RADIO TEST REPORT

Test Report No. : 11245604H-A

Applicant	:	**FUJITSU TEN LIMITED**
Type of Equipment	:	**Car Audio**
Model No.	:	**FT0108A**
FCC ID	:	**BABFT0108A**
Test regulation	:	**FCC Part 15 Subpart E: 2016 (Except for DFS test)**
Test Result	:	**Complied**

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with 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)

Date of test: April 5 to May 20, 2016

Representative test engineer:
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NVLAP TESTING
NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
*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.: 11245604H-A

Revision	Test report No.	Date	Page revised	Contents
- (Original)	11245604H-A	August 30, 2016	-	-

CONTENTS PAGE

SECTION 1: Customer information **4**
SECTION 2: Equipment under test (E.U.T.) **4**
SECTION 3: Test specification, procedures & results **6**
SECTION 4: Operation of E.U.T. during testing **9**
SECTION 5: Radiated Spurious Emission and Band Edge Compliance **14**
SECTION 6: Antenna Terminal Conducted Tests **16**
APPENDIX 1: Test data **17**
26 dB Emission Bandwidth and 99% Occupied Bandwidth 17
6 dB Bandwidth 40
Maximum Conducted Output Power 45
Average Output Power (Reference data) 55
Burst rate confirmation 57
Peak Power Spectral Density 59
Radiated Spurious Emission 76
Conducted Spurious Emission 138
APPENDIX 2: Test instruments **139**
APPENDIX 3: Photographs of test setup **141**
Radiated Spurious Emission 141

SECTION 1: Customer information

Company Name	:	FUJITSU TEN LIMITED
Address	:	2-28, Gosho-dori 1-Chome, Hyogo-ku, Kobe, 652-8510 JAPAN
Telephone Number	:	+81-78-682-2159
Facsimile Number	:	+81-78-671-7160
Contact Person	:	FUKII DAISUKE

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

2.1 Identification of E.U.T.

Type of Equipment	:	Car Audio
Model No.	:	FT0108A
Serial No.	:	Refer to Clause 4.2
Rating	:	DC 12 V
Receipt Date of Sample	:	March 31, 2016
Country of Mass-production	:	Mexico
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

Radio Specification

Radio Type	:	Transceiver
Power Supply (inner)	:	DC 1.8 V, 3.3 V
Clock frequency (Crystal)	:	48 MHz

	IEEE802.11b	IEEE802.11g/n (20 M band)	IEEE802.11a/n/ac (20 M band) *1)	IEEE802.11n/ac (40 M band) *1)	IEEE802.11ac (80 M band) *1)
Frequency of operation	2412 MHz - 2462 MHz	2412 MHz - 2462 MHz	5180 MHz - 5240 MHz 5260 MHz - 5320 MHz 5500 MHz - 5700 MHz 5745 MHz - 5825 MHz	5190 MHz - 5230 MHz 5270 MHz - 5310 MHz 5510 MHz - 5670 MHz 5755 MHz - 5795 MHz	5210 MHz 5290 MHz 5530 MHz - 5610 MHz 5775 MHz
Type of modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	OFDM (64QAM, 16QAM, QPSK, BPSK, 256QAM(IEEE802.11ac only))		
Channel spacing	5MHz		20MHz	40MHz	80MHz
Antenna type	Inverted F Antenna				
Antenna Connector type	U.FL-LP-066				
Antenna Gain	4.7 dBi (2.4 GHz Band), 5.7 dBi (5 GHz Band)				

	Bluetooth Ver.4.1 with EDR function
Frequency of operation	2402 MHz - 2480 MHz
Type of modulation	BT: FHSS (GFSK, π/4-DQPSK, 8-DPSK) LE: GFSK
Channel spacing	BT: 1 MHz LE: 2 MHz
Antenna type	Inverted Antenna
Antenna Connector type	U.FL-LP-066
Antenna Gain	4.7 dBi

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

* Also the EUT complies with FCC Part 15 Subpart B.

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	–	N/A *1)	-
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
26dB Emission Bandwidth	**FCC :**ANSI C63.10:2013, FCC KDB Publication Number 789033	**FCC :** 15.407(a)(1)(2)(3)	See data	Complied	Conducted
	IC: -	**IC:** -			
Maximum Conducted Output Power	**FCC :**ANSI C63.10:2013, 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 :**ANSI C63.10:2013, 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	**FCC :** 15.407(b), 15.205 and 15.209	0.1dB, 828.744 MHz, QP, Vertical, 959.976MHz, QP, Horizontal.	Complied	Conducted (below 30MHz) / Radiated (above 30MHz) *2)
	IC: -	**IC:** RSS-247 6.2.1(2) 6.2.2(2) 6.2.3(2) 6.2.4(2)			
6dB 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 11245604H-D issued by UL Japan, Inc.
*1) The test is not applicable since the EUT is not the device that is designed to be connected to the public utility (AC) power line.
*2) Radiated test was selected over 30 MHz based on section FCC15.407(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)

This EUT provides stable voltage(DC 1.8 V, 3.3 V) constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

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

3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
99 % Occupied Band Width	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

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

Polarity	Radiated emission (Below 1GHz)			
	(3 m*)(±dB)		(10 m*)(±dB)	
	30 – 200 MHz	200 – 1000MHz	30 – 200 MHz	200 – 1000MHz
Horizontal	4.9 dB	5.2 dB	4.9 dB	5.0 dB
Vertical	4.6 dB	5.9 dB	5.0 dB	5.0 dB

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

*Measurement distance

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

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

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m 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 Modes

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

Mode	Remarks*
IEEE 802.11a (11a)	54 Mbps, PN9
IEEE 802.11n SISO 20 MHz BW (11n-20)	MCS 6, PN9 (Long)
IEEE 802.11n SISO 40 MHz BW (11n-40)	MCS 6, PN9 (Short)
IEEE 802.11ac SISO 20 MHz BW (11ac-20)	MCS 3, PN9 (Short)
IEEE 802.11ac SISO 40 MHz BW (11ac-40)	MCS 5, PN9 (Short)
IEEE 802.11ac SISO 80 MHz BW (11ac-80)	MCS 5, PN9 (Long)

*EUT has the power settings by the software as follows;
Power settings:
11a

Data Rate	TX Power(dBm)
6Mbps	7.5
9Mbps	
12Mbps	
18Mbps	
24Mbps	
36Mbps	
48Mbps	
54Mbps	

11n

IEEE Standard	Data Rate	TX Power(dBm)
802.11n longGI HT20	6.5Mbps	6.5
	13Mbps	
	19.5Mbps	
	26Mbps	
	39Mbps	
	52Mbps	
	58.5Mbps	
	65Mbps	
	78Mbps	
802.11n shortGI HT20	7.2Mbps	6.5
	14.4Mbps	
	21.7Mbps	
	28.9Mbps	
	43.3Mbps	
	57.8Mbps	
	65Mbps	
	72.2Mbps	
	86.7Mbps	
802.11n longGI HT40	13.5Mbps	5.5
	27Mbps	
	40.5Mbps	
	54Mbps	
	81Mbps	
	108Mbps	
	121.5Mbps	
	135Mbps	
	162Mbps	
	180Mbps	
802.11n ShortGI HT40	15Mbps	5.5
	30Mbps	
	45Mbps	
	60Mbps	
	90Mbps	
	120Mbps	
	135Mbps	
	150Mbps	
	180Mbps	
	200Mbps	

11ac

IEEE Standard	Data Rate	TX Power(dBm)
802.11ac longGI	6.5Mbps	6.5
	13Mbps	
	19.5Mbps	
	26Mbps	
	39Mbps	
	52Mbps	
	58.5Mbps	
	65Mbps	
	78Mbps	5.5
802.11ac shortGI	7.2Mbps	6.5
	14.4Mbps	
	21.7Mbps	
	28.9Mbps	
	43.3Mbps	
	57.8Mbps	
	65Mbps	
	72.2Mbps	
	86.7Mbps	5.5
802.11ac longGI HT40	13.5Mbps	5.5
	27Mbps	
	40.5Mbps	
	54Mbps	
	81Mbps	
	108Mbps	
	121.5Mbps	
	135Mbps	
	162Mbps	3.5
	180Mbps	
802.11ac shortGI HT40	15Mbps	5.5
	30Mbps	
	45Mbps	
	60Mbps	
	90Mbps	
	120Mbps	
	135Mbps	
	150Mbps	
	180Mbps	3.5
	200Mbps	
802.11ac shortGI HT80	29.3Mbps	4.5
	58.5Mbps	
	87.8Mbps	
	117Mbps	
	175.5Mbps	
	234Mbps	
	263.3Mbps	
	292.5Mbps	
	351Mbps	2.5
	390Mbps	
802.11ac longGI HT80	32.5Mbps	4.5
	65Mbps	
	97.5Mbps	
	130Mbps	
	195Mbps	
	260Mbps	
	292.5Mbps	
	325Mbps	
	390Mbps	2.5
	433.3Mbps	

- Software: QCA RCT Ver 3.0.4.1.0 (WLAN)
*This setting of software is the worst case.
Any conditions under the normal use do not exceed the condition of setting.
In addition, end users cannot change the settings of the output power of the product.

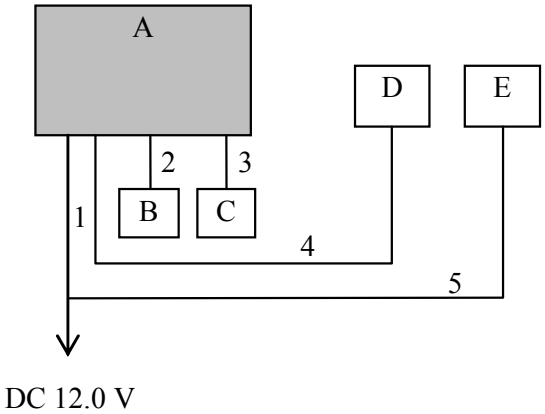
*The details of Operating mode(s)

Test Item	Operating Mode	Tested Frequency			
		Lower Band	Middle Band	Additional Band	Upper Band
26 dB 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, 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
6 dB 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	-	-	-	5775 MHz
Radiated Spurious Emission (Below 1 GHz), Conducted Spurious Emission	11a Tx *1)	-	-	-	5825 MHz
Radiated Spurious Emission (Above 1 GHz)	11a Tx	5180 MHz	5260 MHz 5280 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-20 Tx *2)	5180 MHz	5260 MHz 5280 MHz 5300 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	5755 MHz

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

4.2 Configuration and peripherals

Spurious Emission tests



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

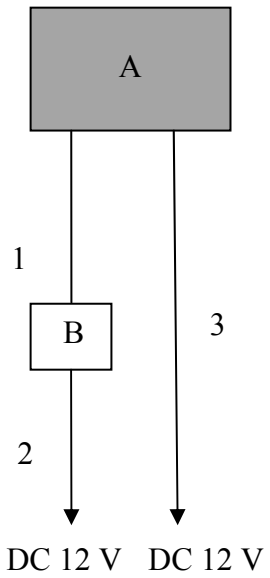
Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Car Audio	FT0108A	100056506-0001	FUJITSU TEN LIMITED	EUT
B	USB Memory	PD-07 WH8GB	-	KING MAX	-
C	Termination	-	-	-	-
D	Speaker Dummy	-	-	-	-
E	Jig board	-	-	-	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC and Signal Cable	4.8	Unshielded	Unshielded	-
2	USB Cable	1.4	Shielded	Shielded	-
3	AM / FM Cable	2.4	Shielded	Shielded	-
4	Signal Cable	2.6	Unshielded	Unshielded	-
5	Signal Cable	2.9	Unshielded	Unshielded	-

Except for Spurious Emission tests



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

Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Car Audio	FT0108A	100056686-0006	FUJITSU TEN LIMITED	EUT
B	Jig board	-	-	-	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Signal Cable	2.9	Unshielded	Unshielded	-
2	DC Cable	0.5	Unshielded	Unshielded	-
3	DC Cable	2.3	Unshielded	Unshielded	-

SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

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

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

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

< Below 1GHz >
The result also satisfied with the general limits specified in section 15.209 (a).

< Above 1GHz >
Inside of restricted bands (Section 15.205):
Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:
Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) in the Section 15.407 (b) (1) (2) (3).
Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) or
78.2 dBuV/m, 3 m (-17 dBm e.i.r.p.*) in the Section 15.407 (b) (4).

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

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

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

Test Antennas are used as below;

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

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method AD *1) RBW: 1 MHz VBW: 3 MHz Detector: Power Averaging (RMS) Trace: ≥ 100 traces If duty cycle was less than 98%, a duty factor was added to the results.
Test Distance	3 m	3.9 m*2) (1 GHz – 10GHz), 1 m*3) (10 GHz – 40 GHz)	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r03 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on April 8, 2016)".
*2) Distance Factor: 20 x log (3.9 m/3.0 m) = 2.28 dB
*3) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.5 dB

The test was made on EUT at the normal use position.

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

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

SECTION 6: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used and Test method
26 dB Bandwidth	Enough to capture the emission	Close to 1 % of EBW	> RBW	Auto	Peak	Max Hold	Spectrum Analyzer
99 % Occupied Bandwidth *1)	Enough width to display emission skirts	1 % to 5 % of OBW	≥ 3 RBW	Auto	Peak	Max Hold	Spectrum Analyzer
6 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Maximum Conducted Output Power	-	-	-	Auto	Average	-	Power Meter (Sensor: 80 MHz BW) (Method PM)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 470 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (200 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3)	9 kHz – 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz – 30 MHz	9.1 kHz	27 kHz				

* The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r03 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on April 8, 2016)".

*1) Peak hold was applied as Worst-case measurement.
*2) KDB 789033 D02 says that RBW is set to be 500 kHz for 5.725 GHz-5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor (10 log(500 kHz / 470 kHz)) was added to the test result.
*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 not detected as shown in the chart. (9 kHz-150 kHz: RBW = 200 Hz, 150 kHz-30 MHz: RBW = 9.1 kHz)

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

Test data : APPENDIX
Test result : Pass

APPENDIX 1: Test data

26 dB Emission Bandwidth and 99% Occupied Bandwidth

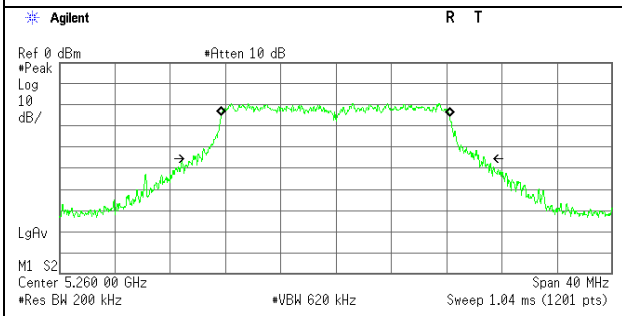
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature/ Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	11a Tx

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	16.919	-
5220	-	16.907	-
5240	-	16.937	-
5260	21.073	16.896	-
5300	20.526	16.981	-
5320	20.772	16.942	-
5500	20.591	16.957	-
5580	20.935	16.914	-
5700	20.320	16.971	-
5745	-	16.930	-
5785	-	16.893	-
5825	-	16.940	-

26 dB Emission Bandwidth

11a

5260 MHz

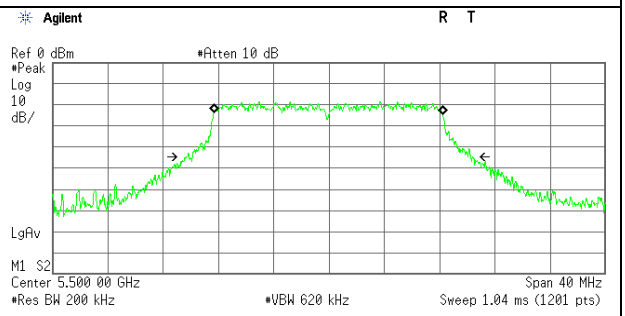


Occupied Bandwidth
16.5301 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -28.793 kHz
x dB Bandwidth 21.073 MHz

5500 MHz

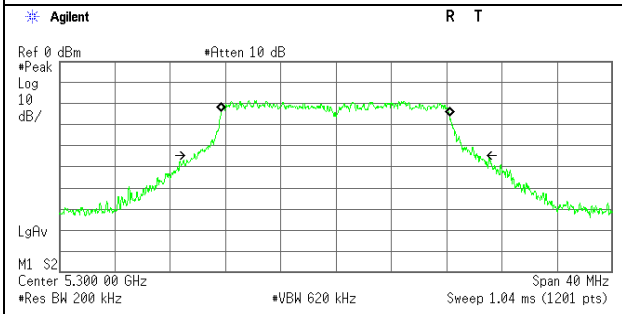


Occupied Bandwidth
16.5946 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -46.029 kHz
x dB Bandwidth 20.591 MHz

5300 MHz

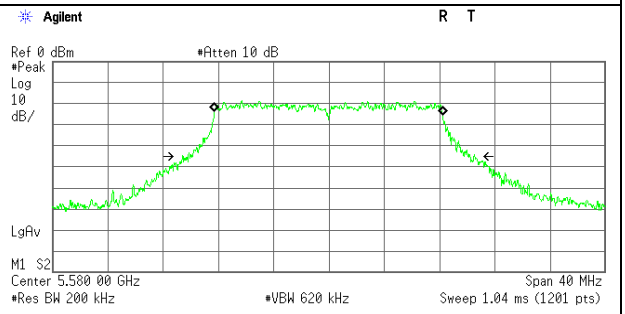


Occupied Bandwidth
16.5131 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -41.192 kHz
x dB Bandwidth 20.526 MHz

5580 MHz

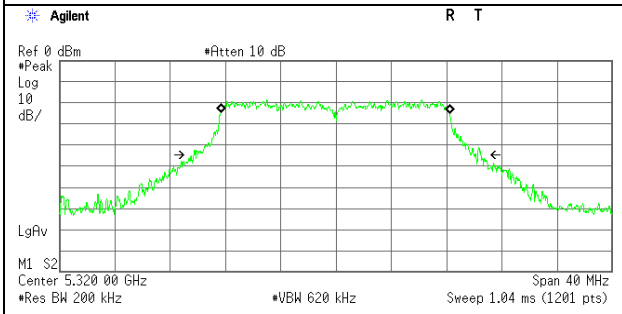


Occupied Bandwidth
16.5362 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -30.652 kHz
x dB Bandwidth 20.935 MHz

5320 MHz

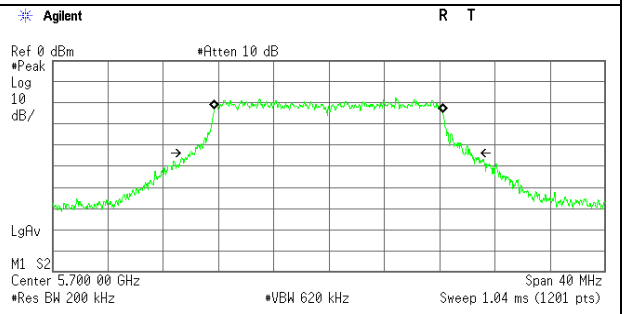


Occupied Bandwidth
16.5780 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -59.524 kHz
x dB Bandwidth 20.772 MHz

5700 MHz



Occupied Bandwidth
16.5527 MHz

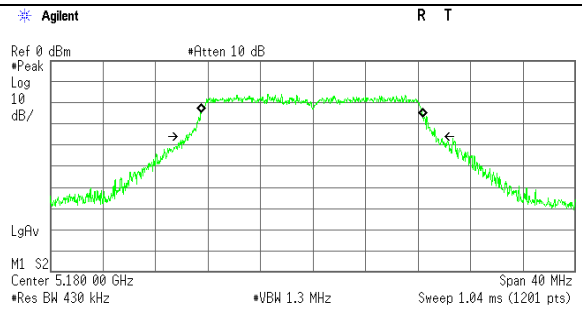
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -42.452 kHz
x dB Bandwidth 20.320 MHz

99 % Occupied Bandwidth

11a

5180 MHz

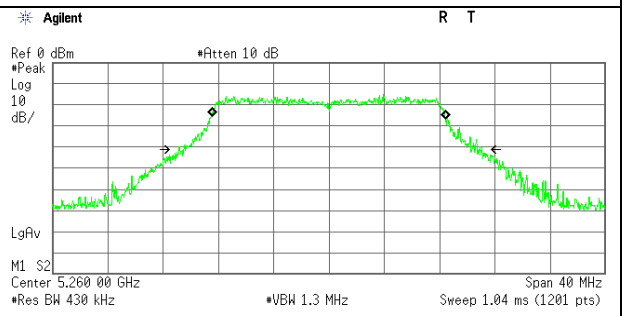


Occupied Bandwidth
16.9193 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -61.444 kHz
x dB Bandwidth 19.011 MHz

5260 MHz

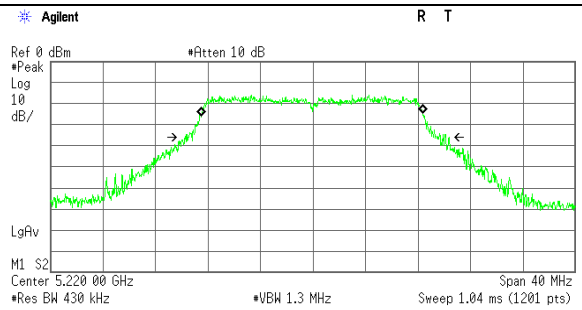


Occupied Bandwidth
16.8963 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -22.661 kHz
x dB Bandwidth 21.901 MHz

5220 MHz

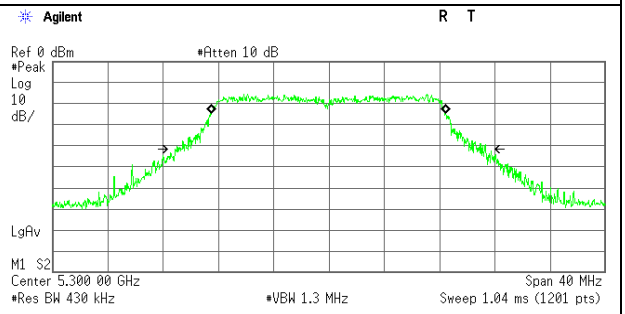


Occupied Bandwidth
16.9067 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -61.897 kHz
x dB Bandwidth 19.860 MHz

5300 MHz

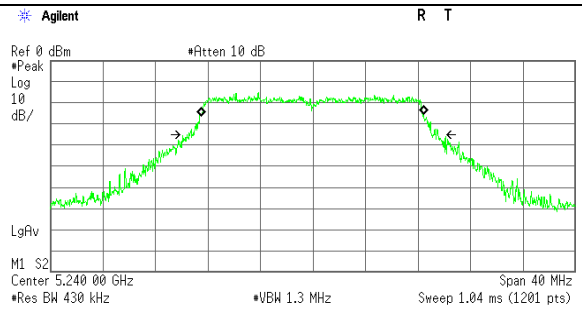


Occupied Bandwidth
16.9809 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -37.332 kHz
x dB Bandwidth 22.330 MHz

5240 MHz

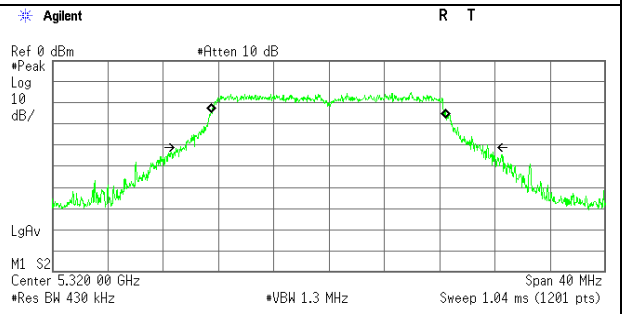


Occupied Bandwidth
16.9369 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -22.788 kHz
x dB Bandwidth 19.257 MHz

5320 MHz



Occupied Bandwidth
16.9417 MHz

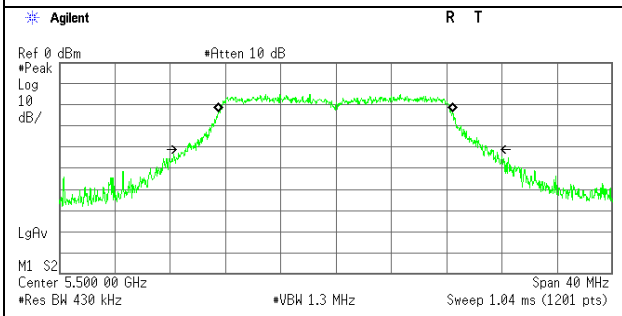
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -12.458 kHz
x dB Bandwidth 21.994 MHz

99 % Occupied Bandwidth

11a

5500 MHz

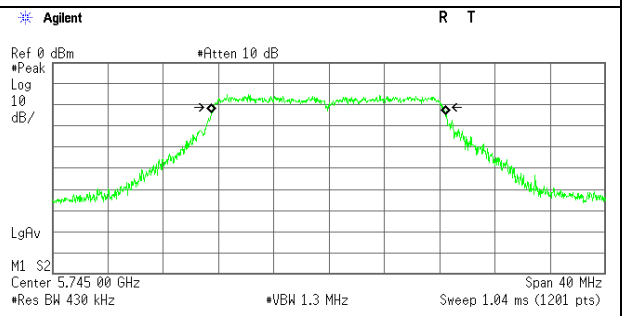


Occupied Bandwidth
16.9571 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -40.008 kHz
x dB Bandwidth 22.139 MHz

5745 MHz

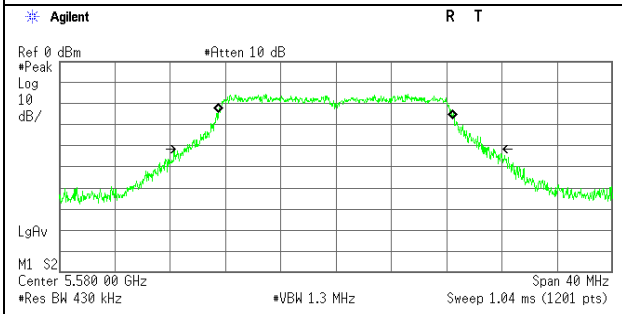


Occupied Bandwidth
16.9300 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error -9.830 kHz
x dB Bandwidth 16.610 MHz

5580 MHz

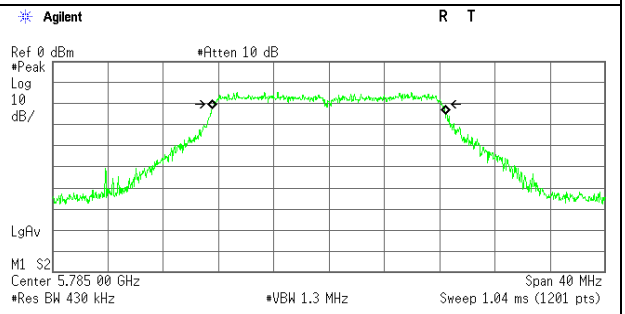


Occupied Bandwidth
16.9137 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -26.394 kHz
x dB Bandwidth 22.332 MHz

5785 MHz

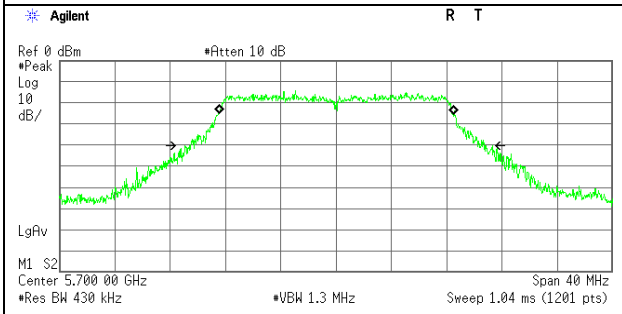


Occupied Bandwidth
16.8931 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error -28.917 kHz
x dB Bandwidth 16.513 MHz

5700 MHz

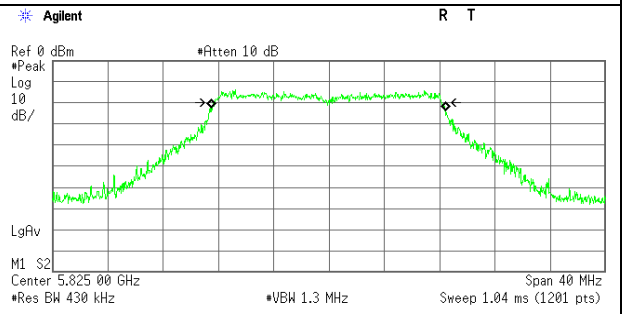


Occupied Bandwidth
16.9709 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 2.885 kHz
x dB Bandwidth 22.201 MHz

5825 MHz



Occupied Bandwidth
16.9398 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error -58.624 kHz
x dB Bandwidth 16.461 MHz

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

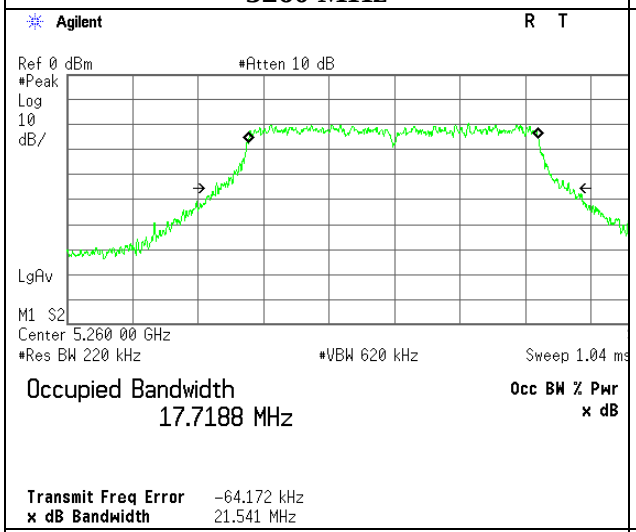
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.985	-
5220	-	17.967	-
5240	-	18.001	-
5260	21.541	17.973	-
5300	21.354	17.954	-
5320	21.136	17.988	-
5500	21.239	18.010	-
5580	21.196	17.996	-
5700	21.752	18.005	-
5745	-	18.023	-
5785	-	17.984	-
5825	-	17.981	-

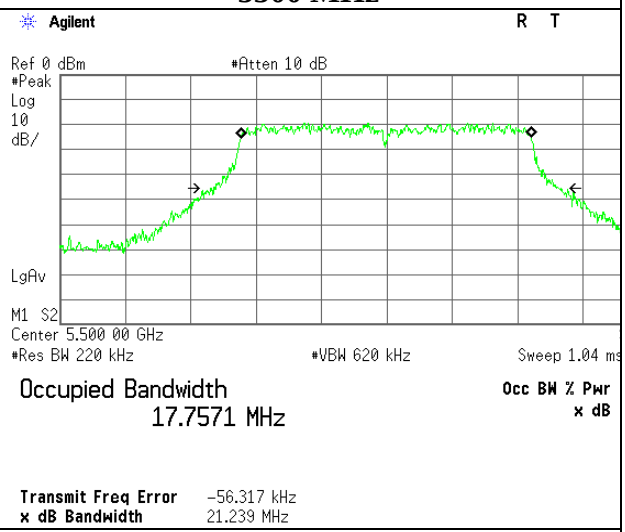
26 dB Emission Bandwidth

11n-20

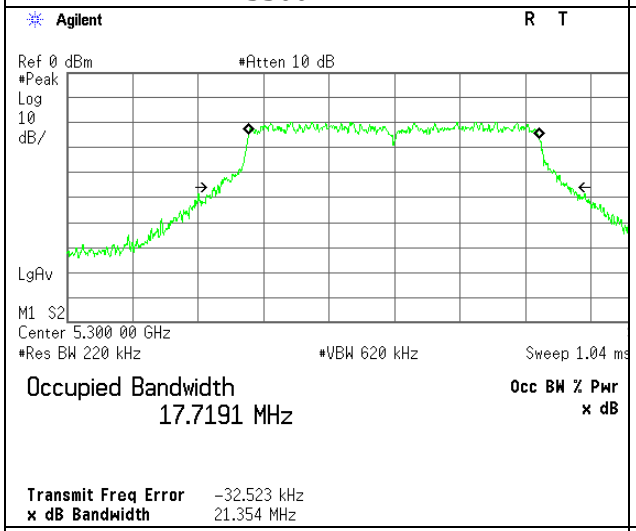
5260 MHz



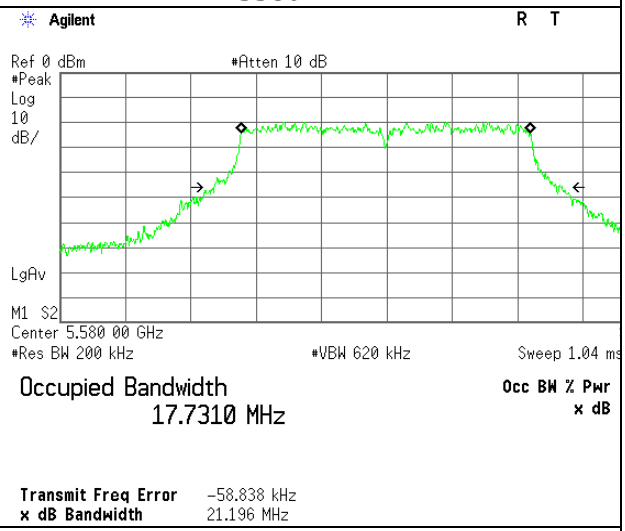
5500 MHz



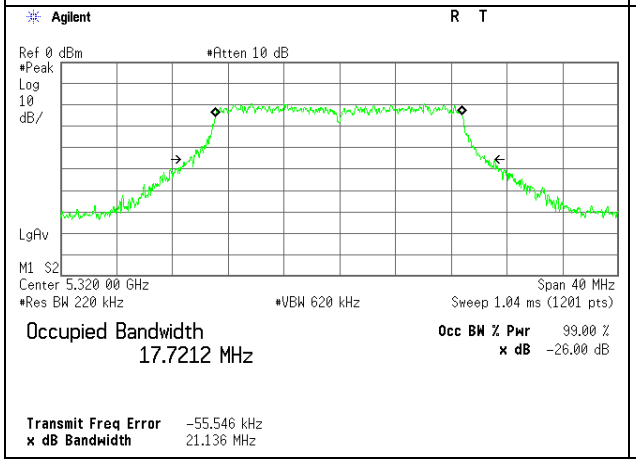
5300 MHz



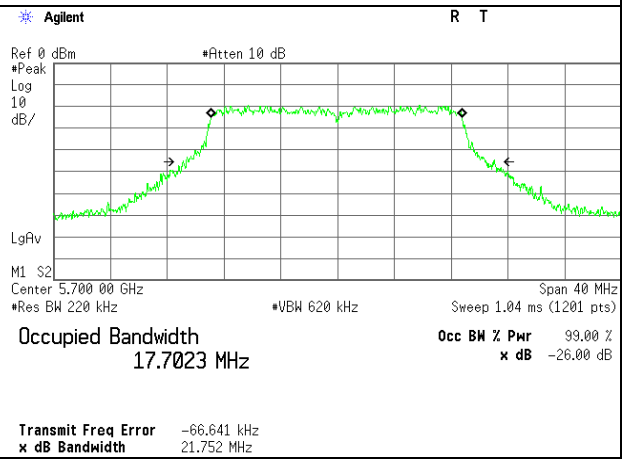
5580 MHz



5320 MHz



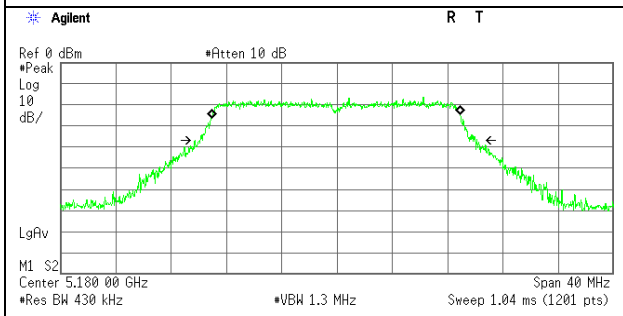
5700 MHz



99 % Occupied Bandwidth

11n-20

5180 MHz

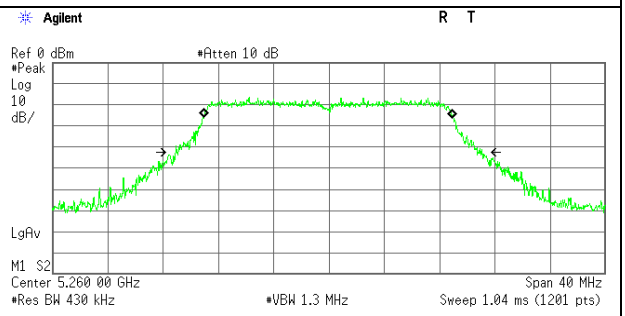


Occupied Bandwidth
17.9846 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -59.282 kHz
x dB Bandwidth 20.065 MHz

5260 MHz

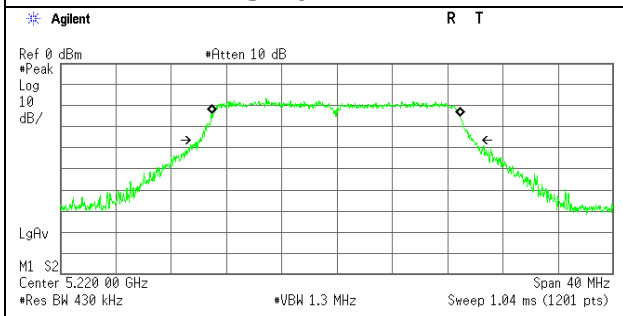


Occupied Bandwidth
17.9731 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -54.007 kHz
x dB Bandwidth 22.126 MHz

5220 MHz

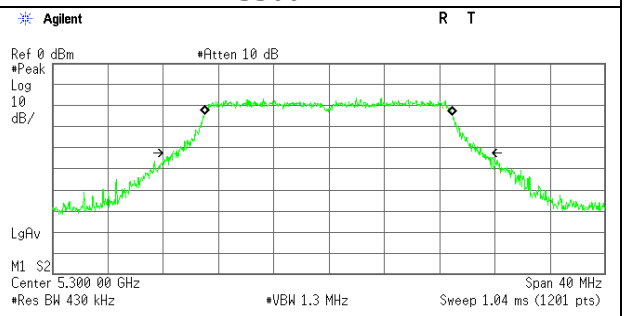


Occupied Bandwidth
17.9674 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -72.400 kHz
x dB Bandwidth 19.922 MHz

5300 MHz

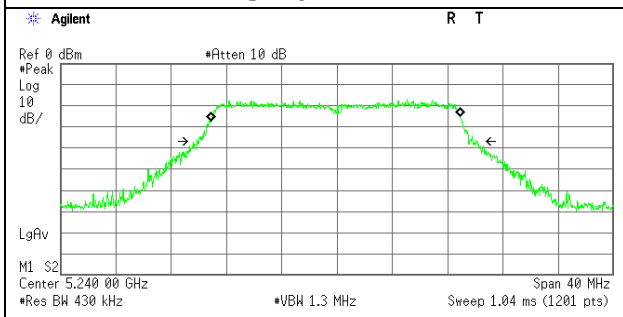


Occupied Bandwidth
17.9535 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -34.764 kHz
x dB Bandwidth 22.393 MHz

5240 MHz

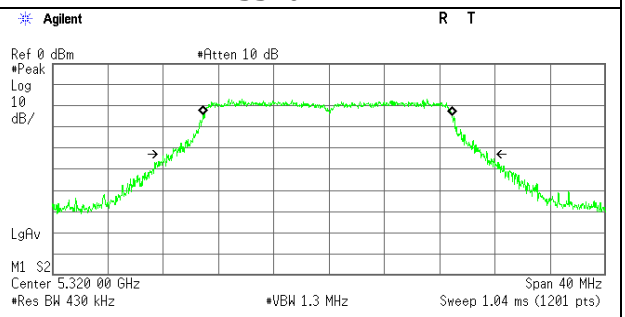


Occupied Bandwidth
18.0011 MHz

Occ BW % Pwr 99.00 %
x dB -20.00 dB

Transmit Freq Error -84.897 kHz
x dB Bandwidth 20.305 MHz

5320 MHz



Occupied Bandwidth
17.9876 MHz

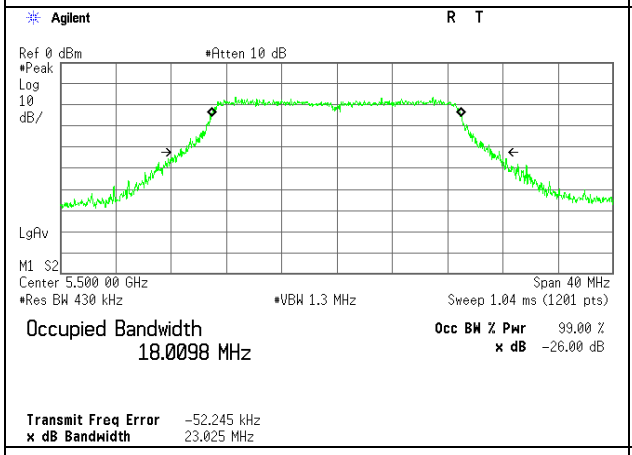
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -87.392 kHz
x dB Bandwidth 23.130 MHz

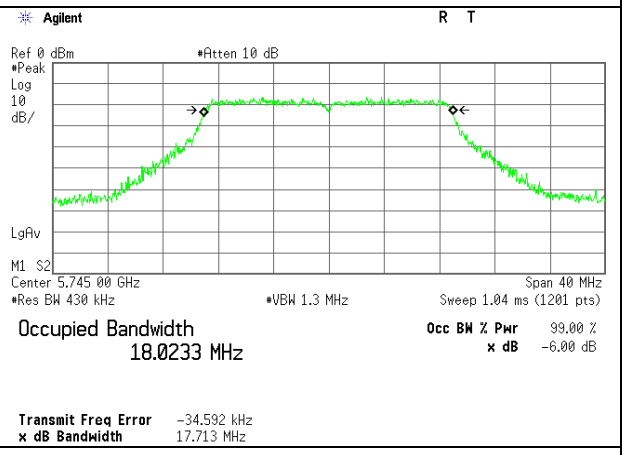
99 % Occupied Bandwidth

11n-20

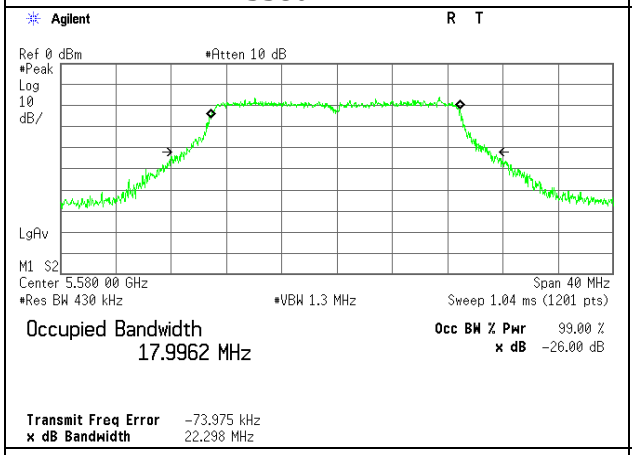
5500 MHz



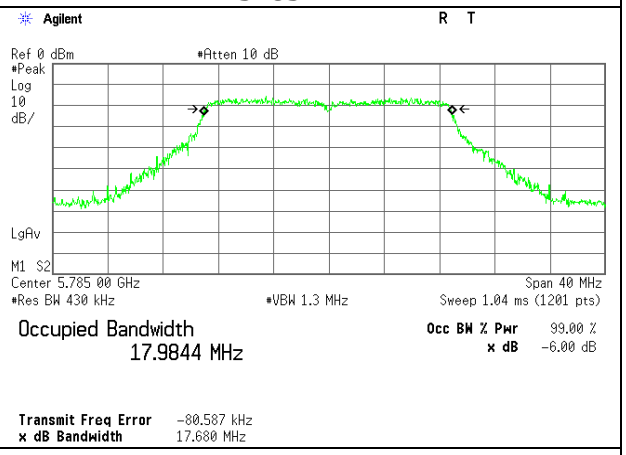
5745 MHz



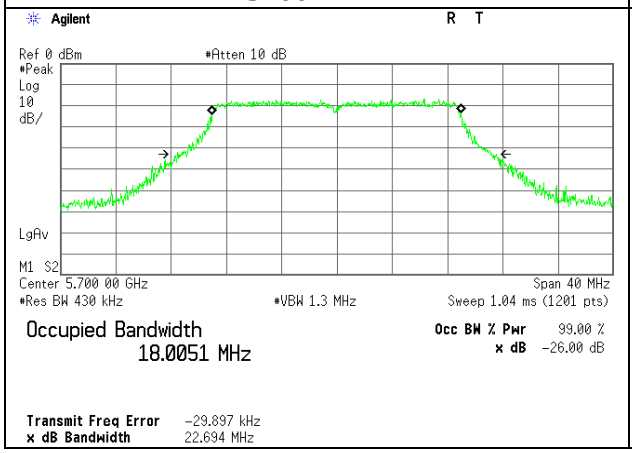
5580 MHz



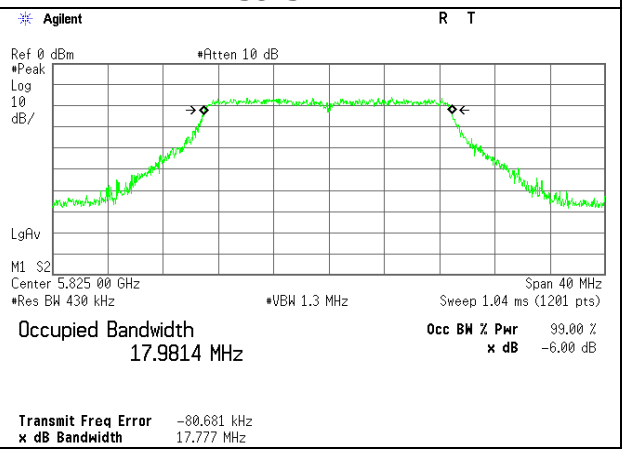
5785 MHz



5700 MHz



5825 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

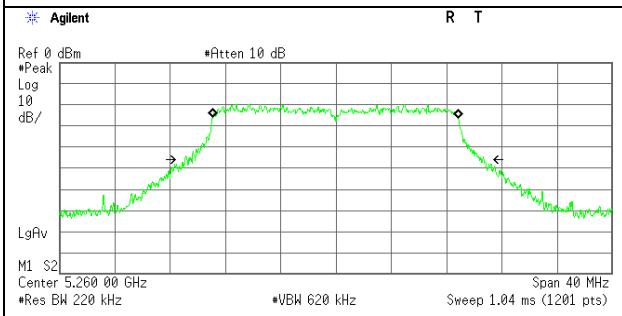
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	18.026	-
5220	-	18.040	-
5240	-	17.998	-
5260	21.586	17.997	-
5300	21.417	18.027	-
5320	21.029	18.008	-
5500	21.531	18.008	-
5580	21.767	18.064	-
5700	20.924	18.007	-
5745	-	17.986	-
5785	-	18.023	-
5825	-	17.989	-

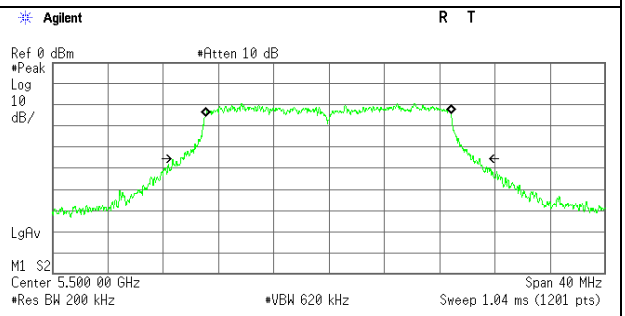
26 dB Emission Bandwidth

11ac-20

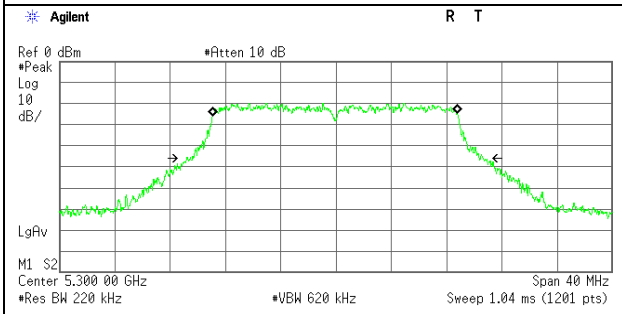
5260 MHz



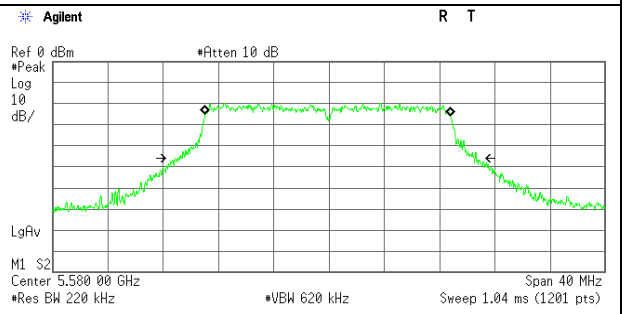
5500 MHz



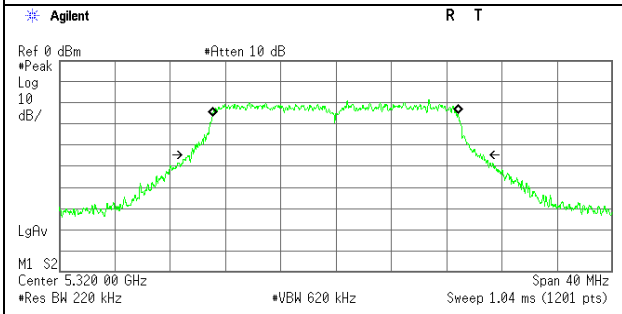
5300 MHz



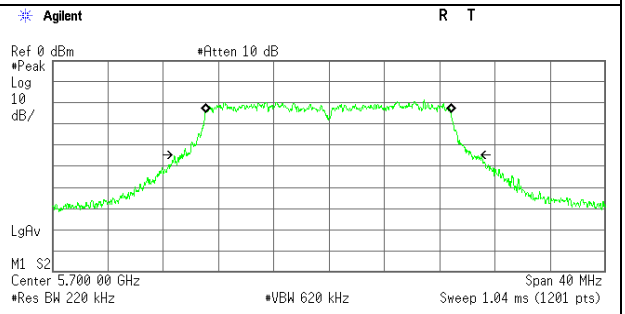
5580 MHz



5320 MHz



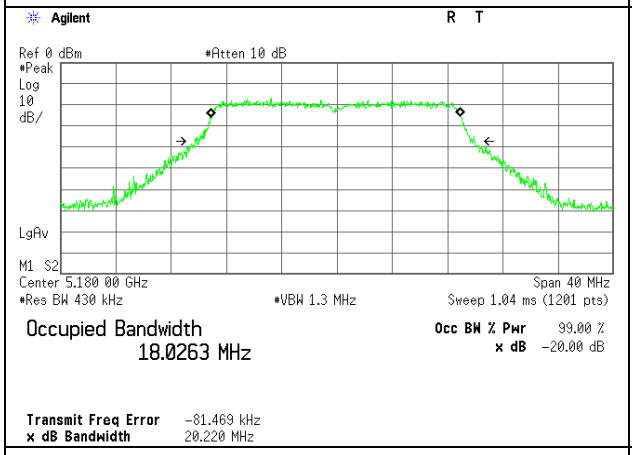
5700 MHz



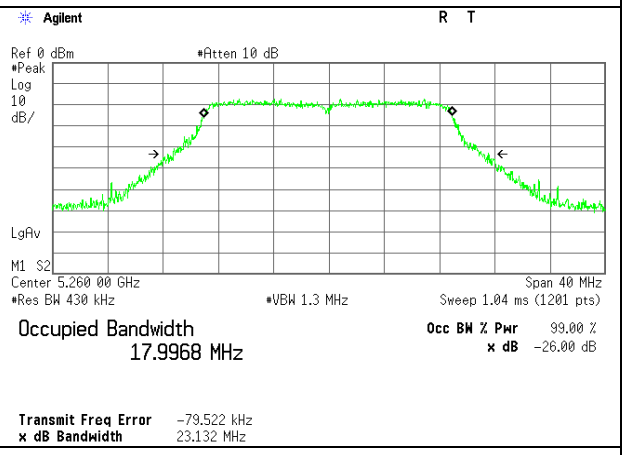
99 % Occupied Bandwidth

11ac-20

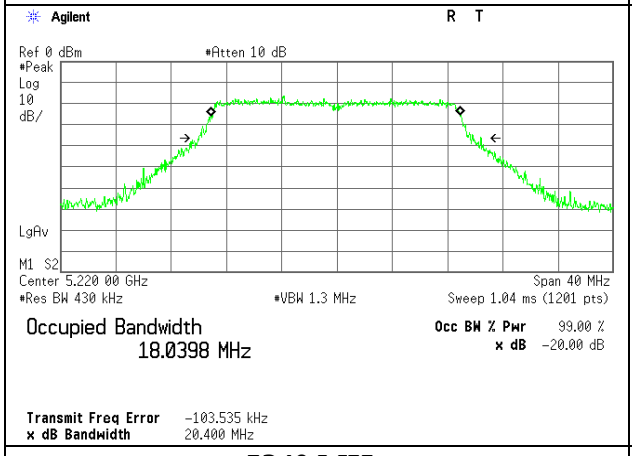
5180 MHz



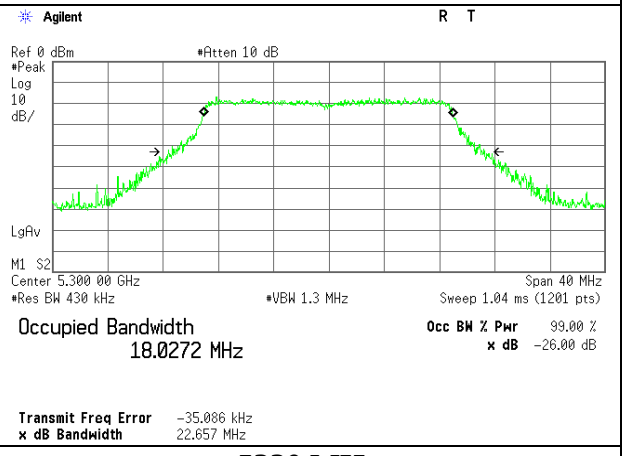
5260 MHz



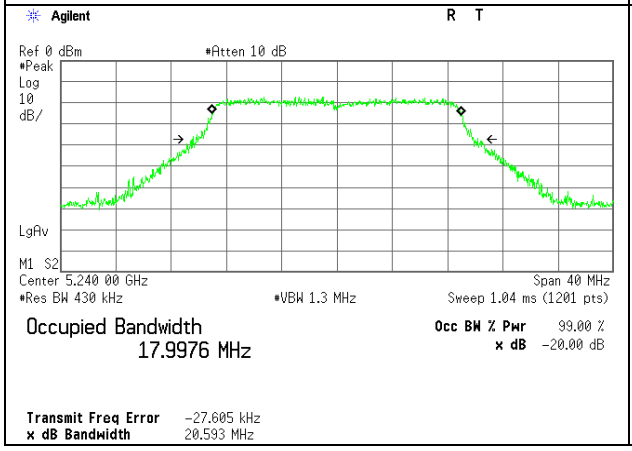
5220 MHz



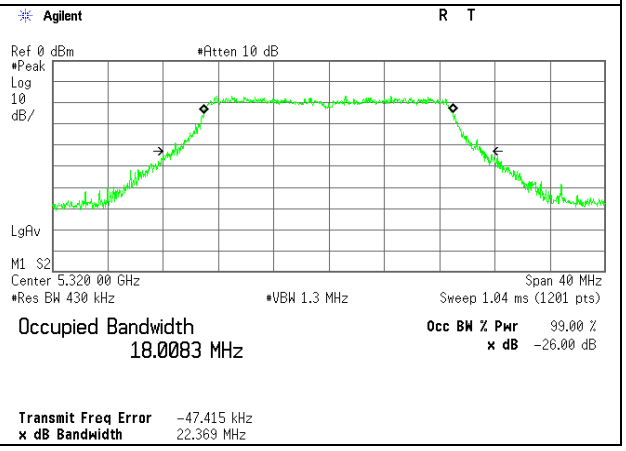
5300 MHz



5240 MHz



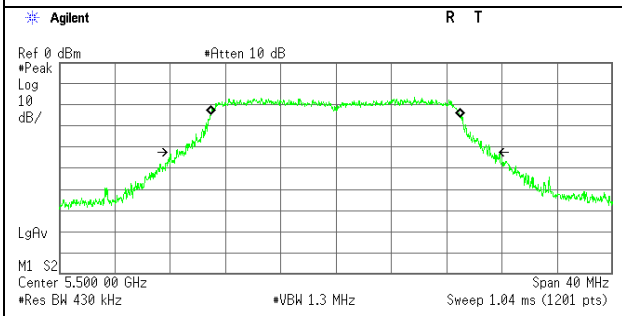
5320 MHz



99 % Occupied Bandwidth

11ac-20

5500 MHz

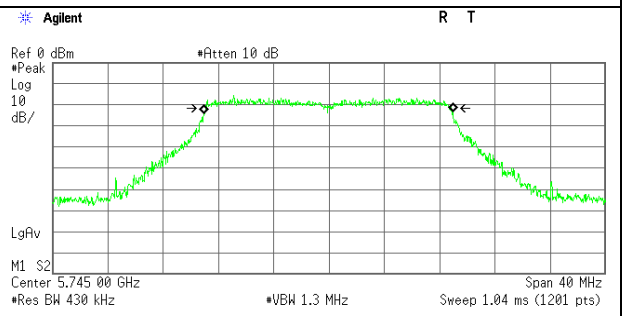


Occupied Bandwidth
18.0082 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -33.342 kHz
x dB Bandwidth 22.619 MHz

5745 MHz

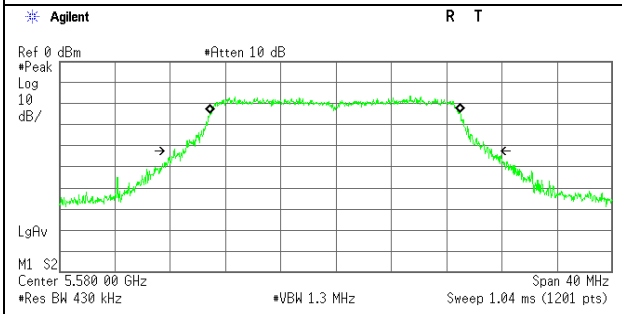


Occupied Bandwidth
17.9857 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error -42.467 kHz
x dB Bandwidth 17.793 MHz

5580 MHz

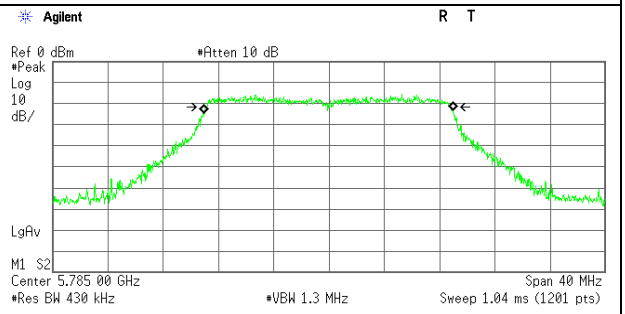


Occupied Bandwidth
18.0643 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -63.285 kHz
x dB Bandwidth 22.906 MHz

5785 MHz

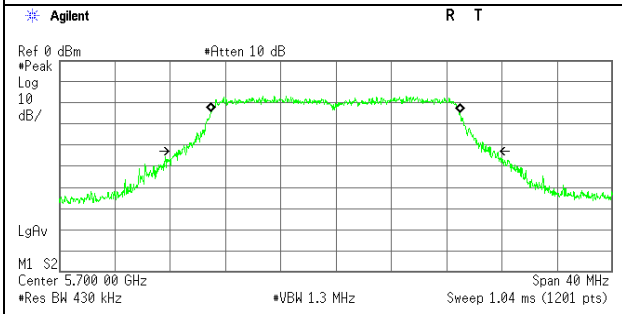


Occupied Bandwidth
18.0230 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error -62.558 kHz
x dB Bandwidth 17.769 MHz

5700 MHz

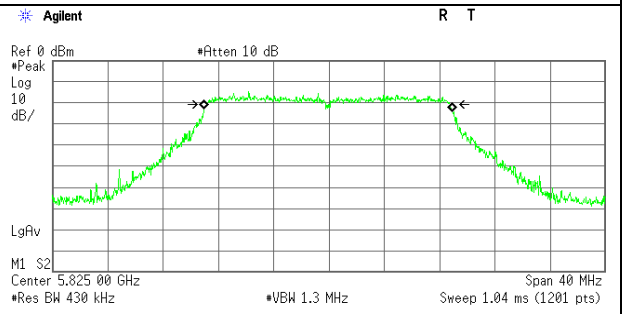


Occupied Bandwidth
18.0067 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -42.504 kHz
x dB Bandwidth 22.351 MHz

5825 MHz



Occupied Bandwidth
17.9894 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error -68.724 kHz
x dB Bandwidth 17.608 MHz

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

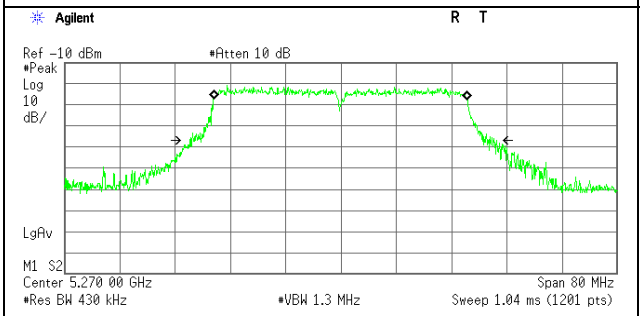
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	36.641	-
5230	-	36.640	-
5270	44.014	36.650	-
5310	42.507	36.842	-
5510	44.220	36.673	-
5550	43.152	36.705	-
5670	44.121	36.746	-
5755	-	36.627	-
5795	-	36.779	-

26 dB Emission Bandwidth

11n-40

5270 MHz

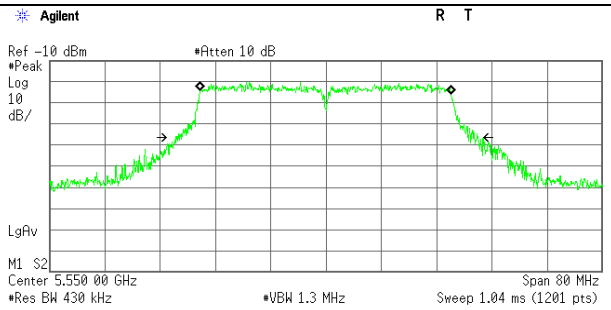


Occupied Bandwidth
36.5390 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -66.369 kHz
x dB Bandwidth 44.014 MHz

5550 MHz

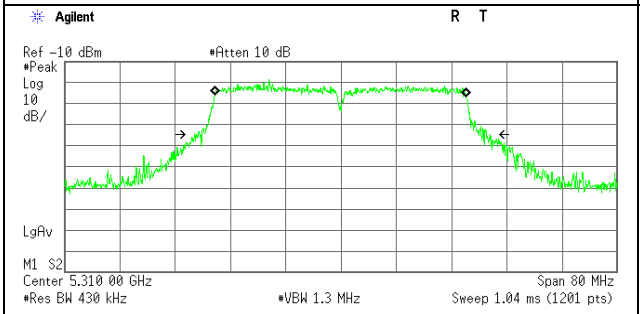


Occupied Bandwidth
36.3870 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -47.366 kHz
x dB Bandwidth 43.152 MHz

5310 MHz

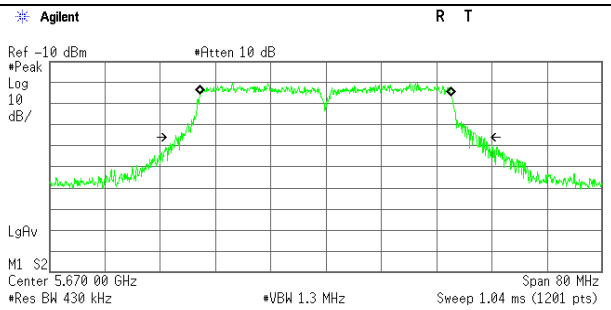


Occupied Bandwidth
36.3010 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -78.896 kHz
x dB Bandwidth 42.507 MHz

5670 MHz

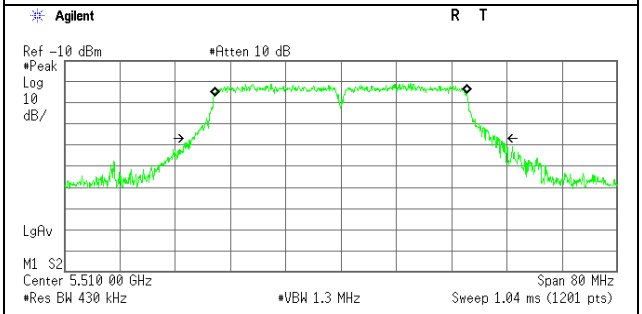


Occupied Bandwidth
36.3972 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -50.332 kHz
x dB Bandwidth 44.121 MHz

5510 MHz



Occupied Bandwidth
36.4897 MHz

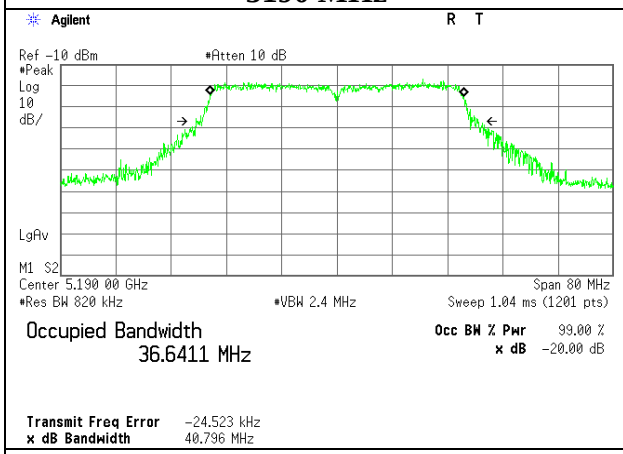
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -36.039 kHz
x dB Bandwidth 44.220 MHz

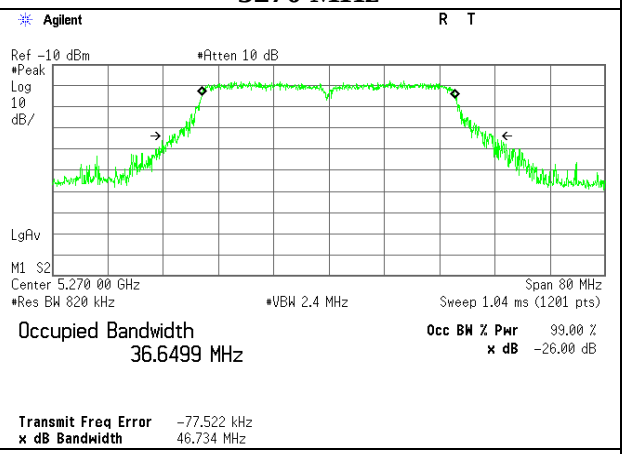
99 % Occupied Bandwidth

11n-40

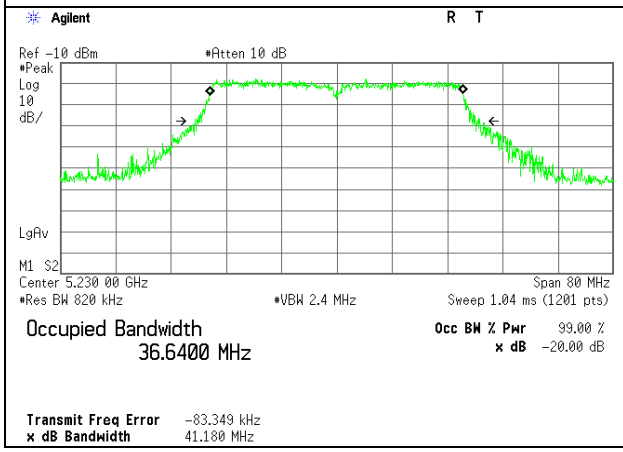
5190 MHz



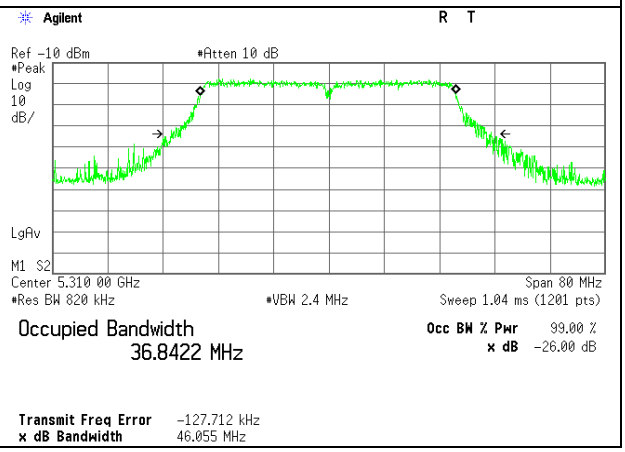
5270 MHz



5230 MHz



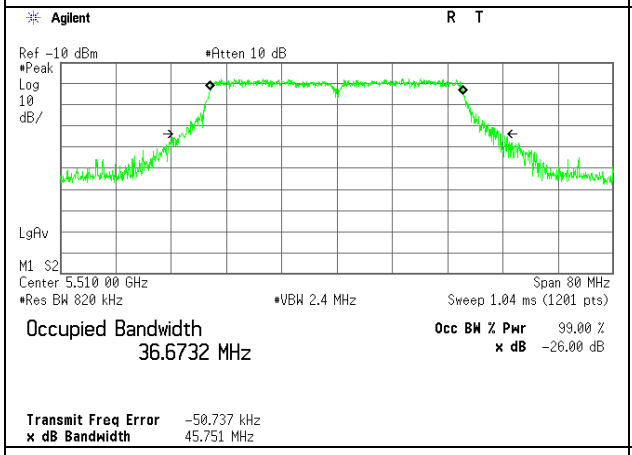
5310 MHz



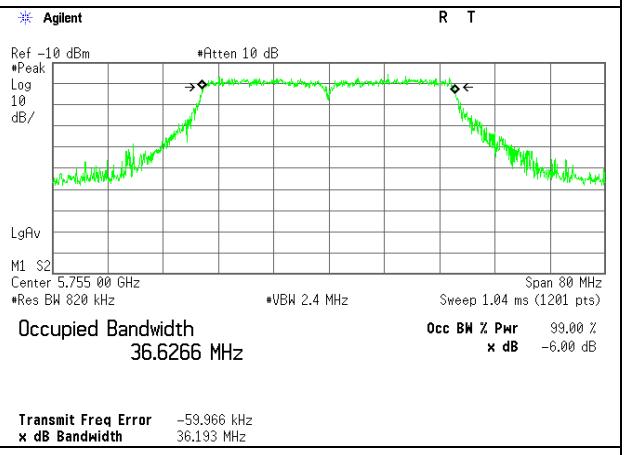
99 % Occupied Bandwidth

11n-40

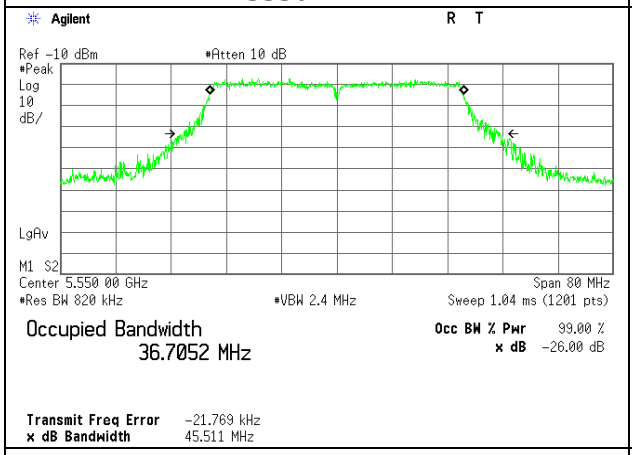
5510 MHz



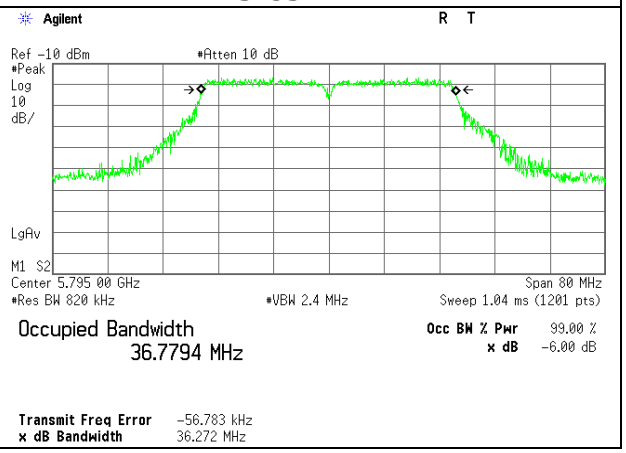
5755 MHz



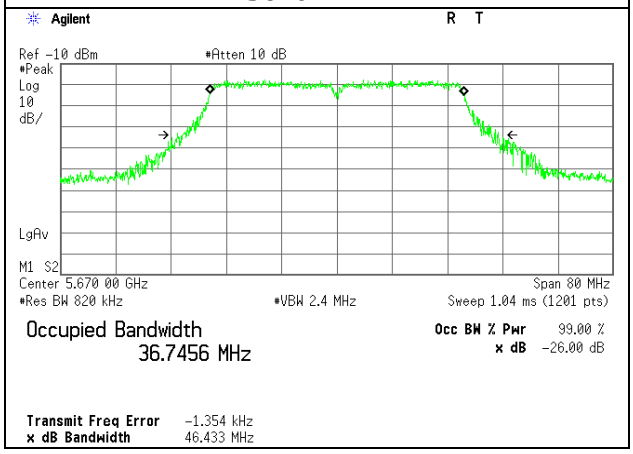
5550 MHz



5795 MHz



5670 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

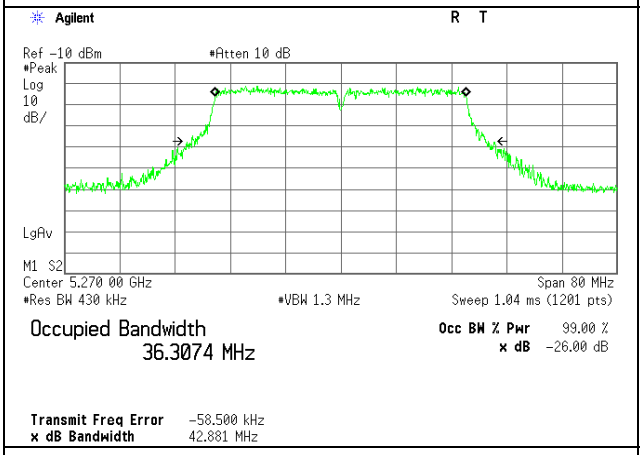
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	36.660	-
5230	-	36.692	-
5270	42.881	36.504	-
5310	42.564	36.606	-
5510	42.279	36.678	-
5550	43.055	36.586	-
5670	42.685	36.647	-
5755	-	36.552	-
5795	-	36.565	-

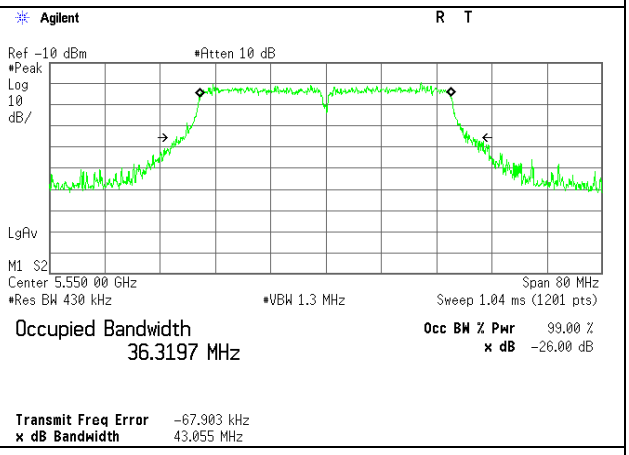
26 dB Emission Bandwidth

11ac-40

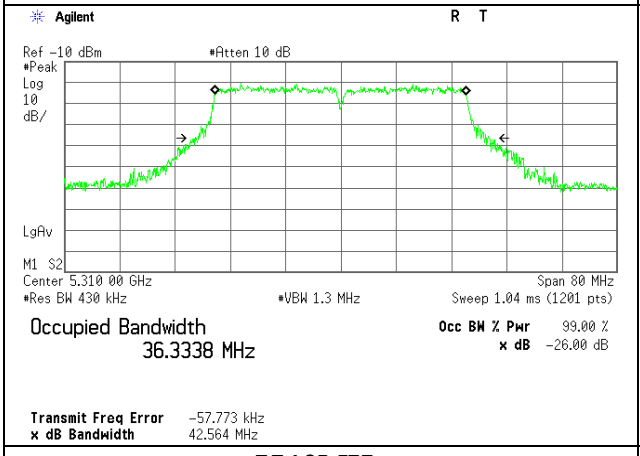
5270MHz



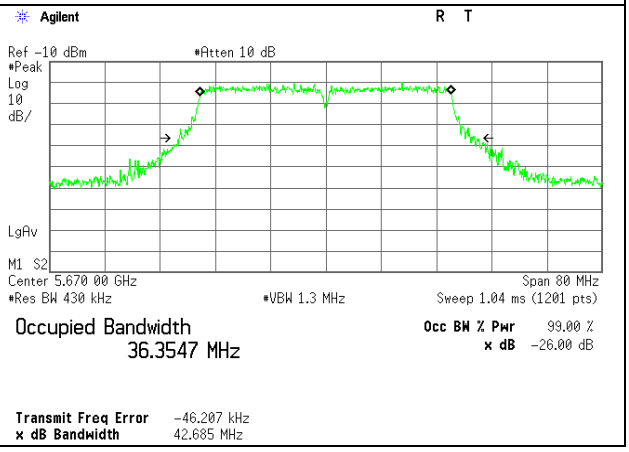
5550MHz



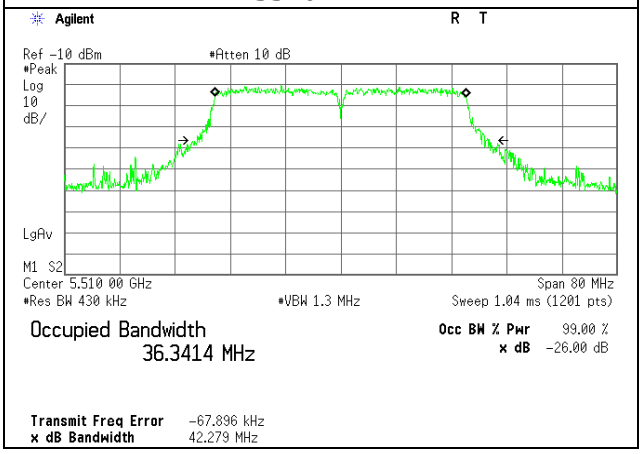
5310MHz



5670MHz



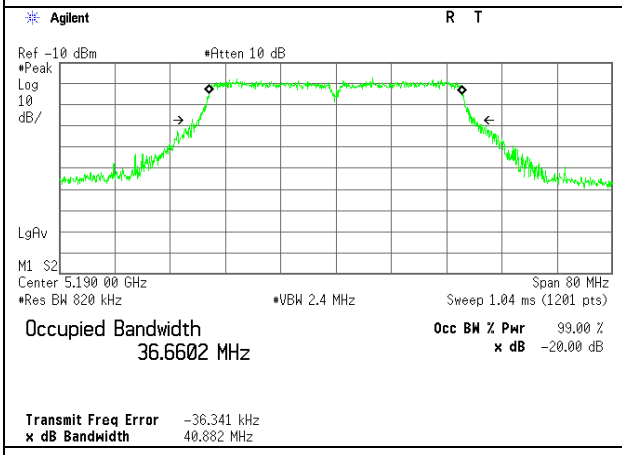
5510MHz



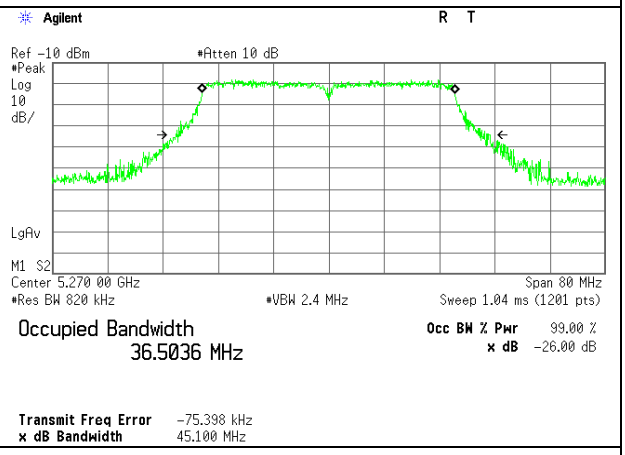
99 % Occupied Bandwidth

11ac-40

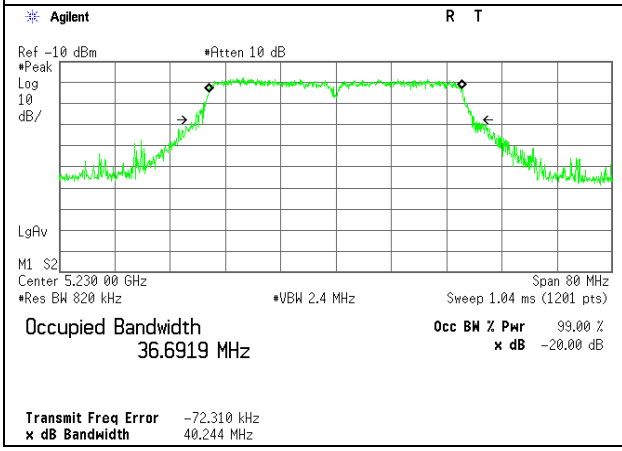
5190 MHz



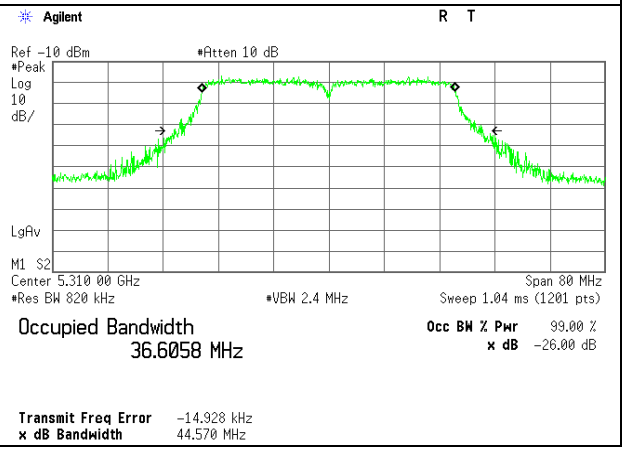
5270 MHz



5230 MHz



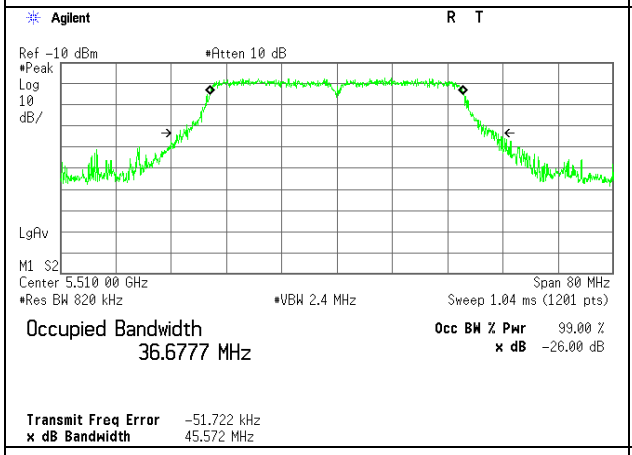
5310 MHz



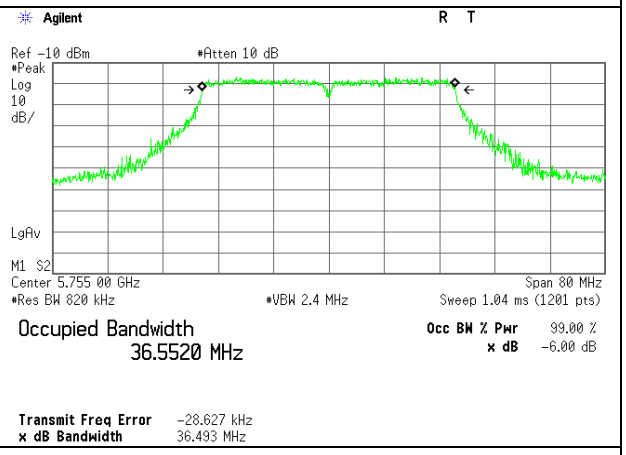
99 % Occupied Bandwidth

11ac-40

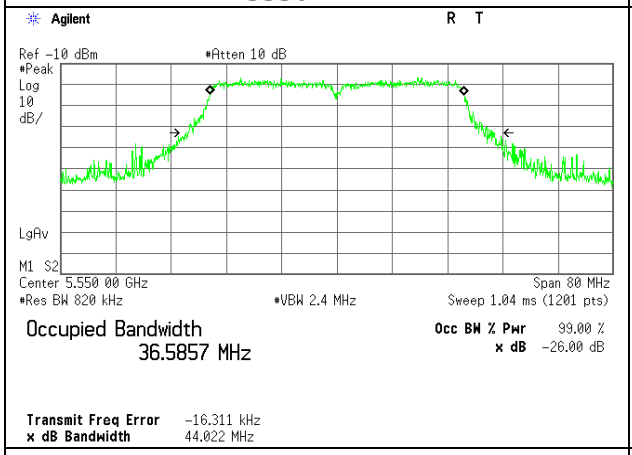
5510 MHz



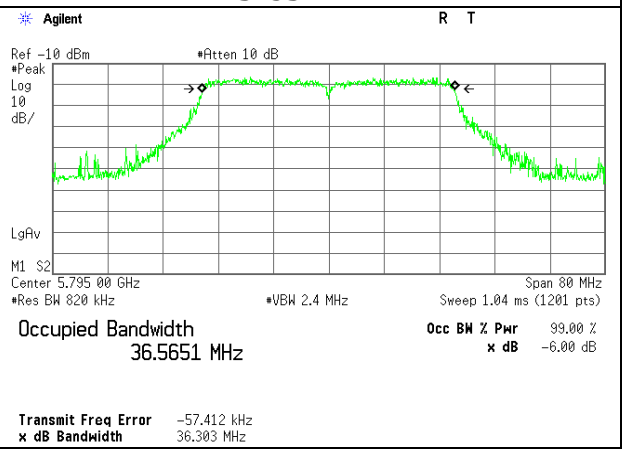
5755 MHz



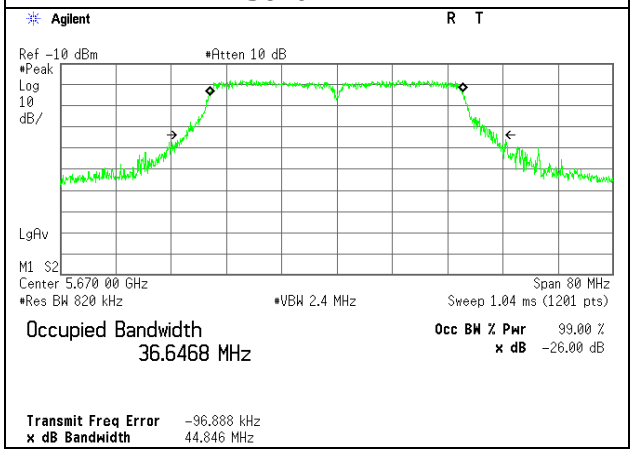
5550 MHz



5795 MHz



5670 MHz



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

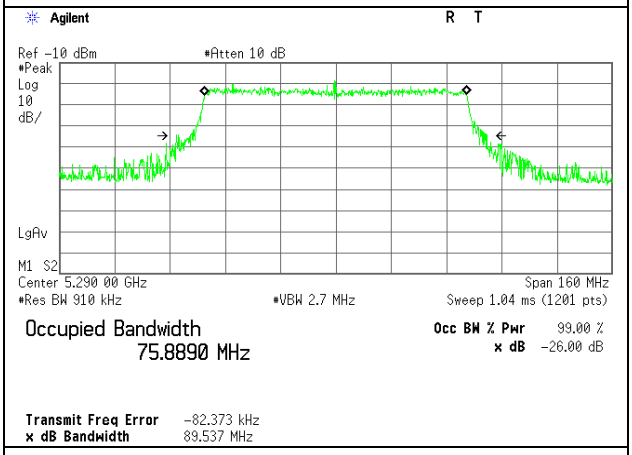
Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5210	-	76.493	-
5290	89.537	76.369	-
5530	85.315	76.419	-
5610	87.178	76.625	-
5775	-	76.296	-

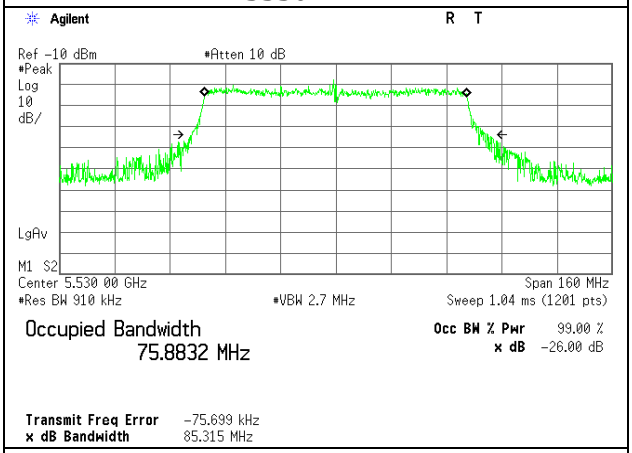
26 dB Emission Bandwidth

11ac-80

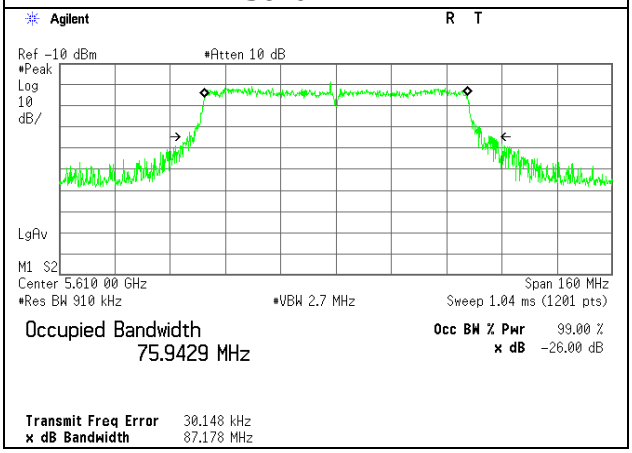
5290 MHz



5530 MHz



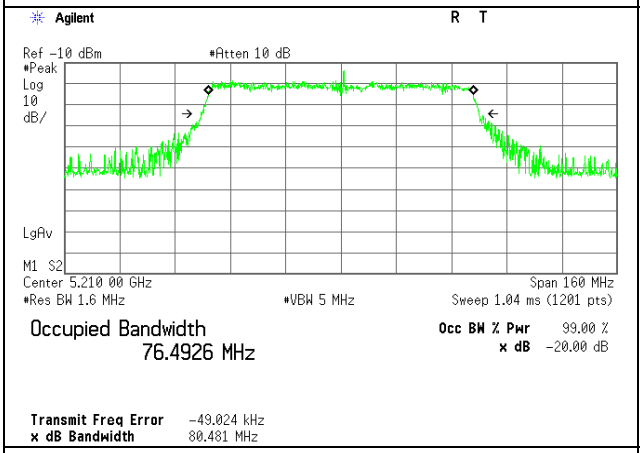
5610 MHz



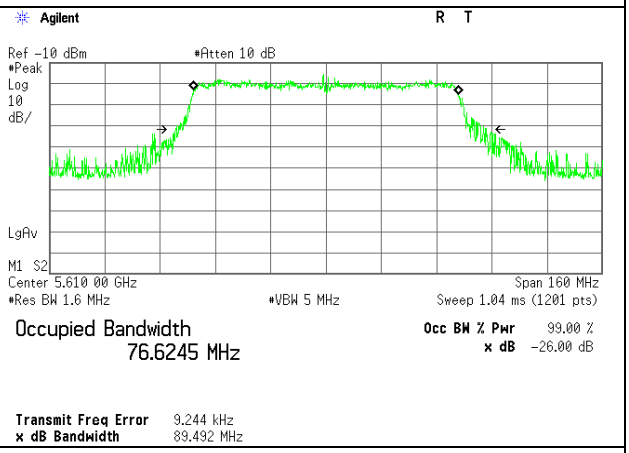
99 % Occupied Bandwidth

11ac-80

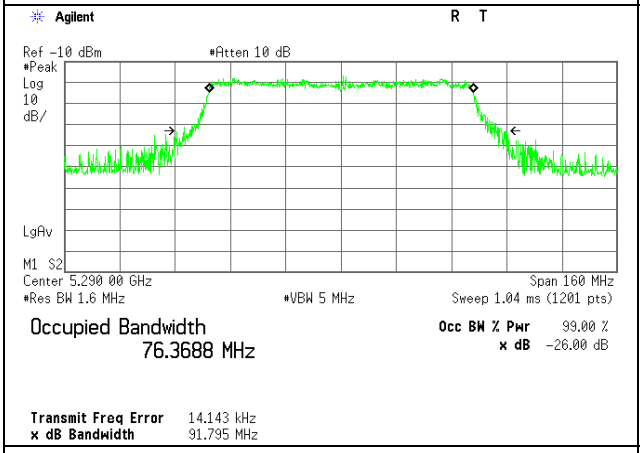
5210MHz



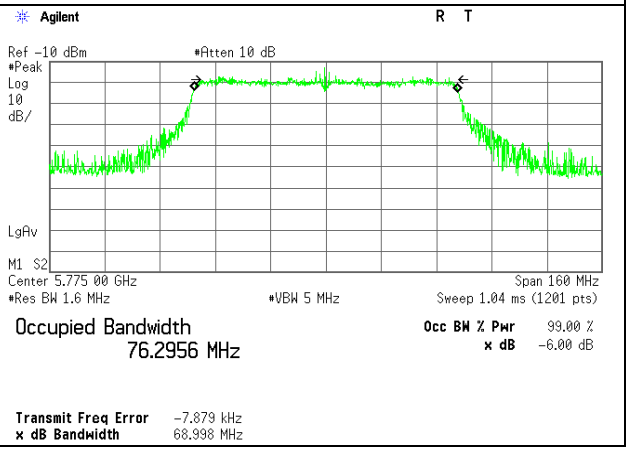
5610MHz



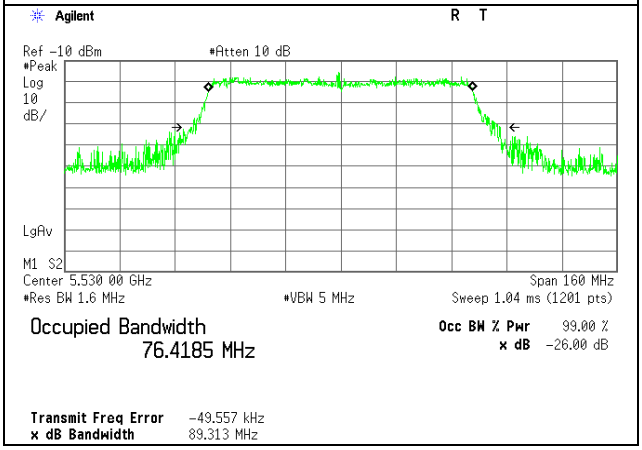
5290MHz



5775MHz



5530MHz



6 dB Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx

11a

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	16.443	> 500
5785	16.481	> 500
5825	16.472	> 500

11n-20

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	17.688	> 500
5785	17.637	> 500
5825	17.645	> 500

11ac-20

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	17.529	> 500
5785	17.695	> 500
5825	17.537	> 500

11n-40

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5755	36.360	> 500
5795	36.430	> 500

11ac-40

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5755	35.892	> 500
5795	36.431	> 500

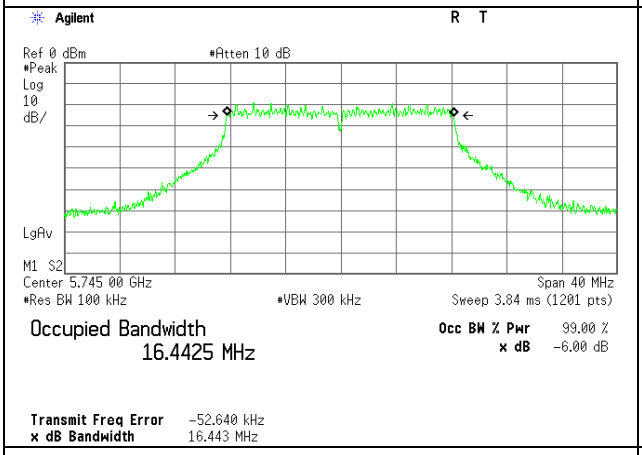
11ac-80

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5775	76.227	> 500

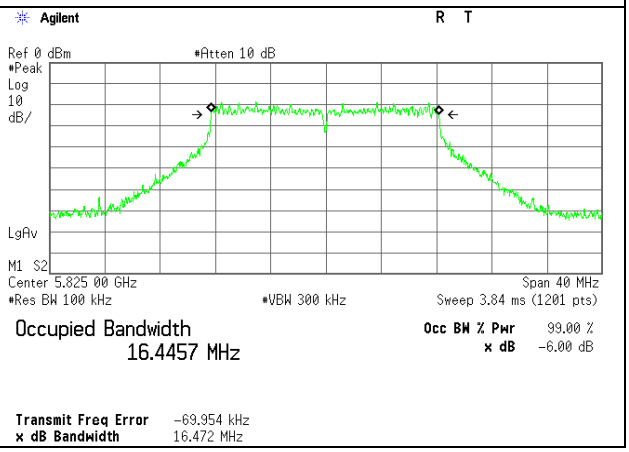
6dB Bandwidth

11a

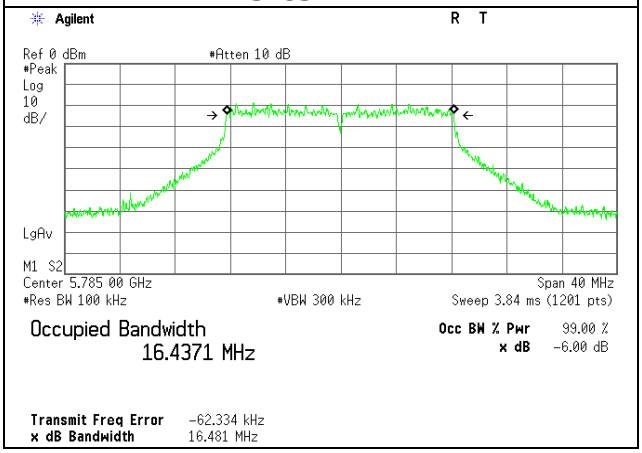
5745 MHz



5825 MHz



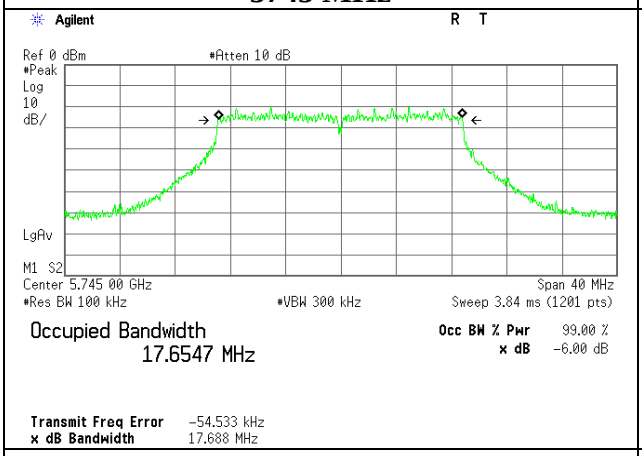
5785 MHz



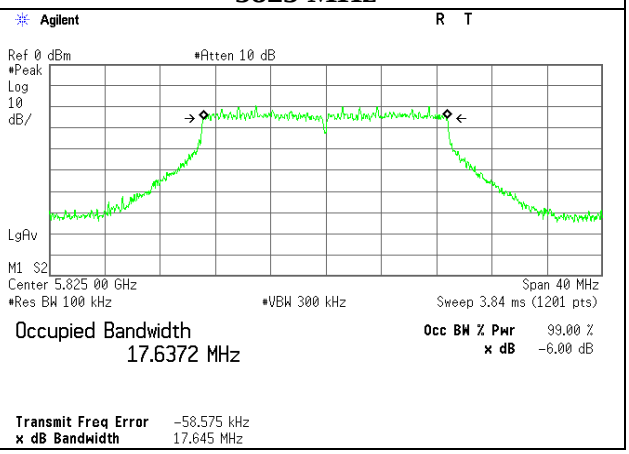
6dB Bandwidth

11n-20

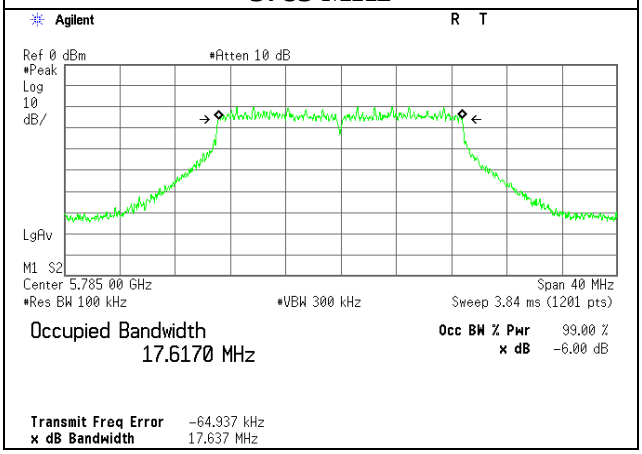
5745 MHz



5825 MHz



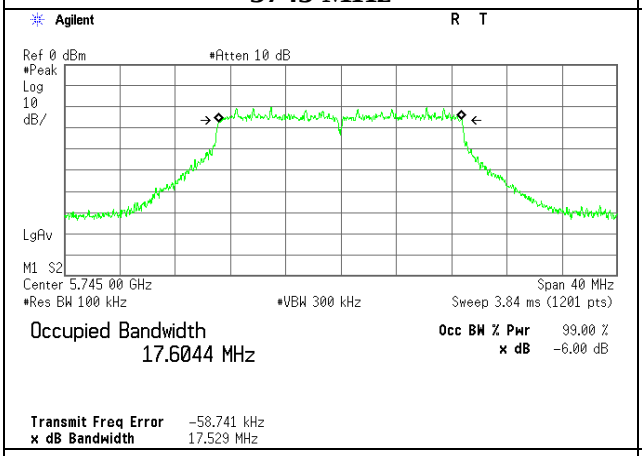
5785 MHz



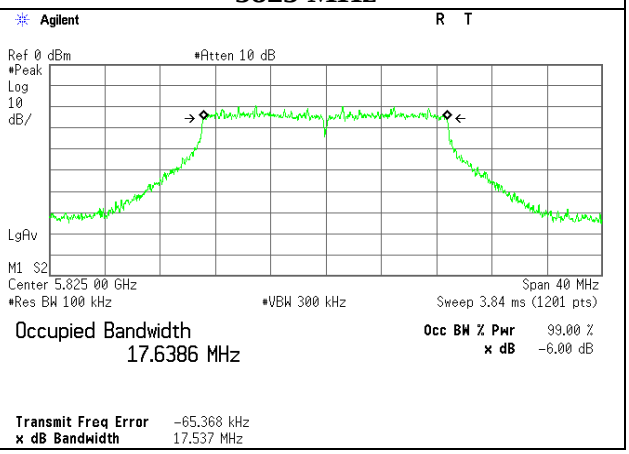
6dB Bandwidth

11ac-20

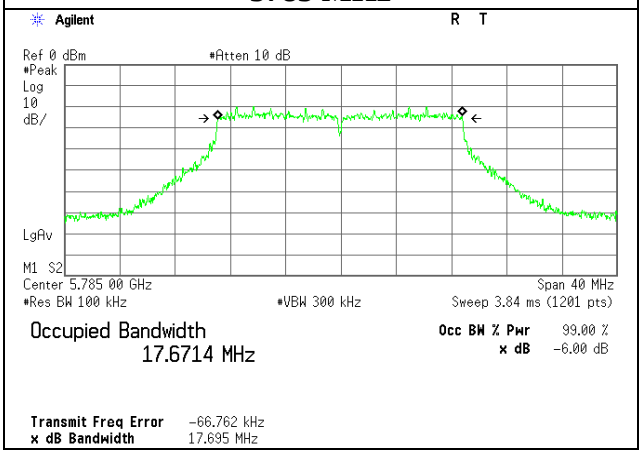
5745 MHz



5825 MHz



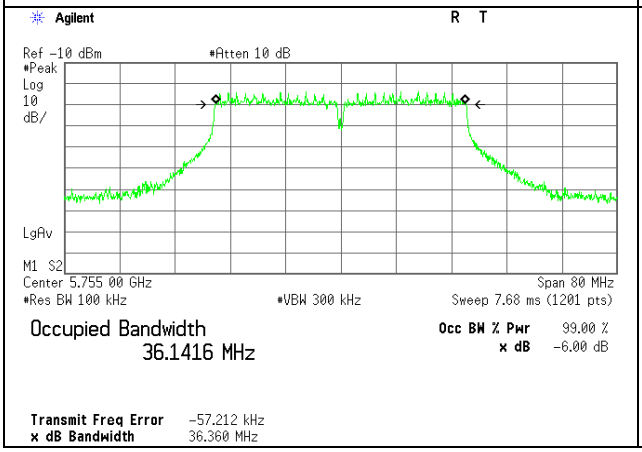
5785 MHz



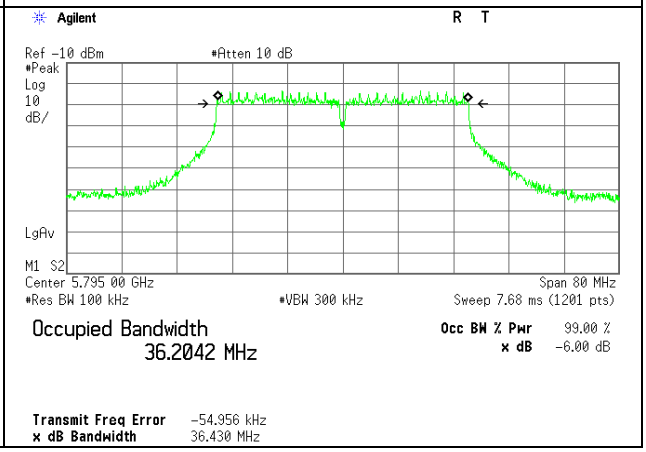
6dB Bandwidth

11n-40

5755 MHz

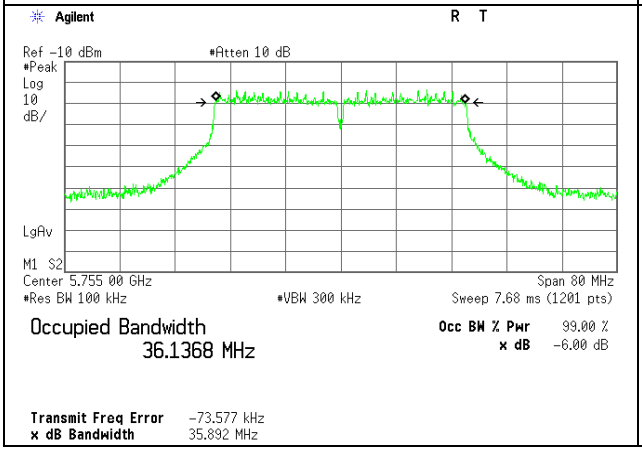


5795 MHz

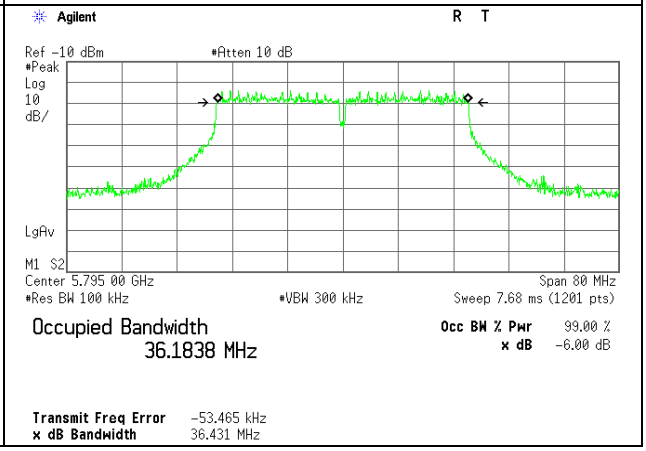


11ac-40

5755 MHz

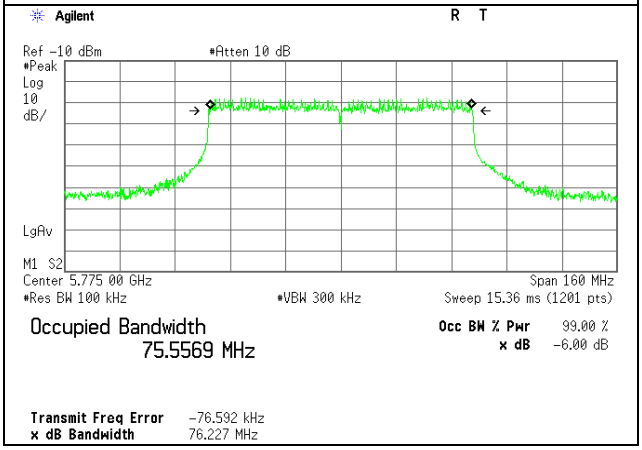


5795 MHz



11ac-80

5775 MHz



Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11a Tx

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]
5180	-10.15	2.82	9.84	1.44	5.7	-	16.919	3.95	2.48	23.97	20.02	9.65	9.22	29.97	20.32
5220	-10.15	2.83	9.84	1.44	5.7	-	16.907	3.96	2.49	23.97	20.01	9.66	9.26	29.97	20.31
5240	-10.18	2.84	9.84	1.44	5.7	-	16.937	3.94	2.48	23.97	20.03	9.64	9.21	29.97	20.33
5260	-10.19	2.85	9.84	1.44	5.7	21.073	16.896	3.94	2.48	23.97	20.03	9.64	9.21	29.97	20.33
5300	-9.82	2.86	9.85	1.44	5.7	20.526	16.981	4.33	2.71	23.97	19.64	10.03	10.07	29.97	19.94
5320	-9.71	2.87	9.85	1.44	5.7	20.772	16.942	4.45	2.78	23.97	19.52	10.15	10.35	29.97	19.82
5500	-9.36	2.94	9.85	1.44	5.7	20.591	16.957	4.87	3.07	23.97	19.10	10.57	11.41	29.97	19.40
5580	-9.68	2.98	9.85	1.44	5.7	20.935	16.914	4.59	2.88	23.97	19.38	10.29	10.69	29.97	19.68
5700	-9.61	3.03	9.85	1.44	5.7	20.320	16.971	4.71	2.96	23.97	19.26	10.41	10.99	29.97	19.56
5745	-9.32	3.05	9.85	1.44	5.7	-	-	5.02	3.18	30.00	24.98	10.72	11.81	36.00	25.28
5785	-9.05	3.07	9.85	1.44	5.7	-	-	5.31	3.39	30.00	24.69	11.01	12.61	36.00	24.99
5825	-8.88	3.08	9.85	1.44	5.7	-	-	5.50	3.54	30.00	24.50	11.20	13.17	36.00	24.80

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

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11n-20 Tx

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for IC) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5180	-10.77	2.82	9.84	1.43	5.7	-	17.985	3.32	2.15	23.97	20.65	9.02	7.97	29.97	20.95
5220	-11.06	2.83	9.84	1.43	5.7	-	17.967	3.04	2.02	23.97	20.93	8.74	7.49	29.97	21.23
5240	-11.05	2.84	9.84	1.43	5.7	-	18.001	3.06	2.02	23.97	20.91	8.76	7.52	29.97	21.21
5260	-11.04	2.85	9.84	1.43	5.7	21.541	17.973	3.08	2.03	23.97	20.89	8.78	7.55	29.97	21.19
5300	-10.80	2.86	9.85	1.43	5.7	21.354	17.954	3.34	2.16	23.97	20.63	9.04	8.02	29.97	20.93
5320	-10.70	2.87	9.85	1.43	5.7	21.136	17.988	3.45	2.21	23.97	20.52	9.15	8.22	29.97	20.82
5500	-10.37	2.94	9.85	1.43	5.7	21.239	18.010	3.85	2.43	23.97	20.12	9.55	9.02	29.97	20.42
5580	-10.68	2.98	9.85	1.43	5.7	21.196	17.996	3.58	2.28	23.97	20.39	9.28	8.47	29.97	20.69
5700	-10.63	3.03	9.85	1.43	5.7	21.752	18.005	3.68	2.33	23.97	20.29	9.38	8.67	29.97	20.59
5745	-10.34	3.05	9.85	1.43	5.7	-	-	3.99	2.51	30.00	26.01	9.69	9.31	36.00	26.31
5785	-10.06	3.07	9.85	1.43	5.7	-	-	4.29	2.68	30.00	25.71	9.99	9.97	36.00	26.01
5825	-9.84	3.08	9.85	1.43	5.7	-	-	4.53	2.83	30.00	25.47	10.23	10.53	36.00	25.77

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

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11ac-20 Tx

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for IC) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5180	-11.13	2.82	9.84	1.14	5.7	-	18.026	2.67	1.85	23.97	21.30	8.37	6.87	29.97	21.60
5220	-11.11	2.83	9.84	1.14	5.7	-	18.040	2.70	1.86	23.97	21.27	8.40	6.93	29.97	21.57
5240	-11.11	2.84	9.84	1.14	5.7	-	17.998	2.71	1.87	23.97	21.26	8.41	6.94	29.97	21.56
5260	-11.10	2.85	9.84	1.14	5.7	21.586	17.997	2.73	1.88	23.97	21.24	8.43	6.97	29.97	21.54
5300	-10.85	2.86	9.85	1.14	5.7	21.417	18.027	3.00	1.99	23.97	20.97	8.70	7.41	29.97	21.27
5320	-10.75	2.87	9.85	1.14	5.7	21.029	18.008	3.11	2.05	23.97	20.86	8.81	7.60	29.97	21.16
5500	-10.40	2.94	9.85	1.14	5.7	21.531	18.008	3.53	2.26	23.97	20.44	9.23	8.38	29.97	20.74
5580	-10.70	2.98	9.85	1.14	5.7	21.767	18.064	3.27	2.12	23.97	20.70	8.97	7.89	29.97	21.00
5700	-10.66	3.03	9.85	1.14	5.7	20.924	18.007	3.36	2.17	23.97	20.61	9.06	8.06	29.97	20.91
5745	-10.36	3.05	9.85	1.14	5.7	-	-	3.68	2.33	30.00	26.32	9.38	8.67	36.00	26.62
5785	-10.12	3.07	9.85	1.14	5.7	-	-	3.94	2.48	30.00	26.06	9.64	9.20	36.00	26.36
5825	-9.91	3.08	9.85	1.14	5.7	-	-	4.17	2.61	30.00	25.83	9.87	9.69	36.00	26.13

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

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11n-40 Tx

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for IC) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-12.03	2.82	9.84	3.22	5.7	-	36.641	3.85	2.43	23.97	20.12	9.55	9.01	29.97	20.42
5230	-12.00	2.84	9.84	3.22	5.7	-	36.640	3.90	2.46	23.97	20.07	9.60	9.13	29.97	20.37
5270	-11.93	2.85	9.84	3.22	5.7	44.014	36.650	3.98	2.50	23.97	19.99	9.68	9.29	29.97	20.29
5310	-11.60	2.87	9.85	3.22	5.7	42.507	36.842	4.34	2.71	23.97	19.63	10.04	10.09	29.97	19.93
5510	-11.18	2.95	9.85	3.22	5.7	44.220	36.673	4.84	3.05	23.97	19.13	10.54	11.32	29.97	19.43
5550	-11.30	2.96	9.85	3.22	5.7	43.152	36.705	4.74	2.98	23.97	19.23	10.44	11.05	29.97	19.53
5670	-11.43	3.02	9.85	3.22	5.7	44.121	36.746	4.66	2.92	23.97	19.31	10.36	10.86	29.97	19.61
5755	-11.08	3.06	9.85	3.22	5.7	-	-	5.05	3.20	30.00	24.95	10.75	11.90	36.00	25.25
5795	-10.87	3.07	9.85	3.22	5.7	-	-	5.27	3.37	30.00	24.73	10.97	12.51	36.00	25.03

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

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11ac-40 Tx

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for IC) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-12.05	2.82	9.84	2.97	5.7	-	36.660	3.58	2.28	23.97	20.39	9.28	8.47	29.97	20.69
5230	-12.00	2.84	9.84	2.97	5.7	-	36.692	3.65	2.32	23.97	20.32	9.35	8.62	29.97	20.62
5270	-11.93	2.85	9.84	2.97	5.7	42.881	36.504	3.73	2.36	23.97	20.24	9.43	8.77	29.97	20.54
5310	-11.58	2.87	9.85	2.97	5.7	42.564	36.606	4.11	2.57	23.97	19.86	9.81	9.57	29.97	20.16
5510	-11.18	2.95	9.85	2.97	5.7	42.279	36.678	4.59	2.88	23.97	19.38	10.29	10.68	29.97	19.68
5550	-11.31	2.96	9.85	2.97	5.7	43.055	36.586	4.48	2.80	23.97	19.49	10.18	10.41	29.97	19.79
5670	-11.44	3.02	9.85	2.97	5.7	42.685	36.647	4.40	2.75	23.97	19.57	10.10	10.23	29.97	19.87
5755	-11.05	3.06	9.85	2.97	5.7	-	-	4.83	3.04	30.00	25.17	10.53	11.31	36.00	25.47
5795	-10.60	3.07	9.85	2.97	5.7	-	-	5.29	3.38	30.00	24.71	10.99	12.57	36.00	25.01

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

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11ac-80 Tx

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for IC) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5210	-13.09	2.83	9.84	2.87	5.7	-	76.493	2.45	1.76	23.97	21.52	8.15	6.53	29.97	21.82
5290	-12.66	2.86	9.85	2.87	5.7	89.537	76.369	2.91	1.96	23.97	21.06	8.61	7.27	29.97	21.36
5530	-12.39	2.95	9.85	2.87	5.7	85.315	76.419	3.29	2.13	23.97	20.68	8.99	7.92	29.97	20.98
5610	-12.56	2.99	9.85	2.87	5.7	87.178	76.625	3.15	2.07	23.97	20.82	8.85	7.68	29.97	21.12
5775	-12.02	3.06	9.85	2.87	5.7	-	-	3.76	2.38	30.00	26.24	9.46	8.84	36.00	26.54

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

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11081930H
Date	04/ 05/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Ken Fujita
Mode	Tx

5500 MHz

Mode	Rate Mbps	Reading Average [dBm]	Remarks
11a	6	-8.87	
	9	-8.87	
	12	-8.86	
	18	-8.87	
	24	-8.89	
	36	-8.87	
	48	-8.86	
	54	-8.81	*

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	11245604H	
Date	04/ 05/2016	05/ 02/2016
Temperature / Humidity	24deg. C / 39 % RH	25deg. C / 31 % RH
Engineer	Ken Fujita	Yutaka Yoshida
Mode	Tx	

5500 MHz

Mode	MCS Number	Reading Average		Remarks
		<Short> [dBm]	<Long> [dBm]	
11n-20	0	-9.08	-	
	1	-8.99	-	
	2	-9.01	-	
	3	-8.92	-	
	4	-8.94	-	
	5	-8.91	-	
	6	-8.88	-8.85	*
	7	-8.91	-	

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

5500 MHz

Mode	MCS Number	Reading Average		Remarks
		<Short> [dBm]	<Long> [dBm]	
11ac-20	0	-10.37		
	1	-10.38		
	2	-10.37		
	3	-10.30	-10.31	*
	4	-10.33		
	5	-10.32		
	6	-10.33		
	7	-10.33		
	8	-11.18		

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	11245604H	
Date	04/ 05/2016	05/ 02/2016
Temperature / Humidity	24deg. C / 39 % RH	25deg. C / 31 % RH
Engineer	Ken Fujita	Yutaka Yoshida
Mode	Tx	

5510 MHz

Mode	MCS Number	Reading Average		Remarks
		<Short> [dBm]	<Long> [dBm]	
11n-40	0	-8.95	-	
	1	-8.86	-	
	2	-8.86	-	
	3	-8.92	-	
	4	-8.86	-	
	5	-8.88	-	
	6	-8.84	-8.91	*
	7	-8.86	-	

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

5510 MHz

Mode	MCS Number	Reading Average		Remarks
		<Short> [dBm]	<Long> [dBm]	
11ac-40	0	-11.04		
	1	-11.03		
	2	-11.04		
	3	-11.10		
	4	-11.12		
	5	-11.02	-11.10	*
	6	-11.12		
	7	-11.19		
	8	-13.33		
	9	-13.36		

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

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature / Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	Tx

5530 MHz

Mode	MCS Number	Reading Average		Remarks
		<Short> [dBm]	<Long> [dBm]	
11ac-80	0	-12.23		
	1	-12.25		
	2	-12.24		
	3	-12.31		
	4	-12.30		
	5	-12.24	-12.22	*
	6	-12.26		
	7	-12.31		
	8	-14.30		
	9	-14.38		

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

Average Output Power (Reference data)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11a / 11n-20 / 11ac-20 Tx

11a 6Mbps

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Time average) [dBm]	[mW]
5180	-10.39	2.82	9.84	2.27	1.69
5220	-10.40	2.83	9.84	2.27	1.69
5240	-10.39	2.84	9.84	2.29	1.70
5260	-10.36	2.85	9.84	2.33	1.71
5300	-10.04	2.86	9.85	2.67	1.85
5320	-9.91	2.87	9.85	2.81	1.91
5500	-9.55	2.94	9.85	3.24	2.11
5580	-9.86	2.98	9.85	2.97	1.98
5700	-9.82	3.03	9.85	3.06	2.02
5745	-9.55	3.05	9.85	3.35	2.16
5785	-9.25	3.07	9.85	3.67	2.33
5825	-9.07	3.08	9.85	3.87	2.44

11n-20 MCS 0(Long GI)

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Time average) [dBm]	[mW]
5180	-11.40	2.82	9.84	1.26	1.34
5220	-11.41	2.83	9.84	1.26	1.34
5240	-11.41	2.84	9.84	1.27	1.34
5260	-11.40	2.85	9.84	1.29	1.35
5300	-11.15	2.86	9.85	1.56	1.43
5320	-11.06	2.87	9.85	1.66	1.46
5500	-10.70	2.94	9.85	2.09	1.62
5580	-11.02	2.98	9.85	1.81	1.52
5700	-10.96	3.03	9.85	1.92	1.56
5745	-10.68	3.05	9.85	2.22	1.67
5785	-10.41	3.07	9.85	2.51	1.78
5825	-10.21	3.08	9.85	2.73	1.87

11ac-20 MCS 0(Long GI)

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Time average) [dBm]	[mW]
5180	-11.37	2.82	9.84	1.29	1.34
5220	-11.41	2.83	9.84	1.26	1.34
5240	-11.42	2.84	9.84	1.26	1.34
5260	-11.39	2.85	9.84	1.30	1.35
5300	-11.16	2.86	9.85	1.55	1.43
5320	-11.05	2.87	9.85	1.67	1.47
5500	-10.68	2.94	9.85	2.11	1.63
5580	-11.02	2.98	9.85	1.81	1.52
5700	-10.96	3.03	9.85	1.92	1.56
5745	-10.66	3.05	9.85	2.24	1.68
5785	-10.40	3.07	9.85	2.52	1.79
5825	-10.21	3.08	9.85	2.73	1.87

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

The test was performed with condition that obtained the maximum frame power in pre-check.

Average Output Power (Reference data)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 02/2016
Temperature/ Humidity	25deg. C / 31 % RH
Engineer	Yutaka Yoshida
Mode	11n-40 / 11ac-40 / 11ac-80 Tx

11n-40 MCS 0(Long GI)

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Time average) [dBm]	[mW]
5190	-12.36	2.82	9.84	0.30	1.07
5230	-12.33	2.84	9.84	0.35	1.08
5270	-12.27	2.85	9.84	0.42	1.10
5310	-11.93	2.87	9.85	0.79	1.20
5510	-11.52	2.95	9.85	1.28	1.34
5550	-11.68	2.96	9.85	1.14	1.30
5670	-11.79	3.02	9.85	1.08	1.28
5755	-11.41	3.06	9.85	1.50	1.41
5795	-11.11	3.07	9.85	1.81	1.52

11ac-40 MCS 0(Long GI)

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Time average) [dBm]	[mW]
5190	-12.35	2.82	9.84	0.31	1.07
5230	-12.36	2.84	9.84	0.32	1.08
5270	-12.26	2.85	9.84	0.43	1.10
5310	-11.93	2.87	9.85	0.79	1.20
5510	-11.50	2.95	9.85	1.30	1.35
5550	-11.69	2.96	9.85	1.13	1.30
5670	-11.79	3.02	9.85	1.08	1.28
5755	-11.39	3.06	9.85	1.52	1.42
5795	-11.10	3.07	9.85	1.82	1.52

11ac-80 MCS 0(Long GI)

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Time average) [dBm]	[mW]
5210	-13.77	2.83	9.84	-1.10	0.78
5290	-13.35	2.86	9.85	-0.65	0.86
5530	-13.06	2.95	9.85	-0.25	0.94
5610	-13.24	2.99	9.85	-0.40	0.91
5775	-12.71	3.06	9.85	0.20	1.05

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

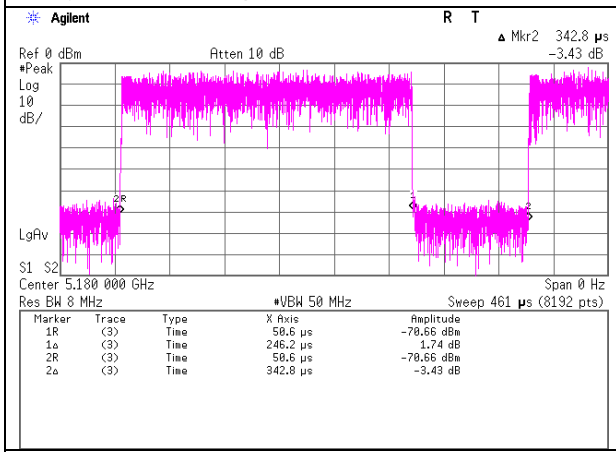
The test was performed with condition that obtained the maximum frame power in pre-check.

Burst rate confirmation

Test place	Ise EMC Lab. No.1 Measurement Room	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H	
Date	04/ 26/2016	05/ 02/2016
Temperature / Humidity	21deg. C / 41 % RH	25deg. C / 31 % RH
Engineer	Ken Fujita	Yutaka Yoshida
Mode	Tx	

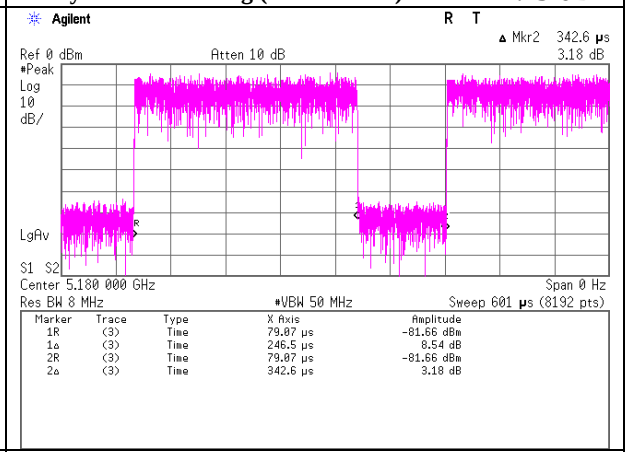
11a 54Mbps

Tx on / (Tx on + Tx off) = 0.718
Tx on / (Tx on + Tx off) * 100 = 71.8 %
Duty factor = 10 * log (342.8 / 246.2) = 1.44 dB



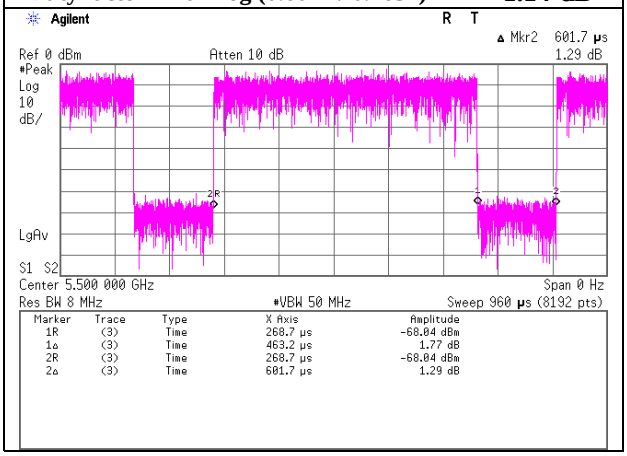
11n-20 MCS6(Long)

Tx on / (Tx on + Tx off) = 0.719
Tx on / (Tx on + Tx off) * 100 = 71.9 %
Duty factor = 10 * log (342.6 / 246.5) = 1.43 dB



11ac-20 MCS3(Short)

Tx on / (Tx on + Tx off) = 0.770
Tx on / (Tx on + Tx off) * 100 = 77.0 %
Duty factor = 10 * log (0.6017 / 0.4632) = 1.14 dB

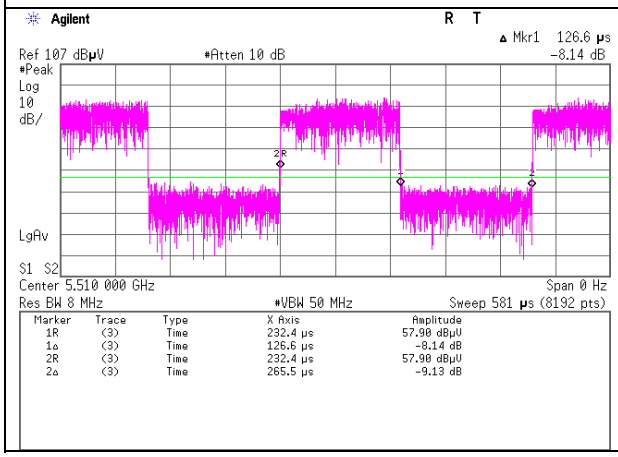


Burst rate confirmation

Test place	Ise EMC Lab. No.1 Measurement Room
Report No.	11245604H
Date	04/ 26/2016
Temperature / Humidity	21deg. C / 41 % RH
Engineer	Ken Fujita
Mode	Tx

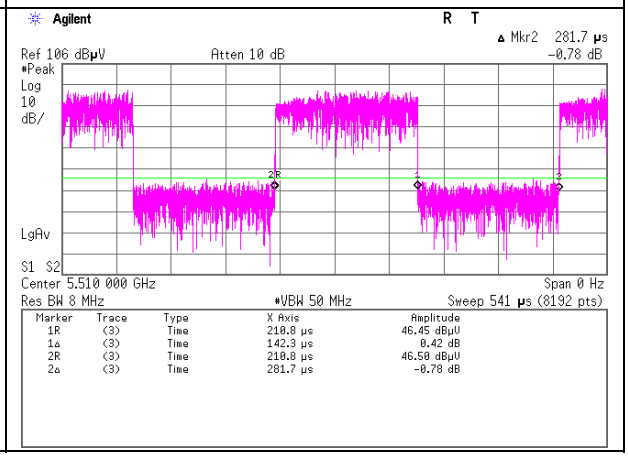
11n-40 MCS6(Short)

Tx on / (Tx on + Tx off) =	**0.477**
Tx on / (Tx on + Tx off) * 100 =	**47.7 %**
Duty factor = 10 * log (265.5 / 126.6) =	**3.22 dB**



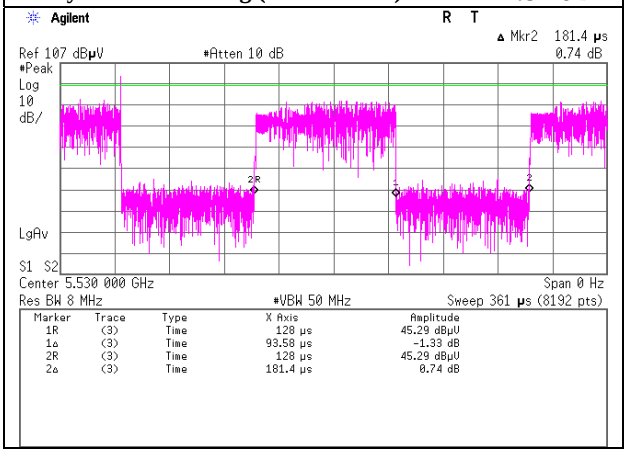
11ac-40 MCS5(Short)

Tx on / (Tx on + Tx off) =	**0.505**
Tx on / (Tx on + Tx off) * 100 =	**50.5 %**
Duty factor = 10 * log (281.7 / 142.3) =	**2.97 dB**



11ac-80 MCS5(Long)

Tx on / (Tx on + Tx off) =	**0.516**
Tx on / (Tx on + Tx off) * 100 =	**51.6 %**
Duty factor = 10 * log (181.4 / 93.58) =	**2.87 dB**



Peak Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature/ Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	11a Tx

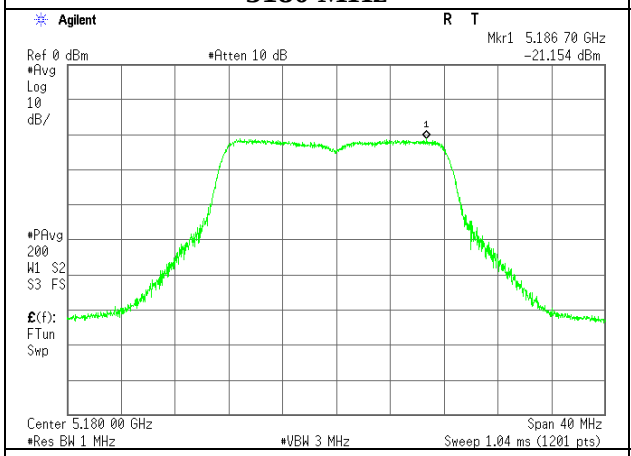
Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-21.15	2.28	9.68	1.44	5.7	0.00	-7.75	11.00	18.75	-2.05	17.00	19.05
5220	-21.19	2.29	9.68	1.44	5.7	0.00	-7.78	11.00	18.78	-2.08	17.00	19.08
5240	-21.27	2.30	9.68	1.44	5.7	0.00	-7.85	11.00	18.85	-2.15	17.00	19.15
5260	-21.22	2.30	9.68	1.44	5.7	0.00	-7.80	11.00	18.80	-2.10	17.00	19.10
5300	-20.72	2.30	9.68	1.44	5.7	0.00	-7.30	11.00	18.30	-1.60	17.00	18.60
5320	-20.14	2.32	9.69	1.44	5.7	0.00	-6.69	11.00	17.69	-0.99	17.00	17.99
5500	-20.53	2.35	9.69	1.44	5.7	0.00	-7.05	11.00	18.05	-1.35	17.00	18.35
5580	-20.73	2.38	9.69	1.44	5.7	0.00	-7.22	11.00	18.22	-1.52	17.00	18.52
5700	-20.63	2.43	9.70	1.44	5.7	0.00	-7.06	11.00	18.06	-1.36	17.00	18.36
5745	-23.48	2.44	9.70	1.44	5.7	0.27	-9.63	30.00	39.63	-3.93	36.00	39.93
5785	-23.07	2.46	9.70	1.44	5.7	0.27	-9.20	30.00	39.20	-3.50	36.00	39.50
5825	-22.60	2.47	9.70	1.44	5.7	0.27	-8.72	30.00	38.72	-3.02	36.00	39.02

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

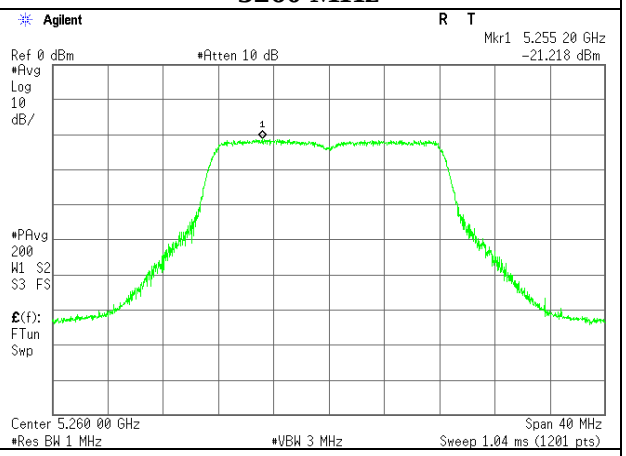
Maximum Power Spectral Density

11a

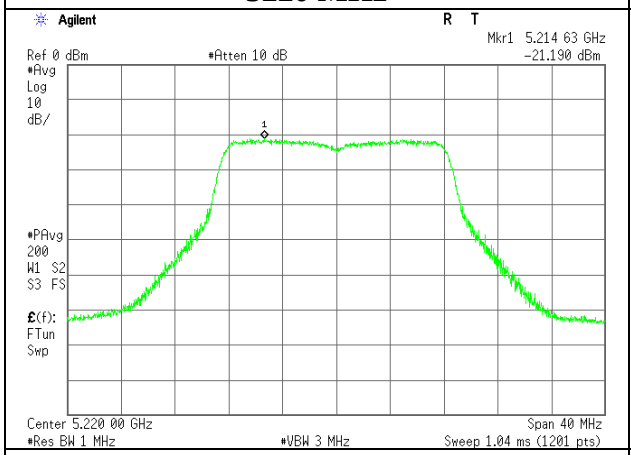
5180 MHz



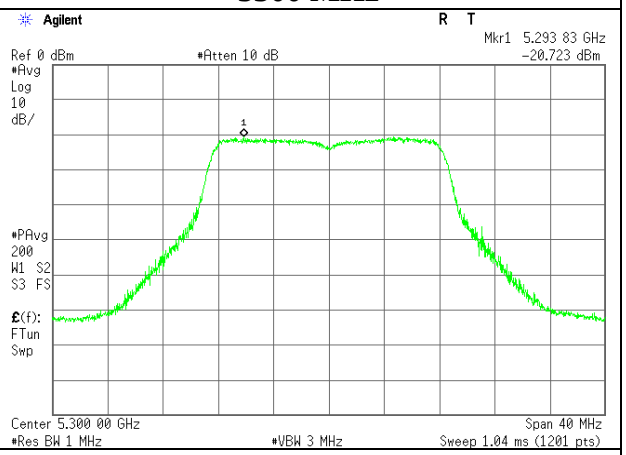
5260 MHz



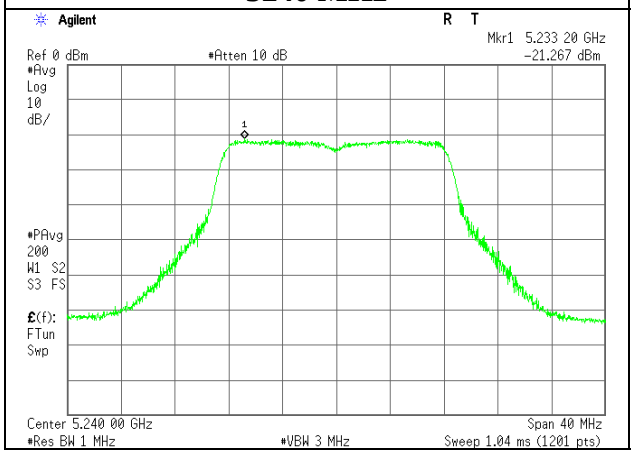
5220 MHz



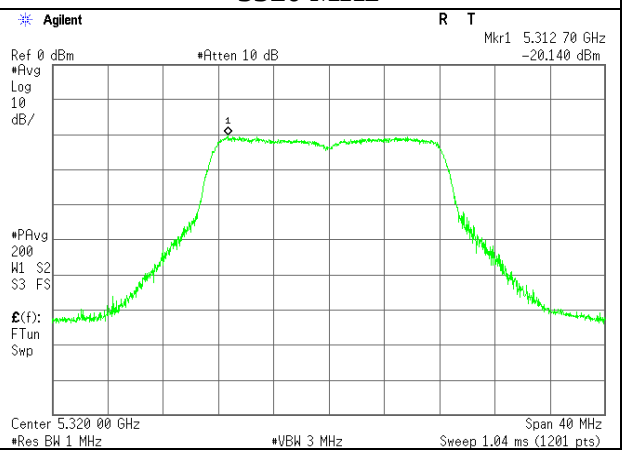
5300 MHz



5240 MHz



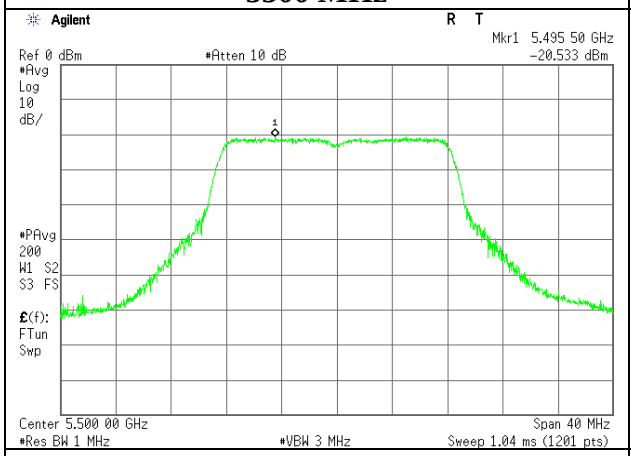
5320 MHz



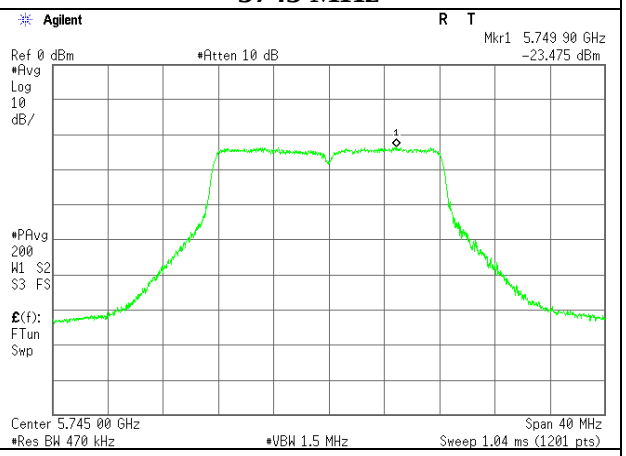
Maximum Power Spectral Density

11a

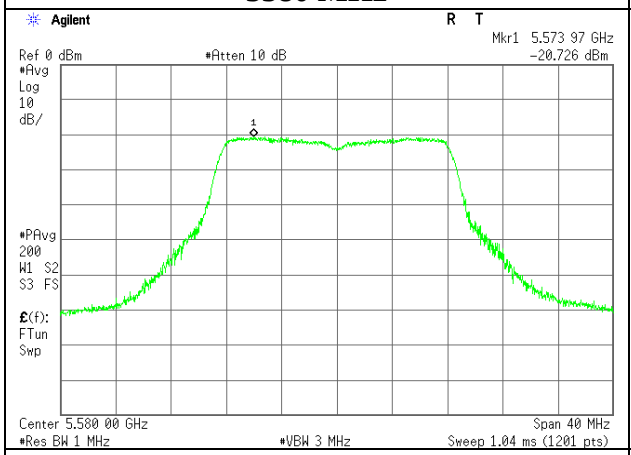
5500 MHz



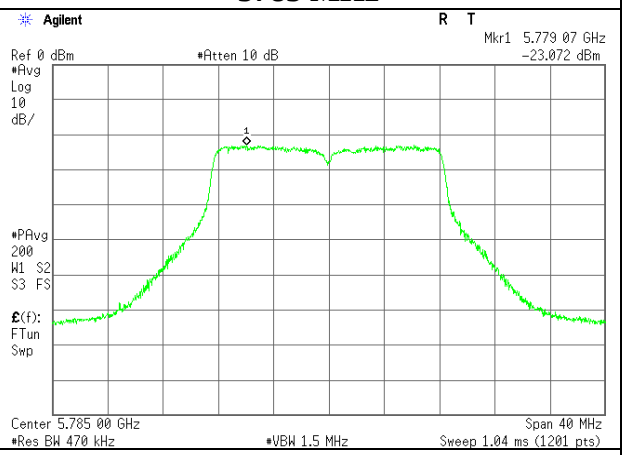
5745 MHz



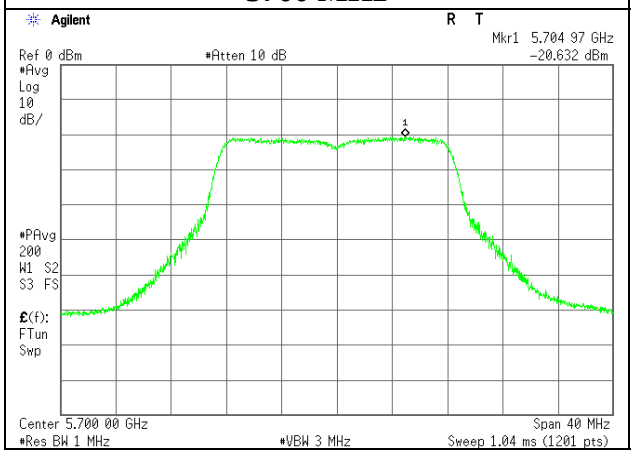
5580 MHz



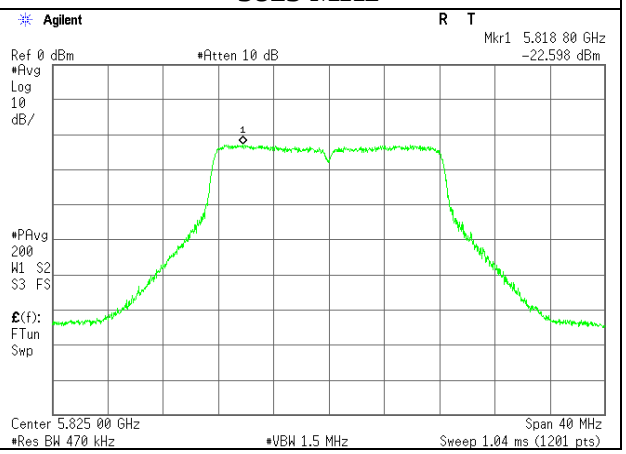
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-20

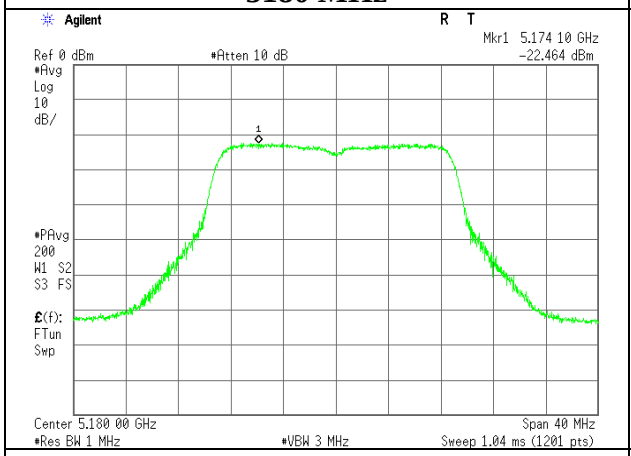
Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-22.46	2.28	9.68	1.43	5.7	0.00	-9.07	11.00	20.07	-3.37	17.00	20.37
5220	-22.24	2.29	9.68	1.43	5.7	0.00	-8.84	11.00	19.84	-3.14	17.00	20.14
5240	-22.26	2.30	9.68	1.43	5.7	0.00	-8.85	11.00	19.85	-3.15	17.00	20.15
5260	-22.24	2.30	9.68	1.43	5.7	0.00	-8.83	11.00	19.83	-3.13	17.00	20.13
5300	-21.70	2.30	9.68	1.43	5.7	0.00	-8.29	11.00	19.29	-2.59	17.00	19.59
5320	-22.11	2.32	9.69	1.43	5.7	0.00	-8.67	11.00	19.67	-2.97	17.00	19.97
5500	-21.47	2.35	9.69	1.43	5.7	0.00	-8.00	11.00	19.00	-2.30	17.00	19.30
5580	-21.98	2.38	9.69	1.43	5.7	0.00	-8.48	11.00	19.48	-2.78	17.00	19.78
5700	-21.53	2.43	9.70	1.43	5.7	0.00	-7.97	11.00	18.97	-2.27	17.00	19.27
5745	-24.49	2.44	9.70	1.43	5.7	0.27	-10.65	30.00	40.65	-4.95	36.00	40.95
5785	-24.36	2.46	9.70	1.43	5.7	0.27	-10.50	30.00	40.50	-4.80	36.00	40.80
5825	-23.82	2.47	9.70	1.43	5.7	0.27	-9.95	30.00	39.95	-4.25	36.00	40.25

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

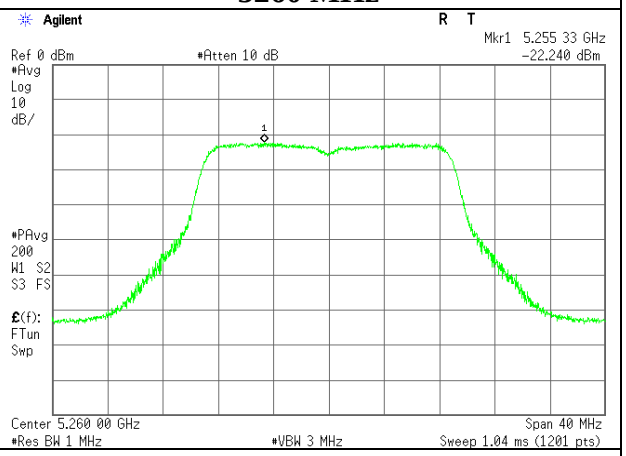
Maximum Power Spectral Density

11n-20

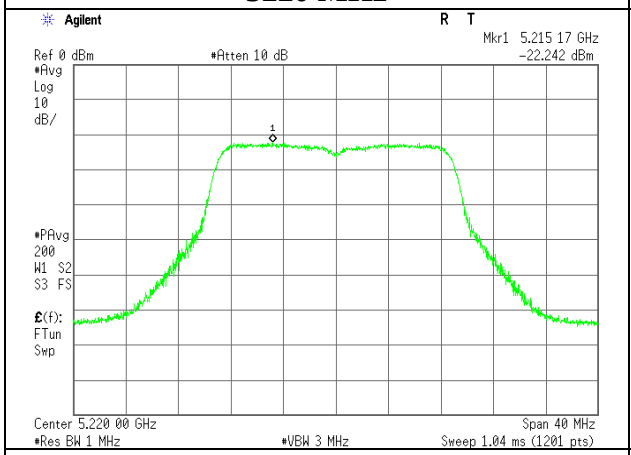
5180 MHz



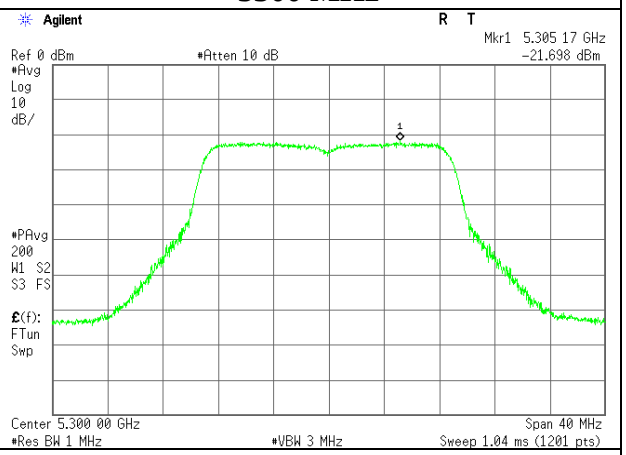
5260 MHz



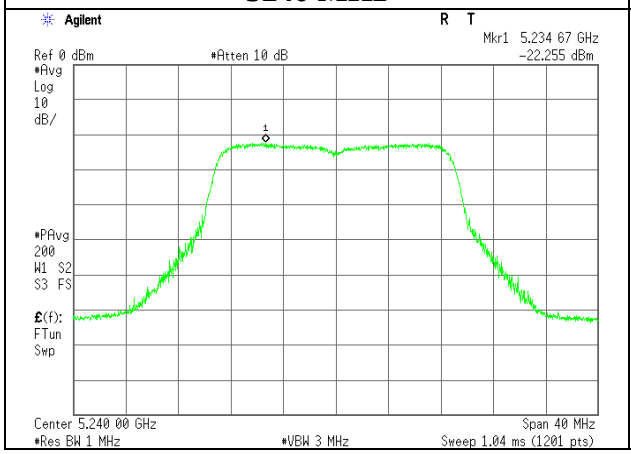
5220 MHz



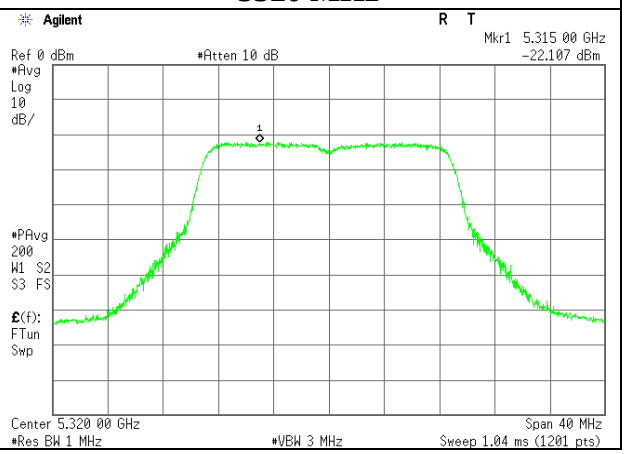
5300 MHz



5240 MHz



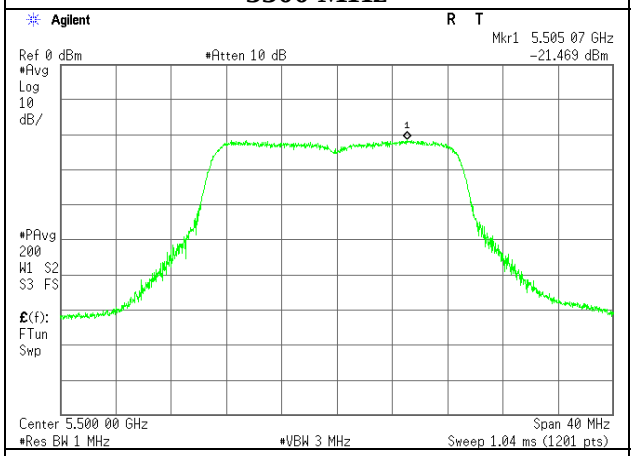
5320 MHz



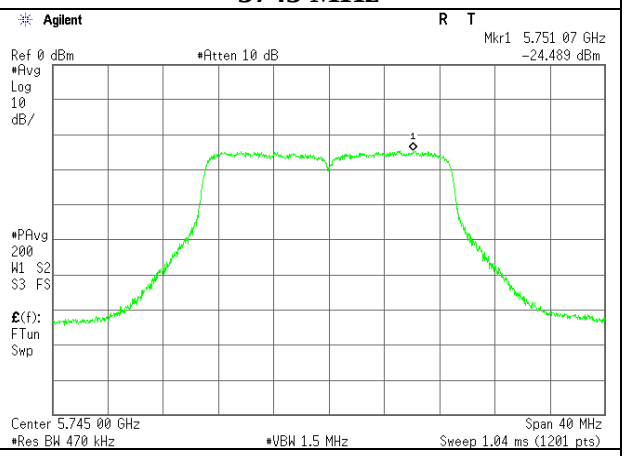
Maximum Power Spectral Density

11n-20

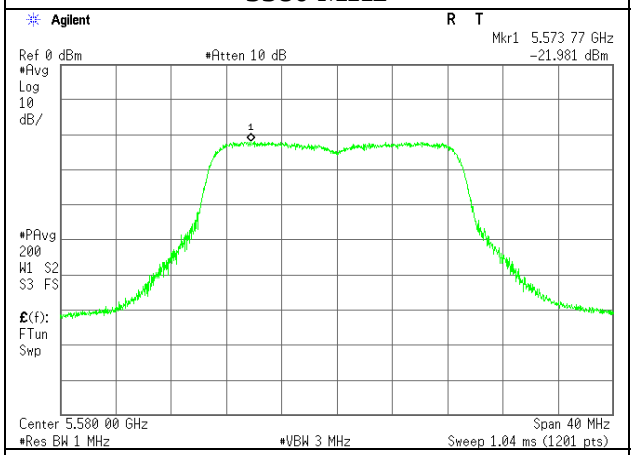
5500 MHz



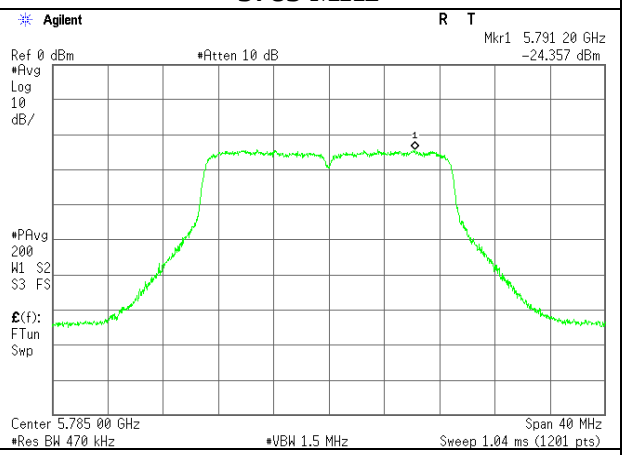
5745 MHz



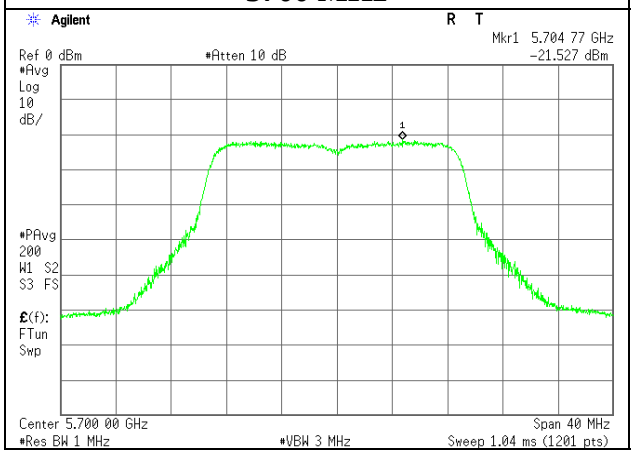
5580 MHz



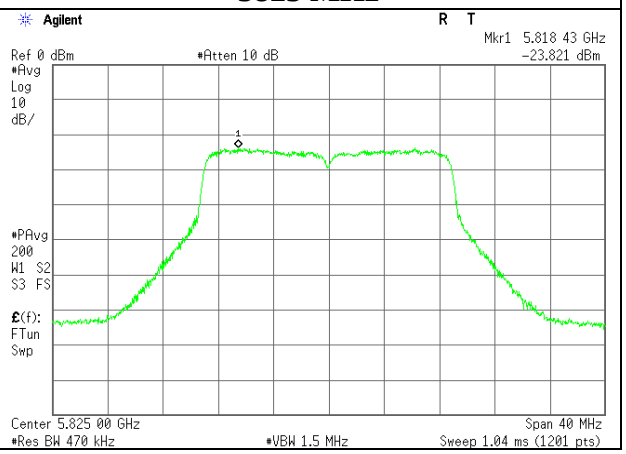
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20

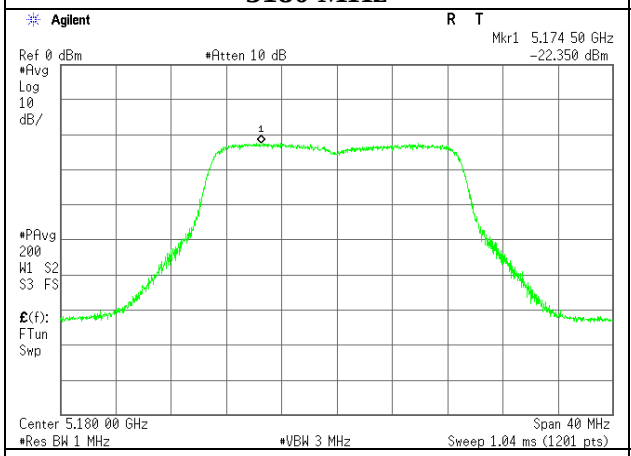
Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-22.35	2.28	9.68	1.14	5.7	0.00	-9.25	11.00	20.25	-3.55	17.00	20.55
5220	-22.39	2.29	9.68	1.14	5.7	0.00	-9.28	11.00	20.28	-3.58	17.00	20.58
5240	-22.45	2.30	9.68	1.14	5.7	0.00	-9.33	11.00	20.33	-3.63	17.00	20.63
5260	-22.13	2.30	9.68	1.14	5.7	0.00	-9.01	11.00	20.01	-3.31	17.00	20.31
5300	-21.86	2.30	9.68	1.14	5.7	0.00	-8.74	11.00	19.74	-3.04	17.00	20.04
5320	-21.82	2.32	9.69	1.14	5.7	0.00	-8.67	11.00	19.67	-2.97	17.00	19.97
5500	-21.60	2.35	9.69	1.14	5.7	0.00	-8.42	11.00	19.42	-2.72	17.00	19.72
5580	-21.74	2.38	9.69	1.14	5.7	0.00	-8.53	11.00	19.53	-2.83	17.00	19.83
5700	-21.83	2.43	9.70	1.14	5.7	0.00	-8.56	11.00	19.56	-2.86	17.00	19.86
5745	-24.61	2.44	9.70	1.14	5.7	0.27	-11.06	30.00	41.06	-5.36	36.00	41.36
5785	-24.29	2.46	9.70	1.14	5.7	0.27	-10.72	30.00	40.72	-5.02	36.00	41.02
5825	-23.92	2.47	9.70	1.14	5.7	0.27	-10.34	30.00	40.34	-4.64	36.00	40.64

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

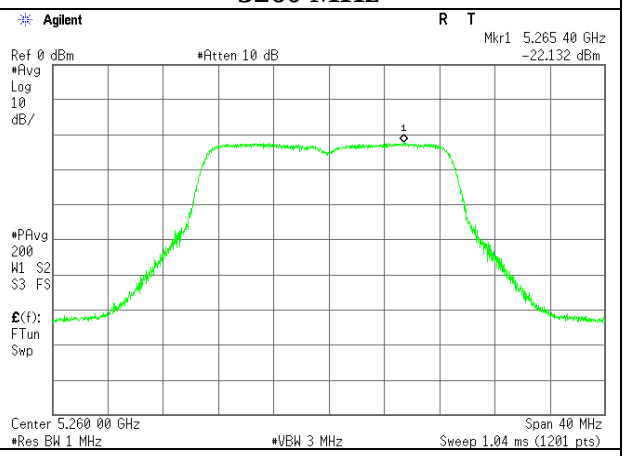
Maximum Power Spectral Density

11ac-20

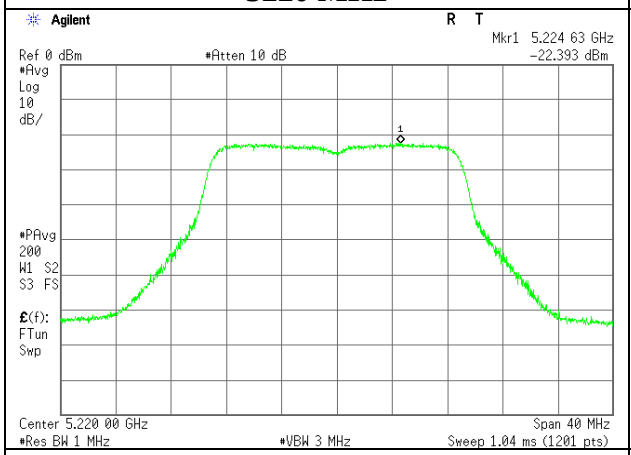
5180 MHz



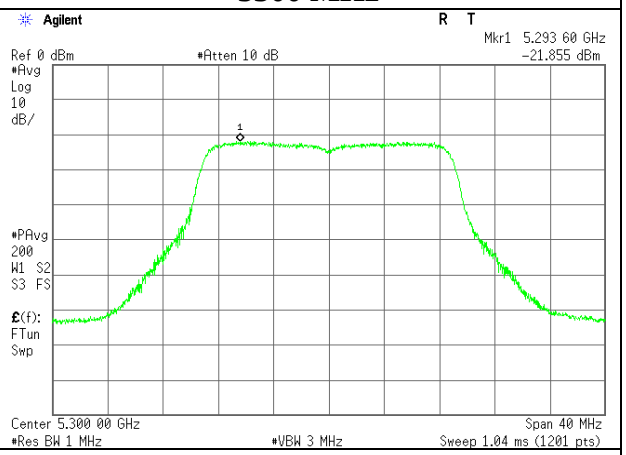
5260 MHz



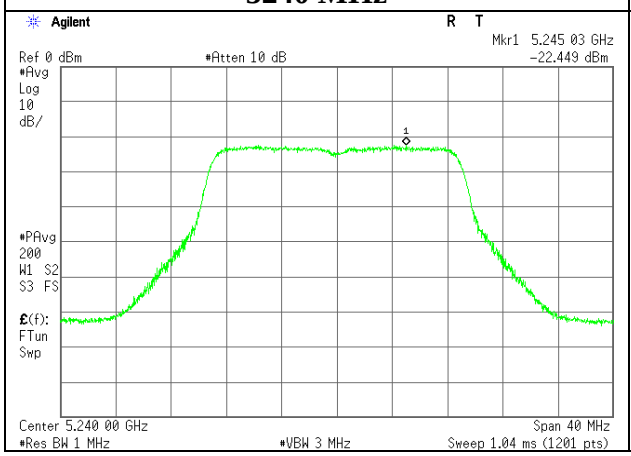
5220 MHz



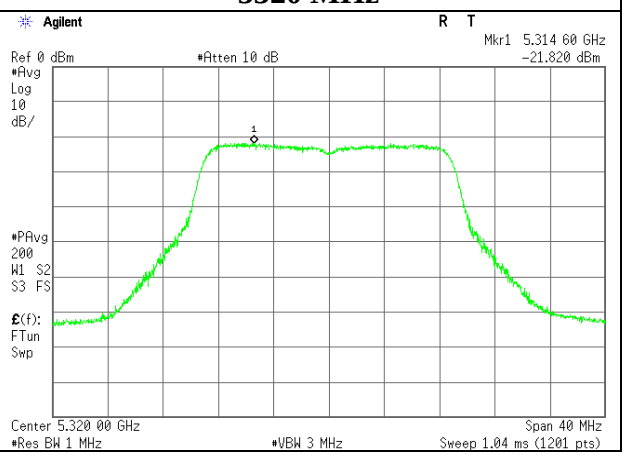
5300 MHz



5240 MHz



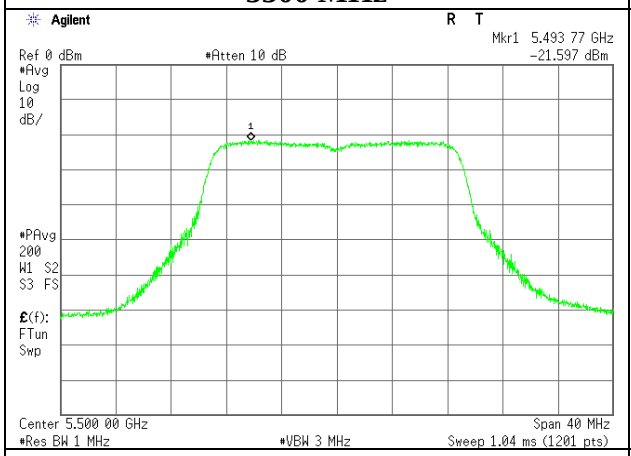
5320 MHz



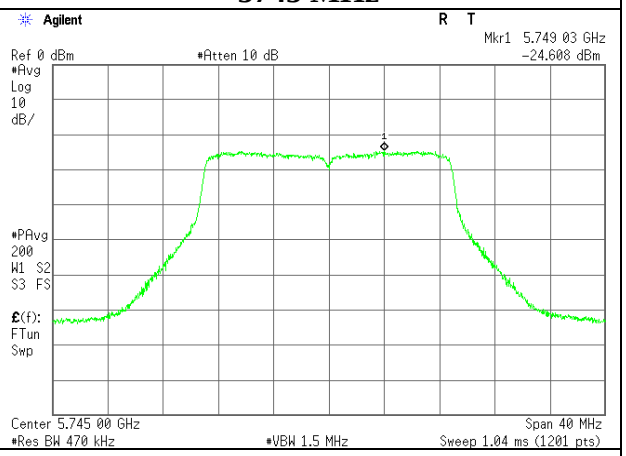
Maximum Power Spectral Density

11ac-20

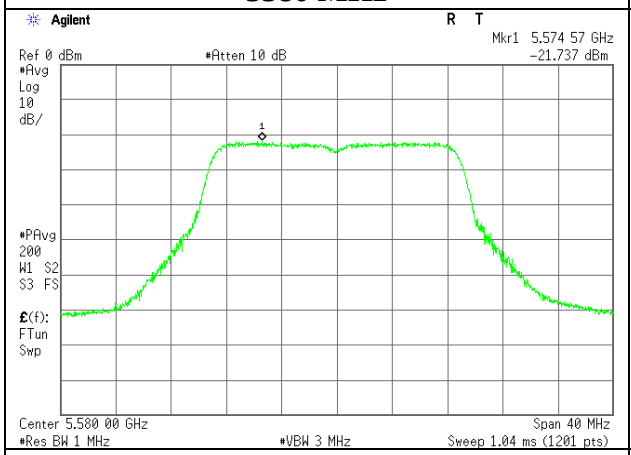
5500 MHz



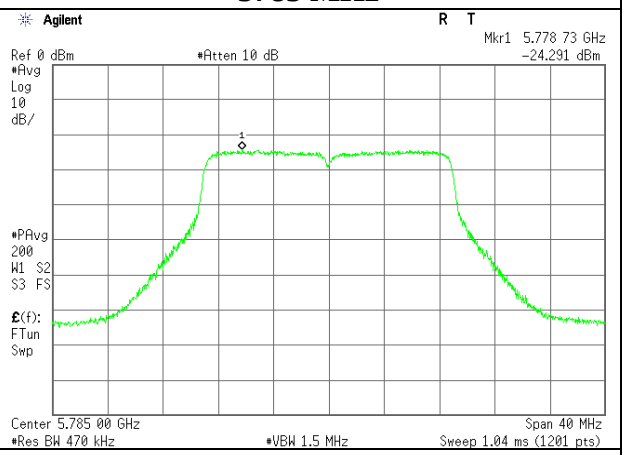
5745 MHz



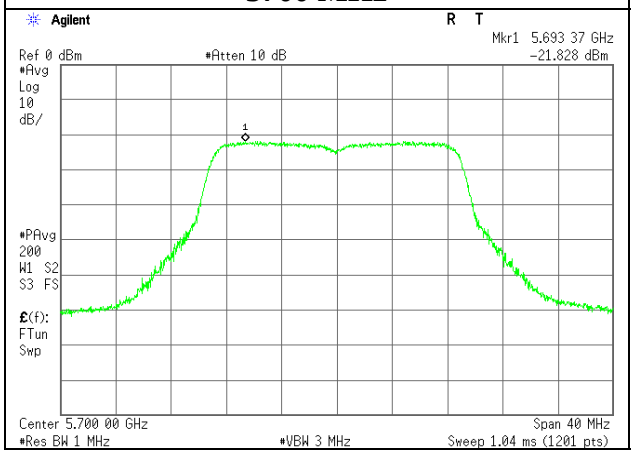
5580 MHz



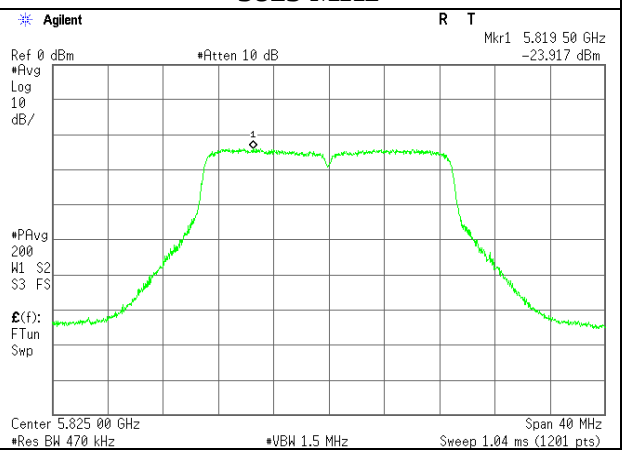
5785 MHz



5700 MHz



5825 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40

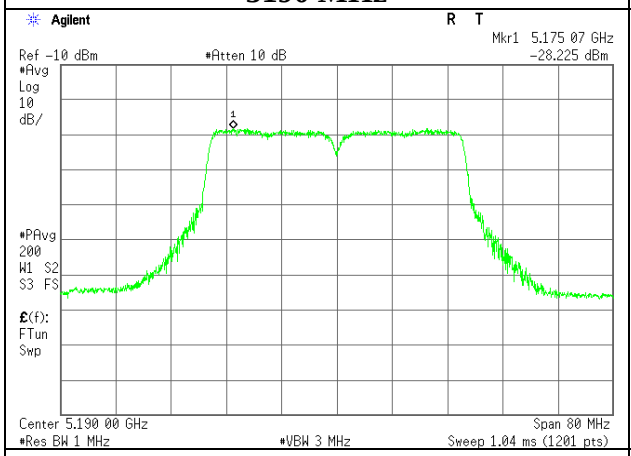
Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-28.23	2.28	9.68	3.22	5.7	0.00	-13.05	11.00	24.05	-7.35	17.00	24.35
5230	-27.81	2.30	9.68	3.22	5.7	0.00	-12.61	11.00	23.61	-6.91	17.00	23.91
5270	-27.90	2.30	9.68	3.22	5.7	0.00	-12.70	11.00	23.70	-7.00	17.00	24.00
5310	-27.18	2.31	9.68	3.22	5.7	0.00	-11.97	11.00	22.97	-6.27	17.00	23.27
5510	-27.02	2.36	9.69	3.22	5.7	0.00	-11.75	11.00	22.75	-6.05	17.00	23.05
5550	-27.28	2.38	9.69	3.22	5.7	0.00	-11.99	11.00	22.99	-6.29	17.00	23.29
5670	-27.13	2.41	9.70	3.22	5.7	0.00	-11.80	11.00	22.80	-6.10	17.00	23.10
5755	-29.74	2.45	9.70	3.22	5.7	0.27	-14.10	30.00	44.10	-8.40	36.00	44.40
5795	-29.38	2.46	9.70	3.22	5.7	0.27	-13.73	30.00	43.73	-8.03	36.00	44.03

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

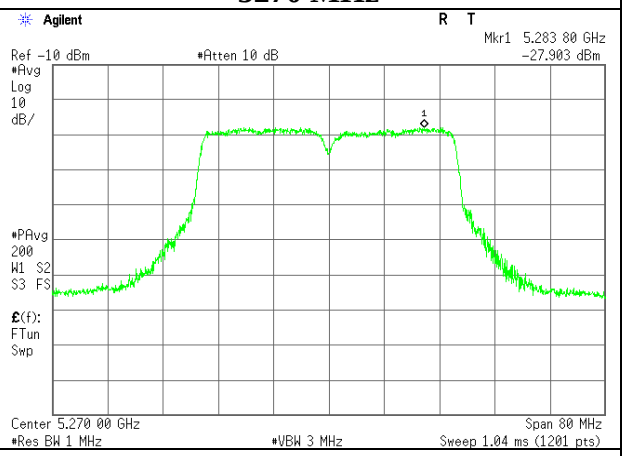
Maximum Power Spectral Density

11n-40

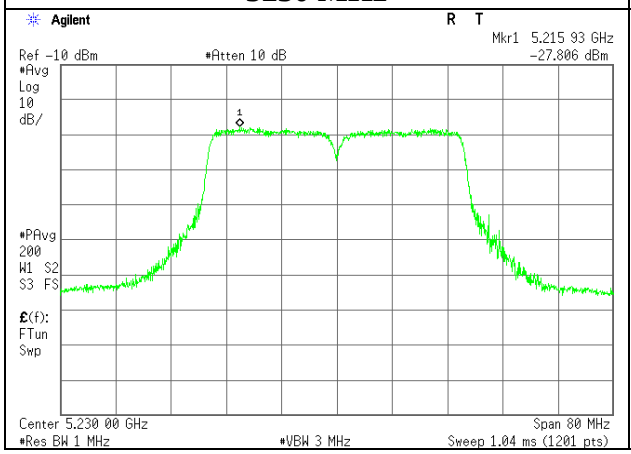
5190 MHz



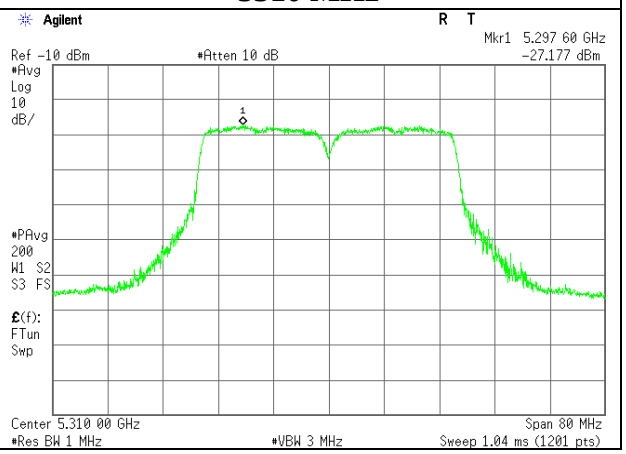
5270 MHz



5230 MHz



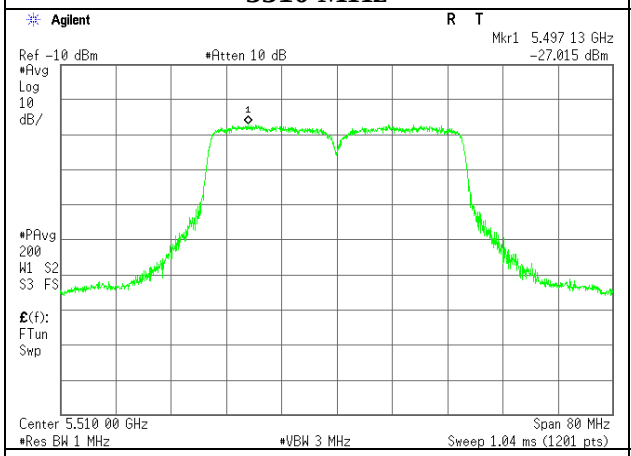
5310 MHz



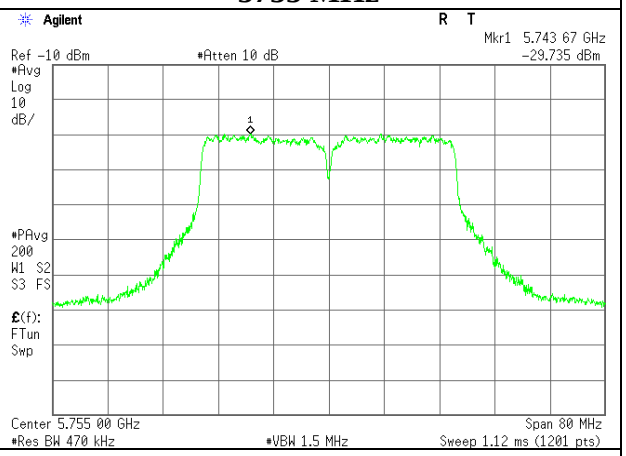
Maximum Power Spectral Density

11n-40

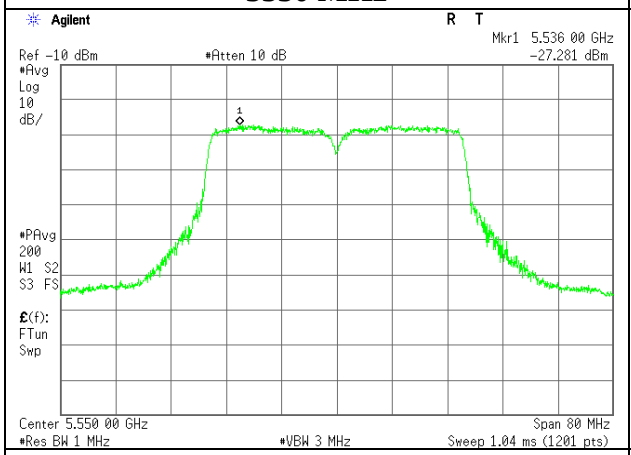
5510 MHz



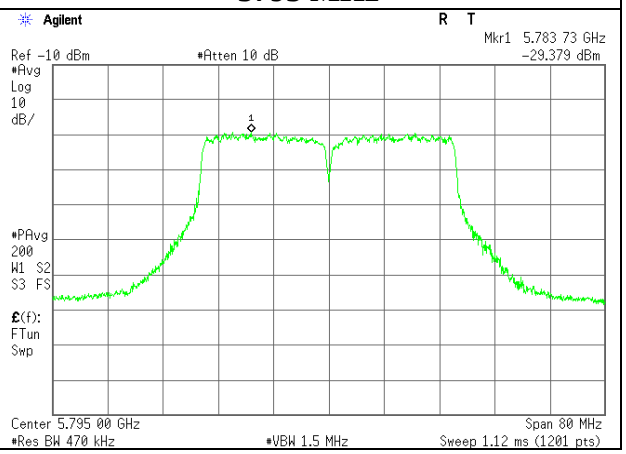
5755 MHz



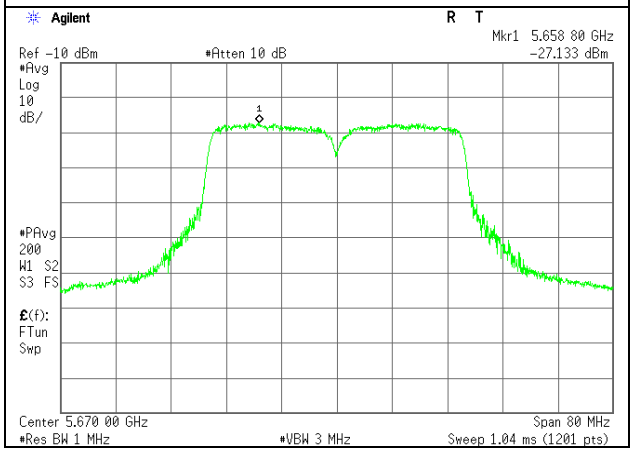
5550 MHz



5795 MHz



5670 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40

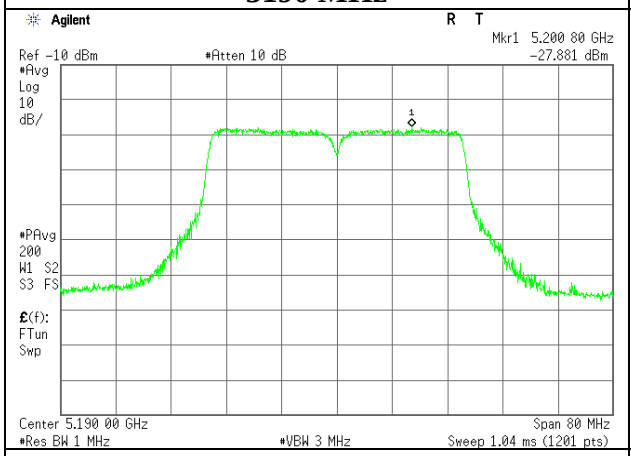
Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-27.88	2.28	9.68	2.97	5.7	0.00	-12.95	11.00	23.95	-7.25	17.00	24.25
5230	-27.79	2.30	9.68	2.97	5.7	0.00	-12.84	11.00	23.84	-7.14	17.00	24.14
5270	-27.47	2.30	9.68	2.97	5.7	0.00	-12.52	11.00	23.52	-6.82	17.00	23.82
5310	-26.86	2.31	9.68	2.97	5.7	0.00	-11.90	11.00	22.90	-6.20	17.00	23.20
5510	-27.09	2.36	9.69	2.97	5.7	0.00	-12.07	11.00	23.07	-6.37	17.00	23.37
5550	-26.80	2.38	9.69	2.97	5.7	0.00	-11.76	11.00	22.76	-6.06	17.00	23.06
5670	-27.20	2.41	9.70	2.97	5.7	0.00	-12.12	11.00	23.12	-6.42	17.00	23.42
5755	-29.33	2.45	9.70	2.97	5.7	0.27	-13.95	30.00	43.95	-8.25	36.00	44.25
5795	-29.40	2.46	9.70	2.97	5.7	0.27	-14.00	30.00	44.00	-8.30	36.00	44.30

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

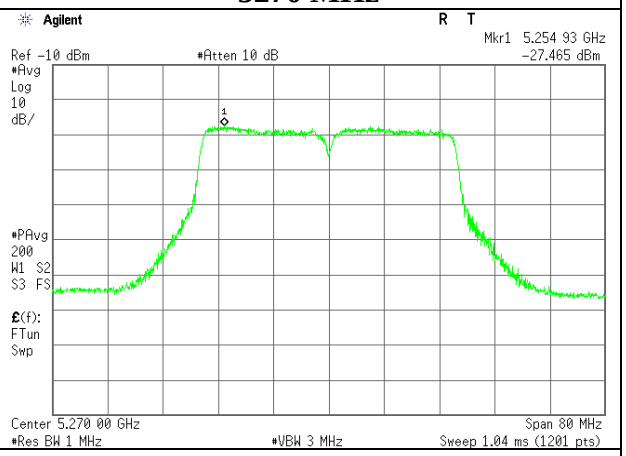
Maximum Power Spectral Density

11ac-40

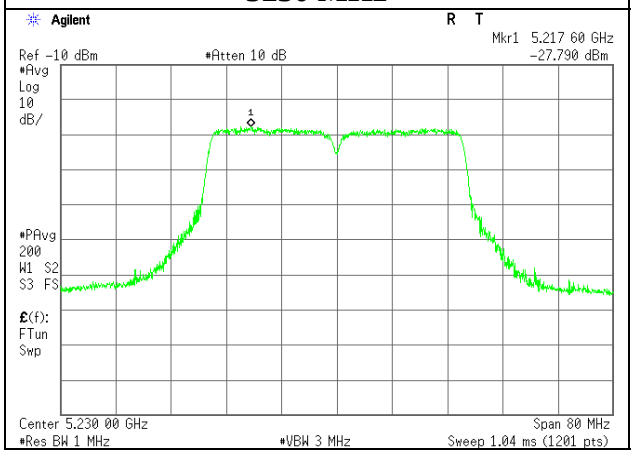
5190 MHz



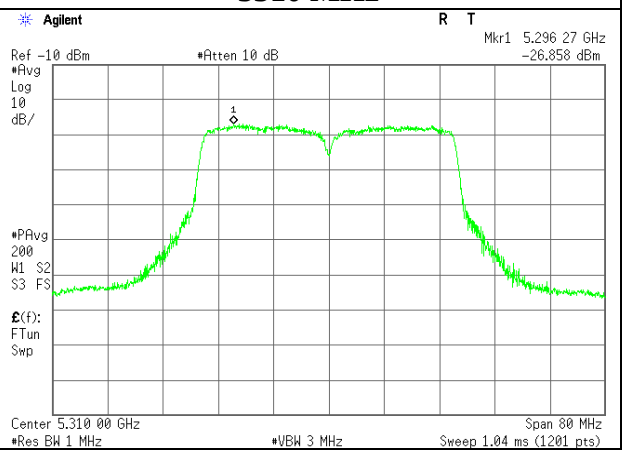
5270 MHz



5230 MHz



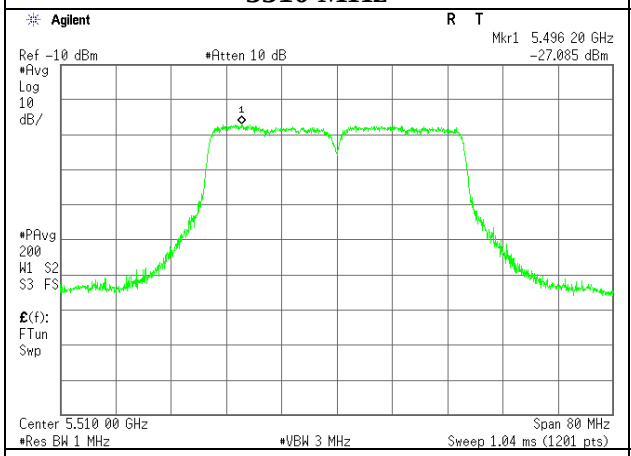
5310 MHz



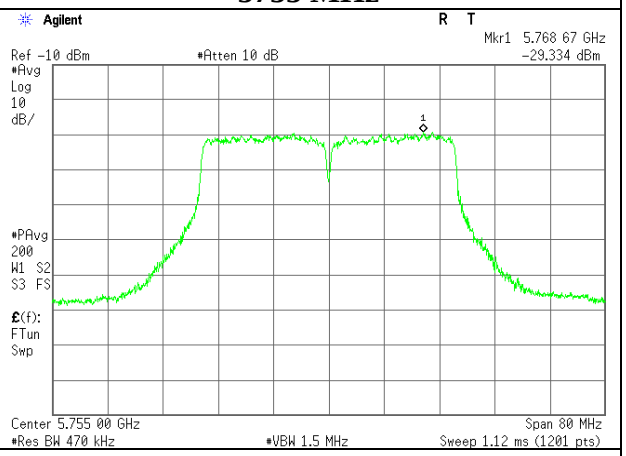
Maximum Power Spectral Density

11ac-40

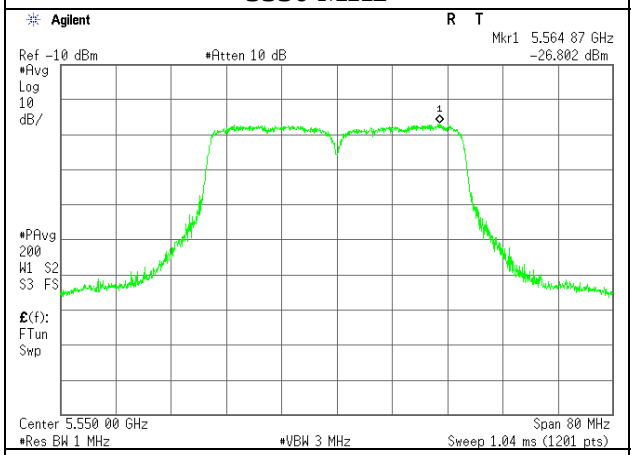
5510 MHz



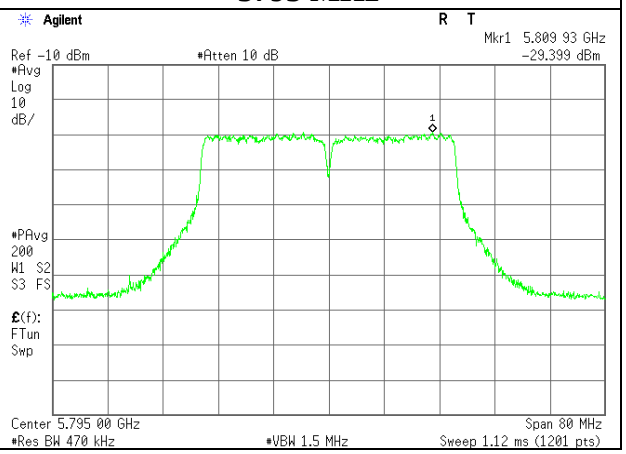
5755 MHz



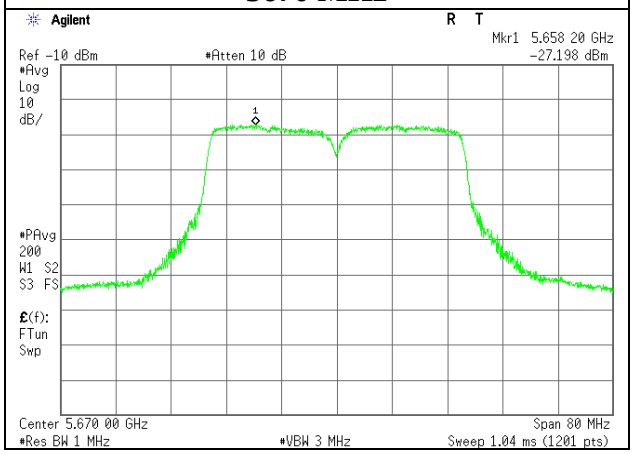
5550 MHz



5795 MHz



5670 MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature / Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80

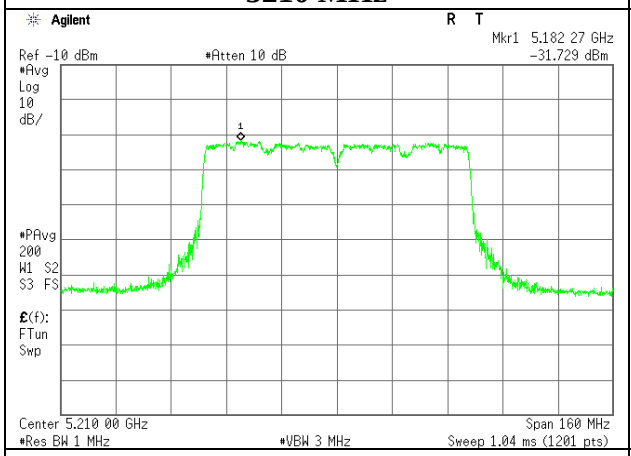
Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5210	-31.73	2.28	9.68	2.87	5.7	0.00	-16.90	11.00	27.90	-11.20	17.00	28.20
5290	-31.51	2.30	9.68	2.87	5.7	0.00	-16.66	11.00	27.66	-10.96	17.00	27.96
5530	-31.08	2.36	9.69	2.87	5.7	0.00	-16.16	11.00	27.16	-10.46	17.00	27.46
5610	-31.34	2.39	9.69	2.87	5.7	0.00	-16.39	11.00	27.39	-10.69	17.00	27.69
5775	-32.94	2.46	9.70	2.87	5.7	0.27	-17.64	30.00	47.64	-11.94	36.00	47.94

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

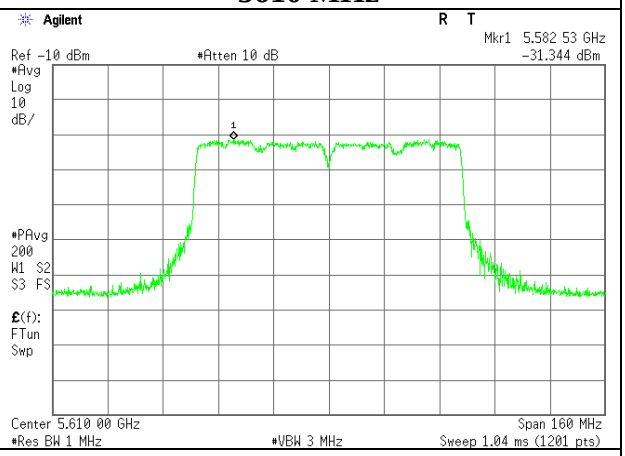
Maximum Power Spectral Density

11ac-80

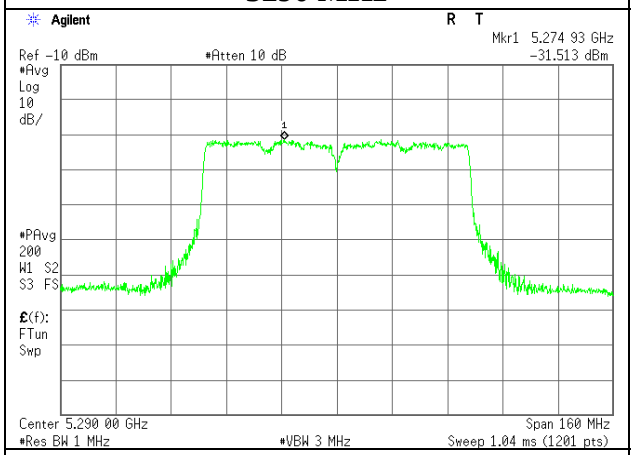
5210 MHz



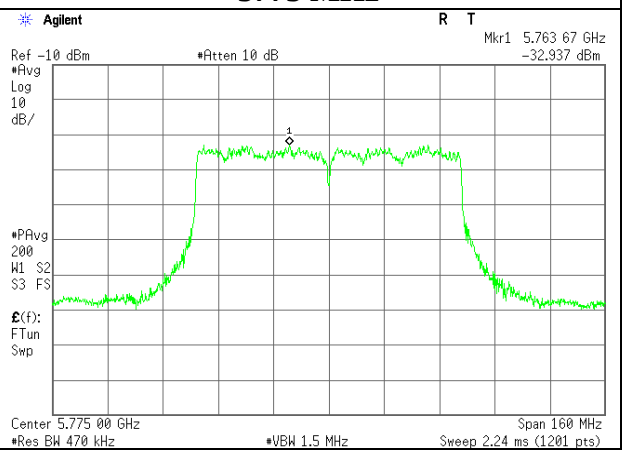
5610 MHz



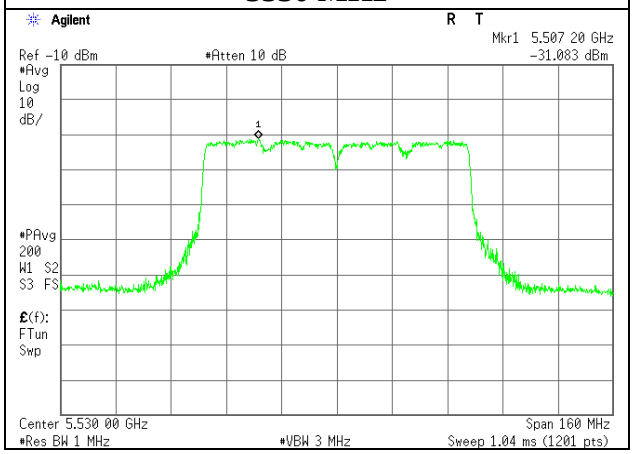
5290 MHz



5775 MHz



5530 MHz



Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	25 deg. C / 55 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	43.9	32.3	6.3	35.5	-	47.0	73.9	26.9	
Hori	10360.000	PK	45.4	38.9	0.4	35.9	-	48.8	68.2	19.4	Floor Noise
Hori	15540.000	PK	45.0	40.0	1.9	35.7	-	51.2	73.9	22.7	Floor Noise
Hori	5150.000	AV	35.2	32.3	6.3	35.5	1.4	39.7	53.9	14.2	
Hori	15540.000	AV	35.1	40.0	1.9	35.7	-	41.3	53.9	12.6	Floor Noise
Vert	5150.000	PK	43.9	32.3	6.3	35.5	-	47.0	73.9	26.9	
Vert	10360.000	PK	45.0	38.9	0.4	35.9	-	48.4	68.2	19.8	Floor Noise
Vert	15540.000	PK	45.1	40.0	1.9	35.7	-	51.3	73.9	22.6	Floor Noise
Vert	5150.000	AV	35.3	32.3	6.3	35.5	1.4	39.8	53.9	14.1	
Vert	15540.000	AV	35.1	40.0	1.9	35.7	-	41.3	53.9	12.6	Floor Noise

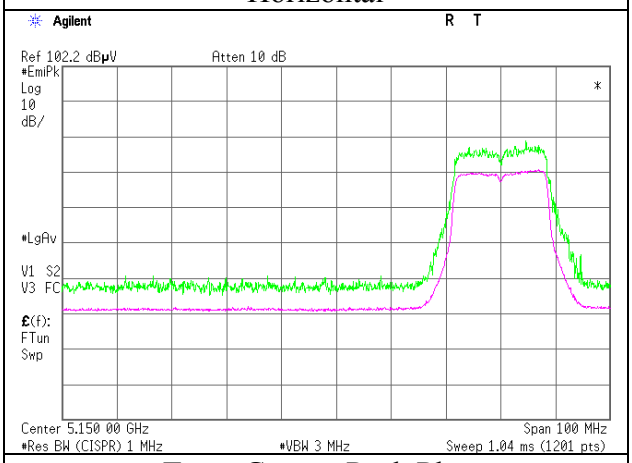
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

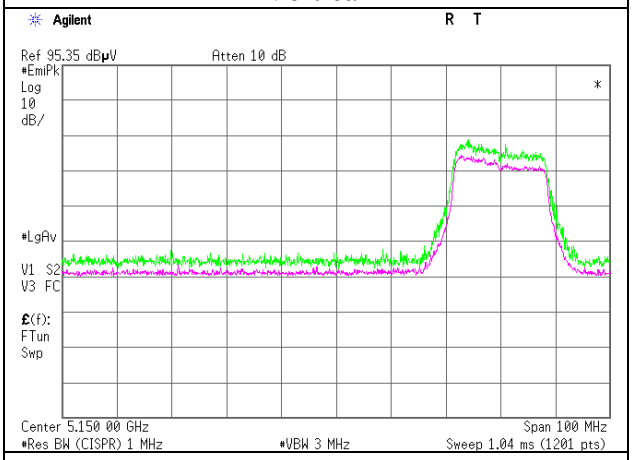
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	25 deg. C / 55 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)
Mode	11a Tx 5180 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	25 deg. C / 55 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 5260 MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10520.000	PK	44.6	39.1	0.6	35.7	-	48.6	68.2	19.6	Floor Noise
Hori	15780.000	PK	46.7	39.8	2.0	36.1	-	52.4	73.9	21.5	Floor Noise
Hori	21040.000	PK	42.8	37.0	-1.1	33.1	-	45.6	73.9	28.3	Floor Noise
Hori	15780.000	AV	35.8	39.8	2.0	36.1	-	41.5	53.9	12.4	Floor Noise
Hori	21040.000	AV	34.3	37.0	-1.1	33.1	-	37.1	53.9	16.8	Floor Noise
Vert	10520.000	PK	45.1	39.1	0.6	35.7	-	49.1	68.2	19.1	Floor Noise
Vert	15780.000	PK	45.8	39.8	2.0	36.1	-	51.5	73.9	22.4	Floor Noise
Vert	21040.000	PK	42.7	37.0	-1.1	33.1	-	45.5	73.9	28.4	Floor Noise
Vert	15780.000	AV	35.8	39.8	2.0	36.1	-	41.5	53.9	12.4	Floor Noise
Vert	21040.000	AV	34.3	37.0	-1.1	33.1	-	37.1	53.9	16.8	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 5280 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	5250.000	PK	46.0	32.4	6.3	35.4	-	49.3	68.2	18.9	
Hori	10560.000	PK	44.9	39.1	0.6	35.6	-	49.0	68.2	19.2	Floor Noise
Hori	15840.000	PK	45.6	39.7	2.1	36.2	-	51.2	73.9	22.7	Floor Noise
Hori	15840.000	AV	35.8	39.7	2.1	36.2	-	41.4	53.9	12.5	Floor Noise
Vert	5250.000	PK	47.0	32.4	6.3	35.4	-	50.3	68.2	17.9	
Vert	10560.000	PK	45.0	39.1	0.6	35.6	-	49.1	68.2	19.1	Floor Noise
Vert	15840.000	PK	45.3	39.7	2.1	36.2	-	50.9	73.9	23.0	Floor Noise
Vert	15840.000	AV	35.8	39.7	2.1	36.2	-	41.4	53.9	12.5	Floor Noise

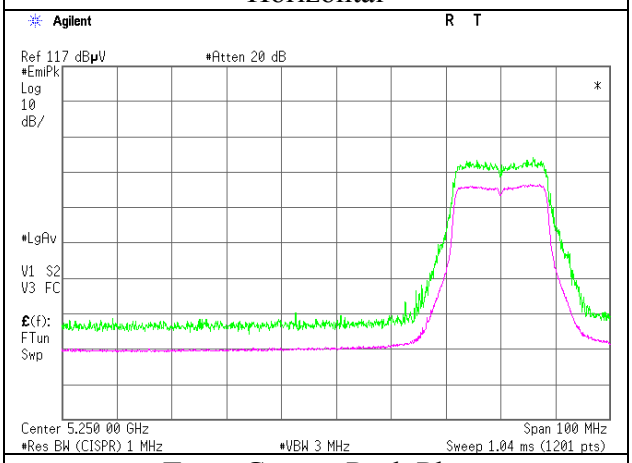
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

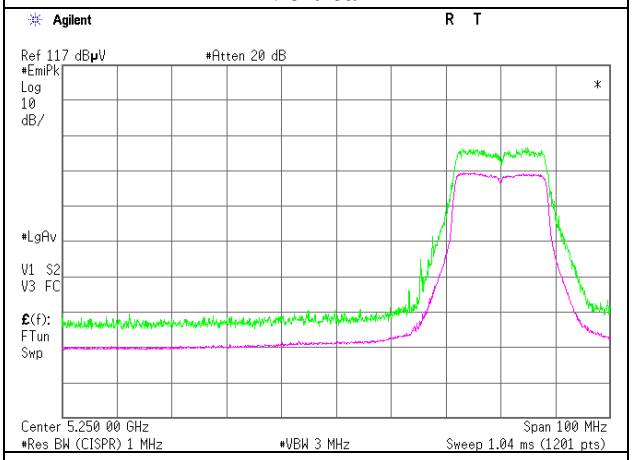
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11a Tx 5280 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 5300 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	10600.000	PK	44.7	39.2	0.6	35.6	-	48.9	73.9	25.0	Floor Noise
Hori	15900.000	PK	46.2	39.7	2.1	36.3	-	51.7	73.9	22.2	Floor Noise
Hori	21200.000	PK	43.4	37.1	-1.1	33.0	-	46.4	73.9	27.5	Floor Noise
Hori	10600.000	AV	34.3	39.2	0.6	35.6	-	38.5	53.9	15.4	Floor Noise
Hori	15900.000	AV	35.7	39.7	2.1	36.3	-	41.2	53.9	12.7	Floor Noise
Hori	21200.000	AV	34.3	37.1	-1.1	33.0	-	37.3	53.9	16.6	Floor Noise
Vert	10600.000	PK	44.2	39.2	0.6	35.6	-	48.4	73.9	25.5	Floor Noise
Vert	15900.000	PK	46.1	39.7	2.1	36.3	-	51.6	73.9	22.3	Floor Noise
Vert	21200.000	PK	43.3	37.1	-1.1	33.0	-	46.3	73.9	27.6	Floor Noise
Vert	10600.000	AV	34.3	39.2	0.6	35.6	-	38.5	53.9	15.4	Floor Noise
Vert	15900.000	AV	35.7	39.7	2.1	36.3	-	41.2	53.9	12.7	Floor Noise
Vert	21200.000	AV	34.3	37.1	-1.1	33.0	-	37.3	53.9	16.6	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	25 deg. C / 55 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	45.1	32.5	6.4	35.4	-	48.6	73.9	25.3	
Hori	10640.000	PK	44.8	39.2	0.6	35.5	-	49.1	73.9	24.8	Floor Noise
Hori	15960.000	PK	46.1	39.6	2.1	36.4	-	51.4	73.9	22.5	Floor Noise
Hori	5350.000	AV	34.1	32.5	6.4	35.4	1.4	39.0	53.9	14.9	
Hori	10640.000	AV	34.4	39.2	0.6	35.5	-	38.7	53.9	15.2	Floor Noise
Hori	15960.000	AV	36.0	39.6	2.1	36.4	-	41.3	53.9	12.6	Floor Noise
Vert	5350.000	PK	42.1	32.5	6.4	35.4	-	45.6	73.9	28.3	
Vert	10640.000	PK	44.5	39.2	0.6	35.5	-	48.8	73.9	25.1	Floor Noise
Vert	15960.000	PK	46.3	39.6	2.1	36.4	-	51.6	73.9	22.3	Floor Noise
Vert	5350.000	AV	34.0	32.5	6.4	35.4	1.4	38.9	53.9	15.0	
Vert	10640.000	AV	34.4	39.2	0.6	35.5	-	38.7	53.9	15.2	Floor Noise
Vert	15960.000	AV	36.0	39.6	2.1	36.4	-	41.3	53.9	12.6	Floor Noise

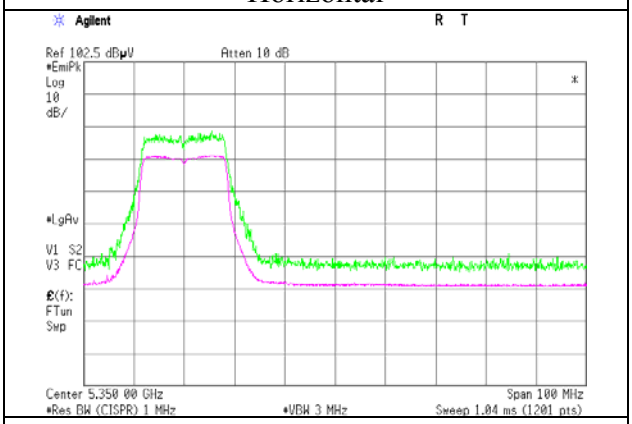
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

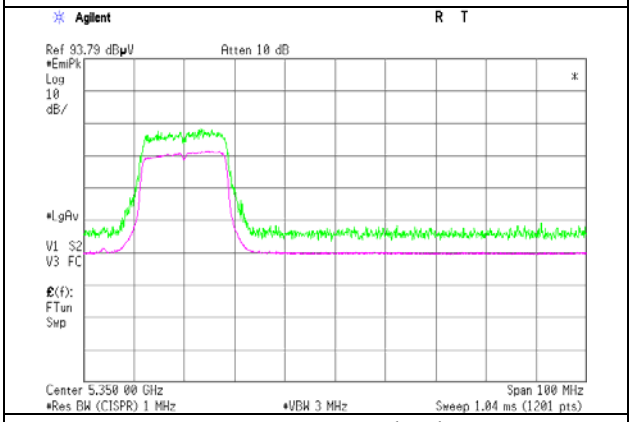
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	25 deg. C / 55 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)
Mode	11a Tx 5320 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	25 deg. C / 55 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	44.4	32.6	6.4	35.4	-	48.0	73.9	25.9	
Hori	5470.000	PK	44.4	32.6	6.4	35.4	-	48.0	68.2	20.2	
Hori	11000.000	PK	44.7	39.6	0.8	35.1	-	50.0	73.9	23.9	Floor Noise
Hori	16500.000	PK	45.3	40.7	2.2	35.7	-	52.5	68.2	15.7	Floor Noise
Hori	5460.000	AV	34.1	32.6	6.4	35.4	1.4	39.1	53.9	14.8	
Hori	11000.000	AV	34.2	39.6	0.8	35.1	-	39.5	53.9	14.4	Floor Noise
Vert	5460.000	PK	45.2	32.6	6.4	35.4	-	48.8	73.9	25.1	
Vert	5470.000	PK	45.5	32.6	6.4	35.4	-	49.1	68.2	19.1	
Vert	11000.000	PK	44.3	39.6	0.8	35.1	-	49.6	73.9	24.3	Floor Noise
Vert	16500.000	PK	45.5	40.7	2.2	35.7	-	52.7	68.2	15.5	Floor Noise
Vert	5460.000	AV	34.2	32.6	6.4	35.4	1.4	39.2	53.9	14.7	
Vert	11000.000	AV	34.2	39.6	0.8	35.1	-	39.5	53.9	14.4	Floor Noise

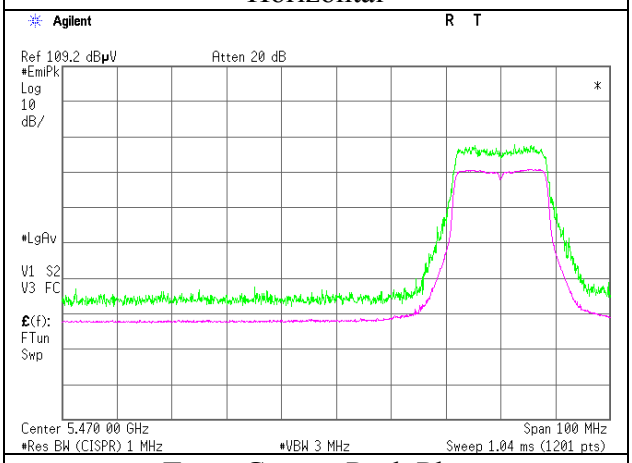
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

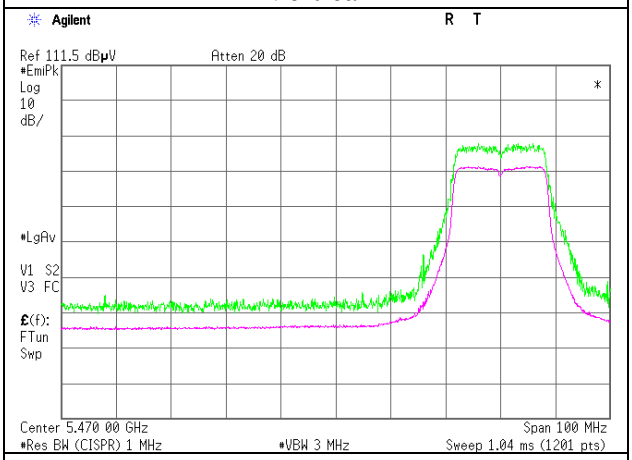
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	25 deg. C / 55 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)
Mode	11a Tx 5500 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	25 deg. C / 55 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	44.2	39.9	0.8	35.1	-	49.8	73.9	24.1	Floor Noise
Hori	16740.000	PK	45.4	41.3	2.2	35.3	-	53.6	68.2	14.6	Floor Noise
Hori	22320.000	PK	43.3	37.4	-0.9	32.5	-	47.3	73.9	26.6	Floor Noise
Hori	11160.000	AV	34.2	39.9	0.8	35.1	-	39.8	53.9	14.1	Floor Noise
Hori	22320.000	AV	34.9	37.4	-0.9	32.5	-	38.9	53.9	15.0	Floor Noise
Vert	11160.000	PK	45.1	39.9	0.8	35.1	-	50.7	73.9	23.2	Floor Noise
Vert	16740.000	PK	46.2	41.3	2.2	35.3	-	54.4	68.2	13.8	Floor Noise
Vert	22320.000	PK	43.4	37.4	-0.9	32.5	-	47.4	73.9	26.5	Floor Noise
Vert	11160.000	AV	34.2	39.9	0.8	35.1	-	39.8	53.9	14.1	Floor Noise
Vert	22320.000	AV	34.9	37.4	-0.9	32.5	-	38.9	53.9	15.0	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	25 deg. C / 55 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	45.7	32.9	6.5	35.5	-	49.6	68.2	18.6	
Hori	11400.000	PK	44.0	40.3	0.9	35.2	-	50.0	73.9	23.9	Floor Noise
Hori	17100.000	PK	44.9	42.3	2.3	34.9	-	54.6	68.2	13.6	Floor Noise
Hori	11400.000	AV	34.0	40.3	0.9	35.2	-	40.0	53.9	13.9	Floor Noise
Vert	5725.000	PK	45.1	32.9	6.5	35.5	-	49.0	68.2	19.2	
Vert	11400.000	PK	44.3	40.3	0.9	35.2	-	50.3	73.9	23.6	Floor Noise
Vert	17100.000	PK	45.2	42.3	2.3	34.9	-	54.9	68.2	13.3	Floor Noise
Vert	11400.000	AV	34.0	40.3	0.9	35.2	-	40.0	53.9	13.9	Floor Noise

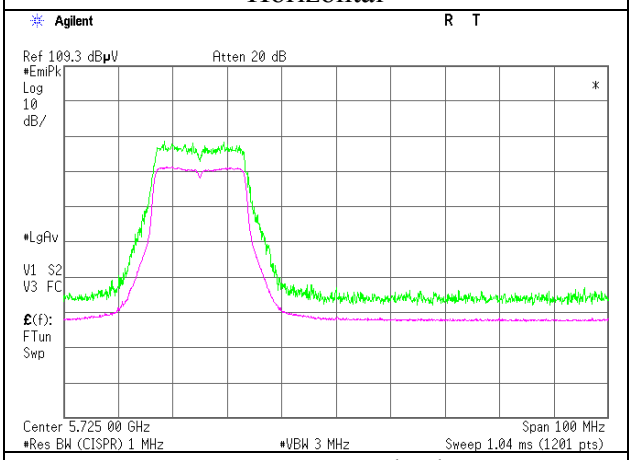
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

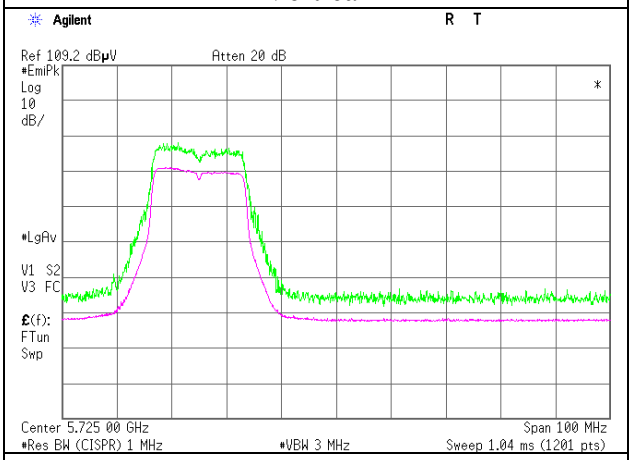
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	25 deg. C / 55 % RH
Engineer	Ken Fujita (1 GHz - 10 GHz)
Mode	11a Tx 5700 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	43.2	32.2	5.6	33.9	-	47.1	68.2	21.1	
Hori	5700.000	PK	45.4	32.3	5.6	34.0	-	49.3	105.2	55.9	
Hori	5720.000	PK	47.7	32.3	5.6	34.0	-	51.6	110.8	59.2	
Hori	5725.000	PK	52.2	32.3	5.6	34.0	-	56.1	122.2	66.1	
Hori	11490.000	PK	44.2	40.5	1.1	35.2	-	50.6	73.9	23.3	Floor Noise
Hori	17235.000	PK	45.4	42.9	2.3	35.0	-	55.6	68.2	12.6	Floor Noise
Hori	11490.000	AV	34.2	40.5	1.1	35.2	-	40.6	53.9	13.3	Floor Noise
Vert	5650.000	PK	43.4	32.2	5.6	33.9	-	47.3	68.2	20.9	
Vert	5700.000	PK	45.4	32.3	5.6	34.0	-	49.3	105.2	55.9	
Vert	5720.000	PK	47.1	32.3	5.6	34.0	-	51.0	110.8	59.8	
Vert	5725.000	PK	51.1	32.3	5.6	34.0	-	55.0	122.2	67.2	
Vert	11490.000	PK	45.0	40.5	1.1	35.2	-	51.4	73.9	22.5	Floor Noise
Vert	17235.000	PK	44.8	42.9	2.3	35.0	-	55.0	68.2	13.2	Floor Noise
Vert	11490.000	AV	34.2	40.5	1.1	35.2	-	40.6	53.9	13.3	Floor Noise

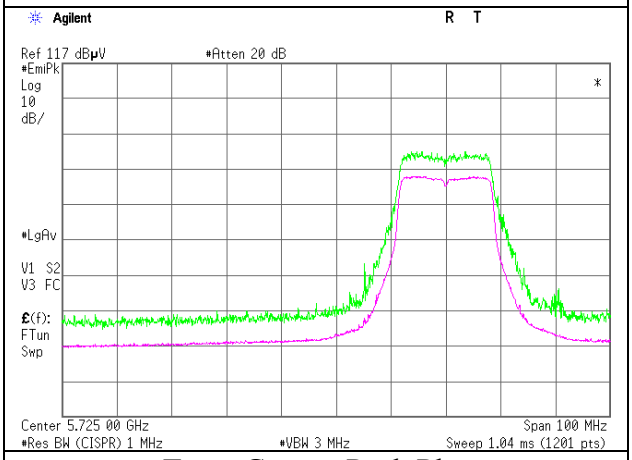
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)=	2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)=	-9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

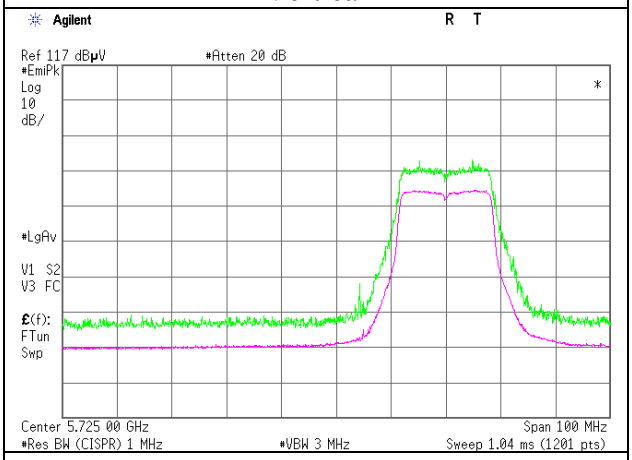
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11a Tx 5745 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11a Tx 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	44.9	40.5	1.1	35.2	-	51.3	73.9	22.6	Floor Noise
Hori	17355.000	PK	45.4	43.5	2.4	35.0	-	56.3	68.2	11.9	Floor Noise
Hori	23140.000	PK	43.2	37.9	-0.7	32.3	-	48.1	73.9	25.8	Floor Noise
Hori	11570.000	AV	33.8	40.5	1.1	35.2	-	40.2	53.9	13.7	Floor Noise
Hori	23140.000	AV	34.4	37.9	-0.7	32.3	-	39.3	53.9	14.6	Floor Noise
Vert	11570.000	PK	44.3	40.5	1.1	35.2	-	50.7	73.9	23.2	Floor Noise
Vert	17355.000	PK	45.0	43.5	2.4	35.0	-	55.9	68.2	12.3	Floor Noise
Vert	23140.000	PK	43.0	37.9	-0.7	32.3	-	47.9	73.9	26.0	Floor Noise
Vert	11570.000	AV	33.8	40.5	1.1	35.2	-	40.2	53.9	13.7	Floor Noise
Vert	23140.000	AV	34.4	37.9	-0.7	32.3	-	39.3	53.9	14.6	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz) (Below 1 GHz)
Mode	11a Tx 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	195.000	QP	37.8	16.5	9.0	32.1	-	31.2	43.5	12.3	
Hori	259.065	QP	49.8	12.7	9.6	32.0	-	40.1	46.0	5.9	
Hori	592.148	QP	36.2	19.0	11.8	32.0	-	35.0	46.0	11.0	
Hori	731.242	QP	42.3	20.1	12.6	31.9	-	43.1	46.0	2.9	
Hori	777.199	QP	43.7	20.6	12.8	31.6	-	45.5	46.0	0.5	
Hori	779.992	QP	43.7	20.6	12.8	31.6	-	45.5	46.0	0.5	
Hori	828.744	QP	41.7	21.2	13.1	31.3	-	44.7	46.0	1.3	
Hori	959.976	QP	40.5	22.3	13.7	30.6	-	45.9	46.0	0.1	
Hori	5850.000	PK	46.7	32.6	5.7	34.0	-	51.0	122.2	71.2	
Hori	5855.000	PK	45.1	32.6	5.7	34.0	-	49.4	110.8	61.4	
Hori	5875.000	PK	43.5	32.6	5.7	34.0	-	47.8	105.2	57.4	
Hori	5925.000	PK	43.5	32.7	5.7	34.1	-	47.8	68.2	20.4	
Hori	11650.000	PK	44.8	40.5	1.1	35.2	-	51.2	73.9	22.7	Floor Noise
Hori	17475.000	PK	45.7	44.0	2.4	35.0	-	57.1	68.2	11.1	Floor Noise
Hori	11650.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise
Vert	194.996	QP	39.9	16.5	9.0	32.1	-	33.3	43.5	10.2	
Vert	259.065	QP	39.7	12.7	9.6	32.0	-	30.0	46.0	16.0	
Vert	592.148	QP	43.4	19.0	11.8	32.0	-	42.2	46.0	3.8	
Vert	731.242	QP	38.9	20.1	12.6	31.9	-	39.7	46.0	6.3	
Vert	777.199	QP	36.0	20.6	12.8	31.6	-	37.8	46.0	8.2	
Vert	779.992	QP	39.6	20.6	12.8	31.6	-	41.4	46.0	4.6	
Vert	828.744	QP	42.9	21.2	13.1	31.3	-	45.9	46.0	0.1	
Vert	959.976	QP	39.6	22.3	13.7	30.6	-	45.0	46.0	1.0	
Vert	5850.000	PK	45.8	32.6	5.7	34.0	-	50.1	122.2	72.1	
Vert	5855.000	PK	45.4	32.6	5.7	34.0	-	49.7	110.8	61.1	
Vert	5875.000	PK	44.0	32.6	5.7	34.0	-	48.3	105.2	56.9	
Vert	5925.000	PK	43.5	32.7	5.7	34.1	-	47.8	68.2	20.4	
Vert	11650.000	PK	44.1	40.5	1.1	35.2	-	50.5	73.9	23.4	Floor Noise
Vert	17475.000	PK	45.3	44.0	2.4	35.0	-	56.7	68.2	11.5	Floor Noise
Vert	11650.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise

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

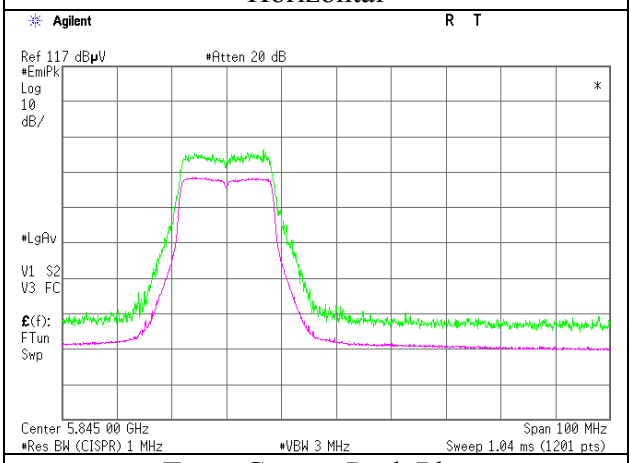
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

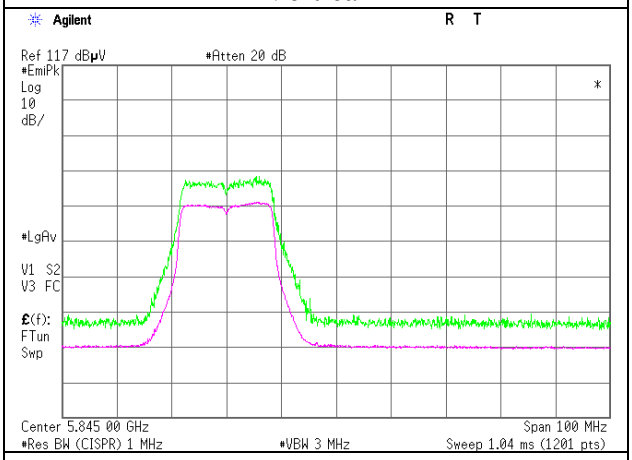
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11a Tx 5825 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	45.0	32.3	6.3	35.5	-	48.1	73.9	25.8	
Hori	10360.000	PK	44.9	38.9	0.4	35.9	-	48.3	68.2	19.9	Floor Noise
Hori	15540.000	PK	45.9	40.0	1.9	35.7	-	52.1	73.9	21.8	Floor Noise
Hori	5150.000	AV	34.1	32.3	6.3	35.5	1.4	38.6	53.9	15.3	
Hori	15540.000	AV	35.2	40.0	1.9	35.7	-	41.4	53.9	12.5	Floor Noise
Vert	5150.000	PK	44.8	32.3	6.3	35.5	-	47.9	73.9	26.0	
Vert	10360.000	PK	45.0	38.9	0.4	35.9	-	48.4	68.2	19.8	Floor Noise
Vert	15540.000	PK	45.1	40.0	1.9	35.7	-	51.3	73.9	22.6	Floor Noise
Vert	5150.000	AV	33.9	32.3	6.3	35.5	1.4	38.4	53.9	15.5	
Vert	15540.000	AV	35.2	40.0	1.9	35.7	-	41.4	53.9	12.5	Floor Noise

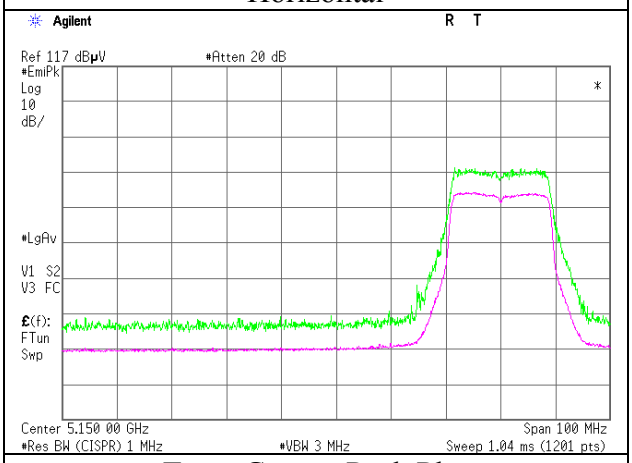
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

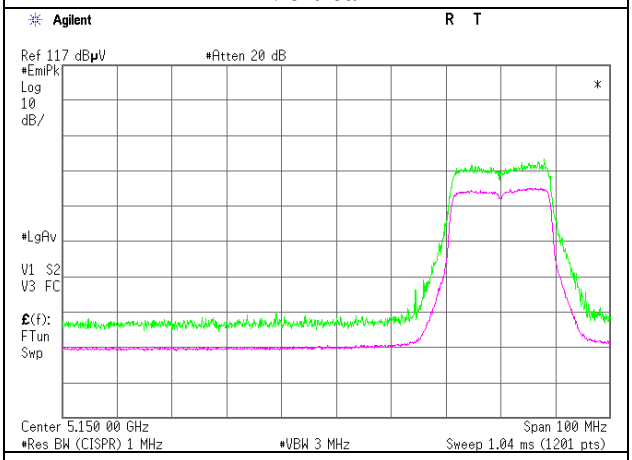
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5180 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 5260 MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	10520.000	PK	45.4	39.1	0.6	35.7	-	49.4	68.2	18.8	Floor Noise
Hori	15780.000	PK	45.9	39.8	2.0	36.1	-	51.6	73.9	22.3	Floor Noise
Hori	21040.000	PK	43.1	37.0	-1.1	33.1	-	45.9	73.9	28.0	Floor Noise
Hori	15780.000	AV	35.7	39.8	2.0	36.1	-	41.4	53.9	12.5	Floor Noise
Hori	21040.000	AV	34.3	37.0	-1.1	33.1	-	37.1	53.9	16.8	Floor Noise
Vert	10520.000	PK	45.3	39.1	0.6	35.7	-	49.3	68.2	18.9	Floor Noise
Vert	15780.000	PK	46.1	39.8	2.0	36.1	-	51.8	73.9	22.1	Floor Noise
Vert	21040.000	PK	42.9	37.0	-1.1	33.1	-	45.7	73.9	28.2	Floor Noise
Vert	15780.000	AV	35.7	39.8	2.0	36.1	-	41.4	53.9	12.5	Floor Noise
Vert	21040.000	AV	34.3	37.0	-1.1	33.1	-	37.1	53.9	16.8	Floor Noise

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

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 5280 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	5250.000	PK	56.6	32.4	6.3	35.4	-	59.9	68.2	8.3	
Hori	10560.000	PK	45.2	39.1	0.6	35.6	-	49.3	68.2	18.9	Floor Noise
Hori	15840.000	PK	45.8	39.7	2.1	36.2	-	51.4	73.9	22.5	Floor Noise
Hori	15840.000	AV	35.8	39.7	2.1	36.2	-	41.4	53.9	12.5	Floor Noise
Vert	5250.000	PK	59.7	32.4	6.3	35.4	-	63.0	68.2	5.2	
Vert	10560.000	PK	45.3	39.1	0.6	35.6	-	49.4	68.2	18.8	Floor Noise
Vert	15840.000	PK	45.7	39.7	2.1	36.2	-	51.3	73.9	22.6	Floor Noise
Vert	15840.000	AV	35.8	39.7	2.1	36.2	-	41.4	53.9	12.5	Floor Noise

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

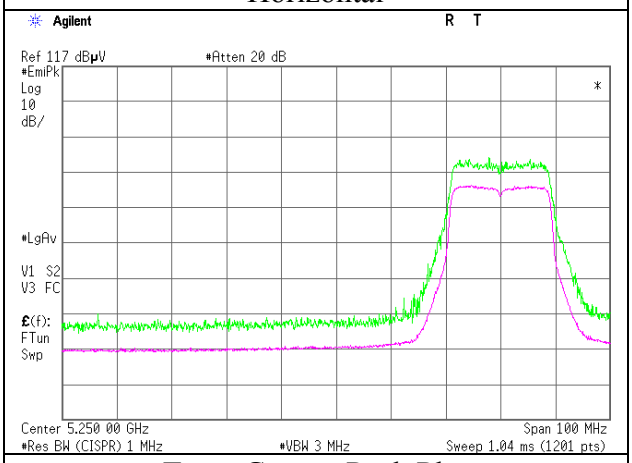
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

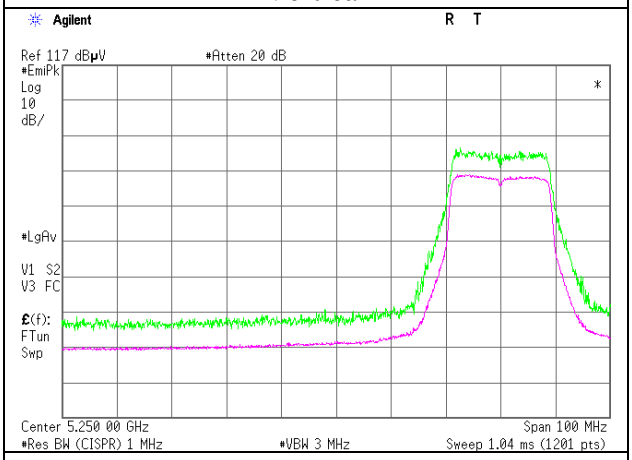
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5280 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 5300 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	10600.000	PK	44.5	39.2	0.6	35.6	-	48.7	73.9	25.2	Floor Noise
Hori	15900.000	PK	45.9	39.7	2.1	36.3	-	51.4	73.9	22.5	Floor Noise
Hori	21200.000	PK	42.6	37.1	-1.1	33.0	-	45.6	73.9	28.3	Floor Noise
Hori	10600.000	AV	34.3	39.2	0.6	35.6	-	38.5	53.9	15.4	Floor Noise
Hori	15900.000	AV	35.6	39.7	2.1	36.3	-	41.1	53.9	12.8	Floor Noise
Hori	21200.000	AV	34.4	37.1	-1.1	33.0	-	37.4	53.9	16.5	Floor Noise
Vert	10600.000	PK	44.9	39.2	0.6	35.6	-	49.1	73.9	24.8	Floor Noise
Vert	15900.000	PK	46.4	39.7	2.1	36.3	-	51.9	73.9	22.0	Floor Noise
Vert	21200.000	PK	43.1	37.1	-1.1	33.0	-	46.1	73.9	27.8	Floor Noise
Vert	10600.000	AV	34.3	39.2	0.6	35.6	-	38.5	53.9	15.4	Floor Noise
Vert	15900.000	AV	35.6	39.7	2.1	36.3	-	41.1	53.9	12.8	Floor Noise
Vert	21200.000	AV	34.4	37.1	-1.1	33.0	-	37.4	53.9	16.5	Floor Noise

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

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	45.7	32.5	6.4	35.4	-	49.2	73.9	24.7	
Hori	10640.000	PK	44.9	39.2	0.6	35.5	-	49.2	73.9	24.7	Floor Noise
Hori	15960.000	PK	45.8	39.6	2.1	36.4	-	51.1	73.9	22.8	Floor Noise
Hori	5350.000	AV	34.1	32.5	6.4	35.4	1.4	39.0	53.9	14.9	
Hori	10640.000	AV	34.3	39.2	0.6	35.5	-	38.6	53.9	15.3	Floor Noise
Hori	15960.000	AV	36.1	39.6	2.1	36.4	-	41.4	53.9	12.5	Floor Noise
Vert	5350.000	PK	45.7	32.5	6.4	35.4	-	49.2	73.9	24.7	
Vert	10640.000	PK	44.1	39.2	0.6	35.5	-	48.4	73.9	25.5	Floor Noise
Vert	15960.000	PK	46.5	39.6	2.1	36.4	-	51.8	73.9	22.1	Floor Noise
Vert	5350.000	AV	35.2	32.5	6.4	35.4	1.4	40.1	53.9	13.8	
Vert	10640.000	AV	34.3	39.2	0.6	35.5	-	38.6	53.9	15.3	Floor Noise
Vert	15960.000	AV	36.1	39.6	2.1	36.4	-	41.4	53.9	12.5	Floor Noise

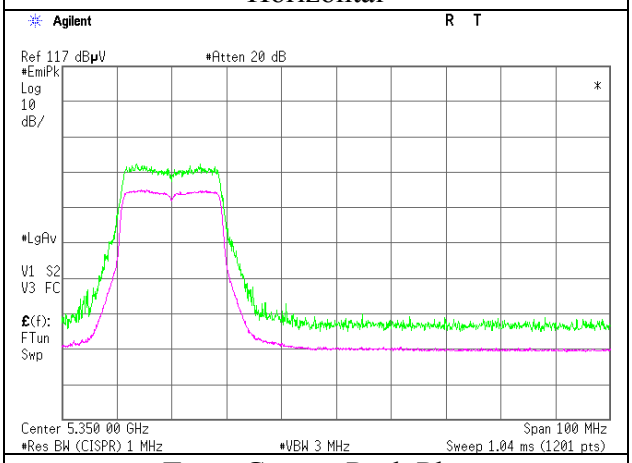
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

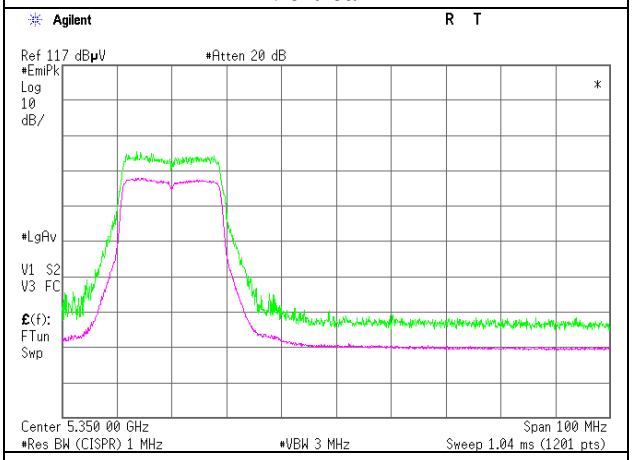
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5320 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	44.3	32.6	6.4	35.4	-	47.9	73.9	26.0	
Hori	5470.000	PK	45.1	32.6	6.4	35.4	-	48.7	68.2	19.5	
Hori	11000.000	PK	44.4	39.6	0.8	35.1	-	49.7	73.9	24.2	Floor Noise
Hori	16500.000	PK	45.8	40.7	2.2	35.7	-	53.0	68.2	15.2	Floor Noise
Hori	5460.000	AV	31.6	32.6	6.4	35.4	1.4	36.6	53.9	17.3	
Hori	11000.000	AV	34.1	39.6	0.8	35.1	-	39.4	53.9	14.5	Floor Noise
Vert	5460.000	PK	44.5	32.6	6.4	35.4	-	48.1	73.9	25.8	
Vert	5470.000	PK	45.4	32.6	6.4	35.4	-	49.0	68.2	19.2	
Vert	11000.000	PK	44.8	39.6	0.8	35.1	-	50.1	73.9	23.8	Floor Noise
Vert	16500.000	PK	45.2	40.7	2.2	35.7	-	52.4	68.2	15.8	Floor Noise
Vert	5460.000	AV	34.3	32.6	6.4	35.4	1.4	39.3	53.9	14.6	
Vert	11000.000	AV	34.1	39.6	0.8	35.1	-	39.4	53.9	14.5	Floor Noise

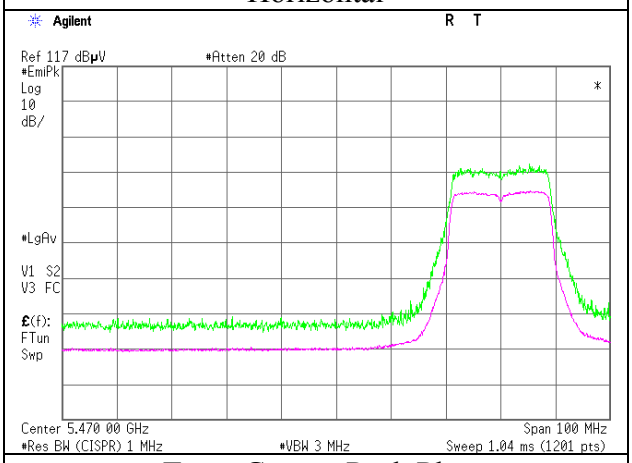
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

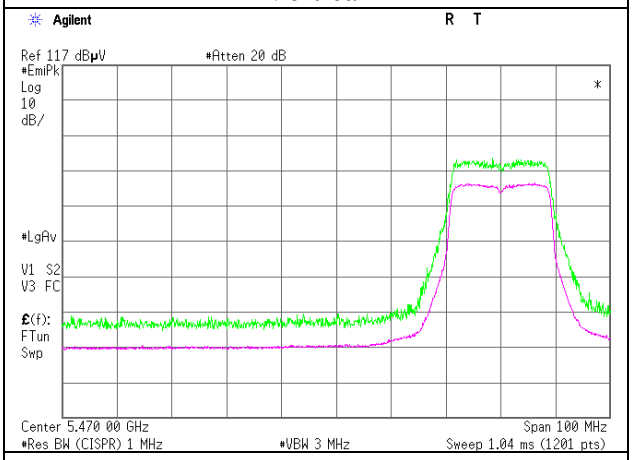
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5500 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	44.9	39.9	0.8	35.1	-	50.5	73.9	23.4	Floor Noise
Hori	16740.000	PK	45.7	41.3	2.2	35.3	-	53.9	68.2	14.3	Floor Noise
Hori	22320.000	PK	43.8	37.4	-0.9	32.5	-	47.8	73.9	26.1	Floor Noise
Hori	11160.000	AV	34.2	39.9	0.8	35.1	-	39.8	53.9	14.1	Floor Noise
Hori	22320.000	AV	34.9	37.4	-0.9	32.5	-	38.9	53.9	15.0	Floor Noise
Vert	11160.000	PK	45.4	39.9	0.8	35.1	-	51.0	73.9	22.9	Floor Noise
Vert	16740.000	PK	46.1	41.3	2.2	35.3	-	54.3	68.2	13.9	Floor Noise
Vert	22320.000	PK	43.4	37.4	-0.9	32.5	-	47.4	73.9	26.5	Floor Noise
Vert	11160.000	AV	34.2	39.9	0.8	35.1	-	39.8	53.9	14.1	Floor Noise
Vert	22320.000	AV	34.8	37.4	-0.9	32.5	-	38.8	53.9	15.1	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	47.2	32.9	6.5	35.5	-	51.1	68.2	17.1	
Hori	11400.000	PK	44.5	40.3	0.9	35.2	-	50.5	73.9	23.4	Floor Noise
Hori	17100.000	PK	45.5	42.3	2.3	34.9	-	55.2	68.2	13.0	Floor Noise
Hori	11400.000	AV	34.1	40.3	0.9	35.2	-	40.1	53.9	13.8	Floor Noise
Vert	5725.000	PK	45.3	32.9	6.5	35.5	-	49.2	68.2	19.0	
Vert	11400.000	PK	44.2	40.3	0.9	35.2	-	50.2	73.9	23.7	Floor Noise
Vert	17100.000	PK	45.7	42.3	2.3	34.9	-	55.4	68.2	12.8	Floor Noise
Vert	11400.000	AV	34.1	40.3	0.9	35.2	-	40.1	53.9	13.8	Floor Noise

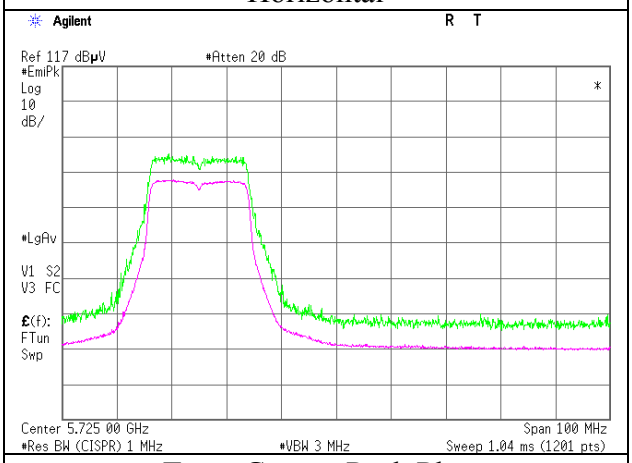
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

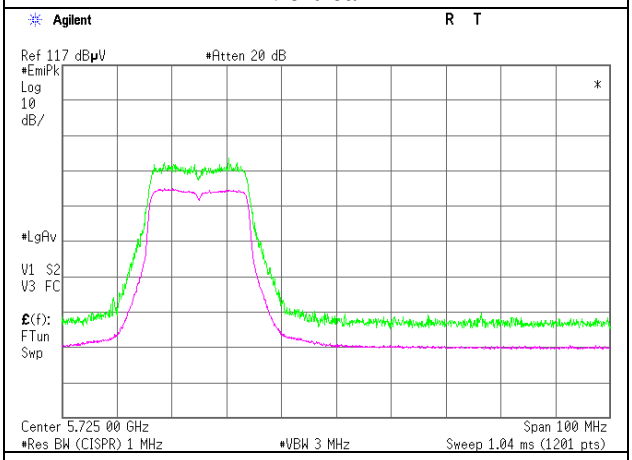
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5700 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	42.8	32.2	5.6	33.9	-	46.7	68.2	21.5	
Hori	5700.000	PK	44.7	32.3	5.6	34.0	-	48.6	105.2	56.6	
Hori	5720.000	PK	46.1	32.3	5.6	34.0	-	50.0	110.8	60.8	
Hori	5725.000	PK	49.3	32.3	5.6	34.0	-	53.2	122.2	69.0	
Hori	11490.000	PK	44.8	40.5	1.1	35.2	-	51.2	73.9	22.7	Floor Noise
Hori	17235.000	PK	45.2	42.9	2.3	35.0	-	55.4	68.2	12.8	Floor Noise
Hori	11490.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise
Hori	11490.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise
Vert	5650.000	PK	43.0	32.2	5.6	33.9	-	46.9	68.2	21.3	
Vert	5700.000	PK	44.7	32.3	5.6	34.0		48.6	105.2	56.6	
Vert	5720.000	PK	46.4	32.3	5.6	34.0	-	50.3	110.8	60.5	
Vert	5725.000	PK	48.7	32.3	5.6	34.0	-	52.6	122.2	69.6	
Vert	11490.000	PK	45.2	40.5	1.1	35.2	-	51.6	73.9	22.3	Floor Noise
Vert	17235.000	PK	45.7	42.9	2.3	35.0	-	55.9	68.2	12.3	Floor Noise
Vert	11490.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise

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

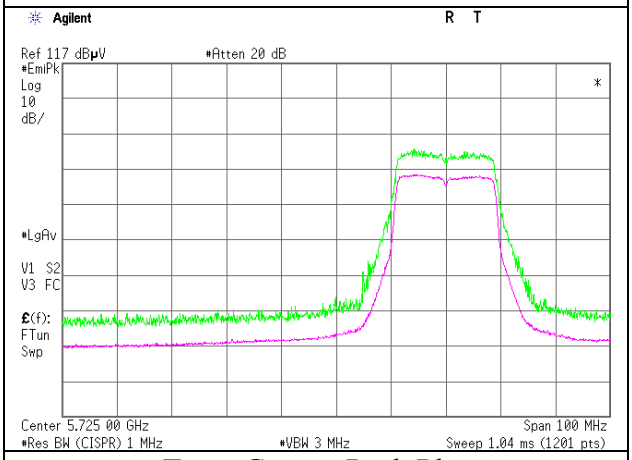
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

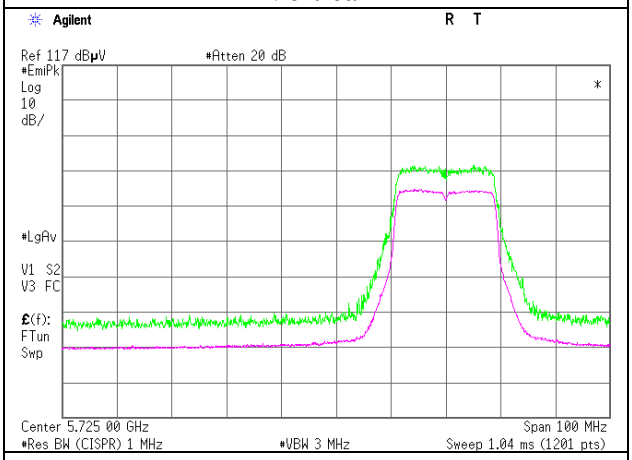
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5745 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	45.1	40.5	1.1	35.2	-	51.5	73.9	22.4	Floor Noise
Hori	17355.000	PK	45.3	43.5	2.4	35.0	-	56.2	68.2	12.0	Floor Noise
Hori	23140.000	PK	43.3	37.9	-0.7	32.3	-	48.2	73.9	25.7	Floor Noise
Hori	11570.000	AV	33.9	40.5	1.1	35.2	-	40.3	53.9	13.6	Floor Noise
Hori	23140.000	AV	34.6	37.9	-0.7	32.3	-	39.5	53.9	14.4	Floor Noise
Vert	11570.000	PK	45.3	40.5	1.1	35.2	-	51.7	73.9	22.2	Floor Noise
Vert	17355.000	PK	45.6	43.5	2.4	35.0	-	56.5	68.2	11.7	Floor Noise
Vert	23140.000	PK	43.4	37.9	-0.7	32.3	-	48.3	73.9	25.6	Floor Noise
Vert	11570.000	AV	33.9	40.5	1.1	35.2	-	40.3	53.9	13.6	Floor Noise
Vert	23140.000	AV	34.5	37.9	-0.7	32.3	-	39.4	53.9	14.5	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11n-20 Tx 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	45.3	32.6	5.7	34.0	-	49.6	122.2	72.6	
Hori	5855.000	PK	44.8	32.6	5.7	34.0	-	49.1	110.8	61.7	
Hori	5875.000	PK	44.3	32.6	5.7	34.0	-	48.6	105.2	56.6	
Hori	5925.000	PK	43.2	32.7	5.7	34.1	-	47.5	68.2	20.7	
Hori	11650.000	PK	44.5	40.5	1.1	35.2	-	50.9	73.9	23.0	Floor Noise
Hori	17475.000	PK	45.4	44.0	2.4	35.0	-	56.8	68.2	11.4	Floor Noise
Hori	11650.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise
Vert	5850.000	PK	44.4	32.6	5.7	34.0	-	48.7	122.2	73.5	
Vert	5855.000	PK	44.3	32.6	5.7	34.0	-	48.6	110.8	62.2	
Vert	5875.000	PK	43.4	32.6	5.7	34.0	-	47.7	105.2	57.5	
Vert	5925.000	PK	43.3	32.7	5.7	34.1	-	47.6	68.2	20.6	
Vert	11650.000	PK	44.7	40.5	1.1	35.2	-	51.1	73.9	22.8	Floor Noise
Vert	17475.000	PK	45.8	44.0	2.4	35.0	-	57.2	68.2	11.0	Floor Noise
Vert	11650.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise

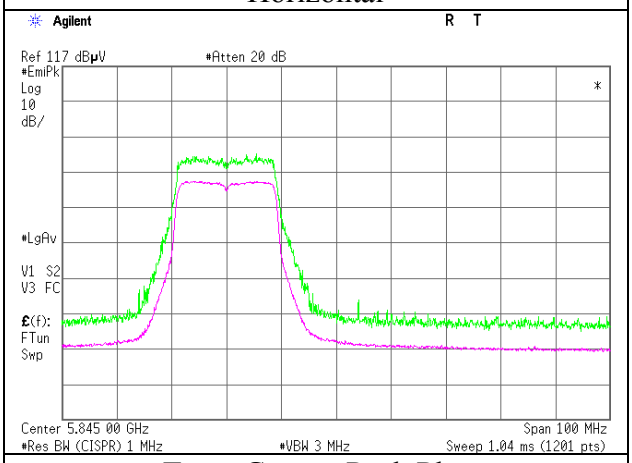
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

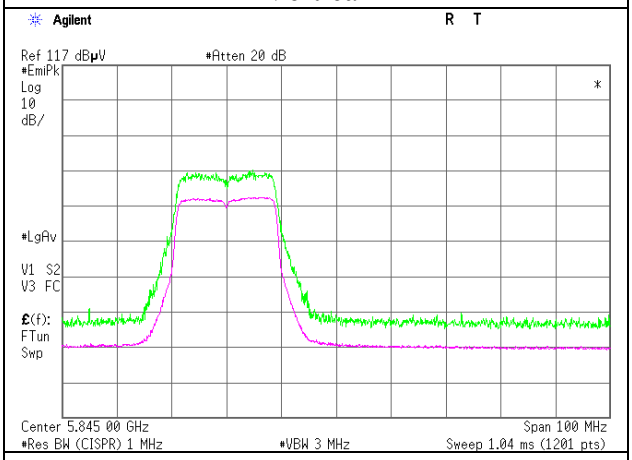
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/27/2016
Temperature/ Humidity	23 deg. C / 68 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11n-20 Tx 5825 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 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	46.5	32.3	6.3	35.5	-	49.6	73.9	24.3	
Hori	10380.000	PK	44.9	39.0	0.4	35.9	-	48.4	68.2	19.8	Floor Noise
Hori	15570.000	PK	45.9	40.0	1.9	35.8	-	52.0	73.9	21.9	Floor Noise
Hori	5150.000	AV	34.3	32.3	6.3	35.5	3.0	40.4	53.9	13.5	
Hori	15570.000	AV	35.7	40.0	1.9	35.8	-	41.8	53.9	12.1	Floor Noise
Vert	5150.000	PK	52.5	32.3	6.3	35.5	-	55.6	73.9	18.3	
Vert	10380.000	PK	45.1	39.0	0.4	35.9	-	48.6	68.2	19.6	Floor Noise
Vert	15570.000	PK	46.1	40.0	1.9	35.8	-	52.2	73.9	21.7	Floor Noise
Vert	5150.000	AV	34.6	32.3	6.3	35.5	3.0	40.7	53.9	13.2	
Vert	15570.000	AV	35.7	40.0	1.9	35.8	-	41.8	53.9	12.1	Floor Noise

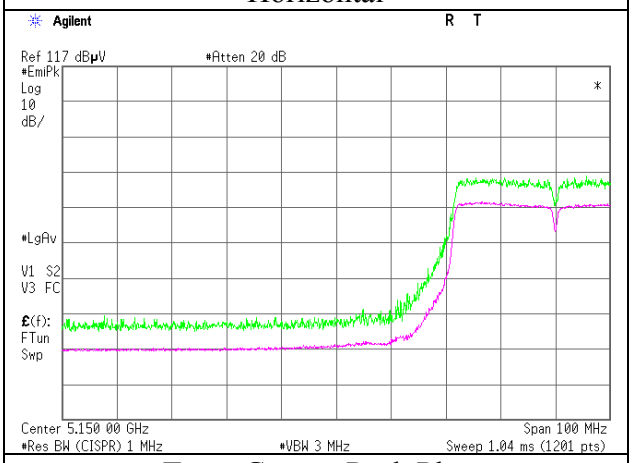
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

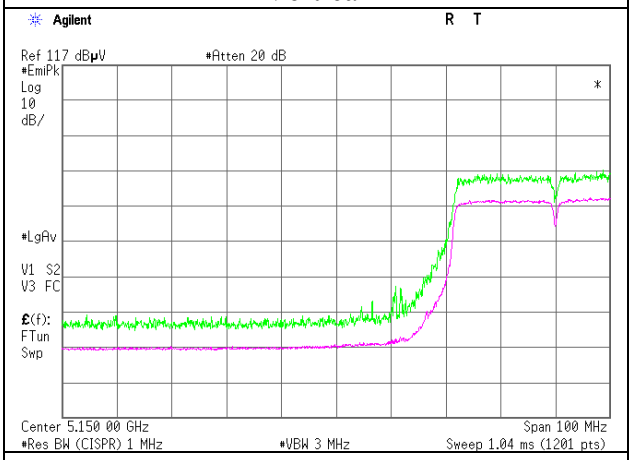
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5190 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 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	44.7	39.1	0.6	35.7	-	48.7	68.2	19.5	Floor Noise
Hori	15810.000	PK	46.2	39.8	2.1	36.2	-	51.9	73.9	22.0	Floor Noise
Hori	21080.000	PK	42.4	37.1	-1.1	33.0	-	45.4	73.9	28.5	Floor Noise
Hori	15810.000	AV	35.7	39.8	2.1	36.2	-	41.4	53.9	12.5	Floor Noise
Hori	21080.000	AV	34.3	37.1	-1.1	33.0	-	37.3	53.9	16.6	Floor Noise
Vert	10540.000	PK	45.2	39.1	0.6	35.7	-	49.2	68.2	19.0	Floor Noise
Vert	15810.000	PK	45.8	39.8	2.1	36.2	-	51.5	73.9	22.4	Floor Noise
Vert	21080.000	PK	42.4	37.1	-1.1	33.0	-	45.4	73.9	28.5	Floor Noise
Vert	15810.000	AV	35.7	39.8	2.1	36.2	-	41.4	53.9	12.5	Floor Noise
Vert	21080.000	AV	34.3	37.1	-1.1	33.0	-	37.3	53.9	16.6	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 5310 MHz		

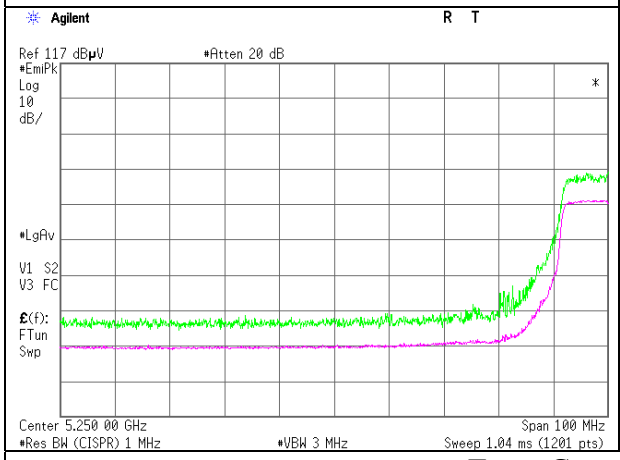
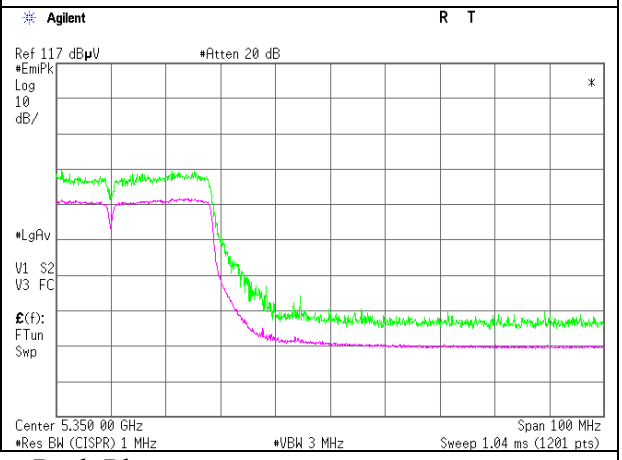
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5250.000	PK	44.3	32.4	6.3	35.4	-	47.6	68.2	20.6	
Hori	5350.000	PK	50.6	32.5	6.4	35.4	-	54.1	73.9	19.8	
Hori	10620.000	PK	45.2	39.2	0.6	35.6	-	49.4	73.9	24.5	Floor Noise
Hori	15930.000	PK	46.2	39.7	2.2	36.4	-	51.7	73.9	22.2	Floor Noise
Hori	5350.000	AV	35.1	32.5	6.4	35.4	3.0	41.6	53.9	12.3	
Hori	10620.000	AV	34.5	39.2	0.6	35.6	-	38.7	53.9	15.2	Floor Noise
Hori	15930.000	AV	36.1	39.7	2.2	36.4	-	41.6	53.9	12.3	Floor Noise
Vert	5250.000	PK	49.3	32.4	6.3	35.4	-	52.6	68.2	15.6	
Vert	5350.000	PK	53.7	32.5	6.4	35.4	-	57.2	73.9	16.7	
Vert	10620.000	PK	45.4	39.2	0.6	35.6	-	49.6	73.9	24.3	Floor Noise
Vert	15930.000	PK	45.9	39.7	2.2	36.4	-	51.4	73.9	22.5	Floor Noise
Vert	5350.000	AV	35.3	32.5	6.4	35.4	3.0	41.8	53.9	12.1	
Vert	10620.000	AV	34.5	39.2	0.6	35.6	-	38.7	53.9	15.2	Floor Noise
Vert	15930.000	AV	36.1	39.7	2.2	36.4	-	41.6	53.9	12.3	Floor Noise

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

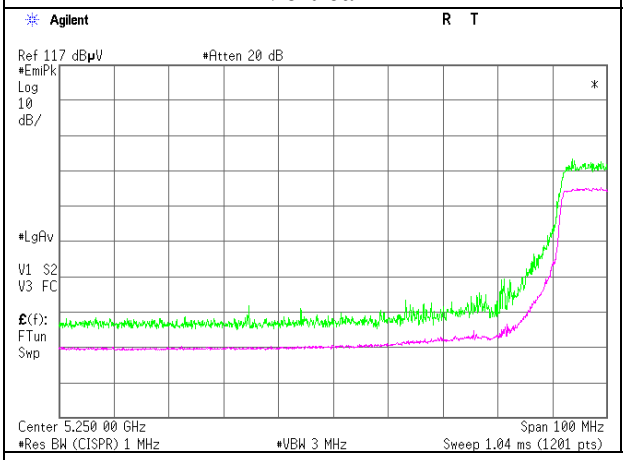
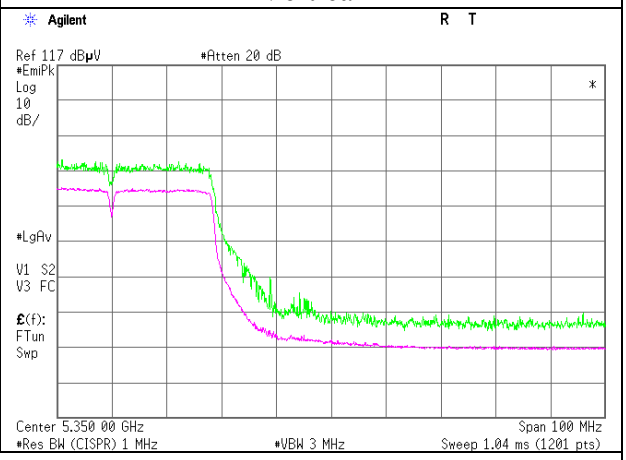
Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5310 MHz

Horizontal	Horizontal
	

Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical	Vertical
	

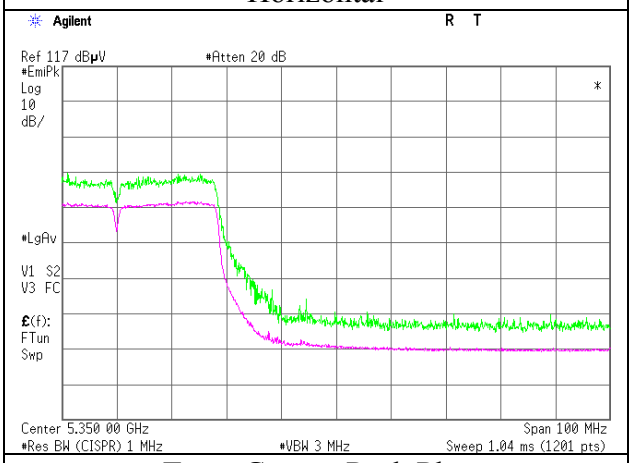
Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission
(Reference Plot for Band-edge)

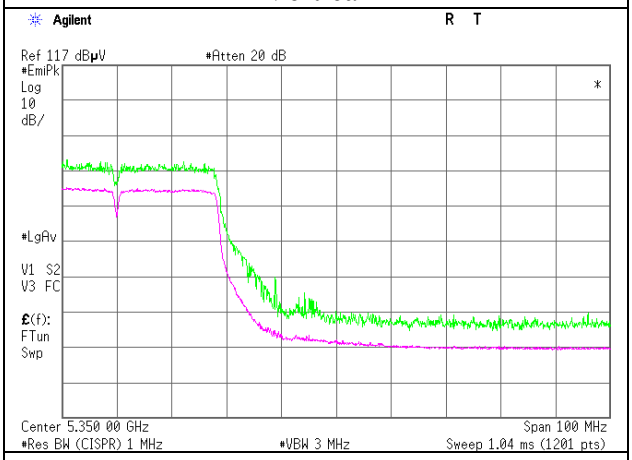
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5310 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 5510 MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5460.000	PK	44.5	32.6	6.4	35.4	-	48.1	73.9	25.8	
Hori	5470.000	PK	47.9	32.6	6.4	35.4	-	51.5	68.2	16.7	
Hori	11020.000	PK	44.9	39.7	0.8	35.1	-	50.3	73.9	23.6	Floor Noise
Hori	16530.000	PK	45.6	40.8	2.2	35.6	-	53.0	68.2	15.2	Floor Noise
Hori	5460.000	AV	34.6	32.6	6.4	35.4	3.0	41.2	53.9	12.7	
Hori	11020.000	AV	34.1	39.7	0.8	35.1	-	39.5	53.9	14.4	Floor Noise
Vert	5460.000	PK	46.4	32.6	6.4	35.4	-	50.0	73.9	23.9	
Vert	5470.000	PK	50.3	32.6	6.4	35.4	-	53.9	68.2	14.3	
Vert	11020.000	PK	45.3	39.7	0.8	35.1	-	50.7	73.9	23.2	Floor Noise
Vert	16530.000	PK	45.1	40.8	2.2	35.6	-	52.5	68.2	15.7	Floor Noise
Vert	5460.000	AV	35.1	32.6	6.4	35.4	3.0	41.7	53.9	12.2	
Vert	11020.000	AV	34.1	39.7	0.8	35.1	-	39.5	53.9	14.4	Floor Noise

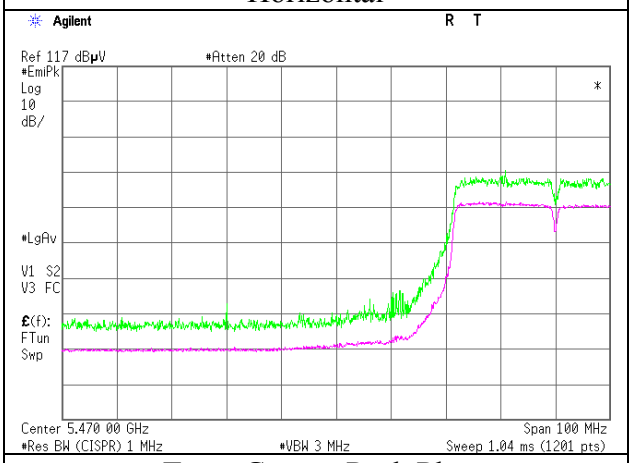
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

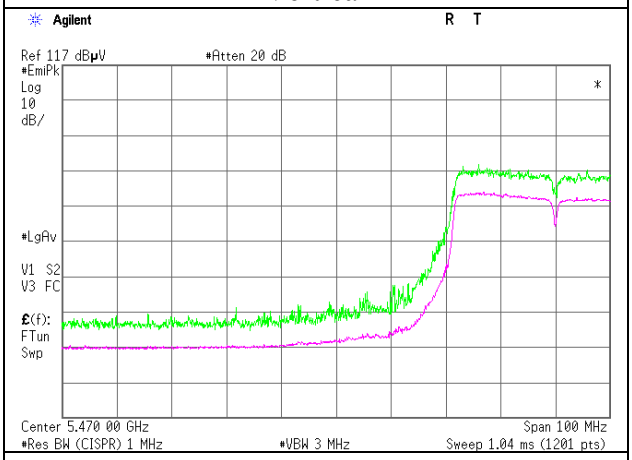
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5510 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 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	45.4	39.8	0.8	35.1	-	50.9	73.9	23.0	Floor Noise
Hori	16650.000	PK	46.2	41.1	2.2	35.5	-	54.0	68.2	14.2	Floor Noise
Hori	22200.000	PK	43.4	37.3	-0.9	32.6	-	47.2	73.9	26.7	Floor Noise
Hori	11100.000	AV	34.3	39.8	0.8	35.1	-	39.8	53.9	14.1	Floor Noise
Hori	22200.000	AV	34.7	37.3	-0.9	32.6	-	38.5	53.9	15.4	Floor Noise
Vert	11100.000	PK	45.0	39.8	0.8	35.1	-	50.5	73.9	23.4	Floor Noise
Vert	16650.000	PK	46.4	41.1	2.2	35.5	-	54.2	68.2	14.0	Floor Noise
Vert	22200.000	PK	43.3	37.3	-0.9	32.6	-	47.1	73.9	26.8	Floor Noise
Vert	11100.000	AV	34.3	39.8	0.8	35.1	-	39.8	53.9	14.1	Floor Noise
Vert	22200.000	AV	34.7	37.3	-0.9	32.6	-	38.5	53.9	15.4	Floor Noise

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

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 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	47.9	32.9	6.5	35.5	-	51.8	68.2	16.4	
Hori	11340.000	PK	44.1	40.2	0.9	35.2	-	50.0	73.9	23.9	Floor Noise
Hori	17010.000	PK	45.4	41.9	2.3	34.9	-	54.7	68.2	13.5	Floor Noise
Hori	11340.000	AV	34.0	40.2	0.9	35.2	-	39.9	53.9	14.0	Floor Noise
Vert	5725.000	PK	44.7	32.9	6.5	35.5	-	48.6	68.2	19.6	
Vert	11340.000	PK	44.4	40.2	0.9	35.2	-	50.3	73.9	23.6	Floor Noise
Vert	17010.000	PK	45.0	41.9	2.3	34.9	-	54.3	68.2	13.9	Floor Noise
Vert	11340.000	AV	34.0	40.2	0.9	35.2	-	39.9	53.9	14.0	Floor Noise

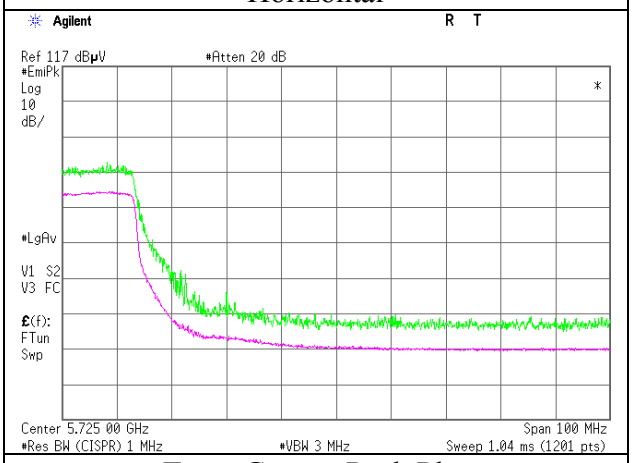
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

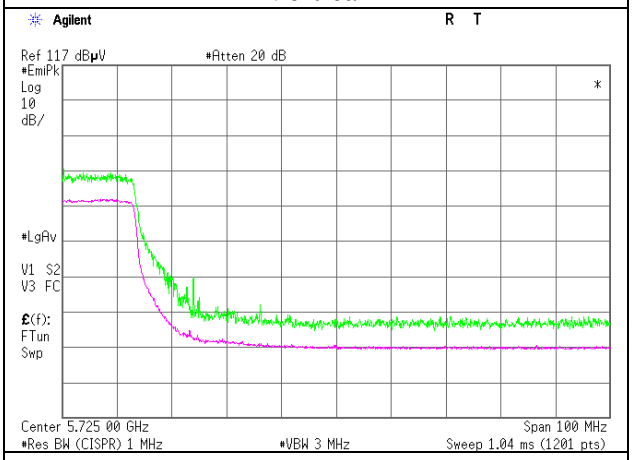
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5670 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 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	43.7	32.2	5.6	33.9	-	47.6	68.2	20.6	
Hori	5700.000	PK	46.7	32.3	5.6	34.0	-	50.6	105.2	54.6	
Hori	5720.000	PK	54.3	32.3	5.6	34.0	-	58.2	110.8	52.6	
Hori	5725.000	PK	55.7	32.3	5.6	34.0	-	59.6	122.2	62.6	
Hori	11510.000	PK	45.4	40.5	1.1	35.2	-	51.8	73.9	22.1	Floor Noise
Hori	17265.000	PK	45.6	43.1	2.3	35.0	-	56.0	68.2	12.2	Floor Noise
Hori	11510.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise
Vert	5650.000	PK	43.6	32.2	5.6	33.9	-	47.5	68.2	20.7	
Vert	5700.000	PK	46.6	32.3	5.6	34.0	-	50.5	105.2	54.7	
Vert	5720.000	PK	53.5	32.3	5.6	34.0	-	57.4	110.8	53.4	
Vert	5725.000	PK	54.6	32.3	5.6	34.0	-	58.5	122.2	63.7	
Vert	11510.000	PK	45.2	40.5	1.1	35.2	-	51.6	73.9	22.3	Floor Noise
Vert	17265.000	PK	45.3	43.1	2.3	35.0	-	55.7	68.2	12.5	Floor Noise
Vert	11510.000	AV	34.1	40.5	1.1	35.2	-	40.5	53.9	13.4	Floor Noise

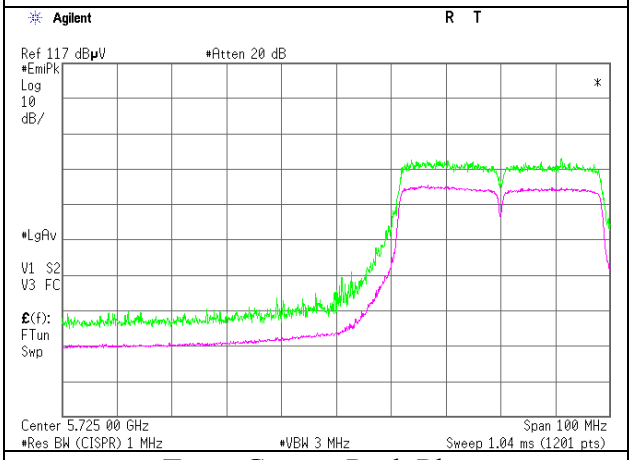
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

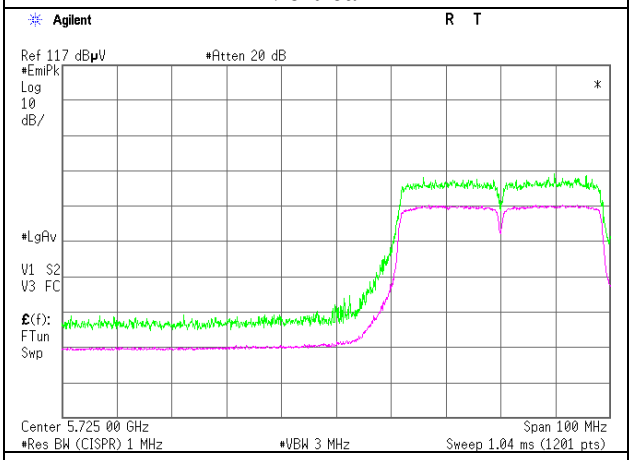
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5755 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-40 Tx 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	44.6	32.6	5.7	34.0	-	48.9	122.2	73.3	
Hori	5855.000	PK	44.5	32.6	5.7	34.0	-	48.8	110.8	62.0	
Hori	5875.000	PK	43.7	32.6	5.7	34.0	-	48.0	105.2	57.2	
Hori	5925.000	PK	43.0	32.7	5.7	34.1	-	47.3	68.2	20.9	
Hori	11590.000	PK	45.2	40.5	1.1	35.2	-	51.6	73.9	22.3	Floor Noise
Hori	17385.000	PK	45.5	43.6	2.4	35.0	-	56.5	68.2	11.7	Floor Noise
Hori	11590.000	AV	33.9	40.5	1.1	35.2	-	40.3	53.9	13.6	Floor Noise
Vert	5850.000	PK	44.2	32.6	5.7	34.0	-	48.5	122.2	73.7	
Vert	5855.000	PK	43.8	32.6	5.7	34.0	-	48.1	110.8	62.7	
Vert	5875.000	PK	43.2	32.6	5.7	34.0	-	47.5	105.2	57.7	
Vert	5925.000	PK	42.1	32.7	5.7	34.1	-	46.4	68.2	21.8	
Vert	11590.000	PK	44.9	40.5	1.1	35.2	-	51.3	73.9	22.6	Floor Noise
Vert	17385.000	PK	45.2	43.6	2.4	35.0	-	56.2	68.2	12.0	Floor Noise
Vert	11590.000	AV	33.9	40.5	1.1	35.2	-	40.3	53.9	13.6	Floor Noise

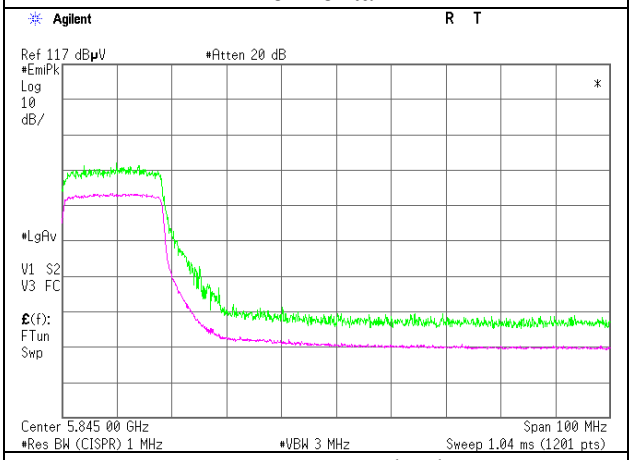
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

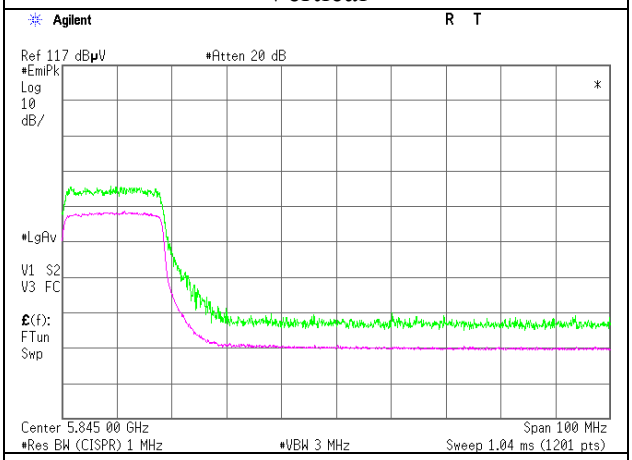
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-40 Tx 5795 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-80 Tx 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	52.5	32.3	6.3	35.5	-	55.6	73.9	18.3	
Hori	10420.000	PK	44.4	39.0	0.4	35.8	-	48.0	68.2	20.2	Floor Noise
Hori	15630.000	PK	46.2	39.9	1.9	35.9	-	52.1	73.9	21.8	Floor Noise
Hori	5150.000	AV	36.2	32.3	6.3	35.5	2.9	42.2	53.9	11.7	
Hori	15630.000	AV	35.6	39.9	1.9	35.9	-	41.5	53.9	12.4	Floor Noise
Vert	5150.000	PK	53.1	32.3	6.3	35.5	-	56.2	73.9	17.7	
Vert	10420.000	PK	44.2	39.0	0.4	35.8	-	47.8	68.2	20.4	Floor Noise
Vert	15630.000	PK	45.6	39.9	1.9	35.9	-	51.5	73.9	22.4	Floor Noise
Vert	5150.000	AV	35.1	32.3	6.3	35.5	2.9	41.1	53.9	12.8	
Vert	15630.000	AV	35.6	39.9	1.9	35.9	-	41.5	53.9	12.4	Floor Noise

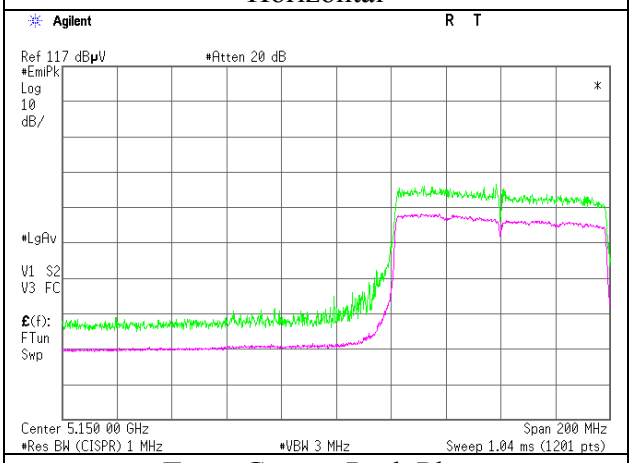
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

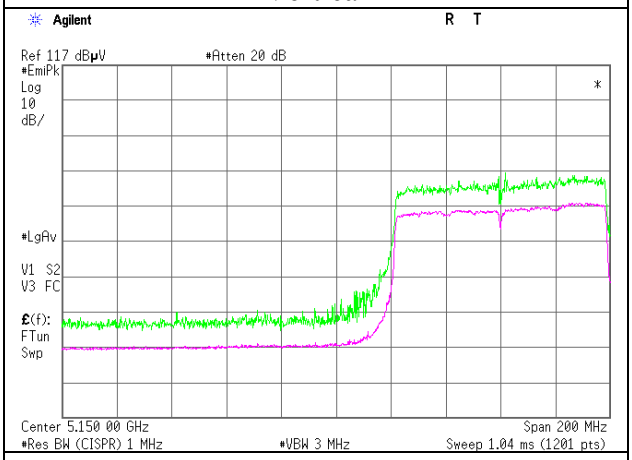
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-80 Tx 5210 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-80 Tx 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	52.8	32.5	6.4	35.4	-	56.3	73.9	17.6	
Hori	10580.000	PK	44.6	39.2	0.6	35.6	-	48.8	68.2	19.4	Floor Noise
Hori	15870.000	PK	45.6	39.7	2.1	36.3	-	51.1	73.9	22.8	Floor Noise
Hori	5350.000	AV	35.5	32.5	6.4	35.4	2.9	41.9	53.9	12.0	
Hori	15870.000	AV	35.8	39.7	2.1	36.3	-	41.3	53.9	12.6	Floor Noise
Vert	5350.000	PK	52.7	32.5	6.4	35.4	-	56.2	73.9	17.7	
Vert	10580.000	PK	44.8	39.2	0.6	35.6	-	49.0	68.2	19.2	Floor Noise
Vert	15870.000	PK	45.9	39.7	2.1	36.3	-	51.4	73.9	22.5	Floor Noise
Vert	5350.000	AV	36.5	32.5	6.4	35.4	2.9	42.9	53.9	11.0	
Vert	15870.000	AV	35.8	39.7	2.1	36.3	-	41.3	53.9	12.6	Floor Noise

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

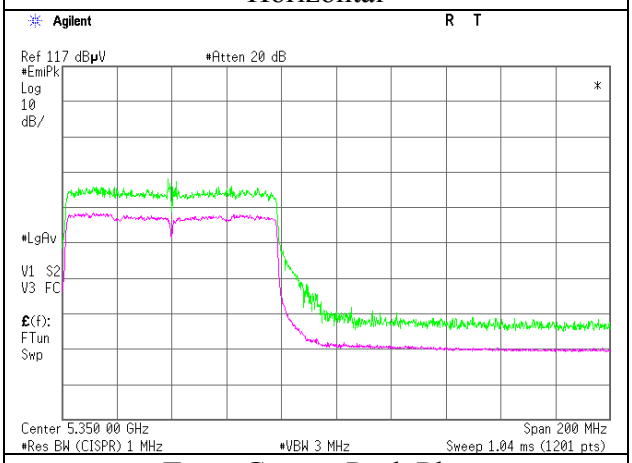
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

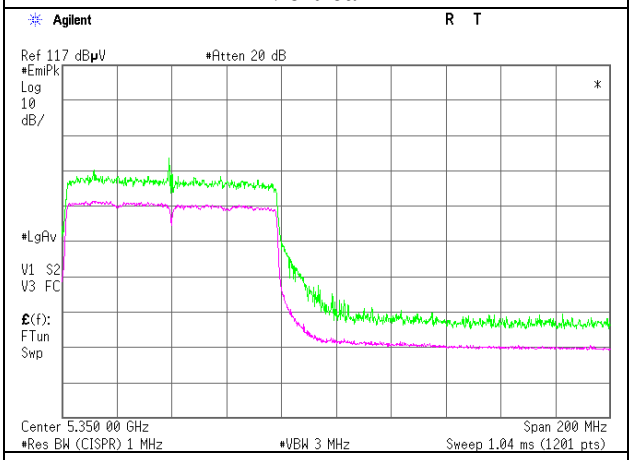
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-80 Tx 5290 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-80 Tx 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	51.3	32.6	6.4	35.4	-	54.9	73.9	19.0	
Hori	5470.000	PK	52.5	32.6	6.4	35.4	-	56.1	68.2	12.1	
Hori	11060.000	PK	44.3	39.7	0.8	35.1	-	49.7	73.9	24.2	Floor Noise
Hori	16590.000	PK	45.3	40.9	2.2	35.5	-	52.9	68.2	15.3	Floor Noise
Hori	5460.000	AV	35.3	32.6	6.4	35.4	2.9	41.8	53.9	12.1	
Hori	11060.000	AV	34.1	39.7	0.8	35.1	-	39.5	53.9	14.4	Floor Noise
Vert	5460.000	PK	54.7	32.6	6.4	35.4	-	58.3	73.9	15.6	
Vert	5470.000	PK	55.8	32.6	6.4	35.4	-	59.4	68.2	8.8	
Vert	11060.000	PK	43.9	39.7	0.8	35.1	-	49.3	73.9	24.6	Floor Noise
Vert	16590.000	PK	45.4	40.9	2.2	35.5	-	53.0	68.2	15.2	Floor Noise
Vert	5460.000	AV	37.6	32.6	6.4	35.4	2.9	44.1	53.9	9.8	
Vert	11060.000	AV	34.1	39.7	0.8	35.1	-	39.5	53.9	14.4	Floor Noise

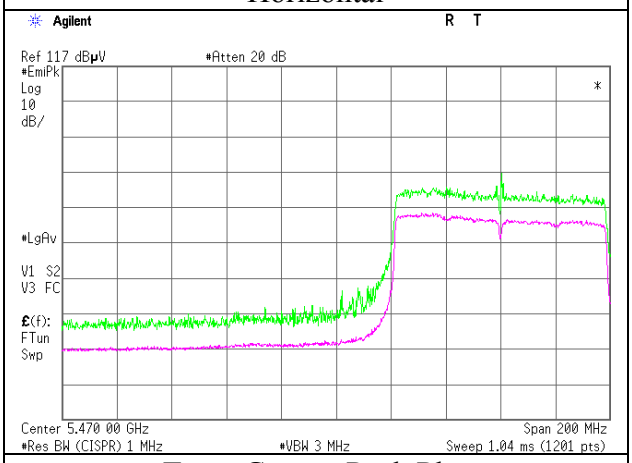
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)+Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

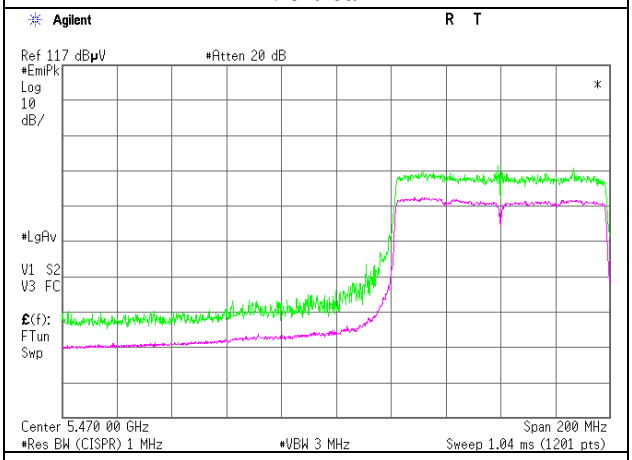
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-80 Tx 5530 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-80 Tx 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	46.0	32.9	6.5	35.5	-	49.9	68.2	18.3	
Hori	11220.000	PK	43.7	40.0	0.9	35.2	-	49.4	73.9	24.5	Floor Noise
Hori	16830.000	PK	45.6	41.5	2.2	35.2	-	54.1	68.2	14.1	Floor Noise
Hori	11220.000	AV	33.8	40.0	0.9	35.2	-	39.5	53.9	14.4	Floor Noise
Vert	5725.000	PK	46.9	32.9	6.5	35.5	-	50.8	68.2	17.4	
Vert	11220.000	PK	44.1	40.0	0.9	35.2	-	49.8	73.9	24.1	Floor Noise
Vert	16830.000	PK	45.5	41.5	2.2	35.2	-	54.0	68.2	14.2	Floor Noise
Vert	11220.000	AV	33.8	40.0	0.9	35.2	-	39.5	53.9	14.4	Floor Noise

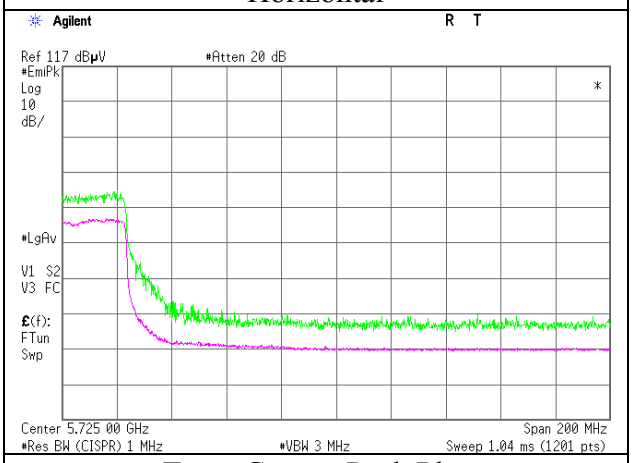
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

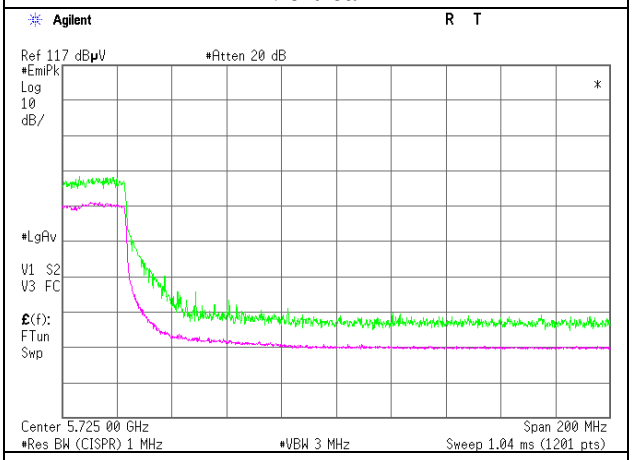
Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-80 Tx 5610 MHz

Horizontal



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/26/2016	04/28/2016	05/14/2016
Temperature/ Humidity	24 deg. C / 43 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz)
Mode	11ac-80 Tx 5775 MHz		

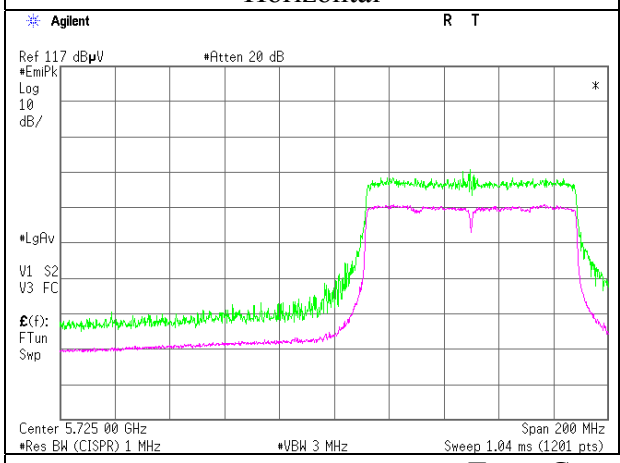
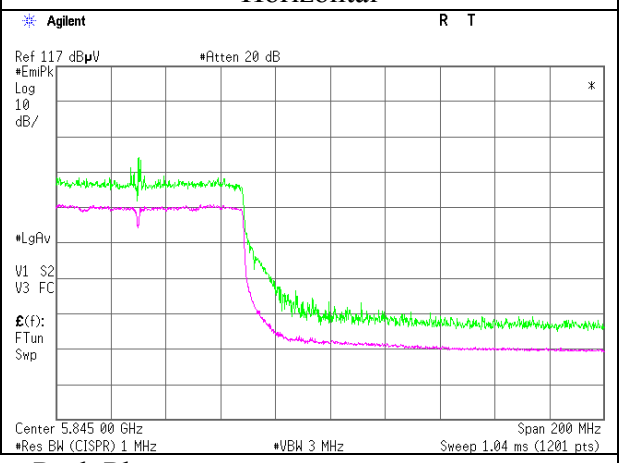
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	5650.000	PK	44.7	32.2	5.6	33.9	-	48.6	68.2	19.6	
Hori	5700.000	PK	49.9	32.3	5.6	34.0	-	53.8	105.2	51.4	
Hori	5720.000	PK	53.6	32.3	5.6	34.0	-	57.5	110.8	53.3	
Hori	5725.000	PK	55.5	32.3	5.6	34.0	-	59.4	122.2	62.8	
Hori	5850.000	PK	47.8	32.6	5.7	34.0	-	52.1	122.2	70.1	
Hori	5855.000	PK	46.1	32.6	5.7	34.0	-	50.4	110.8	60.4	
Hori	5875.000	PK	44.7	32.6	5.7	34.0	-	49.0	105.2	56.2	
Hori	5925.000	PK	43.5	32.7	5.7	34.1	-	47.8	68.2	20.4	
Hori	11550.000	PK	44.4	40.5	1.1	35.2	-	50.8	73.9	23.1	Floor Noise
Hori	17325.000	PK	45.2	43.3	2.4	35.0	-	55.9	68.2	12.3	Floor Noise
Hori	11550.000	AV	33.8	40.5	1.1	35.2	-	40.2	53.9	13.7	Floor Noise
Vert	5650.000	PK	47.5	32.2	5.6	33.9	-	51.4	68.2	16.8	
Vert	5700.000	PK	48.9	32.3	5.6	34.0	-	52.8	105.2	52.4	
Vert	5720.000	PK	52.9	32.3	5.6	34.0	-	56.8	110.8	54.0	
Vert	5725.000	PK	54.7	32.3	5.6	34.0		58.6	122.2	63.6	
Vert	5850.000	PK	45.8	32.6	5.7	34.0		50.1	122.2	72.1	
Vert	5855.000	PK	44.4	32.6	5.7	34.0		48.7	110.8	62.1	
Vert	5875.000	PK	43.8	32.6	5.7	34.0		48.1	105.2	57.1	
Vert	5925.000	PK	43.3	32.7	5.7	34.1		47.6	68.2	20.6	
Vert	11550.000	PK	43.8	40.5	1.1	35.2		50.2	73.9	23.7	Floor Noise
Vert	17325.000	PK	46.4	43.3	2.4	35.0		57.1	68.2	11.1	Floor Noise
Vert	11550.000	AV	33.8	40.5	1.1	35.2		40.2	53.9	13.7	Floor Noise

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

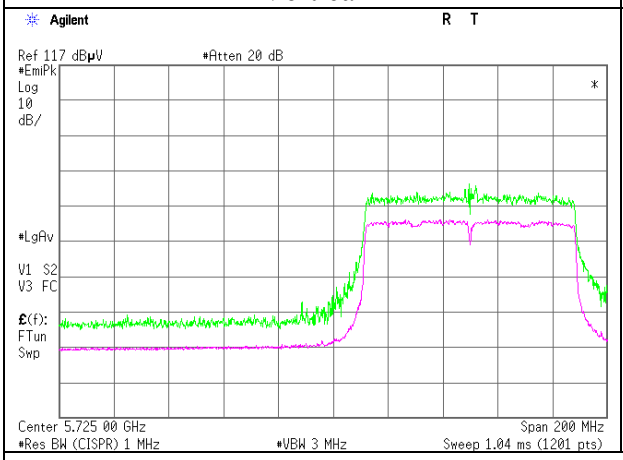
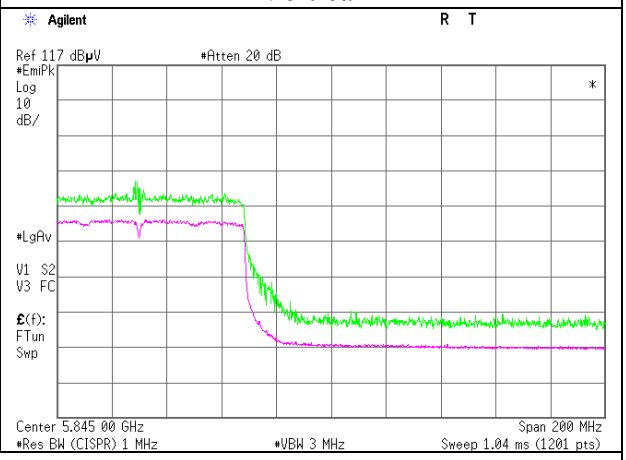
Distance factor:	1GHz-10GHz	20log(3.9m/3.0m)= 2.28dB
	10GHz-40GHz	20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission
(Reference Plot for Band-edge)

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber
Report No.	11245604H
Date	04/26/2016
Temperature/ Humidity	24 deg. C / 43 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)
Mode	11ac-80 Tx 5775 MHz

Horizontal	Horizontal
	

Trace Green : Peak Plot
Trace Purple : Average Plot

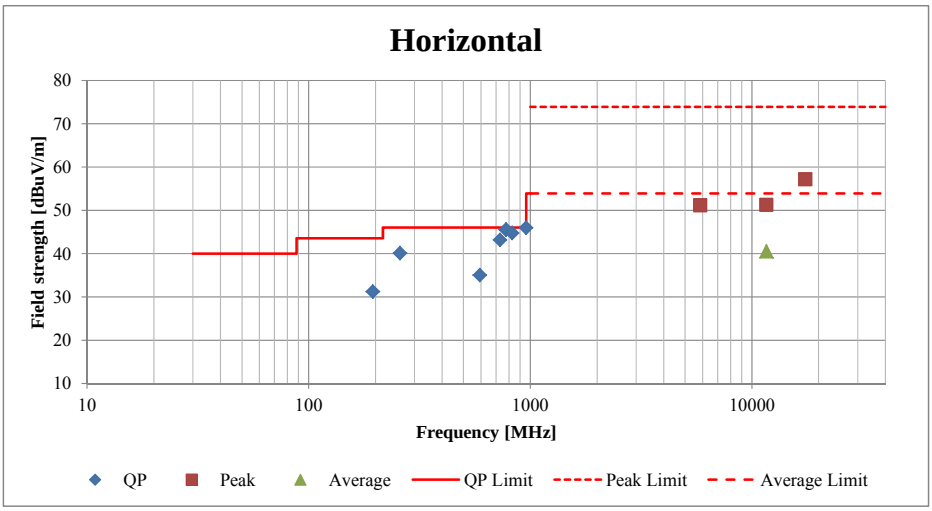
Vertical	Vertical
	

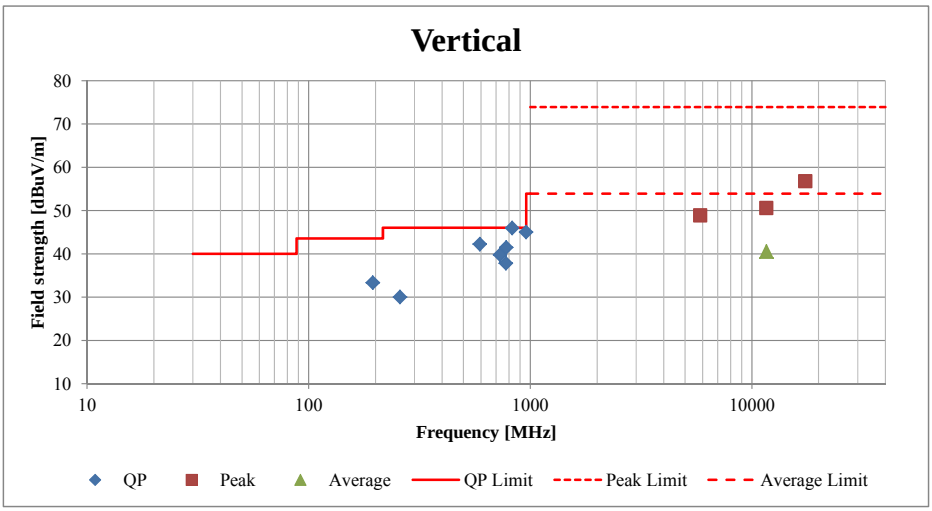
Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.1 Semi Anechoic Chamber	Ise EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11245604H		
Date	04/27/2016	04/28/2016	05/14/2016
Temperature/ Humidity	23 deg. C / 68 % RH	24 deg. C / 52 % RH	22 deg. C / 50 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Satofumi Matsuyama (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 40 GHz) (Below 1 GHz)
Mode	11a Tx 5825 MHz		



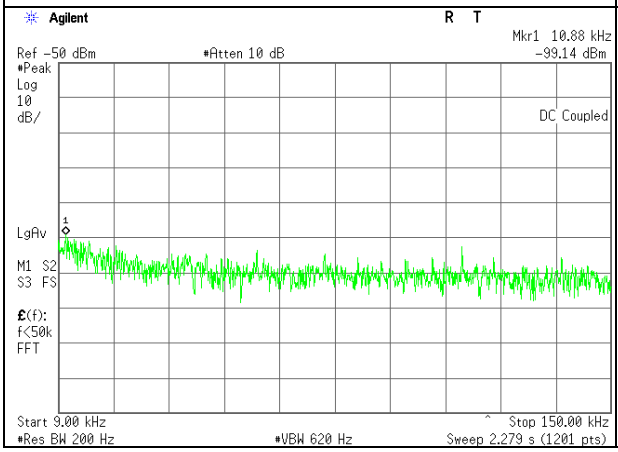


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

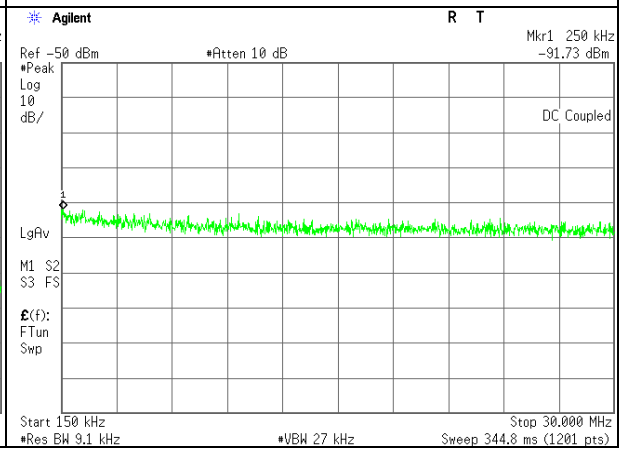
Conducted Spurious Emission

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	11245604H
Date	05/ 20/2016
Temperature/ Humidity	24deg. C / 39 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11a 5825 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
10.88	-99.1	0.01	9.8	4.7	1	-84.6	300	6.0	-23.4	46.8	70.2	
250.00	-91.7	0.01	9.9	4.7	1	-77.2	300	6.0	-15.9	19.6	35.5	

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

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	RE	2015/09/19 * 12
MOS-27	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q26	RE	2016/01/21 * 12
MJM-25	Measure	KOMELON	KMC-36	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MHA-05 *1)	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	253	RE	2015/05/18 * 12
MPA-01	Pre Amplifier	Agilent	8449B	3008A01671	RE	2016/02/26 * 12
MCC-165	Microwave Cable	Junkosha	MWX221	1203S213(1m) / 1311S166(5m)	RE	2015/11/10 * 12
MMM-03	Digital Tester	Fluke	FLUKE 26-3	78030621	RE	2015/08/19 * 12
MRENT-126	Spectrum Analyzer	KEYSIGHT	E4440A	MY46185516	RE/AT	2015/07/31 * 12
MHF-16	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	7001	RE	2015/09/15 * 12
MCC-176	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S303	RE	2016/03/10 * 12
MPM-16	Power Meter	Agilent	8990B	MY51000271	AT	2016/04/07 * 12
MPSE-22	Power sensor	Agilent	N1923A	MY54070003	AT	2016/04/07 * 12
MCC-137	Microwave cable	HUBER+SUHNER	SUCOFLEX 102	37954/2	AT	2015/10/08 * 12
MAT-89	Attenuator	Weinschel Associates	WA56-10	56100305	AT	2015/06/01 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	AT	2015/11/06 * 12
MPSE-23	Power sensor	Agilent	N1923A	MY54070004	AT	2016/04/07 * 12
MAT-10	Attenuator(10dB)	Weinschel Corp	2	BL1173	AT	2015/11/10 * 12
MAT-90	Attenuator	Weinschel Associates	WA56-10	56100306	AT	2015/06/01 * 12
MCC-144	Microwave Cable	Junkosha	MWX221	1207S407	AT	2015/08/06 * 12
MCC-209	Microwave Cable	RS Components	R-132G7210200CD	-	AT	2016/04/01 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2015/12/08 * 12
MMM-07	DIGITAL HiTESTER	Hioki	3805	051201150	AT	2016/01/18 * 12
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	-	RE	-
MSA-06	Spectrum Analyzer	Agilent	E4407B	MY45107638	RE	Pre Check
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	2015/07/13 * 12
MAT-70	Attenuator(6dB)	Agilent	8491A-006	MY52460153	RE	2016/04/05 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2016/03/24 * 12
MMM-08	DIGITAL HiTESTER	Hioki	3805	051201197	RE	2016/01/13 * 12
MHA-16 *1)	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2015/05/19 * 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	2015/06/02 * 12
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2015/09/04 * 12
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 /1871328	RE	2015/09/03 * 12
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

***1) This test equipment was used for the tests before the expiration date of the calibration.**

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

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

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