

FCC/IC RF Test Report

APPLICANT : VERTU Corporation Limited
EQUIPMENT : Cellular Telephone
BRAND NAME : VERTU
MODEL NAME : ASTER
TYPE NAME (LTE) : VM-01
TYPE NAME (WCDMA) : VM-01C
FCC ID : P7QVM-01
IC : 4299A-VM01
STANDARD : FCC Part 15 Subpart C §15.247
IC RSS-210 issue 8
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Jun. 23, 2014 and testing was completed on Jul. 16, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance 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



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TABLE OF CONTENTS

REVISION HISTORY	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Product Specification subjective to this standard	7
1.5 Modification of EUT	7
1.6 Testing Location	8
1.7 Applicable Standards	8
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	9
2.1 Carrier Frequency Channel	9
2.2 Pre-Scanned RF Power	10
2.3 Test Mode	12
2.4 Connection Diagram of Test System	13
2.5 Support Unit used in test configuration and system	15
2.6 EUT Operation Test Setup	15
2.7 Measurement Results Explanation Example	15
3 TEST RESULT	16
3.1 Radiated Band Edges and Spurious Emission Measurement	16
3.2 AC Conducted Emission Measurement	47
3.3 Antenna Requirements	51
4 LIST OF MEASURING EQUIPMENT	52
5 UNCERTAINTY OF EVALUATION	53
APPENDIX A. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR462340C	Rev. 01	Initial issue of report	Jul. 30, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
-	15.247(a)(2)	RSS-210 A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Not Performed	Please refer to Sporton Report No. : FR430469C
-	-	RSS-Gen 4.6.1	99% Bandwidth	-	Not Performed	Please refer to Sporton Report No. : FR430469C
-	15.247(b)	RSS-210 A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Not Performed	Please refer to Sporton Report No. : FR430469C
-	15.247(e)	RSS-210 A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Not Performed	Please refer to Sporton Report No. : FR430469C
-	15.247(d)	RSS-210 A8.5	Conducted Band Edges	$\leq 20\text{dBc}$	Not Performed	Please refer to Sporton Report No. : FR430469C
			Conducted Spurious Emission		Not Performed	Please refer to Sporton Report No. : FR430469C
3.1	15.247(d)	RSS-210 A8.5	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 6.38 dB at 39.450 MHz
3.2	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 9.00 dB at 0.182 MHz
3.3	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

VERTU Corporation Limited

Beacon Hill Road, Church Crookham, Hampshire GU52 8DY, United Kingdom

1.2 Manufacturer

VERTU Corporation Limited

Beacon Hill Road, Church Crookham, Hampshire GU52 8DY, United Kingdom

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Cellular Telephone
Brand Name	VERTU
Model Name	ASTER
Type Name (LTE)	VM-01
Type Name (WCDMA)	VM-01C
Sample 1	LTE Sku
Sample 2	WCDMA Sku
FCC ID	P7QVM-01
IC	4299A-VM01
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/NFC WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v4.0 EDR/LE
HW Version	F2
SW Version	000C_1_420
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two different types of EUT sample #1, and sample #2. For WWAN bands, Sample 1 support GSM, WCDMA and LTE bands. Sample #2 only support GSM and WCDMA bands, and LTE band is disabled by software.

List of Accessory:

Specification of Accessory		
AC Adapter	Brand Name	VERTU
	Model Name	AC-32V
Battery	Brand Name	VERTU
	Model Name	BP-9V
Car Charger	Brand Name	VERTU
	Model Name	DC-30V
Portable Power Charger	Brand Name	VERTU
	Model Name	DC-15V
Earphone 1	Brand Name	VERTU
	Model Name	WH-4V
Earphone 2	Brand Name	VERTU
	Model Name	WH-5V
Earphone 3	Brand Name	VERTU
	Model Name	HP-1V
USB Cable	Brand Name	VERTU
	Model Name	CA-225DV
Wireless Charger	Brand Name	VERTU
	Model Name	AC-35V
Wireless Speaker	Brand Name	VERTU
	Model Name	SP-1V

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n/ac : 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5745~5825MHz.
Maximum (Peak) Output Power to Antenna	<2412 MHz ~ 2462 MHz> 802.11b : 18.83 dBm (0.0764 W) 802.11g : 21.78 dBm (0.1507 W) 802.11n HT20 : 19.23 dBm (0.0838 W) 802.11n HT40 : 19.66 dBm (0.0925 W) <5745 MHz ~ 5825 MHz> 802.11a : 20.61 dBm (0.1151 W) 802.11n HT20 : 19.26 dBm (0.0843 W) 802.11n HT40 : 18.81 dBm (0.0760 W) 802.11ac VHT20 : 17.38 dBm (0.0547 W) 802.11ac VHT40 : 16.93 dBm (0.0493 W) 802.11ac VHT80 : 16.46 dBm (0.0443 W)
Antenna Type	802.11b/g/n/ac : PIFA Antenna type with gain -2.00 dBi 802.11a/n/ac : PIFA Antenna type with gain -2.00 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

1.5 Modification of EUT

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

1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

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.			IC Registration No.
	TH02-HY	CO05-HY	03CH05-HY	4086B-1

1.7 Applicable Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02
- ANSI C63.4-2003
- IC RSS-210 Issue 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 (Y plane) were recorded in this report.

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

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

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437	-	-

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4	149	5745	157	5785
	151	5755	159	5795
	153	5765	161	5805
	155	5775	165	5825

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

2.4GHz 802.11b mode				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	18.83	18.77	18.81	18.72

2.4GHz 802.11g mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	21.78	21.73	21.69	21.76	21.74	21.71	21.68	21.66

2.4GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	19.23	19.06	19.09	19.11	18.96	18.94	19.02	19.09

2.4GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	19.66	19.63	19.57	19.64	19.52	19.49	19.52	19.55



5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	20.61	20.58	20.52	20.35	20.41	20.44	20.56	20.37

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	19.26	19.23	19.16	19.21	19.18	19.12	19.04	19.20

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	18.81	18.56	18.62	18.38	18.54	18.29	18.39	18.64

5GHz 802.11ac VHT20 mode									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	17.38	17.26	16.99	17.03	17.35	17.06	16.93	16.97	17.36

5GHz 802.11ac VHT40 mode										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	16.93	16.76	16.83	16.87	16.90	16.82	16.69	16.73	16.91	16.89

5GHz 802.11ac VHT80 mode										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	16.46	15.89	15.98	16.05	16.03	15.95	15.73	15.95	16.03	16.11

2.3 Test Mode

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

<2.4GHz>

Test Cases				
Radiated TCs	Test Items	Mode	Data Rate	Test Channel
	Radiated Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
		802.11n HT40	MCS0	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9

<5GHz>

Test Cases				
Radiated TCs	Test Items	Mode	Data Rate	Test Channel
	Radiated Spurious Emission	802.11a	6 Mbps	149/157/165
		802.11a WPC Mode	6 Mbps	165
		802.11n HT20	MCS0	149/157/165
		802.11n HT40	MCS0	151/159
		802.11ac VHT80	MCS0	155

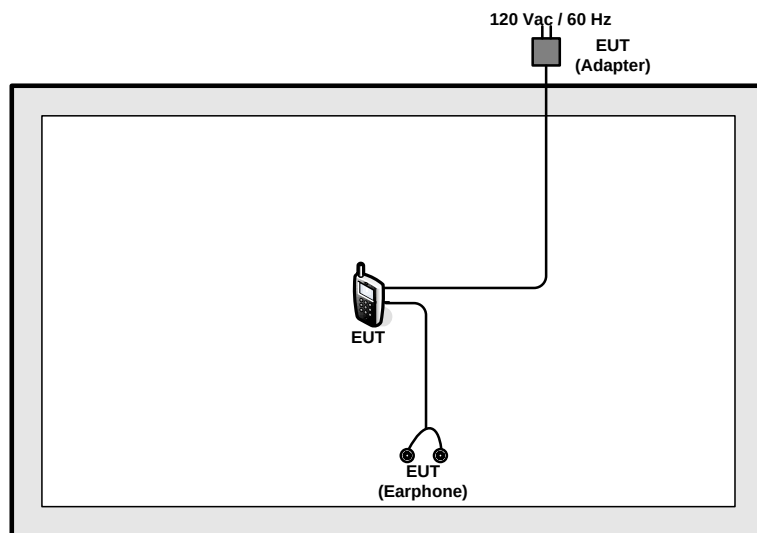
Test Cases	
AC Conducted Emission	Mode 1 : LTE Band 7 Idle + WLAN (2.4GHz) Link + Bluetooth Link + NFC On + Earphone 1 + Battery + USB Cable (Data Link with Notebook)
	Mode 2 : LTE Band VII Idle + WLAN (5GHz) Link + Bluetooth Link + NFC On + Earphone 1 + Battery + USB Cable (Data Link with Notebook)
	Mode 3 : GSM1900 Idle + WLAN (2.4GHz) Idle + Bluetooth Idle + WPC Charging + MP3 + Earphone 2 + Wireless Charger (Charging from Adapter)

Remark:

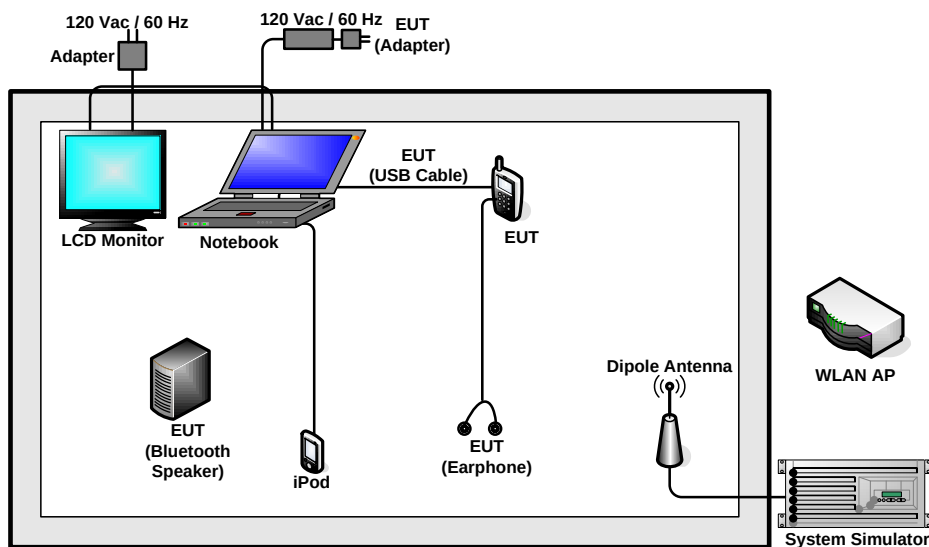
1. The worst case of conducted emission is mode 1; only the test data of it was reported.
2. All the radiated test cases were performance with Sample 1.

2.4 Connection Diagram of Test System

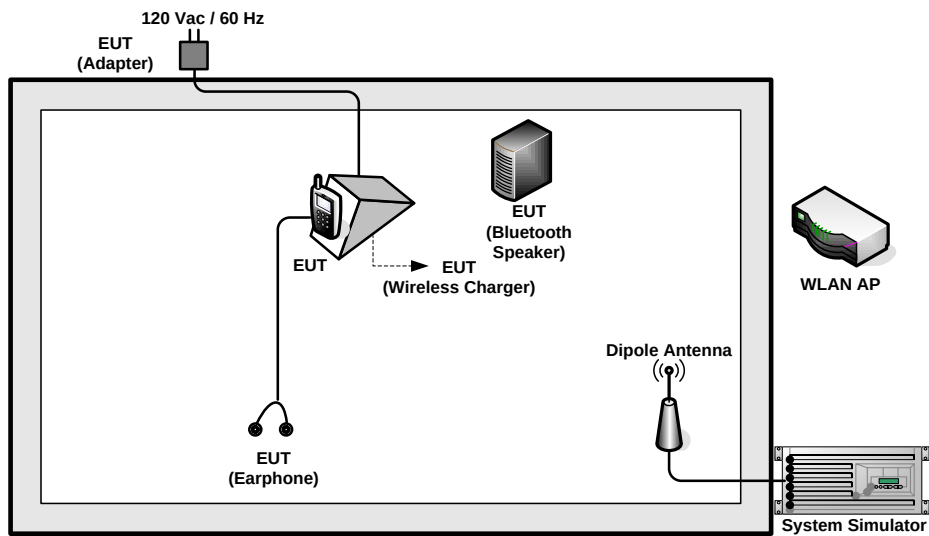
<WLAN Tx Mode>



<AC Conducted Emission Mode>



<EUT with WPC Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMW 500	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
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.	NFC Card	Metro Taipei	Easy Card	N/A	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, “adb” installed in the notebook make the EUT provide 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 Radiated Band Edges and Spurious Emission Measurement

3.1.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

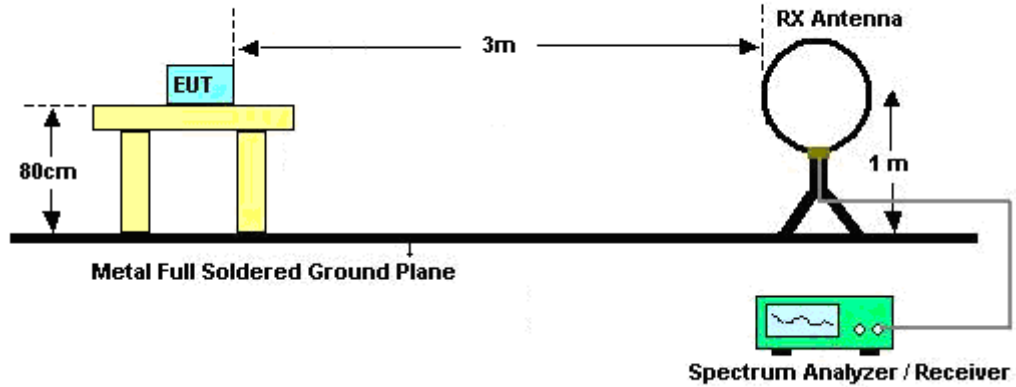
For average measurement:

 - $VBW = 10$ 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.

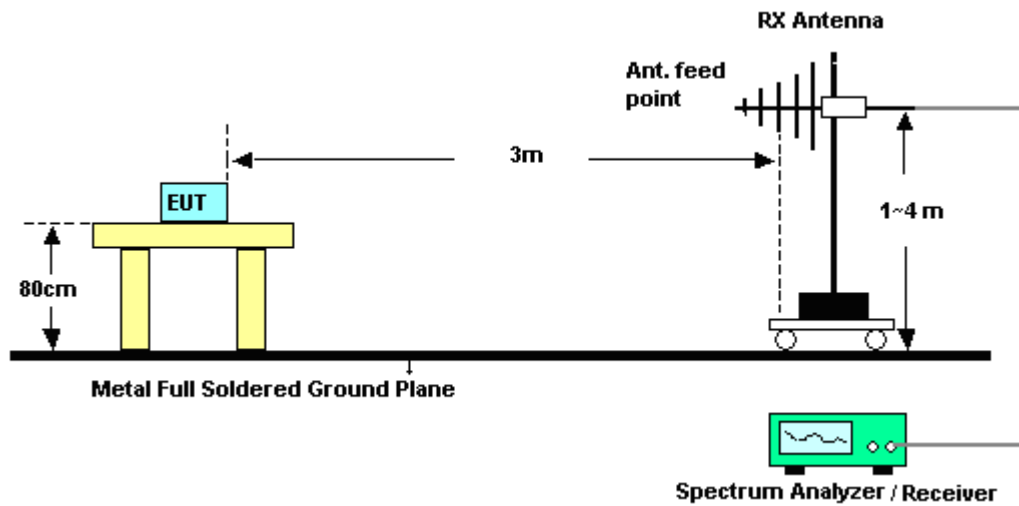
Band	Duty Cycle(%)	T(μ s)	1/T(kHz)	VBW Setting
802.11b	97.63	8240	0.12	300Hz
802.11g	87.24	1368	0.73	1kHz
2.4GHz 802.11n HT20	86.49	1280	0.78	1kHz
2.4GHz 802.11n HT40	75.71	496	2.02	3kHz
802.11a	87.26	1370	0.73	1kHz
5GHz 802.11n HT20	85.95	1272	0.79	1kHz
5GHz 802.11n HT40	75.71	636	1.57	3kHz
5GHz 802.11ac VHT20	82.74	978	1.02	3kHz
5GHz 802.11ac VHT40	71.26	496	2.02	3kHz
5GHz 802.11ac VHT80	54.87	248	4.03	10kHz

3.1.4 Test Setup

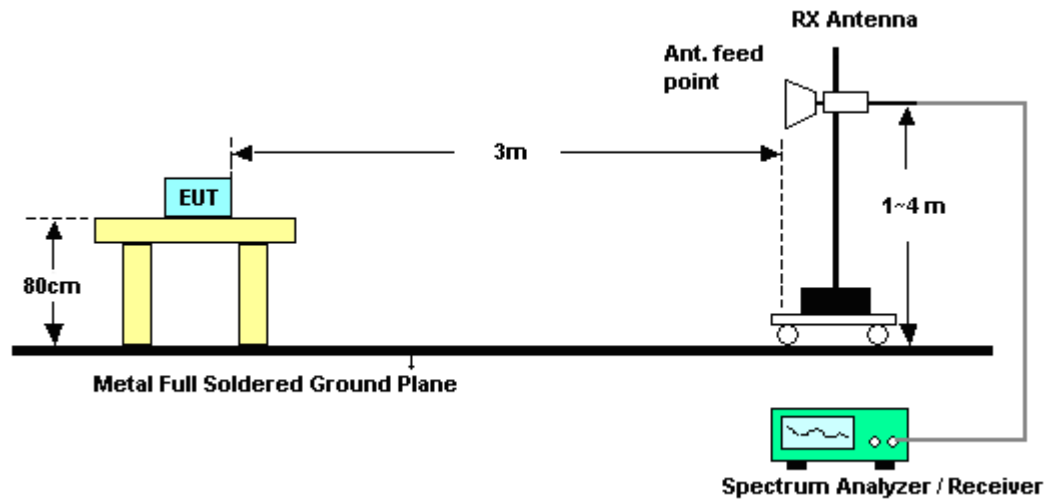
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.1.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)**

<Below 30MHz>

Test Mode :	802.11a Tx CH165 with WPC Charging Mode	Temperature :	25~26°C
Test Engineer :	Jet Lu	Relative Humidity :	50~51%
Polarization :	Horizontal		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01808	31.8	-90.66	122.46	11.23	20.28	0.29	-	-	Average
0.07158	25.95	-84.56	110.51	5.59	20.07	0.29	-	-	Average
0.10728	20.21	-86.78	106.99	-0.13	20.05	0.29	-	-	QP
0.1258	26.88	-78.73	105.61	6.57	20.02	0.29	-	-	Average
0.14332	52.91	-51.57	104.48	32.6	20.02	0.29	-	-	Average
0.40534	41.19	-54.26	95.45	20.99	19.91	0.29	-	-	Average
1.196	39.87	-26.18	66.05	19.63	19.93	0.31	100	25	QP
14.44	36.08	-33.92	70	16.07	19.61	0.4	-	-	QP
20.374	37.11	-32.89	70	16.63	20.05	0.43	-	-	QP
27.59	36.17	-33.83	70	15.34	20.33	0.5	-	-	QP



Test Mode :	802.11a Tx CH165 with WPC Charging Mode	Temperature :	25~26°C
Test Engineer :	Jet Lu	Relative Humidity :	50~51%
Polarization :	Vertical		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01252	32.47	-93.18	125.65	11.9	20.28	0.29	-	-	Average
0.06693	25.46	-85.63	111.09	5.1	20.07	0.29	-	-	Average
0.1029	21.17	-86.19	107.36	0.83	20.05	0.29	-	-	QP
0.14176	23.5	-81.07	104.57	3.19	20.02	0.29	-	-	Average
0.14808	47.63	-56.56	104.19	27.34	20	0.29	-	-	Average
0.40704	41.31	-54.1	95.41	21.11	19.91	0.29	-	-	Average
1.196	40.16	-25.89	66.05	19.92	19.93	0.31	100	244	QP
12.04	36.45	-33.55	70	16.36	19.69	0.4	-	-	QP
21.13	37.48	-32.52	70	16.94	20.11	0.43	-	-	QP
28.395	35.79	-34.21	70	14.97	20.32	0.5	-	-	QP



3.1.6 Test Result of Radiated Spurious at Band Edges

Test Mode :	802.11b	Temperature :	25~26°C
Test Band :	Low	Relative Humidity :	50~51%
Test Channel :	01	Test Engineer :	Jet Lu

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
2388.48	43.78	-30.22	74	45.88	26.93	4.62	33.65	105	20	Peak
2390	34.28	-19.72	54	36.38	26.93	4.62	33.65	105	20	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
2387.22	43.55	-30.45	74	45.65	26.93	4.62	33.65	100	353	Peak
2387.76	34.56	-19.44	54	36.66	26.93	4.62	33.65	100	353	Average

Test Mode :	802.11b	Temperature :	25~26°C
Test Band :	High	Relative Humidity :	50~51%
Test Channel :	11	Test Engineer :	Jet Lu

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
2484.8	45.05	-28.95	74	46.73	27.16	4.73	33.57	123	207	Peak
2484.4	31.61	-22.39	54	33.29	27.16	4.73	33.57	123	207	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
2484.88	44.25	-29.75	74	45.93	27.16	4.73	33.57	100	0	Peak
2483.82	31.26	-22.74	54	32.94	27.16	4.73	33.57	100	0	Average



Test Mode :	802.11g	Temperature :	25~26°C
Test Band :	Low	Relative Humidity :	50~51%
Test Channel :	01	Test Engineer :	Jet Lu

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
2390	60.23	-13.77	74	62.33	26.93	4.62	33.65	104	227	Peak
2390	39.95	-14.05	54	42.05	26.93	4.62	33.65	104	227	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
2390	60.45	-13.55	74	62.55	26.93	4.62	33.65	108	195	Peak
2390	40.18	-13.82	54	42.28	26.93	4.62	33.65	108	195	Average

Test Mode :	802.11g	Temperature :	25~26°C
Test Band :	High	Relative Humidity :	50~51%
Test Channel :	11	Test Engineer :	Jet Lu

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
2483.74	61.19	-12.81	74	62.87	27.16	4.73	33.57	100	0	Peak
2483.71	40.83	-13.17	54	42.51	27.16	4.73	33.57	100	0	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
2484.46	61.04	-12.96	74	62.72	27.16	4.73	33.57	104	114	Peak
2483.5	42.04	-11.96	54	43.72	27.16	4.73	33.57	104	114	Average



Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Band :	Low	Relative Humidity :	50~51%
Test Channel :	01	Test Engineer :	Jet Lu

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
2389.74	53.62	-20.38	74	55.72	26.93	4.62	33.65	103	228	Peak
2390	35.39	-18.61	54	37.49	26.93	4.62	33.65	103	228	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
2389.83	53.59	-20.41	74	55.69	26.93	4.62	33.65	109	194	Peak
2390	35.81	-18.19	54	37.91	26.93	4.62	33.65	109	194	Average

Test Mode :	802.11n HT20	Temperature :	25~26°C
Test Band :	High	Relative Humidity :	50~51%
Test Channel :	11	Test Engineer :	Jet Lu

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
2483.89	58.34	-15.66	74	60.02	27.16	4.73	33.57	100	15	Peak
2483.74	40.77	-13.23	54	42.45	27.16	4.73	33.57	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
2484.58	49.01	-24.99	74	50.69	27.16	4.73	33.57	100	360	Peak
2483.56	33.73	-20.27	54	35.41	27.16	4.73	33.57	100	360	Average

3.1.7 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Note: Pre-scanned all test modes and only choose the worst case mode recorded in the test report for radiated spurious emission below 1GHz.

Test Mode :	802.11b	Temperature :	25~26°C
Test Channel :	01	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2414 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
2414	100.02	-	-	126.14	26.98	4.65	57.75	105	20	Average
2414	104.74	-	-	130.86	26.98	4.65	57.75	105	20	Peak
4824	47	-27	74	68.18	31.22	6.54	58.94	100	0	Peak

Test Mode :	802.11b	Temperature :	25~26°C
Test Channel :	01	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2414 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
2414	98.04	-	-	100.04	26.98	4.65	33.63	100	353	Average
2414	102.5	-	-	104.5	26.98	4.65	33.63	100	353	Peak
4824	48.45	-25.55	74	69.63	31.22	6.54	58.94	100	0	Peak



Test Mode :	802.11b	Temperature :	25~26°C
Test Channel :	06	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2436 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
2436	99.3	-	-	125.34	27.02	4.68	57.74	100	98	Average
2436	102.78	-	-	128.82	27.02	4.68	57.74	100	98	Peak
4875	41.07	-32.93	74	62.07	31.31	6.56	58.87	100	0	Peak
7311	41.73	-32.27	74	55.81	36.14	8.24	58.46	100	0	Peak

Test Mode :	802.11b	Temperature :	25~26°C
Test Channel :	06	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2436 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
2436	97.32	-	-	99.24	27.02	4.68	33.62	100	360	Average
2436	101.05	-	-	102.97	27.02	4.68	33.62	100	360	Peak
4875	46.99	-27.01	74	67.99	31.31	6.56	58.87	100	0	Peak
7311	41.73	-32.27	74	55.81	36.14	8.24	58.46	100	0	Peak



Test Mode :	802.11b	Temperature :	25~26°C
Test Channel :	11	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2462 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
2462	96.05	-	-	121.96	27.11	4.7	57.72	123	207	Average
2462	99.65	-	-	125.56	27.11	4.7	57.72	123	207	Peak
4923	40.91	-33.09	74	61.73	31.39	6.59	58.8	100	0	Peak
7386	42.7	-31.3	74	56.65	36.35	8.31	58.61	100	0	Peak

Test Mode :	802.11b	Temperature :	25~26°C
Test Channel :	11	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2462 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
2462	95.45	-	-	97.23	27.11	4.7	33.59	100	0	Average
2462	99.59	-	-	101.37	27.11	4.7	33.59	100	0	Peak
4925	41.11	-32.89	74	61.92	31.39	6.6	58.8	100	0	Peak
7386	42.7	-31.3	74	56.65	36.35	8.31	58.61	100	0	Peak



Test Mode :	802.11g	Temperature :	25~26°C
Test Channel :	01	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2410 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
2410	90.07	-	-	116.19	26.98	4.65	57.75	104	227	Average
2410	99.46	-	-	125.58	26.98	4.65	57.75	104	227	Peak
4823	40.03	-33.97	74	61.21	31.22	6.54	58.94	100	0	Peak

Test Mode :	802.11g	Temperature :	25~26°C
Test Channel :	01	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2410 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
2410	90.72	-	-	92.72	26.98	4.65	33.63	108	195	Average
2410	99.57	-	-	101.57	26.98	4.65	33.63	108	195	Peak
4825	44.06	-29.94	74	65.24	31.22	6.54	58.94	100	0	Peak



Test Mode :	802.11g	Temperature :	25~26°C
Test Channel :	06	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2435 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
2435	88.51	-	-	114.55	27.02	4.68	57.74	100	228	Average
2435	97.04	-	-	123.08	27.02	4.68	57.74	100	228	Peak
4875	37.55	-36.45	74	58.55	31.31	6.56	58.87	100	0	Peak
7311	41.47	-32.53	74	55.55	36.14	8.24	58.46	100	0	Peak

Test Mode :	802.11g	Temperature :	25~26°C
Test Channel :	06	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2435 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
2435	90.33	-	-	92.25	27.02	4.68	33.62	105	113	Average
2435	99.15	-	-	101.07	27.02	4.68	33.62	105	113	Peak
4875	39.15	-34.85	74	60.15	31.31	6.56	58.87	100	0	Peak
7311	41.47	-32.53	74	55.55	36.14	8.24	58.46	100	0	Peak



Test Mode :	802.11g	Temperature :	25~26°C
Test Channel :	11	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2460 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
32.97	24.34	-15.66	40	38.09	17.34	0.72	31.81	125	332	Peak
135.3	14.26	-29.24	43.5	33.29	11.5	1.25	31.78	-	-	Peak
245.73	20.12	-25.88	46	38.36	11.9	1.63	31.77	-	-	Peak
829.2	25.61	-20.39	46	31.64	22.87	2.88	31.78	-	-	Peak
915.3	26.58	-19.42	46	31.15	23.72	3.02	31.31	-	-	Peak
975.5	28.01	-25.99	54	30.82	24.86	3.16	30.83	-	-	Peak
2460	88.71	-	-	90.49	27.11	4.7	33.59	100	0	Average
2460	97.98	-	-	99.76	27.11	4.7	33.59	100	0	Peak
4923	36.96	-37.04	74	57.78	31.39	6.59	58.8	100	0	Peak
7386	42.82	-31.18	74	56.77	36.35	8.31	58.61	100	0	Peak



Test Mode :	802.11g	Temperature :	25~26°C
Test Channel :	11	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2460 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
34.86	29.12	-10.88	40	43.9	16.3	0.73	31.81	138	224	Peak
42.42	29.01	-10.99	40	48.29	11.76	0.77	31.81	-	-	Peak
233.04	17.63	-28.37	46	37.35	10.46	1.59	31.77	-	-	Peak
762	24.51	-21.49	46	31.53	22.18	2.77	31.97	-	-	Peak
862.8	26.13	-19.87	46	31.73	23.07	2.94	31.61	-	-	Peak
962.9	27.72	-26.28	54	30.67	24.87	3.11	30.93	-	-	Peak
2460	89.23	-	-	91.01	27.11	4.7	33.59	104	114	Average
2460	98.21	-	-	99.99	27.11	4.7	33.59	104	114	Peak
4923	36.38	-37.62	74	57.2	31.39	6.59	58.8	100	0	Peak
7386	41.66	-32.34	74	55.61	36.35	8.31	58.61	100	0	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	01	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2410 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
2410	88.28	-	-	114.4	26.98	4.65	57.75	103	228	Average
2410	96.27	-	-	122.39	26.98	4.65	57.75	103	228	Peak
4824	36.72	-37.28	74	57.9	31.22	6.54	58.94	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	01	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2414 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
2414	87.72	-	-	89.72	26.98	4.65	33.63	109	194	Average
2414	96.85	-	-	98.85	26.98	4.65	33.63	109	194	Peak
4824	36.14	-37.86	74	57.32	31.22	6.54	58.94	100	0	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	06	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2435 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
2435	87.58	-	-	113.62	27.02	4.68	57.74	102	15	Average
2435	97.05	-	-	123.09	27.02	4.68	57.74	102	15	Peak
4875	35.81	-38.19	74	56.81	31.31	6.56	58.87	100	0	Peak
7311	40.65	-33.35	74	54.73	36.14	8.24	58.46	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	06	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2439 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
2439	86.65	-	-	88.5	27.07	4.68	33.6	100	353	Average
2439	92.8	-	-	94.65	27.07	4.68	33.6	100	353	Peak
4875	35.83	-38.17	74	56.83	31.31	6.56	58.87	100	0	Peak
7311	40.65	-33.35	74	54.73	36.14	8.24	58.46	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	11	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 2460 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
2460	88.58	-	-	114.49	27.11	4.7	57.72	100	15	Average
2460	97.41	-	-	123.32	27.11	4.7	57.72	100	15	Peak
4923	36.59	-37.41	74	57.41	31.39	6.59	58.8	100	0	Peak
7386	42.29	-31.71	74	56.24	36.35	8.31	58.61	100	0	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	11	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 2462 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
2462	84.57	-	-	86.35	27.11	4.7	33.59	100	360	Average
2462	92.28	-	-	94.06	27.11	4.7	33.59	100	360	Peak
4923	35.54	-38.46	74	56.36	31.39	6.59	58.8	100	0	Peak
7386	42.29	-31.71	74	56.24	36.35	8.31	58.61	100	0	Peak



Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	149	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5745 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
5745	93.81	-	-	86.5	32.24	7.18	32.11	106	31	Average
5745	104.14	-	-	96.83	32.24	7.18	32.11	106	31	Peak
11490	44.93	-29.07	74	51.7	40.21	10.33	57.31	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	149	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5745 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
5745	97.95	-	-	90.64	32.24	7.18	32.11	102	328	Average
5745	108.66	-	-	101.35	32.24	7.18	32.11	102	328	Peak
11490	44.5	-29.5	74	51.27	40.21	10.33	57.31	100	0	Peak



Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	157	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5786 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
5786	92.86	-	-	85.45	32.31	7.2	32.1	106	356	Average
5786	103.49	-	-	96.08	32.31	7.2	32.1	106	356	Peak
11571	44.3	-29.7	74	51.19	40.05	10.36	57.3	100	0	Peak

Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	157	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5784 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
5784	95.02	-	-	87.63	32.29	7.2	32.1	102	330	Average
5784	106.2	-	-	98.81	32.29	7.2	32.1	102	330	Peak
11571	44.11	-29.89	74	51	40.05	10.36	57.3	100	0	Peak



Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	165	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5826 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
142.86	30.77	-12.73	43.5	49.79	11.5	1.26	31.78	-	-	Peak
214.41	31.37	-12.13	43.5	52.39	9.24	1.52	31.78	-	-	Peak
275.43	30.75	-15.25	46	47.94	12.85	1.72	31.76	-	-	Peak
309.8	30.46	-15.54	46	47.12	13.3	1.8	31.76	-	-	Peak
524.7	25.13	-20.87	46	36.63	18.15	2.28	31.93	-	-	Peak
913.2	37.35	-8.65	46	42	23.65	3.02	31.32	124	220	Peak
5826	92.78	-	-	85.27	32.36	7.24	32.09	107	356	Average
5826	103.07	-	-	95.56	32.36	7.24	32.09	107	356	Peak
11649	45.57	-28.43	74	52.56	39.9	10.41	57.3	100	0	Peak



Test Mode :	802.11a	Temperature :	25~26°C
Test Channel :	165	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5823 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
39.45	33.62	-6.38	40	50.88	13.8	0.75	31.81	110	221	Peak
212.25	25.91	-17.59	43.5	46.95	9.22	1.52	31.78	-	-	Peak
244.38	25.42	-20.58	46	43.76	11.8	1.63	31.77	-	-	Peak
377.7	20.98	-25.02	46	35.77	15.04	1.96	31.79	-	-	Peak
529.6	23.94	-22.06	46	35.39	18.2	2.29	31.94	-	-	Peak
913.2	32.56	-13.44	46	37.21	23.65	3.02	31.32	-	-	Peak
5823	94.36	-	-	86.85	32.36	7.24	32.09	101	329	Average
5823	105.09	-	-	97.58	32.36	7.24	32.09	101	329	Peak
11649	44.74	-29.26	74	51.73	39.9	10.41	57.3	100	0	Peak



Test Mode :	802.11a Tx CH165 with WPC Charging Mode	Temperature :	25~26°C
Test Engineer :	Jet Lu	Relative Humidity :	50~51%
Polarization :	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
87.51	21.26	-18.74	40	43.65	8.38	1.02	31.79	-	-	Peak
196.32	31.52	-11.98	43.5	52.98	8.86	1.46	31.78	113	74	Peak
283.8	28.03	-17.97	46	45.13	12.92	1.74	31.76	-	-	Peak
323.8	24.79	-21.21	46	41.16	13.56	1.84	31.77	-	-	Peak
523.3	17.5	-28.5	46	29	18.14	2.28	31.92	-	-	Peak
873.3	21.46	-24.54	46	27.06	23	2.96	31.56	-	-	Peak
5825	83	-	-	75.49	32.36	7.24	32.09	100	338	Average
5825	93.06	-	-	85.55	32.36	7.24	32.09	100	338	Peak
11649	41.96	-32.04	74	48.95	39.9	10.41	57.3	100	0	Peak



Test Mode :	802.11a Tx CH165 with WPC Charging Mode	Temperature :	25~26°C
Test Engineer :	Jet Lu	Relative Humidity :	50~51%
Polarization :	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
45.39	31.58	-8.42	40	52.55	10.05	0.78	31.8	-	-	Peak
130.17	25.61	-17.89	43.5	44.06	12.1	1.23	31.78	-	-	Peak
282.72	27.09	-18.91	46	44.22	12.89	1.74	31.76	-	-	Peak
323.8	23.06	-22.94	46	39.43	13.56	1.84	31.77	-	-	Peak
514.9	16.19	-29.81	46	27.74	18.1	2.26	31.91	-	-	Peak
913.2	39.22	-6.78	46	43.87	23.65	3.02	31.32	130	40	Peak
5830	84.42	-	-	76.91	32.36	7.24	32.09	153	234	Average
5830	94.73	-	-	87.22	32.36	7.24	32.09	153	234	Peak
11649	42.74	-31.26	74	49.73	39.9	10.41	57.3	100	0	Peak



Test Mode :	5GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	149	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5746 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
5746	89.99	-	-	82.68	32.24	7.18	32.11	108	355	Average
5746	100.15	-	-	92.84	32.24	7.18	32.11	108	355	Peak
11490	44.61	-29.39	74	51.38	40.21	10.33	57.31	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	149	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5743 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
5743	89.21	-	-	81.9	32.24	7.18	32.11	100	280	Average
5743	99.52	-	-	92.21	32.24	7.18	32.11	100	280	Peak
11490	43.76	-30.24	74	50.53	40.21	10.33	57.31	100	0	Peak



Test Mode :	5GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	157	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5786 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
5786	90.47	-	-	83.06	32.31	7.2	32.1	118	356	Average
5786	100.75	-	-	93.34	32.31	7.2	32.1	118	356	Peak
11571	43.92	-30.08	74	50.81	40.05	10.36	57.3	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	157	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5787 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
5787	92.45	-	-	85.04	32.31	7.2	32.1	112	328	Average
5787	102.77	-	-	95.36	32.31	7.2	32.1	112	328	Peak
11571	44.49	-29.51	74	51.38	40.05	10.36	57.3	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	165	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5824 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
5824	90.27	-	-	82.76	32.36	7.24	32.09	107	356	Average
5824	101.59	-	-	94.08	32.36	7.24	32.09	107	356	Peak
11649	43.93	-30.07	74	50.92	39.9	10.41	57.3	100	0	Peak

Test Mode :	5GHz 802.11n HT20	Temperature :	25~26°C
Test Channel :	165	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5824 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
5824	92.41	-	-	84.9	32.36	7.24	32.09	100	327	Average
5824	103.01	-	-	95.5	32.36	7.24	32.09	100	327	Peak
11649	44.06	-29.94	74	51.05	39.9	10.41	57.3	100	0	Peak



Test Mode :	5GHz 802.11n HT40	Temperature :	25~26°C
Test Channel :	151	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5757 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
5757	86.72	-	-	104.36	32.26	7.18	57.08	107	355	Average
5757	96.19	-	-	113.83	32.26	7.18	57.08	107	355	Peak
11511	44.55	-29.45	74	51.31	40.2	10.34	57.3	100	0	Peak

Test Mode :	5GHz 802.11n HT40	Temperature :	25~26°C
Test Channel :	151	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5757 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
5757	89.95	-	-	82.62	32.26	7.18	32.11	102	330	Average
5757	99.43	-	-	92.1	32.26	7.18	32.11	102	330	Peak
11511	43.65	-30.35	74	50.41	40.2	10.34	57.3	100	0	Peak



Test Mode :	5GHz 802.11n HT40	Temperature :	25~26°C
Test Channel :	159	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5793 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
5793	86.57	-	-	104.05	32.31	7.22	57.01	118	357	Average
5793	96.56	-	-	114.04	32.31	7.22	57.01	118	357	Peak
11589	43.6	-30.4	74	50.51	40.01	10.38	57.3	100	0	Peak

Test Mode :	5GHz 802.11n HT40	Temperature :	25~26°C
Test Channel :	159	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5797 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
5797	89.86	-	-	82.43	32.31	7.22	32.1	100	329	Average
5797	99.39	-	-	91.96	32.31	7.22	32.1	100	329	Peak
11589	43.59	-30.41	74	50.5	40.01	10.38	57.3	100	0	Peak



Test Mode :	5GHz 802.11ac VHT80	Temperature :	25~26°C
Test Channel :	155	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Horizontal
Remark :	1. 5773 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
5773	82.77	-	-	100.33	32.29	7.2	57.05	119	357	Average
5773	92.4	-	-	109.96	32.29	7.2	57.05	119	357	Peak
11550	43.57	-30.43	74	50.42	40.09	10.36	57.3	100	0	Peak

Test Mode :	5GHz 802.11ac VHT80	Temperature :	25~26°C
Test Channel :	155	Relative Humidity :	50~51%
Test Engineer :	Jet Lu	Polarization :	Vertical
Remark :	1. 5773 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
5773	85.72	-	-	78.33	32.29	7.2	32.1	103	329	Average
5773	95.49	-	-	88.1	32.29	7.2	32.1	103	329	Peak
11550	43.35	-30.65	74	50.2	40.09	10.36	57.3	100	0	Peak

3.2 AC Conducted Emission Measurement

3.2.1 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.

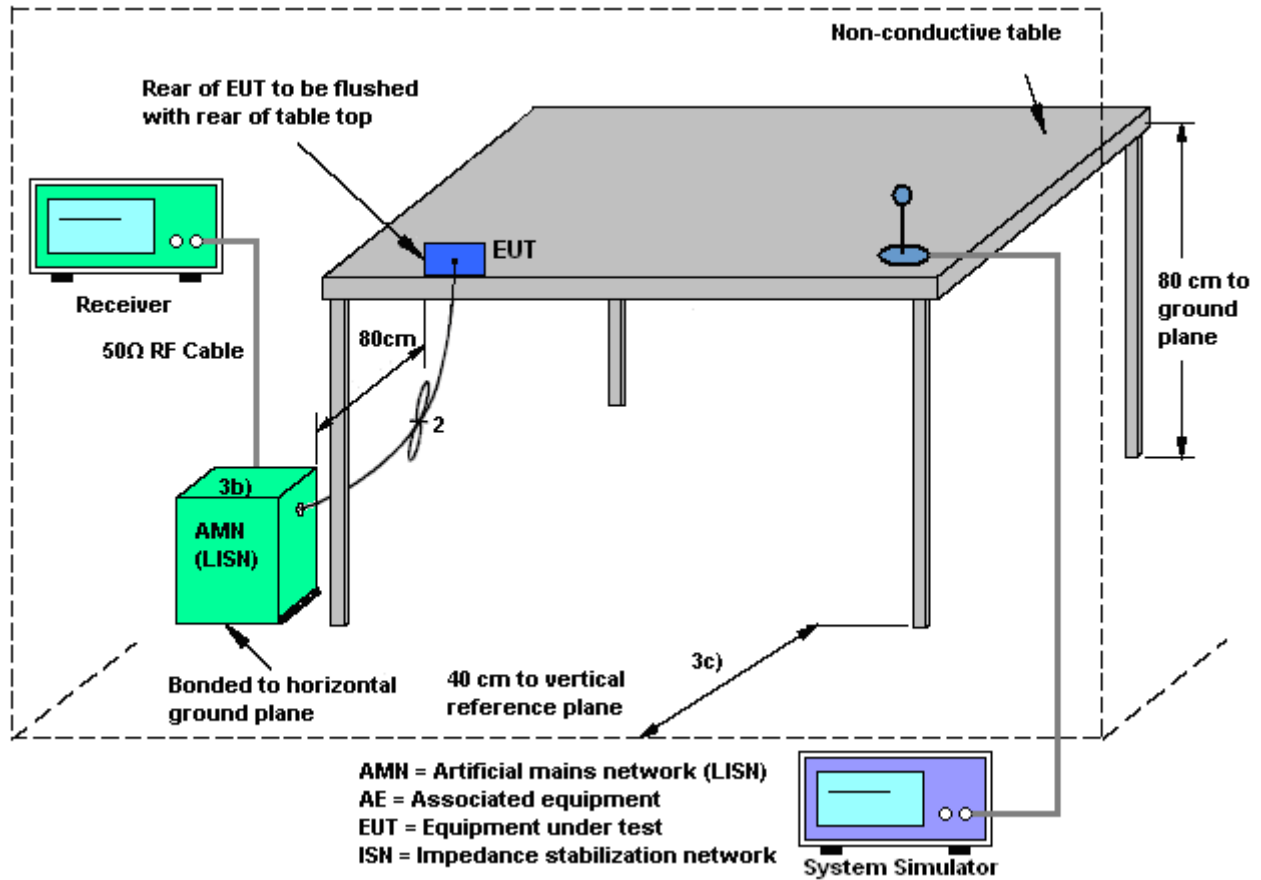
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

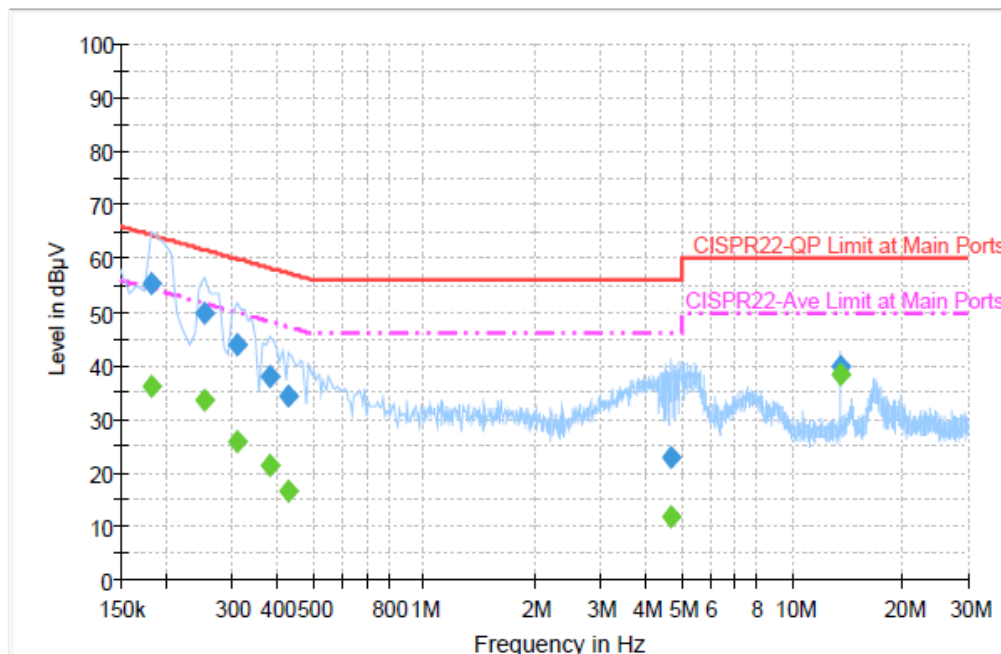
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other 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.

3.2.4 Test Setup



3.2.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 7 Idle + WLAN (2.4GHz) Link + Bluetooth Link + NFC On + Earphone 1 + Battery + USB Cable (Data Link with Notebook)		



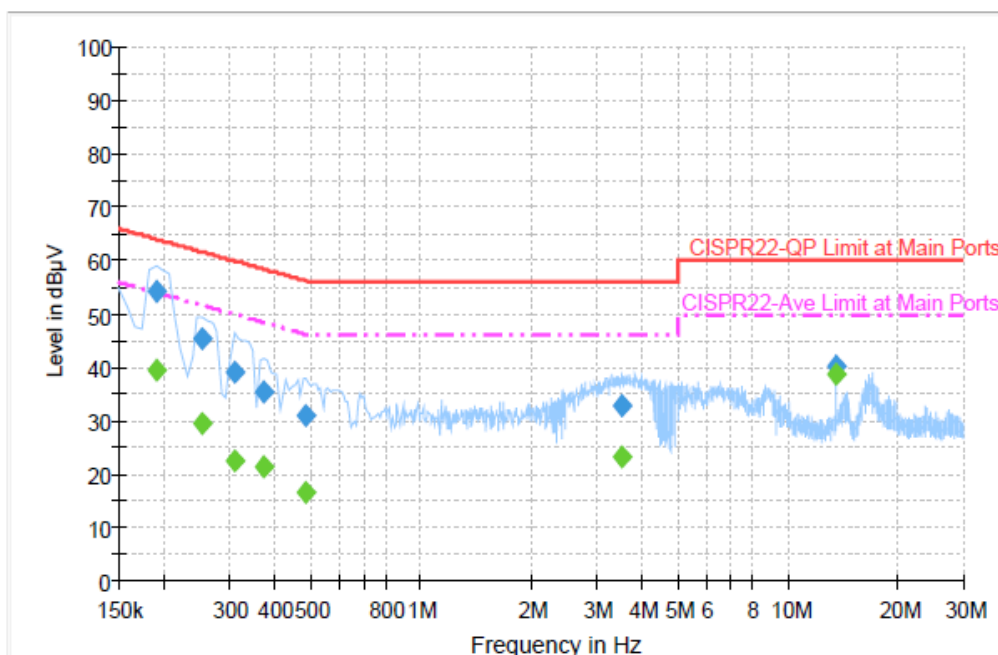
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.182000	55.4	Off	L1	19.4	9.0	64.4
0.254000	49.9	Off	L1	19.4	11.7	61.6
0.310000	43.9	Off	L1	19.4	16.1	60.0
0.382000	38.1	Off	L1	19.4	20.1	58.2
0.430000	34.4	Off	L1	19.4	22.9	57.3
4.694000	22.8	Off	L1	19.6	33.2	56.0
13.558000	40.0	Off	L1	19.8	20.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.182000	36.3	Off	L1	19.4	18.1	54.4
0.254000	33.6	Off	L1	19.4	18.0	51.6
0.310000	25.9	Off	L1	19.4	24.1	50.0
0.382000	21.5	Off	L1	19.4	26.7	48.2
0.430000	16.8	Off	L1	19.4	30.5	47.3
4.694000	11.9	Off	L1	19.6	34.1	46.0
13.558000	38.3	Off	L1	19.8	11.7	50.0

Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 7 Idle + WLAN (2.4GHz) Link + Bluetooth Link + NFC On + Earphone 1 + Battery + USB Cable (Data Link with Notebook)		


Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190000	54.3	Off	N	19.3	9.7	64.0
0.254000	45.2	Off	N	19.4	16.4	61.6
0.310000	39.0	Off	N	19.4	21.0	60.0
0.374000	35.4	Off	N	19.4	23.0	58.4
0.486000	31.0	Off	N	19.4	25.2	56.2
3.526000	32.7	Off	N	19.6	23.3	56.0
13.558000	40.2	Off	N	19.8	19.8	60.0

Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190000	39.6	Off	N	19.3	14.4	54.0
0.254000	29.6	Off	N	19.4	22.0	51.6
0.310000	22.3	Off	N	19.4	27.7	50.0
0.374000	21.3	Off	N	19.4	27.1	48.4
0.486000	16.6	Off	N	19.4	29.6	46.2
3.526000	23.1	Off	N	19.6	22.9	46.0
13.558000	38.7	Off	N	19.8	11.3	50.0



3.3 Antenna Requirements

3.3.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Agilent	E4416A	GB412923 44	300MHz~40GHz	Jan. 28, 2014	Jul. 16, 2014	Jan. 27, 2015	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US404415 48	300MHz~40GHz	Jan. 28, 2014	Jul. 16, 2014	Jan. 27, 2015	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Jul. 11, 2014	Nov. 14, 2014	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Jul. 11, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Jul. 11, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 11, 2014	N/A	Conduction (CO05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 09, 2014	Jul. 09, 2014 ~ Jul. 24, 2014	Jun. 08, 2015	Radiation (03CH05-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~1GHz	Oct. 10, 2013	Jul. 09, 2014 ~ Jul. 24, 2014	Oct. 09, 2014	Radiation (03CH05-HY)
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-124 1	1GHz~18GHz	Apr. 16, 2014	Jul. 09, 2014 ~ Jul. 24, 2014	Apr. 15, 2015	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 251	18GHz~40GHz	Oct. 03, 2013	Jul. 09, 2014 ~ Jul. 24, 2014	Oct. 02, 2014	Radiation (03CH05-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	100kHz~18GHz	Jul. 07, 2014	Jul. 09, 2014 ~ Jul. 24, 2014	Jul. 06, 2015	Radiation (03CH05-HY)
Preamplifier	EMCI	EMC011830	980148	DC~18GHz	Jun. 23, 2014	Jul. 09, 2014 ~ Jul. 24, 2014	Jun. 22, 2015	Radiation (03CH05-HY)
Preamplifier	COM-POWER	PA-103	161075	9kHz~30MHz	Apr. 15, 2014	Jul. 09, 2014 ~ Jul. 24, 2014	Apr. 14, 2015	Radiation (03CH05-HY)
Preamplifier	Miteq	TTA0204	1872107	18GHz~40GHz	May 23, 2014	Jul. 09, 2014 ~ Jul. 24, 2014	May 22, 2015	Radiation (03CH05-HY)
Turn Table	HD	HD100	420/611	0 - 360 degree	N/A	Jul. 09, 2014 ~ Jul. 24, 2014	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	HD100	240/666	1 m - 4 m	N/A	Jul. 09, 2014 ~ Jul. 24, 2014	N/A	Radiation (03CH05-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 (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.10
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