

FCC RF Test Report

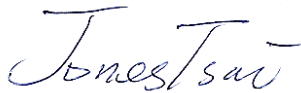
APPLICANT : ZTE CORPORATION
EQUIPMENT : Vodafone Mobile Wi-Fi
BRAND NAME : ZTE
MODEL NAME : R207-Z
FCC ID : SRQ-R207-Z
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Oct. 27, 2014 and testing was completed on Nov. 13, 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



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	5
1.5 Modification of EUT	6
1.6 Testing Location	6
1.7 Applicable Standards.....	6
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	7
2.1 Carrier Frequency Channel	7
2.2 Pre-Scanned RF Power.....	8
2.3 Test Mode.....	9
2.4 Connection Diagram of Test System.....	10
2.5 Support Unit used in test configuration and system	11
2.6 EUT Operation Test Setup	11
2.7 Measurement Results Explanation Example.....	11
3 TEST RESULT.....	12
3.1 6dB Bandwidth Measurement	12
3.2 Output Power Measurement.....	15
3.3 Power Spectral Density Measurement	18
3.4 Conducted Band Edges and Spurious Emission Measurement	21
3.5 Radiated Band Edges and Spurious Emission Measurement	34
3.6 AC Conducted Emission Measurement.....	55
3.7 Antenna Requirements.....	59
4 LIST OF MEASURING EQUIPMENT	60
5 UNCERTAINTY OF EVALUATION	61
APPENDIX A. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR402702	Rev. 01	Initial issue of report	Nov. 17, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.2	15.247(b)	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	Conducted Band Edges	$\leq 20\text{dBc}$	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 1.40 dB at 2390.000 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 16.41 dB at 0.290 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	Vodafone Mobile Wi-Fi
Brand Name	ZTE
Model Name	R207-Z
FCC ID	SRQ-R207-Z
EUT supports Radios application	GSM/GPRS/EGPRS WLAN2.4GHz 802.11b/g/n HT20/HT40/
HW Version	ddxB_P1
SW Version	VDF_DE_MF65MV1.0.0B01
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	802.11b/g/n : 2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to Antenna	802.11b : 14.42 dBm (0.0277 W) 802.11g : 21.73 dBm (0.1489 W) 802.11n HT20 : 22.23 dBm (0.1671 W) 802.11n HT40 : 20.54 dBm (0.1132 W)
Antenna Type/ Gain	802.11b/g/n : PCB Antenna with gain 2.90 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.5 Modification of EUT

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

1.6 Testing 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	CO01-KS	03CH01-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
- ♦ 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 (X plane) were recorded in this report.

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

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

2.1 Carrier Frequency Channel

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

2.2 Pre-Scanned RF Power

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

2.4GHz 802.11b RF Output Power (dBm)						
Power vs. Channel			Power vs. Data Rate			
Channel	Frequency (MHz)	Data Rate 1Mbps	Channel	2Mbps	5.5Mbps	11Mbps
CH 01	2412 MHz	14.42	CH 01	14.26	14.17	14.20
CH 06	2437 MHz	13.94				
CH 11	2462 MHz	13.86				

2.4GHz 802.11g RF Output Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	Data Rate 6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 01	2412 MHz	21.73	CH 01	21.69	21.72	21.66	21.59	21.63	21.67	21.61
CH 06	2437 MHz	21.25								
CH 11	2462 MHz	20.57								

2.4GHz 802.11n HT20 RF Output Power (dBm)										
Power vs. Channel			Power vs. MCS Index							
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	22.23	CH 01	22.20	22.16	22.11	22.18	22.09	22.12	22.15
CH 06	2437 MHz	22.05								
CH 11	2462 MHz	21.35								

2.4GHz 802.11n HT40 RF Output Power (dBm)										
Power vs. Channel			Power vs. MCS Index							
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 03	2422 MHz	20.54	CH 03	20.49	20.45	20.41	20.37	20.39	20.43	20.42
CH 06	2437 MHz	20.42								
CH 09	2452 MHz	20.46								

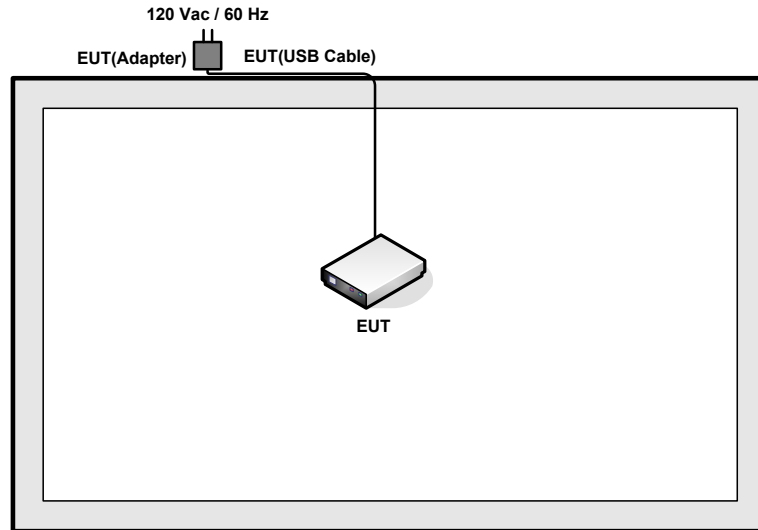
2.3 Test Mode

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

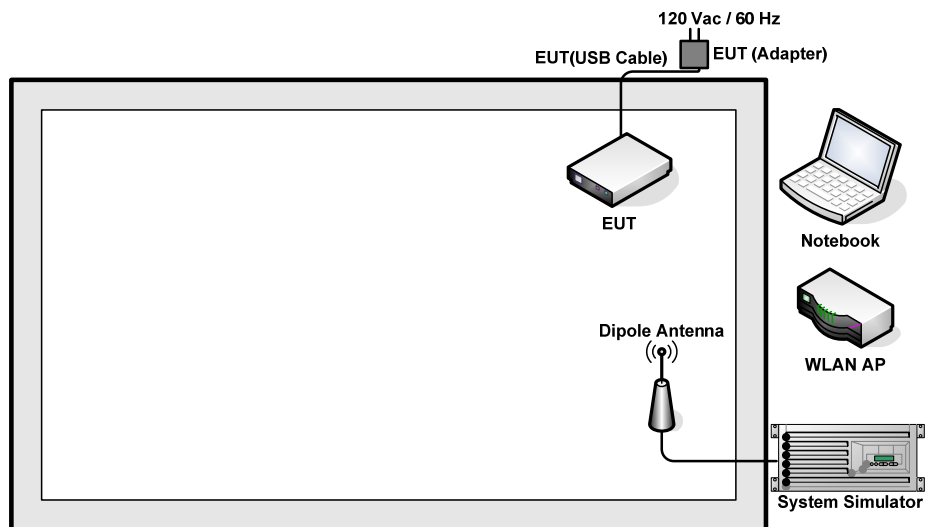
Test Cases				
Conducted TCs	Test Items	Mode	Data Rate	Test Channel
	6dB BW Power Spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9
	Conducted Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
		802.11n HT40	MCS0	3/9
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
802.11n HT40		MCS0	3/6/9	
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
		802.11n HT40	MCS0	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9
Test Cases				
AC Conducted Emission	Mode 1 : GPRS850 Idle + WLAN Link + USB Cable(Charging from Adapter)			
Remark: For Radiated TCs, the tests were performed with adapter and USB cable.				

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.	WLAN AP	D-link	DIR-815	KA2IR815A1	N/A	Unshielded, 1.8m
3.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2 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 6.0 dB

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 6.0 \text{ (dB)}\end{aligned}$$

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.

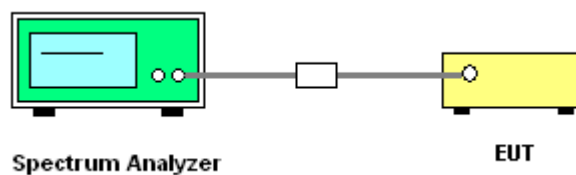
3.1.2 Measuring Instruments

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.

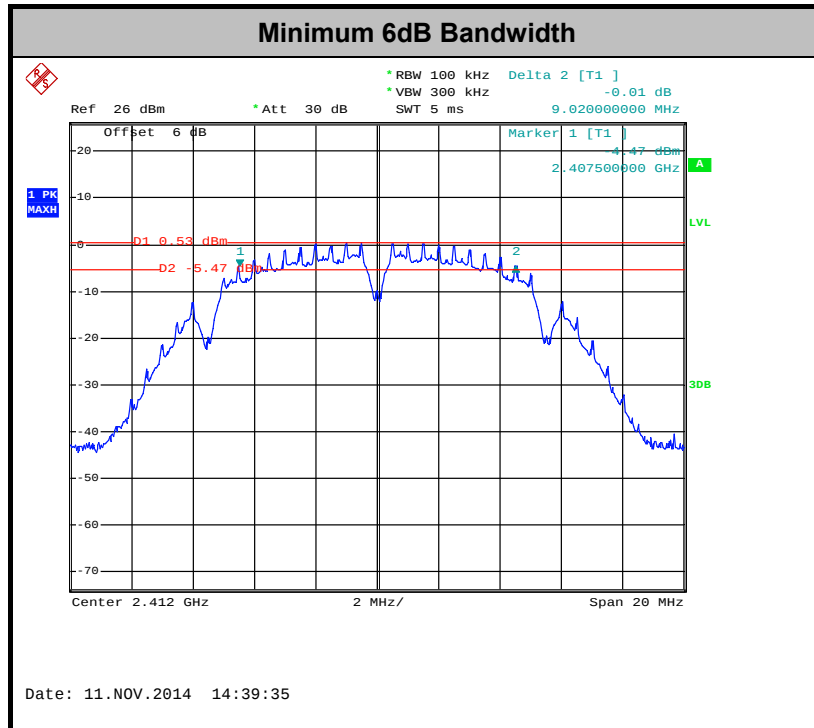
3.1.4 Test Setup



**3.1.5 Test Result of 6dB Bandwidth**

Test Band :	2.4GHz	Temperature :	24~25°C
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
11b	1Mbps	1	1	2412	9.02	0.50	Pass
11b	1Mbps	1	6	2437	9.02	0.50	Pass
11b	1Mbps	1	11	2462	9.04	0.50	Pass
11g	6Mbps	1	1	2412	16.34	0.50	Pass
11g	6Mbps	1	6	2437	16.36	0.50	Pass
11g	6Mbps	1	11	2462	16.32	0.50	Pass
HT20	MCS0	1	1	2412	17.60	0.50	Pass
HT20	MCS0	1	6	2437	17.58	0.50	Pass
HT20	MCS0	1	11	2462	17.60	0.50	Pass
HT40	MCS0	1	3	2422	36.04	0.50	Pass
HT40	MCS0	1	6	2437	36.08	0.50	Pass
HT40	MCS0	1	9	2452	36.32	0.50	Pass



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

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

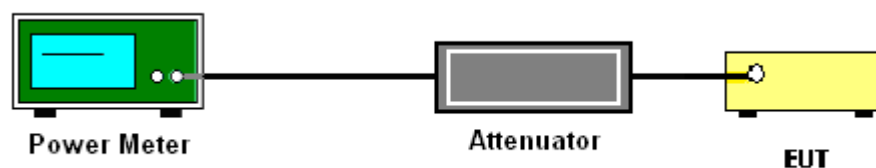
3.2.2 Measuring Instruments

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.

3.2.4 Test Setup





3.2.5 Test Result of Peak Output Power

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

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	RF Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	14.42	30.00	2.90	Pass
11b	1Mbps	1	6	2437	13.94	30.00	2.90	Pass
11b	1Mbps	1	11	2462	13.86	30.00	2.90	Pass
11g	6Mbps	1	1	2412	21.73	30.00	2.90	Pass
11g	6Mbps	1	6	2437	21.25	30.00	2.90	Pass
11g	6Mbps	1	11	2462	20.57	30.00	2.90	Pass
HT20	MCS0	1	1	2412	22.23	30.00	2.90	Pass
HT20	MCS0	1	6	2437	22.05	30.00	2.90	Pass
HT20	MCS0	1	11	2462	21.35	30.00	2.90	Pass
HT40	MCS0	1	3	2422	20.54	30.00	2.90	Pass
HT40	MCS0	1	6	2437	20.42	30.00	2.90	Pass
HT40	MCS0	1	9	2452	20.46	30.00	2.90	Pass

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

**3.2.6 Test Result of Average output Power (Reporting Only)**

Test Mode :	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 Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	0.03	11.01	30	2.90	Pass
11b	1Mbps	1	6	2437	0.03	10.54	30	2.90	Pass
11b	1Mbps	1	11	2462	0.03	10.50	30	2.90	Pass
11g	6Mbps	1	1	2412	0.18	10.86	30	2.90	Pass
11g	6Mbps	1	6	2437	0.18	10.70	30	2.90	Pass
11g	6Mbps	1	11	2462	0.18	10.14	30	2.90	Pass
HT20	MCS0	1	1	2412	0.23	10.98	30	2.90	Pass
HT20	MCS0	1	6	2437	0.23	10.79	30	2.90	Pass
HT20	MCS0	1	11	2462	0.23	10.45	30	2.90	Pass
HT40	MCS0	1	3	2422	0.40	9.44	30	2.90	Pass
HT40	MCS0	1	6	2437	0.40	9.35	30	2.90	Pass
HT40	MCS0	1	9	2452	0.40	9.38	30	2.90	Pass

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.

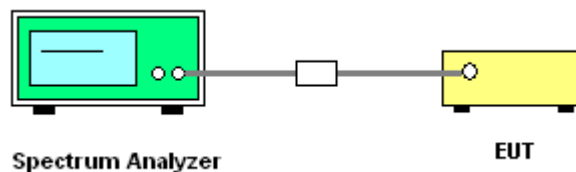
3.3.2 Measuring Instruments

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.

3.3.4 Test Setup



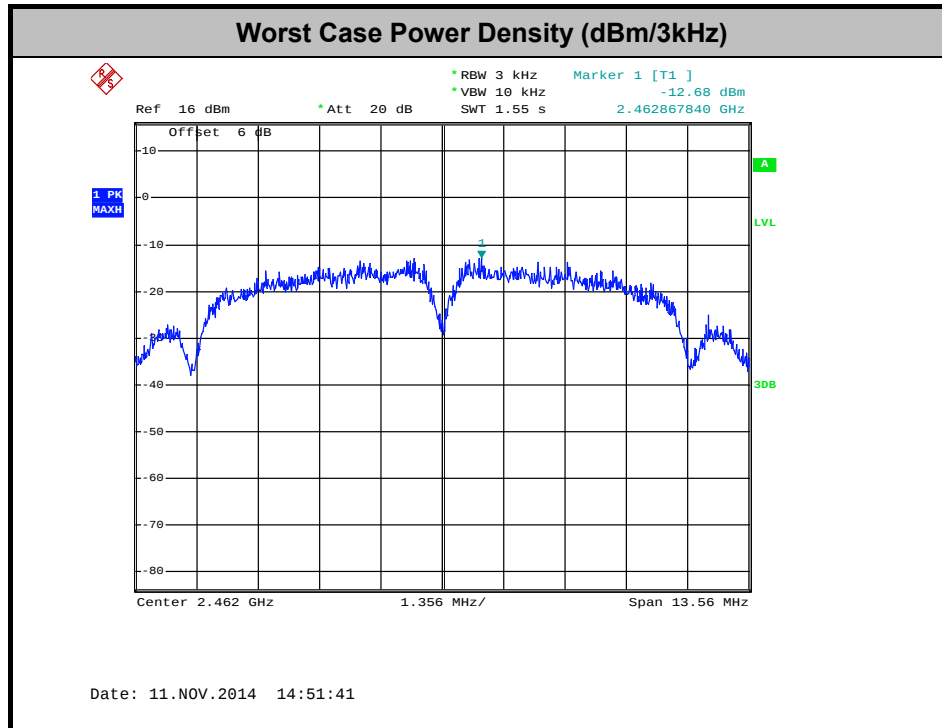


3.3.5 Test Result of Power Spectral Density

Test Mode :	2.4GHz	Temperature :	24~25°C
Test Engineer :	Issac Song	Relative Humidity :	49~51%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Peak Power Density (dBm/3kHz)	Max. Limits (dBm/3kHz)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	-13.33	8	2.90	Pass
11b	1Mbps	1	6	2437	-13.06	8	2.90	Pass
11b	1Mbps	1	11	2462	-12.68	8	2.90	Pass
11g	6Mbps	1	1	2412	-13.82	8	2.90	Pass
11g	6Mbps	1	6	2437	-14.08	8	2.90	Pass
11g	6Mbps	1	11	2462	-14.07	8	2.90	Pass
HT20	MCS0	1	1	2412	-14.03	8	2.90	Pass
HT20	MCS0	1	6	2437	-14.45	8	2.90	Pass
HT20	MCS0	1	11	2462	-13.43	8	2.90	Pass
HT40	MCS0	1	3	2422	-18.60	8	2.90	Pass
HT40	MCS0	1	6	2437	-19.43	8	2.90	Pass
HT40	MCS0	1	9	2452	-19.21	8	2.90	Pass

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



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).

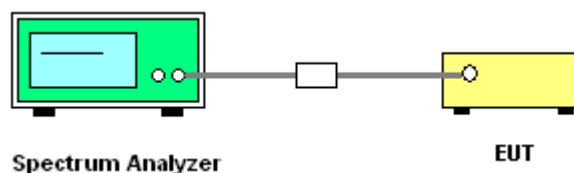
3.4.2 Measuring Instruments

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.

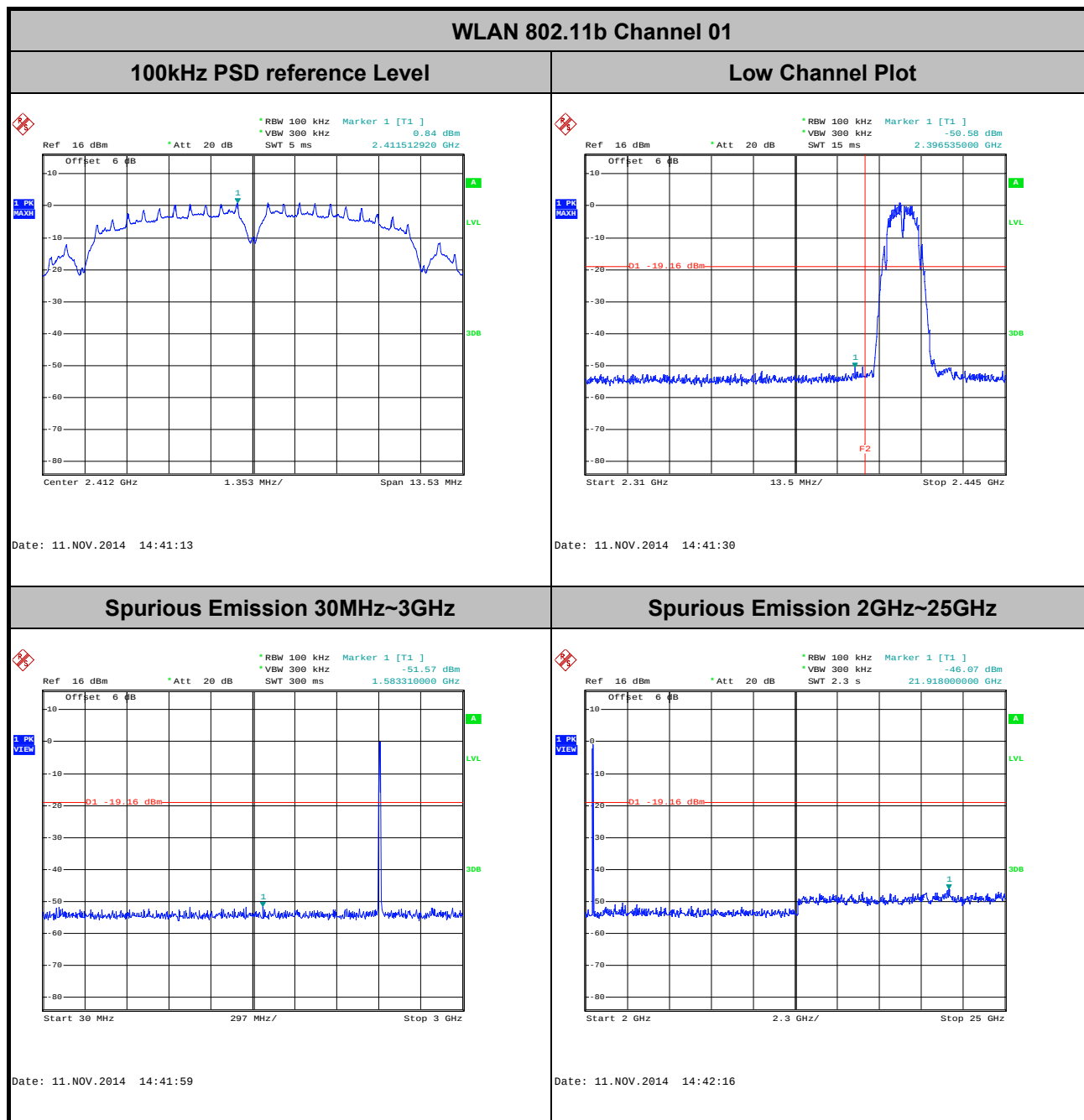
3.4.4 Test Setup





3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

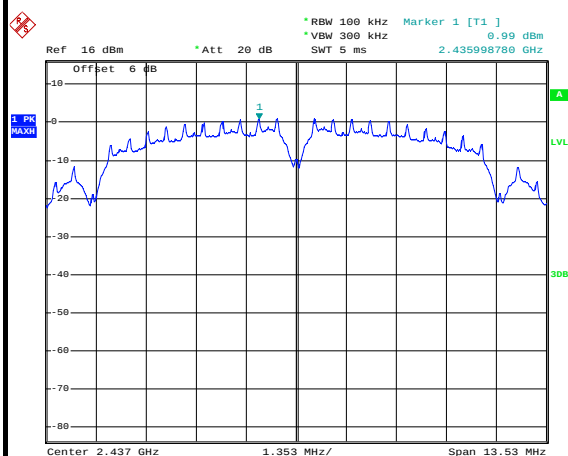




Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

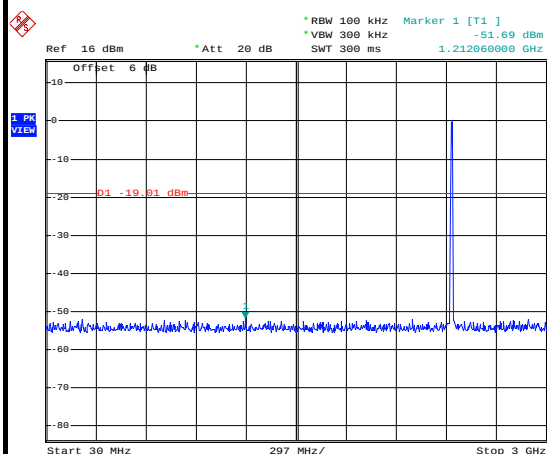
WLAN 802.11b Channel 06

100kHz PSD reference Level



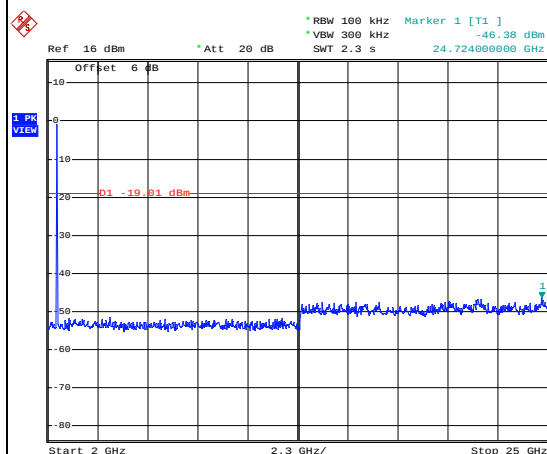
Date: 11.NOV.2014 14:48:04

Spurious Emission 30MHz~3GHz



Date: 11.NOV.2014 14:48:28

Spurious Emission 2GHz~25GHz



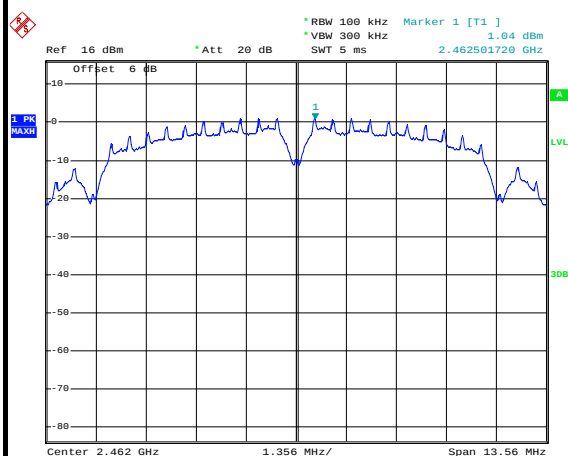
Date: 11.NOV.2014 14:48:46



Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

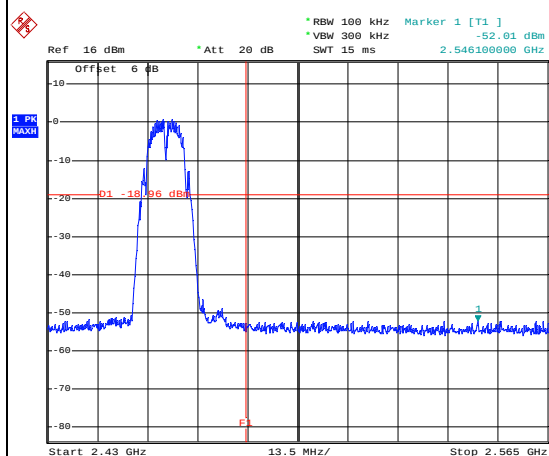
WLAN 802.11b Channel 11

100kHz PSD reference Level



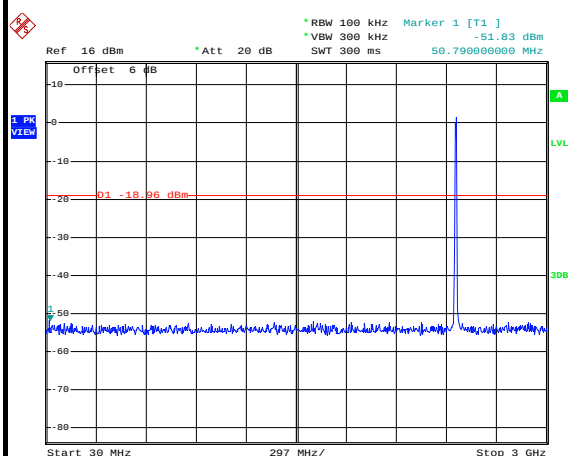
Date: 11.NOV.2014 14:52:04

High Channel Plot



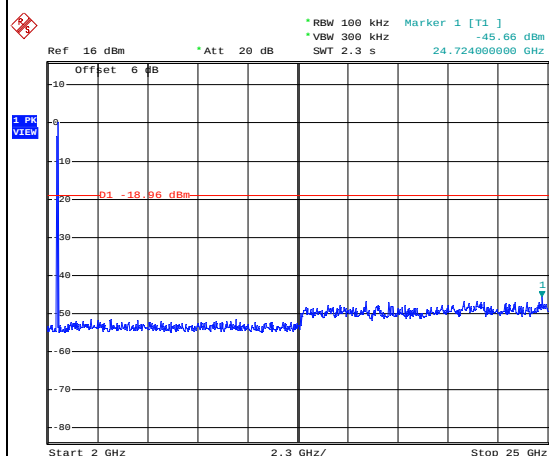
Date: 11.NOV.2014 14:52:24

Spurious Emission 30MHz~3GHz



Date: 11.NOV.2014 14:52:53

Spurious Emission 2GHz~25GHz



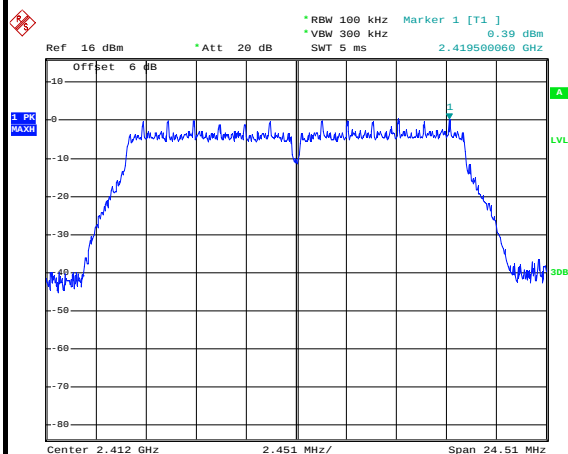
Date: 11.NOV.2014 14:53:11



Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

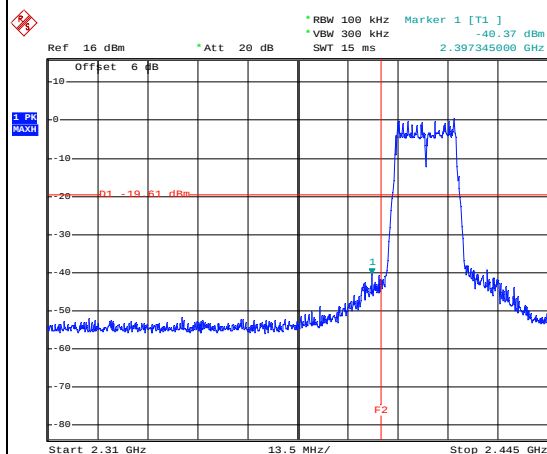
WLAN 802.11g Channel 01

100kHz PSD reference Level



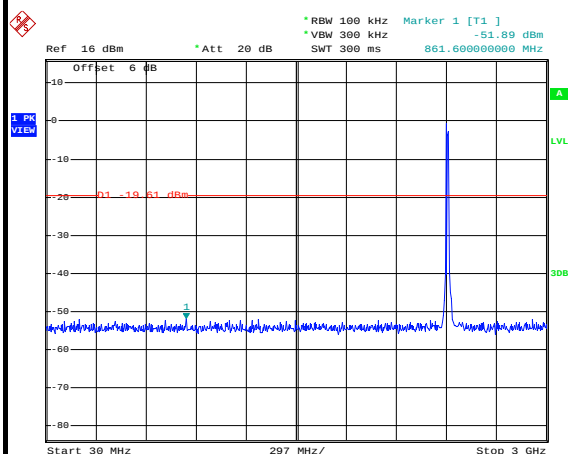
Date: 6.NOV.2014 15:52:11

Low Channel Plot



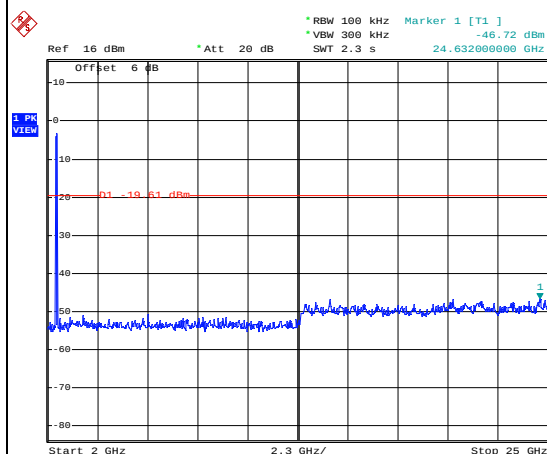
Date: 6.NOV.2014 15:52:29

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 15:52:53

Spurious Emission 2GHz~25GHz



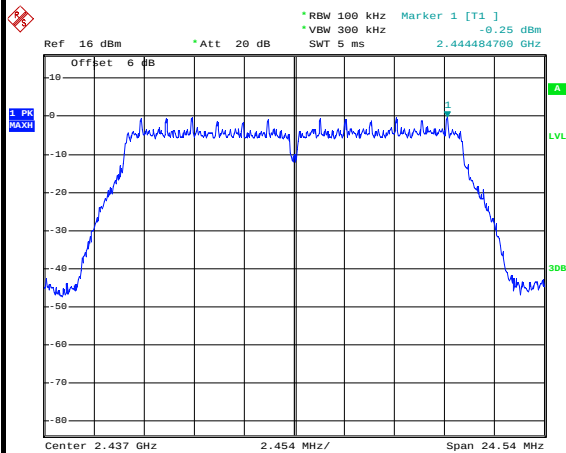
Date: 6.NOV.2014 15:53:11



Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

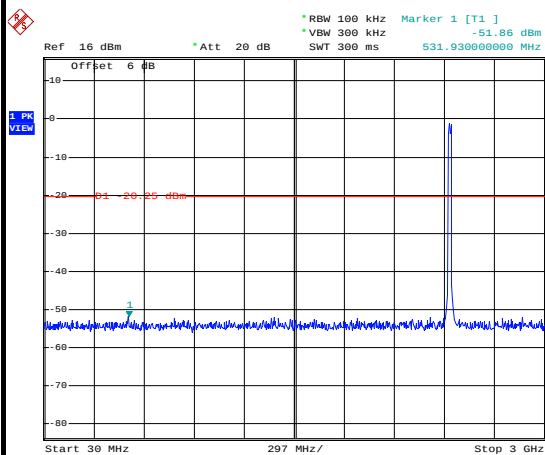
WLAN 802.11g Channel 06

100kHz PSD reference Level



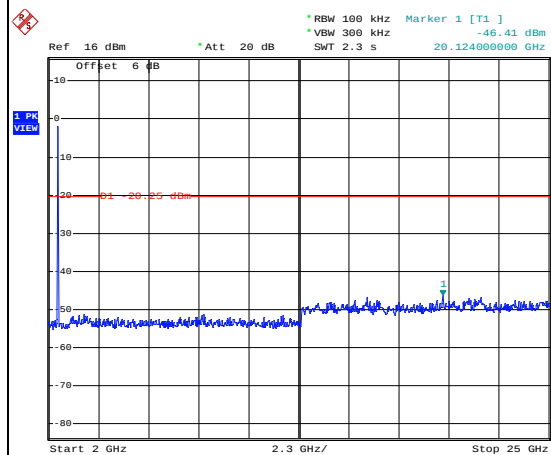
Date: 6.NOV.2014 16:07:35

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:08:38

Spurious Emission 2GHz~25GHz



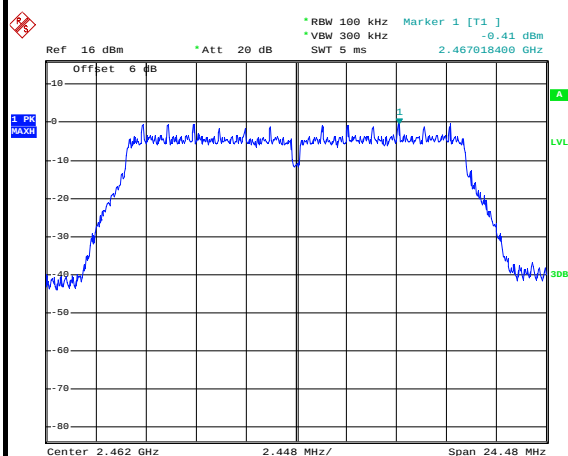
Date: 6.NOV.2014 16:08:56



Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

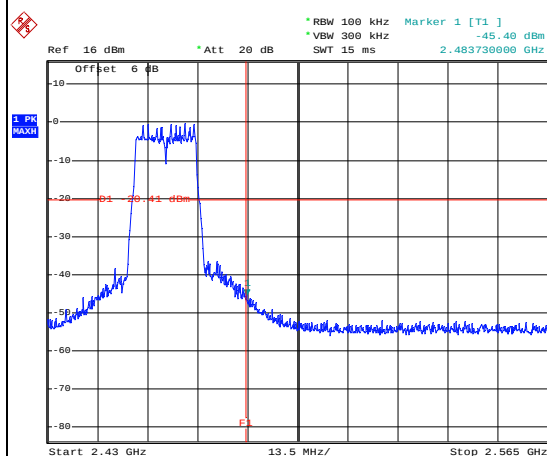
WLAN 802.11g Channel 11

100kHz PSD reference Level



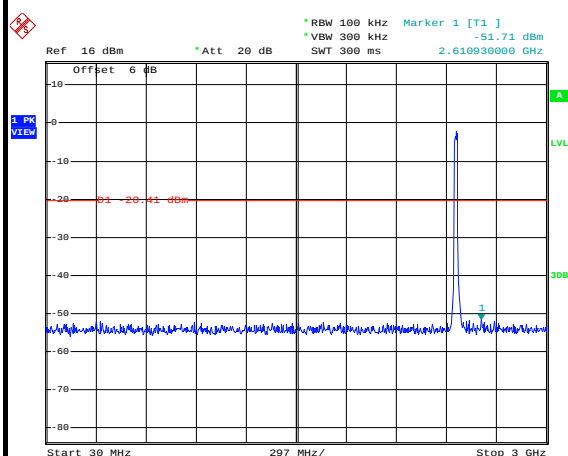
Date: 6.NOV.2014 16:03:34

High Channel Plot



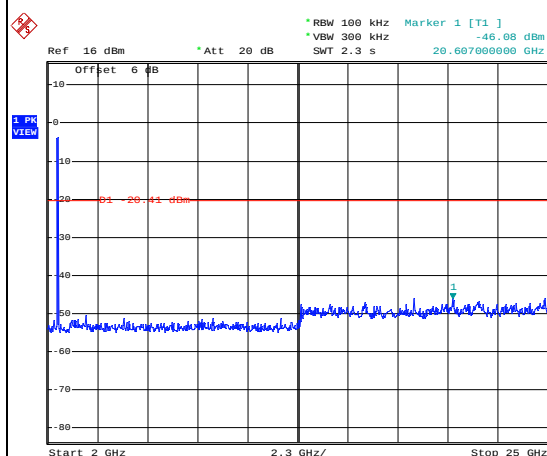
Date: 6.NOV.2014 16:03:53

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:04:17

Spurious Emission 2GHz~25GHz



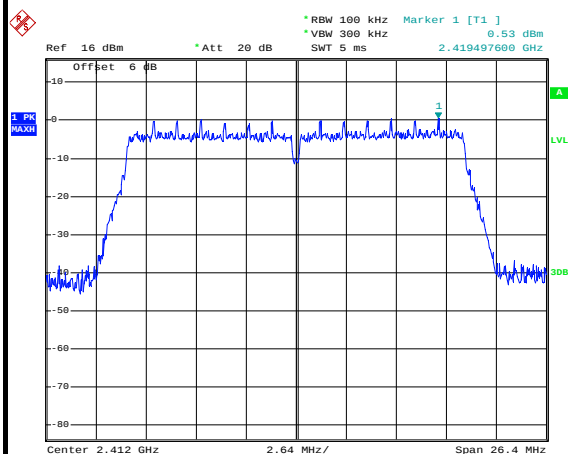
Date: 6.NOV.2014 16:04:35



Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

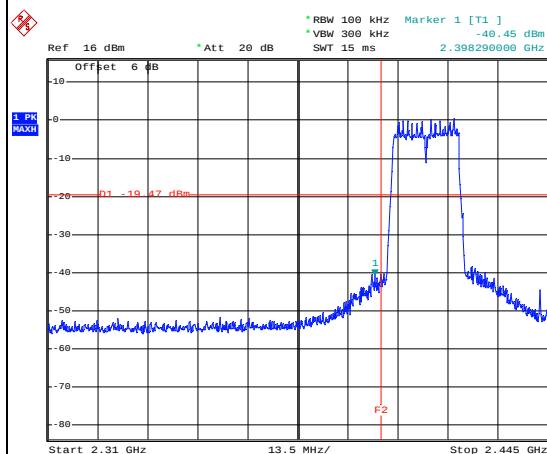
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



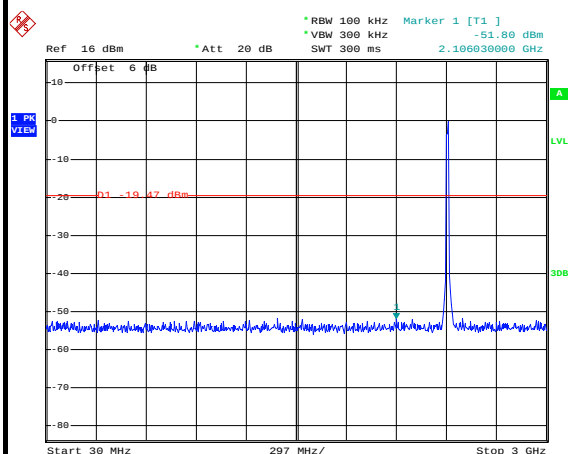
Date: 6.NOV.2014 16:13:29

Low Channel Plot



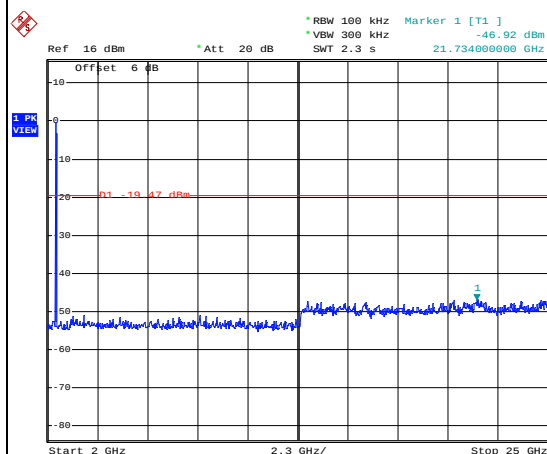
Date: 6.NOV.2014 16:13:47

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:14:10

Spurious Emission 2GHz~25GHz



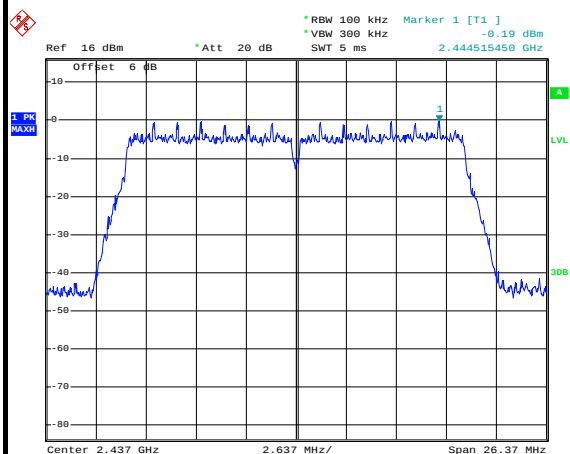
Date: 6.NOV.2014 16:14:28



Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

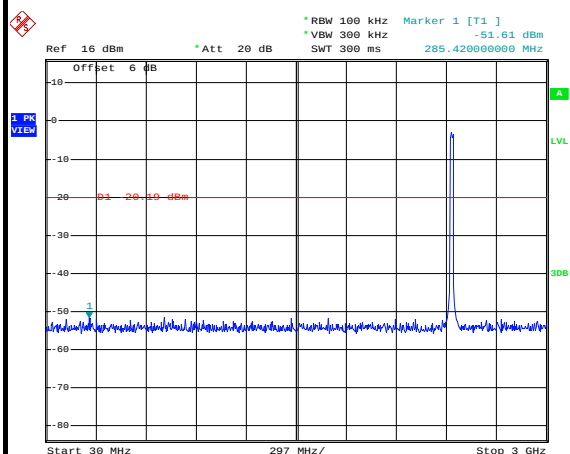
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



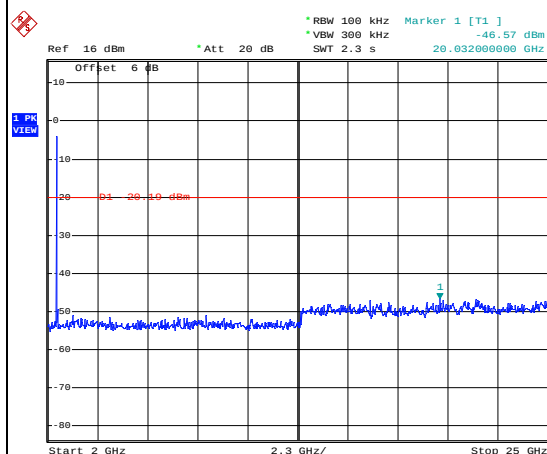
Date: 6.NOV.2014 16:17:42

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:18:07

Spurious Emission 2GHz~25GHz



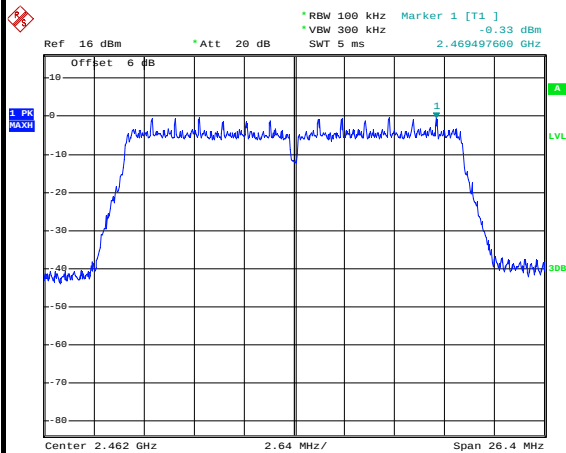
Date: 6.NOV.2014 16:18:25



Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

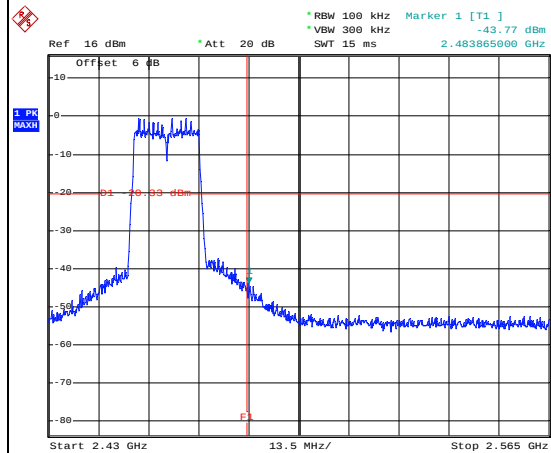
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



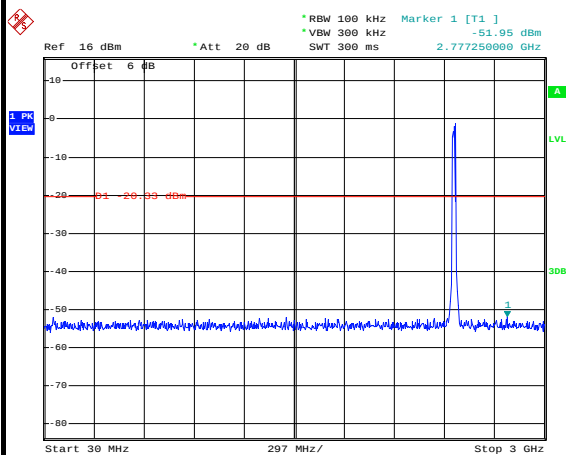
Date: 6.NOV.2014 16:21:25

High Channel Plot



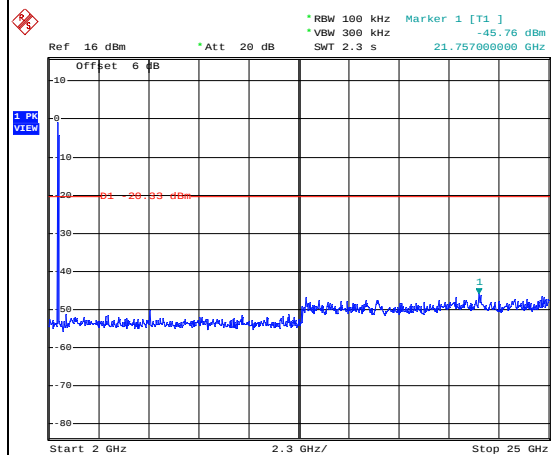
Date: 6.NOV.2014 16:21:44

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:22:56

Spurious Emission 2GHz~25GHz



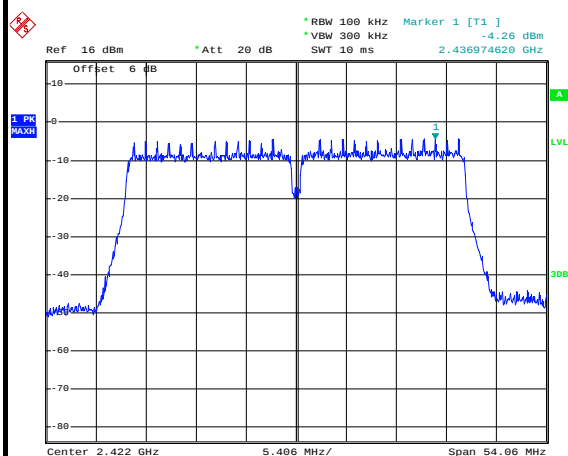
Date: 6.NOV.2014 16:23:14



Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	03	Test Engineer :	Issac Song

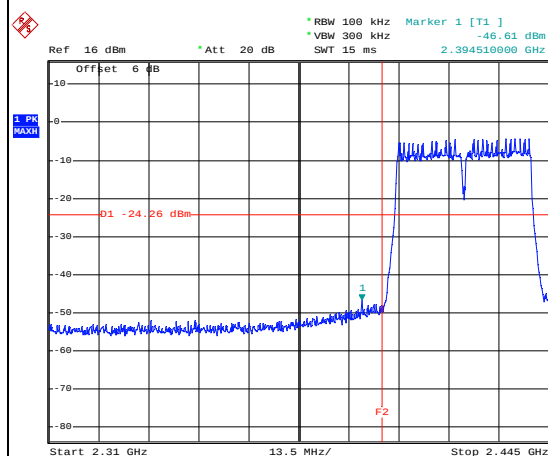
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



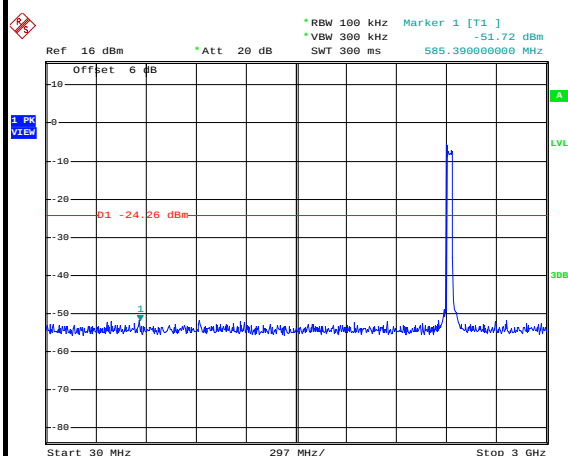
Date: 6.NOV.2014 16:27:44

Low Channel Plot



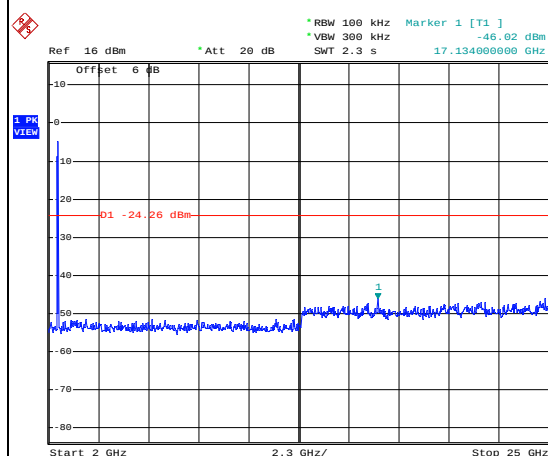
Date: 6.NOV.2014 16:28:02

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:29:07

Spurious Emission 2GHz~25GHz



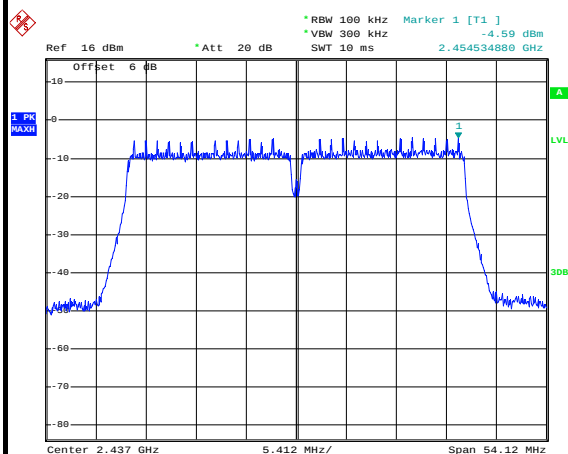
Date: 6.NOV.2014 16:29:24



Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

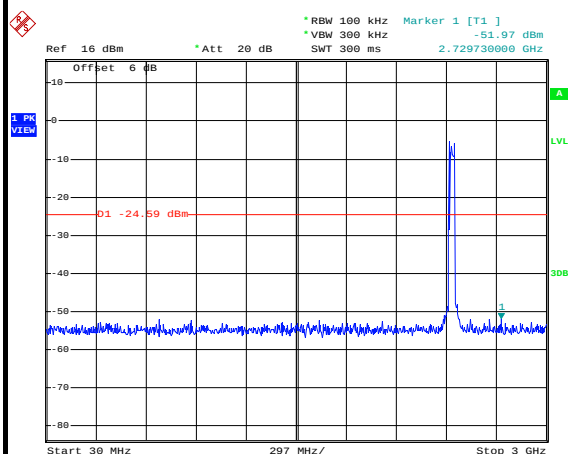
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



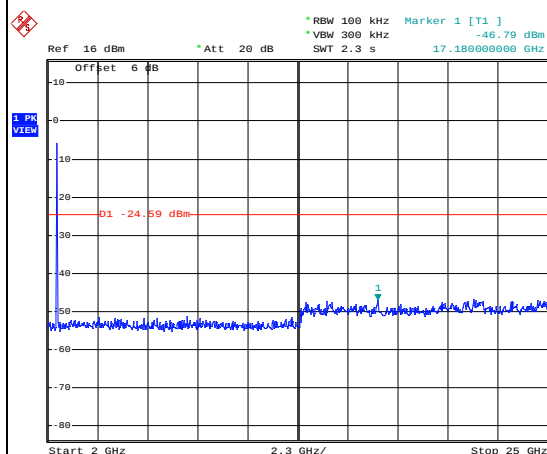
Date: 6.NOV.2014 16:32:23

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:37:20

Spurious Emission 2GHz~25GHz



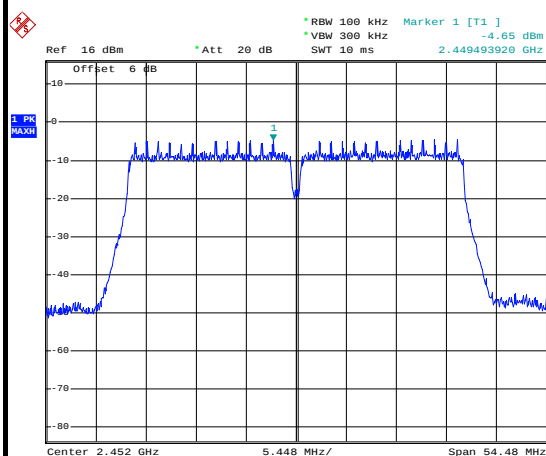
Date: 6.NOV.2014 16:34:24



Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	09	Test Engineer :	Issac Song

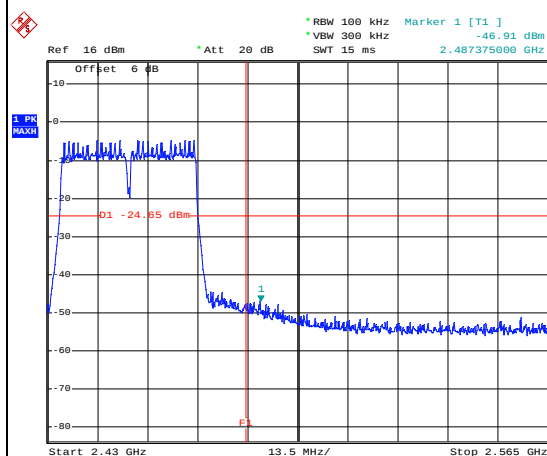
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



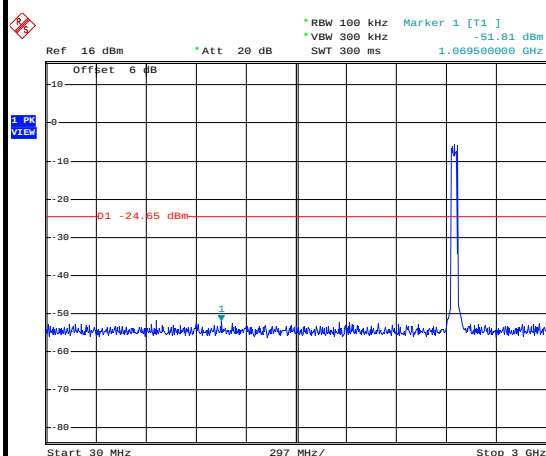
Date: 6.NOV.2014 16:42:12

High Channel Plot



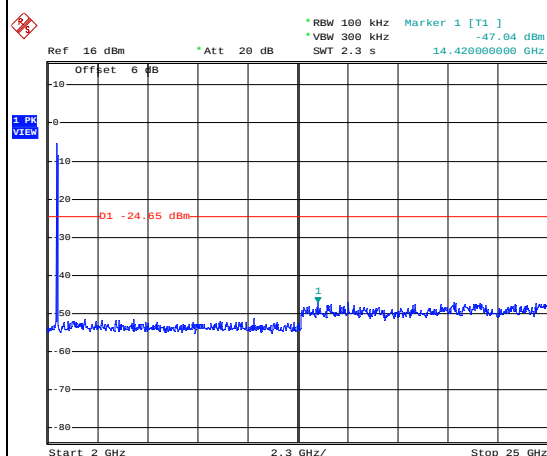
Date: 6.NOV.2014 16:42:33

Spurious Emission 30MHz~3GHz



Date: 6.NOV.2014 16:46:49

Spurious Emission 2GHz~25GHz



Date: 6.NOV.2014 16:44:58

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 Procedures

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

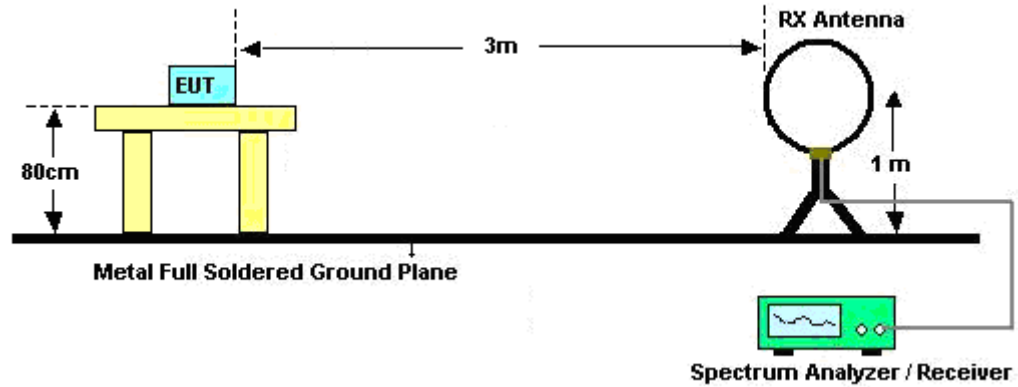
For average measurement:

 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

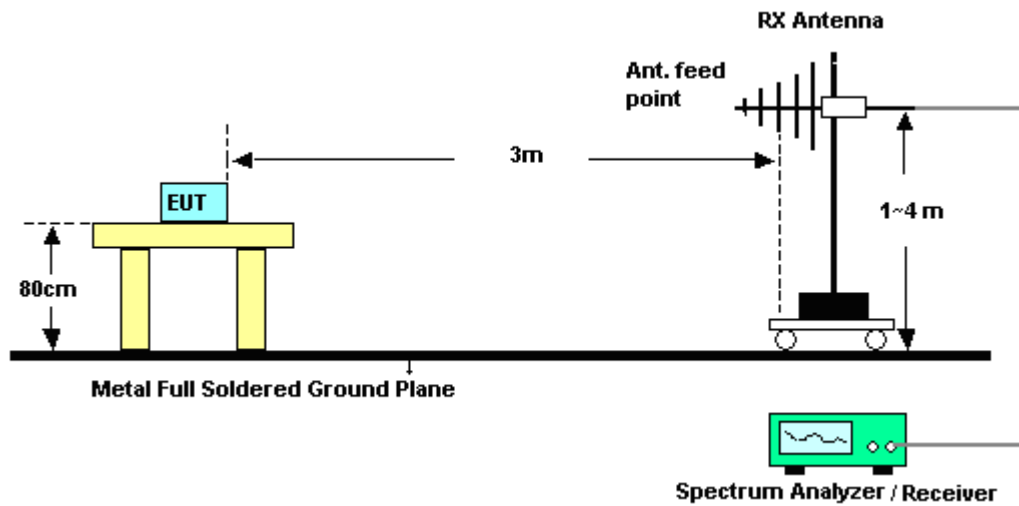
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	99.26	-	-	10Hz
802.11g	96.03	1.40	0.71	1kHz
2.4GHz 802.11n HT20	94.76	1.28	0.78	1kHz
2.4GHz 802.11n HT40	91.27	0.64	1.57	3kHz

3.5.4 Test Setup

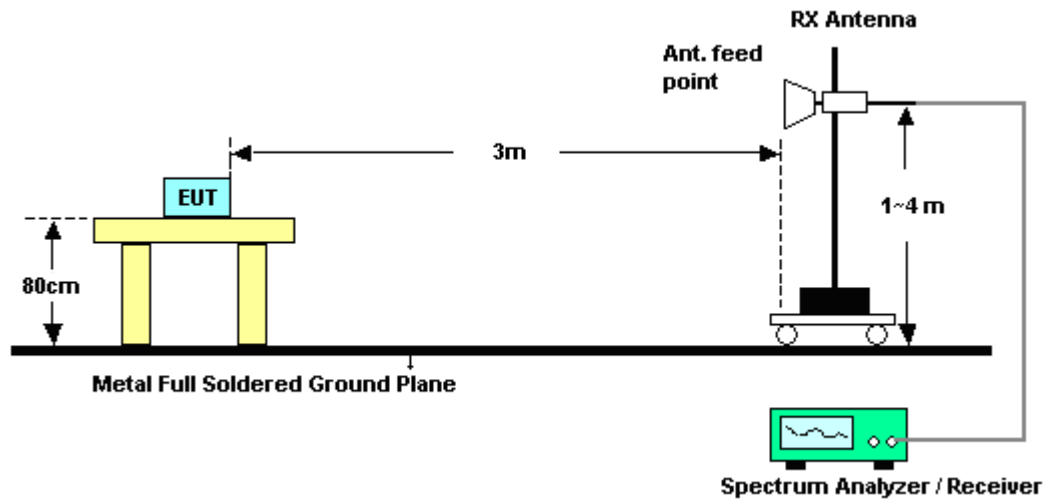
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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



3.5.6 Test Result of Radiated Spurious at Band Edges

Test Mode :	802.11b	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	40~41%
Test Channel :	01	Test Engineer :	Jun Liu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.48	55.37	-18.63	74	53.27	32.01	6.17	36.08	119	49	Peak
2389.92	42.19	-11.81	54	40.09	32.01	6.17	36.08	119	49	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
2386.05	51.69	-22.31	74	49.59	32.01	6.17	36.08	120	237	Peak
2390	39.06	-14.94	54	36.96	32.01	6.17	36.08	120	237	Average

Test Mode :	802.11b	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	40~41%
Test Channel :	11	Test Engineer :	Jun Liu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.04	57.57	-16.43	74	54.69	32.34	6.33	35.79	109	290	Peak
2483.5	44.37	-9.63	54	41.49	32.34	6.33	35.79	109	290	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
2490.01	52.07	-21.93	74	49.08	32.4	6.33	35.74	100	137	Peak
2483.56	39.79	-14.21	54	36.91	32.34	6.33	35.79	100	137	Average



Test Mode :	802.11g	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	40~41%
Test Channel :	01	Test Engineer :	Jun Liu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.38	71.51	-2.49	74	68.32	32.86	3.59	33.26	100	246	Peak
2390	46.07	-7.93	54	42.88	32.86	3.59	33.26	100	246	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.4	66.22	-7.78	74	63.03	32.86	3.59	33.26	100	140	Peak
2390	39.98	-14.02	54	36.79	32.86	3.59	33.26	100	140	Average

Test Mode :	802.11g	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	40~41%
Test Channel :	11	Test Engineer :	Jun Liu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2486.89	66.78	-7.22	74	63.41	33.01	3.65	33.29	100	215	Peak
2483.56	43.25	-10.75	54	39.88	33.01	3.65	33.29	100	215	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	67.88	-6.12	74	64.51	33.01	3.65	33.29	200	305	Peak
2483.53	44.03	-9.97	54	40.66	33.01	3.65	33.29	200	305	Average



Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	40~41%
Test Channel :	01	Test Engineer :	Jun Liu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	72.6	-1.4	74	69.41	32.86	3.59	33.26	200	108	Peak
2389.83	48.06	-5.94	54	44.87	32.86	3.59	33.26	200	108	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	66.5	-7.5	74	63.31	32.86	3.59	33.26	100	52	Peak
2389.92	41.3	-12.7	54	38.11	32.86	3.59	33.26	100	52	Average

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	40~41%
Test Channel :	11	Test Engineer :	Jun Liu

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
2483.77	69.98	-4.02	74	66.61	33.01	3.65	33.29	200	181	Peak
2483.62	46.58	-7.42	54	43.21	33.01	3.65	33.29	200	181	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2492.05	66.58	-7.42	74	63.17	33.05	3.66	33.3	102	93	Peak
2483.5	47.37	-6.63	54	44	33.01	3.65	33.29	102	93	Average



Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	40~41%
Test Channel :	03	Test Engineer :	Jun Liu

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
2389.65	70.03	-3.97	74	66.84	32.86	3.59	33.26	108	182	Peak
2379.75	44.11	-9.89	54	40.96	32.83	3.58	33.26	108	182	Average
2483.77	66.56	-7.44	74	63.19	33.01	3.65	33.29	108	182	Peak
2483.5	43.85	-10.15	54	40.48	33.01	3.65	33.29	108	182	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
2388.3	60.9	-13.1	74	57.71	32.86	3.59	33.26	200	230	Peak
2388.75	42.24	-11.76	54	39.05	32.86	3.59	33.26	200	230	Average
2485.93	59.58	-14.42	74	56.21	33.01	3.65	33.29	200	230	Peak
2483.54	39.13	-14.87	54	35.76	33.01	3.65	33.29	200	230	Average

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	40~41%
Test Channel :	09	Test Engineer :	Jun Liu

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
2388.93	56.28	-17.72	74	53.09	32.86	3.59	33.26	110	172	Peak
2389.56	38.35	-15.65	54	35.16	32.86	3.59	33.26	110	172	Average
2484.88	71.76	-2.24	74	68.39	33.01	3.65	33.29	110	172	Peak
2484.22	51.34	-2.66	54	47.97	33.01	3.65	33.29	110	172	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
2389.38	50.5	-23.5	74	47.31	32.86	3.59	33.26	200	223	Peak
2389.65	35.82	-18.18	54	32.63	32.86	3.59	33.26	200	223	Average
2490.25	61.27	-12.73	74	57.86	33.05	3.66	33.3	200	223	Peak
2483.56	45.86	-8.14	54	42.49	33.01	3.65	33.29	200	223	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	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	107.71	-	-	105.43	32.08	6.22	36.02	137	208	Peak
2412	102.08	-	-	99.8	32.08	6.22	36.02	137	208	Average
4824	47.16	-26.84	74	40.54	35.17	5.25	33.8	100	112	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	103.54	-	-	101.26	32.08	6.22	36.02	100	312	Peak
2412	97.99	-	-	95.71	32.08	6.22	36.02	100	312	Average
4824	46.99	-27.01	74	40.37	35.17	5.25	33.8	100	56	Peak



Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	108.3	-	-	105.78	32.21	6.22	35.91	110	303	Peak
2437	102.85	-	-	100.33	32.21	6.22	35.91	110	303	Average
4882	46.92	-27.08	74	40.26	35.18	5.28	33.8	100	61	Peak
7324	49.35	-24.65	74	40.64	36.21	6.63	34.13	100	105	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	103.24	-	-	100.72	32.21	6.22	35.91	126	311	Peak
2437	97.71	-	-	95.19	32.21	6.22	35.91	126	311	Average
4882	47.05	-26.95	74	40.39	35.18	5.28	33.8	100	102	Peak
7324	48.81	-25.19	74	40.1	36.21	6.63	34.13	100	51	Peak



Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	106.82	-	-	104.12	32.27	6.28	35.85	109	216	Peak
2462	101.11	-	-	98.41	32.27	6.28	35.85	109	216	Average
4924	48.37	-25.63	74	41.67	35.19	5.31	33.8	100	39	Peak
7386	49.86	-24.14	74	41.08	36.24	6.7	34.16	197	65	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	102.77	-	-	100.07	32.27	6.28	35.85	134	133	Peak
2462	97.4	-	-	94.7	32.27	6.28	35.85	134	133	Average
4924	47.92	-26.08	74	41.22	35.19	5.31	33.8	167	215	Peak
7386	50.12	-23.88	74	41.34	36.24	6.7	34.16	139	79	Peak



Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	106.71	-	-	103.48	32.89	3.61	33.27	100	246	Peak
2412	97.08	-	-	93.85	32.89	3.61	33.27	100	246	Average
4824	48.02	-25.98	74	41.4	35.17	5.25	33.8	164	79	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	103.38	-	-	100.15	32.89	3.61	33.27	100	140	Peak
2412	91.16	-	-	87.93	32.89	3.61	33.27	100	140	Average
4824	47.77	-26.23	74	41.15	35.17	5.25	33.8	100	37	Peak



Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	106.38	-	-	103.08	32.95	3.63	33.28	100	239	Peak
2437	94.19	-	-	90.89	32.95	3.63	33.28	100	239	Average
4874	48.15	-25.85	74	41.49	35.18	5.28	33.8	100	16	Peak
7312	49	-25	74	40.32	36.2	6.61	34.13	164	172	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	104.95	-	-	101.65	32.95	3.63	33.28	200	255	Peak
2437	93.89	-	-	90.59	32.95	3.63	33.28	200	255	Average
4874	47.19	-26.81	74	40.53	35.18	5.28	33.8	100	27	Peak
7312	48.98	-25.02	74	40.3	36.2	6.61	34.13	100	67	Peak



Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	104.86	-	-	101.53	32.98	3.64	33.29	100	215	Peak
2462	93.45	-	-	90.12	32.98	3.64	33.29	100	215	Average
4924	47.71	-26.29	74	41.01	35.19	5.31	33.8	100	201	Peak
7386	49.04	-24.96	74	40.26	36.24	6.7	34.16	200	164	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	104.23	-	-	100.9	32.98	3.64	33.29	200	305	Peak
2462	93.69	-	-	90.36	32.98	3.64	33.29	200	305	Average
4924	47.36	-26.64	74	40.66	35.19	5.31	33.8	200	64	Peak
7386	49.46	-24.54	74	40.68	36.24	6.7	34.16	100	28	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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
109.54	22.39	-21.11	43.5	43.22	11.8	0.98	33.61	-	-	Peak
210.42	27.7	-15.8	43.5	50.4	9.49	1.35	33.54	100	61	Peak
287.05	28.17	-17.83	46	47.2	12.8	1.56	33.39	-	-	Peak
355.92	25.34	-20.66	46	42.36	14.63	1.71	33.36	-	-	Peak
445.16	23.61	-22.39	46	38.58	16.28	1.96	33.21	-	-	Peak
742.95	24.34	-21.66	46	34.84	19.84	2.45	32.79	-	-	Peak
2412	108.71	-	-	105.48	32.89	3.61	33.27	200	108	Peak
2412	97.66	-	-	94.43	32.89	3.61	33.27	200	108	Average
4824	47.4	-26.6	74	40.78	35.17	5.25	33.8	100	270	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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
37.76	32.58	-7.42	40	51.93	13.7	0.58	33.63	100	151	Peak
79.47	31.47	-8.53	40	57.78	6.47	0.82	33.6	-	-	Peak
140.58	33.2	-10.3	43.5	54.89	10.82	1.08	33.59	-	-	Peak
209.45	33.41	-10.09	43.5	56.17	9.44	1.34	33.54	-	-	Peak
451.95	28.83	-17.17	46	43.76	16.32	1.95	33.2	-	-	Peak
668.26	25.96	-20.04	46	37.51	19.03	2.35	32.93	-	-	Peak
2412	102.47	-	-	99.24	32.89	3.61	33.27	100	52	Peak
2412	91.24	-	-	88.01	32.89	3.61	33.27	100	52	Average
4824	47.24	-26.76	74	40.62	35.17	5.25	33.8	100	275	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	108.01	-	-	104.71	32.95	3.63	33.28	200	107	Peak
2437	96.86	-	-	93.56	32.95	3.63	33.28	200	107	Average
4874	46.68	-27.32	74	40.02	35.18	5.28	33.8	200	137	Peak
7312	49.14	-24.86	74	40.46	36.2	6.61	34.13	200	45	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	106.9	-	-	103.6	32.95	3.63	33.28	200	107	Peak
2437	96.34	-	-	93.04	32.95	3.63	33.28	200	107	Average
4874	48.66	-25.34	74	42	35.18	5.28	33.8	100	231	Peak
7312	48.89	-25.11	74	40.21	36.2	6.61	34.13	100	319	Peak



Test Mode :	2.4GHz 802.11n HT20	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	106.66	-	-	103.33	32.98	3.64	33.29	200	181	Peak
2462	95.87	-	-	92.54	32.98	3.64	33.29	200	181	Average
4924	46.99	-27.01	74	40.29	35.19	5.31	33.8	200	197	Peak
7386	49.44	-24.56	74	40.66	36.24	6.7	34.16	100	201	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	107.31	-	-	103.98	32.98	3.64	33.29	102	93	Peak
2462	95.34	-	-	92.01	32.98	3.64	33.29	102	93	Average
4924	47.53	-26.47	74	40.83	35.19	5.31	33.8	100	289	Peak
7386	50.09	-23.91	74	41.31	36.24	6.7	34.16	100	201	Peak



Test Mode :	2.4GHz 802.11n HT40	Temperature :	22~23°C
Test Channel :	03	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	105.42	-	-	102.16	32.92	3.62	33.28	108	182	Peak
2422	94.98	-	-	91.72	32.92	3.62	33.28	108	182	Average
4844	48.08	-25.92	74	41.44	35.18	5.26	33.8	200	124	Peak
7266	49.81	-24.19	74	41.17	36.19	6.56	34.11	100	216	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	22~23°C
Test Channel :	03	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	100.08	-	-	96.82	32.92	3.62	33.28	200	230	Peak
2422	89.32	-	-	86.06	32.92	3.62	33.28	200	230	Average
4844	47.42	-26.58	74	40.78	35.18	5.26	33.8	100	250	Peak
7266	49.7	-24.3	74	41.06	36.19	6.56	34.11	100	201	Peak



Test Mode :	2.4GHz 802.11n HT40	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	102.27	-	-	98.97	32.95	3.63	33.28	200	109	Peak
2437	91.69	-	-	88.39	32.95	3.63	33.28	200	109	Average
4874	47.54	-26.46	74	40.88	35.18	5.28	33.8	200	214	Peak
7312	48.93	-25.07	74	40.25	36.2	6.61	34.13	200	164	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	101.45	-	-	98.15	32.95	3.63	33.28	200	250	Peak
2437	91.91	-	-	88.61	32.95	3.63	33.28	200	250	Average
4874	47.96	-26.04	74	41.3	35.18	5.28	33.8	100	213	Peak
7312	48.81	-25.19	74	40.13	36.2	6.61	34.13	100	231	Peak



Test Mode :	2.4GHz 802.11n HT40	Temperature :	22~23°C
Test Channel :	09	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	105.79	-	-	102.49	32.95	3.63	33.28	110	172	Peak
2452	93.69	-	-	90.39	32.95	3.63	33.28	110	172	Average
4904	46.94	-27.06	74	40.25	35.19	5.3	33.8	100	218	Peak
7356	49.65	-24.35	74	40.92	36.22	6.66	34.15	200	218	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	22~23°C
Test Channel :	09	Relative Humidity :	40~41%
Test Engineer :	Jun Liu	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	99.93	-	-	96.63	32.95	3.63	33.28	200	223	Peak
2452	89.35	-	-	86.05	32.95	3.63	33.28	200	223	Average
4904	47.13	-26.87	74	40.44	35.19	5.3	33.8	100	218	Peak
7356	49.2	-24.8	74	40.47	36.22	6.66	34.15	200	312	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 (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

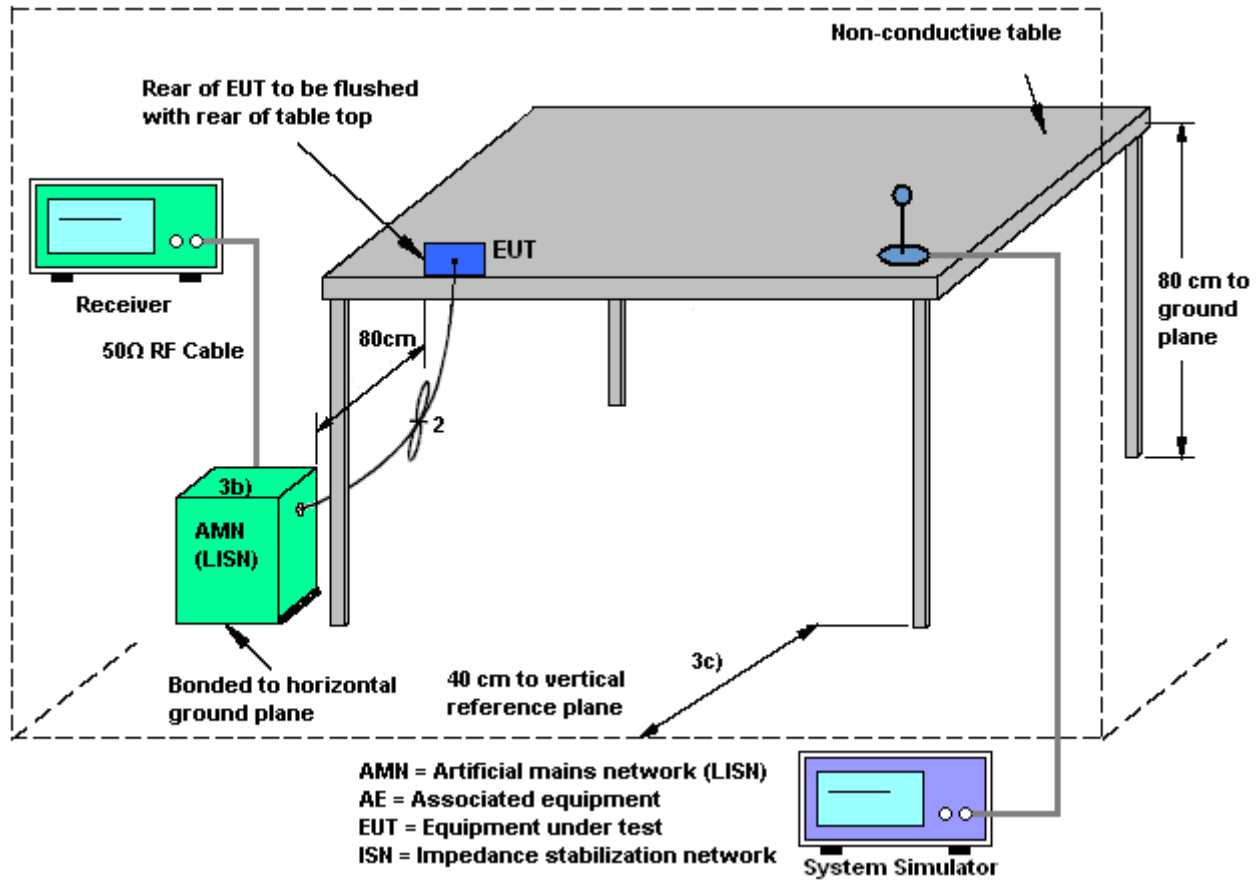
3.6.2 Measuring Instruments

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 (IF bandwidth = 9kHz) with Maximum Hold Mode.

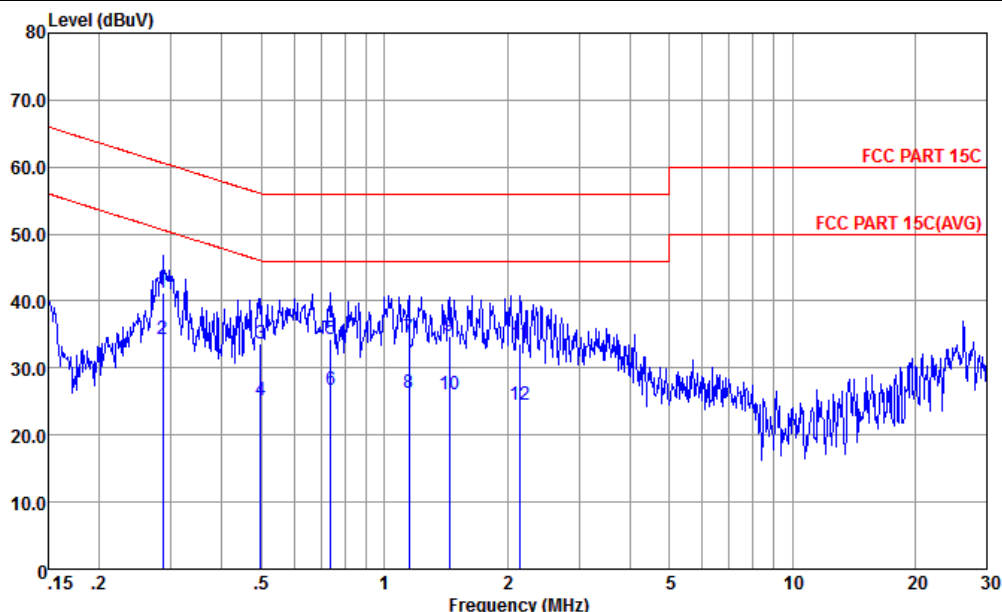
3.6.4 Test Setup





3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Eligan Wang	Relative Humidity :	34~38%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GPRS850 Idle + WLAN Link + USB Cable(Charging from Adapter)		

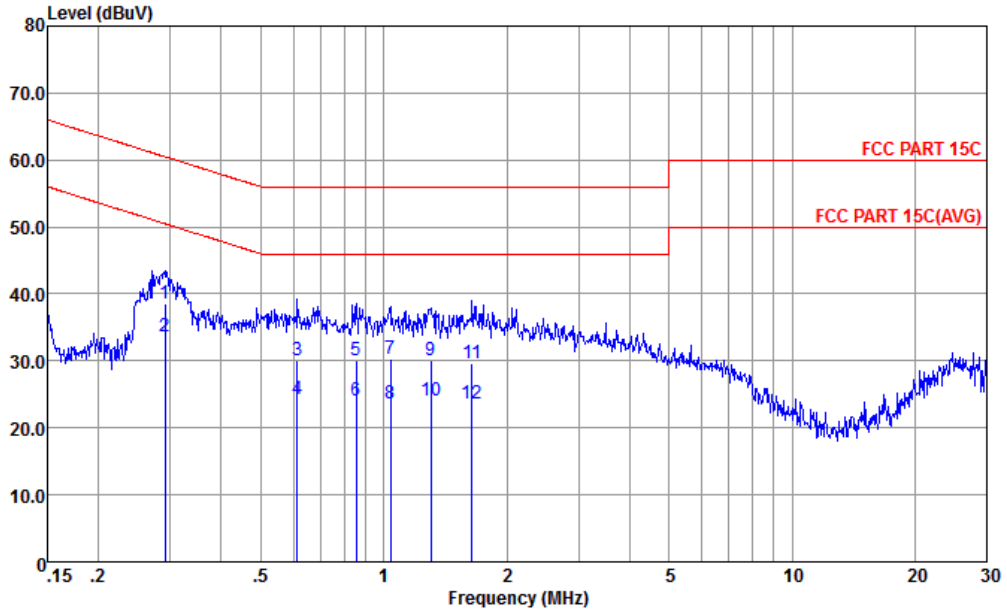


Site : CO01-KS
Condition : FCC PART 15C LISN-L20140306 LINE
Project : (FR) 402702
mode : Mode 1

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.29	41.12	-19.51	60.63	29.81	0.75	10.56	QP
2 *	0.29	34.22	-16.41	50.63	22.91	0.75	10.56	Average
3	0.50	33.73	-22.32	56.05	22.91	0.20	10.62	QP
4	0.50	25.13	-20.92	46.05	14.31	0.20	10.62	Average
5	0.74	34.33	-21.67	56.00	23.50	0.19	10.64	QP
6	0.74	26.73	-19.27	46.00	15.90	0.19	10.64	Average
7	1.15	34.56	-21.44	56.00	23.80	0.10	10.66	QP
8	1.15	26.36	-19.64	46.00	15.60	0.10	10.66	Average
9	1.44	34.68	-21.32	56.00	23.90	0.10	10.68	QP
10	1.44	26.08	-19.92	46.00	15.30	0.10	10.68	Average
11	2.16	33.61	-22.39	56.00	22.80	0.10	10.71	QP
12	2.16	24.61	-21.39	46.00	13.80	0.10	10.71	Average



Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Eligan Wang	Relative Humidity :	34~38%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GPRS850 Idle + WLAN Link + USB Cable(Charging from Adapter)		



Site : CO01-KS
Condition : FCC PART 15C LISN-N20140306 NEUTRAL
Project : (FR) 402702
mode : Mode 1

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
		dBuV	dB	dBuV	dBuV	dB	dB	
1	0.29	38.64	-21.86	60.50	27.30	0.77	10.57	QP
2 *	0.29	33.64	-16.86	50.50	22.30	0.77	10.57	Average
3	0.61	30.07	-25.93	56.00	19.21	0.23	10.63	QP
4	0.61	24.37	-21.63	46.00	13.51	0.23	10.63	Average
5	0.86	30.09	-25.91	56.00	19.30	0.14	10.65	QP
6	0.86	24.09	-21.91	46.00	13.30	0.14	10.65	Average
7	1.04	30.35	-25.65	56.00	19.60	0.10	10.65	QP
8	1.04	23.65	-22.35	46.00	12.90	0.10	10.65	Average
9	1.30	30.06	-25.94	56.00	19.30	0.10	10.66	QP
10	1.30	23.96	-22.04	46.00	13.20	0.10	10.66	Average
11	1.64	29.69	-26.31	56.00	18.90	0.10	10.69	QP
12	1.64	23.59	-22.41	46.00	12.80	0.10	10.69	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

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Oct. 28, 2014	Nov. 06, 2014~ Nov. 11, 2014	Oct. 27, 2015	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	30MHz~40GHz	Feb. 27, 2014	Nov. 06, 2014~ Nov. 11, 2014	Feb. 26, 2015	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Feb. 27, 2014	Nov. 06, 2014~ Nov. 11, 2014	Feb. 26, 2015	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Oct. 25, 2014	Nov. 06, 2014~ Nov. 13, 2014	Oct. 24, 2015	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	101399	9kHz~30GHz	May 04, 2014	Nov. 06, 2014~ Nov. 13, 2014	May 03, 2015	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 08, 2014	Nov. 06, 2014~ Nov. 13, 2014	Oct. 07, 2015	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 08, 2014	Nov. 06, 2014~ Nov. 13, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 08, 2014	Nov. 06, 2014~ Nov. 13, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 18, 2013	Nov. 06, 2014~ Nov. 13, 2014	Nov. 17, 2014	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Mar. 10, 2014	Nov. 06, 2014~ Nov. 13, 2014	Mar. 09, 2015	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161073	1MHz~1GHz	May 04, 2014	Nov. 06, 2014~ Nov. 13, 2014	May 03, 2015	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02371	1GHz~26.5GHz	Oct. 28, 2014	Nov. 06, 2014~ Nov. 13, 2014	Oct. 27, 2015	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 06, 2014~ Nov. 13, 2014	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Nov. 06, 2014~ Nov. 13, 2014	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Nov. 06, 2014~ Nov. 13, 2014	NCR	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 04, 2014	Nov. 05, 2014	May 03, 2015	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 25, 2014	Nov. 05, 2014	Oct. 24, 2015	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 25, 2014	Nov. 05, 2014	Oct. 24, 2015	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000811	AC 0V~300V, 45Hz~1000Hz	Oct. 25, 2014	Nov. 05, 2014	Oct. 24, 2015	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
---	-----