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FCC RADIO TEST REPORT

Applicant's company	**Broadcom Corporation**
Applicant Address	190 Mathilda Place Sunnyvale CA 94086 U.S.A.
FCC ID	**QDS-BRCM1084**
Manufacturer's company	**Broadcom Corporation**
Manufacturer Address	190 Mathilda Place Sunnyvale CA 94086 U.S.A.

Product Name	Broadcom 802.11a/b/g/n WLAN+ Bluetooth PCI-E NGFF2230 card
Brand Name	Broadcom
Model No.	BCM943228Z
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Received Date	Apr. 01, 2014
Final Test Date	Jul. 17, 2015
Submission Type	Class II Change
Operating Mode	Client (without radar detection function)

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2013**, **47 CFR FCC Part 15 Subpart E, KDB789033 D01 v01r04, KDB662911 D01 v02r01,**

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

Testing Laboratory
1190

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR440181-03AB	Rev. 01	Initial issue of report	Jul. 29, 2015

1. VERIFICATION OF COMPLIANCE

Product Name	:	Broadcom 802.11a/b/g/n WLAN+ Bluetooth PCI-E NGFF2230 card
Brand Name	:	Broadcom
Model No.	:	BCM943228Z
Applicant	:	Broadcom Corporation
Test Rule Part(s)	:	47 CFR FCC Part 15 Subpart E § 15.407

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Apr. 01, 2014 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Sam Chen
SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart E				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	14.38 dB
4.2	15.407(b)	Radiated Emissions	Complies	3.67 dB
4.3	15.407(b)	Band Edge Emissions	Complies	0.10 dB
4.4	15.203	Antenna Requirements	Complies	-

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	IEEE 802.11a/n: WLAN (2TX, 2RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	IEEE 802.11a: OFDM IEEE 802.11n: see the below table
Data Modulation	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	IEEE 802.11a: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n: see the below table
Frequency Range	5150 ~ 5350MHz / 5470 ~ 5725MHz
Channel Number	19 for 20MHz bandwidth ; 9 for 40MHz bandwidth
Maximum Conducted Output Power	Band 1: IEEE 802.11a: 14.19 dBm IEEE 802.11n MCS0 (HT20): 14.10 dBm IEEE 802.11n MCS0 (HT40): 16.08 dBm Band 2: IEEE 802.11a: 20.48 dBm IEEE 802.11n MCS0 (HT20): 20.45 dBm IEEE 802.11n MCS0 (HT40): 21.51 dBm Band 3: IEEE 802.11a: 20.69 dBm IEEE 802.11n MCS0 (HT20): 20.71 dBm IEEE 802.11n MCS0 (HT40): 19.93 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Note: The MIMO transmission mode is correlated.

Items	Description	
Communication Mode	☒ IP Based (Load Based)	☐ Frame Based
TPC Function	☒ With TPC	☐ Without TPC
Weather Band (5600~5650MHz)	☒ With 5600~5650MHz	☐ Without 5600~5650MHz
Beamforming Function	☐ With beamforming	☒ Without beamforming

Antenna and Band width

Antenna	Two (TX)	
Band width Mode	20 MHz	40 MHz
IEEE 802.11a	V	X
IEEE 802.11n	V	V

IEEE 11n Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	2	MCS0-15
802.11n (HT40)	2	MCS0-15
Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT supports HT20 and HT40. Note 2: Modulation modes consist of below configuration: HT20/HT40: IEEE 802.11n		

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Set	Ant.	Brand	Model Name (Part Number)	Antenna Type	Connector	Gain (dBi)				
						2.4G	5G B1	5G B2	5G B3	5G B4
1	1	WNC	81XCAA15.G03 (497317-003)	Dipole antenna	Reversed-SMA	1.26	1.58	1.58	1.01	1.09
	2	WNC	81XCAA15.G03 (497317-003)	Dipole antenna	Reversed-SMA	1.26	1.58	1.58	1.01	1.09
2	1	ACON	DM(External) SMA Dipole	Dipole antenna	Reversed-SMA	-1.04	-2.45	-3.28	-4.13	-4.17
	2	ACON	DM(External) SMA Dipole	Dipole antenna	Reversed-SMA	-1.04	-2.45	-3.28	-4.13	-4.17

Note1: The each set has two antennas.

Note2: Set 1~2 are the same type antenna. Only the highest gain antenna was selected to test and record in this report.

For 2.4GHz:

For IEEE 802.11b mode (1TX/1RX)

Only Chain 1 can be used as transmitting/receiving antenna.

For IEEE 802.11g/n mode (2TX/2RX)

Chain 1 and Chain 2 can be used as transmitting/receiving antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 5GHz:

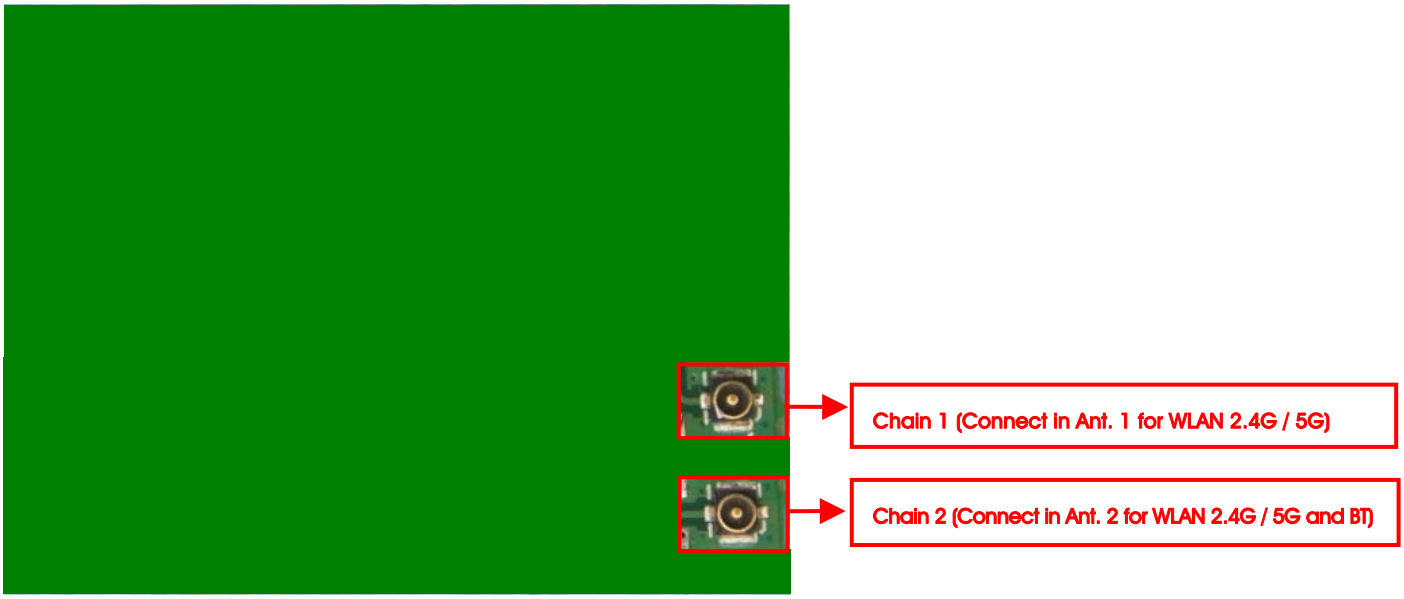
For IEEE 802.11a/n mode (2TX/2RX)

Chain 1 and Chain 2 can be used as transmitting/receiving antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

For Bluetooth mode (1TX/1RX)

Only Chain 2 can be used as transmitting/receiving antenna.


Chain 1 (Connect in Ant. 1 for WLAN 2.4G / 5G)
Chain 2 (Connect in Ant. 2 for WLAN 2.4G / 5G and BT)

3.4. Table for Carrier Frequencies

The EUT has two bandwidth system.

For 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140.

For 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 118, 126, 134.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
5250~5350 MHz Band 2	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz Band 3	100	5500 MHz	120	5600 MHz
	102	5510 MHz	124	5620 MHz
	104	5520 MHz	126	5630 MHz
	108	5540 MHz	128	5640 MHz
	110	5550 MHz	132	5660 MHz
	112	5560 MHz	134	5670 MHz
	116	5580 MHz	136	5680 MHz
	118	5590 MHz	140	5700 MHz

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode		Data Rate	Channel	Chain
AC Power Conducted Emission	Normal Link		-	-	-
Radiated Emission Below 1GHz	Normal Link		-	-	-
Radiated Emission Above 1GHz	11a/BPSK	Band 1-3	6Mbps	36/40/48/52/60/64 /100/116/140	1+2
	11n HT20	Band 1-3	MCS0	36/40/48/52/60/64 /100/116/140	1+2
	11n HT40	Band 1-3	MCS0	38/46/54/62/ 102/110/134	1+2
Band Edge Emission	11a/BPSK	Band 1-3	6Mbps	36/40/48/52/60/64 /100/116/140	1+2
	11n HT20	Band 1-3	MCS0	36/40/48/52/60/64 /100/116/140	1+2
	11n HT40	Band 1-3	MCS0	38/46/54/62/ 102/110/134	1+2

The following test modes were performed for all tests:

For Conducted Emission test:

Mode 1. 2.4GHz WLAN Function + Bluetooth Function

Mode 2. 5GHz WLAN Function + Bluetooth Function

Mode 1 is the worst case, so it was selected to record in this test report.

For Radiated Emission Below 1GHz test:

Mode 1. 2.4GHz WLAN Function + Bluetooth Function

Mode 2. 5GHz WLAN Function + Bluetooth Function

Mode 1 is the worst case, so it was selected to record in this test report.

For Radiated Emission Above 1GHz test:

Mode 1. CTX-EUT

For Co-location test:

Mode 1. 2.4GHz WLAN function + Bluetooth function

Mode 2. 5GHz WLAN function + Bluetooth function

3.6. Table for Testing Locations

Test Site Location					
Address:	No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.				
TEL:	886-3-656-9065				
FAX:	886-3-656-9085				
Test Site No.	**Site Category**	**Location**	**FCC Reg. No.**	**IC File No.**	**VCCI Reg. No**
03CH01-CB	SAC	Hsin Chu	262045	IC 4086D	-
CO01-CB	Conduction	Hsin Chu	262045	IC 4086D	

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

3.7. Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR440181AB

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Adding two set dipole antennas for the device.	1. AC Conducted Emissions 2. Radiated Emissions 3. Band Edge Emissions Measurement 4. Radiated Emission Co-location

Note1: The above test items will be based on original output power to re-test.

Note2: There is no change in hardware or in existing RF relevant portion.

3.8. Table for Supporting Units

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
NB	DELL	E6220	DoC
AP Router	Planex	GW-AP54SGX	KA220030603014-1
Broadcom 802.11a/b/g/n WLAN+ Bluetooth PCI-E NGFF2230 card (Device)	Broadcom	BCM943228Z	QDS-BRCM1084
NB	DELL	E6430	DoC
Mouse	HP	FM100	DoC
Earphone	SHYARO CHI	MIC-04	N/A
Test Fixture*2	Broadcom	BCM9NGFF2EC_1	N/A

For Test Site No: 03CH01-CB (For Below 1GHz)

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC
Wireless ac AP	Netgear	R6300V2	PY313200227
Broadcom 802.11a/b/g/n WLAN+ Bluetooth PCI-E NGFF2230 card (Device)	Broadcom	BCM943228Z	QDS-BRCM1084
NB	DELL	E4300	DoC
Mouse	Logitech	M-U0026	DoC
Earphone	e-Power	S90W	N/A
Test Fixture*2	Broadcom	BCM9NGFF2EC_1	N/A

For Test Site No: 03CH01-CB (For Above 1GHz)

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC
Test Fixture	Broadcom	BCM9NGFF2EC_1	N/A

3.9. Table for Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Test Software Version	MTool 2.0.1.6								
Mode	Test Frequency (MHz)								
	NCB: 20MHz								
	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz
802.11a	44	44	44	71	65	46	47	70	49
802.11n MCS0 HT20	44	44	44	71	70	58	55	70	57
Mode	NCB: 40MHz								
802.11n MCS0 HT40	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz		
	41	52	76	37	34	67	66		

3.10. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.11. Duty Cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.060	2.090	98.56	0.06	0.01
802.11n MCS0 HT20	1.910	1.940	98.45	0.07	0.01
802.11n MCS0 HT40	0.930	0.950	97.89	0.09	1.08

3.12. Maximum Conducted Output Power for original report

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	Duty Factor	Conducted Power (dBm)			Max. Limit (dBm)	Result
			Chain 1	Chain 2	Total		
36	5180 MHz	0.07	11.24	10.93	14.10	16.95	Complies
40	5200 MHz		10.95	10.54	13.76	16.98	Complies
48	5240 MHz		11.06	11.12	14.10	16.98	Complies
52	5260 MHz		17.55	17.33	20.45	24.00	Complies
60	5300 MHz		17.46	17.31	20.40	24.00	Complies
64	5320 MHz		14.79	14.84	17.83	24.00	Complies
100	5500 MHz		14.42	14.36	17.40	23.79	Complies
116	5580 MHz		17.79	17.61	20.71	23.79	Complies
140	5700 MHz		14.18	14.15	17.18	23.79	Complies

Note:

CH36 Conducted Output power limit=4+10log(B);4+10log(19.74)=16.95dBm<17dBm, so CH36 power limt=16.95dBm

CH40 Conducted Output power limit=4+10log(B);4+10log(19.87)=16.98dBm<17dBm, so CH40 power limt=16.98dBm

CH48 Conducted Output power limit=4+10log(B);4+10log(19.87)=16.98dBm<17dBm, so CH48 power limt=16.98dBm

Note:

CH100, 116, 140 Conducted Output power limit=Antenna gain 6.21dBi>6dBi, so B3 Power Limit=24-(6.21-6)=23.79dBm

Only for power table of SAR

Channel	Frequency	Duty Factor	Total Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	0.07	14.10	30.00	Complies
40	5200 MHz		13.76	30.00	Complies
44	5220 MHz		14.12	30.00	Complies
48	5240 MHz		14.10	30.00	Complies
52	5260 MHz		16.35	30.00	Complies
56	5280 MHz		16.34	30.00	Complies
60	5300 MHz		16.39	30.00	Complies
64	5320 MHz		16.41	30.00	Complies
100	5500 MHz		16.48	30.00	Complies
104	5520 MHz		16.53	30.00	Complies
108	5540 MHz		16.48	30.00	Complies
112	5560 MHz		16.56	30.00	Complies
116	5580 MHz		16.48	30.00	Complies
120	5600 MHz		16.46	30.00	Complies
124	5620 MHz		16.54	30.00	Complies
128	5640 MHz		16.48	30.00	Complies
132	5660 MHz		16.61	30.00	Complies
136	5680 MHz		16.64	30.00	Complies
140	5700 MHz		16.64	30.00	Complies

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	Duty Factor	Conducted Power (dBm)			Max. Limit (dBm)	Result
			Chain 1	Chain 2	Total		
38	5190 MHz	0.09	8.73	10.55	12.74	17.00	Complies
46	5230 MHz		12.85	13.27	16.08	17.00	Complies
54	5270 MHz		18.76	18.23	21.51	24.00	Complies
62	5310 MHz		7.23	9.60	11.59	24.00	Complies
102	5510 MHz		9.63	8.51	12.12	23.79	Complies
110	5550 MHz		16.35	17.42	19.93	23.79	Complies
134	5670 MHz		15.96	16.72	19.37	23.79	Complies

Note:

CH102, 110, 134 Conducted Output power limit=Antenna gain 6.21dBi>6dBi, so B3 Power Limit=24-(6.21-6)=23.79dBm

Only for power table of SAR

Channel	Frequency	Duty Factor	Total Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	0.09	12.74	30.00	Complies
46	5230 MHz		14.08	30.00	Complies
54	5270 MHz		16.30	30.00	Complies
62	5310 MHz		11.59	30.00	Complies
102	5510 MHz		12.12	30.00	Complies
110	5550 MHz		16.55	30.00	Complies
118	5590 MHz		16.41	30.00	Complies
126	5630 MHz		16.46	30.00	Complies
134	5670 MHz		16.49	30.00	Complies

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Duty Factor	Conducted Power (dBm)			Max. Limit (dBm)	Result
			Chain 1	Chain 2	Total		
36	5180 MHz	0.06	11.08	10.75	13.93	16.92	Complies
40	5200 MHz		11.35	11.01	14.19	16.92	Complies
48	5240 MHz		11.17	10.85	14.02	16.87	Complies
52	5260 MHz		17.54	17.39	20.48	24.00	Complies
60	5300 MHz		16.32	16.28	19.31	24.00	Complies
64	5320 MHz		11.33	12.12	14.75	23.92	Complies
100	5500 MHz		13.01	12.34	15.70	23.79	Complies
116	5580 MHz		17.83	17.52	20.69	23.79	Complies
140	5700 MHz		12.78	12.71	15.76	23.79	Complies

Note:

CH36 Conducted Output power limit=4+10log(B);4+10log(19.61)=16.92dBm<17dBm, so CH36 power limt=16.92dBm

CH40 Conducted Output power limit=4+10log(B);4+10log(19.61)=16.92dBm<17dBm, so CH40 power limt=16.92dBm

CH48 Conducted Output power limit=4+10log(B);4+10log(19.35)=16.87dBm<17dBm, so CH48 power limt=16.87dBm

CH64 Conducted Output power limit=11+10log(B);11+10log(19.61)=23.92dBm<24dBm, so CH64 power limt=23.92dBm

Note:

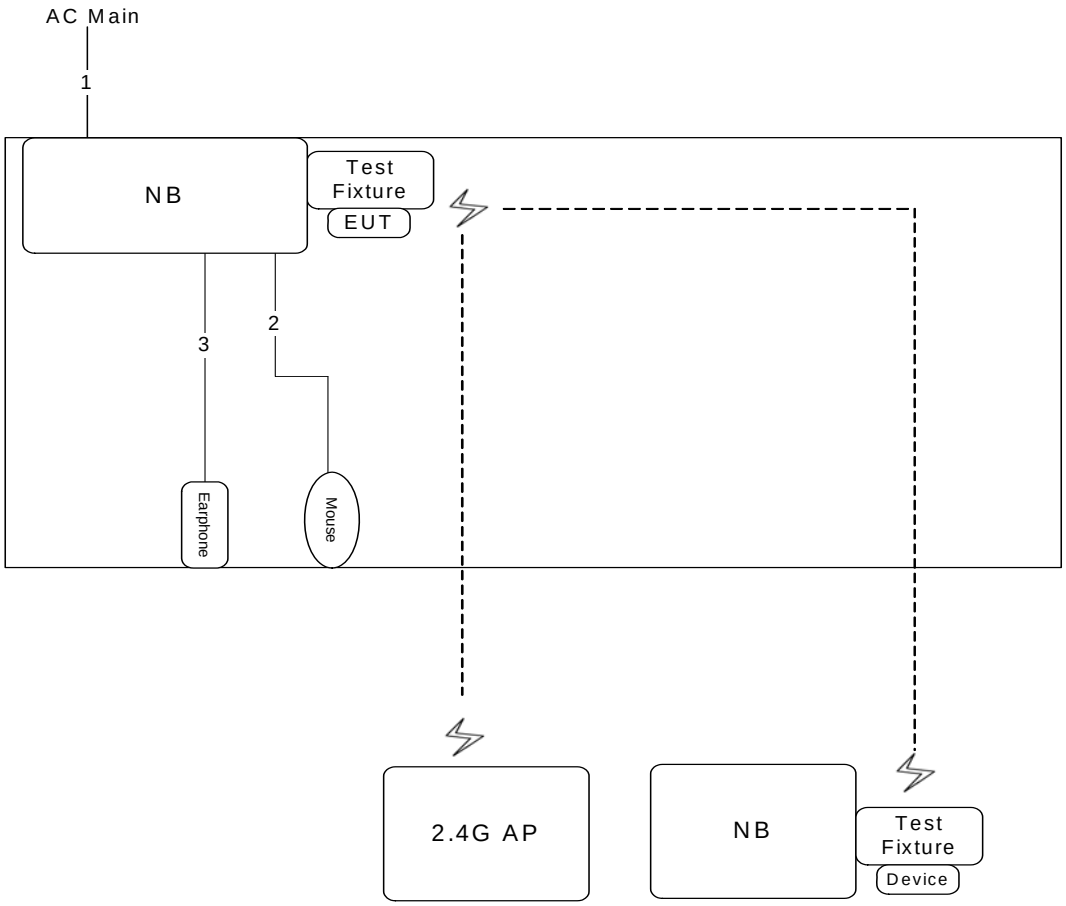
CH100, 116, 140 Conducted Output power limit=Antenna gain 6.21dBi>6dBi, so B3 Power Limit=24-(6.21-6)=23.79dBm

Only for power table of SAR

Channel	Frequency	Duty Factor	Total Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	0.06	13.93	30.00	Complies
40	5200 MHz		14.19	30.00	Complies
44	5220 MHz		14.19	30.00	Complies
48	5240 MHz		14.02	30.00	Complies
52	5260 MHz		16.31	30.00	Complies
56	5280 MHz		16.20	30.00	Complies
60	5300 MHz		16.30	30.00	Complies
64	5320 MHz		14.75	30.00	Complies
100	5500 MHz		15.70	30.00	Complies
104	5520 MHz		16.39	30.00	Complies
108	5540 MHz		16.41	30.00	Complies
112	5560 MHz		16.49	30.00	Complies
116	5580 MHz		16.53	30.00	Complies
120	5600 MHz		16.47	30.00	Complies
124	5620 MHz		16.52	30.00	Complies
128	5640 MHz		16.43	30.00	Complies
132	5660 MHz		16.48	30.00	Complies
136	5680 MHz		16.47	30.00	Complies
140	5700 MHz		15.76	30.00	Complies

3.13. Test Configurations

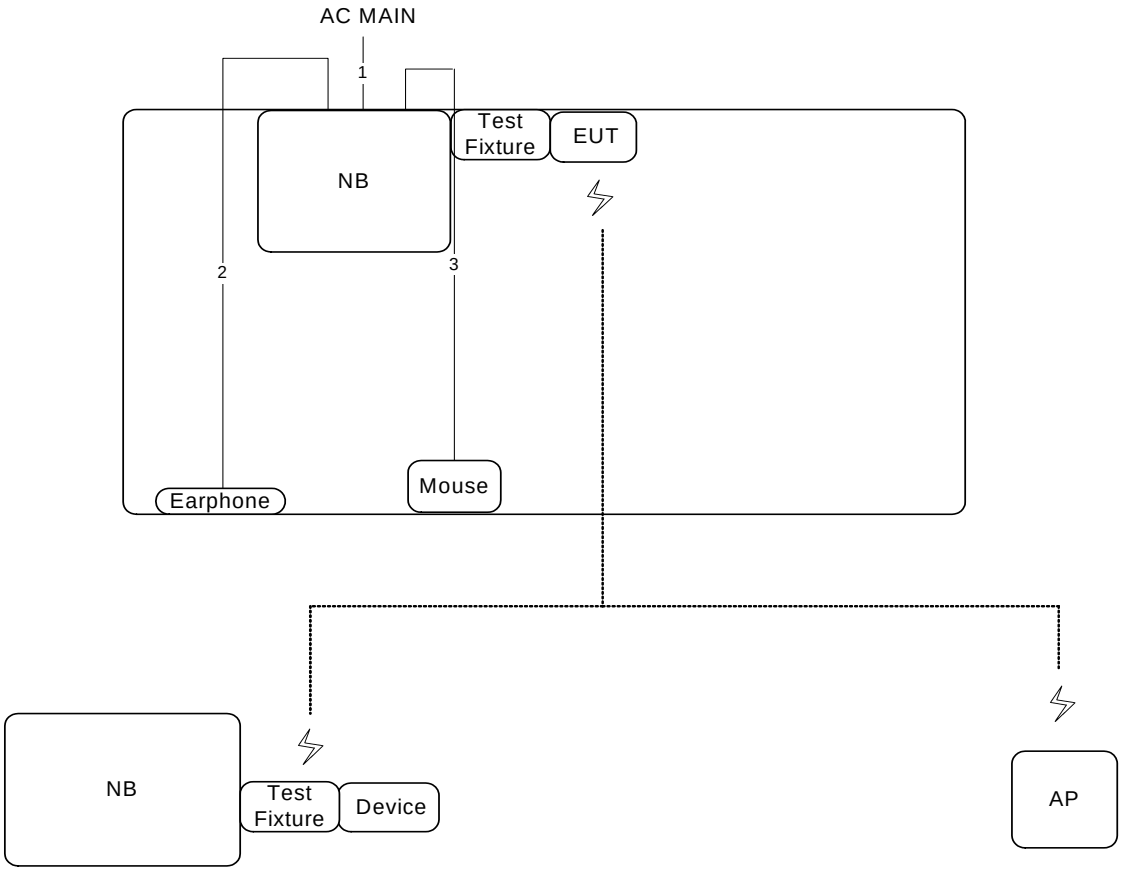
3.13.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length(m)
1	Power cable	No	2.6
2	USB cable	Yes	1.8
3	Audio cable	No	1.1

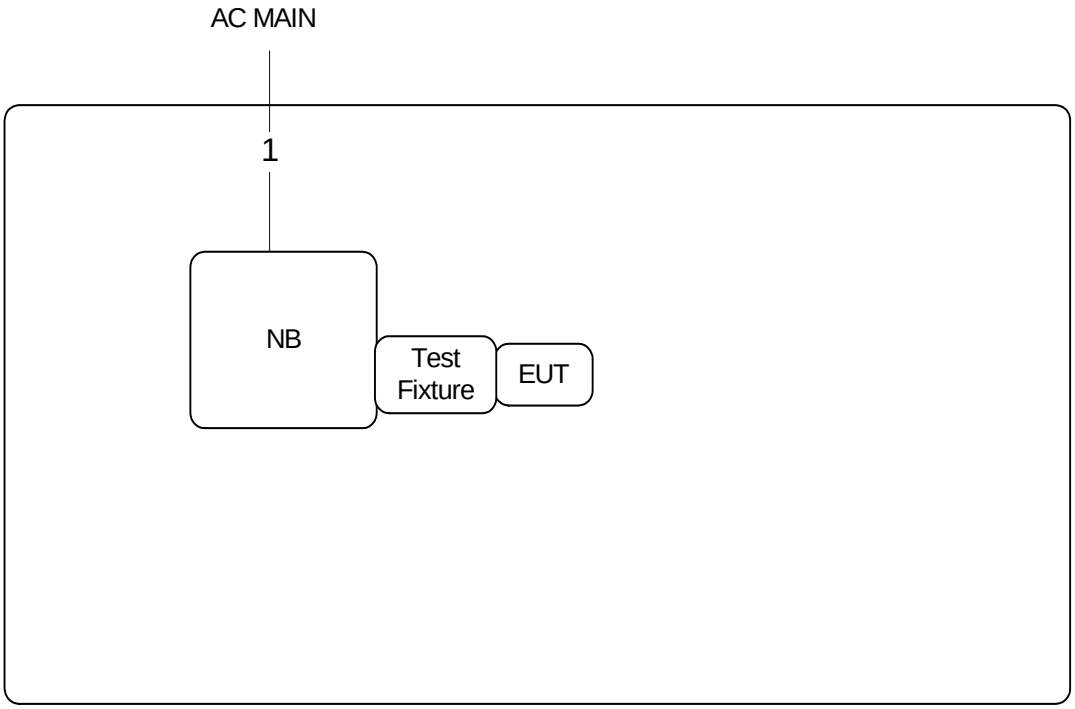
3.13.2. Radiation Emissions Test Configuration

Test Configuration: 30MHz ~1GHz



Item	Connection	Shielded	Length(m)
1	Power cable	No	2.6
2	Audio cable	No	1.4
3	USB cable	Yes	1.8

Test Configuration: above 1GHz



Item	Connection	Shielded	Length(m)
1	Power cable	No	2.6

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product that is designed to connect to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

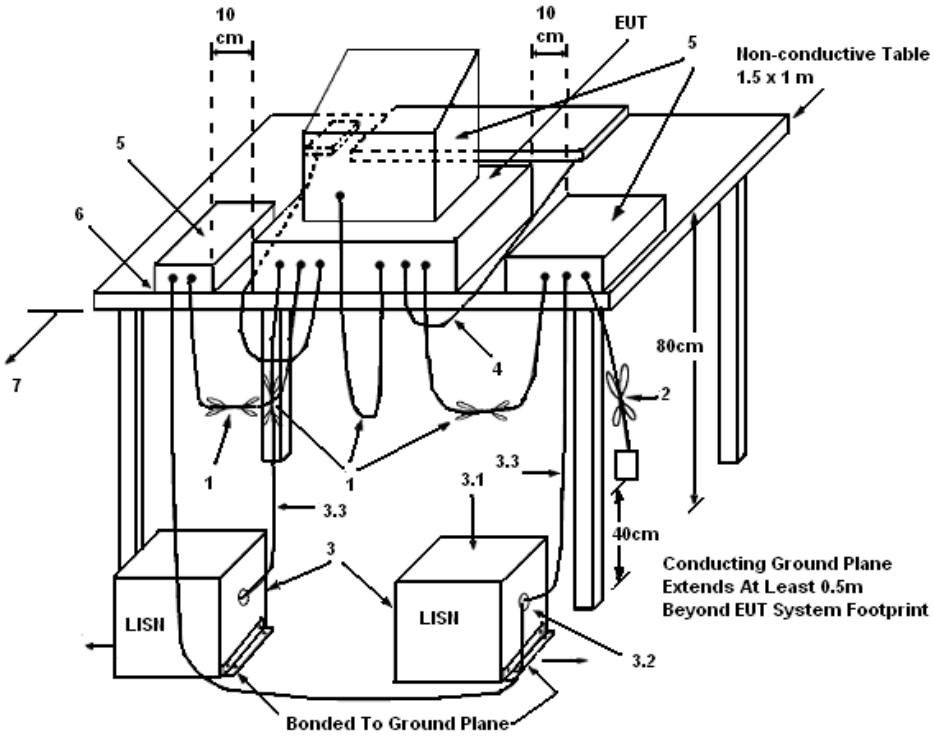
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

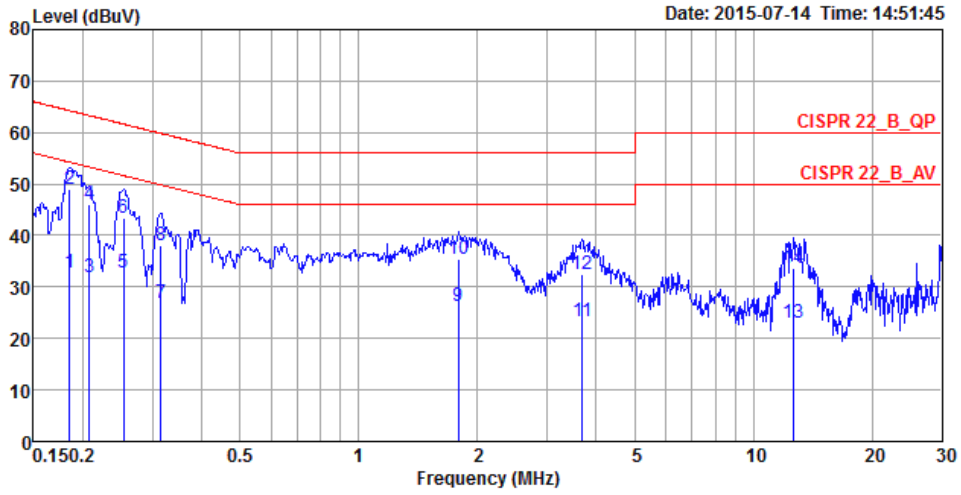
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

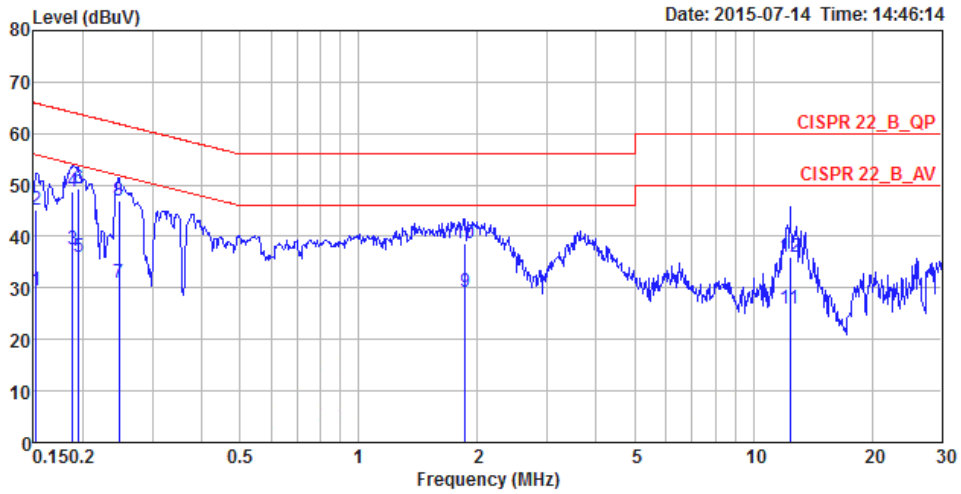
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	22°C	Humidity	58%
Test Engineer	Ryo Fan	Phase	Line
Configuration	Normal Link	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1854	32.82	-21.42	54.24	22.62	10.01	0.19	LINE	Average
2	0.1854	48.90	-15.34	64.24	38.70	10.01	0.19	LINE	QP
3	0.2072	31.85	-21.47	53.32	21.65	10.01	0.19	LINE	Average
4	0.2072	46.05	-17.27	63.32	35.85	10.01	0.19	LINE	QP
5	0.2535	32.71	-18.93	51.64	22.51	10.01	0.19	LINE	Average
6	0.2535	43.52	-18.12	61.64	33.32	10.01	0.19	LINE	QP
7	0.3149	26.93	-22.91	49.84	16.72	10.01	0.20	LINE	Average
8	0.3149	38.01	-21.83	59.84	27.80	10.01	0.20	LINE	QP
9	1.7905	26.25	-19.75	46.00	15.95	10.05	0.25	LINE	Average
10	1.7905	35.54	-20.46	56.00	25.24	10.05	0.25	LINE	QP
11	3.6806	23.43	-22.57	46.00	13.05	10.08	0.30	LINE	Average
12	3.6806	32.60	-23.40	56.00	22.22	10.08	0.30	LINE	QP
13	12.5821	22.96	-27.04	50.00	12.27	10.28	0.41	LINE	Average
14	12.5821	33.67	-26.33	60.00	22.98	10.28	0.41	LINE	QP

Temperature	22°C	Humidity	58%
Test Engineer	Ryo Fan	Phase	Neutral
Configuration	Normal Link	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1524	29.49	-26.38	55.87	19.32	10.00	0.17	NEUTRAL	Average
2	0.1524	45.02	-20.85	65.87	34.85	10.00	0.17	NEUTRAL	QP
3	0.1884	37.43	-16.68	54.11	27.23	10.01	0.19	NEUTRAL	Average
4	0.1884	48.81	-15.30	64.11	38.61	10.01	0.19	NEUTRAL	QP
5	0.1955	35.97	-17.83	53.80	25.77	10.01	0.19	NEUTRAL	Average
6	0.1955	49.42	-14.38	63.80	39.22	10.01	0.19	NEUTRAL	QP
7	0.2468	30.90	-20.96	51.86	20.70	10.01	0.19	NEUTRAL	Average
8	0.2468	46.82	-15.04	61.86	36.62	10.01	0.19	NEUTRAL	QP
9	1.8581	29.22	-16.78	46.00	18.92	10.04	0.26	NEUTRAL	Average
10	1.8581	38.74	-17.26	56.00	28.44	10.04	0.26	NEUTRAL	QP
11	12.3837	25.97	-24.03	50.00	15.30	10.27	0.40	NEUTRAL	Average
12	12.3837	36.10	-23.90	60.00	25.43	10.27	0.40	NEUTRAL	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. Radiated Emissions Measurement

4.2.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed a -27dBm peak limit or average 54dBuV/m and peak 74dBuV/m limits. For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed a -27dBm peak limit or average 54dBuV/m and peak 74dBuV/m limits. In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.2.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for peak

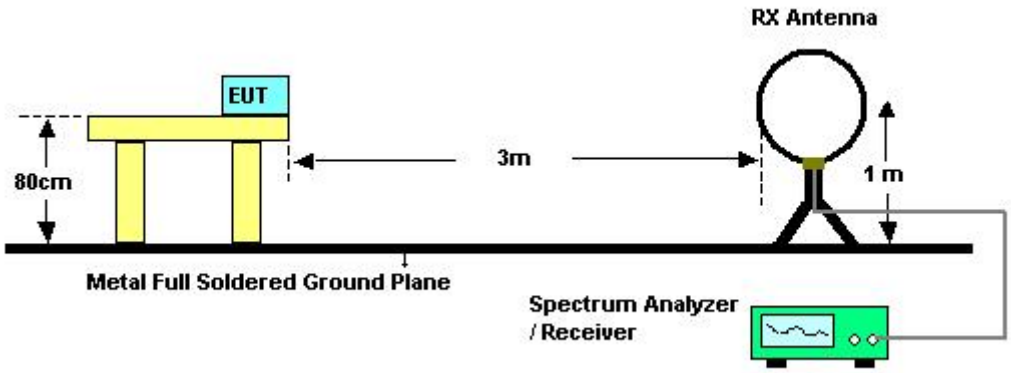
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

4.2.3. Test Procedures

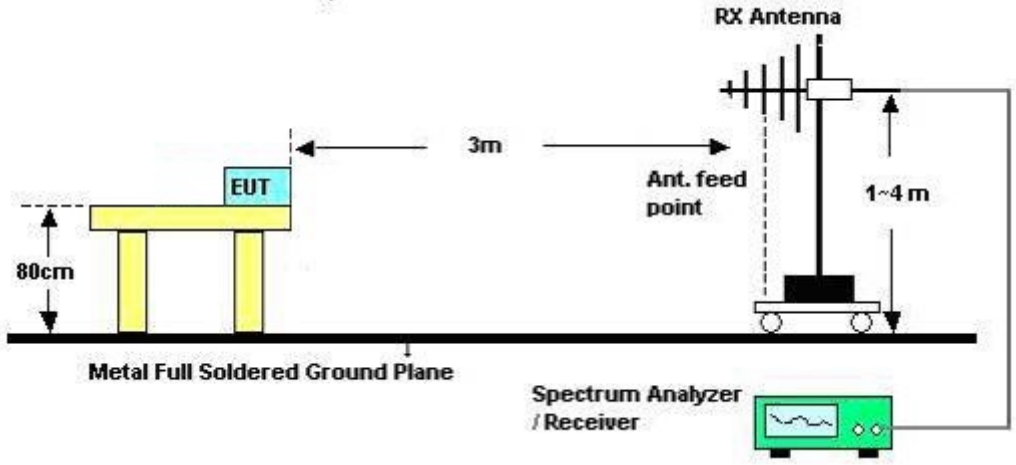
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.2.4. Test Setup Layout

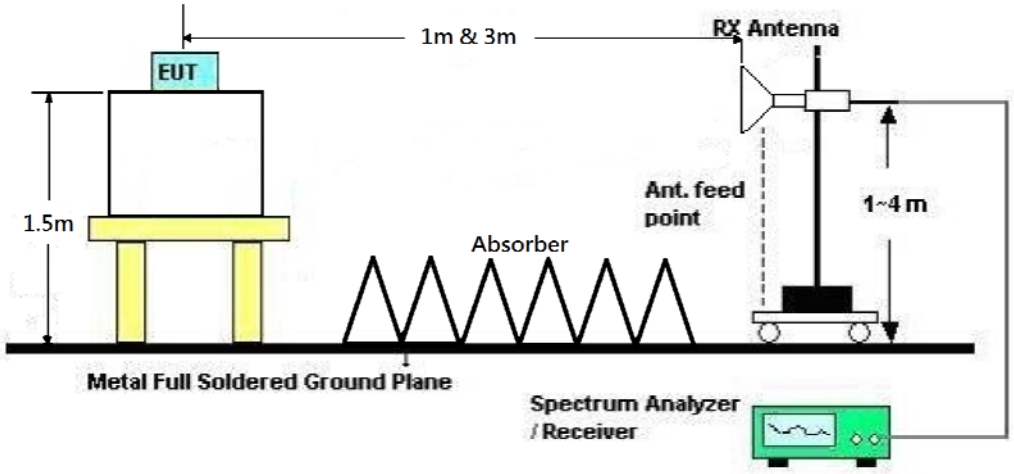
For Radiated Emissions: 9kHz ~30MHz



For Radiated Emissions: 30MHz~1GHz



For Radiated Emissions: Above 1GHz



4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	Normal Link
Test Date	Jul. 16, 2015	Test Mode	Mode 1

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

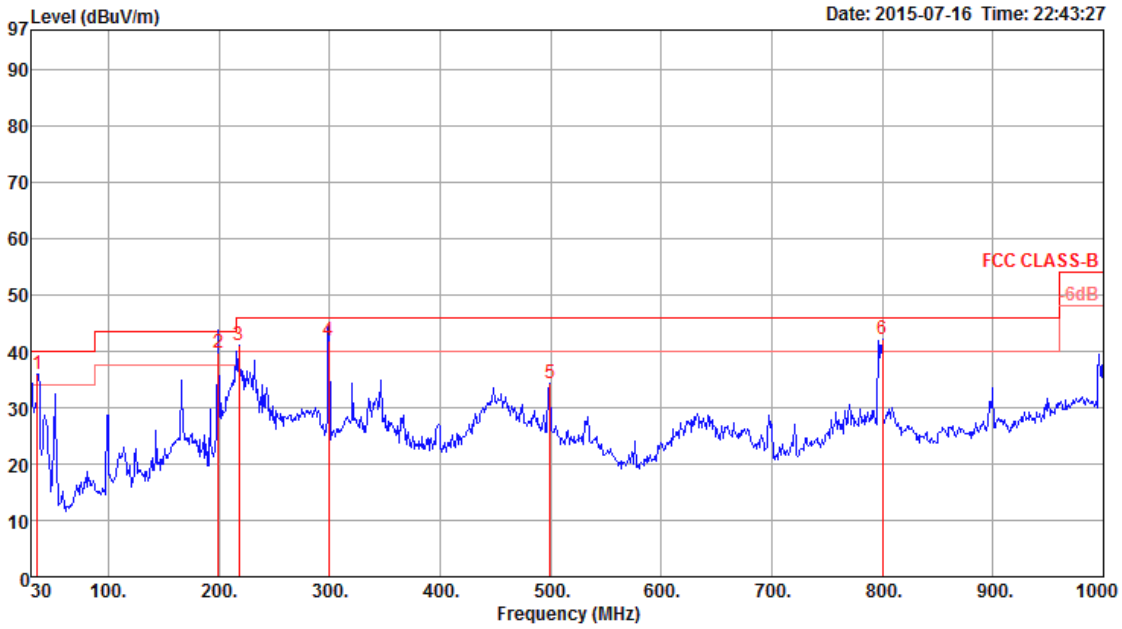
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8. Results of Radiated Emissions (30MHz~1GHz)

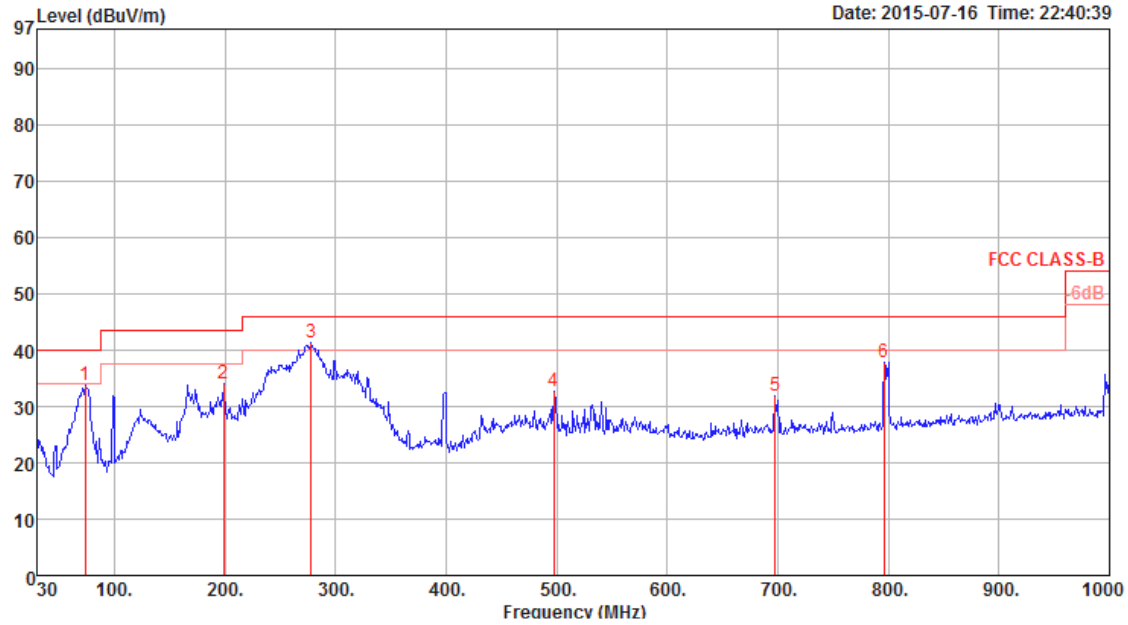
Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	Normal Link
Test Mode	Mode 1		

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	35.82	36.01	40.00	-3.99	46.13	0.69	16.62	27.43	Peak	100	0	HORIZONTAL
2	199.75	39.83	43.50	-3.67	55.69	1.66	10.20	27.72	QP	121	51	HORIZONTAL
3	218.18	41.12	46.00	-4.88	56.46	1.70	10.64	27.68	Peak	100	0	HORIZONTAL
4	299.66	41.85	46.00	-4.15	53.40	2.03	13.90	27.48	QP	147	122	HORIZONTAL
5	499.48	34.32	46.00	-11.68	42.53	2.67	17.79	28.67	Peak	100	0	HORIZONTAL
6	800.18	42.23	46.00	-3.77	46.54	3.22	20.80	28.33	Peak	100	0	HORIZONTAL

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	73.65	33.83	40.00	-6.17	54.19	0.94	7.09	28.39	Peak	400	0	VERTICAL
2	198.78	33.93	43.50	-9.57	49.87	1.66	10.13	27.73	Peak	400	0	VERTICAL
3	278.32	41.24	46.00	-4.76	53.25	1.92	13.60	27.53	Peak	400	0	VERTICAL
4	497.54	32.70	46.00	-13.30	40.95	2.66	17.76	28.67	Peak	400	0	VERTICAL
5	697.36	31.93	46.00	-14.07	37.75	3.09	19.69	28.60	Peak	400	0	VERTICAL
6	796.30	37.84	46.00	-8.16	42.22	3.22	20.75	28.35	Peak	400	0	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.2.9. Results for Radiated Emissions (1GHz~40GHz)

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 36 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15539.12	41.42	54.00	-12.58	30.32	7.56	38.16	34.62	315	150	Average	HORIZONTAL
2	15544.76	53.92	74.00	-20.08	42.79	7.56	38.19	34.62	315	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15538.72	41.58	54.00	-12.42	30.48	7.56	38.16	34.62	329	150	Average	VERTICAL
2	15539.38	54.60	74.00	-19.40	43.50	7.56	38.16	34.62	329	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 40 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15595.19	53.83	74.00	-20.17	42.63	7.58	38.29	34.67	297	150	Peak	HORIZONTAL
2	15595.21	41.38	54.00	-12.62	30.18	7.58	38.29	34.67	297	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15595.42	41.46	54.00	-12.54	30.26	7.58	38.29	34.67	308	150	Average	VERTICAL
2	15603.21	54.44	74.00	-19.56	43.26	7.58	38.29	34.69	308	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 48 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15715.46	41.74	54.00	-12.26	30.40	7.62	38.50	34.78	281	150	Average	HORIZONTAL
2	15722.72	54.48	74.00	-19.52	43.14	7.62	38.50	34.78	281	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15720.75	42.02	54.00	-11.98	30.68	7.62	38.50	34.78	314	150	Average	VERTICAL
2	15721.57	54.59	74.00	-19.41	43.25	7.62	38.50	34.78	314	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 52 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15775.27	55.09	74.00	-18.91	43.67	7.64	38.60	34.82	254	150	Peak	HORIZONTAL
2	15780.29	41.96	54.00	-12.04	30.56	7.64	38.60	34.84	254	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15778.85	55.40	74.00	-18.60	44.00	7.64	38.60	34.84	281	150	Peak	VERTICAL
2	15779.78	41.92	54.00	-12.08	30.52	7.64	38.60	34.84	281	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 60 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10605.66	39.45	54.00	-14.55	29.39	6.21	38.78	34.93	230	150	Average	HORIZONTAL
2	10606.04	52.62	74.00	-21.38	42.56	6.21	38.78	34.93	230	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10602.26	52.09	74.00	-21.91	42.03	6.21	38.78	34.93	244	150	Peak	VERTICAL
2	10603.33	39.52	54.00	-14.48	29.46	6.21	38.78	34.93	244	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 64 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10636.51	39.36	54.00	-14.64	29.27	6.23	38.77	34.91	188	150	Average	HORIZONTAL
2	10643.89	52.29	74.00	-21.71	42.20	6.23	38.77	34.91	188	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10638.37	39.41	54.00	-14.59	29.32	6.23	38.77	34.91	202	150	Average	VERTICAL
2	10640.03	52.46	74.00	-21.54	42.37	6.23	38.77	34.91	202	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 100 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10999.81	52.73	74.00	-21.27	42.29	6.40	38.70	34.66	237	150	Peak	HORIZONTAL
2	11002.00	39.70	54.00	-14.30	29.26	6.40	38.70	34.66	237	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10997.50	52.81	74.00	-21.19	42.37	6.40	38.70	34.66	207	150	Peak	VERTICAL
2	11001.17	39.51	54.00	-14.49	29.07	6.40	38.70	34.66	207	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 116 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11158.94	51.83	74.00	-22.17	41.34	6.44	38.70	34.65	274	150	Peak	HORIZONTAL
2	11161.88	38.98	54.00	-15.02	28.49	6.44	38.70	34.65	274	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11155.19	52.63	74.00	-21.37	42.14	6.44	38.70	34.65	281	150	Peak	VERTICAL
2	11162.50	39.39	54.00	-14.61	28.90	6.44	38.70	34.65	281	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 140 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11396.49	39.68	54.00	-14.32	29.10	6.51	38.70	34.63	288	150	Average	HORIZONTAL
2	11400.75	52.90	74.00	-21.10	42.32	6.51	38.70	34.63	288	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11399.52	40.02	54.00	-13.98	29.44	6.51	38.70	34.63	312	150	Average	VERTICAL
2	11400.16	52.79	74.00	-21.21	42.21	6.51	38.70	34.63	312	150	Peak	VERTICAL

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 36 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15536.43	40.99	54.00	-13.01	29.89	7.56	38.16	34.62	181	150	Average	HORIZONTAL
2	15541.88	54.01	74.00	-19.99	42.91	7.56	38.16	34.62	181	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15537.31	54.04	74.00	-19.96	42.94	7.56	38.16	34.62	206	150	Peak	VERTICAL
2	15539.18	41.08	54.00	-12.92	29.98	7.56	38.16	34.62	206	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 40 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15600.69	54.32	74.00	-19.68	43.14	7.58	38.29	34.69	195	150	Peak	HORIZONTAL
2	15603.72	40.88	54.00	-13.12	29.70	7.58	38.29	34.69	195	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15602.23	55.20	74.00	-18.80	44.02	7.58	38.29	34.69	171	150	Peak	VERTICAL
2	15604.04	41.07	54.00	-12.93	29.89	7.58	38.29	34.69	171	150	Average	VERTICAL

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 48 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15719.76	54.56	74.00	-19.44	43.22	7.62	38.50	34.78	202	150	Peak	HORIZONTAL
2	15721.03	41.48	54.00	-12.52	30.14	7.62	38.50	34.78	202	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15720.82	54.77	74.00	-19.23	43.43	7.62	38.50	34.78	215	150	Peak	VERTICAL
2	15721.63	41.57	54.00	-12.43	30.23	7.62	38.50	34.78	215	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 52 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15778.19	41.72	54.00	-12.28	30.32	7.64	38.60	34.84	202	150	Average	HORIZONTAL
2	15784.74	54.72	74.00	-19.28	43.29	7.64	38.63	34.84	202	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15777.40	41.77	54.00	-12.23	30.37	7.64	38.60	34.84	192	150	Average	VERTICAL
2	15779.95	55.24	74.00	-18.76	43.84	7.64	38.60	34.84	192	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 60 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10601.27	39.55	54.00	-14.45	29.49	6.21	38.78	34.93	205	150	Average	HORIZONTAL
2	10604.04	52.75	74.00	-21.25	42.69	6.21	38.78	34.93	205	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10602.24	39.60	54.00	-14.40	29.54	6.21	38.78	34.93	215	150	Average	VERTICAL
2	10602.90	52.79	74.00	-21.21	42.73	6.21	38.78	34.93	215	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 64 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10636.04	52.75	74.00	-21.25	42.66	6.23	38.77	34.91	160	150	Peak	HORIZONTAL
2	10636.73	39.32	54.00	-14.68	29.23	6.23	38.77	34.91	160	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10635.03	39.35	54.00	-14.65	29.26	6.23	38.77	34.91	180	150	Average	VERTICAL
2	10644.74	52.30	74.00	-21.70	42.21	6.23	38.77	34.91	180	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 100 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10996.09	39.52	54.00	-14.48	29.08	6.40	38.70	34.66	129	150	Average	HORIZONTAL
2	11001.59	52.66	74.00	-21.34	42.22	6.40	38.70	34.66	129	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	10995.72	39.66	54.00	-14.34	29.22	6.40	38.70	34.66	148	150	Average	VERTICAL
2	10998.99	52.73	74.00	-21.27	42.29	6.40	38.70	34.66	148	150	Peak	VERTICAL

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 116 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11158.59	39.26	54.00	-14.74	28.77	6.44	38.70	34.65	175	150	Average	HORIZONTAL
2	11161.68	53.49	74.00	-20.51	43.00	6.44	38.70	34.65	175	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11158.13	39.37	54.00	-14.63	28.88	6.44	38.70	34.65	169	150	Average	VERTICAL
2	11159.63	53.34	74.00	-20.66	42.85	6.44	38.70	34.65	169	150	Peak	VERTICAL

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 140 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11403.33	39.72	54.00	-14.28	29.14	6.51	38.70	34.63	167	150	Average	HORIZONTAL
2	11404.29	52.66	74.00	-21.34	42.08	6.51	38.70	34.63	167	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11399.49	52.45	74.00	-21.55	41.87	6.51	38.70	34.63	136	150	Peak	VERTICAL
2	11402.58	39.98	54.00	-14.02	29.40	6.51	38.70	34.63	136	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 38 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15571.06	41.27	54.00	-12.73	30.12	7.57	38.22	34.64	165	150	Average	HORIZONTAL
2	15572.37	54.79	74.00	-19.21	43.64	7.57	38.22	34.64	165	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15571.99	54.80	74.00	-19.20	43.65	7.57	38.22	34.64	205	150	Peak	VERTICAL
2	15573.65	41.32	54.00	-12.68	30.20	7.57	38.22	34.67	205	150	Average	VERTICAL

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 46 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15692.63	41.78	54.00	-12.22	30.48	7.61	38.44	34.75	179	150	Average	HORIZONTAL
2	15693.16	55.05	74.00	-18.95	43.75	7.61	38.44	34.75	179	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15693.81	55.09	74.00	-18.91	43.79	7.61	38.44	34.75	215	150	Peak	VERTICAL
2	15693.94	41.80	54.00	-12.20	30.50	7.61	38.44	34.75	215	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 54 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15806.38	41.57	54.00	-12.43	30.13	7.65	38.66	34.87	168	150	Average	HORIZONTAL
2	15813.97	54.72	74.00	-19.28	43.28	7.65	38.66	34.87	168	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15810.69	41.53	54.00	-12.47	30.09	7.65	38.66	34.87	130	150	Average	VERTICAL
2	15814.86	55.68	74.00	-18.32	44.24	7.65	38.66	34.87	130	150	Peak	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11nMCS0 HT40 CH 62 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15925.21	55.40	74.00	-18.60	43.78	7.69	38.88	34.95	145	150	Peak	HORIZONTAL
2	15927.32	42.17	54.00	-11.83	30.55	7.69	38.88	34.95	145	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	15933.24	55.24	74.00	-18.76	43.65	7.69	38.88	34.98	206	150	Peak	VERTICAL
2	15934.25	42.20	54.00	-11.80	30.61	7.69	38.88	34.98	206	150	Average	VERTICAL

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 102 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11022.71	52.53	74.00	-21.47	42.08	6.41	38.70	34.66	212	150	Peak	HORIZONTAL
2	11024.58	39.80	54.00	-14.20	29.35	6.41	38.70	34.66	212	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11015.14	53.33	74.00	-20.67	42.89	6.40	38.70	34.66	184	150	Peak	VERTICAL
2	11018.21	39.68	54.00	-14.32	29.24	6.40	38.70	34.66	184	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 110 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11096.01	39.47	54.00	-14.53	28.99	6.43	38.70	34.65	148	150	Average	HORIZONTAL
2	11100.56	52.89	74.00	-21.11	42.41	6.43	38.70	34.65	148	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11096.54	52.91	74.00	-21.09	42.43	6.43	38.70	34.65	181	150	Peak	VERTICAL
2	11099.10	39.41	54.00	-14.59	28.93	6.43	38.70	34.65	181	150	Average	VERTICAL

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 134 / Chain 1 + Chain 2
Test Date	Jul. 17, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11340.16	52.91	74.00	-21.09	42.35	6.49	38.70	34.63	141	150	Peak	HORIZONTAL
2	11342.74	39.94	54.00	-14.06	29.38	6.49	38.70	34.63	141	150	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	11340.35	39.96	54.00	-14.04	29.40	6.49	38.70	34.63	189	150	Average	VERTICAL
2	11341.38	52.66	74.00	-21.34	42.10	6.49	38.70	34.63	189	150	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.3. Band Edge Emissions Measurement

4.3.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed a -27dBm peak limit or average 54dBuV/m and peak 74dBuV/m limits. For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed a -27dBm peak limit or average 54dBuV/m and peak 74dBuV/m limits. In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.3.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for Peak

4.3.3. Test Procedures

1. The test procedure is the same as section 4.2.3.

4.3.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.2.4.

4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Band Edge and Fundamental Emissions

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5146.51	57.75	74.00	-16.25	54.69	4.26	33.27	34.47	149	148	Peak	VERTICAL
2	5150.00	45.85	54.00	-8.15	42.79	4.26	33.27	34.47	149	148	Average	VERTICAL
3	5180.64	103.92			100.79	4.27	33.33	34.47	149	148	Peak	VERTICAL
4	5180.64	94.85			91.72	4.27	33.33	34.47	149	148	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5120.51	44.65	54.00	-9.35	41.67	4.24	33.21	34.47	155	149	Average	VERTICAL
2	5120.83	56.97	74.00	-17.03	53.99	4.24	33.21	34.47	155	149	Peak	VERTICAL
3	5200.64	103.28			100.11	4.28	33.36	34.47	155	149	Peak	VERTICAL
4	5200.64	93.32			90.15	4.28	33.36	34.47	155	149	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5140.48	55.61	74.00	-18.39	52.55	4.26	33.27	34.47	152	150	Peak	VERTICAL
2	5150.00	42.44	54.00	-11.56	39.38	4.26	33.27	34.47	152	150	Average	VERTICAL
3	5240.48	93.72			90.47	4.30	33.42	34.47	152	150	Average	VERTICAL
4	5240.96	104.43			101.18	4.30	33.42	34.47	152	150	Peak	VERTICAL
5	5350.00	42.67	54.00	-11.33	39.16	4.35	33.63	34.47	152	150	Average	VERTICAL
6	5354.90	56.30	74.00	-17.70	52.79	4.35	33.63	34.47	152	150	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5149.04	55.55	74.00	-18.45	52.49	4.26	33.27	34.47	132	210	Peak	VERTICAL
2	5150.00	42.83	54.00	-11.17	39.77	4.26	33.27	34.47	132	210	Average	VERTICAL
3	5260.96	109.78			106.46	4.31	33.48	34.47	132	210	Peak	VERTICAL
4	5260.96	100.12			96.80	4.31	33.48	34.47	132	210	Average	VERTICAL
5	5350.00	43.46	54.00	-10.54	39.95	4.35	33.63	34.47	132	210	Average	VERTICAL
6	5359.62	56.49	74.00	-17.51	52.98	4.35	33.63	34.47	132	210	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5300.64	97.71			94.31	4.33	33.54	34.47	132	129	Average	VERTICAL
2	5300.96	107.89			104.49	4.33	33.54	34.47	132	129	Peak	VERTICAL
3	5350.64	58.28	74.00	-15.72	54.77	4.35	33.63	34.47	132	129	Peak	VERTICAL
4	5374.68	45.40	54.00	-8.60	41.85	4.36	33.66	34.47	132	129	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5320.80	93.99			90.56	4.33	33.57	34.47	130	172	Average	VERTICAL
2	5321.28	104.07			100.64	4.33	33.57	34.47	130	172	Peak	VERTICAL
3	5350.00	45.94	54.00	-8.06	42.43	4.35	33.63	34.47	130	172	Average	VERTICAL
4	5350.77	60.72	74.00	-13.28	57.21	4.35	33.63	34.47	130	172	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11a CH 100, 116, 140 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5459.62	56.91	74.00	-17.09	53.17	4.40	33.81	34.47	111	196	Peak	VERTICAL
2	5460.00	43.83	54.00	-10.17	40.09	4.40	33.81	34.47	111	196	Average	VERTICAL
3	5466.83	60.40	74.00	-13.60	56.62	4.41	33.84	34.47	111	196	Peak	VERTICAL
4	5470.00	45.85	54.00	-8.15	42.07	4.41	33.84	34.47	111	196	Average	VERTICAL
5	5500.64	104.74			100.89	4.42	33.90	34.47	111	196	Peak	VERTICAL
6	5500.96	95.10			91.26	4.42	33.90	34.48	111	196	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5444.74	56.40	74.00	-17.60	52.70	4.39	33.78	34.47	137	213	Peak	VERTICAL
2	5460.00	43.55	54.00	-10.45	39.81	4.40	33.81	34.47	137	213	Average	VERTICAL
3	5466.80	55.72	74.00	-18.28	51.94	4.41	33.84	34.47	137	213	Peak	VERTICAL
4	5470.00	43.16	54.00	-10.84	39.38	4.41	33.84	34.47	137	213	Average	VERTICAL
5	5580.64	110.88			106.82	4.44	34.11	34.49	137	213	Peak	VERTICAL
6	5580.64	100.92			96.86	4.44	34.11	34.49	137	213	Average	VERTICAL
7	5725.00	43.96	54.00	-10.04	39.40	4.50	34.57	34.51	137	213	Average	VERTICAL
8	5732.69	57.45	74.00	-16.55	52.90	4.50	34.57	34.52	137	213	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5700.80	95.73			91.23	4.49	34.52	34.51	110	201	Average	VERTICAL
2	5701.12	105.59			101.09	4.49	34.52	34.51	110	201	Peak	VERTICAL
3	5725.00	48.95	54.00	-5.05	44.39	4.50	34.57	34.51	110	201	Average	VERTICAL
4	5725.16	62.85	74.00	-11.15	58.29	4.50	34.57	34.51	110	201	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 36, 40, 48 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5147.63	58.11	74.00	-15.89	55.05	4.26	33.27	34.47	149	148	Peak	VERTICAL
2	5150.00	45.28	54.00	-8.72	42.22	4.26	33.27	34.47	149	148	Average	VERTICAL
3	5180.32	102.22			99.09	4.27	33.33	34.47	149	148	Peak	VERTICAL
4	5180.32	92.75			89.62	4.27	33.33	34.47	149	148	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5112.50	43.98	54.00	-10.02	41.00	4.24	33.21	34.47	209	150	Average	VERTICAL
2	5142.63	56.26	74.00	-17.74	53.20	4.26	33.27	34.47	209	150	Peak	VERTICAL
3	5200.00	101.55			98.38	4.28	33.36	34.47	209	150	Peak	VERTICAL
4	5200.32	92.11			88.94	4.28	33.36	34.47	209	150	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5138.56	42.48	54.00	-11.52	39.46	4.25	33.24	34.47	153	151	Average	VERTICAL
2	5141.92	56.02	74.00	-17.98	52.96	4.26	33.27	34.47	153	151	Peak	VERTICAL
3	5238.08	101.98			98.73	4.30	33.42	34.47	153	151	Peak	VERTICAL
4	5240.48	93.08			89.83	4.30	33.42	34.47	153	151	Average	VERTICAL
5	5350.00	55.86	74.00	-18.14	52.35	4.35	33.63	34.47	153	151	Peak	VERTICAL
6	5350.00	42.73	54.00	-11.27	39.22	4.35	33.63	34.47	153	151	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5120.58	56.08	74.00	-17.92	53.10	4.24	33.21	34.47	112	181	Peak	VERTICAL
2	5150.00	42.75	54.00	-11.25	39.69	4.26	33.27	34.47	112	181	Average	VERTICAL
3	5260.48	108.43			105.11	4.31	33.48	34.47	112	181	Peak	VERTICAL
4	5260.48	99.32			96.00	4.31	33.48	34.47	112	181	Average	VERTICAL
5	5351.35	43.44	54.00	-10.56	39.93	4.35	33.63	34.47	112	181	Average	VERTICAL
6	5359.04	56.82	74.00	-17.18	53.31	4.35	33.63	34.47	112	181	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5300.32	97.67			94.27	4.33	33.54	34.47	253	148	Average	VERTICAL
2	5300.64	108.67			105.27	4.33	33.54	34.47	253	148	Peak	VERTICAL
3	5350.32	59.50	74.00	-14.50	55.99	4.35	33.63	34.47	253	148	Peak	VERTICAL
4	5373.08	46.11	54.00	-7.89	42.56	4.36	33.66	34.47	253	148	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5320.64	106.14			102.71	4.33	33.57	34.47	119	209	Peak	VERTICAL
2	5320.64	96.27			92.84	4.33	33.57	34.47	119	209	Average	VERTICAL
3	5350.13	49.42	54.00	-4.58	45.91	4.35	33.63	34.47	119	209	Average	VERTICAL
4	5351.25	66.13	74.00	-7.87	62.62	4.35	33.63	34.47	119	209	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT20 CH 100, 116, 140 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5459.46	44.56	54.00	-9.44	40.82	4.40	33.81	34.47	76	191	Average	VERTICAL
2	5459.62	58.19	74.00	-15.81	54.45	4.40	33.81	34.47	76	191	Peak	VERTICAL
3	5466.03	63.34	74.00	-10.66	59.56	4.41	33.84	34.47	76	191	Peak	VERTICAL
4	5469.39	47.33	54.00	-6.67	43.55	4.41	33.84	34.47	76	191	Average	VERTICAL
5	5500.48	105.77			101.92	4.42	33.90	34.47	76	191	Peak	VERTICAL
6	5500.80	95.75			91.91	4.42	33.90	34.48	76	191	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5454.87	56.21	74.00	-17.79	52.47	4.40	33.81	34.47	108	201	Peak	VERTICAL
2	5460.00	43.66	54.00	-10.34	39.92	4.40	33.81	34.47	108	201	Average	VERTICAL
3	5469.36	55.15	74.00	-18.85	51.37	4.41	33.84	34.47	108	201	Peak	VERTICAL
4	5470.00	43.13	54.00	-10.87	39.35	4.41	33.84	34.47	108	201	Average	VERTICAL
5	5580.64	110.11			106.05	4.44	34.11	34.49	108	201	Peak	VERTICAL
6	5580.64	99.99			95.93	4.44	34.11	34.49	108	201	Average	VERTICAL
7	5740.90	56.81	74.00	-17.19	52.21	4.50	34.62	34.52	108	201	Peak	VERTICAL
8	5740.90	44.40	54.00	-9.60	39.80	4.50	34.62	34.52	108	201	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5700.64	96.61			92.11	4.49	34.52	34.51	109	213	Average	VERTICAL
2	5700.80	106.83			102.33	4.49	34.52	34.51	109	213	Peak	VERTICAL
3	5725.00	51.37	54.00	-2.63	46.81	4.50	34.57	34.51	109	213	Average	VERTICAL
4	5725.16	67.42	74.00	-6.58	62.86	4.50	34.57	34.51	109	213	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 38, 46 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5146.09	63.83	74.00	-10.17	60.77	4.26	33.27	34.47	142	210	Peak	VERTICAL
2	5150.00	50.01	54.00	-3.99	46.95	4.26	33.27	34.47	142	210	Average	VERTICAL
3	5188.40	99.58			96.45	4.27	33.33	34.47	142	210	Peak	VERTICAL
4	5188.40	89.99			86.86	4.27	33.33	34.47	142	210	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5135.13	55.71	74.00	-18.29	52.69	4.25	33.24	34.47	216	146	Peak	VERTICAL
2	5150.00	43.32	54.00	-10.68	40.26	4.26	33.27	34.47	216	146	Average	VERTICAL
3	5228.08	101.38			98.13	4.30	33.42	34.47	216	146	Peak	VERTICAL
4	5228.72	91.53			88.28	4.30	33.42	34.47	216	146	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22℃	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 54, 62 / / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5268.08	108.29			104.97	4.31	33.48	34.47	152	179	Peak	VERTICAL
2	5268.40	98.53			95.21	4.31	33.48	34.47	152	179	Average	VERTICAL
3	5351.41	51.79	54.00	-2.21	48.28	4.35	33.63	34.47	152	179	Average	VERTICAL
4	5358.14	65.55	74.00	-8.45	62.04	4.35	33.63	34.47	152	179	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5307.76	87.36			83.96	4.33	33.54	34.47	150	162	Average	VERTICAL
2	5313.21	97.14			93.71	4.33	33.57	34.47	150	162	Peak	VERTICAL
3	5350.71	61.64	74.00	-12.36	58.13	4.35	33.63	34.47	150	162	Peak	VERTICAL
4	5350.71	48.14	54.00	-5.86	44.63	4.35	33.63	34.47	150	162	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

Temperature	22°C	Humidity	64%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 HT40 CH 102, 110, 134 / Chain 1 + Chain 2
Test Date	Jul. 16, 2015		

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5445.26	56.84	74.00	-17.16	53.14	4.39	33.78	34.47	137	220	Peak	VERTICAL
2	5460.00	44.92	54.00	-9.08	41.18	4.40	33.81	34.47	137	220	Average	VERTICAL
3	5468.01	63.89	74.00	-10.11	60.11	4.41	33.84	34.47	137	220	Peak	VERTICAL
4	5468.33	49.22	54.00	-4.78	45.44	4.41	33.84	34.47	137	220	Average	VERTICAL
5	5508.40	98.54			94.70	4.42	33.90	34.48	137	220	Peak	VERTICAL
6	5510.64	89.06			85.22	4.42	33.90	34.48	137	220	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5457.69	45.84	54.00	-8.16	42.10	4.40	33.81	34.47	115	158	Average	VERTICAL
2	5460.00	62.64	74.00	-11.36	58.90	4.40	33.81	34.47	115	158	Peak	VERTICAL
3	5465.39	63.40	74.00	-10.60	59.62	4.41	33.84	34.47	115	158	Peak	VERTICAL
4	5470.00	47.62	54.00	-6.38	43.84	4.41	33.84	34.47	115	158	Average	VERTICAL
5	5548.08	105.73			101.71	4.44	34.06	34.48	115	158	Peak	VERTICAL
6	5548.08	95.68			91.66	4.44	34.06	34.48	115	158	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	5668.08	105.96			101.57	4.48	34.42	34.51	135	218	Peak	VERTICAL
2	5668.08	95.86			91.47	4.48	34.42	34.51	135	218	Average	VERTICAL
3	5725.45	53.90	54.00	-0.10	49.34	4.50	34.57	34.51	135	218	Average	VERTICAL
4	5728.01	67.57	74.00	-6.43	63.01	4.50	34.57	34.51	135	218	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m)

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

Note: Both antenna polarizations have been tested and only the worst case was recorded in test report.

4.4. Antenna Requirements

4.4.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.4.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9kHz ~ 2.75GHz	Apr. 22, 2015	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 02, 2014	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 02, 2014	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	Dec. 03, 2014	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	May 06, 2015	Radiation (03CH01-CB)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz ~ 30 MHz	Jul. 28, 2014	Radiation (03CH01-CB
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 28, 2014	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2014	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Feb. 24, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 12, 2015	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 25, 2014	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 06, 2014	Radiation (03CH01-CB)
EMI Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8.4GHz	Jan. 21, 2015	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)

Note: Calibration Interval of instruments listed above is one year.

Note: N.C.R. means Non-Calibration required.

6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%