FCC/IC RF Test Report

APPLICANT	:	Hon Hai Precision Industry Co., Ltd.
EQUIPMENT	:	802.11a/b/g/n/ac 2T2R WLAN Module
BRAND NAME	:	Foxconn
MODEL NAME	:	WFUR6
FCC ID	:	RX3-WFUR6
IC	:	2878F-WFUR6
STANDARD	:	FCC Part 15 Subpart C §15.247 IC RSS-210 issue 8
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Feb. 06, 2014 and testing was completed on Mar. 14, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory
1190

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APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR420682A	Rev. 01	Initial issue of report	Mar. 28, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	RSS-210 A8.2(a)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	RSS-Gen 4.6.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	RSS-210 A8.4	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	RSS-210 A8.2(b)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	RSS-210 A8.5	Conducted Band Edges	≤ 20dBc	Pass	-
			Conducted Spurious Emission		Pass	-
3.5	15.247(d)	RSS-210 A8.5	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 1.04 dB at 2487.580 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 12.50 dB at 0.190 MHz
3.7	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Hon Hai Precision Industry Co., Ltd.
No. 151, Sec. 1, Nankan Rd., Lujhu Township, Taoyuan County 33859, Taiwan (R.O.C.)

1.2 Manufacturer

Hon Hai Precision Industry Co., Ltd.
No. 151, Sec. 1, Nankan Rd., Lujhu Township, Taoyuan County 33859, Taiwan (R.O.C.)

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	802.11a/b/g/n/ac 2T2R WLAN Module
Brand Name	Foxconn
Model Name	WFUR6
FCC ID	RX3-WFUR6
IC	2878F-WFUR6
EUT supports Radios application	WLAN 11bgn (HT20/HT40) WLAN 11an (HT20/HT40) WLAN 11ac (VHT20/VHT40/VHT80)
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5745 MHz ~ 5825 MHz
Maximum Output Power to antenna	**<2412 MHz ~ 2462 MHz >** **<Ant. Port 1>** 802.11b : 20.55 dBm (0.1135 W) 802.11g : 24.88 dBm (0.3076 W) **<Ant. Port 2>** 802.11b : 20.56 dBm (0.1138 W) 802.11g : 25.16 dBm (0.3281 W) **SISO <Ant. Port 1>** 802.11n HT20 : 24.28 dBm (0.2679 W) 802.11n HT40 : 23.74 dBm (0.2366 W) 802.11n VHT20 : 24.27 dBm (0.2673 W) 802.11n VHT40 : 23.89 dBm (0.2449 W) **SISO <Ant. Port 2>** 802.11n HT20 : 24.38 dBm (0.2742 W) 802.11n HT40 : 23.78 dBm (0.2388 W) 802.11n VHT20 : 24.37 dBm (0.2735 W) 802.11n VHT40 : 23.91 dBm (0.2460 W) **MIMO <Ant. Port 1+2>** 802.11n HT20 : 24.05 dBm (0.2541 W) 802.11n HT40 : 25.17 dBm (0.3289 W) 802.11n VHT20 : 24.26 dBm (0.2667 W) 802.11n VHT40 : 26.27 dBm (0.4236 W)

Product Specification subjective to this standard	
Maximum Output Power to antenna	**<5745 MHz ~ 5825 MHz >** **<Ant. Port 1>** 802.11a : 22.38 dBm (0.1730 W) **<Ant. Port 2>** 802.11a : 22.55 dBm (0.1799 W) **SISO <Ant. Port 1>** 802.11n HT20 : 22.01 dBm (0.1589 W) 802.11n HT40 : 21.79 dBm (0.1510 W) 802.11n VHT20 : 21.61 dBm (0.1449 W) 802.11n VHT40 : 21.32 dBm (0.1355 W) 802.11n VHT80 : 21.79 dBm (0.1510 W) **SISO <Ant. Port 2>** 802.11n HT20 : 22.66 dBm (0.1845 W) 802.11n HT40 : 22.51 dBm (0.1782 W) 802.11n VHT20 : 22.13 dBm (0.1633 W) 802.11n VHT40 : 21.88 dBm (0.1542 W) 802.11n VHT80 : 22.15 dBm (0.1641 W) **MIMO <Ant. Port 1+2>** 802.11n HT20 : 23.66 dBm (0.2323 W) 802.11n HT40 : 24.08 dBm (0.2559 W) 802.11n VHT20 : 23.75 dBm (0.2371 W) 802.11n VHT40 : 24.26 dBm (0.2667 W) 802.11n VHT80 : 22.50 dBm (0.1778 W)
99% Occupied Bandwidth	**<2412 MHz ~ 2462 MHz>** 802.11b : 15.25MHz 802.11g : 18.45MHz 802.11n HT20 : 19.35MHz 802.11n HT40 : 37.00MHz 802.11n VHT20 : 19.00MHz 802.11n VHT40 : 37.00MHz **<5745 MHz ~ 5825 MHz>** 802.11a : 18.20MHz 802.11n HT20 : 19.05MHz 802.11n HT40 : 37.20MHz 802.11n VHT20 : 19.35MHz 802.11n VHT40 : 37.50MHz 802.11n VHT80 : 76.32MHz
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Product Specification subjective to this standard			
Antenna Function for Transmitter		Chain Port 1	Chain Port 2
	802.11 b	V	V
	802.11 g	V	V
	802.11 a	V	V
	802.11 n/ac SISO	V	V
	802.11 n/ac MIMO	V	V

Antenna Information			
Antenna 1 (Vizio_P60)	Manufacturer	Hon Hai Precision Industry Co., Ltd.	
	Antenna Type	Main : PIFA Antenna	Aux. : PIFA Antenna
	Peak Gain	Main : WLAN (2.4GHz): 3.42dBi WLAN (5GHz Band1): 1.5dBi WLAN (5GHz Band2): 1.5dBi WLAN (5GHz Band3): 1.19dBi WLAN (5GHz Band4): 3.86dBi	Aux. : WLAN (2.4GHz): 2.62dBi WLAN (5GHz Band1): 2.48dBi WLAN (5GHz Band2): 2.48dBi WLAN (5GHz Band3): 2.75dBi WLAN (5GHz Band4): 1.91dBi
	Antenna No.	Main : FX5526-11-001-C-TB00	Aux. : FX5526-11-002-C-TB00
Antenna 2 (Vizio_P70)	Manufacturer	Hon Hai Precision Industry Co., Ltd.	
	Antenna Type	Main : PIFA Antenna	Aux. : PIFA Antenna
	Peak Gain	Main : WLAN (2.4GHz): 3.33dBi WLAN (5GHz Band1): 2.42dBi WLAN (5GHz Band2): 2.42dBi WLAN (5GHz Band3): 2.31dBi WLAN (5GHz Band4): -0.7dBi	Aux. : WLAN (2.4GHz): 3.47dBi WLAN (5GHz Band1): 4.66dBi WLAN (5GHz Band2): 4.66dBi WLAN (5GHz Band3): 3.57dBi WLAN (5GHz Band4): 3.34dBi
	Antenna No.	Main : FX5541-11-001-C-TB00	Aux. : FX5541-11-002-C-TB00

Remark:

1. All the tests were performed with Antenna 2.
2. RSE tests were performed with Antenna set 2 (Vizio_P70) and verified Antenna set 1 (Vizio_P60). Only the worst case was reported.

1.5 Modification of EUT

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

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH06HY	722060/4086B-1

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

1.7 Applied Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.4-2003
- IC RSS-210 Issue 8
- IC RSS-Gen Issue 3
- NOTICE 2012-DRS0126

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.
3. Per the section 2.2.3 of Notice of 2012-DRS0126, " Receivers Excluded from Industry Canada Requirements", only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Ant. Port 1, Y plane for Ant. Port 2 / Ant. SISO Port 2 / Ant. MIMO Port1+2) 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		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4	149	5745	157	5785
	151	5755	159	5795
	153	5765	161	5805
	155	5775	165	5825

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.

Ant. 2 (Aux) is chosen for the final conducted and radiated test for 1TX/SISO mode due to higher conducted power and gain against Ant. 1(Main).

<Ant. Port 1>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	20.55	20.51	20.45	20.51

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	24.88	24.85	24.87	24.52	24.78	24.75	24.74	24.84

SISO <Ant. Port 1>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	24.28	24.24	24.21	24.26	24.20	24.26	24.21	24.24

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	23.74	23.71	23.54	23.48	13.59	23.67	23.62	23.51

2.4GHz 802.11n VHT20									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	24.27	24.25	24.23	24.21	24.20	24.15	24.11	24.10	24.16

2.4GHz 802.11n VHT40										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	23.89	23.86	23.87	23.79	23.82	23.73	23.87	23.79	23.88	23.81

<Ant. Port 1>

802.11a								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	22.38	22.33	22.29	22.26	22.34	22.20	22.12	22.15

SISO <Ant. Port 1>

5GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	22.01	21.91	21.94	21.94	21.91	21.95	21.90	21.94

5GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	21.79	21.78	21.68	21.75	21.75	21.74	21.70	21.75

5GHz 802.11 ac VHT20									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	21.61	21.52	21.57	21.48	21.47	21.39	21.54	21.43	21.56

5GHz 802.11 ac VHT40										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	21.32	21.25	21.23	21.31	21.26	21.23	21.29	21.23	21.19	21.27

5GHz 802.11 ac VHT80										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	21.79	21.14	21.09	21.66	20.86	21.18	20.98	21.35	21.10	21.17

<Ant. Port 2>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	20.56	20.28	20.47	20.55

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	25.16	24.86	25.14	24.69	25.09	24.91	25.00	25.11

SISO <Ant. Port 2>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	24.38	24.33	24.31	24.30	24.35	24.34	24.28	24.31

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	23.78	23.62	23.55	23.63	23.76	23.77	23.62	23.43

2.4GHz 802.11n VHT20									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	24.37	24.35	24.33	24.31	24.30	24.30	24.25	24.23	24.21

2.4GHz 802.11n VHT40										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	23.91	23.67	23.53	23.58	23.55	23.64	23.33	23.20	23.41	23.69

<Ant. Port 2>

802.11a								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	22.55	22.36	22.48	22.44	22.39	22.42	22.53	22.49

SISO <Ant. Port 2>

5GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	22.66	22.58	22.64	22.64	22.61	22.65	22.60	22.64

5GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	22.51	22.46	22.25	22.48	22.45	22.50	22.49	22.25

5GHz 802.11 ac VHT20									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	22.13	22.08	22.10	22.07	22.05	22.03	22.10	22.03	22.04

5GHz 802.11 ac VHT40										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	21.88	21.77	21.79	21.69	21.65	21.68	21.78	21.71	21.58	21.62

5GHz 802.11 ac VHT80										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	22.15	21.42	21.60	22.05	21.23	21.61	21.50	21.96	21.71	21.73

MIMO <Ant. Port 1+2>

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	24.05	23.97	23.90	23.91	23.93	23.84	23.83	23.93

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	25.17	25.11	25.02	25.08	25.01	25.10	25.00	25.05

2.4GHz 802.11n VHT20									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	24.26	24.16	24.11	24.14	24.14	24.12	24.14	24.10	24.13

2.4GHz 802.11n VHT40										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	26.27	26.17	26.20	26.13	26.23	26.09	26.14	26.13	26.16	26.10

5GHz 802.11n HT20								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	23.66	23.59	23.55	23.59	23.48	23.47	23.55	23.54

5GHz 802.11n HT40								
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Peak Power (dBm)	24.08	23.98	23.99	23.97	24.02	23.96	24.05	23.98

5GHz 802.11n VHT20									
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
Peak Power (dBm)	23.75	23.71	23.68	23.63	23.60	20.25	23.59	23.70	23.61

5GHz 802.11n VHT40										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	24.26	24.20	24.00	24.14	24.02	24.01	24.00	24.21	24.04	24.13

5GHz 802.11n VHT80										
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Peak Power (dBm)	22.50	21.97	21.60	22.39	22.30	22.31	22.11	22.08	21.95	22.22

Note: MIMO Ant. Port 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

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 and 99% BW Power Spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0/MCS8	1/6/11
		802.11n HT40	MCS0/MCS8	3/6/9
		802.11n VHT20	MCS0	1/6/11
		802.11n VHT40	MCS0	3/6/9
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0/MCS8	1/6/11
		802.11n HT40	MCS0/MCS8	3/6/9
		802.11n VHT20	MCS0	1/6/11
		802.11n VHT40	MCS0	3/6/9
	Conducted Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0/MCS8	1/11
		802.11n HT40	MCS0/MCS8	3/9
		802.11n VHT20	MCS0	1/11
		802.11n VHT40	MCS0	3/9
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0/MCS8	1/6/11
		802.11n HT40	MCS0/MCS8	3/6/9
		802.11n VHT20	MCS0	1/6/11
		802.11n VHT40	MCS0	3/6/9

<2.4GHz>

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0/MCS8	1/11
		802.11n HT40	MCS0/MCS8	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0/MCS8	1/6/11
		802.11n HT40	MCS0/MCS8	3/6/9

<5GHz>

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	6dB and 99% BW Power Spectral Density	802.11a	6 Mbps	149/157/165
		802.11n HT20	MCS0/MCS8	149/157/165
		802.11n HT40	MCS0/MCS8	151/159
		802.11n VHT20	MCS0	149/157/165
		802.11n VHT40	MCS0	151/159
		802.11n VHT80	MCS0	155
	Output Power	802.11a	6 Mbps	149/157/165
		802.11n HT20	MCS0/MCS8	149/157/165
		802.11n HT40	MCS0/MCS8	151/159
		802.11n VHT20	MCS0	149/157/165
		802.11n VHT40	MCS0	151/159
		802.11n VHT80	MCS0	155
	Conducted Band Edge	802.11a	6 Mbps	149/165
		802.11n HT20	MCS0/MCS8	149/165
		802.11n HT40	MCS0/MCS8	151/159
		802.11n VHT20	MCS0	149/165
		802.11n VHT40	MCS0	151/159
		802.11n VHT80	MCS0	155
	Conducted Spurious Emission	802.11a	6 Mbps	149/157/165
		802.11n HT20	MCS0/MCS8	149/157/165
		802.11n HT40	MCS0/MCS8	151/159
		802.11n VHT20	MCS0	149/157/165
		802.11n VHT40	MCS0	151/159
		802.11n VHT80	MCS0	155

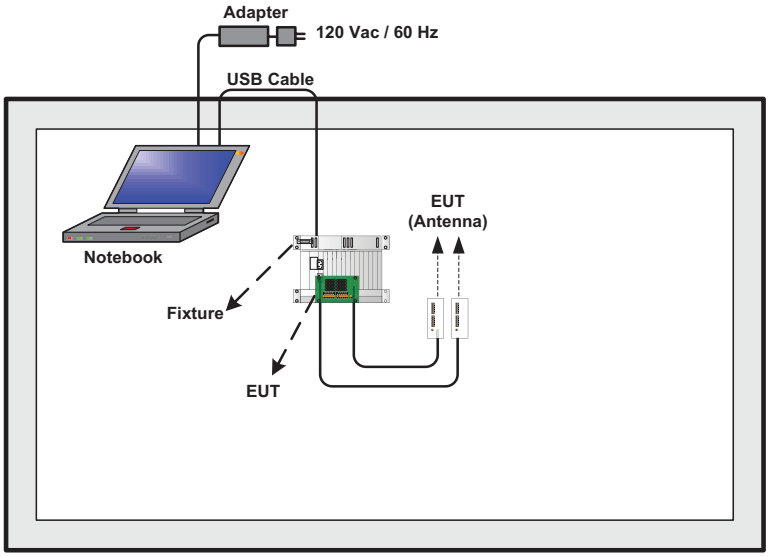
<5GHz>

Test Cases				
Radiated TCs	Test Items	Mode	Data Rate	Test Channel
	Radiated Spurious Emission	802.11a	6 Mbps	149/157/165
		802.11n HT20	MCS0/MCS8	149/157/165
		802.11n HT40	MCS0/MCS8	151/159
		802.11n VHT20	MCS0	149/157/165
		802.11n VHT40	MCS0	151/159
		802.11n VHT80	MCS0	155

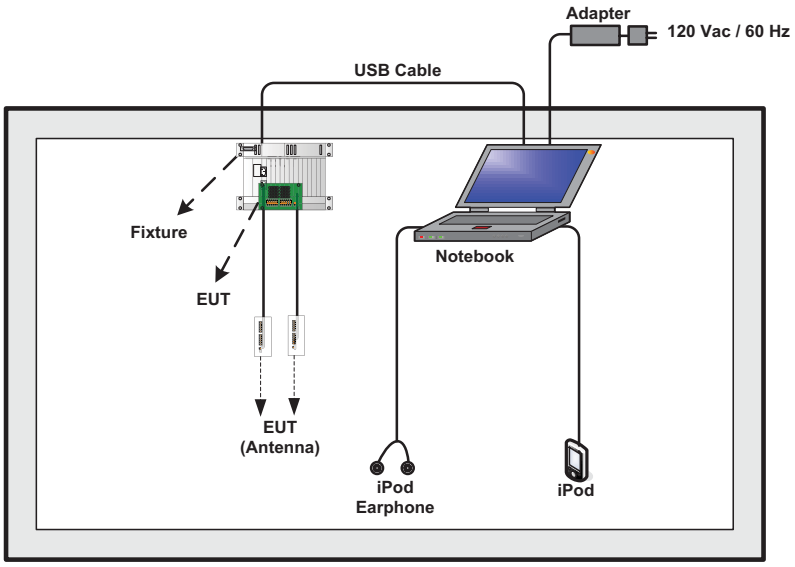
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + USB Cable (Charging from Notebook)

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.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
4.	Fixture	NA	1P-112BJ00-20SB	NA	NA	NA

2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, “MPTool” installed in the notebook make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals.

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2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:
The spectrum analyzer offset is derived from RF cable loss and attenuator factor.
Offset = RF cable loss + attenuator factor.
Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

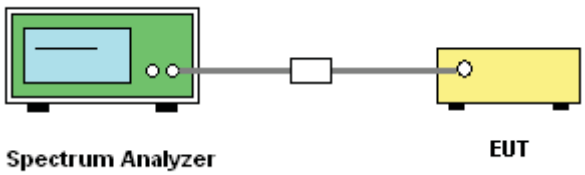
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r01.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1MHz and set the Video bandwidth (VBW) = 3MHz.
6. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Test Band :	2.4GHz	Temperature :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

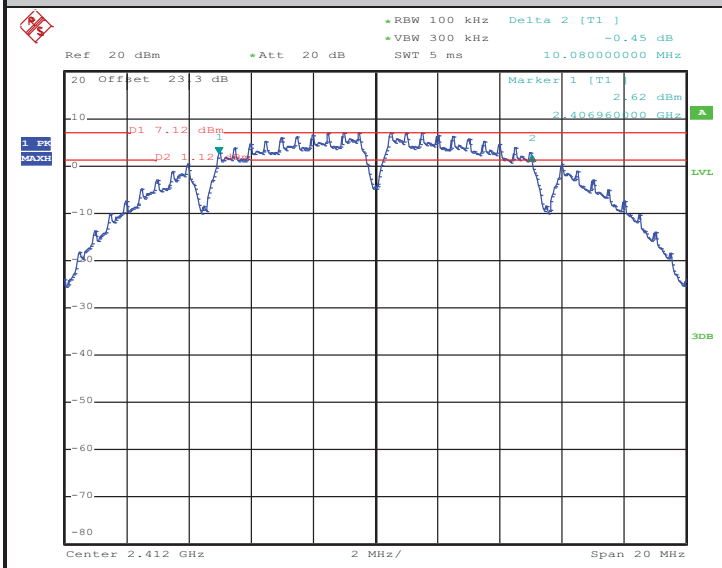
Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant. 1	Ant. 2	Ant. 1	Ant. 2		
11b	1Mbps	1	1	2412		15.20		10.08	0.5	Pass
11b	1Mbps	1	6	2437		15.25		10.08	0.5	Pass
11b	1Mbps	1	11	2462		15.25		10.08	0.5	Pass
11g	6Mbps	1	1	2412		18.20		16.56	0.5	Pass
11g	6Mbps	1	6	2437		18.30		16.56	0.5	Pass
11g	6Mbps	1	11	2462		18.45		16.56	0.5	Pass
HT20	MCS0	1	1	2412		18.95		17.76	0.5	Pass
HT20	MCS0	1	6	2437		19.05		17.80	0.5	Pass
HT20	MCS0	1	11	2462		19.00		17.72	0.5	Pass
HT40	MCS0	1	3	2422	-	36.90	-	36.48	0.5	Pass
HT40	MCS0	1	6	2437		37.00		36.48	0.5	Pass
HT40	MCS0	1	9	2452		37.00		36.48	0.5	Pass
VHT20	MCS0	1	1	2412		18.55		17.76	0.5	Pass
VHT20	MCS0	1	6	2437		18.95		17.76	0.5	Pass
VHT20	MCS0	1	11	2462		19.00		17.76	0.5	Pass
VHT40	MCS0	1	3	2422		36.90		36.40	0.5	Pass
VHT40	MCS0	1	6	2437		37.00		36.40	0.5	Pass
VHT40	MCS0	1	9	2452		36.90		36.40	0.5	Pass
HT20	MCS8	2	1	2412	19.15	19.25	17.80	17.72	0.5	Pass
HT20	MCS8	2	6	2437	19.35	19.30	17.80	17.72	0.5	Pass
HT20	MCS8	2	11	2462	19.35	19.25	17.80	17.72	0.5	Pass
HT40	MCS8	2	3	2422	36.80	36.70	36.48	36.32	0.5	Pass
HT40	MCS8	2	6	2437	36.80	36.80	36.40	36.32	0.5	Pass
HT40	MCS8	2	9	2452	36.90	36.90	36.48	36.32	0.5	Pass

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant. 1	Ant. 2	Ant. 1	Ant. 2		
VHT20	MCS0	2	1	2412	18.55	18.60	17.78	17.64	0.5	Pass
VHT20	MCS0	2	6	2437	18.55	18.65	17.80	17.64	0.5	Pass
VHT20	MCS0	2	11	2462	18.60	18.70	17.76	17.68	0.5	Pass
VHT40	MCS0	2	3	2422	36.90	37.00	36.48	36.48	0.5	Pass
VHT40	MCS0	2	6	2437	36.70	37.00	36.44	36.48	0.5	Pass
VHT40	MCS0	2	9	2452	36.70	36.90	36.48	36.44	0.5	Pass

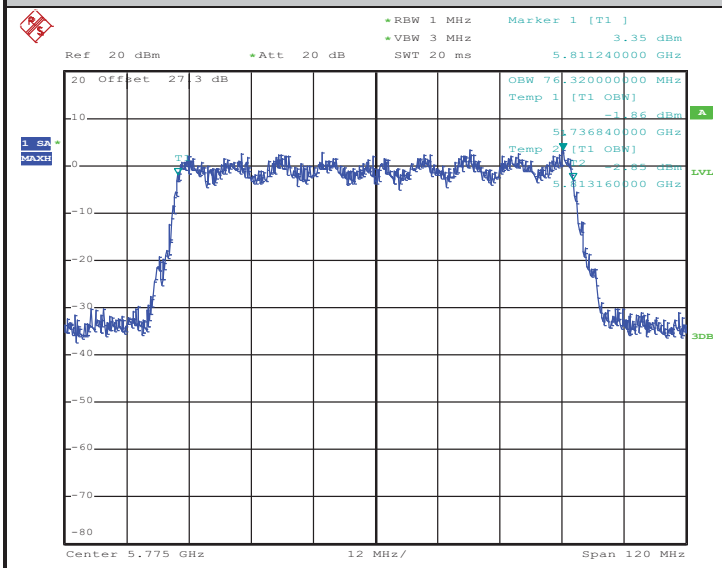
Test Band :	5GHz	Temperature :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant. 1	Ant. 2	Ant. 1	Ant. 2		
11a	6Mbps	1	149	5745	-	18.20	-	16.52	0.50	Pass
11a	6Mbps	1	157	5785		18.05		16.52	0.50	Pass
11a	6Mbps	1	165	5825		18.00		16.56	0.50	Pass
HT20	MCS0	1	149	5745		19.00		17.80	0.50	Pass
HT20	MCS0	1	157	5785		19.05		17.80	0.50	Pass
HT20	MCS0	1	165	5825		18.80		17.80	0.50	Pass
HT40	MCS0	1	151	5755		37.00		36.48	0.50	Pass
HT40	MCS0	1	159	5795		36.80		36.48	0.50	Pass
VHT20	MCS0	1	149	5745		19.05		17.80	0.50	Pass
VHT20	MCS0	1	157	5785		19.20		17.80	0.50	Pass
VHT20	MCS0	1	165	5825		19.15		17.80	0.50	Pass
VHT40	MCS0	1	151	5755		37.30		36.52	0.50	Pass
VHT40	MCS0	1	159	5795		37.30		36.48	0.50	Pass
VHT80	MCS0	1	155	5775		76.32		76.32	0.50	Pass
HT20	MCS8	2	149	5745	19.00	18.60	17.72	17.76	0.50	Pass
HT20	MCS8	2	157	5785	19.00	18.60	17.80	17.76	0.50	Pass
HT20	MCS8	2	165	5825	19.00	18.60	17.72	17.72	0.50	Pass
HT40	MCS8	2	151	5755	37.20	36.90	36.56	36.56	0.50	Pass
HT40	MCS8	2	159	5795	37.00	36.90	36.40	36.48	0.50	Pass
VHT20	MCS0	2	149	5745	19.00	18.70	17.80	17.64	0.50	Pass
VHT20	MCS0	2	157	5785	18.95	18.75	17.72	17.64	0.50	Pass
VHT20	MCS0	2	165	5825	19.35	18.75	17.80	17.64	0.50	Pass
VHT40	MCS0	2	151	5755	37.30	36.90	36.40	36.40	0.50	Pass
VHT40	MCS0	2	159	5795	37.50	36.80	36.48	36.32	0.50	Pass
VHT80	MCS0	2	155	5775	76.08	76.08	76.28	76.32	0.50	Pass

Minimum 6dB Bandwidth



Maximum 99% Occupied 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 and 5725-5850MHz, 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.

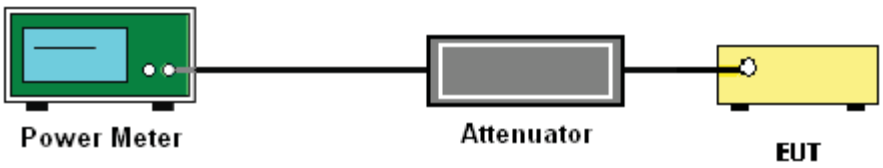
3.2.2 Measuring Instruments

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 v03r01.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
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 :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	SUM	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
11b	1Mbps	1	1	2412	20.55	20.33	-	30.00	30.00	3.33	3.47	Pass
11b	1Mbps	1	6	2437	20.52	20.08		30.00	30.00	3.33	3.47	Pass
11b	1Mbps	1	11	2462	20.17	20.56		30.00	30.00	3.33	3.47	Pass
11g	6Mbps	1	1	2412	24.84	25.05		30.00	30.00	3.33	3.47	Pass
11g	6Mbps	1	6	2437	24.88	25.16		30.00	30.00	3.33	3.47	Pass
11g	6Mbps	1	11	2462	24.52	24.82		30.00	30.00	3.33	3.47	Pass
HT20	MCS0	1	1	2412	24.21	24.38		30.00	30.00	3.33	3.47	Pass
HT20	MCS0	1	6	2437	24.28	23.88		30.00	30.00	3.33	3.47	Pass
HT20	MCS0	1	11	2462	24.24	23.04		30.00	30.00	3.33	3.47	Pass
HT40	MCS0	1	3	2422	23.71	23.61		30.00	30.00	3.33	3.47	Pass
HT40	MCS0	1	6	2437	23.61	23.78		30.00	30.00	3.33	3.47	Pass
HT40	MCS0	1	9	2452	23.74	23.18		30.00	30.00	3.33	3.47	Pass
VHT20	MCS0	1	1	2412	24.25	24.23		30.00	30.00	3.33	3.47	Pass
VHT20	MCS0	1	6	2437	24.27	24.37		30.00	30.00	3.33	3.47	Pass
VHT20	MCS0	1	11	2462	24.26	24.09		30.00	30.00	3.33	3.47	Pass
VHT40	MCS0	1	3	2422	23.86	23.63		30.00	30.00	3.33	3.47	Pass
VHT40	MCS0	1	6	2437	23.74	23.91		30.00	30.00	3.33	3.47	Pass
VHT40	MCS0	1	9	2452	23.89	23.57		30.00	30.00	3.33	3.47	Pass

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

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	SUM	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
HT20	MCS8	2	1	2412	21.12	20.91	24.03	29.59		6.41		Pass
HT20	MCS8	2	6	2437	20.82	21.03	23.94	29.59		6.41		Pass
HT20	MCS8	2	11	2462	20.92	21.15	24.05	29.59		6.41		Pass
HT40	MCS8	2	3	2422	22.28	22.04	25.17	29.59		6.41		Pass
HT40	MCS8	2	6	2437	22.16	21.77	24.98	29.59		6.41		Pass
HT40	MCS8	2	9	2452	21.74	21.69	24.73	29.59		6.41		Pass
VHT20	MCS0	2	1	2412	21.47	21.02	24.26	29.59		6.41		Pass
VHT20	MCS0	2	6	2437	21.29	21.07	24.19	29.59		6.41		Pass
VHT20	MCS0	2	11	2462	21.12	20.93	24.04	29.59		6.41		Pass
VHT40	MCS0	2	3	2422	23.27	23.23	26.26	29.59		6.41		Pass
VHT40	MCS0	2	6	2437	23.21	23.13	26.18	29.59		6.41		Pass
VHT40	MCS0	2	9	2452	23.29	23.22	26.27	29.59		6.41		Pass

Test Band :	5GHz	Temperature :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	SUM	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
11a	6Mbps	1	149	5745	22.38	22.55	-	30.00	30.00	2.42	4.66	Pass
11a	6Mbps	1	157	5785	21.92	22.38		30.00	30.00	2.42	4.66	Pass
11a	6Mbps	1	165	5825	22.11	22.35		30.00	30.00	2.42	4.66	Pass
HT20	MCS0	1	149	5745	22.01	22.66		30.00	30.00	2.42	4.66	Pass
HT20	MCS0	1	157	5785	21.95	22.11		30.00	30.00	2.42	4.66	Pass
HT20	MCS0	1	165	5825	21.91	22.34		30.00	30.00	2.42	4.66	Pass
HT40	MCS0	1	151	5755	21.75	22.51		30.00	30.00	2.42	4.66	Pass
HT40	MCS0	1	159	5795	21.79	21.99		30.00	30.00	2.42	4.66	Pass
VHT20	MCS0	1	149	5745	21.61	22.13		30.00	30.00	2.42	4.66	Pass
VHT20	MCS0	1	157	5785	21.55	21.68		30.00	30.00	2.42	4.66	Pass
VHT20	MCS0	1	165	5825	21.48	21.97		30.00	30.00	2.42	4.66	Pass
VHT40	MCS0	1	151	5755	21.24	21.88		30.00	30.00	2.42	4.66	Pass
VHT40	MCS0	1	159	5795	21.32	21.52		30.00	30.00	2.42	4.66	Pass
VHT80	MCS0	1	155	5775	21.79	22.15		30.00	30.00	2.42	4.66	Pass

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	SUM	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
HT20	MCS8	2	149	5745	21.48	19.36	23.56	29.38		6.62		Pass
HT20	MCS8	2	157	5785	21.27	19.92	23.66	29.38		6.62		Pass
HT20	MCS8	2	165	5825	21.18	19.53	23.44	29.38		6.62		Pass
HT40	MCS8	2	151	5755	21.63	20.42	24.08	29.38		6.62		Pass
HT40	MCS8	2	159	5795	21.18	19.79	23.55	29.38		6.62		Pass
VHT20	MCS0	2	149	5745	21.56	19.74	23.75	29.38		6.62		Pass
VHT20	MCS0	2	157	5785	20.93	19.45	23.26	29.38		6.62		Pass
VHT20	MCS0	2	165	5825	21.13	19.79	23.52	29.38		6.62		Pass
VHT40	MCS0	2	151	5755	21.18	21.32	24.26	29.38		6.62		Pass
VHT40	MCS0	2	159	5795	21.17	20.93	24.06	29.38		6.62		Pass
VHT80	MCS0	2	155	5775	20.30	18.49	22.50	29.38		6.62		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 :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant. 1	Ant. 2	Ant. 1	Ant. 2	Sum Power
11b	1Mbps	1	1	2412	0.00	0.00	17.91	17.98	
11b	1Mbps	1	6	2437	0.00	0.00	17.86	17.63	
11b	1Mbps	1	11	2462	0.00	0.00	17.57	18.00	
11g	6Mbps	1	1	2412	0.00	0.00	16.55	16.91	
11g	6Mbps	1	6	2437	0.00	0.00	16.83	17.00	
11g	6Mbps	1	11	2462	0.00	0.00	16.54	16.09	
HT20	MCS0	1	1	2412	0.00	0.00	15.87	16.00	
HT20	MCS0	1	6	2437	0.00	0.00	15.97	15.93	
HT20	MCS0	1	11	2462	0.00	0.00	15.95	14.89	
HT40	MCS0	1	3	2422	0.00	0.00	15.32	15.22	-
HT40	MCS0	1	6	2437	0.00	0.00	15.16	15.50	
HT40	MCS0	1	9	2452	0.00	0.00	15.44	15.02	
VHT20	MCS0	1	1	2412	0.00	0.00	15.57	15.71	
VHT20	MCS0	1	6	2437	0.00	0.00	15.70	15.90	
VHT20	MCS0	1	11	2462	0.00	0.00	15.52	15.58	
VHT40	MCS0	1	3	2422	0.00	0.00	15.27	15.17	
VHT40	MCS0	1	6	2437	0.00	0.00	15.08	15.43	
VHT40	MCS0	1	9	2452	0.00	0.00	15.42	15.29	

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant. 1	Ant. 2	Ant. 1	Ant. 2	Sum Power
HT20	MCS8	2	1	2412	0.00	0.00	12.12	12.18	15.16
HT20	MCS8	2	6	2437	0.00	0.00	11.81	12.27	15.06
HT20	MCS8	2	11	2462	0.00	0.00	11.98	12.53	15.27
HT40	MCS8	2	3	2422	0.00	0.00	13.22	13.46	16.35
HT40	MCS8	2	6	2437	0.00	0.00	13.19	13.44	16.33
HT40	MCS8	2	9	2452	0.00	0.00	12.97	13.35	16.17
VHT20	MCS0	2	1	2412	0.00	0.00	12.16	12.34	15.26
VHT20	MCS0	2	6	2437	0.00	0.00	11.93	12.29	15.12
VHT20	MCS0	2	11	2462	0.00	0.00	11.88	12.33	15.12
VHT40	MCS0	2	3	2422	0.00	0.00	15.05	15.23	18.15
VHT40	MCS0	2	6	2437	0.00	0.00	14.97	15.22	18.11
VHT40	MCS0	2	9	2452	0.00	0.00	15.16	15.48	18.33

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

Test Band :	5GHz	Temperature :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant. 1	Ant. 2	Ant. 1	Ant. 2	Sum Power
11a	6Mbps	1	149	5745	0.00	0.00	14.31	14.49	-
11a	6Mbps	1	157	5785	0.00	0.00	13.97	14.47	
11a	6Mbps	1	165	5825	0.00	0.00	14.29	14.42	
HT20	MCS0	1	149	5745	0.00	0.00	15.88	15.98	
HT20	MCS0	1	157	5785	0.00	0.00	15.96	15.94	
HT20	MCS0	1	165	5825	0.00	0.00	15.52	15.73	
HT40	MCS0	1	151	5755	0.00	0.00	15.23	15.50	
HT40	MCS0	1	159	5795	0.00	0.00	15.40	15.41	
VHT20	MCS0	1	149	5745	0.00	0.00	15.75	15.95	
VHT20	MCS0	1	157	5785	0.00	0.00	15.84	15.82	
VHT20	MCS0	1	165	5825	0.00	0.00	15.08	15.71	
VHT40	MCS0	1	151	5755	0.00	0.00	14.98	15.48	
VHT40	MCS0	1	159	5795	0.00	0.00	15.14	15.22	
VHT80	MCS0	1	155	5775	0.00	0.00	13.73	13.98	
HT20	MCS8	2	149	5745	0.00	0.00	13.11	10.75	15.10
HT20	MCS8	2	157	5785	0.00	0.00	13.35	11.36	15.48
HT20	MCS8	2	165	5825	0.00	0.00	12.99	11.10	15.16
HT40	MCS8	2	151	5755	0.00	0.00	14.08	11.91	16.14
HT40	MCS8	2	159	5795	0.00	0.00	13.82	11.96	16.00
VHT20	MCS0	2	149	5745	0.00	0.00	13.45	11.14	15.46
VHT20	MCS0	2	157	5785	0.00	0.00	12.79	10.81	14.92
VHT20	MCS0	2	165	5825	0.00	0.00	12.99	11.11	15.16
VHT40	MCS0	2	151	5755	0.00	0.00	16.02	14.44	18.31
VHT40	MCS0	2	159	5795	0.00	0.00	15.98	13.86	18.06
VHT80	MCS0	2	155	5775	0.00	0.00	12.74	10.65	14.83

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

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

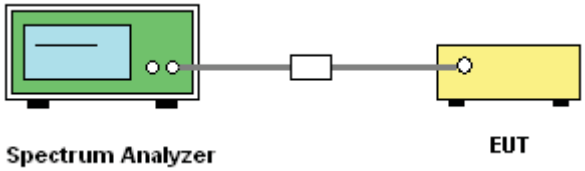
   If measurements performed using method (2) plus 10 log (N) exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

   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 :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	Worst +10log(2)	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
11b	1Mbps	1	1	2412		-12.98		8.00	8.00	3.33	3.47	Pass
11b	1Mbps	1	6	2437		-13.18		8.00	8.00	3.33	3.47	Pass
11b	1Mbps	1	11	2462		-12.80		8.00	8.00	3.33	3.47	Pass
11g	6Mbps	1	1	2412		-11.62		8.00	8.00	3.33	3.47	Pass
11g	6Mbps	1	6	2437		-11.53		8.00	8.00	3.33	3.47	Pass
11g	6Mbps	1	11	2462		-11.91		8.00	8.00	3.33	3.47	Pass
HT20	MCS0	1	1	2412		-11.08		8.00	8.00	3.33	3.47	Pass
HT20	MCS0	1	6	2437		-11.24		8.00	8.00	3.33	3.47	Pass
HT20	MCS0	1	11	2462		-12.02		8.00	8.00	3.33	3.47	Pass
HT40	MCS0	1	3	2422		-15.42	-	8.00	8.00	3.33	3.47	Pass
HT40	MCS0	1	6	2437		-14.61		8.00	8.00	3.33	3.47	Pass
HT40	MCS0	1	9	2452		-14.70		8.00	8.00	3.33	3.47	Pass
VHT20	MCS0	1	1	2412		-11.61		8.00	8.00	3.33	3.47	Pass
VHT20	MCS0	1	6	2437		-11.16		8.00	8.00	3.33	3.47	Pass
VHT20	MCS0	1	11	2462		-11.11		8.00	8.00	3.33	3.47	Pass
VHT40	MCS0	1	3	2422		-14.11		8.00	8.00	3.33	3.47	Pass
VHT40	MCS0	1	6	2437		-14.92		8.00	8.00	3.33	3.47	Pass
VHT40	MCS0	1	9	2452		-13.99		8.00	8.00	3.33	3.47	Pass

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	Worst +10log(2)	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
HT20	MCS8	2	1	2412	-13.07	-13.29	-10.06	7.59		6.41		Pass
HT20	MCS8	2	6	2437	-12.37	-11.92	-8.91	7.59		6.41		Pass
HT20	MCS8	2	11	2462	-12.42	-12.11	-9.10	7.59		6.41		Pass
HT40	MCS8	2	3	2422	-14.76	-15.28	-11.75	7.59		6.41		Pass
HT40	MCS8	2	6	2437	-15.46	-15.52	-12.45	7.59		6.41		Pass
HT40	MCS8	2	9	2452	-15.29	-15.79	-12.28	7.59		6.41		Pass
VHT20	MCS0	2	1	2412	-11.41	-11.00	-7.99	7.59		6.41		Pass
VHT20	MCS0	2	6	2437	-12.55	-12.41	-9.40	7.59		6.41		Pass
VHT20	MCS0	2	11	2462	-12.35	-11.95	-8.94	7.59		6.41		Pass
VHT40	MCS0	2	3	2422	-14.77	-14.40	-11.39	7.59		6.41		Pass
VHT40	MCS0	2	6	2437	-14.34	-13.77	-10.76	7.59		6.41		Pass
VHT40	MCS0	2	9	2452	-14.30	-13.98	-10.97	7.59		6.41		Pass

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

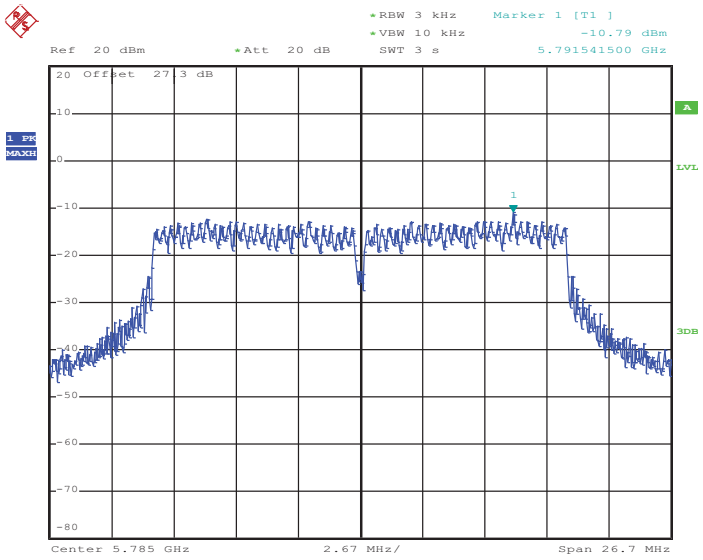
Test Band :	5GHz	Temperature :	21~26℃
Test Engineer :	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	Worst +10log(2)	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
11a	6Mbps	1	149	5745		-12.87		8.00	8.00	2.42	4.66	Pass
11a	6Mbps	1	157	5785		-13.61		8.00	8.00	2.42	4.66	Pass
11a	6Mbps	1	165	5825		-13.24		8.00	8.00	2.42	4.66	Pass
HT20	MCS0	1	149	5745		-12.86		8.00	8.00	2.42	4.66	Pass
HT20	MCS0	1	157	5785		-13.12		8.00	8.00	2.42	4.66	Pass
HT20	MCS0	1	165	5825		-13.34		8.00	8.00	2.42	4.66	Pass
HT40	MCS0	1	151	5755		-14.10		8.00	8.00	2.42	4.66	Pass
HT40	MCS0	1	159	5795		-14.51	-	8.00	8.00	2.42	4.66	Pass
VHT20	MCS0	1	149	5745		-11.00		8.00	8.00	2.42	4.66	Pass
VHT20	MCS0	1	157	5785		-10.79		8.00	8.00	2.42	4.66	Pass
VHT20	MCS0	1	165	5825		-11.33		8.00	8.00	2.42	4.66	Pass
VHT40	MCS0	1	151	5755		-14.52		8.00	8.00	2.42	4.66	Pass
VHT40	MCS0	1	159	5795		-15.38		8.00	8.00	2.42	4.66	Pass
VHT80	MCS0	1	155	5775		-19.04		8.00	8.00	2.42	4.66	Pass

Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Ant. 1	Ant. 2	Worst +10log(2)	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
HT20	MCS8	2	149	5745	-12.72	-14.34	-9.71	7.38		6.62		Pass
HT20	MCS8	2	157	5785	-12.47	-13.83	-9.46	7.38		6.62		Pass
HT20	MCS8	2	165	5825	-11.65	-12.96	-8.64	7.38		6.62		Pass
HT40	MCS8	2	151	5755	-15.08	-16.91	-12.07	7.38		6.62		Pass
HT40	MCS8	2	159	5795	-15.67	-17.35	-12.66	7.38		6.62		Pass
VHT20	MCS0	2	149	5745	-11.82	-13.91	-8.81	7.38		6.62		Pass
VHT20	MCS0	2	157	5785	-11.39	-14.45	-8.38	7.38		6.62		Pass
VHT20	MCS0	2	165	5825	-11.01	-12.82	-8.00	7.38		6.62		Pass
VHT40	MCS0	2	151	5755	-14.87	-17.28	-11.86	7.38		6.62		Pass
VHT40	MCS0	2	159	5795	-15.15	-16.40	-12.14	7.38		6.62		Pass
VHT80	MCS0	2	155	5775	-17.81	-20.38	-14.80	7.38		6.62		Pass

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

Worst Case Power Density (dBm/3kHz)



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3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

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

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup

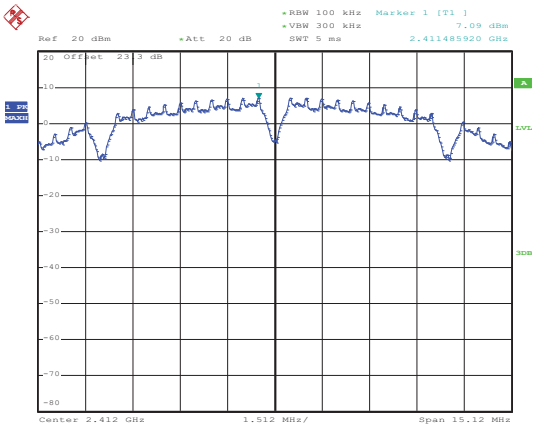
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Number of TX = 1, Ant. Port 2 (Measured)

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11b	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11b Channel 01

100kHz PSD reference Level



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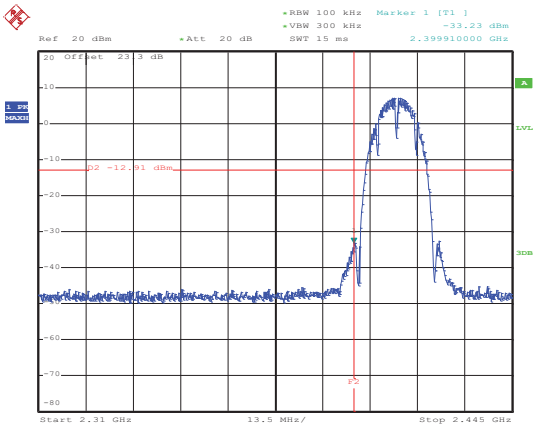
Low Channel Plot



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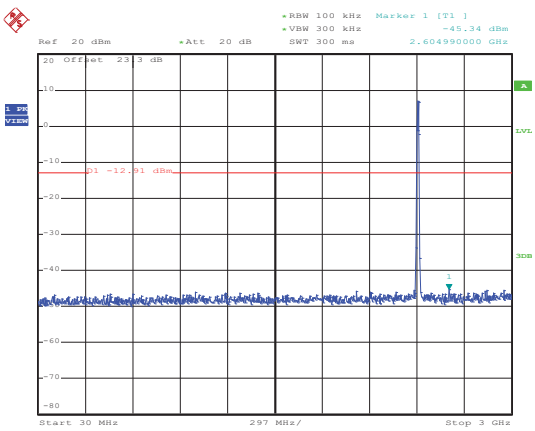
Spurious Emission 30MHz~3GHz



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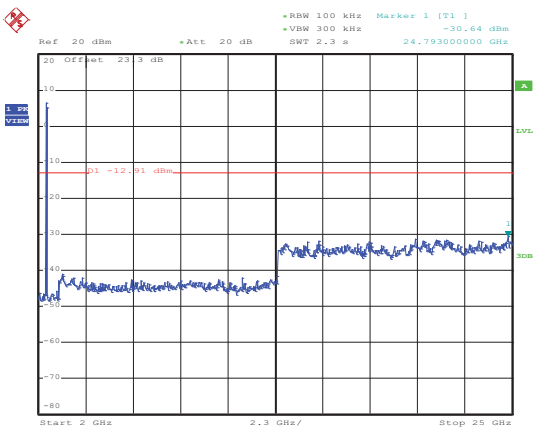
Spurious Emission 2GHz~25GHz

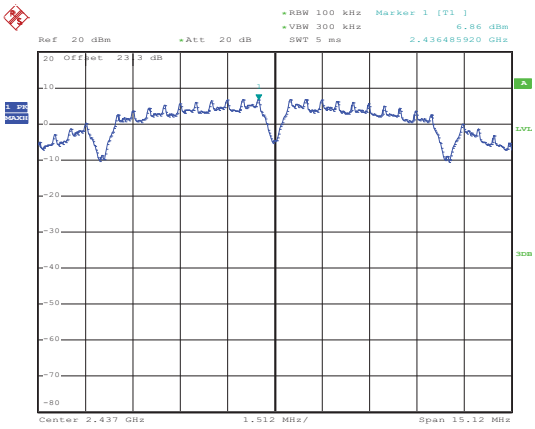


Date: 27.FEB.2014 09:24:05

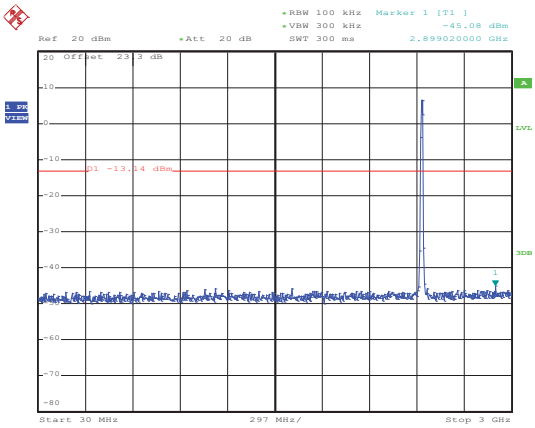
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11b	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid.	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11b Channel 06

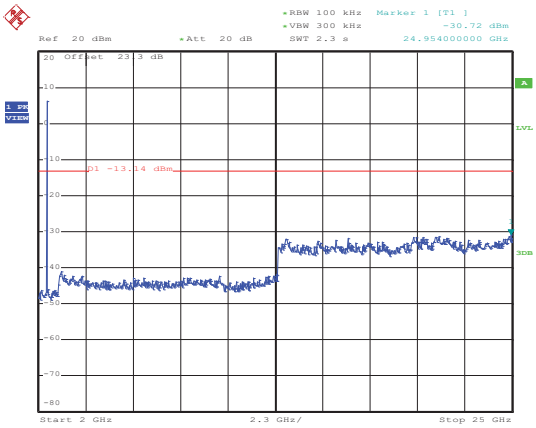
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



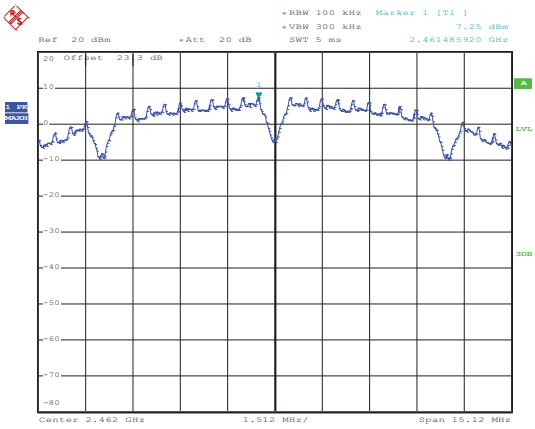
Spurious Emission 2GHz~25GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11b	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

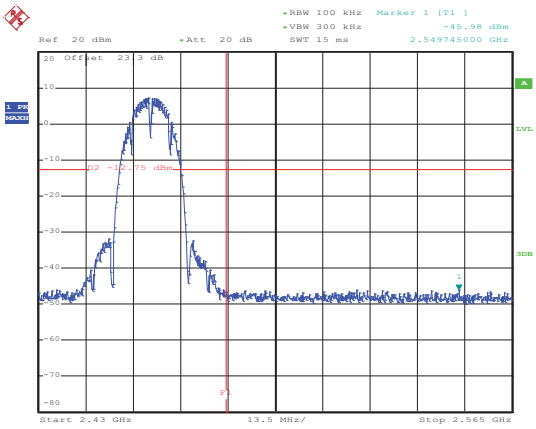
WLAN 802.11b Channel 11

100kHz PSD reference Level



Date: 27.FEB.2014 09:32:57

High Channel Plot



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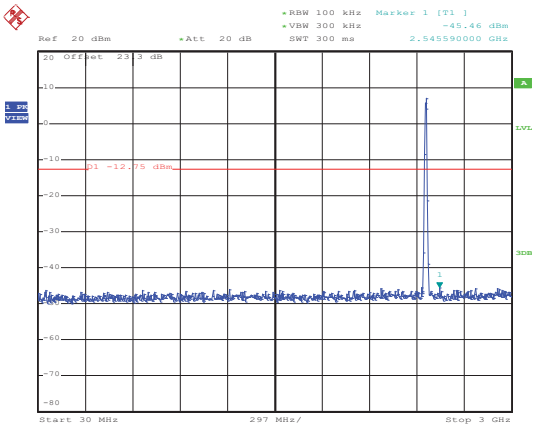
Spurious Emission 30MHz~3GHz



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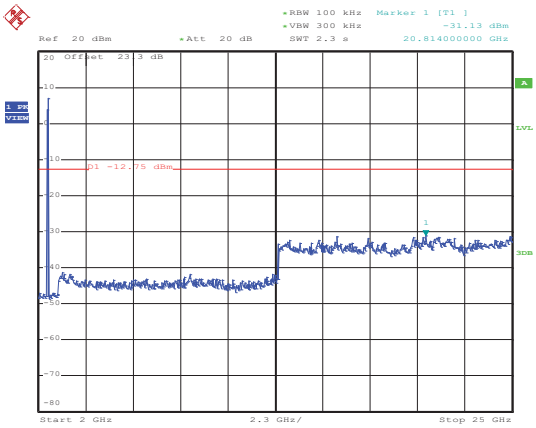
Spurious Emission 2GHz~25GHz



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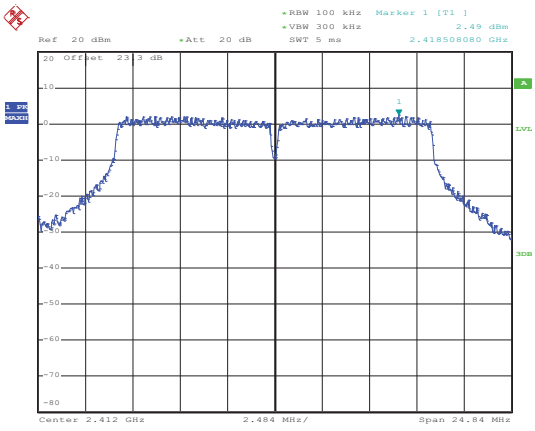
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11g	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11g Channel 01

100kHz PSD reference Level



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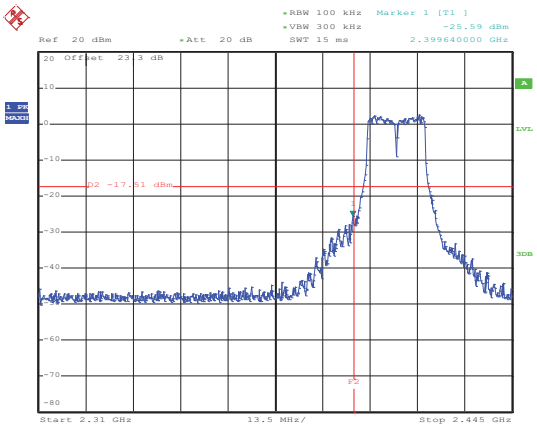
Low Channel Plot



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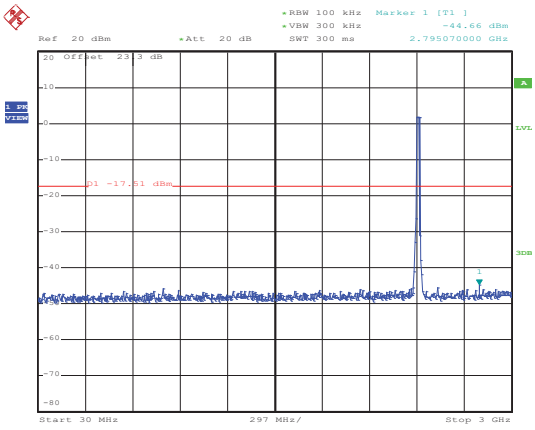
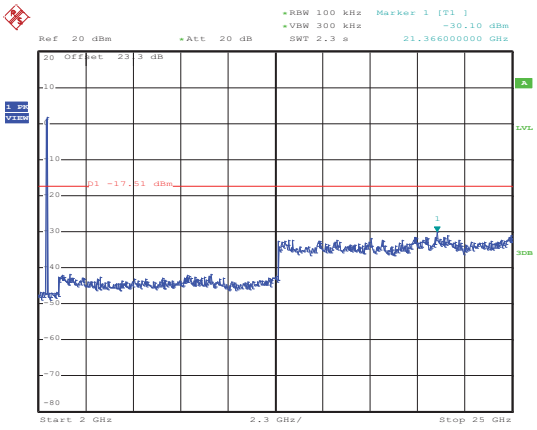
Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 09:46:00

Spurious Emission 2GHz~25GHz

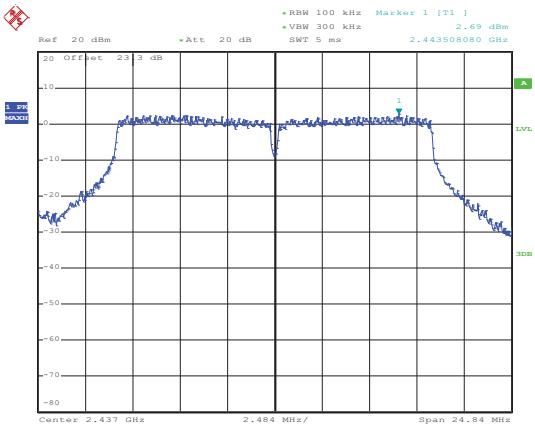


Date: 27.FEB.2014 09:46:19

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11g	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

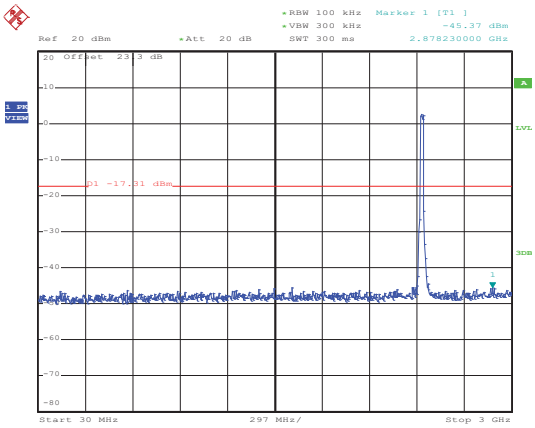
WLAN 802.11g Channel 06

100kHz PSD reference Level



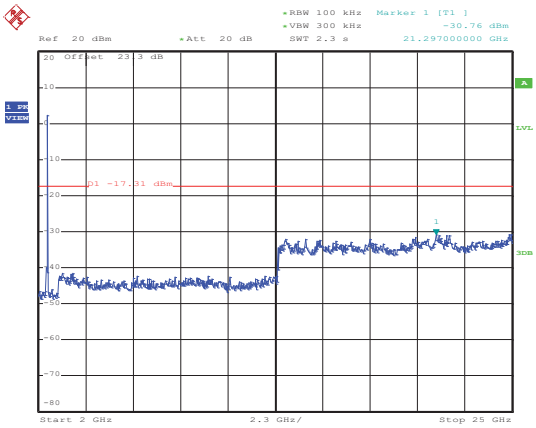
Date: 27.FEB.2014 09:50:39

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 09:51:09

Spurious Emission 2GHz~25GHz

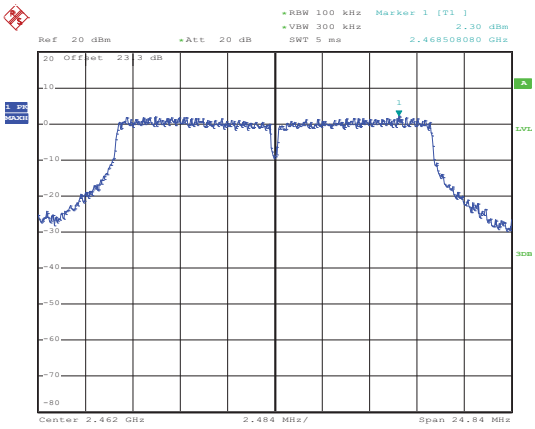


Date: 27.FEB.2014 09:51:28

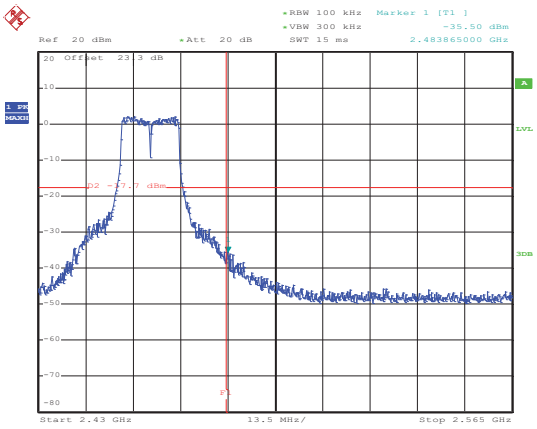
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11g	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11g Channel 11

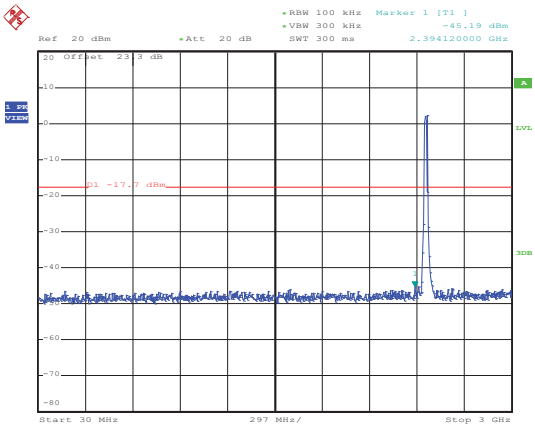
100kHz PSD reference Level



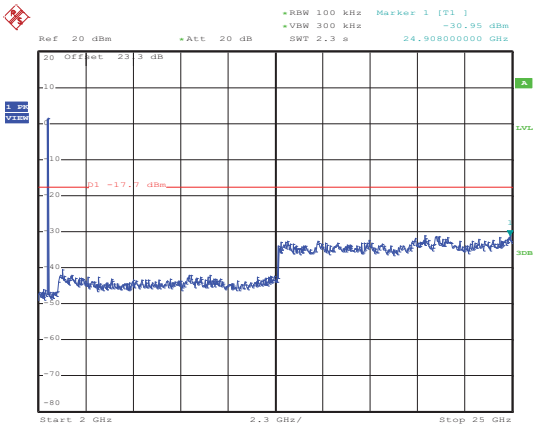
High Channel Plot



Spurious Emission 30MHz~3GHz



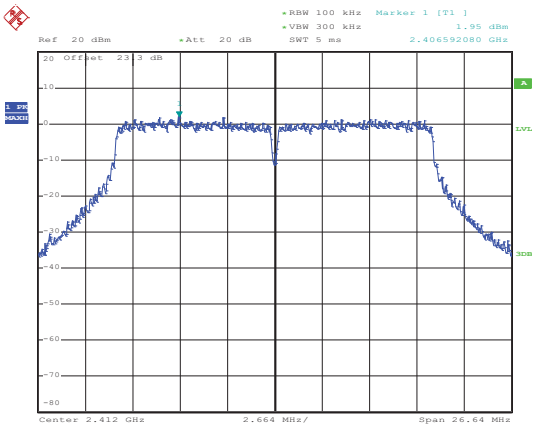
Spurious Emission 2GHz~25GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

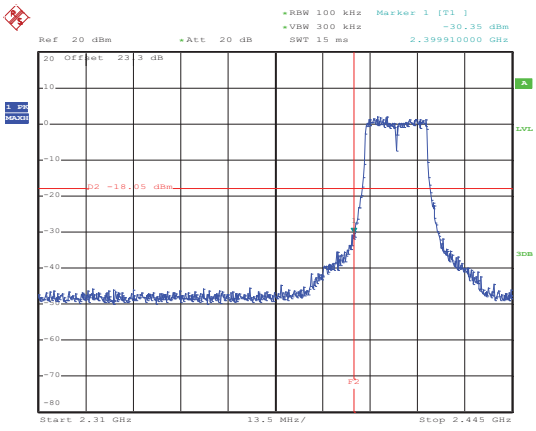
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



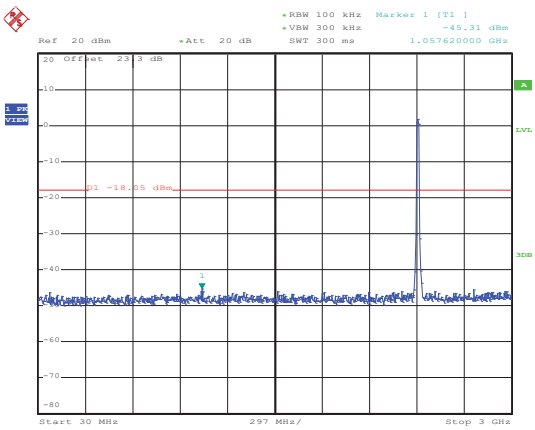
Date: 27.FEB.2014 10:03:15

Low Channel Plot



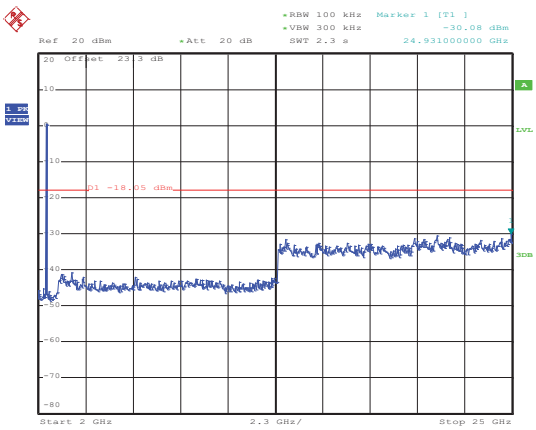
Date: 27.FEB.2014 10:03:35

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 10:03:58

Spurious Emission 2GHz~25GHz

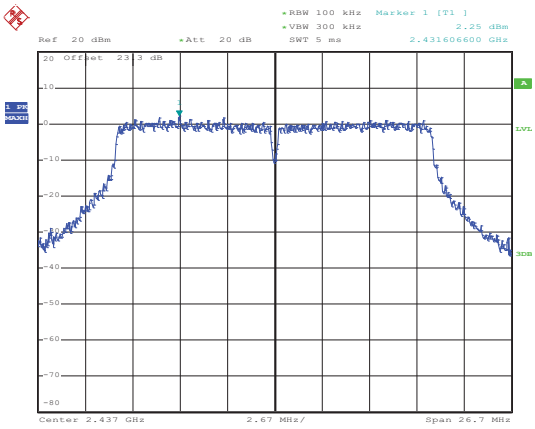


Date: 27.FEB.2014 10:04:17

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

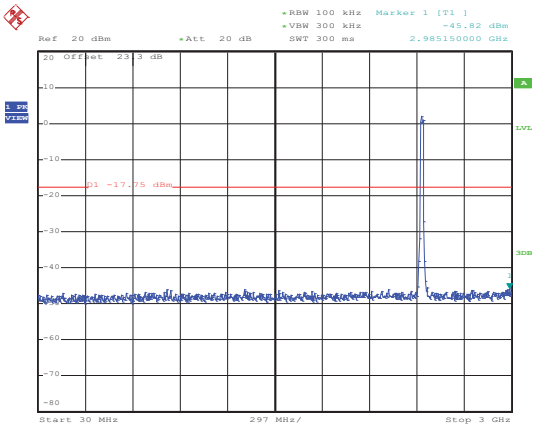
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



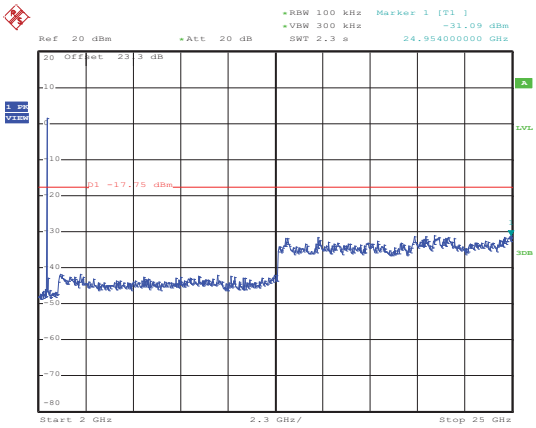
Date: 27.FEB.2014 10:08:24

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 10:08:53

Spurious Emission 2GHz~25GHz

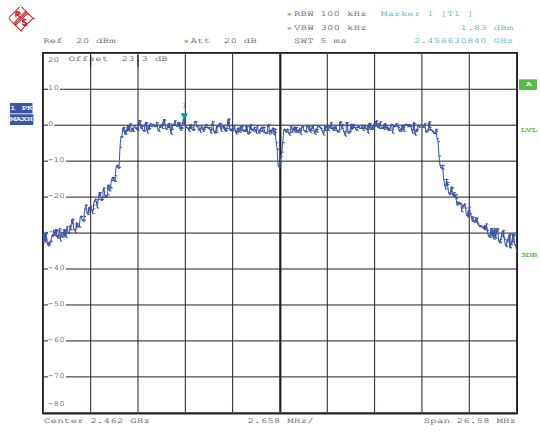


Date: 27.FEB.2014 10:09:11

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

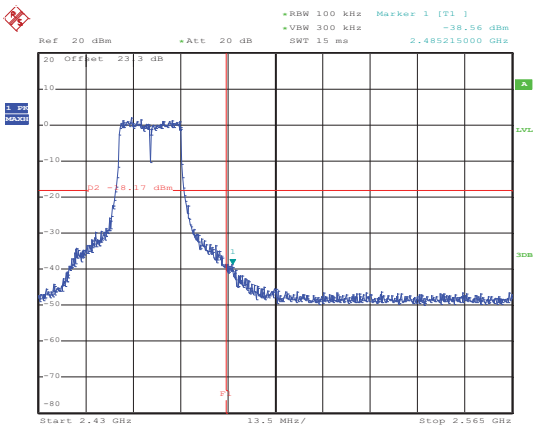
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



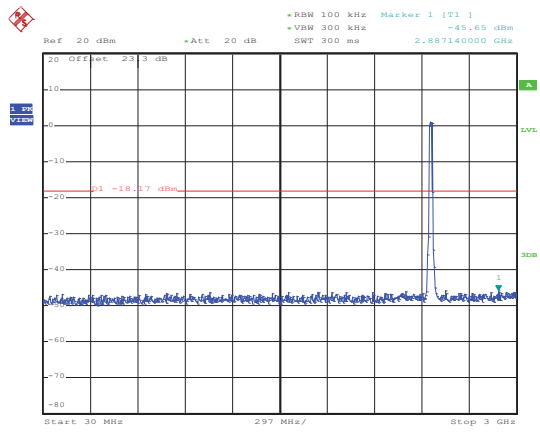
Date: 27.FEB.2014 10:13:39

High Channel Plot



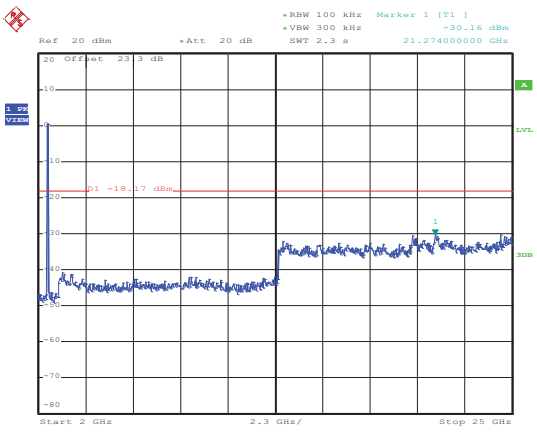
Date: 27.FEB.2014 10:13:55

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 10:14:14

Spurious Emission 2GHz~25GHz

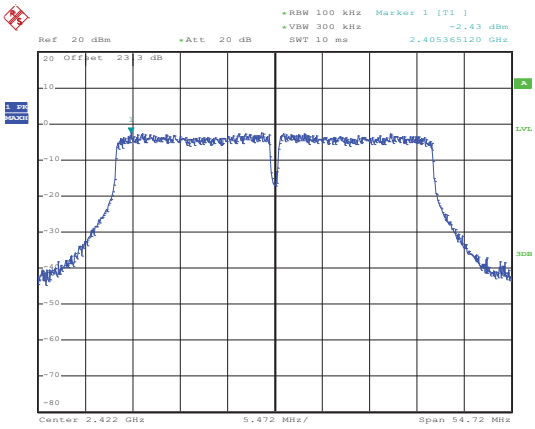


Date: 27.FEB.2014 10:14:33

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	03	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

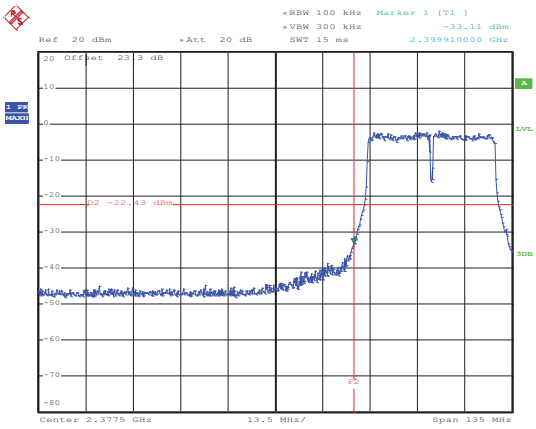
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



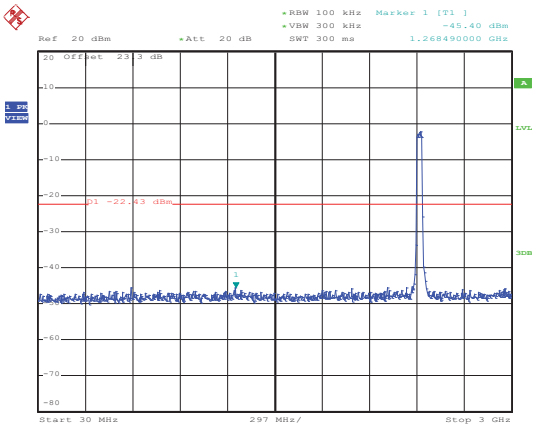
Date: 27.FEB.2014 10:18:59

Low Channel Plot



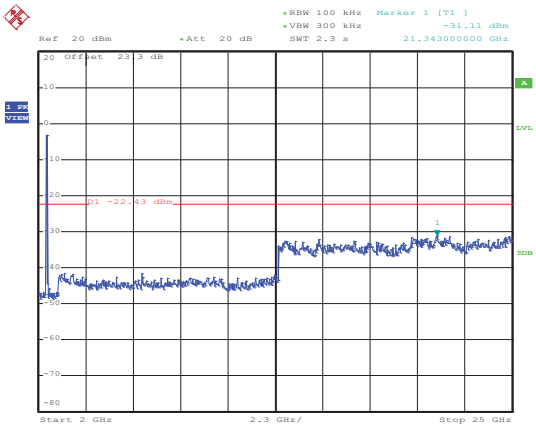
Date: 27.FEB.2014 10:23:33

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 10:24:36

Spurious Emission 2GHz~25GHz

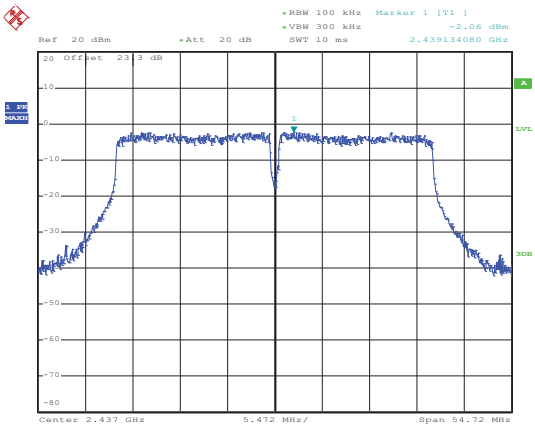


Date: 27.FEB.2014 10:24:54

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

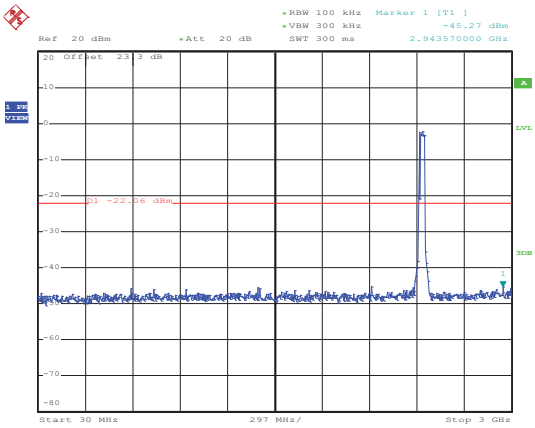
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



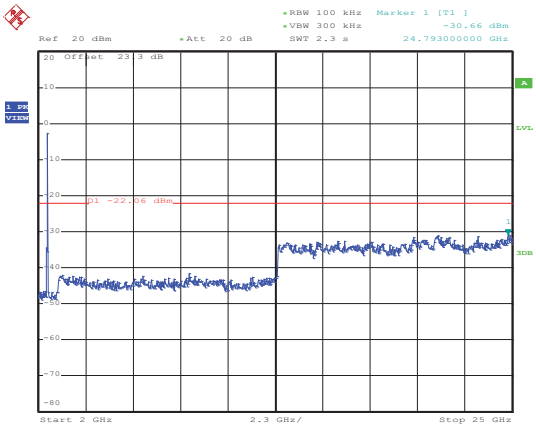
Date: 27.FEB.2014 10:29:19

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 10:29:41

Spurious Emission 2GHz~25GHz

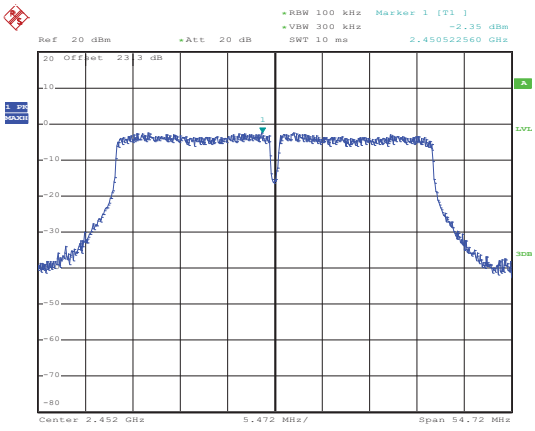


Date: 27.FEB.2014 10:29:59

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	09	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

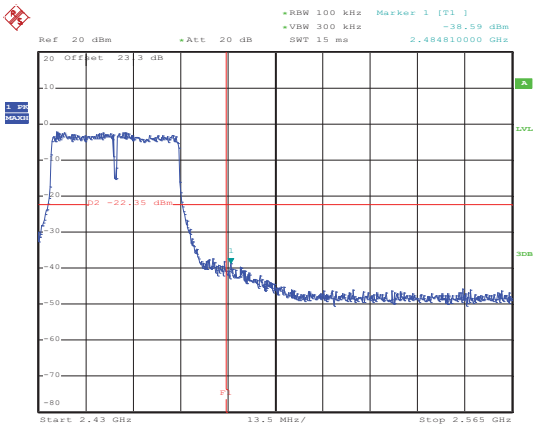
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



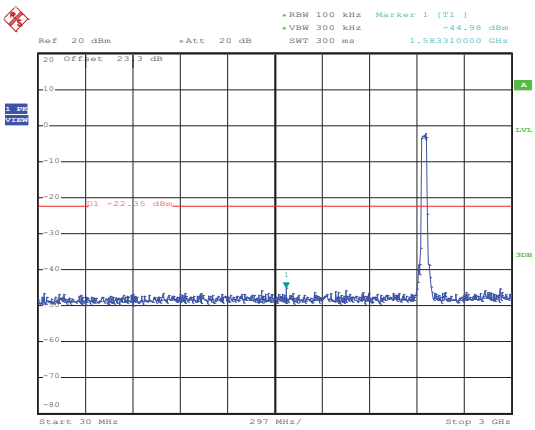
Date: 27.FEB.2014 10:40:15

High Channel Plot



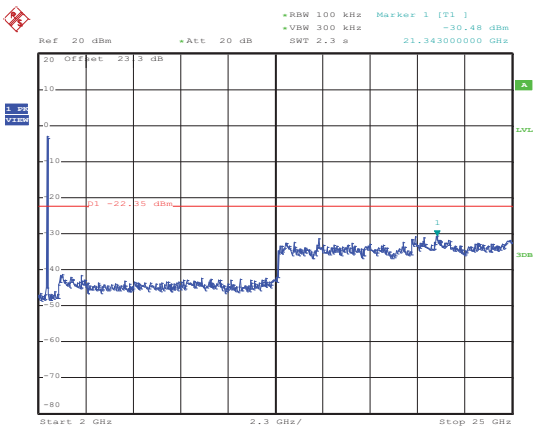
Date: 27.FEB.2014 10:40:46

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 10:41:43

Spurious Emission 2GHz~25GHz

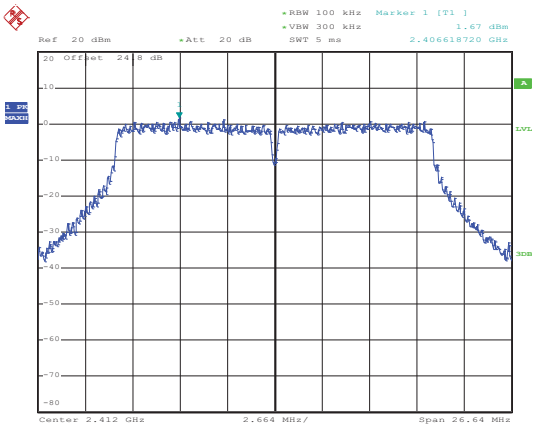


Date: 27.FEB.2014 10:42:01

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

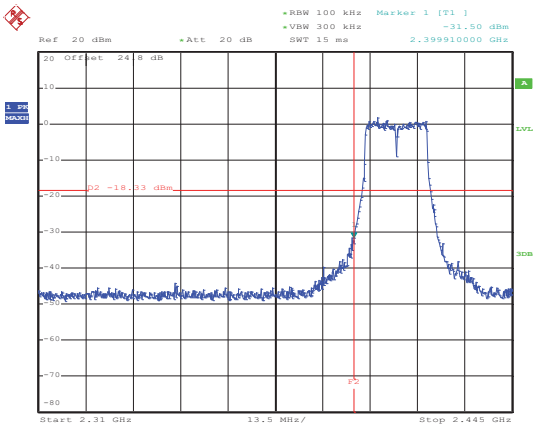
WLAN 802.11n VHT20 Channel 01

100kHz PSD reference Level



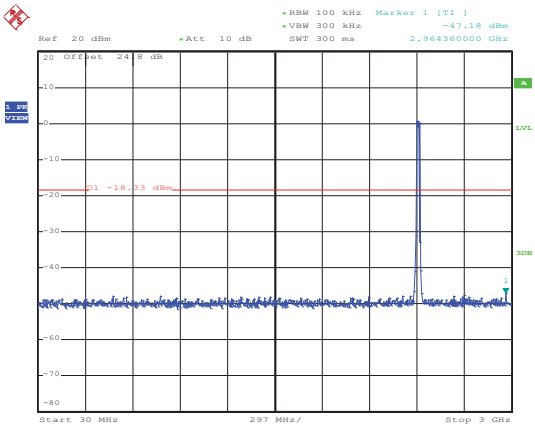
Date: 4.MAR.2014 02:23:16

Low Channel Plot



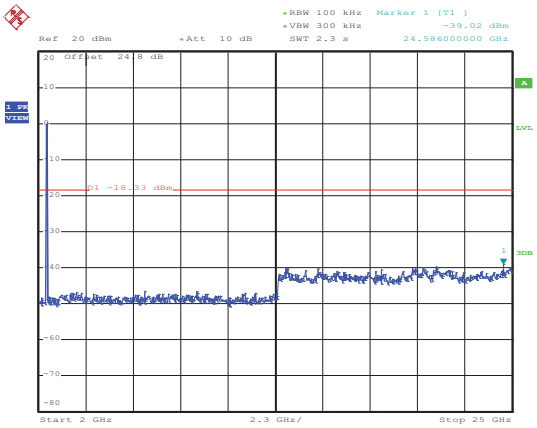
Date: 4.MAR.2014 02:25:20

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 02:24:46

Spurious Emission 2GHz~25GHz

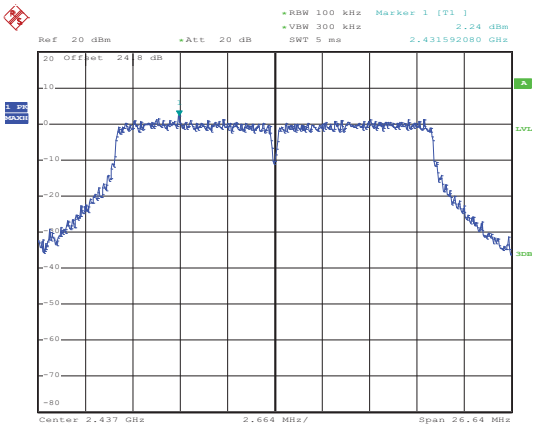


Date: 4.MAR.2014 02:25:05

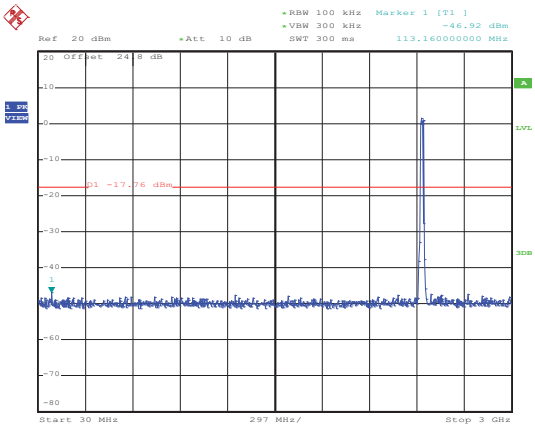
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT20 Channel 06

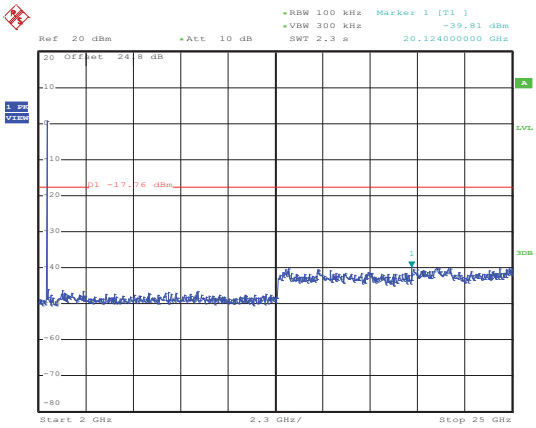
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



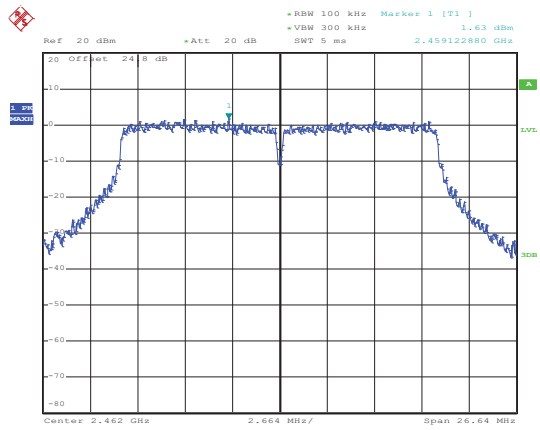
Spurious Emission 2GHz~25GHz



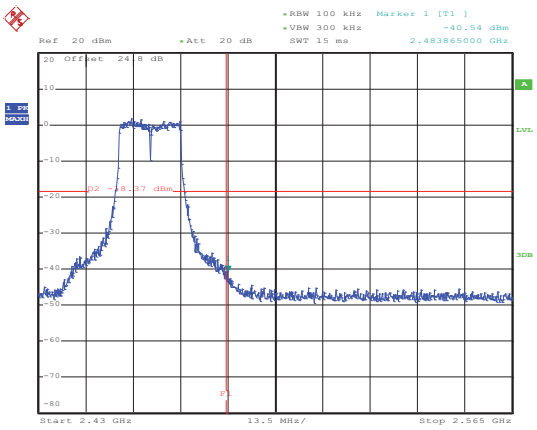
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT20 Channel 11

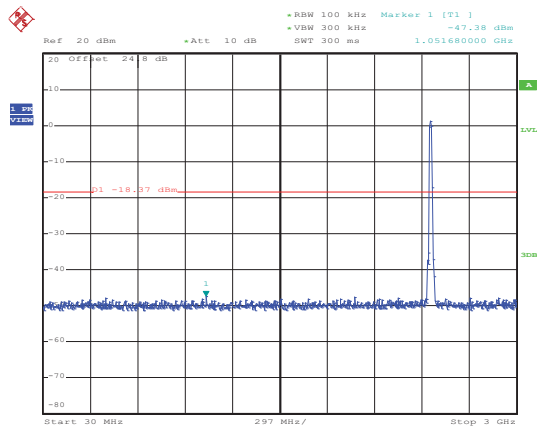
100kHz PSD reference Level



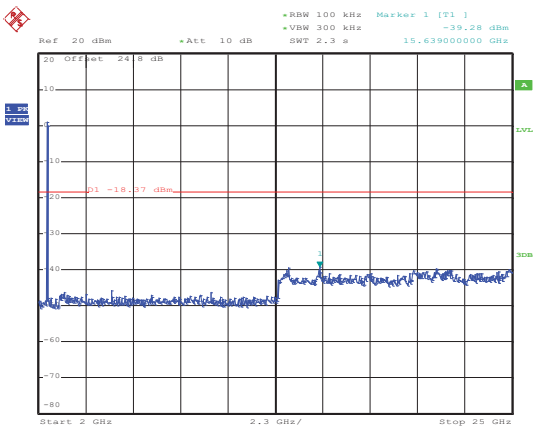
High Channel Plot



Spurious Emission 30MHz~3GHz



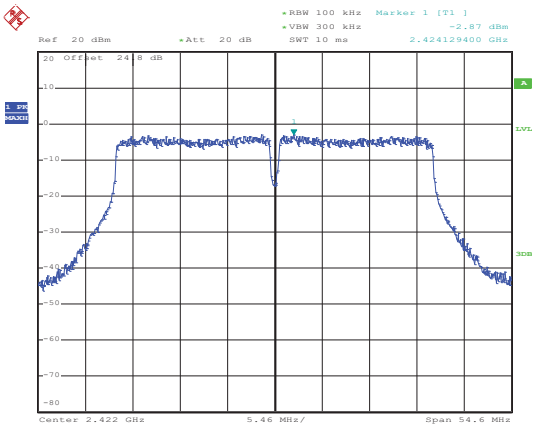
Spurious Emission 2GHz~25GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	03	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

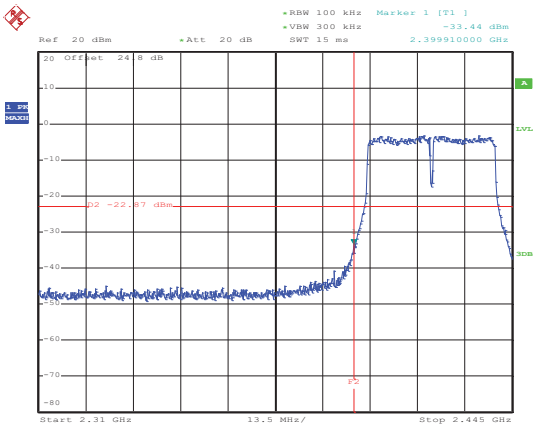
WLAN 802.11n VHT40 Channel 03

100kHz PSD reference Level



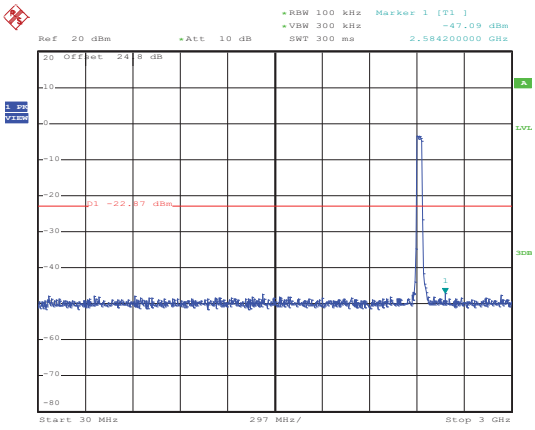
Date: 4.MAR.2014 02:38:20

Low Channel Plot



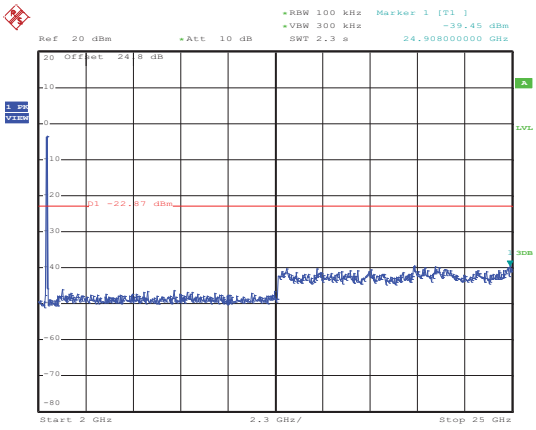
Date: 4.MAR.2014 02:41:42

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 02:38:53

Spurious Emission 2GHz~25GHz

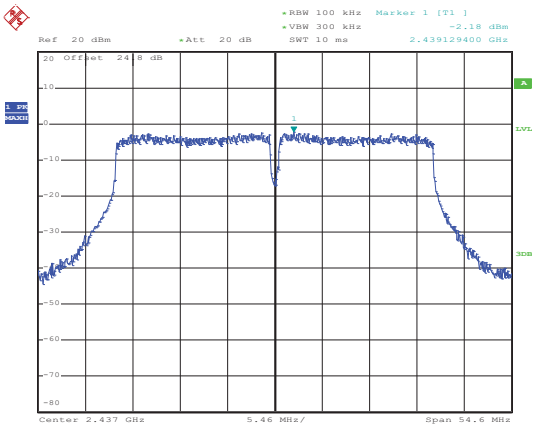


Date: 4.MAR.2014 02:39:12

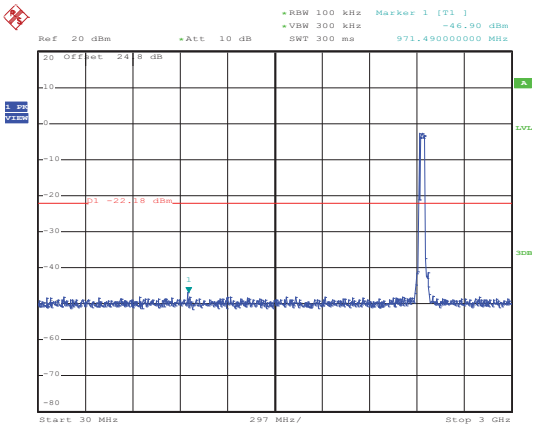
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT40 Channel 06

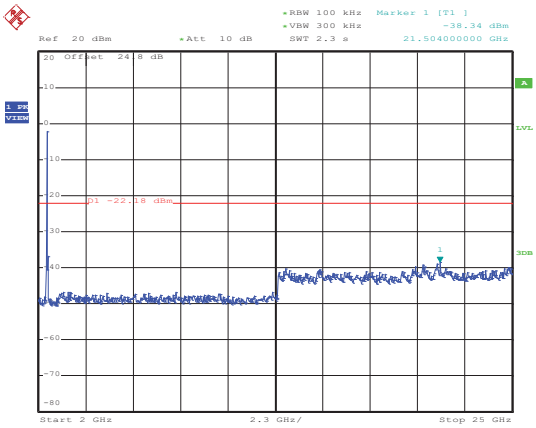
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



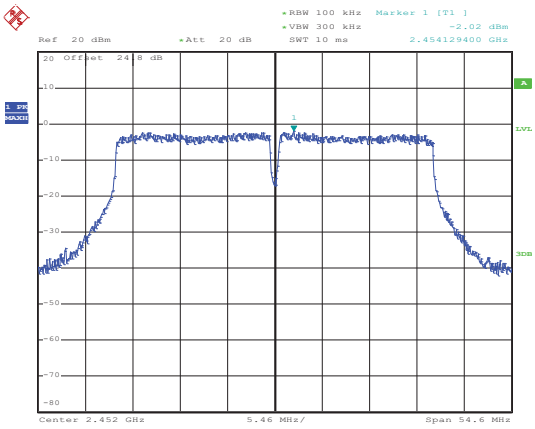
Spurious Emission 2GHz~25GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	09	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

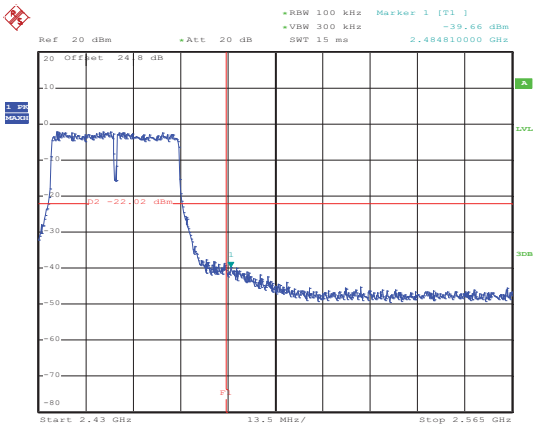
WLAN 802.11n VHT40 Channel 09

100kHz PSD reference Level



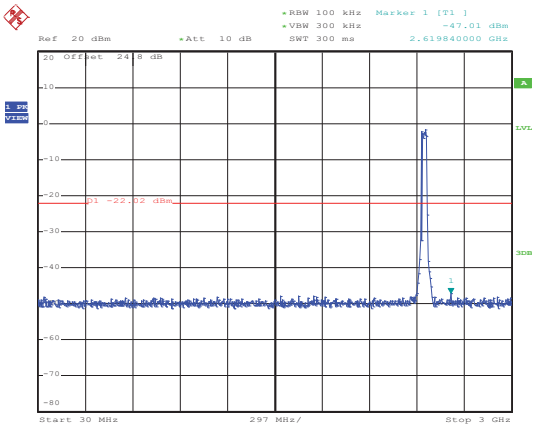
Date: 4.MAR.2014 02:33:00

High Channel Plot



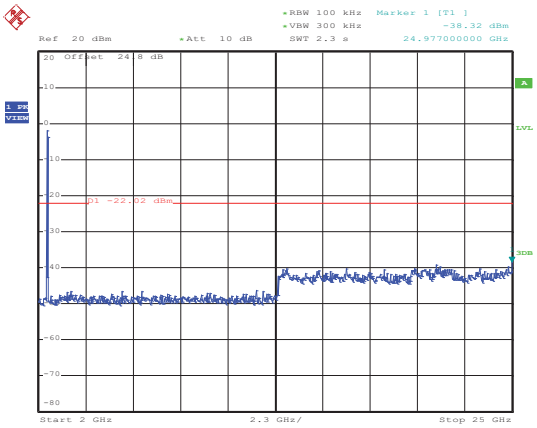
Date: 4.MAR.2014 02:33:14

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 02:33:33

Spurious Emission 2GHz~25GHz

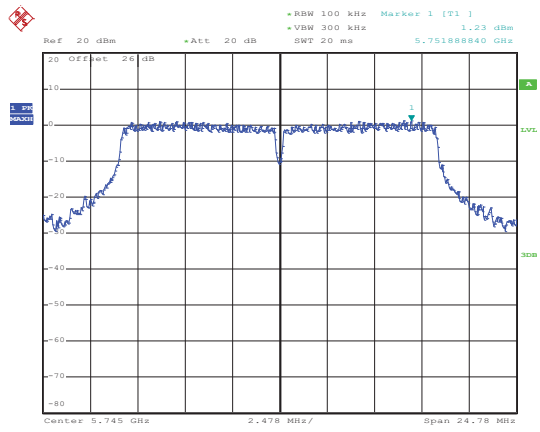


Date: 4.MAR.2014 02:33:52

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11a	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

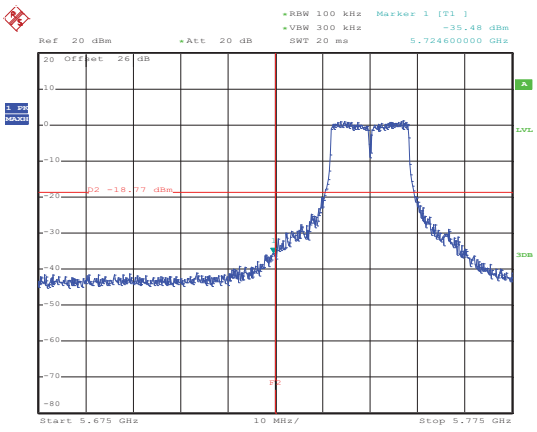
WLAN 802.11a Channel 149

100kHz PSD reference Level



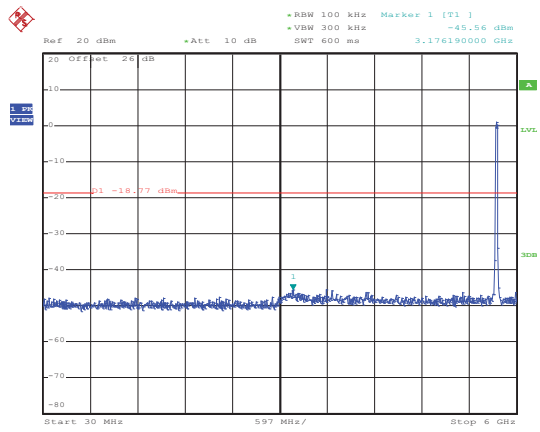
Date: 27.FEB.2014 10:54:41

Low Channel Plot



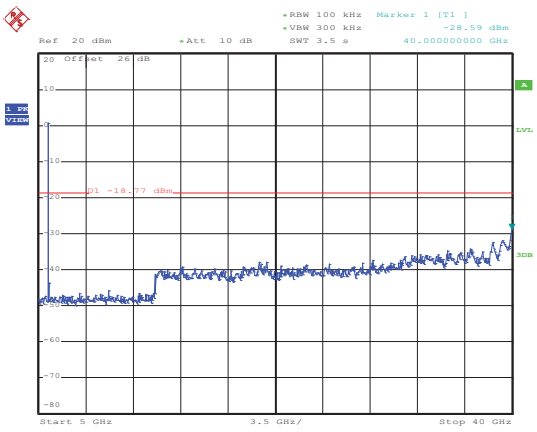
Date: 27.FEB.2014 10:54:59

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 10:58:30

Spurious Emission 5GHz~40GHz

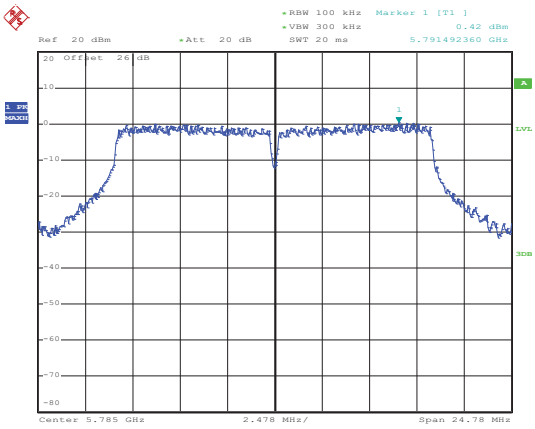


Date: 27.FEB.2014 10:58:48

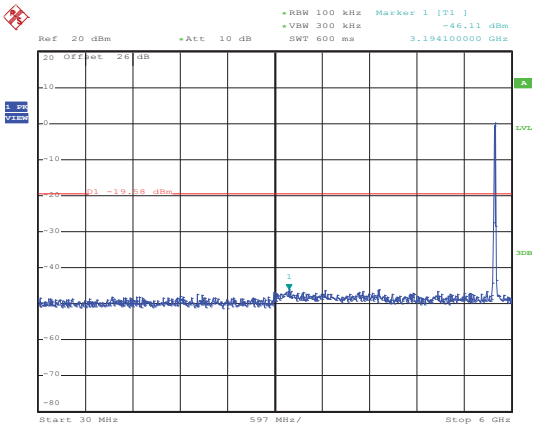
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11a	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11a Channel 157

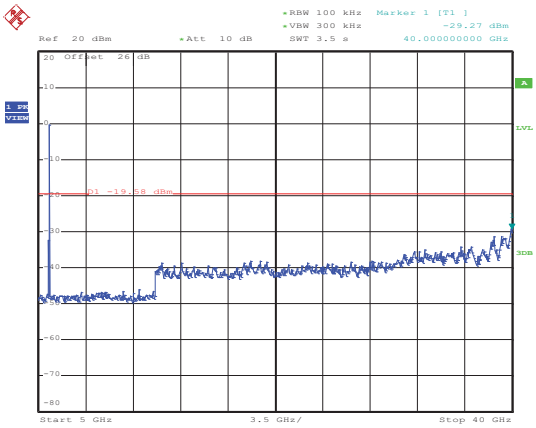
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



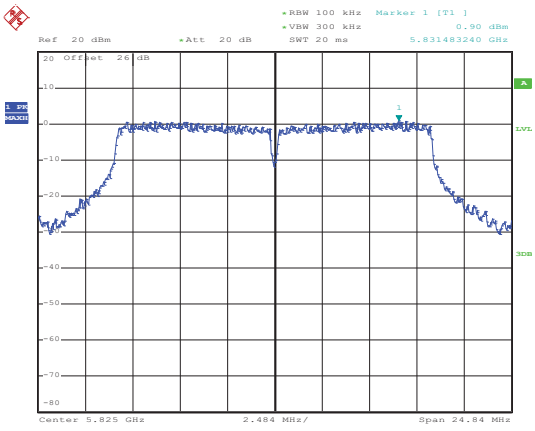
Spurious Emission 5GHz~40GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11a	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

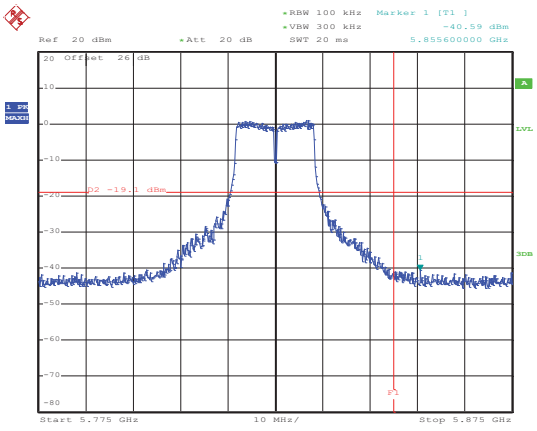
WLAN 802.11a Channel 165

100kHz PSD reference Level



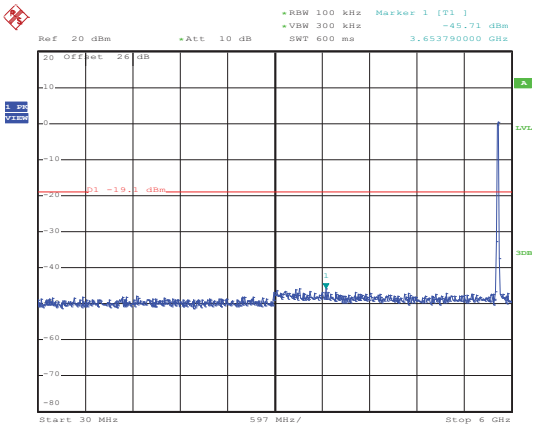
Date: 27.FEB.2014 11:08:44

High Channel Plot



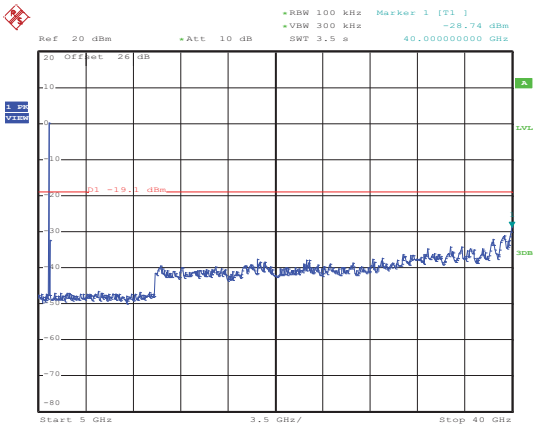
Date: 27.FEB.2014 11:09:20

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 11:10:00

Spurious Emission 5GHz~40GHz

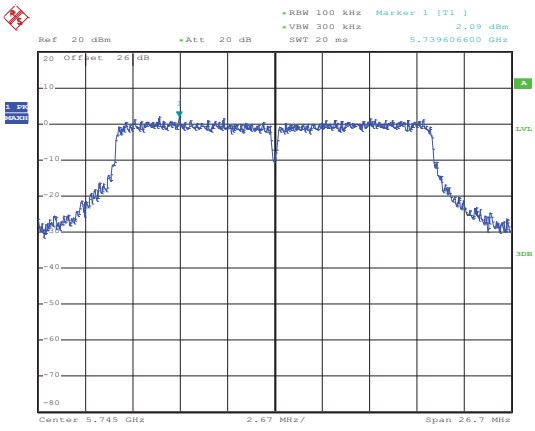


Date: 27.FEB.2014 11:10:19

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

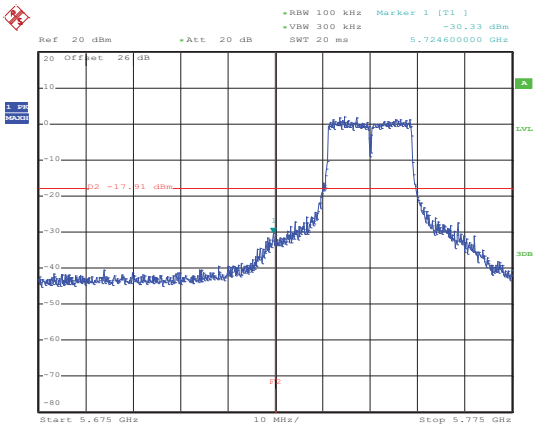
WLAN 802.11n HT20 Channel 149

100kHz PSD reference Level



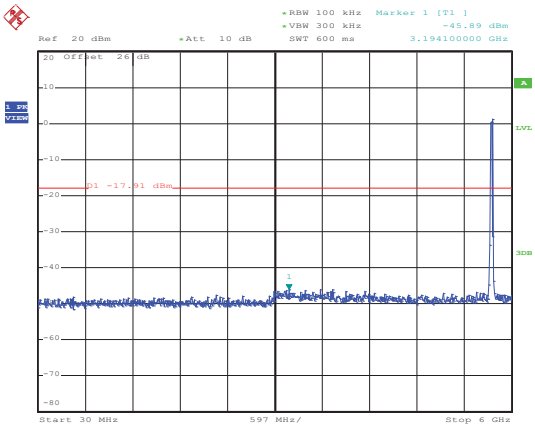
Date: 27.FEB.2014 11:18:34

Low Channel Plot



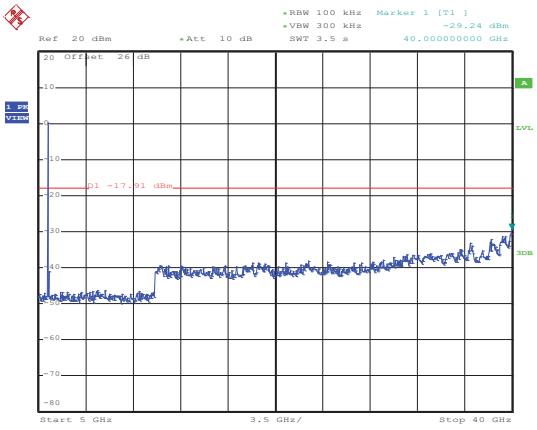
Date: 27.FEB.2014 11:18:52

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 11:19:23

Spurious Emission 5GHz~40GHz

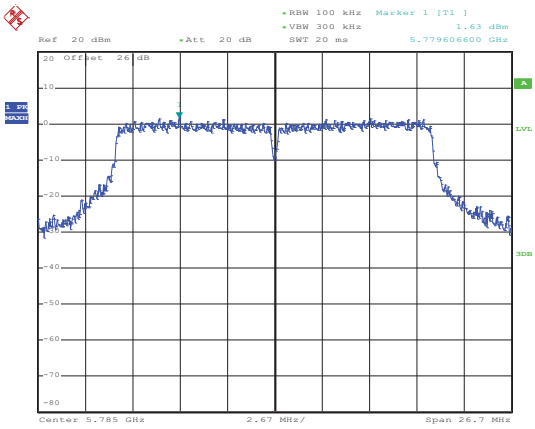


Date: 27.FEB.2014 11:19:42

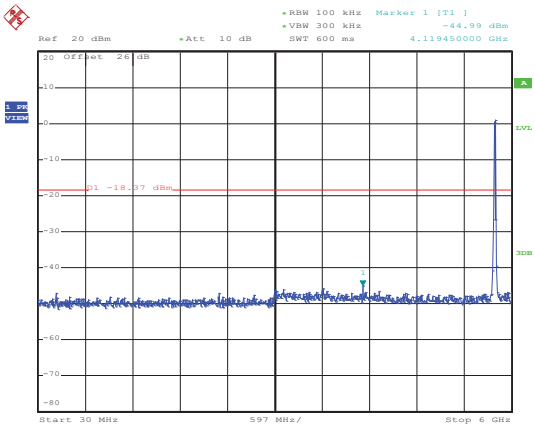
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n HT20 Channel 157

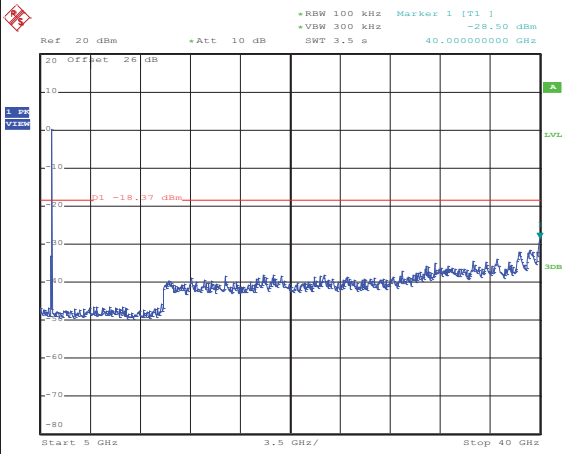
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



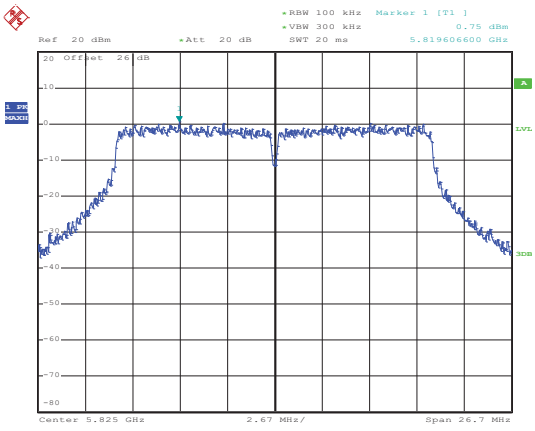
Spurious Emission 5GHz~40GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

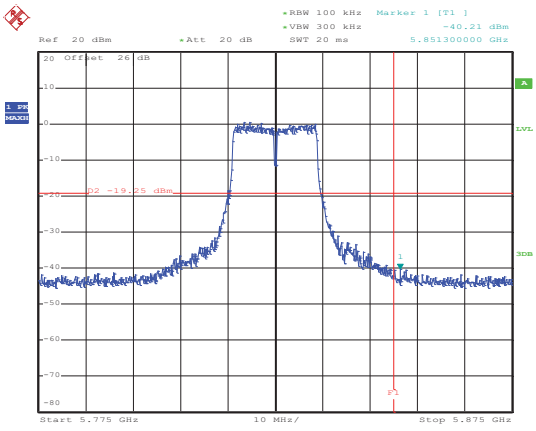
WLAN 802.11n HT20 Channel 165

100kHz PSD reference Level



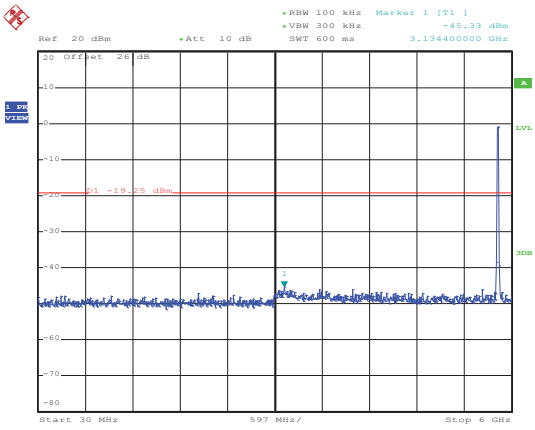
Date: 27.FEB.2014 11:38:54

High Channel Plot



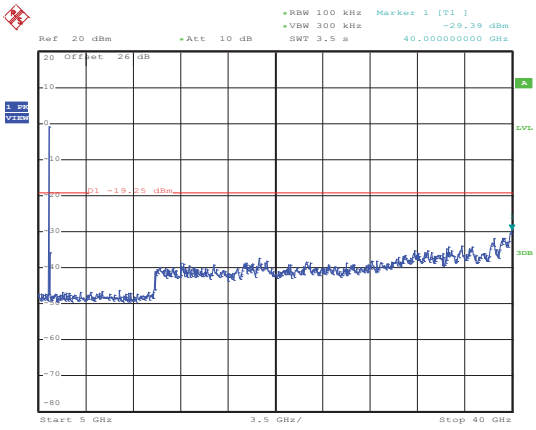
Date: 27.FEB.2014 11:39:15

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 11:39:37

Spurious Emission 5GHz~40GHz

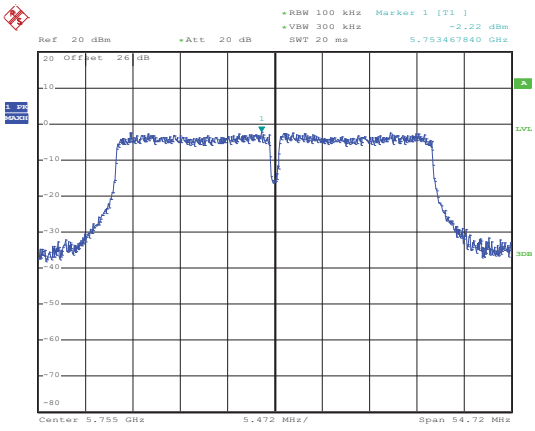


Date: 27.FEB.2014 11:39:56

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	151	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

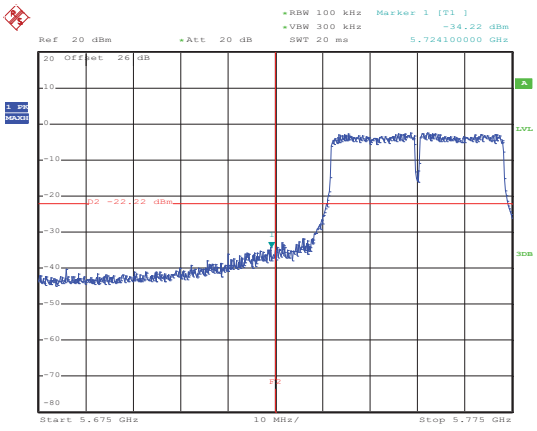
WLAN 802.11n HT40 Channel 151

100kHz PSD reference Level



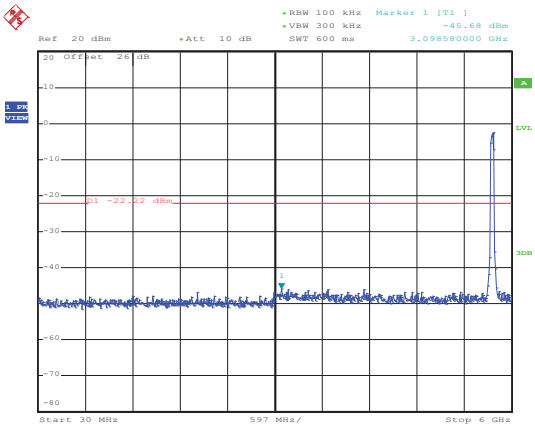
Date: 27.FEB.2014 11:47:49

Low Channel Plot



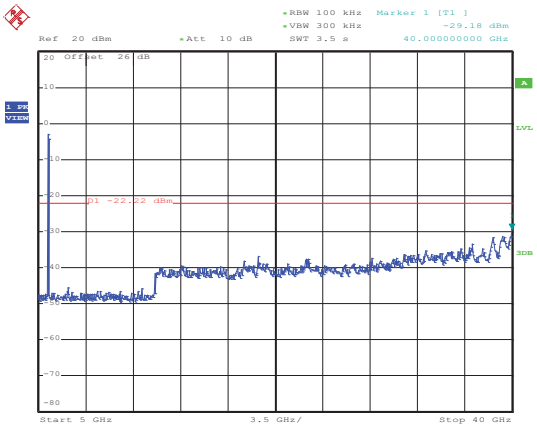
Date: 27.FEB.2014 11:48:03

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 11:48:30

Spurious Emission 5GHz~40GHz

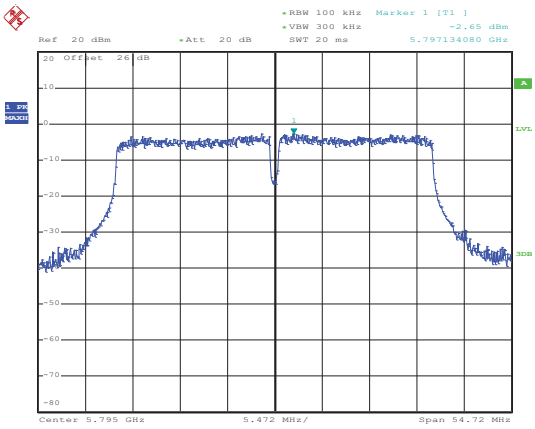


Date: 27.FEB.2014 11:48:49

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	159	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

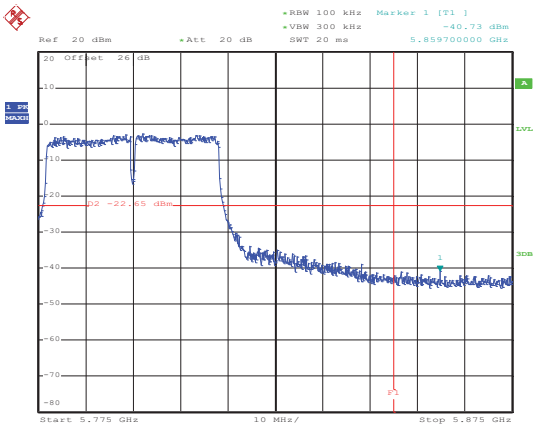
WLAN 802.11n HT40 Channel 159

100kHz PSD reference Level



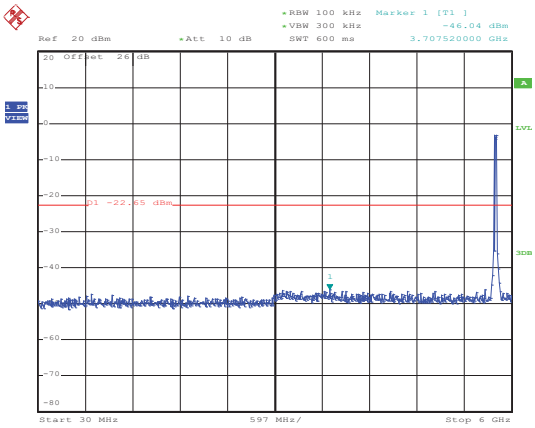
Date: 27.FEB.2014 11:52:37

High Channel Plot



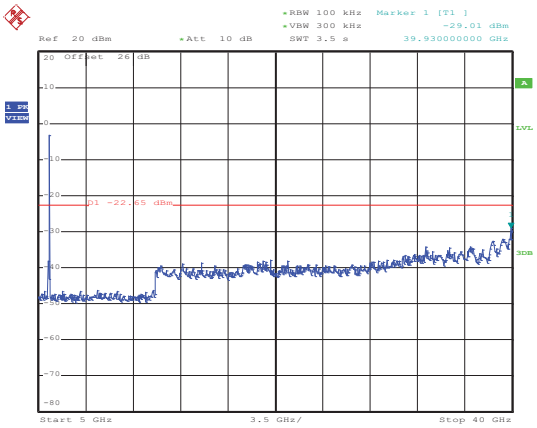
Date: 27.FEB.2014 11:54:28

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 11:53:29

Spurious Emission 5GHz~40GHz

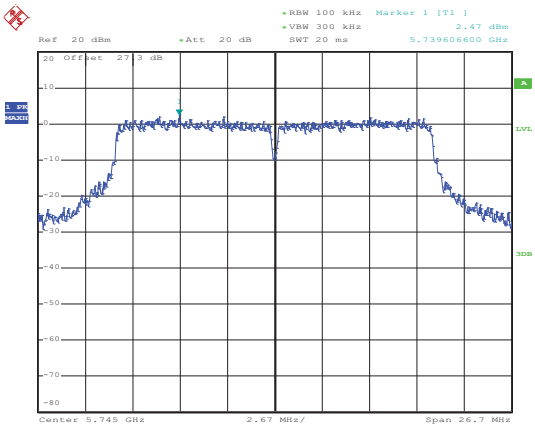


Date: 27.FEB.2014 11:53:47

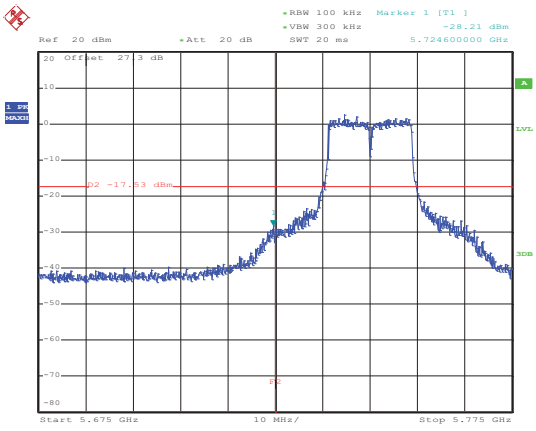
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT20 Channel 149

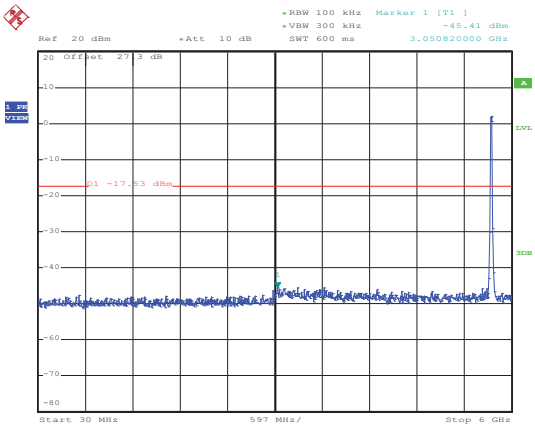
100kHz PSD reference Level



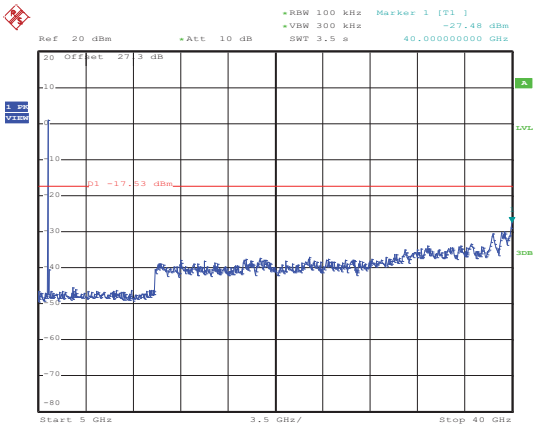
Low Channel Plot



Spurious Emission 30MHz~6GHz



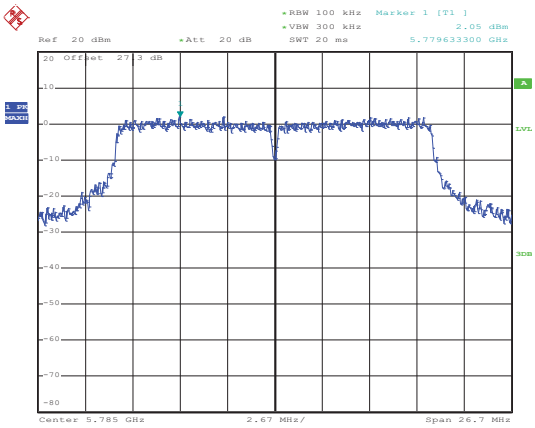
Spurious Emission 5GHz~40GHz



Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

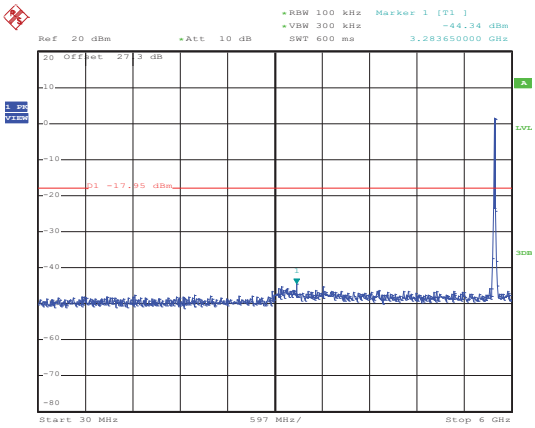
WLAN 802.11n VHT20 Channel 157

100kHz PSD reference Level



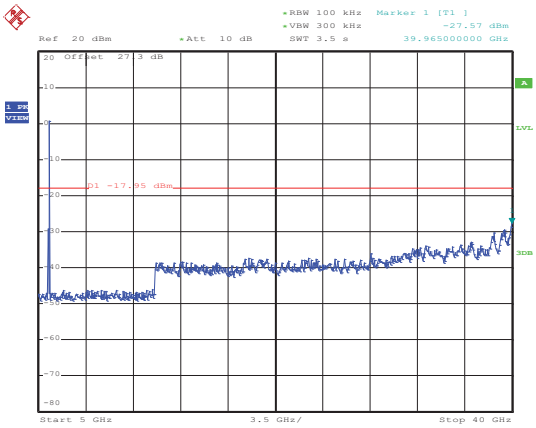
Date: 4.MAR.2014 03:36:05

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 03:36:25

Spurious Emission 5GHz~40GHz

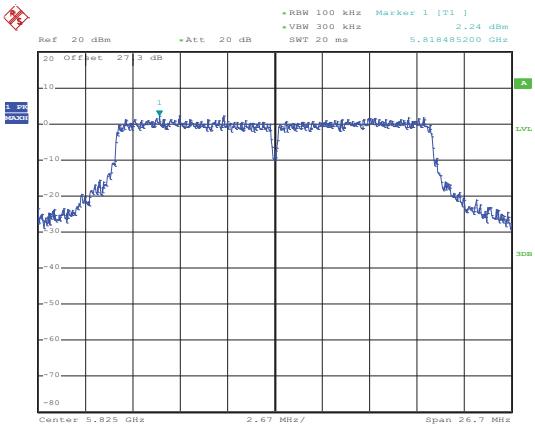


Date: 4.MAR.2014 03:36:44

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

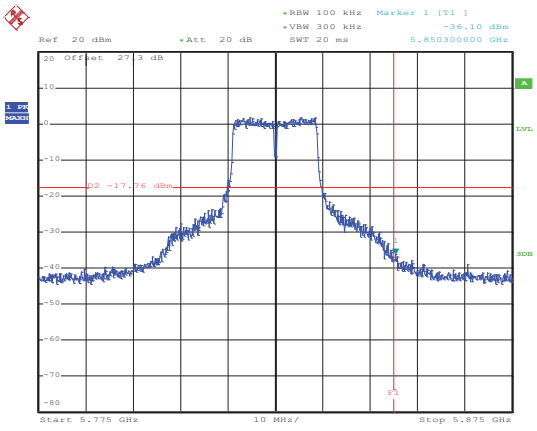
WLAN 802.11n VHT20 Channel 165

100kHz PSD reference Level



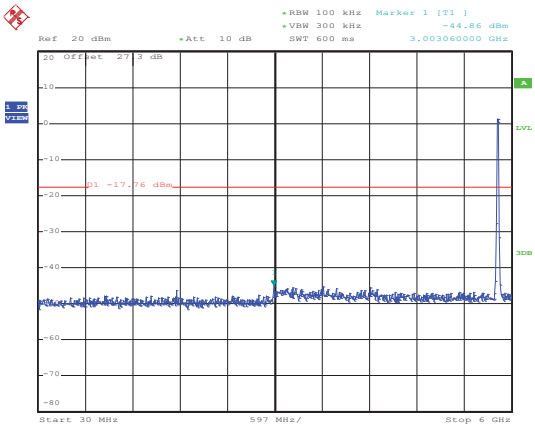
Date: 4.MAR.2014 03:38:19

High Channel Plot



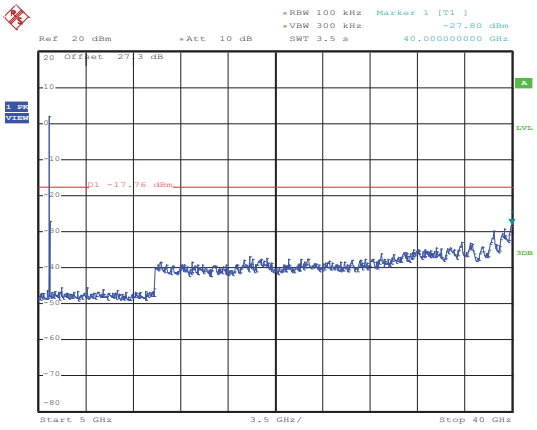
Date: 4.MAR.2014 03:38:33

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 03:38:52

Spurious Emission 5GHz~40GHz

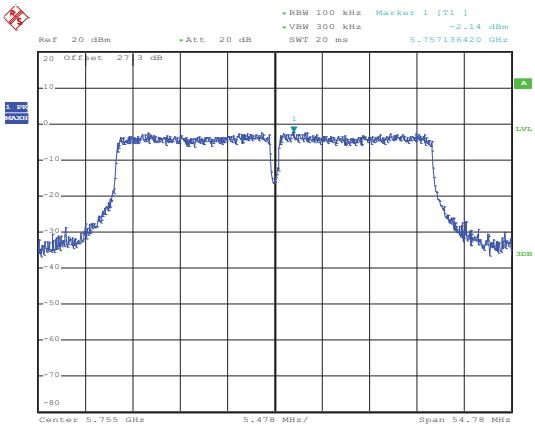


Date: 4.MAR.2014 03:39:11

Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	151	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

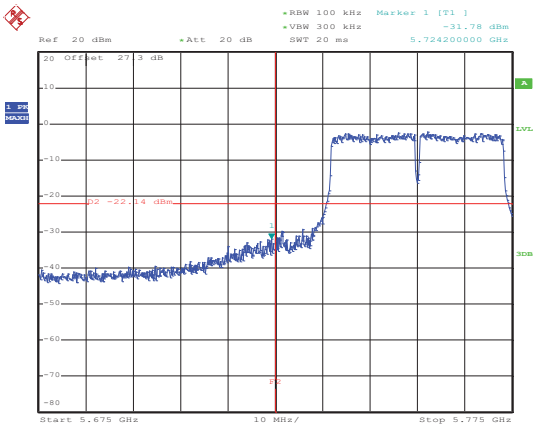
WLAN 802.11n VHT40 Channel 151

100kHz PSD reference Level



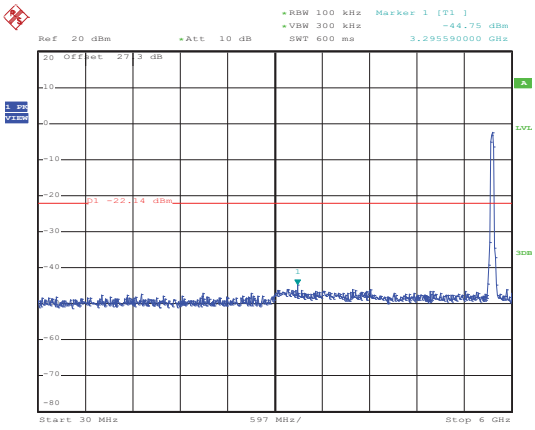
Date: 4.MAR.2014 10:06:42

Low Channel Plot



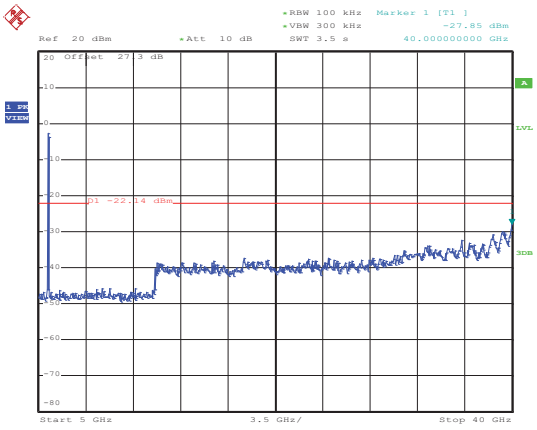
Date: 4.MAR.2014 10:06:55

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 10:07:15

Spurious Emission 5GHz~40GHz

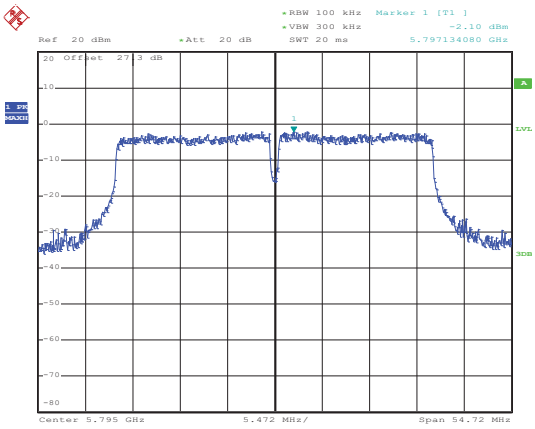


Date: 4.MAR.2014 10:07:33

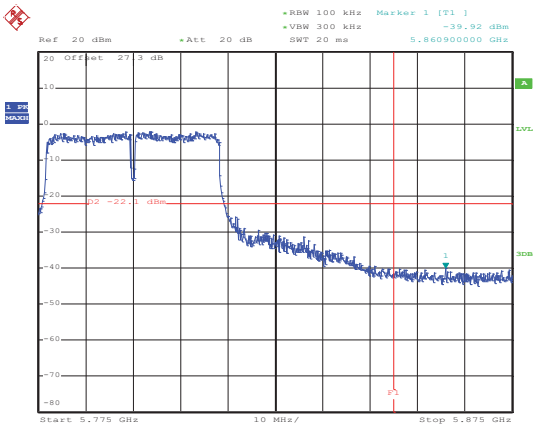
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	159	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT40 Channel 159

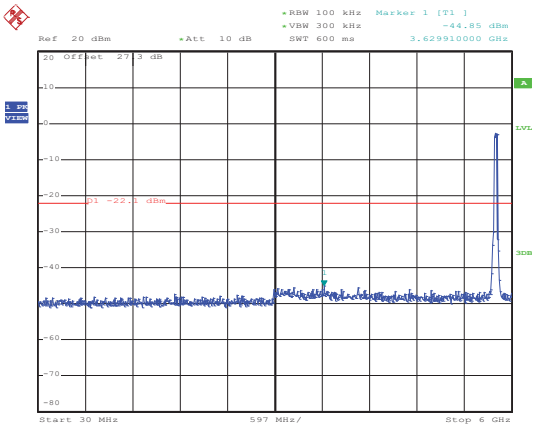
100kHz PSD reference Level



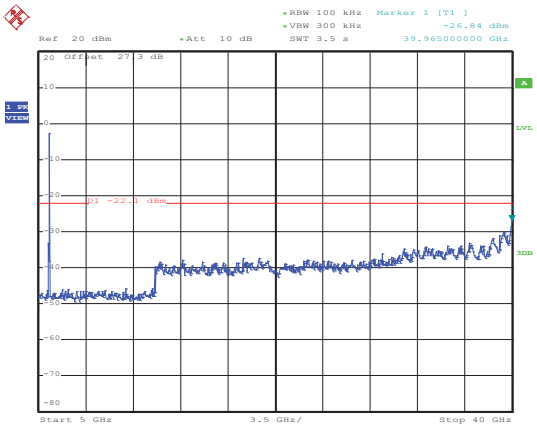
High Channel Plot



Spurious Emission 30MHz~6GHz



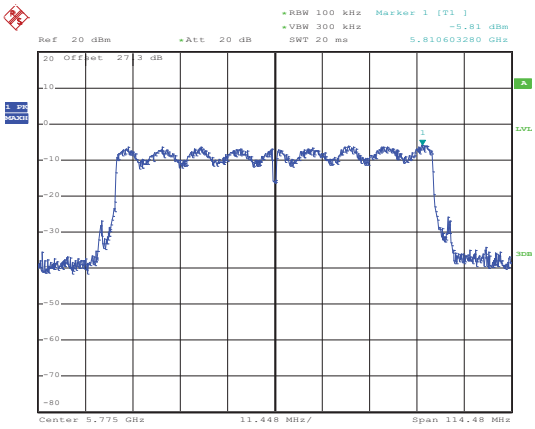
Spurious Emission 5GHz~40GHz



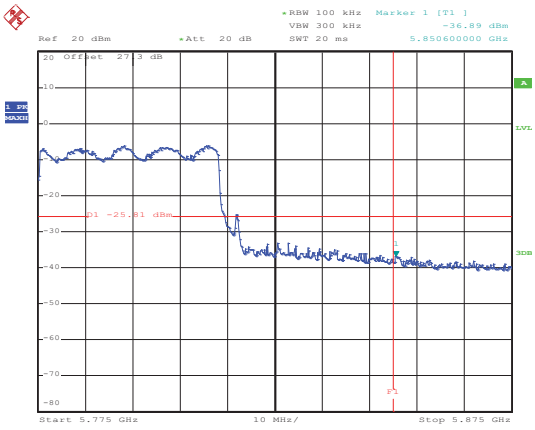
Number of TX :	1	**Ant. Port :**	2
Test Mode :	802.11n VHT80	**Temperature :**	21~26℃
Test Band :	5GHz	**Relative Humidity :**	45~54%
Test Channel :	155	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT80 Channel 155

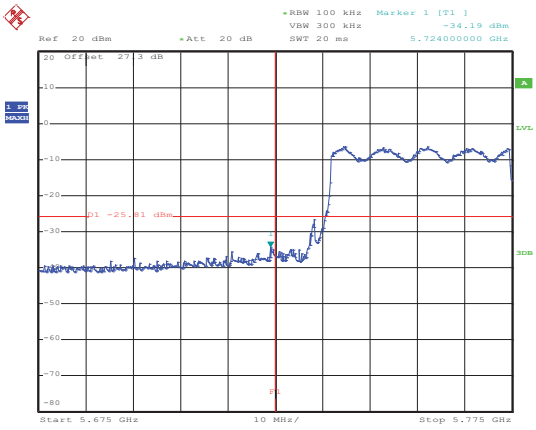
100kHz PSD reference Level

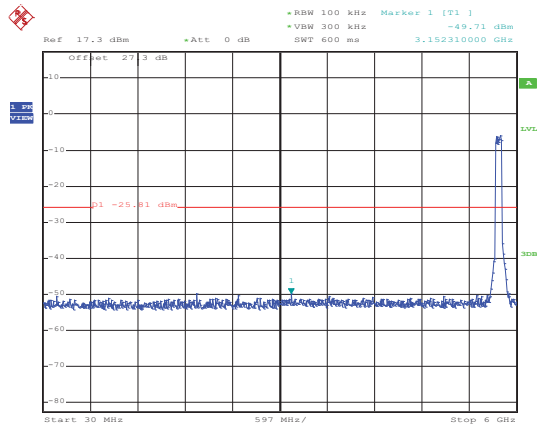
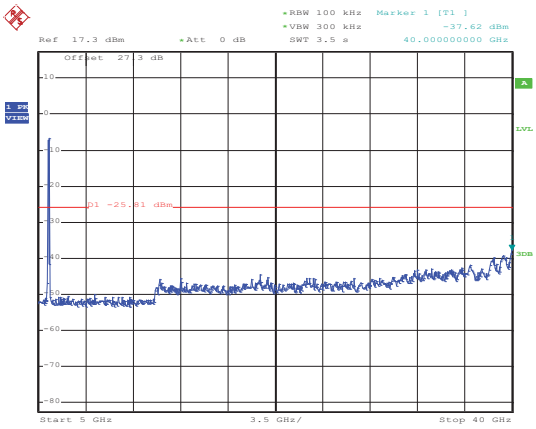


Channel Plot



Channel Plot



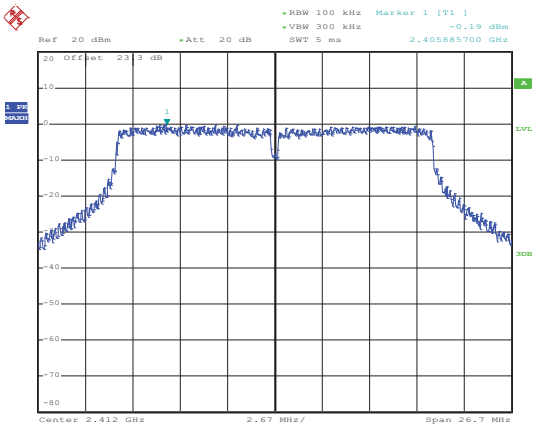
Spurious Emission 30MHz~6GHz	Spurious Emission 5GHz~40GHz
	
Date: 1.MAR.2014 00:32:23	Date: 1.MAR.2014 00:32:42

Number of TX = 2, Ant. Port 1 (Measured)

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

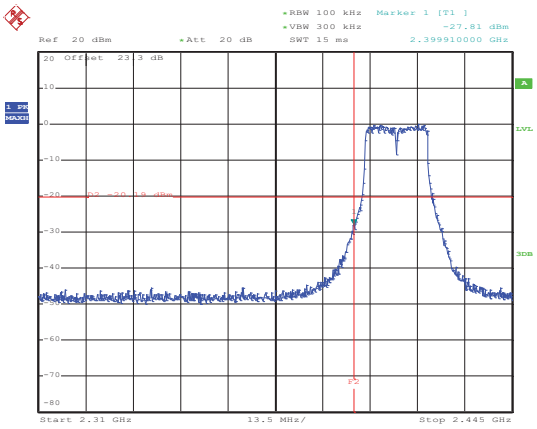
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



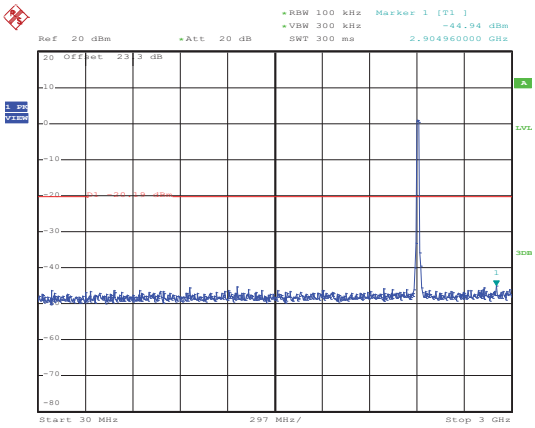
Date: 27.FEB.2014 14:53:29

Low Channel Plot



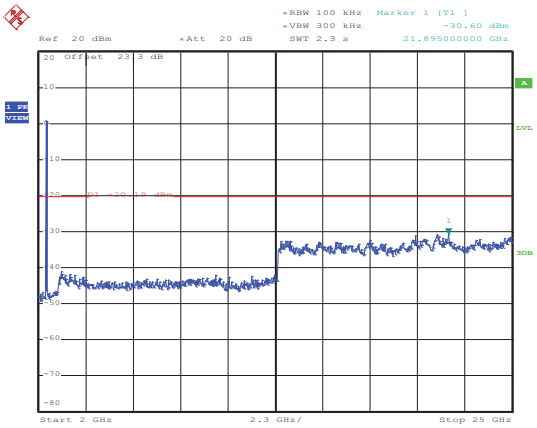
Date: 27.FEB.2014 14:53:52

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:13:04

Spurious Emission 2GHz~25GHz

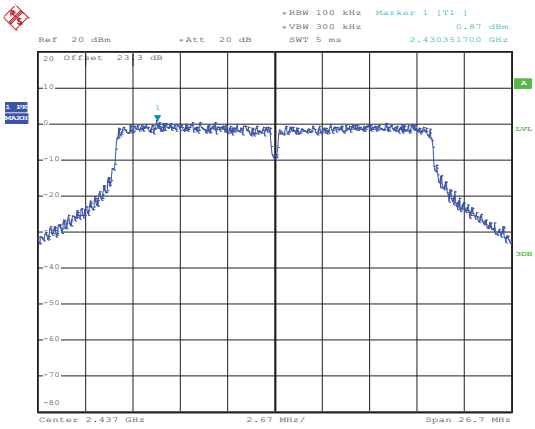


Date: 27.FEB.2014 16:13:22

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

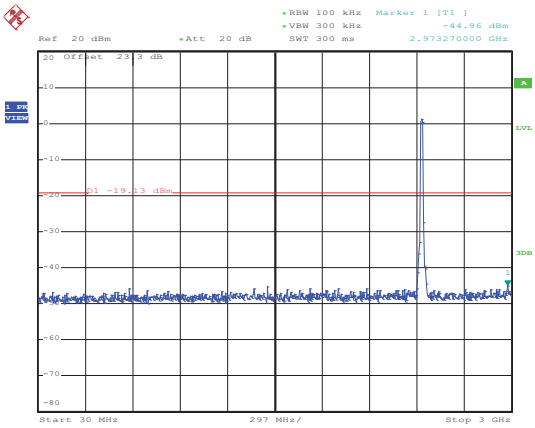
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



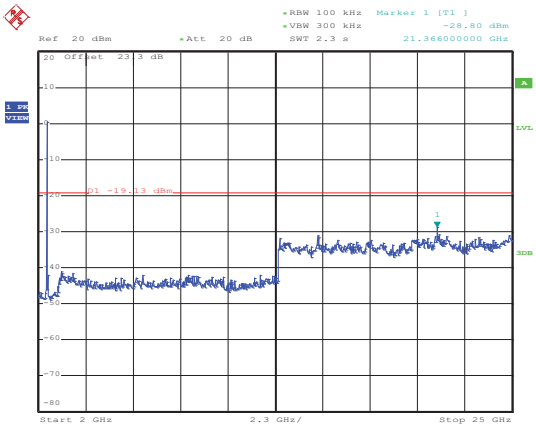
Date: 27.FEB.2014 15:17:47

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:11:45

Spurious Emission 2GHz~25GHz

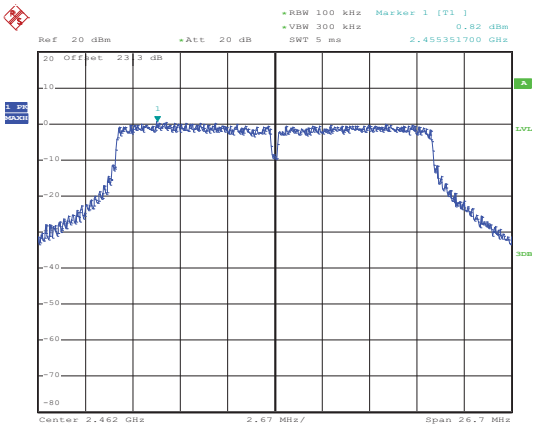


Date: 27.FEB.2014 16:12:03

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

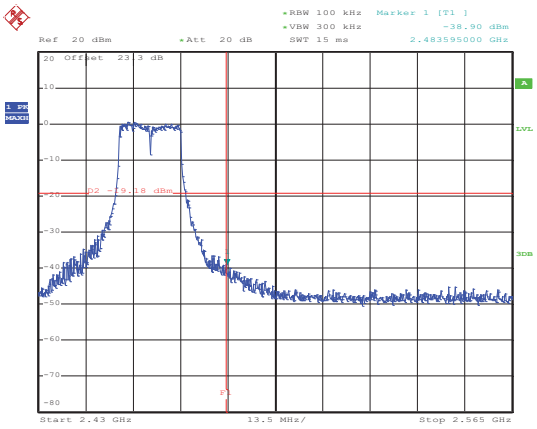
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



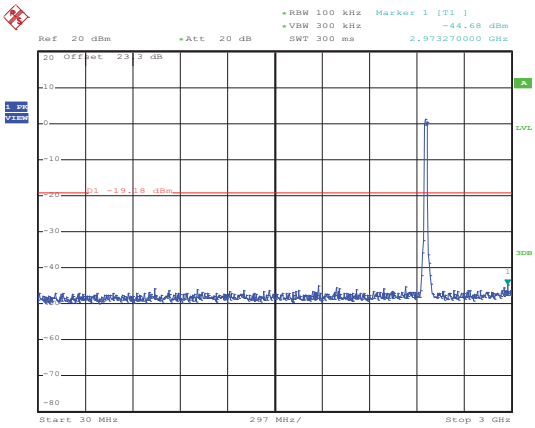
Date: 27.FEB.2014 15:21:59

High Channel Plot



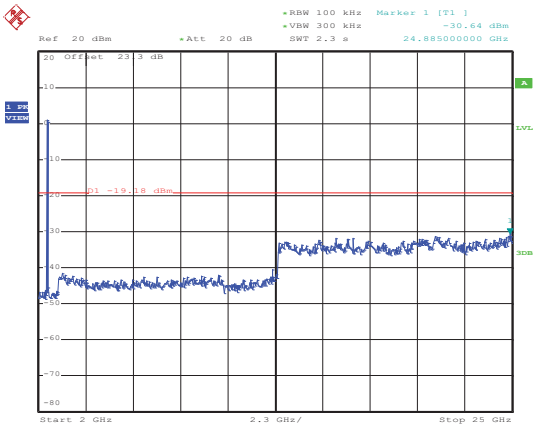
Date: 27.FEB.2014 15:22:15

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:16:44

Spurious Emission 2GHz~25GHz

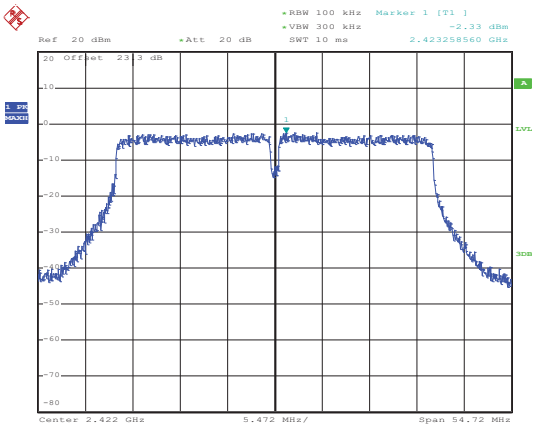


Date: 27.FEB.2014 16:17:02

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	03	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

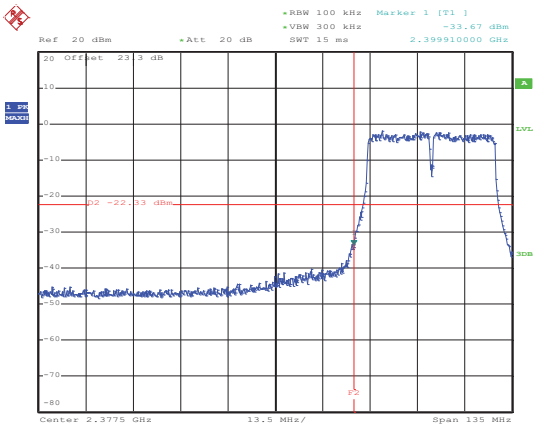
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



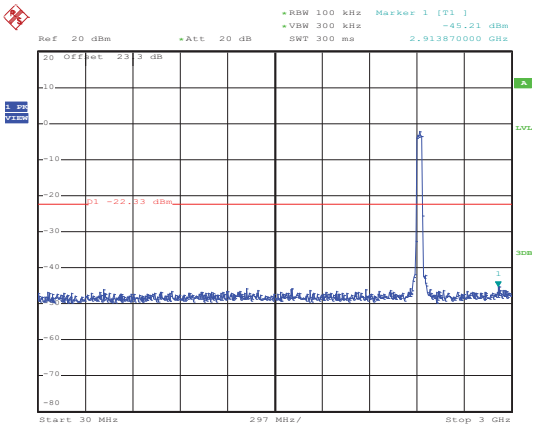
Date: 27.FEB.2014 15:40:28

Low Channel Plot



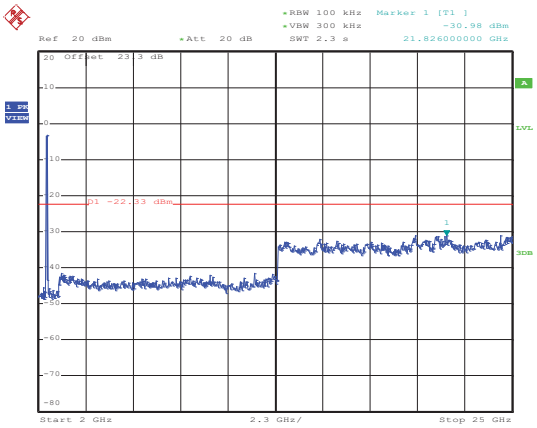
Date: 27.FEB.2014 15:42:35

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 15:43:00

Spurious Emission 2GHz~25GHz

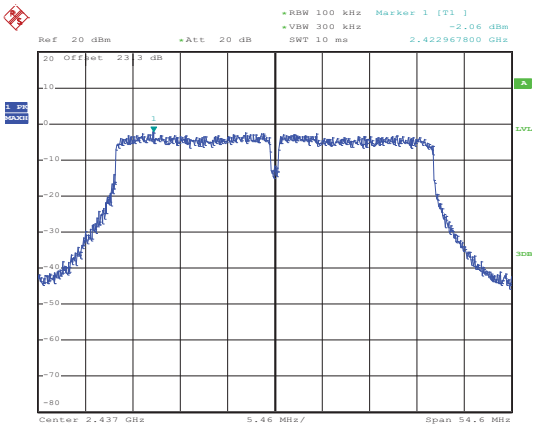


Date: 27.FEB.2014 15:43:19

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

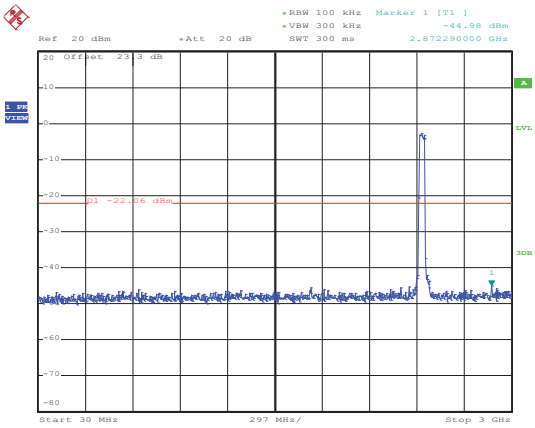
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



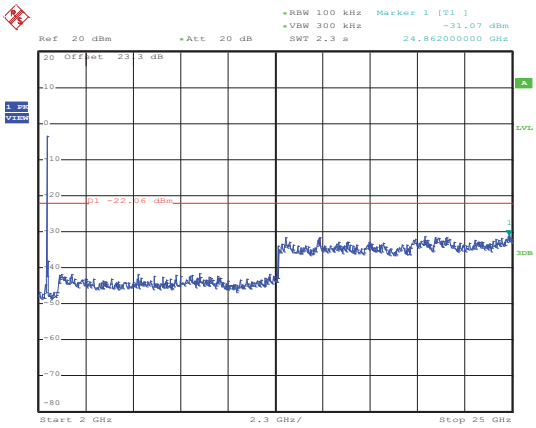
Date: 27.FEB.2014 15:46:07

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 15:46:41

Spurious Emission 2GHz~25GHz

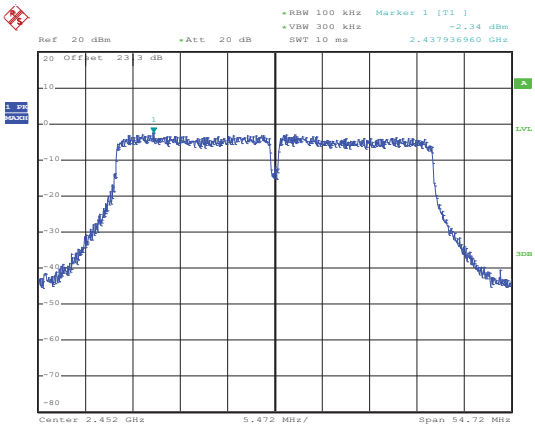


Date: 27.FEB.2014 15:47:00

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	09	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

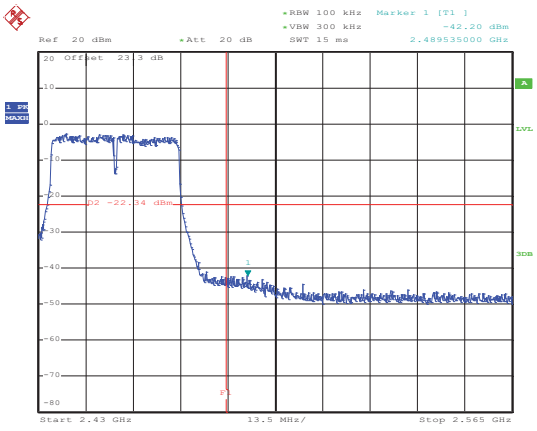
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



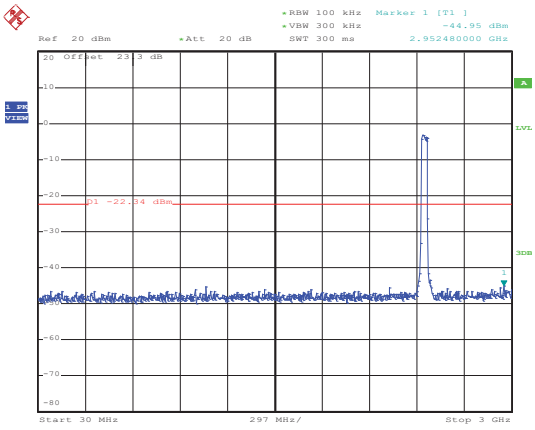
Date: 27.FEB.2014 16:00:07

High Channel Plot



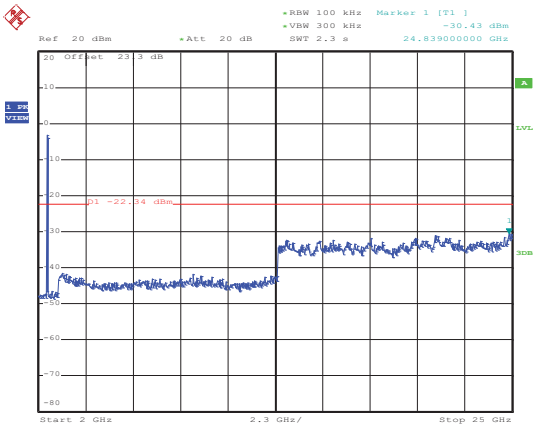
Date: 27.FEB.2014 16:00:21

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:00:43

Spurious Emission 2GHz~25GHz

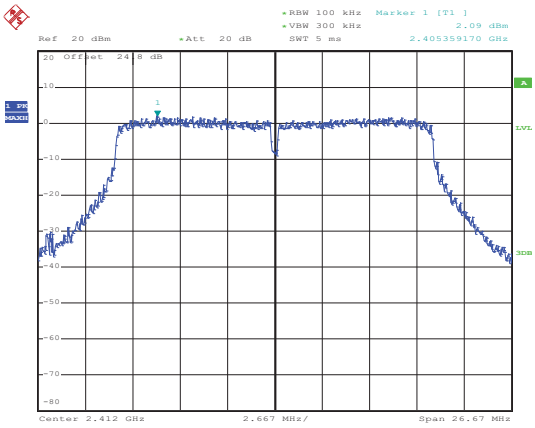


Date: 27.FEB.2014 16:01:02

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

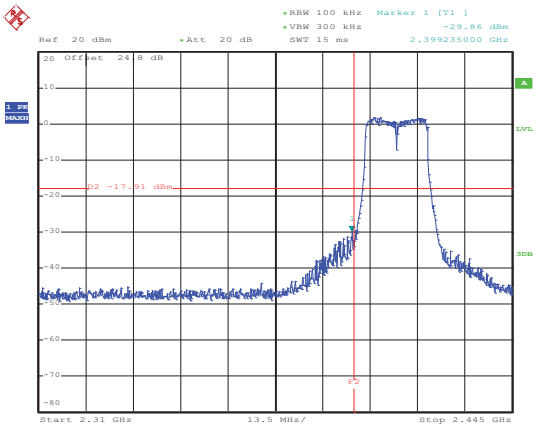
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



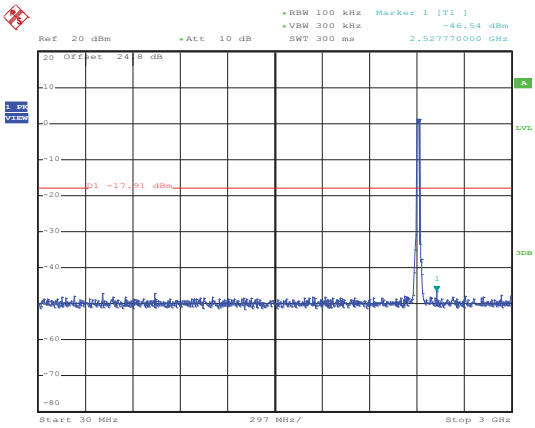
Date: 4.MAR.2014 03:09:22

Low Channel Plot



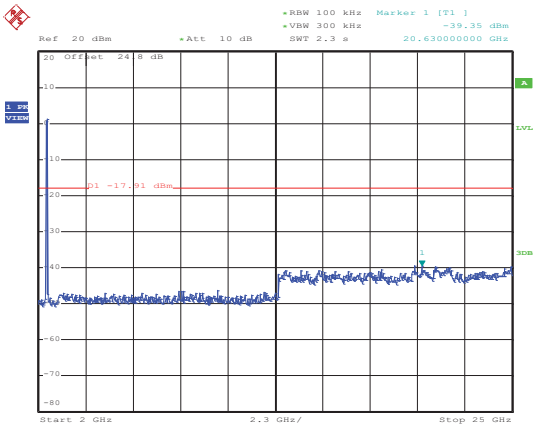
Date: 4.MAR.2014 03:09:36

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:09:55

Spurious Emission 2GHz~25GHz

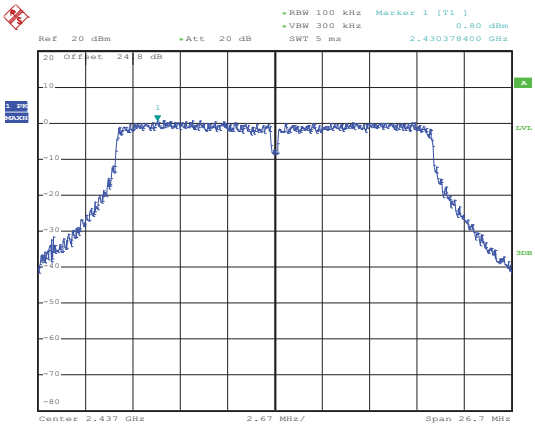


Date: 4.MAR.2014 03:10:14

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

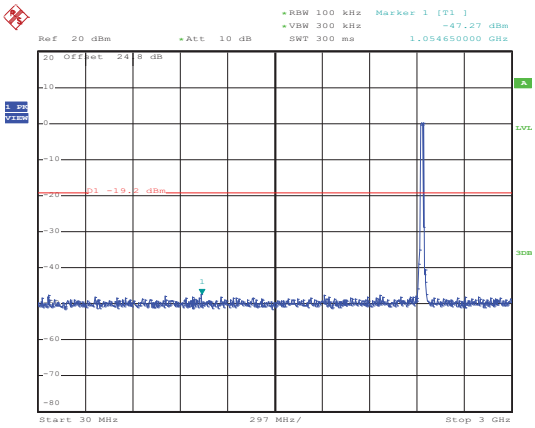
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



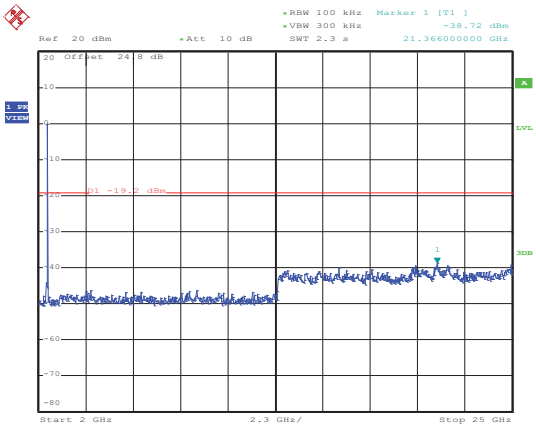
Date: 4.MAR.2014 03:11:59

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:12:19

Spurious Emission 2GHz~25GHz

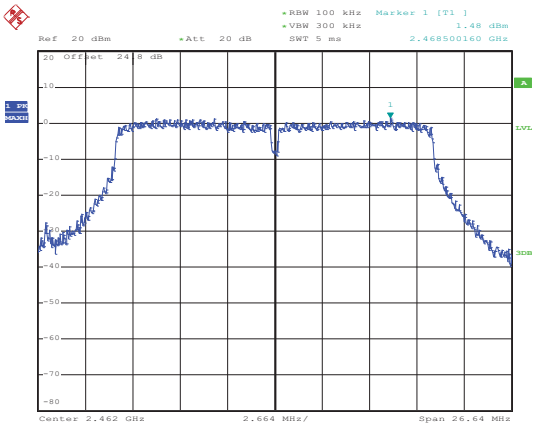


Date: 4.MAR.2014 03:12:37

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

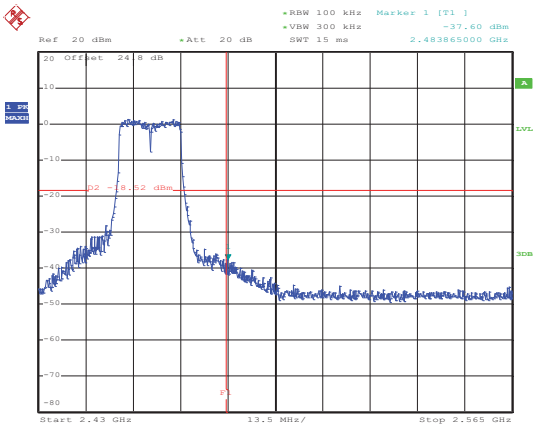
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



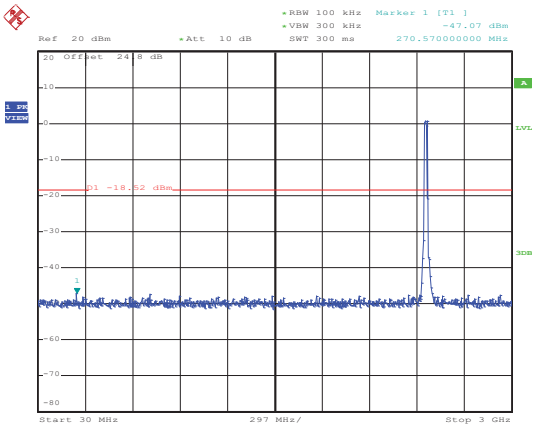
Date: 4.MAR.2014 03:18:35

High Channel Plot



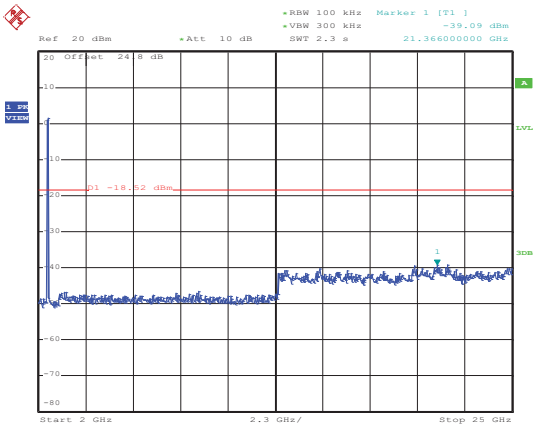
Date: 4.MAR.2014 03:18:49

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:19:08

Spurious Emission 2GHz~25GHz

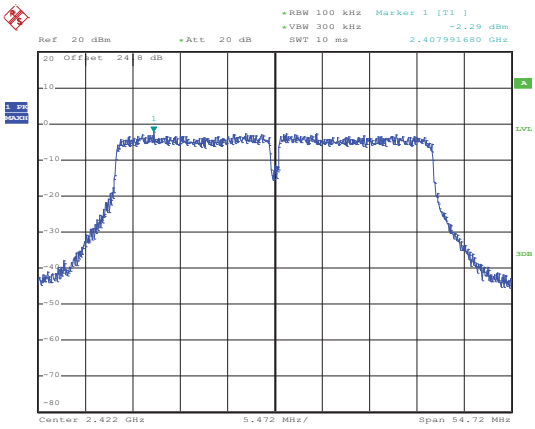


Date: 4.MAR.2014 03:19:27

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	03	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

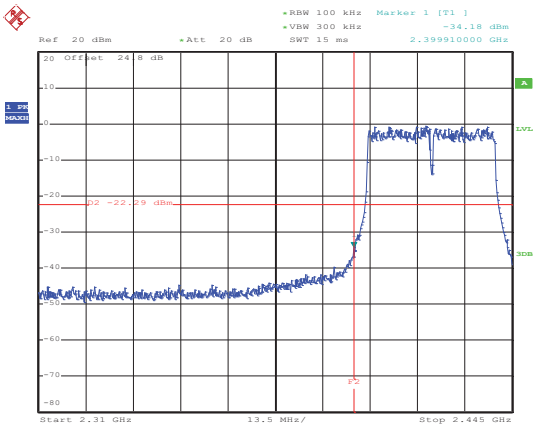
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



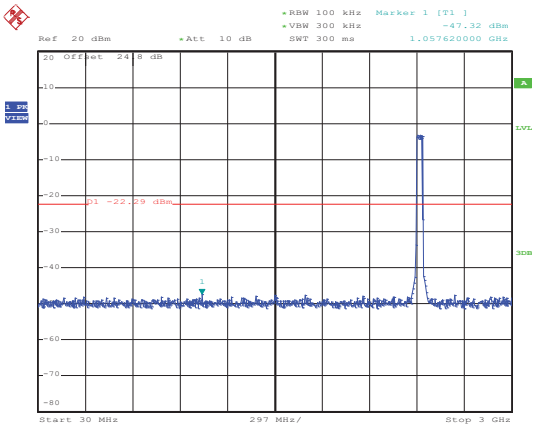
Date: 4.MAR.2014 02:43:58

Low Channel Plot



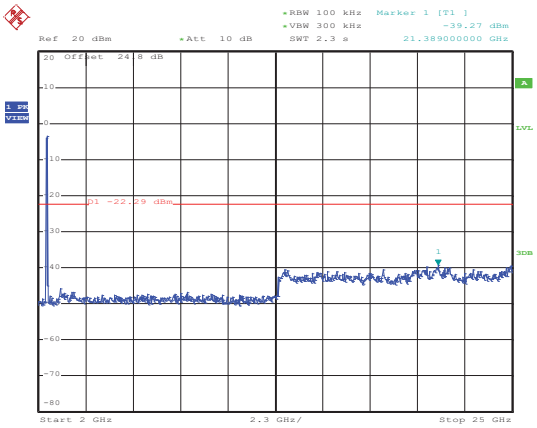
Date: 4.MAR.2014 02:50:57

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 02:44:31

Spurious Emission 2GHz~25GHz

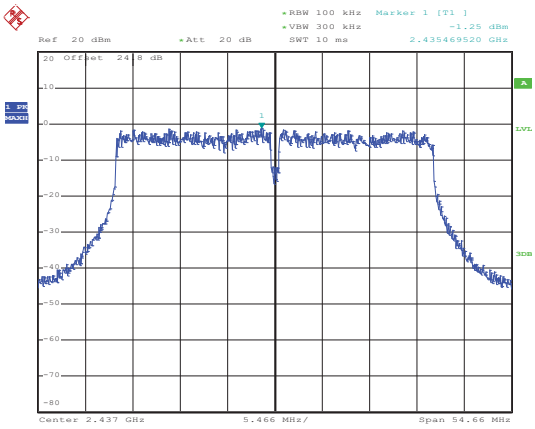


Date: 4.MAR.2014 02:44:49

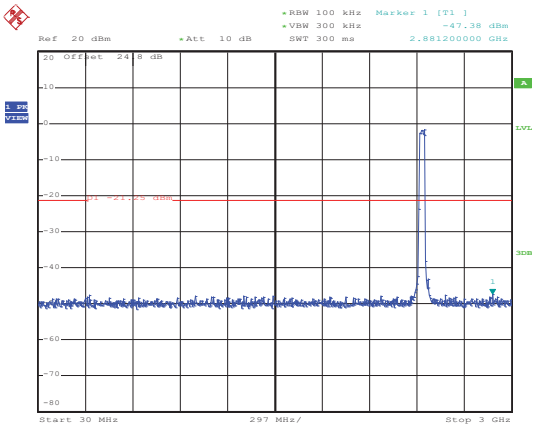
Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n HT40 Channel 06

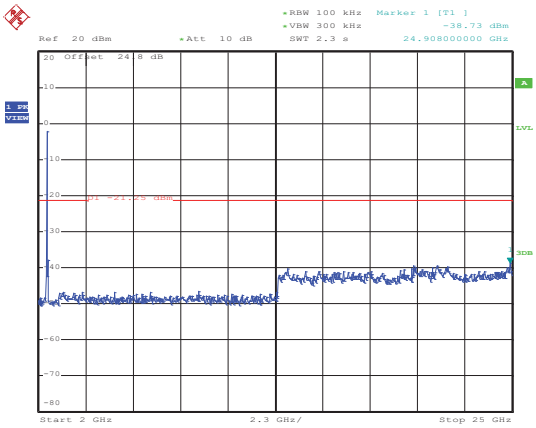
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



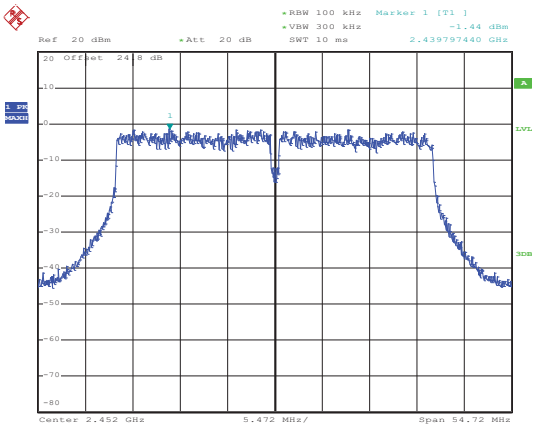
Spurious Emission 2GHz~25GHz



Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	09	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

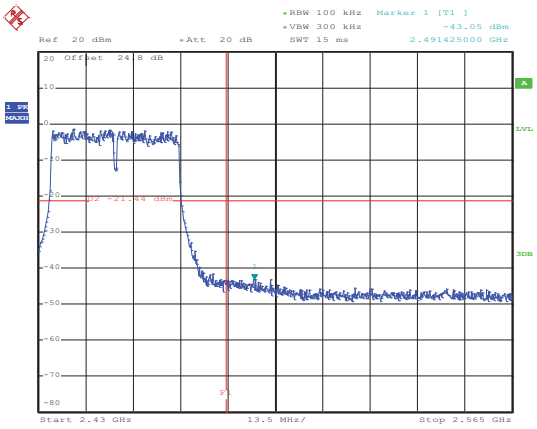
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



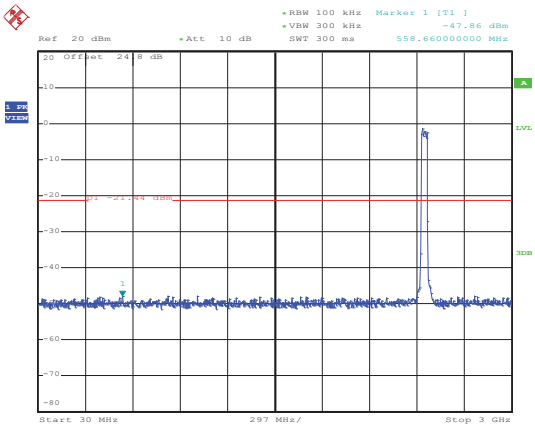
Date: 4.MAR.2014 02:59:49

High Channel Plot



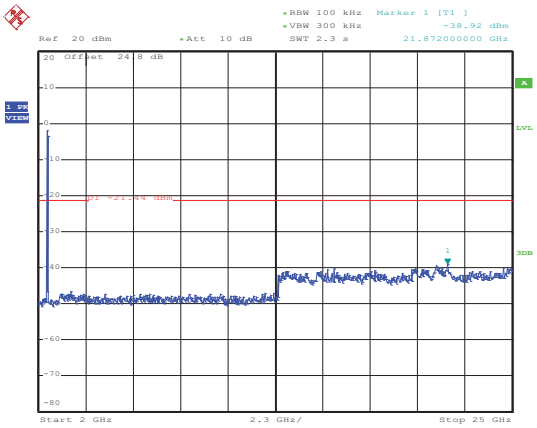
Date: 4.MAR.2014 03:00:03

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:00:22

Spurious Emission 2GHz~25GHz

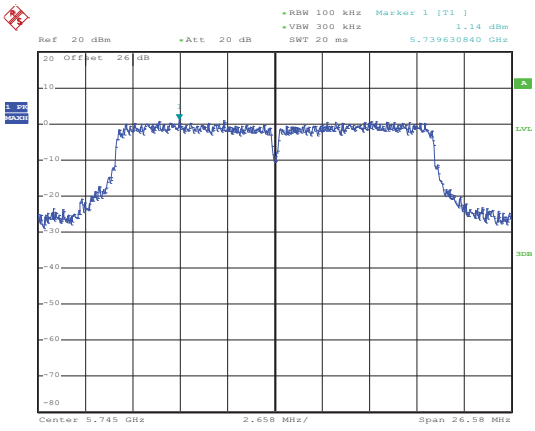


Date: 4.MAR.2014 03:00:41

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

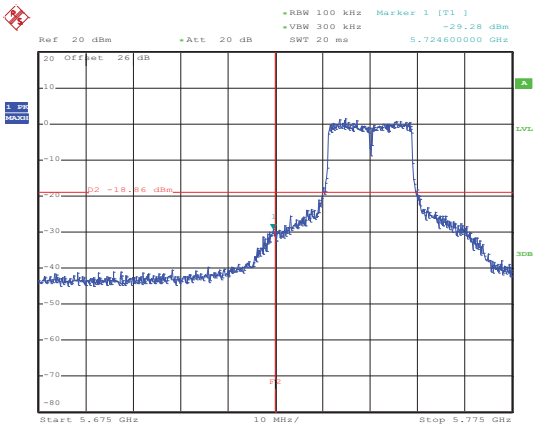
WLAN 802.11n HT20 Channel 149

100kHz PSD reference Level



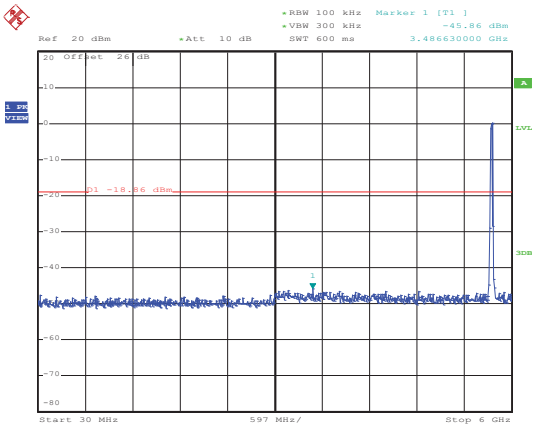
Date: 27.FEB.2014 13:52:48

Low Channel Plot



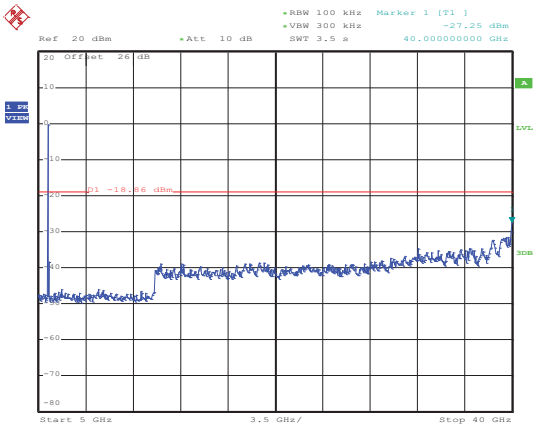
Date: 27.FEB.2014 13:53:07

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 13:53:41

Spurious Emission 5GHz~40GHz

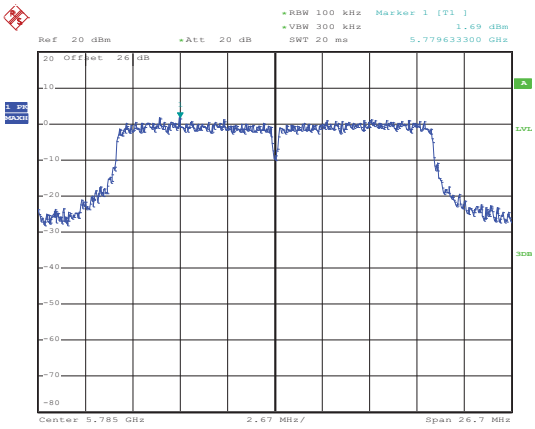


Date: 27.FEB.2014 13:53:59

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

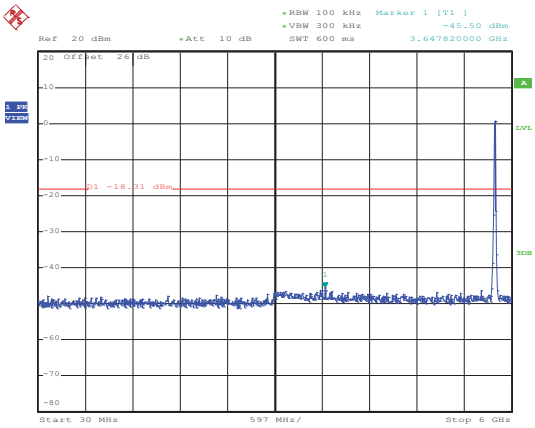
WLAN 802.11n HT20 Channel 157

100kHz PSD reference Level



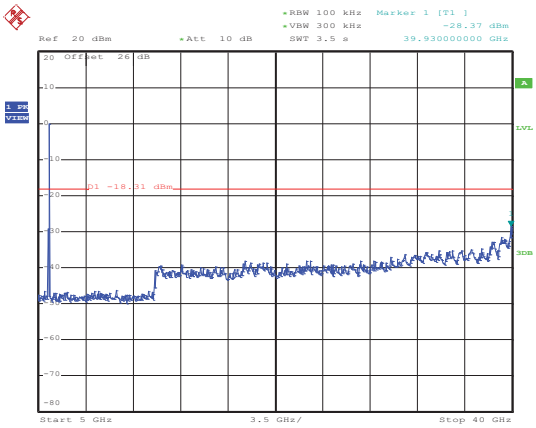
Date: 27.FEB.2014 13:59:05

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 13:59:48

Spurious Emission 5GHz~40GHz

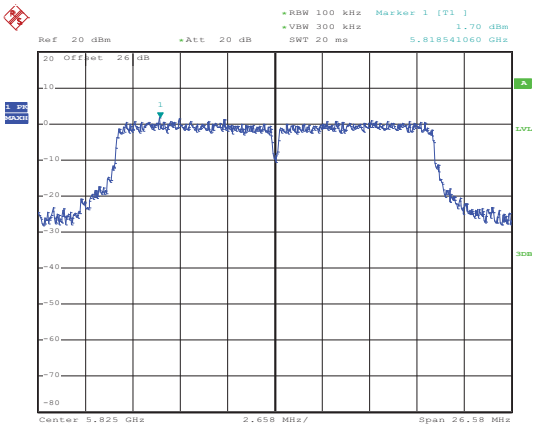


Date: 27.FEB.2014 14:00:06

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

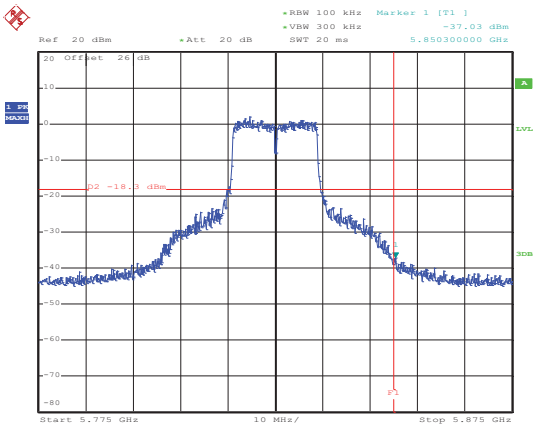
WLAN 802.11n HT20 Channel 165

100kHz PSD reference Level



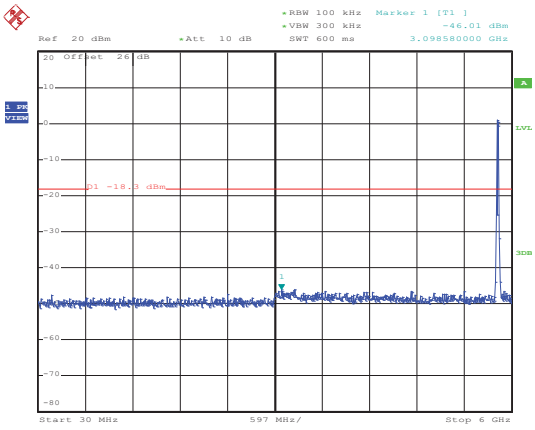
Date: 27.FEB.2014 14:16:00

High Channel Plot



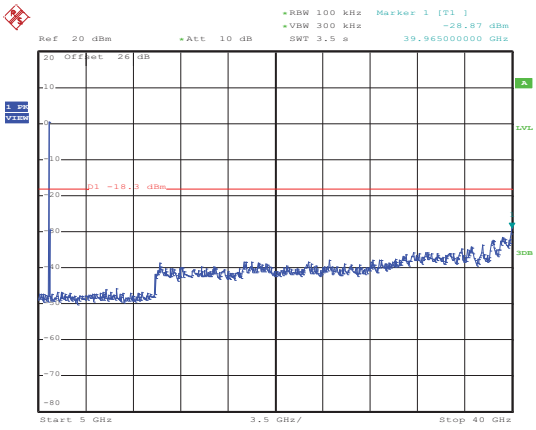
Date: 27.FEB.2014 14:16:14

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:16:36

Spurious Emission 5GHz~40GHz

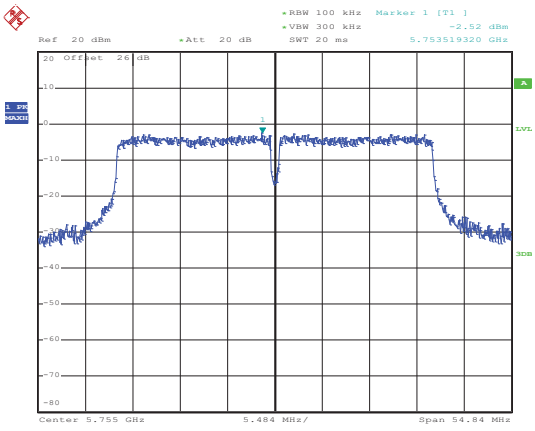


Date: 27.FEB.2014 14:16:54

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	151	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

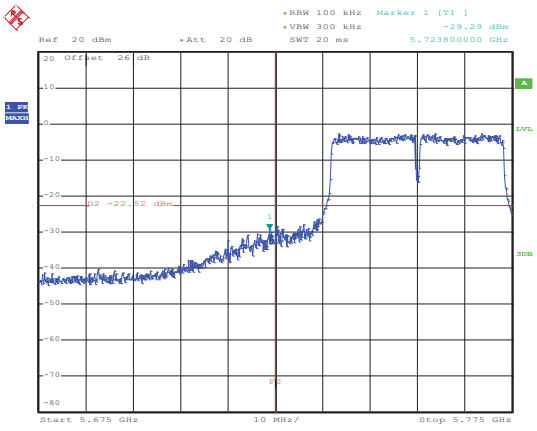
WLAN 802.11n HT40 Channel 151

100kHz PSD reference Level



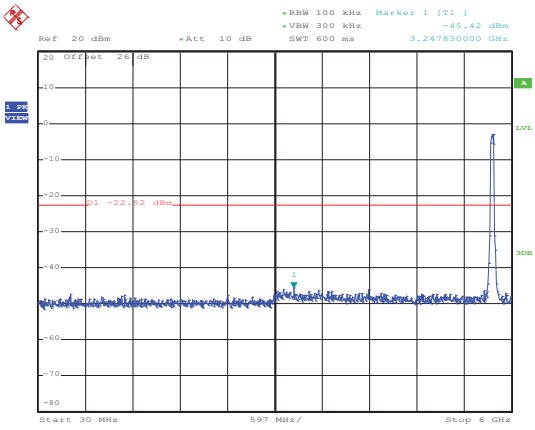
Date: 27.FEB.2014 14:21:11

Low Channel Plot



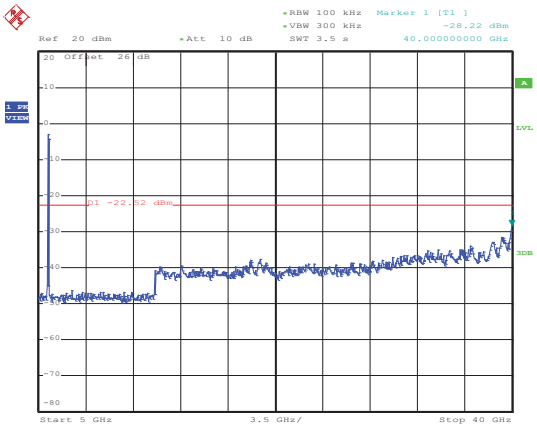
Date: 27.FEB.2014 14:21:29

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:21:52

Spurious Emission 5GHz~40GHz

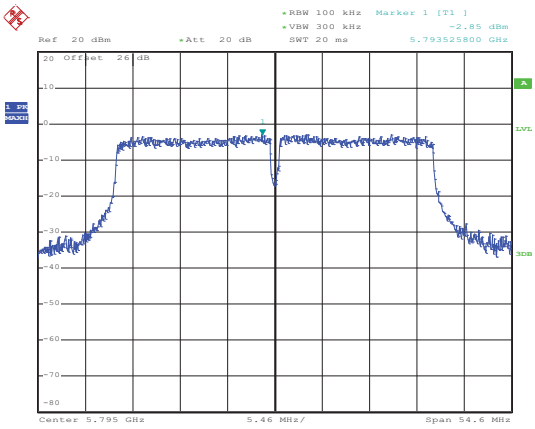


Date: 27.FEB.2014 14:22:10

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	159	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

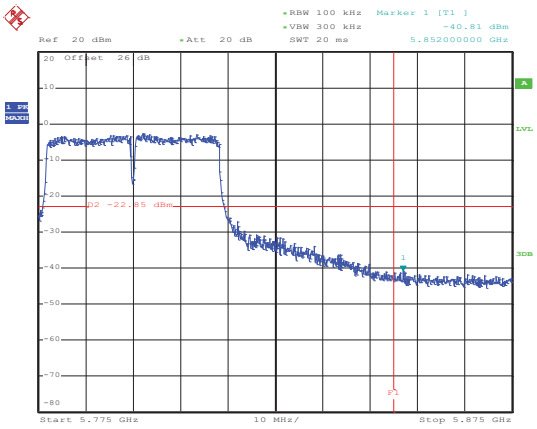
WLAN 802.11n HT40 Channel 159

100kHz PSD reference Level



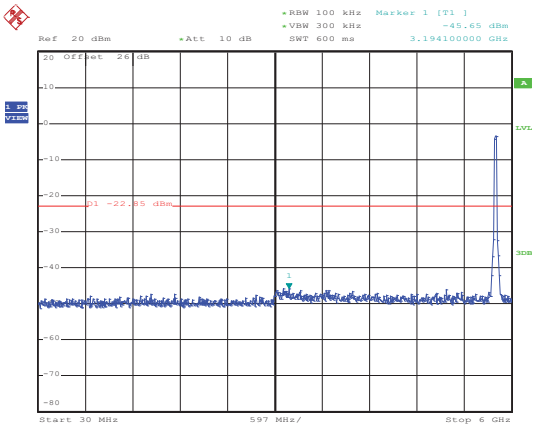
Date: 27.FEB.2014 14:34:25

High Channel Plot



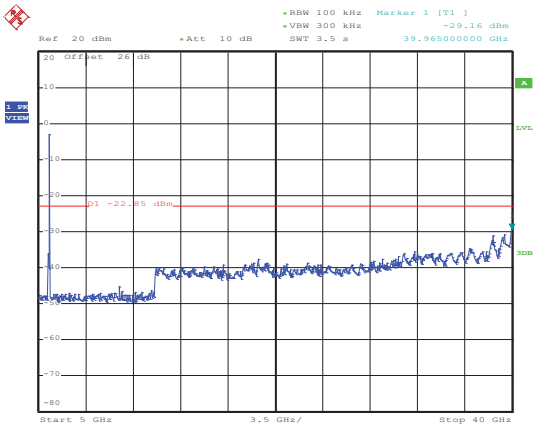
Date: 27.FEB.2014 14:34:41

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:35:02

Spurious Emission 5GHz~40GHz

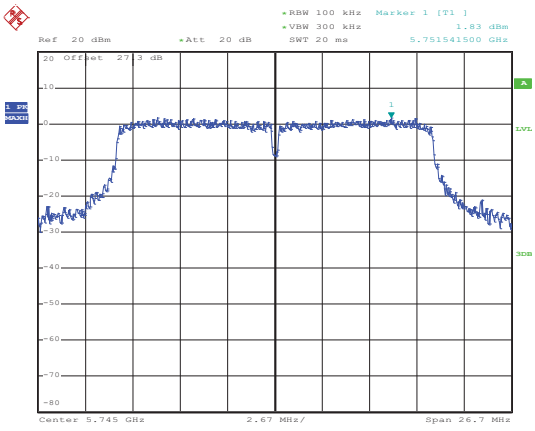


Date: 27.FEB.2014 14:35:21

Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

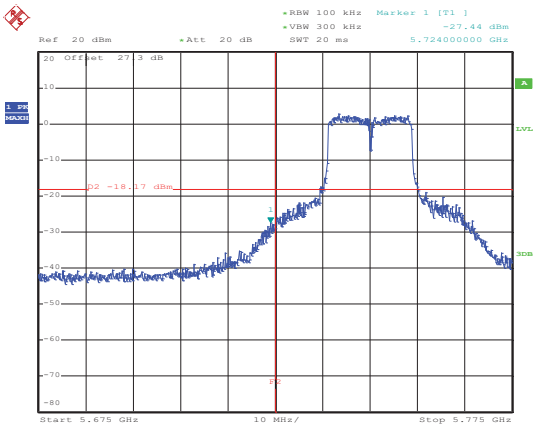
WLAN 802.11n VHT20 Channel 149

100kHz PSD reference Level



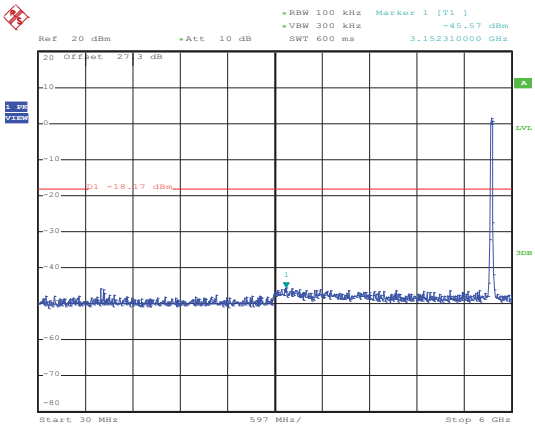
Date: 4.MAR.2014 09:21:44

Low Channel Plot



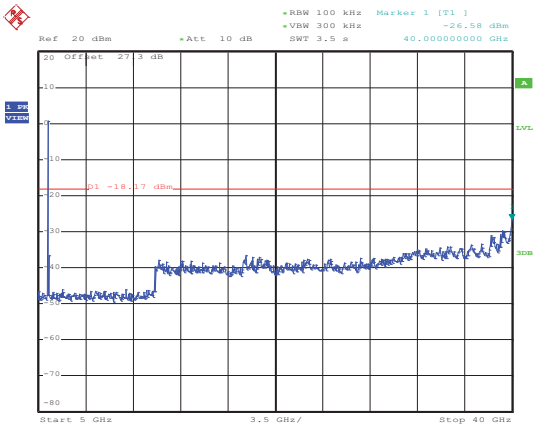
Date: 4.MAR.2014 09:32:38

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 09:22:17

Spurious Emission 5GHz~40GHz

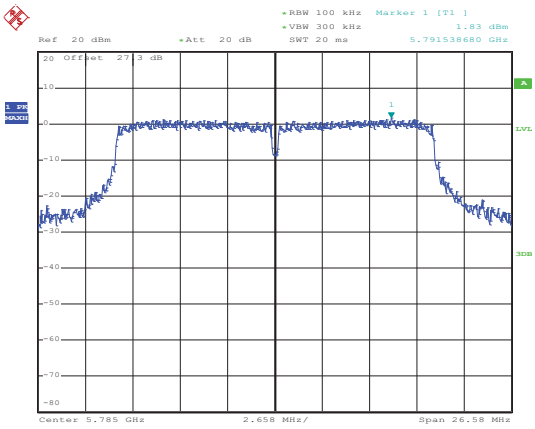


Date: 4.MAR.2014 09:22:36

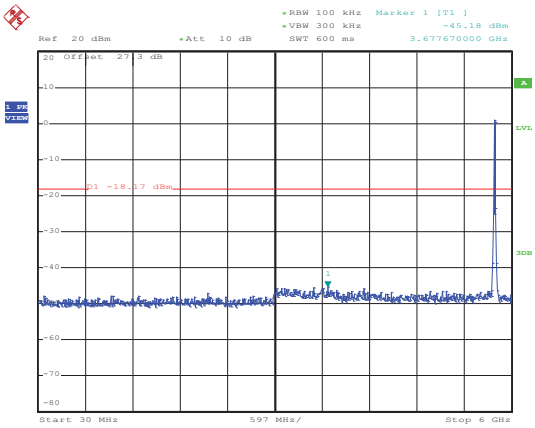
Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT20 Channel 157

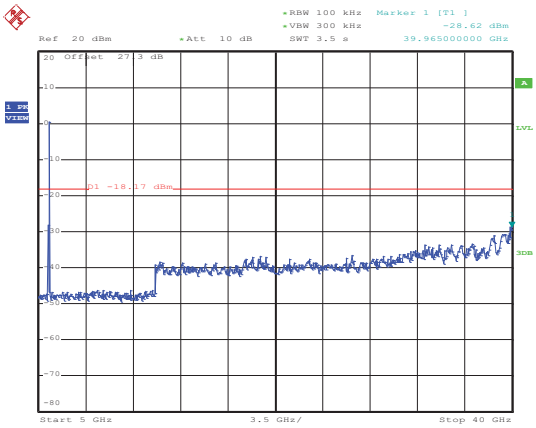
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



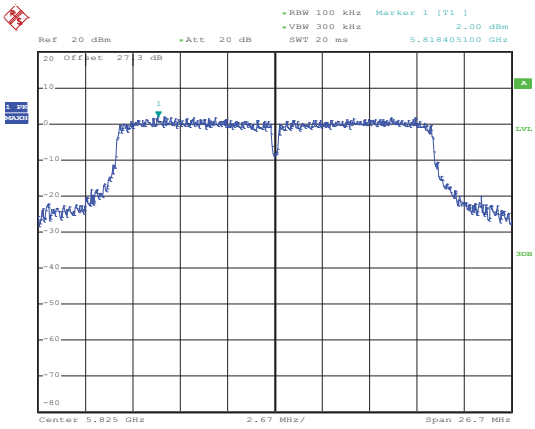
Spurious Emission 5GHz~40GHz



Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

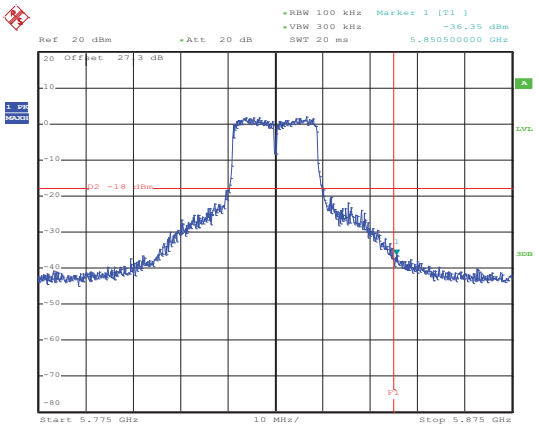
WLAN 802.11n VHT20 Channel 165

100kHz PSD reference Level



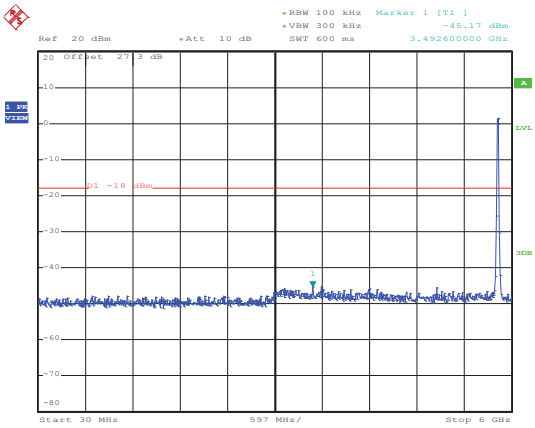
Date: 4.MAR.2014 09:29:54

High Channel Plot



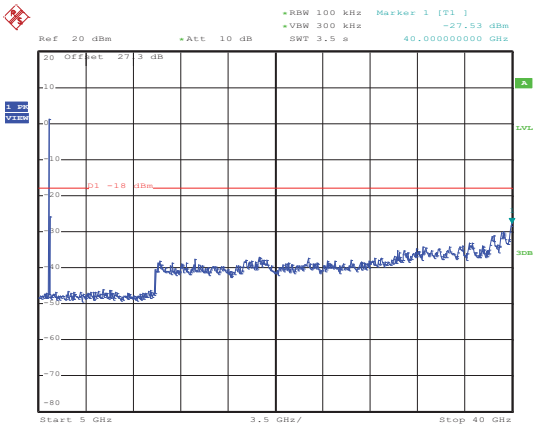
Date: 4.MAR.2014 09:30:08

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 09:30:27

Spurious Emission 5GHz~40GHz

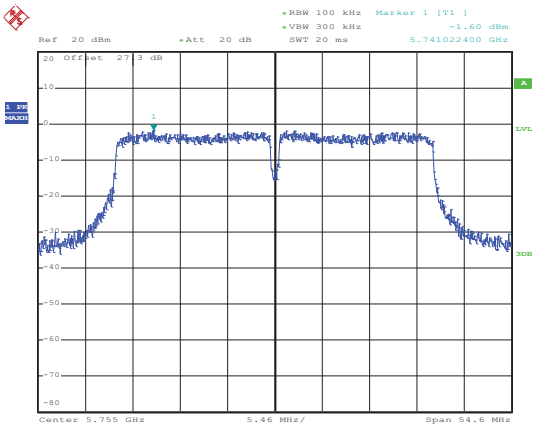


Date: 4.MAR.2014 09:30:46

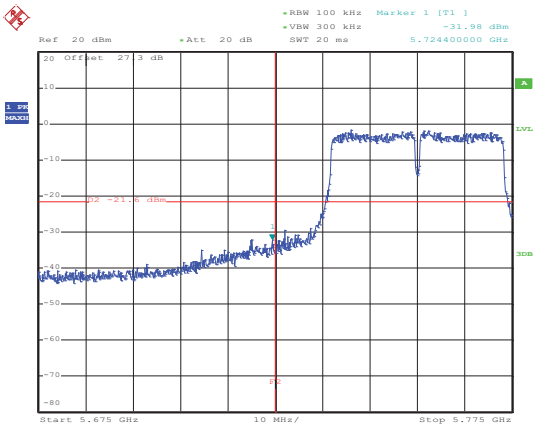
Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	151	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT40 Channel 151

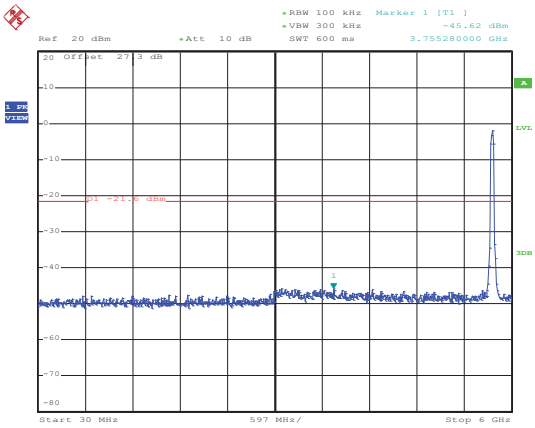
100kHz PSD reference Level



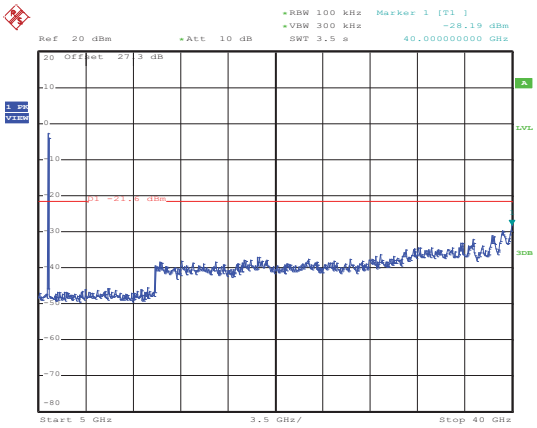
Low Channel Plot



Spurious Emission 30MHz~6GHz



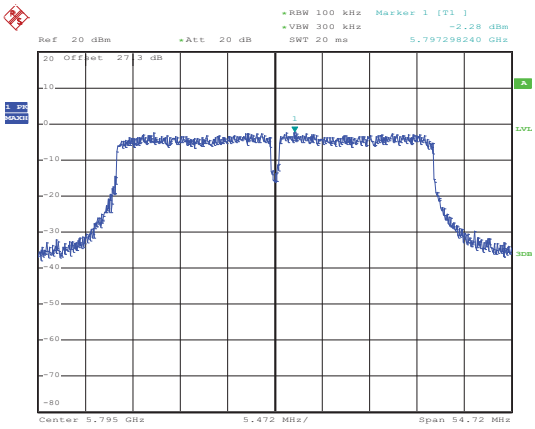
Spurious Emission 5GHz~40GHz



Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	159	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

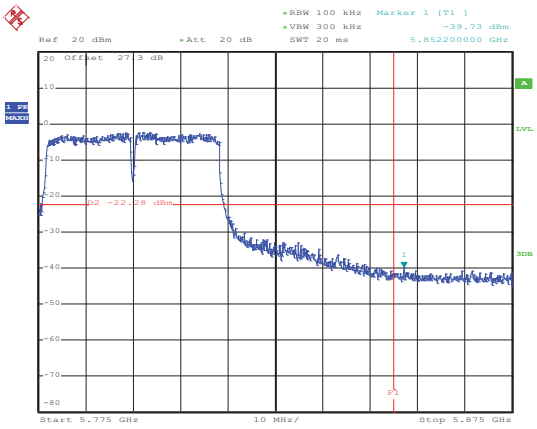
WLAN 802.11n VHT40 Channel 159

100kHz PSD reference Level



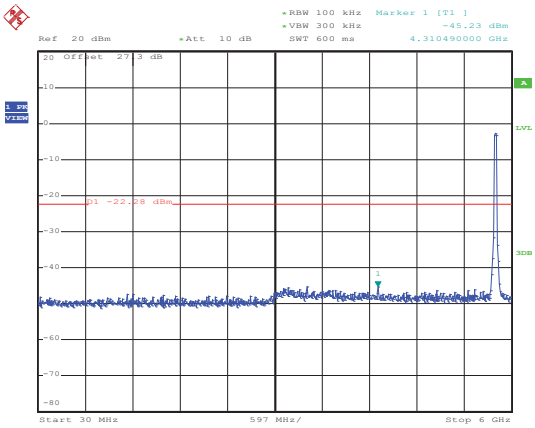
Date: 4.MAR.2014 10:35:34

High Channel Plot



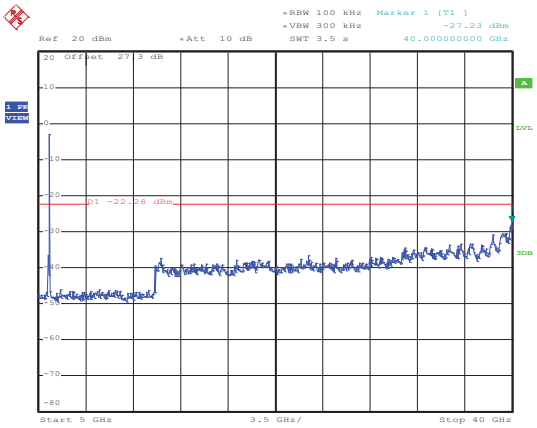
Date: 4.MAR.2014 10:35:48

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 10:36:07

Spurious Emission 5GHz~40GHz

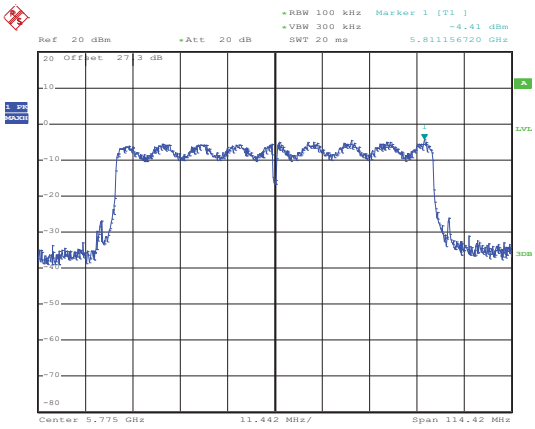


Date: 4.MAR.2014 10:36:26

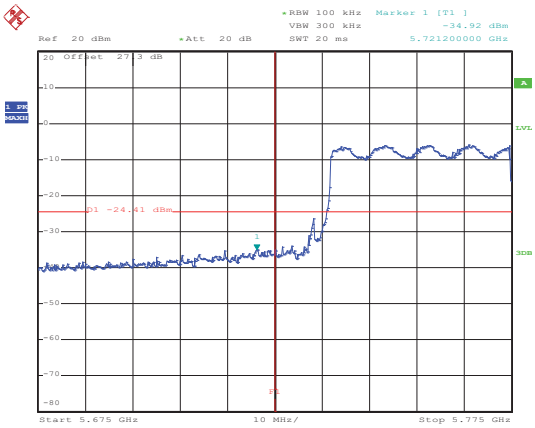
Number of TX :	2	**Ant. Port :**	1
Test Mode :	802.11n VHT80	**Temperature :**	21~26℃
Test Band :	5GHz	**Relative Humidity :**	45~54%
Test Channel :	155	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT80 Channel 155

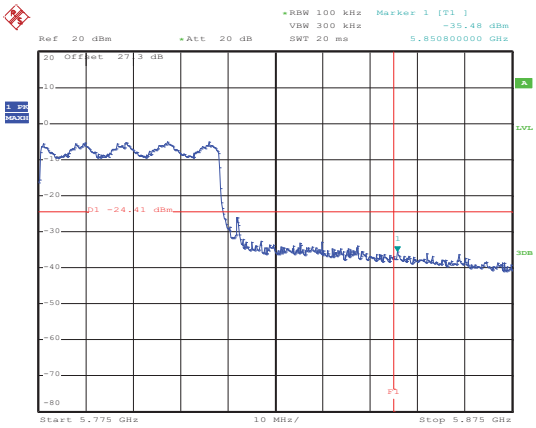
100kHz PSD reference Level

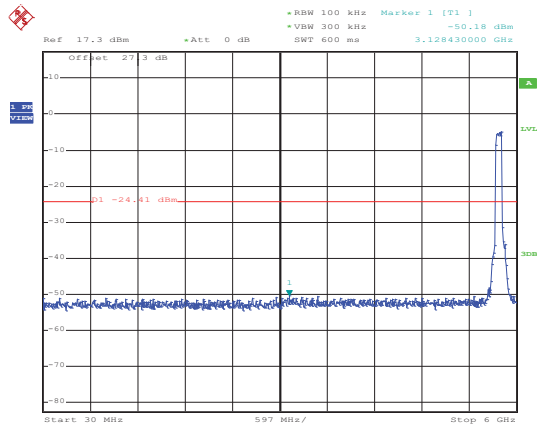
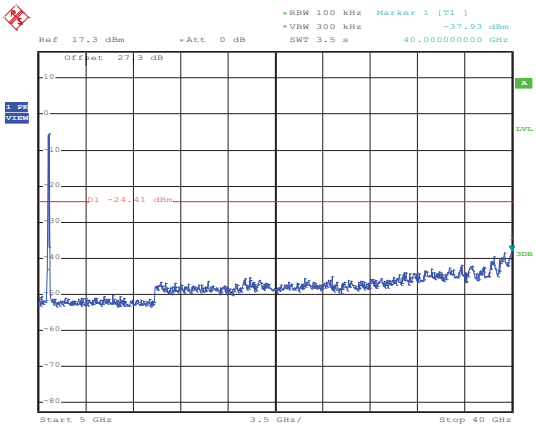


Channel Plot



Channel Plot



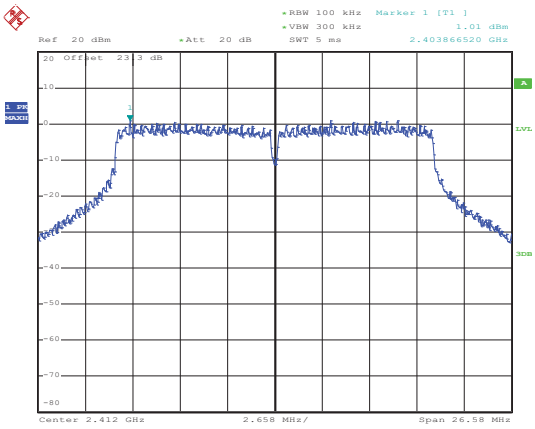
Spurious Emission 30MHz~6GHz	Spurious Emission 5GHz~40GHz
	
Date: 1.MAR.2014 00:39:39	Date: 1.MAR.2014 00:39:57

Number of TX = 2, Ant. Port 2 (Measured)

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

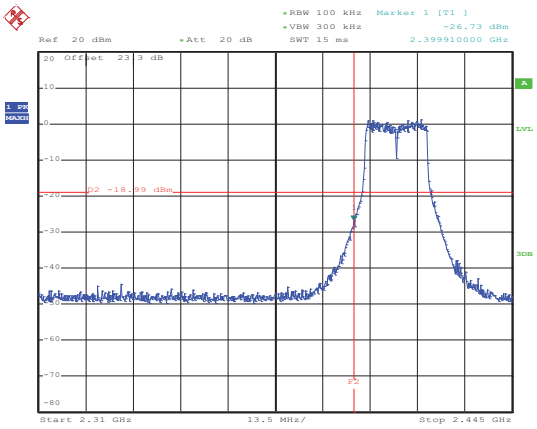
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



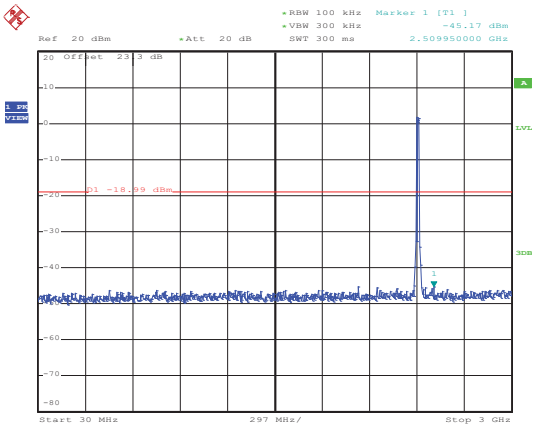
Date: 27.FEB.2014 14:58:58

Low Channel Plot



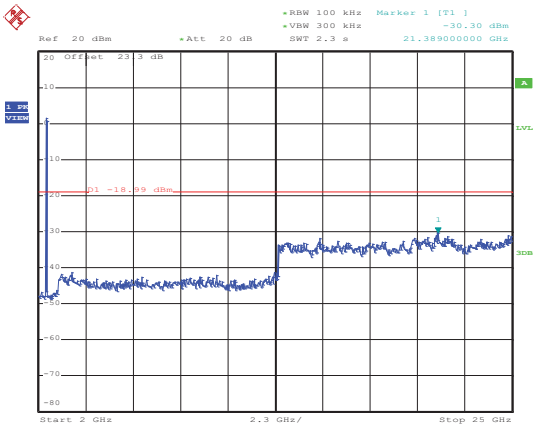
Date: 27.FEB.2014 14:59:33

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:09:41

Spurious Emission 2GHz~25GHz

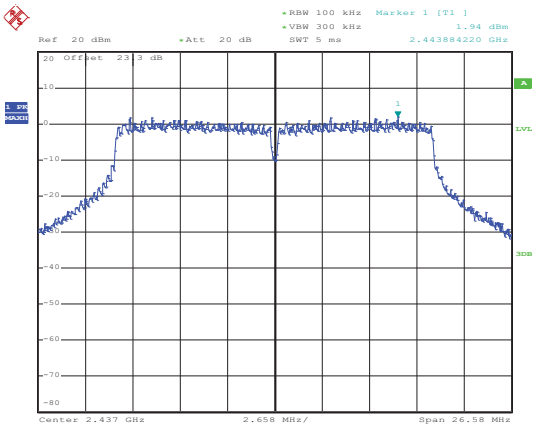


Date: 27.FEB.2014 16:10:00

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

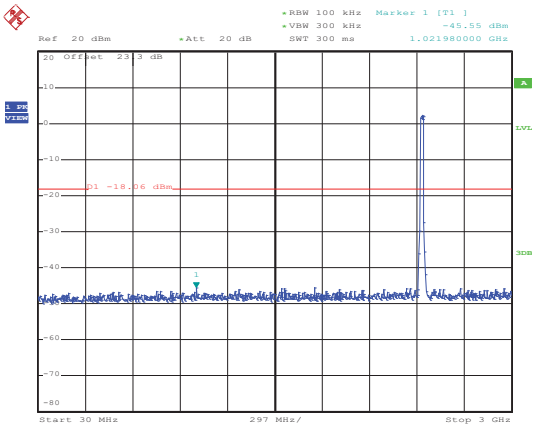
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



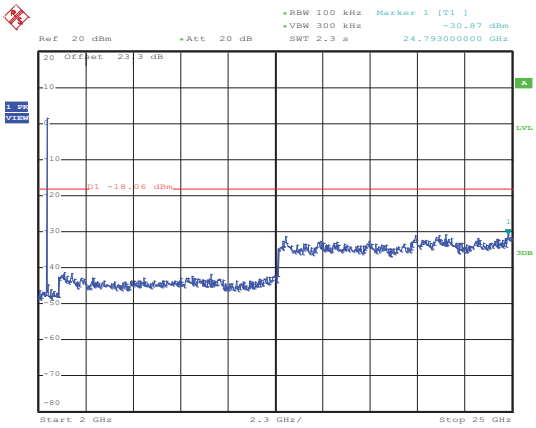
Date: 27.FEB.2014 15:12:17

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:10:56

Spurious Emission 2GHz~25GHz

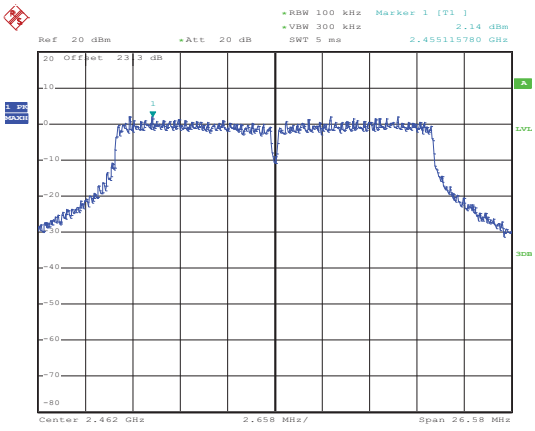


Date: 27.FEB.2014 16:11:15

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

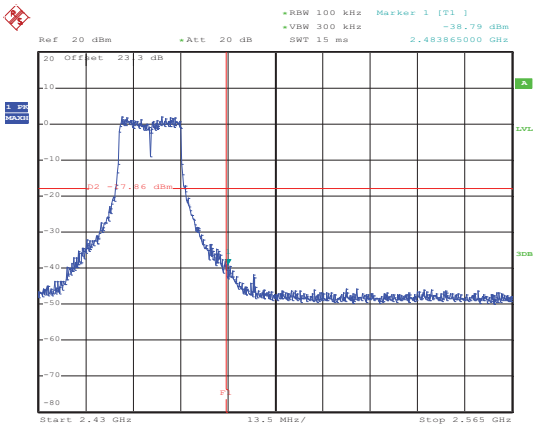
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



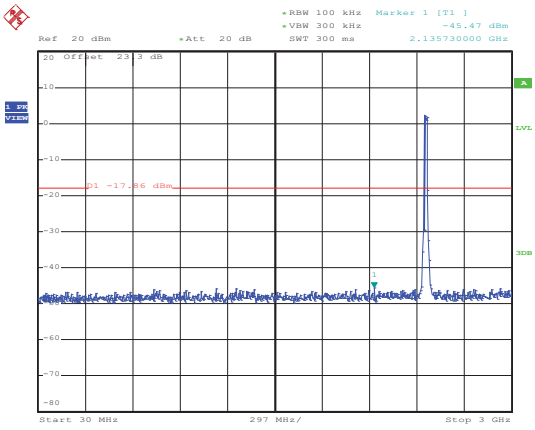
Date: 27.FEB.2014 15:27:04

High Channel Plot



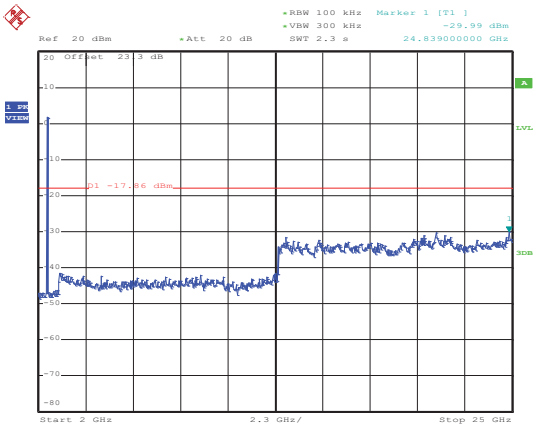
Date: 27.FEB.2014 15:27:21

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 16:15:17

Spurious Emission 2GHz~25GHz

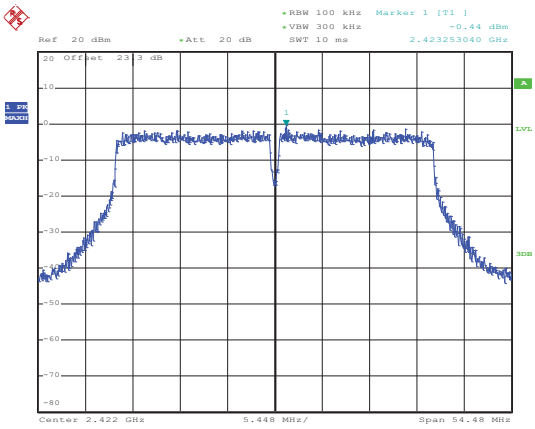


Date: 27.FEB.2014 16:15:36

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	03	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

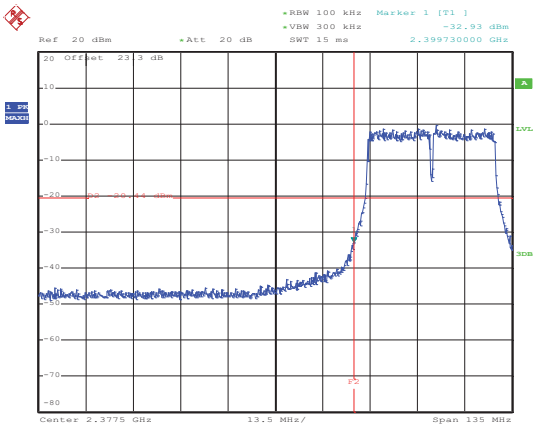
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



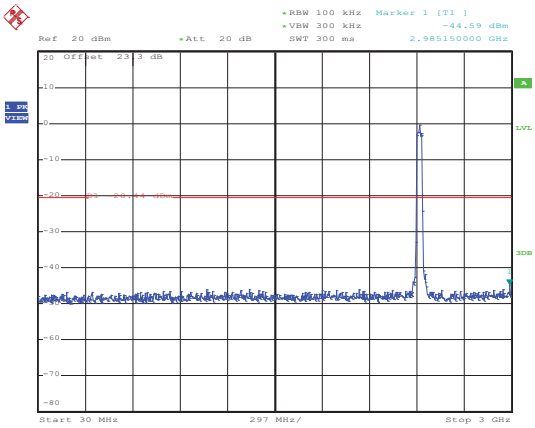
Date: 27.FEB.2014 15:32:32

Low Channel Plot



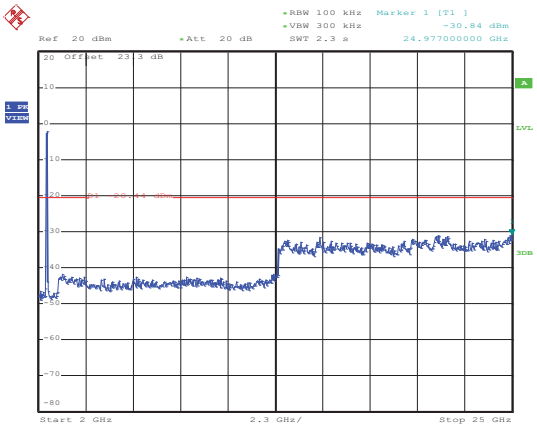
Date: 27.FEB.2014 15:34:15

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 15:36:58

Spurious Emission 2GHz~25GHz

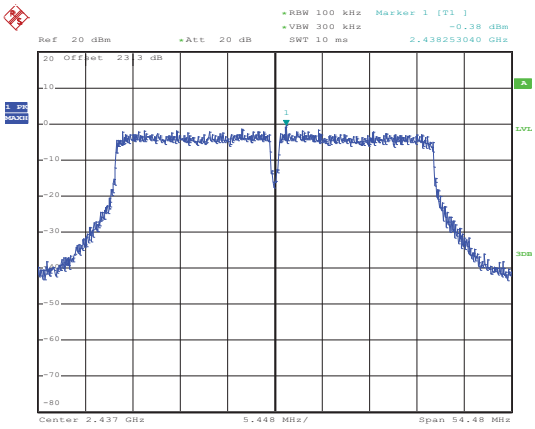


Date: 27.FEB.2014 15:37:17

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

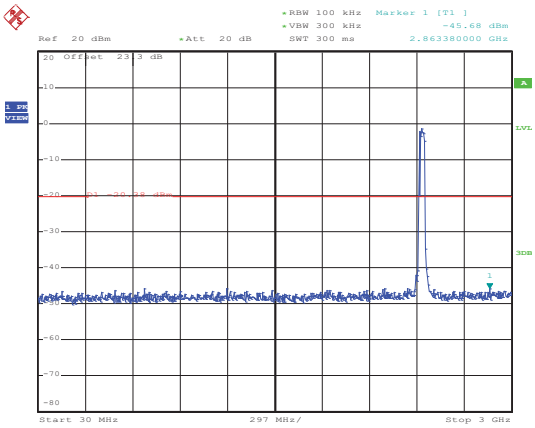
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



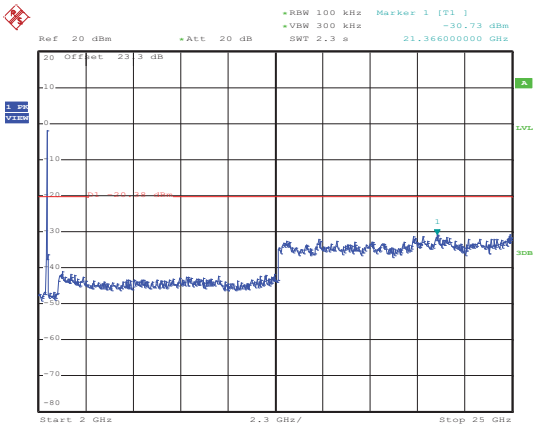
Date: 27.FEB.2014 15:49:54

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 15:50:20

Spurious Emission 2GHz~25GHz

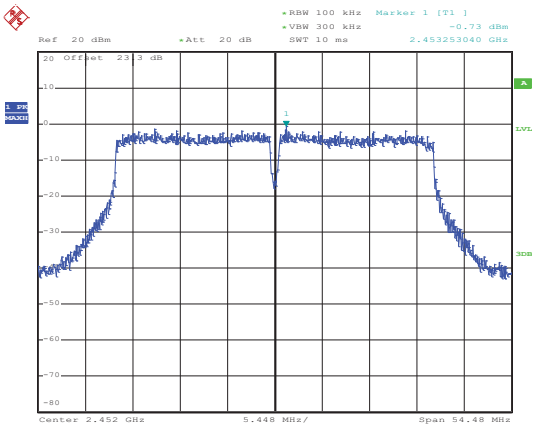


Date: 27.FEB.2014 15:50:39

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	09	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

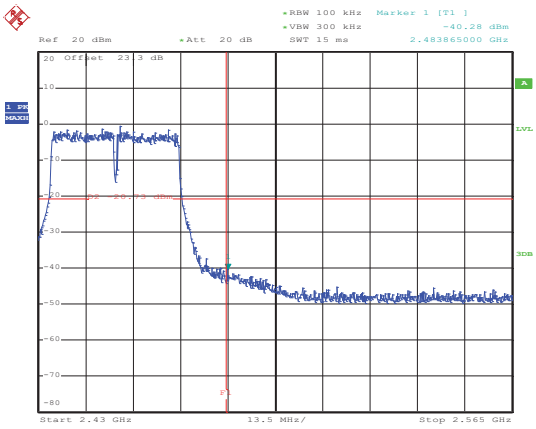
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



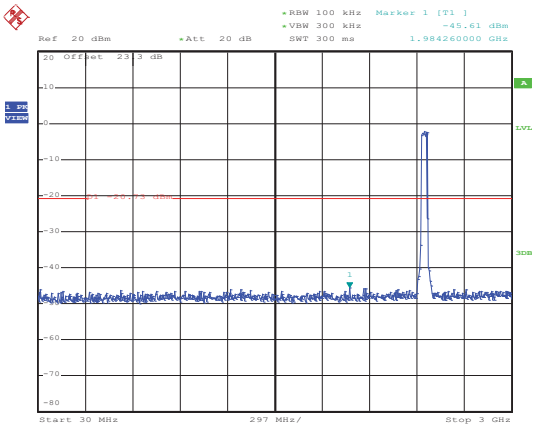
Date: 27.FEB.2014 15:55:52

High Channel Plot



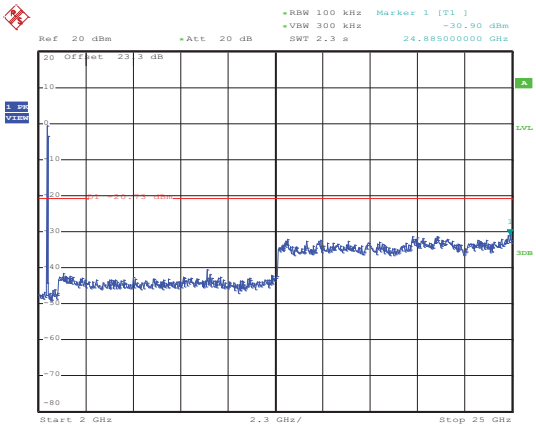
Date: 27.FEB.2014 15:56:10

Spurious Emission 30MHz~3GHz



Date: 27.FEB.2014 15:56:36

Spurious Emission 2GHz~25GHz

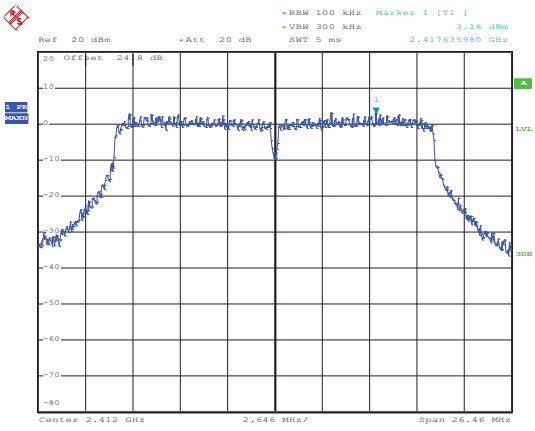


Date: 27.FEB.2014 15:56:55

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	01	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

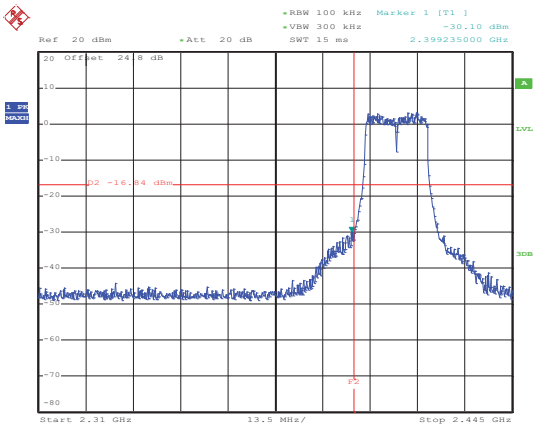
WLAN 802.11n VHT20 Channel 01

100kHz PSD reference Level



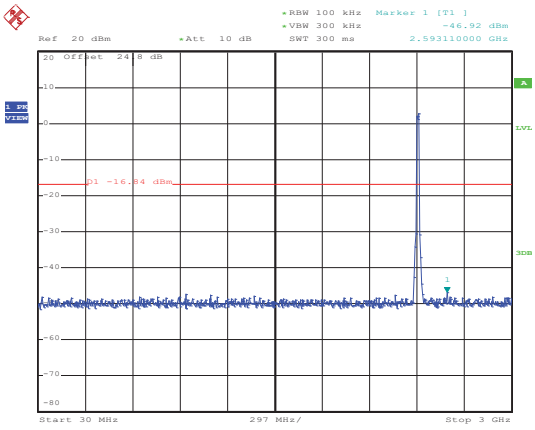
Date: 4.MAR.2014 03:06:54

Low Channel Plot



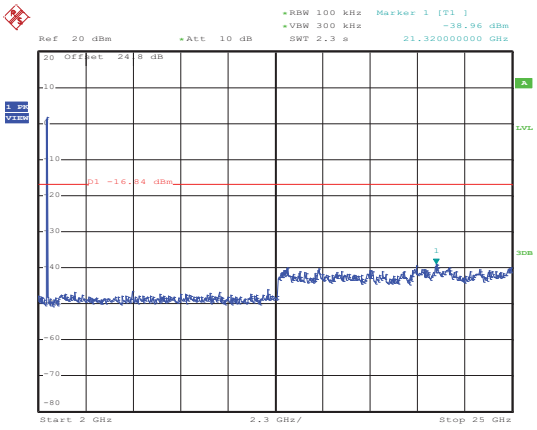
Date: 4.MAR.2014 03:07:08

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:07:27

Spurious Emission 2GHz~25GHz

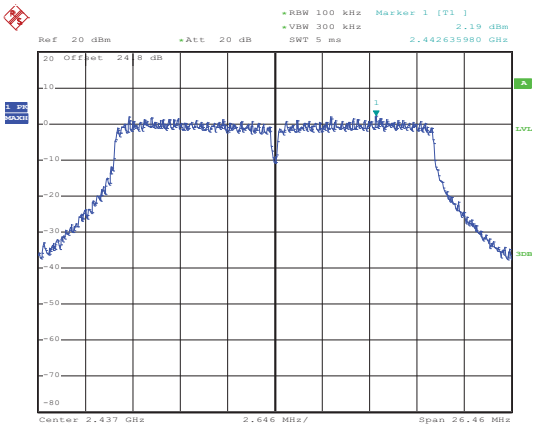


Date: 4.MAR.2014 03:07:45

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

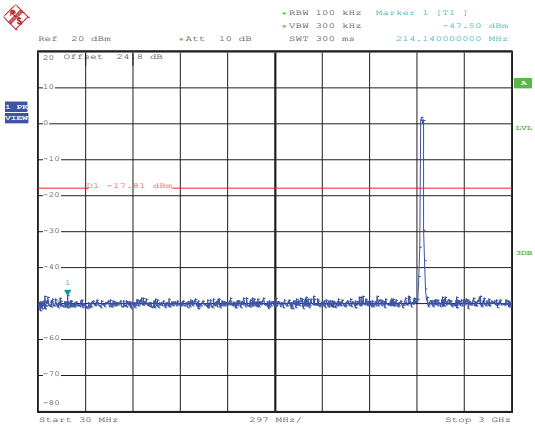
WLAN 802.11n VHT20 Channel 06

100kHz PSD reference Level



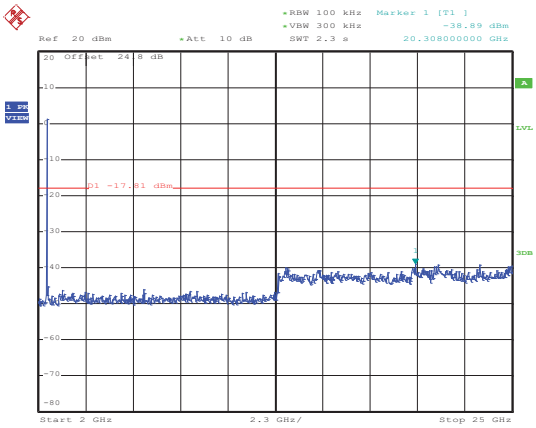
Date: 4.MAR.2014 03:14:16

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:14:36

Spurious Emission 2GHz~25GHz

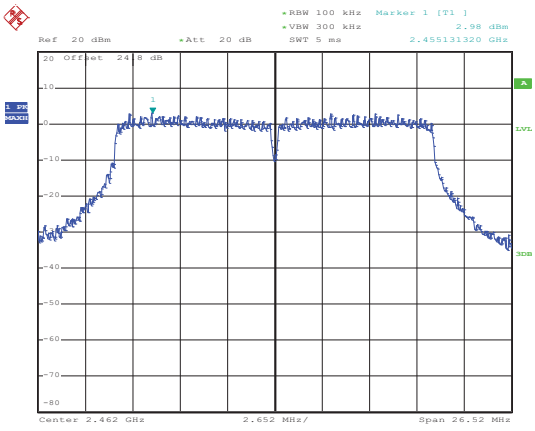


Date: 4.MAR.2014 03:14:55

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	11	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

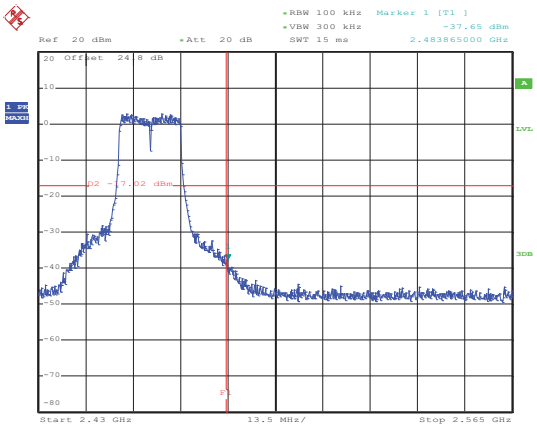
WLAN 802.11n VHT20 Channel 11

100kHz PSD reference Level



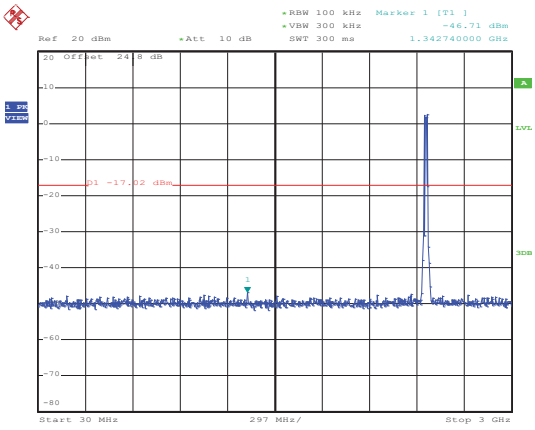
Date: 4.MAR.2014 03:16:22

High Channel Plot



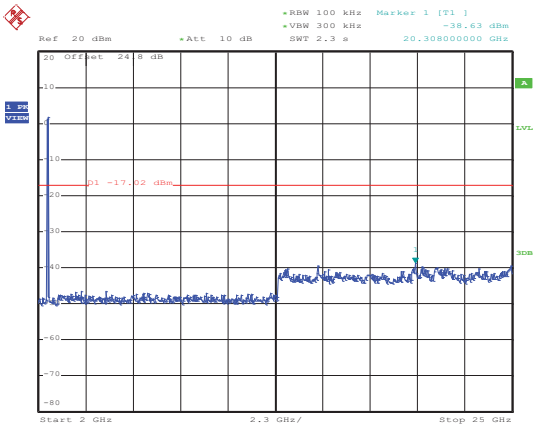
Date: 4.MAR.2014 03:16:36

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:16:55

Spurious Emission 2GHz~25GHz

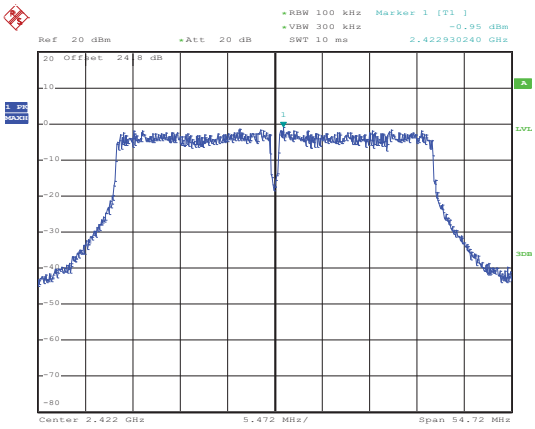


Date: 4.MAR.2014 03:17:13

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Low	**Relative Humidity :**	45~54%
Test Channel :	03	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

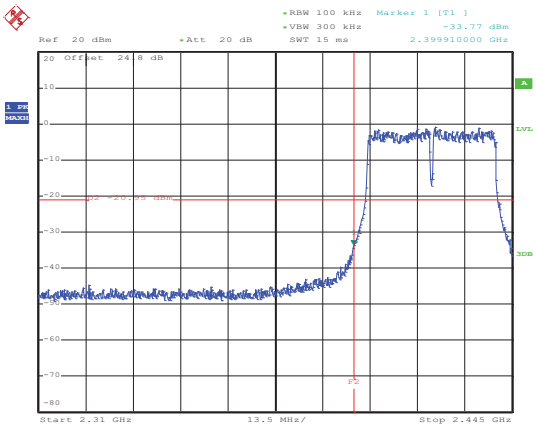
WLAN 802.11n VHT40 Channel 03

100kHz PSD reference Level



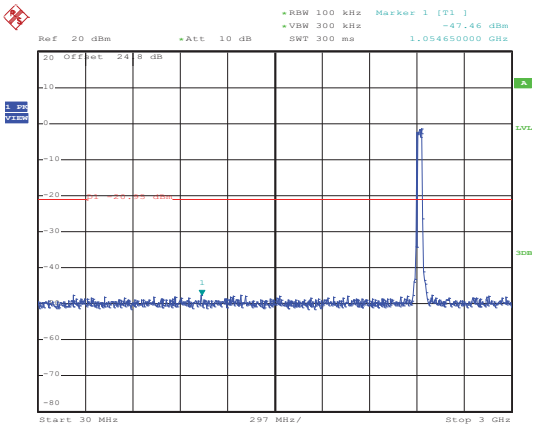
Date: 4.MAR.2014 02:52:39

Low Channel Plot



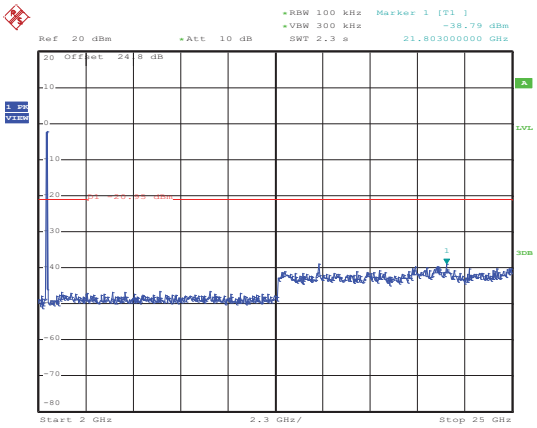
Date: 4.MAR.2014 02:52:53

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 02:53:12

Spurious Emission 2GHz~25GHz

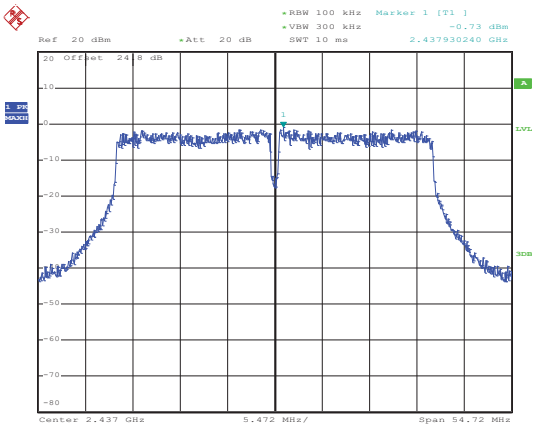


Date: 4.MAR.2014 02:53:31

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	06	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

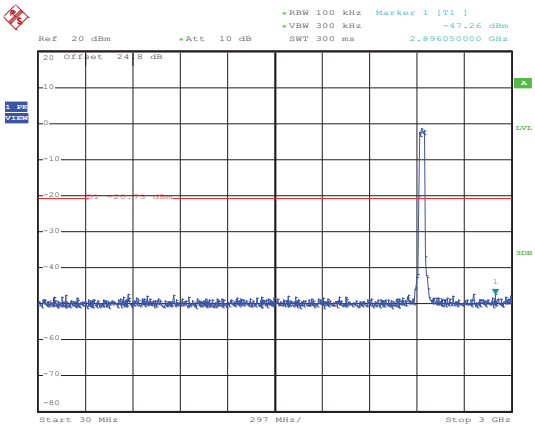
WLAN 802.11n VHT40 Channel 06

100kHz PSD reference Level



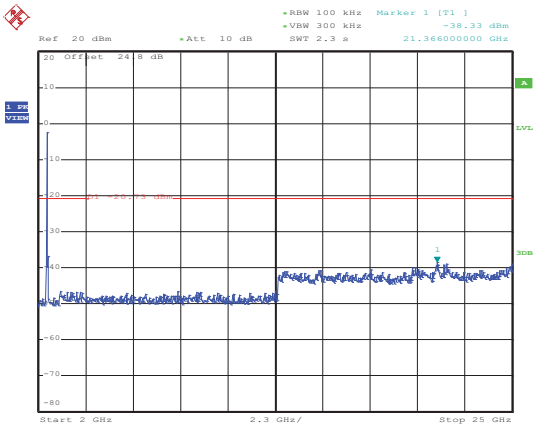
Date: 4.MAR.2014 02:55:04

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 02:55:24

Spurious Emission 2GHz~25GHz

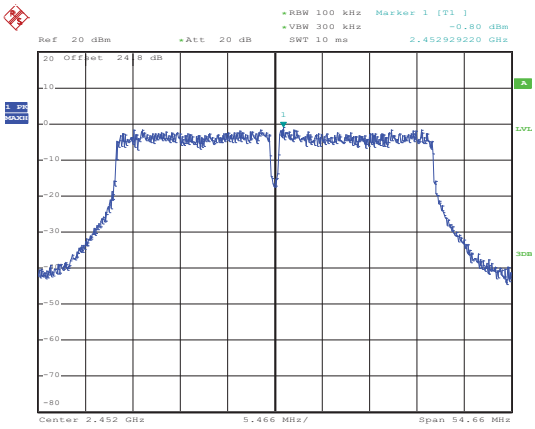


Date: 4.MAR.2014 02:55:42

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	2.4GHz High	**Relative Humidity :**	45~54%
Test Channel :	09	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

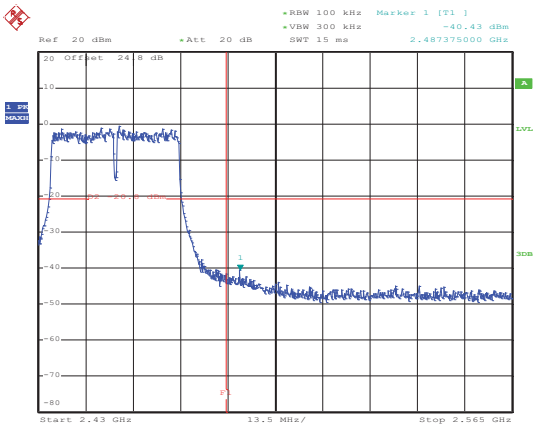
WLAN 802.11n VHT40 Channel 09

100kHz PSD reference Level



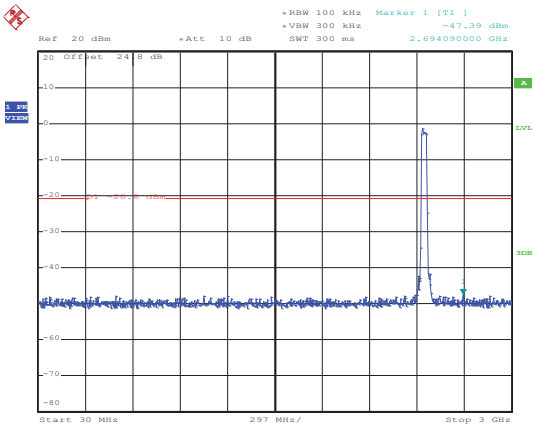
Date: 4.MAR.2014 03:03:24

High Channel Plot



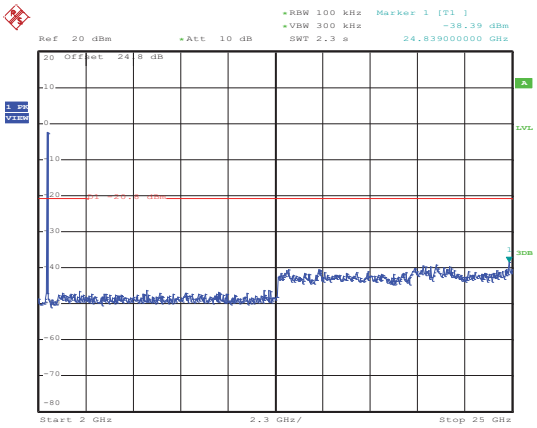
Date: 4.MAR.2014 03:03:38

Spurious Emission 30MHz~3GHz



Date: 4.MAR.2014 03:03:57

Spurious Emission 2GHz~25GHz

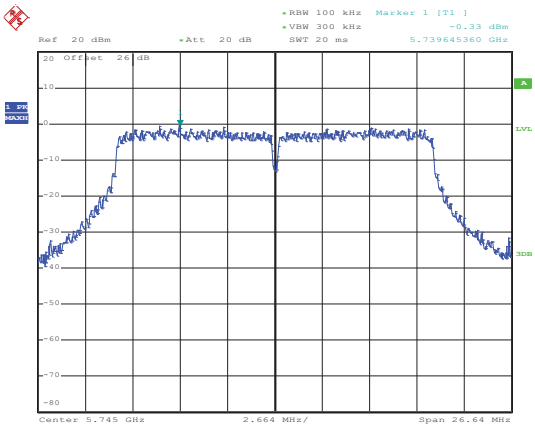


Date: 4.MAR.2014 03:04:16

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

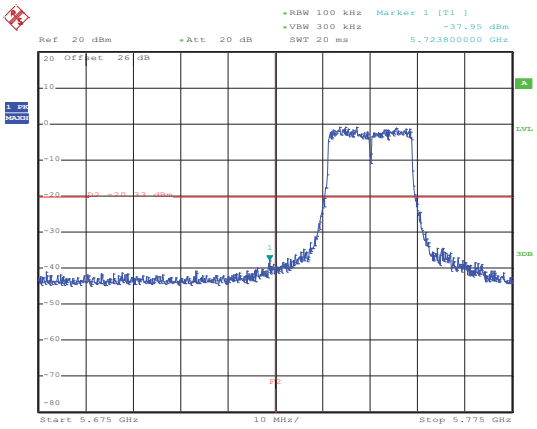
WLAN 802.11n HT20 Channel 149

100kHz PSD reference Level



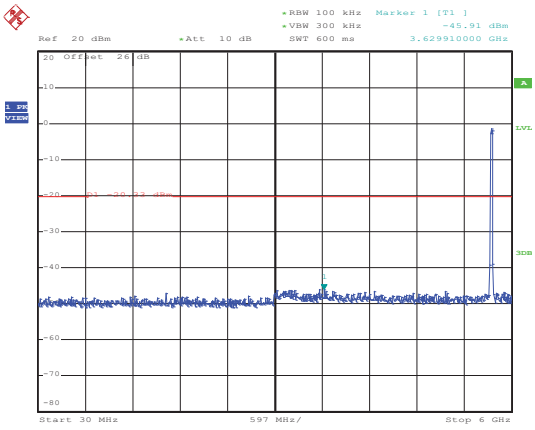
Date: 27.FEB.2014 13:40:48

Low Channel Plot



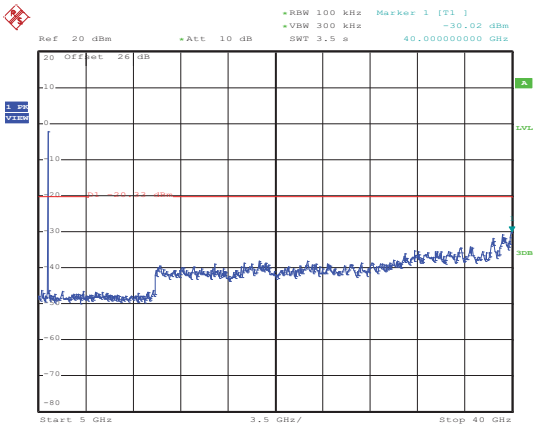
Date: 27.FEB.2014 13:41:58

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 13:41:25

Spurious Emission 5GHz~40GHz

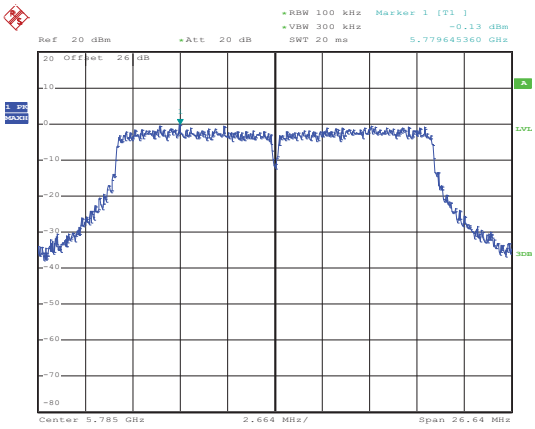


Date: 27.FEB.2014 13:41:43

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

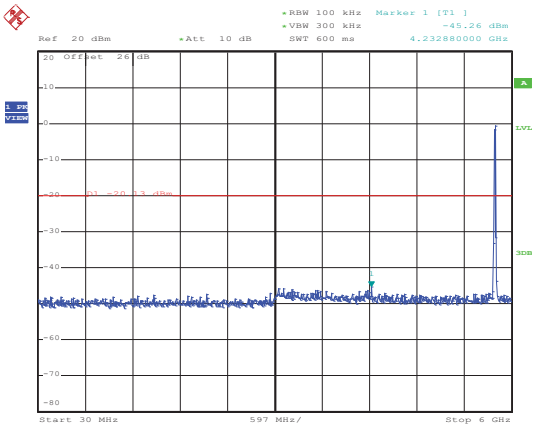
WLAN 802.11n HT20 Channel 157

100kHz PSD reference Level



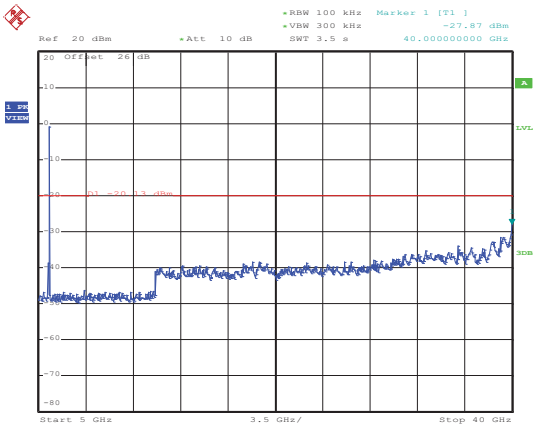
Date: 27.FEB.2014 14:05:36

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:06:02

Spurious Emission 5GHz~40GHz

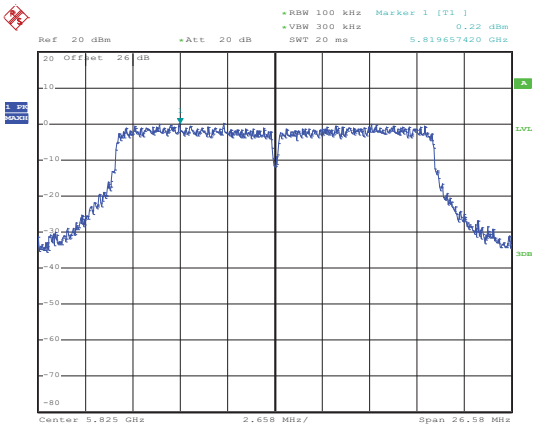


Date: 27.FEB.2014 14:06:21

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT20	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

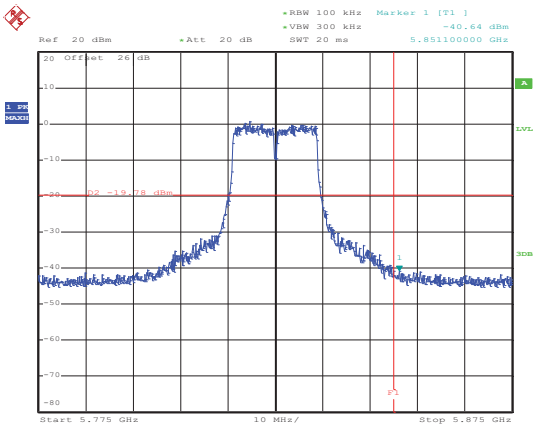
WLAN 802.11n HT20 Channel 165

100kHz PSD reference Level



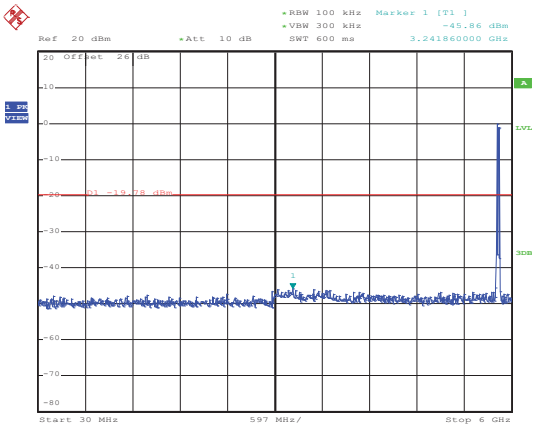
Date: 27.FEB.2014 14:10:33

High Channel Plot



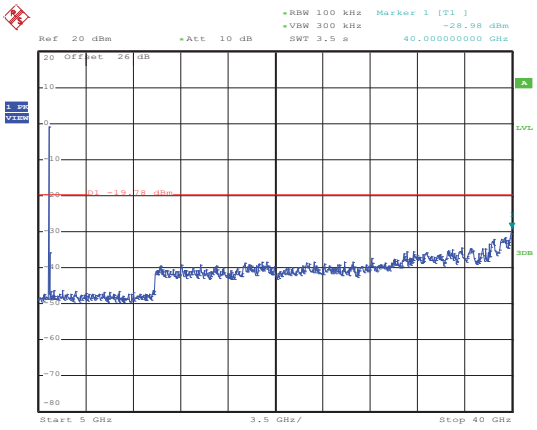
Date: 27.FEB.2014 14:10:53

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:11:17

Spurious Emission 5GHz~40GHz

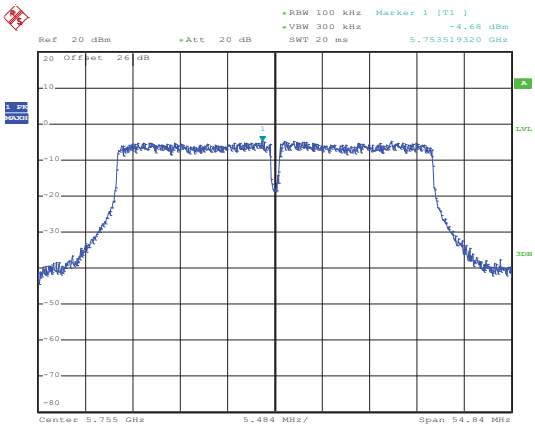


Date: 27.FEB.2014 14:11:36

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	151	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

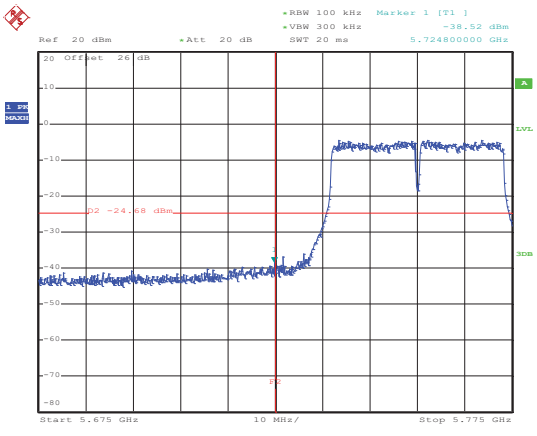
WLAN 802.11n HT40 Channel 151

100kHz PSD reference Level



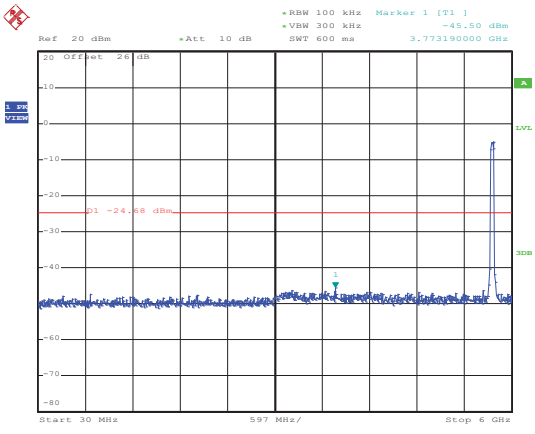
Date: 27.FEB.2014 14:25:15

Low Channel Plot



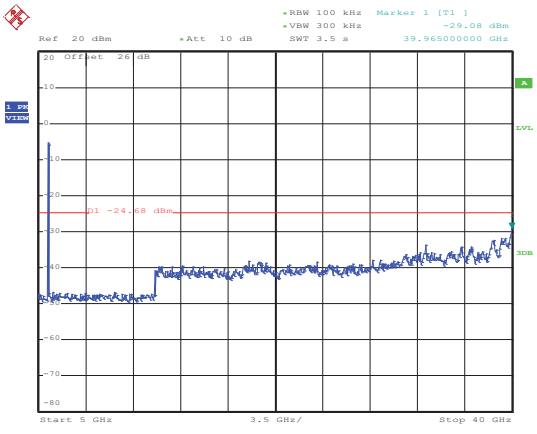
Date: 27.FEB.2014 14:25:32

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:25:52

Spurious Emission 5GHz~40GHz

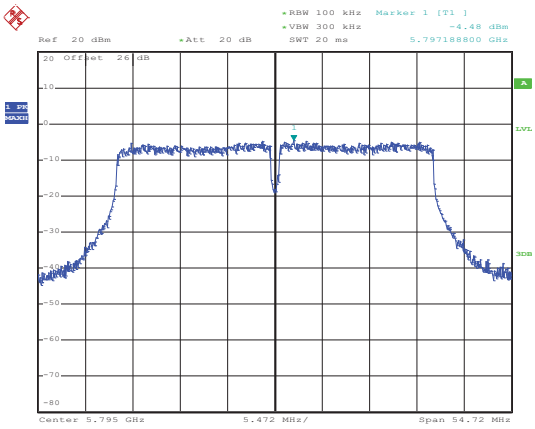


Date: 27.FEB.2014 14:26:11

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n HT40	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	159	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

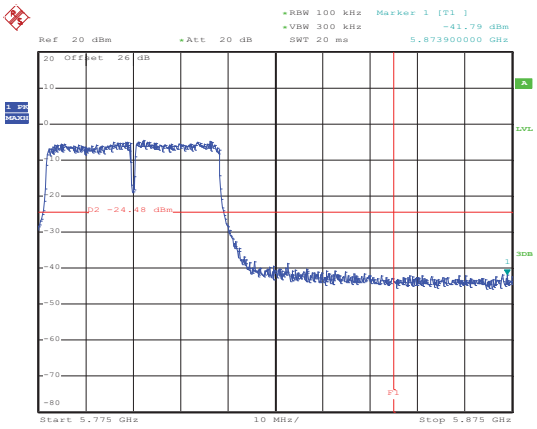
WLAN 802.11n HT40 Channel 159

100kHz PSD reference Level



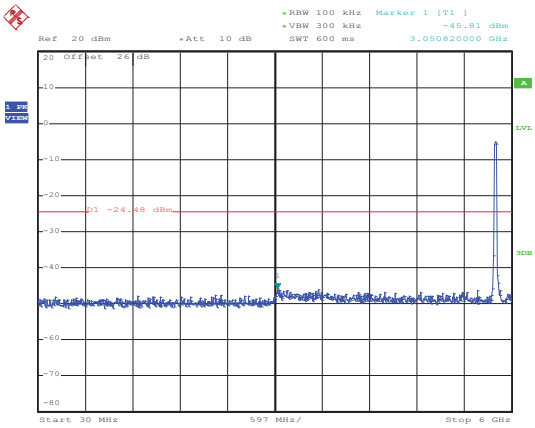
Date: 27.FEB.2014 14:29:32

High Channel Plot



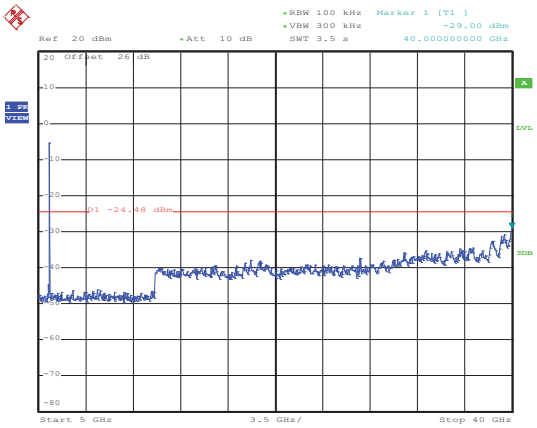
Date: 27.FEB.2014 14:29:56

Spurious Emission 30MHz~6GHz



Date: 27.FEB.2014 14:30:17

Spurious Emission 5GHz~40GHz

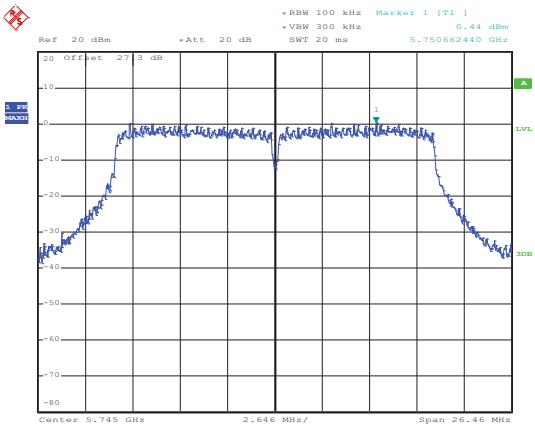


Date: 27.FEB.2014 14:30:36

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	149	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

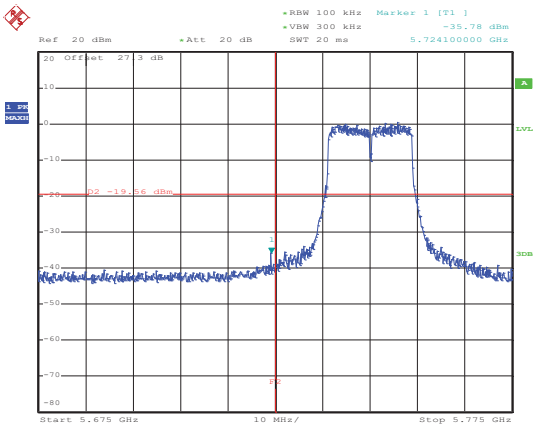
WLAN 802.11n VHT20 Channel 149

100kHz PSD reference Level



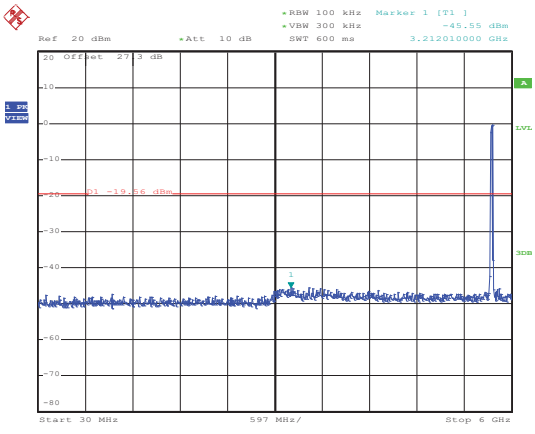
Date: 4.MAR.2014 09:39:41

Low Channel Plot



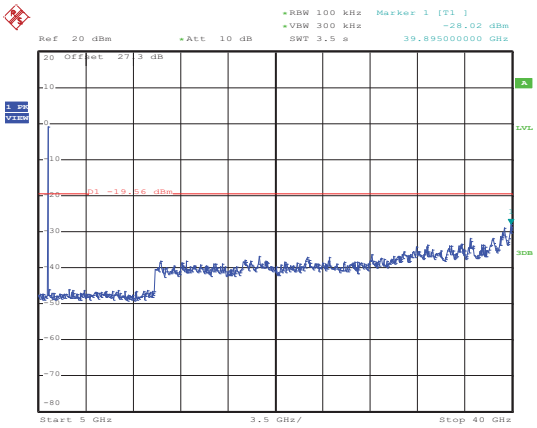
Date: 4.MAR.2014 09:39:55

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 09:40:14

Spurious Emission 5GHz~40GHz

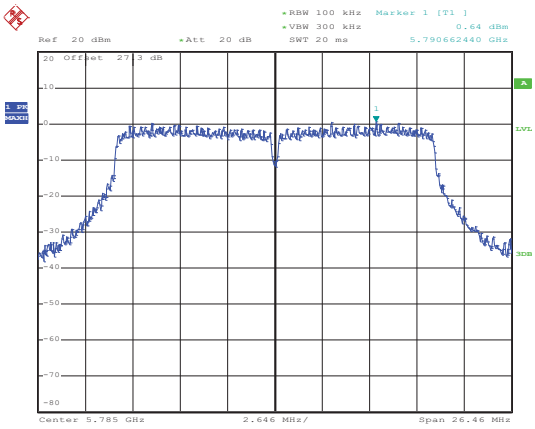


Date: 4.MAR.2014 09:40:32

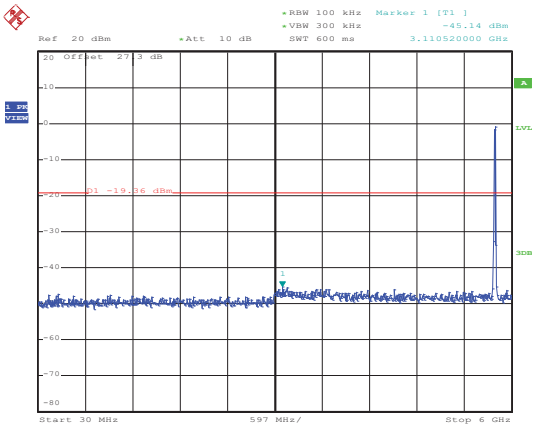
Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz Mid	**Relative Humidity :**	45~54%
Test Channel :	157	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT20 Channel 157

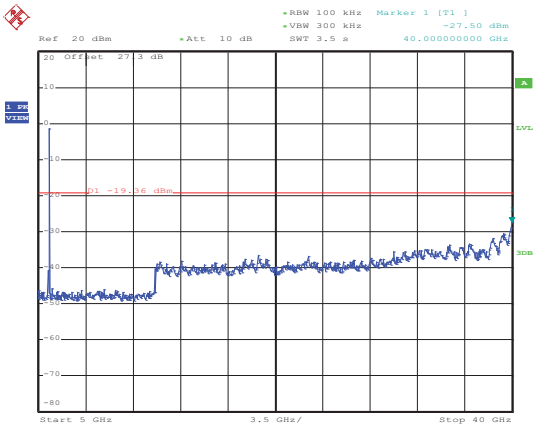
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



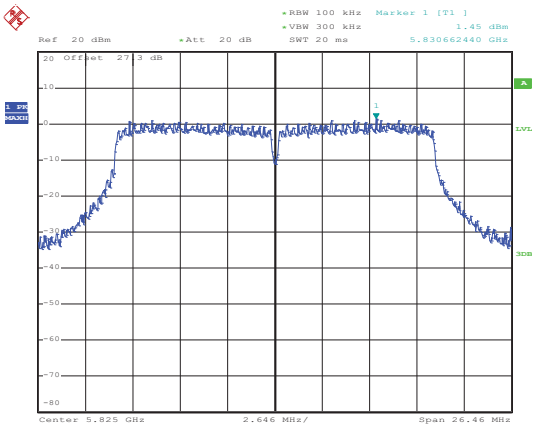
Spurious Emission 5GHz~40GHz



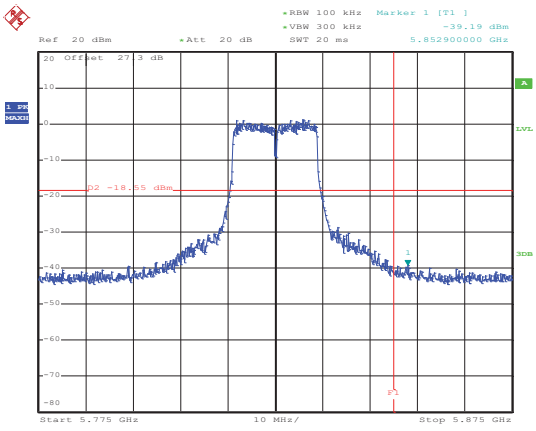
Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT20	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	165	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

WLAN 802.11n VHT20 Channel 165

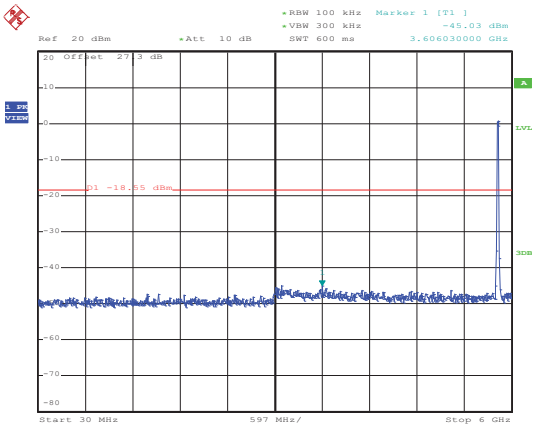
100kHz PSD reference Level



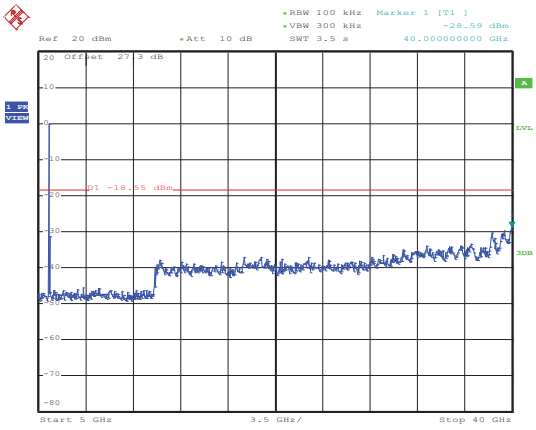
High Channel Plot



Spurious Emission 30MHz~6GHz



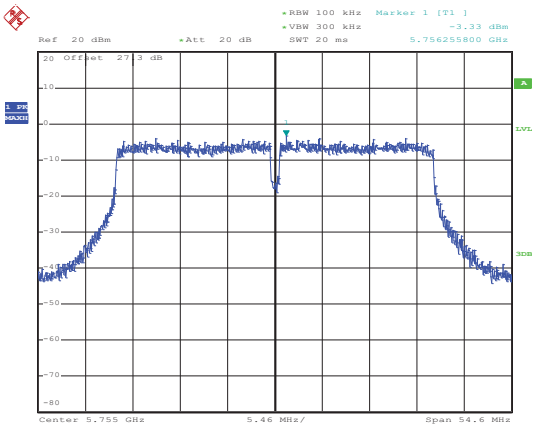
Spurious Emission 5GHz~40GHz



Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	5GHz Low	**Relative Humidity :**	45~54%
Test Channel :	151	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

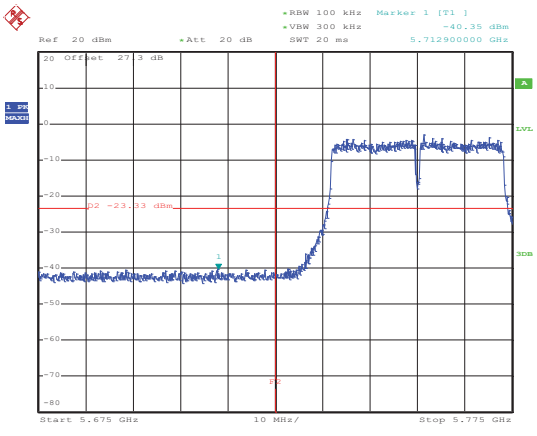
WLAN 802.11n VHT40 Channel 151

100kHz PSD reference Level



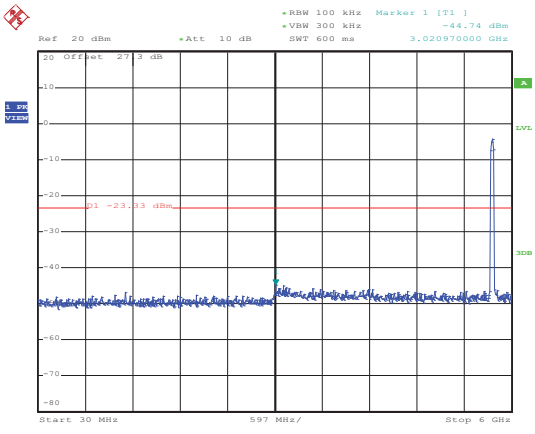
Date: 4.MAR.2014 10:24:09

Low Channel Plot



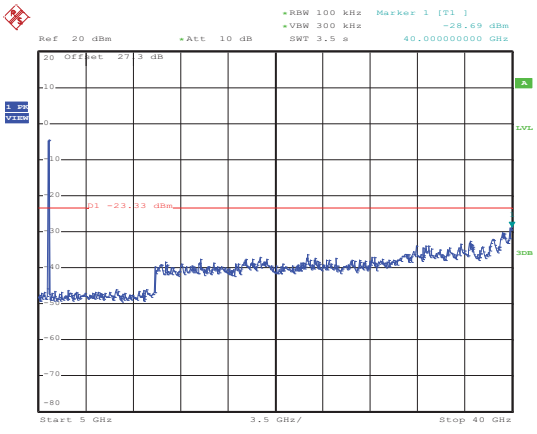
Date: 4.MAR.2014 10:24:23

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 10:24:42

Spurious Emission 5GHz~40GHz

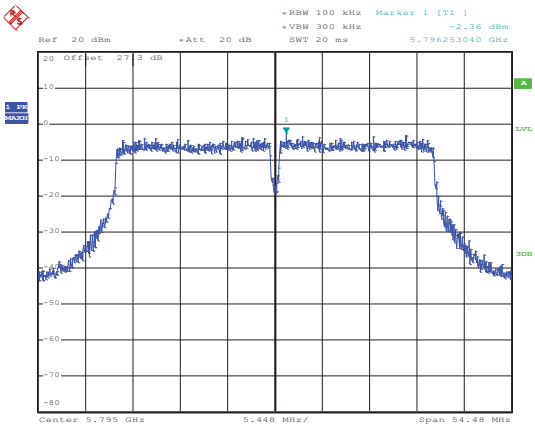


Date: 4.MAR.2014 10:25:01

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT40	**Temperature :**	21~26℃
Test Band :	5GHz High	**Relative Humidity :**	45~54%
Test Channel :	159	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

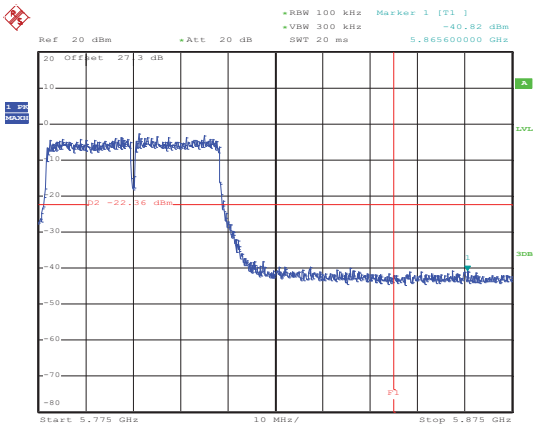
WLAN 802.11n VHT40 Channel 159

100kHz PSD reference Level



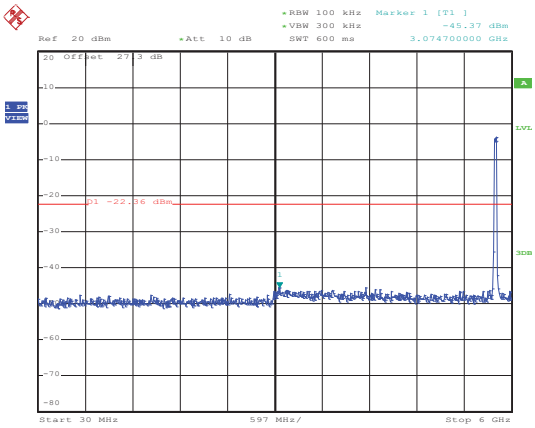
Date: 4.MAR.2014 10:29:10

High Channel Plot



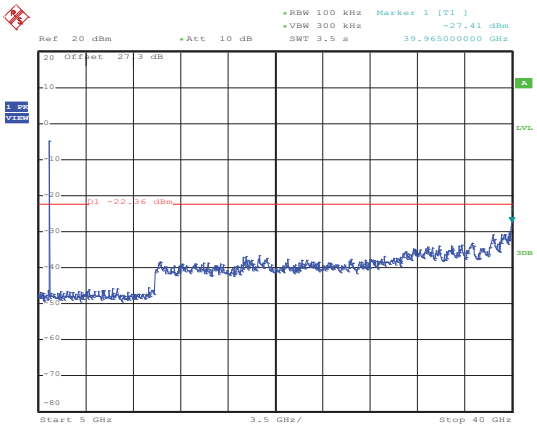
Date: 4.MAR.2014 10:29:23

Spurious Emission 30MHz~6GHz



Date: 4.MAR.2014 10:29:43

Spurious Emission 5GHz~40GHz

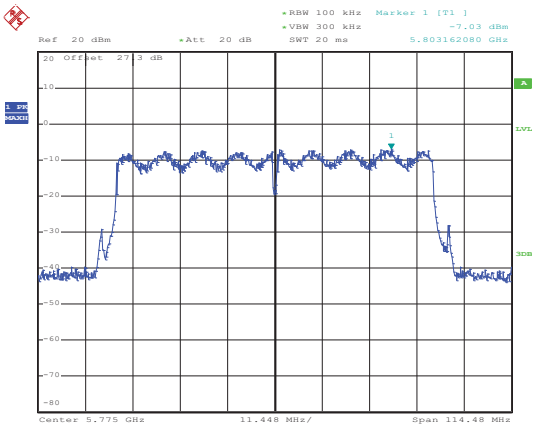


Date: 4.MAR.2014 10:30:01

Number of TX :	2	**Ant. Port :**	2
Test Mode :	802.11n VHT80	**Temperature :**	21~26℃
Test Band :	5GHz	**Relative Humidity :**	45~54%
Test Channel :	155	**Test Engineer :**	Osolemio Chang, Bill Kuo, Rover Lee, and Alex Lee

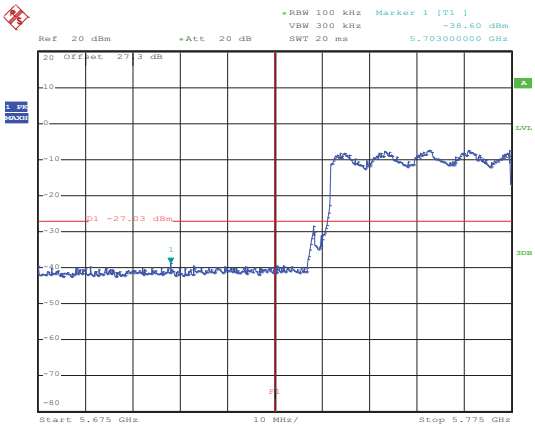
WLAN 802.11n VHT80 Channel 155

100kHz PSD reference Level



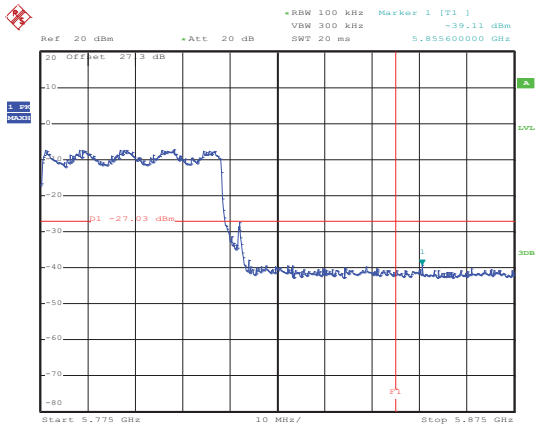
Date: 1.MAR.2014 00:45:28

Channel Plot

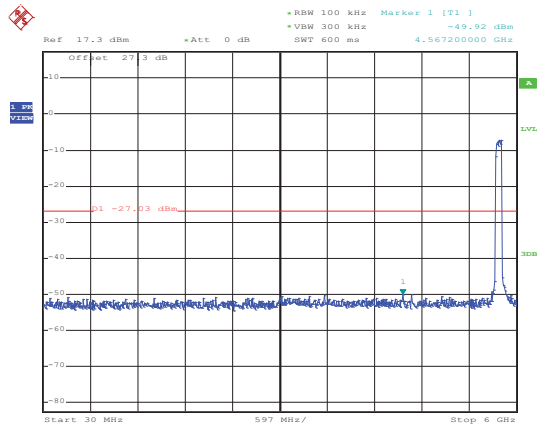
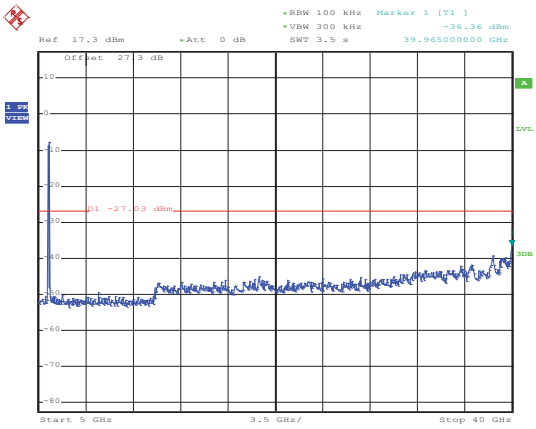


Date: 1.MAR.2014 00:48:30

Channel Plot



Date: 1.MAR.2014 00:47:58

Spurious Emission 30MHz~6GHz	Spurious Emission 5GHz~40GHz
	
Date: 1.MAR.2014 00:45:48	Date: 1.MAR.2014 00:46:06

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.

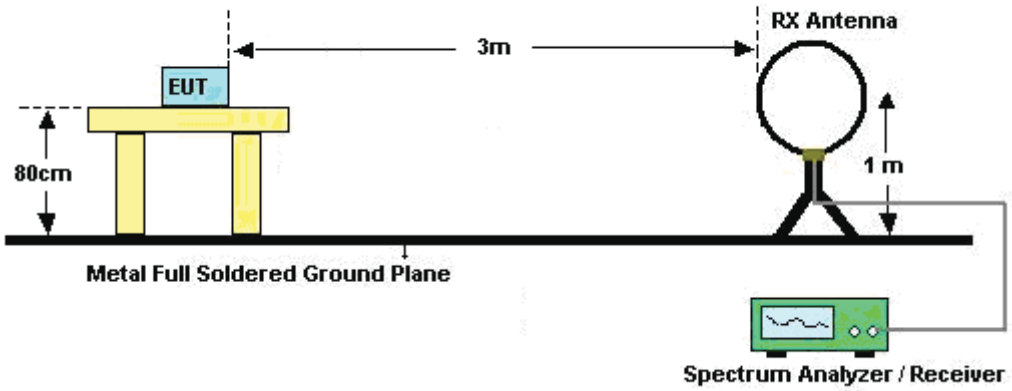
3.5.3 Test Procedure

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

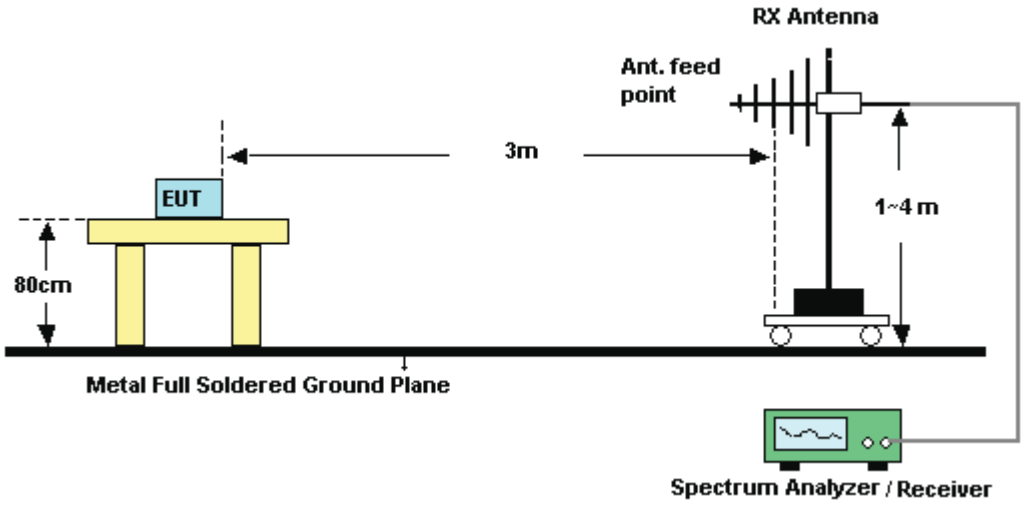
Antenna Port	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
2	802.11b	100	-	-	10Hz
2	802.11g	100	-	-	10Hz
2	2.4GHz 802.11n HT20	100	-	-	10Hz
2	2.4GHz 802.11n HT40	100	-	-	10Hz
1+2	2.4GHz 802.11n HT20 for Ant 1	100	-	-	10Hz
1+2	2.4GHz 802.11n HT40 for Ant 2	100	-	-	10Hz
2	802.11a	100	-	-	10Hz
2	5GHz 802.11n HT20	100	-	-	10Hz
2	5GHz 802.11n HT40	100	-	-	10Hz
1+2	5GHz 802.11n HT20 for Ant 1	100	-	-	10Hz
1+2	5GHz 802.11n HT20 for Ant 2	100	-	-	10Hz
1+2	5GHz 802.11n HT40 for Ant 1	100	-	-	10Hz
1+2	5GHz 802.11n HT40 for Ant 2	100	-	-	10Hz

3.5.4 Test Setup

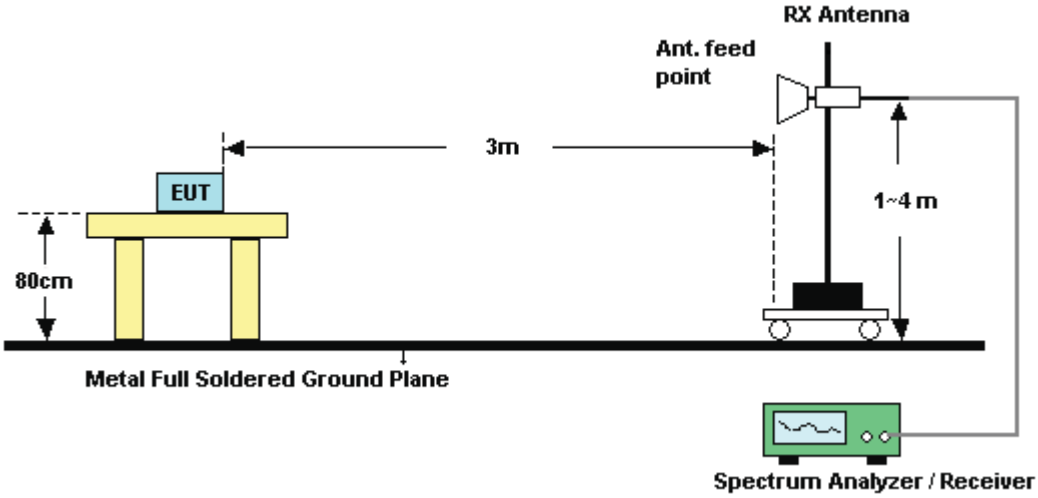
For radiated emissions below 30MHz



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

<Ant. Port 2>

Test Mode :	802.11b	**Temperature :**	23~24°C
Test Band :	Low	**Relative Humidity :**	45~46%
Test Channel :	01	**Test Engineer :**	Gavin Wu

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
2387.13	50.41	-23.59	74	46.37	31.92	6.45	34.33	124	1	Peak
2388.3	38.34	-15.66	54	34.3	31.92	6.45	34.33	124	1	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
2350.77	49.8	-24.2	74	45.88	31.88	6.38	34.34	153	82	Peak
2390	37.99	-16.01	54	33.95	31.92	6.45	34.33	153	82	Average

Test Mode :	802.11b	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	45~46%
Test Channel :	11	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.1	52.9	-21.1	74	48.62	31.99	6.59	34.3	125	3	Peak
2483.5	41.17	-12.83	54	36.89	31.99	6.59	34.3	125	3	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	50.83	-23.17	74	46.55	31.99	6.59	34.3	147	80	Peak
2483.5	38.99	-15.01	54	34.71	31.99	6.59	34.3	147	80	Average

Test Mode :	802.11g	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	45~46%
Test Channel :	01	Test Engineer :	Gavin Wu

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	68.87	-5.13	74	64.83	31.92	6.45	34.33	106	143	Peak
2390	46.22	-7.78	54	42.18	31.92	6.45	34.33	106	143	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	64.09	-9.91	74	60.05	31.92	6.45	34.33	101	138	Peak
2390	43.09	-10.91	54	39.05	31.92	6.45	34.33	101	138	Average

Test Mode :	802.11g	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	45~46%
Test Channel :	11	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.77	72.85	-1.15	74	68.57	31.99	6.59	34.3	101	159	Peak
2483.5	52.51	-1.49	54	48.23	31.99	6.59	34.3	101	159	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	66.13	-7.87	74	61.85	31.99	6.59	34.3	100	123	Peak
2483.5	46.51	-7.49	54	42.23	31.99	6.59	34.3	100	123	Average

SISO <Ant. Port 2>

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	45~46%
Test Channel :	01	Test Engineer :	Gavin Wu

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	66.66	-7.34	74	62.62	31.92	6.45	34.33	189	345	Peak
2390	41.2	-12.8	54	37.16	31.92	6.45	34.33	189	345	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.4	65.38	-8.62	74	61.34	31.92	6.45	34.33	140	278	Peak
2390	40.33	-13.67	54	36.29	31.92	6.45	34.33	140	278	Average

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	45~46%
Test Channel :	11	Test Engineer :	Gavin Wu

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
2485.06	72.47	-1.53	74	68.19	31.99	6.59	34.3	100	130	Peak
2483.5	48.76	-5.24	54	44.48	31.99	6.59	34.3	100	130	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	66.44	-7.56	74	62.16	31.99	6.59	34.3	135	262	Peak
2483.5	44.62	-9.38	54	40.34	31.99	6.59	34.3	135	262	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	45~46%
Test Channel :	03	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.42	66.04	-7.96	74	62.02	31.9	6.45	34.33	197	170	Peak
2388.75	42.37	-11.63	54	38.33	31.92	6.45	34.33	197	170	Average
2489.71	51.03	-22.97	74	46.74	32	6.59	34.3	197	170	Peak
2483.74	37.19	-16.81	54	32.91	31.99	6.59	34.3	197	170	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
2385.24	60.93	-13.07	74	56.91	31.9	6.45	34.33	196	262	Peak
2390	40.33	-13.67	54	36.29	31.92	6.45	34.33	196	262	Average
2484.19	54.45	-19.55	74	50.17	31.99	6.59	34.3	196	262	Peak
2486.56	37.66	-16.34	54	33.38	31.99	6.59	34.3	196	262	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	45~46%
Test Channel :	09	Test Engineer :	Gavin Wu

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
2386.68	50.64	-23.36	74	46.6	31.92	6.45	34.33	100	129	Peak
2389.11	37.83	-16.17	54	33.79	31.92	6.45	34.33	100	129	Average
2487.58	72.96	-1.04	74	68.67	32	6.59	34.3	100	129	Peak
2483.77	52.43	-1.57	54	48.15	31.99	6.59	34.3	100	129	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2382.36	49.19	-24.81	74	45.17	31.9	6.45	34.33	194	258	Peak
2390	37.27	-16.73	54	33.23	31.92	6.45	34.33	194	258	Average
2487.37	67.51	-6.49	74	63.23	31.99	6.59	34.3	194	258	Peak
2483.5	48.28	-5.72	54	44	31.99	6.59	34.3	194	258	Average

MIMO Ant. <Port 1+2>

Test Mode :	802.11n HT20	**Temperature :**	23~24°C
Test Band :	Low	**Relative Humidity :**	45~46%
Test Channel :	01	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.75	66.68	-7.32	74	62.64	31.92	6.45	34.33	109	149	Peak
2390	46.52	-7.48	54	42.48	31.92	6.45	34.33	109	149	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.94	61.24	-12.76	74	57.2	31.92	6.45	34.33	101	129	Peak
2390	43.33	-10.67	54	39.29	31.92	6.45	34.33	101	129	Average

Test Mode :	802.11n HT20	**Temperature :**	23~24°C
Test Band :	High	**Relative Humidity :**	45~46%
Test Channel :	11	**Test Engineer :**	Gavin Wu

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
2483.74	71.59	-2.41	74	67.31	31.99	6.59	34.3	101	143	Peak
2483.5	52.01	-1.99	54	47.73	31.99	6.59	34.3	101	143	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	66.88	-7.12	74	62.6	31.99	6.59	34.3	100	124	Peak
2483.5	48.01	-5.99	54	43.73	31.99	6.59	34.3	100	124	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	45~46%
Test Channel :	03	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.15	65.13	-8.87	74	61.11	31.9	6.45	34.33	108	148	Peak
2390	46.92	-7.08	54	42.88	31.92	6.45	34.33	108	148	Average
2484.85	54.53	-19.47	74	50.25	31.99	6.59	34.3	108	148	Peak
2484.19	38.94	-15.06	54	34.66	31.99	6.59	34.3	108	148	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384.88	63.79	-10.21	74	59.77	31.9	6.45	34.33	101	124	Peak
2390	44.79	-9.21	54	40.75	31.92	6.45	34.33	101	124	Average
2486.38	54.3	-19.7	74	50.02	31.99	6.59	34.3	101	124	Peak
2484.01	38.95	-15.05	54	34.67	31.99	6.59	34.3	101	124	Average

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	45~46%
Test Channel :	09	Test Engineer :	Gavin Wu

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
2349.42	50.58	-23.42	74	46.66	31.88	6.38	34.34	130	146	Peak
2385.6	38.81	-15.19	54	34.77	31.92	6.45	34.33	130	146	Average
2489.2	61.85	-12.15	74	57.56	32	6.59	34.3	130	146	Peak
2483.5	46.04	-7.96	54	41.76	31.99	6.59	34.3	130	146	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
2328.45	50.73	-23.27	74	46.87	31.86	6.35	34.35	102	127	Peak
2385.51	38.84	-15.16	54	34.8	31.92	6.45	34.33	102	127	Average
2483.98	63.77	-10.23	74	59.49	31.99	6.59	34.3	102	127	Peak
2483.5	46.68	-7.32	54	42.4	31.99	6.59	34.3	102	127	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.

<Ant. Port 2>

Test Mode :	802.11b	**Temperature :**	23~24°C
Test Channel :	01	**Relative Humidity :**	45~46%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 2413 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2413	94.63	-	-	90.54	31.93	6.49	34.33	124	1	Average
2413	99.43	-	-	95.34	31.93	6.49	34.33	124	1	Peak
4824	47.88	-26.12	74	58.9	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11b	**Temperature :**	23~24°C
Test Channel :	01	**Relative Humidity :**	45~46%
Test Engineer :	Gavin Wu	**Polarization :**	Vertical
Remark :	1. 2413 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2413	92.82	-	-	88.73	31.93	6.49	34.33	153	82	Average
2413	97.84	-	-	93.75	31.93	6.49	34.33	153	82	Peak
4824	47.72	-26.28	74	58.74	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11b	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2438 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2438	95.05	-	-	90.89	31.96	6.52	34.32	123	1	Average
2438	99.72	-	-	95.56	31.96	6.52	34.32	123	1	Peak
4875	47.95	-26.05	74	59.08	34.37	10.18	55.68	100	0	Peak
7311	49.28	-24.72	74	59.01	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11b	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2436 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2436	92.67	-	-	88.53	31.94	6.52	34.32	180	84	Average
2436	97.37	-	-	93.23	31.94	6.52	34.32	180	84	Peak
4875	47.96	-26.04	74	59.09	34.37	10.18	55.68	100	0	Peak
7311	49.52	-24.48	74	59.25	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11b	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2463 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
229.8	32.78	-13.22	46	52.67	10.2	1.65	31.74	-	-	Peak
235.2	34.76	-11.24	46	53.91	10.92	1.67	31.74	-	-	Peak
241.14	35.41	-10.59	46	53.87	11.58	1.7	31.74	100	254	Peak
366.5	26.24	-19.76	46	41.06	14.86	2.11	31.79	-	-	Peak
664	23.85	-22.15	46	33.6	19.45	2.83	32.03	-	-	Peak
721.4	27.01	-18.99	46	36.22	19.84	2.96	32.01	-	-	Peak
2463	95.69	-	-	91.47	31.97	6.56	34.31	125	3	Average
2463	100.4	-	-	96.18	31.97	6.56	34.31	125	3	Peak
4923	48.34	-25.66	74	59.58	34.34	10.2	55.78	100	0	Peak
7386	49.41	-24.59	74	59.04	35.56	10.92	56.11	100	0	Peak

Test Mode :	802.11b	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2463 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
166.35	25.8	-17.7	43.5	46.11	9.86	1.58	31.75	-	-	Peak
237.36	28.76	-17.24	46	47.66	11.16	1.68	31.74	-	-	Peak
244.65	28.32	-17.68	46	46.5	11.85	1.71	31.74	-	-	Peak
445.6	23.09	-22.91	46	35.81	16.85	2.3	31.87	-	-	Peak
527.5	22.81	-23.19	46	34.02	18.24	2.52	31.97	-	-	Peak
664	30.82	-15.18	46	40.57	19.45	2.83	32.03	102	316	Peak
2463	93.63	-	-	89.41	31.97	6.56	34.31	147	80	Average
2463	98.34	-	-	94.12	31.97	6.56	34.31	147	80	Peak
4923	47.98	-26.02	74	59.22	34.34	10.2	55.78	100	0	Peak
7386	49.96	-24.04	74	59.59	35.56	10.92	56.11	100	0	Peak

Test Mode :	802.11g	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2410	92.72	-	-	88.63	31.93	6.49	34.33	106	143	Average
2410	103.12	-	-	99.03	31.93	6.49	34.33	106	143	Peak
4824	47.79	-26.21	74	58.81	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11g	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2414	89.65	-	-	85.56	31.93	6.49	34.33	101	138	Average
2414	99.87	-	-	95.78	31.93	6.49	34.33	101	138	Peak
4824	47.56	-26.44	74	58.58	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11g	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2438 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2438	91.2	-	-	87.03	31.96	6.52	34.31	101	133	Average
2438	101.48	-	-	97.31	31.96	6.52	34.31	101	133	Peak
4875	49.3	-24.7	74	60.43	34.37	10.18	55.68	100	0	Peak
7311	49.42	-24.58	74	59.15	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11g	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2438 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2438	89.91	-	-	85.74	31.96	6.52	34.31	100	126	Average
2438	99.42	-	-	95.25	31.96	6.52	34.31	100	126	Peak
4875	48.51	-25.49	74	59.64	34.37	10.18	55.68	100	0	Peak
7311	49.91	-24.09	74	59.64	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11g	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2460 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
238.44	35.78	-10.22	46	54.55	11.28	1.69	31.74	100	158	Peak
243.84	35.08	-10.92	46	53.36	11.76	1.7	31.74	-	-	Peak
247.35	33.65	-12.35	46	51.54	12.13	1.72	31.74	-	-	Peak
303.5	24.3	-21.7	46	40.83	13.27	1.92	31.72	-	-	Peak
716.5	26.29	-19.71	46	35.65	19.71	2.94	32.01	-	-	Peak
722.1	26.11	-19.89	46	35.3	19.85	2.96	32	-	-	Peak
2460	92.45	-	-	88.23	31.97	6.56	34.31	101	159	Average
2460	102.38	-	-	98.16	31.97	6.56	34.31	101	159	Peak

Test Mode :	802.11g	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31		

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
170.94	27.31	-16.19	43.5	47.69	9.76	1.61	31.75	100	206	Peak
237.9	28.48	-17.52	46	47.38	11.16	1.68	31.74	-	-	Peak
240.06	28.64	-17.36	46	47.2	11.49	1.69	31.74	-	-	Peak
443.5	22.96	-23.04	46	35.7	16.83	2.3	31.87	-	-	Peak
480.6	22.95	-23.05	46	34.94	17.61	2.31	31.91	-	-	Peak
665.4	27.56	-18.44	46	37.31	19.45	2.83	32.03	-	-	Peak
2464	89.78	-	-	85.55	31.97	6.56	34.3	100	123	Average
2464	99.66	-	-	95.43	31.97	6.56	34.3	100	123	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5747 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5747	102.83	-	-	89.7	35.04	11.39	33.3	100	108	Average
5747	112.51	-	-	99.38	35.04	11.39	33.3	100	108	Peak
11490	50.77	-23.23	74	55.77	37.79	11.04	53.83	100	0	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5747 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5747	96.08	-	-	82.95	35.04	11.39	33.3	101	286	Average
5747	106.22	-	-	93.09	35.04	11.39	33.3	101	286	Peak
11490	50.57	-23.43	74	55.57	37.79	11.04	53.83	100	0	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5787	101.15	-	-	87.95	35.09	11.43	33.32	100	107	Average
5787	111.06	-	-	97.86	35.09	11.43	33.32	100	107	Peak
11571	50.08	-23.92	74	54.83	37.92	11.09	53.76	100	0	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5787	97.77	-	-	84.57	35.09	11.43	33.32	101	286	Average
5787	107.98	-	-	94.78	35.09	11.43	33.32	101	286	Peak
11571	50.42	-23.58	74	55.17	37.92	11.09	53.76	100	0	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
227.64	33.29	-12.71	46	53.38	10	1.65	31.74	-	-	Peak
231.15	34.69	-11.31	46	54.46	10.32	1.65	31.74	100	159	Peak
240.6	34.68	-11.32	46	53.24	11.49	1.69	31.74	-	-	Peak
329.4	25.57	-20.43	46	41.64	13.7	1.98	31.75	-	-	Peak
646.5	22.7	-23.3	46	32.41	19.53	2.8	32.04	-	-	Peak
725.6	27.77	-18.23	46	36.89	19.91	2.97	32	-	-	Peak
5827	101.7	-	-	88.39	35.13	11.51	33.33	100	107	Average
5827	112.55	-	-	99.24	35.13	11.51	33.33	100	107	Peak
11649	50.77	-23.23	74	55.3	38.05	11.14	53.72	100	0	Peak

Test Mode :	802.11a	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
163.65	27.28	-16.22	43.5	47.56	9.94	1.53	31.75	-	-	Peak
175.8	27.55	-15.95	43.5	48.22	9.55	1.53	31.75	102	211	Peak
232.5	28.27	-17.73	46	47.79	10.56	1.66	31.74	-	-	Peak
480.6	24.76	-21.24	46	36.75	17.61	2.31	31.91	-	-	Peak
676.6	26.17	-19.83	46	35.92	19.43	2.85	32.03	-	-	Peak
872.6	25.09	-20.91	46	32.54	20.9	3.29	31.64	-	-	Peak
5827	99.85	-	-	86.54	35.13	11.51	33.33	103	124	Average
5827	109.79	-	-	96.48	35.13	11.51	33.33	103	124	Peak
11649	50.94	-23.06	74	55.47	38.05	11.14	53.72	100	0	Peak

SISO <Ant. Port 2>

Test Mode :	802.11n HT20	**Temperature :**	23~24°C
Test Channel :	01	**Relative Humidity :**	45~46%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2414	90.34	-	-	86.25	31.93	6.49	34.33	189	345	Average
2414	101.27	-	-	97.18	31.93	6.49	34.33	189	345	Peak
4824	47.38	-26.62	74	58.4	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11n HT20	**Temperature :**	23~24°C
Test Channel :	01	**Relative Humidity :**	45~46%
Test Engineer :	Gavin Wu	**Polarization :**	Vertical
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2414	87.17	-	-	83.08	31.93	6.49	34.33	140	278	Average
2414	98.29	-	-	94.2	31.93	6.49	34.33	140	278	Peak
4824	47.66	-26.34	74	58.68	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2439	89.41	-	-	85.25	31.96	6.52	34.32	186	342	Average
2439	100.11	-	-	95.95	31.96	6.52	34.32	186	342	Peak
4875	47.65	-26.35	74	58.78	34.37	10.18	55.68	100	0	Peak
7311	49.31	-24.69	74	59.04	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2439	86.83	-	-	82.67	31.96	6.52	34.32	140	278	Average
2439	97.42	-	-	93.26	31.96	6.52	34.32	140	278	Peak
4875	48.41	-25.59	74	59.54	34.37	10.18	55.68	100	0	Peak
7311	49.29	-24.71	74	59.02	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
225.75	31.78	-14.22	46	52.08	9.8	1.64	31.74	-	-	Peak
235.2	34.1	-11.9	46	53.25	10.92	1.67	31.74	100	125	Peak
244.65	34.05	-11.95	46	52.23	11.85	1.71	31.74	-	-	Peak
300	28.42	-17.58	46	45.03	13.2	1.91	31.72	-	-	Peak
665.4	25.87	-20.13	46	35.62	19.45	2.83	32.03	-	-	Peak
723.5	28.49	-17.51	46	37.65	19.87	2.97	32	-	-	Peak
2464	90.98	-	-	86.76	31.97	6.56	34.31	100	130	Average
2464	101.7	-	-	97.48	31.97	6.56	34.31	100	130	Peak
4923	47.47	-26.53	74	58.71	34.34	10.2	55.78	100	0	Peak
7386	49.14	-24.86	74	58.77	35.56	10.92	56.11	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
166.35	25.18	-18.32	43.5	45.49	9.86	1.58	31.75	-	-	Peak
178.5	27.19	-16.31	43.5	48.06	9.4	1.48	31.75	102	187	Peak
233.04	26.28	-19.72	46	45.8	10.56	1.66	31.74	-	-	Peak
480.6	25.41	-20.59	46	37.4	17.61	2.31	31.91	-	-	Peak
517	23.26	-22.74	46	34.73	17.97	2.51	31.95	-	-	Peak
664	27.03	-18.97	46	36.78	19.45	2.83	32.03	-	-	Peak
2464	88.1	-	-	83.88	31.97	6.56	34.31	135	262	Average
2464	99.09	-	-	94.87	31.97	6.56	34.31	135	262	Peak
4923	47.2	-26.8	74	58.44	34.34	10.2	55.78	100	0	Peak
7386	48.94	-25.06	74	58.57	35.56	10.92	56.11	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2424 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2424	85.3	-	-	81.19	31.94	6.49	34.32	194	170	Average
2424	96.24	-	-	92.13	31.94	6.49	34.32	194	170	Peak
4845	47.69	-26.31	74	58.75	34.39	10.17	55.62	100	0	Peak
7266	48.5	-25.5	74	58.27	35.63	10.95	56.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2424 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2424	83.59	-	-	79.48	31.94	6.49	34.32	196	262	Average
2424	94.48	-	-	90.37	31.94	6.49	34.32	196	262	Peak
4845	47.7	-26.3	74	58.76	34.39	10.17	55.62	100	0	Peak
7266	48.88	-25.12	74	58.65	35.63	10.95	56.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2439	86.1	-	-	81.94	31.96	6.52	34.32	100	349	Average
2439	94.87	-	-	90.71	31.96	6.52	34.32	100	349	Peak
4875	47.43	-26.57	74	58.56	34.37	10.18	55.68	100	0	Peak
7311	48.99	-25.01	74	58.72	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2439	85.19	-	-	81.03	31.96	6.52	34.32	196	262	Average
2439	95.77	-	-	91.61	31.96	6.52	34.32	196	262	Peak
4875	47.86	-26.14	74	58.99	34.37	10.18	55.68	100	0	Peak
7311	49.05	-24.95	74	58.78	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2454 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
235.2	33.55	-12.45	46	52.7	10.92	1.67	31.74	-	-	Peak
239.25	33.77	-12.23	46	52.42	11.4	1.69	31.74	100	143	Peak
243.84	33.61	-12.39	46	51.89	11.76	1.7	31.74	-	-	Peak
664	27.34	-18.66	46	37.09	19.45	2.83	32.03	-	-	Peak
716.5	27.38	-18.62	46	36.74	19.71	2.94	32.01	-	-	Peak
725.6	29.29	-16.71	46	38.41	19.91	2.97	32	-	-	Peak
2454	87.86	-	-	83.64	31.97	6.56	34.31	100	129	Average
2454	98.44	-	-	94.22	31.97	6.56	34.31	100	129	Peak
4905	46.75	-27.25	74	57.94	34.35	10.2	55.74	100	0	Peak
7356	48.6	-25.4	74	58.28	35.58	10.92	56.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2454 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
170.4	25.25	-18.25	43.5	45.63	9.76	1.61	31.75	-	-	Peak
174.45	25.35	-18.15	43.5	45.95	9.6	1.55	31.75	-	-	Peak
182.55	24.34	-19.16	43.5	45.45	9.18	1.46	31.75	-	-	Peak
480.6	24.84	-21.16	46	36.83	17.61	2.31	31.91	-	-	Peak
508.6	26.18	-19.82	46	37.74	17.88	2.5	31.94	-	-	Peak
665.4	27.92	-18.08	46	37.67	19.45	2.83	32.03	100	128	Peak
2454	84.65	-	-	80.43	31.97	6.56	34.31	194	258	Average
2454	94.77	-	-	90.55	31.97	6.56	34.31	194	258	Peak
4905	46.74	-27.26	74	57.93	34.35	10.2	55.74	100	0	Peak
7356	48.22	-25.78	74	57.9	35.58	10.92	56.18	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5750 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5750	98.67	-	-	85.54	35.04	11.39	33.3	200	50	Average
5750	107.85	-	-	94.72	35.04	11.39	33.3	200	50	Peak
11490	49.38	-24.62	74	54.38	37.79	11.04	53.83	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5747 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5747	95.83	-	-	82.7	35.04	11.39	33.3	128	301	Average
5747	106.41	-	-	93.28	35.04	11.39	33.3	128	301	Peak
11490	50.13	-23.87	74	55.13	37.79	11.04	53.83	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5787	98.86	-	-	85.66	35.09	11.43	33.32	200	81	Average
5787	109.05	-	-	95.85	35.09	11.43	33.32	200	81	Peak
11571	50.12	-23.88	74	54.87	37.92	11.09	53.76	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5787	97.18	-	-	83.98	35.09	11.43	33.32	128	301	Average
5787	107.39	-	-	94.19	35.09	11.43	33.32	128	301	Peak
11571	50.58	-23.42	74	55.33	37.92	11.09	53.76	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
225.75	31.55	-14.45	46	51.85	9.8	1.64	31.74	-	-	Peak
232.5	34.04	-11.96	46	53.56	10.56	1.66	31.74	100	249	Peak
242.76	32.69	-13.31	46	51.06	11.67	1.7	31.74	-	-	Peak
300	27.51	-18.49	46	44.12	13.2	1.91	31.72	-	-	Peak
665.4	29.01	-16.99	46	38.76	19.45	2.83	32.03	-	-	Peak
725.6	28.79	-17.21	46	37.91	19.91	2.97	32	-	-	Peak
5827	100.36	-	-	87.05	35.13	11.51	33.33	200	81	Average
5827	111.25	-	-	97.94	35.13	11.51	33.33	200	81	Peak
11649	50.05	-23.95	74	54.58	38.05	11.14	53.72	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
174.45	26.21	-17.29	43.5	46.81	9.6	1.55	31.75	100	152	Peak
183.36	23.97	-19.53	43.5	45.14	9.12	1.46	31.75	-	-	Peak
186.6	22.95	-20.55	43.5	44.21	9.02	1.47	31.75	-	-	Peak
480.6	24.31	-21.69	46	36.3	17.61	2.31	31.91	-	-	Peak
665.4	28.44	-17.56	46	38.19	19.45	2.83	32.03	-	-	Peak
723.5	23.39	-22.61	46	32.55	19.87	2.97	32	-	-	Peak
5827	97.41	-	-	84.1	35.13	11.51	33.33	102	244	Average
5827	107.75	-	-	94.44	35.13	11.51	33.33	102	244	Peak
11649	50.79	-23.21	74	55.32	38.05	11.14	53.72	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5757 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5757	96.43	-	-	83.29	35.06	11.39	33.31	100	164	Average
5757	106.98	-	-	93.84	35.06	11.39	33.31	100	164	Peak
11511	50.24	-23.76	74	55.18	37.8	11.06	53.8	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5757 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5757	92.85	-	-	79.71	35.06	11.39	33.31	125	241	Average
5757	103.61	-	-	90.47	35.06	11.39	33.31	125	241	Peak
11511	50.62	-23.38	74	55.56	37.8	11.06	53.8	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5797 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
233.04	33.17	-12.83	46	52.69	10.56	1.66	31.74	-	-	Peak
237.36	33.94	-12.06	46	52.84	11.16	1.68	31.74	100	151	Peak
244.65	32.46	-13.54	46	50.64	11.85	1.71	31.74	-	-	Peak
573	21.97	-24.03	46	32.01	19.33	2.65	32.02	-	-	Peak
664	24.29	-21.71	46	34.04	19.45	2.83	32.03	-	-	Peak
721.4	28.42	-17.58	46	37.63	19.84	2.96	32.01	-	-	Peak
5797	100.62	-	-	87.38	35.09	11.47	33.32	100	163	Average
5797	110.5	-	-	97.26	35.09	11.47	33.32	100	163	Peak
11589	50.19	-23.81	74	54.88	37.96	11.1	53.75	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5797 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
123.96	21.26	-22.24	43.5	39.73	12.04	1.24	31.75	-	-	Peak
168.24	23.67	-19.83	43.5	43.99	9.82	1.61	31.75	-	-	Peak
175.8	25.65	-17.85	43.5	46.32	9.55	1.53	31.75	-	-	Peak
300	24.23	-21.77	46	40.84	13.2	1.91	31.72	-	-	Peak
480.6	25.73	-20.27	46	37.72	17.61	2.31	31.91	-	-	Peak
665.4	28.52	-17.48	46	38.27	19.45	2.83	32.03	103	167	Peak
5797	94.11	-	-	80.87	35.09	11.47	33.32	125	241	Average
5797	105.1	-	-	91.86	35.09	11.47	33.32	125	241	Peak
11589	50.88	-23.12	74	55.57	37.96	11.1	53.75	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	23~24°C
Test Channel :	155	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5777 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
224.94	31.34	-14.66	46	51.74	9.7	1.64	31.74	-	-	Peak
232.77	32.42	-13.58	46	51.94	10.56	1.66	31.74	-	-	Peak
246	33.34	-12.66	46	51.32	12.04	1.72	31.74	100	182	Peak
303.5	24.84	-21.16	46	41.37	13.27	1.92	31.72	-	-	Peak
664	25.23	-20.77	46	34.98	19.45	2.83	32.03	-	-	Peak
725.6	27.64	-18.36	46	36.76	19.91	2.97	32	-	-	Peak
5777	94.29	-	-	81.09	35.08	11.43	33.31	100	165	Average
5777	103.86	-	-	90.66	35.08	11.43	33.31	100	165	Peak
11550	50.42	-23.58	74	55.21	37.89	11.09	53.77	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	23~24°C
Test Channel :	155	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5777 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
165.54	24.65	-18.85	43.5	44.95	9.88	1.57	31.75	-	-	Peak
173.64	27.02	-16.48	43.5	47.57	9.64	1.56	31.75	101	174	Peak
177.96	25.27	-18.23	43.5	46.14	9.4	1.48	31.75	-	-	Peak
480.6	24.94	-21.06	46	36.93	17.61	2.31	31.91	-	-	Peak
665.4	29.18	-16.82	46	38.93	19.45	2.83	32.03	-	-	Peak
721.4	24.51	-21.49	46	33.72	19.84	2.96	32.01	-	-	Peak
5777	89.97	-	-	76.77	35.08	11.43	33.31	104	243	Average
5777	100.71	-	-	87.51	35.08	11.43	33.31	104	243	Peak
11550	50.81	-23.19	74	55.6	37.89	11.09	53.77	100	0	Peak

MIMO <Ant. Port 1+2>

Test Mode :	802.11n HT20	**Temperature :**	23~24°C
Test Channel :	01	**Relative Humidity :**	45~46%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2410	93.18	-	-	89.09	31.93	6.49	34.33	109	149	Average
2410	103.94	-	-	99.85	31.93	6.49	34.33	109	149	Peak
4824	47.57	-26.43	74	58.59	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11n HT20	**Temperature :**	23~24°C
Test Channel :	01	**Relative Humidity :**	45~46%
Test Engineer :	Gavin Wu	**Polarization :**	Vertical
Remark :	1. 2410 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2410	89.23	-	-	85.14	31.93	6.49	34.33	101	129	Average
2410	100.67	-	-	96.58	31.93	6.49	34.33	101	129	Peak
4824	48.66	-25.34	74	59.68	34.4	10.17	55.59	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2438 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2438	94.22	-	-	90.05	31.96	6.52	34.31	109	148	Average
2438	104.98	-	-	100.81	31.96	6.52	34.31	109	148	Peak
4875	48.01	-25.99	74	59.14	34.37	10.18	55.68	100	0	Peak
7311	49.69	-24.31	74	59.42	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2438 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2438	92.31	-	-	88.14	31.96	6.52	34.31	100	142	Average
2438	102.92	-	-	98.75	31.96	6.52	34.31	100	142	Peak
4875	48.18	-25.82	74	59.31	34.37	10.18	55.68	100	0	Peak
7311	49.33	-24.67	74	59.06	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
234.66	35.1	-10.9	46	54.37	10.8	1.67	31.74	-	-	Peak
241.14	35.52	-10.48	46	53.98	11.58	1.7	31.74	100	209	Peak
250.05	33.63	-12.37	46	51.24	12.4	1.73	31.74	-	-	Peak
303.5	24.72	-21.28	46	41.25	13.27	1.92	31.72	-	-	Peak
665.4	25.78	-20.22	46	35.53	19.45	2.83	32.03	-	-	Peak
721.4	26.65	-19.35	46	35.86	19.84	2.96	32.01	-	-	Peak
2464	90.39	-	-	86.16	31.97	6.56	34.3	101	143	Average
2464	101.46	-	-	97.23	31.97	6.56	34.3	101	143	Peak
4923	48.06	-25.94	74	59.3	34.34	10.2	55.78	100	0	Peak
7386	49.41	-24.59	74	59.04	35.56	10.92	56.11	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
125.04	23.77	-19.73	43.5	42.27	12	1.25	31.75	-	-	Peak
173.1	26.57	-16.93	43.5	47.12	9.64	1.56	31.75	102	169	Peak
241.95	28.52	-17.48	46	46.89	11.67	1.7	31.74	-	-	Peak
665.4	25.53	-20.47	46	35.28	19.45	2.83	32.03	-	-	Peak
833.4	27.69	-18.31	46	35.7	20.63	3.17	31.81	-	-	Peak
973.4	29.87	-24.13	54	35.99	21.38	3.35	30.85	-	-	Peak
2464	88.2	-	-	83.97	31.97	6.56	34.3	100	124	Average
2464	98.81	-	-	94.58	31.97	6.56	34.3	100	124	Peak
4923	47.74	-26.26	74	58.98	34.34	10.2	55.78	100	0	Peak
7386	49.63	-24.37	74	59.26	35.56	10.92	56.11	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2420 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
232.5	34.06	-11.94	46	53.58	10.56	1.66	31.74	-	-	Peak
237.9	35.53	-10.47	46	54.43	11.16	1.68	31.74	100	237	Peak
243.84	35.13	-10.87	46	53.41	11.76	1.7	31.74	-	-	Peak
364.4	24	-22	46	38.82	14.85	2.11	31.78	-	-	Peak
665.4	24.23	-21.77	46	33.98	19.45	2.83	32.03	-	-	Peak
716.5	26.83	-19.17	46	36.19	19.71	2.94	32.01	-	-	Peak
2420	89.13	-	-	84.99	31.94	6.52	34.32	108	148	Average
2420	99.65	-	-	95.51	31.94	6.52	34.32	108	148	Peak
4844	49.23	-24.77	74	60.29	34.39	10.17	55.62	100	0	Peak
7266	49.45	-24.55	74	59.22	35.63	10.95	56.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2424 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
171.75	25.38	-18.12	43.5	45.81	9.72	1.6	31.75	-	-	Peak
237.36	28.61	-17.39	46	47.51	11.16	1.68	31.74	-	-	Peak
241.95	29.17	-16.83	46	47.54	11.67	1.7	31.74	102	309	Peak
454	22.66	-23.34	46	35.2	17.02	2.32	31.88	-	-	Peak
667.5	29.03	-16.97	46	38.76	19.47	2.83	32.03	-	-	Peak
914.6	24.86	-21.14	46	31.84	21.05	3.36	31.39	-	-	Peak
2424	87.62	-	-	83.46	31.96	6.52	34.32	101	124	Average
2424	98.95	-	-	94.79	31.96	6.52	34.32	101	124	Peak
4844	48.22	-25.78	74	59.28	34.39	10.17	55.62	100	0	Peak
7266	49.38	-24.62	74	59.15	35.63	10.95	56.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2439	92.11	-	-	87.95	31.96	6.52	34.32	109	148	Average
2439	102.31	-	-	98.15	31.96	6.52	34.32	109	148	Peak
4874	48.14	-25.86	74	59.27	34.37	10.18	55.68	100	0	Peak
7311	49.12	-24.88	74	58.85	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2439	88.21	-	-	84.04	31.96	6.52	34.31	101	125	Average
2439	99.26	-	-	95.09	31.96	6.52	34.31	101	125	Peak
4874	48.28	-25.72	74	59.41	34.37	10.18	55.68	100	0	Peak
7311	49.33	-24.67	74	59.06	35.61	10.94	56.28	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 2454 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2454	89.6	-	-	85.38	31.97	6.56	34.31	130	146	Average
2454	100.34	-	-	96.12	31.97	6.56	34.31	130	146	Peak
4905	47.97	-26.03	74	59.16	34.35	10.2	55.74	100	0	Peak
7356	49.29	-24.71	74	58.97	35.58	10.92	56.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 2450 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
2450	88.85	-	-	84.68	31.96	6.52	34.31	102	127	Average
2450	99.71	-	-	95.54	31.96	6.52	34.31	102	127	Peak
4905	47.47	-26.53	74	58.66	34.35	10.2	55.74	100	0	Peak
7356	49.33	-24.67	74	59.01	35.58	10.92	56.18	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5747 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
229.53	33.38	-12.62	46	53.27	10.2	1.65	31.74	-	-	Peak
233.04	34.44	-11.56	46	53.96	10.56	1.66	31.74	100	138	Peak
237.36	34.11	-11.89	46	53.01	11.16	1.68	31.74	-	-	Peak
300	26.37	-19.63	46	42.98	13.2	1.91	31.72	-	-	Peak
366.5	24.42	-21.58	46	39.24	14.86	2.11	31.79	-	-	Peak
716.5	27.39	-18.61	46	36.75	19.71	2.94	32.01	-	-	Peak
5747	100.18	-	-	87.05	35.04	11.39	33.3	108	107	Average
5747	111.28	-	-	98.15	35.04	11.39	33.3	108	107	Peak
11490	50.33	-23.67	74	55.33	37.79	11.04	53.83	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5747 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
161.76	26.65	-16.85	43.5	46.88	10.02	1.5	31.75	104	228	Peak
169.86	26.43	-17.07	43.5	46.75	9.8	1.63	31.75	-	-	Peak
233.04	27.03	-18.97	46	46.55	10.56	1.66	31.74	-	-	Peak
480.6	25.03	-20.97	46	37.02	17.61	2.31	31.91	-	-	Peak
664	24.93	-21.07	46	34.68	19.45	2.83	32.03	-	-	Peak
945.4	28.44	-17.56	46	34.9	21.3	3.35	31.11	-	-	Peak
5747	98.19	-	-	85.06	35.04	11.39	33.3	102	301	Average
5747	108.25	-	-	95.12	35.04	11.39	33.3	102	301	Peak
11490	50.61	-23.39	74	55.61	37.79	11.04	53.83	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5787	100.1	-	-	86.9	35.09	11.43	33.32	106	106	Average
5787	110.72	-	-	97.52	35.09	11.43	33.32	106	106	Peak
11571	50	-24	74	54.75	37.92	11.09	53.76	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5787 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5787	98.23	-	-	85.03	35.09	11.43	33.32	102	301	Average
5787	110.23	-	-	97.03	35.09	11.43	33.32	102	301	Peak
11570	50.5	-23.5	74	55.25	37.92	11.09	53.76	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5827	102.18	-	-	88.87	35.13	11.51	33.33	106	106	Average
5827	113.29	-	-	99.98	35.13	11.51	33.33	106	106	Peak
11650	50.34	-23.66	74	54.87	38.05	11.14	53.72	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5827 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5827	96.95	-	-	83.64	35.13	11.51	33.33	102	301	Average
5827	108.32	-	-	95.01	35.13	11.51	33.33	102	301	Peak
11650	50.54	-23.46	74	55.07	38.05	11.14	53.72	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5757 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5757	96.69	-	-	83.55	35.06	11.39	33.31	107	106	Average
5757	107.9	-	-	94.76	35.06	11.39	33.31	107	106	Peak
11510	50.41	-23.59	74	55.35	37.8	11.06	53.8	100	0	Peak
17265	50.23	-23.77	74	50.26	41.07	12.33	53.43	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5757 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
5757	96.48	-	-	83.34	35.06	11.39	33.31	102	301	Average
5757	106.75	-	-	93.61	35.06	11.39	33.31	102	301	Peak
11510	50.58	-23.42	74	55.52	37.8	11.06	53.8	100	0	Peak
17265	50.33	-23.67	74	50.36	41.07	12.33	53.43	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5797 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
224.94	31.39	-14.61	46	51.79	9.7	1.64	31.74	-	-	Peak
232.5	32.99	-13.01	46	52.51	10.56	1.66	31.74	-	-	Peak
240.6	34.01	-11.99	46	52.57	11.49	1.69	31.74	100	253	Peak
300	27.31	-18.69	46	43.92	13.2	1.91	31.72	-	-	Peak
366.5	23.66	-22.34	46	38.48	14.86	2.11	31.79	-	-	Peak
723.5	28.21	-17.79	46	37.37	19.87	2.97	32	-	-	Peak
5797	97.15	-	-	83.91	35.09	11.47	33.32	107	106	Average
5797	108.27	-	-	95.03	35.09	11.47	33.32	107	106	Peak
11590	50.6	-23.4	74	55.29	37.96	11.1	53.75	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5797 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
168.24	27.71	-15.79	43.5	48.03	9.82	1.61	31.75	102	159	Peak
177.96	25.68	-17.82	43.5	46.55	9.4	1.48	31.75	-	-	Peak
248.16	26.81	-19.19	46	44.61	12.22	1.72	31.74	-	-	Peak
366.5	22.33	-23.67	46	37.15	14.86	2.11	31.79	-	-	Peak
480.6	24.78	-21.22	46	36.77	17.61	2.31	31.91	-	-	Peak
665.4	28.48	-17.52	46	38.23	19.45	2.83	32.03	-	-	Peak
5797	94.64	-	-	81.4	35.09	11.47	33.32	100	296	Average
5797	105.19	-	-	91.95	35.09	11.47	33.32	100	296	Peak
11590	50.32	-23.68	74	55.01	37.96	11.1	53.75	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	23~24°C
Test Channel :	155	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5777 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
227.64	33.26	-12.74	46	53.35	10	1.65	31.74	-	-	Peak
232.5	34.67	-11.33	46	54.19	10.56	1.66	31.74	100	157	Peak
237.36	33.58	-12.42	46	52.48	11.16	1.68	31.74	-	-	Peak
301.4	25.68	-20.32	46	42.25	13.24	1.91	31.72	-	-	Peak
342	25.25	-20.75	46	40.89	14.1	2.02	31.76	-	-	Peak
718.6	27.78	-18.22	46	37.07	19.77	2.95	32.01	-	-	Peak
5777	92.44	-	-	79.24	35.08	11.43	33.31	109	109	Average
5777	102.78	-	-	89.58	35.08	11.43	33.31	109	109	Peak
11550	50.34	-23.66	74	55.13	37.89	11.09	53.77	100	0	Peak

Test Mode :	802.11n VHT80	Temperature :	23~24°C
Test Channel :	155	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5777 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit. 3. No spurious emissions are detected other than listed points as below.		

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
160.14	24.9	-18.6	43.5	45.08	10.1	1.47	31.75	-	-	Peak
163.65	26.27	-17.23	43.5	46.55	9.94	1.53	31.75	100	183	Peak
232.5	27.54	-18.46	46	47.06	10.56	1.66	31.74	-	-	Peak
480.6	24.33	-21.67	46	36.32	17.61	2.31	31.91	-	-	Peak
665.4	26.07	-19.93	46	35.82	19.45	2.83	32.03	-	-	Peak
923	27.59	-18.41	46	34.42	21.13	3.36	31.32	-	-	Peak
5777	92.21	-	-	79.01	35.08	11.43	33.31	100	309	Average
5777	103.54	-	-	90.34	35.08	11.43	33.31	100	309	Peak
11550	50.49	-23.51	74	55.28	37.89	11.09	53.77	100	0	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

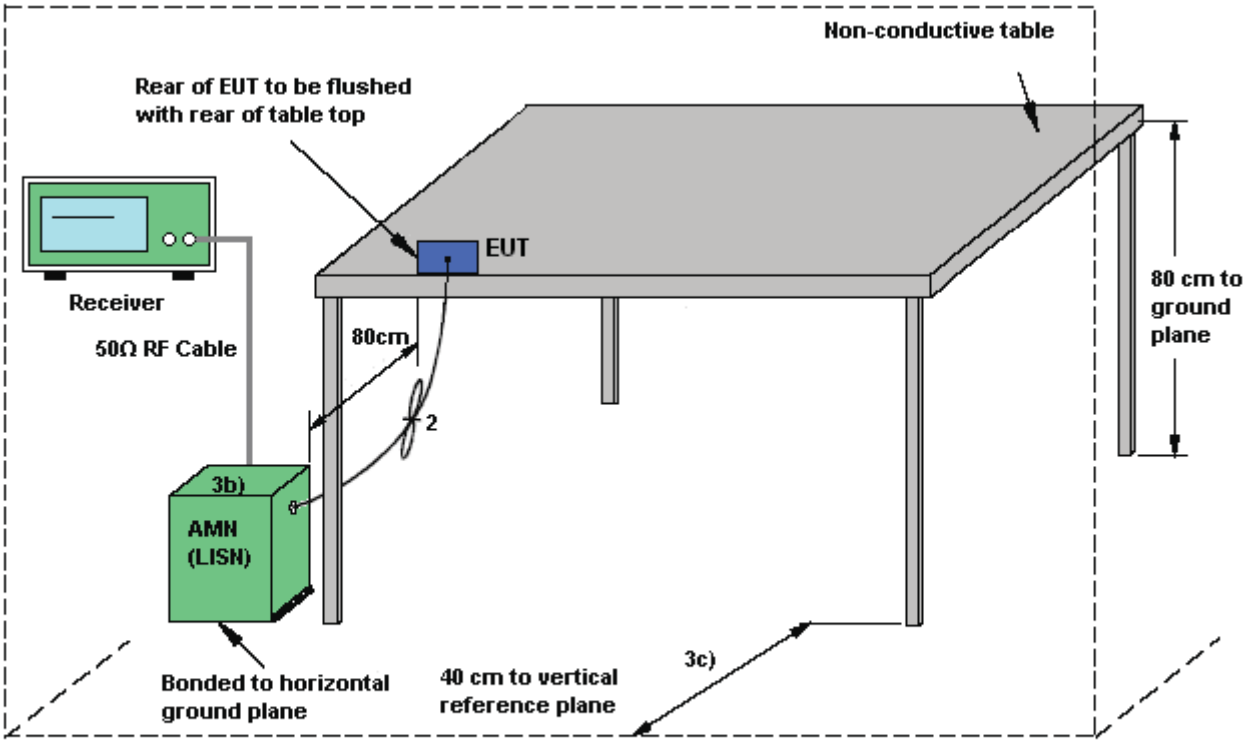
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

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

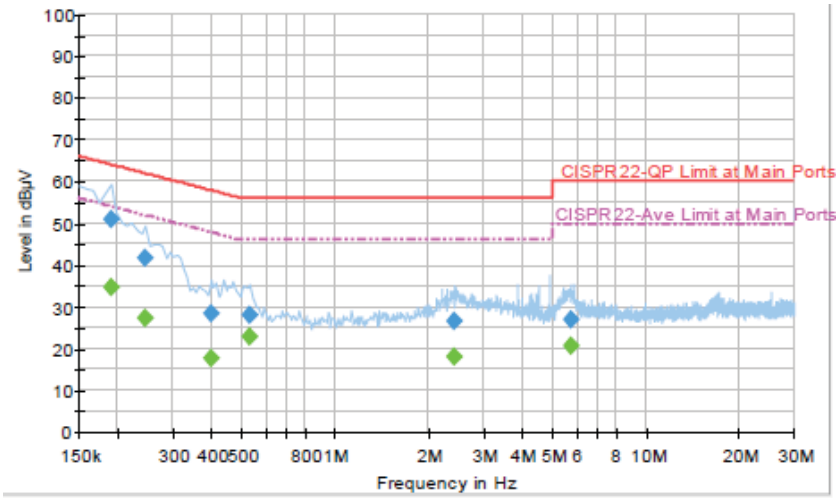
3.6.4 Test Setup



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 :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (2.4GHz) Link + USB Cable (Charging from Notebook)		



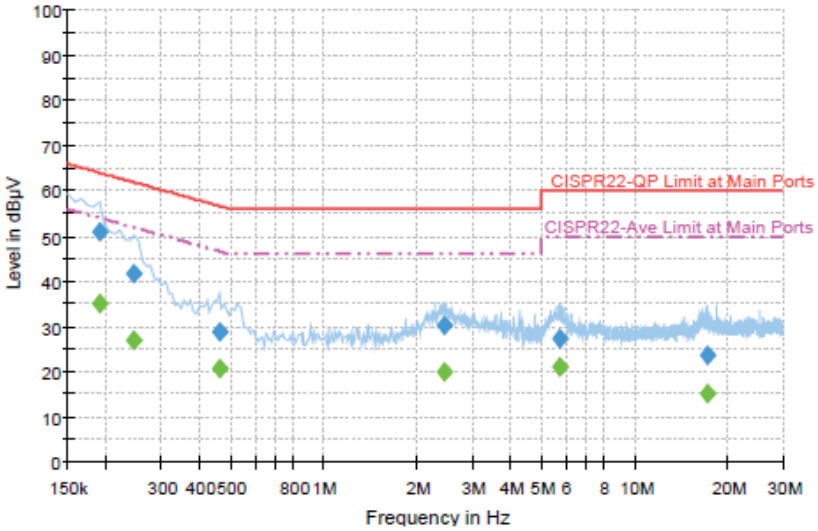
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	51.5	Off	L1	19.4	12.5	64.0
0.246000	41.9	Off	L1	19.5	20.0	61.9
0.398000	28.4	Off	L1	19.6	29.5	57.9
0.534000	27.9	Off	L1	19.5	28.1	56.0
2.414000	26.5	Off	L1	19.5	29.5	56.0
5.718000	26.9	Off	L1	19.6	33.1	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	34.5	Off	L1	19.4	19.5	54.0
0.246000	27.5	Off	L1	19.5	24.4	51.9
0.398000	17.5	Off	L1	19.6	30.4	47.9
0.534000	22.9	Off	L1	19.5	23.1	46.0
2.414000	18.1	Off	L1	19.5	27.9	46.0
5.718000	20.7	Off	L1	19.6	29.3	50.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN (2.4GHz) Link + USB Cable (Charging from Notebook)		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	51.0	Off	N	19.4	13.0	64.0
0.246000	41.8	Off	N	19.5	20.1	61.9
0.462000	28.8	Off	N	19.5	27.9	56.7
2.438000	30.1	Off	N	19.6	25.9	56.0
5.726000	27.4	Off	N	19.6	32.6	60.0
17.134000	23.7	Off	N	19.8	36.3	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	35.1	Off	N	19.4	18.9	54.0
0.246000	26.9	Off	N	19.5	25.0	51.9
0.462000	20.7	Off	N	19.5	26.0	46.7
2.438000	20.1	Off	N	19.6	25.9	46.0
5.726000	20.9	Off	N	19.6	29.1	50.0
17.134000	15.2	Off	N	19.8	34.8	50.0

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

Non-standard antenna connector 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 1	Chain Port 2	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	3.33	3.47	6.41	6.41	0.41	0.41
5 GHz	2.42	4.66	6.62	6.62	0.62	0.62

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	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Feb. 27, 2014~ Mar. 14, 2014	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Aug. 17, 2013	Feb. 27, 2014~ Mar. 14, 2014	Aug. 16, 2014	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 17, 2013	Feb. 27, 2014~ Mar. 14, 2014	Aug. 16, 2014	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Feb. 26, 2014	Nov. 14, 2014	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Feb. 26, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Feb. 26, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Feb. 26, 2014	N/A	Conduction (CO05-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9kHz ~ 26.5GHz	Dec. 02, 2013	Feb. 28, 2014~ Mar. 11, 2014	Dec. 01, 2014	Radiation (03CH06-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz~40GHz	Oct. 23, 2013	Feb. 28, 2014~ Mar. 11, 2014	Oct. 22, 2014	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/0003	20MHz ~ 1000MHz	May 06, 2013	Feb. 28, 2014~ Mar. 11, 2014	May 05, 2014	Radiation (03CH06-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9kHz ~ 30MHz	Jul. 03, 2012	Feb. 28, 2014~ Mar. 11, 2014	Jul. 02, 2014	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL6112B	2885	30MHz ~ 2GHz	Oct. 10, 2013	Feb. 28, 2014~ Mar. 11, 2014	Oct. 09, 2014	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Aug. 02, 2013	Feb. 28, 2014~ Mar. 11, 2014	Aug. 01, 2014	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9kHz ~ 1GHz	Apr. 12, 2013	Feb. 28, 2014~ Mar. 11, 2014	Apr. 11, 2014	Radiation (03CH06-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 18, 2013	Feb. 28, 2014~ Mar. 11, 2014	Jul. 17, 2014	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Oct. 03, 2013	Feb. 28, 2014~ Mar. 11, 2014	Oct. 02, 2014	Radiation (03CH06-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz ~ 26.5GHz	Apr. 12, 2013	Feb. 28, 2014~ Mar. 11, 2014	Apr. 11, 2014	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	Feb. 28, 2014~ Mar. 11, 2014	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1 m ~ 4 m	N/A	Feb. 28, 2014~ Mar. 11, 2014	N/A	Radiation (03CH06-HY)

5 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.50