RADIO TEST REPORT

Test Report No. : 11259492S-C-R2

Applicant	:	**Canon Inc.**
Type of Equipment	:	**Wireless LAN Module**
Model No.	:	**K30374**
FCC ID	:	**AZDK30374**
Test regulation	:	**FCC Part 15 Subpart E: 2016**
Test Result	:	**Complied**

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.
5. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
6. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. This report is a revised version of 11259492S-C-R1. 11259492S-C-R1 is replaced with this report.

Date of test: August 3 to 24, 2016

Representative test engineer:
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Approved by:
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Leader
Consumer Technology Division

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

RTL02610

REVISION HISTORY

Original Test Report No.: 11259492S-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	11259492S-C	October 19, 2016	-	-
1	11259492S-C-R1	November 4, 2016	6	Correction of Section 3.2
2	11259492S-C-R2	November 8, 2016	4, 10	Correction of Section 2.2 Update of Section 4.2

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SECTION 1: Customer information

Company Name	:	Canon Inc.
Address	:	3-451 Tsukakoshi, Saiwai-ku, Kawasaki, kanagawa 212-8530 Japan
Telephone Number	:	+81-3-3758-2111
Contact Person	:	Haruyuki Yanagi

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless LAN Module
Model No.	:	K30374
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 3.3 V
Receipt Date of Sample	:	July 30, 2016
Country of Mass-production	:	Thailand
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: K30374 (referred to as the EUT in this report) is a Wireless LAN Module.

General Specification

Clock frequency(ies) in the system : 40 MHz

Radio Specification

Radio Type : Transceiver

Type of radio	IEEE802.11b	IEEE802.11g	IEEE802.11a	IEEE802.11n (20 M band)	IEEE802.11n (40 M band)
Frequency of operation	2412 MHz - 2462 MHz	2412 MHz - 2462 MHz	5180 MHz - 5240 MHz 5260 MHz - 5320 MHz 5500 MHz - 5700 MHz 5745 MHz - 5825 MHz	2412 MHz - 2462 MHz 5180 MHz - 5240 MHz 5260 MHz - 5320 MHz 5500 MHz - 5700 MHz 5745 MHz - 5825 MHz	2422 MHz - 2452 MHz 5510 MHz - 5670 MHz 5755 MHz - 5795 MHz 5755 MHz - 5825 MHz
Type of modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	OFDM (64QAM, 16QAM, QPSK, BPSK)		
Channel spacing	5 MHz		20 MHz	2.4 GHz band 5 MHz 5 GHz band 20 MHz	2.4 GHz band 5 MHz 5 GHz band 40 MHz
Antenna Gain	-1.69 dBi (2.4 GHz), -3.73 dBi (5 GHz) (W52,W53) -2.22 dBi (5 GHz) (W56,W58)				
Antenna type	Inverted-L antenna				

Remarks: This Wireless Module consists of 1 chip each of 5 GHz bandand 2.4 GHz band.

SECTION 3: Test specification, procedures & results

3.1 Test Specification

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

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (b) (6) / 15.207	**QP** 29.8 dB, 0.22004 MHz, N, 0.21703 MHz, L1, 0.49033 MHz, L1 **AV** 25.7 dB, 19.66524 MHz, N	Complied	-
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
26 dB Emission Bandwidth	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)	See data	N/A	Conducted
	IC: -	**IC:** -			
Maximum Conducted Output Power	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)		Complied	Conducted
	IC: -	**IC:** RSS-247 6.2.1 (1) 6.2.2 (1) 6.2.3 (1) 6.2.4 (1)			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033	**FCC :** 15.407 (a) (1) (2) (3)		Complied	Conducted
	IC: -	**IC:** RSS-247 6.2.1 (1) 6.2.2 (1) 6.2.3 (1) 6.2.4 (1)			
Spurious Emission Restricted Band Edge	**FCC:** ANSI C63.10-2013 KDB Publication Number 789033	**FCC:** 15.407 (b), 15.205 and 15.209	5.9 dB 17100.00 MHz, AV, Hori. Tx 11n-20 5700 MHz	Complied	Conducted (< 30 MHz) / Radiated (> 30 MHz) *1)
	IC: -	**IC:** RSS-247 6.2.1 (2) 6.2.2 (2) 6.2.3 (2) 6.2.4 (2)			
6 dB Emission Bandwidth	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (e)	See data	Complied	Conducted
	IC: -	**IC:** RSS-247 6.2.4 (1)			

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.
* For DFS tests, please see the test report number 11259492S-D issued by UL Japan, Inc.
*1) Radiated test was selected over 30 MHz based on section FCC 15.407 (b) and KDB 789033 D02 G.3.b).

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

FCC Part 15.31 (e)
The host device provides stable voltage (DC 3.3 V) constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203/212 Antenna requirement
The antenna is not removable from the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to standard

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

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

3.4 Uncertainty

EMI

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

Shonan EMC Lab.

Item	Frequency range	Uncertainty (+/-)			
		No. 1 SAC / SR	No. 2 SAC / SR	No. 3 SAC / SR	No. 4 SAC / SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	2.1 dB	2.1 dB	2.6 dB	2.2 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	2.7 dB	2.7 dB	3.1 dB	-
	30 MHz-300 MHz	4.4 dB	4.4 dB	4.6 dB	-
	300 MHz-1 GHz	5.6 dB	5.5 dB	5.3 dB	-
	1 GHz-13 GHz	5.2 dB	5.2 dB	5.2 dB	-
Radiated emission (Measurement distance: 1 m)	13 GHz-18 GHz	4.9 dB	4.9 dB	4.9 dB	-
	18 GHz-40 GHz	4.9 dB	4.9 dB	4.9 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	0.76 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-06	0.79 dB
Spurious emission (Conducted) below 1GHz	1.5 dB
Bandwidth Measurement	0.66 %
Duty cycle and Time Measurement	0.012 %

Conducted Emission test

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

Radiated emission test

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

3.5 Test Location

UL Japan, Inc. Shonan EMC Lab.
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

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)

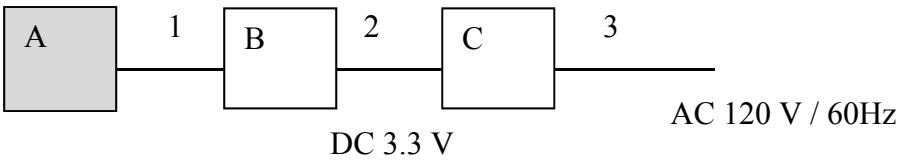
Test operating mode was determined as follows according to "Section 1 of 6 802.11 a/b/g/n testing - Managing Complex Regulatory Approvals -" of TCB Council Workshop October 2009.

Mode	Remarks*
IEEE 802.11a (11a)	54 Mbps, PN9
IEEE 802.11n 20 MHz BW (11n-20)	MCS 7, PN9
IEEE 802.11n 40 MHz BW (11n-40)	MCS 0, PN9
*Transmitting duty was 100 % on all tests. *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: 10 dBm Software: DutApiBRIDGEETH8782.exe, Ver.1.0.7.32 *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, Radiated Spurious Emission (Below 1 GHz), Conducted Spurious Emission	11n-20 Tx *1)	-	-	-	5825 MHz
26 dB Emission Bandwidth	11a Tx 11n-20 Tx	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	11n-40 Tx	-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
99 % Occupied Bandwidth, Maximum Conducted Output Power, Maximum Power Spectral Density	11a Tx 11n-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	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
6 dB Bandwidth	11a Tx 11n-20 Tx	-	-	-	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx	-	-	-	5755 MHz 5795 MHz
Radiated Spurious Emission (Above 1 GHz)	11a Tx *2)	5180 MHz	5320 MHz	5500 MHz 5700 MHz	5745 MHz 5825 MHz
	11n-20 Tx	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40 Tx	5190 MHz 5230 MHz	5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
*1) The mode was tested as a representative, because it had the highest power at antenna terminal test. *2) There were carried out only Band edge.					

4.2 Configuration and peripherals



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

Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Wireless LAN Module	K30374	A135 *1), A138 *2)	Canon	EUT
B	WLAN JOINT PCB	-	-	Canon	-
C	DC Power supply	PAN35-10A	DE001677	Kikusui	Conducted Emission only

*1) Used for Antenna Terminal conducted test
*2) Used for Conducted Emission test and Radiated Emission test

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Flat	0.1	Unshielded	Unshielded	-
2	DC	2.0	Unshielded	Unshielded	-
3	AC	1.8	Unshielded	Unshielded	-

SECTION 5: Conducted Emission

Test Procedure and conditions

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

Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN / (AMN) to the input power source.

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).
An overview sweep with peak detection has been performed.

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

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

SECTION 6: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1 GHz >
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. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

< Above 1 GHz >
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 1 GHz >

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:
(W52, W53, W56)

Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) in the Section 15.407 (b)
(W58)
Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) at 75 MHz or more above or below the band edge increasing linearly to 105.23 dBuV/m, 3 m (10 dBm e.i.r.p.*) at 25 MHz above or below the band edge, from 25 MHz above or below the band edge increasing linearly to a level of 110.83 dBuV/m, 3 m (15.6 dBm e.i.r.p.*) at 5 MHz above or below the band edge, from 5 MHz above or below the band edge increasing linearly to a level of 122.23 dBuV/m, 3 m (27 dBm e.i.r.p.*) at the band edge, in the Section 15.407 (b)

Restricted band edge:

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

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

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

Test Antennas are used as below;

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

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	RBW: 1 MHz VBW: *2)
Test Distance	3 m	3 m (below 1 GHz), 3 m*3) (1 GHz – 13 GHz), 1 m*4) (13 GHz – 40 GHz)	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r03 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on August 22, 2016)".
*2) When duty cycle > 98 percent, VBW was set at 10 Hz.
When duty cycle < 98 percent, VBW (Average) calculation sheet in APPENDIX 1.
*3) Distance Factor: 20 x log (3.99 m/3.0 m) = 2.48 dB
*4) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.54 dB

- 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.

Worst case:

Antenna polarization	Carrier (Band edge)	Spurious				
		Below 1GHz	Above 1GHz			
			1 – 6.4 GHz	6.4 -13 GHz	13 - 18 GHz	18 - 40 GHz
Horizontal	Y	X	Y	Z	Z	X
Vertical	Y	X	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	Sample	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: 50 MHz BW) (Method PM)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 100 kHz *2)	≥ 3 RBW	Auto	RMS or Sample 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 v01r03 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on August 22, 2016)".

*1) Peak hold was applied as Worst-case measurement.
*2) FCC standard says that RBW is set to be 500 kHz for 5.725 GHz-5.850 GHz, but it is not possible with spectrum analyzer, so 10log(500 kHz/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

DATA OF CONDUCTED EMISSION TEST

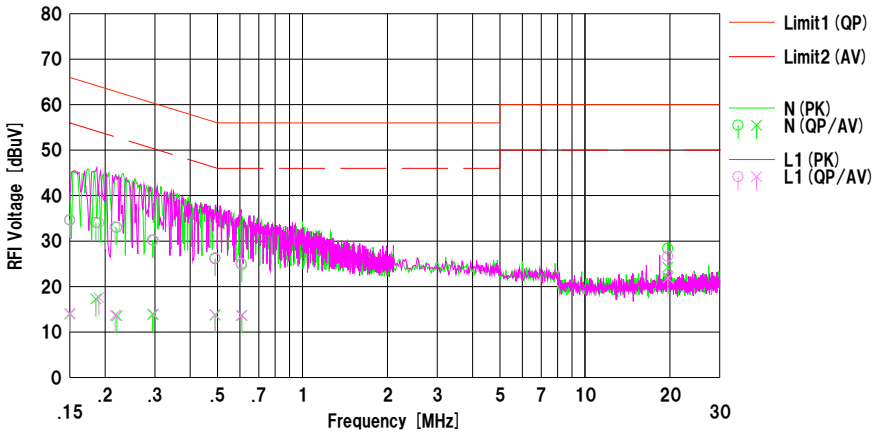
UL Japan,Inc. Shonan EMC Lab. No.2 Shielded Room
Date : 2016/08/24

Mode : 11n-20 Tx 5825MHz

Power : AC 120V / 60Hz (DC 3.3 V)
Temp./Humi. : 24 deg.C / 56 %RH

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

Engineer : Hikaru Shirasawa



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	22.10	1.40	12.58	34.68	13.98	66.00	56.00	31.3	42.0	N	
2	0.18564	21.50	4.70	12.58	34.08	17.28	64.23	54.23	30.1	36.9	N	
3	0.22004	20.40	1.00	12.59	32.99	13.59	62.82	52.82	29.8	39.2	N	
4	0.29461	17.60	1.30	12.61	30.21	13.91	60.39	50.39	30.1	36.4	N	
5	0.49057	13.50	1.10	12.63	26.13	13.73	56.16	46.16	30.0	32.4	N	
6	0.60960	12.20	1.00	12.64	24.84	13.64	56.00	46.00	31.1	32.3	N	
7	19.66524	14.70	10.60	13.65	28.35	24.25	60.00	50.00	31.6	25.7	N	
8	0.15000	22.00	1.50	12.58	34.58	14.08	66.00	56.00	31.4	41.9	L1	
9	0.19002	21.40	5.00	12.58	33.98	17.58	64.04	54.04	30.0	36.4	L1	
10	0.21703	20.50	1.10	12.59	33.09	13.69	62.93	52.93	29.8	39.2	L1	
11	0.29693	17.50	1.30	12.61	30.11	13.91	60.33	50.33	30.2	36.4	L1	
12	0.49033	13.70	1.20	12.63	26.33	13.83	56.16	46.16	29.8	32.3	L1	
13	0.60767	12.40	1.00	12.64	25.04	13.64	56.00	46.00	30.9	32.3	L1	
14	19.66476	13.00	8.20	13.65	26.65	21.85	60.00	50.00	33.3	28.1	L1	

Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN+Cable+ATT) [dB]
LISN: SLS-03

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11a

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	16.997	-
5220	-	16.973	-
5240	-	16.920	-
5260	19.576	16.954	-
5300	19.726	16.948	-
5320	19.786	16.929	-
5500	19.616	17.004	-
5580	19.448	17.006	-
5700	19.405	16.991	-
5745	-	16.934	-
5785	-	17.076	-
5825	-	16.981	-

11n-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	18.016	-
5220	-	18.164	-
5240	-	18.178	-
5260	20.158	18.078	-
5300	20.358	18.154	-
5320	20.089	18.107	-
5500	20.161	18.152	-
5580	20.323	18.189	-
5700	20.200	18.176	-
5745	-	18.143	-
5785	-	18.130	-
5825	-	18.123	-

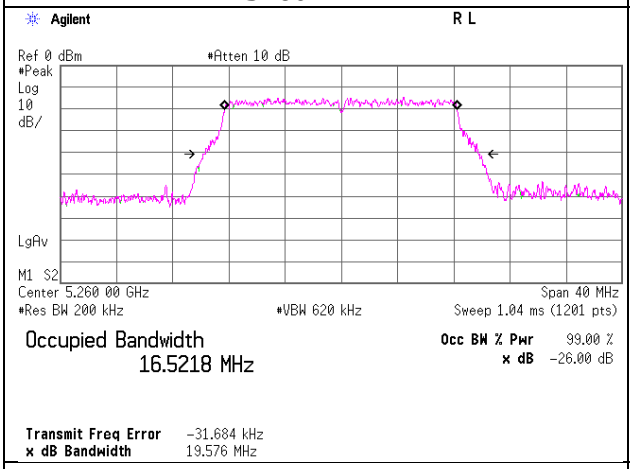
11n-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	36.767	-
-	-	-	-
5230	-	36.636	-
5270	40.748	36.604	-
-	-	-	-
5310	41.019	36.702	-
5510	40.261	36.709	-
5550	40.523	36.703	-
5670	40.674	36.702	-
5755	-	36.671	-
-	-	-	-
5795	-	36.799	-

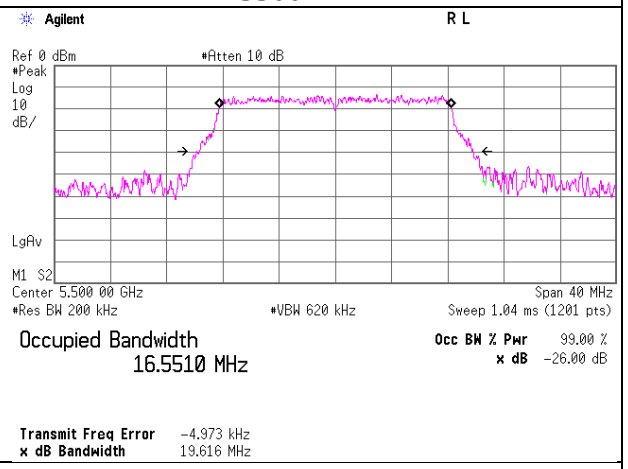
26 dB Emission Bandwidth

11a

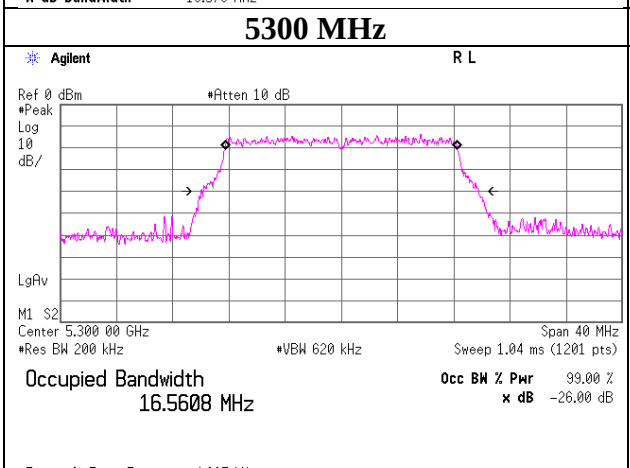
5260 MHz



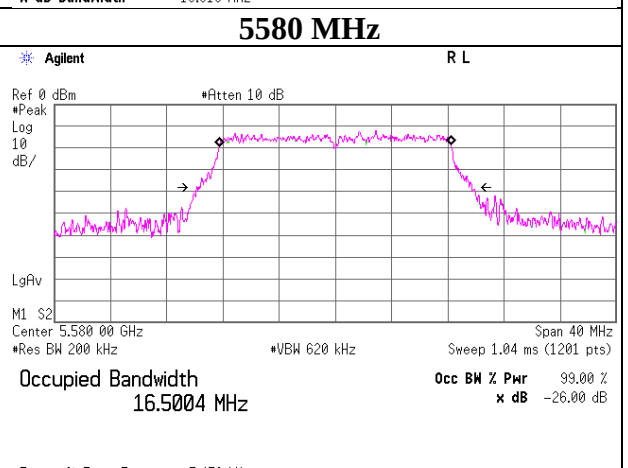
5500 MHz



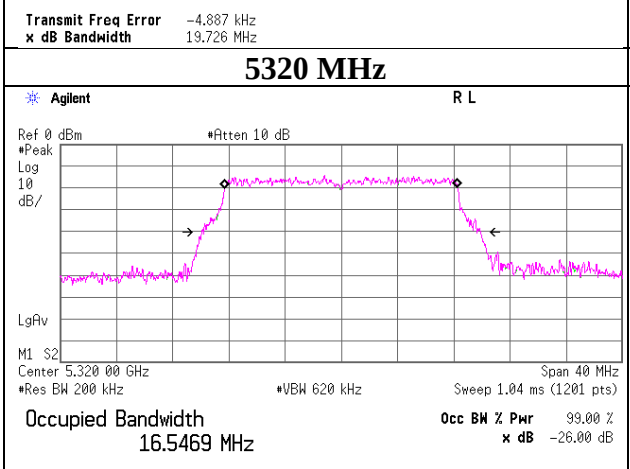
5300 MHz



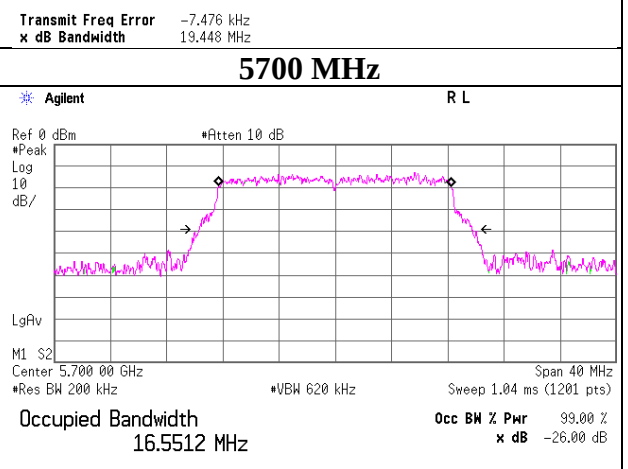
5580 MHz



5320 MHz



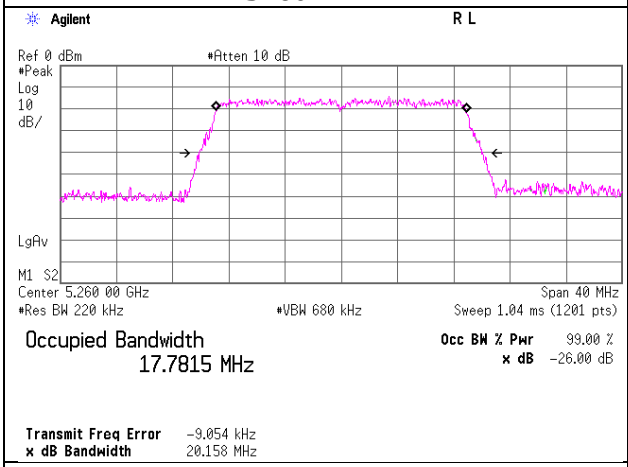
5700 MHz



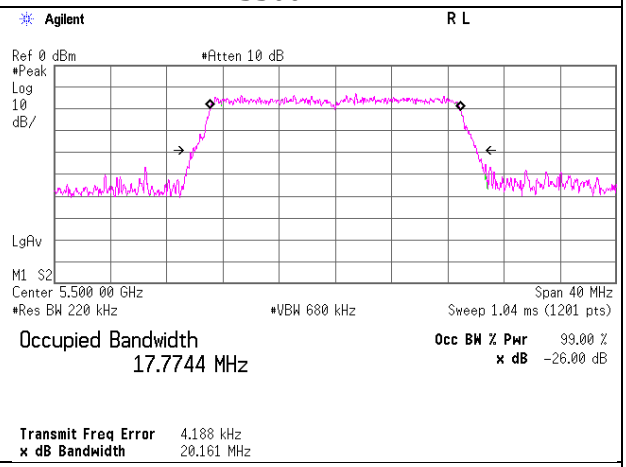
26 dB Emission Bandwidth

11n-20

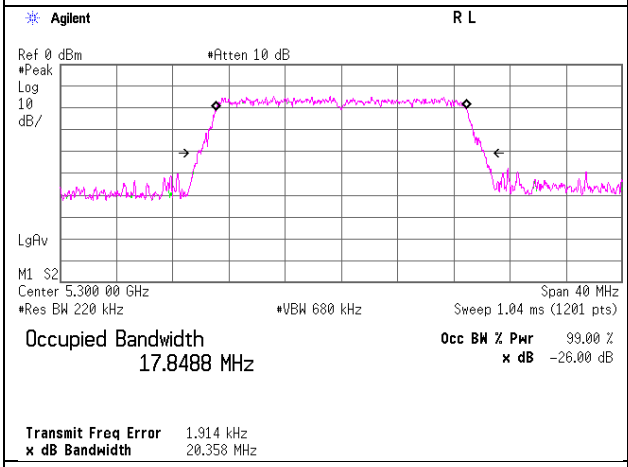
5260 MHz



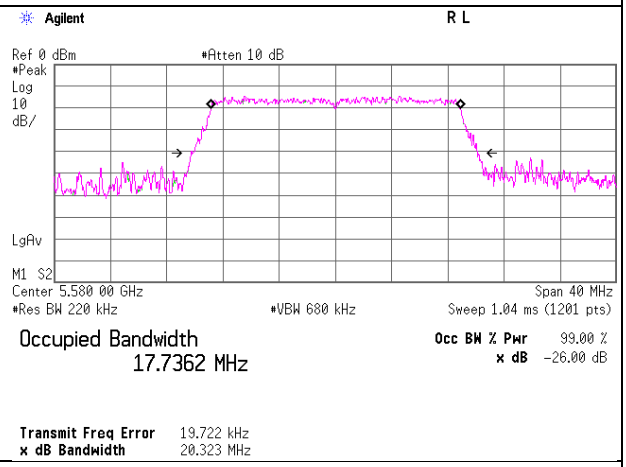
5500 MHz



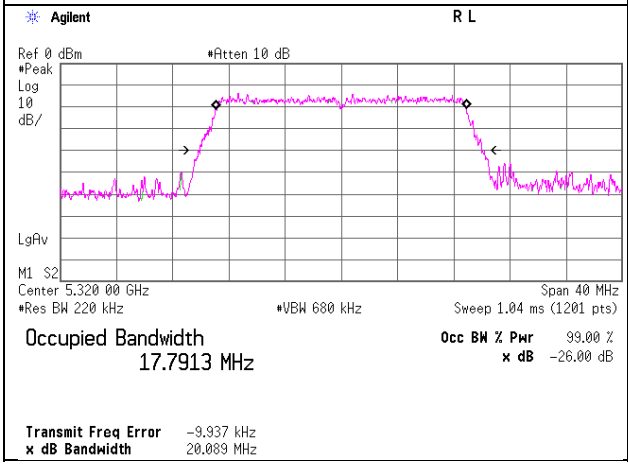
5300 MHz



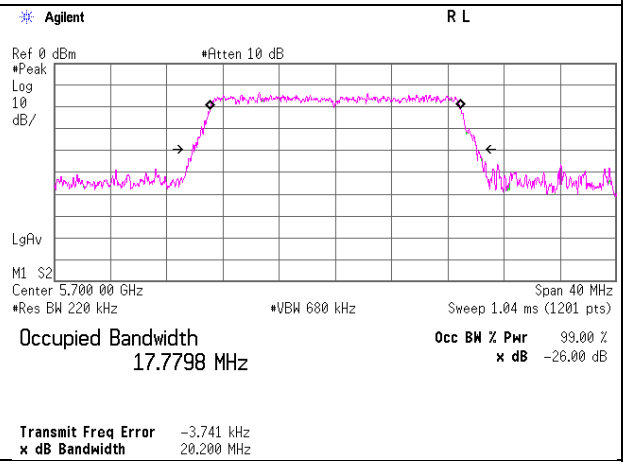
5580 MHz



5320 MHz



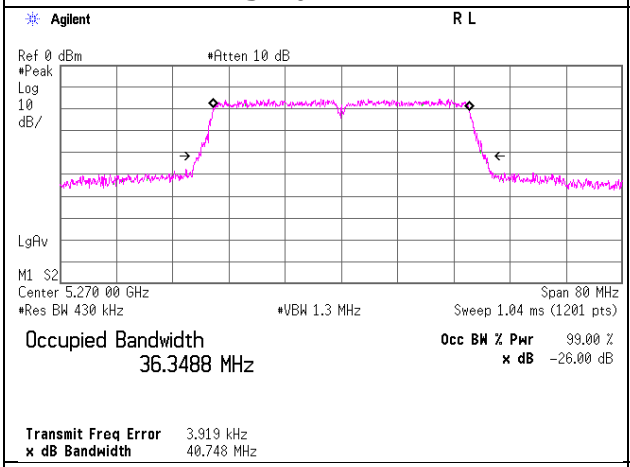
5700 MHz



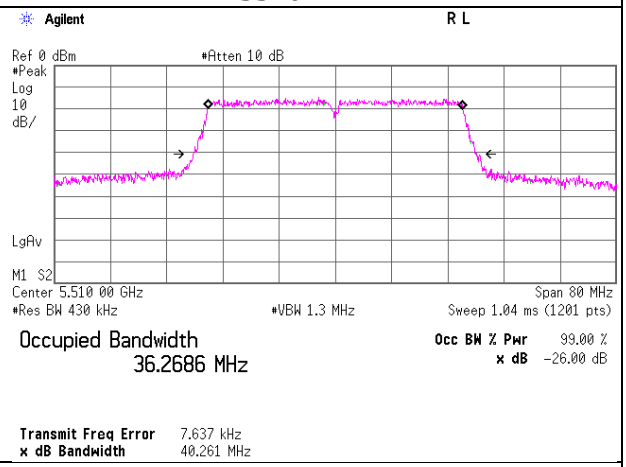
26 dB Emission Bandwidth

11n-40

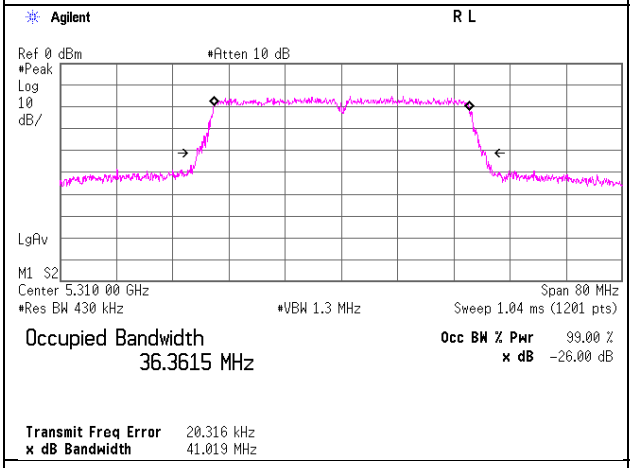
5270 MHz



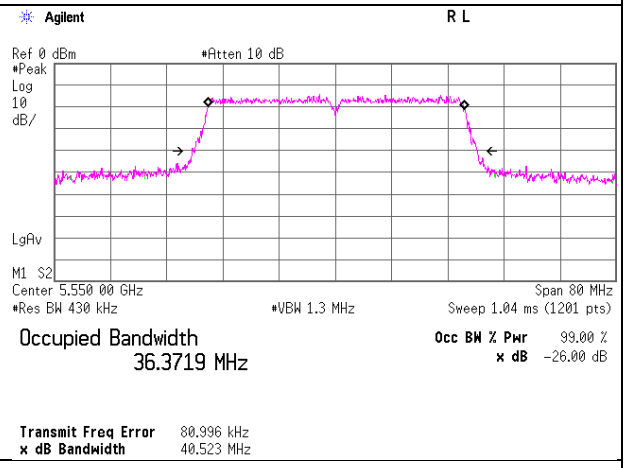
5510 MHz



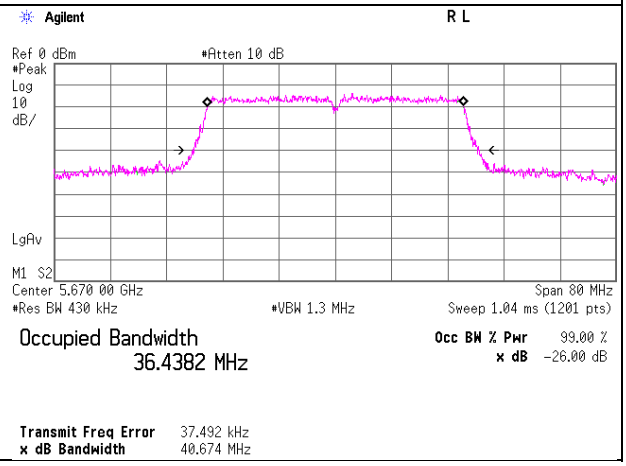
5310 MHz



5550 MHz



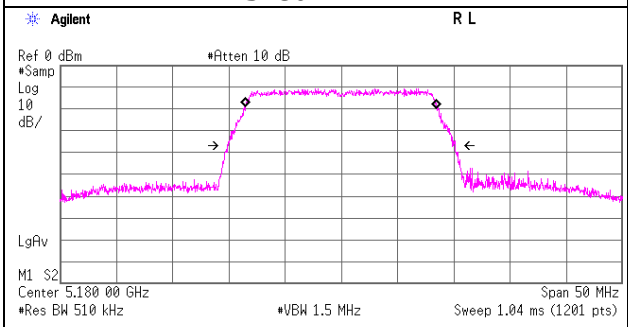
5670 MHz



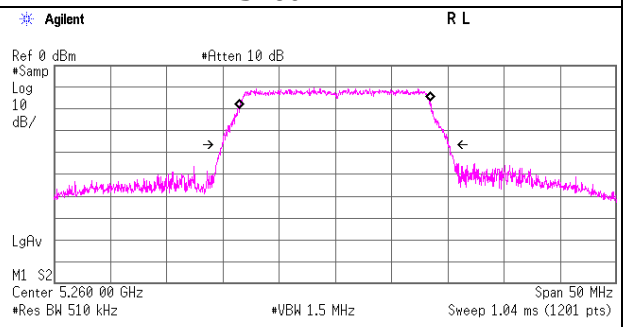
99 % Occupied Bandwidth

11a

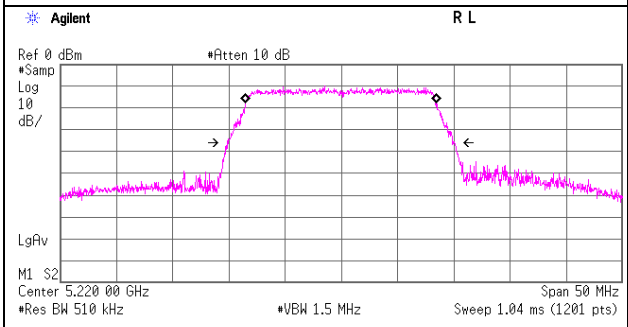
5180 MHz



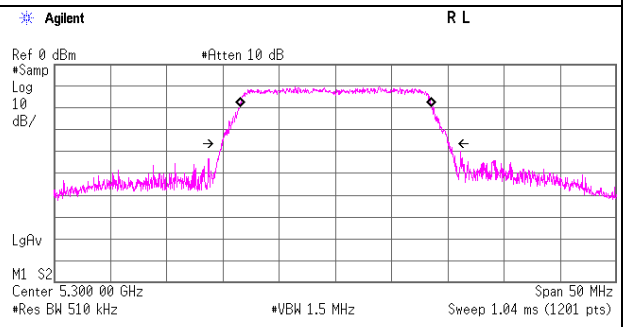
5260 MHz



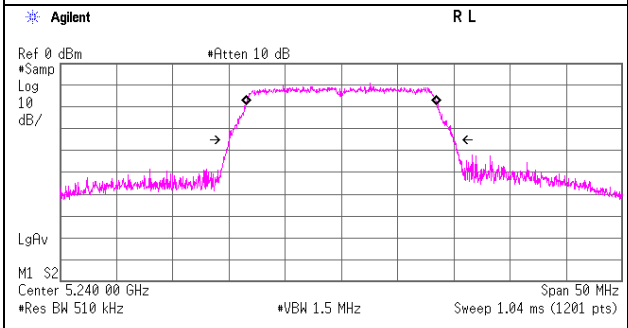
5220 MHz



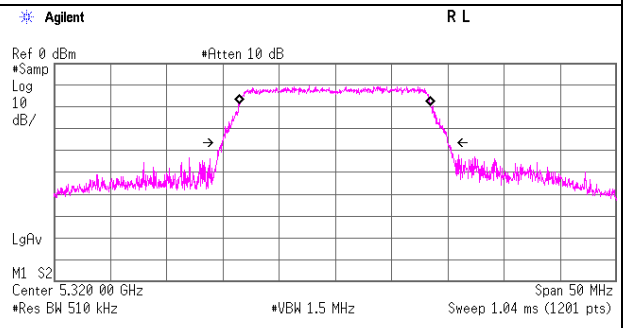
5300 MHz



5240 MHz



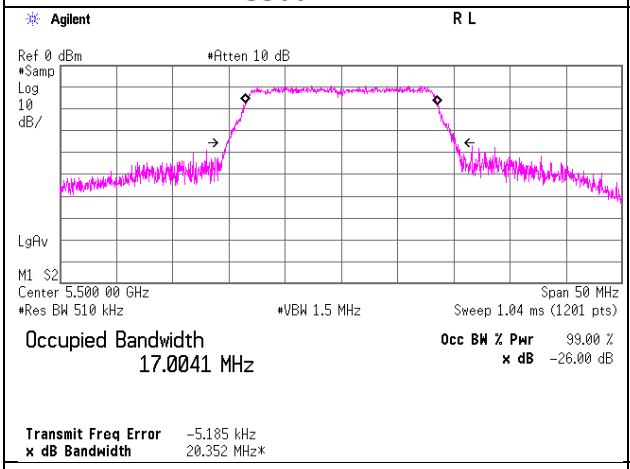
5320 MHz



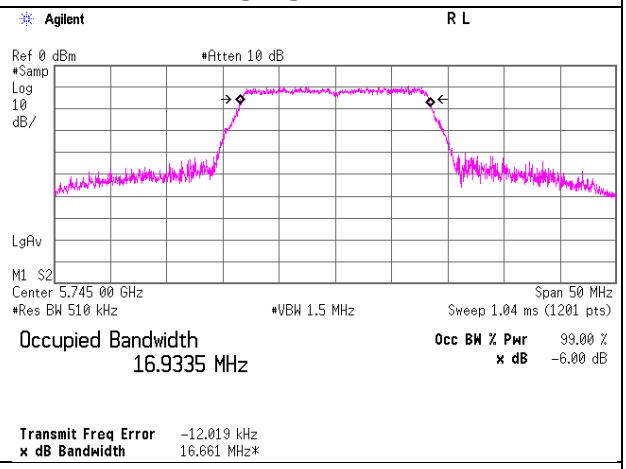
99 % Occupied Bandwidth

11a

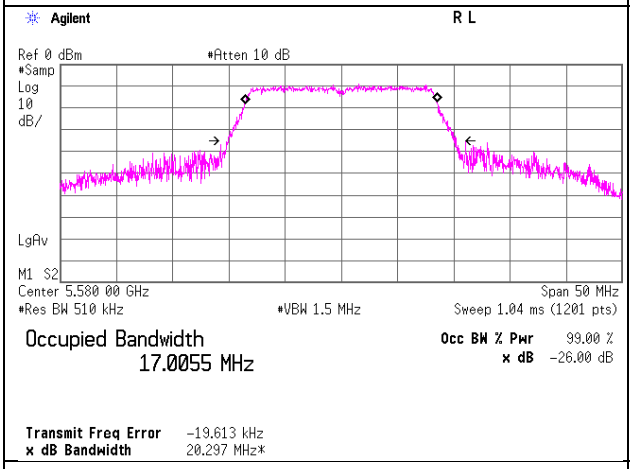
5500 MHz



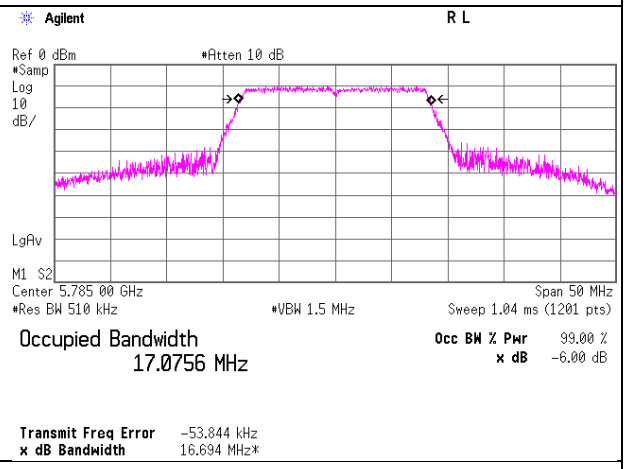
5745 MHz



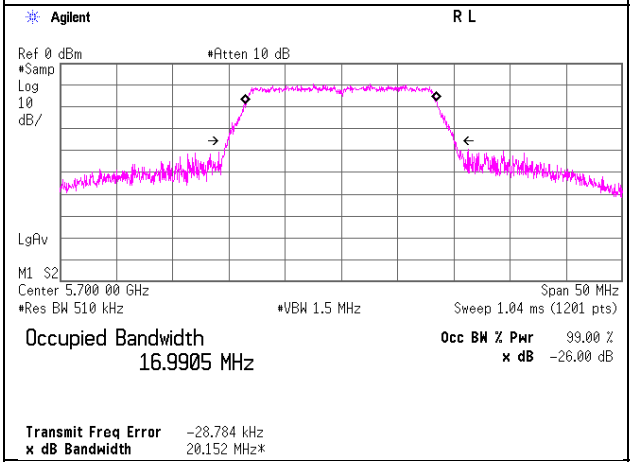
5580 MHz



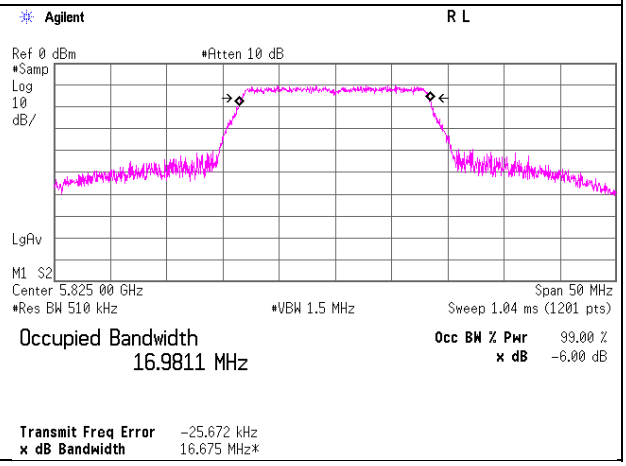
5785 MHz



5700 MHz



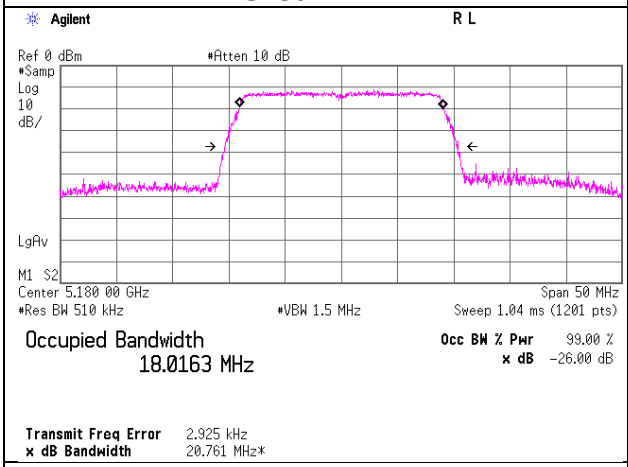
5825 MHz



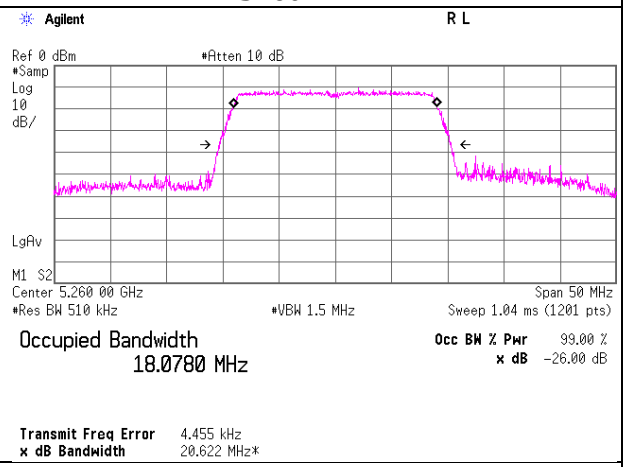
99 % Occupied Bandwidth

11n-20

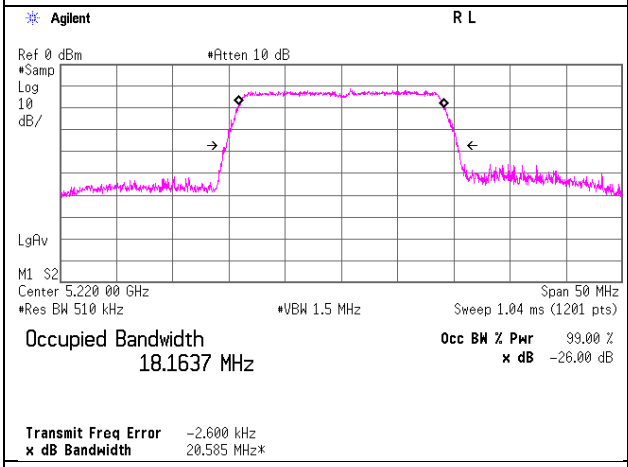
5180 MHz



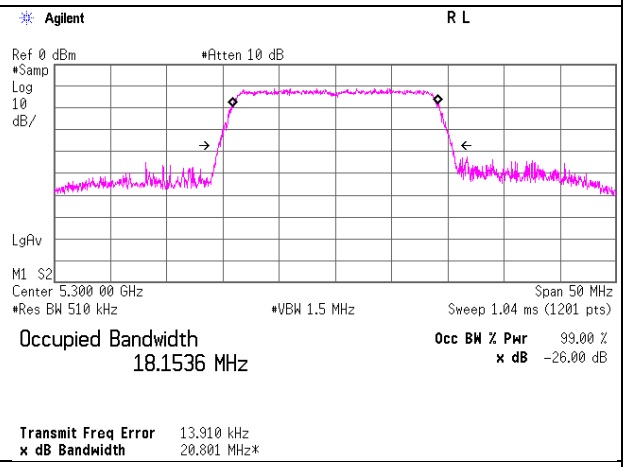
5260 MHz



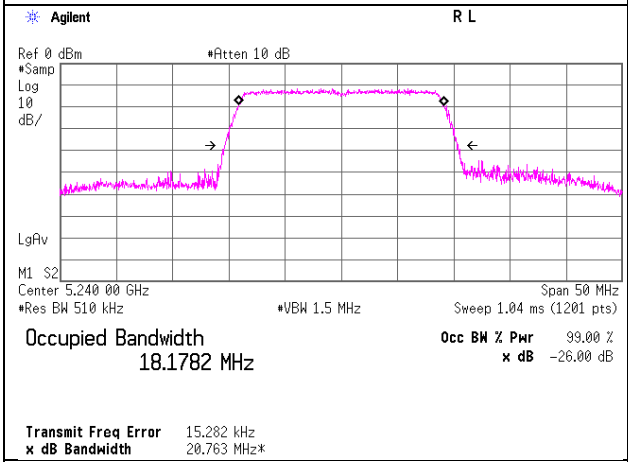
5220 MHz



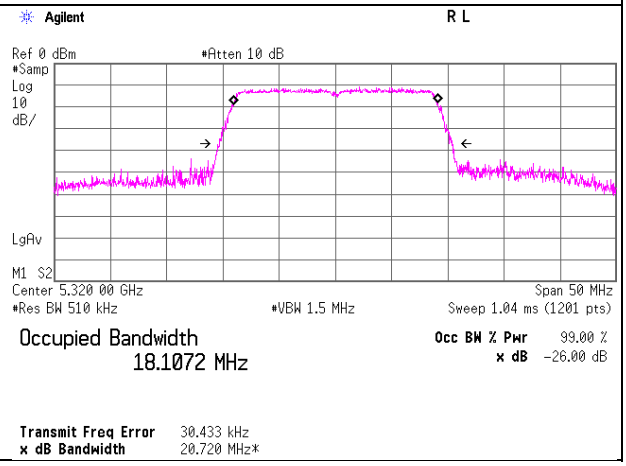
5300 MHz



5240 MHz



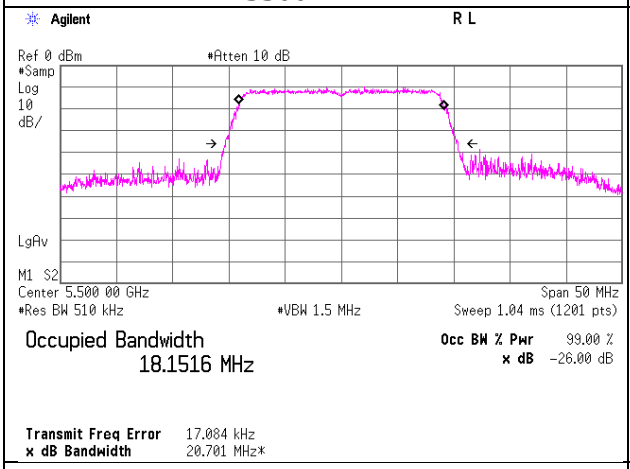
5320 MHz



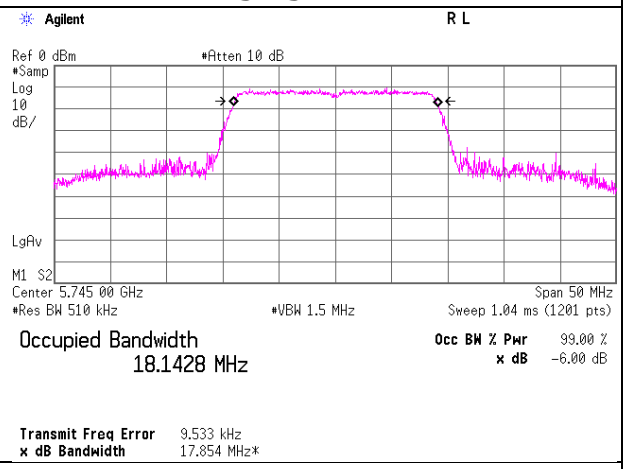
99 % Occupied Bandwidth

11n-20

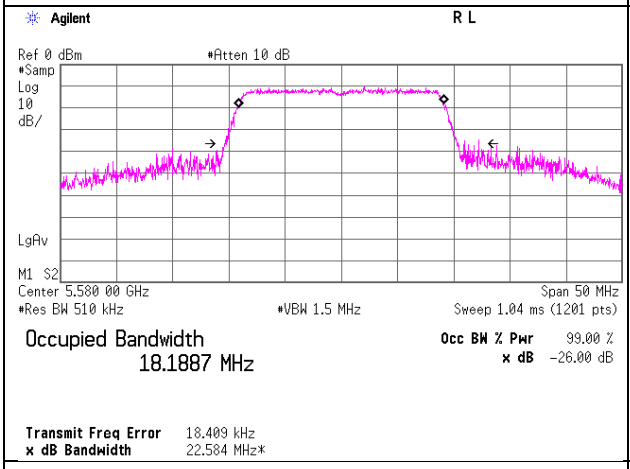
5500 MHz



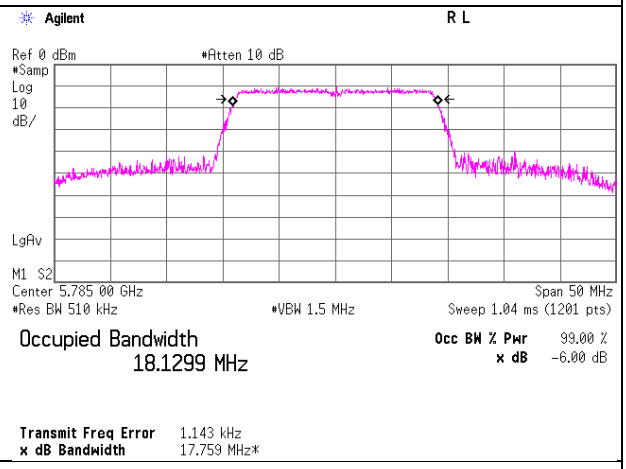
5745 MHz



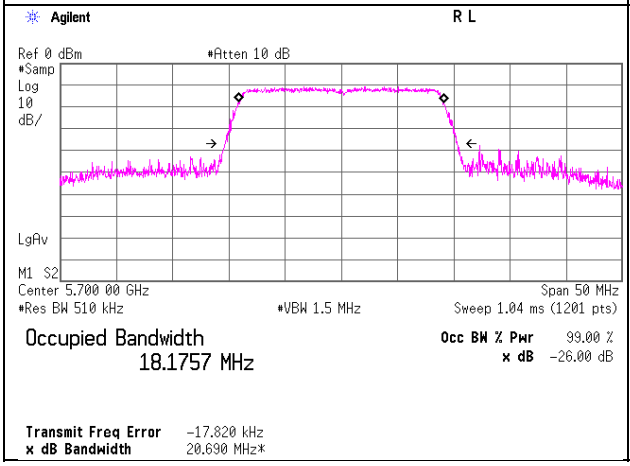
5580 MHz



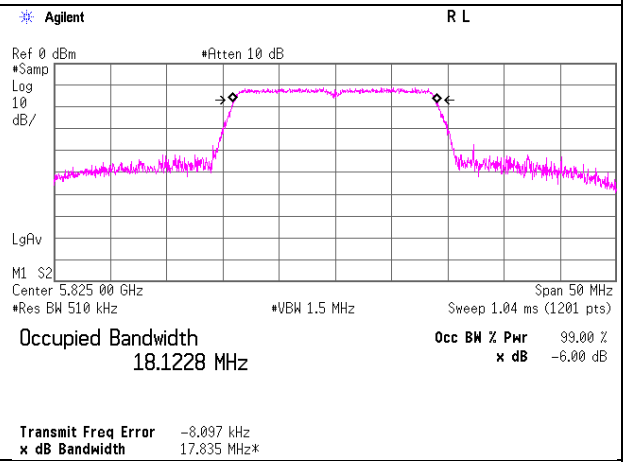
5785 MHz



5700 MHz



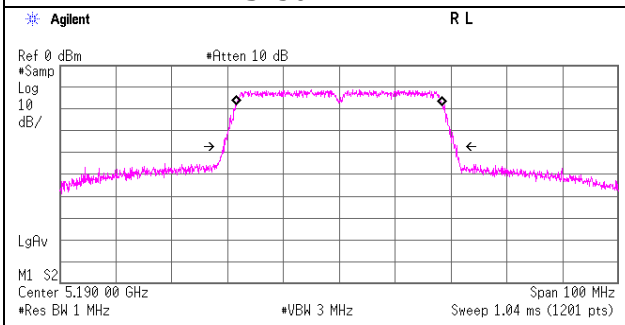
5825 MHz



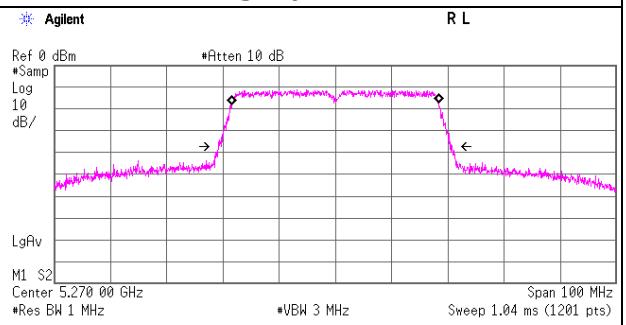
99 % Occupied Bandwidth

11n-40

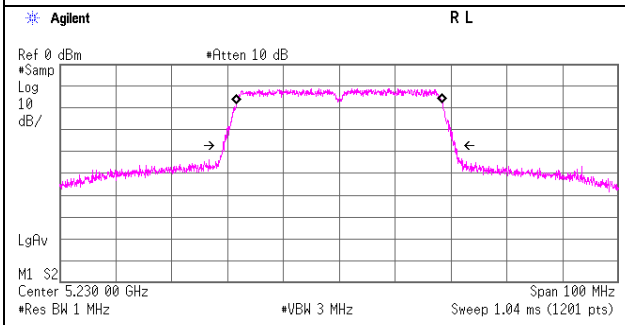
5190 MHz



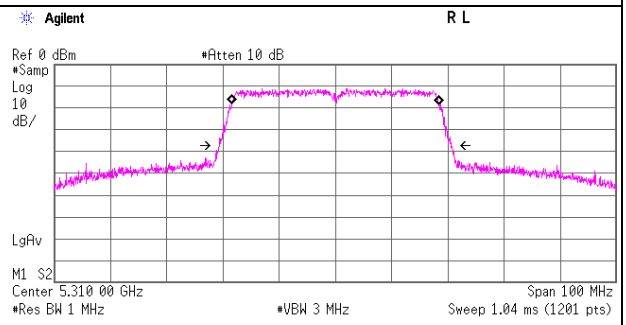
5270 MHz



5230 MHz



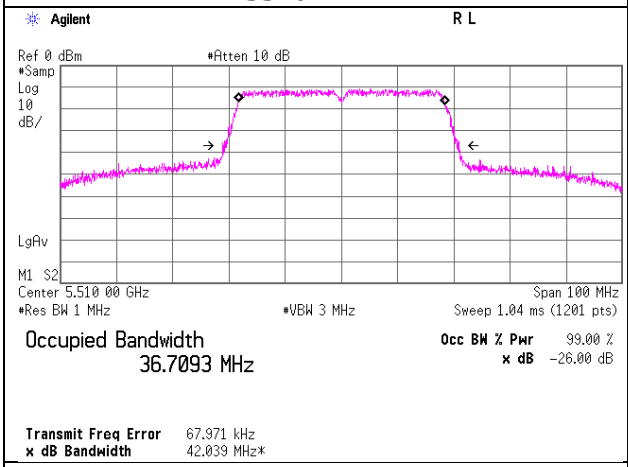
5310 MHz



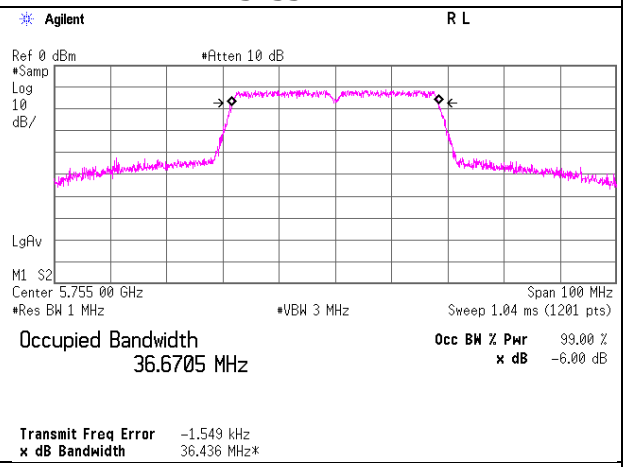
99 % Occupied Bandwidth

11n-40

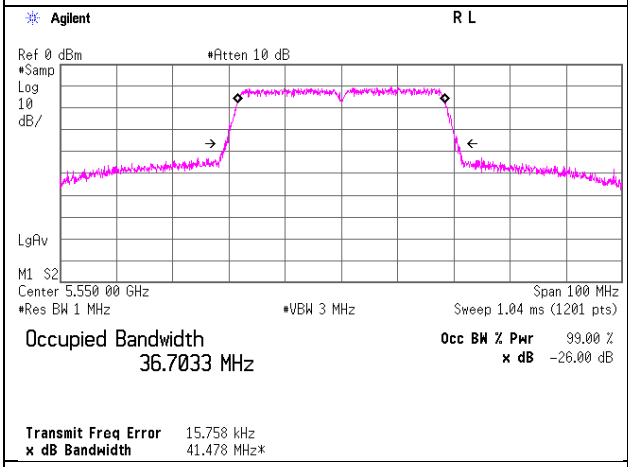
5510 MHz



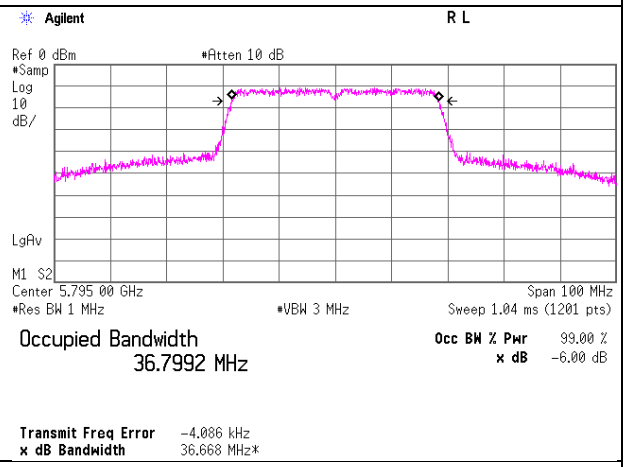
5755 MHz



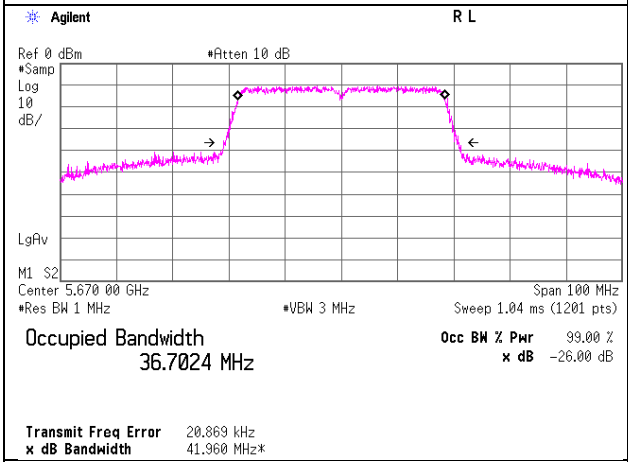
5550 MHz



5795 MHz



5670 MHz



6 dB Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11a

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	16.584	> 500
5785	16.568	> 500
5825	16.554	> 500

11n-20

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	17.849	> 500
5785	17.850	> 500
5825	17.849	> 500

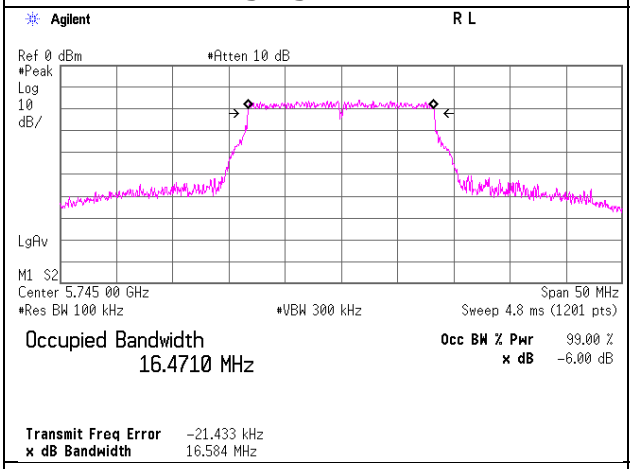
11n-40

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5755	36.627	> 500
-	-	-
5825	36.613	> 500

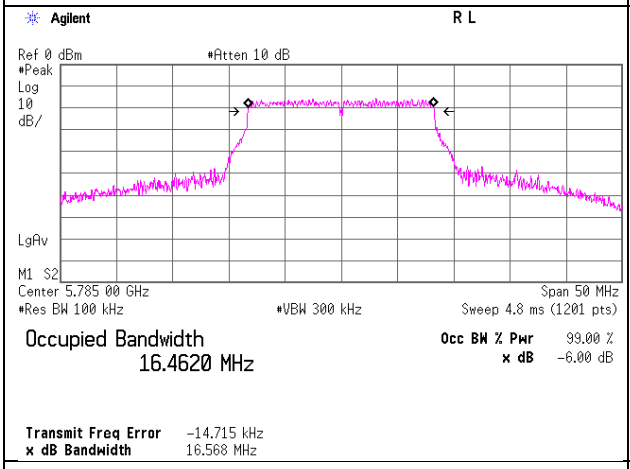
6 dB Bandwidth

11a

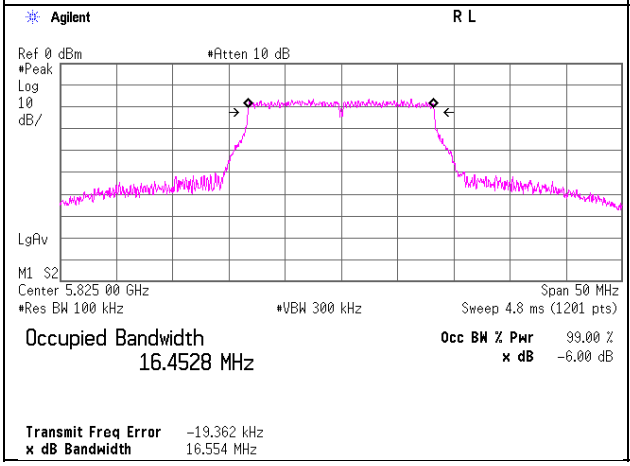
5745 MHz



5785 MHz

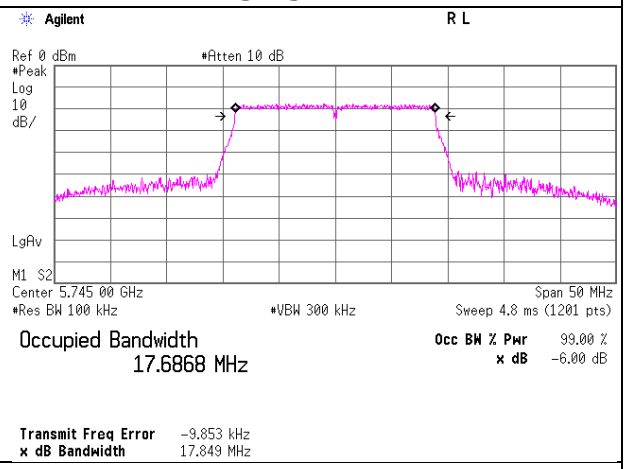


5825 MHz

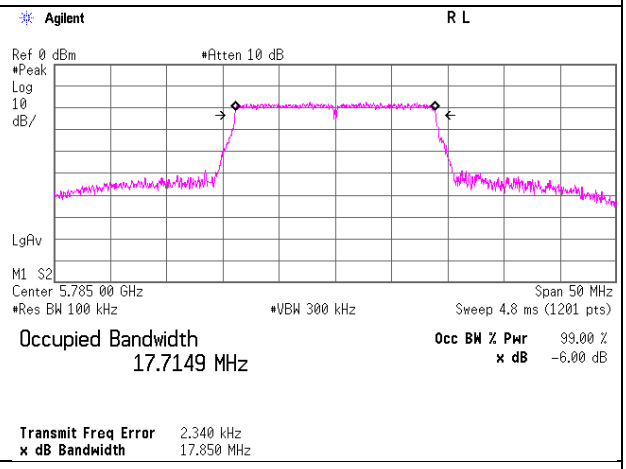


11n-20

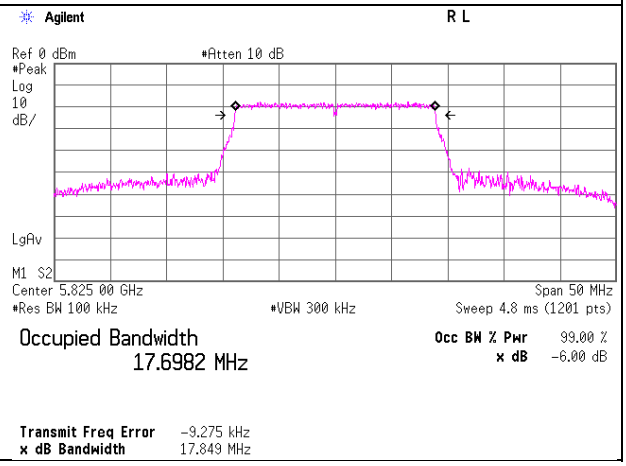
5745 MHz



5785 MHz



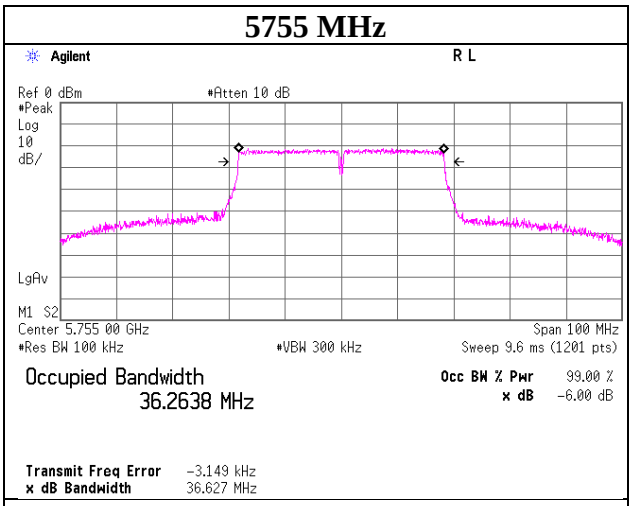
5825 MHz



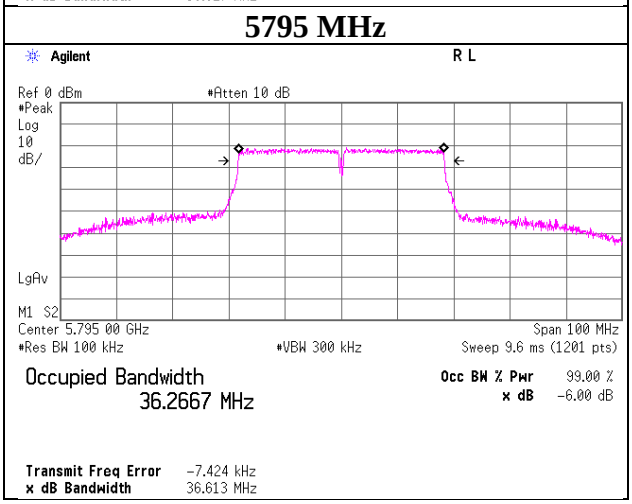
6 dB Bandwidth

11n-40

5755 MHz



5795 MHz



Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 3, 2016
Temperature / Humidity	25 deg. C / 48 % RH
Engineer	Shinichi Takano
Mode	Tx 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				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-3.77	3.70	9.99	0.00	-3.7	-	16.997	9.92	9.82	23.97	14.05	6.19	4.16	29.97	23.78
5220	-3.93	3.71	9.99	0.00	-3.7	-	16.973	9.77	9.48	23.97	14.20	6.04	4.02	29.97	23.93
5240	-3.67	3.71	9.99	0.00	-3.7	-	16.920	10.03	10.07	23.97	13.94	6.30	4.27	29.97	23.67
5260	-3.72	3.71	10.00	0.00	-3.7	19.576	16.954	9.99	9.98	23.91	13.92	6.26	4.23	29.97	23.71
5300	-3.68	3.72	10.00	0.00	-3.7	19.726	16.948	10.04	10.09	23.95	13.91	6.31	4.28	29.97	23.66
5320	-3.63	3.72	10.00	0.00	-3.7	19.786	16.929	10.09	10.21	23.96	13.87	6.36	4.33	29.97	23.61
5500	-3.64	3.86	10.01	0.00	-2.2	19.616	17.004	10.23	10.54	23.92	13.69	8.01	6.32	29.97	21.96
5580	-3.65	3.90	10.00	0.00	-2.2	19.448	17.006	10.25	10.59	23.88	13.63	8.03	6.35	29.97	21.94
5700	-3.82	3.95	9.99	0.00	-2.2	19.405	16.991	10.12	10.28	23.87	13.75	7.90	6.17	29.97	22.07
5745	-3.87	4.02	9.99	0.00	-2.2	-	-	10.14	10.33	30.00	19.86	7.92	6.19	36.00	28.08
5785	-3.77	4.04	9.99	0.00	-2.2	-	-	10.26	10.62	30.00	19.74	8.04	6.37	36.00	27.96
5825	-3.68	4.06	9.98	0.00	-2.2	-	-	10.36	10.86	30.00	19.64	8.14	6.52	36.00	27.86

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

5220 MHz

Mode	Rate	Reading (timed average)	Duty factor	Burst power	Remarks
	Mbps	[dBm]	[dB]	[dBm]	
11a	6	-4.13	0.00	-4.13	
	9	-4.15	0.00	-4.15	
	12	-4.14	0.00	-4.14	
	18	-4.23	0.00	-4.23	
	24	-4.15	0.00	-4.15	
	36	-4.13	0.00	-4.13	
	48	-3.98	0.00	-3.98	
	54	-3.93	0.00	-3.93	*

* 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.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 3, 2016
Temperature / Humidity	25 deg. C / 48 % RH
Engineer	Shinichi Takano
Mode	Tx 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	-3.77	3.70	9.99	0.00	-3.7	-	18.016	9.92	9.82	23.97	14.05	6.19	4.16	29.97	23.78
5220	-4.02	3.71	9.99	0.00	-3.7	-	18.164	9.68	9.29	23.97	14.29	5.95	3.94	29.97	24.02
5240	-3.82	3.71	9.99	0.00	-3.7	-	18.178	9.88	9.73	23.97	14.09	6.15	4.12	29.97	23.82
5260	-3.73	3.71	10.00	0.00	-3.7	20.158	18.078	9.98	9.95	23.97	13.99	6.25	4.22	29.97	23.72
5300	-3.60	3.72	10.00	0.00	-3.7	20.358	18.154	10.12	10.28	23.97	13.85	6.39	4.36	29.97	23.58
5320	-3.64	3.72	10.00	0.00	-3.7	20.089	18.107	10.08	10.19	23.97	13.89	6.35	4.32	29.97	23.62
5500	-3.69	3.86	10.01	0.00	-2.2	20.161	18.152	10.18	10.42	23.97	13.79	7.96	6.25	29.97	22.01
5580	-3.68	3.90	10.00	0.00	-2.2	20.323	18.189	10.22	10.52	23.97	13.75	8.00	6.31	29.97	21.97
5700	-3.84	3.95	9.99	0.00	-2.2	20.200	18.176	10.10	10.23	23.97	13.87	7.88	6.14	29.97	22.09
5745	-3.84	4.02	9.99	0.00	-2.2	-	-	10.17	10.40	30.00	19.83	7.95	6.24	36.00	28.05
5785	-3.75	4.04	9.99	0.00	-2.2	-	-	10.28	10.67	30.00	19.72	8.06	6.40	36.00	27.94
5825	-3.63	4.06	9.98	0.00	-2.2	-	-	10.41	10.99	30.00	19.59	8.19	6.59	36.00	27.81

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

5220 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n	0	-4.25	0.00	-4.25	
	1	-4.28	0.00	-4.28	
	2	-4.33	0.00	-4.33	
	3	-4.35	0.00	-4.35	
	4	-4.19	0.00	-4.19	
	5	-4.13	0.00	-4.13	
	6	-4.12	0.00	-4.12	
	7	-4.02	0.00	-4.02	*

* 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.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 3, 2016
Temperature / Humidity	25 deg. C / 48 % RH
Engineer	Shinichi Takano
Mode	Tx 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				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-3.95	3.70	9.99	0.00	-3.7	-	36.767	9.74	9.42	23.97	14.23	6.01	3.99	29.97	23.96
-															
5230	-4.06	3.71	9.99	0.00	-3.7	-	36.636	9.64	9.20	23.97	14.33	5.91	3.90	29.97	24.06
5270	-4.07	3.71	10.00	0.00	-3.7	40.748	36.604	9.64	9.20	23.97	14.33	5.91	3.90	29.97	24.06
-															
5310	-3.84	3.72	10.00	0.00	-3.7	41.019	36.702	9.88	9.73	23.97	14.09	6.15	4.12	29.97	23.82
5510	-3.68	3.86	10.01	0.00	-2.2	40.261	36.709	10.19	10.45	23.97	13.78	7.97	6.27	29.97	22.00
5550	-3.65	3.88	10.01	0.00	-2.2	40.523	36.703	10.24	10.57	23.97	13.73	8.02	6.34	29.97	21.95
5670	-3.75	3.94	10.00	0.00	-2.2	40.674	36.702	10.19	10.45	23.97	13.78	7.97	6.27	29.97	22.00
5755	-4.05	4.03	9.99	0.00	-2.2	-	-	9.97	9.93	30.00	20.03	7.75	5.96	36.00	28.25
-															
5795	-3.86	4.05	9.99	0.00	-2.2	-	-	10.18	10.42	30.00	19.82	7.96	6.25	36.00	28.04

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-40	0	-3.95	0.00	-3.95	*
	1	-4.04	0.00	-4.04	
	2	-4.11	0.00	-4.11	
	3	-4.09	0.00	-4.09	
	4	-4.03	0.00	-4.03	
	5	-4.08	0.00	-4.08	
	6	-4.00	0.00	-4.00	
	7	-4.04	0.00	-4.04	

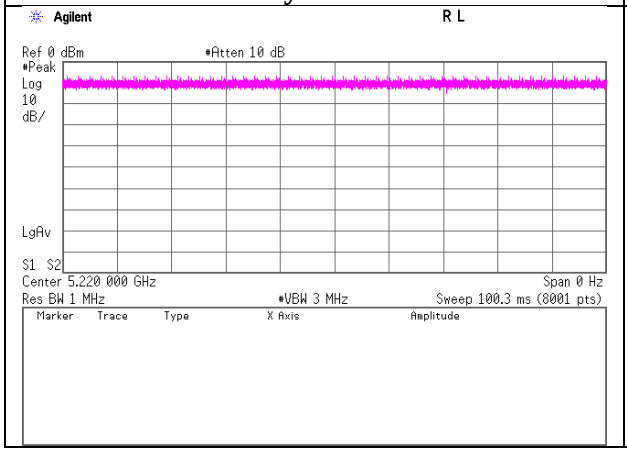
* Worst rate
Sample Calculation:
Burst power = Reading (timed average) + Duty factor
All comparison were carried out on same frequency and measurement factors.

Burst rate confirmation

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 3, 2016
Temperature / Humidity	25 deg. C / 48 % RH
Engineer	Shinichi Takano
Mode	Tx

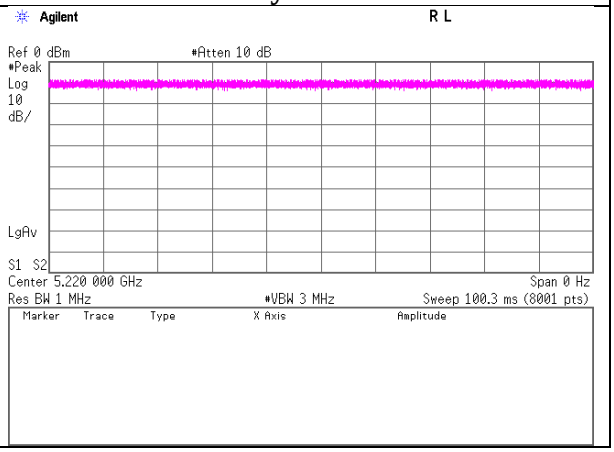
11a 54 Mbps

Duty 100 %



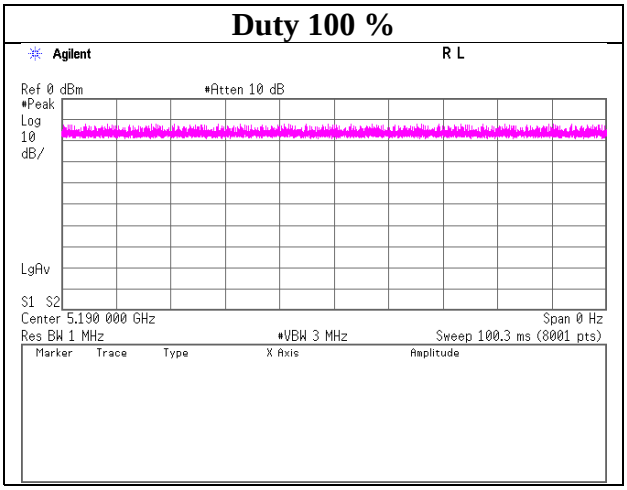
11n-20 MCS7

Duty 100 %



11n-40 MCS 0

Duty 100 %



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
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	-14.75	3.70	9.99	0.00	-3.7	0.00	-1.06	11.00	12.06	-4.79	17.00	21.79
5220	-14.30	3.71	9.99	0.00	-3.7	0.00	-0.60	11.00	11.60	-4.33	17.00	21.33
5240	-14.89	3.71	9.99	0.00	-3.7	0.00	-1.19	11.00	12.19	-4.92	17.00	21.92
5260	-14.77	3.71	10.00	0.00	-3.7	0.00	-1.06	11.00	12.06	-4.79	17.00	21.79
5300	-14.97	3.72	10.00	0.00	-3.7	0.00	-1.25	11.00	12.25	-4.98	17.00	21.98
5320	-14.94	3.72	10.00	0.00	-3.7	0.00	-1.22	11.00	12.22	-4.95	17.00	21.95
5500	-13.96	3.86	10.01	0.00	-2.2	0.00	-0.09	11.00	11.09	-2.31	17.00	19.31
5580	-13.45	3.90	10.00	0.00	-2.2	0.00	0.45	11.00	10.55	-1.77	17.00	18.77
5700	-14.33	3.95	9.99	0.00	-2.2	0.00	-0.39	11.00	11.39	-2.61	17.00	19.61
5745	-23.25	4.02	9.99	0.00	-2.2	6.99	-2.25	30.00	32.25	-4.47	36.00	40.47
5785	-22.46	4.04	9.99	0.00	-2.2	6.99	-1.44	30.00	31.44	-3.66	36.00	39.66
5825	-23.35	4.06	9.98	0.00	-2.2	6.99	-2.32	30.00	32.32	-4.54	36.00	40.54

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.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
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	-14.85	3.70	9.99	0.00	-3.7	0.00	-1.16	11.00	12.16	-4.89	17.00	21.89
5220	-14.93	3.71	9.99	0.00	-3.7	0.00	-1.23	11.00	12.23	-4.96	17.00	21.96
5240	-14.91	3.71	9.99	0.00	-3.7	0.00	-1.21	11.00	12.21	-4.94	17.00	21.94
5260	-14.93	3.71	10.00	0.00	-3.7	0.00	-1.22	11.00	12.22	-4.95	17.00	21.95
5300	-14.87	3.72	10.00	0.00	-3.7	0.00	-1.15	11.00	12.15	-4.88	17.00	21.88
5320	-14.84	3.72	10.00	0.00	-3.7	0.00	-1.12	11.00	12.12	-4.85	17.00	21.85
5500	-14.63	3.86	10.01	0.00	-2.2	0.00	-0.76	11.00	11.76	-2.98	17.00	19.98
5580	-14.22	3.90	10.00	0.00	-2.2	0.00	-0.32	11.00	11.32	-2.54	17.00	19.54
5700	-14.38	3.95	9.99	0.00	-2.2	0.00	-0.44	11.00	11.44	-2.66	17.00	19.66
5745	-23.53	4.02	9.99	0.00	-2.2	6.99	-2.53	30.00	32.53	-4.75	36.00	40.75
5785	-23.37	4.04	9.99	0.00	-2.2	6.99	-2.35	30.00	32.35	-4.57	36.00	40.57
5825	-23.79	4.06	9.98	0.00	-2.2	6.99	-2.76	30.00	32.76	-4.98	36.00	40.98

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.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
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	-18.31	3.70	9.99	0.00	-3.7	0.00	-4.62	11.00	15.62	-8.35	17.00	25.35
-												
5230	-18.52	3.71	9.99	0.00	-3.7	0.00	-4.82	11.00	15.82	-8.55	17.00	25.55
5270	-18.24	3.71	10.00	0.00	-3.7	0.00	-4.53	11.00	15.53	-8.26	17.00	25.26
-												
5310	-18.45	3.72	10.00	0.00	-3.7	0.00	-4.73	11.00	15.73	-8.46	17.00	25.46
5510	-17.72	3.86	10.01	0.00	-2.2	0.00	-3.85	11.00	14.85	-6.07	17.00	23.07
5550	-17.81	3.88	10.01	0.00	-2.2	0.00	-3.92	11.00	14.92	-6.14	17.00	23.14
5670	-17.70	3.94	10.00	0.00	-2.2	0.00	-3.76	11.00	14.76	-5.98	17.00	22.98
5755	-27.48	4.03	9.99	0.00	-2.2	6.99	-6.47	30.00	36.47	-8.69	36.00	44.69
-												
5795	-27.44	4.05	9.99	0.00	-2.2	6.99	-6.41	30.00	36.41	-8.63	36.00	44.63

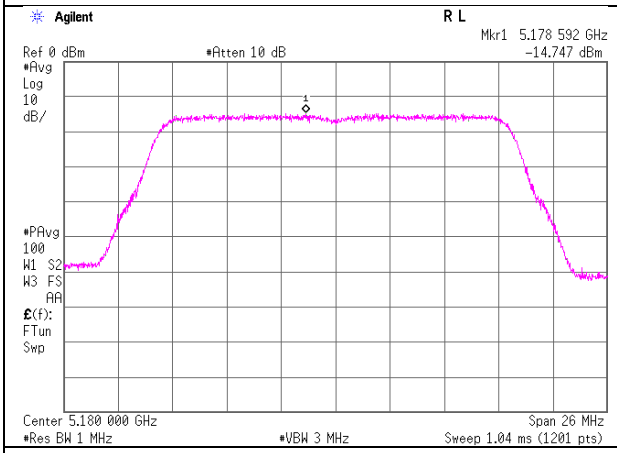
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty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

Maximum Power Spectral Density

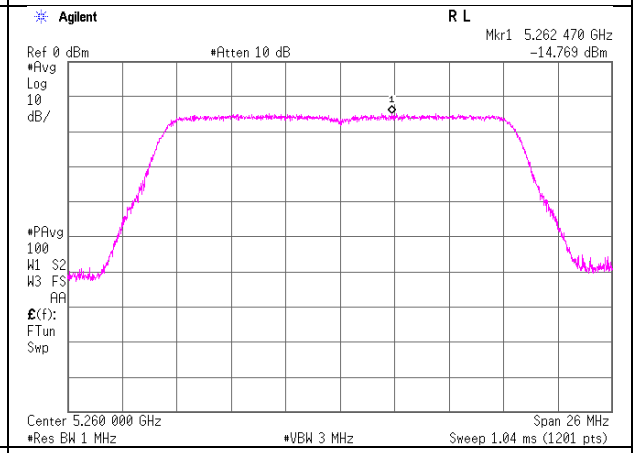
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11a

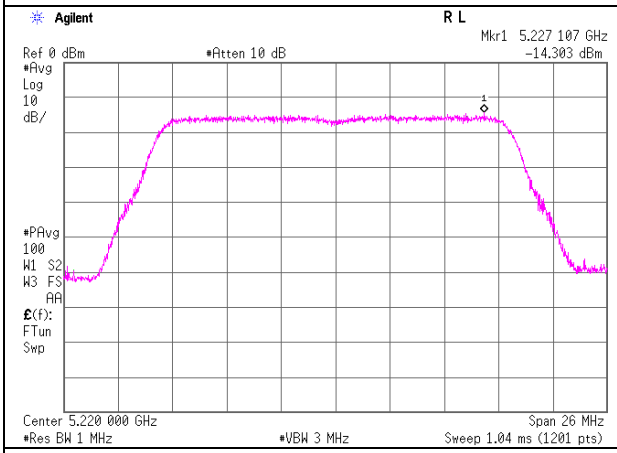
5180 MHz



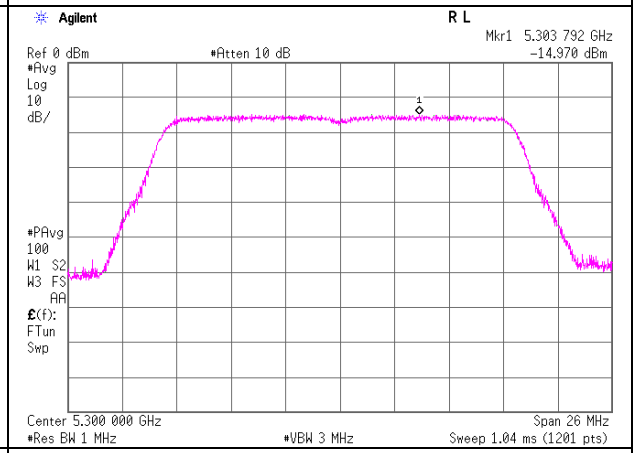
5260 MHz



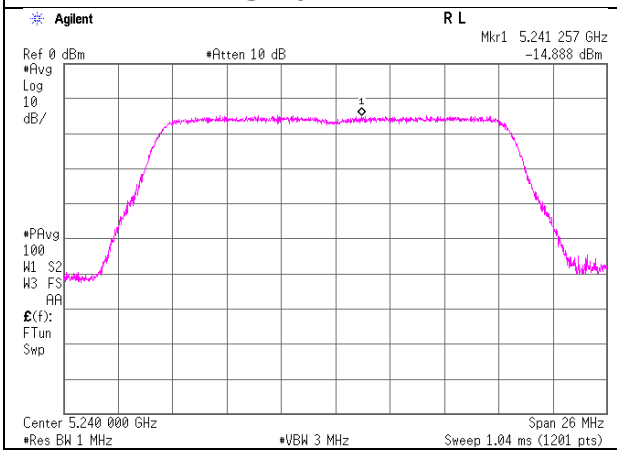
5220 MHz



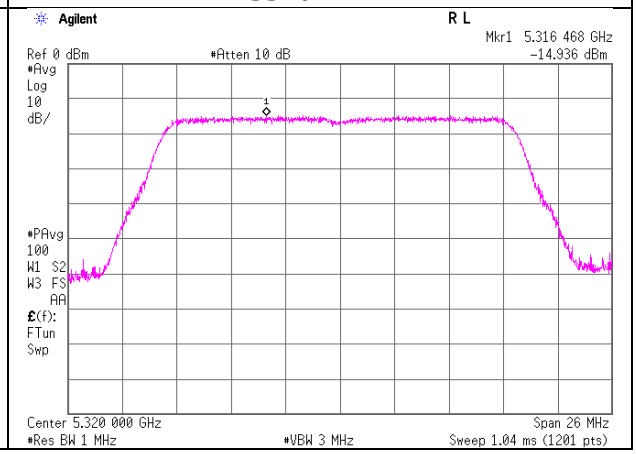
5300 MHz



5240 MHz



5320 MHz

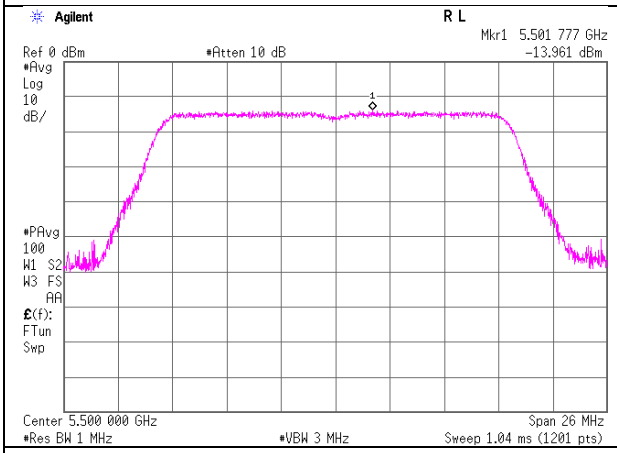


Maximum Power Spectral Density

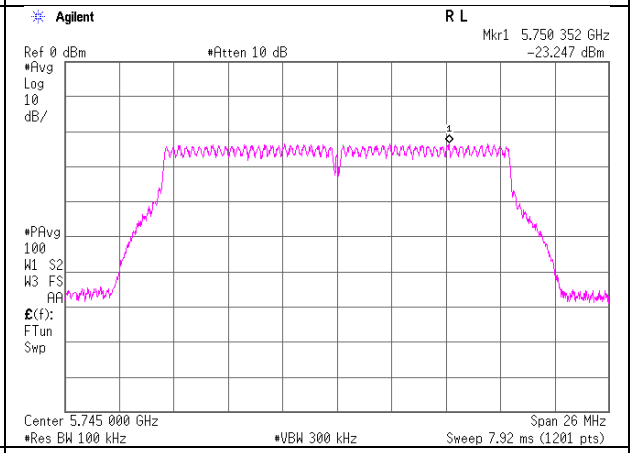
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11a

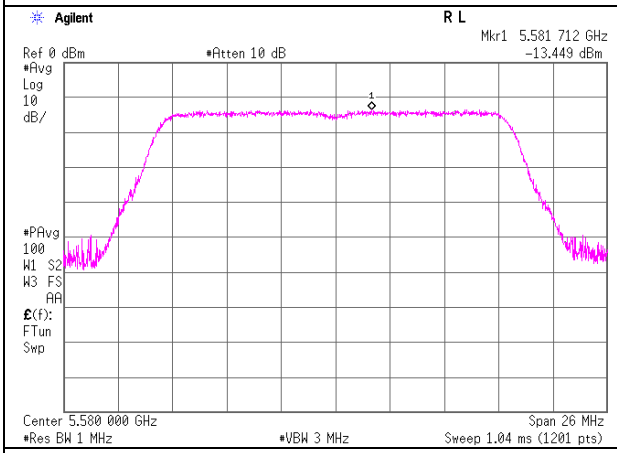
5500 MHz



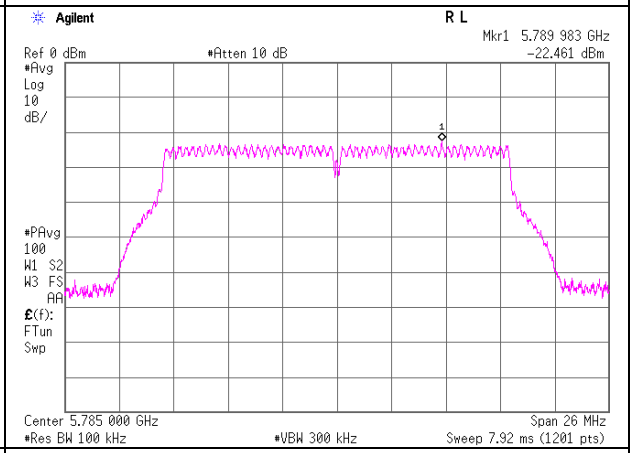
5745 MHz



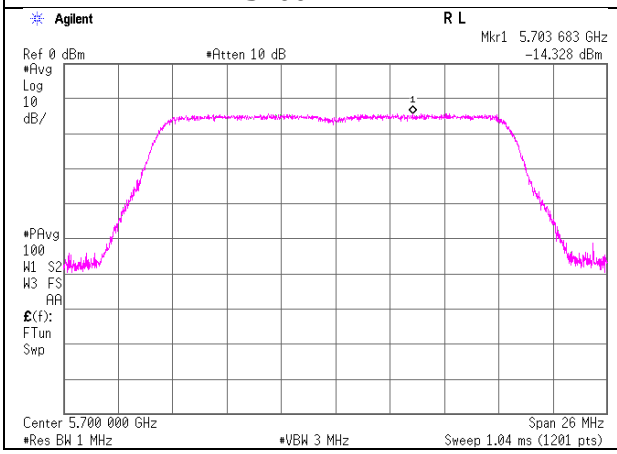
5580 MHz



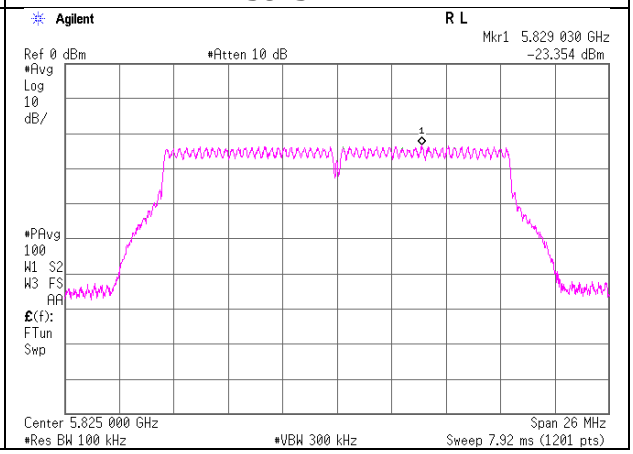
5785 MHz



5700 MHz



5825 MHz

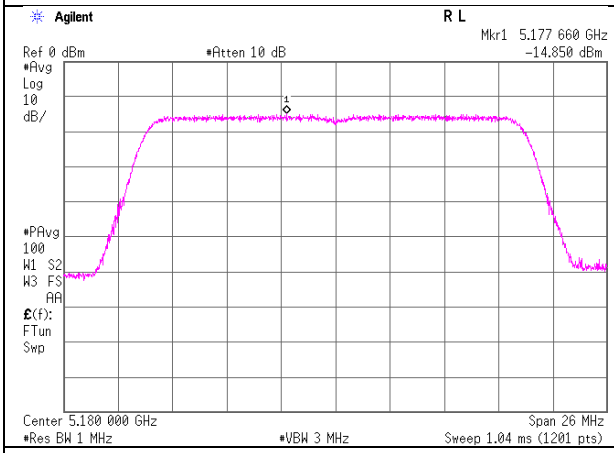


Maximum Power Spectral Density

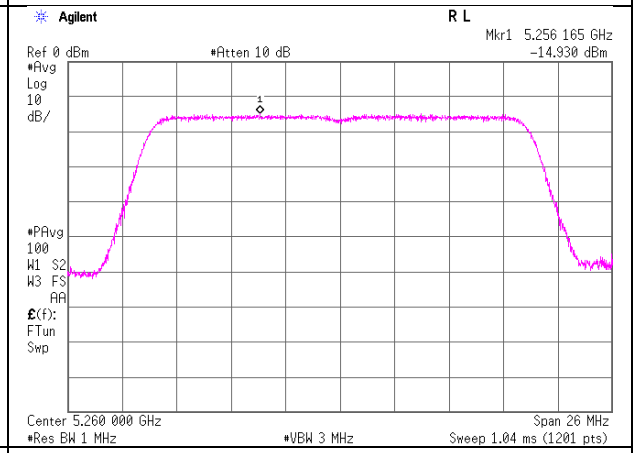
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11n-20

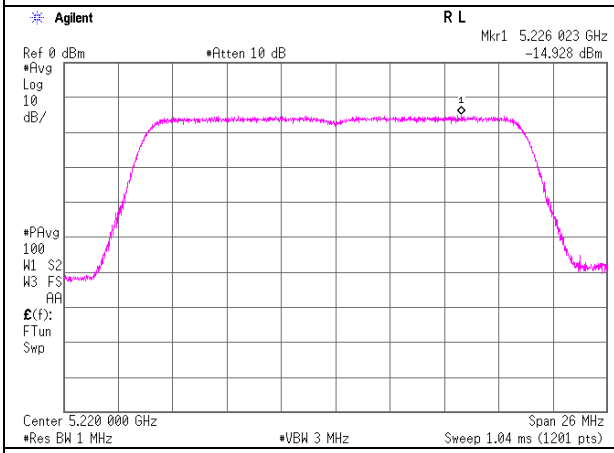
5180 MHz



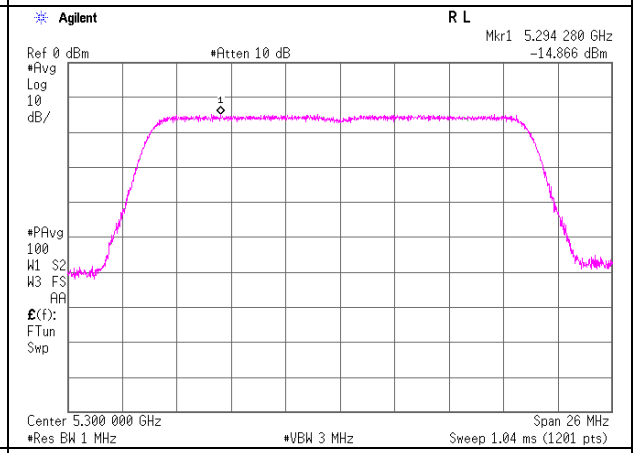
5260 MHz



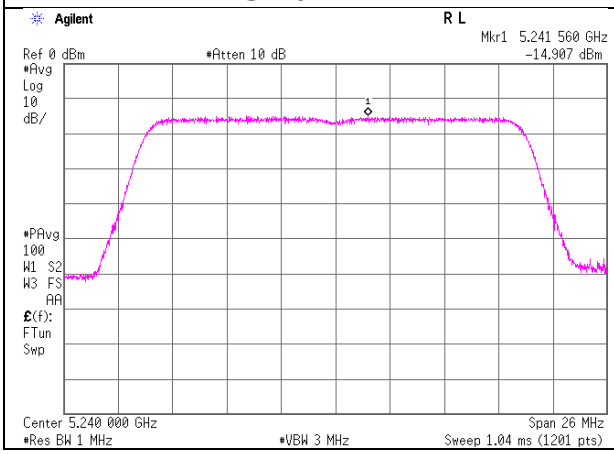
5220 MHz



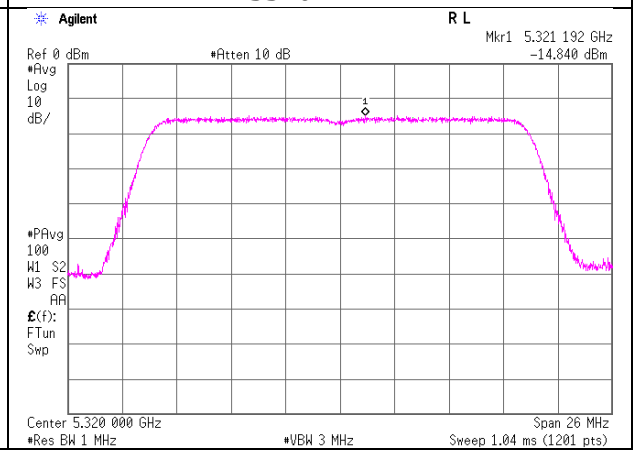
5300 MHz



5240 MHz



5320 MHz

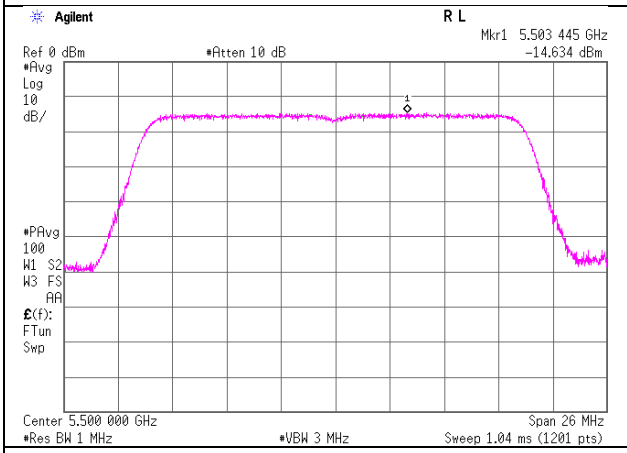


Maximum Power Spectral Density

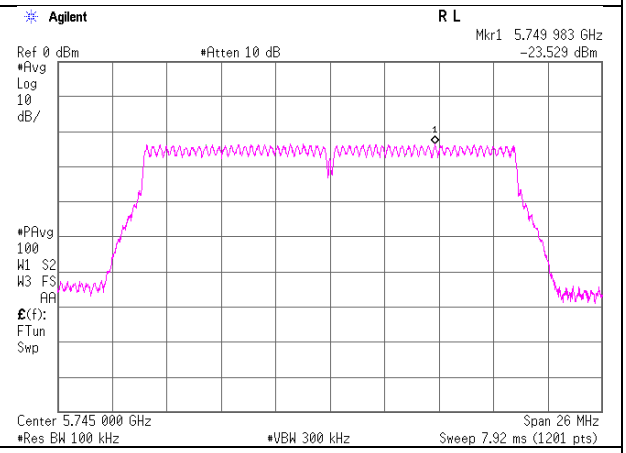
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11n-20

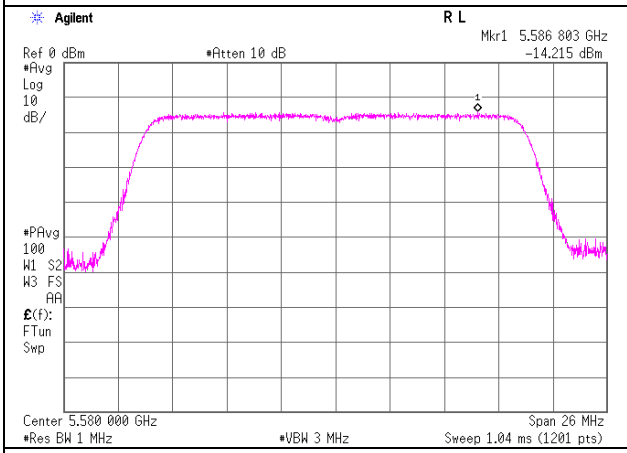
5500 MHz



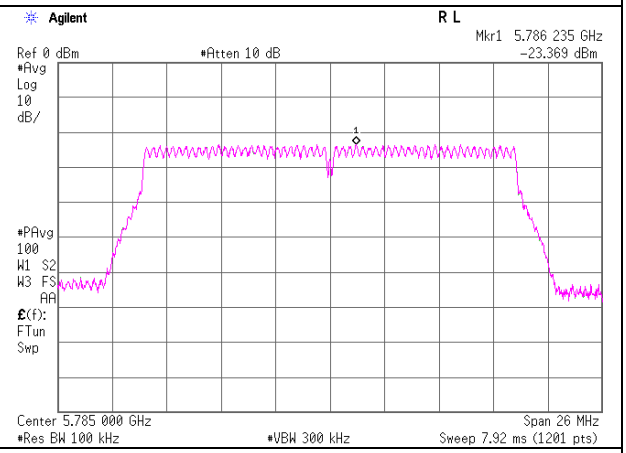
5745 MHz



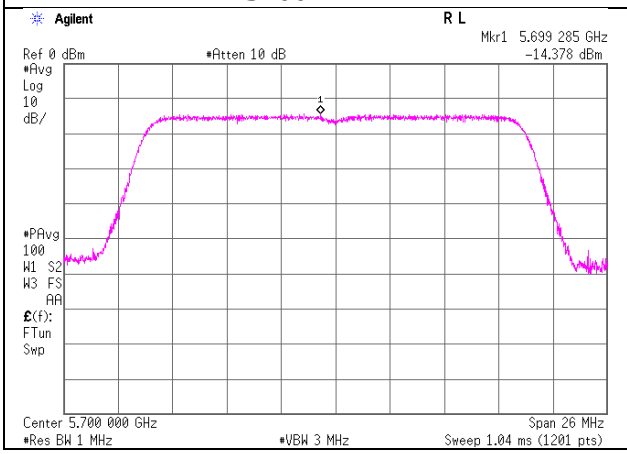
5580 MHz



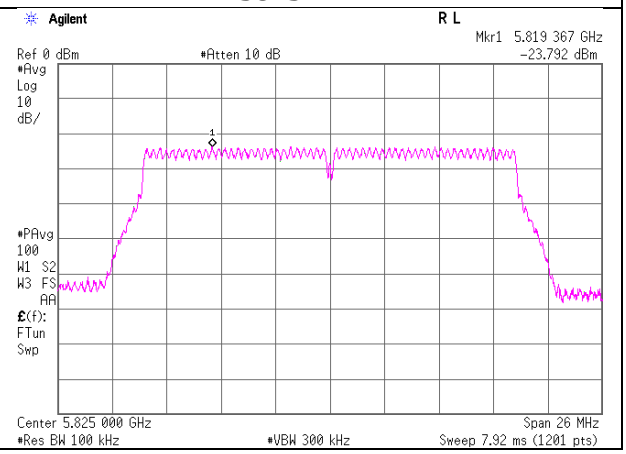
5785 MHz



5700 MHz



5825 MHz

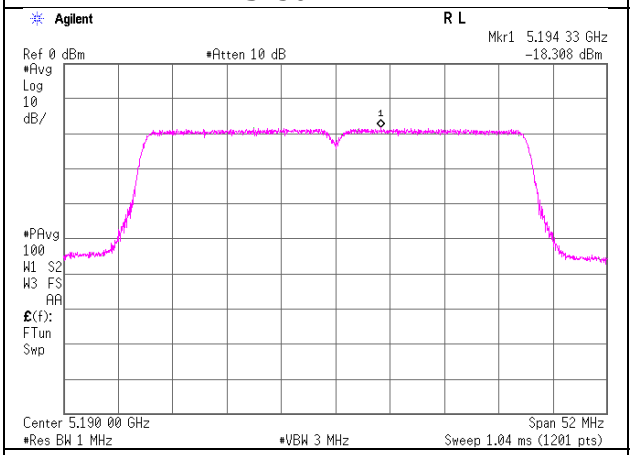


Maximum Power Spectral Density

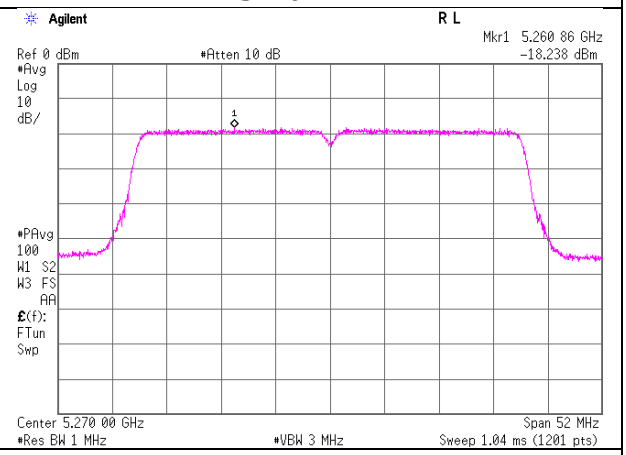
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11n-40

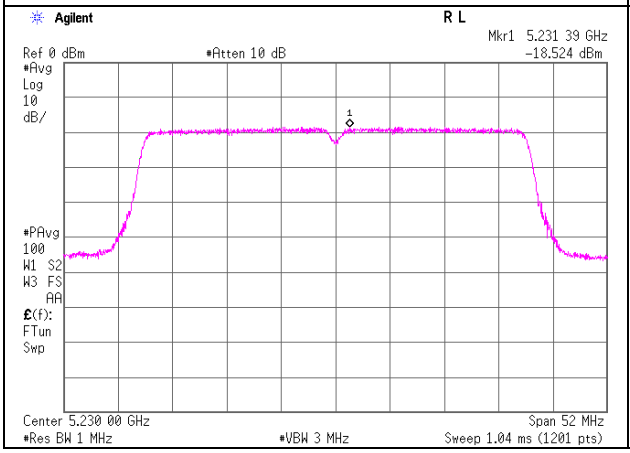
5190 MHz



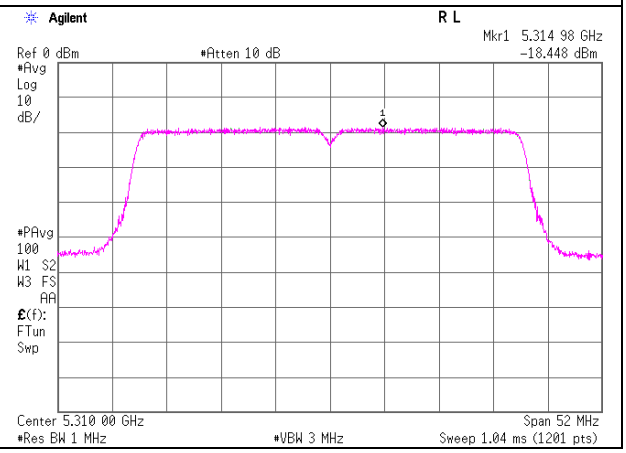
5270 MHz



5230 MHz



5310 MHz

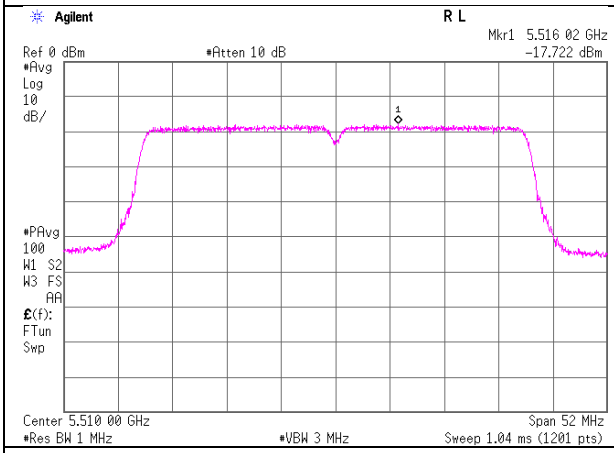


Maximum Power Spectral Density

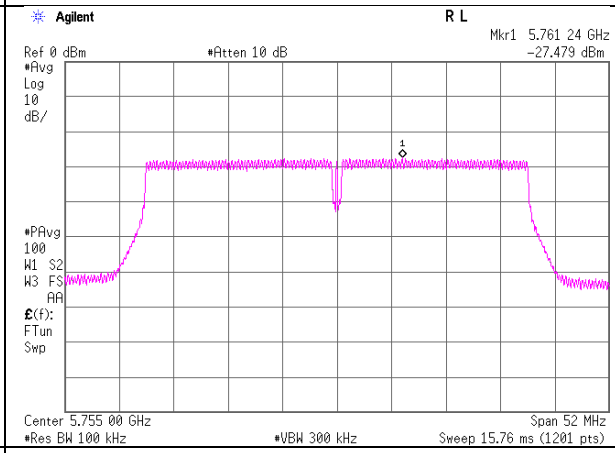
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx

11n-40

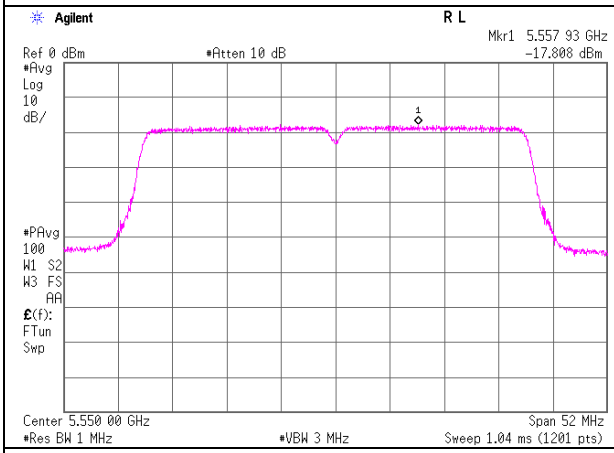
5510 MHz



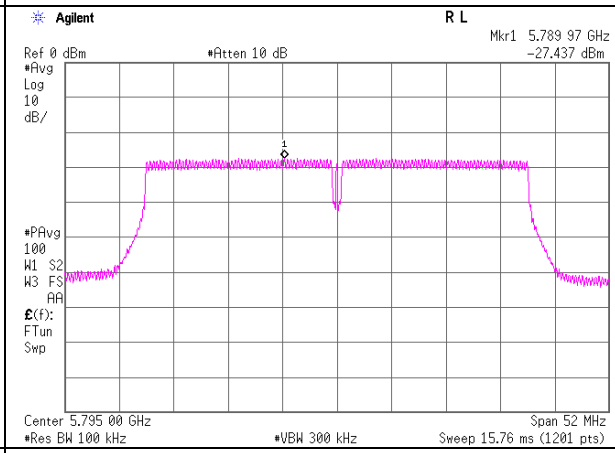
5755 MHz



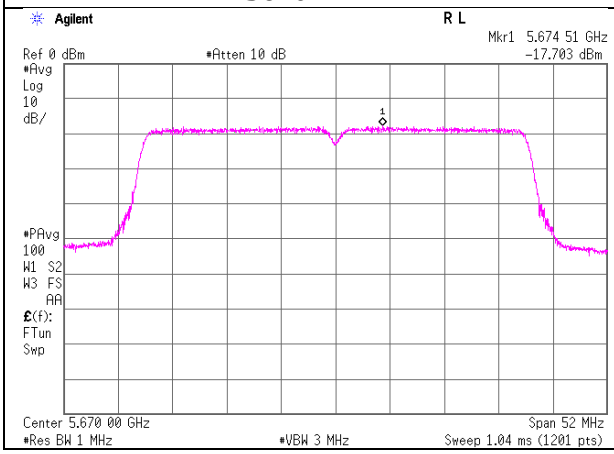
5550 MHz



5795 MHz



5670 MHz



Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
	(1 GHz-6.4 GHz)
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	43.24	32.17	15.67	37.26	2.48	56.30	73.90	17.6	227	113	
Hori.	5150.000	AV	31.96	32.17	15.67	37.26	2.48	45.02	53.90	**8.8**	227	113	VBW:10Hz
Vert.	5150.000	PK	43.94	32.17	15.67	37.26	2.48	57.00	73.90	16.9	228	65	
Vert.	5150.000	AV	31.94	32.17	15.67	37.26	2.48	45.00	53.90	8.9	228	65	VBW:10Hz

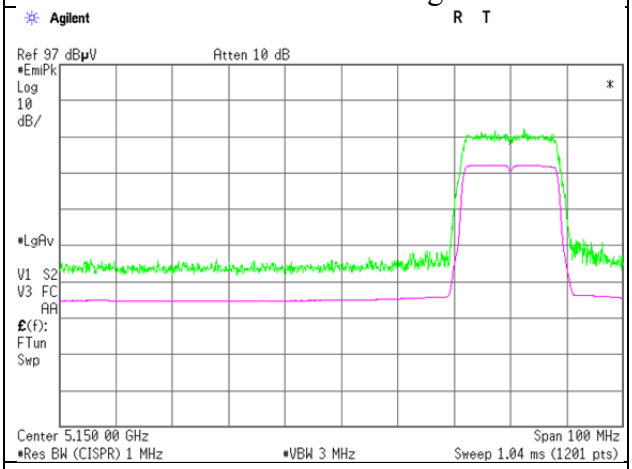
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.99 m / 3.0 m) = 2.48 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11a 5180 MHz

Horizontal

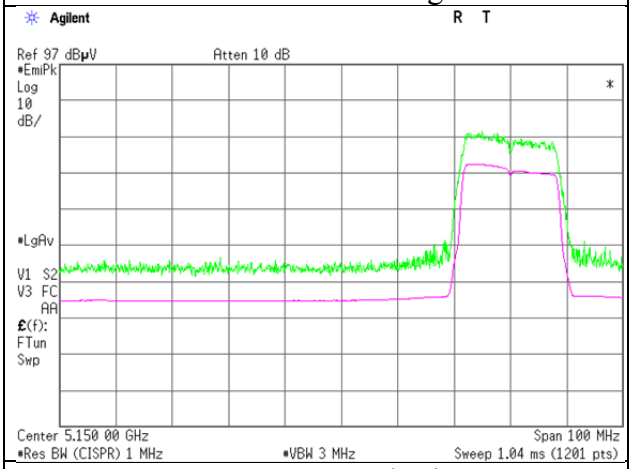
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano (1 GHz-6.4 GHz)
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	43.30	32.19	15.89	37.32	2.48	56.54	73.90	17.3	329	117	
Hori.	5350.000	AV	31.95	32.19	15.89	37.32	2.48	45.19	53.90	8.7	329	117	VBW:10Hz
Vert.	5350.000	PK	43.48	32.19	15.89	37.32	2.48	56.72	73.90	17.1	142	38	
Vert.	5350.000	AV	31.99	32.19	15.89	37.32	2.48	45.23	53.90	**8.6**	142	38	VBW:10Hz

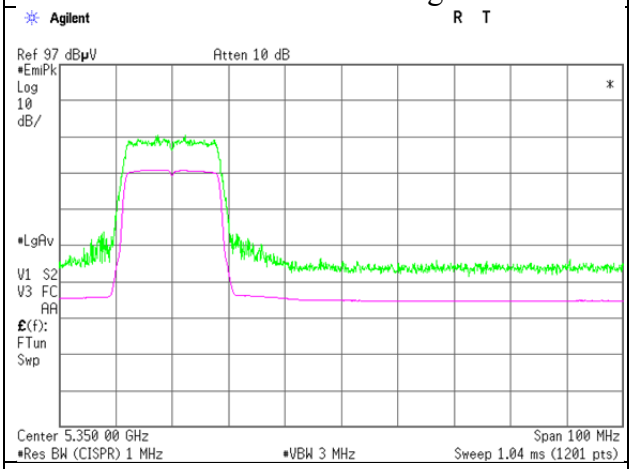
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.99 m / 3.0 m) = 2.48 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11a 5320 MHz

Horizontal

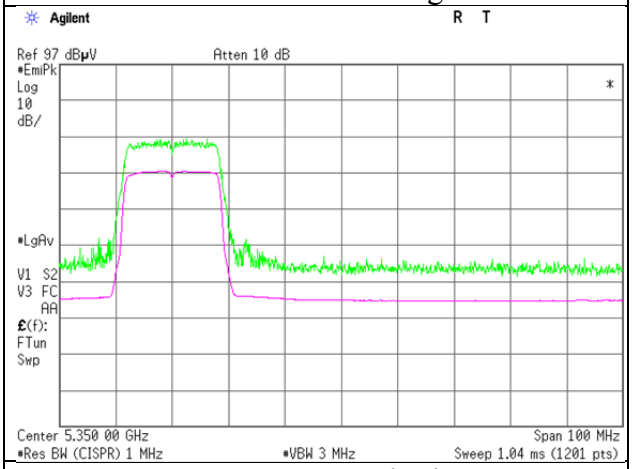
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
	(1 GHz-6.4 GHz)
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	43.21	32.21	16.00	37.35	2.48	56.55	73.90	17.3	252	118	
Hori.	5460.000	AV	31.90	32.21	16.00	37.35	2.48	45.24	53.90	**8.6**	252	118	VBW:10Hz
Vert.	5460.000	PK	43.16	32.21	16.00	37.35	2.48	56.50	73.90	17.4	112	359	
Vert.	5460.000	AV	31.88	32.21	16.00	37.35	2.48	45.22	53.90	**8.6**	112	359	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	43.36	32.21	16.01	37.35	2.48	56.71	-38.49	-27.00	11.5	252	118	
Vert.	5470.000	PK	43.58	32.21	16.01	37.35	2.48	56.93	-38.27	-27.00	**11.3**	112	359	

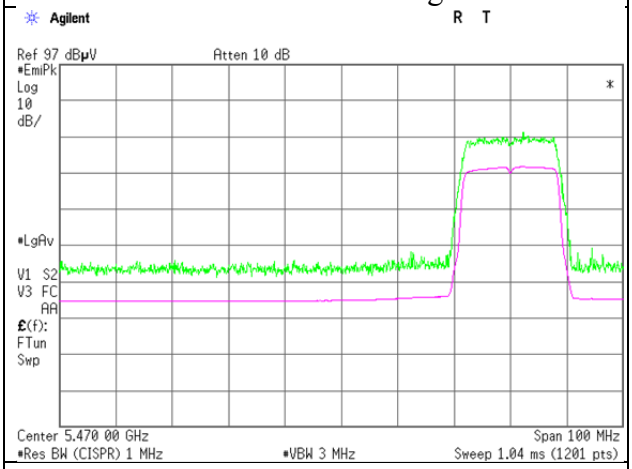
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11a 5500 MHz

Horizontal

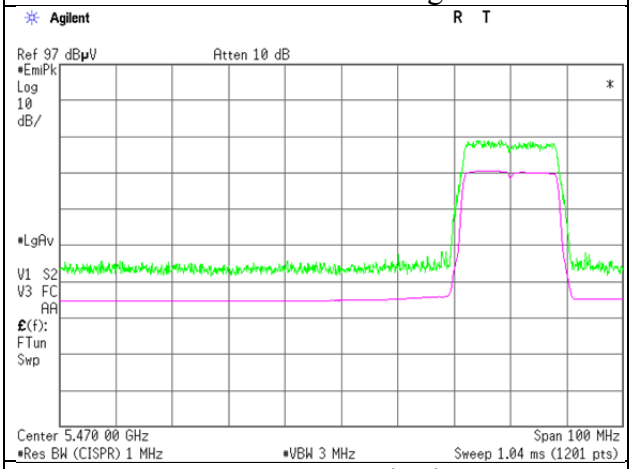
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
	(1 GHz-6.4 GHz)
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	44.36	32.62	16.18	37.47	2.48	58.17	-37.03	-27.00	10.0	239	121	
Vert.	5725.000	PK	45.32	32.62	16.18	37.47	2.48	59.13	-36.07	-27.00	**9.1**	109	313	

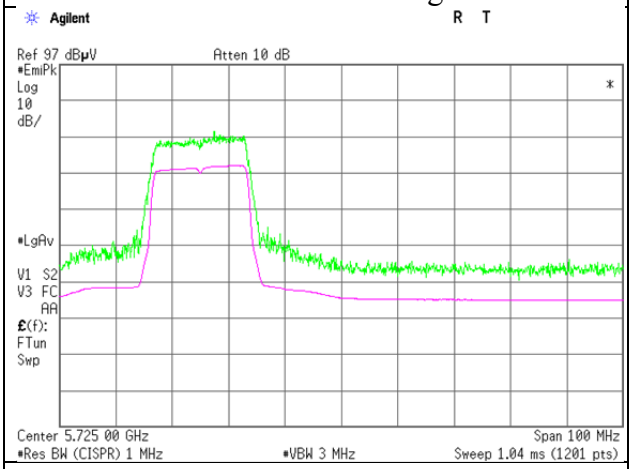
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11a 5700 MHz

Horizontal

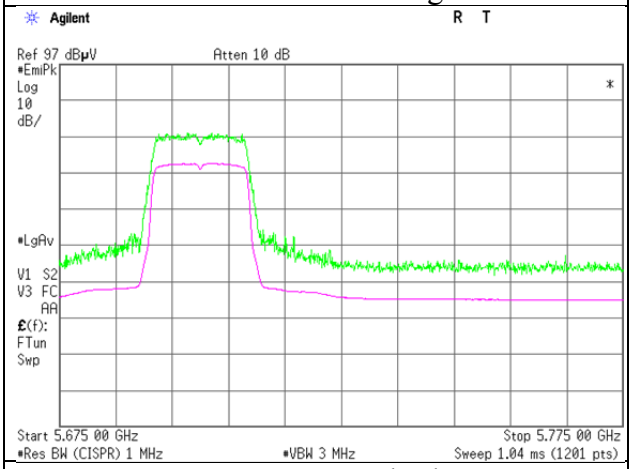
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
	(1 GHz-6.4 GHz)
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	44.72	32.49	16.14	37.44	2.48	58.39	-36.81	-27.00	**9.8**	269	121	
Hori.	5700.000	PK	45.01	32.58	16.17	37.46	2.48	58.78	-36.42	10.00	46.4	269	121	
Hori.	5720.000	PK	46.99	32.61	16.18	37.47	2.48	60.79	-34.41	15.60	50.0	269	121	
Hori.	5725.000	PK	49.51	32.62	16.18	37.47	2.48	63.32	-31.88	27.00	58.9	269	121	
Vert.	5650.000	PK	44.39	32.49	16.14	37.44	2.48	58.06	-37.14	-27.00	10.1	114	311	
Vert.	5700.000	PK	45.25	32.58	16.17	37.46	2.48	59.02	-36.18	10.00	46.2	114	311	
Vert.	5720.000	PK	45.67	32.61	16.18	37.47	2.48	59.47	-35.73	15.60	51.3	114	311	
Vert.	5725.000	PK	49.24	32.62	16.18	37.47	2.48	63.05	-32.15	27.00	59.2	114	311	

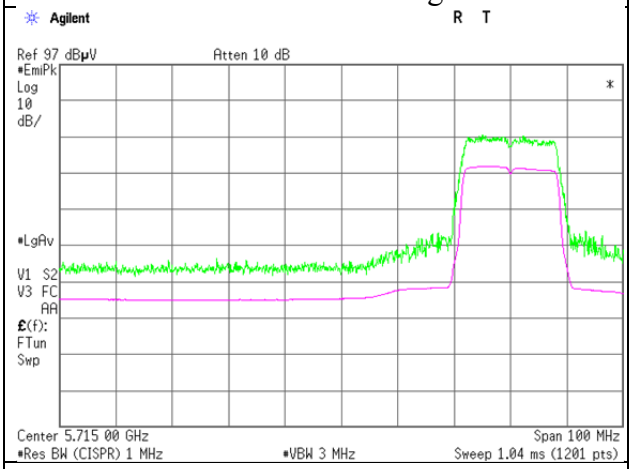
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11a 5745 MHz

Horizontal

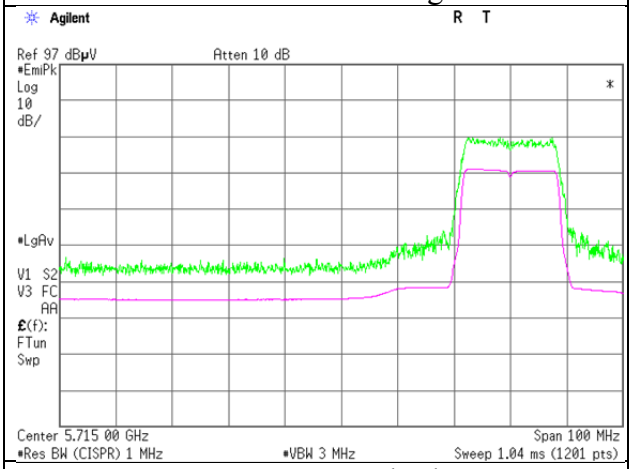
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
	(1 GHz-6.4 GHz)
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	46.14	32.85	16.26	37.54	2.48	60.19	-35.01	27.00	62.0	229	121	
Hori.	5855.000	PK	44.27	32.86	16.26	37.54	2.48	58.33	-36.87	15.60	52.5	229	121	
Hori.	5875.000	PK	44.20	32.90	16.28	37.55	2.48	58.31	-36.89	10.00	46.9	229	121	
Hori.	5925.000	PK	44.69	32.99	16.32	37.57	2.48	58.91	-36.29	-27.00	**9.3**	229	121	
Vert.	5850.000	PK	44.26	32.85	16.26	37.54	2.48	58.31	-36.89	27.00	63.9	116	297	
Vert.	5855.000	PK	43.66	32.86	16.26	37.54	2.48	57.72	-37.48	15.60	53.1	116	297	
Vert.	5875.000	PK	43.72	32.90	16.28	37.55	2.48	57.83	-37.37	10.00	47.4	116	297	
Vert.	5925.000	PK	43.35	32.99	16.32	37.57	2.48	57.57	-37.63	-27.00	10.6	116	297	

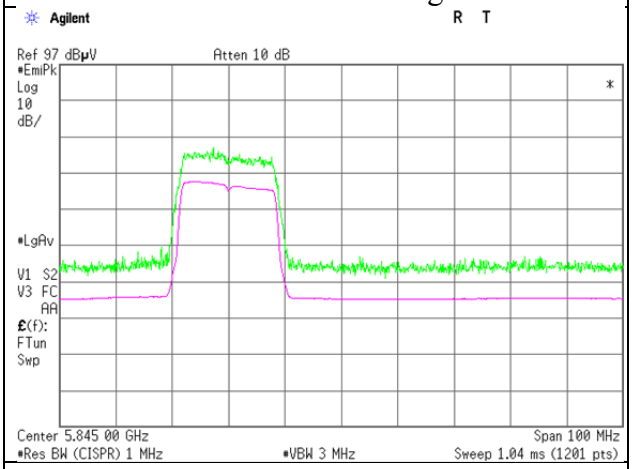
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11a 5825 MHz

Horizontal

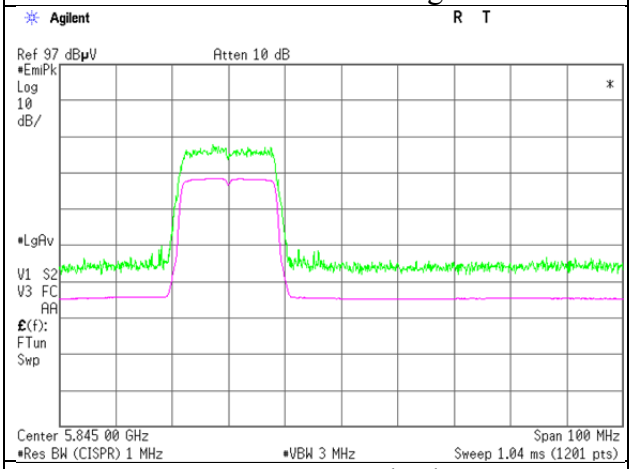
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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	43.52	32.17	15.67	37.26	2.48	56.58	73.90	17.3	340	112	
Hori.	6906.612	PK	48.42	36.48	7.19	40.88	2.48	53.69	73.90	20.2	151	86	
Hori.	10360.000	PK	46.15	39.52	8.21	40.37	2.48	55.99	73.90	17.9	150	0	
Hori.	15540.000	PK	46.98	40.23	10.56	38.70	-9.54	49.53	73.90	24.3	146	172	
Hori.	5150.000	AV	32.00	32.17	15.67	37.26	2.48	45.06	53.90	**8.8**	340	112	VBW:10Hz
Hori.	6906.612	AV	37.17	36.48	7.19	40.88	2.48	42.44	53.90	11.4	151	86	VBW:10Hz
Hori.	10360.000	AV	34.15	39.52	8.21	40.37	2.48	43.99	53.90	9.9	150	0	VBW:10Hz
Hori.	15540.000	AV	35.96	40.23	10.56	38.70	-9.54	38.51	53.90	15.3	146	172	VBW:10Hz
Vert.	5150.000	PK	43.35	32.17	15.67	37.26	2.48	56.41	73.90	17.4	300	64	
Vert.	6906.582	PK	49.08	36.48	7.19	40.88	2.48	54.35	73.90	19.5	143	82	
Vert.	10360.000	PK	46.15	39.52	8.21	40.37	2.48	55.99	73.90	17.9	150	0	
Vert.	15540.000	PK	47.80	40.23	10.56	38.70	-9.54	50.35	73.90	23.5	146	248	
Vert.	5150.000	AV	31.97	32.17	15.67	37.26	2.48	45.03	53.90	**8.8**	300	64	VBW:10Hz
Vert.	6906.582	AV	37.17	36.48	7.19	40.88	2.48	42.44	53.90	11.4	143	82	VBW:10Hz
Vert.	10360.000	AV	34.67	39.52	8.21	40.37	2.48	44.51	53.90	9.3	150	0	VBW:10Hz
Vert.	15540.000	AV	35.63	40.23	10.56	38.70	-9.54	38.18	53.90	15.7	146	248	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

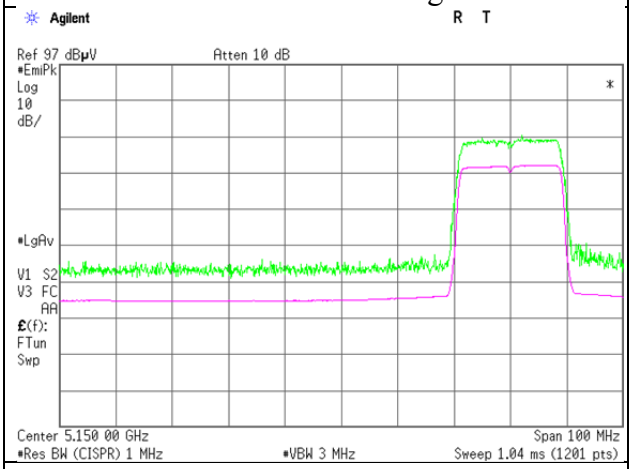
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-20 5180 MHz

Horizontal

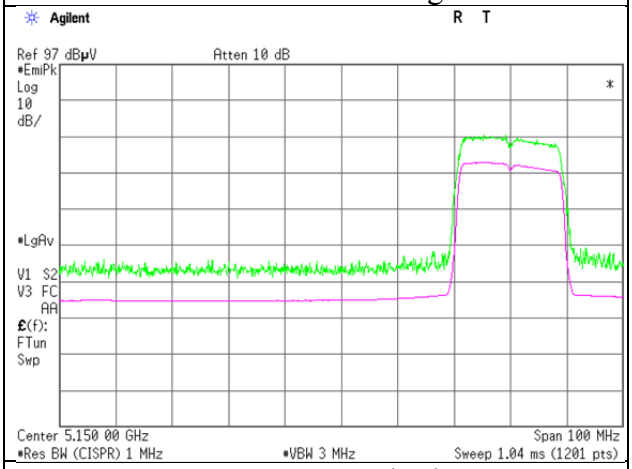
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 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.	6986.637	PK	47.81	36.78	7.21	40.91	2.48	53.37	73.90	20.5	120	93	
Hori.	10480.000	PK	45.67	39.88	8.19	40.40	2.48	55.82	73.90	18.0	150	0	
Hori.	15720.000	PK	47.62	39.74	10.61	38.60	-9.54	49.83	73.90	24.0	145	173	
Hori.	6986.637	AV	36.66	36.78	7.21	40.91	2.48	42.22	53.90	11.6	120	93	VBW:10Hz
Hori.	10480.000	AV	33.89	39.88	8.19	40.40	2.48	44.04	53.90	9.8	150	0	VBW:10Hz
Hori.	15720.000	AV	36.52	39.74	10.61	38.60	-9.54	38.73	53.90	15.1	145	173	VBW:10Hz
Vert.	6986.688	PK	48.21	36.78	7.21	40.91	2.48	53.77	73.90	20.1	125	84	
Vert.	10480.000	PK	46.07	39.88	8.19	40.40	2.48	56.22	73.90	17.6	150	0	
Vert.	15720.000	PK	47.57	39.74	10.61	38.60	-9.54	49.78	73.90	24.1	146	239	
Vert.	6986.688	AV	36.98	36.78	7.21	40.91	2.48	42.54	53.90	11.3	125	84	VBW:10Hz
Vert.	10480.000	AV	34.03	39.88	8.19	40.40	2.48	44.18	53.90	**9.7**	150	0	VBW:10Hz
Vert.	15720.000	AV	36.22	39.74	10.61	38.60	-9.54	38.43	53.90	15.4	146	239	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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	44.12	32.19	15.89	37.32	2.48	57.36	73.90	16.5	282	114	
Hori.	7093.341	PK	49.50	36.86	7.23	41.01	2.48	55.06	73.90	18.8	250	209	
Hori.	10640.000	PK	45.74	40.04	8.34	40.50	2.48	56.10	73.90	17.8	258	134	
Hori.	15960.000	PK	46.91	39.09	10.67	38.47	-9.54	48.66	73.90	25.2	144	179	
Hori.	5350.000	AV	32.11	32.19	15.89	37.32	2.48	45.35	53.90	**8.5**	282	114	VBW:10Hz
Hori.	7093.341	AV	37.33	36.86	7.23	41.01	2.48	42.89	53.90	11.0	250	209	VBW:10Hz
Hori.	10640.000	AV	32.71	40.04	8.34	40.50	2.48	43.07	53.90	10.8	258	134	VBW:10Hz
Hori.	15960.000	AV	35.70	39.09	10.67	38.47	-9.54	37.45	53.90	16.4	144	179	VBW:10Hz
Vert.	5350.000	PK	43.73	32.19	15.89	37.32	2.48	56.97	73.90	16.9	141	37	
Vert.	7093.409	PK	48.17	36.86	7.23	41.01	2.48	53.73	73.90	20.1	150	107	
Vert.	10640.000	PK	45.44	40.04	8.34	40.50	2.48	55.80	73.90	18.1	150	0	
Vert.	15960.000	PK	46.76	39.09	10.67	38.47	-9.54	48.51	73.90	25.3	144	245	
Vert.	5350.000	AV	32.06	32.19	15.89	37.32	2.48	45.30	53.90	8.6	141	37	VBW:10Hz
Vert.	7093.409	AV	37.05	36.86	7.23	41.01	2.48	42.61	53.90	11.2	150	107	VBW:10Hz
Vert.	10640.000	AV	32.90	40.04	8.34	40.50	2.48	43.26	53.90	10.6	150	0	VBW:10Hz
Vert.	15960.000	AV	35.51	39.09	10.67	38.47	-9.54	37.26	53.90	16.6	144	245	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

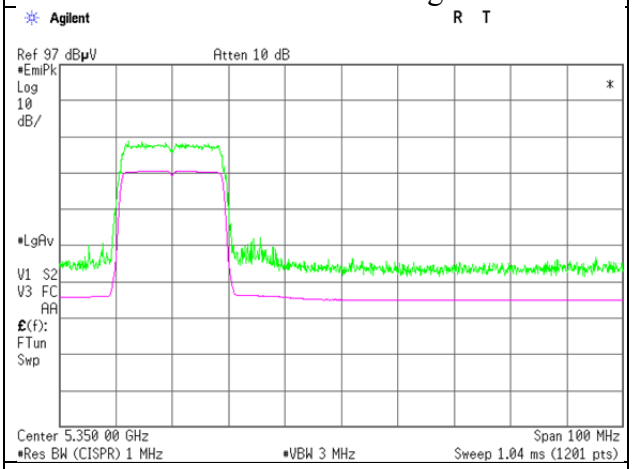
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-20 5320 MHz

Horizontal

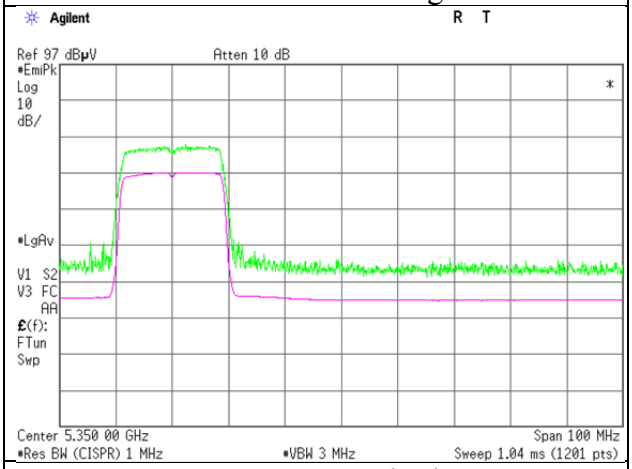
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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	43.65	32.21	16.00	37.35	2.48	56.99	73.90	16.9	241	118	
Hori.	7333.299	PK	47.18	36.92	7.26	41.26	2.48	52.58	73.90	21.3	146	211	
Hori.	11000.000	PK	47.98	40.29	8.72	40.74	2.48	58.73	73.90	15.1	105	229	
Hori.	16500.000	PK	51.65	40.66	10.93	38.30	-9.54	55.40	73.90	18.5	133	175	
Hori.	5460.000	AV	32.07	32.21	16.00	37.35	2.48	45.41	53.90	8.4	241	118	VBW:10Hz
Hori.	7333.299	AV	35.56	36.92	7.26	41.26	2.48	40.96	53.90	12.9	146	211	VBW:10Hz
Hori.	11000.000	AV	35.83	40.29	8.72	40.74	2.48	46.58	53.90	**7.3**	105	229	VBW:10Hz
Hori.	16500.000	AV	36.40	40.66	10.93	38.30	-9.54	40.15	53.90	13.7	133	175	VBW:10Hz
Vert.	5460.000	PK	43.59	32.21	16.00	37.35	2.48	56.93	73.90	16.9	137	359	
Vert.	7333.359	PK	46.98	36.92	7.26	41.26	2.48	52.38	73.90	21.5	138	107	
Vert.	11000.000	PK	47.70	40.29	8.72	40.74	2.48	58.45	73.90	15.4	349	317	
Vert.	16500.000	PK	49.91	40.66	10.93	38.30	-9.54	53.66	73.90	20.2	141	236	
Vert.	5460.000	AV	32.11	32.21	16.00	37.35	2.48	45.45	53.90	8.4	137	359	VBW:10Hz
Vert.	7333.359	AV	35.27	36.92	7.26	41.26	2.48	40.67	53.90	13.2	138	107	VBW:10Hz
Vert.	11000.000	AV	35.23	40.29	8.72	40.74	2.48	45.98	53.90	7.9	349	317	VBW:10Hz
Vert.	16500.000	AV	36.41	40.66	10.93	38.30	-9.54	40.16	53.90	13.7	141	236	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	43.76	32.21	16.01	37.35	2.48	57.11	-38.09	-27.00	**11.1**	241	118	
Vert.	5470.000	PK	43.40	32.21	16.01	37.35	2.48	56.75	-38.45	-27.00	11.5	137	359	

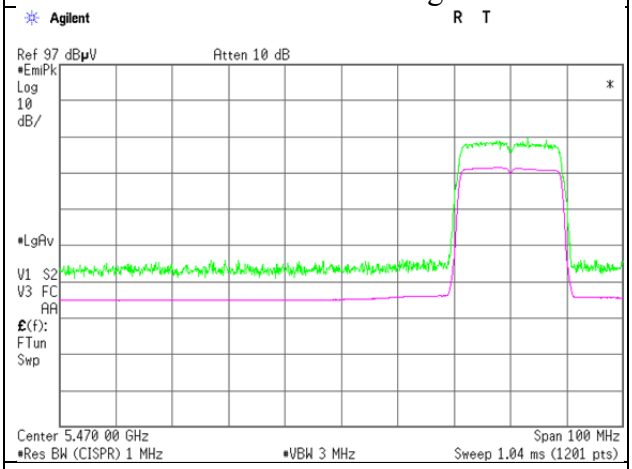
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-20 5500 MHz

Horizontal

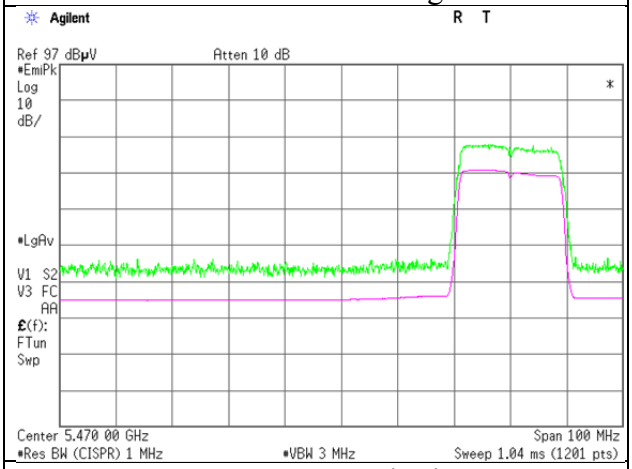
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 5580 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.	7439.953	PK	46.98	36.95	7.28	41.37	2.48	52.32	73.90	21.5	148	204	
Hori.	11160.000	PK	46.33	40.19	8.72	40.61	2.48	57.11	73.90	16.7	150	0	
Hori.	16740.000	PK	55.23	41.46	11.12	38.25	-9.54	60.02	73.90	13.8	163	198	
Hori.	7439.953	AV	35.63	36.95	7.28	41.37	2.48	40.97	53.90	12.9	148	204	VBW:10Hz
Hori.	11160.000	AV	33.94	40.19	8.72	40.61	2.48	44.72	53.90	9.1	150	0	VBW:10Hz
Hori.	16740.000	AV	42.04	41.46	11.12	38.25	-9.54	46.83	53.90	**7.0**	163	198	VBW:10Hz
Vert.	7439.938	PK	46.90	36.95	7.28	41.37	2.48	52.24	73.90	21.6	143	109	
Vert.	11160.000	PK	45.70	40.19	8.72	40.61	2.48	56.48	73.90	17.4	150	0	
Vert.	16740.000	PK	53.37	41.46	11.12	38.25	-9.54	58.16	73.90	15.7	165	246	
Vert.	7439.938	AV	35.24	36.95	7.28	41.37	2.48	40.58	53.90	13.3	143	109	VBW:10Hz
Vert.	11160.000	AV	33.96	40.19	8.72	40.61	2.48	44.74	53.90	9.1	150	0	VBW:10Hz
Vert.	16740.000	AV	41.33	41.46	11.12	38.25	-9.54	46.12	53.90	7.7	165	246	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 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.	7600.001	PK	47.74	37.13	7.30	41.45	2.48	53.20	73.90	20.7	364	3	
Hori.	11400.000	PK	44.49	40.04	8.73	40.41	2.48	55.33	73.90	18.5	150	0	
Hori.	17100.000	PK	54.67	42.61	11.30	38.17	-9.54	60.87	73.90	13.0	155	206	
Hori.	7600.001	AV	36.93	37.13	7.30	41.45	2.48	42.39	53.90	11.5	364	3	VBW:10Hz
Hori.	11400.000	AV	32.14	40.04	8.73	40.41	2.48	42.98	53.90	10.9	150	0	VBW:10Hz
Hori.	17100.000	AV	41.77	42.61	11.30	38.17	-9.54	47.97	53.90	**5.9**	155	206	VBW:10Hz
Vert.	7599.975	PK	47.63	37.13	7.30	41.45	2.48	53.09	73.90	20.8	100	141	
Vert.	11400.000	PK	44.23	40.04	8.73	40.41	2.48	55.07	73.90	18.8	150	0	
Vert.	17100.000	PK	49.16	42.61	11.30	38.17	-9.54	55.36	73.90	18.5	155	224	
Vert.	7599.975	AV	36.33	37.13	7.30	41.45	2.48	41.79	53.90	12.1	100	141	VBW:10Hz
Vert.	11400.000	AV	32.52	40.04	8.73	40.41	2.48	43.36	53.90	10.5	150	0	VBW:10Hz
Vert.	17100.000	AV	37.99	42.61	11.30	38.17	-9.54	44.19	53.90	9.7	155	224	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	47.74	32.62	16.18	37.47	2.48	61.55	-33.65	-27.00	6.7	211	121	
Vert.	5725.000	PK	47.87	32.62	16.18	37.47	2.48	61.68	-33.52	-27.00	**6.5**	230	301	

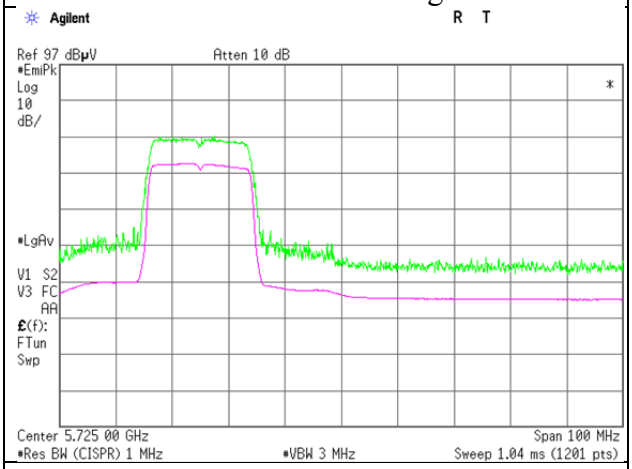
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-20 5700 MHz

Horizontal

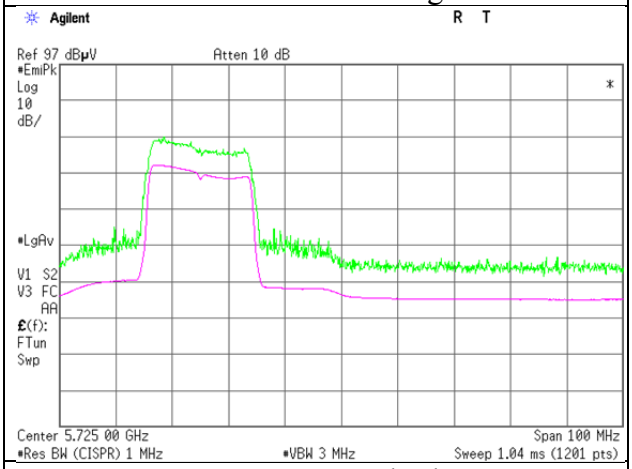
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 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.	7660.009	PK	48.07	37.23	7.31	41.47	2.48	53.62	73.90	20.2	123	0	
Hori.	11490.000	PK	43.50	39.99	8.73	40.34	2.48	54.36	73.90	19.5	150	0	
Hori.	17235.000	PK	51.51	43.00	11.26	38.13	-9.54	58.10	73.90	15.8	160	205	
Hori.	7660.009	AV	37.27	37.23	7.31	41.47	2.48	42.82	53.90	11.0	123	0	VBW:10Hz
Hori.	11490.000	AV	31.68	39.99	8.73	40.34	2.48	42.54	53.90	11.3	150	0	VBW:10Hz
Hori.	17235.000	AV	38.72	43.00	11.26	38.13	-9.54	45.31	53.90	**8.5**	160	205	VBW:10Hz
Vert.	7660.029	PK	48.44	37.23	7.31	41.47	2.48	53.99	73.90	19.9	150	254	
Vert.	11490.000	PK	44.01	39.99	8.73	40.34	2.48	54.87	73.90	19.0	150	0	
Vert.	17235.000	PK	47.96	43.00	11.26	38.13	-9.54	54.55	73.90	19.3	158	222	
Vert.	7660.029	AV	36.84	37.23	7.31	41.47	2.48	42.39	53.90	11.5	150	254	VBW:10Hz
Vert.	11490.000	AV	31.80	39.99	8.73	40.34	2.48	42.66	53.90	11.2	150	0	VBW:10Hz
Vert.	17235.000	AV	35.93	43.00	11.26	38.13	-9.54	42.52	53.90	11.3	158	222	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	44.47	32.49	16.14	37.44	2.48	58.14	-37.06	-27.00	**10.1**	327	122	
Hori.	5700.000	PK	44.64	32.58	16.17	37.46	2.48	58.41	-36.79	10.00	46.8	327	122	
Hori.	5720.000	PK	47.05	32.61	16.18	37.47	2.48	60.85	-34.35	15.60	50.0	327	122	
Hori.	5725.000	PK	50.91	32.62	16.18	37.47	2.48	64.72	-30.48	27.00	57.5	327	122	
Vert.	5650.000	PK	43.60	32.49	16.14	37.44	2.48	57.27	-37.93	-27.00	10.9	231	302	
Vert.	5700.000	PK	43.84	32.58	16.17	37.46	2.48	57.61	-37.59	10.00	47.6	231	302	
Vert.	5720.000	PK	47.39	32.61	16.18	37.47	2.48	61.19	-34.01	15.60	49.6	231	302	
Vert.	5725.000	PK	51.57	32.62	16.18	37.47	2.48	65.38	-29.82	27.00	56.8	231	302	

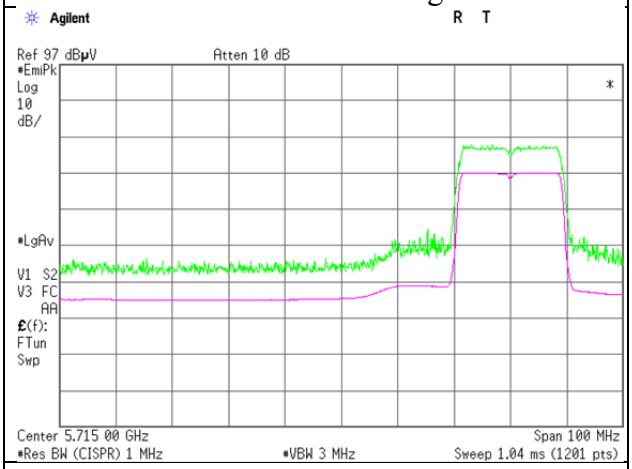
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-20 5745 MHz

Horizontal

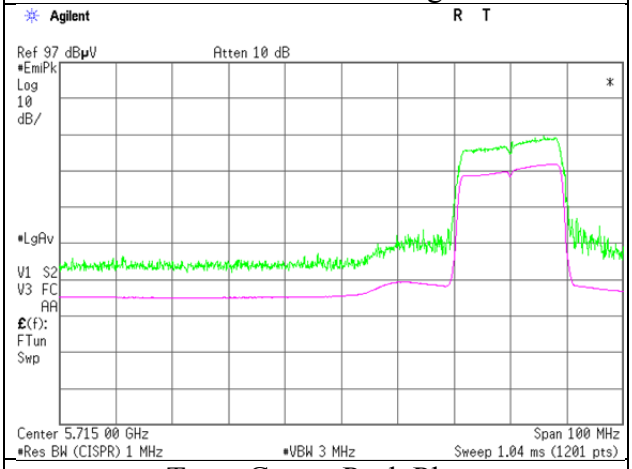
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 5785 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.	7713.317	PK	49.17	37.32	7.32	41.48	2.48	54.81	73.90	19.0	280	206	
Hori.	11570.000	PK	43.15	39.94	8.79	40.27	2.48	54.09	73.90	19.8	150	0	
Hori.	17355.000	PK	47.44	43.33	11.23	38.09	-9.54	54.37	73.90	19.5	148	205	
Hori.	7713.317	AV	38.31	37.32	7.32	41.48	2.48	43.95	53.90	**9.9**	280	206	VBW:10Hz
Hori.	11570.000	AV	31.46	39.94	8.79	40.27	2.48	42.40	53.90	11.5	150	0	VBW:10Hz
Hori.	17355.000	AV	35.45	43.33	11.23	38.09	-9.54	42.38	53.90	11.5	148	205	VBW:10Hz
Vert.	7713.352	PK	49.20	37.32	7.32	41.48	2.48	54.84	73.90	19.0	113	258	
Vert.	11570.000	PK	42.65	39.94	8.79	40.27	2.48	53.59	73.90	20.3	150	0	
Vert.	17355.000	PK	45.30	43.33	11.23	38.09	-9.54	52.23	73.90	21.6	145	213	
Vert.	7713.352	AV	37.79	37.32	7.32	41.48	2.48	43.43	53.90	10.4	113	258	VBW:10Hz
Vert.	11570.000	AV	31.30	39.94	8.79	40.27	2.48	42.24	53.90	11.6	150	0	VBW:10Hz
Vert.	17355.000	AV	33.79	43.33	11.23	38.09	-9.54	40.72	53.90	13.1	145	213	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	September 2, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 5825 MHz				(30-1000MHz)

(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.	30.741	QP	24.80	17.00	6.93	31.91	0.00	16.82	40.00	23.1	200	293	
Hori.	210.096	QP	24.60	16.67	9.05	31.75	0.00	18.57	43.50	24.9	200	147	
Hori.	814.312	QP	23.50	21.11	9.41	31.29	0.00	22.73	46.00	23.2	100	255	
Hori.	926.173	QP	23.80	22.24	9.95	30.68	0.00	25.31	46.00	20.6	150	323	
Hori.	7766.681	PK	49.11	37.41	7.34	41.49	2.48	54.85	73.90	19.0	261	257	
Hori.	11650.000	PK	42.55	39.89	8.86	40.20	2.48	53.58	73.90	20.3	150	0	
Hori.	17475.000	PK	45.57	43.67	11.20	38.06	-9.54	52.84	73.90	21.0	140	136	
Hori.	7766.681	AV	38.13	37.41	7.34	41.49	2.48	43.87	53.90	**10.0**	261	257	VBW:10Hz
Hori.	11650.000	AV	30.86	39.89	8.86	40.20	2.48	41.89	53.90	12.0	150	0	VBW:10Hz
Hori.	17475.000	AV	34.00	43.67	11.20	38.06	-9.54	41.27	53.90	12.6	140	136	VBW:10Hz
Vert.	33.045	QP	24.40	16.51	6.97	31.91	0.00	15.97	40.00	24.0	100	337	
Vert.	206.077	QP	24.50	16.56	9.02	31.75	0.00	18.33	43.50	25.1	100	158	
Vert.	806.064	QP	23.30	21.02	9.37	31.34	0.00	22.35	46.00	23.6	100	300	
Vert.	932.742	QP	23.60	22.29	9.97	30.63	0.00	25.23	46.00	20.7	100	336	
Vert.	7766.692	PK	49.57	37.41	7.34	41.49	2.48	55.31	73.90	18.5	103	257	
Vert.	11650.000	PK	42.84	39.89	8.86	40.20	2.48	53.87	73.90	20.0	150	0	
Vert.	17475.000	PK	45.14	43.67	11.20	38.06	-9.54	52.41	73.90	21.4	149	160	
Vert.	7766.692	AV	37.97	37.41	7.34	41.49	2.48	43.71	53.90	10.1	103	257	VBW:10Hz
Vert.	11650.000	AV	30.85	39.89	8.86	40.20	2.48	41.88	53.90	12.0	150	0	VBW:10Hz
Vert.	17475.000	AV	33.61	43.67	11.20	38.06	-9.54	40.88	53.90	13.0	149	160	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	44.52	32.85	16.26	37.54	2.48	58.57	-36.63	27.00	63.6	232	120	
Hori.	5855.000	PK	44.04	32.86	16.26	37.54	2.48	58.10	-37.10	15.60	52.7	232	120	
Hori.	5875.000	PK	44.45	32.90	16.28	37.55	2.48	58.56	-36.64	10.00	46.6	232	120	
Hori.	5925.000	PK	44.39	32.99	16.32	37.57	2.48	58.61	-36.59	-27.00	**9.6**	232	120	
Vert.	5850.000	PK	43.85	32.85	16.26	37.54	2.48	57.90	-37.30	27.00	64.3	115	299	
Vert.	5855.000	PK	43.63	32.86	16.26	37.54	2.48	57.69	-37.51	15.60	53.1	115	299	
Vert.	5875.000	PK	44.95	32.90	16.28	37.55	2.48	59.06	-36.14	10.00	46.1	115	299	
Vert.	5925.000	PK	43.24	32.99	16.32	37.57	2.48	57.46	-37.74	-27.00	10.7	115	299	

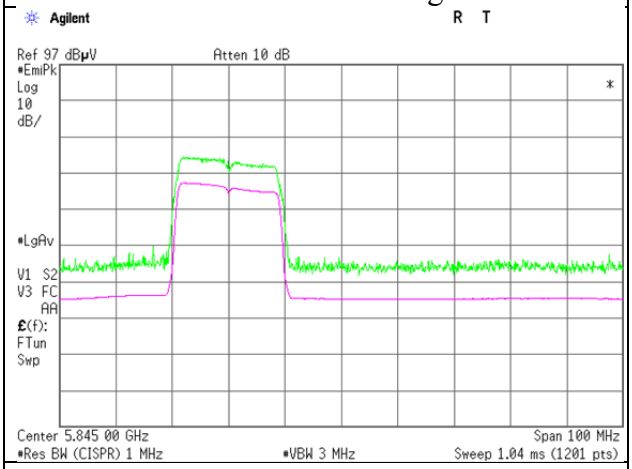
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-20 5825 MHz

Horizontal

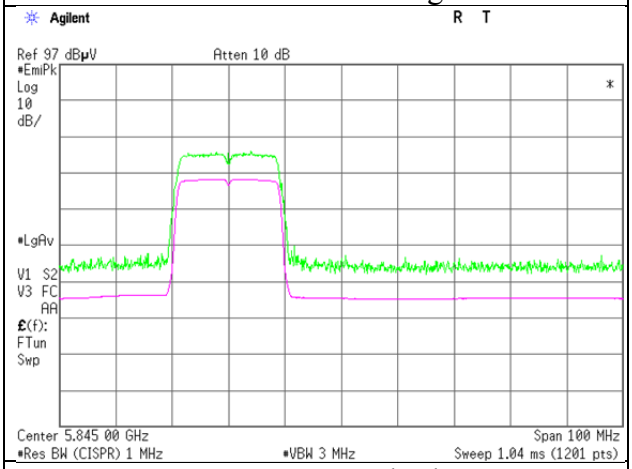
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 4, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 60 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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	44.68	32.17	15.67	37.26	2.48	57.74	73.90	16.1	347	115	
Hori.	6919.984	PK	48.02	36.53	7.19	40.89	2.48	53.33	73.90	20.5	100	325	
Hori.	10380.000	PK	46.58	39.58	8.21	40.37	2.48	56.48	73.90	17.4	150	0	
Hori.	15570.000	PK	45.63	40.15	10.58	38.68	-9.54	48.14	73.90	25.7	153	178	
Hori.	5150.000	AV	32.91	32.17	15.67	37.26	2.48	45.97	53.90	7.9	347	115	VBW:10Hz
Hori.	6919.984	AV	36.97	36.53	7.19	40.89	2.48	42.28	53.90	11.6	100	325	VBW:10Hz
Hori.	10380.000	AV	34.43	39.58	8.21	40.37	2.48	44.33	53.90	9.5	150	0	VBW:10Hz
Hori.	15570.000	AV	35.51	40.15	10.58	38.68	-9.54	38.02	53.90	15.8	153	178	VBW:10Hz
Vert.	5150.000	PK	45.43	32.17	15.67	37.26	2.48	58.49	73.90	15.4	205	66	
Vert.	6920.047	PK	48.45	36.53	7.19	40.89	2.48	53.76	73.90	20.1	115	85	
Vert.	10380.000	PK	47.20	39.58	8.21	40.37	2.48	57.10	73.90	16.8	150	0	
Vert.	15570.000	PK	45.51	40.15	10.58	38.68	-9.54	48.02	73.90	25.8	151	241	
Vert.	5150.000	AV	33.10	32.17	15.67	37.26	2.48	46.16	53.90	**7.7**	205	66	VBW:10Hz
Vert.	6920.047	AV	37.13	36.53	7.19	40.89	2.48	42.44	53.90	11.4	115	85	VBW:10Hz
Vert.	10380.000	AV	34.60	39.58	8.21	40.37	2.48	44.50	53.90	9.4	150	0	VBW:10Hz
Vert.	15570.000	AV	35.22	40.15	10.58	38.68	-9.54	37.73	53.90	16.1	151	241	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

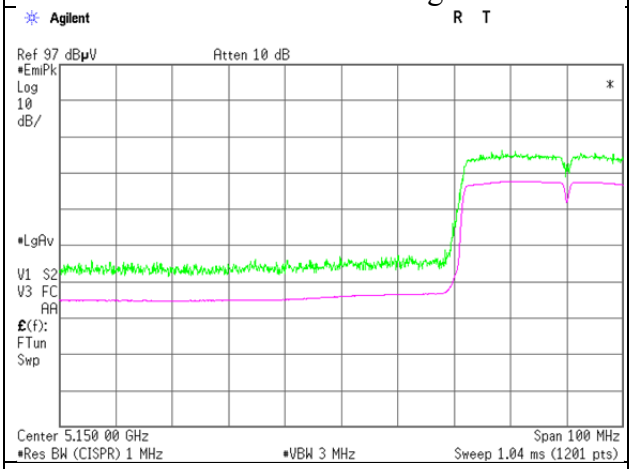
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-40 5190 MHz

Horizontal

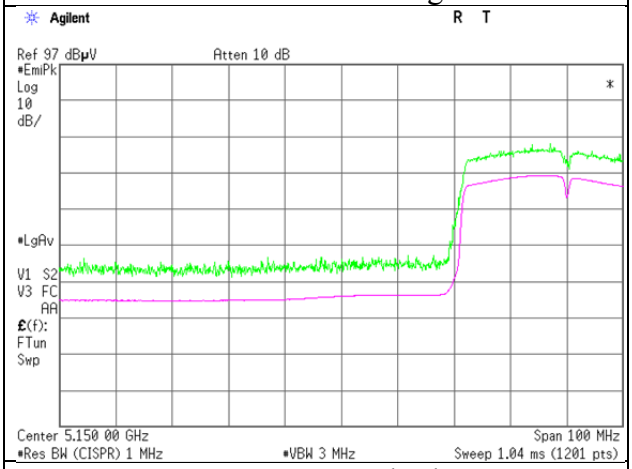
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 4, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 60 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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.	6973.366	PK	48.05	36.73	7.21	40.90	2.48	53.57	73.90	20.3	100	328	
Hori.	10460.000	PK	46.52	39.82	8.20	40.39	2.48	56.63	73.90	17.2	150	0	
Hori.	15690.000	PK	47.07	39.82	10.61	38.62	-9.54	49.34	73.90	24.5	142	187	
Hori.	6973.366	AV	36.84	36.73	7.21	40.90	2.48	42.36	53.90	11.5	100	328	VBW:10Hz
Hori.	10460.000	AV	34.56	39.82	8.20	40.39	2.48	44.67	53.90	9.2	150	0	VBW:10Hz
Hori.	15690.000	AV	35.29	39.82	10.61	38.62	-9.54	37.56	53.90	16.3	142	187	VBW:10Hz
Vert.	6973.322	PK	48.44	36.73	7.21	40.90	2.48	53.96	73.90	19.9	149	107	
Vert.	10460.000	PK	46.25	39.82	8.20	40.39	2.48	56.36	73.90	17.5	150	0	
Vert.	15690.000	PK	46.77	39.82	10.61	38.62	-9.54	49.04	73.90	24.8	144	241	
Vert.	6973.322	AV	36.95	36.73	7.21	40.90	2.48	42.47	53.90	11.4	149	107	VBW:10Hz
Vert.	10460.000	AV	34.60	39.82	8.20	40.39	2.48	44.71	53.90	**9.1**	150	0	VBW:10Hz
Vert.	15690.000	AV	35.06	39.82	10.61	38.62	-9.54	37.33	53.90	16.5	144	241	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 4, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 60 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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	44.17	32.19	15.89	37.32	2.48	57.41	73.90	16.4	370	112	
Hori.	7079.961	PK	48.13	36.85	7.22	40.99	2.48	53.69	73.90	20.2	358	207	
Hori.	10620.000	PK	46.20	40.02	8.32	40.48	2.48	56.54	73.90	17.3	150	0	
Hori.	15930.000	PK	45.33	39.17	10.65	38.49	-9.54	47.12	73.90	26.7	145	177	
Hori.	5350.000	AV	32.32	32.19	15.89	37.32	2.48	45.56	53.90	**8.3**	370	112	VBW:10Hz
Hori.	7079.961	AV	36.99	36.85	7.22	40.99	2.48	42.55	53.90	11.3	358	207	VBW:10Hz
Hori.	10620.000	AV	32.93	40.02	8.32	40.48	2.48	43.27	53.90	10.6	150	0	VBW:10Hz
Hori.	15930.000	AV	34.45	39.17	10.65	38.49	-9.54	36.24	53.90	17.6	145	177	VBW:10Hz
Vert.	5350.000	PK	43.74	32.19	15.89	37.32	2.48	56.98	73.90	16.9	140	64	
Vert.	7080.046	PK	48.10	36.85	7.22	40.99	2.48	53.66	73.90	20.2	150	113	
Vert.	10620.000	PK	46.12	40.02	8.32	40.48	2.48	56.46	73.90	17.4	150	0	
Vert.	15930.000	PK	45.27	39.17	10.65	38.49	-9.54	47.06	73.90	26.8	144	246	
Vert.	5350.000	AV	32.29	32.19	15.89	37.32	2.48	45.53	53.90	**8.3**	140	64	VBW:10Hz
Vert.	7080.046	AV	37.27	36.85	7.22	40.99	2.48	42.83	53.90	11.0	150	113	VBW:10Hz
Vert.	10620.000	AV	33.37	40.02	8.32	40.48	2.48	43.71	53.90	10.1	150	0	VBW:10Hz
Vert.	15930.000	AV	34.10	39.17	10.65	38.49	-9.54	35.89	53.90	18.0	144	246	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

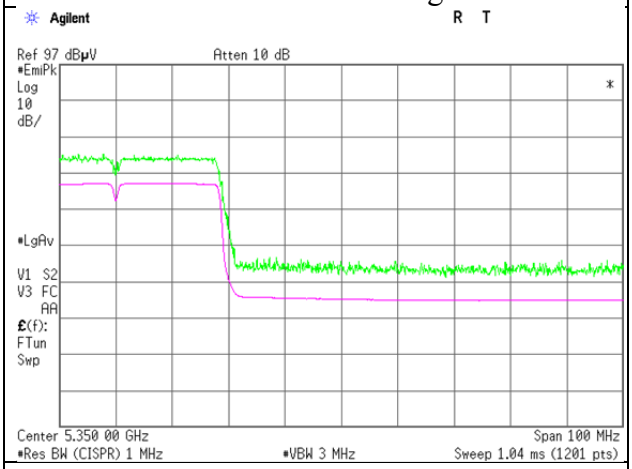
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-40 5310 MHz

Horizontal

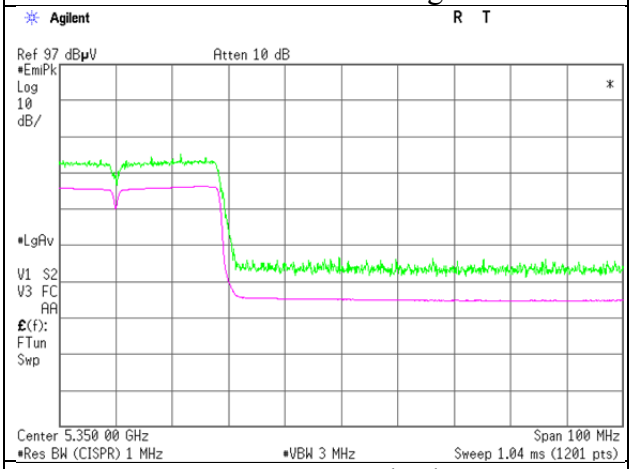
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 4, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 60 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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	43.42	32.21	16.00	37.35	2.48	56.76	73.90	17.1	359	121	
Hori.	7346.647	PK	47.21	36.93	7.27	41.27	2.48	52.62	73.90	21.2	122	205	
Hori.	11020.000	PK	45.94	40.28	8.72	40.72	2.48	56.70	73.90	17.2	150	0	
Hori.	16530.000	PK	46.11	40.76	10.95	38.29	-9.54	49.99	73.90	23.9	140	184	
Hori.	5460.000	AV	32.05	32.21	16.00	37.35	2.48	45.39	53.90	**8.5**	359	121	VBW:10Hz
Hori.	7346.647	AV	35.62	36.93	7.27	41.27	2.48	41.03	53.90	12.8	122	205	VBW:10Hz
Hori.	11020.000	AV	33.93	40.28	8.72	40.72	2.48	44.69	53.90	9.2	150	0	VBW:10Hz
Hori.	16530.000	AV	34.12	40.76	10.95	38.29	-9.54	38.00	53.90	15.9	140	184	VBW:10Hz
Vert.	5460.000	PK	43.80	32.21	16.00	37.35	2.48	57.14	73.90	16.7	110	359	
Vert.	7346.705	PK	47.07	36.93	7.27	41.27	2.48	52.48	73.90	21.4	150	138	
Vert.	11020.000	PK	46.38	40.28	8.72	40.72	2.48	57.14	73.90	16.7	150	0	
Vert.	16530.000	PK	45.66	40.76	10.95	38.29	-9.54	49.54	73.90	24.3	149	231	
Vert.	5460.000	AV	32.06	32.21	16.00	37.35	2.48	45.40	53.90	**8.5**	110	359	VBW:10Hz
Vert.	7346.705	AV	35.44	36.93	7.27	41.27	2.48	40.85	53.90	13.0	150	138	VBW:10Hz
Vert.	11020.000	AV	33.72	40.28	8.72	40.72	2.48	44.48	53.90	9.4	150	0	VBW:10Hz
Vert.	16530.000	AV	33.89	40.76	10.95	38.29	-9.54	37.77	53.90	16.1	149	231	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	43.35	32.21	16.01	37.35	2.48	56.70	-38.50	-27.00	11.5	359	121	
Vert.	5470.000	PK	44.50	32.21	16.01	37.35	2.48	57.85	-37.35	-27.00	**10.4**	110	359	

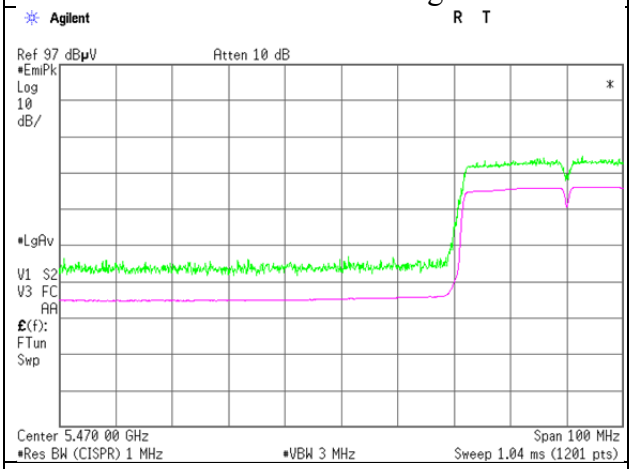
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-40 5510 MHz

Horizontal

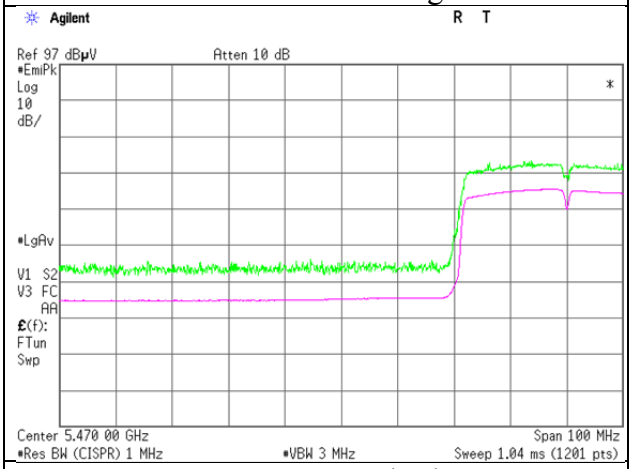
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 4, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 60 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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.	7400.007	PK	47.34	36.94	7.26	41.33	2.48	52.69	73.90	21.2	150	203	
Hori.	11100.000	PK	46.61	40.23	8.72	40.66	2.48	57.38	73.90	16.5	150	0	
Hori.	16650.000	PK	47.44	41.16	11.05	38.27	-9.54	51.84	73.90	22.0	145	176	
Hori.	7400.007	AV	35.86	36.94	7.26	41.33	2.48	41.21	53.90	12.6	150	203	VBW:10Hz
Hori.	11100.000	AV	34.52	40.23	8.72	40.66	2.48	45.29	53.90	**8.6**	150	0	VBW:10Hz
Hori.	16650.000	AV	36.05	41.16	11.05	38.27	-9.54	40.45	53.90	13.4	145	176	VBW:10Hz
Vert.	7399.996	PK	46.66	36.94	7.26	41.33	2.48	52.01	73.90	21.8	107	137	
Vert.	11100.000	PK	46.56	40.23	8.72	40.66	2.48	57.33	73.90	16.5	150	0	
Vert.	16650.000	PK	46.83	41.16	11.05	38.27	-9.54	51.23	73.90	22.6	148	248	
Vert.	7399.996	AV	35.26	36.94	7.26	41.33	2.48	40.61	53.90	13.2	107	137	VBW:10Hz
Vert.	11100.000	AV	34.46	40.23	8.72	40.66	2.48	45.23	53.90	**8.6**	150	0	VBW:10Hz
Vert.	16650.000	AV	35.27	41.16	11.05	38.27	-9.54	39.67	53.90	14.2	148	248	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 dB

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 4, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	23deg. C / 60 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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.	7560.016	PK	48.03	37.07	7.29	41.44	2.48	53.43	73.90	20.4	111	113	
Hori.	11340.000	PK	45.07	40.08	8.73	40.46	2.48	55.90	73.90	18.0	150	0	
Hori.	17010.000	PK	50.11	42.36	11.33	38.20	-9.54	56.06	73.90	17.8	167	177	
Hori.	7560.016	AV	36.19	37.07	7.29	41.44	2.48	41.59	53.90	12.3	111	113	VBW:10Hz
Hori.	11340.000	AV	33.10	40.08	8.73	40.46	2.48	43.93	53.90	9.9	150	0	VBW:10Hz
Hori.	17010.000	AV	38.15	42.36	11.33	38.20	-9.54	44.10	53.90	**9.8**	167	177	VBW:10Hz
Vert.	7560.011	PK	47.78	37.07	7.29	41.44	2.48	53.18	73.90	20.7	100	140	
Vert.	11340.000	PK	45.33	40.08	8.73	40.46	2.48	56.16	73.90	17.7	150	0	
Vert.	17010.000	PK	48.98	42.36	11.33	38.20	-9.54	54.93	73.90	18.9	172	247	
Vert.	7560.011	AV	35.69	37.07	7.29	41.44	2.48	41.09	53.90	12.8	100	140	VBW:10Hz
Vert.	11340.000	AV	33.27	40.08	8.73	40.46	2.48	44.10	53.90	**9.8**	150	0	VBW:10Hz
Vert.	17010.000	AV	37.47	42.36	11.33	38.20	-9.54	43.42	53.90	10.4	172	247	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	43.84	32.62	16.18	37.47	2.48	57.65	-37.55	-27.00	10.6	345	119	
Vert.	5725.000	PK	44.64	32.62	16.18	37.47	2.48	58.45	-36.75	-27.00	**9.8**	164	300	

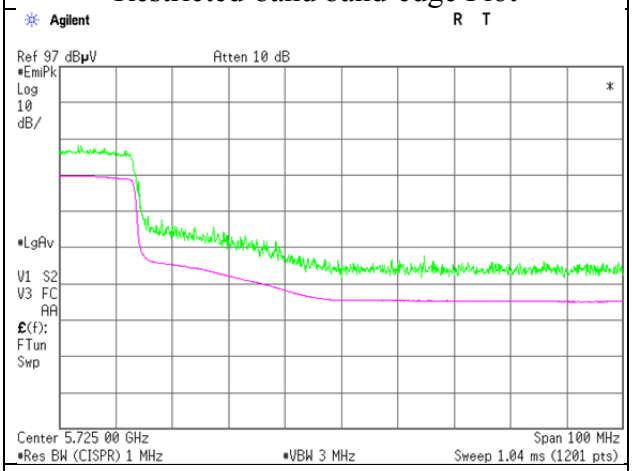
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-40 5670 MHz

Horizontal

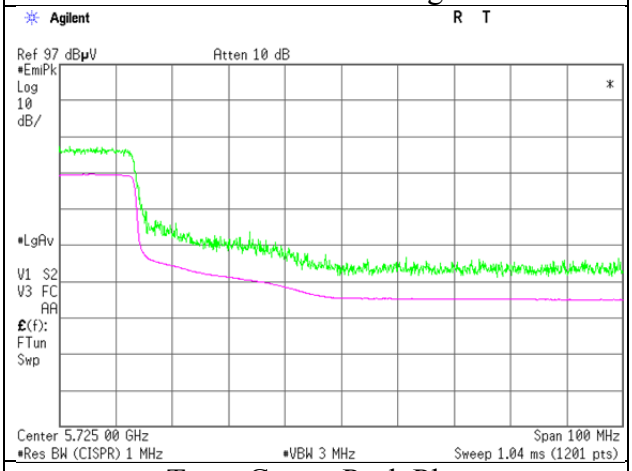
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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.	7673.343	PK	47.60	37.25	7.32	41.47	2.48	53.18	73.90	20.7	150	256	
Hori.	11510.000	PK	43.37	39.97	8.74	40.32	2.48	54.24	73.90	19.6	150	0	
Hori.	17265.000	PK	47.51	43.08	11.26	38.12	-9.54	54.19	73.90	19.7	150	177	
Hori.	7673.343	AV	37.45	37.25	7.32	41.47	2.48	43.03	53.90	10.8	150	256	VBW:10Hz
Hori.	11510.000	AV	31.98	39.97	8.74	40.32	2.48	42.85	53.90	11.0	150	0	VBW:10Hz
Hori.	17265.000	AV	36.52	43.08	11.26	38.12	-9.54	43.20	53.90	**10.7**	150	177	VBW:10Hz
Vert.	7673.405	PK	47.99	37.25	7.32	41.47	2.48	53.57	73.90	20.3	121	260	
Vert.	11510.000	PK	44.18	39.97	8.74	40.32	2.48	55.05	73.90	18.8	150	0	
Vert.	17265.000	PK	47.17	43.08	11.26	38.12	-9.54	53.85	73.90	20.0	152	210	
Vert.	7673.405	AV	36.64	37.25	7.32	41.47	2.48	42.22	53.90	11.6	121	260	VBW:10Hz
Vert.	11510.000	AV	32.06	39.97	8.74	40.32	2.48	42.93	53.90	10.9	150	0	VBW:10Hz
Vert.	17265.000	AV	36.13	43.08	11.26	38.12	-9.54	42.81	53.90	11.0	152	210	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	43.49	32.49	16.14	37.44	2.48	57.16	-38.04	-27.00	11.0	296	121	
Hori.	5700.000	PK	44.34	32.58	16.17	37.46	2.48	58.11	-37.09	10.00	47.1	296	121	
Hori.	5720.000	PK	46.26	32.61	16.18	37.47	2.48	60.06	-35.14	15.60	50.7	296	121	
Hori.	5725.000	PK	46.50	32.62	16.18	37.47	2.48	60.31	-34.89	27.00	61.9	296	121	
Vert.	5650.000	PK	43.73	32.49	16.14	37.44	2.48	57.40	-37.80	-27.00	**10.8**	231	300	
Vert.	5700.000	PK	44.24	32.58	16.17	37.46	2.48	58.01	-37.19	10.00	47.2	231	300	
Vert.	5720.000	PK	45.99	32.61	16.18	37.47	2.48	59.79	-35.41	15.60	51.0	231	300	
Vert.	5725.000	PK	46.47	32.62	16.18	37.47	2.48	60.28	-34.92	27.00	61.9	231	300	

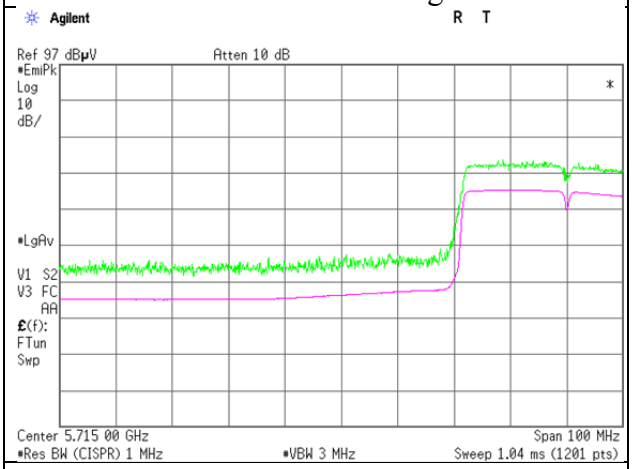
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG｛({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-40 5755 MHz

Horizontal

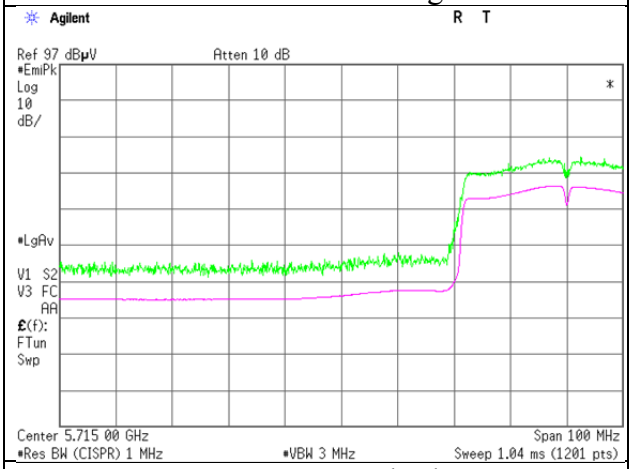
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 15, 2016	August 18, 2016	August 20, 2016	August 23, 2016
Temperature / Humidity	24deg. C / 62 % RH	22deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
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.	7726.667	PK	49.36	37.34	7.33	41.48	2.48	55.03	73.90	18.8	333	10	
Hori.	11590.000	PK	43.55	39.93	8.81	40.25	2.48	54.52	73.90	19.3	150	0	
Hori.	17385.000	PK	45.10	43.42	11.22	38.08	-9.54	52.12	73.90	21.7	156	204	
Hori.	7726.667	AV	38.64	37.34	7.33	41.48	2.48	44.31	53.90	**9.5**	333	10	VBW:10Hz
Hori.	11590.000	AV	31.68	39.93	8.81	40.25	2.48	42.65	53.90	11.2	150	0	VBW:10Hz
Hori.	17385.000	AV	33.51	43.42	11.22	38.08	-9.54	40.53	53.90	13.3	156	204	VBW:10Hz
Vert.	7726.659	PK	49.02	37.34	7.33	41.48	2.48	54.69	73.90	19.2	110	281	
Vert.	11590.000	PK	42.95	39.93	8.81	40.25	2.48	53.92	73.90	19.9	150	0	
Vert.	17385.000	PK	44.11	43.42	11.22	38.08	-9.54	51.13	73.90	22.7	143	224	
Vert.	7726.659	AV	37.73	37.34	7.33	41.48	2.48	43.40	53.90	10.5	110	281	VBW:10Hz
Vert.	11590.000	AV	31.70	39.93	8.81	40.25	2.48	42.67	53.90	11.2	150	0	VBW:10Hz
Vert.	17385.000	AV	32.95	43.42	11.22	38.08	-9.54	39.97	53.90	13.9	143	224	VBW:10Hz

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 (3.99 m / 3.0 m) = 2.48 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	43.99	32.85	16.26	37.54	2.48	58.04	-37.16	27.00	64.2	229	122	
Hori.	5855.000	PK	44.61	32.86	16.26	37.54	2.48	58.67	-36.53	15.60	52.1	229	122	
Hori.	5875.000	PK	44.29	32.90	16.28	37.55	2.48	58.40	-36.80	10.00	46.8	229	122	
Hori.	5925.000	PK	44.09	32.99	16.32	37.57	2.48	58.31	-36.89	-27.00	**9.9**	229	122	
Vert.	5850.000	PK	44.22	32.85	16.26	37.54	2.48	58.27	-36.93	27.00	63.9	166	299	
Vert.	5855.000	PK	43.92	32.86	16.26	37.54	2.48	57.98	-37.22	15.60	52.8	166	299	
Vert.	5875.000	PK	44.05	32.90	16.28	37.55	2.48	58.16	-37.04	10.00	47.0	166	299	
Vert.	5925.000	PK	43.71	32.99	16.32	37.57	2.48	57.93	-37.27	-27.00	10.3	166	299	

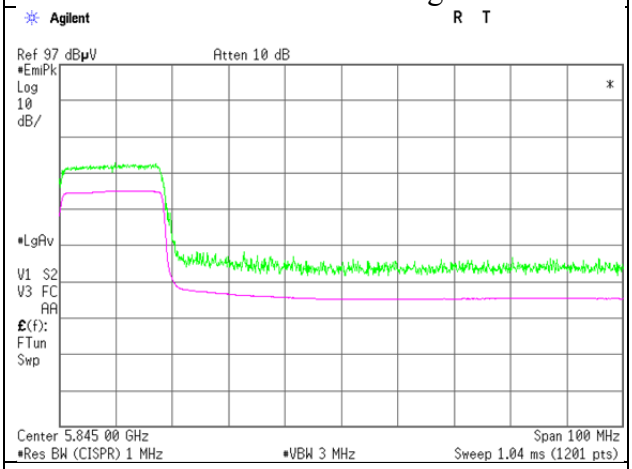
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.99 m / 3.0 m) = 2.48 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11259492S-C-R2
Date	August 5, 2016
Temperature / Humidity	24 deg. C / 62 % RH
Engineer	Shinichi Takano
Mode	Tx 11n-40 5795 MHz

Horizontal

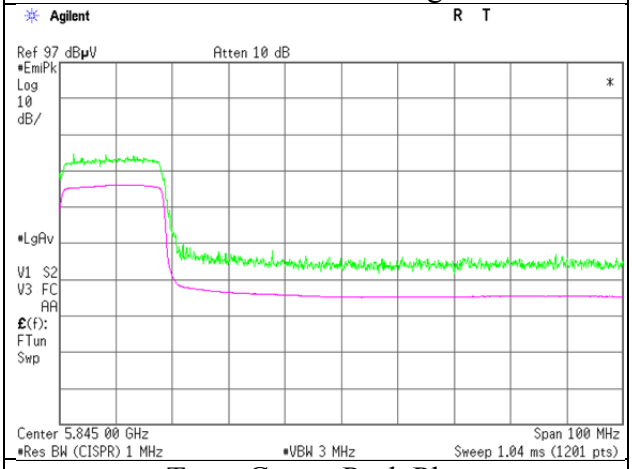
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot

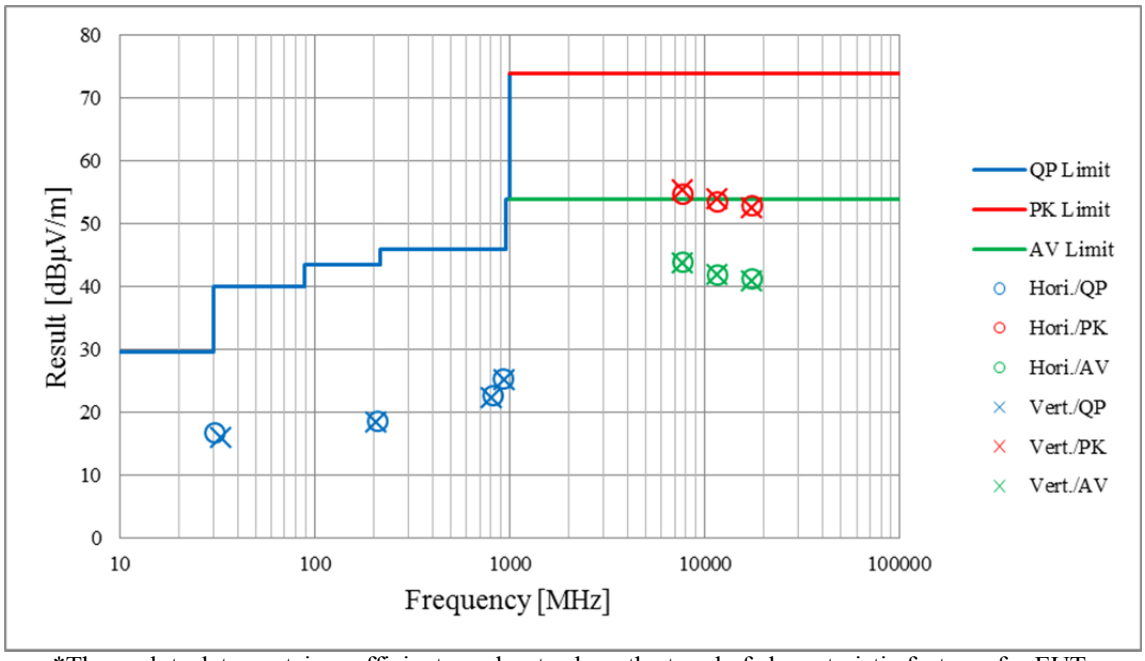


Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Shonan EMC Lab. No.1, 2, and 3, Semi Anechoic Chamber				
Report No.	11259492S-C-R2				
Date	August 5, 2016	August 14, 2016	August 18, 2016	August 20, 2016	September 2, 2016
Temperature / Humidity	24deg. C / 62 % RH	23deg. C / 58 % RH	25deg. C / 55 % RH	23deg. C / 54 % RH	23deg. C / 65 % RH
Engineer	Shinichi Takano	Shinichi Takano	Yosuke Ishikawa	Hikaru Shirasawa	Hikaru Shirasawa
	(1 GHz-6.4 GHz)	(6.4 GHz-13 GHz)	(13 GHz-18 GHz)	(18 GHz-26 GHz)	(26 GHz-40GHz)
Mode	Tx 11n-20 5825 MHz				(30-1000MHz)

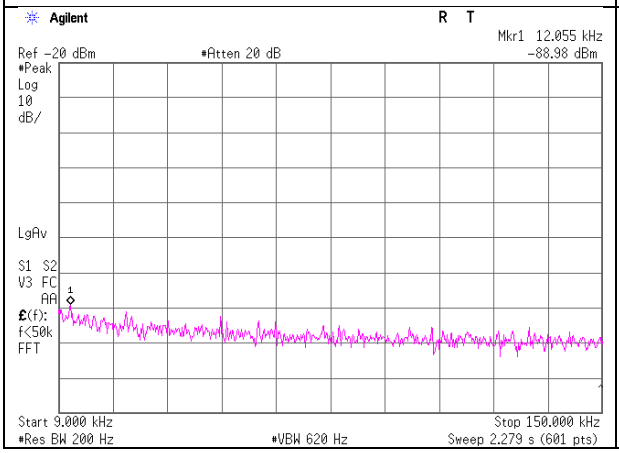


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

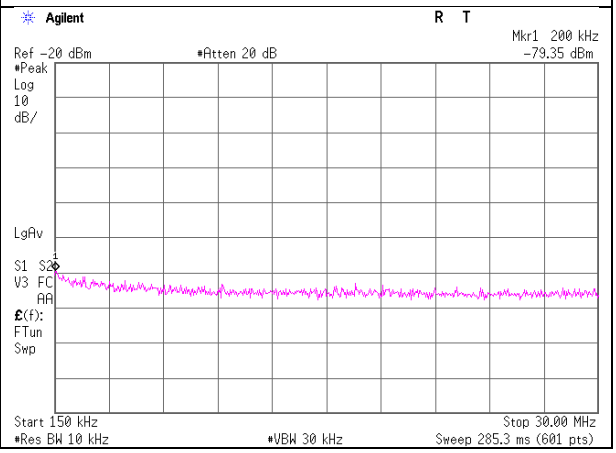
Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11259492S-C-R2
Date	August 4, 2016
Temperature / Humidity	25 deg. C / 38 % RH
Engineer	Kazutaka Takeyma
Mode	Tx 11n-20 5825 MHz

9 kHz-150 kHz



150 kHz-30 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenator [dB]	Antenna Gain [dBi]	N (Number of Output	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
12.06	-89.0	0.01	9.8	-2.2	1	-81.4	300	6.0	-20.1	45.9	66.0	
200.00	-79.4	0.01	9.8	-2.2	1	-71.7	300	6.0	-10.5	21.5	32.0	

E = EIRP - 20*log(D) + Ground bounce + 104.8 [dBuV/m]
EIRP = Reading + Cable Loss + Attenator + Antenna Gain + 10*log(N)

APPENDIX 2: Test instruments

Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
KSA-08	Spectrum Analyzer	Agilent	E4446A	MY46180525	AT, RE	2016/03/28 * 12
SCC-G13	Coaxial Cable	Suhner	SUCOFLEX 102	31599/2	AT	2016/03/23 * 12
SAT10-10	Attenuator	Weinschel Corp.	54A-10	37584	AT	2016/04/18 * 12
SPM-06	Power Meter	Anritsu	ML2495A	0850009	AT	2016/04/01 * 12
SPSS-03	Power sensor	Anritsu	MA2411B	0917063	AT	2016/04/01 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2015/12/07 * 12
KTS-07	Digital Tester	SANWA	PC500	7019232	AT	2015/11/18 * 12
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	AT	2015/09/16 * 12
SAF-05	Pre Amplifier	TOYO Corporation	TPA0118-36	1440490	RE	2016/02/10 * 12
SCC-G04	Coaxial Cable	Junkosha	J12J102207-00	JUN-12-14-018	RE	2016/06/23 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2016/05/11 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2015/08/11 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2015/10/22 * 12
SJM-15	Measure	ASKUL	-	-	RE	-
SAEC-03(SVSWR)	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	RE	2015/08/28 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE,RFI,MF)	-	RE,CE	-
STS-03	Digital Hitester	Hioki	3805-50	080997823	RE	2015/11/18 * 12
SAT10-05	Attenuator(above1GHz)	Agilent	8493C-010	74864	RE	2015/11/04 * 12
SAF-04	Pre Amplifier	TOYO Corporation	TPA0118-36	1440489	RE	2016/03/22 * 12
SFL-03	Highpass Filter	MICRO-TRONICS	HPM50112	028	RE	2015/11/16 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	RE	2016/03/23 * 12
SCC-G05	Coaxial Cable	Junkosha	J12J102207-00	APR-30-15-037	RE	2016/05/24 * 12
SCC-G22	Coaxial Cable	Suhner	SUCOFLEX 104	296199/4	RE	2016/05/11 * 12
SHA-02	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-726	RE	2016/08/09 * 12
SOS-03	Humidity Indicator	A&D	AD-5681	4063325	RE	2015/10/22 * 12
SJM-09	Measure	PROMART	SEN1935	-	RE,CE	-
SAEC-02(SVSWR)	Semi-Anechoic Chamber	TDK	SAEC-02(SVSWR)	2	RE	2016/07/22 * 12
STS-02	Digital Hitester	Hioki	3805-50	080997819	RE,CE	2016/03/22 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM3640	RE	2016/03/15 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26W	00000019	RE	2016/03/23 * 12
SCC-G15	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	RE	2016/03/08 * 12
SCC-G33	Coaxial Cable	Junkosha	MWX241-01000KMSKMS	-	RE	2016/04/18 * 12

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAEC-01(NSA)	Semi-Anechoic Chamber	TDK	SAEC-01(NSA)	1	RE	2016/07/14 * 12
SOS-01	Humidity Indicator	A&D	AD-5681	4062555	RE	2015/10/22 * 12
STS-01	Digital Hitester	Hioki	3805-50	080997812	RE	2015/11/18 * 12
SAF-10	Pre Amplifier	TOYO Corporation	HAP26-40W	00000010	RE	2016/03/23 * 12
SHA-06	Horn Antenna	ETS LINDGREN	3160-10	LM3459	RE	2016/03/24 * 12
SCC-G19	Coaxial Cable	Suhner	SUCOFLEX 102A	1188/2A	RE	2016/03/08 * 12
SAF-02	Pre Amplifier	SONOMA	310N	290212	RE	2016/02/19 * 12
SAT6-02	Attenuator	JFW	50HF-006N	-	RE	2016/02/25 * 12
KAT3-11	Attenuator	JFW IND. INC.	50HF-003N	-	RE	2015/08/31 * 12
SBA-02	Biconical Antenna	Schwarzbeck	BBA9106	91032665	RE	2015/11/02 * 12
SCC-B1/B3/B5/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2016/04/22 * 12
SCC-B2/B4/B6/B7/B8/B13/SRSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	RE	2016/04/22 * 12
SLA-02	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0893	RE	2015/11/03 * 12
STR-07	Test Receiver	Rohde & Schwarz	ESU26	100484	RE	2015/09/04 * 12
SAEC-02(NSA)	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	RE	2016/07/13 * 12
SCC-B12/B13/SRSE-02	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS4906	-/0901-270(RF Selector)	CE	2016/04/22 * 12
SLS-03	LISN	Rohde & Schwarz	ENV216	100513	CE	2016/02/08 * 12
SAT3-06	Attenuator	JFW	50HF-003N	-	CE	2016/02/25 * 12
SOS-04	Humidity Indicator	A&D	AD-5681	4061512	CE	2015/12/07 * 12

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

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

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