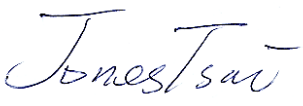
FCC RF Test Report

APPLICANT	:	Lyve Minds, Inc.
EQUIPMENT	:	Set Top Box
BRAND NAME	:	Lyve
MODEL NAME	:	BPH01
MARKETING NAME	:	LyveHome
FCC ID	:	2ABQW-BPH
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on Feb. 13, 2014 and testing was completed on Mar. 11, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR421348D	Rev. 01	Initial issue of report	Apr. 02, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	RSS-210 A9.2	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	RSS-210 A9.2	Maximum Conducted Output Power	≤ 17, 24, 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	RSS-210 A9.2	Power Spectral Density	≤ 4, 11, 17 dBm (depend on band)	Pass	-
3.4	15.407(a)(6)	RSS-210 A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.5	15.407(b)	RSS-210 A9.3	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 0.21 dB at 15538.000 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 13.80 dB at 0.262 MHz
3.7	15.407(g)	-	Frequency Stability	Within Operation Band	Pass	-
3.8	15.407(c)	RSS-210 A9.4	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.9	15.203 & 15.407(a)	RSS-210 A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Lyve Minds, Inc.
10001 N. De Anza Blvd, Ste 300 Cupertino, CA 95014

1.2 Manufacturer

FIH Mobile Limited
No.4, Mingsheng St.,Tu-Cheng Dist., New Taipei City 23679, Taiwan

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Set Top Box
Brand Name	Lyve
Model Name	BPH01
Marketing Name	LyveHome
FCC ID	2ABQW-BPH
EUT supports Radios application	WLAN 11abgn (HT20/HT40) WLAN 11ac (VHT20/VHT40/VHT80) Bluetooth v2.1+EDR/ v4.0-LE
HW Version	DVT
SW Version	V0.150
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5580 MHz 5660 MHz ~ 5700 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 14.36 dBm / 0.0273 W 802.11n HT20 : 14.32 dBm / 0.0270 W 802.11n HT40 : 15.60 dBm / 0.0363 W 802.11ac VHT20 : 15.34 dBm / 0.0342 W 802.11ac VHT40 : 15.64 dBm / 0.0366 W 802.11ac VHT80 : 15.66 dBm / 0.0368 W **<5260 MHz ~ 5320 MHz>** 802.11a : 15.83 dBm / 0.0383 W 802.11n HT20 : 15.17 dBm / 0.0329 W 802.11n HT40 : 15.59 dBm / 0.0362 W 802.11ac VHT20 : 15.24 dBm / 0.0334 W 802.11ac VHT40 : 15.48 dBm / 0.0353 W 802.11ac VHT80 : 15.49 dBm / 0.0354 W **<5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz >** 802.11a : 18.98 dBm / 0.0791 W 802.11n HT20 : 15.69 dBm / 0.0371 W 802.11n HT40 : 15.79 dBm / 0.0379 W 802.11ac VHT20 : 15.74 dBm / 0.0375 W 802.11ac VHT40 : 15.87 dBm / 0.0386 W 802.11ac VHT80 : 14.13 dBm / 0.0259 W
99% Occupied Bandwidth	802.11a : 18.55 MHz 802.11n HT20 : 19.00 MHz 802.11n HT40 : 36.72 MHz 802.11ac VHT20: 18.95 MHz 802.11ac VHT40 : 36.72 MHz 802.11ac VHT80 : 75.78 MHz
Antenna Type	PIFA Antenna with gain 5.57 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH08-HY	636805

Note: The test site complies with ANSI C63.4 2003 requirement.

1.7 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D01 General UNII Test Procedures v01r03
- ANSI C63.4-2003

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38	**5190**	**46**	**5230**
	40	5200	48	5240
	42	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54	**5270**	**62**	**5310**
	56	5280	64	5320
	58	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5600 MHz and 5650-5725 MHz Band 3 (U-NII-2C)	100	5500	116	5580
	102	**5510**	132	5660
	104	5520	**134**	**5670**
	106	5530	136	5680
	108	5540	140	5700
	110	**5550**		
	112	5560		

Note: The above Frequency and Channel in boldface were 802.11n HT40.

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Avg. Power (dBm) <5180 MHz ~ 5240MHz>	14.36	14.09	14.08	14.19	14.17	14.15	14.34	14.13
Avg. Power(dBm) <5260 MHz ~ 5320MHz>	15.83	15.78	15.71	15.78	15.82	15.80	15.82	15.81
Avg. Power(dBm) <5500 MHz ~ 5580MHz>& <5660 MHz ~ 5700MHz>	18.98	18.95	18.95	18.93	18.96	18.96	18.95	18.92

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Avg. Power (dBm) <5180 MHz ~ 5240MHz>	14.32	14.15	14.20	14.04	14.16	14.09	14.09	14.09
Avg. Power(dBm) <5260 MHz ~ 5320MHz>	15.17	15.13	15.10	15.15	15.10	15.13	15.06	15.16
Avg. Power(dBm) <5500 MHz ~ 5580MHz>& <5660 MHz ~ 5700MHz>	15.69	15.63	15.67	15.57	15.46	15.59	15.46	15.46

5GHz 802.11n HT40mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Avg. Power (dBm) <5180 MHz ~ 5240MHz>	15.60	15.49	15.48	15.52	15.46	15.55	15.52	15.46
Avg. Power(dBm) <5260 MHz ~ 5320MHz>	15.59	15.45	15.35	15.45	15.39	15.38	15.38	15.46
Avg. Power(dBm) <5500 MHz ~ 5580MHz>& <5660 MHz ~ 5700MHz>	15.79	14.95	14.99	15.02	15.01	15.10	14.91	14.97

5GHz 802.11ac VHT20 mode									
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8
Avg. Power (dBm) <5180 MHz ~ 5240MHz>	15.34	15.26	15.28	15.32	15.24	15.33	15.32	15.30	15.31
Avg. Power(dBm) <5260 MHz ~ 5320MHz>	15.24	15.18	15.20	15.19	15.18	15.22	15.21	15.15	15.21
Avg. Power(dBm) <5500 MHz ~ 5580MHz>& <5660 MHz ~ 5700MHz>	15.74	15.68	15.70	15.63	15.49	15.50	15.62	15.47	15.50

5GHz 802.11ac VHT40 mode										
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
Avg. Power (dBm) <5180 MHz ~ 5240MHz>	15.64	15.54	15.51	15.37	15.45	15.31	15.34	15.49	15.45	15.50
Avg. Power(dBm) <5260 MHz ~ 5320MHz>	15.48	15.44	15.45	15.45	15.44	15.31	15.37	15.41	15.47	15.43
Avg. Power(dBm) <5500 MHz ~ 5580MHz>& <5660 MHz ~ 5700MHz>	15.87	15.49	15.53	15.47	15.55	15.42	15.44	15.45	15.47	15.49

5GHz 802.11ac VHT80 mode										
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
Avg. Power (dBm) <5180 MHz ~ 5240MHz>	15.66	14.46	15.49	15.44	15.53	15.65	15.58	15.65	15.63	15.62
Avg. Power(dBm) <5260 MHz ~ 5320MHz>	15.49	14.40	15.48	15.45	15.43	15.48	15.47	15.43	15.46	15.44
Avg. Power(dBm) <5500 MHz ~ 5580MHz>& <5660 MHz ~ 5700MHz>	14.13	13.10	14.11	14.02	14.11	14.10	14.09	14.10	14.10	14.11

2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

Test Cases				
	Test Items	Mode	Data rate	Test Channel
Conducted TCs	26dB and 99% BW Power Spectral Density	802.11a	6 Mbps	L/M/H
		802.11n HT20	MCS0	L/M/H
		802.11n HT40	MCS0	L/M/H
		802.11ac VHT20	MCS0	L/M/H
		802.11ac VHT40	MCS0	L/M/H
		802.11ac VHT80	MCS0	M
	20dB Occupied Bandwidth	802.11a	6 Mbps	H
		802.11n HT20	MCS0	H
		802.11n HT40	MCS0	H
		802.11ac VHT20	MCS0	H
		802.11ac VHT40	MCS0	H
		802.11ac VHT80	MCS0	H
	Output Power	802.11a	6 Mbps	L/M/H
		802.11n HT20	MCS0	L/M/H
		802.11n HT40	MCS0	L/M/H
		802.11ac VHT20	MCS0	L/M/H
		802.11ac VHT40	MCS0	L/M/H
		802.11ac VHT80	MCS0	M
	Peak Excursion	802.11a	6 Mbps	L/M/H
		802.11n HT20	MCS0	L/M/H
		802.11n HT40	MCS0	L/M/H
		802.11ac VHT20	MCS0	L/M/H
		802.11ac VHT40	MCS0	L/M/H
		802.11ac VHT80	MCS0	M
	Frequency Stability	802.11a	6 Mbps	L/M/H
		802.11n HT20	MCS0	L/M/H
		802.11n HT40	MCS0	L/M/H
		802.11ac VHT20	MCS0	L/M/H
		802.11ac VHT40	MCS0	L/M/H
		802.11ac VHT80	MCS0	M

Test Cases				
Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	L/H
		802.11n HT20	MCS0	L/H
		802.11n HT40	MCS0	L/H
		802.11ac VHT80	MCS0	M
	Radiated Spurious Emission	802.11a	6 Mbps	L/M/H
		802.11n HT20	MCS0	L/M/H
		802.11n HT40	MCS0	L/M/H
		802.11ac VHT80	MCS0	M
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (5GHz) Link + HDMI + RJ-45 (Load) + Speaker + SD Card + Mouse + MPEG4 + Adapter			

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

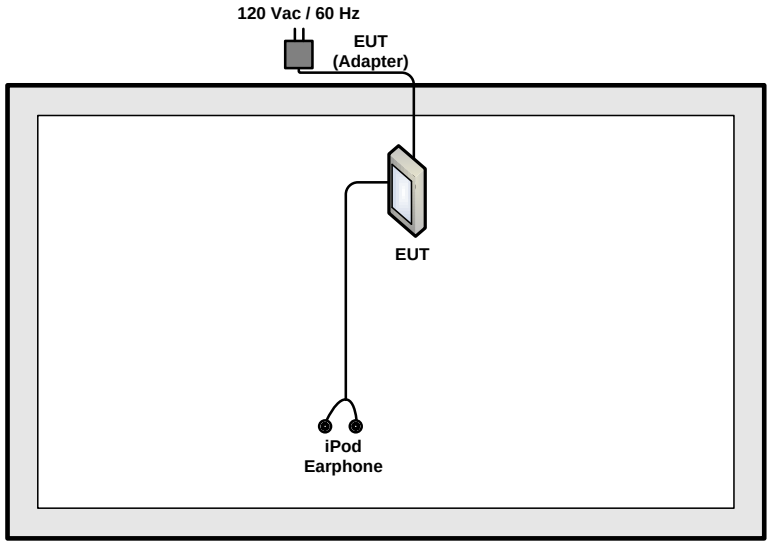
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11ac VHT20	802.11ac VHT20	802.11ac VHT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

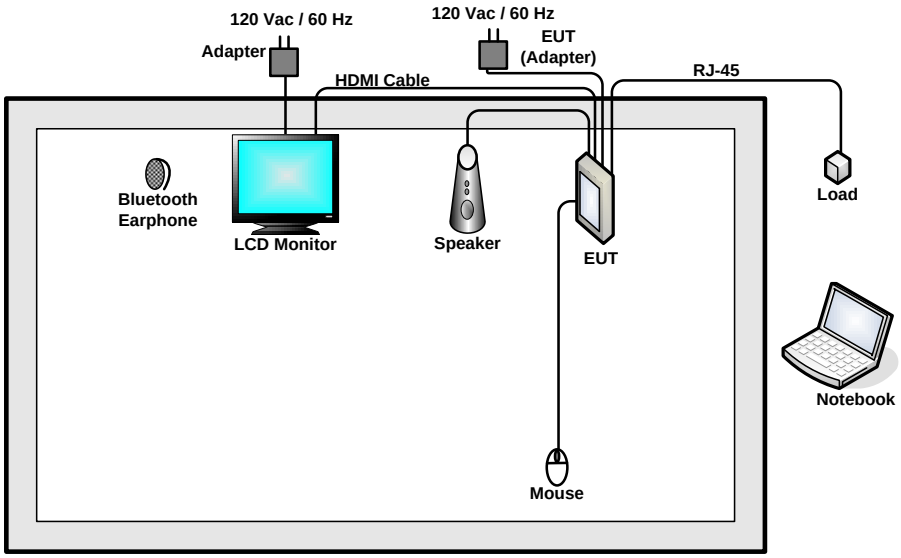
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-

2.4 Connection Diagram of Test System

< Radiated Emission Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
5.	Speaker	N/A	N/A	N/A	N/A	Unshielded, 1.4 m
6.	Mouse	Lenovo	M4806	FCC DoC	Unshielded, 1.8 m	N/A
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit/receive.

2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B).

For the band 5150-5250 MHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B.

For the bands 5250-5350 MHz and 5470-5600 MHz and 5650-5725MHz, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B.

For Straddle Channel, U-NII procedures and limits were applied for operations in the frequency band in accordance with FCC KDB 644545 D01.

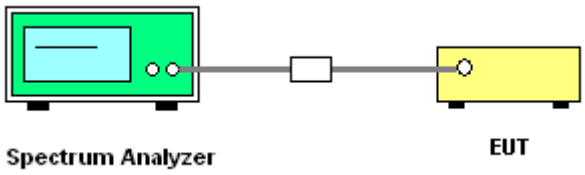
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03. Section D) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth Plots

Test Band :	5GHz band 1	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	36	5180	18.05	21.75	22.56	16.99
11a	6Mbps	1	44	5220	18.05	21.65	22.56	16.99
11a	6Mbps	1	48	5240	18.05	21.75	22.56	16.99
HT20	MCS0	1	36	5180	18.95	21.85	22.78	16.99
HT20	MCS0	1	44	5220	18.90	21.80	22.76	16.99
HT20	MCS0	1	48	5240	18.85	21.85	22.75	16.99
HT40	MCS0	1	38	5190	36.72	41.40	23.01	16.99
HT40	MCS0	1	46	5230	36.72	41.49	23.01	16.99
VHT20	MCS0	1	36	5180	18.90	21.90	22.76	16.99
VHT20	MCS0	1	44	5220	18.95	21.80	22.78	16.99
VHT20	MCS0	1	48	5240	18.90	21.90	22.76	16.99
VHT40	MCS0	1	38	5190	36.63	41.76	23.01	16.99
VHT40	MCS0	1	46	5230	36.63	41.58	23.01	16.99
VHT80	MCS0	1	42	5210	75.75	81.09	23.01	16.99

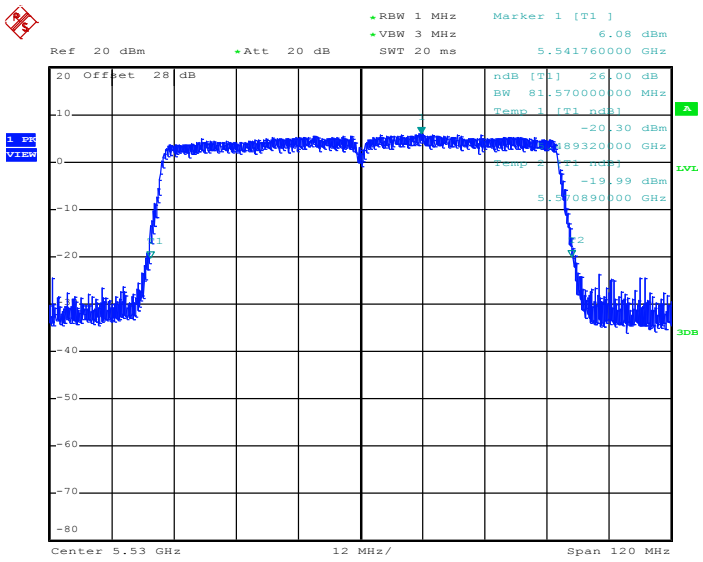
Test Band :	5GHz band 2	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	52	5260	18.15	21.7	29.59	23.98
11a	6Mbps	1	60	5300	18.15	21.85	29.59	23.98
11a	6Mbps	1	64	5320	18.1	21.8	29.58	23.98
HT20	MCS0	1	52	5260	18.9	21.9	29.76	23.98
HT20	MCS0	1	60	5300	18.95	21.85	29.78	23.98
HT20	MCS0	1	64	5320	19	21.95	29.79	23.98
HT40	MCS0	1	54	5270	36.72	41.49	30.00	23.98
HT40	MCS0	1	62	5310	36.63	41.58	30.00	23.98
VHT20	MCS0	1	52	5260	18.95	21.8	29.78	23.98
VHT20	MCS0	1	60	5300	18.65	21.75	29.71	23.98
VHT20	MCS0	1	64	5320	18.85	21.95	29.75	23.98
VHT40	MCS0	1	54	5270	36.63	41.58	30.00	23.98
VHT40	MCS0	1	62	5310	36.63	41.49	30.00	23.98
VHT80	MCS0	1	58	5290	75.75	81.3	30.00	23.98

Test Band :	5GHz band 3	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

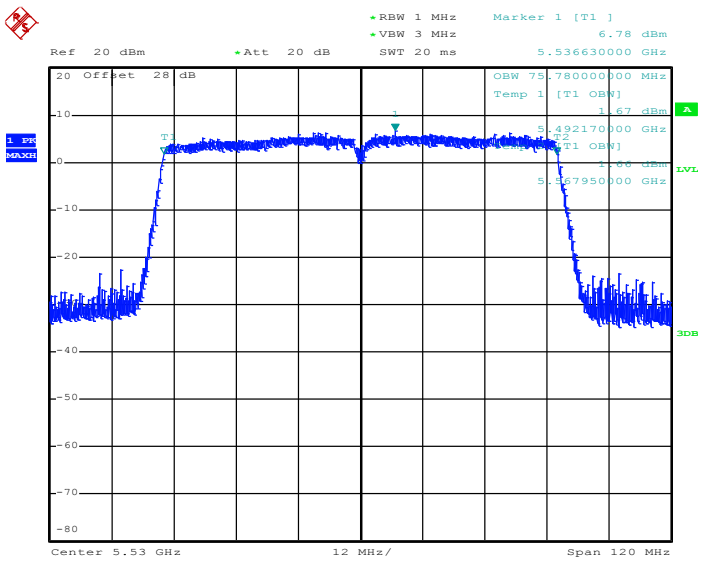
Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	100	5500	18.35	21.75	29.64	23.98
11a	6Mbps	1	116	5580	18.45	21.95	29.66	23.98
11a	6Mbps	1	140	5700	18.55	23.2	29.68	23.98
HT20	MCS0	1	100	5500	18.9	21.95	29.76	23.98
HT20	MCS0	1	116	5580	18.9	21.85	29.76	23.98
HT20	MCS0	1	140	5700	18.95	21.9	29.78	23.98
HT40	MCS0	1	102	5510	36.63	41.4	30.00	23.98
HT40	MCS0	1	110	5550	36.63	41.49	30.00	23.98
HT40	MCS0	1	134	5670	36.63	41.58	30.00	23.98
VHT20	MCS0	1	100	5500	18.75	21.9	29.73	23.98
VHT20	MCS0	1	116	5580	18.9	21.8	29.76	23.98
VHT20	MCS0	1	140	5700	18.85	21.85	29.75	23.98
VHT40	MCS0	1	102	5510	36.72	41.58	30.00	23.98
VHT40	MCS0	1	110	5550	36.63	41.49	30.00	23.98
VHT80	MCS0	1	106	5530	75.78	81.57	30.00	23.98

Maximum 26dB Bandwidth



Date: 11.MAR.2014 09:38:59

Maximum 99% Occupied Bandwidth



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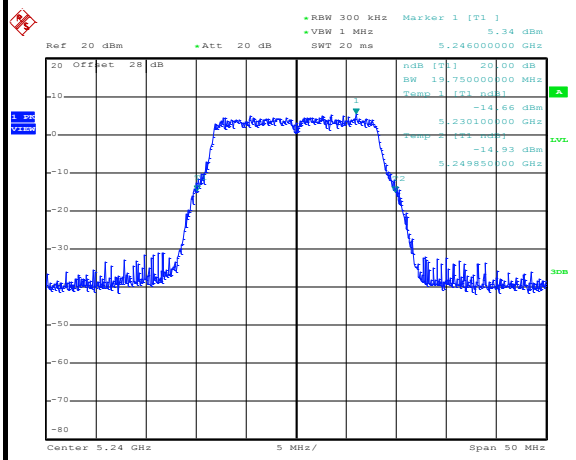
Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.1.6 Test Result of 20dB Occupied Bandwidth

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth Upper Frequency (FH) (MHz)	Upper Limit Line (MHz)	Pass/Fail
11a	6Mbps	1	48	5240	19.75	5249.85	5250	Pass
HT20	MCS0	1	48	5240	19.45	5249.85		Pass
HT40	MCS0	1	46	5230	40.05	5249.98		Pass
VHT20	MCS0	1	48	5240	20.10	5249.95		Pass
VHT40	MCS0	1	46	5230	40.05	5249.98		Pass
VHT80	MCS0	1	42	5210	80.00	5249.84		Pass

20dB Occupied Bandwidth

802.11a CH48 5240MHz



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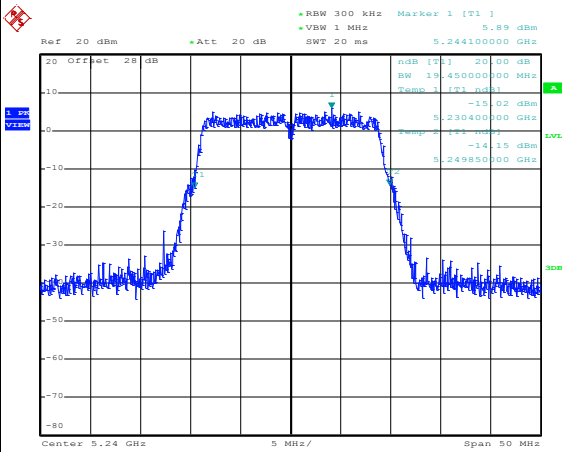
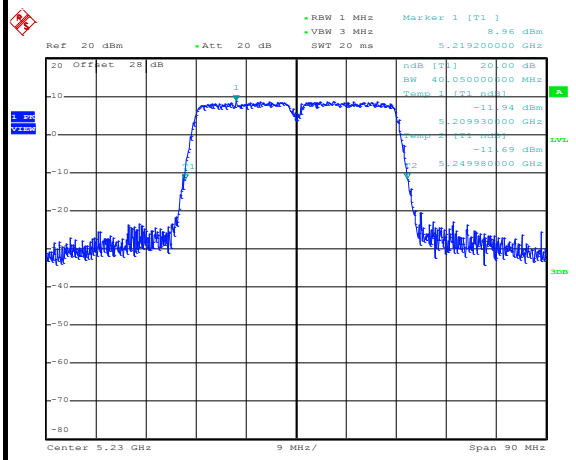
802.11n HT20 CH48 5240MHz



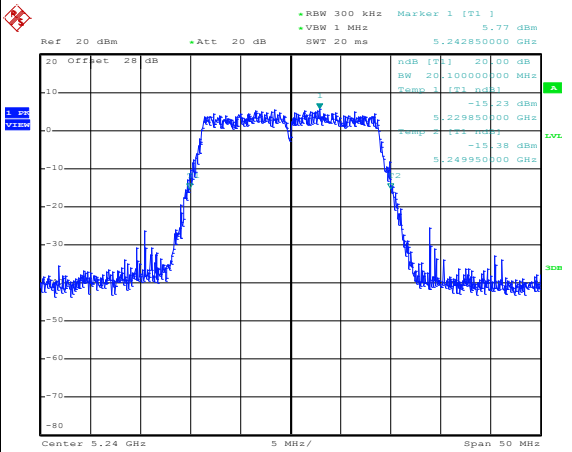
Date: 11.MAR.2014 14:00:03

802.11n HT40 CH46 5230MHz



Date: 11.MAR.2014 14:19:44

802.11ac VHT20 CH48 5240MHz



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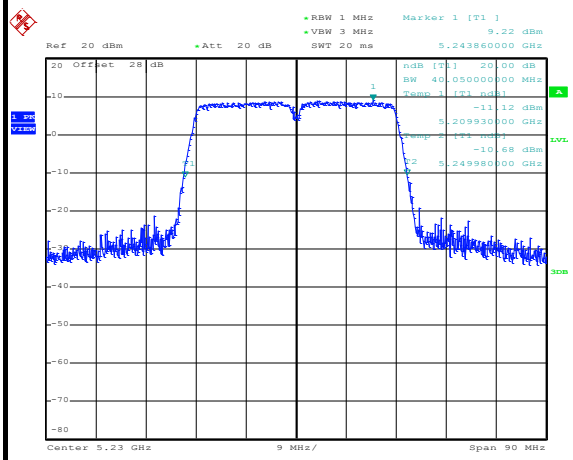
20dB Occupied Bandwidth	
802.11ac VHT40 CH46 5230MHz	802.11ac HT80 CH42 5210MHz



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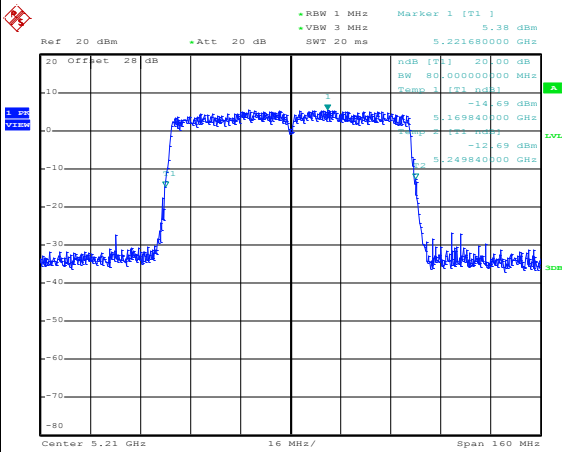

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3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5150-5250 MHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the bands 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz, bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

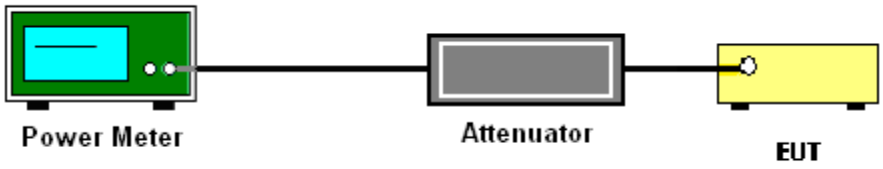
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Test Band :	5GHz band 1	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	36	5180	0.51	14.16	16.99	5.32		Pass
11a	6Mbps	1	44	5220	0.51	14.36	16.99	5.32		Pass
11a	6Mbps	1	48	5240	0.51	14.28	16.99	5.32		Pass
HT20	MCS0	1	36	5180	0.53	14.32	16.99	5.32		Pass
HT20	MCS0	1	44	5220	0.53	14.14	16.99	5.32		Pass
HT20	MCS0	1	48	5240	0.53	14.09	16.99	5.32		Pass
HT40	MCS0	1	38	5190	1.02	15.60	16.99	5.32		Pass
HT40	MCS0	1	46	5230	1.02	15.53	16.99	5.32	-	Pass
VHT20	MCS0	1	36	5180	0.53	15.32	16.99	5.32		Pass
VHT20	MCS0	1	44	5220	0.53	15.34	16.99	5.32		Pass
VHT20	MCS0	1	48	5240	0.53	15.30	16.99	5.32		Pass
VHT40	MCS0	1	38	5190	1.01	15.53	16.99	5.32		Pass
VHT40	MCS0	1	46	5230	1.01	15.64	16.99	5.32		Pass
VHT80	MCS0	1	42	5210	1.85	15.66	16.99	5.32		Pass

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	36	5180	0.51	14.16	17.24	5.32	22.56	Pass
11a	6Mbps	1	44	5220	0.51	14.36	17.24	5.32	22.56	Pass
11a	6Mbps	1	48	5240	0.51	14.28	17.24	5.32	22.56	Pass
HT20	MCS0	1	36	5180	0.53	14.32	17.46	5.32	22.78	Pass
HT20	MCS0	1	44	5220	0.53	14.14	17.44	5.32	22.76	Pass
HT20	MCS0	1	48	5240	0.53	14.09	17.43	5.32	22.75	Pass
HT40	MCS0	1	38	5190	1.02	15.60	17.69	5.32	23.01	Pass
HT40	MCS0	1	46	5230	1.02	15.53	17.69	5.32	23.01	Pass
VHT20	MCS0	1	36	5180	0.53	15.32	17.44	5.32	22.76	Pass
VHT20	MCS0	1	44	5220	0.53	15.34	17.46	5.32	22.78	Pass
VHT20	MCS0	1	48	5240	0.53	15.30	17.44	5.32	22.76	Pass
VHT40	MCS0	1	38	5190	1.01	15.53	17.69	5.32	23.01	Pass
VHT40	MCS0	1	46	5230	1.01	15.64	17.69	5.32	23.01	Pass
VHT80	MCS0	1	42	5210	1.85	15.66	17.69	5.32	23.01	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5150-5250 MHz, the maximum average conducted output power shall not exceed lesser of 50 mW (17dBm) or 4 dBm + 10log (B), where B is 26dB BW for FCC.
3. For the band 5150-5250 MHz, the maximum average EIRP output power shall not exceed lesser of 200 mW (23dBm) or 10 dBm + 10log (B), where B is 99%OBW for IC.

Test Band :	5GHz band 2	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	52	5260	0.51	15.57	23.98	5.57		Pass
11a	6Mbps	1	60	5300	0.51	15.69	23.98	5.57		Pass
11a	6Mbps	1	64	5320	0.51	15.83	23.98	5.57		Pass
HT20	MCS0	1	52	5260	0.53	15.15	23.98	5.57		Pass
HT20	MCS0	1	60	5300	0.53	15.17	23.98	5.57		Pass
HT20	MCS0	1	64	5320	0.53	15.13	23.98	5.57		Pass
HT40	MCS0	1	54	5270	1.02	15.59	23.98	5.57		Pass
HT40	MCS0	1	62	5310	1.02	15.43	23.98	5.57	-	Pass
VHT20	MCS0	1	52	5260	0.53	15.00	23.98	5.57		Pass
VHT20	MCS0	1	60	5300	0.53	15.22	23.98	5.57		Pass
VHT20	MCS0	1	64	5320	0.53	15.24	23.98	5.57		Pass
VHT40	MCS0	1	54	5270	1.01	15.43	23.98	5.57		Pass
VHT40	MCS0	1	62	5310	1.01	15.48	23.98	5.57		Pass
VHT80	MCS0	1	58	5290	1.85	15.49	23.98	5.57		Pass

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	52	5260	0.51	15.57	23.59	5.57	29.59	Pass
11a	6Mbps	1	60	5300	0.51	15.69	23.59	5.57	29.59	Pass
11a	6Mbps	1	64	5320	0.51	15.83	23.58	5.57	29.58	Pass
HT20	MCS0	1	52	5260	0.53	15.15	23.76	5.57	29.76	Pass
HT20	MCS0	1	60	5300	0.53	15.17	23.78	5.57	29.78	Pass
HT20	MCS0	1	64	5320	0.53	15.13	23.79	5.57	29.79	Pass
HT40	MCS0	1	54	5270	1.02	15.59	23.98	5.57	30.00	Pass
HT40	MCS0	1	62	5310	1.02	15.43	23.98	5.57	30.00	Pass
VHT20	MCS0	1	52	5260	0.53	15.00	23.78	5.57	29.78	Pass
VHT20	MCS0	1	60	5300	0.53	15.22	23.71	5.57	29.71	Pass
VHT20	MCS0	1	64	5320	0.53	15.24	23.75	5.57	29.75	Pass
VHT40	MCS0	1	54	5270	1.01	15.43	23.98	5.57	30.00	Pass
VHT40	MCS0	1	62	5310	1.01	15.48	23.98	5.57	30.00	Pass
VHT80	MCS0	1	58	5290	1.85	15.49	23.98	5.57	30.00	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.

Test Band :	5GHz band 3	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	100	5500	0.51	16.54	23.98	5.57		Pass
11a	6Mbps	1	116	5580	0.51	18.98	23.98	5.57		Pass
11a	6Mbps	1	140	5700	0.51	18.17	23.98	5.57		Pass
HT20	MCS0	1	100	5500	0.53	15.15	23.98	5.57		Pass
HT20	MCS0	1	116	5580	0.53	15.67	23.98	5.57		Pass
HT20	MCS0	1	140	5700	0.53	15.69	23.98	5.57		Pass
HT40	MCS0	1	102	5510	1.02	14.03	23.98	5.57		Pass
HT40	MCS0	1	110	5550	1.02	15.79	23.98	5.57		Pass
HT40	MCS0	1	134	5670	1.02	15.78	23.98	5.57	-	Pass
VHT20	MCS0	1	100	5500	0.53	15.15	23.98	5.57		Pass
VHT20	MCS0	1	116	5580	0.53	15.62	23.98	5.57		Pass
VHT20	MCS0	1	140	5700	0.53	15.74	23.98	5.57		Pass
VHT40	MCS0	1	102	5510	1.01	15.84	23.98	5.57		Pass
VHT40	MCS0	1	110	5550	1.01	15.87	23.98	5.57		Pass
VHT40	MCS0	1	134	5670	1.01	15.80	23.98	5.57		Pass
VHT80	MCS0	1	106	5530	1.85	14.13	23.98	5.57		Pass

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	100	5500	0.51	16.54	23.64	5.57	29.64	Pass
11a	6Mbps	1	116	5580	0.51	18.98	23.66	5.57	29.66	Pass
11a	6Mbps	1	140	5700	0.51	18.17	23.68	5.57	29.68	Pass
HT20	MCS0	1	100	5500	0.53	15.15	23.76	5.57	29.76	Pass
HT20	MCS0	1	116	5580	0.53	15.67	23.76	5.57	29.76	Pass
HT20	MCS0	1	140	5700	0.53	15.69	23.78	5.57	29.78	Pass
HT40	MCS0	1	102	5510	1.02	14.03	23.98	5.57	30.00	Pass
HT40	MCS0	1	110	5550	1.02	15.79	23.98	5.57	30.00	Pass
HT40	MCS0	1	134	5670	1.02	15.78	23.98	5.57	30.00	Pass
VHT20	MCS0	1	100	5500	0.53	15.15	23.73	5.57	29.73	Pass
VHT20	MCS0	1	116	5580	0.53	15.62	23.76	5.57	29.76	Pass
VHT20	MCS0	1	140	5700	0.53	15.74	23.75	5.57	29.75	Pass
VHT40	MCS0	1	102	5510	1.01	15.84	23.98	5.57	30.00	Pass
VHT40	MCS0	1	110	5550	1.01	15.87	23.98	5.57	30.00	Pass
VHT40	MCS0	1	134	5670	1.01	15.80	23.98	5.57	30.00	Pass
VHT80	MCS0	1	106	5530	1.85	14.13	23.98	5.57	30.00	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5150-5250 MHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band.

For the bands 5250-5350 MHz and 5470-5600 and 5650-5725 MHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band.

If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section F) Peak power spectral density (PPSD).

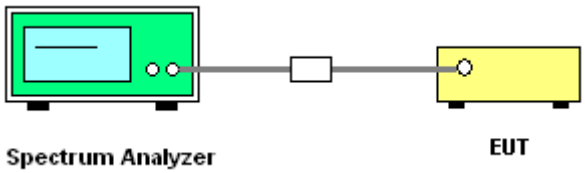
Note: Though the rule refers to “peak power spectral density”, the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r03.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = RMS
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Band :	5GHz band 1	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	CH	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	EIRP PSD Limit (dBm)	Pass/Fail
11a	6Mbps	1	36	5180	0.51	3.73	4.00	5.32	10	Pass
11a	6Mbps	1	44	5220	0.51	3.88	4.00	5.32	10	Pass
11a	6Mbps	1	48	5240	0.51	3.71	4.00	5.32	10	Pass
HT20	MCS0	1	36	5180	0.53	3.39	4.00	5.32	10	Pass
HT20	MCS0	1	44	5220	0.53	3.54	4.00	5.32	10	Pass
HT20	MCS0	1	48	5240	0.53	3.43	4.00	5.32	10	Pass
HT40	MCS0	1	38	5190	1.02	1.59	4.00	5.32	10	Pass
HT40	MCS0	1	46	5230	1.02	1.60	4.00	5.32	10	Pass
VHT20	MCS0	1	36	5180	0.53	3.11	4.00	5.32	10	Pass
VHT20	MCS0	1	44	5220	0.53	3.24	4.00	5.32	10	Pass
VHT20	MCS0	1	48	5240	0.53	3.30	4.00	5.32	10	Pass
VHT40	MCS0	1	38	5190	1.01	0.24	4.00	5.32	10	Pass
VHT40	MCS0	1	46	5230	1.01	0.45	4.00	5.32	10	Pass
VHT80	MCS0	1	42	5210	1.85	1.87	4.00	5.32	10	Pass

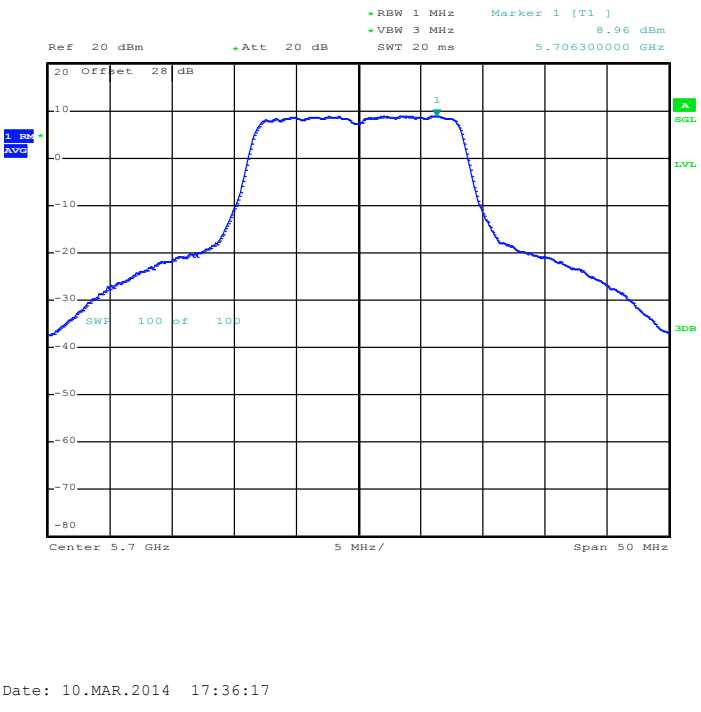
Test Band :	5GHz band 2	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	CH	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	52	5260	0.51	6.10	11.00	5.57	Pass
11a	6Mbps	1	60	5300	0.51	6.19	11.00	5.57	Pass
11a	6Mbps	1	64	5320	0.51	6.39	11.00	5.57	Pass
HT20	MCS0	1	52	5260	0.53	3.92	11.00	5.57	Pass
HT20	MCS0	1	60	5300	0.53	3.91	11.00	5.57	Pass
HT20	MCS0	1	64	5320	0.53	4.26	11.00	5.57	Pass
HT40	MCS0	1	54	5270	1.02	1.54	11.00	5.57	Pass
HT40	MCS0	1	62	5310	1.02	1.68	11.00	5.57	Pass
VHT20	MCS0	1	52	5260	0.53	2.89	11.00	5.57	Pass
VHT20	MCS0	1	60	5300	0.53	3.03	11.00	5.57	Pass
VHT20	MCS0	1	64	5320	0.53	2.98	11.00	5.57	Pass
VHT40	MCS0	1	54	5270	1.01	0.48	11.00	5.57	Pass
VHT40	MCS0	1	62	5310	1.01	0.51	11.00	5.57	Pass
VHT80	MCS0	1	58	5290	1.85	1.62	11.00	5.57	Pass

Test Band :	5GHz band 3	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	Data Rate	N_{TX}	CH	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	100	5500	0.51	8.33	11.00	5.57	Pass
11a	6Mbps	1	116	5580	0.51	8.62	11.00	5.57	Pass
11a	6Mbps	1	140	5700	0.51	9.47	11.00	5.57	Pass
HT20	MCS0	1	100	5500	0.53	4.16	11.00	5.57	Pass
HT20	MCS0	1	116	5580	0.53	4.21	11.00	5.57	Pass
HT20	MCS0	1	140	5700	0.53	4.92	11.00	5.57	Pass
HT40	MCS0	1	102	5510	1.02	1.57	11.00	5.57	Pass
HT40	MCS0	1	110	5550	1.02	1.68	11.00	5.57	Pass
HT40	MCS0	1	134	5670	1.02	1.73	11.00	5.57	Pass
VHT20	MCS0	1	100	5500	0.53	2.69	11.00	5.57	Pass
VHT20	MCS0	1	116	5580	0.53	3.45	11.00	5.57	Pass
VHT20	MCS0	1	140	5700	0.53	3.85	11.00	5.57	Pass
VHT40	MCS0	1	102	5510	1.01	0.09	11.00	5.57	Pass
VHT40	MCS0	1	110	5550	1.01	0.51	11.00	5.57	Pass
VHT40	MCS0	1	134	5670	1.01	0.70	11.00	5.57	Pass
VHT80	MCS0	1	106	5530	1.85	1.39	11.00	5.57	Pass

Worst Case Power Spectral Density(dBm/MHz)



Note: Average Power Density (dB) = Measured value+ Duty Factor

3.4 Peak Excursion Ratio Measurement

3.4.1 Limit of Peak Excursion Ratio

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section G) Peak excursion measurement

1. The transmitter output is connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emission bandwidth.
3. Find the maximum of the peak-max-hold spectrum.
   *Set RBW = 1MHz.
   *Set VBW ≥ 3MHz.
   *Detector = peak.
   *Trace mode = max-hold.
   *Allow the sweeps to continue until the trace stabilizes.
   *Use the peak search function to find the peak of the spectrum.
4. Use the procedure found under section 3.3 to measure the PPSD.
5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

3.4.4 Test Setup

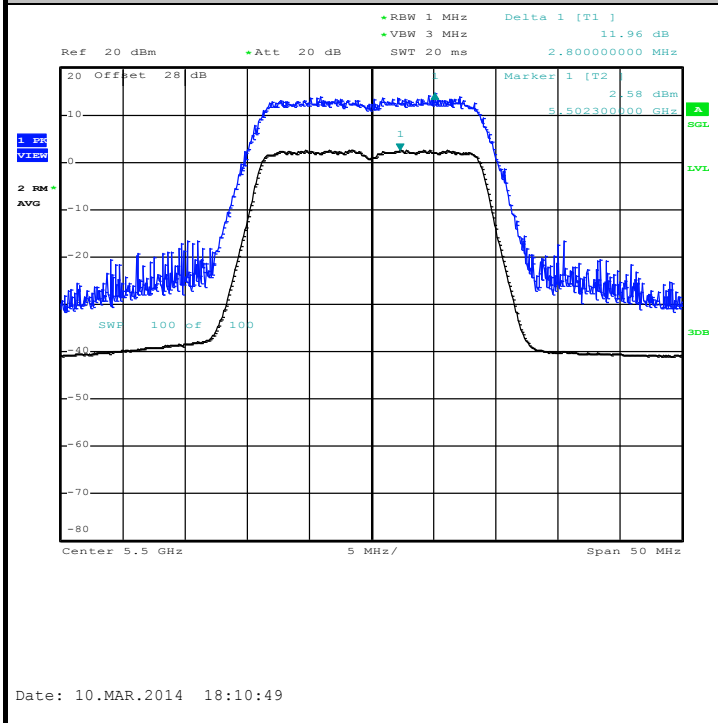
3.4.5 Test Result of Peak Excursion Ratio

Test Band :	5GHz band 3	Temperature :	21~25℃
Test Engineer :	Alex Lee	Relative Humidity :	51~54%

Mod.	N_{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	1	100	5500	8.75	8.91	8.39	7.85	-	13	Pass
HT20	1	100	5500	8.67	9.75	10.22	9.48	-	13	Pass
HT40	1	102	5510	9.13	9.81	9.83	8.94	-	13	Pass
VHT20	1	100	5500	8.80	9.93	10.22	9.41	9.20	13	Pass
VHT40	1	102	5510	9.75	9.35	9.93	8.64	8.62	13	Pass
VHT80	1	106	5530	7.40	8.90	7.02	7.01	7.94	13	Pass

Note: All modulation measured based on the minimum data rate setting.

Worst Case Peak Excursion Ratio (dB)



Note: Peak Excursion Ratio (dB) = Peak – (Average + Duty Cycle Offset)

Duty Cycle Offset: 1.74 dB

3.5 Unwanted Radiated Emission Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.5.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

Frequency (MHz)	Field Strength (microvolts/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

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
-17	78.3
- 27	68.3

(3) KDB789033 v01r03 H)2)c)(i) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03. Section H) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - The setting follows the H) 5) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

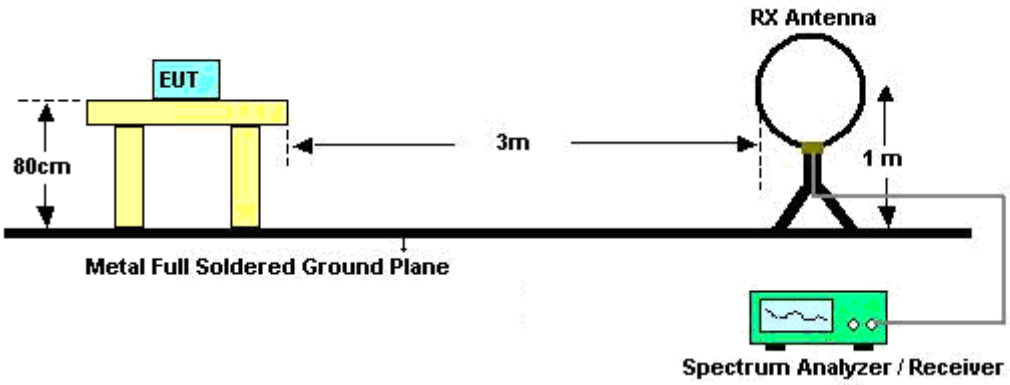
   - The setting follows H) 6) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(μs)	1/T(kHz)	VBW Setting
802.11a	88.84	2070	0.48	1kHz
802.11n HT20	88.53	1930	0.52	1kHz
802.11n HT40	78.99	940	1.06	3kHz
802.11n VHT20	88.58	1940	0.52	1kHz
802.11n VHT40	79.34	960	1.04	3kHz
802.11n VHT80	65.28	470	2.13	3kHz

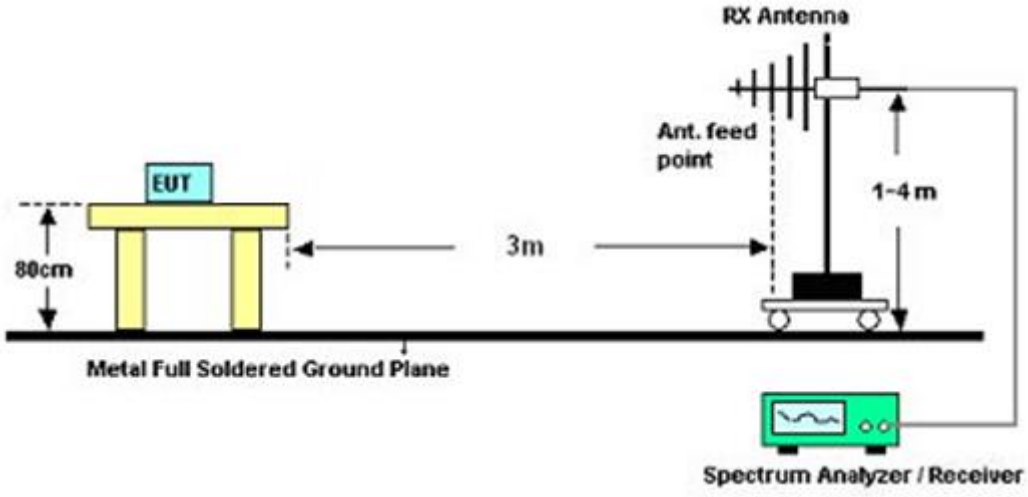
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.5.4 Test Setup

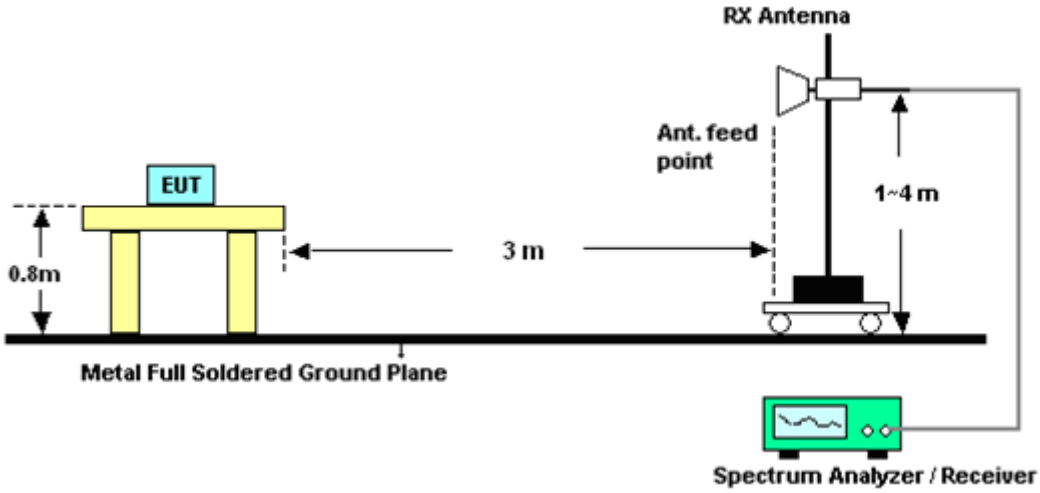
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.5.6 Test Result

3.5.6.1 Test Result of Radiated Band Edges

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	36	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	61.48	-12.52	74	52.27	35.12	8.65	34.56	100	2	Peak
5149.85	47.52	-6.48	54	38.31	35.12	8.65	34.56	100	2	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	61.07	-12.93	74	51.86	35.12	8.65	34.56	100	117	Peak
5150	46.19	-7.81	54	36.98	35.12	8.65	34.56	100	117	Average

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	48	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5121.2	54.03	-19.97	74	44.91	35.09	8.6	34.57	109	7	Peak
5147.3	43.08	-10.92	54	33.87	35.12	8.65	34.56	109	7	Average
5359.68	55.74	-18.26	74	46.19	35.28	8.8	34.53	109	7	Peak
5355.83	44.51	-9.49	54	34.96	35.28	8.8	34.53	109	7	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5143.55	53.94	-20.06	74	44.74	35.12	8.65	34.57	102	44	Peak
5150	42.9	-11.1	54	33.69	35.12	8.65	34.56	102	44	Average
5365.73	55.44	-18.56	74	45.88	35.29	8.8	34.53	102	44	Peak
5354.18	44.31	-9.69	54	34.76	35.28	8.8	34.53	102	44	Average

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	52	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5144	54.47	-19.53	74	45.26	35.12	8.65	34.56	104	120	Peak
5147.75	43.23	-10.77	54	34.02	35.12	8.65	34.56	104	120	Average
5368.04	55.96	-18.04	74	46.4	35.29	8.8	34.53	104	120	Peak
5364.41	44.24	-9.76	54	34.68	35.29	8.8	34.53	104	120	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5059.85	54.25	-19.75	74	45.34	35.05	8.44	34.58	103	42	Peak
5147.15	42.86	-11.14	54	33.65	35.12	8.65	34.56	103	42	Average
5352.86	54.93	-19.07	74	45.38	35.28	8.8	34.53	103	42	Peak
5375.08	43.49	-10.51	54	33.93	35.29	8.8	34.53	103	42	Average

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	64	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.32	62.99	-11.01	74	53.44	35.28	8.8	34.53	102	128	Peak
5402.69	48.73	-5.27	54	39.12	35.32	8.81	34.52	102	128	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.11	63	-11	74	53.45	35.28	8.8	34.53	113	46	Peak
5393.89	47	-7	54	37.41	35.31	8.81	34.53	113	46	Average

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	100	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5466.96	66.82	-7.18	74	57.15	35.37	8.81	34.51	109	196	Peak
5469.84	50.61	-3.39	54	40.94	35.37	8.81	34.51	109	196	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5466.64	65.31	-8.69	74	55.64	35.37	8.81	34.51	102	319	Peak
5470	49.18	-4.82	54	39.51	35.37	8.81	34.51	102	319	Average

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	140	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.56	68.25	-5.75	74	58.08	35.71	9.07	34.61	106	183	Peak
5725.08	52.73	-1.27	54	42.56	35.71	9.07	34.61	106	183	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.48	66.3	-7.7	74	56.13	35.71	9.07	34.61	108	320	Peak
5725.24	50.41	-3.59	54	40.24	35.71	9.07	34.61	108	320	Average

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	36	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.55	65.11	-8.89	74	55.9	35.12	8.65	34.56	100	5	Peak
5149.55	45.85	-8.15	54	36.64	35.12	8.65	34.56	100	5	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.95	61.28	-12.72	74	52.07	35.12	8.65	34.56	100	119	Peak
5149.85	44.52	-9.48	54	35.31	35.12	8.65	34.56	100	119	Average

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	48	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5140.7	54.06	-19.94	74	44.86	35.12	8.65	34.57	133	5	Peak
5150	42.79	-11.21	54	33.58	35.12	8.65	34.56	133	5	Average
5366.06	54.21	-19.79	74	44.65	35.29	8.8	34.53	133	5	Peak
5350	43.15	-10.85	54	33.6	35.28	8.8	34.53	133	5	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.6	53.98	-20.02	74	44.77	35.12	8.65	34.56	115	45	Peak
5150	43.07	-10.93	54	33.86	35.12	8.65	34.56	115	45	Average
5402.8	55.16	-18.84	74	45.55	35.32	8.81	34.52	115	45	Peak
5353.63	43.08	-10.92	54	33.53	35.28	8.8	34.53	115	45	Average

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	52	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.1	53.91	-20.09	74	44.7	35.12	8.65	34.56	115	125	Peak
5147.75	42.62	-11.38	54	33.41	35.12	8.65	34.56	115	125	Average
5369.25	55.64	-18.36	74	46.08	35.29	8.8	34.53	115	125	Peak
5350	44.37	-9.63	54	34.82	35.28	8.8	34.53	115	125	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5056.85	52.82	-21.18	74	43.91	35.05	8.44	34.58	114	44	Peak
5149.85	42.45	-11.55	54	33.24	35.12	8.65	34.56	114	44	Average
5368.81	54.87	-19.13	74	45.31	35.29	8.8	34.53	114	44	Peak
5350	43.56	-10.44	54	34.01	35.28	8.8	34.53	114	44	Average

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	64	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.87	63.32	-10.68	74	53.77	35.28	8.8	34.53	102	120	Peak
5403.02	47.24	-6.76	54	37.63	35.32	8.81	34.52	102	120	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.21	60.52	-13.48	74	50.97	35.28	8.8	34.53	100	45	Peak
5393.78	46.54	-7.46	54	36.95	35.31	8.81	34.53	100	45	Average

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	100	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5468.56	62.82	-11.18	74	53.15	35.37	8.81	34.51	100	46	Peak
5470	46.98	-7.02	54	37.31	35.37	8.81	34.51	100	46	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5467.12	59.34	-14.66	74	49.67	35.37	8.81	34.51	100	314	Peak
5469.2	45.05	-8.95	54	35.38	35.37	8.81	34.51	100	314	Average

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	140	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.88	70.12	-3.88	74	59.95	35.71	9.07	34.61	106	194	Peak
5725	49.12	-4.88	54	38.95	35.71	9.07	34.61	106	194	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.16	69.32	-4.68	74	59.15	35.71	9.07	34.61	108	325	Peak
5725	47.55	-6.45	54	37.38	35.71	9.07	34.61	108	325	Average

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	38	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.35	68.94	-5.06	74	59.73	35.12	8.65	34.56	109	2	Peak
5150	50.34	-3.66	54	41.13	35.12	8.65	34.56	109	2	Average
5357.26	57.01	-16.99	74	47.46	35.28	8.8	34.53	109	2	Peak
5362.76	45.1	-8.9	54	35.54	35.29	8.8	34.53	109	2	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.7	63.1	-10.9	74	53.89	35.12	8.65	34.56	100	340	Peak
5149.7	47.68	-6.32	54	38.47	35.12	8.65	34.56	100	340	Average
5357.15	54.53	-19.47	74	44.98	35.28	8.8	34.53	100	340	Peak
5354.4	44.25	-9.75	54	34.7	35.28	8.8	34.53	100	340	Average

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	46	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147	54.78	-19.22	74	45.57	35.12	8.65	34.56	121	5	Peak
5150	43.46	-10.54	54	34.25	35.12	8.65	34.56	121	5	Average
5403.35	54.52	-19.48	74	44.91	35.32	8.81	34.52	121	5	Peak
5390.15	43.51	-10.49	54	33.92	35.31	8.81	34.53	121	5	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5145.8	54.42	-19.58	74	45.21	35.12	8.65	34.56	102	46	Peak
5148.05	43.44	-10.56	54	34.23	35.12	8.65	34.56	102	46	Average
5386.74	55.24	-18.76	74	45.65	35.31	8.81	34.53	102	46	Peak
5374.86	44.56	-9.44	54	35	35.29	8.8	34.53	102	46	Average

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	54	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5143.1	53.33	-20.67	74	44.13	35.12	8.65	34.57	115	130	Peak
5149.85	42.78	-11.22	54	33.57	35.12	8.65	34.56	115	130	Average
5357.48	56.04	-17.96	74	46.49	35.28	8.8	34.53	115	130	Peak
5352.75	44.78	-9.22	54	35.23	35.28	8.8	34.53	115	130	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5096.45	53.42	-20.58	74	44.36	35.08	8.55	34.57	102	45	Peak
5146.85	42.73	-11.27	54	33.52	35.12	8.65	34.56	102	45	Average
5434.26	55.79	-18.21	74	46.15	35.35	8.81	34.52	102	45	Peak
5352.64	44.1	-9.9	54	34.55	35.28	8.8	34.53	102	45	Average

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	62	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5144.15	53.56	-20.44	74	44.35	35.12	8.65	34.56	103	128	Peak
5150	42.84	-11.16	54	33.63	35.12	8.65	34.56	103	128	Average
5350	72.72	-1.28	74	63.17	35.28	8.8	34.53	103	128	Peak
5350	48.81	-5.19	54	39.26	35.28	8.8	34.53	103	128	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5051.75	53.53	-20.47	74	44.63	35.04	8.44	34.58	113	44	Peak
5148.8	42.56	-11.44	54	33.35	35.12	8.65	34.56	113	44	Average
5350.99	69.81	-4.19	74	60.26	35.28	8.8	34.53	113	44	Peak
5350	47.35	-6.65	54	37.8	35.28	8.8	34.53	113	44	Average

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	102	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5467.44	66.42	-7.58	74	56.75	35.37	8.81	34.51	110	199	Peak
5469.36	52.11	-1.89	54	42.44	35.37	8.81	34.51	110	199	Average
5746.36	54.73	-19.27	74	44.51	35.74	9.1	34.62	110	199	Peak
5748.36	43.64	-10.36	54	33.42	35.74	9.1	34.62	110	199	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5468.08	61.52	-12.48	74	51.85	35.37	8.81	34.51	100	314	Peak
5470	48.37	-5.63	54	38.7	35.37	8.81	34.51	100	314	Average
5763.8	54.1	-19.9	74	43.87	35.76	9.1	34.63	100	314	Peak
5753.32	43.43	-10.57	54	33.19	35.76	9.1	34.62	100	314	Average

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	134	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5370	53.58	-20.42	74	44.02	35.29	8.8	34.53	108	181	Peak
5466.64	42.83	-11.17	54	33.16	35.37	8.81	34.51	108	181	Average
5726.04	60.43	-13.57	74	50.26	35.71	9.07	34.61	108	181	Peak
5733.64	45.8	-8.2	54	35.64	35.71	9.07	34.62	108	181	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.16	53.41	-20.59	74	43.86	35.28	8.8	34.53	100	326	Peak
5468.24	42.79	-11.21	54	33.12	35.37	8.81	34.51	100	326	Average
5727.08	60.02	-13.98	74	49.85	35.71	9.07	34.61	100	326	Peak
5728.92	45.21	-8.79	54	35.04	35.71	9.07	34.61	100	326	Average

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	42	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.35	67.21	-6.79	74	58	35.12	8.65	34.56	121	4	Peak
5150	52.15	-1.85	54	42.94	35.12	8.65	34.56	121	4	Average
5350.99	54.58	-19.42	74	45.03	35.28	8.8	34.53	121	4	Peak
5356.38	43.68	-10.32	54	34.13	35.28	8.8	34.53	121	4	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5145.5	69.5	-4.5	74	60.29	35.12	8.65	34.56	104	44	Peak
5149.55	51.89	-2.11	54	42.68	35.12	8.65	34.56	104	44	Average
5355.17	54.87	-19.13	74	45.32	35.28	8.8	34.53	104	44	Peak
5351.1	44	-10	54	34.45	35.28	8.8	34.53	104	44	Average

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	58	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5079.05	53.29	-20.71	74	44.31	35.07	8.49	34.58	102	123	Peak
5149.85	42.88	-11.12	54	33.67	35.12	8.65	34.56	102	123	Average
5350	70	-4	74	60.45	35.28	8.8	34.53	102	123	Peak
5350.77	50.5	-3.5	54	40.95	35.28	8.8	34.53	102	123	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5133.8	54.17	-19.83	74	45.03	35.11	8.6	34.57	101	43	Peak
5135.75	42.84	-11.16	54	33.7	35.11	8.6	34.57	101	43	Average
5350.99	67.77	-6.23	74	58.22	35.28	8.8	34.53	101	43	Peak
5350.33	48.06	-5.94	54	38.51	35.28	8.8	34.53	101	43	Average

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	106	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.84	64.76	-9.24	74	55.09	35.37	8.81	34.51	100	43	Peak
5469.36	52.75	-1.25	54	43.08	35.37	8.81	34.51	100	43	Average
5727.56	54.16	-19.84	74	43.99	35.71	9.07	34.61	100	43	Peak
5727.4	43.93	-10.07	54	33.76	35.71	9.07	34.61	100	43	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.36	59.94	-14.06	74	50.27	35.37	8.81	34.51	133	320	Peak
5469.2	48.38	-5.62	54	38.71	35.37	8.81	34.51	133	320	Average
5740.68	54.13	-19.87	74	43.91	35.74	9.1	34.62	133	320	Peak
5761	43.23	-10.77	54	33	35.76	9.1	34.63	133	320	Average

3.5.6.2 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Test Mode :	802.11a	**Temperature :**	22~24°C
Test Channel :	36	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Jhuang	**Polarization :**	Horizontal
Remark :	5178 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
92.37	13.33	-30.17	43.5	34.54	9.42	1.12	31.75	-	-	Peak
200.1	20.78	-22.72	43.5	42.07	8.82	1.64	31.75	-	-	Peak
230.07	24.58	-21.42	46	44.75	9.8	1.77	31.74	-	-	Peak
337.8	22.51	-23.49	46	38.23	13.92	2.12	31.76	-	-	Peak
689.9	33.42	-12.58	46	43.59	18.82	3.03	32.02	100	36	Peak
750.1	31.58	-14.42	46	40.46	19.96	3.15	31.99	-	-	Peak
5178	100.23	-	-	90.93	35.15	8.71	34.56	100	2	Average
5178	110.61	-	-	101.31	35.15	8.71	34.56	100	2	Peak
10362	44.97	-9.03	54	52.47	37.95	12	57.45	100	87	Average
10362	58.47	-15.53	74	65.97	37.95	12	57.45	100	87	Peak
15538	53.79	-0.21	54	54.92	40.31	17.13	58.57	103	12	Average
15538	69.5	-4.5	74	70.63	40.31	17.13	58.57	103	12	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	36	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	5182 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
55.92	20.96	-19.04	40	46.27	5.59	0.88	31.78	-	-	Peak
200.1	18.87	-24.63	43.5	39.78	9.2	1.64	31.75	-	-	Peak
230.07	27.48	-18.52	46	47.32	10.13	1.77	31.74	100	52	Peak
634.6	25.2	-20.8	46	35.83	18.51	2.91	32.05	-	-	Peak
689.9	27.13	-18.87	46	37.26	18.86	3.03	32.02	-	-	Peak
750.1	26.43	-19.57	46	35.23	20.04	3.15	31.99	-	-	Peak
5182	97.13	-	-	87.83	35.15	8.71	34.56	100	117	Average
5182	107.52	-	-	98.22	35.15	8.71	34.56	100	117	Peak
10362	41.48	-12.52	54	48.98	37.95	12	57.45	100	25	Average
10362	54.94	-19.06	74	62.44	37.95	12	57.45	100	25	Peak
15542	51.53	-2.47	54	52.66	40.31	17.13	58.57	100	15	Average
15542	62.22	-11.78	74	63.35	40.31	17.13	58.57	100	15	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	44	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5218 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	100.28	-	-	90.9	35.17	8.77	34.56	110	6	Average
5218	110.92	-	-	101.54	35.17	8.77	34.56	110	6	Peak
10440	41.65	-12.35	54	49.07	37.97	12.04	57.43	100	360	Average
10440	55.14	-18.86	74	62.56	37.97	12.04	57.43	100	360	Peak
15658	52.6	-1.4	54	53.66	40.36	17.06	58.48	102	34	Average
15658	68.68	-5.32	74	69.74	40.36	17.06	58.48	102	34	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	44	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	99.68	-	-	90.3	35.17	8.77	34.56	104	44	Average
5218	110.14	-	-	100.76	35.17	8.77	34.56	104	44	Peak
10440	50.48	-23.52	74	57.9	37.97	12.04	57.43	100	0	Peak
15660	48.76	-5.24	54	49.82	40.36	17.06	58.48	100	33	Average
15660	64.4	-9.6	74	65.46	40.36	17.06	58.48	100	33	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	48	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5242 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5242	100.88	-	-	91.46	35.2	8.77	34.55	109	7	Average
5242	111.73	-	-	102.31	35.2	8.77	34.55	109	7	Peak
10482	53.21	-20.79	74	60.56	37.99	12.07	57.41	100	0	Peak
15720	53.55	-0.45	54	54.55	40.39	17.03	58.42	118	34	Average
15720	69.08	-4.92	74	70.08	40.39	17.03	58.42	118	34	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	48	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5242 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5242	99.88	-	-	90.46	35.2	8.77	34.55	102	44	Average
5242	110.67	-	-	101.25	35.2	8.77	34.55	102	44	Peak
10482	51.45	-22.55	74	58.8	37.99	12.07	57.41	100	0	Peak
15718	48.88	-5.12	54	49.88	40.39	17.03	58.42	100	39	Average
15718	63	-11	74	64	40.39	17.03	58.42	100	39	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	52	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5258 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5258	102.56	-	-	93.14	35.2	8.77	34.55	104	120	Average
5258	113.44	-	-	104.02	35.2	8.77	34.55	104	120	Peak
10518	48.75	-25.25	74	56.04	38.01	12.1	57.4	100	0	Peak
15782	52.74	-1.26	54	53.7	40.42	16.99	58.37	116	33	Average
15782	68.55	-5.45	74	69.51	40.42	16.99	58.37	116	33	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	52	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5262 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5262	99.32	-	-	89.88	35.21	8.78	34.55	103	42	Average
5262	110.26	-	-	100.82	35.21	8.78	34.55	103	42	Peak
10521	48.41	-25.59	74	55.7	38.01	12.1	57.4	100	0	Peak
15778	44.9	-9.1	54	45.88	40.41	16.99	58.38	100	44	Average
15778	58.59	-15.41	74	59.57	40.41	16.99	58.38	100	44	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	60	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5302 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5302	102.84	-	-	93.36	35.24	8.78	34.54	104	128	Average
5302	113.42	-	-	103.94	35.24	8.78	34.54	104	128	Peak
10602	47.95	-26.05	74	55.15	38.08	12.14	57.42	100	0	Peak
15898	53.17	-0.83	54	54.07	40.46	16.92	58.28	100	34	Average
15898	68.8	-5.2	74	69.7	40.46	16.92	58.28	100	34	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	60	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5302 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5302	99.22	-	-	89.74	35.24	8.78	34.54	102	44	Average
5302	109.99	-	-	100.51	35.24	8.78	34.54	102	44	Peak
10602	46.16	-27.84	74	53.36	38.08	12.14	57.42	100	0	Peak
15902	47.48	-6.52	54	48.36	40.47	16.92	58.27	100	144	Average
15902	58.69	-15.31	74	59.57	40.47	16.92	58.27	100	144	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	64	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5322 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5322	102.36	-	-	92.86	35.25	8.79	34.54	102	128	Average
5322	112.94	-	-	103.44	35.25	8.79	34.54	102	128	Peak
10638	47.48	-26.52	74	54.64	38.11	12.16	57.43	100	0	Peak
15962	53.39	-0.61	54	54.24	40.49	16.89	58.23	100	34	Average
15962	69.15	-4.85	74	70	40.49	16.89	58.23	100	34	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	64	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5318	99.41	-	-	89.91	35.25	8.79	34.54	113	46	Average
5318	110.01	-	-	100.51	35.25	8.79	34.54	113	46	Peak
10642	45.33	-28.67	74	52.49	38.11	12.16	57.43	100	0	Peak
15958	48.25	-5.75	54	49.1	40.49	16.89	58.23	100	55	Average
15958	60.03	-13.97	74	60.88	40.49	16.89	58.23	100	55	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	100	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	104.01	-	-	94.32	35.4	8.81	34.52	109	196	Average
5502	114.84	-	-	105.15	35.4	8.81	34.52	109	196	Peak
10998	47.17	-26.83	74	53.94	38.4	12.33	57.5	100	0	Peak
16500	52.6	-1.4	54	50.98	41.8	17.12	57.3	100	36	Average
16500	66.73	-7.27	74	65.11	41.8	17.12	57.3	100	36	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	100	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	101.36	-	-	91.67	35.4	8.81	34.52	102	319	Average
5502	111.88	-	-	102.19	35.4	8.81	34.52	102	319	Peak
10998	46.8	-27.2	74	53.57	38.4	12.33	57.5	100	0	Peak
16498	46.5	-7.5	54	44.88	41.8	17.12	57.3	100	44	Average
16498	56.79	-17.21	74	55.17	41.8	17.12	57.3	100	44	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	116	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5578 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5578	104.07	-	-	94.22	35.5	8.9	34.55	109	197	Average
5578	114.93	-	-	105.08	35.5	8.9	34.55	109	197	Peak
11160	48.61	-25.39	74	55.03	38.5	12.51	57.43	100	0	Peak
16742	51.65	-2.35	54	50.22	41.99	16.74	57.3	100	41	Average
16742	62.77	-11.23	74	61.34	41.99	16.74	57.3	100	41	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	116	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5578 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5578	102.69	-	-	92.84	35.5	8.9	34.55	100	319	Average
5578	113.26	-	-	103.41	35.5	8.9	34.55	100	319	Peak
11158	47.3	-26.7	74	53.72	38.5	12.51	57.43	100	0	Peak
16743	47.21	-6.79	54	45.78	41.99	16.74	57.3	100	115	Average
16743	58.32	-15.68	74	56.89	41.99	16.74	57.3	100	115	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	140	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5702 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	103.32	-	-	93.18	35.69	9.05	34.6	106	183	Average
5702	113.56	-	-	103.42	35.69	9.05	34.6	106	183	Peak
11402	50.81	-23.19	74	56.71	38.64	12.8	57.34	100	0	Peak
17102	44.89	-9.11	54	44.03	42.06	16.36	57.56	100	36	Average
17102	55.89	-18.11	74	55.03	42.06	16.36	57.56	100	36	Peak

Test Mode :	802.11a	Temperature :	22~24°C
Test Channel :	140	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5698 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5698	99.45	-	-	89.33	35.67	9.05	34.6	108	320	Average
5698	110.02	-	-	99.9	35.67	9.05	34.6	108	320	Peak
11400	46.52	-27.48	74	52.42	38.64	12.8	57.34	100	0	Peak
17102	48.81	-25.19	74	47.95	42.06	16.36	57.56	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	36	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	5178 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5178	98.26	-	-	88.96	35.15	8.71	34.56	100	5	Average
5178	108.67	-	-	99.37	35.15	8.71	34.56	100	5	Peak
10362	41.15	-12.85	54	48.65	37.95	12	57.45	100	33	Average
10362	54.91	-19.09	74	62.41	37.95	12	57.45	100	33	Peak
15538	50.3	-3.7	54	51.43	40.31	17.13	58.57	102	11	Average
15538	62.99	-11.01	74	64.12	40.31	17.13	58.57	102	11	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	36	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5182 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5182	94.95	-	-	85.65	35.15	8.71	34.56	100	119	Average
5182	105.56	-	-	96.26	35.15	8.71	34.56	100	119	Peak
10362	49.99	-24.01	74	57.49	37.95	12	57.45	100	0	Peak
15541	45.74	-8.26	54	46.87	40.31	17.13	58.57	100	71	Average
15541	57.95	-16.05	74	59.08	40.31	17.13	58.57	100	71	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	44	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	97.73	-	-	88.35	35.17	8.77	34.56	109	2	Average
5218	108.35	-	-	98.97	35.17	8.77	34.56	109	2	Peak
10442	52.66	-21.34	74	60.08	37.97	12.04	57.43	100	0	Peak
15662	51.12	-2.88	54	52.18	40.36	17.06	58.48	113	19	Average
15662	62.94	-11.06	74	64	40.36	17.06	58.48	113	19	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	44	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	95.12	-	-	85.74	35.17	8.77	34.56	100	338	Average
5218	105.25	-	-	95.87	35.17	8.77	34.56	100	338	Peak
10440	47.22	-26.78	74	54.64	37.97	12.04	57.43	100	0	Peak
15658	45.23	-8.77	54	46.29	40.36	17.06	58.48	100	38	Average
15658	57.77	-16.23	74	58.83	40.36	17.06	58.48	100	38	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	48	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5240	98.71	-	-	89.3	35.19	8.77	34.55	133	5	Average
5240	109.47	-	-	100.06	35.19	8.77	34.55	133	5	Peak
10482	50.74	-23.26	74	58.09	37.99	12.07	57.41	100	0	Peak
15718	50.77	-3.23	54	51.77	40.39	17.03	58.42	116	18	Average
15718	62.65	-11.35	74	63.65	40.39	17.03	58.42	116	18	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	48	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5238 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5238	97.56	-	-	88.15	35.19	8.77	34.55	115	45	Average
5238	108.26	-	-	98.85	35.19	8.77	34.55	115	45	Peak
10478	46.21	-27.79	74	53.56	37.99	12.07	57.41	100	0	Peak
15722	45.69	-8.31	54	46.69	40.39	17.03	58.42	100	38	Average
15722	59.66	-14.34	74	60.66	40.39	17.03	58.42	100	38	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	52	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5262 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5262	99.73	-	-	90.29	35.21	8.78	34.55	115	125	Average
5262	110.79	-	-	101.35	35.21	8.78	34.55	115	125	Peak
10522	47.69	-26.31	74	54.98	38.01	12.1	57.4	100	0	Peak
15778	50.54	-3.46	54	51.52	40.41	16.99	58.38	112	17	Average
15778	62.73	-11.27	74	63.71	40.41	16.99	58.38	112	17	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	52	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5262 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5262	97.32	-	-	87.88	35.21	8.78	34.55	114	44	Average
5262	108.31	-	-	98.87	35.21	8.78	34.55	114	44	Peak
10522	46.71	-27.29	74	54	38.01	12.1	57.4	100	0	Peak
15782	45	-9	54	45.96	40.42	16.99	58.37	100	33	Average
15782	58.3	-15.7	74	59.26	40.42	16.99	58.37	100	33	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	60	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5300	100.48	-	-	91	35.24	8.78	34.54	103	122	Average
5300	110.88	-	-	101.4	35.24	8.78	34.54	103	122	Peak
10602	47.44	-26.56	74	54.64	38.08	12.14	57.42	100	0	Peak
15898	51.46	-2.54	54	52.36	40.46	16.92	58.28	118	33	Average
15898	63.8	-10.2	74	64.7	40.46	16.92	58.28	118	33	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	60	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5298 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5298	97.32	-	-	87.84	35.24	8.78	34.54	113	45	Average
5298	107.41	-	-	97.93	35.24	8.78	34.54	113	45	Peak
10599	43.57	-30.43	74	50.77	38.08	12.14	57.42	100	0	Peak
15902	41.85	-12.15	54	42.73	40.47	16.92	58.27	100	91	Average
15902	55.67	-18.33	74	56.55	40.47	16.92	58.27	100	91	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	64	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5318	99.9	-	-	90.4	35.25	8.79	34.54	102	120	Average
5318	110.2	-	-	100.7	35.25	8.79	34.54	102	120	Peak
10641	43.61	-30.39	74	50.77	38.11	12.16	57.43	100	0	Peak
15962	51	-3	54	51.85	40.49	16.89	58.23	117	36	Average
15962	62.6	-11.4	74	63.45	40.49	16.89	58.23	117	36	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	64	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5322 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5322	97.62	-	-	88.12	35.25	8.79	34.54	100	45	Average
5322	108.13	-	-	98.63	35.25	8.79	34.54	100	45	Peak
10641	42.14	-31.86	74	49.3	38.11	12.16	57.43	100	0	Peak
15960	45.03	-8.97	54	45.88	40.49	16.89	58.23	100	40	Average
15960	57.07	-16.93	74	57.92	40.49	16.89	58.23	100	40	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	100	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	99.44	-	-	89.75	35.4	8.81	34.52	100	46	Average
5502	109.84	-	-	100.15	35.4	8.81	34.52	100	46	Peak
11001	43.96	-30.04	74	50.73	38.4	12.33	57.5	100	0	Peak
16498	49.21	-4.79	54	47.59	41.8	17.12	57.3	100	34	Average
16498	60.31	-13.69	74	58.69	41.8	17.12	57.3	100	34	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	100	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	96.72	-	-	87.03	35.4	8.81	34.52	100	314	Average
5502	107.17	-	-	97.48	35.4	8.81	34.52	100	314	Peak
11001	42.33	-31.67	74	49.1	38.4	12.33	57.5	100	0	Peak
16500	53.26	-20.74	74	51.64	41.8	17.12	57.3	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	116	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5582 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	99.47	-	-	89.6	35.52	8.9	34.55	100	43	Average
5582	109.83	-	-	99.96	35.52	8.9	34.55	100	43	Peak
11160	45.57	-28.43	74	51.99	38.5	12.51	57.43	100	0	Peak
16740	47.06	-6.94	54	45.63	41.99	16.74	57.3	100	38	Average
16740	58.27	-15.73	74	56.84	41.99	16.74	57.3	100	38	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	116	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5582 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	97.5	-	-	87.63	35.52	8.9	34.55	100	325	Average
5582	107.8	-	-	97.93	35.52	8.9	34.55	100	325	Peak
11160	42.65	-31.35	74	49.07	38.5	12.51	57.43	100	0	Peak
16738	51.8	-22.2	74	50.37	41.99	16.74	57.3	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	140	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5702 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	100.59	-	-	90.45	35.69	9.05	34.6	106	194	Average
5702	110.91	-	-	100.77	35.69	9.05	34.6	106	194	Peak
11402	47.26	-26.74	74	53.16	38.64	12.8	57.34	100	0	Peak
17098	53.14	-20.86	74	52.28	42.06	16.36	57.56	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	22~24°C
Test Channel :	140	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5698 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5698	97.39	-	-	87.27	35.67	9.05	34.6	108	325	Average
5698	107.65	-	-	97.53	35.67	9.05	34.6	108	325	Peak
11402	45.11	-28.89	74	51.01	38.64	12.8	57.34	100	0	Peak
17100	46.59	-27.41	74	45.73	42.06	16.36	57.56	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	38	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5192 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5192	96.19	-	-	86.83	35.16	8.76	34.56	109	2	Average
5192	106.46	-	-	97.1	35.16	8.76	34.56	109	2	Peak
10380	50.99	-23.01	74	58.48	37.95	12.01	57.45	100	0	Peak
15572	48.51	-5.49	54	49.6	40.33	17.12	58.54	100	36	Average
15572	59.22	-14.78	74	60.31	40.33	17.12	58.54	100	36	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	38	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5192 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5192	92.48	-	-	83.12	35.16	8.76	34.56	100	340	Average
5192	102.35	-	-	92.99	35.16	8.76	34.56	100	340	Peak
10378	49.1	-24.9	74	56.59	37.95	12.01	57.45	100	0	Peak
15572	46.66	-7.34	54	47.75	40.33	17.12	58.54	100	47	Average
15572	57.52	-16.48	74	58.61	40.33	17.12	58.54	100	47	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	46	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5228 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5228	95.98	-	-	86.57	35.19	8.77	34.55	121	5	Average
5228	106.27	-	-	96.86	35.19	8.77	34.55	121	5	Peak
10462	48.92	-25.08	74	56.28	37.99	12.06	57.41	100	0	Peak
15692	50.7	-3.3	54	51.72	40.38	17.05	58.45	100	33	Average
15692	61.59	-12.41	74	62.61	40.38	17.05	58.45	100	33	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	46	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5232 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5232	94.99	-	-	85.58	35.19	8.77	34.55	102	46	Average
5232	105.24	-	-	95.83	35.19	8.77	34.55	102	46	Peak
10458	44.86	-29.14	74	52.24	37.98	12.06	57.42	100	0	Peak
15692	53.57	-20.43	74	54.59	40.38	17.05	58.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	54	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5272 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5272	97.66	-	-	88.21	35.21	8.78	34.54	115	130	Average
5272	107.38	-	-	97.93	35.21	8.78	34.54	115	130	Peak
10542	46.2	-27.8	74	53.47	38.03	12.11	57.41	100	0	Peak
15808	49.86	-4.14	54	50.82	40.42	16.97	58.35	100	35	Average
15808	60.39	-13.61	74	61.35	40.42	16.97	58.35	100	35	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	54	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5268 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5268	94.79	-	-	85.35	35.21	8.78	34.55	102	45	Average
5268	104.8	-	-	95.36	35.21	8.78	34.55	102	45	Peak
10539	41.95	-32.05	74	49.23	38.03	12.1	57.41	100	0	Peak
15808	53.8	-20.2	74	54.76	40.42	16.97	58.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	62	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5308 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
71.58	13.14	-26.86	40	38.32	5.59	1	31.77	-	-	Peak
199.56	20.32	-23.18	43.5	41.61	8.82	1.64	31.75	-	-	Peak
230.07	25.23	-20.77	46	45.4	9.8	1.77	31.74	-	-	Peak
344.8	24.92	-21.08	46	40.35	14.19	2.14	31.76	-	-	Peak
689.9	31.31	-14.69	46	41.48	18.82	3.03	32.02	-	-	Peak
750.1	32.55	-13.45	46	41.43	19.96	3.15	31.99	100	25	Peak
5308	97.71	-	-	88.22	35.24	8.79	34.54	103	128	Average
5308	107.54	-	-	98.05	35.24	8.79	34.54	103	128	Peak
10620	41.44	-32.56	74	48.61	38.1	12.15	57.42	100	0	Peak
15932	50.01	-3.99	54	50.9	40.47	16.9	58.26	100	33	Average
15932	60.99	-13.01	74	61.88	40.47	16.9	58.26	100	33	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	62	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5312 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
55.92	20.94	-19.06	40	46.25	5.59	0.88	31.78	-	-	Peak
74.55	19.54	-20.46	40	43.89	6.41	1.01	31.77	-	-	Peak
230.07	27.84	-18.16	46	47.68	10.13	1.77	31.74	100	125	Peak
600.3	26.22	-19.78	46	36.54	18.91	2.83	32.06	-	-	Peak
689.9	27.54	-18.46	46	37.67	18.86	3.03	32.02	-	-	Peak
748	25.81	-20.19	46	34.63	20.02	3.15	31.99	-	-	Peak
5312	95.21	-	-	85.71	35.25	8.79	34.54	113	44	Average
5312	105.15	-	-	95.65	35.25	8.79	34.54	113	44	Peak
10620	41.08	-32.92	74	48.25	38.1	12.15	57.42	100	0	Peak
15928	53.15	-20.85	74	54.04	40.47	16.9	58.26	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	102	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5508 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5508	96.66	-	-	86.97	35.4	8.81	34.52	110	199	Average
5508	106.41	-	-	96.72	35.4	8.81	34.52	110	199	Peak
11019	41.07	-32.93	74	47.82	38.41	12.33	57.49	100	0	Peak
16528	45.12	-8.88	54	43.53	41.81	17.08	57.3	100	37	Average
16528	56.02	-17.98	74	54.43	41.81	17.08	57.3	100	37	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	102	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5508 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5508	92.87	-	-	83.18	35.4	8.81	34.52	100	314	Average
5508	102.8	-	-	93.11	35.4	8.81	34.52	100	314	Peak
11019	40.56	-33.44	74	47.31	38.41	12.33	57.49	100	0	Peak
16528	49.58	-24.42	74	47.99	41.81	17.08	57.3	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	110	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5548 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5548	97.37	-	-	87.56	35.47	8.87	34.53	100	44	Average
5548	107.09	-	-	97.28	35.47	8.87	34.53	100	44	Peak
11100	43.18	-30.82	74	49.73	38.46	12.45	57.46	100	0	Peak
16652	45.03	-8.97	54	43.52	41.92	16.89	57.3	100	33	Average
16652	55.89	-18.11	74	54.38	41.92	16.89	57.3	100	33	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	110	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5552 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5552	94.81	-	-	85.01	35.47	8.87	34.54	101	320	Average
5552	104.8	-	-	95	35.47	8.87	34.54	101	320	Peak
11100	42.14	-31.86	74	48.69	38.46	12.45	57.46	100	0	Peak
16652	50.82	-23.18	74	49.31	41.92	16.89	57.3	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	134	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5668 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5668	97.3	-	-	87.26	35.64	8.99	34.59	108	181	Average
5668	107.42	-	-	97.38	35.64	8.99	34.59	108	181	Peak
11338	45.38	-28.62	74	51.41	38.6	12.74	57.37	100	0	Peak
17008	52.72	-21.28	74	51.56	42.18	16.32	57.34	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~24°C
Test Channel :	134	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5672 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5672	94.12	-	-	84.05	35.64	9.02	34.59	100	326	Average
5672	103.97	-	-	93.9	35.64	9.02	34.59	100	326	Peak
11340	42.68	-31.32	74	48.71	38.6	12.74	57.37	100	0	Peak
17010	45.78	-28.22	74	44.62	42.18	16.32	57.34	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	42	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5214 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5214	93	-	-	83.62	35.17	8.77	34.56	121	4	Average
5214	103.1	-	-	93.72	35.17	8.77	34.56	121	4	Peak
10422	46.68	-27.32	74	54.1	37.97	12.04	57.43	100	0	Peak
15632	43.28	-10.72	54	44.34	40.36	17.07	58.49	100	31	Average
15632	56.34	-17.66	74	57.4	40.36	17.07	58.49	100	31	Peak

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	42	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5214 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5214	92.19	-	-	82.81	35.17	8.77	34.56	104	44	Average
5214	102.12	-	-	92.74	35.17	8.77	34.56	104	44	Peak
10419	43.66	-30.34	74	51.09	37.97	12.03	57.43	100	0	Peak
15628	51.6	-22.4	74	52.68	40.35	17.07	58.5	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	58	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5292 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5292	94.97	-	-	85.5	35.23	8.78	34.54	102	123	Average
5292	104.89	-	-	95.42	35.23	8.78	34.54	102	123	Peak
10581	42.87	-31.13	74	50.1	38.07	12.12	57.42	100	0	Peak
15870	46.68	-7.32	54	47.6	40.45	16.93	58.3	100	33	Average
15870	57.9	-16.1	74	58.82	40.45	16.93	58.3	100	33	Peak

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	58	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5292 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5292	92.32	-	-	82.85	35.23	8.78	34.54	101	43	Average
5292	102.1	-	-	92.63	35.23	8.78	34.54	101	43	Peak
10581	41.37	-32.63	74	48.6	38.07	12.12	57.42	100	0	Peak
15868	51.66	-22.34	74	52.58	40.45	16.93	58.3	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	106	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5532 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
91.29	14.77	-28.73	43.5	36.29	9.13	1.11	31.76	-	-	Peak
198.75	21.11	-22.39	43.5	42.4	8.82	1.64	31.75	-	-	Peak
230.07	25.79	-20.21	46	45.96	9.8	1.77	31.74	-	-	Peak
344.8	23.18	-22.82	46	38.61	14.19	2.14	31.76	-	-	Peak
689.9	32.6	-13.4	46	42.77	18.82	3.03	32.02	100	25	Peak
750.1	31.99	-14.01	46	40.87	19.96	3.15	31.99	-	-	Peak
5532	93.19	-	-	83.43	35.45	8.84	34.53	100	43	Average
5532	103.06	-	-	93.3	35.45	8.84	34.53	100	43	Peak
11061	41.77	-32.23	74	48.41	38.44	12.39	57.47	100	0	Peak
16592	52.82	-21.18	74	51.28	41.87	16.97	57.3	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	22~24°C
Test Channel :	106	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5532 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
56.19	20.94	-19.06	40	46.25	5.59	0.88	31.78	-	-	Peak
200.1	18.74	-24.76	43.5	39.65	9.2	1.64	31.75	-	-	Peak
230.07	27.7	-18.3	46	47.54	10.13	1.77	31.74	100	41	Peak
633.9	25.22	-20.78	46	35.85	18.51	2.91	32.05	-	-	Peak
689.9	26.85	-19.15	46	36.98	18.86	3.03	32.02	-	-	Peak
808.2	24.89	-21.11	46	33.24	20.29	3.28	31.92	-	-	Peak
5532	90.32	-	-	80.56	35.45	8.84	34.53	133	320	Average
5532	101.41	-	-	91.65	35.45	8.84	34.53	133	320	Peak
11061	42.57	-31.43	74	49.21	38.44	12.39	57.47	100	0	Peak
16590	45.28	-28.72	74	43.74	41.87	16.97	57.3	100	0	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (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 the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

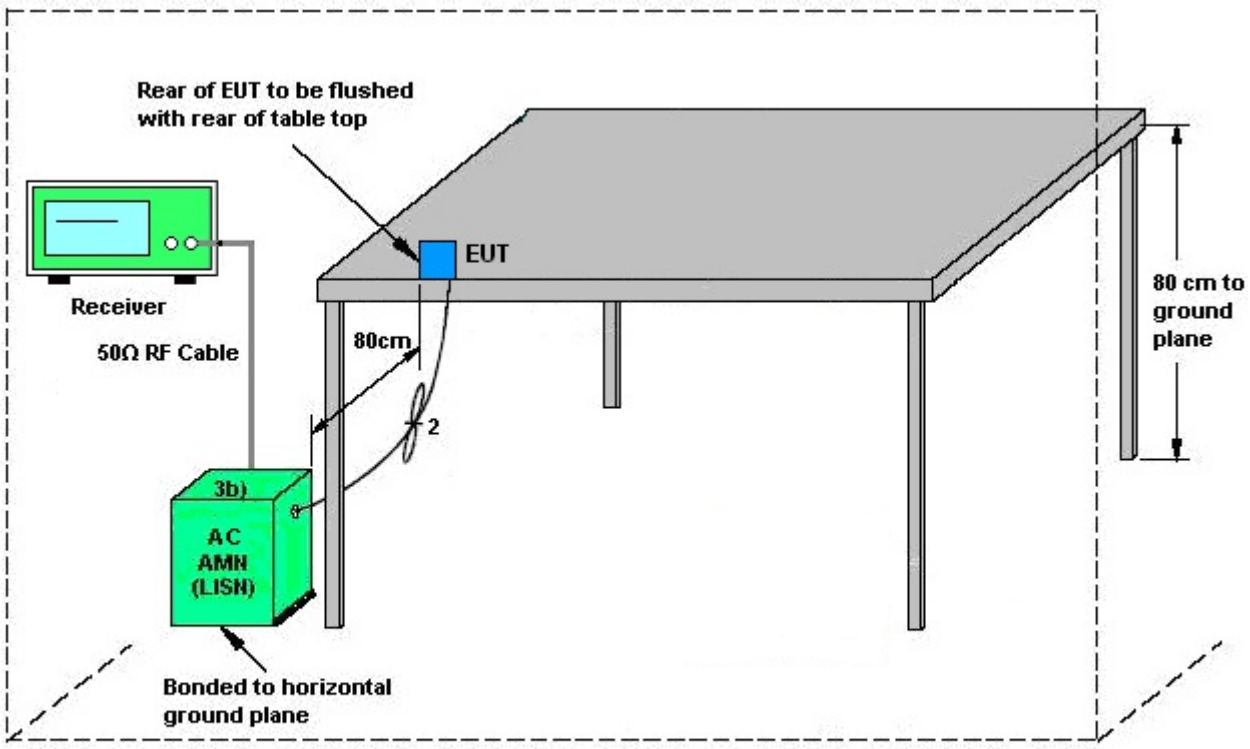
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

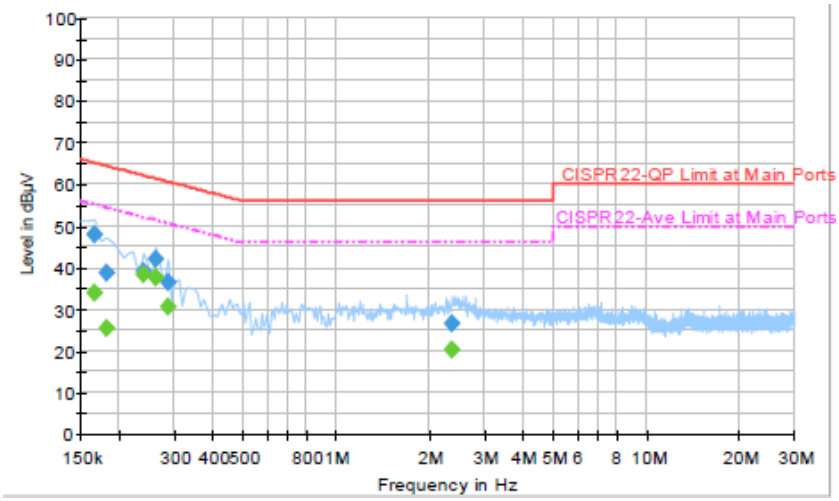
3.6.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Bluetooth Link + WLAN (5GHz) Link + HDMI + RJ-45 (Load) + Speaker + SD Card + Mouse + MPEG4 + Adapter		



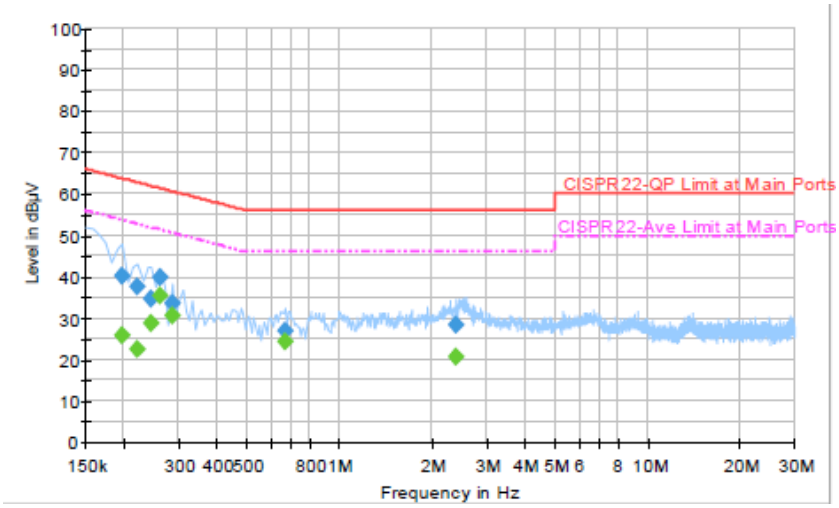
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	47.8	Off	L1	19.3	17.4	65.2
0.182000	38.7	Off	L1	19.3	25.7	64.4
0.238000	39.2	Off	L1	19.4	23.0	62.2
0.262000	42.0	Off	L1	19.3	19.4	61.4
0.286000	36.4	Off	L1	19.4	24.2	60.6
2.374000	26.5	Off	L1	19.6	29.5	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	34.0	Off	L1	19.3	21.2	55.2
0.182000	25.4	Off	L1	19.3	29.0	54.4
0.238000	38.3	Off	L1	19.4	13.9	52.2
0.262000	37.6	Off	L1	19.3	13.8	51.4
0.286000	30.6	Off	L1	19.4	20.0	50.6
2.374000	20.1	Off	L1	19.6	25.9	46.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (5GHz) Link + HDMI + RJ-45 (Load) + Speaker + SD Card + Mouse + MPEG4 + Adapter		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	40.4	Off	N	19.3	23.3	63.7
0.222000	37.6	Off	N	19.4	25.1	62.7
0.246000	34.6	Off	N	19.4	27.3	61.9
0.262000	39.8	Off	N	19.4	21.6	61.4
0.286000	33.7	Off	N	19.4	26.9	60.6
0.670000	27.1	Off	N	19.5	28.9	56.0
2.398000	28.4	Off	N	19.6	27.6	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	25.9	Off	N	19.3	27.8	53.7
0.222000	22.4	Off	N	19.4	30.3	52.7
0.246000	28.9	Off	N	19.4	23.0	51.9
0.262000	35.5	Off	N	19.4	15.9	51.4
0.286000	30.6	Off	N	19.4	20.0	50.6
0.670000	24.3	Off	N	19.5	21.7	46.0
2.398000	20.5	Off	N	19.6	25.5	46.0

3.7 Frequency Stability Measurement

3.7.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

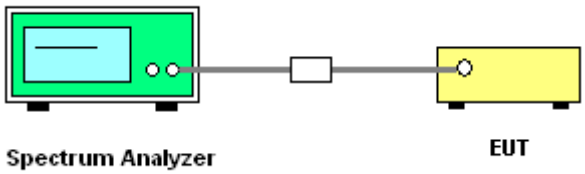
3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

3.7.4 Test Setup



3.7.5 Test Result of Frequency Stability

Test Band :	5GHz band 1,2,3	Test Engineer :	Alex Lee

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	4.75
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	5.25
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	5
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	-30	5
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	50	5

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	4.75
11a	6Mbps	1	64	5320	5319.975	-0.025	-4.70	20	5.25
11a	6Mbps	1	64	5320	5319.975	-0.025	-4.70	20	5
11a	6Mbps	1	64	5320	5320.050	0.050	9.40	-30	5
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	50	5

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)
11a	6Mbps	1	100	5500	5499.975	-0.025	-4.55	20	4.75
11a	6Mbps	1	100	5500	5499.975	-0.025	-4.55	20	5.25
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	5
11a	6Mbps	1	100	5500	5500.050	0.050	9.09	-30	5
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	50	5

Note: Center Frequency = (Low Frequency + High Frequency) / 2.

3.8 Automatically Discontinue Transmission

3.8.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.8.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.8.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.9 Antenna Requirements

3.9.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.9.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.9.3 Antenna Gain

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Mar. 06, 2014~ Mar. 11, 2014	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Aug. 17, 2013	Mar. 06, 2014~ Mar. 11, 2014	Aug. 16, 2014	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 17, 2013	Mar. 06, 2014~ Mar. 11, 2014	Aug. 16, 2014	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz – 26.5GHz	Jan. 15, 2014	Mar. 08, 2014~ Mar. 10, 2014	Jan. 14, 2015	Radiation (03CH08-HY)
Bilog Antenna	Teseq GmbH	CBL6112D	35379	30MHz~2GHz	Oct. 10, 2013	Mar. 08, 2014~ Mar. 10, 2014	Oct. 09, 2014	Radiation (03CH08-HY)
Horn Antenna	ESCO	3117	000143261	1GHz~18GHz	Aug. 22, 2013	Mar. 08, 2014~ Mar. 10, 2014	Aug. 21, 2014	Radiation (03CH08-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz~40GHz	Oct. 03, 2013	Mar. 08, 2014~ Mar. 10, 2014	Oct. 02, 2014	Radiation (03CH08-HY)
Amplifier	SONOMA	310N	187231	9kHz~1GHz	May 15, 2013	Mar. 08, 2014~ Mar. 10, 2014	May 14, 2014	Radiation (03CH08-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	Jul. 09, 2013	Mar. 08, 2014~ Mar. 10, 2014	Jul. 08, 2014	Radiation (03CH08-HY)
Pre Amplifier	Agilent	8449B	3008A02665	1GHz~26.5GHz	Sep. 04, 2013	Mar. 08, 2014~ Mar. 10, 2014	Sep. 03, 2014	Radiation (03CH08-HY)
Turn Table	Chaintek	Chaintek 3000	N/A	0~360 Degree	N/A	Mar. 08, 2014~ Mar. 10, 2014	N/A	Radiation (03CH08-HY)
Antenna Mast	MF	MFA520BS	N/A	1m~4m	N/A	Mar. 08, 2014~ Mar. 10, 2014	N/A	Radiation (03CH08-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MHz	Jul. 03, 2012	Mar. 08, 2014~ Mar. 10, 2014	Jul. 03, 2014	Radiation (03CH08-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Mar. 06, 2014	Nov. 14, 2014	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Mar. 06, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Mar. 06, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Mar. 06, 2014	N/A	Conduction (CO05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.30**