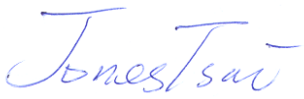
FCC RF Test Report

APPLICANT	:	TCT Mobile Limited
EQUIPMENT	:	Tablet PC
BRAND NAME	:	ALCATEL
MODEL NAME	:	ONE TOUCH P320A
MARKETING NAME	:	ALCATEL ONE TOUCH POP8
FCC ID	:	RAD466
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Jan. 03, 2014 and testing was completed on Feb. 18, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (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.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR410304C	Rev. 01	Initial issue of report	Mar. 10, 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 2.58 dB at 2484.370 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 15.11 dB at 0.750 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

TCT Mobile Limited

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203

1.2 Manufacturer

TCT Mobile Limited

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Brand Name	ALCATEL
Model Name	ONE TOUCH P320A
Marketing Name	ALCATEL ONE TOUCH POP8
FCC ID	RAD466
EUT supports Radios application	GPRS/EGPRS/WCDMA/HSPA/HSPA+ (Downlink Only)/ WLAN 2.4GHz 802.11b/g/n HT20/HT40 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
HW Version	V5.0
SW Version	AAF
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to Antenna	802.11b : 13.88 dBm (0.0244 W) 802.11g : 22.26 dBm (0.1683 W) 802.11n HT20 : 22.21 dBm (0.1663 W) 802.11n HT40 : 22.35 dBm (0.1718 W)
Antenna Type	Monopole Antenna with gain 2.00 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 Site

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC Registration No.
	TH01-KS	CO01-KS	149928

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755-3320-2398	
Test Site No.	Sporton Site No.	FCC Registration No.
	03CH01-SZ	831040

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

1.7 Applied Standards

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

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

Remark:

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 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	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	13.33	13.43	13.27	13.35
CH 06	2437 MHz	13.45	13.44	13.33	13.41
CH 11	2462 MHz	**13.88**	13.80	13.83	13.84

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 01	2412 MHz	21.00	20.95	21.21	21.16	21.63	21.81	21.57	21.46
CH 06	2437 MHz	21.36	21.29	21.34	20.92	21.58	21.91	21.77	21.59
CH 11	2462 MHz	**22.26**	21.17	22.02	21.57	21.78	22.10	21.79	21.93

Channel	Frequency	2.4GHz 802.11n HT20 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	21.58	21.72	21.29	21.75	21.83	21.71	21.84	21.58
CH 06	2437 MHz	21.70	21.74	21.85	21.91	21.79	21.63	21.58	21.77
CH 11	2462 MHz	**22.21**	22.03	21.79	22.09	22.13	22.16	21.86	22.04

Channel	Frequency	2.4GHz 802.11n HT40 RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 03	2422 MHz	21.68	21.23	21.17	21.61	21.28	21.46	21.04	21.39
CH 06	2437 MHz	21.71	21.49	21.73	21.63	21.36	21.09	21.21	21.49
CH 09	2452 MHz	**22.35**	21.75	21.71	21.87	21.93	21.94	21.59	21.72

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	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

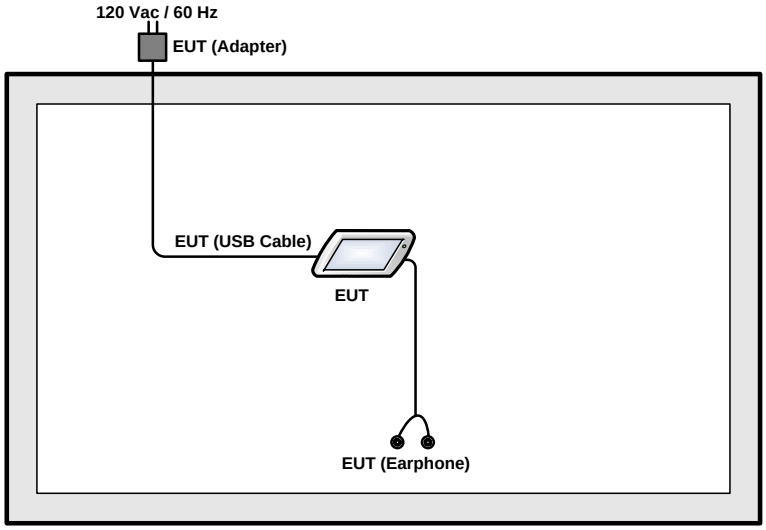
AC Conducted Emission	Mode 1 : GPRS850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone + Battery 1 Mode 2 : GPRS850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone + Battery 2

Remark:

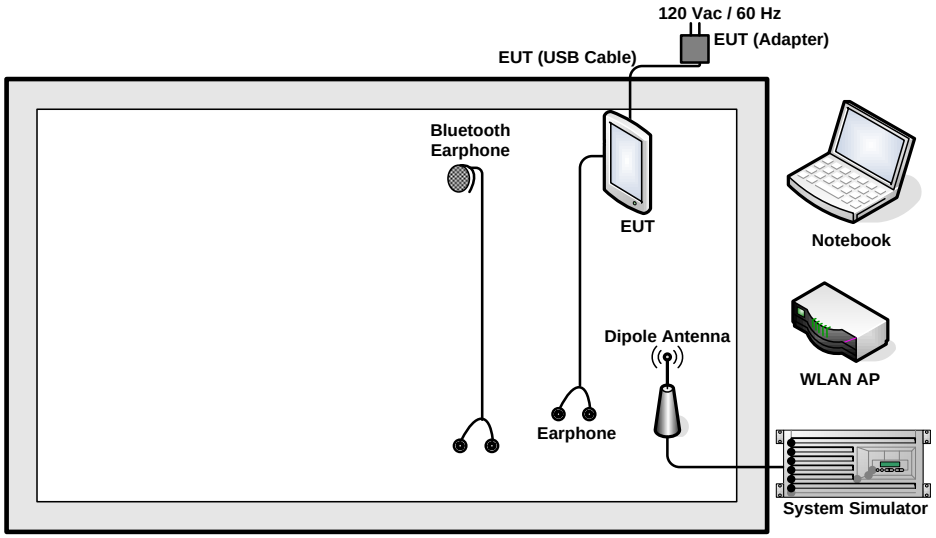
1. For Radiated TCs, all the test modes are performed with Adapter, Earphone, USB Cable and Battery 1, only the worst mode (802.11n HT40 CH09) based on Battery 1 need to verify Battery 2.
2. The worst case of conducted emission is mode 2; only the test data of it was reported.

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.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	G480	PPD-AR5B195	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Lenovo	LBH301	N/A	N/A	N/A

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 and attenuator factor 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 and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.6 dB and 10dB attenuator.

Offset (dB) = RF cable loss (dB) + attenuator factor (dB).

= 5.6 + 10 = 15.6 (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.

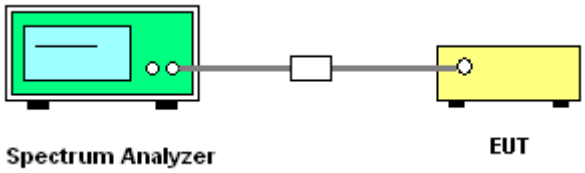
3.1.2 Measuring Instruments

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 v03r01.
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

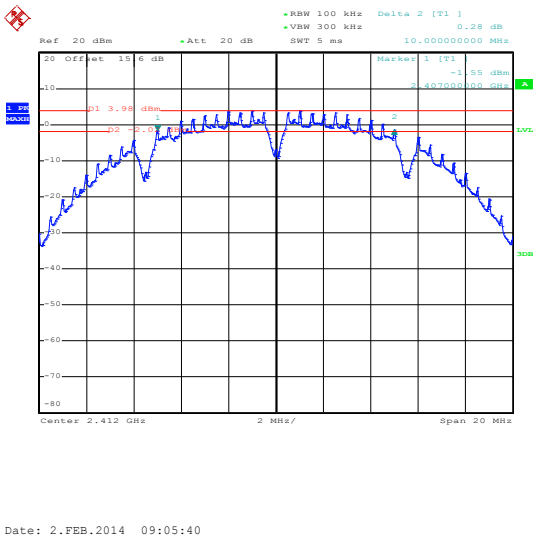


3.1.5 Test Result of 6dB Bandwidth

Test Band :	2.4GHz	Temperature :	24~26℃
Test Engineer :	Issac Song	Relative Humidity :	47~51%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
11b	1Mbps	1	1	2412	10.00	0.5	Pass
11b	1Mbps	1	6	2437	10.08	0.5	Pass
11b	1Mbps	1	11	2462	10.04	0.5	Pass
11g	6Mbps	1	1	2412	16.34	0.5	Pass
11g	6Mbps	1	6	2437	16.32	0.5	Pass
11g	6Mbps	1	11	2462	16.40	0.5	Pass
HT20	MCS0	1	1	2412	17.60	0.5	Pass
HT20	MCS0	1	6	2437	17.58	0.5	Pass
HT20	MCS0	1	11	2462	17.60	0.5	Pass
HT40	MCS0	1	3	2422	35.20	0.5	Pass
HT40	MCS0	1	6	2437	35.20	0.5	Pass
HT40	MCS0	1	9	2452	35.12	0.5	Pass

Minimum 6dB Bandwidth



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.

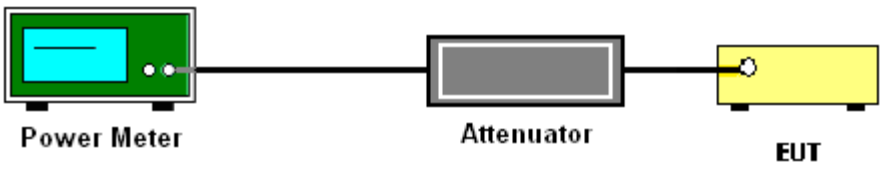
3.2.2 Measuring Instruments

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 v03r01.
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 :	24~26℃
Test Engineer :	Issac Song	Relative Humidity :	47~51%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	RF Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	13.33	30	2.00	Pass
11b	1Mbps	1	6	2437	13.45	30	2.00	Pass
11b	1Mbps	1	11	2462	13.88	30	2.00	Pass
11g	6Mbps	1	1	2412	21.00	30	2.00	Pass
11g	6Mbps	1	6	2437	21.36	30	2.00	Pass
11g	6Mbps	1	11	2462	22.26	30	2.00	Pass
HT20	MCS0	1	1	2412	21.58	30	2.00	Pass
HT20	MCS0	1	6	2437	21.70	30	2.00	Pass
HT20	MCS0	1	11	2462	22.21	30	2.00	Pass
HT40	MCS0	1	3	2422	21.68	30	2.00	Pass
HT40	MCS0	1	6	2437	21.71	30	2.00	Pass
HT40	MCS0	1	9	2452	22.35	30	2.00	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 :	24~26℃
Test Engineer :	Issac Song	Relative Humidity :	47~51%

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	0.08	11.40	30	2.00	Pass
11b	1Mbps	1	6	2437	0.08	11.49	30	2.00	Pass
11b	1Mbps	1	11	2462	0.08	11.93	30	2.00	Pass
11g	6Mbps	1	1	2412	0.50	11.68	30	2.00	Pass
11g	6Mbps	1	6	2437	0.50	11.89	30	2.00	Pass
11g	6Mbps	1	11	2462	0.50	12.41	30	2.00	Pass
HT20	MCS0	1	1	2412	0.54	11.92	30	2.00	Pass
HT20	MCS0	1	6	2437	0.54	12.19	30	2.00	Pass
HT20	MCS0	1	11	2462	0.54	12.52	30	2.00	Pass
HT40	MCS0	1	3	2422	1.02	11.73	30	2.00	Pass
HT40	MCS0	1	6	2437	1.02	11.69	30	2.00	Pass
HT40	MCS0	1	9	2452	1.02	12.21	30	2.00	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.

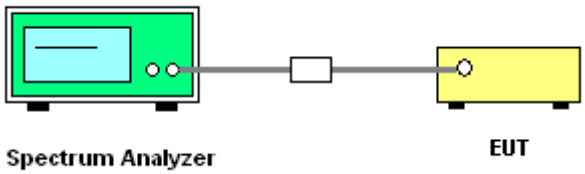
3.3.2 Measuring Instruments

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 v03r01
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



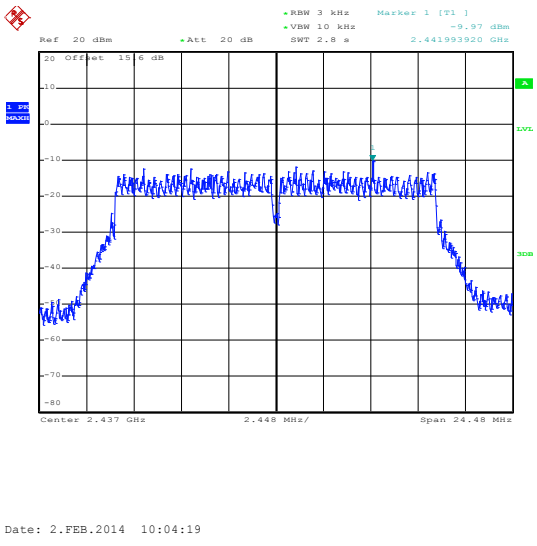
3.3.5 Test Result of Power Spectral Density

Test Mode :	2.4GHz	Temperature :	24~26℃
Test Engineer :	Issac Song	Relative Humidity :	47~51%

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	-10.21	8	2.00	Pass
11b	1Mbps	1	6	2437	-9.99	8	2.00	Pass
11b	1Mbps	1	11	2462	-10.39	8	2.00	Pass
11g	6Mbps	1	1	2412	-13.04	8	2.00	Pass
11g	6Mbps	1	6	2437	-9.97	8	2.00	Pass
11g	6Mbps	1	11	2462	-11.48	8	2.00	Pass
HT20	MCS0	1	1	2412	-13.34	8	2.00	Pass
HT20	MCS0	1	6	2437	-13.02	8	2.00	Pass
HT20	MCS0	1	11	2462	-11.75	8	2.00	Pass
HT40	MCS0	1	3	2422	-15.14	8	2.00	Pass
HT40	MCS0	1	6	2437	-15.59	8	2.00	Pass
HT40	MCS0	1	9	2452	-15.40	8	2.00	Pass

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

Worst Case Power Density (dBm/3kHz)



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).

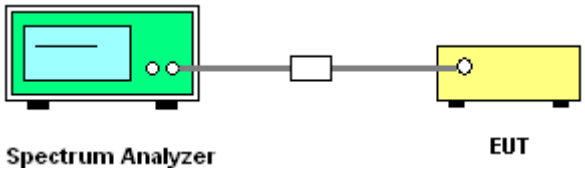
3.4.2 Measuring Instruments

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 v03r01.
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

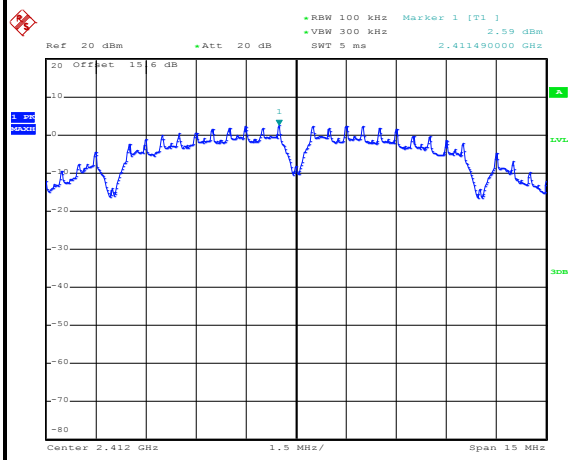


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Mode :	802.11b	**Temperature :**	24~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	47~51%
Test Channel :	01	**Test Engineer :**	Issac Song

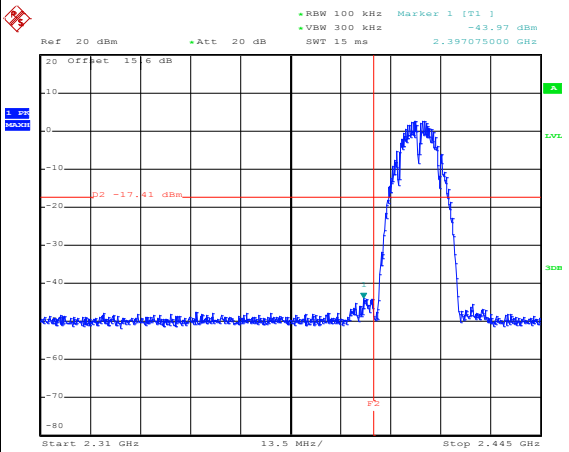
WLAN 802.11b Channel 01

100kHz PSD reference Level



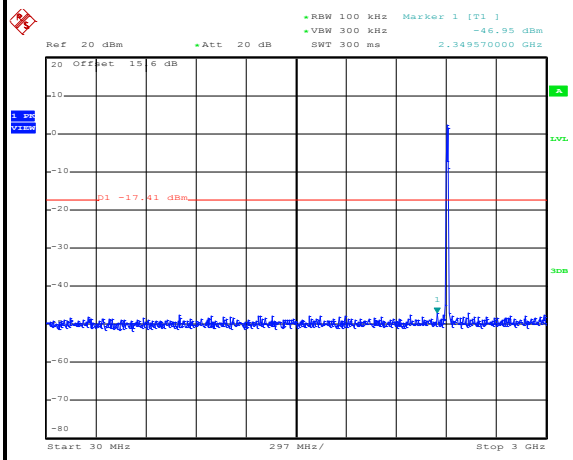
Date: 2.FEB.2014 09:06:10

Low Channel Plot



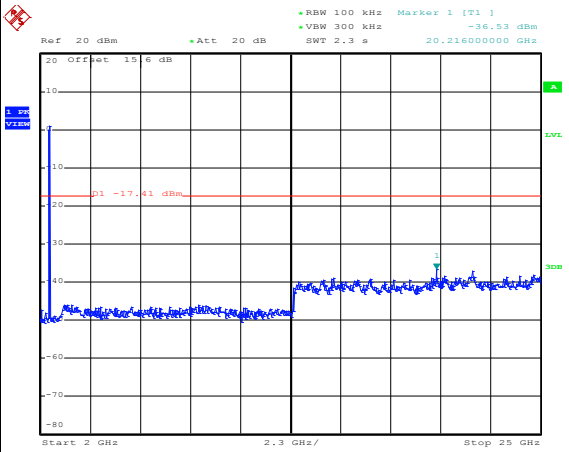
Date: 2.FEB.2014 09:06:24

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 09:06:43

Spurious Emission 2GHz~25GHz

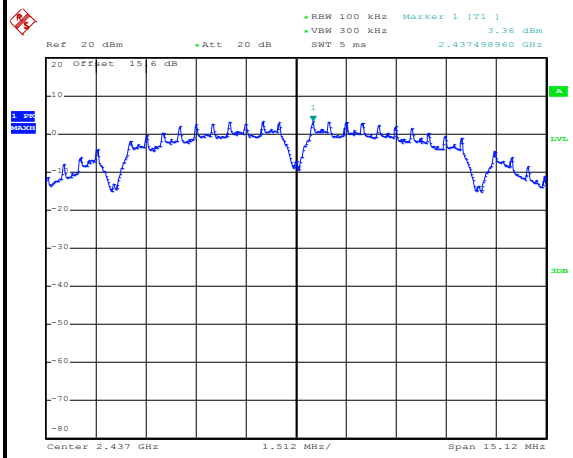


Date: 2.FEB.2014 09:07:02

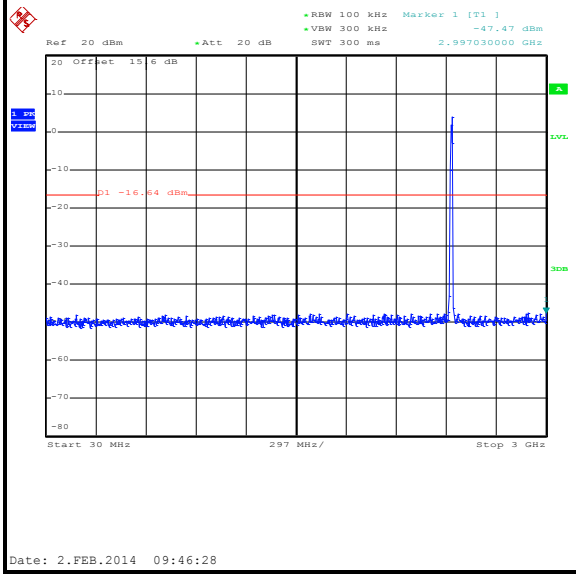
Test Mode :	802.11b	Temperature :	24~26℃
Test Band :	2.4GHz Mid	Relative Humidity :	47~51%
Test Channel :	06	Test Engineer :	Issac Song

WLAN 802.11b Channel 06

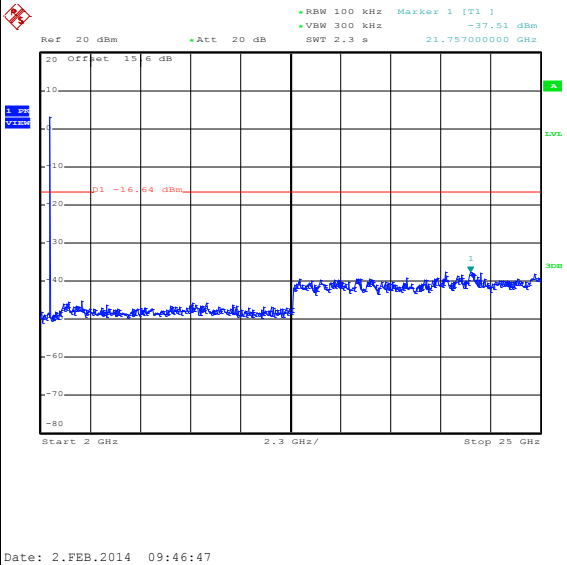
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



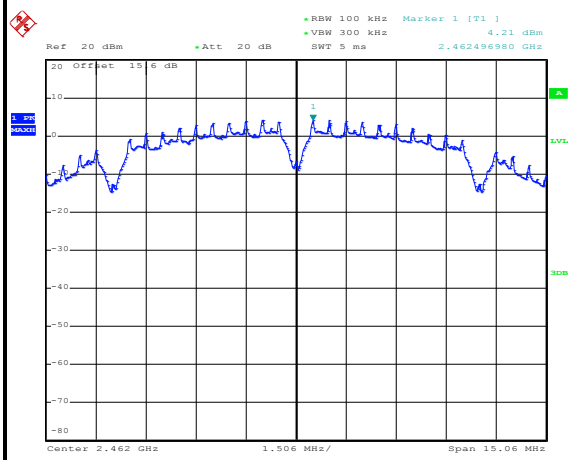
Spurious Emission 2GHz~25GHz



Test Mode :	802.11b	**Temperature :**	24~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	47~51%
Test Channel :	11	**Test Engineer :**	Issac Song

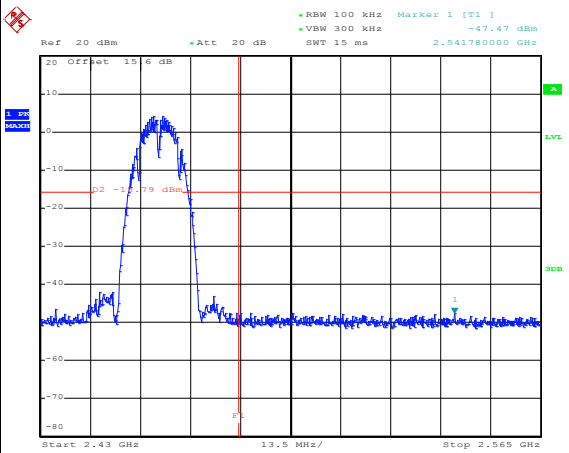
WLAN 802.11b Channel 11

100kHz PSD reference Level



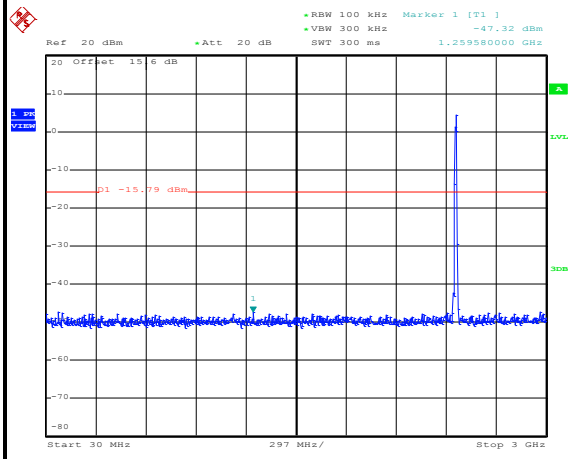
Date: 2.FEB.2014 09:55:38

High Channel Plot



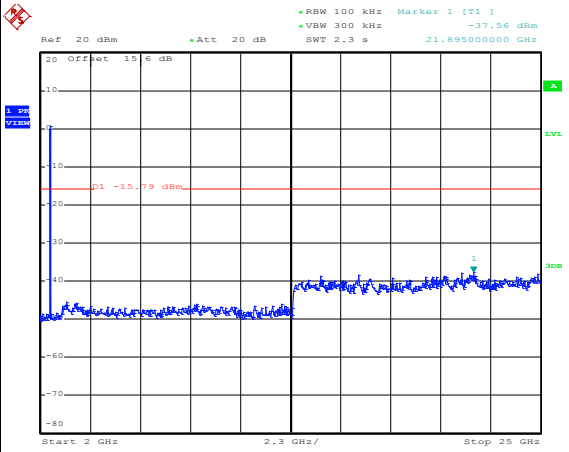
Date: 2.FEB.2014 09:55:52

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 09:56:11

Spurious Emission 2GHz~25GHz

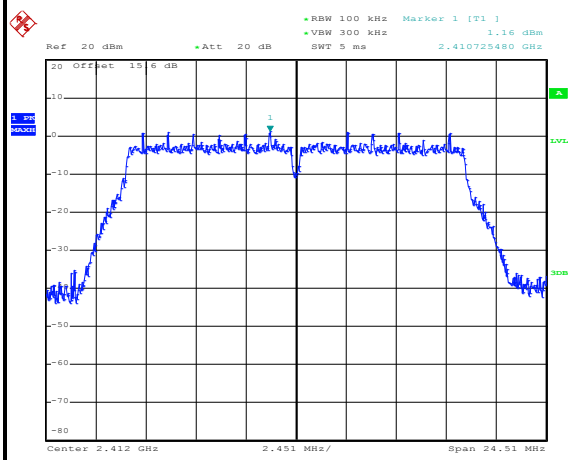


Date: 2.FEB.2014 09:56:30

Test Mode :	802.11g	Temperature :	24~26℃
Test Band :	2.4GHz Low	Relative Humidity :	47~51%
Test Channel :	01	Test Engineer :	Issac Song

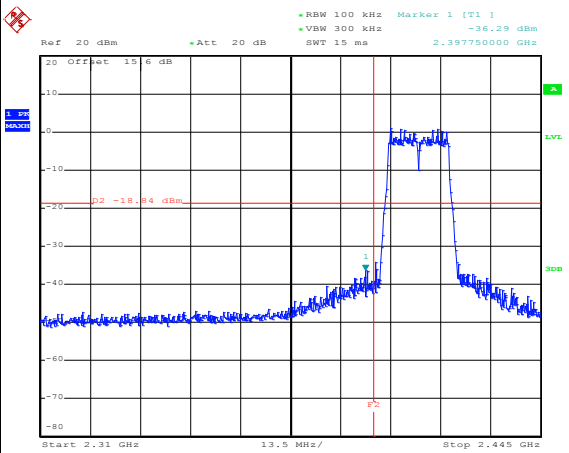
WLAN 802.11g Channel 01

100kHz PSD reference Level



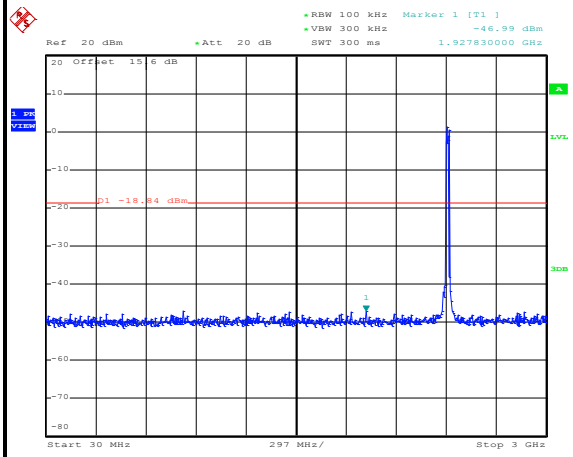
Date: 2.FEB.2014 09:59:57

Low Channel Plot



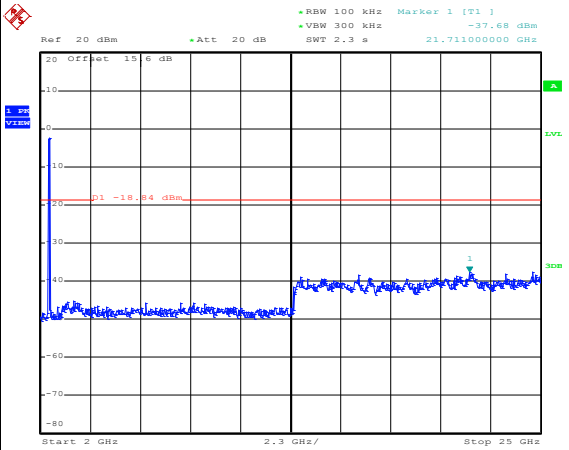
Date: 2.FEB.2014 10:00:11

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 10:00:30

Spurious Emission 2GHz~25GHz

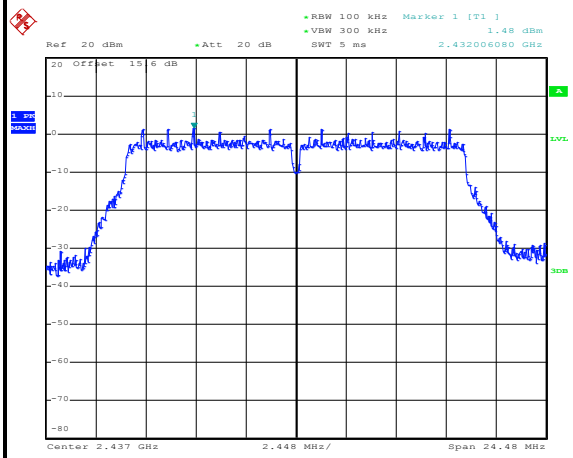


Date: 2.FEB.2014 10:00:49

Test Mode :	802.11g	**Temperature :**	24~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	47~51%
Test Channel :	06	**Test Engineer :**	Issac Song

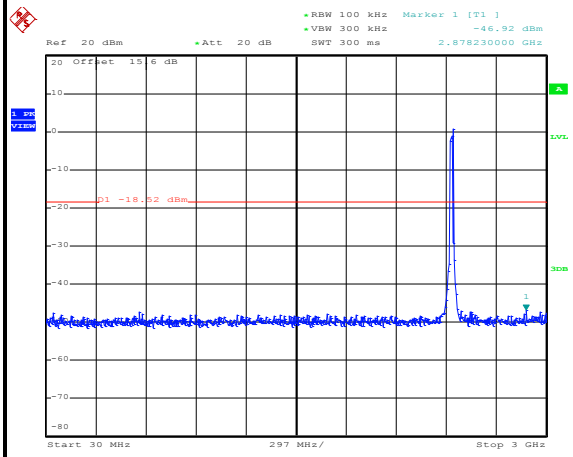
WLAN 802.11g Channel 06

100kHz PSD reference Level



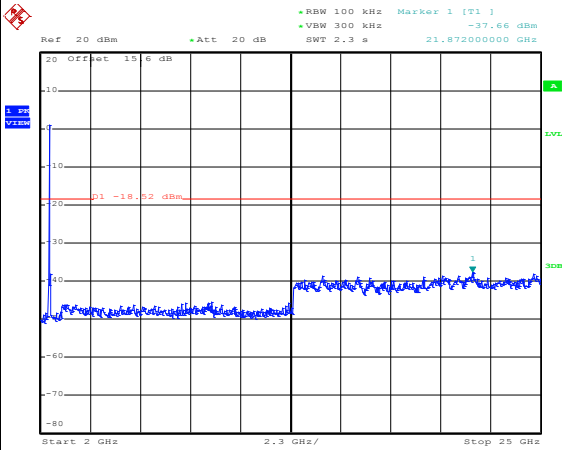
Date: 2.FEB.2014 10:04:28

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 10:04:48

Spurious Emission 2GHz~25GHz

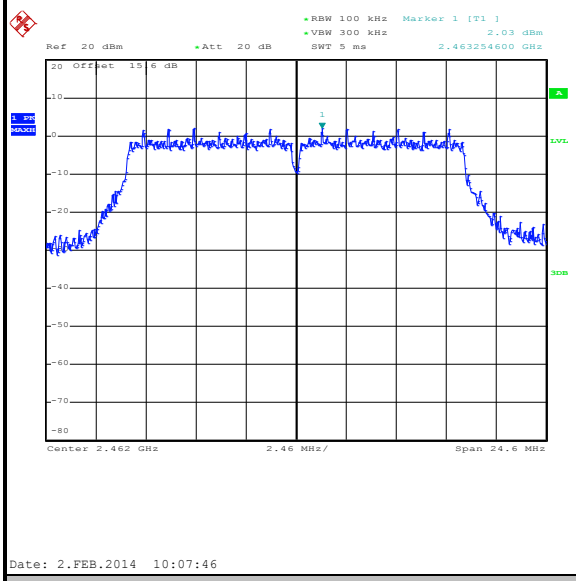


Date: 2.FEB.2014 10:05:06

Test Mode :	802.11g	Temperature :	24~26℃
Test Band :	2.4GHz High	Relative Humidity :	47~51%
Test Channel :	11	Test Engineer :	Issac Song

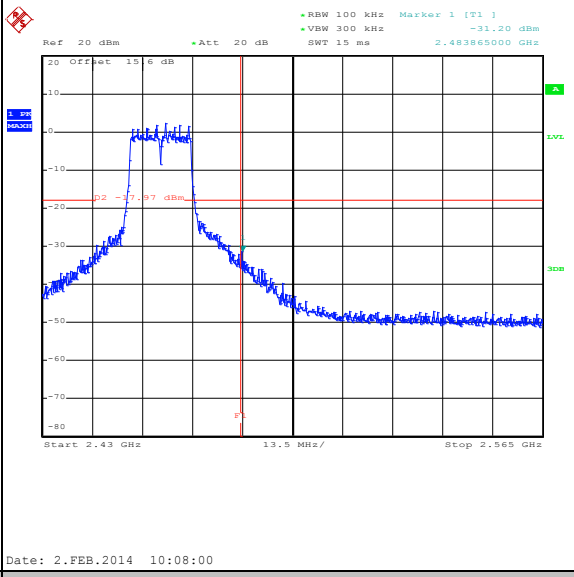
WLAN 802.11g Channel 11

100kHz PSD reference Level



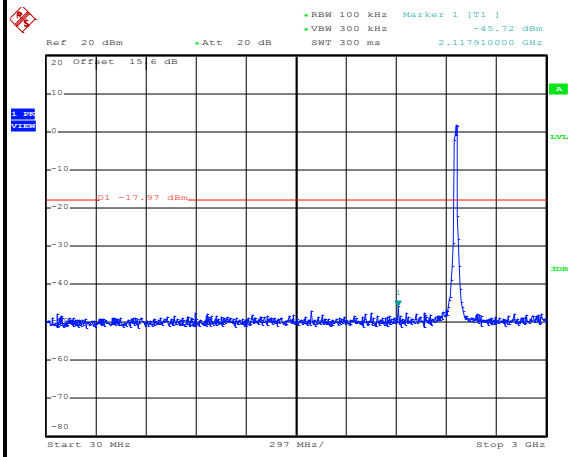
Date: 2.FEB.2014 10:07:46

High Channel Plot



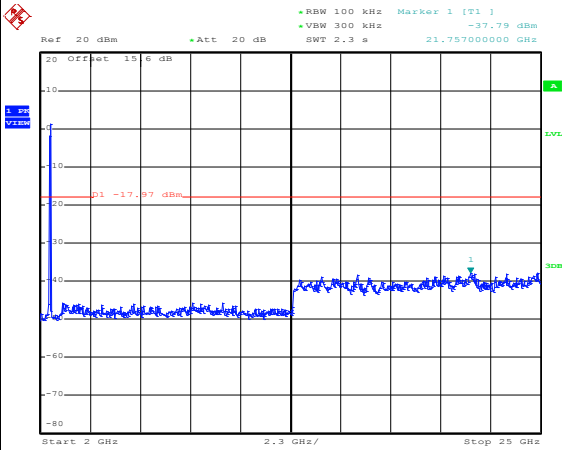
Date: 2.FEB.2014 10:08:00

Spurious Emission 30MHz~3GHz



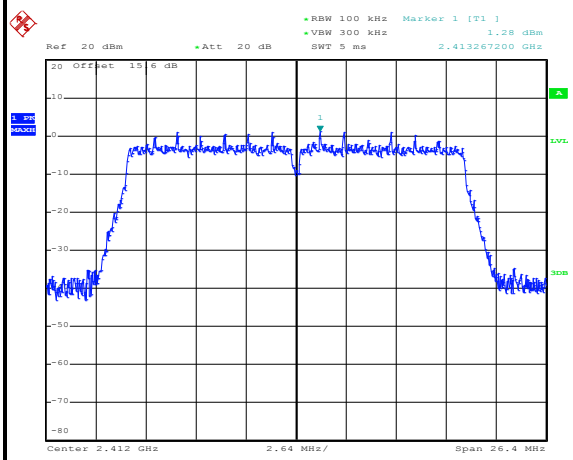
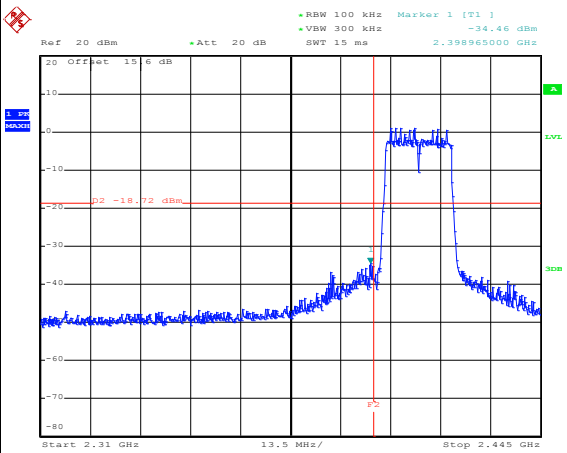
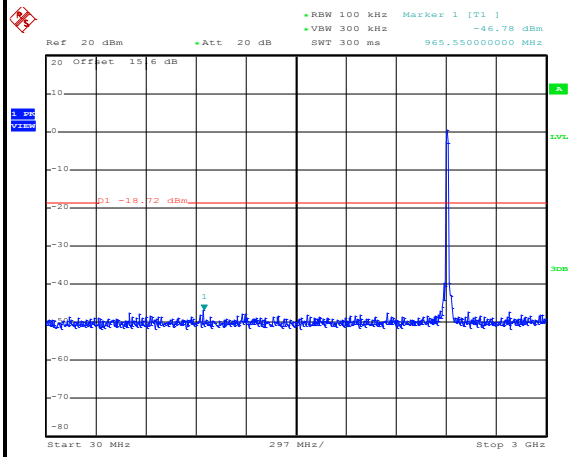
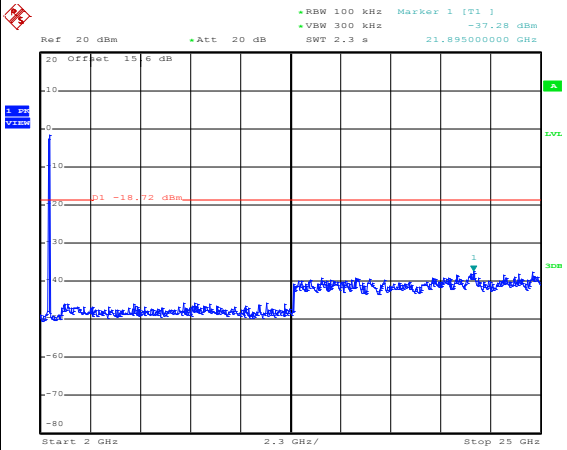
Date: 2.FEB.2014 10:08:20

Spurious Emission 2GHz~25GHz



Date: 2.FEB.2014 10:08:38

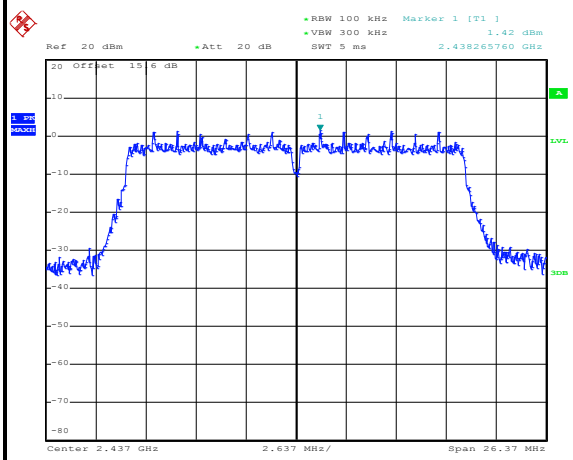
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Band :	2.4GHz Low	Relative Humidity :	47~51%
Test Channel :	01	Test Engineer :	Issac Song

WLAN 802.11n HT20 Channel 01	
100kHz PSD reference Level	Low Channel Plot
	
Date: 2.FEB.2014 10:13:34	Date: 2.FEB.2014 10:13:48
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	
Date: 2.FEB.2014 11:15:37	Date: 2.FEB.2014 10:48:19

Test Mode :	802.11n HT20	**Temperature :**	24~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	47~51%
Test Channel :	06	**Test Engineer :**	Issac Song

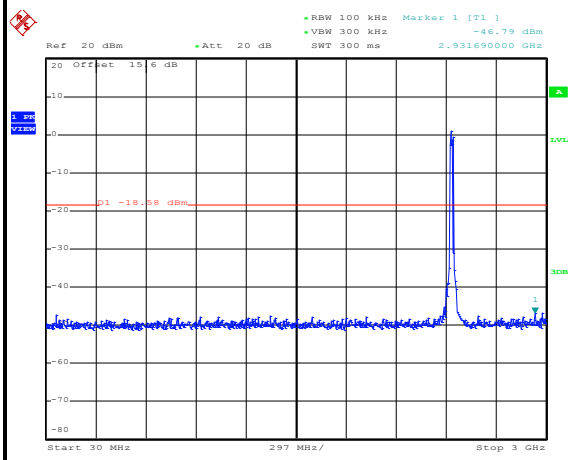
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



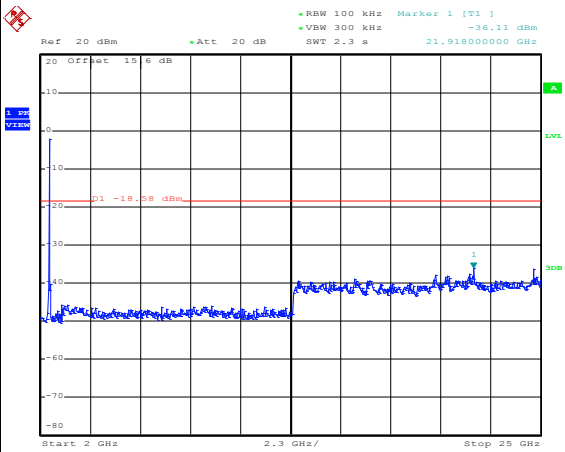
Date: 2.FEB.2014 10:17:44

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 10:18:04

Spurious Emission 2GHz~25GHz

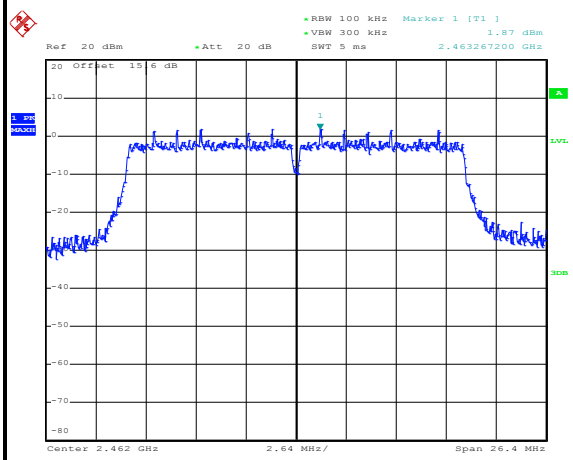


Date: 2.FEB.2014 10:18:22

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Band :	2.4GHz High	Relative Humidity :	47~51%
Test Channel :	11	Test Engineer :	Issac Song

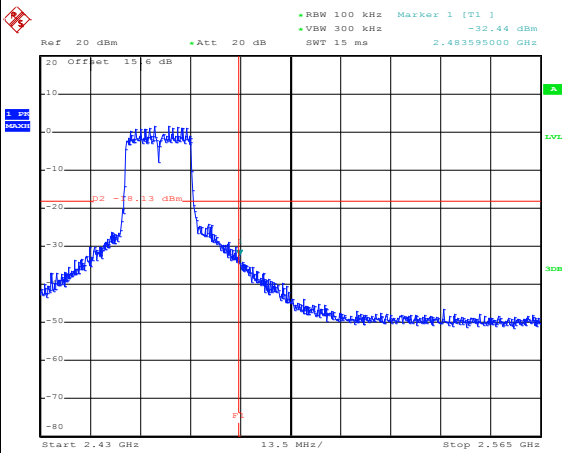
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



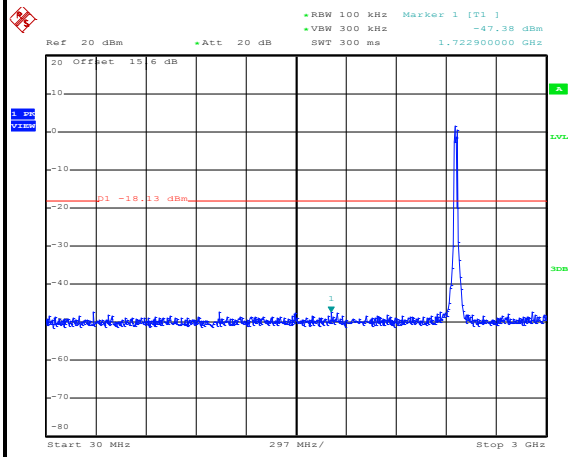
Date: 2.FEB.2014 10:20:56

High Channel Plot



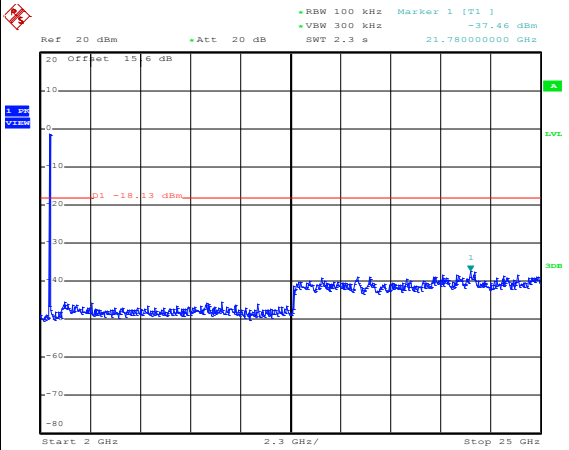
Date: 2.FEB.2014 10:21:10

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 10:21:29

Spurious Emission 2GHz~25GHz

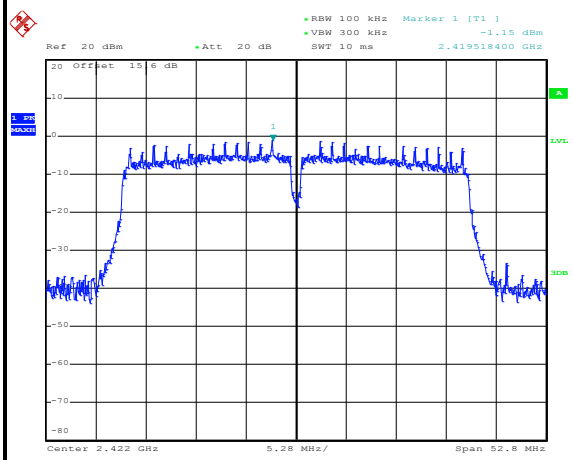


Date: 2.FEB.2014 10:21:48

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Band :	2.4GHz Low	Relative Humidity :	47~51%
Test Channel :	03	Test Engineer :	Issac Song

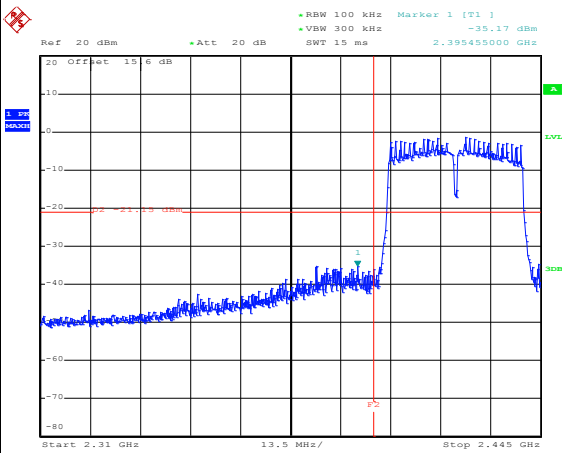
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



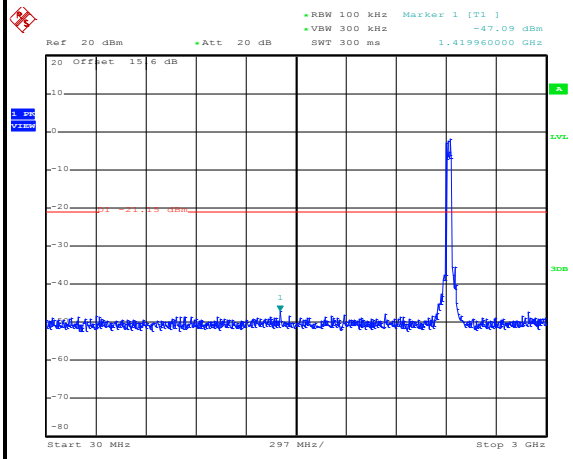
Date: 2.FEB.2014 10:26:01

Low Channel Plot



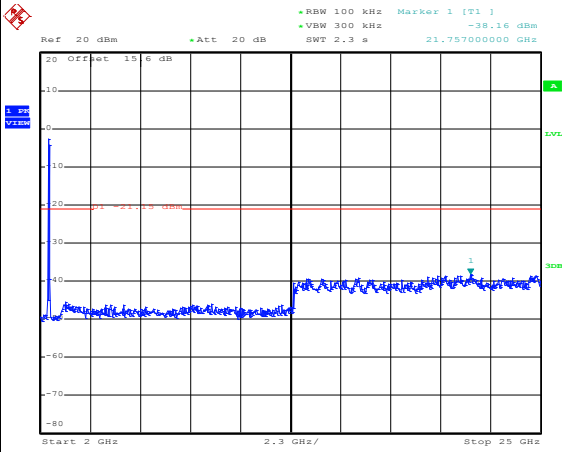
Date: 2.FEB.2014 10:26:15

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 11:00:42

Spurious Emission 2GHz~25GHz

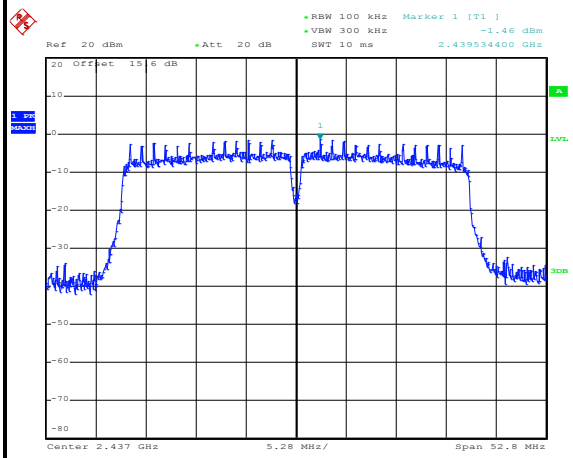


Date: 2.FEB.2014 11:00:05

Test Mode :	802.11n HT40	**Temperature :**	24~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	47~51%
Test Channel :	06	**Test Engineer :**	Issac Song

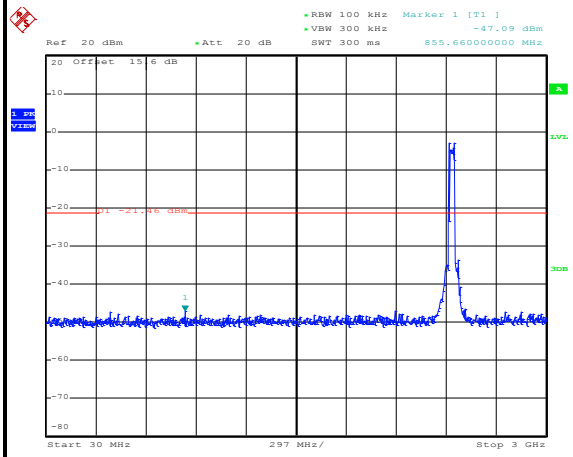
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



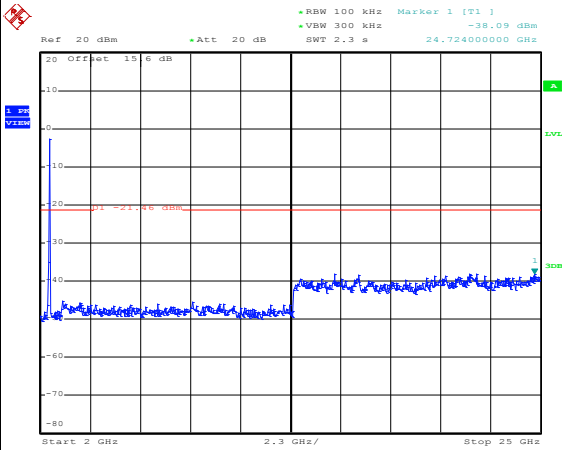
Date: 2.FEB.2014 10:30:54

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 10:31:14

Spurious Emission 2GHz~25GHz

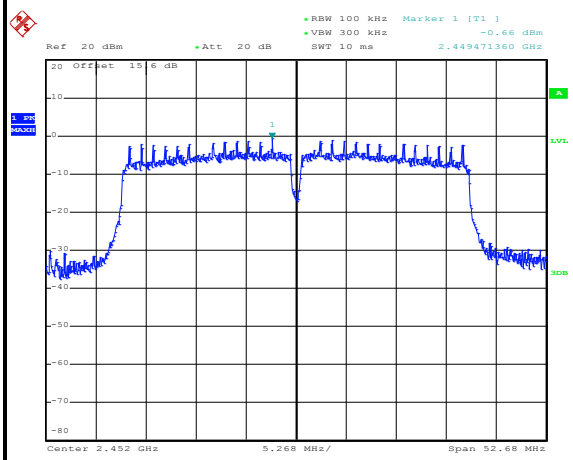


Date: 2.FEB.2014 10:31:32

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Band :	2.4GHz High	Relative Humidity :	47~51%
Test Channel :	09	Test Engineer :	Issac Song

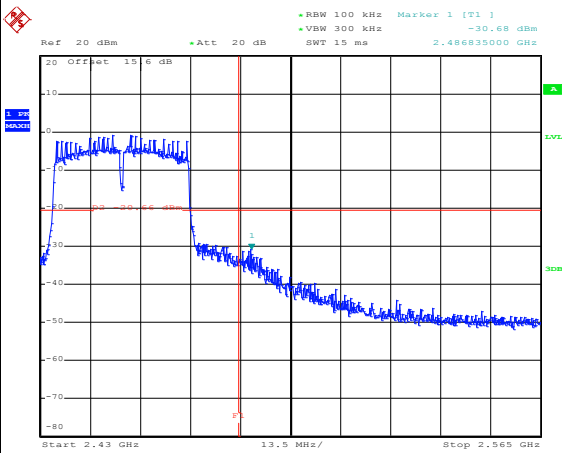
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



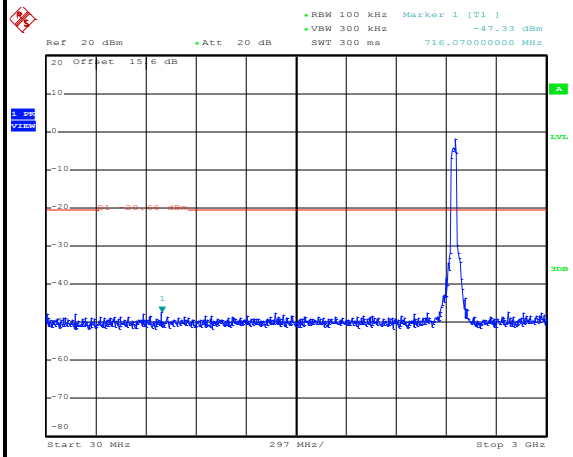
Date: 2.FEB.2014 10:39:19

High Channel Plot



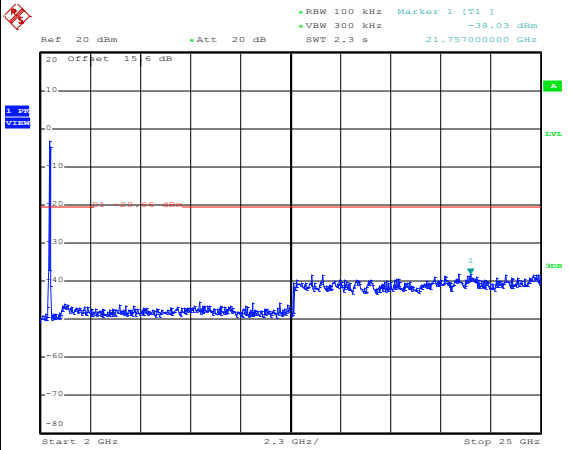
Date: 2.FEB.2014 10:39:33

Spurious Emission 30MHz~3GHz



Date: 2.FEB.2014 11:04:02

Spurious Emission 2GHz~25GHz



Date: 2.FEB.2014 11:02:07

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.

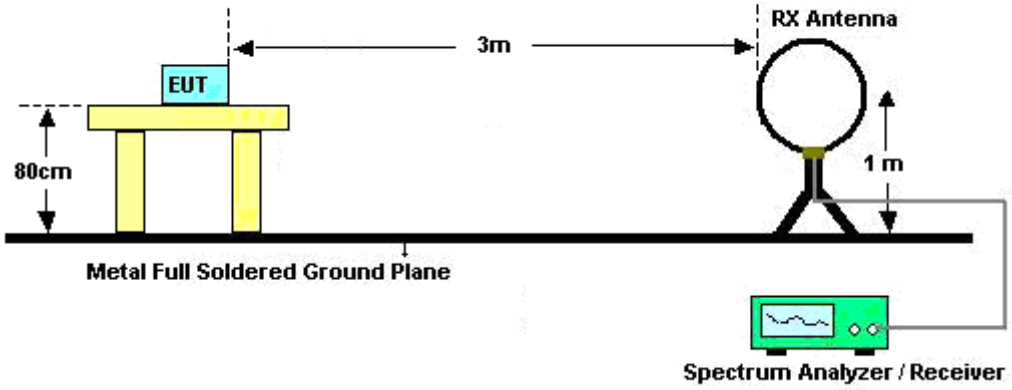
3.5.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ 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.

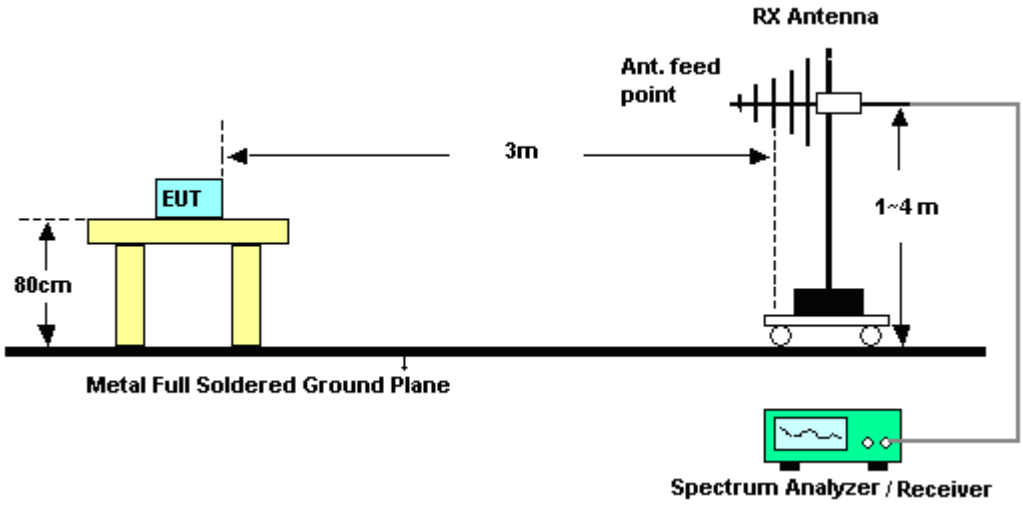
Band	Duty Cycle (%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	98.13	-	-	10Hz
802.11g	89.17	1.400	0.714	1kHz
2.4GHz 802.11n HT20	88.36	1.306	0.766	1kHz
2.4GHz 802.11n HT40	79.13	0.652	1.534	3kHz

3.5.4 Test Setup

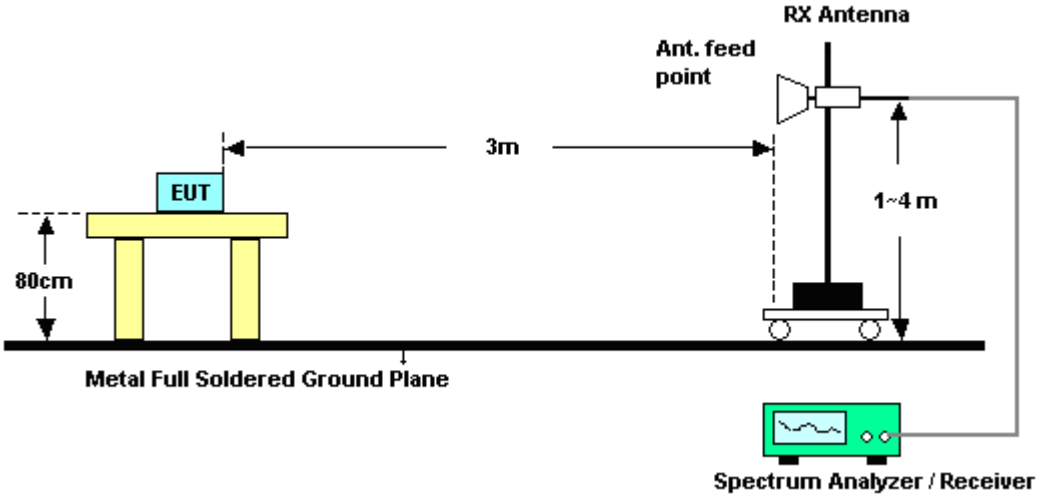
For radiated emissions below 30MHz



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

For Battery 1

Test Mode :	802.11b	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	48~52%
Test Channel :	01	Test Engineer :	Gavin Zhang

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
2318.01	49.99	-24.01	74	43.47	31.64	5.53	30.65	100	222	Peak
2387.04	37.88	-16.12	54	30.9	31.98	5.59	30.59	100	222	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
2318.55	49.34	-24.66	74	42.82	31.64	5.53	30.65	123	271	Peak
2386.86	37.73	-16.27	54	30.75	31.98	5.59	30.59	123	271	Average

Test Mode :	802.11b	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	48~52%
Test Channel :	11	Test Engineer :	Gavin Zhang

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
2498.53	49.59	-24.41	74	41.79	32.5	5.74	30.44	149	285	Peak
2487.64	37.5	-16.5	54	29.76	32.5	5.71	30.47	149	285	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
2490.43	49.18	-24.82	74	41.44	32.5	5.71	30.47	177	249	Peak
2493.91	37.49	-16.51	54	29.69	32.5	5.74	30.44	177	249	Average

Test Mode :	802.11g	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	48~52%
Test Channel :	01	Test Engineer :	Gavin Zhang

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
2388.75	64.22	-9.78	74	57.24	31.98	5.59	30.59	100	221	Peak
2389.65	46.3	-7.7	54	39.32	31.98	5.59	30.59	100	221	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.11	60.02	-13.98	74	53.04	31.98	5.59	30.59	100	272	Peak
2389.65	45.55	-8.45	54	38.57	31.98	5.59	30.59	100	272	Average

Test Mode :	802.11g	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	48~52%
Test Channel :	11	Test Engineer :	Gavin Zhang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2487.76	64.67	-9.33	74	56.93	32.5	5.71	30.47	146	289	Peak
2483.5	48.53	-5.47	54	40.88	32.41	5.71	30.47	146	289	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
2483.92	65.65	-8.35	74	58	32.41	5.71	30.47	146	237	Peak
2483.59	45.19	-8.81	54	37.54	32.41	5.71	30.47	146	237	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	48~52%
Test Channel :	01	Test Engineer :	Gavin Zhang

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	63.97	-10.03	74	56.93	31.98	5.62	30.56	125	234	Peak
2388.57	47.33	-6.67	54	40.35	31.98	5.59	30.59	125	234	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
2389.74	64.94	-9.06	74	57.96	31.98	5.59	30.59	100	228	Peak
2389.65	47.78	-6.22	54	40.8	31.98	5.59	30.59	100	228	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	48~52%
Test Channel :	11	Test Engineer :	Gavin Zhang

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
2483.56	63.07	-10.93	74	55.42	32.41	5.71	30.47	150	236	Peak
2483.77	45.7	-8.3	54	38.05	32.41	5.71	30.47	150	236	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
2491.3	62.13	-11.87	74	54.39	32.5	5.71	30.47	124	238	Peak
2483.98	45.46	-8.54	54	37.81	32.41	5.71	30.47	124	238	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Band :	Low	Relative Humidity :	48~52%
Test Channel :	03	Test Engineer :	Gavin Zhang

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
2388.12	67.48	-6.52	74	60.5	31.98	5.59	30.59	125	236	Peak
2388.48	50.55	-3.45	54	43.57	31.98	5.59	30.59	125	236	Average
2488.36	54.38	-19.62	74	46.64	32.5	5.71	30.47	125	236	Peak
2484.16	41.3	-12.7	54	33.65	32.41	5.71	30.47	125	236	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
2388.66	67.36	-6.64	74	60.38	31.98	5.59	30.59	100	230	Peak
2388.12	50.51	-3.49	54	43.53	31.98	5.59	30.59	100	230	Average
2486.98	53.72	-20.28	74	46.07	32.41	5.71	30.47	100	230	Peak
2484.58	40.86	-13.14	54	33.21	32.41	5.71	30.47	100	230	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Band :	High	Relative Humidity :	48~52%
Test Channel :	09	Test Engineer :	Gavin Zhang

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
2385.87	58.17	-15.83	74	51.19	31.98	5.59	30.59	100	238	Peak
2387.31	43.1	-10.9	54	36.12	31.98	5.59	30.59	100	238	Average
2487.04	66.92	-7.08	74	59.27	32.41	5.71	30.47	100	238	Peak
2484.37	51.42	-2.58	54	43.77	32.41	5.71	30.47	100	238	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
2384.61	57.24	-16.76	74	50.34	31.9	5.59	30.59	100	235	Peak
2388.84	42.64	-11.36	54	35.66	31.98	5.59	30.59	100	235	Average
2486.98	64.26	-9.74	74	56.61	32.41	5.71	30.47	100	235	Peak
2486.05	48.04	-5.96	54	40.39	32.41	5.71	30.47	100	235	Average

For Battery 2

Test Mode :	802.11n HT40	**Temperature :**	23~25°C
Test Band :	High	**Relative Humidity :**	48~52%
Test Channel :	09	**Test Engineer :**	Gavin Zhang

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**
2381.37	55.46	-18.54	74	48.56	31.9	5.59	30.59	105	340	Peak
2388.3	42.74	-11.26	54	35.76	31.98	5.59	30.59	105	340	Average
2487.19	67.57	-6.43	74	59.92	32.41	5.71	30.47	105	340	Peak
2483.62	50.62	-3.38	54	42.97	32.41	5.71	30.47	105	340	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**
2382.09	55.87	-18.13	74	48.97	31.9	5.59	30.59	100	105	Peak
2388.3	41.6	-12.4	54	34.62	31.98	5.59	30.59	100	105	Average
2487.34	66.15	-7.85	74	58.5	32.41	5.71	30.47	100	105	Peak
2486.2	49.51	-4.49	54	41.86	32.41	5.71	30.47	100	105	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.

For Battery 1

Test Mode :	802.11b	**Temperature :**	23~25°C
Test Channel :	01	**Relative Humidity :**	48~52%
Test Engineer :	Gavin Zhang	**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	95.75	-	-	88.62	32.07	5.62	30.56	100	222	Peak
2412	93.4	-	-	86.27	32.07	5.62	30.56	100	222	Average
4824	36.42	-37.58	74	51.5	33.82	8.36	57.26	110	115	Peak

Test Mode :	802.11b	**Temperature :**	23~25°C
Test Channel :	01	**Relative Humidity :**	48~52%
Test Engineer :	Gavin Zhang	**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	95.05	-	-	87.92	32.07	5.62	30.56	123	270	Peak
2412	92.81	-	-	85.68	32.07	5.62	30.56	123	270	Average
4824	34.81	-39.19	74	49.89	33.82	8.36	57.26	110	115	Peak

Test Mode :	802.11b	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	98.61	-	-	91.25	32.24	5.65	30.53	181	285	Peak
2437	96.47	-	-	89.11	32.24	5.65	30.53	181	285	Average
4874	36.37	-37.63	74	51.2	33.93	8.41	57.17	195	245	Peak
7311	35.49	-38.51	74	48.77	33.89	9.99	57.16	132	287	Peak

Test Mode :	802.11b	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	95.32	-	-	87.96	32.24	5.65	30.53	151	272	Peak
2437	93.21	-	-	85.85	32.24	5.65	30.53	151	272	Average
4874	35.18	-38.82	74	50.01	33.93	8.41	57.17	195	245	Peak
7311	35.9	-38.1	74	49.18	33.89	9.99	57.16	132	287	Peak

Test Mode :	802.11b	Temperature :	23~25°C
Test Channel :	11	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	99.74	-	-	92.23	32.33	5.68	30.5	149	285	Peak
2462	97.72	-	-	90.21	32.33	5.68	30.5	149	285	Average
4924	36.26	-37.74	74	50.83	34.05	8.46	57.08	178	139	Peak
7386	35.63	-38.37	74	48.72	33.94	10.02	57.05	150	220	Peak

Test Mode :	802.11b	Temperature :	23~25°C
Test Channel :	11	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	97.22	-	-	89.71	32.33	5.68	30.5	177	249	Peak
2462	94.94	-	-	87.43	32.33	5.68	30.5	177	249	Average
4924	33.73	-40.27	74	48.3	34.05	8.46	57.08	178	139	Peak
7386	35.67	-38.33	74	48.76	33.94	10.02	57.05	150	220	Peak

Test Mode :	802.11g	Temperature :	23~25°C
Test Channel :	01	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	100.37	-	-	93.24	32.07	5.62	30.56	100	220	Peak
2412	91.29	-	-	84.16	32.07	5.62	30.56	100	220	Average
4824	36.7	-37.3	74	51.78	33.82	8.36	57.26	110	200	Peak

Test Mode :	802.11g	Temperature :	23~25°C
Test Channel :	01	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	98.93	-	-	91.8	32.07	5.62	30.56	100	272	Peak
2412	89.82	-	-	82.69	32.07	5.62	30.56	100	272	Average
4824	34.89	-39.11	74	49.97	33.82	8.36	57.26	100	200	Peak

Test Mode :	802.11g	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	102.95	-	-	95.59	32.24	5.65	30.53	123	227	Peak
2437	94.07	-	-	86.71	32.24	5.65	30.53	123	227	Average
4874	37.95	-36.05	74	52.78	33.93	8.41	57.17	199	200	Peak
7311	35.24	-38.76	74	48.52	33.89	9.99	57.16	122	0	Peak

Test Mode :	802.11g	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	98.97	-	-	91.61	32.24	5.65	30.53	143	275	Peak
2437	90.35	-	-	82.99	32.24	5.65	30.53	143	275	Average
4874	35.15	-38.85	74	49.98	33.93	8.41	57.17	190	250	Peak
7311	36.86	-37.14	74	50.14	33.89	9.99	57.16	100	300	Peak

Test Mode :	802.11g	Temperature :	23~25°C
Test Channel :	11	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	102.94	-	-	95.43	32.33	5.68	30.5	145	288	Peak
2462	94.18	-	-	86.67	32.33	5.68	30.5	145	288	Average
4924	35.53	-38.47	74	50.1	34.05	8.46	57.08	125	212	Peak
7386	35.4	-38.6	74	48.49	33.94	10.02	57.05	122	220	Peak

Test Mode :	802.11g	Temperature :	23~25°C
Test Channel :	11	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	100.06	-	-	92.55	32.33	5.68	30.5	145	236	Peak
2462	91.14	-	-	83.63	32.33	5.68	30.5	145	236	Average
4924	33.73	-40.27	74	48.3	34.05	8.46	57.08	110	215	Peak
7386	35.47	-38.53	74	48.56	33.94	10.02	57.05	100	333	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	23~25°C
Test Channel :	01	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	100.92	-	-	93.79	32.07	5.62	30.56	124	234	Peak
2412	91.75	-	-	84.62	32.07	5.62	30.56	124	234	Average
4824	38.01	-35.99	74	53.09	33.82	8.36	57.26	110	115	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	23~25°C
Test Channel :	01	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	98.61	-	-	91.48	32.07	5.62	30.56	100	228	Peak
2412	90.08	-	-	82.95	32.07	5.62	30.56	100	228	Average
4824	36.56	-37.44	74	51.64	33.82	8.36	57.26	110	115	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	100.17	-	-	92.81	32.24	5.65	30.53	100	230	Peak
2437	91.01	-	-	83.65	32.24	5.65	30.53	100	230	Average
4874	37.16	-36.84	74	51.99	33.93	8.41	57.17	195	245	Peak
7311	37.44	-36.56	74	50.72	33.89	9.99	57.16	132	287	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	99.19	-	-	91.83	32.24	5.65	30.53	100	234	Peak
2437	90.36	-	-	83	32.24	5.65	30.53	100	234	Average
4874	36.99	-37.01	74	51.82	33.93	8.41	57.17	195	245	Peak
7311	36.93	-37.07	74	50.21	33.89	9.99	57.16	132	287	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	23~25°C
Test Channel :	11	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	100.37	-	-	92.86	32.33	5.68	30.5	149	235	Peak
2462	91.81	-	-	84.3	32.33	5.68	30.5	149	235	Average
4924	36.46	-37.54	74	51.03	34.05	8.46	57.08	178	139	Peak
7386	37.71	-36.29	74	50.8	33.94	10.02	57.05	150	220	Peak

Test Mode :	2.4GHz 802.11n HT20	Temperature :	23~25°C
Test Channel :	11	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	99.52	-	-	92.01	32.33	5.68	30.5	124	237	Peak
2462	90.78	-	-	83.27	32.33	5.68	30.5	124	237	Average
4924	35.87	-38.13	74	50.44	34.05	8.46	57.08	178	139	Peak
7386	35.6	-38.4	74	48.69	33.94	10.02	57.05	150	220	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	23~25°C
Test Channel :	03	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	97.69	-	-	90.41	32.16	5.65	30.53	124	235	Peak
2422	89.44	-	-	82.16	32.16	5.65	30.53	124	235	Average
4844	37.2	-36.8	74	52.19	33.86	8.38	57.23	178	160	Peak
7266	36.42	-37.58	74	49.77	33.87	9.98	57.2	100	210	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	23~25°C
Test Channel :	03	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	96.38	-	-	89.1	32.16	5.65	30.53	100	230	Peak
2422	88.12	-	-	80.84	32.16	5.65	30.53	100	230	Average
4844	36.68	-37.32	74	51.67	33.86	8.38	57.23	178	160	Peak
7266	36.42	-37.58	74	49.77	33.87	9.98	57.2	177	245	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	97.35	-	-	89.99	32.24	5.65	30.53	100	304	Peak
2437	89.14	-	-	81.78	32.24	5.65	30.53	100	304	Average
4874	36.3	-37.7	74	51.13	33.93	8.41	57.17	158	318	Peak
7311	36.68	-37.32	74	49.96	33.89	9.99	57.16	148	265	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	23~25°C
Test Channel :	06	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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	97.05	-	-	89.69	32.24	5.65	30.53	100	232	Peak
2437	88.63	-	-	81.27	32.24	5.65	30.53	100	232	Average
4874	35.89	-38.11	74	50.72	33.93	8.41	57.17	158	318	Peak
7311	37.89	-36.11	74	51.17	33.89	9.99	57.16	148	265	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	23~25°C
Test Channel :	09	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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
107.6	27.87	-15.63	43.5	47.21	10.53	1.31	31.18	-	-	Peak
208.48	37.69	-5.81	43.5	55.94	10.96	1.72	30.93	152	201	Peak
321.97	28.1	-17.9	46	42.4	14.24	2.08	30.62	-	-	Peak
687.66	25.62	-20.38	46	33.13	18.81	2.95	29.27	-	-	Peak
884.57	26.03	-19.97	46	30.48	20.78	3.3	28.53	-	-	Peak
941.8	26.4	-19.6	46	30.04	21.24	3.44	28.32	-	-	Peak
2452	99.05	-	-	91.63	32.24	5.68	30.5	100	237	Peak
2452	90.56	-	-	83.14	32.24	5.68	30.5	100	237	Average
4904	34.42	-39.58	74	49.08	34.01	8.44	57.11	170	215	Peak
7356	36.11	-37.89	74	49.28	33.92	10.01	57.1	163	28	Peak

Test Mode :	2.4GHz 802.11n HT40	Temperature :	23~25°C
Test Channel :	09	Relative Humidity :	48~52%
Test Engineer :	Gavin Zhang	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
61.04	21.02	-18.98	40	43.21	8.08	1.01	31.28	-	-	Peak
107.6	28.98	-14.52	43.5	48.32	10.53	1.31	31.18	-	-	Peak
211.39	37.38	-6.12	43.5	55.45	11.13	1.72	30.92	178	245	Peak
330.7	24.21	-21.79	46	38.68	14.02	2.1	30.59	-	-	Peak
761.38	24.96	-21.04	46	30.88	19.99	3.08	28.99	-	-	Peak
993.21	26.39	-27.61	54	29.71	21.3	3.51	28.13	-	-	Peak
2452	97.13	-	-	89.71	32.24	5.68	30.5	100	235	Peak
2452	88.68	-	-	81.26	32.24	5.68	30.5	100	235	Average
4904	36.11	-37.89	74	50.77	34.01	8.44	57.11	170	215	Peak
7356	35.86	-38.14	74	49.03	33.92	10.01	57.1	163	28	Peak

For Battery 2

Test Mode :	2.4GHz 802.11n HT40	**Temperature :**	23~25°C
Test Channel :	09	**Relative Humidity :**	48~52%
Test Engineer :	Gavin Zhang	**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	99.05	-	-	91.63	32.24	5.68	30.5	100	237	Peak
2452	90.56	-	-	83.14	32.24	5.68	30.5	100	237	Average
4904	34.42	-39.58	74	49.08	34.01	8.44	57.11	185	263	Peak
7356	36.11	-37.89	74	49.28	33.92	10.01	57.1	178	205	Peak

Test Mode :	2.4GHz 802.11n HT40	**Temperature :**	23~25°C
Test Channel :	09	**Relative Humidity :**	48~52%
Test Engineer :	Gavin Zhang	**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	97.13	-	-	89.71	32.24	5.68	30.5	100	235	Peak
2452	88.68	-	-	81.26	32.24	5.68	30.5	100	235	Average
4904	36.11	-37.89	74	50.77	34.01	8.44	57.11	178	223	Peak
7356	35.86	-38.14	74	49.03	33.92	10.01	57.1	176	250	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.

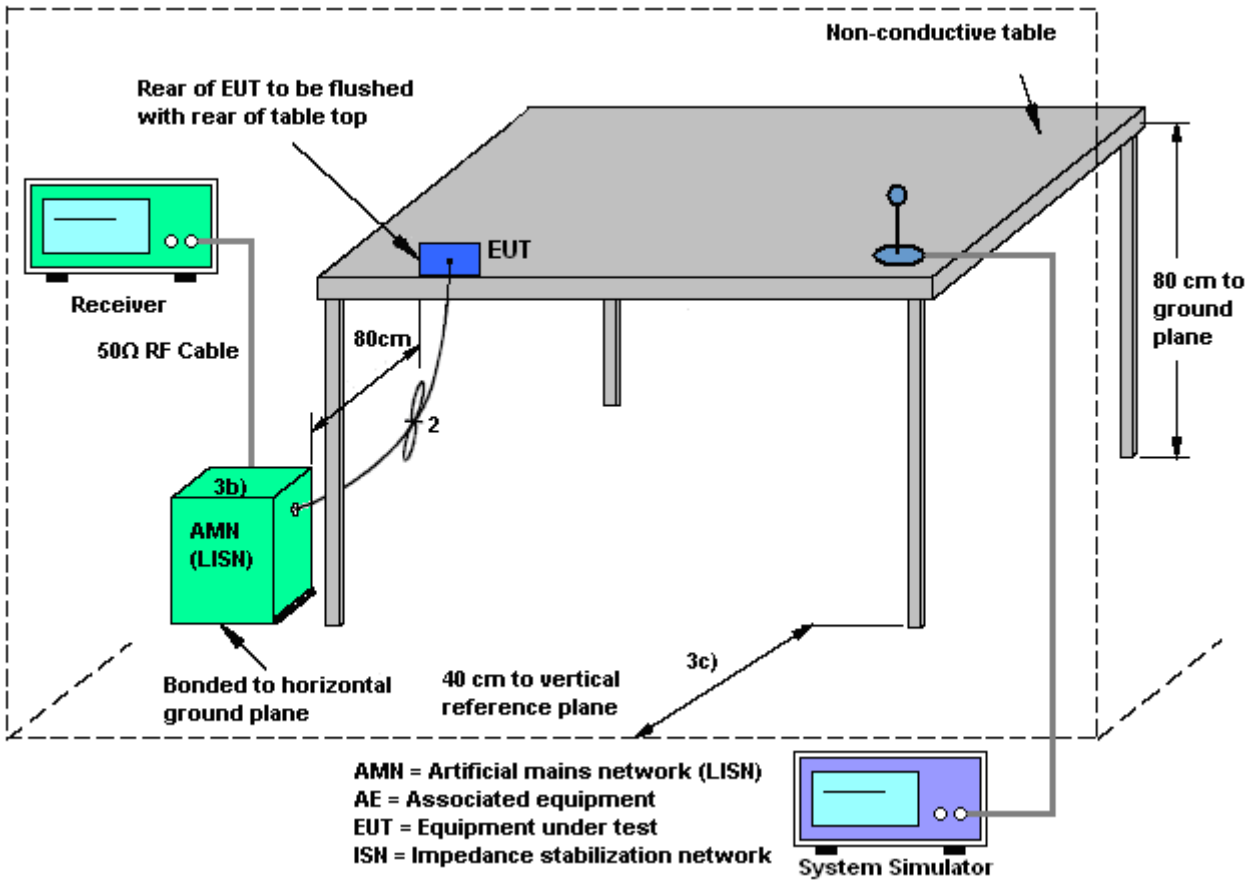
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

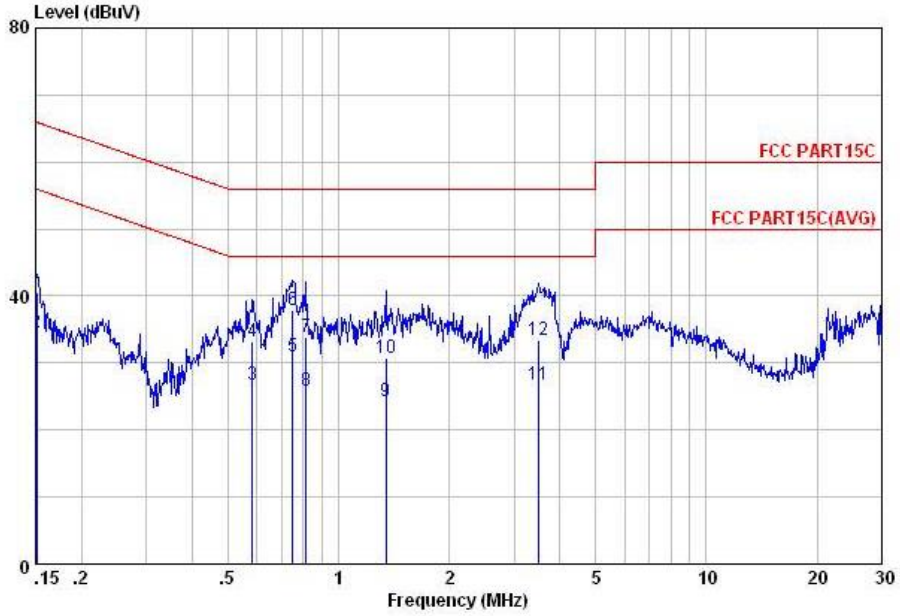
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other 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 2	**Temperature :**	21~23℃
Test Engineer :	Harvey Tang	**Relative Humidity :**	41~43%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	GPRS850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone + Battery 2		

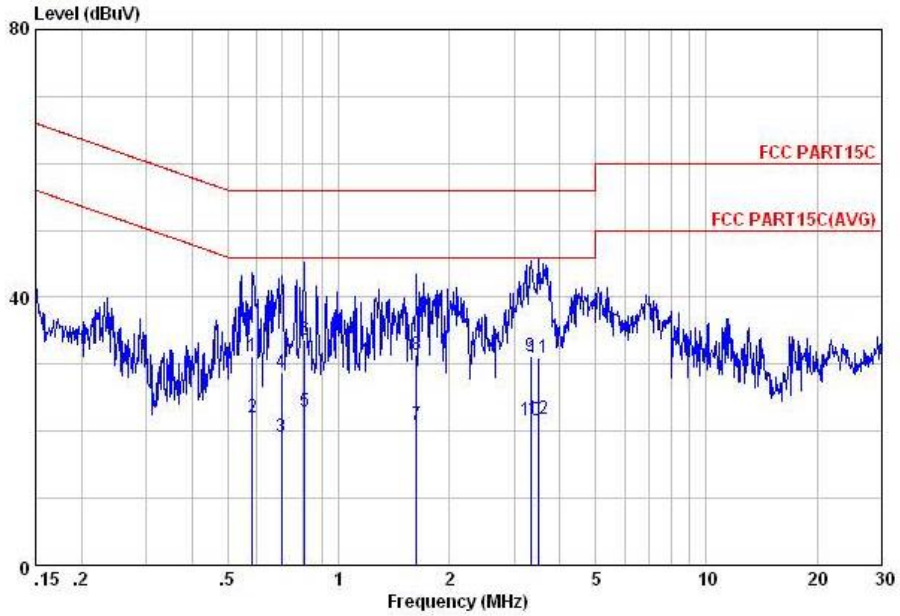


Site : C001-KS
Condition: FCC PART15C LISN-L20130306 LINE

mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	40.65	-25.31	65.96	27.99	1.94	10.72	QP
2	0.15	34.55	-21.41	55.96	21.89	1.94	10.72	Average
3	0.58	26.85	-19.15	46.00	16.40	0.20	10.25	Average
4	0.58	33.15	-22.85	56.00	22.70	0.20	10.25	QP
5	0.75	30.89	-15.11	46.00	20.50	0.19	10.20	Average
6	0.75	37.79	-18.21	56.00	27.40	0.19	10.20	QP
7	0.82	33.85	-22.15	56.00	23.50	0.16	10.19	QP
8	0.82	25.85	-20.15	46.00	15.50	0.16	10.19	Average
9	1.34	24.38	-21.62	46.00	14.10	0.10	10.18	Average
10	1.34	30.78	-25.22	56.00	20.50	0.10	10.18	QP
11	3.51	26.80	-19.20	46.00	16.40	0.17	10.23	Average
12	3.51	33.40	-22.60	56.00	23.00	0.17	10.23	QP

Test Mode :	Mode 2	Temperature :	21~23℃
Test Engineer :	Harvey Tang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GPRS850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone + Battery 2		



Site : C001-KS
Condition: FCC PART15C LISN-N20130306 NEUTRAL

mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.58	31.10	-24.90	56.00	20.59	0.26	10.25	QP
2	0.58	22.00	-24.00	46.00	11.49	0.26	10.25	Average
3	0.70	19.21	-26.79	46.00	8.80	0.20	10.21	Average
4	0.70	28.81	-27.19	56.00	18.40	0.20	10.21	QP
5	0.81	22.86	-23.14	46.00	12.50	0.16	10.20	Average
6	0.81	33.76	-22.24	56.00	23.40	0.16	10.20	QP
7	1.63	20.89	-25.11	46.00	10.60	0.10	10.19	Average
8	1.63	31.39	-24.61	56.00	21.10	0.10	10.19	QP
9	3.33	31.09	-24.91	56.00	20.70	0.16	10.23	QP
10	3.33	21.59	-24.41	46.00	11.20	0.16	10.23	Average
11	3.49	31.00	-25.00	56.00	20.60	0.17	10.23	QP
12	3.49	21.80	-24.20	46.00	11.40	0.17	10.23	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; Max 30dBm	Dec. 28, 2013	Feb. 02, 2014	Dec. 27, 2014	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	30MHz~40GHz (-20~+20dBm) Max input Power 23dBm	Feb. 28, 2013	Feb. 02, 2014	Feb. 27, 2014	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Feb. 28, 2013	Feb. 02, 2014	Feb. 27, 2014	Conducted (TH01-KS)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	Apr. 04, 2013	Feb. 18, 2014	Apr. 03, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 26, 2013	Feb. 18, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Dec. 25, 2013	Feb. 18, 2014	Dec. 24, 2014	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz-3000MHz GAIN 30db	Mar. 28, 2013	Feb. 18, 2014	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Feb. 18, 2014	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 22, 2013	Feb. 18, 2014	Nov. 21, 2014	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 29, 2013	Feb. 18, 2014	May 28, 2014	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0 ~ 360 degree	N/A	Feb. 18, 2014	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m - 4 m	N/A	Feb. 18, 2014	N/A	Radiation (03CH01-SZ)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	May 23, 2013	Jan. 20, 2014	May 22, 2014	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Dec. 10, 2013	Jan. 20, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Dec. 10, 2013	Jan. 20, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	May 25, 2013	Jan. 20, 2014	May 24, 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))	**2.26**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.90**