RADIO TEST REPORT

Test Report No. : 10993397H-C

Applicant	:	**silex technology, Inc.**
Type of Equipment	:	**PCI Express mini card WLAN module**
Model No.	:	**SX-PCEAC**
FCC ID	:	**N6C-SXPCEAC**
Test regulation	:	**FCC Part 15 Subpart E: 2015** ***Spurious emission test only**
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. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
6. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)

Date of test: June 10 and November 7, 2015 to January 8, 2016

Representative test engineer:
Shinichi Miyazono
Engineer
Consumer Technology Division

Approved by:
Takahiro Hatakeda
Leader
Consumer Technology Division

NVLAP LAB CODE: 200572-0

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

REVISION HISTORY

Original Test Report No.: 10993397H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	10993397H-C	January 28, 2016	-	-

UL Japan, Inc.
Ise EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8999
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SECTION 1: Customer information

Company Name	:	silex technology, Inc.
Address	:	2-3-1 Hikaridai, Seika-cho, Kyoto 619-0237, Japan
Telephone Number	:	+81-774-98-3878
Facsimile Number	:	+81-774-98-3758
Contact Person	:	Toshiro Kometani

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

2.1 Identification of E.U.T.

Type of Equipment	:	PCI Express mini card WLAN module
Model No.	:	SX-PCEAC
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 3.3 V
Receipt Date of Sample	:	October 9, 2015
Country of Mass-production	:	Japan
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No Modification by the test lab

2.2 Product Description

Model: SX-PCEAC (referred to as the EUT in this report) is a PCI Express mini card WLAN module.

General Specification

Clock frequency(ies) in the system	:	40 MHz
Operating Temperature	:	0 deg. C - +60 deg. C

Radio Specification

Radio Type	:	Transceiver
Method of Frequency Generation	:	Synthesizer
Power Supply (inner)	:	DC 1.2 V

Type of radio	**IEEE802.11a/n/ac (20 M band)**	**IEEE802.11n/ac (40 M band)**	**IEEE802.11ac (80 M band)**
Frequency of operation	5180 MHz - 5240 MHz 5260 MHz - 5320 MHz 5500 MHz - 5700 MHz 5745 MHz - 5825 MHz	5190 MHz - 5230 MHz 5270 MHz - 5310 MHz 5510 MHz - 5670 MHz 5755 MHz - 5795 MHz	5210 MHz 5290 MHz 5530 MHz - 5610 MHz 5775 MHz
Type of modulation	11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 11ac: OFDM (64QAM, 16QAM, QPSK, BPSK, 256QAM)		
Channel spacing	20 MHz	40 MHz	80 MHz
Antenna type	Flying Lead Antenna		
Antenna connector type	U.FL Alternative connector		
Antenna Gain	2 dBi		

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification	:	FCC Part 15 Subpart E: 2015, final revised on November 23, 2015 *Some parts are effective on and after December 17, 2015 or December 23, 2015. The revision does not affect the test specification applied to the EUT.
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Spurious Emission Restricted Band Edge	**FCC:** ANSI C63.10-2013 KDB Publication Number 789033	**FCC:** 15.407 (b), 15.205 and 15.209	0.5 dB 5150.000 MHz, AV, Vert.	Complied	Radiated (> 30 MHz) *1)
	IC: -	**IC:** RSS-247 6.2.1 (2) 6.2.2 (2) 6.2.3 (2) 6.2.4 (2)			
Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422. *1) Radiated test was selected over 30 MHz based on section FCC 15.407 (b) and KDB 789033 D02 G.3.b).					

FCC Part 15.31 (e)

This EUT provides stable voltage (DC 1.2 V) constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203/212 Antenna requirement

The EUT has a unique coupling/antenna connector (U.FL Alternative connector). Therefore the equipment complies with the requirement of 15.203/212.

3.3 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

EMI

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

Ise EMC Lab.

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

Polarity	Radiated emission (Below 1GHz)			
	(3 m*)(±dB)		(10 m*)(±dB)	
	30 – 300 MHz	300 – 1000MHz	30 – 300 MHz	300 – 1000MHz
Horizontal	4.8 dB	5.2 dB	4.8 dB	5.0 dB
Vertical	4.5 dB	5.9 dB	4.8 dB	5.1 dB

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

*Measurement distance

Radiated emission test

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

3.5 Test Location

UL Japan, Inc. Ise EMC Lab. *NVLAP Lab. code: 200572-0
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone: +81 596 24 8999, Facsimile: +81 596 24 8124

Test site	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms	Maximum measurement distance
No.1 semi-anechoic chamber	2973C-1	19.2 x 11.2 x 7.7	7.0 x 6.0	No.1 Power source room	10 m
No.2 semi-anechoic chamber	2973C-2	7.5 x 5.8 x 5.2	4.0 x 4.0	-	3 m
No.3 semi-anechoic chamber	2973C-3	12.0 x 8.5 x 5.9	6.8 x 5.75	No.3 Preparation room	3 m
No.3 shielded room	-	4.0 x 6.0 x 2.7	N/A	-	-
No.4 semi-anechoic chamber	2973C-4	12.0 x 8.5 x 5.9	6.8 x 5.75	No.4 Preparation room	3 m
No.4 shielded room	-	4.0 x 6.0 x 2.7	N/A	-	-
No.5 semi-anechoic chamber	-	6.0 x 6.0 x 3.9	6.0 x 6.0	-	-
No.6 shielded room	-	4.0 x 4.5 x 2.7	4.0 x 4.5	-	-
No.6 measurement room	-	4.75 x 5.4 x 3.0	4.75 x 4.15	-	-
No.7 shielded room	-	4.7 x 7.5 x 2.7	4.7 x 7.5	-	-
No.8 measurement room	-	3.1 x 5.0 x 2.7	N/A	-	-
No.9 measurement room	-	8.8 x 4.6 x 2.8	2.4 x 2.4	-	-
No.11 measurement room	-	6.2 x 4.7 x 3.0	4.8 x 4.6	-	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0 m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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

4.1 Operating Mode(s)

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

Mode	Remarks*
IEEE 802.11a (11a)	6Mbps, PN9
IEEE 802.11n MIMO 20MHz BW (11n-20)	MCS 19(3 stream), PN9
IEEE 802.11n MIMO 40MHz BW (11n-40)	MCS 16(3 stream), PN9
IEEE 802.11ac MIMO 20MHz BW (11ac-20)	MCS 3(3 stream), PN9
IEEE 802.11ac MIMO 40MHz BW (11ac-40)	MCS 0(3 stream), PN9
IEEE 802.11ac MIMO 80MHz BW (11ac-80)	MCS 6(3 stream), PN9
*The worst antenna (Ant: x) and condition was determined based on the test result of Maximum Conducted Output Power.	

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

	Power Setting		
	11a	11n-20	11ac-20
5180MHz	14.0	14.0	14.0
5220MHz	14.0	14.0	14.0
5240MHz	14.0	14.0	14.0
5260MHz	14.0	14.0	14.0
5300MHz	14.0	14.0	14.0
5320MHz	14.0	14.0	14.0
5500MHz	12.0	12.0	12.0
5580MHz	12.0	12.0	12.0
5700MHz	8.0	8.0	8.0
5745MHz	7.0	7.0	7.0
5785MHz	7.0	7.0	7.0
5825MHz	7.0	7.0	7.0

	Power Setting	
	11n-40	11ac-40
5190MHz	14.5	14.5
5230MHz	16.0	16.0
5270MHz	16.0	16.0
5310MHz	14.0	14.0
5510MHz	13.5	13.5
5550MHz	16.0	16.0
5670MHz	11.0	11.0
5755MHz	9.0	9.0
5795MHz	9.0	9.0

	Power Setting
	11ac-80
5210MHz	8.0
5290MHz	5.0
5530MHz	8.0
5610MHz	13.0
5775MHz	9.5

Software: ART2_ver_4_9_802_1

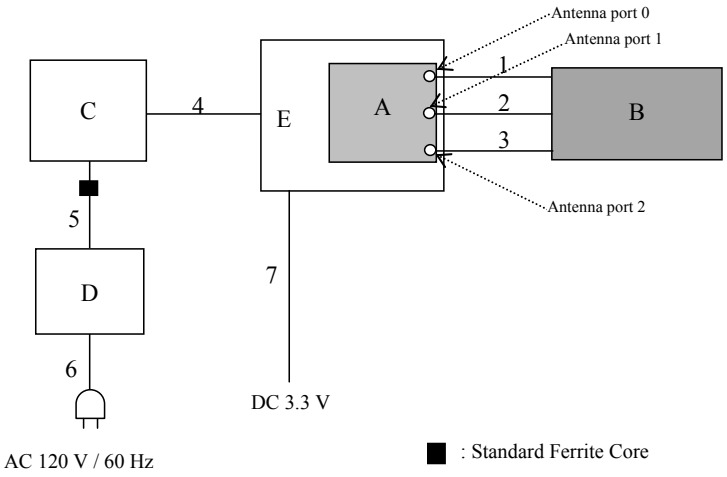
*This setting of software is the worst case.
Any conditions under the normal use do not exceed the condition of setting.
In addition, end users cannot change the settings of the output power of the product.

*The details of Operating mode(s)

Test Item	Operating Mode	Tested Antenna Port *2)	Tested Frequency			
			Low Band	Middle Band	Additional Band	Upper Band
Radiated Spurious Emission (Below 1GHz)	11n-40 Tx *1)	0+1+2	-	5270MHz *1)	-	-
Radiated Spurious Emission (Above 1GHz) Band Edge confirmation (Radiated)	11n-20 Tx *3)	0+1+2	5180MHz	5260MHz 5320MHz	5500MHz 5580MHz 5700MHz	5745MHz 5785MHz 5825MHz
	11n-40 Tx *3)	0+1+2	5190MHz	5270MHz 5310MHz	5510MHz 5550MHz 5670MHz	5755MHz 5795MHz
	11ac-80 Tx	0+1+2	5210MHz	5290MHz	5530MHz 5610MHz	5775MHz

*1) The operating mode and tested frequency were tested as a representative, because it had the highest power at antenna terminal test.
*2) After the comparison between SISO and MIMO, test was performed with the worst condition as a representative.
*3) The operating 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	PCI Express mini card WLAN module	SX-PCEAC	84253F010749	silex technology, Inc.	EUT
B	External antenna	KWM-619BMPW X-890	1	Unictron Technologies Corporation	EUT
C	Laptop PC	E6510	8001WM1	DELL	-
D	AC Adapter	LA90PE0-01	CN-03T6XF-71615-08 J-1148-A01	DELL	-
E	Jig Board	-	-	silex technology, Inc.	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Antenna Cable	0.05	Unshielded	Unshielded	-
2	Antenna Cable	0.05	Unshielded	Unshielded	-
3	Antenna Cable	0.05	Unshielded	Unshielded	-
4	Mini PCI Cable	1.00	Shielded	Shielded	-
5	DC Cable	1.80	Unshielded	Unshielded	-
6	AC Cable	0.90	Unshielded	Unshielded	-
7	DC Cable	2.00	Unshielded	Unshielded	-

SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

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

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

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

< Below 1GHz >

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

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

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

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 AD *1) RBW: 1 MHz VBW: 3 MHz Detector: Power Averaging (RMS) Trace: ≥ 100 traces Duty factor was added to the results.
Test Distance	3 m	3 m (below 1 GHz), 3 m*2) (1 GHz – 10 GHz), 1 m*3) (10 GHz – 26.5 GHz), 0.5 m*4) (26.5 GHz – 40 GHz)	

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v01r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E (Issued on January 8, 2016)".
*2) Distance Factor: 20 x log (4.4 m/3.0 m) = 3.3 dB
*3) Distance Factor: 20 x log (1.0 m/3.0 m) = -9.5 dB
*4) Distance Factor: 20 x log (0.5 m/3.0 m) = -15.6 dB

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

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

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

APPENDIX 1: Test data

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 7, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 56 % RH	21 deg. C / 35 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Satofumi Matsuyama	Hironobu Ohnishi	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5180 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5150.000	PK	55.6	33.3	4.1	31.3	-	61.7	73.9	12.2	Bandedge	
Hori	5279.972	PK	58.4	33.2	4.1	31.3	-	64.4	68.2	3.8	Outside	
Hori	6906.680	PK	56.3	36.4	4.9	32.4	-	65.2	68.2	3.0	Outside	
Hori	10360.000	PK	54.9	40.0	-2.2	34.4	-	58.3	68.2	9.9	Outside	
Hori	15540.000	PK	45.2	39.6	-0.7	33.5	-	50.6	73.9	23.3	Inside	
Hori	5150.000	AV	43.5	33.3	4.1	31.3	1.4	51.0	53.9	2.9	Bandedge	
Hori	15540.000	AV	36.9	39.6	-0.7	33.5	1.4	43.7	53.9	10.2	Inside	
Vert	5150.000	PK	55.4	33.3	4.1	31.3	-	61.5	73.9	12.4	Bandedge	
Vert	5279.972	PK	57.1	33.2	4.1	31.3	-	63.1	68.2	5.1	Outside	
Vert	6906.680	PK	52.3	36.4	4.9	32.4	-	61.2	68.2	7.0	Outside	
Vert	10360.000	PK	56.9	40.0	-2.2	34.4	-	60.3	68.2	7.9	Outside	
Vert	15540.000	PK	47.1	39.6	-0.7	33.5	-	52.5	73.9	21.4	Inside	
Vert	5150.000	AV	40.5	33.3	4.1	31.3	1.4	48.0	53.9	5.9	Bandedge	
Vert	15540.000	AV	38.0	39.6	-0.7	33.5	1.4	44.8	53.9	9.1	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

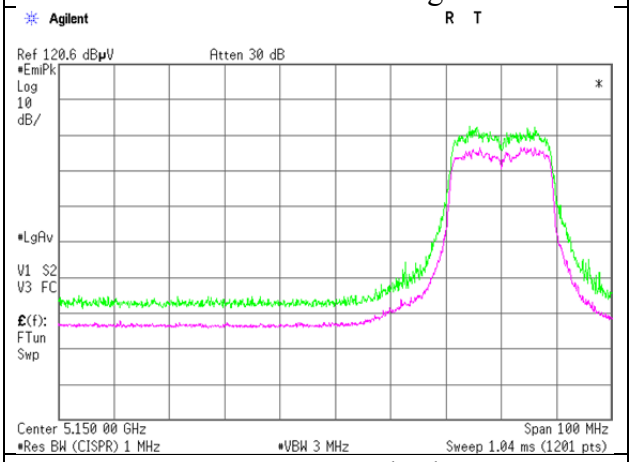
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 7, 2015
Temperature / Humidity	22deg. C / 56 % RH
Engineer	Satofumi Matsuyama
Mode	Tx 11n-20 5180 MHz

Horizontal

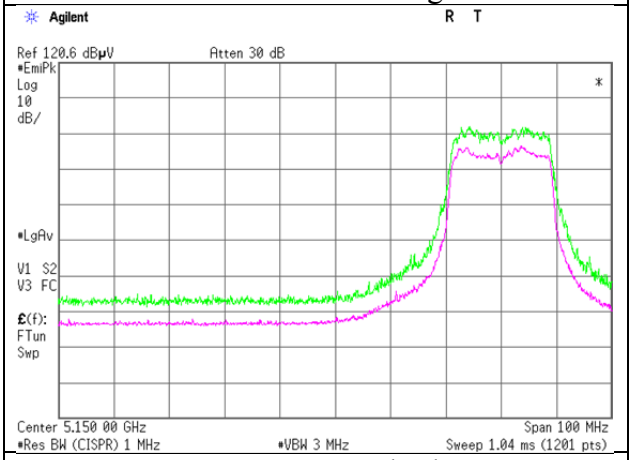
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 7, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 56 % RH	21 deg. C / 35 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Hironobu Ohnishi (10 GHz - 18 GHz)	Koji Yamamoto (18 GHz - 26.5 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5260 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	7013.335	PK	49.8	36.7	4.9	32.5	-	58.9	68.2	9.3	Outside	
Hori	10520.000	PK	50.6	40.4	-2.2	34.3	-	54.5	68.2	13.7	Outside	
Hori	15780.000	PK	44.1	38.9	-0.9	33.6	-	48.5	73.9	25.4	Inside	Floor Noise
Hori	15780.000	AV	36.3	38.9	-0.9	33.6	-	40.7	53.9	13.2	Inside	Floor Noise
Vert	7013.335	PK	47.9	36.7	4.9	32.5	-	57.0	68.2	11.2	Outside	
Vert	10520.000	PK	53.2	40.4	-2.2	34.3	-	57.1	68.2	11.1	Outside	
Vert	15780.000	PK	44.5	38.9	-0.9	33.6	-	48.9	73.9	25.0	Inside	Floor Noise
Vert	15780.000	AV	36.1	38.9	-0.9	33.6	-	40.5	53.9	13.4	Inside	Floor Noise

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

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

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 7, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 56 % RH	21 deg. C / 35 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Satofumi Matsuyama (1 GHz - 10 GHz)	Hironobu Ohnishi (10 GHz - 18 GHz)	Koji Yamamoto (18 GHz - 26.5 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5320 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5350.000	PK	61.0	33.1	4.2	31.3	-	67.0	73.9	6.9	Bandedge	
Hori	7093.315	PK	47.1	36.7	4.9	32.5	-	56.2	68.2	12.0	Outside	
Hori	10640.000	PK	52.0	40.8	-2.1	34.2	-	56.5	73.9	17.4	Inside	
Hori	15960.000	PK	44.5	38.4	-1.0	33.7	-	48.2	73.9	25.7	Inside	Floor Noise
Hori	5350.000	AV	45.9	33.1	4.2	31.3	1.4	53.3	53.9	0.6	Bandedge	
Hori	10640.000	AV	41.4	40.8	-2.1	34.2	1.4	47.3	53.9	6.6	Inside	
Hori	15960.000	AV	36.2	38.4	-1.0	33.7	-	39.9	53.9	14.0	Inside	Floor Noise
Vert	5350.000	PK	56.0	33.1	4.2	31.3	-	62.0	73.9	11.9	Bandedge	
Vert	7093.315	PK	46.0	36.7	4.9	32.5	-	55.1	68.2	13.1	Outside	
Vert	10640.000	PK	54.3	40.8	-2.1	34.2	-	58.8	73.9	15.1	Inside	
Vert	15960.000	PK	46.6	38.4	-1.0	33.7	-	50.3	73.9	23.6	Inside	Floor Noise
Vert	5350.000	AV	41.9	33.1	4.2	31.3	1.4	49.3	53.9	4.6	Bandedge	
Vert	10640.000	AV	44.0	40.8	-2.1	34.2	1.4	49.9	53.9	4.0	Inside	
Vert	15960.000	AV	37.0	38.4	-1.0	33.7	-	40.7	53.9	13.2	Inside	Floor Noise

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

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

*The 10th harmonic was not seen so the result was its base noise level.

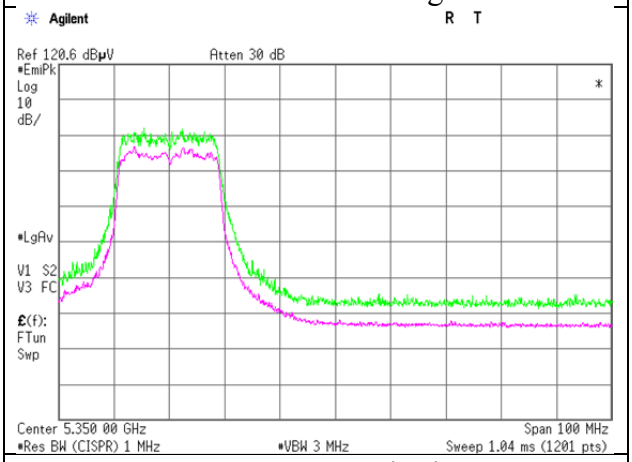
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 7, 2015
Temperature / Humidity	22deg. C / 56 % RH
Engineer	Satofumi Matsuyama
Mode	Tx 11n-20 5320 MHz

Horizontal

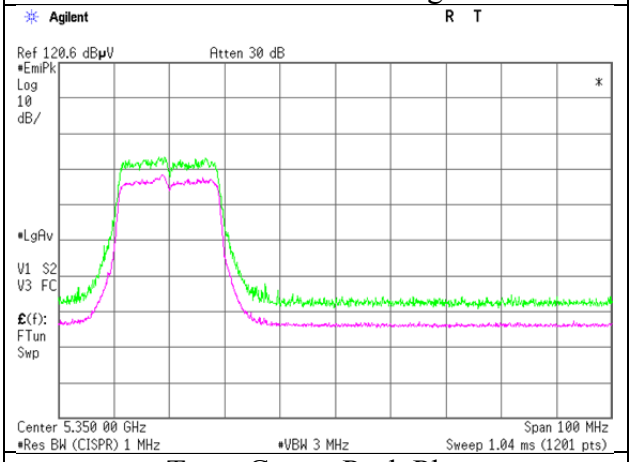
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 29, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 33 % RH	21 deg. C / 35 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Takumi Shimada	Hironobu Ohnishi	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5500 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5279.900	PK	60.1	32.9	3.8	34.0	-	62.8	68.2	5.4	Outside	
Hori	5350.000	PK	57.5	32.9	3.8	34.0	-	60.2	73.9	13.7	Inside	
Hori	5460.000	PK	57.4	32.9	3.9	33.9	-	60.3	73.9	13.6	Inside	
Hori	5470.000	PK	57.7	32.9	3.9	33.9	-	60.6	68.2	7.6	Bandedge	
Hori	11000.000	PK	52.5	42.0	-2.0	33.9	-	58.6	73.9	15.3	Inside	
Hori	16500.000	PK	44.6	40.0	-0.8	33.2	-	50.6	68.2	17.6	Outside	Floor Noise
Hori	5350.000	AV	48.2	32.9	3.8	34.0	1.4	52.3	53.9	1.6	Inside	
Hori	5460.000	AV	47.2	32.9	3.9	33.9	1.4	51.5	53.9	2.4	Inside	
Hori	11000.000	AV	42.0	42.0	-2.0	33.9	1.4	49.5	53.9	4.4	Inside	
Vert	5279.900	PK	58.3	32.9	3.8	34.0	-	61.0	68.2	7.2	Outside	
Vert	5350.000	PK	55.5	32.9	3.8	34.0	-	58.2	73.9	15.7	Inside	
Vert	5460.000	PK	55.1	32.9	3.9	33.9	-	58.0	73.9	15.9	Inside	
Vert	5470.000	PK	58.3	32.9	3.9	33.9	-	61.2	68.2	7.0	Bandedge	
Vert	11000.000	PK	55.6	42.0	-2.0	33.9	-	61.7	73.9	12.2	Inside	
Vert	16500.000	PK	45.0	40.0	-0.8	33.2	-	51.0	68.2	17.2	Outside	Floor Noise
Vert	5350.000	AV	46.2	32.9	3.8	34.0	1.4	50.3	53.9	3.6	Inside	
Vert	5460.000	AV	45.4	32.9	3.9	33.9	1.4	49.7	53.9	4.2	Inside	
Vert	11000.000	AV	45.5	42.0	-2.0	33.9	1.4	53.0	53.9	0.9	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

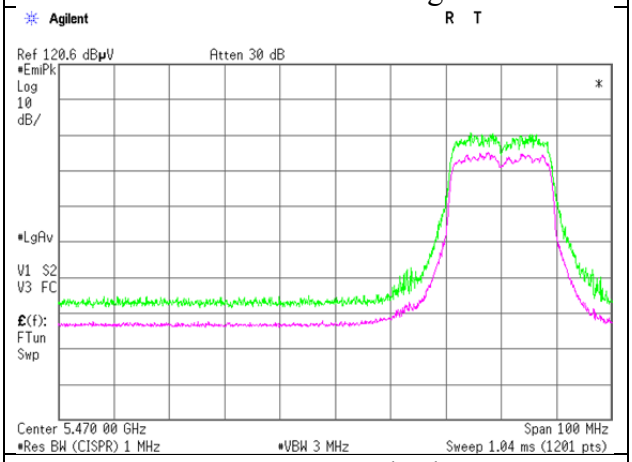
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 Semi Anechoic Chamber
Report No.	10993397H
Date	November 29, 2015
Temperature / Humidity	24deg. C / 33 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5500 MHz

Horizontal

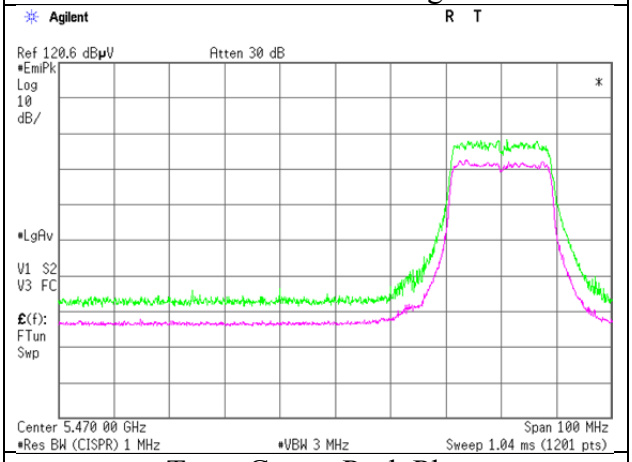
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 29, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 33 % RH	21 deg. C / 35 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Takumi Shimada	Hironobu Ohnishi	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5580 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	61.3	32.9	3.8	34.0	-	64.0	68.2	4.2	Outside	
Hori	5350.000	PK	59.2	32.9	3.8	34.0	-	61.9	73.9	12.0	Inside	
Hori	11160.000	PK	54.2	41.7	-1.9	33.9	-	60.1	73.9	13.8	Inside	
Hori	16740.000	PK	43.9	40.9	-0.7	32.9	-	51.2	68.2	17.0	Outside	Floor Noise
Hori	5350.000	AV	48.5	32.9	3.8	34.0	1.4	52.6	53.9	1.3	Inside	
Hori	11160.000	AV	44.2	41.7	-1.9	33.9	1.4	51.5	53.9	2.4	Inside	
Vert	5280.000	PK	57.1	32.9	3.8	34.0	-	59.8	68.2	8.4	Outside	
Vert	5350.000	PK	57.3	32.9	3.8	34.0	-	60.0	73.9	13.9	Inside	
Vert	11160.000	PK	54.8	41.7	-1.9	33.9	-	60.7	73.9	13.2	Inside	
Vert	16740.000	PK	44.9	40.9	-0.7	32.9	-	52.2	68.2	16.0	Outside	Floor Noise
Vert	5350.000	AV	48.2	32.9	3.8	34.0	1.4	52.3	53.9	1.6	Inside	
Vert	11160.000	AV	44.9	41.7	-1.9	33.9	1.4	52.2	53.9	1.7	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 29, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 33 % RH	21 deg. C / 35 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Takumi Shimada	Hironobu Ohnishi	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5700 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	56.8	32.9	3.8	34.0	-	59.5	68.2	8.7	Outside	
Hori	5350.000	PK	58.7	32.9	3.8	34.0	-	61.4	73.9	12.5	Inside	
Hori	5725.000	PK	51.9	33.2	4.0	33.9	-	55.2	68.2	13.0	Bandedge	
Hori	11400.000	PK	53.1	41.3	-1.8	33.7	-	58.9	73.9	15.0	Inside	
Hori	17100.000	PK	44.1	42.2	-0.6	32.7	-	53.0	68.2	15.2	Outside	Floor Noise
Hori	5350.000	AV	48.8	32.9	3.8	34.0	1.4	52.9	53.9	1.0	Inside	
Hori	11400.000	AV	43.4	41.3	-1.8	33.7	1.4	50.6	53.9	3.3	Inside	
Vert	5280.000	PK	57.3	32.9	3.8	34.0	-	60.0	68.2	8.2	Outside	
Vert	5350.000	PK	56.6	32.9	3.8	34.0	-	59.3	73.9	14.6	Inside	
Vert	5725.000	PK	53.3	33.2	4.0	33.9	-	56.6	68.2	11.6	Bandedge	
Vert	11400.000	PK	50.8	41.3	-1.8	33.7	-	56.6	73.9	17.3	Inside	
Vert	17100.000	PK	44.1	42.2	-0.6	32.7	-	53.0	68.2	15.2	Outside	Floor Noise
Vert	5350.000	AV	46.8	32.9	3.8	34.0	1.4	50.9	53.9	3.0	Inside	
Vert	11400.000	AV	41.1	41.3	-1.8	33.7	1.4	48.3	53.9	5.6	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

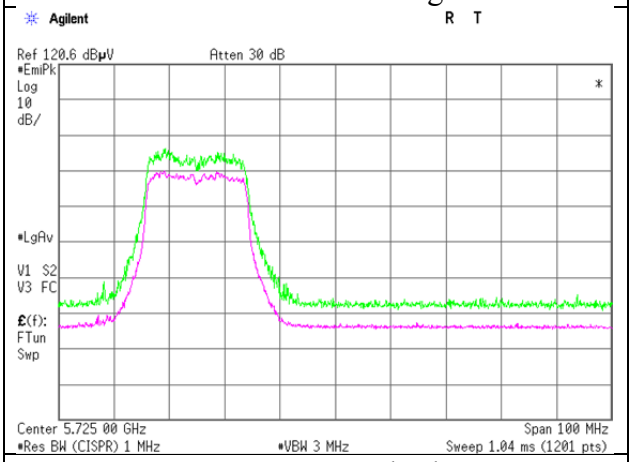
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 29, 2015
Temperature / Humidity	24deg. C / 33 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5700 MHz

Horizontal

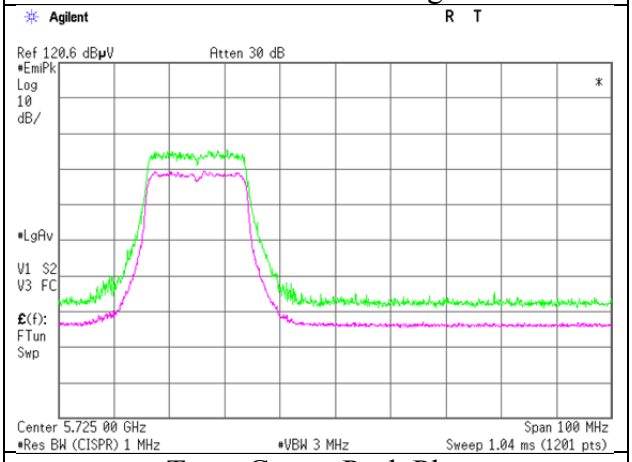
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 29, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 33 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Takumi Shimada	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5745 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	58.3	32.9	3.8	34.0	-	61.0	68.2	7.2	Outside	
Hori	5350.000	PK	58.1	32.9	3.8	34.0	-	60.8	73.9	13.1	Inside	
Hori	5715.000	PK	52.2	33.2	4.0	33.9	-	55.5	68.2	12.7	Outside	
Hori	5725.000	PK	56.4	33.2	4.0	33.9	-	59.7	78.2	18.5	Bandedge	
Hori	11490.000	PK	51.7	41.1	-1.7	33.7	-	57.4	73.9	16.5	Inside	
Hori	17235.000	PK	43.9	42.8	-0.6	32.7	-	53.4	68.2	14.8	Outside	
Hori	5350.000	AV	48.7	32.9	3.8	34.0	1.4	52.8	53.9	1.1	Inside	
Hori	11490.000	AV	40.8	41.1	-1.7	33.7	1.4	47.9	53.9	6.0	Inside	
Vert	5280.000	PK	56.3	32.9	3.8	34.0	-	59.0	68.2	9.2	Outside	
Vert	5350.000	PK	54.9	32.9	3.8	34.0	-	57.6	73.9	16.3	Inside	
Vert	5715.000	PK	52.9	33.2	4.0	33.9	-	56.2	68.2	12.0	Outside	
Vert	5725.000	PK	56.9	33.2	4.0	33.9	-	60.2	78.2	18.0	Bandedge	
Vert	11490.000	PK	51.7	41.1	-1.7	33.7	-	57.4	73.9	16.5	Inside	
Vert	17235.000	PK	43.4	42.8	-0.6	32.7	-	52.9	68.2	15.3	Outside	
Vert	5350.000	AV	45.2	32.9	3.8	34.0	1.4	49.3	53.9	4.6	Inside	
Vert	11490.000	AV	40.4	41.1	-1.7	33.7	1.4	47.5	53.9	6.4	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

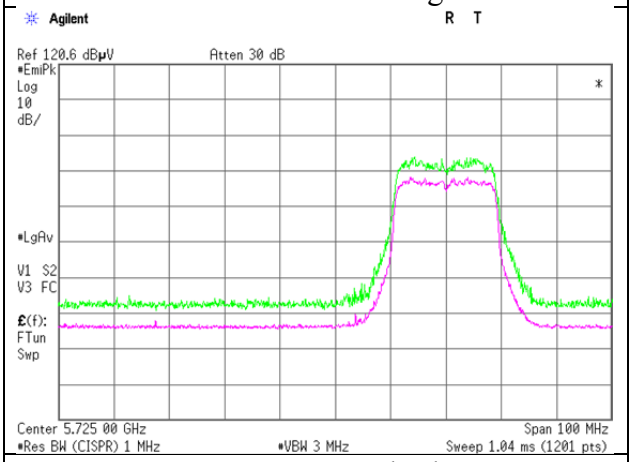
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 29, 2015
Temperature / Humidity	24deg. C / 33 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5745 MHz

Horizontal

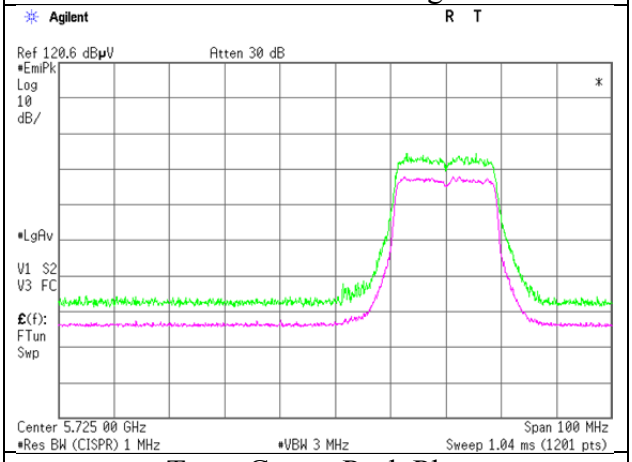
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 29, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 33 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Takumi Shimada	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5785 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	62.7	32.9	3.8	34.0	-	65.4	68.2	2.8	Outside	
Hori	5350.000	PK	57.6	32.9	3.8	34.0	-	60.3	73.9	13.6	Inside	
Hori	11570.000	PK	50.7	41.0	-1.7	33.7	-	56.3	73.9	17.6	Inside	
Hori	17355.000	PK	43.9	43.4	-0.4	32.7	-	54.2	68.2	14.0	Outside	
Hori	5350.000	AV	48.0	32.9	3.8	34.0	1.4	52.1	53.9	1.8	Inside	
Hori	11570.000	AV	40.3	41.0	-1.7	33.7	1.4	47.3	53.9	6.6	Inside	
Vert	5280.000	PK	58.5	32.9	3.8	34.0	-	61.2	68.2	7.0	Outside	
Vert	5350.000	PK	57.6	32.9	3.8	34.0	-	60.3	73.9	13.6	Inside	
Vert	11570.000	PK	51.3	41.0	-1.7	33.7	-	56.9	73.9	17.0	Inside	
Vert	17355.000	PK	43.4	43.4	-0.4	32.7	-	53.7	68.2	14.5	Outside	
Vert	5350.000	AV	46.6	32.9	3.8	34.0	1.4	50.7	53.9	3.2	Inside	
Vert	11570.000	AV	41.2	41.0	-1.7	33.7	1.4	48.2	53.9	5.7	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 29, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 33 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Takumi Shimada	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-20 5825 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5350.000	PK	59.5	32.9	3.8	34.0	-	62.2	73.9	11.7	Inside	
Hori	5850.000	PK	51.5	33.4	4.0	34.0	-	54.9	78.2	23.3	Bandedge	
Hori	5860.000	PK	50.9	33.4	4.0	34.0	-	54.3	68.2	13.9	Outside	
Hori	11650.000	PK	53.7	40.9	-1.6	33.6	-	59.4	73.9	14.5	Inside	
Hori	17475.000	PK	43.9	43.9	-0.4	32.7	-	54.7	68.2	13.5	Outside	
Hori	5350.000	AV	48.4	32.9	3.8	34.0	1.4	52.5	53.9	1.4	Inside	
Hori	11650.000	AV	43.9	40.9	-1.6	33.6	1.4	51.0	53.9	2.9	Inside	
Vert	5350.000	PK	56.2	32.9	3.8	34.0	-	58.9	73.9	15.0	Inside	
Vert	5850.000	PK	50.1	33.4	4.0	34.0	-	53.5	78.2	24.7	Bandedge	
Vert	5860.000	PK	48.4	33.4	4.0	34.0	-	51.8	68.2	16.4	Outside	
Vert	11650.000	PK	53.9	40.9	-1.6	33.6	-	59.6	73.9	14.3	Inside	
Vert	17475.000	PK	43.4	43.9	-0.4	32.7	-	54.2	68.2	14.0	Outside	
Vert	5350.000	AV	46.6	32.9	3.8	34.0	1.4	50.7	53.9	3.2	Inside	
Vert	11650.000	AV	44.4	40.9	-1.6	33.6	1.4	51.5	53.9	2.4	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

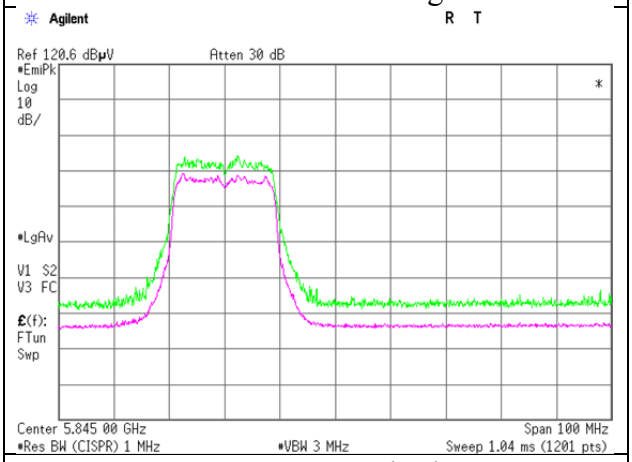
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 29, 2015
Temperature / Humidity	24deg. C / 33 % RH
Engineer	Takumi Shimada
Mode	Tx 11n-20 5825 MHz

Horizontal

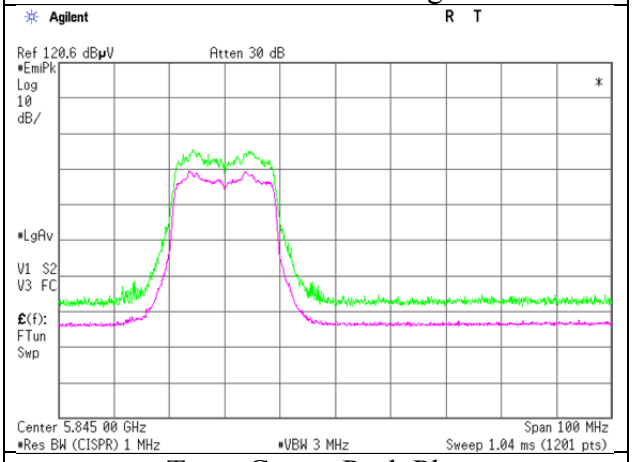
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 20, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	21deg. C / 63 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui (1 GHz – 10 GHz)	Keisuke Kawamura (10 GHz - 18 GHz)	Koji Yamamoto (18 GHz - 26.5 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5190 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5150.000	PK	63.1	33.0	3.8	34.1	-	65.8	73.9	8.1	Bandedge	
Hori	10380.000	PK	52.2	40.0	-2.2	34.4	-	55.6	68.2	12.6	Outside	
Hori	15570.000	PK	43.8	39.5	-0.7	33.5	-	49.1	73.9	24.8	Inside	
Hori	5150.000	AV	49.6	33.0	3.8	34.1	1.0	53.3	53.9	0.6	Bandedge	Integration Method
Hori	15570.000	AV	36.3	39.5	-0.7	33.5	1.0	42.6	53.9	11.3	Inside	
Vert	5150.000	PK	63.1	33.0	3.8	34.1	-	65.8	73.9	8.1	Bandedge	
Vert	10380.000	PK	54.0	40.0	-2.2	34.4	-	57.4	68.2	10.8	Outside	
Vert	15570.000	PK	44.5	39.5	-0.7	33.5	-	49.8	73.9	24.1	Inside	
Vert	5150.000	AV	49.7	33.0	3.8	34.1	1.0	53.4	53.9	0.5	Bandedge	Integration Method
Vert	15570.000	AV	36.1	39.5	-0.7	33.5	1.0	42.4	53.9	11.5	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

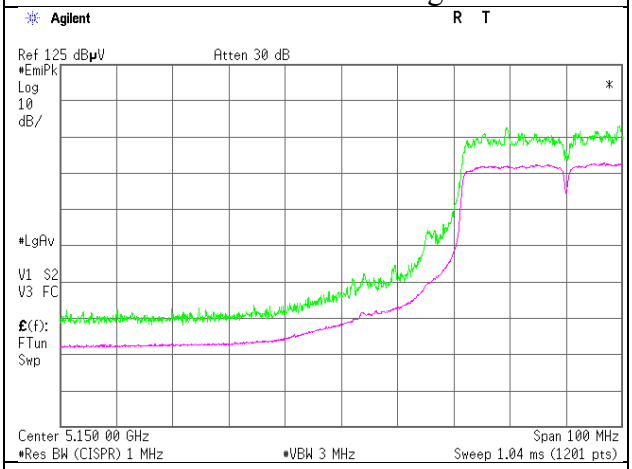
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 20, 2015
Temperature / Humidity	21deg. C / 63 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40 5190 MHz

Horizontal

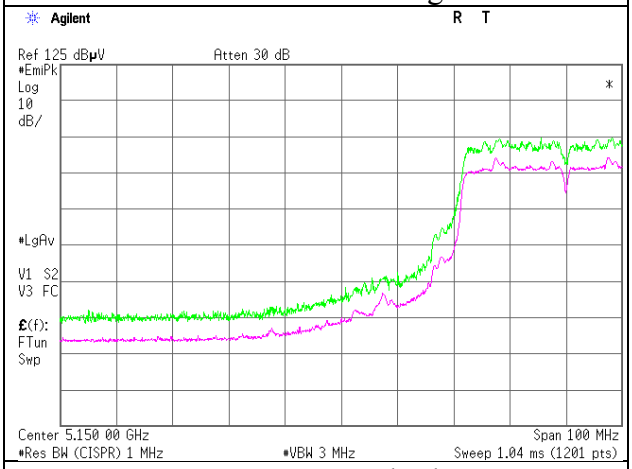
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber				
Report No.	10993397H				
Date	December 8, 2015	December 9, 2015	January 7, 2016	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 30 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura	Keisuke Kawamura	Koji Yamamoto	Takafumi Noguchi	Shinichi Miyazono
	(30 MHz - 1000 MHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(1 GHz - 10 GHz)	(26.5 GHz – 40 GHz)
Mode	Tx 11n-40 5270 MHz				

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	71.531	QP	41.0	5.9	7.2	28.4	-	25.7	40.0	14.3	Outside	
Hori	249.361	QP	46.3	17.2	8.5	27.4	-	44.6	46.0	1.4	Inside	
Hori	319.511	QP	47.1	14.9	9.0	27.6	-	43.4	46.0	2.6	Outside	
Hori	445.105	QP	41.4	17.5	9.5	28.4	-	40.0	46.0	6.0	Outside	
Hori	498.818	QP	45.8	17.9	9.7	28.5	-	44.9	46.0	1.1	Outside	
Hori	674.501	QP	39.2	20.1	10.4	28.1	-	41.6	46.0	4.4	Outside	
Hori	799.103	QP	34.0	21.9	10.9	27.9	-	38.9	46.0	7.1	Outside	
Hori	969.926	QP	33.9	23.1	11.5	27.1	-	41.4	53.9	12.5	Inside	
Hori	10540.000	PK	52.2	40.5	-2.2	34.3	-	56.2	68.2	12.0	Outside	
Hori	15810.000	PK	44.3	38.8	-0.9	33.6	-	48.6	73.9	25.3	Inside	
Hori	15810.000	AV	36.2	38.8	-0.9	33.6	1.0	41.5	53.9	12.4	Inside	
Vert	46.315	QP	38.9	11.6	6.9	28.5	-	28.9	40.0	11.1	Outside	
Vert	71.531	QP	53.3	5.9	7.2	28.4	-	38.0	40.0	2.0	Outside	
Vert	249.361	QP	42.0	17.2	8.5	27.4	-	40.3	46.0	5.7	Inside	
Vert	319.871	QP	45.1	15.0	9.0	27.6	-	41.5	46.0	4.5	Outside	
Vert	445.272	QP	36.8	17.5	9.5	28.4	-	35.4	46.0	10.6	Outside	
Vert	498.818	QP	45.4	17.9	9.7	28.5	-	44.5	46.0	1.5	Outside	
Vert	661.234	QP	40.5	19.9	10.4	28.2	-	42.6	46.0	3.4	Outside	
Vert	799.103	QP	33.6	21.9	10.9	27.9	-	38.5	46.0	7.5	Outside	
Vert	10540.000	PK	46.9	40.5	-2.2	34.3	-	50.9	68.2	17.3	Outside	
Vert	15810.000	PK	44.0	38.8	-0.9	33.6	-	48.3	73.9	25.6	Inside	
Vert	15810.000	AV	36.0	38.8	-0.9	33.6	1.0	41.3	53.9	12.6	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 4, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 30 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5310 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5350.000	PK	62.1	32.9	3.8	34.0	-	64.8	73.9	9.1	Bandedge	
Hori	10620.000	PK	46.5	40.7	-2.1	34.2	-	50.9	73.9	23.0	Inside	
Hori	15930.000	PK	44.2	38.5	-0.9	33.7	-	48.1	73.9	25.8	Inside	
Hori	5350.000	AV	49.2	32.9	3.8	34.0	1.0	52.9	53.9	1.0	Bandedge	Integration Method
Hori	10620.000	AV	36.7	40.7	-2.1	34.2	1.0	42.1	53.9	11.8	Inside	
Hori	15930.000	AV	36.0	38.5	-0.9	33.7	1.0	40.9	53.9	13.0	Inside	
Vert	5350.000	PK	57.7	32.9	3.8	34.0	-	60.4	73.9	13.5	Bandedge	
Vert	10620.000	PK	49.7	40.7	-2.1	34.2	-	54.1	73.9	19.8	Inside	
Vert	15930.000	PK	44.8	38.5	-0.9	33.7	-	48.7	73.9	25.2	Inside	
Vert	5350.000	AV	45.3	32.9	3.8	34.0	1.0	49.0	53.9	4.9	Bandedge	Integration Method
Vert	10620.000	AV	39.6	40.7	-2.1	34.2	1.0	45.0	53.9	8.9	Inside	
Vert	15930.000	AV	36.0	38.5	-0.9	33.7	1.0	40.9	53.9	13.0	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

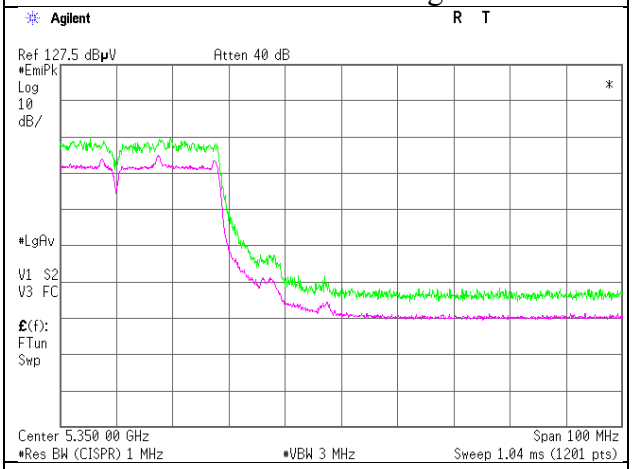
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	December 4, 2015
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40 5310 MHz

Horizontal

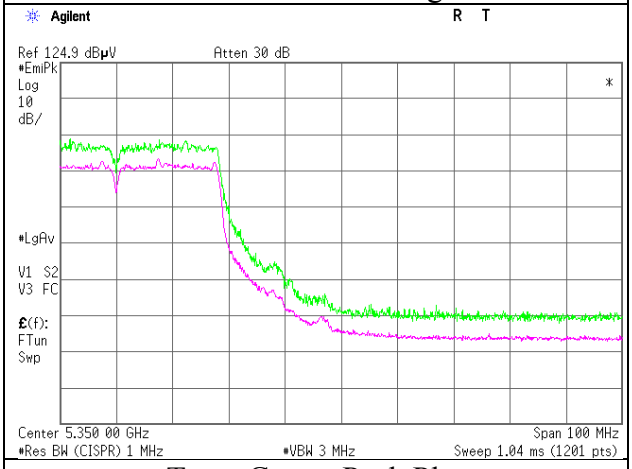
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 20, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	21deg. C / 63 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz – 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5510 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	52.6	32.2	7.3	31.2	-	60.9	68.2	7.3	Outside	
Hori	5350.000	PK	49.6	32.2	7.3	31.2	-	57.9	73.9	16.0	Inside	
Hori	5460.000	PK	58.2	32.9	3.9	33.9	-	61.1	73.9	12.8	Inside	
Hori	5470.000	PK	63.6	32.9	3.9	33.9	-	66.5	68.2	1.7	Bandedge	
Hori	11020.000	PK	52.1	41.9	-2.0	33.9	-	58.1	73.9	15.8	Inside	
Hori	16530.000	PK	43.6	40.1	-0.8	33.1	-	49.8	68.2	18.4	Outside	
Hori	5350.000	AV	40.8	32.2	7.3	31.2	1.0	50.1	53.9	3.8	Inside	
Hori	5460.000	AV	46.9	32.9	3.9	33.9	1.0	50.8	53.9	3.1	Inside	
Hori	11020.000	AV	40.7	41.9	-2.0	33.9	1.0	47.7	53.9	6.2	Inside	
Vert	5280.000	PK	53.7	32.2	7.3	31.2	-	62.0	68.2	6.2	Outside	
Vert	5350.000	PK	50.5	32.2	7.3	31.2	-	58.8	73.9	15.1	Inside	
Vert	5460.000	PK	58.8	32.9	3.9	33.9	-	61.7	73.9	12.2	Inside	
Vert	5470.000	PK	63.7	32.9	3.9	33.9	-	66.6	68.2	1.6	Bandedge	
Vert	11020.000	PK	54.1	41.9	-2.0	33.9	-	60.1	73.9	13.8	Inside	
Vert	16530.000	PK	44.3	40.1	-0.8	33.1	-	50.5	68.2	17.7	Outside	
Vert	5350.000	AV	41.4	32.2	7.3	31.2	1.0	50.7	53.9	3.2	Inside	
Vert	5460.000	AV	46.8	32.9	3.9	33.9	1.0	50.7	53.9	3.2	Inside	
Vert	11020.000	AV	43.2	41.9	-2.0	33.9	1.0	50.2	53.9	3.7	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

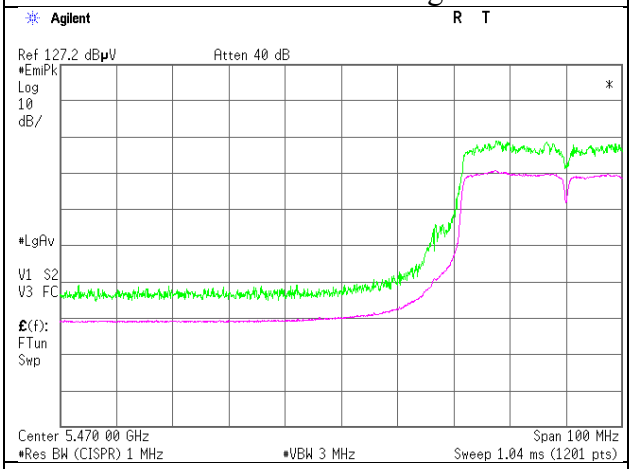
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 20, 2015
Temperature / Humidity	21deg. C / 63 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40 5510 MHz

Horizontal

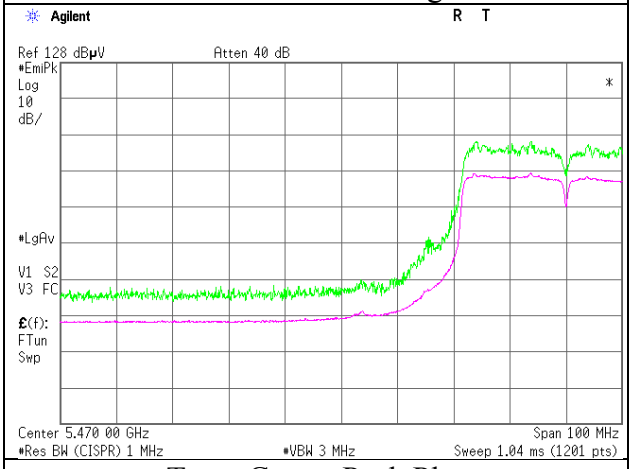
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 9, 2015	January 7, 2016	January 7, 2016	January 8, 2016
Temperature / Humidity	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura (10 GHz - 18 GHz)	Koji Yamamoto (18 GHz - 26.5 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5550 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	52.4	32.2	7.3	31.2	-	60.7	68.2	7.5	Outside	
Hori	5350.000	PK	50.0	32.2	7.3	31.2	-	58.3	73.9	15.6	Inside	
Hori	11100.000	PK	55.0	41.8	-2.0	33.9	-	60.9	73.9	13.0	Inside	
Hori	16650.000	PK	44.6	40.6	-0.7	33.0	-	51.5	68.2	16.7	Outside	
Hori	5350.000	AV	40.4	32.2	7.3	31.2	1.0	49.7	53.9	4.2	Inside	
Hori	11100.000	AV	43.4	41.8	-2.0	33.9	1.0	50.3	53.9	3.6	Inside	
Vert	5280.000	PK	52.1	32.2	7.3	31.2	-	60.4	68.2	7.8	Outside	
Vert	5350.000	PK	48.2	32.2	7.3	31.2	-	56.5	73.9	17.4	Inside	
Vert	11100.000	PK	58.4	41.8	-2.0	33.9	-	64.3	73.9	9.6	Inside	
Vert	16650.000	PK	44.2	40.6	-0.7	33.0	-	51.1	68.2	17.1	Outside	
Vert	5350.000	AV	39.1	32.2	7.3	31.2	1.0	48.4	53.9	5.5	Inside	
Vert	11100.000	AV	46.2	41.8	-2.0	33.9	1.0	53.1	53.9	0.8	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 20, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	21deg. C / 63 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5670 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	51.6	32.2	7.3	31.2	-	59.9	68.2	8.3	Outside	
Hori	5350.000	PK	49.3	32.2	7.3	31.2	-	57.6	73.9	16.3	Inside	
Hori	5725.000	PK	53.0	33.2	4.0	33.9	-	56.3	68.2	11.9	Bandedge	
Hori	11340.000	PK	56.1	41.4	-1.8	33.8	-	61.9	73.9	12.0	Inside	
Hori	17010.000	PK	43.3	41.8	-0.6	32.7	-	51.8	68.2	16.4	Outside	
Hori	5350.000	AV	40.1	32.2	7.3	31.2	1.0	49.4	53.9	4.5	Inside	
Hori	11340.000	AV	44.9	41.4	-1.8	33.8	1.0	51.7	53.9	2.2	Inside	
Vert	5280.000	PK	52.1	32.2	7.3	31.2	-	60.4	68.2	7.8	Outside	
Vert	5350.000	PK	51.8	32.2	7.3	31.2	-	60.1	73.9	13.8	Inside	
Vert	5725.000	PK	52.7	33.2	4.0	33.9	-	56.0	68.2	12.2	Bandedge	
Vert	11340.000	PK	54.1	41.4	-1.8	33.8	-	59.9	73.9	14.0	Inside	
Vert	17010.000	PK	43.8	41.8	-0.6	32.7	-	52.3	68.2	15.9	Outside	
Vert	5350.000	AV	42.0	32.2	7.3	31.2	1.0	51.3	53.9	2.6	Inside	
Vert	11340.000	AV	42.7	41.4	-1.8	33.8	1.0	49.5	53.9	4.4	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

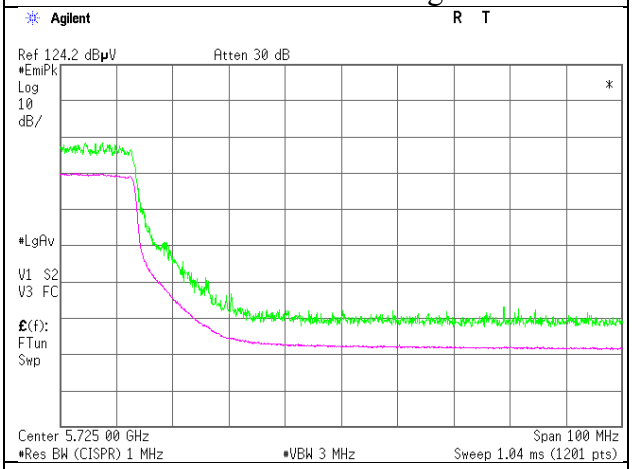
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 20, 2015
Temperature / Humidity	21deg. C / 63 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40 5670 MHz

Horizontal

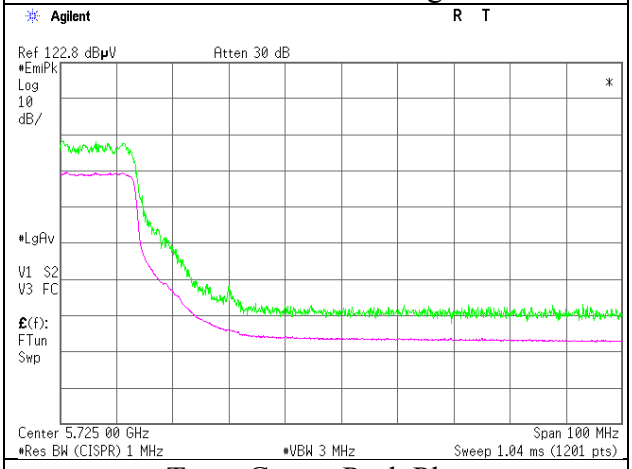
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 20, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	21deg. C / 63 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5755 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	52.1	32.2	7.3	31.2	-	60.4	68.2	7.8	Outside	
Hori	5350.000	PK	50.4	32.2	7.3	31.2	-	58.7	73.9	15.2	Inside	
Hori	5715.000	PK	55.4	33.2	4.0	33.9	-	58.7	68.2	9.5	Outside	
Hori	5725.000	PK	63.7	33.2	4.0	33.9	-	67.0	78.2	11.2	Bandedge	
Hori	11510.000	PK	50.5	41.1	-1.7	33.7	-	56.2	73.9	17.7	Inside	
Hori	17265.000	PK	44.4	43.0	-0.6	32.7	-	54.1	68.2	14.1	Outside	
Hori	5350.000	AV	41.4	32.2	7.3	31.2	1.0	50.7	53.9	3.2	Inside	
Hori	11510.000	AV	41.2	41.1	-1.7	33.7	1.0	47.9	53.9	6.0	Inside	
Vert	5280.000	PK	51.9	32.2	7.3	31.2	-	60.2	68.2	8.0	Outside	
Vert	5350.000	PK	49.2	32.2	7.3	31.2	-	57.5	73.9	16.4	Inside	
Vert	5715.000	PK	55.1	33.2	4.0	33.9	-	58.4	68.2	9.8	Outside	
Vert	5725.000	PK	63.7	33.2	4.0	33.9	-	67.0	78.2	11.2	Bandedge	
Vert	11510.000	PK	50.8	41.1	-1.7	33.7	-	56.5	73.9	17.4	Inside	
Vert	17265.000	PK	44.6	43.0	-0.6	32.7	-	54.3	68.2	13.9	Outside	
Vert	5350.000	AV	39.9	32.2	7.3	31.2	1.0	49.2	53.9	4.7	Inside	
Vert	11510.000	AV	41.2	41.1	-1.7	33.7	1.0	47.9	53.9	6.0	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

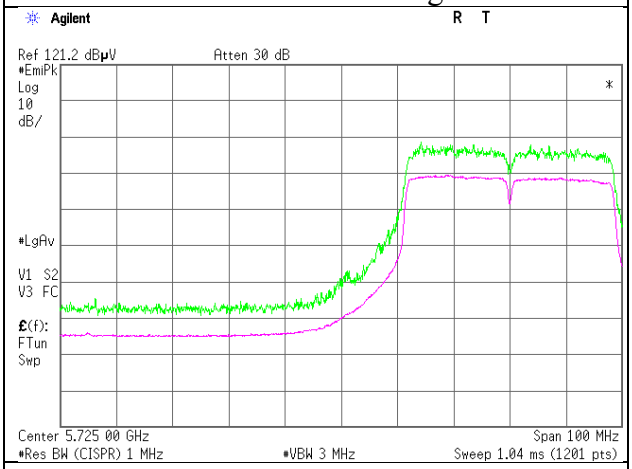
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 20, 2015
Temperature / Humidity	21deg. C / 63 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40 5755 MHz

Horizontal

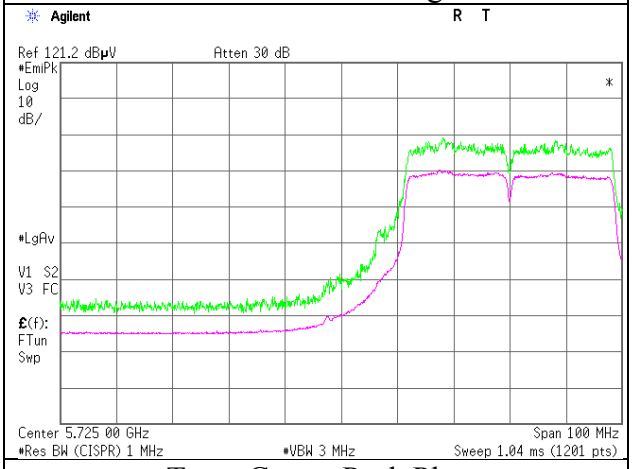
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	November 20, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	21deg. C / 63 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui	Keisuke Kawamura	Koji Yamamoto	Shinichi Miyazono
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11n-40 5795 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	54.3	32.2	7.3	31.2	-	62.6	68.2	5.6	Outside	
Hori	5350.000	PK	51.0	32.2	7.3	31.2	-	59.3	73.9	14.6	Inside	
Hori	5850.000	PK	51.8	33.4	4.0	34.0	-	55.2	73.9	18.7	Bandedge	
Hori	11590.000	PK	51.3	41.0	-1.6	33.7	-	57.0	73.9	16.9	Inside	
Hori	17385.000	PK	44.0	43.5	-0.4	32.7	-	54.4	68.2	13.8	Outside	
Hori	5350.000	AV	42.3	32.2	7.3	31.2	1.0	51.6	53.9	2.3	Inside	
Hori	5850.000	AV	41.2	33.4	4.0	34.0	1.0	45.6	53.9	8.3	Bandedge	
Hori	11590.000	AV	41.9	41.0	-1.6	33.7	1.0	48.6	53.9	5.3	Inside	
Vert	5280.000	PK	52.3	32.2	7.3	31.2	-	60.6	68.2	7.6	Outside	
Vert	5350.000	PK	50.7	32.2	7.3	31.2	-	59.0	73.9	14.9	Inside	
Vert	5850.000	PK	49.6	33.4	4.0	34.0	-	53.0	73.9	20.9	Bandedge	
Vert	11590.000	PK	53.9	41.0	-1.6	33.7	-	59.6	73.9	14.3	Inside	
Vert	17385.000	PK	43.9	43.5	-0.4	32.7	-	54.3	68.2	13.9	Outside	
Vert	5350.000	AV	40.5	32.2	7.3	31.2	1.0	49.8	53.9	4.1	Inside	
Vert	5850.000	AV	36.7	33.4	4.0	34.0	1.0	41.1	53.9	12.8	Bandedge	
Vert	11590.000	AV	42.1	41.0	-1.6	33.7	1.0	48.8	53.9	5.1	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

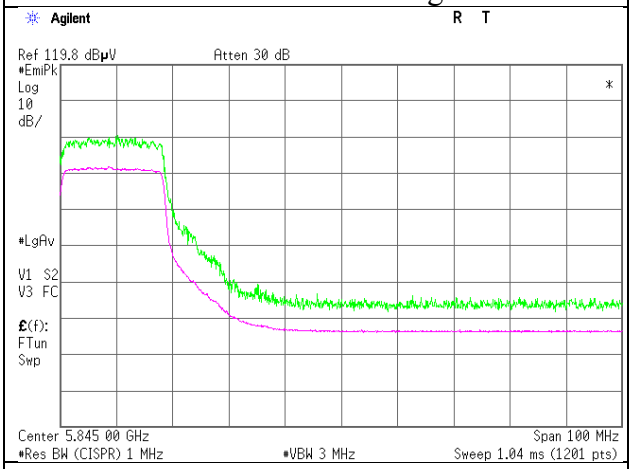
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	November 20, 2015
Temperature / Humidity	21deg. C / 63 % RH
Engineer	Tomoki Matsui
Mode	Tx 11n-40 5795 MHz

Horizontal

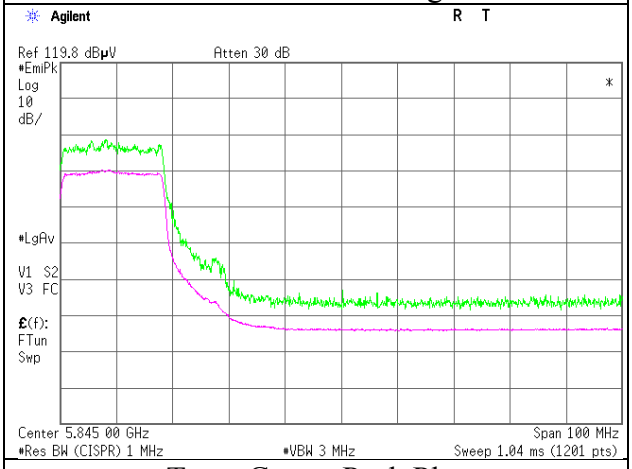
Restricted-band band-edge Plot



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

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 8, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 30 % RH	23deg. C / 38 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura (1 GHz - 10 GHz)	Keisuke Kawamura (10 GHz - 26.5 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5210 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5150.000	PK	61.1	33.0	3.8	34.1	-	63.8	73.9	10.1	Bandedge	
Hori	10420.000	PK	42.3	40.1	-2.2	34.4	-	45.8	68.2	22.4	Outside	
Hori	15630.000	PK	44.8	39.3	-0.8	33.5	-	49.8	73.9	24.1	Inside	
Hori	5150.000	AV	38.7	33.0	3.8	34.1	2.6	44.0	53.9	9.9	Bandedge	
Hori	15630.000	AV	36.6	39.3	-0.8	33.5	2.6	44.2	53.9	9.7	Inside	
Vert	5150.000	PK	55.8	33.0	3.8	34.1	-	58.5	73.9	15.4	Bandedge	
Vert	10420.000	PK	42.4	40.1	-2.2	34.4	-	45.9	68.2	22.3	Outside	
Vert	15630.000	PK	46.0	39.3	-0.8	33.5	-	51.0	73.9	22.9	Inside	
Vert	5150.000	AV	39.7	33.0	3.8	34.1	2.6	45.0	53.9	8.9	Bandedge	
Vert	15630.000	AV	36.5	39.3	-0.8	33.5	2.6	44.1	53.9	9.8	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

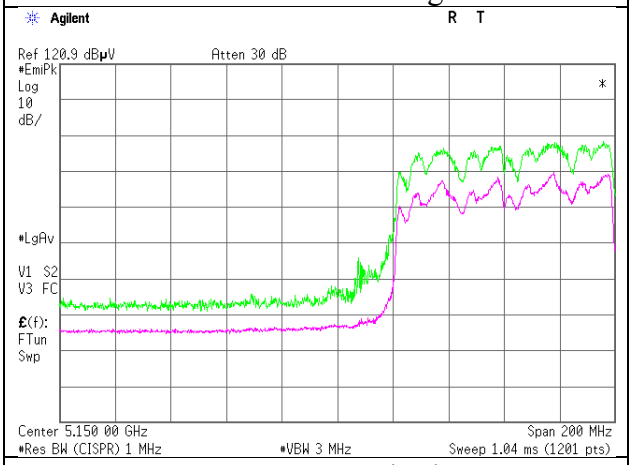
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	December 8, 2015
Temperature / Humidity	24deg. C / 35 % RH
Engineer	Keisuke Kawamura
Mode	Tx 11ac-80 5210 MHz

Horizontal

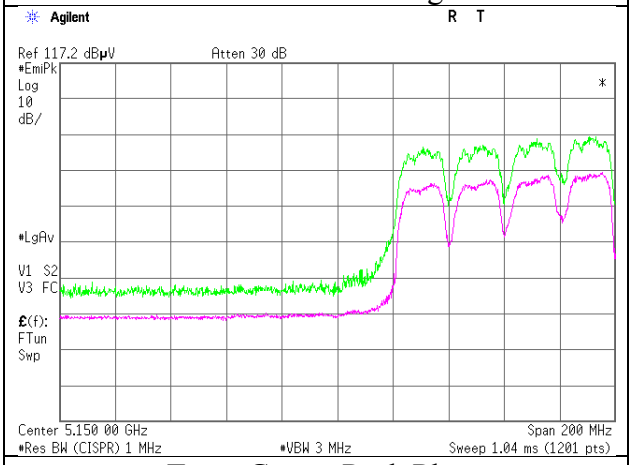
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 4, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 30 % RH	23deg. C / 38 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Tomoki Matsui (1 GHz - 10 GHz)	Keisuke Kawamura (10 GHz - 26.5 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5290 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5350.000	PK	62.1	32.9	3.8	34.0	-	64.8	73.9	9.1	Bandedge	
Hori	10580.000	PK	41.6	40.6	-2.2	34.3	-	45.7	68.2	22.5	Outside	
Hori	15870.000	PK	44.9	38.7	-0.9	33.6	-	49.1	73.9	24.8	Inside	
Hori	5350.000	AV	44.4	32.9	3.8	34.0	2.6	49.7	53.9	4.2	Bandedge	
Hori	15870.000	AV	35.9	38.7	-0.9	33.6	2.6	42.7	53.9	11.2	Inside	
Vert	5350.000	PK	64.2	32.9	3.8	34.0	-	66.9	73.9	7.0	Bandedge	
Vert	10580.000	PK	42.7	40.6	-2.2	34.3	-	46.8	68.2	21.4	Outside	
Vert	15870.000	PK	45.7	38.7	-0.9	33.6	-	49.9	73.9	24.0	Inside	
Vert	5350.000	AV	43.5	32.9	3.8	34.0	2.6	48.8	53.9	5.1	Bandedge	
Vert	15870.000	AV	35.9	38.7	-0.9	33.6	2.6	42.7	53.9	11.2	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

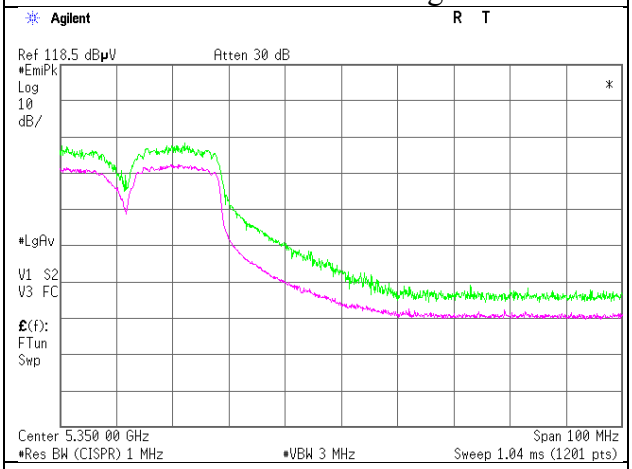
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	December 4, 2015
Temperature / Humidity	22deg. C / 30 % RH
Engineer	Tomoki Matsui
Mode	Tx 11ac-80 5290 MHz

Horizontal

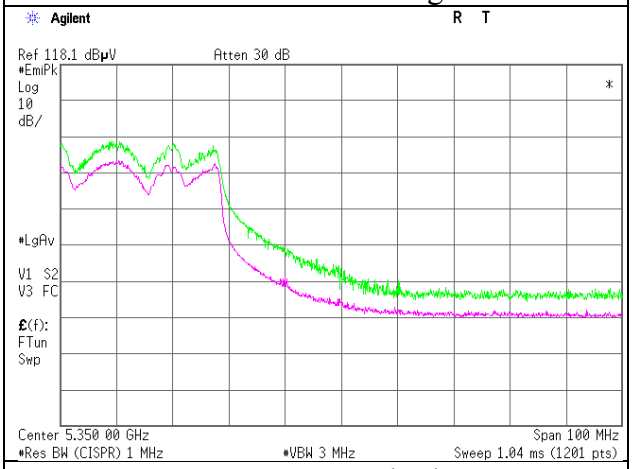
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 8, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 35 % RH	23deg. C / 38 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura (1 GHz - 10 GHz)	Keisuke Kawamura (10 GHz - 26.5 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5530 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5460.000	PK	58.9	32.9	3.9	33.9	-	61.8	73.9	12.1	Inside	
Hori	5470.000	PK	64.3	32.9	3.9	33.9	-	67.2	68.2	1.0	Outside	
Hori	11060.000	PK	44.6	41.9	-2.0	33.9	-	50.6	73.9	23.3	Inside	
Hori	16590.000	PK	44.4	40.4	-0.7	33.1	-	51.0	68.2	17.2	Outside	
Hori	5460.000	AV	38.2	32.9	3.9	33.9	2.6	43.7	53.9	10.2	Inside	
Hori	11060.000	AV	35.8	41.9	-2.0	33.9	2.6	44.4	53.9	9.5	Inside	
Vert	5460.000	PK	58.1	32.9	3.9	33.9	-	61.0	73.9	12.9	Inside	
Vert	5470.000	PK	63.6	32.9	3.9	33.9	-	66.5	68.2	1.7	Outside	
Vert	11060.000	PK	48.4	41.9	-2.0	33.9	-	54.4	73.9	19.5	Inside	
Vert	16590.000	PK	44.9	40.4	-0.7	33.1	-	51.5	68.2	16.7	Outside	
Vert	5460.000	AV	44.5	32.9	3.9	33.9	2.6	50.0	53.9	3.9	Inside	
Vert	11060.000	AV	38.1	41.9	-2.0	33.9	2.6	46.7	53.9	7.2	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

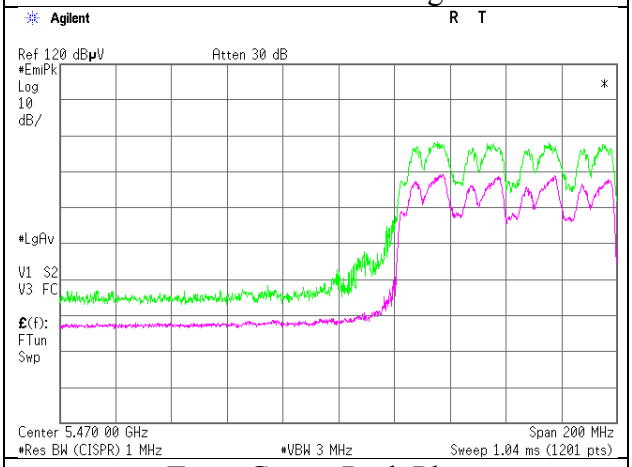
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	December 8, 2015
Temperature / Humidity	24deg. C / 35 % RH
Engineer	Keisuke Kawamura
Mode	Tx 11ac-80 5530 MHz

Horizontal

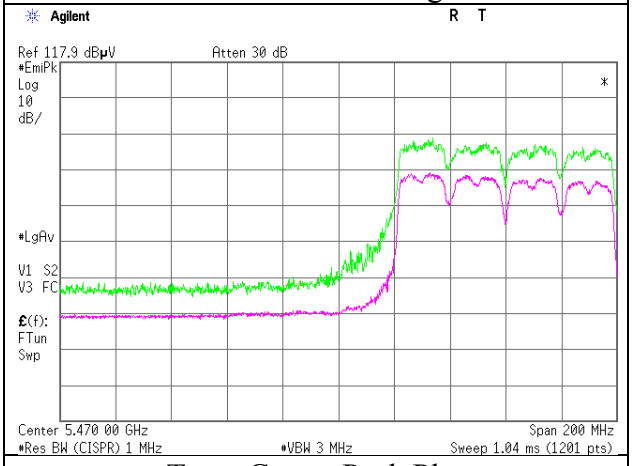
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 8, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 35 % RH	23deg. C / 38 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura (1 GHz – 10 GHz)	Keisuke Kawamura (10 GHz - 26.5 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5610 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	52.9	32.2	7.3	31.2	-	61.2	68.2	7.0	Outside	
Hori	5350.000	PK	50.2	32.2	7.3	31.2	-	58.5	73.9	15.4	Inside	
Hori	5460.000	PK	58.9	32.9	3.9	33.9	-	61.8	73.9	12.1	Inside	
Hori	5470.000	PK	64.3	32.9	3.9	33.9	-	67.2	68.2	1.0	Bandedge	
Hori	11220.000	PK	52.1	41.6	-1.8	33.8	-	58.1	73.9	15.8	Inside	
Hori	16830.000	PK	43.3	41.2	-0.7	32.8	-	51.0	68.2	17.2	Outside	
Hori	5350.000	AV	40.0	32.2	7.3	31.2	2.6	50.9	53.9	3.0	Inside	
Hori	5460.000	AV	38.2	32.9	3.9	33.9	2.6	43.7	53.9	10.2	Inside	
Hori	11220.000	AV	41.5	41.6	-1.8	33.8	2.6	50.1	53.9	3.8	Inside	
Vert	5280.000	PK	51.9	32.2	7.3	31.2	-	60.2	68.2	8.0	Outside	
Vert	5350.000	PK	50.4	32.2	7.3	31.2	-	58.7	73.9	15.2	Inside	
Vert	5460.000	PK	58.1	32.9	3.9	33.9	-	61.0	73.9	12.9	Inside	
Vert	5470.000	PK	63.6	32.9	3.9	33.9	-	66.5	68.2	1.7	Bandedge	
Vert	11220.000	PK	53.5	41.6	-1.8	33.8	-	59.5	73.9	14.4	Inside	
Vert	16830.000	PK	44.1	41.2	-0.7	32.8	-	51.8	68.2	16.4	Outside	
Vert	5350.000	AV	40.3	32.2	7.3	31.2	2.6	51.2	53.9	2.7	Inside	
Vert	5460.000	AV	44.5	32.9	3.9	33.9	2.6	50.0	53.9	3.9	Inside	
Vert	11220.000	AV	41.4	41.6	-1.8	33.8	2.6	50.0	53.9	3.9	Inside	

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

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

*The 10th harmonic was not seen so the result was its base noise level.

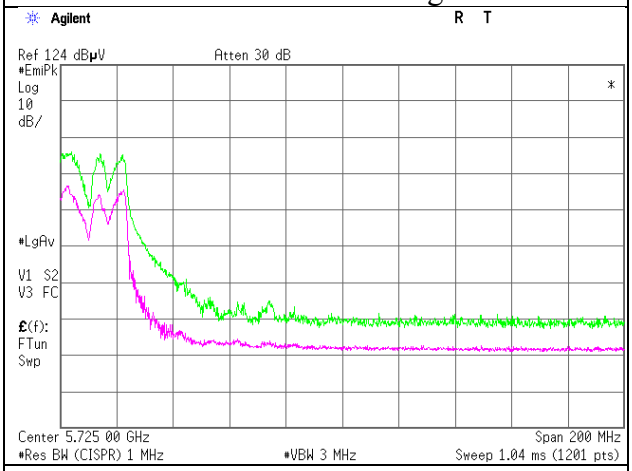
Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	December 8, 2015
Temperature / Humidity	24deg. C / 35 % RH
Engineer	Keisuke Kawamura
Mode	Tx 11ac-80 5610 MHz

Horizontal

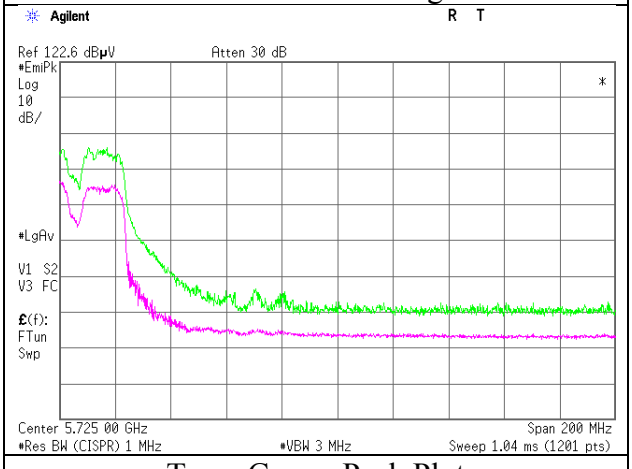
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber			
Report No.	10993397H			
Date	December 8, 2015	December 9, 2015	January 7, 2016	January 8, 2016
Temperature / Humidity	24deg. C / 35 % RH	23deg. C / 38 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura (1 GHz – 10 GHz)	Keisuke Kawamura (10 GHz - 26.5 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Shinichi Miyazono (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 5775 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Inside or Outside of Restricted Bands	Remark
Hori	5280.000	PK	52.8	32.2	7.3	31.2	-	61.1	68.2	7.1	Outside	
Hori	5350.000	PK	50.4	32.2	7.3	31.2	-	58.7	73.9	15.2	Inside	
Hori	5715.000	PK	63.5	33.2	4.0	33.9	-	66.8	68.2	1.4	Outside	
Hori	5725.000	PK	68.9	33.2	4.0	33.9	-	72.2	78.2	6.0	Bandedge	
Hori	5845.000	PK	54.0	33.4	4.0	34.0	-	57.4	68.2	10.8	Outside	
Hori	5850.000	PK	50.5	33.4	4.0	34.0	-	53.9	78.2	24.3	Bandedge	
Hori	5860.000	PK	47.1	33.4	4.0	34.0	-	50.5	68.2	17.7	Outside	
Hori	11550.000	PK	49.6	41.0	-1.7	33.7	-	55.2	73.9	18.7	Inside	
Hori	17325.000	PK	43.9	43.2	-0.6	32.7	-	53.8	68.2	14.4	Outside	
Hori	5350.000	AV	40.4	32.2	7.3	31.2	2.6	51.3	53.9	2.6	Inside	
Hori	11550.000	AV	40.2	41.0	-1.7	33.7	2.6	48.4	53.9	5.5	Inside	
Vert	5280.000	PK	51.9	32.2	7.3	31.2	-	60.2	68.2	8.0	Outside	
Vert	5350.000	PK	50.0	32.2	7.3	31.2	-	58.3	73.9	15.6	Inside	
Vert	5715.000	PK	62.1	33.2	4.0	33.9	-	65.4	68.2	2.8	Outside	
Vert	5725.000	PK	68.3	33.2	4.0	33.9	-	71.6	78.2	6.6	Bandedge	
Vert	5845.000	PK	58.0	33.4	4.0	34.0	-	61.4	68.2	6.8	Outside	
Vert	5850.000	PK	50.4	33.4	4.0	34.0	-	53.8	78.2	24.4	Bandedge	
Vert	5860.000	PK	51.7	33.4	4.0	34.0	-	55.1	68.2	13.1	Outside	
Vert	11550.000	PK	50.3	41.0	-1.7	33.7	-	55.9	73.9	18.0	Inside	
Vert	17325.000	PK	44.7	43.2	-0.6	32.7	-	54.6	68.2	13.6	Outside	
Vert	5350.000	AV	39.0	32.2	7.3	31.2	2.6	49.9	53.9	4.0	Inside	
Vert	11550.000	AV	41.7	41.0	-1.7	33.7	2.6	49.9	53.9	4.0	Inside	

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

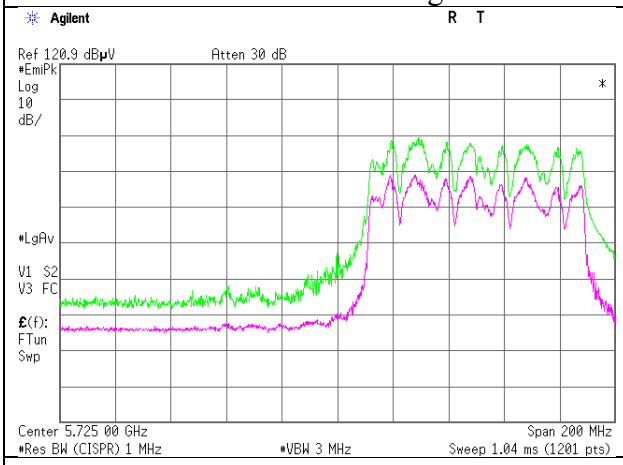
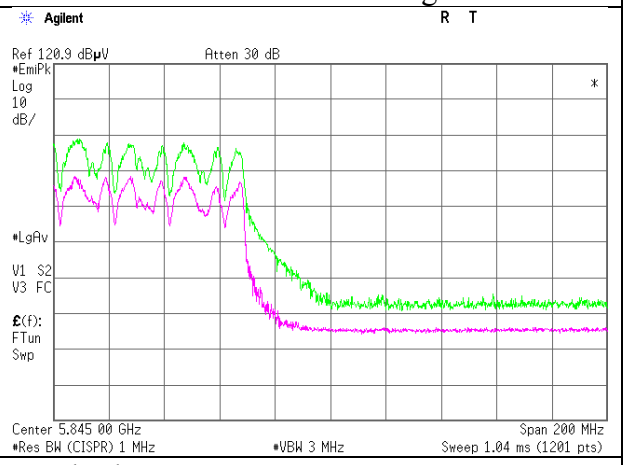
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

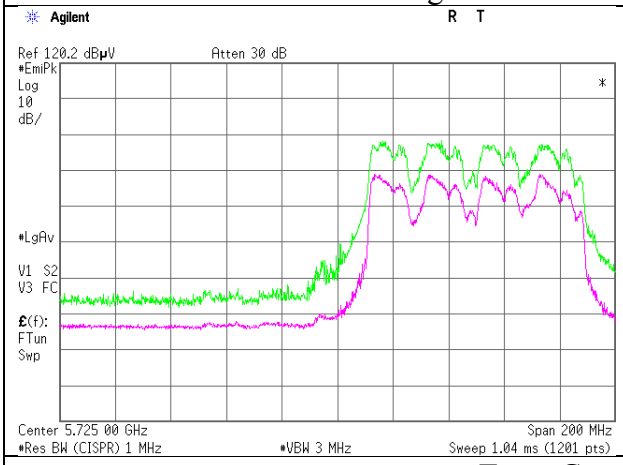
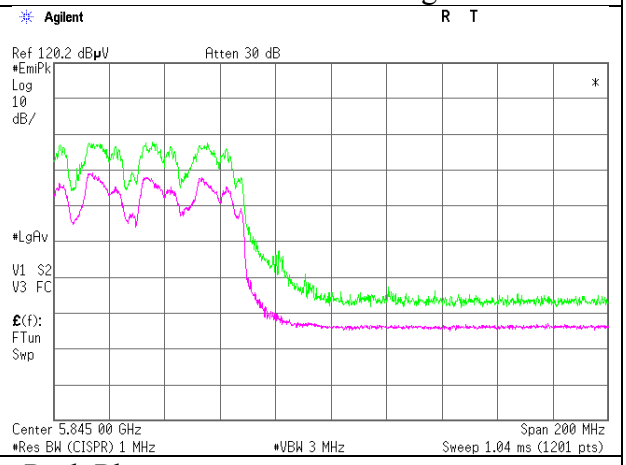
*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 1GHz-10GHz 20log(4.4m/3.0m)= 3.3dB
10GHz-26.5GHz 20log(1.0m/3.0m)= -9.5dB
26.5GHz-40GHz 20log(0.5m/3.0m)= -15.6dB

Radiated Spurious Emission

Test place	Ise EMC Lab. No.4 Semi Anechoic Chamber
Report No.	10993397H
Date	December 8, 2015
Temperature / Humidity	24deg. C / 35 % RH
Engineer	Keisuke Kawamura
Mode	Tx 11ac-80 5775 MHz

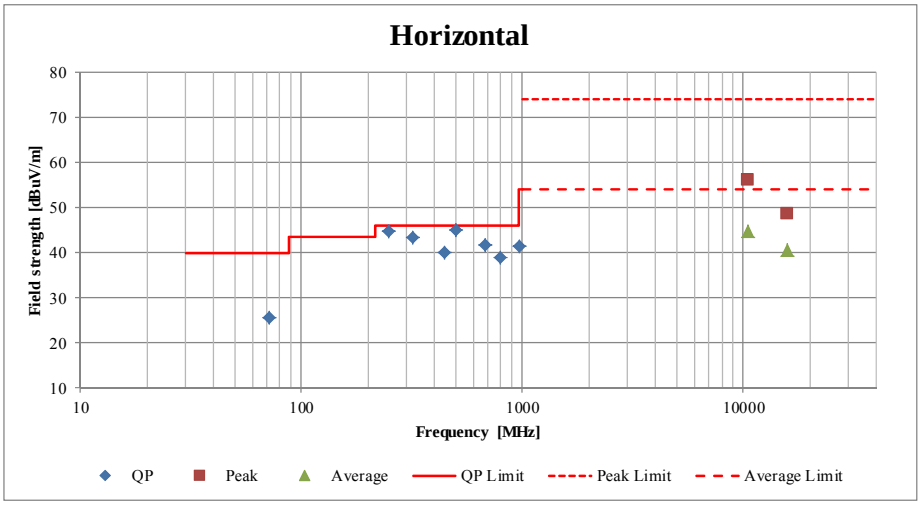
Horizontal	Horizontal
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	

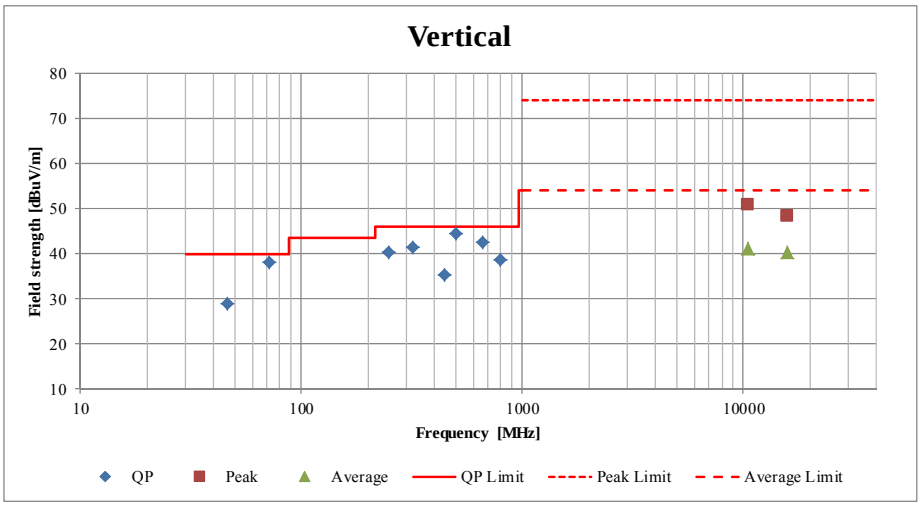
Vertical	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	

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

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Ise EMC Lab. No.2 and No.4 Semi Anechoic Chamber				
Report No.	10993397H				
Date	December 8, 2015	December 9, 2015	January 7, 2016	January 7, 2016	January 8, 2016
Temperature / Humidity	22deg. C / 30 % RH	23deg. C / 38 % RH	23 deg. C / 46 % RH	23 deg. C / 30 % RH	23 deg. C / 32 % RH
Engineer	Keisuke Kawamura	Keisuke Kawamura	Koji Yamamoto	Takafumi Noguchi	Shinichi Miyazono
	(30 MHz - 1000 MHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(1 GHz - 10 GHz)	(26.5 GHz – 40 GHz)
Mode	Tx 11n-40 5270 MHz				





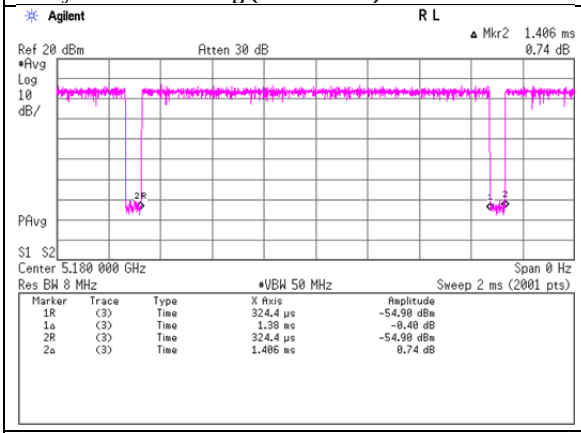
*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Duty cycle

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10993397H
Date	06/10/2015
Temperature/ Humidity	26deg. C / 56% RH
Engineer	Yutaka Yoshida
Mode	11a / 11n-20 / 11n-40

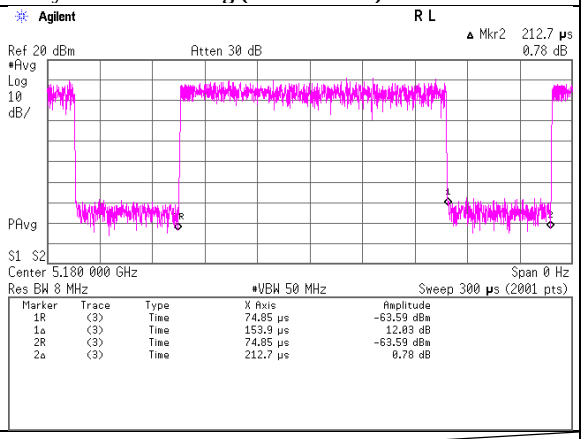
11a 6Mbps(Single Stream)

Tx on / (Tx on + Tx off) = 0.982
Tx on / (Tx on + Tx off) * 100 = 98.2 %
Duty factor = 10 * log (1.406 / 1.38) = 0.08 dB



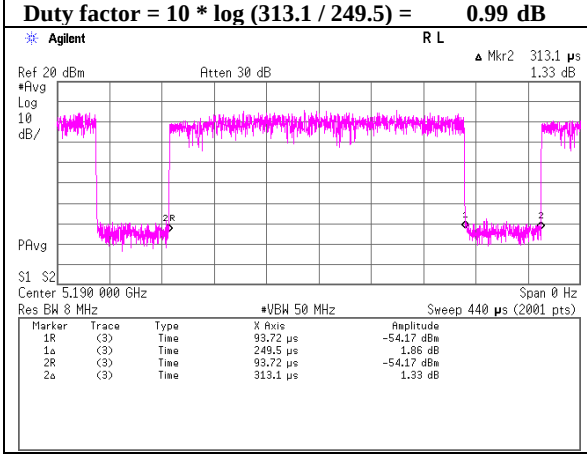
11n-20 MCS19(3 Stream)

Tx on / (Tx on + Tx off) = 0.724
Tx on / (Tx on + Tx off) * 100 = 72.4 %
Duty factor = 10 * log (212.7 / 153.9) = 1.41 dB



11n-40 MCS16(3 Stream)

Tx on / (Tx on + Tx off) = 0.797
Tx on / (Tx on + Tx off) * 100 = 79.7 %
Duty factor = 10 * log (313.1 / 249.5) = 0.99 dB

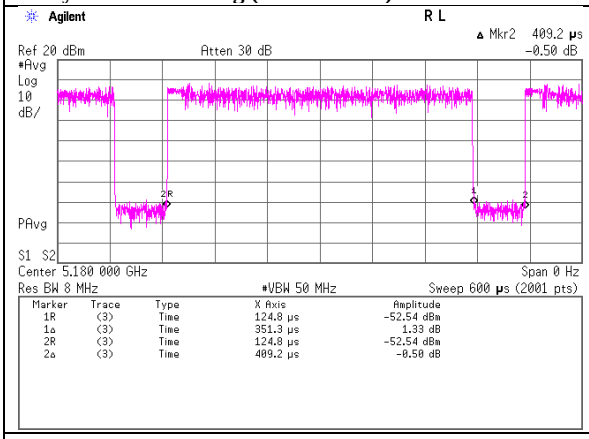


Duty cycle

Test place	Ise EMC Lab. No.11 Measurement Room
Report No.	10993397H
Date	06/10/2015
Temperature/ Humidity	26deg. C / 56% RH
Engineer	Yutaka Yoshida
Mode	11ac-20 / 11ac-20 /11ac-80

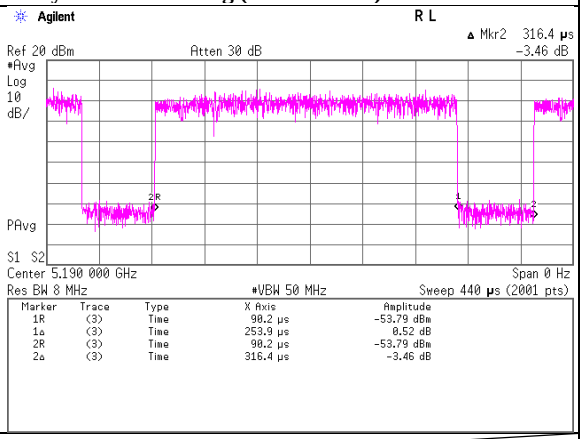
11ac-20 MCS3(3 Stream)

Tx on / (Tx on + Tx off) = 0.859
Tx on / (Tx on + Tx off) * 100 = 85.9 %
Duty factor = 10 * log (409.2 / 351.3) = 0.66 dB



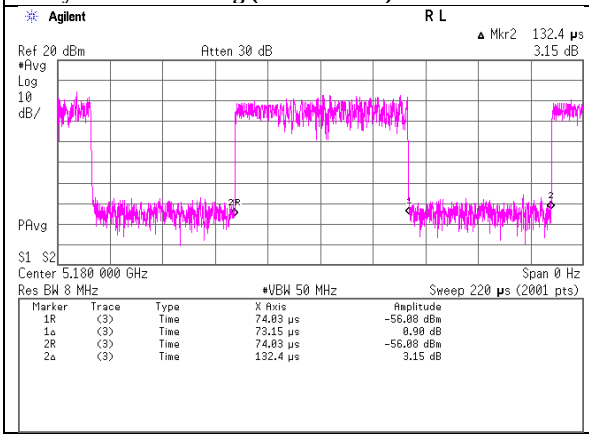
11ac-40 MCS0(3 Stream)

Tx on / (Tx on + Tx off) = 0.802
Tx on / (Tx on + Tx off) * 100 = 80.2 %
Duty factor = 10 * log (316.4 / 253.9) = 0.96 dB



11ac-80 MCS6(3 Stream)

Tx on / (Tx on + Tx off) = 0.552
Tx on / (Tx on + Tx off) * 100 = 55.2 %
Duty factor = 10 * log (132.4 / 73.15) = 2.58 dB



APPENDIX 2: Test instruments

Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2015/07/01 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2015/01/13 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2015/11/06 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2015/02/05 * 12
MCC-168	Microwave Cable	Junkosha	MWX221	1408S016(1m) / 1409S492(5m)	RE	2015/09/24 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2015/01/28 * 12
MMM-01	Digital Tester	Fluke	FLUKE 26-3	78030611	RE	2015/08/19 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2015/09/02 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2015/10/11 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2015/10/11 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2015/02/06 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2015/11/10 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2015/09/04 * 12
MHF-16	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	7001	RE	2015/09/15 * 12
MCC-176	Microwave Cable	Junkosha	MMX221-00500 DMSDMS	1502S303	RE	2015/03/27 * 12
MHA-02	Horn Antenna 18-26.5GHz	EMCO	3160-09	1265	RE	2015/02/05 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2015/10/01 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE	2015/01/13 * 12
MSA-13	Spectrum Analyzer	Agilent	E4440A	MY46185823	RE	2015/06/02 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2015/05/18 * 12
MCC-167	Microwave Cable	Junkosha	MWX221	1404S374(1m) / 1405S074(5m)	RE	2015/05/21 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2015/03/19 * 12
MMM-08	DIGITAL HiTESTER	Hioki	3805	051201197	RE	2015/01/16 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	RE	2015/02/26 * 12
MCC-54	Microwave Cable	Suhner	SUCOFLEX101	2873(1m) / 2876(5m)	RE	2015/03/09 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	3950M00205	RE	2015/06/02 * 12
MHA-29	Horn Antenna 26.5-40GHz	ETS LINDGREN	3160-10	00152399	RE	2015/09/04 * 12
MPA-22	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 /1871328	RE	2015/09/03 * 12

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

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

Test Item: **RE: Radiated Emission**