FCC RF Test Report

APPLICANT	:	Lenovo (Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT	:	Portable Tablet Computer
BRAND NAME	:	lenovo
MODEL NAME	:	YOGA Tablet 2-1371F
FCC ID	:	O57YT21371F
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product testing was completed on Sep. 16, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 2627

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

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APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR480501C	Rev. 01	Initial issue of report	Oct. 15, 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 2.90 dB at 2388.930 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 8.13 dB at 0.250 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Lenovo (Shanghai) Electronics Technology Co., Ltd.
No. 68 Building, 199 Fenju Road, Wai Gao Qiao FTZ, Shanghai, China

1.2 Manufacturer

Lenovo PC HK Limited
23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong

1.3 Factory

LENOVO MOBILE COMMUNICATION TECHNOLOGY CO LTD
NO.999 QISHAN NORTH 2ND ROAD, INFORMATION & OPTOELECTRONICS PARK, TORCH HIGH TECH, XIAMEN FUJIAN 361009, CHINA

LENOVO MOBILE COMMUNICATION (WUHAN) CO LTD
19 GAOXIN 4TH RD EAST LAKE HIGH-TECH, ZONE WUHAN HUBEI 430205, CHINA

1.4 Product Feature of Equipment Under Test

Product Feature	
Equipment	Portable Tablet Computer
Brand Name	lenovo
Model Name	YOGA Tablet 2-1371F
FCC ID	O57YT21371F
EUT supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40 WLAN5GHz 802.11a/n HT20/HT40 Bluetooth v3.0+EDR Bluetooth v4.0 LE
HW Version	H001
SW Version	S100
EUT Stage	Production Unit

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT sample 1 and sample 2, the differences between two samples are only different supplier for Battery/EMMC/Panel/Touch panel/front and back camera.

1.5 Product Specification subjective to this standard

<table>
<tr><th colspan="2">Product Specification subjective to this standard</th></tr>
<tr><td>Tx/Rx Channel Frequency Range</td><td>802.11b/g/n : 2412 MHz ~ 2462 MHz</td></tr>
<tr><td>Maximum (Peak) Output Power to antenna</td><td><2412 MHz ~ 2462 MHz >
802.11b : 18.37 dBm (0.0687 W)
802.11g : 20.89 dBm (0.1227 W)
802.11n HT20 : 22.12 dBm (0.1629 W)
802.11n HT40 : 19.44 dBm (0.0879 W)</td></tr>
<tr><td>Antenna Type</td><td>< Chain Port 0>
802.11b/g/n : IFA Antenna with gain 0.90 dBi
< Chain Port 1>
802.11b/g/n : IFA Antenna with gain 0.80 dBi</td></tr>
<tr><td>Type of Modulation</td><td>802.11b : DSSS (DBPSK / DQPSK / CCK)
802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)</td></tr>
<tr><td>Antenna Function for Transmitter</td><td>
<table>
<tr><th></th><th>Chain Port 0</th><th>Chain Port 1</th></tr>
<tr><td>802.11 b</td><td>V</td><td>V</td></tr>
<tr><td>802.11 g</td><td>V</td><td>V</td></tr>
<tr><td>802.11 n SISO</td><td>V</td><td>V</td></tr>
<tr><td>802.11 n MIMO</td><td>V</td><td>V</td></tr>
</table>
</td></tr>
</table>

1.6 Modification of EUT

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

1.7 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

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

1.8 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

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

2.1 Carrier Frequency and Channel

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

2.2 Pre-Scanned RF Power

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

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11b RF Power (dBm)				
			Data Rate	Power vs. Data Rate			
			1Mbps	Channel	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412	0	15.28	CH 11	15.44	15.37	15.43
CH 06	2437	0	15.31				
CH 11	2462	0	**15.59**				
CH 01	2412	1	**18.37**	CH 01	18.12	18.31	18.13
CH 06	2437	1	17.98				
CH 11	2462	1	17.76				

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11g RF Power (dBm)							
			Data Rate	Power vs. Data Rate						
			6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 01	2412	0	17.14	CH 11	17.31	17.14	16.99	16.94	16.78	16.87	16.82
CH 06	2437	0	17.16								
CH 11	2462	0	**17.32**								
CH 01	2412	1	**20.89**	CH 01	20.36	19.86	20.12	20.35	19.74	20.36	19.99
CH 06	2437	1	20.39								
CH 11	2462	1	20.15								

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11n HT-20 RF Power (dBm)							
			MCS Index	Power vs. MCS Index						
			MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412	0	15.86	CH 11	15.85	15.78	15.81	15.93	15.91	15.84	15.89
CH 06	2437	0	15.94								
CH 11	2462	0	**16.04**								
CH 01	2412	1	**22.12**	CH 01	21.73	21.63	21.68	21.55	21.98	21.71	21.79
CH 06	2437	1	21.24								
CH 11	2462	1	21.71								
CH 01	2412	0+1(0)	16.59	CH 11	16.77	16.78	16.62	16.29	16.31	16.27	16.19
CH 06	2437	0+1(0)	16.78								
CH 11	2462	0+1(0)	16.98								
CH 01	2412	0+1(1)	17.67	CH 11	17.45	17.81	17.26	17.16	17.07	17.33	17.21
CH 06	2437	0+1(1)	17.08								
CH 11	2462	0+1(1)	17.87								
CH 01	2412	0+1	20.17	CH 11	20.13	20.34	19.96	19.76	19.72	19.84	19.74
CH 06	2437	0+1	19.94								
CH 11	2462	0+1	**20.46**								

Channel	Frequency (MHz)	Chain Port	2.4GHz 802.11n HT-40 RF Power (dBm)							
			MCS Index	Power vs. MCS Index						
			MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 03	2422	0	12.13	CH 09	11.49	11.27	11.68	11.09	11.26	11.56	11.63
CH 06	2437	0	11.87								
CH 09	2452	0	**12.18**								
CH 03	2422	1	**19.44**	CH 03	19.28	19.21	19.38	18.55	18.38	18.92	19.22
CH 06	2437	1	19.11								
CH 09	2452	1	19.20								
CH 03	2422	0+1(0)	9.95	CH 03	9.78	9.69	9.79	9.81	9.77	9.65	9.48
CH 06	2437	0+1(0)	9.81								
CH 09	2452	0+1(0)	9.79								
CH 03	2422	0+1(1)	11.34	CH 03	11.29	11.33	11.26	11.14	11.13	11.12	11.21
CH 06	2437	0+1(1)	11.10								
CH 09	2452	0+1(1)	11.00								
CH 03	2422	0+1	**13.71**	CH 03	13.61	13.60	13.60	13.54	13.51	13.46	13.44
CH 06	2437	0+1	13.51								
CH 09	2452	0+1	13.45								

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

2.3 Test Mode

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

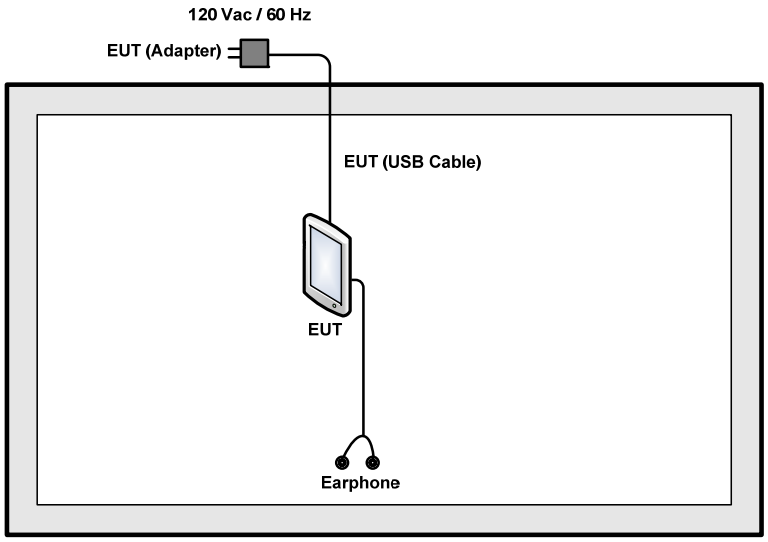
<2.4GHz>

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

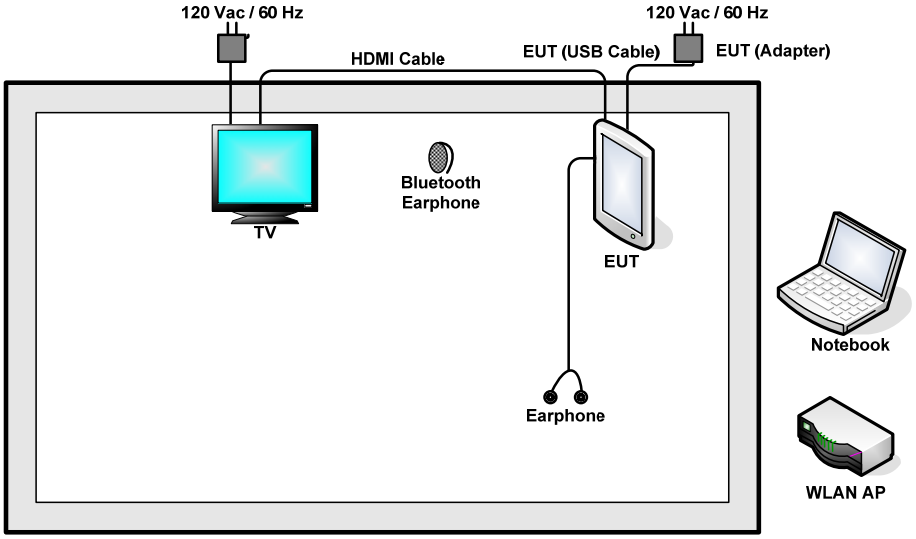
Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (2.4G) Link + USB Cable 1 (Charging from Adapter) + Battery 1 + Earphone + HDMI Cable for Sample 1 Mode 2 : Bluetooth Link + WLAN (2.4G) Link + USB Cable 2 (Charging from Adapter) + Battery 2 + Earphone + HDMI Cable for Sample 2
Remark: The worst case of conducted emission is mode 1; 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.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
2.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	LCD TV	Lenovo	32A21	N/A	N/A	N/A
4.	Bluetooth Earphone	Lenovo	LBH505	N/A	N/A	N/A
5.	Earphone	Lenovo	SH100	FCC DoC	Unshielded,1.2m	N/A
6.	HDMI Cable	N/A	N/A	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 between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:
The spectrum analyzer offset is derived from RF cable loss.
Offset = RF cable loss
Following shows an offset computation example with cable loss 6 dB.

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

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

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

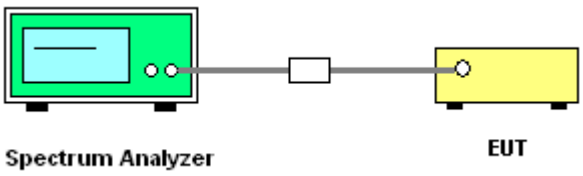
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup

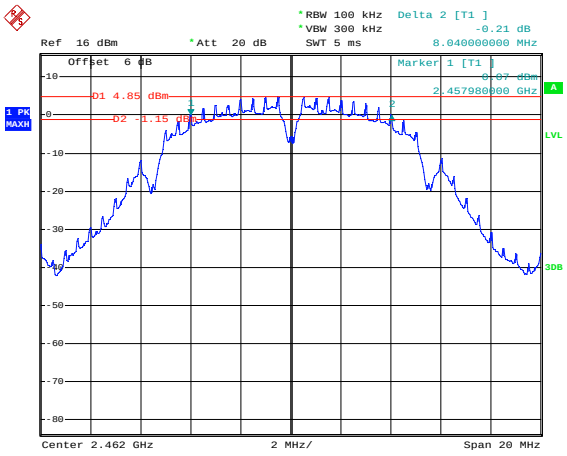


3.1.5 Test Result of 6dB Bandwidth

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

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Chain Port 0	Chain Port 1		
11b	1Mbps	1	1	2412	-	8.06	0.5	Pass
11b	1Mbps	1	6	2437	-	8.06	0.5	Pass
11b	1Mbps	1	11	2462	-	8.04	0.5	Pass
11g	6Mbps	1	1	2412	-	15.40	0.5	Pass
11g	6Mbps	1	6	2437	-	15.40	0.5	Pass
11g	6Mbps	1	11	2462	-	15.08	0.5	Pass
HT20	MCS0	1	1	2412	-	15.20	0.5	Pass
HT20	MCS0	1	6	2437	-	15.08	0.5	Pass
HT20	MCS0	1	11	2462	-	15.04	0.5	Pass
HT40	MCS0	1	3	2422	-	36.00	0.5	Pass
HT40	MCS0	1	6	2437	-	36.28	0.5	Pass
HT40	MCS0	1	9	2452	-	36.32	0.5	Pass
HT20	MCS0	2	1	2412	15.52	15.70	0.5	Pass
HT20	MCS0	2	6	2437	15.68	16.34	0.5	Pass
HT20	MCS0	2	11	2462	15.68	16.26	0.5	Pass
HT40	MCS0	2	3	2422	36.28	36.32	0.5	Pass
HT40	MCS0	2	6	2437	36.24	36.28	0.5	Pass
HT40	MCS0	2	9	2452	36.08	36.28	0.5	Pass

Minimum 6dB Bandwidth



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

3.2 Peak Output Power Measurement

3.2.1 Limit of Peak Output Power

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

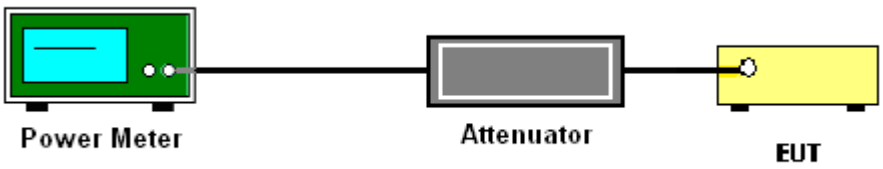
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

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

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	SUM	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11b	1Mbps	1	1	2412	15.28	18.37	-	30.00	30.00	0.90	0.80	Pass
11b	1Mbps	1	6	2437	15.31	17.98		30.00	30.00	0.90	0.80	Pass
11b	1Mbps	1	11	2462	15.59	17.76		30.00	30.00	0.90	0.80	Pass
11g	6Mbps	1	1	2412	17.14	20.89		30.00	30.00	0.90	0.80	Pass
11g	6Mbps	1	6	2437	17.16	20.39		30.00	30.00	0.90	0.80	Pass
11g	6Mbps	1	11	2462	17.32	20.15		30.00	30.00	0.90	0.80	Pass
HT20	MCS0	1	1	2412	15.86	22.12		30.00	30.00	0.90	0.80	Pass
HT20	MCS0	1	6	2437	15.94	21.24		30.00	30.00	0.90	0.80	Pass
HT20	MCS0	1	11	2462	16.04	21.71		30.00	30.00	0.90	0.80	Pass
HT40	MCS0	1	3	2422	12.13	19.44		30.00	30.00	0.90	0.80	Pass
HT40	MCS0	1	6	2437	11.87	19.11		30.00	30.00	0.90	0.80	Pass
HT40	MCS0	1	9	2452	12.18	19.20		30.00	30.00	0.90	0.80	Pass
HT20	MCS0	2	1	2412	16.59	17.67	20.17	30.00		3.86		Pass
HT20	MCS0	2	6	2437	16.78	17.08	19.94	30.00		3.86		Pass
HT20	MCS0	2	11	2462	16.98	17.87	20.46	30.00		3.86		Pass
HT40	MCS0	2	3	2422	9.95	11.34	13.71	30.00		3.86		Pass
HT40	MCS0	2	6	2437	9.81	11.10	13.51	30.00		3.86		Pass
HT40	MCS0	2	9	2452	9.79	11.00	13.45	30.00		3.86		Pass

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

3.2.6 Test Result of Average output Power (Reporting Only)

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

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	Sum Power
11b	1Mbps	1	1	2412	0.00	0.00	11.76	14.67	-
11b	1Mbps	1	6	2437	0.00	0.00	11.73	14.47	
11b	1Mbps	1	11	2462	0.00	0.00	11.92	14.21	
11g	6Mbps	1	1	2412	0.21	0.20	7.01	10.45	
11g	6Mbps	1	6	2437	0.21	0.20	7.03	10.24	
11g	6Mbps	1	11	2462	0.21	0.20	7.19	10.02	
HT20	MCS0	1	1	2412	0.23	0.22	5.31	12.25	
HT20	MCS0	1	6	2437	0.23	0.22	5.45	12.07	
HT20	MCS0	1	11	2462	0.23	0.22	5.48	11.67	
HT40	MCS0	1	3	2422	0.47	0.43	2.46	10.09	
HT40	MCS0	1	6	2437	0.47	0.43	1.95	9.30	
HT40	MCS0	1	9	2452	0.47	0.43	2.62	9.48	
HT20	MCS0	2	1	2412	0.42	0.42	6.98	7.77	10.40
HT20	MCS0	2	6	2437	0.42	0.42	6.93	7.60	10.28
HT20	MCS0	2	11	2462	0.42	0.42	7.21	7.91	10.58
HT40	MCS0	2	3	2422	0.78	0.76	0.47	2.13	4.39
HT40	MCS0	2	6	2437	0.78	0.76	0.07	1.79	4.02
HT40	MCS0	2	9	2452	0.78	0.76	0.01	1.68	3.93

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

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

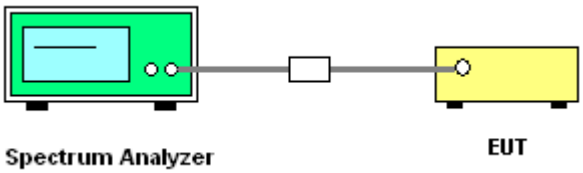
   If measurements performed using method (2) plus 10 log (N) exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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

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

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

3.3.4 Test Setup



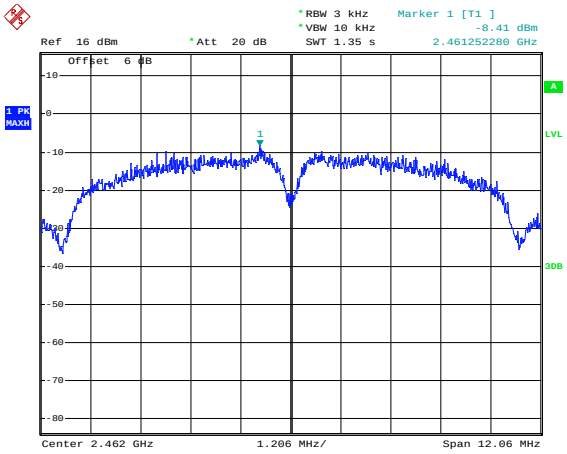
3.3.5 Test Result of Power Spectral Density

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

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	Worst +10log(2)	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11b	1Mbps	1	1	2412	-	-8.88	-	8.00	8.00	0.90	0.80	Pass
11b	1Mbps	1	6	2437	-	-9.92		8.00	8.00	0.90	0.80	Pass
11b	1Mbps	1	11	2462	-	-8.41		8.00	8.00	0.90	0.80	Pass
11g	6Mbps	1	1	2412	-	-16.42		8.00	8.00	0.90	0.80	Pass
11g	6Mbps	1	6	2437	-	-14.95		8.00	8.00	0.90	0.80	Pass
11g	6Mbps	1	11	2462	-	-15.43		8.00	8.00	0.90	0.80	Pass
HT20	MCS0	1	1	2412	-	-13.39		8.00	8.00	0.90	0.80	Pass
HT20	MCS0	1	6	2437	-	-13.96		8.00	8.00	0.90	0.80	Pass
HT20	MCS0	1	11	2462	-	-12.62		8.00	8.00	0.90	0.80	Pass
HT40	MCS0	1	3	2422	-	-18.65		8.00	8.00	0.90	0.80	Pass
HT40	MCS0	1	6	2437	-	-19.19		8.00	8.00	0.90	0.80	Pass
HT40	MCS0	1	9	2452	-	-19.34		8.00	8.00	0.90	0.80	Pass
HT20	MCS0	2	1	2412	-16.58	-17.66	-13.57	8.00		3.86		Pass
HT20	MCS0	2	6	2437	-18.04	-17.91	-14.90	8.00		3.86		Pass
HT20	MCS0	2	11	2462	-17.86	-17.29	-14.28	8.00		3.86		Pass
HT40	MCS0	2	3	2422	-28.00	-25.95	-22.94	8.00		3.86		Pass
HT40	MCS0	2	6	2437	-27.39	-26.99	-23.98	8.00		3.86		Pass
HT40	MCS0	2	9	2452	-28.22	-25.65	-22.64	8.00		3.86		Pass

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

Worst Case Power Density (dBm/3kHz)



Date: 16.SEP.2014 00:23:41

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

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

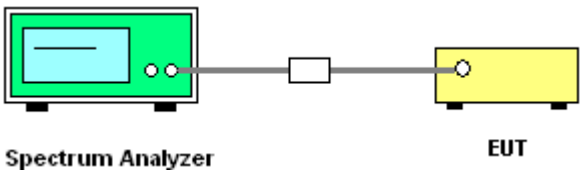
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



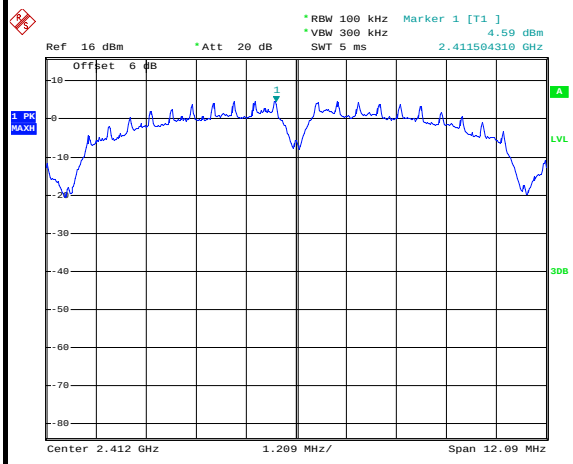
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Number of TX = 1, Chain Port 1 (Measured)

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

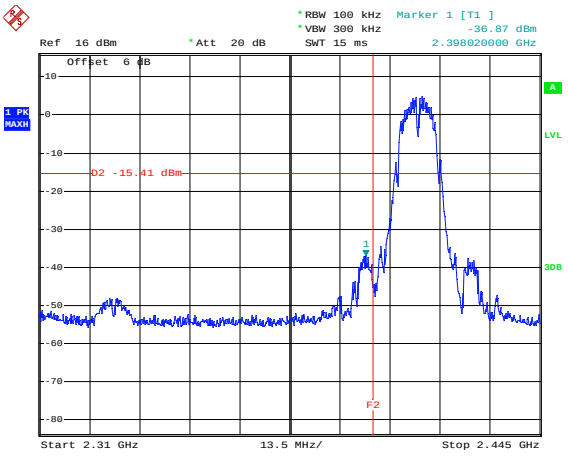
WLAN 802.11b Channel 01

100kHz PSD reference Level



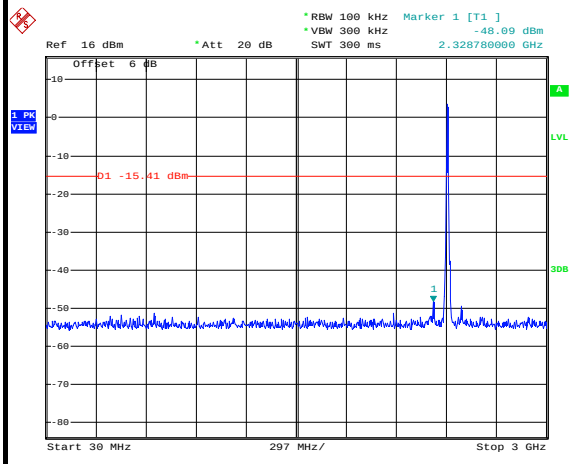
Date: 16.SEP.2014 00:12:08

Low Channel Plot



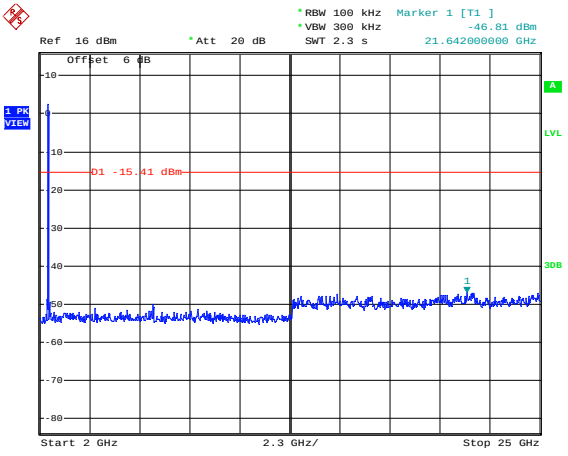
Date: 16.SEP.2014 00:12:21

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 00:12:41

Spurious Emission 2GHz~25GHz

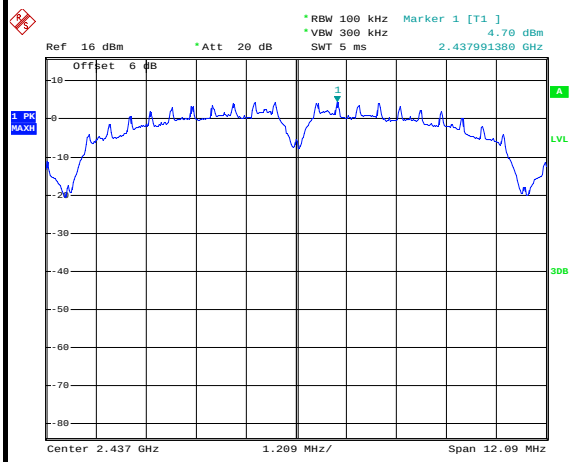


Date: 16.SEP.2014 00:12:59

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

WLAN 802.11b Channel 06

100kHz PSD reference Level



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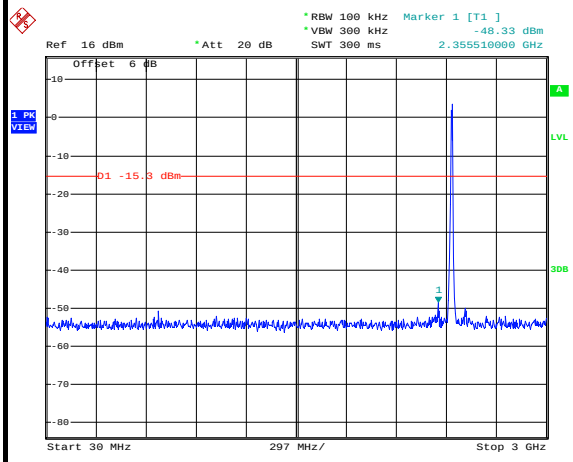
Spurious Emission 30MHz~3GHz



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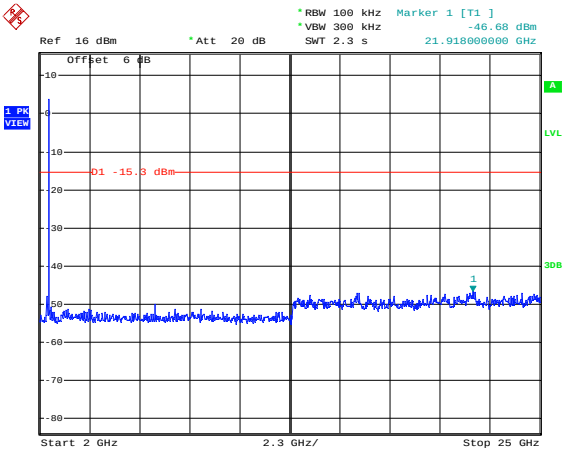
Spurious Emission 2GHz~25GHz

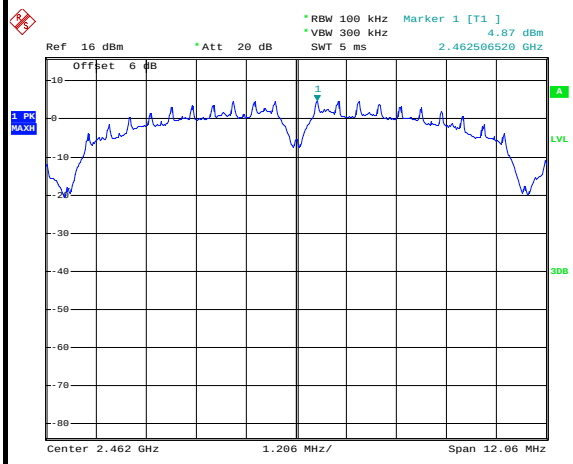


Date: 16.SEP.2014 00:28:14

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

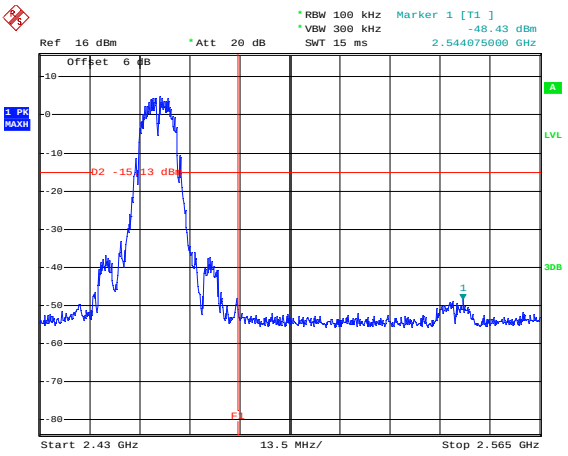
WLAN 802.11b Channel 11

100kHz PSD reference Level



Date: 16.SEP.2014 00:23:50

High Channel Plot



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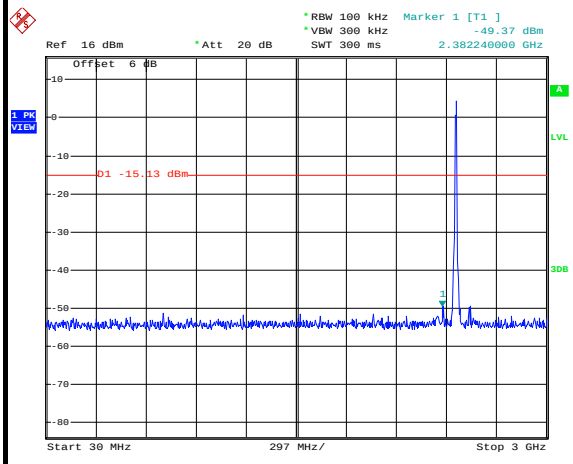
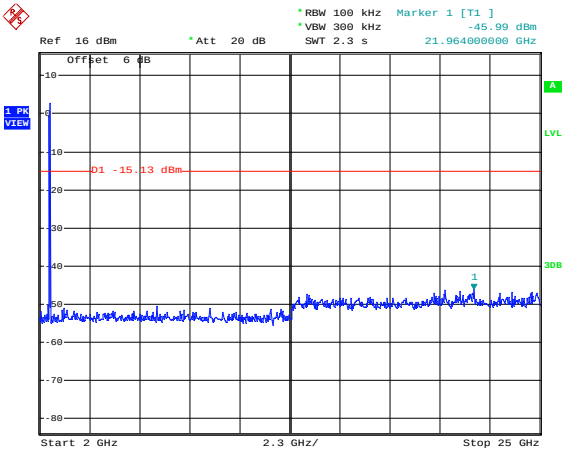
Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 00:24:23

Spurious Emission 2GHz~25GHz

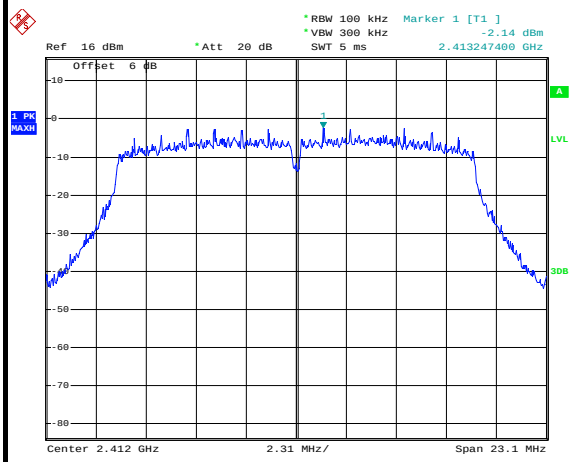


Date: 16.SEP.2014 00:24:41

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

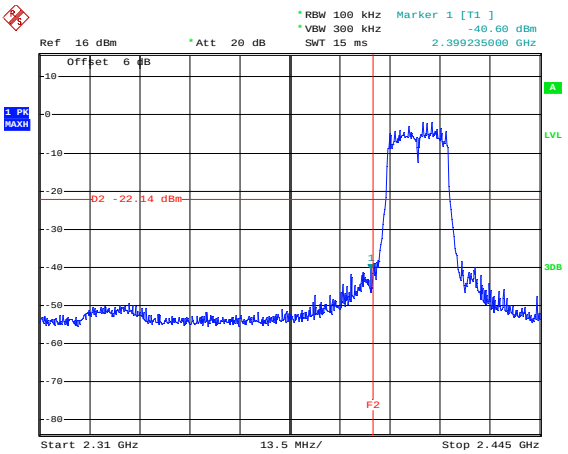
WLAN 802.11g Channel 01

100kHz PSD reference Level



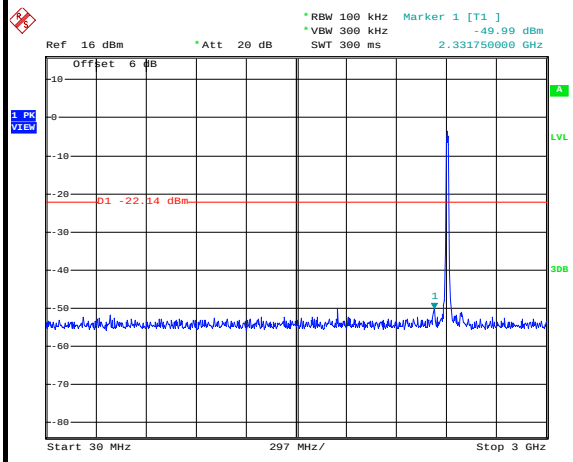
Date: 16.SEP.2014 00:37:43

Low Channel Plot



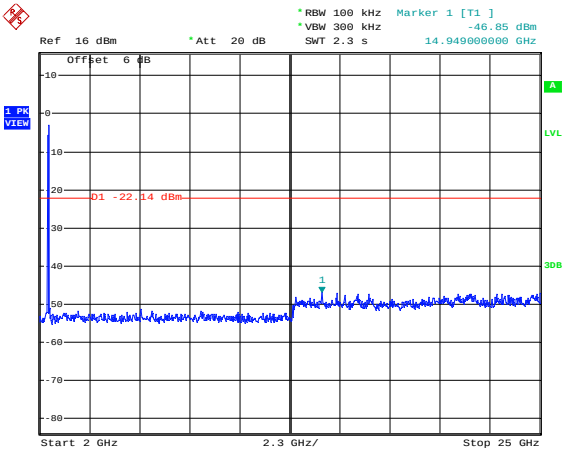
Date: 16.SEP.2014 00:37:57

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 00:38:16

Spurious Emission 2GHz~25GHz

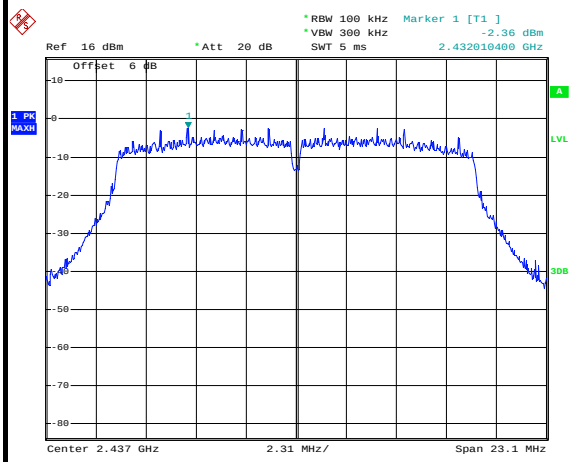


Date: 16.SEP.2014 00:38:35

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

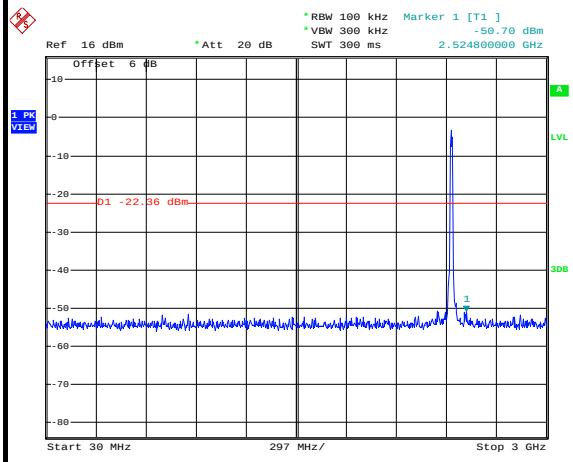
WLAN 802.11g Channel 06

100kHz PSD reference Level



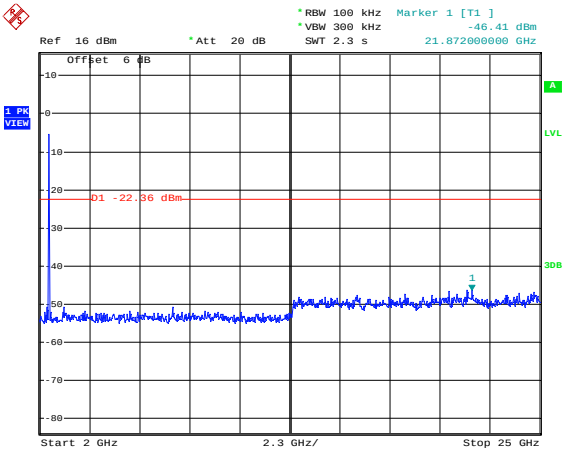
Date: 16.SEP.2014 00:41:55

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 00:43:16

Spurious Emission 2GHz~25GHz

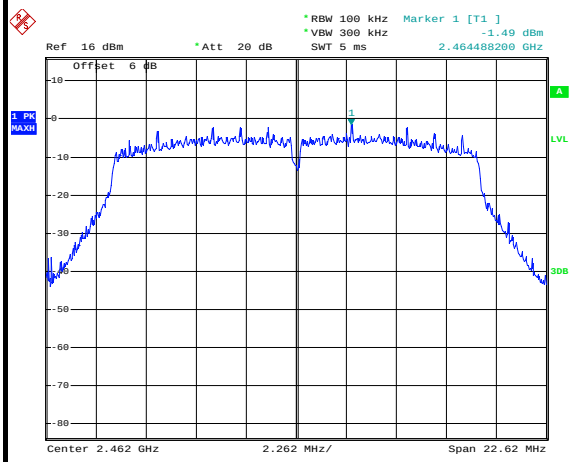


Date: 16.SEP.2014 00:43:34

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

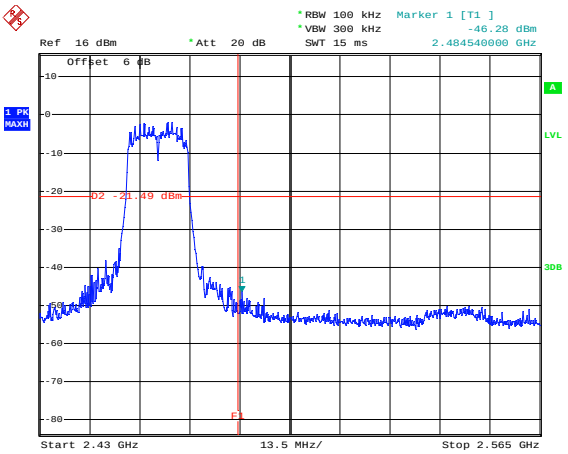
WLAN 802.11g Channel 11

100kHz PSD reference Level



Date: 16.SEP.2014 00:46:23

High Channel Plot



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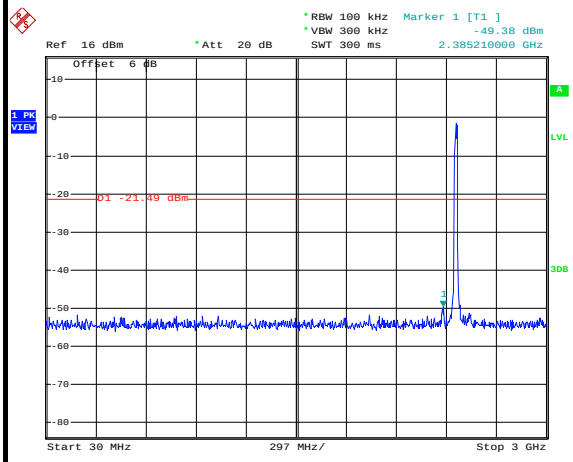
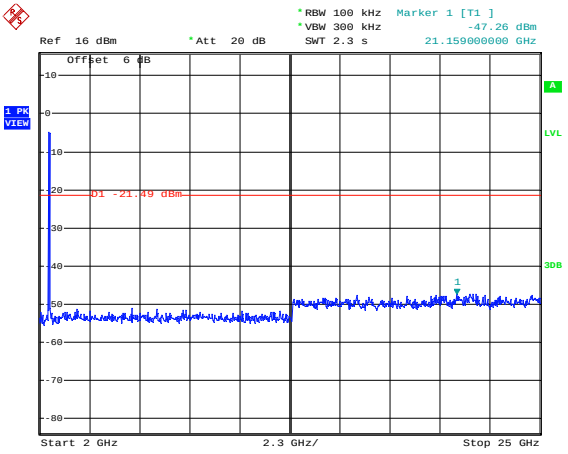
Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 00:46:56

Spurious Emission 2GHz~25GHz

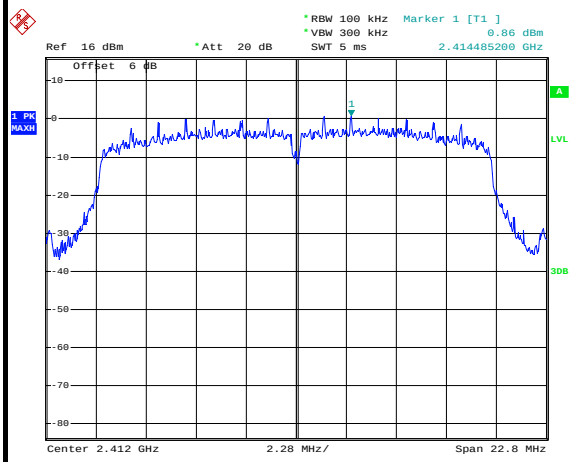


Date: 16.SEP.2014 00:47:15

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

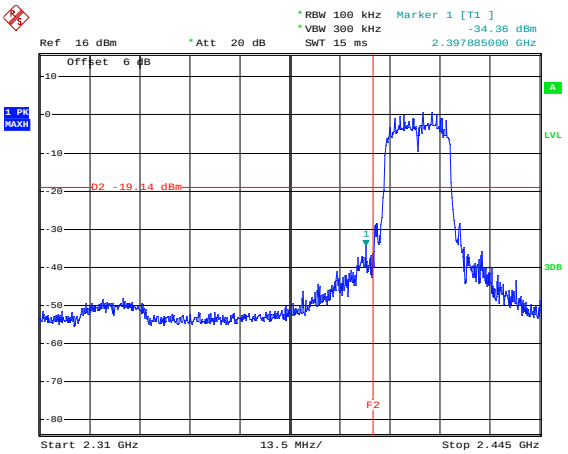
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



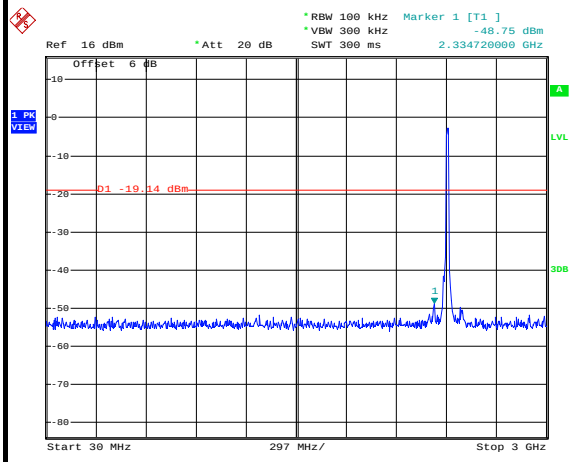
Date: 16.SEP.2014 00:56:08

Low Channel Plot



Date: 16.SEP.2014 00:56:22

Spurious Emission 30MHz~3GHz



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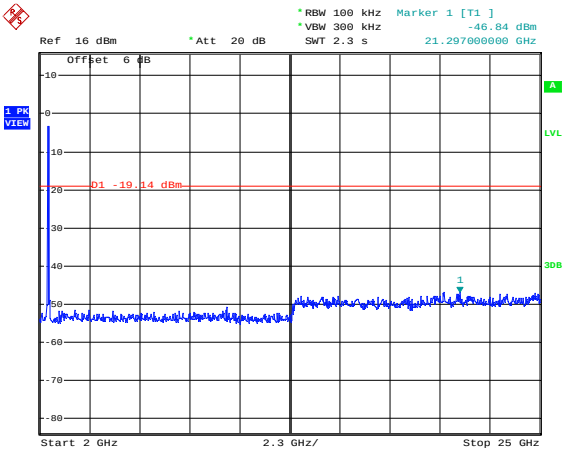
Spurious Emission 2GHz~25GHz

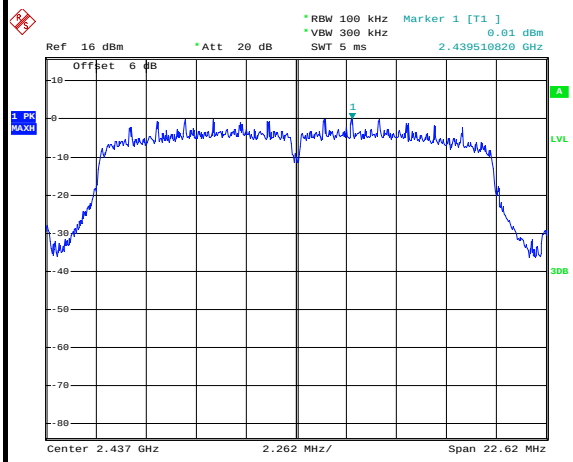


Date: 16.SEP.2014 00:57:00

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

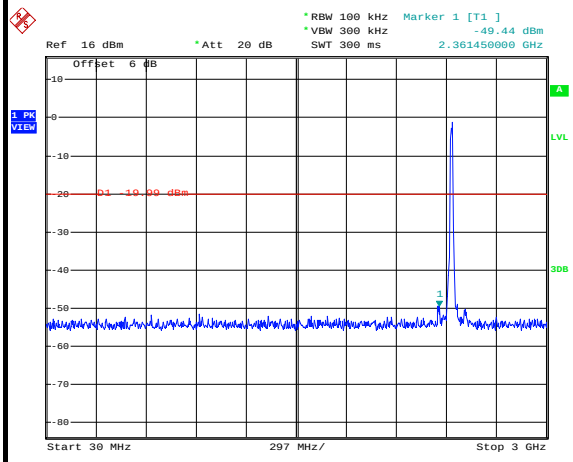
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



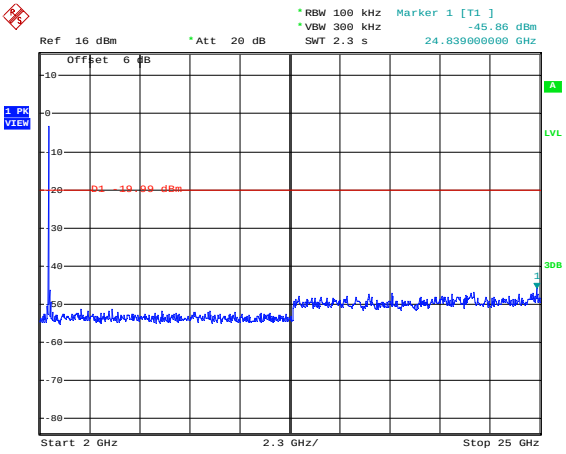
Date: 16.SEP.2014 01:03:32

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 01:03:52

Spurious Emission 2GHz~25GHz

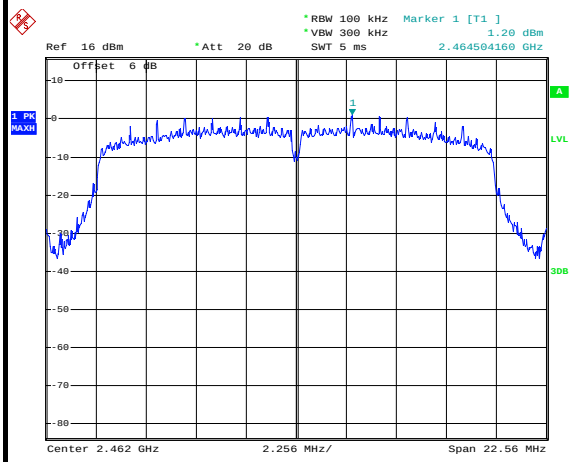


Date: 16.SEP.2014 01:04:11

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

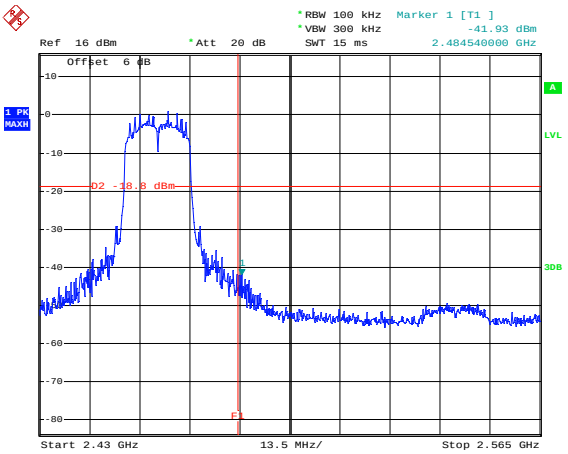
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



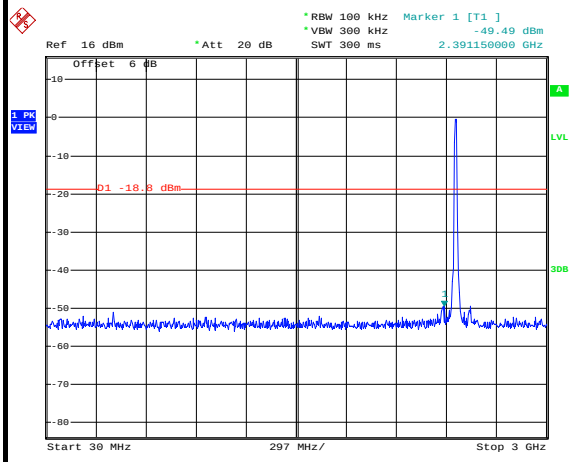
Date: 16.SEP.2014 01:09:32

High Channel Plot



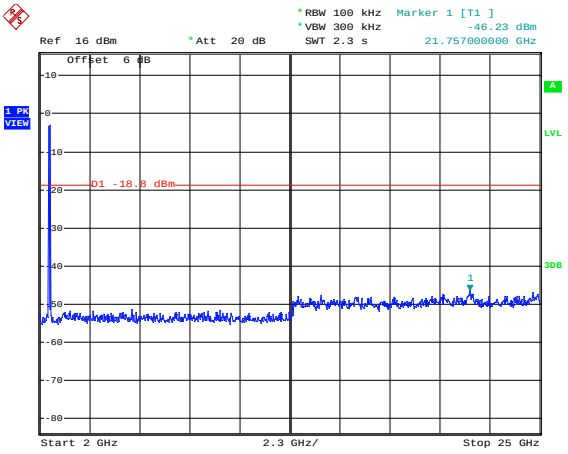
Date: 16.SEP.2014 01:09:46

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 01:10:05

Spurious Emission 2GHz~25GHz

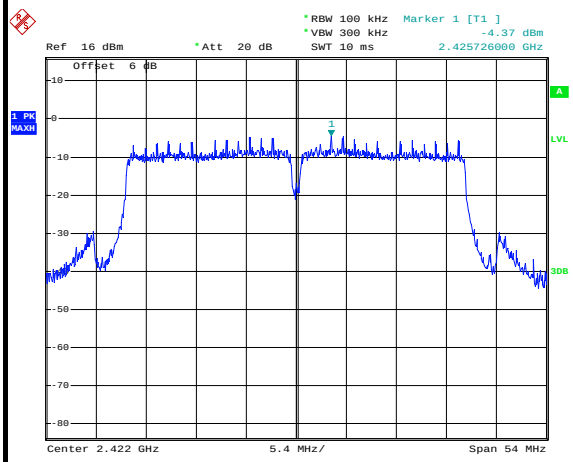


Date: 16.SEP.2014 01:10:24

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

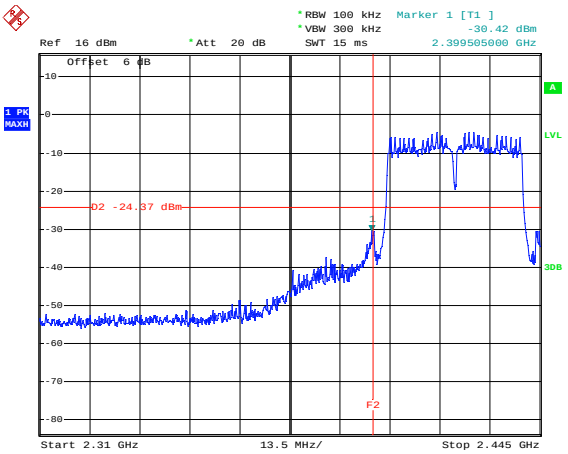
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



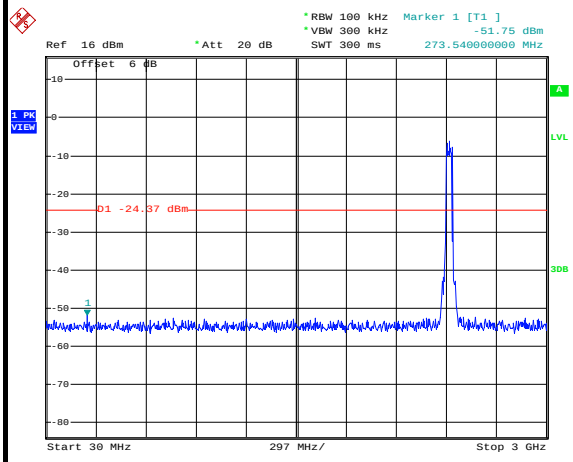
Date: 16.SEP.2014 03:53:40

Low Channel Plot



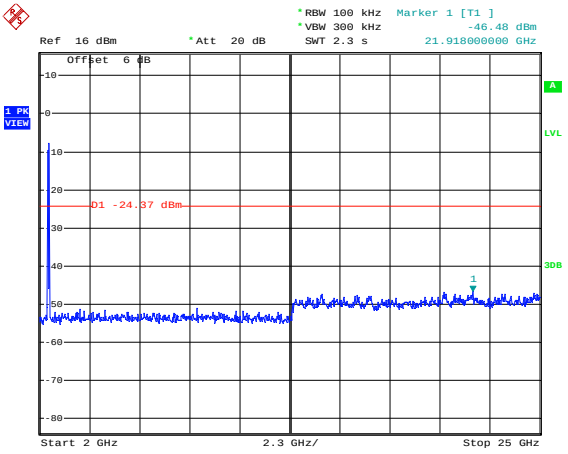
Date: 16.SEP.2014 03:53:54

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 03:58:11

Spurious Emission 2GHz~25GHz

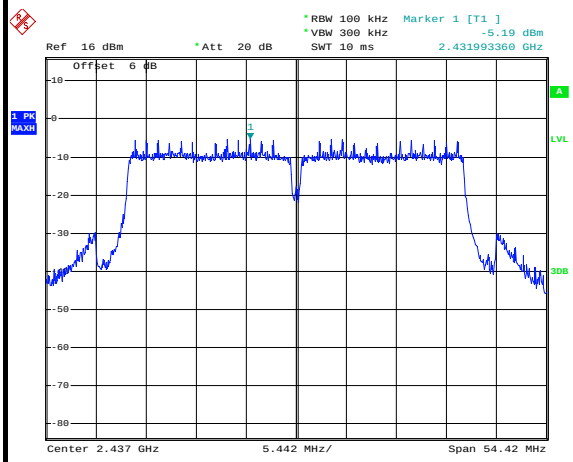


Date: 16.SEP.2014 03:55:54

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

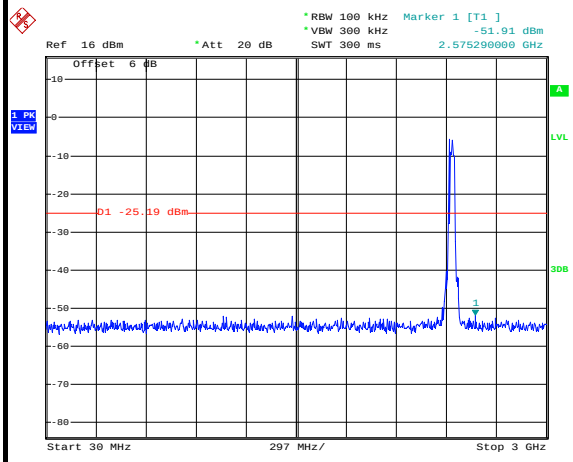
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



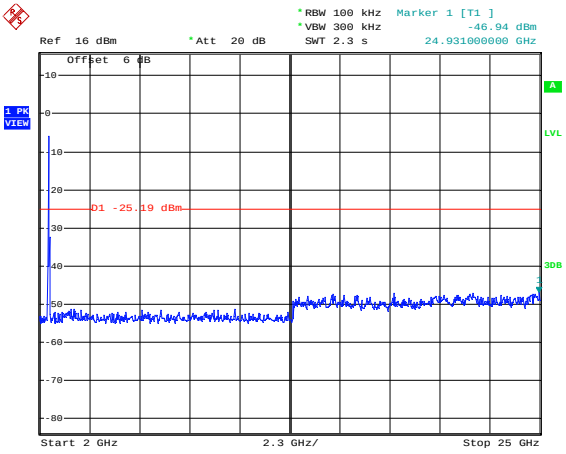
Date: 16.SEP.2014 04:00:50

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 04:04:27

Spurious Emission 2GHz~25GHz

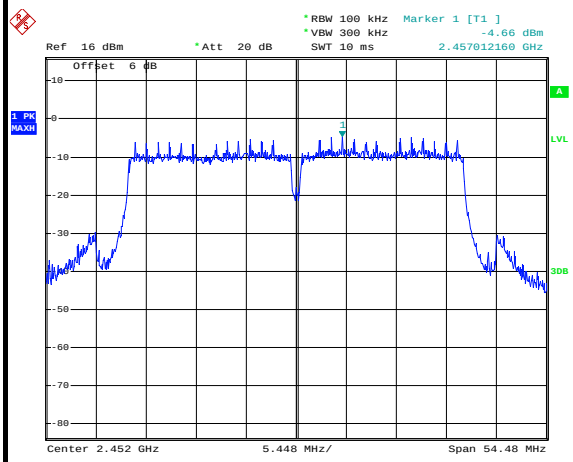


Date: 16.SEP.2014 04:02:41

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

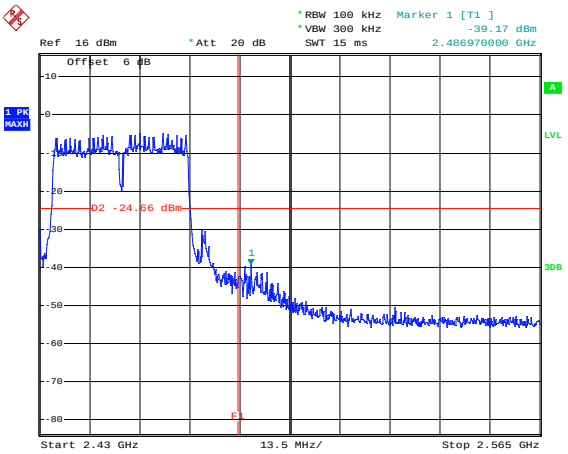
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



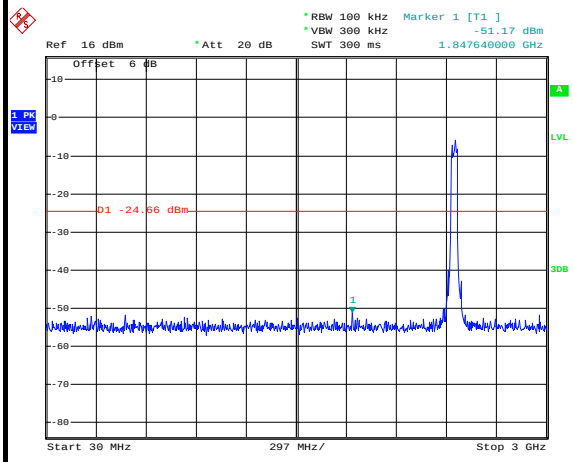
Date: 16.SEP.2014 04:06:59

High Channel Plot



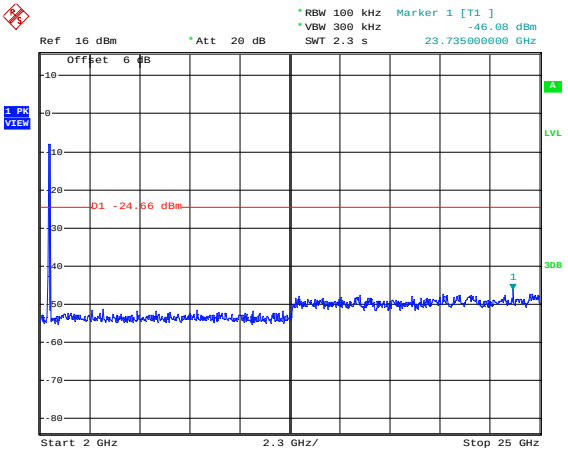
Date: 16.SEP.2014 04:07:13

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 04:09:43

Spurious Emission 2GHz~25GHz



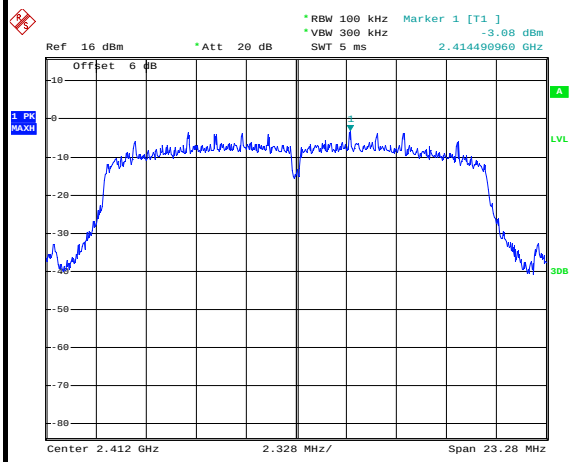
Date: 16.SEP.2014 04:08:49

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

Number of TX :	2	**Chain Port:**	0+1(0)
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

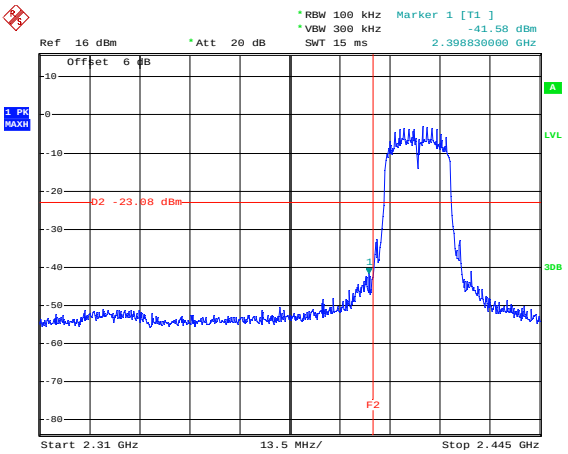
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



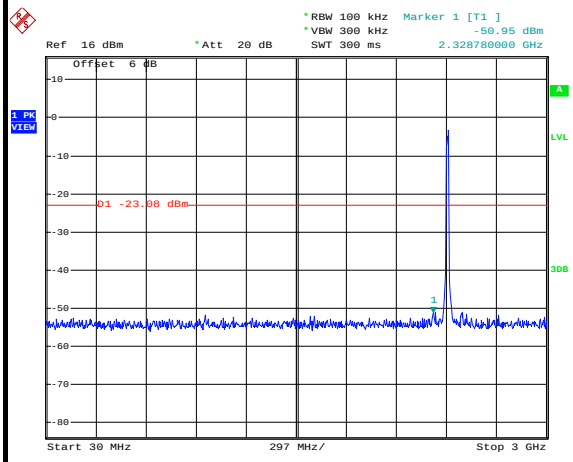
Date: 16.SEP.2014 02:16:10

Low Channel Plot



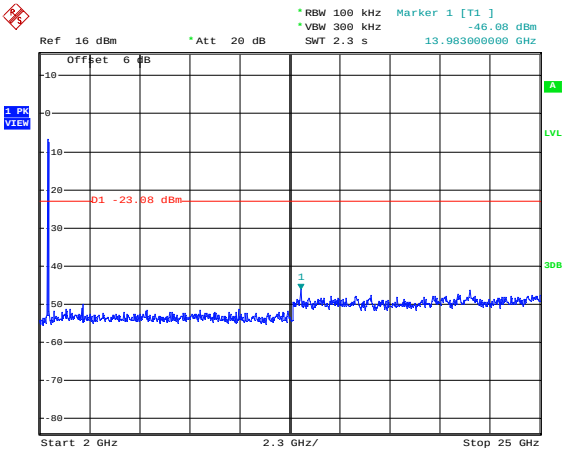
Date: 16.SEP.2014 02:16:24

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 02:16:43

Spurious Emission 2GHz~25GHz

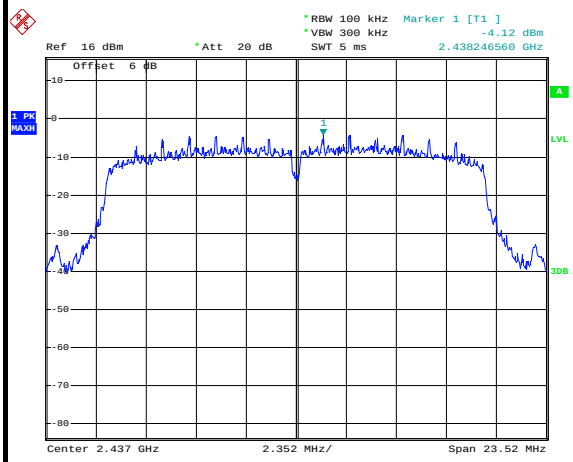


Date: 16.SEP.2014 02:17:02

Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT20	Temperature :	24~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

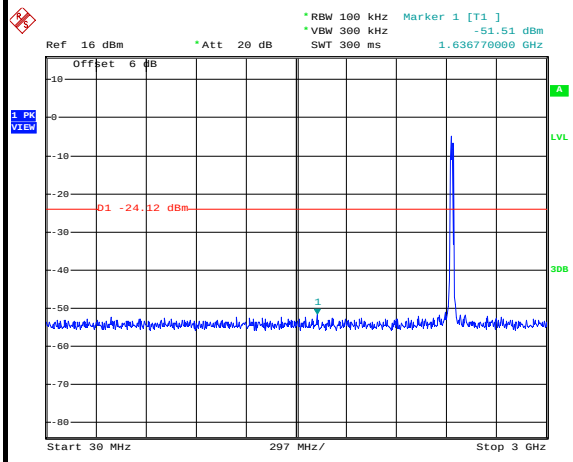
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



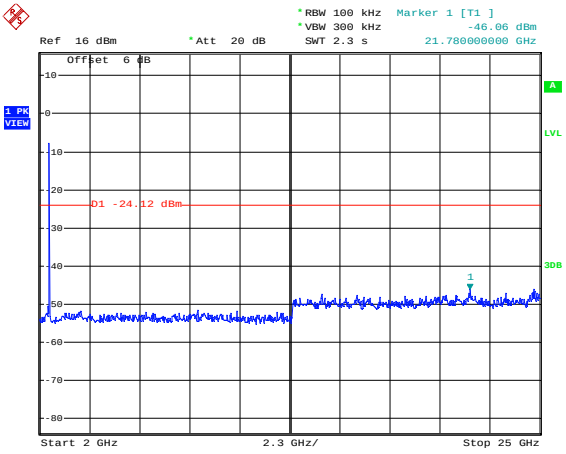
Date: 16.SEP.2014 02:21:00

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 02:21:20

Spurious Emission 2GHz~25GHz

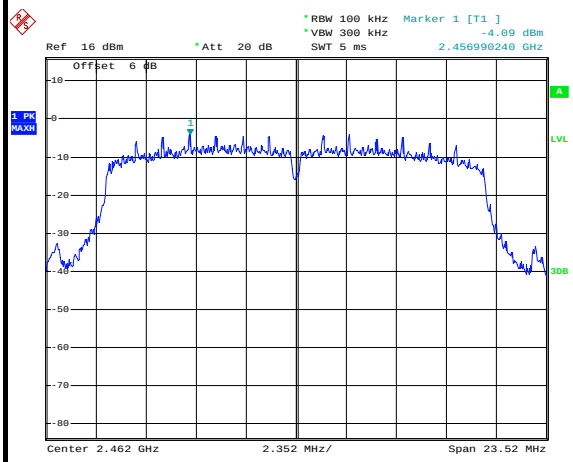


Date: 16.SEP.2014 02:21:39

Number of TX :	2	**Chain Port:**	0+1(0)
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

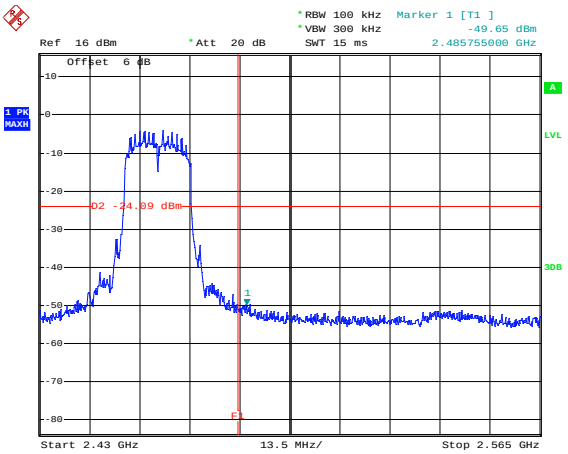
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



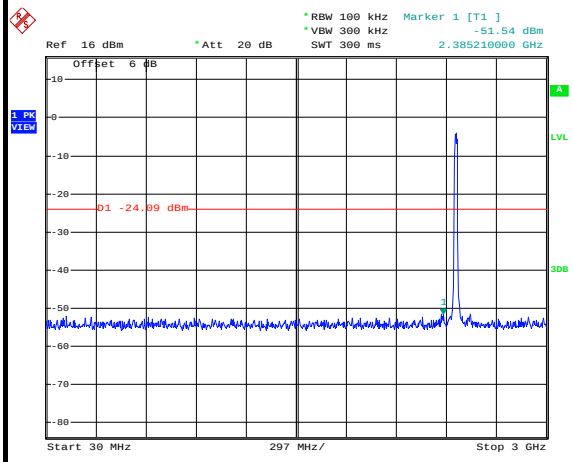
Date: 16.SEP.2014 02:25:00

High Channel Plot



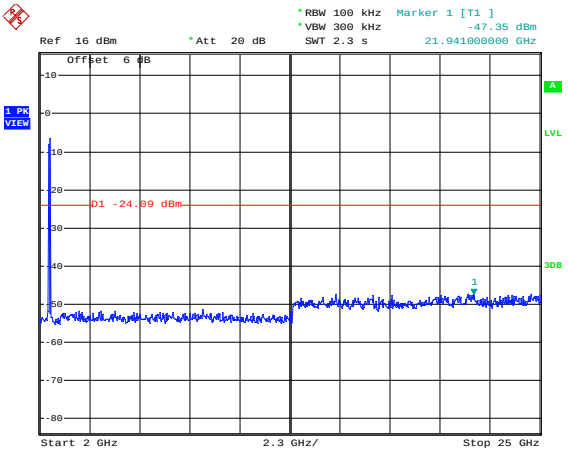
Date: 16.SEP.2014 02:25:14

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 02:25:33

Spurious Emission 2GHz~25GHz

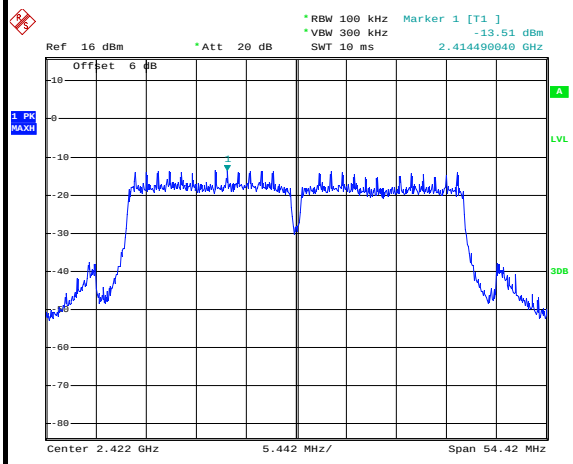


Date: 16.SEP.2014 02:25:52

Number of TX :	2	**Chain Port:**	0+1(0)
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	03	**Test Engineer :**	Issac Song

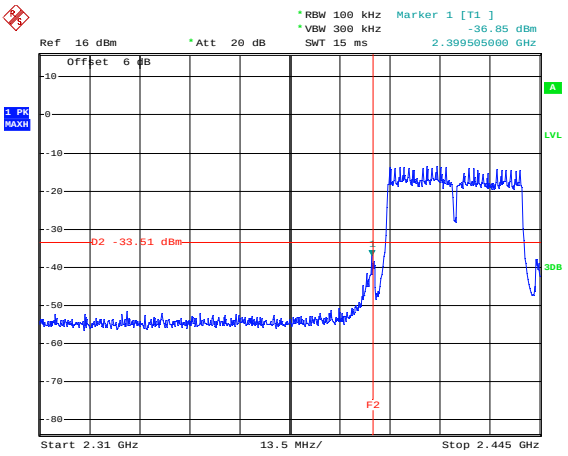
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



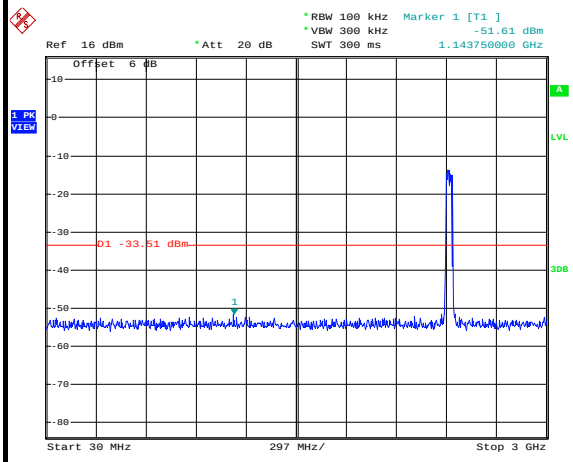
Date: 16.SEP.2014 04:55:24

Low Channel Plot



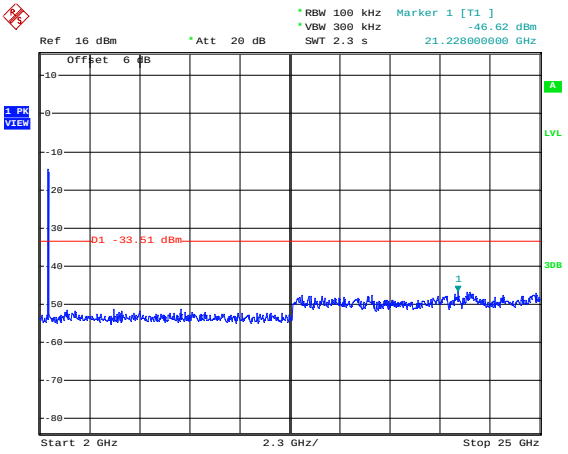
Date: 16.SEP.2014 04:55:38

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 04:55:58

Spurious Emission 2GHz~25GHz

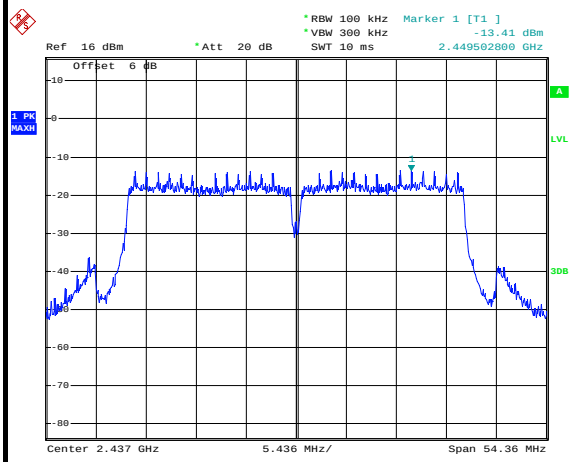


Date: 16.SEP.2014 04:56:16

Number of TX :	2	**Chain Port:**	0+1(0)
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

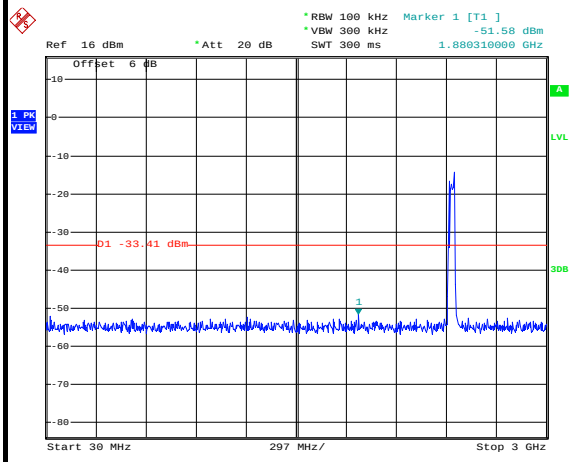
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



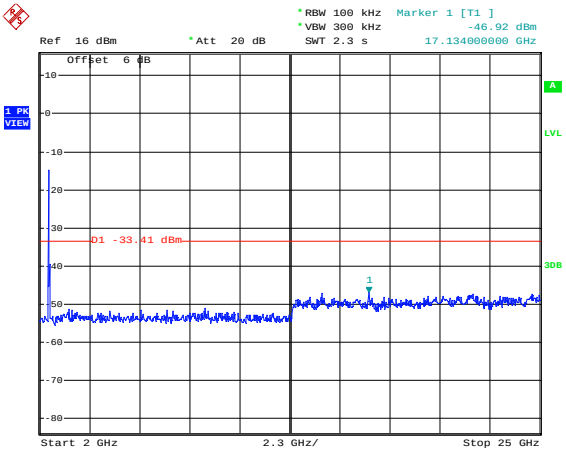
Date: 16.SEP.2014 04:59:05

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 05:01:46

Spurious Emission 2GHz~25GHz

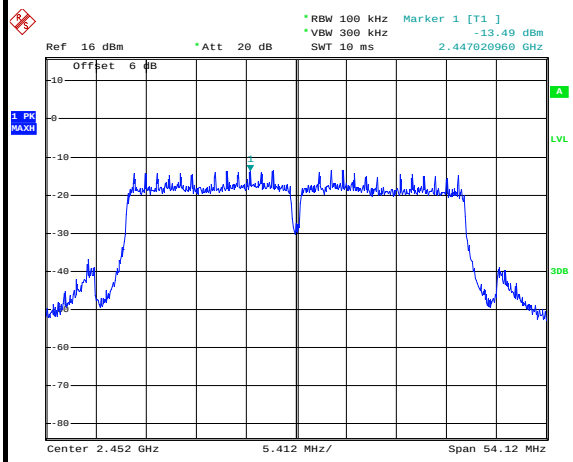


Date: 16.SEP.2014 05:00:46

Number of TX :	2	Chain Port:	0+1(0)
Test Mode :	802.11n HT40	Temperature :	24~25℃
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	09	Test Engineer :	Issac Song

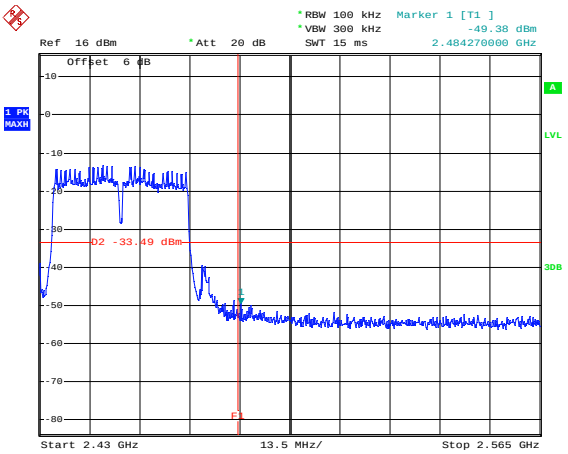
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



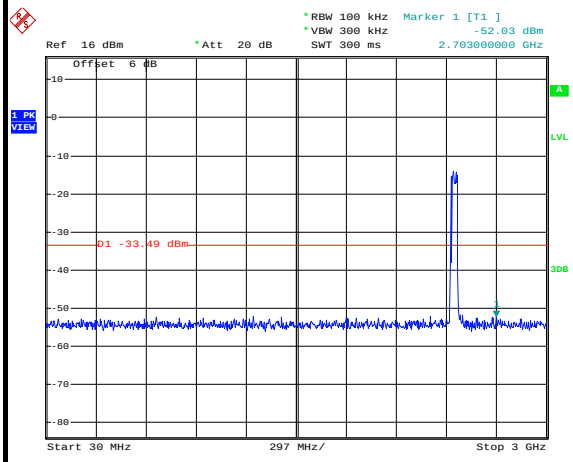
Date: 16.SEP.2014 05:04:29

High Channel Plot



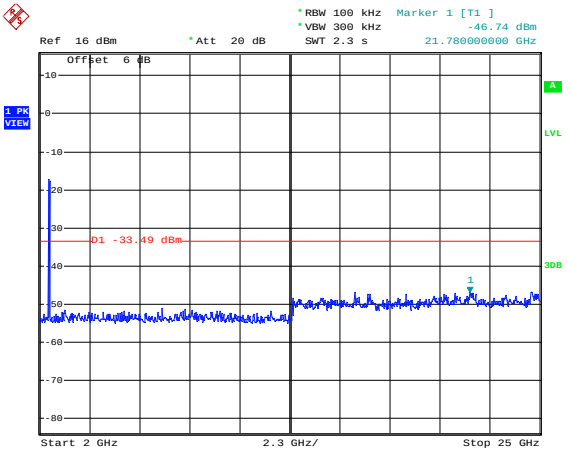
Date: 16.SEP.2014 05:04:43

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 05:05:57

Spurious Emission 2GHz~25GHz



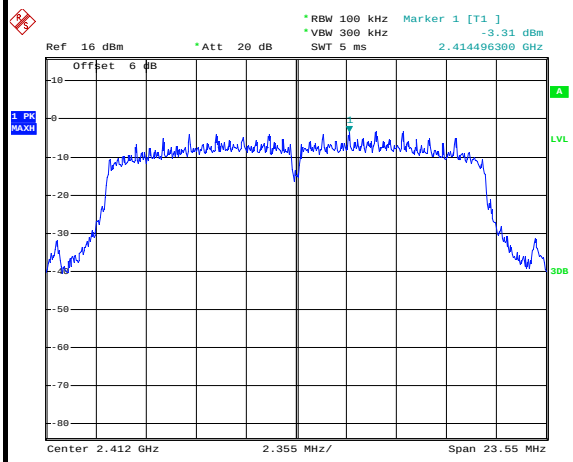
Date: 16.SEP.2014 05:06:16

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

Number of TX :	2	**Chain Port:**	0+1(1)
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	01	**Test Engineer :**	Issac Song

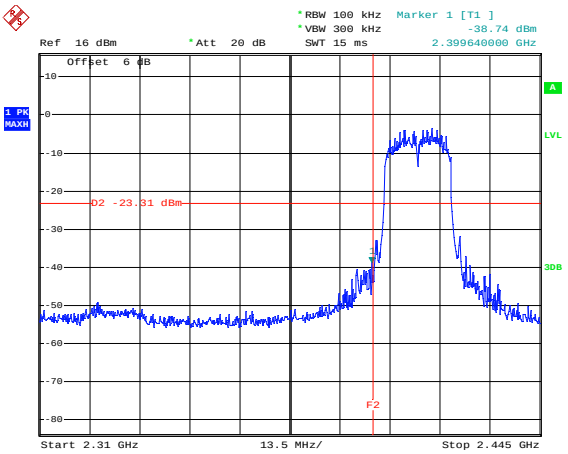
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



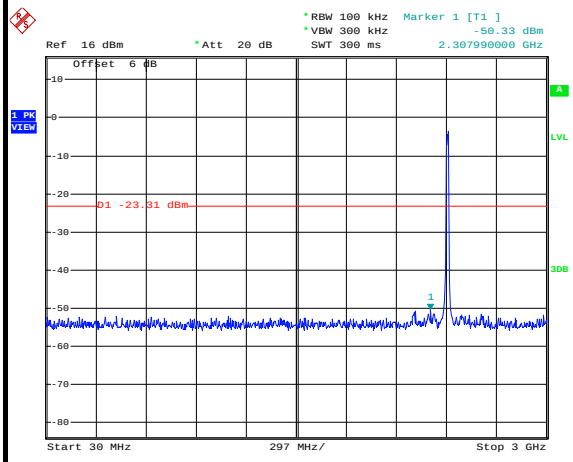
Date: 16.SEP.2014 02:37:08

Low Channel Plot



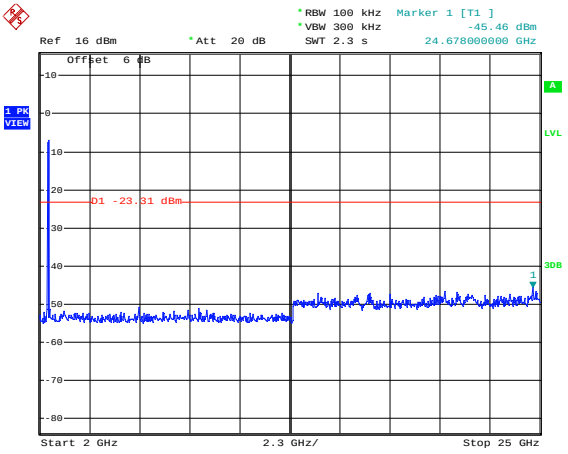
Date: 16.SEP.2014 04:14:07

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 03:48:24

Spurious Emission 2GHz~25GHz

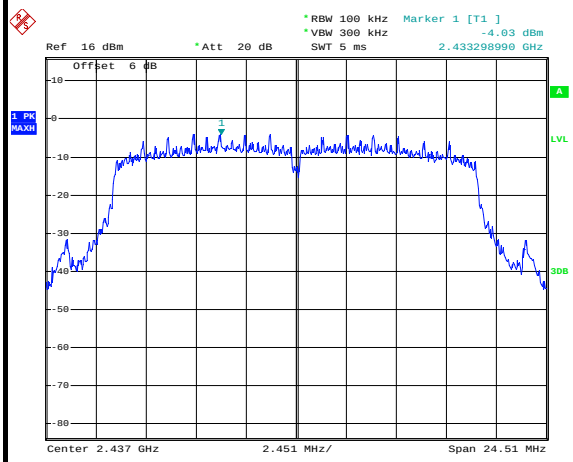


Date: 16.SEP.2014 03:48:43

Number of TX :	2	**Chain Port:**	0+1(1)
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

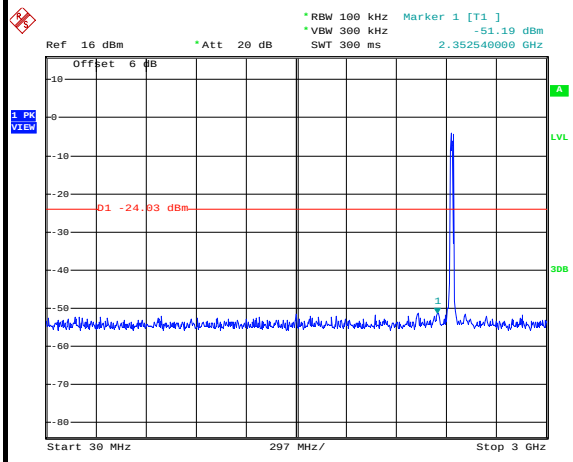
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



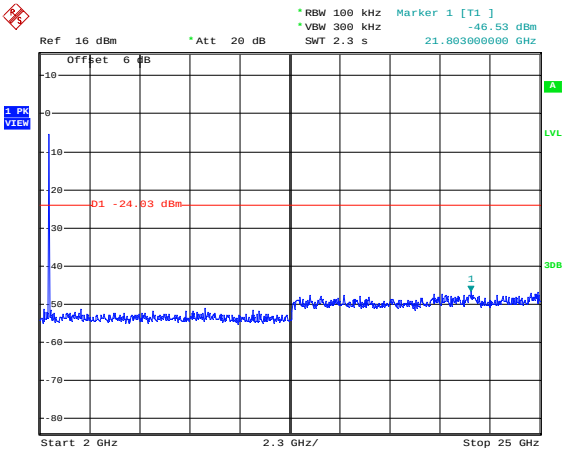
Date: 16.SEP.2014 02:33:30

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 02:33:50

Spurious Emission 2GHz~25GHz

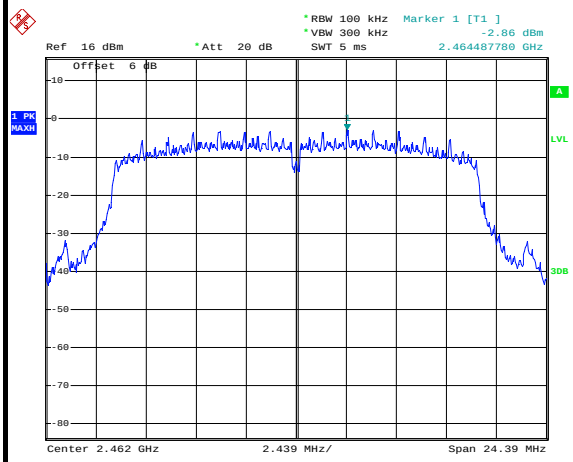


Date: 16.SEP.2014 02:34:09

Number of TX :	2	**Chain Port:**	0+1(1)
Test Mode :	802.11n HT20	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	11	**Test Engineer :**	Issac Song

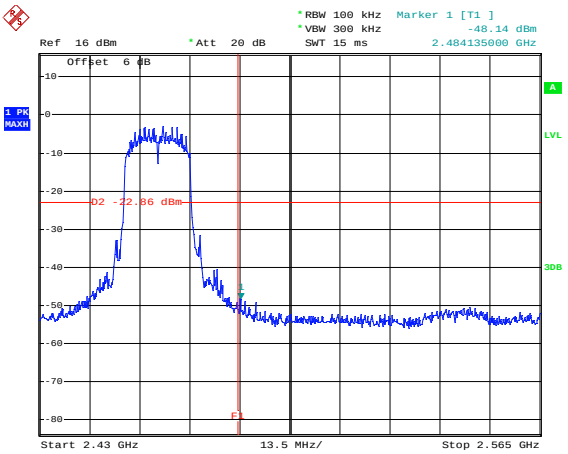
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



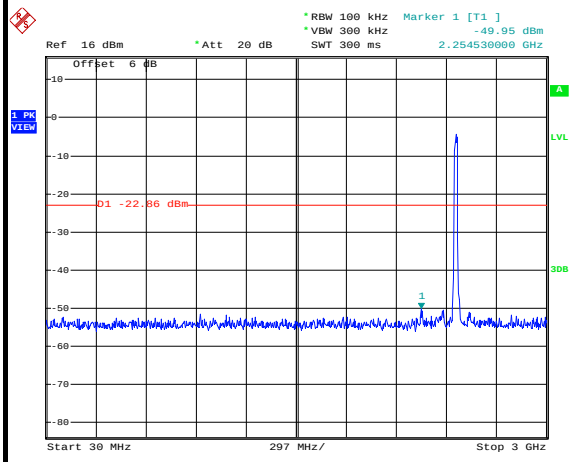
Date: 16.SEP.2014 02:29:23

High Channel Plot



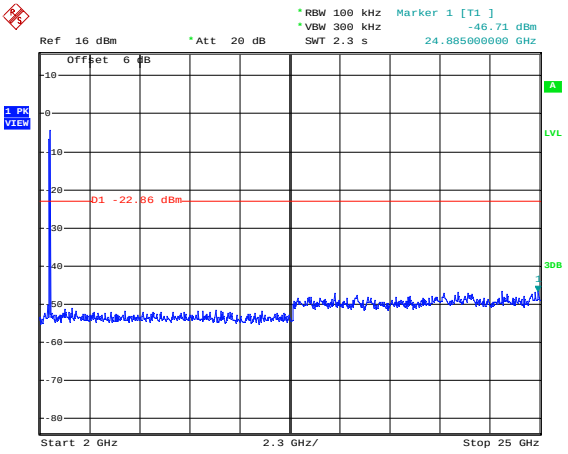
Date: 16.SEP.2014 02:29:37

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 02:29:56

Spurious Emission 2GHz~25GHz

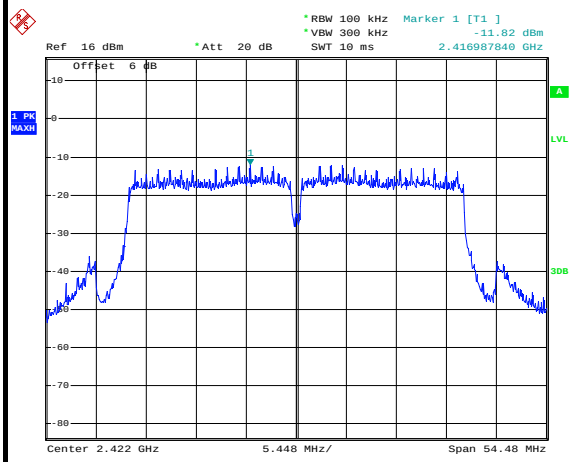


Date: 16.SEP.2014 02:30:15

Number of TX :	2	**Chain Port:**	0+1(1)
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Low	**Relative Humidity :**	49~51%
Test Channel :	03	**Test Engineer :**	Issac Song

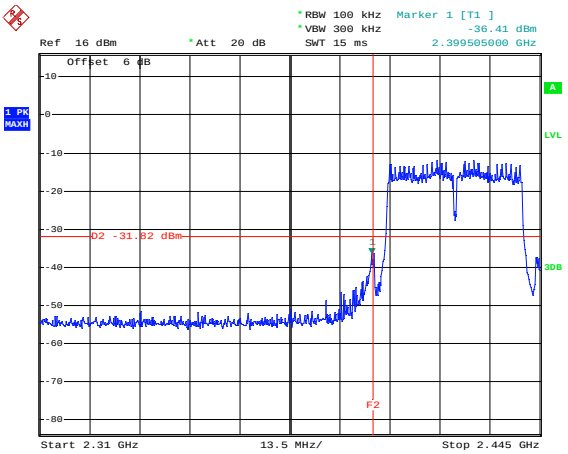
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



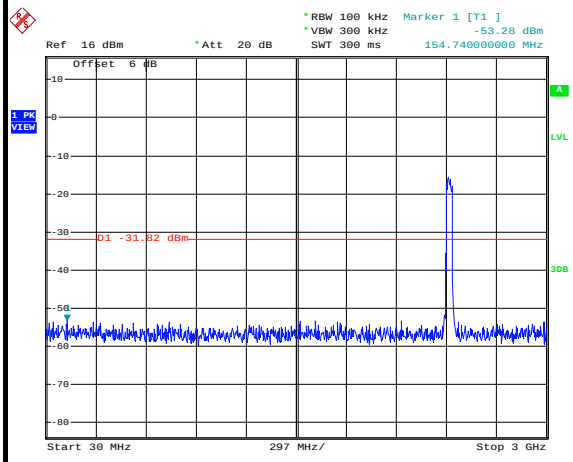
Date: 16.SEP.2014 05:09:34

Low Channel Plot



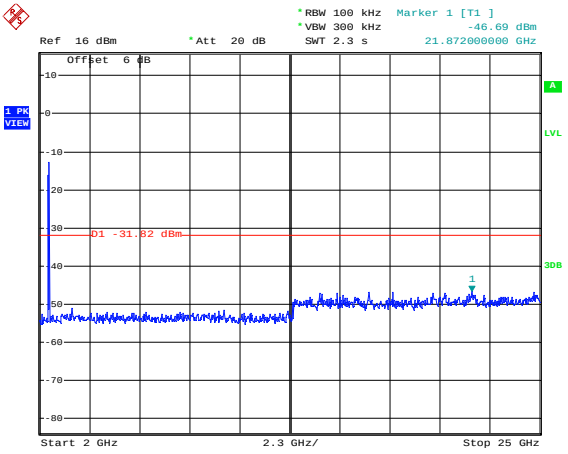
Date: 16.SEP.2014 05:09:48

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 05:12:20

Spurious Emission 2GHz~25GHz

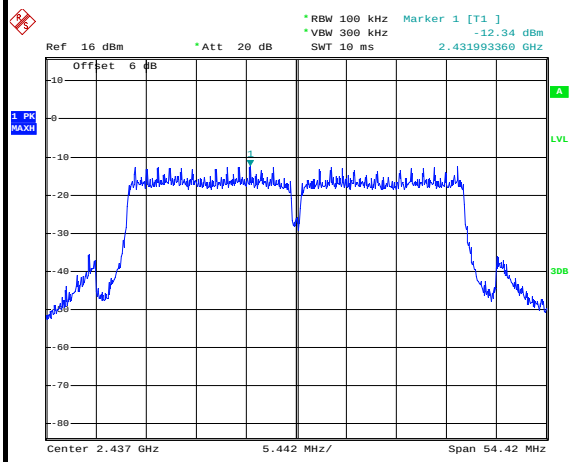


Date: 16.SEP.2014 05:11:22

Number of TX :	2	**Chain Port:**	0+1(1)
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	49~51%
Test Channel :	06	**Test Engineer :**	Issac Song

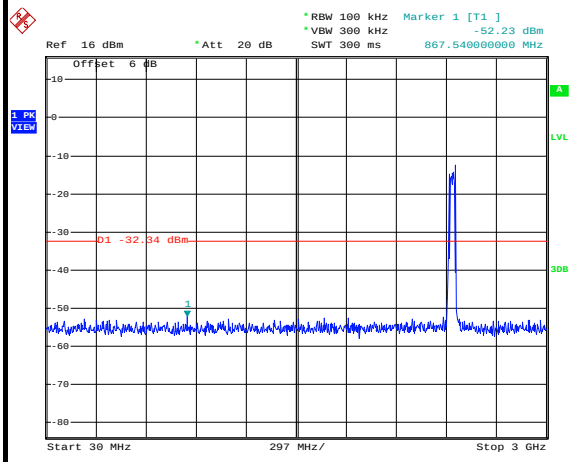
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



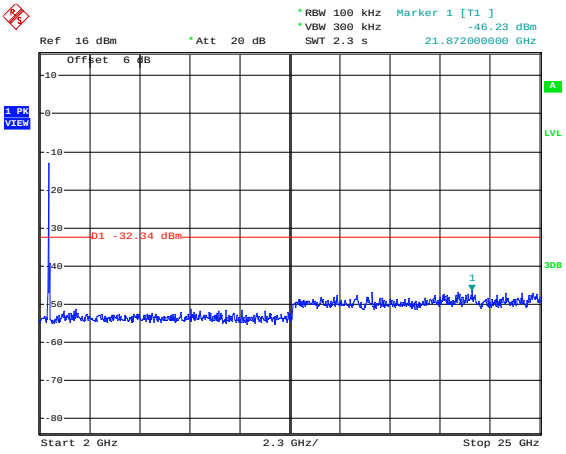
Date: 16.SEP.2014 05:14:48

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 05:17:18

Spurious Emission 2GHz~25GHz

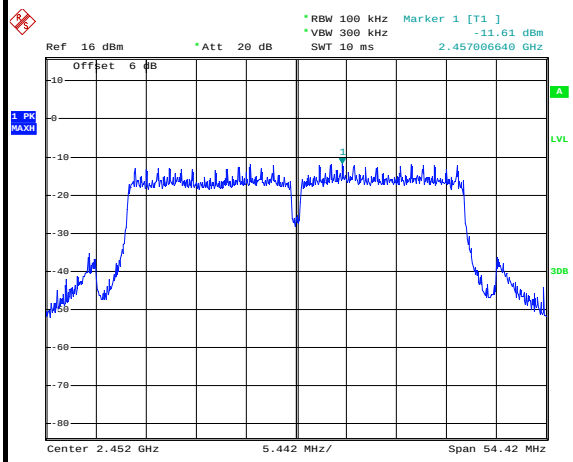


Date: 16.SEP.2014 05:16:21

Number of TX :	2	**Chain Port:**	0+1(1)
Test Mode :	802.11n HT40	**Temperature :**	24~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	49~51%
Test Channel :	09	**Test Engineer :**	Issac Song

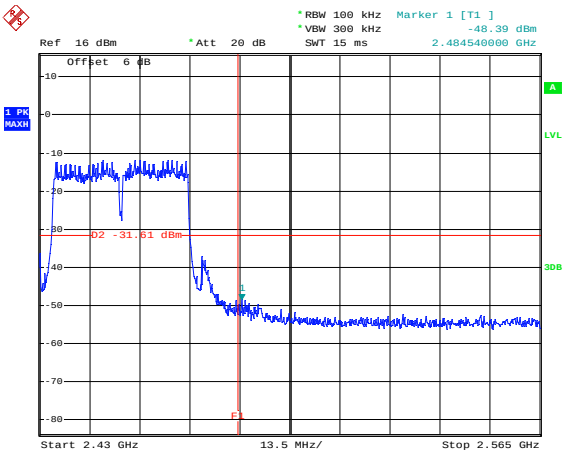
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



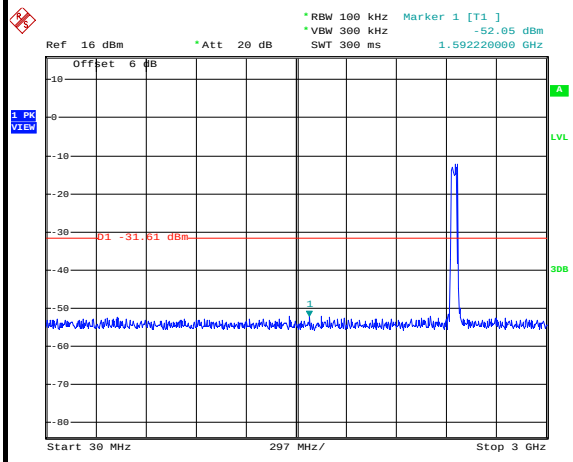
Date: 16.SEP.2014 05:20:14

High Channel Plot



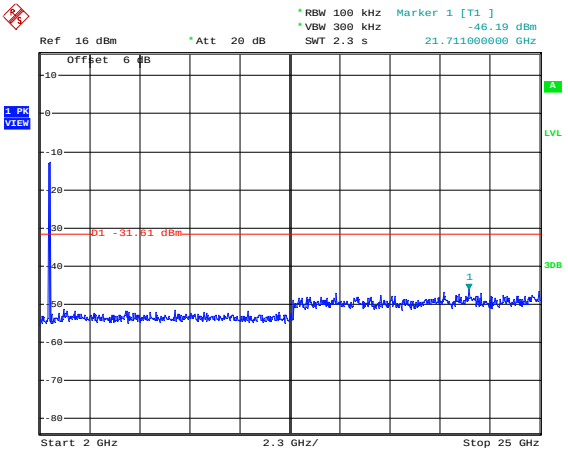
Date: 16.SEP.2014 05:20:28

Spurious Emission 30MHz~3GHz



Date: 16.SEP.2014 05:21:43

Spurious Emission 2GHz~25GHz



Date: 16.SEP.2014 05:22:02

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.5.2 Measuring Instruments

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

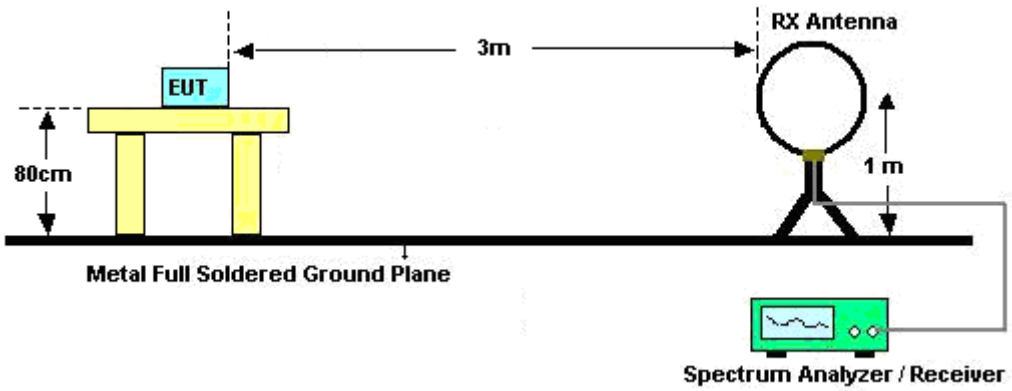
3.5.3 Test Procedure

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

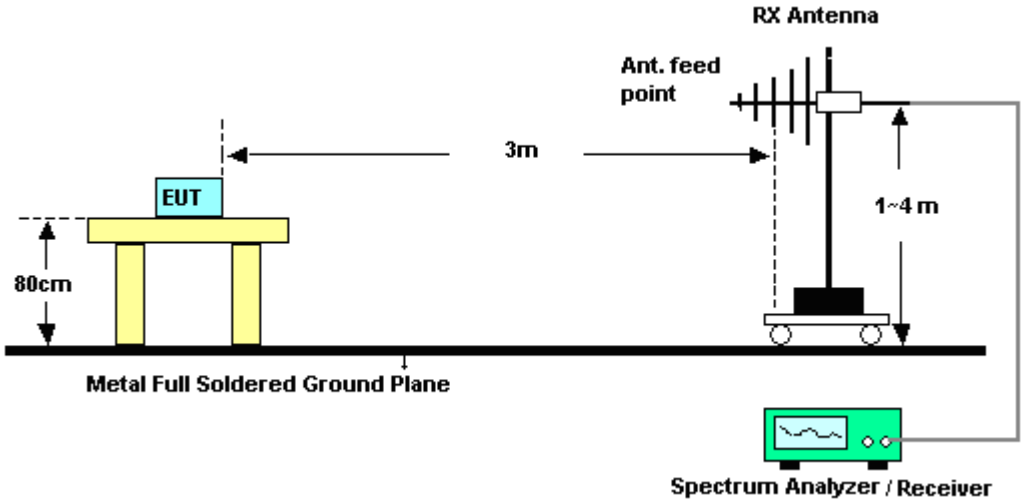
Chain Port	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
0	802.11b	100	-	-	10Hz
1	802.11b	100	-	-	
0	802.11g	95.30	2.07	0.48	1kHz
1	802.11g	95.39	2.07	0.48	
1	2.4GHz 802.11n HT20	94.95	1.92	0.52	1kHz
1	2.4GHz 802.11n HT40	90.80	0.95	1.05	3kHz
0+1	2.4GHz 802.11n HT20	90.88	0.98	1.02	3kHz
0+1	2.4GHz 802.11n HT40	83.95	0.50	1.99	

3.5.4 Test Setup

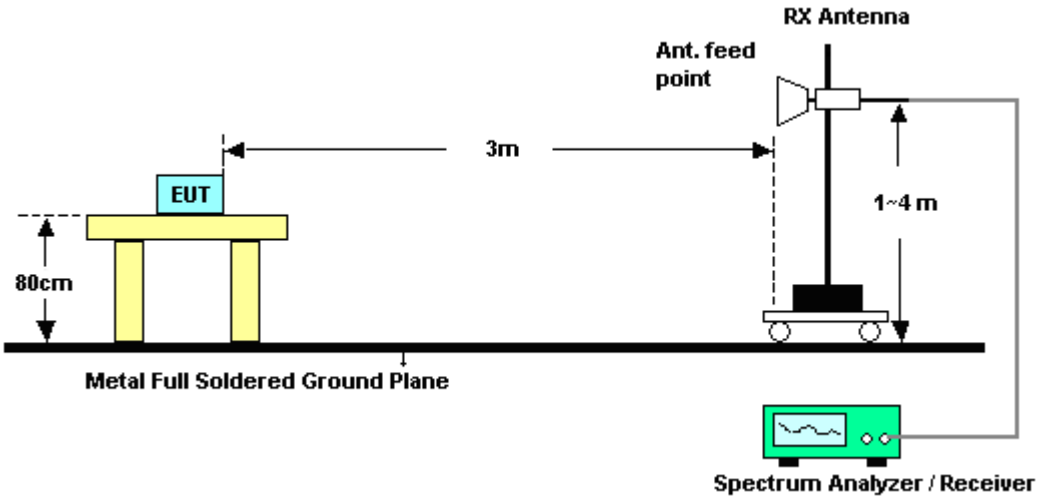
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

For Sample 1

< Chain Port 0>

Test Mode :	802.11b	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Feng Wang

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
2329.80	58.13	-15.87	74	60.21	31.76	2.59	36.43	118	280	Peak
2329.26	50.27	-3.73	54	52.35	31.76	2.59	36.43	118	280	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
2328.81	52.90	-21.10	74	54.98	31.76	2.59	36.43	191	107	Peak
2328.18	43.26	-10.74	54	45.34	31.76	2.59	36.43	191	107	Average

Test Mode :	802.11b	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Feng Wang

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
2483.71	55.93	-18.07	74	56.7	32.34	2.68	35.79	109	291	Peak
2483.50	48.02	-5.98	54	48.79	32.34	2.68	35.79	109	291	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
2483.80	53.31	-20.69	74	54.08	32.34	2.68	35.79	141	250	Peak
2483.50	44.16	-9.84	54	44.93	32.34	2.68	35.79	141	250	Average

Test Mode :	802.11g	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Feng Wang

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	71.10	-2.90	74	72.53	32.01	2.64	36.08	116	287	Peak
2390	48.19	-5.81	54	49.62	32.01	2.64	36.08	116	287	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
2390	70.13	-3.87	74	71.56	32.01	2.64	36.08	173	265	Peak
2390	46.10	-7.90	54	47.53	32.01	2.64	36.08	173	265	Average

Test Mode :	802.11g	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Feng Wang

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
2483.65	70.10	-3.90	74	70.87	32.34	2.68	35.79	-	-	Peak
2483.50	45.92	-8.08	54	46.69	32.34	2.68	35.79	116	292	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
2484.49	67.23	-6.77	74	68	32.34	2.68	35.79	165	267	Peak
2483.50	43.14	-10.86	54	43.91	32.34	2.68	35.79	165	267	Average

< Chain Port 1>

Test Mode :	802.11b	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Feng Wang

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
2328.36	48.74	-25.26	74	50.82	31.76	2.59	36.43	136	109	Peak
2331.51	35.21	-18.79	54	37.29	31.76	2.59	36.43	136	109	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
2332.05	50.54	-23.46	74	52.62	31.76	2.59	36.43	100	99	Peak
2331.69	37.93	-16.07	54	40.01	31.76	2.59	36.43	100	99	Average

Test Mode :	802.11b	**Temperature :**	22~23°C
Test Band :	High	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Feng Wang

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
2483.62	48.38	-25.62	74	49.15	32.34	2.68	35.79	133	305	Peak
2483.50	35.50	-18.50	54	36.27	32.34	2.68	35.79	133	305	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
2483.74	48.23	-25.77	74	49	32.34	2.68	35.79	100	86	Peak
2483.50	36.49	-17.51	54	37.26	32.34	2.68	35.79	100	86	Average

Test Mode :	802.11g	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Feng Wang

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	61.17	-12.83	74	62.60	32.01	2.64	36.08	181	0	Peak
2390	36.80	-17.20	54	38.23	32.01	2.64	36.08	181	0	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	63.61	-10.39	74	65.04	32.01	2.64	36.08	100	97	Peak
2389.92	38.95	-15.05	54	40.38	32.01	2.64	36.08	100	97	Average

Test Mode :	802.11g	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Feng Wang

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
2486.35	63.51	-10.49	74	64.28	32.34	2.68	35.79	105	48	Peak
2485.24	37.84	-16.16	54	38.61	32.34	2.68	35.79	105	48	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
2486.32	67.32	-6.68	74	68.09	32.34	2.68	35.79	100	90	Peak
2485.21	40.07	-13.93	54	40.84	32.34	2.68	35.79	100	90	Average

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Feng Wang

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	69.80	-4.20	74	71.23	32.01	2.64	36.08	100	285	Peak
2390	46.68	-7.32	54	48.11	32.01	2.64	36.08	100	280	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
2389.56	67.28	-6.72	74	68.71	32.01	2.64	36.08	172	254	Peak
2389.92	44.40	-9.60	54	45.83	32.01	2.64	36.08	172	254	Average

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Feng Wang

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
2483.92	64.61	-9.39	74	65.38	32.34	2.68	35.79	140	161	Peak
2483.50	40.53	-13.47	54	41.30	32.34	2.68	35.79	140	161	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
2483.56	68.92	-5.08	74	69.69	32.34	2.68	35.79	-	-	Peak
2483.50	43.19	-10.81	54	43.96	32.34	2.68	35.79	118	278	Average

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	03	Test Engineer :	Feng Wang

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
2389.20	70.70	-3.30	74	72.13	32.01	2.64	36.08	119	291	Peak
2389.38	42.24	-11.76	54	43.67	32.01	2.64	36.08	119	290	Average
2484.52	49.28	-24.72	74	50.05	32.34	2.68	35.79	100	160	Peak
2485.00	35.71	-18.29	54	36.48	32.34	2.68	35.79	100	160	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
2386.95	67.86	-6.14	74	69.29	32.01	2.64	36.08	102	261	Peak
2390.00	40.41	-13.59	54	41.84	32.01	2.64	36.08	102	261	Average
2488.21	53.34	-20.66	74	54.00	32.40	2.68	35.74	168	264	Peak
2499.43	36.44	-17.56	54	37.10	32.40	2.68	35.74	168	264	Average

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	09	Test Engineer :	Feng Wang

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
2382.63	52.46	-21.54	74	54.03	31.95	2.64	36.16	136	235	Peak
2336.10	35.88	-18.12	54	37.81	31.82	2.59	36.34	136	235	Average
2484.85	62.33	-11.67	74	63.10	32.34	2.68	35.79	186	64	Peak
2483.50	38.86	-15.14	54	39.63	32.34	2.68	35.79	186	64	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
2386.41	54.19	-19.81	74	55.62	32.01	2.64	36.08	142	265	Peak
2386.77	36.87	-17.13	54	38.30	32.01	2.64	36.08	143	265	Average
2486.74	65.13	-8.87	74	65.90	32.34	2.68	35.79	190	275	Peak
2483.80	40.99	-13.01	54	41.76	32.34	2.68	35.79	190	275	Average

< Chain Port 0+1>

Test Mode :	802.11n HT20	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Feng Wang

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
2389.56	67.99	-6.01	74	69.42	32.01	2.64	36.08	200	22	Peak
2390	43.71	-10.29	54	45.14	32.01	2.64	36.08	200	22	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
2390	70.01	-3.99	74	71.44	32.01	2.64	36.08	100	275	Peak
2389.92	47.99	-6.01	54	49.42	32.01	2.64	36.08	100	279	Average

Test Mode :	802.11n HT20	**Temperature :**	22~23°C
Test Band :	High	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Feng Wang

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
2483.95	67.96	-6.04	74	68.73	32.34	2.68	35.79	117	164	Peak
2483.59	41.49	-12.51	54	42.26	32.34	2.68	35.79	148	157	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
2483.59	69.84	-4.16	74	70.61	32.34	2.68	35.79	200	257	Peak
2483.62	42.7	-11.30	54	43.47	32.34	2.68	35.79	200	257	Average

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Band :	Low	Relative Humidity :	42~43%
Test Channel :	03	Test Engineer :	Feng Wang

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
2388.30	70.01	-3.99	74	71.44	32.01	2.64	36.08	117	291	Peak
2389.74	43.00	-11.00	54	44.43	32.01	2.64	36.08	117	291	Average
2483.71	54.70	-19.30	74	55.47	32.34	2.68	35.79	117	291	Peak
2483.50	36.85	-17.15	54	37.62	32.34	2.68	35.79	117	291	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	67.08	-6.92	74	68.51	32.01	2.64	36.08	100	262	Peak
2389.29	40.12	-13.88	54	41.55	32.01	2.64	36.08	100	262	Average
2484.43	52.11	-21.89	74	52.88	32.34	2.68	35.79	100	263	Peak
2486.29	36.31	-17.69	54	37.08	32.34	2.68	35.79	100	263	Average

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Band :	High	Relative Humidity :	42~43%
Test Channel :	09	Test Engineer :	Feng Wang

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	57.09	-16.91	74	58.52	32.01	2.64	36.08	116	287	Peak
2383.08	38.14	-15.86	54	39.71	31.95	2.64	36.16	116	287	Average
2484.16	66.79	-7.21	74	67.56	32.34	2.68	35.79	112	296	Peak
2484.16	44.84	-9.16	54	45.61	32.34	2.68	35.79	112	296	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
2389.56	55.79	-18.21	74	57.22	32.01	2.64	36.08	100	274	Peak
2388.84	37.67	-16.33	54	39.1	32.01	2.64	36.08	100	274	Average
2483.50	65.51	-8.49	74	66.28	32.34	2.68	35.79	117	274	Peak
2483.59	42.62	-11.38	54	43.39	32.34	2.68	35.79	117	274	Average

For Sample 2

< Chain Port 1>

Test Mode :	802.11g	**Temperature :**	22~23°C
Test Band :	Low	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Feng Wang

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	67.94	-6.06	74	69.37	32.01	2.64	36.08	126	314	Peak
2390	45.09	-8.91	54	46.52	32.01	2.64	36.08	126	314	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
2390	68.03	-5.97	74	69.46	32.01	2.64	36.08	100	123	Peak
2390	44.1	-9.90	54	45.53	32.01	2.64	36.08	100	123	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 Sample 1

< Chain Port 0>

Test Mode :	802.11b	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**Polarization :**	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2328	58.50	-15.50	74	60.58	31.76	2.59	36.43	118	280	Peak
2328	50.21	-3.79	54	52.29	31.76	2.59	36.43	118	280	Average
2412	105.33	-	-	106.61	32.08	2.66	36.02	117	281	Peak
2412	101.14	-	-	102.42	32.08	2.66	36.02	117	281	Average
4824	43.83	-30.17	74	42.50	34.20	3.78	36.65	126	314	Peak

Test Mode :	802.11b	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**Polarization :**	Vertical
Remark :	2412 MHz is Fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2328	53.42	-20.58	74	55.5	31.76	2.59	36.43	191	107	Peak
2328	42.91	-11.09	54	44.99	31.76	2.59	36.43	191	107	Average
2412	103.35	-	-	104.63	32.08	2.66	36.02	176	251	Peak
2412	99.2	-	-	100.48	32.08	2.66	36.02	176	251	Average
4824	43.64	-30.36	74	42.31	34.2	3.78	36.65	116	310	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2356	54.89	-19.11	74	56.64	31.89	2.61	36.25	114	306	Peak
2356	45.64	-8.36	54	47.39	31.89	2.61	36.25	114	306	Average
2437	103.3	-	-	104.34	32.21	2.66	35.91	115	305	Peak
2437	98.9	-	-	99.94	32.21	2.66	35.91	115	305	Average
4874	47.72	-26.28	74	46.58	34.2	3.78	36.84	106	234	Peak
7312	44.61	-29.39	74	43.02	35.72	4.73	38.86	104	26	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2437 MHz is Fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2356	55.09	-18.91	74	56.84	31.89	2.61	36.25	118	250	Peak
2356	45.75	-8.25	54	47.5	31.89	2.61	36.25	118	250	Average
2437	103.54	-	-	104.58	32.21	2.66	35.91	172	251	Peak
2437	99.26	-	-	100.3	32.21	2.66	35.91	172	251	Average
4874	45.13	-28.87	74	43.99	34.2	3.78	36.84	100	0	Peak
7312	44.69	-29.31	74	43.1	35.72	4.73	38.86	167	148	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384	54.61	-19.39	74	56.18	31.95	2.64	36.16	111	288	Peak
2384	45.66	-8.34	54	47.23	31.95	2.64	36.16	111	288	Average
2462	107.44	-	-	108.35	32.27	2.67	35.85	111	288	Peak
2462	103.1	-	-	104.01	32.27	2.67	35.85	111	288	Average
4924	43.16	-30.84	74	42.21	34.2	3.78	37.03	200	136	Peak
7386	45.11	-28.89	74	43.77	35.76	4.77	39.19	106	124	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384	52.82	-21.18	74	54.39	31.95	2.64	36.16	141	250	Peak
2384	42.43	-11.57	54	44	31.95	2.64	36.16	141	250	Average
2462	103	-	-	103.91	32.27	2.67	35.85	141	250	Peak
2462	98.85	-	-	99.76	32.27	2.67	35.85	141	250	Average
4924	43.77	-30.23	74	42.82	34.2	3.78	37.03	106	312	Peak
7386	45.76	-28.24	74	44.42	35.76	4.77	39.19	177	233	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
78.5	25.61	-14.39	40	51.06	6.6	0.60	32.65	-	-	Peak
194.9	39.38	-4.12	43.5	62.14	9	0.71	32.47	120	105	Peak
246.31	36.4	-9.60	46	56.34	11.68	0.84	32.46	-	-	Peak
323.91	37.34	-8.66	46	55.14	13.76	0.84	32.4	-	-	Peak
355.92	37.24	-8.76	46	54.04	14.65	0.90	32.35	-	-	Peak
655.65	30.86	-15.14	46	42.57	19.02	1.27	32.00	-	-	Peak
2336	60.82	-13.18	74	62.75	31.82	2.59	36.34	100	290	Peak
2336	47.51	-6.49	54	49.44	31.82	2.59	36.34	100	290	Average
2412	109.06	-	-	110.34	32.08	2.66	36.02	116	296	Peak
2412	97.3	-	-	98.58	32.08	2.66	36.02	116	296	Average
4824	45.02	-28.98	74	43.69	34.2	3.78	36.65	104	329	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	29.74	-10.26	40	44.21	18	0.19	32.66	100	350	Peak
54.25	28.2	-11.80	40	54.09	6.4	0.31	32.60	-	-	Peak
151.25	30.16	-13.34	43.5	51.88	10.02	0.82	32.56	-	-	Peak
246.31	31.17	-14.83	46	51.11	11.68	0.84	32.46	-	-	Peak
382.11	32.98	-13.02	46	49.12	15.23	0.96	32.33	-	-	Peak
656.62	32.45	-13.55	46	44.16	19.02	1.27	32.00	-	-	Peak
2332	57.73	-16.27	74	59.81	31.76	2.59	36.43	154	271	Peak
2332	43.92	-10.08	54	46	31.76	2.59	36.43	154	271	Average
2412	106.84	-	-	108.12	32.08	2.66	36.02	100	269	Peak
2412	94.76	-	-	96.04	32.08	2.66	36.02	100	269	Average
4824	44.69	-29.31	74	43.36	34.2	3.78	36.65	100	0	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2352	60.43	-13.57	74	62.18	31.89	2.61	36.25	144	296	Peak
2352	47.29	-6.71	54	49.04	31.89	2.61	36.25	144	296	Average
2437	106.56	-	-	107.6	32.21	2.66	35.91	137	288	Peak
2437	94.77	-	-	95.81	32.21	2.66	35.91	137	288	Average
4874	44.08	-29.92	74	42.94	34.2	3.78	36.84	114	325	Peak
7311	45.18	-28.82	74	43.59	35.72	4.73	38.86	138	234	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2360	58.26	-15.74	74	60	31.89	2.62	36.25	177	266	Peak
2360	44.58	-9.42	54	46.32	31.89	2.62	36.25	177	266	Average
2437	105.47	-	-	106.51	32.21	2.66	35.91	142	266	Peak
2437	93.23	-	-	94.27	32.21	2.66	35.91	142	266	Average
4874	43.12	-30.88	74	41.98	34.2	3.78	36.84	100	105	Peak
7311	45.04	-28.96	74	43.45	35.72	4.73	38.86	128	206	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2382	59.92	-14.08	74	61.49	31.95	2.64	36.16	100	290	Peak
2382	45.41	-8.59	54	46.98	31.95	2.64	36.16	100	290	Average
2462	107.23	-	-	108.14	32.27	2.67	35.85	116	293	Peak
2462	95.62	-	-	96.53	32.27	2.67	35.85	116	293	Average
4924	43.79	-30.21	74	42.84	34.2	3.78	37.03	200	190	Peak
7386	45.71	-28.29	74	44.37	35.76	4.77	39.19	185	132	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2386	58.44	-15.56	74	59.87	32.01	2.64	36.08	122	276	Peak
2386	44.56	-9.44	54	45.99	32.01	2.64	36.08	122	276	Average
2462	104.09	-	-	105	32.27	2.67	35.85	100	276	Peak
2462	92.24	-	-	93.15	32.27	2.67	35.85	100	276	Average
4924	43.8	-30.20	74	42.85	34.2	3.78	37.03	148	325	Peak
7386	45.68	-28.32	74	44.34	35.76	4.77	39.19	105	313	Peak

< Chain Port 1>

Test Mode :	802.11b	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**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	95.67	-	-	96.95	32.08	2.66	36.02	136	109	Peak
2412	89.6	-	-	90.88	32.08	2.66	36.02	136	109	Average
4824	45.01	-28.99	74	43.68	34.2	3.78	36.65	163	241	Peak

Test Mode :	802.11b	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**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	100.11	-	-	101.39	32.08	2.66	36.02	100	99	Peak
2412	95.81	-	-	97.09	32.08	2.66	36.02	100	99	Average
4824	46.00	-28	74	44.67	34.2	3.78	36.65	148	124	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	98.28	-	-	99.32	32.21	2.66	35.91	104	122	Peak
2437	93.62	-	-	94.66	32.21	2.66	35.91	104	122	Average
4874	44.55	-29.45	74	43.41	34.2	3.78	36.84	126	347	Peak
7312	46.63	-27.37	74	45.04	35.72	4.73	38.86	103	256	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	100.64	-	-	101.68	32.21	2.66	35.91	100	97	Peak
2437	96.04	-	-	97.08	32.21	2.66	35.91	100	97	Average
4874	45.34	-28.66	74	44.2	34.2	3.78	36.84	126	47	Peak
7312	47.81	-26.19	74	46.22	35.72	4.73	38.86	195	349	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	97.12	-	-	98.03	32.27	2.67	35.85	133	305	Peak
2462	92.87	-	-	93.78	32.27	2.67	35.85	133	305	Average
4924	44.21	-29.79	74	43.26	34.2	3.78	37.03	129	302	Peak
7386	46.6	-27.40	74	45.26	35.76	4.77	39.19	100	234	Peak

Test Mode :	802.11b	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	101.95	-	-	102.86	32.27	2.67	35.85	100	86	Peak
2462	97.26	-	-	98.17	32.27	2.67	35.85	100	86	Average
4924	45.57	-28.43	74	44.62	34.2	3.78	37.03	104	351	Peak
7386	47.3	-26.70	74	45.96	35.76	4.77	39.19	109	234	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	94.87	-	-	96.15	32.08	2.66	36.02	181	0	Peak
2412	83.29	-	-	84.57	32.08	2.66	36.02	181	0	Average
4824	46.45	-27.55	74	45.12	34.2	3.78	36.65	102	48	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	99.6	-	-	100.88	32.08	2.66	36.02	100	97	Peak
2412	87.46	-	-	88.74	32.08	2.66	36.02	100	97	Average
4824	45.15	-28.85	74	43.82	34.2	3.78	36.65	121	306	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	96.88	-	-	97.92	32.21	2.66	35.91	137	116	Peak
2437	85.47	-	-	86.51	32.21	2.66	35.91	137	116	Average
4874	44.58	-29.42	74	43.44	34.2	3.78	36.84	126	321	Peak
7312	45.82	-28.18	74	44.23	35.72	4.73	38.86	100	332	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	100.85	-	-	101.89	32.21	2.66	35.91	100	90	Peak
2437	89.12	-	-	90.16	32.21	2.66	35.91	100	90	Average
4874	44.85	-29.15	74	43.71	34.2	3.78	36.84	114	29	Peak
7312	45.02	-28.98	74	43.43	35.72	4.73	38.86	185	247	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	97.78	-	-	98.69	32.27	2.67	35.85	105	48	Peak
2462	86.22	-	-	87.13	32.27	2.67	35.85	105	48	Average
4924	44.41	-29.59	74	43.46	34.2	3.78	37.03	146	231	Peak
7386	46.28	-27.72	74	44.94	35.76	4.77	39.19	105	216	Peak

Test Mode :	802.11g	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	100.65	-	-	101.56	32.27	2.67	35.85	100	90	Peak
2462	88.64	-	-	89.55	32.27	2.67	35.85	100	90	Average
4924	44.4	-29.60	74	43.45	34.2	3.78	37.03	111	256	Peak
7386	45.54	-28.46	74	44.2	35.76	4.77	39.19	134	343	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2336	57.72	-16.28	74	59.65	31.82	2.59	36.34	174	285	Peak
2336	43.20	-10.80	54	45.13	31.82	2.59	36.34	174	285	Average
2412	106.00	-	-	107.28	32.08	2.66	36.02	142	285	Peak
2412	93.73	-	-	95.01	32.08	2.66	36.02	142	285	Average
4824	44.42	-29.58	74	43.09	34.2	3.78	36.65	139	205	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2334	55.16	-18.84	74	57.24	31.76	2.59	36.43	158	269	Peak
2334	41.48	-12.52	54	43.56	31.76	2.59	36.43	158	269	Average
2412	101.73	-	-	103.01	32.08	2.66	36.02	200	249	Peak
2412	89.70	-	-	90.98	32.08	2.66	36.02	200	249	Average
4824	45.11	-28.89	74	43.78	34.2	3.78	36.65	102	308	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2354	59.62	-14.38	74	61.37	31.89	2.61	36.25	100	288	Peak
2354	46.46	-7.54	54	48.21	31.89	2.61	36.25	100	288	Average
2437	105.10	-	-	106.14	32.21	2.66	35.91	140	287	Peak
2437	92.81	-	-	93.85	32.21	2.66	35.91	140	287	Average
4874	43.60	-30.40	74	42.46	34.2	3.78	36.84	129	352	Peak
7311	44.10	-29.90	74	42.51	35.72	4.73	38.86	109	68	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2360	57.05	-16.95	74	58.79	31.89	2.62	36.25	100	283	Peak
2360	43.59	-10.41	54	45.33	31.89	2.62	36.25	100	283	Average
2437	103.51	-	-	104.55	32.21	2.66	35.91	122	279	Peak
2437	91.66	-	-	92.7	32.21	2.66	35.91	122	279	Average
4874	43.82	-30.18	74	42.68	34.2	3.78	36.84	124	308	Peak
7311	44.36	-29.64	74	42.77	35.72	4.73	38.86	100	299	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384	57.5	-16.50	74	59.07	31.95	2.64	36.16	100	290	Peak
2384	44.14	-9.86	54	45.71	31.95	2.64	36.16	100	290	Average
2462	100.39	-	-	101.3	32.27	2.67	35.85	145	234	Peak
2462	88.01	-	-	88.92	32.27	2.67	35.85	145	234	Average
4924	43.95	-30.05	74	43	34.2	3.78	37.03	128	324	Peak
7386	45.9	-28.10	74	44.56	35.76	4.77	39.19	104	231	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2386	56.31	-17.69	74	57.74	32.01	2.64	36.08	148	279	Peak
2386	42.86	-11.14	54	44.29	32.01	2.64	36.08	148	279	Average
2462	102.16	-	-	103.07	32.27	2.67	35.85	118	288	Peak
2462	91.01	-	-	91.92	32.27	2.67	35.85	118	288	Average
4924	43.32	-30.68	74	42.37	34.2	3.78	37.03	100	342	Peak
7386	45.68	-28.32	74	44.34	35.76	4.77	39.19	200	0	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	94.79	-	-	95.95	32.14	2.66	35.96	100	160	Peak
2422	82.90	-	-	84.06	32.14	2.66	35.96	100	160	Average
4844	43.26	-30.74	74	42	34.20	3.78	36.72	125	324	Peak
7266	44.78	-29.22	74	43.08	35.71	4.72	38.73	100	214	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	96.11	-	-	97.27	32.14	2.66	35.96	169	264	Peak
2422	83.88	-	-	85.04	32.14	2.66	35.96	169	264	Average
4844	44.95	-29.05	74	43.69	34.2	3.78	36.72	102	354	Peak
7266	44.69	-29.31	74	42.99	35.71	4.72	38.73	100	258	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	94.15	-	-	95.19	32.21	2.66	35.91	138	237	Peak
2437	82.11	-	-	83.15	32.21	2.66	35.91	138	237	Average
4874	44.17	-29.83	74	43.03	34.2	3.78	36.84	125	300	Peak
7311	43.62	-30.38	74	42.03	35.72	4.73	38.86	119	140	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	94.28	-	-	95.32	32.21	2.66	35.91	168	273	Peak
2437	83.37	-	-	84.41	32.21	2.66	35.91	168	273	Average
4874	43.47	-30.53	74	42.33	34.2	3.78	36.84	100	321	Peak
7311	44.15	-29.85	74	42.56	35.72	4.73	38.86	110	298	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	93.84	-	-	94.87	32.21	2.67	35.91	136	235	Peak
2452	82.85	-	-	83.88	32.21	2.67	35.91	136	235	Average
4904	44.34	-29.66	74	43.32	34.2	3.78	36.96	125	0	Peak
7356	44.58	-29.42	74	43.14	35.74	4.76	39.06	100	257	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	94.83	-	-	95.86	32.21	2.67	35.91	143	265	Peak
2452	83.53	-	-	84.56	32.21	2.67	35.91	143	265	Average
4874	43.47	-30.53	74	42.33	34.2	3.78	36.84	142	310	Peak
7311	44.15	-29.85	74	42.56	35.72	4.73	38.86	124	39	Peak

< Chain Port 0+1>

Test Mode :	802.11n HT20	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**Polarization :**	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2334	54.34	-19.66	74	56.42	31.76	2.59	36.43	200	22	Peak
2334	41.58	-12.42	54	43.66	31.76	2.59	36.43	200	22	Average
2412	100.26	-	-	101.54	32.08	2.66	36.02	200	22	Peak
2412	89.20	-	-	90.48	32.08	2.66	36.02	200	22	Average
4824	46.28	-27.72	74	44.95	34.20	3.78	36.65	136	204	Peak

Test Mode :	802.11n HT20	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**Polarization :**	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2328	58.04	-15.96	74	60.12	31.76	2.59	36.43	100	279	Peak
2328	44.75	-9.25	54	46.83	31.76	2.59	36.43	100	279	Average
2412	105.06	-	-	106.34	32.08	2.66	36.02	100	278	Peak
2412	94.51	-	-	95.79	32.08	2.66	36.02	100	278	Average
4824	45.06	-28.94	74	43.73	34.2	3.78	36.65	154	321	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2352	59.03	-14.97	74	60.78	31.89	2.61	36.25	120	235	Peak
2352	45.32	-8.68	54	47.07	31.89	2.61	36.25	120	235	Average
2437	102.99	-	-	104.03	32.21	2.66	35.91	114	235	Peak
2437	91.21	-	-	92.25	32.21	2.66	35.91	114	235	Average
4874	44.56	-29.44	74	43.42	34.2	3.78	36.84	128	320	Peak
7311	45.69	-28.31	74	44.1	35.72	4.73	38.86	108	327	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2360	57.86	-16.14	74	59.6	31.89	2.62	36.25	100	264	Peak
2360	45.02	-8.98	54	46.76	31.89	2.62	36.25	100	264	Average
2437	104.27	-	-	105.31	32.21	2.66	35.91	141	264	Peak
2437	93.66	-	-	94.7	32.21	2.66	35.91	141	264	Average
4874	44.26	-29.74	74	43.12	34.2	3.78	36.84	148	321	Peak
7311	45.46	-28.54	74	43.87	35.72	4.73	38.86	158	214	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2378	54.67	-19.33	74	56.24	31.95	2.64	36.16	117	164	Peak
2378	43.17	-10.83	54	44.74	31.95	2.64	36.16	117	164	Average
2462	101.17	-	-	102.08	32.27	2.67	35.85	117	164	Peak
2462	90.67	-	-	91.58	32.27	2.67	35.85	117	164	Average
4924	43.91	-30.09	74	42.96	34.2	3.78	37.03	108	321	Peak
7386	46.58	-27.42	74	45.24	35.76	4.77	39.19	100	254	Peak

Test Mode :	802.11n HT20	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2378	55.51	-18.49	74	57.08	31.95	2.64	36.16	200	257	Peak
2378	43.02	-10.98	54	44.59	31.95	2.64	36.16	200	257	Average
2462	102.22	-	-	103.13	32.27	2.67	35.85	200	257	Peak
2462	91.32	-	-	92.23	32.27	2.67	35.85	200	257	Average
4924	45.00	-29.00	74	44.05	34.2	3.78	37.03	154	301	Peak
7386	45.88	-28.12	74	44.54	35.76	4.77	39.19	124	257	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	99.89	-	-	101.05	32.14	2.66	35.96	117	291	Peak
2422	88.62	-	-	89.78	32.14	2.66	35.96	117	291	Average
4844	44.56	-29.44	74	43.3	34.2	3.78	36.72	105	116	Peak
7266	43.96	-30.04	74	42.26	35.71	4.72	38.73	158	324	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	97.06	-	-	98.22	32.14	2.66	35.96	100	263	Peak
2422	85.42	-	-	86.58	32.14	2.66	35.96	100	263	Average
4844	43.4	-30.60	74	42.14	34.2	3.78	36.72	159	208	Peak
7266	44.35	-29.65	74	42.65	35.71	4.72	38.73	147	146	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	98.83	-	-	99.87	32.21	2.66	35.91	114	294	Peak
2437	86.60	-	-	87.64	32.21	2.66	35.91	114	294	Average
4874	43.66	-30.34	74	42.52	34.20	3.78	36.84	103	218	Peak
7311	45.71	-28.29	74	44.12	35.72	4.73	38.86	125	38	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	96.78	-	-	97.82	32.21	2.66	35.91	100	275	Peak
2437	85.96	-	-	87	32.21	2.66	35.91	100	275	Average
4874	44.01	-29.99	74	42.87	34.2	3.78	36.84	100	354	Peak
7311	43.83	-30.17	74	42.24	35.72	4.73	38.86	196	325	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	98.04	-	-	99.07	32.21	2.67	35.91	112	296	Peak
2452	86.82	-	-	87.85	32.21	2.67	35.91	112	296	Average
4904	43.51	-30.49	74	42.49	34.2	3.78	36.96	200	279	Peak
7356	44.8	-29.20	74	43.36	35.74	4.76	39.06	128	309	Peak

Test Mode :	802.11n HT40	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Feng Wang	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	96.87	-	-	97.9	32.21	2.67	35.91	100	272	Peak
2452	85.05	-	-	86.08	32.21	2.67	35.91	100	272	Average
4904	43.47	-30.53	74	42.45	34.2	3.78	36.96	198	326	Peak
7356	44.62	-29.38	74	43.18	35.74	4.76	39.06	112	98	Peak

For Sample 2

< Chain Port 1>

Test Mode :	802.11g	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**Polarization :**	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2336	57.74	-16.26	74	59.67	31.82	2.59	36.34	100	301	Peak
2336	44.70	-9.30	54	46.63	31.82	2.59	36.34	100	301	Average
2412	106.36	-	-	107.64	32.08	2.66	36.02	126	314	Peak
2412	94.40	-	-	95.68	32.08	2.66	36.02	126	314	Average
4824	44.81	-29.19	74	43.48	34.2	3.78	36.65	163	231	Peak

Test Mode :	802.11g	**Temperature :**	22~23°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Feng Wang	**Polarization :**	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2332	54.51	-19.49	74	56.59	31.76	2.59	36.43	164	347	Peak
2332	41.08	-12.92	54	43.16	31.76	2.59	36.43	164	347	Average
2412	105.20	-	-	106.48	32.08	2.66	36.02	100	123	Peak
2412	92.95	-	-	94.23	32.08	2.66	36.02	100	123	Average
4824	44.52	-29.48	74	43.19	34.20	3.78	36.65	126	32	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.

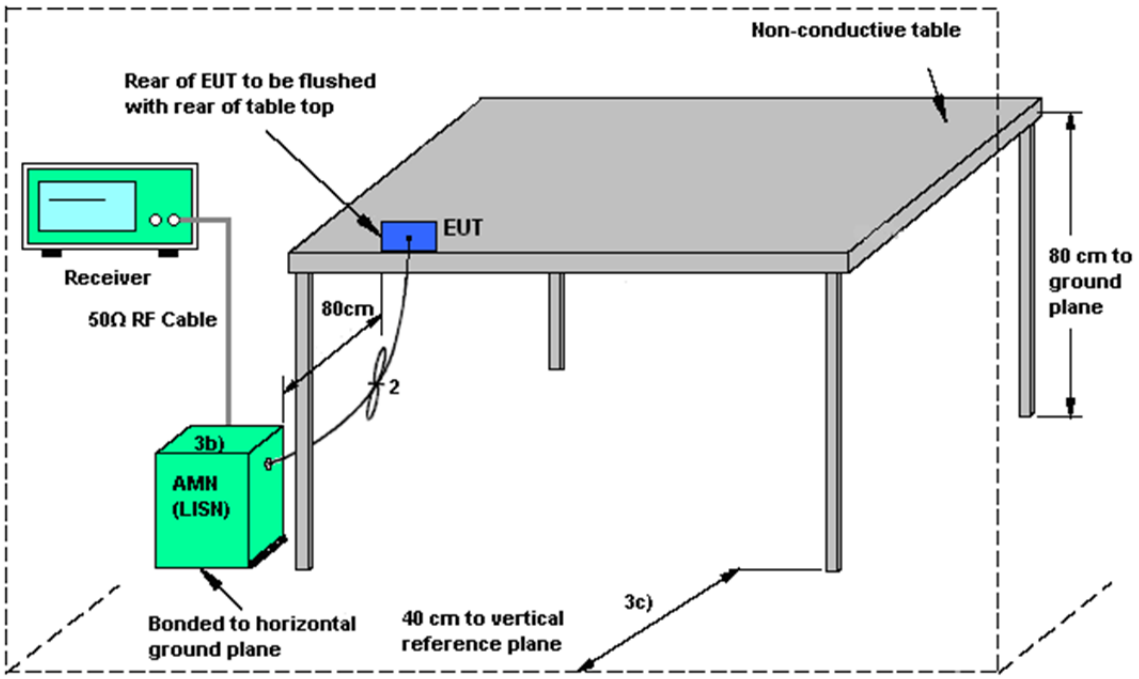
3.6.2 Measuring Instruments

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

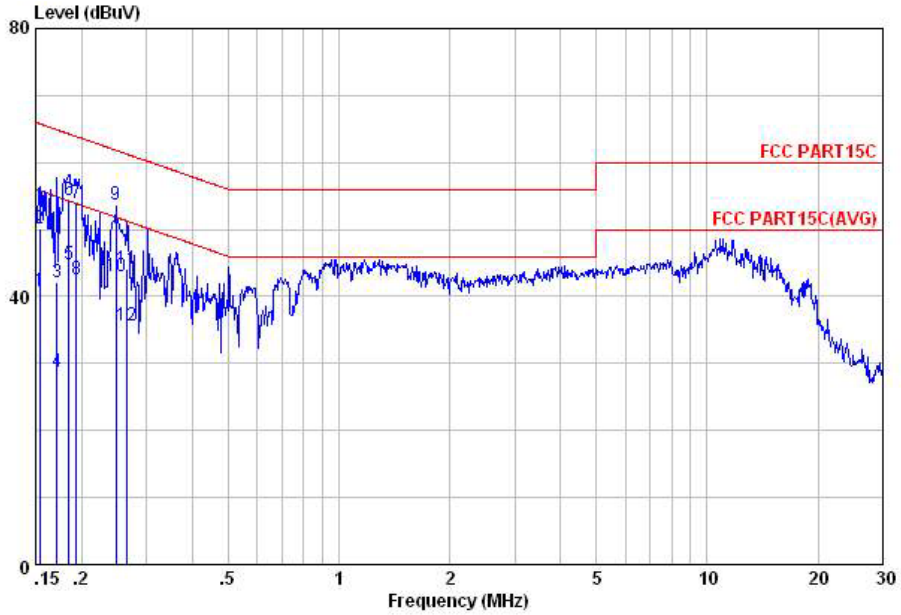
3.6.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Eligah Wang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Bluetooth Link + WLAN (2.4G) Link + USB Cable 1 (Charging from Adapter) + Battery 1 + Earphone + HDMI Cable for Sample 1		

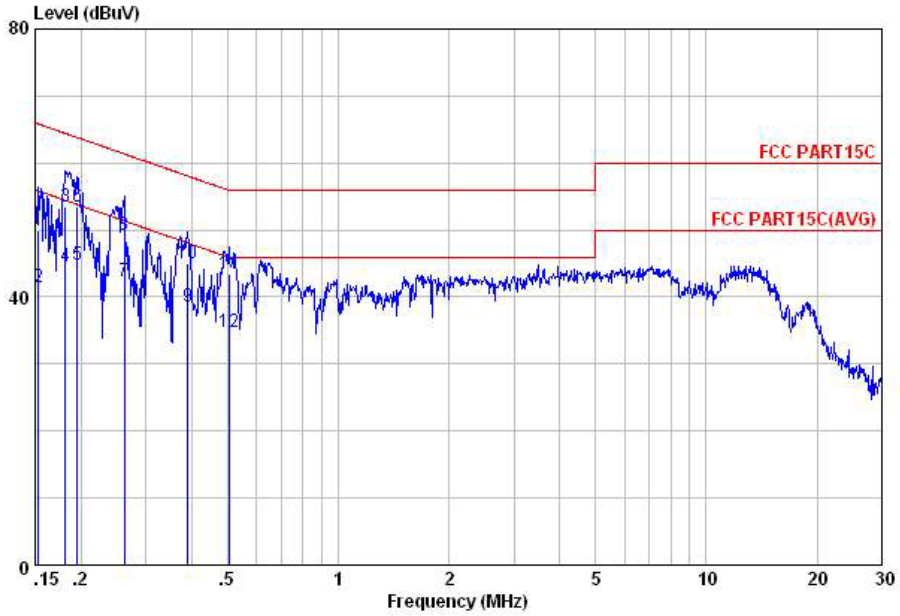


Site : C001-KS
Condition: FCC PART15C LISN-L20130306 LINE

mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	40.89	-14.89	55.78	28.30	1.89	10.70	Average
2	0.15	50.19	-15.59	65.78	37.60	1.89	10.70	QP
3	0.17	42.07	-22.83	64.90	29.90	1.53	10.64	QP
4	0.17	28.77	-26.13	54.90	16.60	1.53	10.64	Average
5	0.18	44.72	-9.56	54.28	32.90	1.21	10.61	Average
6	0.18	54.42	-9.86	64.28	42.60	1.21	10.61	QP
7	0.19	53.97	-9.92	63.89	42.30	1.08	10.59	QP
8	0.19	42.57	-11.32	53.89	30.90	1.08	10.59	Average
9	0.25	53.69	-8.13	61.82	42.30	0.88	10.51	QP
10	0.25	42.99	-8.83	51.82	31.60	0.88	10.51	Average
11	0.26	44.21	-17.08	61.29	32.91	0.83	10.47	QP
12	0.26	35.61	-15.68	51.29	24.31	0.83	10.47	Average

Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Eligah Wang	Relative Humidity :	41~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (2.4G) Link + USB Cable 1 (Charging from Adapter) + Battery 1 + Earphone + HDMI Cable for Sample 1		



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

mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	49.86	-15.96	65.82	37.31	1.85	10.70	QP
2	0.15	41.46	-14.36	55.82	28.91	1.85	10.70	Average
3	0.18	53.47	-10.95	64.42	41.60	1.25	10.62	QP
4	0.18	44.47	-9.95	54.42	32.60	1.25	10.62	Average
5	0.20	44.73	-9.07	53.80	33.09	1.05	10.59	Average
6	0.20	53.53	-10.27	63.80	41.89	1.05	10.59	QP
7	0.26	42.45	-8.93	51.38	31.11	0.86	10.48	Average
8	0.26	49.15	-12.23	61.38	37.81	0.86	10.48	QP
9	0.39	38.61	-9.47	48.08	27.90	0.42	10.29	Average
10	0.39	44.91	-13.17	58.08	34.20	0.42	10.29	QP
11	0.50	43.46	-12.54	56.00	32.90	0.30	10.26	QP
12	0.50	34.86	-11.14	46.00	24.30	0.30	10.26	Average

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the Antenna exceeds 6 dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For CDD transmissions, directional gain is calculated as

$$Directional Gain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

The EUT supports CDD mode.

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

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

	Chain Port 0 (dBi)	Chain Port 1 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	0.90	0.80	3.86	3.86	0.00	0.00

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

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 28, 2013	Sep. 16, 2014	Dec. 27, 2014	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	30MHz~40GHz	Feb. 27, 2014	Sep. 16, 2014	Feb. 26, 2015	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Feb. 27, 2014	Sep. 16, 2014	Feb. 26, 2015	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 05, 2013	Sep. 08, 2014	Nov. 04, 2014	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	101399	9kHz~30GHz	May 04, 2014	Sep. 08, 2014	May 03, 2015	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 09, 2013	Sep. 08, 2014	Oct. 08, 2014	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 08, 2014	Sep. 08, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 08, 2014	Sep. 08, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 18, 2013	Sep. 08, 2014	Nov. 17, 2014	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Mar. 10, 2014	Sep. 08, 2014	Mar. 09, 2015	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161073	1MHz~1GHz	May 04, 2014	Sep. 08, 2014	May 03, 2015	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02371	1GHz~26.5GHz	Dec. 10, 2013	Sep. 08, 2014	Dec. 09, 2014	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Sep. 08, 2014	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Sep. 08, 2014	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Sep. 08, 2014	NCR	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 04, 2014	Aug. 18, 2014	May 03, 2015	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Dec. 10, 2013	Aug. 18, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Dec. 10, 2013	Aug. 18, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Nov. 12, 2013	Aug. 18, 2014	Nov. 11, 2014	Conduction (CO01-KS)

5 Uncertainty of Evaluation

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

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

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

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