FCC RF Test Report

APPLICANT	:	ZTE CORPORATION
EQUIPMENT	:	CDMA/LTE Ufi
BRAND NAME	:	ZTE
MODEL NAME	:	306ZT
FCC ID	:	SRQ-ZTEMF975S
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Jun. 18, 2014 and testing was completed on Aug. 21, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory
2627

SPORTON INTERNATIONAL (KUNSHAN) INC.
No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

TABLE OF CONTENTS

REVISION HISTORY **3**

SUMMARY OF TEST RESULT **4**

1 GENERAL DESCRIPTION **5**

1.1 Applicant 5
1.2 Manufacturer 5
1.3 Product Feature of Equipment Under Test 5
1.4 Product Specification subjective to this standard 6
1.5 Modification of EUT 7
1.6 Testing Location 7
1.7 Applicable Standards 7

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST **8**

2.1 Carrier Frequency and Channel 8
2.2 Pre-Scanned RF Power 9
2.3 Test Mode 11
2.4 Connection Diagram of Test System 12
2.5 Support Unit used in test configuration and system 13
2.6 EUT Operation Test Setup 13
2.7 Measurement Results Explanation Example 13

3 TEST RESULT **14**

3.1 6dB Bandwidth Measurement 14
3.2 Peak Output Power Measurement 16
3.3 Power Spectral Density Measurement 19
3.4 Conducted Band Edges and Spurious Emission Measurement 22
3.5 Radiated Band Edges and Spurious Emission Measurement 47
3.6 AC Conducted Emission Measurement 69
3.7 Antenna Requirements 77

4 LIST OF MEASURING EQUIPMENT **78**

5 UNCERTAINTY OF EVALUATION **79**

APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR461802A	Rev. 01	Initial issue of report	Aug. 26, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.2	15.247(b)	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	Conducted Band Edges	≤ 20dBc	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 4.09 dB at 2389.470 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 7.59 dB at 0.580 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	CDMA/LTE Ufi
Brand Name	ZTE
Model Name	306ZT
FCC ID	SRQ-ZTEMF975S
EUT supports Radios application	CDMA/EV-DO/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80
HW Version	xw3B
SW Version	306ZTV1.0.0B09
EUT Stage	Identical Prototype

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

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	2412 MHz ~ 2462 MHz
Maximum Output Power to antenna	802.11b : 22.66 dBm (0.1845 W) 802.11g : 23.72 dBm (0.2355 W) 802.11n HT20 : 25.51 dBm (0.3556 W) 802.11n HT40 : 26.14 dBm (0.4111 W)
Antenna Type	Chain Port 0: Monopole Antenna Chain Port 1: Monopole Antenna
Antenna Gain	Chain Port 0 : 1.60 dBi Chain Port 1 : 1.60 dBi Chain Port 0 + 1 : 1.60 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
Antenna Function for Transmitter	

	Chain Port 0	Chain Port 1
802.11 b MIMO	V	V
802.11 g MIMO	V	V
802.11 n MIMO	V	V
802.11 n MIMO	V	V

1.5 Modification of EUT

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

1.6 Testing Location

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 Registration No.**
	TH01-KS	03CH01-KS	CO01-KS	149928

1.7 Applicable Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.4-2003

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.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

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

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

2.1 Carrier Frequency and Channel

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

2.2 Pre-Scanned RF Power

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

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11b RF Power (dBm)				
			Data Rate	Power vs. Data Rate			
			1Mbps	Channel	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412	0+1(0)	20.24	CH 11	20.32	20.28	20.23
CH 06	2437	0+1(0)	19.95				
CH 11	2462	0+1(0)	**20.35**				
CH 01	2412	0+1(1)	18.71	CH 11	18.77	18.76	18.78
CH 06	2437	0+1(1)	18.61				
CH 11	2462	0+1(1)	**18.82**				
CH 01	2412	0+1	22.55	CH 11	22.62	22.60	22.58
CH 06	2437	0+1	22.34				
CH 11	2462	0+1	**22.66**				

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11g RF Power (dBm)								
			Data Rate	Power vs. Data Rate							
			6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 01	2412	0+1(0)	**21.68**	CH 01	21.21	21.16	21.06	21.32	21.41	21.61	21.46
CH 06	2437	0+1(0)	20.01								
CH 11	2462	0+1(0)	20.12								
CH 01	2412	0+1(1)	**19.45**	CH 01	19.03	19.01	18.88	18.75	19.05	19.15	19.21
CH 06	2437	0+1(1)	18.41								
CH 11	2462	0+1(1)	18.23								
CH 01	2412	0+1	**23.72**	CH 01	23.27	23.23	23.12	23.23	23.40	23.56	23.49
CH 06	2437	0+1	22.29								
CH 11	2462	0+1	22.29								

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11n HT-20 RF Power (dBm)								
			MCS Index	Power vs. MCS Index							
			MCS8	Channel	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
CH 01	2412	0+1(0)	20.09	CH 11	22.03	22.27	22.57	22.98	22.81	23.03	23.04
CH 06	2437	0+1(0)	20.01								
CH 11	2462	0+1(0)	**23.05**								
CH 01	2412	0+1(1)	18.47	CH 11	21.38	21.42	21.86	21.82	21.76	21.73	21.87
CH 06	2437	0+1(1)	18.37								
CH 11	2462	0+1(1)	**21.88**								
CH 01	2412	0+1	22.37	CH 11	24.73	24.88	25.24	25.45	25.33	25.44	25.50
CH 06	2437	0+1	22.28								
CH 11	2462	0+1	**25.51**								

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11n HT-40 RF Power (dBm)								
			MCS Index	Power vs. MCS Index							
			MCS8	Channel	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
CH 03	2422	0+1(0)	20.52	CH 09	21.42	21.93	23.36	23.42	23.08	23.68	23.65
CH 06	2437	0+1(0)	20.56								
CH 09	2452	0+1(0)	**23.71**								
CH 03	2422	0+1(1)	19.48	CH 09	21.29	21.82	22.37	22.03	21.58	22.12	22.45
CH 06	2437	0+1(1)	19.02								
CH 09	2452	0+1(1)	**22.47**								
CH 03	2422	0+1	23.04	CH 09	24.37	24.89	25.90	25.79	25.40	25.98	26.10
CH 06	2437	0+1	22.87								
CH 09	2452	0+1	**26.14**								

Note: Chain Port 0+1 is a calculated result from sum of the power Chain Port 0+1(0) and Chain Port 0+1(1).

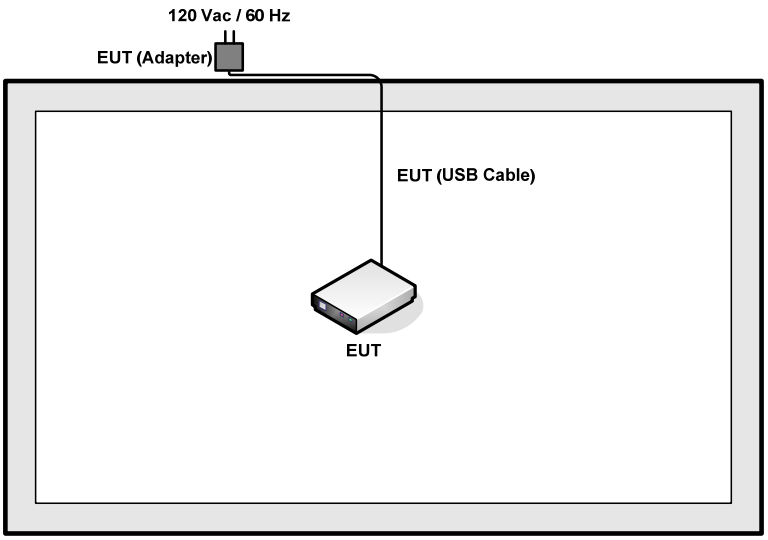
2.3 Test Mode

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

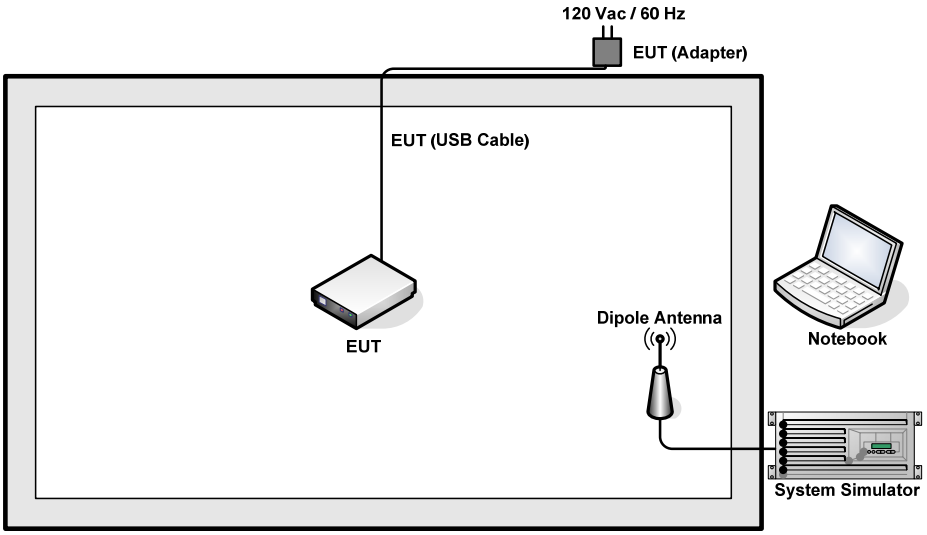
Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	6dB BW Power Spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS8	1/6/11
		802.11n HT40	MCS8	3/6/9
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS8	1/6/11
		802.11n HT40	MCS8	3/6/9
	Conducted Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS8	1/11
		802.11n HT40	MCS8	3/9
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS8	1/6/11
		802.11n HT40	MCS8	3/6/9
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS8	1/11
		802.11n HT40	MCS8	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS8	1/6/11
		802.11n HT40	MCS8	3/6/9
AC Conducted Emission	Mode 1 : CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)			

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m

2.6 EUT Operation Test Setup

For WLAN function, the engineering test program was provided and enabled to make EUT continuous transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 6 dB.

Offset(dB) = RF cable loss(dB) = 6 (dB)

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.

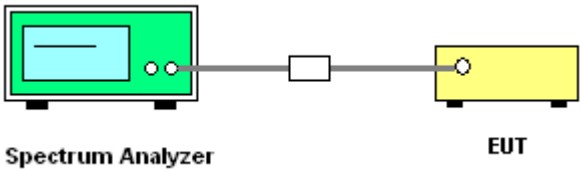
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. Measure and record the results in the test report.

3.1.4 Test Setup

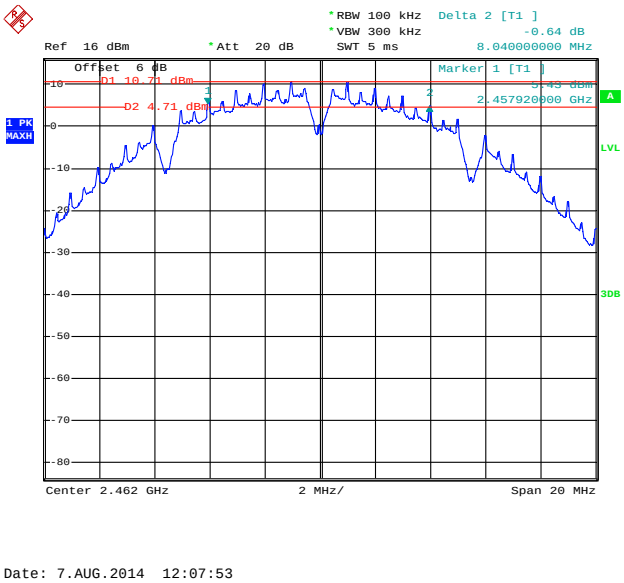


3.1.5 Test Result of 6dB Bandwidth

Test Band :	2.4GHz	Temperature :	24~25℃
Test Engineer :	Issac Song	Relative Humidity :	49~51%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Chain Port 0	Chain Port 1		
11b	1Mbps	2	1	2412	8.08	8.08	0.50	Pass
11b	1Mbps	2	6	2437	8.08	8.06	0.50	Pass
11b	1Mbps	2	11	2462	8.04	8.06	0.50	Pass
11g	6Mbps	2	1	2412	16.30	16.28	0.50	Pass
11g	6Mbps	2	6	2437	15.88	15.92	0.50	Pass
11g	6Mbps	2	11	2462	15.70	16.30	0.50	Pass
HT20	MCS8	2	1	2412	17.54	17.26	0.50	Pass
HT20	MCS8	2	6	2437	17.16	16.94	0.50	Pass
HT20	MCS8	2	11	2462	15.94	17.14	0.50	Pass
HT40	MCS8	2	3	2422	35.04	35.12	0.50	Pass
HT40	MCS8	2	6	2437	35.08	35.44	0.50	Pass
HT40	MCS8	2	9	2452	35.08	35.68	0.50	Pass

Minimum 6dB Bandwidth



Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Peak Output Power Measurement

3.2.1 Limit of Peak Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is 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.

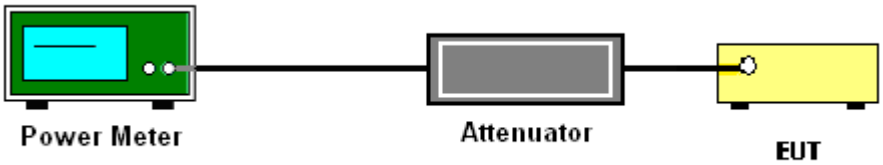
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r02.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Test Band :	2.4GHz	Temperature :	24~25℃
Test Engineer :	Issac Song	Relative Humidity :	49~51%

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	SUM	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11b	1Mbps	2	1	2412	20.24	18.71	22.55	30.00		1.60		Pass
11b	1Mbps	2	6	2437	19.95	18.61	22.34	30.00		1.60		Pass
11b	1Mbps	2	11	2462	20.35	18.82	22.66	30.00		1.60		Pass
11g	6Mbps	2	1	2412	21.68	19.45	23.72	30.00		1.60		Pass
11g	6Mbps	2	6	2437	20.01	18.41	22.29	30.00		1.60		Pass
11g	6Mbps	2	11	2462	20.12	18.23	22.29	30.00		1.60		Pass
HT20	MCS8	2	1	2412	20.09	18.47	22.37	30.00		1.60		Pass
HT20	MCS8	2	6	2437	20.01	18.37	22.28	30.00		1.60		Pass
HT20	MCS8	2	11	2462	23.05	21.88	25.51	30.00		1.60		Pass
HT40	MCS8	2	3	2422	20.52	19.48	23.04	30.00		1.60		Pass
HT40	MCS8	2	6	2437	20.56	19.02	22.87	30.00		1.60		Pass
HT40	MCS8	2	9	2452	23.71	22.47	26.14	30.00		1.60		Pass

Note: Measured power (dBm) has offset with cable loss.

3.2.6 Test Result of Average output Power (Reporting Only)

Test Band :	2.4GHz	Temperature :	24~25℃
Test Engineer :	Issac Song	Relative Humidity :	49~51%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	Sum Power
11b	1Mbps	2	1	2412	0.00	0.00	17.68	16.16	20.00
11b	1Mbps	2	6	2437	0.00	0.00	17.47	16.07	19.84
11b	1Mbps	2	11	2462	0.00	0.00	17.87	16.25	20.15
11g	6Mbps	2	1	2412	0.21	0.20	13.97	12.38	16.26
11g	6Mbps	2	6	2437	0.21	0.20	13.52	12.01	15.84
11g	6Mbps	2	11	2462	0.21	0.20	13.66	11.94	15.89
HT20	MCS8	2	1	2412	0.23	0.23	13.34	11.71	15.61
HT20	MCS8	2	6	2437	0.23	0.23	13.30	11.69	15.58
HT20	MCS8	2	11	2462	0.23	0.23	13.41	11.75	15.67
HT40	MCS8	2	3	2422	0.45	0.42	13.13	11.95	15.59
HT40	MCS8	2	6	2437	0.45	0.42	13.51	11.93	15.80
HT40	MCS8	2	9	2452	0.45	0.42	13.66	12.04	15.94

Note: Measured power (dBm) has offset with cable loss and duty factor.

3.3 Power Spectral Density Measurement

3.3.1 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.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
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.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

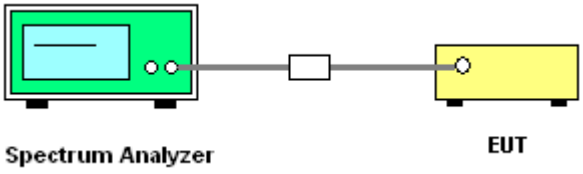
   If measurements performed using method (2) plus 10 log (N) exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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

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

   Method (2): Measure and add 10 log (N) dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



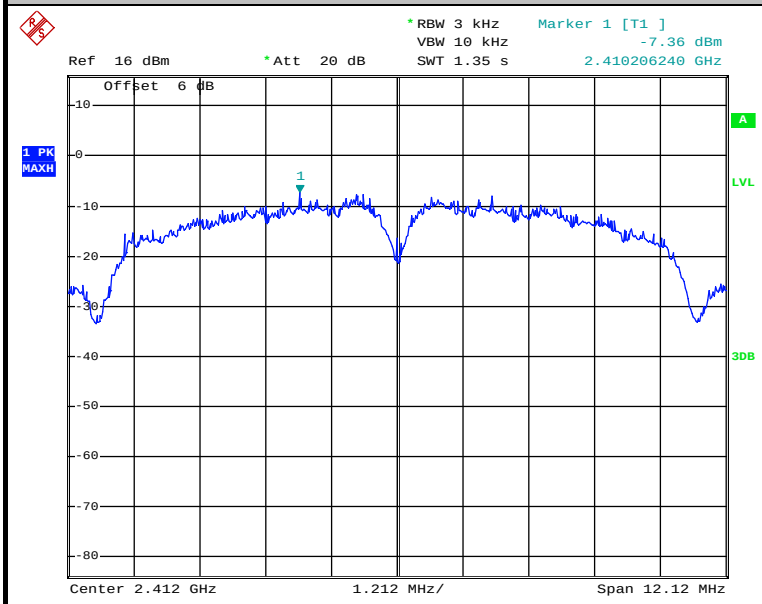
3.3.5 Test Result of Power Spectral Density

Test Band :	2.4GHz	Temperature :	24~25℃
Test Engineer :	Issac Song	Relative Humidity :	49~51%

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	Worst +10log(2)	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11b	1Mbps	2	1	2412	-8.21	-7.36	-4.35	8.00		4.61		Pass
11b	1Mbps	2	6	2437	-8.57	-8.34	-5.33	8.00		4.61		Pass
11b	1Mbps	2	11	2462	-8.94	-8.44	-5.43	8.00		4.61		Pass
11g	6Mbps	2	1	2412	-13.55	-14.97	-10.54	8.00		4.61		Pass
11g	6Mbps	2	6	2437	-13.34	-15.20	-10.33	8.00		4.61		Pass
11g	6Mbps	2	11	2462	-12.75	-15.18	-9.74	8.00		4.61		Pass
HT20	MCS8	2	1	2412	-12.47	-13.11	-9.46	8.00		4.61		Pass
HT20	MCS8	2	6	2437	-12.89	-14.43	-9.88	8.00		4.61		Pass
HT20	MCS8	2	11	2462	-12.57	-14.84	-9.56	8.00		4.61		Pass
HT40	MCS8	2	3	2422	-15.18	-17.05	-12.17	8.00		4.61		Pass
HT40	MCS8	2	6	2437	-14.68	-16.43	-11.67	8.00		4.61		Pass
HT40	MCS8	2	9	2452	-13.77	-16.40	-10.76	8.00		4.61		Pass

Note: Measured power density (dBm) has offset with cable loss.

Worst Case Power Density (dBm/3kHz)



Date: 21.AUG.2014 17:05:32

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

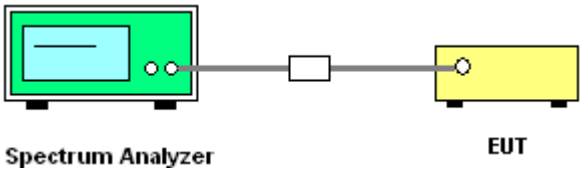
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. 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).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



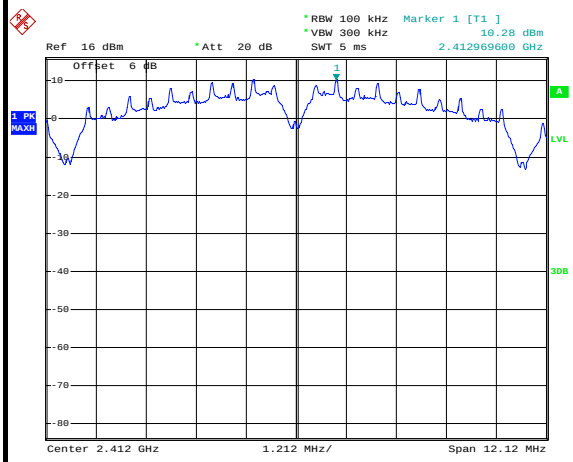
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Number of TX = 2, Chain Port 0+1(0) (Measured)

Number of TX	2	**Chain Port :**	0
Test Mode :	802.11b	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

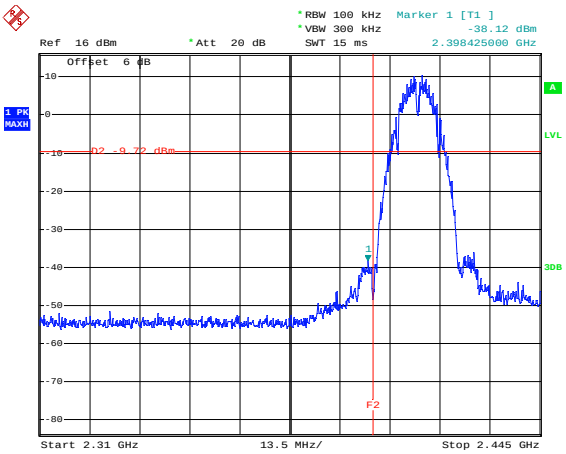
WLAN 802.11b Channel 01

100kHz PSD reference Level



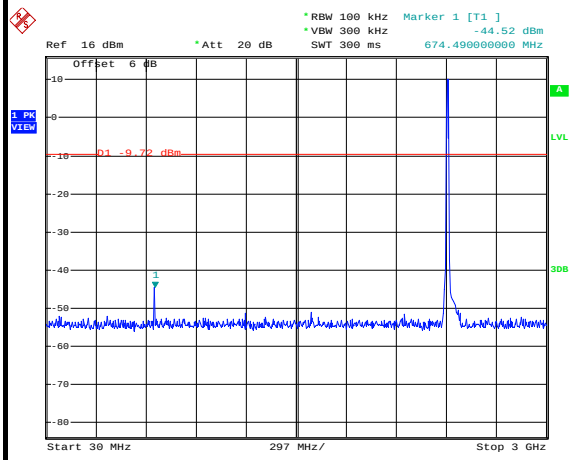
Date: 7.AUG.2014 18:43:22

Low Channel Plot



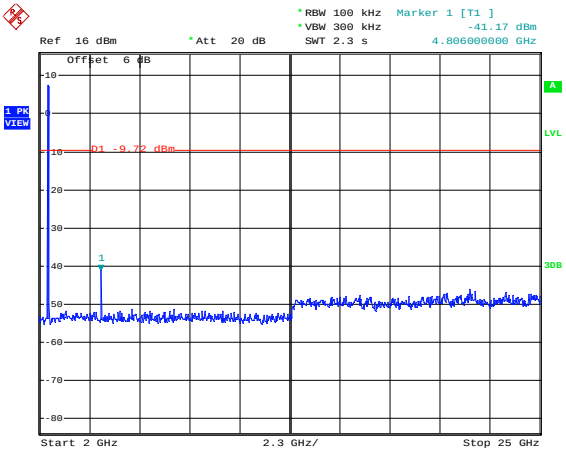
Date: 7.AUG.2014 18:43:36

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 18:43:55

Spurious Emission 2GHz~25GHz

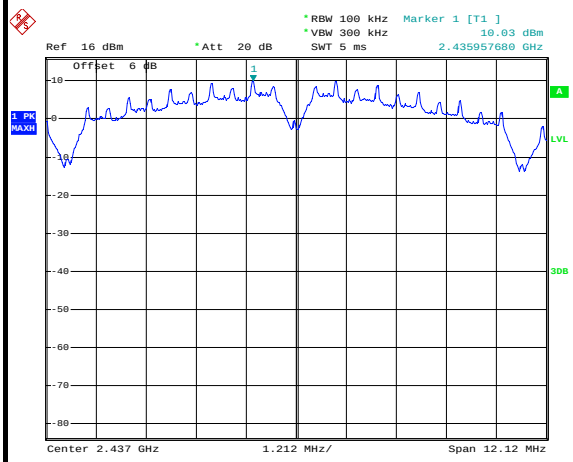


Date: 7.AUG.2014 18:44:14

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11b	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

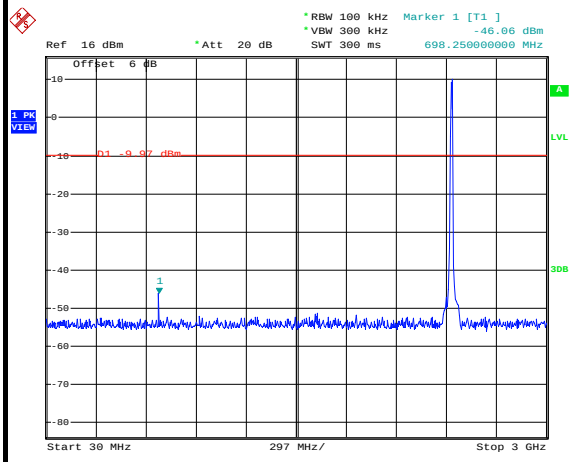
WLAN 802.11b Channel 06

100kHz PSD reference Level



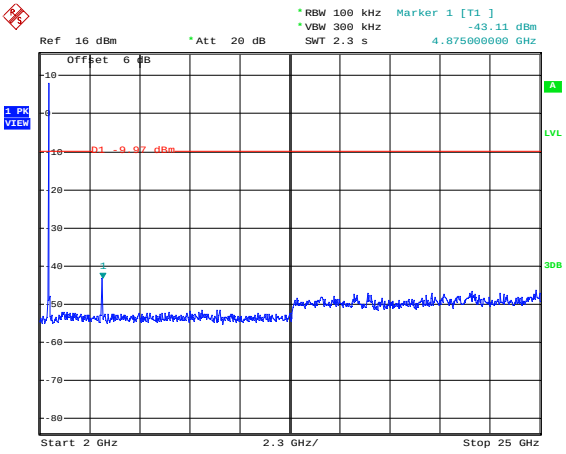
Date: 7.AUG.2014 12:00:23

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:00:43

Spurious Emission 2GHz~25GHz

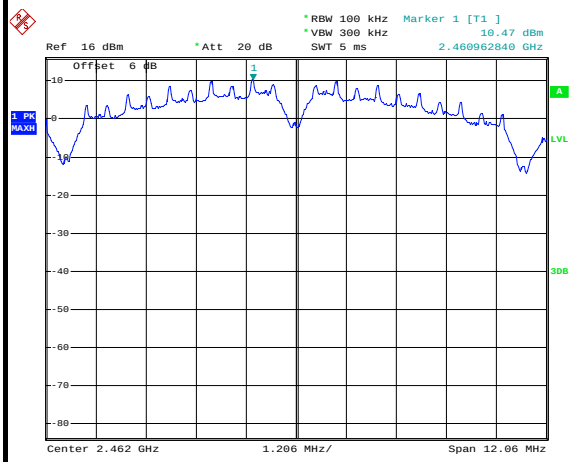


Date: 7.AUG.2014 12:01:02

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11b	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

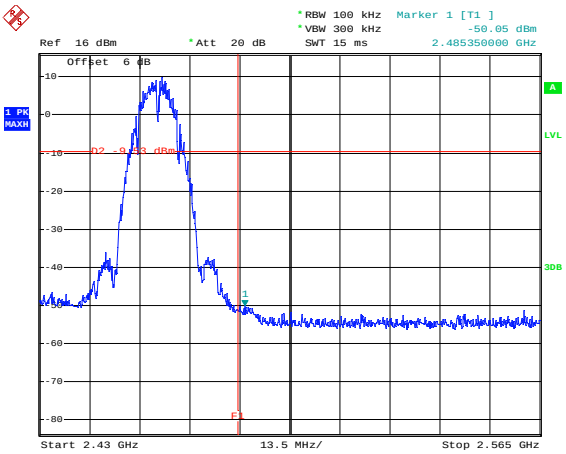
WLAN 802.11b Channel 11

100kHz PSD reference Level



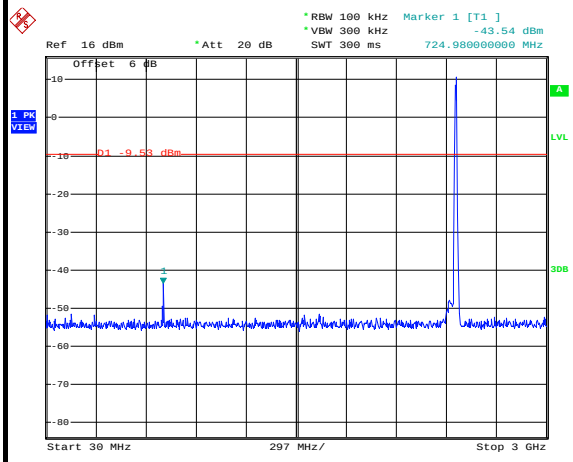
Date: 7.AUG.2014 12:08:23

High Channel Plot



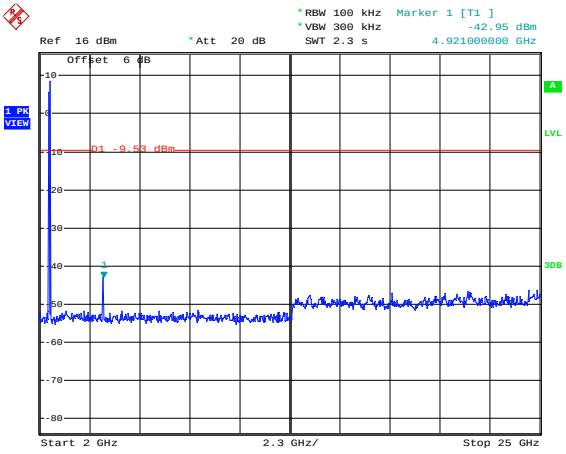
Date: 7.AUG.2014 12:08:36

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:08:56

Spurious Emission 2GHz~25GHz

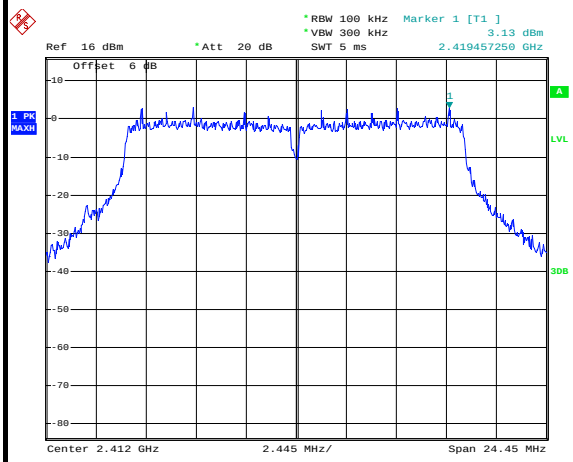


Date: 7.AUG.2014 12:09:14

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11g	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

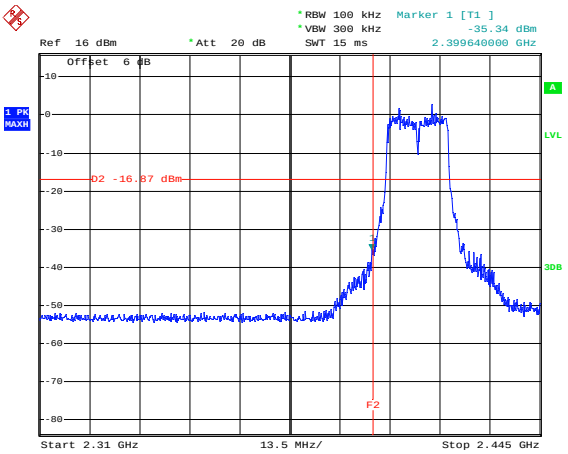
WLAN 802.11g Channel 01

100kHz PSD reference Level



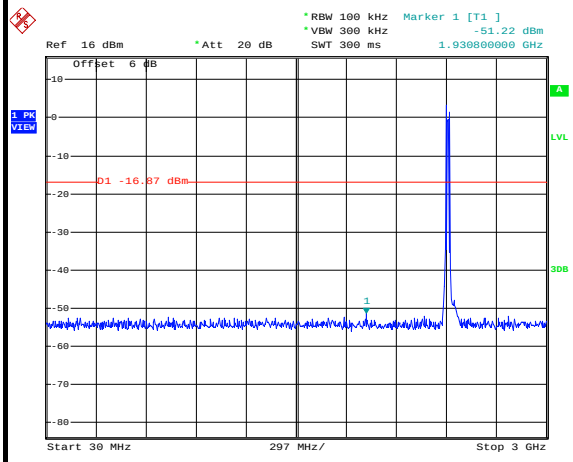
Date: 7.AUG.2014 12:36:27

Low Channel Plot



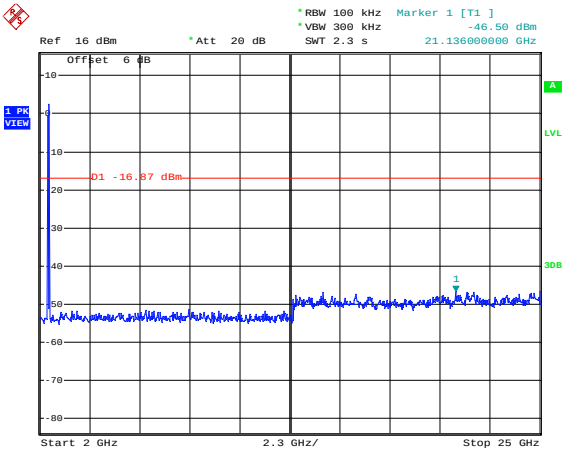
Date: 7.AUG.2014 12:42:08

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:37:00

Spurious Emission 2GHz~25GHz

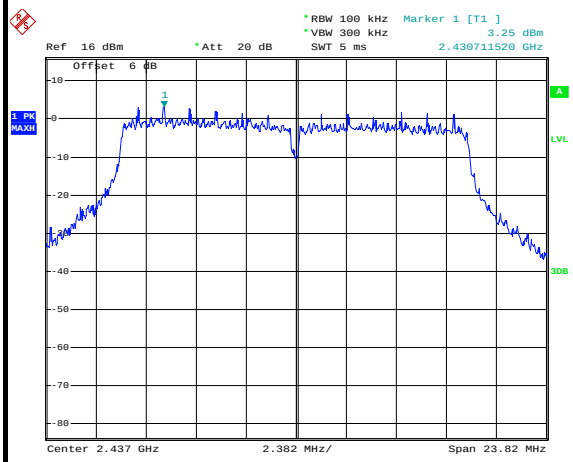


Date: 7.AUG.2014 12:37:19

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11g	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

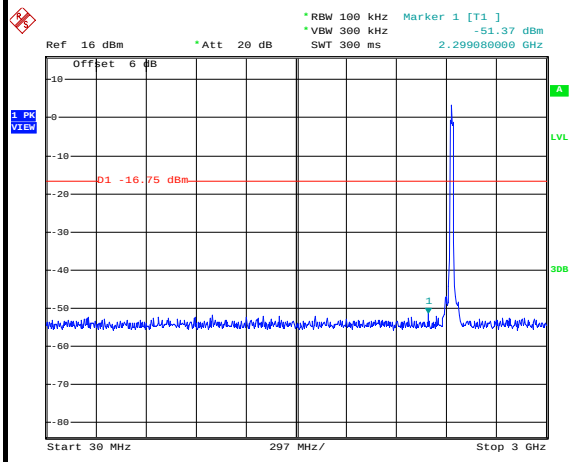
WLAN 802.11g Channel 06

100kHz PSD reference Level



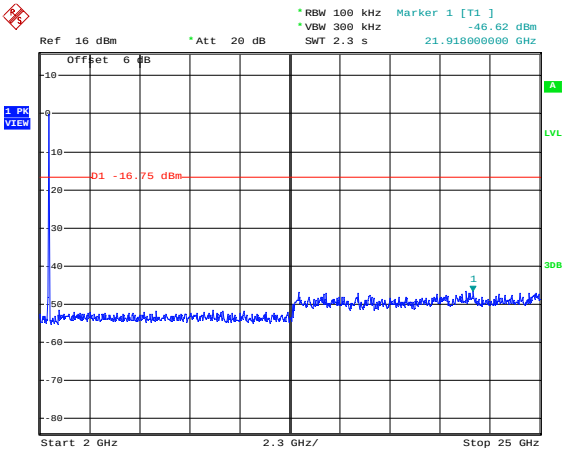
Date: 7.AUG.2014 12:48:12

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:48:32

Spurious Emission 2GHz~25GHz

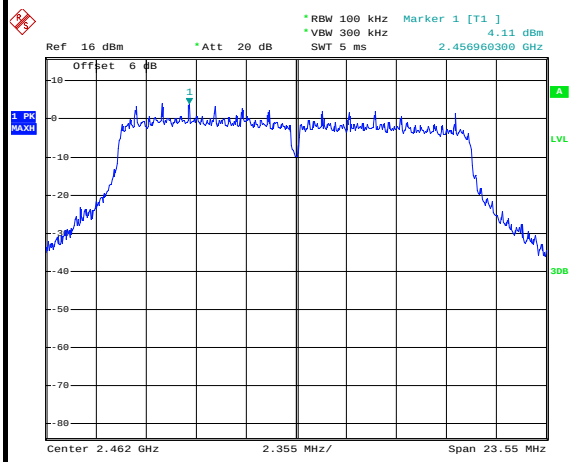


Date: 7.AUG.2014 12:48:51

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11g	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

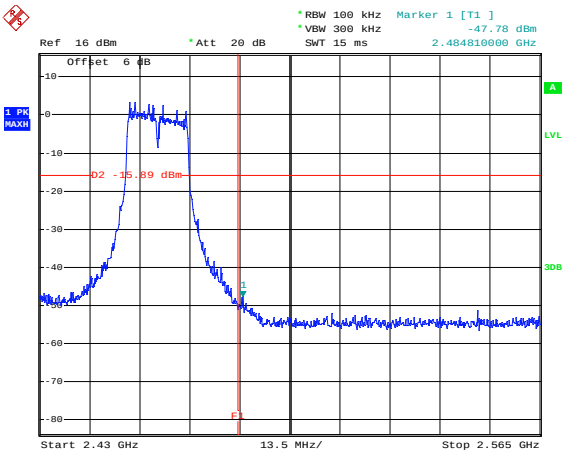
WLAN 802.11g Channel 11

100kHz PSD reference Level



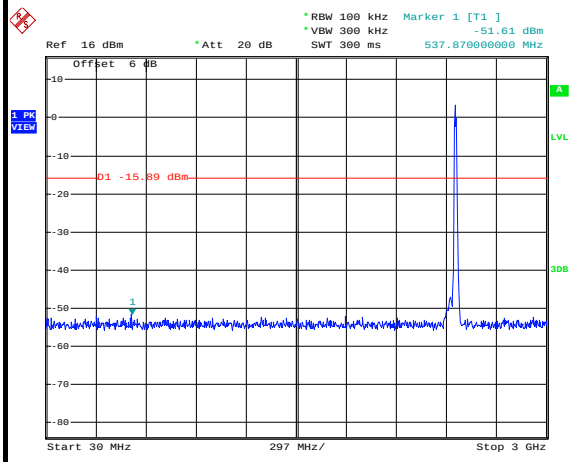
Date: 7.AUG.2014 13:10:37

High Channel Plot



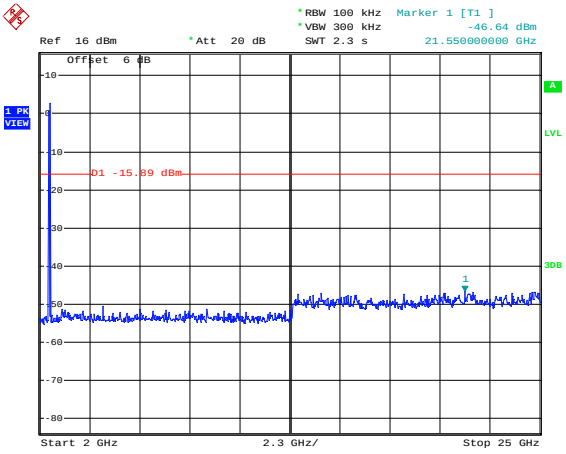
Date: 7.AUG.2014 13:10:51

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 13:11:10

Spurious Emission 2GHz~25GHz

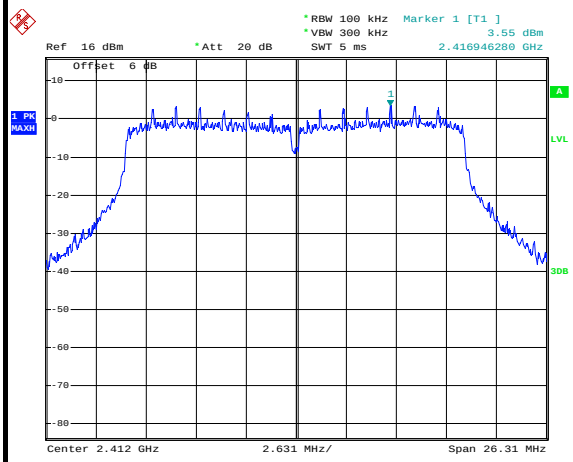


Date: 7.AUG.2014 13:11:29

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

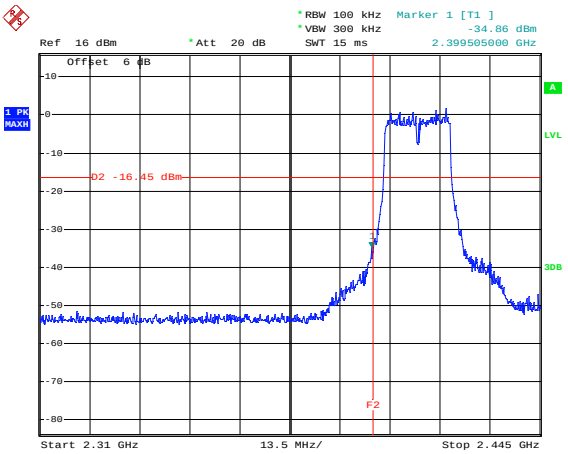
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



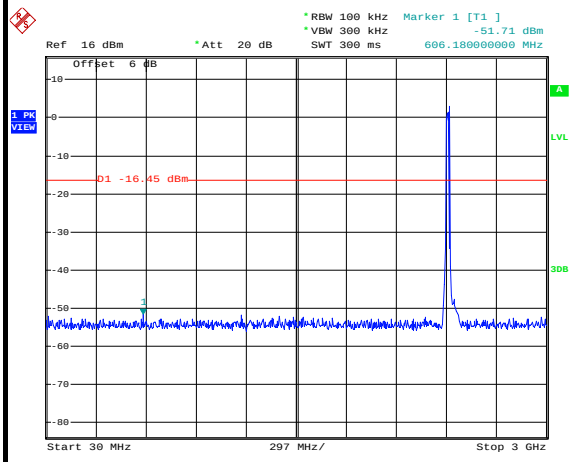
Date: 7.AUG.2014 14:29:06

Low Channel Plot



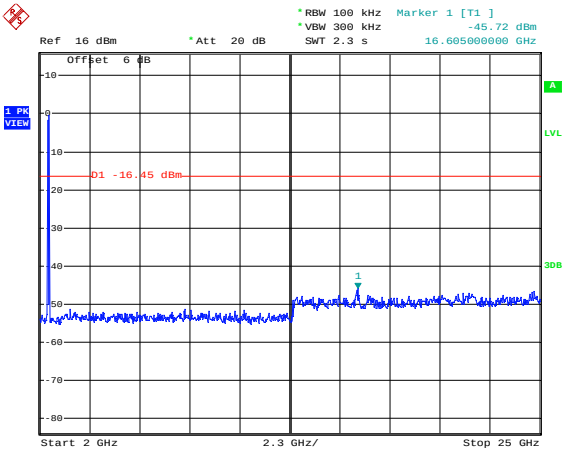
Date: 7.AUG.2014 14:40:25

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 14:35:38

Spurious Emission 2GHz~25GHz

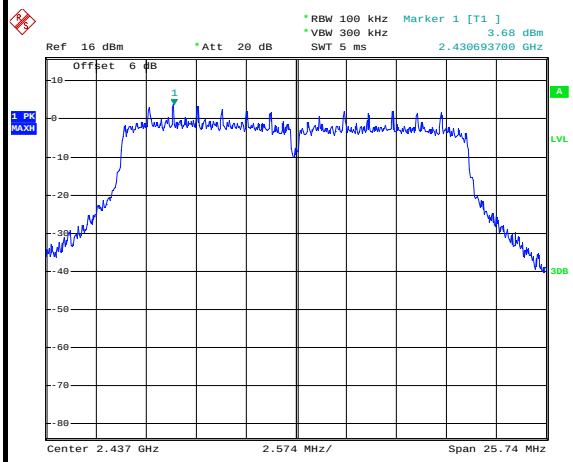


Date: 7.AUG.2014 14:35:57

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

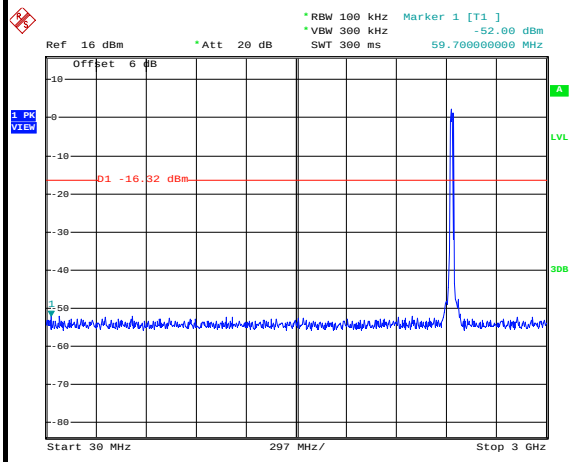
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



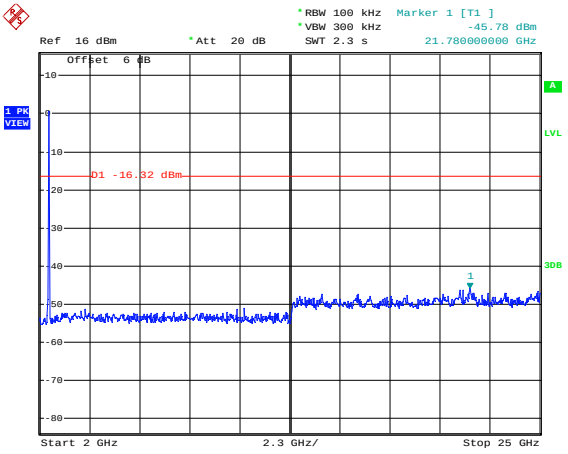
Date: 7.AUG.2014 15:03:17

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:03:36

Spurious Emission 2GHz~25GHz

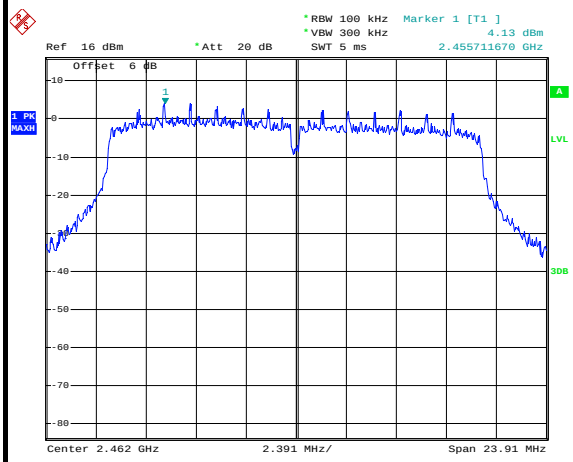


Date: 7.AUG.2014 15:03:55

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

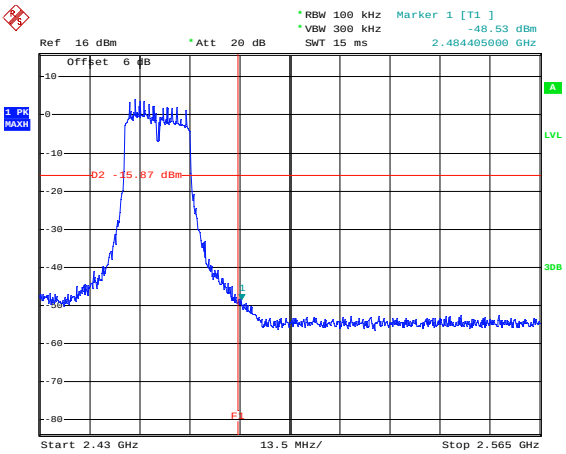
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



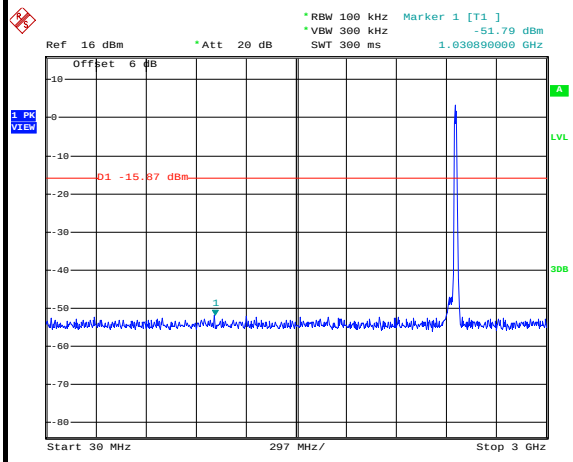
Date: 7.AUG.2014 15:07:50

High Channel Plot



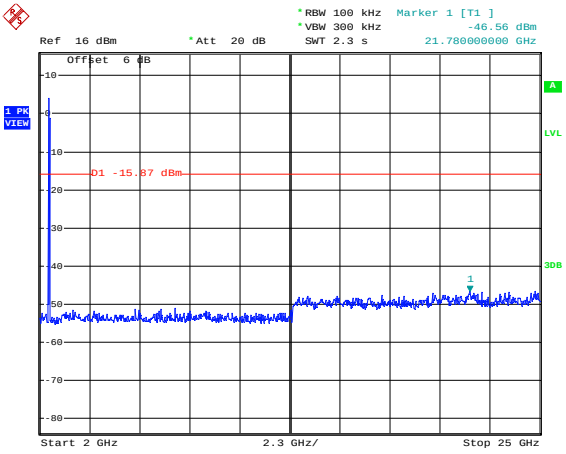
Date: 7.AUG.2014 15:08:04

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:08:24

Spurious Emission 2GHz~25GHz

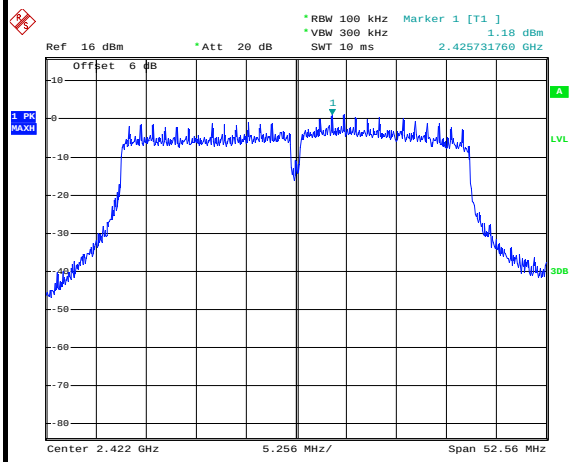


Date: 7.AUG.2014 15:08:42

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	03	**Test Engineer :**	Issac Song

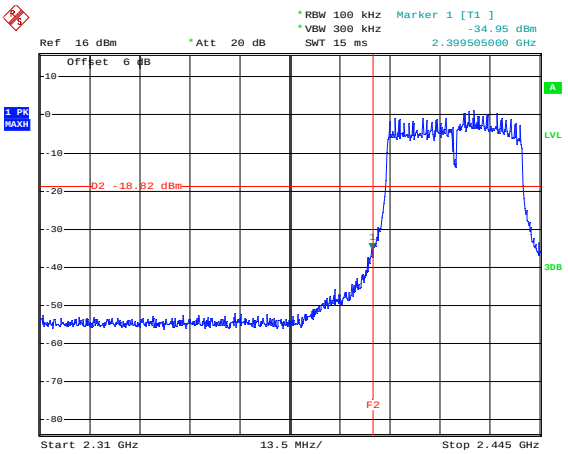
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



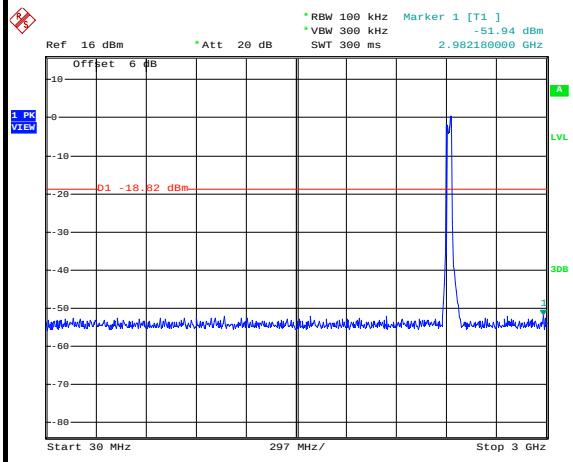
Date: 7.AUG.2014 15:27:54

Low Channel Plot



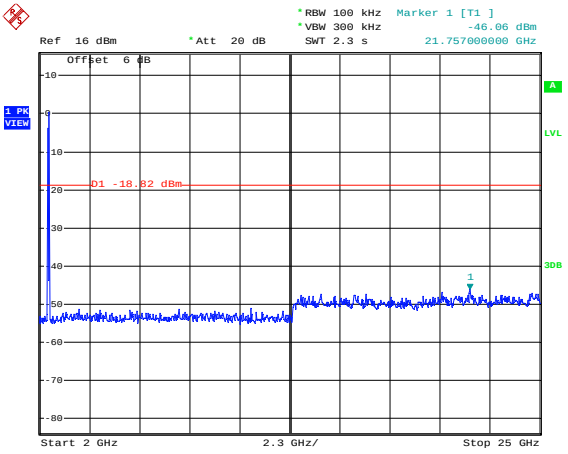
Date: 7.AUG.2014 15:28:08

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:28:28

Spurious Emission 2GHz~25GHz

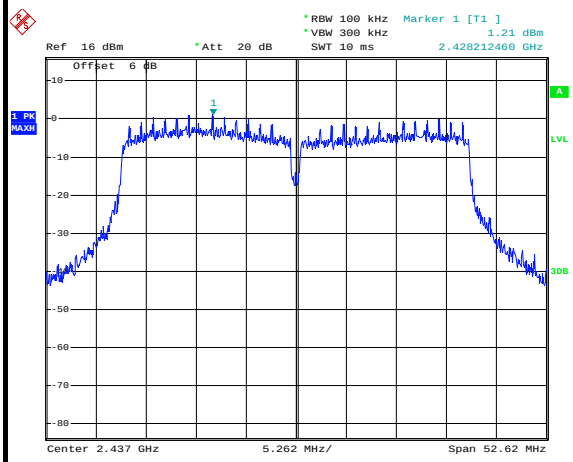


Date: 7.AUG.2014 15:28:46

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

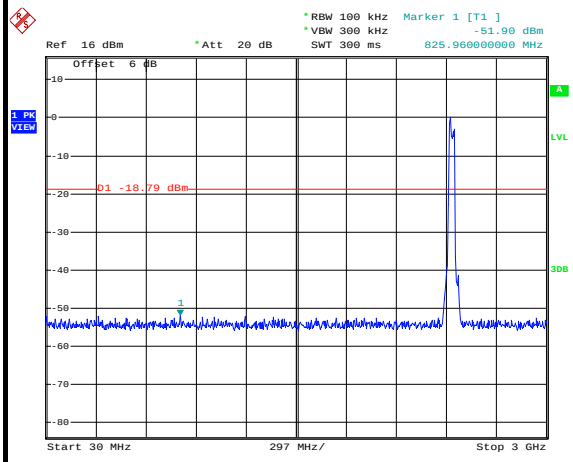
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



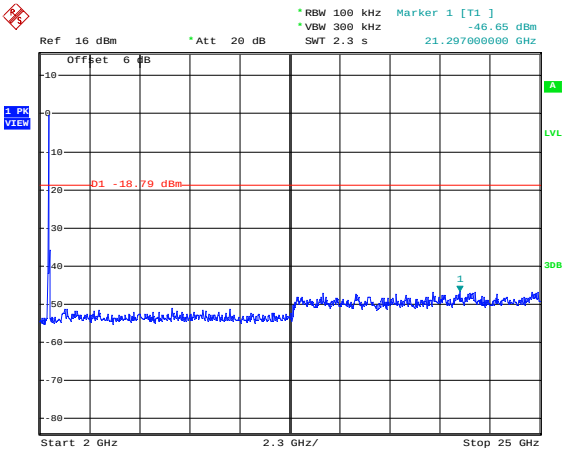
Date: 7.AUG.2014 15:32:23

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:34:35

Spurious Emission 2GHz~25GHz

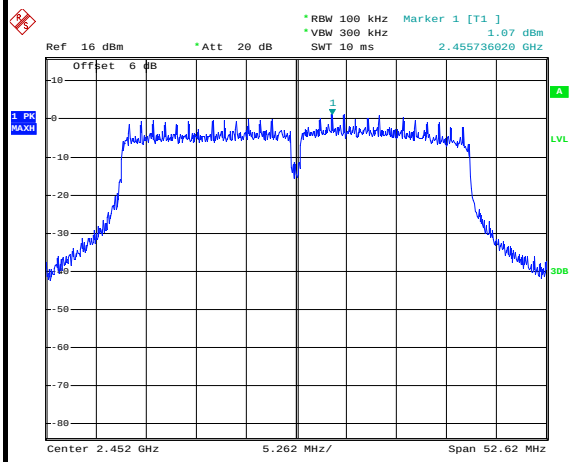


Date: 7.AUG.2014 15:34:53

Number of TX :	2	**Chain Port :**	0
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	09	**Test Engineer :**	Issac Song

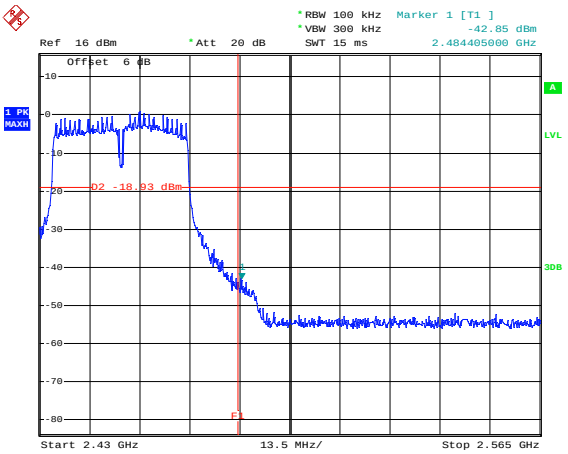
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



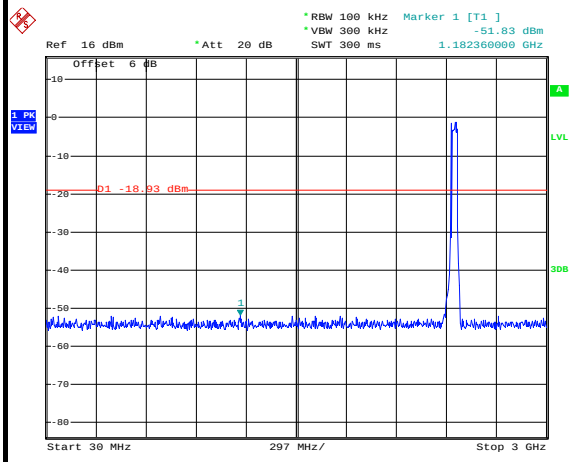
Date: 7.AUG.2014 15:52:21

High Channel Plot



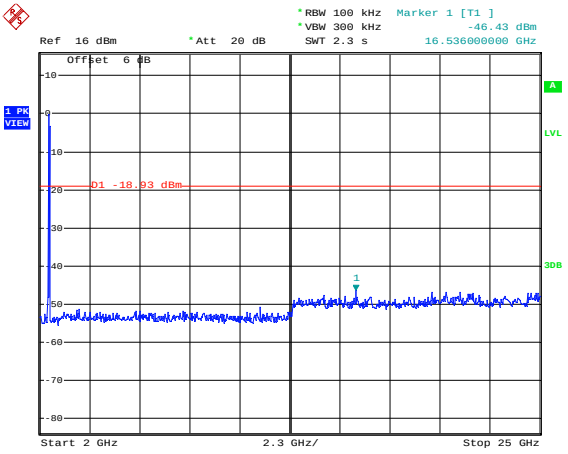
Date: 7.AUG.2014 19:21:24

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 19:21:43

Spurious Emission 2GHz~25GHz



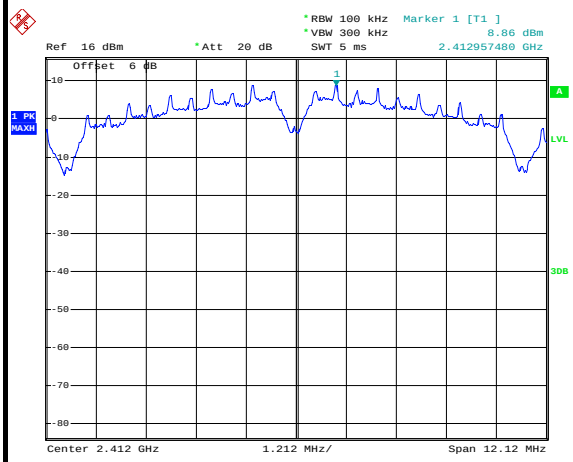
Date: 7.AUG.2014 19:22:02

Number of TX = 2, Chain Port 0+1(1) (Measured)

Number of TX	2	**Chain Port :**	1
Test Mode :	802.11b	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

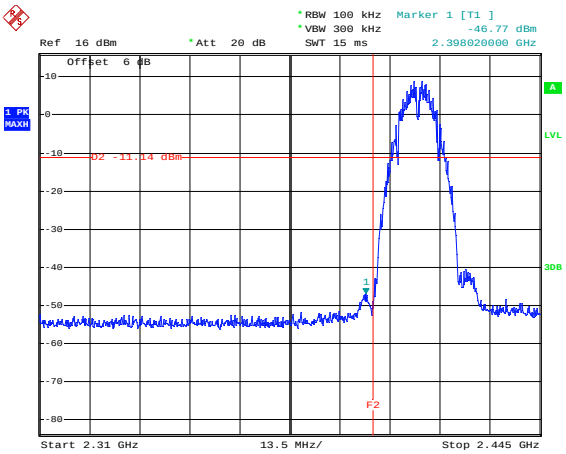
WLAN 802.11b Channel 01

100kHz PSD reference Level



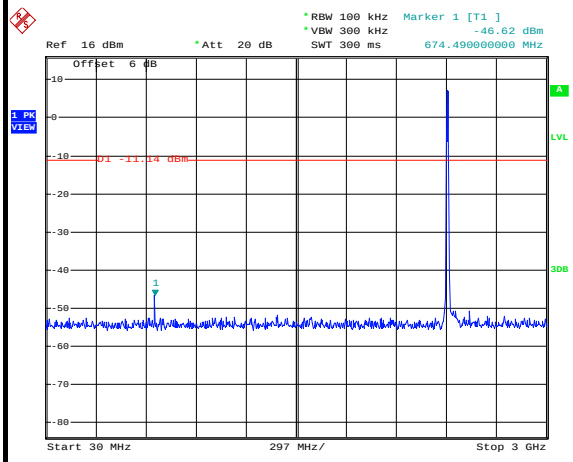
Date: 7.AUG.2014 11:46:09

Low Channel Plot



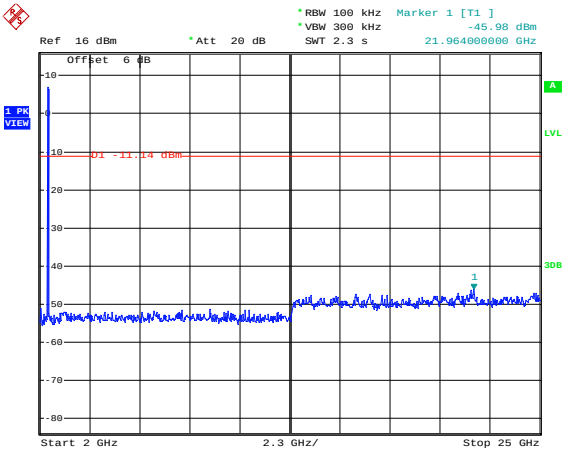
Date: 7.AUG.2014 11:46:23

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 11:46:42

Spurious Emission 2GHz~25GHz

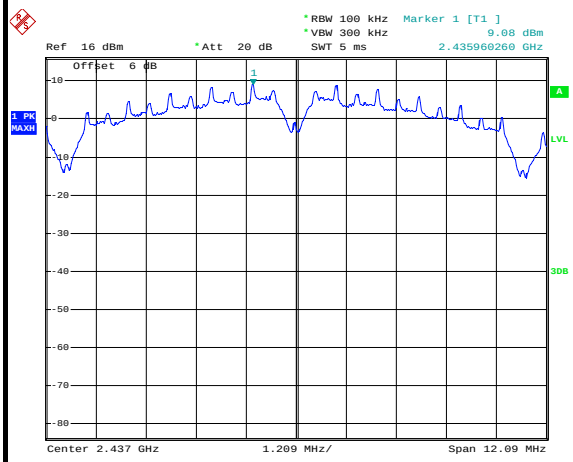


Date: 7.AUG.2014 11:47:01

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11b	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

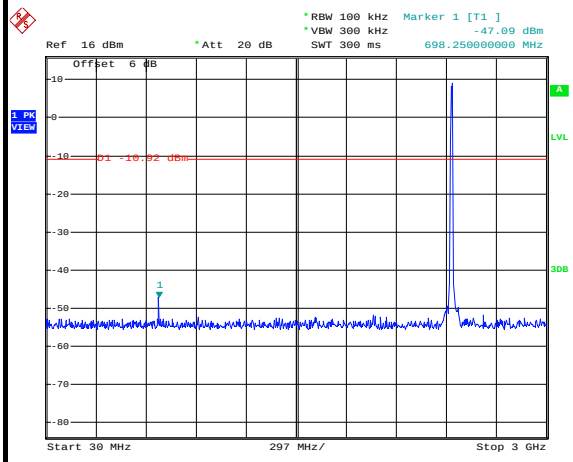
WLAN 802.11b Channel 06

100kHz PSD reference Level



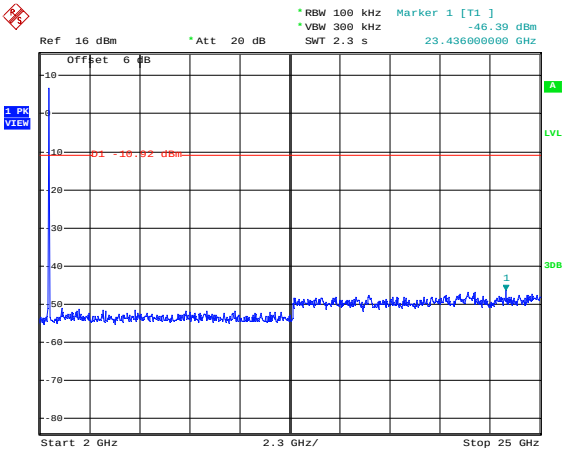
Date: 7.AUG.2014 11:52:18

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 11:52:38

Spurious Emission 2GHz~25GHz

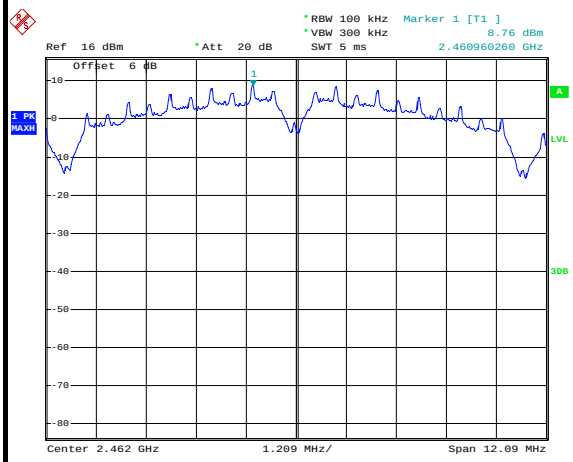


Date: 7.AUG.2014 11:52:56

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11b	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

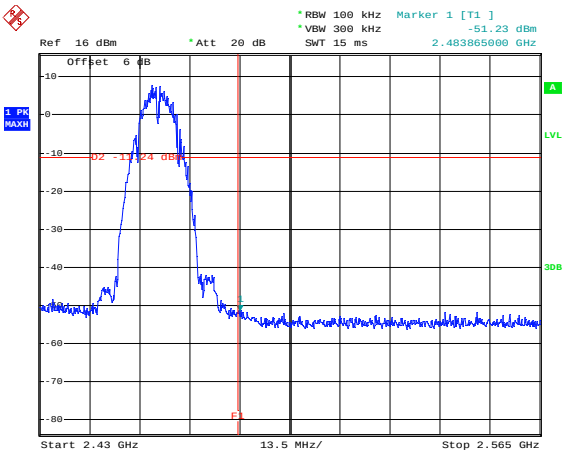
WLAN 802.11b Channel 11

100kHz PSD reference Level



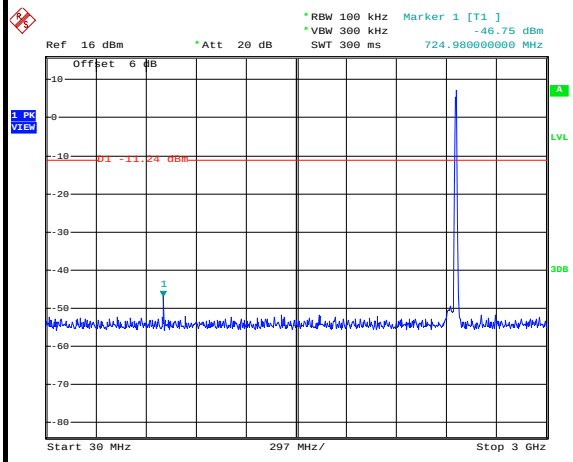
Date: 7.AUG.2014 12:14:08

High Channel Plot



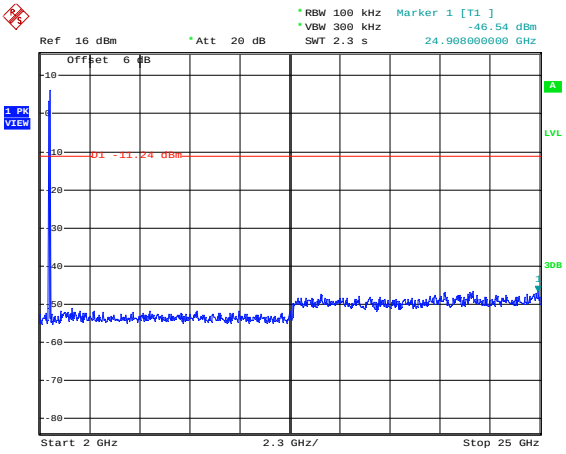
Date: 7.AUG.2014 12:14:22

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:14:42

Spurious Emission 2GHz~25GHz

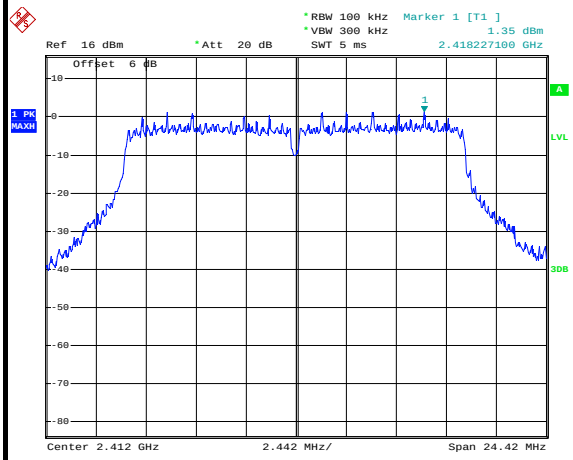


Date: 7.AUG.2014 12:15:00

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11g	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

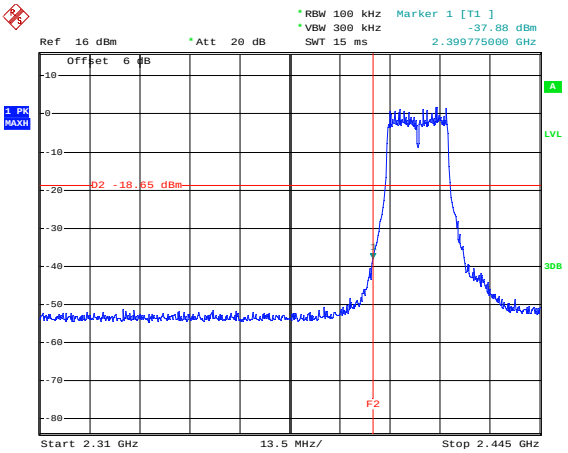
WLAN 802.11g Channel 01

100kHz PSD reference Level



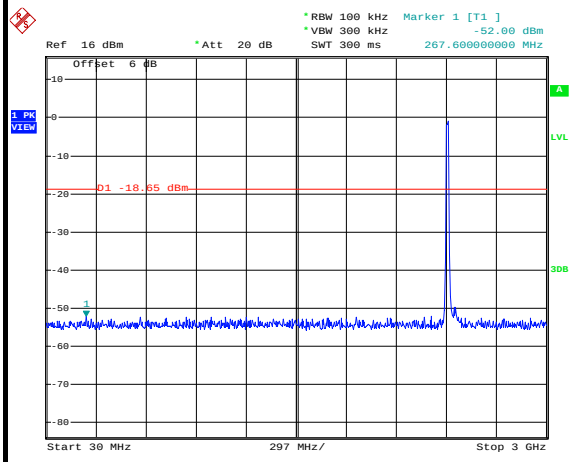
Date: 7.AUG.2014 12:22:35

Low Channel Plot



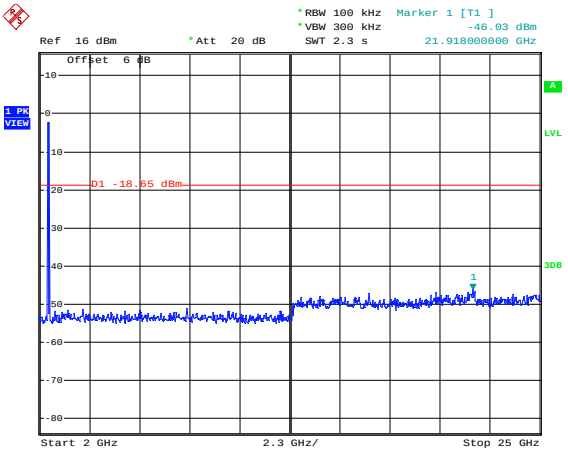
Date: 7.AUG.2014 12:28:55

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:23:08

Spurious Emission 2GHz~25GHz

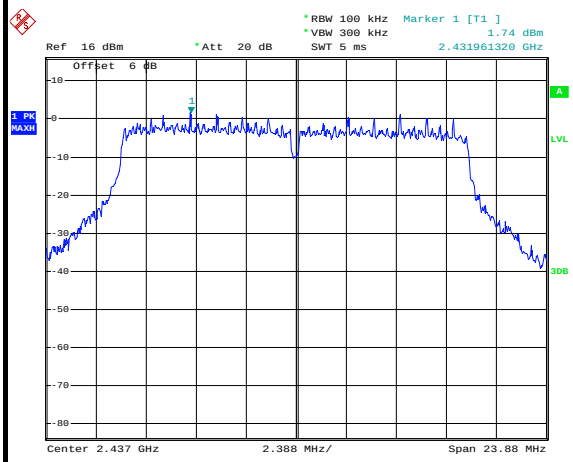


Date: 7.AUG.2014 12:23:27

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11g	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

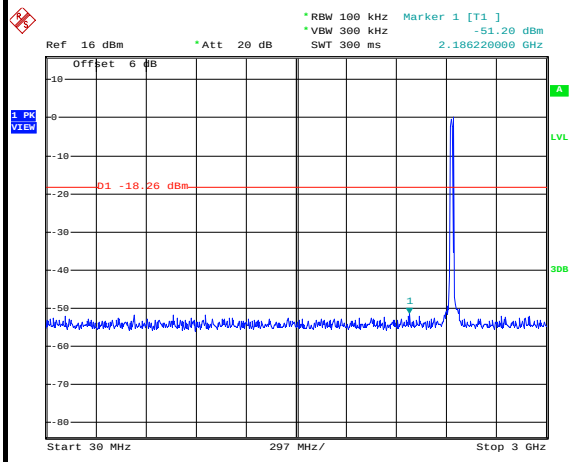
WLAN 802.11g Channel 06

100kHz PSD reference Level



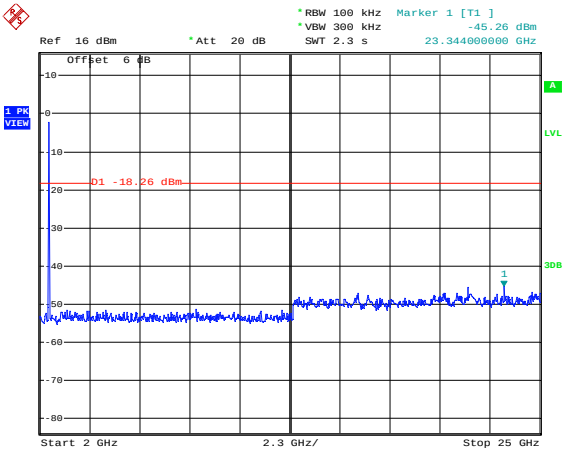
Date: 7.AUG.2014 12:59:39

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 12:59:59

Spurious Emission 2GHz~25GHz

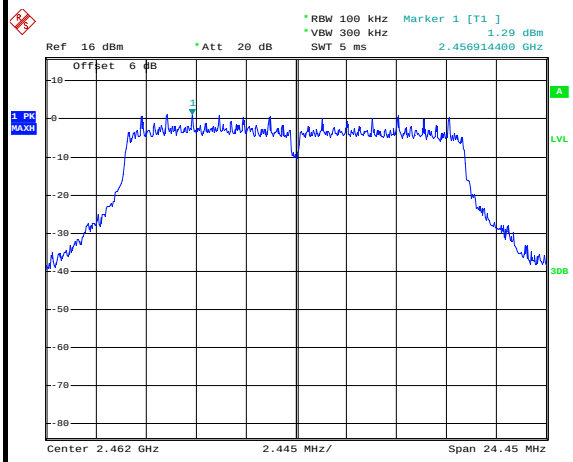


Date: 7.AUG.2014 13:00:17

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11g	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

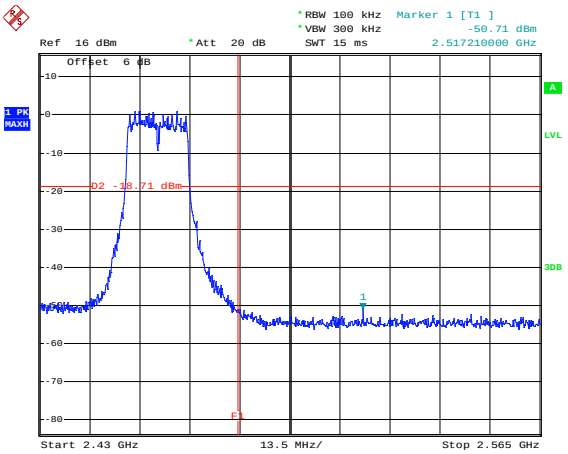
WLAN 802.11g Channel 11

100kHz PSD reference Level



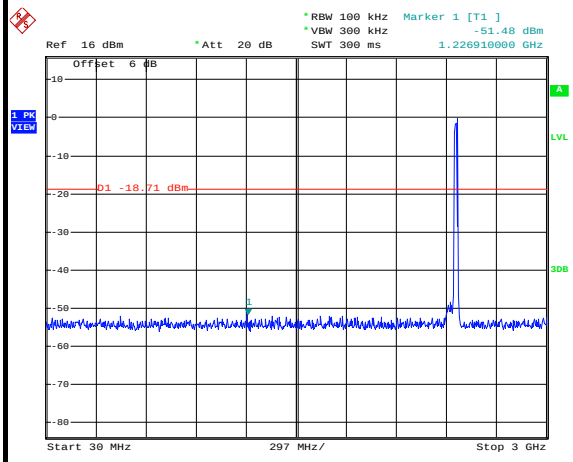
Date: 7.AUG.2014 13:03:51

High Channel Plot



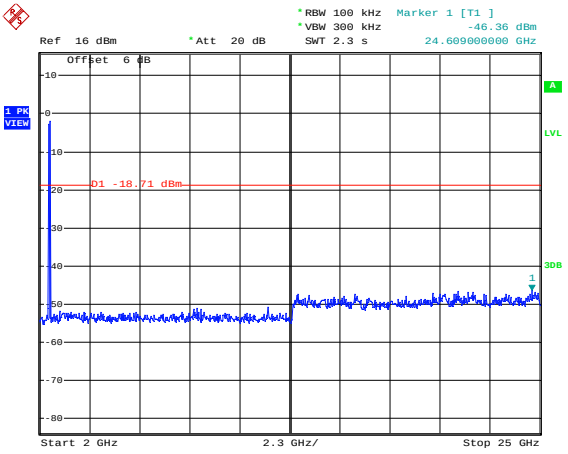
Date: 7.AUG.2014 13:07:22

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 13:04:24

Spurious Emission 2GHz~25GHz

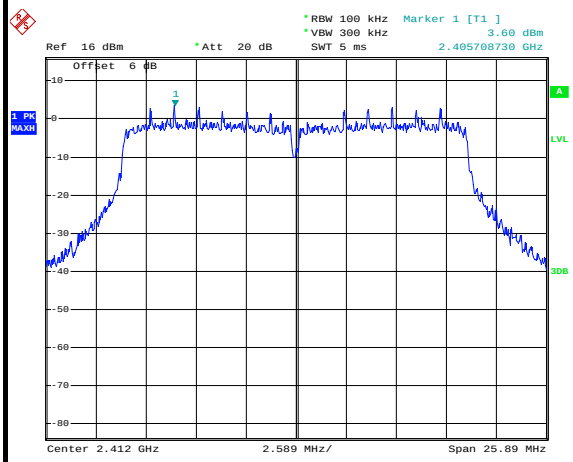


Date: 7.AUG.2014 13:04:43

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

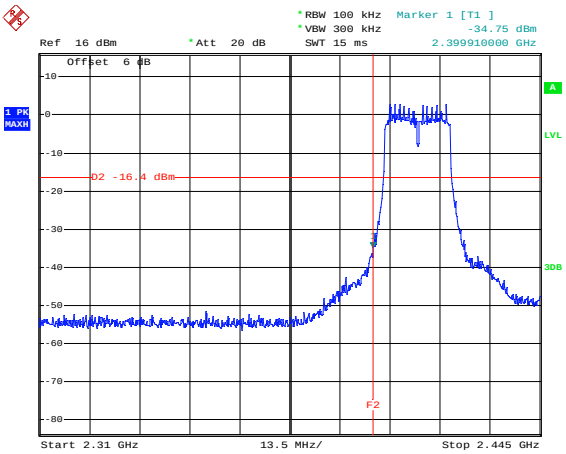
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



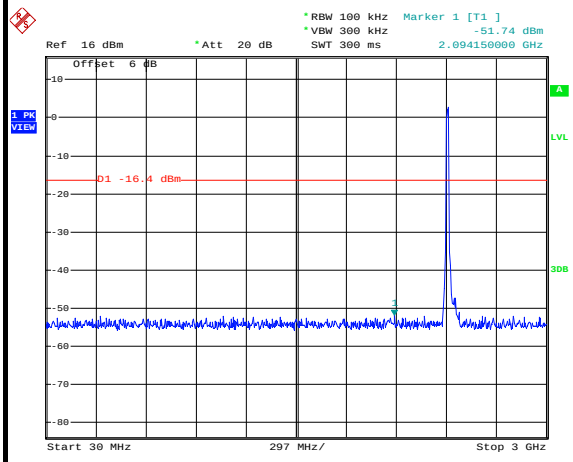
Date: 7.AUG.2014 19:13:23

Low Channel Plot



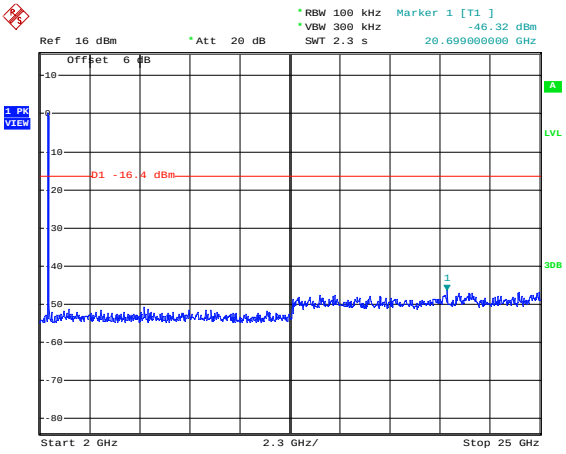
Date: 7.AUG.2014 19:13:37

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 19:13:56

Spurious Emission 2GHz~25GHz

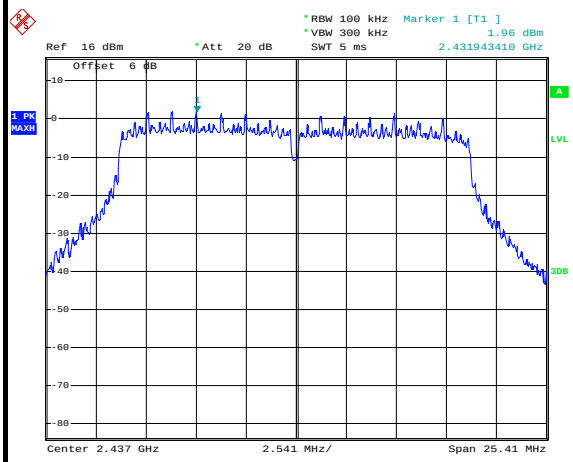


Date: 7.AUG.2014 19:14:15

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

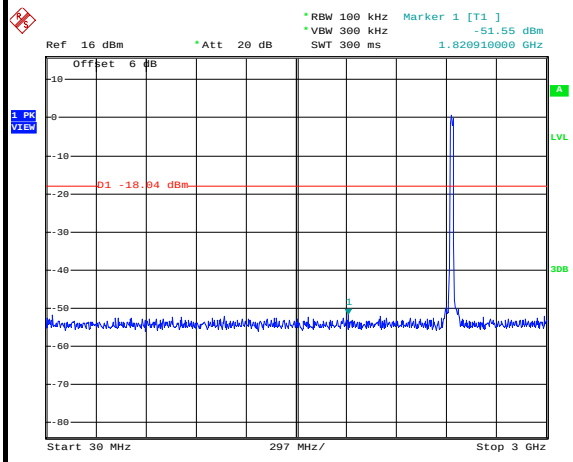
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



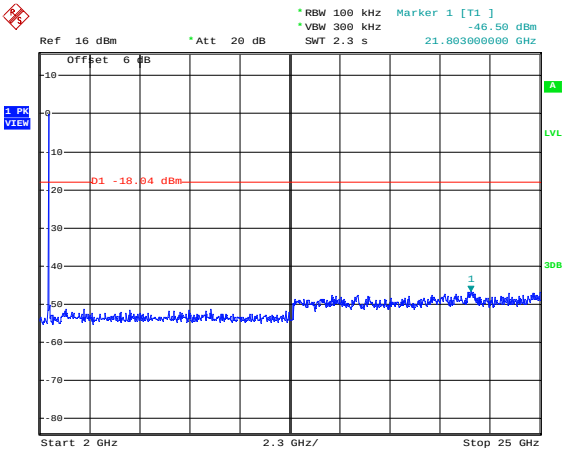
Date: 7.AUG.2014 14:59:04

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 14:59:23

Spurious Emission 2GHz~25GHz

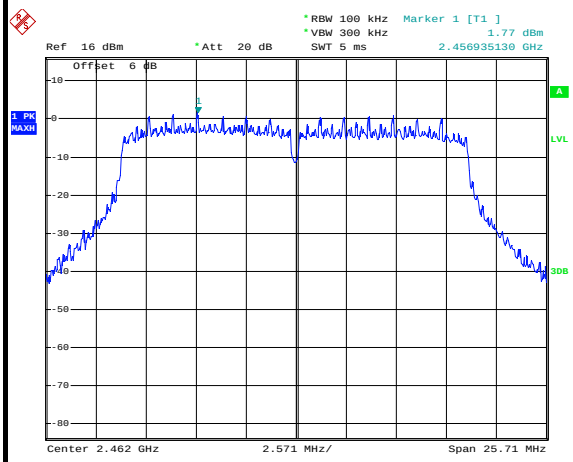


Date: 7.AUG.2014 14:59:42

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

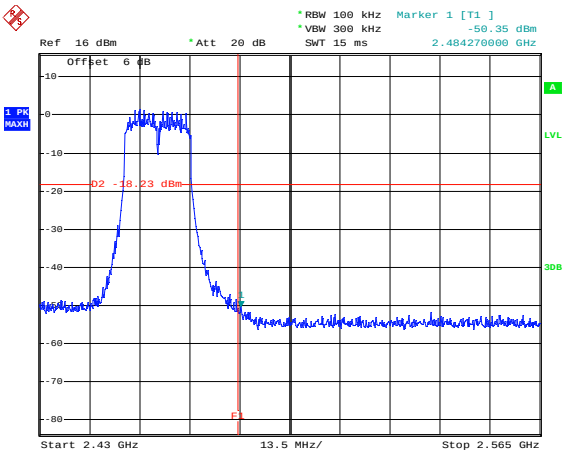
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



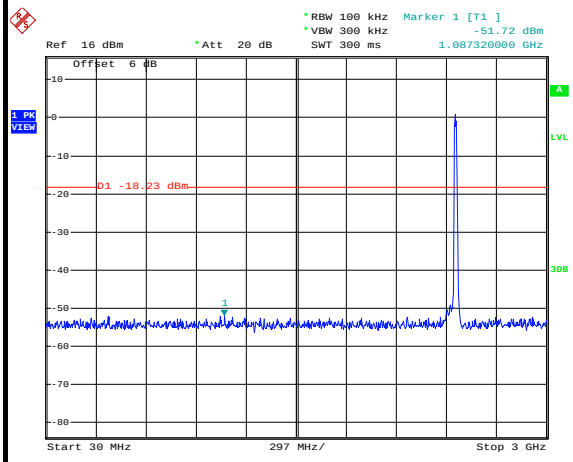
Date: 7.AUG.2014 15:14:06

High Channel Plot



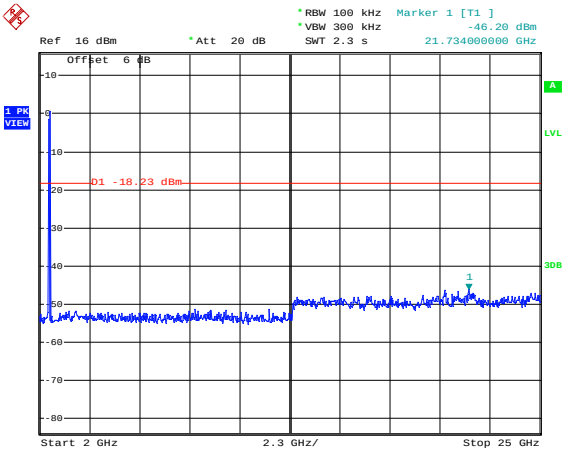
Date: 7.AUG.2014 15:14:20

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:14:39

Spurious Emission 2GHz~25GHz

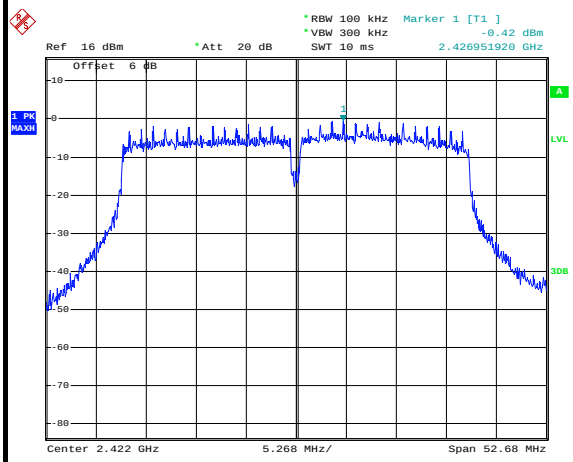


Date: 7.AUG.2014 15:14:58

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	03	**Test Engineer :**	Issac Song

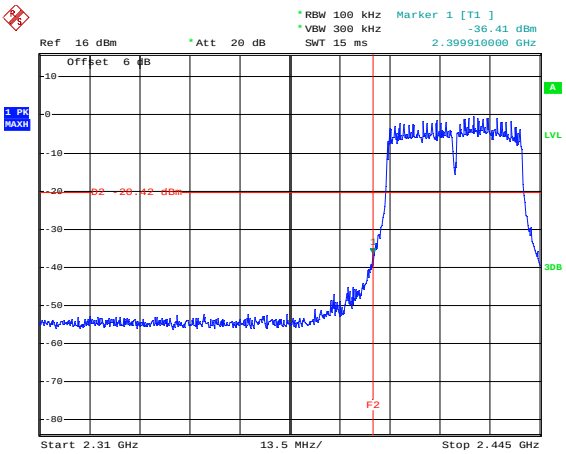
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



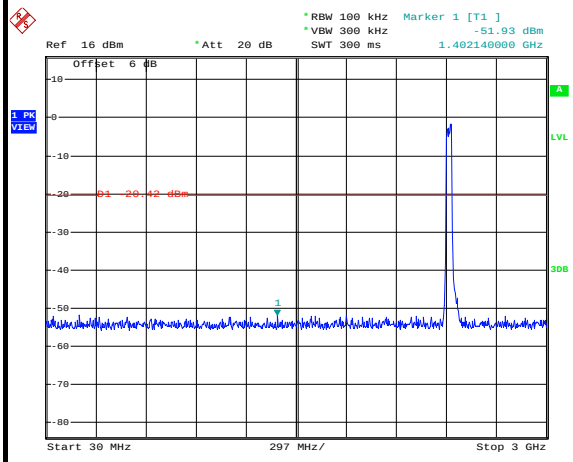
Date: 7.AUG.2014 15:21:29

Low Channel Plot



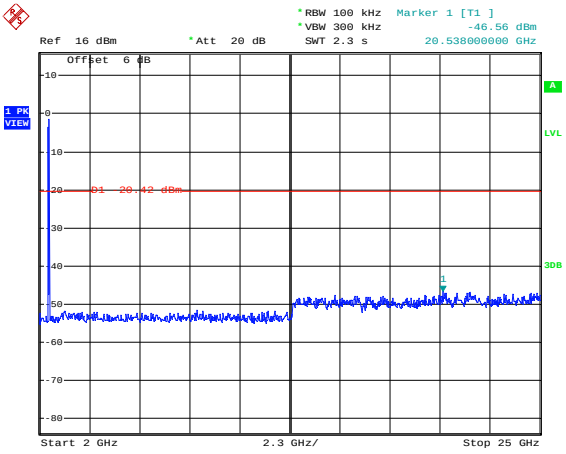
Date: 7.AUG.2014 15:24:47

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:22:03

Spurious Emission 2GHz~25GHz

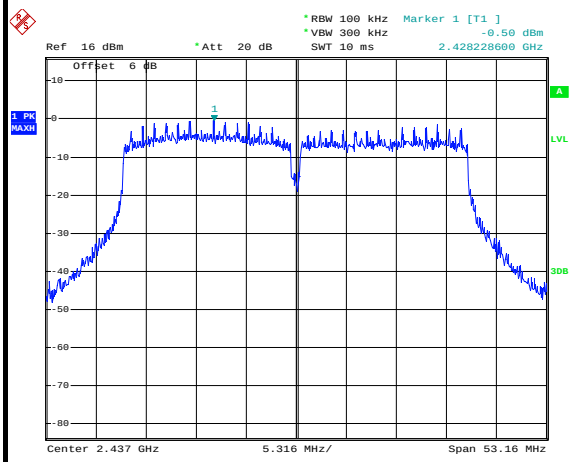


Date: 7.AUG.2014 15:22:21

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

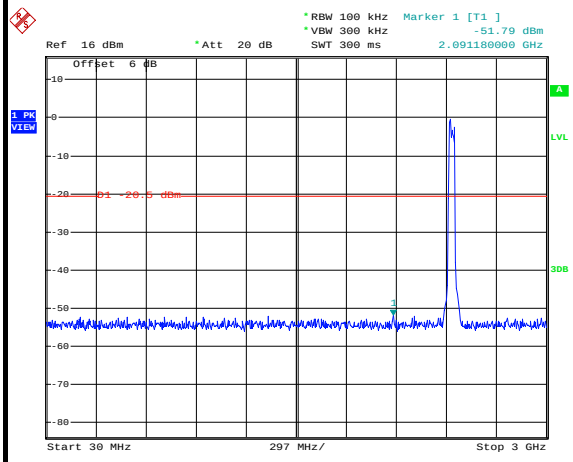
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



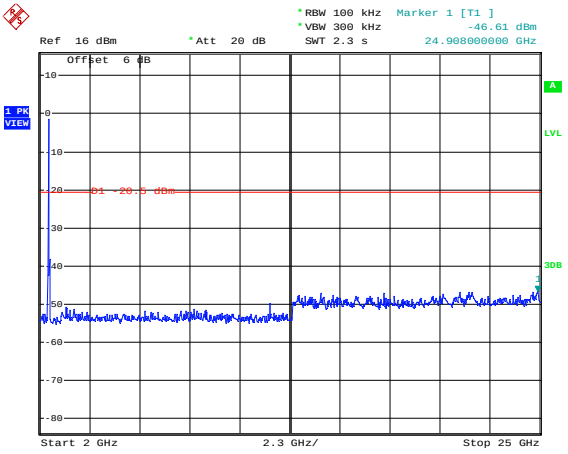
Date: 7.AUG.2014 15:38:21

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:38:41

Spurious Emission 2GHz~25GHz

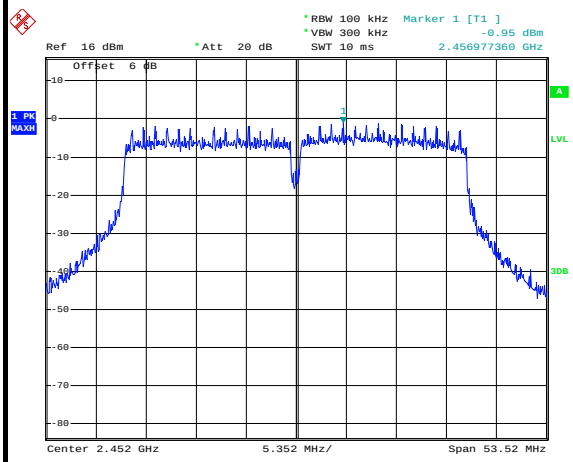


Date: 7.AUG.2014 15:39:00

Number of TX :	2	**Chain Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	09	**Test Engineer :**	Issac Song

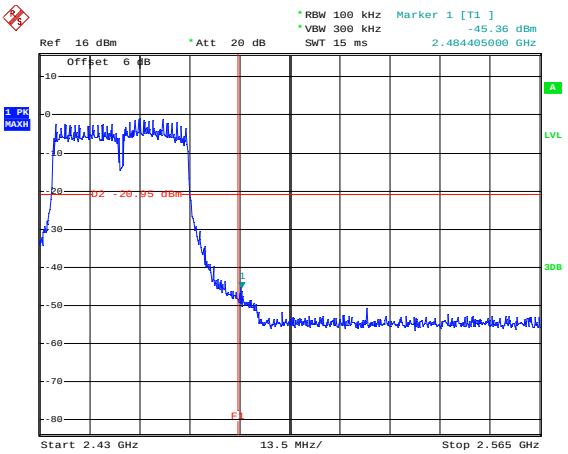
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



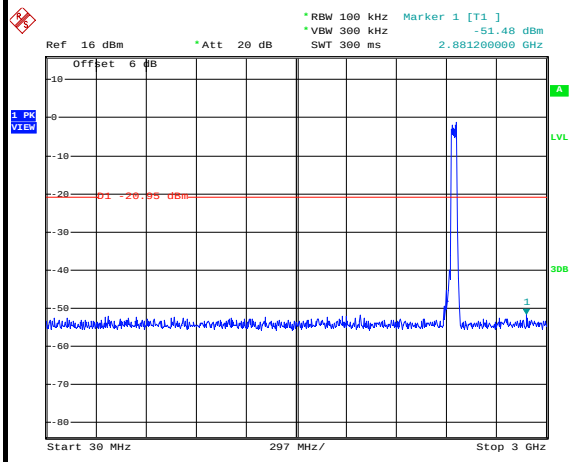
Date: 7.AUG.2014 15:48:20

High Channel Plot



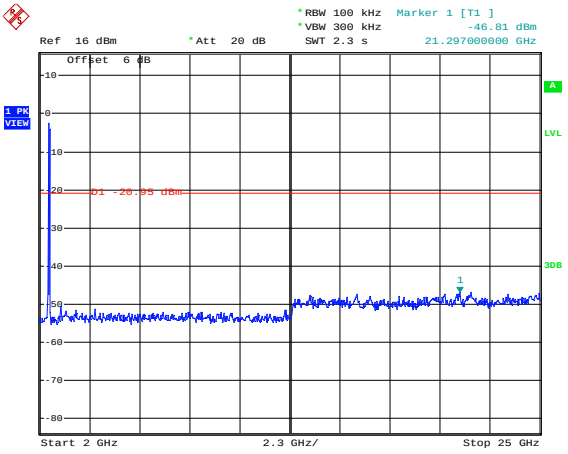
Date: 7.AUG.2014 15:48:34

Spurious Emission 30MHz~3GHz



Date: 7.AUG.2014 15:48:53

Spurious Emission 2GHz~25GHz



Date: 7.AUG.2014 15:49:12

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

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

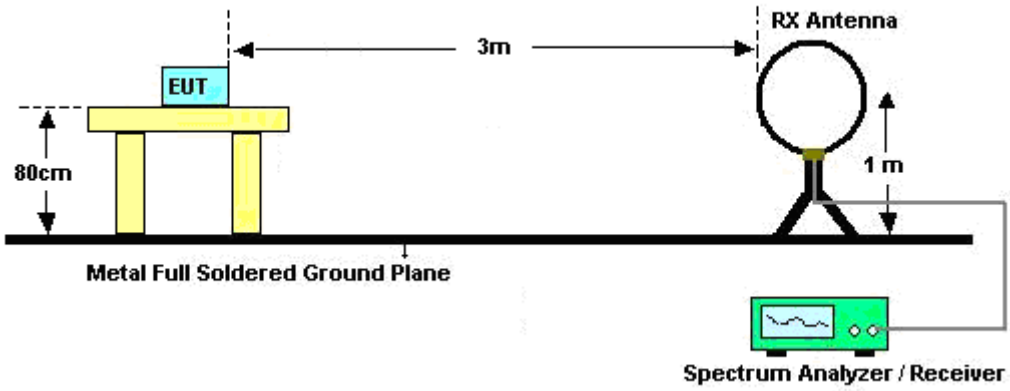
3.5.3 Test Procedure

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

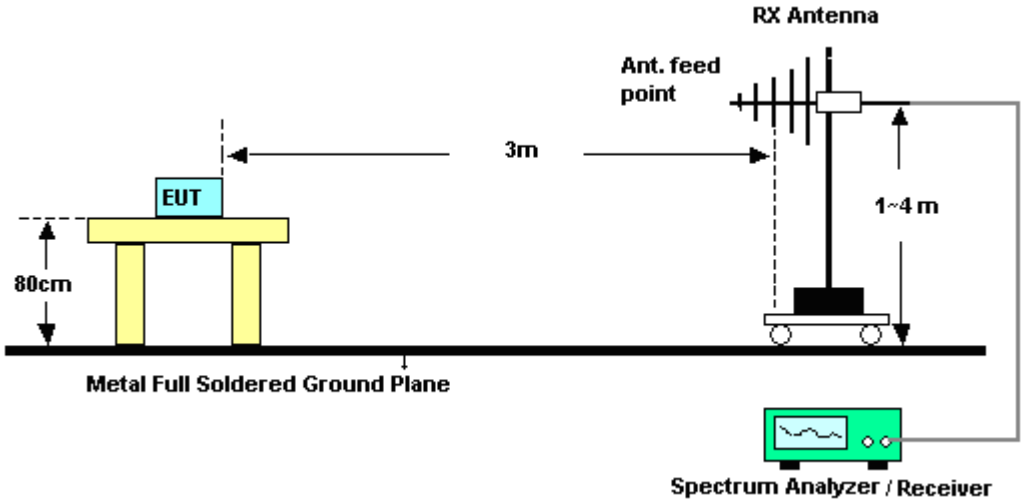
Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
0+1	802.11b	100.00	-	-	10Hz
0+1	802.11g	95.45	2.067	0.484	1kHz
0+1	2.4GHz 802.11n HT20	94.79	1.923	0.520	1kHz
0+1	2.4GHz 802.11n HT40	90.82	0.946	1.057	3kHz

3.5.4 Test Setup

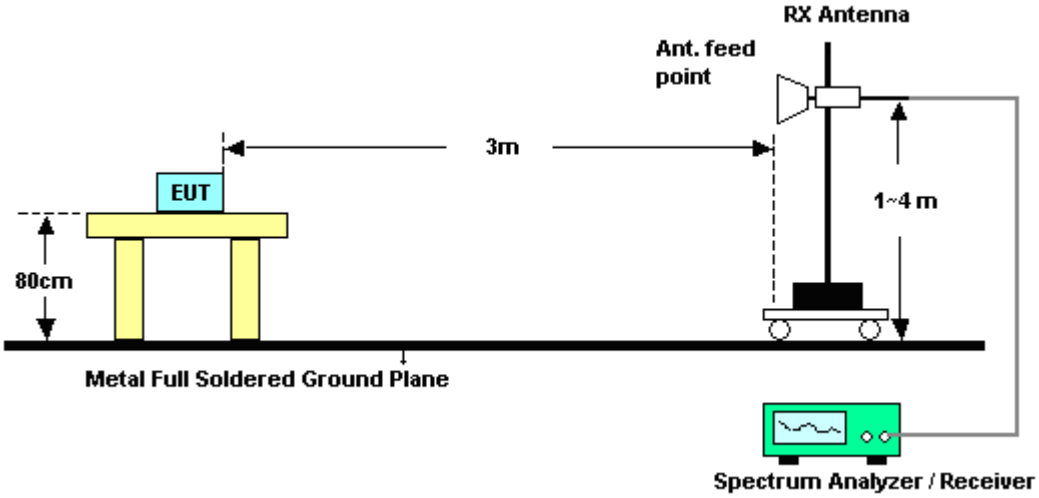
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.29	56.23	-17.77	74	57.71	31.96	2.64	36.08	112	36	Peak
2389.38	43.04	-10.96	54	44.52	31.96	2.64	36.08	112	36	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
2388.84	56.38	-17.62	74	57.86	31.96	2.64	36.08	100	264	Peak
2389.38	41.35	-12.65	54	42.83	31.96	2.64	36.08	100	264	Average

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	High	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.59	56.72	-17.28	74	57.75	32.08	2.68	35.79	112	24	Peak
2483.65	41.92	-12.08	54	42.95	32.08	2.68	35.79	112	24	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	55.57	-18.43	74	56.6	32.08	2.68	35.79	100	74	Peak
2483.5	41.25	-12.75	54	42.28	32.08	2.68	35.79	100	74	Average

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.83	68.53	-5.47	74	70.01	31.96	2.64	36.08	179	162	Peak
2390	47.44	-6.56	54	48.92	31.96	2.64	36.08	179	162	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
2389.47	69.91	-4.09	74	71.39	31.96	2.64	36.08	176	295	Peak
2390	48.63	-5.37	54	50.11	31.96	2.64	36.08	176	295	Average

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	High	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.83	65.42	-8.58	74	66.45	32.08	2.68	35.79	200	25	Peak
2483.65	44.46	-9.54	54	45.49	32.08	2.68	35.79	200	25	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	64.74	-9.26	74	65.77	32.08	2.68	35.79	137	302	Peak
2483.5	42.79	-11.21	54	43.82	32.08	2.68	35.79	137	302	Average

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	64.07	-9.93	74	65.55	31.96	2.64	36.08	182	41	Peak
2390	46.36	-7.64	54	47.84	31.96	2.64	36.08	182	41	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
2389.65	64.36	-9.64	74	65.84	31.96	2.64	36.08	146	145	Peak
2390	43.31	-10.69	54	44.79	31.96	2.64	36.08	146	145	Average

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	High	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.59	55.9	-18.1	74	56.93	32.08	2.68	35.79	133	66	Peak
2483.5	40.44	-13.56	54	41.47	32.08	2.68	35.79	133	66	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.83	56.15	-17.85	74	57.18	32.08	2.68	35.79	109	293	Peak
2483.5	39.15	-14.85	54	40.18	32.08	2.68	35.79	109	293	Average

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	03	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	68.76	-5.24	74	70.24	31.96	2.64	36.08	146	157	Peak
2389.74	44.87	-9.13	54	46.35	31.96	2.64	36.08	146	157	Average
2483.56	59.85	-14.15	74	60.88	32.08	2.68	35.79	163	66	Peak
2486.17	37.34	-16.66	54	38.37	32.08	2.68	35.79	163	66	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.57	68.24	-5.76	74	69.72	31.96	2.64	36.08	115	151	Peak
2389.92	47.39	-6.61	54	48.87	31.96	2.64	36.08	115	151	Average
2484.04	61.45	-12.55	74	62.48	32.08	2.68	35.79	100	292	Peak
2483.8	39.55	-14.45	54	40.58	32.08	2.68	35.79	100	292	Average

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Band :	High	**Relative Humidity :**	42~43%
Test Channel :	09	**Test Engineer :**	Simon Lu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.66	62.46	-11.54	74	63.94	31.96	2.64	36.08	180	17	Peak
2390	36.97	-17.03	54	38.45	31.96	2.64	36.08	180	17	Average
2485.39	67.64	-6.36	74	68.67	32.08	2.68	35.79	160	65	Peak
2483.5	47.76	-6.24	54	48.79	32.08	2.68	35.79	160	65	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
2389.65	63.25	-10.75	74	64.73	31.96	2.64	36.08	101	271	Peak
2389.74	36.72	-17.28	54	38.2	31.96	2.64	36.08	101	271	Average
2484.91	65.11	-8.89	74	66.14	32.08	2.68	35.79	100	58	Peak
2483.5	44.9	-9.1	54	45.93	32.08	2.68	35.79	100	58	Average

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

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

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	112.13	-	-	113.51	31.98	2.66	36.02	112	36	Peak
2412	105.11	-	-	106.49	31.98	2.66	36.02	112	36	Average
4824	47.64	-26.36	74	46.44	34.07	3.78	36.65	112	203	Peak

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2412 MHz is Fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	108.46	-	-	109.84	31.98	2.66	36.02	100	264	Peak
2412	102.69	-	-	104.07	31.98	2.66	36.02	100	264	Average
4824	48.48	-25.52	74	47.28	34.07	3.78	36.65	147	304	Peak

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2437 MHz is Fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	111.8	-	-	113.02	32.03	2.66	35.91	116	28	Peak
2437	107.24	-	-	108.46	32.03	2.66	35.91	116	28	Average
4874	46.31	-27.69	74	45.35	34.02	3.78	36.84	126	331	Peak
7312	47.09	-26.91	74	45.5	35.72	4.73	38.86	112	304	Peak

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2437 MHz is Fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	110.93	-	-	112.15	32.03	2.66	35.91	101	63	Peak
2437	106.19	-	-	107.41	32.03	2.66	35.91	101	63	Average
4874	45.58	-28.42	74	44.62	34.02	3.78	36.84	100	225	Peak
7312	45.54	-28.46	74	43.95	35.72	4.73	38.86	178	220	Peak

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	110.61	-	-	111.74	32.05	2.67	35.85	112	24	Peak
2462	104.15	-	-	105.28	32.05	2.67	35.85	112	24	Average
4924	48.19	-25.81	74	47.47	33.97	3.78	37.03	108	210	Peak
7386	46.8	-27.2	74	45.46	35.76	4.77	39.19	106	147	Peak

Test Mode :	802.11b - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	110.04	-	-	111.17	32.05	2.67	35.85	100	74	Peak
2462	104.42	-	-	105.55	32.05	2.67	35.85	100	74	Average
4924	45.8	-28.2	74	45.08	33.97	3.78	37.03	187	236	Peak
7386	45.46	-28.54	74	44.12	35.76	4.77	39.19	110	234	Peak

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.97	29.84	-10.16	40	44.91	17.4	0.19	32.66	-	-	Peak
44.55	26.27	-13.73	40	48.43	10.2	0.31	32.67	-	-	Peak
119.24	35.49	-8.01	43.5	55.67	11.88	0.58	32.64	100	0	Peak
242.43	34.62	-11.38	46	55.01	11.24	0.84	32.47	-	-	Peak
724.52	31.26	-14.74	46	42.18	19.67	1.41	32	-	-	Peak
960.23	31.12	-22.88	54	40.35	20.76	1.72	31.71	-	-	Peak
2412	106.37	-	-	107.75	31.98	2.66	36.02	179	162	Peak
2412	96.94	-	-	98.32	31.98	2.66	36.02	179	162	Average
4824	45.47	-28.53	74	44.27	34.07	3.78	36.65	116	224	Peak

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
33.88	29.71	-10.29	40	46.4	15.75	0.19	32.63	-	-	Peak
71.71	26.23	-13.77	40	53.01	5.4	0.47	32.65	-	-	Peak
119.24	32.52	-10.98	43.5	52.7	11.88	0.58	32.64	200	0	Peak
239.52	28.17	-17.83	46	48.96	10.85	0.84	32.48	-	-	Peak
480.08	28.6	-17.4	46	42.25	17.3	1.22	32.17	-	-	Peak
722.58	28.16	-17.84	46	39.14	19.61	1.41	32	-	-	Peak
2412	106.88	-	-	108.26	31.98	2.66	36.02	176	295	Peak
2412	97.35	-	-	98.73	31.98	2.66	36.02	176	295	Average
4824	44.58	-29.42	74	43.38	34.07	3.78	36.65	200	259	Peak

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	108.98	-	-	110.2	32.03	2.66	35.91	112	156	Peak
2437	99.09	-	-	100.31	32.03	2.66	35.91	112	156	Average
4874	46.51	-27.49	74	45.55	34.02	3.78	36.84	100	201	Peak
7312	45.75	-28.25	74	44.16	35.72	4.73	38.86	102	141	Peak

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	108.98	-	-	110.2	32.03	2.66	35.91	112	156	Peak
2437	99.09	-	-	100.31	32.03	2.66	35.91	112	156	Average
4874	46.51	-27.49	74	45.55	34.02	3.78	36.84	100	201	Peak
7312	45.75	-28.25	74	44.16	35.72	4.73	38.86	102	141	Peak

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	106.56	-	-	107.69	32.05	2.67	35.85	200	25	Peak
2462	96.74	-	-	97.87	32.05	2.67	35.85	200	25	Average
4924	44.52	-29.48	74	43.8	33.97	3.78	37.03	124	324	Peak
7386	47.04	-26.96	74	45.7	35.76	4.77	39.19	100	225	Peak

Test Mode :	802.11g - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	107.12	-	-	108.25	32.05	2.67	35.85	137	302	Peak
2462	96.95	-	-	98.08	32.05	2.67	35.85	137	302	Average
4924	44.58	-29.42	74	43.86	33.97	3.78	37.03	100	165	Peak
7386	46.5	-27.5	74	45.16	35.76	4.77	39.19	156	223	Peak

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	106.78	-	-	108.16	31.98	2.66	36.02	182	41	Peak
2412	96.21	-	-	97.59	31.98	2.66	36.02	182	41	Average
4824	46.7	-27.3	74	45.5	34.07	3.78	36.65	112	247	Peak

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	101.86	-	-	103.24	31.98	2.66	36.02	146	145	Peak
2412	91.44	-	-	92.82	31.98	2.66	36.02	146	145	Average
4824	45.41	-28.59	74	44.21	34.07	3.78	36.65	157	221	Peak

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	106.43	-	-	107.65	32.03	2.66	35.91	135	64	Peak
2437	95.08	-	-	96.3	32.03	2.66	35.91	135	64	Average
4874	45.36	-28.64	74	44.4	34.02	3.78	36.84	124	308	Peak
7312	44.98	-29.02	74	43.39	35.72	4.73	38.86	200	189	Peak

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	107.65	-	-	108.87	32.03	2.66	35.91	100	282	Peak
2437	94.84	-	-	96.06	32.03	2.66	35.91	100	282	Average
4874	45.71	-28.29	74	44.75	34.02	3.78	36.84	126	284	Peak
7312	45.89	-28.11	74	44.3	35.72	4.73	38.86	100	347	Peak

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	106.59	-	-	107.72	32.05	2.67	35.85	133	66	Peak
2462	96.14	-	-	97.27	32.05	2.67	35.85	133	66	Average
4924	43.77	-30.23	74	43.05	33.97	3.78	37.03	124	226	Peak
7386	46.41	-27.59	74	45.07	35.76	4.77	39.19	157	302	Peak

Test Mode :	802.11n HT20 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	104.03	-	-	105.16	32.05	2.67	35.85	109	293	Peak
2462	93.77	-	-	94.9	32.05	2.67	35.85	109	293	Average
4924	44.79	-29.21	74	44.07	33.97	3.78	37.03	119	305	Peak
7386	46.17	-27.83	74	44.83	35.76	4.77	39.19	195	224	Peak

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	03	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2422	106.27	-	-	107.57	32	2.66	35.96	175	57	Peak
2422	96.68	-	-	97.98	32	2.66	35.96	175	57	Average
4844	45.42	-28.58	74	44.3	34.06	3.78	36.72	157	247	Peak
7266	46.37	-27.63	74	44.67	35.71	4.72	38.73	112	184	Peak

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	03	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2422	106.22	-	-	107.52	32	2.66	35.96	100	252	Peak
2422	95.24	-	-	96.54	32	2.66	35.96	100	252	Average
4844	45.37	-28.63	74	44.25	34.06	3.78	36.72	165	105	Peak
7266	45.7	-28.3	74	44	35.71	4.72	38.73	165	18	Peak

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	106.65	-	-	107.87	32.03	2.66	35.91	115	30	Peak
2437	97	-	-	98.22	32.03	2.66	35.91	115	30	Average
4874	44.85	-29.15	74	43.89	34.02	3.78	36.84	100	203	Peak
7312	45.87	-28.13	74	44.28	35.72	4.73	38.86	124	234	Peak

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	06	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	106.64	-	-	107.86	32.03	2.66	35.91	105	105	Peak
2437	96.81	-	-	98.03	32.03	2.66	35.91	105	105	Average
4874	44.77	-29.23	74	43.81	34.02	3.78	36.84	189	224	Peak
7312	45.1	-28.9	74	43.51	35.72	4.73	38.86	109	231	Peak

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	09	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Horizontal
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	106.26	-	-	107.47	32.03	2.67	35.91	113	28	Peak
2452	95.87	-	-	97.08	32.03	2.67	35.91	113	28	Average
4904	44.48	-29.52	74	43.67	33.99	3.78	36.96	112	234	Peak
7356	47.23	-26.77	74	45.79	35.74	4.76	39.06	100	248	Peak

Test Mode :	802.11n HT40 - Chain Port 0+1	**Temperature :**	22~23°C
Test Channel :	09	**Relative Humidity :**	42~43%
Test Engineer :	Simon Lu	**Polarization :**	Vertical
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	105.21	-	-	106.42	32.03	2.67	35.91	102	96	Peak
2452	95.11	-	-	96.32	32.03	2.67	35.91	102	96	Average
4904	44.57	-29.43	74	43.76	33.99	3.78	36.96	197	257	Peak
7356	46.68	-27.32	74	45.24	35.74	4.76	39.06	105	174	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	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.

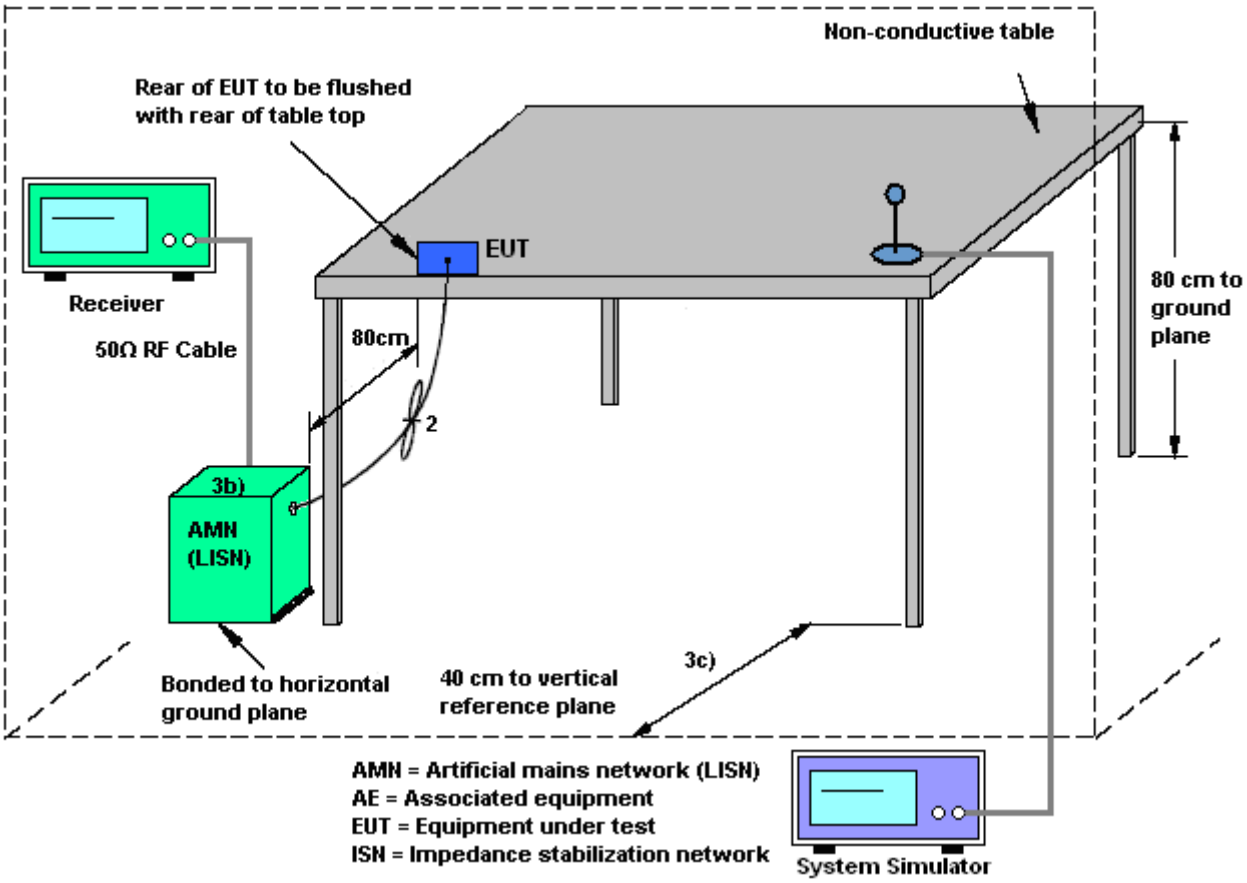
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

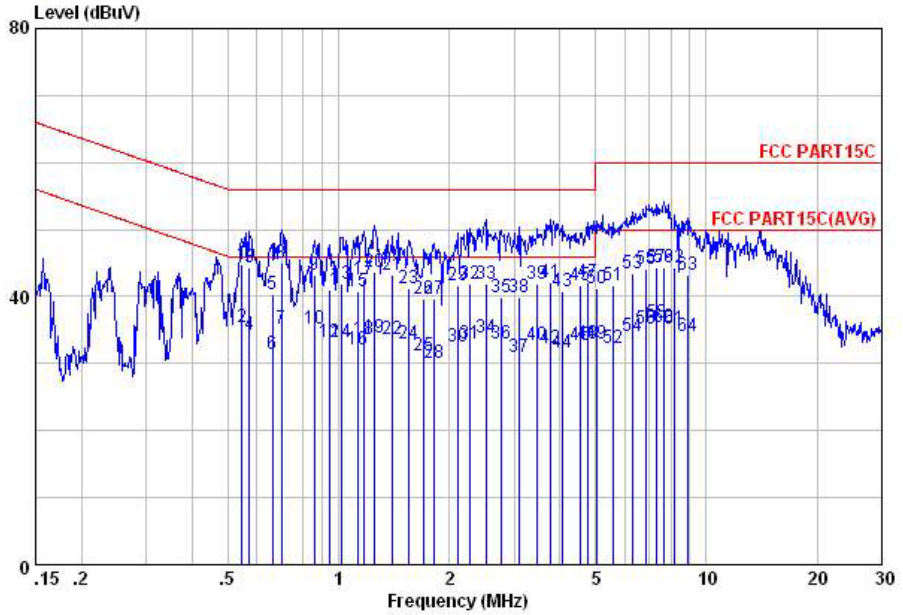
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

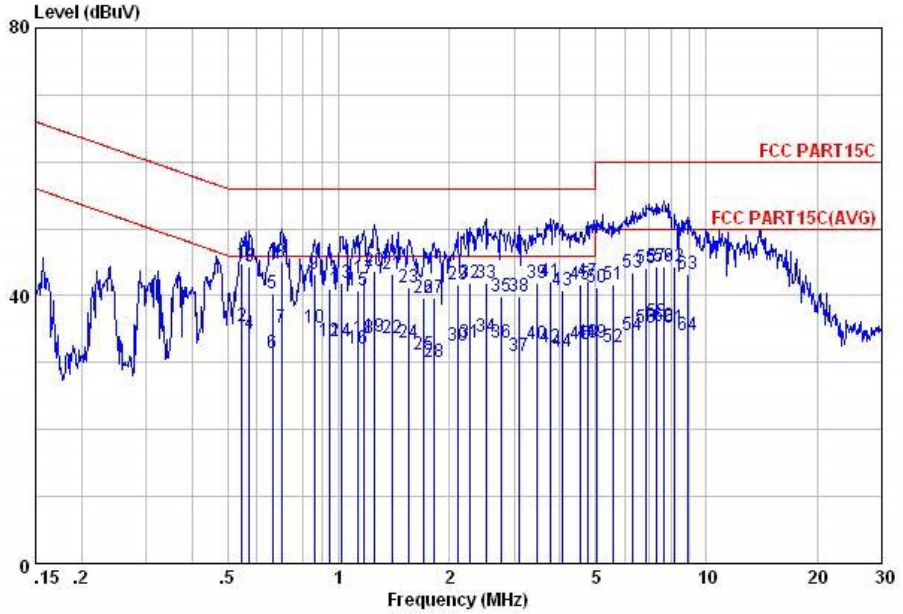
Test Mode :	Mode 1	**Temperature :**	22~24℃
Test Engineer :	Eligah Wang	**Relative Humidity :**	42~45%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)		



Site : C001-KS
Condition: FCC PART15C LISN-L20130306 LINE
Project : (FR) 461802
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.55	44.75	-11.25	56.00	34.30	0.20	10.25	QP
2	0.55	35.35	-10.65	46.00	24.90	0.20	10.25	Average
3	0.57	44.25	-11.75	56.00	33.80	0.20	10.25	QP
4	0.57	34.35	-11.65	46.00	23.90	0.20	10.25	Average
5	0.66	40.32	-15.68	56.00	29.90	0.20	10.22	QP
6	0.66	31.32	-14.68	46.00	20.90	0.20	10.22	Average
7	0.70	35.31	-10.69	46.00	24.90	0.20	10.21	Average
8	0.70	45.01	-10.99	56.00	34.60	0.20	10.21	QP
9	0.86	43.23	-12.77	56.00	32.90	0.14	10.19	QP
10	0.86	35.23	-10.77	46.00	24.90	0.14	10.19	Average
11	0.94	41.10	-14.90	56.00	30.81	0.11	10.18	QP
12	0.94	33.20	-12.80	46.00	22.91	0.11	10.18	Average
13	1.02	41.88	-14.12	56.00	31.60	0.10	10.18	QP
14	1.02	33.18	-12.82	46.00	22.90	0.10	10.18	Average
15	1.13	40.88	-15.12	56.00	30.60	0.10	10.18	QP
16	1.13	32.18	-13.82	46.00	21.90	0.10	10.18	Average
17	1.17	42.58	-13.42	56.00	32.30	0.10	10.18	QP
18	1.17	33.58	-12.42	46.00	23.30	0.10	10.18	Average
19	1.25	33.88	-12.12	46.00	23.60	0.10	10.18	Average
20	1.25	43.58	-12.42	56.00	33.30	0.10	10.18	QP
21	1.40	43.18	-12.82	56.00	32.90	0.10	10.18	QP
22	1.40	33.58	-12.42	46.00	23.30	0.10	10.18	Average
23	1.55	41.19	-14.81	56.00	30.90	0.10	10.19	QP
24	1.55	32.89	-13.11	46.00	22.60	0.10	10.19	Average
25	1.71	31.19	-14.81	46.00	20.90	0.10	10.19	Average
26	1.71	39.59	-16.41	56.00	29.30	0.10	10.19	QP
27	1.82	39.59	-16.41	56.00	29.30	0.10	10.19	QP
28	1.82	30.19	-15.81	46.00	19.90	0.10	10.19	Average

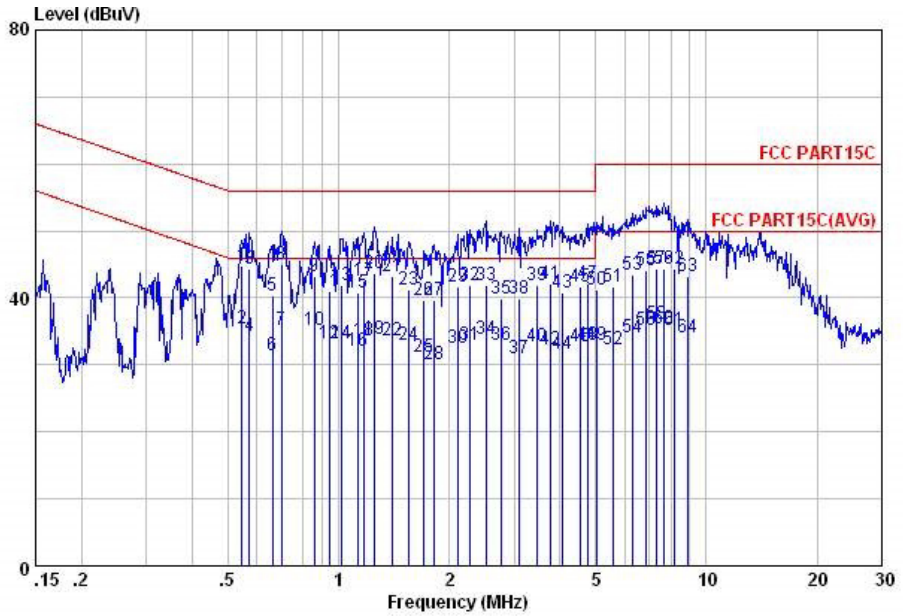
Test Mode :	Mode 1	**Temperature :**	22~24℃
Test Engineer :	Eligah Wang	**Relative Humidity :**	42~45%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)		



Site : C001-KS
Condition: FCC PART15C LISN-L20130306 LINE
Project : (FR) 461802
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
29	2.11	41.60	-14.40	56.00	31.31	0.10	10.19	QP
30	2.11	32.60	-13.40	46.00	22.31	0.10	10.19	Average
31	2.27	32.90	-13.10	46.00	22.59	0.11	10.20	Average
32	2.27	41.90	-14.10	56.00	31.59	0.11	10.20	QP
33	2.51	41.92	-14.08	56.00	31.60	0.12	10.20	QP
34	2.51	33.92	-12.08	46.00	23.60	0.12	10.20	Average
35	2.76	39.94	-16.06	56.00	29.60	0.13	10.21	QP
36	2.76	32.94	-13.06	46.00	22.60	0.13	10.21	Average
37	3.09	30.97	-15.03	46.00	20.61	0.14	10.22	Average
38	3.09	39.97	-16.03	56.00	29.61	0.14	10.22	QP
39	3.47	42.00	-14.00	56.00	31.60	0.17	10.23	QP
40	3.47	32.80	-13.20	46.00	22.40	0.17	10.23	Average
41	3.78	42.02	-13.98	56.00	31.60	0.18	10.24	QP
42	3.78	32.32	-13.68	46.00	21.90	0.18	10.24	Average
43	4.05	40.73	-15.27	56.00	30.30	0.19	10.24	QP
44	4.05	31.73	-14.27	46.00	21.30	0.19	10.24	Average
45	4.53	41.74	-14.26	56.00	31.30	0.19	10.25	QP
46	4.53	32.74	-13.26	46.00	22.30	0.19	10.25	Average
47	4.75	42.05	-13.95	56.00	31.60	0.20	10.25	QP
48	4.75	33.05	-12.95	46.00	22.60	0.20	10.25	Average
49	5.06	33.06	-16.94	50.00	22.60	0.20	10.26	Average
50	5.06	41.26	-18.74	60.00	30.80	0.20	10.26	QP
51	5.59	41.77	-18.23	60.00	31.30	0.20	10.27	QP
52	5.59	32.37	-17.63	50.00	21.90	0.20	10.27	Average
53	6.32	43.40	-16.60	60.00	32.90	0.20	10.30	QP
54	6.32	34.10	-15.90	50.00	23.60	0.20	10.30	Average
55	6.88	44.12	-15.88	60.00	33.60	0.20	10.32	QP

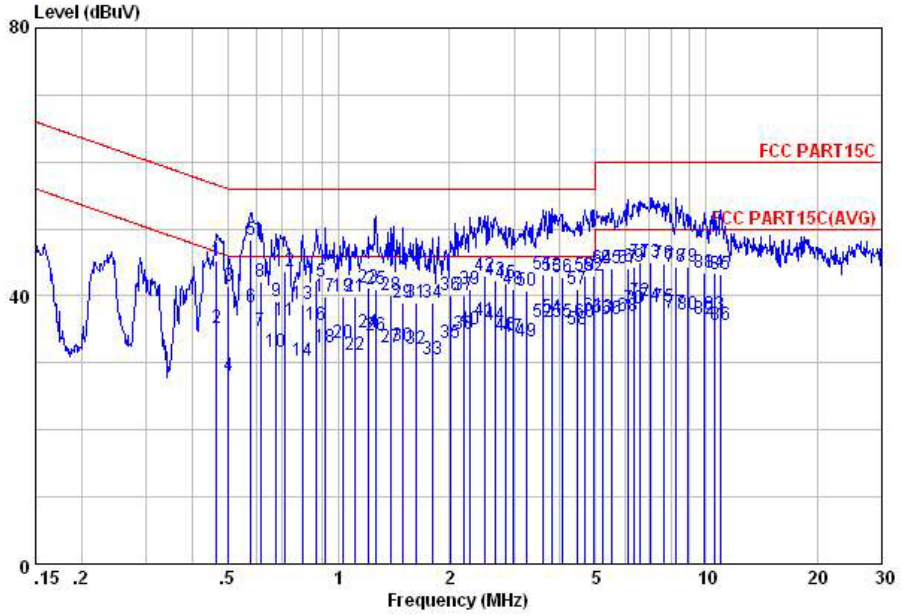
Test Mode :	Mode 1	**Temperature :**	22~24℃
Test Engineer :	Eligah Wang	**Relative Humidity :**	42~45%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)		



Site : C001-KS
Condition: FCC PART15C LISN-L20130306 LINE
Project : (FR) 461802
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
56	6.88	35.12	-14.88	50.00	24.60	0.20	10.32	Average
57	7.33	44.33	-15.67	60.00	33.80	0.20	10.33	QP
58	7.33	36.13	-13.87	50.00	25.60	0.20	10.33	Average
59	7.65	44.43	-15.57	60.00	33.90	0.20	10.33	QP
60	7.65	35.43	-14.57	50.00	24.90	0.20	10.33	Average
61	8.19	35.14	-14.86	50.00	24.60	0.20	10.34	Average
62	8.19	44.44	-15.56	60.00	33.90	0.20	10.34	QP
63	8.87	43.15	-16.85	60.00	32.60	0.20	10.35	QP
64	8.87	34.15	-15.85	50.00	23.60	0.20	10.35	Average

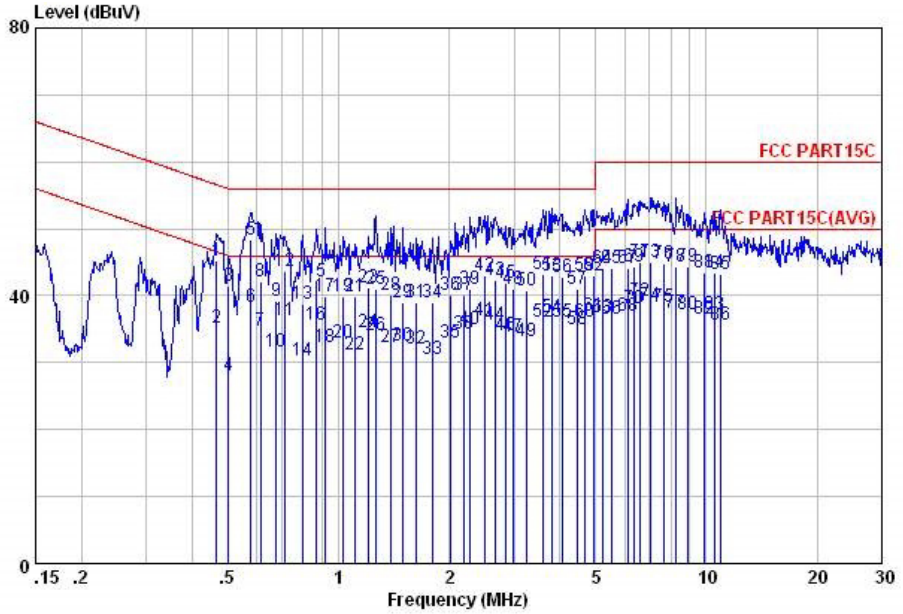
Test Mode :	Mode 1	**Temperature :**	22~24℃
Test Engineer :	Eligah Wang	**Relative Humidity :**	42~45%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)		



Site : C001-KS
Condition: FCC PART15C LISN-N20130306 NEUTRAL
Project : (FR) 461802
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.47	45.20	-11.38	56.58	34.60	0.33	10.27	QP
2	0.47	35.20	-11.38	46.58	24.60	0.33	10.27	Average
3	0.50	41.36	-14.64	56.00	30.80	0.30	10.26	QP
4	0.50	28.16	-17.84	46.00	17.60	0.30	10.26	Average
5	0.58	48.41	-7.59	56.00	37.90	0.26	10.25	QP
6	0.58	38.41	-7.59	46.00	27.90	0.26	10.25	Average
7	0.61	34.77	-11.23	46.00	24.30	0.23	10.24	Average
8	0.61	42.07	-13.93	56.00	31.60	0.23	10.24	QP
9	0.68	39.23	-16.77	56.00	28.80	0.21	10.22	QP
10	0.68	31.73	-14.27	46.00	21.30	0.21	10.22	Average
11	0.72	36.30	-9.70	46.00	25.89	0.20	10.21	Average
12	0.72	43.70	-12.30	56.00	33.29	0.20	10.21	QP
13	0.80	38.66	-17.34	56.00	28.29	0.17	10.20	QP
14	0.80	30.26	-15.74	46.00	19.89	0.17	10.20	Average
15	0.87	42.22	-13.78	56.00	31.90	0.13	10.19	QP
16	0.87	35.62	-10.38	46.00	25.30	0.13	10.19	Average
17	0.92	39.90	-16.10	56.00	29.59	0.12	10.19	QP
18	0.92	32.20	-13.80	46.00	21.89	0.12	10.19	Average
19	1.03	39.88	-16.12	56.00	29.60	0.10	10.18	QP
20	1.03	32.88	-13.12	46.00	22.60	0.10	10.18	Average
21	1.11	39.88	-16.12	56.00	29.60	0.10	10.18	QP
22	1.11	31.18	-14.82	46.00	20.90	0.10	10.18	Average
23	1.21	41.18	-14.82	56.00	30.90	0.10	10.18	QP
24	1.21	34.58	-11.42	46.00	24.30	0.10	10.18	Average
25	1.26	41.08	-14.92	56.00	30.80	0.10	10.18	QP
26	1.26	34.18	-11.82	46.00	23.90	0.10	10.18	Average
27	1.38	32.38	-13.62	46.00	22.10	0.10	10.18	Average
28	1.38	40.18	-15.82	56.00	29.90	0.10	10.18	QP

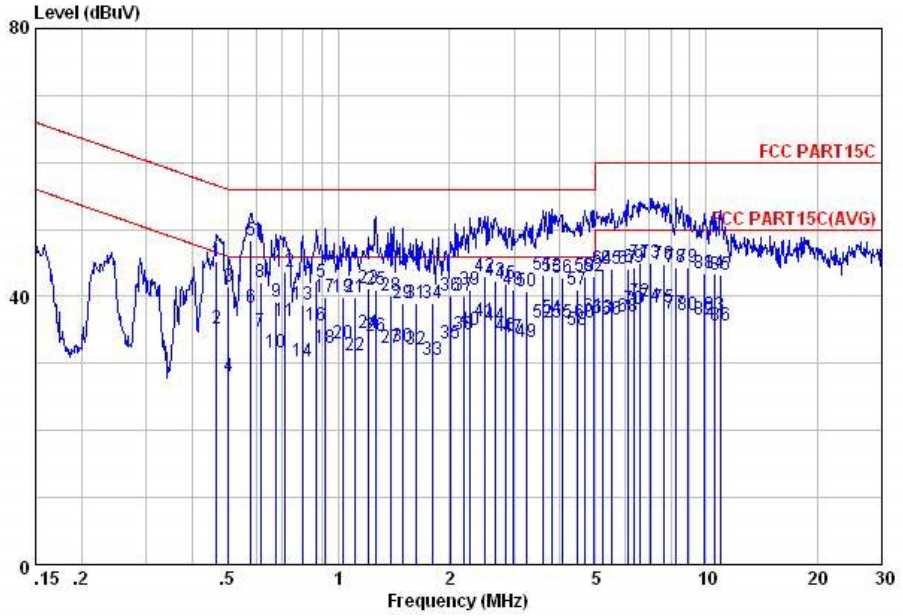
Test Mode :	Mode 1	**Temperature :**	22~24℃
Test Engineer :	Eligah Wang	**Relative Humidity :**	42~45%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)		



Site : C001-KS
Condition: FCC PART15C LISN-N20130306 NEUTRAL
Project : (FR) 461802
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
29	1.50	38.89	-17.11	56.00	28.60	0.10	10.19	QP
30	1.50	32.59	-13.41	46.00	22.30	0.10	10.19	Average
31	1.63	38.89	-17.11	56.00	28.60	0.10	10.19	QP
32	1.63	32.19	-13.81	46.00	21.90	0.10	10.19	Average
33	1.80	30.59	-15.41	46.00	20.30	0.10	10.19	Average
34	1.80	38.89	-17.11	56.00	28.60	0.10	10.19	QP
35	2.01	33.09	-12.91	46.00	22.80	0.10	10.19	Average
36	2.01	40.19	-15.81	56.00	29.90	0.10	10.19	QP
37	2.20	40.20	-15.80	56.00	29.90	0.11	10.19	QP
38	2.20	34.40	-11.60	46.00	24.10	0.11	10.19	Average
39	2.27	40.90	-15.10	56.00	30.59	0.11	10.20	QP
40	2.27	34.90	-11.10	46.00	24.59	0.11	10.20	Average
41	2.49	36.22	-9.78	46.00	25.91	0.11	10.20	Average
42	2.49	43.12	-12.88	56.00	32.81	0.11	10.20	QP
43	2.68	42.23	-13.77	56.00	31.90	0.12	10.21	QP
44	2.68	35.63	-10.37	46.00	25.30	0.12	10.21	Average
45	2.84	41.94	-14.06	56.00	31.59	0.13	10.22	QP
46	2.84	34.14	-11.86	46.00	23.79	0.13	10.22	Average
47	2.99	33.96	-12.04	46.00	23.60	0.14	10.22	Average
48	2.99	40.96	-15.04	56.00	30.60	0.14	10.22	QP
49	3.24	33.28	-12.72	46.00	22.89	0.16	10.23	Average
50	3.24	40.68	-15.32	56.00	30.29	0.16	10.23	QP
51	3.58	43.31	-12.69	56.00	32.91	0.17	10.23	QP
52	3.58	36.01	-9.99	46.00	25.61	0.17	10.23	Average
53	3.82	43.02	-12.98	56.00	32.60	0.18	10.24	QP
54	3.82	36.72	-9.28	46.00	26.30	0.18	10.24	Average
55	4.05	36.03	-9.97	46.00	25.60	0.19	10.24	Average

Test Mode :	Mode 1	**Temperature :**	22~24℃
Test Engineer :	Eligah Wang	**Relative Humidity :**	42~45%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	CDMA2000 BC1 Idle + WLAN (2.4G) Link + USB Cable (Charging from Adapter)		



Site : C001-KS
Condition: FCC PART15C LISN-N20130306 NEUTRAL
Project : (FR) 461802
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
56	4.05	42.73	-13.27	56.00	32.30	0.19	10.24	QP
57	4.48	41.04	-14.96	56.00	30.60	0.19	10.25	QP
58	4.48	35.04	-10.96	46.00	24.60	0.19	10.25	Average
59	4.67	43.05	-12.95	56.00	32.60	0.20	10.25	QP
60	4.67	36.05	-9.95	46.00	25.60	0.20	10.25	Average
61	4.95	37.06	-8.94	46.00	26.60	0.20	10.26	Average
62	4.95	43.06	-12.94	56.00	32.60	0.20	10.26	QP
63	5.22	36.76	-13.24	50.00	26.30	0.20	10.26	Average
64	5.22	44.06	-15.94	60.00	33.60	0.20	10.26	QP
65	5.53	44.07	-15.93	60.00	33.60	0.20	10.27	QP
66	5.53	36.57	-13.43	50.00	26.10	0.20	10.27	Average
67	6.12	44.09	-15.91	60.00	33.60	0.20	10.29	QP
68	6.12	37.09	-12.91	50.00	26.60	0.20	10.29	Average
69	6.35	44.40	-15.60	60.00	33.90	0.20	10.30	QP
70	6.35	38.10	-11.90	50.00	27.60	0.20	10.30	Average
71	6.59	45.11	-14.89	60.00	34.60	0.20	10.31	QP
72	6.59	39.11	-10.89	50.00	28.60	0.20	10.31	Average
73	7.06	45.12	-14.88	60.00	34.60	0.20	10.32	QP
74	7.06	38.62	-11.38	50.00	28.10	0.20	10.32	Average
75	7.65	38.43	-11.57	50.00	27.90	0.20	10.33	Average
76	7.65	44.83	-15.17	60.00	34.30	0.20	10.33	QP
77	8.28	37.44	-12.56	50.00	26.90	0.20	10.34	Average
78	8.28	44.34	-15.66	60.00	33.80	0.20	10.34	QP
79	8.87	44.35	-15.65	60.00	33.80	0.20	10.35	QP
80	8.87	37.15	-12.85	50.00	26.60	0.20	10.35	Average
81	9.86	43.36	-16.64	60.00	32.80	0.20	10.36	QP
82	9.86	36.46	-13.54	50.00	25.90	0.20	10.36	Average
83	10.56	37.17	-12.83	50.00	26.60	0.21	10.36	Average
84	10.56	43.37	-16.63	60.00	32.80	0.21	10.36	QP
85	10.90	43.17	-16.83	60.00	32.59	0.22	10.36	QP
86	10.90	35.67	-14.33	50.00	25.09	0.22	10.36	Average

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For CDD transmissions, directional gain is calculated as

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

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

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

For power measurements on IEEE 802.11 devices,

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

The EUT supports CDD mode.

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

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

	Ant. 1 (dBi)	Ant. 2 (dBi)	for Power (dBi)	for PSD (dBi)	Limit Reduction (dB)	Limit Reduction (dB)
2.4 GHz	1.60	1.60	1.60	4.61	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

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. 28, 2013	Aug. 07, 2014~ Aug. 21, 2014	Dec. 27, 2014	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	30MHz~40GHz	Feb. 27, 2014	Aug. 07, 2014~ Aug. 21, 2014	Feb. 26, 2015	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Feb. 27, 2014	Aug. 07, 2014~ Aug. 21, 2014	Feb. 26, 2015	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 05, 2013	Jul. 30, 2014	Nov. 04, 2014	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 28, 2013	Jul. 30, 2014	Dec. 27, 2014	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 09, 2013	Jul. 30, 2014	Oct. 08, 2014	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 08, 2014	Jul. 30, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 08, 2014	Jul. 30, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 18, 2013	Jul. 30, 2014	Nov. 17, 2014	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Mar. 10, 2014	Jul. 30, 2014	Mar. 09, 2015	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161073	1MHz~1GHz	May 04, 2014	Jul. 30, 2014	May 03, 2015	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02371	1GHz~26.5GHz	Dec. 10, 2013	Jul. 30, 2014	Dec. 09, 2014	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 30, 2014	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Jul. 30, 2014	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Jul. 30, 2014	NCR	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 04, 2014	Jul. 31, 2014	May 03, 2015	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Dec. 10, 2013	Jul. 31, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Dec. 10, 2013	Jul. 31, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Nov. 12, 2013	Jul. 31, 2014	Nov. 11, 2014	Conduction (CO01-KS)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.3

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.5