RADIO TEST REPORT

Test Report No. : 12193629S-C-R2

Applicant	:	**TAIYO YUDEN CO., LTD.**
Type of Equipment	:	**Wireless LAN & Bluetooth Combo Module**
Model No.	:	**WYSAGVDXG, WYSEGVDXG**
FCC ID	:	**RYYWYSAGVDXG**
Test regulation	:	**FCC Part 15 Subpart E: 2018**
Test Result	:	**Complied (Refer to SECTION 3.2)**

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3. This sample tested is in compliance with the limits of the above regulation.
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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. The all test items in this test report are conducted by UL Japan, Inc. Shonan EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 12193629S-C-R1. 12193629S-C-R1 is replaced with this report.

Date of test: March 16 to April 24, 2018

Representative test engineer:

Yosuke Ishikawa
Engineer
Consumer Technology Division

Approved by:

Akio Hayashi
Leader
Consumer Technology Division

RTL02610

☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan.
☒ There is no testing item of "Non-accreditation".

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REVISION HISTORY

Original Test Report No.: 12193629S-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	12193629S-C	June 27, 2018	-	-
1	12193629S-C-R1	March 28, 2019	1	Addition of Comment "(Refer to SECTION 3.2)" " 9. The information…"
			4	Addition of Comment "The information…" "(Information from test lab.)" Addition of Similar model Correction of Rating "Vmain: DC 3 V-3.6 V VIO: DC 5 V -> VIO : DC 1.8/ 3.3 V, VDD33 : DC 3.3 V"
			5	Correction of Antenna Gain "-0.1 dBi ->2.1 dBi" "4.4 dBi (1001932PT and 1001932FT), 2.2 dBi (AH104N2450D1) ->" 4.5 dBi (1001932PT), 4.4 dBi (1001932FT), 2.4 dBi (AH104N2450D1)" Deletion of Comment "*EUT has two external antennas …"
			6	Addition of Comment "a) - g) Refer to APPENDIX 1 …" Correction of Comment "12193629S-D ->12193629S-G-R1"
			7	Addition of Comment "b) Refer to APPENDIX 1 …" Correction of Test Procedure "RSS-Gen 6.6 -> RSS-Gen 6.7"
			10	Correction of Comment "Because the … of the base. ->" The antennas … of the base." "26.5 GHz -> 40 GHz"
			11	Addition of Item "F : Jig Board…" Addition of Comment "*3) VIO is converted…" Correction of Diagram
			12	Addition of Figure (Conducted emission)
			14	Addition of Figure (Radiated emission) Deletion of Test Distance
			46-51 66-71 305	Correction of Antenna Gain "4.4 -> 4.5"
2	12193629S-C-R2	April 9, 2019	11	Addition of Serial number A: "TYWLAN-AC3FA4001B79 *1), TYWLAN-AC3FA4001B7D *2)" Deletion of Serial number C: "TYWLAN-AC3FA4001B79 *1)"
			14	Correction of *Test Distance External Antenna type: "0.08 m -> 3.92 m" Chip Antenna type: "0.05 m -> 3.95 m"
			140	Correction of Reading Vert., PK: "0.00 -> 54.87"

CONTENTS **PAGE**

SECTION 1: Customer information

Company Name	:	TAIYO YUDEN CO., LTD.
Address	:	8-1 Sakae-cho Takasaki-shi Gunma 370-8522 Japan
Telephone Number	:	+81-27-324-2313
Facsimile Number	:	+81-27-324-2314
Contact Person	:	Masaki Naganuma

The information provided from the customer is as follows;
- Applicant, Type of Equipment, Model No., FCC ID on the cover and other relevant pages
- SECTION 1: Customer information
- SECTION 2: Equipment under test (E.U.T.)
- SECTION 4: Operation of E.U.T. during testing

* The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless LAN & Bluetooth Combo Module
Model No.	:	WYSAGVDXG, WYSEGVDXG
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	VIO : DC 1.8/ 3.3 V, VDD 33 : DC 3.3 V
Receipt Date of Sample (Information from test lab.)	:	March 14, 2018
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: WYSAGVDXG, WYSEGVDXG (referred to as the EUT in this report) is a Wireless LAN & Bluetooth Combo Module. Differences between WYSAGVDXG and WYSEGVDXG are as follows.
- WYSAGVDXG: Internal Antenna type (Chip Antenna)
- WYSEGVDXG: External Antenna type

Similar model : WYSAGVDXG-F, WYSEGVDXG-F

Radio Specification

Radio Type	:	Transceiver
Frequency of Operation	:	2.4 GHz: 2402 MHz - 2480 MHz (Bluetooth BDR/EDR, Bluetooth Low Energy) 2412 MHz - 2462 MHz (IEEE 802.11b/g/11n-20) 2422 MHz - 2452 MHz (IEEE 802.11n-40) U-NII-1 / U-NII-2 A: 5180 MHz - 5320 MHz (IEEE 802.11a/n-20/ac-20) 5190 MHz - 5310 MHz (IEEE 802.11n-40/ac-40) 5210 MHz - 5290 MHz (IEEE 802.11ac-80) U-NII-2C : 5500 MHz - 5700 MHz (IEEE 802.11a/n-20/ac-20) 5510 MHz - 5670 MHz (IEEE 802.11n-40/ac-40) 5530 MHz - 5610 MHz (IEEE 802.11ac-80) U-NII-3: 5745 MHz - 5825 MHz (IEEE 802.11a/n-20/ac-20) 5755 MHz - 5795 MHz (IEEE 802.11n-40/ac-40) 5775 MHz (IEEE 802.11ac-80)
Modulation	:	DSSS : IEEE 802.11b OFDM : IEEE 802.11g/n/a/ac FHSS(GFSK, /4-DQPSK, 8DPSK) : Bluetooth BDR/EDR GFSK : Bluetooth Low Energy
Antenna type	:	[WYSAGVDXG] Chip Antenna (AH104N2450D1) [WYSEGVDXG] External Antenna (1001932PT and 1001932FT)
Antenna Gain	:	2.4 GHz: 2.5 dBi (1001932PT and 1001932FT), 2.1 dBi (AH104N2450D1) 5 GHz: 4.5 dBi (1001932PT), 4.4 dBi (1001932FT), 2.4 dBi (AH104N2450D1)
Operating Temperature	:	-30 deg. C to +85 deg. C
Clock frequency	:	37.4 MHz

SECTION 3: Test specification, procedures & results

3.1 Test Specification

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

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

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (b) (6) / 15.207	19.2 dB, 2.46862 MHz, N AV, VIO Antenna : 1001932PT	Complied a)	-
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
26 dB Emission Bandwidth	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)	See data	N/A b)	Conducted
	IC: -	**IC:** -			
Maximum Conducted Output Power	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)		Complied c)	Conducted
	IC: -	**IC:** RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033	**FCC :** 15.407 (a) (1) (2) (3)		Complied d)	Conducted
	IC: -	**IC:** RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1			
Spurious Emission Restricted Band Edge	**FCC:** ANSI C63.10-2013 KDB Publication Number 789033	**FCC:** 15.407 (b), 15.205 and 15.209	0.4 dB 5725.000 MHz, PK, Hori. Tx 11n-20 5700 MHz Antenna : 1001932PT	Complied# e), f)	Conducted (< 30 MHz) / Radiated (> 30 MHz) *1)
	IC: -	**IC:** RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2			
6 dB Emission Bandwidth	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (e)	See data	Complied g)	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 12193629S-G-R1 issued by UL Japan, Inc.
*1) Radiated test was selected over 30 MHz based on section FCC 15.407 (b) and KDB 789033 D02 G.3.b).
a) Refer to APPENDIX 1 (data of Conducted Emission)
b) Refer to APPENDIX 1 (data of 26 dB Emission Bandwidth and 99 % Occupied Bandwidth)
c) Refer to APPENDIX 1 (data of Maximum Conducted Output Power)
d) Refer to APPENDIX 1 (data of Maximum Power Spectral Density)
e) Refer to APPENDIX 1 (data of Radiated Spurious Emission)
f) Refer to APPENDIX 1 (data of Conducted Spurious Emission)
g) Refer to APPENDIX 1 (data of 6 dB Bandwidth)

Symbols:
Complied The data of this test item has enough margin, more than the measurement uncertainty.
Complied# The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.

* In case any questions arise about test procedure, ANSI C63.10: 2013 is also referred.

FCC Part 15.31 (e)

This EUT provides stable voltage constantly to RF Module regardless of input voltage from host device. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

[WYSAGVDXG]
It is impossible for end users to replace the antenna, because it is soldered on the circuit board. Therefore the equipment complies with the requirement.

[WYSEGVDXG]
The EUT has a unique coupling/antenna connector. Therefore the equipment complies with the requirement.

3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
99 % Occupied Band Width	RSS-Gen 6.7	**IC:** -	N/A	- b)	Conducted
b) Refer to APPENDIX 1 (data of 26 dB Emission Bandwidth and 99 % Occupied Bandwidth)					

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

3.4 Uncertainty

EMI

There is no applicable rule of uncertainty in this applied standard. Therefore, the following results are derived depending on whether or not laboratory uncertainty is applied.

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

Shonan EMC Lab.

Item	Frequency range	Uncertainty (+/-)				
		No. 1 SAC / SR	No. 2 SAC / SR	No. 3 SAC / SR	No. 4 SAC / SR	No. 5,6,8 SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	2.5 dB	2.5 dB	2.5 dB	2.6 dB	2.6 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	3.2 dB	3.2 dB	3.3 dB	-	-
	30 MHz-200 MHz	4.9 dB	4.9 dB	4.9 dB	-	-
	200 MHz-1 GHz	6.1 dB	6.1 dB	6.1 dB	-	-
	1 GHz-6 GHz	4.7 dB	4.7 dB	4.7 dB	-	-
	6 GHz-18 GHz	5.3 dB	5.3 dB	5.3 dB	-	-
	18 GHz-40 GHz	5.6 dB	5.6 dB	5.6 dB	-	-
Radiated emission (Measurement distance: 1 m)	1 GHz-18 GHz	5.6 dB	5.6 dB	5.6 dB	-	-
	18 GHz-40 GHz	5.9 dB	5.9 dB	5.9 dB	-	-

SAC=Semi-Anechoic Chamber

SR= Shielded Room is applied besides radiated emission

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector)_SPM-06	0.48 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-06	0.66 dB
Power Measurement above 1 GHz (Average Detector)_SPM-07	0.47 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-07	0.64 dB
Spurious emission (Conducted) below 1GHz	1.8 dB
Spurious emission (Conducted) 1 GHz-3 GHz	1.7 dB
Spurious emission (Conducted) 3 GHz-18 GHz	2.5 dB
Spurious emission (Conducted) 18 GHz-26.5 GHz	2.5 dB
Spurious emission (Conducted) 26.5 GHz-40 GHz	2.7 dB
Bandwidth Measurement	1.01 %
Duty cycle and Time Measurement	0.012 %

3.5 Test Location

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1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 JAPAN
Telephone: +81 463 50 6400, Facsimile: +81 463 50 6401
JAB Accreditation No. RTL02610
FCC Test Firm Registration Number: 839876

Test site	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
No.4 Semi-anechoic chamber	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
No.1 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.2 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.3 Shielded room	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
No.4 Shielded room	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
No.5 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.6 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.8 shielded room	-	3.45 x 5.5 x 2.4	3.45 x 5.5	-
No.1 Measurement room	-	2.55 x 4.1 x 2.5	-	-

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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

4.1 Operating Mode(s)

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

Mode	Remarks*
IEEE 802.11a (11a)	12 Mbps, PN9
IEEE 802.11n 20 MHz BW (11n-20)	MCS 0, PN9
IEEE 802.11ac 20 MHz BW (11ac-20)	MCS 6, PN9
IEEE 802.11n 40 MHz BW (11n-40)	MCS 7, PN9
IEEE 802.11ac 40 MHz BW (11ac-40)	MCS 5, PN9
IEEE 802.11ac 80 MHz BW (11ac-80)	MCS 0, PN9
*The worst condition was determined based on the test result of Maximum Conducted Output Power.	
*Power of the EUT was set by the software as follows; Power settings: 11a/11n-20/11ac-20 : 12 dBm 11n-40/11ac-40 : 10 dBm 11ac-80 : 8 dBm Software: Dut labtool Version 2.0.0.96 *This setting of software is the worst case.Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product.	

*The details of Operation mode(s)

Test Item	Operating Mode	Tested Frequency			
		Lower Band	Middle Band	Additional Band	Upper Band
Conducted emission *1) *2)	11a Tx	-	-	5580 MHz	-
26 dB Emission Bandwidth *3)	11a Tx 11n-20 Tx 11ac-20 Tx	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	11n-40 Tx 11ac-40 Tx	-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
	11ac-80 Tx	-	5290 MHz	5530 MHz 5610 MHz	-
99 % Occupied Bandwidth, Maximum Conducted Output Power, Maximum Power Spectral Density *3)	11a Tx 11n-20 Tx 11ac-20 Tx	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
6 dB Bandwidth *3)	11a Tx 11n-20 Tx 11ac-20 Tx	-	-	-	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx	-	-	-	5755 MHz 5795 MHz
	11ac-80 Tx	-	-	-	5775 MHz
Radiated Spurious Emission(Below 1 GHz) *4)	11a Tx *1)	-	-	5580 MHz	-
Radiated Spurious Emission (Above 1 GHz) *4)	11a Tx 11n-20 Tx 11ac-20 Tx	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx 11ac-40 Tx	5190 MHz 5230 MHz	5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	11ac-80 Tx	5210 MHz	5290 MHz	5530 MHz 5610 MHz	5775 MHz
Conducted Spurious Emission *1) *3)	11a Tx	-	-	5580 MHz	-

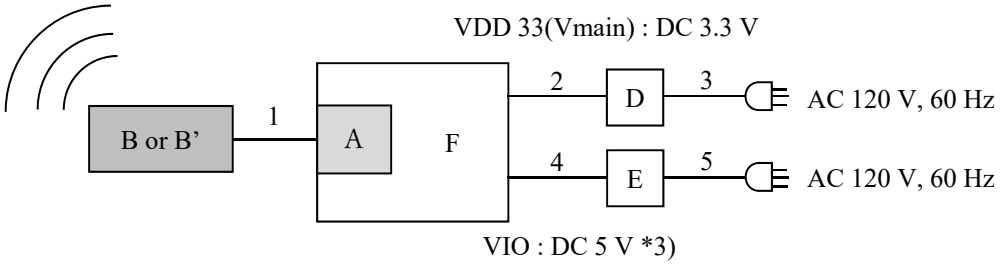
*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.
*2) Conducted emission has been measured with WYSEGVDXG (Antenna: 1001932PT).
WYSEGVDXG (Antenna: 1001932FT) and WYSAGVDXG were confirmed with Peak chart only.

*3) Antenna terminal test has been measured with WYSEGVDXG as representative.

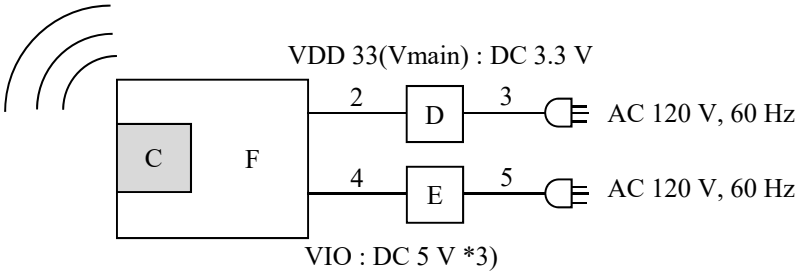
*4) Full measurement of Radiated emission in 30 MHz - 40 GHz has been performed with WYSEGVDXG (Antenna: 1001932 PT).
-WYSEGVDXG (Antenna: 1001932 FT) was tested at only 11a Tx 5580 MHz mode in 30 MHz - 40 GHz and band edge measurement. The antennas 1001932 PT and 1001932 FT have the same antenna shape. The differences are antenna gain (0.1 dB smaller) and the material of the base.
-WYSAGVDXG (Chip Antenna) was also tested at only 11a Tx 5580 MHz mode in 30 MHz - 40 GHz and band edge measurement since it was confirmed by pretest that carrier and spurious emission were equivalent or less than WYSEGVDXG (Antenna: 1001932 PT).

4.2 Configuration and peripherals

External Antenna type



Chip Antenna type



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Wireless LAN & Bluetooth Combo Module (External Antenna type)	WYSEGVDXG	TYWLAN-AC3FA4001B79 *1) TYWLAN-AC3FA4001B7D *2)	TAIYO YUDEN CO., LTD.	EUT
B	Tunable Embedded FPC Antenna	1001932PT	PT-AC3FA4001B7D	TAIYO YUDEN CO., LTD.	EUT
B'	Tunable Embedded FPC Antenna	1001932FT	FT-AC3FA4001B7D	TAIYO YUDEN CO., LTD.	EUT
C	Wireless LAN & Bluetooth Combo Module (Chip Antenna type)	WYSAGVDXG	TYWLAN-AC3FA4001B7B *2)	TAIYO YUDEN CO., LTD.	EUT
D	Power Supply (DC)	PAN35-10A	DE001677	Kikusui	-
E	Power Supply (DC)	PAN60-10A	NL002383	Kikusui	-
F	Jig Board	-	-	TAIYO YUDEN CO., LTD.	-

*1) Used for Antenna Terminal conducted test
*2) Used for Radiated Emission test and Conducted Emission test
*3) VIO is converted to DC 3.3 V on Jig Board and supplied to EUT

List of cables used

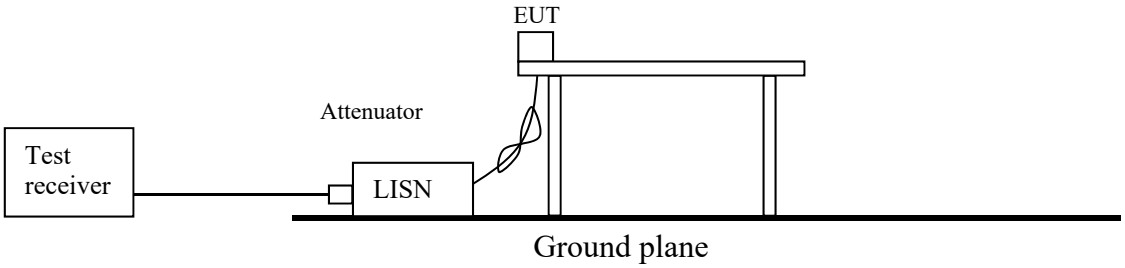
No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	Antenna	0.1	Shielded	Shielded	-
2	DC	0.2 + 1.0	Unshielded	Unshielded	-
3	AC	3.0	Unshielded	Unshielded	-
4	DC	0.2 + 1.0	Unshielded	Unshielded	-
5	AC	3.0	Unshielded	Unshielded	-

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN) / Artificial mains Network (AMN) and excess AC cable was bundled in center.

Conducted emission



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

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Shielded room.
The EUT was connected to a LISN (AMN) via DC power source.
An overview sweep with peak detection has been performed.

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

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

SECTION 6: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

[For below 1 GHz]
(Antenna:1001932PT, 1001932FT)
EUT was placed on a urethane platform of nominal size, 0.5 m by 0.5 m, raised 0.8 m above the conducting ground plane.

(Antenna:AH104N2450D1)
EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.
The table is made of expanded polystyrol and expanded polypropylene and the table top is covered with polycarbonate. That has very low permittivity.

The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

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

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

< Below 1GHz >

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

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

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

For W58 Bandedge
-27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge in the section 15.407(b)(4)(i).

Restricted band edge:

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

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

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

Test Antennas are used as below;

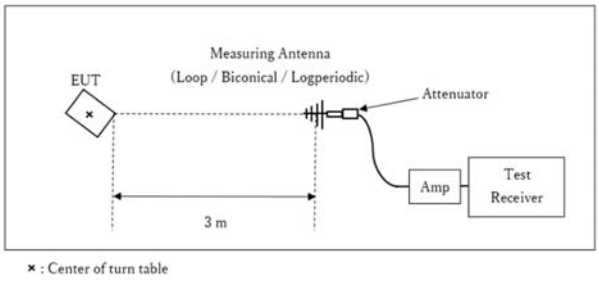
Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method VB *1) RBW: 1 MHz VBW: 1/T (T: burst length, refer to APENDIX) Detector: Power Trace: ≥ 100 traces

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

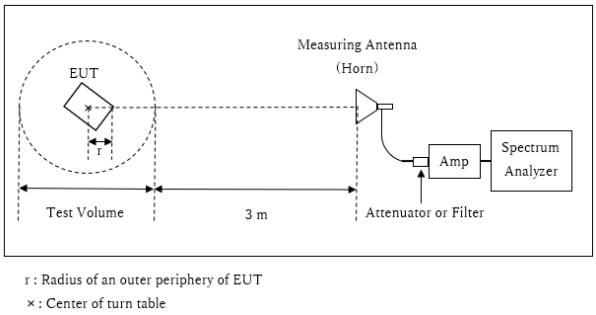
Radiated emission

Below 1 GHz



Test Distance: 3 m

1 GHz - 13 GHz

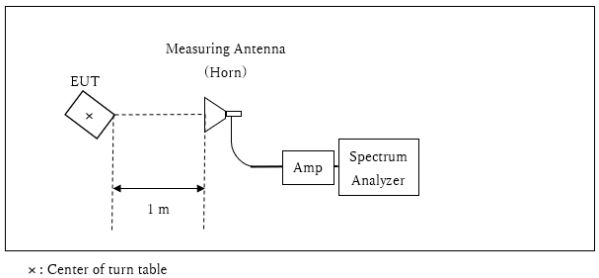


External Antenna type
Distance Factor: 20 x log (3.92 m*/3.0 m) = 2.33 dB
* Test Distance: (3 + Test Volume /2) - r = 3.92 m

Chip Antenna type
Distance Factor: 20 x log (3.95 m*/3.0 m) = 2.39 dB
* Test Distance: (3 + Test Volume /2) - r = 3.95 m

Test Volume: 2 m
(Test Volume has been calibrated based on CISPR 16-1-4.)
r = 0.08 m (External Antenna type)
r = 0.05 m (Chip Antenna type)

13 GHz – 40 GHz



Distance Factor: 20 x log (1.0 m* / 3.0 m) = -9.54 dB
*Test Distance: 1 m

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

External Antenna type

Antenna polarization		Carrier	Spurious (Below 1 GHz)	Spurious (1 GHz – 6.4 GHz)	Spurious (6.4 GHz – 18 GHz)	Spurious (13 GHz – 18 GHz)	Spurious (18 GHz – 26.5 GHz)	Spurious (26.5 GHz – 40 GHz)
Horizontal	Module	Y	X	Y	X	X	Z	X
	Antenna	X	X	X	X	X	Y	X
Vertical	Module	Y	X	Y	X	X	X	X
	Antenna	Y	X	Y	X	X	X	X

Chip Antenna type

Antenna polarization	Carrier	Spurious (Below 1 GHz)	Spurious (1 GHz – 6.4 GHz)	Spurious (6.4 GHz – 18 GHz)	Spurious (13 GHz – 18 GHz)	Spurious (18 GHz – 26.5 GHz)	Spurious (26.5 GHz – 40 GHz)
Horizontal	Y	X	Z	Z	Z	Z	X
Vertical	Y	X	Y	Y	X	Y	X

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

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

SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used and Test method
26 dB Bandwidth	Enough to capture the emission	Close to 1 % of EBW	> RBW	Auto	Peak	Max Hold	Spectrum Analyzer
99 % Occupied Bandwidth *1)	Enough width to display emission skirts	1 % to 5 % of OBW	≥ 3 RBW	Auto	Peak	Max Hold	Spectrum Analyzer
6 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Maximum Conducted Output Power	-	-	-	Auto	Average	-	Power Meter (Sensor: 160 MHz BW) (Method PM)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 100 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (100 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3)	9 kHz – 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz – 30 MHz	10 kHz	30 kHz				

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

*1) Peak hold was applied as Worst-case measurement.
*2) KDB 789033 D02 says that RBW is set to be 500 kHz for 5.725 GHz - 5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor (10 log(500 kHz / 100 kHz)) was added to the test result.
*3) In the frequency range below 30 MHz, RBW was narrowed to separate the noise contents.
Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart. (9 kHz-150 kHz: RBW = 200 Hz, 150 kHz-30 MHz: RBW = 10 kHz)

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

Test data : APPENDIX
Test result : Pass

APPENDIX 1: Test data

Conducted Emission

Antenna: 1001932PT
Test Point: Vmain

DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2018/04/25

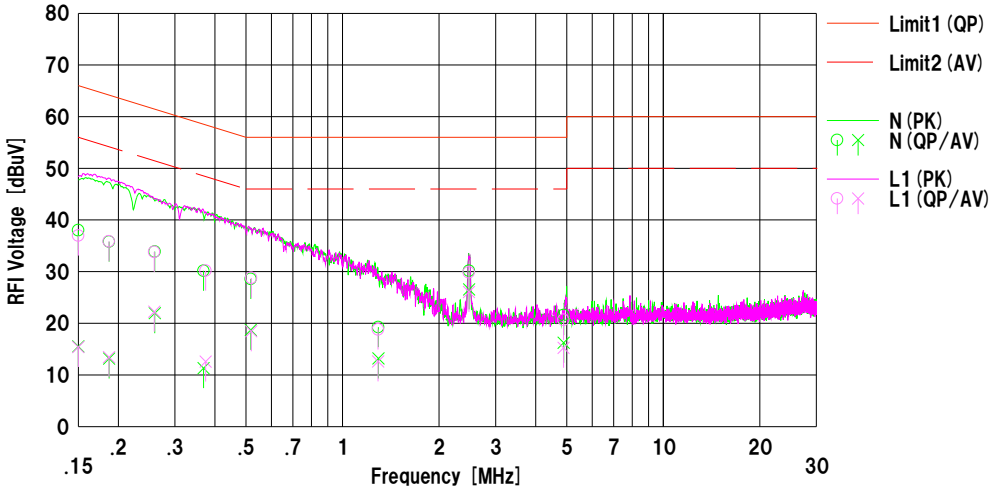
Mode : Tx 11a 5580 MHz

Power : DC 3.3 V
Temp./Humi. : 23 deg.C / 44 %RH

Remarks : Vmain
Ant : 1001932PT

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Kazuya Noda



No.	Freq.	Reading		C.Fac	Results		Limit		Margin		Phase	Comment
		<QP>	<AV>		<QP>	<AV>	<QP>	<AV>	<QP>	<AV>		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	0.15000	25.62	3.15	12.38	38.00	15.53	66.00	56.00	28.0	40.4	N	
2	0.18715	23.41	0.78	12.39	35.80	13.17	64.16	54.16	28.3	40.9	N	
3	0.25988	21.47	9.55	12.40	33.87	21.95	61.44	51.44	27.5	29.4	N	
4	0.36869	17.74	-1.12	12.42	30.16	11.30	58.53	48.53	28.3	37.2	N	
5	0.51729	16.15	6.31	12.41	28.56	18.72	56.00	46.00	27.4	27.2	N	
6	1.29352	6.78	0.70	12.48	19.26	13.18	56.00	46.00	36.7	32.8	N	
7	2.48021	17.61	14.02	12.54	30.15	26.56	56.00	46.00	25.8	19.4	N	
8	4.89157	8.89	3.56	12.67	21.56	16.23	56.00	46.00	34.4	29.7	N	
9	0.15000	24.58	3.02	12.38	36.96	15.40	66.00	56.00	29.0	40.6	L1	
10	0.18700	23.47	1.05	12.39	35.86	13.44	64.17	54.17	28.3	40.7	L1	
11	0.25899	21.43	9.84	12.40	33.83	22.24	61.46	51.46	27.6	29.2	L1	
12	0.37426	17.77	0.17	12.42	30.19	12.59	58.41	48.41	28.2	35.8	L1	
13	0.51915	16.36	6.03	12.41	28.77	18.44	56.00	46.00	27.2	27.5	L1	
14	1.29076	6.32	0.12	12.48	18.80	12.60	56.00	46.00	37.2	33.4	L1	
15	2.47968	17.31	13.52	12.54	29.85	26.06	56.00	46.00	26.1	19.9	L1	
16	4.88912	7.98	2.56	12.67	20.65	15.23	56.00	46.00	35.3	30.7	L1	

Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN (AMN) +Cable+ATT) [dB]
LISN (AMN) : SLS-05

Conducted Emission

Antenna: 1001932PT
Test Point: VIO

DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2018/04/24

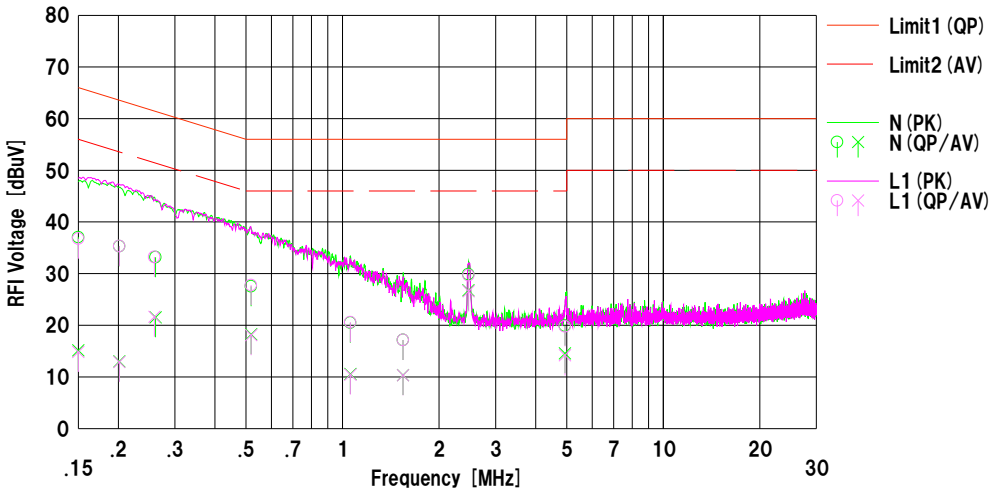
Mode : Tx 11a 5580 MHz

Power : DC 5 V
Temp./Humi. : 23 deg.C / 44 %RH

Remarks : VIO
Ant : 1001932PT

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Kazuya Noda



No.	Freq.	Reading <QP>	Reading <AV>	C.Fac	Results <QP>	Results <AV>	Limit <QP>	Limit <AV>	Margin <QP>	Margin <AV>	Phase	Comment
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	0.15000	24.67	2.77	12.38	37.05	15.15	66.00	56.00	28.9	40.8	N	
2	0.20142	22.91	0.63	12.38	35.29	13.01	63.55	53.55	28.2	40.5	N	
3	0.26142	20.78	9.15	12.40	33.18	21.55	61.39	51.39	28.2	29.8	N	
4	0.51904	15.14	5.85	12.41	27.55	18.26	56.00	46.00	28.4	27.7	N	
5	1.05784	8.02	-1.89	12.47	20.49	10.58	56.00	46.00	35.5	35.4	N	
6	1.54393	4.67	-2.14	12.48	17.15	10.34	56.00	46.00	38.8	35.6	N	
7	2.46862	17.34	14.22	12.54	29.88	26.76	56.00	46.00	26.1	19.2	N	
8	4.93641	7.24	1.89	12.67	19.91	14.56	56.00	46.00	36.0	31.4	N	
9	0.15000	24.38	2.47	12.38	36.76	14.85	66.00	56.00	29.2	41.1	L1	
10	0.20148	22.94	0.51	12.38	35.32	12.89	63.55	53.55	28.2	40.6	L1	
11	0.25916	20.81	9.23	12.40	33.21	21.63	61.46	51.46	28.2	29.8	L1	
12	0.51882	15.37	5.67	12.41	27.78	18.08	56.00	46.00	28.2	27.9	L1	
13	1.05786	8.11	-2.03	12.47	20.58	10.44	56.00	46.00	35.4	35.5	L1	
14	1.54388	4.68	-2.17	12.48	17.16	10.31	56.00	46.00	38.8	35.6	L1	
15	2.47109	17.13	14.04	12.54	29.67	26.58	56.00	46.00	26.3	19.4	L1	
16	4.93598	7.12	1.51	12.67	19.79	14.18	56.00	46.00	36.2	31.8	L1	

Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN (AMN) +Cable+ATT) [dB]
LISN (AMN) : SLS-05

Conducted Emission

Antenna: 1001932FT
Test Point: Vmain

DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2018/04/25

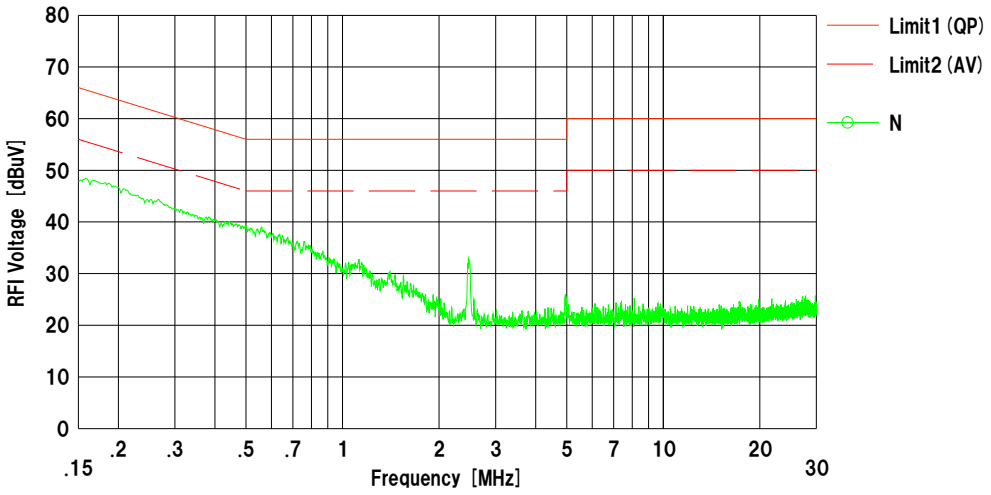
Mode : Tx 11a 5580 MHz

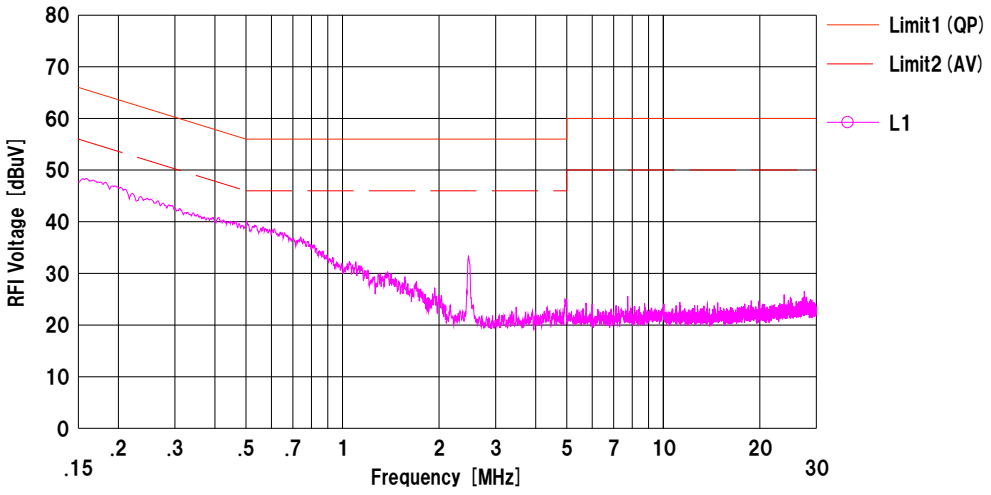
Power : DC 3.3 V
Temp./Humi. : 23 deg.C / 44 %RH

Remarks : Vmain
Ant : 1001932FT

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Kazuya Noda





Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN (AMN) +Cable+ATT) [dB]
LISN (AMN) : SLS-05

Conducted Emission

Antenna: 1001932FT
Test Point: VIO

DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2018/04/25

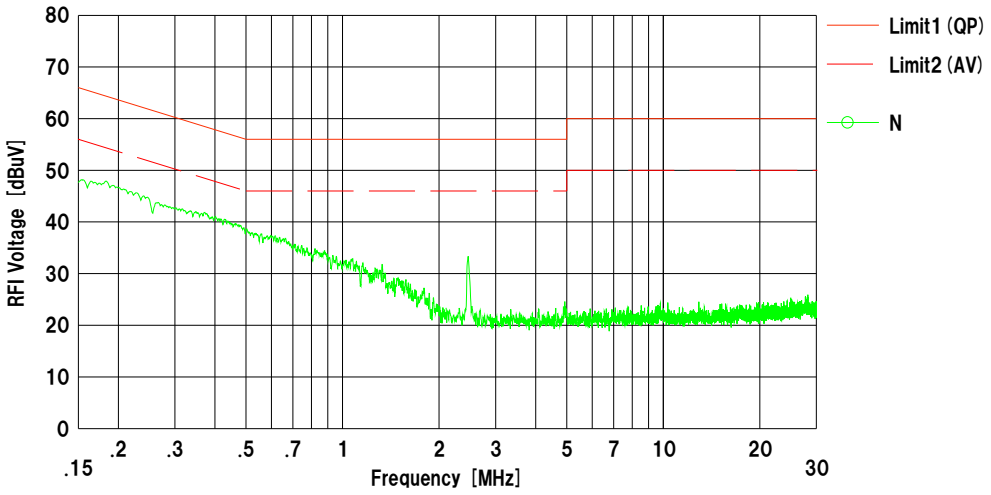
Mode : Tx 11a 5580 MHz

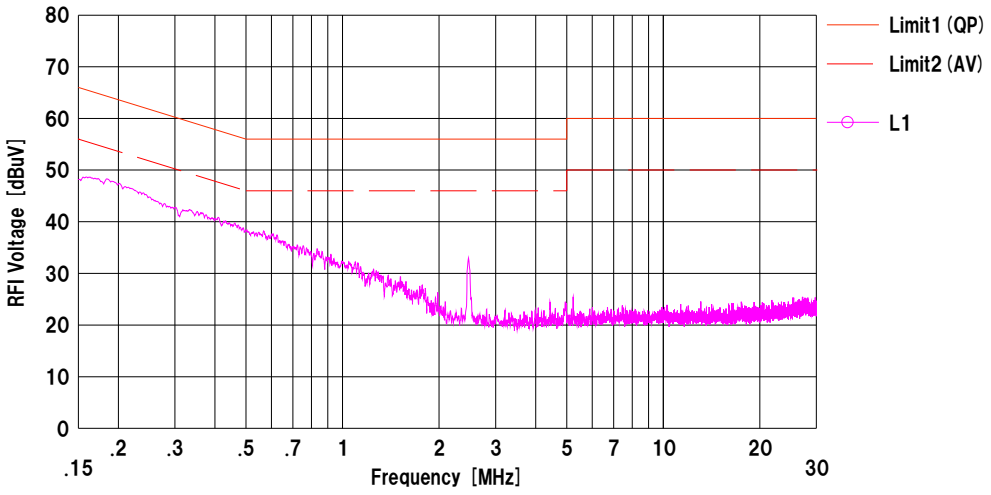
Power : DC 5 V
Temp./Humi. : 23 deg.C / 44 %RH

Remarks : VIO
Ant : 1001932FT

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Kazuya Noda





Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN (AMN) +Cable+ATT) [dB]
LISN (AMN) : SLS-05

Conducted Emission

Antenna: Chip
Test Point: Vmain

DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2018/04/25

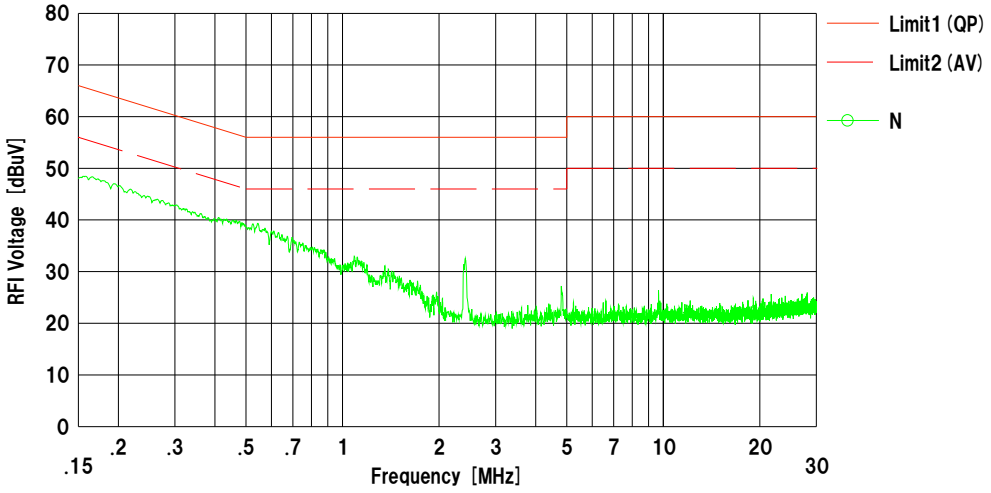
Mode : Tx 11a 5580 MHz

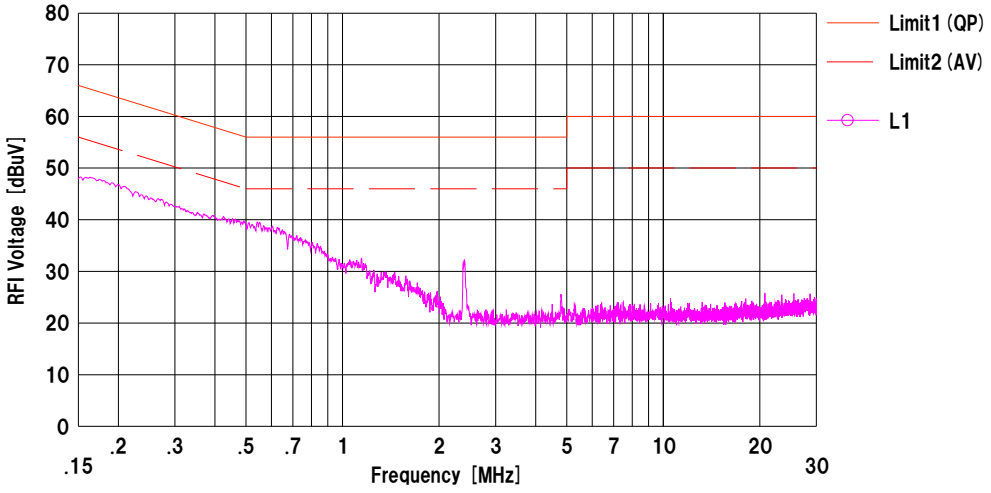
Power : DC 3.3 V
Temp./Humi. : 23 deg.C / 44 %RH

Remarks : Vmain

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Kazuya Noda





Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN (AMN) +Cable+ATT) [dB]
LISN (AMN) : SLS-05

Conducted Emission

Antenna: Chip
Test Point: VIO

DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2018/04/24

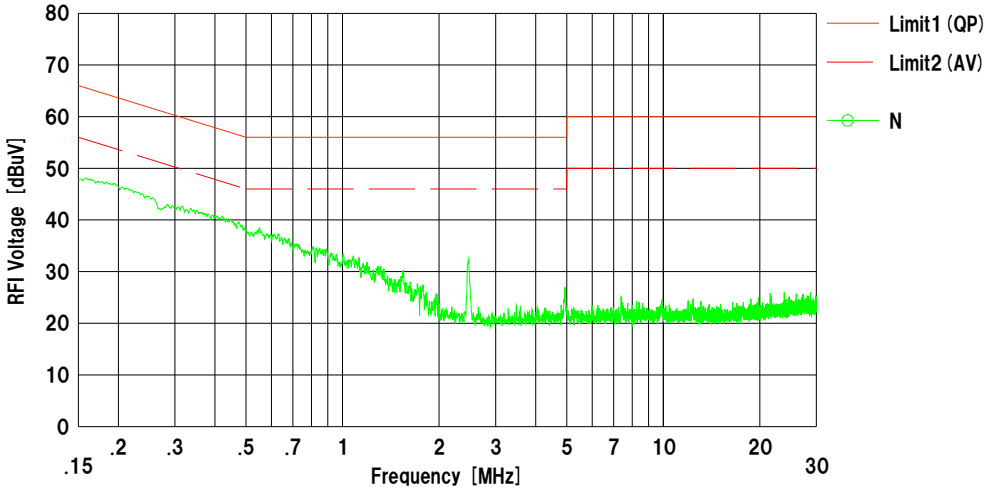
Mode : Tx 11a 5580 MHz

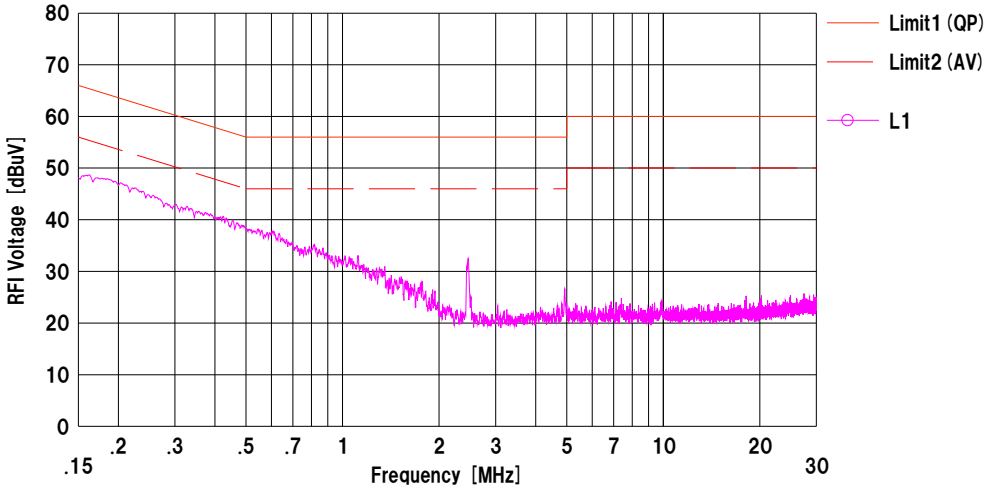
Power : DC 5 V
Temp./Humi. : 23 deg.C / 44 %RH

Remarks : VIO

Limit1 : FCC 15C (15.207) QP
Limit2 : FCC 15C (15.207) AV

Engineer : Kazuya Noda





Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN (AMN) +Cable+ATT) [dB]
LISN (AMN) : SLS-05

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Shiro Kobayashi
Mode	Tx

11a

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	16661.3
5220	-	16658.6
5240	-	16650.2
5260	18.993	16662.7
5300	19.029	16666.5
5320	19.267	16668.9
5500	19.283	16661.3
5580	19.196	16696.9
5700	18.904	16679.6
5745	-	16656.9
5785	-	16646.1
5825	-	16664.5

11n-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	17707.1
5220	-	17699.3
5240	-	17750.0
5260	19.826	17721.4
5300	19.805	17705.4
5320	19.867	17736.9
5500	19.917	17731.7
5580	19.974	17728.4
5700	19.726	17738.6
5745	-	17712.7
5785	-	17745.2
5825	-	17755.0

11ac-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	17759.9
5220	-	17713.7
5240	-	17758.0
5260	19.610	17767.9
5300	19.659	17782.6
5320	19.633	17716.0
5500	19.714	17756.1
5580	19.766	17804.7
5700	19.733	17760.3
5745	-	17768.9
5785	-	17724.3
5825	-	17751.7

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Shiro Kobayashi
Mode	Tx

11n-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5190	-	36223.6
5230	-	36215.9
5270	39.879	36214.4
5310	39.740	36192.2
5510	39.616	36253.8
5550	39.508	36194.2
5670	39.278	36253.7
5755	-	36216.8
5795	-	36183.7

11ac-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5190	-	36306.1
5230	-	36291.1
5270	40.029	36227.9
5310	39.807	36160.1
5510	39.928	36226.4
5550	40.230	36246.9
5670	40.145	36275.5
5755	-	36415.2
5795	-	36233.3

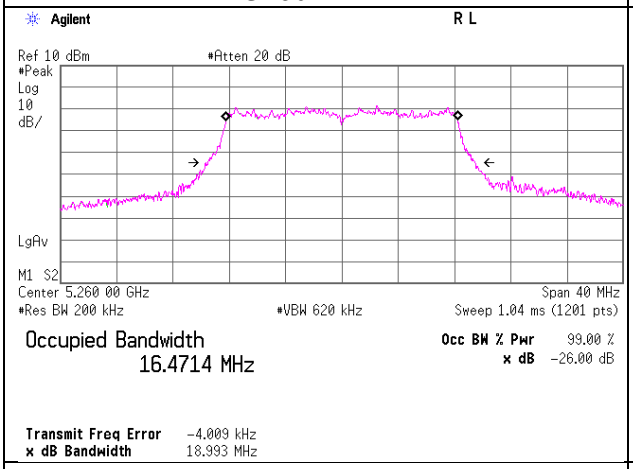
11ac-80

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5210	-	76158.9
5290	81.722	76280.9
5530	81.503	76210.7
5610	81.195	76241.4
5775	-	76238.1

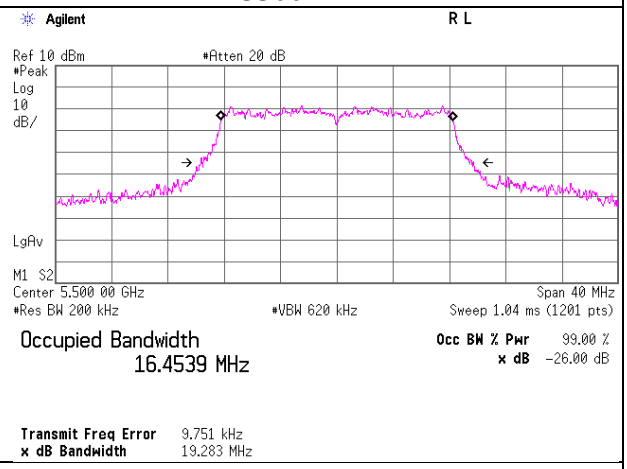
26 dB Emission Bandwidth

11a

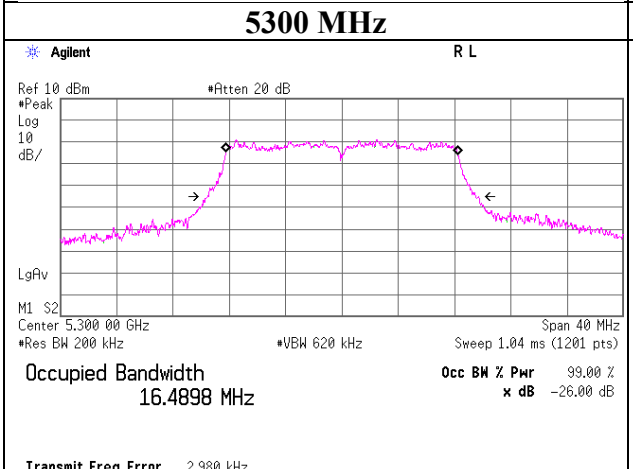
5260 MHz



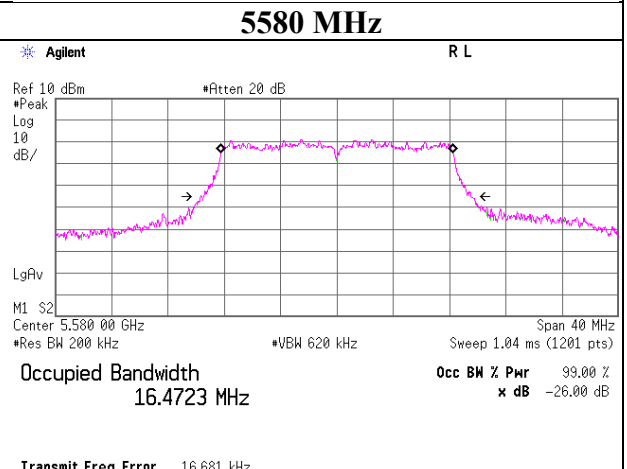
5500 MHz



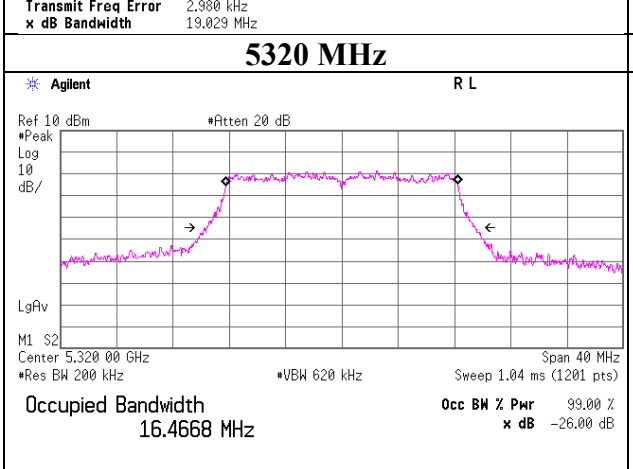
5300 MHz



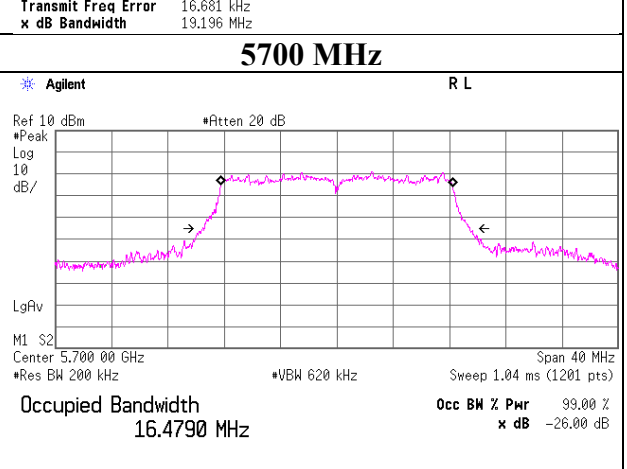
5580 MHz



5320 MHz



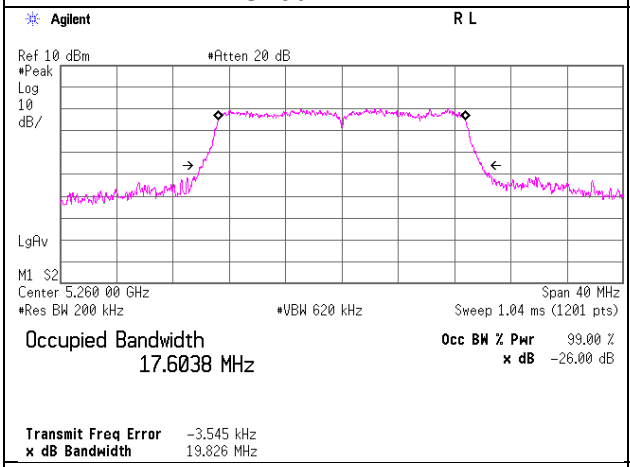
5700 MHz



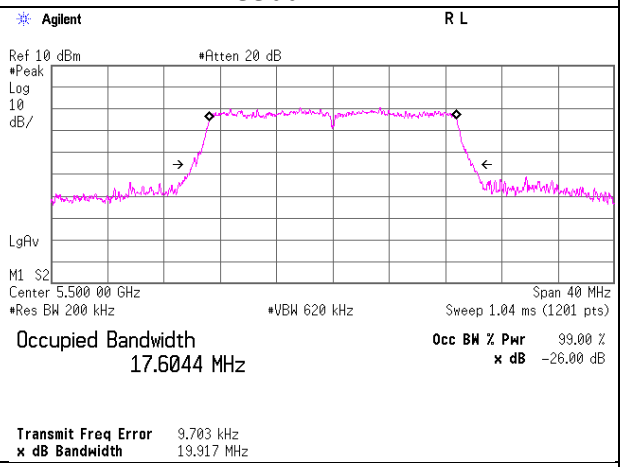
26 dB Emission Bandwidth

11n-20

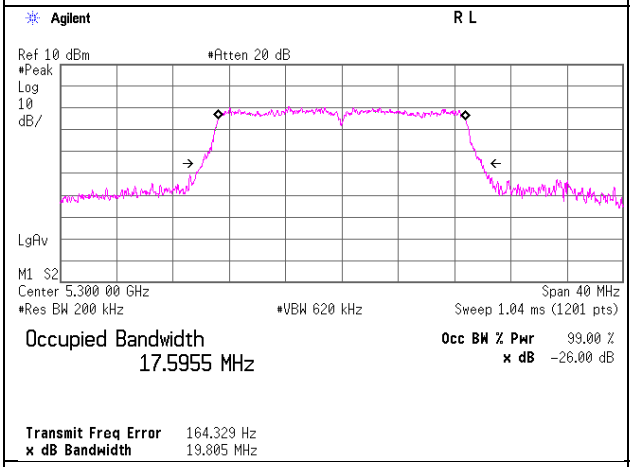
5260 MHz



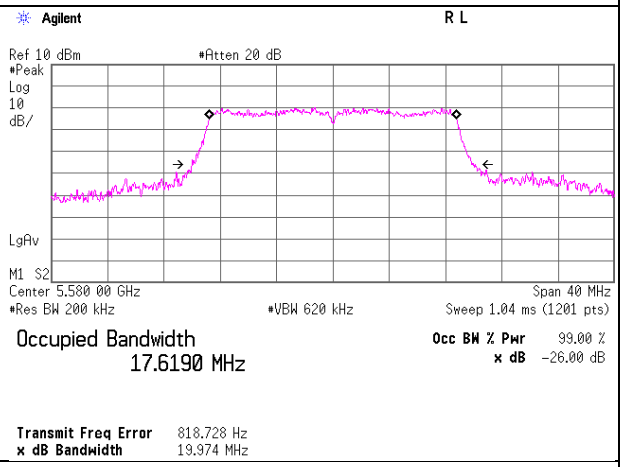
5500 MHz



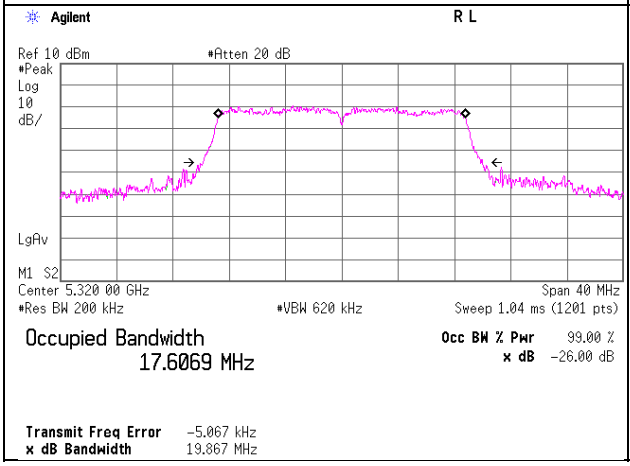
5300 MHz



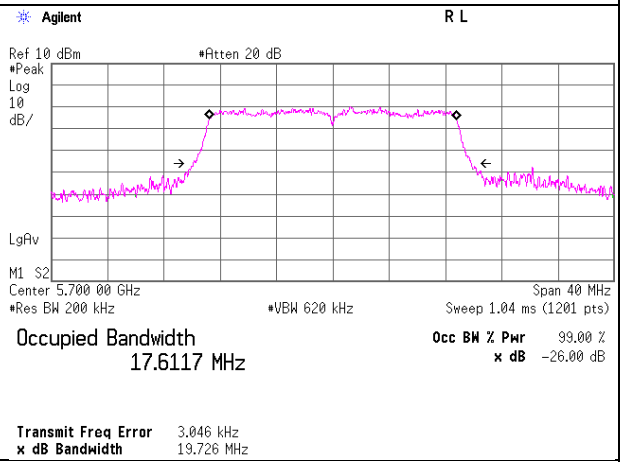
5580 MHz



5320 MHz



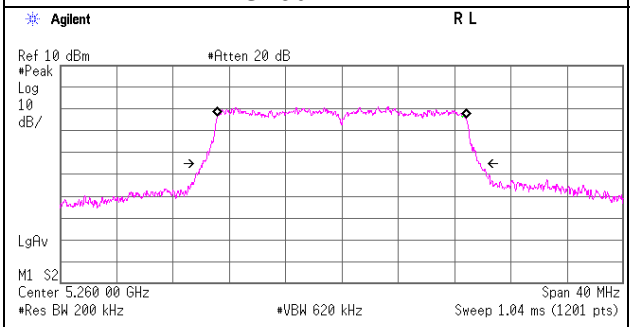
5700 MHz



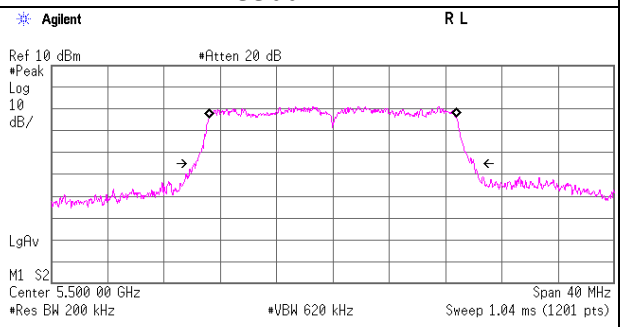
26 dB Emission Bandwidth

11ac-20

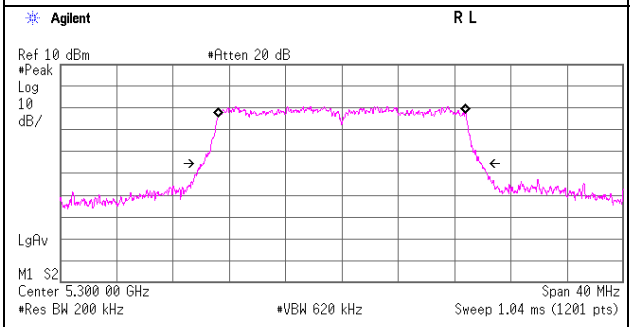
5260 MHz



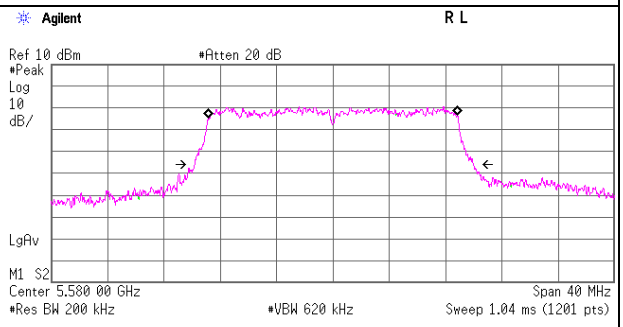
5500 MHz



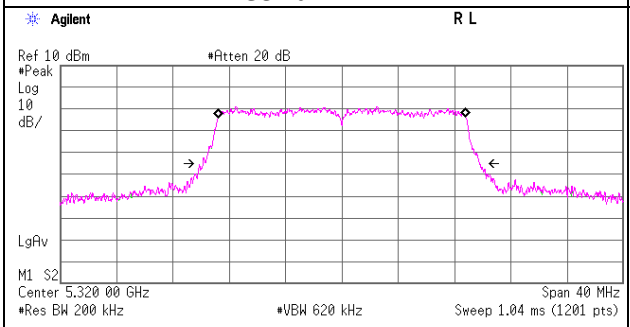
5300 MHz



5580 MHz



5320 MHz



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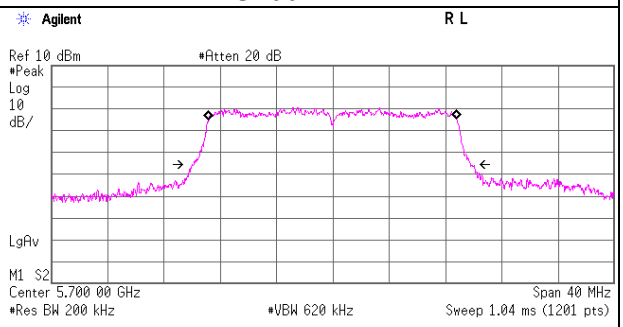
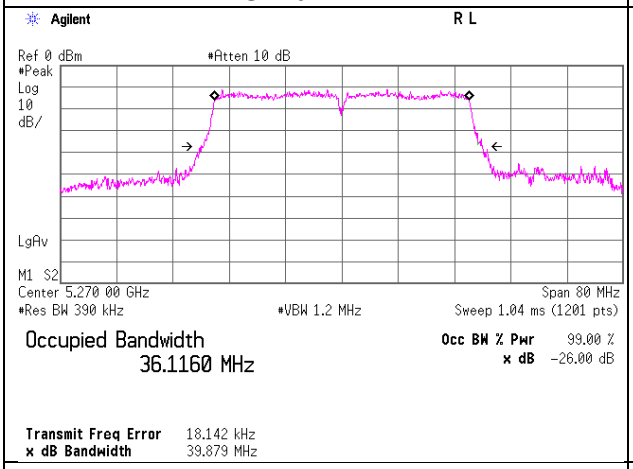


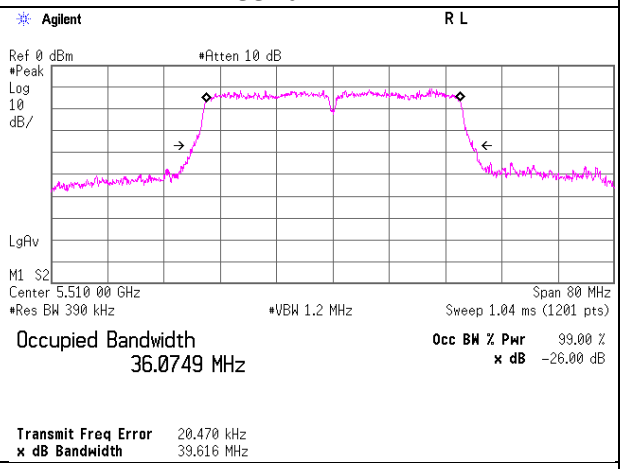
26 dB Emission Bandwidth

11n-40

5270 MHz



5510 MHz



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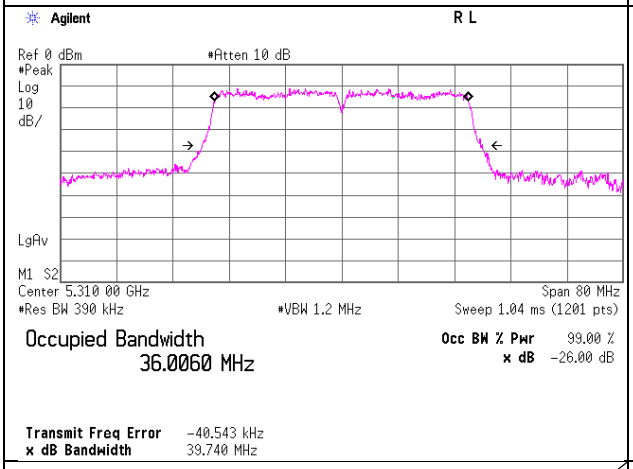
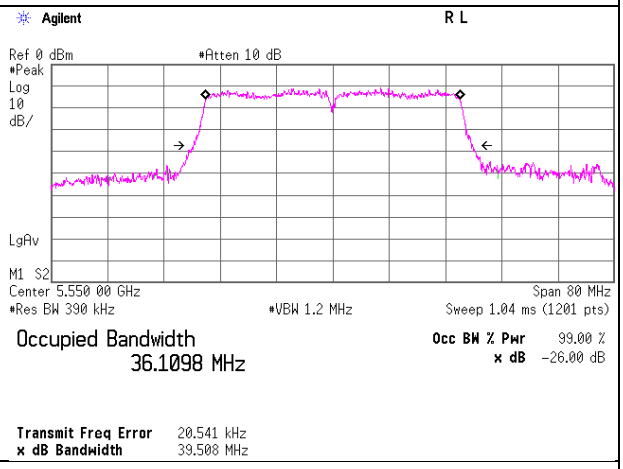
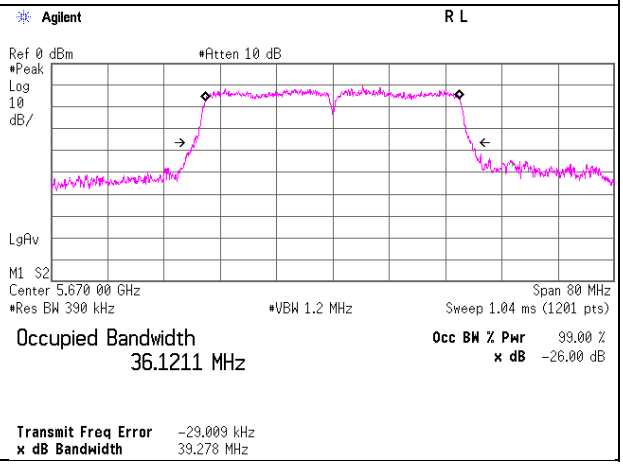


5550 MHz



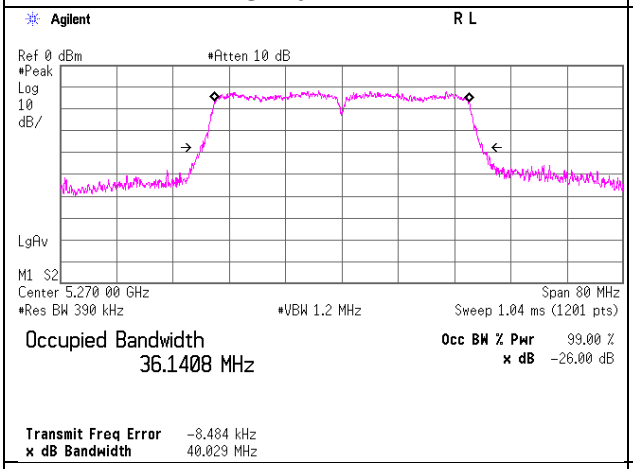
5670 MHz



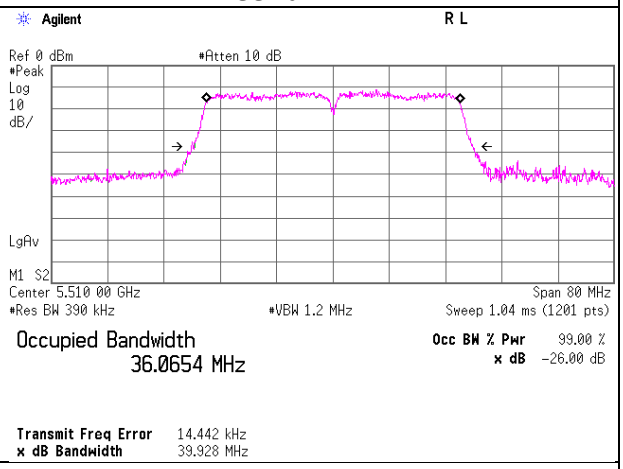
26 dB Emission Bandwidth

11ac-40

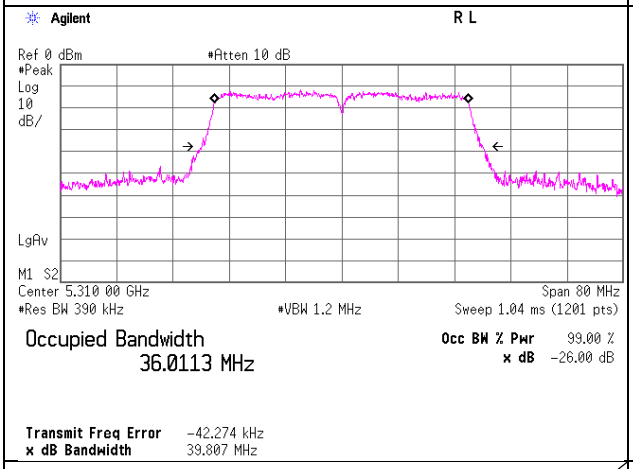
5270 MHz



5510 MHz



5310 MHz



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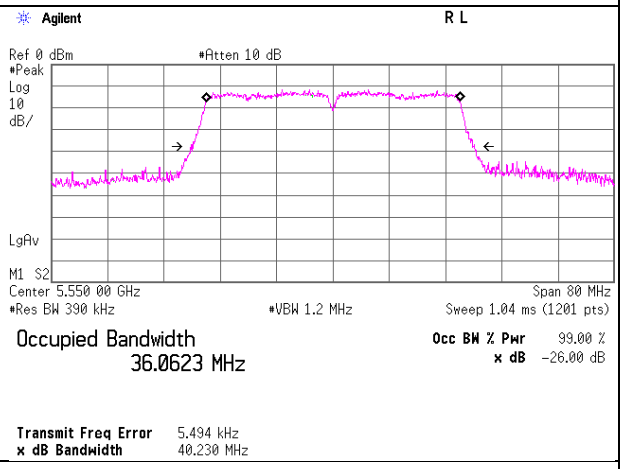

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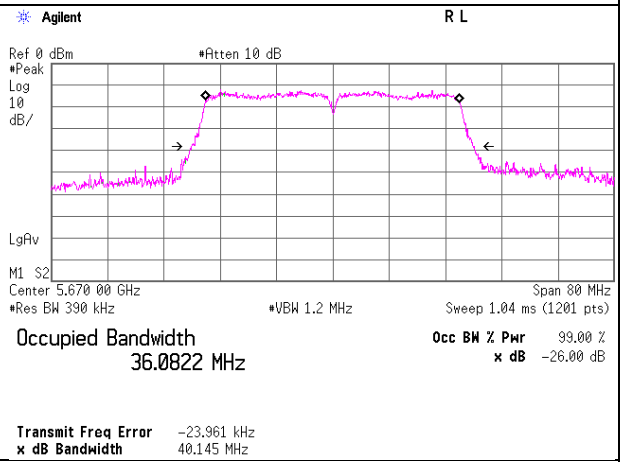
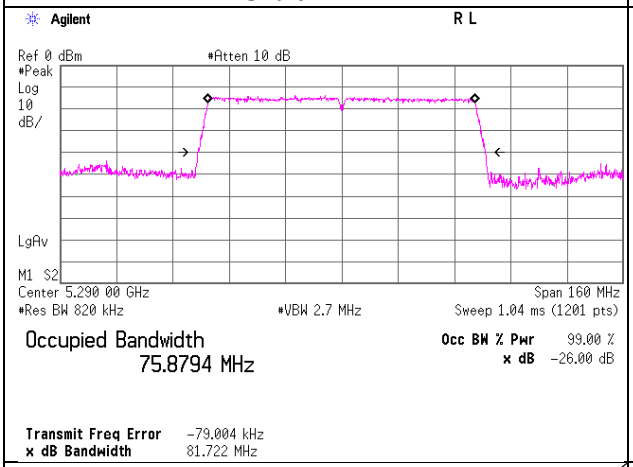


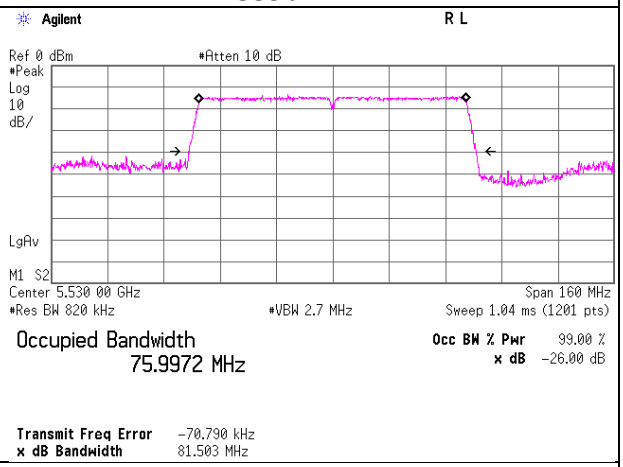
26 dB Emission Bandwidth

11ac-80

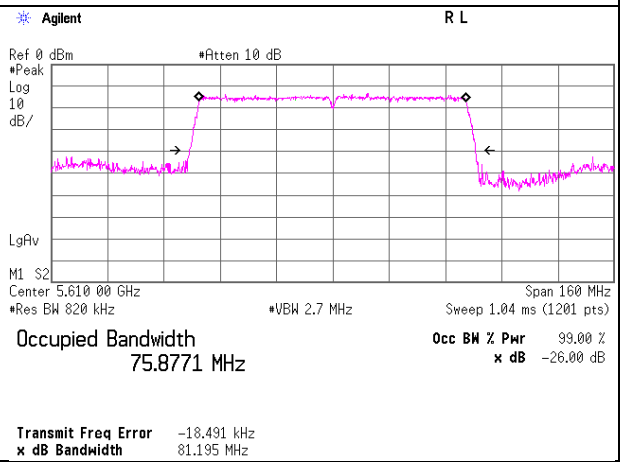
5290 MHz



5530 MHz



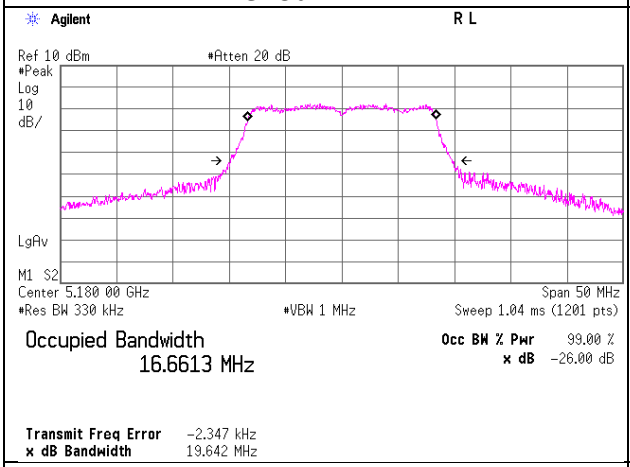
5610 MHz



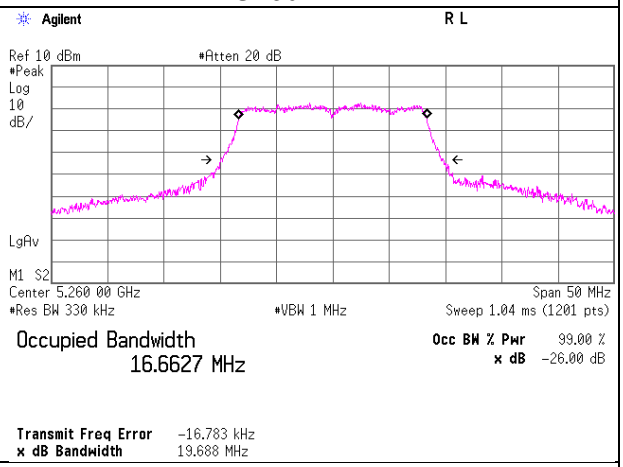
99 % Occupied Bandwidth

11a

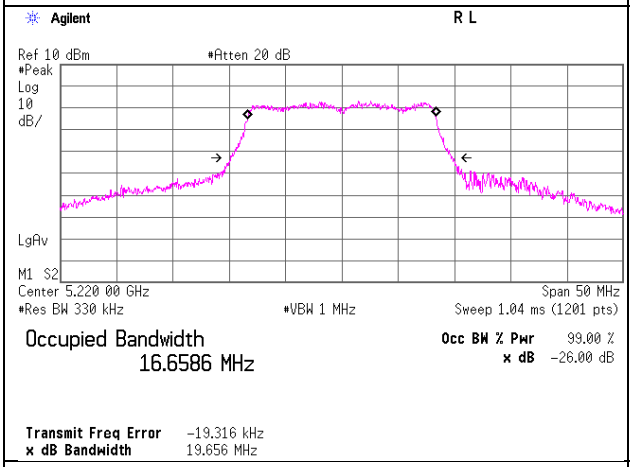
5180 MHz



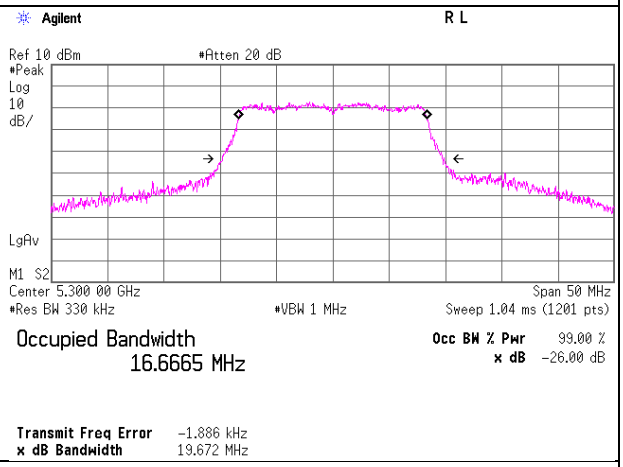
5260 MHz



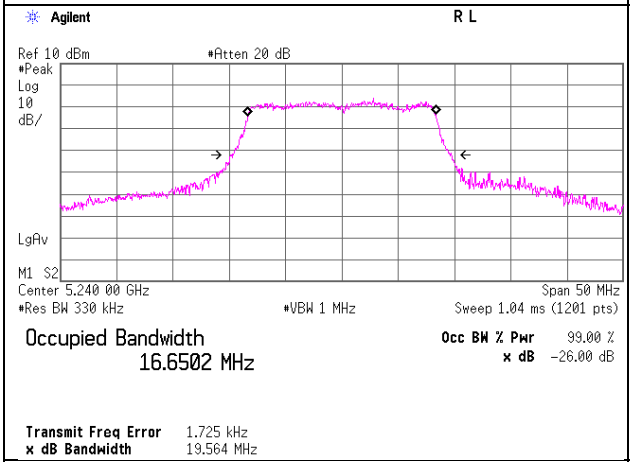
5220 MHz



5300 MHz



5240 MHz



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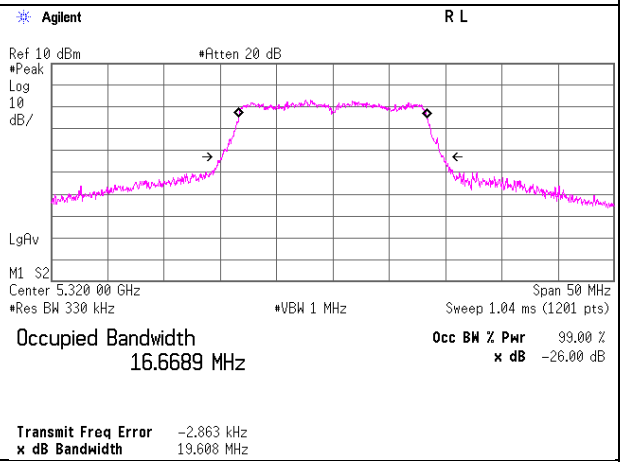
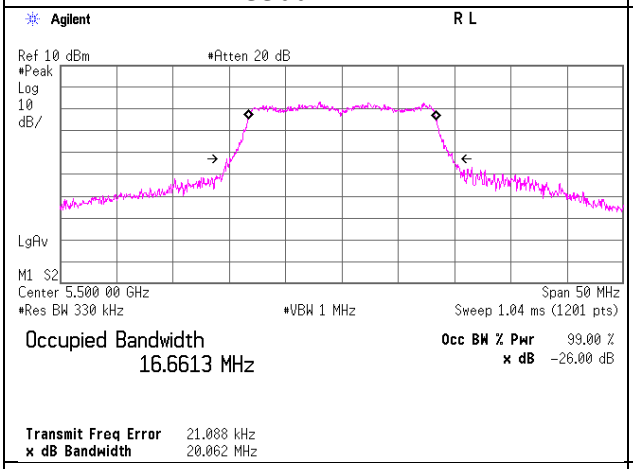


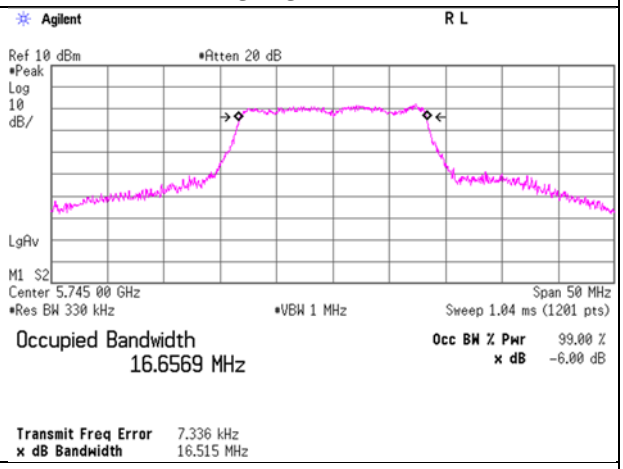
99 % Occupied Bandwidth

11a

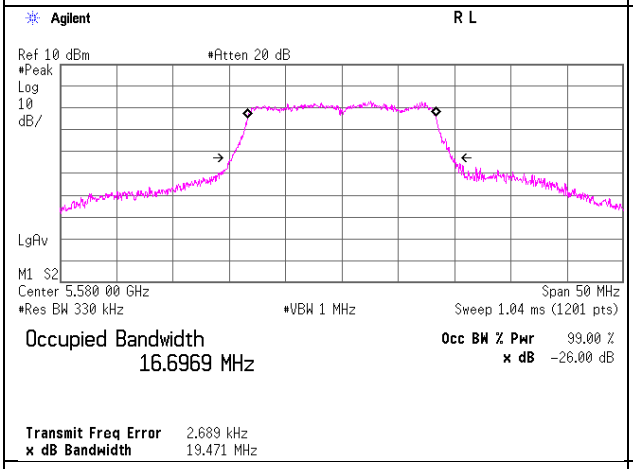
5500 MHz



5745 MHz



5580 MHz



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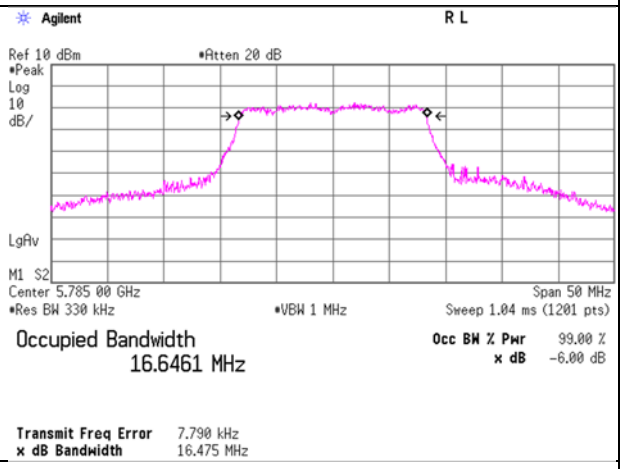

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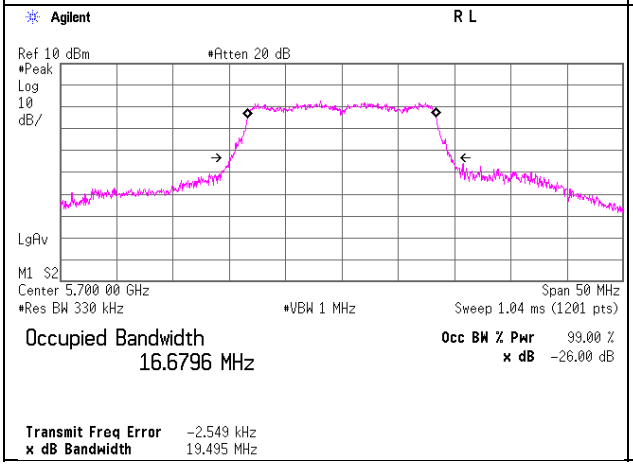
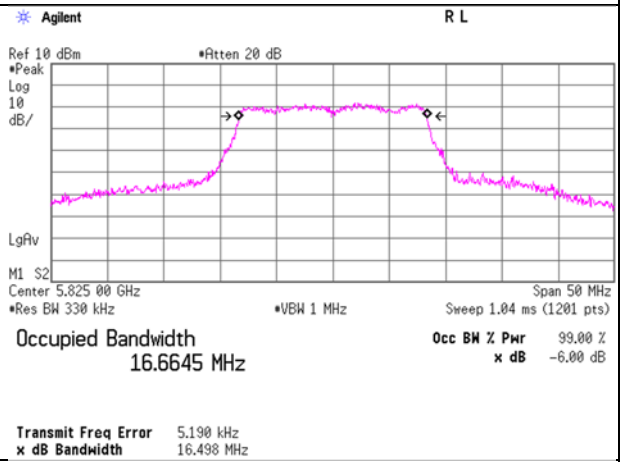


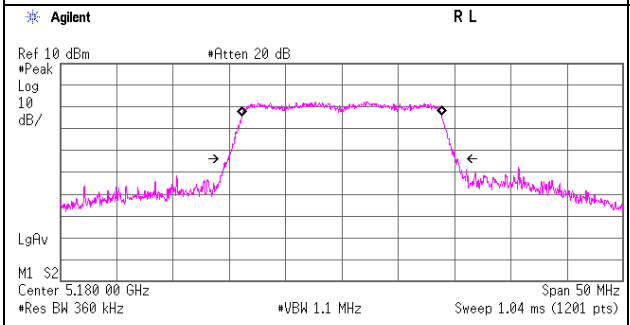
5825 MHz



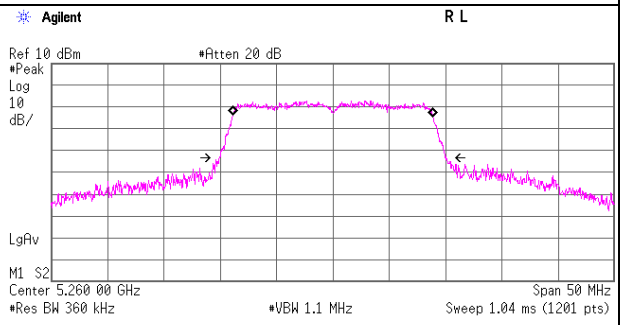
99 % Occupied Bandwidth

11n-20

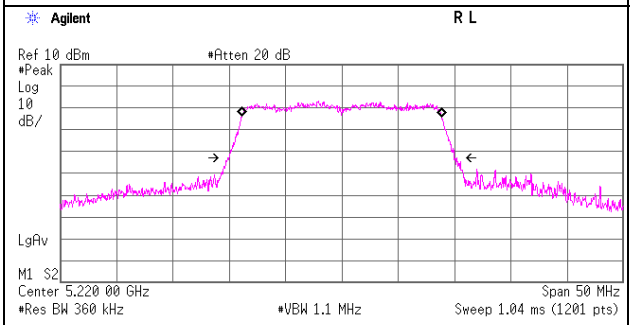
5180 MHz



5260 MHz



5220 MHz



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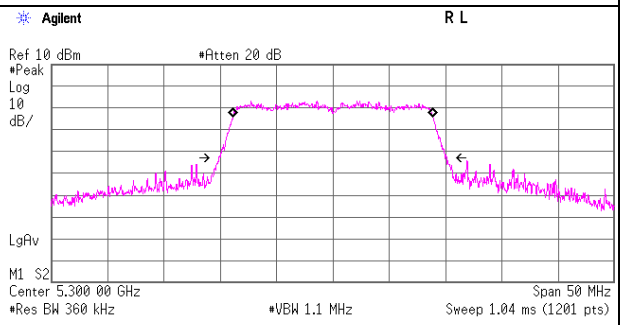
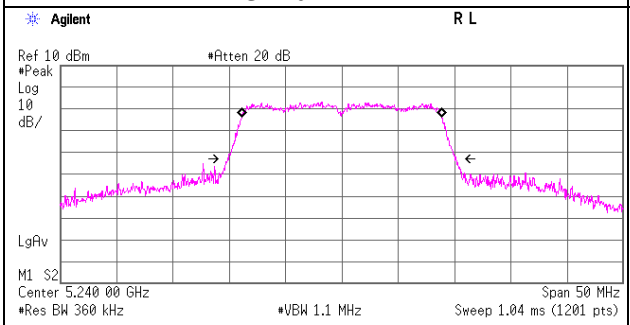


5240 MHz



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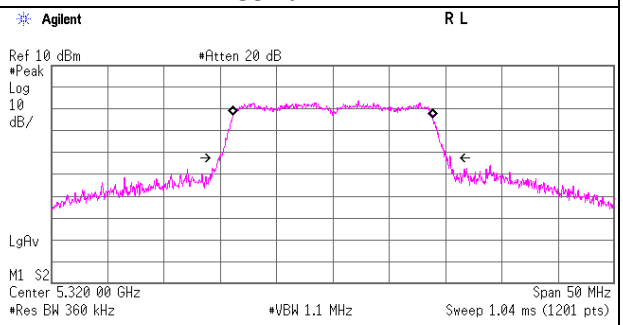
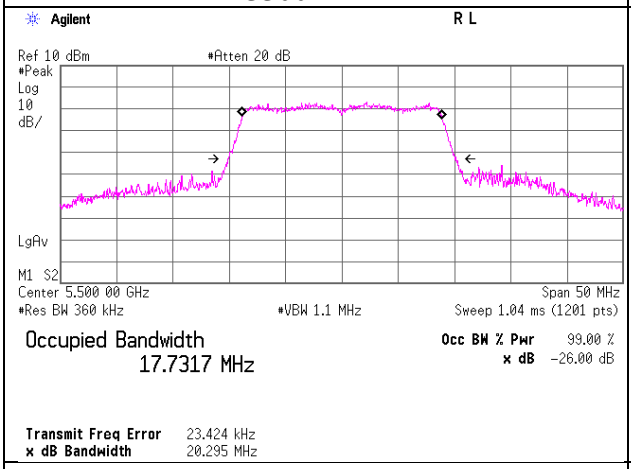


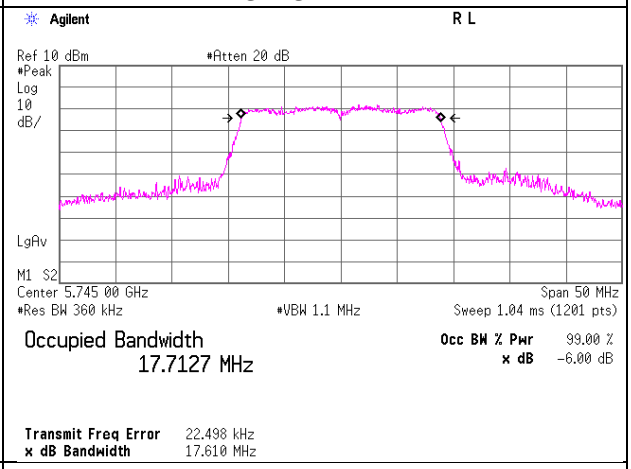
99 % Occupied Bandwidth

11n-20

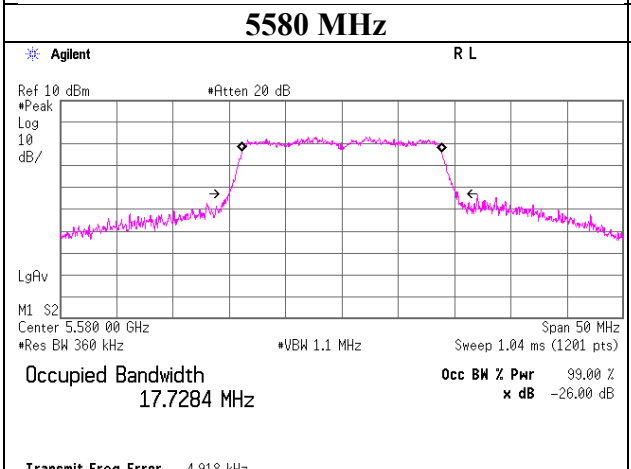
5500 MHz



5745 MHz



5580 MHz



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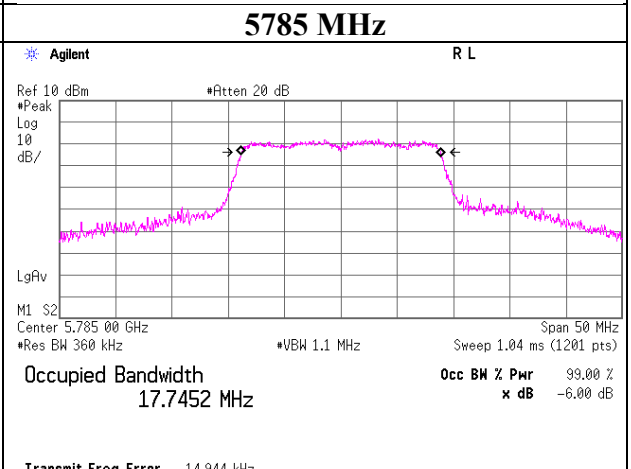

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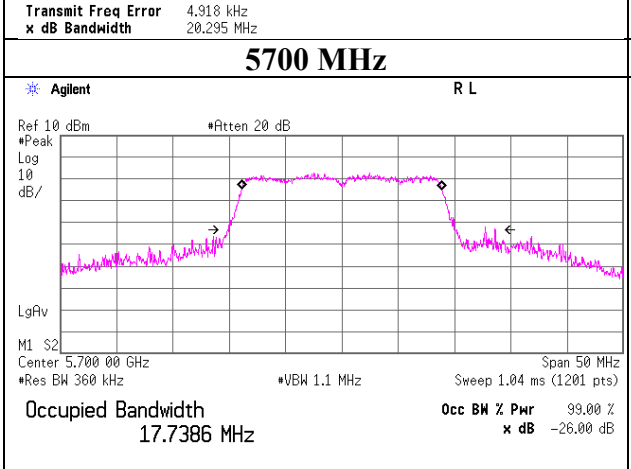
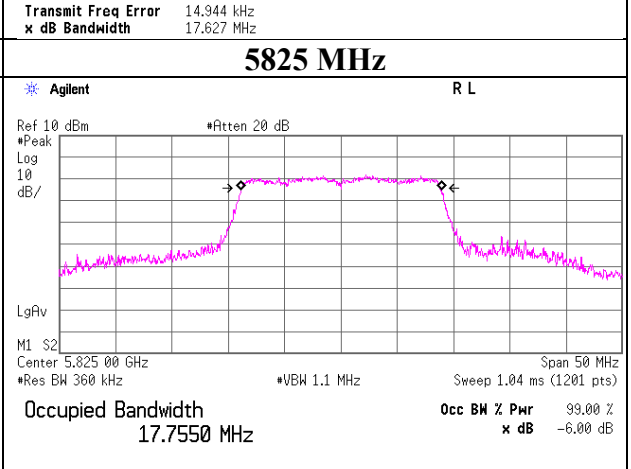


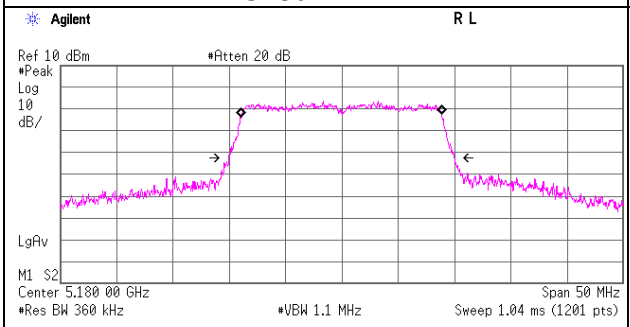
5825 MHz



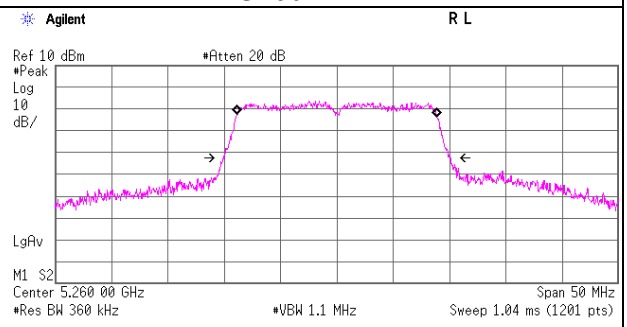
99 % Occupied Bandwidth

11ac-20

5180 MHz



5260 MHz



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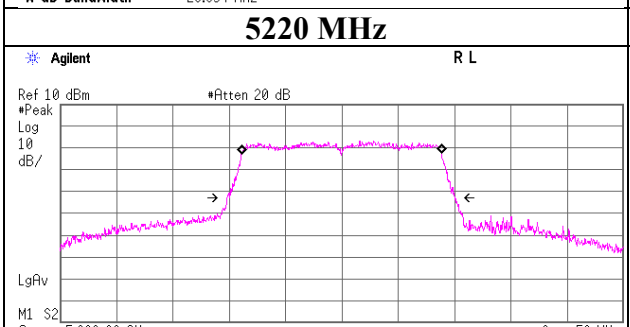

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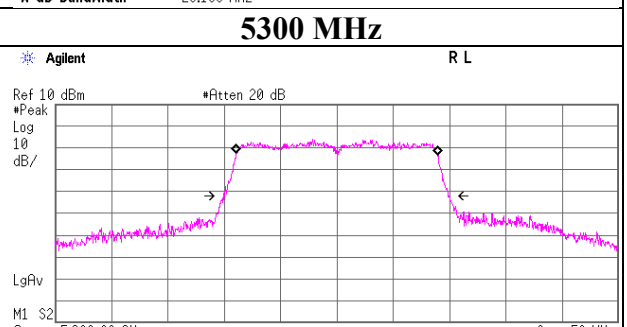
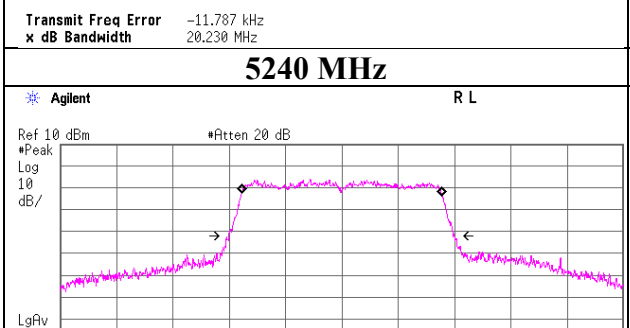


5240 MHz



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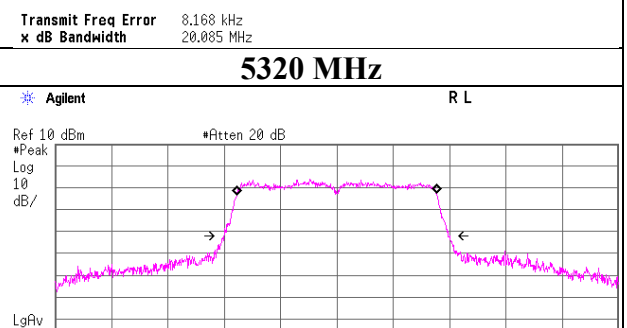
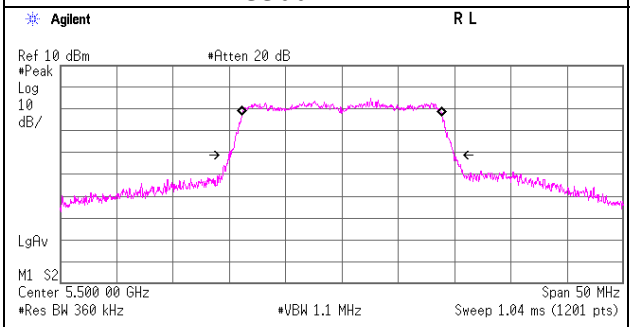


99 % Occupied Bandwidth

11ac-20

5500 MHz



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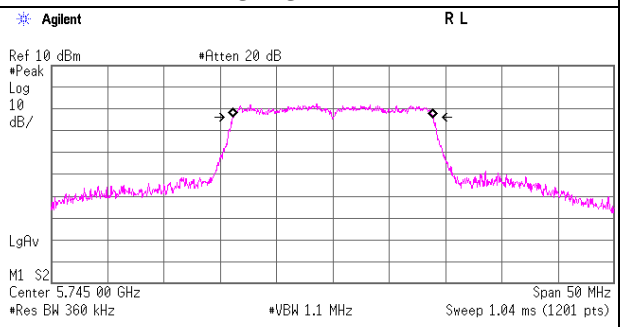

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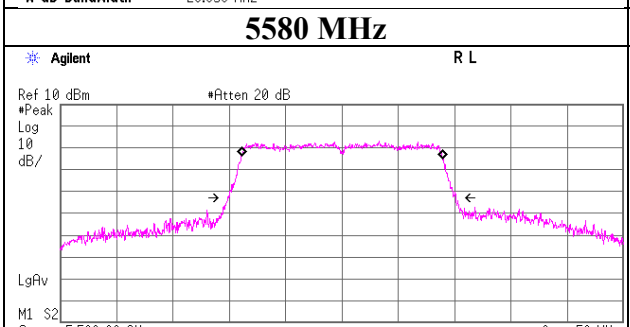

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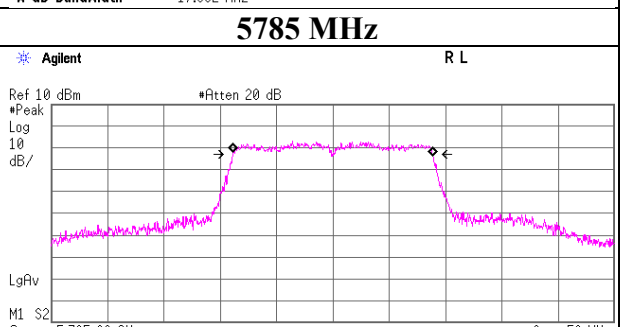

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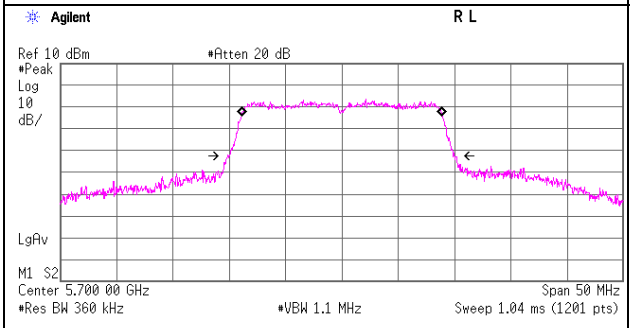
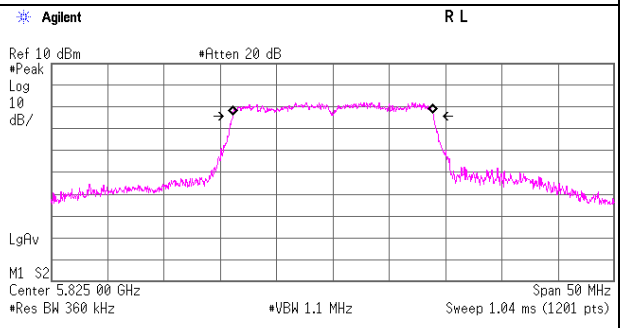


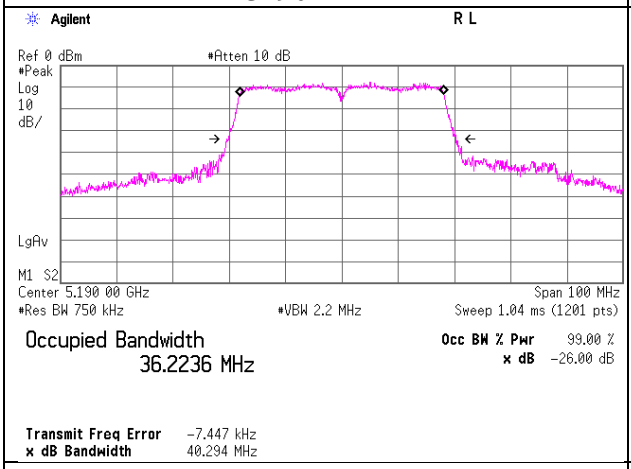
5825 MHz



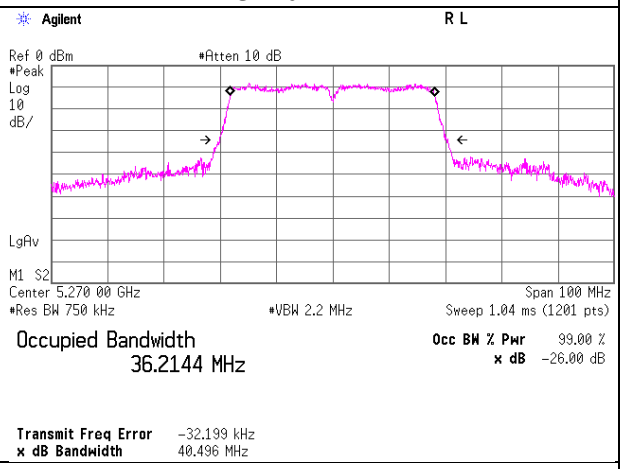
99 % Occupied Bandwidth

11n-40

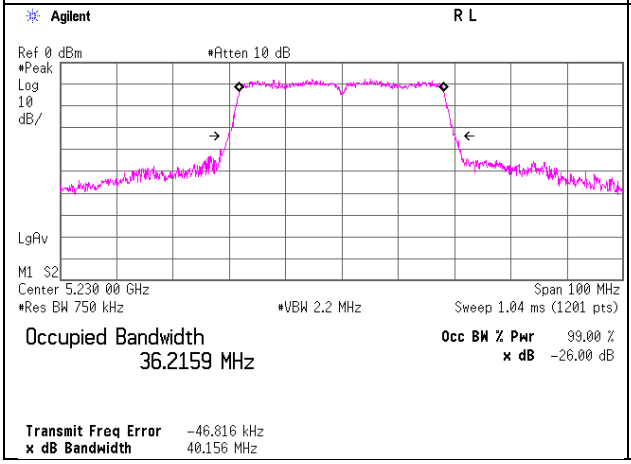
5190 MHz



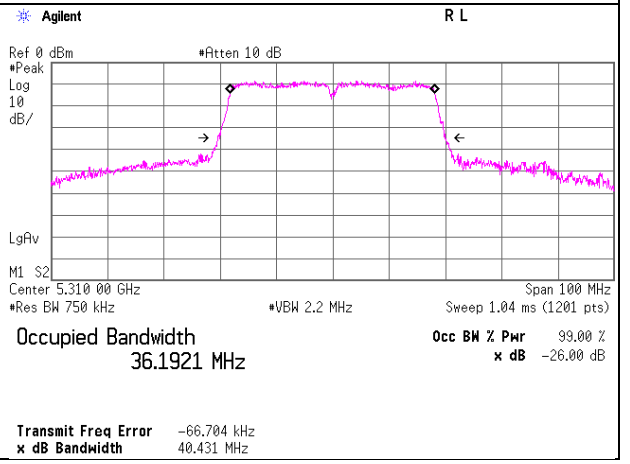
5270 MHz



5230 MHz



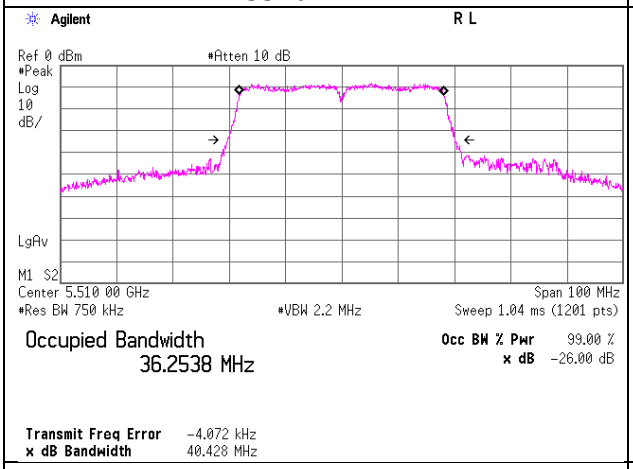
5310 MHz



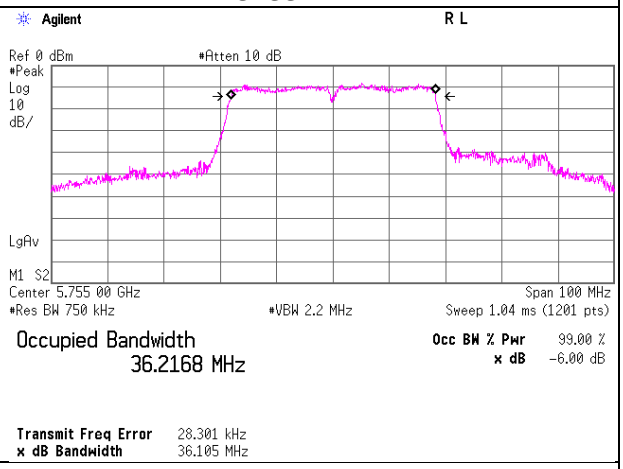
99 % Occupied Bandwidth

11n-40

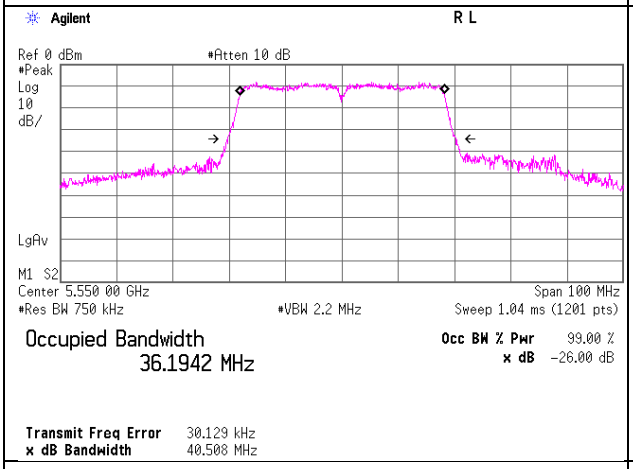
5510 MHz



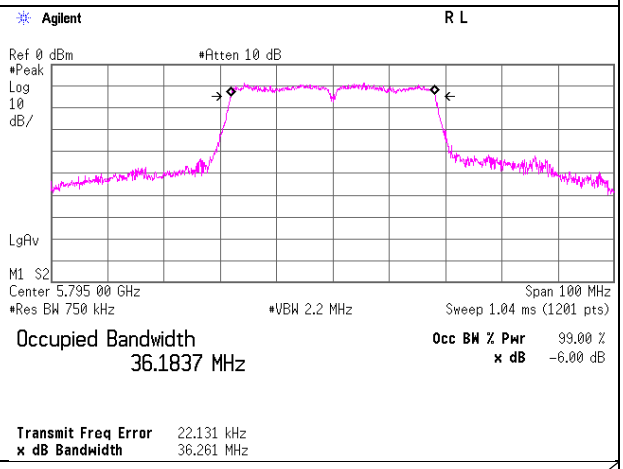
5755 MHz



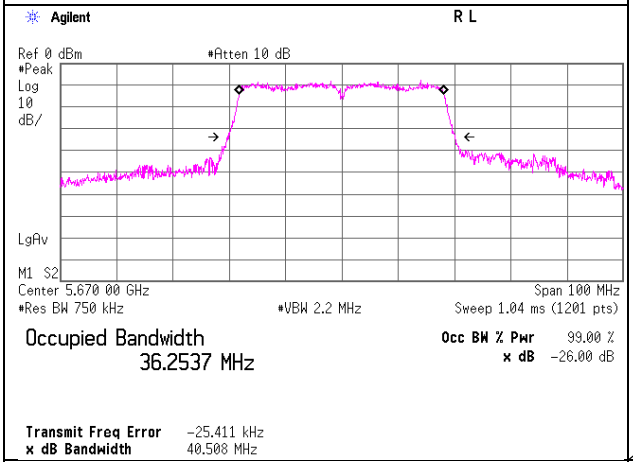
5550 MHz



5795 MHz



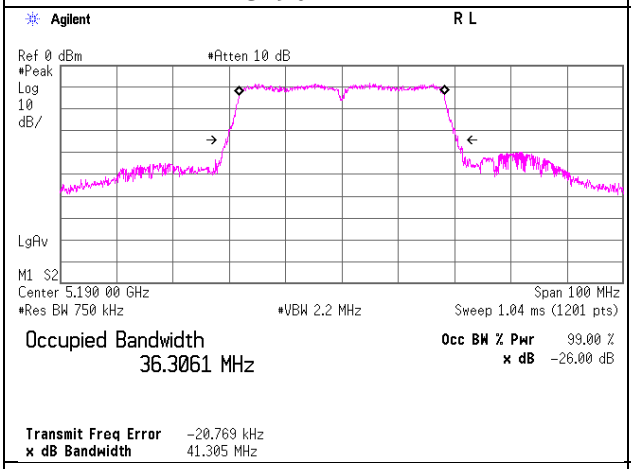
5670 MHz



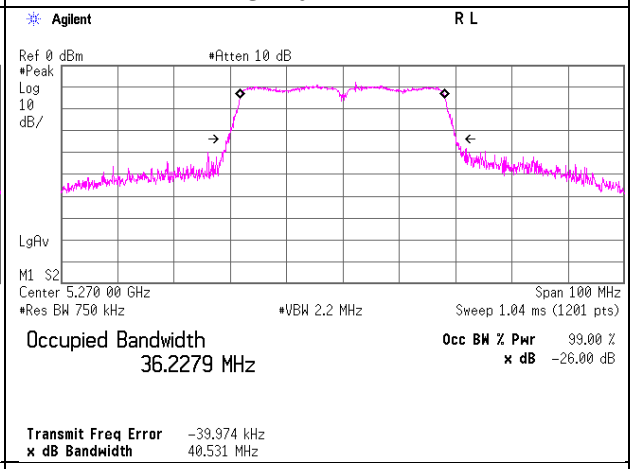
99 % Occupied Bandwidth

11ac-40

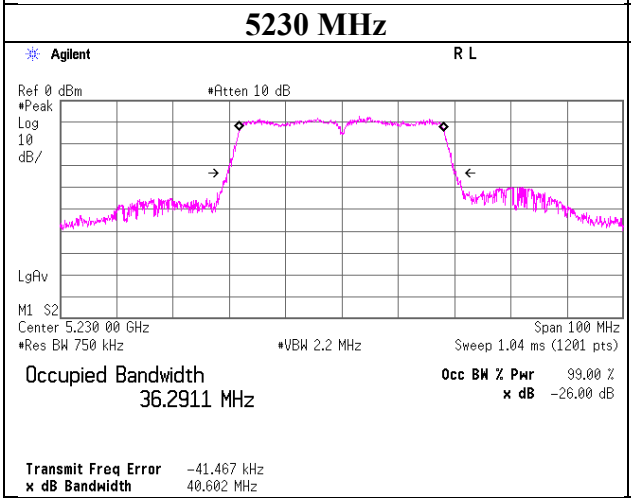
5190 MHz



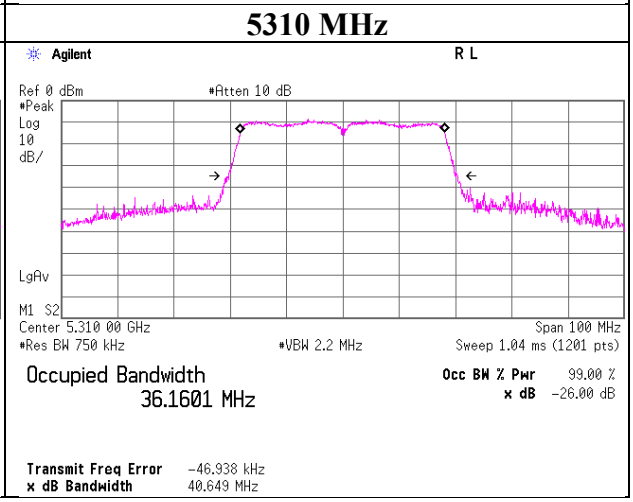
5270 MHz



5230 MHz



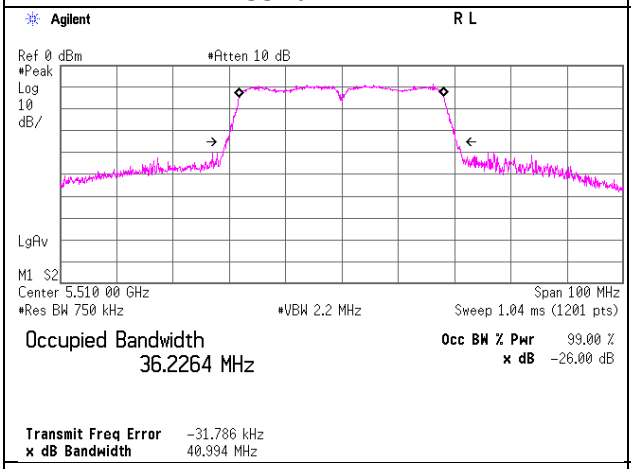
5310 MHz



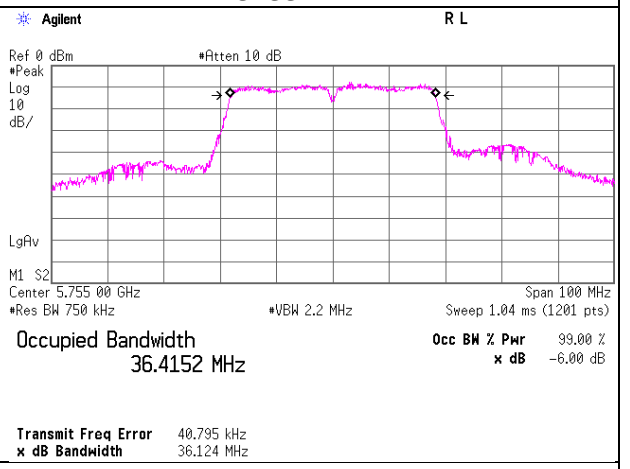
99 % Occupied Bandwidth

11ac-40

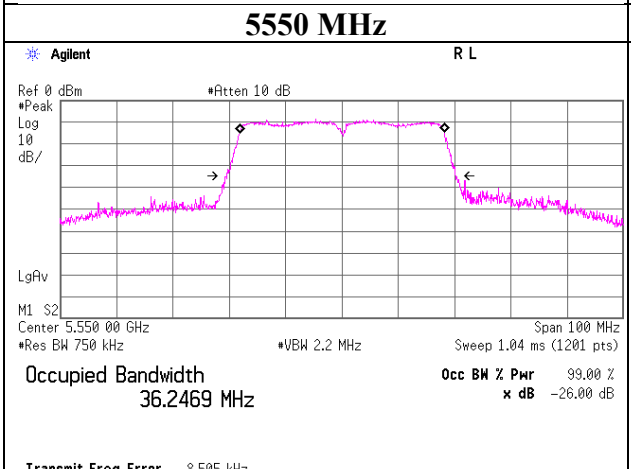
5510 MHz



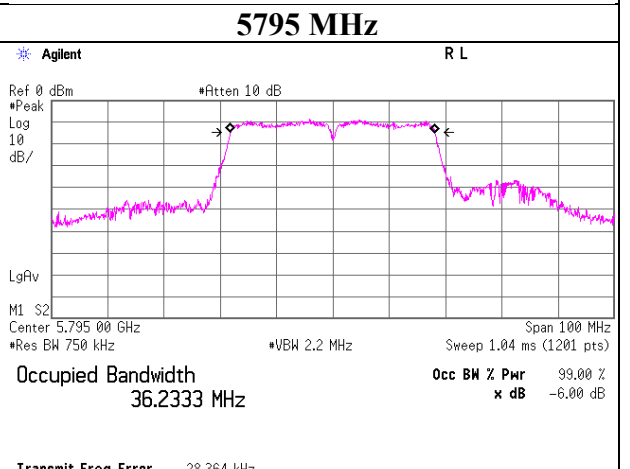
5755 MHz



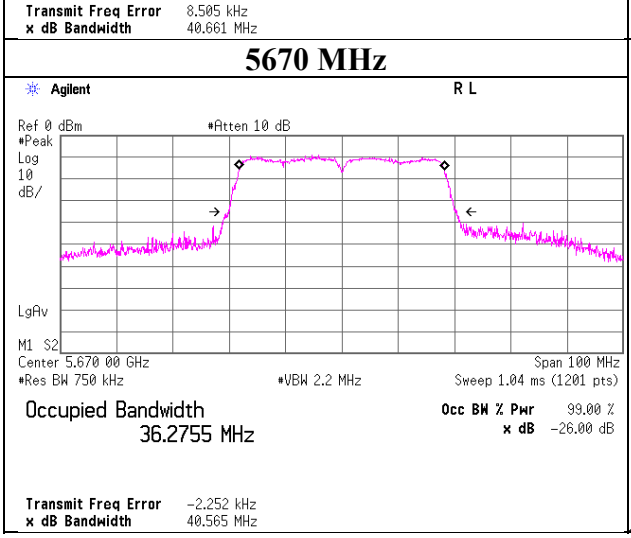
5550 MHz



5795 MHz



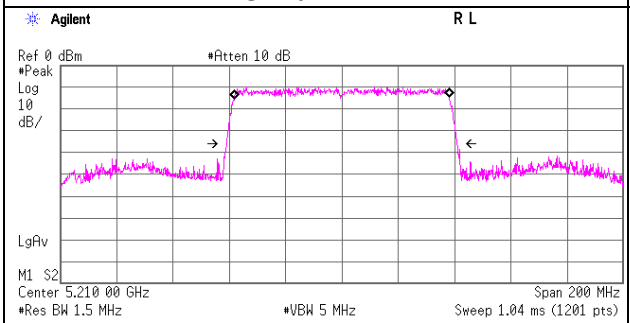
5670 MHz



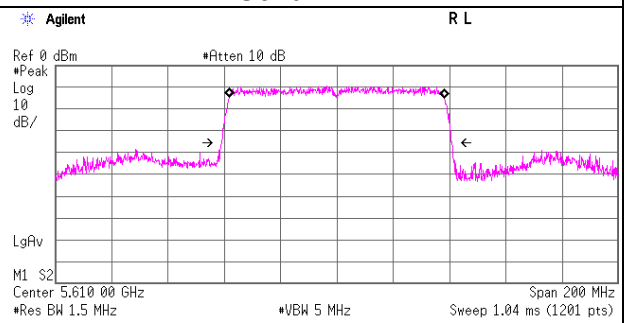
99 % Occupied Bandwidth

11ac-80

5210 MHz

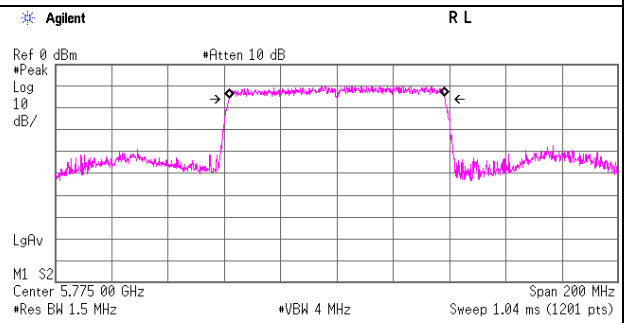


5610 MHz

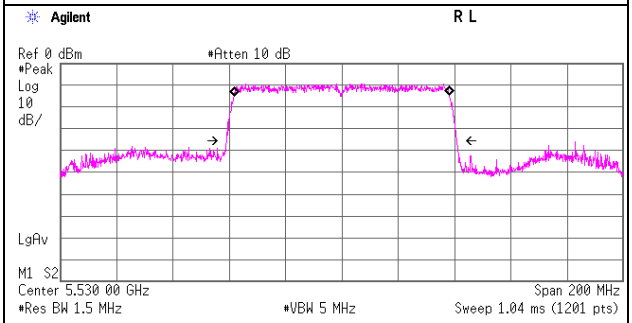


5290 MHz

5775 MHz



5530 MHz



6 dB Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Shiro Kobayashi
Mode	Tx

11a

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
5745	16.381	> 0.500
5785	16.370	> 0.500
5825	16.378	> 0.500

11n-20

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
5745	17.671	> 0.500
5785	17.312	> 0.500
5825	17.658	> 0.500

11ac-20

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
5745	17.627	> 0.500
5785	17.734	> 0.500
5825	17.668	> 0.500

11n-40

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
5755	36.108	> 0.500
5795	35.774	> 0.500

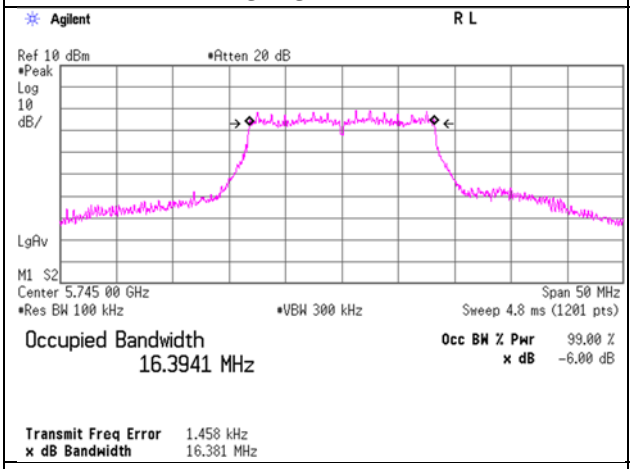
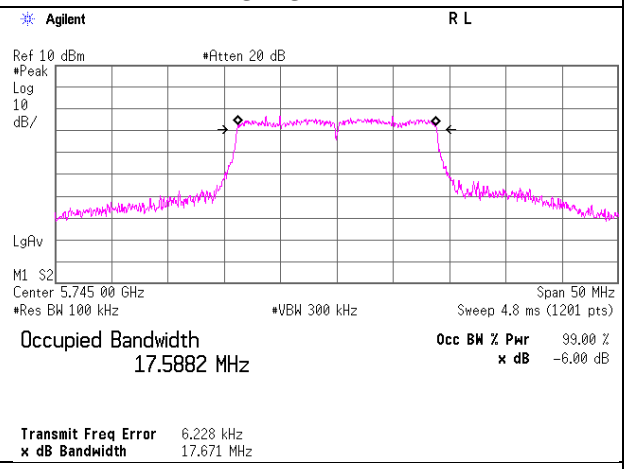
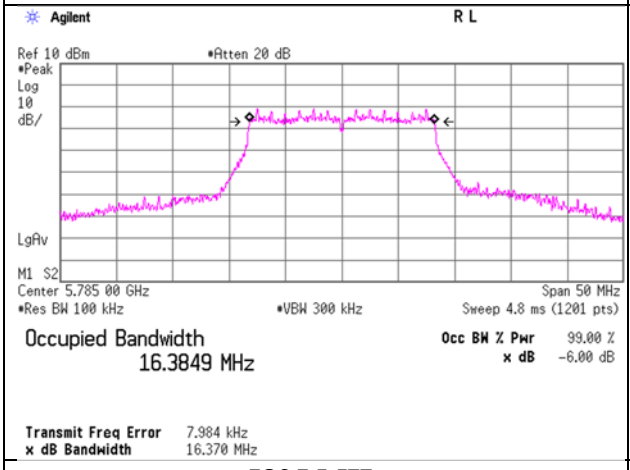
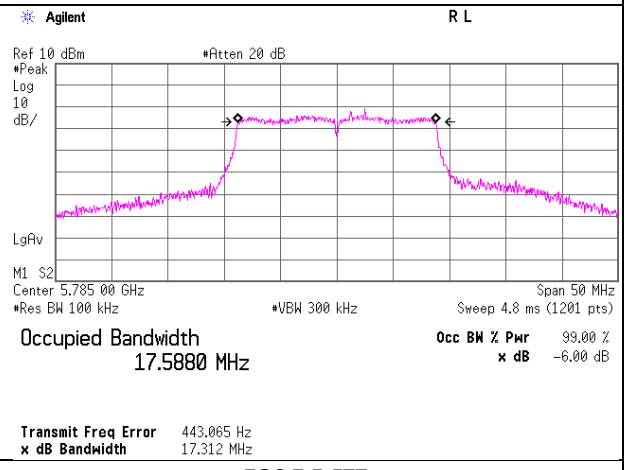
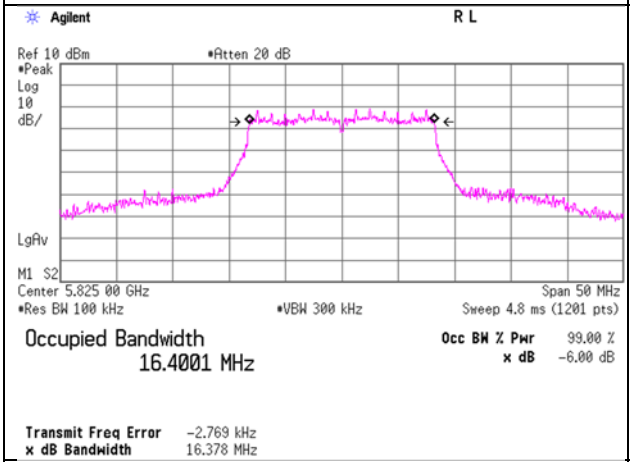
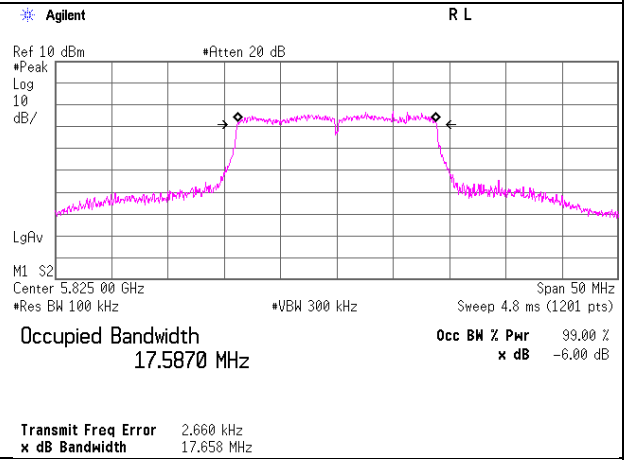
11ac-40

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
5755	36.338	> 0.500
5795	36.027	> 0.500

11ac-80

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
5775	76.408	> 0.500

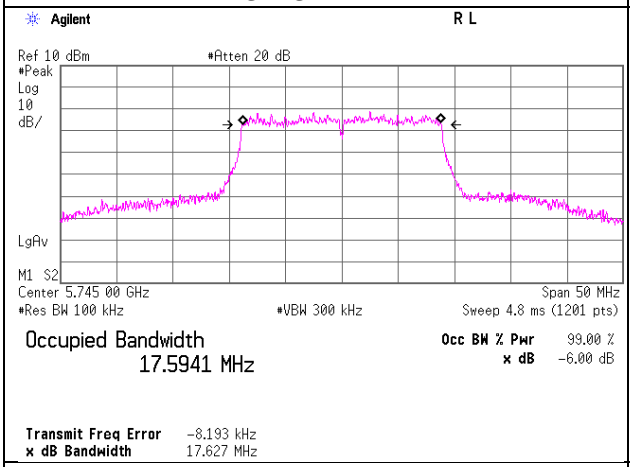
6 dB Bandwidth

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

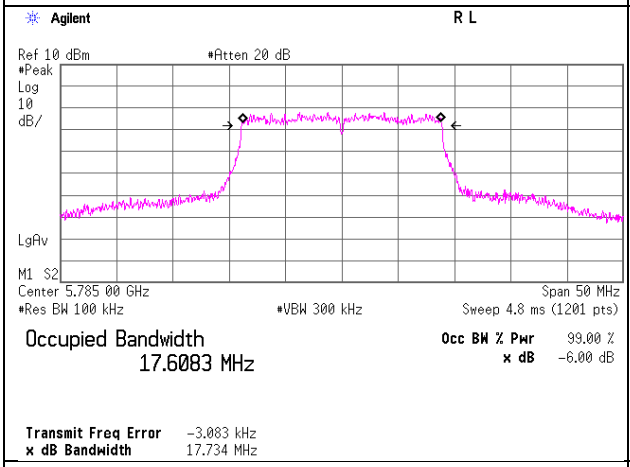
6 dB Bandwidth

11ac-20

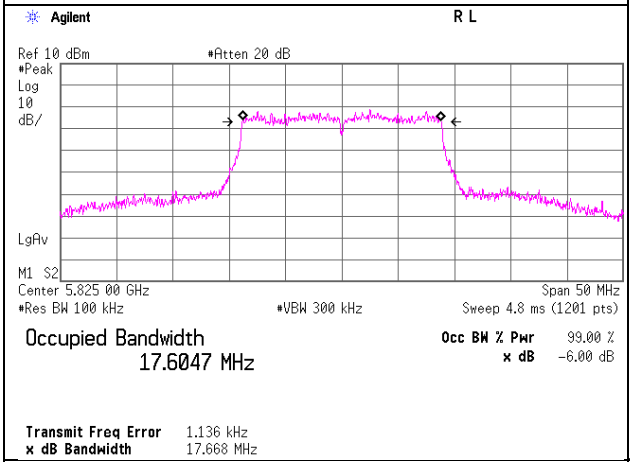
5745 MHz



5785 MHz

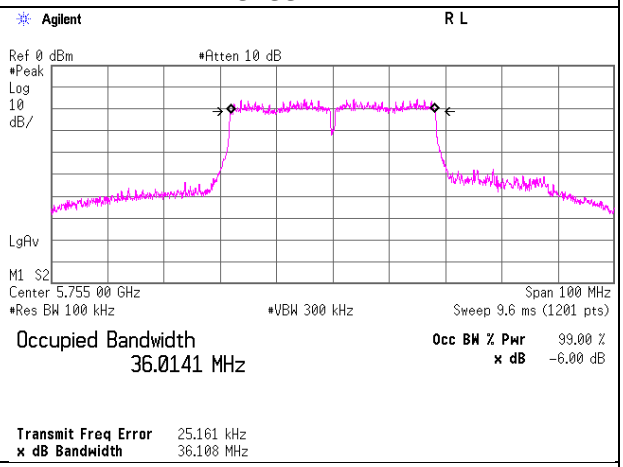


5825 MHz

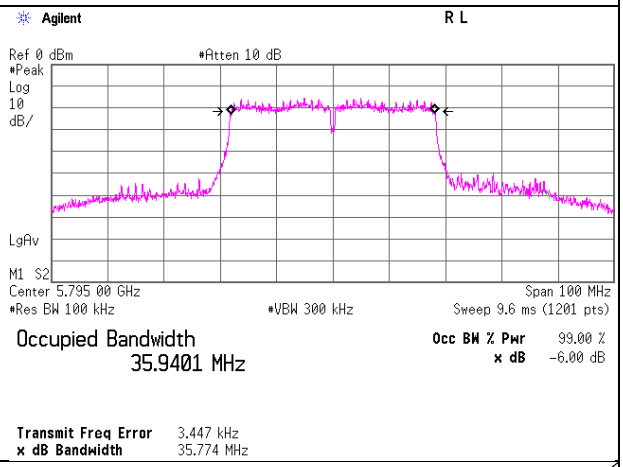


11n-40

5755 MHz



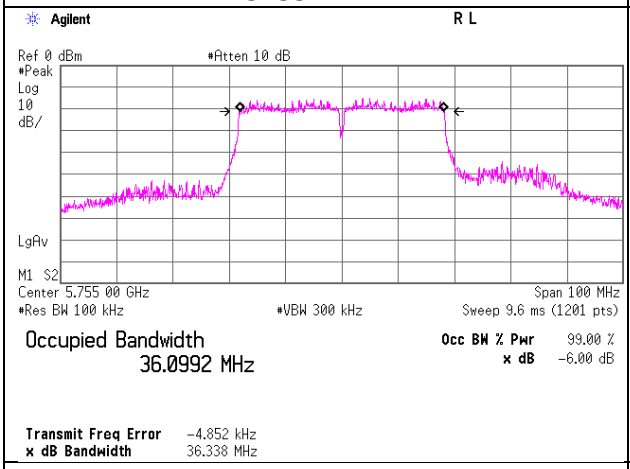
5795 MHz



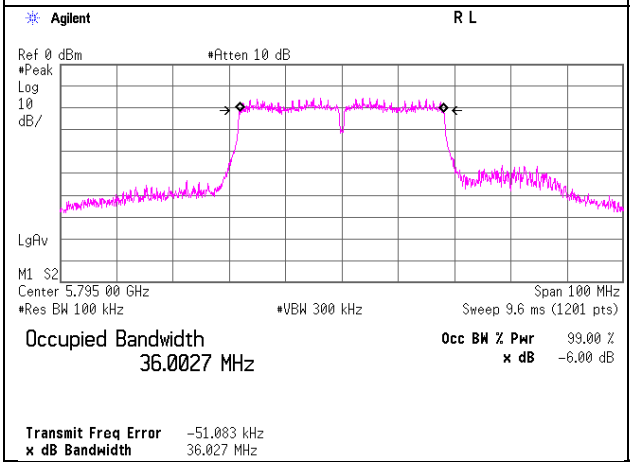
6 dB Bandwidth

11ac-40

5755 MHz

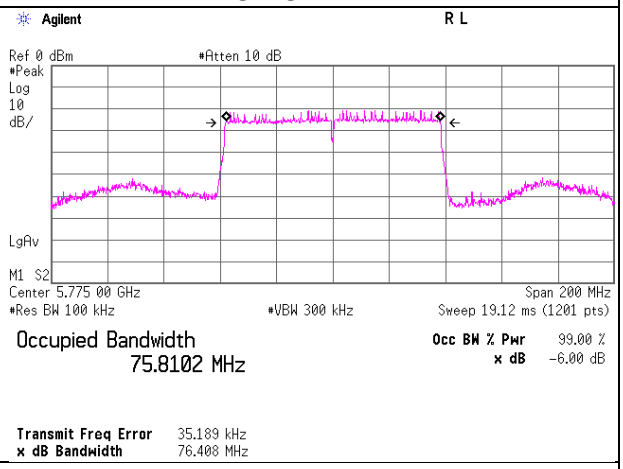


5795 MHz



11ac-80

5775 MHz



Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11a	

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

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	1.40	1.75	9.90	0.10	4.5	-	16.661	13.15	20.65	23.97	10.82	17.65	58.21	29.97	12.32
5220	1.37	1.76	9.90	0.10	4.5	-	16.659	13.13	20.56	23.97	10.84	17.63	57.94	29.97	12.34
5240	1.43	1.76	9.90	0.10	4.5	-	16.650	13.19	20.84	23.97	10.78	17.69	58.74	29.97	12.28
5260	1.48	1.76	9.89	0.10	4.5	18.993	16.663	13.23	21.04	23.78	10.55	17.73	59.29	29.97	12.24
5300	1.42	1.77	9.89	0.10	4.5	19.029	16.666	13.18	20.80	23.79	10.61	17.68	58.61	29.97	12.29
5320	1.52	1.77	9.89	0.10	4.5	19.267	16.669	13.28	21.28	23.84	10.56	17.78	59.98	29.97	12.19
5500	1.51	1.79	9.86	0.10	4.5	19.283	16.661	13.26	21.18	23.85	10.59	17.76	59.70	29.97	12.21
5580	1.61	1.80	9.85	0.10	4.5	19.196	16.697	13.36	21.68	23.83	10.47	17.86	61.09	29.97	12.11
5700	0.97	1.81	9.84	0.10	4.5	18.904	16.680	12.72	18.71	23.76	11.04	17.22	52.72	29.97	12.75
5745	0.96	1.82	9.83	0.10	4.5	-	16.657	12.71	18.66	30.00	17.29	17.21	52.60	36.00	18.79
5785	0.77	1.82	9.83	0.10	4.5	-	16.646	12.52	17.86	30.00	17.48	17.02	50.35	36.00	18.98
5825	0.66	1.83	9.82	0.10	4.5	-	16.664	12.41	17.42	30.00	17.59	16.91	49.09	36.00	19.09

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11n-20	

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

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	0.94	1.75	9.90	0.01	4.5	-	17.707	12.60	18.18	23.97	11.37	17.10	51.24	29.97	12.87
5220	1.23	1.76	9.90	0.01	4.5	-	17.699	12.90	19.48	23.97	11.07	17.40	54.90	29.97	12.57
5240	1.14	1.76	9.90	0.01	4.5	-	17.750	12.81	19.08	23.97	11.16	17.31	53.78	29.97	12.66
5260	1.10	1.76	9.89	0.01	4.5	19.826	17.721	12.76	18.86	23.97	11.21	17.26	53.16	29.97	12.71
5300	0.95	1.77	9.89	0.01	4.5	19.805	17.705	12.62	18.26	23.96	11.34	17.12	51.47	29.97	12.85
5320	1.12	1.77	9.89	0.01	4.5	19.867	17.737	12.79	18.99	23.97	11.18	17.29	53.53	29.97	12.68
5500	0.94	1.79	9.86	0.01	4.5	19.917	17.732	12.60	18.18	23.97	11.37	17.10	51.24	29.97	12.87
5580	0.70	1.80	9.85	0.01	4.5	19.974	17.728	12.36	17.20	23.97	11.61	16.86	48.48	29.97	13.11
5700	0.62	1.81	9.84	0.01	4.5	19.726	17.739	12.28	16.89	23.95	11.67	16.78	47.60	29.97	13.19
5745	0.58	1.82	9.83	0.01	4.5	-	17.713	12.24	16.73	30.00	17.76	16.74	47.16	36.00	19.26
5785	0.35	1.82	9.83	0.01	4.5	-	17.745	12.01	15.87	30.00	17.99	16.51	44.73	36.00	19.49
5825	0.26	1.83	9.82	0.01	4.5	-	17.755	11.92	15.55	30.00	18.08	16.42	43.81	36.00	19.58

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11ac-20	

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

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	1.08	1.75	9.90	0.08	4.5	-	17.760	12.81	19.08	23.97	11.16	17.31	53.77	29.97	12.66
5220	1.18	1.76	9.90	0.08	4.5	-	17.714	12.92	19.57	23.97	11.05	17.42	55.15	29.97	12.55
5240	1.06	1.76	9.90	0.08	4.5	-	17.758	12.80	19.04	23.97	11.17	17.30	53.65	29.97	12.67
5260	1.13	1.76	9.89	0.08	4.5	19.610	17.768	12.86	19.30	23.92	11.06	17.36	54.40	29.97	12.61
5300	1.02	1.77	9.89	0.08	4.5	19.659	17.783	12.76	18.86	23.93	11.17	17.26	53.16	29.97	12.71
5320	1.04	1.77	9.89	0.08	4.5	19.633	17.716	12.78	18.95	23.92	11.14	17.28	53.40	29.97	12.69
5500	1.00	1.79	9.86	0.08	4.5	19.714	17.756	12.73	18.73	23.94	11.21	17.23	52.79	29.97	12.74
5580	0.85	1.80	9.85	0.08	4.5	19.766	17.805	12.58	18.10	23.95	11.37	17.08	51.00	29.97	12.89
5700	0.65	1.81	9.84	0.08	4.5	19.733	17.760	12.38	17.28	23.95	11.57	16.88	48.70	29.97	13.09
5745	0.66	1.82	9.83	0.08	4.5	-	17.769	12.39	17.32	30.00	17.61	16.89	48.82	36.00	19.11
5785	0.34	1.82	9.83	0.08	4.5	-	17.724	12.07	16.09	30.00	17.93	16.57	45.35	36.00	19.43
5825	0.43	1.83	9.82	0.08	4.5	-	17.752	12.16	16.43	30.00	17.84	16.66	46.30	36.00	19.34

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11n-40	

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

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-0.94	1.75	9.90	0.15	4.5	-	36.224	10.86	12.19	23.97	13.11	15.36	34.35	29.97	14.61
5230	-0.84	1.76	9.90	0.15	4.5	-	36.216	10.97	12.50	23.97	13.00	15.47	35.23	29.97	14.50
5270	-1.05	1.76	9.89	0.15	4.5	39.879	36.214	10.75	11.88	23.97	13.22	15.25	33.49	29.97	14.72
5310	-1.09	1.77	9.89	0.15	4.5	39.740	36.192	10.72	11.80	23.97	13.25	15.22	33.26	29.97	14.75
5510	-1.04	1.79	9.86	0.15	4.5	39.616	36.254	10.76	11.91	23.97	13.21	15.26	33.57	29.97	14.71
5550	-1.13	1.80	9.85	0.15	4.5	39.508	36.194	10.67	11.67	23.97	13.30	15.17	32.88	29.97	14.80
5670	-1.36	1.81	9.84	0.15	4.5	39.278	36.254	10.44	11.06	23.97	13.53	14.94	31.19	29.97	15.03
5755	-1.61	1.82	9.83	0.15	4.5	-	36.217	10.19	10.45	30.00	19.81	14.69	29.44	36.00	21.31
5795	-1.69	1.83	9.82	0.15	4.5	-	36.184	10.11	10.26	30.00	19.89	14.61	28.90	36.00	21.39

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11ac-40	

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

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-0.93	1.75	9.90	0.12	4.5	-	36.306	10.84	12.14	23.97	13.13	15.34	34.22	29.97	14.63
5230	-0.96	1.76	9.90	0.12	4.5	-	36.291	10.82	12.08	23.97	13.15	15.32	34.06	29.97	14.65
5270	-0.99	1.76	9.89	0.12	4.5	40.029	36.228	10.78	11.97	23.97	13.19	15.28	33.75	29.97	14.69
5310	-1.03	1.77	9.89	0.12	4.5	39.807	36.160	10.75	11.89	23.97	13.22	15.25	33.52	29.97	14.72
5510	-1.23	1.79	9.86	0.12	4.5	39.928	36.226	10.54	11.33	23.97	13.43	15.04	31.93	29.97	14.93
5550	-1.24	1.80	9.85	0.12	4.5	40.230	36.247	10.53	11.30	23.97	13.44	15.03	31.86	29.97	14.94
5670	-1.38	1.81	9.84	0.12	4.5	40.145	36.275	10.39	10.95	23.97	13.58	14.89	30.85	29.97	15.08
5755	-1.57	1.82	9.83	0.12	4.5	-	36.415	10.20	10.48	30.00	19.80	14.70	29.53	36.00	21.30
5795	-1.66	1.83	9.82	0.12	4.5	-	36.233	10.11	10.26	30.00	19.89	14.61	28.92	36.00	21.39

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11ac-80	

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

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5210	-2.82	1.76	9.90	0.04	4.5	-	76.159	8.88	7.73	23.97	15.09	13.38	21.78	29.97	16.59
5290	-3.17	1.76	9.89	0.04	4.5	81.722	76.281	8.52	7.11	23.97	15.45	13.02	20.05	29.97	16.95
5530	-3.11	1.79	9.86	0.04	4.5	81.503	76.211	8.58	7.21	23.97	15.39	13.08	20.33	29.97	16.89
5610	-3.10	1.81	9.85	0.04	4.5	81.195	76.241	8.60	7.25	23.97	15.37	13.10	20.42	29.97	16.87
5775	-3.26	1.82	9.83	0.04	4.5	-	76.238	8.43	6.97	30.00	21.57	12.93	19.64	36.00	23.07

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11a

5220 MHz

Mode	Rate Mbps	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11a	6	1.11	0.09	1.20	
	9	1.31	0.10	1.41	
	12	1.37	0.10	1.47	*
	18	1.25	0.10	1.35	
	24	1.13	0.10	1.23	
	36	1.22	0.10	1.32	
	48	1.36	0.10	1.46	
	54	1.24	0.10	1.34	

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11n-20

5220 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-20	0	1.23	0.01	1.24	*
	1	1.11	0.02	1.13	
	2	1.14	0.03	1.17	
	3	1.16	0.04	1.20	
	4	1.13	0.05	1.18	
	5	1.13	0.07	1.20	
	6	1.14	0.08	1.22	
	7	1.14	0.09	1.23	

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11ac-20

5220 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11ac-20	0	1.13	0.01	1.14	
	1	1.17	0.02	1.19	
	2	1.22	0.03	1.25	
	3	1.20	0.03	1.23	
	4	1.14	0.05	1.19	
	5	1.18	0.07	1.25	
	6	1.18	0.08	1.26	*
	7	1.14	0.09	1.23	
	8	1.16	0.09	1.25	

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11n-40

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-40	0	-0.87	0.02	-0.85	
	1	-0.89	0.03	-0.86	
	2	-0.91	0.06	-0.85	
	3	-0.93	0.07	-0.86	
	4	-0.91	0.10	-0.81	
	5	-0.93	0.13	-0.80	
	6	-0.94	0.14	-0.80	
	7	-0.94	0.15	-0.79	*

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11ac-40

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11ac-40	0	-0.86	0.02	-0.84	
	1	-0.92	0.04	-0.88	
	2	-0.89	0.05	-0.84	
	3	-0.90	0.07	-0.83	
	4	-0.92	0.10	-0.82	
	5	-0.93	0.12	-0.81	*
	6	-0.96	0.14	-0.82	
	7	-0.97	0.15	-0.82	
	8	-1.00	0.17	-0.83	
	9	-1.01	0.18	-0.83	

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11ac-80

5210 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11ac-80	0	-2.82	0.04	-2.78	*
	1	-2.86	0.07	-2.79	
	2	-2.91	0.10	-2.81	
	3	-2.94	0.13	-2.81	
	4	-3.02	0.18	-2.84	
	5	-3.11	0.23	-2.88	
	6	-3.11	0.25	-2.86	
	7	-3.11	0.26	-2.85	
	8	-3.15	0.30	-2.85	
	9	-3.12	0.32	-2.80	

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

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

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 19, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)		Duty factor	Result (Burst power average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
5180	1.13	1.75	9.90	12.78	18.97	0.09	12.87	19.35
5220	1.11	1.76	9.90	12.77	18.92	0.09	12.86	19.31
5240	1.10	1.76	9.90	12.76	18.88	0.09	12.85	19.27
5260	1.14	1.76	9.89	12.79	19.01	0.09	12.88	19.40
5300	1.24	1.77	9.89	12.90	19.50	0.09	12.99	19.90
5320	1.14	1.77	9.89	12.80	19.05	0.09	12.89	19.44
5500	1.12	1.79	9.86	12.77	18.92	0.09	12.86	19.31
5580	0.92	1.80	9.85	12.57	18.07	0.09	12.66	18.44
5700	0.71	1.81	9.84	12.36	17.22	0.09	12.45	17.57
5745	0.59	1.82	9.83	12.24	16.75	0.09	12.33	17.09
5785	0.56	1.82	9.83	12.21	16.63	0.09	12.30	16.97
5825	0.45	1.83	9.82	12.10	16.22	0.09	12.19	16.55

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss
Result (Burst power average) = Time average + Duty factor
*The equipment and cables were not used for factor 0 dB of the data sheets.

The average output power was measured with the lowest order modulation and lowest data rate configuration in each IEEE 802.11 mode based on KDB 248227 D01.

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11n-20	

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)		Duty factor	Result (Burst power average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
5180	0.94	1.75	9.90	12.59	18.16	0.01	12.60	18.18
5220	1.23	1.76	9.90	12.89	19.45	0.01	12.90	19.48
5240	1.14	1.76	9.90	12.80	19.05	0.01	12.81	19.08
5260	1.10	1.76	9.89	12.75	18.84	0.01	12.76	18.86
5300	0.95	1.77	9.89	12.61	18.24	0.01	12.62	18.26
5320	1.12	1.77	9.89	12.78	18.97	0.01	12.79	18.99
5500	0.94	1.79	9.86	12.59	18.16	0.01	12.60	18.18
5580	0.70	1.80	9.85	12.35	17.18	0.01	12.36	17.20
5700	0.62	1.81	9.84	12.27	16.87	0.01	12.28	16.89
5745	0.58	1.82	9.83	12.23	16.71	0.01	12.24	16.73
5785	0.35	1.82	9.83	12.00	15.85	0.01	12.01	15.87
5825	0.26	1.83	9.82	11.91	15.52	0.01	11.92	15.55

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss
Result (Burst power average) = Time average + Duty factor
*The equipment and cables were not used for factor 0 dB of the data sheets.

The average output power was measured with the lowest order modulation and lowest data rate configuration in each IEEE 802.11 mode based on KDB 248227 D01.

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11ac-20	

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)		Duty factor	Result (Burst power average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
5180	1.08	1.75	9.90	12.73	18.75	0.01	12.74	18.79
5220	1.13	1.76	9.90	12.79	19.01	0.01	12.80	19.05
5240	0.98	1.76	9.90	12.64	18.37	0.01	12.65	18.41
5260	1.09	1.76	9.89	12.74	18.79	0.01	12.75	18.84
5300	1.00	1.77	9.89	12.66	18.45	0.01	12.67	18.49
5320	0.98	1.77	9.89	12.64	18.37	0.01	12.65	18.41
5500	0.98	1.79	9.86	12.63	18.32	0.01	12.64	18.37
5580	0.80	1.80	9.85	12.45	17.58	0.01	12.46	17.62
5700	0.63	1.81	9.84	12.28	16.90	0.01	12.29	16.94
5745	0.52	1.82	9.83	12.17	16.48	0.01	12.18	16.52
5785	0.27	1.82	9.83	11.92	15.56	0.01	11.93	15.60
5825	0.39	1.83	9.82	12.04	16.00	0.01	12.05	16.03

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss
Result (Burst power average) = Time average + Duty factor
*The equipment and cables were not used for factor 0 dB of the data sheets.

The average output power was measured with the lowest order modulation and lowest data rate configuration in each IEEE 802.11 mode based on KDB 248227 D01.

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11n-40	

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)		Duty factor	Result (Burst power average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
5190	-0.87	1.75	9.90	10.78	11.97	0.02	10.80	12.02
5230	-0.85	1.76	9.90	10.81	12.05	0.02	10.83	12.10
5270	-0.93	1.76	9.89	10.72	11.80	0.02	10.74	11.85
5310	-0.98	1.77	9.89	10.68	11.69	0.02	10.70	11.75
5510	-1.14	1.79	9.86	10.51	11.25	0.02	10.53	11.30
5550	-1.12	1.80	9.85	10.53	11.30	0.02	10.55	11.35
5670	-1.34	1.81	9.84	10.31	10.74	0.02	10.33	10.79
5755	-1.52	1.82	9.83	10.13	10.30	0.02	10.15	10.35
5795	-1.58	1.83	9.82	10.07	10.16	0.02	10.09	10.21

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss
Result (Burst power average) = Time average + Duty factor
*The equipment and cables were not used for factor 0 dB of the data sheets.

The average output power was measured with the lowest order modulation and lowest data rate configuration in each IEEE 802.11 mode based on KDB 248227 D01.

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11ac-40	

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)		Duty factor	Result (Burst power average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
5190	-0.86	1.75	9.90	10.79	11.99	0.02	10.81	12.04
5230	-0.91	1.76	9.90	10.75	11.89	0.02	10.77	11.93
5270	-0.97	1.76	9.89	10.68	11.69	0.02	10.70	11.74
5310	-0.99	1.77	9.89	10.67	11.67	0.02	10.69	11.71
5510	-1.17	1.79	9.86	10.48	11.17	0.02	10.50	11.21
5550	-1.15	1.80	9.85	10.50	11.22	0.02	10.52	11.26
5670	-1.29	1.81	9.84	10.36	10.86	0.02	10.38	10.90
5755	-1.54	1.82	9.83	10.11	10.26	0.02	10.13	10.29
5795	-1.67	1.83	9.82	9.98	9.95	0.02	10.00	9.99

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss
Result (Burst power average) = Time average + Duty factor
*The equipment and cables were not used for factor 0 dB of the data sheets.

The average output power was measured with the lowest order modulation and lowest data rate configuration in each IEEE 802.11 mode based on KDB 248227 D01.

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.1 Measurement Room	
Report No.	12193629S-C-R2	
Date	March 16, 2018	March 19, 2018
Temperature / Humidity	24 deg. C / 40 % RH	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa	Shiro Kobayashi
Mode	Tx 11ac-80	

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)		Duty factor	Result (Burst power average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
5210	-2.86	1.76	9.90	8.80	7.59	0.04	8.84	7.66
5290	-3.17	1.76	9.89	8.48	7.05	0.04	8.52	7.11
5530	-3.11	1.79	9.86	8.54	7.14	0.04	8.58	7.21
5610	-3.10	1.80	9.85	8.55	7.16	0.04	8.59	7.23
5775	-3.26	1.82	9.83	8.39	6.90	0.04	8.43	6.97

Sample Calculation:
Result (Timed average) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss
Result (Burst power average) = Time average + Duty factor
*The equipment and cables were not used for factor 0 dB of the data sheets.

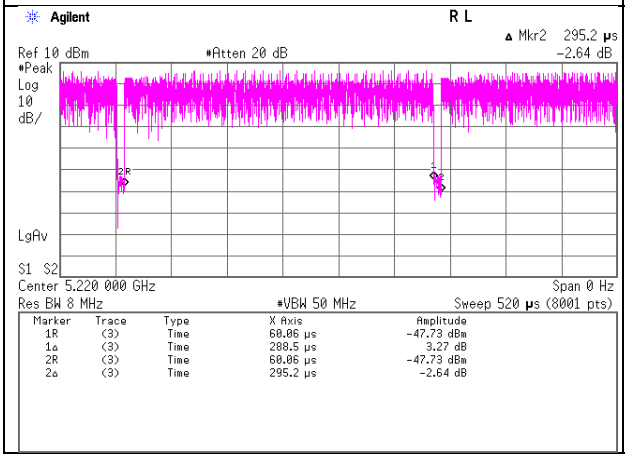
The average output power was measured with the lowest order modulation and lowest data rate configuration in each IEEE 802.11 mode based on KDB 248227 D01.

Burst rate confirmation

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

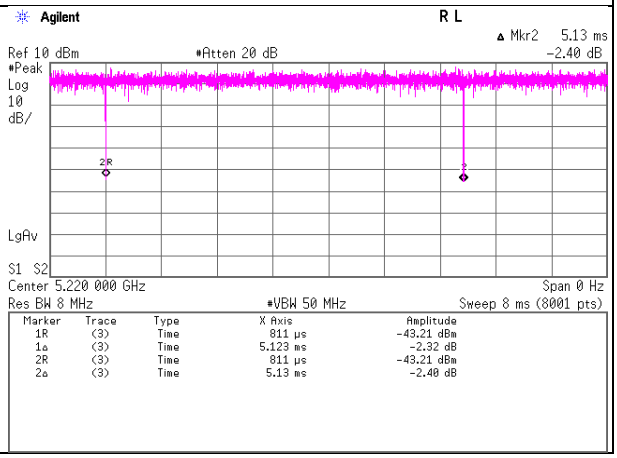
11a 12 Mbps

Tx on / (Tx on + Tx off) =	0.977
Tx on / (Tx on + Tx off) * 100 =	97.7 %
Duty factor = 10 * log (0.2952 / 0.2885) =	0.10 dB
VBW: 1/Tx on = 3467 Hz < 3600 Hz	



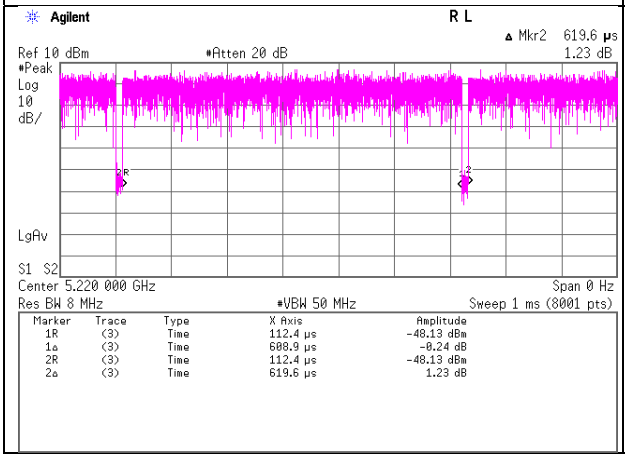
11n-20 MCS 0

Tx on / (Tx on + Tx off) =	0.999
Tx on / (Tx on + Tx off) * 100 =	99.9 %
Duty factor = 10 * log (5.13 / 5.123) =	0.01 dB
VBW: 10 Hz	



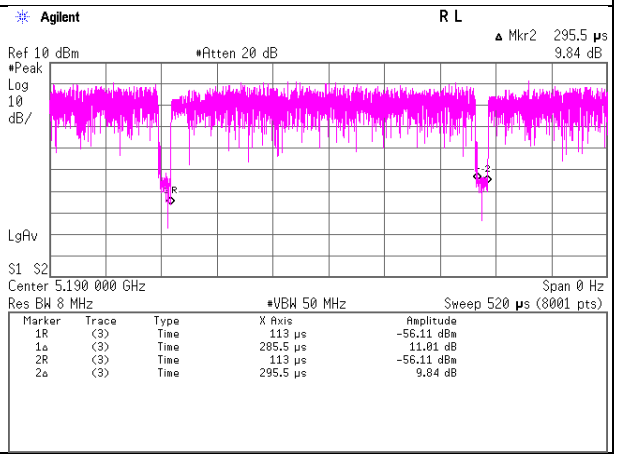
11ac-20 MCS 6

Tx on / (Tx on + Tx off) =	0.983
Tx on / (Tx on + Tx off) * 100 =	98.3 %
Duty factor = 10 * log (0.6196 / 0.6089) =	0.08 dB
VBW: 10 Hz	



11n-40 MCS 7

Tx on / (Tx on + Tx off) =	0.966
Tx on / (Tx on + Tx off) * 100 =	96.6 %
Duty factor = 10 * log (0.2955 / 0.2855) =	0.15 dB
VBW: 1/Tx on = 3503 Hz < 3600 Hz	

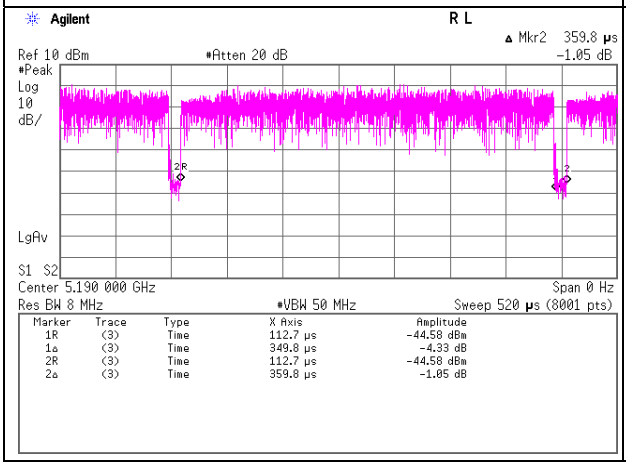


Burst rate confirmation

Test place	Shonan EMC Lab. No.1 Measurement Room
Report No.	12193629S-C-R2
Date	March 16, 2018
Temperature / Humidity	24 deg. C / 40 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

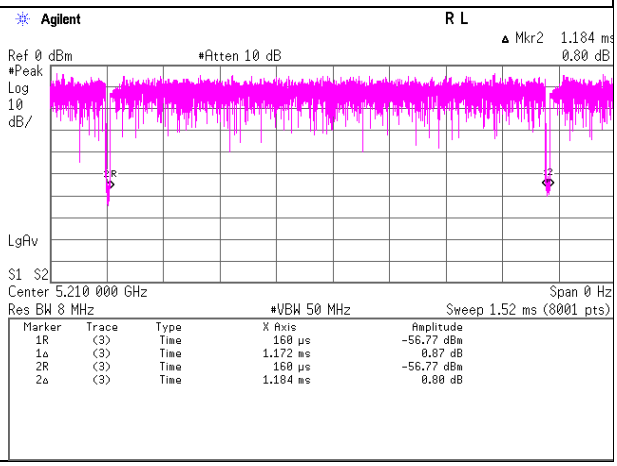
11ac-40 MCS 5

Tx on / (Tx on + Tx off) =	**0.972**
Tx on / (Tx on + Tx off) * 100 =	**97.2 %**
Duty factor = 10 * log (0.3598 / 0.3498) =	**0.12 dB**
VBW: 1/Tx on = 2859 Hz < 3000 Hz	



11ac-80 MCS 0

Tx on / (Tx on + Tx off) =	**0.990**
Tx on / (Tx on + Tx off) * 100 =	**99.0 %**
Duty factor = 10 * log (1.184 / 1.172) =	**0.04 dB**
VBW: 10 Hz	



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-9.59	1.75	9.90	0.10	4.5	0.00	2.16	11.00	8.84	6.66	17.00	10.34
5220	-9.40	1.76	9.90	0.10	4.5	0.00	2.36	11.00	8.64	6.86	17.00	10.14
5240	-9.44	1.76	9.90	0.10	4.5	0.00	2.32	11.00	8.68	6.82	17.00	10.18
5260	-9.81	1.76	9.89	0.10	4.5	0.00	1.94	11.00	9.06	6.44	17.00	10.56
5300	-9.49	1.77	9.89	0.10	4.5	0.00	2.27	11.00	8.73	6.77	17.00	10.23
5320	-9.29	1.77	9.89	0.10	4.5	0.00	2.47	11.00	8.53	6.97	17.00	10.03
5500	-9.51	1.79	9.86	0.10	4.5	0.00	2.24	11.00	8.76	6.74	17.00	10.26
5580	-9.73	1.80	9.85	0.10	4.5	0.00	2.02	11.00	8.98	6.52	17.00	10.48
5700	-9.88	1.81	9.84	0.10	4.5	0.00	1.87	11.00	9.13	6.37	17.00	10.63
5745	-17.91	1.82	9.83	0.10	4.5	6.99	0.83	30.00	29.17	5.33	36.00	30.67
5785	-17.83	1.82	9.83	0.10	4.5	6.99	0.91	30.00	29.09	5.41	36.00	30.59
5825	-18.52	1.83	9.82	0.10	4.5	6.99	0.22	30.00	29.78	4.72	36.00	31.28

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-9.50	1.75	9.90	0.01	4.5	0.00	2.15	11.00	8.85	6.65	17.00	10.35
5220	-9.66	1.76	9.90	0.01	4.5	0.00	2.01	11.00	8.99	6.51	17.00	10.49
5240	-9.38	1.76	9.90	0.01	4.5	0.00	2.29	11.00	8.71	6.79	17.00	10.21
5260	-9.84	1.76	9.89	0.01	4.5	0.00	1.82	11.00	9.18	6.32	17.00	10.68
5300	-9.73	1.77	9.89	0.01	4.5	0.00	1.94	11.00	9.06	6.44	17.00	10.56
5320	-9.38	1.77	9.89	0.01	4.5	0.00	2.28	11.00	8.72	6.78	17.00	10.22
5500	-9.76	1.79	9.86	0.01	4.5	0.00	1.90	11.00	9.10	6.40	17.00	10.60
5580	-9.75	1.80	9.85	0.01	4.5	0.00	1.91	11.00	9.09	6.41	17.00	10.59
5700	-10.13	1.81	9.84	0.01	4.5	0.00	1.53	11.00	9.47	6.03	17.00	10.97
5745	-20.23	1.82	9.83	0.01	4.5	6.99	-1.58	30.00	31.58	2.92	36.00	33.08
5785	-19.24	1.82	9.83	0.01	4.5	6.99	-0.60	30.00	30.60	3.90	36.00	32.10
5825	-20.13	1.83	9.82	0.01	4.5	6.99	-1.48	30.00	31.48	3.02	36.00	32.98

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-10.16	1.75	9.90	0.08	4.5	0.00	1.56	11.00	9.44	6.06	17.00	10.94
5220	-9.87	1.76	9.90	0.08	4.5	0.00	1.87	11.00	9.13	6.37	17.00	10.63
5240	-9.48	1.76	9.90	0.08	4.5	0.00	2.26	11.00	8.74	6.76	17.00	10.24
5260	-10.06	1.76	9.89	0.08	4.5	0.00	1.66	11.00	9.34	6.16	17.00	10.84
5300	-9.88	1.77	9.89	0.08	4.5	0.00	1.86	11.00	9.14	6.36	17.00	10.64
5320	-9.33	1.77	9.89	0.08	4.5	0.00	2.40	11.00	8.60	6.90	17.00	10.10
5500	-9.11	1.79	9.86	0.08	4.5	0.00	2.61	11.00	8.39	7.11	17.00	9.89
5580	-10.20	1.80	9.85	0.08	4.5	0.00	1.53	11.00	9.47	6.03	17.00	10.97
5700	-10.18	1.81	9.84	0.08	4.5	0.00	1.55	11.00	9.45	6.05	17.00	10.95
5745	-19.55	1.82	9.83	0.08	4.5	6.99	-0.83	30.00	30.83	3.67	36.00	32.33
5785	-18.91	1.82	9.83	0.08	4.5	6.99	-0.20	30.00	30.20	4.30	36.00	31.70
5825	-19.71	1.83	9.82	0.08	4.5	6.99	-0.99	30.00	30.99	3.51	36.00	32.49

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-15.27	1.75	9.90	0.15	4.5	0.00	-3.47	11.00	14.47	1.03	17.00	15.97
5230	-14.75	1.76	9.90	0.15	4.5	0.00	-2.94	11.00	13.94	1.56	17.00	15.44
5270	-15.20	1.76	9.89	0.15	4.5	0.00	-3.40	11.00	14.40	1.10	17.00	15.90
5310	-15.23	1.77	9.89	0.15	4.5	0.00	-3.42	11.00	14.42	1.08	17.00	15.92
5510	-14.93	1.79	9.86	0.15	4.5	0.00	-3.13	11.00	14.13	1.37	17.00	15.63
5550	-15.02	1.80	9.85	0.15	4.5	0.00	-3.22	11.00	14.22	1.28	17.00	15.72
5670	-15.44	1.81	9.84	0.15	4.5	0.00	-3.64	11.00	14.64	0.86	17.00	16.14
5755	-23.46	1.82	9.83	0.15	4.5	6.99	-4.67	30.00	34.67	-0.17	36.00	36.17
5795	-24.46	1.83	9.82	0.15	4.5	6.99	-5.67	30.00	35.67	-1.17	36.00	37.17

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-14.91	1.75	9.90	0.12	4.5	0.00	-3.13	11.00	14.13	1.37	17.00	15.63
5230	-14.15	1.76	9.90	0.12	4.5	0.00	-2.37	11.00	13.37	2.13	17.00	14.87
5270	-14.87	1.76	9.89	0.12	4.5	0.00	-3.10	11.00	14.10	1.40	17.00	15.60
5310	-14.56	1.77	9.89	0.12	4.5	0.00	-2.77	11.00	13.77	1.73	17.00	15.27
5510	-14.78	1.79	9.86	0.12	4.5	0.00	-3.01	11.00	14.01	1.49	17.00	15.51
5550	-14.73	1.80	9.85	0.12	4.5	0.00	-2.96	11.00	13.96	1.54	17.00	15.46
5670	-15.21	1.81	9.84	0.12	4.5	0.00	-3.43	11.00	14.43	1.07	17.00	15.93
5755	-24.00	1.82	9.83	0.12	4.5	6.99	-5.24	30.00	35.24	-0.74	36.00	36.74
5795	-24.00	1.83	9.82	0.12	4.5	6.99	-5.24	30.00	35.24	-0.74	36.00	36.74

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5210	-20.33	1.76	9.90	0.04	4.5	0.00	-8.63	11.00	19.63	-4.13	17.00	21.13
5290	-20.48	1.76	9.89	0.04	4.5	0.00	-8.79	11.00	19.79	-4.29	17.00	21.29
5530	-20.52	1.79	9.86	0.04	4.5	0.00	-8.83	11.00	19.83	-4.33	17.00	21.33
5610	-20.36	1.80	9.85	0.04	4.5	0.00	-8.67	11.00	19.67	-4.17	17.00	21.17
5775	-30.17	1.82	9.83	0.04	4.5	6.99	-11.49	30.00	41.49	-6.99	36.00	42.99

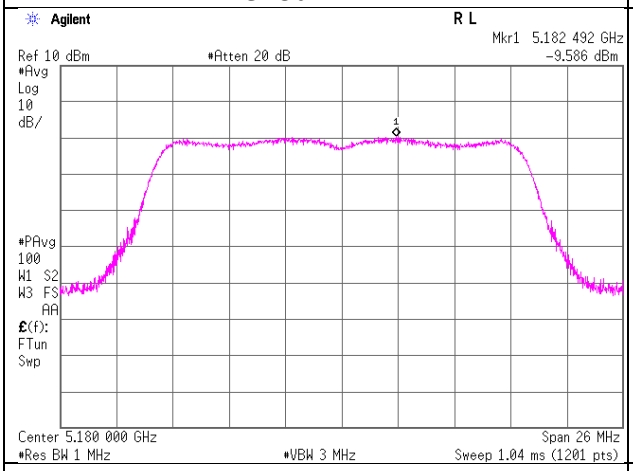
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty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

Maximum Power Spectral Density

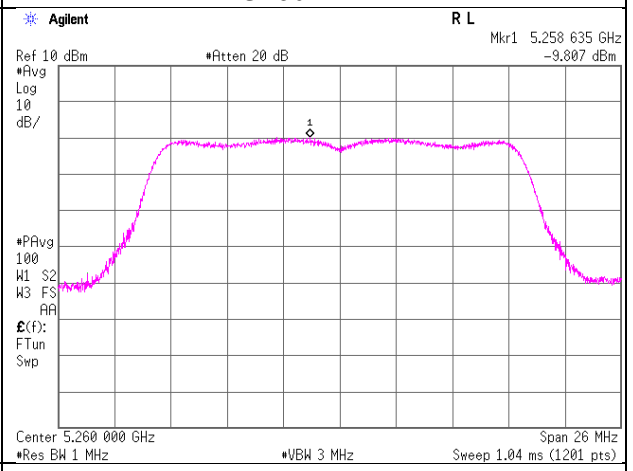
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a

11a

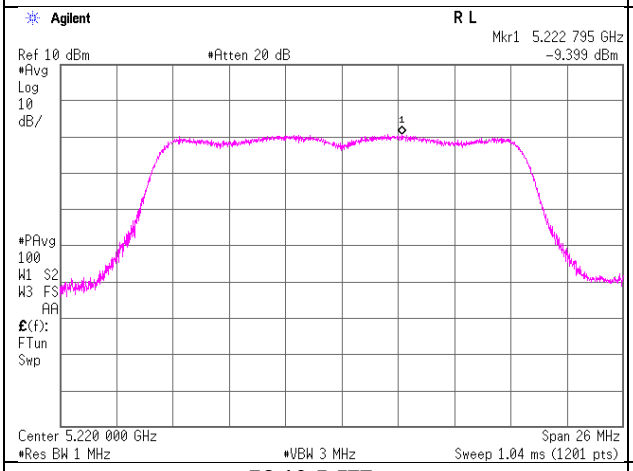
5180 MHz



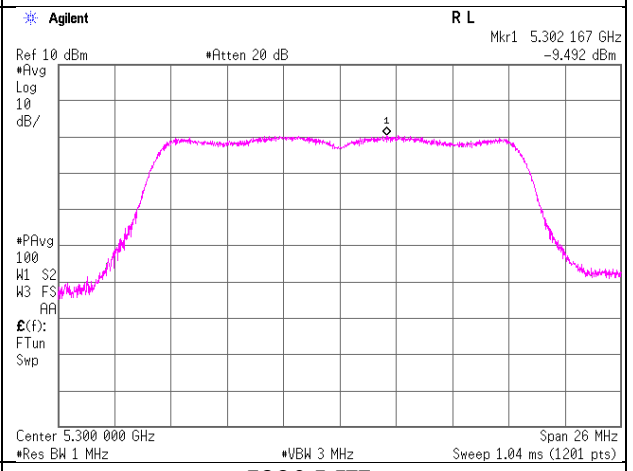
5260 MHz



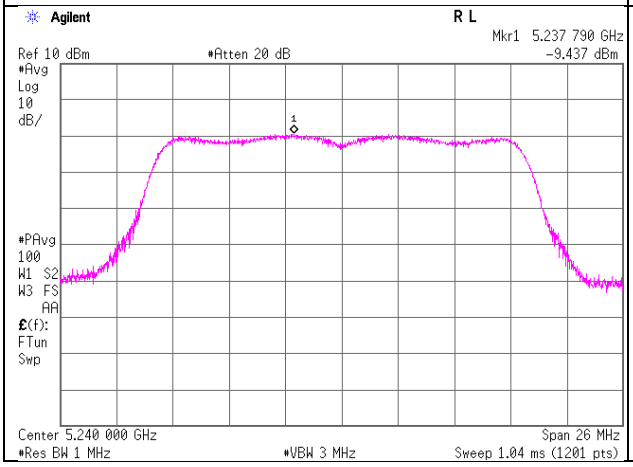
5220 MHz



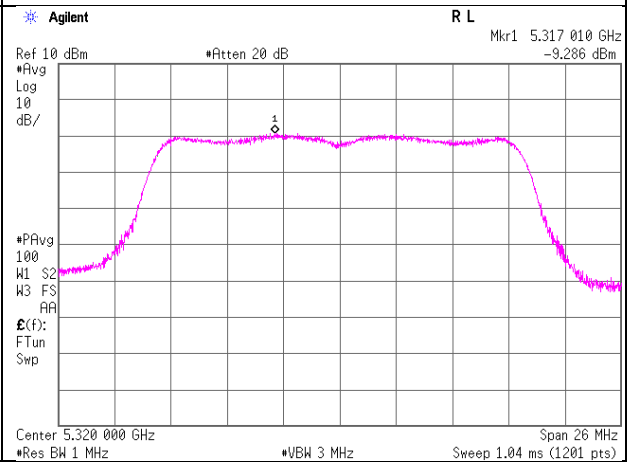
5300 MHz



5240 MHz



5320 MHz

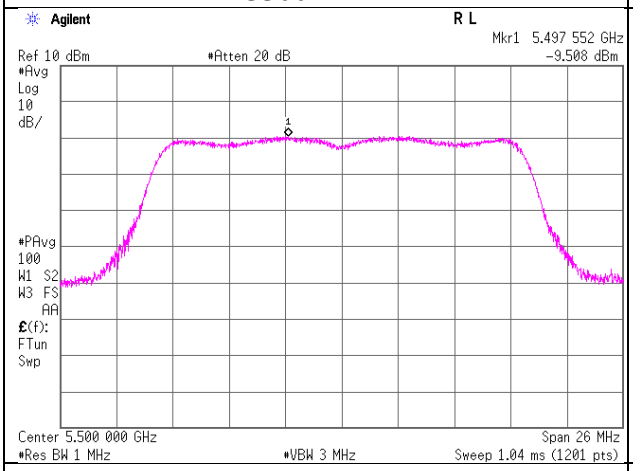


Maximum Power Spectral Density

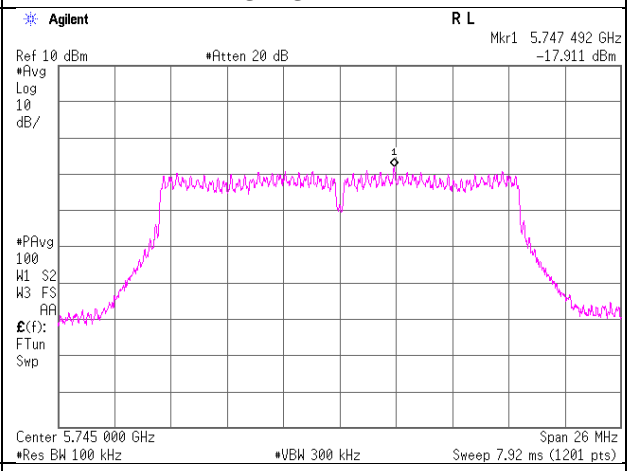
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a

11a

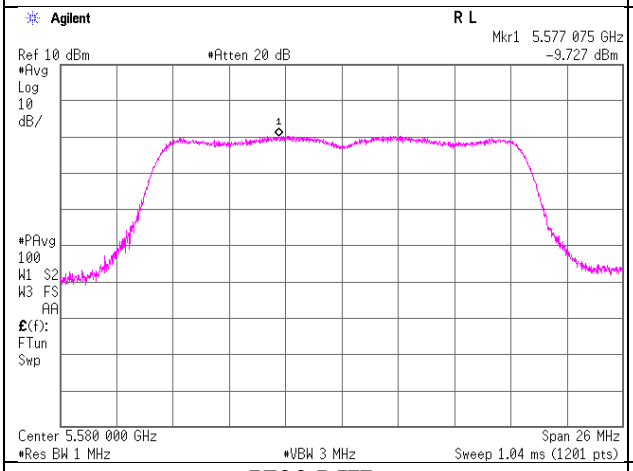
5500 MHz



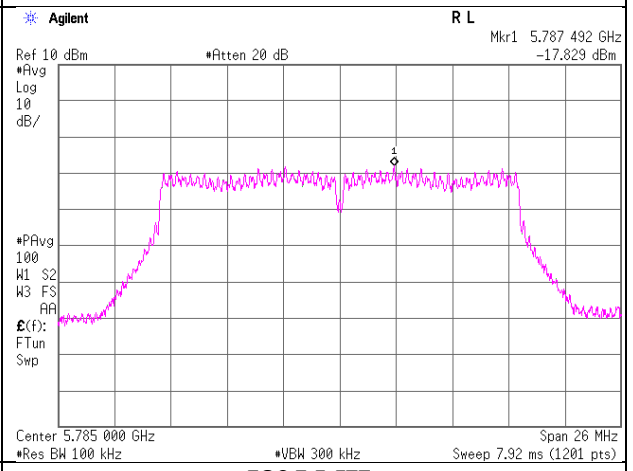
5745 MHz



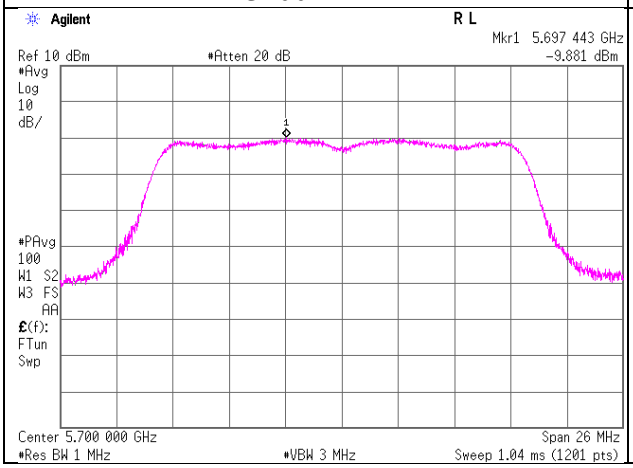
5580 MHz



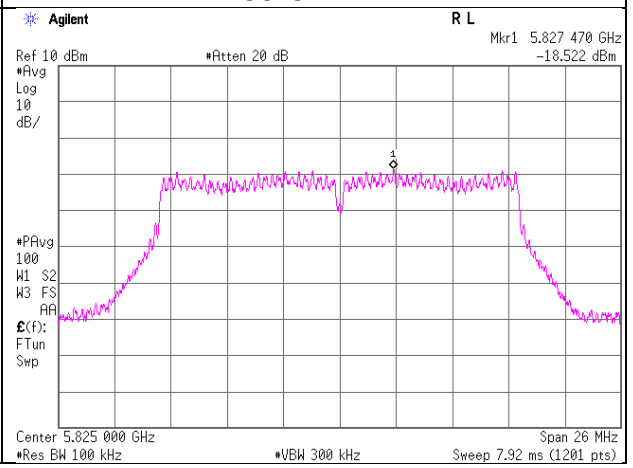
5785 MHz



5700 MHz



5825 MHz

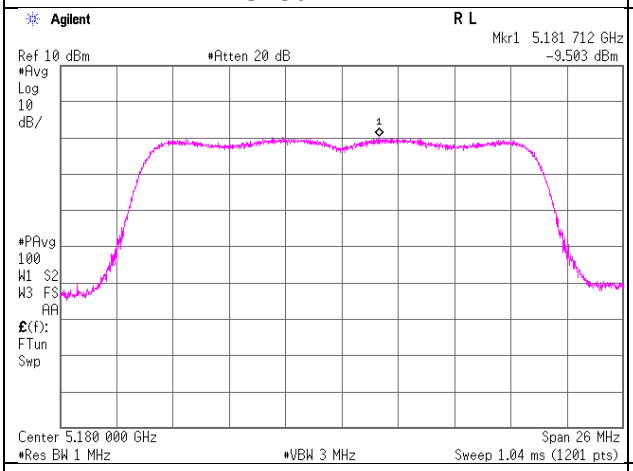


Maximum Power Spectral Density

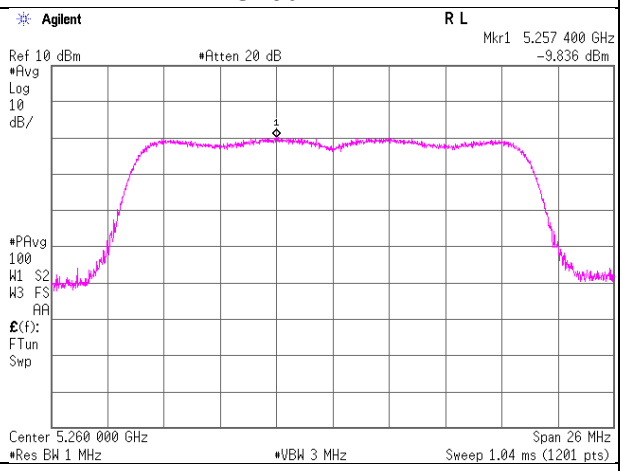
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20

11n-20

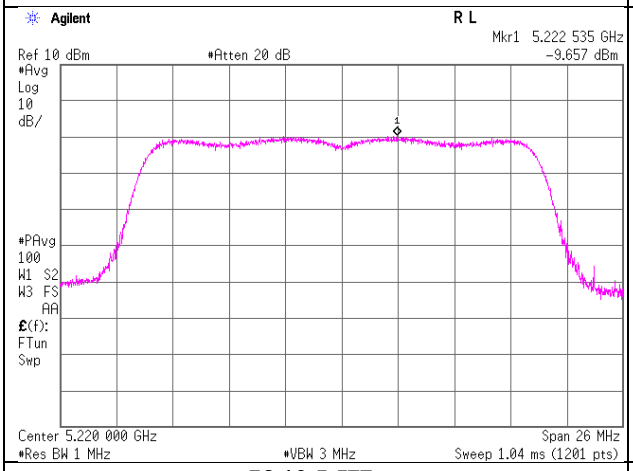
5180 MHz



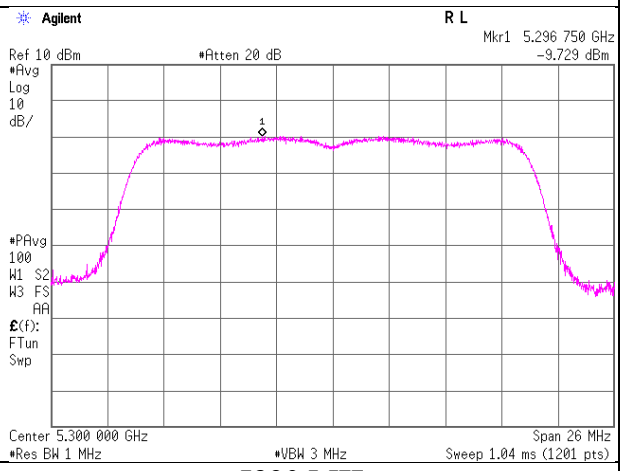
5260 MHz



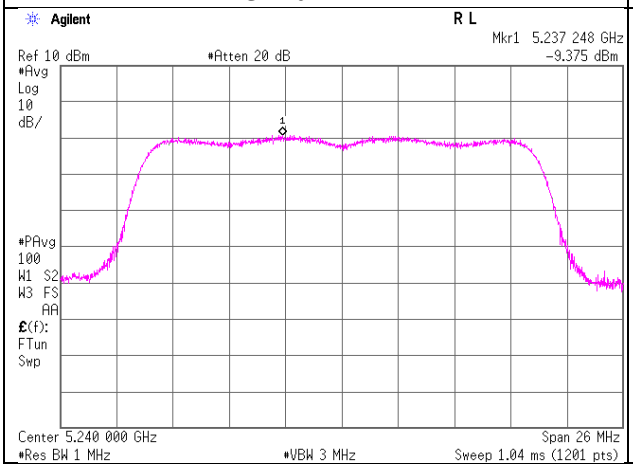
5220 MHz



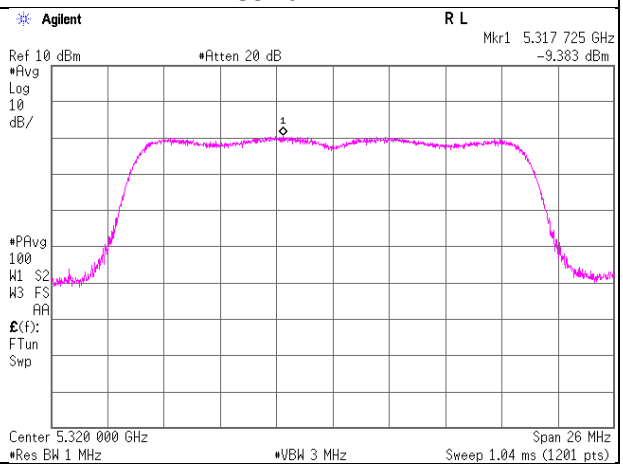
5300 MHz



5240 MHz



5320 MHz

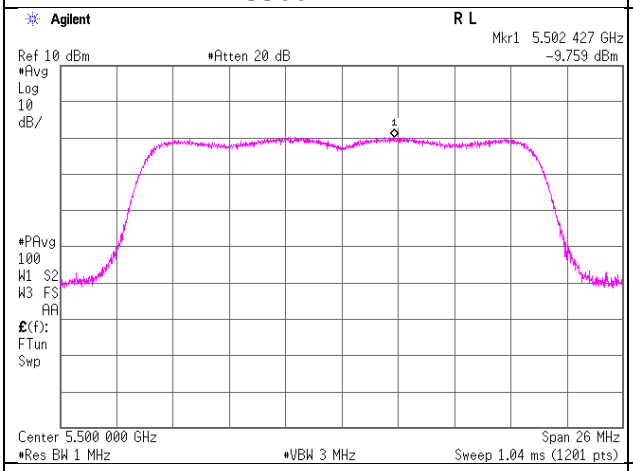


Maximum Power Spectral Density

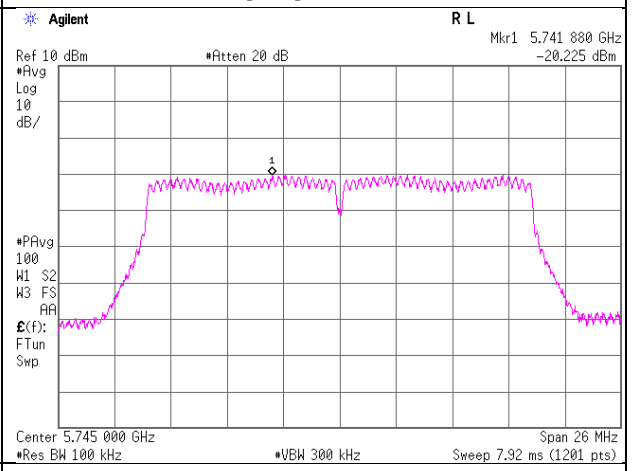
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20

11n-20

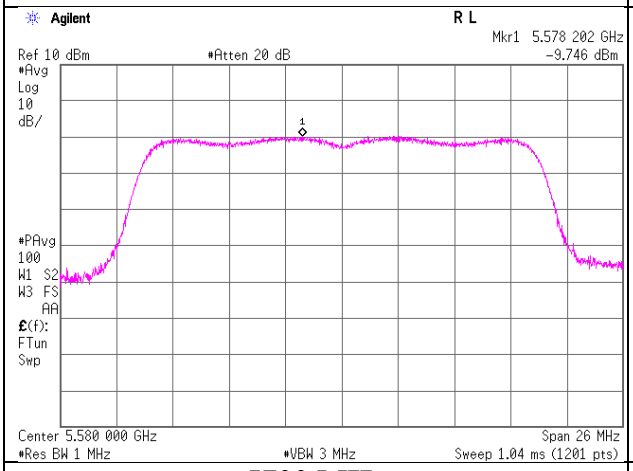
5500 MHz



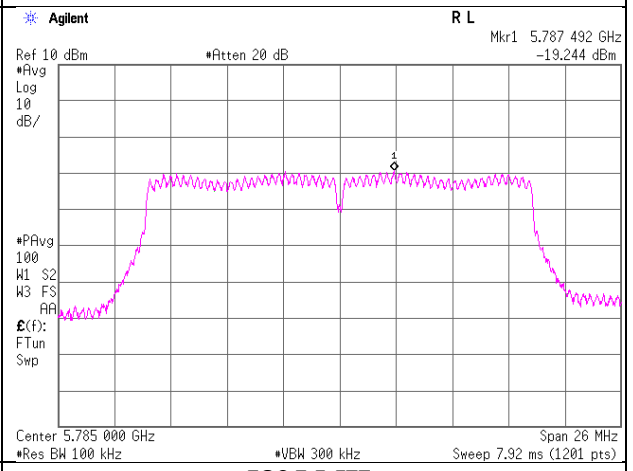
5745 MHz



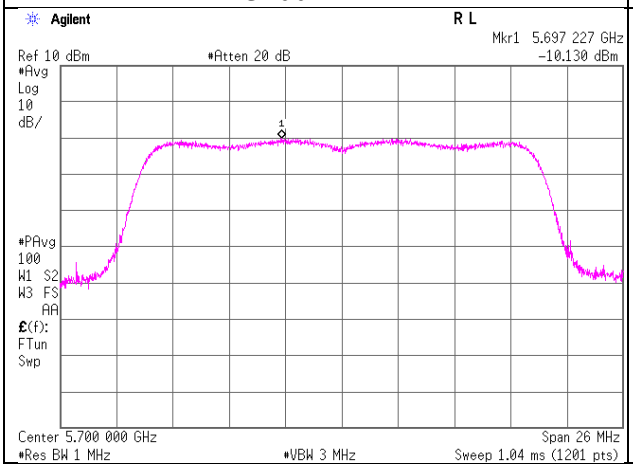
5580 MHz



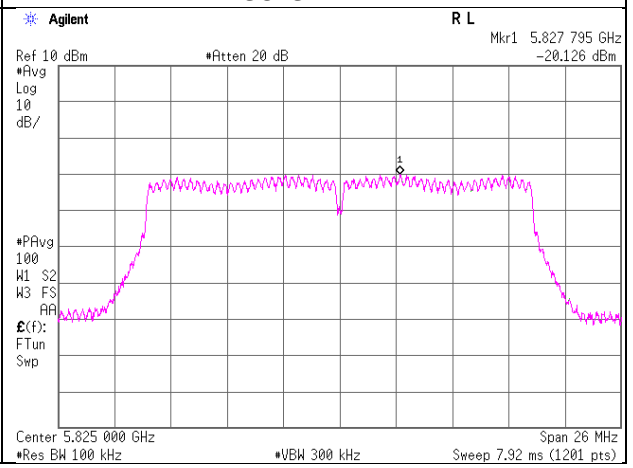
5785 MHz



5700 MHz



5825 MHz

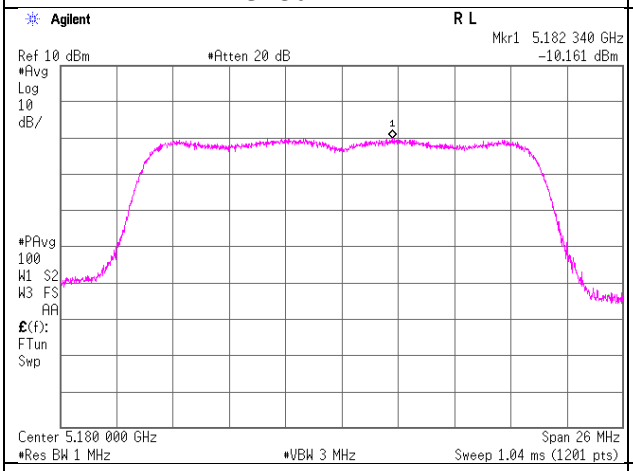


Maximum Power Spectral Density

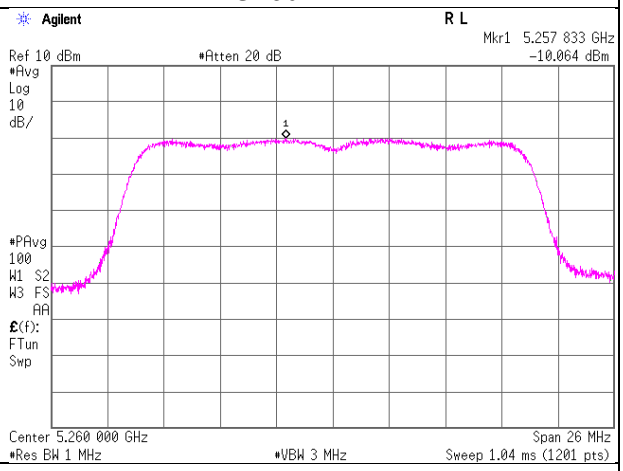
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20

11ac-20

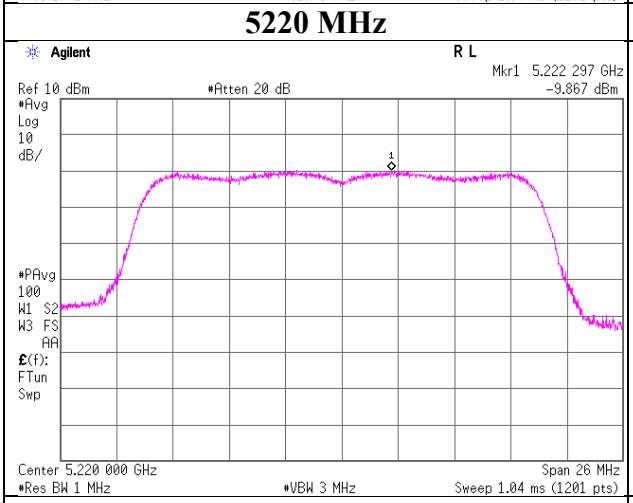
5180 MHz



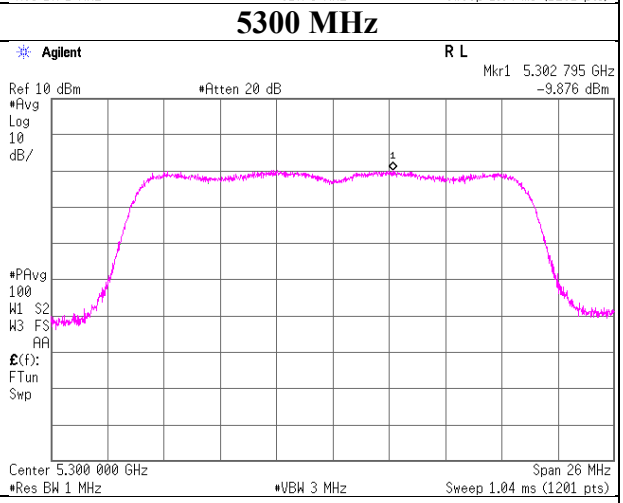
5260 MHz



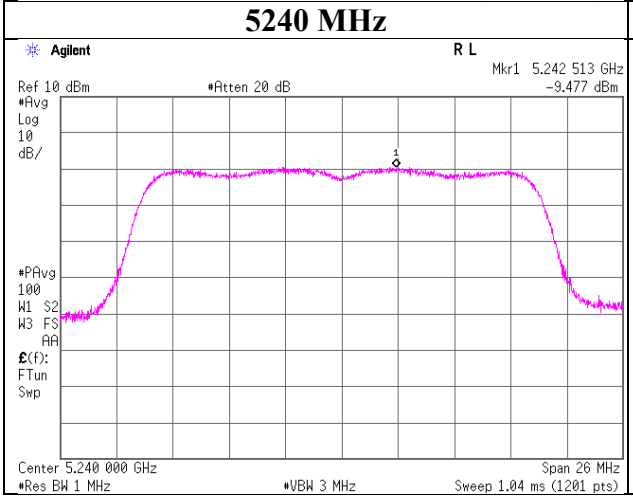
5220 MHz



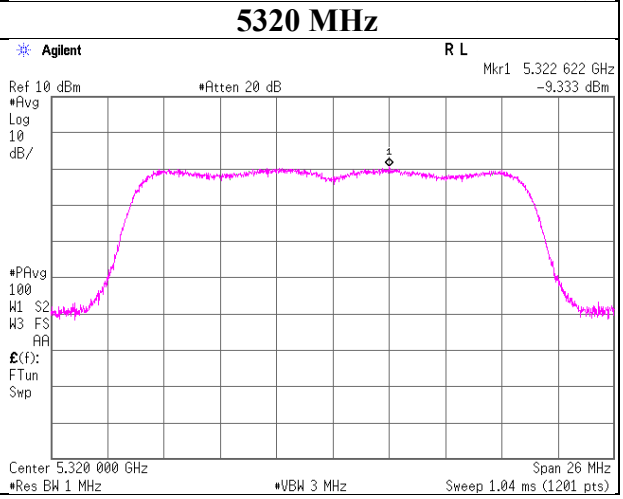
5300 MHz



5240 MHz



5320 MHz

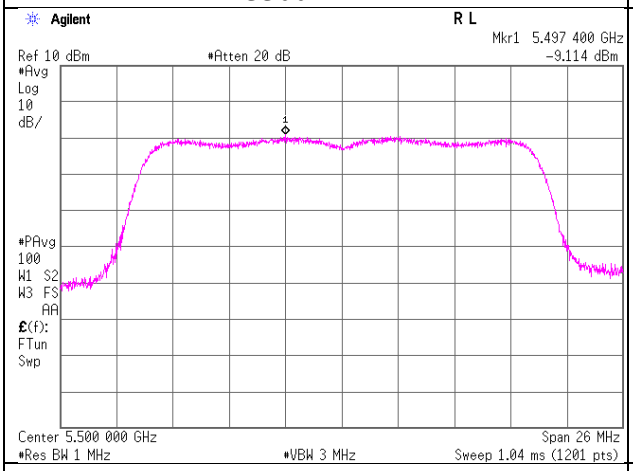


Maximum Power Spectral Density

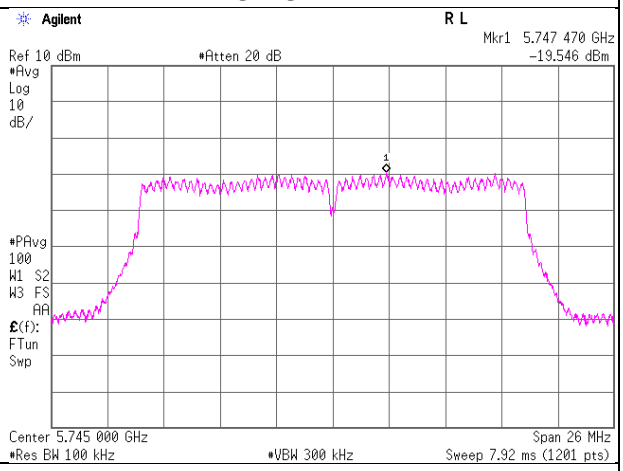
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20

11ac-20

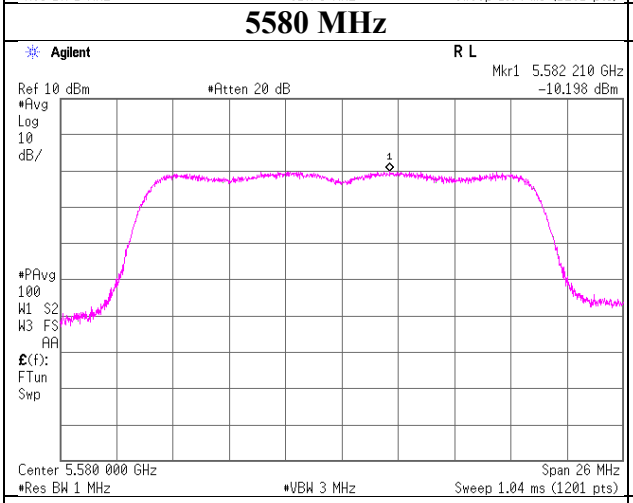
5500 MHz



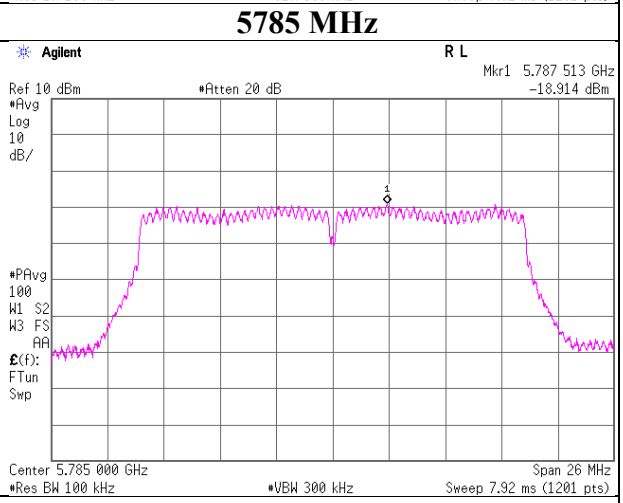
5745 MHz



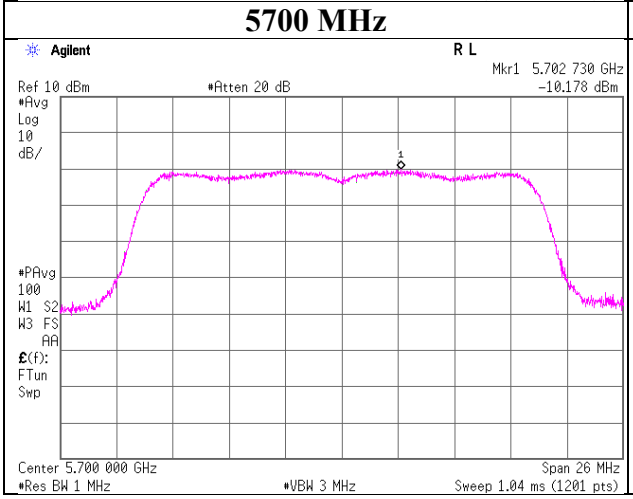
5580 MHz



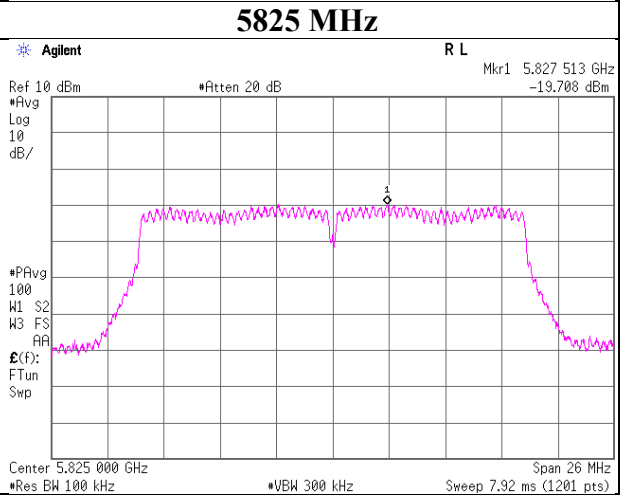
5785 MHz



5700 MHz



5825 MHz

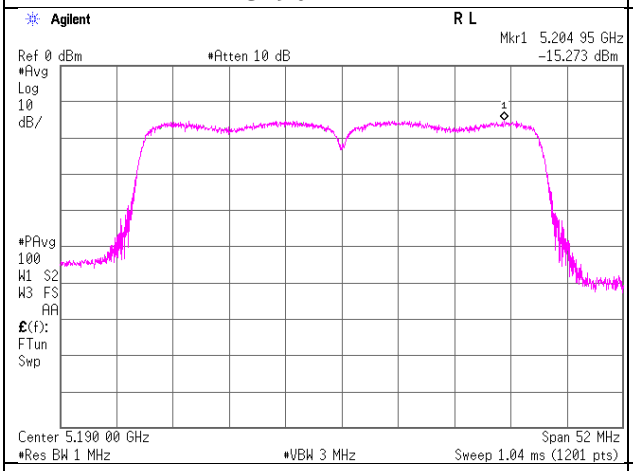


Maximum Power Spectral Density

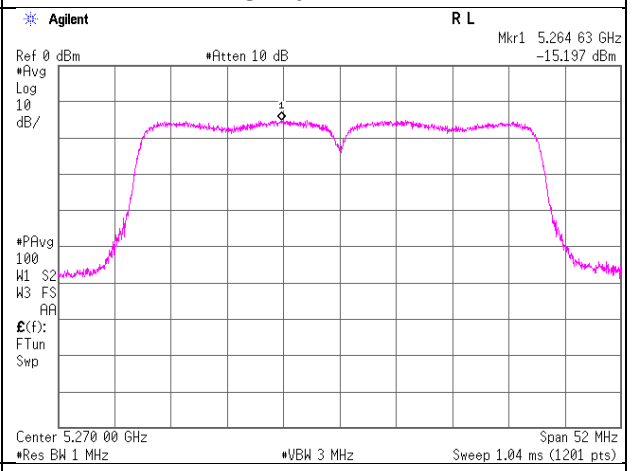
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40

11n-40

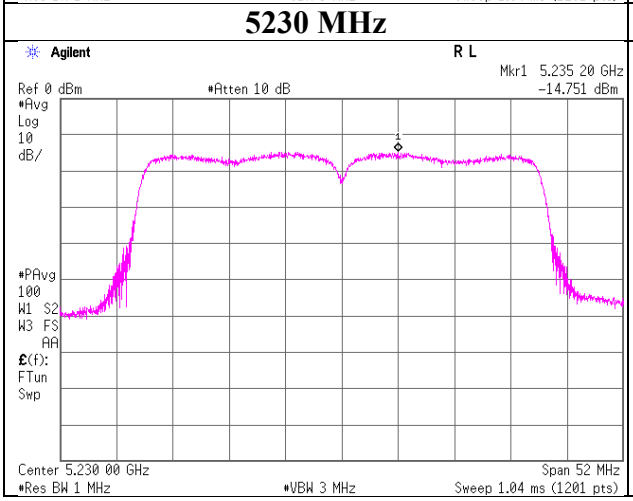
5190 MHz



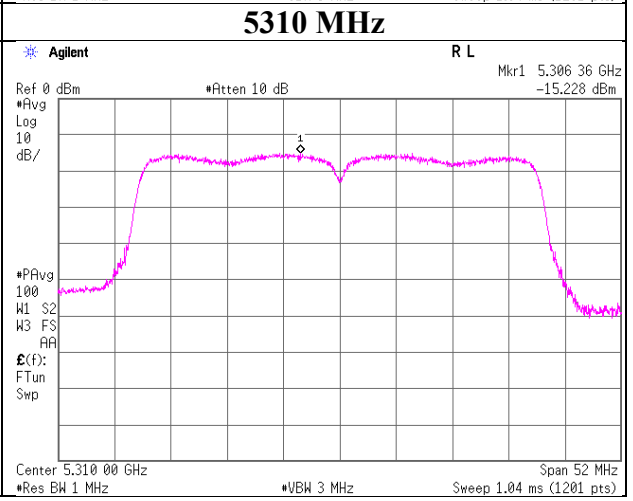
5270 MHz



5230 MHz



5310 MHz

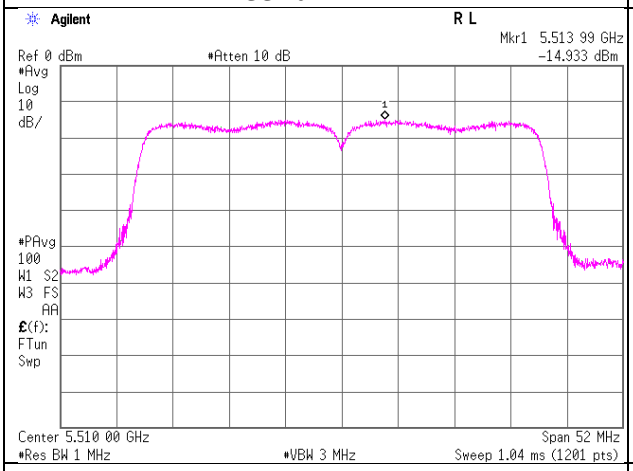


Maximum Power Spectral Density

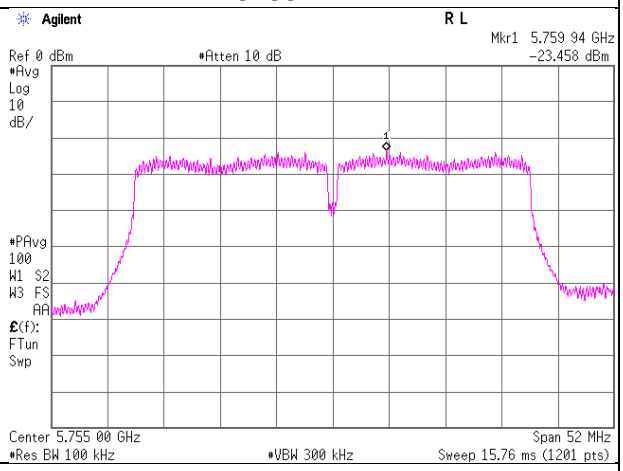
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40

11n-40

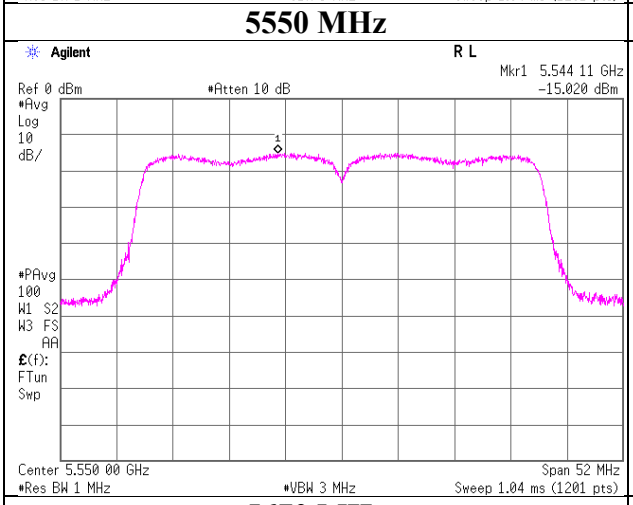
5510 MHz



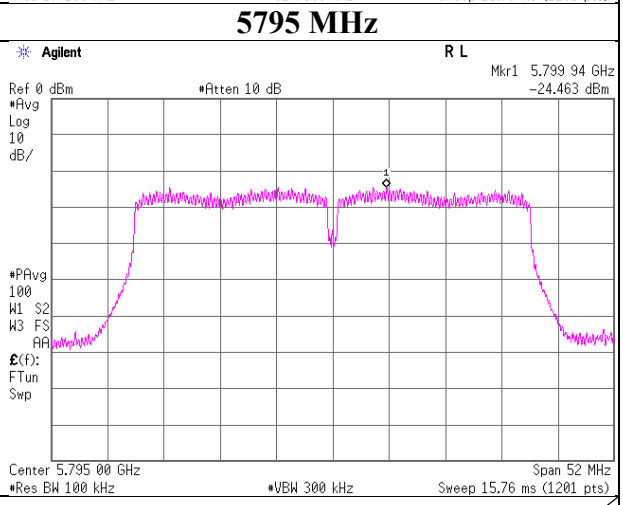
5755 MHz



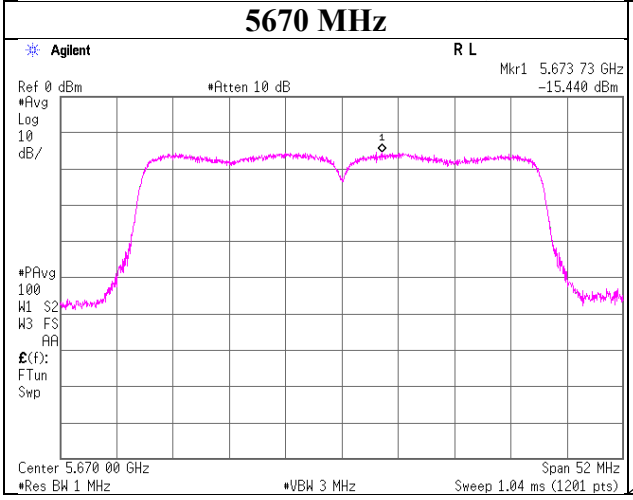
5550 MHz



5795 MHz



5670 MHz

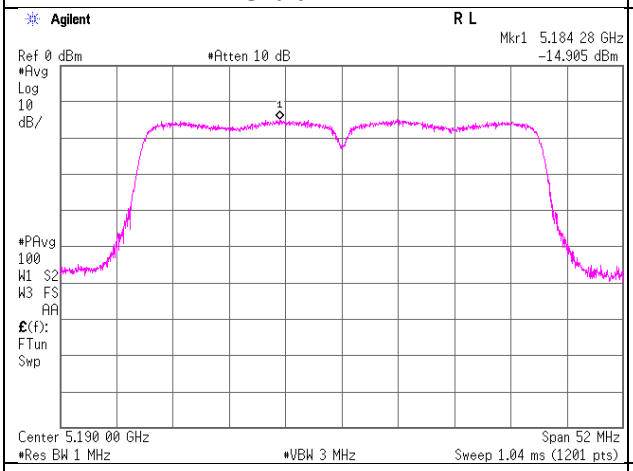


Maximum Power Spectral Density

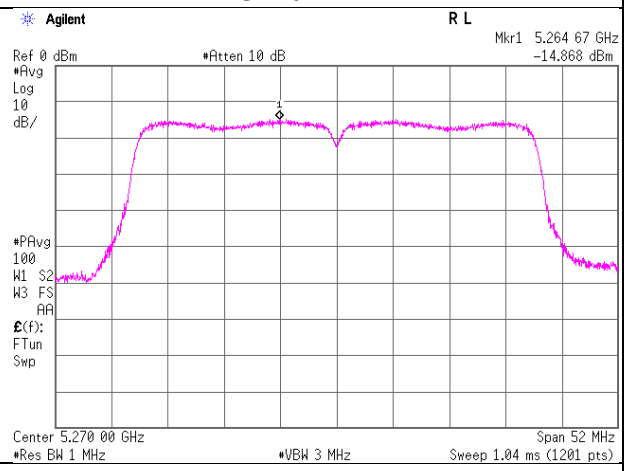
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40

11n-40

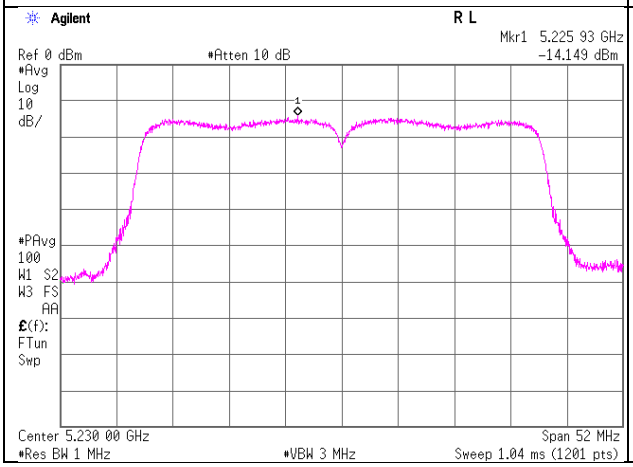
5190 MHz



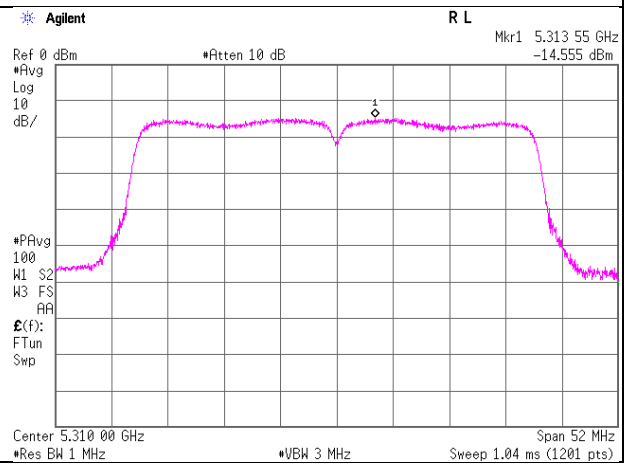
5270 MHz



5230 MHz



5310 MHz

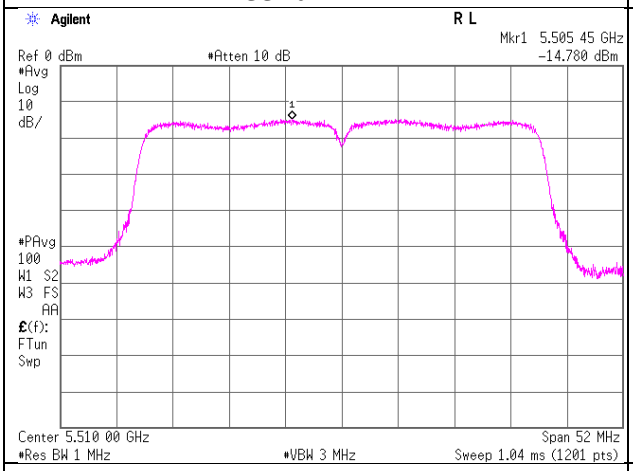


Maximum Power Spectral Density

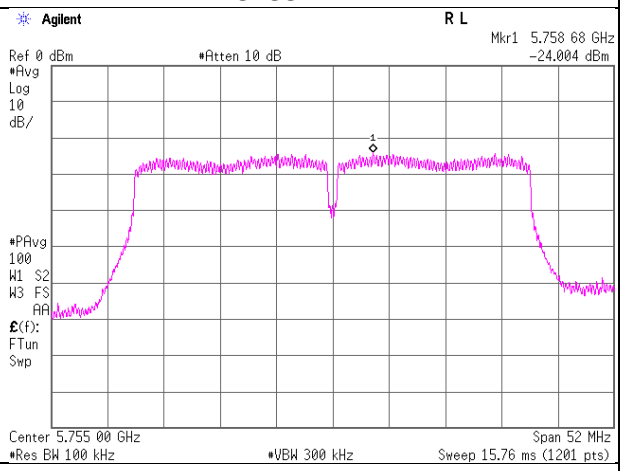
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40

11ac-40

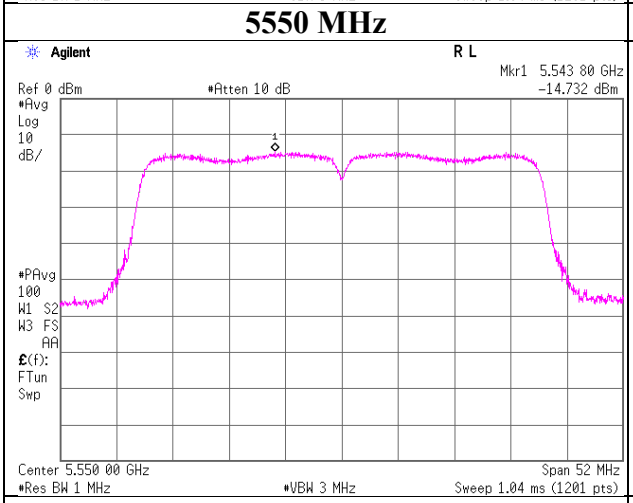
5510 MHz



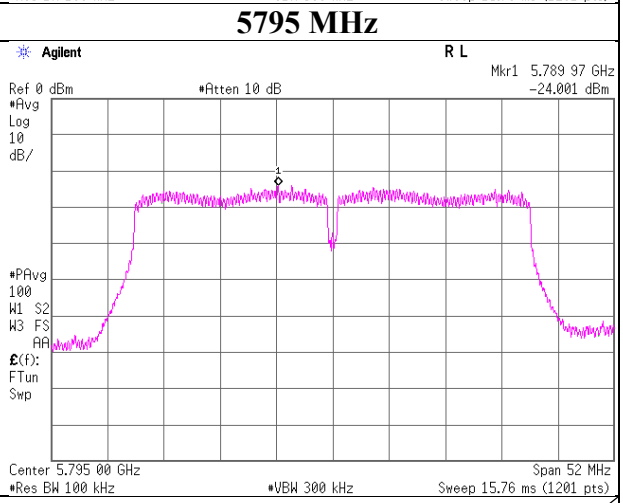
5755 MHz



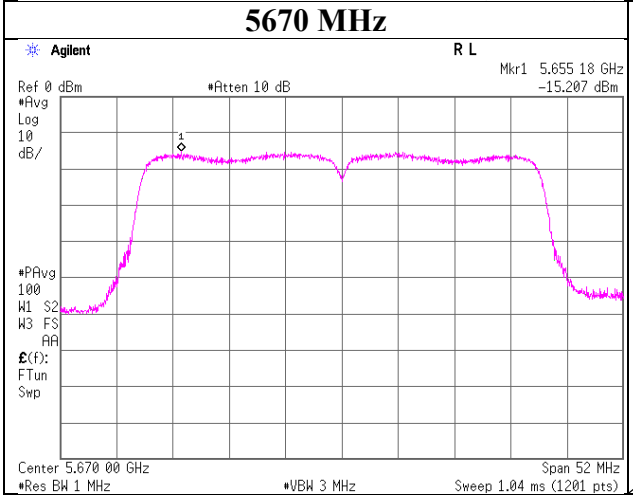
5550 MHz



5795 MHz



5670 MHz

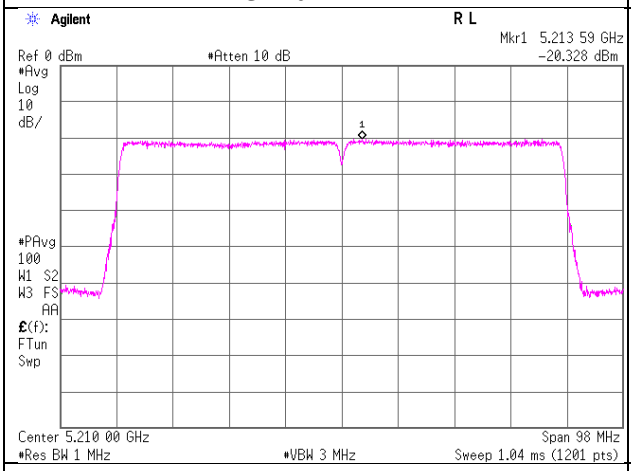


Maximum Power Spectral Density

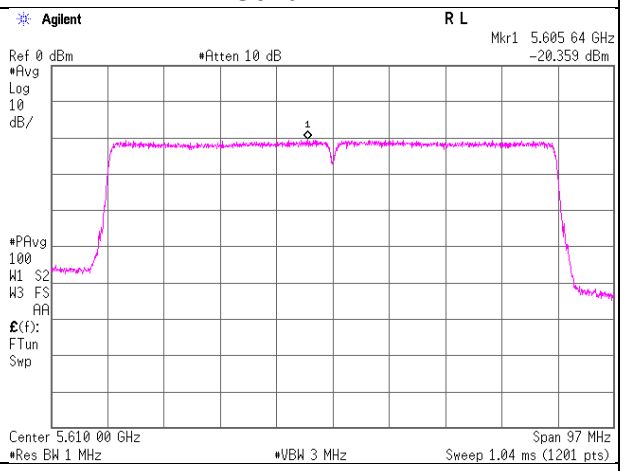
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80

11ac-80

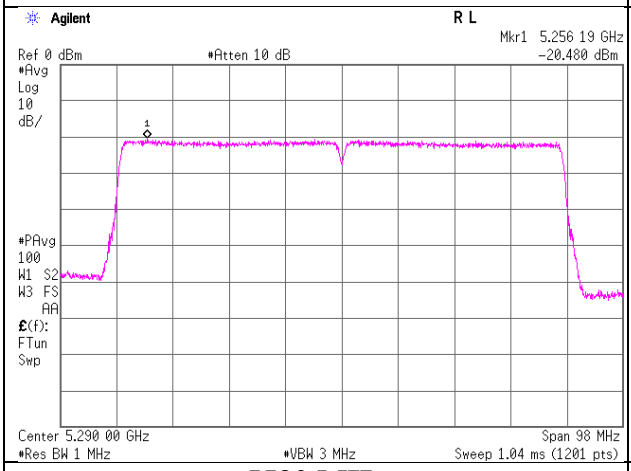
5210 MHz



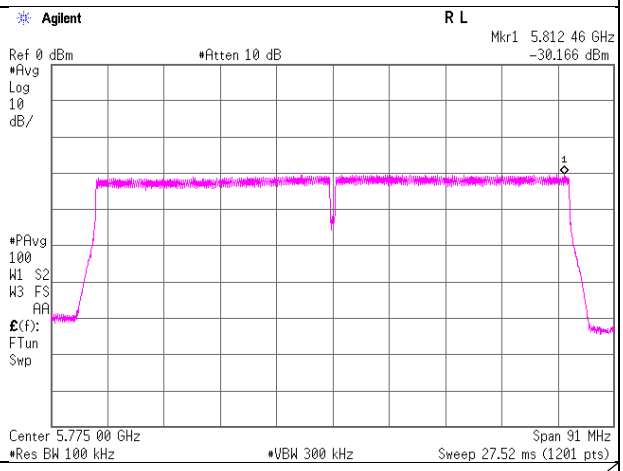
5610 MHz



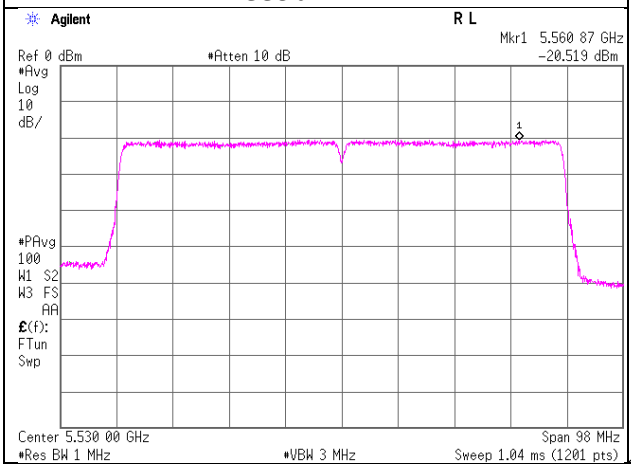
5290 MHz



5775 MHz



5530 MHz



Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 21, 2018	March 30, 2018	March 31, 2018	April 1, 2018
Temperature / Humidity	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	22 deg. C / 30 % RH
Engineer	Kazutaka Takeyama (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5180 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.41	32.01	16.48	44.63	2.33	57.60	73.90	16.3	179	272	
Hori.	10360.000	PK	47.33	39.68	9.38	43.62	2.33	55.10	73.90	18.8	105	221	
Hori.	15540.000	PK	48.60	40.23	11.63	42.10	-9.54	48.82	73.90	25.0	150	1	
Hori.	20720.000	PK	51.21	39.82	12.65	47.33	-9.54	46.81	73.90	27.0	136	291	
Hori.	5150.000	AV	41.03	32.01	16.48	44.63	2.33	47.22	53.90	6.6	179	272	VBW: 3.6 kHz
Hori.	10360.000	AV	37.98	39.68	9.38	43.62	2.33	45.75	53.90	8.1	105	221	VBW: 3.6 kHz
Hori.	15540.000	AV	37.94	40.23	11.63	42.10	-9.54	38.16	53.90	15.7	150	1	VBW: 3.6 kHz
Hori.	20720.000	AV	49.79	39.82	12.65	47.33	-9.54	45.39	53.90	8.5	136	291	VBW: 3.6 kHz
Vert.	5150.000	PK	52.36	32.01	16.48	44.63	2.33	58.55	73.90	15.3	141	243	
Vert.	10360.000	PK	47.48	39.68	9.38	43.62	2.33	55.25	73.90	18.6	201	311	
Vert.	15540.000	PK	48.11	40.23	11.63	42.10	-9.54	48.33	73.90	25.5	150	1	
Vert.	20720.000	PK	51.72	39.82	12.65	47.33	-9.54	47.32	73.90	26.5	132	24	
Vert.	5150.000	AV	42.43	32.01	16.48	44.63	2.33	48.62	53.90	**5.2**	141	243	VBW: 3.6 kHz
Vert.	10360.000	AV	38.06	39.68	9.38	43.62	2.33	45.83	53.90	8.0	201	311	VBW: 3.6 kHz
Vert.	15540.000	AV	37.87	40.23	11.63	42.10	-9.54	38.09	53.90	15.8	150	1	VBW: 3.6 kHz
Vert.	20720.000	AV	50.10	39.82	12.65	47.33	-9.54	45.70	53.90	8.2	132	24	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

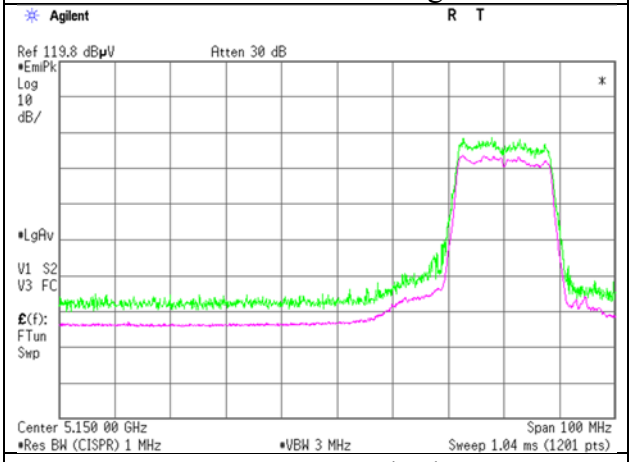
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 21, 2018
Temperature / Humidity	23 deg. C / 25 % RH
Engineer	Kazutaka Takeyama
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11a 5180 MHz

Horizontal

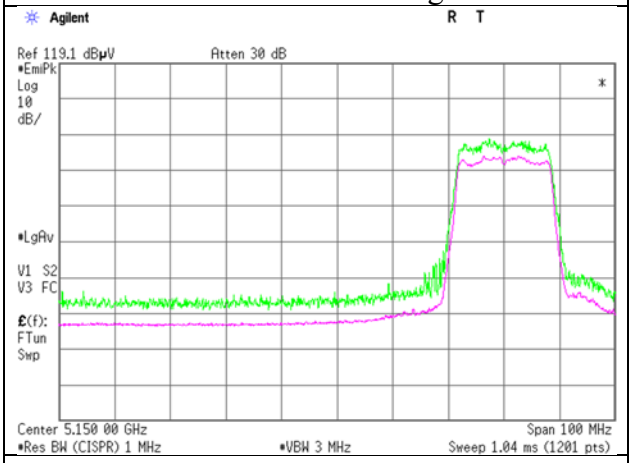
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 21, 2018	March 30, 2018	March 31, 2018	April 1, 2018
Temperature / Humidity	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	22 deg. C / 30 % RH
Engineer	Kazutaka Takeyama (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5240 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	47.81	39.88	9.44	43.53	2.33	55.93	73.90	17.9	105	233	
Hori.	15720.000	PK	47.71	39.49	11.72	42.13	-9.54	47.25	73.90	26.6	150	1	
Hori.	20960.000	PK	53.30	39.77	12.77	46.92	-9.54	49.38	73.90	24.5	100	314	
Hori.	10480.000	AV	37.85	39.88	9.44	43.53	2.33	45.97	53.90	7.9	105	233	VBW: 3.6 kHz
Hori.	15720.000	AV	37.65	39.49	11.72	42.13	-9.54	37.19	53.90	16.7	150	1	VBW: 3.6 kHz
Hori.	20960.000	AV	52.11	39.77	12.77	46.92	-9.54	48.19	53.90	**5.7**	100	314	VBW: 3.6 kHz
Vert.	10480.000	PK	47.62	39.88	9.44	43.53	2.33	55.74	73.90	18.1	211	298	
Vert.	15720.000	PK	47.46	39.49	11.72	42.13	-9.54	47.00	73.90	26.9	150	1	
Vert.	20960.000	PK	55.00	39.77	12.77	46.92	-9.54	51.08	73.90	22.8	127	24	
Vert.	10480.000	AV	37.64	39.88	9.44	43.53	2.33	45.76	53.90	8.1	211	298	VBW: 3.6 kHz
Vert.	15720.000	AV	37.50	39.49	11.72	42.13	-9.54	37.04	53.90	16.8	150	1	VBW: 3.6 kHz
Vert.	20960.000	AV	54.08	39.77	12.77	46.92	-9.54	50.16	53.90	**3.7**	127	24	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 21, 2018	March 30, 2018	March 31, 2018	April 1, 2018
Temperature / Humidity	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	22 deg. C / 30 % RH
Engineer	Kazutaka Takeyama	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5320 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	52.65	32.09	16.39	44.79	2.33	58.67	73.90	15.2	153	267	
Hori.	10640.000	PK	47.78	39.97	9.61	43.59	2.33	56.10	73.90	17.8	103	244	
Hori.	15960.000	PK	47.60	38.50	11.83	42.18	-9.54	46.21	73.90	27.6	150	1	
Hori.	21280.000	PK	51.29	39.82	12.87	47.23	-9.54	47.21	73.90	26.6	119	313	
Hori.	5350.000	AV	42.66	32.09	16.39	44.79	2.33	48.68	53.90	5.2	153	267	VBW: 3.6 kHz
Hori.	10640.000	AV	37.27	39.97	9.61	43.59	2.33	45.59	53.90	8.3	103	244	VBW: 3.6 kHz
Hori.	15960.000	AV	37.41	38.50	11.83	42.18	-9.54	36.02	53.90	17.8	150	1	VBW: 3.6 kHz
Hori.	21280.000	AV	49.47	39.82	12.87	47.23	-9.54	45.39	53.90	8.5	119	313	VBW: 3.6 kHz
Vert.	5350.000	PK	52.46	32.09	16.39	44.79	2.33	58.48	73.90	15.4	145	244	
Vert.	10640.000	PK	47.88	39.97	9.61	43.59	2.33	56.20	73.90	17.7	209	287	
Vert.	15960.000	PK	47.81	38.50	11.83	42.18	-9.54	46.42	73.90	27.4	150	1	
Vert.	21280.000	PK	54.13	39.82	12.87	47.23	-9.54	50.05	73.90	23.8	127	22	
Vert.	5350.000	AV	46.46	32.09	16.39	44.79	2.33	52.48	53.90	**1.4**	145	244	VBW: 3.6 kHz
Vert.	10640.000	AV	37.50	39.97	9.61	43.59	2.33	45.82	53.90	8.0	209	287	VBW: 3.6 kHz
Vert.	15960.000	AV	37.38	38.50	11.83	42.18	-9.54	35.99	53.90	17.9	150	1	VBW: 3.6 kHz
Vert.	21280.000	AV	53.23	39.82	12.87	47.23	-9.54	49.15	53.90	4.7	127	22	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

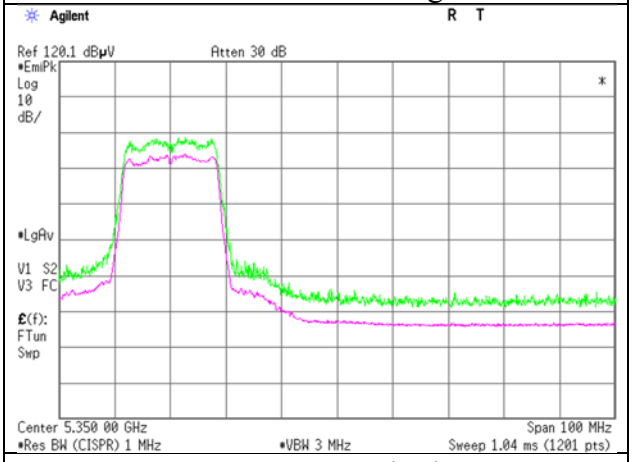
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 21, 2018
Temperature / Humidity	23 deg. C / 25 % RH
Engineer	Kazutaka Takeyama
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11a 5320 MHz

Horizontal

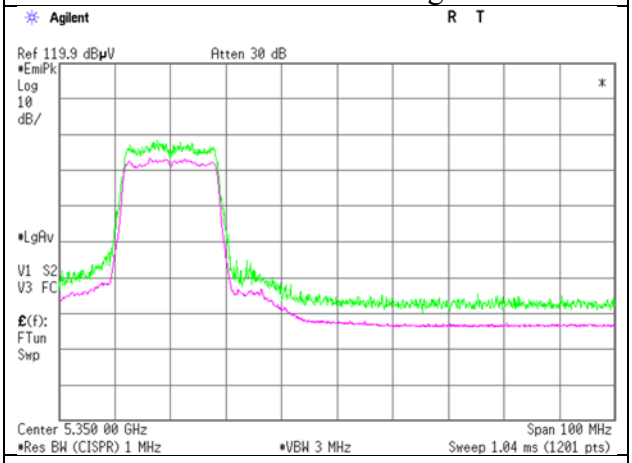
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 21, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Kazutaka Takeyama (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5500 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.08	32.14	16.36	44.87	2.33	57.04	73.90	16.8	164	266	
Hori.	11000.000	PK	48.51	40.11	10.00	43.77	2.33	57.18	73.90	16.7	105	234	
Hori.	16500.000	PK	47.96	39.24	12.41	42.12	-9.54	47.95	73.90	25.9	150	1	
Hori.	22000.000	PK	50.04	39.99	13.15	47.15	-9.54	46.49	73.90	27.4	108	314	
Hori.	5460.000	AV	40.77	32.14	16.36	44.87	2.33	46.73	53.90	7.1	164	266	VBW: 3.6 kHz
Hori.	11000.000	AV	38.24	40.11	10.00	43.77	2.33	46.91	53.90	**6.9**	105	234	VBW: 3.6 kHz
Hori.	16500.000	AV	37.61	39.24	12.41	42.12	-9.54	37.60	53.90	16.3	150	1	VBW: 3.6 kHz
Hori.	22000.000	AV	48.35	39.99	13.15	47.15	-9.54	44.80	53.90	9.1	108	314	VBW: 3.6 kHz
Vert.	5460.000	PK	50.74	32.14	16.36	44.87	2.33	56.70	73.90	17.2	142	247	
Vert.	11000.000	PK	48.64	40.11	10.00	43.77	2.33	57.31	73.90	16.5	206	299	
Vert.	16500.000	PK	47.25	39.24	12.41	42.12	-9.54	47.24	73.90	26.6	150	1	
Vert.	22000.000	PK	51.69	39.99	13.15	47.15	-9.54	48.14	73.90	25.7	140	25	
Vert.	5460.000	AV	40.20	32.14	16.36	44.87	2.33	46.16	53.90	7.7	142	247	VBW: 3.6 kHz
Vert.	11000.000	AV	38.32	40.11	10.00	43.77	2.33	46.99	53.90	**6.9**	206	299	VBW: 3.6 kHz
Vert.	16500.000	AV	37.19	39.24	12.41	42.12	-9.54	37.18	53.90	16.7	150	1	VBW: 3.6 kHz
Vert.	22000.000	AV	49.80	39.99	13.15	47.15	-9.54	46.25	53.90	7.6	140	25	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	55.65	32.15	16.35	44.88	2.33	61.60	-33.60	-27.00	**6.6**	164	266	
Vert.	5470.000	PK	54.89	32.15	16.35	44.88	2.33	60.84	-34.36	-27.00	7.4	142	247	

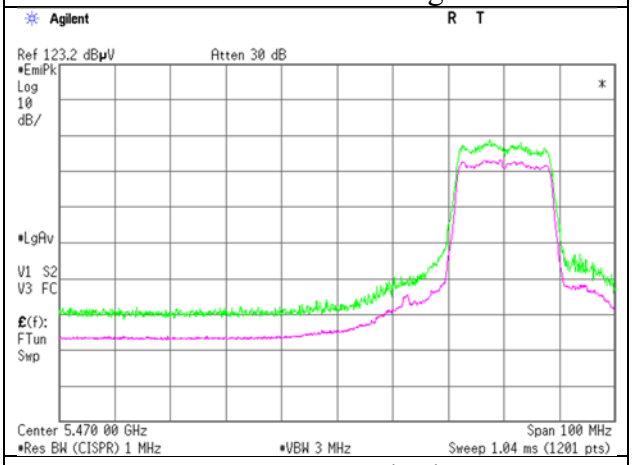
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 21, 2018
Temperature / Humidity	23 deg. C / 25 % RH
Engineer	Kazutaka Takeyama
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11a 5500 MHz

Horizontal

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2				
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	3	3	3	3	3
Date	April 4, 2018	March 21, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	20 deg. C / 57 % RH	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Kazutaka Takeyama	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(30 MHz - 1 GHz)	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT				
Mode	Tx 11a 5580 MHz				

(below 1GHz and above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	239.998	QP	26.72	11.57	8.38	32.03	0.00	14.64	46.00	31.3	212	15	
Hori.	275.728	QP	23.91	12.48	8.59	32.01	0.00	12.97	46.00	33.0	125	356	
Hori.	11160.000	PK	48.99	40.12	10.10	43.61	2.33	57.93	73.90	15.9	106	233	
Hori.	16740.000	PK	46.81	39.68	12.42	41.87	-9.54	47.50	73.90	26.4	150	1	
Hori.	22320.000	PK	50.86	39.97	13.24	47.87	-9.54	46.66	73.90	27.2	122	295	
Hori.	11160.000	AV	37.65	40.12	10.10	43.61	2.33	46.59	53.90	7.3	106	233	VBW: 3.6 kHz
Hori.	16740.000	AV	36.48	39.68	12.42	41.87	-9.54	37.17	53.90	16.7	150	1	VBW: 3.6 kHz
Hori.	22320.000	AV	49.32	39.97	13.24	47.87	-9.54	45.12	53.90	8.7	122	295	VBW: 3.6 kHz
Vert.	37.400	QP	22.88	15.13	6.77	32.20	0.00	12.58	40.00	27.4	100	0	
Vert.	67.546	QP	26.88	6.60	6.79	32.18	0.00	8.09	40.00	31.9	100	225	
Vert.	120.000	QP	22.59	12.97	7.40	32.14	0.00	10.82	43.50	32.6	100	3	
Vert.	168.000	QP	23.64	15.54	8.03	32.10	0.00	15.11	43.50	28.3	100	331	
Vert.	211.486	QP	27.31	11.53	8.22	32.06	0.00	15.00	43.50	28.5	100	293	
Vert.	239.998	QP	27.36	11.57	8.38	32.03	0.00	15.28	46.00	30.7	218	91	
Vert.	275.657	QP	28.47	12.47	8.59	32.01	0.00	17.52	46.00	28.4	100	81	
Vert.	365.054	QP	23.35	14.67	9.06	31.96	0.00	15.12	46.00	30.8	100	344	
Vert.	11160.000	PK	48.41	40.12	10.10	43.61	2.33	57.35	73.90	16.5	208	222	
Vert.	16740.000	PK	46.96	39.68	12.42	41.87	-9.54	47.65	73.90	26.2	150	1	
Vert.	22320.000	PK	51.04	39.97	13.24	47.87	-9.54	46.84	73.90	27.0	138	27	
Vert.	11160.000	AV	37.85	40.12	10.10	43.61	2.33	46.79	53.90	**7.1**	208	222	VBW: 3.6 kHz
Vert.	16740.000	AV	36.66	39.68	12.42	41.87	-9.54	37.35	53.90	16.5	150	1	VBW: 3.6 kHz
Vert.	22320.000	AV	49.68	39.97	13.24	47.87	-9.54	45.48	53.90	8.4	138	27	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 21, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Kazutaka Takeyama (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5700 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11400.000	PK	47.82	40.13	10.24	43.38	2.33	57.14	73.90	16.7	102	218	
Hori.	17100.000	PK	47.89	40.92	12.46	41.55	-9.54	50.18	73.90	23.7	150	1	
Hori.	22800.000	PK	48.00	39.94	13.50	47.46	-9.54	44.44	73.90	29.4	131	306	
Hori.	11400.000	AV	37.55	40.13	10.24	43.38	2.33	46.87	53.90	7.0	102	218	VBW: 3.6 kHz
Hori.	17100.000	AV	37.04	40.92	12.46	41.55	-9.54	39.33	53.90	14.5	150	1	VBW: 3.6 kHz
Hori.	22800.000	AV	45.57	39.94	13.50	47.46	-9.54	42.01	53.90	11.8	131	306	VBW: 3.6 kHz
Vert.	11400.000	PK	47.70	40.13	10.24	43.38	2.33	57.02	73.90	16.8	201	288	
Vert.	17100.000	PK	47.51	40.92	12.46	41.55	-9.54	49.80	73.90	24.1	150	1	
Vert.	22800.000	PK	49.76	39.94	13.50	47.46	-9.54	46.20	73.90	27.7	103	28	
Vert.	11400.000	AV	37.98	40.13	10.24	43.38	2.33	47.30	53.90	**6.6**	201	288	VBW: 3.6 kHz
Vert.	17100.000	AV	37.19	40.92	12.46	41.55	-9.54	39.48	53.90	14.4	150	1	VBW: 3.6 kHz
Vert.	22800.000	AV	47.71	39.94	13.50	47.46	-9.54	44.15	53.90	9.7	103	28	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	55.63	32.53	16.59	44.87	2.33	62.21	-32.99	-27.00	**6.0**	165	268	
Vert.	5725.000	PK	55.16	32.53	16.59	44.87	2.33	61.74	-33.46	-27.00	6.5	143	233	

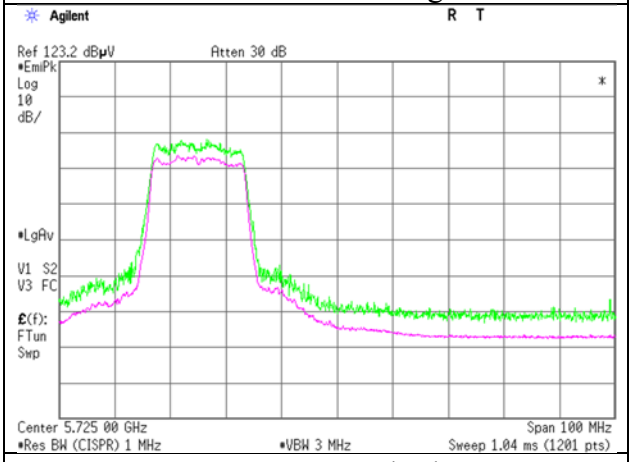
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG〈({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 21, 2018
Temperature / Humidity	23 deg. C / 25 % RH
Engineer	Kazutaka Takeyama
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11a 5700 MHz

Horizontal

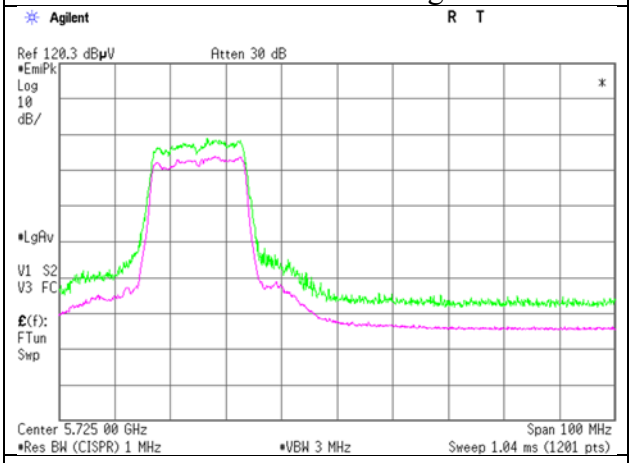
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 22, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	21 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Hiroyuki Morikawa (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5745 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11490.000	PK	47.62	40.13	10.30	43.29	2.33	57.09	73.97	16.8	151	270	
Hori.	17235.000	PK	47.39	41.96	12.45	41.50	-9.54	50.76	73.90	23.1	150	1	
Hori.	22980.000	PK	50.09	39.93	13.63	46.97	-9.54	47.14	73.90	26.7	103	71	
Hori.	11490.000	AV	38.14	40.13	10.30	43.29	2.33	47.61	53.97	6.3	151	270	VBW: 3.6 kHz
Hori.	17235.000	AV	37.28	41.96	12.45	41.50	-9.54	40.65	53.90	13.2	150	1	VBW: 3.6 kHz
Hori.	22980.000	AV	48.18	39.93	13.63	46.97	-9.54	45.23	53.90	8.6	103	71	VBW: 3.6 kHz
Vert.	11490.000	PK	47.88	40.13	10.30	43.29	2.33	57.35	73.97	16.6	224	271	
Vert.	17235.000	PK	47.16	41.96	12.45	41.50	-9.54	50.53	73.90	23.3	150	1	
Vert.	22980.000	PK	52.44	39.93	13.63	46.97	-9.54	49.49	73.90	24.4	122	28	
Vert.	11490.000	AV	39.01	40.13	10.30	43.29	2.33	48.48	53.97	**5.4**	224	271	VBW: 3.6 kHz
Vert.	17235.000	AV	37.19	41.96	12.45	41.50	-9.54	40.56	53.90	13.3	150	1	VBW: 3.6 kHz
Vert.	22980.000	AV	51.10	39.93	13.63	46.97	-9.54	48.15	53.90	5.7	122	28	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.75	32.41	16.50	44.88	2.33	56.11	-39.09	-27.00	12.1	121	69	
Hori.	5700.000	PK	50.01	32.49	16.56	44.88	2.33	56.51	-38.69	10.00	48.7	121	69	
Hori.	5720.000	PK	60.28	32.53	16.59	44.87	2.33	66.86	-28.34	15.60	43.9	121	69	
Hori.	5725.000	PK	64.15	32.53	16.59	44.87	2.33	70.73	-24.47	27.00	51.5	121	69	
Vert.	5650.000	PK	50.49	32.41	16.50	44.88	2.33	56.85	-38.35	-27.00	**11.4**	128	207	
Vert.	5700.000	PK	50.04	32.49	16.56	44.88	2.33	56.54	-38.66	10.00	48.7	128	207	
Vert.	5720.000	PK	55.72	32.53	16.59	44.87	2.33	62.30	-32.90	15.60	48.5	128	207	
Vert.	5725.000	PK	59.30	32.53	16.59	44.87	2.33	65.88	-29.32	27.00	56.3	128	207	

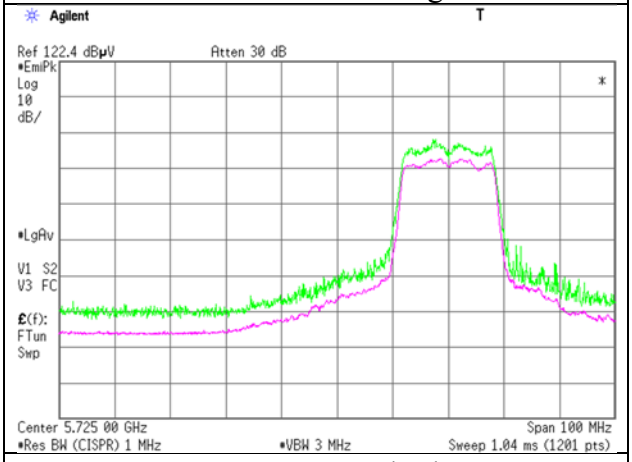
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11a 5745 MHz

Horizontal

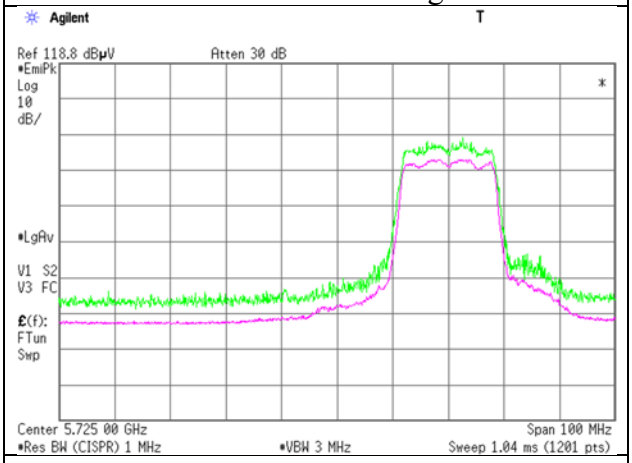
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 22, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	21 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Hiroyuki Morikawa (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5785 MHz			

(below 1GHz and above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11570.000	PK	49.33	40.01	10.35	43.29	2.33	58.73	73.97	15.2	108	258	
Hori.	17355.000	PK	47.41	42.88	12.45	41.45	-9.54	51.75	73.90	22.1	150	1	
Hori.	23140.000	PK	48.70	39.91	13.70	47.09	-9.54	45.68	73.90	28.2	134	289	
Hori.	11570.000	AV	39.36	40.01	10.35	43.29	2.33	48.76	53.97	5.2	108	258	VBW: 3.6 kHz
Hori.	17355.000	AV	36.92	42.88	12.45	41.45	-9.54	41.26	53.90	12.6	150	1	VBW: 3.6 kHz
Hori.	23140.000	AV	46.62	39.91	13.70	47.09	-9.54	43.60	53.90	10.3	134	289	VBW: 3.6 kHz
Vert.	11570.000	PK	48.70	40.01	10.35	43.29	2.33	58.10	73.97	15.8	187	268	
Vert.	17355.000	PK	47.65	42.88	12.45	41.45	-9.54	51.99	73.90	21.9	150	1	
Vert.	23140.000	PK	53.74	39.91	13.70	47.09	-9.54	50.72	73.90	23.1	136	21	
Vert.	11570.000	AV	39.63	40.01	10.35	43.29	2.33	49.03	53.97	4.9	187	268	VBW: 3.6 kHz
Vert.	17355.000	AV	37.02	42.88	12.45	41.45	-9.54	41.36	53.90	12.5	150	1	VBW: 3.6 kHz
Vert.	23140.000	AV	52.52	39.91	13.70	47.09	-9.54	49.50	53.90	**4.4**	136	21	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 22, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	21 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Hiroyuki Morikawa (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11a 5825 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	49.06	39.88	10.38	43.30	2.33	58.35	73.97	15.6	134	265	
Hori.	17475.000	PK	46.92	43.80	12.46	41.40	-9.54	52.24	73.90	21.6	150	1	
Hori.	23300.000	PK	50.48	39.89	13.77	47.29	-9.54	47.31	73.90	26.5	133	97	
Hori.	11650.000	AV	39.47	39.88	10.38	43.30	2.33	48.76	53.97	5.2	134	265	VBW: 3.6 kHz
Hori.	17475.000	AV	36.09	43.80	12.46	41.40	-9.54	41.41	53.90	12.4	150	1	VBW: 3.6 kHz
Hori.	23300.000	AV	48.24	39.89	13.77	47.29	-9.54	45.07	53.90	8.8	133	97	VBW: 3.6 kHz
Vert.	11650.000	PK	48.58	39.88	10.38	43.30	2.33	57.87	73.97	16.1	197	269	
Vert.	17475.000	PK	47.32	43.80	12.46	41.40	-9.54	52.64	73.90	21.2	150	1	
Vert.	23300.000	PK	54.00	39.89	13.77	47.29	-9.54	50.83	73.90	23.0	135	26	
Vert.	11650.000	AV	40.20	39.88	10.38	43.30	2.33	49.49	53.97	**4.4**	197	269	VBW: 3.6 kHz
Vert.	17475.000	AV	36.21	43.80	12.46	41.40	-9.54	41.53	53.90	12.3	150	1	VBW: 3.6 kHz
Vert.	23300.000	AV	52.56	39.89	13.77	47.29	-9.54	49.39	53.90	4.5	135	26	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	58.76	32.74	16.73	44.86	2.33	65.70	-29.50	27.00	56.5	146	259	
Hori.	5855.000	PK	56.04	32.75	16.73	44.86	2.33	62.99	-32.21	15.60	47.8	146	259	
Hori.	5875.000	PK	50.92	32.78	16.76	44.86	2.33	57.93	-37.27	10.00	47.3	146	259	
Hori.	5925.000	PK	49.81	32.87	16.80	44.85	2.33	56.96	-38.24	-27.00	**11.2**	146	259	
Vert.	5850.000	PK	55.21	32.74	16.73	44.86	2.33	62.15	-33.05	27.00	60.1	126	47	
Vert.	5855.000	PK	52.70	32.75	16.73	44.86	2.33	59.65	-35.55	15.60	51.2	126	47	
Vert.	5875.000	PK	50.12	32.78	16.76	44.86	2.33	57.13	-38.07	10.00	48.1	126	47	
Vert.	5925.000	PK	49.63	32.87	16.80	44.85	2.33	56.78	-38.42	-27.00	11.4	126	47	

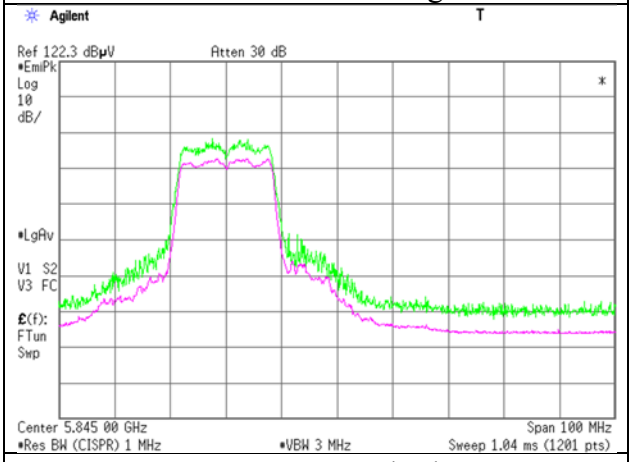
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG｛({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11a 5825 MHz

Horizontal

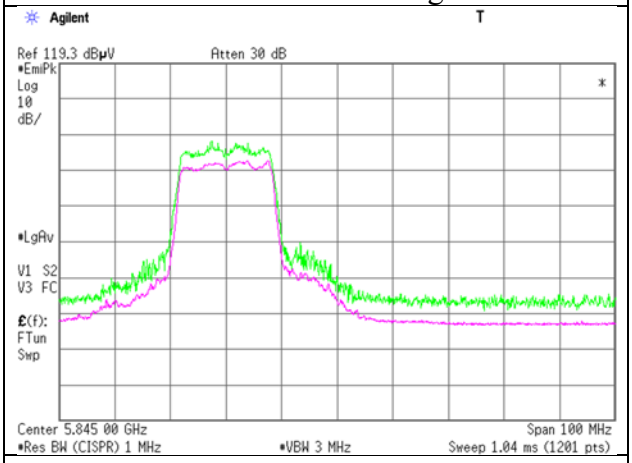
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5180 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	52.49	32.01	16.48	44.63	2.33	58.68	73.97	15.2	159	260	
Hori.	5150.000	AV	39.58	32.01	16.48	44.63	2.33	45.77	53.97	**8.2**	159	260	VBW: 10 Hz
Vert.	5150.000	PK	52.49	32.01	16.48	44.63	2.33	58.68	73.97	15.2	126	264	
Vert.	5150.000	AV	38.83	32.01	16.48	44.63	2.33	45.02	53.97	8.9	126	264	VBW: 10 Hz

*This mode was performed only band edges measurement.

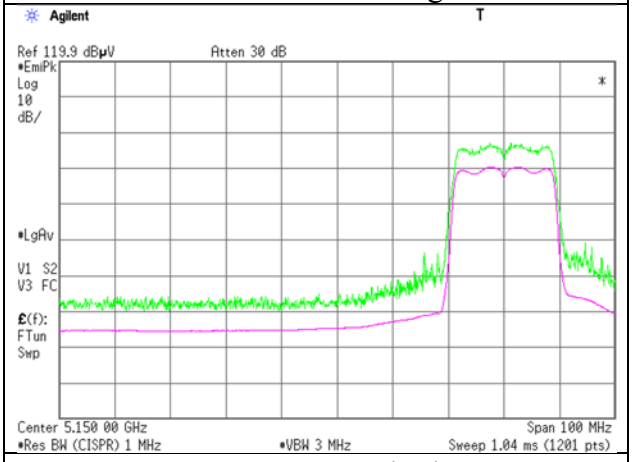
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5180 MHz

Horizontal

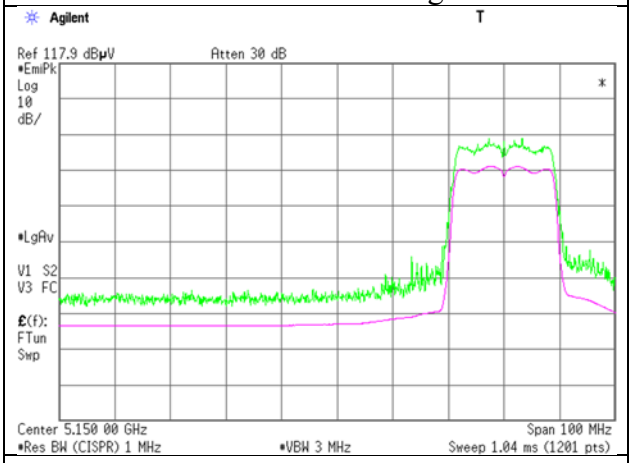
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5320 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	52.23	32.09	16.39	44.79	2.33	58.25	73.97	15.7	120	273	
Hori.	5350.000	AV	39.62	32.09	16.39	44.79	2.33	45.64	53.97	**8.3**	120	273	VBW: 10 Hz
Vert.	5350.000	PK	52.55	32.09	16.39	44.79	2.33	58.57	73.97	15.4	147	263	
Vert.	5350.000	AV	39.56	32.09	16.39	44.79	2.33	45.58	53.97	**8.3**	147	263	VBW: 10 Hz

*This mode was performed only band edges measurement.

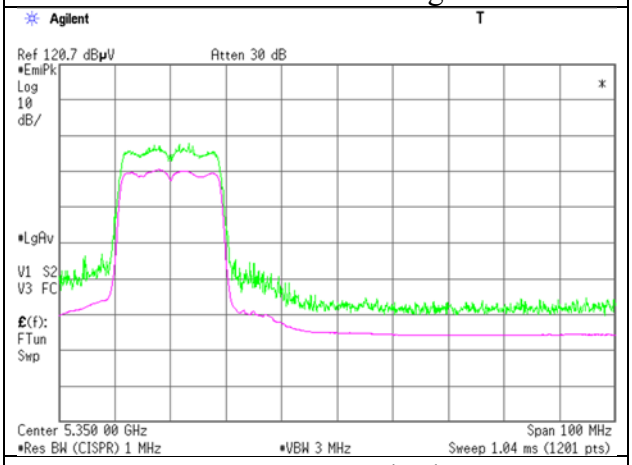
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
*The 4th harmonic was not seen so the result was its base noise level.
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5320 MHz

Horizontal

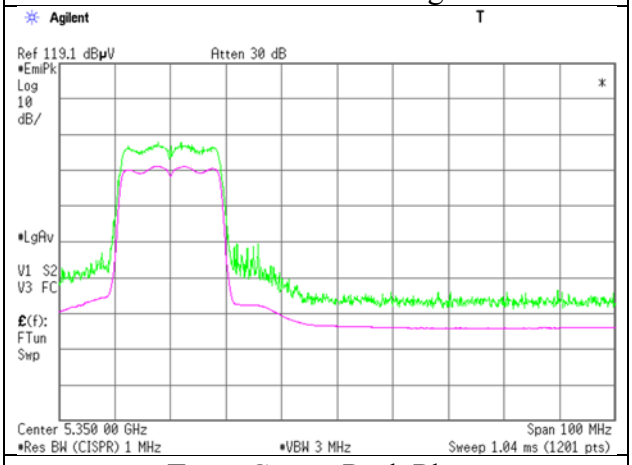
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5500 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	54.37	32.14	16.36	44.87	2.33	60.33	73.97	13.6	117	266	
Hori.	5460.000	AV	38.67	32.14	16.36	44.87	2.33	44.63	53.97	**9.3**	117	266	VBW: 10 Hz
Vert.	5460.000	PK	52.10	32.14	16.36	44.87	2.33	58.06	73.97	15.9	150	271	
Vert.	5460.000	AV	38.18	32.14	16.36	44.87	2.33	44.14	53.97	9.8	150	271	VBW: 10 Hz

*This mode was performed only band edges measurement.

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	58.45	32.15	16.35	44.88	2.33	64.40	-30.80	-27.00	**3.8**	117	266	
Vert.	5470.000	PK	56.80	32.15	16.35	44.88	2.33	62.75	-32.45	-27.00	5.5	150	271	

*This mode was performed only band edges measurement.

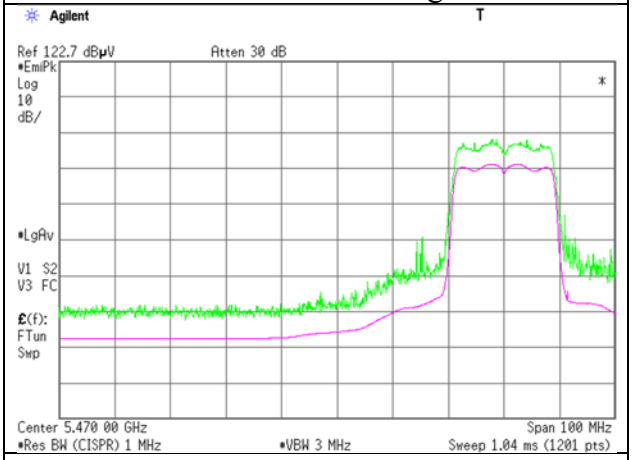
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5500 MHz

Horizontal

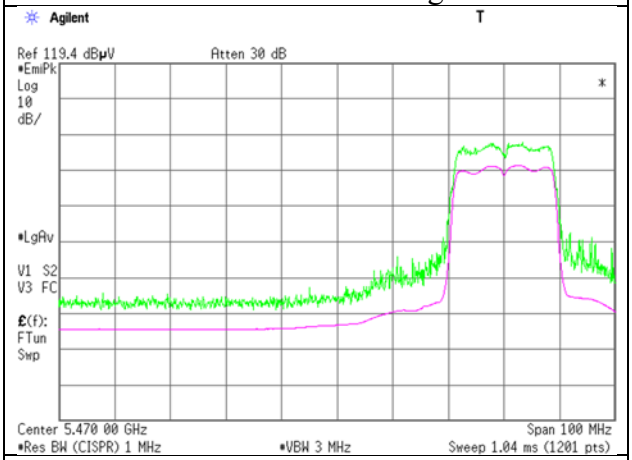
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5700 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	60.70	32.53	16.59	44.87	2.33	67.28	-27.92	-27.00	0.9	152	257	
Vert.	5725.000	PK	61.27	32.53	16.59	44.87	2.33	67.85	-27.35	-27.00	**0.4**	119	310	

*This mode was performed only band edges measurement.

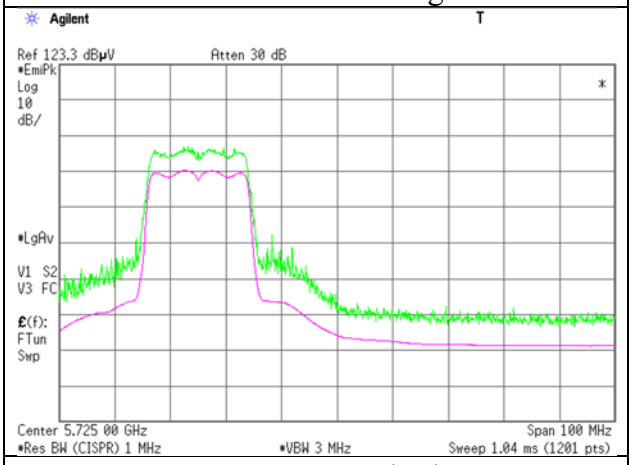
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5700 MHz

Horizontal

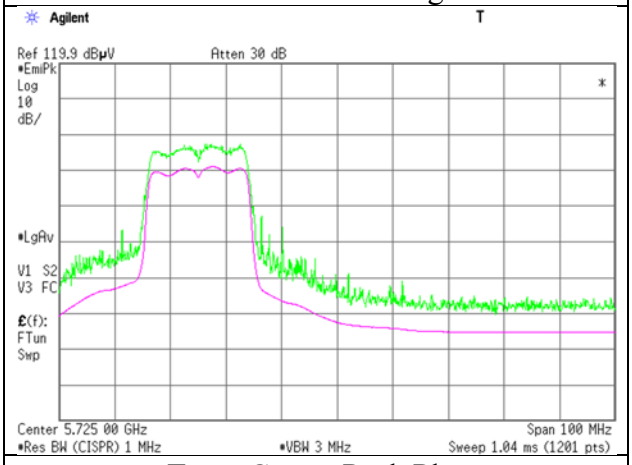
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5745 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.71	32.41	16.50	44.88	2.33	56.07	-39.13	-27.00	**12.1**	149	257	
Hori.	5700.000	PK	51.99	32.49	16.56	44.88	2.33	58.49	-36.71	10.00	46.7	149	257	
Hori.	5720.000	PK	61.14	32.53	16.59	44.87	2.33	67.72	-27.48	15.60	43.1	149	257	
Hori.	5725.000	PK	68.96	32.53	16.59	44.87	2.33	75.54	-19.66	27.00	46.7	149	257	
Vert.	5650.000	PK	49.76	32.41	16.50	44.88	2.33	56.12	-39.08	-27.00	**12.1**	130	250	
Vert.	5700.000	PK	51.06	32.49	16.56	44.88	2.33	57.56	-37.64	10.00	47.6	130	250	
Vert.	5720.000	PK	58.07	32.53	16.59	44.87	2.33	64.65	-30.55	15.60	46.2	130	250	
Vert.	5725.000	PK	64.66	32.53	16.59	44.87	2.33	71.24	-23.96	27.00	51.0	130	250	

*This mode was performed only band edges measurement.

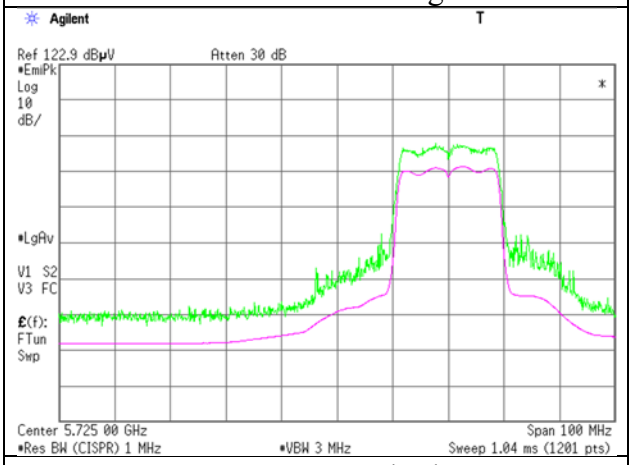
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5745 MHz

Horizontal

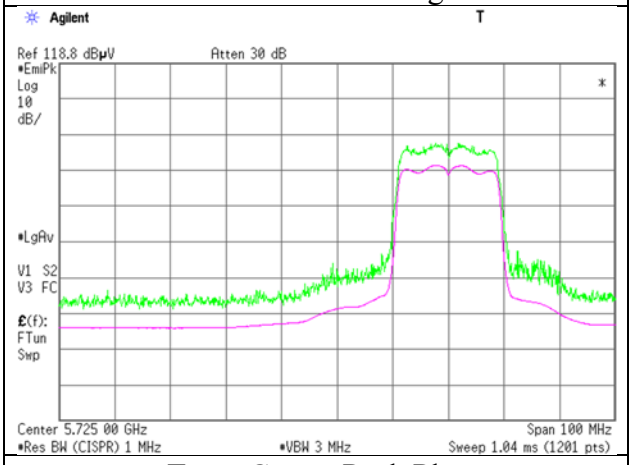
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5825 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	55.03	32.74	16.73	44.86	2.33	61.97	-33.23	27.00	60.2	169	270	
Hori.	5855.000	PK	53.52	32.75	16.73	44.86	2.33	60.47	-34.73	15.60	50.3	169	270	
Hori.	5875.000	PK	50.35	32.78	16.76	44.86	2.33	57.36	-37.84	10.00	47.8	169	270	
Hori.	5925.000	PK	49.88	32.87	16.80	44.85	2.33	57.03	-38.17	-27.00	**11.2**	169	270	
Vert.	5850.000	PK	55.31	32.74	16.73	44.86	2.33	62.25	-32.95	27.00	60.0	134	241	
Vert.	5855.000	PK	53.46	32.75	16.73	44.86	2.33	60.41	-34.79	15.60	50.4	134	241	
Vert.	5875.000	PK	50.16	32.78	16.76	44.86	2.33	57.17	-38.03	10.00	48.0	134	241	
Vert.	5925.000	PK	49.55	32.87	16.80	44.85	2.33	56.70	-38.50	-27.00	11.5	134	241	

*This mode was performed only band edges measurement.

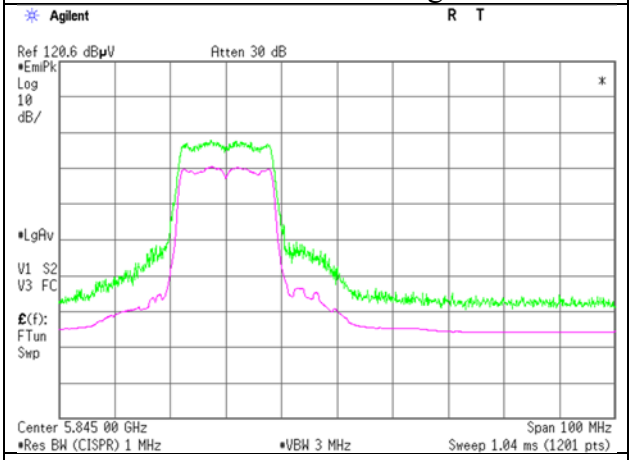
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11n-20 5825 MHz

Horizontal

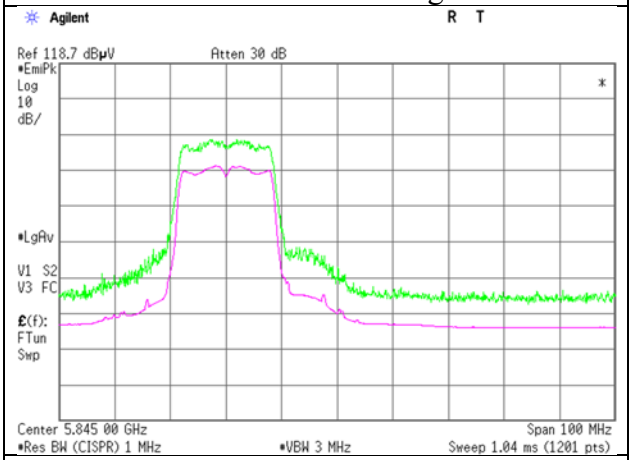
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5180 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.26	32.01	16.48	44.63	2.33	57.45	73.97	16.5	168	246	
Hori.	5150.000	AV	39.69	32.01	16.48	44.63	2.33	45.88	53.97	**8.0**	168	246	VBW: 10 Hz
Vert.	5150.000	PK	52.01	32.01	16.48	44.63	2.33	58.20	73.97	15.7	140	227	
Vert.	5150.000	AV	39.04	32.01	16.48	44.63	2.33	45.23	53.97	8.7	140	227	VBW: 10 Hz

*This mode was performed only band edges measurement.

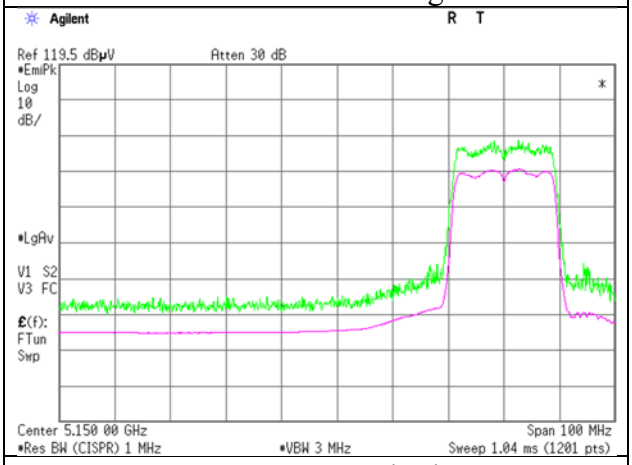
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5180 MHz

Horizontal

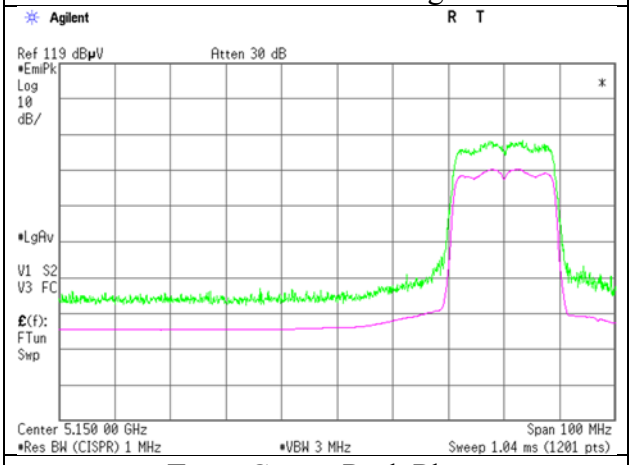
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5320 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	53.75	32.09	16.39	44.79	2.33	59.77	73.97	14.2	164	261	
Hori.	5350.000	AV	40.30	32.09	16.39	44.79	2.33	46.32	53.97	**7.6**	164	261	VBW: 10 Hz
Vert.	5350.000	PK	52.44	32.09	16.39	44.79	2.33	58.46	73.97	15.5	139	243	
Vert.	5350.000	AV	38.10	32.09	16.39	44.79	2.33	44.12	53.97	9.8	139	243	VBW: 10 Hz

*This mode was performed only band edges measurement.

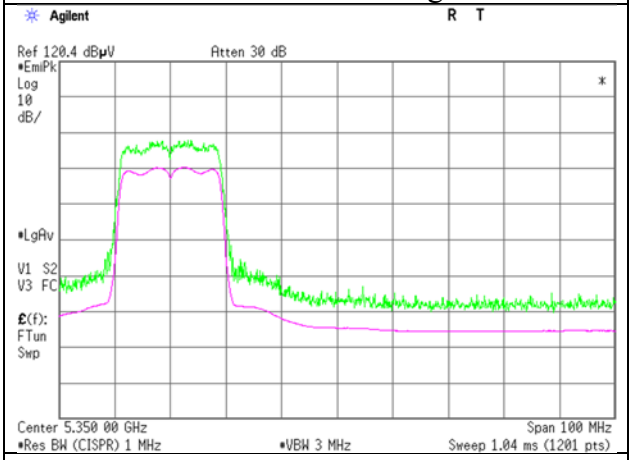
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5320 MHz

Horizontal

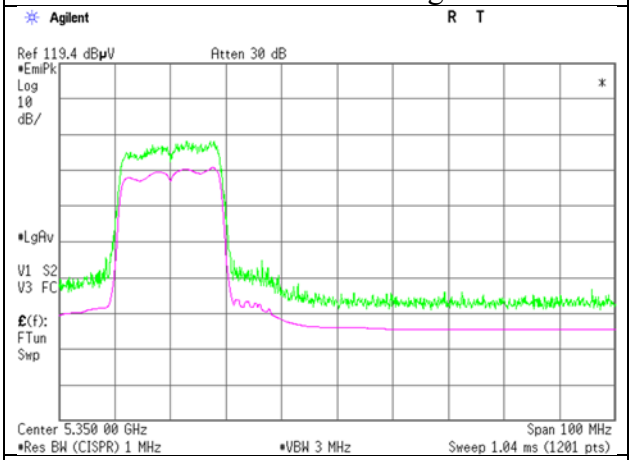
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5500 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.61	32.14	16.36	44.87	2.33	57.57	73.97	16.4	104	269	
Hori.	5460.000	AV	38.55	32.14	16.36	44.87	2.33	44.51	53.97	**9.4**	104	269	VBW: 10 Hz
Vert.	5460.000	PK	50.96	32.14	16.36	44.87	2.33	56.92	73.97	17.0	102	291	
Vert.	5460.000	AV	38.32	32.14	16.36	44.87	2.33	44.28	53.97	9.6	102	291	VBW: 10 Hz

*This mode was performed only band edges measurement.

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	59.82	32.15	16.35	44.88	2.33	65.77	-29.43	-27.00	**2.4**	104	269	
Vert.	5470.000	PK	58.28	32.15	16.35	44.88	2.33	64.23	-30.97	-27.00	4.0	102	291	

*This mode was performed only band edges measurement.

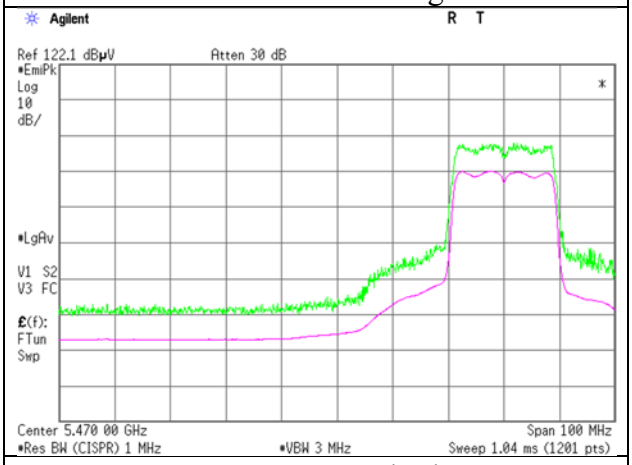
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5500 MHz

Horizontal

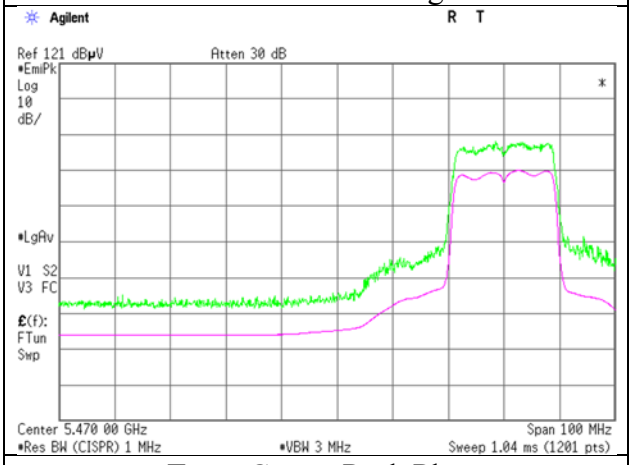
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5700 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	58.89	32.53	16.59	44.87	2.33	65.47	-29.73	-27.00	**2.7**	161	285	
Vert.	5725.000	PK	58.43	32.53	16.59	44.87	2.33	65.01	-30.19	-27.00	3.2	107	220	

*This mode was performed only band edges measurement.

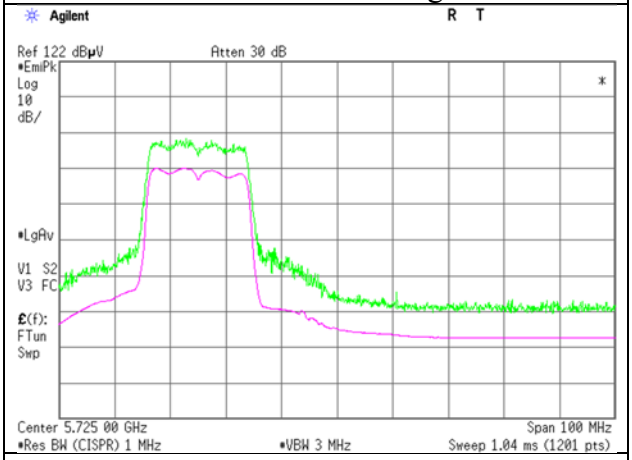
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5700 MHz

Horizontal

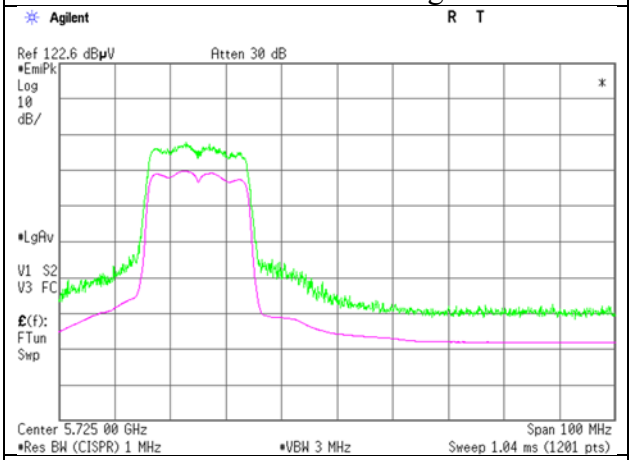
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5745 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.85	32.41	16.50	44.88	2.33	56.21	-38.99	-27.00	12.0	104	263	
Hori.	5700.000	PK	51.27	32.49	16.56	44.88	2.33	57.77	-37.43	10.00	47.4	104	263	
Hori.	5720.000	PK	59.52	32.53	16.59	44.87	2.33	66.10	-29.10	15.60	44.7	104	263	
Hori.	5725.000	PK	64.65	32.53	16.59	44.87	2.33	71.23	-23.97	27.00	51.0	104	263	
Vert.	5650.000	PK	50.11	32.41	16.50	44.88	2.33	56.47	-38.73	-27.00	**11.7**	189	216	
Vert.	5700.000	PK	50.78	32.49	16.56	44.88	2.33	57.28	-37.92	10.00	47.9	189	216	
Vert.	5720.000	PK	58.37	32.53	16.59	44.87	2.33	64.95	-30.25	15.60	45.9	189	216	
Vert.	5725.000	PK	61.97	32.53	16.59	44.87	2.33	68.55	-26.65	27.00	53.7	189	216	

*This mode was performed only band edges measurement.

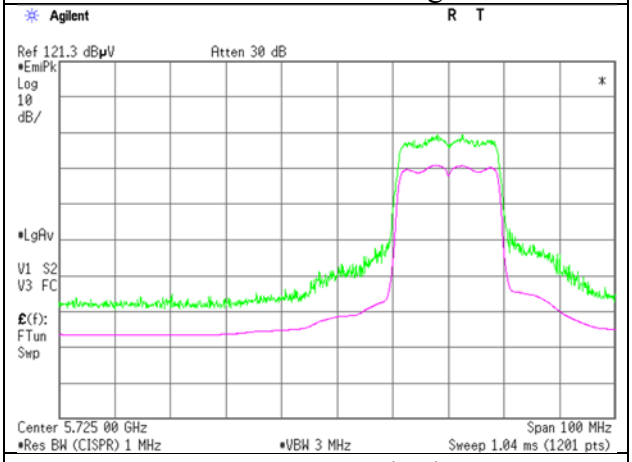
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5745 MHz

Horizontal

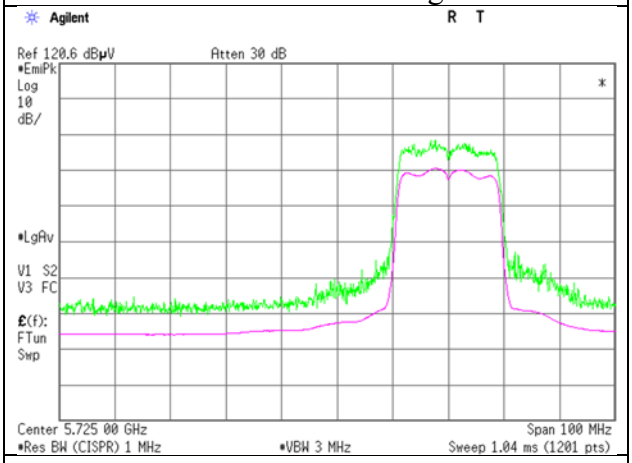
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5825 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	60.03	32.74	16.73	44.86	2.33	66.97	-28.23	27.00	55.2	180	268	
Hori.	5855.000	PK	55.71	32.75	16.73	44.86	2.33	62.66	-32.54	15.60	48.1	180	268	
Hori.	5875.000	PK	51.80	32.78	16.76	44.86	2.33	58.81	-36.39	10.00	46.4	180	268	
Hori.	5925.000	PK	50.43	32.87	16.80	44.85	2.33	57.58	-37.62	-27.00	**10.6**	180	268	
Vert.	5850.000	PK	58.60	32.74	16.73	44.86	2.33	65.54	-29.66	27.00	56.7	109	210	
Vert.	5855.000	PK	53.86	32.75	16.73	44.86	2.33	60.81	-34.39	15.60	50.0	109	210	
Vert.	5875.000	PK	50.73	32.78	16.76	44.86	2.33	57.74	-37.46	10.00	47.5	109	210	
Vert.	5925.000	PK	49.58	32.87	16.80	44.85	2.33	56.73	-38.47	-27.00	11.5	109	210	

*This mode was performed only band edges measurement.

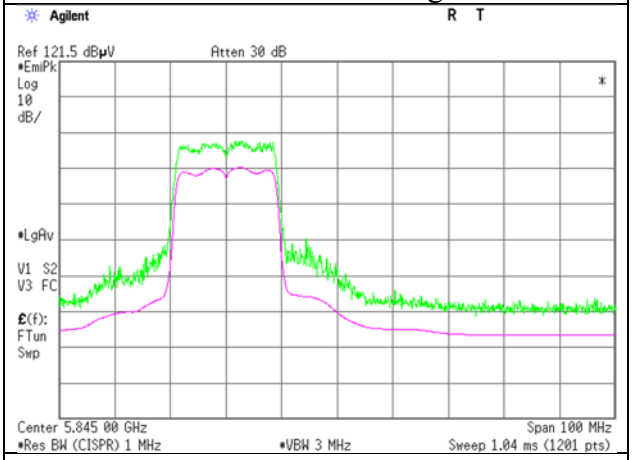
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 22, 2018
Temperature / Humidity	25 deg. C / 29 % RH
Engineer	Kazutaka Takeyama
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-20 5825 MHz

Horizontal

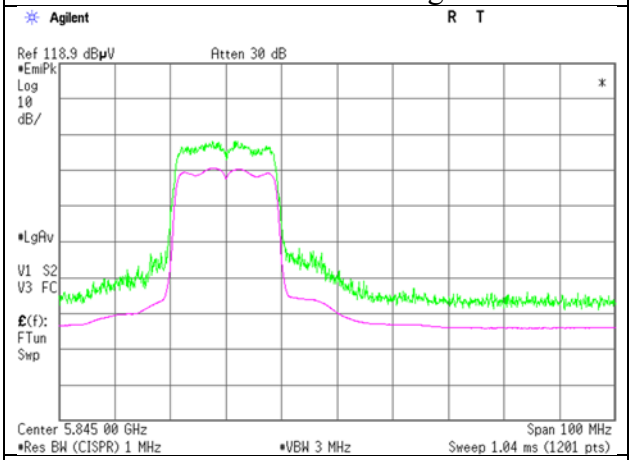
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5190 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	54.15	32.01	16.48	44.63	2.33	60.34	73.97	13.6	243	259	
Hori.	10380.000	PK	47.15	39.71	9.39	43.61	2.33	54.97	73.97	19.0	150	0	
Hori.	15570.000	PK	48.34	40.11	11.66	42.10	-9.54	48.47	73.90	25.4	150	1	
Hori.	20760.000	PK	52.82	39.81	12.68	47.26	-9.54	48.51	73.90	25.3	118	320	
Hori.	5150.000	AV	43.02	32.01	16.48	44.63	2.33	49.21	53.97	4.7	243	259	VBW: 3.6 kHz
Hori.	10380.000	AV	37.11	39.71	9.39	43.61	2.33	44.93	53.97	9.0	150	0	VBW: 3.6 kHz
Hori.	15570.000	AV	37.93	40.11	11.66	42.10	-9.54	38.06	53.90	15.8	150	1	VBW: 3.6 kHz
Hori.	20760.000	AV	51.36	39.81	12.68	47.26	-9.54	47.05	53.90	6.8	118	320	VBW: 3.6 kHz
Vert.	5150.000	PK	54.29	32.01	16.48	44.63	2.33	60.48	73.97	13.4	170	186	
Vert.	10380.000	PK	47.20	39.71	9.39	43.61	2.33	55.02	73.97	18.9	150	0	
Vert.	15570.000	PK	48.98	40.11	11.66	42.10	-9.54	49.11	73.90	24.7	150	1	
Vert.	20760.000	PK	50.91	39.81	12.68	47.26	-9.54	46.60	73.90	27.3	135	25	
Vert.	5150.000	AV	43.57	32.01	16.48	44.63	2.33	49.76	53.97	**4.2**	170	186	VBW: 3.6 kHz
Vert.	10380.000	AV	37.27	39.71	9.39	43.61	2.33	45.09	53.97	8.8	150	0	VBW: 3.6 kHz
Vert.	15570.000	AV	37.95	40.11	11.66	42.10	-9.54	38.08	53.90	15.8	150	1	VBW: 3.6 kHz
Vert.	20760.000	AV	48.60	39.81	12.68	47.26	-9.54	44.29	53.90	9.6	135	25	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

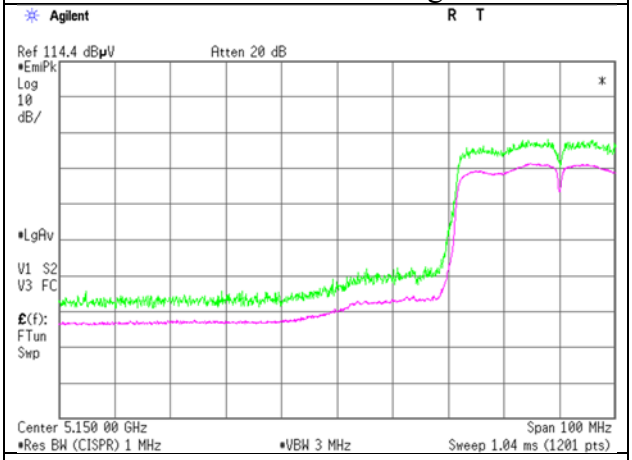
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11n-40 5190 MHz

Horizontal

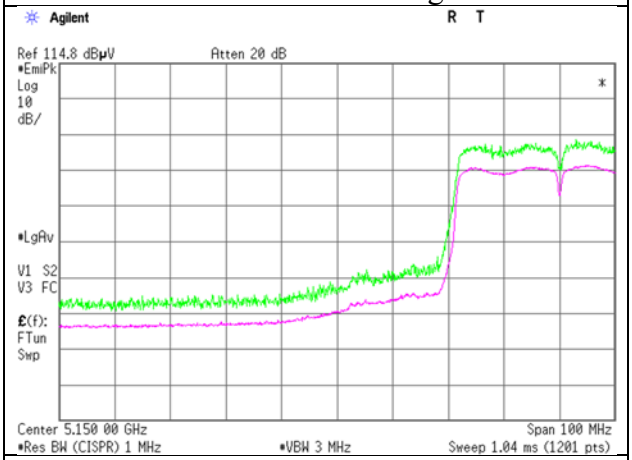
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5230 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	48.08	39.84	9.43	43.55	2.33	56.13	73.97	17.8	150	0	
Hori.	15690.000	PK	48.91	39.61	11.71	42.13	-9.54	48.56	73.90	25.3	150	1	
Hori.	20920.000	PK	48.97	39.78	12.75	46.99	-9.54	44.97	73.90	28.9	139	298	
Hori.	10460.000	AV	37.50	39.84	9.43	43.55	2.33	45.55	53.97	8.4	150	0	VBW: 3.6 kHz
Hori.	15690.000	AV	37.86	39.61	11.71	42.13	-9.54	37.51	53.90	16.3	150	1	VBW: 3.6 kHz
Hori.	20920.000	AV	46.78	39.78	12.75	46.99	-9.54	42.78	53.90	11.1	139	298	VBW: 3.6 kHz
Vert.	10460.000	PK	47.83	39.84	9.43	43.55	2.33	55.88	73.97	18.0	150	0	
Vert.	15690.000	PK	48.54	39.61	11.71	42.13	-9.54	48.19	73.90	25.7	150	1	
Vert.	20920.000	PK	54.20	39.78	12.75	46.99	-9.54	50.20	73.90	23.7	137	25	
Vert.	10460.000	AV	37.24	39.84	9.43	43.55	2.33	45.29	53.97	8.6	150	0	VBW: 3.6 kHz
Vert.	15690.000	AV	37.79	39.61	11.71	42.13	-9.54	37.44	53.90	16.4	150	1	VBW: 3.6 kHz
Vert.	20920.000	AV	52.86	39.78	12.75	46.99	-9.54	48.86	53.90	**5.0**	137	25	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5310 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	56.06	32.09	16.39	44.79	2.33	62.08	73.97	11.8	165	273	
Hori.	10620.000	PK	47.26	39.96	9.57	43.58	2.33	55.54	73.97	18.4	150	0	
Hori.	15930.000	PK	48.01	38.62	11.80	42.18	-9.54	46.71	73.90	27.1	150	1	
Hori.	21240.000	PK	50.53	39.82	12.86	47.17	-9.54	46.50	73.90	27.4	127	17	
Hori.	5350.000	AV	43.68	32.09	16.39	44.79	2.33	49.70	53.97	**4.2**	165	273	VBW: 3.6 kHz
Hori.	10620.000	AV	37.32	39.96	9.57	43.58	2.33	45.60	53.97	8.3	150	0	VBW: 3.6 kHz
Hori.	15930.000	AV	37.27	38.62	11.80	42.18	-9.54	35.97	53.90	17.9	150	1	VBW: 3.6 kHz
Hori.	21240.000	AV	48.54	39.82	12.86	47.17	-9.54	44.51	53.90	9.3	127	17	VBW: 3.6 kHz
Vert.	5350.000	PK	54.76	32.09	16.39	44.79	2.33	60.78	73.97	13.1	201	282	
Vert.	10620.000	PK	47.32	39.96	9.57	43.58	2.33	55.60	73.97	18.3	150	0	
Vert.	15930.000	PK	48.18	38.62	11.80	42.18	-9.54	46.88	73.90	27.0	150	1	
Vert.	21240.000	PK	52.53	39.82	12.86	47.17	-9.54	48.50	73.90	25.4	136	20	
Vert.	5350.000	AV	42.13	32.09	16.39	44.79	2.33	48.15	53.97	5.8	201	282	VBW: 3.6 kHz
Vert.	10620.000	AV	37.14	39.96	9.57	43.58	2.33	45.42	53.97	8.5	150	0	VBW: 3.6 kHz
Vert.	15930.000	AV	37.38	38.62	11.80	42.18	-9.54	36.08	53.90	17.8	150	1	VBW: 3.6 kHz
Vert.	21240.000	AV	51.00	39.82	12.86	47.17	-9.54	46.97	53.90	6.9	136	20	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

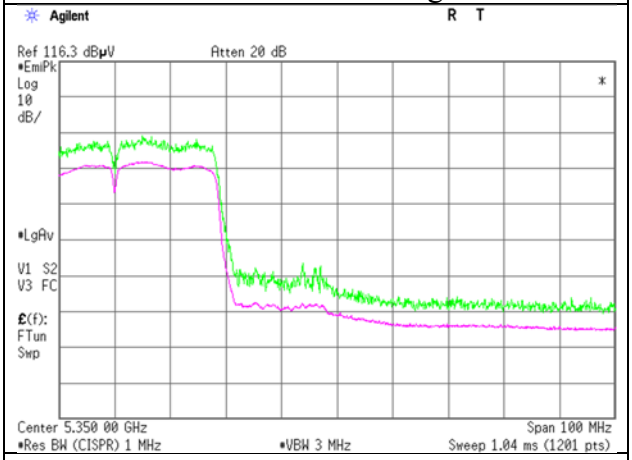
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11n-40 5310 MHz

Horizontal

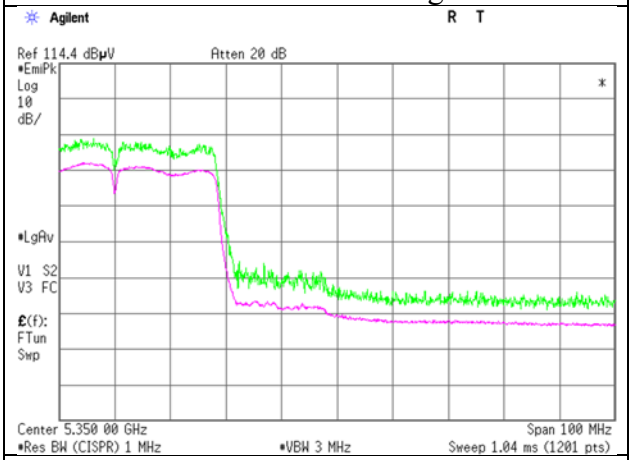
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5510 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	54.32	32.14	16.36	44.87	2.33	60.28	73.97	13.6	156	268	
Hori.	11020.000	PK	48.46	40.11	10.01	43.75	2.33	57.16	73.97	16.8	150	0	
Hori.	16530.000	PK	48.01	39.29	12.40	42.09	-9.54	48.07	73.90	25.8	150	1	
Hori.	22040.000	PK	49.40	39.99	13.16	47.24	-9.54	45.77	73.90	28.1	130	310	
Hori.	5460.000	AV	42.51	32.14	16.36	44.87	2.33	48.47	53.97	**5.5**	156	268	VBW: 3.6 kHz
Hori.	11020.000	AV	37.82	40.11	10.01	43.75	2.33	46.52	53.97	7.4	150	0	VBW: 3.6 kHz
Hori.	16530.000	AV	37.12	39.29	12.40	42.09	-9.54	37.18	53.90	16.7	150	1	VBW: 3.6 kHz
Hori.	22040.000	AV	47.66	39.99	13.16	47.24	-9.54	44.03	53.90	9.8	130	310	VBW: 3.6 kHz
Vert.	5460.000	PK	52.15	32.14	16.36	44.87	2.33	58.11	73.97	15.8	201	240	
Vert.	11020.000	PK	48.02	40.11	10.01	43.75	2.33	56.72	73.97	17.2	150	0	
Vert.	16530.000	PK	47.29	39.29	12.40	42.09	-9.54	47.35	73.90	26.5	150	1	
Vert.	22040.000	PK	51.39	39.99	13.16	47.24	-9.54	47.76	73.90	26.1	144	21	
Vert.	5460.000	AV	41.19	32.14	16.36	44.87	2.33	47.15	53.97	6.8	201	240	VBW: 3.6 kHz
Vert.	11020.000	AV	37.60	40.11	10.01	43.75	2.33	46.30	53.97	7.6	150	0	VBW: 3.6 kHz
Vert.	16530.000	AV	36.88	39.29	12.40	42.09	-9.54	36.94	53.90	16.9	150	1	VBW: 3.6 kHz
Vert.	22040.000	AV	49.91	39.99	13.16	47.24	-9.54	46.28	53.90	7.6	144	21	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	57.00	32.15	16.35	44.88	2.33	62.95	-32.25	-27.00	**5.3**	156	268	
Vert.	5470.000	PK	54.70	32.15	16.35	44.88	2.33	60.65	-34.55	-27.00	7.6	201	240	

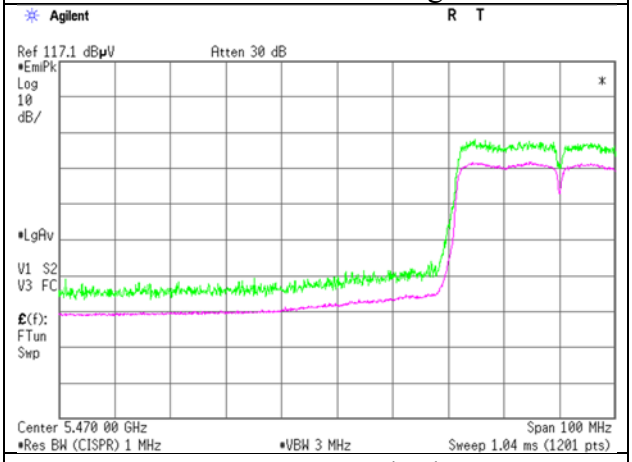
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11n-40 5510 MHz

Horizontal

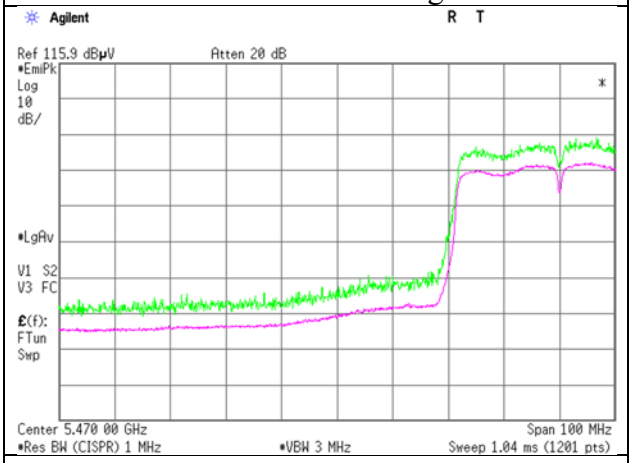
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5550 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11100.000	PK	48.94	40.11	10.07	43.67	2.33	57.78	73.97	16.1	150	268	
Hori.	16650.000	PK	47.84	39.51	12.42	41.96	-9.54	48.27	73.90	25.6	150	1	
Hori.	22200.000	PK	51.27	39.98	13.21	47.60	-9.54	47.32	73.90	26.5	141	297	
Hori.	11100.000	AV	37.78	40.11	10.07	43.67	2.33	46.62	53.97	7.3	150	268	VBW: 3.6 kHz
Hori.	16650.000	AV	37.54	39.51	12.42	41.96	-9.54	37.97	53.90	15.9	150	1	VBW: 3.6 kHz
Hori.	22200.000	AV	49.40	39.98	13.21	47.60	-9.54	45.45	53.90	8.4	141	297	VBW: 3.6 kHz
Vert.	11100.000	PK	49.47	40.11	10.07	43.67	2.33	58.31	73.97	15.6	150	268	
Vert.	16650.000	PK	47.57	39.51	12.42	41.96	-9.54	48.00	73.90	25.9	150	1	
Vert.	22200.000	PK	49.91	39.98	13.21	47.60	-9.54	45.96	73.90	27.9	103	26	
Vert.	11100.000	AV	37.84	40.11	10.07	43.67	2.33	46.68	53.97	**7.2**	150	268	VBW: 3.6 kHz
Vert.	16650.000	AV	37.47	39.51	12.42	41.96	-9.54	37.90	53.90	16.0	150	1	VBW: 3.6 kHz
Vert.	22200.000	AV	47.78	39.98	13.21	47.60	-9.54	43.83	53.90	10.0	103	26	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5670 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11340.000	PK	47.86	40.12	10.21	43.44	2.33	57.08	73.97	16.8	150	0	
Hori.	17010.000	PK	47.31	40.23	12.45	41.59	-9.54	48.86	73.90	25.0	150	1	
Hori.	22680.000	PK	47.15	39.95	13.42	47.79	-9.54	43.19	73.90	30.7	130	312	
Hori.	11340.000	AV	37.45	40.12	10.21	43.44	2.33	46.67	53.97	**7.3**	150	0	VBW: 3.6 kHz
Hori.	17010.000	AV	36.69	40.23	12.45	41.59	-9.54	38.24	53.90	15.6	150	1	VBW: 3.6 kHz
Hori.	22680.000	AV	44.74	39.95	13.42	47.79	-9.54	40.78	53.90	13.1	130	312	VBW: 3.6 kHz
Vert.	11340.000	PK	47.91	40.12	10.21	43.44	2.33	57.13	73.97	16.8	150	0	
Vert.	17010.000	PK	47.26	40.23	12.45	41.59	-9.54	48.81	73.90	25.0	150	1	
Vert.	22680.000	PK	51.59	39.95	13.42	47.79	-9.54	47.63	73.90	26.2	117	29	
Vert.	11340.000	AV	37.44	40.12	10.21	43.44	2.33	46.66	53.97	**7.3**	150	0	VBW: 3.6 kHz
Vert.	17010.000	AV	36.36	40.23	12.45	41.59	-9.54	37.91	53.90	15.9	150	1	VBW: 3.6 kHz
Vert.	22680.000	AV	50.15	39.95	13.42	47.79	-9.54	46.19	53.90	7.7	117	29	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	52.20	32.53	16.59	44.87	2.33	58.78	-36.42	-27.00	**9.4**	154	258	
Vert.	5725.000	PK	51.52	32.53	16.59	44.87	2.33	58.10	-37.10	-27.00	10.1	173	241	

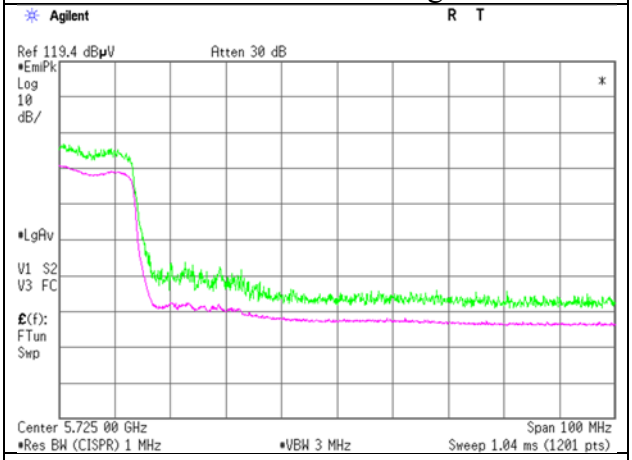
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11n-40 5670 MHz

Horizontal

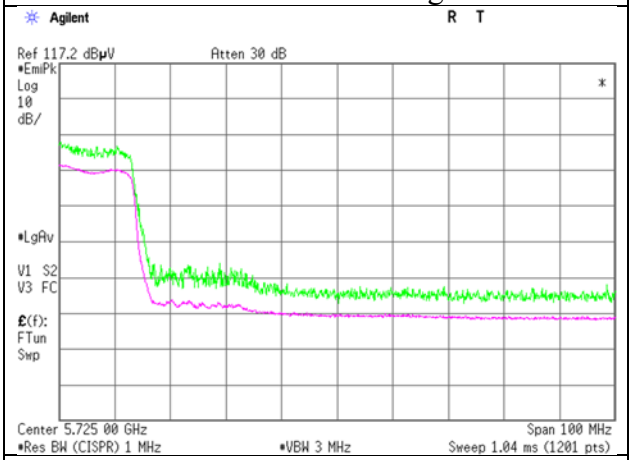
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5755 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	47.75	40.11	10.31	43.28	2.33	57.22	73.97	16.7	207	257	
Hori.	17265.000	PK	47.88	42.19	12.46	41.48	-9.54	51.51	73.90	22.3	150	1	
Hori.	23020.000	PK	50.25	39.93	13.64	46.94	-9.54	47.34	73.90	26.5	100	98	
Hori.	11510.000	AV	37.60	40.11	10.31	43.28	2.33	47.07	53.97	6.9	207	257	VBW: 3.6 kHz
Hori.	17265.000	AV	37.17	42.19	12.46	41.48	-9.54	40.80	53.90	13.1	150	1	VBW: 3.6 kHz
Hori.	23020.000	AV	48.19	39.93	13.64	46.94	-9.54	45.28	53.90	8.6	100	98	VBW: 3.6 kHz
Vert.	11510.000	PK	47.68	40.11	10.31	43.28	2.33	57.15	73.97	16.8	238	122	
Vert.	17265.000	PK	47.81	42.19	12.46	41.48	-9.54	51.44	73.90	22.4	150	1	
Vert.	23020.000	PK	50.20	39.93	13.64	46.94	-9.54	47.29	73.90	26.6	113	21	
Vert.	11510.000	AV	37.81	40.11	10.31	43.28	2.33	47.28	53.97	**6.6**	238	122	VBW: 3.6 kHz
Vert.	17265.000	AV	37.05	42.19	12.46	41.48	-9.54	40.68	53.90	13.2	150	1	VBW: 3.6 kHz
Vert.	23020.000	AV	48.24	39.93	13.64	46.94	-9.54	45.33	53.90	8.5	113	21	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.16	32.41	16.50	44.88	2.33	55.52	-39.68	-27.00	12.7	150	262	
Hori.	5700.000	PK	52.26	32.49	16.56	44.88	2.33	58.76	-36.44	10.00	46.4	150	262	
Hori.	5720.000	PK	59.19	32.53	16.59	44.87	2.33	65.77	-29.43	15.60	45.0	150	262	
Hori.	5725.000	PK	60.74	32.53	16.59	44.87	2.33	67.32	-27.88	27.00	54.9	150	262	
Vert.	5650.000	PK	49.34	32.41	16.50	44.88	2.33	55.70	-39.50	-27.00	**12.5**	122	232	
Vert.	5700.000	PK	52.40	32.49	16.56	44.88	2.33	58.90	-36.30	10.00	46.3	122	232	
Vert.	5720.000	PK	57.81	32.53	16.59	44.87	2.33	64.39	-30.81	15.60	46.4	122	232	
Vert.	5725.000	PK	59.01	32.53	16.59	44.87	2.33	65.59	-29.61	27.00	56.6	122	232	

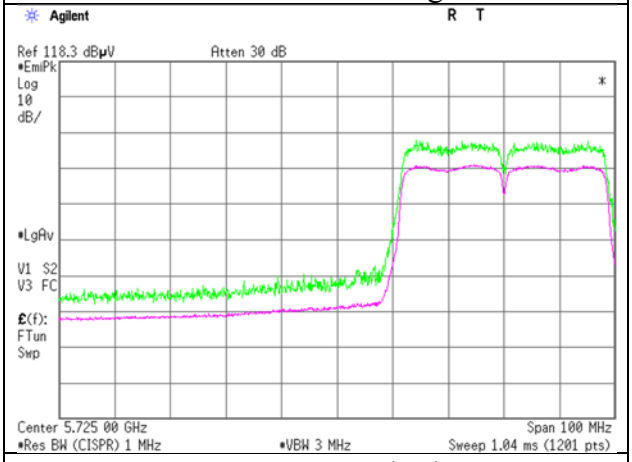
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11n-40 5755 MHz

Horizontal

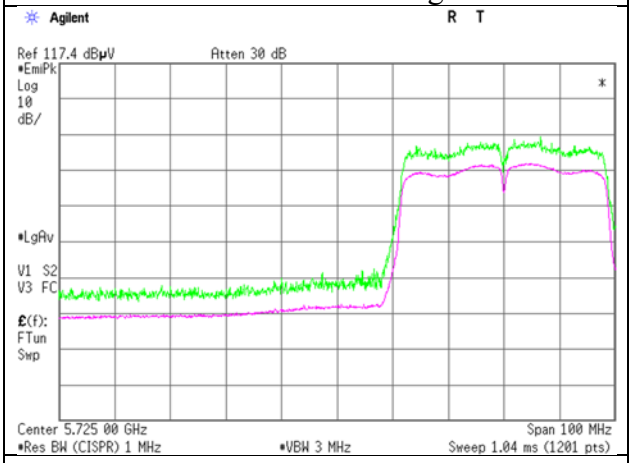
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	24 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11n-40 5795 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11590.000	PK	47.33	39.98	10.36	43.29	2.33	56.71	73.97	17.2	148	245	
Hori.	17385.000	PK	47.19	43.11	12.46	41.44	-9.54	51.78	73.90	22.1	150	1	
Hori.	23180.000	PK	49.96	39.90	13.72	47.14	-9.54	46.90	73.90	27.0	142	100	
Hori.	11590.000	AV	37.62	39.98	10.36	43.29	2.33	47.00	53.97	6.9	148	245	VBW: 3.6 kHz
Hori.	17385.000	AV	36.88	43.11	12.46	41.44	-9.54	41.47	53.90	12.4	150	1	VBW: 3.6 kHz
Hori.	23180.000	AV	47.64	39.90	13.72	47.14	-9.54	44.58	53.90	9.3	142	100	VBW: 3.6 kHz
Vert.	11590.000	PK	47.83	39.98	10.36	43.29	2.33	57.21	73.97	16.7	236	138	
Vert.	17385.000	PK	47.11	43.11	12.46	41.44	-9.54	51.70	73.90	22.2	150	1	
Vert.	23180.000	PK	53.12	39.90	13.72	47.14	-9.54	50.06	73.90	23.8	136	26	
Vert.	11590.000	AV	37.83	39.98	10.36	43.29	2.33	47.21	53.97	6.7	236	138	VBW: 3.6 kHz
Vert.	17385.000	AV	36.65	43.11	12.46	41.44	-9.54	41.24	53.90	12.6	150	1	VBW: 3.6 kHz
Vert.	23180.000	AV	51.65	39.90	13.72	47.14	-9.54	48.59	53.90	**5.3**	136	26	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	51.97	32.74	16.73	44.86	2.33	58.91	-36.29	27.00	63.3	186	257	
Hori.	5855.000	PK	51.04	32.75	16.73	44.86	2.33	57.99	-37.21	15.60	52.8	186	257	
Hori.	5875.000	PK	50.27	32.78	16.76	44.86	2.33	57.28	-37.92	10.00	47.9	186	257	
Hori.	5925.000	PK	49.76	32.87	16.80	44.85	2.33	56.91	-38.29	-27.00	**11.3**	186	257	
Vert.	5850.000	PK	51.12	32.74	16.73	44.86	2.33	58.06	-37.14	27.00	64.1	143	315	
Vert.	5855.000	PK	50.63	32.75	16.73	44.86	2.33	57.58	-37.62	15.60	53.2	143	315	
Vert.	5875.000	PK	50.09	32.78	16.76	44.86	2.33	57.10	-38.10	10.00	48.1	143	315	
Vert.	5925.000	PK	49.54	32.87	16.80	44.85	2.33	56.69	-38.51	-27.00	11.5	143	315	

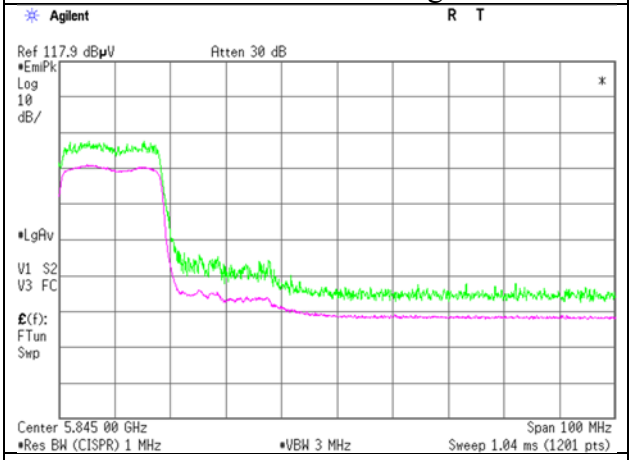
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11n-40 5795 MHz

Horizontal

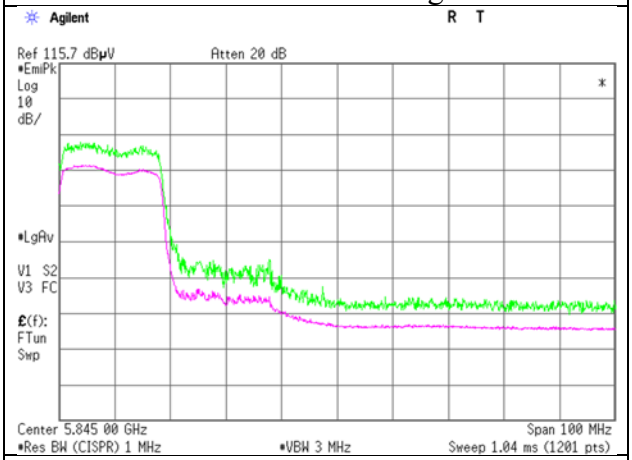
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5190 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	54.31	32.01	16.48	44.63	2.33	60.50	73.97	13.4	205	241	
Hori.	5150.000	AV	40.72	32.01	16.48	44.63	2.33	46.91	53.97	7.0	205	241	VBW: 3 kHz
Vert.	5150.000	PK	54.64	32.01	16.48	44.63	2.33	60.83	73.97	13.1	175	267	
Vert.	5150.000	AV	41.30	32.01	16.48	44.63	2.33	47.49	53.97	**6.4**	175	267	VBW: 3 kHz

*This mode was performed only band edges measurement.

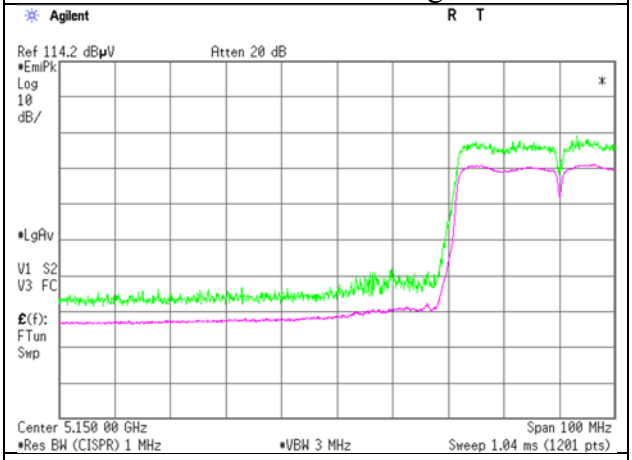
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	24 deg. C / 37 % RH
Engineer	Shiro Kobayashi
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5190 MHz

Horizontal

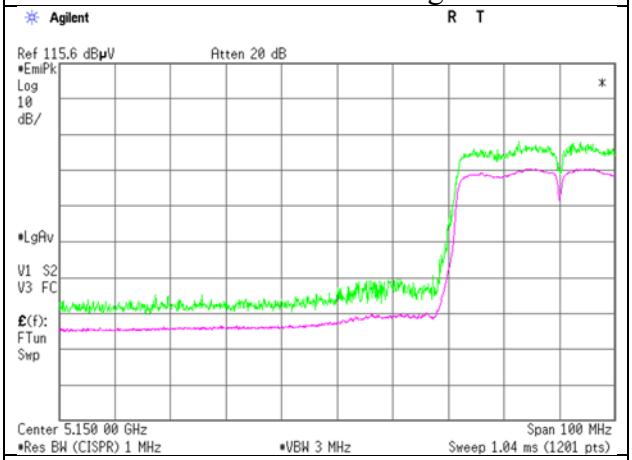
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5310 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	56.37	32.09	16.39	44.79	2.33	62.39	73.97	11.5	122	264	
Hori.	5350.000	AV	43.15	32.09	16.39	44.79	2.33	49.17	53.97	**4.8**	122	264	VBW: 3 kHz
Vert.	5350.000	PK	56.34	32.09	16.39	44.79	2.33	62.36	73.97	11.6	182	237	
Vert.	5350.000	AV	42.69	32.09	16.39	44.79	2.33	48.71	53.97	5.2	182	237	VBW: 3 kHz

*This mode was performed only band edges measurement.

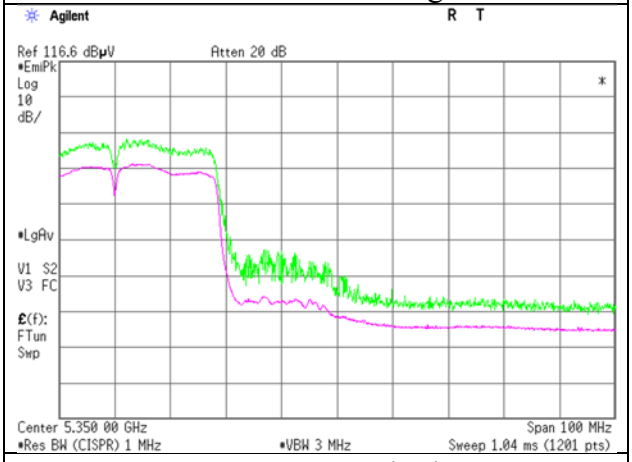
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5310 MHz

Horizontal

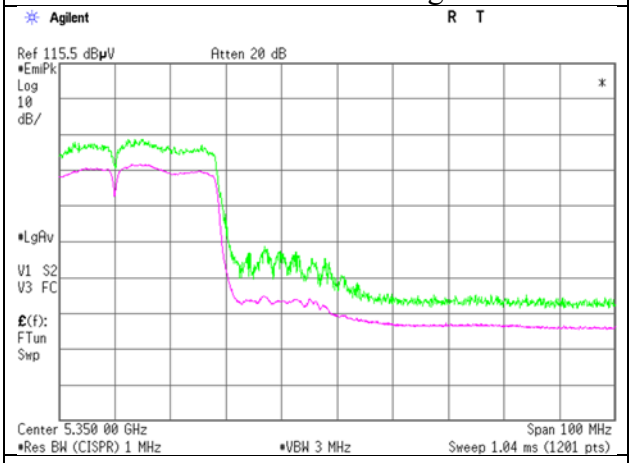
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5510 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	55.26	32.14	16.36	44.87	2.33	61.22	73.97	12.7	118	269	
Hori.	5460.000	AV	42.41	32.14	16.36	44.87	2.33	48.37	53.97	**5.6**	118	269	VBW: 3 kHz
Vert.	5460.000	PK	54.87	32.14	16.36	44.87	2.33	60.83	73.97	13.1	171	210	
Vert.	5460.000	AV	41.06	32.14	16.36	44.87	2.33	47.02	53.97	6.9	171	210	VBW: 3 kHz

*This mode was performed only band edges measurement.

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

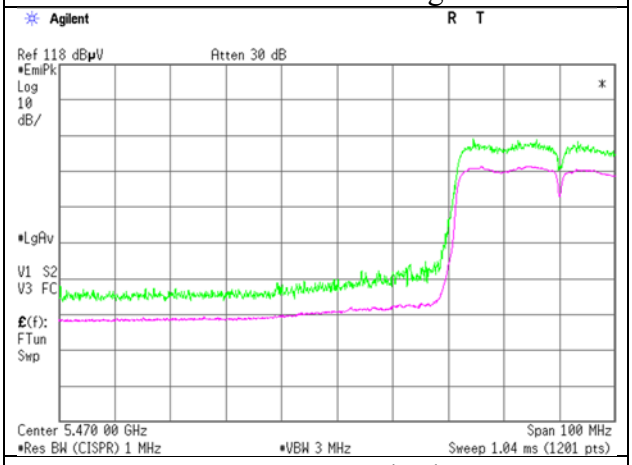
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	59.02	32.15	16.35	44.88	2.33	64.97	-30.23	-27.00	**3.2**	118	269	
Vert.	5470.000	PK	57.66	32.15	16.35	44.88	2.33	63.61	-31.59	-27.00	4.6	171	210	

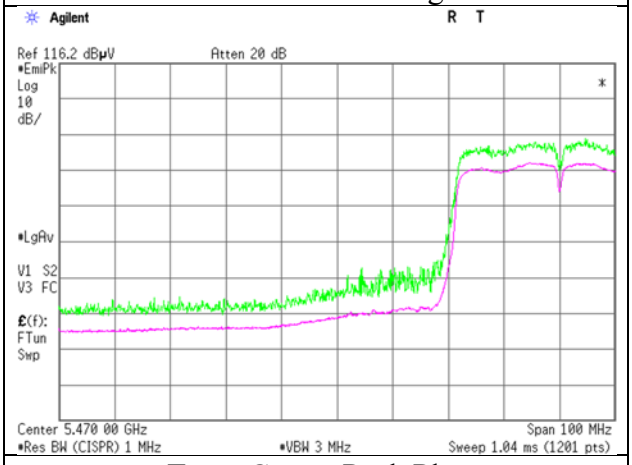
*This mode was performed only band edges measurement.

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) * 10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5510 MHz

Horizontal
Restricted-band band-edge Plot

Trace Green: Peak Plot Trace Purple: Average Plot

Vertical
Restricted-band band-edge Plot

Trace Green: Peak Plot Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5670 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	53.85	32.53	16.59	44.87	2.33	60.43	-34.77	-27.00	**7.8**	118	265	
Vert.	5725.000	PK	51.61	32.53	16.59	44.87	2.33	58.19	-37.01	-27.00	10.0	173	214	

*This mode was performed only band edges measurement.

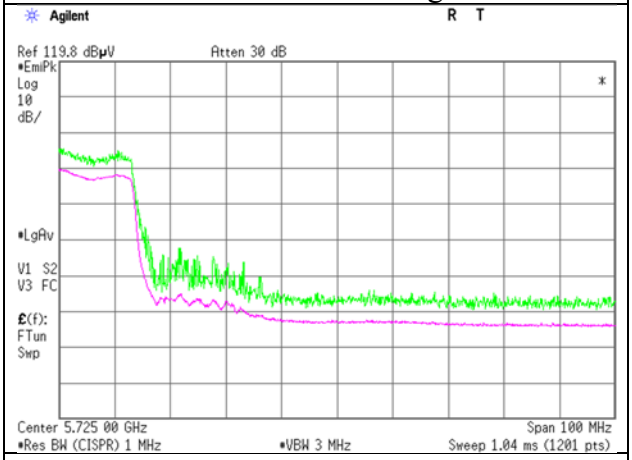
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG （({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5670 MHz

Horizontal

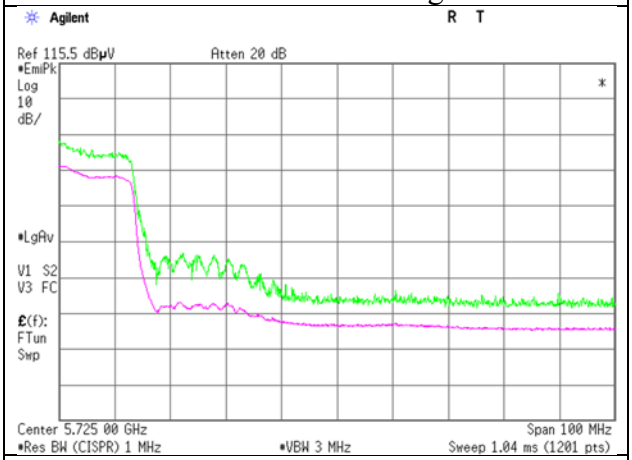
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5755 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.89	32.41	16.50	44.88	2.33	56.25	-38.95	-27.00	**12.0**	120	257	
Hori.	5700.000	PK	55.52	32.49	16.56	44.88	2.33	62.02	-33.18	10.00	43.2	120	257	
Hori.	5720.000	PK	63.61	32.53	16.59	44.87	2.33	70.19	-25.01	15.60	40.6	120	257	
Hori.	5725.000	PK	68.85	32.53	16.59	44.87	2.33	75.43	-19.77	27.00	46.8	120	257	
Vert.	5650.000	PK	49.67	32.41	16.50	44.88	2.33	56.03	-39.17	-27.00	12.2	179	238	
Vert.	5700.000	PK	52.75	32.49	16.56	44.88	2.33	59.25	-35.95	10.00	46.0	179	238	
Vert.	5720.000	PK	61.56	32.53	16.59	44.87	2.33	68.14	-27.06	15.60	42.7	179	238	
Vert.	5725.000	PK	65.20	32.53	16.59	44.87	2.33	71.78	-23.42	27.00	50.4	179	238	

*This mode was performed only band edges measurement.

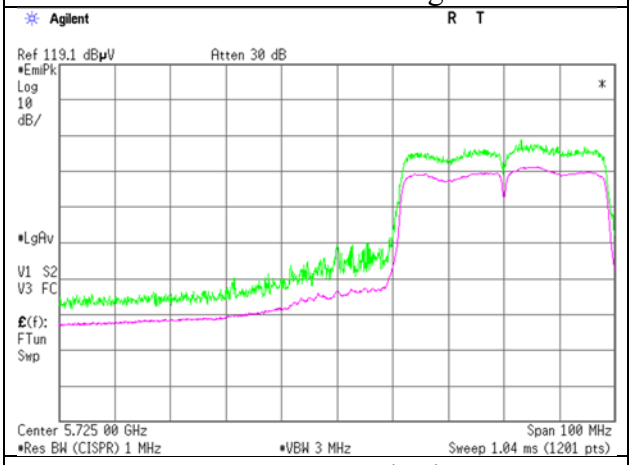
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5755 MHz

Horizontal

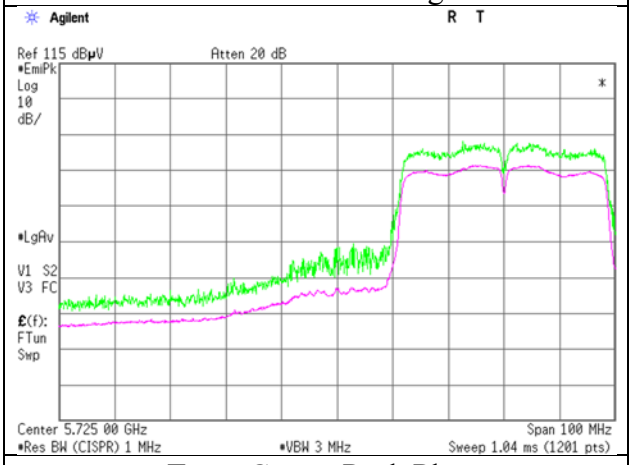
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5795 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	52.15	32.74	16.73	44.86	2.33	59.09	-36.11	27.00	63.1	119	263	
Hori.	5855.000	PK	51.54	32.75	16.73	44.86	2.33	58.49	-36.71	15.60	52.3	119	263	
Hori.	5875.000	PK	50.03	32.78	16.76	44.86	2.33	57.04	-38.16	10.00	48.2	119	263	
Hori.	5925.000	PK	49.47	32.87	16.80	44.85	2.33	56.62	-38.58	-27.00	**11.6**	119	263	
Vert.	5850.000	PK	50.04	32.74	16.73	44.86	2.33	56.98	-38.22	27.00	65.2	168	223	
Vert.	5855.000	PK	50.71	32.75	16.73	44.86	2.33	57.66	-37.54	15.60	53.1	168	223	
Vert.	5875.000	PK	49.27	32.78	16.76	44.86	2.33	56.28	-38.92	10.00	48.9	168	223	
Vert.	5925.000	PK	49.24	32.87	16.80	44.85	2.33	56.39	-38.81	-27.00	11.8	168	223	

*This mode was performed only band edges measurement.

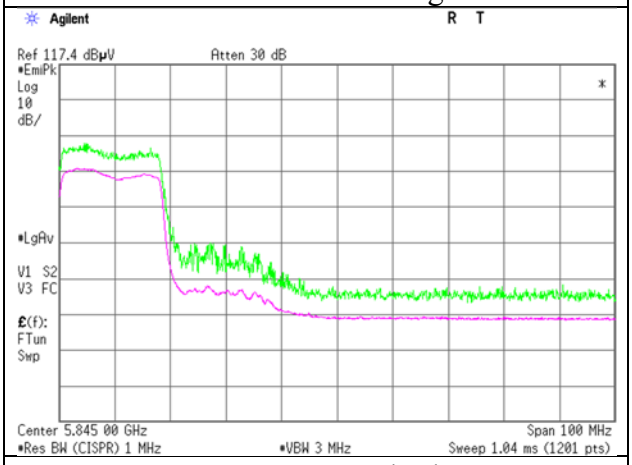
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz – 6.4 GHz)
Antenna	1001932PT
Mode	Tx 11ac-40 5795 MHz

Horizontal

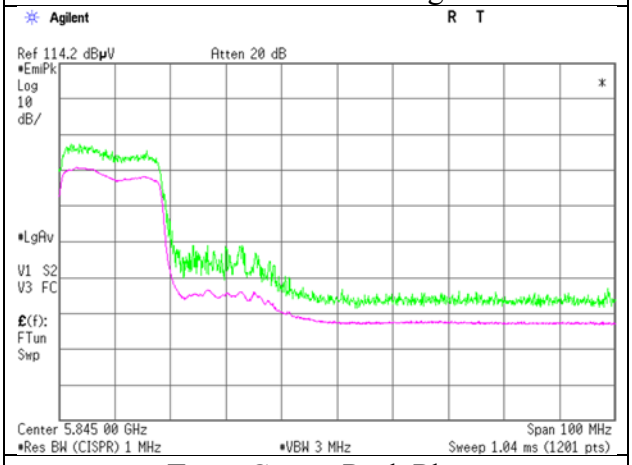
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	25 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Makoto Hosaka	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11ac-80 5210 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	53.40	32.01	16.48	44.63	2.33	59.59	73.97	14.3	115	286	
Hori.	10420.000	PK	47.47	39.78	9.40	43.58	2.33	55.40	73.97	18.5	104	258	
Hori.	15630.000	PK	48.20	39.86	11.68	42.12	-9.54	48.08	73.90	25.8	150	1	
Hori.	20840.000	PK	50.18	39.80	12.72	47.13	-9.54	46.03	73.90	27.8	122	310	
Hori.	5150.000	AV	41.01	32.01	16.48	44.63	2.33	47.20	53.97	6.7	115	286	VBW: 10 Hz
Hori.	10420.000	AV	35.68	39.78	9.40	43.58	2.33	43.61	53.97	10.3	104	258	VBW: 10 Hz
Hori.	15630.000	AV	36.66	39.86	11.68	42.12	-9.54	36.54	53.90	17.3	150	1	VBW: 10 Hz
Hori.	20840.000	AV	48.14	39.80	12.72	47.13	-9.54	43.99	53.90	9.9	122	310	VBW: 10 Hz
Vert.	5150.000	PK	53.65	32.01	16.48	44.63	2.33	59.84	73.97	14.1	179	234	
Vert.	10420.000	PK	47.62	39.78	9.40	43.58	2.33	55.55	73.97	18.4	217	267	
Vert.	15630.000	PK	48.55	39.86	11.68	42.12	-9.54	48.43	73.90	25.4	150	1	
Vert.	20840.000	PK	53.24	39.80	12.72	47.13	-9.54	49.09	73.90	24.8	136	45	
Vert.	5150.000	AV	40.47	32.01	16.48	44.63	2.33	46.66	53.97	7.3	179	234	VBW: 10 Hz
Vert.	10420.000	AV	35.94	39.78	9.40	43.58	2.33	43.87	53.97	10.1	217	267	VBW: 10 Hz
Vert.	15630.000	AV	36.62	39.86	11.68	42.12	-9.54	36.50	53.90	17.4	150	1	VBW: 10 Hz
Vert.	20840.000	AV	51.66	39.80	12.72	47.13	-9.54	47.51	53.90	**6.3**	136	45	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

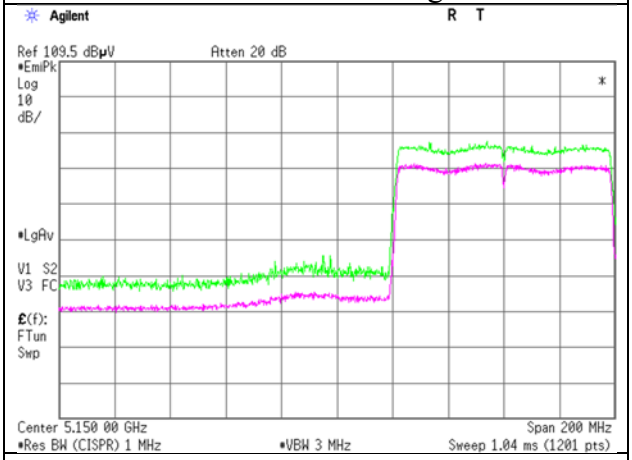
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-80 5210 MHz

Horizontal

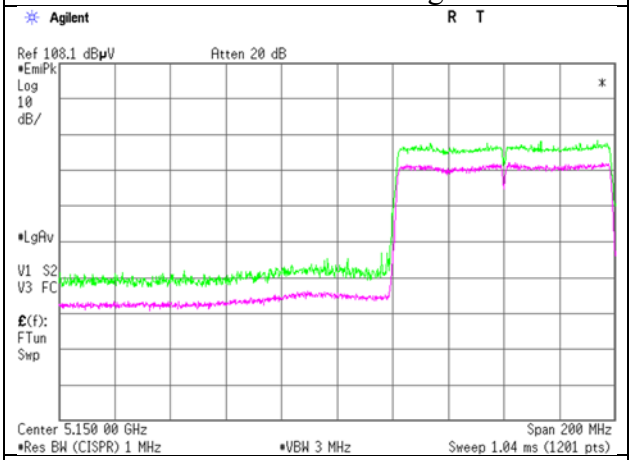
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	25 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Makoto Hosaka	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11ac-80 5290 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	53.72	32.09	16.39	44.79	2.33	59.74	73.97	14.2	105	235	
Hori.	10580.000	PK	47.50	39.94	9.54	43.56	2.33	55.75	73.97	18.2	106	239	
Hori.	15870.000	PK	47.25	38.87	11.78	42.16	-9.54	46.20	73.90	27.7	150	1	
Hori.	21160.000	PK	55.29	39.80	12.84	47.06	-9.54	51.33	73.90	22.5	131	242	
Hori.	5350.000	AV	40.02	32.09	16.39	44.79	2.33	46.04	53.97	7.9	105	235	VBW: 10 Hz
Hori.	10580.000	AV	35.07	39.94	9.54	43.56	2.33	43.32	53.97	10.6	106	239	VBW: 10 Hz
Hori.	15870.000	AV	36.06	38.87	11.78	42.16	-9.54	35.01	53.90	18.8	150	1	VBW: 10 Hz
Hori.	21160.000	AV	54.15	39.80	12.84	47.06	-9.54	50.19	53.90	**3.7**	131	242	VBW: 10 Hz
Vert.	5350.000	PK	54.27	32.09	16.39	44.79	2.33	60.29	73.97	13.6	180	292	
Vert.	10580.000	PK	47.04	39.94	9.54	43.56	2.33	55.29	73.97	18.6	206	255	
Vert.	15870.000	PK	47.22	38.87	11.78	42.16	-9.54	46.17	73.90	27.7	150	1	
Vert.	21160.000	PK	49.94	39.80	12.84	47.06	-9.54	45.98	73.90	27.9	138	216	
Vert.	5350.000	AV	40.21	32.09	16.39	44.79	2.33	46.23	53.97	7.7	180	292	VBW: 10 Hz
Vert.	10580.000	AV	35.25	39.94	9.54	43.56	2.33	43.50	53.97	10.4	206	255	VBW: 10 Hz
Vert.	15870.000	AV	36.07	38.87	11.78	42.16	-9.54	35.02	53.90	18.8	150	1	VBW: 10 Hz
Vert.	21160.000	AV	47.63	39.80	12.84	47.06	-9.54	43.67	53.90	10.2	138	216	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

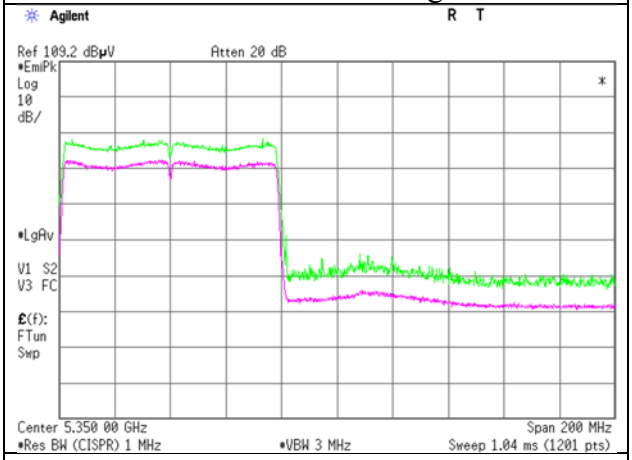
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-80 5290 MHz

Horizontal

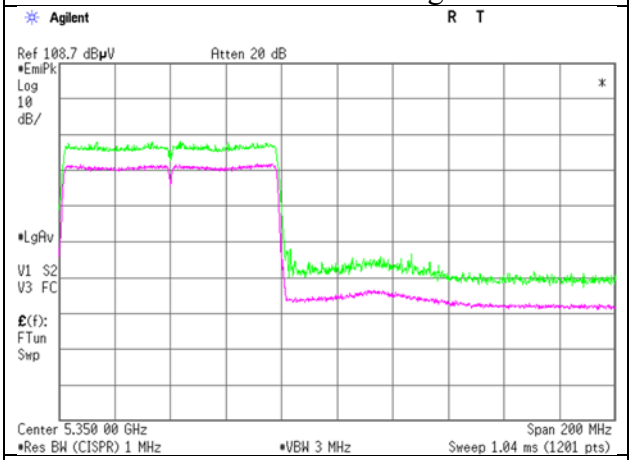
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	25 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Makoto Hosaka	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11ac-80 5530 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	60.10	32.14	16.36	44.87	2.33	66.06	73.97	7.9	191	265	
Hori.	11060.000	PK	48.60	40.11	10.04	43.71	2.33	57.37	73.97	16.6	217	246	
Hori.	16590.000	PK	47.26	39.40	12.41	42.02	-9.54	47.51	73.90	26.3	150	1	
Hori.	22120.000	PK	54.71	39.98	13.18	47.42	-9.54	50.91	73.90	22.9	134	247	
Hori.	5460.000	AV	45.43	32.14	16.36	44.87	2.33	51.39	53.97	**2.5**	191	265	VBW: 10 Hz
Hori.	11060.000	AV	35.98	40.11	10.04	43.71	2.33	44.75	53.97	9.2	217	246	VBW: 10 Hz
Hori.	16590.000	AV	35.75	39.40	12.41	42.02	-9.54	36.00	53.90	17.9	150	1	VBW: 10 Hz
Hori.	22120.000	AV	53.65	39.98	13.18	47.42	-9.54	49.85	53.90	4.0	134	247	VBW: 10 Hz
Vert.	5460.000	PK	60.23	32.14	16.36	44.87	2.33	66.19	73.97	7.7	103	213	
Vert.	11060.000	PK	48.01	40.11	10.04	43.71	2.33	56.78	73.97	17.1	207	264	
Vert.	16590.000	PK	47.18	39.40	12.41	42.02	-9.54	47.43	73.90	26.4	150	1	
Vert.	22120.000	PK	53.21	39.98	13.18	47.42	-9.54	49.41	73.90	24.4	133	217	
Vert.	5460.000	AV	45.50	32.14	16.36	44.87	2.33	51.46	53.97	**2.5**	103	213	VBW: 10 Hz
Vert.	11060.000	AV	36.15	40.11	10.04	43.71	2.33	44.92	53.97	9.0	207	264	VBW: 10 Hz
Vert.	16590.000	AV	35.80	39.40	12.41	42.02	-9.54	36.05	53.90	17.8	150	1	VBW: 10 Hz
Vert.	22120.000	AV	52.34	39.98	13.18	47.42	-9.54	48.54	53.90	5.3	133	217	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	57.17	32.15	16.35	44.88	2.33	63.12	-32.08	-27.00	**5.1**	191	265	
Vert.	5470.000	PK	55.91	32.15	16.35	44.88	2.33	61.86	-33.34	-27.00	6.3	103	213	

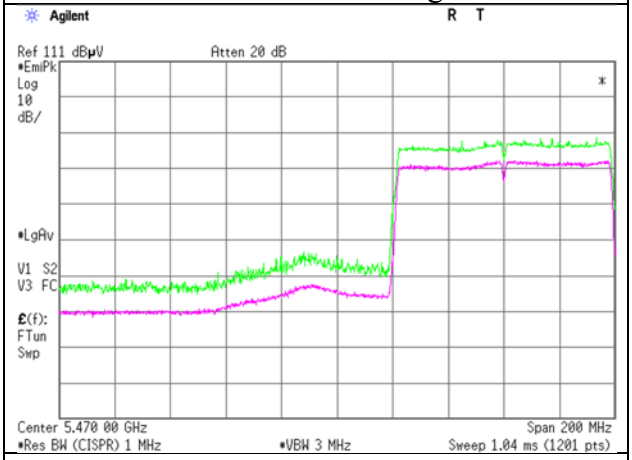
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
*The 4th harmonic was not seen so the result was its base noise level.
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-80 5530 MHz

Horizontal

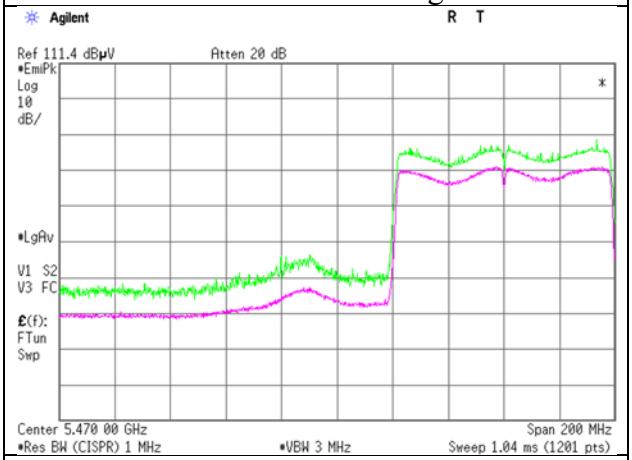
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	25 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Makoto Hosaka	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11ac-80 5610 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11220.000	PK	47.55	40.12	10.14	43.55	2.33	56.59	73.97	17.3	102	248	
Hori.	16830.000	PK	46.71	39.84	12.44	41.77	-9.54	47.68	73.90	26.2	150	1	
Hori.	22440.000	PK	53.86	39.96	13.27	48.14	-9.54	49.41	73.90	24.4	133	247	
Hori.	11220.000	AV	35.38	40.12	10.14	43.55	2.33	44.42	53.97	9.5	102	248	VBW: 10 Hz
Hori.	16830.000	AV	34.90	39.84	12.44	41.77	-9.54	35.87	53.90	18.0	150	1	VBW: 10 Hz
Hori.	22440.000	AV	52.57	39.96	13.27	48.14	-9.54	48.12	53.90	**5.7**	133	247	VBW: 10 Hz
Vert.	11220.000	PK	47.67	40.12	10.14	43.55	2.33	56.71	73.97	17.2	169	278	
Vert.	16830.000	PK	47.01	39.84	12.44	41.77	-9.54	47.98	73.90	25.9	150	1	
Vert.	22440.000	PK	53.29	39.96	13.27	48.14	-9.54	48.84	73.90	25.0	134	213	
Vert.	11220.000	AV	35.22	40.12	10.14	43.55	2.33	44.26	53.97	9.7	169	278	VBW: 10 Hz
Vert.	16830.000	AV	34.91	39.84	12.44	41.77	-9.54	35.88	53.90	18.0	150	1	VBW: 10 Hz
Vert.	22440.000	AV	52.01	39.96	13.27	48.14	-9.54	47.56	53.90	6.3	134	213	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	49.89	32.53	16.59	44.87	2.33	56.47	-38.73	-27.00	**11.7**	110	269	
Vert.	5725.000	PK	49.36	32.53	16.59	44.87	2.33	55.94	-39.26	-27.00	12.3	179	246	

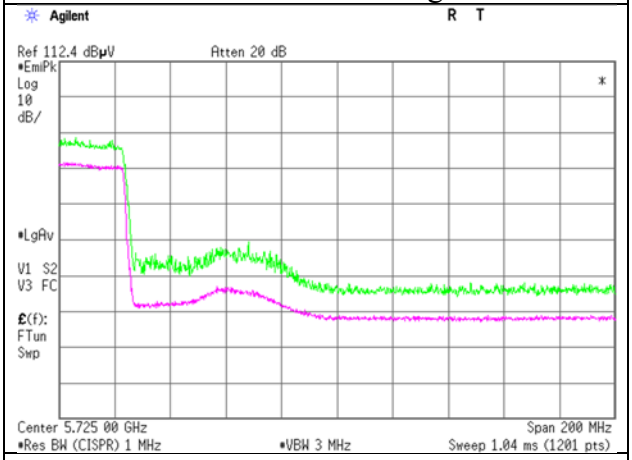
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
*The 4th harmonic was not seen so the result was its base noise level.
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-80 5610 MHz

Horizontal

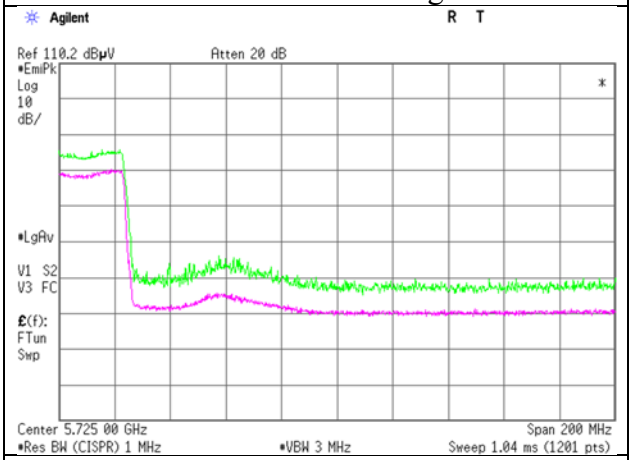
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 23, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	25 deg. C / 32 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Makoto Hosaka	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932PT			
Mode	Tx 11ac-80 5775 MHz			

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11550.000	PK	48.10	40.05	10.33	43.29	2.33	57.52	73.97	16.4	103	256	
Hori.	17325.000	PK	47.81	42.65	12.46	41.46	-9.54	51.92	73.90	21.9	150	1	
Hori.	23100.000	PK	52.31	39.92	13.68	47.04	-9.54	49.33	73.90	24.5	138	251	
Hori.	11550.000	AV	35.79	40.05	10.33	43.29	2.33	45.21	53.97	8.7	103	256	VBW: 10 Hz
Hori.	17325.000	AV	35.87	42.65	12.46	41.46	-9.54	39.98	53.90	13.9	150	1	VBW: 10 Hz
Hori.	23100.000	AV	51.65	39.92	13.68	47.04	-9.54	48.67	53.90	**5.2**	138	251	VBW: 10 Hz
Vert.	11550.000	PK	48.81	40.05	10.33	43.29	2.33	58.23	73.97	15.7	204	278	
Vert.	17325.000	PK	47.75	42.65	12.46	41.46	-9.54	51.86	73.90	22.0	150	1	
Vert.	23100.000	PK	52.31	39.92	13.68	47.04	-9.54	49.33	73.90	24.5	135	213	
Vert.	11550.000	AV	36.30	40.05	10.33	43.29	2.33	45.72	53.97	8.2	204	278	VBW: 10 Hz
Vert.	17325.000	AV	35.86	42.65	12.46	41.46	-9.54	39.97	53.90	13.9	150	1	VBW: 10 Hz
Vert.	23100.000	AV	49.36	39.92	13.68	47.04	-9.54	46.38	53.90	7.5	135	213	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

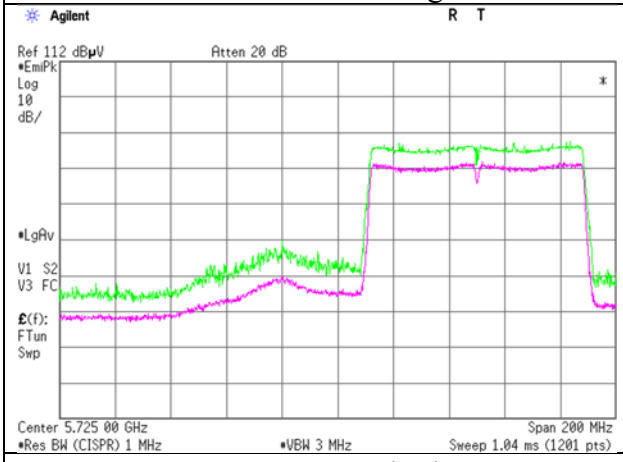
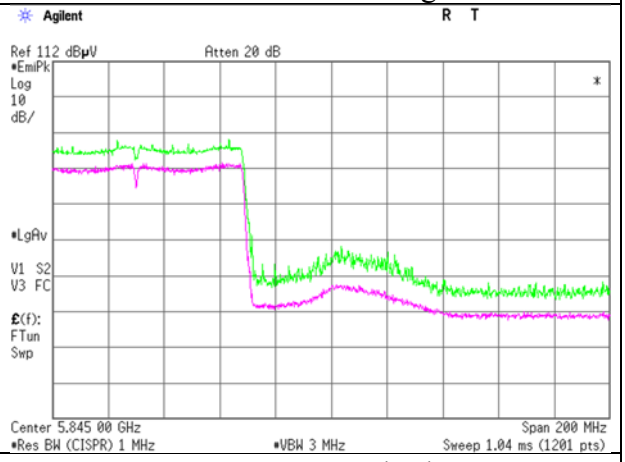
(* PK: Peak, AV: Average, QP: Quasi-Peak)

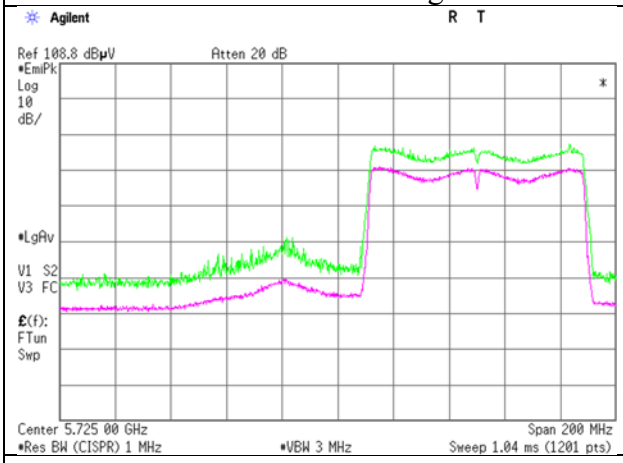
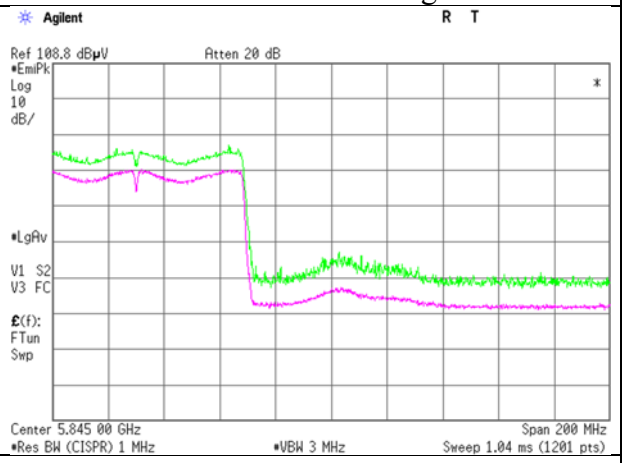
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.68	32.41	16.50	44.88	2.33	56.04	-39.16	-27.00	12.2	108	257	
Hori.	5700.000	PK	61.88	32.49	16.56	44.88	2.33	68.38	-26.82	10.00	36.8	108	257	
Hori.	5720.000	PK	58.76	32.53	16.59	44.87	2.33	65.34	-29.86	15.60	45.5	108	257	
Hori.	5725.000	PK	58.96	32.53	16.59	44.87	2.33	65.54	-29.66	27.00	56.7	108	257	
Hori.	5850.000	PK	62.80	32.74	16.73	44.86	2.33	69.74	-25.46	27.00	52.5	108	257	
Hori.	5855.000	PK	61.12	32.75	16.73	44.86	2.33	68.07	-27.13	15.60	42.7	108	257	
Hori.	5875.000	PK	56.68	32.78	16.76	44.86	2.33	63.69	-31.51	10.00	41.5	108	257	
Hori.	5925.000	PK	50.01	32.87	16.80	44.85	2.33	57.16	-38.04	-27.00	**11.0**	108	257	
Vert.	5650.000	PK	49.57	32.41	16.50	44.88	2.33	55.93	-39.27	-27.00	12.3	170	251	
Vert.	5700.000	PK	58.37	32.49	16.56	44.88	2.33	64.87	-30.33	10.00	40.3	170	251	
Vert.	5720.000	PK	56.11	32.53	16.59	44.87	2.33	62.69	-32.51	15.60	48.1	170	251	
Vert.	5725.000	PK	54.88	32.53	16.59	44.87	2.33	61.46	-33.74	27.00	60.7	170	251	
Vert.	5850.000	PK	58.59	32.74	16.73	44.86	2.33	65.53	-29.67	27.00	56.7	170	251	
Vert.	5855.000	PK	56.41	32.75	16.73	44.86	2.33	63.36	-31.84	15.60	47.4	170	251	
Vert.	5875.000	PK	52.85	32.78	16.76	44.86	2.33	59.86	-35.34	10.00	45.3	170	251	
Vert.	5925.000	PK	49.49	32.87	16.80	44.85	2.33	56.64	-38.56	-27.00	11.6	170	251	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 23, 2018
Temperature / Humidity	25 deg. C / 32 % RH
Engineer	Makoto Hosaka
	(1 GHz - 13 GHz)
Antenna	1001932PT
Mode	Tx 11ac-80 5775 MHz

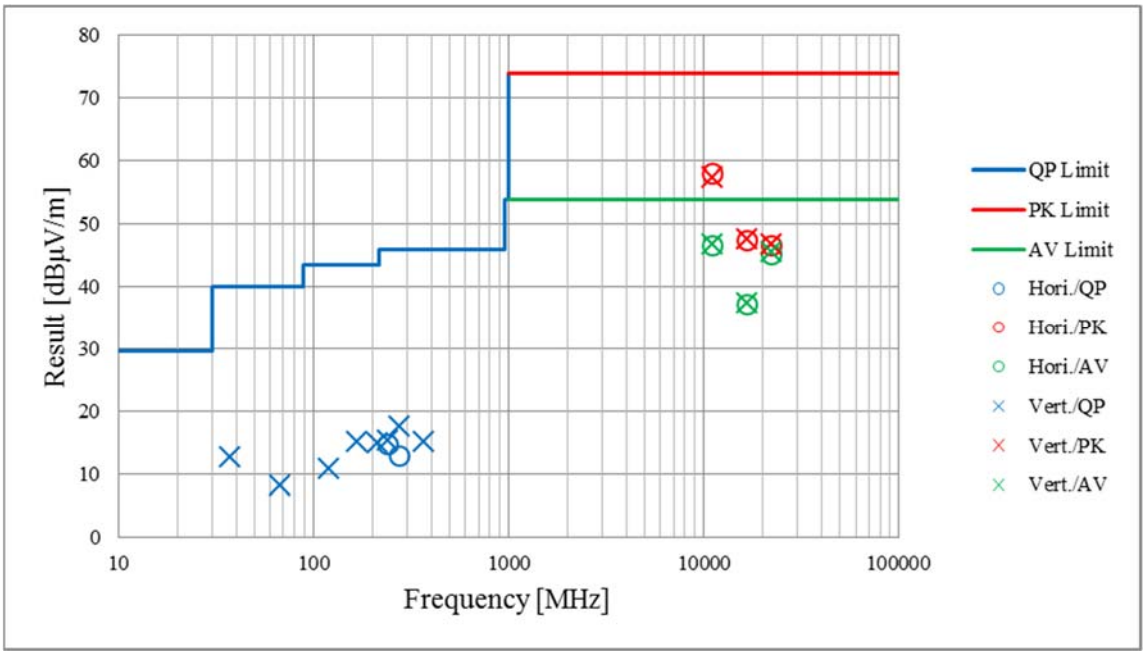
Horizontal	Horizontal
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

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

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

Radiated Spurious Emission
(Plot data, Worst case)

Report No.	12193629S-C-R2				
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	3	3	3	3	3
Date	April 4, 2018	March 21, 2018	March 30, 2018	March 31, 2018	April 2, 2018
Temperature / Humidity	20 deg. C / 57 % RH	23 deg. C / 25 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi (30 MHz - 1 GHz)	Kazutaka Takeyama (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Hiroyuki Morikawa (18 GHz – 26.5 GHz)	Shiro Kobayashi (26.5 GHz – 40 GHz)
Antenna	1001932PT				
Mode	Tx 11a 5580 MHz				



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5180 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.26	32.01	16.48	44.63	2.33	57.45	73.97	16.5	167	275	
Hori.	5150.000	AV	40.88	32.01	16.48	44.63	2.33	47.07	53.97	**6.9**	167	275	VBW: 3.6 kHz
Vert.	5150.000	PK	51.42	32.01	16.48	44.63	2.33	57.61	73.97	16.3	100	342	
Vert.	5150.000	AV	40.46	32.01	16.48	44.63	2.33	46.65	53.97	7.3	100	342	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

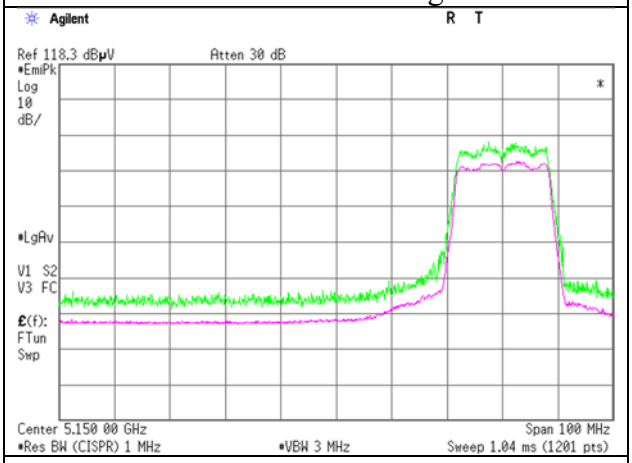
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5180 MHz

Horizontal

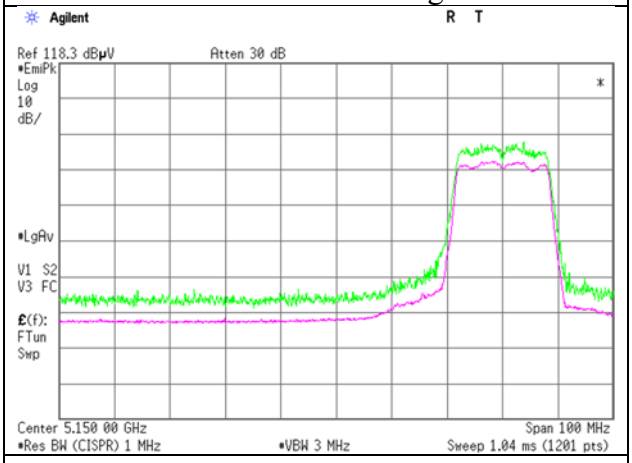
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5320 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.67	32.09	16.39	44.79	2.33	57.69	73.97	16.2	136	248	
Hori.	5350.000	AV	40.53	32.09	16.39	44.79	2.33	46.55	53.97	**7.4**	136	248	VBW: 3.6 kHz
Vert.	5350.000	PK	50.85	32.09	16.39	44.79	2.33	56.87	73.97	17.1	166	290	
Vert.	5350.000	AV	40.32	32.09	16.39	44.79	2.33	46.34	53.97	7.6	166	290	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

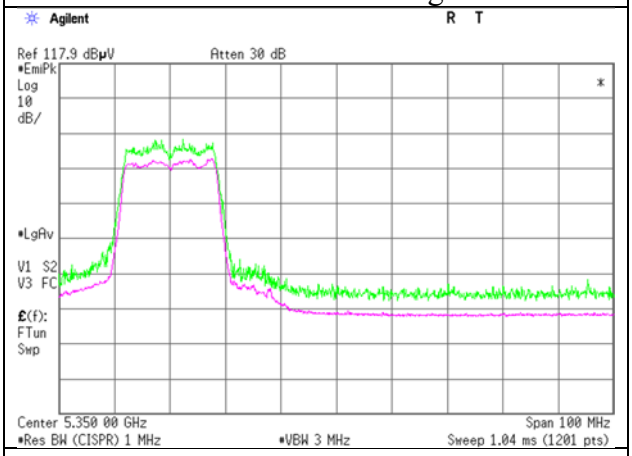
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa (1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5320 MHz

Horizontal

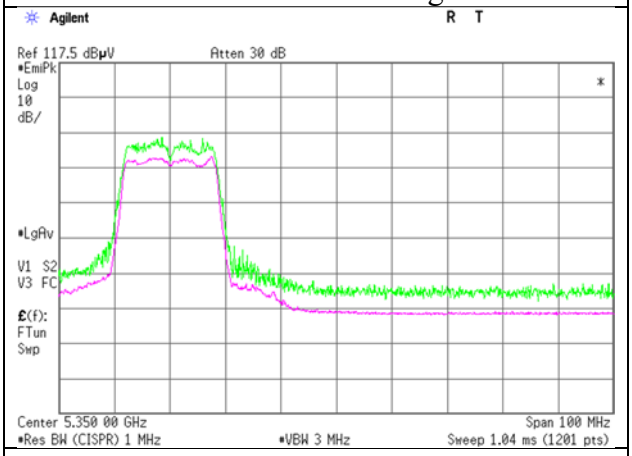
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5500 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.21	32.14	16.36	44.87	2.33	56.17	73.97	17.8	158	262	
Hori.	5460.000	AV	39.33	32.14	16.36	44.87	2.33	45.29	53.97	**8.6**	158	262	VBW: 3.6 kHz
Vert.	5460.000	PK	50.15	32.14	16.36	44.87	2.33	56.11	73.97	17.8	100	23	
Vert.	5460.000	AV	39.40	32.14	16.36	44.87	2.33	45.36	53.97	**8.6**	100	23	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	55.56	32.15	16.35	44.88	2.33	61.51	-33.69	-27.00	**6.7**	158	262	
Vert.	5470.000	PK	54.11	32.15	16.35	44.88	2.33	60.06	-35.14	-27.00	8.1	100	23	

*This mode was performed only band edges measurement.

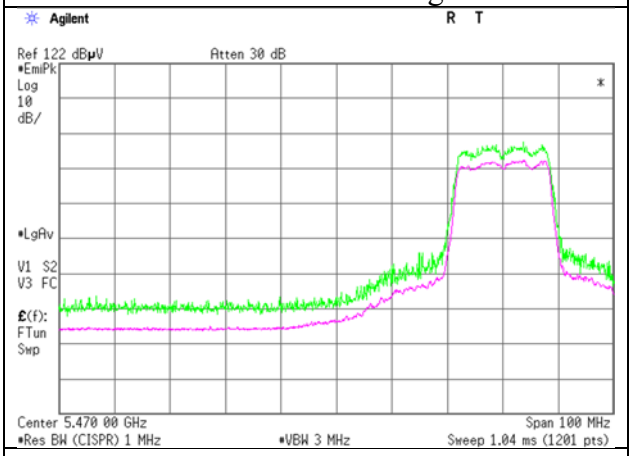
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5500 MHz

Horizontal

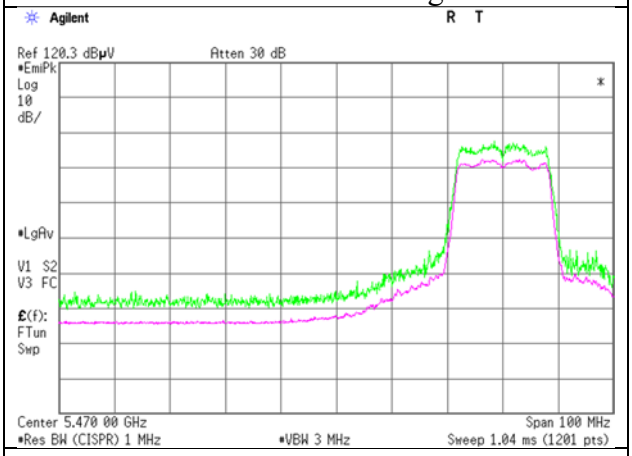
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2				
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	3	3	3	3	3
Date	April 4, 2018	March 24, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	20 deg. C / 57 % RH	22 deg. C / 34 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz - 1 GHz)	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz – 26.5 GHz)	(26.5 GHz – 40 GHz)
Antenna	1001932FT				
Mode	Tx 11a 5580 MHz				

(below 1GHz and above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	239.998	QP	26.93	11.57	8.38	32.03	0.00	14.85	46.00	31.1	217	2	
Hori.	276.409	QP	23.76	12.50	8.59	32.01	0.00	12.84	46.00	33.1	115	179	
Hori.	11160.000	PK	46.43	40.12	10.10	43.61	2.33	55.37	73.97	18.6	100	0	
Hori.	16740.000	PK	47.09	39.68	12.42	41.87	-9.54	47.78	73.90	26.1	150	1	
Hori.	22320.000	PK	55.32	39.97	13.24	47.87	-9.54	51.12	73.90	22.7	157	72	
Hori.	11160.000	AV	36.62	40.12	10.10	43.61	2.33	45.56	53.97	8.4	100	0	VBW: 3.6 kHz
Hori.	16740.000	AV	36.95	39.68	12.42	41.87	-9.54	37.64	53.90	16.2	150	1	VBW: 3.6 kHz
Hori.	22320.000	AV	54.18	39.97	13.24	47.87	-9.54	49.98	53.90	**3.9**	157	72	VBW: 3.6 kHz
Vert.	37.400	QP	22.87	15.13	6.77	32.20	0.00	12.57	40.00	27.4	100	0	
Vert.	67.497	QP	27.36	6.60	6.79	32.18	0.00	8.57	40.00	31.4	100	208	
Vert.	120.000	QP	22.00	12.97	7.40	32.14	0.00	10.23	43.50	33.2	100	114	
Vert.	168.000	QP	23.12	15.54	8.03	32.10	0.00	14.59	43.50	28.9	100	356	
Vert.	216.807	QP	26.56	11.53	8.25	32.05	0.00	14.29	46.00	31.7	100	284	
Vert.	239.998	QP	27.39	11.57	8.38	32.03	0.00	15.31	46.00	30.6	214	176	
Vert.	276.292	QP	28.47	12.49	8.59	32.01	0.00	17.54	46.00	28.4	100	200	
Vert.	363.507	QP	24.19	14.64	9.05	31.96	0.00	15.92	46.00	30.0	100	194	
Vert.	11160.000	PK	46.91	40.12	10.10	43.61	2.33	55.85	73.97	18.1	100	0	
Vert.	16740.000	PK	46.98	39.68	12.42	41.87	-9.54	47.67	73.90	26.2	150	1	
Vert.	22320.000	PK	53.80	39.97	13.24	47.87	-9.54	49.60	73.90	24.3	136	18	
Vert.	11160.000	AV	37.02	40.12	10.10	43.61	2.33	45.96	53.97	8.0	100	0	VBW: 3.6 kHz
Vert.	16740.000	AV	36.98	39.68	12.42	41.87	-9.54	37.67	53.90	16.2	150	1	VBW: 3.6 kHz
Vert.	22320.000	AV	52.27	39.97	13.24	47.87	-9.54	48.07	53.90	5.8	136	18	VBW: 3.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5700 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	58.33	32.53	16.59	44.87	2.33	64.91	-30.29	-27.00	3.3	157	249	
Vert.	5725.000	PK	58.61	32.53	16.59	44.87	2.33	65.19	-30.01	-27.00	**3.0**	165	228	

*This mode was performed only band edges measurement.

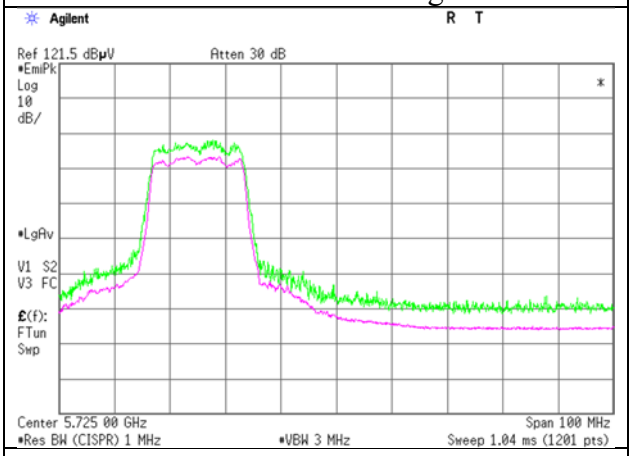
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5700 MHz

Horizontal

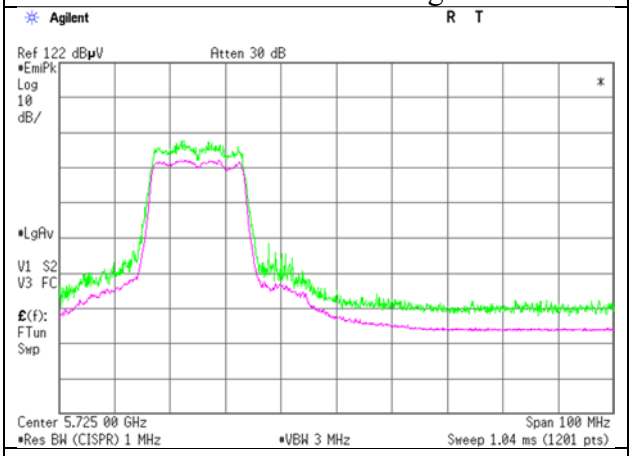
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5745 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.86	32.41	16.50	44.88	2.33	56.22	-38.98	-27.00	**12.0**	172	253	
Hori.	5700.000	PK	49.95	32.49	16.56	44.88	2.33	56.45	-38.75	10.00	48.8	172	253	
Hori.	5720.000	PK	62.28	32.53	16.59	44.87	2.33	68.86	-26.34	15.60	41.9	172	253	
Hori.	5725.000	PK	67.74	32.53	16.59	44.87	2.33	74.32	-20.88	27.00	47.9	172	253	
Vert.	5650.000	PK	49.34	32.41	16.50	44.88	2.33	55.70	-39.50	-27.00	12.5	118	230	
Vert.	5700.000	PK	49.40	32.49	16.56	44.88	2.33	55.90	-39.30	10.00	49.3	118	230	
Vert.	5720.000	PK	55.58	32.53	16.59	44.87	2.33	62.16	-33.04	15.60	48.6	118	230	
Vert.	5725.000	PK	60.90	32.53	16.59	44.87	2.33	67.48	-27.72	27.00	54.7	118	230	

*This mode was performed only band edges measurement.

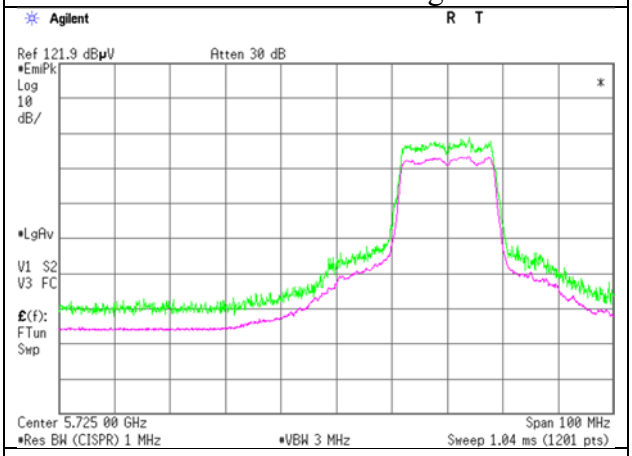
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5745 MHz

Horizontal

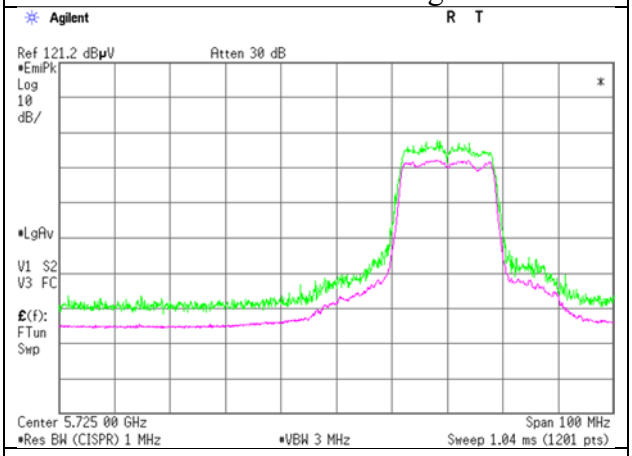
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5825 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	55.97	32.74	16.73	44.86	2.33	62.91	-32.29	-27.00	**5.3**	194	249	
Hori.	5855.000	PK	54.96	32.75	16.73	44.86	2.33	61.91	-33.29	10.00	43.3	194	249	
Hori.	5875.000	PK	49.89	32.78	16.76	44.86	2.33	56.90	-38.30	15.60	53.9	194	249	
Hori.	5925.000	PK	49.43	32.87	16.80	44.85	2.33	56.58	-38.62	27.00	65.6	194	249	
Vert.	5850.000	PK	54.70	32.74	16.73	44.86	2.33	61.64	-33.56	-27.00	6.6	191	134	
Vert.	5855.000	PK	52.96	32.75	16.73	44.86	2.33	59.91	-35.29	10.00	45.3	191	134	
Vert.	5875.000	PK	48.84	32.78	16.76	44.86	2.33	55.85	-39.35	15.60	55.0	191	134	
Vert.	5925.000	PK	49.85	32.87	16.80	44.85	2.33	57.00	-38.20	27.00	65.2	191	134	

*This mode was performed only band edges measurement.

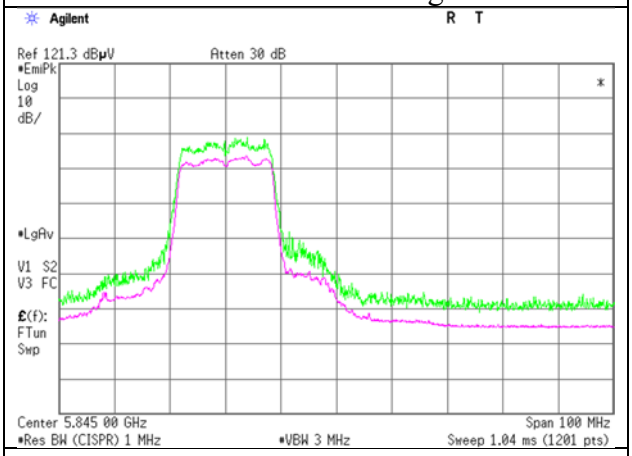
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11a 5825 MHz

Horizontal

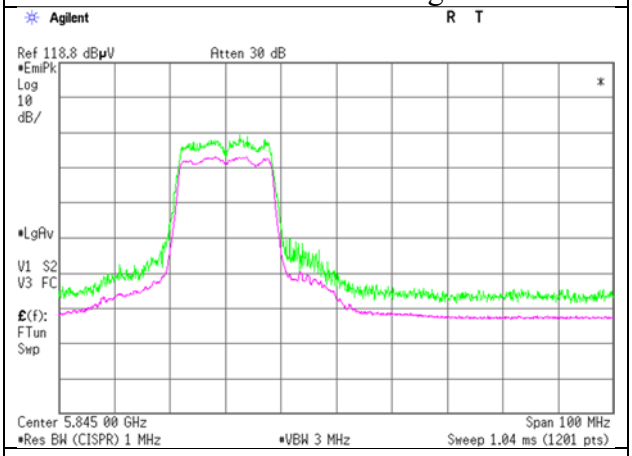
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5180 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.32	32.01	16.48	44.63	2.33	57.51	73.97	16.4	171	240	
Hori.	5150.000	AV	38.03	32.01	16.48	44.63	2.33	44.22	53.97	9.7	171	240	VBW: 10 Hz
Vert.	5150.000	PK	52.62	32.01	16.48	44.63	2.33	58.81	73.97	15.1	100	287	
Vert.	5150.000	AV	38.56	32.01	16.48	44.63	2.33	44.75	53.97	**9.2**	100	287	VBW: 10 Hz

*This mode was performed only band edges measurement.

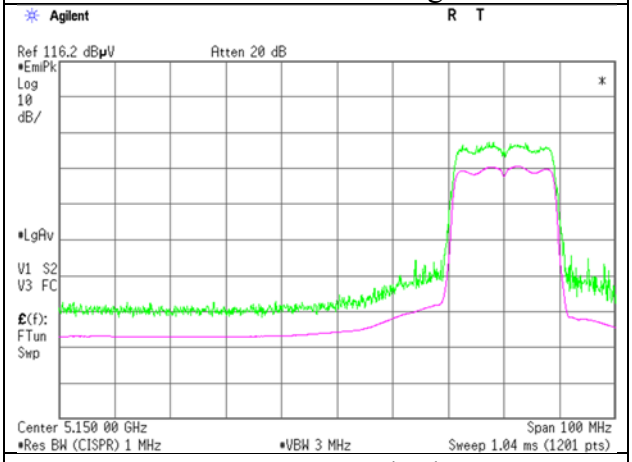
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5180 MHz

Horizontal

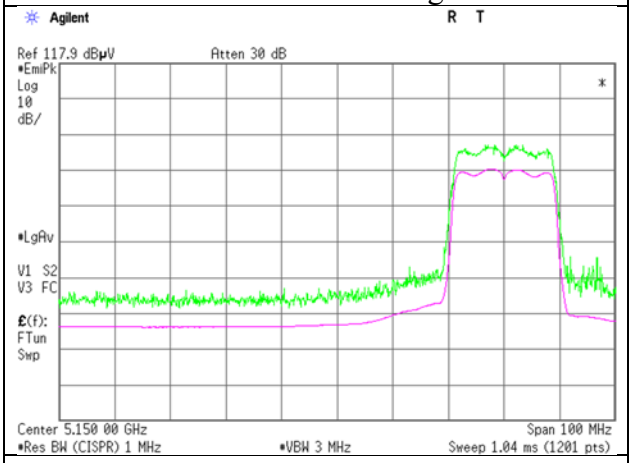
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5320 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	53.27	32.09	16.39	44.79	2.33	59.29	73.97	14.6	166	265	
Hori.	5350.000	AV	38.81	32.09	16.39	44.79	2.33	44.83	53.97	**9.1**	166	265	VBW: 10 Hz
Vert.	5350.000	PK	52.73	32.09	16.39	44.79	2.33	58.75	73.97	15.2	190	288	
Vert.	5350.000	AV	38.22	32.09	16.39	44.79	2.33	44.24	53.97	9.7	190	288	VBW: 10 Hz

*This mode was performed only band edges measurement.

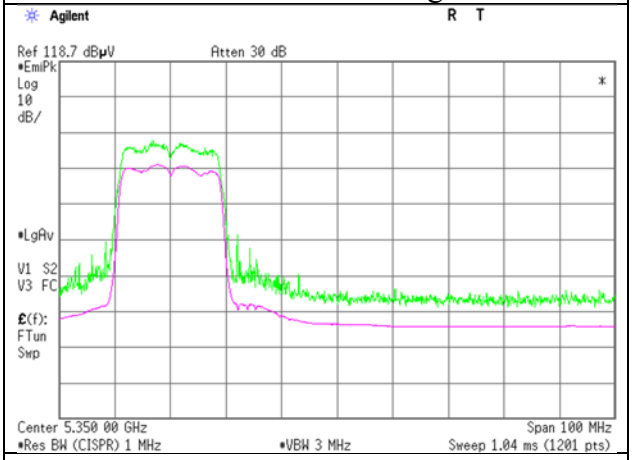
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa (1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5320 MHz

Horizontal

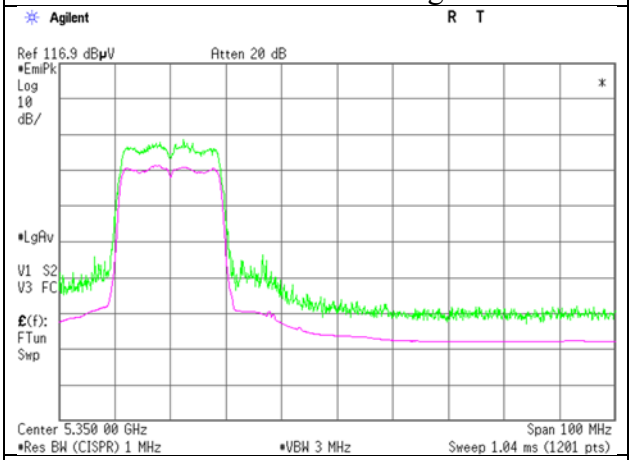
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5500 MHz

(above 1GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	51.35	32.14	16.36	44.87	2.33	57.31	73.97	16.6	144	258	
Hori.	5460.000	AV	37.31	32.14	16.36	44.87	2.33	43.27	53.97	**10.7**	144	258	VBW: 10 Hz
Vert.	5460.000	PK	51.46	32.14	16.36	44.87	2.33	57.42	73.97	16.5	152	290	
Vert.	5460.000	AV	37.22	32.14	16.36	44.87	2.33	43.18	53.97	**10.7**	152	290	VBW: 10 Hz

*This mode was performed only band edges measurement.

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	54.65	32.15	16.35	44.88	2.33	60.60	-34.60	-27.00	7.6	144	258	
Vert.	5470.000	PK	54.83	32.15	16.35	44.88	2.33	60.78	-34.42	-27.00	**7.4**	152	290	

*This mode was performed only band edges measurement.

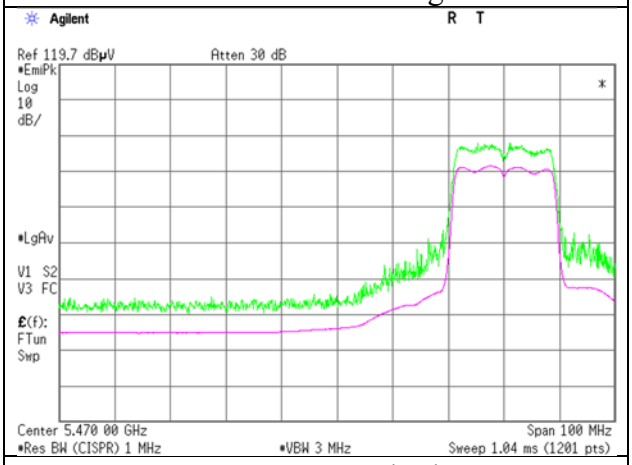
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 24, 2018
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5500 MHz

Horizontal

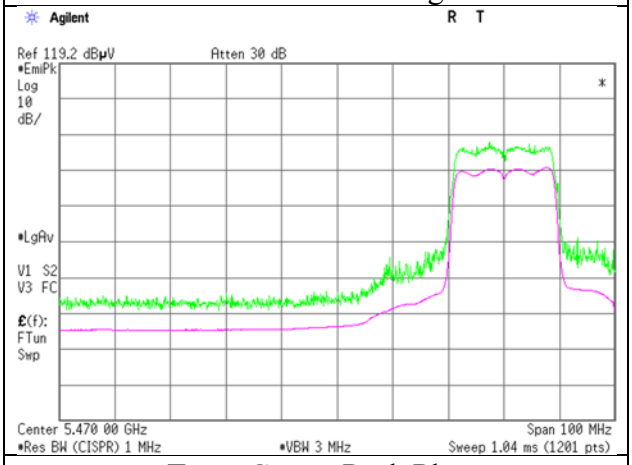
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5700 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	57.94	32.53	16.59	44.87	2.33	64.52	-30.68	-27.00	**3.7**	145	260	
Vert.	5725.000	PK	57.46	32.53	16.59	44.87	2.33	64.04	-31.16	-27.00	4.2	175	187	

*This mode was performed only band edges measurement.

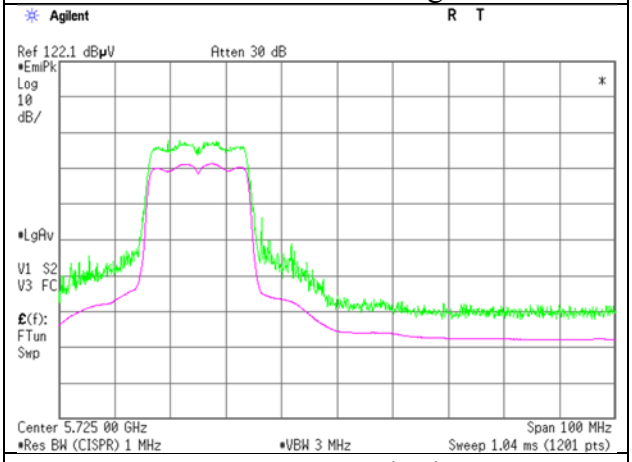
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG （({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5700 MHz

Horizontal

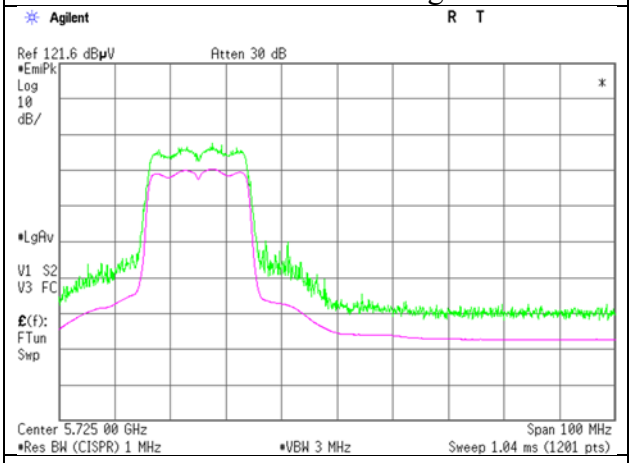
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5745 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.73	32.41	16.50	44.88	2.33	55.09	-40.11	-27.00	13.1	150	262	
Hori.	5700.000	PK	50.21	32.49	16.56	44.88	2.33	56.71	-38.49	10.00	48.5	150	262	
Hori.	5720.000	PK	58.46	32.53	16.59	44.87	2.33	65.04	-30.16	15.60	45.8	150	262	
Hori.	5725.000	PK	66.68	32.53	16.59	44.87	2.33	73.26	-21.94	27.00	48.9	150	262	
Vert.	5650.000	PK	49.29	32.41	16.50	44.88	2.33	55.65	-39.55	-27.00	**12.6**	112	310	
Vert.	5700.000	PK	49.66	32.49	16.56	44.88	2.33	56.16	-39.04	10.00	49.0	112	310	
Vert.	5720.000	PK	58.17	32.53	16.59	44.87	2.33	64.75	-30.45	15.60	46.1	112	310	
Vert.	5725.000	PK	65.57	32.53	16.59	44.87	2.33	72.15	-23.05	27.00	50.1	112	310	

*This mode was performed only band edges measurement.

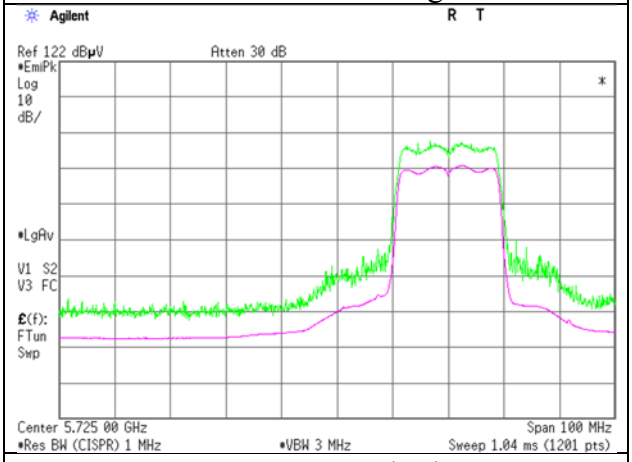
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5745 MHz

Horizontal

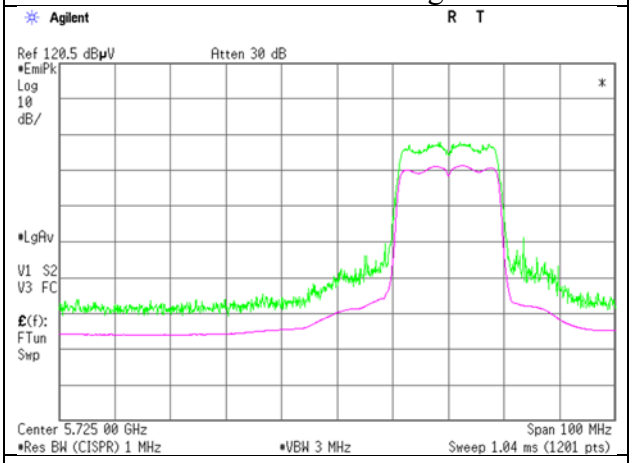
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5825 MHz

(Calculation) (above 1GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	58.32	32.74	16.73	44.86	2.33	65.26	-29.94	27.00	56.9	150	240	
Hori.	5855.000	PK	55.70	32.75	16.73	44.86	2.33	62.65	-32.55	15.60	48.2	150	240	
Hori.	5875.000	PK	50.38	32.78	16.76	44.86	2.33	57.39	-37.81	10.00	47.8	150	240	
Hori.	5925.000	PK	49.52	32.87	16.80	44.85	2.33	56.67	-38.53	-27.00	**11.5**	150	240	
Vert.	5850.000	PK	56.10	32.74	16.73	44.86	2.33	63.04	-32.16	27.00	59.2	123	233	
Vert.	5855.000	PK	53.79	32.75	16.73	44.86	2.33	60.74	-34.46	15.60	50.1	123	233	
Vert.	5875.000	PK	50.15	32.78	16.76	44.86	2.33	57.16	-38.04	10.00	48.0	123	233	
Vert.	5925.000	PK	49.31	32.87	16.80	44.85	2.33	56.46	-38.74	-27.00	11.7	123	233	

*This mode was performed only band edges measurement.

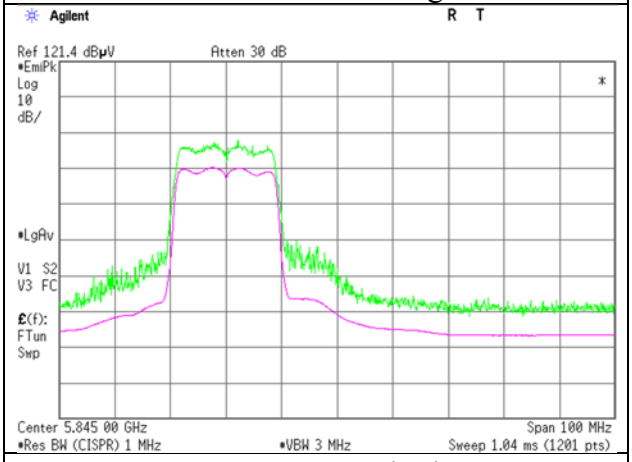
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi (1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-20 5825 MHz

Horizontal

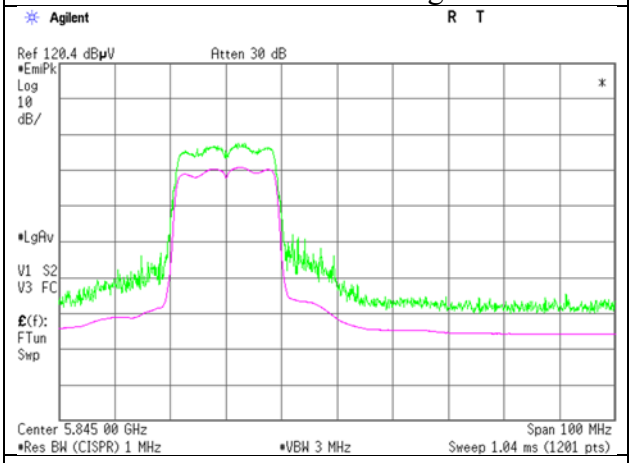
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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