

FCC/IC RF Test Report

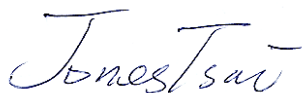
APPLICANT : Mosby LLC.
EQUIPMENT : Tablet PC
MODEL NAME : GU045RW
FCC ID : S5R-2670
IC : 10911A-2670
STANDARD : FCC Part 15 Subpart E §15.407
IC RSS-210 issue 8
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product testing was completed on Sep. 20, 2013. 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



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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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR332727-04	Rev. 01	Initial issue of report	Sep. 06, 2013
FR332727-04	Rev. 02	<ol style="list-style-type: none"> 1. Replace straddle channel band description to NII-2e and DTS. 2. Add description NTX =2 for MIMO output. 3. Add description about the WIFI AC power line conducted emission configuration. 4. Address the frequency of U-NII 2e Ch142 in section 2.1 	Sep. 20, 2013

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 0.57 dB at 5350.11 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 9.40 dB at 0.158 MHz
3.7	15.407(c)	RSS-210 A9.4	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.203 & 15.407(a)	RSS-210 A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Mosby LLC.
2825 E. Cottonwood Parkway
Suite 500
Salt Lake City, Utah 84121

1.2 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Model Name	GU045RW
FCC ID	S5R-2670
IC	10911A-2670
EUT supports Radios application	WLAN 11b/g/n (HT20), WLAN 11a/n (HT20/HT40) Bluetooth v3.0

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

1.3 Product Specification of Equipment Under Test

Product Specification subjective to this standard										
Tx/Rx Channel Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5580 MHz 5660 MHz ~ 5700 MHz									
Maximum Output Power	<5180 MHz ~ 5240 MHz> 802.11a : 15.2 dBm / 0.0331 W 802.11n HT20 : 15.2 dBm / 0.0331 W 802.11n HT40 : 15.1 dBm / 0.0324 W <5260 MHz ~ 5320 MHz> 802.11a : 14.3 dBm / 0.0269 W 802.11n HT20 : 14.4 dBm / 0.0275 W 802.11n HT40 : 14.3 dBm / 0.0269 W <5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz > 802.11a : 14.7 dBm / 0.0295 W 802.11n HT20 : 14.8 dBm / 0.0302 W 802.11n HT40 : 14.7 dBm / 0.0295 W									
99% Occupied Bandwidth	802.11a : 17.50 MHz 802.11n HT20 : 18.45 MHz 802.11n HT40 : 36.18 MHz									
Antenna Type / Gain	<5180 MHz ~ 5240 MHz> Ant. 1 : Fixed internal Antenna with gain 2.00 dBi Ant. 2 : Fixed internal Antenna with gain 3.20 dBi <5260 MHz ~ 5320 MHz> Ant. 1 : Fixed internal Antenna with gain 2.00 dBi Ant. 2 : Fixed internal Antenna with gain 3.40 dBi <5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz > Ant. 1 : Fixed internal Antenna with gain 2.80 dBi Ant. 2 : Fixed internal Antenna with gain 3.30 dBi									
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)									
Antenna Function Description	<table border="1"> <thead> <tr> <th></th> <th>Ant. 1</th> <th>Ant. 2</th> </tr> </thead> <tbody> <tr> <td>802.11 a MIMO</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n MIMO</td> <td>V</td> <td>V</td> </tr> </tbody> </table>		Ant. 1	Ant. 2	802.11 a MIMO	V	V	802.11 n MIMO	V	V
	Ant. 1	Ant. 2								
802.11 a MIMO	V	V								
802.11 n MIMO	V	V								

1.4 Modification of EUT

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

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st 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	03CH07-HY	722060/4086B-1

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

1.6 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
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02.
- ♦ ANSI C63.4-2003
- ♦ IC RSS-210 Issued 8
- ♦ IC RSS-Gen Issue 3
- ♦ NOTICE 2012-DRS0126

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.
3. Per the section 2.2.3 of Notice of 2012-DRS0126, " Receivers Excluded from Industry Canada Requirements", only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

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 and 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

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

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5580 MHz and 5660-5720 MHz Band 3 (U-NII 2e)	100	5500	132	5660
	102	5510	134	5670
	104	5520	136	5680
	108	5540	140	5700
	110	5550	142	5710
	112	5560	144	5720
	116	5580	-	-

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 antenna configurations as following table and the highest power data rates were chosen for full test in the following tables.

MIMO <Ant. 1+2>

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	15.2	14.9	14.9	15.1	15.0	15.0	15.0	15.0

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	15.2	14.9	15.0	14.9	14.9	15.0	14.9	14.9
Data Rate (MHz)	MCS 8	MCS 9	MCS10	MCS 11	MCS 12	MCS 13	MCS 14	MCS 15
Average Power (dBm)	14.8	14.8	14.9	14.8	15.0	14.9	14.8	14.8

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	15.1	14.9	15.0	14.5	14.1	14.1	14.2	14.2
Data Rate (MHz)	MCS 8	MCS 9	MCS10	MCS 11	MCS 12	MCS 13	MCS 14	MCS 15
Average Power (dBm)	14.9	15.0	15.0	13.8	13.8	13.8	13.5	14.0

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

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	N _{TX}	Test Channel	
Conducted TCs	26dB and 99% BW Power Spectral Density	802.11a	6 Mbps	2	L/M/H/Straddle	
		802.11n HT20	MCS0	2	L/M/H/Straddle	
		802.11n HT40	MCS0	2	L/M/H/Straddle	
	Output Power	802.11a	6 Mbps	2	L/M/H	
		802.11n HT20	MCS0	2	L/M/H	
		802.11n HT40	MCS0	2	L/M/H	
	Peak Excursion	802.11a	6 Mbps	2	L	
		802.11n HT20	MCS0	2	L	
		802.11n HT40	MCS0	2	L	
	Conducted Spurious Emission	802.11a	6 Mbps	2	Straddle	
		802.11n HT20	MCS0	2	Straddle	
		802.11n HT40	MCS0	2	Straddle	
	Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	2	L/H
			802.11n HT20	MCS0	2	L/H
			802.11n HT40	MCS0	2	L/H
Radiated Spurious Emission		802.11a	6 Mbps	2	L/M/H/Straddle	
		802.11n HT20	MCS0	2	L/M/H/Straddle	
		802.11n HT40	MCS0	2	L/M/H/Straddle	
AC Conducted Emission	Mode 1 : WLAN (5GHz, 11a, Ch36, 6Mbps) Link + Bluetooth Link + Earphone + USB Cable (Data Link With Notebook) + Camera Mode 2 : WLAN (5GHz, 11a, Ch36, 6Mbps) MIMO Tx + Earphone + USB Cable (Data Link With Notebook) + Camera					
Note: The N _{TX} =2 means 2 antenna ports simultaneously transmit during test.						

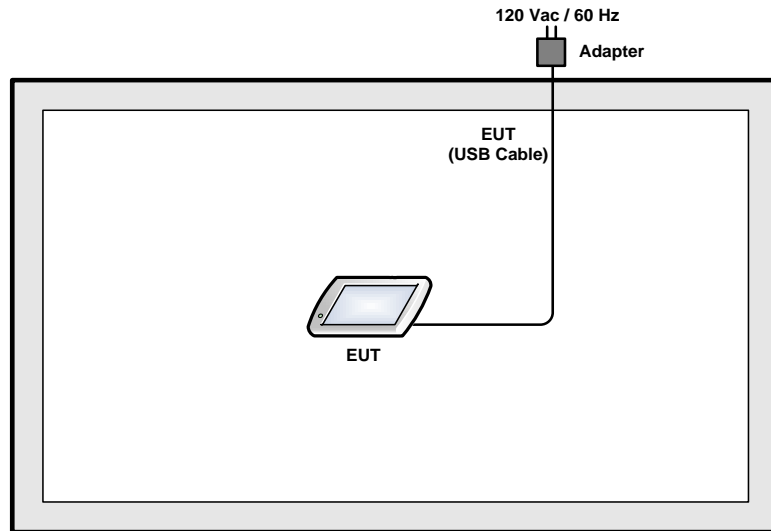
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

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
Straddle		-	-	144

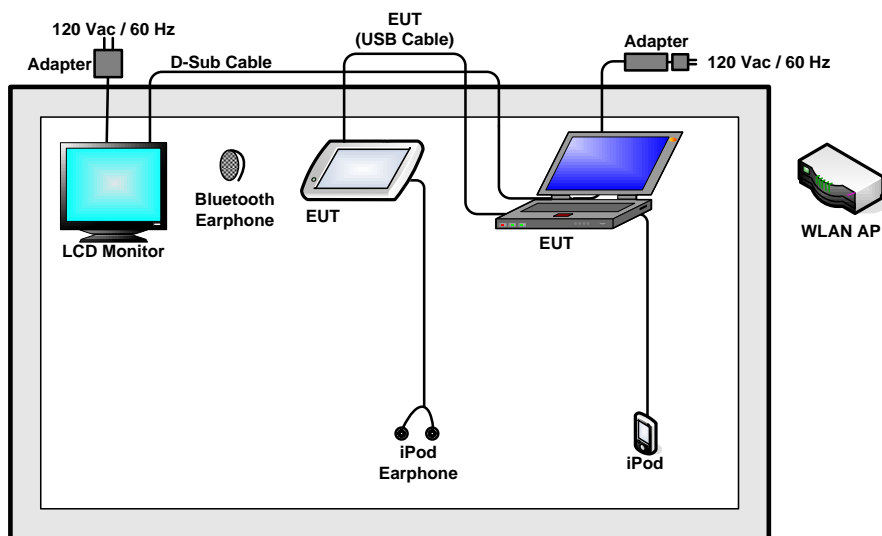
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

2.4 Connection Diagram of Test System

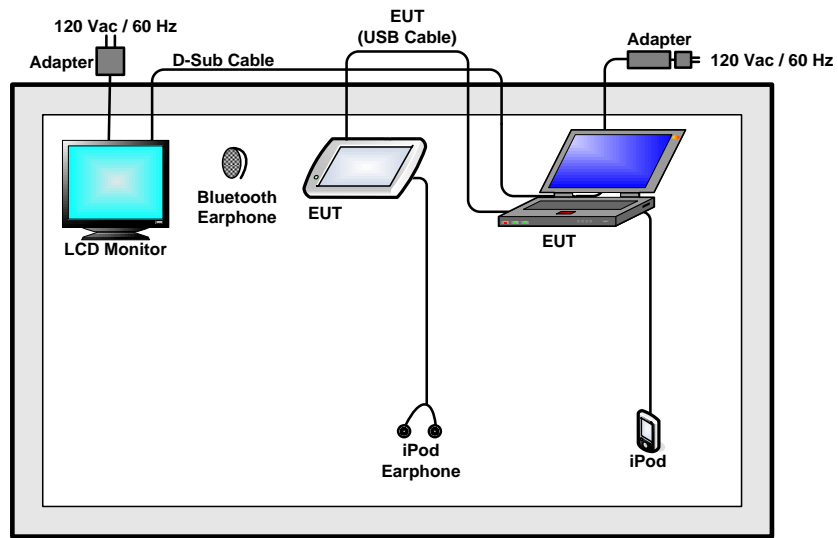
<WLAN Tx Mode>



<AC Conducted Emission for Mode 1>



<AC Conducted Emission for Mode 2>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	iPod Earphone	Apple	N/A	N/A	Unshielded, 1.0 m	N/A
6.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
8.	Adapter	Foxlink	A02710	Verification	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, "ADB" installed in the notebook make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals.

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.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 26dB & 99% 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, 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5720 MHz, 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.

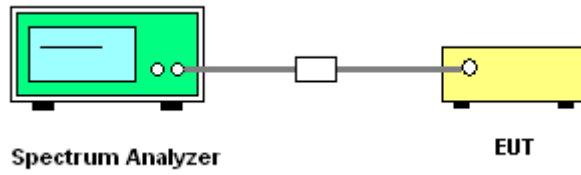
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.
Section C) 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) $\geq 3 * RBW$.
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

Test Band :	5GHz band 1,2,3	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

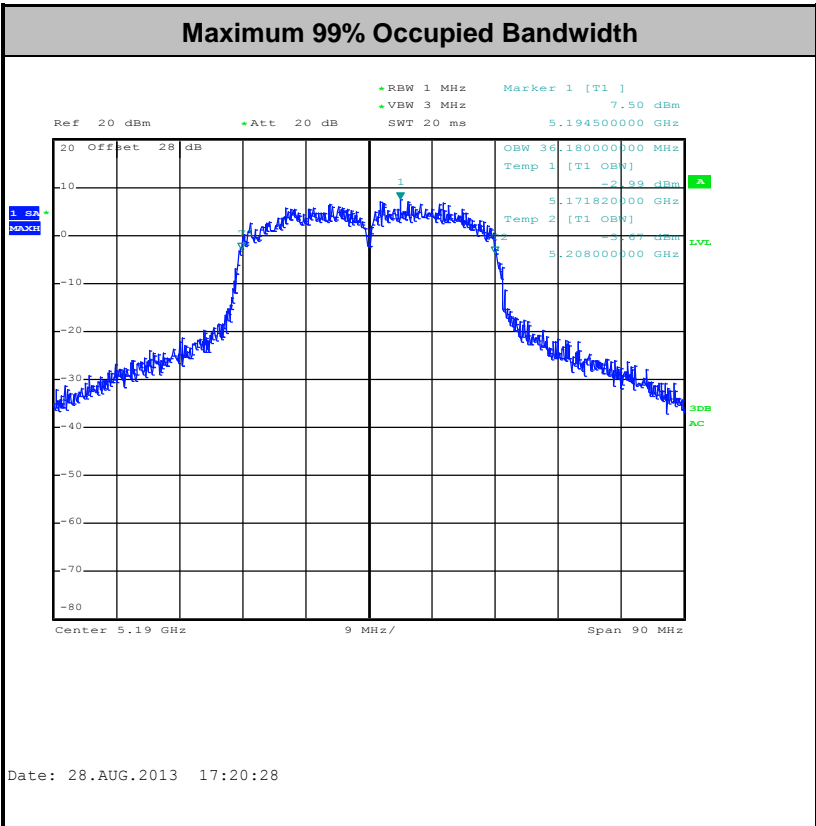
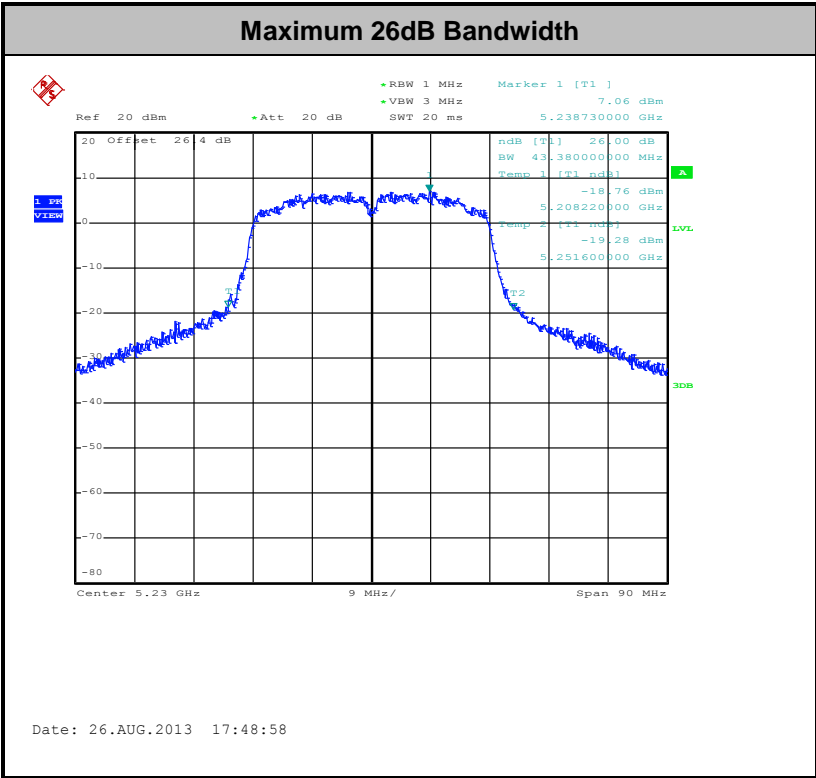
Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
					Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	17.50	17.30	21.60	21.15	22.38	23.01
11a	6Mbps	2	44	5220	17.35	17.35	21.30	20.00	22.39	23.01
11a	6Mbps	2	48	5240	17.40	17.30	21.20	19.95	22.38	23.00
HT20	MCS0	2	36	5180	18.45	18.35	22.90	22.25	22.64	23.01
HT20	MCS0	2	44	5220	18.35	18.35	22.55	21.90	22.64	23.01
HT20	MCS0	2	48	5240	18.35	18.30	22.70	22.80	22.62	23.01
HT40	MCS0	2	38	5190	36.18	35.91	42.84	42.30	23.01	23.01
HT40	MCS0	2	46	5230	36.09	36.00	42.84	43.38	23.01	23.01

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)
					Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	5260	17.30	17.25	21.10	19.80	29.37	23.97
11a	6Mbps	2	60	5300	17.25	17.15	20.50	19.50	29.34	23.90
11a	6Mbps	2	64	5320	17.30	17.25	20.60	19.45	29.37	23.89
HT20	MCS0	2	52	5260	18.30	18.20	22.25	21.05	29.60	23.98
HT20	MCS0	2	60	5300	18.30	18.30	22.20	21.05	29.62	23.98
HT20	MCS0	2	64	5320	18.30	18.15	21.75	20.60	29.59	23.98
HT40	MCS0	2	54	5270	36.00	36.00	43.38	42.03	30.00	23.98
HT40	MCS0	2	62	5310	36.00	35.91	42.48	41.67	30.00	23.98

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)
					Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	17.20	17.25	20.55	19.45	29.36	23.89
11a	6Mbps	2	116	5580	17.25	17.25	20.35	19.80	29.37	23.97
11a	6Mbps	2	140	5700	17.20	17.25	20.30	19.85	29.36	23.98
HT20	MCS0	2	100	5500	18.30	18.30	21.45	20.90	29.62	23.98
HT20	MCS0	2	116	5580	18.30	18.15	21.60	21.20	29.59	23.98
HT20	MCS0	2	140	5700	18.30	18.25	21.25	21.15	29.61	23.98
HT40	MCS0	2	102	5510	36.00	35.82	42.39	42.03	30.00	23.98
HT40	MCS0	2	110	5550	36.00	36.00	42.48	41.40	30.00	23.98
HT40	MCS0	2	134	5670	36.09	35.91	42.84	42.12	30.00	23.98

Test Band :	Straddle Channel	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

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)
					Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	144	5720	17.20	17.20	20.55	20.25	-	-
				NII -2e	13.75	13.75	15.50	15.40	28.38	22.88
				DTS	3.45	3.45	5.05	4.85	28.38	23.86
HT20	MCS0	2	144	5720	18.25	18.20	21.55	21.65	-	-
				NII -2e	14.25	14.25	16.10	16.00	28.54	23.04
				DTS	4.00	3.95	5.45	5.65	28.97	24.36
HT40	MCS0	2	142	5710	36.18	36.18	42.84	42.57	-	-
				NII -2e	33.27	33.27	36.69	36.60	30.00	23.98
				DTS	2.91	2.91	6.15	5.97	27.64	24.76



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 $4 \text{ dBm} + 10\log B$, 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, 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5720 MHz, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log B$, 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.

U-NII limits were applied for straddle channel in accordance with FCC KDB 644545 D01.

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

For normal channel, the testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r03. Method PM (Measurement using an RF average power meter):

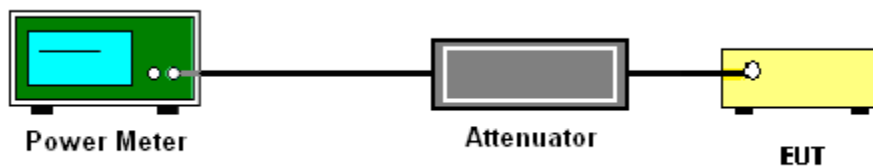
1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with a factor, $10 \log(1/x)$, where x is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

For straddle channel, the testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r03. Method SA-3 (RMS detection with max hold)

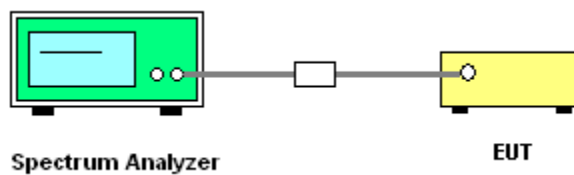
Compute power by integrating the spectrum across the 26dB occupied bandwidth of the signal using the instrument's band power measurement function.

3.2.4 Test Setup

For normal channel:



For straddle channel:



3.2.5 Test Result of Maximum Conducted Output Power

Test Band :	5GHz band 1	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	36	5180	13.0	11.0	15.2	23.0	2.64	-	Pass
11a	6Mbps	2	44	5220	13.0	10.7	15.0	23.0	2.64		Pass
11a	6Mbps	2	48	5240	13.0	10.7	15.0	23.0	2.64		Pass
HT20	MCS0	2	36	5180	13.0	11.0	15.1	23.0	2.64		Pass
HT20	MCS0	2	44	5220	12.8	10.7	14.9	23.0	2.64		Pass
HT20	MCS0	2	48	5240	13.0	11.0	15.2	23.0	2.64		Pass
HT40	MCS0	2	38	5190	10.1	7.9	12.1	23.0	2.64		Pass
HT40	MCS0	2	46	5230	13.0	10.8	15.1	23.0	2.64		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
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.

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			-	DG (dBi)	EIRP Power for IC Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	36	5180	13.0	11.0	15.2	-	2.64	22.4	Pass
11a	6Mbps	2	44	5220	13.0	10.7	15.0		2.64	22.4	Pass
11a	6Mbps	2	48	5240	13.0	10.7	15.0		2.64	22.4	Pass
HT20	MCS0	2	36	5180	13.0	11.0	15.1		2.64	22.6	Pass
HT20	MCS0	2	44	5220	12.8	10.7	14.9		2.64	22.6	Pass
HT20	MCS0	2	48	5240	13.0	11.0	15.2		2.64	22.6	Pass
HT40	MCS0	2	38	5190	10.1	7.9	12.1		2.64	23.0	Pass
HT40	MCS0	2	46	5230	13.0	10.8	15.1		2.64	23.0	Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
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 and 99% OBW for IC.

Test Band :	5GHz band 2	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	52	5260	13.0	8.5	14.3	24.0	2.76		Pass
11a	6Mbps	2	60	5300	13.0	8.4	14.3	23.9	2.76		Pass
11a	6Mbps	2	64	5320	13.0	8.3	14.3	23.9	2.76		Pass
HT20	MCS0	2	52	5260	13.0	8.5	14.4	24.0	2.76		Pass
HT20	MCS0	2	60	5300	13.0	8.0	14.2	24.0	2.76		Pass
HT20	MCS0	2	64	5320	12.8	8.2	14.1	24.0	2.76		Pass
HT40	MCS0	2	54	5270	13.0	8.5	14.3	24.0	2.76		Pass
HT40	MCS0	2	62	5310	12.1	7.4	13.3	24.0	2.76		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
2. For the 5250-5350 MHz MHz, 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.

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			IC Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	52	5260	13.0	8.5	14.3	23.4	2.76	29.4	Pass
11a	6Mbps	2	60	5300	13.0	8.4	14.3	23.3	2.76	29.3	Pass
11a	6Mbps	2	64	5320	13.0	8.3	14.3	23.4	2.76	29.4	Pass
HT20	MCS0	2	52	5260	13.0	8.5	14.4	23.6	2.76	29.6	Pass
HT20	MCS0	2	60	5300	13.0	8.0	14.2	23.6	2.76	29.6	Pass
HT20	MCS0	2	64	5320	12.8	8.2	14.1	23.6	2.76	29.6	Pass
HT40	MCS0	2	54	5270	13.0	8.5	14.3	24.0	2.76	30.0	Pass
HT40	MCS0	2	62	5310	12.1	7.4	13.3	24.0	2.76	30.0	Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
2. For the 5250-5350 MHz MHz, 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 :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	100	5500	12.9	10.0	14.7	23.9	3.06	-	Pass
11a	6Mbps	2	116	5580	13.0	9.6	14.6	24.0	3.06		Pass
11a	6Mbps	2	140	5700	13.0	10.0	14.8	24.0	3.06		Pass
HT20	MCS0	2	100	5500	13.0	10.0	14.8	24.0	3.06		Pass
HT20	MCS0	2	116	5580	12.7	9.5	14.4	24.0	3.06		Pass
HT20	MCS0	2	140	5700	13.0	9.8	14.7	24.0	3.06		Pass
HT40	MCS0	2	102	5510	12.8	9.7	14.5	24.0	3.06		Pass
HT40	MCS0	2	110	5550	13.0	9.8	14.7	24.0	3.06		Pass
HT40	MCS0	2	134	5670	13.0	9.7	14.7	24.0	3.06		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
2. For the 5470-5600MHz and 5650-5725MHz 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.

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			IC Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	100	5500	12.9	10.0	14.7	23.4	3.06	29.4	Pass
11a	6Mbps	2	116	5580	13.0	9.6	14.6	23.4	3.06	29.4	Pass
11a	6Mbps	2	140	5700	13.0	10.0	14.8	23.4	3.06	29.4	Pass
HT20	MCS0	2	100	5500	13.0	10.0	14.8	23.6	3.06	29.6	Pass
HT20	MCS0	2	116	5580	12.7	9.5	14.4	23.6	3.06	29.6	Pass
HT20	MCS0	2	140	5700	13.0	9.8	14.7	23.6	3.06	29.6	Pass
HT40	MCS0	2	102	5510	12.8	9.7	14.5	24.0	3.06	30.0	Pass
HT40	MCS0	2	110	5550	13.0	9.8	14.7	24.0	3.06	30.0	Pass
HT40	MCS0	2	134	5670	13.0	9.7	14.7	24.0	3.06	30.0	Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
2. For the 5470-5600MHz and 5650-5725MHz 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 :	Straddle Channel	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	144	5720	12.8	10.0	14.6	-	3.06	-	-
				NII -2e	12.0	9.3	13.8	22.9	3.06		Pass
				DTS	5.1	2.2	6.9	23.9	3.06		Pass
HT20	MCS0	2	144	5720	13.0	10.0	14.8	-	3.06	-	-
				NII -2e	12.2	9.3	14.0	23.0	3.06		Pass
				DTS	5.5	1.9	7.1	24.4	3.06		Pass
HT40	MCS0	2	142	5710	12.8	9.8	14.5	-	3.06	-	-
				NII -2e	12.6	9.6	14.3	24.0	3.06		Pass
				DTS	-1.2	-4.3	0.6	24.8	3.06		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
2. For NII-2e band falls into 5470-5725 MHz, 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. For DTS band falls into 5725-5825 MHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			IC Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	Sum Power				
11a	6Mbps	2	144	5720	12.8	10.0	14.6	-	3.06	-	-
				NII -2e	12.0	9.3	13.8	22.4	3.06	28.38	Pass
				DTS	5.1	2.2	6.9	22.4	3.06	28.38	Pass
HT20	MCS0	2	144	5720	13.0	10.0	14.8	-	3.06	-	-
				NII -2e	12.2	9.3	14.0	22.5	3.06	28.54	Pass
				DTS	5.5	1.9	7.1	23.0	3.06	28.97	Pass
HT40	MCS0	2	142	5710	12.8	9.8	14.5	-	3.06	-	-
				NII -2e	12.6	9.6	14.3	24.0	3.06	30.00	Pass
				DTS	-1.2	-4.3	0.6	21.6	3.06	27.64	Pass

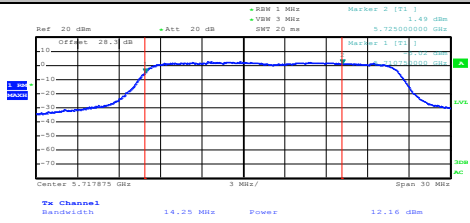
Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant.2.
2. For NII-2e band falls into 5470-5725 MHz, 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. For DTS band falls into 5725-5825 MHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.

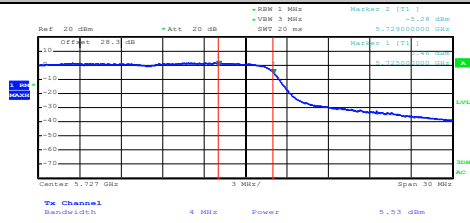
Maximum Straddle Channel Power

Ant. 1

NII-2e Band

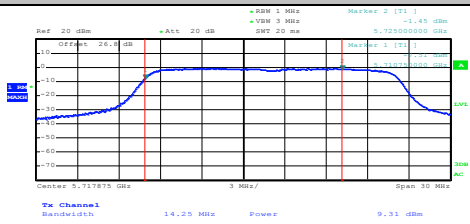


DTS Band

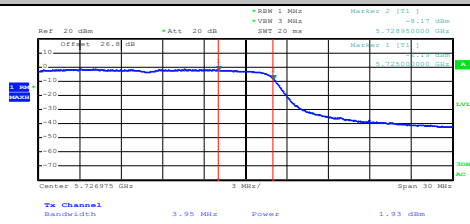


Ant. 2

NII-2e Band



DTS Band



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

For the bands 5250-5350 MHz, 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5720 MHz, peak power spectral density shall not exceed 11 dBm in any 1-MHz.

U-NII limits were applied for straddle channel in accordance with FCC KDB 644545 D01.

3.3.2 Measuring Instruments

See list of measuring instruments 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).

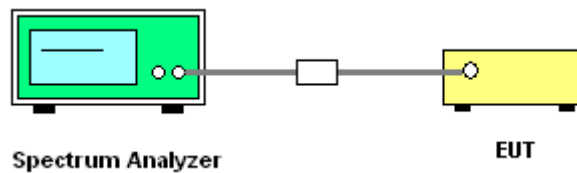
1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r03.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW \geq 3 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep time = 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.

4. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Band :	5GHz band 1	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	EIRP PSD for IC Limit (dBm)	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	36	5180			2.85	4.00	5.65	10	Pass
11a	6Mbps	2	44	5220			2.71	4.00	5.65	10	Pass
11a	6Mbps	2	48	5240			2.42	4.00	5.65	10	Pass
HT20	MCS0	2	36	5180			2.58	4.00	5.65	10	Pass
HT20	MCS0	2	44	5220			2.30	4.00	5.65	10	Pass
HT20	MCS0	2	48	5240			2.61	4.00	5.65	10	Pass
HT40	MCS0	2	38	5190			0.11	4.00	5.65	10	Pass
HT40	MCS0	2	46	5230			-0.12	4.00	5.65	10	Pass

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.

Test Band :	5GHz band 2	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	52	5260			1.98	11.00	5.77		Pass
11a	6Mbps	2	60	5300		1.81	11.00	5.77	Pass		
11a	6Mbps	2	64	5320		1.31	11.00	5.77	Pass		
HT20	MCS0	2	52	5260		1.80	11.00	5.77	Pass		
HT20	MCS0	2	60	5300		1.46	11.00	5.77	Pass		
HT20	MCS0	2	64	5320		0.84	11.00	5.77	Pass		
HT40	MCS0	2	54	5270		-0.90	11.00	5.77	Pass		
HT40	MCS0	2	62	5310		-1.89	11.00	5.77	Pass		

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.

Test Band :	5GHz band 3	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

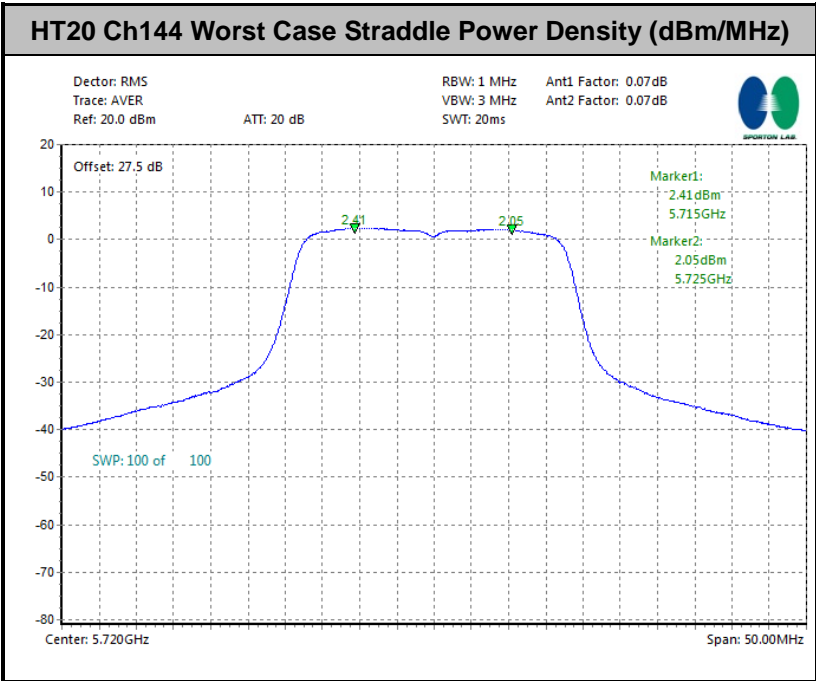
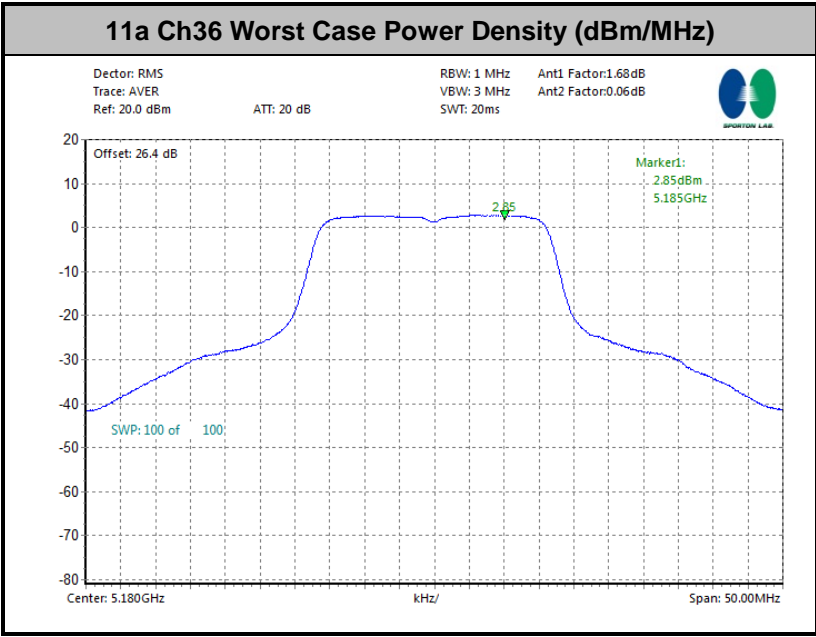
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	100	5500	-	2.15	10.93	6.07	-	Pass	
11a	6Mbps	2	116	5580		2.11	10.93	6.07		Pass	
11a	6Mbps	2	140	5700		2.57	10.93	6.07		Pass	
HT20	MCS0	2	100	5500		1.65	10.93	6.07		Pass	
HT20	MCS0	2	116	5580		1.72	10.93	6.07		Pass	
HT20	MCS0	2	140	5700		2.30	10.93	6.07		Pass	
HT40	MCS0	2	102	5510		-0.90	10.93	6.07		Pass	
HT40	MCS0	2	110	5550		-0.64	10.93	6.07		Pass	
HT40	MCS0	2	134	5670		-0.41	10.93	6.07		Pass	

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.

Test Band :	Straddle Channel	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	-	Pass /Fail			
					Ant. 1	Ant. 2	Sum PSD							
11a	6Mbps	2	144	NII -2e	-			10.93	6.07	-	Pass			
				DTS							1.90	10.93	6.07	Pass
HT20	MCS0	2	144	NII -2e							2.41	10.93	6.07	Pass
				DTS							2.05	10.93	6.07	Pass
HT40	MCS0	2	142	NII -2e							-0.39	10.93	6.07	Pass
				DTS							-4.21	10.93	6.07	Pass

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.



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

See list of measuring instruments of this test report.

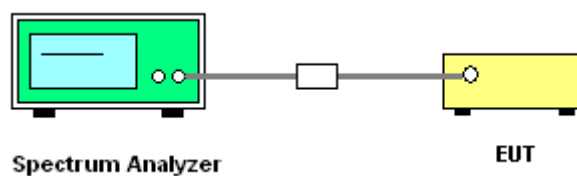
3.4.3 Test Procedures

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 \geq 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

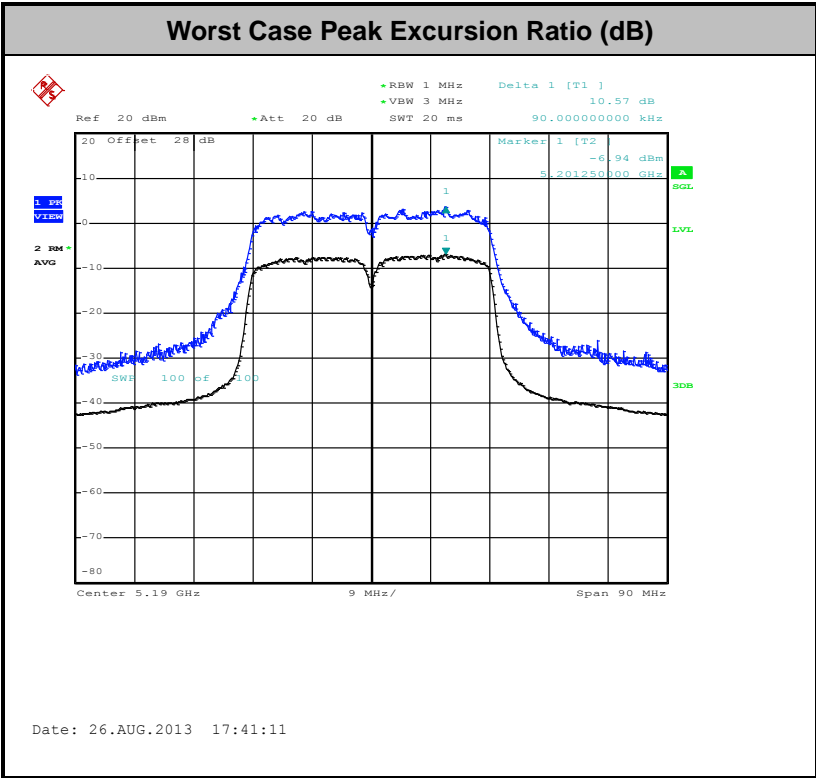
Test Band :	5GHz band 1,2,3	Temperature :	25~27°C
Test Engineer :	Stuart Lin	Relative Humidity :	50~55%

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	2	36	5180	9.09	10.12	10.07	10.17	-	13	Pass
HT20	2	36	5180	8.66	9.32	9.76	10.59	-	13	Pass
HT40	2	38	5190	9.49	9.82	9.72	11.49	-	13	Pass

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	2	52	5260	9.26	9.88	9.82	10.29	-	13	Pass
HT20	2	52	5260	8.96	9.72	9.88	10.58	-	13	Pass
HT40	2	54	5270	9.52	9.88	10.35	11.44	-	13	Pass

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	2	100	5500	9.29	10.14	10.45	10.42	-	13	Pass
HT20	2	100	5500	9.39	9.62	9.77	10.86	-	13	Pass
HT40	2	102	5510	9.49	10.31	9.88	11.13	-	13	Pass

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



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

3.5 Unwanted Emissions 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.

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

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

See list of measuring instruments of this test report.

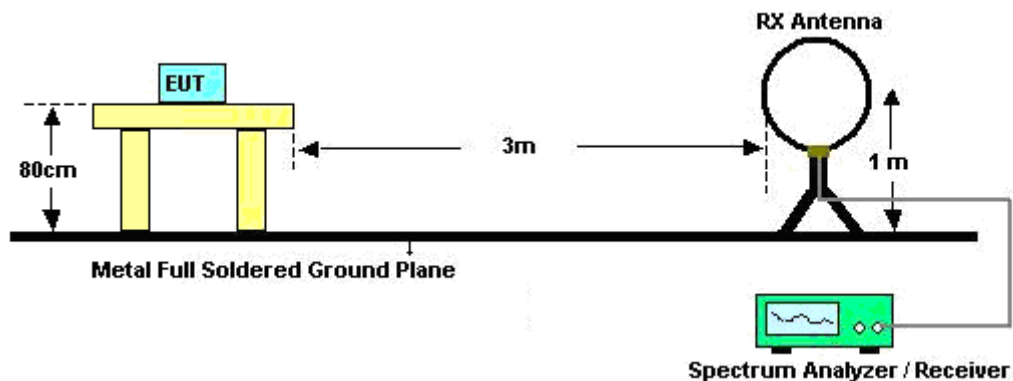
3.5.3 Test Procedures

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 \geq 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 \geq 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.
 - For 802.11a and 802.11nHT20 mode, the VBW are set 10Hz, and for 802.11n HT40, the VBW is set to 3kHz.

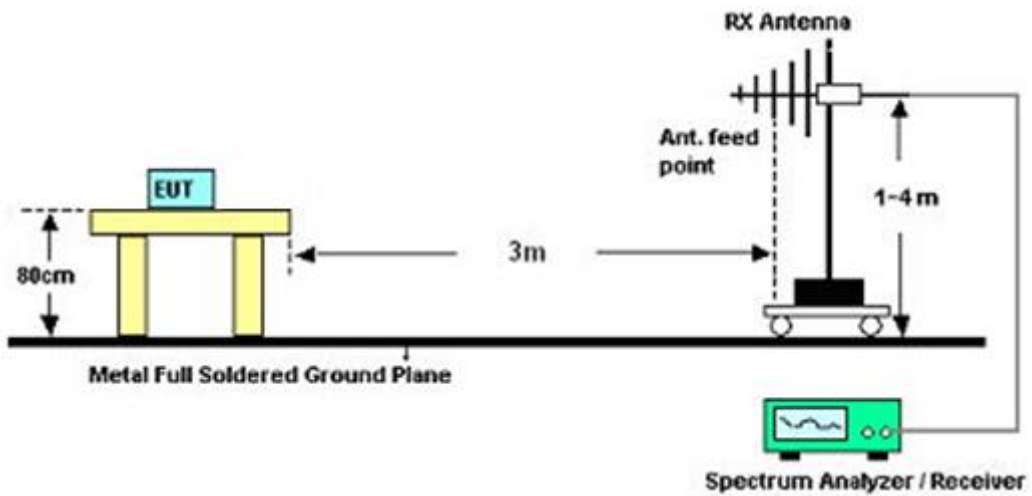
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters 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

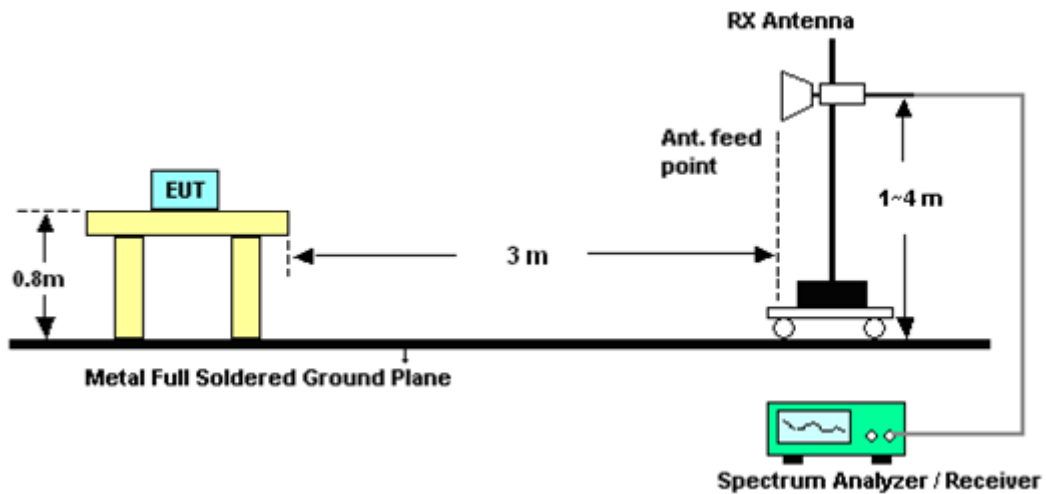
For radiated emissions below 30MHz



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 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Band Edges

MIMO<Ant. 1+ 2>

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
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
5147.75	55.21	-18.79	74	44.19	34.29	9.22	32.49	101	357	Peak
5150	41.65	-12.35	54	30.63	34.29	9.22	32.49	101	357	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	61.84	-12.16	74	50.82	34.29	9.22	32.49	180	219	Peak
5150	45.39	-8.61	54	34.37	34.29	9.22	32.49	180	219	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
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
5067.05	53.23	-20.77	74	42.46	34.07	9.05	32.35	100	14	Peak
5043.95	40.68	-13.32	54	29.99	34.03	9.01	32.35	100	14	Average
5355.83	56.29	-17.71	74	45.1	34.81	9.56	33.18	100	14	Peak
5355.83	47.82	-6.18	54	36.63	34.81	9.56	33.18	100	14	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
5065.25	54.13	-19.87	74	43.36	34.07	9.05	32.35	192	327	Peak
5043.95	41.3	-12.7	54	30.61	34.03	9.01	32.35	192	327	Average
5440.2	54.54	-19.46	74	43.26	35.03	9.73	33.48	192	327	Peak
5355.83	44.06	-9.94	54	32.87	34.81	9.56	33.18	192	327	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
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
5038.85	53.41	-20.59	74	42.37	34.35	9.01	32.32	101	333	Peak
5000.9	40.39	-13.61	54	29.41	34.3	8.97	32.29	101	333	Average
5351.21	53.86	-20.14	74	42.83	34.65	9.56	33.18	101	333	Peak
5353.08	40.59	-13.41	54	29.56	34.65	9.56	33.18	101	333	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
5147.9	53.92	-20.08	74	42.74	34.45	9.22	32.49	159	219	Peak
5001.05	40.51	-13.49	54	29.53	34.3	8.97	32.29	159	219	Average
5371.78	53.8	-20.2	74	42.7	34.67	9.61	33.18	159	219	Peak
5354.18	40.83	-13.17	54	29.8	34.65	9.56	33.18	159	219	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
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
5371.89	54.2	-19.8	74	43.1	34.67	9.61	33.18	100	319	Peak
5350.99	41.16	-12.84	54	30.13	34.65	9.56	33.18	100	319	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
5352.97	54.52	-19.48	74	43.49	34.65	9.56	33.18	192	216	Peak
5351.32	41.85	-12.15	54	30.82	34.65	9.56	33.18	192	216	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
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
5354.32	53.27	-20.73	74	42.24	34.65	9.56	33.18	104	66	Peak
5353.36	40.58	-13.42	54	29.55	34.65	9.56	33.18	104	66	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	54.05	-19.95	74	43.02	34.65	9.56	33.18	183	198	Peak
5353.2	41.04	-12.96	54	30.01	34.65	9.56	33.18	183	198	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
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	56.04	-17.96	74	45.08	35.07	10.04	34.15	103	345	Peak
5725	42.33	-11.67	54	31.37	35.07	10.04	34.15	103	345	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
5725.08	56.65	-17.35	74	45.69	35.07	10.04	34.15	159	203	Peak
5725	42.42	-11.58	54	31.46	35.07	10.04	34.15	159	203	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
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	56.34	-17.66	74	45.16	34.45	9.22	32.49	101	356	Peak
5149.85	42.3	-11.7	54	31.12	34.45	9.22	32.49	101	356	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
5147.3	61.59	-12.41	74	50.41	34.45	9.22	32.49	178	214	Peak
5150	46.7	-7.3	54	35.52	34.45	9.22	32.49	178	214	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
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
5083.55	53.34	-20.66	74	42.51	34.12	9.1	32.39	100	11	Peak
5122.1	40.24	-13.76	54	29.31	34.2	9.18	32.45	100	11	Average
5355.83	57.48	-16.52	74	46.29	34.81	9.56	33.18	100	11	Peak
5355.83	48.67	-5.33	54	37.48	34.81	9.56	33.18	100	11	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
5043.65	53.39	-20.61	74	42.7	34.03	9.01	32.35	143	330	Peak
5120	40.54	-13.46	54	29.61	34.2	9.18	32.45	143	330	Average
5356.05	55.67	-18.33	74	44.43	34.81	9.61	33.18	143	330	Peak
5355.83	46.57	-7.43	54	35.38	34.81	9.56	33.18	143	330	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
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
5030.3	53.61	-20.39	74	42.59	34.33	9.01	32.32	100	321	Peak
5000.3	40.39	-13.61	54	29.41	34.3	8.97	32.29	100	321	Average
5383.55	54.2	-19.8	74	43.15	34.68	9.65	33.28	100	321	Peak
5353.85	40.68	-13.32	54	29.65	34.65	9.56	33.18	100	321	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
5109.8	53.7	-20.3	74	42.56	34.42	9.14	32.42	160	217	Peak
5051.15	40.52	-13.48	54	29.47	34.35	9.05	32.35	160	217	Average
5403.9	54.28	-19.72	74	43.32	34.7	9.65	33.39	160	217	Peak
5354.18	40.84	-13.16	54	29.81	34.65	9.56	33.18	160	217	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
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
5353.08	54.62	-19.38	74	43.59	34.65	9.56	33.18	100	14	Peak
5350	40.74	-13.26	54	29.71	34.65	9.56	33.18	100	14	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
5350.55	54.36	-19.64	74	43.33	34.65	9.56	33.18	175	217	Peak
5350.33	41.94	-12.06	54	30.91	34.65	9.56	33.18	175	217	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
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
5367.92	53.09	-20.91	74	41.99	34.67	9.61	33.18	104	38	Peak
5353.2	40.55	-13.45	54	29.52	34.65	9.56	33.18	104	38	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
5394.16	53.72	-20.28	74	42.67	34.68	9.65	33.28	183	198	Peak
5353.2	40.84	-13.16	54	29.81	34.65	9.56	33.18	183	198	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
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
5725.24	58.72	-15.28	74	47.76	35.07	10.04	34.15	100	55	Peak
5725	43.37	-10.63	54	32.41	35.07	10.04	34.15	100	55	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	59.28	-14.72	74	48.32	35.07	10.04	34.15	161	203	Peak
5725	44.25	-9.75	54	33.29	35.07	10.04	34.15	161	203	Average

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	38	Relative Humidity :	51~53%
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
5149.85	64.24	-9.76	74	53.22	34.29	9.22	32.49	100	44	Peak
5150	53.15	-0.85	54	42.13	34.29	9.22	32.49	100	44	Average
5372.99	55.43	-18.57	74	44.15	34.85	9.61	33.18	100	44	Peak
5356.05	43.78	-10.22	54	32.54	34.81	9.61	33.18	100	44	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	64.41	-9.59	74	53.39	34.29	9.22	32.49	192	329	Peak
5149.85	53.23	-0.77	54	42.21	34.29	9.22	32.49	192	329	Average
5352.31	55.08	-18.92	74	43.89	34.81	9.56	33.18	192	329	Peak
5434.04	43.9	-10.1	54	32.62	35.03	9.73	33.48	192	329	Average

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	46	Relative Humidity :	51~53%
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
5114.9	54.1	-19.9	74	43.18	34.2	9.14	32.42	102	15	Peak
5096	42.49	-11.51	54	31.61	34.16	9.14	32.42	102	15	Average
5381.9	55.51	-18.49	74	44.24	34.9	9.65	33.28	102	15	Peak
5382.01	46.31	-7.69	54	35.04	34.9	9.65	33.28	102	15	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
5047.1	53.58	-20.42	74	42.85	34.03	9.05	32.35	174	331	Peak
5018	42.87	-11.13	54	32.28	33.94	8.97	32.32	174	331	Average
5355.06	54.65	-19.35	74	43.46	34.81	9.56	33.18	174	331	Peak
5381.9	45.01	-8.99	54	33.74	34.9	9.65	33.28	174	331	Average

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	54	Relative Humidity :	51~53%
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
5006	54.72	-19.28	74	43.72	34.32	8.97	32.29	100	17	Peak
5043.2	41.7	-12.3	54	30.69	34.35	9.01	32.35	100	17	Average
5376.62	53.23	-20.77	74	42.23	34.67	9.61	33.28	100	17	Peak
5371.12	41.83	-12.17	54	30.73	34.67	9.61	33.18	100	17	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
5028.05	53.86	-20.14	74	42.84	34.33	9.01	32.32	194	219	Peak
5017.4	41.76	-12.24	54	30.79	34.32	8.97	32.32	194	219	Average
5355.5	54.33	-19.67	74	43.3	34.65	9.56	33.18	194	219	Peak
5354.18	42.23	-11.77	54	31.2	34.65	9.56	33.18	194	219	Average

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	62	Relative Humidity :	51~53%
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
5001.5	53.63	-20.37	74	42.65	34.3	8.97	32.29	100	15	Peak
5003.45	41.63	-12.37	54	30.65	34.3	8.97	32.29	100	15	Average
5351.32	58.71	-15.29	74	47.68	34.65	9.56	33.18	100	15	Peak
5350	47.93	-6.07	54	36.9	34.65	9.56	33.18	100	15	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
5039.6	53.64	-20.36	74	42.6	34.35	9.01	32.32	189	203	Peak
5024.9	42.06	-11.94	54	31.04	34.33	9.01	32.32	189	203	Average
5350.11	64.36	-9.64	74	53.33	34.65	9.56	33.18	189	203	Peak
5350.11	53.43	-0.57	54	42.4	34.65	9.56	33.18	189	203	Average

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	102	Relative Humidity :	51~53%
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
5470	55.89	-18.11	74	44.91	34.77	9.78	33.57	155	51	Peak
5469.84	44.6	-9.4	54	33.62	34.77	9.78	33.57	155	51	Average
5738.92	53.83	-20.17	74	42.87	35.09	10.04	34.17	155	51	Peak
5741.4	41.31	-12.69	54	30.33	35.09	10.06	34.17	155	51	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
5469.84	64.07	-9.93	74	53.09	34.77	9.78	33.57	199	200	Peak
5470	51.58	-2.42	54	40.6	34.77	9.78	33.57	199	200	Average
5748.92	53.71	-20.29	74	42.73	35.09	10.06	34.17	199	200	Peak
5751.48	41.52	-12.48	54	30.54	35.09	10.06	34.17	199	200	Average

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	134	Relative Humidity :	51~53%
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
5354.32	53.88	-20.12	74	42.85	34.65	9.56	33.18	102	40	Peak
5351.44	42.06	-11.94	54	31.03	34.65	9.56	33.18	102	40	Average
5749.32	53.73	-20.27	74	42.75	35.09	10.06	34.17	102	40	Peak
5737.72	41.53	-12.47	54	30.57	35.09	10.04	34.17	102	40	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
5351.28	55.06	-18.94	74	44.03	34.65	9.56	33.18	156	200	Peak
5353.68	42.51	-11.49	54	31.48	34.65	9.56	33.18	156	200	Average
5762.12	53.61	-20.39	74	42.64	35.11	10.06	34.2	156	200	Peak
5725.32	41.72	-12.28	54	30.76	35.07	10.04	34.15	156	200	Average

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

MIMO<Ant.1 +2>

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5182 MHz is fundamental signal which can be ignored. 10359 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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	91.88	-	-	80.65	34.48	9.27	32.52	101	357	Average
5182	103.34	-	-	92.11	34.48	9.27	32.52	101	357	Peak
10359	36.36	-17.64	54	44.23	37.29	13.71	58.87	100	23	Average
10359	50.5	-23.5	74	58.37	37.29	13.71	58.87	100	23	Peak
15540	46.49	-27.51	74	48.09	40.33	15.56	57.49	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5184 MHz is fundamental signal which can be ignored. 10362 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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
5184	99.43	-	-	88.2	34.48	9.27	32.52	180	219	Average
5184	111.09	-	-	99.86	34.48	9.27	32.52	180	219	Peak
10362	38.27	-15.73	54	46.14	37.29	13.71	58.87	100	122	Average
10362	52.2	-21.8	74	60.07	37.29	13.71	58.87	100	122	Peak
15540	46.58	-27.42	74	48.18	40.33	15.56	57.49	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5222 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5222	97.28	-	-	86.12	34.46	9.35	32.65	100	19	Average
5222	110.31	-	-	99.15	34.46	9.35	32.65	100	19	Peak
10440	48.04	-25.96	74	55.86	37.35	13.71	58.88	100	0	Peak
15660	48.51	-25.49	74	49.75	40.46	15.65	57.35	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5222 MHz is fundamental signal which can be ignored. 10442 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5222	98.07	-	-	86.91	34.46	9.35	32.65	190	330	Average
5222	111.13	-	-	99.97	34.46	9.35	32.65	190	330	Peak
10442	49.39	-24.61	74	57.21	37.35	13.71	58.88	100	0	Peak
15660	47.72	-26.28	74	48.96	40.46	15.65	57.35	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5242 MHz is fundamental signal which can be ignored. 10482 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.01	28.33	-11.67	40	49.56	9.3	0.67	31.2	100	47	Peak
128.82	20.26	-23.24	43.5	38.6	11.62	1.14	31.1	-	-	Peak
267.87	24.51	-21.49	46	41.03	12.85	1.63	31	-	-	Peak
331.5	20.39	-25.61	46	35.36	14.17	1.86	31	-	-	Peak
686.4	22.54	-23.46	46	29.57	20.49	2.91	30.43	-	-	Peak
906.2	25.59	-20.41	46	29.36	23.19	3.35	30.31	-	-	Peak
5242	97.21	-	-	85.92	34.55	9.39	32.65	100	14	Average
5242	110.04	-	-	98.75	34.55	9.39	32.65	100	14	Peak
10482	49.29	-24.71	74	57.07	37.39	13.72	58.89	100	0	Peak
15720	46.94	-27.06	74	48	40.52	15.69	57.27	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5240 MHz is fundamental signal which can be ignored. 10482 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
46.74	29.6	-10.4	40	50.43	9.7	0.67	31.2	100	158	Peak
130.17	25.31	-18.19	43.5	43.66	11.6	1.15	31.1	-	-	Peak
224.67	23.33	-22.67	46	42.03	10.85	1.45	31	-	-	Peak
323.1	23.56	-22.44	46	38.81	13.93	1.82	31	-	-	Peak
653.5	22.6	-23.4	46	30.01	20.23	2.85	30.49	-	-	Peak
821.5	24.52	-21.48	46	29.35	22.31	3.2	30.34	-	-	Peak
5240	97.27	-	-	86.02	34.51	9.39	32.65	192	327	Average
5240	110.05	-	-	98.8	34.51	9.39	32.65	192	327	Peak
10482	37.84	-16.16	54	45.62	37.39	13.72	58.89	120	166	Average
10482	51.37	-22.63	74	59.15	37.39	13.72	58.89	120	166	Peak
15720	47.41	-26.59	74	48.47	40.52	15.69	57.27	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5258 MHz is fundamental signal which can be ignored. 10521 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5258	91.2	-	-	80.02	34.55	9.39	32.76	101	333	Average
5258	102.65	-	-	91.47	34.55	9.39	32.76	101	333	Peak
10521	45	-29	74	52.31	37.81	13.72	58.84	100	0	Peak
15780	47.66	-26.34	74	48.97	40.16	15.75	57.22	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5258 MHz is fundamental signal which can be ignored. 10521 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5258	97.1	-	-	85.92	34.55	9.39	32.76	159	219	Average
5258	108.8	-	-	97.62	34.55	9.39	32.76	159	219	Peak
10521	45.4	-28.6	74	52.71	37.81	13.72	58.84	100	0	Peak
15780	47.83	-26.17	74	49.14	40.16	15.75	57.22	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5302 MHz is fundamental signal which can be ignored. 10599 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5302	91.74	-	-	80.63	34.6	9.48	32.97	110	334	Average
5302	103.55	-	-	92.44	34.6	9.48	32.97	110	334	Peak
10599	45.11	-28.89	74	52.15	37.84	13.73	58.61	100	0	Peak
15900	47.01	-26.99	74	48.07	40.18	15.84	57.08	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5298 MHz is fundamental signal which can be ignored. 10599 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5298	97.28	-	-	86.17	34.6	9.48	32.97	176	219	Average
5298	109.25	-	-	98.14	34.6	9.48	32.97	176	219	Peak
10599	44.4	-29.6	74	51.44	37.84	13.73	58.61	100	0	Peak
15900	46.69	-27.31	74	47.75	40.18	15.84	57.08	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
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	91.59	-	-	80.42	34.62	9.52	32.97	100	319	Average
5318	102.9	-	-	91.73	34.62	9.52	32.97	100	319	Peak
10641	45.57	-28.43	74	52.5	37.86	13.73	58.52	100	0	Peak
15960	47.67	-26.33	74	48.6	40.19	15.88	57	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
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	96.49	-	-	85.32	34.62	9.52	32.97	192	216	Average
5322	108.27	-	-	97.1	34.62	9.52	32.97	192	216	Peak
10640	44.49	-29.51	74	51.42	37.86	13.73	58.52	100	0	Peak
15960	46.79	-27.21	74	47.72	40.19	15.88	57	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5502 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	89.91	-	-	78.99	34.8	9.86	33.74	104	66	Average
5502	101.63	-	-	90.71	34.8	9.86	33.74	104	66	Peak
11001	45.13	-28.87	74	50.93	38	13.76	57.56	100	0	Peak
16500	48.84	-25.16	74	47.28	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5498 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5498	94.43	-	-	83.47	34.8	9.82	33.66	183	198	Average
5498	106.66	-	-	95.7	34.8	9.82	33.66	183	198	Peak
11001	45.88	-28.12	74	51.68	38	13.76	57.56	100	0	Peak
16500	48.36	-25.64	74	46.8	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5582 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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	90.92	-	-	80.11	34.9	9.92	34.01	114	67	Average
5582	103.12	-	-	92.31	34.9	9.92	34.01	114	67	Peak
11160	45.16	-28.84	74	50.42	38.17	13.93	57.36	100	0	Peak
16740	49.18	-24.82	74	47.46	41.54	16.23	56.05	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5582 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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	94.35	-	-	83.54	34.9	9.92	34.01	195	199	Average
5582	105.98	-	-	95.17	34.9	9.92	34.01	195	199	Peak
11160	45.81	-28.19	74	51.07	38.17	13.93	57.36	100	0	Peak
16740	49.34	-24.66	74	47.62	41.54	16.23	56.05	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5702 MHz is fundamental signal which can be ignored. 17100 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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	95.28	-	-	84.33	35.05	10.02	34.12	103	345	Average
5702	106.6	-	-	95.65	35.05	10.02	34.12	103	345	Peak
11400	45.77	-28.23	74	50.23	38.4	14.21	57.07	100	0	Peak
17100	47.69	-26.31	74	45.81	41.58	16.46	56.16	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5702 MHz is fundamental signal which can be ignored. 17100 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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	95.31	-	-	84.36	35.05	10.02	34.12	159	203	Average
5702	106.9	-	-	95.95	35.05	10.02	34.12	159	203	Peak
11400	46.24	-27.76	74	50.7	38.4	14.21	57.07	100	0	Peak
17100	48.28	-25.72	74	46.4	41.58	16.46	56.16	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5720 MHz is fundamental signal which can be ignored. 17160 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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
5720	91.69	-	-	80.73	35.07	10.04	34.15	100	36	Average
5720	102.97	-	-	92.01	35.07	10.04	34.15	100	36	Peak
11439	46.76	-27.24	74	51.09	38.43	14.27	57.03	100	0	Peak
17160	48.68	-25.32	74	46.84	41.5	16.51	56.17	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5720 MHz is fundamental signal which can be ignored. 17160 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 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
5720	92.53	-	-	81.57	35.07	10.04	34.15	154	225	Average
5720	103.7	-	-	92.74	35.07	10.04	34.15	154	225	Peak
11439	45.8	-28.2	74	50.13	38.43	14.27	57.03	100	0	Peak
17160	48.15	-25.85	74	46.31	41.5	16.51	56.17	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5184 MHz is fundamental signal which can be ignored. 10362 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5184	92.15	-	-	80.92	34.48	9.27	32.52	101	356	Average
5184	103.7	-	-	92.47	34.48	9.27	32.52	101	356	Peak
10362	40.73	-13.27	54	48.17	37.72	13.71	58.87	100	18	Average
10362	51.89	-22.11	74	59.33	37.72	13.71	58.87	100	18	Peak
15540	47.07	-26.93	74	48.89	40.11	15.56	57.49	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5184 MHz is fundamental signal which can be ignored. 10362 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5184	99.47	-	-	88.24	34.48	9.27	32.52	178	214	Average
5184	111.43	-	-	100.2	34.48	9.27	32.52	178	214	Peak
10362	42.84	-11.16	54	50.28	37.72	13.71	58.87	100	152	Average
10362	53.71	-20.29	74	61.15	37.72	13.71	58.87	100	152	Peak
15540	47.29	-26.71	74	49.11	40.11	15.56	57.49	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5220 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5220	97.35	-	-	86.09	34.46	9.35	32.55	104	3	Average
5220	109.93	-	-	98.67	34.46	9.35	32.55	104	3	Peak
10440	48.53	-25.47	74	56.35	37.35	13.71	58.88	100	0	Peak
15660	47.82	-26.18	74	49.06	40.46	15.65	57.35	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5220 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5220	98.65	-	-	87.39	34.46	9.35	32.55	192	332	Average
5220	111.57	-	-	100.31	34.46	9.35	32.55	192	332	Peak
10440	49.26	-24.74	74	57.08	37.35	13.71	58.88	100	0	Peak
15660	47.33	-26.67	74	48.57	40.46	15.65	57.35	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 1. 5242 MHz is fundamental signal which can be ignored. 2. 10480 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.01	29.42	-10.58	40	50.65	9.3	0.67	31.2	100	211	Peak
137.19	20.07	-23.43	43.5	38.54	11.44	1.19	31.1	-	-	Peak
271.11	24.17	-21.83	46	40.62	12.9	1.64	30.99	-	-	Peak
487.6	19.96	-26.04	46	30.44	17.84	2.41	30.73	-	-	Peak
659.8	21.45	-24.55	46	28.8	20.27	2.86	30.48	-	-	Peak
874	23.96	-22.04	46	28.17	22.84	3.3	30.35	-	-	Peak
5242	97.33	-	-	86.04	34.55	9.39	32.65	100	11	Average
5242	111.08	-	-	99.79	34.55	9.39	32.65	100	11	Peak
10480	48.44	-25.56	74	56.22	37.39	13.72	58.89	100	0	Peak
15720	46.59	-27.41	74	47.65	40.52	15.69	57.27	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5238 MHz is fundamental signal which can be ignored. 10480 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.16	23.79	-16.21	40	36.1	18.56	0.55	31.42	100	125	Peak
128.82	24.11	-19.39	43.5	42.45	11.62	1.14	31.1	-	-	Peak
290.28	24.64	-21.36	46	40.89	13.16	1.69	31.1	-	-	Peak
326.6	23.64	-22.36	46	38.77	14.03	1.84	31	-	-	Peak
692	22.1	-23.9	46	29.07	20.53	2.92	30.42	-	-	Peak
864.9	25.08	-20.92	46	29.41	22.75	3.29	30.37	-	-	Peak
5238	98.25	-	-	87	34.51	9.39	32.65	143	330	Average
5238	111.71	-	-	100.46	34.51	9.39	32.65	143	330	Peak
10480	37.18	-16.82	54	44.96	37.39	13.72	58.89	102	60	Average
10480	50.42	-23.58	74	58.2	37.39	13.72	58.89	102	60	Peak
15720	46.13	-27.87	74	47.19	40.52	15.69	57.27	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5260 MHz is fundamental signal which can be ignored. 10521 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5260	90.55	-	-	79.3	34.57	9.44	32.76	100	321	Average
5260	102.29	-	-	91.04	34.57	9.44	32.76	100	321	Peak
10521	44.54	-29.46	74	51.85	37.81	13.72	58.84	100	0	Peak
15780	46.57	-27.43	74	47.88	40.16	15.75	57.22	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5260 MHz is fundamental signal which can be ignored. 10521 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5260	96.61	-	-	85.36	34.57	9.44	32.76	160	217	Average
5260	108.37	-	-	97.12	34.57	9.44	32.76	160	217	Peak
10521	44.63	-29.37	74	51.94	37.81	13.72	58.84	100	0	Peak
15780	47.69	-26.31	74	49	40.16	15.75	57.22	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5300 MHz is fundamental signal which can be ignored. 2. 10599 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5300	91.38	-	-	80.27	34.6	9.48	32.97	100	319	Average
5300	103.04	-	-	91.93	34.6	9.48	32.97	100	319	Peak
10599	45.01	-28.99	74	52.05	37.84	13.73	58.61	100	0	Peak
15900	46.44	-27.56	74	47.5	40.18	15.84	57.08	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
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 (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5300	96.21	-	-	85.1	34.6	9.48	32.97	176	222	Average
5300	108.06	-	-	96.95	34.6	9.48	32.97	176	222	Peak
10600	44.75	-29.25	74	51.79	37.84	13.73	58.61	100	0	Peak
15900	47.2	-26.8	74	48.26	40.18	15.84	57.08	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 5320 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 (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5320	90.09	-	-	78.92	34.62	9.52	32.97	100	14	Average
5320	102.08	-	-	90.91	34.62	9.52	32.97	100	14	Peak
10641	45.28	-28.72	74	52.21	37.86	13.73	58.52	100	0	Peak
15960	46.52	-27.48	74	47.45	40.19	15.88	57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
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 (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5322	96.19	-	-	85.02	34.62	9.52	32.97	175	217	Average
5322	107.73	-	-	96.56	34.62	9.52	32.97	175	217	Peak
10641	45.43	-28.57	74	52.36	37.86	13.73	58.52	100	0	Peak
15960	46.57	-27.43	74	47.5	40.19	15.88	57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5498 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5498	89.53	-	-	78.57	34.8	9.82	33.66	104	38	Average
5498	101.26	-	-	90.3	34.8	9.82	33.66	104	38	Peak
11001	45.1	-28.9	74	50.9	38	13.76	57.56	100	0	Peak
16500	47.17	-26.83	74	45.61	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5500 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5500	93.85	-	-	82.85	34.8	9.86	33.66	183	198	Average
5500	106.1	-	-	95.1	34.8	9.86	33.66	183	198	Peak
11001	44.9	-29.1	74	50.7	38	13.76	57.56	100	0	Peak
16500	47.42	-26.58	74	45.86	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5580 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	88.97	-	-	78.18	34.88	9.92	34.01	138	65	Average
5580	100.88	-	-	90.09	34.88	9.92	34.01	138	65	Peak
11160	45.62	-28.38	74	50.88	38.17	13.93	57.36	100	0	Peak
16740	48.26	-25.74	74	46.54	41.54	16.23	56.05	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5580 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	93.32	-	-	82.53	34.88	9.92	34.01	160	200	Average
5580	105.68	-	-	94.89	34.88	9.92	34.01	160	200	Peak
11160	45.21	-28.79	74	50.47	38.17	13.93	57.36	100	0	Peak
16740	49.44	-24.56	74	47.72	41.54	16.23	56.05	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5702 MHz is fundamental signal which can be ignored. 17100 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	92.82	-	-	81.87	35.05	10.02	34.12	100	55	Average
5702	104.32	-	-	93.37	35.05	10.02	34.12	100	55	Peak
11400	46.41	-27.59	74	50.87	38.4	14.21	57.07	100	0	Peak
17100	48.8	-25.2	74	46.92	41.58	16.46	56.16	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5698 MHz is fundamental signal which can be ignored. 17100 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5698	94.5	-	-	83.57	35.03	10.02	34.12	161	203	Average
5698	105.99	-	-	95.06	35.03	10.02	34.12	161	203	Peak
11400	46.96	-27.04	74	51.42	38.4	14.21	57.07	100	0	Peak
17100	49.63	-24.37	74	47.75	41.58	16.46	56.16	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5720 MHz is fundamental signal which can be ignored. 17160 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5720	91.29	-	-	80.33	35.07	10.04	34.15	100	62	Average
5720	103.46	-	-	92.5	35.07	10.04	34.15	100	62	Peak
11439	46.23	-27.77	74	50.56	38.43	14.27	57.03	100	0	Peak
17160	47.99	-26.01	74	46.15	41.5	16.51	56.17	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5718 MHz is fundamental signal which can be ignored. 17160 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5718	94.27	-	-	83.31	35.07	10.04	34.15	189	200	Average
5718	106	-	-	95.04	35.07	10.04	34.15	189	200	Peak
11439	46.39	-27.61	74	50.72	38.43	14.27	57.03	100	0	Peak
17160	48.54	-25.46	74	46.7	41.5	16.51	56.17	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5192 MHz is fundamental signal which can be ignored. 10382 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5192	95.75	-	-	84.54	34.42	9.31	32.52	100	44	Average
5192	106.11	-	-	94.9	34.42	9.31	32.52	100	44	Peak
10382	49.82	-24.18	74	57.25	37.73	13.71	58.87	100	0	Peak
15570	47.38	-26.62	74	49.14	40.11	15.58	57.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5192 MHz is fundamental signal which can be ignored. 10383 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5192	98.65	-	-	87.44	34.42	9.31	32.52	192	329	Average
5192	109.69	-	-	98.48	34.42	9.31	32.52	192	329	Peak
10383	42.25	-11.75	54	49.68	37.73	13.71	58.87	100	35	Average
10383	52.11	-21.89	74	59.54	37.73	13.71	58.87	100	35	Peak
15570	47.03	-26.97	74	48.79	40.11	15.58	57.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5232 MHz is fundamental signal which can be ignored. 10460 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5232	99.64	-	-	88.43	34.51	9.35	32.65	102	15	Average
5232	110.69	-	-	99.48	34.51	9.35	32.65	102	15	Peak
10460	46.83	-27.17	74	54.63	37.36	13.72	58.88	100	0	Peak
15690	47.36	-26.64	74	48.51	40.49	15.67	57.31	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5232 MHz is fundamental signal which can be ignored. 10460 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5232	100.6	-	-	89.39	34.51	9.35	32.65	174	331	Average
5232	111.45	-	-	100.24	34.51	9.35	32.65	174	331	Peak
10460	47.12	-26.88	74	54.92	37.36	13.72	58.88	100	0	Peak
15690	46.75	-27.25	74	47.9	40.49	15.67	57.31	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5270 MHz is fundamental signal which can be ignored. 10539 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5270	90.36	-	-	79.11	34.57	9.44	32.76	100	17	Average
5270	101.03	-	-	89.78	34.57	9.44	32.76	100	17	Peak
10539	45.3	-28.7	74	52.57	37.81	13.72	58.8	100	0	Peak
15810	47.38	-26.62	74	48.63	40.16	15.77	57.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5272 MHz is fundamental signal which can be ignored. 10539 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5272	96.05	-	-	84.9	34.57	9.44	32.86	194	219	Average
5272	106.83	-	-	95.68	34.57	9.44	32.86	194	219	Peak
10539	45.86	-28.14	74	53.13	37.81	13.72	58.8	100	0	Peak
15810	47.22	-26.78	74	48.47	40.16	15.77	57.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
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 (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.01	31.34	-8.66	40	52.57	9.3	0.67	31.2	100	19	Peak
129.09	20.11	-23.39	43.5	38.45	11.62	1.14	31.1	-	-	Peak
269.22	24.32	-21.68	46	40.81	12.87	1.64	31	-	-	Peak
334.3	20.27	-25.73	46	35.16	14.24	1.87	31	-	-	Peak
466.6	21.12	-24.88	46	32.19	17.39	2.34	30.8	-	-	Peak
890.8	25.12	-20.88	46	29.11	23	3.33	30.32	-	-	Peak
5312	89.63	-	-	78.46	34.62	9.52	32.97	100	15	Average
5312	100.25	-	-	89.08	34.62	9.52	32.97	100	15	Peak
10620	44.99	-29.01	74	51.98	37.85	13.73	58.57	100	0	Peak
15930	47.47	-26.53	74	48.46	40.19	15.86	57.04	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 5310 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 (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.56	28.46	-11.54	40	44.44	14.66	0.6	31.24	100	149	Peak
128.82	25.29	-18.21	43.5	43.63	11.62	1.14	31.1	-	-	Peak
225.21	22.43	-23.57	46	41.13	10.85	1.45	31	-	-	Peak
328	23.75	-22.25	46	38.85	14.06	1.84	31	-	-	Peak
631.8	21.54	-24.46	46	29.25	20.05	2.78	30.54	-	-	Peak
900.6	24.64	-21.36	46	28.49	23.11	3.34	30.3	-	-	Peak
5310	95.26	-	-	84.09	34.62	9.52	32.97	189	203	Average
5310	106.13	-	-	94.96	34.62	9.52	32.97	189	203	Peak
10620	44.73	-29.27	74	51.72	37.85	13.73	58.57	100	0	Peak
15930	48.99	-25.01	74	49.98	40.19	15.86	57.04	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5510 MHz is fundamental signal which can be ignored. 16530 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5510	88.06	-	-	77.14	34.8	9.86	33.74	155	51	Average
5510	99.75	-	-	88.83	34.8	9.86	33.74	155	51	Peak
11019	45.69	-28.31	74	51.45	38.02	13.76	57.54	100	0	Peak
16530	48.99	-25.01	74	47.41	41.42	16.14	55.98	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5512 MHz is fundamental signal which can be ignored. 16530 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5512	92.77	-	-	81.85	34.8	9.86	33.74	199	200	Average
5512	103.55	-	-	92.63	34.8	9.86	33.74	199	200	Peak
11019	45.39	-28.61	74	51.15	38.02	13.76	57.54	100	0	Peak
16530	48.74	-25.26	74	47.16	41.42	16.14	55.98	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	110	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5552 MHz is fundamental signal which can be ignored. 16650 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5552	89.77	-	-	78.93	34.86	9.9	33.92	139	66	Average
5552	100.16	-	-	89.32	34.86	9.9	33.92	139	66	Peak
11100	46.24	-27.76	74	51.71	38.1	13.87	57.44	100	0	Peak
16650	48.33	-25.67	74	46.67	41.49	16.19	56.02	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	110	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5552 MHz is fundamental signal which can be ignored. 16650 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5552	93.92	-	-	83.08	34.86	9.9	33.92	196	201	Average
5552	104.43	-	-	93.59	34.86	9.9	33.92	196	201	Peak
11100	46.94	-27.06	74	52.41	38.1	13.87	57.44	100	0	Peak
16650	48.61	-25.39	74	46.95	41.49	16.19	56.02	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5666 MHz is fundamental signal which can be ignored. 17010 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5666	91.94	-	-	81.06	34.99	9.98	34.09	102	40	Average
5666	101.74	-	-	90.86	34.99	9.98	34.09	102	40	Peak
11340	46.4	-27.6	74	51.06	38.33	14.16	57.15	100	0	Peak
17010	50.54	-23.46	74	48.65	41.68	16.34	56.13	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5672 MHz is fundamental signal which can be ignored. 17010 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5672	92.57	-	-	81.65	35.01	10	34.09	156	200	Average
5672	103.02	-	-	92.1	35.01	10	34.09	156	200	Peak
11340	46.67	-27.33	74	51.33	38.33	14.16	57.15	100	0	Peak
17010	49.25	-24.75	74	47.36	41.68	16.34	56.13	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	142	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5712 MHz is fundamental signal which can be ignored. 17130 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5712	90.96	-	-	80.04	35.05	10.02	34.15	101	38	Average
5712	101.57	-	-	90.65	35.05	10.02	34.15	101	38	Peak
11421	48.15	-25.85	74	52.54	38.42	14.24	57.05	100	0	Peak
17130	49.61	-24.39	74	47.74	41.54	16.49	56.16	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	142	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5710 MHz is fundamental signal which can be ignored. 17130 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5710	93.14	-	-	82.22	35.05	10.02	34.15	187	198	Average
5710	103.15	-	-	92.2	35.05	10.02	34.12	187	198	Peak
11421	47.34	-26.66	74	51.73	38.42	14.24	57.05	100	0	Peak
17130	49.99	-24.01	74	48.12	41.54	16.49	56.16	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 (dB μ V)	
	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.

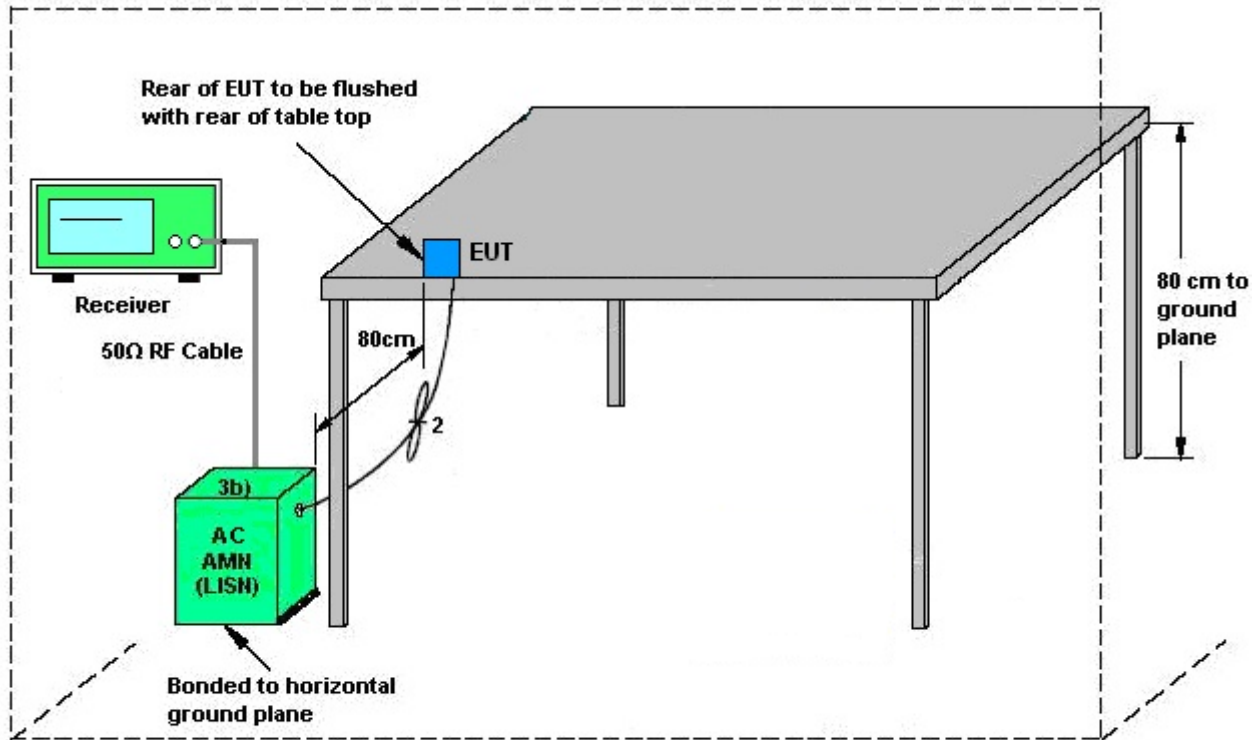
3.6.2 Measuring Instruments

See list of measuring instruments 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.

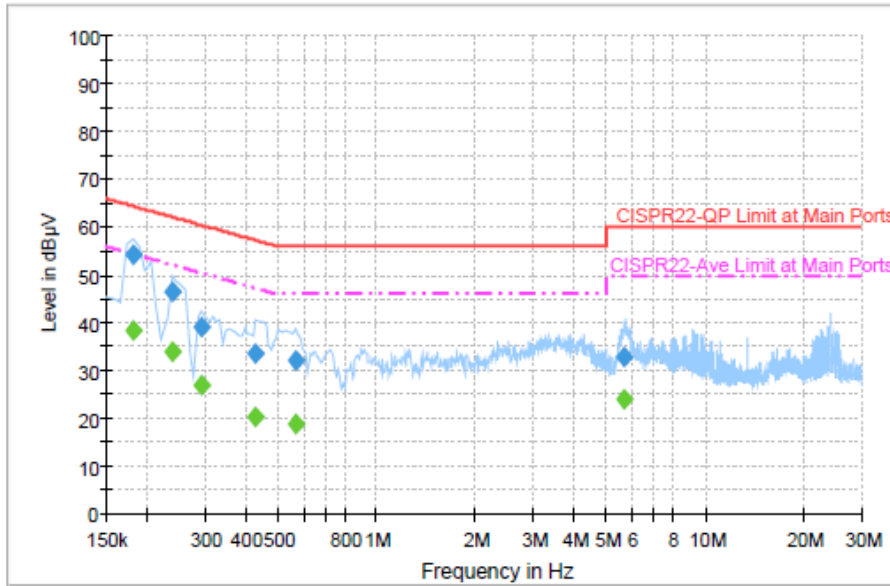
3.6.4 Test Setup



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°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (5GHz, 11a, Ch36, 6Mbps) Link + Bluetooth Link + Earphone + USB Cable (Data Link With Notebook) + Camera		



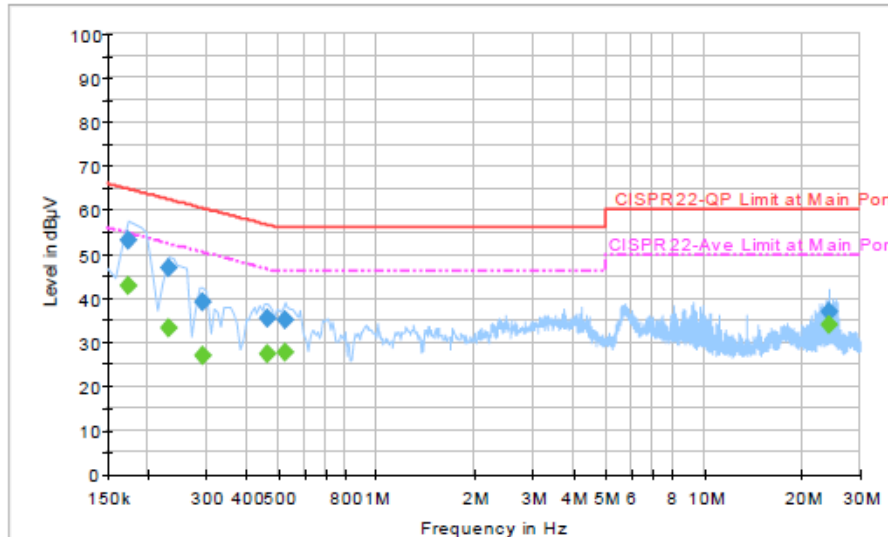
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.182000	54.3	Off	L1	19.4	10.1	64.4
0.238000	46.5	Off	L1	19.5	15.7	62.2
0.294000	39.2	Off	L1	19.4	21.2	60.4
0.430000	33.4	Off	L1	19.4	23.9	57.3
0.566000	32.2	Off	L1	19.4	23.8	56.0
5.694000	33.0	Off	L1	19.7	27.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.182000	38.2	Off	L1	19.4	16.2	54.4
0.238000	34.1	Off	L1	19.5	18.1	52.2
0.294000	26.9	Off	L1	19.4	23.5	50.4
0.430000	20.3	Off	L1	19.4	27.0	47.3
0.566000	19.0	Off	L1	19.4	27.0	46.0
5.694000	24.1	Off	L1	19.7	25.9	50.0

Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN (5GHz, 11a, Ch36, 6Mbps) Link + Bluetooth Link + Earphone + USB Cable (Data Link With Notebook) + Camera		



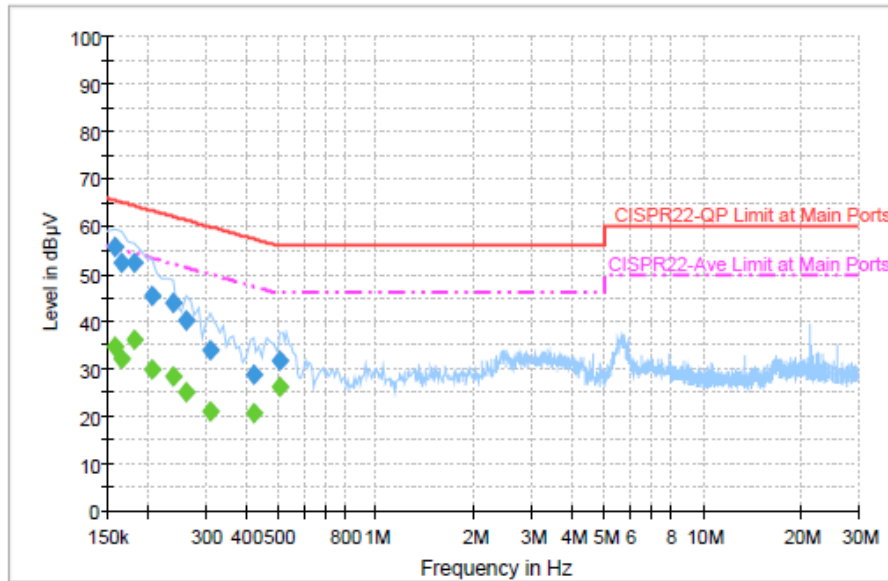
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	53.0	Off	N	19.4	11.8	64.8
0.230000	47.0	Off	N	19.4	15.4	62.4
0.294000	39.2	Off	N	19.4	21.2	60.4
0.462000	35.6	Off	N	19.3	21.1	56.7
0.526000	35.1	Off	N	19.4	20.9	56.0
24.238000	37.0	Off	N	20.0	23.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	42.9	Off	N	19.4	11.9	54.8
0.230000	33.2	Off	N	19.4	19.2	52.4
0.294000	26.9	Off	N	19.4	23.5	50.4
0.462000	27.2	Off	N	19.3	19.5	46.7
0.526000	27.6	Off	N	19.4	18.4	46.0
24.238000	33.9	Off	N	20.0	16.1	50.0

Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (5GHz, 11a, Ch36, 6Mbps) MIMO Tx + Earphone + USB Cable (Data Link With Notebook) + Camera		



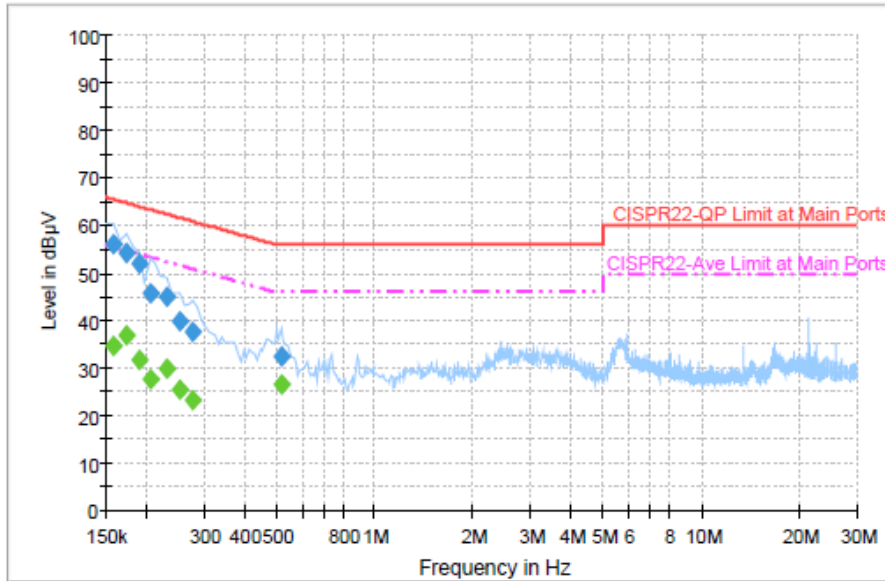
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	55.6	Off	L1	19.3	10.0	65.6
0.166000	52.3	Off	L1	19.4	12.9	65.2
0.182000	52.2	Off	L1	19.4	12.2	64.4
0.206000	45.3	Off	L1	19.4	18.1	63.4
0.238000	44.0	Off	L1	19.5	18.2	62.2
0.262000	40.2	Off	L1	19.4	21.2	61.4
0.310000	33.9	Off	L1	19.4	26.1	60.0
0.422000	28.8	Off	L1	19.4	28.6	57.4
0.510000	31.9	Off	L1	19.4	24.1	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.6	Off	L1	19.3	21.0	55.6
0.166000	32.2	Off	L1	19.4	23.0	55.2
0.182000	36.2	Off	L1	19.4	18.2	54.4
0.206000	29.9	Off	L1	19.4	23.5	53.4
0.238000	28.3	Off	L1	19.5	23.9	52.2
0.262000	25.1	Off	L1	19.4	26.3	51.4
0.310000	21.1	Off	L1	19.4	28.9	50.0
0.422000	20.7	Off	L1	19.4	26.7	47.4
0.510000	26.2	Off	L1	19.4	19.8	46.0

Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN (5GHz, 11a, Ch36, 6Mbps) MIMO Tx + Earphone + USB Cable (Data Link With Notebook) + Camera		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	56.2	Off	N	19.3	9.4	65.6
0.174000	54.2	Off	N	19.4	10.6	64.8
0.190000	52.2	Off	N	19.4	11.8	64.0
0.206000	45.8	Off	N	19.4	17.6	63.4
0.230000	45.0	Off	N	19.4	17.4	62.4
0.254000	39.7	Off	N	19.5	21.9	61.6
0.278000	37.8	Off	N	19.4	23.1	60.9
0.518000	32.5	Off	N	19.4	23.5	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.5	Off	N	19.3	21.1	55.6
0.174000	37.0	Off	N	19.4	17.8	54.8
0.190000	31.9	Off	N	19.4	22.1	54.0
0.206000	27.6	Off	N	19.4	25.8	53.4
0.230000	29.9	Off	N	19.4	22.5	52.4
0.254000	25.4	Off	N	19.5	26.2	51.6
0.278000	23.1	Off	N	19.4	27.8	50.9
0.518000	26.7	Off	N	19.4	19.3	46.0

3.7 Automatically Discontinue Transmission

3.7.1 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.

3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

3.7.3 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.

3.8 Antenna Requirements

3.8.1 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.

3.8.2 Antenna Connected Construction

Non-detachable antenna is used.

3.8.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

The EUT supports CDD mode.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant 1 (dBi)	Ant 2 (dBi)				
Band I	2.00	3.20	2.64	5.65	0.00	0.00
Band II	2.00	3.40	2.76	5.77	0.00	0.00
Band III	2.80	3.30	3.06	6.07	0.00	0.07

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

4 List of Measuring Equipment

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	Aug. 16, 2013~ Sep. 20, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Aug. 16, 2013~ Aug. 28, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Aug. 16, 2013~ Aug. 28, 2013	Sep. 07, 2013	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 13, 2012	Jul. 12, 2013~ Sep. 04, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2012	Jul. 12, 2013~ Sep. 04, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 06, 2012	Jul. 12, 2013~ Sep. 04, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Jul. 12, 2013~ Sep. 04, 2013	N/A	Conduction (CO05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz~30GHz	Nov. 30, 2012	Aug. 01, 2013~ Aug. 28, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9KHz~7GHz	Sep. 03, 2012	Aug. 01, 2013~ Aug. 28, 2013	Sep. 02, 2013	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MhZ	Jul. 03, 2012	Aug. 01, 2013~ Aug. 28, 2013	Jul. 03, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz~1GHz	Oct. 06, 2012	Aug. 01, 2013~ Aug. 28, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2012	Aug. 01, 2013~ Aug. 20, 2013	Aug. 21, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Aug. 22, 2013~ Aug. 28, 2013	Aug. 21, 2014	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Sep. 28, 2012	Aug. 01, 2013~ Aug. 28, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Aug. 01, 2013~ Aug. 28, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Dec. 01, 2012	Aug. 01, 2013~ Aug. 28, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	159088	DC~18G High Gain	Feb. 27, 2013	Aug. 01, 2013~ Aug. 28, 2013	Feb. 26, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Aug. 01, 2013~ Aug. 28, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Aug. 01, 2013~ Aug. 28, 2013	N/A	Radiation (03CH07-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
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Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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