

FCC RF Test Report

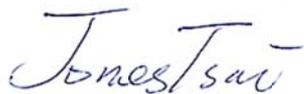
APPLICANT : ZTE CORPORATION
EQUIPMENT : LTE Ufi
BRAND NAME : ZTE
MODEL NAME : MF97A
FCC ID : SRQ-ZTEMF97A
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Jan. 26, 2014 and testing was completed on Apr. 04, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

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



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



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



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.2	15.247(b)	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.24 dB at 2483.650 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.54 dB at 0.340 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

ZTE CORPORATION

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

1.2 Manufacturer

ZTE CORPORATION

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

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	LTE Ufi
Brand Name	ZTE
Model Name	MF97A
FCC ID	SRQ-ZTEMF97A
EUT supports Radios application	CDMA/EV-DO/LTE/ WLAN 2.4GHz 802. 11b/g/n HT20/HT40/ WLAN 5GHz 802. 11a/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
HW Version	MF97AV1.0.0B01
SW Version	xs9B
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: 5745~5825MHz.																		
Maximum Output Power to antenna	<p><2412 MHz ~ 2462 MHz > 802.11b : 18.68 dBm (0.0738 W) 802.11g : 19.55 dBm (0.0902 W) 802.11n HT20 : 21.34 dBm (0.1361 W) 802.11n HT40 : 20.34 dBm (0.1081 W)</p> <p><5745 MHz ~ 5825 MHz > 802.11a : 20.16 dBm (0.1038 W) 802.11n HT20 : 22.46 dBm (0.1762 W) 802.11n HT40 : 22.09 dBm (0.1618 W)</p>																		
Antenna Type	Chain Port 0: Dipole Antenna Chain Port 1: PCB Antenna																		
Antenna Gain	<p><2.4GHz> Chain Port 0 : 2.50 dBi Chain Port 1: 2.50 dBi Chain Port 0 + 1: 5.51 dBi</p> <p><5GHz> Chain Port 0 : 3.50 dBi Chain Port 1: 3.50 dBi Chain Port 0 + 1: 6.51 dBi</p>																		
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)																		
Antenna Function for Transmitter	<table border="1"> <thead> <tr> <th></th> <th>Chain Port 0</th> <th>Chain Port 1</th> </tr> </thead> <tbody> <tr> <td>802.11 b</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 g</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 a</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n SISO</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n MIMO</td> <td>V</td> <td>V</td> </tr> </tbody> </table>		Chain Port 0	Chain Port 1	802.11 b	V	V	802.11 g	V	V	802.11 a	V	V	802.11 n SISO	V	V	802.11 n MIMO	V	V
	Chain Port 0	Chain Port 1																	
802.11 b	V	V																	
802.11 g	V	V																	
802.11 a	V	V																	
802.11 n SISO	V	V																	
802.11 n MIMO	V	V																	

1.5 Modification of EUT

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

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC Registration No.
	TH01-KS	03CH01-KS	CO01-KS
			149928

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

Remark:

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

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

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	159	5795
	151	5755	161	5805
	153	5765	165	5825
	157	5785	-	-

2.2 Pre-Scanned RF Power

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

2.4GHz 802.11b Peak Power (dBm)				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Chain Port 0	18.16	18.12	18.20	18.09
Chain Port 1	18.62	18.50	18.68	18.22

2.4GHz 802.11g Peak Power (dBm)								
Data Rate (MHz)	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Chain Port 0	19.55	19.36	19.00	18.90	19.53	19.28	19.17	19.12
Chain Port 1	19.53	18.90	18.88	18.33	18.13	18.03	18.36	18.70

2.4GHz 802.11n HT20 Peak Power (dBm)								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Chain Port 0	18.63	18.46	18.36	18.50	18.48	18.39	18.58	18.62
Chain Port 1	17.16	16.92	16.87	16.99	16.95	16.80	16.81	16.72
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Chain Port 0+1(0)	19.06	18.93	18.60	18.81	18.15	18.23	17.96	18.10
Chain Port 0+1(1)	17.46	17.38	17.40	17.45	16.81	17.12	17.26	17.35
Chain Port 0+1	21.34	21.23	21.05	21.19	20.54	20.72	20.63	20.75

2.4GHz 802.11n HT40 Peak Power (dBm)								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Chain Port 0	17.90	17.88	17.85	17.73	17.79	17.60	17.71	17.56
Chain Port 1	16.90	16.50	16.56	16.32	15.65	15.75	16.06	15.92
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Chain Port 0+1(0)	17.95	17.66	17.38	17.74	17.90	17.80	17.64	17.08
Chain Port 0+1(1)	16.60	16.46	16.34	16.50	16.11	16.53	16.45	16.25
Chain Port 0+1	20.34	20.11	19.90	20.17	20.11	20.22	20.10	19.70



5GHz 802.11a Peak Power (dBm)								
Data Rate (MHz)	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Chain Port 0	20.16	19.98	19.83	19.97	20.07	19.90	20.09	20.13
Chain Port 1	19.48	19.16	19.41	19.35	19.29	19.08	19.31	19.28

5GHz 802.11n HT20 Peak Power (dBm)								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Chain Port 0	20.41	20.24	20.18	20.21	20.25	20.23	20.29	20.34
Chain Port 1	19.19	19.06	18.85	18.68	18.87	18.79	18.83	18.86
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Chain Port 0+1(0)	19.88	19.78	19.85	19.87	19.77	19.73	19.82	19.74
Chain Port 0+1(1)	18.98	18.80	18.85	18.68	18.79	18.70	18.73	18.16
Chain Port 0+1	22.46	22.33	22.39	22.33	22.32	22.26	22.32	22.03

5GHz 802.11n HT40 Peak Power (dBm)								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Chain Port 0	19.80	19.57	19.68	19.56	19.64	19.53	19.70	19.76
Chain Port 1	18.64	18.09	18.19	18.27	18.42	18.28	18.53	18.24
Data Rate (MHz)	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
Chain Port 0+1(0)	19.70	19.40	19.45	19.43	19.54	19.60	19.68	19.33
Chain Port 0+1(1)	18.35	18.18	18.13	18.21	18.34	18.12	18.23	18.13
Chain Port 0+1	22.09	21.84	21.85	21.87	21.99	21.93	22.03	21.78

Note:

- Chain Port 0+1 is a calculated result from sum of the power Chain Port 0+1(0) and Chain Port 0+1(1).
- The data rates of WLAN 802.11 b/g/a/n were set in 5.5Mbps for 2.4GHz 802.11b (Chain Port 1), 6Mbps for 2.4GHz 802.11g (Chain Port 0), MCS0 for 2.4GHz 802.11n HT20 (Chain Port 0), MCS8 for 2.4GHz 802.11n HT20 (Chain Port 0+1), MCS0 for 2.4GHz 802.11n HT40 (Chain Port 0), MCS8 for 2.4GHz 802.11n HT40 (Chain Port 0+1), 6Mbps for 5GHz 802.11a (Chain Port 0), MCS0 for 5GHz 802.11n HT20 (Chain Port 0), MCS8 for 5GHz 802.11n HT20 (Chain Port 0+1), MCS0 for 5GHz 802.11n HT40 (Chain Port 0) and MCS8 for 5GHz 802.11n HT40 (Chain Port 0+1) due to the highest RF output power.

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	Remark
Conducted TCs	6dB BW Power Spectral Density	802.11b	5.5 Mbps	1/6/11	Chain Port 1
		802.11g	6 Mbps	1/6/11	Chain Port 0
		802.11n HT20	MCS0	1/6/11	Chain Port 0
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1 (0)
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1 (1)
		802.11n HT40	MCS0	3/6/9	Chain Port 0
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1 (0)
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1 (1)
	Output Power	802.11b	5.5 Mbps	1/6/11	Chain Port 0
		802.11b	5.5 Mbps	1/6/11	Chain Port 1
		802.11g	6 Mbps	1/6/11	Chain Port 0
		802.11g	6 Mbps	1/6/11	Chain Port 1
		802.11n HT20	MCS0	1/6/11	Chain Port 0
		802.11n HT20	MCS0	1/6/11	Chain Port 1
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1 (0)
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1 (1)
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1
		802.11n HT40	MCS0	3/6/9	Chain Port 0
		802.11n HT40	MCS0	3/6/9	Chain Port 1
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1 (0)
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1 (1)
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1
	Conducted Band Edge	802.11b	5.5 Mbps	1/11	Chain Port 1
		802.11g	6 Mbps	1/11	Chain Port 0
		802.11n HT20	MCS0	1/11	Chain Port 0
		802.11n HT20	MCS8	1/11	Chain Port 0+1 (0)
		802.11n HT20	MCS8	1/11	Chain Port 0+1 (1)
		802.11n HT40	MCS0	3/9	Chain Port 0
802.11n HT40		MCS8	3/9	Chain Port 0+1 (0)	
802.11n HT40		MCS8	3/9	Chain Port 0+1 (1)	
Conducted TCs	Conducted Spurious Emission	802.11b	5.5 Mbps	1/6/11	Chain Port 1
		802.11g	6 Mbps	1/6/11	Chain Port 0
		802.11n HT20	MCS0	1/6/11	Chain Port 0
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1 (0)
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1 (1)
		802.11n HT40	MCS0	3/6/9	Chain Port 0
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1 (0)
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1 (1)



	Test Items	Mode	Data Rate	Test Channel	Remark
Radiated TCs	Radiated Band Edge	802.11b	5.5 Mbps	1/11	Chain Port 1
		802.11g	6 Mbps	1/11	Chain Port 0
		802.11n HT20	MCS0	1/11	Chain Port 0
		802.11n HT20	MCS8	1/11	Chain Port 0+1
		802.11n HT40	MCS0	3/9	Chain Port 0
		802.11n HT40	MCS8	3/9	Chain Port 0+1
	Radiated Spurious Emission	802.11b	5.5 Mbps	1/6/11	Chain Port 1
		802.11g	6 Mbps	1/6/11	Chain Port 0
		802.11n HT20	MCS0	1/6/11	Chain Port 0
		802.11n HT20	MCS8	1/6/11	Chain Port 0+1
		802.11n HT40	MCS0	3/6/9	Chain Port 0
		802.11n HT40	MCS8	3/6/9	Chain Port 0+1



<5GHz>

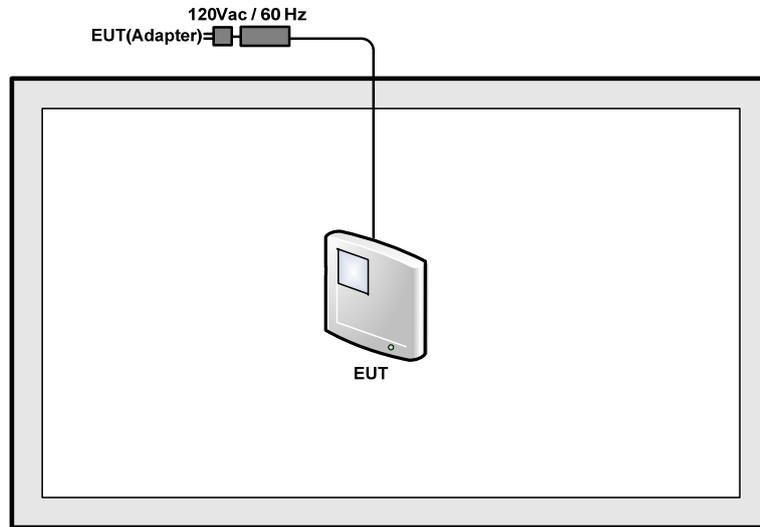
Test Cases					
	Test Items	Mode	Data Rate	Test Channel	Remark
Conducted TCs	6dB BW Power Spectral Density	802.11a	6 Mbps	149/157/165	Chain Port 0
		802.11n HT20	MCS0	149/157/165	Chain Port 0
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1 (0)
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1 (1)
		802.11n HT40	MCS0	151/159	Chain Port 0
		802.11n HT40	MCS8	151/159	Chain Port 0+1 (0)
		802.11n HT40	MCS8	151/159	Chain Port 0+1 (1)
	Output Power	802.11a	6 Mbps	149/157/165	Chain Port 0
		802.11a	6 Mbps	149/157/165	Chain Port 1
		802.11n HT20	MCS0	149/157/165	Chain Port 0
		802.11n HT20	MCS0	149/157/165	Chain Port 1
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1 (0)
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1 (1)
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1
		802.11n HT40	MCS0	151/159	Chain Port 0
		802.11n HT40	MCS0	151/159	Chain Port 1
		802.11n HT40	MCS8	151/159	Chain Port 0+1 (0)
		802.11n HT40	MCS8	151/159	Chain Port 0+1 (1)
	Conducted Band Edge	802.11a	6 Mbps	149/165	Chain Port 0
		802.11n HT20	MCS0	149/165	Chain Port 0
		802.11n HT20	MCS8	149/165	Chain Port 0+1 (0)
		802.11n HT20	MCS8	149/165	Chain Port 0+1 (1)
		802.11n HT40	MCS0	151/159	Chain Port 0
		802.11n HT40	MCS8	151/159	Chain Port 0+1 (0)
	Conducted Spurious Emission	802.11a	6 Mbps	149/157/165	Chain Port 0
		802.11n HT20	MCS0	149/157/165	Chain Port 0
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1 (0)
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1 (1)
		802.11n HT40	MCS0	151/159	Chain Port 0
		802.11n HT40	MCS8	151/159	Chain Port 0+1 (0)
802.11n HT40		MCS8	151/159	Chain Port 0+1 (1)	
Radiated TCs	Radiated Spurious Emission	802.11a	6 Mbps	149/157/165	Chain Port 0
		802.11n HT20	MCS0	149/157/165	Chain Port 0
		802.11n HT20	MCS8	149/157/165	Chain Port 0+1
		802.11n HT40	MCS0	151/159	Chain Port 0
		802.11n HT40	MCS8	151/159	Chain Port 0+1



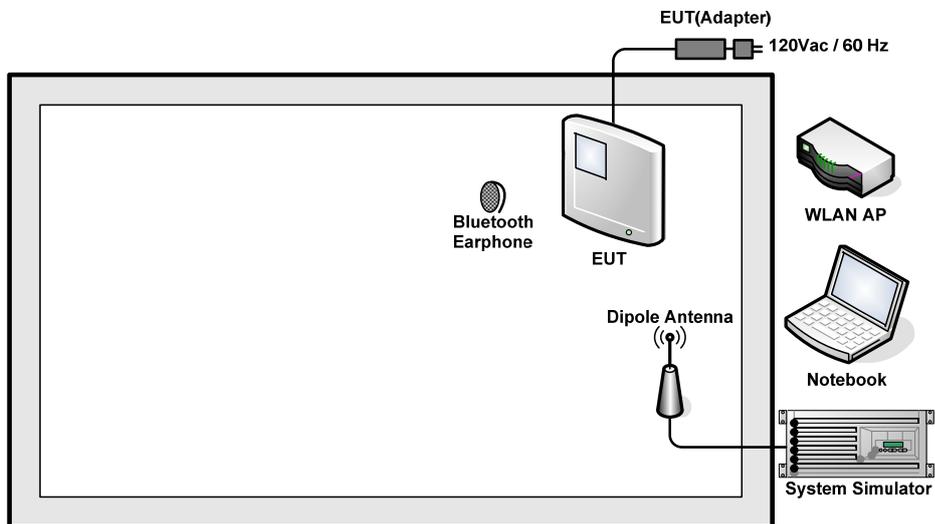
AC Conducted Emission	Mode 1 : CDMA2000 BC0 Idle + Bluetooth Link + WLAN 2.4GHz Link + Adapter Mode 2 : CDMA2000 BC0 Idle + Bluetooth Link + WLAN 5GHz Link + Adapter
Remark: <ol style="list-style-type: none">1. The worst case of AC conducted emission is mode 2; only the test data of it is reported.2. For radiated TCs, the tests were performed with adapter.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-106	QTLBH-106	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit/receive.

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



2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 6.3 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset (dB)} &= \text{RF cable loss (dB)} + \text{attenuator factor (dB)} \\ &= 6.3 + 10 = 16.3 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

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

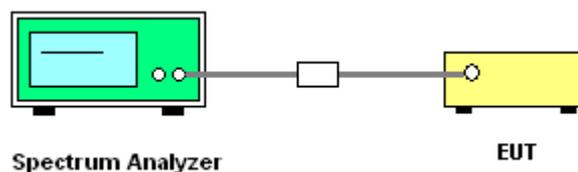
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup





3.1.5 Test Result of 6dB Occupied Bandwidth

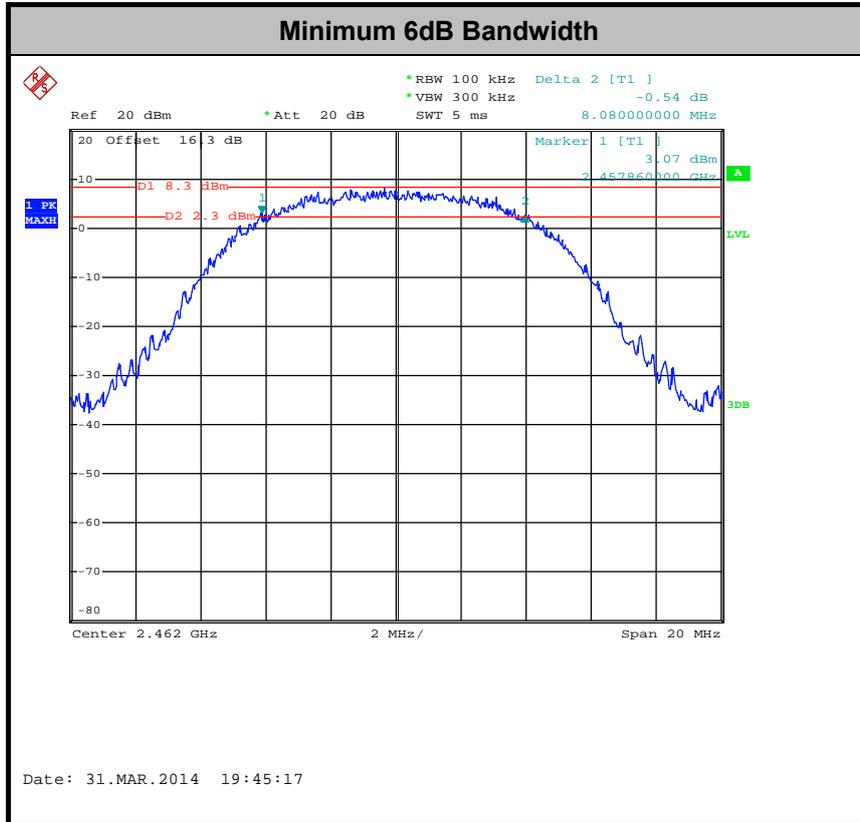
Test Band :	2.4GHz	Temperature :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Chain Port 0	Chain Port 1		
11b	5.5Mbps	1	1	2412	-	8.18	0.5	Pass
11b	5.5Mbps	1	6	2437	-	8.24	0.5	Pass
11b	5.5Mbps	1	11	2462	-	8.08	0.5	Pass
11g	6Mbps	1	1	2412	15.68	-	0.5	Pass
11g	6Mbps	1	6	2437	15.80	-	0.5	Pass
11g	6Mbps	1	11	2462	16.04	-	0.5	Pass
HT20	MCS0	1	1	2412	15.44	-	0.5	Pass
HT20	MCS0	1	6	2437	16.28	-	0.5	Pass
HT20	MCS0	1	11	2462	16.24	-	0.5	Pass
HT40	MCS0	1	3	2422	35.36	-	0.5	Pass
HT40	MCS0	1	6	2437	36.16	-	0.5	Pass
HT40	MCS0	1	9	2452	36.08	-	0.5	Pass
HT20	MCS8	2	1	2412	15.44	15.72	0.5	Pass
HT20	MCS8	2	6	2437	15.76	16.28	0.5	Pass
HT20	MCS8	2	11	2462	15.64	16.28	0.5	Pass
HT40	MCS8	2	3	2422	36.08	35.92	0.5	Pass
HT40	MCS8	2	6	2437	36.24	36.32	0.5	Pass
HT40	MCS8	2	9	2452	36.08	36.24	0.5	Pass



Test Band :	5GHz	Temperature :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	6dB Bandwidth (MHz)		6dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Chain Port 0	Chain Port 1		
11a	6Mbps	1	149	5745	15.68	-	0.5	Pass
11a	6Mbps	1	157	5785	15.32	-	0.5	Pass
11a	6Mbps	1	165	5825	15.36	-	0.5	Pass
HT20	MCS0	1	149	5745	15.12	-	0.5	Pass
HT20	MCS0	1	157	5785	15.32	-	0.5	Pass
HT20	MCS0	1	165	5825	15.08	-	0.5	Pass
HT40	MCS0	1	151	5755	36.08	-	0.5	Pass
HT40	MCS0	1	159	5795	36.16	-	0.5	Pass
HT20	MCS8	2	149	5745	15.36	16.28	0.5	Pass
HT20	MCS8	2	157	5785	15.68	16.28	0.5	Pass
HT20	MCS8	2	165	5825	15.48	16.28	0.5	Pass
HT40	MCS8	2	151	5755	36.32	36.32	0.5	Pass
HT40	MCS8	2	159	5795	36.32	36.32	0.5	Pass



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.

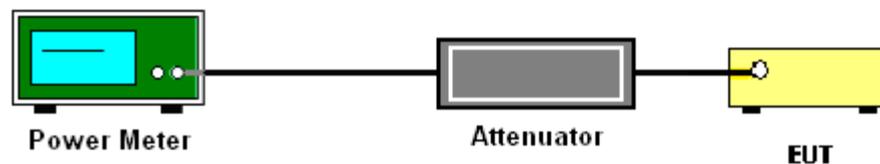
3.2.2 Measuring Instruments

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 :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	SUM	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11b	5.5Mbps	1	1	2412	17.62	18.07	-	30.00	30.00	2.50	2.50	Pass
11b	5.5Mbps	1	6	2437	18.20	18.68	-	30.00	30.00	2.50	2.50	Pass
11b	5.5Mbps	1	11	2462	17.93	18.12	-	30.00	30.00	2.50	2.50	Pass
11g	6Mbps	1	1	2412	18.97	19.31	-	30.00	30.00	2.50	2.50	Pass
11g	6Mbps	1	6	2437	19.55	19.53	-	30.00	30.00	2.50	2.50	Pass
11g	6Mbps	1	11	2462	19.19	18.98	-	30.00	30.00	2.50	2.50	Pass
HT20	MCS0	1	1	2412	18.51	17.13	-	30.00	30.00	2.50	2.50	Pass
HT20	MCS0	1	6	2437	18.63	17.16	-	30.00	30.00	2.50	2.50	Pass
HT20	MCS0	1	11	2462	18.48	17.09	-	30.00	30.00	2.50	2.50	Pass
HT40	MCS0	1	3	2422	17.68	16.86	-	30.00	30.00	2.50	2.50	Pass
HT40	MCS0	1	6	2437	17.90	16.90	-	30.00	30.00	2.50	2.50	Pass
HT40	MCS0	1	9	2452	17.82	15.72	-	30.00	30.00	2.50	2.50	Pass
HT20	MCS8	2	1	2412	17.20	17.28	20.25	30.00		2.50		Pass
HT20	MCS8	2	6	2437	19.06	17.46	21.34	30.00		2.50		Pass
HT20	MCS8	2	11	2462	17.53	16.99	20.28	30.00		2.50		Pass
HT40	MCS8	2	3	2422	17.84	16.58	20.27	30.00		2.50		Pass
HT40	MCS8	2	6	2437	17.95	16.60	20.34	30.00		2.50		Pass
HT40	MCS8	2	9	2452	17.45	16.11	19.84	30.00		2.50		Pass

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



Test Band :	5GHz	Temperature :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Max. Limit (dBm)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	SUM	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11a	6Mbps	1	149	5745	19.75	18.26	-	30.00	30.00	3.50	3.50	Pass
11a	6Mbps	1	157	5785	20.16	19.00		30.00	30.00	3.50	3.50	Pass
11a	6Mbps	1	165	5825	19.58	19.48		30.00	30.00	3.50	3.50	Pass
HT20	MCS0	1	149	5745	20.14	17.84		30.00	30.00	3.50	3.50	Pass
HT20	MCS0	1	157	5785	20.41	18.51		30.00	30.00	3.50	3.50	Pass
HT20	MCS0	1	165	5825	20.02	19.19		30.00	30.00	3.50	3.50	Pass
HT40	MCS0	1	151	5755	19.62	18.06		30.00	30.00	3.50	3.50	Pass
HT40	MCS0	1	159	5795	19.80	18.64		30.00	30.00	3.50	3.50	Pass
HT20	MCS8	2	149	5745	19.61	18.36	22.04	30.00		3.50		Pass
HT20	MCS8	2	157	5785	19.88	18.98	22.46	30.00		3.50		Pass
HT20	MCS8	2	165	5825	19.56	18.86	22.23	30.00		3.50		Pass
HT40	MCS8	2	151	5755	19.70	18.35	22.09	30.00		3.50		Pass
HT40	MCS8	2	159	5795	19.28	18.11	21.74	30.00		3.50		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 :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	Sum Power
11b	5.5Mbps	1	1	2412	0.18	0.18	14.68	15.07	
11b	5.5Mbps	1	6	2437	0.18	0.18	15.46	15.78	
11b	5.5Mbps	1	11	2462	0.18	0.18	14.99	15.23	
11g	6Mbps	1	1	2412	0.19	0.20	9.73	9.47	
11g	6Mbps	1	6	2437	0.19	0.20	10.39	8.92	
11g	6Mbps	1	11	2462	0.19	0.20	10.06	9.61	
HT20	MCS0	1	1	2412	0.22	0.22	8.94	7.45	
HT20	MCS0	1	6	2437	0.22	0.22	9.72	8.22	
HT20	MCS0	1	11	2462	0.22	0.22	9.37	7.28	
HT40	MCS0	1	3	2422	0.44	0.44	8.98	7.55	
HT40	MCS0	1	6	2437	0.44	0.44	9.28	7.94	
HT40	MCS0	1	9	2452	0.44	0.44	8.98	7.65	
HT20	MCS8	2	1	2412	0.42	0.42	8.64	7.87	
HT20	MCS8	2	6	2437	0.42	0.42	9.46	8.57	12.05
HT20	MCS8	2	11	2462	0.42	0.42	9.03	7.76	11.45
HT40	MCS8	2	3	2422	0.79	0.79	8.83	8.20	11.54
HT40	MCS8	2	6	2437	0.79	0.79	8.97	8.63	11.81
HT40	MCS8	2	9	2452	0.79	0.79	8.93	8.23	11.60

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



Test Band :	5GHz	Temperature :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	Sum Power
11a	6Mbps	1	149	5745	0.20	0.19	13.11	11.03	-
11a	6Mbps	1	157	5785	0.20	0.19	13.52	11.11	
11a	6Mbps	1	165	5825	0.20	0.19	13.14	11.21	
HT20	MCS0	1	149	5745	0.22	0.22	12.60	9.59	
HT20	MCS0	1	157	5785	0.22	0.22	12.91	9.99	
HT20	MCS0	1	165	5825	0.22	0.22	12.49	10.24	
HT40	MCS0	1	151	5755	0.40	0.44	13.14	9.90	
HT40	MCS0	1	159	5795	0.40	0.44	13.54	10.35	
HT20	MCS8	2	149	5745	0.41	0.41	12.48	10.88	14.76
HT20	MCS8	2	157	5785	0.41	0.41	12.92	11.00	15.08
HT20	MCS8	2	165	5825	0.41	0.41	12.73	10.65	14.82
HT40	MCS8	2	151	5755	0.77	0.79	13.41	10.91	15.35
HT40	MCS8	2	159	5795	0.77	0.79	13.02	10.55	14.97

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.

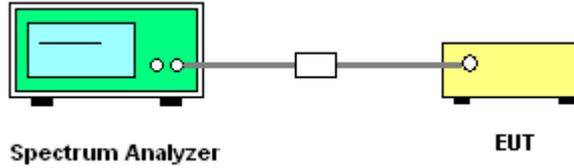
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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 :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	Worst +10log(2)	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11b	5.5Mbps	1	1	2412	-	-8.07		8.00	8.00	2.50	2.50	Pass
11b	5.5Mbps	1	6	2437	-	-6.92		8.00	8.00	2.50	2.50	Pass
11b	5.5Mbps	1	11	2462	-	-7.36		8.00	8.00	2.50	2.50	Pass
11g	6Mbps	1	1	2412	-15.43	-		8.00	8.00	2.50	2.50	Pass
11g	6Mbps	1	6	2437	-14.23	-		8.00	8.00	2.50	2.50	Pass
11g	6Mbps	1	11	2462	-15.30	-		8.00	8.00	2.50	2.50	Pass
HT20	MCS0	1	1	2412	-15.29	-		8.00	8.00	2.50	2.50	Pass
HT20	MCS0	1	6	2437	-15.23	-		8.00	8.00	2.50	2.50	Pass
HT20	MCS0	1	11	2462	-15.36	-		8.00	8.00	2.50	2.50	Pass
HT40	MCS0	1	3	2422	-18.82	-		8.00	8.00	2.50	2.50	Pass
HT40	MCS0	1	6	2437	-18.04	-		8.00	8.00	2.50	2.50	Pass
HT40	MCS0	1	9	2452	-19.27	-		8.00	8.00	2.50	2.50	Pass
HT20	MCS8	2	1	2412	-14.93	-18.49	-11.92	8.00		5.51		Pass
HT20	MCS8	2	6	2437	-15.24	-17.05	-12.23	8.00		5.51		Pass
HT20	MCS8	2	11	2462	-14.59	-17.91	-11.58	8.00		5.51		Pass
HT40	MCS8	2	3	2422	-21.35	-21.63	-18.34	8.00		5.51		Pass
HT40	MCS8	2	6	2437	-19.85	-19.63	-16.62	8.00		5.51		Pass
HT40	MCS8	2	9	2452	-19.93	-21.80	-16.92	8.00		5.51		Pass

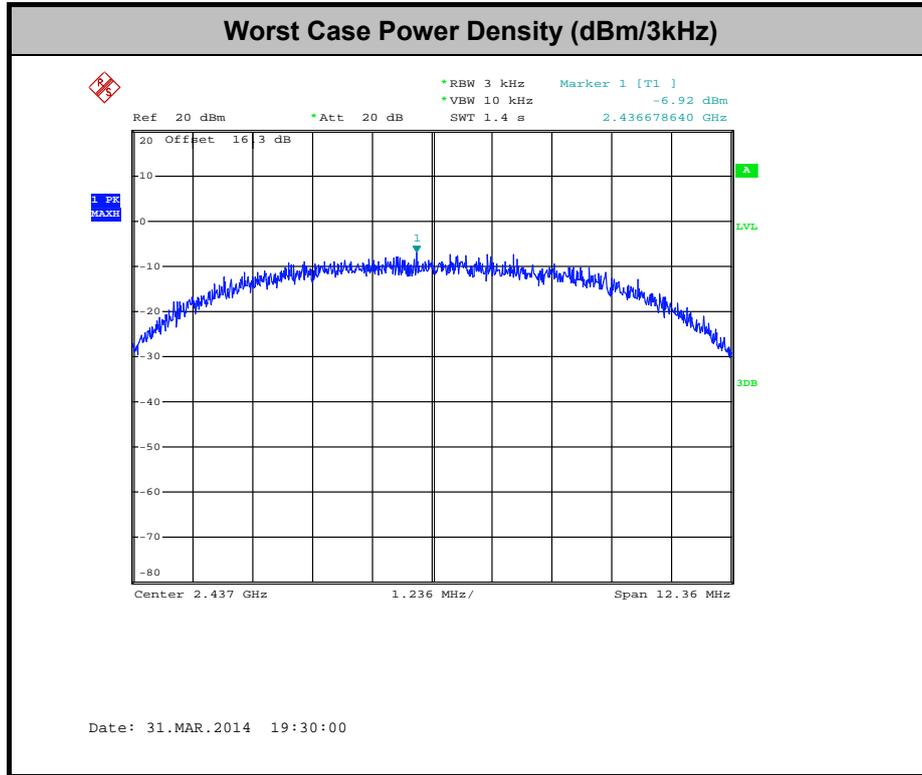
Note: Measured power density (dBm) has offset with cable loss.



Test Band :	5GHz	Temperature :	23~24°C
Test Engineer :	Adonis Li	Relative Humidity :	47~48%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Peak Power Density (dBm/3kHz)			Max. Limit (dBm/3kHz)		DG (dBi)		Pass/Fail
					Chain Port 0	Chain Port 1	Worst +10log(2)	Chain Port 0	Chain Port 1	Chain Port 0	Chain Port 1	
11a	6Mbps	1	149	5745	-9.77	-	-	8.00	8.00	3.50	3.50	Pass
11a	6Mbps	1	157	5785	-10.30	-		8.00	8.00	3.50	3.50	Pass
11a	6Mbps	1	165	5825	-9.77	-		8.00	8.00	3.50	3.50	Pass
HT20	MCS0	1	149	5745	-10.96	-		8.00	8.00	3.50	3.50	Pass
HT20	MCS0	1	157	5785	-10.20	-		8.00	8.00	3.50	3.50	Pass
HT20	MCS0	1	165	5825	-11.08	-		8.00	8.00	3.50	3.50	Pass
HT40	MCS0	1	151	5755	-14.18	-		8.00	8.00	3.50	3.50	Pass
HT40	MCS0	1	159	5795	-14.50	-		8.00	8.00	3.50	3.50	Pass
HT20	MCS8	2	149	5745	-9.59	-13.86	-6.58	7.49		6.51		Pass
HT20	MCS8	2	157	5785	-10.84	-13.49	-7.83	7.49		6.51		Pass
HT20	MCS8	2	165	5825	-10.15	-14.75	-7.14	7.49		6.51		Pass
HT40	MCS8	2	151	5755	-14.15	-17.08	-11.14	7.49		6.51		Pass
HT40	MCS8	2	159	5795	-14.74	-16.82	-11.73	7.49		6.51		Pass

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



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

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

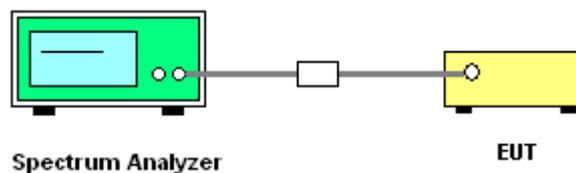
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance 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

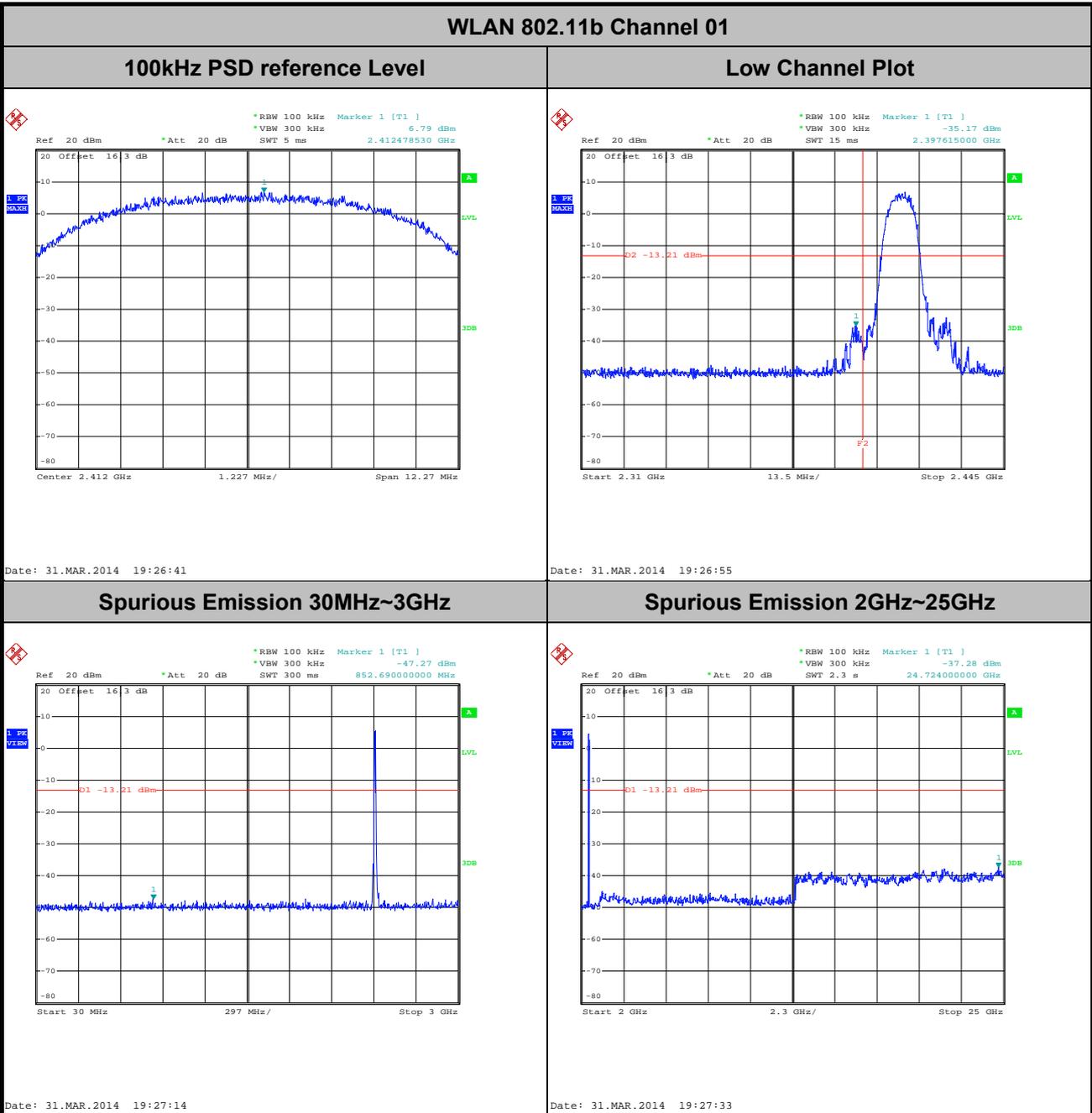




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Number of TX = 1, Chain Port 1

Number of TX	1	Chain Port	1
Test Mode :	802.11b	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Adonis Li

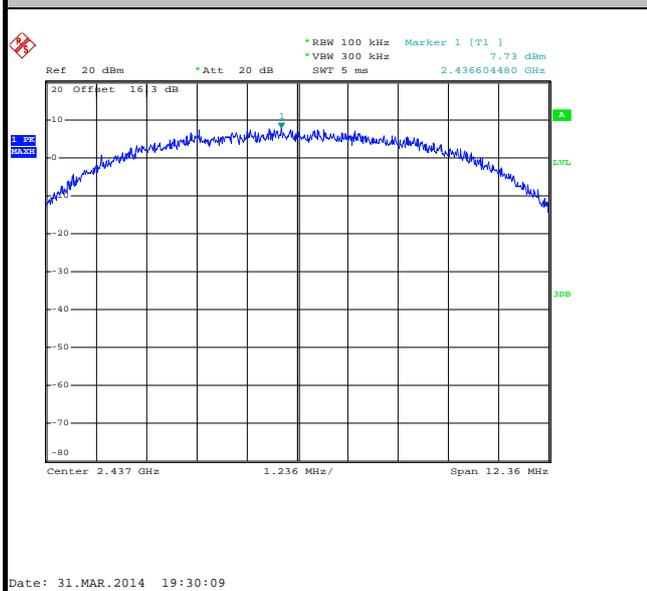




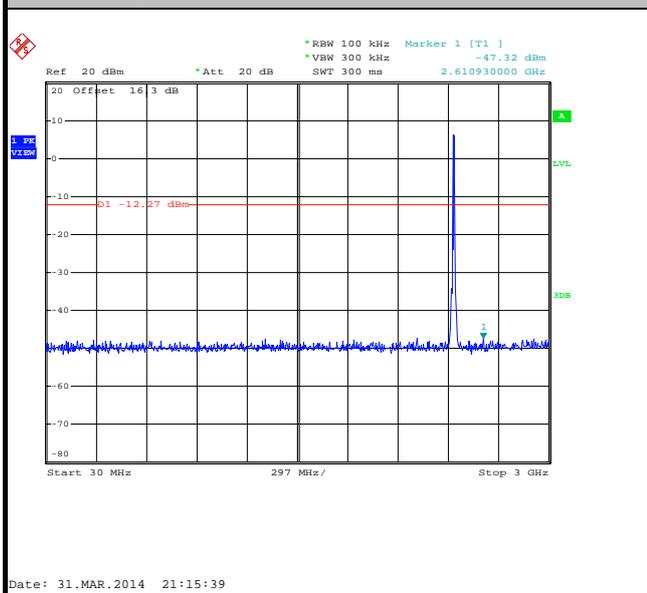
Number of TX :	1	Chain Port	1
Test Mode :	802.11b	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li

WLAN 802.11b Channel 06

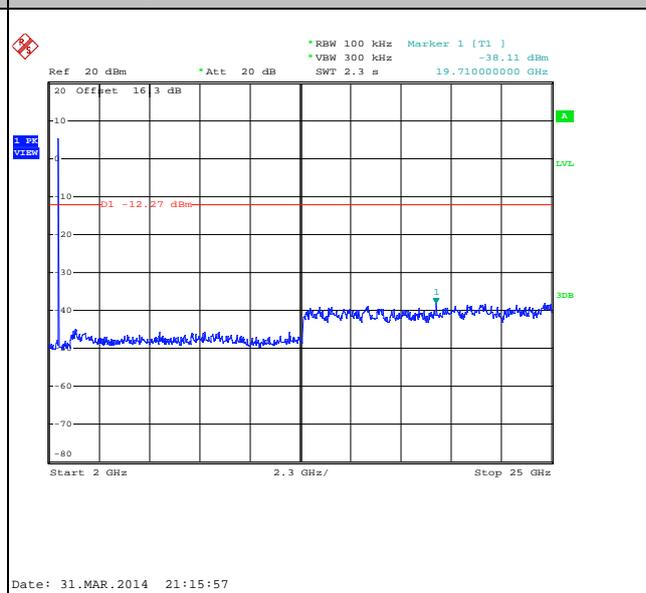
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

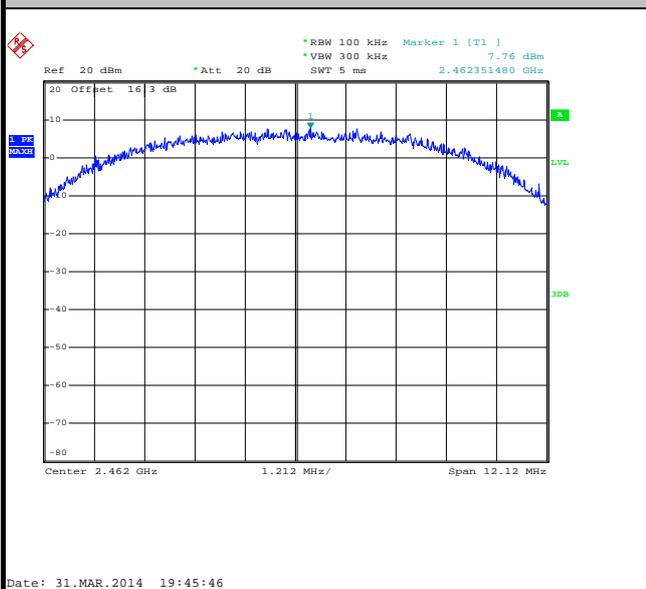




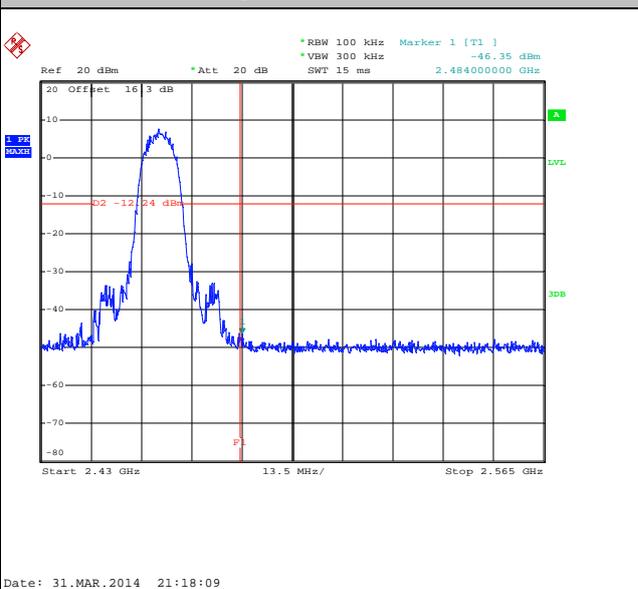
Number of TX :	1	Chain Port	1
Test Mode :	802.11b	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Adonis Li

WLAN 802.11b Channel 11

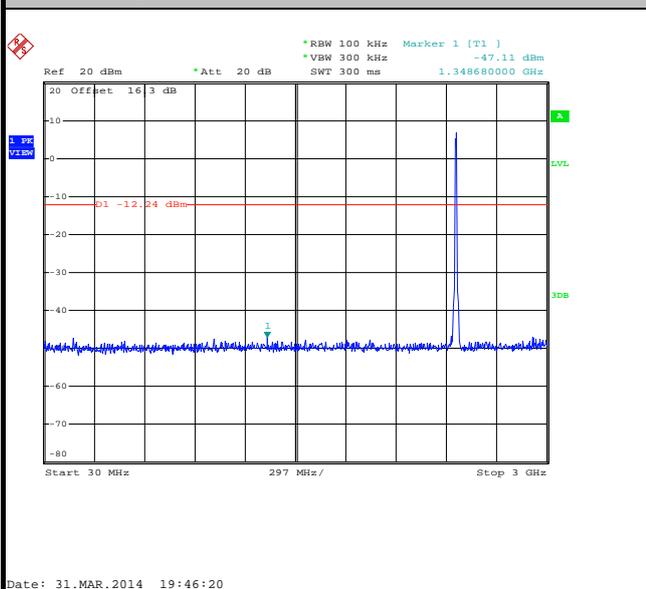
100kHz PSD reference Level



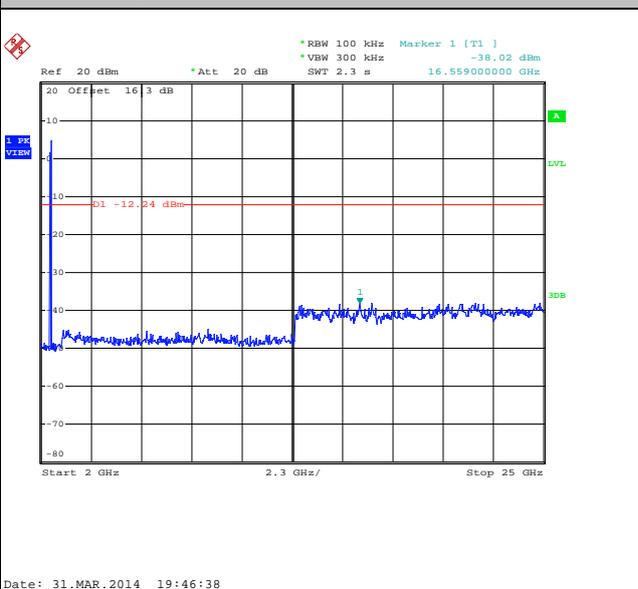
High Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz



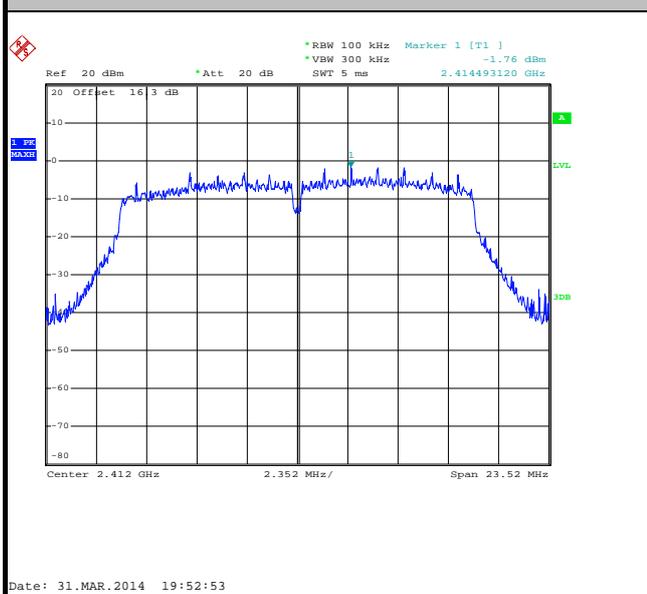


Number of TX = 1, Chain Port 0

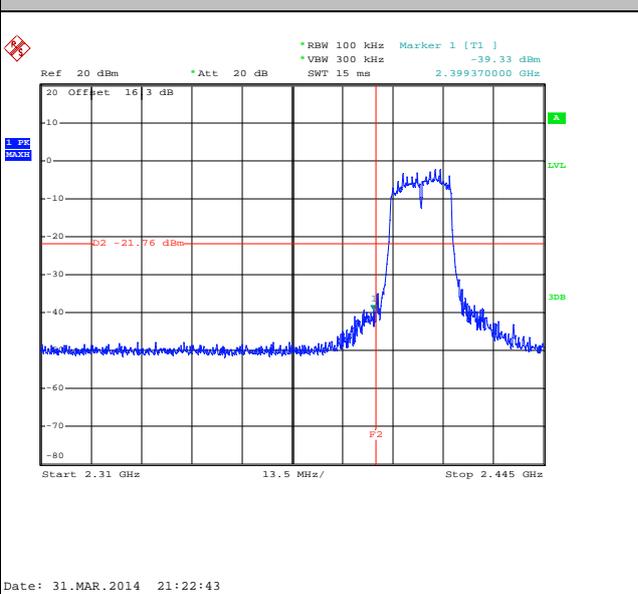
Number of TX :	1	Chain Port	0
Test Mode :	802.11g	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Adonis Li

WLAN 802.11g Channel 01

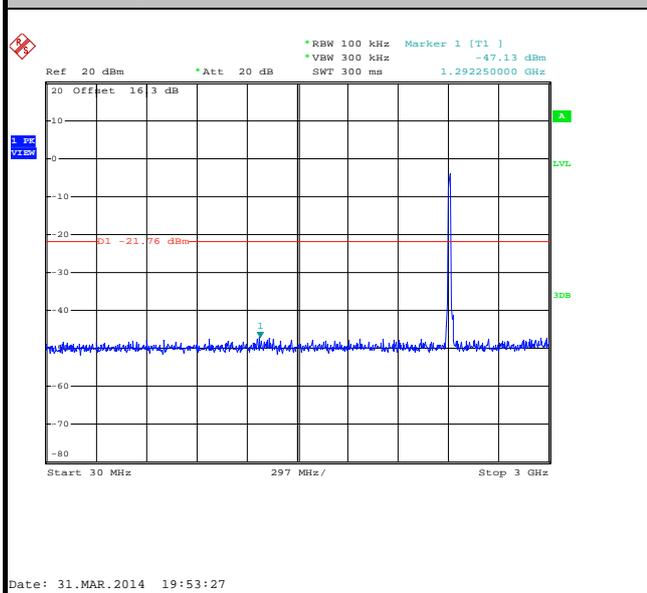
100kHz PSD reference Level



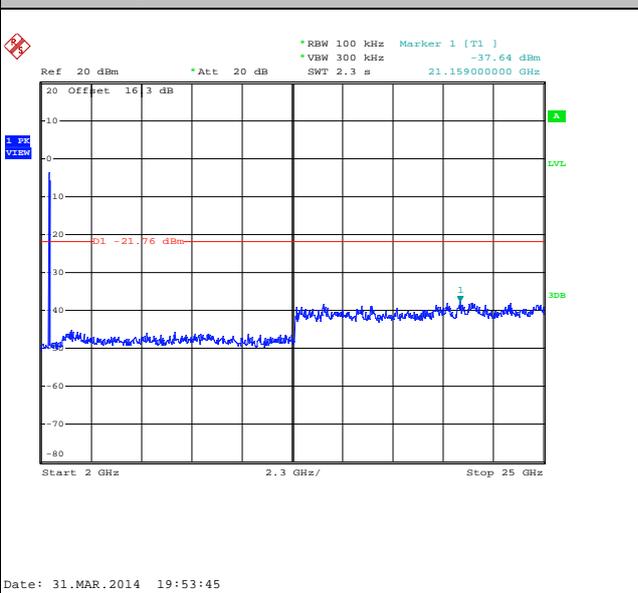
Low Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

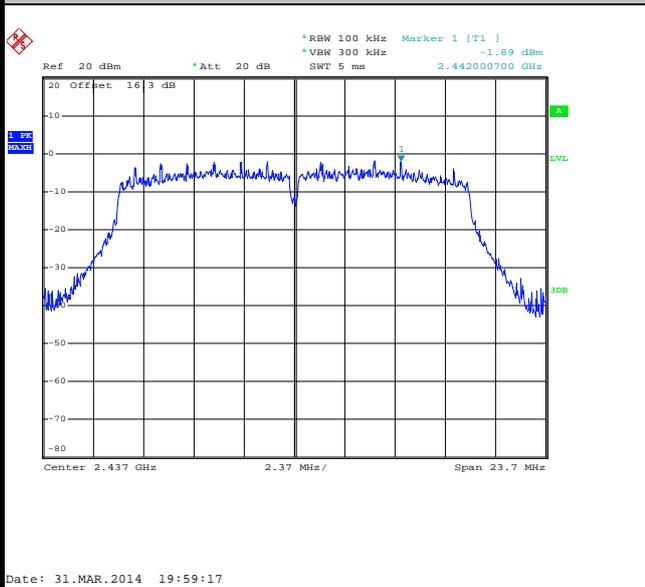




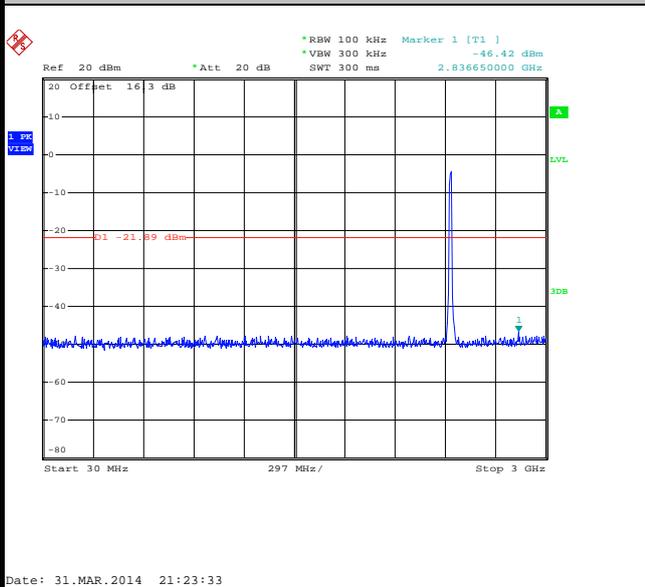
Number of TX :	1	Chain Port	0
Test Mode :	802.11g	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li

WLAN 802.11g Channel 06

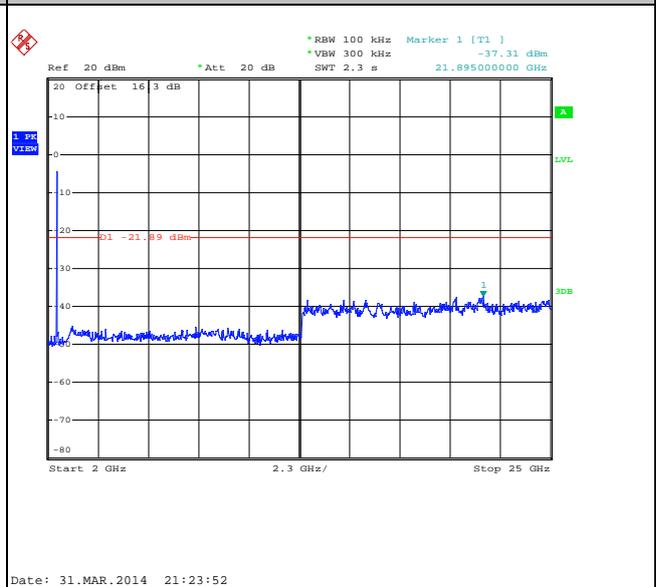
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

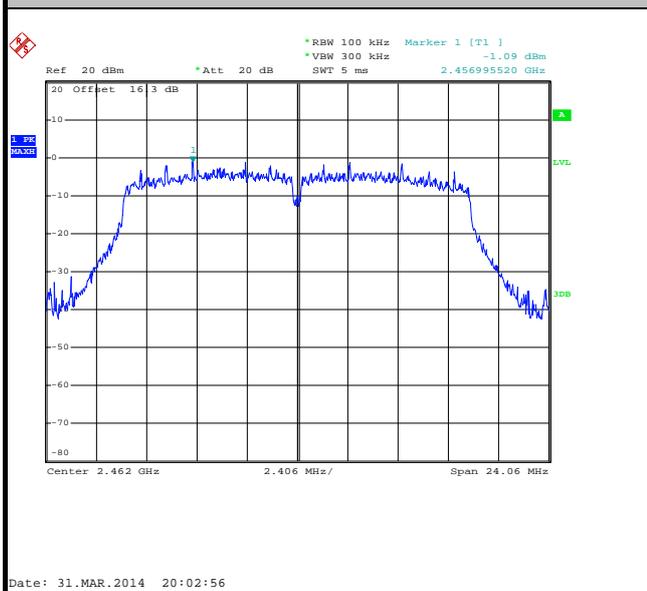




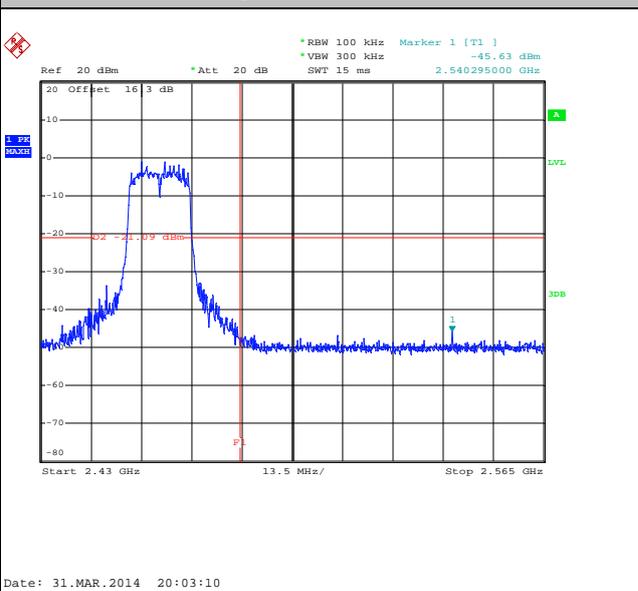
Number of TX :	1	Chain Port	0
Test Mode :	802.11g	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Adonis Li

WLAN 802.11g Channel 11

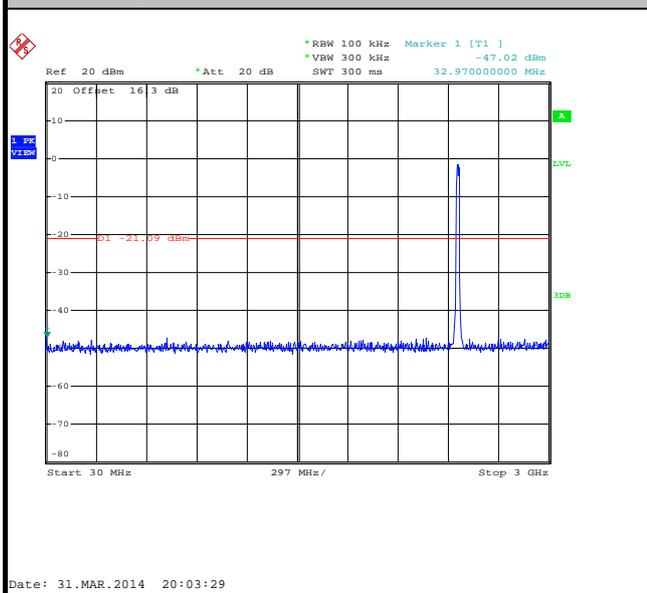
100kHz PSD reference Level



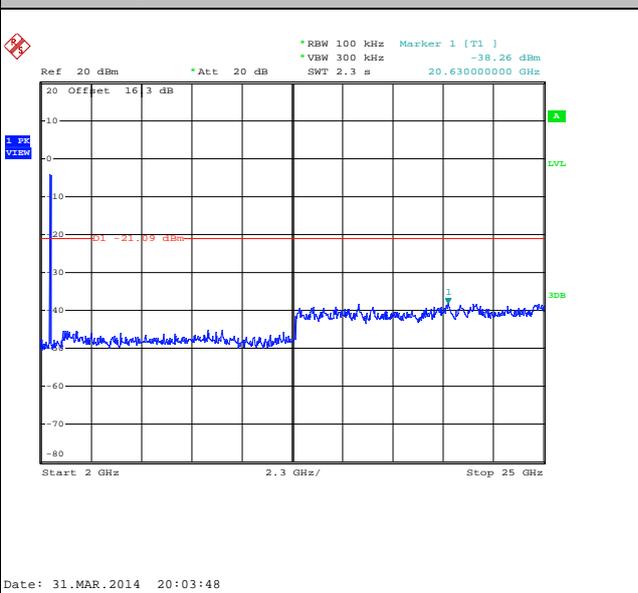
High Channel Plot



Spurious Emission 30MHz~3GHz

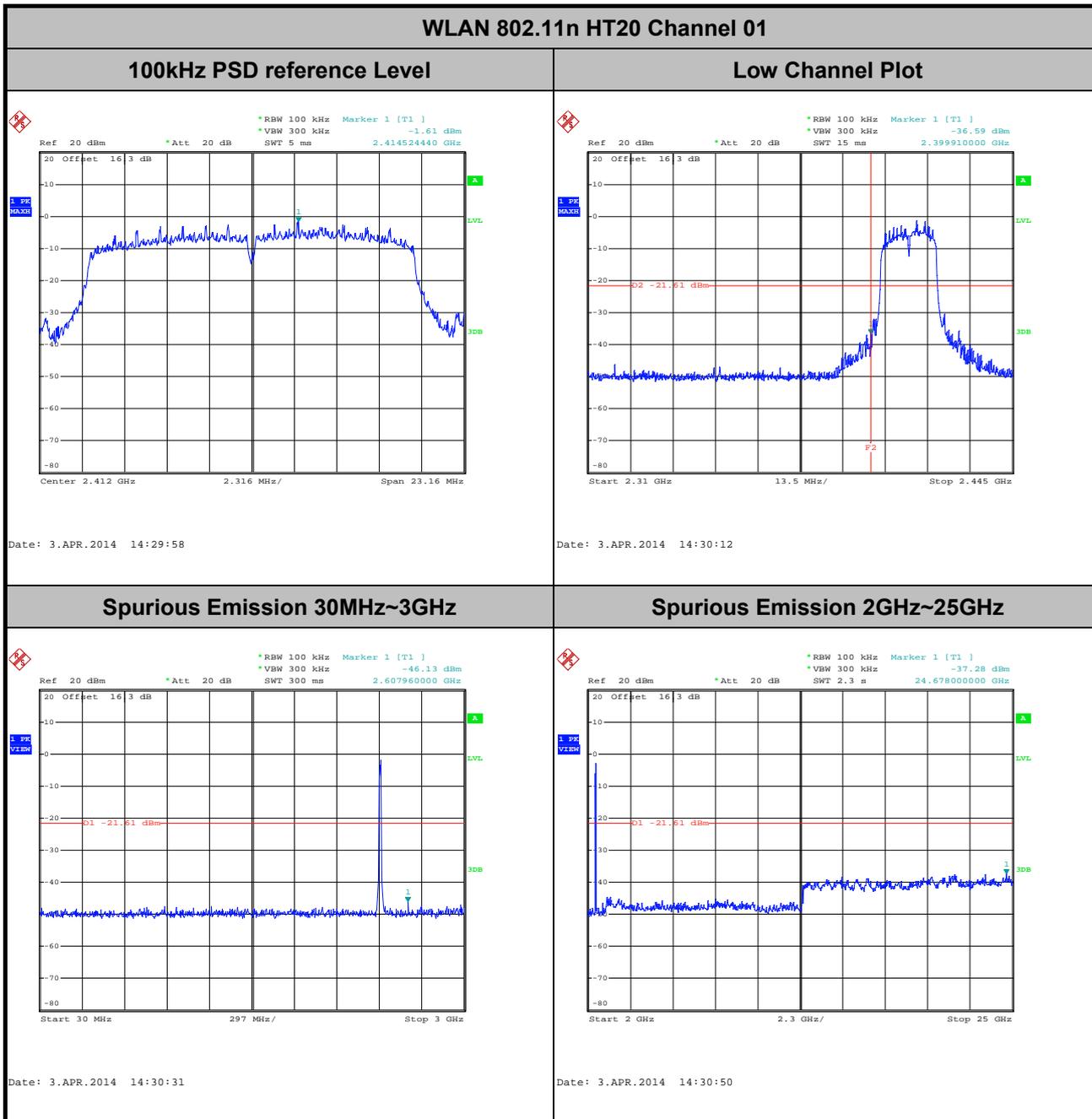


Spurious Emission 2GHz~25GHz



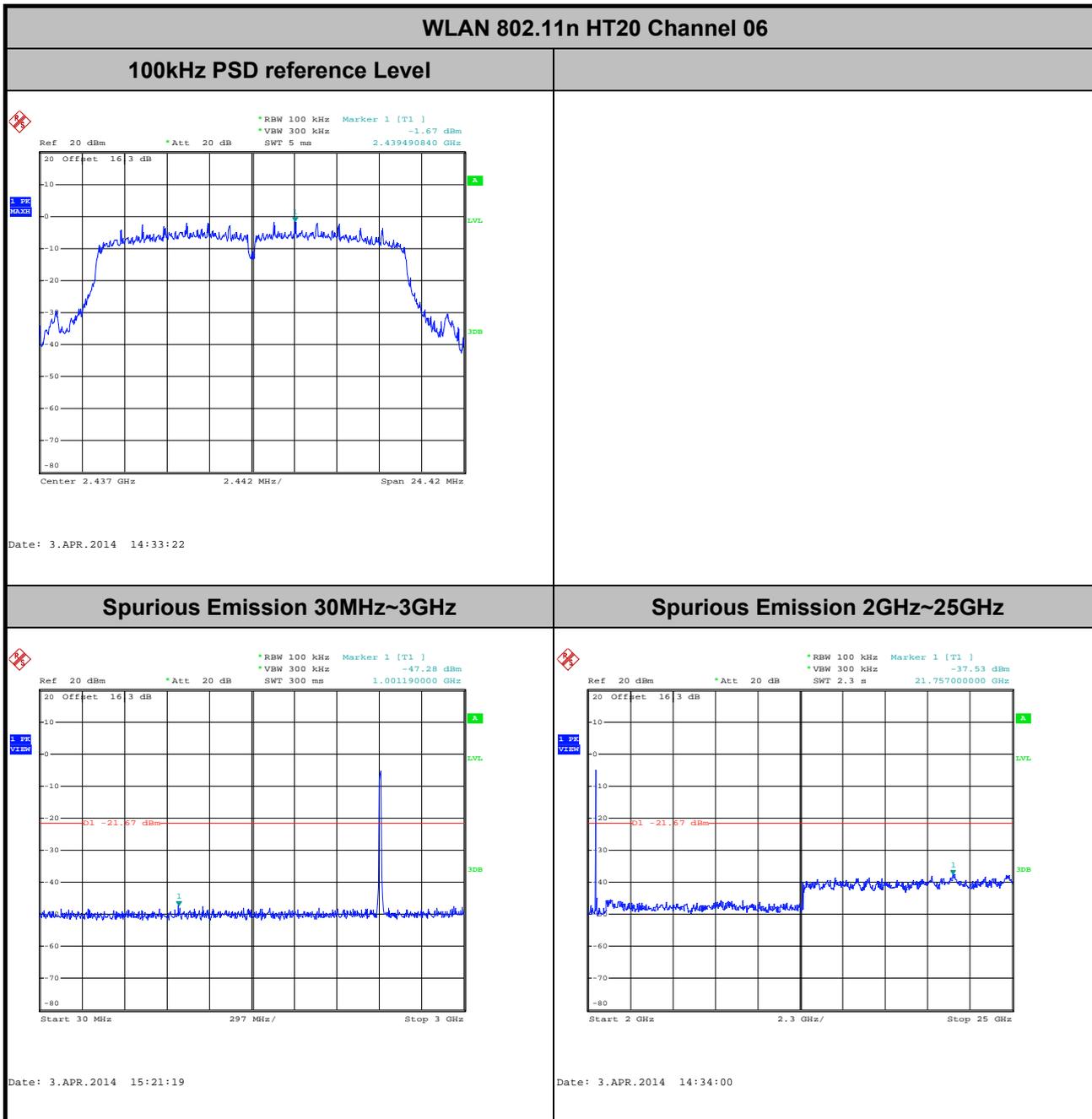


Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Adonis Li





Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li

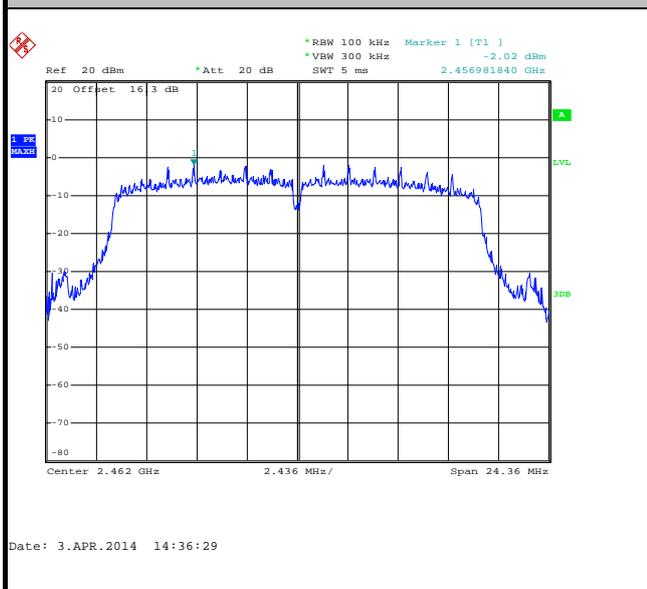




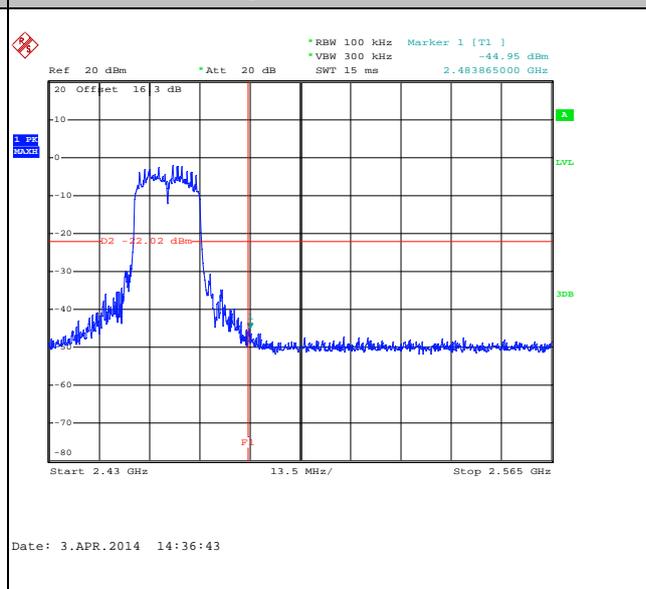
Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 11

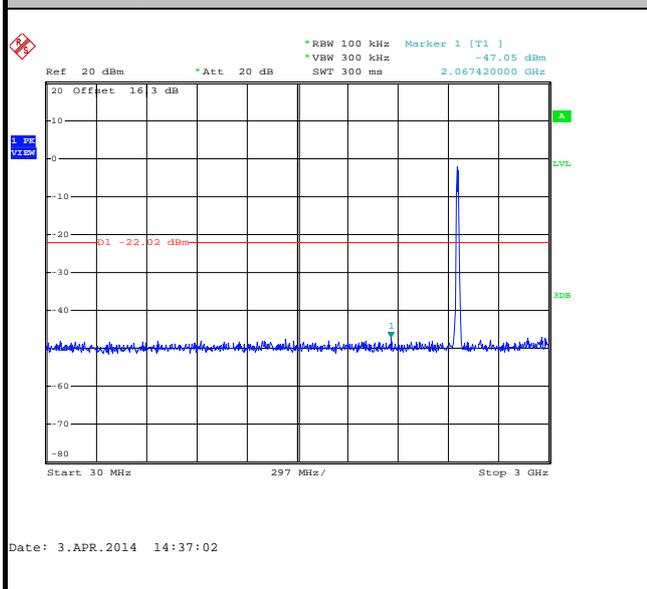
100kHz PSD reference Level



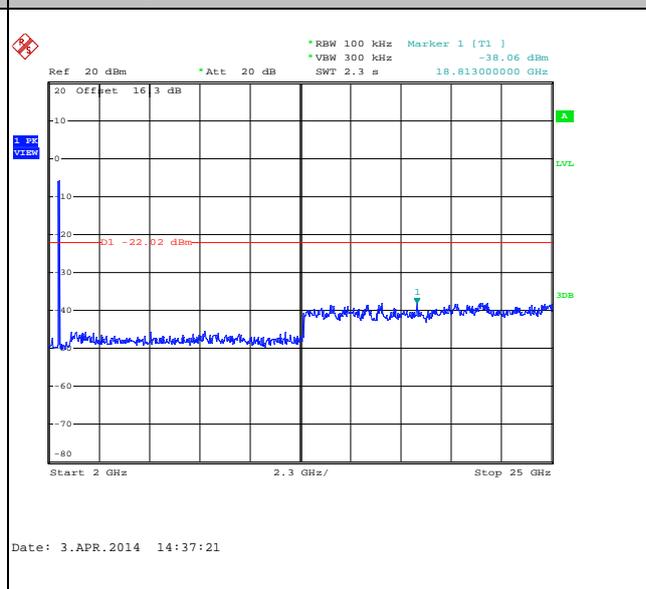
High Channel Plot



Spurious Emission 30MHz~3GHz

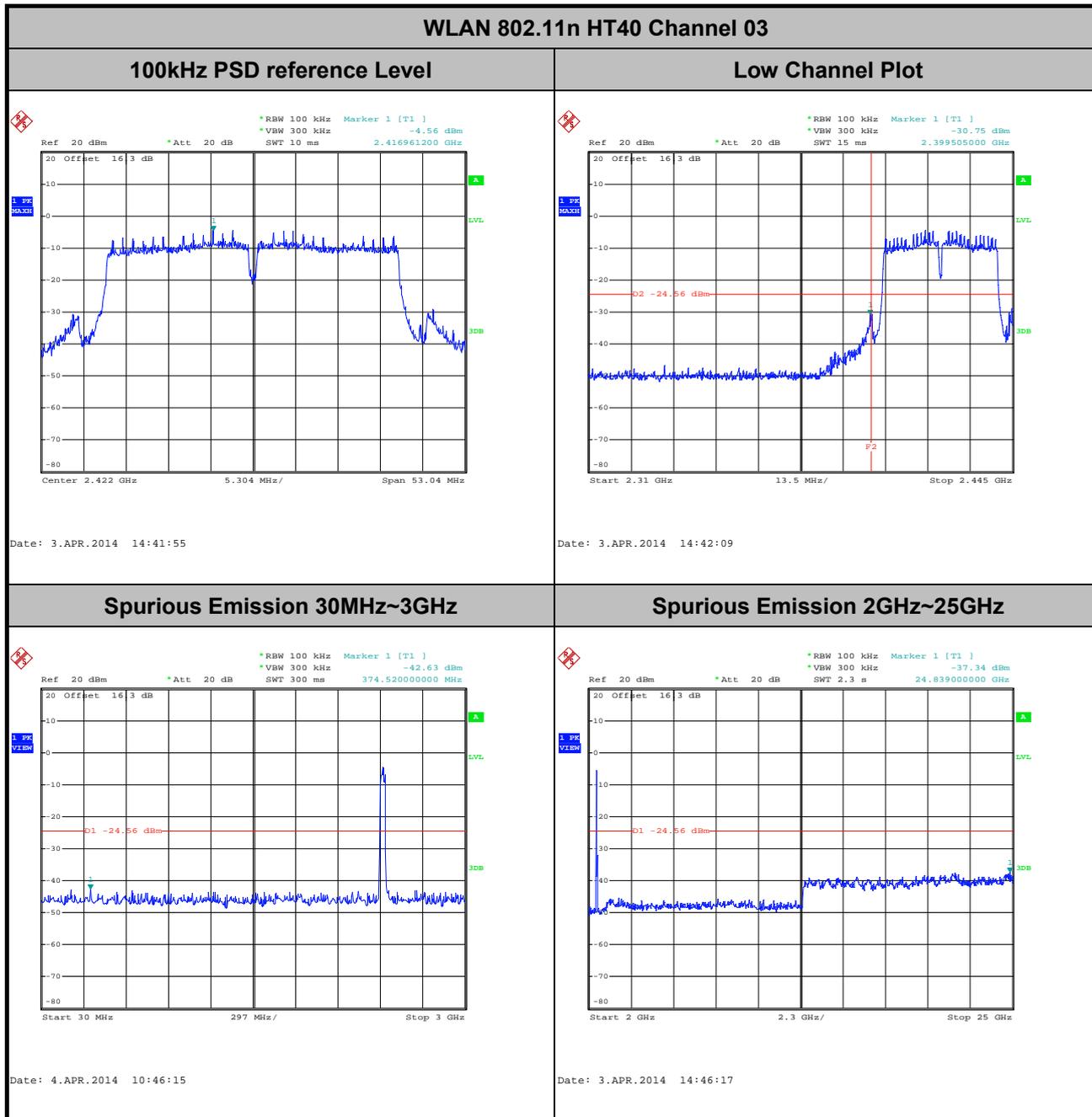


Spurious Emission 2GHz~25GHz



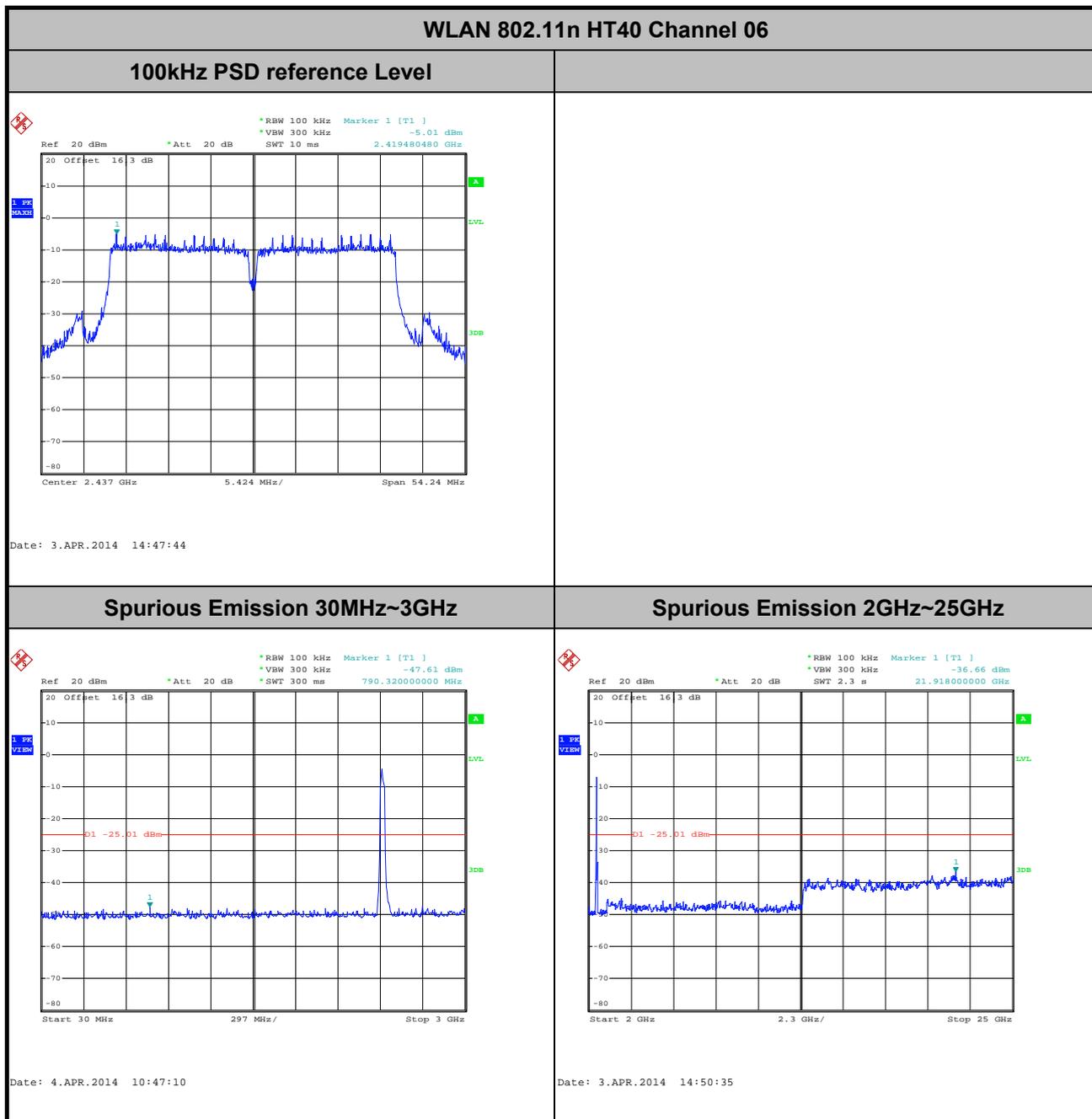


Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	03	Test Engineer :	Adonis Li



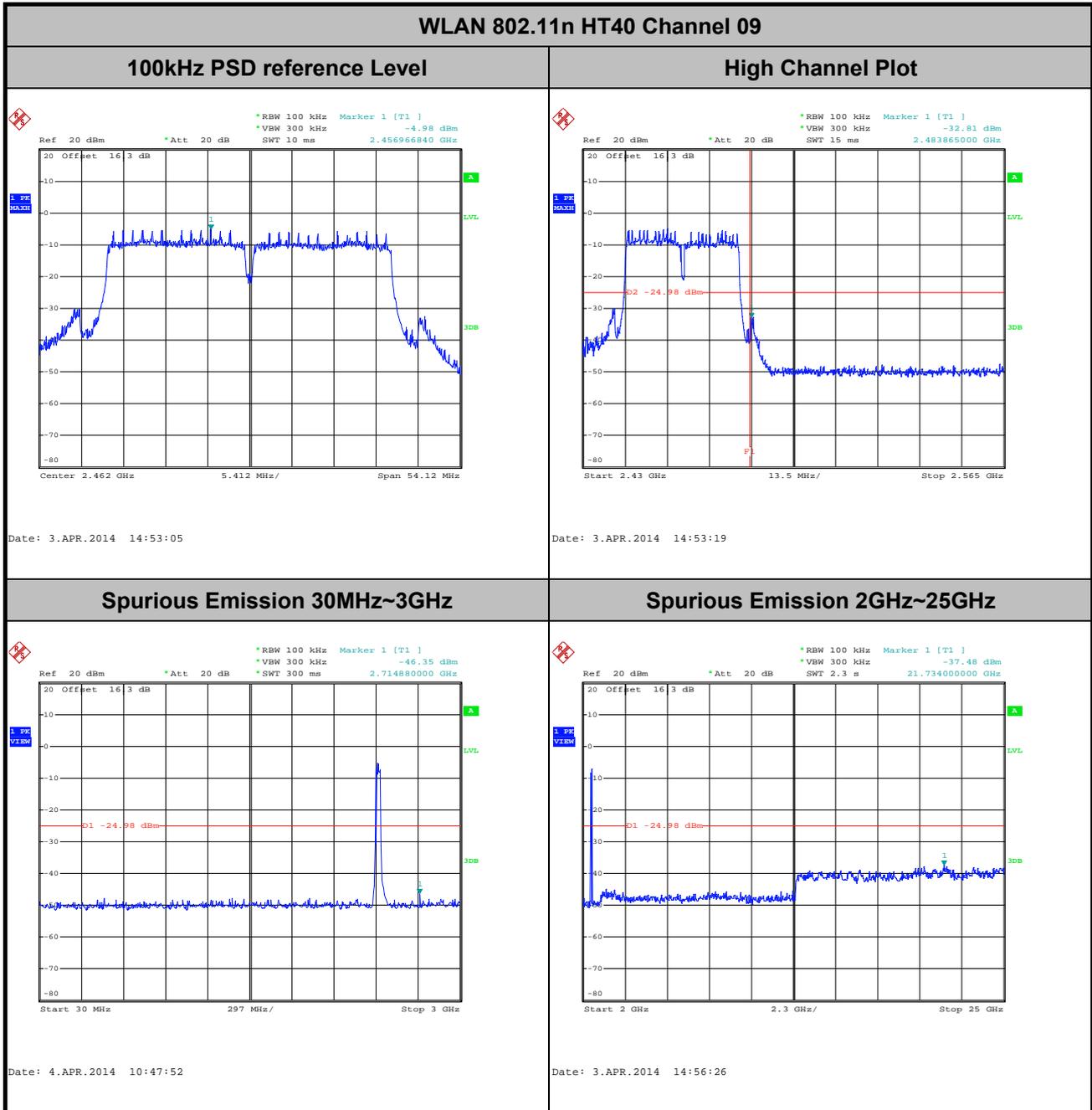


Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li





Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	09	Test Engineer :	Adonis Li

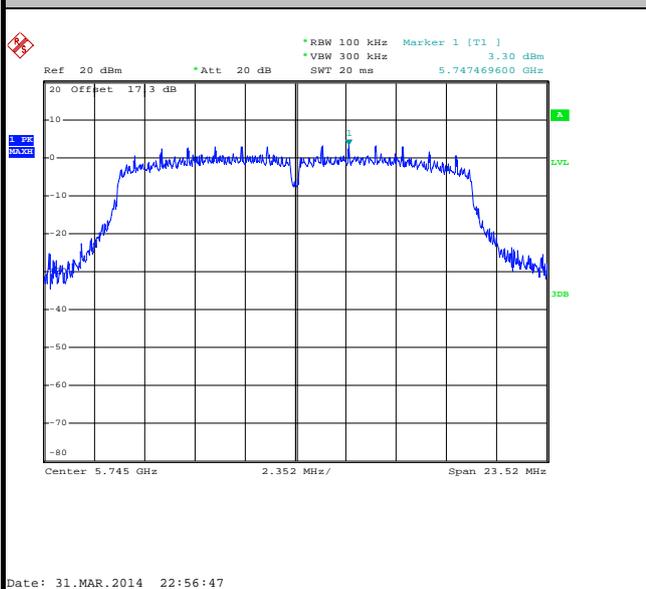




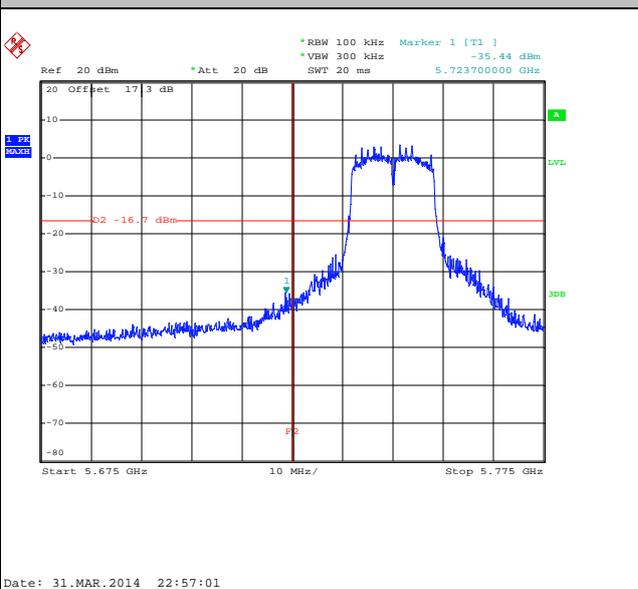
Number of TX :	1	Chain Port	0
Test Mode :	802.11a	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	149	Test Engineer :	Adonis Li

WLAN 802.11a Channel 149

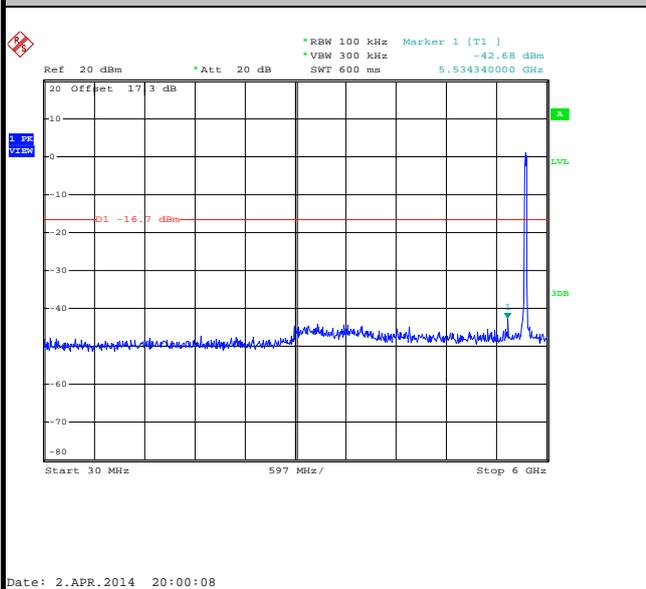
100kHz PSD reference Level



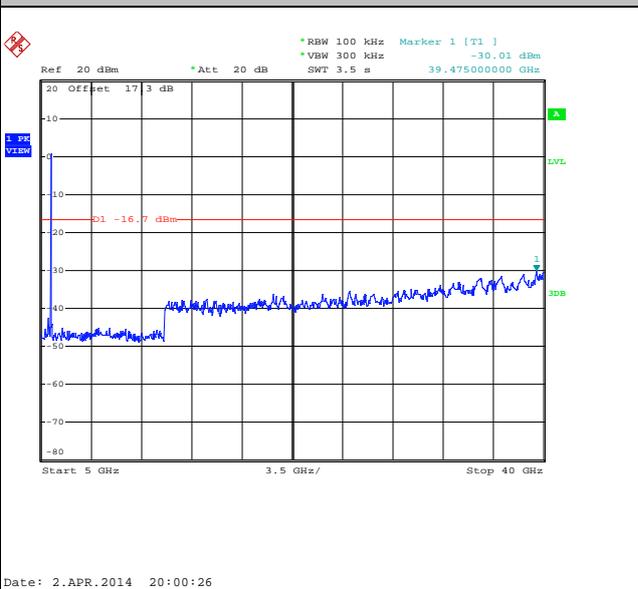
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

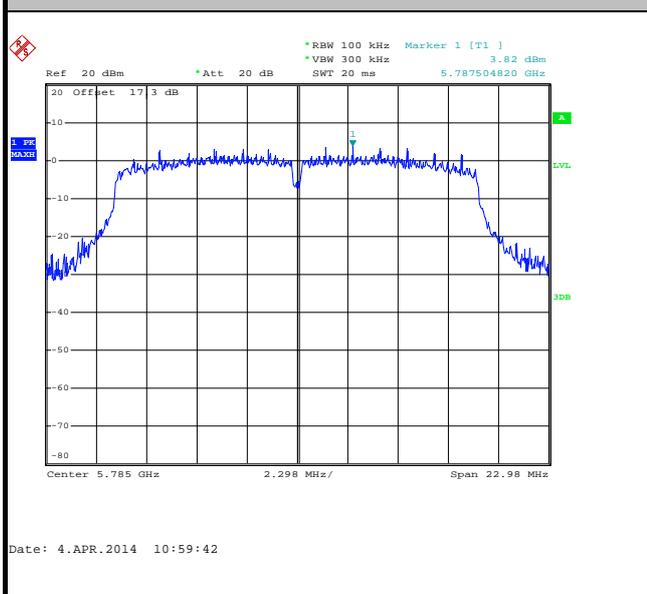




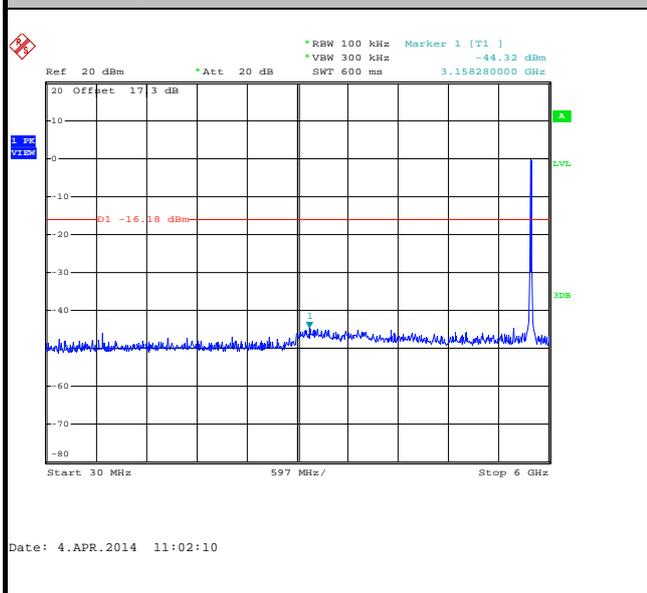
Number of TX :	1	Chain Port	0
Test Mode :	802.11a	Temperature :	23~24°C
Test Band :	5GHz Mid	Relative Humidity :	47~48%
Test Channel :	157	Test Engineer :	Adonis Li

WLAN 802.11a Channel 157

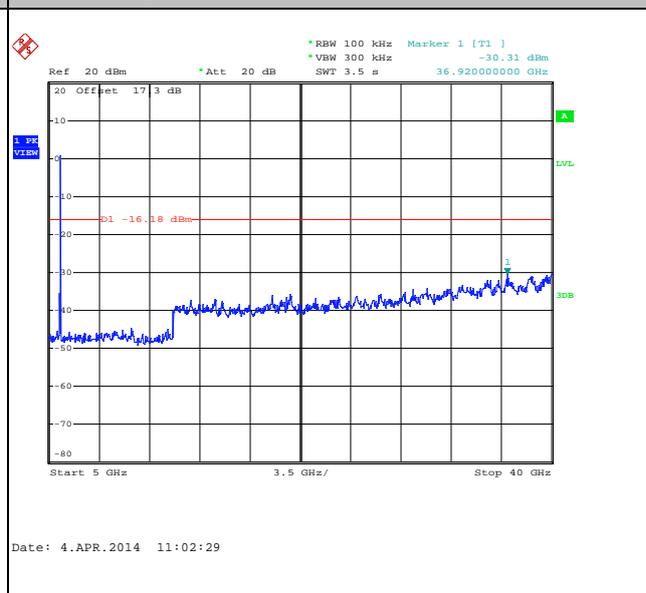
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

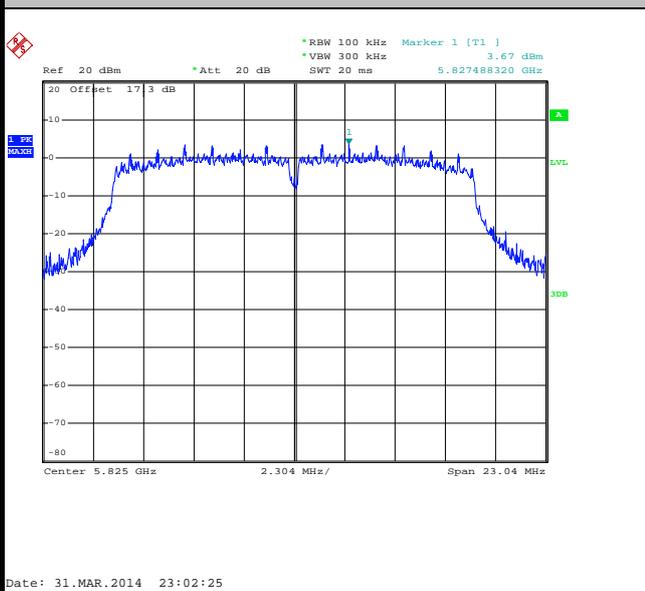




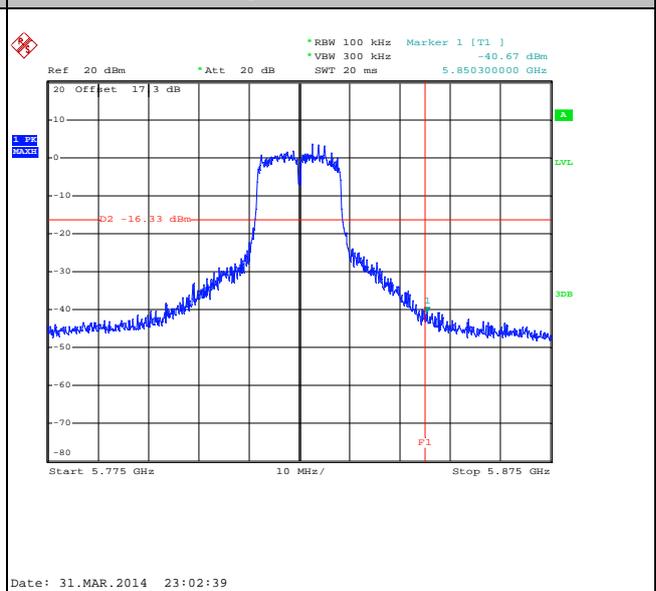
Number of TX :	1	Chain Port	0
Test Mode :	802.11a	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	165	Test Engineer :	Adonis Li

WLAN 802.11a Channel 165

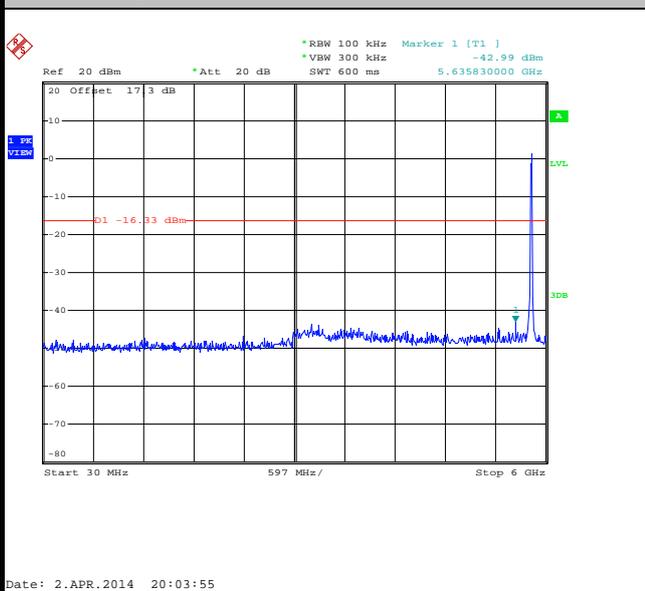
100kHz PSD reference Level



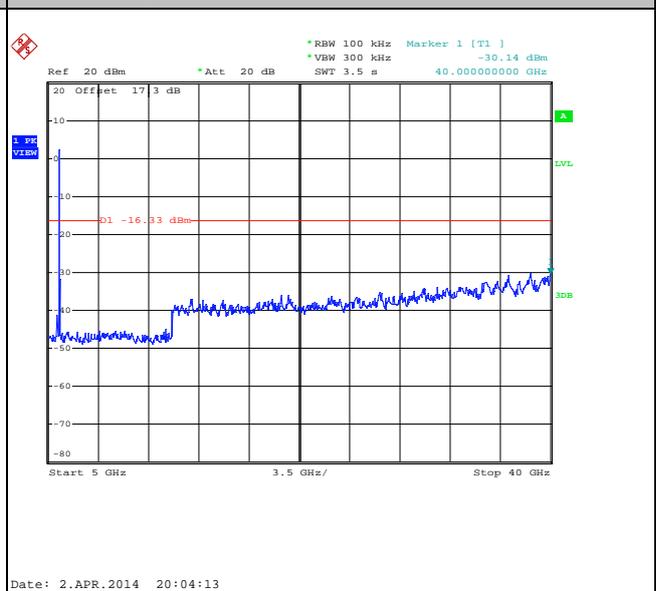
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

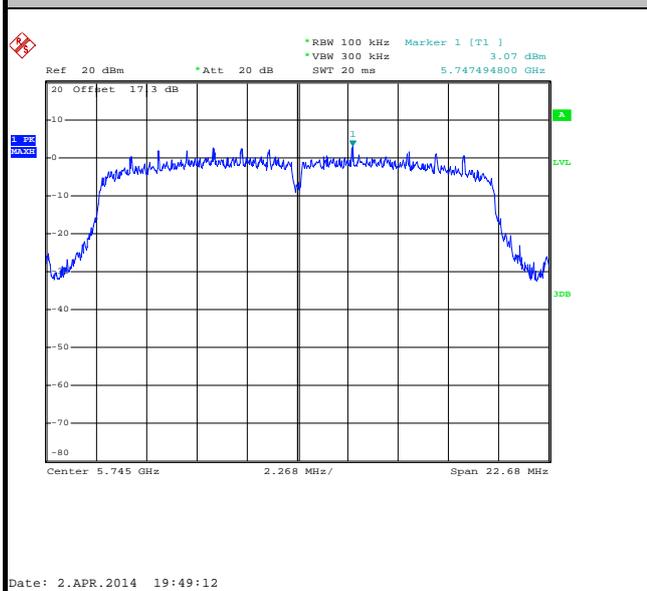




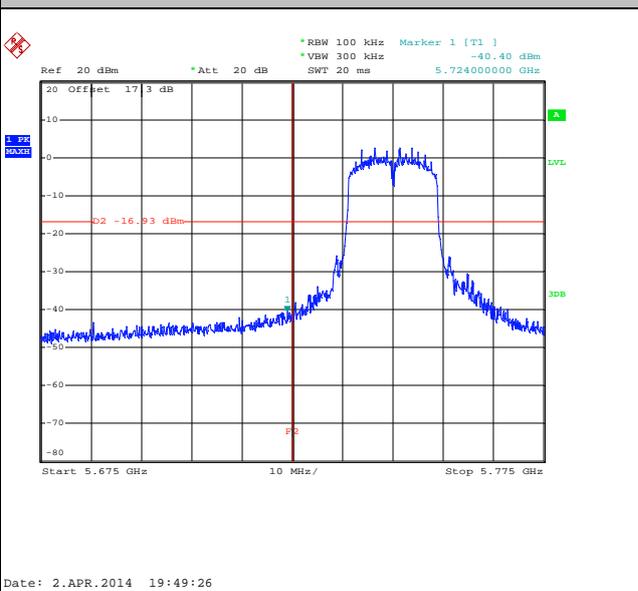
Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	149	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 149

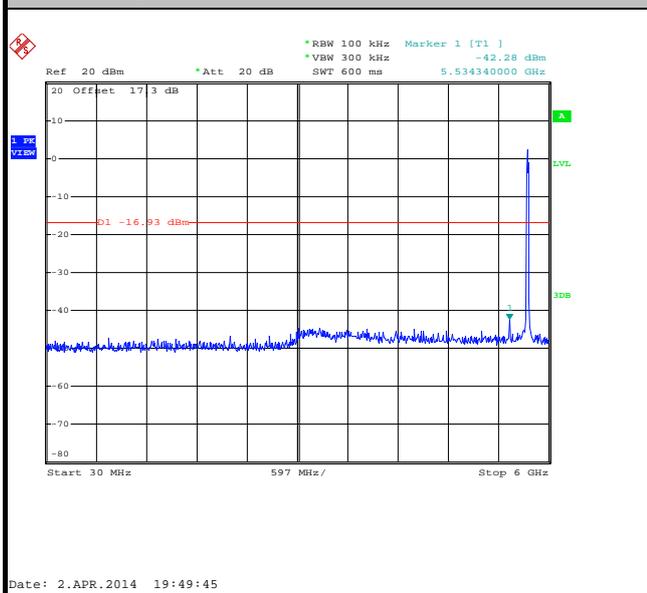
100kHz PSD reference Level



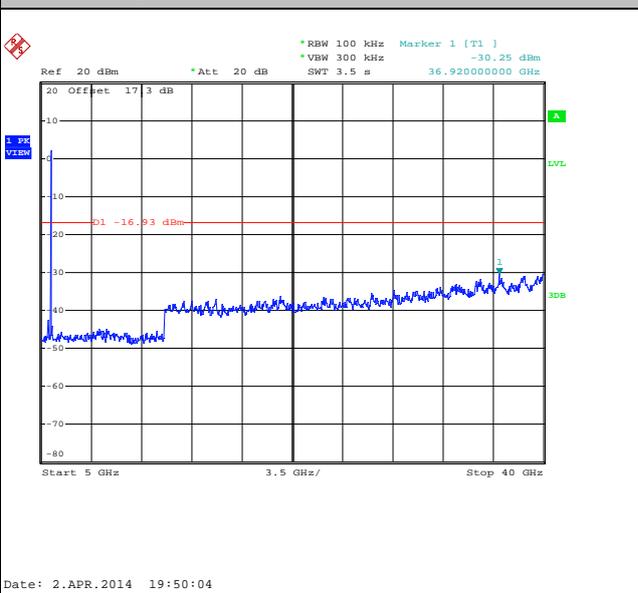
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

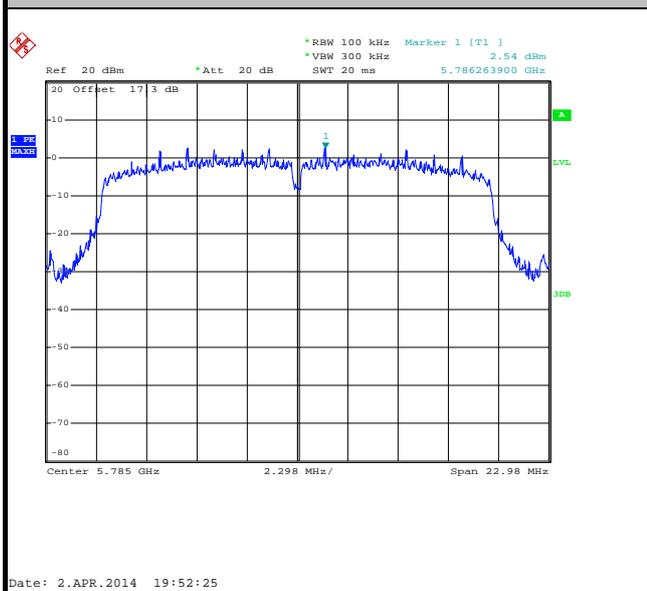




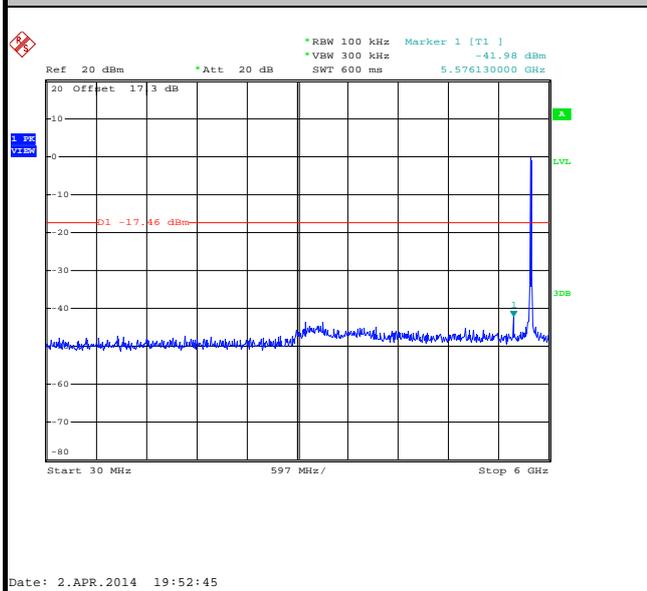
Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz Mid	Relative Humidity :	47~48%
Test Channel :	157	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 157

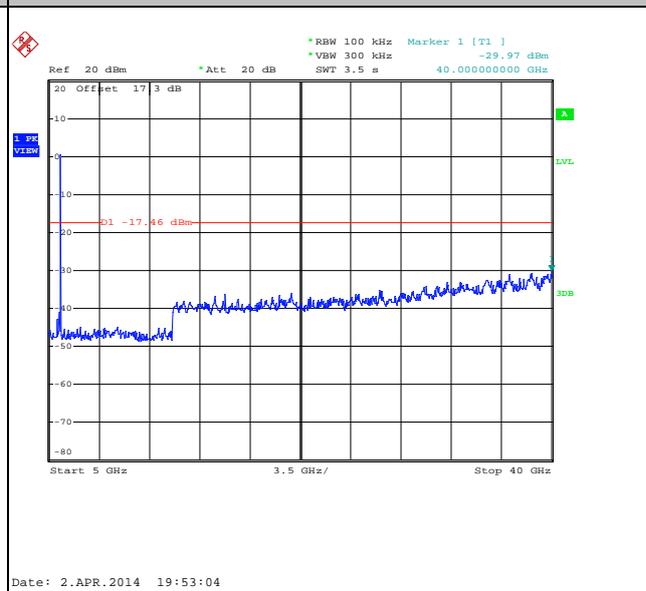
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

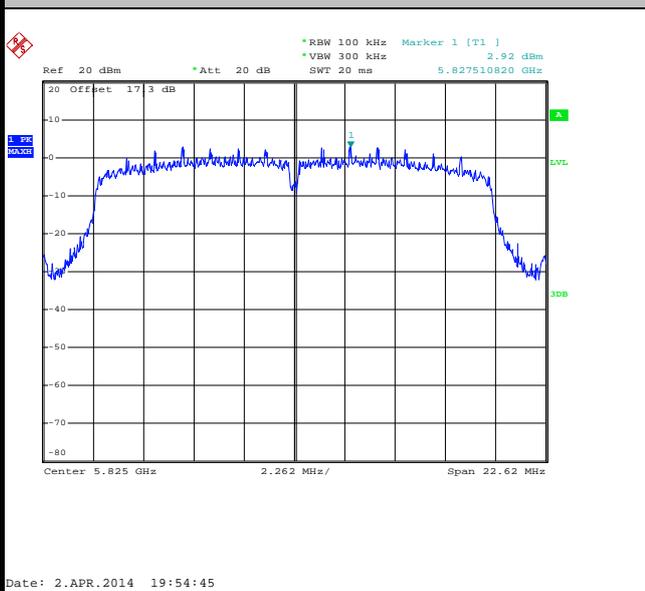




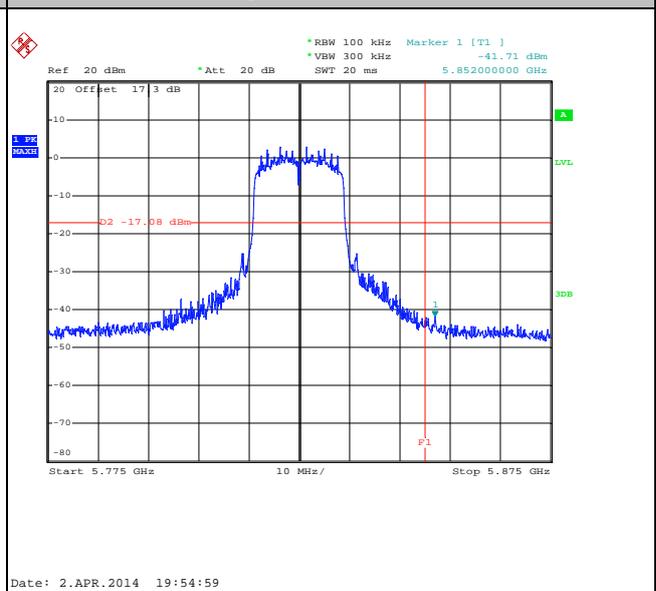
Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	165	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 165

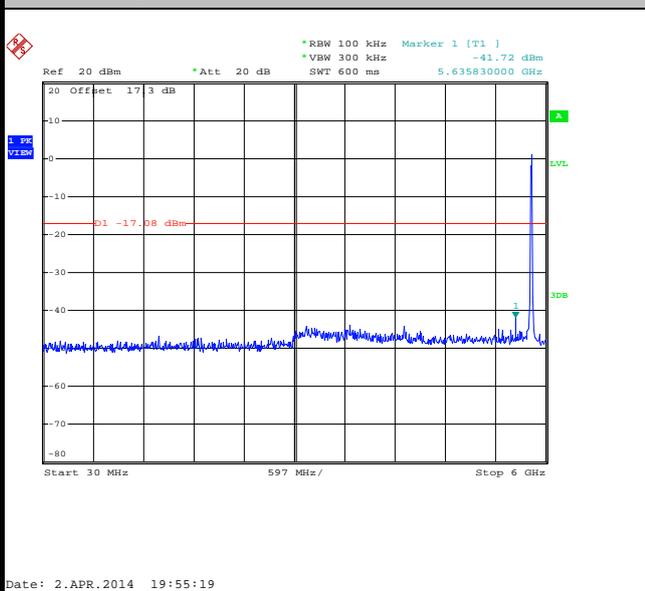
100kHz PSD reference Level



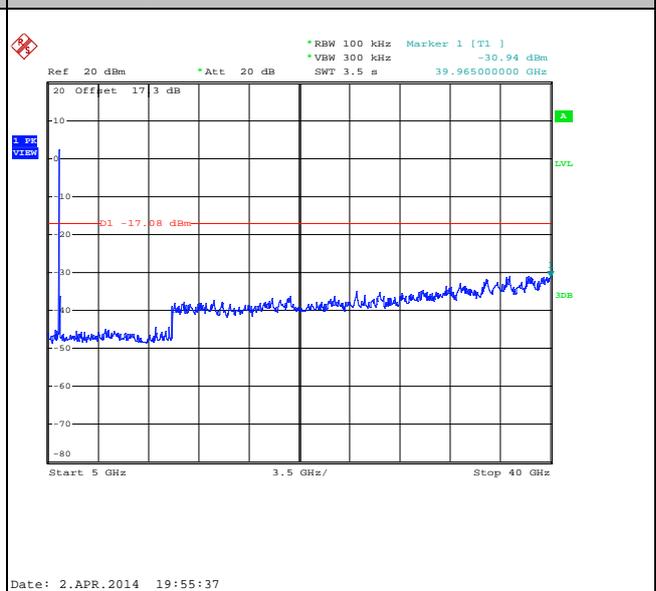
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

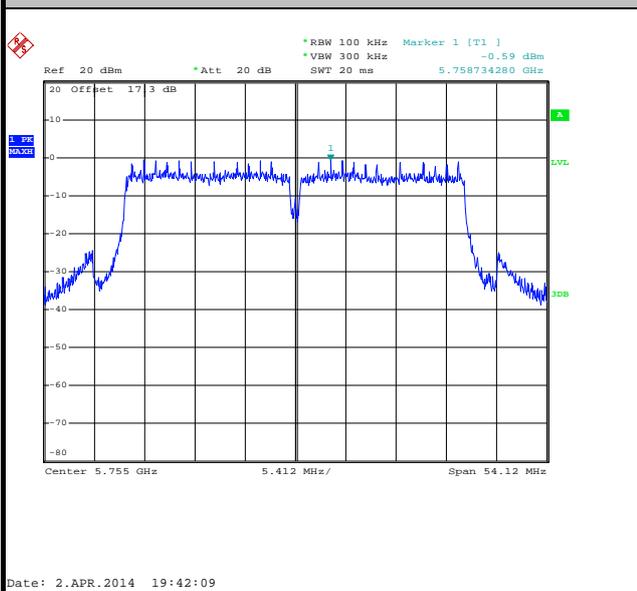




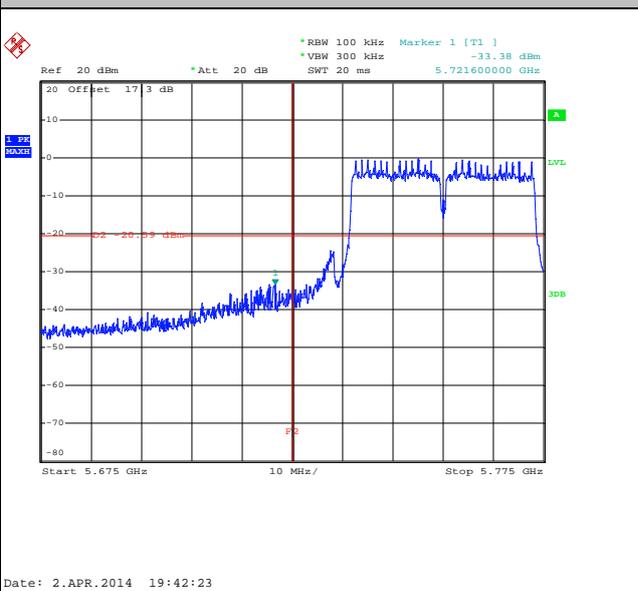
Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	151	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 151

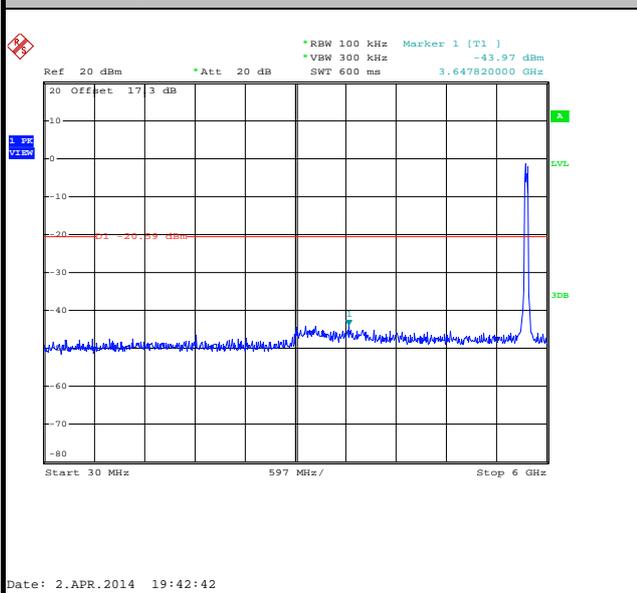
100kHz PSD reference Level



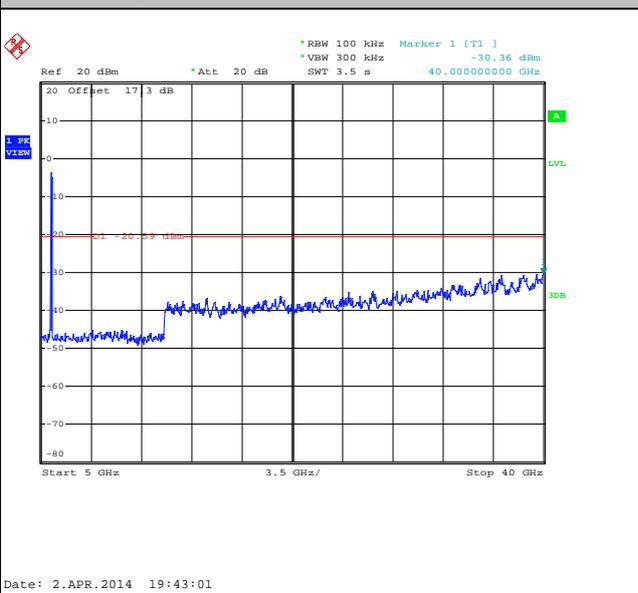
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

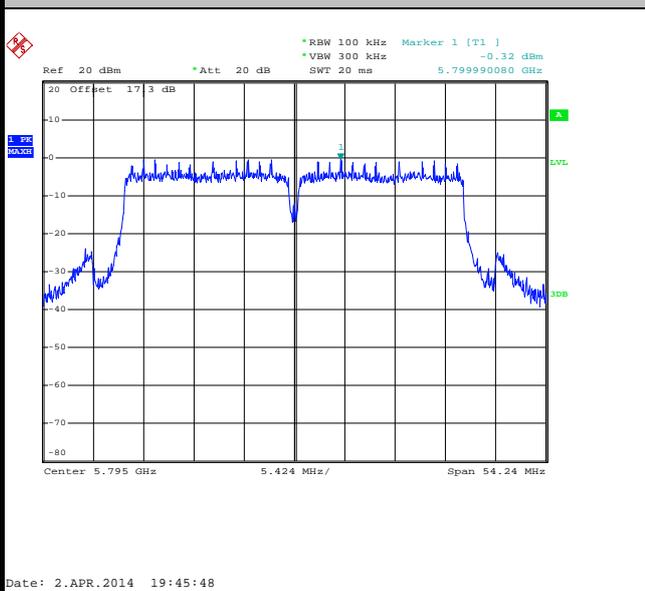




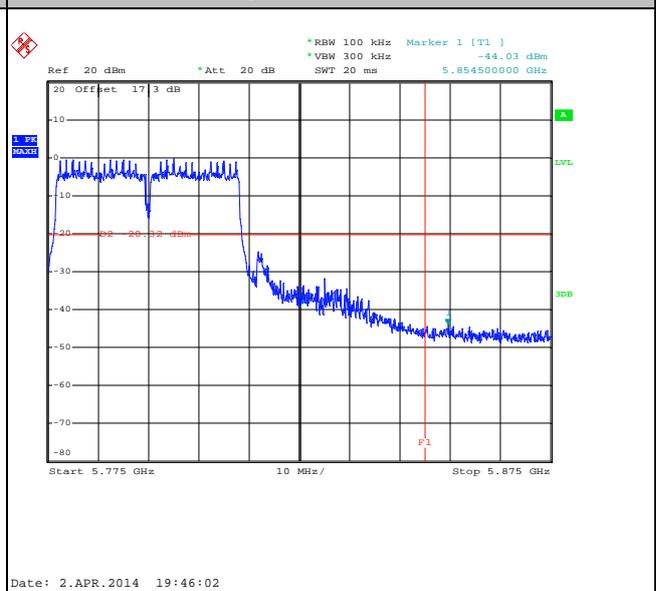
Number of TX :	1	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	159	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 159

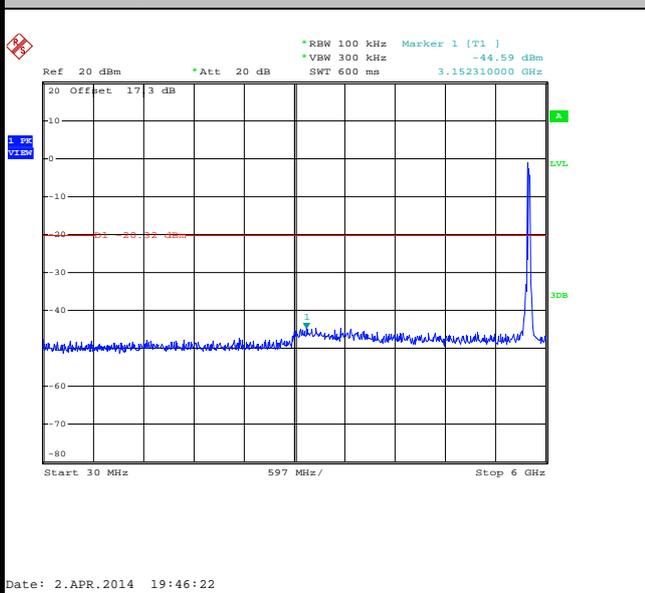
100kHz PSD reference Level



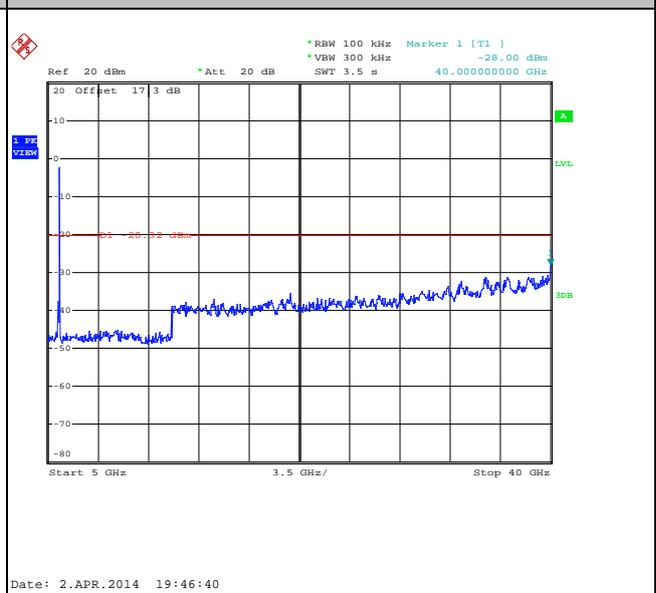
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz



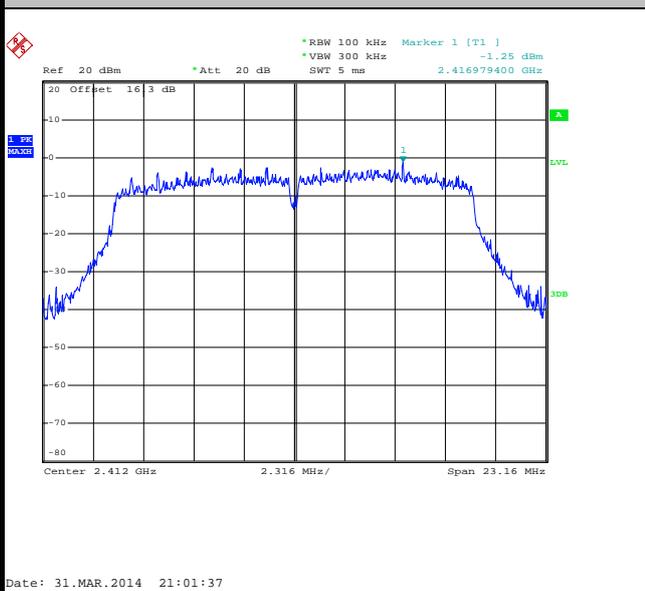


Number of TX = 2, Chain Port 0

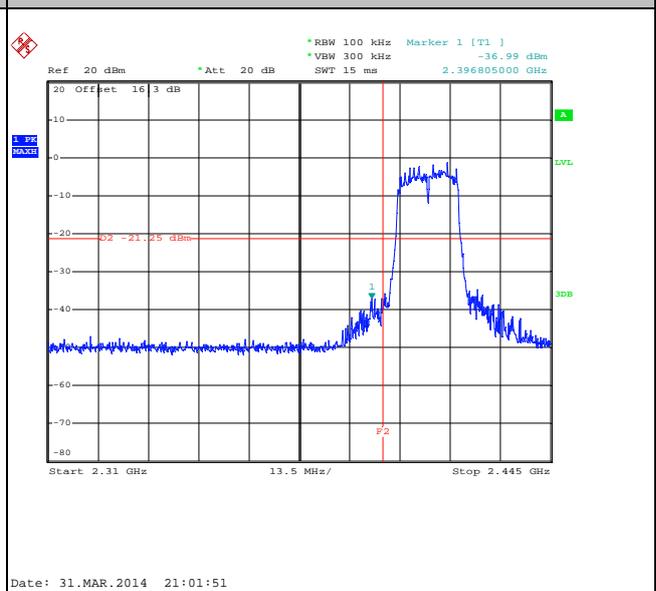
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 01

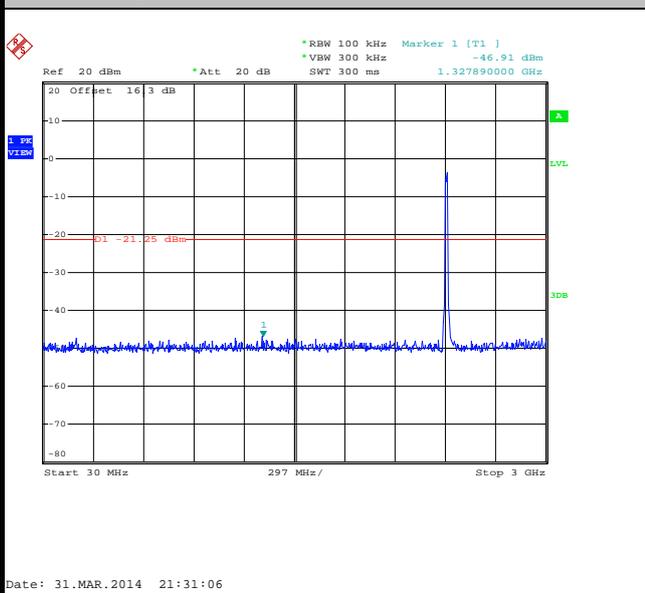
100kHz PSD reference Level



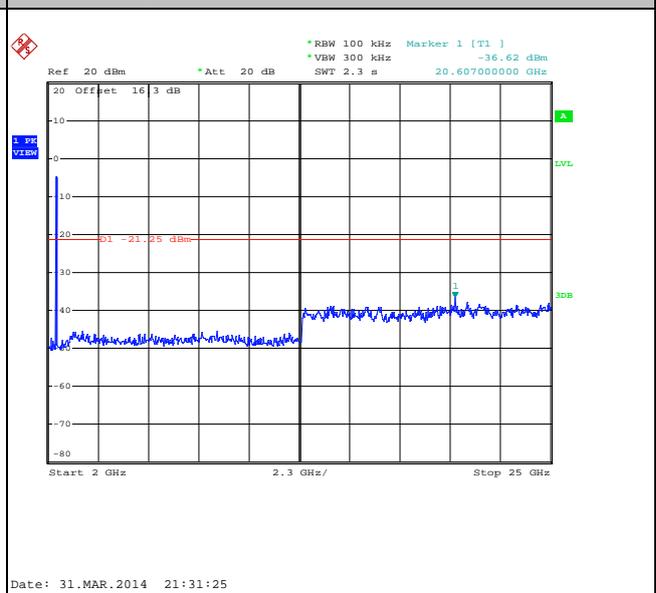
Low Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

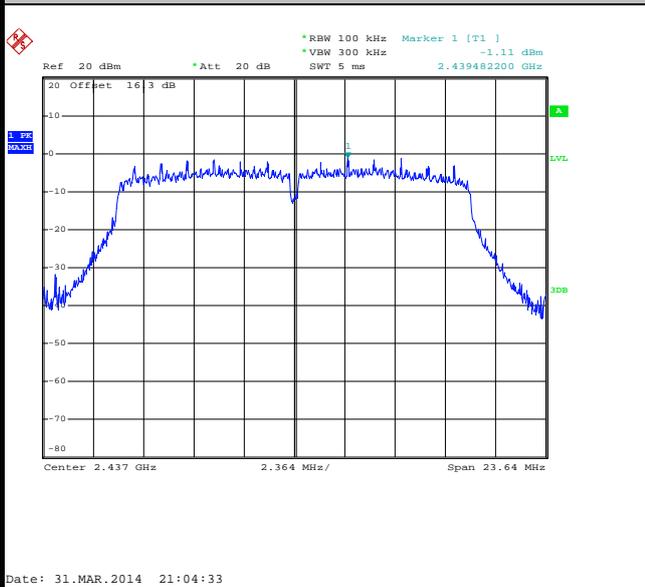




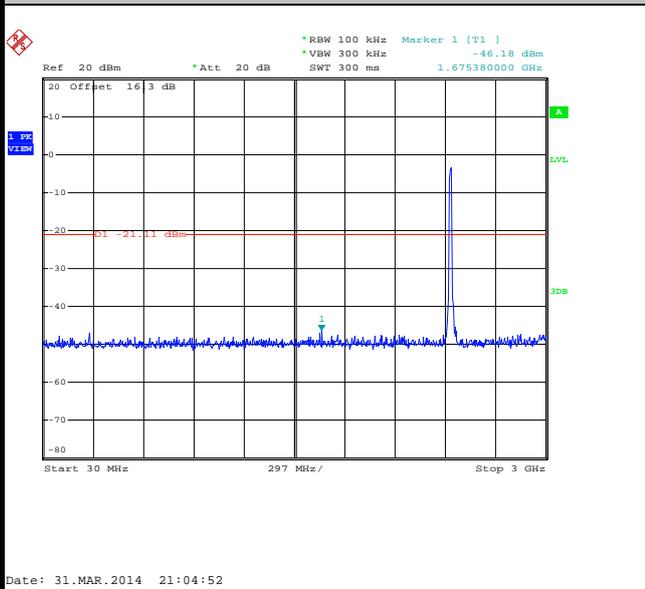
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 06

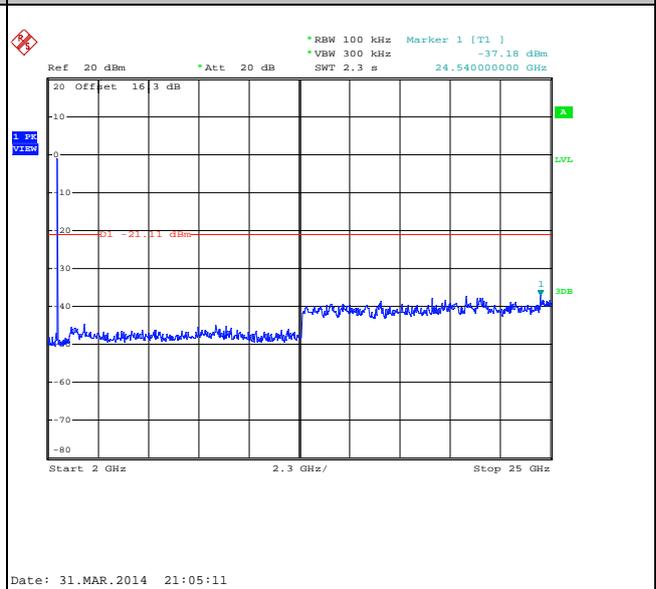
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz

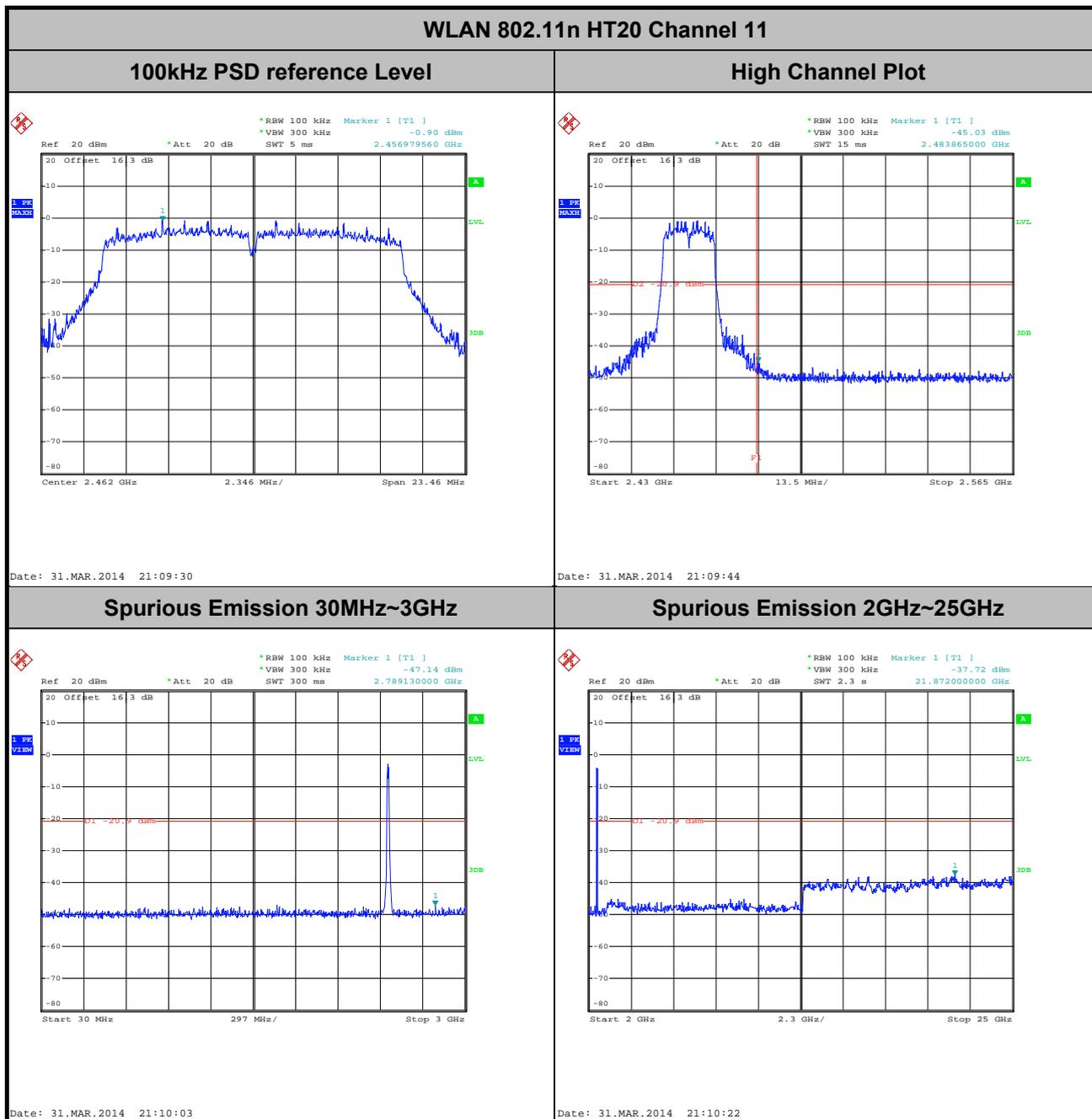


Spurious Emission 2GHz~25GHz





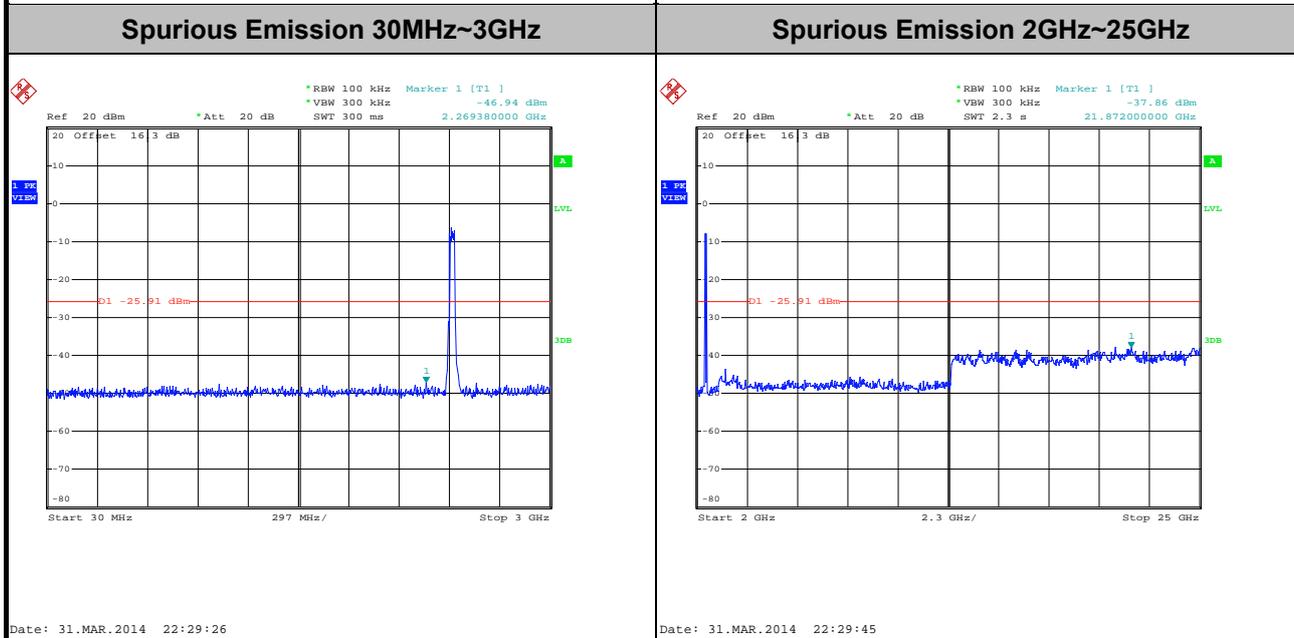
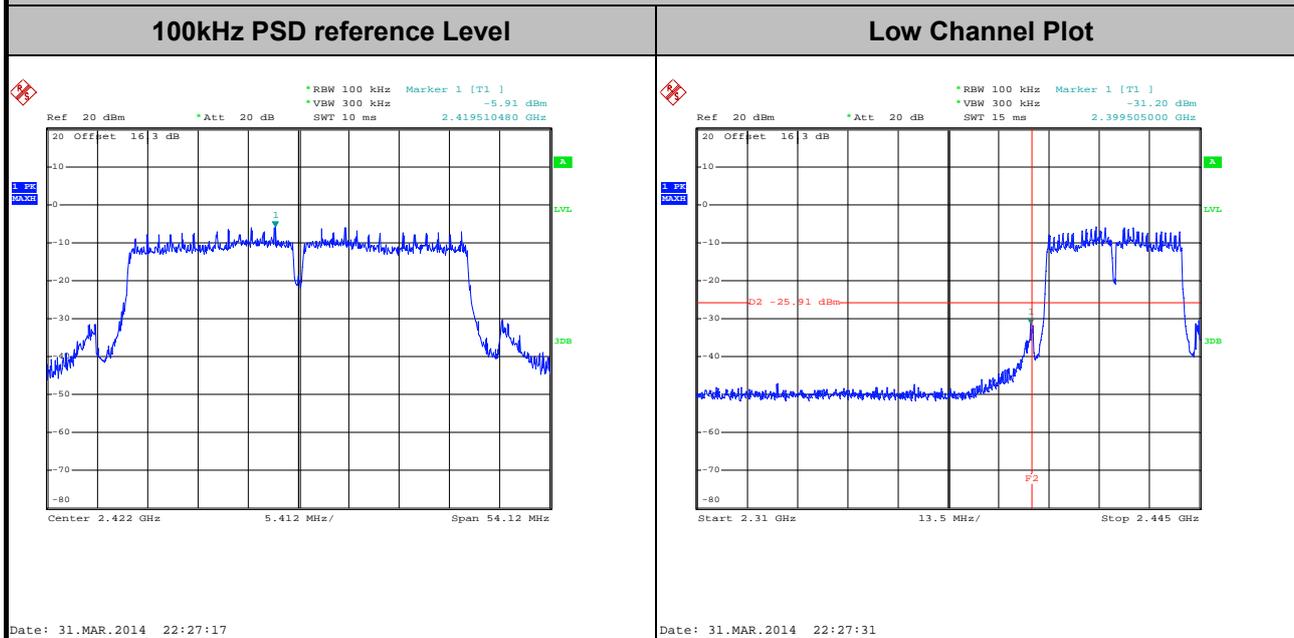
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Adonis Li





Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	03	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 03

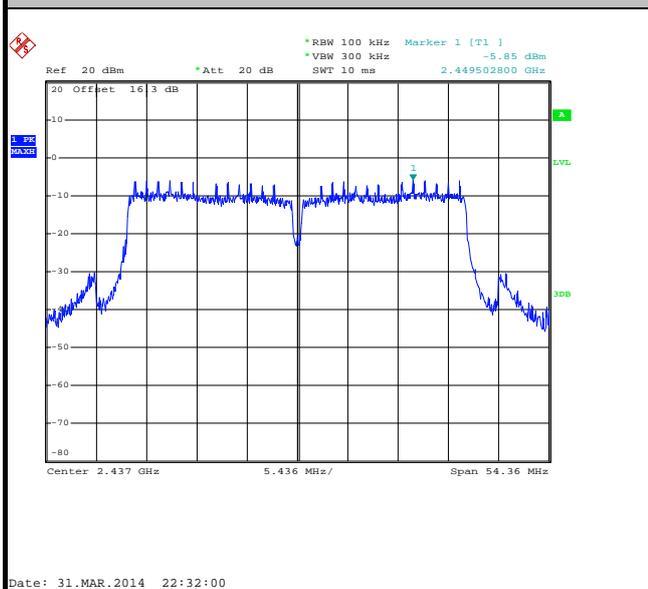




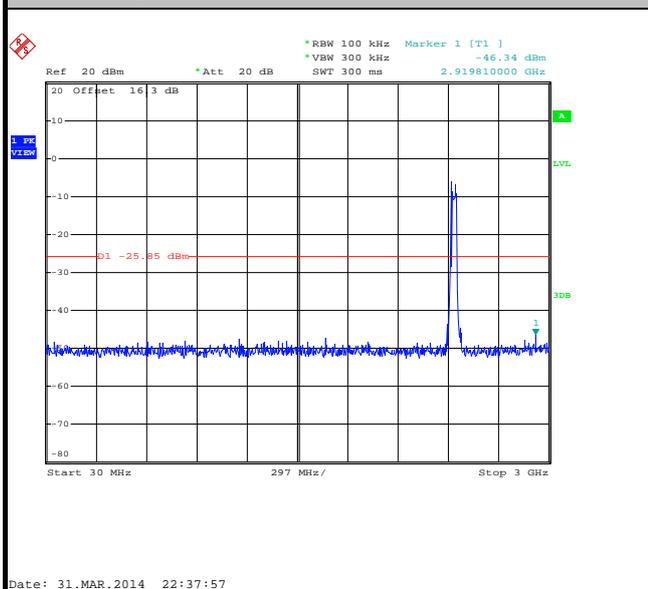
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 06

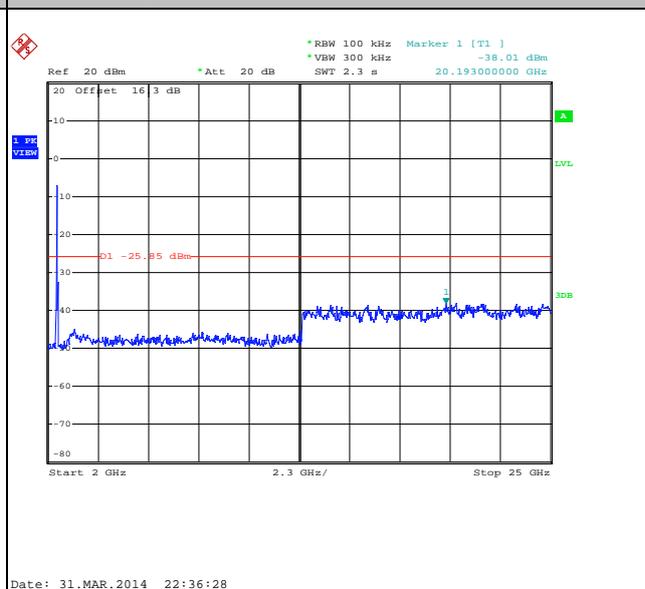
100kHz PSD reference Level



Spurious Emission 30MHz~3GHz

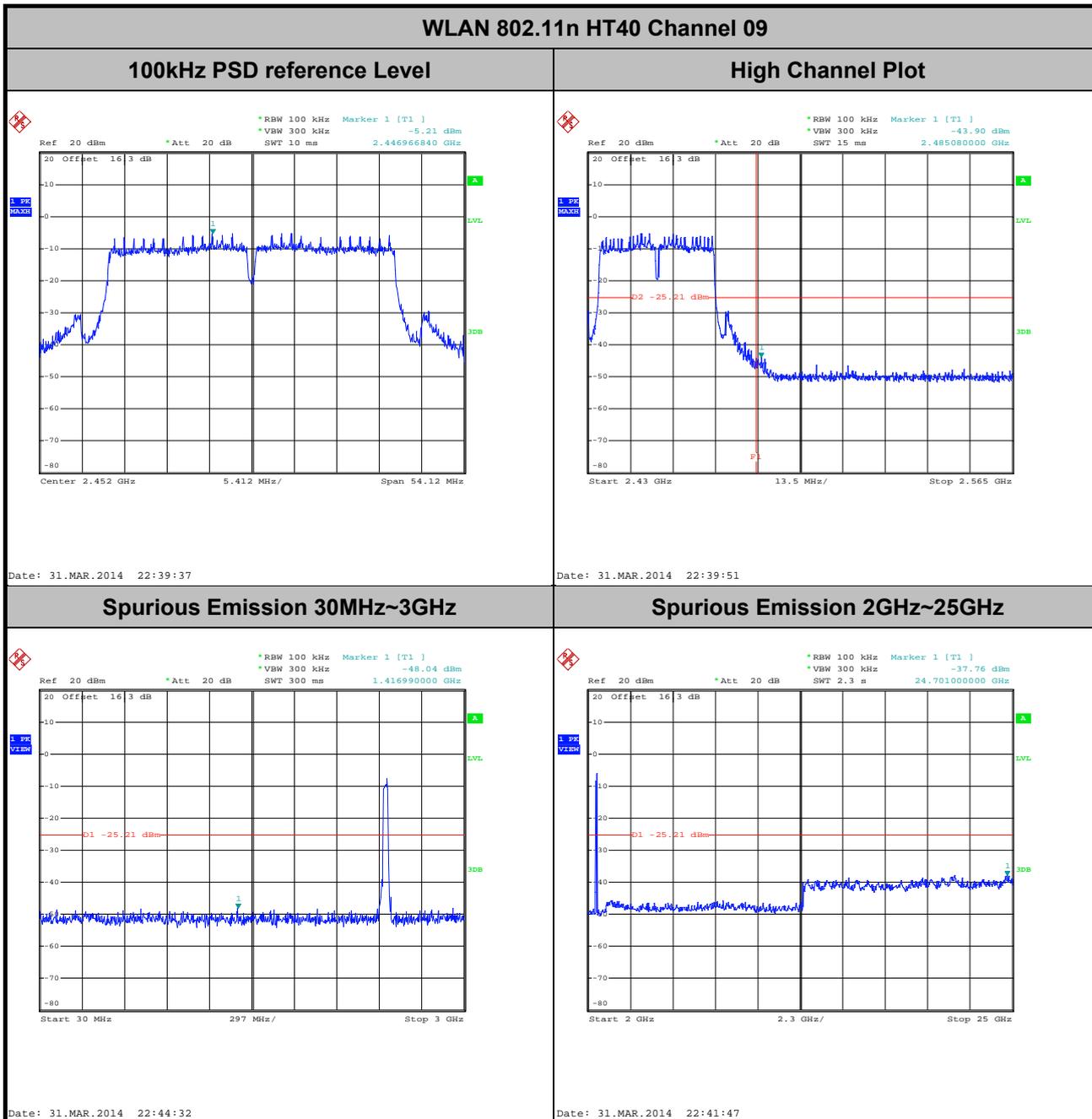


Spurious Emission 2GHz~25GHz





Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	09	Test Engineer :	Adonis Li

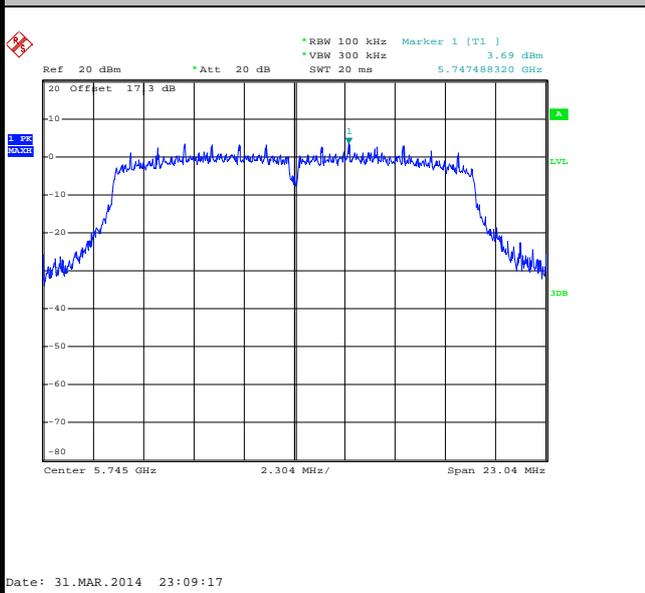




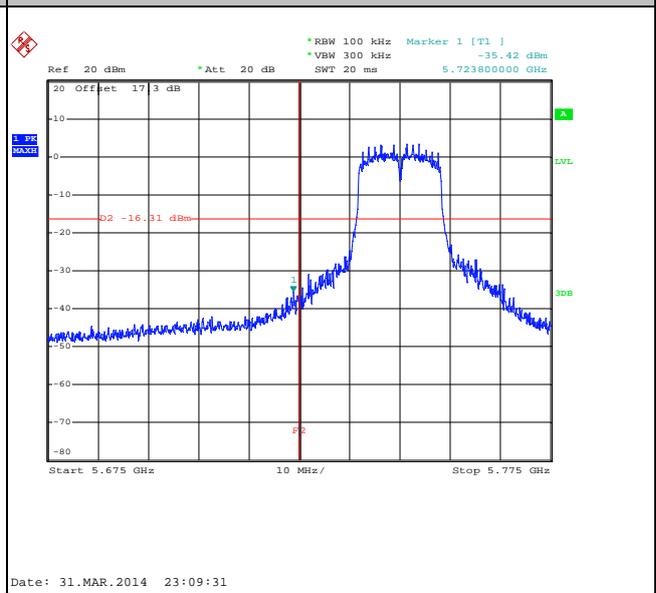
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	149	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 149

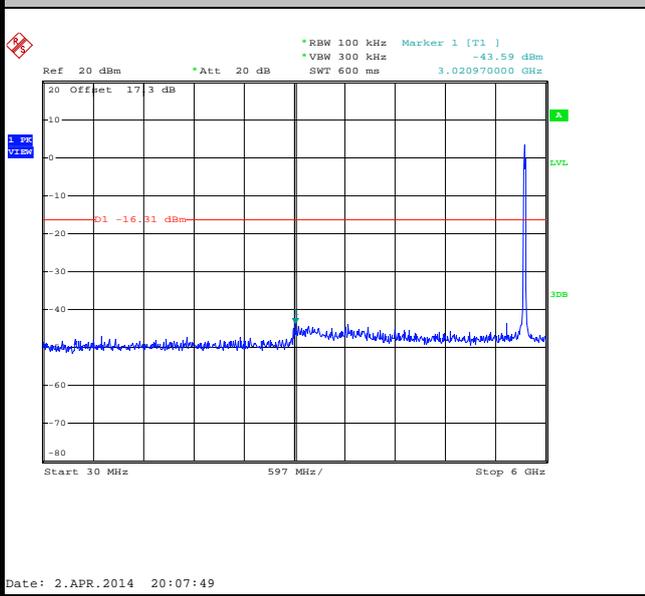
100kHz PSD reference Level



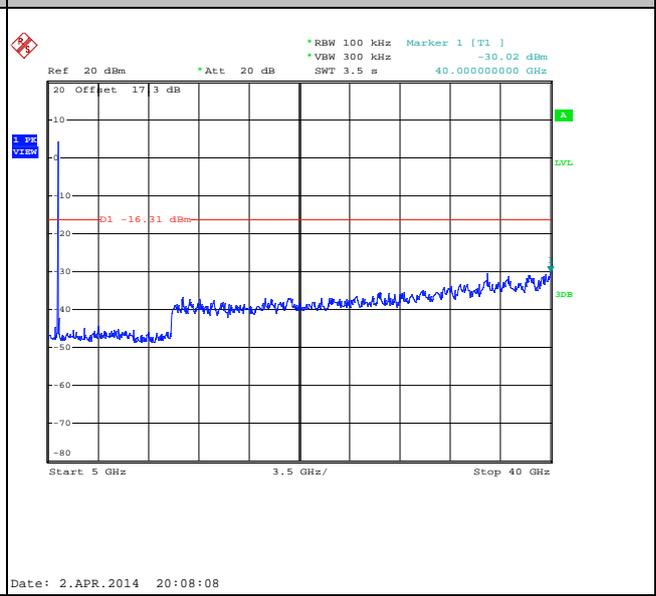
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

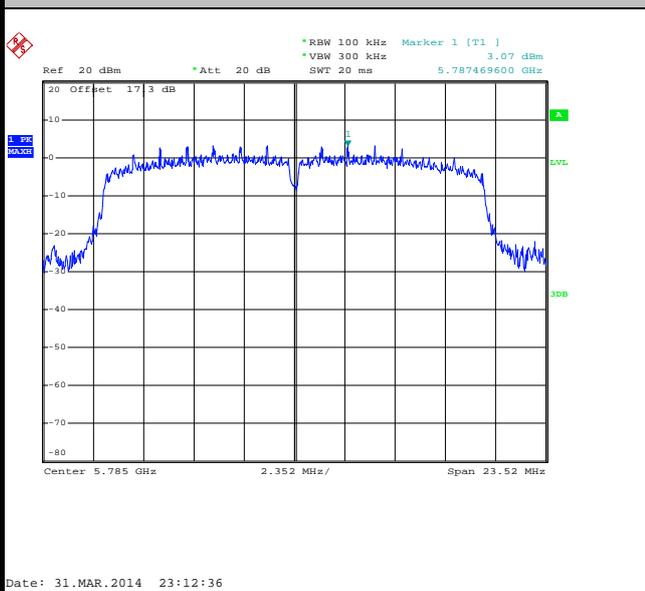




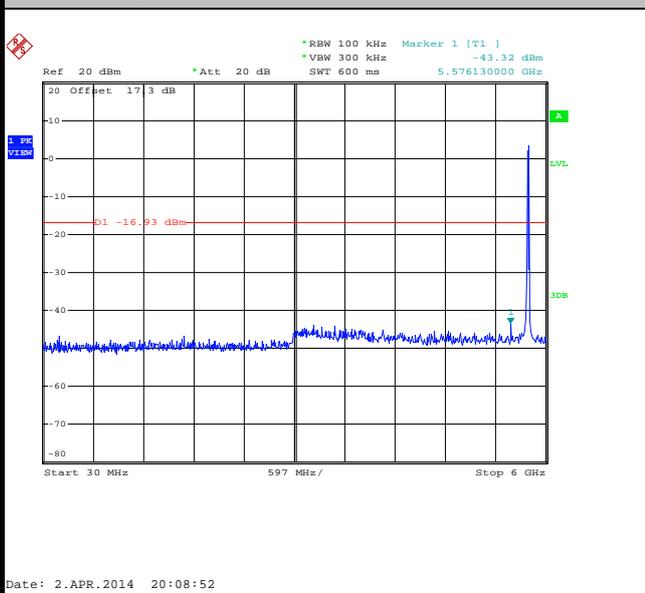
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz Mid	Relative Humidity :	47~48%
Test Channel :	157	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 157

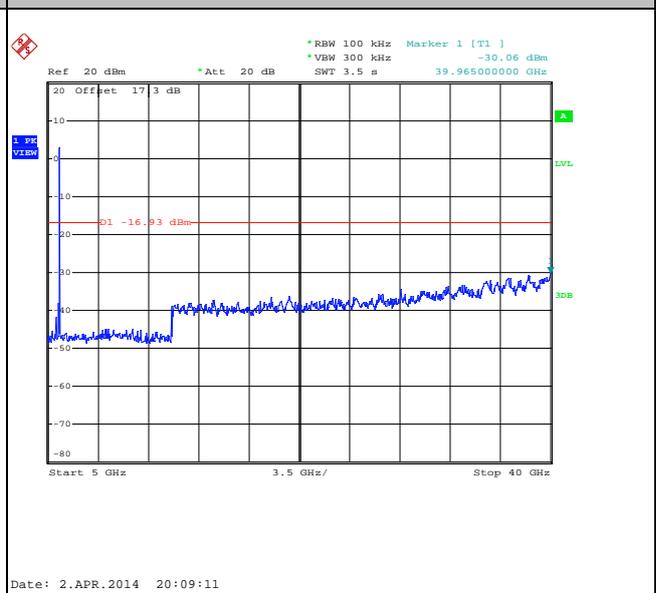
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

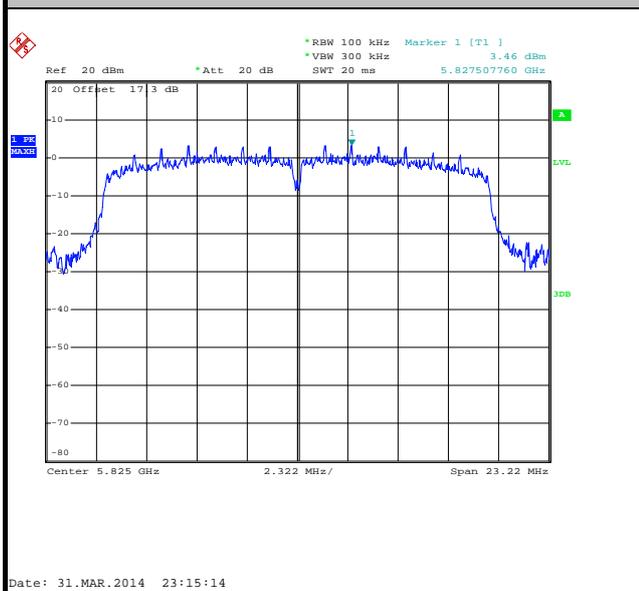




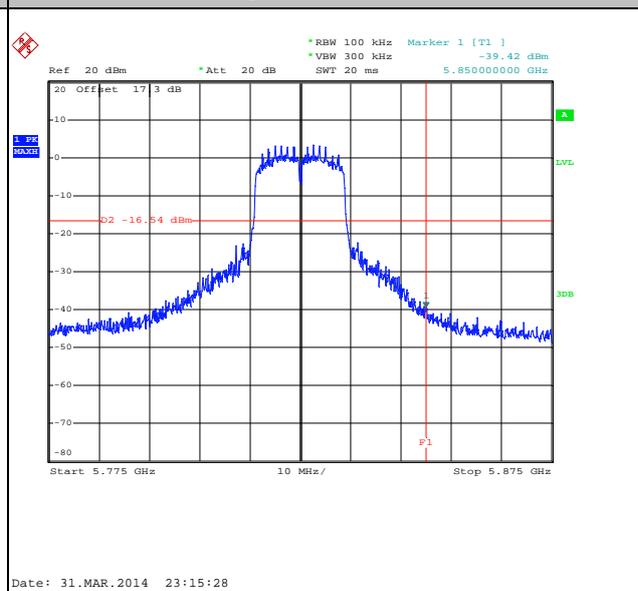
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	165	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 165

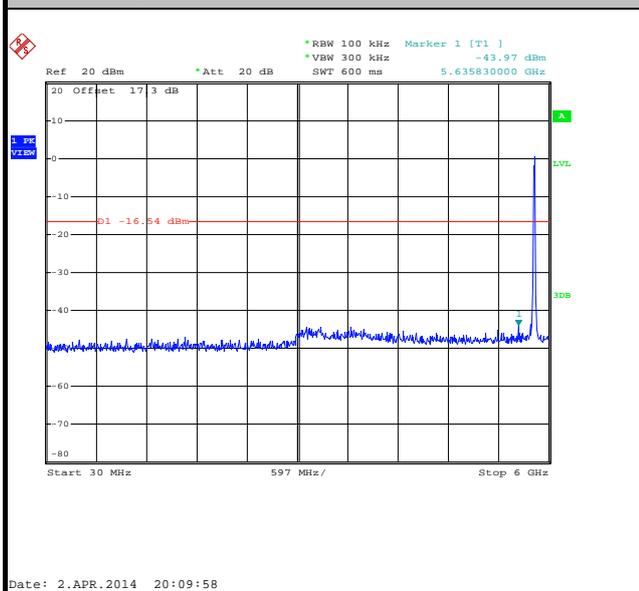
100kHz PSD reference Level



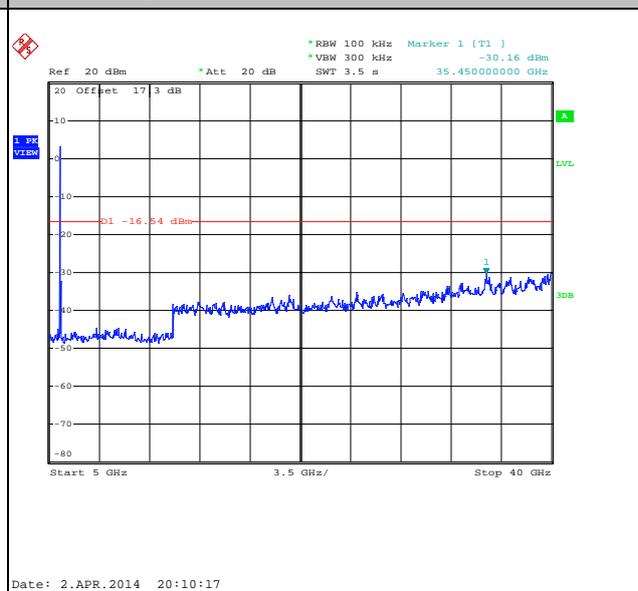
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

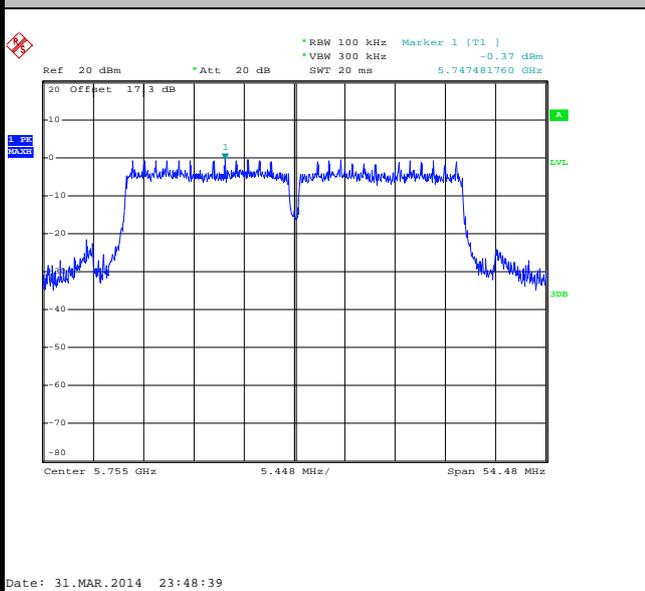




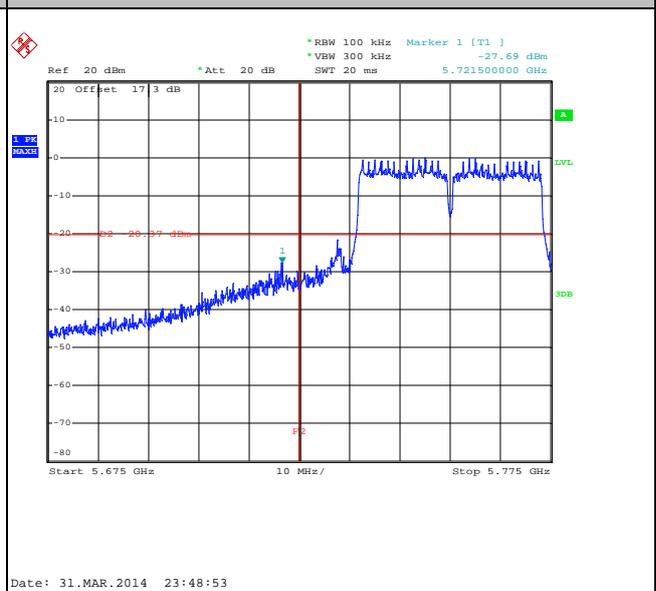
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	151	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 151

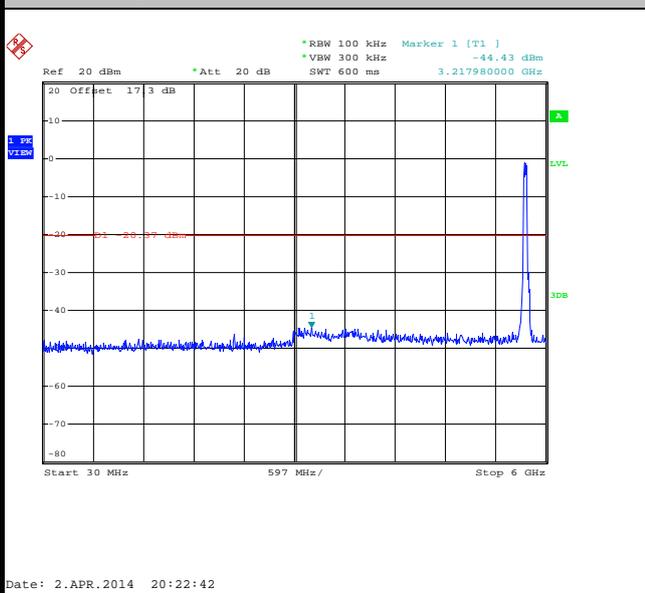
100kHz PSD reference Level



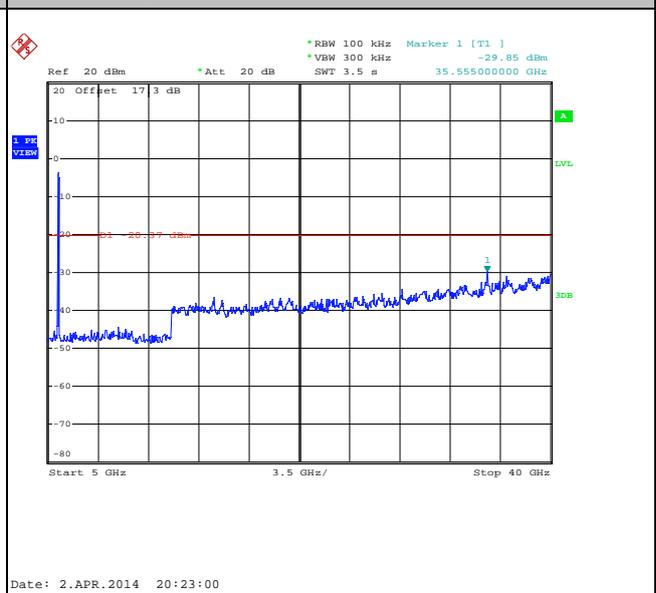
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

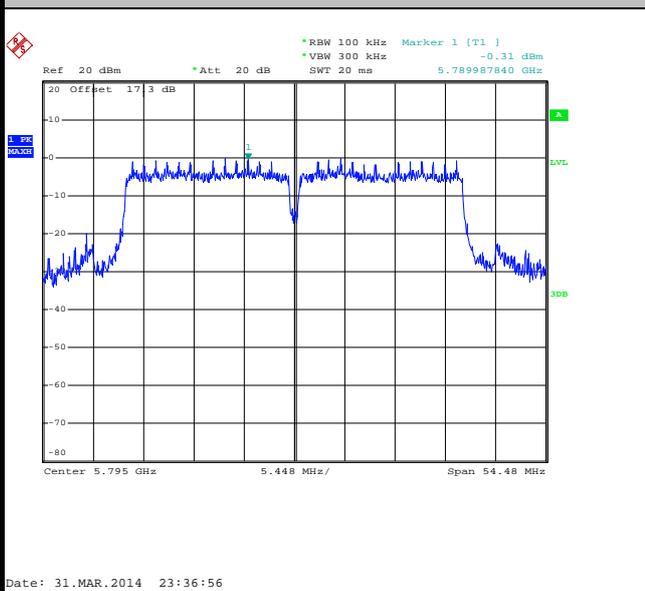




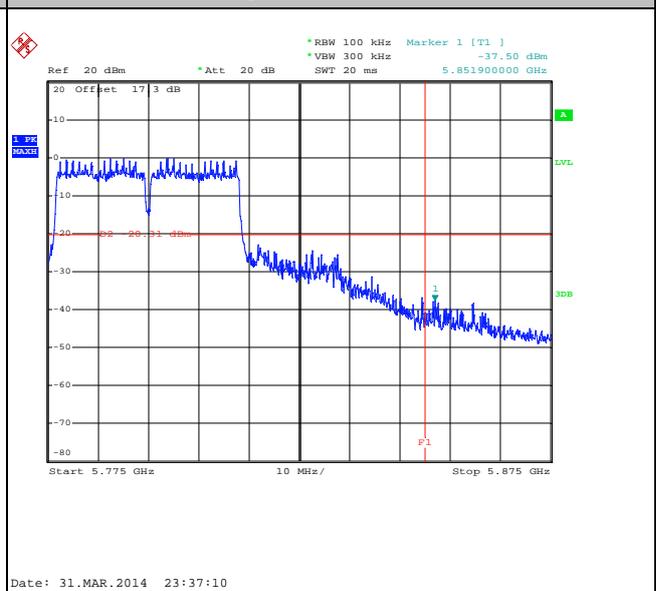
Number of TX :	2	Chain Port	0
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	159	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 159

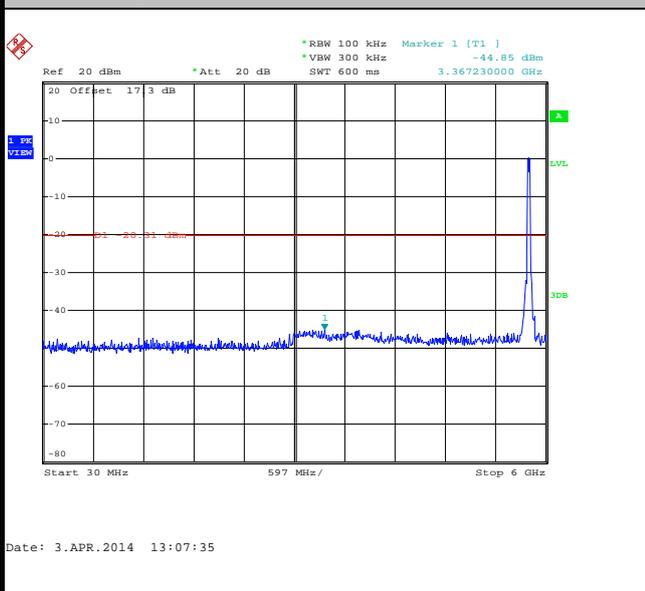
100kHz PSD reference Level



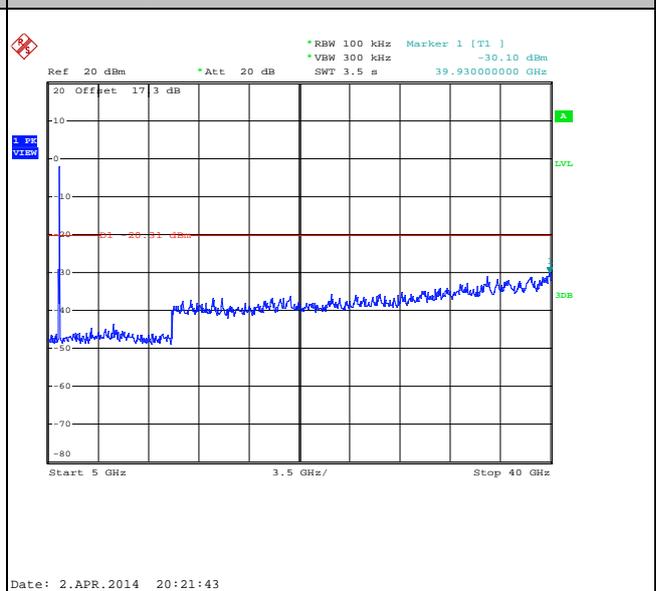
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz



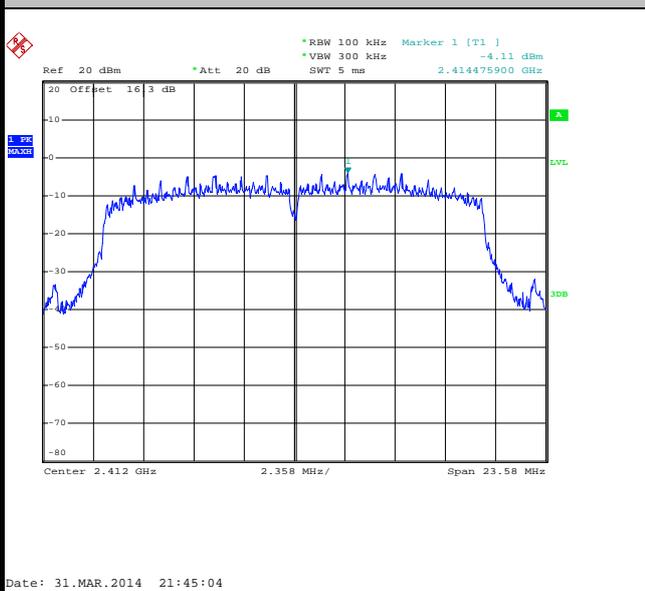


Number of TX = 2, Chain Port 1

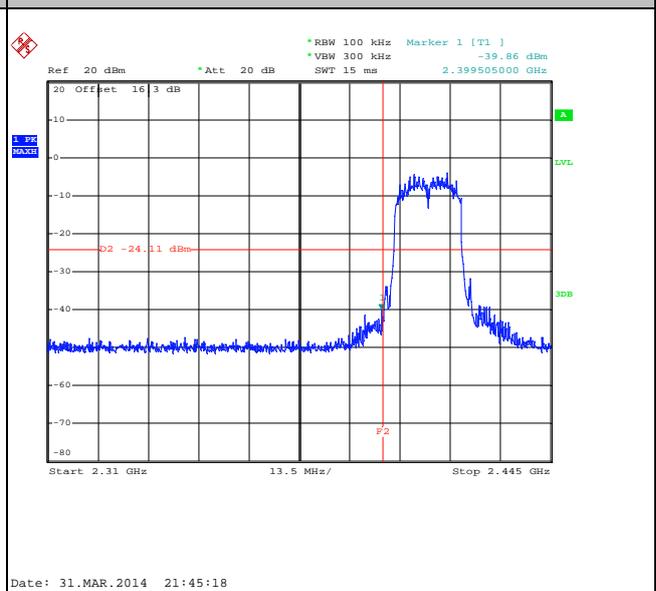
Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 01

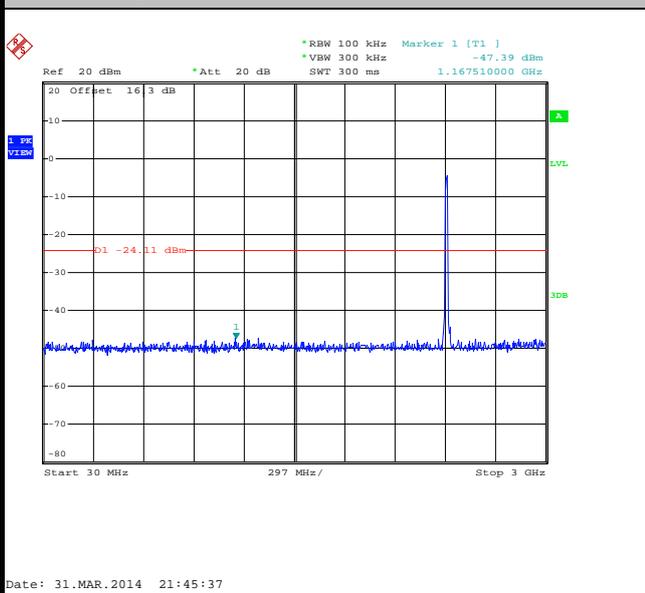
100kHz PSD reference Level



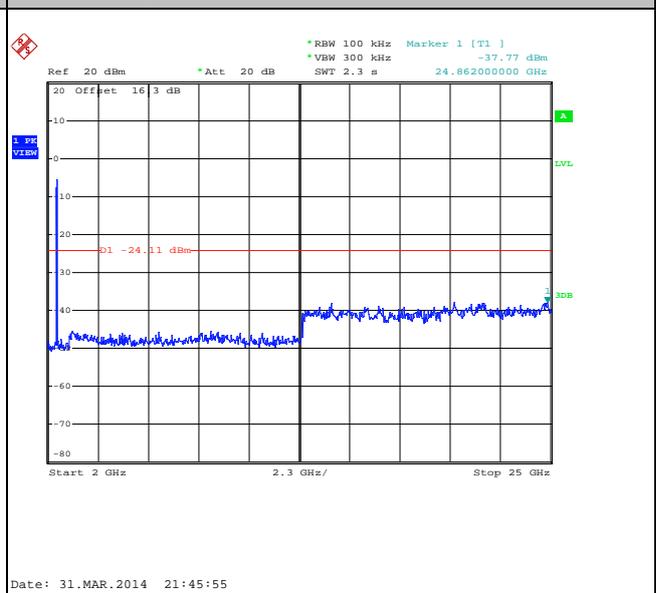
Low Channel Plot



Spurious Emission 30MHz~3GHz

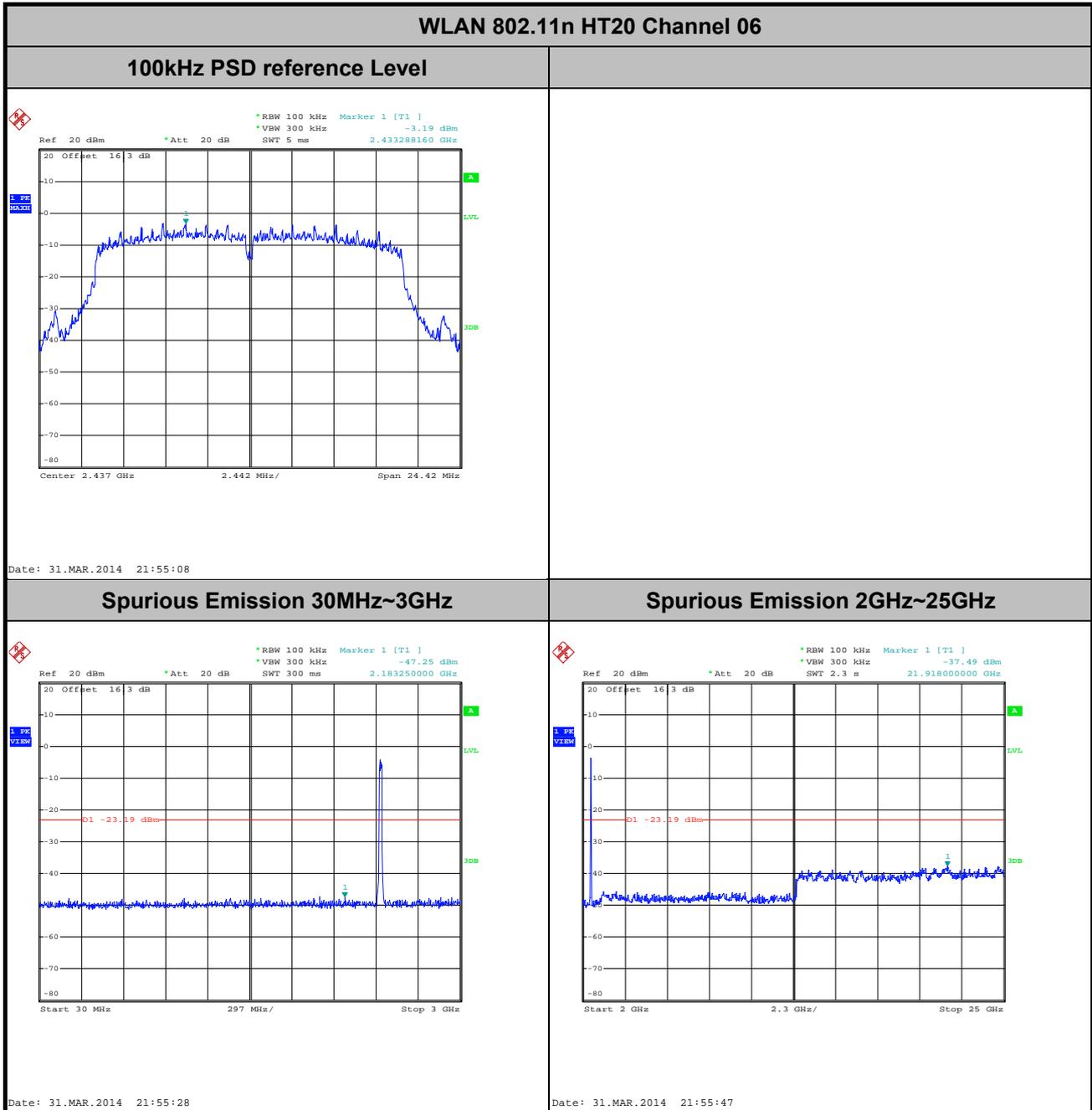


Spurious Emission 2GHz~25GHz





Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li

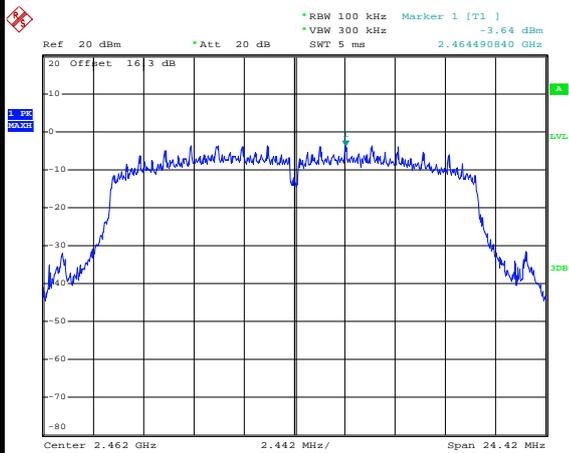




Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Adonis Li

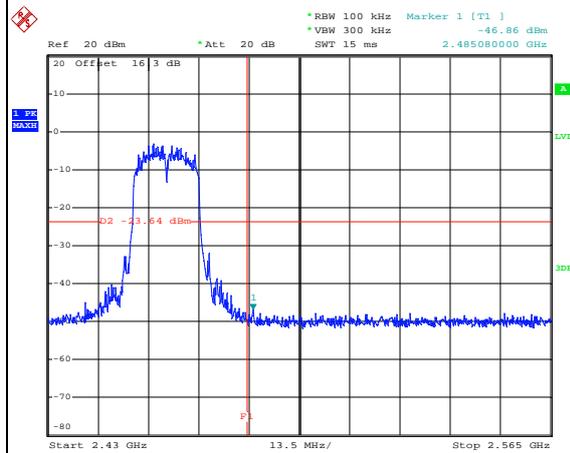
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



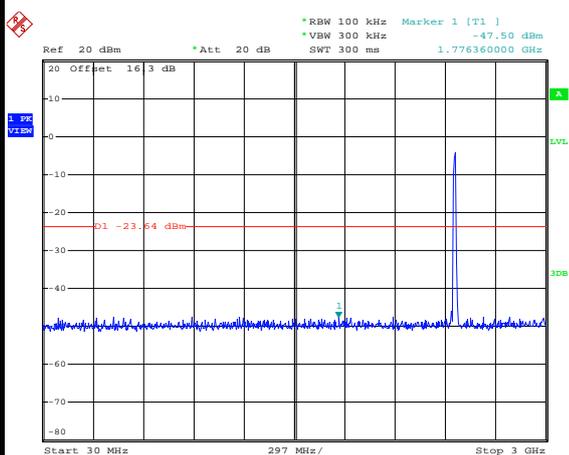
Date: 31.MAR.2014 21:51:30

High Channel Plot



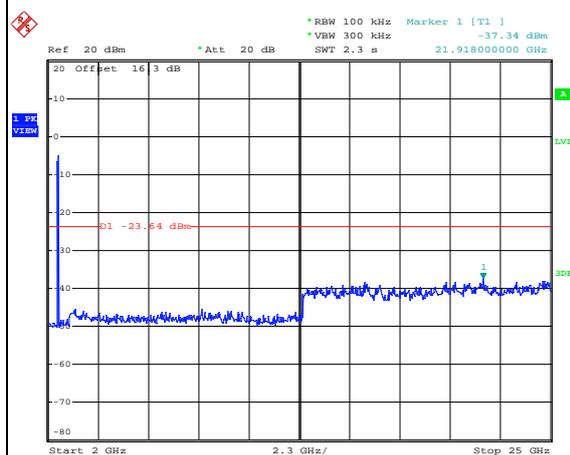
Date: 31.MAR.2014 21:51:44

Spurious Emission 30MHz~3GHz



Date: 31.MAR.2014 21:52:03

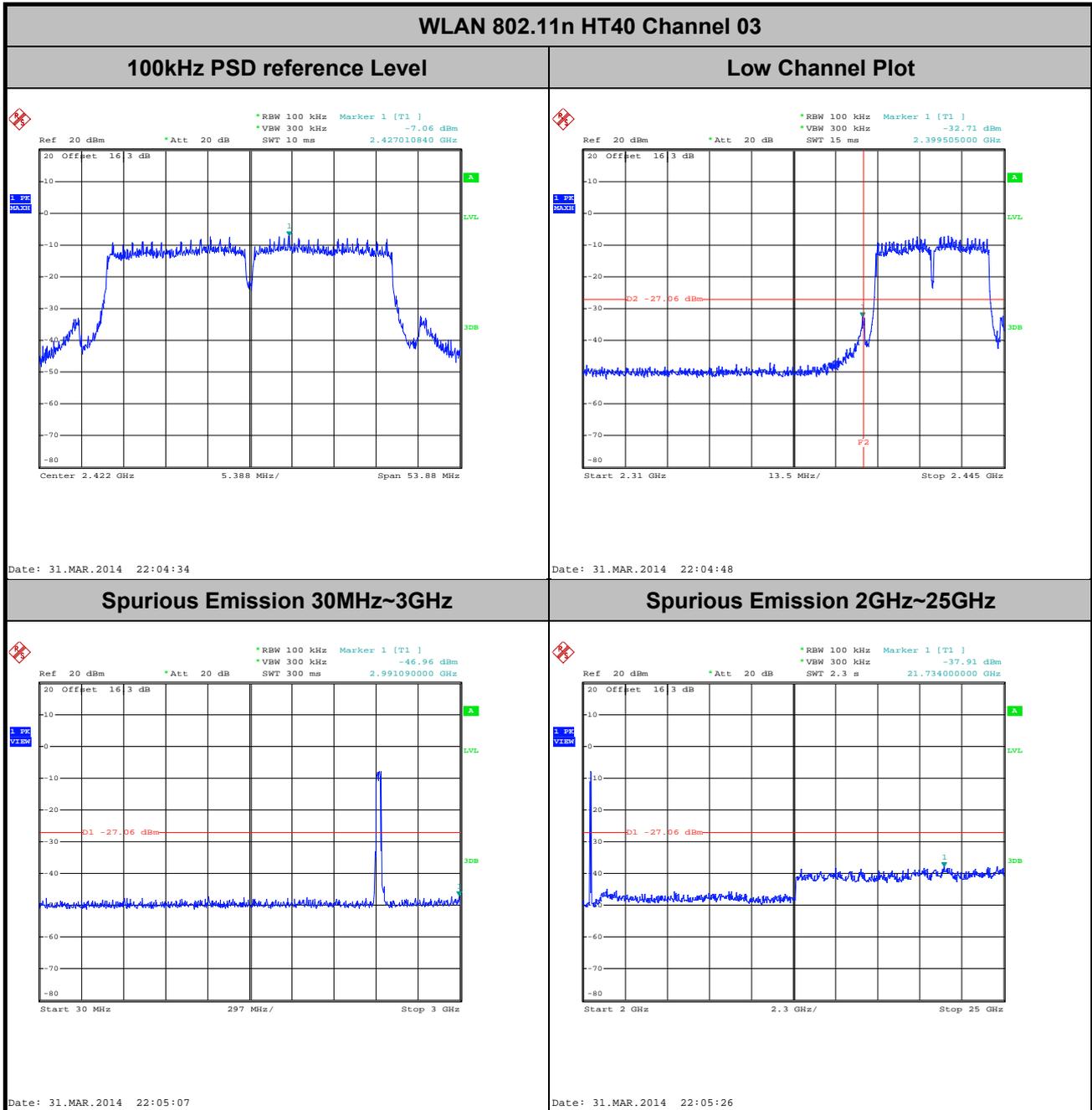
Spurious Emission 2GHz~25GHz



Date: 31.MAR.2014 21:52:22

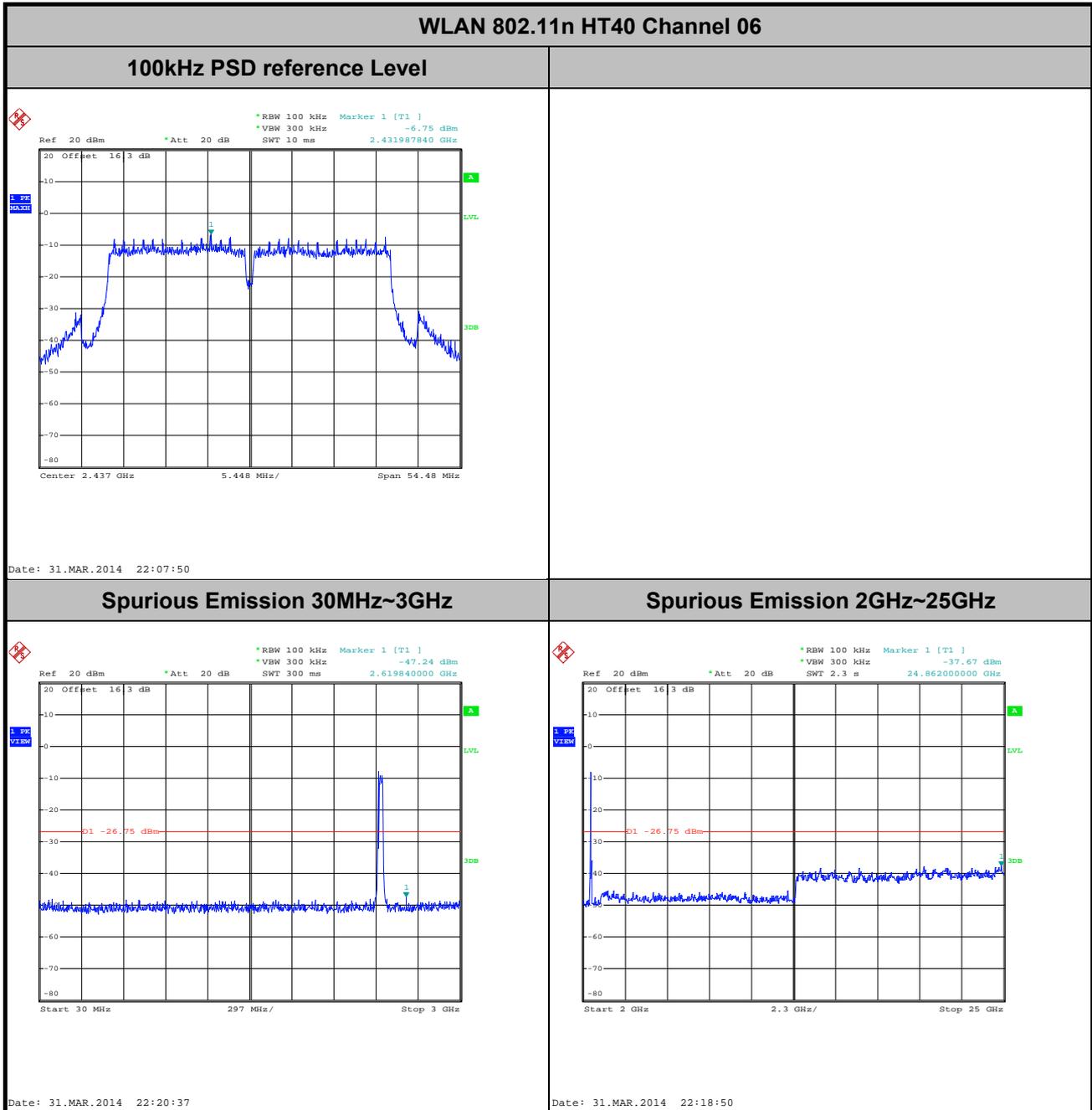


Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz Low	Relative Humidity :	47~48%
Test Channel :	03	Test Engineer :	Adonis Li



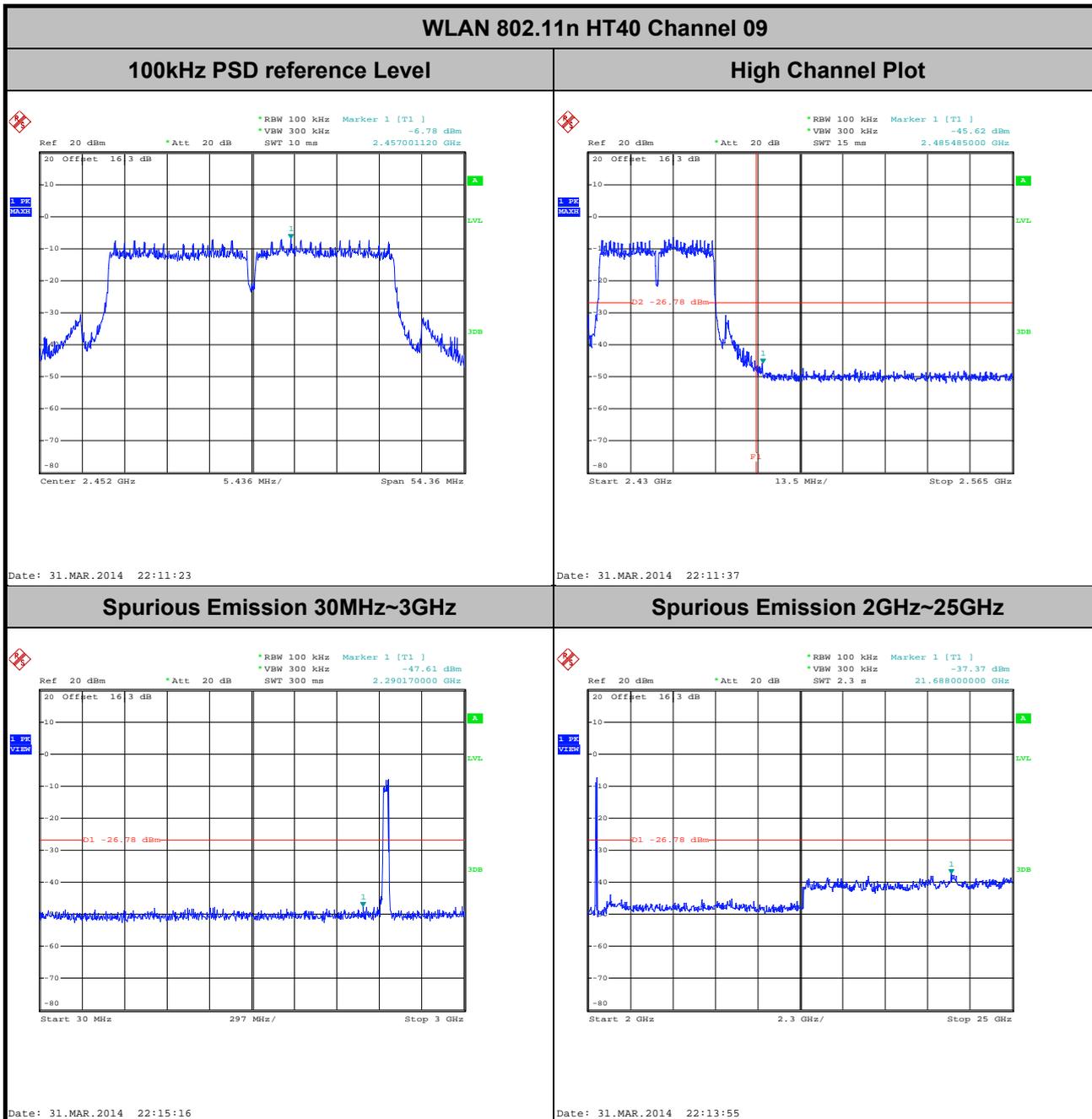


Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz Mid	Relative Humidity :	47~48%
Test Channel :	06	Test Engineer :	Adonis Li





Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	2.4GHz High	Relative Humidity :	47~48%
Test Channel :	09	Test Engineer :	Adonis Li

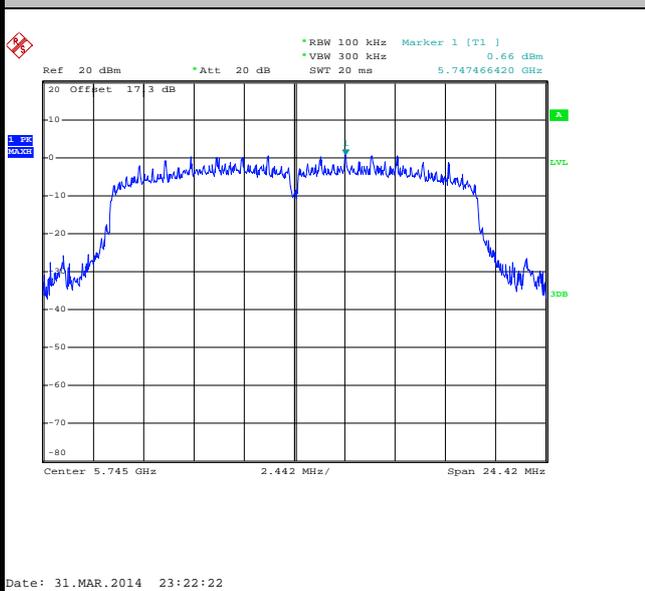




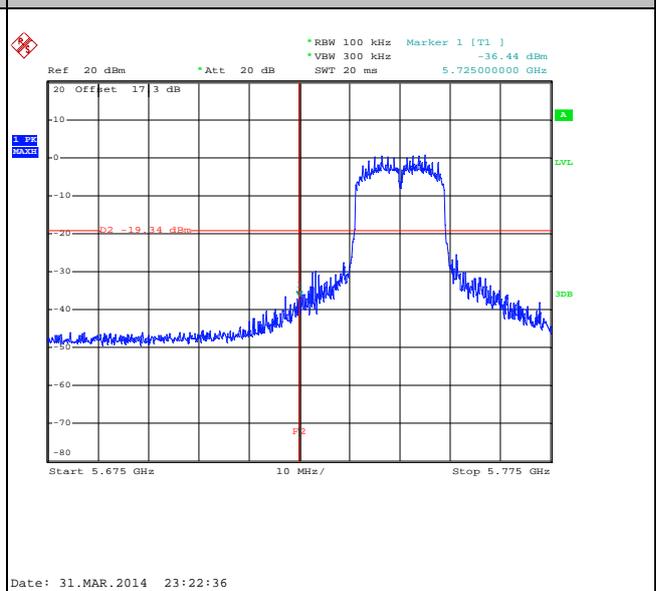
Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	149	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 149

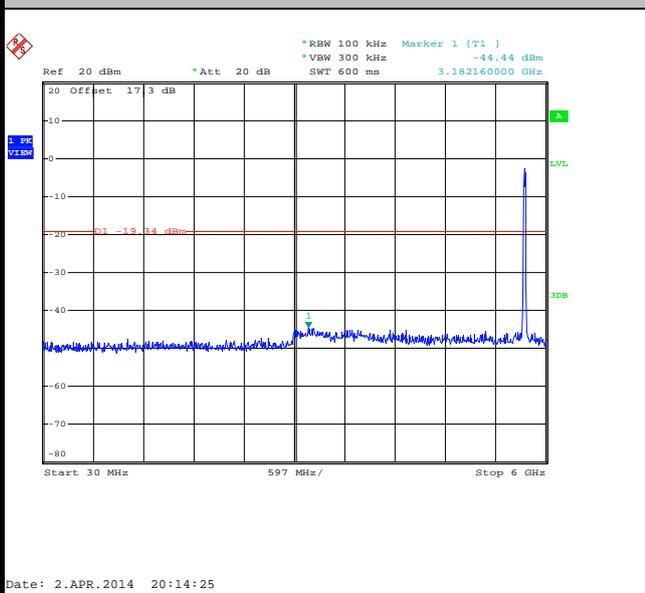
100kHz PSD reference Level



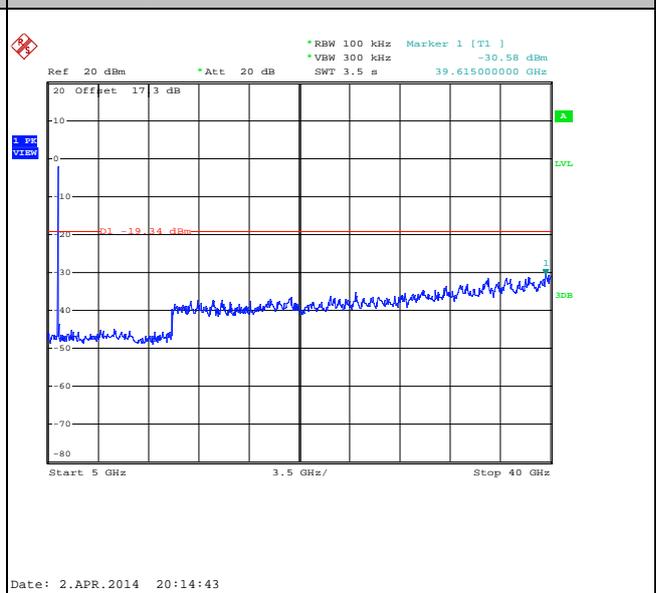
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

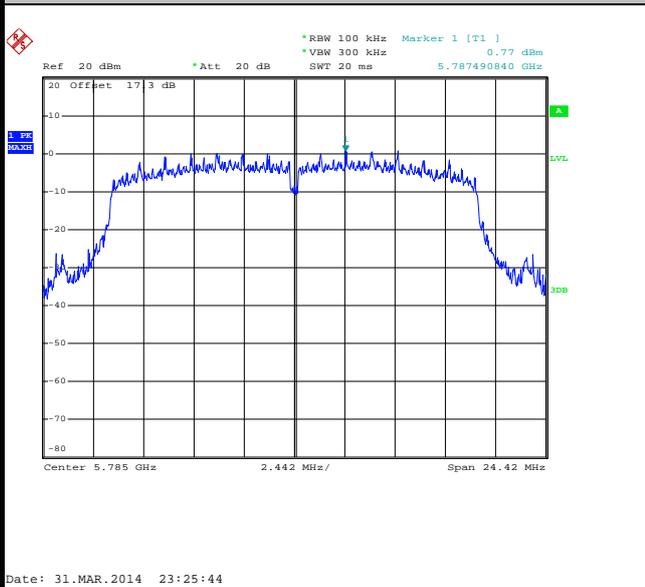




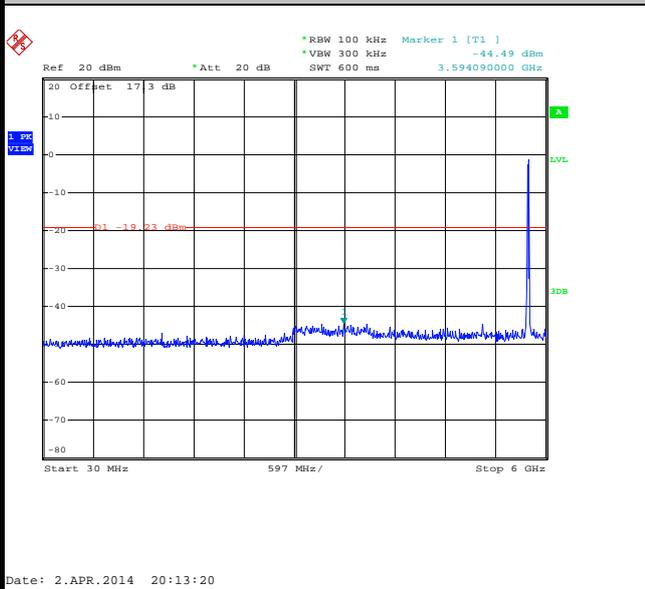
Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz Mid	Relative Humidity :	47~48%
Test Channel :	157	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 157

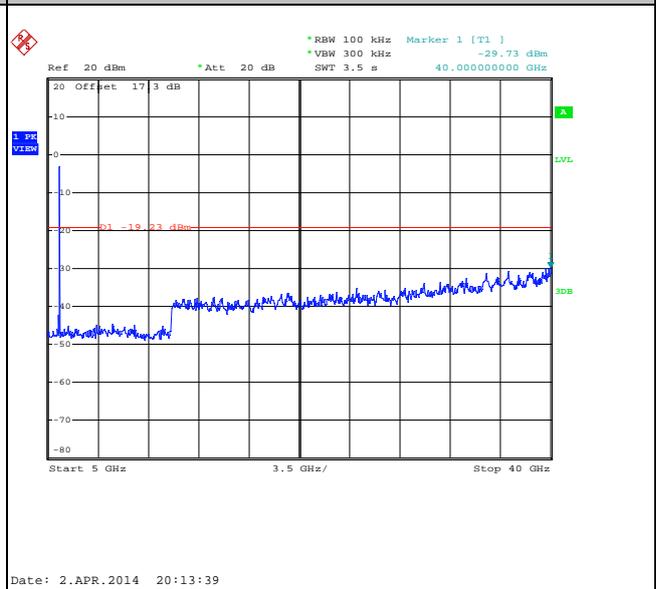
100kHz PSD reference Level



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

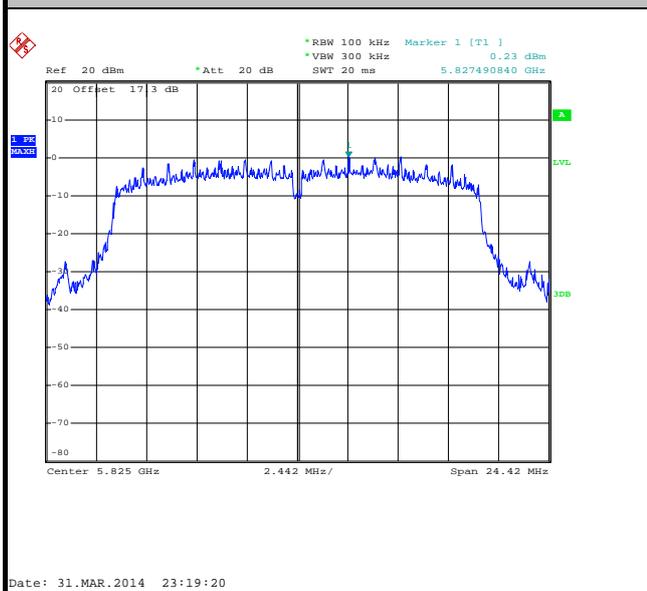




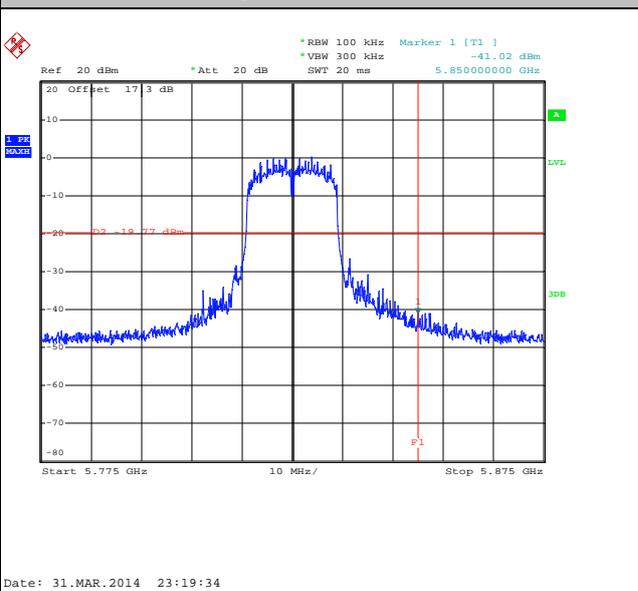
Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT20	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	165	Test Engineer :	Adonis Li

WLAN 802.11n HT20 Channel 165

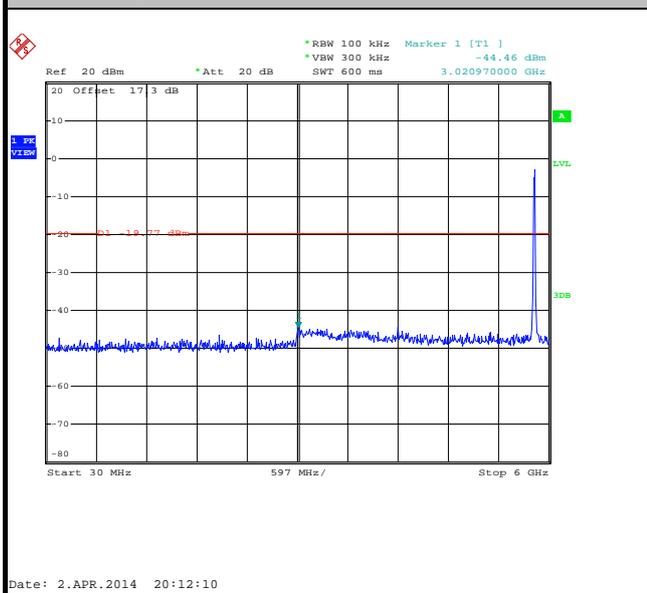
100kHz PSD reference Level



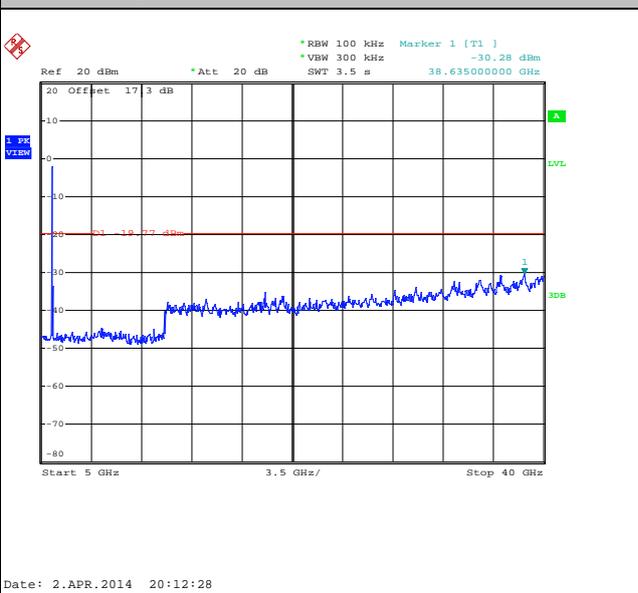
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

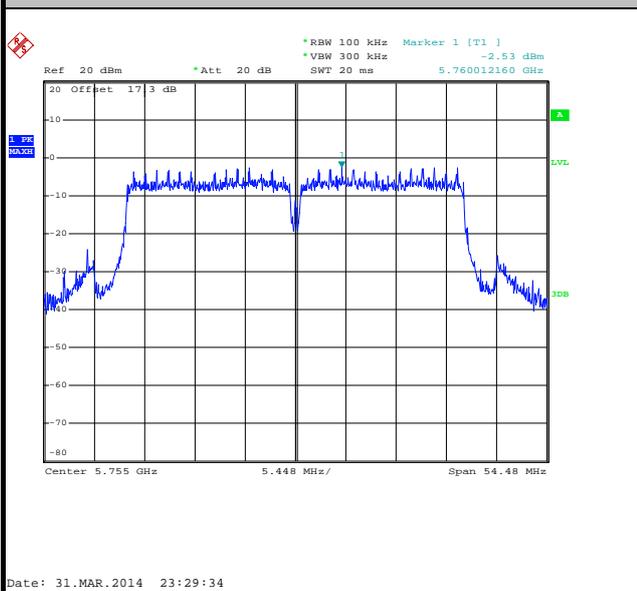




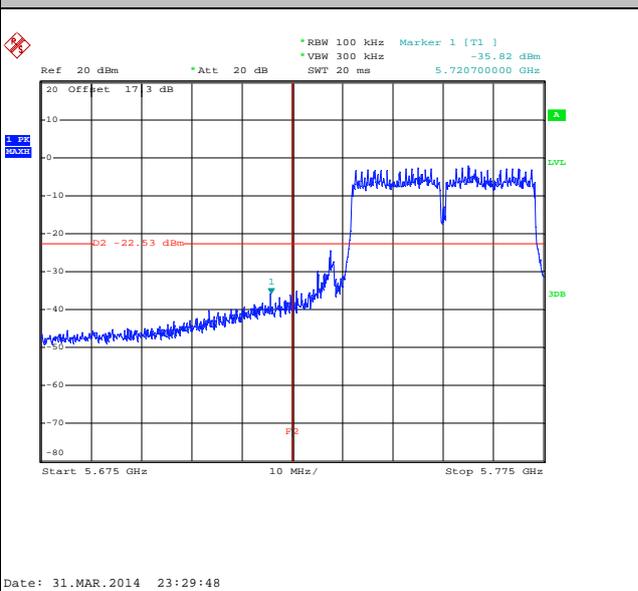
Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	5GHz Low	Relative Humidity :	47~48%
Test Channel :	151	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 151

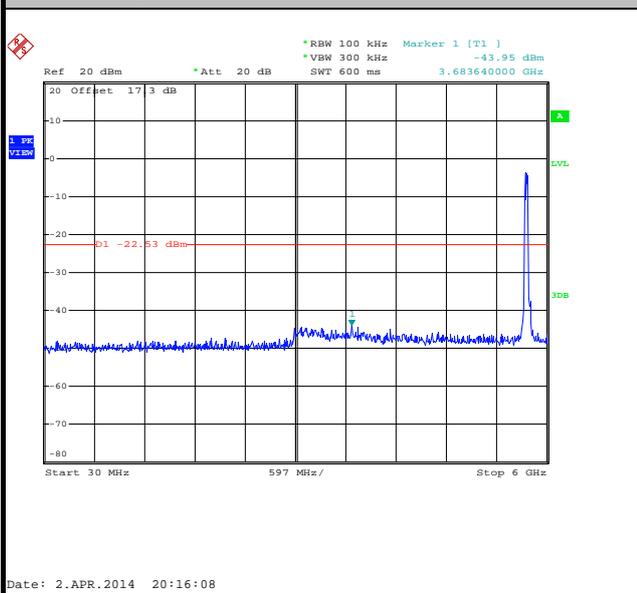
100kHz PSD reference Level



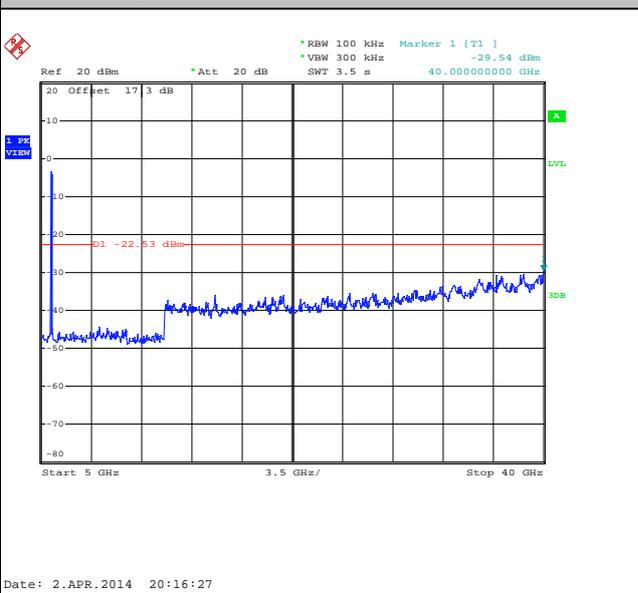
Low Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz

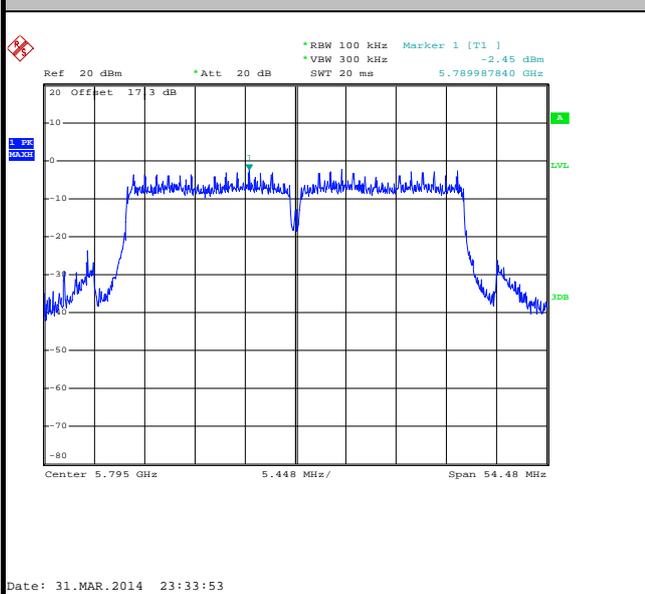




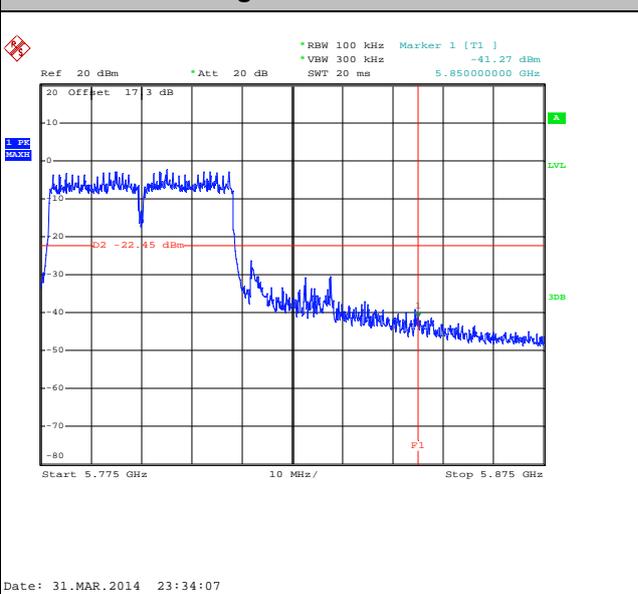
Number of TX :	2	Chain Port	1
Test Mode :	802.11n HT40	Temperature :	23~24°C
Test Band :	5GHz High	Relative Humidity :	47~48%
Test Channel :	159	Test Engineer :	Adonis Li

WLAN 802.11n HT40 Channel 159

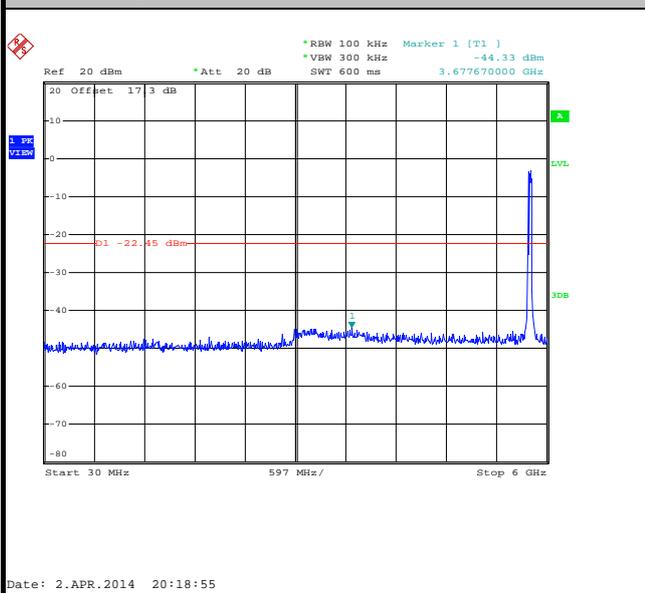
100kHz PSD reference Level



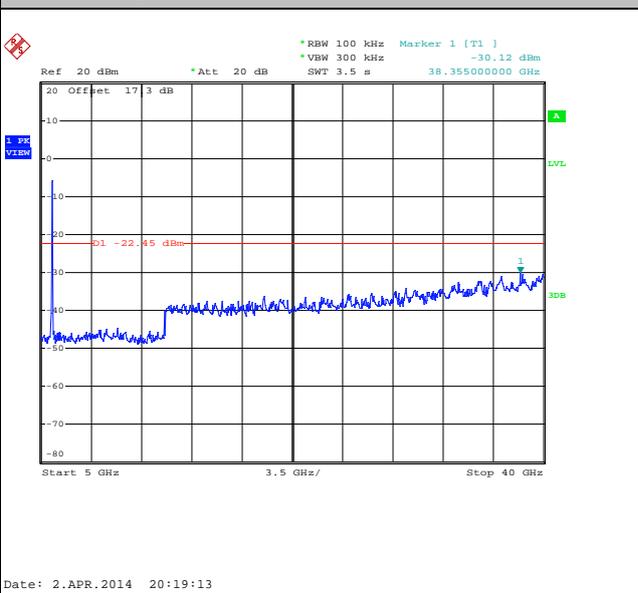
High Channel Plot



Spurious Emission 30MHz~6GHz



Spurious Emission 5GHz~40GHz



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.

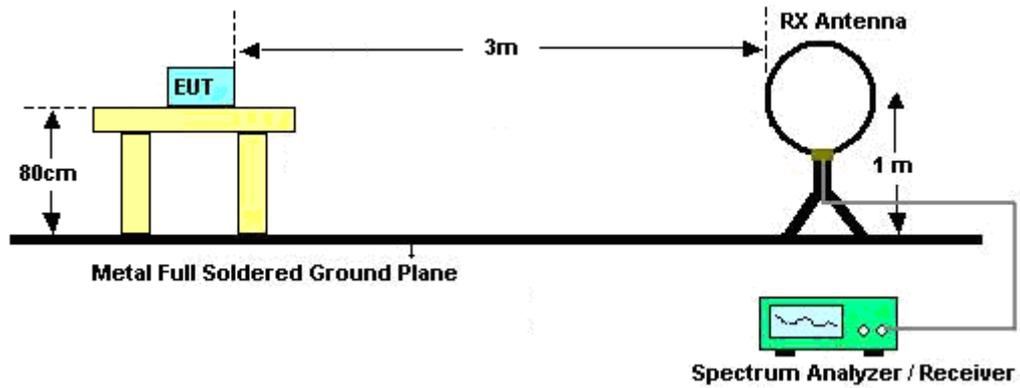
3.5.3 Test Procedure

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; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, $VBW = 3$ MHz for $f \geq 1$ GHz for peak measurement.
 For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

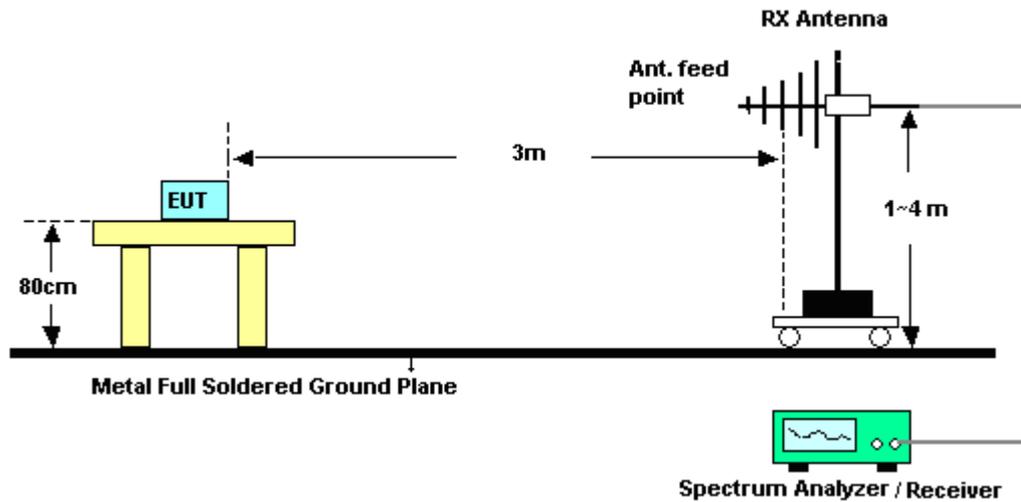
Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting.
1	802.11b	95.87	2.320	0.431	1kHz
0	802.11g	95.76	2.076	0.482	1kHz
0	2.4G 802.11n HT20	95.04	1.918	0.521	1kHz
0+1	2.4G 802.11n HT20	90.81	0.988	1.012	3kHz
0	2.4G 802.11n HT40	90.46	0.948	1.055	3kHz
0+1	2.4G 802.11n HT40	83.39	0.502	1.992	3kHz
0	802.11a	95.39	2.070	0.483	1kHz
0	5G 802.11n HT20	95.05	1.920	0.521	1kHz
0+1	5G 802.11n HT20	90.99	0.990	1.010	3kHz
0	5G 802.11n HT40	91.14	0.946	1.057	3kHz
0+1	5G 802.11n HT40	83.72	0.504	1.984	3kHz

3.5.4 Test Setup

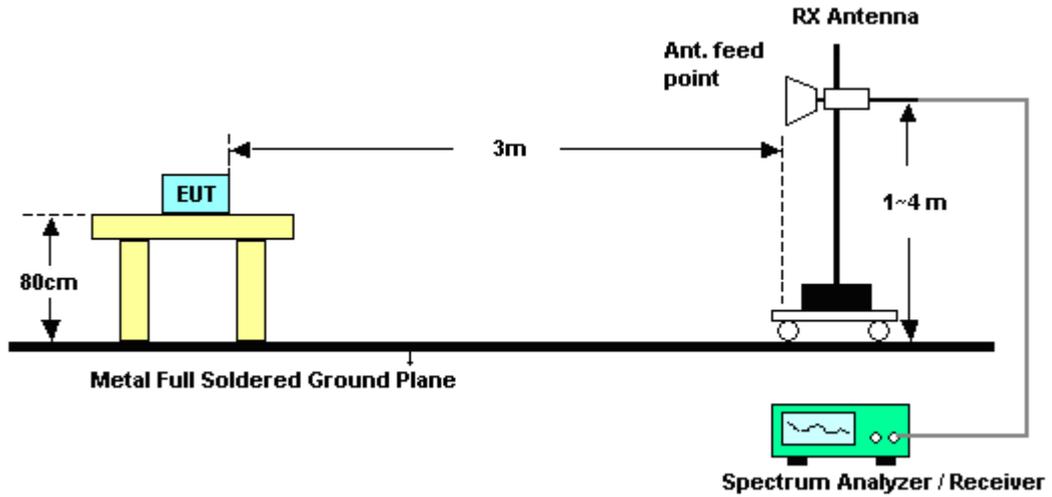
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Test Mode :	802.11b - Chain Port 1	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	43~44%
Test Channel :	01	Test Engineer :	Stone Gu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.83	55.72	-18.28	74	52.53	32.86	3.59	33.26	118	134	Peak
2390	46.43	-7.57	54	43.24	32.86	3.59	33.26	118	134	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	55.66	-18.34	74	52.47	32.86	3.59	33.26	100	105	Peak
2390	47.23	-6.77	54	44.04	32.86	3.59	33.26	100	105	Average

Test Mode :	802.11b - Chain Port 1	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	43~44%
Test Channel :	11	Test Engineer :	Stone Gu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.62	55.74	-18.26	74	52.37	33.01	3.65	33.29	113	187	Peak
2483.5	47.52	-6.48	54	44.15	33.01	3.65	33.29	113	187	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.22	59.18	-14.82	74	55.81	33.01	3.65	33.29	100	91	Peak
2483.5	53.68	-0.32	54	50.31	33.01	3.65	33.29	100	76	Average



Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	43~44%
Test Channel :	01	Test Engineer :	Stone Gu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	72.03	-1.97	74	68.84	32.86	3.59	33.26	114	326	Peak
2390	43.52	-10.48	54	40.33	32.86	3.59	33.26	114	326	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	73.14	-0.86	74	69.95	32.86	3.59	33.26	100	86	Peak
2390	44.63	-9.37	54	41.44	32.86	3.59	33.26	100	86	Average

Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	43~44%
Test Channel :	11	Test Engineer :	Stone Gu

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
2485.12	65.76	-8.24	74	62.39	33.01	3.65	33.29	113	264	Peak
2483.5	43.19	-10.81	54	39.82	33.01	3.65	33.29	113	264	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
2485.21	70.91	-3.09	74	67.54	33.01	3.65	33.29	100	87	Peak
2483.5	46.09	-7.91	54	42.72	33.01	3.65	33.29	100	87	Average



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	43~44%
Test Channel :	01	Test Engineer :	Stone Gu

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	71.35	-2.65	74	68.16	32.86	3.59	33.26	112	325	Peak
2390	43.45	-10.55	54	40.26	32.86	3.59	33.26	112	325	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	71.22	-2.78	74	68.03	32.86	3.59	33.26	100	66	Peak
2389.83	44.77	-9.23	54	41.58	32.86	3.59	33.26	100	66	Average

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	43~44%
Test Channel :	11	Test Engineer :	Stone Gu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.83	67.25	-6.75	74	63.88	33.01	3.65	33.29	130	313	Peak
2483.68	42.81	-11.19	54	39.44	33.01	3.65	33.29	100	162	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.65	73.76	-0.24	74	70.39	33.01	3.65	33.29	100	75	Peak
2483.68	47.79	-6.21	54	44.42	33.01	3.65	33.29	100	75	Average



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	43~44%
Test Channel :	01	Test Engineer :	Stone Gu

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
2389.74	68.11	-5.89	74	64.92	32.86	3.59	33.26	112	301	Peak
2390	44.87	-9.13	54	41.68	32.86	3.59	33.26	112	301	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.74	71.16	-2.84	74	67.97	32.86	3.59	33.26	100	77	Peak
2390	44.21	-9.79	54	41.02	32.86	3.59	33.26	100	77	Average

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	43~44%
Test Channel :	11	Test Engineer :	Stone Gu

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
2484.25	70.66	-3.34	74	67.29	33.01	3.65	33.29	113	287	Peak
2483.53	43.9	-10.1	54	40.53	33.01	3.65	33.29	113	287	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.92	70.77	-3.23	74	67.4	33.01	3.65	33.29	100	94	Peak
2483.65	45.73	-8.27	54	42.36	33.01	3.65	33.29	100	94	Average



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	43~44%
Test Channel :	03	Test Engineer :	Stone Gu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.65	73.36	-0.64	74	70.17	32.86	3.59	33.26	113	133	Peak
2389.74	46.62	-7.38	54	43.43	32.86	3.59	33.26	113	133	Average
2483.68	54.28	-19.72	74	50.91	33.01	3.65	33.29	113	133	Peak
2484.22	39.73	-14.27	54	36.36	33.01	3.65	33.29	113	133	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.56	72.47	-1.53	74	69.28	32.86	3.59	33.26	100	78	Peak
2389.83	47.14	-6.86	54	43.95	32.86	3.59	33.26	100	78	Average
2488.69	52.85	-21.15	74	49.44	33.05	3.66	33.3	100	78	Peak
2489.26	39.45	-14.55	54	36.04	33.05	3.66	33.3	100	78	Average



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	43~44%
Test Channel :	09	Test Engineer :	Stone Gu

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
2389.74	57.54	-16.46	74	54.35	32.86	3.59	33.26	109	328	Peak
2389.74	39.9	-14.1	54	36.71	32.86	3.59	33.26	109	328	Average
2483.71	70.51	-3.49	74	67.14	33.01	3.65	33.29	106	332	Peak
2483.95	46.28	-7.72	54	42.91	33.01	3.65	33.29	106	332	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	57.65	-16.35	74	54.46	32.86	3.59	33.26	100	66	Peak
2389.83	39.88	-14.12	54	36.69	32.86	3.59	33.26	100	66	Average
2484.16	70.76	-3.24	74	67.39	33.01	3.65	33.29	100	101	Peak
2483.71	46.74	-7.26	54	43.37	33.01	3.65	33.29	100	101	Average



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Band :	Low	Relative Humidity :	43~44%
Test Channel :	03	Test Engineer :	Stone Gu

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	73.13	-0.87	74	69.94	32.86	3.59	33.26	113	284	Peak
2389.83	51.56	-2.44	54	48.37	32.86	3.59	33.26	113	284	Average
2484.46	57.86	-16.14	74	54.49	33.01	3.65	33.29	113	284	Peak
2483.68	40.82	-13.18	54	37.45	33.01	3.65	33.29	113	284	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.11	70.42	-3.58	74	67.23	32.86	3.59	33.26	100	80	Peak
2389.92	49.29	-4.71	54	46.1	32.86	3.59	33.26	100	80	Average
2484.19	58.23	-15.77	74	54.86	33.01	3.65	33.29	100	80	Peak
2483.5	41.84	-12.16	54	38.47	33.01	3.65	33.29	100	80	Average



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Band :	High	Relative Humidity :	43~44%
Test Channel :	09	Test Engineer :	Stone Gu

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
2484.16	72.37	-1.63	74	69	33.01	3.65	33.29	116	292	Peak
2483.56	50.03	-3.97	54	46.66	33.01	3.65	33.29	116	292	Average
2390	59.98	-14.02	74	56.79	32.86	3.59	33.26	116	292	Peak
2389.83	42.26	-11.74	54	39.07	32.86	3.59	33.26	116	292	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	70.11	-3.89	74	66.74	33.01	3.65	33.29	100	81	Peak
2483.53	49.3	-4.7	54	45.93	33.01	3.65	33.29	100	81	Average
2389.92	56.83	-17.17	74	53.64	32.86	3.59	33.26	100	80	Peak
2389.2	40.25	-13.75	54	37.06	32.86	3.59	33.26	100	81	Average

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

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

Test Mode :	802.11b-Chain Port 1	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	107.49	-	-	104.26	32.89	3.61	33.27	118	134	Peak
2412	102.5	-	-	99.27	32.89	3.61	33.27	118	134	Average
4824	47.99	-26.01	74	41.37	35.17	5.25	33.8	100	198	Peak

Test Mode :	802.11b-Chain Port 1	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2412 MHz is Fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	109.1	-	-	105.87	32.89	3.61	33.27	100	105	Peak
2412	103.54	-	-	100.31	32.89	3.61	33.27	100	105	Average
4824	47.28	-26.72	74	40.66	35.17	5.25	33.8	100	51	Peak



Test Mode :	802.11b - Chain Port 1	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	105.56	-	-	102.26	32.95	3.63	33.28	115	136	Peak
2437	101.01	-	-	97.71	32.95	3.63	33.28	115	136	Average
4874	47.19	-26.81	74	40.53	35.18	5.28	33.8	100	101	Peak
7312	48.76	-25.24	74	40.08	36.2	6.61	34.13	110	31	Peak

Test Mode :	802.11b - Chain Port 1	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	108.47	-	-	105.17	32.95	3.63	33.28	100	103	Peak
2437	103.14	-	-	99.84	32.95	3.63	33.28	100	103	Average
4874	48.25	-25.75	74	41.59	35.18	5.28	33.8	100	51	Peak
7312	49.5	-24.5	74	40.82	36.2	6.61	34.13	100	221	Peak



Test Mode :	802.11b - Chain Port 1	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	105.94	-	-	102.61	32.98	3.64	33.29	113	187	Peak
2462	101.22	-	-	97.89	32.98	3.64	33.29	113	187	Average
4924	48.76	-25.24	74	42.06	35.19	5.31	33.8	100	58	Peak
7386	50.28	-23.72	74	41.5	36.24	6.7	34.16	110	25	Peak

Test Mode :	802.11b - Chain Port 1	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	108.5	-	-	105.17	32.98	3.64	33.29	100	91	Peak
2462	103.7	-	-	100.37	32.98	3.64	33.29	100	91	Average
4924	49.47	-24.53	74	42.77	35.19	5.31	33.8	100	61	Peak
7386	49.88	-24.12	74	41.1	36.24	6.7	34.16	120	202	Peak



Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	105.63	-	-	102.4	32.89	3.61	33.27	114	326	Peak
2412	94.14	-	-	90.91	32.89	3.61	33.27	114	326	Average
4824	47.7	-26.3	74	41.08	35.17	5.25	33.8	100	161	Peak

Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	108.17	-	-	104.94	32.89	3.61	33.27	100	86	Peak
2412	96.32	-	-	93.09	32.89	3.61	33.27	100	86	Average
4824	47.36	-26.64	74	40.74	35.17	5.25	33.8	100	69	Peak



Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	104.82	-	-	101.52	32.95	3.63	33.28	167	320	Peak
2437	93.91	-	-	90.61	32.95	3.63	33.28	167	320	Average
4874	47.02	-26.98	74	40.36	35.18	5.28	33.8	100	54	Peak
7312	49.48	-24.52	74	40.8	36.2	6.61	34.13	100	61	Peak

Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	108.22	-	-	104.92	32.95	3.63	33.28	100	65	Peak
2437	96.85	-	-	93.55	32.95	3.63	33.28	100	65	Average
4874	46.81	-27.19	74	40.15	35.18	5.28	33.8	100	162	Peak
7312	49.5	-24.5	74	40.82	36.2	6.61	34.13	100	301	Peak



Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	104.21	-	-	100.88	32.98	3.64	33.29	171	305	Peak
2462	92.3	-	-	88.97	32.98	3.64	33.29	171	305	Average
4924	48.66	-25.34	74	41.96	35.19	5.31	33.8	100	69	Peak
7386	49.24	-24.76	74	40.46	36.24	6.7	34.16	100	166	Peak

Test Mode :	802.11g - Chain Port 0	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	106.19	-	-	102.86	32.98	3.64	33.29	100	83	Peak
2462	95.07	-	-	91.74	32.98	3.64	33.29	100	83	Average
4924	47.49	-26.51	74	40.79	35.19	5.31	33.8	100	61	Peak
7386	49.48	-24.52	74	40.7	36.24	6.7	34.16	100	162	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	105.72	-	-	102.49	32.89	3.61	33.27	110	325	Peak
2412	94.51	-	-	91.28	32.89	3.61	33.27	110	325	Average
4824	47.82	-26.18	74	41.2	35.17	5.25	33.8	110	84	Peak

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	107.92	-	-	104.69	32.89	3.61	33.27	100	66	Peak
2412	96.84	-	-	93.61	32.89	3.61	33.27	100	66	Average
4824	48.04	-25.96	74	41.42	35.17	5.25	33.8	100	51	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	101.73	-	-	98.43	32.95	3.63	33.28	167	321	Peak
2437	91.1	-	-	87.8	32.95	3.63	33.28	167	321	Average
4874	48.3	-25.7	74	41.64	35.18	5.28	33.8	110	221	Peak
7312	49.15	-24.85	74	40.47	36.2	6.61	34.13	100	116	Peak

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	106.34	-	-	103.04	32.95	3.63	33.28	100	78	Peak
2437	94.61	-	-	91.31	32.95	3.63	33.28	100	78	Average
4874	47.33	-26.67	74	40.67	35.18	5.28	33.8	100	51	Peak
7312	48.9	-25.1	74	40.22	36.2	6.61	34.13	110	62	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	20.6	-19.4	40	35.69	18	0.48	33.57	-	-	Peak
74.62	20.03	-19.97	40	47.03	5.8	0.8	33.6	-	-	Peak
197.81	25.82	-17.68	43.5	49.18	8.91	1.29	33.56	-	-	Peak
311.3	28.41	-17.59	46	46.89	13.27	1.62	33.37	-	-	Peak
403.45	24.66	-21.34	46	40.09	16.02	1.85	33.3	-	-	Peak
943.74	30.94	-15.06	46	39.86	20.71	2.81	32.44	100	26	Peak
2462	102.21	-	-	98.88	32.98	3.64	33.29	105	314	Peak
2462	91.12	-	-	87.79	32.98	3.64	33.29	105	314	Average
4924	47.24	-26.76	74	40.54	35.19	5.31	33.8	110	62	Peak
7386	49.85	-24.15	74	41.07	36.24	6.7	34.16	100	47	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
50.37	30.47	-9.53	40	55.99	7.4	0.66	33.58	100	61	Peak
100.81	24.8	-18.7	43.5	46.86	10.62	0.93	33.61	-	-	Peak
311.3	24.77	-21.23	46	43.25	13.27	1.62	33.37	-	-	Peak
372.41	21.26	-24.74	46	37.73	15.12	1.75	33.34	-	-	Peak
551.86	20.72	-25.28	46	33.13	18.5	2.1	33.01	-	-	Peak
944.71	32.06	-13.94	46	40.98	20.71	2.81	32.44	-	-	Peak
2462	107.66	-	-	104.33	32.98	3.64	33.29	100	75	Peak
2462	96.03	-	-	92.7	32.98	3.64	33.29	100	75	Average
4924	47.45	-26.55	74	40.75	35.19	5.31	33.8	100	115	Peak
7386	50.27	-23.73	74	41.49	36.24	6.7	34.16	100	169	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	107.55	-	-	104.32	32.89	3.61	33.27	146	348	Peak
2412	95.46	-	-	92.23	32.89	3.61	33.27	146	348	Average
4824	47.43	-26.57	74	40.81	35.17	5.25	33.8	100	114	Peak

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	01	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	109.5	-	-	106.27	32.89	3.61	33.27	100	77	Peak
2412	96.58	-	-	93.35	32.89	3.61	33.27	100	77	Average
4824	46.27	-27.73	74	39.65	35.17	5.25	33.8	100	51	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	110.36	-	-	107.06	32.95	3.63	33.28	115	286	Peak
2437	98.09	-	-	94.79	32.95	3.63	33.28	115	286	Average
4874	47.37	-26.63	74	40.71	35.18	5.28	33.8	100	97	Peak
7312	49.61	-24.39	74	40.93	36.2	6.61	34.13	100	102	Peak

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	107.87	-	-	104.57	32.95	3.63	33.28	100	80	Peak
2437	95.83	-	-	92.53	32.95	3.63	33.28	100	80	Average
4874	47.71	-26.29	74	41.05	35.18	5.28	33.8	110	77	Peak
7312	49.61	-24.39	74	40.93	36.2	6.61	34.13	112	58	Peak



Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	107.61	-	-	104.28	32.98	3.64	33.29	113	287	Peak
2462	95.15	-	-	91.82	32.98	3.64	33.29	113	287	Average
4924	48.04	-25.96	74	41.34	35.19	5.31	33.8	100	63	Peak
7386	50.89	-23.11	74	42.11	36.24	6.7	34.16	100	66	Peak

Test Mode :	2.4GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	11	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	107.16	-	-	103.83	32.98	3.64	33.29	100	80	Peak
2462	94.66	-	-	91.33	32.98	3.64	33.29	100	80	Average
4924	46.93	-27.07	74	40.23	35.19	5.31	33.8	114	41	Peak
7386	49.89	-24.11	74	41.11	36.24	6.7	34.16	100	49	Peak



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2422	104.48	-	-	101.22	32.92	3.62	33.28	113	133	Peak
2422	92.25	-	-	88.99	32.92	3.62	33.28	113	133	Average
4844	47.24	-26.76	74	40.6	35.18	5.26	33.8	100	65	Peak
7266	48.78	-25.22	74	40.14	36.19	6.56	34.11	100	46	Peak

Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2422	105.03	-	-	101.77	32.92	3.62	33.28	100	78	Peak
2422	94.55	-	-	91.29	32.92	3.62	33.28	100	78	Average
4844	47.15	-26.85	74	40.51	35.18	5.26	33.8	100	163	Peak
7266	48.92	-25.08	74	40.28	36.19	6.56	34.11	100	164	Peak



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	101.88	-	-	98.58	32.95	3.63	33.28	109	319	Peak
2437	91.45	-	-	88.15	32.95	3.63	33.28	109	319	Average
4874	47.41	-26.59	74	40.75	35.18	5.28	33.8	100	61	Peak
7312	48.46	-25.54	74	39.78	36.2	6.61	34.13	100	294	Peak

Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	104.06	-	-	100.76	32.95	3.63	33.28	100	75	Peak
2437	93.12	-	-	89.82	32.95	3.63	33.28	100	75	Average
4874	46.8	-27.2	74	40.14	35.18	5.28	33.8	100	154	Peak
7312	48.75	-25.25	74	40.07	36.2	6.61	34.13	100	69	Peak



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	103.99	-	-	100.69	32.95	3.63	33.28	109	328	Peak
2452	92.79	-	-	89.49	32.95	3.63	33.28	109	328	Average
4904	47.87	-26.13	74	41.18	35.19	5.3	33.8	100	29	Peak
7356	48.27	-25.73	74	39.54	36.22	6.66	34.15	100	49	Peak

Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	103.43	-	-	100.13	32.95	3.63	33.28	100	66	Peak
2452	92.82	-	-	89.52	32.95	3.63	33.28	100	66	Average
4904	46.93	-27.07	74	40.24	35.19	5.3	33.8	100	61	Peak
7356	47.47	-26.53	74	38.74	36.22	6.66	34.15	100	82	Peak



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2422	105.33	-	-	102.07	32.92	3.62	33.28	113	284	Peak
2422	93.83	-	-	90.57	32.92	3.62	33.28	113	284	Average
4844	47.77	-26.23	74	41.13	35.18	5.26	33.8	100	161	Peak
7266	49.49	-24.51	74	40.85	36.19	6.56	34.11	100	112	Peak

Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	03	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2422	105.79	-	-	102.53	32.92	3.62	33.28	100	80	Peak
2422	94.9	-	-	91.64	32.92	3.62	33.28	100	80	Average
4844	46.31	-27.69	74	39.67	35.18	5.26	33.8	100	61	Peak
7266	49.68	-24.32	74	41.04	36.19	6.56	34.11	100	232	Peak



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	104.24	-	-	100.94	32.95	3.63	33.28	112	269	Peak
2437	92.79	-	-	89.49	32.95	3.63	33.28	112	269	Average
4874	46.95	-27.05	74	40.29	35.18	5.28	33.8	100	98	Peak
7312	49.32	-24.68	74	40.64	36.2	6.61	34.13	100	302	Peak

Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	06	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	105.11	-	-	101.81	32.95	3.63	33.28	100	81	Peak
2437	94.08	-	-	90.78	32.95	3.63	33.28	100	81	Average
4874	47.21	-26.79	74	40.55	35.18	5.28	33.8	100	41	Peak
7312	48.84	-25.16	74	40.16	36.2	6.61	34.13	100	102	Peak



Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	103.83	-	-	100.53	32.95	3.63	33.28	112	319	Peak
2452	92.23	-	-	88.93	32.95	3.63	33.28	112	319	Average
4904	46.28	-27.72	74	39.59	35.19	5.3	33.8	110	300	Peak
7356	49.49	-24.51	74	40.76	36.22	6.66	34.15	110	115	Peak

Test Mode :	2.4GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	09	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	105.69	-	-	102.39	32.95	3.63	33.28	100	91	Peak
2452	94.66	-	-	91.36	32.95	3.63	33.28	100	91	Average
4904	48.51	-25.49	74	41.82	35.19	5.3	33.8	100	69	Peak
7356	48.87	-25.13	74	40.14	36.22	6.66	34.15	112	36	Peak



Test Mode :	802.11a - Chain Port 0	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	114.09	-	-	106.6	35.52	5.67	33.7	100	156	Peak
5745	102.34	-	-	94.85	35.52	5.67	33.7	100	156	Average
11490	36.06	-37.94	74	56.75	4.47	8.84	34	100	203	Peak

Test Mode :	802.11a - Chain Port 0	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	107.94	-	-	100.45	35.52	5.67	33.7	100	81	Peak
5745	96.44	-	-	88.95	35.52	5.67	33.7	100	81	Average
11490	35.12	-38.88	74	55.81	4.47	8.84	34	190	230	Peak



Test Mode :	802.11a - Chain Port 0	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	114.76	-	-	107.23	35.53	5.7	33.7	100	192	Peak
5785	103.41	-	-	95.88	35.53	5.7	33.7	100	192	Average
11571	35.1	-38.9	74	55.94	4.38	8.8	34.02	200	0	Peak

Test Mode :	802.11a - Chain Port 0	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	110.26	-	-	102.73	35.53	5.7	33.7	194	299	Peak
5785	98.39	-	-	90.86	35.53	5.7	33.7	194	299	Average
11571	34.23	-39.77	74	55.07	4.38	8.8	34.02	100	0	Peak



Test Mode :	802.11a - Chain Port 0	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	112.14	-	-	104.53	35.55	5.76	33.7	100	349	Peak
5825	100.56	-	-	92.95	35.55	5.76	33.7	100	349	Average
11649	35.01	-38.99	74	56.13	4.2	8.73	34.05	100	154	Peak

Test Mode :	802.11a - Chain Port 0	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	109.17	-	-	101.56	35.55	5.76	33.7	100	118	Peak
5825	96.84	-	-	89.23	35.55	5.76	33.7	100	118	Average
11649	34.46	-39.54	74	55.58	4.2	8.73	34.05	100	161	Peak



Test Mode :	5GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	113.33	-	-	105.84	35.52	5.67	33.7	100	183	Peak
5745	100.41	-	-	92.92	35.52	5.67	33.7	100	183	Average
11490	34.25	-39.75	74	54.94	4.47	8.84	34	100	200	Peak

Test Mode :	5GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	107.84	-	-	100.35	35.52	5.67	33.7	177	292	Peak
5745	95.74	-	-	88.25	35.52	5.67	33.7	177	292	Average
11490	35.24	-38.76	74	55.93	4.47	8.84	34	100	200	Peak



Test Mode :	5GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	112.78	-	-	105.25	35.53	5.7	33.7	100	193	Peak
5785	102.56	-	-	95.03	35.53	5.7	33.7	100	193	Average
11571	35.87	-38.13	74	56.71	4.38	8.8	34.02	100	193	Peak

Test Mode :	5GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	107.61	-	-	100.08	35.53	5.7	33.7	195	298	Peak
5785	97.34	-	-	89.81	35.53	5.7	33.7	195	298	Average
11571	33.28	-40.72	74	54.12	4.38	8.8	34.02	150	200	Peak



Test Mode :	5GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	111.17	-	-	103.56	35.55	5.76	33.7	100	18	Peak
5825	99.85	-	-	92.24	35.55	5.76	33.7	100	18	Average
11649	35.01	-38.99	74	56.13	4.2	8.73	34.05	100	96	Peak

Test Mode :	5GHz 802.11n HT20 – Chain Port 0	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	108.93	-	-	101.32	35.55	5.76	33.7	160	118	Peak
5825	97.59	-	-	89.98	35.55	5.76	33.7	160	118	Average
11649	34.46	-39.54	74	55.58	4.2	8.73	34.05	100	192	Peak



Test Mode :	5GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	112.89	-	-	105.4	35.52	5.67	33.7	100	190	Peak
5745	100.55	-	-	93.06	35.52	5.67	33.7	100	190	Average
11490	35.83	-38.17	74	56.52	4.47	8.84	34	200	0	Peak

Test Mode :	5GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	149	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	109.25	-	-	101.76	35.52	5.67	33.7	179	297	Peak
5745	97.98	-	-	90.49	35.52	5.67	33.7	179	297	Peak
11490	35.75	-38.25	74	56.44	4.47	8.84	34	200	102	Peak



Test Mode :	5GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	113.49	-	-	105.96	35.53	5.7	33.7	100	191	Peak
5785	102.15	-	-	94.62	35.53	5.7	33.7	100	191	Average
11571	34.28	-39.72	74	55.12	4.38	8.8	34.02	200	0	Peak

Test Mode :	5GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	157	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	109.22	-	-	101.69	35.53	5.7	33.7	176	299	Peak
5785	97.56	-	-	90.03	35.53	5.7	33.7	176	299	Average
11571	33.28	-40.72	74	54.12	4.38	8.8	34.02	100	0	Peak



Test Mode :	5GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	111.52	-	-	103.91	35.55	5.76	33.7	100	357	Peak
5825	100.01	-	-	92.4	35.55	5.76	33.7	100	357	Average
11649	35.01	-38.99	74	56.13	4.2	8.73	34.05	100	261	Peak

Test Mode :	5GHz 802.11n HT20 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	165	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	109.3	-	-	101.69	35.55	5.76	33.7	146	116	Peak
5825	97.48	-	-	89.87	35.55	5.76	33.7	146	116	Average
11649	34.46	-39.54	74	55.58	4.2	8.73	34.05	100	197	Peak



Test Mode :	5GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5755	109.28	-	-	101.77	35.53	5.68	33.7	100	193	Peak
5755	98.18	-	-	90.67	35.53	5.68	33.7	100	193	Average
11511	35.47	-38.53	74	56.08	4.53	8.86	34	120	300	Peak

Test Mode :	5GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5755	102.22	-	-	94.71	35.53	5.68	33.7	100	81	Peak
5755	91.28	-	-	83.77	35.53	5.68	33.7	100	81	Average
11510	35.29	-38.71	74	55.9	4.53	8.86	34	100	0	Peak



Test Mode :	5GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5795 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5795	109.97	-	-	102.41	35.54	5.72	33.7	100	187	Peak
5795	97.73	-	-	90.17	35.54	5.72	33.7	100	187	Average
11589	38.02	-35.98	74	58.93	4.34	8.78	34.03	100	103	Peak

Test Mode :	5GHz 802.11n HT40 – Chain Port 0	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5795 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5795	104.92	-	-	97.36	35.54	5.72	33.7	177	298	Peak
5795	93.18	-	-	85.62	35.54	5.72	33.7	177	298	Average
11590	37.57	-36.43	74	58.48	4.34	8.78	34.03	100	200	Peak



Test Mode :	5GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5755	110.27	-	-	102.76	35.53	5.68	33.7	100	191	Peak
5755	97.88	-	-	90.37	35.53	5.68	33.7	100	191	Average
11511	35.42	-38.58	74	56.03	4.53	8.86	34	100	0	Peak

Test Mode :	5GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	151	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5755	105.96	-	-	98.45	35.53	5.68	33.7	175	297	Peak
5755	94.78	-	-	87.27	35.53	5.68	33.7	175	297	Average
11510	35.02	-38.98	74	55.63	4.53	8.86	34	200	0	Peak



Test Mode :	5GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	1. 5795 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5795	110.72	-	-	103.16	35.54	5.72	33.7	100	190	Peak
5795	99.76	-	-	92.2	35.54	5.72	33.7	100	190	Average
11589	38.04	-35.96	74	58.95	4.34	8.78	34.03	100	192	Peak

Test Mode :	5GHz 802.11n HT40 – Chain Port 0+1	Temperature :	23~24°C
Test Channel :	159	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	1. 5795 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5795	105.69	-	-	98.13	35.54	5.72	33.7	177	292	Peak
5795	94.9	-	-	87.34	35.54	5.72	33.7	177	292	Average
11590	37.57	-36.43	74	58.48	4.34	8.78	34.03	120	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 (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

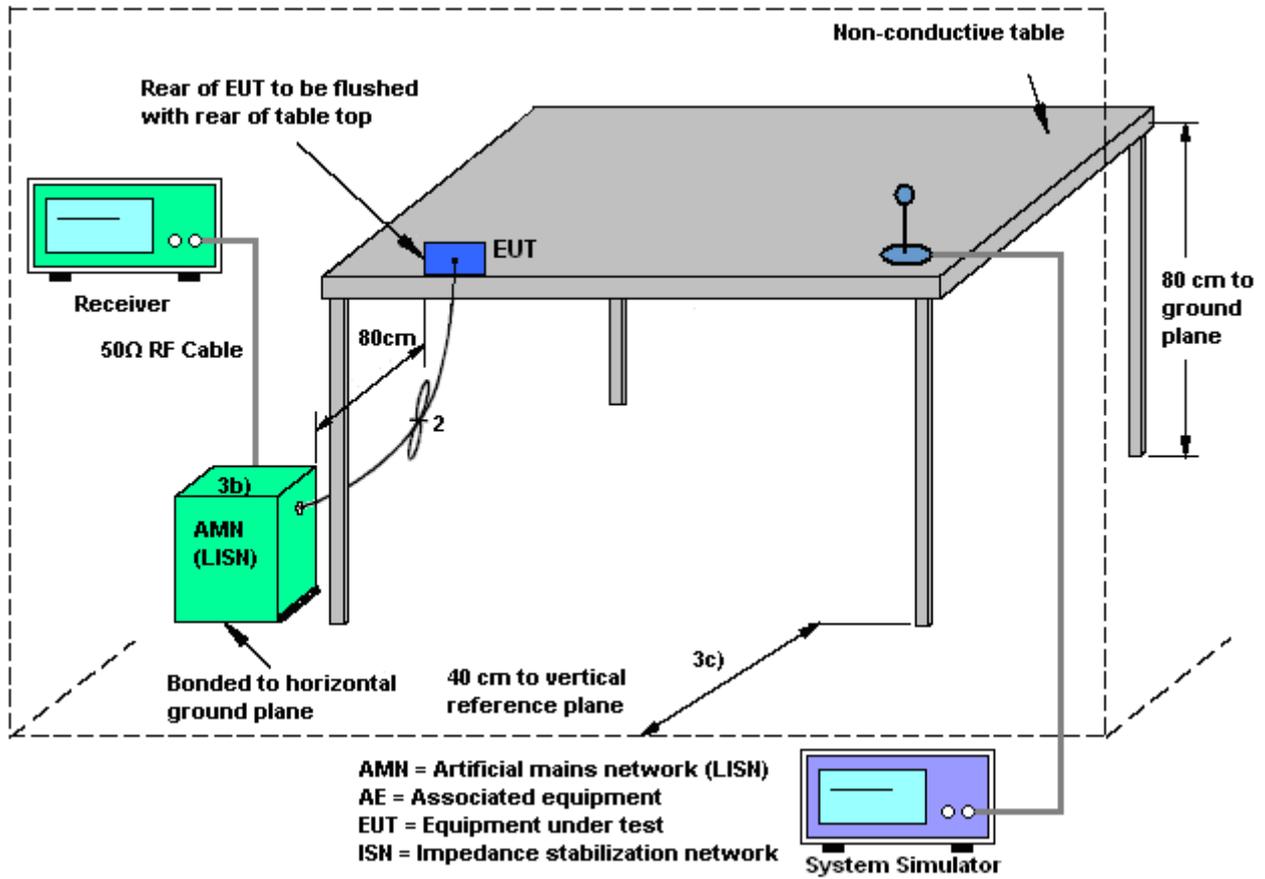
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

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

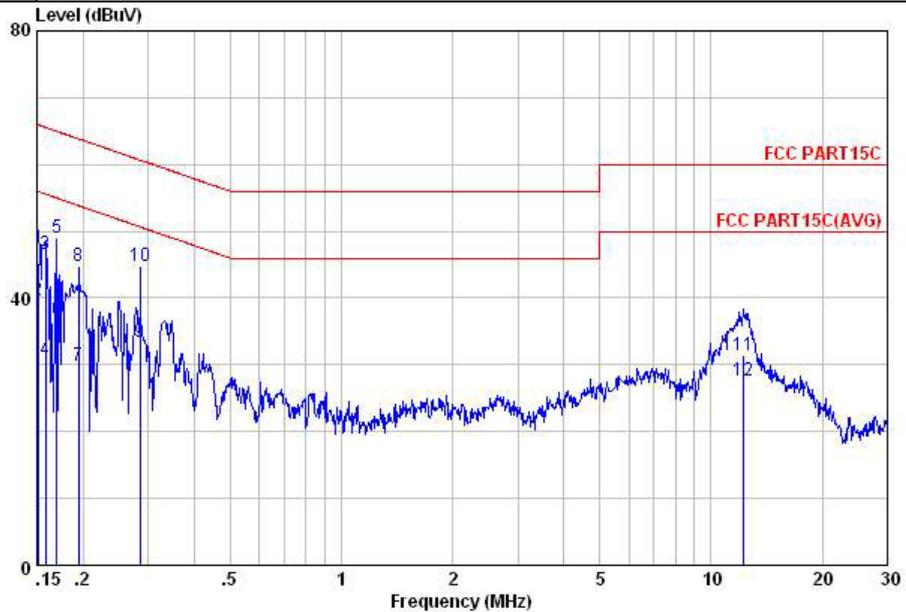
3.6.4 Test Setup





3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	19~21°C
Test Engineer :	Eligah Wang	Relative Humidity :	37~39%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	CDMA2000 BC0 Idle + Bluetooth Link + WLAN 5GHz Link + Adapter		



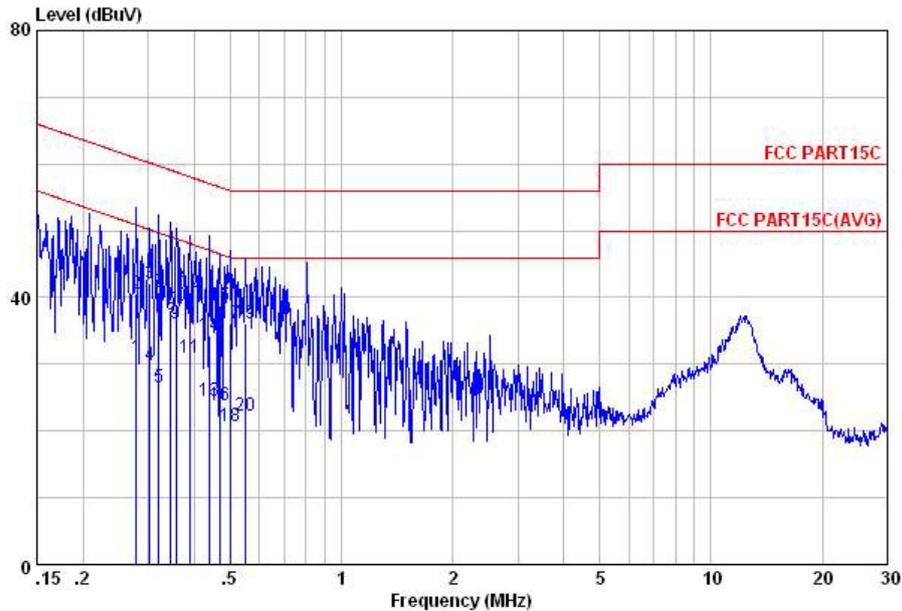
Site : C001-KS
 Condition: FCC PART15C LISN-L20130306 LINE

mode : Mode 2

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.15	45.15	-20.81	65.96	32.49	1.94	10.72	QP
2	0.15	39.75	-16.21	55.96	27.09	1.94	10.72	Average
3	0.16	46.50	-19.06	65.56	34.00	1.82	10.68	QP
4	0.16	30.70	-24.86	55.56	18.20	1.82	10.68	Average
5	0.17	49.12	-15.87	64.99	36.90	1.58	10.64	QP
6	0.17	36.82	-18.17	54.99	24.60	1.58	10.64	Average
7	0.19	29.75	-24.09	53.84	18.10	1.06	10.59	Average
8	0.19	44.85	-18.99	63.84	33.20	1.06	10.59	QP
9	0.28	33.38	-17.30	50.68	22.20	0.76	10.42	Average
10	0.28	44.88	-15.80	60.68	33.70	0.76	10.42	QP
11	12.25	31.35	-28.65	60.00	20.80	0.20	10.35	QP
12	12.25	27.65	-22.35	50.00	17.10	0.20	10.35	Average



Test Mode :	Mode 2	Temperature :	19~21°C
Test Engineer :	Eligah Wang	Relative Humidity :	37~39%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	CDMA2000 BC0 Idle + Bluetooth Link + WLAN 5GHz Link + Adapter		



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

mode : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.28	31.05	-19.80	50.85	19.80	0.81	10.44	Average
2	0.28	40.55	-20.30	60.85	29.30	0.81	10.44	QP
3	0.30	42.19	-17.96	60.15	31.10	0.71	10.38	QP
4	0.30	29.89	-20.26	50.15	18.80	0.71	10.38	Average
5	0.32	26.58	-23.13	49.71	15.60	0.62	10.36	Average
6	0.32	40.78	-18.93	59.71	29.80	0.62	10.36	QP
7	0.34	38.05	-21.04	59.09	27.20	0.52	10.33	QP
8	0.34	37.55	-11.54	49.09	26.70	0.52	10.33	Average
9	0.36	36.20	-12.58	48.78	25.40	0.49	10.31	Average
10	0.36	38.70	-20.08	58.78	27.90	0.49	10.31	QP
11	0.39	30.91	-17.17	48.08	20.20	0.42	10.29	Average
12	0.39	40.81	-17.27	58.08	30.10	0.42	10.29	QP
13	0.44	24.53	-22.54	47.07	13.91	0.35	10.27	Average
14	0.44	34.33	-22.74	57.07	23.71	0.35	10.27	QP
15	0.47	38.79	-17.70	56.49	28.20	0.32	10.27	QP
16	0.47	23.89	-22.60	46.49	13.30	0.32	10.27	Average
17	0.50	36.16	-19.84	56.00	25.60	0.30	10.26	QP
18	0.50	20.76	-25.24	46.00	10.20	0.30	10.26	Average
19	0.55	36.03	-19.97	56.00	25.50	0.28	10.25	QP
20	0.55	22.33	-23.67	46.00	11.80	0.28	10.25	Average

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

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 = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

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

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

For power measurements on IEEE 802.11 devices,

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

The EUT supports CDD mode.

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

The directional gain "DG" is calculated as following table.

	Ant. 1 (dBi)	Ant. 2 (dBi)	for Power (dBi)	for PSD (dBi)	Limit Reduction (dB)	Limit Reduction (dB)
2.4 GHz	2.50	2.50	2.50	5.51	0.00	0.00
5 GHz	3.50	3.50	3.50	6.51	0.00	0.51

Power Limit Reduction = $DG(\text{Power}) - 6\text{dBi}$, (min = 0)

PSD Limit Reduction = $DG(\text{PSD}) - 6\text{dBi}$, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 28, 2013	Mar. 31, 2014~ Apr. 04, 2014	Dec. 27, 2014	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	30MHz~40GHz	Feb. 27, 2014	Mar. 31, 2014~ Apr. 04, 2014	Feb. 26, 2015	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Feb. 27, 2014	Mar. 31, 2014~ Apr. 04, 2014	Feb. 26, 2015	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 05, 2013	Apr. 01, 2014	Nov. 04, 2014	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	101399	9kHz~30GHz	May 23, 2013	Apr. 01, 2014	May 22, 2014	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 09, 2013	Apr. 01, 2014	Oct. 08, 2014	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 08, 2014	Apr. 01, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 08, 2014	Apr. 01, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA1702 49	15GHz~40GHz	Mar. 10, 2014	Apr. 01, 2014	Mar. 09, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 18, 2013	Apr. 01, 2014	Nov. 17, 2014	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1GHz	May 23, 2013	Apr. 01, 2014	May 22, 2014	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A023 71	1GHz~26.5GHz	Dec.10, 2013	Apr. 01, 2014	Dec. 09, 2014	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Apr. 01, 2014	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Apr. 01, 2014	NCR	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	May 23, 2013	Mar. 13, 2014	May 22, 2014	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Dec. 10, 2013	Mar. 13, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Dec. 10, 2013	Mar. 13, 2014	Dec. 09, 2014	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	AC 0V~300V, 45Hz~1000Hz	Dec. 10, 2013	Mar. 13, 2014	Dec. 09, 2014	Conduction (CO01-KS)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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