FCC RF Test Report

APPLICANT	:	**Shanghai Longcheer 3g Technology Co., Ltd.**
EQUIPMENT	:	**LTE Hotspot**
BRAND NAME	:	**富士ソフト株式会社**
MODEL NAME	:	**WM340**
FCC ID	:	**WLPWM340**
STANDARD	:	**FCC Part 15 Subpart C §15.247**
CLASSIFICATION	:	**(DTS) Digital Transmission System**

The product was received on Mar. 30, 2012 and completely tested on May 29, 2012. We, SPORTON INTERNATIONAL (KUNSHAN) 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL (KUNSHAN) INC.

No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR233002	Rev. 01	Initial issue of report	May 30, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.2	15.247(b)	A8.4	Power Output	≤ 30dBm	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	≤ 20dBc	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	< 20 dBc	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	≤ 8dBm	Pass	-
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 15.55 dB at 0.440 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 4.88 dB at 38.730 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Shanghai Longcheer 3g Technology Co., Ltd.
No.1, Building 5, 299 Bisheng Rd, Zhangjiang Hi-Tech Park, Pudong, Shanghai, P.R. China

1.2 Manufacturer

Shanghai Longcheer 3g Technology Co., Ltd.
No.1, Building 5, 299 Bisheng Rd, Zhangjiang Hi-Tech Park, Pudong, Shanghai, P.R. China

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	LTE Hotspot
Brand Name	富士ソフト株式会社
Model Name	WM340
FCC ID	WLPWM340
Tx/Rx Frequency Range	2412 MHz ~ 2462 MHz
Number of Channels	11
Carrier Frequency of Each Channel	2412+(n-1)*5 MHz; n=1~11
Channel Spacing	5 MHz
Maximum Output Power to Antenna	802.11b : 13.45 dBm (0.0221 W) 802.11g : 20.65 dBm (0.1161 W) 802.11g/n (BW 20MHz) : 20.26 dBm (0.1062 W) 802.11g/n (BW 40MHz) : 20.34 dBm (0.1081 W)
Duty Cycle	802.11b : 100.00% 802.11g : 100.00% 802.11g/n (BW 20MHz) : 100.00% 802.11g/n (BW 40MHz) : 100.00%
Antenna Type	Fixed Internal Antenna with gain 1.84 dBi
HW Version	Mainboard：LQTMG97B Subboard：LQTB90A
SW Version	LQT0018_1.0_MG97
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

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

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.			
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH01-KS	CO01-KS	03CH01-KS	149928/4086E-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 D01 DTS Meas. Guidance v01
- ANSI C63.4-2003
- IC RSS-210 Issue 8
- IC RSS-Gen Issue 3

Remark:

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

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	P08S	QDS-BRCM1030	N/A	AC I/P: Unshielded, 0.9 m DC O/P: Shielded, 1.8 m

2 Test Configuration of Equipment Under Test

2.1 Pre-Scanned RF Power

Preliminary tests were performed in different data rate as below table and the highest power data rates (11b, 11g, 11g/n (BW 20MHz), 11g/n (BW 40MHz) modes) were chosen for full test in the following sections to demonstrate compliance to the FCC limit line.

2.4GHz 802.11b mode				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	**13.45**	13.41	12.81	13.41

2.4GHz 802.11g mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	**20.65**	19.56	19.58	19.18	19.96	20.03	19.78	20.03

2.4GHz 802.11g/n (BW 20MHz) mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	**20.26**	19.98	19.85	20.04	20.03	20.11	20.21	20.16

2.4GHz 802.11g/n (BW 40MHz) mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	**20.34**	20.15	20.21	20.02	20.31	20.21	20.34	20.18

2.2 Test Mode

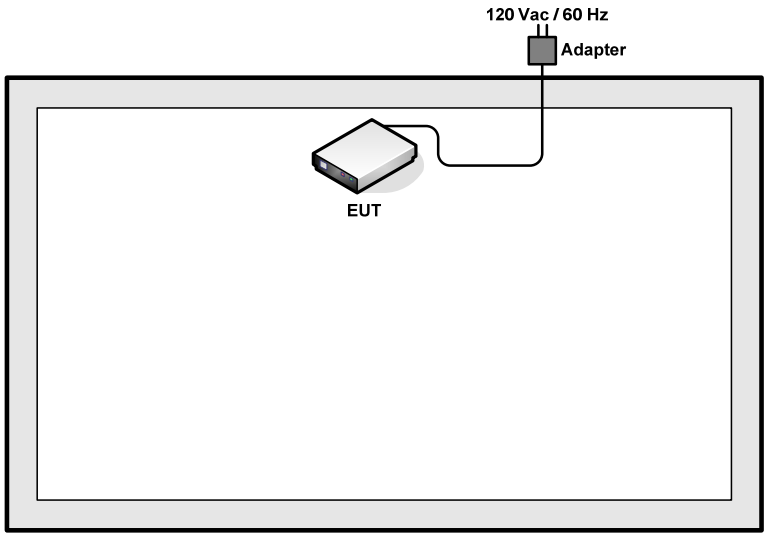
The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 KHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic 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.

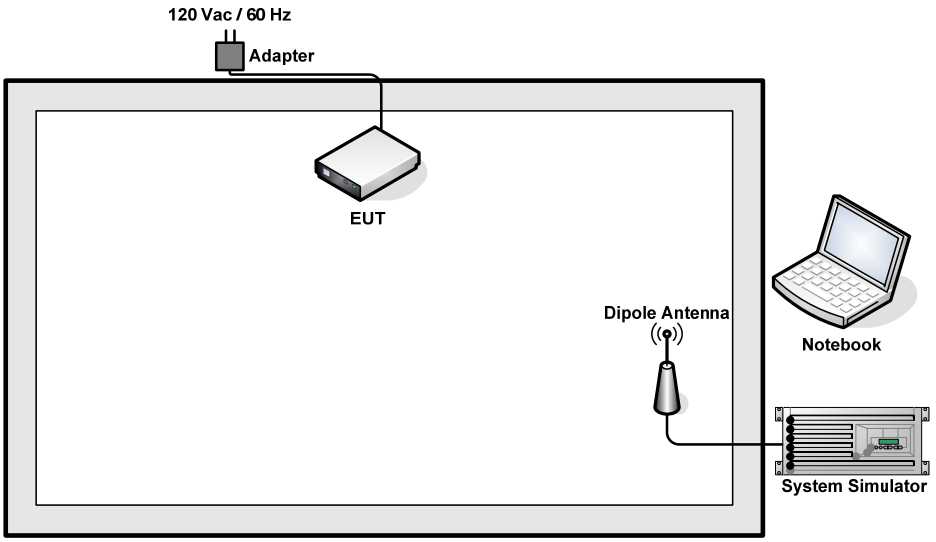
Test Cases		
Test Item	**802.11b (Modulation : DSSS)**	**802.11g/n (Modulation : OFDM)**
Conducted TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11g/n (BW 20M)_CH01_2412 MHz Mode 8: 802.11g/n (BW 20M)_CH06_2437 MHz Mode 9: 802.11g/n (BW 20M)_CH11_2462 MHz Mode 10: 802.11g/n (BW 40M)_CH03_2422 MHz Mode 11: 802.11g/n (BW 40M)_CH06_2437 MHz Mode 12: 802.11g/n (BW 40M)_CH09_2452 MHz
Radiated TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11g/n (BW 20M)_CH01_2412 MHz Mode 8: 802.11g/n (BW 20M)_CH06_2437 MHz Mode 9: 802.11g/n (BW 20M)_CH11_2462 MHz Mode 10: 802.11g/n (BW 40M)_CH03_2422 MHz Mode 11: 802.11g/n (BW 40M)_CH06_2437 MHz Mode 12: 802.11g/n (BW 40M)_CH09_2452 MHz
AC Conducted Emission	Mode 1 ： GSM850 Idle + WLAN Link + Adapter	

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 RF Utility

The programmed RF utility “CMD” 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 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 KHz.

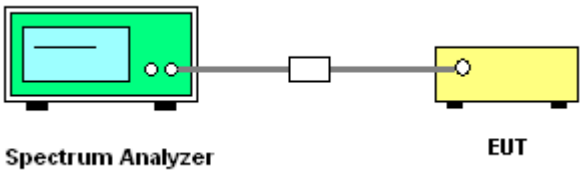
3.1.2 Measuring Instruments

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 v01.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1-5% of the emission bandwidth (EBW).Set the Video bandwidth (VBW) ≥ 3 * RBW. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.
4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

3.1.4 Test Setup

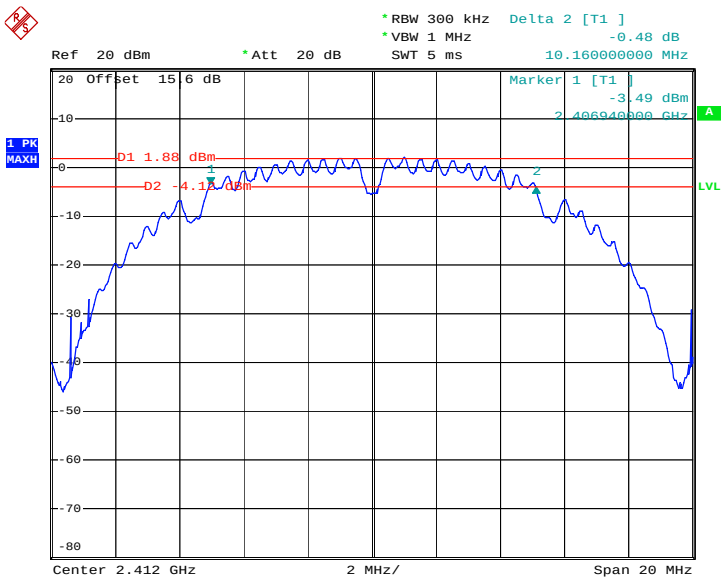


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	10.16	0.5	Pass
06	2437	10.16	0.5	Pass
11	2462	10.16	0.5	Pass

Mode 1 : 6 dB Bandwidth Plot on 802.11b Channel 01



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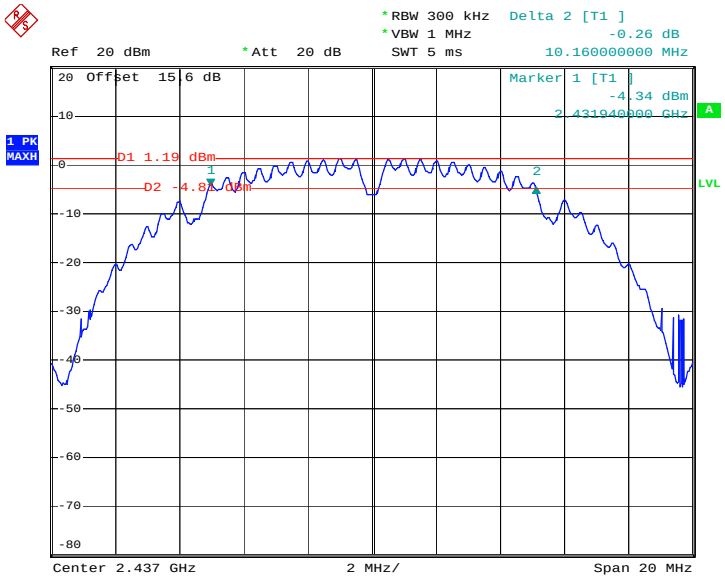
Mode 2 : 6 dB Bandwidth Plot on 802.11b Channel 06



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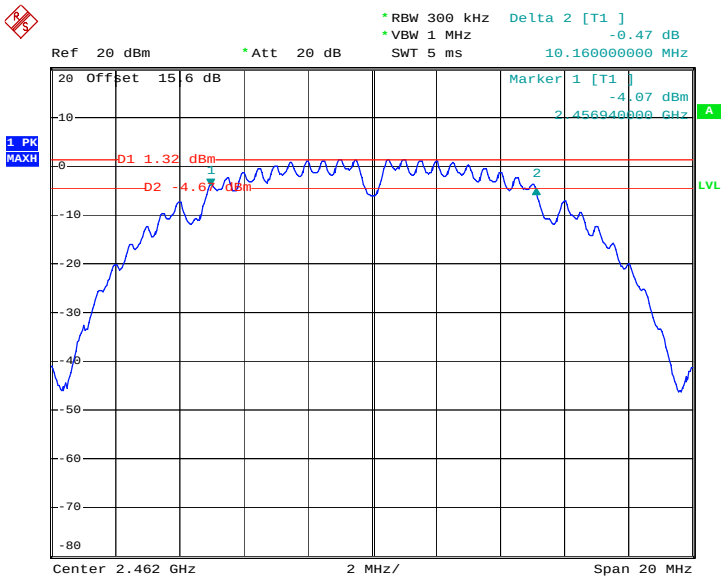
Mode 3 : 6 dB Bandwidth Plot on 802.11b Channel 11

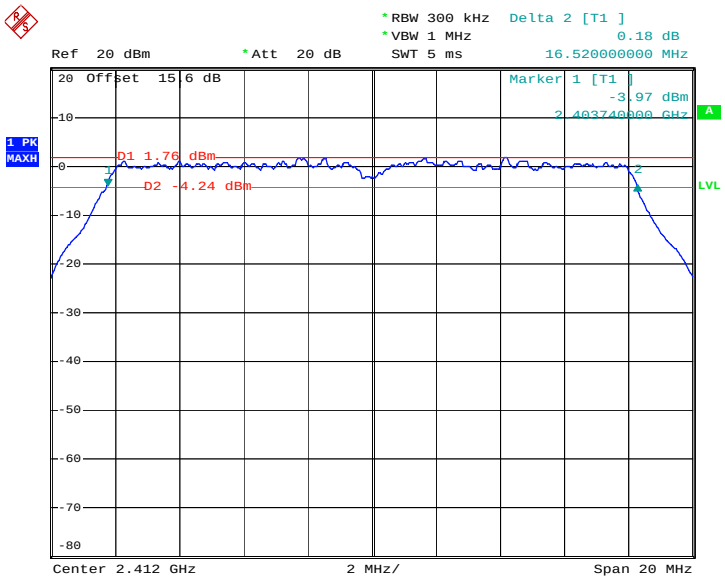


Date: 23.MAY.2012 11:53:52

Test Mode :	Mode 4, 5, 6	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.52	0.5	Pass
06	2437	16.48	0.5	Pass
11	2462	16.52	0.5	Pass

Mode 4 : 6 dB Bandwidth Plot on 802.11g Channel 01



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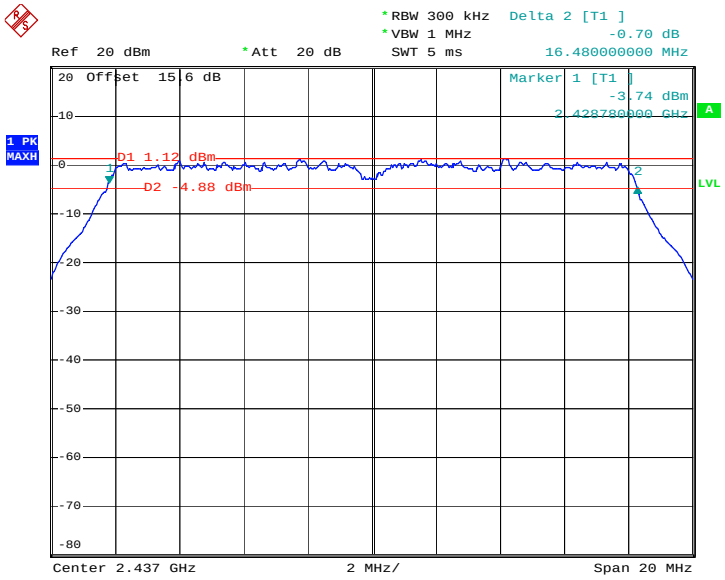
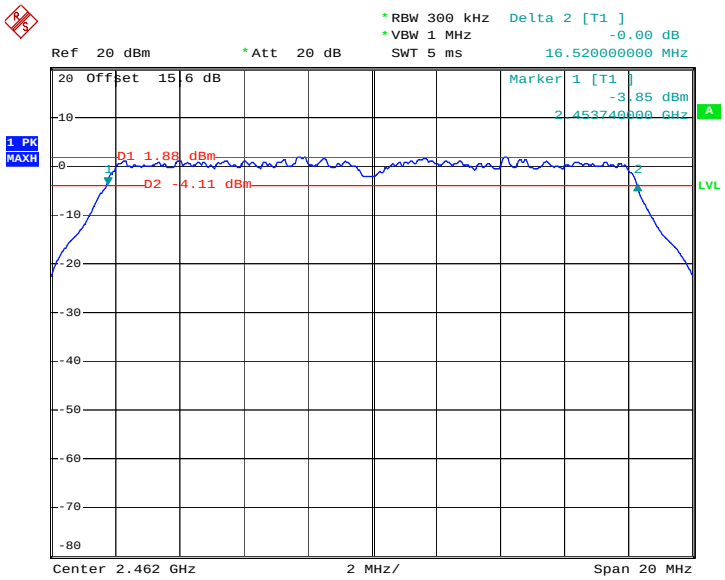
Mode 5 : 6 dB Bandwidth Plot on 802.11g Channel 06



Date: 23.MAY.2012 13:10:03

Mode 6 : 6 dB Bandwidth Plot on 802.11g Channel 11

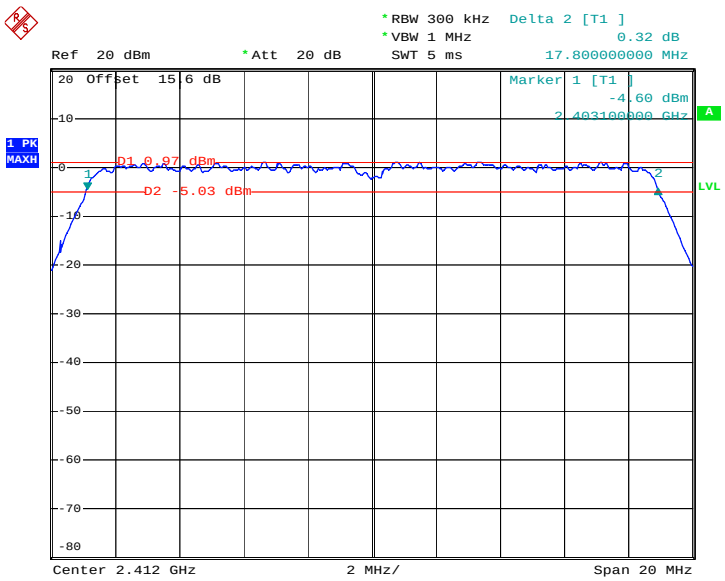


Date: 23.MAY.2012 13:14:53

Test Mode :	Mode 7, 8, 9	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g/n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.80	0.5	Pass
06	2437	17.80	0.5	Pass
11	2462	17.80	0.5	Pass

Mode 7 : 6 dB Bandwidth Plot on 802.11g/n(BW 20MHz) Channel 01



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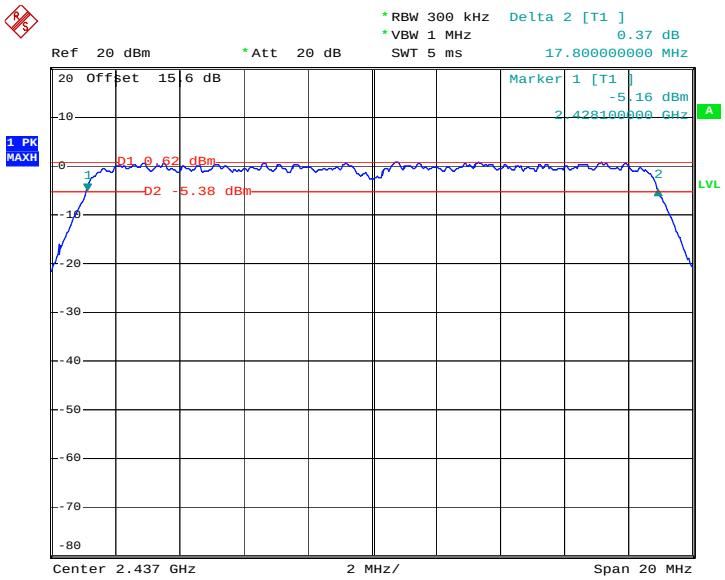
Mode 8 : 6 dB Bandwidth Plot on 802.11g/n(BW 20MHz) Channel 06



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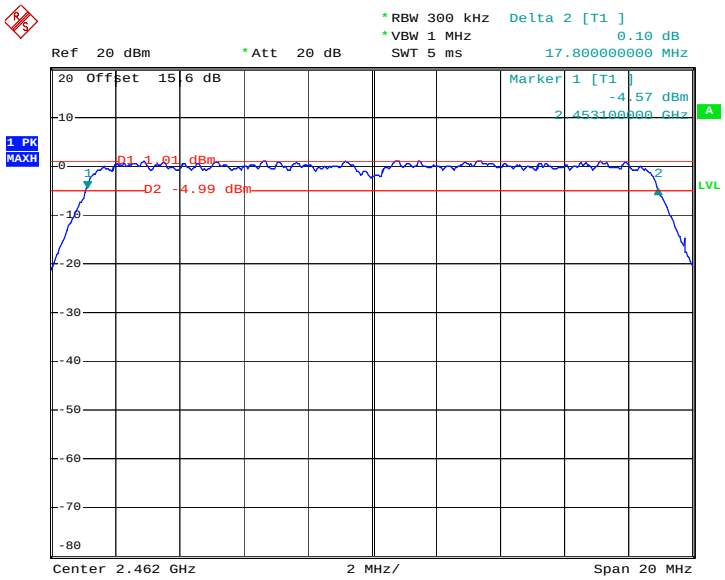
Mode 9 : 6 dB Bandwidth Plot on 802.11g/n(BW 20MHz) Channel 11

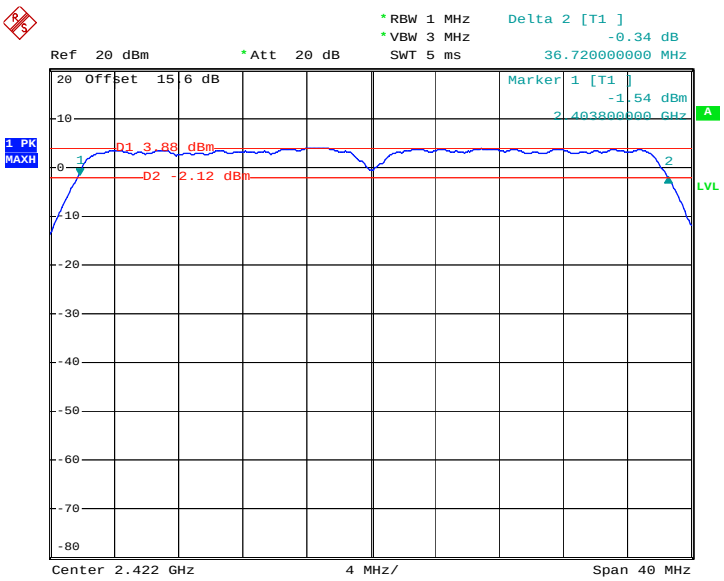


Date: 23.MAY.2012 13:45:09

Test Mode :	Mode 10, 11, 12	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g/n (BW 40MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
03	2422	36.72	0.5	Pass
06	2437	36.72	0.5	Pass
09	2452	36.72	0.5	Pass

Mode 10 : 6 dB Bandwidth Plot on 802.11g/n(BW 40MHz) Channel 03



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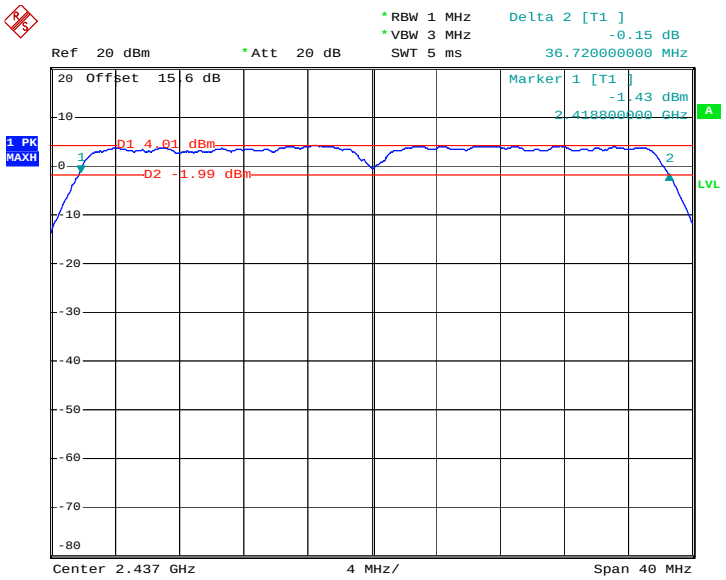
Mode 11 : 6 dB Bandwidth Plot on 802.11g/n(BW 40MHz) Channel 06



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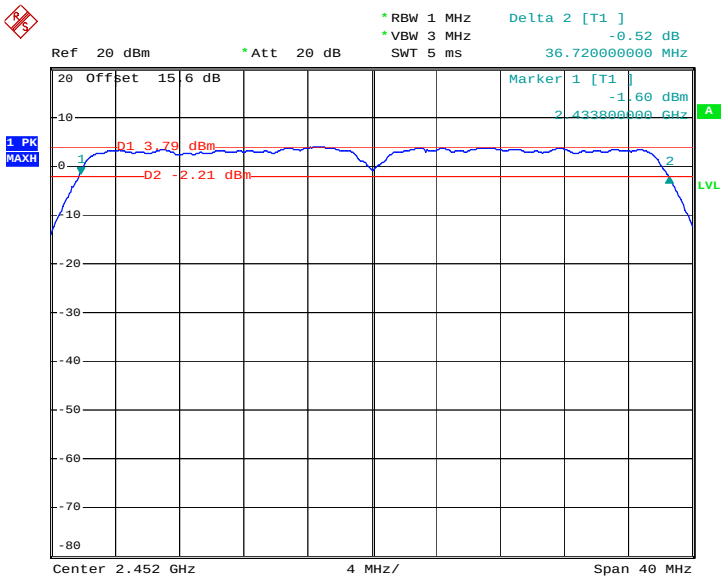
Mode 12 : 6 dB Bandwidth Plot on 802.11g/n(BW 40MHz) Channel 09



Date: 23.MAY.2012 14:03:59

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

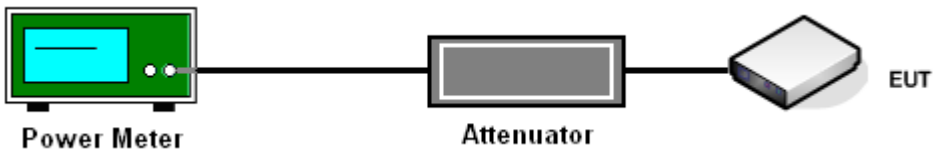
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure PK2 of FCC KDB No. 558074 DTS Meas. Guidance v01.
2. The RF output of EUT was connected to the power meter by a low loss cable.
3. Measure the power by power meter.

3.2.4 Test Setup



3.2.5 Test Result of Output Power

Test Mode :	Mode 1, 2, 3	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	13.45	30	Pass
06	2437	12.77	30	Pass
11	2462	12.52	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.65	30	Pass
06	2437	19.88	30	Pass
11	2462	20.58	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	23~24℃
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g/n (BW 20MHz) Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	19.58	30	Pass
06	2437	19.81	30	Pass
11	2462	20.26	30	Pass

Test Mode :	Mode 10, 11, 12	Temperature :	23~24
Test Engineer :	Zhi Lu	Relative Humidity :	47~48

Channel	Frequency (MHz)	802.11g/n (BW 40MHz) Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422	20.22	30	Pass
06	2437	20.34	30	Pass
09	2452	20.15	30	Pass

3.3 Band Edges Measurement

3.3.1 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.

3.3.2 Measuring Instruments

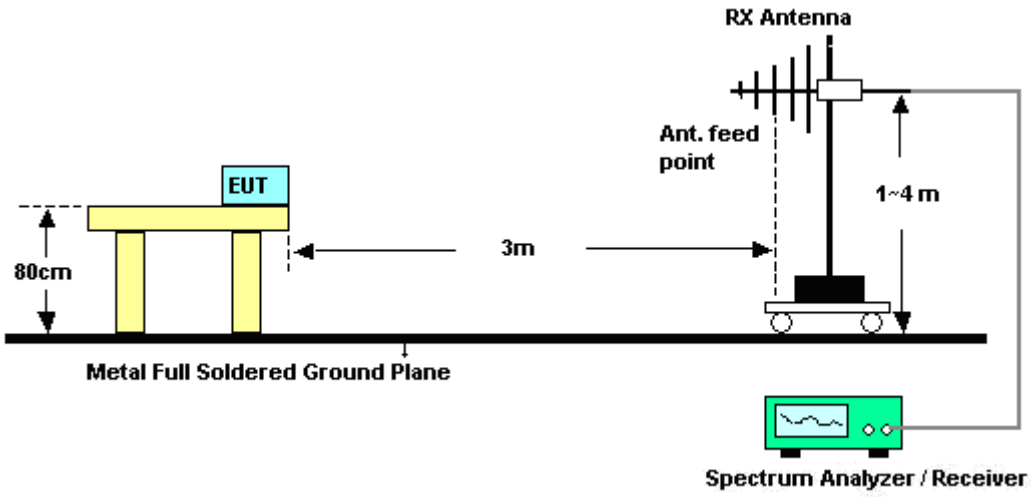
See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows the guidelines in ANSI C63.4-2003 and the Measurement Procedure of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v01.
2. Conducted emission test: Set RBW = 100 KHz, Video bandwidth (VBW) ≥ RBW. Out of the authorized frequency band emissions must be at least 20 dB lower than the highest emission level within the authorized band as measured with a 100 KHz RBW. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
3. Radiated emission test: Apply to band edge emissions that falling on 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 measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, then modify the unit for continuous operation. Use the settings in this paragraph to correct the reading level by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation per 15.35(b) and (c).

3.3.4 Test Setup

<Radiated Band Edges>



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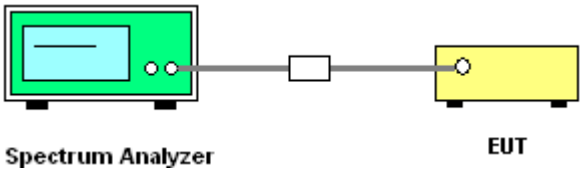


3.3.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	25~26℃
Test Band :	802.11b	Relative Humidity :	43~45%
Test Channel :	01	Test Engineer :	Steven Hao

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
2340.21	49.49	-24.51	74	47.32	32.78	3.33	33.94	146	360	Peak
2340.21	35.81	-18.19	54	33.64	32.78	3.33	33.94	146	360	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
2310.76	49.14	-24.86	74	47.05	32.73	3.22	33.86	111	255	Peak
2310.76	35.48	-18.52	54	33.39	32.73	3.22	33.86	111	255	Average

Test Mode :	Mode 3	Temperature :	25~26℃
Test Band :	802.11b	Relative Humidity :	43~45%
Test Channel :	11	Test Engineer :	Steven Hao

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
2493.92	44.16	-29.84	74	41.62	33.05	3.72	34.23	100	0	Peak
2493.92	30.82	-23.18	54	28.28	33.05	3.72	34.23	100	0	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2492.02	46.56	-27.44	74	44.02	33.05	3.72	34.23	100	296	Peak
2492.02	30.84	-23.16	54	28.3	33.05	3.72	34.23	100	296	Average

Test Mode :	Mode 4	Temperature :	25~26℃
Test Band :	802.11g	Relative Humidity :	43~45%
Test Channel :	01	Test Engineer :	Steven Hao

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
2384.48	44.33	-29.67	74	42.09	32.83	3.42	34.01	147	0	Peak
2384.48	30.68	-23.32	54	28.44	32.83	3.42	34.01	147	0	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2341.16	44.88	-29.12	74	42.71	32.78	3.33	33.94	121	0	Peak
2341.16	30.38	-23.62	54	28.21	32.78	3.33	33.94	121	0	Average

Test Mode :	Mode 6	Temperature :	25~26℃
Test Band :	802.11g	Relative Humidity :	43~45%
Test Channel :	11	Test Engineer :	Steven Hao

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
2497.91	43.57	-30.43	74	41.03	33.05	3.72	34.23	100	360	Peak
2497.91	30.6	-23.4	54	28.06	33.05	3.72	34.23	100	360	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
2493.73	43.73	-30.27	74	41.19	33.05	3.72	34.23	184	0	Peak
2493.73	30.57	-23.43	54	28.03	33.05	3.72	34.23	184	0	Average

Test Mode :	Mode 7	Temperature :	25~26℃
Test Band :	802.11g/n (BW 20MHz)	Relative Humidity :	43~45%
Test Channel :	01	Test Engineer :	Steven Hao

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
2389.99	55.74	-18.26	74	53.46	32.86	3.47	34.05	118	27	Peak
2389.99	35.77	-18.23	54	33.49	32.86	3.47	34.05	118	27	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
2389.8	51.95	-22.05	74	49.67	32.86	3.47	34.05	100	0	Peak
2389.8	34.4	-19.6	54	32.12	32.86	3.47	34.05	100	0	Average

Test Mode :	Mode 9	Temperature :	25~26℃
Test Band :	802.11g/n (BW 20MHz)	Relative Humidity :	43~45%
Test Channel :	11	Test Engineer :	Steven Hao

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
2487.08	54.25	-19.75	74	51.76	33.01	3.68	34.2	139	360	Peak
2487.08	34.31	-19.69	54	31.82	33.01	3.68	34.2	139	360	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
2485.75	52.02	-21.98	74	49.53	33.01	3.68	34.2	100	0	Peak
2485.75	32.89	-21.11	54	30.4	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 10	Temperature :	25~26℃
Test Band :	802.11g/n (BW 40MHz)	Relative Humidity :	43~45%
Test Channel :	03	Test Engineer :	Steven Hao

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.85	56.11	-17.89	74	53.83	32.86	3.47	34.05	100	12	Peak
2388.85	43.22	-10.78	54	40.94	32.86	3.47	34.05	100	12	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
2388.85	52.75	-21.25	74	50.47	32.86	3.47	34.05	100	165	Peak
2388.85	32.46	-21.54	54	30.18	32.86	3.47	34.05	100	165	Average

Test Mode :	Mode 12	Temperature :	25~26℃
Test Band :	802.11g/n (BW 40MHz)	Relative Humidity :	43~45%
Test Channel :	09	Test Engineer :	Steven Hao

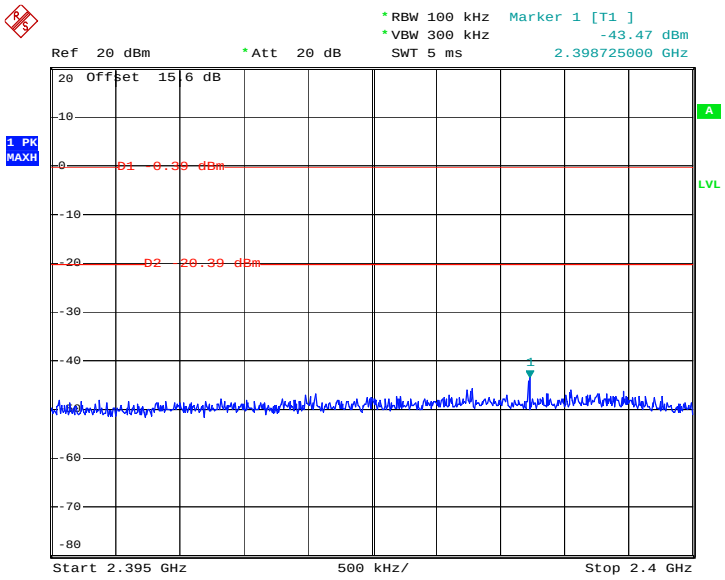
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2494.11	43.76	-30.24	74	41.22	33.05	3.72	34.23	147	360	Peak
2494.11	30.78	-23.22	54	28.24	33.05	3.72	34.23	147	360	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
2494.11	44.54	-29.46	74	42	33.05	3.72	34.23	100	324	Peak
2494.11	30.77	-23.23	54	28.23	33.05	3.72	34.23	100	324	Average

3.3.6 Test Plots of Conducted Band Edges

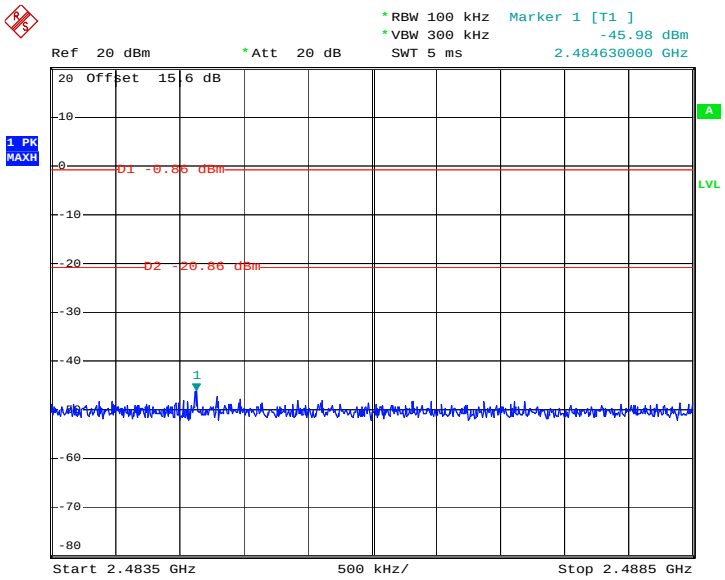
Test Mode :	Mode 1 and 3	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	47~48%
Test Channel :	01 and 11	Test Engineer :	Zhi Lu

Low Band Edge Plot on 802.11b Channel 01



Date: 23.MAY.2012 11:42:16

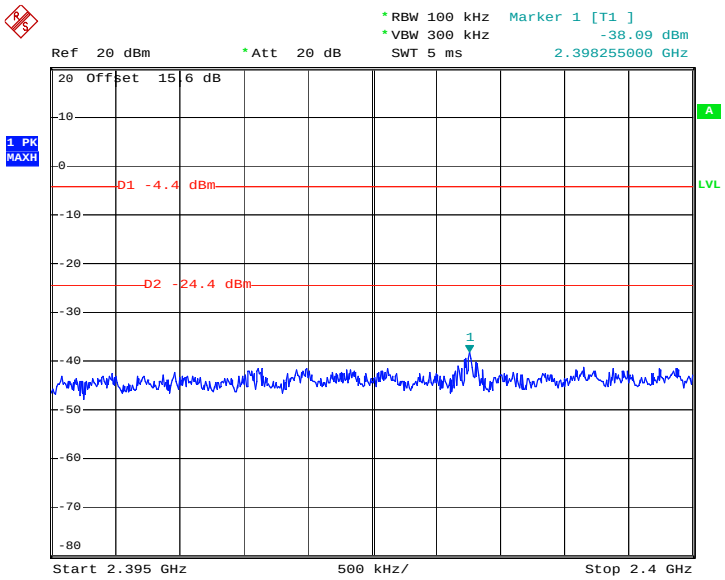
High Band Edge Plot on 802.11b Channel 11



Date: 23.MAY.2012 11:55:19

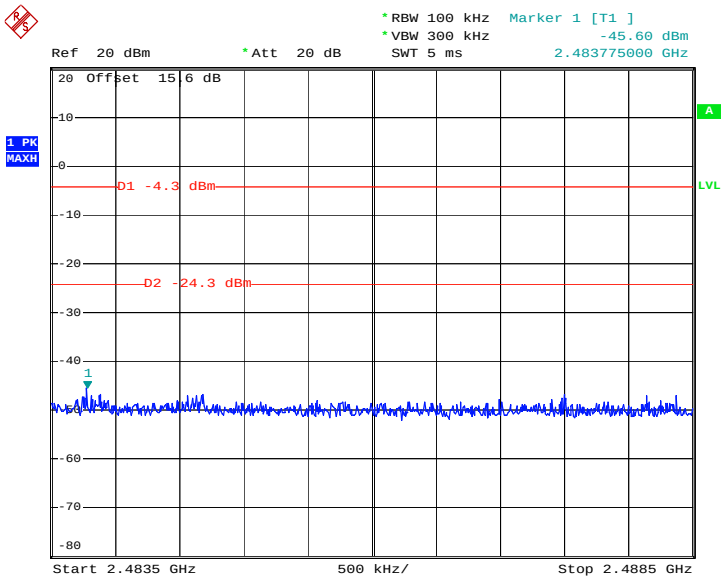
Test Mode :	Mode 4 and 6	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	47~48%
Test Channel :	01 and 11	Test Engineer :	Zhi Lu

Low Band Edge Plot on 802.11g Channel 01



Date: 23.MAY.2012 12:02:00

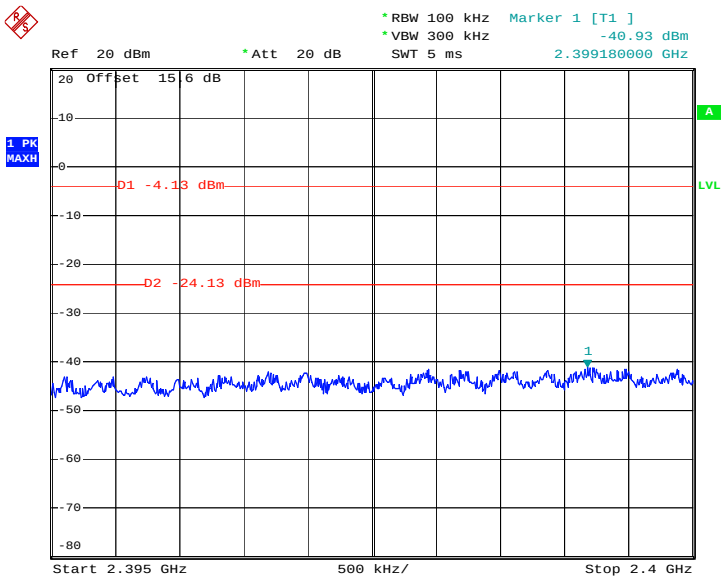
High Band Edge Plot on 802.11g Channel 11



Date: 23.MAY.2012 13:15:46

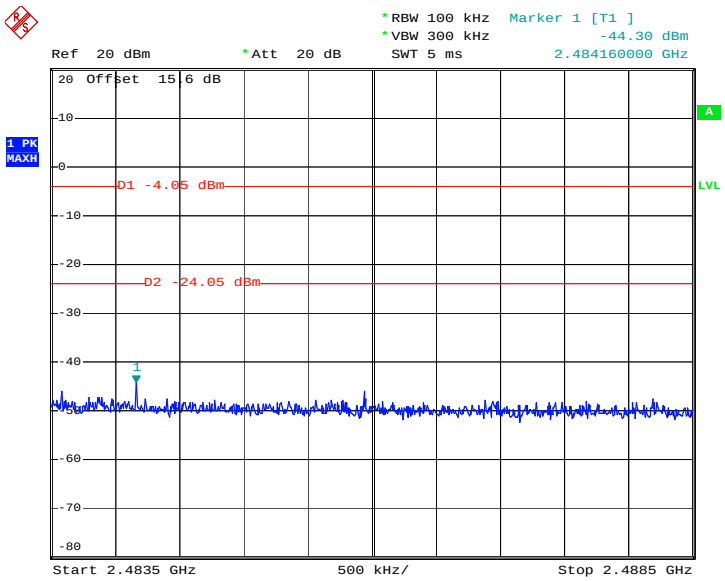
Test Mode :	Mode 7 and 9	Temperature :	23~24℃
Test Band :	802.11g/n (BW 20MHz)	Relative Humidity :	47~48%
Test Channel :	01 and 11	Test Engineer :	Zhi Lu

Low Band Edge Plot on 802.11g/n (BW 20MHz) Channel 01



Date: 23.MAY.2012 13:29:27

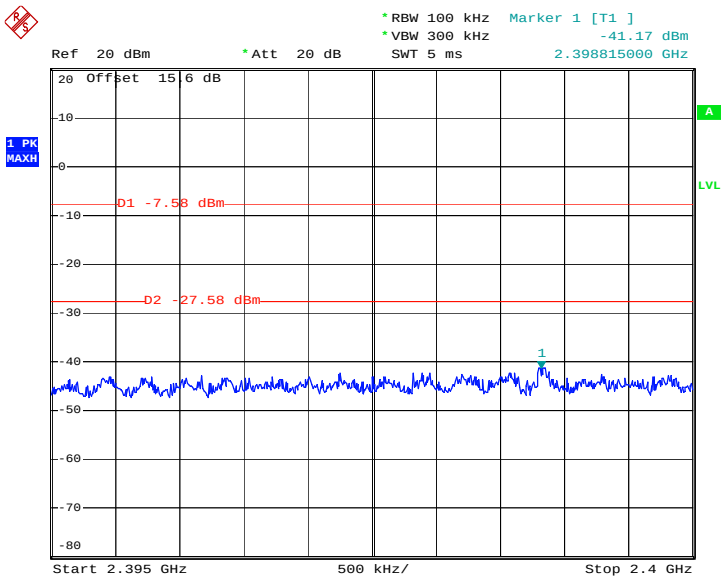
High Band Edge Plot on 802.11g/n (BW 20MHz) Channel 11



Date: 23.MAY.2012 13:48:07

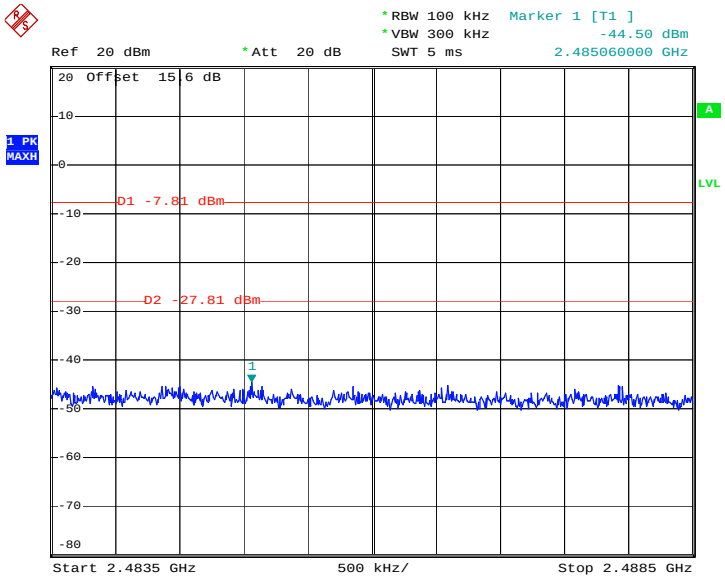
Test Mode :	Mode 10 and 12	Temperature :	23~24℃
Test Band :	802.11g/n (BW 40MHz)	Relative Humidity :	47~48%
Test Channel :	03 and 09	Test Engineer :	Zhi Lu

Low Band Edge Plot on 802.11g/n (BW 40MHz) Channel 03



Date: 23.MAY.2012 13:56:58

High Band Edge Plot on 802.11g/n (BW 40MHz) Channel 09



Date: 23.MAY.2012 14:04:35

3.4 Spurious Emission Measurement

3.4.1 Limit of Spurious Emission Measurement

All harmonics/spurious must be at least 20 dB down from the highest emission level within the authorized band.

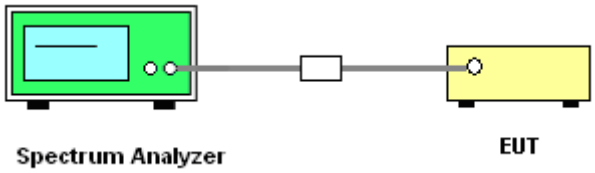
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable. The path loss was compensated to the results for each measurement.
2. Set RBW = 100 KHz, Video bandwidth (VBW) ≥ RBW, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 KHz RBW.

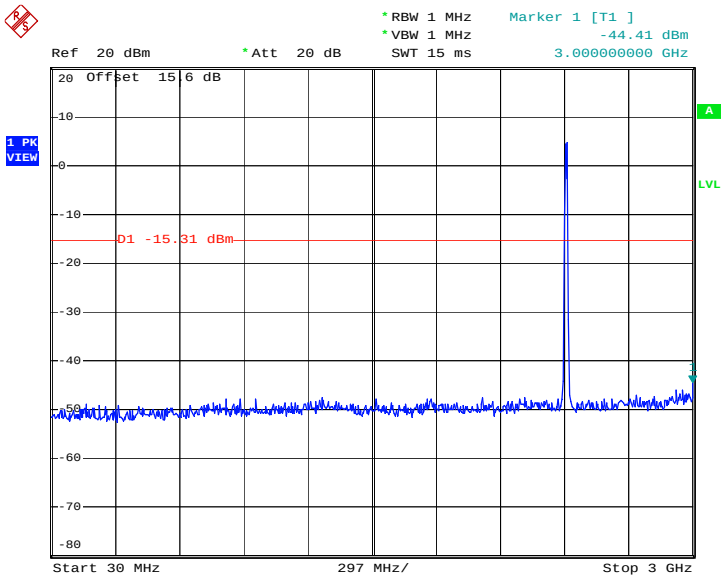
3.4.4 Test Setup



3.4.5 Test Plots of Spurious Emission

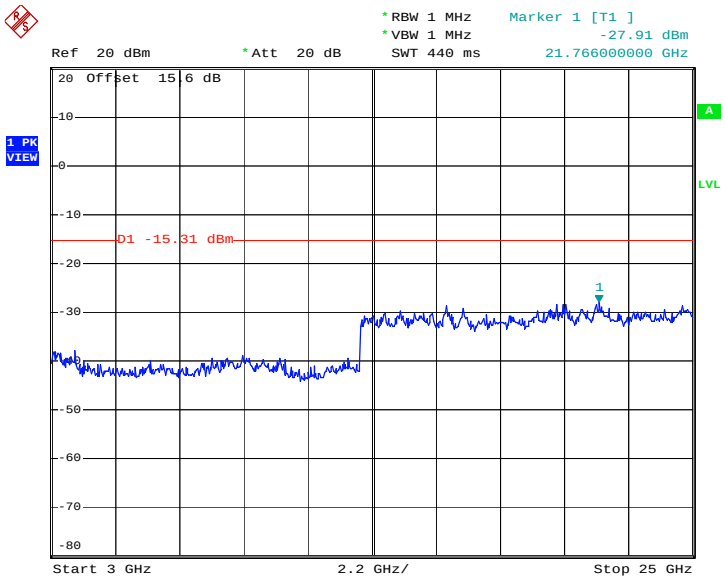
Test Mode :	Mode 1	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:43:30

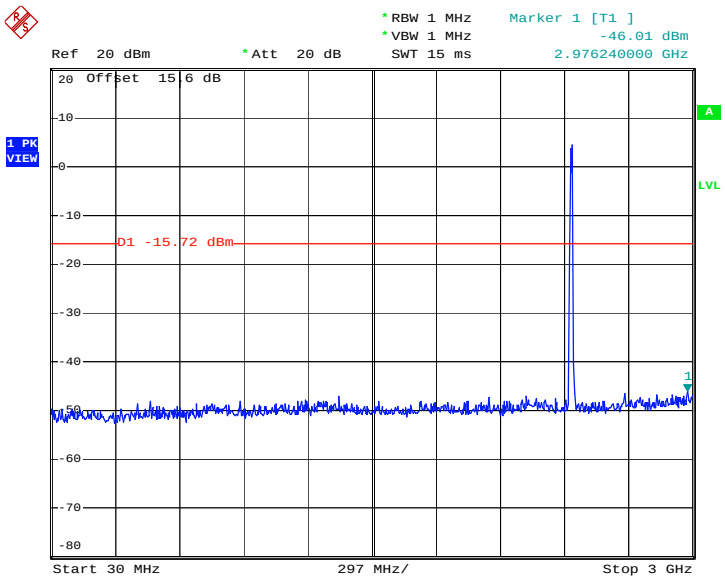
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:43:48

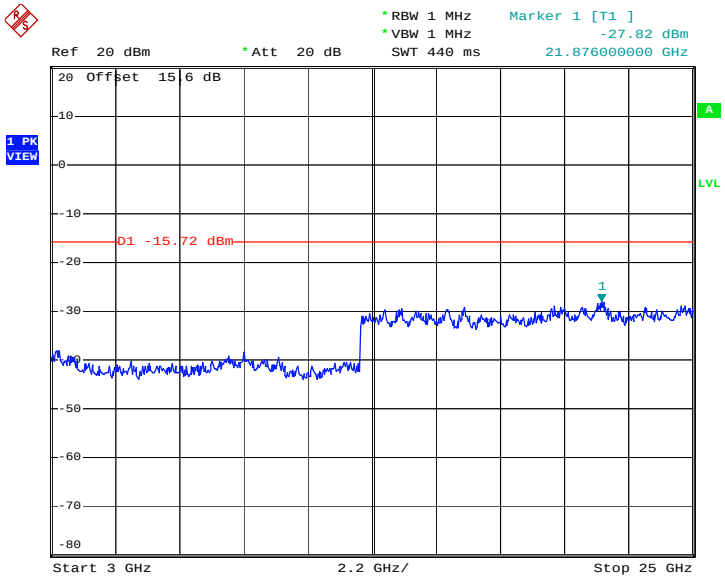
Test Mode :	Mode 2	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:45:15

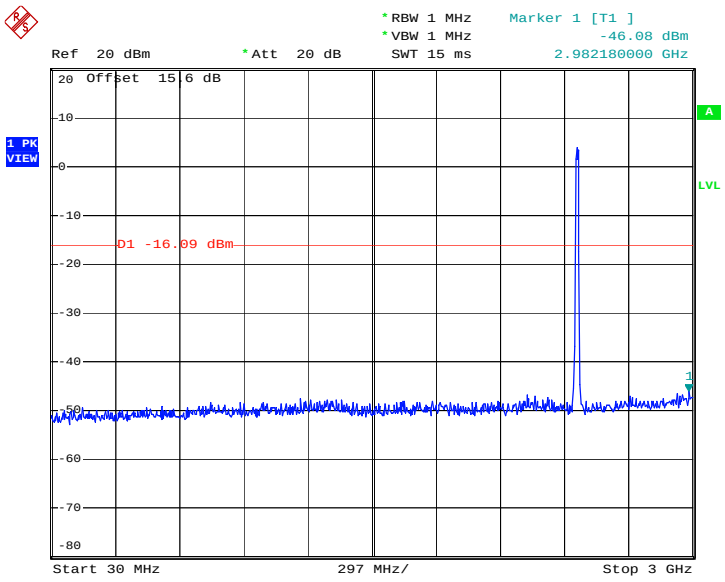
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:45:33

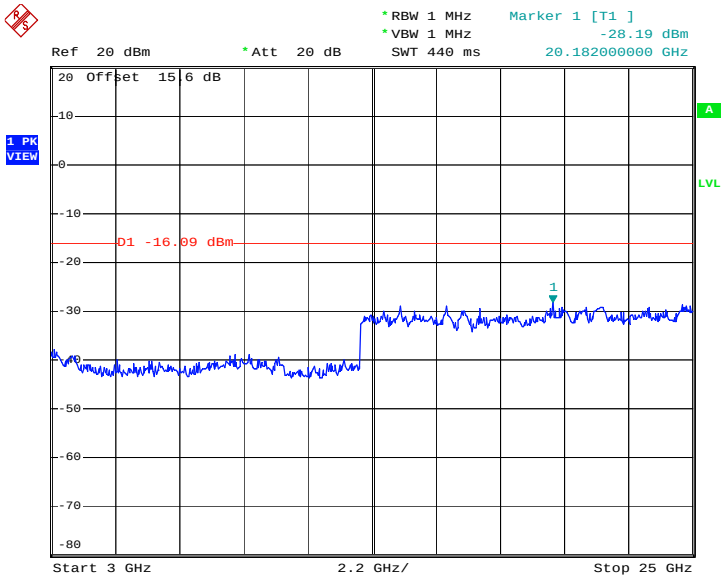
Test Mode :	Mode 3	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:46:53

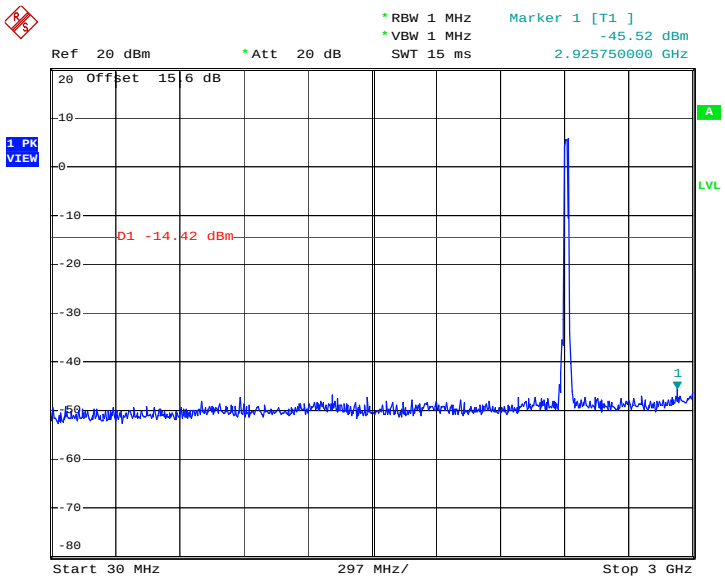
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:47:11

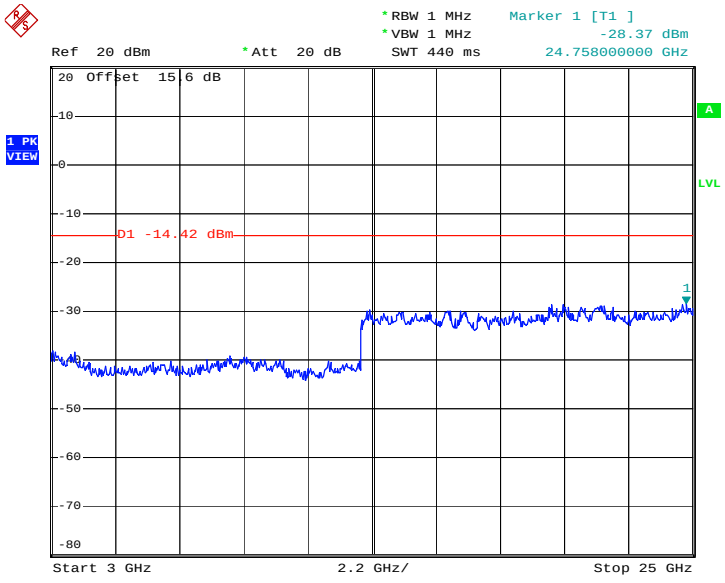
Test Mode :	Mode 4	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:48:35

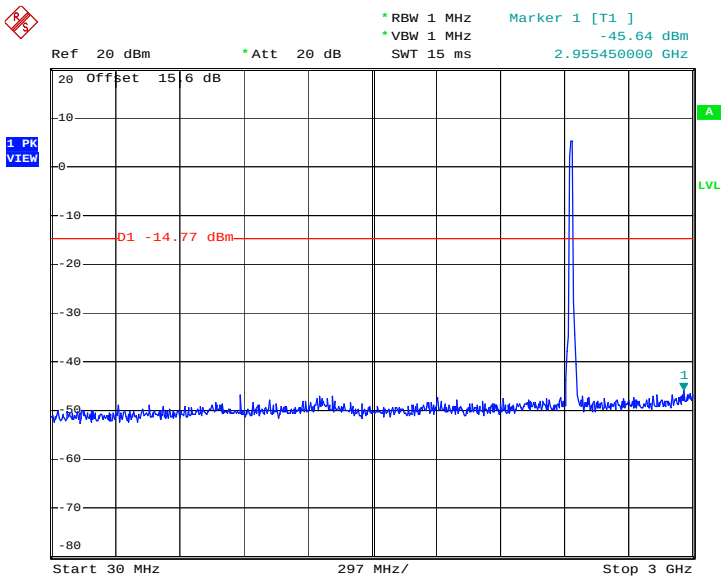
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:48:53

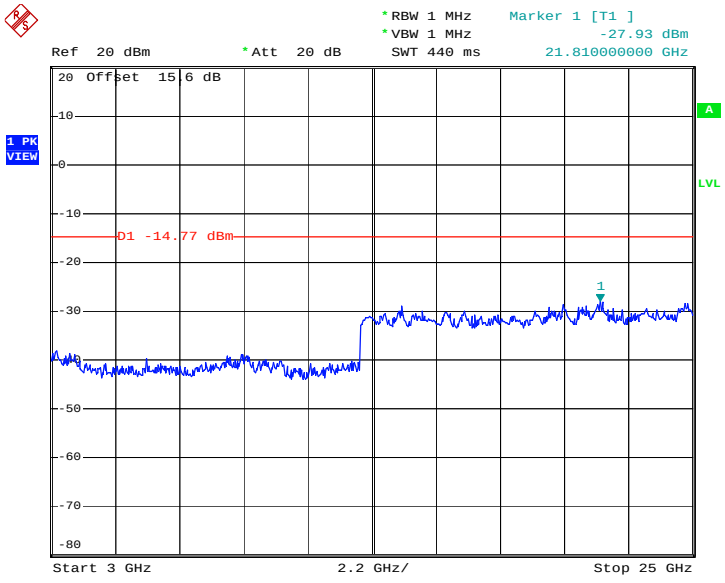
Test Mode :	Mode 5	Temperature :	23~24
Test Band :	802.11g	Relative Humidity :	47~48
Test Channel :	06	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:49:41

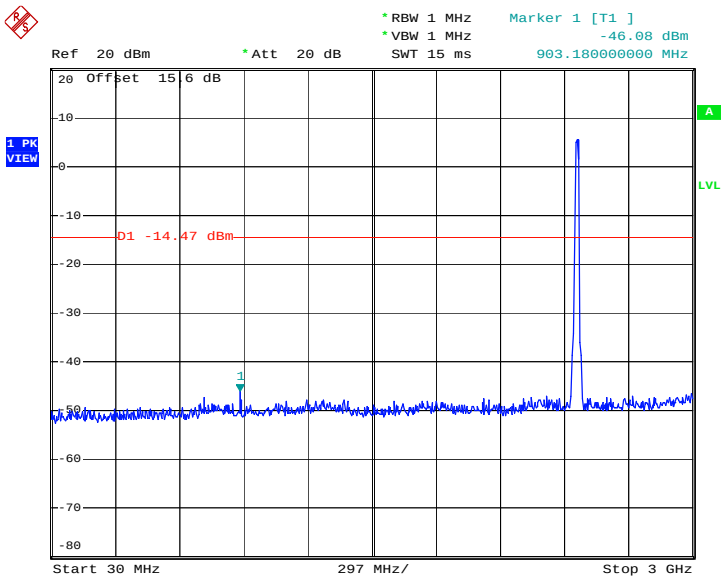
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:50:00

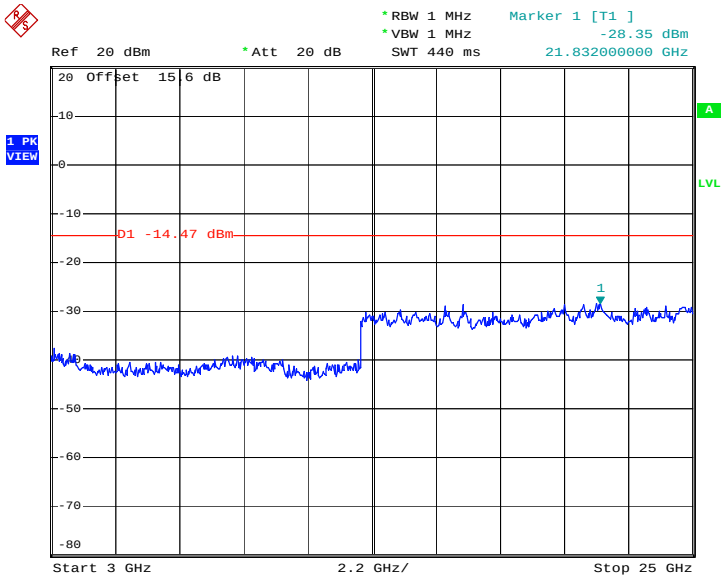
Test Mode :	Mode 6	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:51:31

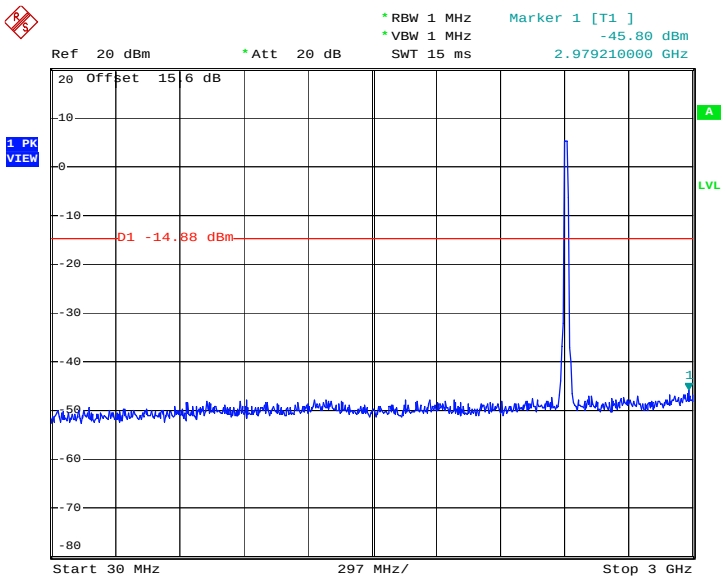
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:51:49

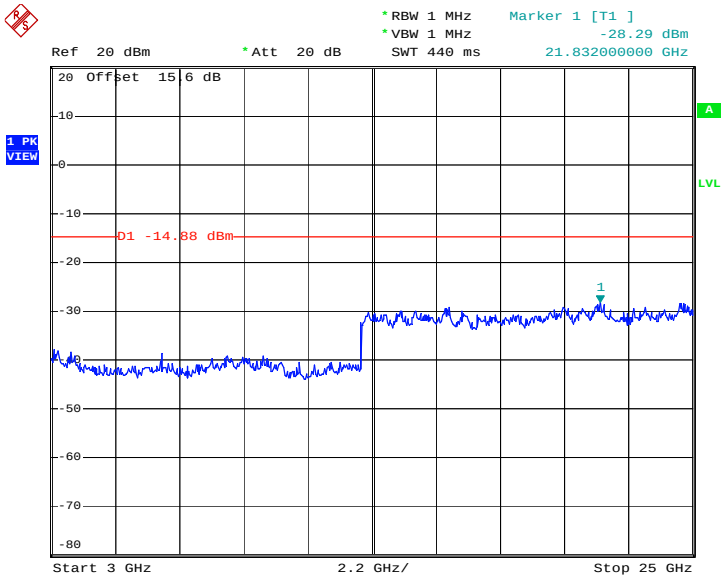
Test Mode :	Mode 7	Temperature :	23~24℃
Test Band :	802.11g/n (BW 20MHz)	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:52:59

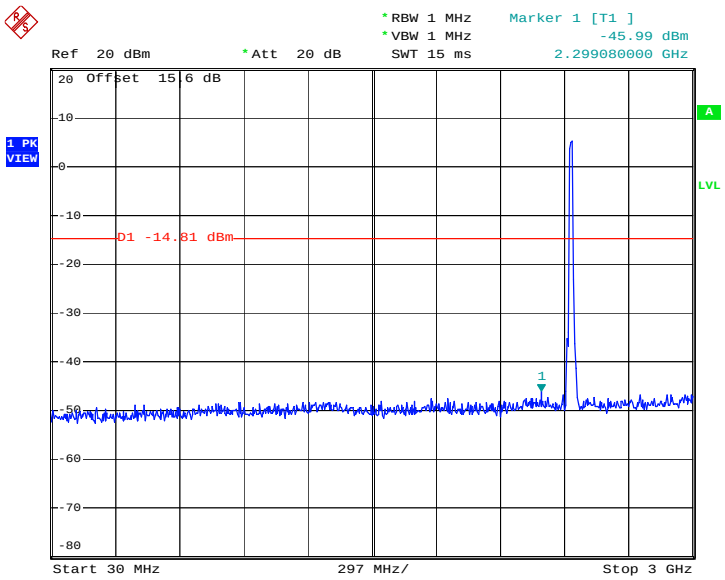
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:53:17

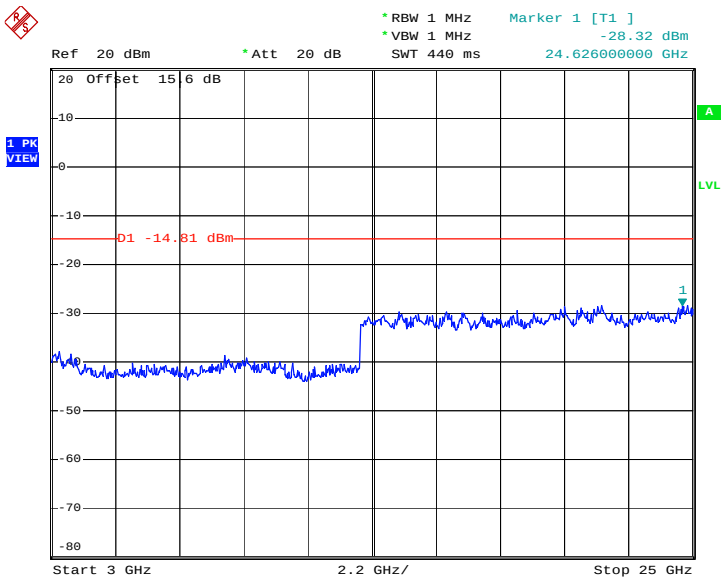
Test Mode :	Mode 8	Temperature :	23~24℃
Test Band :	802.11g/n (BW 20MHz)	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:54:37

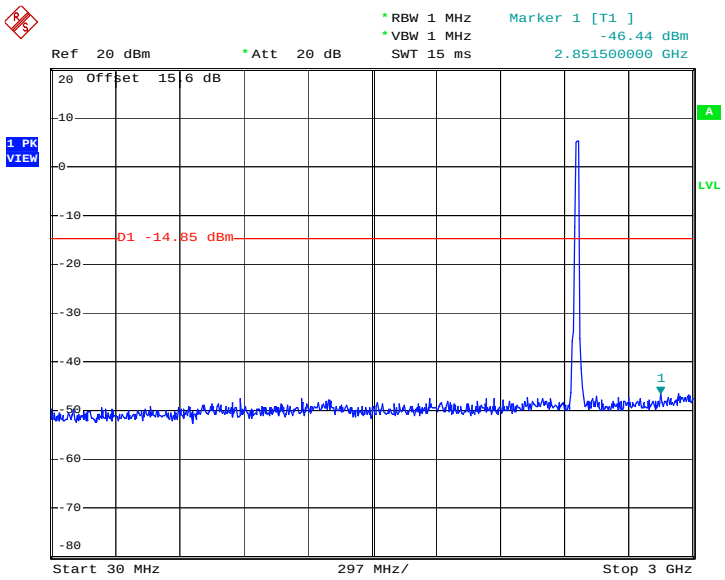
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:54:56

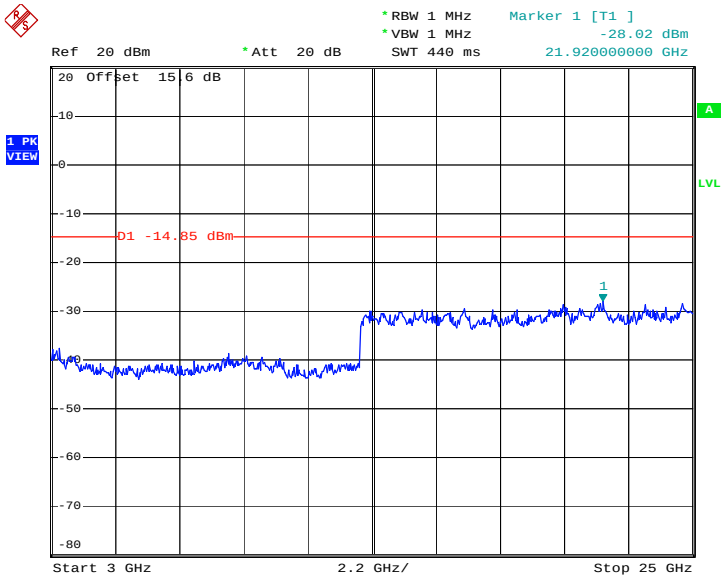
Test Mode :	Mode 9	Temperature :	23~24℃
Test Band :	802.11g/n (BW 20MHz)	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:55:52

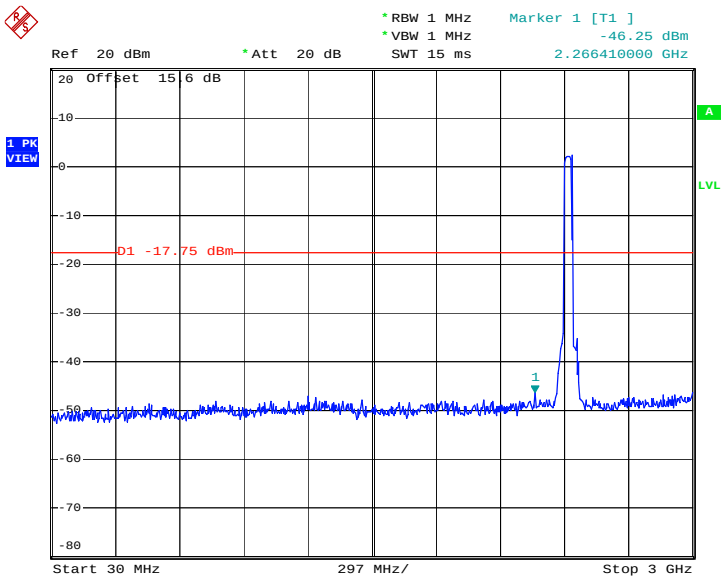
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:56:11

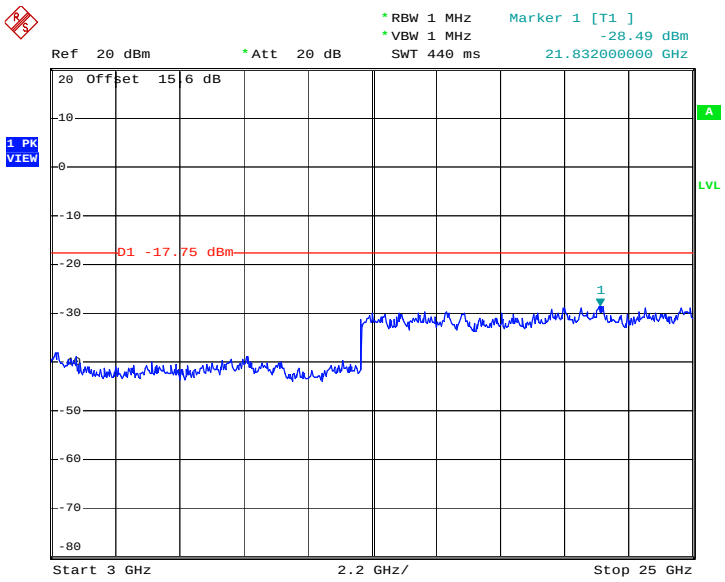
Test Mode :	Mode 10	Temperature :	23~24℃
Test Band :	802.11g/n (BW 40MHz)	Relative Humidity :	47~48%
Test Channel :	03	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 16:58:40

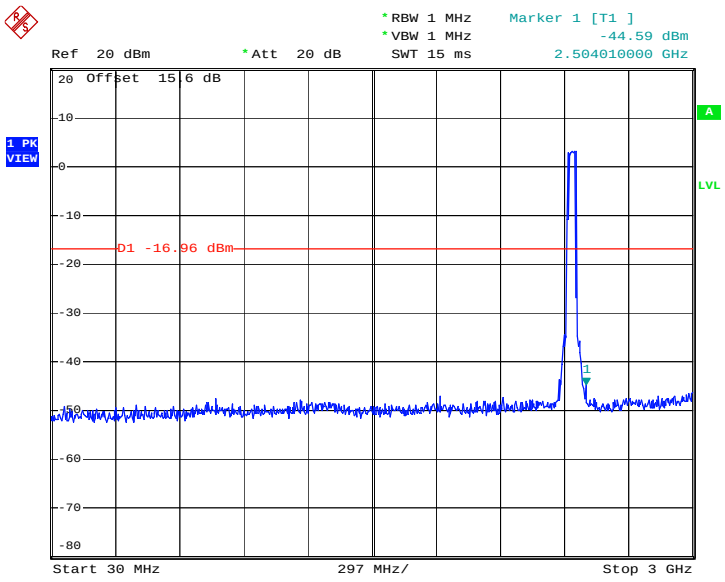
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 16:58:58

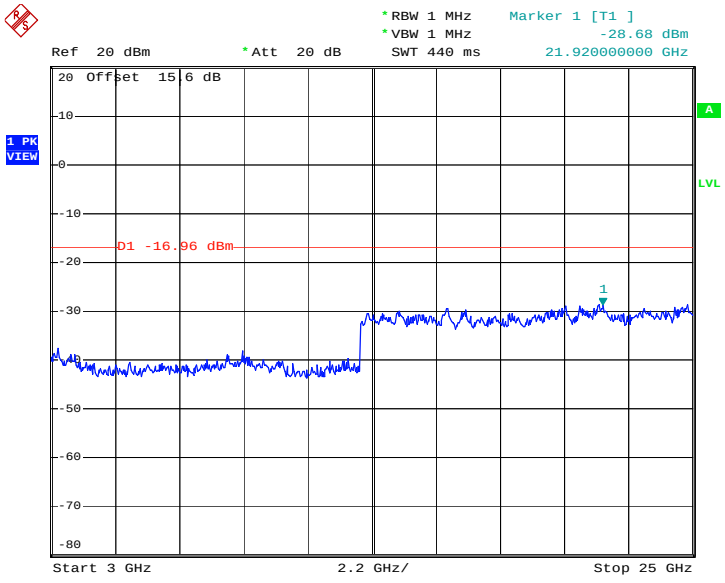
Test Mode :	Mode 11	Temperature :	23~24℃
Test Band :	802.11g/n (BW 40MHz)	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 17:00:53

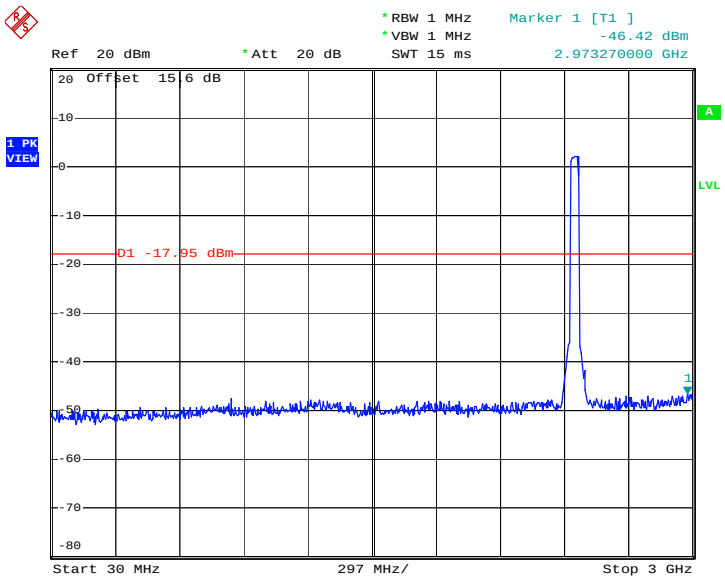
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 17:01:11

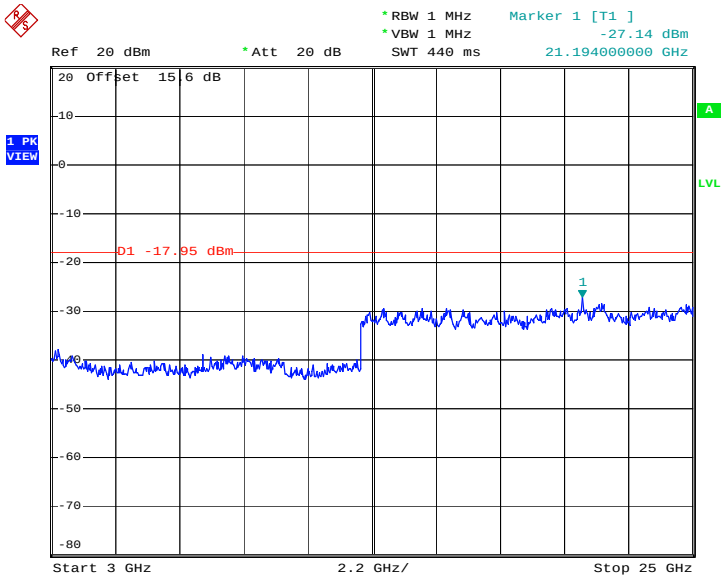
Test Mode :	Mode 12	Temperature :	23~24℃
Test Band :	802.11g/n (BW 40MHz)	Relative Humidity :	47~48%
Test Channel :	09	Test Engineer :	Zhi Lu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 23.MAY.2012 17:03:59

Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 23.MAY.2012 17:04:17

3.5 Power Spectral Density Measurement

3.5.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3KHz band at any time interval of continuous transmission.

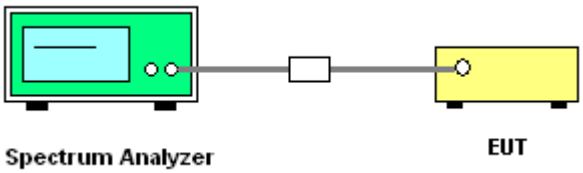
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The testing follows Measurement Procedure PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v01.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Record the measurement data derived from spectrum analyzer.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 KHz. Video bandwidth (VBW) >= 300 KHz In order to make an accurate measurement, set the span to 5-30% greater than Emission Bandwidth (EBW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
6. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (3 kHz/100 kHz = -15.2 dB).

3.5.4 Test Setup



3.5.5 Test Result of Power Spectral Density

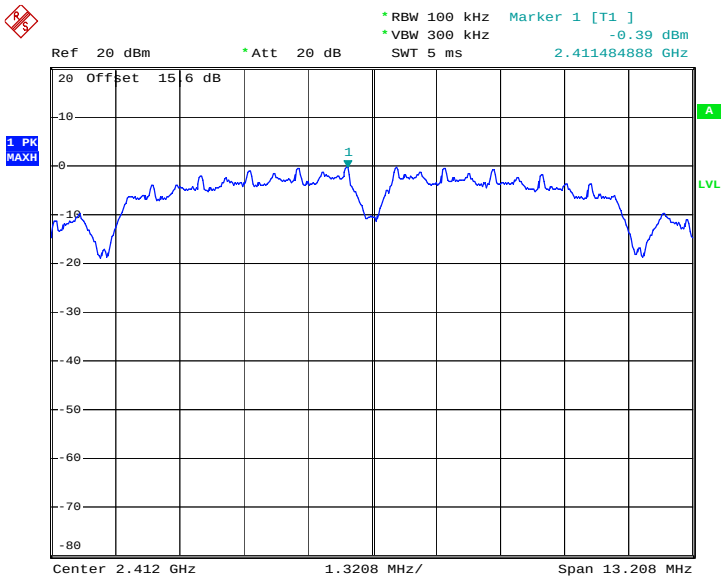
Test Mode :	Mode 1, 2, 3	Temperature :	23~24□
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-0.39	-15.59	8	Pass
06	2437	-1.19	-16.39	8	Pass
11	2462	-0.86	-16.06	8	Pass

Note:

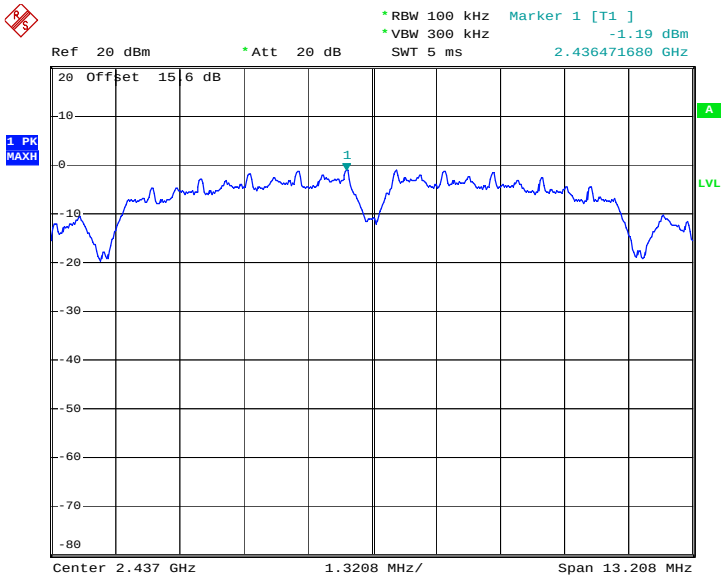
1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3kHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

Mode 1 : PSD Plot on 802.11b Channel 01



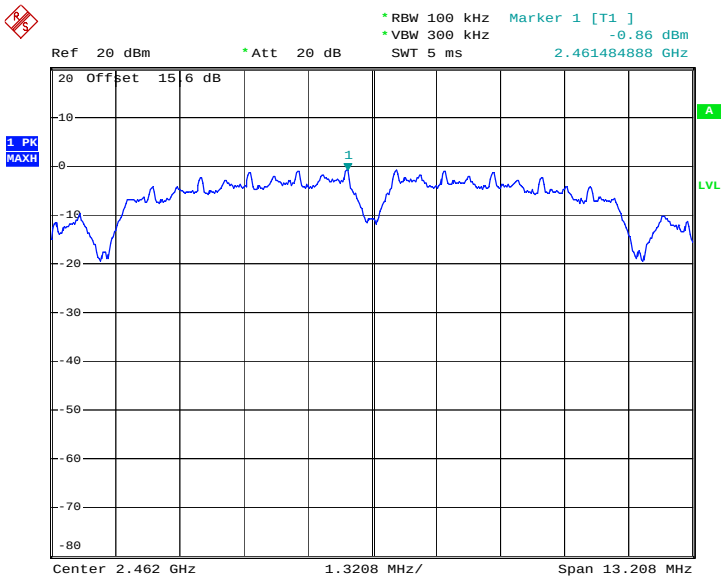
Date: 23.MAY.2012 11:41:32

Mode 2 : PSD Plot on 802.11b Channel 06



Date: 23.MAY.2012 11:50:05

Mode 3 : PSD Plot on 802.11b Channel 11



Date: 23.MAY.2012 11:54:33

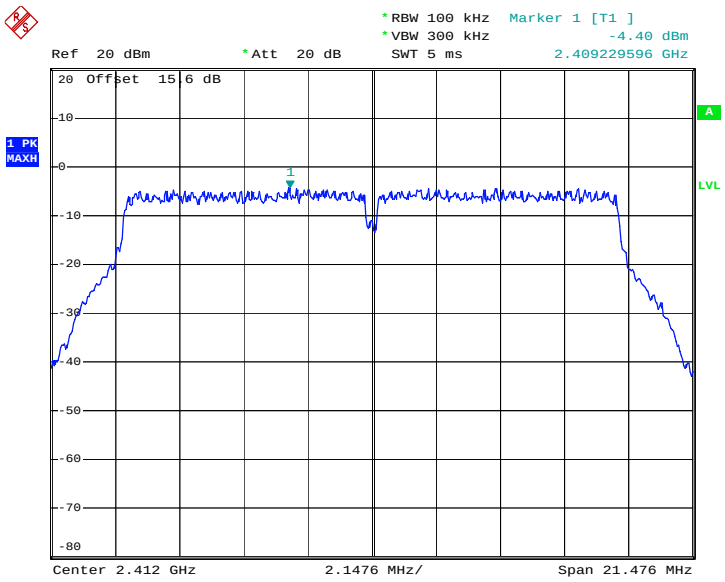
Test Mode :	Mode 4, 5, 6	Temperature :	23~24□
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-4.40	-19.60	8	Pass
06	2437	-4.63	-19.83	8	Pass
11	2462	-4.30	-19.50	8	Pass

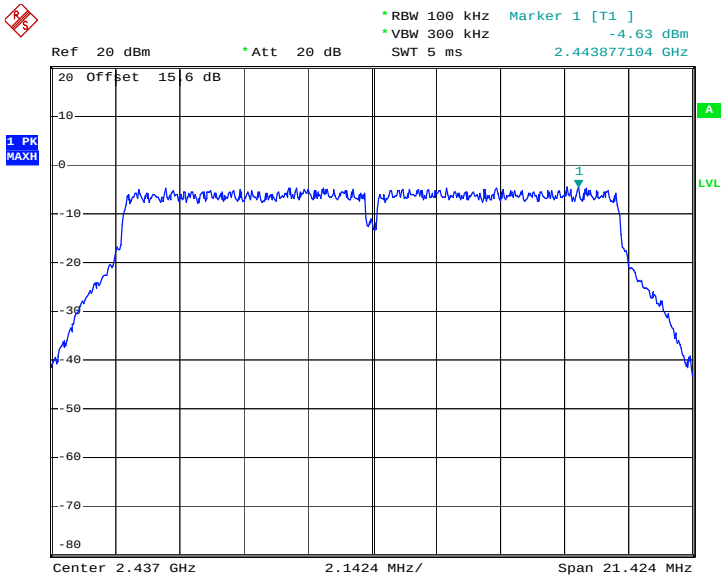
Note:

1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3KHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

Mode 4 : PSD Plot on 802.11g Channel 01

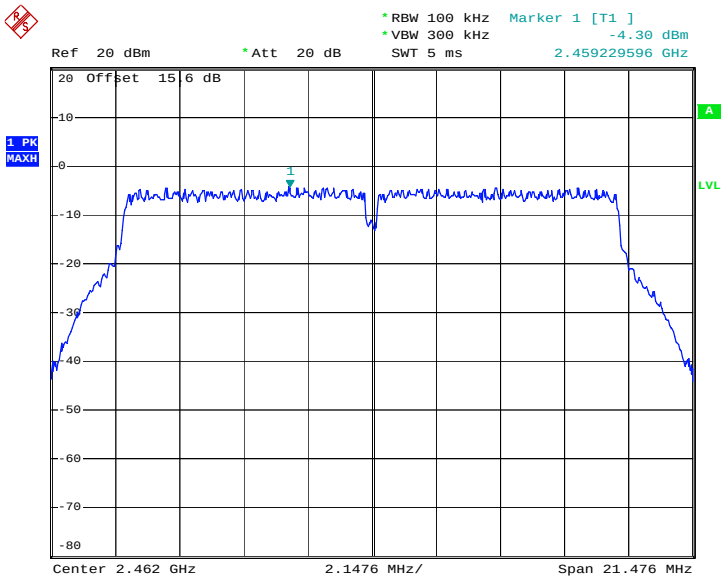


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 23.MAY.2012 13:10:34

Mode 6 : PSD Plot on 802.11g Channel 11



Date: 23.MAY.2012 13:15:16

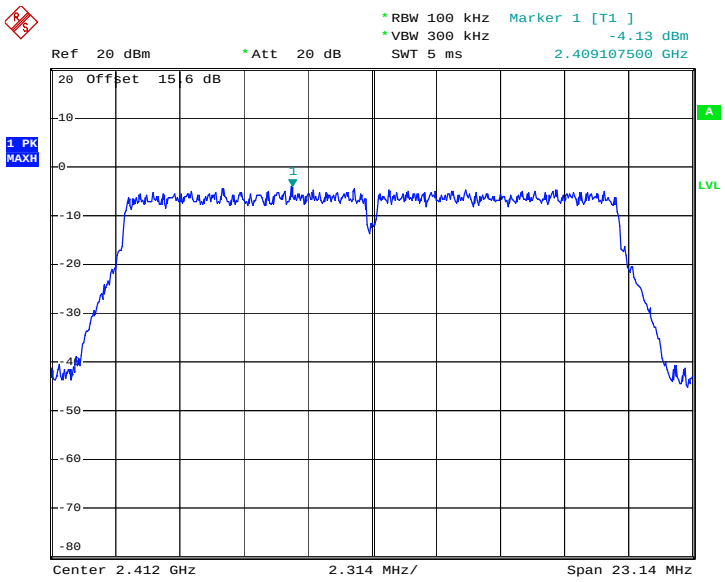
Test Mode :	Mode 7, 8, 9	Temperature :	23~24□
Test Engineer :	Zhi Lu	Relative Humidity :	47~48%

Channel	Frequency (MHz)	802.11g/n (BW 20MHz) Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-4.13	-19.33	8	Pass
06	2437	-4.40	-19.60	8	Pass
11	2462	-4.05	-19.25	8	Pass

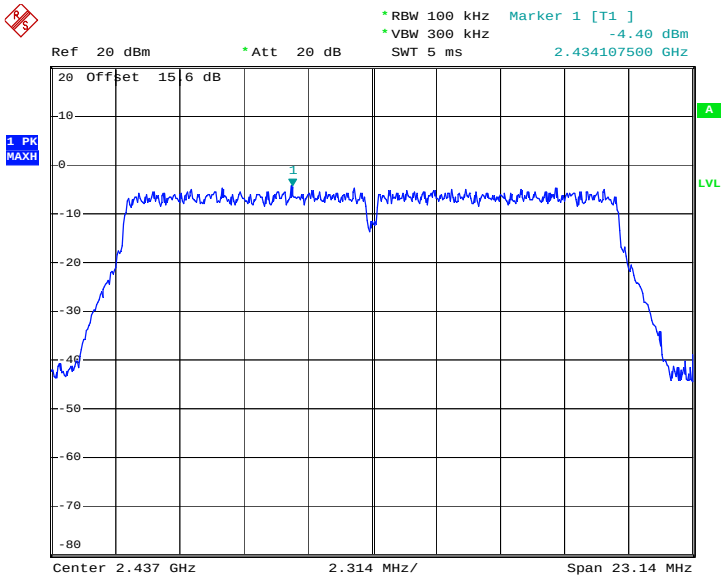
Note:

1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3KHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

Mode 7 : PSD Plot on 802.11g/n (BW 20MHz) Channel 01



Mode 8 : PSD Plot on802.11g/n (BW 20MHz) Channel 06



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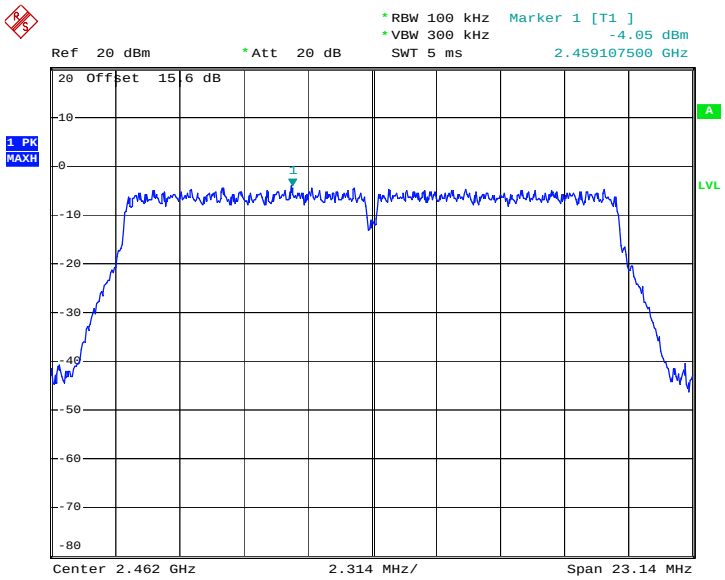
Mode 9 : PSD Plot on 802.11g/n (BW 20MHz) Channel 11



Date: 23.MAY.2012 13:45:34

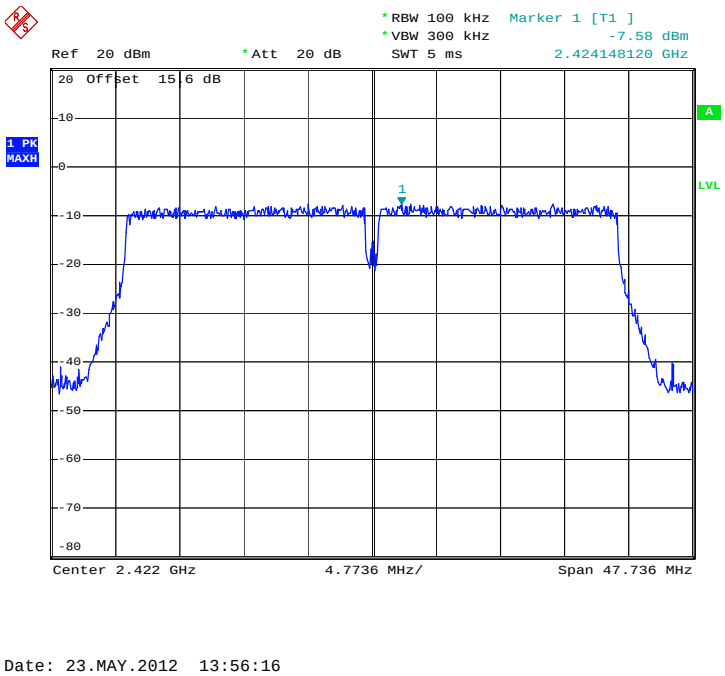
Test Mode :	Mode 10, 11, 12	Temperature :	23~24
Test Engineer :	Zhi Lu	Relative Humidity :	47~48

Channel	Frequency (MHz)	802.11g/n (BW 40MHz) Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
03	2422	-7.58	-22.78	8	Pass
06	2437	-4.78	-19.98	8	Pass
09	2452	-7.81	-23.01	8	Pass

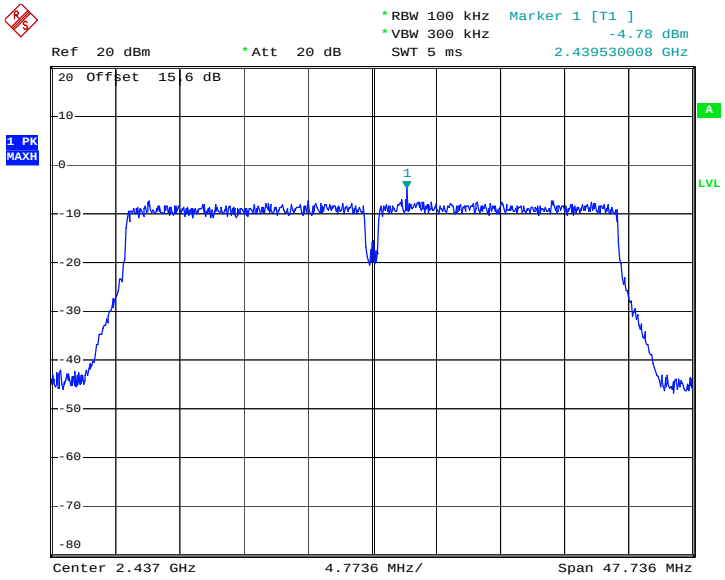
Note:

1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3KHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

Mode 10 : PSD Plot on 802.11g/n (BW 40MHz) Channel 03

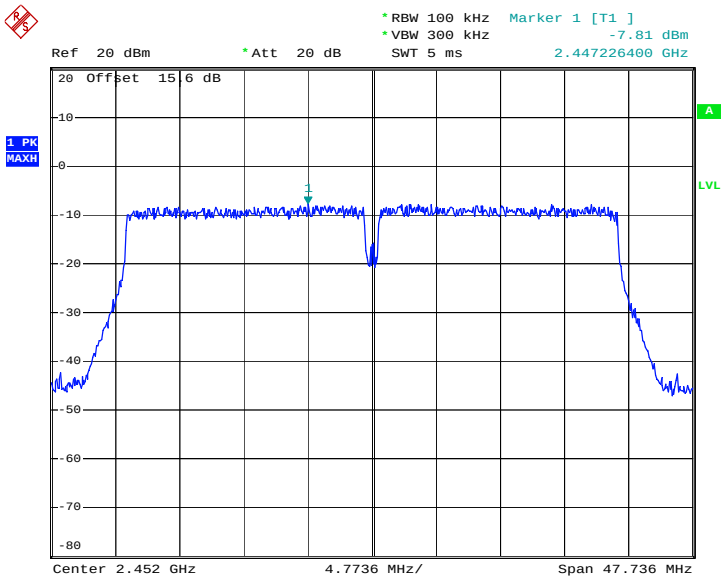


Mode 11 : PSD Plot on802.11g/n (BW 40MHz) Channel 06



Date: 23.MAY.2012 14:01:16

Mode 12 : PSD Plot on 802.11g/n (BW 40MHz) Channel 09



Date: 23.MAY.2012 14:04:19

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 KHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (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.

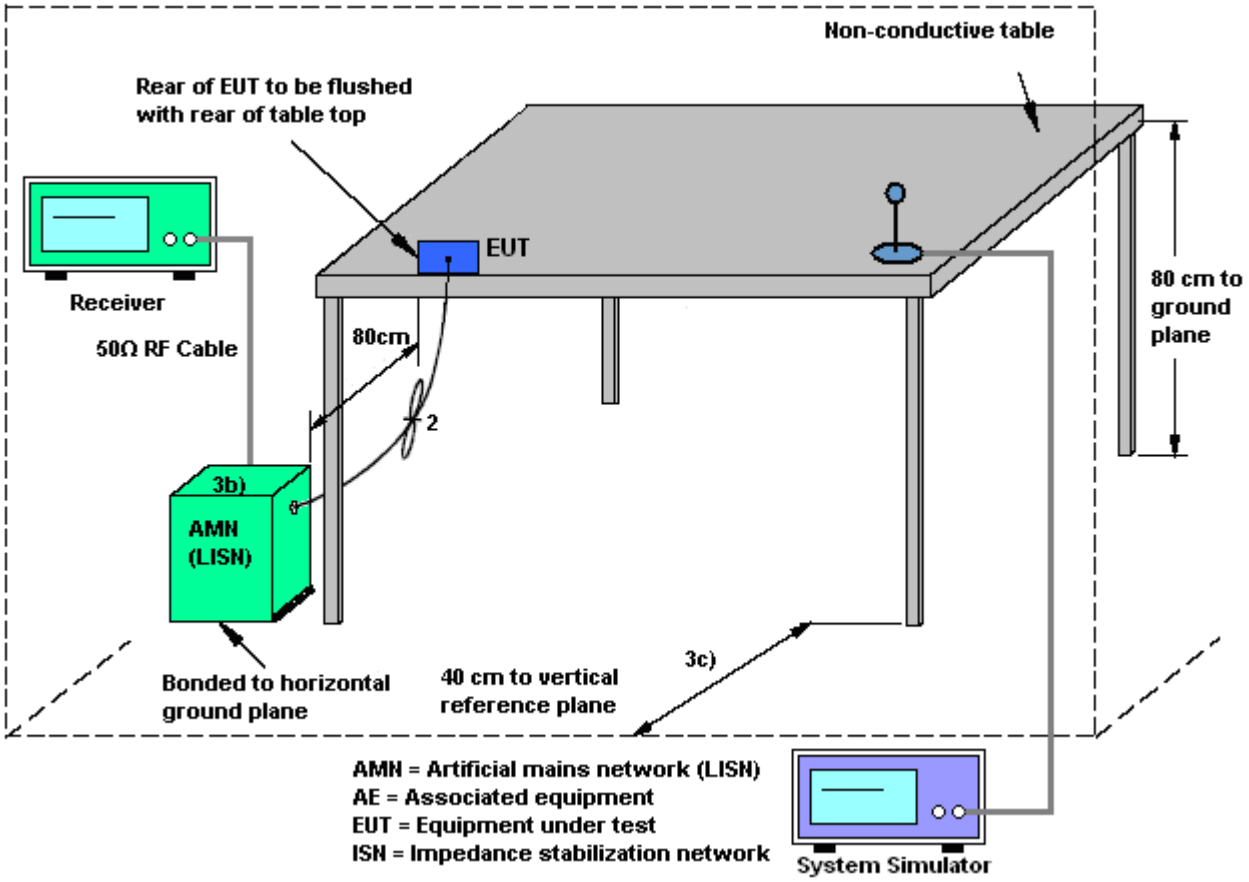
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

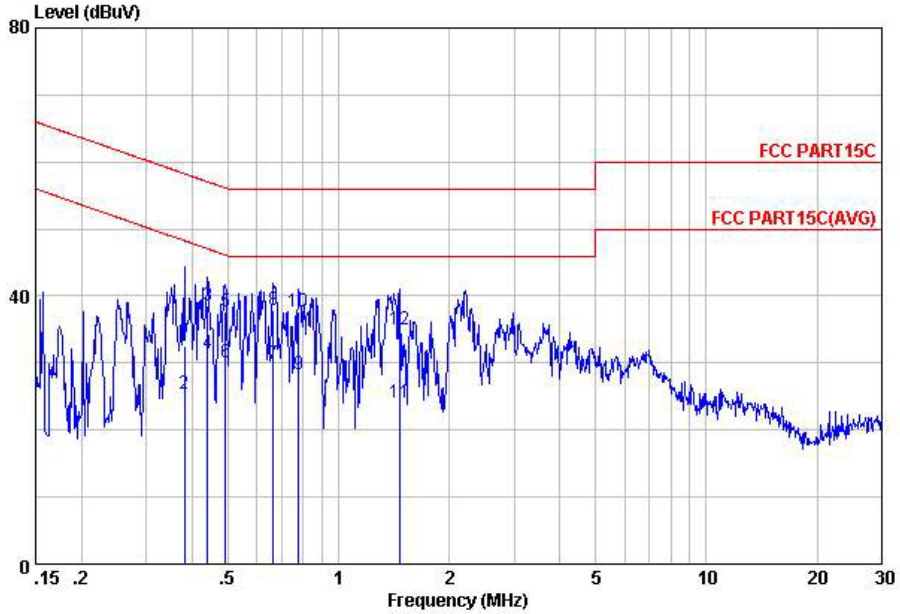
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (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.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

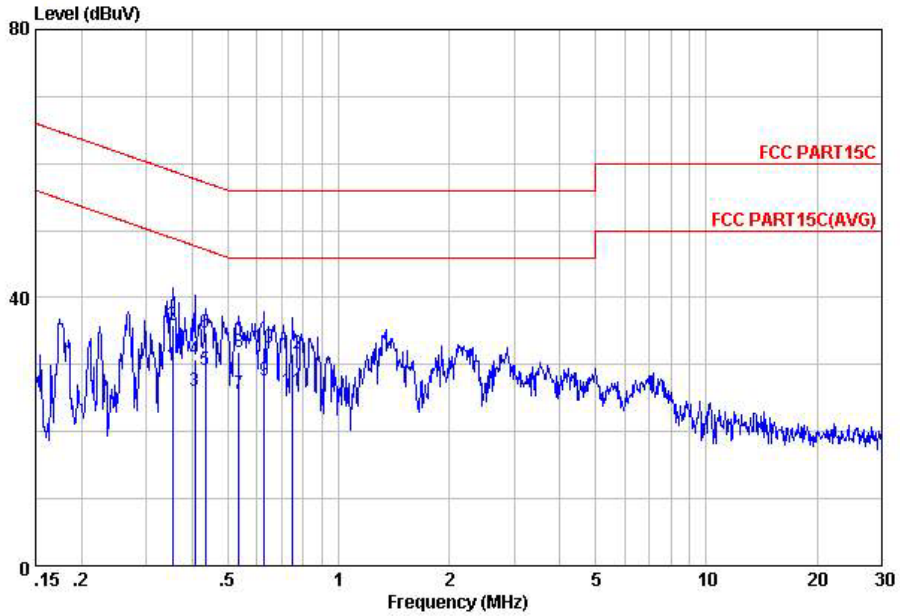
Test Mode :	Mode 1	Temperature :	19~20℃
Test Engineer :	Tom Wang	Relative Humidity :	39~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + WLAN Link + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : C001-KS
Condition: FCC PART15C LISN-100807 LINE
Project : (FR) 233002
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.38	32.61	-25.64	58.25	22.50	-0.08	10.19	QP
2	0.38	25.31	-22.94	48.25	15.20	-0.08	10.19	Average
3	0.44	38.52	-18.55	57.07	28.40	-0.08	10.20	QP
4	0.44	31.52	-15.55	47.07	21.40	-0.08	10.20	Average
5	0.49	37.73	-18.41	56.14	27.60	-0.08	10.21	QP
6	0.49	30.03	-16.11	46.14	19.90	-0.08	10.21	Average
7	0.66	29.84	-16.16	46.00	19.70	-0.09	10.23	Average
8	0.66	37.84	-18.16	56.00	27.70	-0.09	10.23	QP
9	0.78	28.35	-17.65	46.00	18.20	-0.09	10.24	Average
10	0.78	37.75	-18.25	56.00	27.60	-0.09	10.24	QP
11	1.46	24.09	-21.91	46.00	13.90	-0.11	10.30	Average
12	1.46	35.09	-20.91	56.00	24.90	-0.11	10.30	QP

Test Mode :	Mode 1	Temperature :	19~20℃
Test Engineer :	Tom Wang	Relative Humidity :	39~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + WLAN Link + Adapter		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : C001-KS
Condition: FCC PART15C LISN-100807 NEUTRAL
Project : (FR) 233002
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.35	29.91	-18.96	48.87	19.81	-0.08	10.18	Average
2	0.35	35.81	-23.06	58.87	25.71	-0.08	10.18	QP
3	0.41	26.11	-21.62	47.73	16.00	-0.08	10.19	Average
4	0.41	30.81	-26.92	57.73	20.70	-0.08	10.19	QP
5	0.44	29.12	-18.03	47.15	19.00	-0.08	10.20	Average
6	0.44	34.82	-22.33	57.15	24.70	-0.08	10.20	QP
7	0.53	25.73	-20.27	46.00	15.60	-0.08	10.21	Average
8	0.53	31.93	-24.07	56.00	21.80	-0.08	10.21	QP
9	0.63	27.55	-18.45	46.00	17.40	-0.08	10.23	Average
10	0.63	32.65	-23.35	56.00	22.50	-0.08	10.23	QP
11	0.75	26.06	-19.94	46.00	15.90	-0.08	10.24	Average
12	0.75	31.56	-24.44	56.00	21.40	-0.08	10.24	QP

3.7 Radiated Emission Measurement

3.7.1 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

3.7.2 Measuring Instruments

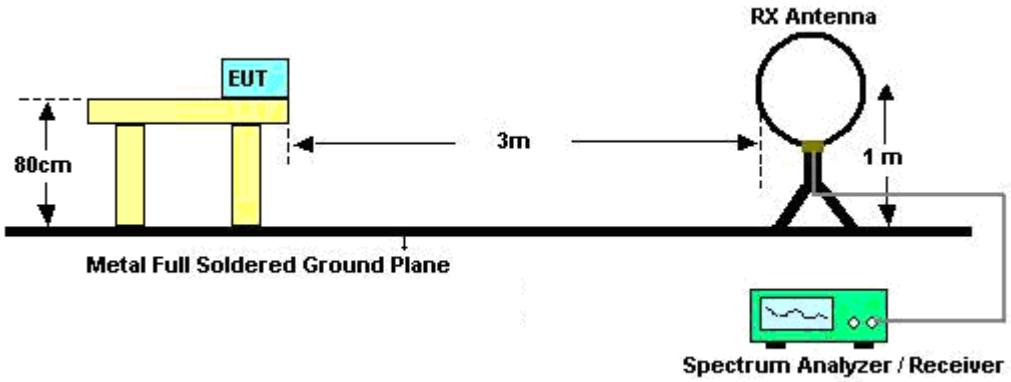
See list of measuring instruments of this test report.

3.7.3 Test Procedures

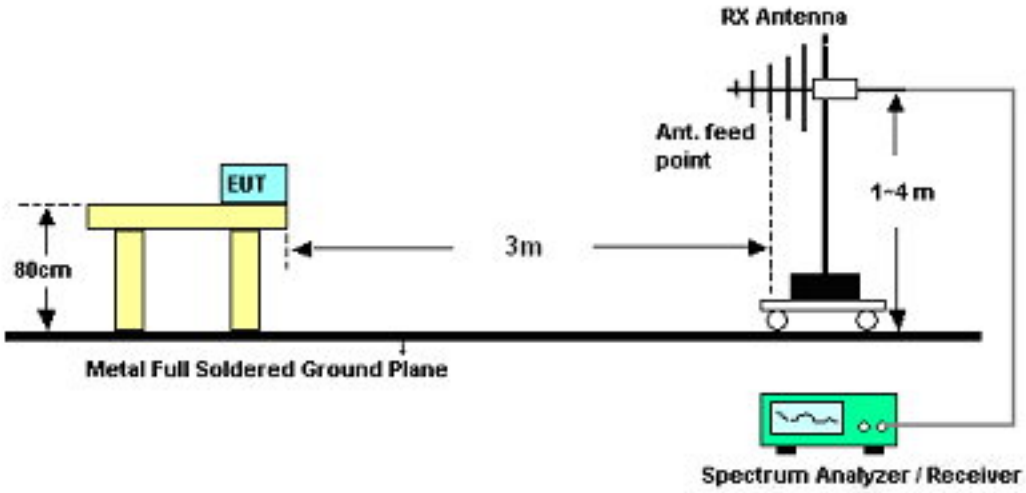
1. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW = 1 MHz for f ≥ 1 GHz, 100 KHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Measurement above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB per decade from 3m to 1m.
   Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB)
2. Maximize the emission by rotating the EUT for three orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines in ANSI C63.4-2003.

3.7.4 Test Setup

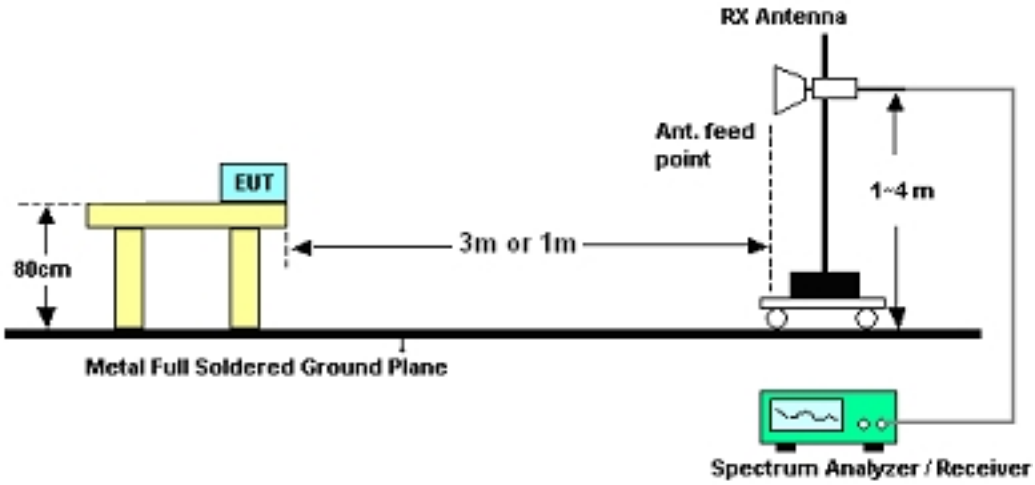
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.7.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

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

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

Test Mode :	Mode 1	Temperature :	25~26℃
Test Channel :	01	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
38.73	35.12	-4.88	40	51.93	12.98	0.25	30.04	100	123	Peak
189.08	22.46	-21.04	43.5	43.34	8.49	0.57	29.94	-	-	Peak
507.24	23.41	-22.59	46	34.83	17.34	0.96	29.72	-	-	Peak
672.14	25.84	-20.16	46	35.34	19.07	1.11	29.68	-	-	Peak
800.18	30.69	-15.31	46	39.18	19.85	1.25	29.59	-	-	Peak
902.03	26.32	-19.68	46	34.04	20.46	1.3	29.48	-	-	Peak
2340.21	35.81	-18.19	54	33.64	32.78	3.33	33.94	146	360	Average
2340.21	49.49	-24.51	74	47.32	32.78	3.33	33.94	146	360	Peak
2412	91.4	-	-	89.07	32.89	3.52	34.08	146	360	Average
2412	96.88	-	-	94.55	32.89	3.52	34.08	146	360	Peak
2496.39	49.03	-24.97	74	46.49	33.05	3.72	34.23	146	360	Peak
2496.39	36.08	-17.92	54	33.54	33.05	3.72	34.23	146	360	Average
4824	39.48	-14.52	54	31.61	35.17	4.97	32.27	100	268	Average
4824	54.13	-19.87	74	46.26	35.17	4.97	32.27	100	268	Peak

Test Mode :	Mode 1	Temperature :	25~26℃
Test Channel :	01	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
38.73	30.41	-9.59	40	47.22	12.98	0.25	30.04	100	21	Peak
189.08	21.87	-21.63	43.5	42.75	8.49	0.57	29.94	-	-	Peak
336.52	20.15	-25.85	46	35.12	14.17	0.8	29.94	-	-	Peak
575.14	26.61	-19.39	46	36.67	18.55	1.04	29.65	-	-	Peak
719.67	29.21	-16.79	46	38.2	19.52	1.15	29.66	-	-	Peak
860.32	24.76	-21.24	46	32.61	20.5	1.28	29.63	-	-	Peak
2310.76	35.48	-18.52	54	33.39	32.73	3.22	33.86	111	255	Average
2310.76	49.14	-24.86	74	47.05	32.73	3.22	33.86	111	255	Peak
2412	86.87	-	-	84.54	32.89	3.52	34.08	100	255	Average
2412	91.18	-	-	88.85	32.89	3.52	34.08	100	255	Peak
2495.06	35.56	-18.44	54	33.02	33.05	3.72	34.23	111	255	Average
2495.06	49.26	-24.74	74	46.72	33.05	3.72	34.23	111	255	Peak
4824	39.27	-14.73	54	31.4	35.17	4.97	32.27	100	360	Average
4824	51.85	-22.15	74	43.98	35.17	4.97	32.27	100	360	Peak

Test Mode :	Mode 2	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
44.55	31.32	-8.68	40	51.58	9.6	0.27	30.13	100	129	Peak
189.08	23.33	-20.17	43.5	44.21	8.49	0.57	29.94	-	-	Peak
367.56	21.14	-24.86	46	35.27	14.95	0.83	29.91	-	-	Peak
514.03	23.9	-22.1	46	35.15	17.5	0.97	29.72	-	-	Peak
670.2	25.93	-20.07	46	35.46	19.05	1.1	29.68	-	-	Peak
799.21	27.06	-18.94	46	35.55	19.85	1.25	29.59	-	-	Peak
2350.66	30.57	-23.43	54	28.4	32.78	3.33	33.94	146	360	Average
2350.66	44.37	-29.63	74	42.2	32.78	3.33	33.94	146	360	Peak
2437	88.83	-	-	86.43	32.95	3.6	34.15	100	301	Average
2437	94.68	-	-	92.28	32.95	3.6	34.15	100	301	Peak
2493.16	31.15	-22.85	54	28.61	33.05	3.72	34.23	146	360	Average
2493.16	46.8	-27.2	74	44.26	33.05	3.72	34.23	146	360	Peak
4874	40.79	-13.21	54	32.9	35.18	4.98	32.27	100	325	Average
4874	52.68	-21.32	74	44.79	35.18	4.98	32.27	100	325	Peak

Test Mode :	Mode 2	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	28.35	-11.65	40	44.47	13.7	0.24	30.06	122	19	Peak
188.11	22.16	-21.34	43.5	43.04	8.48	0.57	29.93	-	-	Peak
340.4	20.18	-25.82	46	35.03	14.28	0.81	29.94	-	-	Peak
514.03	24.63	-21.37	46	35.88	17.5	0.97	29.72	-	-	Peak
601.33	26.11	-19.89	46	36.06	18.6	1.07	29.62	-	-	Peak
721.61	29.52	-16.48	46	38.47	19.55	1.15	29.65	-	-	Peak
2326.72	30.12	-23.88	54	27.99	32.76	3.27	33.9	100	194	Average
2326.72	44.27	-29.73	74	42.14	32.76	3.27	33.9	100	194	Peak
2437	87.65	-	-	85.25	32.95	3.6	34.15	100	360	Average
2437	92.17	-	-	89.77	32.95	3.6	34.15	100	360	Peak
2493.73	28.91	-25.09	54	26.37	33.05	3.72	34.23	100	21	Average
2493.73	43.62	-30.38	74	41.08	33.05	3.72	34.23	100	21	Peak
4874	39.79	-14.21	54	31.9	35.18	4.98	32.27	100	360	Average
4874	51.64	-22.36	74	43.75	35.18	4.98	32.27	100	360	Peak

Test Mode :	Mode 3	Temperature :	25~26℃
Test Channel :	11	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	30.52	-9.48	40	42.34	18	0.26	30.08	100	0	Peak
139.61	22.46	-21.04	43.5	41.07	10.9	0.49	30	-	-	Peak
189.08	22.63	-20.87	43.5	43.51	8.49	0.57	29.94	-	-	Peak
510.15	23.73	-22.27	46	35.08	17.4	0.97	29.72	-	-	Peak
671.17	26.42	-19.58	46	35.93	19.06	1.11	29.68	-	-	Peak
800.18	28.19	-17.81	46	36.68	19.85	1.25	29.59	-	-	Peak
2349.71	30.48	-23.52	54	28.31	32.78	3.33	33.94	100	360	Average
2349.71	44.65	-29.35	74	42.48	32.78	3.33	33.94	100	360	Peak
2462	91.2	-	-	88.75	32.98	3.64	34.17	122	360	Average
2462	94.99	-	-	92.54	32.98	3.64	34.17	122	360	Peak
2493.92	30.82	-23.18	54	28.28	33.05	3.72	34.23	100	0	Average
2493.92	44.16	-29.84	74	41.62	33.05	3.72	34.23	100	0	Peak
4924	39.86	-14.14	54	31.94	35.19	4.99	32.26	121	276	Average
4924	51.69	-22.31	74	43.77	35.19	4.99	32.26	121	276	Peak

Test Mode :	Mode 3	Temperature :	25~26℃
Test Channel :	11	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
38.73	29	-11	40	45.81	12.98	0.25	30.04	100	188	Peak
189.08	20.95	-22.55	43.5	41.83	8.49	0.57	29.94	-	-	Peak
336.52	20.68	-25.32	46	35.65	14.17	0.8	29.94	-	-	Peak
480.08	23.9	-22.1	46	35.84	16.87	0.94	29.75	-	-	Peak
578.05	26.78	-19.22	46	36.82	18.56	1.04	29.64	-	-	Peak
719.67	29.21	-16.79	46	38.2	19.52	1.15	29.66	-	-	Peak
2372.51	30.74	-23.26	54	28.5	32.83	3.42	34.01	100	296	Average
2372.51	43.96	-30.04	74	41.72	32.83	3.42	34.01	100	296	Peak
2462	89.75	-	-	87.3	32.98	3.64	34.17	100	231	Average
2462	94.51	-	-	92.06	32.98	3.64	34.17	100	231	Peak
2492.02	30.84	-23.16	54	28.3	33.05	3.72	34.23	100	296	Average
2492.02	46.56	-27.44	74	44.02	33.05	3.72	34.23	100	296	Peak
4924	40.22	-13.78	54	32.3	35.19	4.99	32.26	100	360	Average
4924	51.38	-22.62	74	43.46	35.19	4.99	32.26	100	360	Peak

Test Mode :	Mode 4	Temperature :	25~26℃
Test Channel :	01	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.91	30.34	-9.66	40	44.15	16.04	0.24	30.09	100	265	Peak
189.08	21.57	-21.93	43.5	42.45	8.49	0.57	29.94	-	-	Peak
370.47	21.23	-24.77	46	35.25	15.05	0.83	29.9	-	-	Peak
510.15	23.63	-22.37	46	34.98	17.4	0.97	29.72	-	-	Peak
662.44	26.94	-19.06	46	36.53	18.98	1.1	29.67	-	-	Peak
800.18	27.65	-18.35	46	36.14	19.85	1.25	29.59	-	-	Peak
2384.48	30.68	-23.32	54	28.44	32.83	3.42	34.01	147	0	Average
2384.48	44.33	-29.67	74	42.09	32.83	3.42	34.01	147	0	Peak
2412	81.09	-	-	78.76	32.89	3.52	34.08	147	32	Average
2412	90.17	-	-	87.84	32.89	3.52	34.08	147	32	Peak
2497.15	30.7	-23.3	54	28.16	33.05	3.72	34.23	147	0	Average
2497.15	44.32	-29.68	74	41.78	33.05	3.72	34.23	147	0	Peak
4824	39.37	-14.63	54	31.5	35.17	4.97	32.27	127	268	Average
4824	52.14	-21.86	74	44.27	35.17	4.97	32.27	127	268	Peak

Test Mode :	Mode 4	Temperature :	25~26℃
Test Channel :	01	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.91	28.37	-11.63	40	42.18	16.04	0.24	30.09	100	61	Peak
189.08	21.54	-21.96	43.5	42.42	8.49	0.57	29.94	-	-	Peak
340.4	20.3	-25.7	46	35.15	14.28	0.81	29.94	-	-	Peak
579.99	26.34	-19.66	46	36.38	18.56	1.04	29.64	-	-	Peak
720.64	29.86	-16.14	46	38.84	19.53	1.15	29.66	-	-	Peak
965.08	28.33	-25.67	54	35.69	20.82	1.35	29.53	-	-	Peak
2341.16	30.38	-23.62	54	28.21	32.78	3.33	33.94	121	0	Average
2341.16	44.88	-29.12	74	42.71	32.78	3.33	33.94	121	0	Peak
2412	88.04	-	-	85.71	32.89	3.52	34.08	121	110	Peak
2412	81	-	-	78.67	32.89	3.52	34.08	121	110	Average
2495.25	30.85	-23.15	54	28.31	33.05	3.72	34.23	121	226	Average
2495.25	44.01	-29.99	74	41.47	33.05	3.72	34.23	121	226	Peak
4824	39.4	-14.6	54	31.53	35.17	4.97	32.27	121	226	Average
4824	54.7	-19.3	74	46.83	35.17	4.97	32.27	121	226	Peak

Test Mode :	Mode 5	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	29.19	-10.81	40	45.31	13.7	0.24	30.06	100	158	Peak
140.58	21.9	-21.6	43.5	40.59	10.82	0.49	30	-	-	Peak
189.08	23.48	-20.02	43.5	44.36	8.49	0.57	29.94	-	-	Peak
514.03	23.63	-22.37	46	34.88	17.5	0.97	29.72	-	-	Peak
668.26	25.66	-20.34	46	35.21	19.03	1.1	29.68	-	-	Peak
800.18	28.03	-17.97	46	36.52	19.85	1.25	29.59	-	-	Peak
2376.5	31.05	-22.95	54	28.81	32.83	3.42	34.01	174	360	Average
2376.5	44.3	-29.7	74	42.06	32.83	3.42	34.01	174	360	Peak
2437	80.37	-	-	77.97	32.95	3.6	34.15	174	360	Average
2437	88.77	-	-	86.37	32.95	3.6	34.15	174	360	Peak
2494.3	30.67	-23.33	54	28.13	33.05	3.72	34.23	174	360	Average
2494.3	43.84	-30.16	74	41.3	33.05	3.72	34.23	174	360	Peak
4874	40.06	-13.94	54	32.17	35.18	4.98	32.27	121	269	Average
4874	52.53	-21.47	74	44.64	35.18	4.98	32.27	121	269	Peak

Test Mode :	Mode 5	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	28.39	-11.61	40	44.51	13.7	0.24	30.06	100	203	Peak
180.35	24.15	-19.35	43.5	45.07	8.4	0.56	29.88	-	-	Peak
340.4	21.13	-24.87	46	35.98	14.28	0.81	29.94	-	-	Peak
509.18	24.44	-21.56	46	35.81	17.38	0.97	29.72	-	-	Peak
640.13	27.48	-18.52	46	37.19	18.85	1.09	29.65	-	-	Peak
720.64	29.41	-16.59	46	38.39	19.53	1.15	29.66	-	-	Peak
2371.94	30.7	-23.3	54	28.46	32.83	3.42	34.01	181	215	Average
2371.94	44.2	-29.8	74	41.96	32.83	3.42	34.01	181	215	Peak
2437	75.02	-	-	72.62	32.95	3.6	34.15	100	200	Average
2437	87.83	-	-	85.43	32.95	3.6	34.15	100	200	Peak
2499.81	31.22	-22.78	54	28.68	33.05	3.72	34.23	181	215	Average
2499.81	43.63	-30.37	74	41.09	33.05	3.72	34.23	181	215	Peak
4874	39.52	-14.48	54	31.63	35.18	4.98	32.27	100	326	Average
4874	52.53	-21.47	74	44.64	35.18	4.98	32.27	100	326	Peak

Test Mode :	Mode 6	Temperature :	25~26℃
Test Channel :	11	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	29.2	-10.8	40	45.32	13.7	0.24	30.06	100	153	Peak
137.67	21.77	-21.73	43.5	40.23	11.05	0.49	30	-	-	Peak
189.08	22.8	-20.7	43.5	43.68	8.49	0.57	29.94	-	-	Peak
499.48	22.91	-23.09	46	34.49	17.19	0.96	29.73	-	-	Peak
670.2	25.84	-20.16	46	35.37	19.05	1.1	29.68	-	-	Peak
800.18	28.91	-17.09	46	37.4	19.85	1.25	29.59	-	-	Peak
2370.99	30.77	-23.23	54	28.53	32.83	3.42	34.01	144	0	Average
2370.99	44.49	-29.51	74	42.25	32.83	3.42	34.01	144	0	Peak
2462	81.95	-	-	79.5	32.98	3.64	34.17	144	360	Average
2462	90.91	-	-	88.46	32.98	3.64	34.17	144	360	Peak
2497.91	30.6	-23.4	54	28.06	33.05	3.72	34.23	100	360	Average
2497.91	43.57	-30.43	74	41.03	33.05	3.72	34.23	100	360	Peak
4912	39.6	-14.4	54	31.68	35.19	4.99	32.26	100	245	Average
4912	52.58	-21.42	74	44.66	35.19	4.99	32.26	100	245	Peak

Test Mode :	Mode 6	Temperature :	25~26℃
Test Channel :	11	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	27.68	-12.32	40	43.8	13.7	0.24	30.06	100	0	Peak
180.36	23.34	-20.16	43.5	44.26	8.4	0.56	29.88	-	-	Peak
341.37	20.35	-25.65	46	35.18	14.3	0.81	29.94	-	-	Peak
477.17	23.18	-22.82	46	35.21	16.8	0.93	29.76	-	-	Peak
580.96	27.16	-18.84	46	37.18	18.57	1.05	29.64	-	-	Peak
719.67	29.28	-16.72	46	38.27	19.52	1.15	29.66	-	-	Peak
2369.09	30.96	-23.04	54	28.72	32.83	3.42	34.01	184	360	Average
2369.09	44.17	-29.83	74	41.93	32.83	3.42	34.01	184	360	Peak
2462	74.09	-	-	71.64	32.98	3.64	34.17	100	302	Average
2462	89.9	-	-	87.45	32.98	3.64	34.17	100	302	Peak
2493.73	30.57	-23.43	54	28.03	33.05	3.72	34.23	184	0	Average
2493.73	43.73	-30.27	74	41.19	33.05	3.72	34.23	184	0	Peak
4924	39.52	-14.48	54	31.6	35.19	4.99	32.26	100	360	Average
4924	51.72	-22.28	74	43.8	35.19	4.99	32.26	100	360	Peak

Test Mode :	Mode 7	Temperature :	25~26℃
Test Channel :	01	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
36.79	30.67	-9.33	40	46.31	14.19	0.24	30.07	136	28	Peak
189.08	22.12	-21.38	43.5	43	8.49	0.57	29.94	-	-	Peak
371.44	21.15	-24.85	46	35.13	15.09	0.83	29.9	-	-	Peak
509.18	23.56	-22.44	46	34.93	17.38	0.97	29.72	-	-	Peak
670.2	26.47	-19.53	46	36	19.05	1.1	29.68	-	-	Peak
878.75	26.33	-19.67	46	34.12	20.47	1.29	29.55	-	-	Peak
2389.99	55.74	-18.26	74	53.46	32.86	3.47	34.05	118	27	Peak
2389.99	35.77	-18.23	54	33.49	32.86	3.47	34.05	118	27	Average
2412	85.62	-	-	83.29	32.89	3.52	34.08	118	360	Average
2412	95.55	-	-	93.22	32.89	3.52	34.08	118	360	Peak
2498.1	35.06	-18.94	54	32.52	33.05	3.72	34.23	118	0	Average
2498.1	43.55	-30.45	74	41.01	33.05	3.72	34.23	118	0	Peak
4824	39.02	-14.98	54	31.15	35.17	4.97	32.27	100	325	Average
4824	53.09	-20.91	74	45.22	35.17	4.97	32.27	100	325	Peak

Test Mode :	Mode 7	Temperature :	25~26℃
Test Channel :	01	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
33.88	29.63	-10.37	40	43.93	15.56	0.23	30.09	100	218	Peak
180.35	22.74	-20.76	43.5	43.66	8.4	0.56	29.88	-	-	Peak
480.08	23.24	-22.76	46	35.18	16.87	0.94	29.75	-	-	Peak
579.99	26.91	-19.09	46	36.95	18.56	1.04	29.64	-	-	Peak
640.13	27.25	-18.75	46	36.96	18.85	1.09	29.65	-	-	Peak
719.67	28.88	-17.12	46	37.87	19.52	1.15	29.66	-	-	Peak
2389.8	34.4	-19.6	54	32.12	32.86	3.47	34.05	100	0	Average
2389.8	51.95	-22.05	74	49.67	32.86	3.47	34.05	100	0	Peak
2412	84.09	-	-	81.76	32.89	3.52	34.08	100	322	Average
2412	93.22	-	-	90.89	32.89	3.52	34.08	100	322	Peak
2493.92	30.96	-23.04	54	28.42	33.05	3.72	34.23	100	301	Average
2493.92	44.03	-29.97	74	41.49	33.05	3.72	34.23	100	301	Peak
4824	38.98	-15.02	54	31.11	35.17	4.97	32.27	100	360	Average
4824	52.5	-21.5	74	44.63	35.17	4.97	32.27	100	360	Peak

Test Mode :	Mode 8	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.02	-7.98	40	43.84	18	0.26	30.08	100	167	Peak
137.67	21.54	-21.96	43.5	40	11.05	0.49	30	-	-	Peak
189.08	23.27	-20.23	43.5	44.15	8.49	0.57	29.94	-	-	Peak
511.12	23.96	-22.04	46	35.29	17.42	0.97	29.72	-	-	Peak
669.23	26.35	-19.65	46	35.89	19.04	1.1	29.68	-	-	Peak
800.18	28.93	-17.07	46	37.42	19.85	1.25	29.59	-	-	Peak
2384.29	30.51	-23.49	54	28.27	32.83	3.42	34.01	100	141	Average
2384.29	46.47	-27.53	74	44.23	32.83	3.42	34.01	100	141	Peak
2437	87.92	-	-	85.52	32.95	3.6	34.15	143	360	Average
2437	97.23	-	-	94.83	32.95	3.6	34.15	143	360	Peak
2495.25	31.05	-22.95	54	28.51	33.05	3.72	34.23	143	360	Average
2495.25	43.34	-30.66	74	40.8	33.05	3.72	34.23	143	360	Peak
4874	39.09	-14.91	54	31.2	35.18	4.98	32.27	100	360	Average
4874	52.57	-21.43	74	44.68	35.18	4.98	32.27	100	360	Peak

Test Mode :	Mode 8	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.97	28.69	-11.31	40	41.23	17.29	0.25	30.08	100	29	Peak
179.38	22.08	-21.42	43.5	42.93	8.47	0.56	29.88	-	-	Peak
338.46	19.98	-26.02	46	34.89	14.23	0.8	29.94	-	-	Peak
509.18	23.53	-22.47	46	34.9	17.38	0.97	29.72	-	-	Peak
581.93	26.22	-19.78	46	36.24	18.57	1.05	29.64	-	-	Peak
719.67	29.49	-16.51	46	38.48	19.52	1.15	29.66	-	-	Peak
2383.15	30.05	-23.95	54	27.81	32.83	3.42	34.01	100	16	Average
2383.15	43.99	-30.01	74	41.75	32.83	3.42	34.01	100	16	Peak
2437	85.08	-	-	82.68	32.95	3.6	34.15	100	308	Average
2437	95.91	-	-	93.51	32.95	3.6	34.15	100	308	Peak
2487.08	29.78	-24.22	54	27.29	33.01	3.68	34.2	100	308	Average
2487.08	45.32	-28.68	74	42.83	33.01	3.68	34.2	100	308	Peak
4874	39.03	-14.97	54	31.14	35.18	4.98	32.27	121	345	Average
4874	50.95	-23.05	74	43.06	35.18	4.98	32.27	121	345	Peak

Test Mode :	Mode 9	Temperature :	25~26℃
Test Channel :	11	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
34.85	29.32	-10.68	40	44.08	15.1	0.23	30.09	100	261	Peak
140.58	20.45	-23.05	43.5	39.14	10.82	0.49	30	-	-	Peak
189.08	23	-20.5	43.5	43.88	8.49	0.57	29.94	-	-	Peak
501.42	22.95	-23.05	46	34.5	17.22	0.96	29.73	-	-	Peak
669.23	25.82	-20.18	46	35.36	19.04	1.1	29.68	-	-	Peak
800.18	26.98	-19.02	46	35.47	19.85	1.25	29.59	-	-	Peak
2389.23	30.17	-23.83	54	27.89	32.86	3.47	34.05	100	166	Average
2389.23	43.93	-30.07	74	41.65	32.86	3.47	34.05	100	166	Peak
2462	87.36	-	-	84.91	32.98	3.64	34.17	100	0	Average
2462	96.98	-	-	94.53	32.98	3.64	34.17	100	0	Peak
2487.08	34.31	-19.69	54	31.82	33.01	3.68	34.2	139	360	Average
2487.08	54.25	-19.75	74	51.76	33.01	3.68	34.2	139	360	Peak
4924	39.07	-14.93	54	31.15	35.19	4.99	32.26	146	289	Average
4924	52	-22	74	44.08	35.19	4.99	32.26	146	289	Peak

Test Mode :	Mode 9	Temperature :	25~26℃
Test Channel :	11	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	30.88	-9.12	40	47	13.7	0.24	30.06	100	308	Peak
180.35	22.69	-20.81	43.5	43.61	8.4	0.56	29.88	-	-	Peak
478.14	23.85	-22.15	46	35.83	16.83	0.94	29.75	-	-	Peak
580.96	26.24	-19.76	46	36.26	18.57	1.05	29.64	-	-	Peak
719.67	28.72	-17.28	46	37.71	19.52	1.15	29.66	-	-	Peak
967.02	27.28	-26.72	54	34.61	20.84	1.36	29.53	-	-	Peak
2373.65	30.29	-23.71	54	28.05	32.83	3.42	34.01	100	35	Average
2373.65	44.07	-29.93	74	41.83	32.83	3.42	34.01	100	35	Peak
2462	85.32	-	-	82.87	32.98	3.64	34.17	100	284	Average
2462	95.69	-	-	93.24	32.98	3.64	34.17	100	284	Peak
2485.75	32.89	-21.11	54	30.4	33.01	3.68	34.2	100	0	Average
2485.75	52.02	-21.98	74	49.53	33.01	3.68	34.2	100	0	Peak
4924	39.06	-14.94	54	31.14	35.19	4.99	32.26	128	269	Average
4924	50.73	-23.27	74	42.81	35.19	4.99	32.26	128	269	Peak

Test Mode :	Mode 10	Temperature :	25~26℃
Test Channel :	03	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2422 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
35.82	31.62	-8.38	40	46.82	14.65	0.23	30.08	100	95	Peak
189.08	21.61	-21.89	43.5	42.49	8.49	0.57	29.94	-	-	Peak
368.53	21.06	-24.94	46	35.15	14.98	0.83	29.9	-	-	Peak
510.15	23.17	-22.83	46	34.52	17.4	0.97	29.72	-	-	Peak
673.11	26.66	-19.34	46	36.16	19.08	1.11	29.69	-	-	Peak
800.18	27.33	-18.67	46	35.82	19.85	1.25	29.59	-	-	Peak
2388.85	43.22	-10.78	54	40.94	32.86	3.47	34.05	100	12	Average
2388.85	56.11	-17.89	74	53.83	32.86	3.47	34.05	100	12	Peak
2422	85.08	-	-	82.72	32.92	3.56	34.12	121	360	Average
2422	94.59	-	-	92.23	32.92	3.56	34.12	121	360	Peak
2493.92	30.66	-23.34	54	28.12	33.05	3.72	34.23	121	0	Average
2493.92	43.62	-30.38	74	41.08	33.05	3.72	34.23	121	0	Peak
4844	39.23	-14.77	54	31.34	35.18	4.98	32.27	136	256	Average
4844	52.66	-21.34	74	44.77	35.18	4.98	32.27	136	256	Peak

Test Mode :	Mode 10	Temperature :	25~26℃
Test Channel :	03	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2422 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	28.11	-11.89	40	44.23	13.7	0.24	30.06	100	159	Peak
189.08	22.76	-20.74	43.5	43.64	8.49	0.57	29.94	-	-	Peak
340.4	20.87	-25.13	46	35.72	14.28	0.81	29.94	-	-	Peak
512.09	24.17	-21.83	46	35.47	17.45	0.97	29.72	-	-	Peak
579.02	26.49	-19.51	46	36.53	18.56	1.04	29.64	-	-	Peak
719.67	29.06	-16.94	46	38.05	19.52	1.15	29.66	-	-	Peak
2388.85	32.46	-21.54	54	30.18	32.86	3.47	34.05	100	165	Average
2388.85	52.75	-21.25	74	50.47	32.86	3.47	34.05	100	165	Peak
2422	74.19	-	-	71.83	32.92	3.56	34.12	153	329	Average
2422	90.31	-	-	87.95	32.92	3.56	34.12	153	329	Peak
2493.92	30.4	-23.6	54	27.86	33.05	3.72	34.23	100	0	Average
2493.92	44.89	-29.11	74	42.35	33.05	3.72	34.23	100	0	Peak
4844	39.22	-14.78	54	31.33	35.18	4.98	32.27	128	360	Average
4844	52.55	-21.45	74	44.66	35.18	4.98	32.27	128	360	Peak

Test Mode :	Mode 11	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
33.88	29.41	-10.59	40	43.71	15.56	0.23	30.09	100	20	Peak
189.08	23.12	-20.38	43.5	44	8.49	0.57	29.94	-	-	Peak
295.78	20.93	-25.07	46	37.21	12.95	0.72	29.95	-	-	Peak
506.27	23.45	-22.55	46	34.91	17.31	0.96	29.73	-	-	Peak
671.17	26.23	-19.77	46	35.74	19.06	1.11	29.68	-	-	Peak
800.18	27.65	-18.35	46	36.14	19.85	1.25	29.59	-	-	Peak
2388.28	35.62	-18.38	54	33.34	32.86	3.47	34.05	100	129	Average
2388.28	51.85	-22.15	74	49.57	32.86	3.47	34.05	100	129	Peak
2437	84.35	-	-	81.95	32.95	3.6	34.15	148	360	Average
2437	94.67	-	-	92.27	32.95	3.6	34.15	148	360	Peak
2485.75	31.35	-22.65	54	28.86	33.01	3.68	34.2	100	102	Average
2485.75	49.22	-24.78	74	46.73	33.01	3.68	34.2	100	102	Peak
4874	39.44	-14.56	54	31.55	35.18	4.98	32.27	167	346	Average
4874	52.95	-21.05	74	45.06	35.18	4.98	32.27	167	346	Peak

Test Mode :	Mode 11	Temperature :	25~26℃
Test Channel :	06	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	28.81	-11.19	40	44.93	13.7	0.24	30.06	100	189	Peak
178.41	23.9	-19.6	43.5	44.67	8.55	0.56	29.88	-	-	Peak
341.37	20.58	-25.42	46	35.41	14.3	0.81	29.94	-	-	Peak
511.12	24.77	-21.23	46	36.1	17.42	0.97	29.72	-	-	Peak
644.98	27.62	-18.38	46	37.3	18.88	1.09	29.65	-	-	Peak
719.67	29.64	-16.36	46	38.63	19.52	1.15	29.66	-	-	Peak
2389.61	28.09	-25.91	54	25.81	32.86	3.47	34.05	100	262	Average
2389.61	47.64	-26.36	74	45.36	32.86	3.47	34.05	100	262	Peak
2437	79.08	-	-	76.68	32.95	3.6	34.15	100	360	Average
2437	88.63	-	-	86.23	32.95	3.6	34.15	100	360	Peak
2488.6	31.16	-22.84	54	28.62	33.05	3.72	34.23	183	0	Average
2488.6	47.41	-26.59	74	44.87	33.05	3.72	34.23	183	0	Peak
4874	39.38	-14.62	54	31.49	35.18	4.98	32.27	154	328	Average
4874	52.72	-21.28	74	44.83	35.18	4.98	32.27	154	328	Peak

Test Mode :	Mode 12	Temperature :	25~26℃
Test Channel :	09	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Horizontal
Remark :	2452 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
35.82	30.58	-9.42	40	45.78	14.65	0.23	30.08	120	0	Peak
189.08	20.48	-23.02	43.5	41.36	8.49	0.57	29.94	-	-	Peak
295.78	20.47	-25.53	46	36.75	12.95	0.72	29.95	-	-	Peak
499.48	22.76	-23.24	46	34.34	17.19	0.96	29.73	-	-	Peak
672.14	25.23	-20.77	46	34.73	19.07	1.11	29.68	-	-	Peak
878.75	27	-19	46	34.79	20.47	1.29	29.55	-	-	Peak
2345.15	30.38	-23.62	54	28.21	32.78	3.33	33.94	100	360	Average
2345.15	44.08	-29.92	74	41.91	32.78	3.33	33.94	100	360	Peak
2452	77.87	-	-	75.47	32.95	3.6	34.15	147	360	Average
2452	87.14	-	-	84.74	32.95	3.6	34.15	147	360	Peak
2494.11	30.78	-23.22	54	28.24	33.05	3.72	34.23	147	360	Average
2494.11	43.76	-30.24	74	41.22	33.05	3.72	34.23	147	360	Peak
4904	39.53	-14.47	54	31.61	35.19	4.99	32.26	168	89	Average
4904	53	-21	74	45.08	35.19	4.99	32.26	168	89	Peak

Test Mode :	Mode 12	Temperature :	25~26℃
Test Channel :	09	Relative Humidity :	43~45%
Test Engineer :	Steven Hao	Polarization :	Vertical
Remark :	2452 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
37.76	29.21	-10.79	40	45.33	13.7	0.24	30.06	100	0	Peak
179.38	22.66	-20.84	43.5	43.51	8.47	0.56	29.88	-	-	Peak
340.4	20.47	-25.53	46	35.32	14.28	0.81	29.94	-	-	Peak
476.2	23.88	-22.12	46	35.93	16.78	0.93	29.76	-	-	Peak
617.82	25.89	-20.11	46	35.75	18.69	1.08	29.63	-	-	Peak
720.64	29.4	-16.6	46	38.38	19.53	1.15	29.66	-	-	Peak
2389.04	30.52	-23.48	54	28.24	32.86	3.47	34.05	100	324	Average
2389.04	44.73	-29.27	74	42.45	32.86	3.47	34.05	100	324	Peak
2452	76.87	-	-	74.47	32.95	3.6	34.15	100	300	Average
2452	86.05	-	-	83.65	32.95	3.6	34.15	100	300	Peak
2494.11	30.77	-23.23	54	28.23	33.05	3.72	34.23	100	324	Average
2494.11	44.54	-29.46	74	42	33.05	3.72	34.23	100	324	Peak
4904	39.51	-14.49	54	31.59	35.19	4.99	32.26	147	248	Average
4904	52.62	-21.38	74	44.7	35.19	4.99	32.26	147	248	Peak

3.8 Antenna Requirements

3.8.1 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.

3.8.2 Antenna Connected Construction

Non-standard connector used.

3.8.3 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	R&S	FSP40	100319	9kHz~40GHz	Dec. 30, 2011	May 23, 2012	Dec. 29, 2012	Conducted (TH01-KS)
Power Meter	Agilent	E4416A	MY45101555	N/A	Aug. 23, 2011	May 23, 2012	Aug. 22, 2012	Conducted (TH01-KS)
Power Sensor	Agilent	E9327A	MY44421198	N/A	Aug. 23, 2011	May 23, 2012	Aug. 22, 2012	Conducted (TH01-KS)
System Simulator	R&S	CMU200	837587/066	2G Full-Band	Dec. 30, 2011	May 23, 2012	Dec. 29, 2012	Conducted (TH01-KS)
DC Power supply	GWINSTEK	GPS-3030D	E1884515	N/A	Aug. 23, 2011	May 23, 2012	Aug. 22, 2012	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Dec. 30, 2011	May 23, 2012	Dec. 29, 2012	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 09, 2011	May 25, 2012	Nov. 08, 2012	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 30, 2011	May 25, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 08, 2011	May 25, 2012	Dec. 07, 2012	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	860004/00	9 kHz~30 MHz	Jul. 28, 2011	May 25, 2012	Jul. 27, 2012	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 06, 2012	May 25, 2012	Jan. 05, 2013	Radiation (03CH01-KS)
Amplifier	Wireless	FPA-6592G	060004	30MHz~2GHz	Dec. 30, 2011	May 25, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Dec. 30, 2011	May 25, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701023	1GHz~18GHz	Nov. 07, 2011	May 25, 2012	Nov. 06, 2012	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Oct. 11, 2011	May 25, 2012	Oct.10, 2012	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	Jun. 02, 2011	May 29, 2012	Jun. 01, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Dec. 30, 2011	May 29, 2012	Dec. 29, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Dec. 30, 2011	May 29, 2012	Dec. 29, 2012	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	N/A	Nov. 16, 2011	May 29, 2012	Nov. 15, 2012	Conduction (CO01-KS)
System Simulator	R&S	CMU200	837587/066	2G Full-Band	Dec. 30, 2011	May 29, 2012	Dec. 29, 2012	Conduction (CO01-KS)

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
Combined Standard Uncertainty Uc(y)	**1.13**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**		

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
Combined Standard Uncertainty Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**		

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	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				