RADIO TEST REPORT

Test Report No. : 11355752S-P-R3

Applicant	:	**Canon Inc.**
Type of Equipment	:	**Wireless LAN Module**
Model No.	:	**BM72065**
FCC ID	:	**AZDBM72065**
Test regulation	:	**FCC Part 15 Subpart E: 2016**
Test Result	:	**Complied**

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.
5. 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 11355752S-P-R2. 11355752S-P-R2 is replaced with this report.

Date of test: September 20 to October 21, 2016

Representative test engineer:
Yosuke Ishikawa
Engineer
Consumer Technology Division

Approved by:
Toyokazu Imamura
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

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REVISION HISTORY

Original Test Report No.: 11355752S-P

Revision	Test report No.	Date	Page revised	Contents
- (Original)	11355752S-P	December 2, 2016	-	-
1	11355752S-P-R1	December 14, 2016	5	Update of 3.2
2	11355752S-P-R2	December 19, 2016	11-13	Update
3	11355752S-P-R3	December 21, 2016	38	Update

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SECTION 1: Customer information

Company Name	:	Canon Inc.
Address	:	9-1, Imaikami-cho, Nakahara-ku, Kawasaki, Kanagawa, 211-8501 JAPAN
Telephone Number	:	+81-3-3758-2111
Facsimile Number	:	+81-44-739-5495
Contact Person	:	Yasuhiko Minakawa

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless LAN Module
Model No.	:	BM72065
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 3.3 V
Receipt Date of Sample	:	September 20, 2016
Country of Mass-production	:	Japan
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No Modification by the test lab.

2.2 Product Description

Model: BM72065 (referred to as the EUT in this report) is a Wireless LAN Module.

General Specification

Clock frequency(ies) in the system : 38.4 MHz

Radio Specification

Equipment type : Transceiver

WLAN (IEEE802.11b/g/a/n-20/n-40)

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 - 5320 MHz 5500 MHz - 5700 MHz 5745 MHz - 5825 MHz	2412 MHz - 2462 MHz 5180 MHz - 5320 MHz 5500 MHz - 5700 MHz 5745 MHz - 5825 MHz	2422 MHz - 2452 MHz 5190 MHz - 5310 MHz 5510 MHz - 5670 MHz 5755 MHz - 5795 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	40 MHz
Antenna type	Balance Antenna				
Antenna gain	2.4 GHz ~ 2.5 GHz : 3.0 dBi, 5.15 GHz ~ 5.85 GHz: 4.5 dBi				
Antenna connector type	U.FL connector				
Operating temperature	0 deg. C - +50 deg. C				

Remarks: This Wireless Module consists of 1 chip each of 5 GHz band and 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 November 14, 2016 and effective December 14, 2016
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements

* The revision on November 14, 2016, does not affect the test specification applied to the EUT.

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (b) (6) / 15.207	19.3 dB, 0.40136 MHz, N QP, Tx 5670 MHz, 11n-40	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	7.0 dB 10480.000 MHz, AV, Vertical, Tx 5240 MHz, Tx 11n-20	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 11355752S-R 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 RF Module has its own regulator. The RF Module is constantly provided voltage (DC 1.8 V and DC 3.0 V) through the regulator regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement
The EUT has a unique coupling/antenna connector (U.FL). Therefore the equipment complies with the requirement.

3.3 Addition to standard

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

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

3.4 Uncertainty

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
Power Measurement above 1 GHz (Average Detector)_SPM-07	0.74 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-07	1.08 dB
Spurious emission (Conducted) below 1GHz	1.5 dB
Spurious emission (Conducted) 1 GHz-3 GHz	1.7 dB
Spurious emission (Conducted) 3 GHz-18 GHz	2.4 dB
Spurious emission (Conducted) 18 GHz-26.5 GHz	2.5 dB
Spurious emission (Conducted) 26.5 GHz-40 GHz	2.5 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)	9 Mbps, PN9
IEEE 802.11n 20 MHz BW (11n-20)	MCS 0, PN9
IEEE 802.11n 40 MHz BW (11n-40)	MCS 0, PN9
*The worst condition was determined based on the test result of Maximum Peak Output Power (Mid Channel)	
Power settings: 11a = 11 dBm, 11n-20 = 11 dBm, 11n-40 = 11 dBm Software: DUT Labtool ver 1.0.7.13	

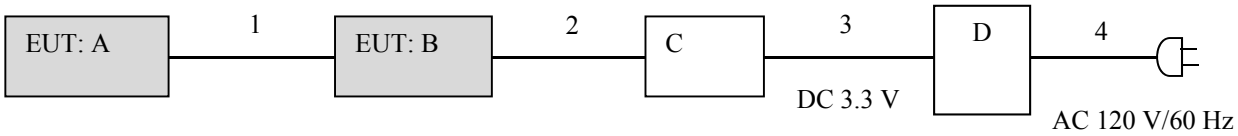
*Transmitting duty was 100 % on all tests.

*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 *1)	Tx, 11n-40	-	-	5670 MHz	-
26 dB Emission Bandwidth	Tx, 11a, Tx, 11n-20	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	Tx, 11n-40	-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
99 % Occupied Bandwidth, Maximum Conducted Output Power, Maximum Power Spectral Density	Tx, 11a, Tx, 11n-20	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	Tx, 11n-40	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
20 dB Bandwidth	Tx, 11a, Tx, 11n-20	5240 MHz	-	-	-
	Tx, 11n-40	5230 MHz	-	-	-
6 dB Bandwidth	Tx, 11a, Tx, 11n-20	-	-	-	5745 MHz 5785 MHz 5825 MHz
	Tx, 11n-40	-	-	-	5755 MHz 5795 MHz
Radiated Spurious Emission (Above 1 GHz)	Tx, 11n-20	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	Tx, 11n-40	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.

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 and support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	2.4-5G dual band antenna	146153-100	-	MOLEX	EUT
B	Wireless LAN Module	BM72065	60128BCC1E18	Canon	EUT
C	Jig	-	-	-	-
D	DC Power Supply	PAN35-10A	NA000955	Kikusui	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Antenna	0.1	Unshielded	Unshielded	-
2	Flat	0.07	Unshielded	Unshielded	-
3	DC	1.5	Unshielded	Unshielded	-
4	DC	1.8	Unshielded	Unshielded	-

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity.
The rear of tabletop was located 40 cm 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 80 cm 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).

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

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

Outside of the restricted bands:
Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) in the Section 15.407 (b) (1) (2) (3).
Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) or
105.2 dBuV/m, 3 m (10 dBm e.i.r.p.*) or 110.8 dBuV/m, 3 m (15.6 dBm e.i.r.p.*) or
122.2 dBuV/m, 3 m (27 dBm e.i.r.p.*) in the Section 15.407 (b) (4).

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

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

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

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	Method VB *1) RBW: 1 MHz VBW: 10 Hz Detector: Volt Averaging (CISPR Peak)
Test Distance	3 m	3.94 m*2) (1 GHz – 13 GHz), 1 m*3) (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 April 8, 2016)".
*2) Distance Factor: 20 x log (3.94 m/3.0 m) = 2.37 dB
*3) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.5 dB

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

EUT	Antenna polarization	Carrier (Band edge)	Spurious					
			Below 1 GHz	Above 1 GHz				
				1 GHz -6.4 GHz	6.4 GHz -13 GHz	13 GHz -18 GHz	18 GHz - 26.5 GHz	26.5 GHz - 40 GHz
Module	Horizontal	Z	X	Z	X	X	X	X
	Vertical	Z	X	Z	X	X	X	X
Antenna	Horizontal	X	X	X	X	X	X	X
	Vertical	Y	X	Y	X	X	X	X

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

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

SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used and Test method
26 dB Bandwidth	Enough to capture the emission	Close to 1 % of EBW	> RBW	Auto	Peak	Max Hold	Spectrum Analyzer
99 % Occupied Bandwidth *1)	Enough width to display emission skirts	1 % to 5 % of OBW	≥ 3 RBW	Auto	Peak	Max Hold	Spectrum Analyzer
20 dB Bandwidth	Enough to capture the emission	Close to 1 % of EBW	> RBW	Auto	Peak	Max Hold	Spectrum Analyzer
6 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Maximum Conducted Output Power	-	-	-	Auto	Average	-	Power Meter (Sensor: 80 MHz BW) (Method PM-G)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 100 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (100 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3)	9 kHz – 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz – 30 MHz	10 kHz	30 kHz				

* The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r02 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on April 8, 2016)".

*1) Peak hold was applied as Worst-case measurement.
*2) KDB 789033 D02 says that RBW is set to be 500 kHz for 5.725 GHz-5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor (10 log(500 kHz / 1000 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

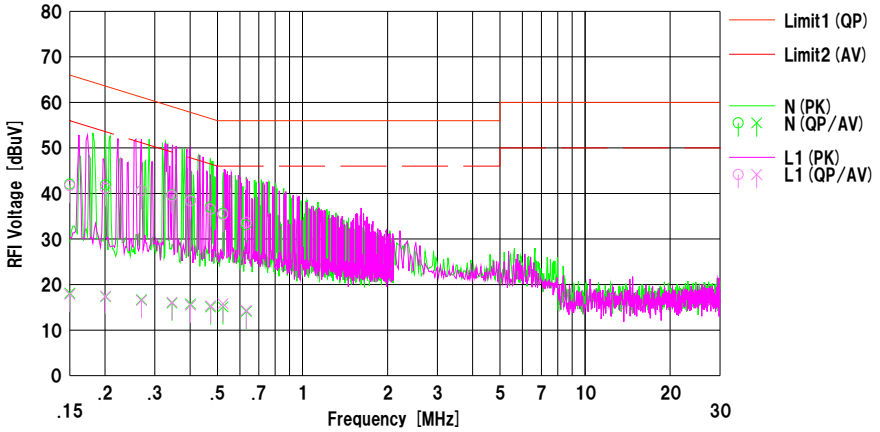
UL Japan, Inc. Shonan EMC Lab. No.1 Shielded Room
Date : 2016/10/13

Mode : Tx_11n40_5670 MHz

Power : DC 3.3 V
Temp./Humi. : 22 deg.C / 54 %RH

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

Engineer : Takahiro Suzuki



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	29.61	5.69	12.43	42.04	18.12	66.00	56.00	23.9	37.8	N	
2	0.20093	29.43	4.91	12.43	41.86	17.34	63.57	53.57	21.7	36.2	N	
3	0.26920	28.08	4.25	12.44	40.52	16.69	61.14	51.14	20.6	34.4	N	
4	0.34507	27.18	3.49	12.45	39.63	15.94	59.08	49.08	19.4	33.1	N	
5	0.40136	26.03	3.27	12.47	38.50	15.74	57.83	47.83	19.3	32.0	N	
6	0.47254	24.54	2.62	12.47	37.01	15.09	56.47	46.47	19.4	31.3	N	
7	0.52300	23.17	2.64	12.47	35.64	15.11	56.00	46.00	20.3	30.8	N	
8	0.63289	20.57	1.62	12.50	33.07	14.12	56.00	46.00	22.9	31.8	N	
9	0.15000	29.29	5.41	12.43	41.72	17.84	66.00	56.00	24.2	38.1	L1	
10	0.20093	28.68	5.03	12.43	41.11	17.46	63.57	53.57	22.4	36.1	L1	
11	0.26920	28.11	4.09	12.44	40.55	16.53	61.14	51.14	20.5	34.6	L1	
12	0.34507	27.03	3.68	12.45	39.48	16.13	59.08	49.08	19.6	32.9	L1	
13	0.40136	25.89	2.99	12.47	38.36	15.46	57.83	47.83	19.4	32.3	L1	
14	0.47254	24.05	2.91	12.47	36.52	15.38	56.47	46.47	19.9	31.0	L1	
15	0.52300	22.89	3.32	12.47	35.36	15.79	56.00	46.00	20.6	30.2	L1	
16	0.63289	21.13	1.85	12.50	33.63	14.35	56.00	46.00	22.3	31.6	L1	

Calculation:Result [dBuV] =Reading [dBuV] +C.Fac (LISN+Cable+ATT) [dB]
LISN: SLS-01

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11a

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	17.090	-
5220	-	17.131	-
5240	-	17.106	-
5260	19.643	17.153	-
5300	19.867	17.112	-
5320	19.717	17.099	-
5500	19.711	17.196	-
5580	19.591	17.136	-
5700	19.515	17.112	-
5745	-	17.150	-
5785	-	17.112	-
5825	-	17.181	-

11n-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5180	-	18.004	-
5220	-	18.035	-
5240	-	18.011	-
5260	20.149	18.029	-
5300	20.107	18.011	-
5320	19.904	17.998	-
5500	19.947	18.010	-
5580	20.041	17.993	-
5700	19.999	18.012	-
5745	-	18.012	-
5785	-	17.990	-
5825	-	17.966	-

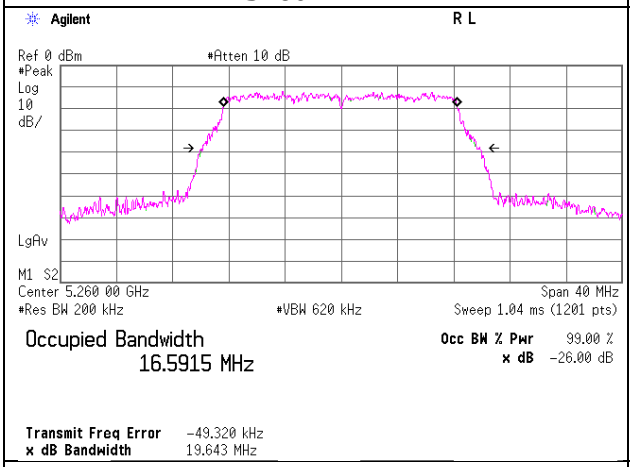
11n-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [MHz]	Limit [MHz]
5190	-	36.505	-
5230	-	36.578	-
5270	39.875	36.621	-
5310	40.304	36.550	-
5510	40.458	36.563	-
5550	40.212	36.637	-
5670	40.150	36.556	-
5755	-	36.540	-
5795	-	36.549	-

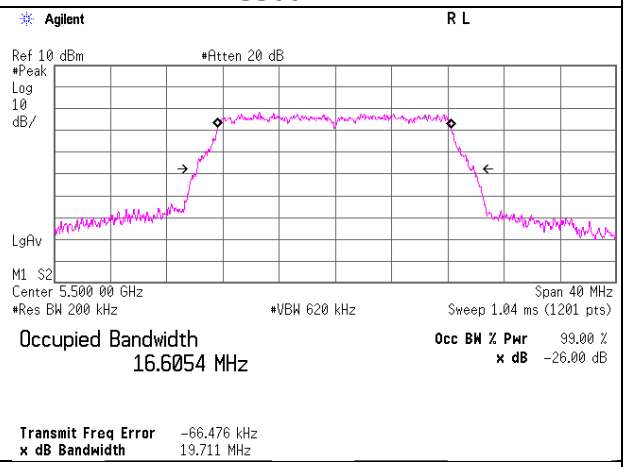
26 dB Emission Bandwidth

11a

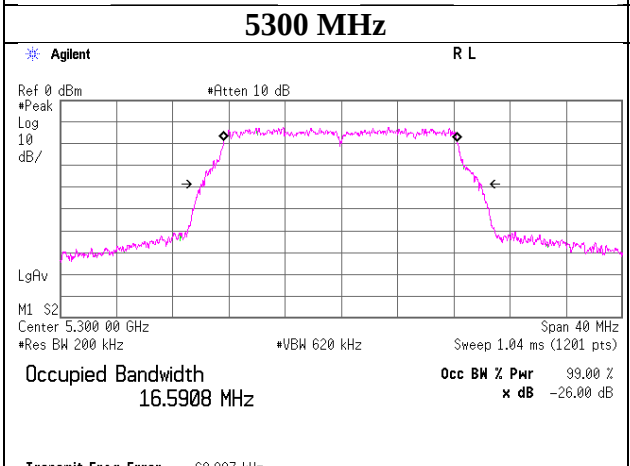
5260 MHz



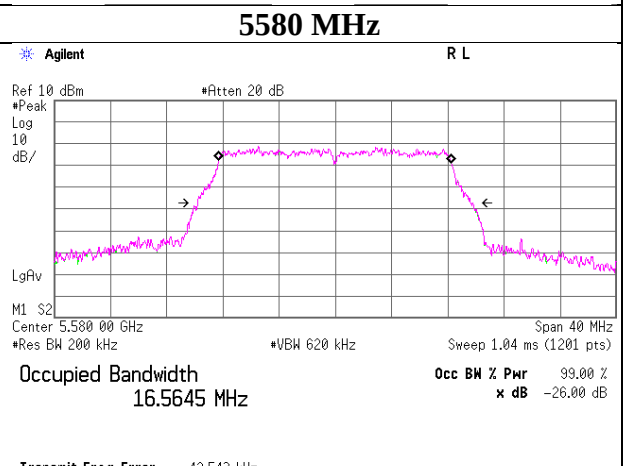
5500 MHz



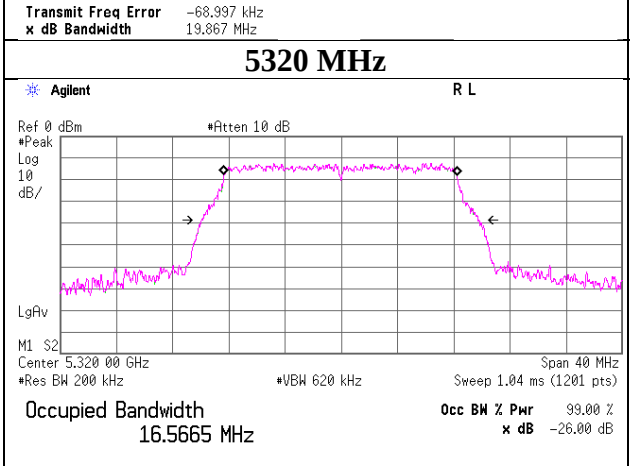
5300 MHz



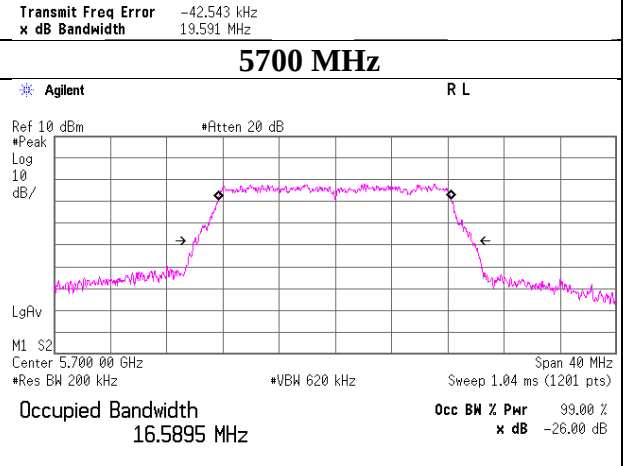
5580 MHz



5320 MHz



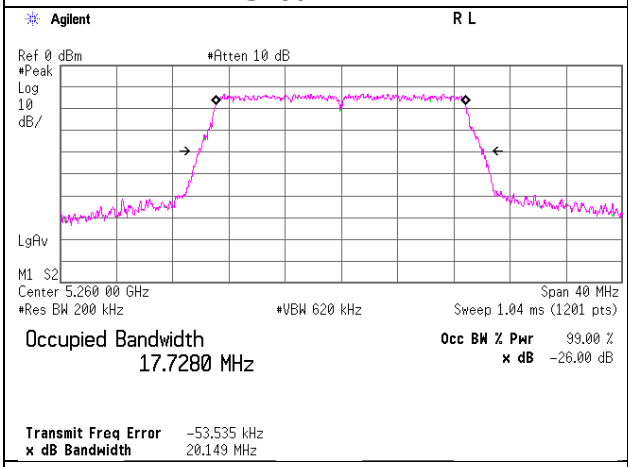
5700 MHz



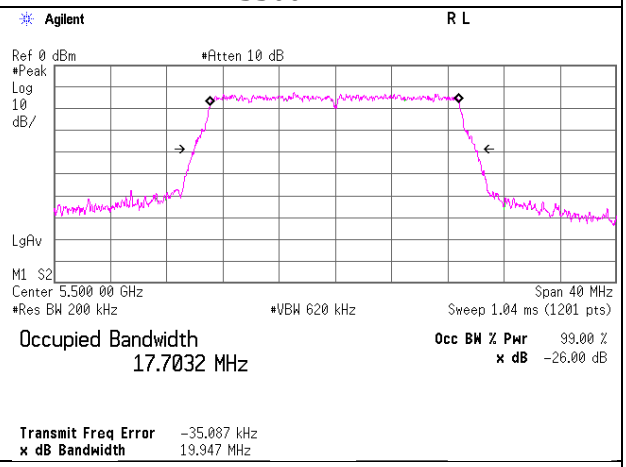
26 dB Emission Bandwidth

11n-20

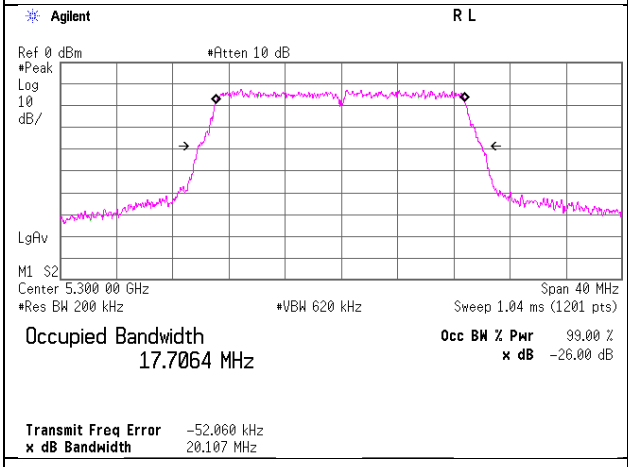
5260 MHz



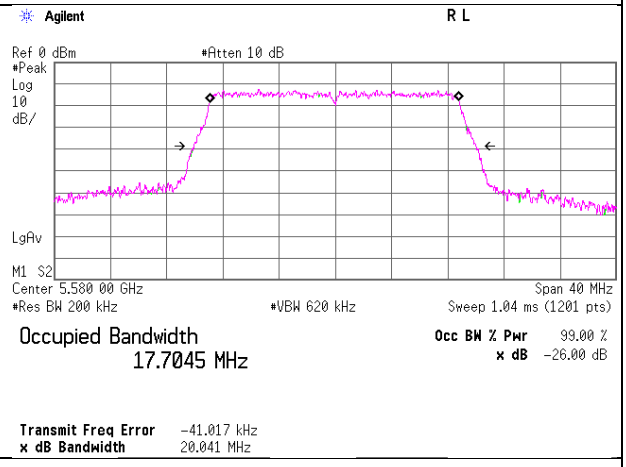
5500 MHz



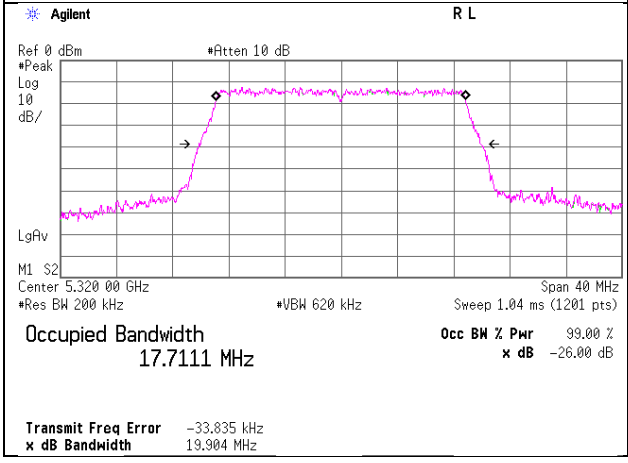
5300 MHz



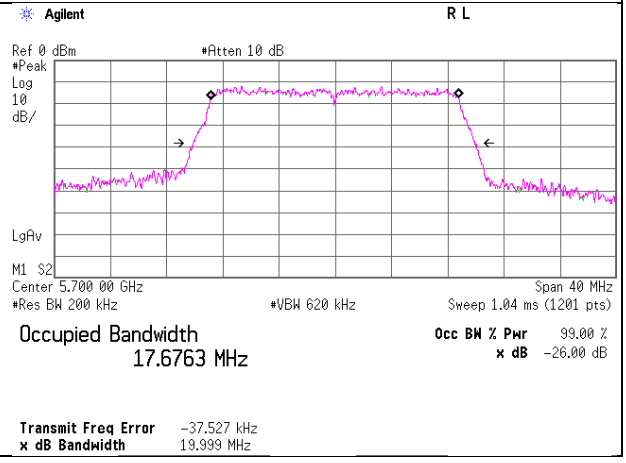
5580 MHz



5320 MHz



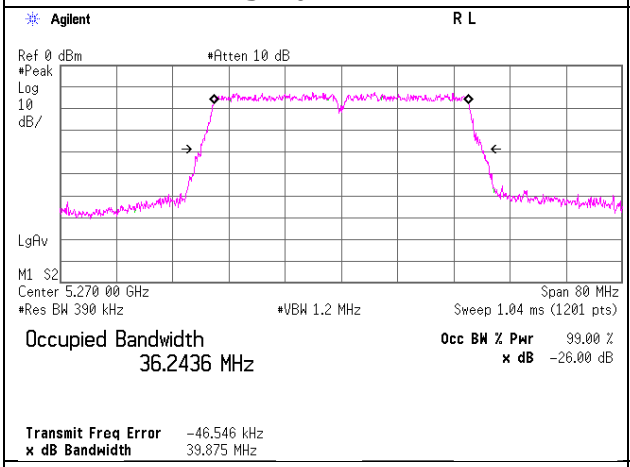
5700 MHz



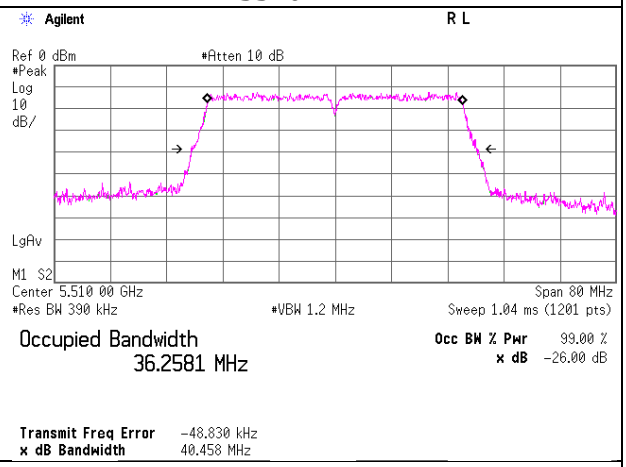
26 dB Emission Bandwidth

11n-40

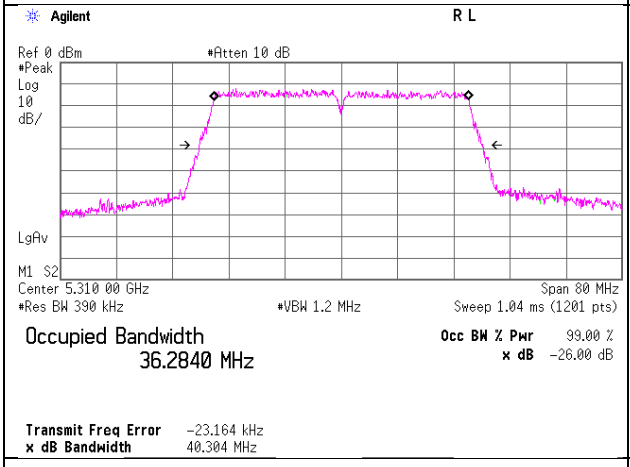
5270 MHz



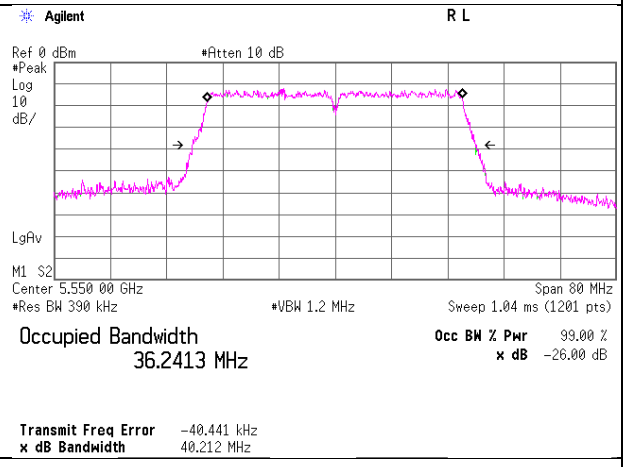
5510 MHz



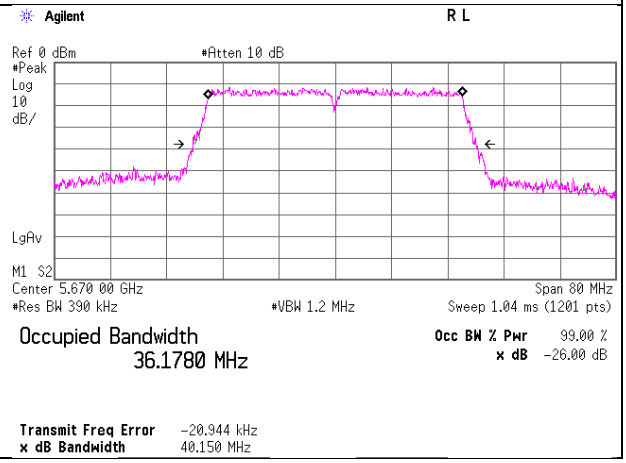
5310 MHz



5550 MHz



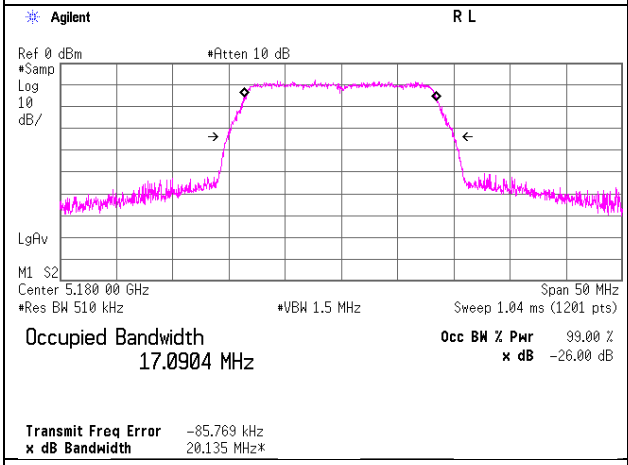
5670 MHz



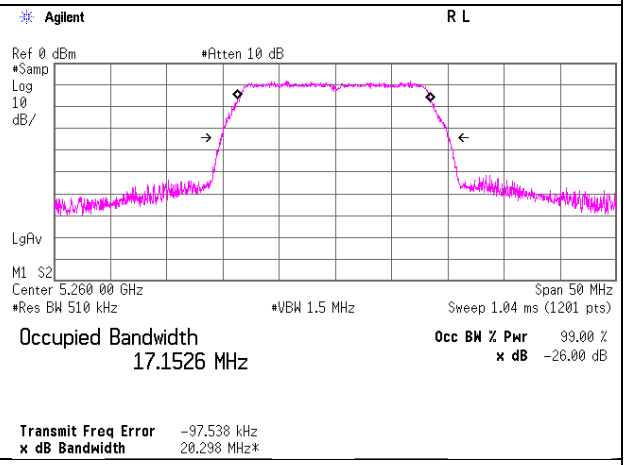
99 % Occupied Bandwidth

11a

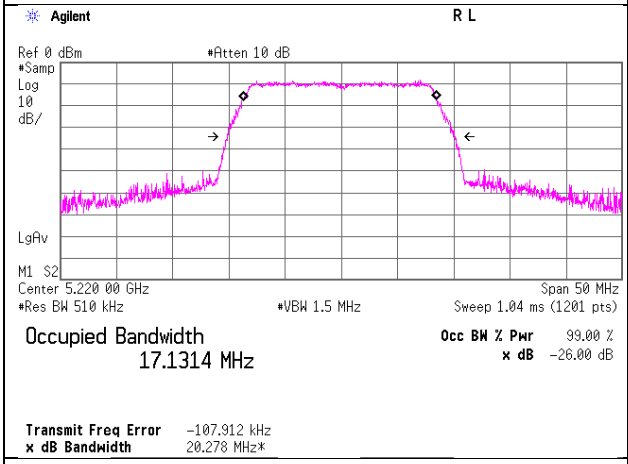
5180 MHz



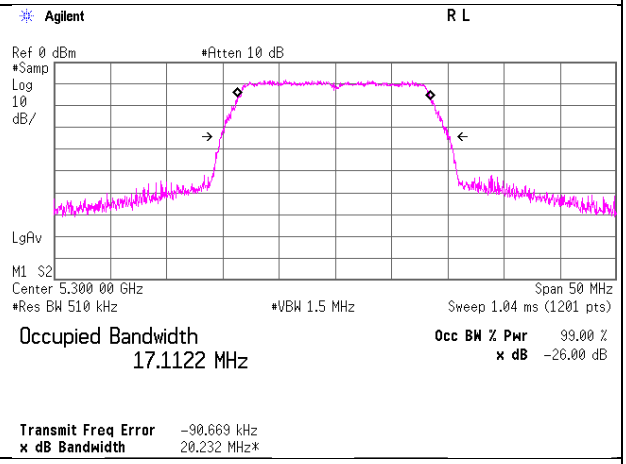
5260 MHz



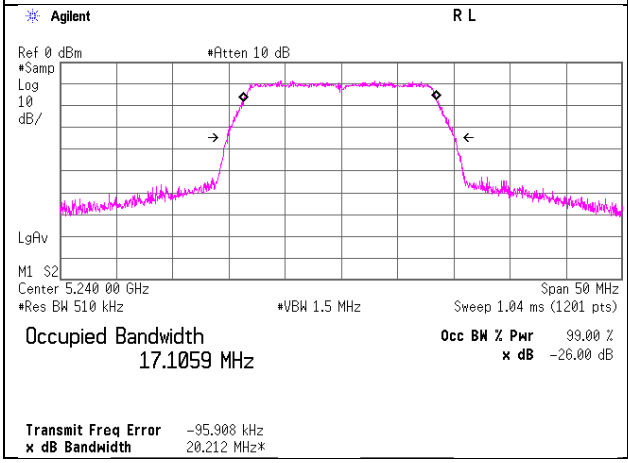
5220 MHz



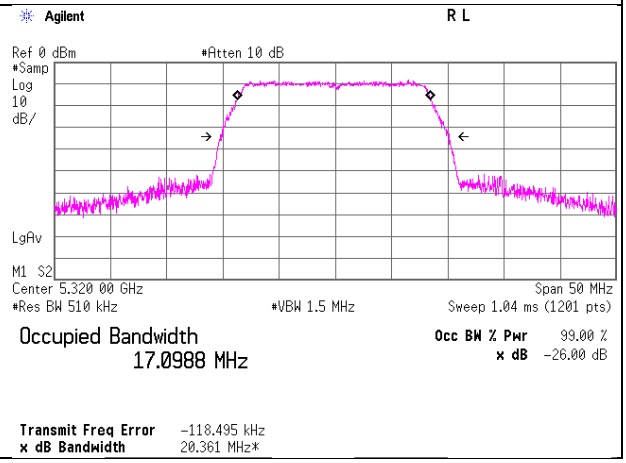
5300 MHz



5240 MHz



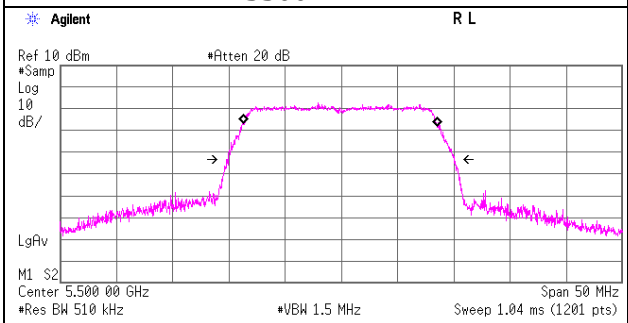
5320 MHz



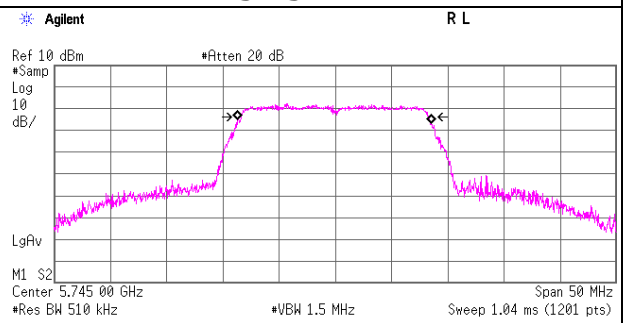
99 % Occupied Bandwidth

11a

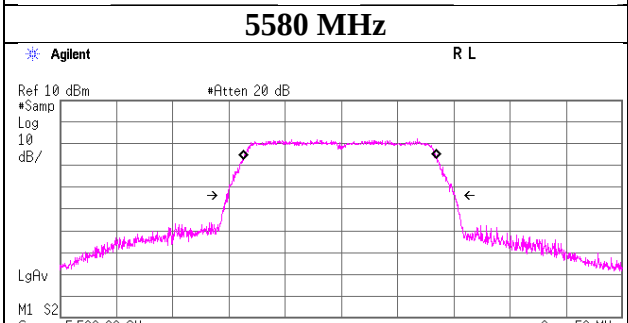
5500 MHz



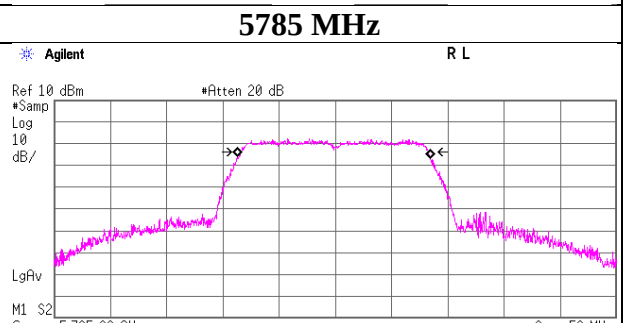
5745 MHz



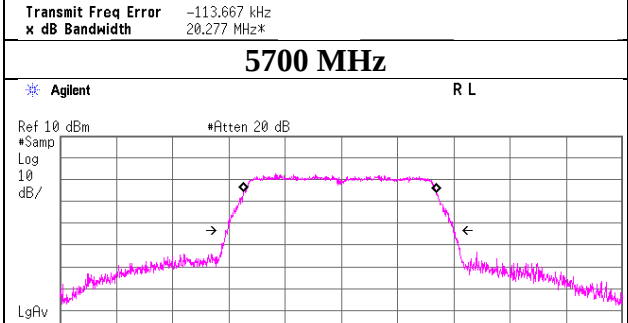
5580 MHz



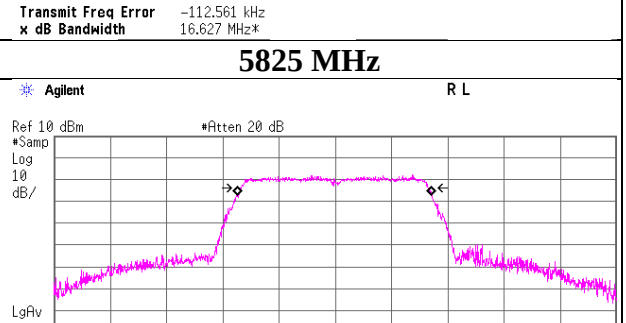
5785 MHz



5700 MHz



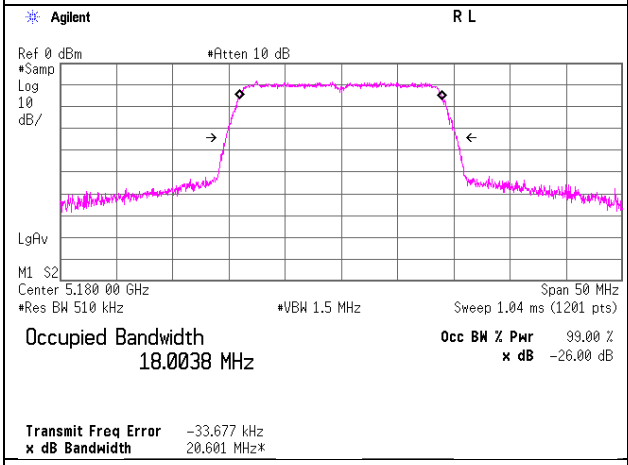
5825 MHz



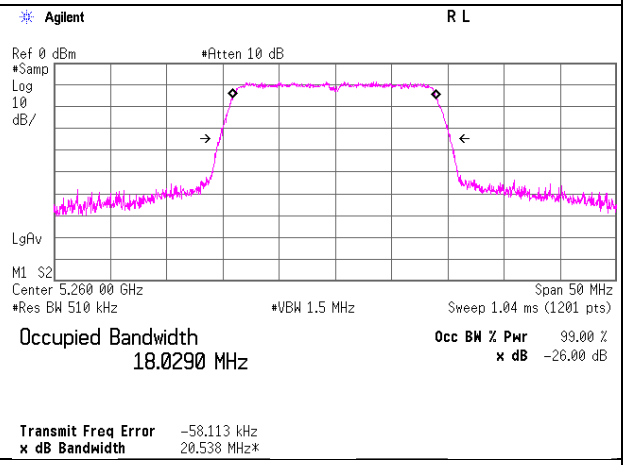
99 % Occupied Bandwidth

11n-20

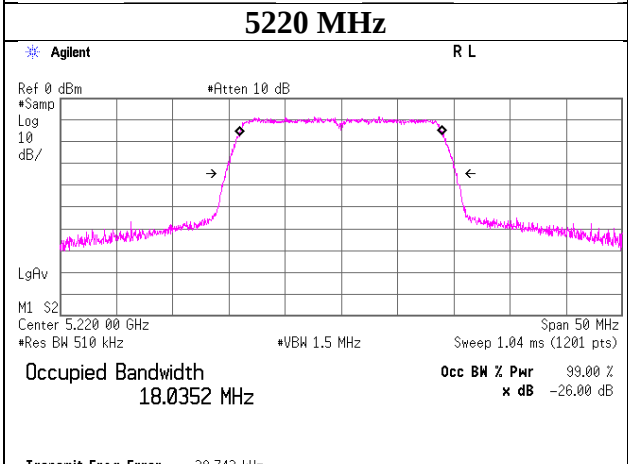
5180 MHz



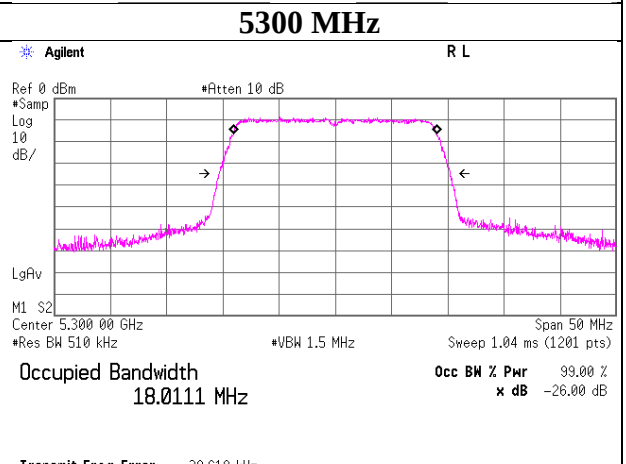
5260 MHz



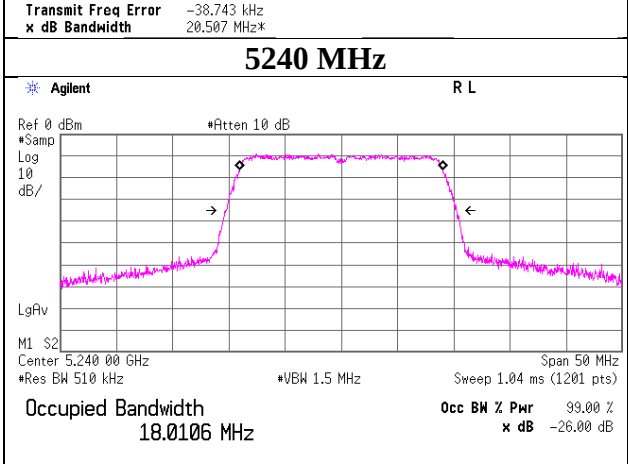
5220 MHz



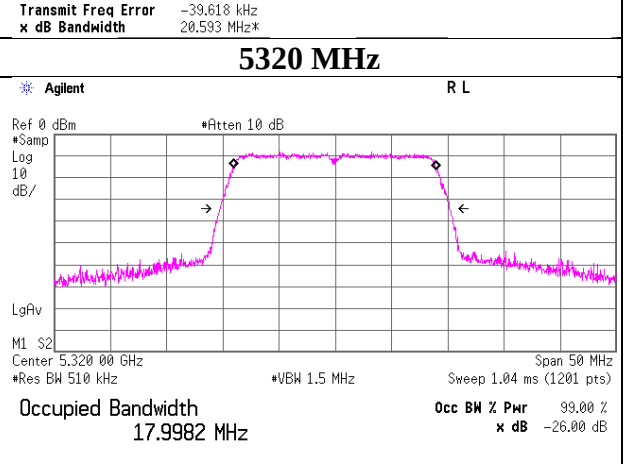
5300 MHz



5240 MHz



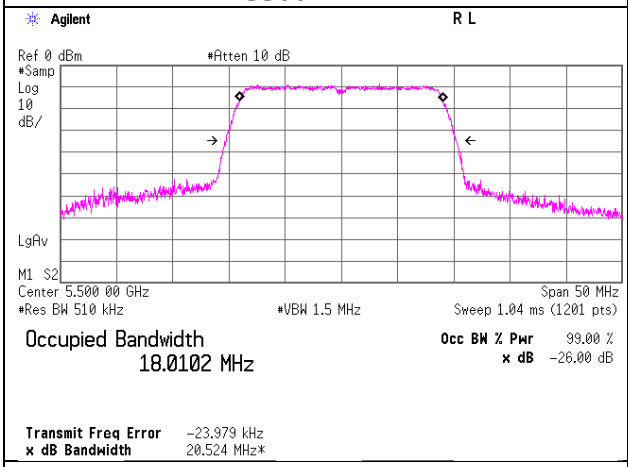
5320 MHz



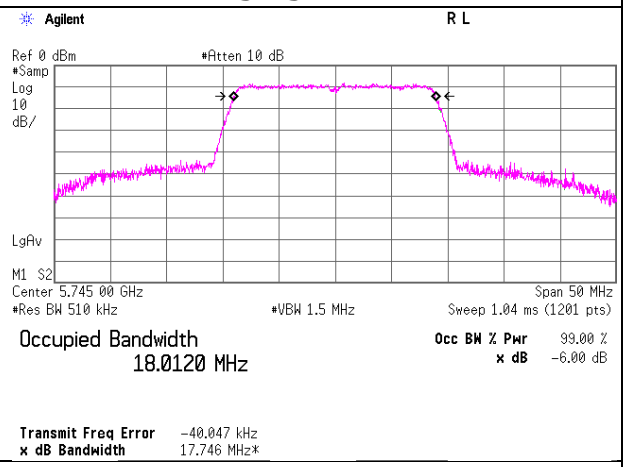
99 % Occupied Bandwidth

11n-20

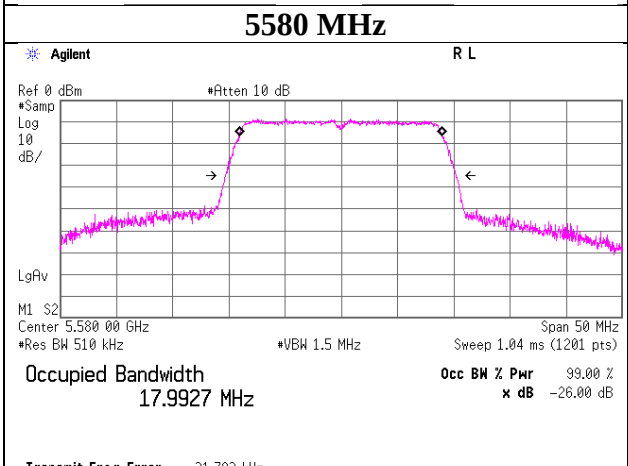
5500 MHz



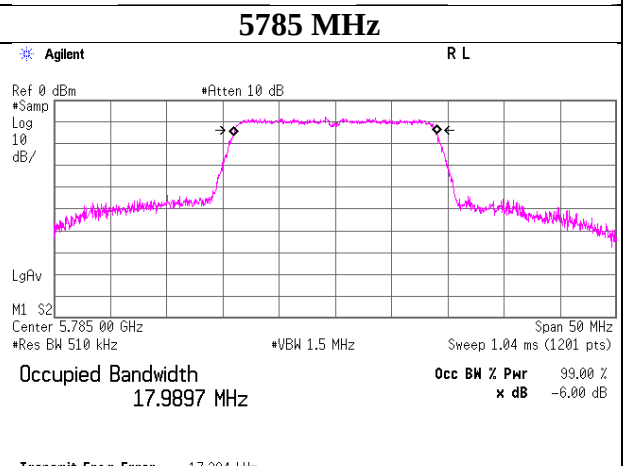
5745 MHz



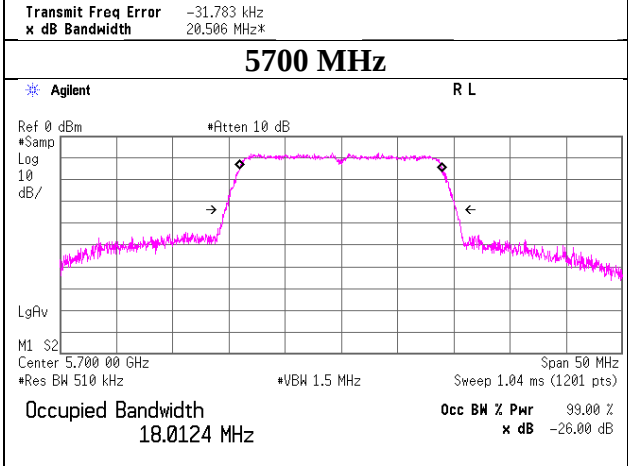
5580 MHz



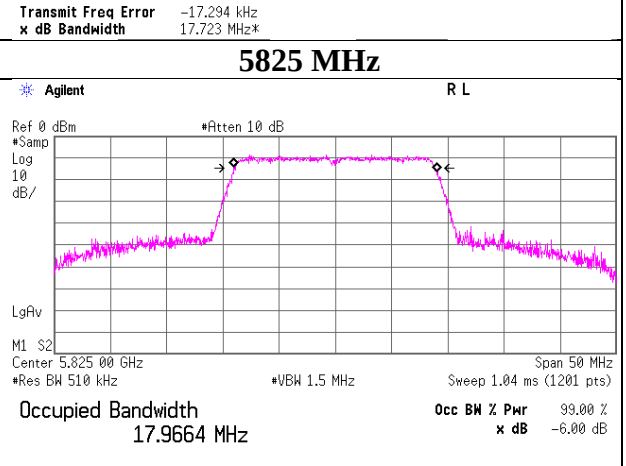
5785 MHz



5700 MHz



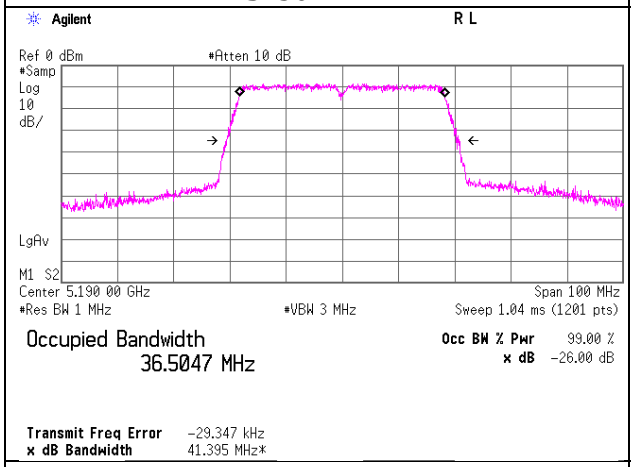
5825 MHz



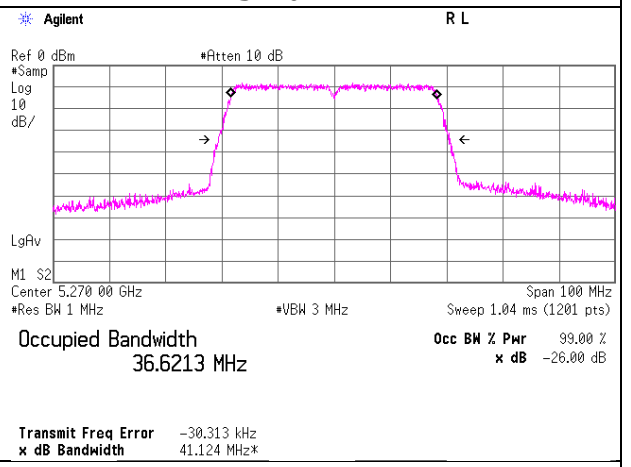
99 % Occupied Bandwidth

11n-40

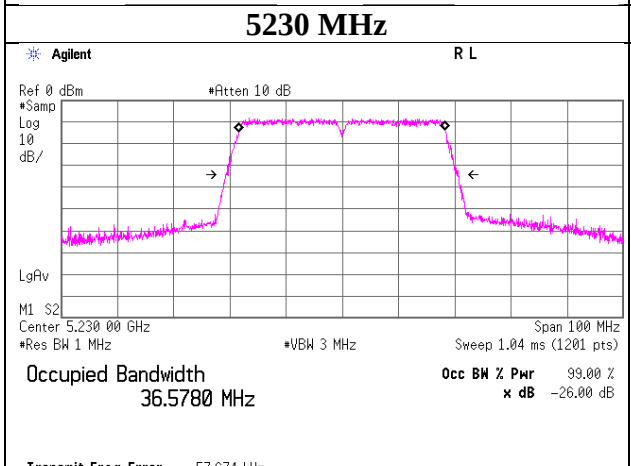
5190 MHz



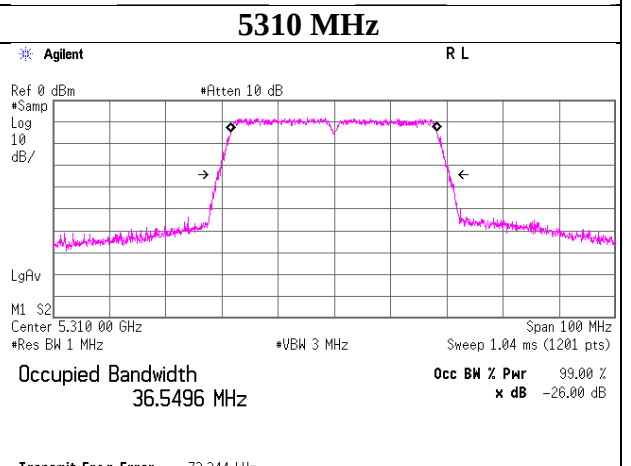
5270 MHz



5230 MHz



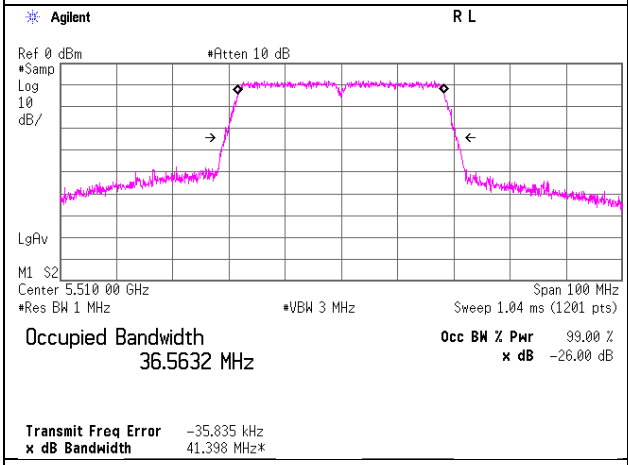
5310 MHz



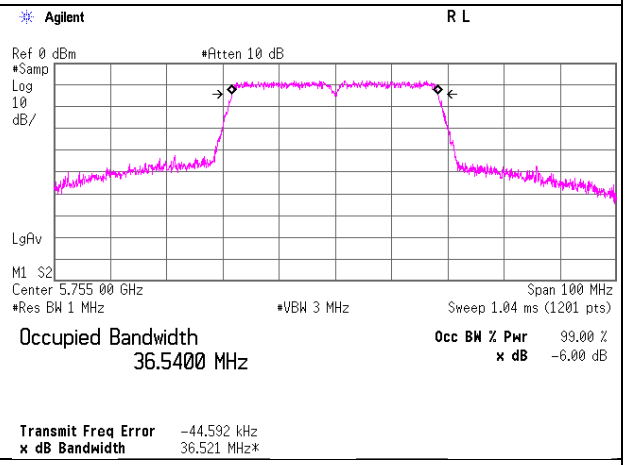
99 % Occupied Bandwidth

11n-40

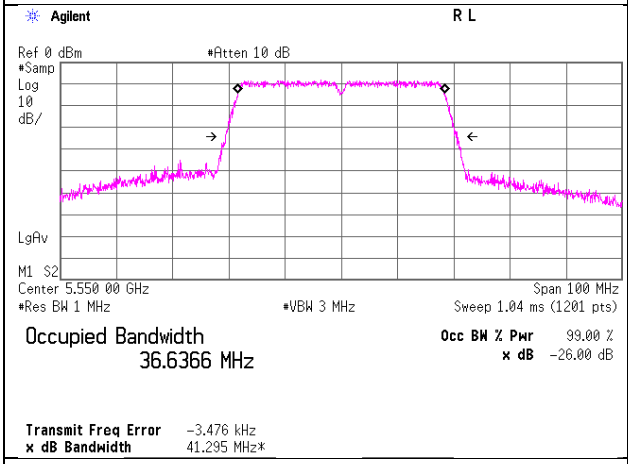
5510 MHz



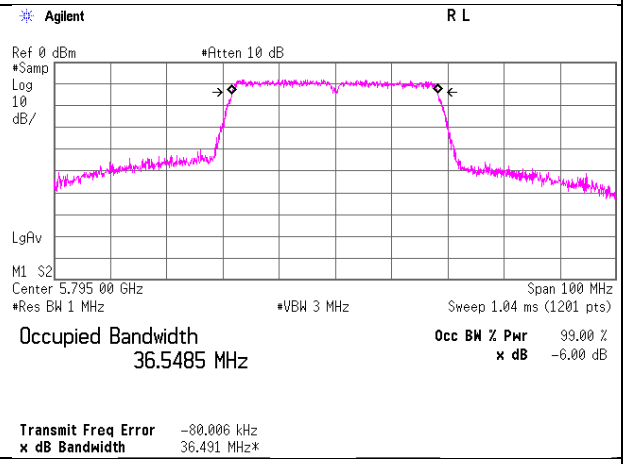
5755 MHz



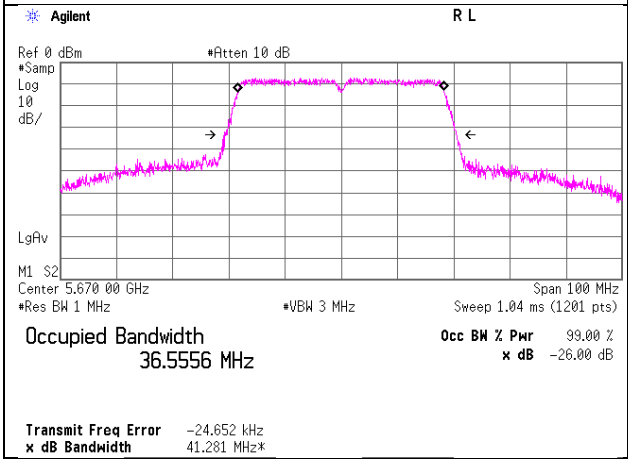
5550 MHz



5795 MHz



5670 MHz



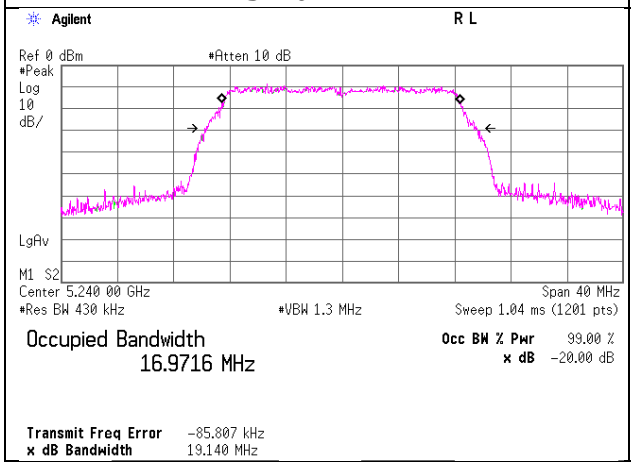
20 dB Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

Mode	Tested Frequency [MHz]	20 dB Emission Bandwidth [MHz]
11a	5240	19.140
11n-20	5240	19.708
11n-40	5230	39.761

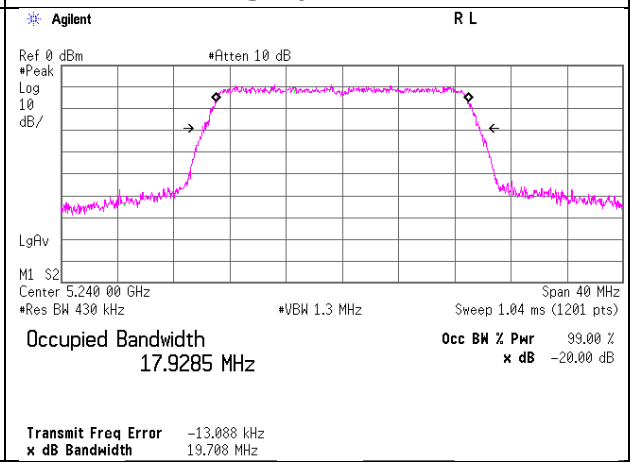
11a

5240 MHz



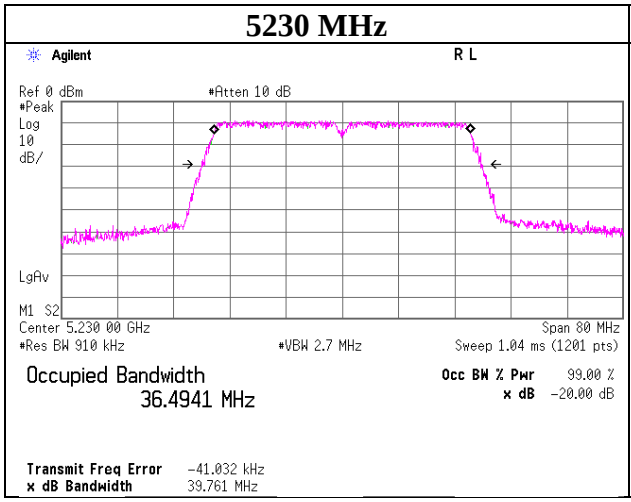
11n-20

5240 MHz



11n-40

5230 MHz



6 dB Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11a

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	16.609	> 500
5785	16.614	> 500
5825	16.590	> 500

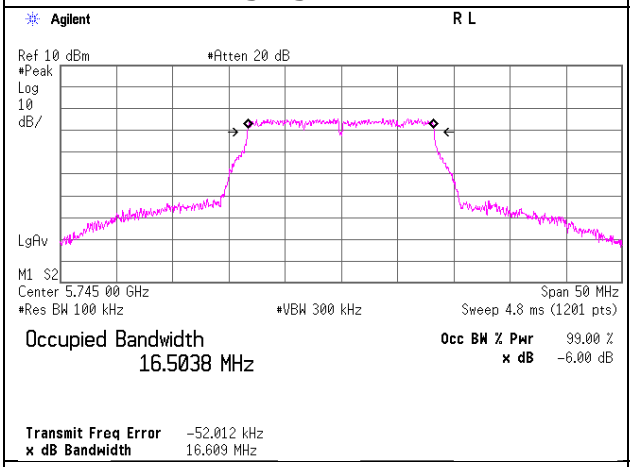
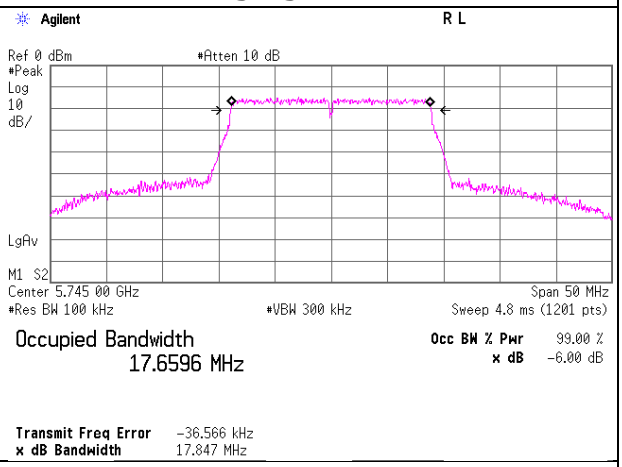
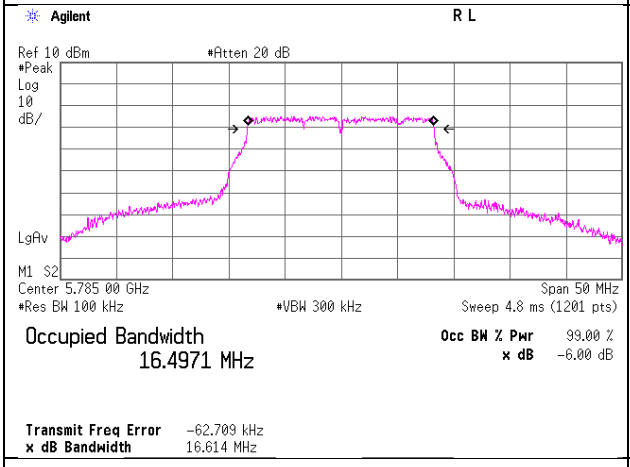
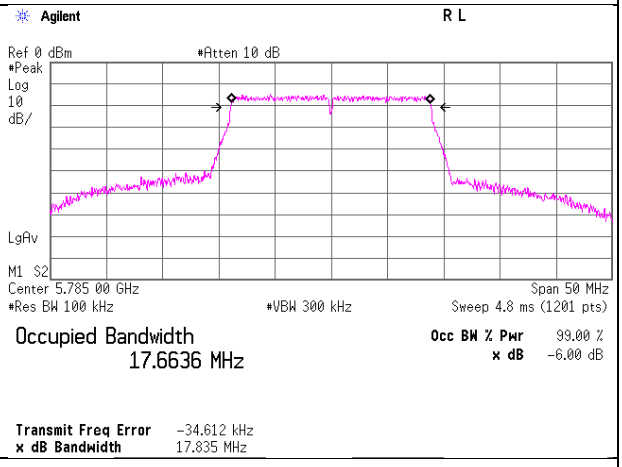
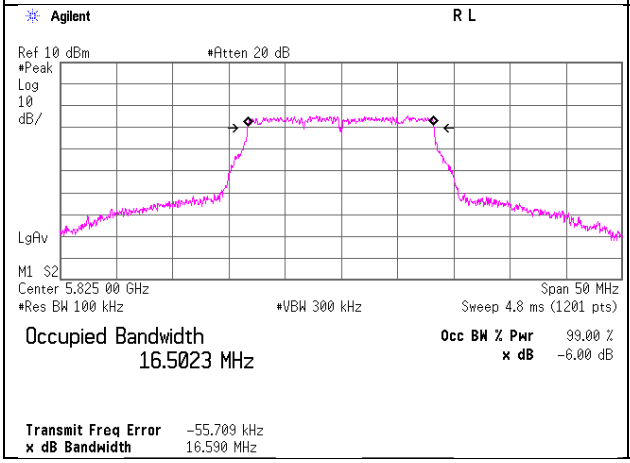
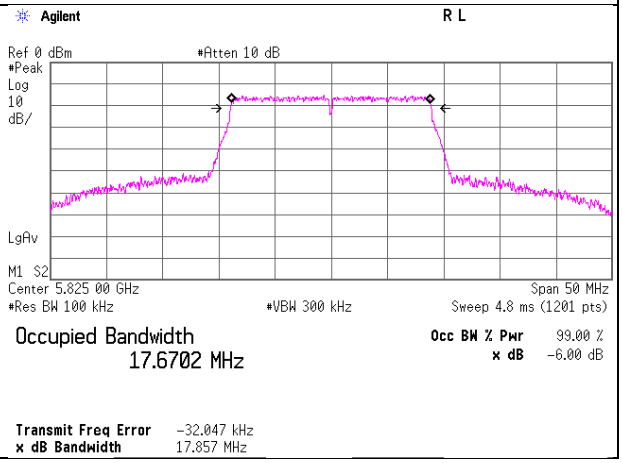
11n-20

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5745	17.847	> 500
5785	17.835	> 500
5825	17.857	> 500

11n-40

Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [kHz]
5755	36.624	> 500
5795	36.602	> 500

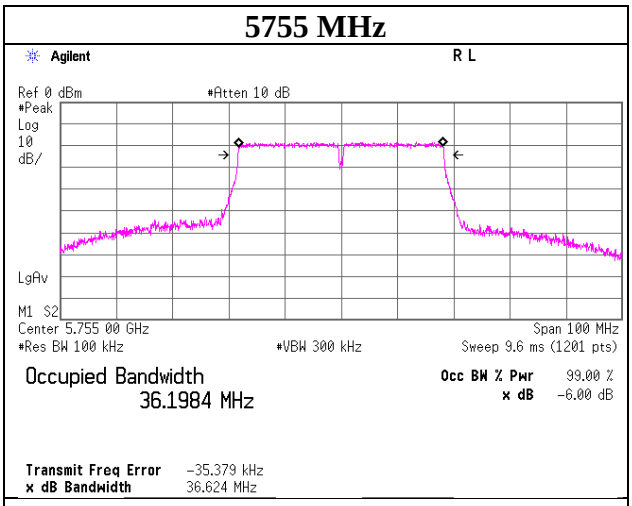
6 dB Bandwidth

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

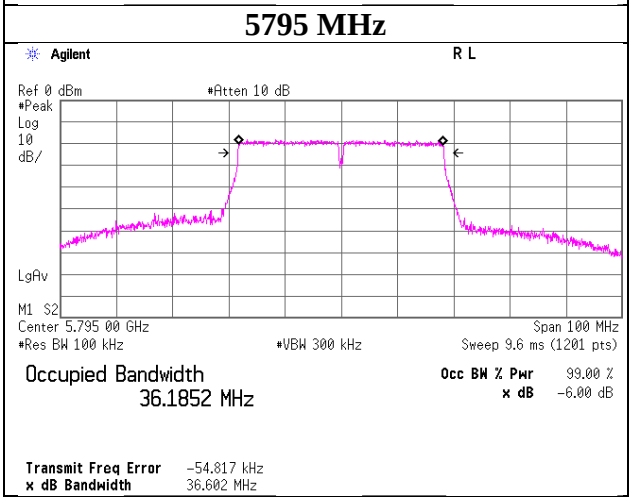
6 dB Bandwidth

11n-40

5755 MHz



5795 MHz



Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 20, 2016
Temperature / Humidity	24 deg. C / 54 % 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 Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-0.38	2.61	9.69	0.00	4.5	-	17.090	11.92	15.56	23.97	12.05	16.42	43.85	29.97	13.55
5220	-0.41	2.62	9.69	0.00	4.5	-	17.131	11.90	15.49	23.97	12.07	16.40	43.65	29.97	13.57
5240	-0.55	2.64	9.69	0.00	4.5	-	17.106	11.78	15.07	23.97	12.19	16.28	42.46	29.97	13.69
5260	-0.43	2.66	9.68	0.00	4.5	19.643	17.153	11.91	15.52	23.93	12.02	16.41	43.75	29.97	13.56
5300	-0.46	2.67	9.68	0.00	4.5	19.867	17.112	11.89	15.45	23.97	12.08	16.39	43.55	29.97	13.58
5320	-0.42	2.69	9.68	0.00	4.5	19.717	17.099	11.95	15.67	23.94	11.99	16.45	44.16	29.97	13.52
5500	-0.09	2.57	9.68	0.00	4.5	19.711	17.196	12.16	16.44	23.94	11.78	16.66	46.34	29.97	13.31
5580	-0.05	2.61	9.68	0.00	4.5	19.591	17.136	12.24	16.75	23.92	11.68	16.74	47.21	29.97	13.23
5700	0.15	2.65	9.69	0.00	4.5	19.515	17.112	12.49	17.74	23.90	11.41	16.99	50.00	29.97	12.98
5745	0.02	2.67	9.69	0.00	4.5	-	-	12.38	17.30	30.00	17.62	16.88	48.75	36.00	19.12
5785	0.00	2.69	9.69	0.00	4.5	-	-	12.38	17.30	30.00	17.62	16.88	48.75	36.00	19.12
5825	-0.18	2.72	9.69	0.00	4.5	-	-	12.23	16.71	30.00	17.77	16.73	47.10	36.00	19.27

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 20, 2016
Temperature / Humidity	24 deg. C / 54 % 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	-0.37	2.61	9.69	0.00	4.5	-	18.004	11.93	15.60	23.97	12.04	16.43	43.95	29.97	13.54
5220	-0.32	2.62	9.69	0.00	4.5	-	18.035	11.99	15.81	23.97	11.98	16.49	44.57	29.97	13.48
5240	-0.56	2.64	9.69	0.00	4.5	-	18.011	11.77	15.03	23.97	12.20	16.27	42.36	29.97	13.70
5260	-0.41	2.66	9.68	0.00	4.5	20.149	18.029	11.93	15.60	23.97	12.04	16.43	43.95	29.97	13.54
5300	-0.38	2.67	9.68	0.00	4.5	20.107	18.011	11.97	15.74	23.97	12.00	16.47	44.36	29.97	13.50
5320	-0.42	2.69	9.68	0.00	4.5	19.904	17.998	11.95	15.67	23.97	12.02	16.45	44.16	29.97	13.52
5500	-0.10	2.57	9.68	0.00	4.5	19.947	18.010	12.15	16.41	23.97	11.82	16.65	46.24	29.97	13.32
5580	-0.10	2.61	9.68	0.00	4.5	20.041	17.993	12.19	16.56	23.97	11.78	16.69	46.67	29.97	13.28
5700	0.12	2.65	9.69	0.00	4.5	19.999	18.012	12.46	17.62	23.97	11.51	16.96	49.66	29.97	13.01
5745	0.10	2.67	9.69	0.00	4.5	-	-	12.46	17.62	30.00	17.54	16.96	49.66	36.00	19.04
5785	-0.04	2.69	9.69	0.00	4.5	-	-	12.34	17.14	30.00	17.66	16.84	48.31	36.00	19.16
5825	-0.16	2.72	9.69	0.00	4.5	-	-	12.25	16.79	30.00	17.75	16.75	47.32	36.00	19.25

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 20, 2016
Temperature / Humidity	24 deg. C / 54 % 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 Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-0.45	2.61	9.69	0.00	4.5	-	36.505	11.85	15.31	23.97	12.12	16.35	43.15	29.97	13.62
5230	-0.45	2.62	9.69	0.00	4.5	-	36.578	11.86	15.35	23.97	12.11	16.36	43.25	29.97	13.61
5270	-0.51	2.66	9.68	0.00	4.5	39.875	36.621	11.83	15.24	23.97	12.14	16.33	42.95	29.97	13.64
5310	-0.60	2.67	9.68	0.00	4.5	40.304	36.550	11.75	14.96	23.97	12.22	16.25	42.17	29.97	13.72
5510	-0.15	2.58	9.68	0.00	4.5	40.458	36.563	12.11	16.26	23.97	11.86	16.61	45.81	29.97	13.36
5550	-0.24	2.59	9.68	0.00	4.5	40.212	36.637	12.03	15.96	23.97	11.94	16.53	44.98	29.97	13.44
5670	0.52	2.64	9.69	0.00	4.5	40.150	36.556	12.85	19.28	23.97	11.12	17.35	54.33	29.97	12.62
5755	-0.08	2.68	9.69	0.00	4.5	-	-	12.29	16.94	30.00	17.71	16.79	47.75	36.00	19.21
5795	-0.20	2.70	9.69	0.00	4.5	-	-	12.19	16.56	30.00	17.81	16.69	46.67	36.00	19.31

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 20, 2016
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Shinichi Takano
Mode	Tx

5220 MHz

Mode	Rate Mbps	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11a	6	-0.47	0.00	-0.47	
	9	-0.41	0.00	-0.41	*
	12	-0.43	0.00	-0.43	
	18	-0.42	0.00	-0.42	
	24	-0.46	0.00	-0.46	
	36	-0.50	0.00	-0.50	
	48	-0.49	0.00	-0.49	
	54	-0.50	0.00	-0.50	

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

5220 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-20	0	-0.32	0.00	-0.32	*
	1	-0.36	0.00	-0.36	
	2	-0.34	0.00	-0.34	
	3	-0.37	0.00	-0.37	
	4	-0.38	0.00	-0.38	
	5	-0.36	0.00	-0.36	
	6	-0.38	0.00	-0.38	
	7	-0.35	0.00	-0.35	

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

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-40	0	-0.45	0.00	-0.45	*
	1	-0.46	0.00	-0.46	
	2	-0.49	0.00	-0.49	
	3	-0.51	0.00	-0.51	
	4	-0.50	0.00	-0.50	
	5	-0.49	0.00	-0.49	
	6	-0.47	0.00	-0.47	
	7	-0.50	0.00	-0.50	

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

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 20, 2016
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Shinichi Takano
Mode	Tx

11a

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5180	-0.38	2.61	9.69	11.92	15.56
5220	-0.41	2.62	9.69	11.90	15.49
5240	-0.55	2.64	9.69	11.78	15.07
5260	-0.43	2.66	9.68	11.91	15.52
5300	-0.46	2.67	9.68	11.89	15.45
5320	-0.42	2.69	9.68	11.95	15.67
5500	-0.09	2.57	9.68	12.16	16.44
5580	-0.05	2.61	9.68	12.24	16.75
5700	0.15	2.65	9.69	12.49	17.74
5745	0.02	2.67	9.69	12.38	17.30
5785	0.00	2.69	9.69	12.38	17.30
5825	-0.18	2.72	9.69	12.23	16.71

Sample Calculation:
Result (Timed average) = Reading + Cable Loss + Atten. Loss
*The equipment and cables were not used for factor 0 dB of the data sheets.

11n-20

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5180	-0.37	2.61	9.69	11.93	15.60
5220	-0.32	2.62	9.69	11.99	15.81
5240	-0.56	2.64	9.69	11.77	15.03
5260	-0.41	2.66	9.68	11.93	15.60
5300	-0.38	2.67	9.68	11.97	15.74
5320	-0.42	2.69	9.68	11.95	15.67
5500	-0.10	2.57	9.68	12.15	16.41
5580	-0.10	2.61	9.68	12.19	16.56
5700	0.12	2.65	9.69	12.46	17.62
5745	0.10	2.67	9.69	12.46	17.62
5785	-0.04	2.69	9.69	12.34	17.14
5825	-0.16	2.72	9.69	12.25	16.79

Sample Calculation:
Result (Timed average) = Reading + Cable Loss + Atten. Loss
*The equipment and cables were not used for factor 0 dB of the data sheets.

Average Output Power
(Reference data for RF Exposure)

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 20, 2016
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Shinichi Takano
Mode	Tx

11n-40

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Result (Timed average)	
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]
5190	-0.45	2.61	9.69	11.85	15.31
5230	-0.45	2.62	9.69	11.86	15.35
5270	-0.51	2.66	9.68	11.83	15.24
5310	-0.60	2.67	9.68	11.75	14.96
5510	-0.15	2.58	9.68	12.11	16.26
5550	-0.24	2.59	9.68	12.03	15.96
5670	0.52	2.64	9.69	12.85	19.28
5755	-0.08	2.68	9.69	12.29	16.94
5795	-0.20	2.70	9.69	12.19	16.56

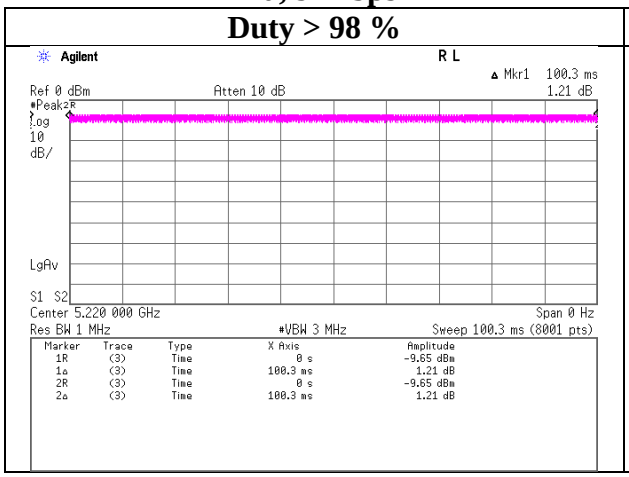
Sample Calculation:
Result (Timed average) = Reading + Cable Loss + Atten. Loss
*The equipment and cables were not used for factor 0 dB of the data sheets.

Burst rate confirmation

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

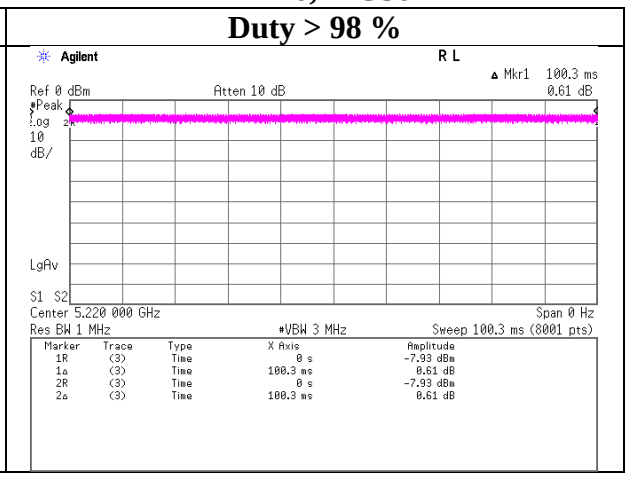
11a, 9 Mbps

Duty > 98 %



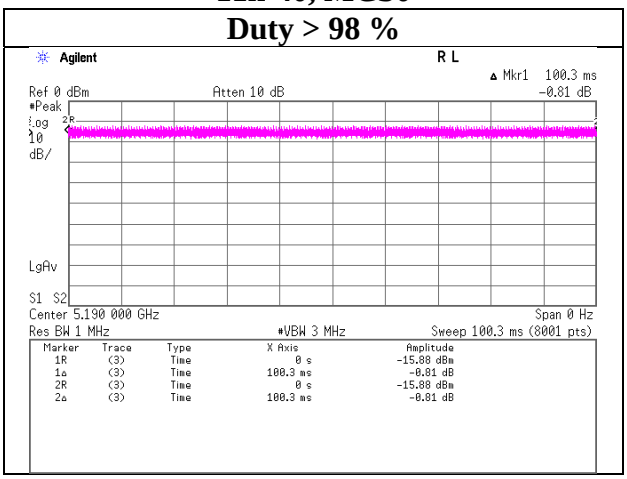
11n-20, MCS0

Duty > 98 %



11n-40, MCS0

Duty > 98 %



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
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	-11.46	2.61	9.69	0.00	4.5	0.00	0.84	11.00	10.16	5.35	17.00	11.66
5220	-11.42	2.62	9.69	0.00	4.5	0.00	0.89	11.00	10.11	5.39	17.00	11.61
5240	-12.22	2.64	9.69	0.00	4.5	0.00	0.11	11.00	10.89	4.61	17.00	12.39
5260	-11.62	2.66	9.68	0.00	4.5	0.00	0.72	11.00	10.28	5.22	17.00	11.78
5300	-11.85	2.67	9.68	0.00	4.5	0.00	0.50	11.00	10.50	5.00	17.00	12.00
5320	-11.74	2.69	9.68	0.00	4.5	0.00	0.63	11.00	10.37	5.13	17.00	11.87
5500	-10.92	2.57	9.68	0.00	4.5	0.00	1.34	11.00	9.67	5.84	17.00	11.17
5580	-11.55	2.61	9.68	0.00	4.5	0.00	0.74	11.00	10.26	5.24	17.00	11.76
5700	-11.33	2.65	9.69	0.00	4.5	0.00	1.02	11.00	9.99	5.52	17.00	11.49
5745	-20.60	2.67	9.69	0.00	4.5	6.99	-1.25	30.00	31.25	3.25	36.00	32.75
5785	-20.09	2.69	9.69	0.00	4.5	6.99	-0.72	30.00	30.72	3.78	36.00	32.22
5825	-20.29	2.72	9.69	0.00	4.5	6.99	-0.89	30.00	30.89	3.61	36.00	32.39

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
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	-12.34	2.61	9.69	0.00	4.5	0.00	-0.04	11.00	11.04	4.46	17.00	12.54
5220	-12.18	2.62	9.69	0.00	4.5	0.00	0.13	11.00	10.87	4.63	17.00	12.37
5240	-12.39	2.64	9.69	0.00	4.5	0.00	-0.06	11.00	11.06	4.44	17.00	12.56
5260	-12.15	2.66	9.68	0.00	4.5	0.00	0.19	11.00	10.81	4.69	17.00	12.31
5300	-11.99	2.67	9.68	0.00	4.5	0.00	0.36	11.00	10.64	4.86	17.00	12.14
5320	-11.68	2.69	9.68	0.00	4.5	0.00	0.69	11.00	10.31	5.19	17.00	11.81
5500	-11.89	2.57	9.68	0.00	4.5	0.00	0.37	11.00	10.64	4.87	17.00	12.14
5580	-11.97	2.61	9.68	0.00	4.5	0.00	0.32	11.00	10.68	4.82	17.00	12.18
5700	-11.40	2.65	9.69	0.00	4.5	0.00	0.94	11.00	10.06	5.44	17.00	11.56
5745	-21.14	2.67	9.69	0.00	4.5	6.99	-1.79	30.00	31.79	2.71	36.00	33.29
5785	-20.93	2.69	9.69	0.00	4.5	6.99	-1.56	30.00	31.56	2.94	36.00	33.06
5825	-21.14	2.72	9.69	0.00	4.5	6.99	-1.74	30.00	31.74	2.76	36.00	33.24

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

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11n-40

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-15.10	2.61	9.69	0.00	4.5	0.00	-2.80	11.00	13.80	1.70	17.00	15.30
5230	-15.42	2.62	9.69	0.00	4.5	0.00	-3.11	11.00	14.11	1.39	17.00	15.61
5270	-15.07	2.66	9.68	0.00	4.5	0.00	-2.73	11.00	13.73	1.77	17.00	15.23
5310	-14.53	2.67	9.68	0.00	4.5	0.00	-2.18	11.00	13.18	2.32	17.00	14.68
5510	-14.93	2.58	9.68	0.00	4.5	0.00	-2.67	11.00	13.67	1.83	17.00	15.17
5550	-15.35	2.59	9.68	0.00	4.5	0.00	-3.08	11.00	14.08	1.42	17.00	15.58
5670	-14.45	2.64	9.69	0.00	4.5	0.00	-2.12	11.00	13.12	2.38	17.00	14.62
5755	-24.60	2.68	9.69	0.00	4.5	6.99	-5.24	30.00	35.24	-0.74	36.00	36.74
5795	-24.30	2.70	9.69	0.00	4.5	6.99	-4.92	30.00	34.92	-0.42	36.00	36.42

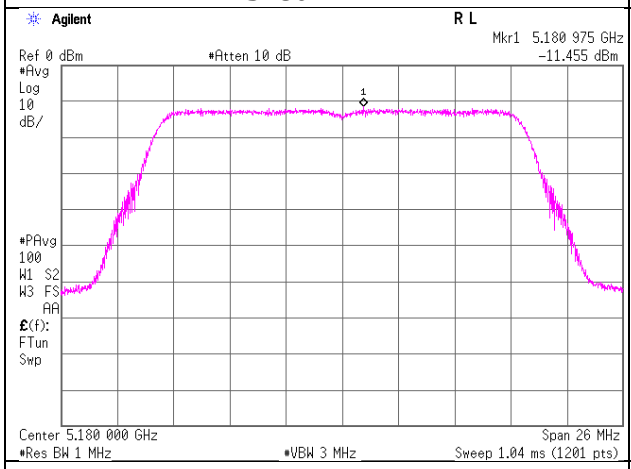
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.)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

Maximum Power Spectral Density

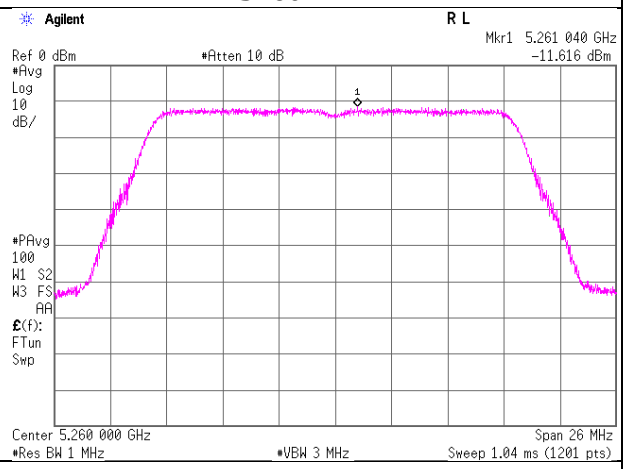
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11a

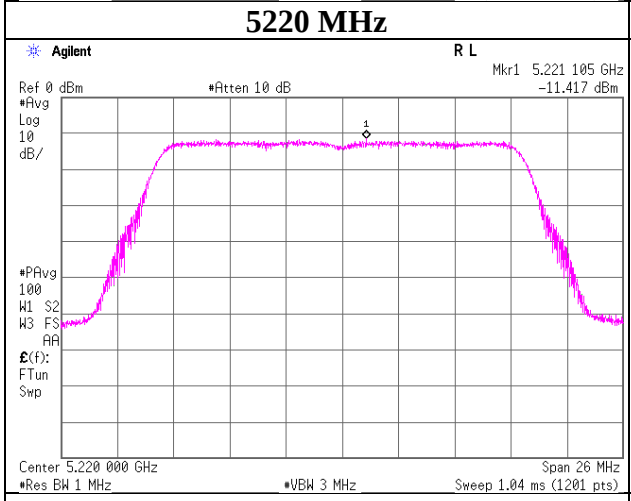
5180 MHz



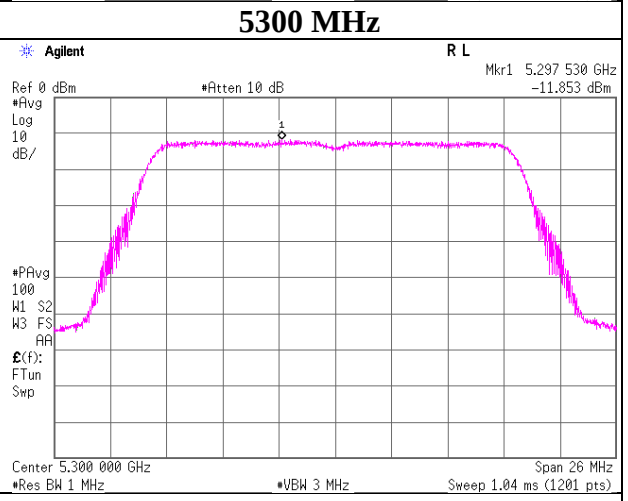
5260 MHz



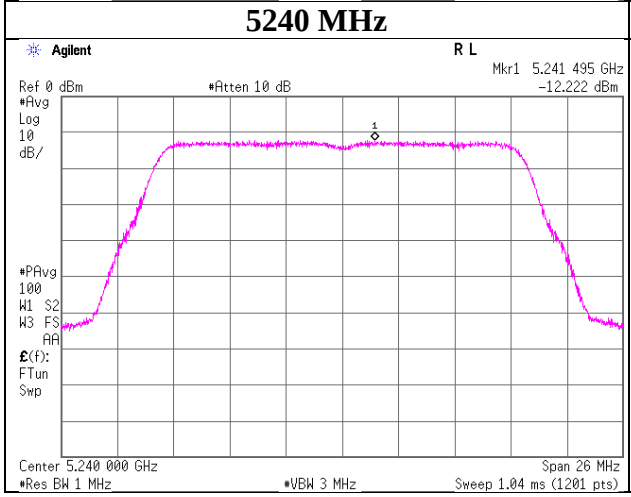
5220 MHz



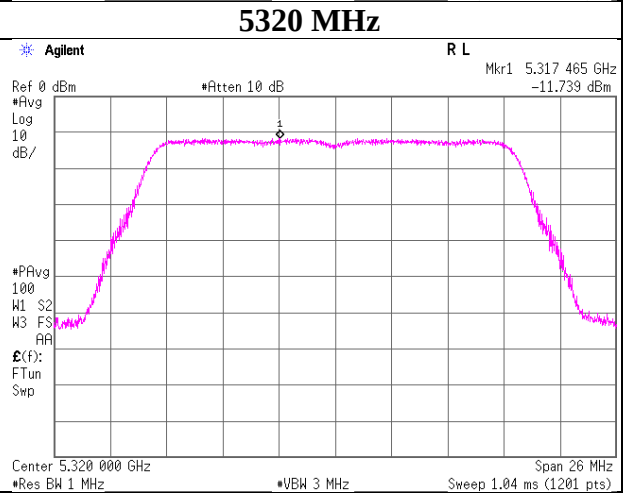
5300 MHz



5240 MHz



5320 MHz

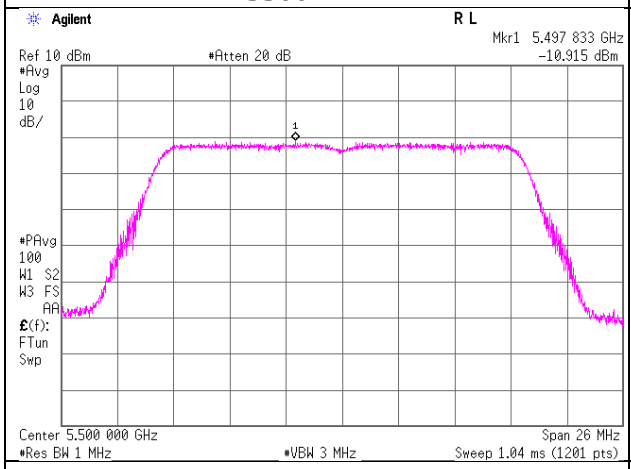


Maximum Power Spectral Density

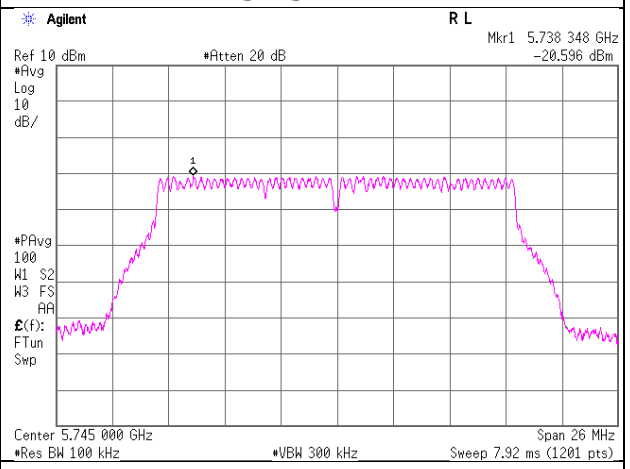
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11a

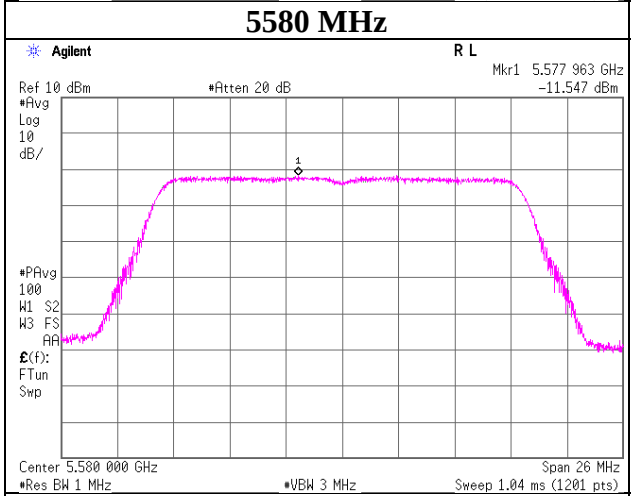
5500 MHz



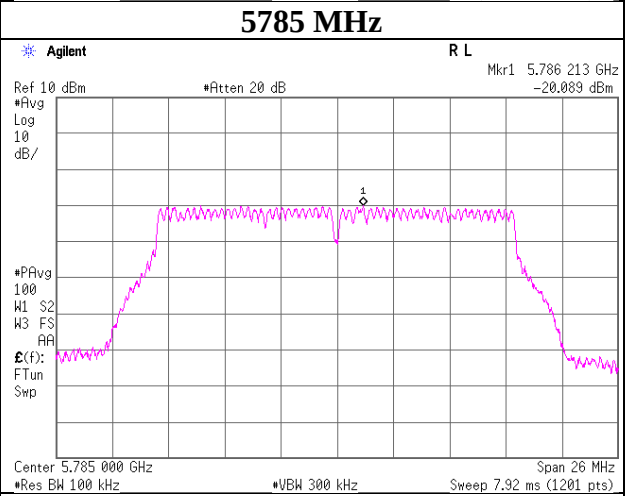
5745 MHz



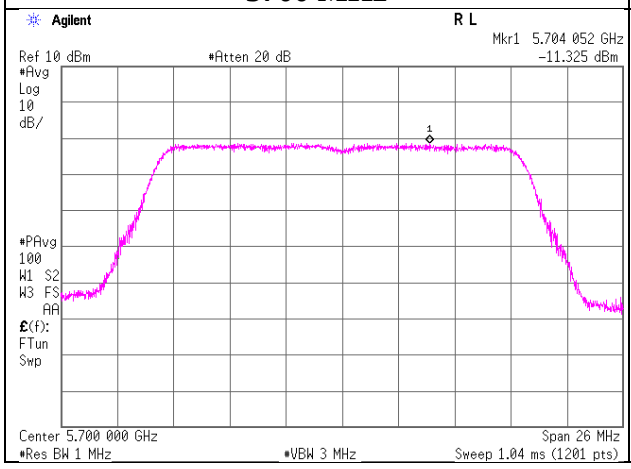
5580 MHz



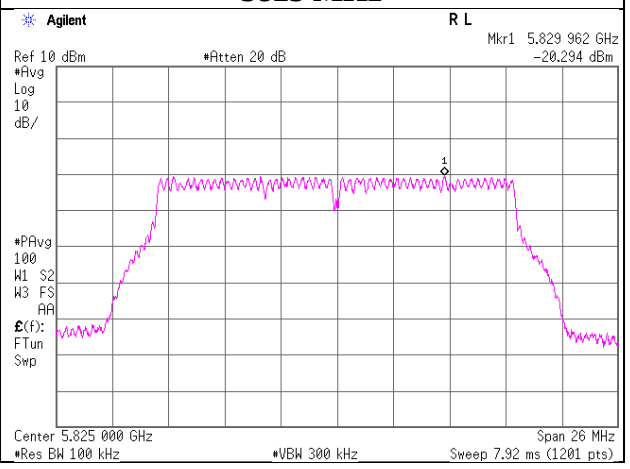
5785 MHz



5700 MHz



5825 MHz

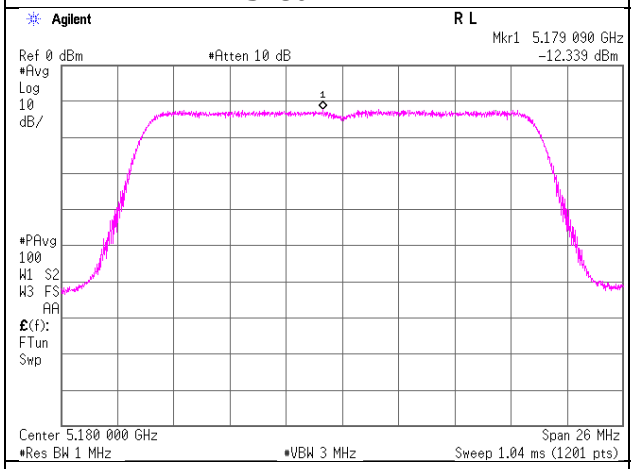


Maximum Power Spectral Density

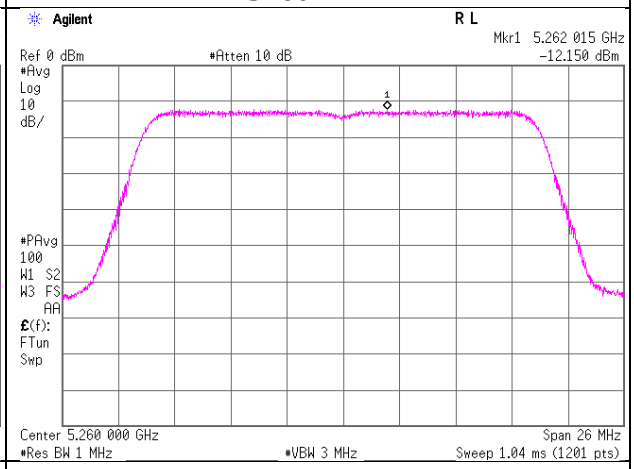
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11n-20

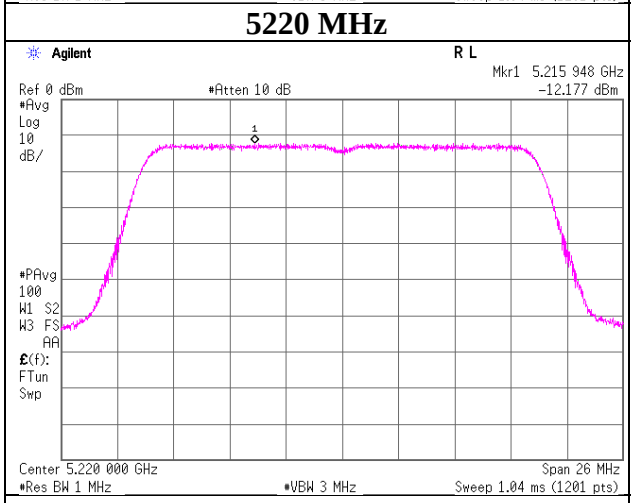
5180 MHz



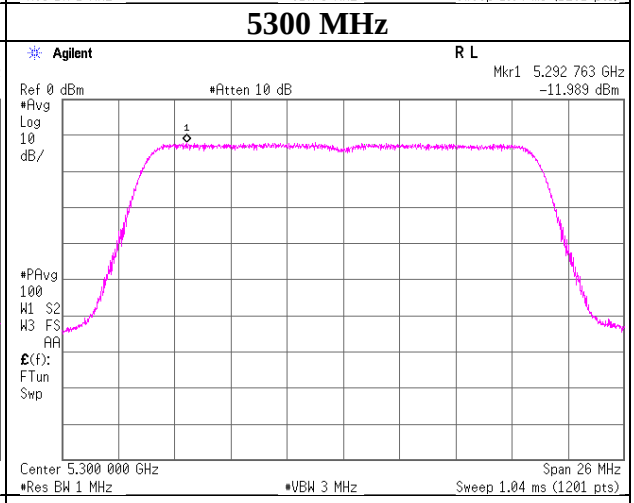
5260 MHz



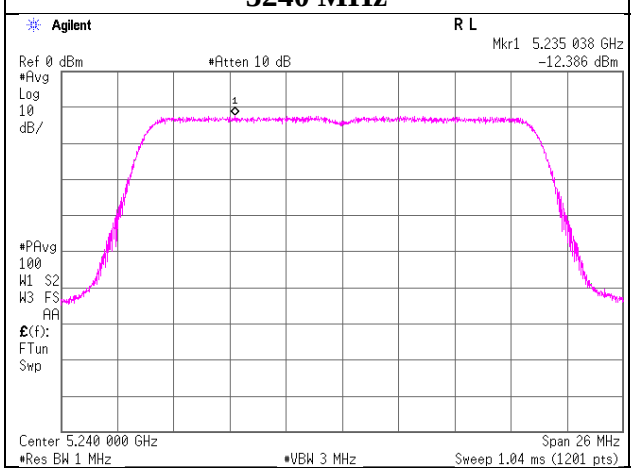
5220 MHz



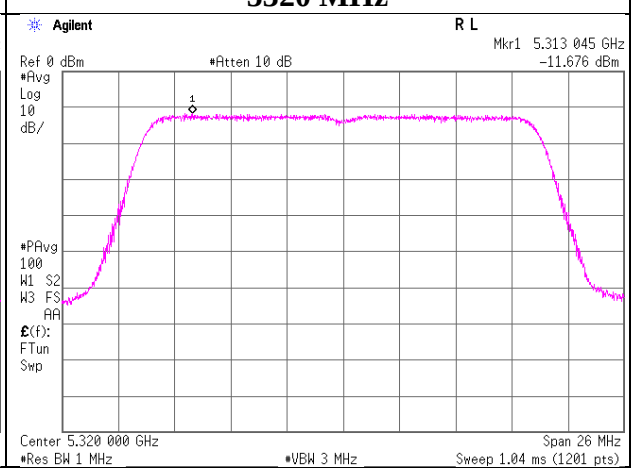
5300 MHz



5240 MHz



5320 MHz

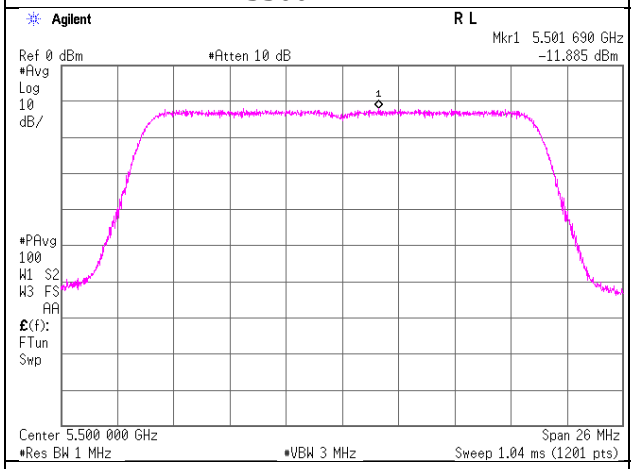


Maximum Power Spectral Density

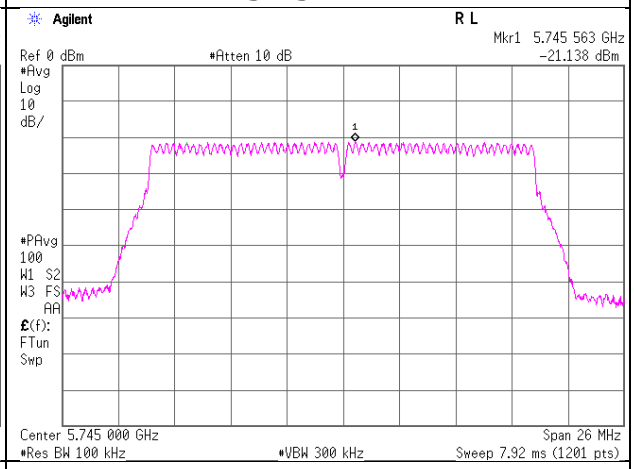
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11n-20

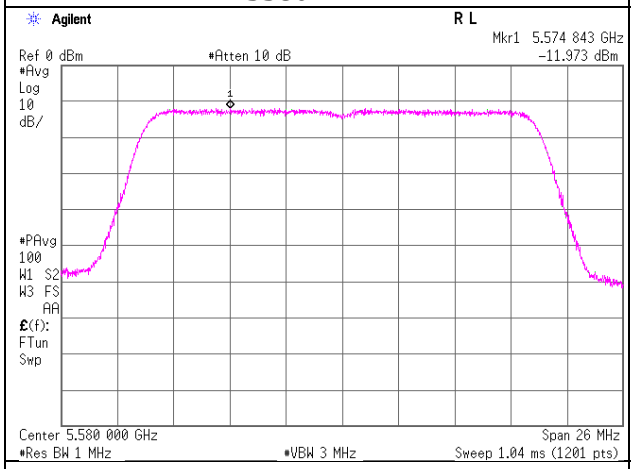
5500 MHz



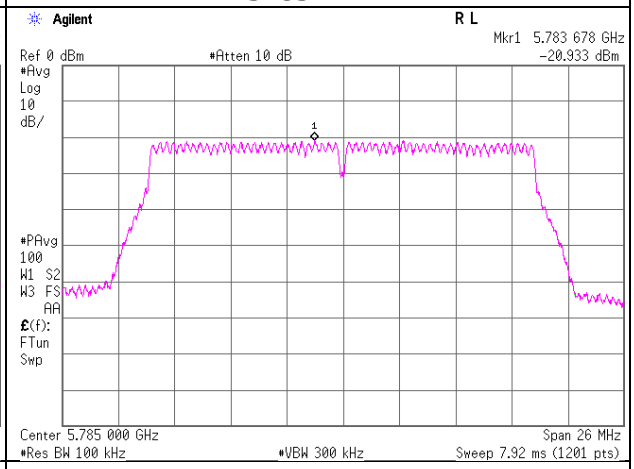
5745 MHz



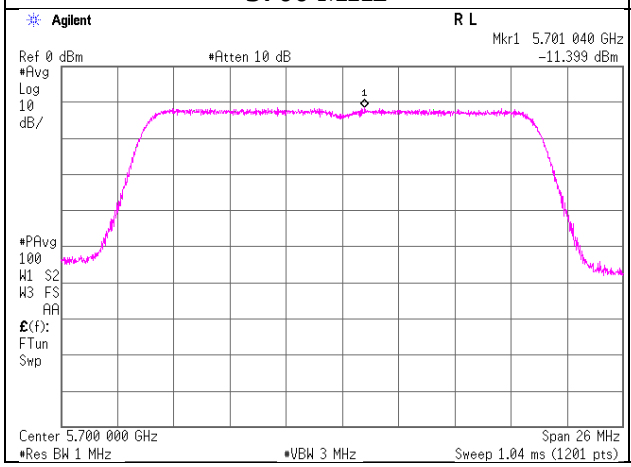
5580 MHz



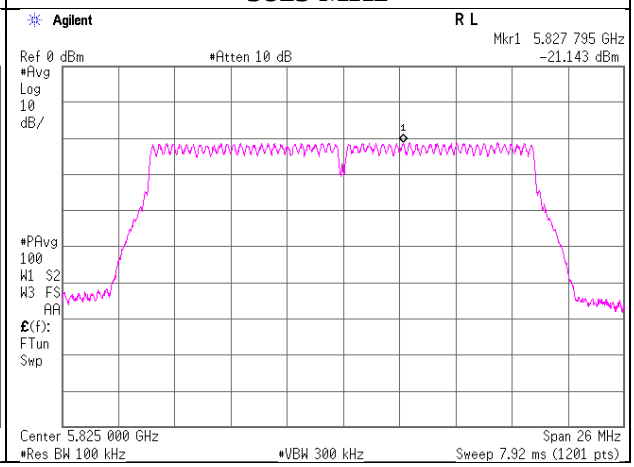
5785 MHz



5700 MHz



5825 MHz

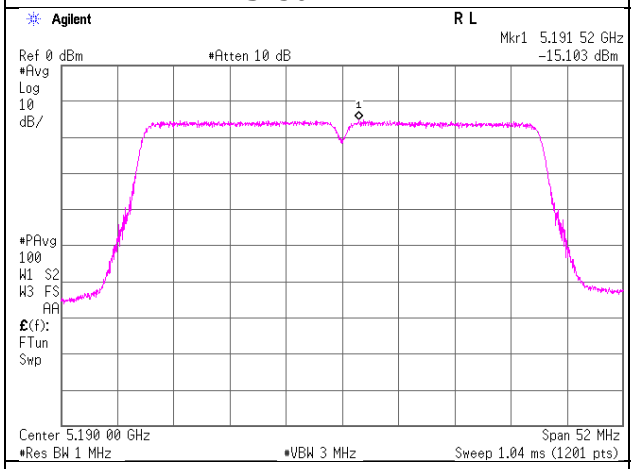


Maximum Power Spectral Density

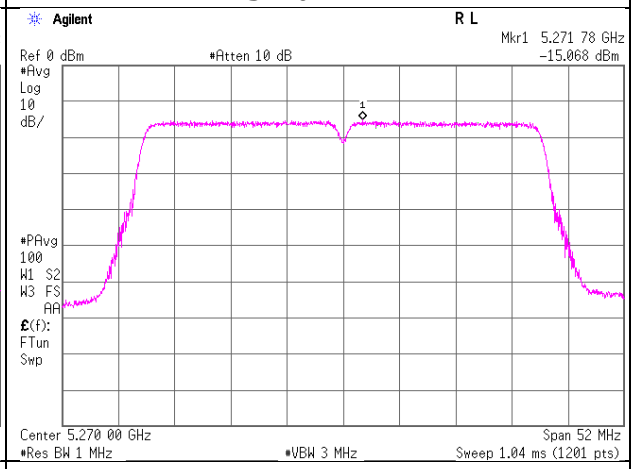
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11n-40

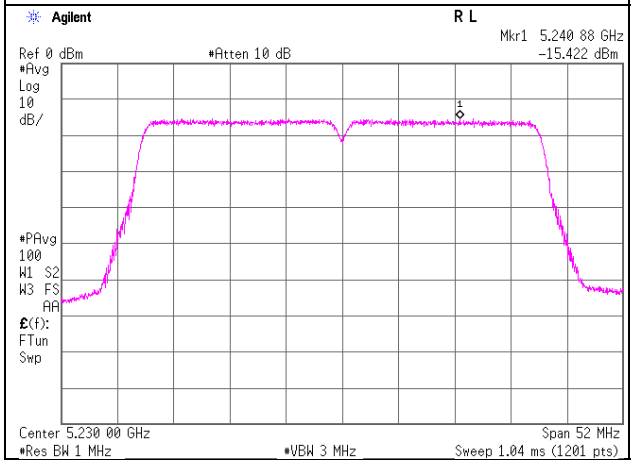
5190 MHz



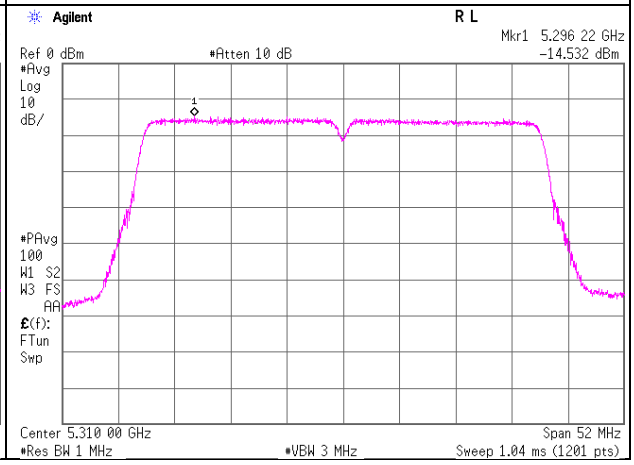
5270 MHz



5230 MHz



5310 MHz

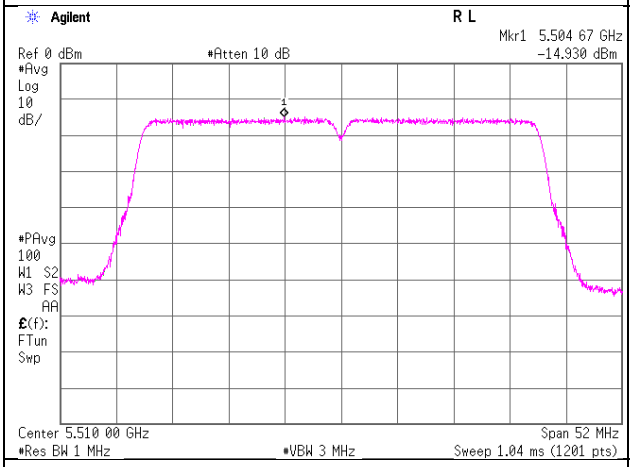


Maximum Power Spectral Density

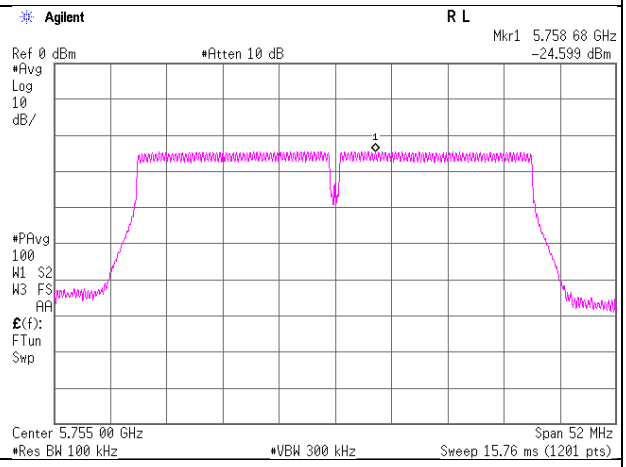
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx

11n-40

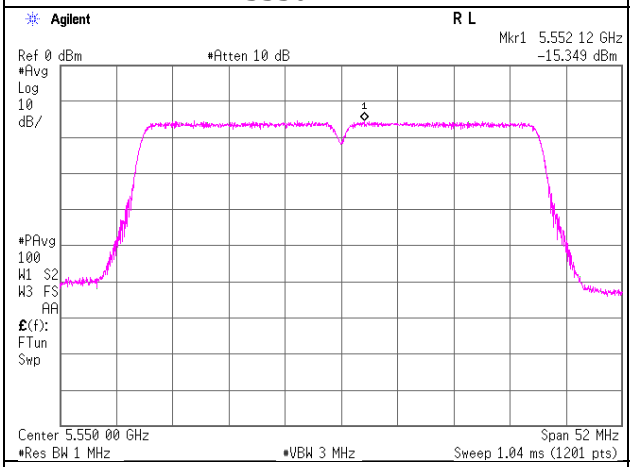
5510 MHz



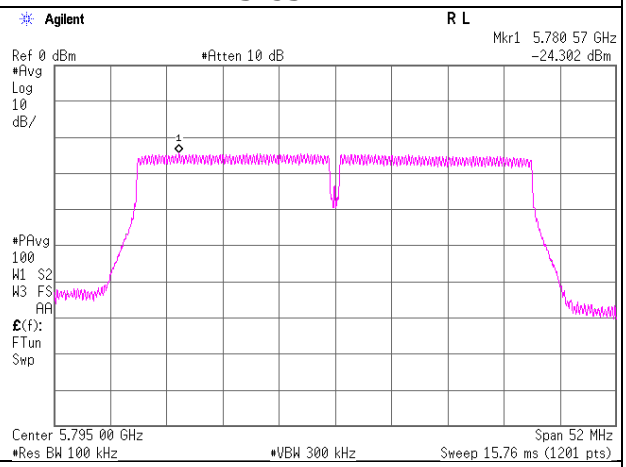
5755 MHz



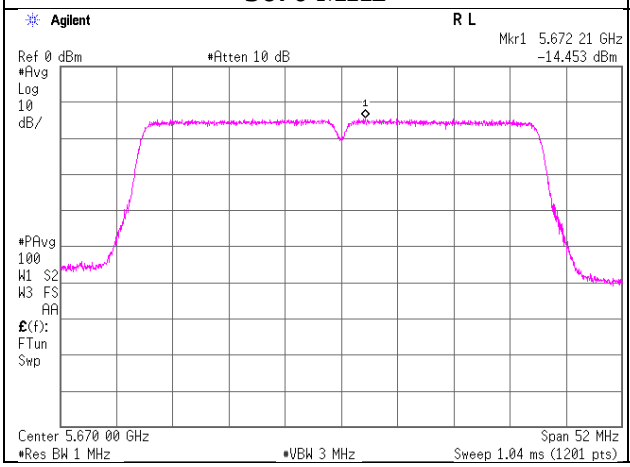
5550 MHz



5795 MHz



5670 MHz



Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 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	43.49	31.65	15.63	37.26	2.37	55.88	73.90	18.0	104	86	
Hori.	10360.000	PK	46.37	39.54	8.09	39.32	2.37	57.05	73.90	16.8	285	62	
Hori.	15540.000	PK	44.58	39.24	10.64	38.70	-9.54	46.22	73.90	27.6	150	0	
Hori.	20720.000	PK	44.54	40.12	13.89	46.74	-9.54	42.27	73.90	31.6	150	0	
Hori.	25900.000	PK	44.13	40.24	15.88	46.81	-9.54	43.90	73.90	30.0	150	0	
Hori.	5150.000	AV	31.14	31.65	15.63	37.26	2.37	43.53	53.90	10.3	104	86	VBW:10Hz
Hori.	10360.000	AV	34.26	39.54	8.09	39.32	2.37	44.94	53.90	**8.9**	285	62	VBW:10Hz
Hori.	15540.000	AV	32.95	39.24	10.64	38.70	-9.54	34.59	53.90	19.3	150	0	VBW:10Hz
Hori.	20720.000	AV	30.83	40.12	13.89	46.74	-9.54	28.56	53.90	25.3	150	0	VBW:10Hz
Hori.	25900.000	AV	30.23	40.24	15.88	46.81	-9.54	30.00	53.90	23.9	150	0	VBW:10Hz
Vert.	5150.000	PK	42.14	31.65	15.63	37.26	2.37	54.53	73.90	19.3	147	169	
Vert.	10360.000	PK	45.60	39.54	8.09	39.32	2.37	56.28	73.90	17.6	276	211	
Vert.	15540.000	PK	44.20	39.24	10.64	38.70	-9.54	45.84	73.90	28.0	150	0	
Vert.	20720.000	PK	44.68	40.12	13.89	46.74	-9.54	42.41	73.90	31.4	150	0	
Vert.	25900.000	PK	44.68	40.24	15.88	46.81	-9.54	44.45	73.90	29.4	150	0	
Vert.	5150.000	AV	31.14	31.65	15.63	37.26	2.37	43.53	53.90	10.3	147	169	VBW:10Hz
Vert.	10360.000	AV	34.09	39.54	8.09	39.32	2.37	44.77	53.90	9.1	276	211	VBW:10Hz
Vert.	15540.000	AV	32.93	39.24	10.64	38.70	-9.54	34.57	53.90	19.3	150	0	VBW:10Hz
Vert.	20720.000	AV	30.77	40.12	13.89	46.74	-9.54	28.50	53.90	25.4	150	0	VBW:10Hz
Vert.	25900.000	AV	30.17	40.24	15.88	46.81	-9.54	29.94	53.90	23.9	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

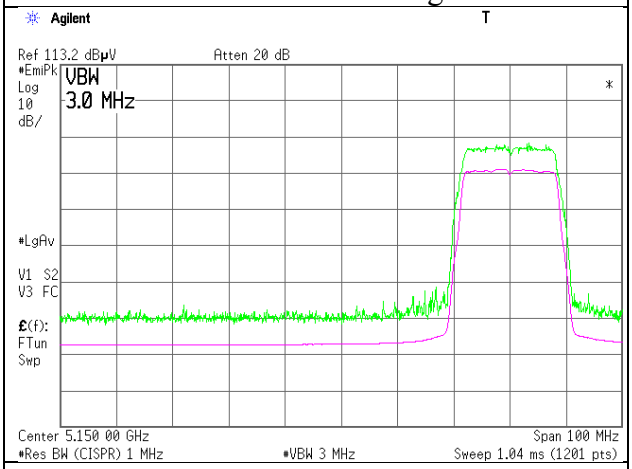
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24 deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11a 5180 MHz

Horizontal

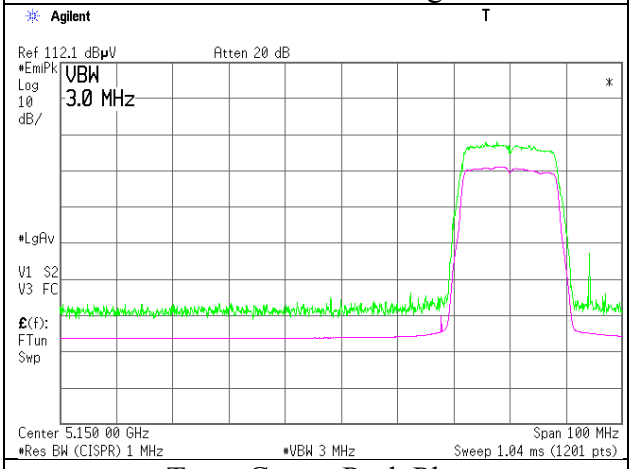
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11a 5240 MHz				

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	45.96	39.76	8.08	39.33	2.37	56.84	73.90	17.0	284	63	
Hori.	15720.000	PK	44.17	38.58	10.73	38.60	-9.54	45.34	73.90	28.5	150	0	
Hori.	20960.000	PK	43.97	40.11	13.85	46.69	-9.54	41.70	73.90	32.2	150	0	
Hori.	26200.000	PK	44.45	40.21	16.00	46.94	-9.54	44.18	73.90	29.7	150	0	
Hori.	10480.000	AV	34.90	39.76	8.08	39.33	2.37	45.78	53.90	**8.1**	284	63	VBW:10Hz
Hori.	15720.000	AV	32.48	38.58	10.73	38.60	-9.54	33.65	53.90	20.2	150	0	VBW:10Hz
Hori.	20960.000	AV	30.15	40.11	13.85	46.69	-9.54	27.88	53.90	26.0	150	0	VBW:10Hz
Hori.	26200.000	AV	30.24	40.21	16.00	46.94	-9.54	29.97	53.90	23.9	150	0	VBW:10Hz
Vert.	10480.000	PK	45.80	39.76	8.08	39.33	2.37	56.68	73.90	17.2	276	212	
Vert.	15720.000	PK	45.33	38.58	10.73	38.60	-9.54	46.50	73.90	27.4	150	0	
Vert.	20960.000	PK	43.86	40.11	13.85	46.69	-9.54	41.59	73.90	32.3	150	0	
Vert.	26200.000	PK	44.14	40.21	16.00	46.94	-9.54	43.87	73.90	30.0	150	0	
Vert.	10480.000	AV	34.43	39.76	8.08	39.33	2.37	45.31	53.90	8.5	276	212	VBW:10Hz
Vert.	15720.000	AV	32.46	38.58	10.73	38.60	-9.54	33.63	53.90	20.2	150	0	VBW:10Hz
Vert.	20960.000	AV	30.12	40.11	13.85	46.69	-9.54	27.85	53.90	26.0	150	0	VBW:10Hz
Vert.	26200.000	AV	30.30	40.21	16.00	46.94	-9.54	30.03	53.90	23.8	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 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	43.86	31.79	15.73	37.32	2.37	56.43	73.90	17.4	150	285	
Hori.	10640.000	PK	47.09	39.87	8.18	39.40	2.37	58.11	73.90	15.7	284	62	
Hori.	15960.000	PK	44.37	37.71	10.86	38.47	-9.54	44.93	73.90	28.9	150	0	
Hori.	21280.000	PK	44.11	40.13	13.94	46.78	-9.54	41.86	73.90	32.0	150	0	
Hori.	5350.000	AV	31.43	31.79	15.73	37.32	2.37	44.00	53.90	9.9	150	285	VBW:10Hz
Hori.	10640.000	AV	35.59	39.87	8.18	39.40	2.37	46.61	53.90	7.2	284	62	VBW:10Hz
Hori.	15960.000	AV	33.17	37.71	10.86	38.47	-9.54	33.73	53.90	20.1	150	0	VBW:10Hz
Hori.	21280.000	AV	31.13	40.13	13.94	46.78	-9.54	28.88	53.90	25.0	150	0	VBW:10Hz
Vert.	5350.000	PK	43.54	31.79	15.73	37.32	2.37	56.11	73.90	17.7	150	123	
Vert.	10640.000	PK	47.99	39.87	8.18	39.40	2.37	59.01	73.90	14.8	276	212	
Vert.	15960.000	PK	44.33	37.71	10.86	38.47	-9.54	44.89	73.90	29.0	150	0	
Vert.	21280.000	PK	43.36	40.13	13.94	46.78	-9.54	41.11	73.90	32.7	150	0	
Vert.	5350.000	AV	31.38	31.79	15.73	37.32	2.37	43.95	53.90	9.9	150	123	VBW:10Hz
Vert.	10640.000	AV	35.72	39.87	8.18	39.40	2.37	46.74	53.90	**7.1**	276	212	VBW:10Hz
Vert.	15960.000	AV	33.17	37.71	10.86	38.47	-9.54	33.73	53.90	20.1	150	0	VBW:10Hz
Vert.	21280.000	AV	31.01	40.13	13.94	46.78	-9.54	28.76	53.90	25.1	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

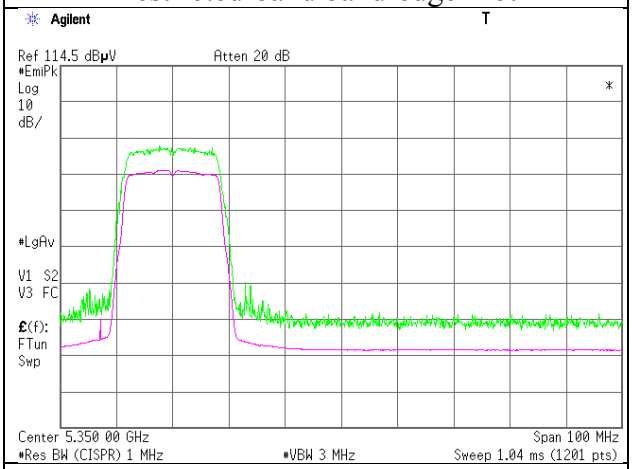
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24 deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11a 5320 MHz

Horizontal

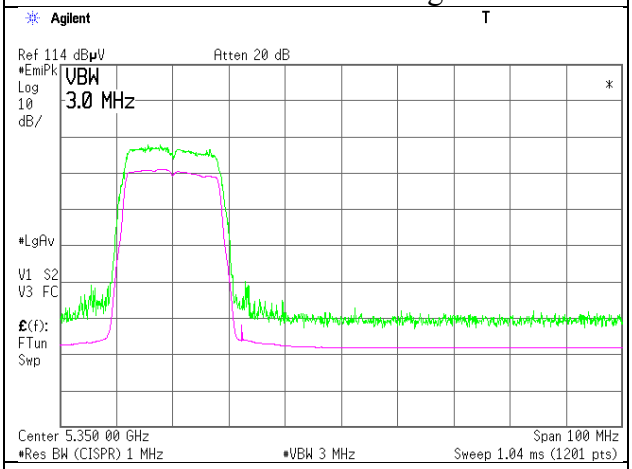
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 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	44.12	31.86	15.78	37.35	2.37	56.78	73.90	17.1	196	85	
Hori.	11000.000	PK	45.09	40.06	8.72	39.57	2.37	56.67	73.90	17.2	100	197	
Hori.	16500.000	PK	42.84	38.79	11.18	38.30	-9.54	44.97	73.90	28.9	150	0	
Hori.	22000.000	PK	44.87	40.17	14.34	47.47	-9.54	42.37	73.90	31.5	150	0	
Hori.	5460.000	AV	31.51	31.86	15.78	37.35	2.37	44.17	53.90	9.7	196	85	VBW:10Hz
Hori.	11000.000	AV	33.82	40.06	8.72	39.57	2.37	45.40	53.90	**8.5**	100	197	VBW:10Hz
Hori.	16500.000	AV	32.35	38.79	11.18	38.30	-9.54	34.48	53.90	19.4	150	0	VBW:10Hz
Hori.	22000.000	AV	31.14	40.17	14.34	47.47	-9.54	28.64	53.90	25.2	150	0	VBW:10Hz
Vert.	5460.000	PK	43.72	31.86	15.78	37.35	2.37	56.38	73.90	17.5	133	176	
Vert.	11000.000	PK	44.87	40.06	8.72	39.57	2.37	56.45	73.90	17.4	358	41	
Vert.	16500.000	PK	43.46	38.79	11.18	38.30	-9.54	45.59	73.90	28.3	150	0	
Vert.	22000.000	PK	44.03	40.17	14.34	47.47	-9.54	41.53	73.90	32.3	150	0	
Vert.	5460.000	AV	31.43	31.86	15.78	37.35	2.37	44.09	53.90	9.8	133	176	VBW:10Hz
Vert.	11000.000	AV	33.71	40.06	8.72	39.57	2.37	45.29	53.90	8.6	358	41	VBW:10Hz
Vert.	16500.000	AV	32.37	38.79	11.18	38.30	-9.54	34.50	53.90	19.4	150	0	VBW:10Hz
Vert.	22000.000	AV	31.76	40.17	14.34	47.47	-9.54	29.26	53.90	24.6	150	0	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 (3.94 m / 3.0 m) = 2.37 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	44.47	31.87	15.79	37.35	2.37	57.15	-38.05	-27.00	**11.1**	196	85	
Vert.	5470.000	PK	43.59	31.87	15.79	37.35	2.37	56.27	-38.93	-27.00	11.9	133	176	

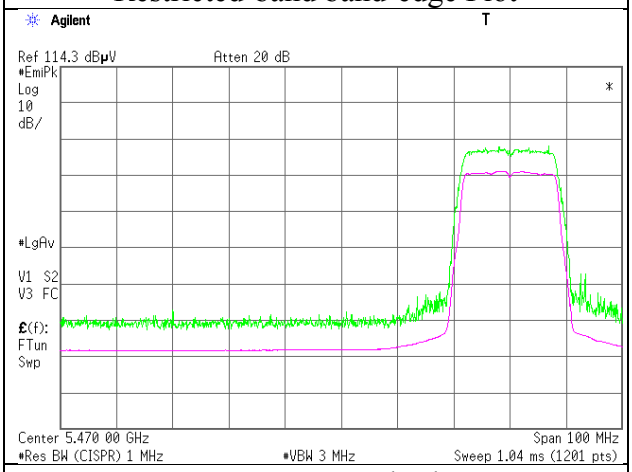
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11a 5500 MHz

Horizontal

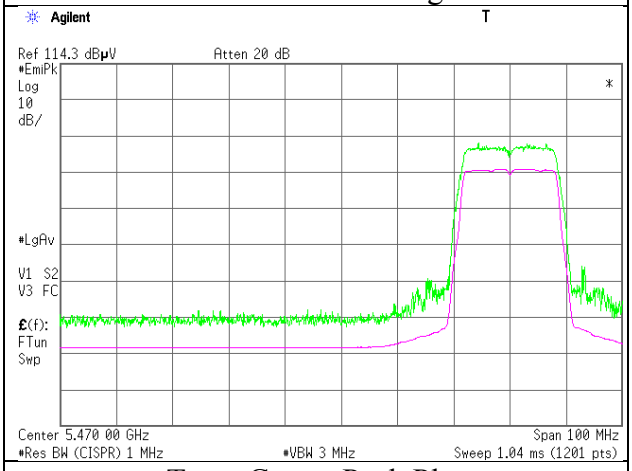
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11a 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.	11160.000	PK	45.39	39.99	8.50	39.54	2.37	56.71	73.90	17.1	265	62	
Hori.	16740.000	PK	43.55	39.37	11.22	38.25	-9.54	46.35	73.90	27.5	150	0	
Hori.	22320.000	PK	43.80	40.21	14.50	47.50	-9.54	41.47	73.90	32.4	150	0	
Hori.	11160.000	AV	35.14	39.99	8.50	39.54	2.37	46.46	53.90	**7.4**	265	62	VBW:10Hz
Hori.	16740.000	AV	32.57	39.37	11.22	38.25	-9.54	35.37	53.90	18.5	150	0	VBW:10Hz
Hori.	22320.000	AV	31.26	40.21	14.50	47.50	-9.54	28.93	53.90	24.9	150	0	VBW:10Hz
Vert.	11160.000	PK	44.88	39.99	8.50	39.54	2.37	56.20	73.90	17.7	277	213	
Vert.	16740.000	PK	43.08	39.37	11.22	38.25	-9.54	45.88	73.90	28.0	150	0	
Vert.	22320.000	PK	43.56	40.21	14.50	47.50	-9.54	41.23	73.90	32.6	150	0	
Vert.	11160.000	AV	34.47	39.99	8.50	39.54	2.37	45.79	53.90	8.1	277	213	VBW:10Hz
Vert.	16740.000	AV	32.56	39.37	11.22	38.25	-9.54	35.36	53.90	18.5	150	0	VBW:10Hz
Vert.	22320.000	AV	30.97	40.21	14.50	47.50	-9.54	28.64	53.90	25.2	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11a 5700 MHz				

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11400.000	PK	46.40	39.96	8.73	39.50	2.37	57.96	73.90	15.9	100	241	
Hori.	17100.000	PK	44.37	40.88	11.31	38.17	-9.54	48.85	73.90	25.0	150	0	
Hori.	22800.000	PK	43.88	40.26	14.58	47.11	-9.54	42.07	73.90	31.8	150	0	
Hori.	11400.000	AV	34.11	39.96	8.73	39.50	2.37	45.67	53.90	**8.2**	100	241	VBW:10Hz
Hori.	17100.000	AV	32.71	40.88	11.31	38.17	-9.54	37.19	53.90	16.7	150	0	VBW:10Hz
Hori.	22800.000	AV	31.26	40.26	14.58	47.11	-9.54	29.45	53.90	24.4	150	0	VBW:10Hz
Vert.	11400.000	PK	46.51	39.96	8.73	39.50	2.37	58.07	73.90	15.8	377	43	
Vert.	17100.000	PK	43.37	40.88	11.31	38.17	-9.54	47.85	73.90	26.0	150	0	
Vert.	22800.000	PK	44.23	40.26	14.58	47.11	-9.54	42.42	73.90	31.4	150	0	
Vert.	11400.000	AV	33.90	39.96	8.73	39.50	2.37	45.46	53.90	8.4	377	43	VBW:10Hz
Vert.	17100.000	AV	32.77	40.88	11.31	38.17	-9.54	37.25	53.90	16.6	150	0	VBW:10Hz
Vert.	22800.000	AV	31.21	40.26	14.58	47.11	-9.54	29.40	53.90	24.5	150	0	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 (3.94 m / 3.0 m) = 2.37 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	44.54	32.26	15.97	37.47	2.37	57.67	-37.53	-27.00	10.5	153	90	
Vert.	5725.000	PK	44.80	32.26	15.97	37.47	2.37	57.93	-37.27	-27.00	**10.3**	147	205	

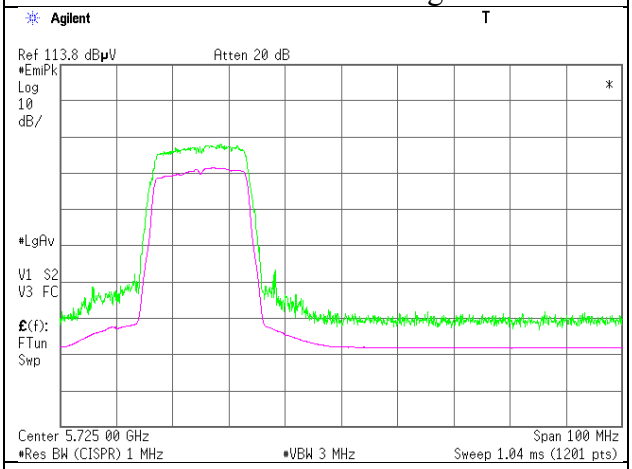
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11a 5700 MHz

Horizontal

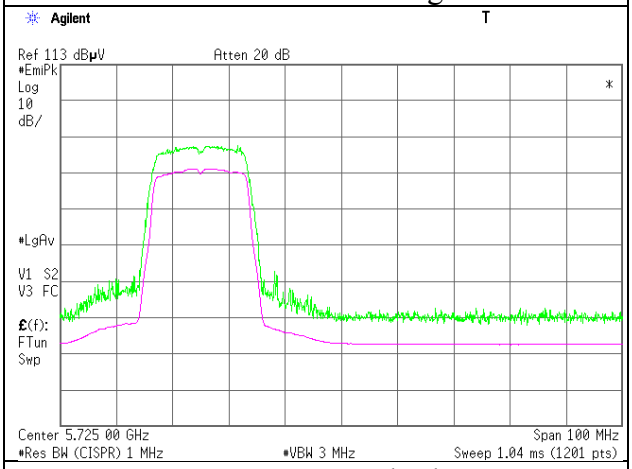
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11a 5745 MHz				

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11490.000	PK	43.93	39.88	8.70	39.48	2.37	55.40	73.90	18.5	255	287	
Hori.	17235.000	PK	43.72	42.06	11.34	38.13	-9.54	49.45	73.90	24.4	150	0	
Hori.	22980.000	PK	44.63	40.28	14.58	46.86	-9.54	43.09	73.90	30.8	150	0	
Hori.	11490.000	AV	32.71	39.88	8.70	39.48	2.37	44.18	53.90	**9.7**	255	287	VBW:10Hz
Hori.	17235.000	AV	32.05	42.06	11.34	38.13	-9.54	37.78	53.90	16.1	150	0	VBW:10Hz
Hori.	22980.000	AV	31.70	40.28	14.58	46.86	-9.54	30.16	53.90	23.7	150	0	VBW:10Hz
Vert.	11490.000	PK	43.51	39.88	8.70	39.48	2.37	54.98	73.90	18.9	278	214	
Vert.	17235.000	PK	42.79	42.06	11.34	38.13	-9.54	48.52	73.90	25.3	150	0	
Vert.	22980.000	PK	44.11	40.28	14.58	46.86	-9.54	42.57	73.90	31.3	150	0	
Vert.	11490.000	AV	32.41	39.88	8.70	39.48	2.37	43.88	53.90	10.0	278	214	VBW:10Hz
Vert.	17235.000	AV	32.09	42.06	11.34	38.13	-9.54	37.82	53.90	16.0	150	0	VBW:10Hz
Vert.	22980.000	AV	31.57	40.28	14.58	46.86	-9.54	30.03	53.90	23.8	150	0	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 (3.94 m / 3.0 m) = 2.37 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	43.19	32.14	15.92	37.44	2.37	56.18	-39.02	-27.00	12.0	115	89	
Hori.	5700.000	PK	43.42	32.22	15.96	37.46	2.37	56.51	-38.69	10.00	48.7	115	89	
Hori.	5720.000	PK	44.35	32.25	15.97	37.47	2.37	57.47	-37.73	15.60	53.3	115	89	
Hori.	5725.000	PK	53.37	32.26	15.97	37.47	2.37	66.50	-28.70	27.00	55.7	115	89	
Vert.	5650.000	PK	43.93	32.14	15.92	37.44	2.37	56.92	-38.28	-27.00	**11.3**	145	206	
Vert.	5700.000	PK	43.97	32.22	15.96	37.46	2.37	57.06	-38.14	10.00	48.1	145	206	
Vert.	5720.000	PK	47.03	32.25	15.97	37.47	2.37	60.15	-35.05	15.60	50.7	145	206	
Vert.	5725.000	PK	53.03	32.26	15.97	37.47	2.37	66.16	-29.04	27.00	56.0	145	206	

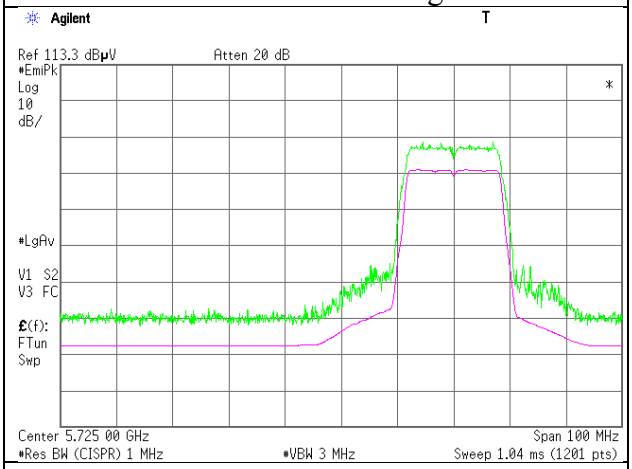
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11a 5745 MHz

Horizontal

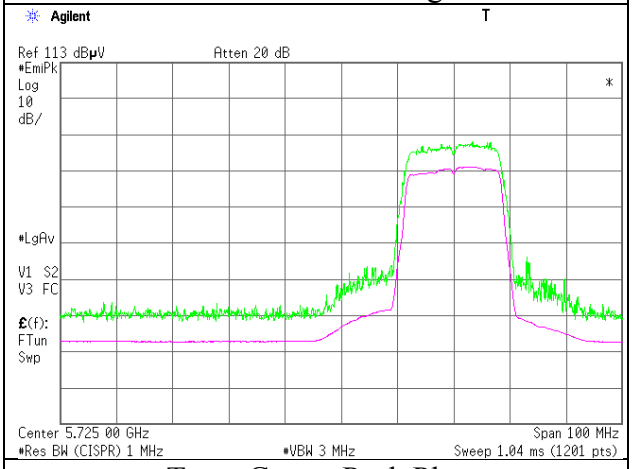
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11a 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.	11570.000	PK	43.84	39.78	8.75	39.47	2.37	55.27	73.90	18.6	267	289	
Hori.	17355.000	PK	43.01	43.10	11.37	38.09	-9.54	49.85	73.90	24.0	150	0	
Hori.	23140.000	PK	43.55	40.25	14.65	46.74	-9.54	42.17	73.90	31.7	150	0	
Hori.	11570.000	AV	32.63	39.78	8.75	39.47	2.37	44.06	53.90	**9.8**	267	289	VBW:10Hz
Hori.	17355.000	AV	32.28	43.10	11.37	38.09	-9.54	39.12	53.90	14.7	150	0	VBW:10Hz
Hori.	23140.000	AV	31.18	40.25	14.65	46.74	-9.54	29.80	53.90	24.1	150	0	VBW:10Hz
Vert.	11570.000	PK	42.95	39.78	8.75	39.47	2.37	54.38	73.90	19.5	278	215	
Vert.	17355.000	PK	42.56	43.10	11.37	38.09	-9.54	49.40	73.90	24.5	150	0	
Vert.	23140.000	PK	45.37	40.25	14.65	46.74	-9.54	43.99	73.90	29.9	150	0	
Vert.	11570.000	AV	31.96	39.78	8.75	39.47	2.37	43.39	53.90	10.5	278	215	VBW:10Hz
Vert.	17355.000	AV	32.22	43.10	11.37	38.09	-9.54	39.06	53.90	14.8	150	0	VBW:10Hz
Vert.	23140.000	AV	31.53	40.25	14.65	46.74	-9.54	30.15	53.90	23.7	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

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

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	2	3	3	1
Date	October 6, 2016	October 7, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	25 deg. C / 47 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Hiroyuki Morikawa (6.4 GHz-13 GHz)	Yosuke Ishikawa (13 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11a 5825 MHz				

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	42.14	39.66	8.80	39.45	2.37	53.52	73.90	20.3	266	290	
Hori.	17475.000	PK	44.83	44.15	11.40	38.06	-9.54	52.78	73.90	21.1	150	0	
Hori.	23300.000	PK	43.69	40.22	14.74	46.64	-9.54	42.47	73.90	31.4	150	0	
Hori.	11650.000	AV	31.77	39.66	8.80	39.45	2.37	43.15	53.90	10.7	266	290	VBW:10Hz
Hori.	17475.000	AV	32.65	44.15	11.40	38.06	-9.54	40.60	53.90	13.3	150	0	VBW:10Hz
Hori.	23300.000	AV	31.10	40.22	14.74	46.64	-9.54	29.88	53.90	24.0	150	0	VBW:10Hz
Vert.	11650.000	PK	42.82	39.66	8.80	39.45	2.37	54.20	73.90	19.7	278	214	
Vert.	17475.000	PK	44.35	44.15	11.40	38.06	-9.54	52.30	73.90	21.6	150	0	
Vert.	23300.000	PK	43.83	40.22	14.74	46.64	-9.54	42.61	73.90	31.2	150	0	
Vert.	11650.000	AV	31.99	39.66	8.80	39.45	2.37	43.37	53.90	**10.5**	278	214	VBW:10Hz
Vert.	17475.000	AV	32.70	44.15	11.40	38.06	-9.54	40.65	53.90	13.2	150	0	VBW:10Hz
Vert.	23300.000	AV	31.23	40.22	14.74	46.64	-9.54	30.01	53.90	23.8	150	0	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 (3.94 m / 3.0 m) = 2.37 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	47.30	32.46	16.07	37.54	2.37	60.66	-34.54	27.00	61.5	151	69	
Hori.	5855.000	PK	44.26	32.47	16.08	37.54	2.37	57.64	-37.56	15.60	53.2	151	69	
Hori.	5875.000	PK	43.21	32.51	16.09	37.55	2.37	56.63	-38.57	10.00	48.6	151	69	
Hori.	5925.000	PK	43.56	32.59	16.14	37.57	2.37	57.09	-38.11	-27.00	11.1	151	69	
Vert.	5850.000	PK	48.50	32.46	16.07	37.54	2.37	61.86	-33.34	27.00	60.3	100	138	
Vert.	5855.000	PK	45.27	32.47	16.08	37.54	2.37	58.65	-36.55	15.60	52.2	100	138	
Vert.	5875.000	PK	43.38	32.51	16.09	37.55	2.37	56.80	-38.40	10.00	48.4	100	138	
Vert.	5925.000	PK	43.65	32.59	16.14	37.57	2.37	57.18	-38.02	-27.00	**11.0**	100	138	

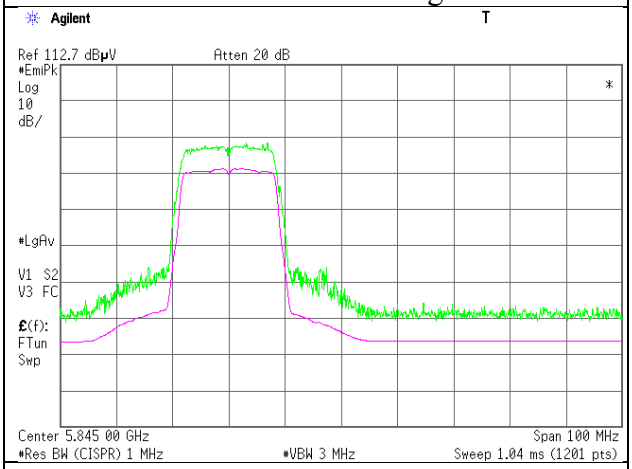
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11a 5825 MHz

Horizontal

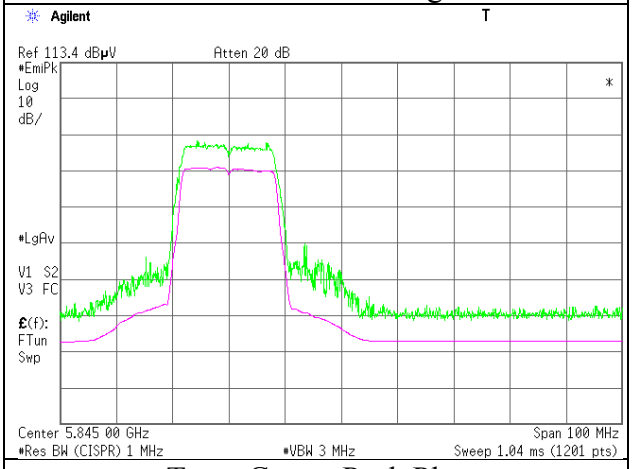
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
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	43.67	31.65	15.63	37.26	2.37	56.06	73.90	17.8	202	76	
Hori.	10360.000	PK	46.70	39.61	8.21	39.32	2.37	57.57	73.90	16.3	100	244	
Hori.	15540.000	PK	43.97	39.24	10.64	38.70	-9.54	45.61	73.90	28.2	150	0	
Hori.	20720.000	PK	44.36	40.12	13.89	46.74	-9.54	42.09	73.90	31.8	150	0	
Hori.	25900.000	PK	44.28	40.24	15.88	46.81	-9.54	44.05	73.90	29.8	150	0	
Hori.	5150.000	AV	31.40	31.65	15.63	37.26	2.37	43.79	53.90	10.1	202	76	VBW:10Hz
Hori.	10360.000	AV	35.44	39.61	8.21	39.32	2.37	46.31	53.90	**7.5**	100	244	VBW:10Hz
Hori.	15540.000	AV	33.05	39.24	10.64	38.70	-9.54	34.69	53.90	19.2	150	0	VBW:10Hz
Hori.	20720.000	AV	31.98	40.12	13.89	46.74	-9.54	29.71	53.90	24.1	150	0	VBW:10Hz
Hori.	25900.000	AV	31.79	40.24	15.88	46.81	-9.54	31.56	53.90	22.3	150	0	VBW:10Hz
Vert.	5150.000	PK	43.58	31.65	15.63	37.26	2.37	55.97	73.90	17.9	147	166	
Vert.	10360.000	PK	46.43	39.61	8.21	39.32	2.37	57.30	73.90	16.6	340	21	
Vert.	15540.000	PK	44.98	39.24	10.64	38.70	-9.54	46.62	73.90	27.2	150	0	
Vert.	20720.000	PK	44.31	40.12	13.89	46.74	-9.54	42.04	73.90	31.8	150	0	
Vert.	25900.000	PK	44.19	40.24	15.88	46.81	-9.54	43.96	73.90	29.9	150	0	
Vert.	5150.000	AV	31.35	31.65	15.63	37.26	2.37	43.74	53.90	10.1	147	166	VBW:10Hz
Vert.	10360.000	AV	35.16	39.61	8.21	39.32	2.37	46.03	53.90	7.8	340	21	VBW:10Hz
Vert.	15540.000	AV	33.05	39.24	10.64	38.70	-9.54	34.69	53.90	19.2	150	0	VBW:10Hz
Vert.	20720.000	AV	31.96	40.12	13.89	46.74	-9.54	29.69	53.90	24.2	150	0	VBW:10Hz
Vert.	25900.000	AV	31.69	40.24	15.88	46.81	-9.54	31.46	53.90	22.4	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

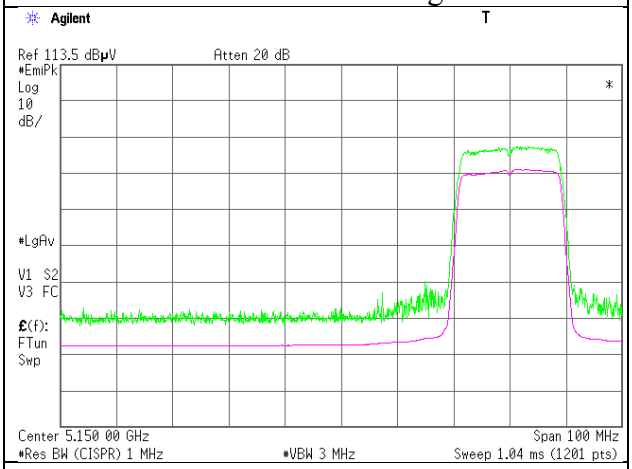
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-20 5180 MHz

Horizontal

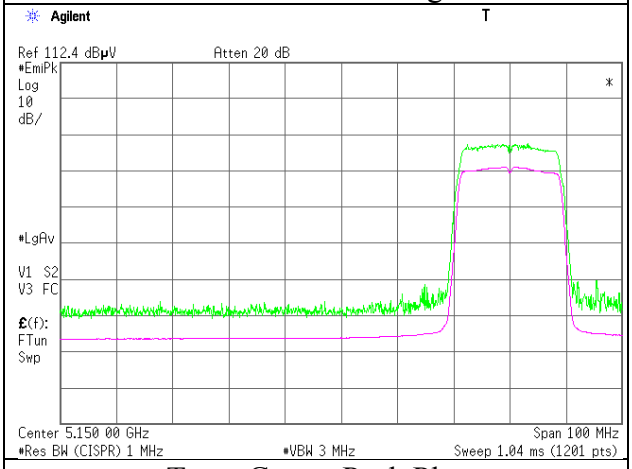
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
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.	10480.000	PK	46.24	39.84	8.19	39.33	2.37	57.31	73.90	16.5	100	224	
Hori.	15720.000	PK	43.29	38.58	10.73	38.60	-9.54	44.46	73.90	29.4	150	0	
Hori.	20960.000	PK	44.69	40.11	13.85	46.69	-9.54	42.42	73.90	31.4	150	0	
Hori.	26200.000	PK	45.55	40.21	16.00	46.94	-9.54	45.28	73.90	28.6	150	0	
Hori.	10480.000	AV	35.38	39.84	8.19	39.33	2.37	46.45	53.90	7.4	100	224	VBW:10Hz
Hori.	15720.000	AV	32.56	38.58	10.73	38.60	-9.54	33.73	53.90	20.1	150	0	VBW:10Hz
Hori.	20960.000	AV	31.92	40.11	13.85	46.69	-9.54	29.65	53.90	24.2	150	0	VBW:10Hz
Hori.	26200.000	AV	31.69	40.21	16.00	46.94	-9.54	31.42	53.90	22.4	150	0	VBW:10Hz
Vert.	10480.000	PK	48.23	39.84	8.19	39.33	2.37	59.30	73.90	14.6	379	33	
Vert.	15720.000	PK	42.97	38.58	10.73	38.60	-9.54	44.14	73.90	29.7	150	0	
Vert.	20960.000	PK	44.53	40.11	13.85	46.69	-9.54	42.26	73.90	31.6	150	0	
Vert.	26200.000	PK	44.89	40.21	16.00	46.94	-9.54	44.62	73.90	29.2	150	0	
Vert.	10480.000	AV	35.78	39.84	8.19	39.33	2.37	46.85	53.90	**7.0**	379	33	VBW:10Hz
Vert.	15720.000	AV	32.54	38.58	10.73	38.60	-9.54	33.71	53.90	20.1	150	0	VBW:10Hz
Vert.	20960.000	AV	31.64	40.11	13.85	46.69	-9.54	29.37	53.90	24.5	150	0	VBW:10Hz
Vert.	26200.000	AV	31.88	40.21	16.00	46.94	-9.54	31.61	53.90	22.2	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
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	43.75	31.79	15.73	37.32	2.37	56.32	73.90	17.5	108	93	
Hori.	10640.000	PK	45.60	39.93	8.34	39.40	2.37	56.84	73.90	17.0	100	311	
Hori.	15960.000	PK	44.65	37.71	10.86	38.47	-9.54	45.21	73.90	28.6	150	0	
Hori.	21280.000	PK	44.06	40.13	13.94	46.78	-9.54	41.81	73.90	32.0	150	0	
Hori.	5350.000	AV	31.54	31.79	15.73	37.32	2.37	44.11	53.90	9.7	108	93	VBW:10Hz
Hori.	10640.000	AV	34.36	39.93	8.34	39.40	2.37	45.60	53.90	8.3	100	311	VBW:10Hz
Hori.	15960.000	AV	33.18	37.71	10.86	38.47	-9.54	33.74	53.90	20.1	150	0	VBW:10Hz
Hori.	21280.000	AV	31.30	40.13	13.94	46.78	-9.54	29.05	53.90	24.8	150	0	VBW:10Hz
Vert.	5350.000	PK	43.21	31.79	15.73	37.32	2.37	55.78	73.90	18.1	142	123	
Vert.	10640.000	PK	45.49	39.93	8.34	39.40	2.37	56.73	73.90	17.1	386	30	
Vert.	15960.000	PK	44.85	37.71	10.86	38.47	-9.54	45.41	73.90	28.4	150	0	
Vert.	21280.000	PK	43.47	40.13	13.94	46.78	-9.54	41.22	73.90	32.6	150	0	
Vert.	5350.000	AV	31.22	31.79	15.73	37.32	2.37	43.79	53.90	10.1	142	123	VBW:10Hz
Vert.	10640.000	AV	35.26	39.93	8.34	39.40	2.37	46.50	53.90	**7.4**	386	30	VBW:10Hz
Vert.	15960.000	AV	33.21	37.71	10.86	38.47	-9.54	33.77	53.90	20.1	150	0	VBW:10Hz
Vert.	21280.000	AV	31.15	40.13	13.94	46.78	-9.54	28.90	53.90	25.0	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

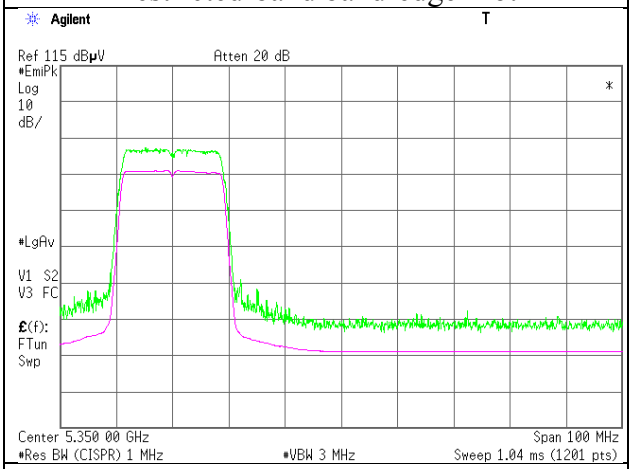
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-20 5320 MHz

Horizontal

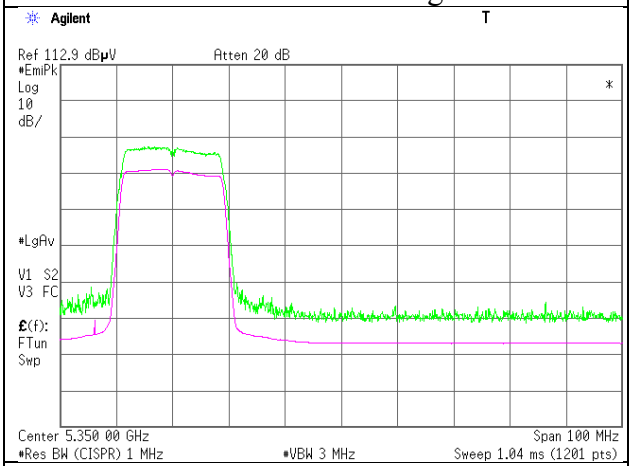
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
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	43.17	31.86	15.78	37.35	2.37	55.83	73.90	18.0	148	85	
Hori.	11000.000	PK	45.09	40.06	8.72	39.57	2.37	56.67	73.90	17.2	100	197	
Hori.	16500.000	PK	43.80	38.79	11.18	38.30	-9.54	45.93	73.90	27.9	150	0	
Hori.	22000.000	PK	44.01	40.17	14.34	47.47	-9.54	41.51	73.90	32.3	150	0	
Hori.	5460.000	AV	31.50	31.86	15.78	37.35	2.37	44.16	53.90	9.7	148	85	VBW:10Hz
Hori.	11000.000	AV	33.82	40.06	8.72	39.57	2.37	45.40	53.90	**8.5**	100	197	VBW:10Hz
Hori.	16500.000	AV	32.34	38.79	11.18	38.30	-9.54	34.47	53.90	19.4	150	0	VBW:10Hz
Hori.	22000.000	AV	32.16	40.17	14.34	47.47	-9.54	29.66	53.90	24.2	150	0	VBW:10Hz
Vert.	5460.000	PK	44.03	31.86	15.78	37.35	2.37	56.69	73.90	17.2	106	202	
Vert.	11000.000	PK	44.87	40.06	8.72	39.57	2.37	56.45	73.90	17.4	358	41	
Vert.	16500.000	PK	43.58	38.79	11.18	38.30	-9.54	45.71	73.90	28.1	150	0	
Vert.	22000.000	PK	44.25	40.17	14.34	47.47	-9.54	41.75	73.90	32.1	150	0	
Vert.	5460.000	AV	31.45	31.86	15.78	37.35	2.37	44.11	53.90	9.7	106	202	VBW:10Hz
Vert.	11000.000	AV	33.71	40.06	8.72	39.57	2.37	45.29	53.90	8.6	358	41	VBW:10Hz
Vert.	16500.000	AV	32.35	38.79	11.18	38.30	-9.54	34.48	53.90	19.4	150	0	VBW:10Hz
Vert.	22000.000	AV	32.06	40.17	14.34	47.47	-9.54	29.56	53.90	24.3	150	0	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 (3.94 m / 3.0 m) = 2.37 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	43.00	31.87	15.79	37.35	2.37	55.68	-39.52	-27.00	12.5	148	85	
Vert.	5470.000	PK	44.05	31.87	15.79	37.35	2.37	56.73	-38.47	-27.00	**11.5**	106	202	

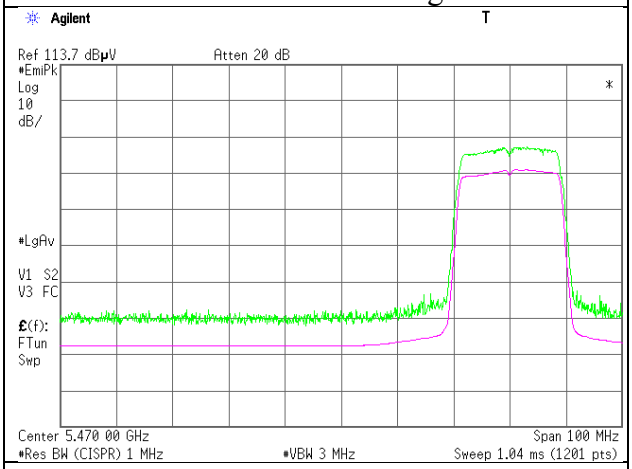
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-20 5500 MHz

Horizontal

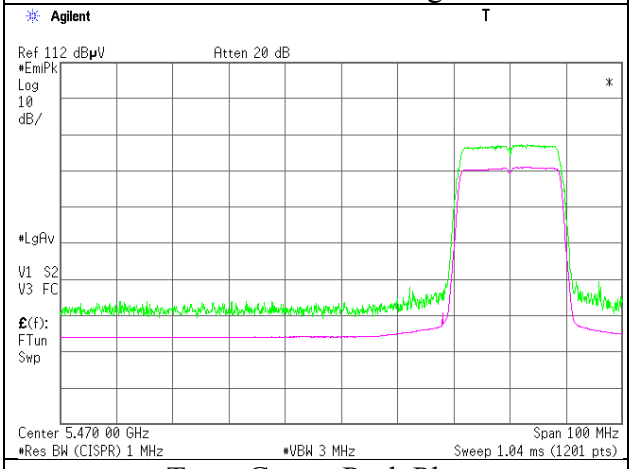
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
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.	11160.000	PK	46.16	40.02	8.72	39.54	2.37	57.73	73.90	16.1	100	191	
Hori.	16740.000	PK	43.28	39.37	11.22	38.25	-9.54	46.08	73.90	27.8	150	0	
Hori.	22320.000	PK	43.71	40.21	14.50	47.50	-9.54	41.38	73.90	32.5	150	0	
Hori.	11160.000	AV	35.02	40.02	8.72	39.54	2.37	46.59	53.90	**7.3**	100	191	VBW:10Hz
Hori.	16740.000	AV	32.55	39.37	11.22	38.25	-9.54	35.35	53.90	18.5	150	0	VBW:10Hz
Hori.	22320.000	AV	31.45	40.21	14.50	47.50	-9.54	29.12	53.90	24.7	150	0	VBW:10Hz
Vert.	11160.000	PK	46.77	40.02	8.72	39.54	2.37	58.34	73.90	15.5	380	23	
Vert.	16740.000	PK	43.53	39.37	11.22	38.25	-9.54	46.33	73.90	27.5	150	0	
Vert.	22320.000	PK	43.61	40.21	14.50	47.50	-9.54	41.28	73.90	32.6	150	0	
Vert.	11160.000	AV	34.94	40.02	8.72	39.54	2.37	46.51	53.90	**7.3**	380	23	VBW:10Hz
Vert.	16740.000	AV	32.57	39.37	11.22	38.25	-9.54	35.37	53.90	18.5	150	0	VBW:10Hz
Vert.	22320.000	AV	31.03	40.21	14.50	47.50	-9.54	28.70	53.90	25.2	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
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.	11400.000	PK	46.40	39.96	8.73	39.50	2.37	57.96	73.90	15.9	100	241	
Hori.	17100.000	PK	44.70	40.88	11.31	38.17	-9.54	49.18	73.90	24.7	150	0	
Hori.	22800.000	PK	43.13	40.26	14.58	47.11	-9.54	41.32	73.90	32.5	150	0	
Hori.	11400.000	AV	34.11	39.96	8.73	39.50	2.37	45.67	53.90	**8.2**	100	241	VBW:10Hz
Hori.	17100.000	AV	32.75	40.88	11.31	38.17	-9.54	37.23	53.90	16.6	150	0	VBW:10Hz
Hori.	22800.000	AV	31.09	40.26	14.58	47.11	-9.54	29.28	53.90	24.6	150	0	VBW:10Hz
Vert.	11400.000	PK	46.51	39.96	8.73	39.50	2.37	58.07	73.90	15.8	377	43	
Vert.	17100.000	PK	43.59	40.88	11.31	38.17	-9.54	48.07	73.90	25.8	150	0	
Vert.	22800.000	PK	43.51	40.26	14.58	47.11	-9.54	41.70	73.90	32.2	150	0	
Vert.	11400.000	AV	33.90	39.96	8.73	39.50	2.37	45.46	53.90	8.4	377	43	VBW:10Hz
Vert.	17100.000	AV	32.73	40.88	11.31	38.17	-9.54	37.21	53.90	16.6	150	0	VBW:10Hz
Vert.	22800.000	AV	31.15	40.26	14.58	47.11	-9.54	29.34	53.90	24.5	150	0	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 (3.94 m / 3.0 m) = 2.37 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	44.39	32.26	15.97	37.47	2.37	57.52	-37.68	-27.00	**10.7**	152	92	
Vert.	5725.000	PK	44.25	32.26	15.97	37.47	2.37	57.38	-37.82	-27.00	10.8	102	201	

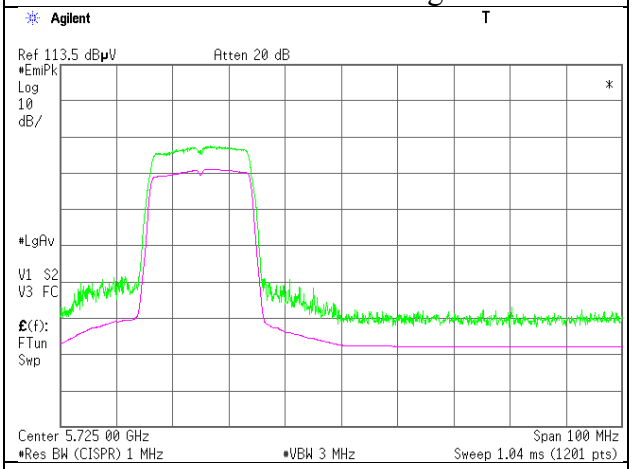
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-20 5700 MHz

Horizontal

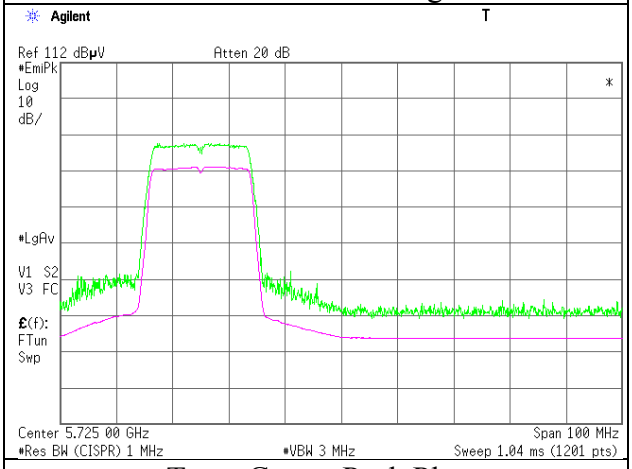
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11n-20 5745 MHz			

(abo 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11490.000	PK	43.64	39.94	8.73	39.48	2.37	55.20	73.90	18.7	100	243	
Hori.	17235.000	PK	42.69	42.06	11.34	38.13	-9.54	48.42	73.90	25.4	150	0	
Hori.	11490.000	AV	32.41	39.94	8.73	39.48	2.37	43.97	53.90	**9.9**	100	243	VBW:10Hz
Hori.	17235.000	AV	32.14	42.06	11.34	38.13	-9.54	37.87	53.90	16.0	150	0	VBW:10Hz
Vert.	11490.000	PK	43.39	39.94	8.73	39.48	2.37	54.95	73.90	18.9	356	49	
Vert.	17235.000	PK	44.51	42.06	11.34	38.13	-9.54	50.24	73.90	23.6	150	0	
Vert.	11490.000	AV	32.33	39.94	8.73	39.48	2.37	43.89	53.90	10.0	356	49	VBW:10Hz
Vert.	17235.000	AV	32.15	42.06	11.34	38.13	-9.54	37.88	53.90	16.0	150	0	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 (3.94 m / 3.0 m) = 2.37 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	43.09	32.14	15.92	37.44	2.37	56.08	-39.12	-27.00	12.1	150	86	
Hori.	5700.000	PK	43.04	32.22	15.96	37.46	2.37	56.13	-39.07	10.00	49.1	150	86	
Hori.	5720.000	PK	47.03	32.25	15.97	37.47	2.37	60.15	-35.05	15.60	50.7	150	86	
Hori.	5725.000	PK	54.17	32.26	15.97	37.47	2.37	67.30	-27.90	27.00	54.9	150	86	
Vert.	5650.000	PK	43.36	32.14	15.92	37.44	2.37	56.35	-38.85	-27.00	**11.9**	100	202	
Vert.	5700.000	PK	43.18	32.22	15.96	37.46	2.37	56.27	-38.93	10.00	48.9	100	202	
Vert.	5720.000	PK	47.50	32.25	15.97	37.47	2.37	60.62	-34.58	15.60	50.2	100	202	
Vert.	5725.000	PK	54.64	32.26	15.97	37.47	2.37	67.77	-27.43	27.00	54.4	100	202	

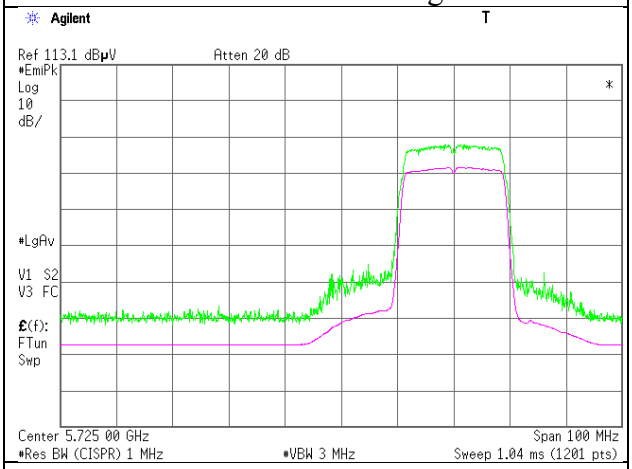
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-20 5745 MHz

Horizontal

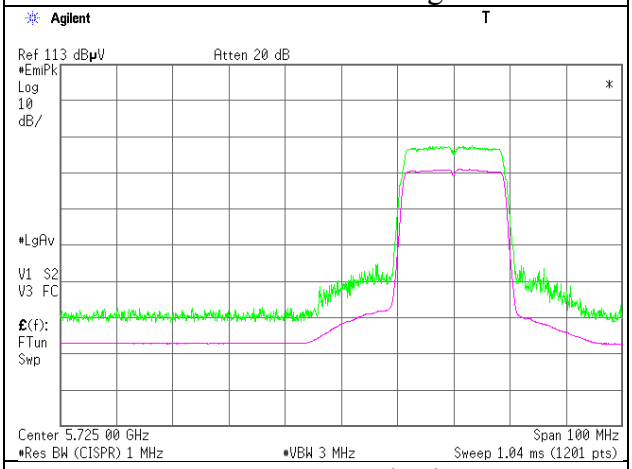
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
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.	11570.000	PK	43.37	39.85	8.79	39.47	2.37	54.91	73.90	18.9	100	287	
Hori.	17355.000	PK	43.21	43.10	11.37	38.09	-9.54	50.05	73.90	23.8	150	0	
Hori.	23140.000	PK	44.07	40.25	14.65	46.74	-9.54	42.69	73.90	31.2	150	0	
Hori.	11570.000	AV	31.89	39.85	8.79	39.47	2.37	43.43	53.90	10.4	100	287	VBW:10Hz
Hori.	17355.000	AV	32.36	43.10	11.37	38.09	-9.54	39.20	53.90	14.7	150	0	VBW:10Hz
Hori.	23140.000	AV	31.31	40.25	14.65	46.74	-9.54	29.93	53.90	23.9	150	0	VBW:10Hz
Vert.	11570.000	PK	43.13	39.85	8.79	39.47	2.37	54.67	73.90	19.2	391	38	
Vert.	17355.000	PK	44.46	43.10	11.37	38.09	-9.54	51.30	73.90	22.6	150	0	
Vert.	23140.000	PK	44.23	40.25	14.65	46.74	-9.54	42.85	73.90	31.0	150	0	
Vert.	11570.000	AV	32.01	39.85	8.79	39.47	2.37	43.55	53.90	**10.3**	391	38	VBW:10Hz
Vert.	17355.000	AV	32.35	43.10	11.37	38.09	-9.54	39.19	53.90	14.7	150	0	VBW:10Hz
Vert.	23140.000	AV	31.48	40.25	14.65	46.74	-9.54	30.10	53.90	23.8	150	0	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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
Mode	Tx 11n-20 5825 MHz			

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	42.79	39.74	8.86	39.45	2.37	54.31	73.90	19.5	100	252	
Hori.	17475.000	PK	43.89	44.15	11.40	38.06	-9.54	51.84	73.90	22.0	100	0	
Hori.	23300.000	PK	42.89	40.22	14.74	46.64	-9.54	41.67	73.90	32.2	150	0	
Hori.	11650.000	AV	31.68	39.74	8.86	39.45	2.37	43.20	53.90	**10.7**	100	252	VBW:10Hz
Hori.	17475.000	AV	32.83	44.15	11.40	38.06	-9.54	40.78	53.90	13.1	100	0	VBW:10Hz
Hori.	23300.000	AV	30.93	40.22	14.74	46.64	-9.54	29.71	53.90	24.1	150	0	VBW:10Hz
Vert.	11650.000	PK	42.92	39.74	8.86	39.45	2.37	54.44	73.90	19.4	355	24	
Vert.	17475.000	PK	44.19	44.15	11.40	38.06	-9.54	52.14	73.90	21.7	100	0	
Vert.	23300.000	PK	44.35	40.22	14.74	46.64	-9.54	43.13	73.90	30.7	150	0	
Vert.	11650.000	AV	31.62	39.74	8.86	39.45	2.37	43.14	53.90	**10.7**	355	24	VBW:10Hz
Vert.	17475.000	AV	32.81	44.15	11.40	38.06	-9.54	40.76	53.90	13.1	100	0	VBW:10Hz
Vert.	23300.000	AV	31.28	40.22	14.74	46.64	-9.54	30.06	53.90	23.8	150	0	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 (3.94 m / 3.0 m) = 2.37 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	49.39	32.46	16.07	37.54	2.37	62.75	-32.45	27.00	59.5	103	67	
Hori.	5855.000	PK	45.26	32.47	16.08	37.54	2.37	58.64	-36.56	15.60	52.2	103	67	
Hori.	5875.000	PK	43.13	32.51	16.09	37.55	2.37	56.55	-38.65	10.00	48.7	103	67	
Hori.	5925.000	PK	43.48	32.59	16.14	37.57	2.37	57.01	-38.19	-27.00	11.2	103	67	
Vert.	5850.000	PK	50.42	32.46	16.07	37.54	2.37	63.78	-31.42	27.00	58.4	113	175	
Vert.	5855.000	PK	44.72	32.47	16.08	37.54	2.37	58.10	-37.10	15.60	52.7	113	175	
Vert.	5875.000	PK	43.72	32.51	16.09	37.55	2.37	57.14	-38.06	10.00	48.1	113	175	
Vert.	5925.000	PK	43.91	32.59	16.14	37.57	2.37	57.44	-37.76	-27.00	**10.8**	113	175	

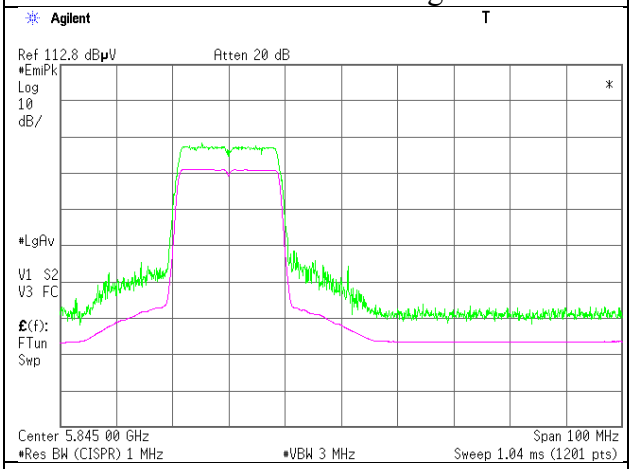
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG （({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 6, 2016
Temperature / Humidity	24deg. C / 61 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-20 5825 MHz

Horizontal

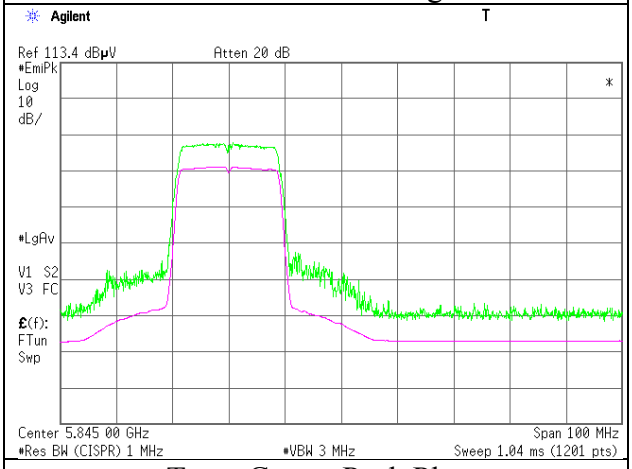
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
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	43.57	31.65	15.63	37.26	2.37	55.96	73.90	17.9	111	278	
Hori.	10380.000	PK	45.96	39.65	8.21	39.32	2.37	56.87	73.90	17.0	100	261	
Hori.	15570.000	PK	43.36	39.13	10.65	38.68	-9.54	44.92	73.90	28.9	150	0	
Hori.	20760.000	PK	44.42	40.11	13.88	46.73	-9.54	42.14	73.90	31.7	150	0	
Hori.	25950.000	PK	44.20	40.23	15.90	46.81	-9.54	43.98	73.90	29.9	150	0	
Hori.	5150.000	AV	31.41	31.65	15.63	37.26	2.37	43.80	53.90	10.1	111	278	VBW:10Hz
Hori.	10380.000	AV	34.79	39.65	8.21	39.32	2.37	45.70	53.90	**8.2**	100	261	VBW:10Hz
Hori.	15570.000	AV	33.00	39.13	10.65	38.68	-9.54	34.56	53.90	19.3	150	0	VBW:10Hz
Hori.	20760.000	AV	32.21	40.11	13.88	46.73	-9.54	29.93	53.90	23.9	150	0	VBW:10Hz
Hori.	25950.000	AV	31.85	40.23	15.90	46.81	-9.54	31.63	53.90	22.2	150	0	VBW:10Hz
Vert.	5150.000	PK	43.26	31.65	15.63	37.26	2.37	55.65	73.90	18.2	126	200	
Vert.	10380.000	PK	46.32	39.65	8.21	39.32	2.37	57.23	73.90	16.6	348	44	
Vert.	15570.000	PK	44.05	39.13	10.65	38.68	-9.54	45.61	73.90	28.2	150	0	
Vert.	20760.000	PK	44.29	40.11	13.88	46.73	-9.54	42.01	73.90	31.8	150	0	
Vert.	25950.000	PK	44.54	40.23	15.90	46.81	-9.54	44.32	73.90	29.5	150	0	
Vert.	5150.000	AV	31.13	31.65	15.63	37.26	2.37	43.52	53.90	10.3	126	200	VBW:10Hz
Vert.	10380.000	AV	34.71	39.65	8.21	39.32	2.37	45.62	53.90	**8.2**	348	44	VBW:10Hz
Vert.	15570.000	AV	33.02	39.13	10.65	38.68	-9.54	34.58	53.90	19.3	150	0	VBW:10Hz
Vert.	20760.000	AV	32.10	40.11	13.88	46.73	-9.54	29.82	53.90	24.0	150	0	VBW:10Hz
Vert.	25950.000	AV	31.73	40.23	15.90	46.81	-9.54	31.51	53.90	22.3	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

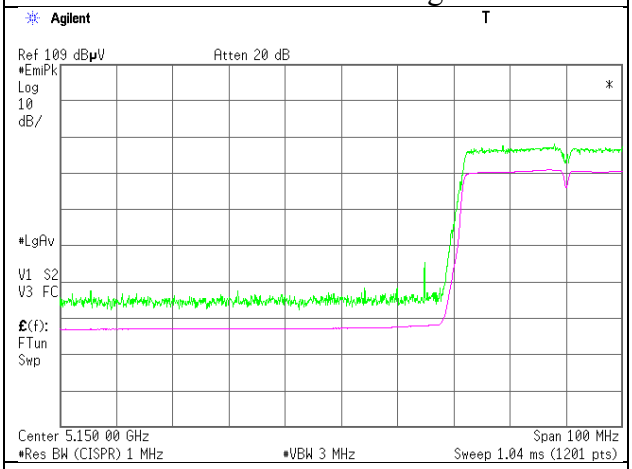
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 7, 2016
Temperature / Humidity	25deg. C / 47 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-40 5190 MHz

Horizontal

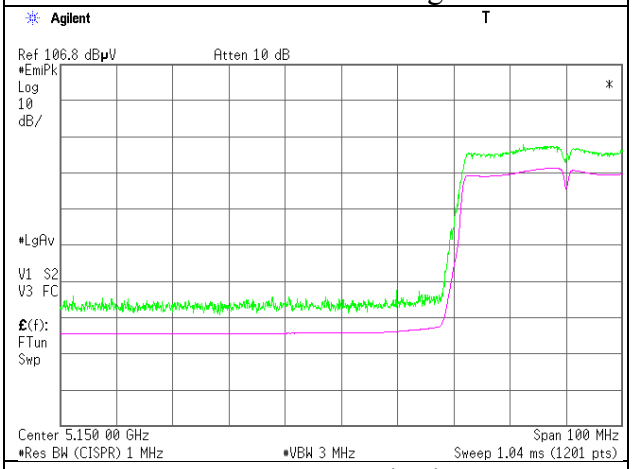
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
Mode	Tx 11n-40 5230 MHz			

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	45.87	39.80	8.20	39.33	2.37	56.91	73.90	16.9	100	301	
Hori.	15690.000	PK	44.55	38.69	10.72	38.62	-9.54	45.80	73.90	28.1	150	0	
Hori.	20920.000	PK	44.54	40.11	13.86	46.70	-9.54	42.27	73.90	31.6	150	0	
Hori.	26150.000	PK	44.33	40.21	15.99	46.91	-9.54	44.08	73.90	29.8	150	0	
Hori.	10460.000	AV	34.88	39.80	8.20	39.33	2.37	45.92	53.90	**7.9**	100	301	VBW:10Hz
Hori.	15690.000	AV	32.58	38.69	10.72	38.62	-9.54	33.83	53.90	20.0	150	0	VBW:10Hz
Hori.	20920.000	AV	31.85	40.11	13.86	46.70	-9.54	29.58	53.90	24.3	150	0	VBW:10Hz
Hori.	26150.000	AV	31.91	40.21	15.99	46.91	-9.54	31.66	53.90	22.2	150	0	VBW:10Hz
Vert.	10460.000	PK	45.87	39.80	8.20	39.33	2.37	56.91	73.90	16.9	351	69	
Vert.	15690.000	PK	44.90	38.69	10.72	38.62	-9.54	46.15	73.90	27.7	150	0	
Vert.	20920.000	PK	44.02	40.11	13.86	46.70	-9.54	41.75	73.90	32.1	150	0	
Vert.	26150.000	PK	45.38	40.21	15.99	46.91	-9.54	45.13	73.90	28.7	150	0	
Vert.	10460.000	AV	34.72	39.80	8.20	39.33	2.37	45.76	53.90	8.1	351	69	VBW:10Hz
Vert.	15690.000	AV	32.60	38.69	10.72	38.62	-9.54	33.85	53.90	20.0	150	0	VBW:10Hz
Vert.	20920.000	AV	31.97	40.11	13.86	46.70	-9.54	29.70	53.90	24.2	150	0	VBW:10Hz
Vert.	26150.000	AV	32.02	40.21	15.99	46.91	-9.54	31.77	53.90	22.1	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
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	44.63	31.79	15.73	37.32	2.37	57.20	73.90	16.7	154	92	
Hori.	10620.000	PK	44.23	39.92	8.32	39.39	2.37	55.45	73.90	18.4	100	214	
Hori.	15930.000	PK	43.77	37.82	10.85	38.49	-9.54	44.41	73.90	29.4	150	0	
Hori.	21240.000	PK	0.00	40.12	13.93	46.77	-9.54	-2.26	73.90	76.1	150	0	
Hori.	5350.000	AV	32.23	31.79	15.73	37.32	2.37	44.80	53.90	9.1	154	92	VBW:10Hz
Hori.	10620.000	AV	33.48	39.92	8.32	39.39	2.37	44.70	53.90	9.2	100	214	VBW:10Hz
Hori.	15930.000	AV	33.15	37.82	10.85	38.49	-9.54	33.79	53.90	20.1	150	0	VBW:10Hz
Hori.	21240.000	AV	31.51	40.12	13.93	46.77	-9.54	29.25	53.90	24.6	150	0	VBW:10Hz
Vert.	5350.000	PK	44.76	31.79	15.73	37.32	2.37	57.33	73.90	16.5	111	140	
Vert.	10620.000	PK	44.73	39.92	8.32	39.39	2.37	55.95	73.90	17.9	307	69	
Vert.	15930.000	PK	44.93	37.82	10.85	38.49	-9.54	45.57	73.90	28.3	150	0	
Vert.	21240.000	PK	43.67	40.12	13.93	46.77	-9.54	41.41	73.90	32.4	150	0	
Vert.	5350.000	AV	32.05	31.79	15.73	37.32	2.37	44.62	53.90	9.2	111	140	VBW:10Hz
Vert.	10620.000	AV	33.69	39.92	8.32	39.39	2.37	44.91	53.90	**8.9**	307	69	VBW:10Hz
Vert.	15930.000	AV	33.14	37.82	10.85	38.49	-9.54	33.78	53.90	20.1	150	0	VBW:10Hz
Vert.	21240.000	AV	31.22	40.12	13.93	46.77	-9.54	28.96	53.90	24.9	150	0	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 (3.94 m / 3.0 m) = 2.37 dB

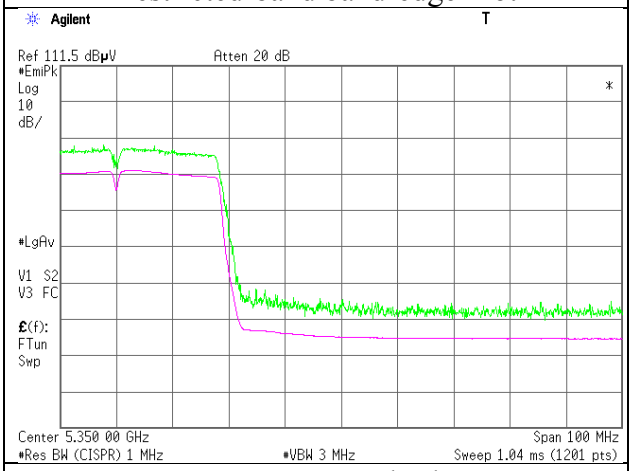
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 7, 2016
Temperature / Humidity	25deg. C / 47 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-40 5310 MHz

Horizontal

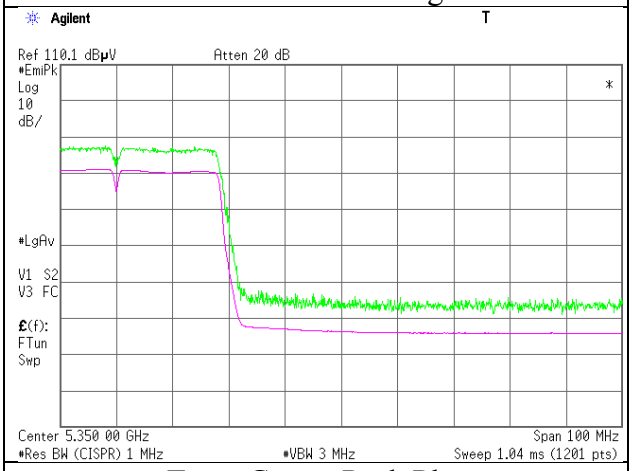
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
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	44.42	31.86	15.78	37.35	2.37	57.08	73.90	16.8	103	84	
Hori.	11020.000	PK	45.35	40.06	8.72	39.57	2.37	56.93	73.90	16.9	100	193	
Hori.	16530.000	PK	43.69	38.86	11.19	38.29	-9.54	45.91	73.90	27.9	150	0	
Hori.	22040.000	PK	43.95	40.17	14.36	47.47	-9.54	41.47	73.90	32.4	150	0	
Hori.	5460.000	AV	31.84	31.86	15.78	37.35	2.37	44.50	53.90	9.4	103	84	VBW:10Hz
Hori.	11020.000	AV	34.12	40.06	8.72	39.57	2.37	45.70	53.90	**8.2**	100	193	VBW:10Hz
Hori.	16530.000	AV	32.19	38.86	11.19	38.29	-9.54	34.41	53.90	19.4	150	0	VBW:10Hz
Hori.	22040.000	AV	31.94	40.17	14.36	47.47	-9.54	29.46	53.90	24.4	150	0	VBW:10Hz
Vert.	5460.000	PK	43.69	31.86	15.78	37.35	2.37	56.35	73.90	17.5	106	174	
Vert.	11020.000	PK	44.46	40.06	8.72	39.57	2.37	56.04	73.90	17.8	325	55	
Vert.	16530.000	PK	43.92	38.86	11.19	38.29	-9.54	46.14	73.90	27.7	150	0	
Vert.	22040.000	PK	44.09	40.17	14.36	47.47	-9.54	41.61	73.90	32.2	150	0	
Vert.	5460.000	AV	31.67	31.86	15.78	37.35	2.37	44.33	53.90	9.5	106	174	VBW:10Hz
Vert.	11020.000	AV	34.07	40.06	8.72	39.57	2.37	45.65	53.90	**8.2**	325	55	VBW:10Hz
Vert.	16530.000	AV	32.21	38.86	11.19	38.29	-9.54	34.43	53.90	19.4	150	0	VBW:10Hz
Vert.	22040.000	AV	32.06	40.17	14.36	47.47	-9.54	29.58	53.90	24.3	150	0	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 (3.94 m / 3.0 m) = 2.37 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	47.38	31.87	15.79	37.35	2.37	60.06	-35.14	-27.00	**8.1**	103	84	
Vert.	5470.000	PK	47.26	31.87	15.79	37.35	2.37	59.94	-35.26	-27.00	8.3	106	174	

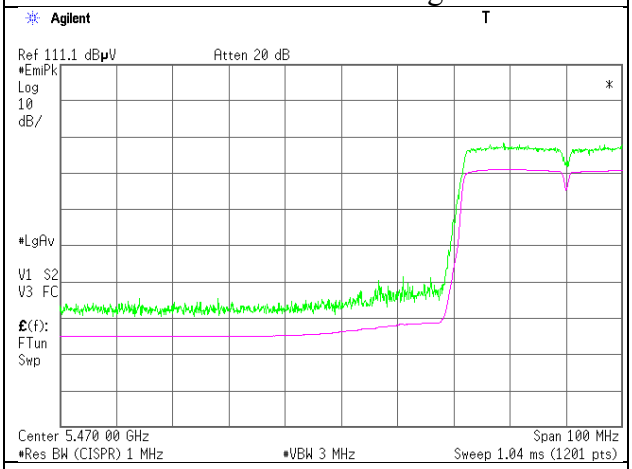
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 7, 2016
Temperature / Humidity	25deg. C / 47 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-40 5510 MHz

Horizontal

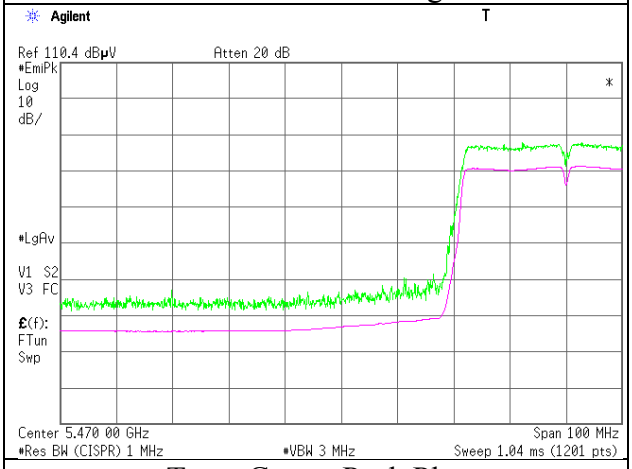
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)
Mode	Tx 11n-40 5550 MHz			

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11100.000	PK	45.16	40.04	8.72	39.55	2.37	56.74	73.90	17.1	100	258	
Hori.	16650.000	PK	43.63	39.15	11.21	38.27	-9.54	46.18	73.90	27.7	150	0	
Hori.	22200.000	PK	44.11	40.19	14.44	47.49	-9.54	41.71	73.90	32.1	150	0	
Hori.	11100.000	AV	34.22	40.04	8.72	39.55	2.37	45.80	53.90	8.1	100	258	VBW:10Hz
Hori.	16650.000	AV	32.43	39.15	11.21	38.27	-9.54	34.98	53.90	18.9	150	0	VBW:10Hz
Hori.	22200.000	AV	31.88	40.19	14.44	47.49	-9.54	29.48	53.90	24.4	150	0	VBW:10Hz
Vert.	11100.000	PK	45.02	40.04	8.72	39.55	2.37	56.60	73.90	17.3	339	61	
Vert.	16650.000	PK	43.02	39.15	11.21	38.27	-9.54	45.57	73.90	28.3	150	0	
Vert.	22200.000	PK	43.44	40.19	14.44	47.49	-9.54	41.04	73.90	32.8	150	0	
Vert.	11100.000	AV	34.44	40.04	8.72	39.55	2.37	46.02	53.90	**7.8**	339	61	VBW:10Hz
Vert.	16650.000	AV	32.45	39.15	11.21	38.27	-9.54	35.00	53.90	18.9	150	0	VBW:10Hz
Vert.	22200.000	AV	31.26	40.19	14.44	47.49	-9.54	28.86	53.90	25.0	150	0	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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	3	3	1	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016	October 13, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH	22 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)	Takahiro Suzuki (30 MHz-1000 MHz
Mode	Tx 11n-40 5670 MHz				

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	108.857	QP	22.15	11.39	8.24	31.80	0.00	9.98	43.50	33.5	198	2	
Hori.	175.569	QP	22.09	15.93	8.91	31.77	0.00	15.16	43.50	28.3	266	348	
Hori.	241.451	QP	22.07	17.76	9.51	31.74	0.00	17.60	46.00	28.4	134	351	
Hori.	461.668	QP	21.85	18.02	7.58	31.88	0.00	15.57	46.00	30.4	129	32	
Hori.	480.000	QP	32.03	18.12	7.68	31.88	0.00	25.95	46.00	20.0	100	179	
Hori.	11340.000	PK	44.53	39.98	8.73	39.51	2.37	56.10	73.90	17.8	100	225	
Hori.	17010.000	PK	44.45	40.10	11.28	38.20	-9.54	48.09	73.90	25.8	150	0	
Hori.	22680.000	PK	43.94	40.24	14.59	47.27	-9.54	41.96	73.90	31.9	150	0	
Hori.	11340.000	AV	33.29	39.98	8.73	39.51	2.37	44.86	53.90	9.0	100	225	VBW:10Hz
Hori.	17010.000	AV	33.21	40.10	11.28	38.20	-9.54	36.85	53.90	17.0	150	0	VBW:10Hz
Hori.	22680.000	AV	31.43	40.24	14.59	47.27	-9.54	29.45	53.90	24.4	150	0	VBW:10Hz
Vert.	123.714	QP	22.92	13.39	8.40	31.79	0.00	12.92	43.50	30.5	100	23	
Vert.	179.025	QP	22.33	16.09	8.95	31.77	0.00	15.60	43.50	27.9	100	1	
Vert.	202.003	QP	22.01	16.63	9.16	31.76	0.00	16.04	43.50	27.4	100	217	
Vert.	479.997	QP	29.03	18.12	7.68	31.88	0.00	22.95	46.00	23.0	100	148	
Vert.	659.187	QP	21.87	20.18	8.63	32.04	0.00	18.64	46.00	27.3	100	102	
Vert.	11340.000	PK	45.15	39.98	8.73	39.51	2.37	56.72	73.90	17.1	393	56	
Vert.	17010.000	PK	44.67	40.10	11.28	38.20	-9.54	48.31	73.90	25.5	150	0	
Vert.	22680.000	PK	43.78	40.24	14.59	47.27	-9.54	41.80	73.90	32.1	150	0	
Vert.	11340.000	AV	33.45	39.98	8.73	39.51	2.37	45.02	53.90	**8.8**	393	56	VBW:10Hz
Vert.	17010.000	AV	33.31	40.10	11.28	38.20	-9.54	36.95	53.90	16.9	150	0	VBW:10Hz
Vert.	22680.000	AV	31.26	40.24	14.59	47.27	-9.54	29.28	53.90	24.6	150	0	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 (3.94 m / 3.0 m) = 2.37 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	43.69	32.26	15.97	37.47	2.37	56.82	-38.38	-27.00	**11.4**	152	90	
Vert.	5725.000	PK	43.31	32.26	15.97	37.47	2.37	56.44	-38.76	-27.00	11.8	122	203	

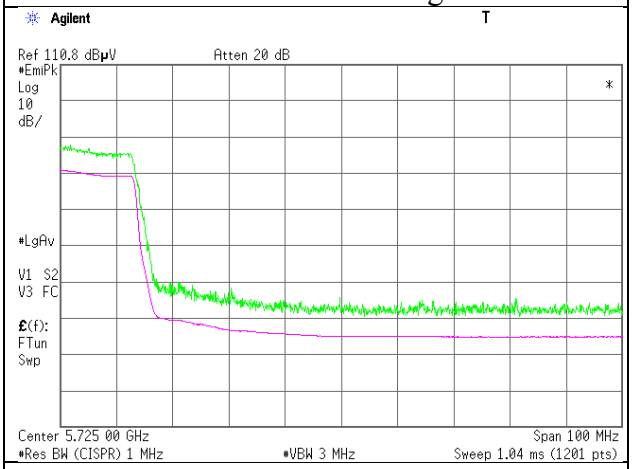
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 7, 2016
Temperature / Humidity	25deg. C / 47 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-40 5670 MHz

Horizontal

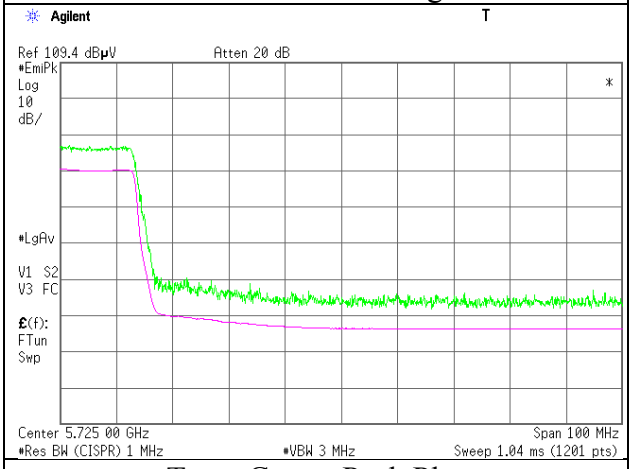
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
Mode	Tx 11n-40 5755 MHz			

(above 1GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	43.15	39.93	8.74	39.48	2.37	54.71	73.90	19.1	100	304	
Hori.	17265.000	PK	43.82	42.32	11.34	38.12	-9.54	49.82	73.90	24.0	150	0	
Hori.	23020.000	PK	44.43	40.28	14.59	46.82	-9.54	42.94	73.90	30.9	150	0	
Hori.	11510.000	AV	32.17	39.93	8.74	39.48	2.37	43.73	53.90	10.1	100	304	VBW:10Hz
Hori.	17265.000	AV	32.10	42.32	11.34	38.12	-9.54	38.10	53.90	15.8	150	0	VBW:10Hz
Hori.	23020.000	AV	31.41	40.28	14.59	46.82	-9.54	29.92	53.90	23.9	150	0	VBW:10Hz
Vert.	11510.000	PK	42.88	39.93	8.74	39.48	2.37	54.44	73.90	19.4	337	70	
Vert.	17265.000	PK	43.22	42.32	11.34	38.12	-9.54	49.22	73.90	24.6	150	0	
Vert.	23020.000	PK	44.12	40.28	14.59	46.82	-9.54	42.63	73.90	31.2	150	0	
Vert.	11510.000	AV	32.41	39.93	8.74	39.48	2.37	43.97	53.90	**9.9**	337	70	VBW:10Hz
Vert.	17265.000	AV	32.11	42.32	11.34	38.12	-9.54	38.11	53.90	15.7	150	0	VBW:10Hz
Vert.	23020.000	AV	31.51	40.28	14.59	46.82	-9.54	30.02	53.90	23.8	150	0	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 (3.94 m / 3.0 m) = 2.37 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	43.10	32.14	15.92	37.44	2.37	56.09	-39.11	-27.00	12.1	146	77	
Hori.	5700.000	PK	43.56	32.22	15.96	37.46	2.37	56.65	-38.55	10.00	48.6	146	77	
Hori.	5720.000	PK	52.28	32.25	15.97	37.47	2.37	65.40	-29.80	15.60	45.4	146	77	
Hori.	5725.000	PK	53.44	32.26	15.97	37.47	2.37	66.57	-28.63	27.00	55.6	146	77	
Vert.	5650.000	PK	43.35	32.14	15.92	37.44	2.37	56.34	-38.86	-27.00	**11.9**	102	174	
Vert.	5700.000	PK	43.99	32.22	15.96	37.46	2.37	57.08	-38.12	10.00	48.1	102	174	
Vert.	5720.000	PK	53.68	32.25	15.97	37.47	2.37	66.80	-28.40	15.60	44.0	102	174	
Vert.	5725.000	PK	54.42	32.26	15.97	37.47	2.37	67.55	-27.65	27.00	54.7	102	174	

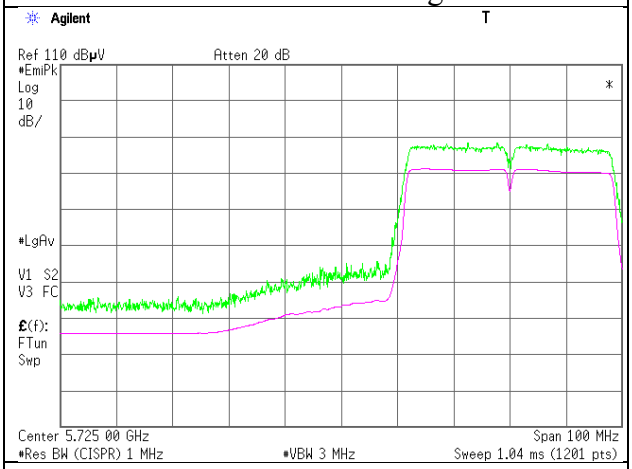
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG （{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 7, 2016
Temperature / Humidity	25deg. C / 47 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-40 5755 MHz

Horizontal

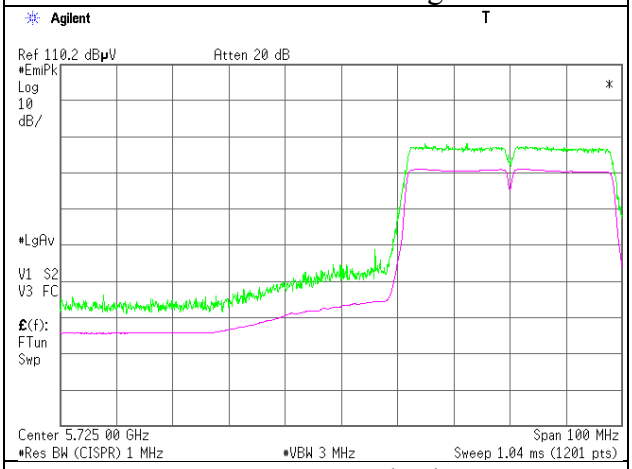
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Report No.	11355752S-P-R3			
Anechoic Chamber No.	2	3	3	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH
Engineer	Hiroyuki Morikawa	Yosuke Ishikawa	Hikaru Shirasawa	Takahiro Suzuki
	(1 GHz-6.4 GHz)	(6.4 GHz-18 GHz)	(18 GHz-26.5 GHz)	(26.5 GHz-40 GHz)
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.	5875.000	PK	43.04	32.51	16.09	37.55	2.37	56.46	73.90	17.4	118	64	
Hori.	11590.000	PK	43.09	39.82	8.81	39.46	2.37	54.63	73.90	19.2	100	284	
Hori.	17385.000	PK	42.60	43.36	11.37	38.08	-9.54	49.71	73.90	24.1	150	0	
Hori.	23180.000	PK	43.39	40.25	14.68	46.72	-9.54	42.06	73.90	31.8	150	0	
Hori.	5850.000	AV	31.35	32.46	16.07	37.54	2.37	44.71	53.90	9.1	118	64	VBW:10Hz
Hori.	5855.000	AV	31.35	32.47	16.08	37.54	2.37	44.73	53.90	9.1	118	64	VBW:10Hz
Hori.	5925.000	AV	32.62	32.59	16.14	37.57	2.37	46.15	53.90	**7.7**	118	64	VBW:10Hz
Hori.	11590.000	AV	32.05	39.82	8.81	39.46	2.37	43.59	53.90	10.3	100	284	VBW:10Hz
Hori.	17385.000	AV	32.43	43.36	11.37	38.08	-9.54	39.54	53.90	14.3	150	0	VBW:10Hz
Hori.	23180.000	AV	30.72	40.25	14.68	46.72	-9.54	29.39	53.90	24.5	150	0	VBW:10Hz
Vert.	11590.000	PK	42.80	39.82	8.81	39.46	2.37	54.34	73.90	19.5	375	37	
Vert.	17385.000	PK	43.41	43.36	11.37	38.08	-9.54	50.52	73.90	23.3	150	0	
Vert.	23180.000	PK	43.04	40.25	14.68	46.72	-9.54	41.71	73.90	32.1	150	0	
Vert.	5850.000	AV	31.45	32.46	16.07	37.54	2.37	44.81	53.90	9.0	100	176	VBW:10Hz
Vert.	5855.000	AV	31.48	32.47	16.08	37.54	2.37	44.86	53.90	9.0	100	176	VBW:10Hz
Vert.	5925.000	AV	31.36	32.59	16.14	37.57	2.37	44.89	53.90	9.0	100	176	VBW:10Hz
Vert.	11590.000	AV	32.06	39.82	8.81	39.46	2.37	43.60	53.90	10.3	375	37	VBW:10Hz
Vert.	17385.000	AV	32.45	43.36	11.37	38.08	-9.54	39.56	53.90	14.3	150	0	VBW:10Hz
Vert.	23180.000	AV	30.84	40.25	14.68	46.72	-9.54	29.51	53.90	24.3	150	0	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 (3.94 m / 3.0 m) = 2.37 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	43.72	32.46	16.07	37.54	2.37	57.08	-38.12	27.00	65.1	118	64	
Hori.	5855.000	PK	42.86	32.47	16.08	37.54	2.37	56.24	-38.96	15.60	54.6	118	64	
Hori.	5925.000	PK	43.11	32.59	16.14	37.57	2.37	56.64	-38.56	-27.00	11.6	118	64	
Hori.	5875.000	AV	31.36	32.51	16.09	37.55	2.37	44.78	-50.42	10.00	60.4	118	64	
Vert.	5850.000	PK	44.45	32.46	16.07	37.54	2.37	57.81	-37.39	27.00	64.4	100	176	
Vert.	5855.000	PK	43.55	32.47	16.08	37.54	2.37	56.93	-38.27	15.60	53.9	100	176	
Vert.	5875.000	PK	42.65	32.51	16.09	37.55	2.37	56.07	-39.13	10.00	49.1	100	176	
Vert.	5925.000	PK	43.91	32.59	16.14	37.57	2.37	57.44	-37.76	-27.00	**10.8**	100	176	

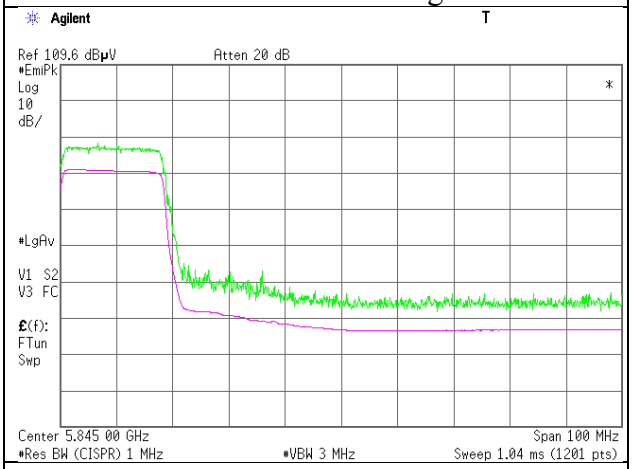
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Resrult(EIRP[dBm])=10*LOG（{ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)
*Other frequency noises omitted in this report were not 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 (3.94 m / 3.0 m) = 2.37 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	11355752S-P-R3
Anechoic Chamber No.	2
Date	October 7, 2016
Temperature / Humidity	25deg. C / 47 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 11n-40 5795 MHz

Horizontal

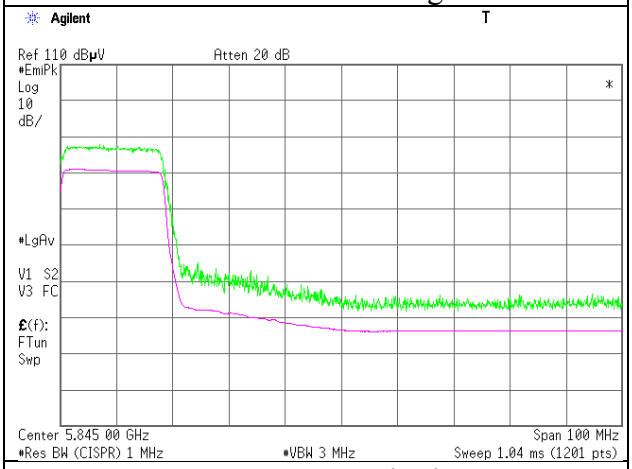
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot

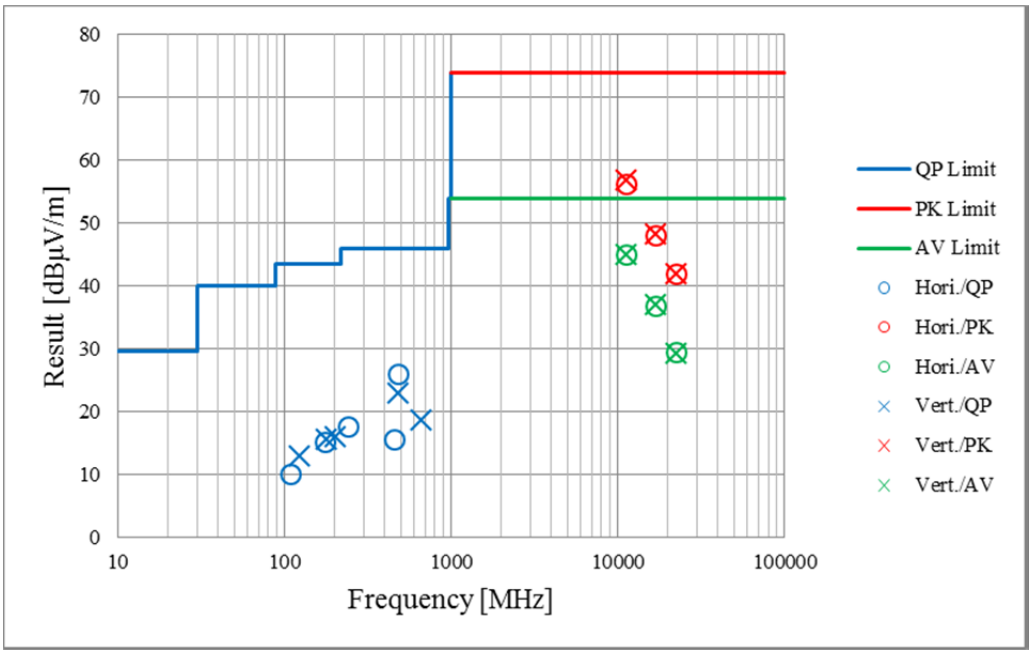


Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission
(Plot data, Worst case)

Report No.	11355752S-P-R3				
Anechoic Chamber No.	2	3	3	1	1
Date	October 6, 2016	October 9, 2016	October 10, 2016	October 12, 2016	October 13, 2016
Temperature / Humidity	24 deg. C / 61 % RH	24 deg. C / 65 % RH	24 deg. C / 50 % RH	23 deg. C / 55 % RH	22 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa (1 GHz-6.4 GHz)	Yosuke Ishikawa (6.4 GHz-18 GHz)	Hikaru Shirasawa (18 GHz-26.5 GHz)	Takahiro Suzuki (26.5 GHz-40 GHz)	Takahiro Suzuki (30 MHz-1000 MHz
Mode	Tx 11n-40 5670 MHz				

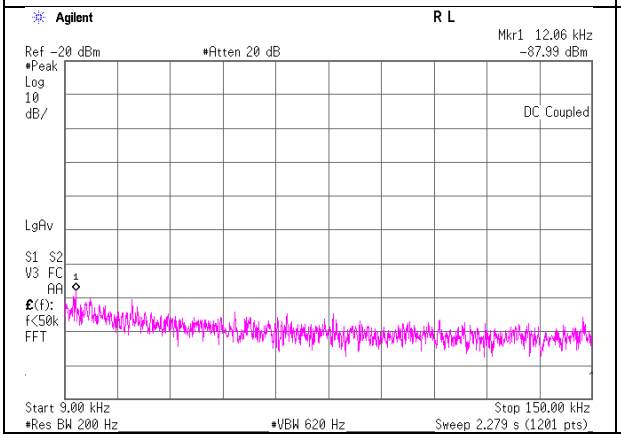


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

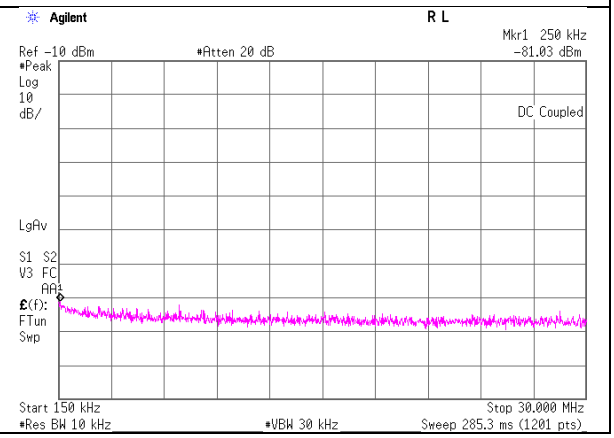
Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11355752S-P-R3
Date	September 21, 2016
Temperature / Humidity	24deg. C / 52 % RH
Engineer	Yosuke Ishikawa
Mode	Tx 11n-40 5670 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	-88.0	0.02	9.5	4.5	1	-73.9	300	6.0	-12.7	45.9	58.6	
250.00	-81.0	0.02	9.5	4.5	1	-67.0	300	6.0	-5.7	19.6	25.3	

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)
SPM-07	Power Meter	Agilent	8990B	MY51002 72	AT	2016/04/04 * 12
SPSS-04	Power sensor	Agilent	N1923A	MY53260 09	AT	2016/04/04 * 12
SCC-G14	Coaxial Cable	Suhner	SUCOFLEX 102	31600/2	AT	2016/03/23 * 12
SAT10-09	Attenuator	Weinschel Corp.	54A-10	W5692	AT	2015/11/04 * 12
SCC-H11	Microwave cable	RS Pro	R-132G721 0 100CO	-	AT	2016/04/18 * 12
STS-06	Digital Hitester	Hioki	3805-50	080997830	AT	2016/03/22 * 12
SOS-10	Humidity Indicator	A&D	AD-5681	4064561	AT	2015/10/22 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250 106	AT, RE	2016/03/23 * 12
SRENT-06	Spectrum Analyzer	KEYSIGHT	E4440A	MY48250 921	AT	2016/08/07 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2015/12/07 * 12
SAF-05	Pre Amplifier	TOYO Corporation	TPA0118-3 6	1440490	RE	2016/02/10 * 12
SCC-G05	Coaxial Cable	Junkosha	J12J102207- 00	APR-30-1 5-037	RE	2016/05/24 * 12
SCC-G22	Coaxial Cable	Suhner	SUCOFLEX 104	296199/4	RE	2016/05/11 * 12
SHA-02	Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-726	RE	2016/08/09 * 12
SOS-04	Humidity Indicator	A&D	AD-5681	4061512	RE	2015/12/07 * 12
SJM-09	Measure	PROMART	SEN1935	-	RE	-
SAEC-02(SV SWR)	Semi-Anechoic Chamber	TDK	SAEC-02(S VSWR)	2	RE	2016/07/22 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV (RE,CE,RFI, MF)	-	RE	-
STS-02	Digital Hitester	Hioki	3805-50	080997819	RE	2016/03/22 * 12
SAT10-05	Attenuator(above1G Hz)	Agilent	8493C-010	74864	RE	2015/11/04 * 12
SFL-03	Highpass Filter	MICRO-TRONICS	HPM50112	028	RE	2015/11/16 * 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

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

Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-739	RE	2016/08/22 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2015/10/22 * 12
SJM-15	Measure	ASKUL	-	-	RE	-
SAEC-03(SV SWR)	Semi-Anechoic Chamber	TDK	SAEC-03(S VSWR)	3	RE	2016/07/25 * 12
STS-03	Digital Hitester	Hioki	3805-50	080997823	RE	2015/11/18 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM3640	RE	2016/03/15 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26 W	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	MWX241-0 1000KMSK MS	-	RE	2016/04/18 * 12
SAEC-01(NS A)	Semi-Anechoic Chamber	TDK	SAEC-01(N SA)	1	RE	2016/07/14 * 12
SAF-10	Pre Amplifier	TOYO Corporation	HAP26-40 W	00000010	RE	2016/03/23 * 12
SCC-G19	Coaxial Cable	Suhner	SUCOFLEX 102A	1188/2A	RE	2016/03/08 * 12
SCC-G33	Coaxial Cable	Junkosha	MWX241-0 1000KMSK MS	-	RE	2016/04/18 * 12
SHA-06	Horn Antenna	ETS LINDGREN	3160-10	LM3459	RE	2016/03/24 * 12
SOS-01	Humidity Indicator	A&D	AD-5681	4062555	RE	2016/10/12 * 12
STR-01	Test Receiver	Rohde & Schwarz	ESU40	100093	RE,CE	2015/11/06 * 12
KJM-09	Measure	KOMELON	KMC-36	-	RE,CE	-
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV (RE,CE,RFI, MF)	-	RE,CE	-
STS-01	Digital Hitester	Hioki	3805-50	080997812	RE,CE	2015/11/18 * 12
SAF-01	Pre Amplifier	SONOMA	310N	290211	RE	2016/02/19 * 12
KAT6-04	Attenuator	INMET	18N-6dB	-	RE	2015/12/18 * 12
SAT3-09	Attenuator	JFW	50HF-003N	-	RE	2016/08/04 * 12
KBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1926	RE	2015/11/02 * 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

Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SCC-A1/A3/A5/A7/A8/A13/SRSE-01	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269 (RF Selector)	RE	2016/04/22 * 12
SCC-A2/A4/A6/A7/A8/A13/SRSE-01	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269 (RF Selector)	RE	2016/04/22 * 12
KLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	170	RE	2015/10/17 * 12
SCC-A12/A13/SRSE-01	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS4906	-/0901-269 (RF Selector)	CE	2016/04/22 * 12
SLS-01	LISN	Rohde & Schwarz	ENV216	100511	CE	2016/02/08 * 12
SAT3-10	Attenuator	JFW	50HF-003N	-	CE	2016/08/04 * 12
SOS-02	Humidity Indicator	A&D	AD-5681	4063343	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