

# Partial FCC RF Test Report

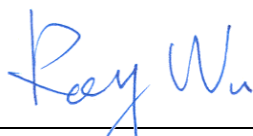
APPLICANT : LG Electronics Inc.  
EQUIPMENT : Notebook Computer  
BRAND NAME : LG  
MODEL NAME : LGP43, P430, PB430, PD430, PV430  
FCC ID : VQF-RT3090BC4  
STANDARD : FCC Part 15 Subpart C §15.247  
CLASSIFICATION : Digital Transmission System (DTS)

This is a partial report which is only valid combined with the Integrated WLAN Module report (Brand Name: Ralink, Model Name: RT3090BC4, FCC ID: VQF-RT3090BC4).

The product was received on Apr. 08, 2011 and completely tested on Apr. 19, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the 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:



Roy Wu / Manager



## SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



## TABLE OF CONTENTS

<b>REVISION HISTORY.....</b>	<b>3</b>
<b>SUMMARY OF TEST RESULT .....</b>	<b>4</b>
<b>1 GENERAL DESCRIPTION .....</b>	<b>5</b>
1.1 Applicant.....	5
1.2 Manufacturer.....	5
1.3 Feature of Equipment Under Test .....	5
1.4 Testing Site.....	6
1.5 Applied Standards .....	6
1.6 Ancillary Equipment List .....	6
<b>2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST .....</b>	<b>7</b>
2.1 Test Mode.....	7
2.2 Connection Diagram of Test System.....	8
2.3 RF Utility .....	9
<b>3 TEST RESULT .....</b>	<b>10</b>
3.1 Band Edges Measurement .....	10
3.2 AC Conducted Emission Measurement.....	17
3.3 Radiated Emission Measurement.....	21
3.4 Antenna Requirements.....	44
<b>4 LIST OF MEASURING EQUIPMENT .....</b>	<b>45</b>
<b>5 UNCERTAINTY OF EVALUATION .....</b>	<b>46</b>



## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR140837	Rev. 01	Initial issue of report	Apr. 27, 2011

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(d)	A8.5	Frequency Band Edges	$\leq 20\text{dBc}$	Pass	-
3.2	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 8.7 dB at 1.45 MHz
3.3	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 4.33 dB at 63.21 MHz
3.4	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

# 1 General Description

## 1.1 Applicant

LG Electronics Inc.

No. 19-1, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

## 1.2 Manufacturer

LG Electronics Inc.

No. 25, The Third Street Kunshan Export Processing Zone, Jiangsu, P.R.C.

## 1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Notebook Computer
Brand Name	LG
Model Name	LGP43, P430, PB430, PD430, PV430
FCC ID	VQF-RT3090BC4
Tx/Rx Frequency Range	2400 MHz ~ 2483.5 MHz
Number of Channels	11
Carrier Frequency of Each Channel	$2412+(n-1)*5$ MHz; $n=1\sim11$
Channel Spacing	5 MHz
Antenna Type	PIFA Antenna
Antenna Gain	WNC Antenna : 1.48 dBi Whayu Antenna : -2.68 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

### Remark:

1. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).
2. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL INC.		
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>FCC/IC Registration No.</b>
	CO05-HY	03CH05-HY	722060/4086B-1

## 1.5 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 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 8

### 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 (DoC), recorded in a separate test report.

## 1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	LCD Monitor	Dell	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
4.	USB HD	WD	WDBAAR3200A BK-PESN	FCC DoC	Shielded, 0.5 m	N/A
5.	Earphone	Ergotech	ET-E200	FCC DoC	Unshielded, 1.8 m	N/A

## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 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), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

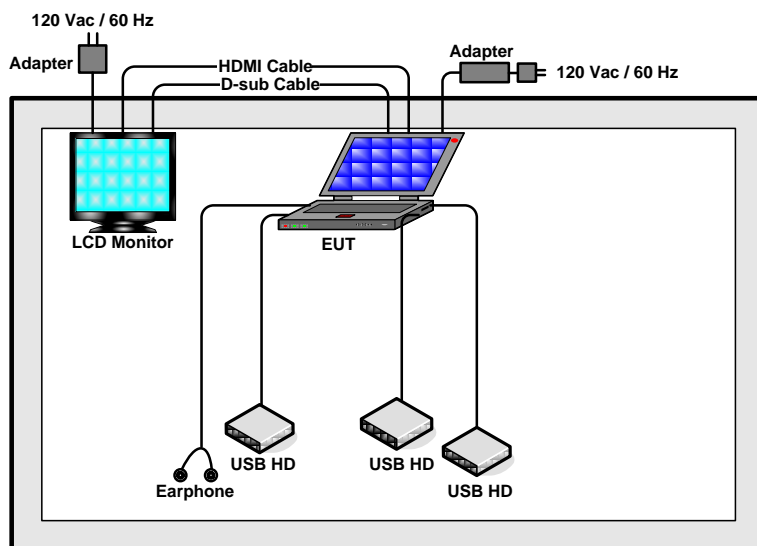
Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

The following tables are showing the test modes as the worst cases and recorded in this report.

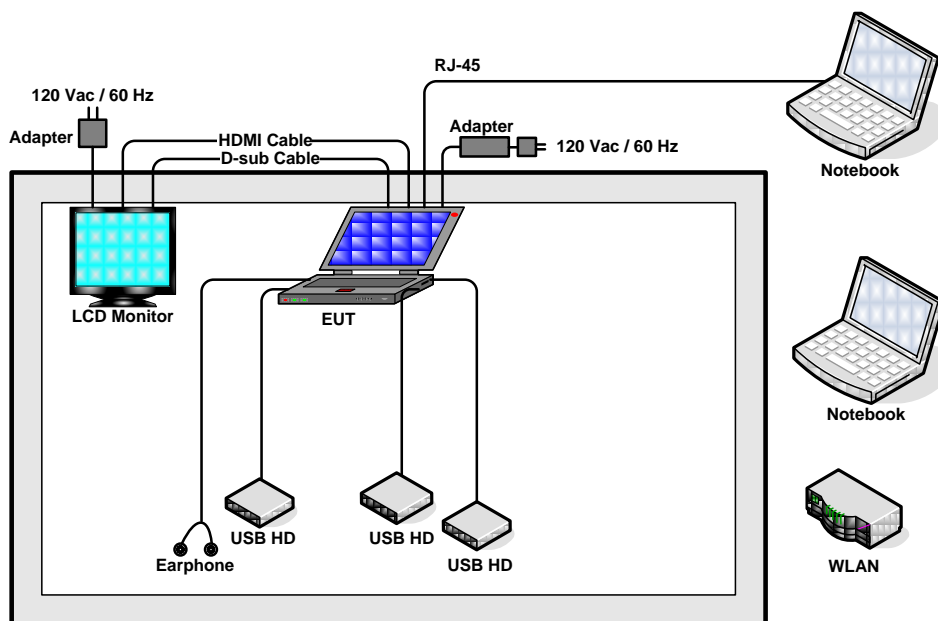
Test Cases	
Test Item	<b>802.11b (Modulation : DSSS)</b> <b>802.11g/n (Modulation : OFDM)</b>
<b>Radiated TCs</b>	Mode 1: 802.11b_CH01_2412 MHz with Antenna 1 Mode 2: 802.11b_CH06_2437 MHz with Antenna 1 Mode 3: 802.11b_CH11_2462 MHz with Antenna 1 Mode 4: 802.11g_CH01_2412 MHz with Antenna 1 Mode 5: 802.11g_CH06_2437 MHz with Antenna 1 Mode 6: 802.11g_CH11_2462 MHz with Antenna 1 Mode 7 : 802.11n_CH01_2412 MHz (BW 20M) with Antenna 1 Mode 8 : 802.11n_CH06_2437 MHz (BW 20M) with Antenna 1 Mode 9 : 802.11n_CH11_2462 MHz (BW 20M) with Antenna 1 Mode 10 : 802.11n_CH03_2422 MHz (BW 40M) with Antenna 1 Mode 11 : 802.11n_CH06_2437 MHz (BW 40M) with Antenna 1 Mode 12 : 802.11n_CH09_2452 MHz (BW 40M) with Antenna 1 Mode 13 : 802.11g_CH11_2462 MHz with Antenna 2
<b>AC Conducted Emission</b>	Mode 1 : WLAN Link + TC + Adapter
<b>Remark:</b> <ol style="list-style-type: none"> <li>Only the tests of radiated emission and conducted emission were performed in this report, and the conducted test cases can be referred to Ralink module report (FCC ID: VQF-RT3090BC4).</li> <li>TC stands for Test Configuration, and consists of monitor, USB HD, earphone, and RJ-45.</li> <li>Mode 7 to 12 of radiation test only performed Band Edges.</li> </ol>	

## 2.2 Connection Diagram of Test System

### <WLAN Tx Mode>



### <AC Conducted Emission Mode>







## **2.3 RF Utility**

The programmed RF utility "RaUI-Shortcut.exe" is installed in EUT to provide channel selection, power level, data rate and the application type. RF utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

### **3 Test Result**

#### **3.1 Band Edges Measurement**

##### **3.1.1 Limit of Band Edges**

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. 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.

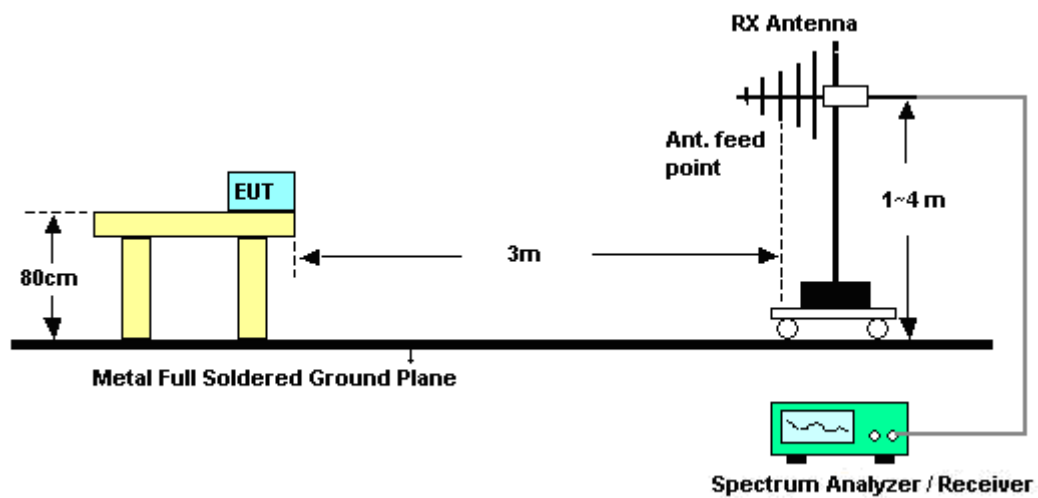
##### **3.1.2 Measuring Instruments**

See list of measuring instruments of this test report.

##### **3.1.3 Test Procedures**

1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW)  $\geq$  RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the device complies with the use of power option 2 the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

### 3.1.4 Test Setup



### 3.1.5 Test Result of Radiated Band Edges

<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	23~25℃
<b>Test Band :</b>	802.11b	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.99	56.2	-17.8	74	54.08	31.7	4.5	34.08	100	236	Peak
2389.99	44.9	-9.1	54	42.78	31.7	4.5	34.08	100	236	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2385.62	52.62	-21.38	74	50.53	31.7	4.47	34.08	153	305	Peak
2385.62	42.4	-11.6	54	40.31	31.7	4.47	34.08	153	305	Average

<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~25℃
<b>Test Band :</b>	802.11b	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2484.42	56.63	-17.37	74	54.34	31.78	4.59	34.08	100	238	Peak
2484.42	45.25	-8.75	54	42.96	31.78	4.59	34.08	100	238	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2484.04	51.57	-22.43	74	49.28	31.78	4.59	34.08	197	259	Peak
2484.04	39.85	-14.15	54	37.56	31.78	4.59	34.08	197	259	Average



<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11g	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.04	59.41	-14.59	74	57.32	31.7	4.47	34.08	102	236	Peak
2389.04	43.84	-10.16	54	41.75	31.7	4.47	34.08	102	236	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.23	52.45	-21.55	74	50.36	31.7	4.47	34.08	200	256	Peak
2389.23	37.94	-16.06	54	35.85	31.7	4.47	34.08	200	256	Average

<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11g	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	60.83	-13.17	74	58.54	31.78	4.59	34.08	100	228	Peak
2483.5	43.43	-10.57	54	41.14	31.78	4.59	34.08	100	228	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	55.2	-18.8	74	52.91	31.78	4.59	34.08	196	251	Peak
2483.5	38.46	-15.54	54	36.17	31.78	4.59	34.08	196	251	Average



<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11n (BW 20MHz)	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.99	56.76	-17.24	74	54.64	31.7	4.5	34.08	100	236	Peak
2389.99	42.67	-11.33	54	40.55	31.7	4.5	34.08	100	236	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.8	48.87	-25.13	74	46.75	31.7	4.5	34.08	200	256	Peak
2389.8	35.54	-18.46	54	33.42	31.7	4.5	34.08	200	256	Average

<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11n (BW 20MHz)	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	63.91	-10.09	74	61.62	31.78	4.59	34.08	100	230	Peak
2483.5	44.42	-9.58	54	42.13	31.78	4.59	34.08	100	230	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2485.56	56.95	-17.05	74	54.66	31.78	4.59	34.08	199	251	Peak
2485.56	38.62	-15.38	54	36.33	31.78	4.59	34.08	199	251	Average



<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11n (BW 40MHz)	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	03	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386.19	63.5	-10.5	74	61.41	31.7	4.47	34.08	101	218	Peak
2386.19	46.29	-7.71	54	44.2	31.7	4.47	34.08	101	218	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2388.66	55.18	-18.82	74	53.09	31.7	4.47	34.08	200	238	Peak
2388.66	38.68	-15.32	54	36.59	31.7	4.47	34.08	200	238	Average

<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11n (BW 40MHz)	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	09	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2485.56	61.97	-12.03	74	59.68	31.78	4.59	34.08	101	234	Peak
2485.56	45.31	-8.69	54	43.02	31.78	4.59	34.08	101	234	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.85	54.69	-19.31	74	52.4	31.78	4.59	34.08	200	253	Peak
2483.85	38.85	-15.15	54	36.56	31.78	4.59	34.08	200	253	Average



<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~25°C
<b>Test Band :</b>	802.11g	<b>Relative Humidity :</b>	49~51%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Brian Chang

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	49.36	-24.64	74	80.87	0	4.59	36.1	100	252	Peak
2483.5	33.6	-20.4	54	65.11	0	4.59	36.1	100	252	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level ( dBuV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	46.23	-27.77	74	43.94	31.78	4.59	34.08	193	74	Peak
2483.5	32.06	-21.94	54	29.77	31.78	4.59	34.08	193	74	Average



## 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 (dBuV)	
	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.

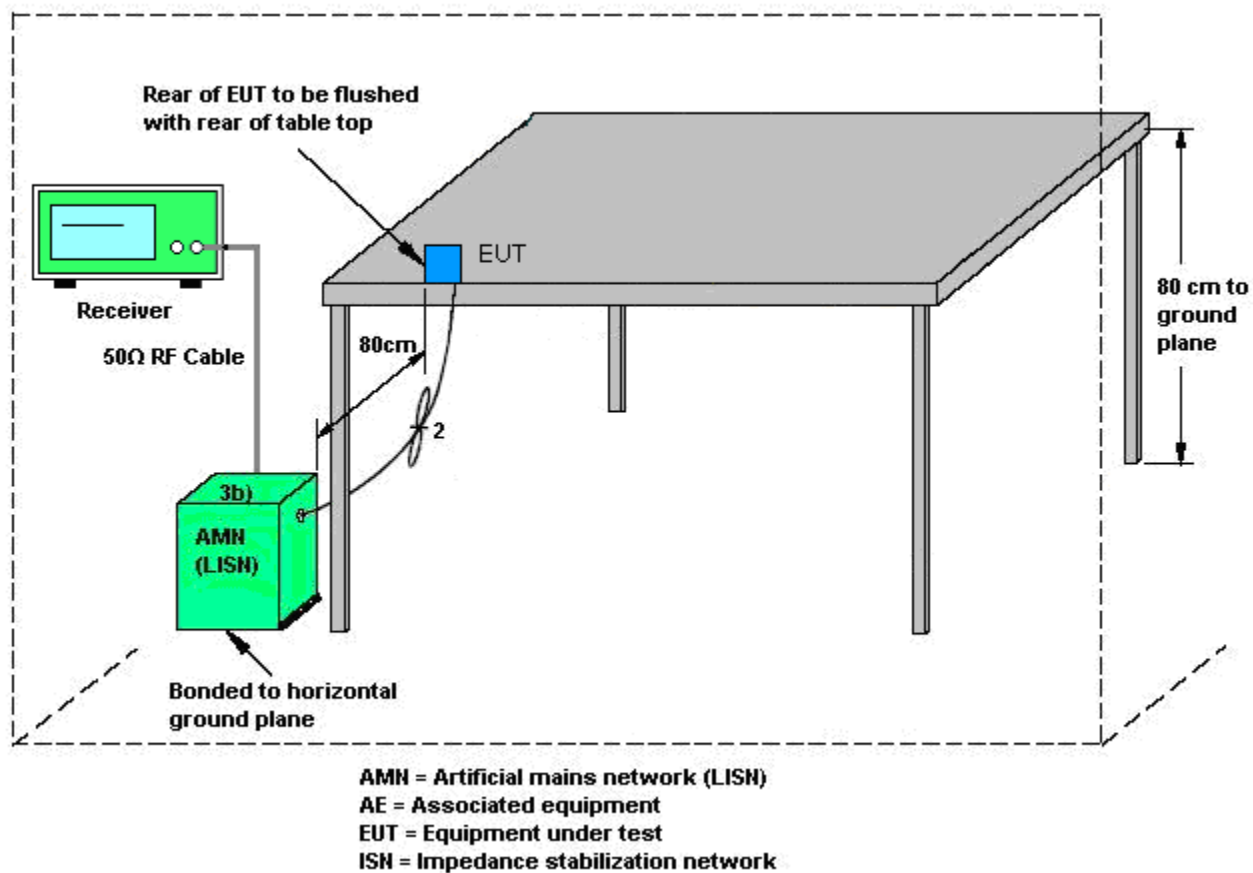
### 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

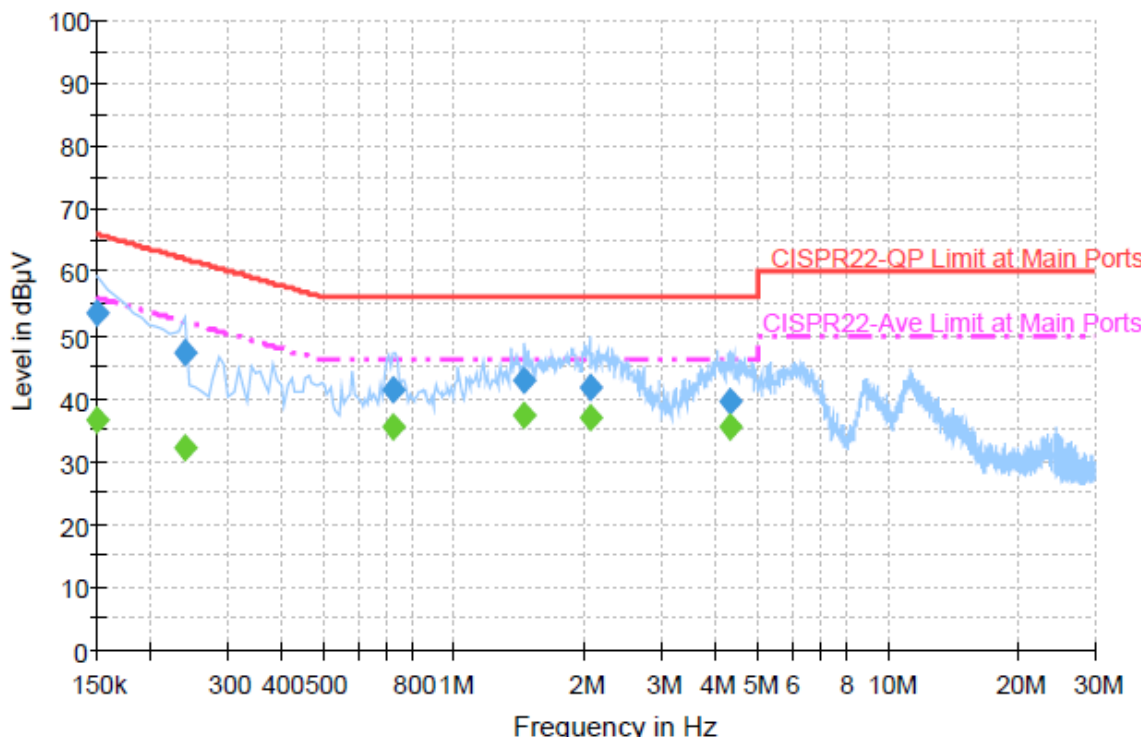
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. 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°C
Test Engineer :	Novic Chiang	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link + TC + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



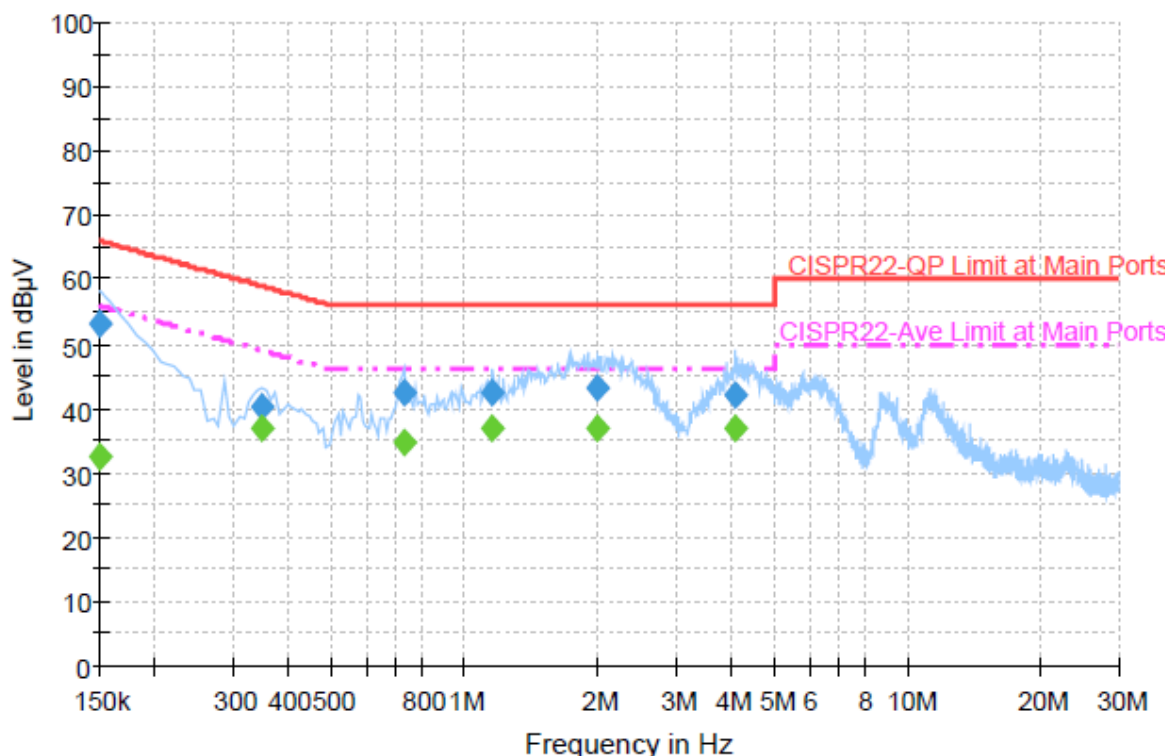
#### Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	53.4	Off	L1	19.4	12.6	66.0
0.238000	47.4	Off	L1	19.4	14.8	62.2
0.726000	41.5	Off	L1	19.4	14.5	56.0
1.454000	42.7	Off	L1	19.4	13.3	56.0
2.054000	41.6	Off	L1	19.4	14.4	56.0
4.342000	39.5	Off	L1	19.5	16.5	56.0

#### Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	36.7	Off	L1	19.4	19.3	56.0
0.238000	32.1	Off	L1	19.4	20.1	52.2
0.726000	35.4	Off	L1	19.4	10.6	46.0
1.454000	37.3	Off	L1	19.4	8.7	46.0
2.054000	36.8	Off	L1	19.4	9.2	46.0
4.342000	35.3	Off	L1	19.5	10.7	46.0

<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	20~22°C
<b>Test Engineer :</b>	Novic Chiang	<b>Relative Humidity :</b>	40~42%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	WLAN Link + TC + Adapter		
<b>Remark :</b>	All emissions not reported here are more than 10 dB below the prescribed limit.		


**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	53.1	Off	N	19.4	12.9	66.0
0.350000	40.0	Off	N	19.4	19.0	59.0
0.734000	42.3	Off	N	19.4	13.7	56.0
1.158000	42.3	Off	N	19.5	13.7	56.0
1.998000	43.3	Off	N	19.5	12.7	56.0
4.070000	42.0	Off	N	19.5	14.0	56.0

**Final Result 2**

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	32.5	Off	N	19.4	23.5	56.0
0.350000	37.0	Off	N	19.4	12.0	49.0
0.734000	34.5	Off	N	19.4	11.5	46.0
1.158000	36.8	Off	N	19.5	9.2	46.0
1.998000	36.8	Off	N	19.5	9.2	46.0
4.070000	37.1	Off	N	19.5	8.9	46.0

### 3.3 Radiated Emission Measurement

#### 3.3.1 Limit of Radiated Emission

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

#### 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

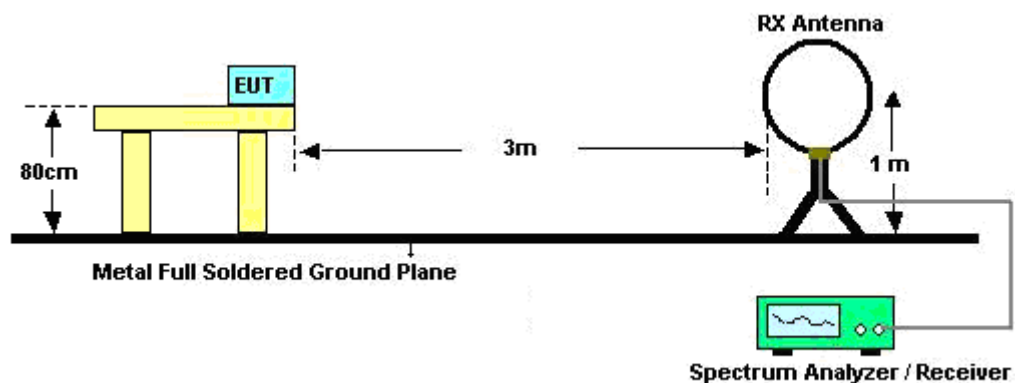
#### 3.3.3

#### 3.3.4 Test Procedures

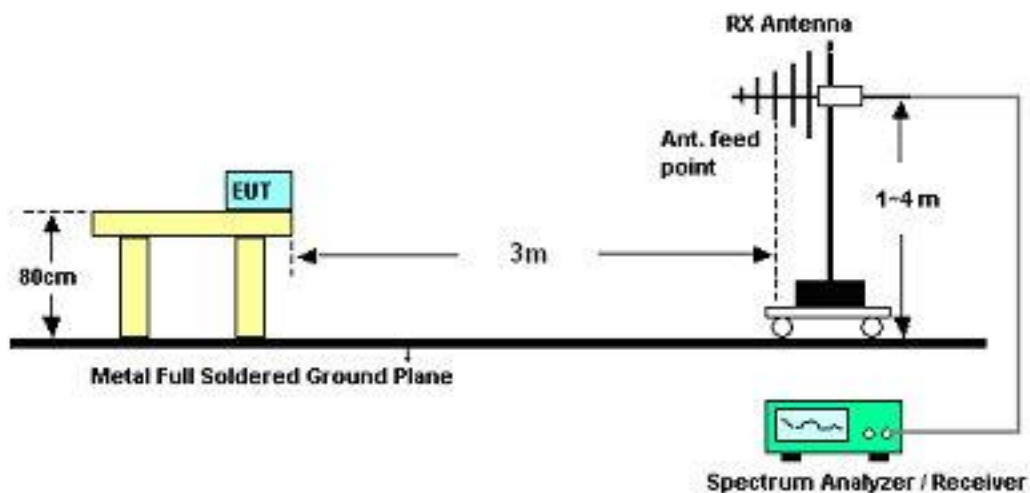
- The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
- Use the following spectrum analyzer settings:
  - Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold.
  - Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.  
Distance extrapolation factor =  $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$  (dB)
- Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

### 3.3.5 Test Setup

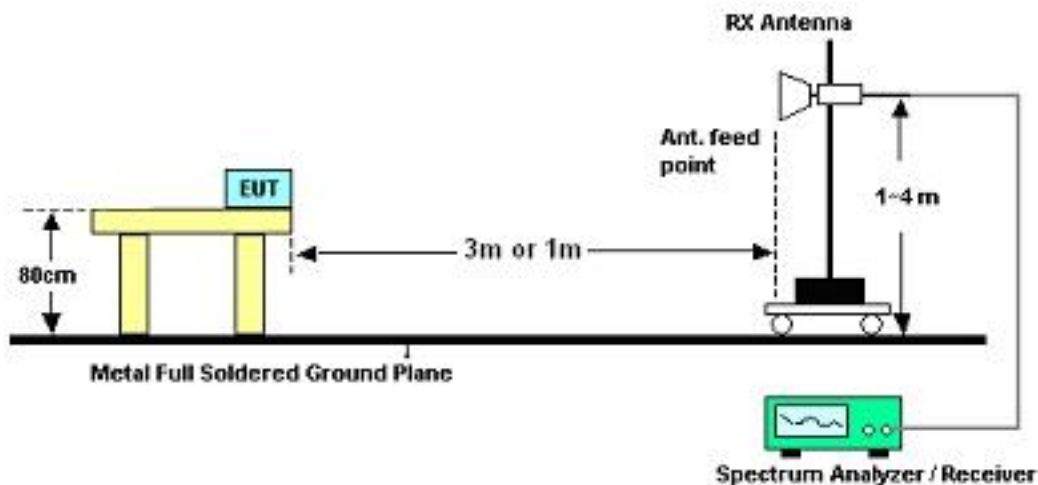
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

Test Engineer :	Brian Chang	Temperature :	23~25℃	
		Relative Humidity :	49~51%	

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

**Note:**

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

Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB);

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

**3.3.7 Test Result of Radiated Emission (30 MHz ~ 10<sup>th</sup> Harmonic)**

<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
250.59	27.98	-18.02	46	46.42	11.67	1.42	31.53	-	-	Peak
266.25	28.05	-17.95	46	46.24	11.83	1.42	31.44	-	-	Peak
280.02	34.56	-11.44	46	52.48	11.97	1.48	31.37	121	28	Peak
314.7	34.02	-11.98	46	51.19	12.56	1.55	31.28	-	-	Peak
348.3	31.48	-14.52	46	47.66	13.42	1.71	31.31	-	-	Peak
458.9	31.63	-14.37	46	44.73	16.12	1.92	31.14	-	-	Peak
2389.99	44.9	-9.1	54	42.78	31.7	4.5	34.08	100	236	Average
2389.99	56.2	-17.8	74	54.08	31.7	4.5	34.08	100	236	Peak
2412	105.03	-	-	102.9	31.71	4.5	34.08	100	236	Average
2412	108.68	-	-	106.55	31.71	4.5	34.08	100	236	Peak
2488	42.19	-11.81	54	39.88	31.8	4.59	34.08	100	236	Average
2488	55.42	-18.58	74	53.11	31.8	4.59	34.08	100	236	Peak
4824	44.05	-29.95	74	62.3	33.77	6.44	58.46	100	0	Peak





<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
64.29	35.05	-4.95	40	60.33	5.51	0.73	31.52	106	261	Peak
115.32	25.6	-17.9	43.5	45.64	10.53	0.95	31.52	-	-	Peak
246.81	27.53	-18.47	46	46.17	11.47	1.42	31.53	-	-	Peak
348.3	28.93	-17.07	46	45.11	13.42	1.71	31.31	-	-	Peak
418.3	30.49	-15.51	46	44.61	15.18	1.87	31.17	-	-	Peak
458.9	31.77	-14.23	46	44.87	16.12	1.92	31.14	-	-	Peak
2385.62	42.4	-11.6	54	40.31	31.7	4.47	34.08	153	305	Average
2385.62	52.62	-21.38	74	50.53	31.7	4.47	34.08	153	305	Peak
2412	101.69	-	-	99.56	31.71	4.5	34.08	153	305	Average
2412	105.14	-	-	103.01	31.71	4.5	34.08	153	305	Peak
2494	38.07	-15.93	54	35.73	31.8	4.62	34.08	153	305	Average
2494	50.48	-23.52	74	48.14	31.8	4.62	34.08	153	305	Peak

<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
243.57	26.84	-19.16	46	45.74	11.2	1.42	31.52	-	-	Peak
262.74	28.08	-17.92	46	46.33	11.79	1.42	31.46	-	-	Peak
278.94	33.88	-12.12	46	51.82	11.96	1.48	31.38	100	355	Peak
314.7	33.6	-12.4	46	50.77	12.56	1.55	31.28	-	-	Peak
349.7	31.45	-14.55	46	47.58	13.47	1.71	31.31	-	-	Peak
461	31.43	-14.57	46	44.48	16.17	1.92	31.14	-	-	Peak
2386	42.86	-11.14	54	40.77	31.7	4.47	34.08	100	242	Average
2386	54.07	-19.93	74	51.98	31.7	4.47	34.08	100	242	Peak
2437	106.4	-	-	104.2	31.75	4.53	34.08	100	242	Average
2437	110.24	-	-	108.06	31.73	4.53	34.08	100	242	Peak
2492	45.81	-8.19	54	43.47	31.8	4.62	34.08	100	242	Average
2492	56.37	-17.63	74	54.03	31.8	4.62	34.08	100	242	Peak
4874	44.73	-29.27	74	62.82	33.78	6.49	58.36	100	0	Peak
9748	48.56	-25.44	74	57.73	36.81	10.46	56.44	100	0	Peak



<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
64.29	35.06	-4.94	40	60.34	5.51	0.73	31.52	133	254	Peak
228.99	26.7	-19.3	46	46.68	10.18	1.34	31.5	-	-	Peak
243.3	26.66	-19.34	46	45.56	11.2	1.42	31.52	-	-	Peak
348.3	29.16	-16.84	46	45.34	13.42	1.71	31.31	-	-	Peak
419.7	30.27	-15.73	46	44.34	15.23	1.87	31.17	-	-	Peak
461	31.97	-14.03	46	45.02	16.17	1.92	31.14	-	-	Peak
2374	37.42	-16.58	54	35.35	31.68	4.47	34.08	200	266	Average
2374	49.41	-24.59	74	47.34	31.68	4.47	34.08	200	266	Peak
2437	101.16	-	-	98.96	31.75	4.53	34.08	200	266	Average
2437	105.06	-	-	102.88	31.73	4.53	34.08	200	266	Peak
2500	39.9	-14.1	54	37.56	31.8	4.62	34.08	200	266	Average
2500	50.95	-23.05	74	48.61	31.8	4.62	34.08	200	266	Peak
4874	46.8	-27.2	74	64.89	33.78	6.49	58.36	100	0	Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
253.83	30.26	-15.74	46	48.64	11.71	1.42	31.51	-	-	Peak
263.28	28.19	-17.81	46	46.44	11.79	1.42	31.46	-	-	Peak
278.94	35.44	-10.56	46	53.38	11.96	1.48	31.38	100	288	Peak
313.3	33.64	-12.36	46	50.86	12.51	1.55	31.28	-	-	Peak
328.7	31.14	-14.86	46	47.88	12.92	1.63	31.29	-	-	Peak
348.3	30.61	-15.39	46	46.79	13.42	1.71	31.31	-	-	Peak
2388	39.33	-14.67	54	37.24	31.7	4.47	34.08	100	238	Average
2388	51.58	-22.42	74	49.49	31.7	4.47	34.08	100	238	Peak
2462	103.29	-	-	101.04	31.77	4.56	34.08	100	238	Average
2462	107.18	-	-	104.93	31.77	4.56	34.08	100	238	Peak
2484.42	45.25	-8.75	54	42.96	31.78	4.59	34.08	100	238	Average
2484.42	56.63	-17.37	74	54.34	31.78	4.59	34.08	100	238	Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
63.75	34.57	-5.43	40	59.85	5.51	0.73	31.52	122	51	Peak
111.81	25.7	-17.8	43.5	46.03	10.24	0.95	31.52	-	-	Peak
247.62	28.48	-17.52	46	47.12	11.47	1.42	31.53	-	-	Peak
349	28.98	-17.02	46	45.13	13.45	1.71	31.31	-	-	Peak
418.3	30.08	-15.92	46	44.2	15.18	1.87	31.17	-	-	Peak
460.3	32.1	-13.9	46	45.15	16.17	1.92	31.14	-	-	Peak
2376	34.64	-19.36	54	32.57	31.68	4.47	34.08	197	259	Average
2376	46.29	-27.71	74	44.22	31.68	4.47	34.08	197	259	Peak
2462	98.6	-	-	96.35	31.77	4.56	34.08	197	259	Average
2462	102.46	-	-	100.21	31.77	4.56	34.08	197	259	Peak
2484.04	39.85	-14.15	54	37.56	31.78	4.59	34.08	197	259	Average
2484.04	51.57	-22.43	74	49.28	31.78	4.59	34.08	197	259	Peak



<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
239.79	30.3	-15.7	46	49.54	10.93	1.34	31.51	-	-	Peak
251.67	29.53	-16.47	46	47.94	11.69	1.42	31.52	-	-	Peak
280.02	33.64	-12.36	46	51.56	11.97	1.48	31.37	100	32	Peak
314.7	33.21	-12.79	46	50.38	12.56	1.55	31.28	-	-	Peak
327.3	30.76	-15.24	46	47.55	12.87	1.63	31.29	-	-	Peak
348.3	30.85	-15.15	46	47.03	13.42	1.71	31.31	-	-	Peak
2389.04	43.84	-10.16	54	41.75	31.7	4.47	34.08	102	236	Average
2389.04	59.41	-14.59	74	57.32	31.7	4.47	34.08	102	236	Peak
2412	98.76	-	-	96.63	31.71	4.5	34.08	102	236	Average
2412	108.1	-	-	105.97	31.71	4.5	34.08	102	236	Peak
2494	41.87	-12.13	54	39.53	31.8	4.62	34.08	102	236	Average
2494	54.55	-19.45	74	52.21	31.8	4.62	34.08	102	236	Peak



<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
64.29	35.16	-4.84	40	60.44	5.51	0.73	31.52	133	104	Peak
136.11	25.85	-17.65	43.5	45.52	10.77	1.07	31.51	-	-	Peak
240.06	27.31	-18.69	46	46.49	10.99	1.34	31.51	-	-	Peak
349.7	30.3	-15.7	46	46.43	13.47	1.71	31.31	-	-	Peak
419.7	29.96	-16.04	46	44.03	15.23	1.87	31.17	-	-	Peak
459.6	32.32	-13.68	46	45.4	16.14	1.92	31.14	-	-	Peak
2389.23	37.94	-16.06	54	35.85	31.7	4.47	34.08	200	256	Average
2389.23	52.45	-21.55	74	50.36	31.7	4.47	34.08	200	256	Peak
2412	91.57	-	-	89.44	31.71	4.5	34.08	200	256	Average
2412	100.74	-	-	98.61	31.71	4.5	34.08	200	256	Peak
2490	36.86	-17.14	54	34.52	31.8	4.62	34.08	200	256	Average
2490	48.91	-25.09	74	46.57	31.8	4.62	34.08	200	256	Peak



<b>Test Mode :</b>	Mode 5	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
246.27	30.45	-15.55	46	49.15	11.4	1.42	31.52	-	-	Peak
258.96	29.5	-16.5	46	47.8	11.76	1.42	31.48	-	-	Peak
278.94	34.13	-11.87	46	52.07	11.96	1.48	31.38	144	353	Peak
314.7	33.05	-12.95	46	50.22	12.56	1.55	31.28	-	-	Peak
348.3	32	-14	46	48.18	13.42	1.71	31.31	-	-	Peak
459.6	31.16	-14.84	46	44.24	16.14	1.92	31.14	-	-	Peak
2384	43.9	-10.1	54	41.83	31.68	4.47	34.08	100	231	Average
2384	54.01	-19.99	74	51.94	31.68	4.47	34.08	100	231	Peak
2437	99.41	-	-	97.21	31.75	4.53	34.08	100	231	Average
2437	108.65	-	-	106.45	31.75	4.53	34.08	100	231	Peak
2490	46.52	-7.48	54	44.18	31.8	4.62	34.08	100	231	Average
2490	57.89	-16.11	74	55.55	31.8	4.62	34.08	100	231	Peak



<b>Test Mode :</b>	Mode 5	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
63.21	34.93	-5.07	40	60.27	5.46	0.73	31.53	100	189	Peak
111	25.77	-17.73	43.5	46.1	10.24	0.95	31.52	-	-	Peak
136.11	25.41	-18.09	43.5	45.08	10.77	1.07	31.51	-	-	Peak
348.3	29.22	-16.78	46	45.4	13.42	1.71	31.31	-	-	Peak
419.7	30.95	-15.05	46	45.02	15.23	1.87	31.17	-	-	Peak
459.6	32.05	-13.95	46	45.13	16.14	1.92	31.14	-	-	Peak
2384	37.95	-16.05	54	35.88	31.68	4.47	34.08	200	258	Average
2384	48.99	-25.01	74	46.92	31.68	4.47	34.08	200	258	Peak
2437	94.37	-	-	92.17	31.75	4.53	34.08	200	258	Average
2437	103.57	-	-	101.39	31.73	4.53	34.08	200	258	Peak
2492	40.79	-13.21	54	38.45	31.8	4.62	34.08	200	258	Average
2492	52.17	-21.83	74	49.83	31.8	4.62	34.08	200	258	Peak



<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
241.68	28.97	-17.03	46	48.09	11.06	1.34	31.52	-	-	Peak
255.99	31.85	-14.15	46	50.2	11.73	1.42	31.5	-	-	Peak
280.02	33.59	-12.41	46	51.51	11.97	1.48	31.37	127	60	Peak
314.7	32.18	-13.82	46	49.35	12.56	1.55	31.28	-	-	Peak
348.3	31.02	-14.98	46	47.2	13.42	1.71	31.31	-	-	Peak
458.9	31.46	-14.54	46	44.56	16.12	1.92	31.14	-	-	Peak
2372	38.76	-15.24	54	36.69	31.68	4.47	34.08	100	228	Average
2372	50.66	-23.34	74	48.59	31.68	4.47	34.08	100	228	Peak
2462	97.29	-	-	95.04	31.77	4.56	34.08	100	228	Average
2462	106.54	-	-	104.29	31.77	4.56	34.08	100	228	Peak
2483.5	43.43	-10.57	54	41.14	31.78	4.59	34.08	100	228	Average
2483.5	60.83	-13.17	74	58.54	31.78	4.59	34.08	100	228	Peak



<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
63.21	35.67	-4.33	40	61.01	5.46	0.73	31.53	133	254	Peak
137.19	25.64	-17.86	43.5	45.35	10.73	1.07	31.51	-	-	Peak
247.08	27.84	-18.16	46	46.48	11.47	1.42	31.53	-	-	Peak
348.3	29.83	-16.17	46	46.01	13.42	1.71	31.31	-	-	Peak
419.7	29.95	-16.05	46	44.02	15.23	1.87	31.17	-	-	Peak
459.6	32.25	-13.75	46	45.33	16.14	1.92	31.14	-	-	Peak
2378	34.36	-19.64	54	32.29	31.68	4.47	34.08	196	251	Average
2378	46.02	-27.98	74	43.95	31.68	4.47	34.08	196	251	Peak
2462	91.57	-	-	89.32	31.77	4.56	34.08	196	251	Average
2462	100.91	-	-	98.66	31.77	4.56	34.08	196	251	Peak
2483.5	38.46	-15.54	54	36.17	31.78	4.59	34.08	196	251	Average
2483.5	55.2	-18.8	74	52.91	31.78	4.59	34.08	196	251	Peak



<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.99	42.67	-11.33	54	40.55	31.7	4.5	34.08	100	236	Average
2389.99	56.76	-17.24	74	54.64	31.7	4.5	34.08	100	236	Peak
2412	96.82	-	-	94.69	31.71	4.5	34.08	100	236	Average
2412	106.5	-	-	104.34	31.71	4.53	34.08	100	236	Peak
2486	41.23	-12.77	54	38.94	31.78	4.59	34.08	100	236	Average
2486	54.36	-19.64	74	52.07	31.78	4.59	34.08	100	236	Peak

<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.8	35.54	-18.46	54	33.42	31.7	4.5	34.08	200	256	Average
2389.8	48.87	-25.13	74	46.75	31.7	4.5	34.08	200	256	Peak
2412	89.48	-	-	87.35	31.71	4.5	34.08	200	256	Average
2412	99.22	-	-	97.09	31.71	4.5	34.08	200	256	Peak
2484	36.14	-17.86	54	33.85	31.78	4.59	34.08	200	256	Average
2484	48.29	-25.71	74	46	31.78	4.59	34.08	200	256	Peak

<b>Test Mode :</b>	Mode 8	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386	44.54	-9.46	54	42.45	31.7	4.47	34.08	100	232	Average
2386	55.03	-18.97	74	52.94	31.7	4.47	34.08	100	232	Peak
2437	99.07	-	-	96.87	31.75	4.53	34.08	100	232	Average
2437	108.74	-	-	106.56	31.73	4.53	34.08	100	232	Peak
2490	47.08	-6.92	54	44.74	31.8	4.62	34.08	100	232	Average
2490	57.82	-16.18	74	55.48	31.8	4.62	34.08	100	232	Peak

<b>Test Mode :</b>	Mode 8	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2384	38.35	-15.65	54	36.28	31.68	4.47	34.08	200	259	Average
2384	49.54	-24.46	74	47.47	31.68	4.47	34.08	200	259	Peak
2437	94.07	-	-	91.87	31.75	4.53	34.08	200	259	Average
2437	103.88	-	-	101.7	31.73	4.53	34.08	200	259	Peak
2490	41.29	-12.71	54	38.95	31.8	4.62	34.08	200	259	Average
2490	52.37	-21.63	74	50.03	31.8	4.62	34.08	200	259	Peak

<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2384	38.81	-15.19	54	36.74	31.68	4.47	34.08	100	230	Average
2384	51.15	-22.85	74	49.08	31.68	4.47	34.08	100	230	Peak
2462	96.37	-	-	94.12	31.77	4.56	34.08	100	230	Average
2462	106.24	-	-	103.99	31.77	4.56	34.08	100	230	Peak
2483.5	44.42	-9.58	54	42.13	31.78	4.59	34.08	100	230	Average
2483.5	63.91	-10.09	74	61.62	31.78	4.59	34.08	100	230	Peak

<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2380	34.76	-19.24	54	32.69	31.68	4.47	34.08	199	251	Average
2380	46.85	-27.15	74	44.78	31.68	4.47	34.08	199	251	Peak
2462	91.64	-	-	89.39	31.77	4.56	34.08	199	251	Average
2462	101.39	-	-	99.14	31.77	4.56	34.08	199	251	Peak
2485.56	38.62	-15.38	54	36.33	31.78	4.59	34.08	199	251	Average
2485.56	56.95	-17.05	74	54.66	31.78	4.59	34.08	199	251	Peak

<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	03	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2422 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2386.19	46.29	-7.71	54	44.2	31.7	4.47	34.08	101	218	Average
2386.19	63.5	-10.5	74	61.41	31.7	4.47	34.08	101	218	Peak
2422	94.54	-	-	92.36	31.73	4.53	34.08	101	218	Average
2422	103.86	-	-	101.73	31.71	4.5	34.08	101	218	Peak
2496	41.29	-12.71	54	38.95	31.8	4.62	34.08	101	218	Average
2496	54.06	-19.94	74	51.72	31.8	4.62	34.08	101	218	Peak

<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	03	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2422 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2388.66	38.68	-15.32	54	36.59	31.7	4.47	34.08	200	238	Average
2388.66	55.18	-18.82	74	53.09	31.7	4.47	34.08	200	238	Peak
2422	88.65	-	-	86.47	31.73	4.53	34.08	200	238	Average
2422	98.75	-	-	96.57	31.73	4.53	34.08	200	238	Peak
2500	36.31	-17.69	54	33.97	31.8	4.62	34.08	200	238	Average
2500	49.22	-24.78	74	46.88	31.8	4.62	34.08	200	238	Peak



<b>Test Mode :</b>	Mode 11	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	41.83	-12.17	54	39.71	31.7	4.5	34.08	100	234	Average
2390	55.29	-18.71	74	53.17	31.7	4.5	34.08	100	234	Peak
2437	94.7	-	-	92.5	31.75	4.53	34.08	100	234	Average
2437	104.63	-	-	102.4	31.75	4.56	34.08	100	234	Peak
2484	43.88	-10.12	54	41.59	31.78	4.59	34.08	100	234	Average
2484	59.69	-14.31	74	57.4	31.78	4.59	34.08	100	234	Peak

<b>Test Mode :</b>	Mode 11	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	36.32	-17.68	54	34.2	31.7	4.5	34.08	200	263	Average
2390	49.71	-24.29	74	47.59	31.7	4.5	34.08	200	263	Peak
2437	89.77	-	-	87.57	31.75	4.53	34.08	200	263	Average
2437	99.75	-	-	97.57	31.73	4.53	34.08	200	263	Peak
2484	38.29	-15.71	54	36	31.78	4.59	34.08	200	263	Average
2484	52.78	-21.22	74	50.49	31.78	4.59	34.08	200	263	Peak



<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	09	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2452 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2388	39.68	-14.32	54	37.59	31.7	4.47	34.08	101	234	Average
2388	51.74	-22.26	74	49.65	31.7	4.47	34.08	101	234	Peak
2452	92.56	-	-	90.33	31.75	4.56	34.08	101	234	Average
2452	102.5	-	-	100.27	31.75	4.56	34.08	101	234	Peak
2485.56	45.31	-8.69	54	43.02	31.78	4.59	34.08	101	234	Average
2485.56	61.97	-12.03	74	59.68	31.78	4.59	34.08	101	234	Peak

<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	09	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2452 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2376	34.41	-19.59	54	32.34	31.68	4.47	34.08	200	253	Average
2376	46.29	-27.71	74	44.22	31.68	4.47	34.08	200	253	Peak
2452	86.63	-	-	84.4	31.75	4.56	34.08	200	253	Average
2452	96.58	-	-	94.33	31.77	4.56	34.08	200	253	Peak
2483.85	38.85	-15.15	54	36.56	31.78	4.59	34.08	200	253	Average
2483.85	54.69	-19.31	74	52.4	31.78	4.59	34.08	200	253	Peak



<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
263.01	30.13	-15.87	46	-471.29	0	1.42	-500	-	-	Peak
280.02	36.53	-9.47	46	-464.95	0	1.48	-500	119	245	Peak
298.92	29.81	-16.19	46	-471.74	0	1.55	-500	-	-	Peak
314.7	33.34	-12.66	46	-468.21	0	1.55	-500	-	-	Peak
328	31.29	-14.71	46	-470.34	0	1.63	-500	-	-	Peak
348.3	33.19	-12.81	46	-468.52	0	1.71	-500	-	-	Peak
2370	30.83	-23.17	54	62.43	0	4.47	36.07	100	252	Average
2370	44.25	-29.75	74	75.85	0	4.47	36.07	100	252	Peak
2462	79.66	-	-	111.19	0	4.56	36.09	100	252	Average
2462	88.55	-	-	120.08	0	4.56	36.09	100	252	Peak
2483.5	33.6	-20.4	54	65.11	0	4.59	36.1	100	252	Average
2483.5	49.36	-24.64	74	80.87	0	4.59	36.1	100	252	Peak



<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Brian Chang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.97	28.87	-11.13	40	43.2	16.63	0.58	31.54	-	-	Peak
65.64	34.38	-5.62	40	59.56	5.6	0.73	31.51	105	37	Peak
280.02	28.47	-17.53	46	46.39	11.97	1.48	31.37	-	-	Peak
313.3	32.52	-13.48	46	49.74	12.51	1.55	31.28	-	-	Peak
349.7	32.46	-13.54	46	48.59	13.47	1.71	31.31	-	-	Peak
418.3	33.98	-12.02	46	48.1	15.18	1.87	31.17	-	-	Peak
2384	30.33	-23.67	54	28.26	31.68	4.47	34.08	193	74	Average
2384	44.6	-29.4	74	42.53	31.68	4.47	34.08	193	74	Peak
2462	73.48	-	-	71.23	31.77	4.56	34.08	193	74	Average
2462	81.99	-	-	79.74	31.77	4.56	34.08	193	74	Peak
2483.5	32.06	-21.94	54	29.77	31.78	4.59	34.08	193	74	Average
2483.5	46.23	-27.77	74	43.94	31.78	4.59	34.08	193	74	Peak

## **3.4 Antenna Requirements**

### **3.4.1 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.

### **3.4.2 Antenna Connected Construction**

The antennas type used in this product is PIFA Antenna without connector and it is considered to meet antenna requirement.

### **3.4.3 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	Due Date	Remark
EMI Test Receive	R&S	ESCS 30	100356	9KHz – 2.75GHz	Aug. 16, 2010	Aug. 15, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz – 30MHz	Dec. 03, 2010	Dec. 02, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz – 30MHz	Dec. 01, 2010	Nov. 30, 2011	Conduction (CO05-HY)
AC Power Source	APC	APC-1000 W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	FSP30	101352	9KHz-40GHz	Nov. 03, 2010	Nov. 02, 2011	Radiation (03CH05-HY)
Amplifier	COM-POWER	PA-103	161075	1KHz - 1GHz	Mar. 29, 2011	Mar. 28, 2012	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 1GHz	Nov. 06, 2010	Nov. 05, 2011	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 18, 2010	Oct. 17, 2011	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz- 26.5GHz	Apr. 15, 2010	Apr. 14, 2011	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 - 360 degree	N/A	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m - 4 m	N/A	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	00066584	1GHz ~ 18GHz	Aug. 05, 2010	Aug. 04, 2011	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH05-HY)

## 5 Uncertainty of Evaluation

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

Contribution	Uncertainty of $X_i$		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.10	Normal (k=2)	0.05
Cable Loss	0.10	Normal (k=2)	0.05
AMN Insertion Loss	2.50	Rectangular	0.63
Receiver Specification	1.50	Rectangular	0.43
Site Imperfection	1.39	Rectangular	0.80
Mismatch	+0.34 / -0.35	U-Shape	0.24
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>1.13</b>		
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>2.26</b>		

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

Contribution	Uncertainty of $X_i$		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>1.27</b>		
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>2.54</b>		

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

Contribution	Uncertainty of $X_i$		$u(X_i)$	$C_i$	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	$\pm 0.10$	Normal ( $k=2$ )	0.10	1	0.10
Antenna Factor Calibration	$\pm 1.70$	Normal ( $k=2$ )	0.85	1	0.85
Cable Loss Calibration	$\pm 0.50$	Normal ( $k=2$ )	0.25	1	0.25
Receiver Correction	$\pm 2.00$	Rectangular	1.15	1	1.15
Antenna Factor Directional	$\pm 1.50$	Rectangular	0.87	1	0.87
Site Imperfection	$\pm 2.80$	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>4.72</b>				