RADIO TEST REPORT

Test Report No. : 10812026H-C-R1

Applicant	:	**NIKON CORPORATION**
Type of Equipment	:	**Wireless Transmitter**
Model No.	:	**N1526**
FCC ID	:	**CGJ1152EA**
Test regulation	:	**FCC Part 15 Subpart E: 2015**
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)
7. This report is a revised version of 10812026H-C. 10812026H-C is replaced with this report.

Date of test: June 7 to July 2, 2015

Representative test engineer:
T. matsui
Tomoki Matsui
Engineer
Consumer Technology Division

Approved by:
T. Hatakeda
Takahiro Hatakeda
Leader
Consumer Technology Division

NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
*As for the range of Accreditation in NVLAP, you may refer to the WEB address,
http://japan.ul.com/resources/emc_accredited/

REVISION HISTORY

Original Test Report No.: 10812026H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	10812026H-C	July 28, 2015	-	-
1	10812026H-C-R1	November 24, 2015	P.5	Update of FCC15 version
1	10812026H-C-R1	November 24, 2015	P.5	Correction of FCC Part 15.203 Antenna requirement sentence

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

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SECTION 1: Customer information

Company Name	:	NEC Platforms, Ltd.
Address	:	800, Shimomata, Kakegawa-shi, Shizuoka 436-8501,Japan
Telephone Number	:	+81-537-22-8276
Facsimile Number	:	+81-537-22-8236
Contact Person	:	Kouichi Sakurai

*Remarks:
NIKON CORPORATION designates NEC Platforms, Ltd. as manufacturer of the product (Wireless Transmitter).

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless Transmitter
Model No.	:	N1526
Serial No.	:	Refer to Clause 4.2
Rating	:	DC 5.0 V
Receipt Date of Sample	:	June 1, 2015
Country of Mass-production	:	Japan
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No Modification by the test lab

2.2 Product Description

Model No: N1526 (referred to as the EUT in this report) is the Wireless Transmitter.

General Specification

Clock frequency(ies) in the system	:	40 MHz (Crystal), 32.7 kHz (OSC)
Operating temperature	:	0 deg. C to +40 deg. C

Radio Specification

Radio Type	:	Transceiver
Power Supply (inner)	:	DC 3.3 V

Specification of Wireless LAN (IEEE802.11b/g/a/n-20/n-40/11ac-20/11ac-40/11ac-80)

Type of radio	IEEE802.11b	IEEE802.11g/n (20 M band)	IEEE802.11n (40 M band)	IEEE802.11a/n/ac (20 M band)	IEEE802.11n/ac (40 M band)	IEEE802.11ac (80 M band)
Frequency of operation (MHz)	2412 - 2462	2412 - 2462	2422 - 2452	5180 - 5240 * 5260 - 5320 * 5745 - 5825 *	5190 - 5230 * 5270 - 5310 * 5755 - 5795 *	5210 * 5290 * 5775 *
Type of modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)		OFDM (64QAM, 16QAM, QPSK, BPSK, 256QAM(IEEE802.11ac only))		
Channel spacing	5 MHz			20 MHz	40 MHz	80 MHz
Antenna type	Antenna 0: Pattern Antenna Inverted L Type Antenna 1: Pattern Antenna Inverted L Type					
Antenna Gain	2.4GHz: 1 dBi 5GHz: 1 dBi					
Directional Antenna Gain	2.4 GHz: 4.01 dBi 5 GHz: 4.01 dBi					

* This test report applies to Wireless LAN (5 GHz Band).

SECTION 3: Test specification, procedures & results

3.1 Test Specification

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

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

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC :**ANSI C63.4:2009	**FCC:** 15.407(b)(6) / 15.207	**QP** 17.7 dB 0.47375 MHz, N **AV** 7.7 dB 0.47375 MHz, N 0.47242 MHz, L	Complied	-
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
26dB Emission Bandwidth	**FCC :**ANSI C63.4:2009, FCC KDB Publication Number 789033	**FCC :** 15.407(a)(1)(2)(3)	See data	N/A	Conducted
	IC: -	**IC:** -			
Maximum Conducted Output Power	**FCC :**ANSI C63.4:2009, 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 C63.4:2009, 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 C63.4:2009	**FCC :** 15.407(b), 15.205 and 15.209	0.1dB 11510.000MHz, AV, Hori.	Complied	Conducted (below 30MHz) / Radiated (above 30MHz) *1)
	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 C63.4:2009	**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 10812026H-E-R1 issued by UL Japan, Inc.
*1) Radiated test was selected over 30 MHz based on section FCC15.407(b) and KDB 789033 D02 G.3.b).

FCC 15.31 (e)
This EUT provides stable voltage (DC 3.3 V) constantly to RF Part 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.

Test room (semi-anechoic chamber)	**Conducted emission (±dB)**
	150kHz-30MHz
No.1	3.5dB
No.2	3.5dB
No.3	3.4dB
No.4	3.5dB

Test room (semi-anechoic chamber)	**Radiated emission**						
	(3m*)(±dB)				**(1m*)(±dB)**		**(0.5m*)(±dB)**
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	1GHz -10GHz	10GHz -18GHz	18GHz -26.5GHz	26.5GHz -40GHz
No.1	4.3dB	5.5dB	6.3dB	5.5dB	5.8dB	5.8dB	4.3dB
No.2	4.2dB	5.4dB	6.3dB	5.4dB	5.7dB	5.9dB	5.6dB
No.3	4.4dB	5.4dB	6.4dB	5.2dB	5.5dB	5.8dB	5.5dB
No.4	4.7dB	5.6dB	6.4dB	5.3dB	5.7dB	5.9dB	5.5dB

*3m/1m/0.5m = Measurement distance

Antenna terminal conducted emission and Power density (±dB)			**Antenna terminal conducted emission (±dB)**		**Channel power (±dB)**
Below 1GHz	1GHz-3GHz	3GHz-18GHz	18GHz-26.5GHz	26.5GHz-40GHz	
1.5dB	1.7dB	2.8dB	2.8dB	2.9dB	2.6dB

Conducted Emission test

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

Radiated emission test(3m)

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.

Mode	Remarks*
IEEE 802.11a (11a)	6Mbps, PN9
IEEE 802.11n SISO 20MHz BW (11n-20)	MCS 1, PN9
IEEE 802.11ac SISO 20MHz BW (11ac-20)	MCS 1, PN9
IEEE 802.11n SISO 40MHz BW (11n-40)	MCS 1, PN9
IEEE 802.11ac SISO 40MHz BW (11ac-40)	MCS 1, PN9
IEEE 802.11ac SISO 80MHz BW (11ac-80)	MCS 1, PN9 *1)
*The worst condition was determined based on the test result of Maximum Peak Output Power. *EUT has the power settings by the software as follows; - Power Setting: Refer to the following table. - Software: LAB-tool Ver : 15.2.4.92 *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. *1) Radiated spurious emission test was performed with Rate:MCS9 because of the test tool.	

[Power Settings]

20MHz Band W52	ch36	ch40	ch44	ch48
11a (SISO)	9 dBm	9 dBm	9 dBm	9 dBm
11n-20 (SISO)	9 dBm	9 dBm	9 dBm	9 dBm
11ac-20(SISO)	9 dBm	9 dBm	9 dBm	9 dBm

20MHz Band W53	ch52	ch56	ch60	ch64
11a (SISO)	9 dBm	9 dBm	9 dBm	9 dBm
11n-20 (SISO)	9 dBm	9 dBm	9 dBm	9 dBm
11ac-20(SISO)	9 dBm	9 dBm	9 dBm	9 dBm

20MHz Band W58	ch149	ch153	ch157	ch161	ch165
11a (SISO)	7 dBm	9 dBm	9 dBm	9 dBm	9 dBm
11n-20 (SISO)	7 dBm	9 dBm	9 dBm	9 dBm	9 dBm
11ac-20(SISO)	7 dBm	9 dBm	9 dBm	9 dBm	9 dBm

40MHz Band W52	ch38	ch46
11n-40(SISO)	9 dBm	9 dBm
11ac-40(SISO)	9 dBm	9 dBm

40MHz Band W53	ch54	ch62
11n-40(SISO)	9 dBm	9 dBm
11ac-40(SISO)	9 dBm	9 dBm

40MHz Band W58	ch151	ch159
11n-40(SISO)	7 dBm	9 dBm
11ac-40(SISO)	7 dBm	9 dBm

80MHz Band W52	Ch42
11ac-80(SISO)	6dBm

80MHz Band W53	ch58
11ac-80(SISO)	7dBm

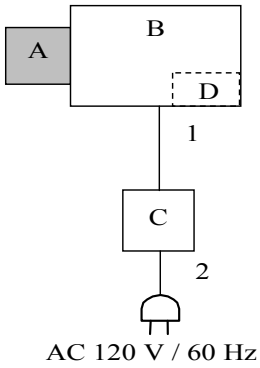
80MHz Band W58	ch155
11ac-80(SISO)	5dBm

*The details of Operating mode(s)

Test Item	Operating Mode	Tested Antenna port *2)	Tested Frequency			
			Low Band	Middle Band	Additional Band	Upper Band
Conducted emission, Radiated Spurious Emission (Below 1GHz)	11ac-40 Tx *1)	0+1	-	5310MHz *1)	-	-
Conducted Spurious Emission	11ac-40 Tx *1)	0	-	5310MHz *1)	-	-
26dB Emission Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	0	-	5260MHz 5300MHz 5320MHz	-	-
	11n-40 Tx 11ac-40 Tx	0	-	5270MHz 5310MHz	-	-
	11ac-80 Tx	0	-	5290MHz	-	-
99% Occupied Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	0	5180MHz 5220MHz 5240MHz	5260MHz 5300MHz 5320MHz	-	5745MHz 5785MHz 5825MHz
	11n-40 Tx 11ac-40 Tx	0	5190MHz 5230MHz	5270MHz 5310MHz	-	5755MHz 5795MHz
	11ac-80 Tx	0	5210MHz	5290MHz	-	5775MHz
Maximum Conducted Output Power, Maximum Power Spectral Density	11a Tx 11n-20 Tx 11ac-20 Tx	0+1, 0, 1	5180MHz 5220MHz 5240MHz	5260MHz 5300MHz 5320MHz	-	5745MHz 5785MHz 5825MHz
	11n-40 Tx 11ac-40 Tx	0+1, 0, 1	5190MHz 5230MHz	5270MHz 5310MHz	-	5755MHz 5795MHz
	11ac-80 Tx	0+1, 0, 1	5210MHz	5290MHz	-	5775MHz
Radiated Spurious Emission (Above 1GHz)	11ac-20 Tx *3)	0+1	5180MHz	5260MHz 5320MHz	-	5745MHz 5785MHz 5825MHz
	11ac-40 Tx *3)	0+1	5190MHz	5270MHz 5310MHz	-	5755MHz 5795MHz
	11ac-80 Tx	0+1	5210MHz	5290MHz	-	5775MHz
Band Edge confirmation	11ac-20 Tx *3)	0+1	5180MHz	5320MHz	-	5745MHz 5825MHz
	11ac-40 Tx *3)	0+1	5190MHz	5310MHz	-	5755MHz 5795MHz
	11ac-80 Tx	0+1	5210MHz	5290MHz	-	5775MHz
6dB Bandwidth	11a Tx 11n-20 Tx 11ac-20 Tx	0	-	-	-	5745MHz 5785MHz 5825MHz
	11n-40 Tx 11ac-40 Tx	0	-	-	-	5755MHz 5795MHz
	11ac-80 Tx	0	-	-	-	5775MHz

*1) The operating mode and tested frequency were tested as a representative, because it had the highest power at antenna terminal test.
*2) After the comparison between Antenna port 0 and Antenna port 1, test was performed with the antenna that had higher power as a representative.
*3) Since 11a, 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 conducted output power.

4.2 Configuration and peripherals



* 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	Wireless Transmitter	N1526	No.1	NEC Platforms, Ltd.	EUT
B	Camera	Q870	PT62024	Nikon	-
C	AC Adapter	YHA-67EA	3Y000410	YHT	-
D	Power Connector	-	-	Nikon	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC Cable	2.0	Unshielded	Unshielded	-
2	AC Cable	2.0	Unshielded	Unshielded	-

SECTION 5: Conducted Emission

Test Procedure

EUT was placed on a wooden table of nominal size, 0.5m by 1.0m, raised 0.8m above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center.

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

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

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

SECTION 6: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

EUT was placed on a urethane platform of nominal size, 0.5m by 1.0m, raised 0.8m above the conducting ground plane.
The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.
The height of the measuring antenna varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.
The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).
The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.
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
Restricted bandedge: Apply to limit in the Section 15.209(a).
Since this limit is severer than the limit of the inside of restricted bands.

*Electric Field Strength to e.i.r.p. Conversion

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

Test Antennas are used as below;

Frequency	30MHz to 300MHz	300MHz to 1GHz	Above 1GHz
Antenna Type	Biconical	Logperiodic	Horn

Frequency	Below 1GHz	Above 1GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	PK	AV
IF Bandwidth	BW 120kHz(T/R)	RBW: 1MHz VBW: 3MHz	Method AD *1) RBW: 1MHz VBW: 3MHz Detector: Power Averaging (RMS) Duty factor was added to the results.
Test Distance	3m	3m (below 10GHz), 1m*2) (above 10GHz), 0.5m*3) (above 26.5GHz)	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on June 6, 2014)".
*2) Distance Factor: 20 x log (3.0m/1.0m) = 9.5dB
*3) Distance Factor: 20 x log (3.0m/0.5m) = 15.6dB

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

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

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

SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used and Test method
26dB Bandwidth	40MHz, 80MHz, 160MHz	Close to 1% of EBW	Greater than 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
6dB Bandwidth	160MHz	100kHz	300kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Maximum Conducted Output Power	-	-	-	Auto	Averaging	-	Power Meter (Sensor: 80MHz BW) (Method PM-G)
Maximum Power Spectral Density	40MHz, 80MHz, 160MHz	1MHz or 470kHz *2)	3MHz or 1.5MHz	Auto	Sample Power Averaging (200 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3)	9kHz-150kHz	200Hz	620Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150kHz-30MHz	9.1kHz	27kHz				
Band Edge confirmation *4)	80MHz, 160MHz, 240MHz	1MHz	3MHz	Auto	Peak	Max Hold	Spectrum Analyzer (Method VB)
			>1/T		Average		

* The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on June 6, 2014)".

*1) Peak hold was applied as Worst-case measurement.
*2) FCC standard says that RBW is set to be 500kHz for 5.725-5.850GHz, but it is not possible with spectrum analyzer, so 10log(500kHz/470kHz) was added to the test result.
*3) In the frequency range below 30MHz, RBW was narrowed to separate the noise contents. Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart.(9kHz-150kHz:RBW=200Hz, 150kHz-30MHz:RBW=9.1kHz)
*4) Reference data

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

Test data : APPENDIX
Test result : Pass

APPENDIX 1: Test data

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

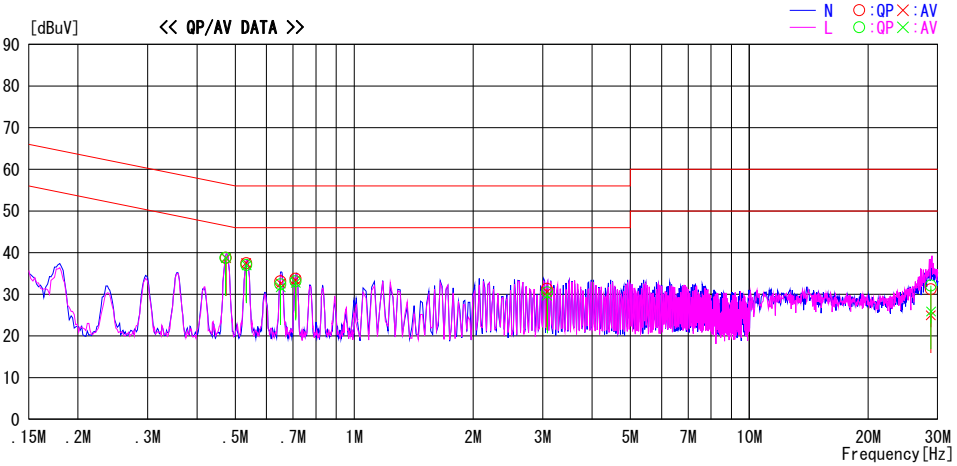
UL Japan, Inc. Ise EMC Lab. No.2 Semi Anechoic Chamber
Date : 2015/07/02

Report No. : 10812026H

Temp./Humi. : 18deg. C / 58% RH
Engineer : Takafumi Noguchi

Mode / Remarks : 11ac40 5310MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.47375	25.5	25.5	13.2	38.7	38.7	56.4	46.4	17.7	7.7	N	
0.53312	24.3	24.3	13.2	37.5	37.5	56.0	46.0	18.5	8.5	N	
0.65108	19.8	19.3	13.3	33.1	32.6	56.0	46.0	22.9	13.4	N	
0.70998	20.4	20.1	13.3	33.7	33.4	56.0	46.0	22.3	12.6	N	
3.07759	17.7	17.0	13.6	31.3	30.6	56.0	46.0	24.7	15.4	N	
28.81857	15.8	9.6	15.4	31.2	25.0	60.0	50.0	28.8	25.0	N	
0.47242	25.5	25.6	13.2	38.7	38.8	56.5	46.5	17.8	7.7	L	
0.53370	23.8	23.8	13.2	37.0	37.0	56.0	46.0	19.0	9.0	L	
0.65092	19.1	18.4	13.3	32.4	31.7	56.0	46.0	23.6	14.3	L	
0.71118	19.8	19.5	13.3	33.1	32.8	56.0	46.0	22.9	13.2	L	
3.07977	16.9	16.1	13.6	30.5	29.7	56.0	46.0	25.5	16.3	L	
28.82543	16.7	10.5	15.4	32.1	25.9	60.0	50.0	27.9	24.1	L	

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

26dB Emission Bandwidth and 99% Occupied Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11a

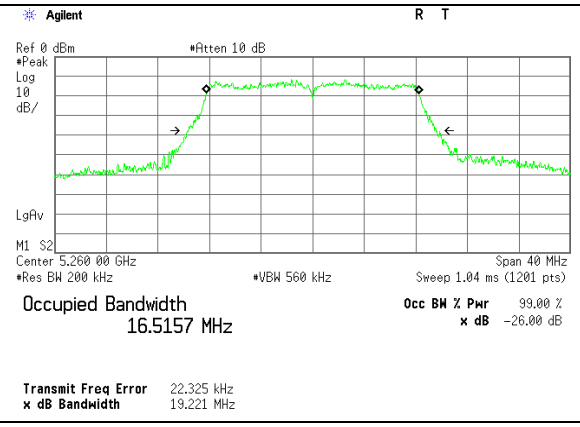
11a Antenna port 0

Frequency [MHz]	26dB Emission Bandwidth [MHz]	99% Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	16.8581	-
5220	-	16.8653	-
5240	-	16.8540	-
5260	19.221	16.8827	-
5300	19.584	16.9246	-
5320	19.556	16.8777	-
5745	-	16.8945	-
5785	-	16.8707	-
5825	-	16.9221	-

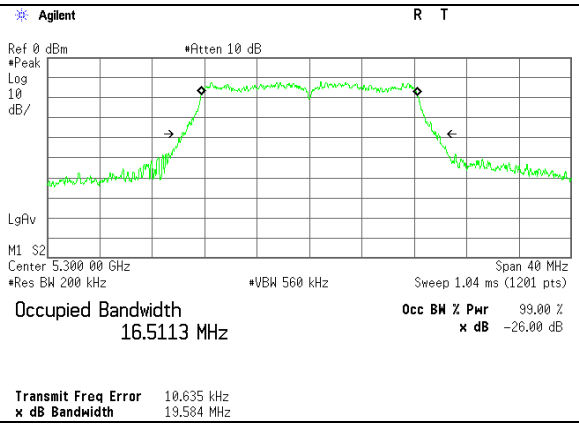
26dB Emission Bandwidth

11a Antenna port 0

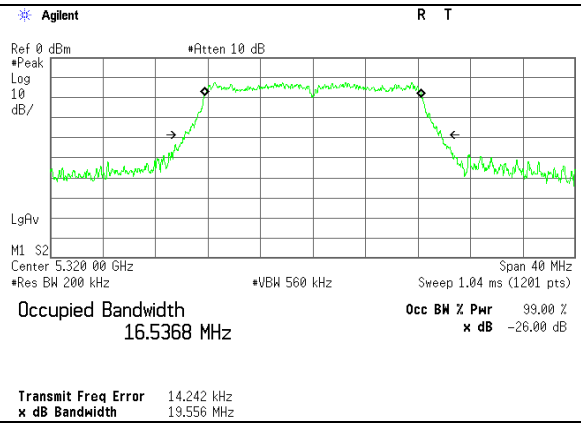
5260MHz



5300MHz



5320MHz

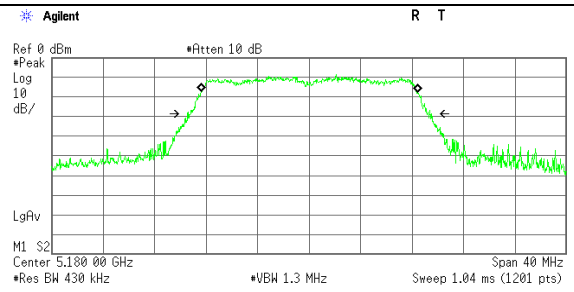


UL Japan, Inc.
Ise EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8999
Facsimile : +81 596 24 8124

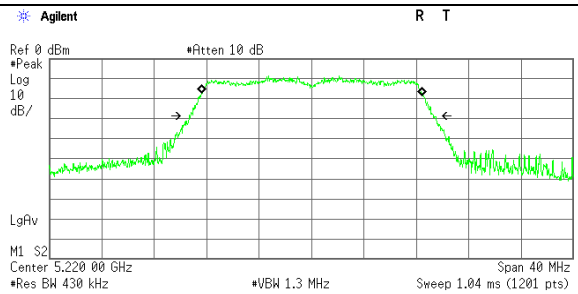
99% Occupied Bandwidth

11a Antenna port 0

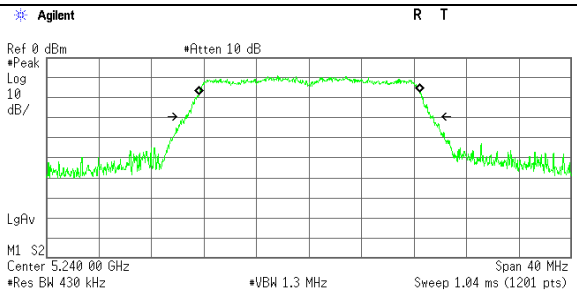
5180MHz



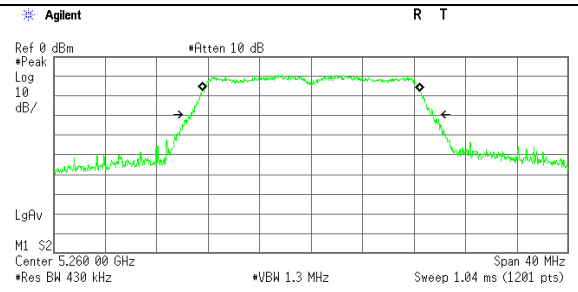
5220MHz



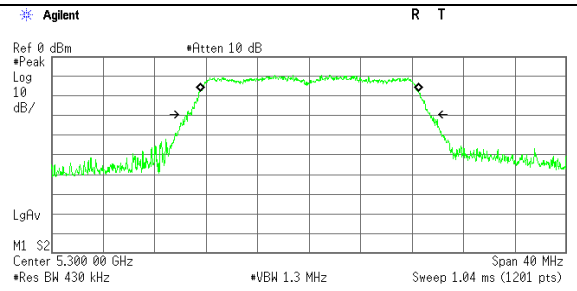
5240MHz



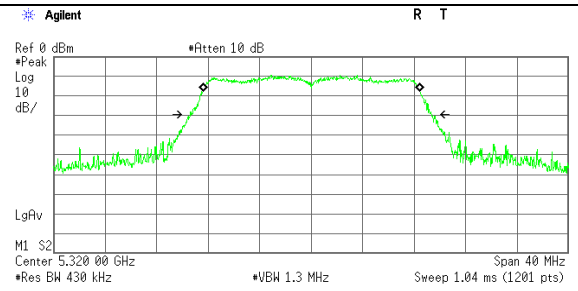
5260MHz



5300MHz



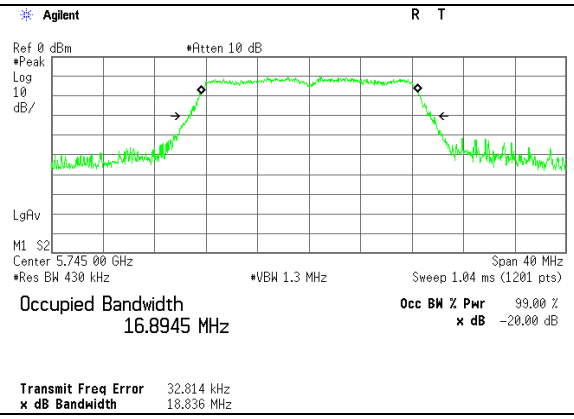
5320MHz



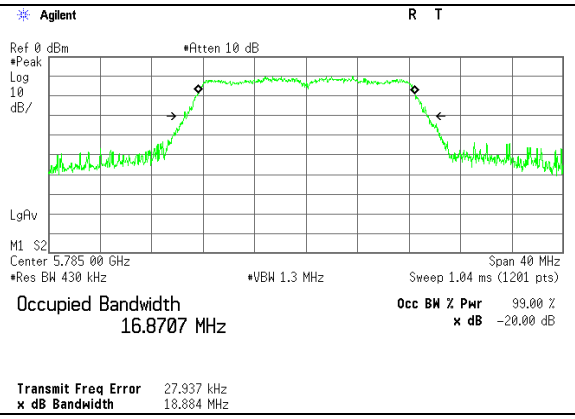
99% Occupied Bandwidth

11a Antenna port 0

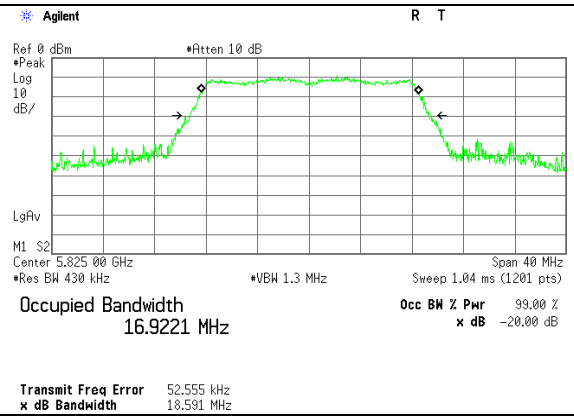
5745MHz



5785MHz



5825MHz



26dB Emission Bandwidth and 99% Occupied Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11n-20

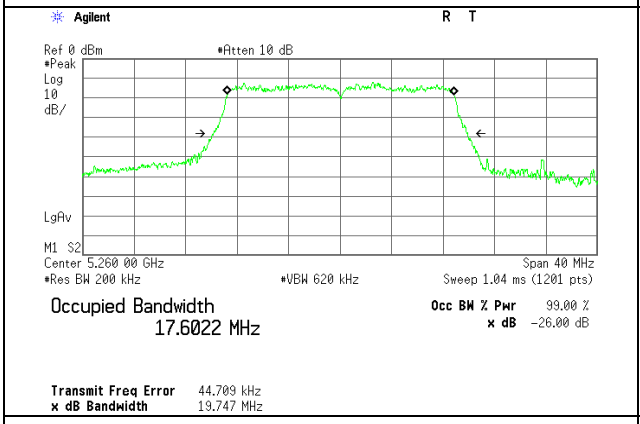
11n-20 Antenna port 0

Frequency [MHz]	26dB Emission Bandwidth [MHz]	99% Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.8010	-
5220	-	17.7958	-
5240	-	17.7840	-
5260	19.747	17.7821	-
5300	19.709	17.8088	-
5320	19.725	17.7740	-
5745	-	17.7893	-
5785	-	17.8359	-
5825	-	17.7932	-

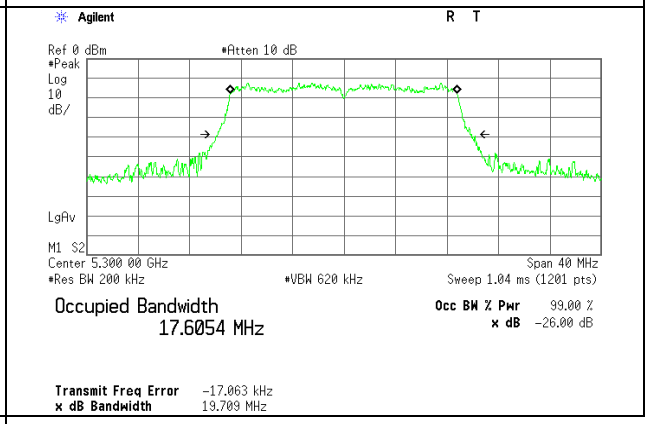
26dB Emission Bandwidth

11n-20 Antenna port 0

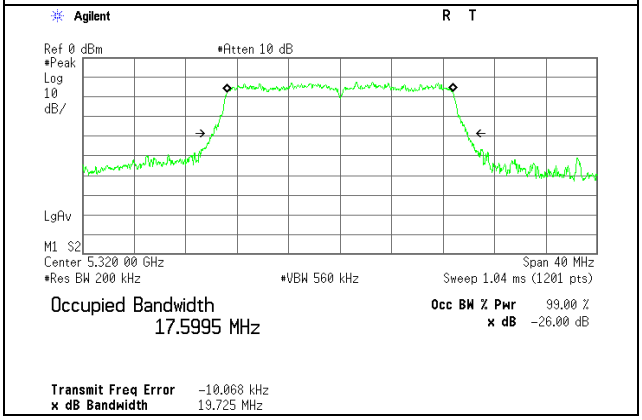
5260MHz



5300MHz



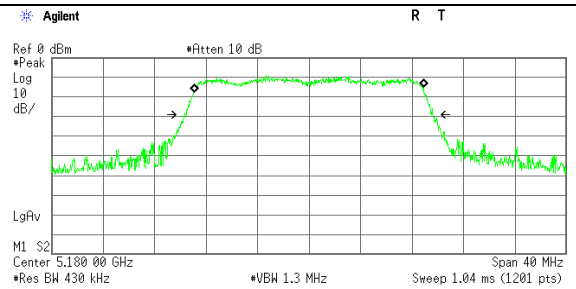
5320MHz



99% Occupied Bandwidth

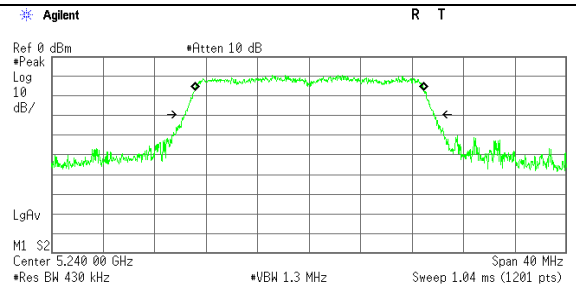
11n-20 Antenna port 0

5180MHz



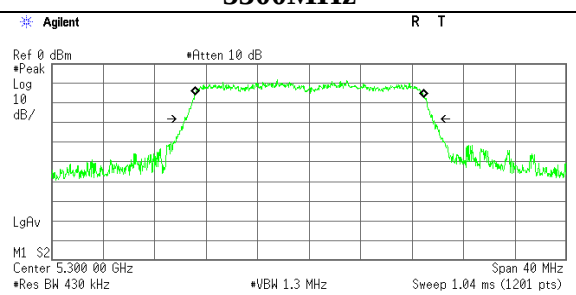
5220MHz

5240MHz



5260MHz

5300MHz

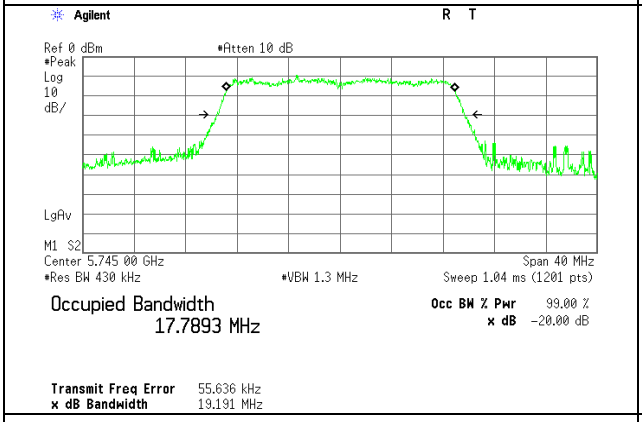


5320MHz

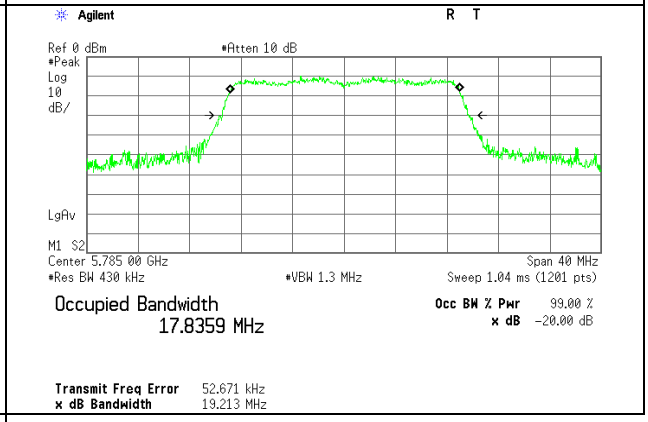
99% Occupied Bandwidth

11n-20 Antenna port 0

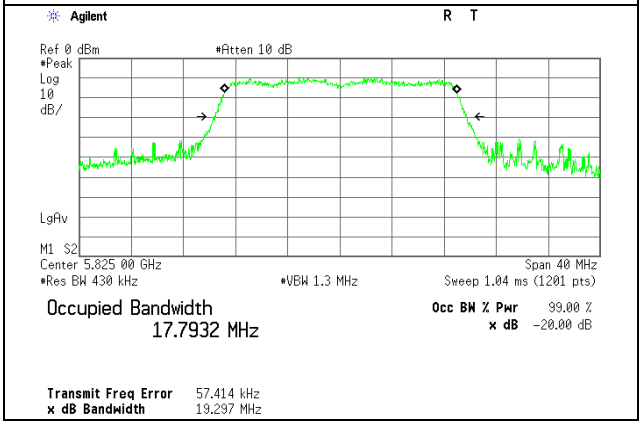
5745MHz



5785MHz



5825MHz



26dB Emission Bandwidth and 99% Occupied Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-20

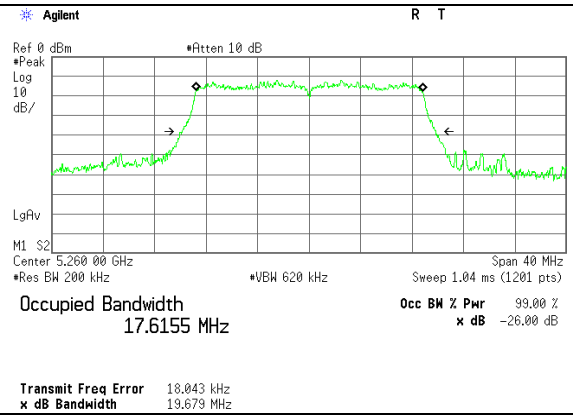
Tx 11ac-20 Antenna port 0

Frequency [MHz]	26dB Emission Bandwidth [MHz]	99% Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.7782	-
5220	-	17.7688	-
5240	-	17.7836	-
5260	19.679	17.8208	-
5300	19.831	17.8005	-
5320	19.764	17.7822	-
5745	-	17.8170	-
5785	-	17.8251	-
5825	-	17.8307	-

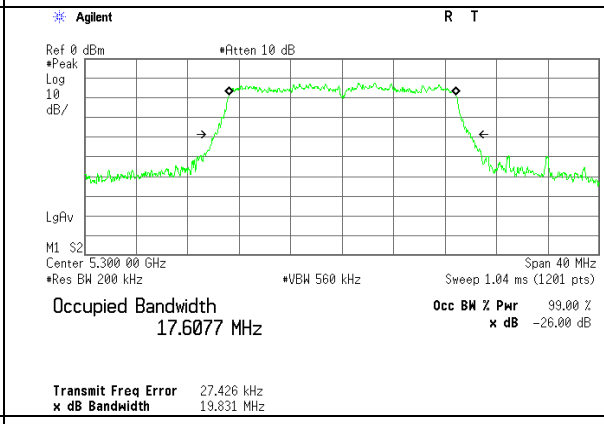
26dB Emission Bandwidth

11ac-20 Antenna port 0

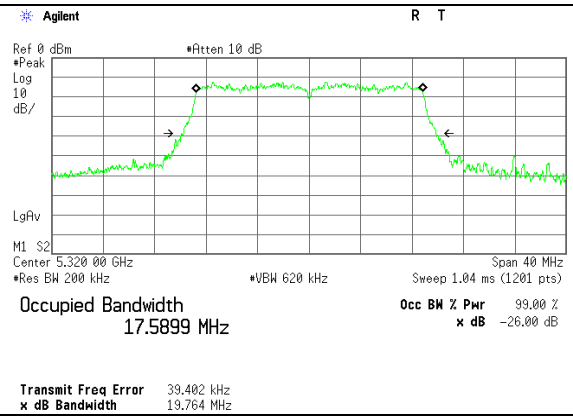
5260MHz



5300MHz



5320MHz

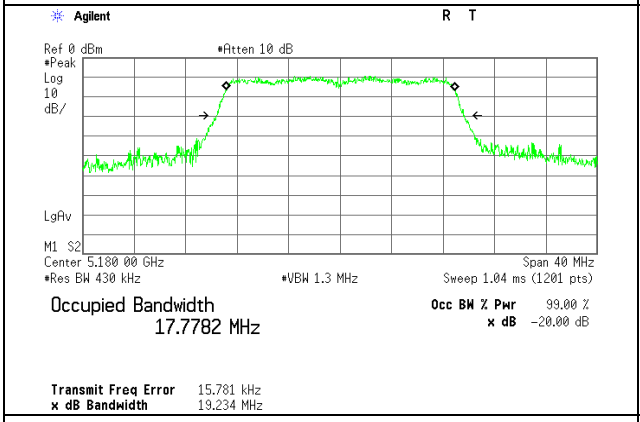


UL Japan, Inc.
Ise EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8999
Facsimile : +81 596 24 8124

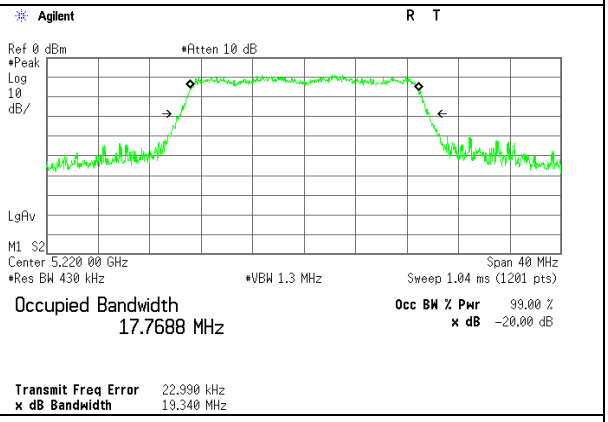
99% Occupied Bandwidth

11ac-20 Antenna port 0

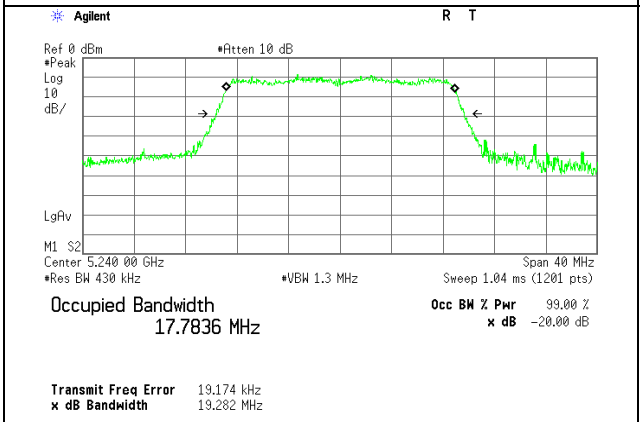
5180MHz



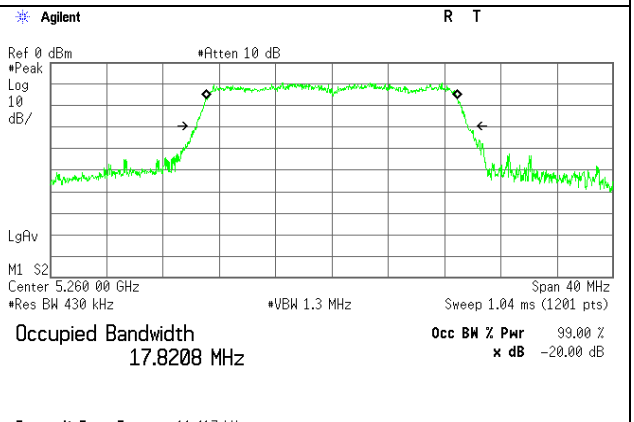
5220MHz



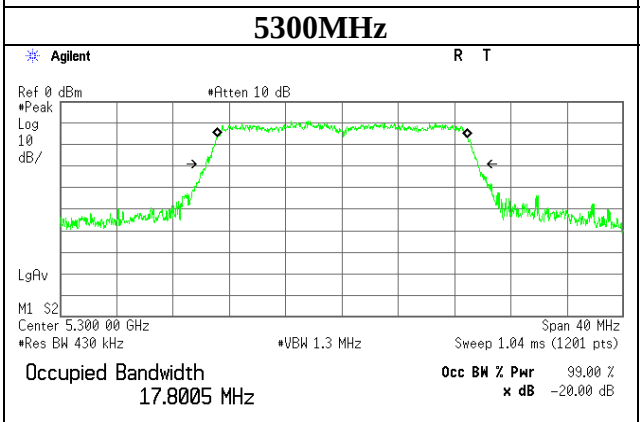
5240MHz



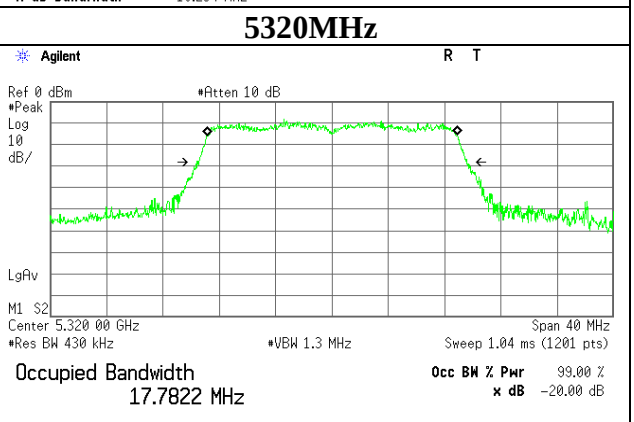
5260MHz



5300MHz



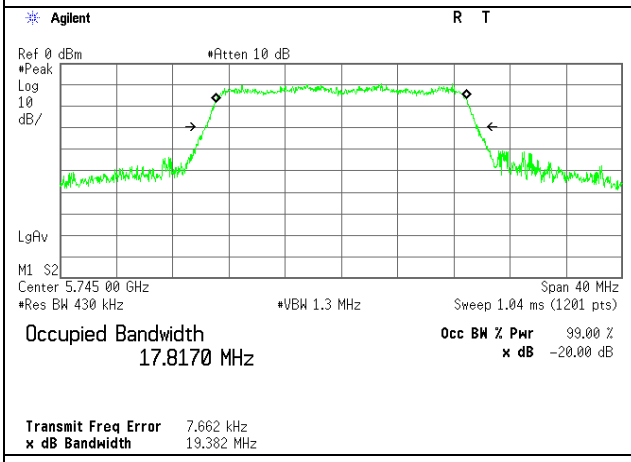
5320MHz



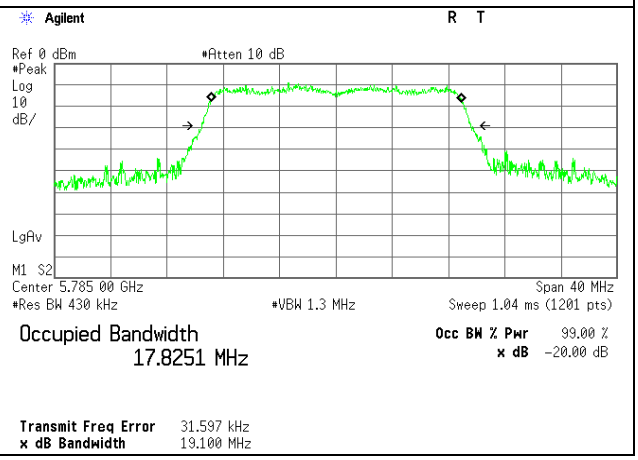
99% Occupied Bandwidth

11ac-20 Antenna port 0

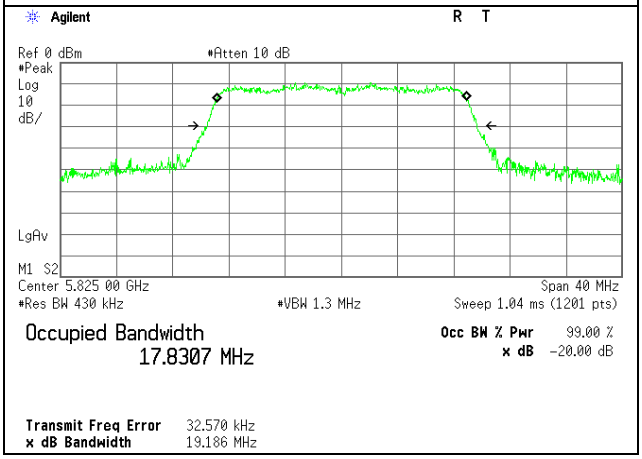
5745MHz



5785MHz



5825MHz



26dB Emission Bandwidth and 99% Occupied Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40

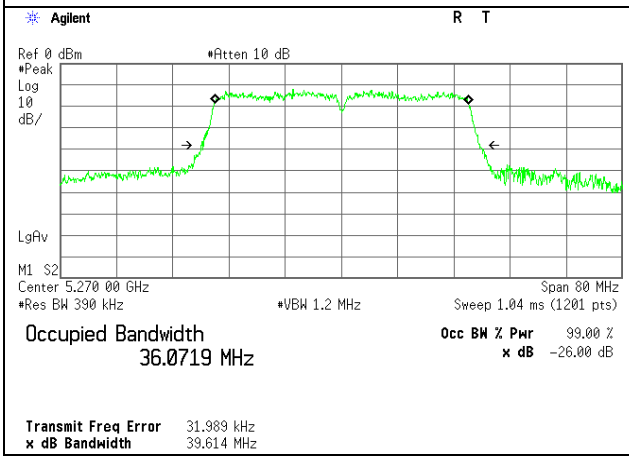
Tx 11n-40 Antenna port 0

Frequency [MHz]	26dB Emission Bandwidth [MHz]	99% Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	36.2219	-
5230	-	36.2238	-
5270	39.614	36.3108	-
5310	39.663	36.3498	-
5755	-	36.3469	-
5795	-	36.2793	-

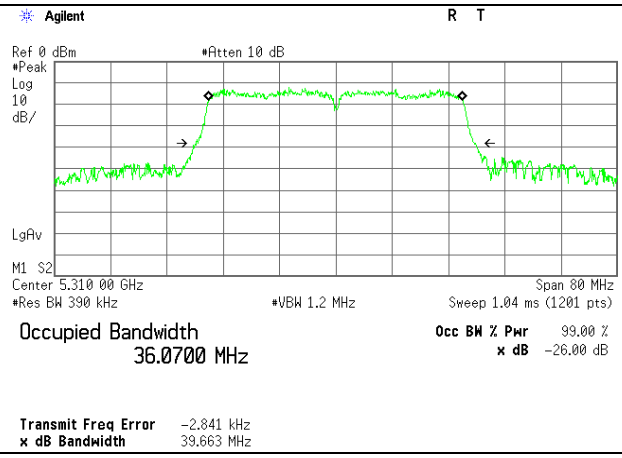
26dB Emission Bandwidth

11n-40 Antenna port 0

5270MHz



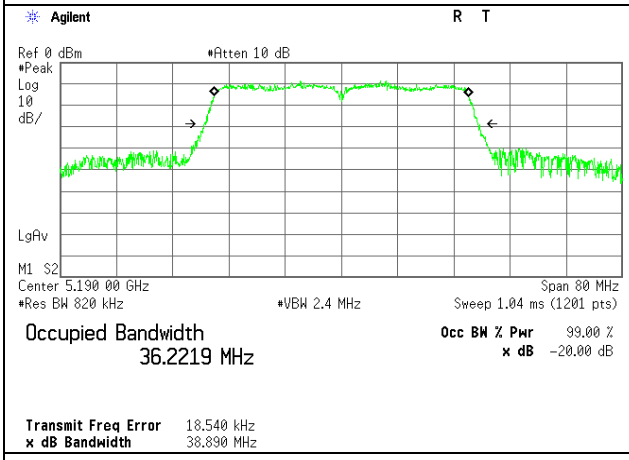
5310MHz



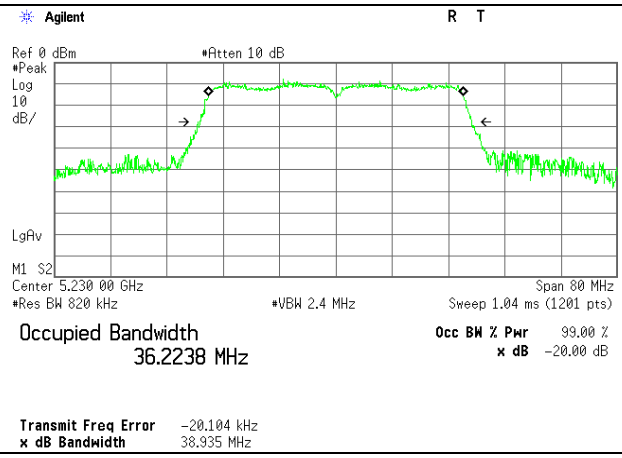
99% Occupied Bandwidth

11n-40 Antenna port 0

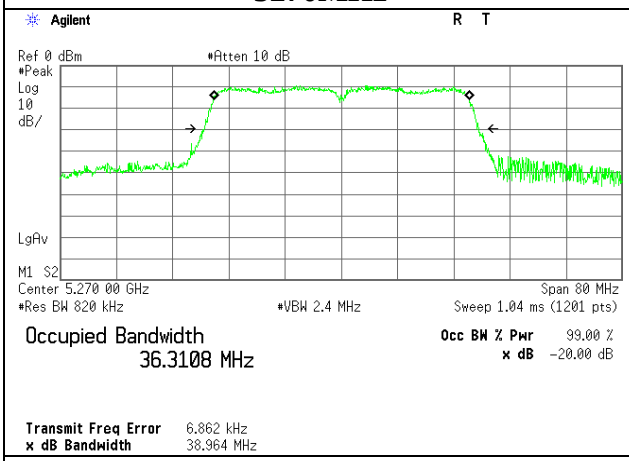
5190MHz



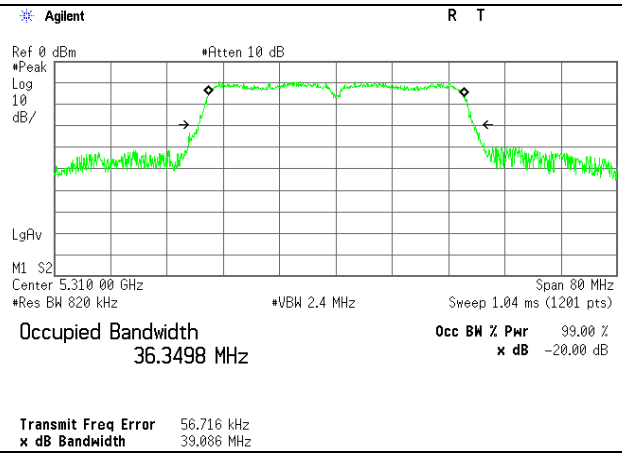
5230MHz



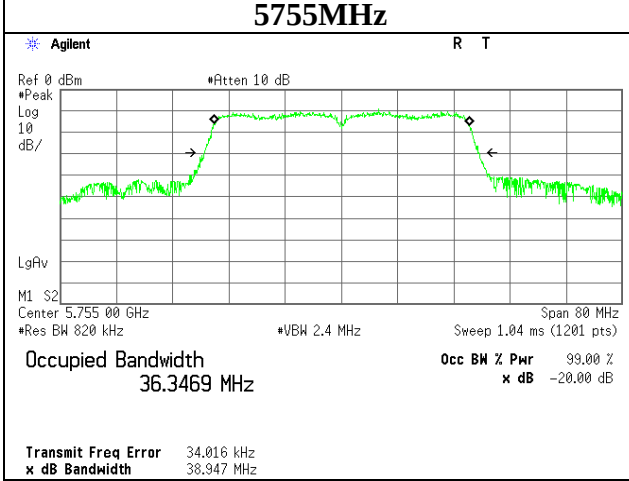
5270MHz



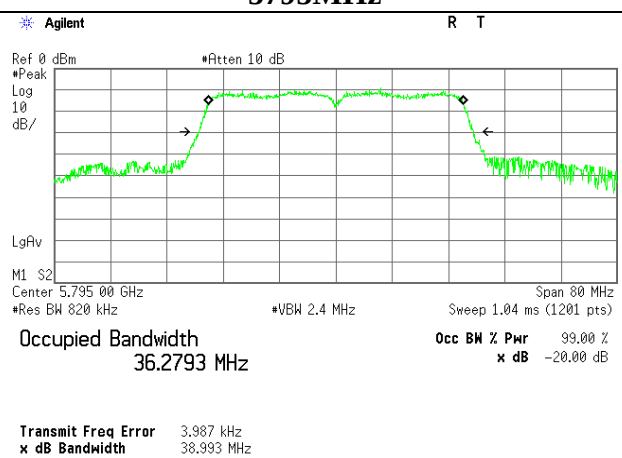
5310MHz



5755MHz



5795MHz



26dB Emission Bandwidth and 99% Occupied Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-40

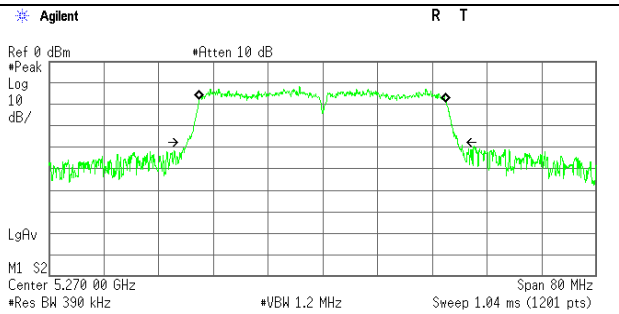
Tx 11ac-40 Antenna port 0

Frequency [MHz]	26dB Emission Bandwidth [MHz]	99% Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	36.2642	-
5230	-	36.3654	-
5270	39.609	36.3270	-
5310	39.824	36.3370	-
5755	-	36.4273	-
5795	-	36.3072	-

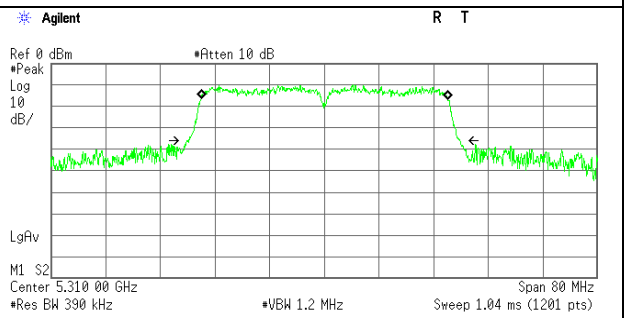
26dB Emission Bandwidth

11ac-40 Antenna port 0

5270MHz



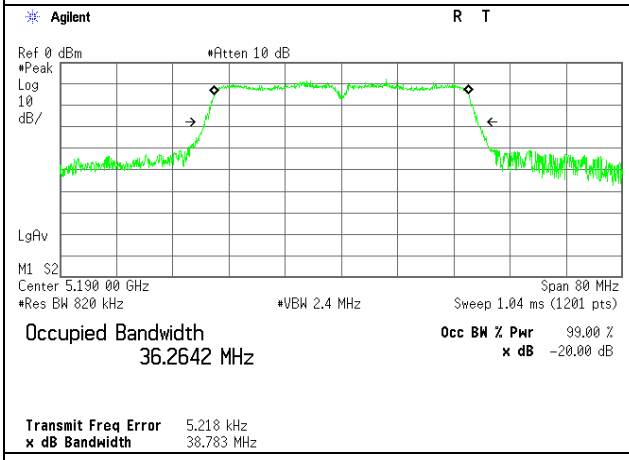
5310MHz



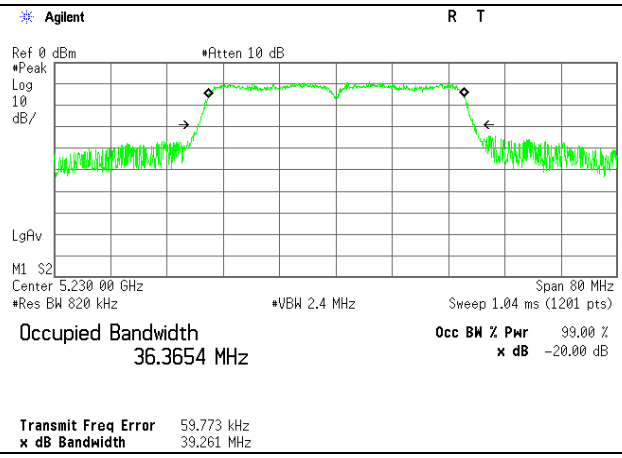
99% Occupied Bandwidth

11ac-40 Antenna port 0

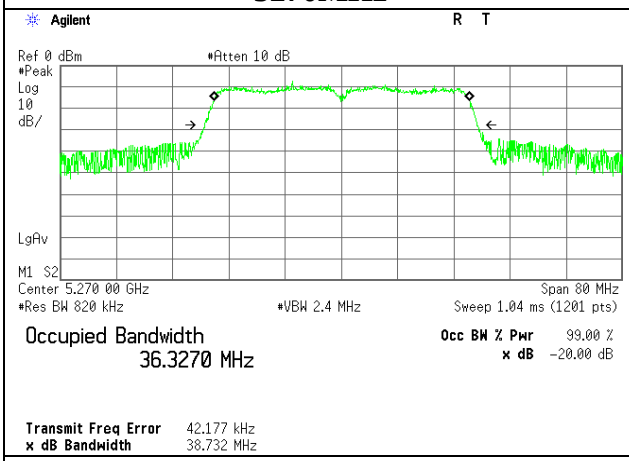
5190MHz



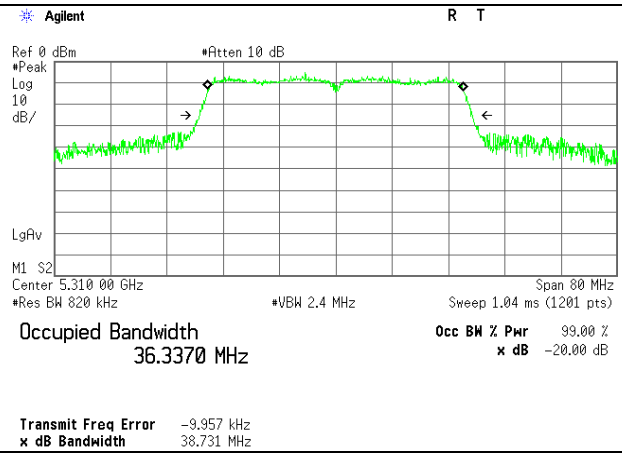
5230MHz



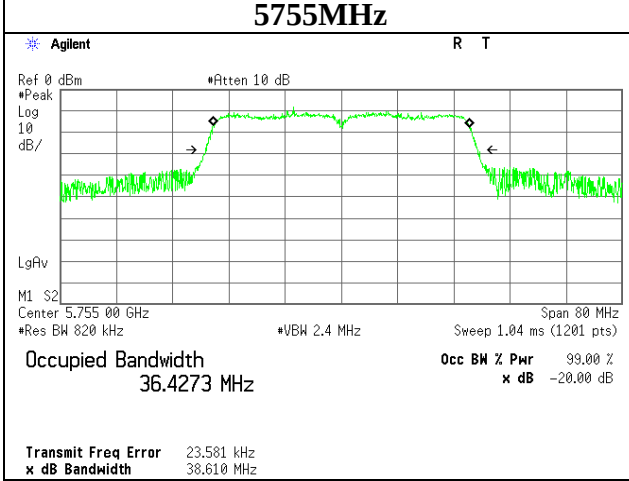
5270MHz



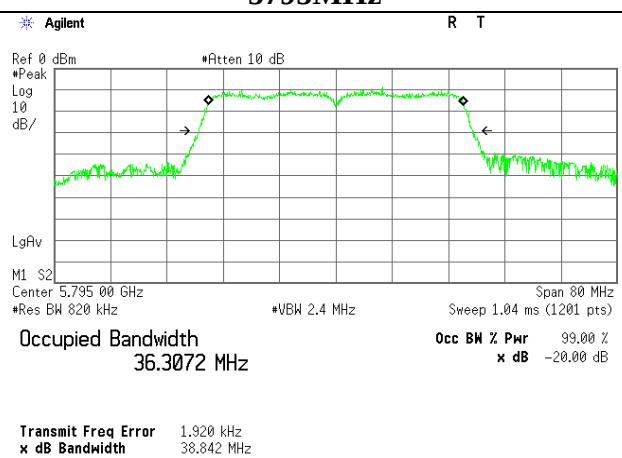
5310MHz



5755MHz



5795MHz



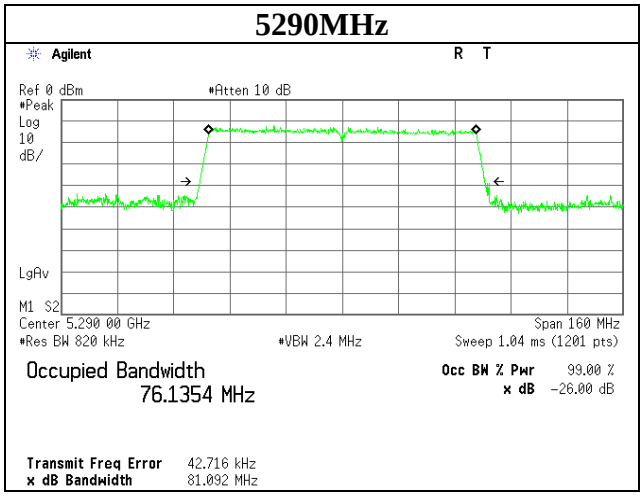
26dB Emission Bandwidth and 99% Occupied Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-80

Tx 11ac-80 Antenna port 0

Frequency [MHz]	26dB Emission Bandwidth [MHz]	99% Occupied Bandwidth [MHz]	Limit [MHz]
5210	-	76.2974	-
5290	81.092	76.3199	-
5775	-	76.3495	-

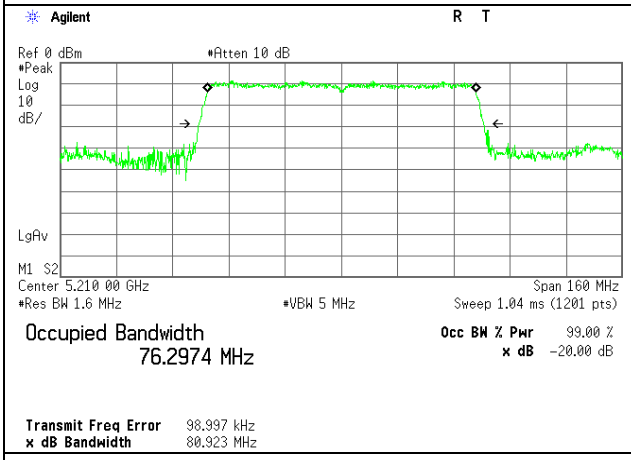
26dB Emission Bandwidth



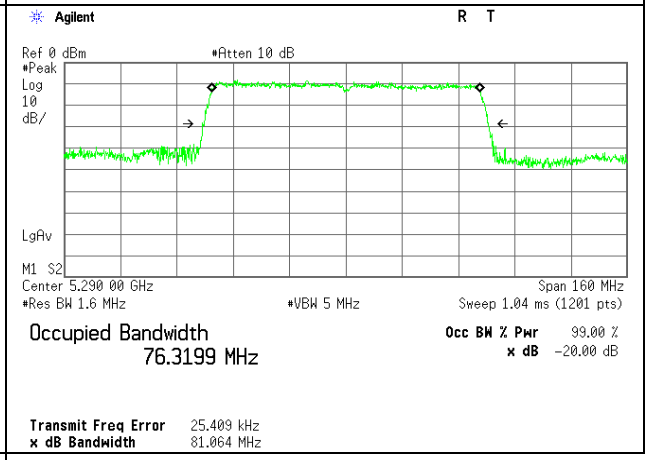
99% Occupied Bandwidth

11ac-80 Antenna port 0

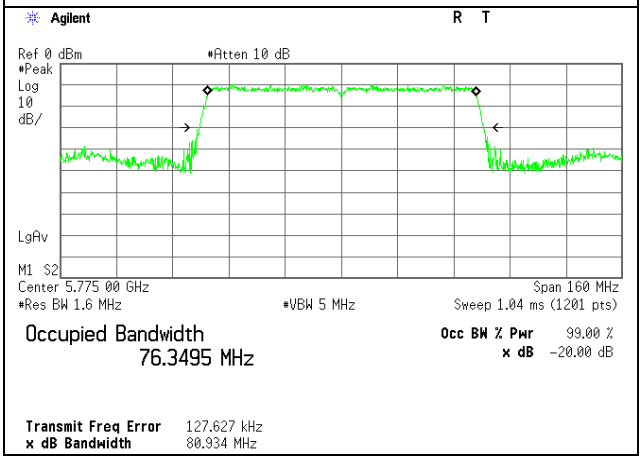
5210MHz



5290MHz



5775MHz



6dB Bandwidth

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/09/2015
Temperature/ Humidity	23deg. C / 43% RH
Engineer	Tomoki Matsui
Mode	Tx 11a /11n-20 /11ac-20 /11n-40 /11ac-40 /11ac-80

11a Antenna port 0

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	16.380	>500
5785	16.375	>500
5825	16.347	>500

11n-20 Antenna port 0

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	17.518	>500
5785	17.306	>500
5825	17.361	>500

11ac-20 Antenna port 0

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5745	17.541	>500
5785	17.102	>500
5825	17.236	>500

11n-40 Antenna port 0

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5755	35.743	>500
5795	35.460	>500

11ac-40 Antenna port 0

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5755	35.484	>500
5795	35.308	>500

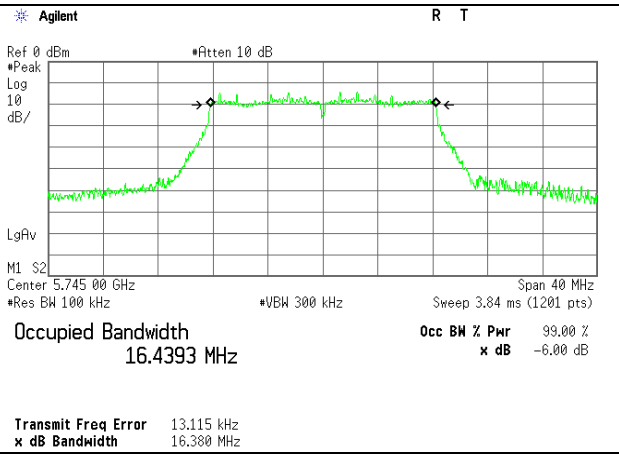
11ac-80 Antenna port 0

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
5775	76.562	>500

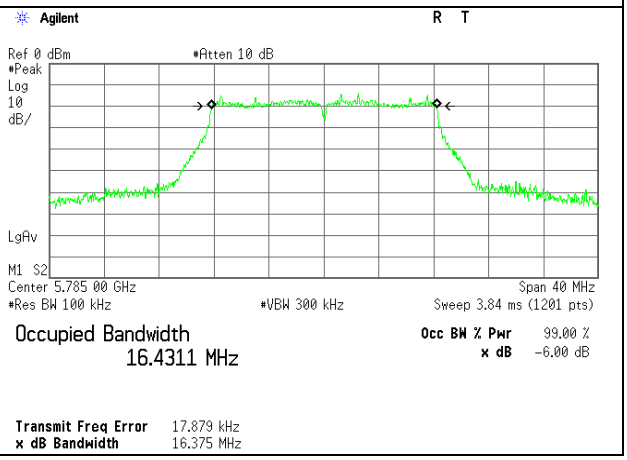
6dB Bandwidth

11a Antenna port 0

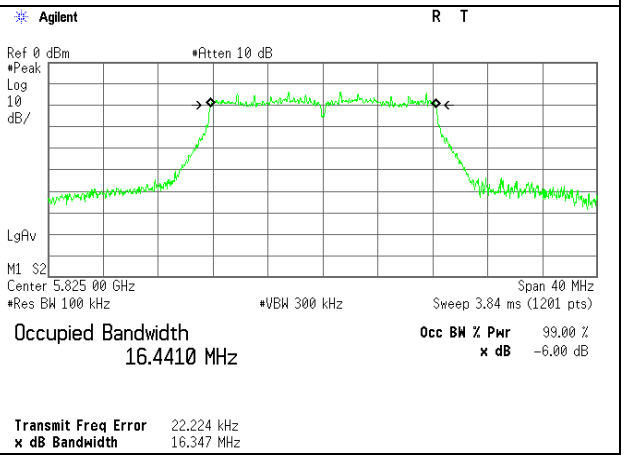
5745MHz



5785MHz



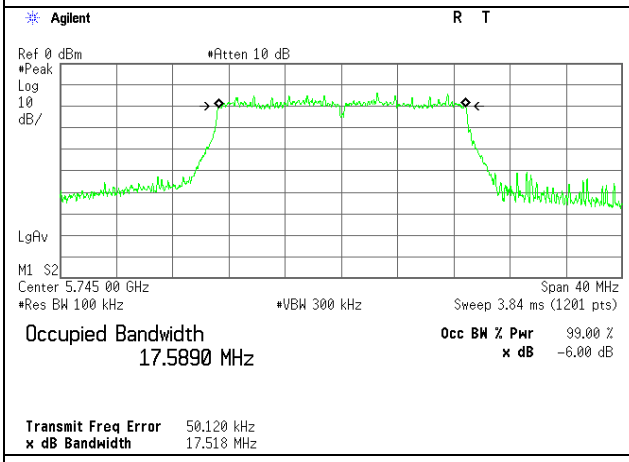
5825MHz



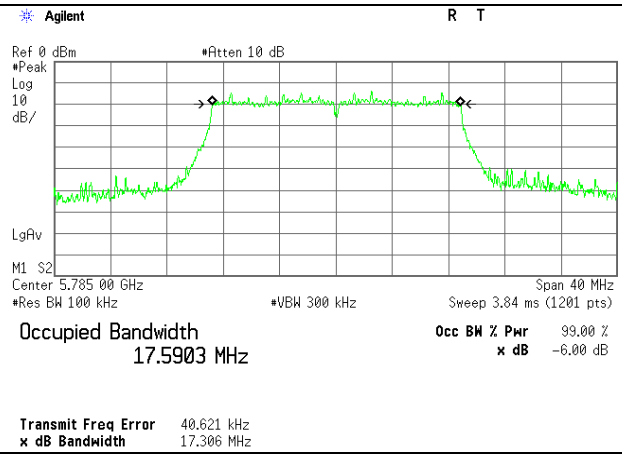
6dB Bandwidth

11n-20 Antenna port 0

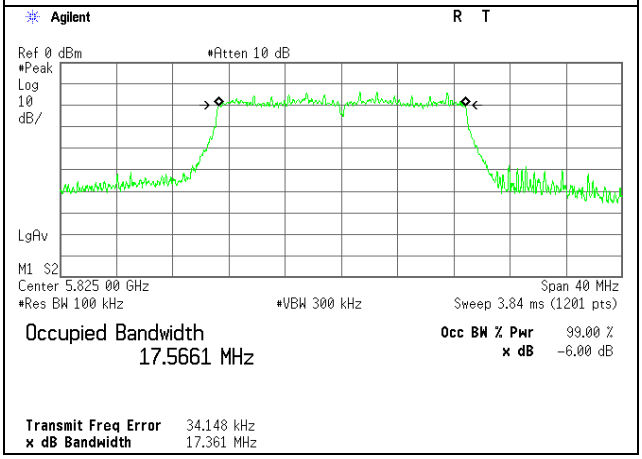
5745MHz



5785MHz



5825MHz

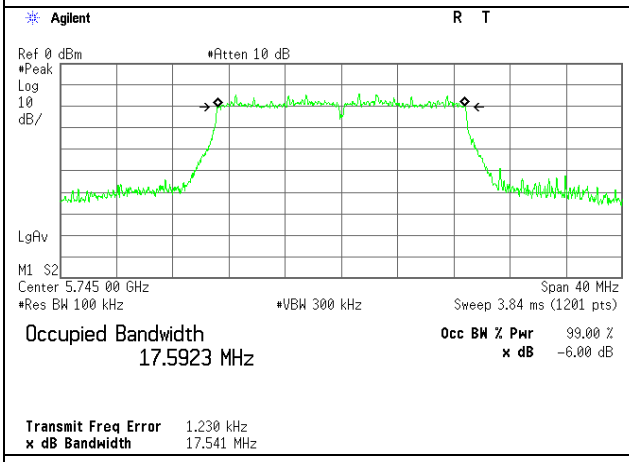


UL Japan, Inc.
Ise EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8999
Facsimile : +81 596 24 8124

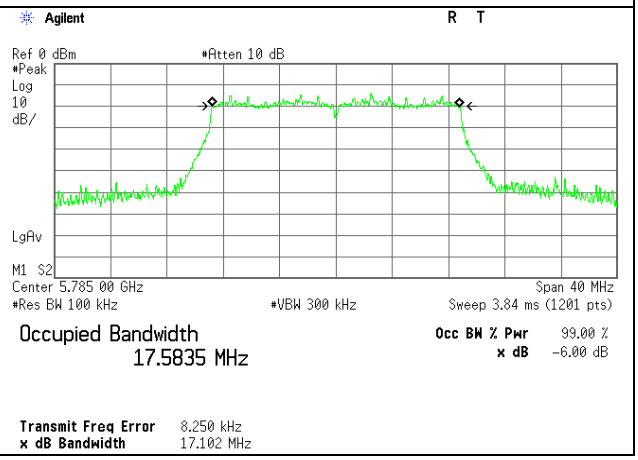
6dB Bandwidth

11ac-20 Antenna port 0

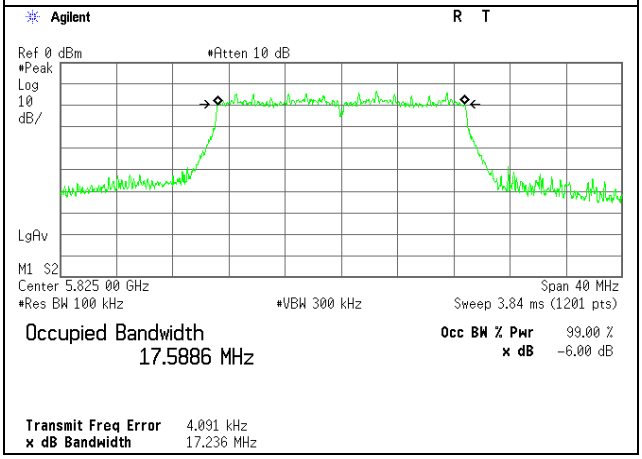
5745MHz



5785MHz



5825MHz



UL Japan, Inc.
Ise EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8999
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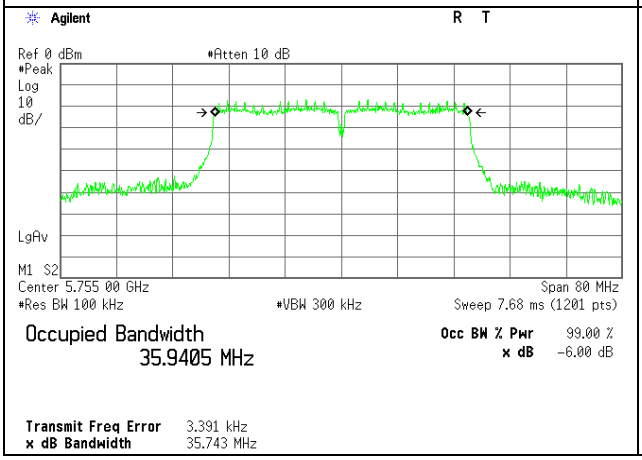
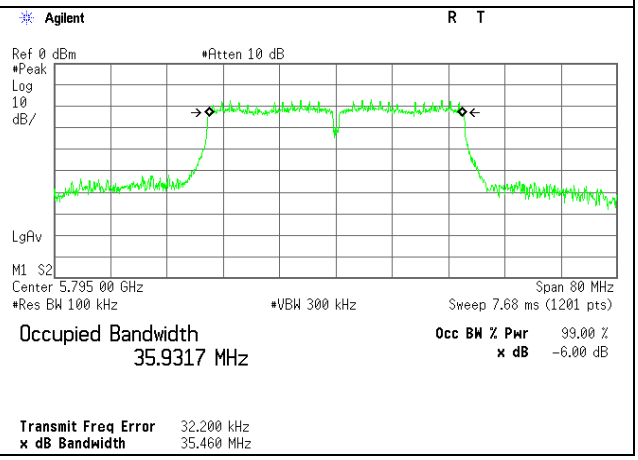
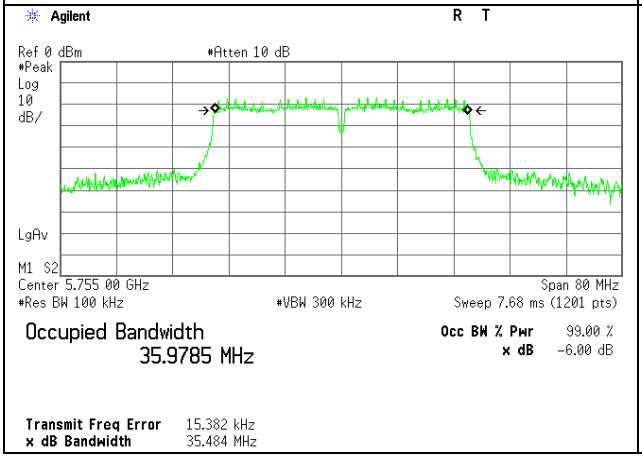
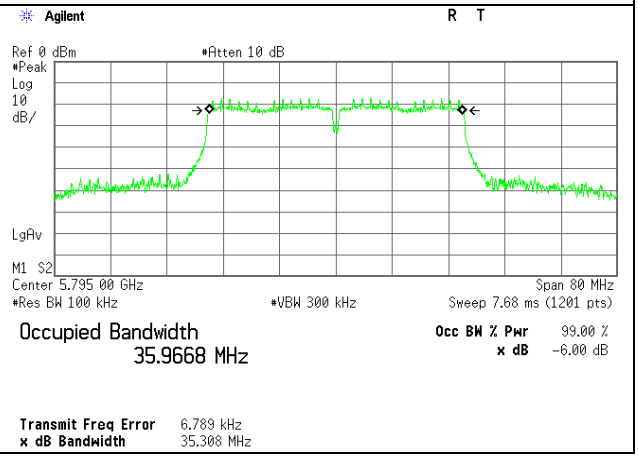
6dB Bandwidth

11n-40 Antenna port 0

5755MHz	5795MHz
	

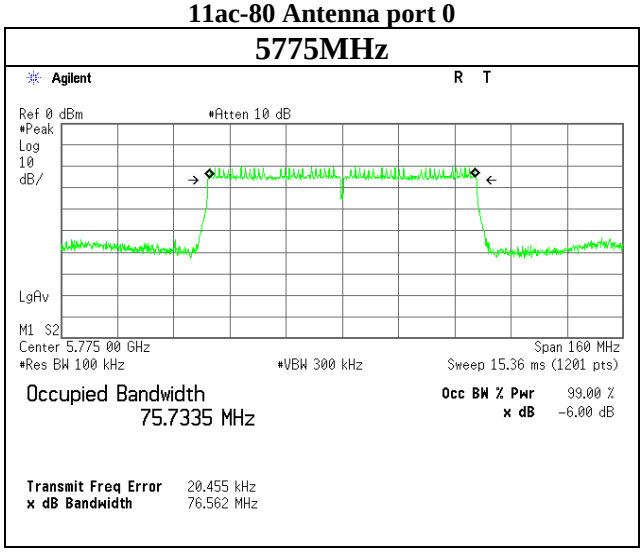
6dB Bandwidth

11ac-40 Antenna port 0

5755MHz	5795MHz
	

6dB Emission Bandwidth

11ac-80 Antenna port 0



Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/07/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Yuta Moriya	Shinichi Miyazono
Mode	Tx 11a	

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)		Limit (Cond.)		Limit (e.i.r.p)		Margin (Cond.)	Margin (e.i.r.p.)
	(Cond.)	(e.i.r.p.)	(Cond.)	(e.i.r.p.)										
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	10.99	27.67	9.71	24.43	13.16	20.70	17.17	52.10	23.97	250.00	29.97	993.12	10.81	12.80
5220.0	10.84	27.29	9.57	24.10	13.10	20.41	17.11	51.39	23.97	250.00	29.97	993.12	10.87	12.86
5240.0	10.99	27.67	9.84	24.77	13.19	20.83	17.20	52.44	23.97	250.00	29.97	993.12	10.78	12.77
5260.0	10.74	27.04	9.98	25.12	13.16	20.72	17.17	52.16	23.83	241.55	29.83	961.61	10.67	12.66
5300.0	10.89	27.42	10.05	25.29	13.21	20.94	17.22	52.71	23.91	246.04	29.91	979.49	10.70	12.69
5320.0	10.67	26.85	10.02	25.23	13.16	20.69	17.17	52.09	23.91	246.04	29.91	979.49	10.75	12.74
5745.0	5.77	14.52	5.58	14.06	10.55	11.35	14.56	28.58	30.00	1000.00	36.00	3981.07	19.45	21.44
5785.0	10.14	25.53	9.82	24.72	13.00	19.96	17.01	50.24	30.00	1000.00	36.00	3981.07	17.00	18.99
5825.0	10.21	25.70	9.93	25.00	13.04	20.14	17.05	50.71	30.00	1000.00	36.00	3981.07	16.96	18.95

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	-0.95	1.25	10.11	4.01	10.41	10.99	14.42	27.67	23.97	250.00	29.97	993.12	13.56	15.55
5220.0	-1.01	1.25	10.11	4.01	10.35	10.84	14.36	27.29	23.97	250.00	29.97	993.12	13.62	15.61
5240.0	-0.96	1.26	10.11	4.01	10.41	10.99	14.42	27.67	23.97	250.00	29.97	993.12	13.56	15.55
5260.0	-1.06	1.26	10.11	4.01	10.31	10.74	14.32	27.04	23.83	241.55	29.83	961.61	13.52	15.51
5300.0	-1.01	1.27	10.11	4.01	10.37	10.89	14.38	27.42	23.91	246.04	29.91	979.49	13.54	15.53
5320.0	-1.10	1.27	10.11	4.01	10.28	10.67	14.29	26.85	23.91	246.04	29.91	979.49	13.63	15.62
5745.0	-3.82	1.36	10.07	4.01	7.61	5.77	11.62	14.52	30.00	1000.00	36.00	3981.07	22.39	24.38
5785.0	-1.41	1.37	10.10	4.01	10.06	10.14	14.07	25.53	30.00	1000.00	36.00	3981.07	19.94	21.93
5825.0	-1.39	1.38	10.10	4.01	10.09	10.21	14.10	25.70	30.00	1000.00	36.00	3981.07	19.91	21.90

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	-1.43	1.25	10.05	4.01	9.87	9.71	13.88	24.43	23.97	250.00	29.97	993.12	14.10	16.09
5220.0	-1.49	1.25	10.05	4.01	9.81	9.57	13.82	24.10	23.97	250.00	29.97	993.12	14.16	16.15
5240.0	-1.38	1.26	10.05	4.01	9.93	9.84	13.94	24.77	23.97	250.00	29.97	993.12	14.04	16.03
5260.0	-1.32	1.26	10.05	4.01	9.99	9.98	14.00	25.12	23.83	241.55	29.83	961.61	13.84	15.83
5300.0	-1.30	1.27	10.05	4.01	10.02	10.05	14.03	25.29	23.91	246.04	29.91	979.49	13.89	15.88
5320.0	-1.31	1.27	10.05	4.01	10.01	10.02	14.02	25.23	23.91	246.04	29.91	979.49	13.90	15.89
5745.0	-3.94	1.36	10.05	4.01	7.47	5.58	11.48	14.06	30.00	1000.00	36.00	3981.07	22.53	24.52
5785.0	-1.49	1.37	10.04	4.01	9.92	9.82	13.93	24.72	30.00	1000.00	36.00	3981.07	20.08	22.07
5825.0	-1.45	1.38	10.04	4.01	9.97	9.93	13.98	25.00	30.00	1000.00	36.00	3981.07	20.03	22.02

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna Gain
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)
Limit(e.i.r.p.) = Limit(Cond.) + 6dBi

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/07/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Yuta Moriya	Shinichi Miyazono
Mode	Tx 11n-20	

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)		Limit (Cond.)		Limit (e.i.r.p)		Margin (Cond.)	Margin (e.i.r.p.)
	(Cond.)	(e.i.r.p.)	(Cond.)	(e.i.r.p.)										
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	10.74	27.04	9.55	24.04	13.07	20.29	17.08	51.08	23.97	250.00	29.97	993.12	10.90	12.89
5220.0	10.42	26.24	9.23	23.23	12.93	19.65	16.94	49.47	23.97	250.00	29.97	993.12	11.04	13.03
5240.0	10.40	26.18	9.48	23.17	12.98	19.88	16.93	49.36	23.97	250.00	29.97	993.12	10.99	13.04
5260.0	10.72	25.94	9.53	23.99	13.06	20.24	16.98	49.93	23.95	248.31	29.95	988.55	10.89	12.97
5300.0	10.45	26.24	9.86	24.10	13.08	20.31	17.02	50.34	23.94	247.74	29.94	986.28	10.86	12.92
5320.0	10.69	26.30	9.77	24.32	13.11	20.46	17.04	50.62	23.95	248.31	29.95	988.55	10.84	12.91
5745.0	6.10	15.35	5.51	13.87	10.65	11.60	14.66	29.21	30.00	1000.00	36.00	3981.07	19.35	21.34
5785.0	10.19	25.64	9.95	24.95	13.04	20.14	17.04	50.59	30.00	1000.00	36.00	3981.07	16.96	18.96
5825.0	10.16	25.59	9.95	25.06	13.04	20.12	17.05	50.65	30.00	1000.00	36.00	3981.07	16.96	18.95

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	-1.05	1.25	10.11	4.01	10.31	10.74	14.32	27.04	23.97	250.00	29.97	993.12	13.66	15.65
5220.0	-1.18	1.25	10.11	4.01	10.18	10.42	14.19	26.24	23.97	250.00	29.97	993.12	13.79	15.78
5240.0	-1.20	1.26	10.11	4.01	10.17	10.40	14.18	26.18	23.97	250.00	29.97	993.12	13.80	15.79
5260.0	-1.24	1.26	10.11	4.01	10.30	10.72	14.14	25.94	23.95	248.31	29.95	988.55	13.65	15.81
5300.0	-1.20	1.27	10.11	4.01	10.19	10.45	14.19	26.24	23.94	247.74	29.94	986.28	13.75	15.75
5320.0	-1.19	1.27	10.11	4.01	10.29	10.69	14.20	26.30	23.95	248.31	29.95	988.55	13.66	15.75
5745.0	-3.58	1.36	10.07	4.01	7.85	6.10	11.86	15.35	30.00	1000.00	36.00	3981.07	22.15	24.14
5785.0	-1.39	1.37	10.10	4.01	10.08	10.19	14.09	25.64	30.00	1000.00	36.00	3981.07	19.92	21.91
5825.0	-1.41	1.38	10.10	4.01	10.07	10.16	14.08	25.59	30.00	1000.00	36.00	3981.07	19.93	21.92

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	-1.50	1.25	10.05	4.01	9.80	9.55	13.81	24.04	23.97	250.00	29.97	993.12	14.17	16.16
5220.0	-1.65	1.25	10.05	4.01	9.65	9.23	13.66	23.23	23.97	250.00	29.97	993.12	14.32	16.31
5240.0	-1.67	1.26	10.05	4.01	9.77	9.48	13.65	23.17	23.97	250.00	29.97	993.12	14.20	16.32
5260.0	-1.52	1.26	10.05	4.01	9.79	9.53	13.80	23.99	23.95	248.31	29.95	988.55	14.16	16.15
5300.0	-1.51	1.27	10.05	4.01	9.94	9.86	13.82	24.10	23.94	247.74	29.94	986.28	14.00	16.12
5320.0	-1.47	1.27	10.05	4.01	9.90	9.77	13.86	24.32	23.95	248.31	29.95	988.55	14.05	16.09
5745.0	-4.00	1.36	10.05	4.01	7.41	5.51	11.42	13.87	30.00	1000.00	36.00	3981.07	22.59	24.58
5785.0	-1.45	1.37	10.04	4.01	9.98	9.95	13.97	24.95	30.00	1000.00	36.00	3981.07	20.02	22.03
5825.0	-1.44	1.38	10.04	4.01	9.98	9.95	13.99	25.06	30.00	1000.00	36.00	3981.07	20.02	22.01

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna Gain
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)
Limit(e.i.r.p.) = Limit(Cond.) + 6dBi

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/07/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Yuta Moriya	Shinichi Miyazono
Mode	Tx 11ac-20	

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)		Limit (Cond.)		Limit (e.i.r.p)		Margin (Cond.)	Margin (e.i.r.p.)
	(Cond.)	(e.i.r.p.)	(Cond.)	(e.i.r.p.)										
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	10.52	26.49	9.23	23.17	12.95	19.75	16.96	49.66	23.97	250.00	29.97	993.12	11.02	13.01
5220.0	10.74	27.04	9.40	23.44	13.04	20.14	17.03	50.48	23.97	250.00	29.97	993.12	10.93	12.94
5240.0	11.40	28.71	9.59	24.15	13.22	21.00	17.23	52.86	23.97	250.00	29.97	993.12	10.75	12.74
5260.0	11.09	27.93	9.64	24.27	13.17	20.73	17.18	52.19	23.94	247.74	29.94	986.28	10.77	12.76
5300.0	11.02	27.73	10.33	26.00	13.29	21.34	17.30	53.73	23.97	250.00	29.97	993.12	10.68	12.67
5320.0	10.67	26.85	9.75	24.55	13.10	20.42	17.11	51.40	23.95	248.31	29.95	988.55	10.85	12.84
5745.0	5.86	14.76	5.62	14.16	10.60	11.48	14.61	28.92	30.00	1000.00	36.00	3981.07	19.40	21.39
5785.0	10.00	25.18	10.23	25.76	13.06	20.23	17.07	50.94	30.00	1000.00	36.00	3981.07	16.94	18.93
5825.0	9.95	25.06	9.66	24.32	12.93	19.61	16.94	49.38	30.00	1000.00	36.00	3981.07	17.07	19.06

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	-1.14	1.25	10.11	4.01	10.22	10.52	14.23	26.49	23.97	250.00	29.97	993.12	13.75	15.74
5220.0	-1.05	1.25	10.11	4.01	10.31	10.74	14.32	27.04	23.97	250.00	29.97	993.12	13.66	15.65
5240.0	-0.80	1.26	10.11	4.01	10.57	11.40	14.58	28.71	23.97	250.00	29.97	993.12	13.40	15.39
5260.0	-0.92	1.26	10.11	4.01	10.45	11.09	14.46	27.93	23.94	247.74	29.94	986.28	13.49	15.48
5300.0	-0.96	1.27	10.11	4.01	10.42	11.02	14.43	27.73	23.97	250.00	29.97	993.12	13.55	15.54
5320.0	-1.10	1.27	10.11	4.01	10.28	10.67	14.29	26.85	23.95	248.31	29.95	988.55	13.67	15.66
5745.0	-3.75	1.36	10.07	4.01	7.68	5.86	11.69	14.76	30.00	1000.00	36.00	3981.07	22.32	24.31
5785.0	-1.47	1.37	10.10	4.01	10.00	10.00	14.01	25.18	30.00	1000.00	36.00	3981.07	20.00	21.99
5825.0	-1.50	1.38	10.10	4.01	9.98	9.95	13.99	25.06	30.00	1000.00	36.00	3981.07	20.02	22.01

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5180.0	-1.66	1.25	10.05	4.01	9.65	9.23	13.65	23.17	23.97	250.00	29.97	993.12	14.32	16.32
5220.0	-1.61	1.25	10.05	4.01	9.73	9.40	13.70	23.44	23.97	250.00	29.97	993.12	14.24	16.27
5240.0	-1.49	1.26	10.05	4.01	9.82	9.59	13.83	24.15	23.97	250.00	29.97	993.12	14.15	16.14
5260.0	-1.47	1.26	10.05	4.01	9.84	9.64	13.85	24.27	23.94	247.74	29.94	986.28	14.10	16.09
5300.0	-1.18	1.27	10.05	4.01	10.14	10.33	14.15	26.00	23.97	250.00	29.97	993.12	13.83	15.82
5320.0	-1.43	1.27	10.05	4.01	9.89	9.75	13.90	24.55	23.95	248.31	29.95	988.55	14.06	16.05
5745.0	-3.91	1.36	10.05	4.01	7.50	5.62	11.51	14.16	30.00	1000.00	36.00	3981.07	22.50	24.49
5785.0	-1.31	1.37	10.04	4.01	10.10	10.23	14.11	25.76	30.00	1000.00	36.00	3981.07	19.90	21.89
5825.0	-1.57	1.38	10.04	4.01	9.85	9.66	13.86	24.32	30.00	1000.00	36.00	3981.07	20.15	22.14

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna Gain
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)
Limit(e.i.r.p.) = Limit (Cond.) + 6dBi

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/07/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Yuta Moriya	Shinichi Miyazono
Mode	Tx 11n-40	

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)		Limit (Cond.)		Limit (e.i.r.p)		Margin (Cond.)	Margin (e.i.r.p.)
	(Cond.)	(e.i.r.p.)	(Cond.)	(e.i.r.p.)										
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5190.0	10.59	26.67	9.42	23.71	13.01	20.01	17.02	50.38	23.97	250.00	29.97	993.12	10.96	12.95
5230.0	10.23	25.76	9.59	24.15	12.97	19.83	16.98	49.92	23.97	250.00	29.97	993.12	11.00	12.99
5270.0	10.50	26.42	9.79	24.66	13.07	20.29	17.08	51.08	23.97	250.00	29.97	993.12	10.90	12.89
5310.0	10.50	26.42	9.62	24.21	13.03	20.11	17.04	50.63	23.97	250.00	29.97	993.12	10.94	12.93
5755.0	5.20	13.09	4.62	11.64	9.92	9.82	13.93	24.73	30.00	1000.00	36.00	3981.07	20.08	22.07
5795.0	10.09	25.41	9.68	24.38	12.96	19.78	16.97	49.79	30.00	1000.00	36.00	3981.07	17.04	19.03

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5190.0	-1.11	1.25	10.11	4.01	10.25	10.59	14.26	26.67	23.97	250.00	29.97	993.12	13.72	15.71
5230.0	-1.27	1.26	10.11	4.01	10.10	10.23	14.11	25.76	23.97	250.00	29.97	993.12	13.87	15.86
5270.0	-1.16	1.26	10.11	4.01	10.21	10.50	14.22	26.42	23.97	250.00	29.97	993.12	13.76	15.75
5310.0	-1.17	1.27	10.11	4.01	10.21	10.50	14.22	26.42	23.97	250.00	29.97	993.12	13.76	15.75
5755.0	-4.27	1.36	10.07	4.01	7.16	5.20	11.17	13.09	30.00	1000.00	36.00	3981.07	22.84	24.83
5795.0	-1.43	1.37	10.10	4.01	10.04	10.09	14.05	25.41	30.00	1000.00	36.00	3981.07	19.96	21.95

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5190.0	-1.56	1.25	10.05	4.01	9.74	9.42	13.75	23.71	23.97	250.00	29.97	993.12	14.23	16.22
5230.0	-1.49	1.26	10.05	4.01	9.82	9.59	13.83	24.15	23.97	250.00	29.97	993.12	14.15	16.14
5270.0	-1.40	1.26	10.05	4.01	9.91	9.79	13.92	24.66	23.97	250.00	29.97	993.12	14.06	16.05
5310.0	-1.49	1.27	10.05	4.01	9.83	9.62	13.84	24.21	23.97	250.00	29.97	993.12	14.14	16.13
5755.0	-4.76	1.36	10.05	4.01	6.65	4.62	10.66	11.64	30.00	1000.00	36.00	3981.07	23.35	25.34
5795.0	-1.55	1.37	10.04	4.01	9.86	9.68	13.87	24.38	30.00	1000.00	36.00	3981.07	20.14	22.13

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna Gain
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)
Limit(e.i.r.p.) = Limit(Cond.) + 6dBi

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/07/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Yuta Moriya	Shinichi Miyazono
Mode	Tx 11ac-40	

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)		Limit (Cond.)		Limit (e.i.r.p)		Margin (Cond.)	Margin (e.i.r.p.)
	(Cond.)	(e.i.r.p.)	(Cond.)	(e.i.r.p.)										
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5190.0	10.57	26.61	9.53	23.99	13.03	20.10	17.04	50.60	23.97	250.00	29.97	993.12	10.94	12.93
5230.0	10.26	25.82	9.53	23.99	12.96	19.78	16.97	49.81	23.97	250.00	29.97	993.12	11.01	13.00
5270.0	10.59	26.67	9.40	23.66	13.01	19.99	17.02	50.33	23.97	250.00	29.97	993.12	10.96	12.95
5310.0	11.02	27.73	10.38	26.12	13.30	21.39	17.31	53.85	23.97	250.00	29.97	993.12	10.67	12.66
5755.0	5.64	14.19	5.15	12.97	10.33	10.79	14.34	27.16	30.00	1000.00	36.00	3981.07	19.67	21.66
5795.0	10.07	25.35	9.77	24.60	12.98	19.84	16.99	49.95	30.00	1000.00	36.00	3981.07	17.02	19.01

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5190.0	-1.12	1.25	10.11	4.01	10.24	10.57	14.25	26.61	23.97	250.00	29.97	993.12	13.73	15.72
5230.0	-1.26	1.26	10.11	4.01	10.11	10.26	14.12	25.82	23.97	250.00	29.97	993.12	13.86	15.85
5270.0	-1.12	1.26	10.11	4.01	10.25	10.59	14.26	26.67	23.97	250.00	29.97	993.12	13.72	15.71
5310.0	-0.96	1.27	10.11	4.01	10.42	11.02	14.43	27.73	23.97	250.00	29.97	993.12	13.55	15.54
5755.0	-3.92	1.36	10.07	4.01	7.51	5.64	11.52	14.19	30.00	1000.00	36.00	3981.07	22.49	24.48
5795.0	-1.44	1.37	10.10	4.01	10.03	10.07	14.04	25.35	30.00	1000.00	36.00	3981.07	19.97	21.96

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5190.0	-1.51	1.25	10.05	4.01	9.79	9.53	13.80	23.99	23.97	250.00	29.97	993.12	14.18	16.17
5230.0	-1.52	1.26	10.05	4.01	9.79	9.53	13.80	23.99	23.97	250.00	29.97	993.12	14.18	16.17
5270.0	-1.58	1.26	10.05	4.01	9.73	9.40	13.74	23.66	23.97	250.00	29.97	993.12	14.24	16.23
5310.0	-1.16	1.27	10.05	4.01	10.16	10.38	14.17	26.12	23.97	250.00	29.97	993.12	13.81	15.80
5755.0	-4.29	1.36	10.05	4.01	7.12	5.15	11.13	12.97	30.00	1000.00	36.00	3981.07	22.88	24.87
5795.0	-1.51	1.37	10.04	4.01	9.90	9.77	13.91	24.60	30.00	1000.00	36.00	3981.07	20.10	22.09

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna Gain
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)
Limit(e.i.r.p.) = Limit(Cond.) + 6dBi

Maximum Conducted Output Power

Test place	Ise EMC Lab. No.11 Measurement Room		
Report No.	10812026H		
Date	06/07/2015	06/29/2015	07/02/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH	24deg. C / 54% RH
Engineer	Yuta Moriya	Shinichi Miyazono	Shinichi Miyazono
Mode	Tx 11ac-80		

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)		Limit (Cond.)		Limit (e.i.r.p)		Margin (Cond.)	Margin (e.i.r.p.)
	(Cond.)	(e.i.r.p.)	(Cond.)	(e.i.r.p.)										
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5210.0	3.66	9.23	3.56	8.95	8.59	7.22	12.60	18.18	23.97	250.00	29.97	993.12	15.38	17.37
5290.0	5.50	13.84	4.80	12.08	10.13	10.29	14.14	25.91	23.97	250.00	29.97	993.12	13.84	15.83
5775.0	3.32	8.36	2.88	7.24	7.92	6.20	11.93	15.60	30.00	1000.00	36.00	3981.07	22.08	24.07

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5210.0	-5.70	1.25	10.09	4.01	5.64	3.66	9.65	9.23	23.97	250.00	29.97	993.12	18.33	20.32
5290.0	-3.98	1.27	10.11	4.01	7.40	5.50	11.41	13.84	23.97	250.00	29.97	993.12	16.57	18.56
5775.0	-6.23	1.37	10.07	4.01	5.21	3.32	9.22	8.36	30.00	1000.00	36.00	3981.07	24.79	26.78

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)		Limit (Cond.)		Limit (e.i.r.p.)		Margin (Cond.)	Margin (e.i.r.p.)
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dB]
5210.0	-5.76	1.25	10.02	4.01	5.51	3.56	9.52	8.95	23.97	250.00	29.97	993.12	18.46	20.45
5290.0	-4.51	1.27	10.05	4.01	6.81	4.80	10.82	12.08	23.97	250.00	29.97	993.12	17.16	19.15
5775.0	-6.83	1.37	10.05	4.01	4.59	2.88	8.60	7.24	30.00	1000.00	36.00	3981.07	25.41	27.40

Result(Cond.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten.Loss + Antenna Gain
15.407(a)(1)(iv) Limit(Cond.) = 23.97dBm(250mW)
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm
15.407(a)(3) Limit(Cond.) = 30dBm(1W)
Limit (e.i.r.p.) = Limit(Cond.) + 6dBi

Maximum Conducted Output Power(Worst Rate Check)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/05/2015 Night
Temperature/ Humidity	23deg. C / 58% RH
Engineer	Shinichi Miyazono
Mode	11a Tx

5180MHz

Rate [Mbps]	Reading Antenna port 0		Reading Antenna port 1		Result Antenna port 0 + 1		Remark
	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
6	-1.08	0.78	-	-	-	-	
9	-1.02	0.79	-1.83	0.66	-	-	*Single transmission
12	-1.04	0.79	-	-	-	-	
18	-1.14	0.77	-	-	-	-	
24	-1.08	0.78	-	-	-	-	
36	-1.09	0.78	-	-	-	-	
48	-1.19	0.76	-	-	-	-	
54	-1.17	0.76	-	-	-	-	
6	-0.98	0.80	-1.63	0.69	1.72	1.49	*Simultaneous transmission
9	-1.14	0.77	-1.64	0.69	1.63	1.45	
12	-1.06	0.78	-1.66	0.68	1.66	1.47	
18	-1.26	0.75	-1.69	0.68	1.54	1.43	
24	-1.07	0.78	-1.78	0.66	1.60	1.45	
36	-1.11	0.77	-1.74	0.67	1.60	1.44	
48	-1.25	0.75	-1.71	0.67	1.54	1.42	
54	-1.12	0.77	-1.68	0.68	1.62	1.45	

* Worst Rate

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

Maximum Conducted Output Power(Worst Rate Check)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/05/2015 Night
Temperature/ Humidity	23deg. C / 58% RH
Engineer	Shinichi Miyazono
Mode	11n-20 Tx

5180MHz

MCS Index	Reading Antenna port 0		Reading Antenna port 1		Result Antenna port 0 + 1		Remark
	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
0	-0.97	0.80	-1.89	0.65	-	-	*Single transmission
1	-1.14	0.77	-	-	-	-	
2	-1.26	0.75	-	-	-	-	
3	-1.21	0.76	-	-	-	-	
4	-1.22	0.76	-	-	-	-	
5	-1.12	0.77	-	-	-	-	
6	-1.23	0.75	-	-	-	-	
7	-1.14	0.77	-	-	-	-	
0	-1.09	0.78	-1.61	0.69	1.67	1.47	
1	-1.06	0.78	-1.53	0.70	1.72	1.49	*Simultaneous transmission
2	-1.08	0.78	-1.73	0.67	1.62	1.45	
3	-1.10	0.78	-1.71	0.67	1.62	1.45	
4	-1.02	0.79	-1.68	0.68	1.67	1.47	
5	-1.02	0.79	-1.61	0.69	1.71	1.48	
6	-1.09	0.78	-1.61	0.69	1.67	1.47	
7	-1.10	0.78	-1.68	0.68	1.63	1.46	
8	-1.06	0.78	-1.70	0.68	1.64	1.46	
9	-1.09	0.78	-1.54	0.70	1.70	1.48	*MIMO
10	-1.06	0.78	-1.73	0.67	1.63	1.45	
11	-1.17	0.76	-1.57	0.70	1.64	1.46	
12	-1.26	0.75	-1.83	0.66	1.47	1.40	
13	-1.22	0.76	-1.77	0.67	1.52	1.42	
14	-1.02	0.79	-1.73	0.67	1.65	1.46	
15	-1.05	0.79	-1.74	0.67	1.63	1.46	

* Worst MCS

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

Maximum Conducted Output Power(Worst Rate Check)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/05/2015 Night
Temperature/ Humidity	23deg. C / 58% RH
Engineer	Shinichi Miyazono
Mode	11ac-20 Tx

5180MHz

MCS Index	Reading Antenna port 0		Reading Antenna port 1		Result Antenna port 0 + 1		Remark
	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
0	-1.11	0.77	-1.93	0.64	-	-	*Single transmission
1	-1.28	0.74	-	-	-	-	
2	-1.20	0.76	-	-	-	-	
3	-1.12	0.77	-	-	-	-	
4	-1.14	0.77	-	-	-	-	
5	-1.22	0.76	-	-	-	-	
6	-1.21	0.76	-	-	-	-	
7	-1.17	0.76	-	-	-	-	
8	-1.26	0.75	-	-	-	-	
0	-0.99	0.80	-1.64	0.69	1.71	1.48	
1	-0.92	0.81	-1.58	0.70	1.77	1.50	*Simultaneous transmission
2	-1.00	0.79	-1.64	0.69	1.70	1.48	
3	-1.01	0.79	-1.60	0.69	1.72	1.48	
4	-1.03	0.79	-1.68	0.68	1.67	1.47	
5	-1.05	0.79	-1.72	0.67	1.64	1.46	
6	-1.01	0.79	-1.65	0.68	1.69	1.48	
7	-1.00	0.79	-1.64	0.69	1.70	1.48	
8	-1.02	0.79	-1.61	0.69	1.71	1.48	
0	-0.99	0.80	-1.68	0.68	1.69	1.48	
1	-0.95	0.80	-1.60	0.69	1.75	1.50	*MIMO
2	-1.01	0.79	-1.68	0.68	1.68	1.47	
3	-1.00	0.79	-1.57	0.70	1.73	1.49	
4	-1.00	0.79	-1.75	0.67	1.65	1.46	
5	-1.06	0.78	-1.78	0.66	1.61	1.45	
6	-1.01	0.79	-1.78	0.66	1.63	1.46	
7	-1.03	0.79	-1.68	0.68	1.67	1.47	
8	-1.05	0.79	-1.67	0.68	1.66	1.47	

* Worst MCS

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

Maximum Conducted Output Power(Worst Rate Check)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/06/2015
Temperature/ Humidity	22deg. C / 55% RH
Engineer	Kazuya Yoshioka
Mode	11n-40 Tx

5190MHz

MCS Index	Reading Antenna port 0		Reading Antenna port 1		Result Antenna port 0 + 1		Remark
	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
0	-0.92	0.81	-1.62	0.69	-	-	*Single transmission
1	-1.36	0.73	-	-	-	-	
2	-1.16	0.77	-	-	-	-	
3	-1.09	0.78	-	-	-	-	
4	-1.08	0.78	-	-	-	-	
5	-1.07	0.78	-	-	-	-	
6	-1.41	0.72	-	-	-	-	
7	-1.32	0.74	-	-	-	-	
0	-0.87	0.82	-1.42	0.72	1.87	1.54	
1	-0.84	0.82	-1.44	0.72	1.88	1.54	*Simultaneous transmission
2	-1.08	0.78	-1.67	0.68	1.65	1.46	
3	-0.76	0.84	-1.61	0.69	1.85	1.53	
4	-1.09	0.78	-1.71	0.67	1.62	1.45	
5	-1.01	0.79	-1.59	0.69	1.72	1.49	
6	-1.12	0.77	-1.58	0.70	1.67	1.47	
7	-0.89	0.81	-1.49	0.71	1.83	1.52	
8	-0.85	0.82	-1.51	0.71	1.84	1.53	*MIMO
9	-0.62	0.87	-1.81	0.66	1.84	1.53	
10	-0.91	0.81	-1.75	0.67	1.70	1.48	
11	-0.68	0.86	-1.75	0.67	1.83	1.52	
12	-0.92	0.81	-1.63	0.69	1.75	1.50	
13	-1.04	0.79	-1.87	0.65	1.58	1.44	
14	-1.12	0.77	-1.53	0.70	1.69	1.48	
15	-0.96	0.80	-1.44	0.72	1.82	1.52	

* Worst MCS

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

Maximum Conducted Output Power(Worst Rate Check)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/06/2015
Temperature/ Humidity	22deg. C / 55% RH
Engineer	Kazuya Yoshioka
Mode	11ac-40 Tx

5190MHz

MCS Index	Reading		Reading		Result		Remark
	$A_{Antenna\ port\ 0}$		Antenna 1		Antenna 0 + 1		
	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
0	-1.45	0.72	-	-	-	-	
1	-1.32	0.74	-	-	-	-	
2	-1.40	0.72	-	-	-	-	
3	-1.30	0.74	-	-	-	-	
4	-1.27	0.75	-	-	-	-	
5	-1.18	0.76	-1.59	0.69	-	-	*Single transmission
6	-1.42	0.72	-	-	-	-	
7	-1.27	0.75	-	-	-	-	
8	-1.47	0.71	-	-	-	-	
9	-1.35	0.73	-	-	-	-	
0	-0.88	0.82	-1.66	0.68	1.76	1.50	
1	-0.76	0.84	-1.23	0.75	2.02	1.59	*Simultaneous transmission
2	-0.83	0.83	-1.56	0.70	1.83	1.52	
3	-0.69	0.85	-1.54	0.70	1.92	1.55	
4	-0.75	0.84	-1.80	0.66	1.77	1.50	
5	-0.60	0.87	-1.78	0.66	1.86	1.53	
6	-0.77	0.84	-1.76	0.67	1.77	1.50	
7	-0.93	0.81	-1.51	0.71	1.80	1.51	
8	-0.71	0.85	-1.49	0.71	1.93	1.56	
9	-1.03	0.79	-1.54	0.70	1.73	1.49	
0	-1.08	0.78	-1.49	0.71	1.73	1.49	
1	-1.18	0.76	-1.77	0.67	1.55	1.43	
2	-0.77	0.84	-1.79	0.66	1.76	1.50	
3	-0.80	0.83	-1.59	0.69	1.83	1.53	*MIMO
4	-0.91	0.81	-1.52	0.70	1.81	1.52	
5	-1.12	0.77	-1.56	0.70	1.68	1.47	
6	-0.97	0.80	-1.67	0.68	1.70	1.48	
7	-0.88	0.82	-1.61	0.69	1.78	1.51	
8	-0.85	0.82	-1.69	0.68	1.76	1.50	
9	-1.25	0.75	-1.55	0.70	1.61	1.45	

* Worst MCS

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

Maximum Conducted Output Power(Worst Rate Check)

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/06/2015
Temperature/ Humidity	22deg. C / 55% RH
Engineer	Kazuya Yoshioka
Mode	11ac-80 Tx

5210MHz

MCS Index	Reading Antenna port 0		Reading Antenna port 1		Result Antenna port 0 + 1		Remark
	[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]	
0	-1.13	0.77	-	-	-	-	
1	-1.08	0.78	-	-	-	-	
2	-0.85	0.82	-	-	-	-	
3	-0.77	0.84	-1.48	0.71	-	-	*Single transmission
4	-1.06	0.78	-	-	-	-	
5	-1.06	0.78	-	-	-	-	
6	-1.20	0.76	-	-	-	-	
7	-1.00	0.79	-	-	-	-	
8	-0.97	0.80	-	-	-	-	
9	-0.85	0.82	-	-	-	-	
0	-0.64	0.86	-1.29	0.74	2.06	1.61	
1	-0.57	0.88	-1.28	0.74	2.10	1.62	*Simultaneous transmission
2	-0.70	0.85	-1.49	0.71	1.93	1.56	
3	-0.73	0.85	-1.42	0.72	1.95	1.57	
4	-0.88	0.82	-1.53	0.70	1.82	1.52	
5	-0.92	0.81	-1.48	0.71	1.82	1.52	
6	-0.79	0.83	-1.44	0.72	1.91	1.55	
7	-1.13	0.77	-1.38	0.73	1.76	1.50	
8	-0.99	0.80	-1.11	0.77	1.96	1.57	
9	-0.65	0.86	-1.50	0.71	1.96	1.57	
0	-0.69	0.85	-1.22	0.76	2.06	1.61	*MIMO
1	-0.73	0.85	-1.30	0.74	2.00	1.59	
2	-0.85	0.82	-1.49	0.71	1.85	1.53	
3	-0.76	0.84	-1.39	0.73	1.95	1.57	
4	-0.85	0.82	-1.38	0.73	1.90	1.55	
5	-0.88	0.82	-1.29	0.74	1.93	1.56	
6	-1.04	0.79	-1.49	0.71	1.75	1.50	
7	-0.94	0.81	-1.46	0.71	1.82	1.52	
8	-0.86	0.82	-1.53	0.70	1.83	1.52	
9	-0.98	0.80	-1.46	0.71	1.80	1.51	

* Worst MCS

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

Maximum Average Output Power (Reference data for SAR testing)

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/07/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Yuta Moriya	Shinichi Miyazono
Mode	11a Tx 6Mbps	

[AV]

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p.)	
	(Cond.)	(e.r.i.p)	(Cond.)	(e.r.i.p)				
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]
5180.0	10.57	26.61	9.40	23.66	13.00	19.97	17.01	50.27
5200.0	10.28	25.88	8.95	22.54	12.84	19.23	16.85	48.42
5220.0	10.42	26.24	9.44	23.77	12.98	19.86	16.99	50.01
5240.0	10.62	26.73	9.33	23.50	13.00	19.95	17.01	50.23
5260.0	10.35	26.06	9.77	24.60	13.04	20.12	17.05	50.67
5280.0	10.09	25.41	9.10	22.91	12.83	19.19	16.84	48.32
5300.0	10.86	27.35	9.40	23.66	13.07	20.26	17.08	51.01
5320.0	10.40	26.18	9.86	24.83	13.07	20.26	17.08	51.01
5745.0	5.65	14.22	5.38	13.55	10.43	11.03	14.44	27.78
5765.0	9.23	23.23	9.12	22.96	12.64	18.35	16.65	46.19
5785.0	9.77	24.60	9.68	24.38	12.89	19.46	16.90	48.98
5805.0	9.27	23.33	9.10	22.91	12.64	18.37	16.65	46.24
5825.0	9.98	25.12	9.64	24.27	12.93	19.62	16.94	49.38

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5180.0	-1.12	1.25	10.11	4.01	10.24	10.57	14.25	26.61
5200.0	-1.22	1.25	10.09	4.01	10.12	10.28	14.13	25.88
5220.0	-1.18	1.25	10.11	4.01	10.18	10.42	14.19	26.24
5240.0	-1.11	1.26	10.11	4.01	10.26	10.62	14.27	26.73
5260.0	-1.22	1.26	10.11	4.01	10.15	10.35	14.16	26.06
5280.0	-1.32	1.27	10.09	4.01	10.04	10.09	14.05	25.41
5300.0	-1.02	1.27	10.11	4.01	10.36	10.86	14.37	27.35
5320.0	-1.21	1.27	10.11	4.01	10.17	10.40	14.18	26.18
5745.0	-3.91	1.36	10.07	4.01	7.52	5.65	11.53	14.22
5765.0	-1.78	1.36	10.07	4.01	9.65	9.23	13.66	23.23
5785.0	-1.57	1.37	10.10	4.01	9.90	9.77	13.91	24.60
5805.0	-1.77	1.37	10.07	4.01	9.67	9.27	13.68	23.33
5825.0	-1.49	1.38	10.10	4.01	9.99	9.98	14.00	25.12

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5180.0	-1.63	1.25	10.11	4.01	9.73	9.40	13.74	23.66
5200.0	-1.75	1.25	10.02	4.01	9.52	8.95	13.53	22.54
5220.0	-1.61	1.25	10.11	4.01	9.75	9.44	13.76	23.77
5240.0	-1.67	1.26	10.11	4.01	9.70	9.33	13.71	23.50
5260.0	-1.47	1.26	10.11	4.01	9.90	9.77	13.91	24.60
5280.0	-1.70	1.27	10.02	4.01	9.59	9.10	13.60	22.91
5300.0	-1.65	1.27	10.11	4.01	9.73	9.40	13.74	23.66
5320.0	-1.44	1.27	10.11	4.01	9.94	9.86	13.95	24.83
5745.0	-4.10	1.36	10.05	4.01	7.31	5.38	11.32	13.55
5765.0	-1.81	1.36	10.05	4.01	9.60	9.12	13.61	22.96
5785.0	-1.61	1.37	10.10	4.01	9.86	9.68	13.87	24.38
5805.0	-1.83	1.37	10.05	4.01	9.59	9.10	13.60	22.91
5825.0	-1.64	1.38	10.10	4.01	9.84	9.64	13.85	24.27

Result(Cond.) = Reading + Cable Loss + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss + Atten.Loss + Antenna Gain
15.407(a)(1) Limit(Cond.) = 16.98dBm(50mW) or 4 + 10log(26dB BW) dBm
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm

*As a result of preliminary test, the formal test was performed with simultaneous transmission had the worst rate.

Maximum Average Output Power (Reference data for SAR testing)

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/08/2015	06/29/2015
Temperature/ Humidity	23deg. C / 54% RH	23deg. C / 49% RH
Engineer	Tomoki Matsui	Shinichi Miyazono
Mode	11n-20 Tx MCS 0	

[AV]

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p.)	
	(Cond.)	(e.r.i.p)	(Cond.)	(e.r.i.p)				
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]
5180.0	10.05	25.29	9.25	23.28	12.85	19.29	16.86	48.57
5200.0	9.77	24.60	8.30	20.89	12.57	18.07	16.58	45.50
5220.0	9.68	24.38	8.73	21.98	12.65	18.41	16.66	46.36
5240.0	10.23	25.76	9.46	23.82	12.94	19.70	16.95	49.59
5260.0	10.69	26.92	9.14	23.01	12.97	19.83	16.98	49.93
5280.0	10.16	25.59	8.39	21.13	12.69	18.56	16.70	46.72
5300.0	10.38	26.12	9.84	24.77	13.06	20.22	17.07	50.90
5320.0	10.67	26.85	9.75	24.55	13.10	20.42	17.11	51.40
5745.0	5.71	14.39	5.07	12.76	10.33	10.78	14.34	27.15
5765.0	9.25	23.28	8.99	22.65	12.61	18.24	16.62	45.93
5785.0	9.51	23.93	9.93	25.00	12.89	19.44	16.90	48.94
5805.0	9.20	23.17	8.97	22.59	12.60	18.18	16.61	45.77
5825.0	9.71	24.43	9.86	24.83	12.92	19.57	16.93	49.27

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5180.0	-1.34	1.25	10.11	4.01	10.02	10.05	14.03	25.29
5200.0	-1.44	1.25	10.09	4.01	9.90	9.77	13.91	24.60
5220.0	-1.50	1.25	10.11	4.01	9.86	9.68	13.87	24.38
5240.0	-1.27	1.26	10.11	4.01	10.10	10.23	14.11	25.76
5260.0	-1.08	1.26	10.11	4.01	10.29	10.69	14.30	26.92
5280.0	-1.29	1.27	10.09	4.01	10.07	10.16	14.08	25.59
5300.0	-1.22	1.27	10.11	4.01	10.16	10.38	14.17	26.12
5320.0	-1.10	1.27	10.11	4.01	10.28	10.67	14.29	26.85
5745.0	-3.86	1.36	10.07	4.01	7.57	5.71	11.58	14.39
5765.0	-1.77	1.36	10.07	4.01	9.66	9.25	13.67	23.28
5785.0	-1.69	1.37	10.10	4.01	9.78	9.51	13.79	23.93
5805.0	-1.80	1.37	10.07	4.01	9.64	9.20	13.65	23.17
5825.0	-1.61	1.38	10.10	4.01	9.87	9.71	13.88	24.43

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5180.0	-1.70	1.25	10.11	4.01	9.66	9.25	13.67	23.28
5200.0	-2.08	1.25	10.02	4.01	9.19	8.30	13.20	20.89
5220.0	-1.95	1.25	10.11	4.01	9.41	8.73	13.42	21.98
5240.0	-1.61	1.26	10.11	4.01	9.76	9.46	13.77	23.82
5260.0	-1.76	1.26	10.11	4.01	9.61	9.14	13.62	23.01
5280.0	-2.05	1.27	10.02	4.01	9.24	8.39	13.25	21.13
5300.0	-1.45	1.27	10.11	4.01	9.93	9.84	13.94	24.77
5320.0	-1.49	1.27	10.11	4.01	9.89	9.75	13.90	24.55
5745.0	-4.36	1.36	10.05	4.01	7.05	5.07	11.06	12.76
5765.0	-1.87	1.36	10.05	4.01	9.54	8.99	13.55	22.65
5785.0	-1.50	1.37	10.10	4.01	9.97	9.93	13.98	25.00
5805.0	-1.89	1.37	10.05	4.01	9.53	8.97	13.54	22.59
5825.0	-1.54	1.38	10.10	4.01	9.94	9.86	13.95	24.83

Result(Cond.) = Reading + Cable Loss + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss + Atten.Loss + Antenna Gain
15.407(a)(1) Limit(Cond.) = 16.98dBm(50mW) or 4 + 10log(26dB BW) dBm
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm

*As a result of preliminary test, the formal test was performed with simultaneous transmission had the worst rate.

Maximum Average Output Power (Reference data for SAR testing)

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/08/2015	06/29/2015
Temperature/ Humidity	23deg. C / 57% RH	23deg. C / 49% RH
Engineer	Tomoki Matsui	Shinichi Miyazono
Mode	11ac-20 Tx MCS 0	

[AV]

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p.)	
	(Cond.)	(e.r.i.p)	(Cond.)	(e.r.i.p)				
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]
5180.0	10.50	26.42	9.20	23.17	12.94	19.70	16.95	49.60
5200.0	10.00	25.18	8.95	22.54	12.78	18.95	16.79	47.72
5220.0	10.30	25.94	9.38	23.60	12.94	19.68	16.95	49.55
5240.0	10.64	26.79	9.42	23.71	13.02	20.06	17.03	50.51
5260.0	10.07	25.35	8.83	22.23	12.76	18.90	16.77	47.58
5280.0	10.14	25.53	8.79	22.13	12.77	18.93	16.78	47.66
5300.0	10.69	26.92	9.79	24.66	13.11	20.49	17.12	51.58
5320.0	10.38	26.12	9.51	23.93	12.98	19.88	16.99	50.05
5745.0	5.26	13.24	5.07	12.76	10.14	10.33	14.15	26.01
5765.0	9.35	23.55	9.12	22.96	12.67	18.47	16.68	46.51
5785.0	9.79	24.66	9.89	24.89	12.94	19.68	16.95	49.55
5805.0	9.31	23.44	8.97	22.59	12.62	18.29	16.63	46.04
5825.0	9.84	24.77	9.55	24.04	12.88	19.39	16.89	48.82

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5180.0	-1.15	1.25	10.11	4.01	10.21	10.50	14.22	26.42
5200.0	-1.34	1.25	10.09	4.01	10.00	10.00	14.01	25.18
5220.0	-1.23	1.25	10.11	4.01	10.13	10.30	14.14	25.94
5240.0	-1.10	1.26	10.11	4.01	10.27	10.64	14.28	26.79
5260.0	-1.34	1.26	10.11	4.01	10.03	10.07	14.04	25.35
5280.0	-1.30	1.27	10.09	4.01	10.06	10.14	14.07	25.53
5300.0	-1.09	1.27	10.11	4.01	10.29	10.69	14.30	26.92
5320.0	-1.22	1.27	10.11	4.01	10.16	10.38	14.17	26.12
5745.0	-4.22	1.36	10.07	4.01	7.21	5.26	11.22	13.24
5765.0	-1.72	1.36	10.07	4.01	9.71	9.35	13.72	23.55
5785.0	-1.56	1.37	10.10	4.01	9.91	9.79	13.92	24.66
5805.0	-1.75	1.37	10.07	4.01	9.69	9.31	13.70	23.44
5825.0	-1.55	1.38	10.10	4.01	9.93	9.84	13.94	24.77

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5180.0	-1.72	1.25	10.11	4.01	9.64	9.20	13.65	23.17
5200.0	-1.75	1.25	10.02	4.01	9.52	8.95	13.53	22.54
5220.0	-1.64	1.25	10.11	4.01	9.72	9.38	13.73	23.60
5240.0	-1.63	1.26	10.11	4.01	9.74	9.42	13.75	23.71
5260.0	-1.91	1.26	10.11	4.01	9.46	8.83	13.47	22.23
5280.0	-1.85	1.27	10.02	4.01	9.44	8.79	13.45	22.13
5300.0	-1.47	1.27	10.11	4.01	9.91	9.79	13.92	24.66
5320.0	-1.60	1.27	10.11	4.01	9.78	9.51	13.79	23.93
5745.0	-4.36	1.36	10.05	4.01	7.05	5.07	11.06	12.76
5765.0	-1.81	1.36	10.05	4.01	9.60	9.12	13.61	22.96
5785.0	-1.52	1.37	10.10	4.01	9.95	9.89	13.96	24.89
5805.0	-1.89	1.37	10.05	4.01	9.53	8.97	13.54	22.59
5825.0	-1.68	1.38	10.10	4.01	9.80	9.55	13.81	24.04

Result(Cond.) = Reading + Cable Loss + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss + Atten.Loss + Antenna Gain
15.407(a)(1) Limit(Cond.) = 16.98dBm(50mW) or 4 + 10log(26dB BW) dBm
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm

*As a result of preliminary test, the formal test was performed with simultaneous transmission had the worst rate.

Maximum Average Output Power (Reference data for SAR testing)

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/08/2015	06/29/2015
Temperature/ Humidity	23deg. C / 57% RH	23deg. C / 49% RH
Engineer	Tomoki Matsui	Shinichi Miyazono
Mode	11n-40 Tx MCS 0	

[AV]

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)	
	(Cond.)	(e.i.r.p)	(Cond.)	(e.i.r.p)				
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]
5190.0	8.61	21.68	8.55	21.53	12.35	17.16	16.36	43.20
5230.0	8.83	22.23	8.73	21.98	12.45	17.56	16.46	44.21
5270.0	9.68	24.38	8.67	21.83	12.64	18.35	16.65	46.21
5310.0	9.89	24.89	8.99	22.65	12.76	18.88	16.77	47.54
5755.0	4.92	12.39	4.27	10.47	9.63	9.19	13.59	22.86
5795.0	9.08	22.86	8.91	22.44	12.55	17.99	16.56	45.29

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5190.0	-1.96	1.23	10.08	4.01	9.35	8.61	13.36	21.68
5230.0	-1.86	1.24	10.08	4.01	9.46	8.83	13.47	22.23
5270.0	-1.47	1.25	10.08	4.01	9.86	9.68	13.87	24.38
5310.0	-1.38	1.25	10.08	4.01	9.95	9.89	13.96	24.89
5755.0	-4.51	1.36	10.07	4.01	6.92	4.92	10.93	12.39
5795.0	-1.87	1.37	10.08	4.01	9.58	9.08	13.59	22.86

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5190.0	-1.99	1.23	10.08	4.01	9.32	8.55	13.33	21.53
5230.0	-1.91	1.24	10.08	4.01	9.41	8.73	13.42	21.98
5270.0	-1.95	1.25	10.08	4.01	9.38	8.67	13.39	21.83
5310.0	-1.79	1.25	10.08	4.01	9.54	8.99	13.55	22.65
5755.0	-5.11	1.36	10.05	3.90	6.30	4.27	10.20	10.47
5795.0	-1.95	1.37	10.08	4.01	9.50	8.91	13.51	22.44

Result(Cond.) = Reading + Cable Loss + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss + Atten.Loss + Antenna Gain
15.407(a)(1) Limit(Cond.) = 16.98dBm(50mW) or 4 + 10log(26dB BW) dBm
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm

*As a result of preliminary test, the formal test was performed with simultaneous transmission had the worst rate.

Maximum Average Output Power (Reference data for SAR testing)

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/08/2015	06/29/2015
Temperature/ Humidity	23deg. C / 57% RH	23deg. C / 49% RH
Engineer	Tomoki Matsui	Shinichi Miyazono
Mode	11ac-40 Tx MCS 0	

[AV]

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)	
	(Cond.)	(e.i.r.p)	(Cond.)	(e.i.r.p)				
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]
5190.0	9.79	24.66	8.67	21.83	12.66	18.46	16.67	46.49
5230.0	9.71	24.43	8.77	22.08	12.67	18.48	16.68	46.51
5270.0	9.93	25.00	9.08	22.86	12.79	19.01	16.80	47.86
5310.0	9.31	23.44	8.99	22.65	12.63	18.31	16.64	46.09
5755.0	4.57	11.51	4.02	9.86	9.34	8.59	13.30	21.37
5795.0	9.12	22.96	9.31	23.44	12.66	18.43	16.67	46.40

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5190.0	-1.40	1.23	10.08	4.01	9.91	9.79	13.92	24.66
5230.0	-1.45	1.24	10.08	4.01	9.87	9.71	13.88	24.43
5270.0	-1.36	1.25	10.08	4.01	9.97	9.93	13.98	25.00
5310.0	-1.64	1.25	10.08	4.01	9.69	9.31	13.70	23.44
5755.0	-4.83	1.36	10.07	4.01	6.60	4.57	10.61	11.51
5795.0	-1.85	1.37	10.08	4.01	9.60	9.12	13.61	22.96

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5190.0	-1.93	1.23	10.08	4.01	9.38	8.67	13.39	21.83
5230.0	-1.89	1.24	10.08	4.01	9.43	8.77	13.44	22.08
5270.0	-1.75	1.25	10.08	4.01	9.58	9.08	13.59	22.86
5310.0	-1.79	1.25	10.08	4.01	9.54	8.99	13.55	22.65
5795.0	-5.37	1.36	10.05	3.90	6.04	4.02	9.94	9.86
5795.0	-1.76	1.37	10.08	4.01	9.69	9.31	13.70	23.44

Result(Cond.) = Reading + Cable Loss + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss + Atten.Loss + Antenna Gain
15.407(a)(1) Limit(Cond.) = 16.98dBm(50mW) or 4 + 10log(26dB BW) dBm
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm

*As a result of preliminary test, the formal test was performed with simultaneous transmission had the worst rate.

Maximum Average Output Power (Reference data for SAR testing)

Test place	Ise EMC Lab. No.11 Measurement Room	
Report No.	10812026H	
Date	06/08/2015	06/29/2015
Temperature/ Humidity	23deg. C / 57% RH	23deg. C / 49% RH
Engineer	Tomoki Matsui	Shinichi Miyazono
Mode	11ac-80 Tx MCS 0	

[AV]

Antenna port 0+1

Freq.	Antenna Port 0 Result		Antenna Port 1 Result		Result Antenna Port 0+1 (Cond.)		Result Antenna Port 0+1 (e.i.r.p)	
	(Cond.)	(e.i.r.p)	(Cond.)	(e.i.r.p)				
[MHz]	[mW]	[mW]	[mW]	[mW]	[dBm]	[mW]	[dBm]	[mW]
5210.0	3.56	8.97	3.33	8.39	8.39	6.90	12.40	17.37
5290.0	5.15	12.97	4.45	11.19	9.82	9.60	13.83	24.17
5775.0	3.05	7.69	2.78	7.00	7.66	5.83	11.67	14.69

Antenna port 0

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5210.0	-5.80	1.23	10.09	4.01	5.52	3.56	9.53	8.97
5290.0	-4.21	1.24	10.09	4.01	7.12	5.15	11.13	12.97
5775.0	-6.59	1.37	10.07	4.01	4.85	3.05	8.86	7.69

Antenna port 1

Freq.	P/M Reading	Cable Loss	Atten. Loss	Antenna Gain	Result (Cond.)		Result (e.i.r.p.)	
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]
5210.0	-6.02	1.23	10.02	4.01	5.23	3.33	9.24	8.39
5290.0	-4.78	1.24	10.02	4.01	6.48	4.45	10.49	11.19
5775.0	-6.98	1.37	10.05	4.01	4.44	2.78	8.45	7.00

Result(Cond.) = Reading + Cable Loss + Atten.Loss
Result(e.i.r.p.) = Reading + Cable Loss + Atten.Loss + Antenna Gain
15.407(a)(1) Limit(Cond.) = 16.98dBm(50mW) or 4 + 10log(26dB BW) dBm
15.407(a)(2) Limit(Cond.) = 23.97dBm(250mW) or 11 + 10log(26dB BW) dBm

Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/29/2015
Temperature/ Humidity	23deg. C / 49% RH
Engineer	Shinichi Miyazono
Mode	11a Tx

<W52, W53 bands>

Antenna Port 0+1

Freq.	Antenna Port 0 Result	Antenna Port 1 Result	Result Antenna Port 0+1		Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[mW/MHz]	[dBm/MHz]	[dB]
5180.0	0.91	0.77	2.25	1.68	11.00	8.75
5220.0	0.91	0.77	2.24	1.67	11.00	8.76
5240.0	0.99	0.81	2.55	1.80	11.00	8.45
5260.0	0.99	0.86	2.67	1.85	11.00	8.33
5300.0	1.04	0.87	2.83	1.92	11.00	8.17
5320.0	0.96	0.89	2.66	1.84	11.00	8.34

Antenna Port 0

Freq.	S/A Reading	Cable Loss	Atten. Loss	Duty Factor	Correction Factor	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dB]	[dBm/MHz]	[mW/MHz]	[dBm/MHz]	[dB]
5180.0	-13.30	2.67	10.08	0.15	0.00	-0.40	0.91	11.00	11.40
5220.0	-13.34	2.68	10.09	0.15	0.00	-0.42	0.91	11.00	11.42
5240.0	-13.00	2.70	10.09	0.15	0.00	-0.06	0.99	11.00	11.06
5260.0	-12.98	2.70	10.09	0.15	0.00	-0.04	0.99	11.00	11.04
5300.0	-12.78	2.73	10.09	0.15	0.00	0.19	1.04	11.00	10.81
5320.0	-13.16	2.73	10.09	0.15	0.00	-0.19	0.96	11.00	11.19

Antenna Port 1

Freq.	S/A Reading	Cable Loss	Atten. Loss	Duty Factor	Correction Factor	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dB]	[dBm/MHz]	[mW/MHz]	[dBm/MHz]	[dB]
5180.0	-14.06	2.67	10.08	0.15	0.00	-1.16	0.77	11.00	12.16
5220.0	-14.08	2.68	10.09	0.15	0.00	-1.16	0.77	11.00	12.16
5240.0	-13.84	2.70	10.09	0.15	0.00	-0.90	0.81	11.00	11.90
5260.0	-13.61	2.70	10.09	0.15	0.00	-0.67	0.86	11.00	11.67
5300.0	-13.55	2.73	10.09	0.15	0.00	-0.58	0.87	11.00	11.58
5320.0	-13.49	2.73	10.09	0.15	0.00	-0.52	0.89	11.00	11.52

Result = Reading + Cable Loss + Atten. Loss + Duty Factor + Correction Factor

<W58 band>

Antenna Port 0+1

Freq.	Antenna Port 0 Result	Antenna Port 1 Result	Result Antenna Port 0+1		Limit	Margin
[MHz]	[mW/500kHz]	[mW/500kHz]	[dBm/500kHz]	[mW/500kHz]	[dBm/500kHz]	[dB]
5745.0	0.29	0.30	-2.31	0.59	30.00	32.31
5785.0	0.46	0.46	-0.34	0.92	30.00	30.34
5825.0	0.48	0.53	0.04	1.01	30.00	29.96

Antenna Port 0

Freq.	S/A Reading	Cable Loss	Atten. Loss	Duty Factor	Correction Factor	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dB]	[dBm/500kHz]	[mW/500kHz]	[dBm/500kHz]	[dB]
5745.0	-18.79	2.91	10.07	0.15	0.27	-5.39	0.29	30.00	35.39
5785.0	-16.76	2.92	10.07	0.15	0.27	-3.35	0.46	30.00	33.35
5825.0	-16.65	2.94	10.06	0.15	0.27	-3.23	0.48	30.00	33.23

Antenna Port 1

Freq.	S/A Reading	Cable Loss	Atten. Loss	Duty Factor	Correction Factor	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dB]	[dBm/500kHz]	[mW/500kHz]	[dBm/500kHz]	[dB]
5745.0	-18.64	2.91	10.07	0.15	0.27	-5.24	0.30	30.00	35.24
5785.0	-16.76	2.92	10.07	0.15	0.27	-3.35	0.46	30.00	33.35
5825.0	-16.15	2.94	10.06	0.15	0.27	-2.73	0.53	30.00	32.73

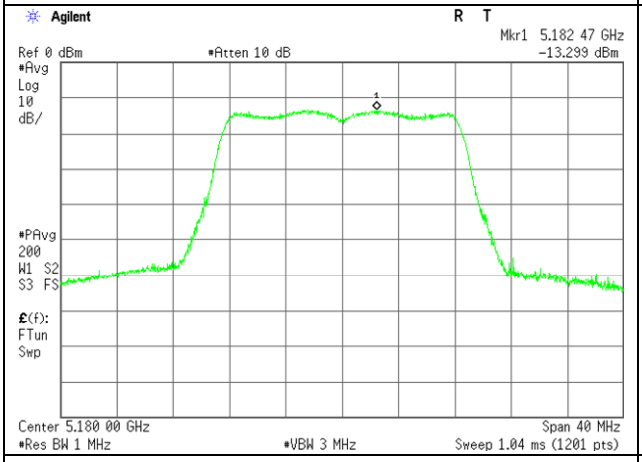
Result = Reading + Cable Loss + Atten. Loss + Duty Factor + Correction Factor

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

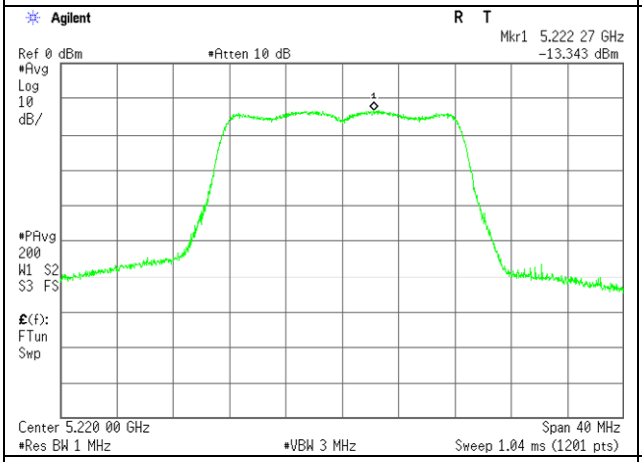
Maximum Power Spectral Density

11a Antenna port 0

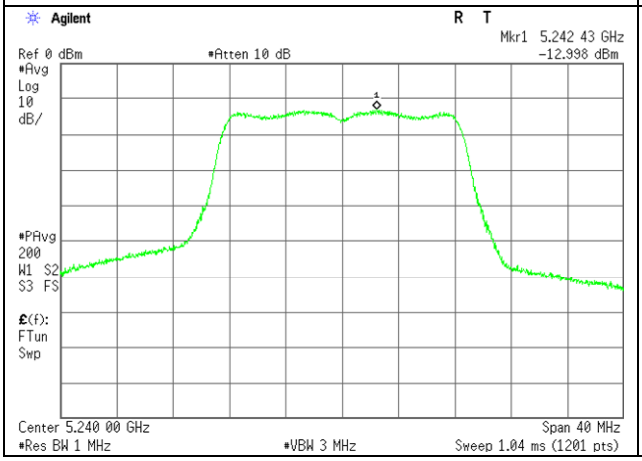
5180MHz



5220MHz

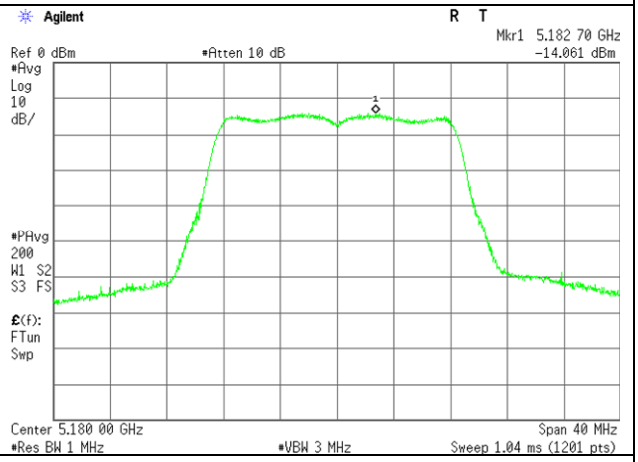


5240MHz

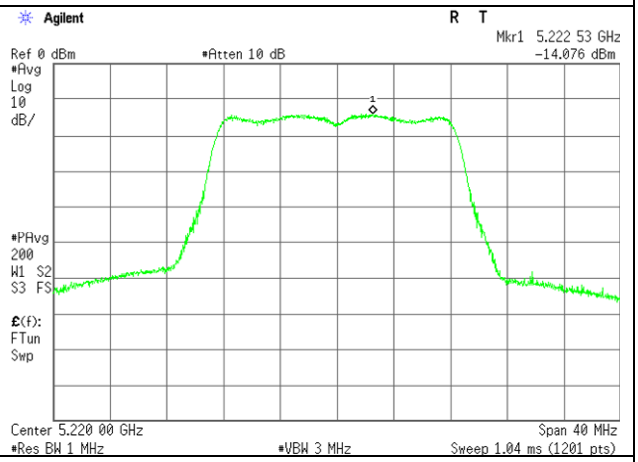


11a Antenna port 1

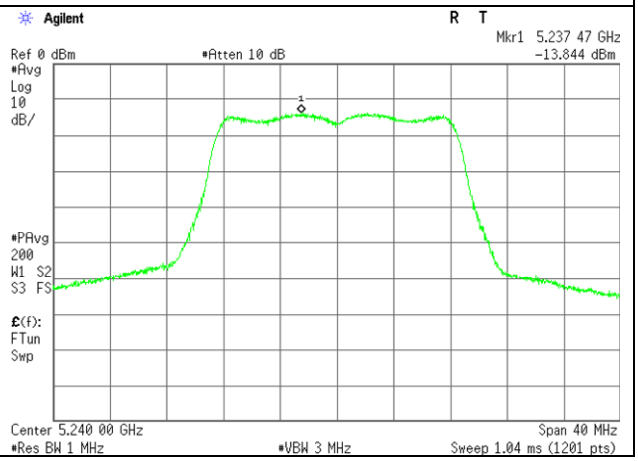
5180MHz



5220MHz



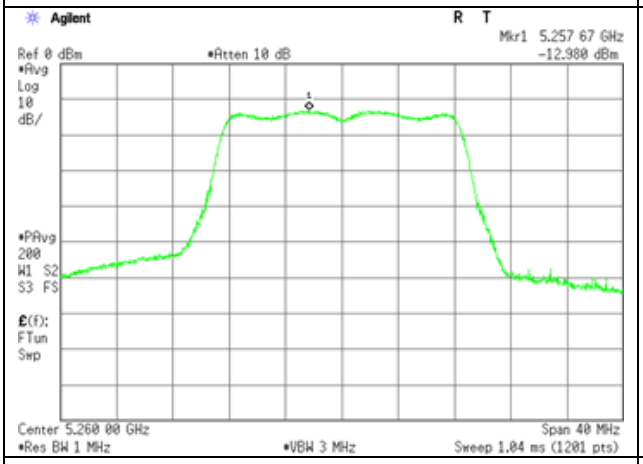
5240MHz



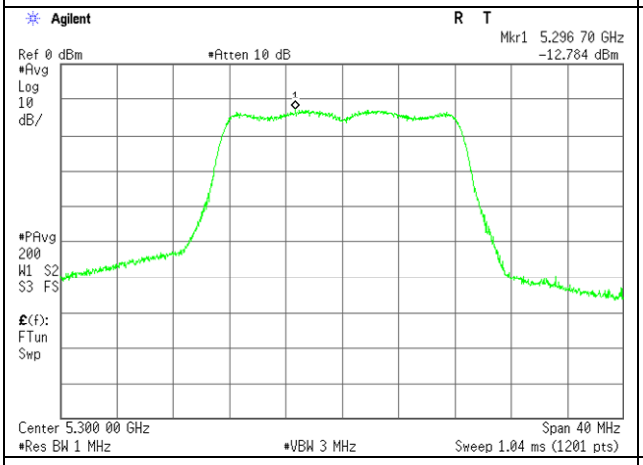
Maximum Power Spectral Density

11a Antenna port 0

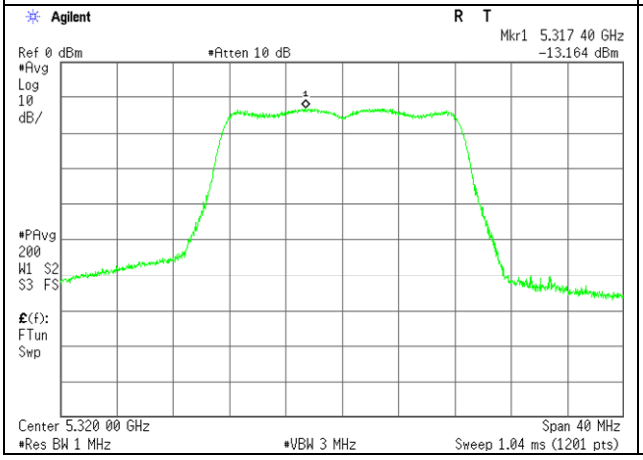
5260MHz



5300MHz

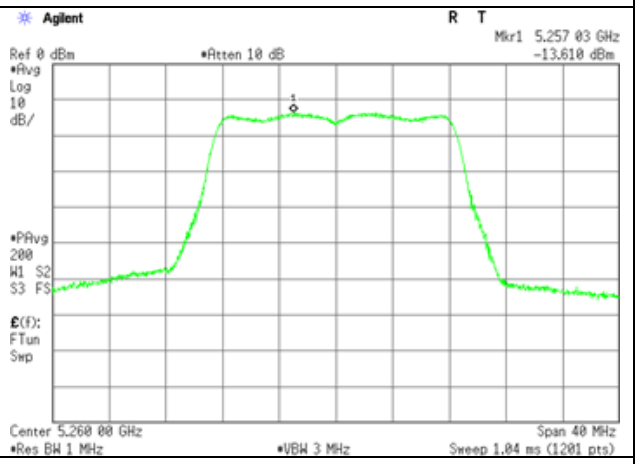


5320MHz

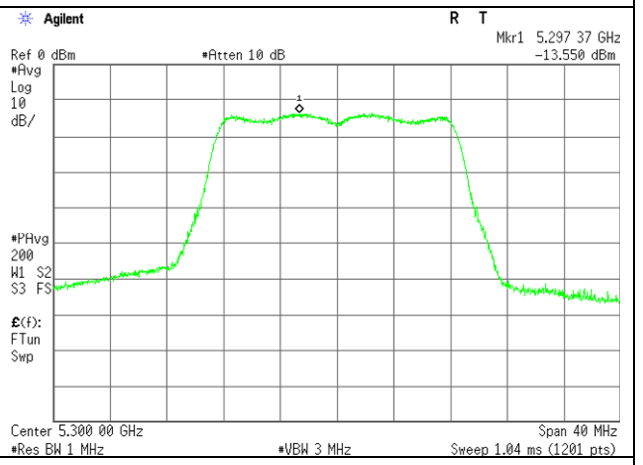


11a Antenna port 1

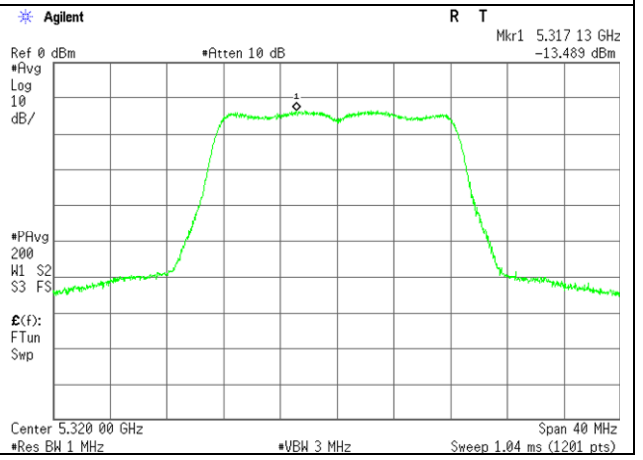
5260MHz



5300MHz



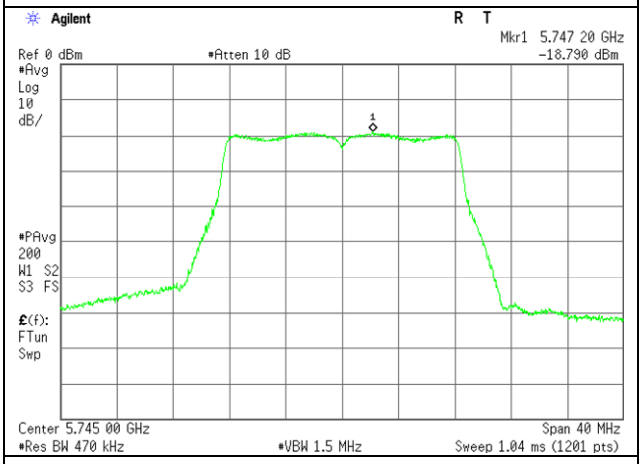
5320MHz



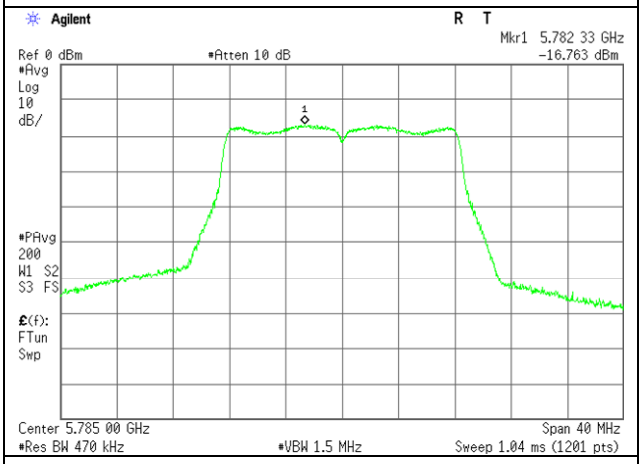
Maximum Power Spectral Density

11a Antenna port 0

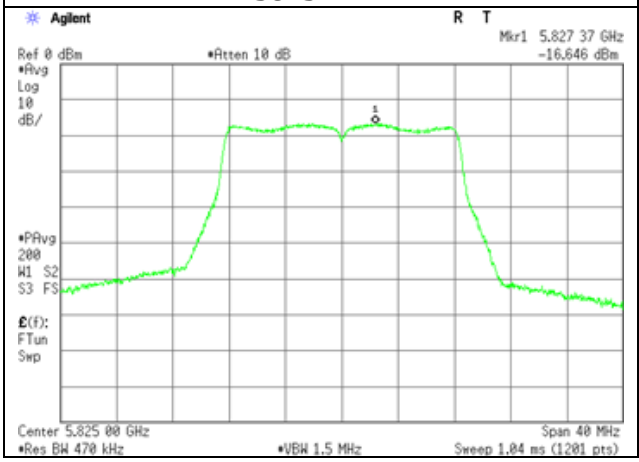
5745MHz



5785MHz

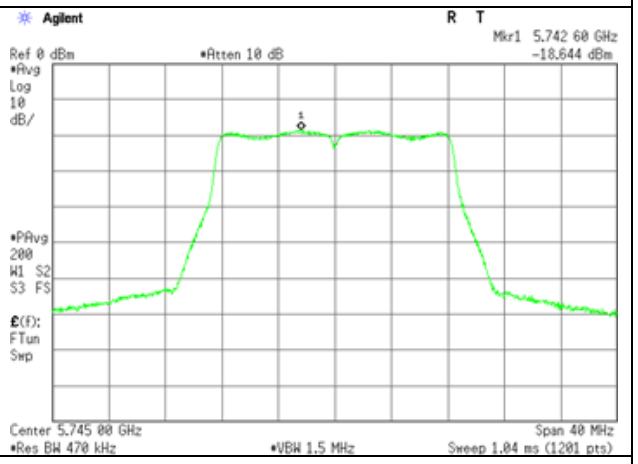


5825MHz

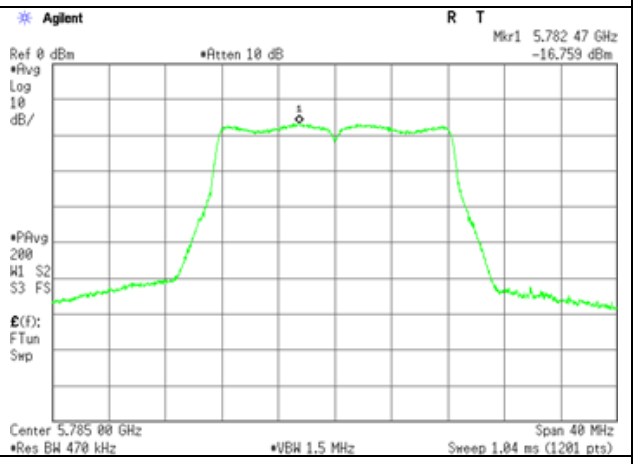


11a Antenna port 1

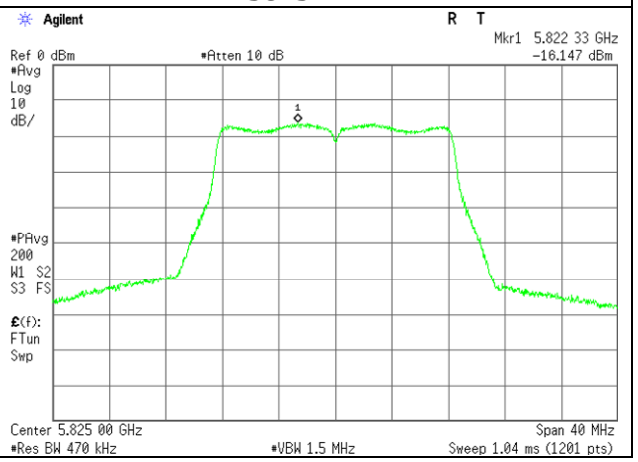
5745MHz



5785MHz



5825MHz



Maximum Power Spectral Density

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10812026H
Date	06/29/2015
Temperature/ Humidity	23deg. C / 49% RH
Engineer	Shinichi Miyazono
Mode	11n-20 Tx

<W52, W53 bands>

Antenna Port 0+1

Freq. [MHz]	Antenna Port 0 Result [mW/MHz]	Antenna Port 1 Result [mW/MHz]	Result Antenna Port 0+1 [dBm/MHz]	Result Antenna Port 0+1 [mW/MHz]	Limit [dBm/MHz]	Margin [dB]
5180.0	0.85	0.80	2.16	1.65	11.00	8.84
5220.0	0.83	0.71	1.87	1.54	11.00	9.13
5240.0	0.90	0.78	2.25	1.68	11.00	8.75
5260.0	0.89	0.77	2.21	1.66	11.00	8.79
5300.0	0.88	0.78	2.21	1.66	11.00	8.79
5320.0	0.93	0.84	2.49	1.77	11.00	8.51

Antenna Port 0

Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Correction Factor [dB]	Result [dBm/MHz]	Result [mW/MHz]	Limit [dBm/MHz]	Margin [dB]
5180.0	-13.79	2.67	10.08	0.33	0.00	-0.71	0.85	11.00	11.71
5220.0	-13.93	2.68	10.09	0.33	0.00	-0.83	0.83	11.00	11.83
5240.0	-13.57	2.70	10.09	0.33	0.00	-0.45	0.90	11.00	11.45
5260.0	-13.62	2.70	10.09	0.33	0.00	-0.49	0.89	11.00	11.50
5300.0	-13.69	2.73	10.09	0.33	0.00	-0.54	0.88	11.00	11.54
5320.0	-13.45	2.73	10.09	0.33	0.00	-0.30	0.93	11.00	11.30

Antenna Port 1

Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Correction Factor [dB]	Result [dBm/MHz]	Result [mW/MHz]	Limit [dBm/MHz]	Margin [dB]
5180.0	-14.07	2.67	10.08	0.33	0.00	-0.99	0.80	11.00	11.99
5220.0	-14.58	2.68	10.09	0.33	0.00	-1.48	0.71	11.00	12.48
5240.0	-14.20	2.70	10.09	0.33	0.00	-1.08	0.78	11.00	12.08
5260.0	-14.25	2.70	10.09	0.33	0.00	-1.13	0.77	11.00	12.13
5300.0	-14.24	2.73	10.09	0.33	0.00	-1.09	0.78	11.00	12.09
5320.0	-13.91	2.73	10.09	0.33	0.00	-0.76	0.84	11.00	11.76

Result = Reading + Cable Loss + Atten. Loss + Duty Factor + Correction Factor

<W58 band>

Antenna Port 0+1

Freq. [MHz]	Antenna Port 0 Result [mW/500kHz]	Antenna Port 1 Result [mW/500kHz]	Result Antenna Port 0+1 [dBm/500kHz]	Result Antenna Port 0+1 [mW/500kHz]	Limit [dBm/500kHz]	Margin [dB]
5745.0	0.26	0.27	-2.69	0.54	30.00	32.69
5785.0	0.39	0.42	-0.95	0.80	30.00	30.95
5825.0	0.42	0.43	-0.74	0.84	30.00	30.74

Antenna Port 0

Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Correction Factor [dB]	Result [dBm/500kHz]	Result [mW/500kHz]	Limit [dBm/500kHz]	Margin [dB]
5745.0	-19.35	2.91	10.07	0.33	0.27	-5.77	0.26	30.00	35.77
5785.0	-17.73	2.92	10.07	0.33	0.27	-4.14	0.39	30.00	34.14
5825.0	-17.40	2.94	10.06	0.33	0.27	-3.80	0.42	30.00	33.80

Antenna Port 1

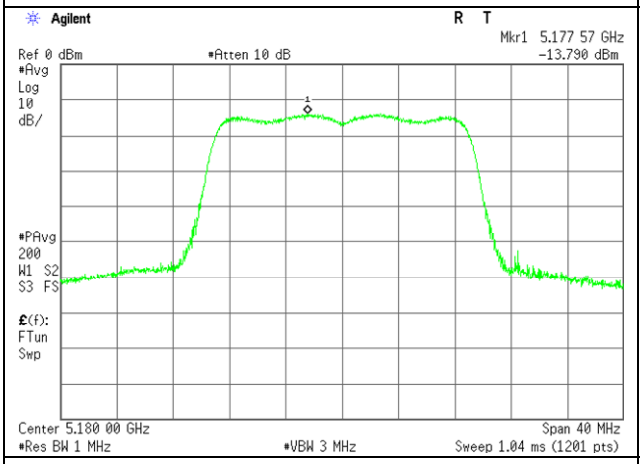
Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Correction Factor [dB]	Result [dBm/500kHz]	Result [mW/500kHz]	Limit [dBm/500kHz]	Margin [dB]
5745.0	-19.21	2.91	10.07	0.33	0.27	-5.63	0.27	30.00	35.63
5785.0	-17.38	2.92	10.07	0.33	0.27	-3.79	0.42	30.00	33.79
5825.0	-17.30	2.94	10.06	0.33	0.27	-3.70	0.43	30.00	33.70

Result = Reading + Cable Loss + Atten. Loss + Duty Factor + Correction Factor

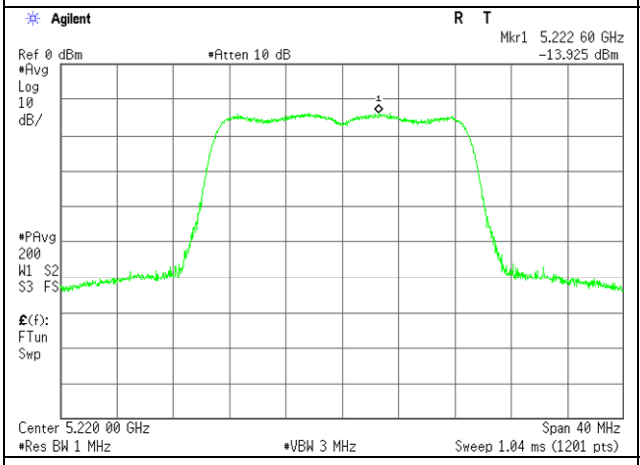
Maximum Power Spectral Density

11n-20 Antenna port 0

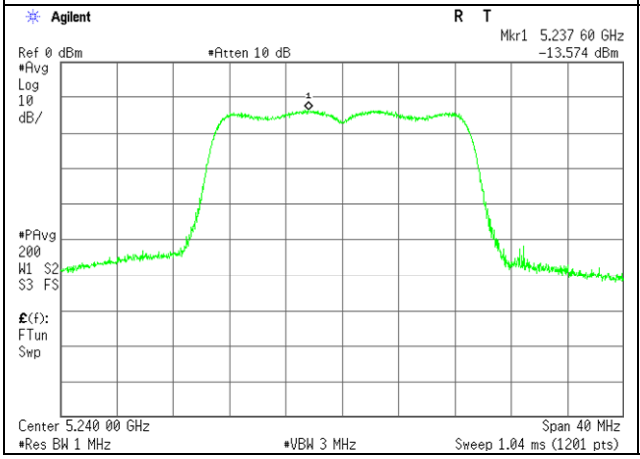
5180MHz



5220MHz

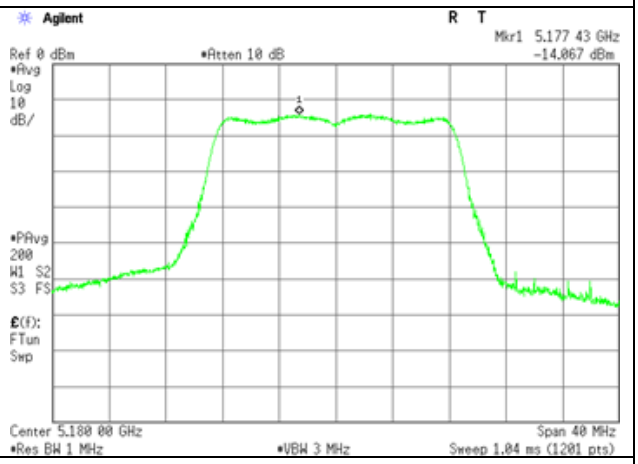


5240MHz

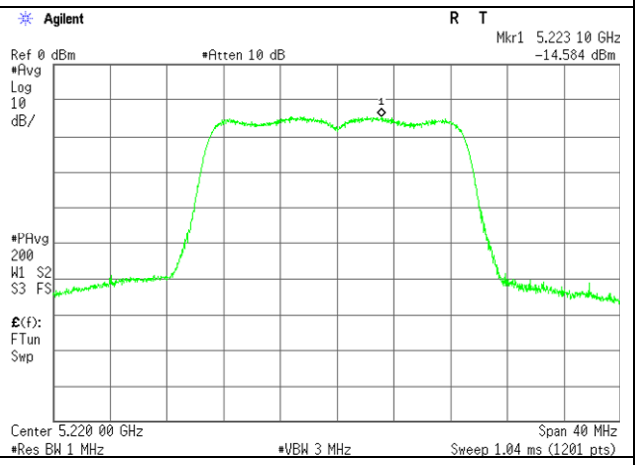


11n-20 Antenna port 1

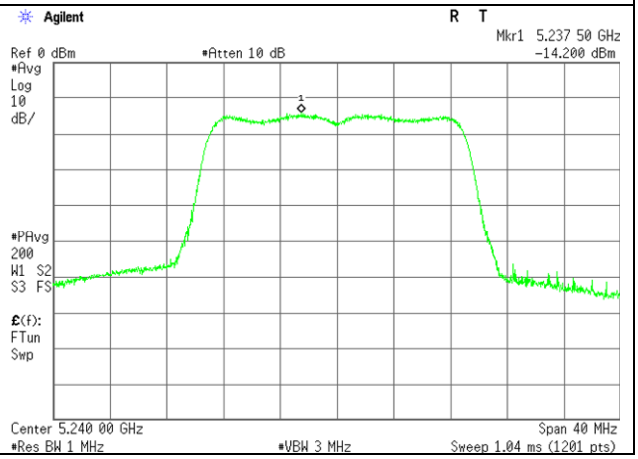
5180MHz



5220MHz



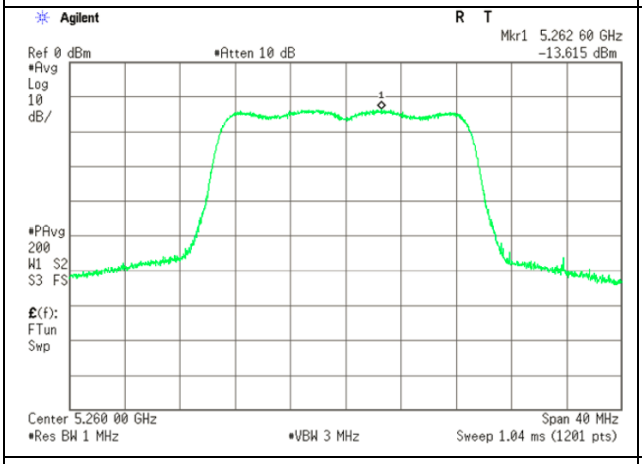
5240MHz



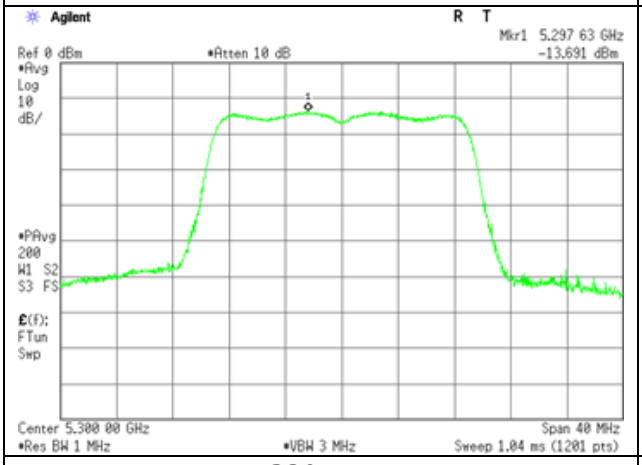
Maximum Power Spectral Density

11n-20 Antenna port 0

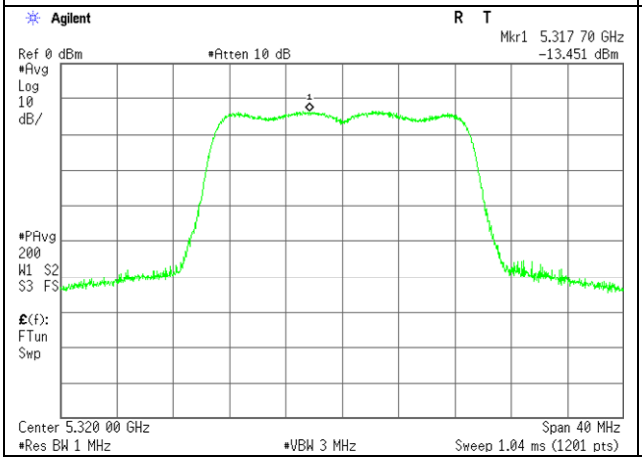
5260MHz



5300MHz

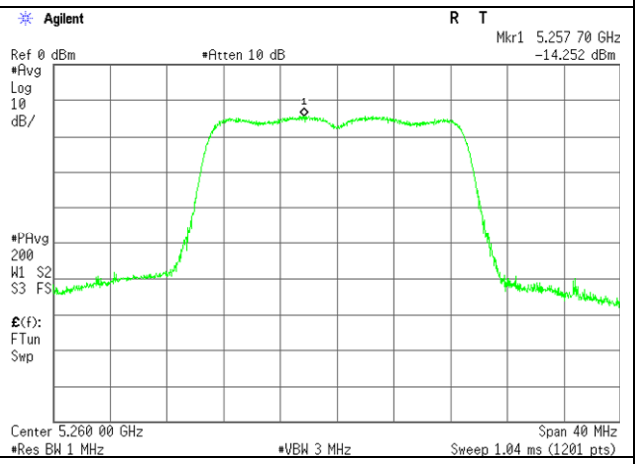


5320MHz

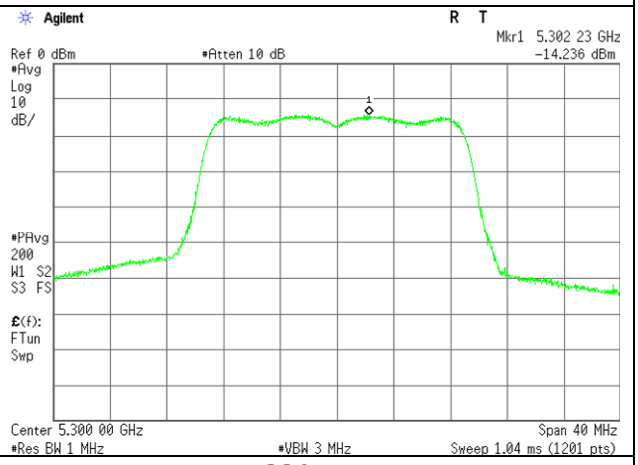


11n-20 Antenna port 1

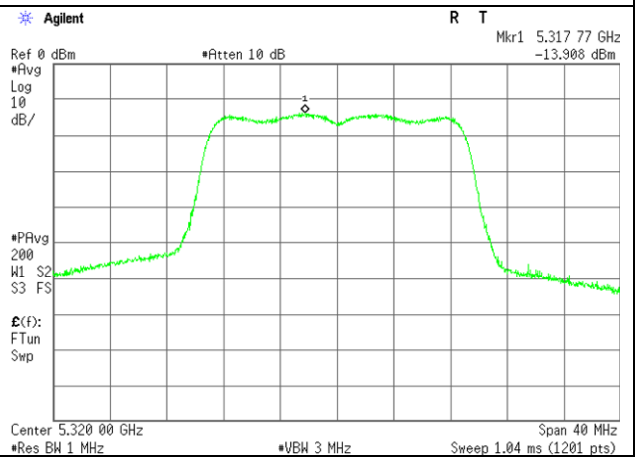
5260MHz



5300MHz



5320MHz



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