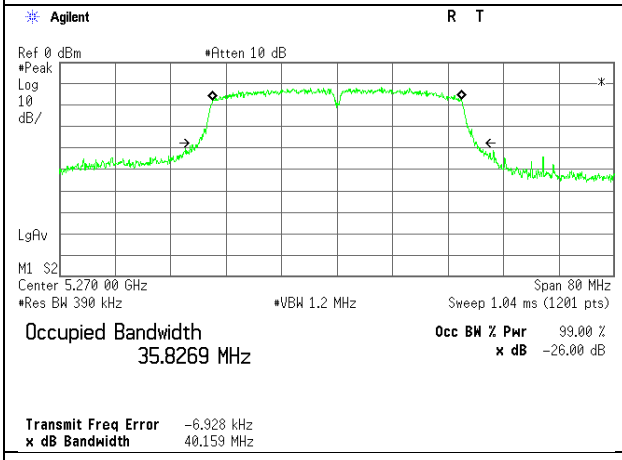
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11ac-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	35.910	-
5230	-	35.863	-
5270	40.159	35.841	-
5310	39.835	35.836	-
5510	40.331	35.909	-
5550	41.728	35.861	-
5670	40.133	35.862	-
5755	-	35.875	-
5795	-	35.865	-

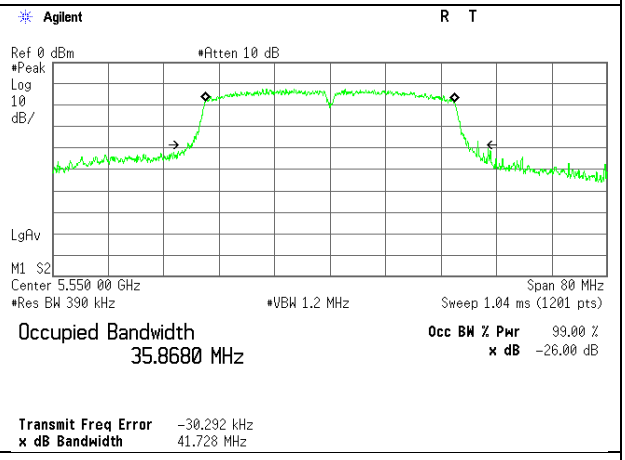
26 dB Emission Bandwidth

11ac-40

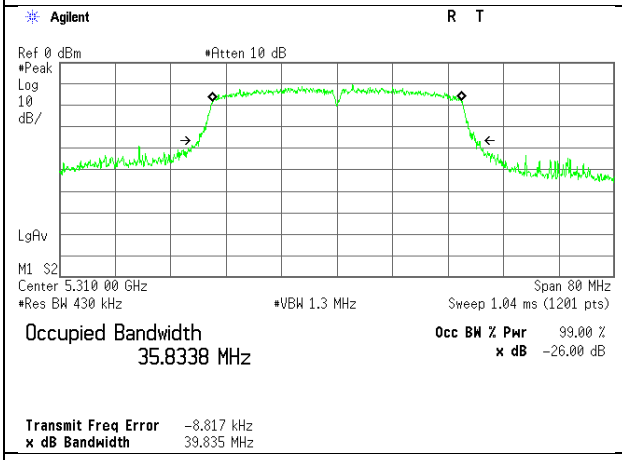
5270 MHz



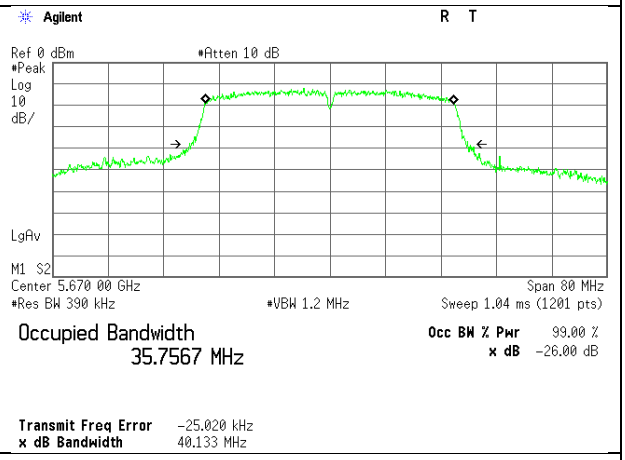
5550 MHz



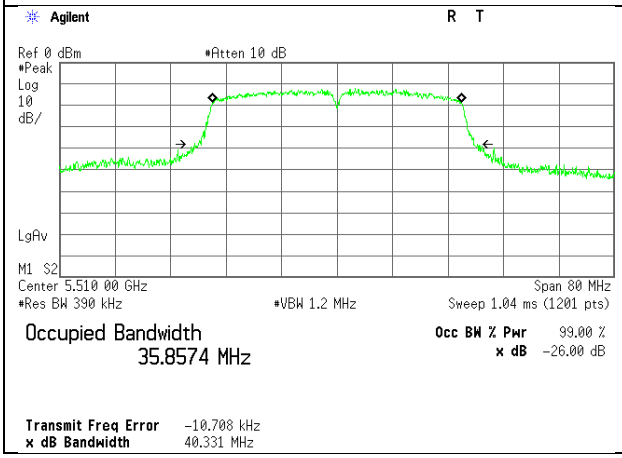
5310 MHz



5670 MHz



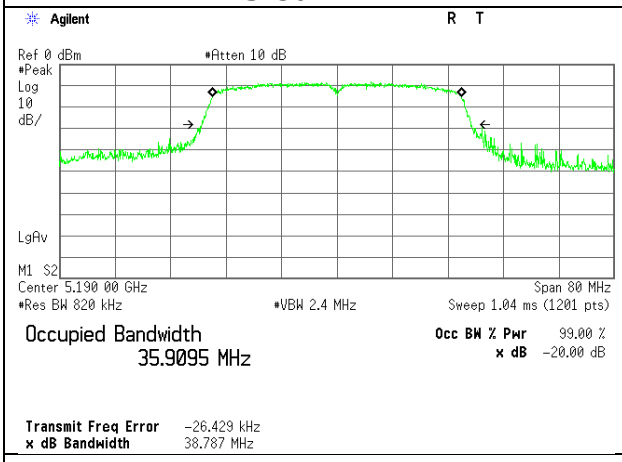
5510 MHz



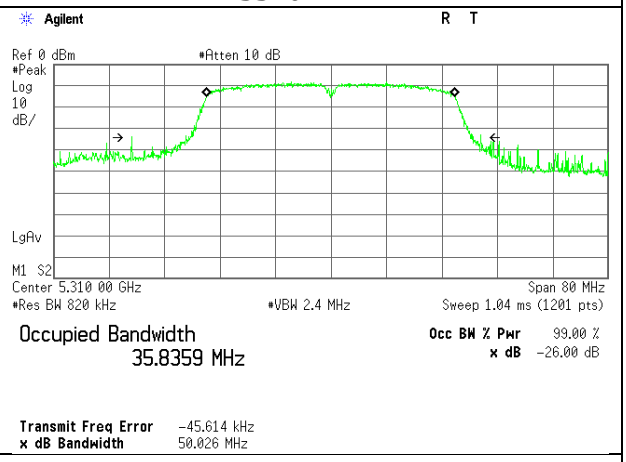
99 % Occupied Bandwidth

11ac-40

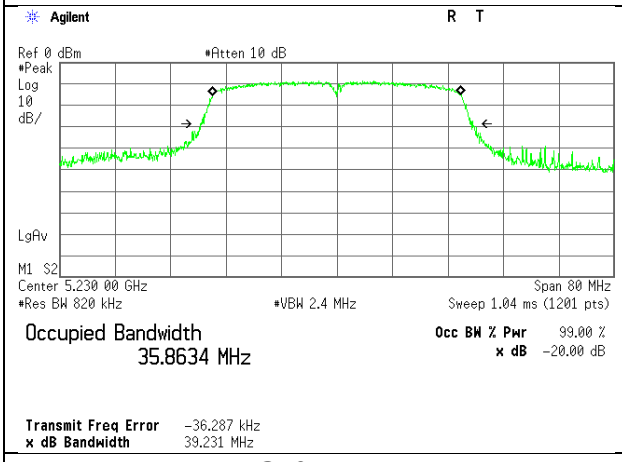
5190 MHz



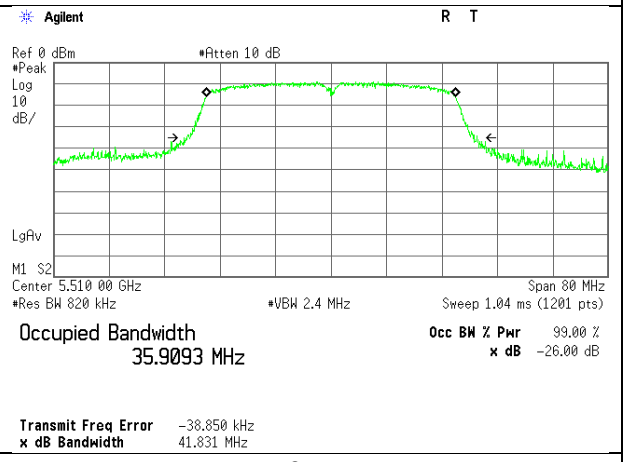
5310 MHz



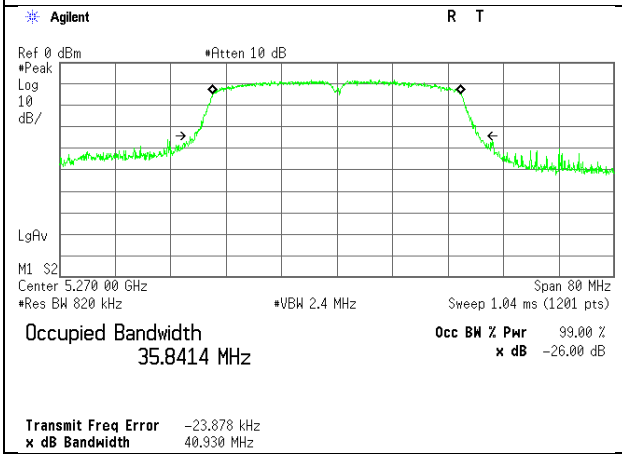
5230 MHz



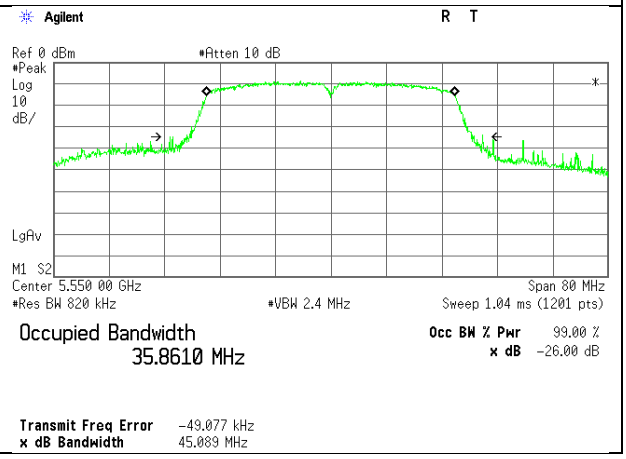
5510 MHz



5270 MHz



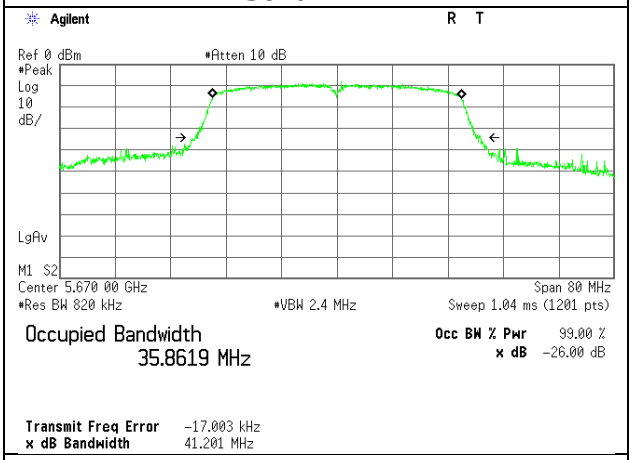
5550 MHz



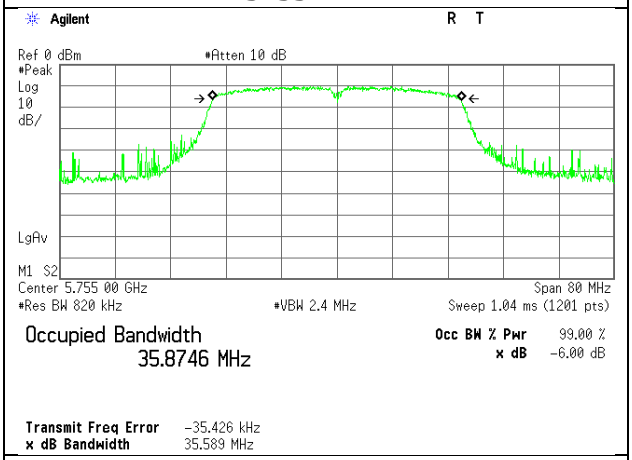
99 % Occupied Bandwidth

11ac-40

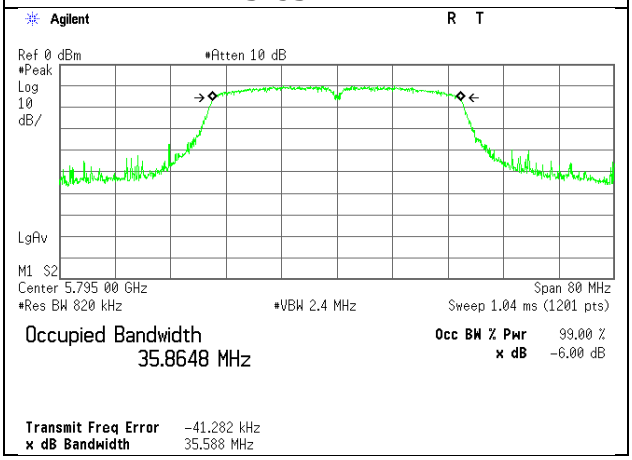
5670 MHz



5755 MHz



5795 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

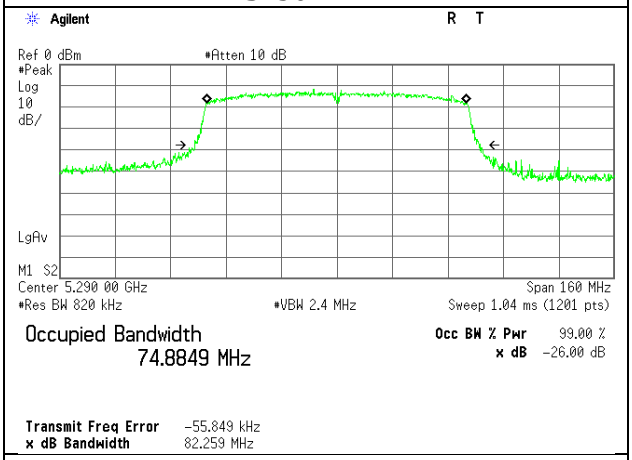
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11ac-80

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5210	-	75.069	-
5290	82.259	75.021	-
5530	82.021	75.155	-
5610	81.716	75.071	-
5775	-	75.085	-

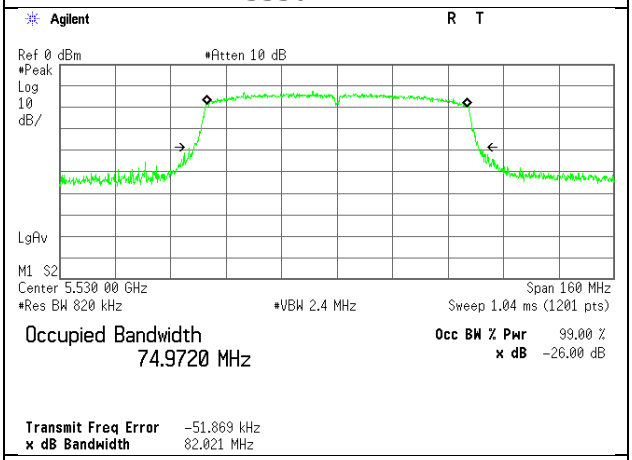
26 dB Emission Bandwidth

11ac-80

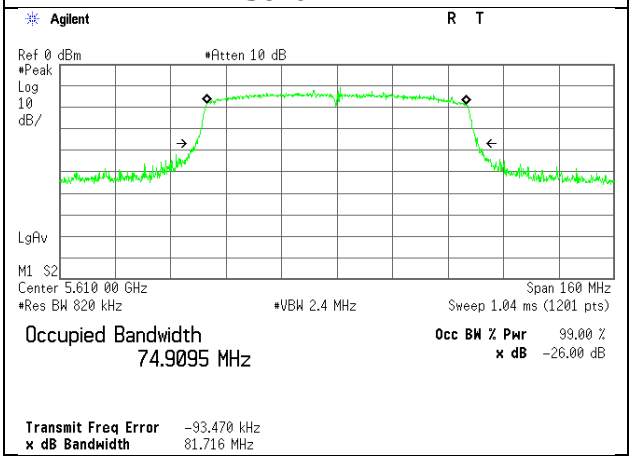
5290 MHz



5530 MHz



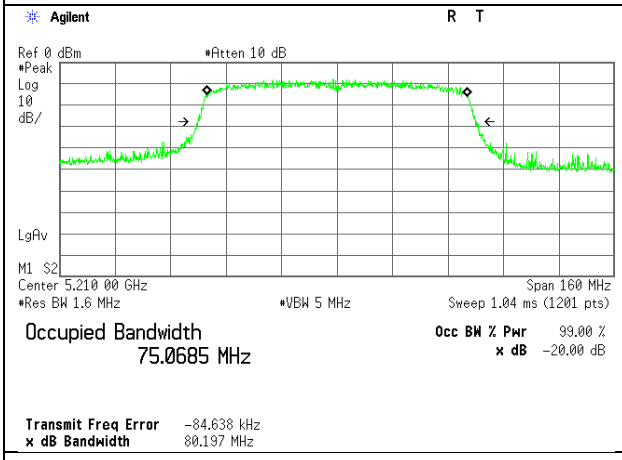
5610 MHz



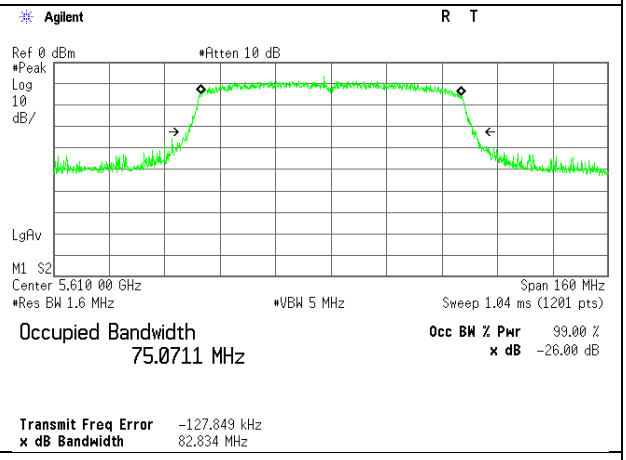
99 % Occupied Bandwidth

11ac-80

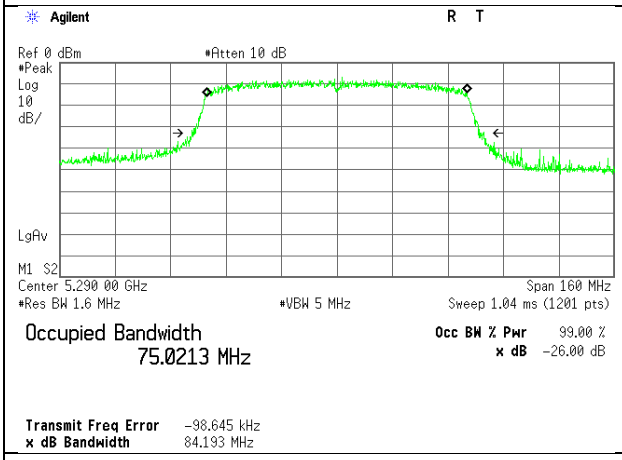
5210 MHz



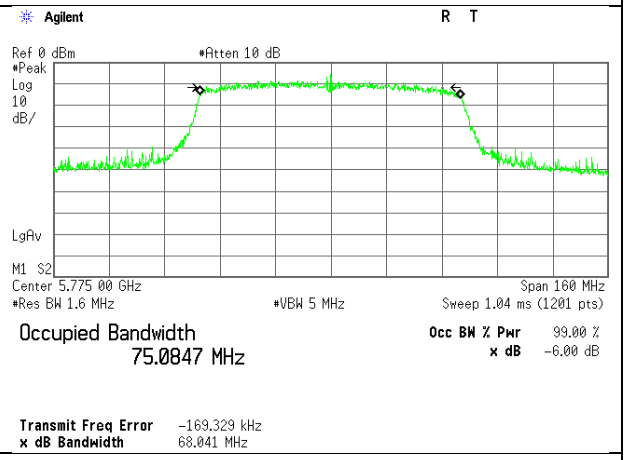
5610 MHz



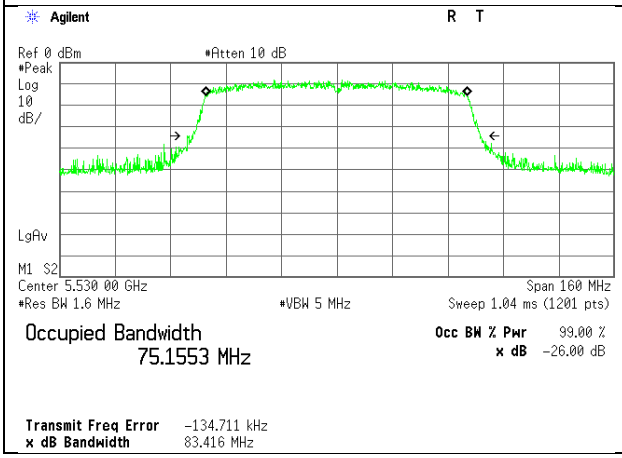
5290 MHz



5775 MHz



5530 MHz



6 dB Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx

11a

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	16.455	> 500
5785	16.486	> 500
5825	16.509	> 500

11n-20

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	13.817	> 500
5785	14.075	> 500
5825	15.151	> 500

11ac-20

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	15.046	> 500
5785	14.381	> 500
5825	15.097	> 500

11n-40

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5755	33.814	> 500
5795	35.140	> 500

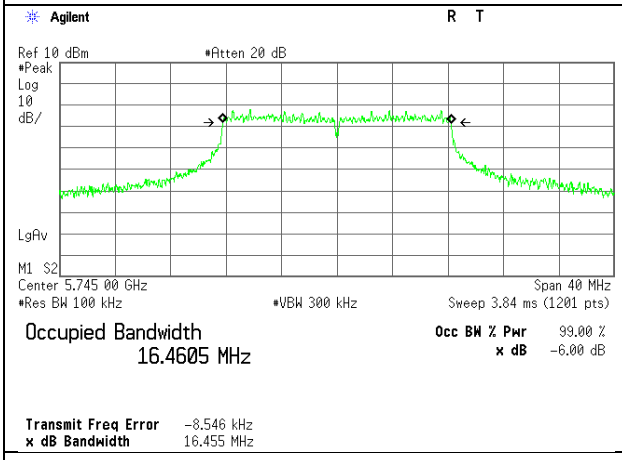
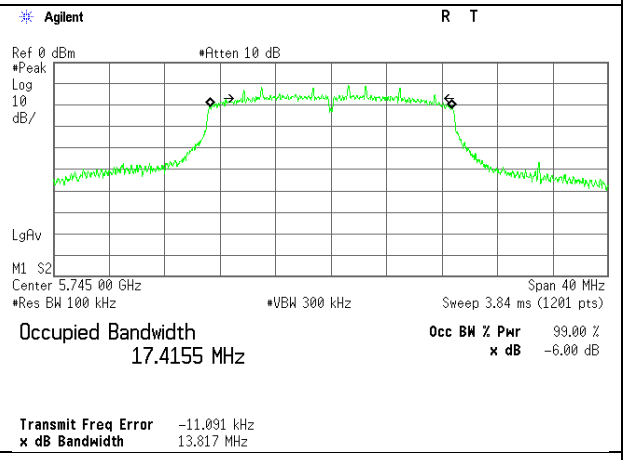
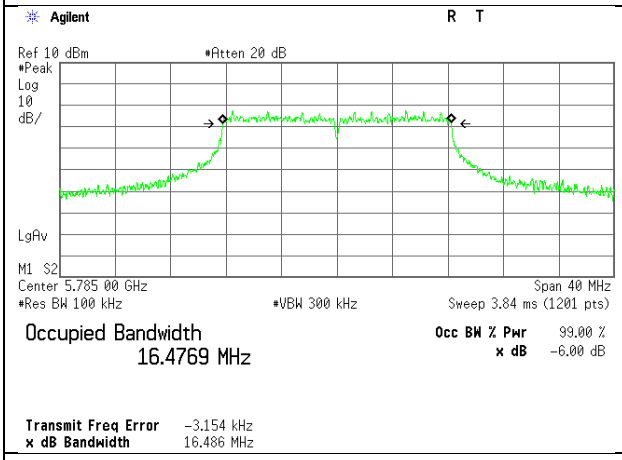
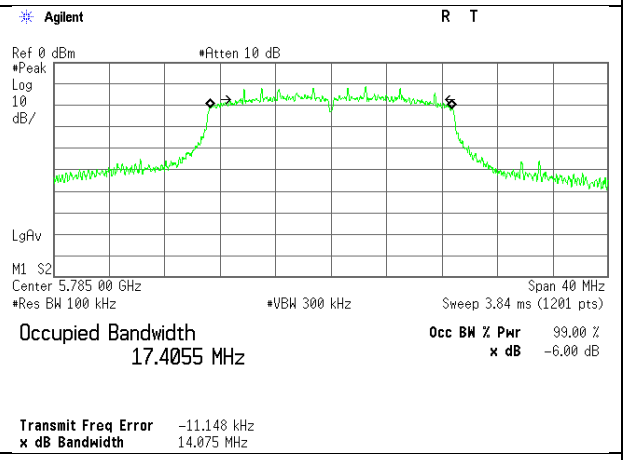
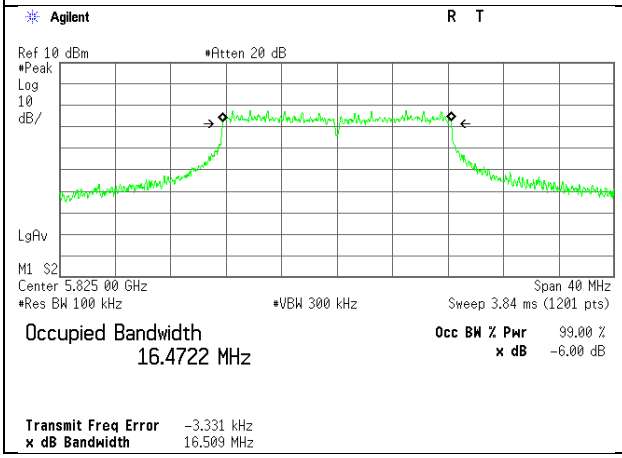
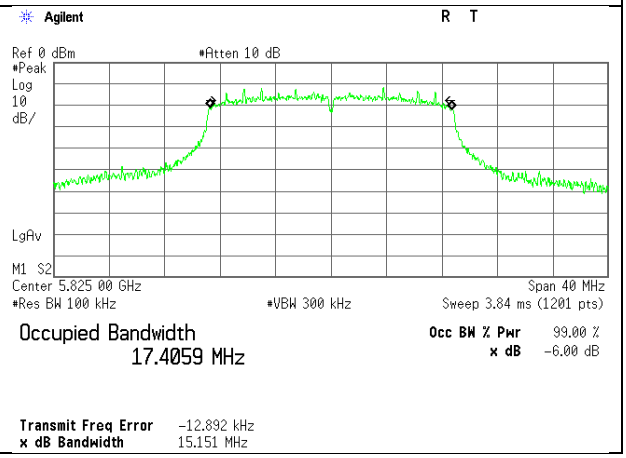
11ac-40

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5755	34.959	> 500
5795	33.926	> 500

11ac-80

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5775	73.890	> 500

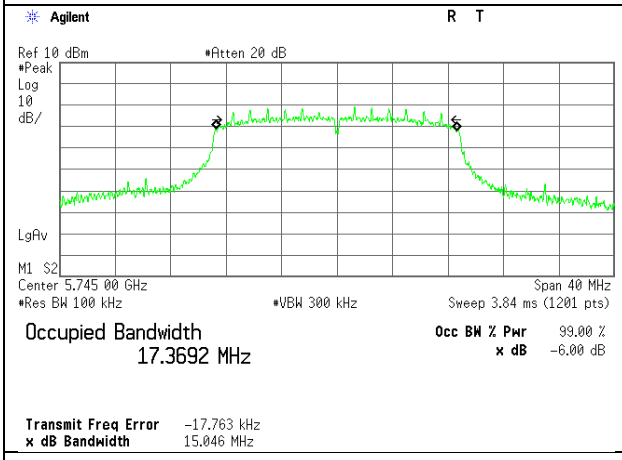
6 dB Bandwidth

11a	11n-20
5745 MHz	**5745 MHz**
	
5785 MHz	**5785 MHz**
	
5825 MHz	**5825 MHz**
	

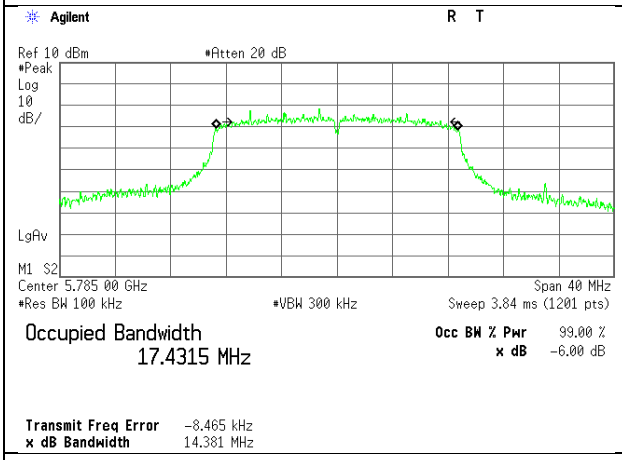
6 dB Bandwidth

11ac-20

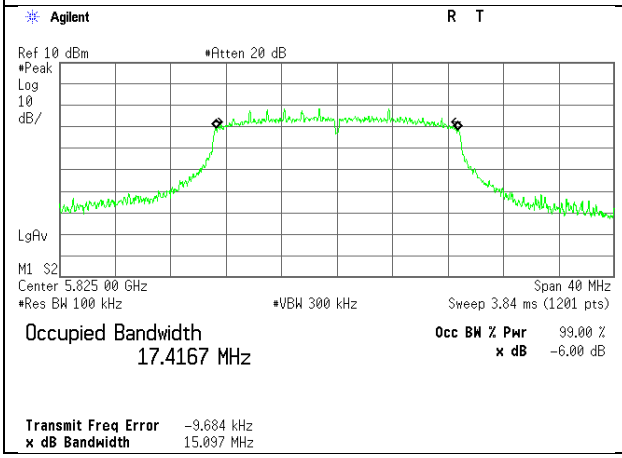
5745 MHz



5785 MHz

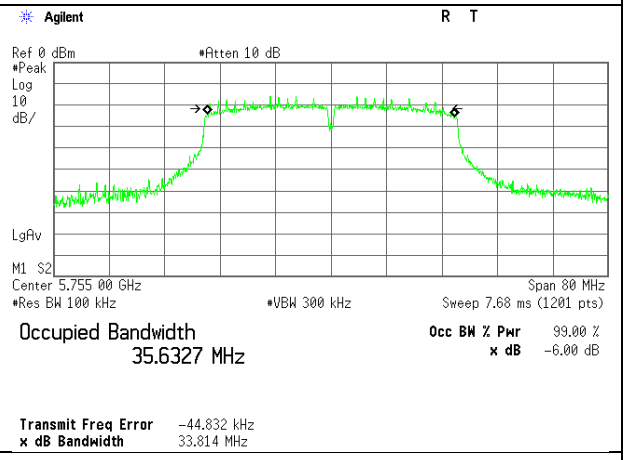


5825 MHz

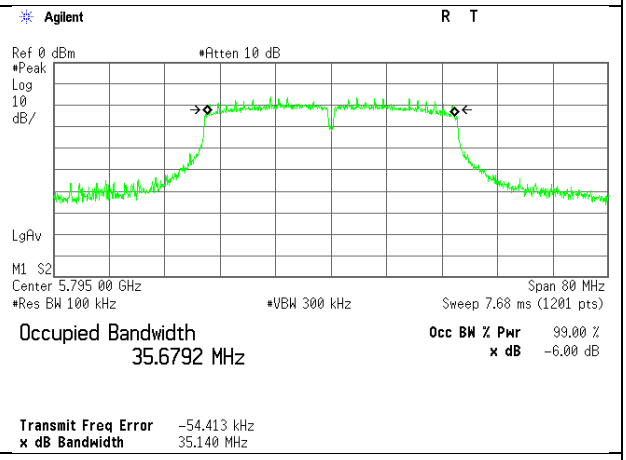


11n-40

5755 MHz



5795 MHz

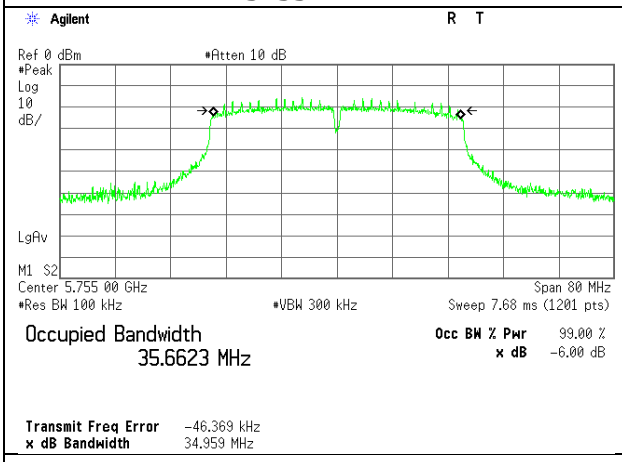


UL Japan, Inc.
Ise EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8999
Facsimile : +81 596 24 8124

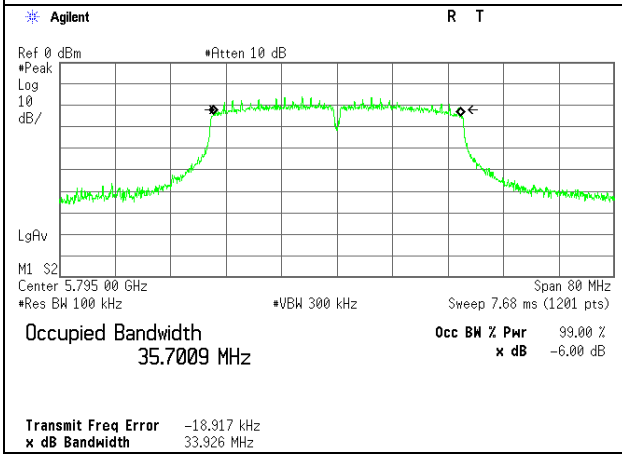
6 dB Bandwidth

11ac-40

5755 MHz

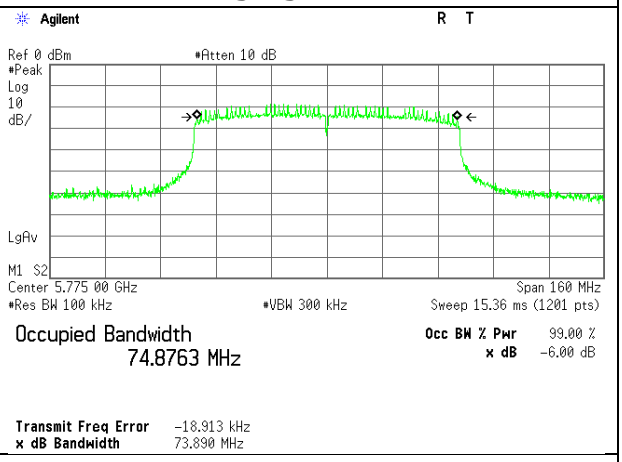


5795 MHz



11ac-80

5775 MHz



Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11a

11a 24Mbps Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-2.39	2.36	10.08	0.63	5.0	-	17.037	10.68	11.69	23.97	13.29	15.68	36.98	29.97	14.29
5220	0.67	2.38	10.08	0.63	5.0	-	17.084	13.76	23.77	23.97	10.21	18.76	75.16	29.97	11.21
5240	0.60	2.39	10.08	0.63	5.0	-	17.074	13.70	23.44	23.97	10.27	18.70	74.13	29.97	11.27
5260	0.40	2.40	10.09	0.63	5.0	21.709	17.036	13.52	22.49	23.97	10.45	18.52	71.12	29.97	11.45
5300	0.04	2.41	10.09	0.63	5.0	22.173	17.002	13.17	20.75	23.97	10.80	18.17	65.61	29.97	11.80
5320	-3.97	2.42	10.09	0.63	5.0	21.850	17.043	9.17	8.26	23.97	14.80	14.17	26.12	29.97	15.80
5500	-4.15	2.47	10.11	0.63	5.0	20.501	17.076	9.06	8.05	23.97	14.91	14.06	25.47	29.97	15.91
5580	-4.63	2.50	10.10	0.63	5.0	21.803	17.062	8.60	7.24	23.97	15.37	13.60	22.91	29.97	16.37
5700	-3.73	2.53	10.09	0.63	5.0	20.898	17.063	9.52	8.95	23.97	14.45	14.52	28.31	29.97	15.45
5745	-3.20	2.55	10.09	0.63	5.0	-	-	10.07	10.16	30.00	19.93	15.07	32.14	36.00	20.93
5785	-2.88	2.56	10.09	0.63	5.0	-	-	10.40	10.96	30.00	19.60	15.40	34.67	36.00	20.60
5825	-3.33	2.58	10.08	0.63	5.0	-	-	9.96	9.91	30.00	20.04	14.96	31.33	36.00	21.04

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + 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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-20

11n-20 MCS 0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-3.13	2.36	10.08	0.18	5.0	-	17.504	9.49	8.89	23.97	14.48	14.49	28.12	29.97	15.48
5220	0.52	2.38	10.08	0.18	5.0	-	17.479	13.16	20.70	23.97	10.81	18.16	65.46	29.97	11.81
5240	1.28	2.39	10.08	0.18	5.0	-	17.489	13.93	24.72	23.97	10.04	18.93	78.16	29.97	11.04
5260	1.27	2.40	10.09	0.18	5.0	19.905	17.464	13.94	24.77	23.97	10.03	18.94	78.34	29.97	11.03
5300	0.65	2.41	10.09	0.18	5.0	19.700	17.482	13.33	21.53	23.94	10.61	18.33	68.08	29.97	11.64
5320	-3.61	2.42	10.09	0.18	5.0	19.567	17.485	9.08	8.09	23.91	14.83	14.08	25.59	29.97	15.89
5500	-3.93	2.47	10.11	0.18	5.0	19.896	17.490	8.83	7.64	23.97	15.14	13.83	24.15	29.97	16.14
5580	-4.28	2.50	10.10	0.18	5.0	19.515	17.510	8.50	7.08	23.90	15.40	13.50	22.39	29.97	16.47
5700	-4.30	2.53	10.09	0.18	5.0	19.433	17.510	8.50	7.08	23.88	15.38	13.50	22.39	29.97	16.47
5745	-2.33	2.55	10.09	0.18	5.0	-	-	10.49	11.19	30.00	19.51	15.49	35.40	36.00	20.51
5785	-2.73	2.56	10.09	0.18	5.0	-	-	10.10	10.23	30.00	19.90	15.10	32.36	36.00	20.90
5825	-3.95	2.58	10.08	0.18	5.0	-	-	8.89	7.74	30.00	21.11	13.89	24.49	36.00	22.11

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + 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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-20

11ac-20 MCS 0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-3.08	2.36	10.08	0.18	5.0	-	17.510	9.54	8.99	23.97	14.43	14.54	28.44	29.97	15.43
5220	0.27	2.38	10.08	0.18	5.0	-	17.514	12.91	19.54	23.97	11.06	17.91	61.80	29.97	12.06
5240	1.35	2.39	10.08	0.18	5.0	-	17.483	14.00	25.12	23.97	9.97	19.00	79.43	29.97	10.97
5260	1.33	2.40	10.09	0.18	5.0	19.810	17.500	14.00	25.12	23.96	9.96	19.00	79.43	29.97	10.97
5300	0.21	2.41	10.09	0.18	5.0	19.576	17.527	12.89	19.45	23.91	11.02	17.89	61.52	29.97	12.08
5320	-3.58	2.42	10.09	0.18	5.0	19.517	17.507	9.11	8.15	23.90	14.79	14.11	25.76	29.97	15.86
5500	-3.83	2.47	10.11	0.18	5.0	19.754	17.491	8.93	7.82	23.95	15.02	13.93	24.72	29.97	16.04
5580	-4.39	2.50	10.10	0.18	5.0	19.847	17.522	8.39	6.90	23.97	15.58	13.39	21.83	29.97	16.58
5700	-4.25	2.53	10.09	0.18	5.0	19.467	17.484	8.55	7.16	23.89	15.34	13.55	22.65	29.97	16.42
5745	-2.88	2.55	10.09	0.18	5.0	-	-	9.94	9.86	30.00	20.06	14.94	31.19	36.00	21.06
5785	-2.49	2.56	10.09	0.18	5.0	-	-	10.34	10.81	30.00	19.66	15.34	34.20	36.00	20.66
5825	-3.89	2.58	10.08	0.18	5.0	-	-	8.95	7.85	30.00	21.05	13.95	24.83	36.00	22.05

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + 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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40

11n-40 MCS 0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-4.83	2.38	10.08	0.36	5.0	-	35.875	7.99	6.30	23.97	15.98	12.99	19.91	29.97	16.98
5230	-0.66	2.38	10.08	0.36	5.0	-	35.875	12.16	16.44	23.97	11.81	17.16	52.00	29.97	12.81
5270	-0.46	2.40	10.09	0.36	5.0	40.093	35.874	12.39	17.34	23.97	11.58	17.39	54.83	29.97	12.58
5310	-3.78	2.41	10.09	0.36	5.0	40.530	35.886	9.08	8.09	23.97	14.89	14.08	25.59	29.97	15.89
5510	-4.13	2.49	10.11	0.36	5.0	42.972	35.890	8.83	7.64	23.97	15.14	13.83	24.15	29.97	16.14
5550	-3.84	2.49	10.11	0.36	5.0	39.982	35.944	9.12	8.17	23.97	14.85	14.12	25.82	29.97	15.85
5670	-4.40	2.53	10.10	0.36	5.0	41.799	35.919	8.59	7.23	23.97	15.38	13.59	22.86	29.97	16.38
5755	-4.51	2.56	10.09	0.36	5.0	-	-	8.50	7.08	30.00	21.50	13.50	22.39	36.00	22.50
5795	-4.70	2.56	10.09	0.36	5.0	-	-	8.31	6.78	30.00	21.69	13.31	21.43	36.00	22.69

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + 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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-40

11ac-40 MCS 0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-4.56	2.38	10.08	0.36	5.0	-	35.910	8.26	6.70	23.97	15.71	13.26	21.18	29.97	16.71
5230	-0.66	2.38	10.08	0.36	5.0	-	35.863	12.16	16.44	23.97	11.81	17.16	52.00	29.97	12.81
5270	-0.39	2.40	10.09	0.36	5.0	40.159	35.841	12.46	17.62	23.97	11.51	17.46	55.72	29.97	12.51
5310	-3.76	2.41	10.09	0.36	5.0	39.835	35.836	9.10	8.13	23.97	14.87	14.10	25.70	29.97	15.87
5510	-4.27	2.49	10.11	0.36	5.0	40.331	35.909	8.69	7.40	23.97	15.28	13.69	23.39	29.97	16.28
5550	-3.90	2.49	10.11	0.36	5.0	41.728	35.861	9.06	8.05	23.97	14.91	14.06	25.47	29.97	15.91
5670	-4.33	2.53	10.10	0.36	5.0	40.133	35.862	8.66	7.35	23.97	15.31	13.66	23.23	29.97	16.31
5755	-4.49	2.56	10.09	0.36	5.0	-	-	8.52	7.11	30.00	21.48	13.52	22.49	36.00	22.48
5795	-4.74	2.56	10.09	0.36	5.0	-	-	8.27	6.71	30.00	21.73	13.27	21.23	36.00	22.73

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + 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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-80

11ac-80 MCS 0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5210	-4.82	2.38	10.08	0.71	5.0	-	75.069	8.35	6.84	23.97	15.62	13.35	21.63	29.97	16.62
5290	-4.23	2.41	10.09	0.71	5.0	82.259	75.021	8.98	7.91	23.97	14.99	13.98	25.00	29.97	15.99
5530	-3.82	2.49	10.11	0.71	5.0	82.021	75.155	9.49	8.89	23.97	14.48	14.49	28.12	29.97	15.48
5610	-4.09	2.52	10.10	0.71	5.0	81.716	75.071	9.24	8.39	23.97	14.73	14.24	26.55	29.97	15.73
5775	-1.92	2.56	10.09	0.71	5.0	-	-	11.44	13.93	30.00	18.56	16.44	44.06	36.00	19.56

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + 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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	March 31, 2016
Temperature / Humidity	23deg. C / 33 % RH
Engineer	Yutaka Yoshida
Mode	Tx

5180 MHz

Mode	Rate Mbps	Reading AV (Tx on time only) [dBm]	Remarks
11a	6	-2.57	
	9	-2.61	
	12	-2.55	
	18	-2.50	
	24	-2.00	*
	36	-3.39	
	48	-4.35	
	54	-5.40	

5180 MHz

Mode	MCS Index	Reading AV (Tx on time only) [dBm]	Remarks
11n-20	0	-1.81	*
	1	-2.76	
	2	-2.77	
	3	-3.03	
	4	-3.05	
	5	-5.39	
	6	-5.38	
	7	-5.40	

5190 MHz

Mode	MCS Index	Reading AV (Tx on time only) [dBm]	Remarks
11n-40	0	-1.89	*
	1	-3.02	
	2	-3.00	
	3	-3.28	
	4	-3.28	
	5	-3.82	
	6	-4.76	
	7	-5.23	

* Worst rate
Sample Calculation:
All comparison were carried out on same frequency and measurement factors.

5180 MHz

Mode	MCS Index	Reading AV (Tx on time only) [dBm]	Remarks
11ac-20	0	-1.84	*
	1	-2.78	
	2	-2.79	
	3	-3.05	
	4	-3.05	
	5	-5.40	
	6	-5.39	
	7	-5.36	
	8	-7.32	

5190 MHz

Mode	MCS Index	Reading AV (Tx on time only) [dBm]	Remarks
11ac-40	0	-1.90	*
	1	-3.03	
	2	-3.01	
	3	-3.29	
	4	-3.30	
	5	-3.81	
	6	-4.79	
	7	-5.23	
	8	-6.20	
	9	-9.91	

5210 MHz

Mode	MCS Index	Reading AV (Tx on time only) [dBm]	Remarks
11ac-80	0	-3.03	*
	1	-4.03	
	2	-4.00	
	3	-3.77	
	4	-3.75	
	5	-3.72	
	6	-5.17	
	7	-5.15	
	8	-6.52	
	9	-7.53	

*Difference between worst rate check data and formal test result is due to the different test condition.

Average Output Power
(Reference data for RF Exposure)

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx

11a 6Mbps

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Time average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5180	-2.02	2.36	10.08	10.42	11.02
5220	0.81	2.38	10.08	13.27	21.23
5240	0.72	2.39	10.08	13.19	20.84
5260	0.64	2.40	10.09	13.13	20.56
5300	0.48	2.41	10.09	12.98	19.86
5320	-3.68	2.42	10.09	8.83	7.64
5500	-3.98	2.47	10.11	8.60	7.24
5580	-4.21	2.50	10.10	8.39	6.90
5700	-3.34	2.53	10.09	9.28	8.47
5745	-2.94	2.55	10.09	9.70	9.33
5785	-2.61	2.56	10.09	10.04	10.09
5825	-3.31	2.58	10.08	9.35	8.61

11n-20 MCS0

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Time average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5180	-3.13	2.36	10.08	9.31	8.53
5220	0.52	2.38	10.08	12.98	19.86
5240	1.28	2.39	10.08	13.75	23.71
5260	1.27	2.40	10.09	13.76	23.77
5300	0.65	2.41	10.09	13.15	20.65
5320	-3.61	2.42	10.09	8.90	7.76
5500	-3.93	2.47	10.11	8.65	7.33
5580	-4.28	2.50	10.10	8.32	6.79
5700	-4.30	2.53	10.09	8.32	6.79
5745	-2.33	2.55	10.09	10.31	10.74
5785	-2.73	2.56	10.09	9.92	9.82
5825	-3.95	2.58	10.08	8.71	7.43

11ac-20 MCS0

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Time average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5180	-3.08	2.36	10.08	9.36	8.63
5220	0.27	2.38	10.08	12.73	18.75
5240	1.35	2.39	10.08	13.82	24.10
5260	1.33	2.40	10.09	13.82	24.10
5300	0.21	2.41	10.09	12.71	18.66
5320	-3.58	2.42	10.09	8.93	7.82
5500	-3.83	2.47	10.11	8.75	7.50
5580	-4.39	2.50	10.10	8.21	6.62
5700	-4.25	2.53	10.09	8.37	6.87
5745	-2.88	2.55	10.09	9.76	9.46
5785	-2.49	2.56	10.09	10.16	10.38
5825	-3.89	2.58	10.08	8.77	7.53

Sample Calculation:
Result (Time average) = Reading + Cable Loss + Atten. Loss

11n-40 MCS0

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Time average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5190	-4.83	2.38	10.08	7.63	5.79
5230	-0.66	2.38	10.08	11.80	15.14
5270	-0.46	2.40	10.09	12.03	15.96
5310	-3.78	2.41	10.09	8.72	7.45
5510	-4.13	2.49	10.11	8.47	7.03
5550	-3.84	2.49	10.11	8.76	7.52
5670	-4.40	2.53	10.10	8.23	6.65
5755	-4.51	2.56	10.09	8.14	6.52
5795	-4.70	2.56	10.09	7.95	6.24

11ac-40 MCS0

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Time average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5190	-4.56	2.38	10.08	7.90	6.17
5230	-0.66	2.38	10.08	11.80	15.14
5270	-0.39	2.40	10.09	12.10	16.22
5310	-3.76	2.41	10.09	8.74	7.48
5510	-4.27	2.49	10.11	8.33	6.81
5550	-3.90	2.49	10.11	8.70	7.41
5670	-4.33	2.53	10.10	8.30	6.76
5755	-4.49	2.56	10.09	8.16	6.55
5795	-4.74	2.56	10.09	7.91	6.18

11ac-80 MCS0

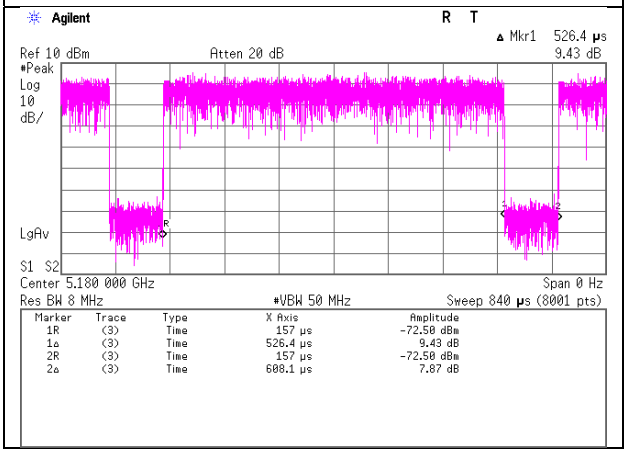
Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Time average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5210	-4.82	2.38	10.08	7.64	5.81
5290	-4.23	2.41	10.09	8.27	6.71
5530	-3.82	2.49	10.11	8.78	7.55
5610	-4.09	2.52	10.10	8.53	7.13
5775	-1.92	2.56	10.09	10.73	11.83

Burst rate confirmation

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	March 31, 2016
Temperature / Humidity	23deg. C / 33 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11a / 11n-20 / 11n-40

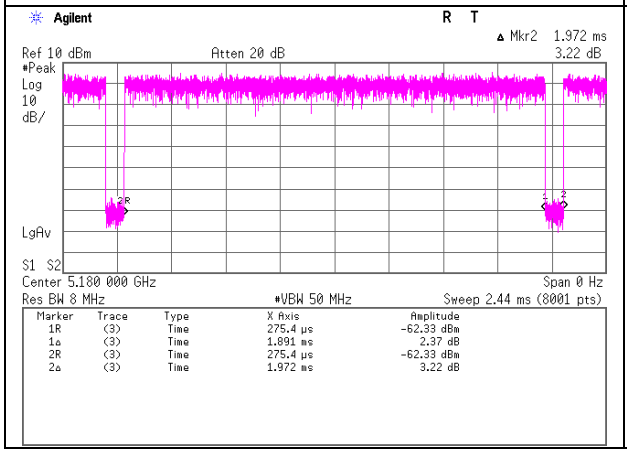
11a 24Mbps

Tx on / (Tx on + Tx off) = 0.866
Tx on / (Tx on + Tx off) * 100 = 86.6 %
Duty factor = 10 * log (0.6081 / 0.5264) = 0.63 dB



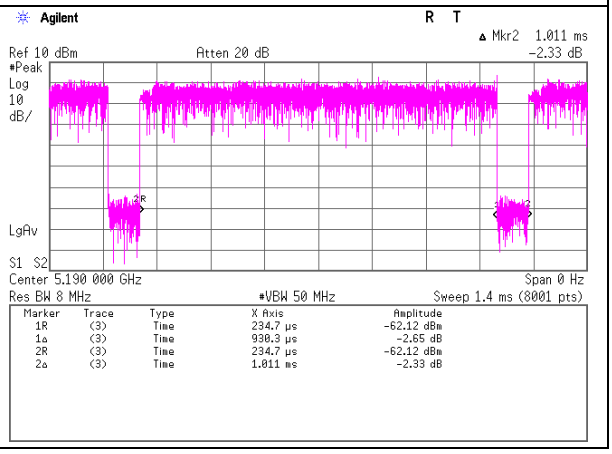
11n-20 MCS0

Tx on / (Tx on + Tx off) = 0.959
Tx on / (Tx on + Tx off) * 100 = 95.9 %
Duty factor = 10 * log (1.972 / 1.891) = 0.18 dB



11n-40 MCS0

Tx on / (Tx on + Tx off) = 0.920
Tx on / (Tx on + Tx off) * 100 = 92.0 %
Duty factor = 10 * log (1.011 / 0.9303) = 0.36 dB

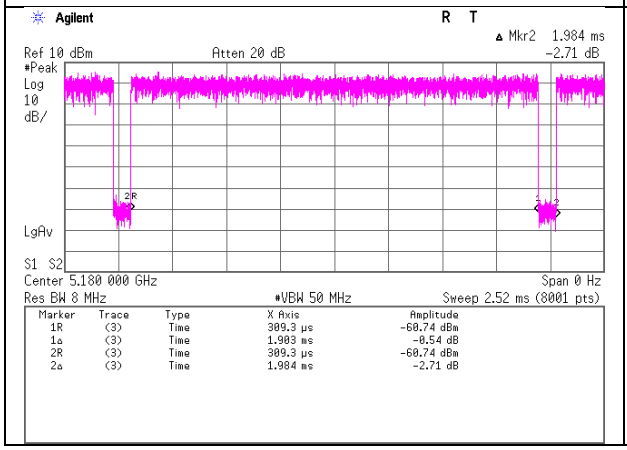


Burst rate confirmation

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	March 31, 2016
Temperature / Humidity	23deg. C / 33 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11ac-20 / 11ac-40 / 11ac-80

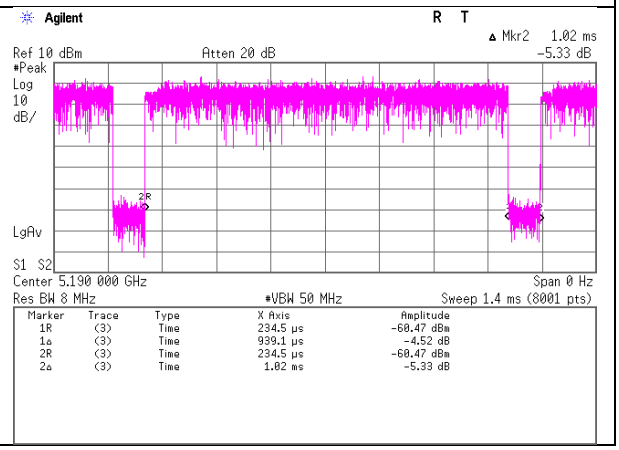
11ac-20 MCS0

Tx on / (Tx on + Tx off) =	**0.959**
Tx on / (Tx on + Tx off) * 100 =	**95.9 %**
Duty factor = 10 * log (1.984 / 1.903) =	**0.18 dB**



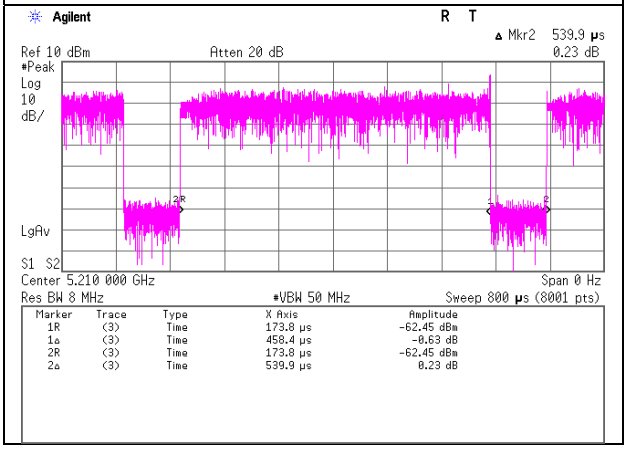
11ac-40 MCS0

Tx on / (Tx on + Tx off) =	**0.921**
Tx on / (Tx on + Tx off) * 100 =	**92.1 %**
Duty factor = 10 * log (1.02 / 0.9391) =	**0.36 dB**



11ac-80 MCS0

Tx on / (Tx on + Tx off) =	**0.849**
Tx on / (Tx on + Tx off) * 100 =	**84.9 %**
Duty factor = 10 * log (0.5399 / 0.4584) =	**0.71 dB**



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11a

11a 24Mbps

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-13.07	2.36	10.08	0.63	5.0	0.00	0.00	11.00	11.00	5.00	17.00	12.00
5220	-10.59	2.38	10.08	0.63	5.0	0.00	2.50	11.00	8.50	7.50	17.00	9.50
5240	-9.93	2.39	10.08	0.63	5.0	0.00	3.17	11.00	7.83	8.17	17.00	8.83
5260	-10.16	2.40	10.09	0.63	5.0	0.00	2.96	11.00	8.04	7.96	17.00	9.04
5300	-10.99	2.41	10.09	0.63	5.0	0.00	2.15	11.00	8.86	7.15	17.00	9.86
5320	-14.63	2.42	10.09	0.63	5.0	0.00	-1.49	11.00	12.49	3.51	17.00	13.49
5500	-14.37	2.47	10.11	0.63	5.0	0.00	-1.16	11.00	12.16	3.84	17.00	13.16
5580	-15.16	2.50	10.10	0.63	5.0	0.00	-1.93	11.00	12.93	3.08	17.00	13.93
5700	-14.40	2.53	10.09	0.63	5.0	0.00	-1.15	11.00	12.15	3.85	17.00	13.15
5745	-16.06	2.55	10.09	0.63	5.0	0.27	-2.52	30.00	32.52	2.48	36.00	33.52
5785	-16.78	2.56	10.09	0.63	5.0	0.27	-3.24	30.00	33.24	1.76	36.00	34.24
5825	-17.23	2.58	10.08	0.63	5.0	0.27	-3.67	30.00	33.67	1.33	36.00	34.67

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 + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-20

11n-20 MCS0 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]
5180	-13.39	2.36	10.08	0.18	5.0	0.00	-0.77	11.00	11.77	4.23	17.00	12.77
5220	-9.93	2.38	10.08	0.18	5.0	0.00	2.71	11.00	8.29	7.71	17.00	9.29
5240	-9.09	2.39	10.08	0.18	5.0	0.00	3.56	11.00	7.44	8.56	17.00	8.44
5260	-9.41	2.40	10.09	0.18	5.0	0.00	3.26	11.00	7.74	8.26	17.00	8.74
5300	-10.41	2.41	10.09	0.18	5.0	0.00	2.27	11.00	8.73	7.27	17.00	9.73
5320	-14.16	2.42	10.09	0.18	5.0	0.00	-1.47	11.00	12.47	3.53	17.00	13.47
5500	-13.79	2.47	10.11	0.18	5.0	0.00	-1.03	11.00	12.03	3.97	17.00	13.03
5580	-14.74	2.50	10.10	0.18	5.0	0.00	-1.96	11.00	12.96	3.05	17.00	13.96
5700	-14.34	2.53	10.09	0.18	5.0	0.00	-1.54	11.00	12.54	3.46	17.00	13.54
5745	-16.25	2.55	10.09	0.18	5.0	0.27	-3.16	30.00	33.16	1.84	36.00	34.16
5785	-16.27	2.56	10.09	0.18	5.0	0.27	-3.17	30.00	33.17	1.83	36.00	34.17
5825	-17.51	2.58	10.08	0.18	5.0	0.27	-4.40	30.00	34.40	0.60	36.00	35.40

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 + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-20

11ac-20 MCS0 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-13.67	2.36	10.08	0.18	5.0	0.00	-1.05	11.00	12.05	3.95	17.00	13.05
5220	-9.84	2.38	10.08	0.18	5.0	0.00	2.80	11.00	8.20	7.80	17.00	9.20
5240	-9.40	2.39	10.08	0.18	5.0	0.00	3.25	11.00	7.75	8.25	17.00	8.75
5260	-9.33	2.40	10.09	0.18	5.0	0.00	3.34	11.00	7.66	8.34	17.00	8.66
5300	-10.06	2.41	10.09	0.18	5.0	0.00	2.62	11.00	8.38	7.62	17.00	9.38
5320	-14.52	2.42	10.09	0.18	5.0	0.00	-1.83	11.00	12.83	3.17	17.00	13.83
5500	-14.32	2.47	10.11	0.18	5.0	0.00	-1.56	11.00	12.56	3.44	17.00	13.56
5580	-14.72	2.50	10.10	0.18	5.0	0.00	-1.94	11.00	12.94	3.06	17.00	13.94
5700	-14.53	2.53	10.09	0.18	5.0	0.00	-1.73	11.00	12.73	3.27	17.00	13.73
5745	-16.46	2.55	10.09	0.18	5.0	0.27	-3.37	30.00	33.37	1.63	36.00	34.37
5785	-15.94	2.56	10.09	0.18	5.0	0.27	-2.84	30.00	32.84	2.16	36.00	33.84
5825	-17.46	2.58	10.08	0.18	5.0	0.27	-4.35	30.00	34.35	0.65	36.00	35.35

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 + Atten. Loss + Duty Factor + RBW Correction Factor

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40

11n-40 MCS0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-18.33	2.38	10.08	0.36	5.0	0.00	-5.51	11.00	16.51	-0.51	17.00	17.51
5230	-13.41	2.38	10.08	0.36	5.0	0.00	-0.59	11.00	11.59	4.41	17.00	12.59
5270	-14.06	2.40	10.09	0.36	5.0	0.00	-1.21	11.00	12.21	3.80	17.00	13.21
5310	-17.10	2.41	10.09	0.36	5.0	0.00	-4.24	11.00	15.24	0.76	17.00	16.24
5510	-17.45	2.49	10.11	0.36	5.0	0.00	-4.49	11.00	15.49	0.51	17.00	16.49
5550	-17.25	2.49	10.11	0.36	5.0	0.00	-4.29	11.00	15.29	0.71	17.00	16.29
5670	-17.80	2.53	10.10	0.36	5.0	0.00	-4.81	11.00	15.81	0.19	17.00	16.81
5755	-21.26	2.56	10.09	0.36	5.0	0.27	-7.98	30.00	37.98	-2.98	36.00	38.98
5795	-21.55	2.56	10.09	0.36	5.0	0.27	-8.27	30.00	38.27	-3.27	36.00	39.27

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-40

11ac-40 MCS0 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-18.45	2.38	10.08	0.36	5.0	0.00	-5.63	11.00	16.63	-0.63	17.00	17.63
5230	-13.68	2.38	10.08	0.36	5.0	0.00	-0.86	11.00	11.86	4.14	17.00	12.86
5270	-13.95	2.40	10.09	0.36	5.0	0.00	-1.10	11.00	12.10	3.90	17.00	13.10
5310	-17.27	2.41	10.09	0.36	5.0	0.00	-4.41	11.00	15.41	0.59	17.00	16.41
5510	-17.74	2.49	10.11	0.36	5.0	0.00	-4.78	11.00	15.78	0.22	17.00	16.78
5550	-17.33	2.49	10.11	0.36	5.0	0.00	-4.37	11.00	15.37	0.63	17.00	16.37
5670	-17.60	2.53	10.10	0.36	5.0	0.00	-4.61	11.00	15.61	0.39	17.00	16.61
5755	-21.35	2.56	10.09	0.36	5.0	0.27	-8.07	30.00	38.07	-3.07	36.00	39.07
5795	-21.69	2.56	10.09	0.36	5.0	0.27	-8.41	30.00	38.41	-3.41	36.00	39.41

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 + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-80

11ac-80 MCS0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5210	-21.65	2.38	10.08	0.71	5.0	0.00	-8.48	11.00	19.48	-3.48	17.00	20.48
5290	-21.21	2.41	10.09	0.71	5.0	0.00	-8.00	11.00	19.00	-3.00	17.00	20.00
5530	-20.28	2.49	10.11	0.71	5.0	0.00	-6.97	11.00	17.97	-1.97	17.00	18.97
5610	-20.63	2.52	10.10	0.71	5.0	0.00	-7.30	11.00	18.30	-2.30	17.00	19.30
5775	-21.84	2.56	10.09	0.71	5.0	0.27	-8.21	30.00	38.21	-3.21	36.00	39.21

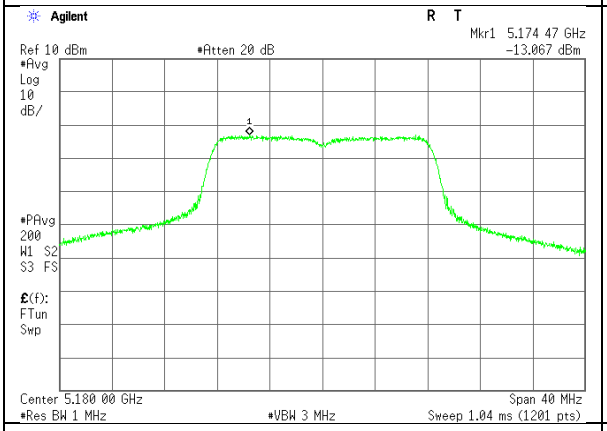
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

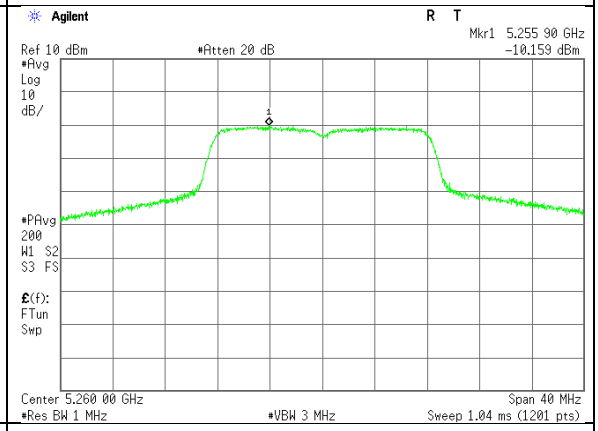
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11a

11a

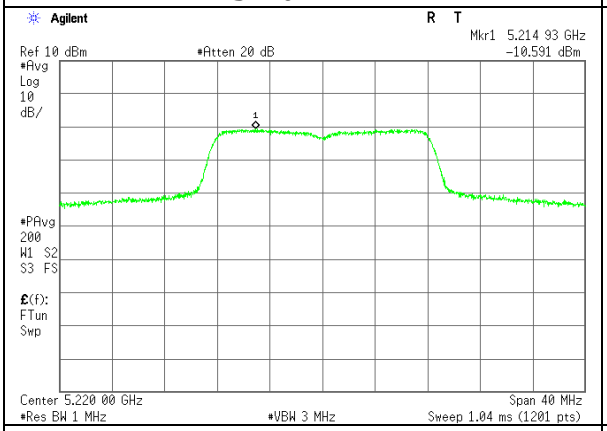
5180 MHz



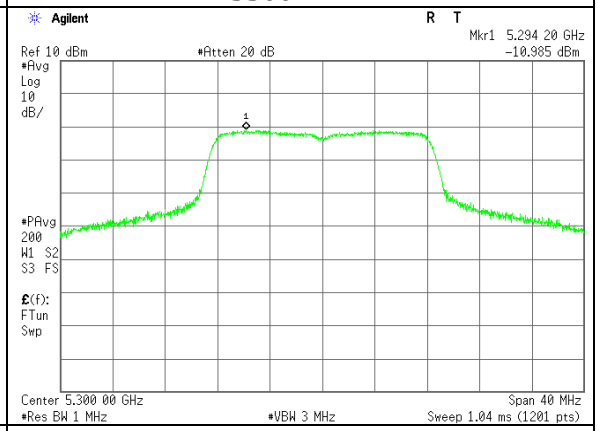
5260 MHz



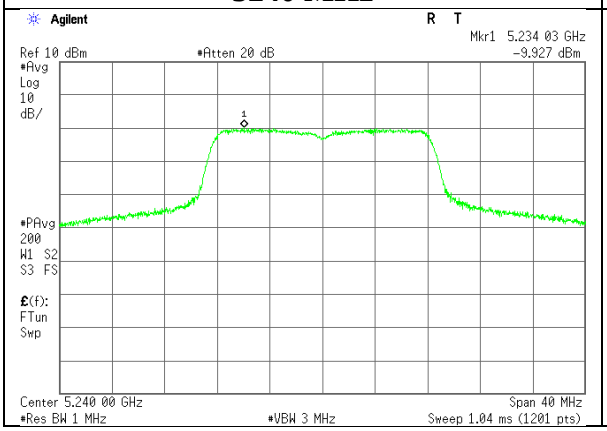
5220 MHz



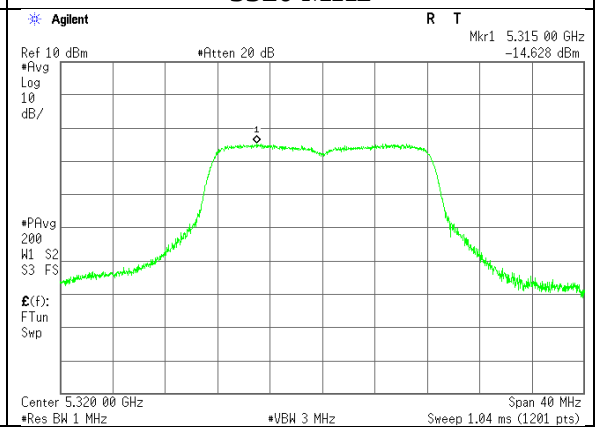
5300 MHz



5240 MHz



5320 MHz

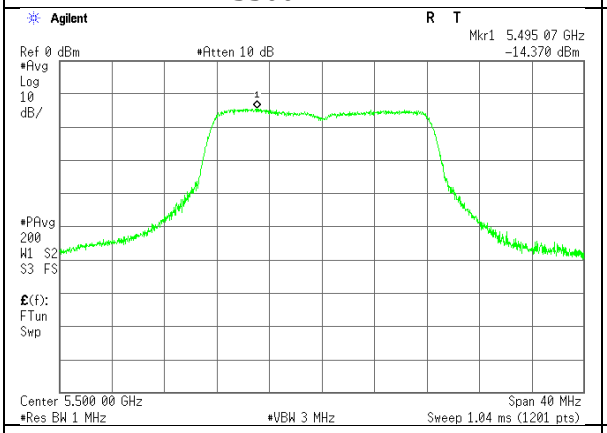


Maximum Power Spectral Density

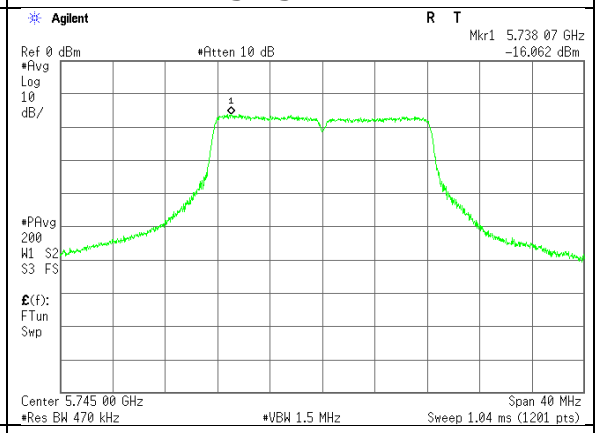
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11a

11a

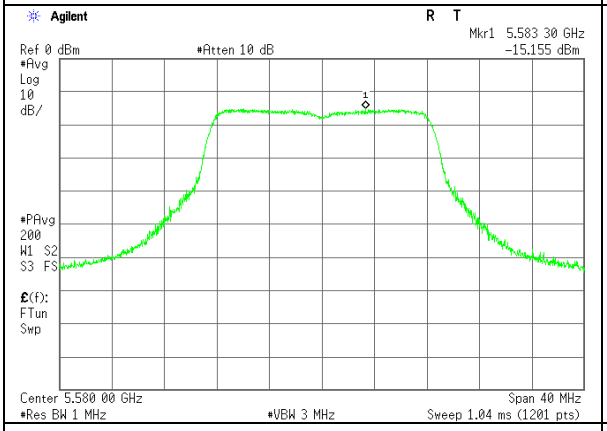
5500 MHz



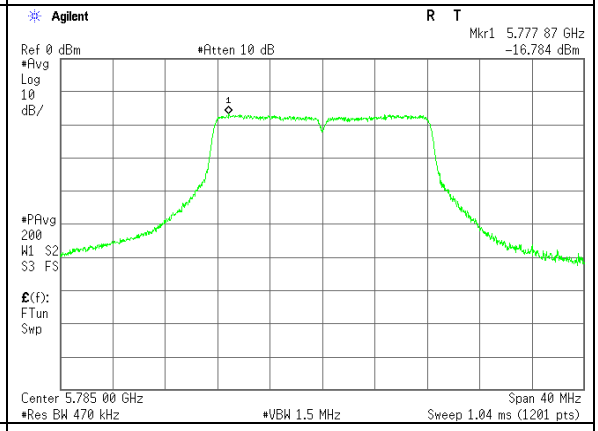
5745 MHz



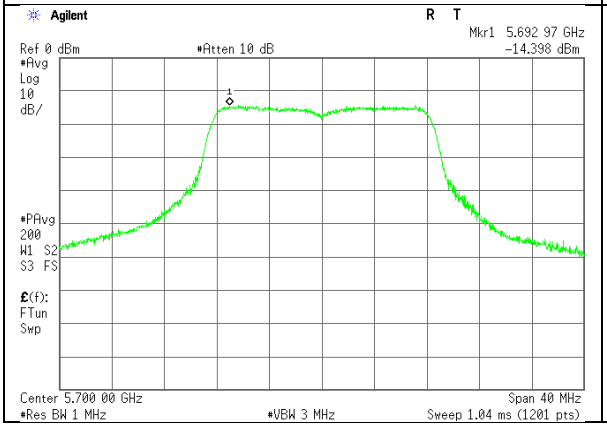
5580 MHz



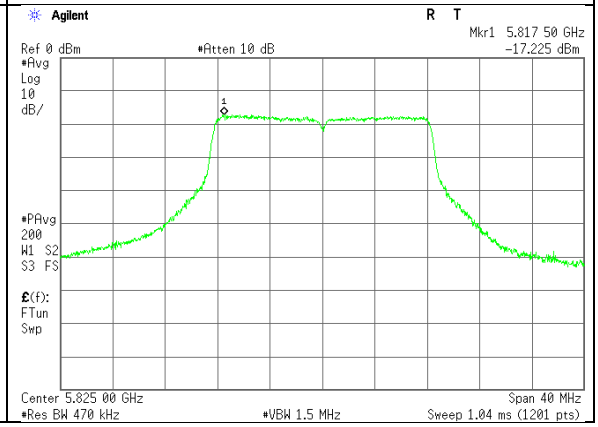
5785 MHz



5700 MHz



5825 MHz

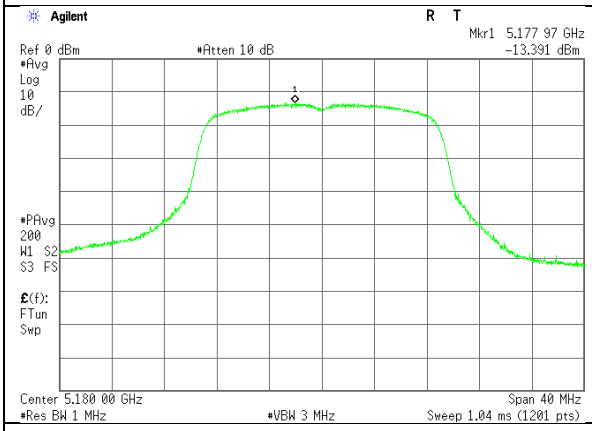


Maximum Power Spectral Density

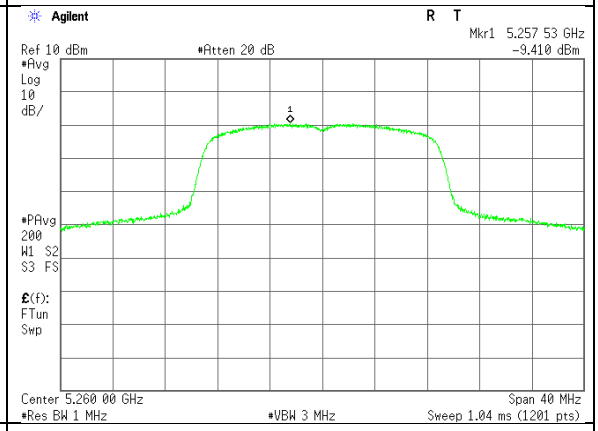
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-20

11n-20

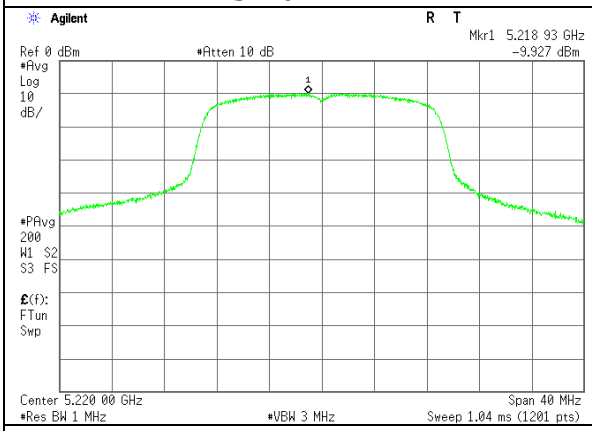
5180 MHz



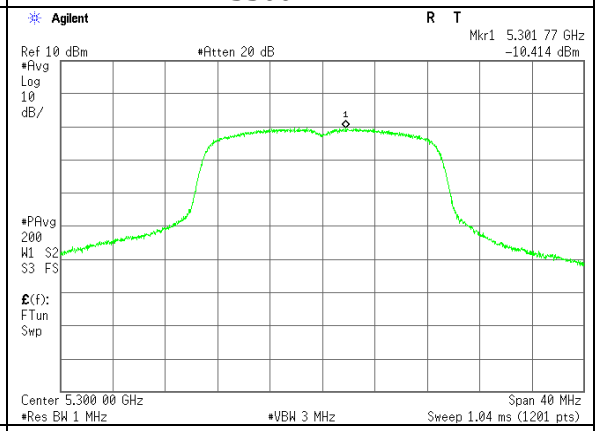
5260 MHz



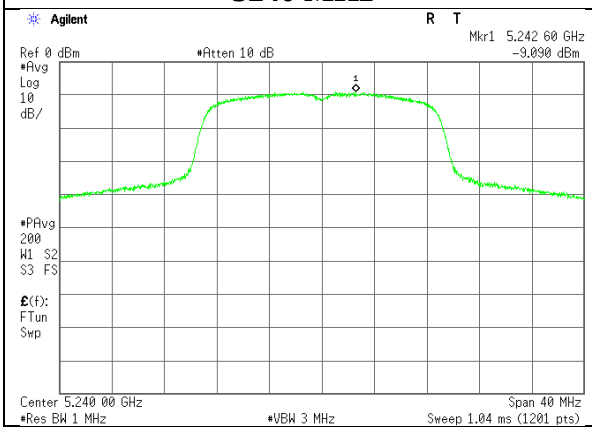
5220 MHz



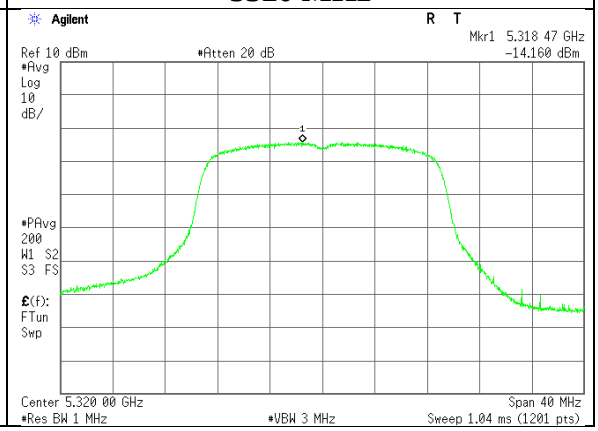
5300 MHz



5240 MHz



5320 MHz

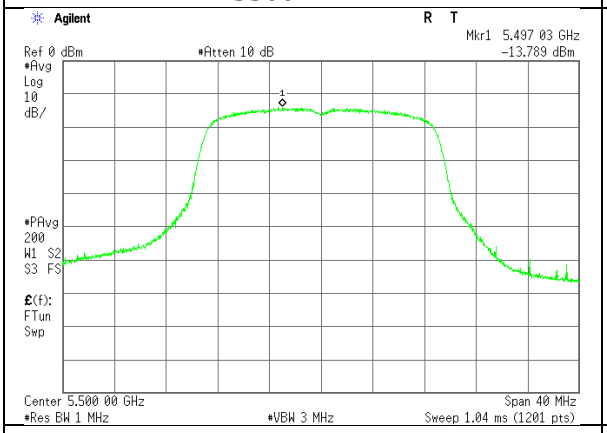


Maximum Power Spectral Density

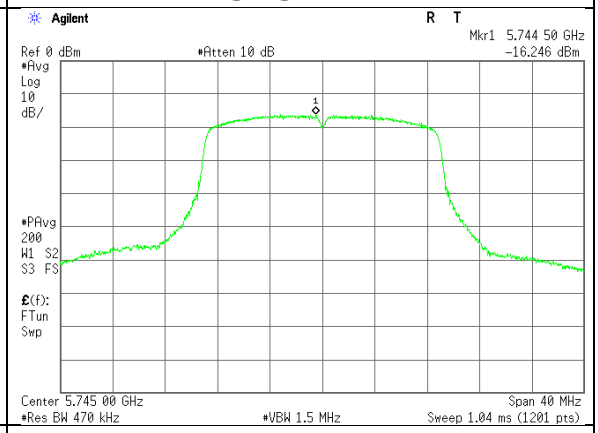
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-20

11n-20

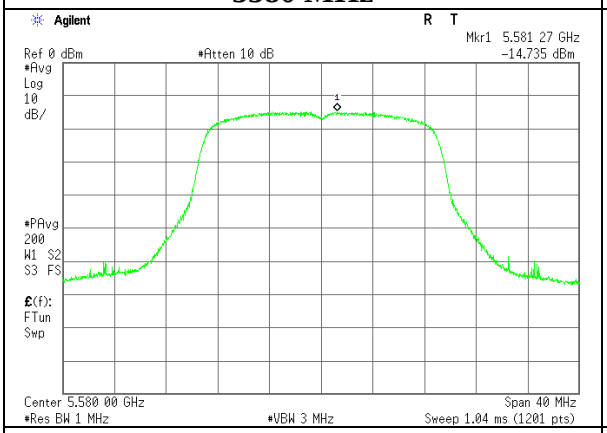
5500 MHz



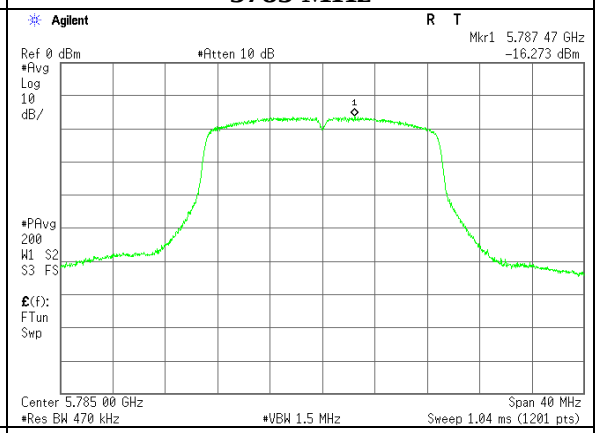
5745 MHz



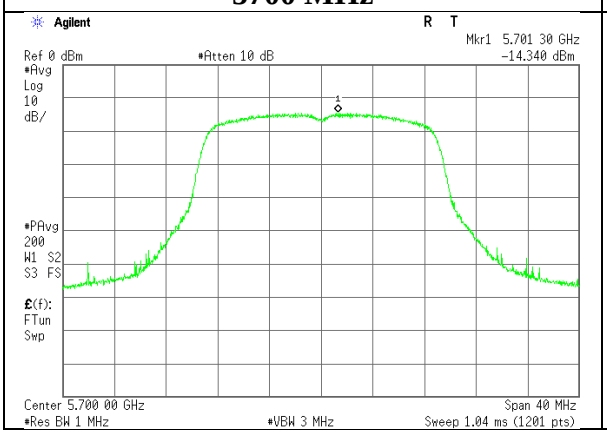
5580 MHz



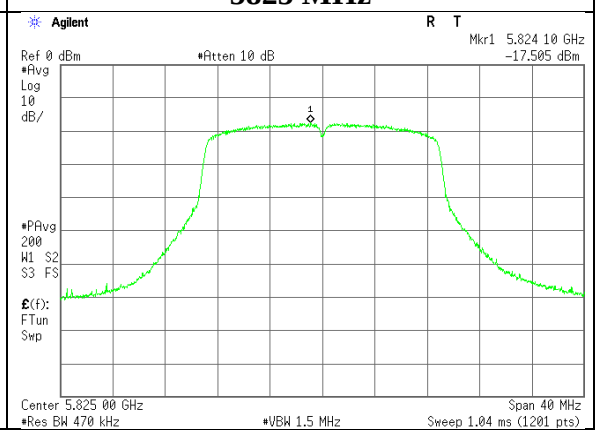
5785 MHz



5700 MHz



5825 MHz

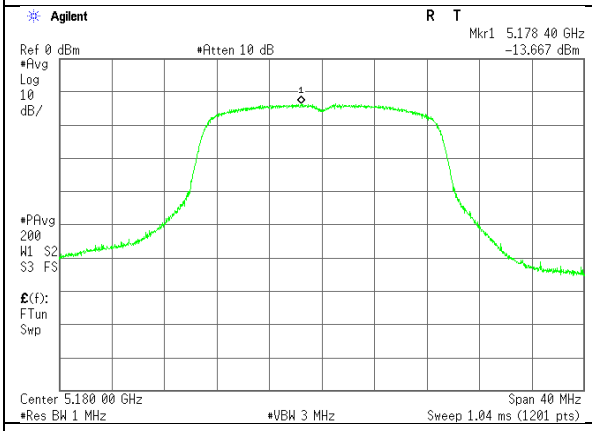


Maximum Power Spectral Density

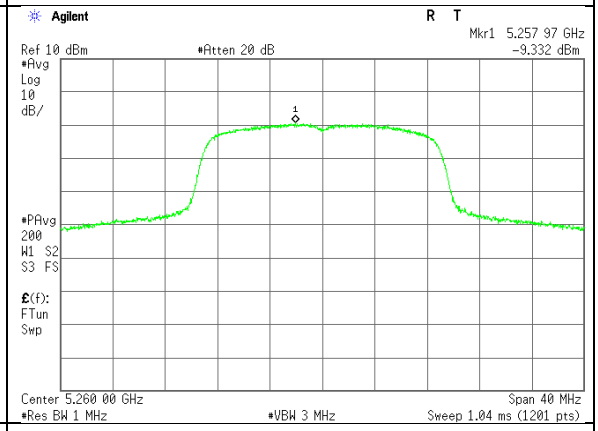
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-20

11ac-20

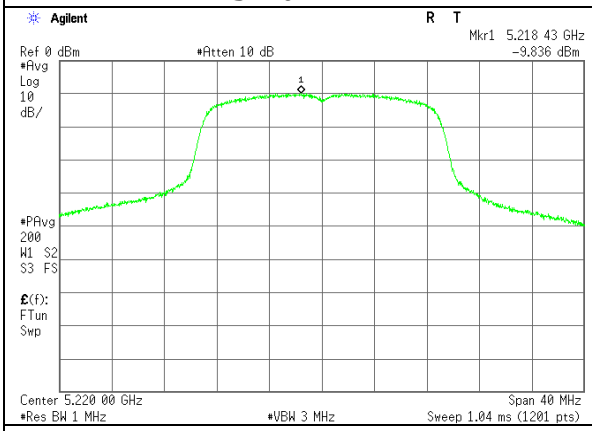
5180 MHz



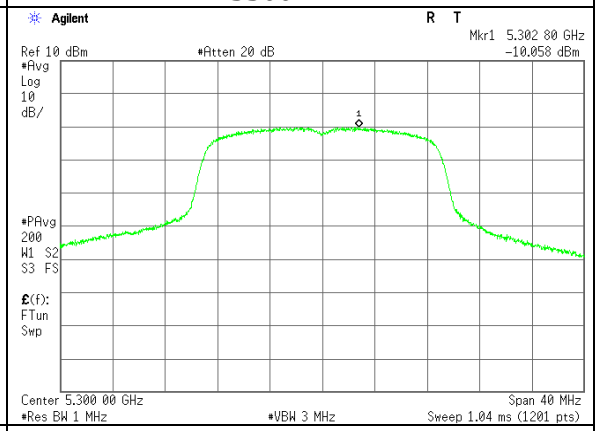
5260 MHz



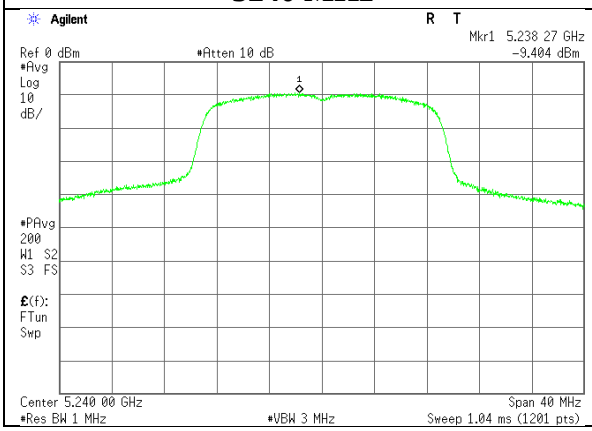
5220 MHz



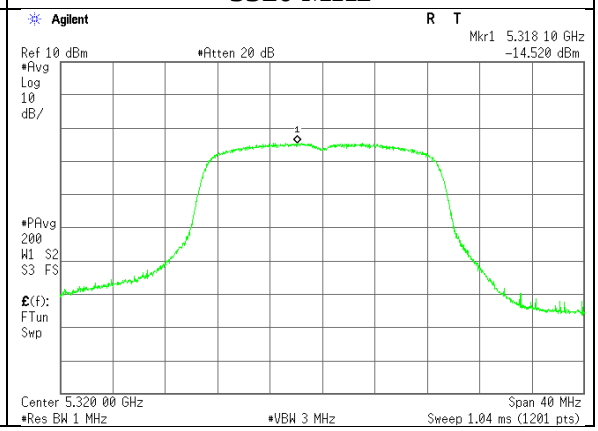
5300 MHz



5240 MHz



5320 MHz

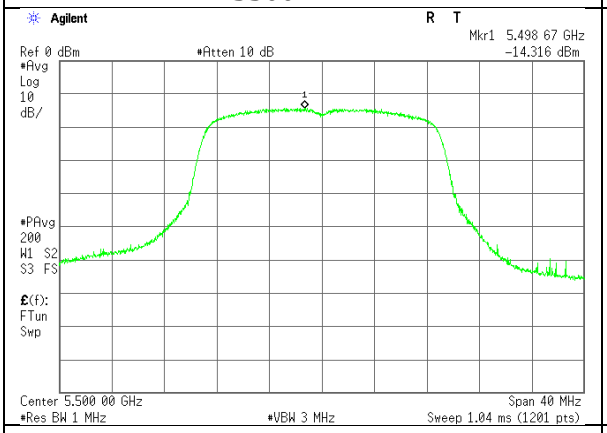


Maximum Power Spectral Density

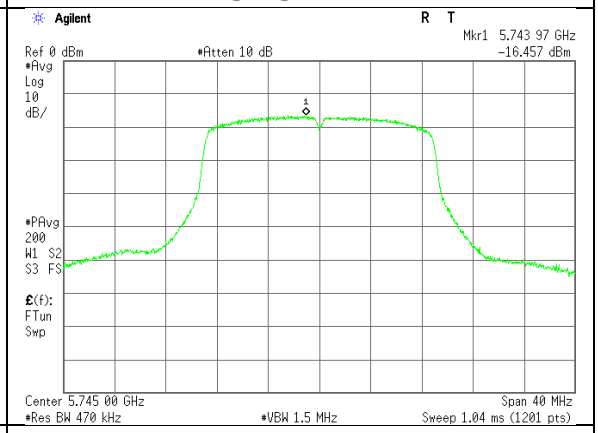
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-20

11ac-20

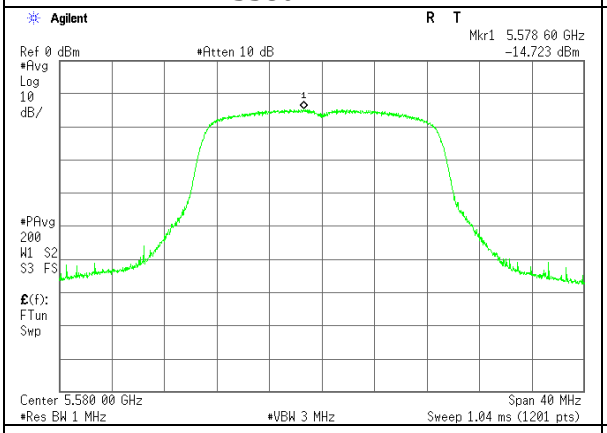
5500 MHz



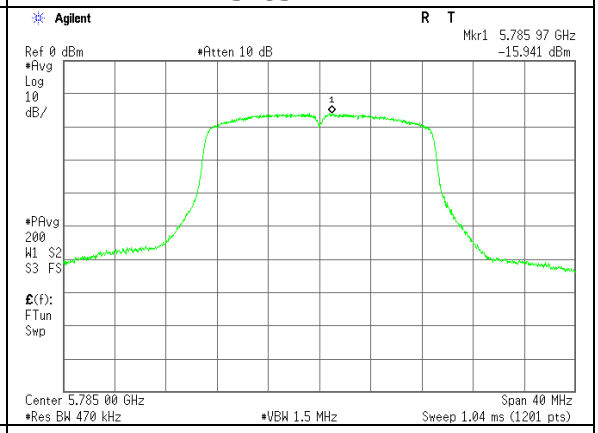
5745 MHz



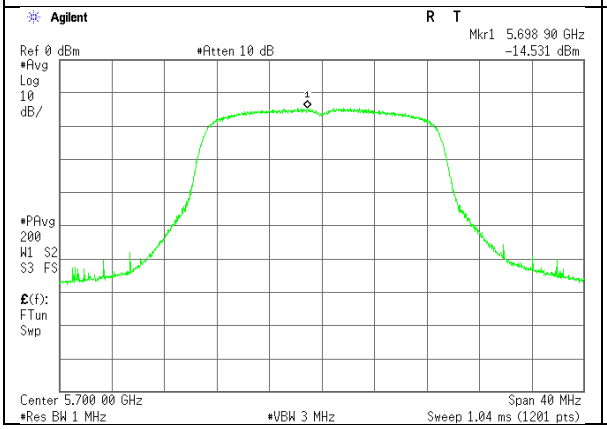
5580 MHz



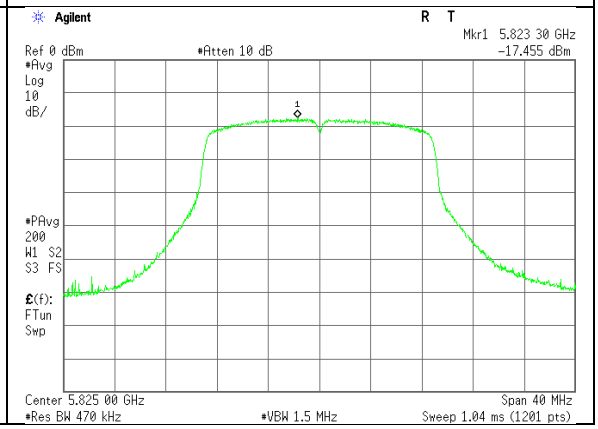
5785 MHz



5700 MHz



5825 MHz

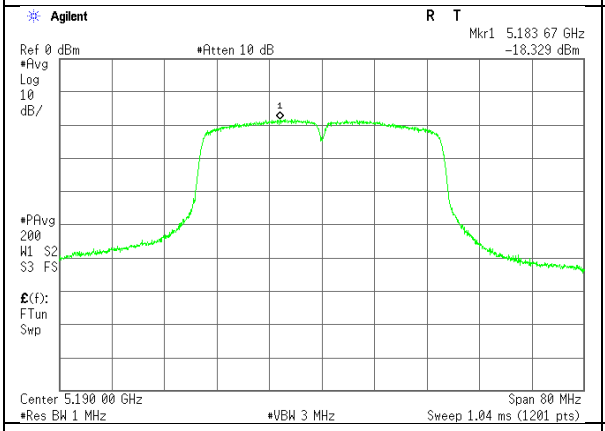


Maximum Power Spectral Density

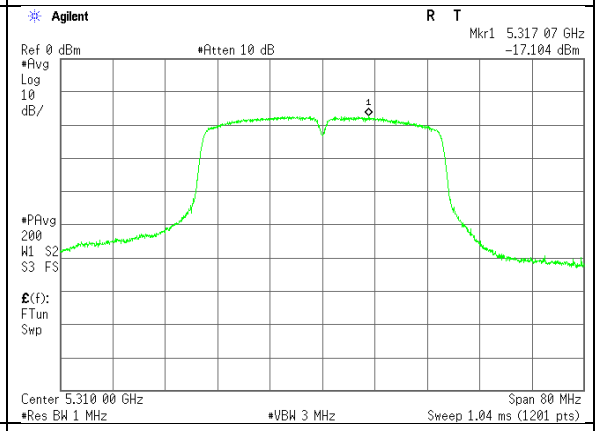
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40

11n-40

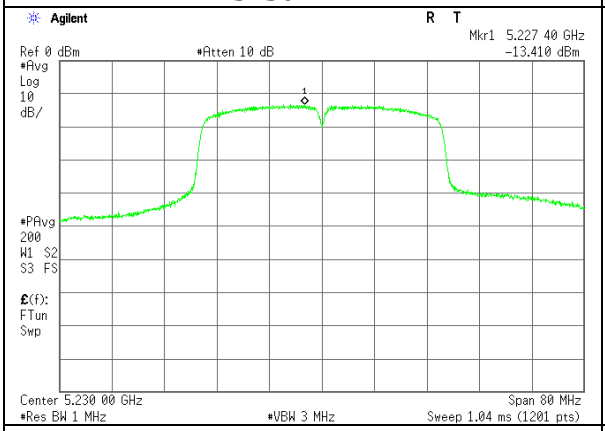
5190 MHz



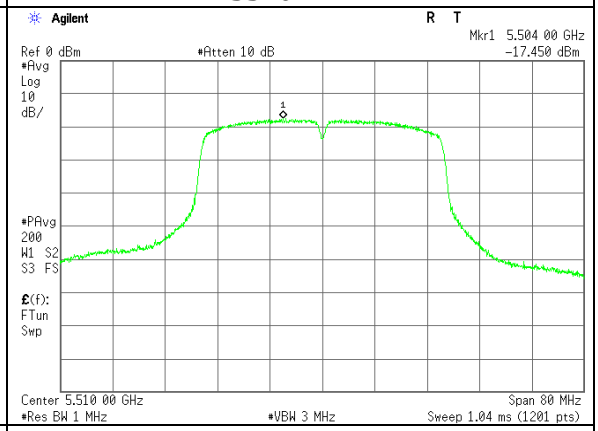
5310 MHz



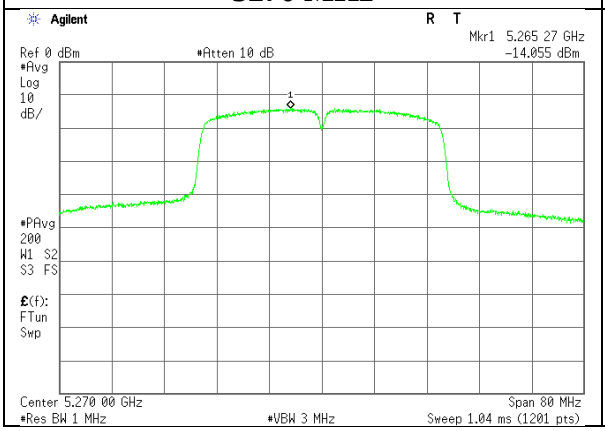
5230 MHz



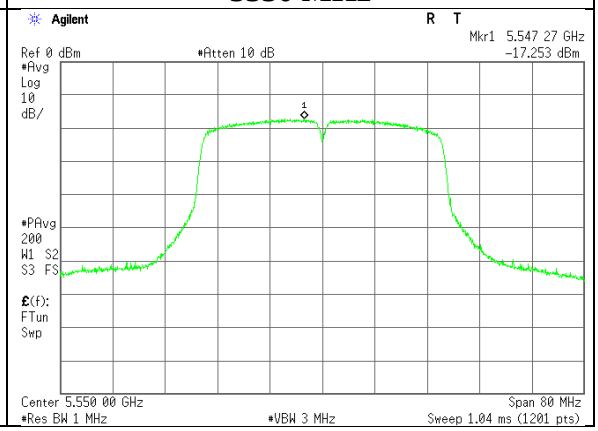
5510 MHz



5270 MHz



5550 MHz

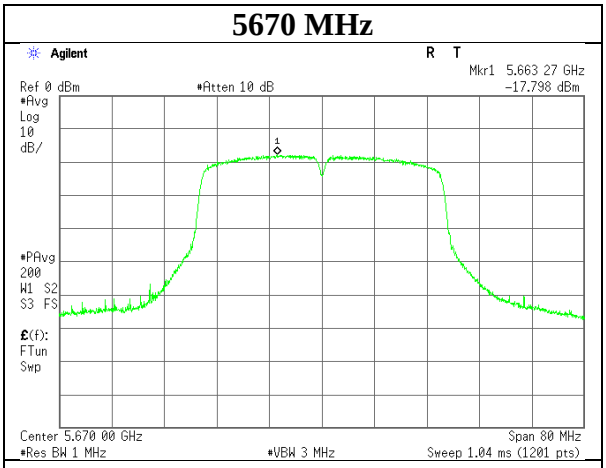


Maximum Power Spectral Density

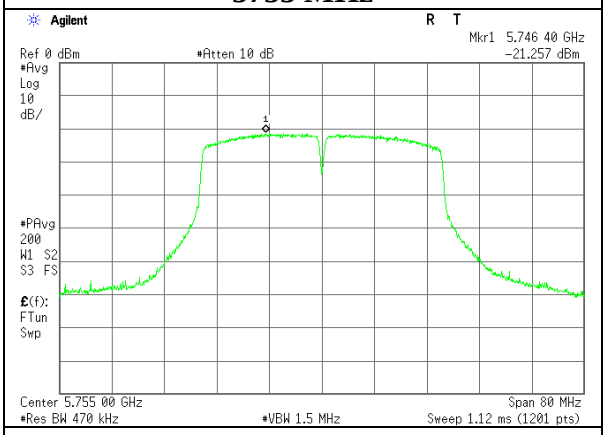
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40

11n-40

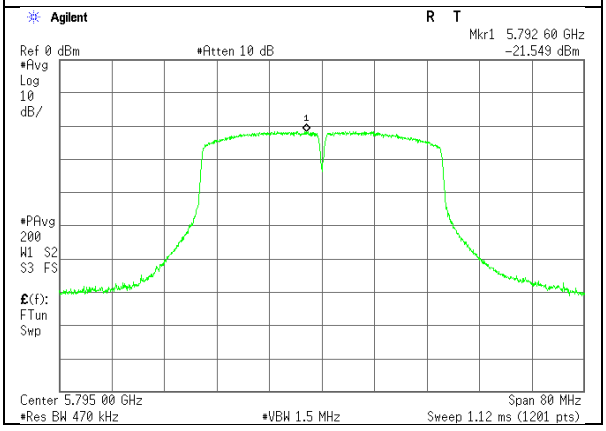
5670 MHz



5755 MHz



5795 MHz

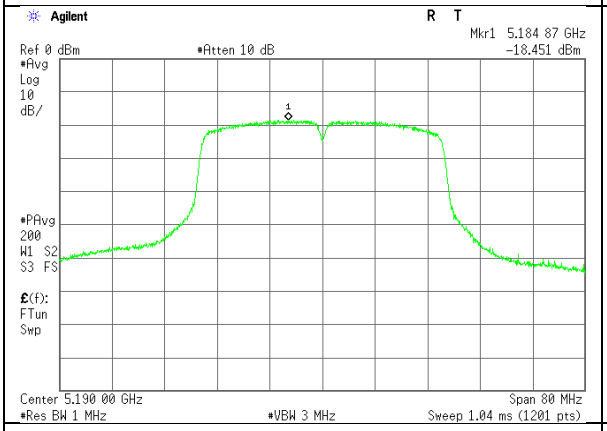


Maximum Power Spectral Density

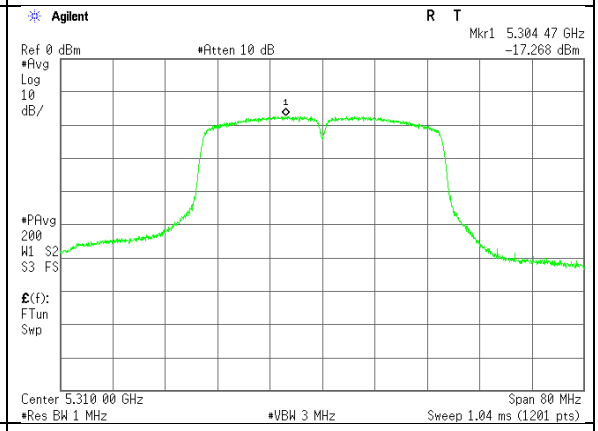
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-40

11ac-40

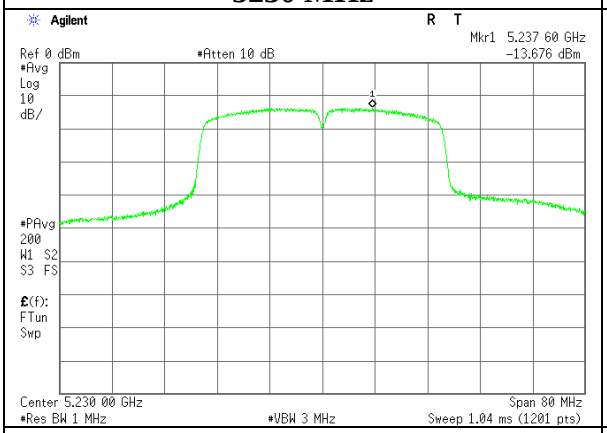
5190 MHz



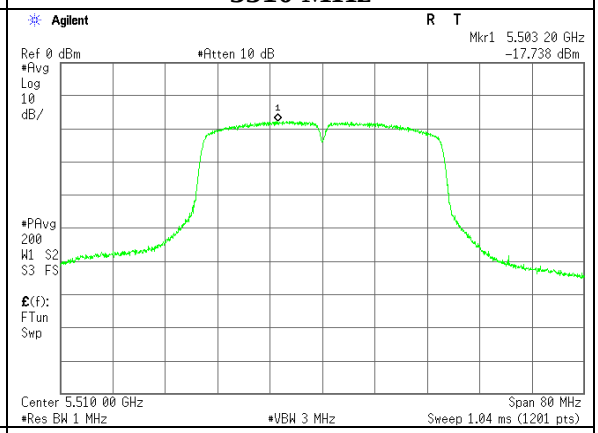
5310 MHz



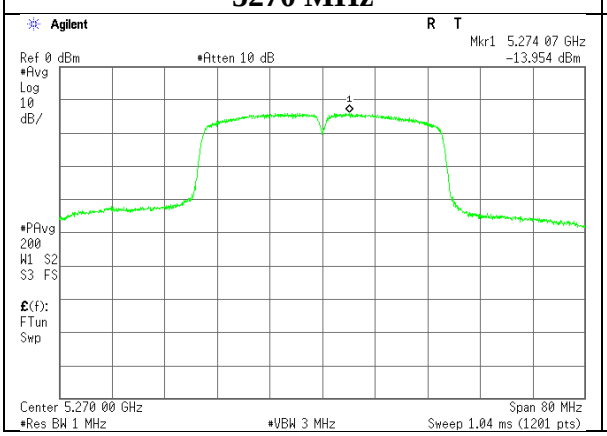
5230 MHz



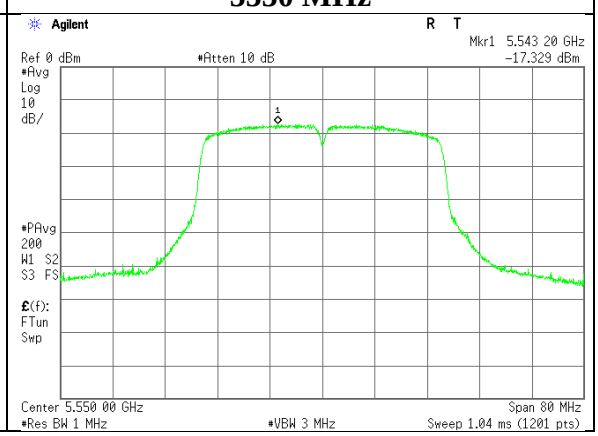
5510 MHz



5270 MHz



5550 MHz

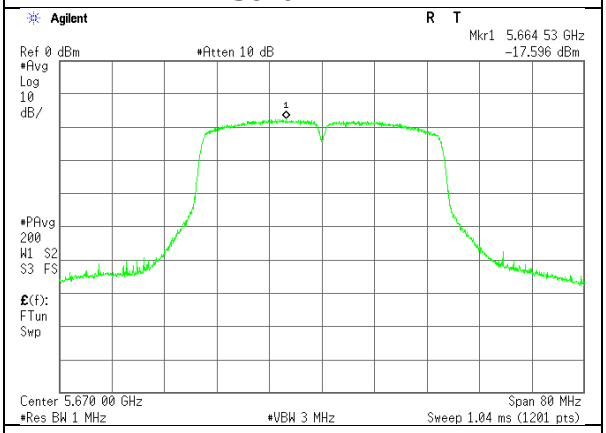


Maximum Power Spectral Density

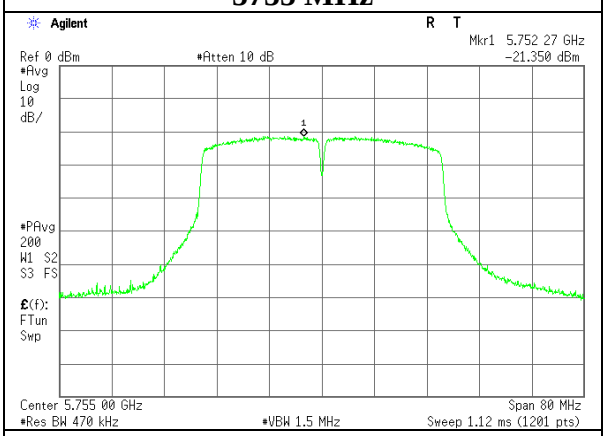
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-40

11ac-40

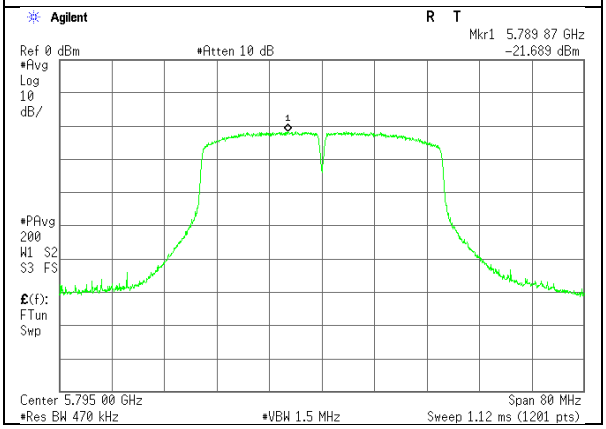
5670 MHz



5755 MHz



5795 MHz

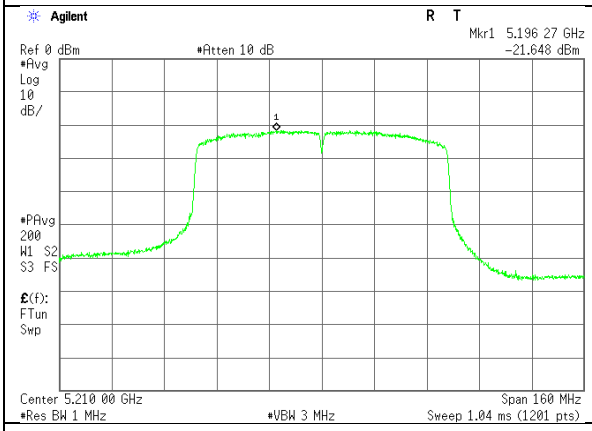


Maximum Power Spectral Density

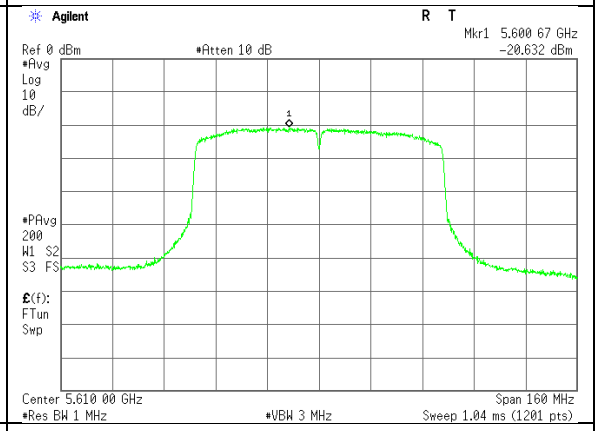
Test place	Ise EMC Lab. No.6 Measurement Room
Report No.	11182619H
Date	August 26, 2016
Temperature / Humidity	25deg. C / 48 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-80

11ac-80

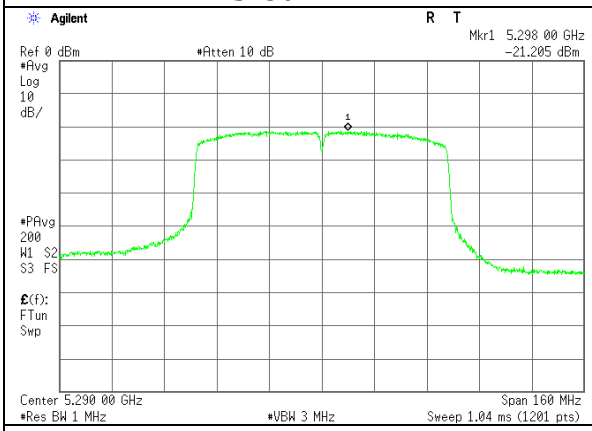
5210 MHz



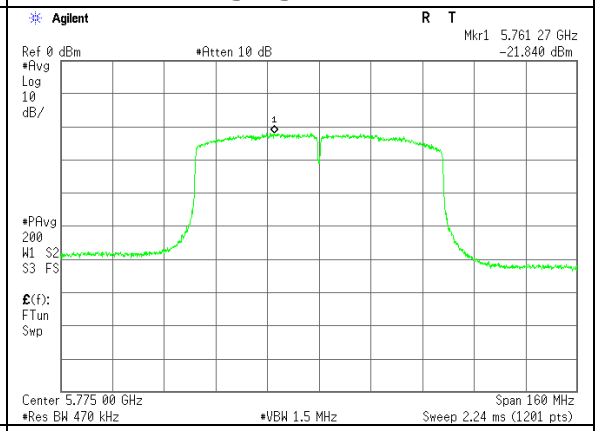
5610 MHz



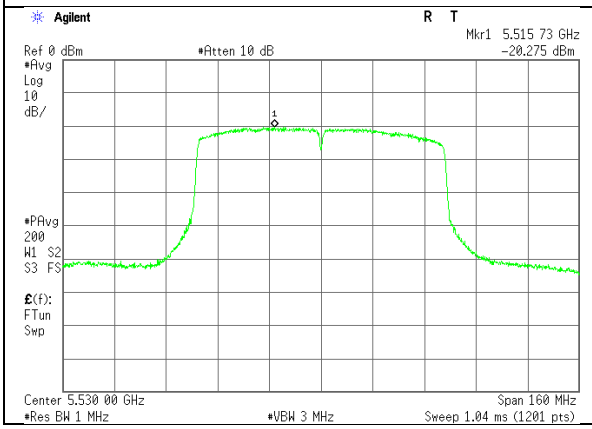
5290 MHz



5775 MHz



5530 MHz



Radiated Spurious Emission

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	59.1	31.5	7.5	31.7	-	66.4	73.9	7.5	
Hori	10360.000	PK	51.7	39.4	-2.2	34.5	-	54.4	73.9	19.5	
Hori	15540.000	PK	44.4	39.3	-0.7	33.6	-	49.4	73.9	24.5	Floor noise
Hori	20720.000	PK	47.4	40.2	-1.7	33.5	-	52.4	73.9	21.5	
Hori	25900.000	PK	46.1	40.8	-0.6	34.3	-	52.0	73.9	21.9	Floor noise
Hori	5150.000	AV	43.6	31.5	7.5	31.7	0.2	51.1	53.9	2.8	*1)
Hori	10360.000	AV	44.3	39.4	-2.2	34.5	0.2	47.2	53.9	6.7	
Hori	15540.000	AV	37.5	39.3	-0.7	33.6	-	42.5	53.9	11.4	Floor noise
Hori	20720.000	AV	42.1	40.2	-1.7	33.5	0.2	47.3	53.9	6.6	
Hori	25900.000	AV	37.4	40.8	-0.6	34.3	-	43.3	53.9	10.6	Floor noise
Vert	5150.000	PK	58.1	31.5	7.5	31.7	-	65.4	73.9	8.5	
Vert	10360.000	PK	48.2	39.4	-2.2	34.5	-	50.9	73.9	23.0	
Vert	15540.000	PK	41.8	39.3	-0.7	33.6	-	46.8	73.9	27.1	Floor noise
Vert	20720.000	PK	51.1	40.2	-1.7	33.5	-	56.1	73.9	17.8	
Vert	25900.000	PK	45.9	40.8	-0.6	34.3	-	51.8	73.9	22.1	Floor noise
Vert	5150.000	AV	42.6	31.5	7.5	31.7	0.2	50.1	53.9	3.8	*1)
Vert	10360.000	AV	42.5	39.4	-2.2	34.5	0.2	45.4	53.9	8.5	
Vert	15540.000	AV	35.9	39.3	-0.7	33.6	-	40.9	53.9	13.0	Floor noise
Vert	20720.000	AV	47.1	40.2	-1.7	33.5	0.2	52.3	53.9	1.6	
Vert	25900.000	AV	37.6	40.8	-0.6	34.3	-	43.5	53.9	10.4	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

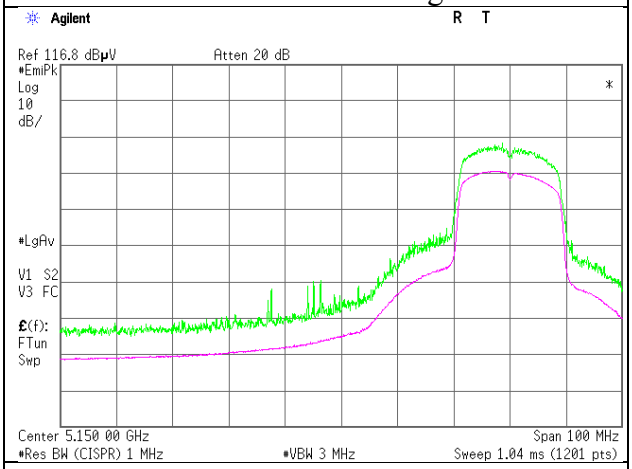
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Report No.	11182619H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	August 4, 2016
Temperature / Humidity	22 deg. C / 50 % RH
Engineer	Yuta Moriya
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5180 MHz

Horizontal

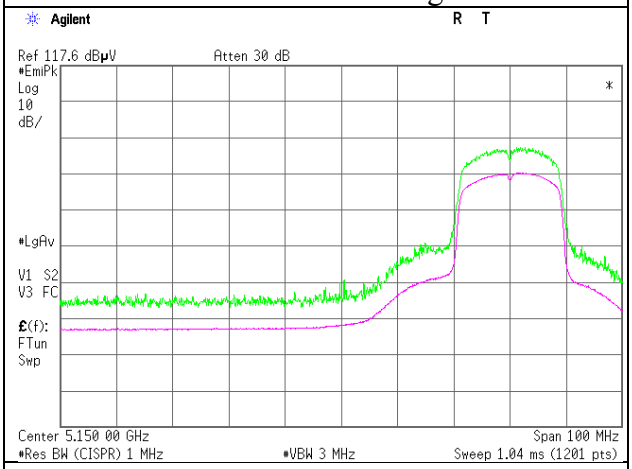
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H				
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.2	No.2	No.3	No.2	No.3
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016	August 18, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH	23 deg. C / 58 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Takafumi Noguchi (30 MHz - 1000 MHz)
Mode	Tx 11ac-20 5260 MHz				

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	98.996	QP	47.2	9.6	8.0	32.2	-	32.6	43.5	10.9	
Hori	111.699	QP	34.3	11.3	8.2	32.2	-	21.6	43.5	21.9	
Hori	692.968	QP	41.8	19.7	12.4	32.1	-	41.8	46.0	4.2	
Hori	721.508	QP	30.3	20.0	12.5	32.0	-	30.8	46.0	15.2	
Hori	989.954	QP	32.0	22.4	13.8	30.5	-	37.7	53.9	16.2	
Hori	1000.000	QP	28.4	22.5	13.9	30.4	-	34.4	53.9	19.5	
Hori	10520.000	PK	55.0	39.8	-2.1	34.4	-	58.3	73.9	15.6	
Hori	15780.000	PK	44.3	38.9	-0.8	33.8	-	48.6	73.9	25.3	Floor noise
Hori	21040.000	PK	47.3	40.2	-1.6	33.4	-	52.5	73.9	21.4	
Hori	26300.000	PK	46.1	41.2	-0.4	33.6	-	53.3	73.9	20.6	Floor noise
Hori	10520.000	AV	42.6	39.8	-2.1	34.4	0.2	46.1	53.9	7.8	
Hori	15780.000	AV	37.4	38.9	-0.8	33.8	-	41.7	53.9	12.2	Floor noise
Hori	21040.000	AV	40.9	40.2	-1.6	33.4	0.2	46.3	53.9	7.6	
Hori	26300.000	AV	37.4	41.2	-0.4	33.6	-	44.6	53.9	9.3	Floor noise
Vert	98.996	QP	56.0	9.6	8.0	32.2	-	41.4	43.5	2.1	
Vert	111.699	QP	36.7	11.3	8.2	32.2	-	24.0	43.5	19.5	
Vert	692.968	QP	40.5	19.7	12.4	32.1	-	40.5	46.0	5.5	
Vert	721.508	QP	29.2	20.0	12.5	32.0	-	29.7	46.0	16.3	
Vert	989.954	QP	26.9	22.4	13.8	30.5	-	32.6	53.9	21.3	
Vert	1000.000	QP	27.8	22.5	13.9	30.4	-	33.8	53.9	20.1	
Vert	10520.000	PK	51.4	39.8	-2.1	34.4	-	54.7	73.9	19.2	
Vert	15780.000	PK	41.5	38.9	-0.8	33.8	-	45.8	73.9	28.1	Floor noise
Vert	21040.000	PK	49.5	40.2	-1.6	33.4	-	54.7	73.9	19.2	
Vert	26300.000	PK	45.9	41.2	-0.4	33.6	-	53.1	73.9	20.8	Floor noise
Vert	10520.000	AV	40.6	39.8	-2.1	34.4	0.2	44.1	53.9	9.8	
Vert	15780.000	AV	35.7	38.9	-0.8	33.8	-	40.0	53.9	13.9	Floor noise
Vert	21040.000	AV	44.4	40.2	-1.6	33.4	0.2	49.8	53.9	4.1	
Vert	26300.000	AV	37.6	41.2	-0.4	33.6	-	44.8	53.9	9.1	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	56.3	31.3	7.6	31.8	-	63.4	73.9	10.5	
Hori	10640.000	PK	46.9	40.0	-2.1	34.2	-	50.6	73.9	23.3	
Hori	15960.000	PK	43.9	38.5	-0.7	33.9	-	47.8	73.9	26.1	Floor noise
Hori	21280.000	PK	45.6	40.3	-1.6	33.3	-	51.0	73.9	22.9	Floor noise
Hori	5350.000	AV	41.1	31.3	7.6	31.8	0.2	48.4	53.9	5.5	*1)
Hori	10640.000	AV	40.3	40.0	-2.1	34.2	0.2	44.2	53.9	9.7	
Hori	15960.000	AV	37.6	38.5	-0.7	33.9	-	41.5	53.9	12.4	Floor noise
Hori	21280.000	AV	37.3	40.3	-1.6	33.3	-	42.7	53.9	11.2	Floor noise
Vert	5350.000	PK	53.9	31.3	7.6	31.8	-	61.0	73.9	12.9	
Vert	10640.000	PK	47.9	40.0	-2.1	34.2	-	51.6	73.9	22.3	
Vert	15960.000	PK	41.8	38.5	-0.7	33.9	-	45.7	73.9	28.2	Floor noise
Vert	21280.000	PK	46.5	40.3	-1.6	33.3	-	51.9	73.9	22.0	
Vert	5350.000	AV	38.1	31.3	7.6	31.8	0.2	45.4	53.9	8.5	*1)
Vert	10640.000	AV	39.7	40.0	-2.1	34.2	0.2	43.6	53.9	10.3	
Vert	15960.000	AV	36.0	38.5	-0.7	33.9	-	39.9	53.9	14.0	Floor noise
Vert	21280.000	AV	40.2	40.3	-1.6	33.3	0.2	45.8	53.9	8.1	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

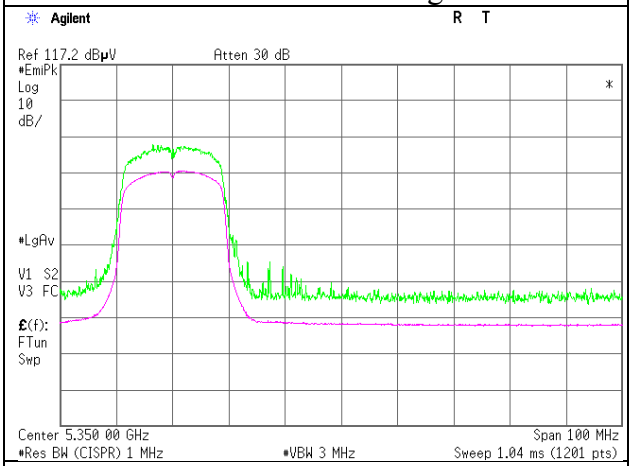
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5320 MHz

Horizontal

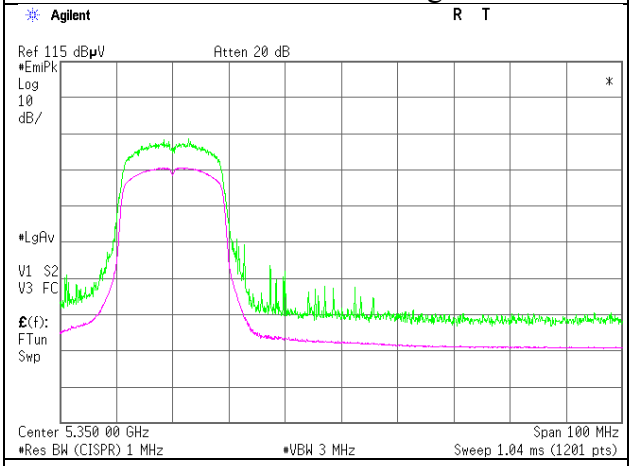
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	5460.000	PK	50.2	31.2	7.7	31.8	-	57.3	73.9	16.6	
Hori	5470.000	PK	55.0	31.2	7.7	31.8	-	62.1	73.9	11.8	
Hori	11000.000	PK	45.5	40.7	-2.0	33.9	-	50.3	73.9	23.6	
Hori	16500.000	PK	43.5	40.0	-0.6	33.4	-	49.5	73.9	24.4	Floor noise
Hori	22000.000	PK	45.0	40.6	-1.4	33.0	-	51.2	68.2	17.0	
Hori	5460.000	AV	35.9	31.2	7.7	31.8	0.2	43.2	53.9	10.7	*1)
Hori	5470.000	AV	39.0	31.2	7.7	31.8	0.2	46.3	53.9	7.6	*1)
Hori	11000.000	AV	36.7	40.7	-2.0	33.9	0.2	41.7	53.9	12.2	
Hori	16500.000	AV	37.8	40.0	-0.6	33.4	-	43.8	53.9	10.1	Floor noise
Vert	5460.000	PK	49.9	31.2	7.7	31.8	-	57.0	73.9	16.9	
Vert	5470.000	PK	56.5	31.2	7.7	31.8	-	63.6	73.9	10.3	
Vert	11000.000	PK	46.5	40.7	-2.0	33.9	-	51.3	73.9	22.6	
Vert	16500.000	PK	42.2	40.0	-0.6	33.4	-	48.2	73.9	25.7	Floor noise
Vert	22000.000	PK	47.1	40.6	-1.4	33.0	-	53.3	68.2	14.9	
Vert	5460.000	AV	35.7	31.2	7.7	31.8	0.2	43.0	53.9	10.9	*1)
Vert	5470.000	AV	40.9	31.2	7.7	31.8	0.2	48.2	53.9	5.7	*1)
Vert	11000.000	AV	38.5	40.7	-2.0	33.9	0.2	43.5	53.9	10.4	
Vert	16500.000	AV	35.9	40.0	-0.6	33.4	-	41.9	53.9	12.0	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

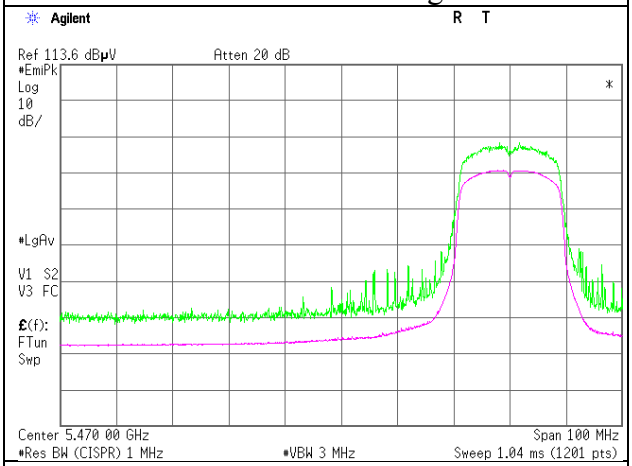
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5500 MHz

Horizontal

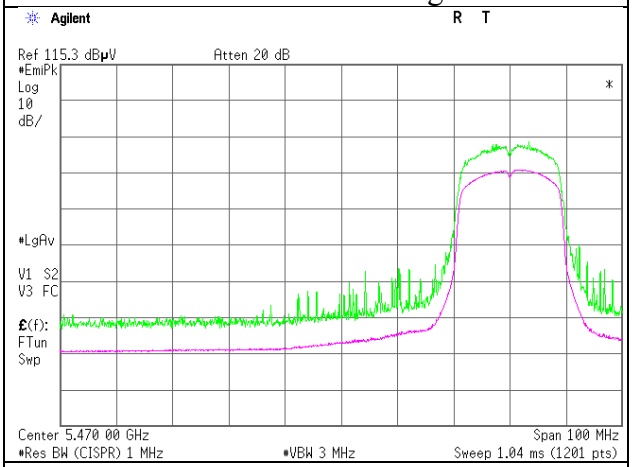
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-20 5580 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11160.000	PK	45.7	40.6	-1.9	33.9	-	50.5	73.9	23.4	
Hori	16740.000	PK	43.2	40.7	-0.5	33.2	-	50.2	73.9	23.7	Floor noise
Hori	22320.000	PK	43.9	40.8	-1.4	32.7	-	50.6	73.9	23.3	Floor noise
Hori	11160.000	AV	36.1	40.6	-1.9	33.9	0.2	41.1	53.9	12.8	
Hori	16740.000	AV	37.9	40.7	-0.5	33.2	-	44.9	53.9	9.0	Floor noise
Hori	22320.000	AV	35.9	40.8	-1.4	32.7	-	42.6	53.9	11.3	Floor noise
Vert	11160.000	PK	47.2	40.6	-1.9	33.9	-	52.0	73.9	21.9	
Vert	16740.000	PK	42.4	40.7	-0.5	33.2	-	49.4	73.9	24.5	Floor noise
Vert	22320.000	PK	46.8	40.8	-1.4	32.7	-	53.5	73.9	20.4	
Vert	11160.000	AV	37.2	40.6	-1.9	33.9	0.2	42.2	53.9	11.7	
Vert	16740.000	AV	35.7	40.7	-0.5	33.2	-	42.7	53.9	11.2	Floor noise
Vert	22320.000	AV	40.8	40.8	-1.4	32.7	0.2	47.7	53.9	6.2	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	59.3	31.4	7.8	31.8	-	66.7	73.9	7.2	
Hori	11400.000	PK	52.3	40.4	-1.8	33.9	-	57.0	73.9	16.9	
Hori	17100.000	PK	43.0	41.8	-0.5	33.0	-	51.3	73.9	22.6	Floor noise
Hori	22800.000	PK	44.1	41.0	-1.3	32.4	-	51.4	73.9	22.5	Floor noise
Hori	5725.000	AV	43.1	31.4	7.8	31.8	0.2	50.7	53.9	3.2	*1)
Hori	11400.000	AV	40.2	40.4	-1.8	33.9	0.2	45.1	53.9	8.8	
Hori	17100.000	AV	37.8	41.8	-0.5	33.0	-	46.1	53.9	7.8	Floor noise
Hori	22800.000	AV	35.3	41.0	-1.3	32.4	-	42.6	53.9	11.3	Floor noise
Vert	5725.000	PK	58.4	31.4	7.8	31.8	-	65.8	73.9	8.1	
Vert	11400.000	PK	55.4	40.4	-1.8	33.9	-	60.1	73.9	13.8	
Vert	17100.000	PK	42.6	41.8	-0.5	33.0	-	50.9	73.9	23.0	Floor noise
Vert	22800.000	PK	46.8	41.0	-1.3	32.4	-	54.1	73.9	19.8	
Vert	5725.000	AV	42.3	31.4	7.8	31.8	0.2	49.9	53.9	4.0	*1)
Vert	11400.000	AV	42.3	40.4	-1.8	33.9	0.2	47.2	53.9	6.7	
Vert	17100.000	AV	35.6	41.8	-0.5	33.0	-	43.9	53.9	10.0	Floor noise
Vert	22800.000	AV	40.6	41.0	-1.3	32.4	0.2	48.1	53.9	5.8	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

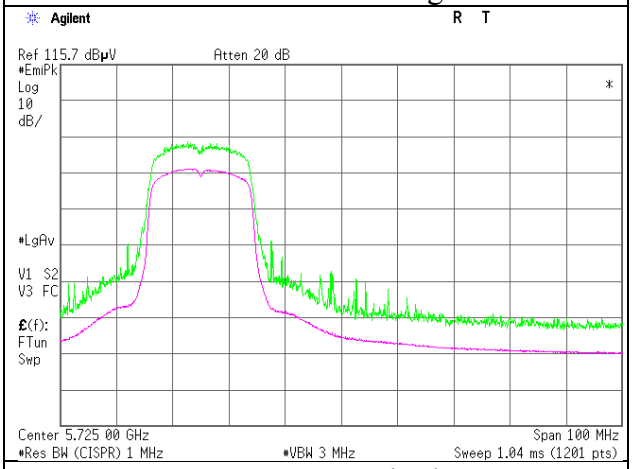
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5700 MHz

Horizontal

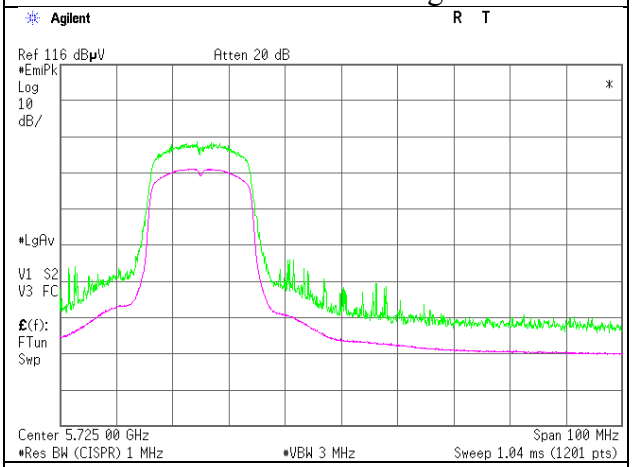
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.4	No.2
Date	May 31, 2016	May 31, 2016	September 8, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	23 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Shinichi Miyazono (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-20 5745 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5650.000	PK	41.6	31.3	7.8	31.4	-	49.3	68.2	18.9	
Hori	5700.000	PK	50.0	31.4	7.8	31.4	-	57.8	105.2	47.4	
Hori	5715.000	PK	57.2	31.4	7.8	31.4	-	65.0	109.4	44.4	
Hori	5720.000	PK	59.4	31.4	7.8	31.4	-	67.2	110.8	43.6	
Hori	5725.000	PK	61.1	31.4	7.8	31.4	-	68.9	122.2	53.3	
Hori	11490.000	PK	56.4	40.3	-1.6	33.9	-	61.2	73.9	12.7	
Hori	17235.000	PK	43.0	42.4	-0.4	33.0	-	52.0	73.9	21.9	Floor noise
Hori	22980.000	PK	44.3	41.1	-1.3	32.2	-	51.9	73.9	22.0	Floor noise
Hori	11490.000	AV	43.4	40.3	-1.6	33.9	0.2	48.4	53.9	5.5	
Hori	17235.000	AV	37.8	42.4	-0.4	33.0	-	46.8	53.9	7.1	Floor noise
Hori	22980.000	AV	35.4	41.1	-1.3	32.2	-	43.0	53.9	10.9	Floor noise
Vert	5650.000	PK	42.0	31.3	7.8	31.4	-	49.7	68.2	18.5	
Vert	5700.000	PK	51.8	31.4	7.8	31.4	-	59.6	105.2	45.6	
Vert	5715.000	PK	58.5	31.4	7.8	31.4	-	66.3	109.4	43.1	
Vert	5720.000	PK	60.1	31.4	7.8	31.4	-	67.9	110.8	42.9	
Vert	5725.000	PK	63.0	31.4	7.8	31.4	-	70.8	122.2	51.4	
Vert	11490.000	PK	58.8	40.3	-1.6	33.9	-	63.6	73.9	10.3	
Vert	17235.000	PK	42.6	42.4	-0.4	33.0	-	51.6	73.9	22.3	Floor noise
Vert	22980.000	PK	47.7	41.1	-1.3	32.2	-	55.3	73.9	18.6	
Vert	11490.000	AV	44.9	40.3	-1.6	33.9	0.2	49.9	53.9	4.0	
Vert	17235.000	AV	35.6	42.4	-0.4	33.0	-	44.6	53.9	9.3	Floor noise
Vert	22980.000	AV	40.8	41.1	-1.3	32.2	0.2	48.6	53.9	5.3	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

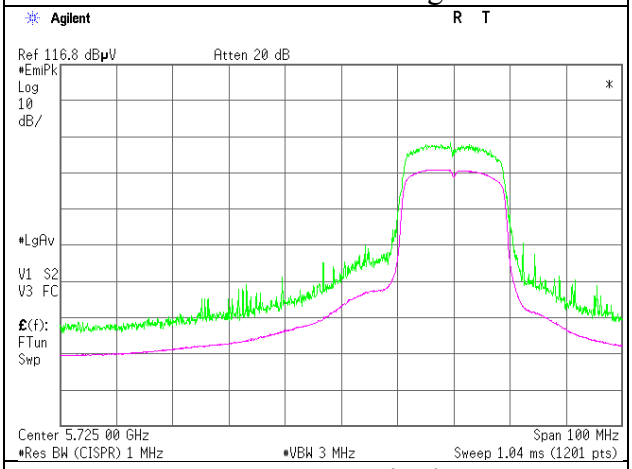
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shinichi Miyazono
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5745 MHz

Horizontal

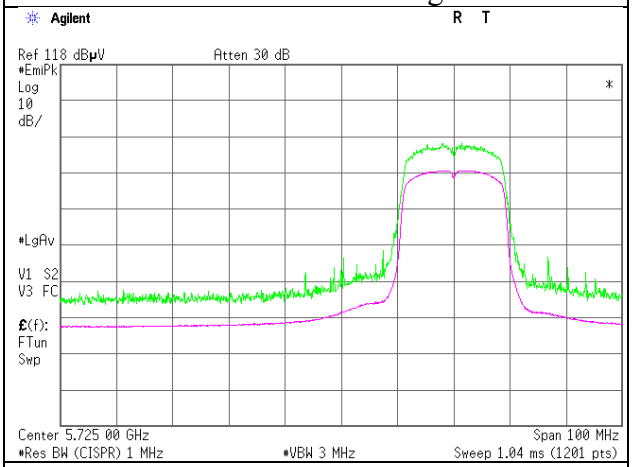
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura	Hiroyuki Furutaka	Yuta Moriya	Ken Fujita
	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)
Mode	Tx 11ac-20 5785 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11570.000	PK	54.5	40.1	-1.6	33.9	-	59.1	73.9	14.8	
Hori	17355.000	PK	42.9	42.9	-0.4	33.0	-	52.4	73.9	21.5	Floor noise
Hori	23140.000	PK	43.9	41.1	-1.3	32.2	-	51.5	73.9	22.4	Floor noise
Hori	11570.000	AV	42.6	40.1	-1.6	33.9	0.2	47.4	53.9	6.5	
Hori	17355.000	AV	37.5	42.9	-0.4	33.0	-	47.0	53.9	6.9	Floor noise
Hori	23140.000	AV	34.9	41.1	-1.3	32.2	-	42.5	53.9	11.4	Floor noise
Vert	11570.000	PK	55.8	40.1	-1.6	33.9	-	60.4	73.9	13.5	
Vert	17355.000	PK	42.8	42.9	-0.4	33.0	-	52.3	73.9	21.6	Floor noise
Vert	23140.000	PK	46.6	41.1	-1.3	32.2	-	54.2	73.9	19.7	
Vert	11570.000	AV	42.5	40.1	-1.6	33.9	0.2	47.3	53.9	6.6	
Vert	17355.000	AV	35.6	42.9	-0.4	33.0	-	45.1	53.9	8.8	Floor noise
Vert	23140.000	AV	40.7	41.1	-1.3	32.2	0.2	48.5	53.9	5.4	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.4	No.2
Date	May 31, 2016	May 31, 2016	September 8, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	23 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Shinichi Miyazono (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	57.4	31.6	7.8	31.5	-	65.3	122.2	56.9	
Hori	5855.000	PK	54.6	31.6	7.8	31.5	-	62.5	110.8	48.3	
Hori	5860.000	PK	52.4	31.6	7.8	31.5	-	60.3	109.4	49.1	
Hori	5875.000	PK	45.0	31.6	7.8	31.5	-	52.9	105.2	52.3	
Hori	5925.000	PK	42.0	31.6	7.8	31.5	-	49.9	68.2	18.3	
Hori	11650.000	PK	58.6	40.0	-1.6	33.9	-	63.1	73.9	10.8	
Hori	17475.000	PK	42.5	43.4	-0.4	33.1	-	52.4	73.9	21.5	Floor noise
Hori	23300.000	PK	43.9	41.0	-1.2	32.2	-	51.5	73.9	22.4	Floor noise
Hori	11650.000	AV	44.2	40.0	-1.6	33.9	0.2	48.9	53.9	5.0	
Hori	17475.000	AV	37.8	43.4	-0.4	33.1	-	47.7	53.9	6.2	Floor noise
Hori	23300.000	AV	34.9	41.0	-1.2	32.2	-	42.5	53.9	11.4	Floor noise
Vert	5850.000	PK	57.8	31.6	7.8	31.5	-	65.7	122.2	56.5	
Vert	5855.000	PK	55.3	31.6	7.8	31.5	-	63.2	110.8	47.6	
Vert	5860.000	PK	53.5	31.6	7.8	31.5	-	61.4	109.4	48.0	
Vert	5875.000	PK	46.3	31.6	7.8	31.5	-	54.2	105.2	51.0	
Vert	5925.000	PK	41.2	31.6	7.8	31.5	-	49.1	68.2	19.1	
Vert	11650.000	PK	58.2	40.0	-1.6	33.9	-	62.7	73.9	11.2	
Vert	17475.000	PK	42.5	43.4	-0.4	33.1	-	52.4	73.9	21.5	Floor noise
Vert	23300.000	PK	46.4	41.0	-1.2	32.2	-	54.0	73.9	19.9	
Vert	11650.000	AV	45.6	40.0	-1.6	33.9	0.2	50.3	53.9	3.6	
Vert	17475.000	AV	35.8	43.4	-0.4	33.1	-	45.7	53.9	8.2	Floor noise
Vert	23300.000	AV	40.1	41.0	-1.2	32.2	0.2	47.9	53.9	6.0	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

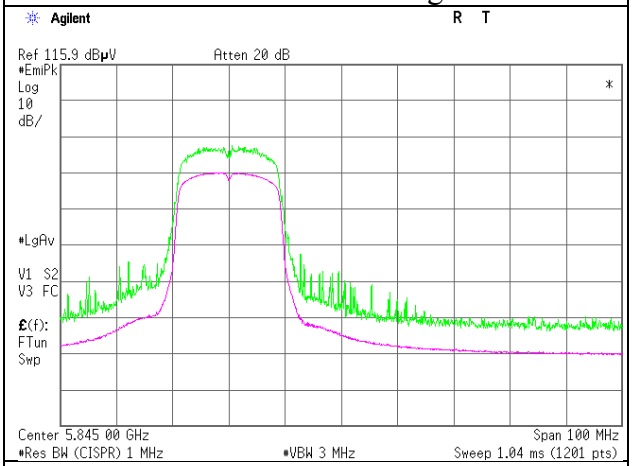
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shinichi Miyazono
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5825 MHz

Horizontal

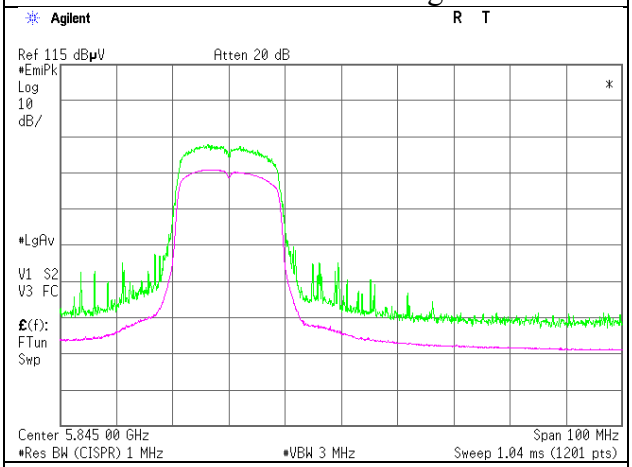
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 5, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 52 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	59.8	31.5	7.5	31.7	-	67.1	73.9	6.8	
Hori	10380.000	PK	48.3	39.5	-2.2	34.5	-	51.1	73.9	22.8	
Hori	15570.000	PK	44.4	39.2	-0.7	33.7	-	49.2	73.9	24.7	Floor noise
Hori	20760.000	PK	47.3	40.2	-1.7	33.5	-	52.3	73.9	21.6	
Hori	25950.000	PK	47.2	40.9	-0.6	34.3	-	53.2	73.9	20.7	Floor noise
Hori	5150.000	AV	44.2	31.5	7.5	31.7	0.4	51.9	53.9	2.0	*1)
Hori	10380.000	AV	41.4	39.5	-2.2	34.5	0.4	44.6	53.9	9.3	
Hori	15570.000	AV	37.5	39.2	-0.7	33.7	-	42.3	53.9	11.6	Floor noise
Hori	20760.000	AV	41.4	40.2	-1.7	33.5	0.4	46.8	53.9	7.1	
Hori	25950.000	AV	37.7	40.9	-0.6	34.3	-	43.7	53.9	10.2	Floor noise
Vert	5150.000	PK	57.4	31.5	7.5	31.7	-	64.7	73.9	9.2	
Vert	10380.000	PK	48.3	39.5	-2.2	34.5	-	51.1	73.9	22.8	
Vert	15570.000	PK	42.4	39.2	-0.7	33.7	-	47.2	73.9	26.7	Floor noise
Vert	20760.000	PK	50.8	40.2	-1.7	33.5	-	55.8	73.9	18.1	
Vert	25950.000	PK	47.4	40.9	-0.6	34.3	-	53.4	73.9	20.5	Floor noise
Vert	5150.000	AV	44.3	31.5	7.5	31.7	0.4	52.0	53.9	1.9	*1)
Vert	10380.000	AV	41.2	39.5	-2.2	34.5	0.4	44.4	53.9	9.5	
Vert	15570.000	AV	36.6	39.2	-0.7	33.7	-	41.4	53.9	12.5	Floor noise
Vert	20760.000	AV	46.4	40.2	-1.7	33.5	0.4	51.8	53.9	2.1	
Vert	25950.000	AV	38.3	40.9	-0.6	34.3	-	44.3	53.9	9.6	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

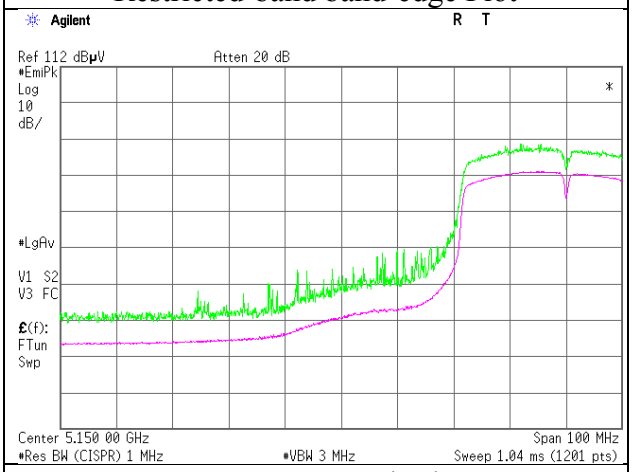
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-40 5190 MHz

Horizontal

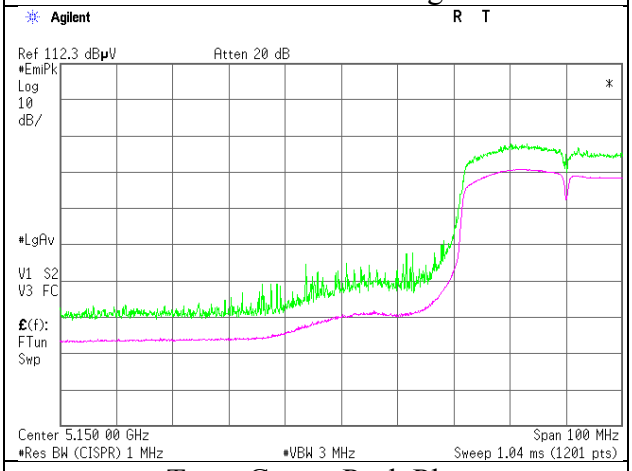
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 5, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 52 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-40 5270 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10540.000	PK	50.2	39.8	-2.1	34.3	-	53.6	73.9	20.3	
Hori	15810.000	PK	44.3	38.8	-0.7	33.8	-	48.6	73.9	25.3	Floor noise
Hori	21080.000	PK	47.4	40.3	-1.6	33.4	-	52.7	73.9	21.2	
Hori	26350.000	PK	47.2	41.3	-0.4	33.5	-	54.6	73.9	19.3	Floor noise
Hori	10540.000	AV	41.3	39.8	-2.1	34.3	0.4	45.1	53.9	8.8	
Hori	15810.000	AV	37.2	38.8	-0.7	33.8	-	41.5	53.9	12.4	Floor noise
Hori	21080.000	AV	40.9	40.3	-1.6	33.4	0.4	46.6	53.9	7.3	
Hori	26350.000	AV	37.7	41.3	-0.4	33.5	-	45.1	53.9	8.8	Floor noise
Vert	10540.000	PK	48.0	39.8	-2.1	34.3	-	51.4	73.9	22.5	
Vert	15810.000	PK	42.1	38.8	-0.7	33.8	-	46.4	73.9	27.5	Floor noise
Vert	21080.000	PK	48.8	40.3	-1.6	33.4	-	54.1	73.9	19.8	
Vert	26350.000	PK	47.4	41.3	-0.4	33.5	-	54.8	73.9	19.1	Floor noise
Vert	10540.000	AV	39.0	39.8	-2.1	34.3	0.4	42.8	53.9	11.1	
Vert	15810.000	AV	36.5	38.8	-0.7	33.8	-	40.8	53.9	13.1	Floor noise
Vert	21080.000	AV	43.4	40.3	-1.6	33.4	0.4	49.1	53.9	4.8	
Vert	26350.000	AV	38.3	41.3	-0.4	33.5	-	45.7	53.9	8.2	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 5, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 52 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	58.1	31.3	7.6	31.8	-	65.2	73.9	8.7	
Hori	10620.000	PK	47.6	40.0	-2.1	34.3	-	51.2	73.9	22.7	
Hori	15930.000	PK	44.6	38.6	-0.6	33.9	-	48.7	73.9	25.2	Floor noise
Hori	21240.000	PK	47.8	40.3	-1.6	33.3	-	53.2	73.9	20.7	
Hori	5350.000	AV	43.7	31.3	7.6	31.8	0.4	51.2	53.9	2.7	*1)
Hori	10620.000	AV	40.2	40.0	-2.1	34.3	0.4	44.2	53.9	9.7	
Hori	15930.000	AV	37.4	38.6	-0.6	33.9	-	41.5	53.9	12.4	Floor noise
Hori	21240.000	AV	40.3	40.3	-1.6	33.3	0.4	46.1	53.9	7.8	
Vert	5350.000	PK	55.9	31.3	7.6	31.8	-	63.0	73.9	10.9	
Vert	10620.000	PK	46.5	40.0	-2.1	34.3	-	50.1	73.9	23.8	
Vert	15930.000	PK	42.2	38.6	-0.6	33.9	-	46.3	73.9	27.6	Floor noise
Vert	21240.000	PK	47.9	40.3	-1.6	33.3	-	53.3	73.9	20.6	
Vert	5350.000	AV	42.0	31.3	7.6	31.8	0.4	49.5	53.9	4.4	*1)
Vert	10620.000	AV	40.0	40.0	-2.1	34.3	0.4	44.0	53.9	9.9	
Vert	15930.000	AV	36.1	38.6	-0.6	33.9	-	40.2	53.9	13.7	Floor noise
Vert	21240.000	AV	42.3	40.3	-1.6	33.3	0.4	48.1	53.9	5.8	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

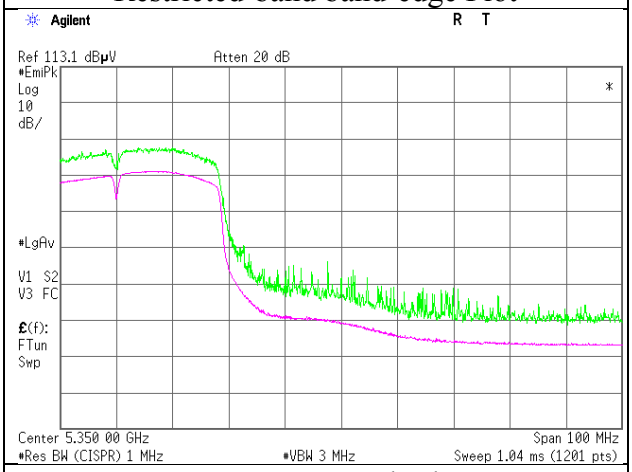
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	May 20, 2016
Temperature / Humidity	25deg. C / 42 % RH
Engineer	Keisuke Kawamura
Mode	Tx 11ac-40 5310 MHz

Horizontal

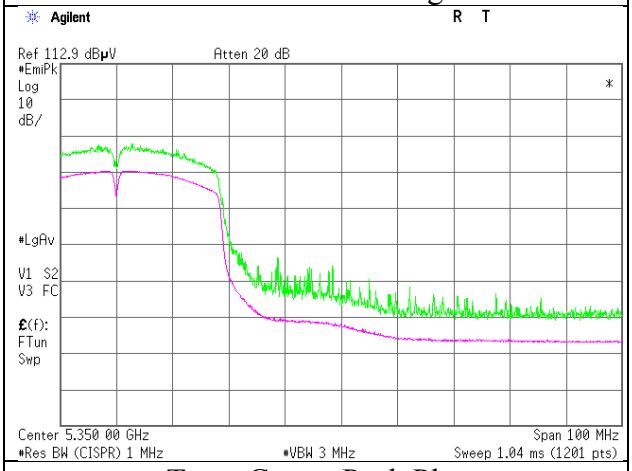
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 5, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 52 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-40 5510 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	53.3	31.2	7.7	31.8	-	60.4	73.9	13.5	
Hori	5470.000	PK	58.8	31.2	7.7	31.8	-	65.9	73.9	8.0	
Hori	11020.000	PK	47.5	40.7	-2.0	33.9	-	52.3	73.9	21.6	
Hori	16530.000	PK	45.0	40.0	-0.6	33.4	-	51.0	73.9	22.9	Floor noise
Hori	22040.000	PK	46.9	40.6	-1.4	33.0	-	53.1	73.9	20.8	
Hori	5460.000	AV	38.1	31.2	7.7	31.8	0.4	45.6	53.9	8.3	*1)
Hori	5470.000	AV	43.9	31.2	7.7	31.8	0.4	51.4	53.9	2.5	*1)
Hori	11020.000	AV	39.8	40.7	-2.0	33.9	0.4	45.0	53.9	8.9	
Hori	16530.000	AV	37.2	40.0	-0.6	33.4	-	43.2	53.9	10.7	Floor noise
Hori	22040.000	AV	40.5	40.6	-1.4	33.0	0.4	47.1	53.9	6.8	
Vert	5460.000	PK	52.0	31.2	7.7	31.8	-	59.1	73.9	14.8	
Vert	5470.000	PK	58.8	31.2	7.7	31.8	-	65.9	73.9	8.0	
Vert	11020.000	PK	47.7	40.7	-2.0	33.9	-	52.5	73.9	21.4	
Vert	16530.000	PK	42.4	40.0	-0.6	33.4	-	48.4	73.9	25.5	Floor noise
Vert	22040.000	PK	48.4	40.6	-1.4	33.0	-	54.6	73.9	19.3	
Vert	5460.000	AV	37.6	31.2	7.7	31.8	0.4	45.1	53.9	8.8	*1)
Vert	5470.000	AV	43.4	31.2	7.7	31.8	0.4	50.9	53.9	3.0	*1)
Vert	11020.000	AV	40.2	40.7	-2.0	33.9	0.4	45.4	53.9	8.5	
Vert	16530.000	AV	36.4	40.0	-0.6	33.4	-	42.4	53.9	11.5	Floor noise
Vert	22040.000	AV	41.7	40.6	-1.4	33.0	0.4	48.3	53.9	5.6	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

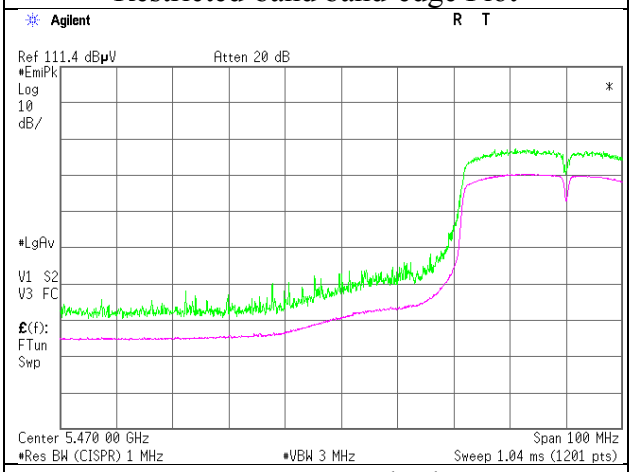
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-40 5510 MHz

Horizontal

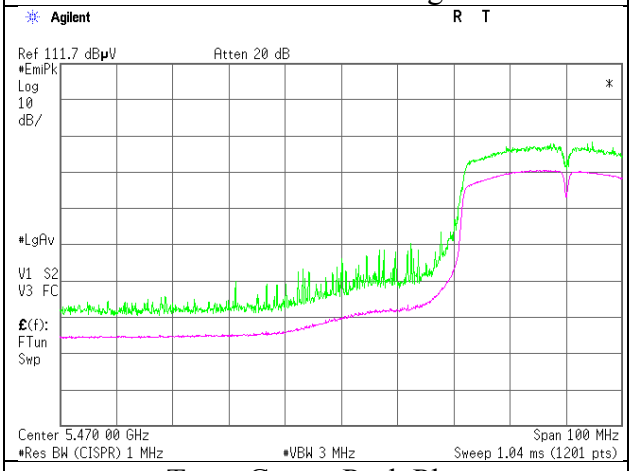
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 5, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 52 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-40 5550 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11100.000	PK	51.0	40.6	-1.9	33.9	-	55.8	73.9	18.1	
Hori	16650.000	PK	45.0	40.4	-0.6	33.3	-	51.5	73.9	22.4	Floor noise
Hori	22200.000	PK	44.7	40.7	-1.4	32.8	-	51.2	73.9	22.7	Floor noise
Hori	11100.000	AV	37.7	40.6	-1.9	33.9	0.4	42.9	53.9	11.0	
Hori	16650.000	AV	37.2	40.4	-0.6	33.3	-	43.7	53.9	10.2	Floor noise
Hori	22200.000	AV	36.0	40.7	-1.4	32.8	-	42.5	53.9	11.4	Floor noise
Vert	11100.000	PK	53.6	40.6	-1.9	33.9	-	58.4	73.9	15.5	
Vert	16650.000	PK	42.3	40.4	-0.6	33.3	-	48.8	73.9	25.1	Floor noise
Vert	22200.000	PK	47.3	40.7	-1.4	32.8	-	53.8	73.9	20.1	
Vert	11100.000	AV	41.3	40.6	-1.9	33.9	0.4	46.5	53.9	7.4	
Vert	16650.000	AV	36.3	40.4	-0.6	33.3	-	42.8	53.9	11.1	Floor noise
Vert	22200.000	AV	41.1	40.7	-1.4	32.8	0.4	48.0	53.9	5.9	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 5, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 52 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	50.9	31.4	7.8	31.8	-	58.3	73.9	15.6	
Hori	11340.000	PK	52.6	40.4	-1.8	33.9	-	57.3	73.9	16.6	
Hori	17010.000	PK	45.4	41.4	-0.5	33.0	-	53.3	73.9	20.6	Floor noise
Hori	22680.000	PK	46.3	41.0	-1.3	32.5	-	53.5	73.9	20.4	
Hori	5725.000	AV	38.7	31.4	7.8	31.8	0.4	46.5	53.9	7.4	*1)
Hori	11340.000	AV	40.8	40.4	-1.8	33.9	0.4	45.9	53.9	8.0	
Hori	17010.000	AV	37.7	41.4	-0.5	33.0	-	45.6	53.9	8.3	Floor noise
Hori	22680.000	AV	39.9	41.0	-1.3	32.5	0.4	47.5	53.9	6.4	
Vert	5725.000	PK	52.5	31.4	7.8	31.8	-	59.9	73.9	14.0	
Vert	11340.000	PK	53.6	40.4	-1.8	33.9	-	58.3	73.9	15.6	
Vert	17010.000	PK	42.8	41.4	-0.5	33.0	-	50.7	73.9	23.2	Floor noise
Vert	22680.000	PK	48.1	41.0	-1.3	32.5	-	55.3	73.9	18.6	
Vert	5725.000	AV	37.1	31.4	7.8	31.8	0.4	44.9	53.9	9.0	*1)
Vert	11340.000	AV	41.3	40.4	-1.8	33.9	0.4	46.4	53.9	7.5	
Vert	17010.000	AV	34.6	41.4	-0.5	33.0	-	42.5	53.9	11.4	Floor noise
Vert	22680.000	AV	41.9	41.0	-1.3	32.5	0.4	49.5	53.9	4.4	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

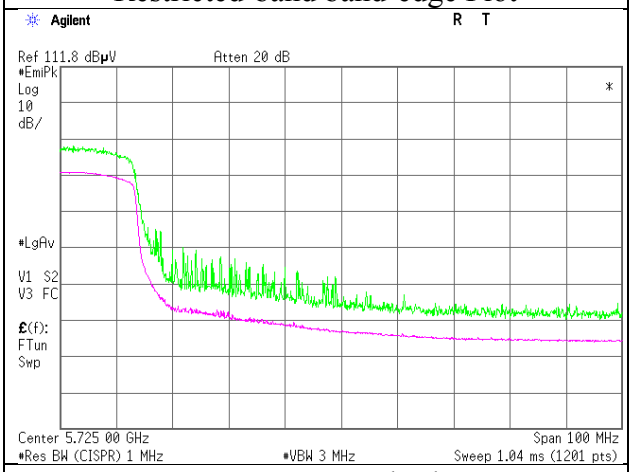
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-40 5670 MHz

Horizontal

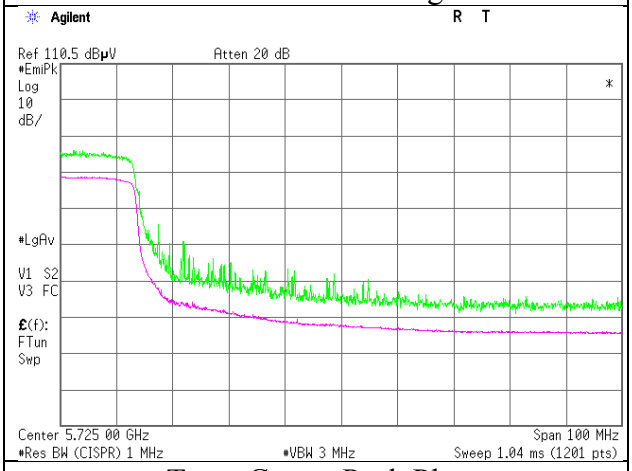
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.4	No.2
Date	May 31, 2016	May 31, 2016	September 8, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	23 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Shinichi Miyazono (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	5650.000	PK	41.7	31.3	7.8	31.4	-	49.4	68.2	18.8	
Hori	5700.000	PK	50.4	31.4	7.8	31.4	-	58.2	105.2	47.0	
Hori	5715.000	PK	57.8	31.4	7.8	31.4	-	65.6	109.4	43.8	
Hori	5720.000	PK	60.0	31.4	7.8	31.4	-	67.8	110.8	43.0	
Hori	5725.000	PK	61.1	31.4	7.8	31.4	-	68.9	122.2	53.3	
Hori	11510.000	PK	59.3	40.3	-1.6	33.9	-	64.1	73.9	9.8	
Hori	17265.000	PK	45.2	42.5	-0.4	33.0	-	54.3	73.9	19.6	Floor noise
Hori	23020.000	PK	44.2	41.1	-1.3	32.2	-	51.8	73.9	22.1	Floor noise
Hori	11510.000	AV	41.1	40.3	-1.6	33.9	0.4	46.3	53.9	7.6	
Hori	17265.000	AV	37.4	42.5	-0.4	33.0	-	46.5	53.9	7.4	Floor noise
Hori	23020.000	AV	35.5	41.1	-1.3	32.2	-	43.1	53.9	10.8	Floor noise
Vert	5650.000	PK	41.1	31.3	7.8	31.4	-	48.8	68.2	19.4	
Vert	5700.000	PK	52.8	31.4	7.8	31.4	-	60.6	105.2	44.6	
Vert	5715.000	PK	59.8	31.4	7.8	31.4	-	67.6	109.4	41.8	
Vert	5720.000	PK	61.9	31.4	7.8	31.4	-	69.7	110.8	41.1	
Vert	5725.000	PK	62.9	31.4	7.8	31.4	-	70.7	122.2	51.5	
Vert	11510.000	PK	58.7	40.3	-1.6	33.9	-	63.5	73.9	10.4	
Vert	17265.000	PK	42.8	42.5	-0.4	33.0	-	51.9	73.9	22.0	Floor noise
Vert	23020.000	PK	46.9	41.1	-1.3	32.2	-	54.5	73.9	19.4	
Vert	11510.000	AV	45.6	40.3	-1.6	33.9	0.4	50.8	53.9	3.1	
Vert	17265.000	AV	34.6	42.5	-0.4	33.0	-	43.7	53.9	10.2	Floor noise
Vert	23020.000	AV	41.4	41.1	-1.3	32.2	0.4	49.4	53.9	4.5	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

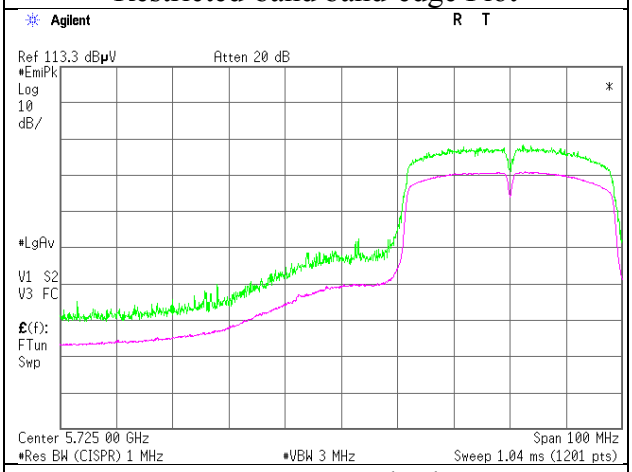
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shinichi Miyazono
Mode	Tx 11ac-40 5755 MHz

Horizontal

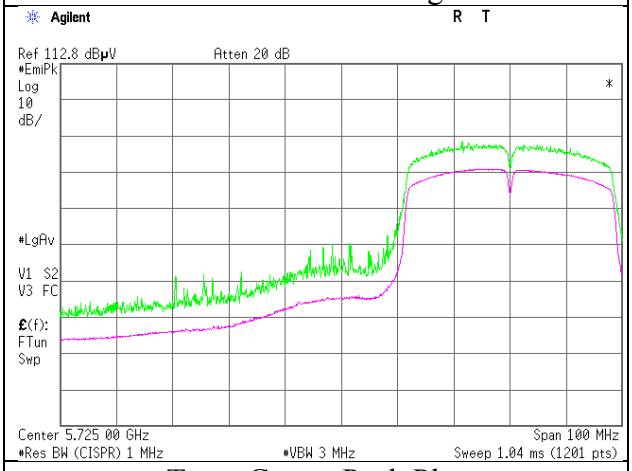
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.4	No.2
Date	May 31, 2016	May 31, 2016	September 8, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	23 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Shinichi Miyazono (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 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	48.2	31.6	7.8	31.5	-	56.1	122.2	66.1	
Hori	5855.000	PK	48.1	31.6	7.8	31.5	-	56.0	110.8	54.8	
Hori	5860.000	PK	46.6	31.6	7.8	31.5	-	54.5	109.4	54.9	
Hori	5875.000	PK	41.5	31.6	7.8	31.5	-	49.4	105.2	55.8	
Hori	5925.000	PK	41.1	31.6	7.8	31.5	-	49.0	68.2	19.2	
Hori	11590.000	PK	55.8	40.1	-1.6	33.9	-	60.4	73.9	13.5	
Hori	17385.000	PK	45.0	43.0	-0.4	33.0	-	54.6	73.9	19.3	Floor noise
Hori	23180.000	PK	44.5	41.1	-1.2	32.2	-	52.2	73.9	21.7	Floor noise
Hori	11590.000	AV	43.0	40.1	-1.6	33.9	0.4	48.0	53.9	5.9	
Hori	17385.000	AV	37.2	43.0	-0.4	33.0	-	46.8	53.9	7.1	Floor noise
Hori	23180.000	AV	35.0	41.1	-1.2	32.2	-	42.7	53.9	11.2	Floor noise
Vert	5850.000	PK	50.5	31.6	7.8	31.5	-	58.4	122.2	63.8	
Vert	5855.000	PK	50.3	31.6	7.8	31.5	-	58.2	110.8	52.6	
Vert	5860.000	PK	48.2	31.6	7.8	31.5	-	56.1	109.4	53.3	
Vert	5875.000	PK	42.0	31.6	7.8	31.5	-	49.9	105.2	55.3	
Vert	5925.000	PK	41.3	31.6	7.8	31.5	-	49.2	68.2	19.0	
Vert	11590.000	PK	51.9	40.1	-1.6	33.9	-	56.5	73.9	17.4	
Vert	17385.000	PK	42.5	43.0	-0.4	33.0	-	52.1	73.9	21.8	Floor noise
Vert	23180.000	PK	46.5	41.1	-1.2	32.2	-	54.2	73.9	19.7	
Vert	11590.000	AV	39.0	40.1	-1.6	33.9	0.4	44.0	53.9	9.9	
Vert	17385.000	AV	34.3	43.0	-0.4	33.0	-	43.9	53.9	10.0	Floor noise
Vert	23180.000	AV	41.1	41.1	-1.2	32.2	0.4	49.2	53.9	4.7	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

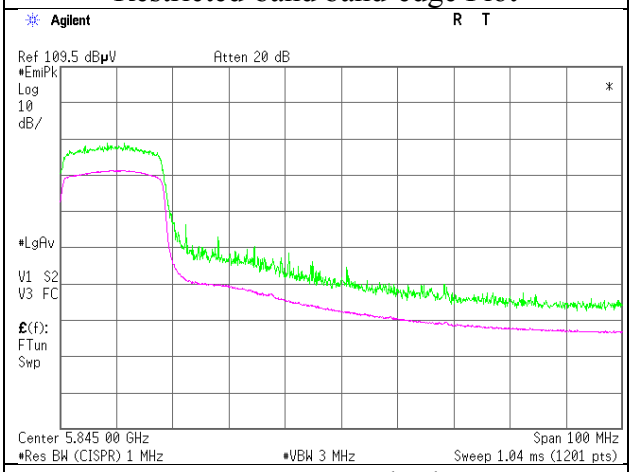
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shinichi Miyazono
Mode	Tx 11ac-40 5795 MHz

Horizontal

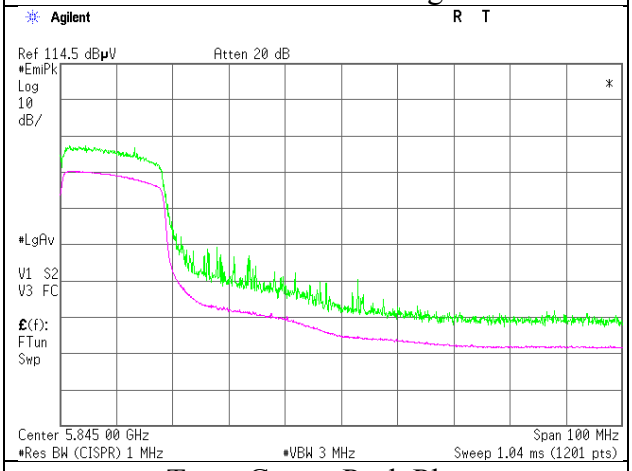
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 3, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	25 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-80 5210 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	53.8	31.5	7.5	31.7	-	61.1	73.9	12.8	
Hori	10420.000	PK	47.1	39.6	-2.2	34.5	-	50.0	73.9	23.9	
Hori	15630.000	PK	45.1	39.1	-0.8	33.7	-	49.7	73.9	24.2	Floor noise
Hori	20840.000	PK	48.7	40.2	-1.7	33.4	-	53.8	73.9	20.1	
Hori	26050.000	PK	48.3	40.9	-0.5	34.2	-	54.5	73.9	19.4	Floor noise
Hori	5150.000	AV	43.7	31.5	7.5	31.7	0.7	51.7	53.9	2.2	*1)
Hori	10420.000	AV	40.9	39.6	-2.2	34.5	0.7	44.5	53.9	9.4	
Hori	15630.000	AV	36.3	39.1	-0.8	33.7	-	40.9	53.9	13.0	Floor noise
Hori	20840.000	AV	43.1	40.2	-1.7	33.4	0.7	48.9	53.9	5.0	
Hori	26050.000	AV	39.0	40.9	-0.5	34.2	-	45.2	53.9	8.7	Floor noise
Vert	5150.000	PK	55.2	31.5	7.5	31.7	-	62.5	73.9	11.4	
Vert	10420.000	PK	47.2	39.6	-2.2	34.5	-	50.1	73.9	23.8	
Vert	15630.000	PK	42.5	39.1	-0.8	33.7	-	47.1	73.9	26.8	Floor noise
Vert	20840.000	PK	49.8	40.2	-1.7	33.4	-	54.9	73.9	19.0	
Vert	26050.000	PK	47.7	40.9	-0.5	34.2	-	53.9	73.9	20.0	Floor noise
Vert	5150.000	AV	44.6	31.5	7.5	31.7	0.7	52.6	53.9	1.3	*1)
Vert	10420.000	AV	41.1	39.6	-2.2	34.5	0.7	44.7	53.9	9.2	
Vert	15630.000	AV	34.3	39.1	-0.8	33.7	-	38.9	53.9	15.0	Floor noise
Vert	20840.000	AV	43.7	40.2	-1.7	33.4	0.7	49.5	53.9	4.4	
Vert	26050.000	AV	40.1	40.9	-0.5	34.2	-	46.3	53.9	7.6	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

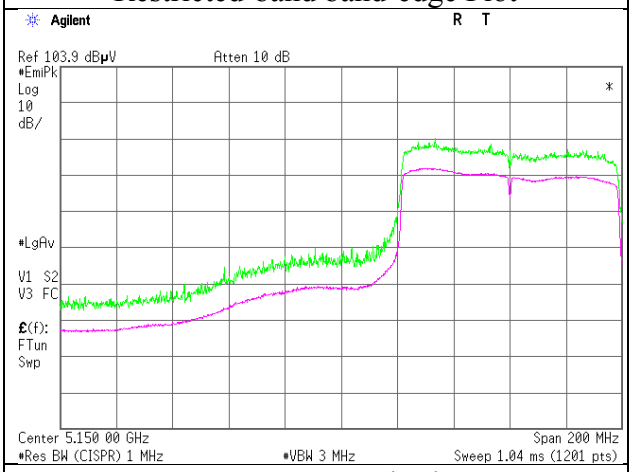
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5210 MHz

Horizontal

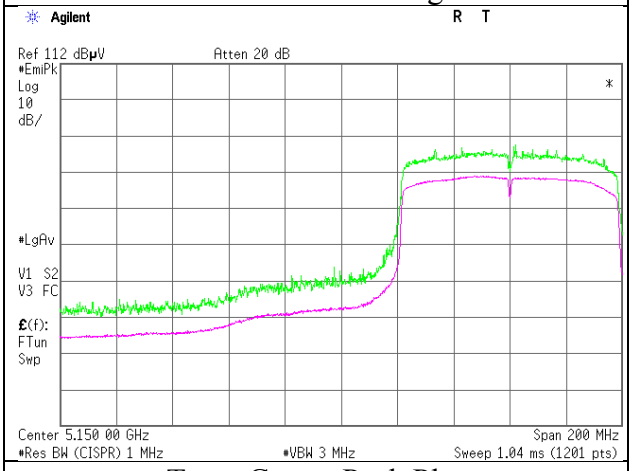
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 3, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	25 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-80 5290 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	56.5	31.3	7.6	31.8	-	63.6	73.9	10.3	
Hori	10580.000	PK	44.8	39.9	-2.1	34.3	-	48.3	73.9	25.6	
Hori	15870.000	PK	45.0	38.7	-0.7	33.8	-	49.2	73.9	24.7	Floor noise
Hori	21160.000	PK	47.8	40.3	-1.6	33.3	-	53.2	73.9	20.7	
Hori	26450.000	PK	46.9	41.4	-0.3	33.2	-	54.8	73.9	19.1	Floor noise
Hori	5350.000	AV	41.9	31.3	7.6	31.8	0.7	49.7	53.9	4.2	*1)
Hori	10580.000	AV	38.4	39.9	-2.1	34.3	0.7	42.6	53.9	11.3	
Hori	15870.000	AV	36.4	38.7	-0.7	33.8	-	40.6	53.9	13.3	Floor noise
Hori	21160.000	AV	41.0	40.3	-1.6	33.3	0.7	47.1	53.9	6.8	
Hori	26450.000	AV	38.3	41.4	-0.3	33.2	-	46.2	53.9	7.7	Floor noise
Vert	5350.000	PK	54.0	31.3	7.6	31.8	-	61.1	73.9	12.8	
Vert	10580.000	PK	45.6	39.9	-2.1	34.3	-	49.1	73.9	24.8	
Vert	15870.000	PK	42.7	38.7	-0.7	33.8	-	46.9	73.9	27.0	Floor noise
Vert	21160.000	PK	47.1	40.3	-1.6	33.3	-	52.5	73.9	21.4	
Vert	26450.000	PK	46.8	41.4	-0.3	33.2	-	54.7	73.9	19.2	Floor noise
Vert	5350.000	AV	41.6	31.3	7.6	31.8	0.7	49.4	53.9	4.5	*1)
Vert	10580.000	AV	38.9	39.9	-2.1	34.3	0.7	43.1	53.9	10.8	
Vert	15870.000	AV	34.5	38.7	-0.7	33.8	-	38.7	53.9	15.2	Floor noise
Vert	21160.000	AV	41.0	40.3	-1.6	33.3	0.7	47.1	53.9	6.8	
Vert	26450.000	AV	38.5	41.4	-0.3	33.2	-	46.4	53.9	7.5	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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

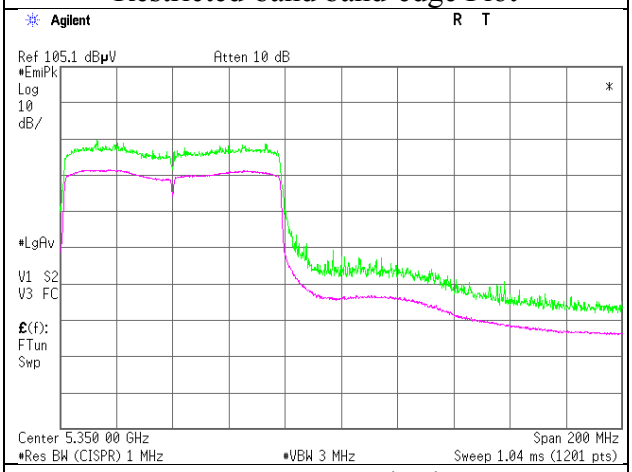
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5290 MHz

Horizontal

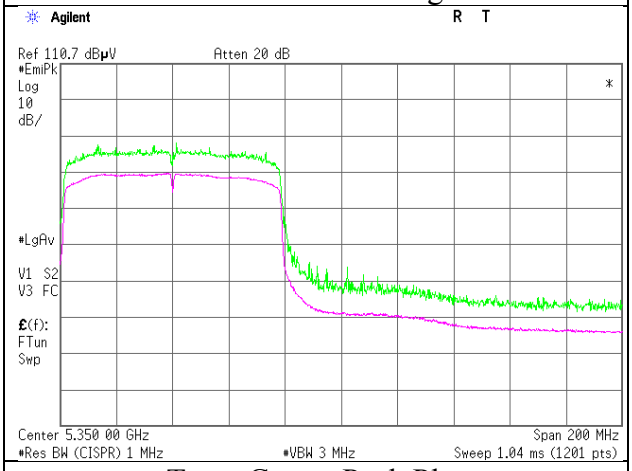
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 3, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	25 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-80 5530 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	53.6	31.2	7.7	31.8	-	60.7	73.9	13.2	
Hori	5470.000	PK	54.5	31.2	7.7	31.8	-	61.6	73.9	12.3	
Hori	11060.000	PK	50.5	40.7	-2.0	33.9	-	55.3	73.9	18.6	
Hori	16590.000	PK	45.1	40.2	-0.6	33.3	-	51.4	73.9	22.5	Floor noise
Hori	22120.000	PK	46.5	40.7	-1.4	32.9	-	52.9	73.9	21.0	
Hori	5460.000	AV	41.4	31.2	7.7	31.8	0.7	49.2	53.9	4.7	*1)
Hori	5470.000	AV	41.5	31.2	7.7	31.8	0.7	49.3	53.9	4.6	*1)
Hori	11060.000	AV	36.7	40.7	-2.0	33.9	0.7	42.2	53.9	11.7	
Hori	16590.000	AV	36.2	40.2	-0.6	33.3	-	42.5	53.9	11.4	Floor noise
Hori	22120.000	AV	38.4	40.7	-1.4	32.9	0.7	45.5	53.9	8.4	
Vert	5460.000	PK	51.9	31.2	7.7	31.8	-	59.0	73.9	14.9	
Vert	5470.000	PK	54.4	31.2	7.7	31.8	-	61.5	73.9	12.4	
Vert	11060.000	PK	49.8	40.7	-2.0	33.9	-	54.6	73.9	19.3	
Vert	16590.000	PK	42.3	40.2	-0.6	33.3	-	48.6	73.9	25.3	Floor noise
Vert	22120.000	PK	48.4	40.7	-1.4	32.9	-	54.8	73.9	19.1	
Vert	5460.000	AV	40.4	31.2	7.7	31.8	0.7	48.2	53.9	5.7	*1)
Vert	5470.000	AV	41.8	31.2	7.7	31.8	0.7	49.6	53.9	4.3	*1)
Vert	11060.000	AV	35.6	40.7	-2.0	33.9	0.7	41.1	53.9	12.8	
Vert	16590.000	AV	34.6	40.2	-0.6	33.3	-	40.9	53.9	13.0	Floor noise
Vert	22120.000	AV	42.3	40.7	-1.4	32.9	0.7	49.4	53.9	4.5	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

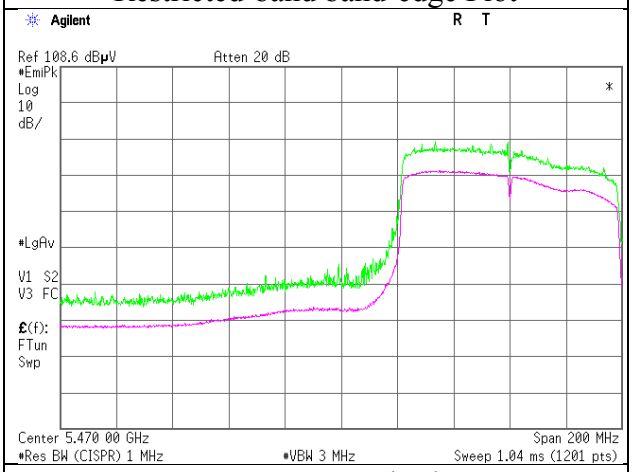
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5530 MHz

Horizontal

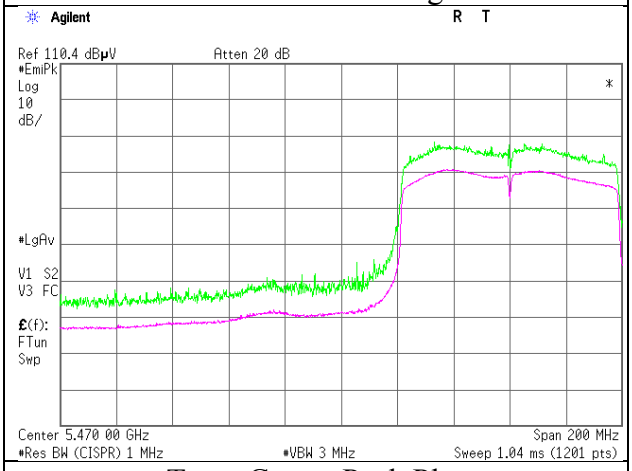
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.3	No.2
Date	May 31, 2016	May 31, 2016	August 3, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	25 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura	Hiroyuki Furutaka	Yuta Moriya	Ken Fujita
	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)
Mode	Tx 11ac-80 5610 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	47.7	31.4	7.8	31.8	-	55.1	73.9	18.8	
Hori	11220.000	PK	64.8	40.5	-1.8	33.9	-	69.6	73.9	4.3	
Hori	16830.000	PK	45.2	40.9	-0.5	33.1	-	52.5	73.9	21.4	Floor noise
Hori	22440.000	PK	47.2	40.9	-1.4	32.6	-	54.1	73.9	19.8	
Hori	5725.000	AV	37.8	31.4	7.8	31.8	0.7	45.9	53.9	8.0	*1)
Hori	11220.000	AV	46.0	40.5	-1.8	33.9	0.7	51.5	53.9	2.4	
Hori	16830.000	AV	36.3	40.9	-0.5	33.1	-	43.6	53.9	10.3	Floor noise
Hori	22440.000	AV	40.7	40.9	-1.4	32.6	0.7	48.3	53.9	5.6	
Vert	5725.000	PK	47.2	31.4	7.8	31.8	-	54.6	73.9	19.3	
Vert	11220.000	PK	61.3	40.5	-1.8	33.9	-	66.1	73.9	7.8	
Vert	16830.000	PK	42.7	40.9	-0.5	33.1	-	50.0	73.9	23.9	Floor noise
Vert	22440.000	PK	49.2	40.9	-1.4	32.6	-	56.1	73.9	17.8	
Vert	5725.000	AV	38.1	31.4	7.8	31.8	0.7	46.2	53.9	7.7	*1)
Vert	11220.000	AV	43.6	40.5	-1.8	33.9	0.7	49.1	53.9	4.8	
Vert	16830.000	AV	34.3	40.9	-0.5	33.1	-	41.6	53.9	12.3	Floor noise
Vert	22440.000	AV	43.8	40.9	-1.4	32.6	0.7	51.4	53.9	2.5	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

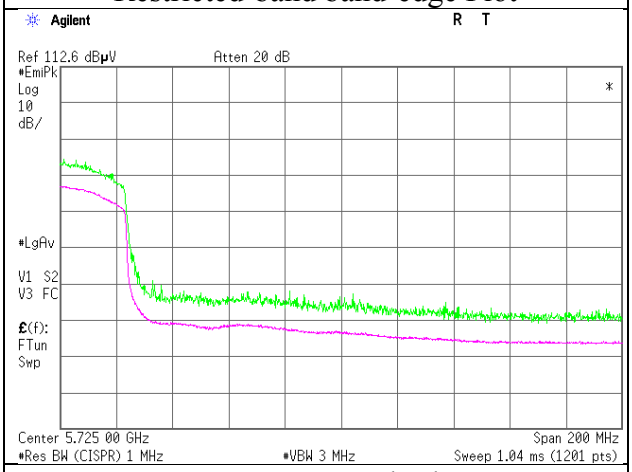
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	11182619H
Date	May 20, 2016
Temperature / Humidity	25deg. C / 42 % RH
Engineer	Keisuke Kawamura
Mode	Tx 11ac-80 5610 MHz

Horizontal

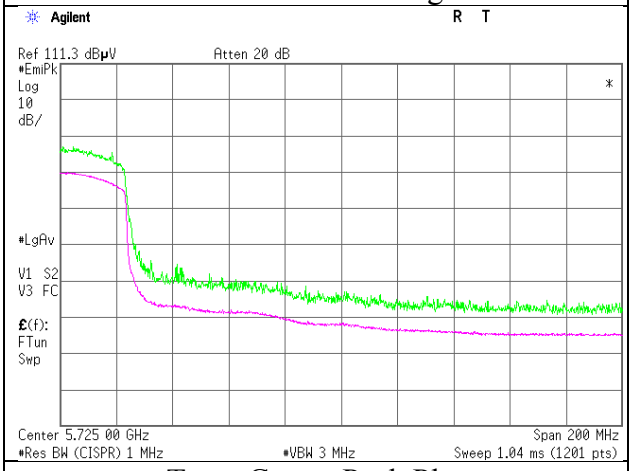
Restricted-band band-edge Plot



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

(Antenna : M/N 146153)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.4	No.2
Date	May 31, 2016	May 31, 2016	September 8, 2016	August 16, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	23 deg. C / 61 % RH	23 deg. C / 47 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Shinichi Miyazono (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)
Mode	Tx 11ac-80 5775 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5650.000	PK	47.4	31.3	7.8	31.4	-	55.1	68.2	13.1	
Hori	5700.000	PK	53.5	31.4	7.8	31.4	-	61.3	105.2	43.9	
Hori	5715.000	PK	54.4	31.4	7.8	31.4	-	62.2	109.4	47.2	
Hori	5720.000	PK	56.0	31.4	7.8	31.4	-	63.8	110.8	47.0	
Hori	5725.000	PK	60.5	31.4	7.8	31.4	-	68.3	122.2	53.9	
Hori	5850.000	PK	50.2	31.6	7.8	31.5	-	58.1	122.2	64.1	
Hori	5855.000	PK	49.9	31.6	7.8	31.5	-	57.8	110.8	53.0	
Hori	5860.000	PK	48.0	31.6	7.8	31.5	-	55.9	109.4	53.5	
Hori	5875.000	PK	46.5	31.6	7.8	31.5	-	54.4	105.2	50.8	
Hori	5925.000	PK	44.5	31.6	7.8	31.5	-	52.4	68.2	15.8	
Hori	11550.000	PK	57.0	40.2	-1.6	33.9	-	61.7	73.9	12.2	
Hori	17325.000	PK	45.2	42.7	-0.4	33.0	-	54.5	73.9	19.4	Floor noise
Hori	23100.000	PK	46.5	41.1	-1.3	32.2	-	54.1	73.9	19.8	
Hori	11550.000	AV	46.5	40.2	-1.6	33.9	0.7	51.9	53.9	2.0	
Hori	17325.000	AV	36.3	42.7	-0.4	33.0	-	45.6	53.9	8.3	Floor noise
Hori	23100.000	AV	39.7	41.1	-1.3	32.2	0.7	48.0	53.9	5.9	
Vert	5650.000	PK	50.2	31.3	7.8	31.4	-	57.9	68.2	10.3	
Vert	5700.000	PK	55.9	31.4	7.8	31.4	-	63.7	105.2	41.5	
Vert	5715.000	PK	57.0	31.4	7.8	31.4	-	64.8	109.4	44.6	
Vert	5720.000	PK	58.8	31.4	7.8	31.4	-	66.6	110.8	44.2	
Vert	5725.000	PK	61.0	31.4	7.8	31.4	-	68.8	122.2	53.4	
Vert	5850.000	PK	55.4	31.6	7.8	31.5	-	63.3	122.2	58.9	
Vert	5855.000	PK	53.7	31.6	7.8	31.5	-	61.6	110.8	49.2	
Vert	5860.000	PK	51.5	31.6	7.8	31.5	-	59.4	109.4	50.0	
Vert	5875.000	PK	50.0	31.6	7.8	31.5	-	57.9	105.2	47.3	
Vert	5925.000	PK	45.4	31.6	7.8	31.5	-	53.3	68.2	14.9	
Vert	11550.000	PK	62.2	40.2	-1.6	33.9	-	66.9	73.9	7.0	
Vert	17325.000	PK	42.9	42.7	-0.4	33.0	-	52.2	73.9	21.7	Floor noise
Vert	23100.000	PK	47.7	41.1	-1.3	32.2	-	55.3	73.9	18.6	
Vert	11550.000	AV	46.3	40.2	-1.6	33.9	0.7	51.7	53.9	2.2	
Vert	17325.000	AV	34.4	42.7	-0.4	33.0	-	43.7	53.9	10.2	Floor noise
Vert	23100.000	AV	42.6	41.1	-1.3	32.2	0.7	50.9	53.9	3.0	

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

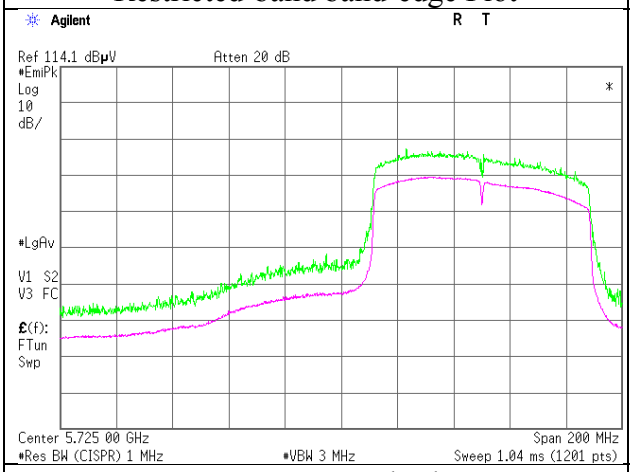
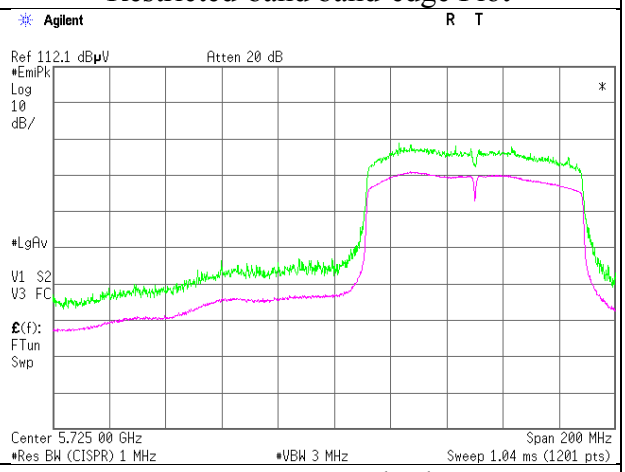
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

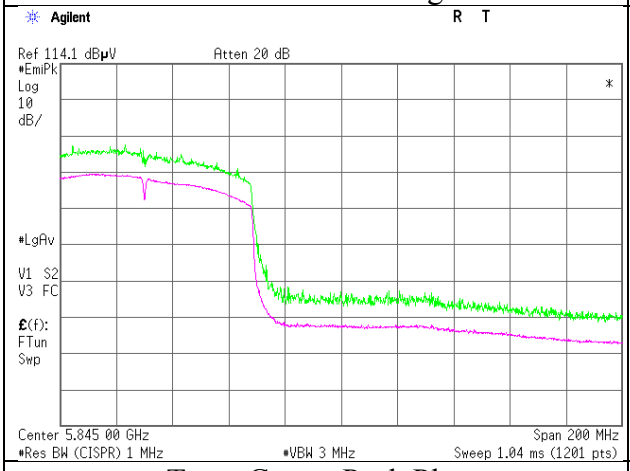
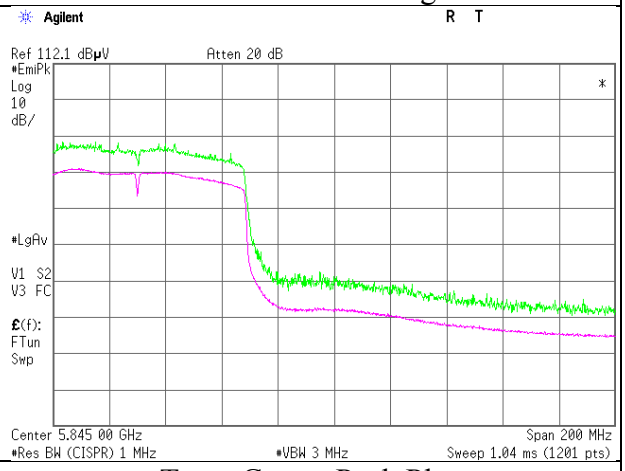
Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N 146153)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shinichi Miyazono
Mode	Tx 11ac-80 5775 MHz

Horizontal	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

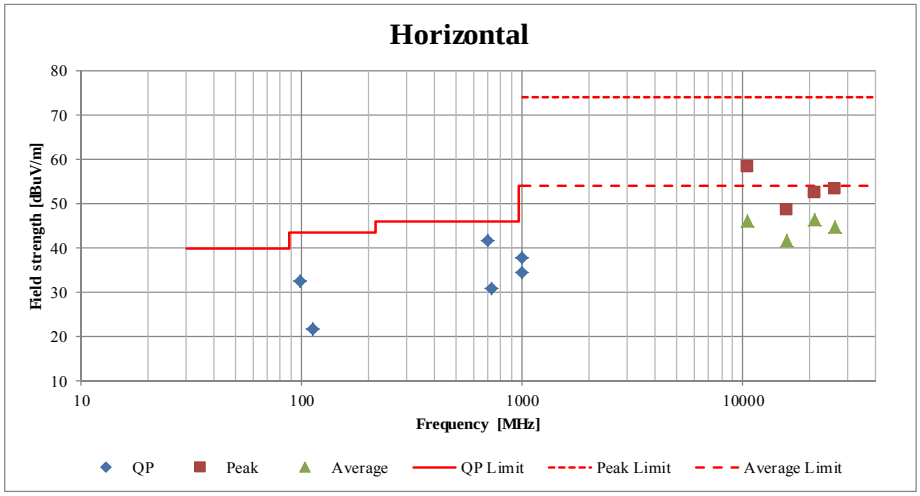
Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

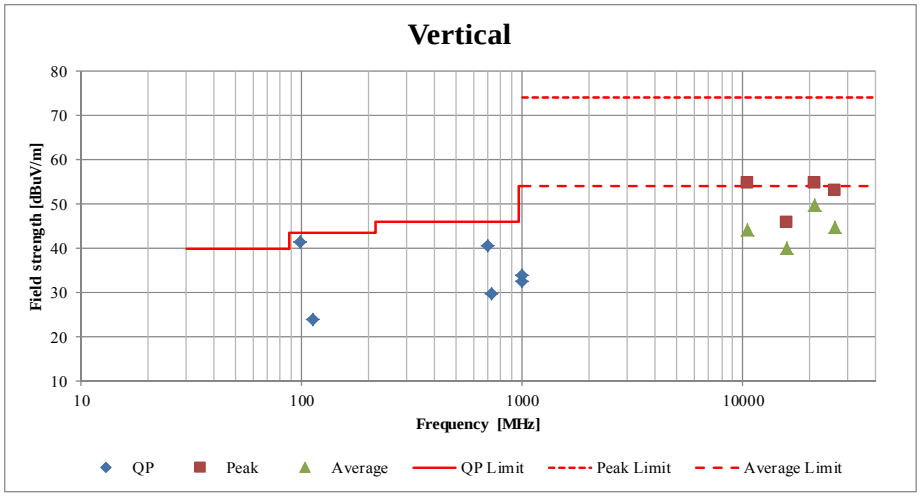
* Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Plot data, Worst case (Antenna : M/N 146153)

Report No.	11182619H				
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.2	No.2	No.3	No.2	No.3
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016	August 18, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH	23 deg. C / 58 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Takafumi Noguchi (30 MHz - 1000 MHz)
Mode	Tx 11ac-20 5260 MHz				





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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5180 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	57.2	32.0	5.8	34.1	-	60.9	73.9	13.0	
Hori	10360.000	PK	48.0	39.4	-2.2	34.5	-	50.7	73.9	23.2	
Hori	15540.000	PK	44.7	39.3	-0.7	33.6	-	49.7	73.9	24.2	Floor noise
Hori	20720.000	PK	46.7	38.1	-1.1	32.9	-	50.8	73.9	23.1	
Hori	5150.000	AV	44.6	32.0	5.8	34.1	0.2	48.5	53.9	5.4	*1)
Hori	10360.000	AV	39.4	39.4	-2.2	34.5	0.2	42.3	53.9	11.6	
Hori	15540.000	AV	34.5	39.3	-0.7	33.6	-	39.5	53.9	14.4	Floor noise
Hori	20720.000	AV	39.7	38.1	-1.1	32.9	0.2	44.0	53.9	9.9	
Vert	5150.000	PK	56.7	32.0	5.8	34.1	-	60.4	73.9	13.5	
Vert	10360.000	PK	48.8	39.4	-2.2	34.5	-	51.5	73.9	22.4	
Vert	15540.000	PK	44.5	39.3	-0.7	33.6	-	49.5	73.9	24.4	Floor noise
Vert	20720.000	PK	50.5	38.1	-1.1	32.9	-	54.6	73.9	19.3	
Vert	5150.000	AV	44.0	32.0	5.8	34.1	0.2	47.9	53.9	6.0	*1)
Vert	10360.000	AV	41.6	39.4	-2.2	34.5	0.2	44.5	53.9	9.4	
Vert	15540.000	AV	34.6	39.3	-0.7	33.6	-	39.6	53.9	14.3	Floor noise
Vert	20720.000	AV	46.8	38.1	-1.1	32.9	0.2	51.1	53.9	2.8	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

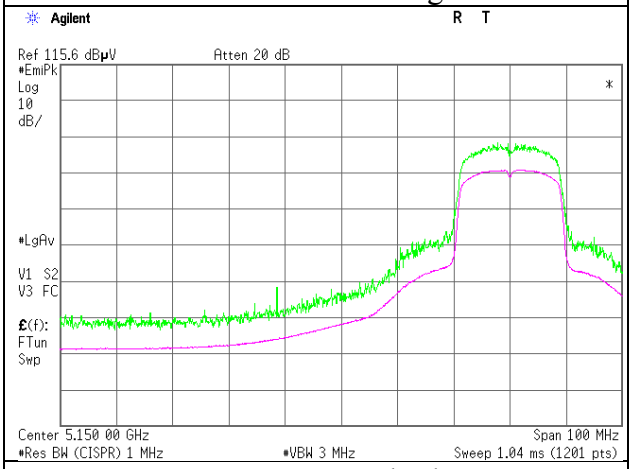
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5180 MHz

Horizontal

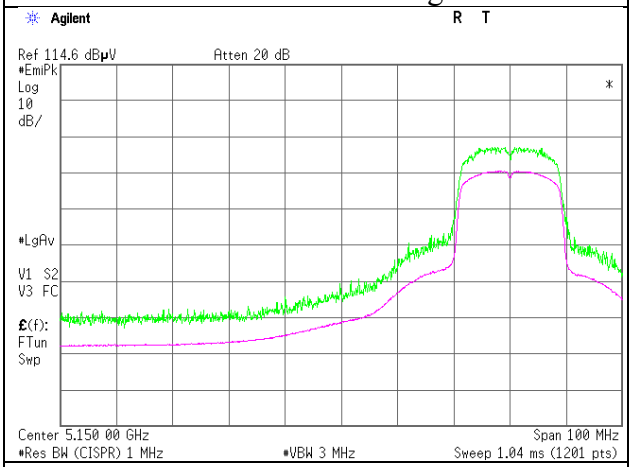
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H				
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.2	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016	August 19, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH	22deg. C / 48 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)	Takafumi Noguchi (30 MHz - 1000 MHz)
Mode	Tx 11ac-20 5260 MHz				

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	98.996	QP	47.4	9.6	8.0	32.2	-	32.8	43.5	10.7	
Hori	111.699	QP	24.0	11.3	8.2	32.2	-	11.3	43.5	32.2	
Hori	692.968	QP	42.3	19.7	12.4	32.1	-	42.3	46.0	3.7	
Hori	721.508	QP	30.6	20.0	12.5	32.0	-	31.1	46.0	14.9	
Hori	989.954	QP	30.1	22.4	13.8	30.5	-	35.8	53.9	18.1	
Hori	1000.000	QP	30.5	22.5	13.9	30.4	-	36.5	53.9	17.4	
Hori	10520.000	PK	49.6	39.8	-2.1	34.4	-	52.9	73.9	21.0	
Hori	15780.000	PK	45.0	38.9	-0.8	33.8	-	49.3	73.9	24.6	Floor noise
Hori	21040.000	PK	45.4	38.2	-1.0	33.1	-	49.5	73.9	24.4	
Hori	10520.000	AV	41.3	39.8	-2.1	34.4	0.2	44.8	53.9	9.1	
Hori	15780.000	AV	34.8	38.9	-0.8	33.8	-	39.1	53.9	14.8	Floor noise
Hori	21040.000	AV	39.0	38.2	-1.0	33.1	0.2	43.3	53.9	10.6	
Vert	98.996	QP	56.0	9.6	8.0	32.2	-	41.4	43.5	2.1	
Vert	111.699	QP	26.4	11.3	8.2	32.2	-	13.7	43.5	29.8	
Vert	692.968	QP	39.5	19.7	12.4	32.1	-	39.5	46.0	6.5	
Vert	721.508	QP	28.5	20.0	12.5	32.0	-	29.0	46.0	17.0	
Vert	989.954	QP	26.7	22.4	13.8	30.5	-	32.4	53.9	21.5	
Vert	1000.000	QP	25.8	22.5	13.9	30.4	-	31.8	53.9	22.1	
Vert	10520.000	PK	47.2	39.8	-2.1	34.4	-	50.5	73.9	23.4	
Vert	15780.000	PK	45.3	38.9	-0.8	33.8	-	49.6	73.9	24.3	Floor noise
Vert	21040.000	PK	49.6	38.2	-1.0	33.1	-	53.7	73.9	20.2	
Vert	10520.000	AV	38.8	39.8	-2.1	34.4	0.2	42.3	53.9	11.6	
Vert	15780.000	AV	34.7	38.9	-0.8	33.8	-	39.0	53.9	14.9	Floor noise
Vert	21040.000	AV	45.7	38.2	-1.0	33.1	0.2	50.0	53.9	3.9	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz -40 GHz)
Mode	Tx 11ac-20 5320 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	55.5	32.0	5.8	34.0	-	59.3	73.9	14.6	
Hori	10640.000	PK	45.6	40.0	-2.1	34.2	-	49.3	73.9	24.6	
Hori	15960.000	PK	44.6	38.5	-0.7	33.9	-	48.5	73.9	25.4	Floor noise
Hori	21280.000	PK	46.8	38.1	-1.0	33.0	-	50.9	73.9	23.0	
Hori	5350.000	AV	36.2	32.0	5.8	34.0	0.2	40.2	53.9	13.7	*1)
Hori	10640.000	AV	37.6	40.0	-2.1	34.2	0.2	41.5	53.9	12.4	
Hori	15960.000	AV	34.5	38.5	-0.7	33.9	-	38.4	53.9	15.5	Floor noise
Hori	21280.000	AV	40.3	38.1	-1.0	33.0	0.2	44.6	53.9	9.3	
Vert	5350.000	PK	55.9	32.0	5.8	34.0	-	59.7	73.9	14.2	
Vert	10640.000	PK	46.1	40.0	-2.1	34.2	-	49.8	73.9	24.1	
Vert	15960.000	PK	44.5	38.5	-0.7	33.9	-	48.4	73.9	25.5	Floor noise
Vert	21280.000	PK	51.3	38.1	-1.0	33.0	-	55.4	73.9	18.5	
Vert	5350.000	AV	36.4	32.0	5.8	34.0	0.2	40.4	53.9	13.5	*1)
Vert	10640.000	AV	40.2	40.0	-2.1	34.2	0.2	44.1	53.9	9.8	
Vert	15960.000	AV	34.8	38.5	-0.7	33.9	-	38.7	53.9	15.2	Floor noise
Vert	21280.000	AV	47.8	38.1	-1.0	33.0	0.2	52.1	53.9	1.8	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

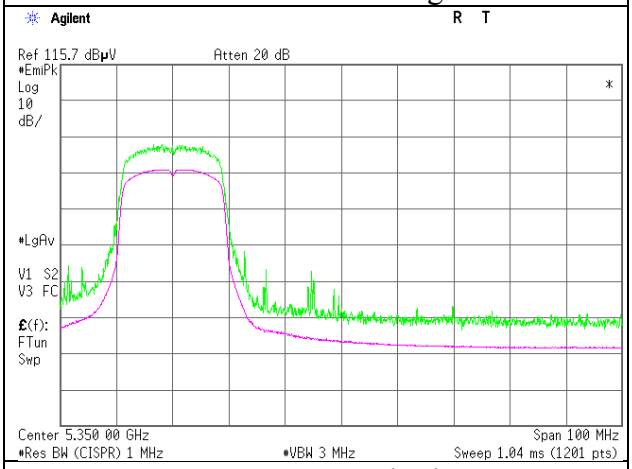
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5320 MHz

Horizontal

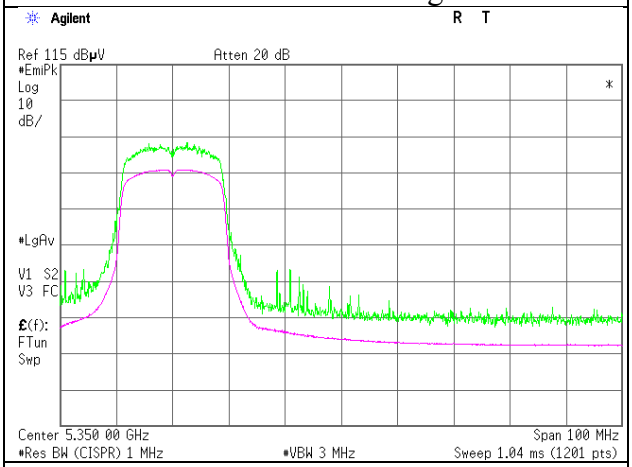
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5500 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	54.6	32.0	5.9	33.9	-	58.6	73.9	15.3	
Hori	5470.000	PK	57.6	32.0	5.9	33.9	-	61.6	73.9	12.3	
Hori	11000.000	PK	43.5	40.7	-2.0	33.9	-	48.3	73.9	25.6	
Hori	16500.000	PK	44.7	40.0	-0.6	33.4	-	50.7	73.9	23.2	Floor noise
Hori	22000.000	PK	47.2	38.0	-0.8	32.7	-	51.7	73.9	22.2	
Hori	5460.000	AV	39.5	32.0	5.9	33.9	0.2	43.7	53.9	10.2	*1)
Hori	5470.000	AV	42.3	32.0	5.9	33.9	0.2	46.5	53.9	7.4	*1)
Hori	11000.000	AV	35.5	40.7	-2.0	33.9	0.2	40.5	53.9	13.4	
Hori	16500.000	AV	34.7	40.0	-0.6	33.4	-	40.7	53.9	13.2	Floor noise
Hori	22000.000	AV	41.6	38.0	-0.8	32.7	0.2	46.3	53.9	7.6	
Vert	5460.000	PK	50.8	32.0	5.9	33.9	-	54.8	73.9	19.1	
Vert	5470.000	PK	54.6	32.0	5.9	33.9	-	58.6	73.9	15.3	
Vert	11000.000	PK	45.2	40.7	-2.0	33.9	-	50.0	73.9	23.9	
Vert	16500.000	PK	44.4	40.0	-0.6	33.4	-	50.4	73.9	23.5	Floor noise
Vert	22000.000	PK	50.3	38.0	-0.8	32.7	-	54.8	73.9	19.1	
Vert	5460.000	AV	33.5	32.0	5.9	33.9	0.2	37.7	53.9	16.2	*1)
Vert	5470.000	AV	34.8	32.0	5.9	33.9	0.2	39.0	53.9	14.9	*1)
Vert	11000.000	AV	37.9	40.7	-2.0	33.9	0.2	42.9	53.9	11.0	
Vert	16500.000	AV	34.8	40.0	-0.6	33.4	-	40.8	53.9	13.1	Floor noise
Vert	22000.000	AV	46.5	38.0	-0.8	32.7	0.2	51.2	53.9	2.7	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

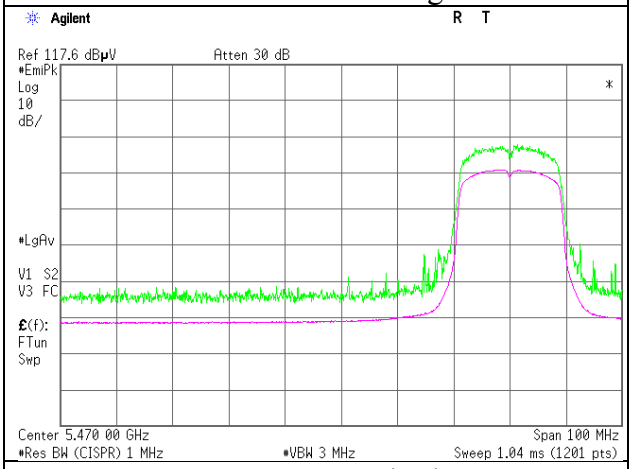
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5500 MHz

Horizontal

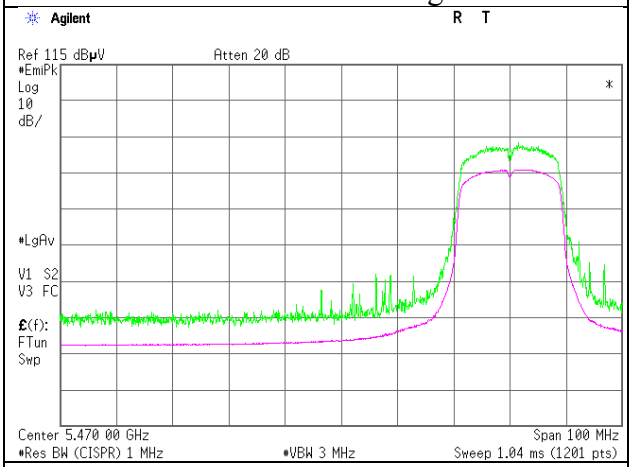
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5580 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11160.000	PK	44.7	40.6	-1.9	33.9	-	49.5	73.9	24.4	
Hori	16740.000	PK	44.8	40.7	-0.5	33.2	-	51.8	73.9	22.1	Floor noise
Hori	22320.000	PK	46.7	38.5	-0.7	32.5	-	52.0	73.9	21.9	
Hori	11160.000	AV	36.0	40.6	-1.9	33.9	0.2	41.0	53.9	12.9	
Hori	16740.000	AV	34.5	40.7	-0.5	33.2	-	41.5	53.9	12.4	Floor noise
Hori	22320.000	AV	40.1	38.5	-0.7	32.5	0.2	45.6	53.9	8.3	
Vert	11160.000	PK	44.2	40.6	-1.9	33.9	-	49.0	73.9	24.9	
Vert	16740.000	PK	45.0	40.7	-0.5	33.2	-	52.0	73.9	21.9	Floor noise
Vert	22320.000	PK	51.0	38.5	-0.7	32.5	-	56.3	73.9	17.6	
Vert	11160.000	AV	36.7	40.6	-1.9	33.9	0.2	41.7	53.9	12.2	
Vert	16740.000	AV	34.7	40.7	-0.5	33.2	-	41.7	53.9	12.2	Floor noise
Vert	22320.000	AV	47.2	38.5	-0.7	32.5	0.2	52.7	53.9	1.2	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 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	60.0	32.3	6.0	34.0	-	64.3	73.9	9.6	
Hori	11400.000	PK	44.0	40.4	-1.8	33.9	-	48.7	73.9	25.2	
Hori	17100.000	PK	43.4	41.8	-0.5	33.0	-	51.7	73.9	22.2	Floor noise
Hori	22800.000	PK	46.8	39.4	-0.6	32.4	-	53.2	73.9	20.7	
Hori	5725.000	AV	38.4	32.3	6.0	34.0	0.2	42.9	53.9	11.0	*1)
Hori	11400.000	AV	35.9	40.4	-1.8	33.9	0.2	40.8	53.9	13.1	
Hori	17100.000	AV	34.7	41.8	-0.5	33.0	-	43.0	53.9	10.9	Floor noise
Hori	22800.000	AV	39.9	39.4	-0.6	32.4	0.2	46.5	53.9	7.4	
Vert	5725.000	PK	59.6	32.3	6.0	34.0	-	63.9	73.9	10.0	
Vert	11400.000	PK	47.4	40.4	-1.8	33.9	-	52.1	73.9	21.8	
Vert	17100.000	PK	44.7	41.8	-0.5	33.0	-	53.0	73.9	20.9	Floor noise
Vert	22800.000	PK	48.5	39.4	-0.6	32.4	-	54.9	73.9	19.0	
Vert	5725.000	AV	37.9	32.3	6.0	34.0	0.2	42.4	53.9	11.5	*1)
Vert	11400.000	AV	38.5	40.4	-1.8	33.9	0.2	43.4	53.9	10.5	
Vert	17100.000	AV	34.6	41.8	-0.5	33.0	-	42.9	53.9	11.0	Floor noise
Vert	22800.000	AV	43.1	39.4	-0.6	32.4	0.2	49.7	53.9	4.2	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

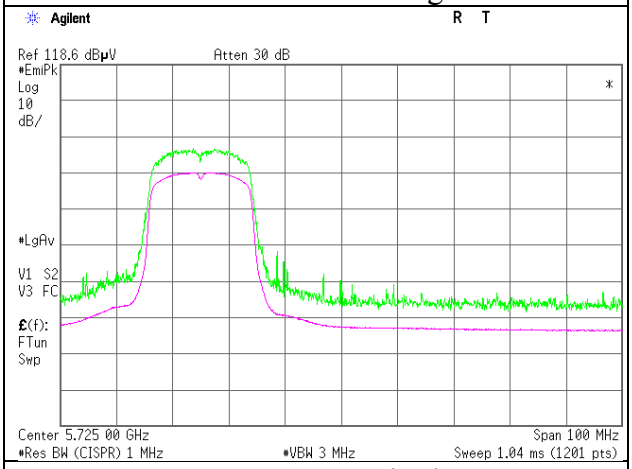
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5700 MHz

Horizontal

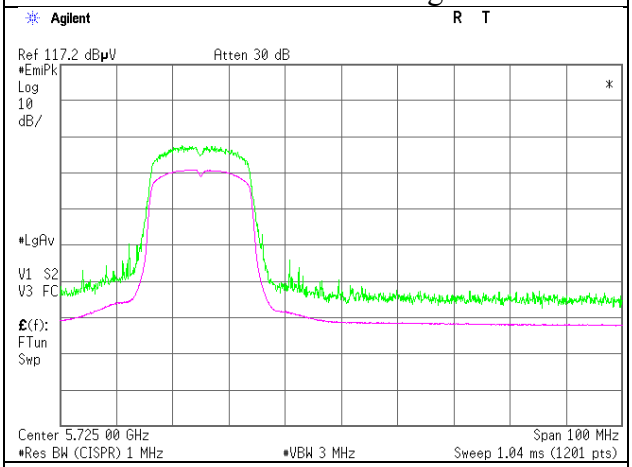
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.4	No.2	No.2
Date	June 22, 2016	September 8, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5745 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5650.000	PK	41.5	31.3	7.8	31.4	-	49.2	68.2	19.0	
Hori	5700.000	PK	45.7	31.4	7.8	31.4	-	53.5	105.2	51.7	
Hori	5715.000	PK	53.4	31.4	7.8	31.4	-	61.2	109.4	48.2	
Hori	5720.000	PK	54.6	31.4	7.8	31.4	-	62.4	110.8	48.4	
Hori	5725.000	PK	56.4	31.4	7.8	31.4	-	64.2	122.2	58.0	
Hori	11490.000	PK	43.1	40.3	-1.6	33.9	-	47.9	73.9	26.0	
Hori	17235.000	PK	42.3	42.4	-0.4	33.0	-	51.3	73.9	22.6	Floor noise
Hori	22980.000	PK	44.6	39.7	-0.5	32.3	-	51.5	73.9	22.4	
Hori	11490.000	AV	35.8	40.3	-1.6	33.9	0.2	40.8	53.9	13.1	
Hori	17235.000	AV	34.6	42.4	-0.4	33.0	-	43.6	53.9	10.3	Floor noise
Hori	22980.000	AV	35.4	39.7	-0.5	32.3	0.2	42.5	53.9	11.4	
Vert	5650.000	PK	45.9	31.3	7.8	31.4	-	53.6	68.2	14.6	
Vert	5700.000	PK	46.2	31.4	7.8	31.4	-	54.0	105.2	51.2	
Vert	5715.000	PK	52.7	31.4	7.8	31.4	-	60.5	109.4	48.9	
Vert	5720.000	PK	54.7	31.4	7.8	31.4	-	62.5	110.8	48.3	
Vert	5725.000	PK	58.3	31.4	7.8	31.4	-	66.1	122.2	56.1	
Vert	11490.000	PK	48.0	40.3	-1.6	33.9	-	52.8	73.9	21.1	
Vert	17235.000	PK	43.1	42.4	-0.4	33.0	-	52.1	73.9	21.8	Floor noise
Vert	22980.000	PK	47.5	39.7	-0.5	32.3	-	54.4	73.9	19.5	
Vert	11490.000	AV	39.0	40.3	-1.6	33.9	0.2	44.0	53.9	9.9	
Vert	17235.000	AV	34.7	42.4	-0.4	33.0	-	43.7	53.9	10.2	Floor noise
Vert	22980.000	AV	42.4	39.7	-0.5	32.3	0.2	49.5	53.9	4.4	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

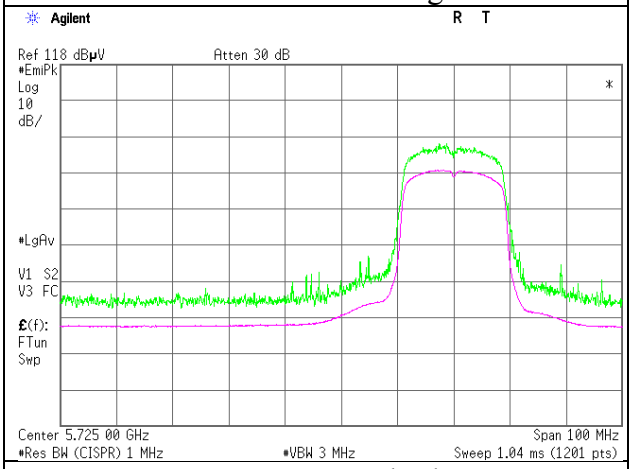
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5745 MHz

Horizontal

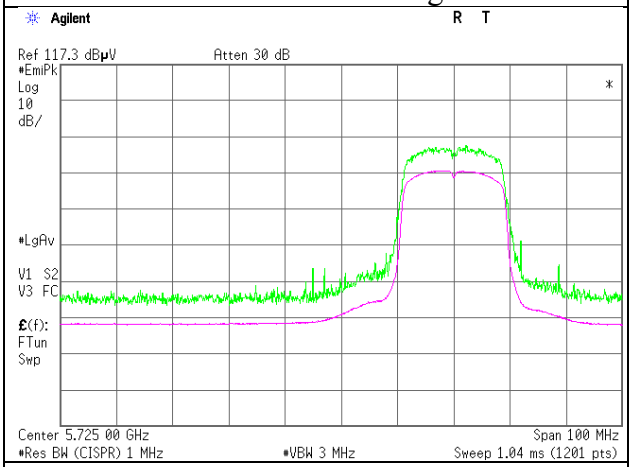
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5785 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11570.000	PK	42.1	40.1	-1.6	33.9	-	46.7	73.9	27.2	
Hori	17355.000	PK	43.2	42.9	-0.4	33.0	-	52.7	73.9	21.2	Floor noise
Hori	23140.000	PK	44.6	39.6	-0.5	32.3	-	51.4	73.9	22.5	Floor noise
Hori	11570.000	AV	35.4	40.1	-1.6	33.9	0.2	40.2	53.9	13.7	
Hori	17355.000	AV	34.2	42.9	-0.4	33.0	-	43.7	53.9	10.2	Floor noise
Hori	23140.000	AV	35.4	39.6	-0.5	32.3	-	42.2	53.9	11.7	Floor noise
Vert	11570.000	PK	46.7	40.1	-1.6	33.9	-	51.3	73.9	22.6	
Vert	17355.000	PK	43.0	42.9	-0.4	33.0	-	52.5	73.9	21.4	Floor noise
Vert	23140.000	PK	47.5	39.6	-0.5	32.3	-	54.3	73.9	19.6	
Vert	11570.000	AV	37.6	40.1	-1.6	33.9	0.2	42.4	53.9	11.5	
Vert	17355.000	AV	34.1	42.9	-0.4	33.0	-	43.6	53.9	10.3	Floor noise
Vert	23140.000	AV	42.0	39.6	-0.5	32.3	0.2	49.0	53.9	4.9	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.4	No.2	No.2
Date	June 22, 2016	September 8, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 5825 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	50.6	31.6	7.8	31.5	-	58.5	122.2	63.7	
Hori	5855.000	PK	48.7	31.6	7.8	31.5	-	56.6	110.8	54.2	
Hori	5860.000	PK	48.0	31.6	7.8	31.5	-	55.9	109.4	53.5	
Hori	5875.000	PK	45.4	31.6	7.8	31.5	-	53.3	105.2	51.9	
Hori	5925.000	PK	46.7	31.6	7.8	31.5	-	54.6	68.2	13.6	
Hori	11650.000	PK	43.7	40.0	-1.6	33.9	-	48.2	73.9	25.7	
Hori	17475.000	PK	41.7	43.4	-0.4	33.1	-	51.6	73.9	22.3	Floor noise
Hori	23300.000	PK	44.6	39.5	-0.5	32.2	-	51.4	73.9	22.5	Floor noise
Hori	11650.000	AV	35.9	40.0	-1.6	33.9	0.2	40.6	53.9	13.3	
Hori	17475.000	AV	34.3	43.4	-0.4	33.1	-	44.2	53.9	9.7	Floor noise
Hori	23300.000	AV	35.4	39.5	-0.5	32.2	-	42.2	53.9	11.7	Floor noise
Vert	5850.000	PK	49.9	31.6	7.8	31.5	-	57.8	122.2	64.4	
Vert	5855.000	PK	49.0	31.6	7.8	31.5	-	56.9	110.8	53.9	
Vert	5860.000	PK	47.6	31.6	7.8	31.5	-	55.5	109.4	53.9	
Vert	5875.000	PK	45.3	31.6	7.8	31.5	-	53.2	105.2	52.0	
Vert	5925.000	PK	44.8	31.6	7.8	31.5	-	52.7	68.2	15.5	
Vert	11650.000	PK	46.7	40.0	-1.6	33.9	-	51.2	73.9	22.7	
Vert	17475.000	PK	43.4	43.4	-0.4	33.1	-	53.3	73.9	20.6	Floor noise
Vert	23300.000	PK	49.2	39.5	-0.5	32.2	-	56.0	73.9	17.9	
Vert	11650.000	AV	37.7	40.0	-1.6	33.9	0.2	42.4	53.9	11.5	
Vert	17475.000	AV	34.3	43.4	-0.4	33.1	-	44.2	53.9	9.7	Floor noise
Vert	23300.000	AV	42.8	39.5	-0.5	32.2	0.2	49.8	53.9	4.1	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

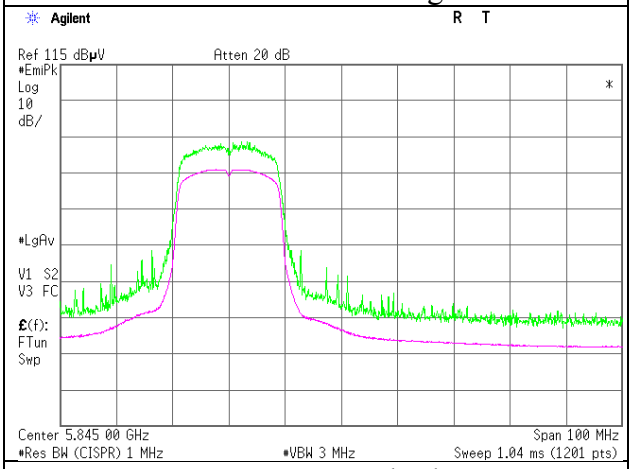
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5825 MHz

Horizontal

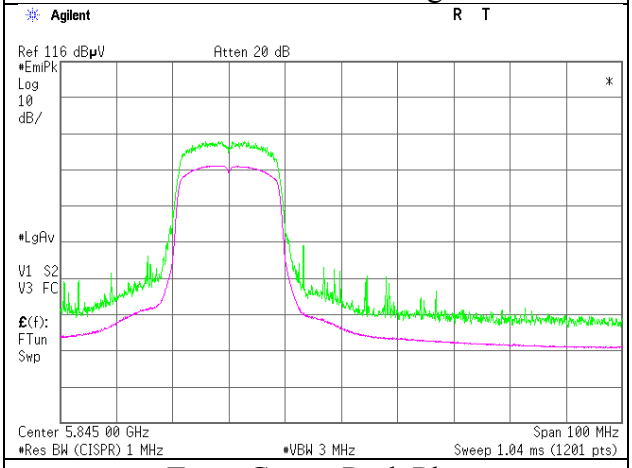
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5190 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	54.2	32.0	5.8	34.1	-	57.9	73.9	16.0	
Hori	10380.000	PK	47.0	39.5	-2.2	34.5	-	49.8	73.9	24.1	
Hori	15570.000	PK	44.8	39.2	-0.7	33.7	-	49.6	73.9	24.3	Floor noise
Hori	20760.000	PK	46.0	38.1	-1.0	32.9	-	50.2	73.9	23.7	
Hori	5150.000	AV	37.9	32.0	5.8	34.1	0.4	42.0	53.9	11.9	*1)
Hori	10380.000	AV	38.7	39.5	-2.2	34.5	0.4	41.9	53.9	12.0	
Hori	15570.000	AV	35.3	39.2	-0.7	33.7	-	40.1	53.9	13.8	Floor noise
Hori	20760.000	AV	39.4	38.1	-1.0	32.9	0.4	44.0	53.9	9.9	
Vert	5150.000	PK	53.6	32.0	5.8	34.1	-	57.3	73.9	16.6	
Vert	10380.000	PK	46.8	39.5	-2.2	34.5	-	49.6	73.9	24.3	
Vert	15570.000	PK	42.9	39.2	-0.7	33.7	-	47.7	73.9	26.2	Floor noise
Vert	20760.000	PK	49.8	38.1	-1.0	32.9	-	54.0	73.9	19.9	
Vert	5150.000	AV	37.6	32.0	5.8	34.1	0.4	41.7	53.9	12.2	*1)
Vert	10380.000	AV	39.9	39.5	-2.2	34.5	0.4	43.1	53.9	10.8	
Vert	15570.000	AV	34.4	39.2	-0.7	33.7	-	39.2	53.9	14.7	Floor noise
Vert	20760.000	AV	46.1	38.1	-1.0	32.9	0.4	50.7	53.9	3.2	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

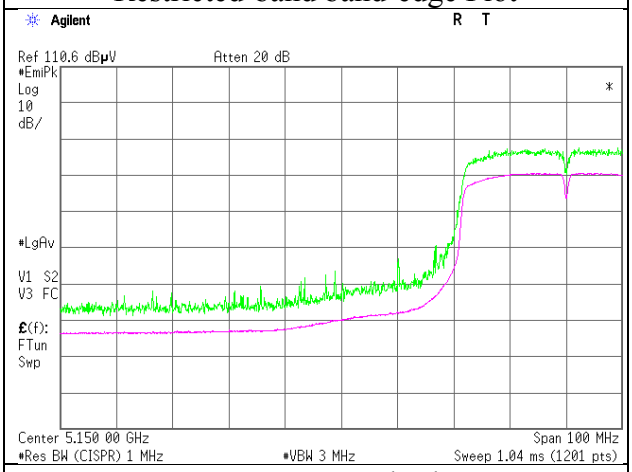
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5190 MHz

Horizontal

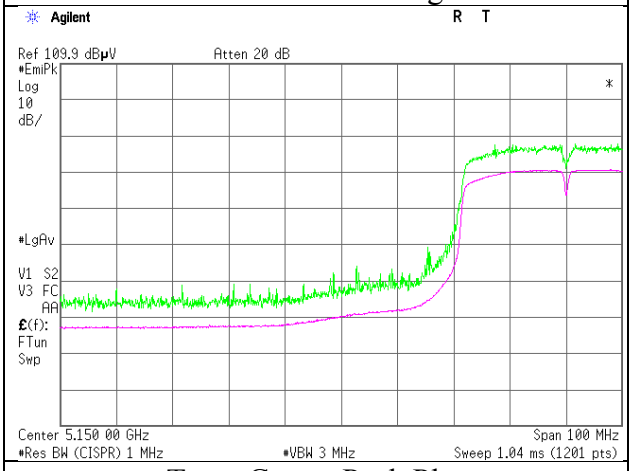
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5270 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10540.000	PK	46.7	39.8	-2.1	34.3	-	50.1	73.9	23.8	
Hori	15810.000	PK	44.1	38.8	-0.7	33.8	-	48.4	73.9	25.5	Floor noise
Hori	21080.000	PK	45.9	38.2	-1.0	33.0	-	50.1	73.9	23.8	
Hori	10540.000	AV	38.4	39.8	-2.1	34.3	0.4	42.2	53.9	11.7	
Hori	15810.000	AV	34.9	38.8	-0.7	33.8	-	39.2	53.9	14.7	Floor noise
Hori	21080.000	AV	39.4	38.2	-1.0	33.0	0.4	44.0	53.9	9.9	
Vert	10540.000	PK	46.7	39.8	-2.1	34.3	-	50.1	73.9	23.8	
Vert	15810.000	PK	42.5	38.8	-0.7	33.8	-	46.8	73.9	27.1	Floor noise
Vert	21080.000	PK	50.6	38.2	-1.0	33.0	-	54.8	73.9	19.1	
Vert	10540.000	AV	38.7	39.8	-2.1	34.3	0.4	42.5	53.9	11.4	
Vert	15810.000	AV	34.4	38.8	-0.7	33.8	-	38.7	53.9	15.2	Floor noise
Vert	21080.000	AV	46.7	38.2	-1.0	33.0	0.4	51.3	53.9	2.6	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5310 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	58.5	32.0	5.8	34.0	-	62.3	73.9	11.6	
Hori	10620.000	PK	45.5	40.0	-2.1	34.3	-	49.1	73.9	24.8	
Hori	15930.000	PK	44.8	38.6	-0.6	33.9	-	48.9	73.9	25.0	Floor noise
Hori	21240.000	PK	46.3	38.2	-1.0	33.0	-	50.5	73.9	23.4	
Hori	5350.000	AV	39.6	32.0	5.8	34.0	0.4	43.8	53.9	10.1	*1)
Hori	10620.000	AV	38.2	40.0	-2.1	34.3	0.4	42.2	53.9	11.7	
Hori	15930.000	AV	35.3	38.6	-0.6	33.9	-	39.4	53.9	14.5	Floor noise
Hori	21240.000	AV	40.8	38.2	-1.0	33.0	0.4	45.4	53.9	8.5	
Vert	5350.000	PK	57.1	32.0	5.8	34.0	-	60.9	73.9	13.0	
Vert	10620.000	PK	46.0	40.0	-2.1	34.3	-	49.6	73.9	24.3	
Vert	15930.000	PK	42.3	38.6	-0.6	33.9	-	46.4	73.9	27.5	Floor noise
Vert	21240.000	PK	50.7	38.2	-1.0	33.0	-	54.9	73.9	19.0	
Vert	5350.000	AV	38.8	32.0	5.8	34.0	0.4	43.0	53.9	10.9	*1)
Vert	10620.000	AV	39.6	40.0	-2.1	34.3	0.4	43.6	53.9	10.3	
Vert	15930.000	AV	34.7	38.6	-0.6	33.9	-	38.8	53.9	15.1	Floor noise
Vert	21240.000	AV	47.4	38.2	-1.0	33.0	0.4	52.0	53.9	1.9	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

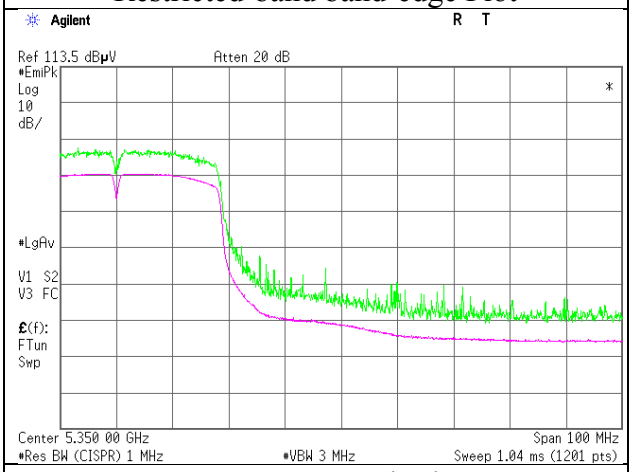
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5310 MHz

Horizontal

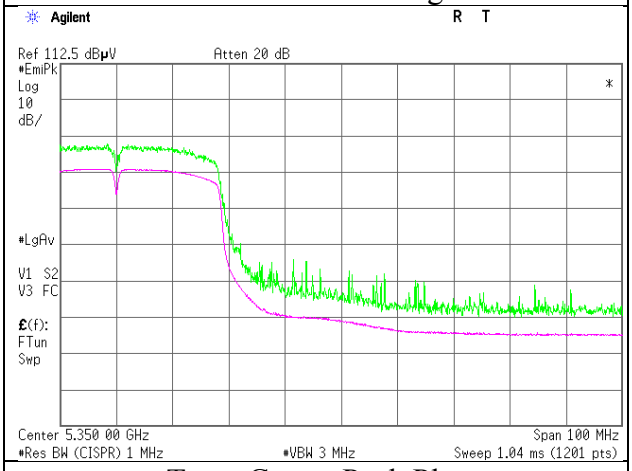
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5510 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	55.0	32.0	5.9	33.9	-	59.0	73.9	14.9	
Hori	5470.000	PK	56.8	32.0	5.9	33.9	-	60.8	73.9	13.1	
Hori	11020.000	PK	44.4	40.7	-2.0	33.9	-	49.2	73.9	24.7	
Hori	16530.000	PK	44.8	40.0	-0.6	33.4	-	50.8	73.9	23.1	Floor noise
Hori	22040.000	PK	47.6	38.0	-0.8	32.6	-	52.2	73.9	21.7	
Hori	5460.000	AV	35.6	32.0	5.9	33.9	0.4	40.0	53.9	13.9	*1)
Hori	5470.000	AV	39.9	32.0	5.9	33.9	0.4	44.3	53.9	9.6	*1)
Hori	11020.000	AV	36.5	40.7	-2.0	33.9	0.4	41.7	53.9	12.2	
Hori	16530.000	AV	35.3	40.0	-0.6	33.4	-	41.3	53.9	12.6	Floor noise
Hori	22040.000	AV	41.3	38.0	-0.8	32.6	0.4	46.3	53.9	7.6	
Vert	5460.000	PK	56.2	32.0	5.9	33.9	-	60.2	73.9	13.7	
Vert	5470.000	PK	58.2	32.0	5.9	33.9	-	62.2	73.9	11.7	
Vert	11020.000	PK	44.6	40.7	-2.0	33.9	-	49.4	73.9	24.5	
Vert	16530.000	PK	42.1	40.0	-0.6	33.4	-	48.1	73.9	25.8	Floor noise
Vert	22040.000	PK	50.6	38.0	-0.8	32.6	-	55.2	73.9	18.7	
Vert	5460.000	AV	36.5	32.0	5.9	33.9	0.4	40.9	53.9	13.0	*1)
Vert	5470.000	AV	41.0	32.0	5.9	33.9	0.4	45.4	53.9	8.5	*1)
Vert	11020.000	AV	35.3	40.7	-2.0	33.9	0.4	40.5	53.9	13.4	
Vert	16530.000	AV	34.2	40.0	-0.6	33.4	-	40.2	53.9	13.7	Floor noise
Vert	22040.000	AV	47.0	38.0	-0.8	32.6	0.4	52.0	53.9	1.9	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

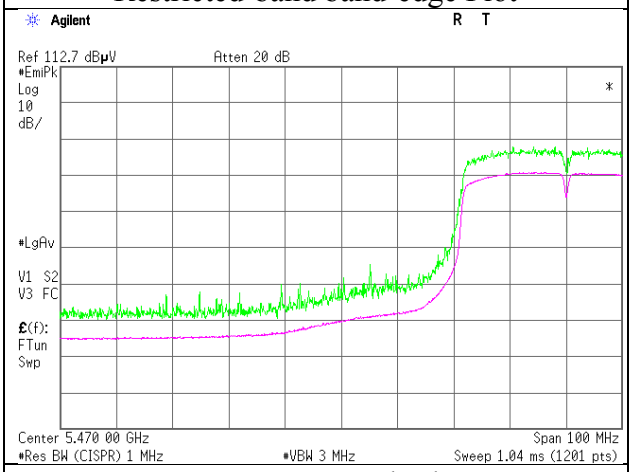
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5510 MHz

Horizontal

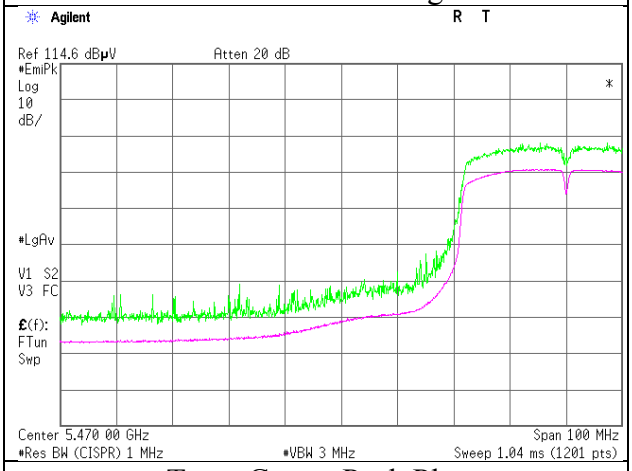
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5550 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	11100.000	PK	46.3	40.6	-1.9	33.9	-	51.1	73.9	22.8	
Hori	16650.000	PK	43.9	40.4	-0.6	33.3	-	50.4	73.9	23.5	Floor noise
Hori	22200.000	PK	47.2	38.3	-0.7	32.6	-	52.2	73.9	21.7	
Hori	11100.000	AV	38.2	40.6	-1.9	33.9	0.4	43.4	53.9	10.5	
Hori	16650.000	AV	35.6	40.4	-0.6	33.3	-	42.1	53.9	11.8	Floor noise
Hori	22200.000	AV	41.2	38.3	-0.7	32.6	0.4	46.6	53.9	7.3	
Vert	11100.000	PK	46.8	40.6	-1.9	33.9	-	51.6	73.9	22.3	
Vert	16650.000	PK	42.3	40.4	-0.6	33.3	-	48.8	73.9	25.1	Floor noise
Vert	22200.000	PK	50.0	38.3	-0.7	32.6	-	55.0	73.9	18.9	
Vert	11100.000	AV	38.3	40.6	-1.9	33.9	0.4	43.5	53.9	10.4	
Vert	16650.000	AV	34.2	40.4	-0.6	33.3	-	40.7	53.9	13.2	Floor noise
Vert	22200.000	AV	46.1	38.3	-0.7	32.6	0.4	51.5	53.9	2.4	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 11, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5670 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	53.7	32.3	6.0	34.0	-	58.0	73.9	15.9	
Hori	11340.000	PK	45.2	40.4	-1.8	33.9	-	49.9	73.9	24.0	
Hori	17010.000	PK	44.1	41.4	-0.5	33.0	-	52.0	73.9	21.9	Floor noise
Hori	22680.000	PK	46.6	39.2	-0.6	32.4	-	52.8	73.9	21.1	
Hori	5725.000	AV	36.1	32.3	6.0	34.0	0.4	40.8	53.9	13.1	*1)
Hori	11340.000	AV	36.3	40.4	-1.8	33.9	0.4	41.4	53.9	12.5	
Hori	17010.000	AV	35.2	41.4	-0.5	33.0	-	43.1	53.9	10.8	Floor noise
Hori	22680.000	AV	39.6	39.2	-0.6	32.4	0.4	46.2	53.9	7.7	
Vert	5725.000	PK	53.2	32.3	6.0	34.0	-	57.5	73.9	16.4	
Vert	11340.000	PK	46.3	40.4	-1.8	33.9	-	51.0	73.9	22.9	
Vert	17010.000	PK	42.5	41.4	-0.5	33.0	-	50.4	73.9	23.5	Floor noise
Vert	22680.000	PK	50.1	39.2	-0.6	32.4	-	56.3	73.9	17.6	
Vert	5725.000	AV	36.3	32.3	6.0	34.0	0.4	41.0	53.9	12.9	*1)
Vert	11340.000	AV	37.9	40.4	-1.8	33.9	0.4	43.0	53.9	10.9	
Vert	17010.000	AV	34.4	41.4	-0.5	33.0	-	42.3	53.9	11.6	Floor noise
Vert	22680.000	AV	45.6	39.2	-0.6	32.4	0.4	52.2	53.9	1.7	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

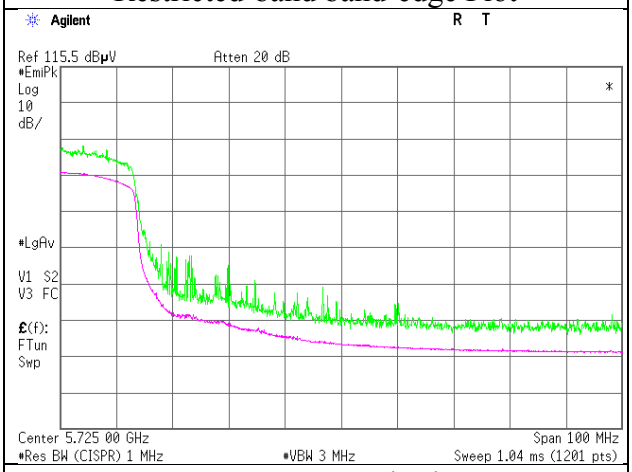
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-40 5670 MHz

Horizontal

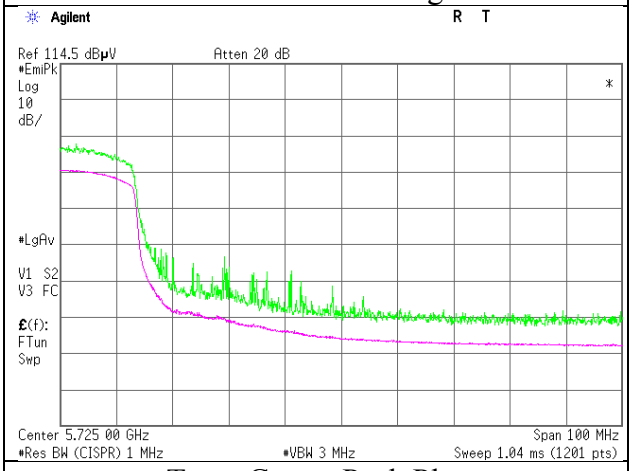
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.4	No.2	No.2
Date	June 22, 2016	September 8, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5755 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5650.000	PK	45.9	31.3	7.8	31.4	-	53.6	68.2	14.6	
Hori	5700.000	PK	48.9	31.4	7.8	31.4	-	56.7	105.2	48.5	
Hori	5715.000	PK	51.1	31.4	7.8	31.4	-	58.9	109.4	50.5	
Hori	5720.000	PK	52.3	31.4	7.8	31.4	-	60.1	110.8	50.7	
Hori	5725.000	PK	54.7	31.4	7.8	31.4	-	62.5	122.2	59.7	
Hori	11510.000	PK	43.8	40.3	-1.6	33.9	-	48.6	73.9	25.3	
Hori	17265.000	PK	44.1	42.5	-0.4	33.0	-	53.2	73.9	20.7	Floor noise
Hori	23020.000	PK	45.3	39.7	-0.5	32.3	-	52.2	73.9	21.7	Floor noise
Hori	11510.000	AV	35.2	40.3	-1.6	33.9	0.4	40.4	53.9	13.5	
Hori	17265.000	AV	35.2	42.5	-0.4	33.0	-	44.3	53.9	9.6	Floor noise
Hori	23020.000	AV	36.1	39.7	-0.5	32.3	-	43.0	53.9	10.9	Floor noise
Vert	5650.000	PK	46.4	31.3	7.8	31.4	-	54.1	68.2	14.1	
Vert	5700.000	PK	50.4	31.4	7.8	31.4	-	58.2	105.2	47.0	
Vert	5715.000	PK	51.7	31.4	7.8	31.4	-	59.5	109.4	49.9	
Vert	5720.000	PK	54.6	31.4	7.8	31.4	-	62.4	110.8	48.4	
Vert	5725.000	PK	58.0	31.4	7.8	31.4	-	65.8	122.2	56.4	
Vert	11510.000	PK	44.6	40.3	-1.6	33.9	-	49.4	73.9	24.5	
Vert	17265.000	PK	42.5	42.5	-0.4	33.0	-	51.6	73.9	22.3	Floor noise
Vert	23020.000	PK	47.8	39.7	-0.5	32.3	-	54.7	73.9	19.2	
Vert	11510.000	AV	35.4	40.3	-1.6	33.9	0.4	40.6	53.9	13.3	
Vert	17265.000	AV	34.4	42.5	-0.4	33.0	-	43.5	53.9	10.4	Floor noise
Vert	23020.000	AV	42.3	39.7	-0.5	32.3	0.4	49.6	53.9	4.3	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

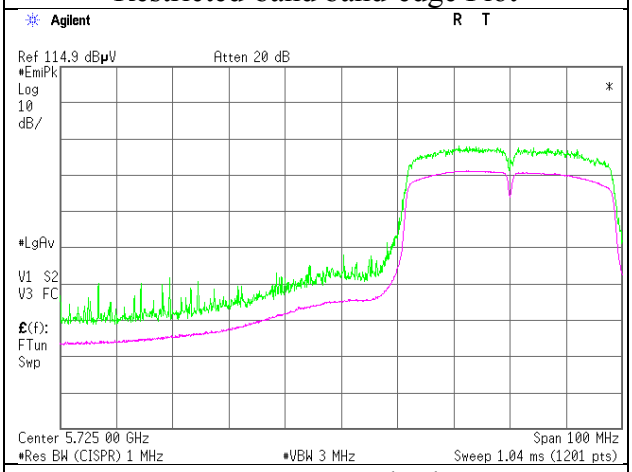
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-40 5755 MHz

Horizontal

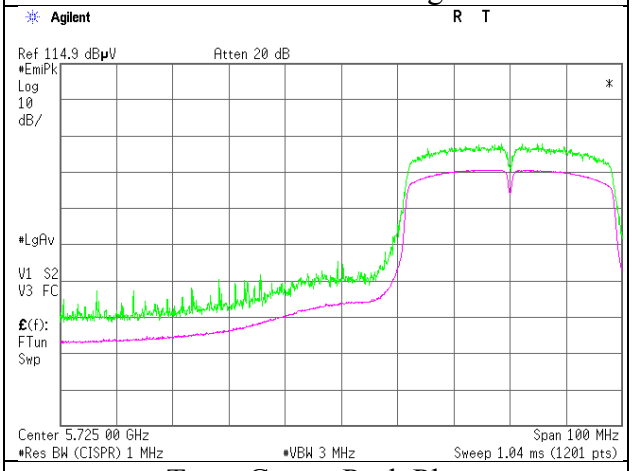
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.4	No.2	No.2
Date	June 22, 2016	September 8, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 5795 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5850.000	PK	48.3	31.6	7.8	31.5	-	56.2	122.2	66.0	
Hori	5855.000	PK	47.9	31.6	7.8	31.5	-	55.8	110.8	55.0	
Hori	5860.000	PK	46.1	31.6	7.8	31.5	-	54.0	109.4	55.4	
Hori	5875.000	PK	44.1	31.6	7.8	31.5	-	52.0	105.2	53.2	
Hori	5925.000	PK	42.3	31.6	7.8	31.5	-	50.2	68.2	18.0	
Hori	11590.000	PK	43.7	40.1	-1.6	33.9	-	48.3	73.9	25.6	
Hori	17385.000	PK	44.3	43.0	-0.4	33.0	-	53.9	73.9	20.0	Floor noise
Hori	23180.000	PK	45.3	39.6	-0.5	32.3	-	52.1	73.9	21.8	Floor noise
Hori	11590.000	AV	35.6	40.1	-1.6	33.9	0.4	40.6	53.9	13.3	
Hori	17385.000	AV	35.1	43.0	-0.4	33.0	-	44.7	53.9	9.2	Floor noise
Hori	23180.000	AV	36.1	39.6	-0.5	32.3	-	42.9	53.9	11.0	Floor noise
Vert	5850.000	PK	45.8	31.6	7.8	31.5	-	53.7	122.2	68.5	
Vert	5855.000	PK	43.6	31.6	7.8	31.5	-	51.5	110.8	59.3	
Vert	5860.000	PK	43.2	31.6	7.8	31.5	-	51.1	109.4	58.3	
Vert	5875.000	PK	43.0	31.6	7.8	31.5	-	50.9	105.2	54.3	
Vert	5925.000	PK	42.0	31.6	7.8	31.5	-	49.9	68.2	18.3	
Vert	11590.000	PK	46.1	40.1	-1.6	33.9	-	50.7	73.9	23.2	
Vert	17385.000	PK	42.5	43.0	-0.4	33.0	-	52.1	73.9	21.8	Floor noise
Vert	23180.000	PK	47.5	39.6	-0.5	32.3	-	54.3	73.9	19.6	
Vert	11590.000	AV	36.5	40.1	-1.6	33.9	0.4	41.5	53.9	12.4	
Vert	17385.000	AV	34.4	43.0	-0.4	33.0	-	44.0	53.9	9.9	Floor noise
Vert	23180.000	AV	41.4	39.6	-0.5	32.3	0.4	48.6	53.9	5.3	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

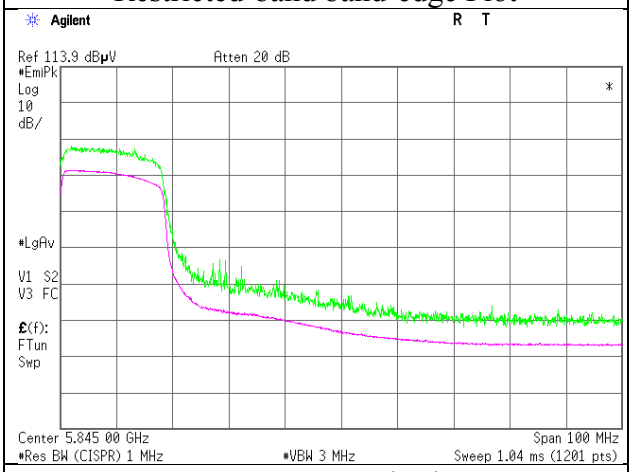
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-40 5795 MHz

Horizontal

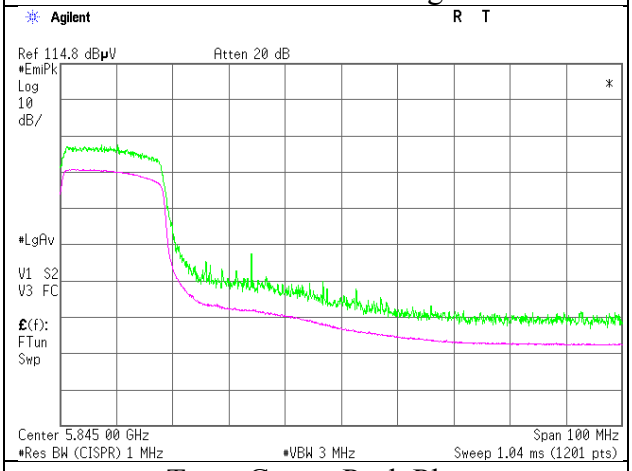
Restricted-band band-edge Plot



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

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 12, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	23deg. C / 58 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5210 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5150.000	PK	51.5	32.0	5.8	34.1	-	55.2	73.9	18.7	
Hori	10420.000	PK	46.6	39.6	-2.2	34.5	-	49.5	73.9	24.4	
Hori	15630.000	PK	46.5	39.1	-0.8	33.7	-	51.1	73.9	22.8	Floor noise
Hori	20840.000	PK	46.6	38.2	-1.0	33.0	-	50.8	73.9	23.1	
Hori	5150.000	AV	38.8	32.0	5.8	34.1	0.7	43.2	53.9	10.7	*1)
Hori	10420.000	AV	38.1	39.6	-2.2	34.5	0.7	41.7	53.9	12.2	
Hori	15630.000	AV	37.2	39.1	-0.8	33.7	-	41.8	53.9	12.1	Floor noise
Hori	20840.000	AV	40.2	38.2	-1.0	33.0	0.7	45.1	53.9	8.8	
Vert	5150.000	PK	51.4	32.0	5.8	34.1	-	55.1	73.9	18.8	
Vert	10420.000	PK	46.8	39.6	-2.2	34.5	-	49.7	73.9	24.2	
Vert	15630.000	PK	45.3	39.1	-0.8	33.7	-	49.9	73.9	24.0	Floor noise
Vert	20840.000	PK	50.5	38.2	-1.0	33.0	-	54.7	73.9	19.2	
Vert	5150.000	AV	38.8	32.0	5.8	34.1	0.7	43.2	53.9	10.7	*1)
Vert	10420.000	AV	38.5	39.6	-2.2	34.5	0.7	42.1	53.9	11.8	
Vert	15630.000	AV	36.7	39.1	-0.8	33.7	-	41.3	53.9	12.6	Floor noise
Vert	20840.000	AV	47.0	38.2	-1.0	33.0	0.7	51.9	53.9	2.0	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

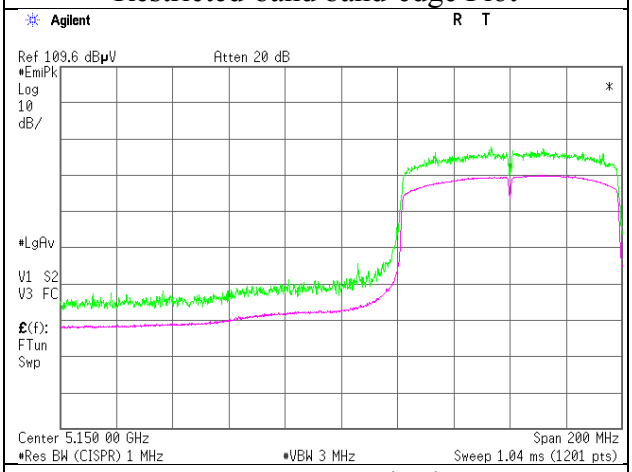
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5210 MHz

Horizontal

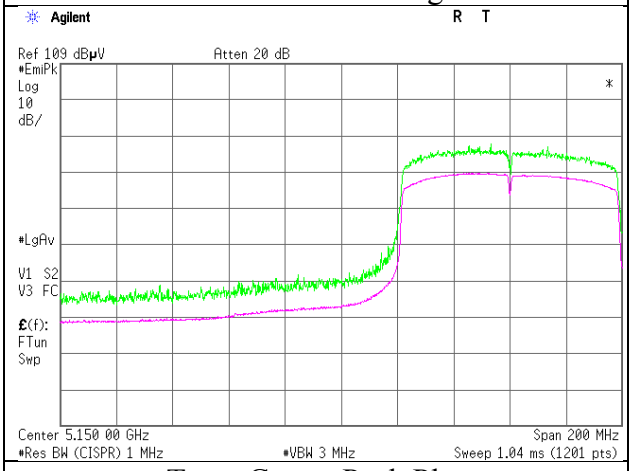
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 12, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	23deg. C / 58 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5290 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5350.000	PK	55.4	32.0	5.8	34.0	-	59.2	73.9	14.7	
Hori	10580.000	PK	45.8	39.9	-2.1	34.3	-	49.3	73.9	24.6	
Hori	15870.000	PK	46.2	38.7	-0.7	33.8	-	50.4	73.9	23.5	Floor noise
Hori	21160.000	PK	45.5	38.2	-1.0	33.0	-	49.7	73.9	24.2	
Hori	5350.000	AV	40.1	32.0	5.8	34.0	0.7	44.6	53.9	9.3	*1)
Hori	10580.000	AV	37.2	39.9	-2.1	34.3	0.7	41.4	53.9	12.5	
Hori	15870.000	AV	37.1	38.7	-0.7	33.8	-	41.3	53.9	12.6	Floor noise
Hori	21160.000	AV	39.8	38.2	-1.0	33.0	0.7	44.7	53.9	9.2	
Vert	5350.000	PK	54.6	32.0	5.8	34.0	-	58.4	73.9	15.5	
Vert	10580.000	PK	45.2	39.9	-2.1	34.3	-	48.7	73.9	25.2	
Vert	15870.000	PK	46.0	38.7	-0.7	33.8	-	50.2	73.9	23.7	Floor noise
Vert	21160.000	PK	49.5	38.2	-1.0	33.0	-	53.7	73.9	20.2	
Vert	5350.000	AV	39.9	32.0	5.8	34.0	0.7	44.4	53.9	9.5	*1)
Vert	10580.000	AV	37.5	39.9	-2.1	34.3	0.7	41.7	53.9	12.2	
Vert	15870.000	AV	36.3	38.7	-0.7	33.8	-	40.5	53.9	13.4	Floor noise
Vert	21160.000	AV	46.2	38.2	-1.0	33.0	0.7	51.1	53.9	2.8	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

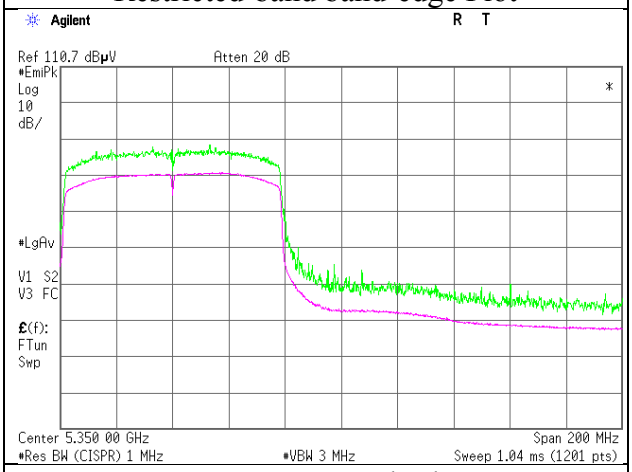
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5290 MHz

Horizontal

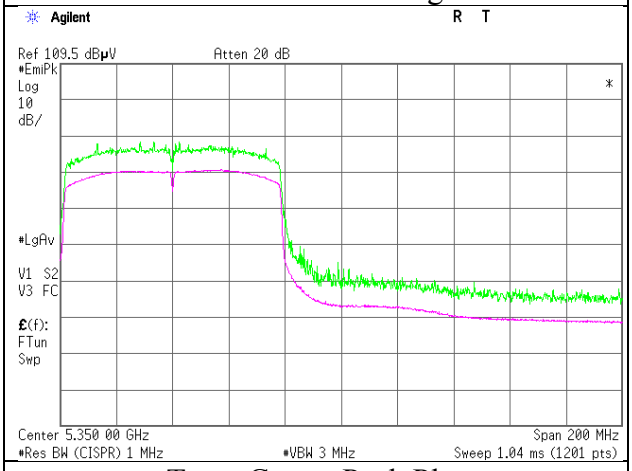
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 12, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	23deg. C / 58 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5530 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	56.7	32.0	5.9	33.9	-	60.7	73.9	13.2	
Hori	5470.000	PK	56.9	32.0	5.9	33.9	-	60.9	73.9	13.0	
Hori	11060.000	PK	45.5	40.7	-2.0	33.9	-	50.3	73.9	23.6	Floor noise
Hori	16590.000	PK	46.2	40.2	-0.6	33.3	-	52.5	73.9	21.4	Floor noise
Hori	22120.000	PK	44.0	38.2	-0.8	32.6	-	48.8	73.9	25.1	Floor noise
Hori	5460.000	AV	41.3	32.0	5.9	33.9	0.7	46.0	53.9	7.9	*1)
Hori	5470.000	AV	41.6	32.0	5.9	33.9	0.7	46.3	53.9	7.6	*1)
Hori	11060.000	AV	35.4	40.7	-2.0	33.9	-	40.2	53.9	13.7	Floor noise
Hori	16590.000	AV	37.1	40.2	-0.6	33.3	-	43.4	53.9	10.5	Floor noise
Hori	22120.000	AV	35.2	38.2	-0.8	32.6	-	40.0	53.9	13.9	Floor noise
Vert	5460.000	PK	55.1	32.0	5.9	33.9	-	59.1	73.9	14.8	
Vert	5470.000	PK	55.7	32.0	5.9	33.9	-	59.7	73.9	14.2	
Vert	11060.000	PK	45.4	40.7	-2.0	33.9	-	50.2	73.9	23.7	Floor noise
Vert	16590.000	PK	46.0	40.2	-0.6	33.3	-	52.3	73.9	21.6	Floor noise
Vert	22120.000	PK	49.9	38.2	-0.8	32.6	-	54.7	73.9	19.2	
Vert	5460.000	AV	40.4	32.0	5.9	33.9	0.7	45.1	53.9	8.8	*1)
Vert	5470.000	AV	40.8	32.0	5.9	33.9	0.7	45.5	53.9	8.4	*1)
Vert	11060.000	AV	35.7	40.7	-2.0	33.9	-	40.5	53.9	13.4	Floor noise
Vert	16590.000	AV	36.3	40.2	-0.6	33.3	-	42.6	53.9	11.3	Floor noise
Vert	22120.000	AV	45.7	38.2	-0.8	32.6	0.7	51.2	53.9	2.7	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

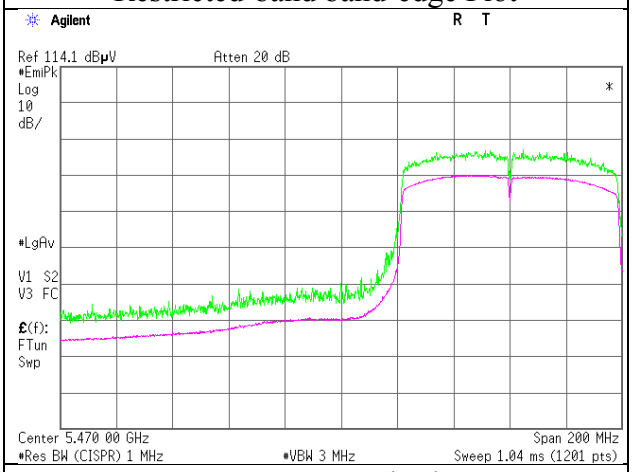
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 11, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5530 MHz

Horizontal

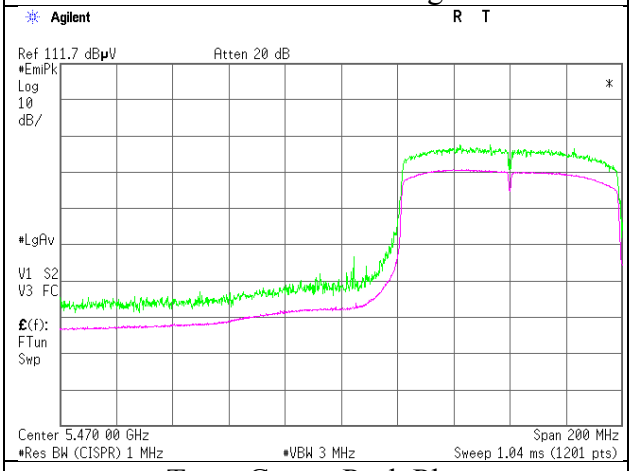
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 22, 2016	August 12, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	23deg. C / 58 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Takumi Shimada (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5610 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5725.000	PK	49.0	32.3	6.0	34.0	-	53.3	73.9	20.6	
Hori	11220.000	PK	46.1	40.5	-1.8	33.9	-	50.9	73.9	23.0	Floor noise
Hori	16830.000	PK	46.1	40.9	-0.5	33.1	-	53.4	73.9	20.5	Floor noise
Hori	22440.000	PK	46.4	38.8	-0.7	32.5	-	52.0	73.9	21.9	
Hori	5725.000	AV	37.1	32.3	6.0	34.0	0.7	42.1	53.9	11.8	*1)
Hori	11220.000	AV	36.2	40.5	-1.8	33.9	-	41.0	53.9	12.9	Floor noise
Hori	16830.000	AV	37.0	40.9	-0.5	33.1	-	44.3	53.9	9.6	Floor noise
Hori	22440.000	AV	40.7	38.8	-0.7	32.5	0.7	47.0	53.9	6.9	
Vert	5725.000	PK	48.0	32.3	6.0	34.0	-	52.3	73.9	21.6	
Vert	11220.000	PK	45.8	40.5	-1.8	33.9	-	50.6	73.9	23.3	Floor noise
Vert	16830.000	PK	46.1	40.9	-0.5	33.1	-	53.4	73.9	20.5	Floor noise
Vert	22440.000	PK	49.4	38.8	-0.7	32.5	-	55.0	73.9	18.9	
Vert	5725.000	AV	36.9	32.3	6.0	34.0	0.7	41.9	53.9	12.0	*1)
Vert	11220.000	AV	35.9	40.5	-1.8	33.9	-	40.7	53.9	13.2	Floor noise
Vert	16830.000	AV	36.4	40.9	-0.5	33.1	-	43.7	53.9	10.2	Floor noise
Vert	22440.000	AV	45.3	38.8	-0.7	32.5	0.7	51.6	53.9	2.3	

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 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

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

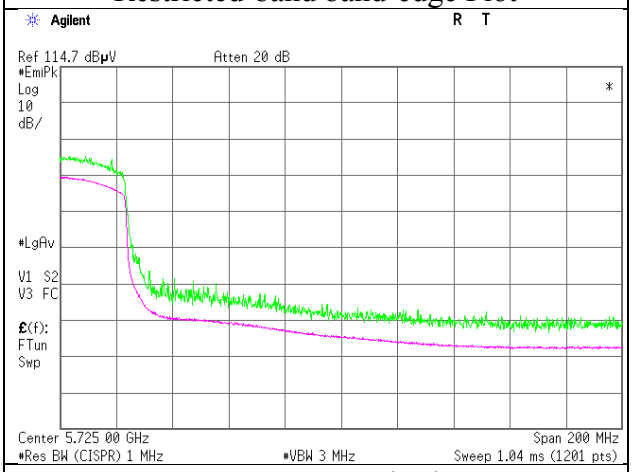
Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11182619H
Date	August 4, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Takumi Shimada
Mode	Tx 11ac-80 5610 MHz

Horizontal

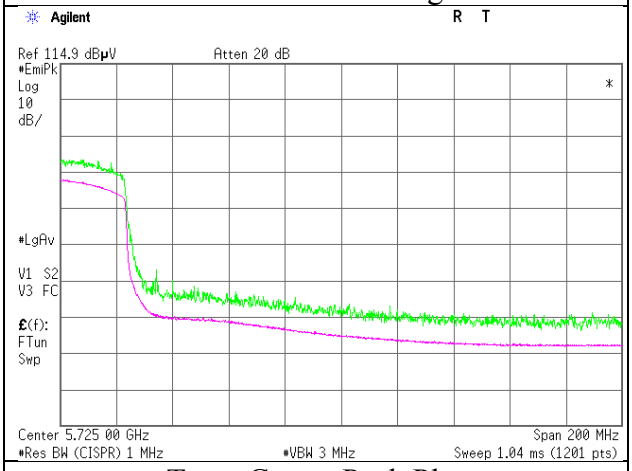
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

(Antenna : M/N H2U84W1H1S)

Report No.	11182619H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.4	No.2	No.2
Date	June 22, 2016	September 8, 2016	August 15, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 68 % RH	22deg. C / 50 % RH	23deg. C / 47 % RH	25deg. C / 55 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Masafumi Niwa (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5775 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5650.000	PK	47.3	31.3	7.8	31.4	-	55.0	68.2	13.2	
Hori	5700.000	PK	50.9	31.4	7.8	31.4	-	58.7	105.2	46.5	
Hori	5715.000	PK	51.1	31.4	7.8	31.4	-	58.9	109.4	50.5	
Hori	5720.000	PK	52.2	31.4	7.8	31.4	-	60.0	110.8	50.8	
Hori	5725.000	PK	54.6	31.4	7.8	31.4	-	62.4	122.2	59.8	
Hori	5850.000	PK	48.4	31.6	7.8	31.5	-	56.3	122.2	65.9	
Hori	5855.000	PK	48.0	31.6	7.8	31.5	-	55.9	110.8	54.9	
Hori	5860.000	PK	47.9	31.6	7.8	31.5	-	55.8	109.4	53.6	
Hori	5875.000	PK	46.4	31.6	7.8	31.5	-	54.3	105.2	50.9	
Hori	5925.000	PK	45.8	31.6	7.8	31.5	-	53.7	68.2	14.5	
Hori	11550.000	PK	44.1	40.2	-1.6	33.9	-	48.8	73.9	25.1	Floor noise
Hori	17325.000	PK	45.7	42.7	-0.4	33.0	-	55.0	73.9	18.9	Floor noise
Hori	23100.000	PK	44.0	39.7	-0.5	32.3	-	50.9	73.9	23.0	Floor noise
Hori	11550.000	AV	35.4	40.2	-1.6	33.9	-	40.1	53.9	13.8	Floor noise
Hori	17325.000	AV	36.6	42.7	-0.4	33.0	-	45.9	53.9	8.0	Floor noise
Hori	23100.000	AV	35.2	39.7	-0.5	32.3	-	42.1	53.9	11.8	Floor noise
Vert	5650.000	PK	48.0	31.3	7.8	31.4	-	55.7	68.2	12.5	
Vert	5700.000	PK	51.4	31.4	7.8	31.4	-	59.2	105.2	46.0	
Vert	5715.000	PK	53.2	31.4	7.8	31.4	-	61.0	109.4	48.4	
Vert	5720.000	PK	54.9	31.4	7.8	31.4	-	62.7	110.8	48.1	
Vert	5725.000	PK	56.4	31.4	7.8	31.4	-	64.2	122.2	58.0	
Vert	5850.000	PK	49.3	31.6	7.8	31.5	-	57.2	122.2	65.0	
Vert	5855.000	PK	49.8	31.6	7.8	31.5	-	57.7	110.8	53.1	
Vert	5860.000	PK	48.8	31.6	7.8	31.5	-	56.7	109.4	52.7	
Vert	5875.000	PK	47.8	31.6	7.8	31.5	-	55.7	105.2	49.5	
Vert	5925.000	PK	46.0	31.6	7.8	31.5	-	53.9	68.2	14.3	
Vert	11550.000	PK	45.9	40.2	-1.6	33.9	-	50.6	73.9	23.3	Floor noise
Vert	17325.000	PK	46.4	42.7	-0.4	33.0	-	55.7	73.9	18.2	Floor noise
Vert	23100.000	PK	47.6	39.7	-0.5	32.3	-	54.5	73.9	19.4	
Vert	11550.000	AV	36.0	40.2	-1.6	33.9	-	40.7	53.9	13.2	Floor noise
Vert	17325.000	AV	36.7	42.7	-0.4	33.0	-	46.0	53.9	7.9	Floor noise
Vert	23100.000	AV	41.5	39.7	-0.5	32.3	0.7	49.1	53.9	4.8	

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

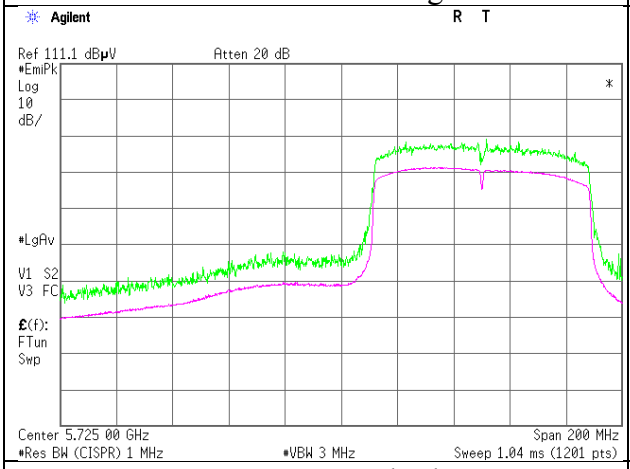
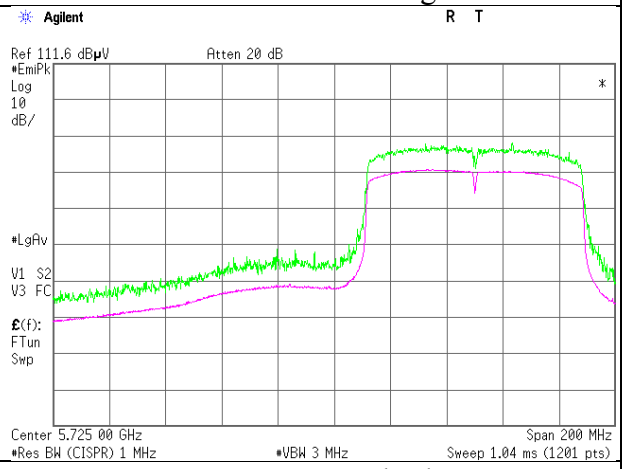
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

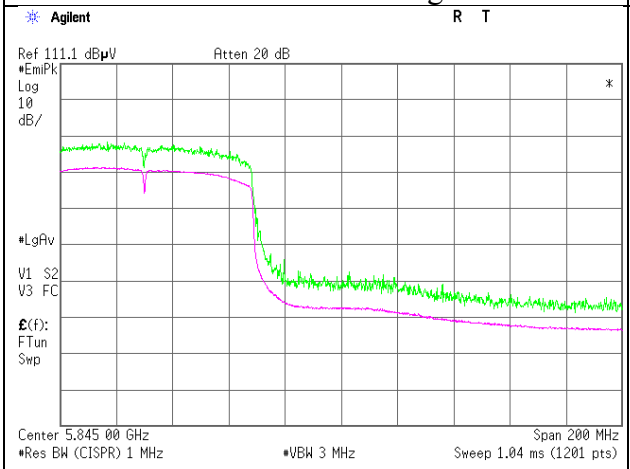
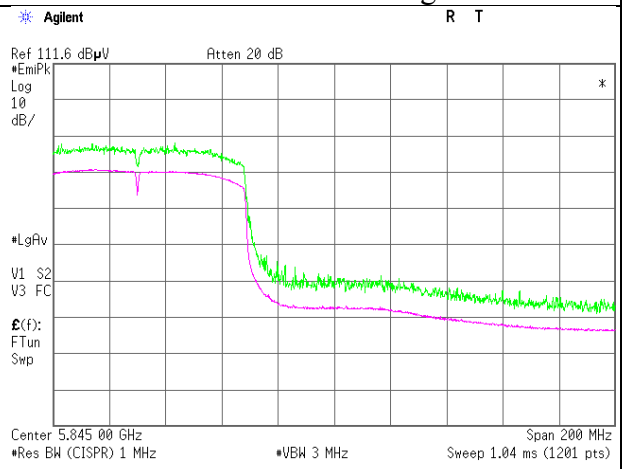
Distance factor: 1 GHz - 10 GHz 20log (4.5 m / 3.0 m) = 3.53 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Reference Plot for band-edge (Antenna : M/N H2U84W1H1S)

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	11182619H
Date	September 8, 2016
Temperature / Humidity	22deg. C / 50 % RH
Engineer	Yuta Moriya
Mode	Tx 11ac-80 5775 MHz

Horizontal	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

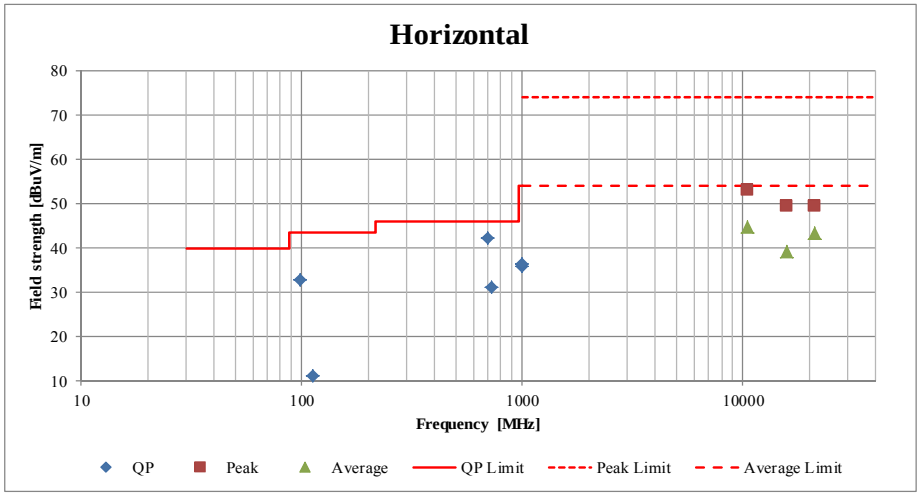
Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

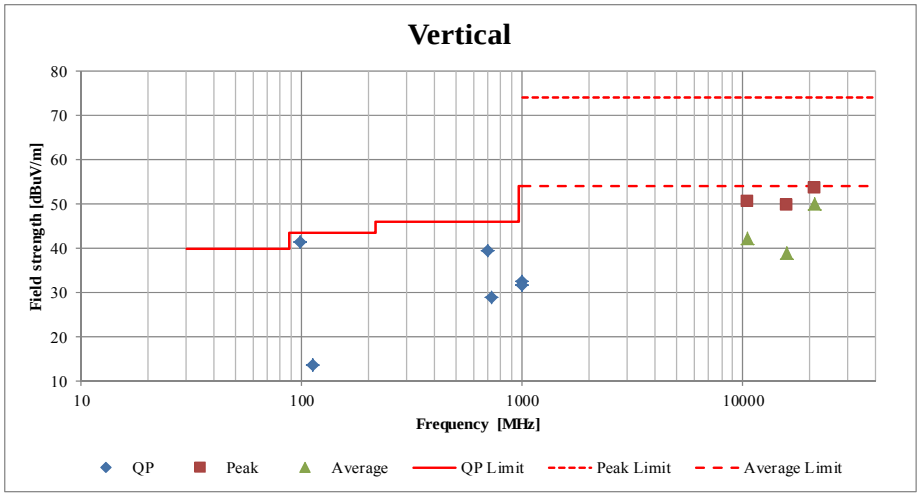
* Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Plot data, Worst case (Antenna : M/N H2U84W1H1S)

Report No.	11182619H				
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.2	No.2	No.3	No.2	No.3
Date	May 31, 2016	May 31, 2016	August 4, 2016	August 16, 2016	August 18, 2016
Temperature / Humidity	21deg. C / 60 % RH	25deg. C / 45 % RH	22 deg. C / 50 % RH	23 deg. C / 47 % RH	23 deg. C / 58 % RH
Engineer	Keisuke Kawamura (18 GHz - 26.5 GHz)	Hiroyuki Furutaka (26.5 GHz - 40 GHz)	Yuta Moriya (1 GHz - 10 GHz)	Ken Fujita (10 GHz - 18 GHz)	Takafumi Noguchi (30 MHz - 1000 MHz)
Mode	Tx 11ac-20 5260 MHz				



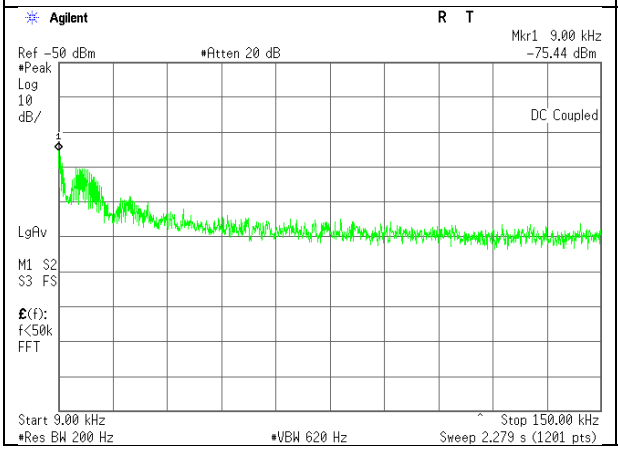


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

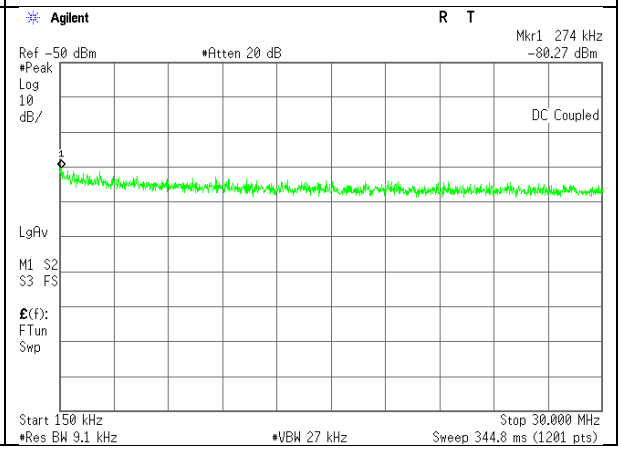
Conducted Spurious Emission

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11182619H
Date	April 1, 2016
Temperature / Humidity	25deg. C / 36 % RH
Engineer	Yutaka Yoshida
Mode	Tx 11ac-20 5260 MHz

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
9.00	-75.4	0.90	10.0	5.0	1	-59.5	300	6.0	1.7	48.5	46.8	
274.00	-80.3	0.90	10.0	5.0	1	-64.4	300	6.0	-3.1	18.8	21.9	

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

EMI test equipment (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2015/10/01 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE	2016/01/21 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE/RE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2015/11/06 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2016/05/29 * 12
MCC-167	Microwave Cable	Junkosha	MWX221	1404S374(1m) / 1405S074(5m)	RE	2016/05/20 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2016/03/24 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2016/05/29 * 12
MMM-08	DIGITAL HiTESTER	Hioki	3805	051201197	RE	2016/01/13 * 12
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2016/08/02 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2016/01/21 * 12
MJM-14	Measure	KOMELON	KMC-36	-	RE	-
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2016/05/19 * 12
MHA-04	Horn Antenna 26.5-40GHz	EMCO	3160-10	1140	RE	2015/11/13 * 12
MCC-54	Microwave Cable	Suhner	SUCOFLEX101	2873(1m) / 2876(5m)	RE	2016/03/18 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	3950M00205	RE	2016/06/16 * 12
MMM-01	Digital Tester	Fluke	FLUKE 26-3	78030611	RE	2016/08/23 * 12
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 /1871328	RE	2016/09/06 * 12
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2015/09/04 * 12
MCC-141	Microwave Cable	Junkosha	MWX221	1305S002R(1m) / 1405S146(5m)	RE	2016/06/21 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2015/09/02 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2015/10/11 * 12
MLA-22	Logperiodic Antenna(200-1000MHz)	Schwarzbeck	VUSLP9111B	911B-191	RE	2016/01/30 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2016/07/26 * 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

EMI test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-16	Power Meter	Agilent	8990B	MY51000271	AT	2016/04/07 * 12
MPSE-22	Power sensor	Agilent	N1923A	MY54070003	AT	2016/04/07 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT	2016/08/17 * 12
MCC-206	Microwave Cable	RS Components	R-132G7210200CD	-	AT	2016/02/08 * 12
MCC-171	Microwave Cable	Junkosha	MWX221	1409S494	AT	2016/03/11 * 12
MAT-25	Attenuator(10dB)(above 1GHz)	Agilent	8493C	71642	AT	2016/06/15 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	1401	AT	2016/01/21 * 12
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	CE	2016/09/02 * 12
MOS-27	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q26	CE	2016/01/21 * 12
MJM-25	Measure	KOMELON	KMC-36	-	CE	-
MTR-09	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	CE	2016/06/25 * 12
MLS-25	LISN(AMN)	Schwarzbeck	NSLK8127	8127-731	CE(EUT)	2016/07/21 * 12
MTA-30	Terminator	TME	CT-01	-	CE	2016/01/15 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/TSJ	5D-2W(20m)/3D-2W(7.5m)/RG400u(1.5m)/RFM-E421(Switcher)	-/01068(Switcher)	CE	2016/06/29 * 12
MAT-64	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2016/01/14 * 12
MMM-03	Digital Tester	Fluke	FLUKE 26-3	78030621	CE	2016/08/23 * 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