

Partial FCC RF Test Report

APPLICANT : Qualcomm Atheros, Inc.
EQUIPMENT : 1X1 802.11b/g/n-BT4.0 Combo PCIe minicard
BRAND NAME : Qualcomm Atheros
MODEL NAME : QCWB335
FCC ID : PPD-QCWB335
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

This is a partial report which is included the radiated emission test item. The product was received on Jul. 26, 2013 and completely tested on Aug. 27, 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.

SPORTON INTERNATIONAL INC.

TEL : 886-3-327-3456

FAX : 886-3-328-4978

FCC ID : PPD-QCWB335

Page Number : 1 of 35

Report Issued Date : Aug. 28, 2013

Report Version : Rev. 01



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 Feature of Equipment Under Test 5

 1.4 Product Specification of Equipment Under Test 6

 1.5 Modification of EUT 6

 1.6 Testing Site 6

 1.7 Applied Standards 6

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 7

 2.1 Carrier Frequency Channel 7

 2.2 Pre-Scanned RF Power 8

 2.3 Test Mode 9

 2.4 Connection Diagram of Test System 9

 2.5 Support Unit used in test configuration and system 10

 2.6 Description of RF Function Operation Test Setup 10

3 TEST RESULT 11

 3.1 Radiated Band Edges and Spurious Emission Measurement 11

 3.2 Antenna Requirements 33

4 LIST OF MEASURING EQUIPMENT 34

5 UNCERTAINTY OF EVALUATION 35

APPENDIX A. SETUP PHOTOGRAPHS



SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
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 0.07 dB at 2390.000 MHz
3.2	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

Qualcomm Atheros, Inc.
1700 Technology Drive, San Jose, CA95110

1.2 Manufacturer

Qualcomm Atheros, Inc.
1700 Technology Drive, San Jose, CA95110

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	1X1 802.11b/g/n-BT4.0 Combo PCIe minicard
Brand Name	Qualcomm Atheros
Model Name	QCWB335
Installed Notebook Computer	Brand Name: TOSHIBA Model Name: Satellite W30t-A; Satellite W30Dt-A; Satellite Click; Toshiba Click
FCC ID	PPD-QCWB335
EUT supports Radios application	WLAN 11b/g/n HT20/HT40 Bluetooth v2.1 + EDR Bluetooth v4.0 - LE
EUT Stage	Identical Prototype

Antenna Information			
Antenna	Manufacturer	Foxconn	
	Antenna Type	Main: PIFA Antenna	Aux.: PIFA Antenna
	Peak gain	Main Antenna : 2.03 dBi	Aux. Antenna : 2.64 dBi

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz
Maximum Output Power to Antenna	802.11b : 19.92 dBm (0.0982 W) 802.11g : 24.27 dBm (0.2673 W) 802.11n HT20 : 23.92 dBm (0.2466 W) 802.11n HT40 : 22.98 dBm (0.1986 W)
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.5 Modification of EUT

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

1.6 Testing Site

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

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

1.7 Applied Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01
- ♦ ANSI C63.4-2003

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.



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. For radiated measurement, pre-scanned in three test planes (X, Y, Z) in Tablet PC configurations and one test plane in Laptop PC configuration. The worst cases (Y plane in Tablet PC configuration) 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		



2.2 Pre-Scanned RF Power

Band	2.4GHz 802.11b RF Power (dBm)			2.4GHz 802.11g RF Power (dBm)		
Channel	1	6	11	1	6	11
Frequency (MHz)	2412	2437	2462	2412	2437	2462
Peak Power	19.81	19.92	19.58	21.71	24.27	22.92

Band	2.4GHz 802.11n HT20 RF Power (dBm)		
Channel	1	6	11
Frequency (MHz)	2412	2437	2462
Peak Power	20.70	23.92	22.15

Band	2.4GHz 802.11n HT40 RF Power (dBm)		
Channel	3	6	9
Frequency (MHz)	2422	2437	2452
Peak Power	20.63	22.98	21.28

Band	2.4GHz 802.11b RF Power (dBm)			2.4GHz 802.11g RF Power (dBm)		
Duty Cycle (%)	100%			97.53%		
Channel	1	6	11	1	6	11
Frequency (MHz)	2412	2437	2462	2412	2437	2462
Average Power	17.45	17.72	17.41	11.94	17.71	14.79

Band	2.4GHz 802.11n HT20 RF Power (dBm)		
Duty Cycle (%)	97.52%		
Channel	1	6	11
Frequency (MHz)	2412	2437	2462
Average Power	10.90	16.27	13.47

Band	2.4GHz 802.11n HT40 RF Power (dBm)		
Duty Cycle (%)	96.04%		
Channel	3	6	9
Frequency (MHz)	2422	2437	2452
Average Power	10.95	14.37	11.87

Note: The data rates of WLAN 802.11b/g/n were set in 1Mbps for 802.11b, 6Mbps for 802.11g, MCS0 for 802.11n HT20, and MCS0 for HT40 due to the highest RF output power.

2.3 Test Mode

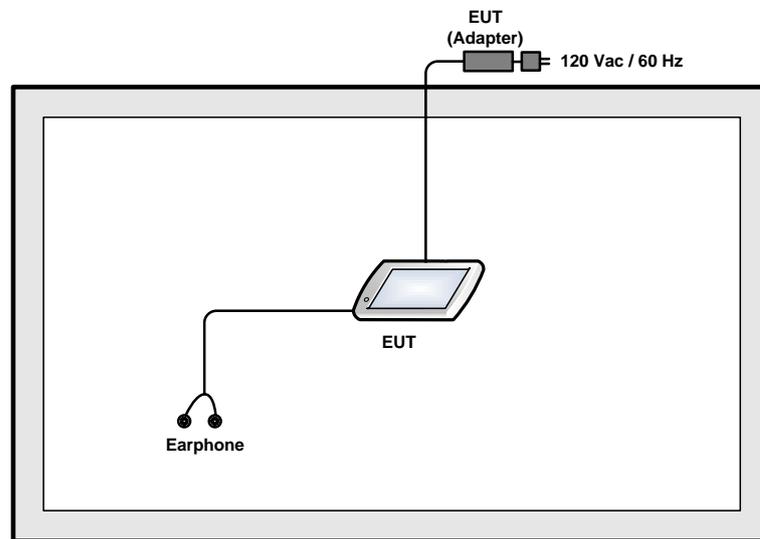
Final results of test modes, data rates and test channels are shown as following table.

<2.4GHz>

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Radiated TCs	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

2.4 Connection Diagram of Test System

<WLAN Tx Mode>





2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Earphone	Ergotech	ET-E200	FCC DoC	Unshielded, 1.8 m	N/A

2.6 Description of RF Function Operation Test Setup

The programmed RF utility, "Atheros Radio Test" installed in the EUT make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals.

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

See list of measuring instruments of this test report.



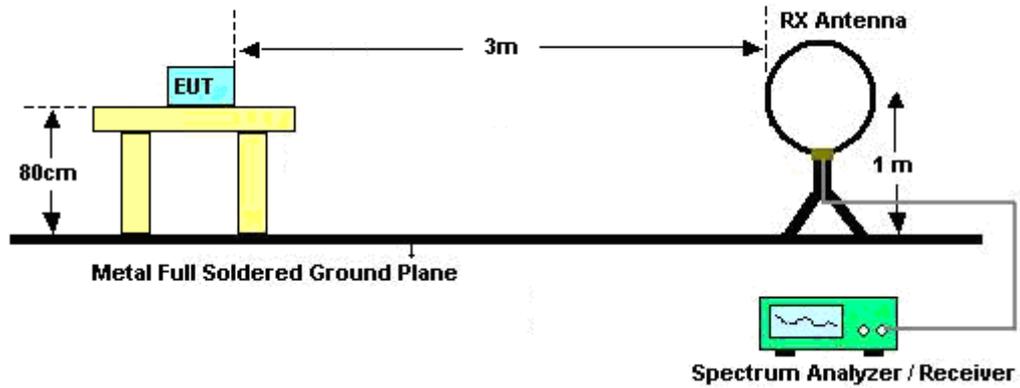
3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
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.

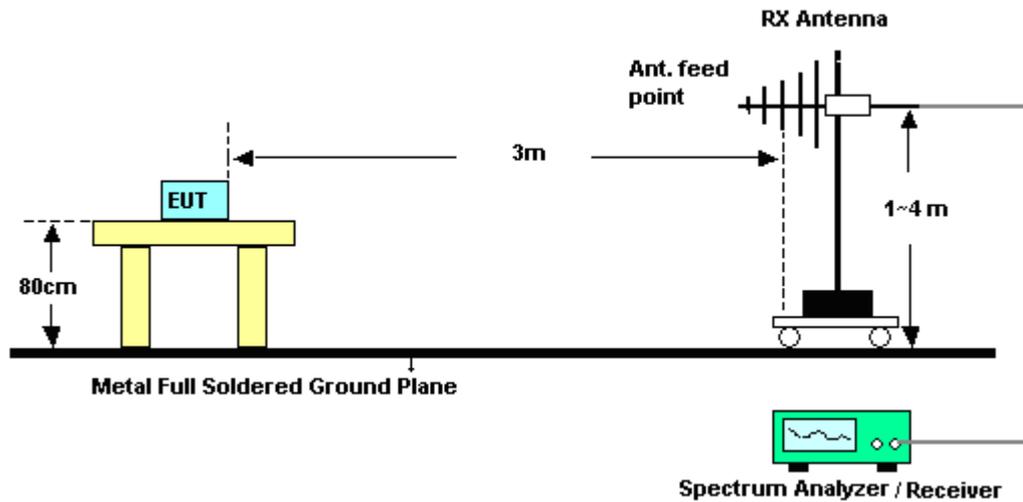
Band	Duty Cycle(%)	T(μ s)	1/T(kHz)	VBW Setting
802.11b	100.00	-	-	10Hz
802.11g	97.53	2024.038	0.494	1kHz
2.4GHz 802.11n HT20	97.52	1887.821	0.530	1kHz
2.4GHz 802.11n HT40	96.04	931.731	1.073	3kHz

3.1.4 Test Setup

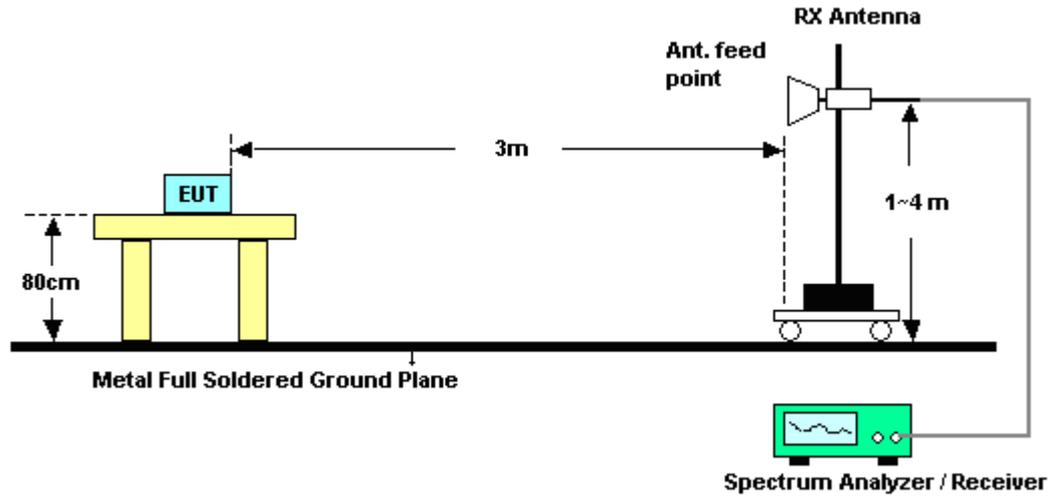
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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



3.1.6 Test Result of Radiated Spurious at Band Edges

Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	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
2386.23	59.57	-14.43	74	54.75	32.18	6.91	34.27	118	122	Peak
2386.59	49.11	-4.89	54	44.29	32.18	6.91	34.27	118	122	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
2388.03	57.93	-16.07	74	53.11	32.18	6.91	34.27	100	88	Peak
2386.68	47.07	-6.93	54	42.25	32.18	6.91	34.27	100	88	Average

Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	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
2487.94	63.22	-10.78	74	58.29	32.3	7.06	34.43	115	119	Peak
2487.61	53.65	-0.35	54	48.72	32.3	7.06	34.43	115	119	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
2487.79	59.93	-14.07	74	55	32.3	7.06	34.43	100	142	Peak
2487.64	48.44	-5.56	54	43.51	32.3	7.06	34.43	100	142	Average



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	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
2390	72.84	-1.16	74	68.05	32.18	6.91	34.3	118	121	Peak
2390	52.59	-1.41	54	47.8	32.18	6.91	34.3	118	121	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
2389.92	67.96	-6.04	74	63.17	32.18	6.91	34.3	100	87	Peak
2390	50.89	-3.11	54	46.1	32.18	6.91	34.3	100	87	Average

Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	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
2486.41	70.34	-3.66	74	65.33	32.38	7.06	34.43	114	117	Peak
2483.59	51.99	-2.01	54	46.98	32.38	7.06	34.43	114	117	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
2484.67	66.79	-7.21	74	61.78	32.38	7.06	34.43	100	137	Peak
2483.53	50.4	-3.6	54	45.39	32.38	7.06	34.43	100	137	Average



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	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
2389.38	72.71	-1.29	74	67.89	32.18	6.91	34.27	118	122	Peak
2390	53.15	-0.85	54	48.36	32.18	6.91	34.3	118	122	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
2389.92	69.36	-4.64	74	64.57	32.18	6.91	34.3	100	87	Peak
2390	51.4	-2.6	54	46.61	32.18	6.91	34.3	100	87	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	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
2484.13	69.76	-4.24	74	64.75	32.38	7.06	34.43	114	118	Peak
2483.5	51.76	-2.24	54	46.75	32.38	7.06	34.43	114	118	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
2483.86	66.74	-7.26	74	61.73	32.38	7.06	34.43	100	135	Peak
2483.59	50.58	-3.42	54	45.57	32.38	7.06	34.43	100	135	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	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
2389.2	70.07	-3.93	74	65.13	32.3	6.91	34.27	116	117	Peak
2390	53.93	-0.07	54	49.02	32.3	6.91	34.3	116	117	Average
2486.29	57.51	-16.49	74	52.5	32.38	7.06	34.43	116	117	Peak
2494.3	45.49	-8.51	54	40.51	32.4	7.06	34.48	116	117	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
2389.11	69.14	-4.86	74	64.2	32.3	6.91	34.27	128	137	Peak
2389.92	53.34	-0.66	54	48.43	32.3	6.91	34.3	128	137	Average
2492.14	57.16	-16.84	74	52.18	32.4	7.06	34.48	128	137	Peak
2484.07	44.93	-9.07	54	39.92	32.38	7.06	34.43	128	137	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	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
2386.05	57.49	-16.51	74	52.55	32.3	6.91	34.27	114	118	Peak
2389.02	45.18	-8.82	54	40.24	32.3	6.91	34.27	114	118	Average
2483.62	70.13	-3.87	74	65.12	32.38	7.06	34.43	114	118	Peak
2484.01	53.84	-0.16	54	48.83	32.38	7.06	34.43	114	118	Peak

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
2389.47	56.71	-17.29	74	51.77	32.3	6.91	34.27	100	136	Peak
2349.96	45.12	-8.88	54	40.29	32.24	6.84	34.25	100	136	Average
2483.86	68.03	-5.97	74	63.02	32.38	7.06	34.43	100	136	Peak
2483.65	52.61	-1.39	54	47.6	32.38	7.06	34.43	100	136	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 :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	106.02	-	-	101.17	32.2	6.95	34.3	118	122	Average
2410	111.27	-	-	106.42	32.2	6.95	34.3	118	122	Peak

Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	103.45	-	-	98.6	32.2	6.95	34.3	100	88	Average
2410	108.66	-	-	103.81	32.2	6.95	34.3	100	88	Peak



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2438 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
2438	109.46	-	-	104.58	32.24	6.99	34.35	116	122	Average
2438	114.49	-	-	109.61	32.24	6.99	34.35	116	122	Peak
4875	48.19	-25.81	74	63.92	34.28	8.82	58.83	100	0	Peak
4986	46.39	-27.61	74	61.76	34.3	8.95	58.62	100	0	Peak
7311	47.8	-26.2	74	58.58	36.04	10.91	57.73	100	0	Peak

Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	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	106.18	-	-	101.3	32.24	6.99	34.35	100	85	Average
2439	111.33	-	-	106.45	32.24	6.99	34.35	100	85	Peak
4875	49.62	-24.38	74	65.35	34.28	8.82	58.83	100	0	Peak
4995	50.35	-23.65	74	65.69	34.3	8.95	58.59	100	0	Peak
7313	49.65	-24.35	74	60.43	36.04	10.91	57.73	100	0	Peak



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	109.69	-	-	104.8	32.26	7.02	34.39	115	119	Average
2462	114.66	-	-	109.77	32.26	7.02	34.39	115	119	Peak

Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2464	105.44	-	-	100.55	32.26	7.02	34.39	100	142	Average
2464	110.42	-	-	105.53	32.26	7.02	34.39	100	142	Peak



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	99.41	-	-	94.56	32.2	6.95	34.3	118	121	Average
2410	109.78	-	-	104.93	32.2	6.95	34.3	118	121	Peak

Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	96.87	-	-	92.02	32.2	6.95	34.3	100	87	Average
2410	107.42	-	-	102.57	32.2	6.95	34.3	100	87	Peak



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
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	106.78	-	-	101.9	32.24	6.99	34.35	116	121	Average
2439	117.15	-	-	112.27	32.24	6.99	34.35	116	121	Peak
4876	46.72	-27.28	74	62.42	34.28	8.85	58.83	100	0	Peak
5001	46.15	-27.85	74	61.47	34.3	8.97	58.59	100	0	Peak
7309	40.78	-13.22	54	51.56	36.04	10.91	57.73	101	163	Average
7309	54.53	-19.47	74	65.31	36.04	10.91	57.73	101	163	Peak

Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	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	103.26	-	-	98.4	32.22	6.99	34.35	126	138	Average
2435	113.48	-	-	108.62	32.22	6.99	34.35	126	138	Peak
4875	46.22	-27.78	74	61.95	34.28	8.82	58.83	100	0	Peak
4983	51.1	-22.9	74	66.47	34.3	8.95	58.62	100	0	Peak
7309	41.44	-12.56	54	52.22	36.04	10.91	57.73	100	25	Average
7309	55.86	-18.14	74	66.64	36.04	10.91	57.73	100	25	Peak



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2464	99.01	-	-	94.01	32.37	7.02	34.39	114	117	Average
2464	109.19	-	-	104.19	32.37	7.02	34.39	114	117	Peak

Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2464	96.39	-	-	91.39	32.37	7.02	34.39	100	137	Average
2464	107.1	-	-	102.1	32.37	7.02	34.39	100	137	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	98.33	-	-	93.48	32.2	6.95	34.3	118	122	Average
2410	108.97	-	-	104.12	32.2	6.95	34.3	118	122	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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	95.8	-	-	90.95	32.2	6.95	34.3	100	87	Average
2410	106.3	-	-	101.45	32.2	6.95	34.3	100	87	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
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
99.93	30.35	-13.15	43.5	50.66	9.8	0.99	31.1	-	-	Peak
190.38	27.49	-16.01	43.5	48.31	9	1.28	31.1	-	-	Peak
299.19	39.41	-6.59	46	55.35	13.3	1.77	31.01	100	25	Peak
433	38.73	-7.27	46	50.53	16.69	2.25	30.74	-	-	Peak
499.5	33.08	-12.92	46	43.15	18.08	2.45	30.6	-	-	Peak
564.6	29.57	-16.43	46	38.53	19.19	2.59	30.74	-	-	Peak
2439	105.07	-	-	100.19	32.24	6.99	34.35	116	120	Average
2439	115.43	-	-	110.55	32.24	6.99	34.35	116	120	Peak
4876	44.94	-29.06	74	60.64	34.28	8.85	58.83	100	0	Peak
4983	46.62	-27.38	74	61.99	34.3	8.95	58.62	100	0	Peak
7309	41.7	-12.3	54	52.48	36.04	10.91	57.73	100	166	Average
7309	53.91	-20.09	74	64.69	36.04	10.91	57.73	100	166	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	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
99.93	37.47	-6.03	43.5	57.78	9.8	0.99	31.1	100	57	Peak
232.77	24.15	-21.85	46	42.26	11.39	1.5	31	-	-	Peak
299.19	31.51	-14.49	46	47.45	13.3	1.77	31.01	-	-	Peak
365.1	32.16	-13.84	46	46.11	15.06	2.07	31.08	-	-	Peak
433	31.42	-14.58	46	43.22	16.69	2.25	30.74	-	-	Peak
566.7	33.46	-12.54	46	42.37	19.22	2.6	30.73	-	-	Peak
2439	102.22	-	-	97.34	32.24	6.99	34.35	100	84	Average
2439	112.21	-	-	107.33	32.24	6.99	34.35	100	84	Peak
4876	45.47	-28.53	74	61.17	34.28	8.85	58.83	100	0	Peak
4992	50.61	-23.39	74	65.95	34.3	8.95	58.59	100	0	Peak
7309	40.56	-13.44	54	51.34	36.04	10.91	57.73	100	38	Average
7309	52.23	-21.77	74	63.01	36.04	10.91	57.73	100	38	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2464	97.8	-	-	92.8	32.37	7.02	34.39	114	118	Average
2464	108.43	-	-	103.43	32.37	7.02	34.39	114	118	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2464	95.42	-	-	90.42	32.37	7.02	34.39	100	135	Average
2464	105.51	-	-	100.51	32.37	7.02	34.39	100	135	Peak



Test Mode :	2.4GHz 802.11n HT40	Temperature :	21~24°C
Test Channel :	03	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2424 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2424	92.45	-	-	87.52	32.33	6.95	34.35	116	117	Average
2424	102.38	-	-	97.45	32.33	6.95	34.35	116	117	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	21~24°C
Test Channel :	03	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2424 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2424	89.94	-	-	85.01	32.33	6.95	34.35	128	137	Average
2424	99.81	-	-	94.88	32.33	6.95	34.35	128	137	Peak



Test Mode :	2.4GHz 802.11n HT40	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
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	98.32	-	-	93.44	32.24	6.99	34.35	118	121	Average
2439	107.88	-	-	103	32.24	6.99	34.35	118	121	Peak
4875	41.05	-32.95	74	56.78	34.28	8.82	58.83	100	0	Peak
4995	46.71	-27.29	74	62.05	34.3	8.95	58.59	100	0	Peak
7311	43	-31	74	53.78	36.04	10.91	57.73	100	0	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	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	96.39	-	-	91.51	32.24	6.99	34.35	188	94	Average
2439	105.81	-	-	100.93	32.24	6.99	34.35	188	94	Peak
4872	44.14	-29.86	74	59.87	34.28	8.82	58.83	100	0	Peak
4995	50.96	-23.04	74	66.3	34.3	8.95	58.59	100	0	Peak
7311	43.29	-30.71	74	54.07	36.04	10.91	57.73	100	0	Peak



Test Mode :	2.4GHz 802.11n HT40	Temperature :	21~24°C
Test Channel :	09	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
Remark :	1. 2454 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2454	94.26	-	-	89.26	32.37	7.02	34.39	114	118	Average
2454	103.99	-	-	98.99	32.37	7.02	34.39	114	118	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	21~24°C
Test Channel :	09	Relative Humidity :	51~53%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
Remark :	1. 2454 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
2454	91.85	-	-	86.85	32.37	7.02	34.39	100	136	Average
2454	101.37	-	-	96.37	32.37	7.02	34.39	100	136	Peak



3.2 Antenna Requirements

3.2.1 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.

3.2.2 Antenna Connected Construction

Embedded in Antenna.

3.2.3 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
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Aug. 23, 2013~ Aug. 27, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Aug. 23, 2013~ Aug. 27, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Aug. 23, 2013~ Aug. 27, 2013	Sep. 07, 2013	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9KHz~7GHz	Sep. 03, 2012	Aug. 21, 2013~ Aug. 27, 2013	Sep. 02, 2013	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz~30GHz	Nov. 30, 2012	Aug. 21, 2013~ Aug. 27, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MHz	Jul. 03, 2012	Aug. 21, 2013~ Aug. 27, 2013	Jul. 03, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz~1GHz	Oct. 06, 2012	Aug. 21, 2013~ Aug. 27, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	66583	1GHz~18GHz	Aug. 02, 2013	Aug. 21, 2013~ Aug. 27, 2013	Aug. 01, 2014	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Sep. 28, 2012	Aug. 21, 2013~ Aug. 27, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Aug. 21, 2013~ Aug. 27, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Dec. 01, 2012	Aug. 21, 2013~ Aug. 27, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Aug. 21, 2013~ Aug. 27, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Aug. 21, 2013~ Aug. 27, 2013	N/A	Radiation (03CH07-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
---	------

Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

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

