

FCC RF Test Report

APPLICANT : ZTE CORPORATION
EQUIPMENT : WCDMA/CDMA/LTE Multi-Mode Digital
Mobile Phone
BRAND NAME : ZTE
MODEL NAME : ZTE A2017U
FCC ID : SRQ-ZTEA2017U
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Mar. 16, 2016 and testing was completed on Apr. 19, 2016. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR631604C	Rev. 01	Initial issue of report	May 25, 2016

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 9.05 dB at 46.490 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 18.41 dB at 0.870 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

ZTE CORPORATION

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

1.2 Manufacturer

ZTE CORPORATION

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

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	WCDMA/CDMA/LTE Multi-Mode Digital Mobile Phone
Brand Name	ZTE
Model Name	ZTE A2017U
FCC ID	SRQ-ZTEA2017U
EUT supports Radios application	CDMA/EV-DO/ GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(16QAM uplink is not supported)/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE/Bluetooth v4.2 LE
IMEI Code	Conducted: 990006780003751 Conduction: 990006780003793 Radiation: 990006780003629
HW Version	wwdB
SW Version	A2017UV1.0.0B07
EUT Stage	Production Unit

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



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification			
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz		
Maximum (Peak) Output Power to antenna	<Ant 1> 802.11b : 16.92 dBm (0.0492 W) 802.11g : 19.43 dBm (0.0877 W) 802.11n HT20 : 16.34 dBm (0.0431 W) 802.11n HT40 : 16.97 dBm (0.0498 W) <Ant 2> 802.11b : 16.73 dBm (0.0471 W) 802.11g : 19.45 dBm (0.0881 W) 802.11n HT20 : 16.41 dBm (0.0438 W) 802.11n HT40 : 16.99 dBm (0.0500 W) <Ant 1 + 2> 802.11b : 17.19 dBm (0.0524 W) 802.11g : 19.70 dBm (0.0933 W) 802.11n HT20 : 16.82 dBm (0.0481 W) 802.11n HT40 : 17.30 dBm (0.0537 W)		
Antenna Type	<Ant 1> 802.11b/g/n : PIFA Antenna with gain -0.50 dBi < Ant 2> 802.11b/g/n : PIFA Antenna with gain -0.50 dBi		
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)		
Antenna Function for Transmitter		Chain Port 1	Chain Port 2
	802.11 b	V	V
	802.11 g	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 Location

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.			
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958			
Test Site No.	Sporton Site No.			FCC Registration No.
	TH01-KS	03CH03-KS	CO01-KS	306251

Note: The test site complies with ANSI C63.4 2014 requirement.

1.7 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

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

2.1 Carrier Frequency Channel

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



2.2 Pre-Scanned RF Power

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

2.4GHz 802.11b RF Output Power (dBm)							
Power vs. Channel				Power vs. Data Rate			
Channel	Frequency (MHz)	Ant	Data Rate 1Mbps	Channel	2Mbps	5.5Mbps	11Mbps
CH 01	2412	1	15.26	CH 11	16.79	16.82	16.87
CH 06	2437	1	16.83				
CH 11	2462	1	16.92				
CH 01	2412	2	16.22	CH 11	16.71	16.63	16.68
CH 06	2437	2	16.65				
CH 11	2462	2	16.73				
CH 01	2412	1+2(1)	11.94	CH 11	13.33	13.50	13.45
CH 06	2437	1+2(1)	13.42				
CH 11	2462	1+2(1)	13.53				
CH 01	2412	1+2(2)	14.21	CH 11	14.68	14.65	14.61
CH 06	2437	1+2(2)	14.47				
CH 11	2462	1+2(2)	14.75				
CH 01	2412	1+2	16.23	CH 11	17.07	17.12	17.08
CH 06	2437	1+2	16.99				
CH 11	2462	1+2	17.19				

2.4GHz 802.11g RF Output Power (dBm)											
Power vs. Channel				Power vs. MCS Index							
Channel	Frequency (MHz)	Ant	Data Rate 6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 01	2412	1	17.98	CH 11	19.37	19.41	19.38	19.34	19.21	19.16	19.36
CH 06	2437	1	19.27								
CH 11	2462	1	19.43								
CH 01	2412	2	18.51	CH 11	19.30	19.39	19.32	19.43	19.26	19.38	19.42
CH 06	2437	2	19.11								
CH 11	2462	2	19.45								
CH 01	2412	1+2(1)	14.72	CH 11	16.23	16.13	16.19	16.29	16.15	16.31	16.24
CH 06	2437	1+2(1)	16.11								
CH 11	2462	1+2(1)	16.33								
CH 01	2412	1+2(2)	16.35	CH 11	16.92	16.98	16.84	16.90	16.97	16.76	16.93
CH 06	2437	1+2(2)	16.70								
CH 11	2462	1+2(2)	17.03								
CH 01	2412	1+2	18.62	CH 11	19.60	19.59	19.54	19.62	19.59	19.55	19.61
CH 06	2437	1+2	19.43								
CH 11	2462	1+2	19.70								



2.4GHz 802.11n HT20 RF Output Power (dBm)											
Power vs. Channel				Power vs. MCS Index							
Channel	Frequency (MHz)	Ant	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412	1	14.59	CH 11	16.26	16.15	16.03	15.94	16.18	16.30	16.21
CH 06	2437	1	15.93								
CH 11	2462	1	16.34								
CH 01	2412	2	15.66	CH 11	16.33	16.34	16.08	16.15	16.18	16.38	16.22
CH 06	2437	2	16.09								
CH 11	2462	2	16.41								
CH 01	2412	1+2(1)	11.57	CH 11	13.11	13.20	13.13	13.22	13.09	13.10	13.15
CH 06	2437	1+2(1)	12.90								
CH 11	2462	1+2(1)	13.24								
CH 01	2412	1+2(2)	13.61	CH 11	14.31	14.24	13.95	14.04	10.96	12.53	11.08
CH 06	2437	1+2(2)	14.12								
CH 11	2462	1+2(2)	14.32								
CH 01	2412	1+2	15.72	CH 11	16.76	16.76	16.57	16.66	15.16	15.83	15.25
CH 06	2437	1+2	16.56								
CH 11	2462	1+2	16.82								

2.4GHz 802.11n HT40 RF Output Power (dBm)											
Power vs. Channel				Power vs. MCS Index							
Channel	Frequency (MHz)	Ant	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 03	2422	1	15.12	CH 09	16.79	16.71	16.93	16.72	16.62	16.65	16.57
CH 06	2437	1	15.84								
CH 09	2452	1	16.97								
CH 03	2422	2	16.36	CH 09	16.64	16.48	16.96	16.68	16.65	16.45	16.36
CH 06	2437	2	16.03								
CH 09	2452	2	16.99								
CH 03	2422	1+2(1)	12.00	CH 09	13.80	13.66	13.86	13.82	13.46	13.01	12.91
CH 06	2437	1+2(1)	12.83								
CH 09	2452	1+2(1)	13.93								
CH 03	2422	1+2(2)	14.15	CH 09	14.53	14.46	14.60	14.56	14.49	14.34	14.32
CH 06	2437	1+2(2)	13.84								
CH 09	2452	1+2(2)	14.62								
CH 03	2422	1+2	16.22	CH 09	17.19	17.09	17.26	17.22	17.02	16.74	16.68
CH 06	2437	1+2	16.37								
CH 09	2452	1+2	17.30								

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

2.3 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

Single Antenna

<2.4GHz>

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

MIMO Antenna

<2.4GHz>

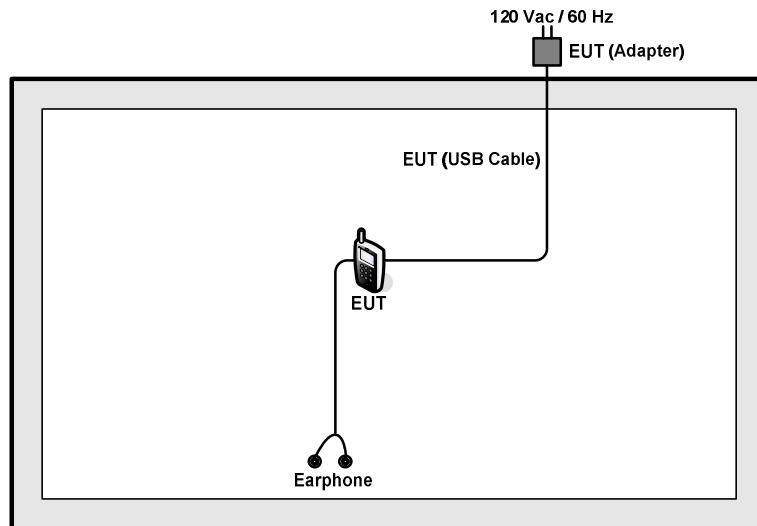
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link (2.4G) + USB Cable (Charging from Adapter) + Earphone
Remark: For Radiated Test Cases, The tests were performance with Adapter, Earphone, and USB Cable.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>

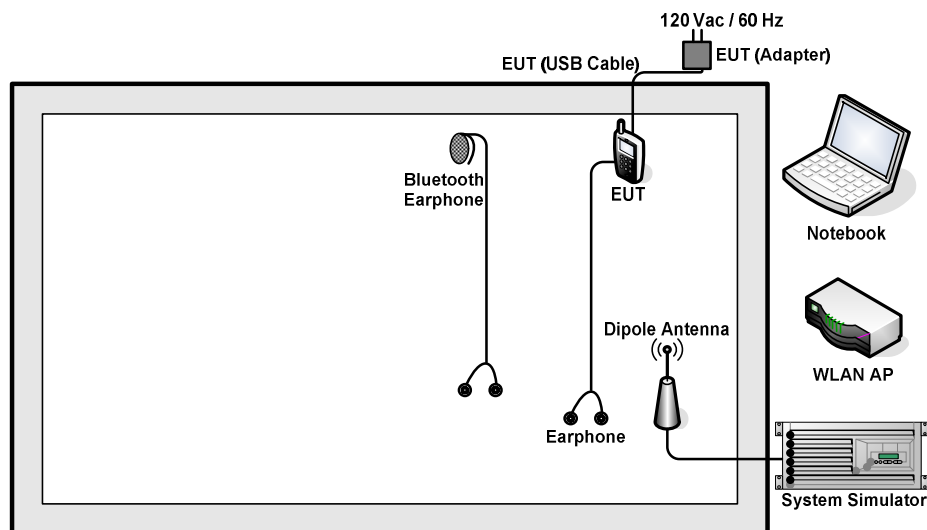
For 802.11b, 802.11n40



For 802.11g, 802.11n20



<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	Anritus	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded, 1.8 m
3.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-106	QTLBH-106	Unshielded, 0.5 m	N/A
5.	Earphone	Lenovo	SH100	N/A	Unshielded, 1.2 m	N/A
6.	Earphone	Lenovo	LH102	N/A	Unshielded, 1.2 m	N/A

2.6 EUT Operation Test Setup

For WLAN function, the engineering test program was provided and enabled to make EUT continuous transmit/receive.

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



2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example :

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 5.4 dB.

Offset(dB) = RF cable loss(dB).
= 5.4 (dB)

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

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

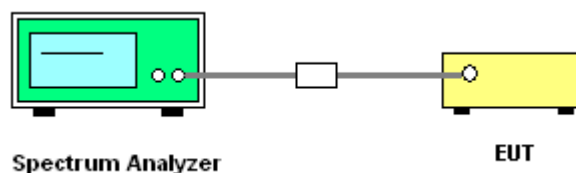
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

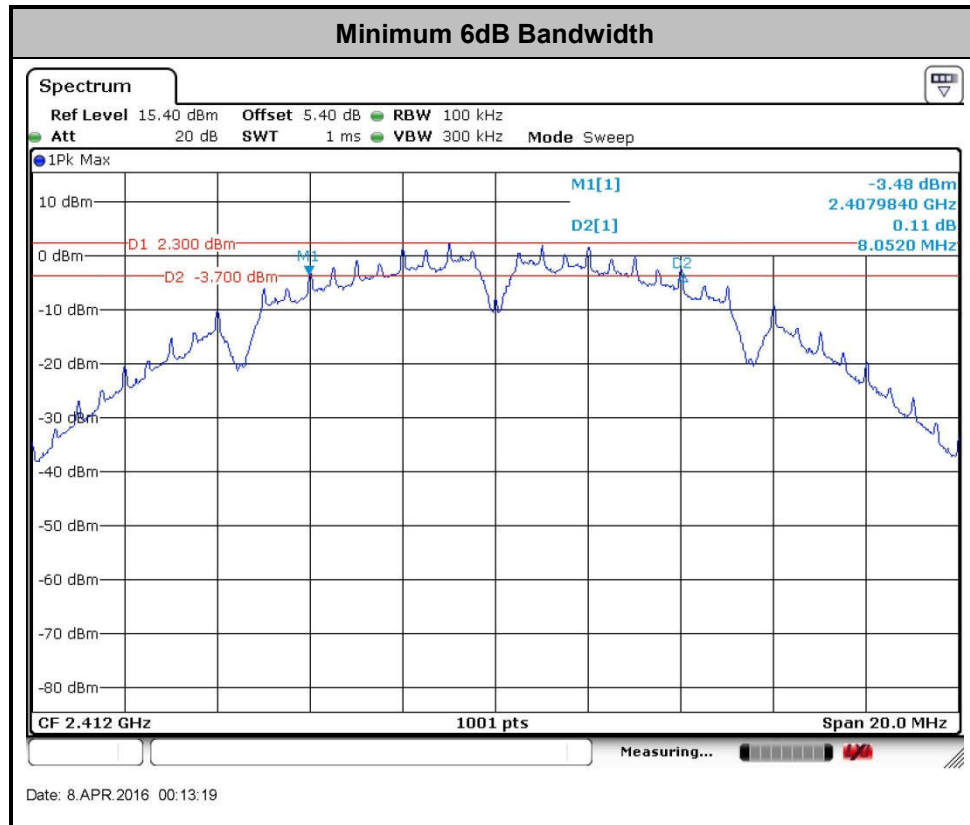
1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.



3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna 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.

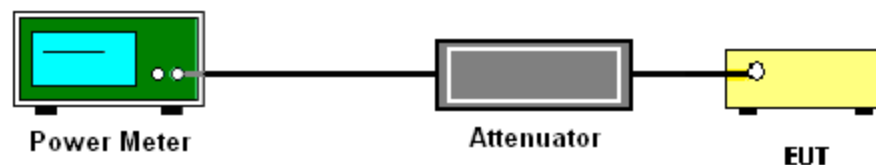
3.2.2 Measuring Instruments

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 v03r05 section 9.1.2 PKPM1 Peak power meter method.
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

Please refer to Appendix A of this test report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A

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 v03r05.
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.

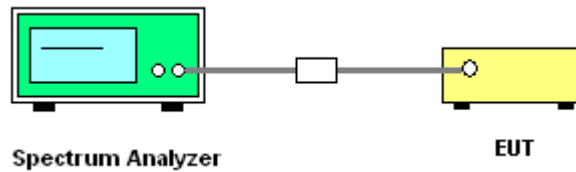
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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.

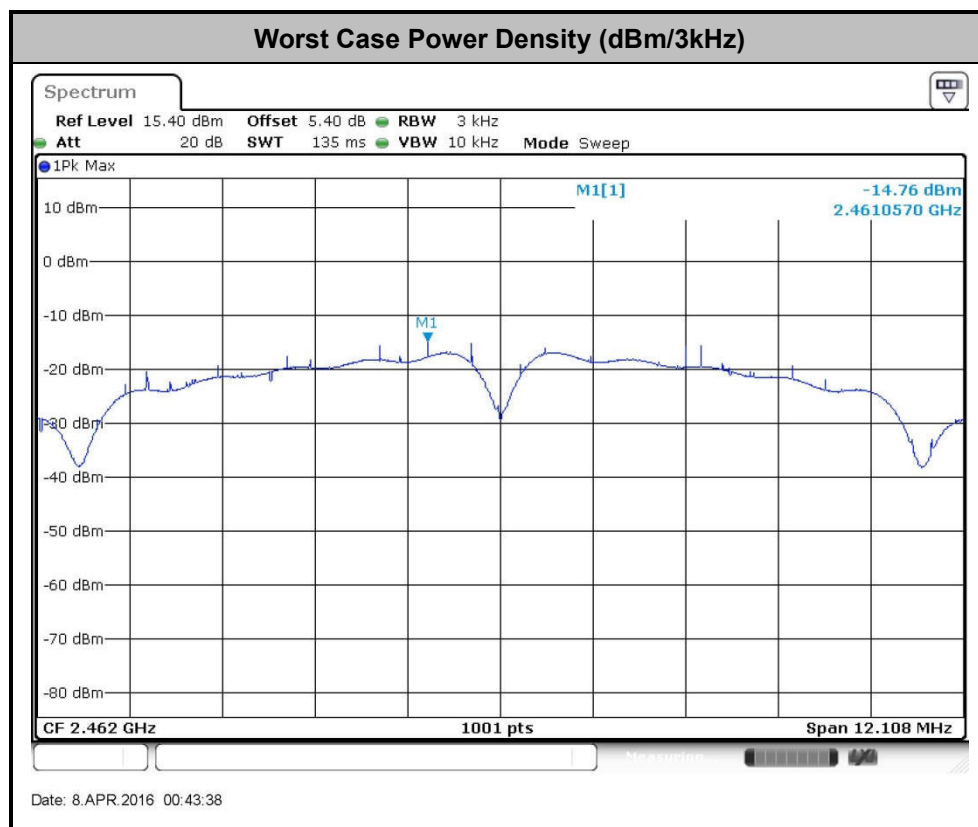
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A of this test report.



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).

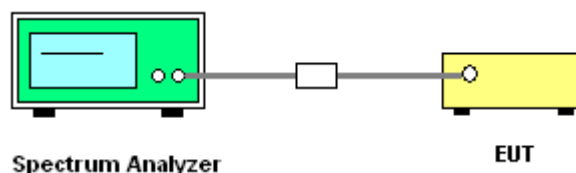
3.4.2 Measuring Instruments

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 v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup

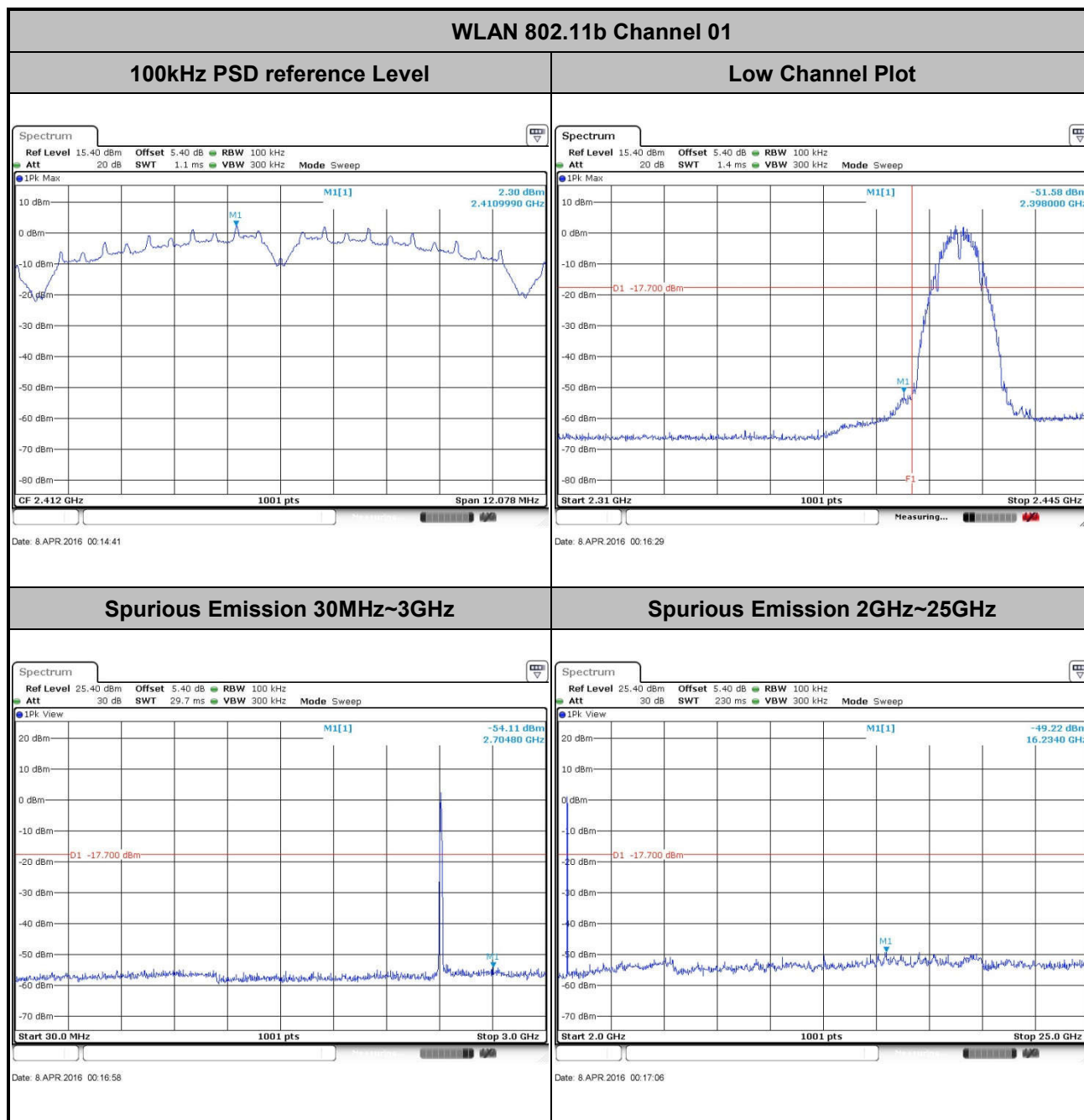




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

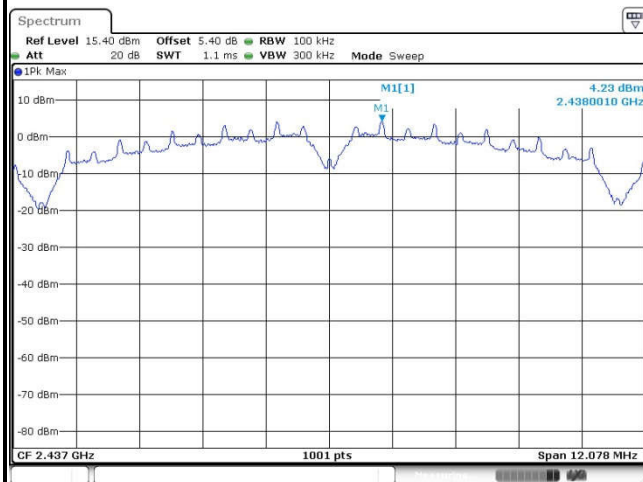
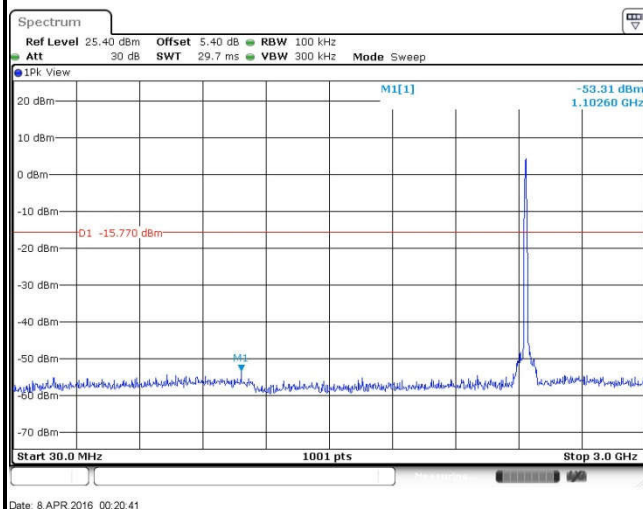
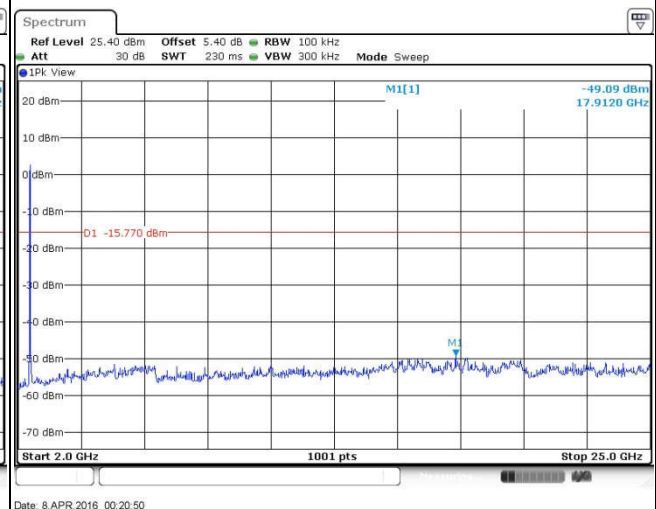
Number of TX = 1, Ant. 1 (Measured)

Number of TX	1	Ant. :	1
Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song



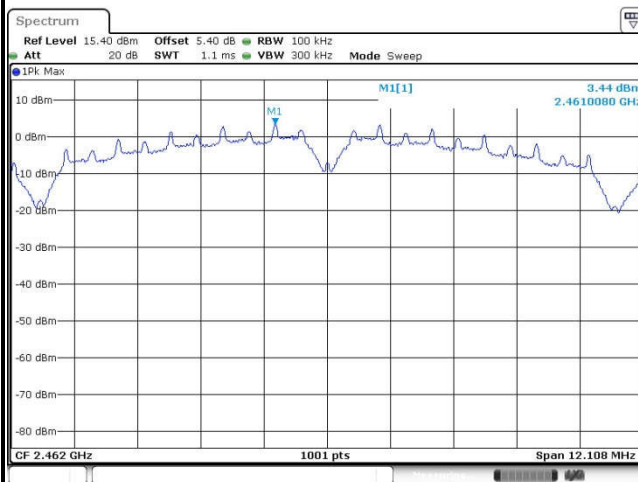


Number of TX :	1	Ant. :	1
Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

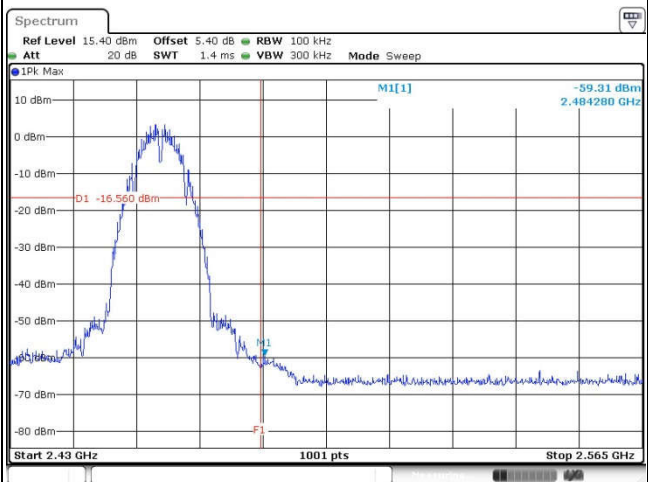
WLAN 802.11b Channel 06**100kHz PSD reference Level****Mid Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



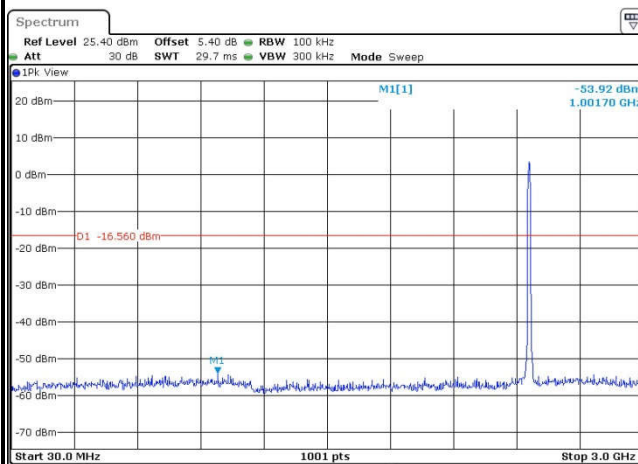
Number of TX :	1	Ant. :	1
Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

WLAN 802.11b Channel 11**100kHz PSD reference Level**

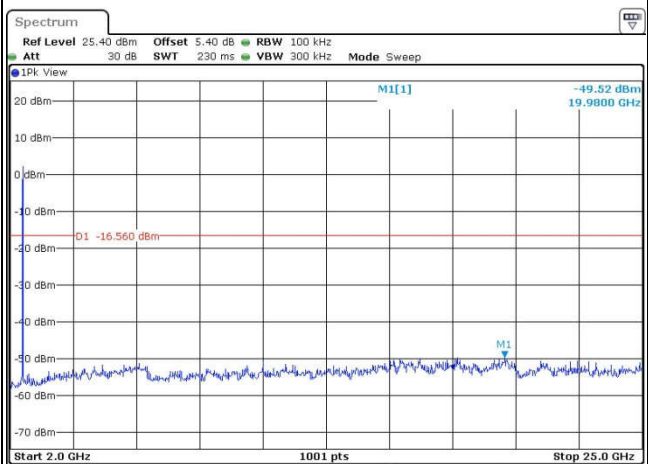
Date: 8 APR 2016 00:23:05

High Channel Plot

Date: 8 APR 2016 00:23:15

Spurious Emission 30MHz~3GHz

Date: 8 APR 2016 00:23:26

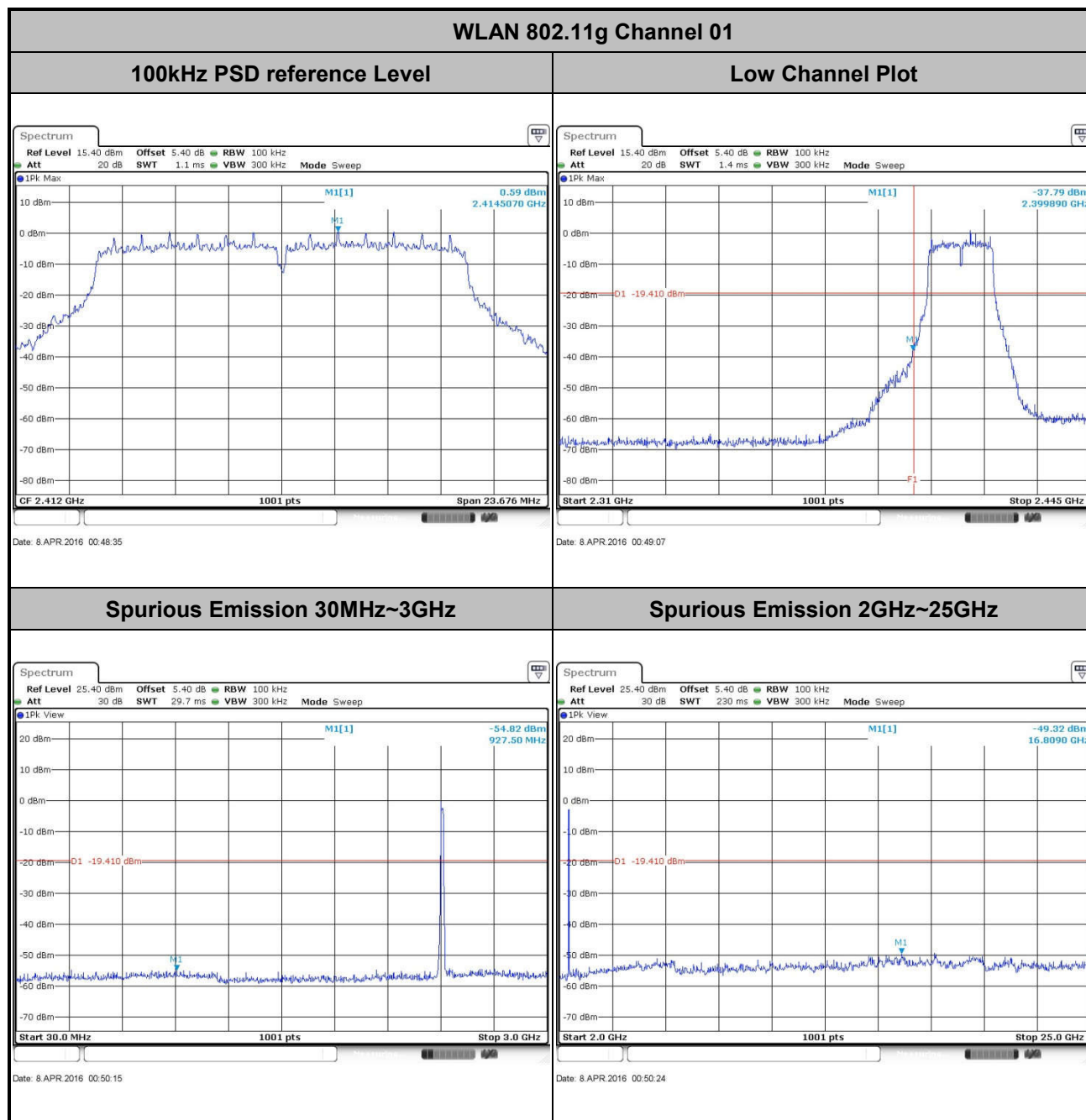
Spurious Emission 2GHz~25GHz

Date: 8 APR 2016 00:23:34



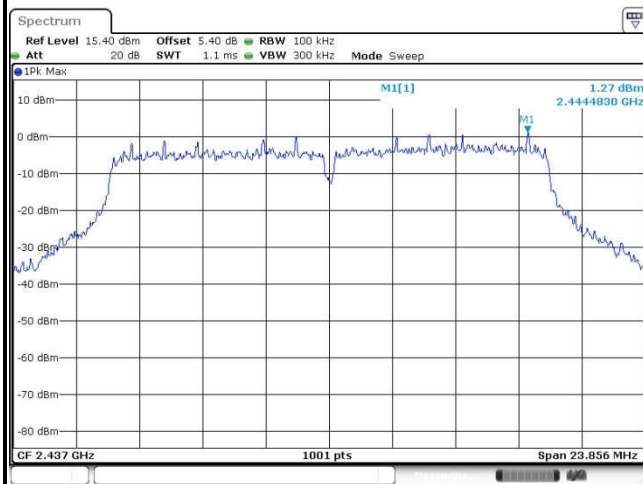
Number of TX = 1, Ant. 2 (Measured)

Number of TX :	1	Ant. :	2
Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

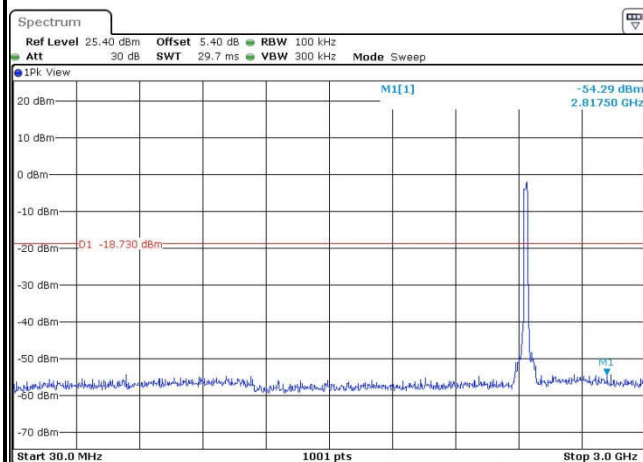




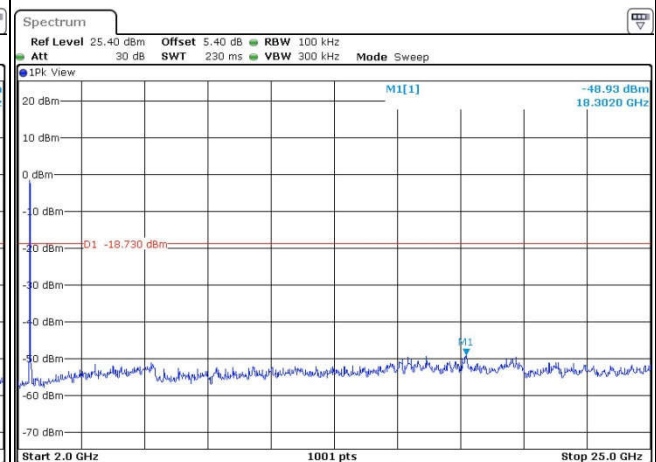
Number of TX :	1	Ant. :	2
Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

WLAN 802.11g Channel 06**100kHz PSD reference Level**

Date: 8 APR 2016 00:52:39

Mid Channel Plot**Spurious Emission 30MHz~3GHz**

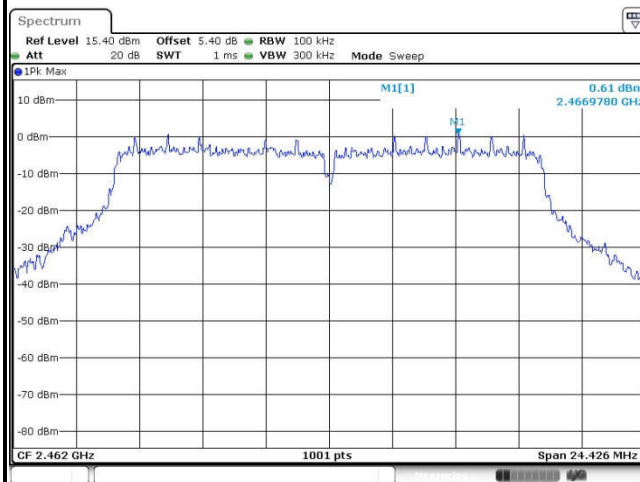
Date: 8 APR 2016 00:52:49

Spurious Emission 2GHz~25GHz

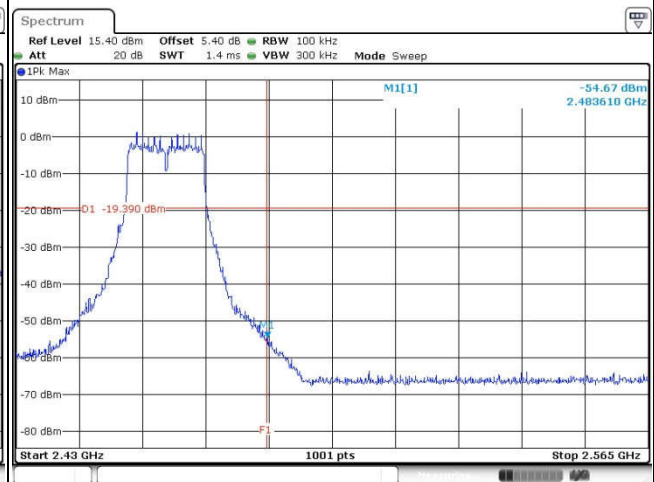
Date: 8 APR 2016 00:52:58



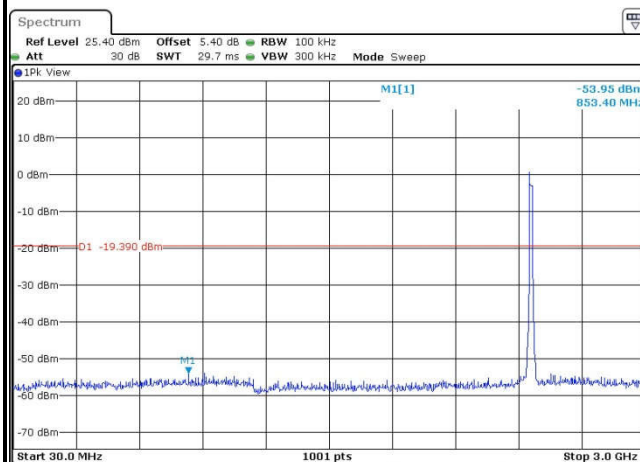
Number of TX :	1	Ant. :	2
Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

WLAN 802.11g Channel 11**100kHz PSD reference Level**

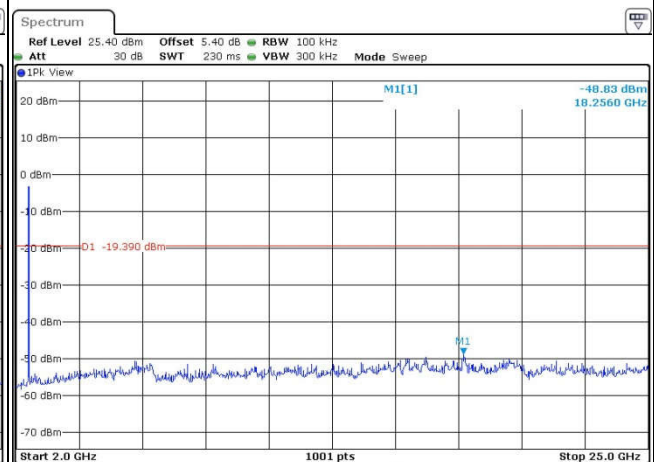
Date: 8 APR 2016 00:55:00

High Channel Plot

Date: 8 APR 2016 00:55:14

Spurious Emission 30MHz~3GHz

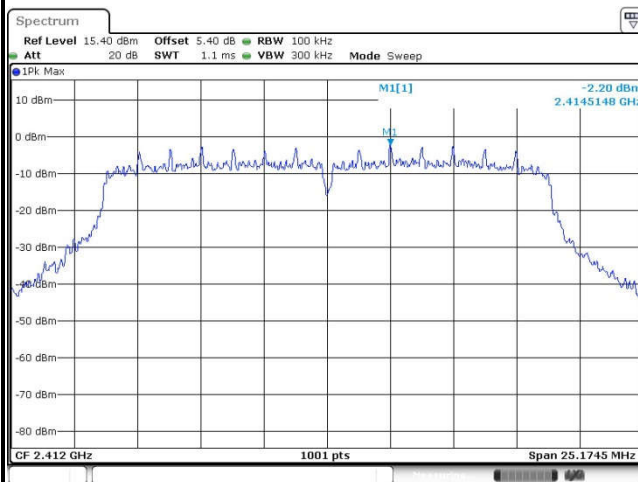
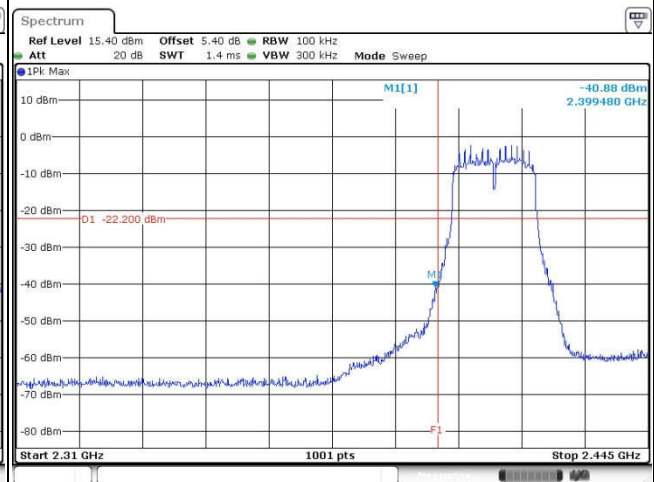
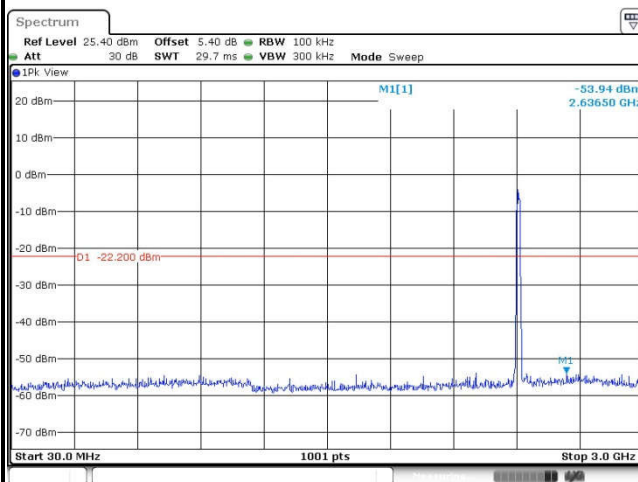
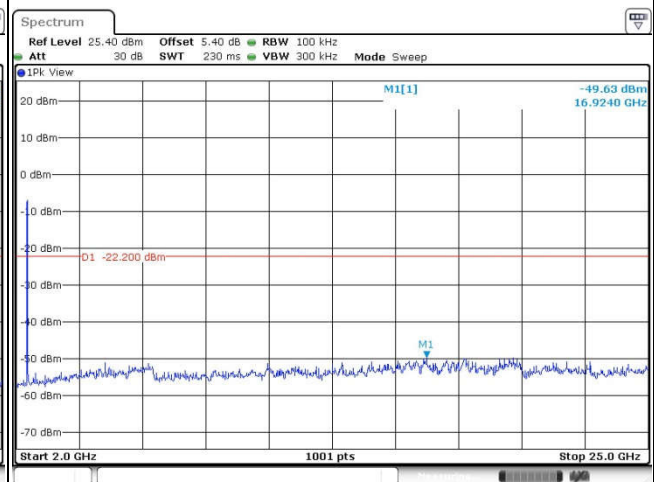
Date: 8 APR 2016 00:55:46

Spurious Emission 2GHz~25GHz

Date: 8 APR 2016 00:55:54

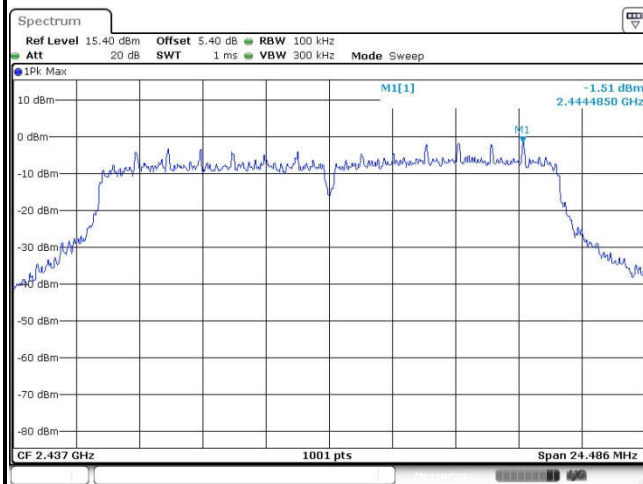
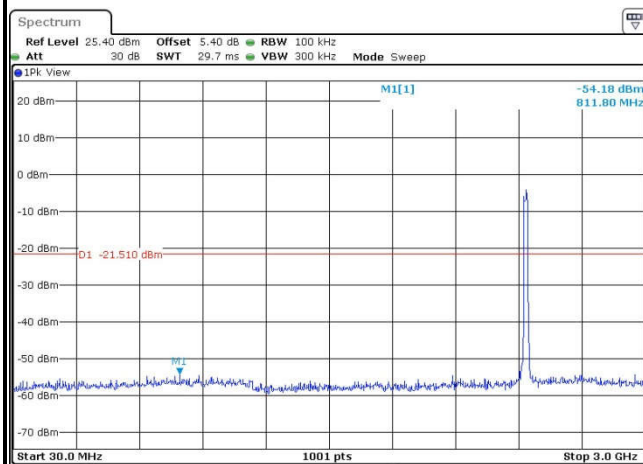
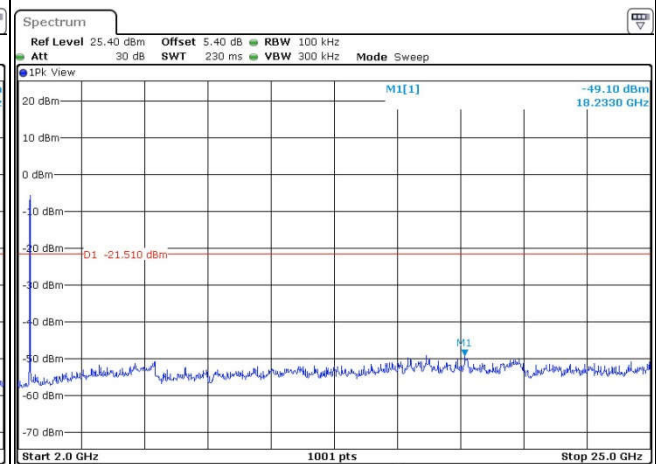


Number of TX :	1	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**

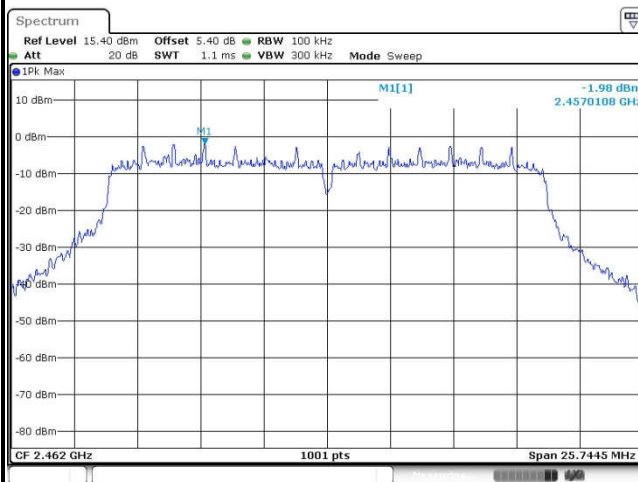
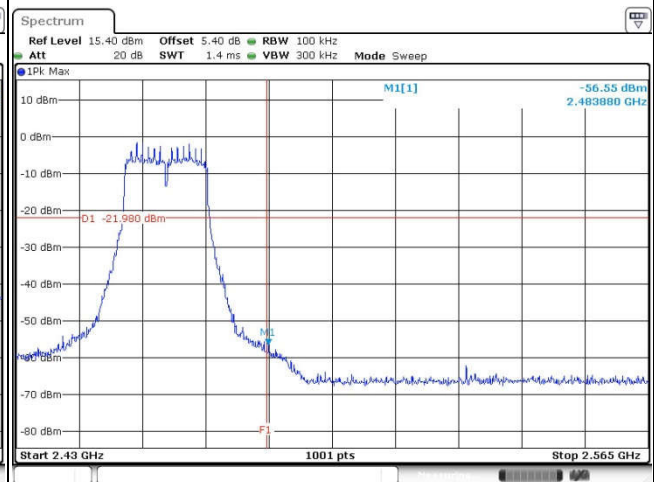
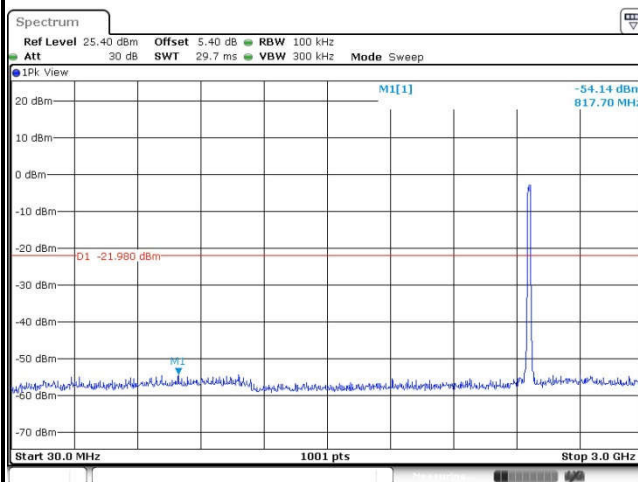
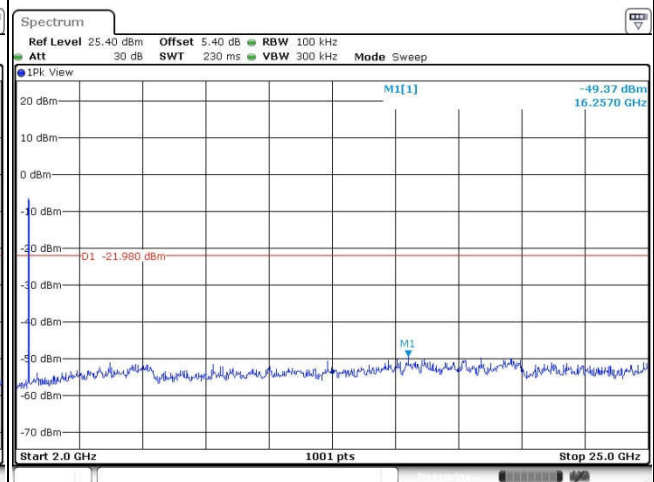


Number of TX :	1	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

WLAN 802.11n HT20 Channel 06**100kHz PSD reference Level****Mid Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**

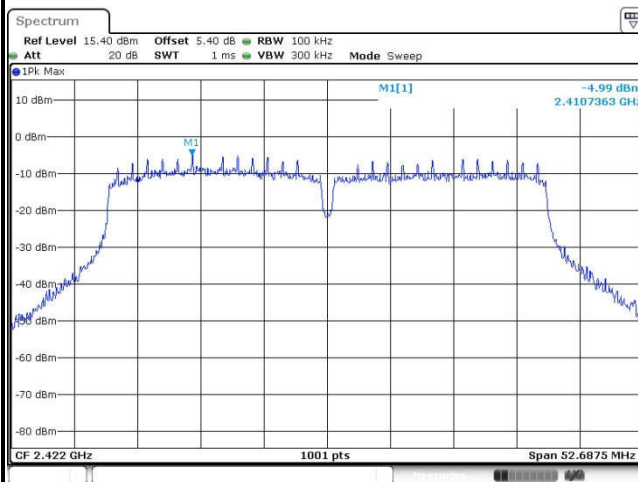


Number of TX :	1	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

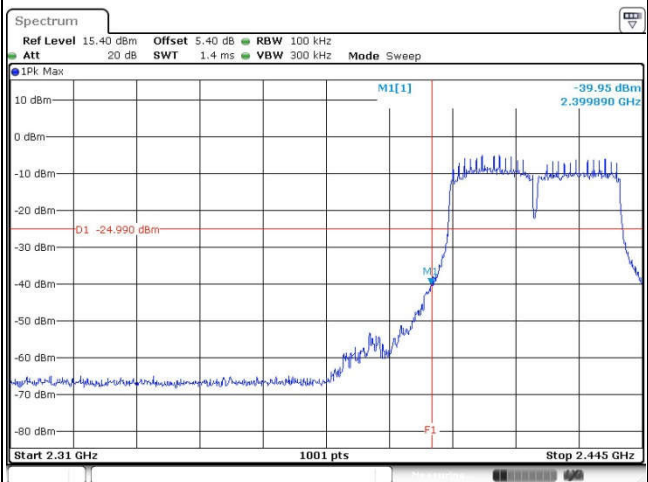
WLAN 802.11n HT20 Channel 11**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



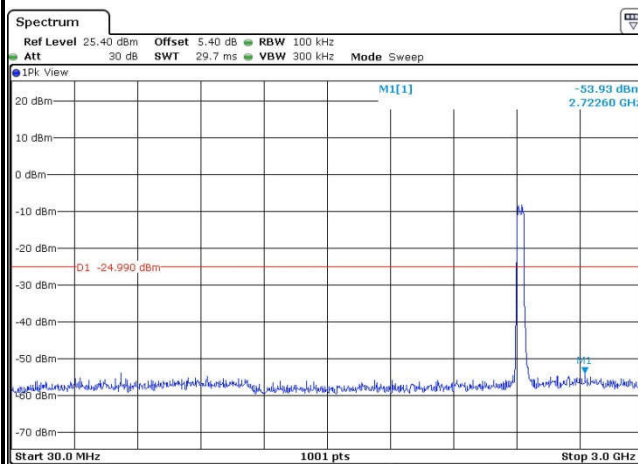
Number of TX :	1	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	03	Test Engineer :	Issac Song

WLAN 802.11n HT40 Channel 03**100kHz PSD reference Level**

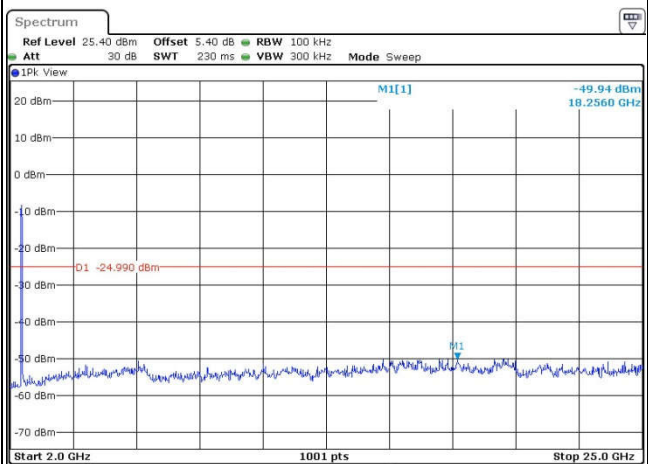
Date: 9 APR 2016 00:35:23

Low Channel Plot

Date: 9 APR 2016 00:35:40

Spurious Emission 30MHz~3GHz

Date: 9 APR 2016 00:38:04

Spurious Emission 2GHz~25GHz

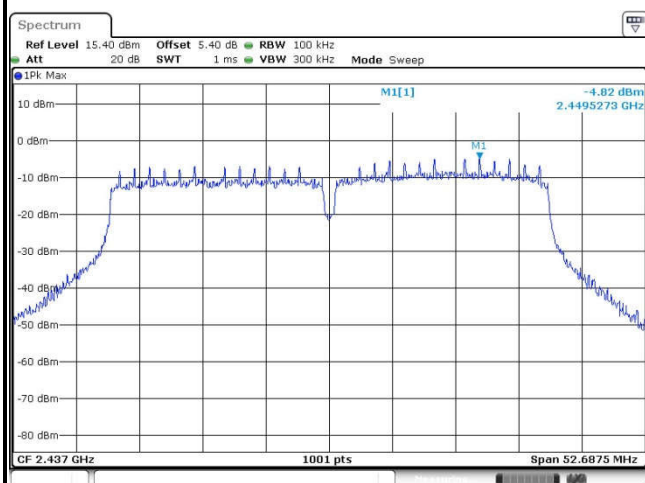
Date: 9 APR 2016 00:37:05



Number of TX :	1	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

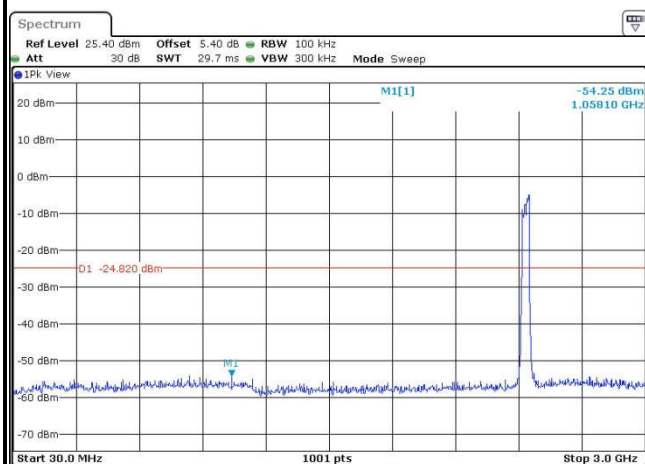
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level

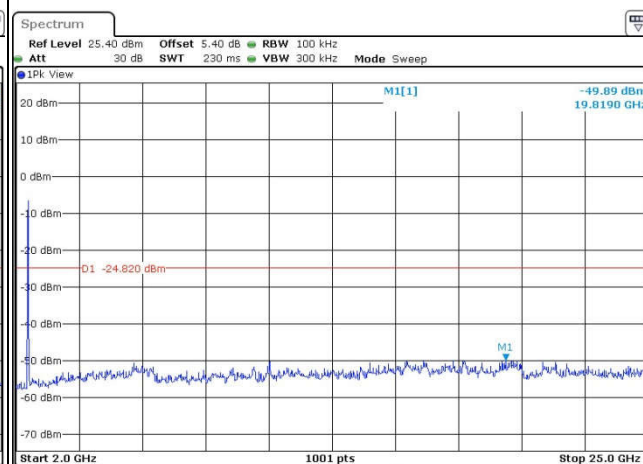


Mid Channel Plot

Spurious Emission 30MHz~3GHz

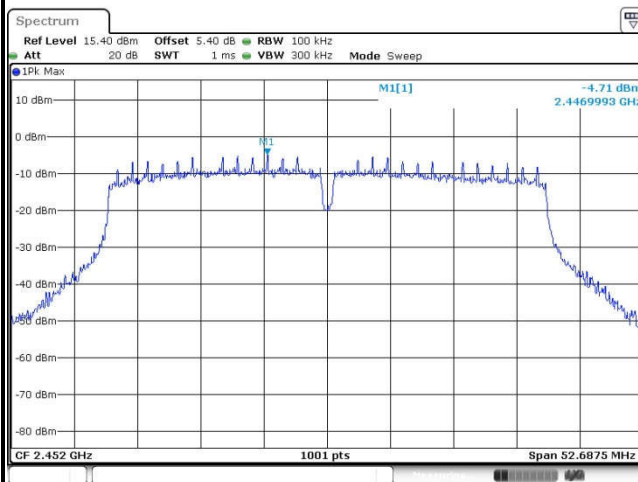
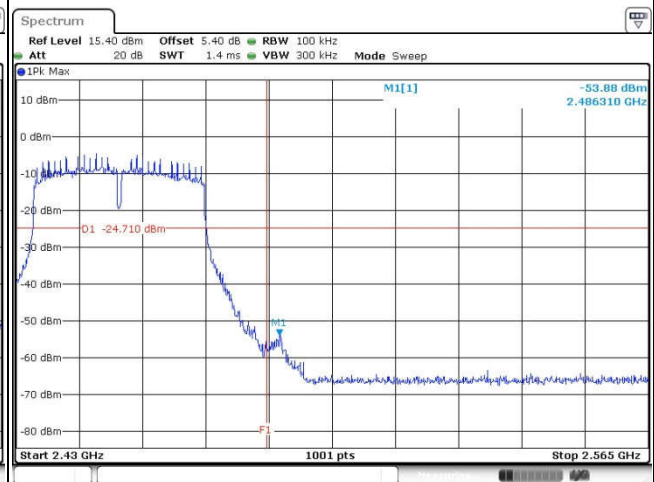
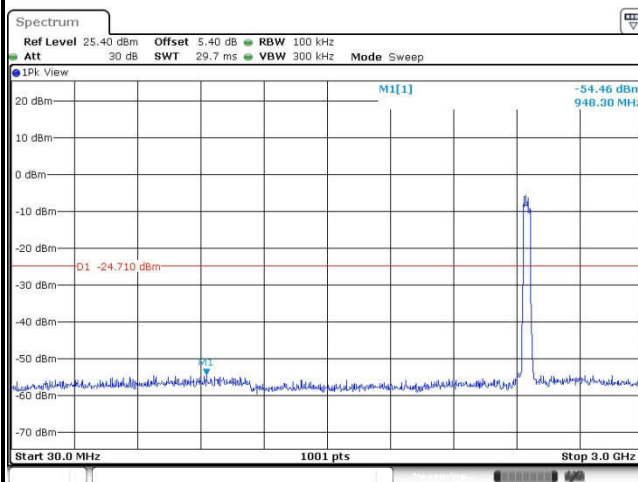
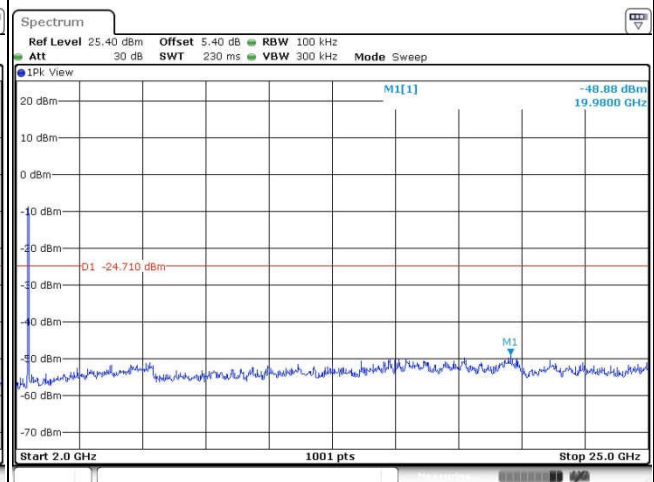


Spurious Emission 2GHz~25GHz



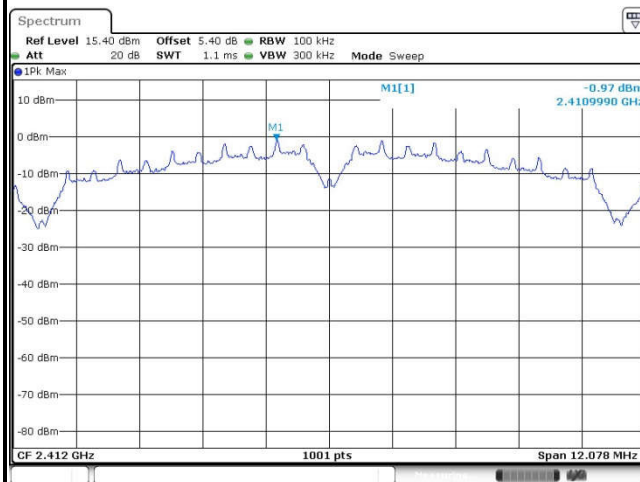


Number of TX :	1	Ant. :	2
Test Mode :	802.11n HT40	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	09	Test Engineer :	Issac Song

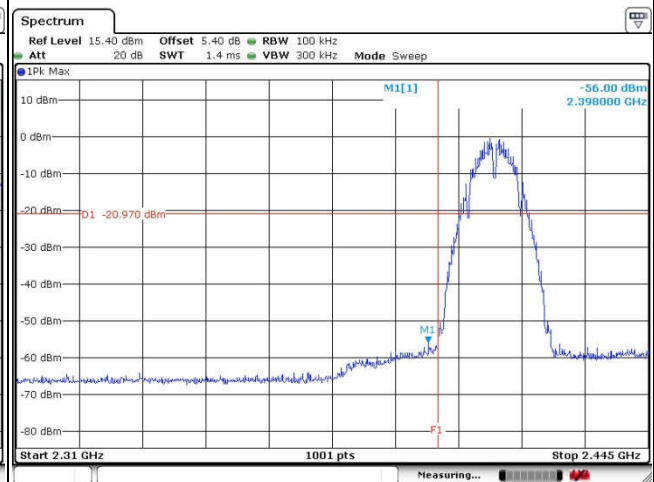
WLAN 802.11n HT40 Channel 09**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**

**Number of TX = 2, Ant 1+2(1) (Measured)**

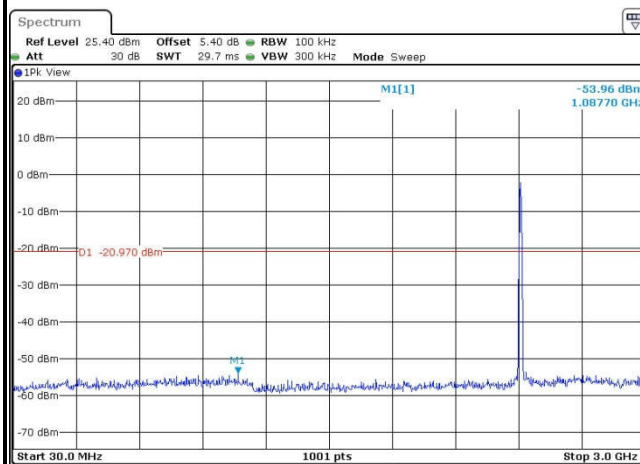
Number of TX :	2	Ant. :	1
Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

WLAN 802.11b Channel 01**100kHz PSD reference Level**

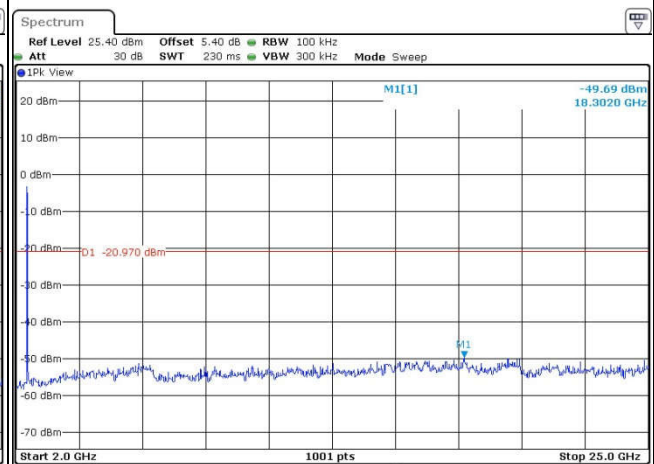
Date: 8 APR 2016 00:27:04

Low Channel Plot

Date: 8 APR 2016 00:28:37

Spurious Emission 30MHz~3GHz

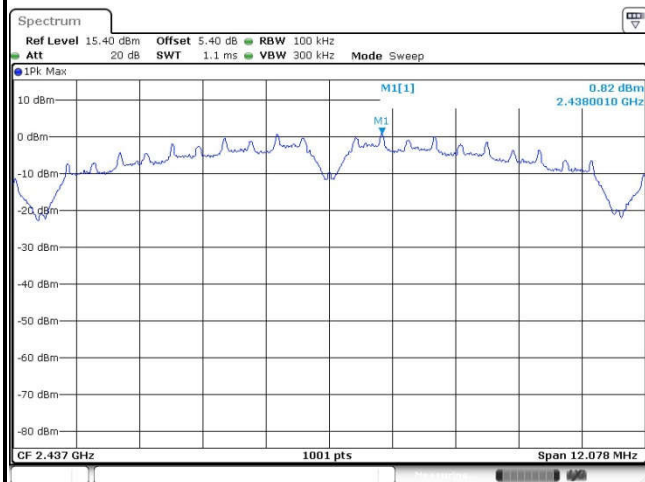
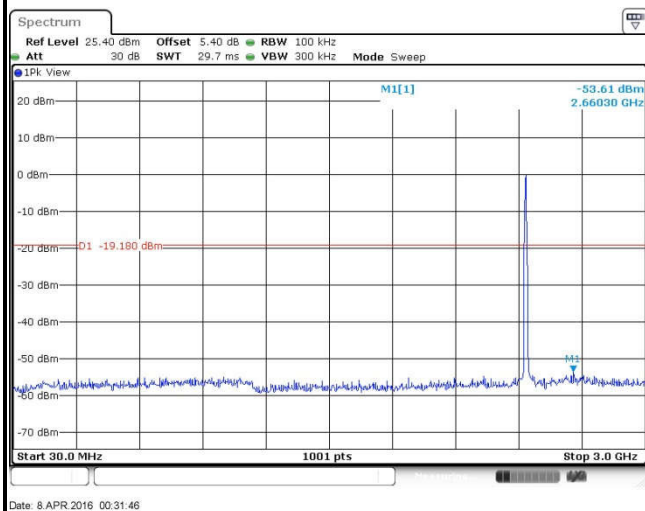
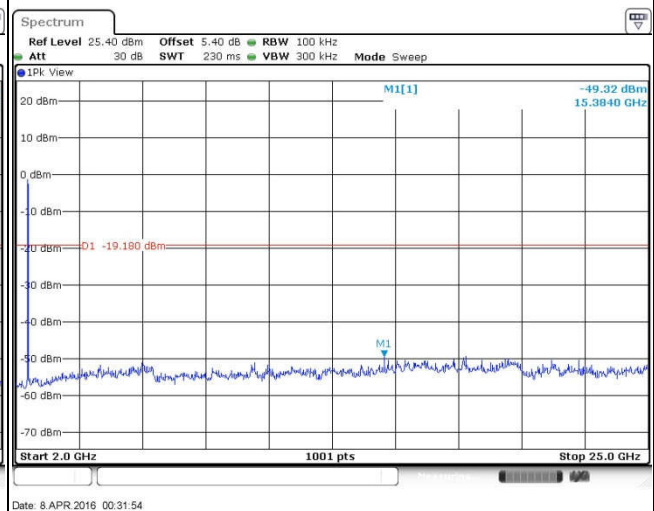
Date: 8 APR 2016 00:28:51

Spurious Emission 2GHz~25GHz

Date: 8 APR 2016 00:28:59

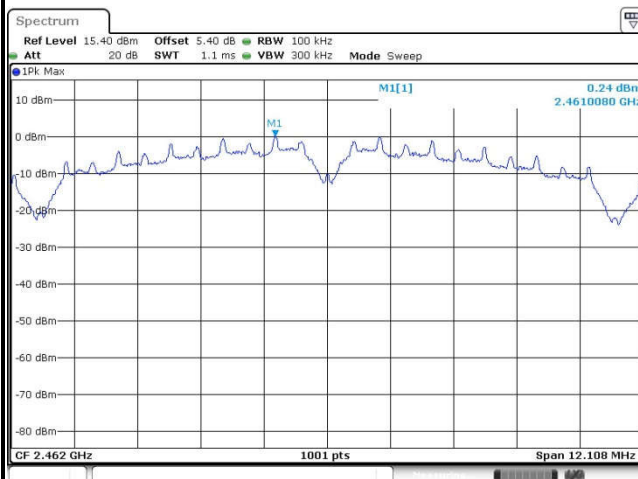


Number of TX :	2	Ant. :	1
Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

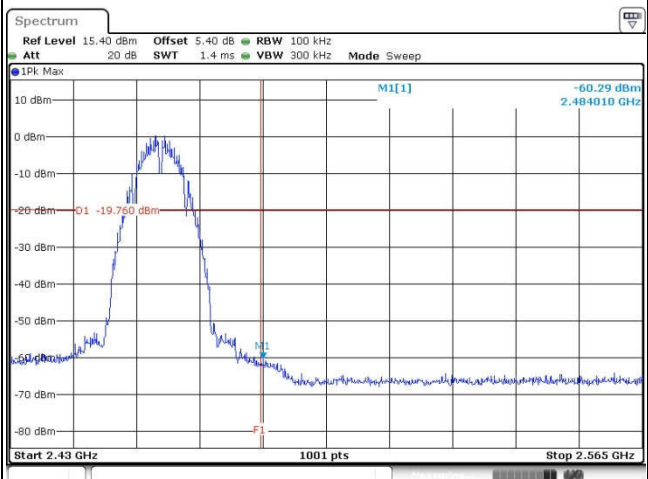
WLAN 802.11b Channel 06**100kHz PSD reference Level****Mid Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



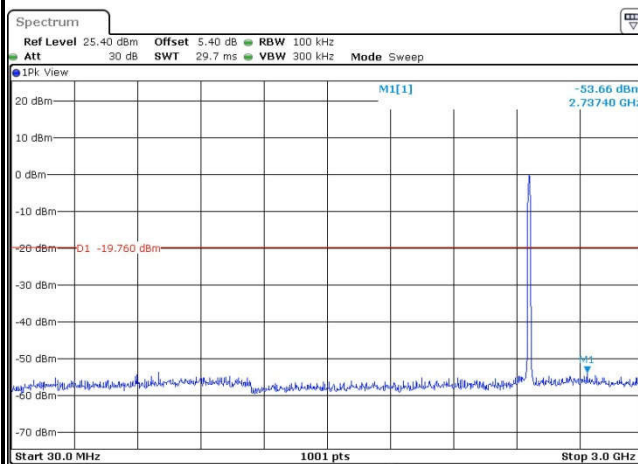
Number of TX :	2	Ant. :	1
Test Mode :	802.11b	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

WLAN 802.11b Channel 11**100kHz PSD reference Level**

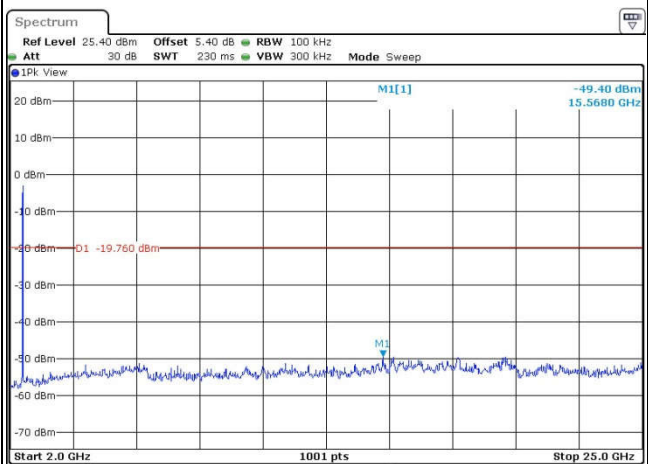
Date: 8 APR 2016 00:33:59

High Channel Plot

Date: 8 APR 2016 00:34:09

Spurious Emission 30MHz~3GHz

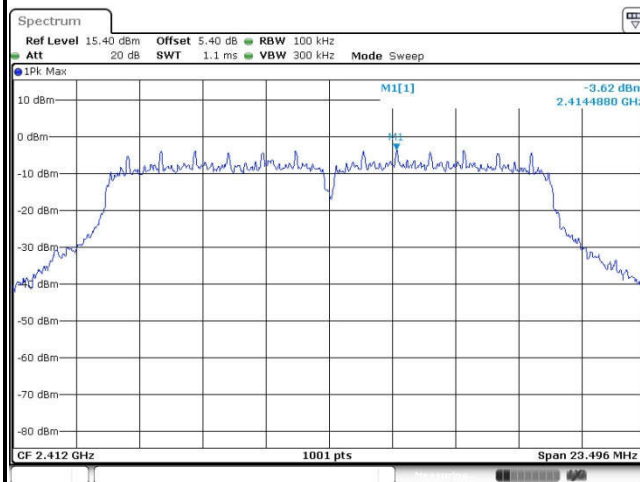
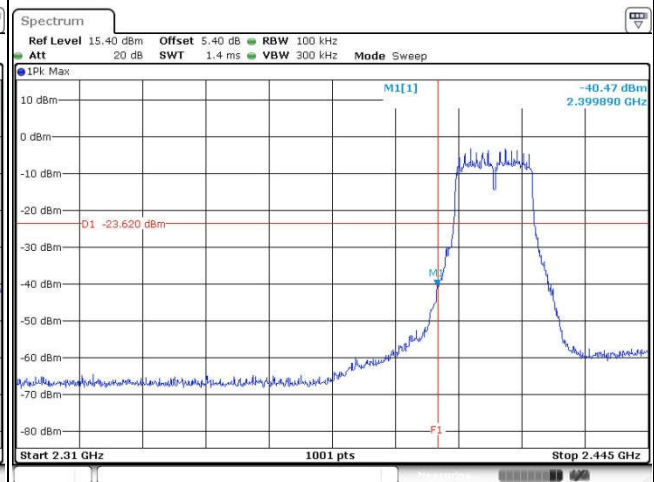
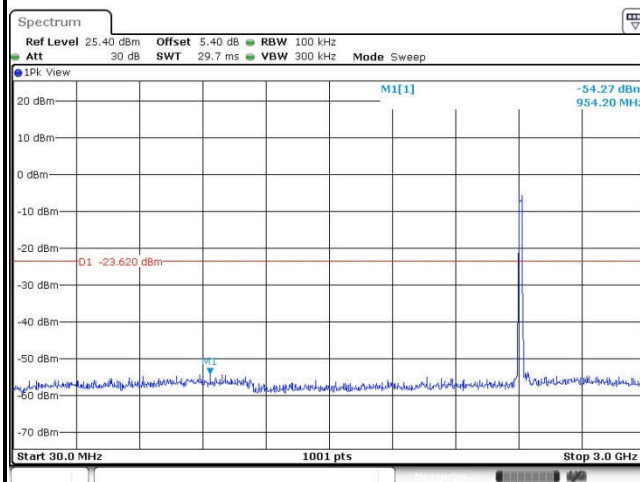
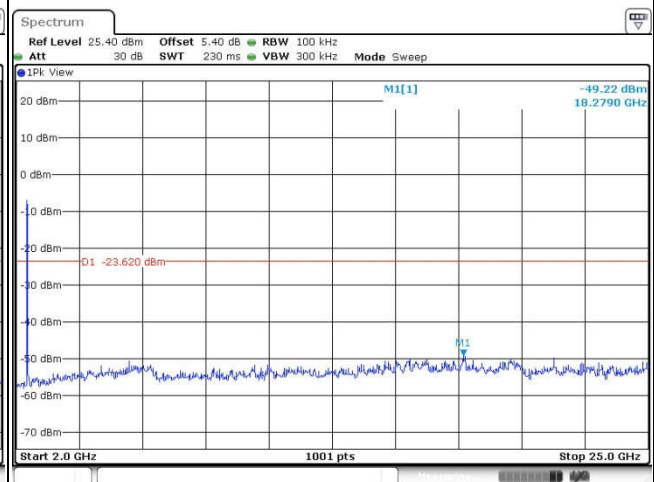
Date: 8 APR 2016 00:34:20

Spurious Emission 2GHz~25GHz

Date: 8 APR 2016 00:34:28

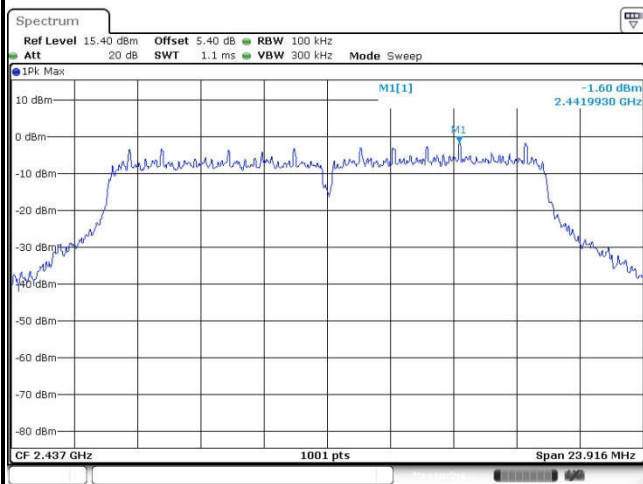
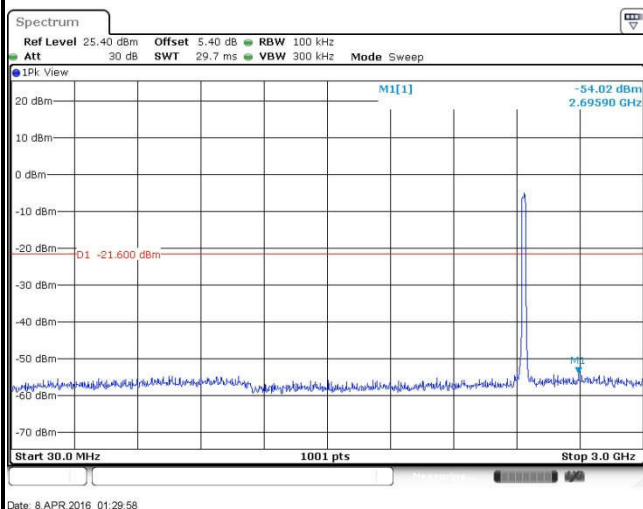
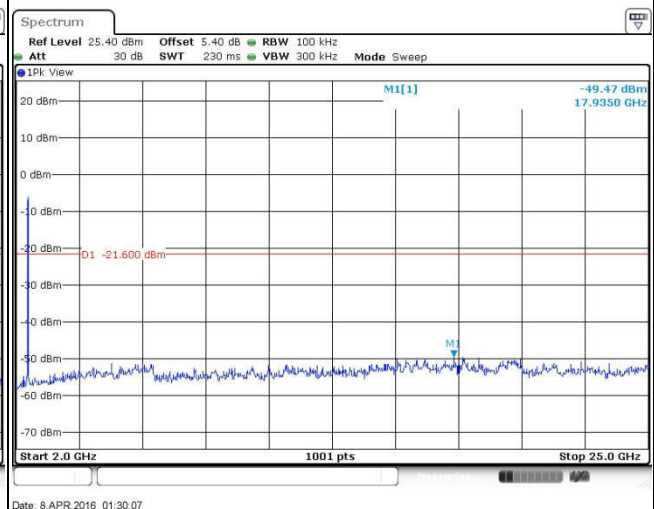


Number of TX :	2	Ant. :	1
Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

WLAN 802.11g Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



Number of TX :	2	Ant. :	1
Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

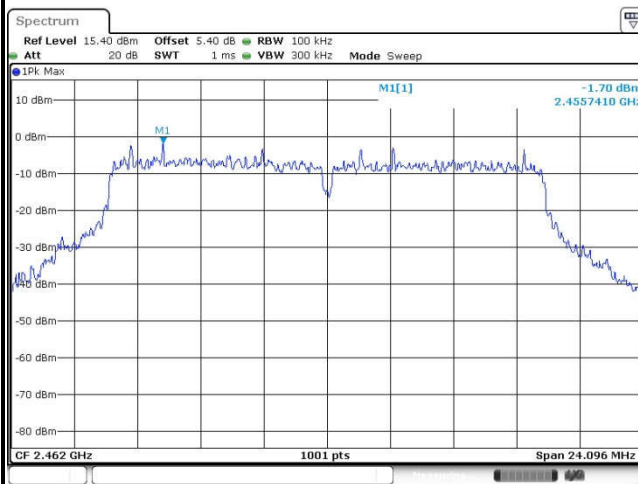
WLAN 802.11g Channel 06**100kHz PSD reference Level****Mid Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



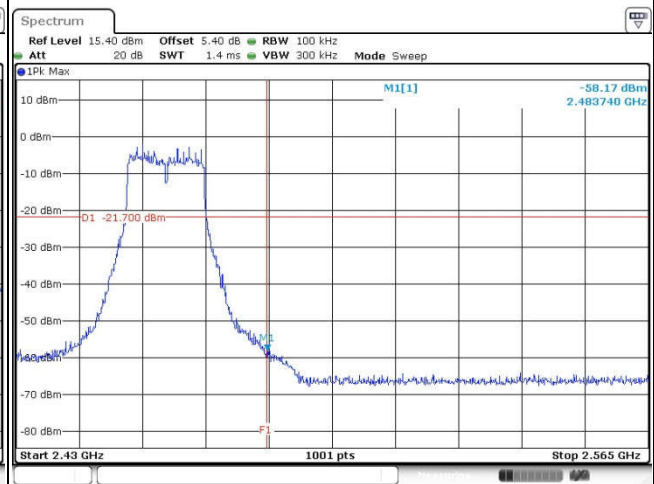
Number of TX :	2	Ant. :	1
Test Mode :	802.11g	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

WLAN 802.11g Channel 11

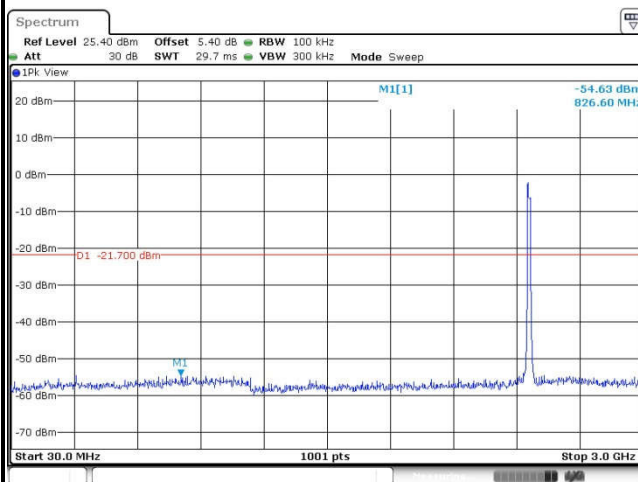
100kHz PSD reference Level



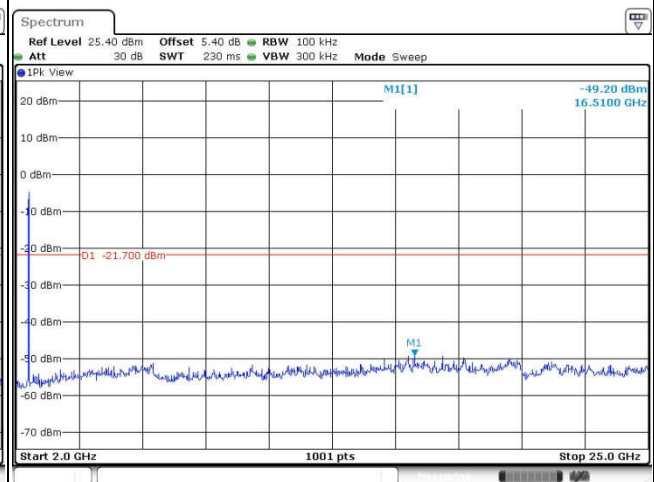
High Channel Plot



Spurious Emission 30MHz~3GHz

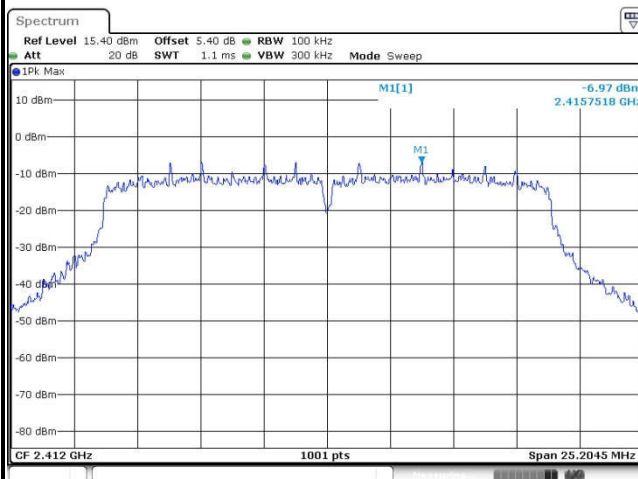


Spurious Emission 2GHz~25GHz

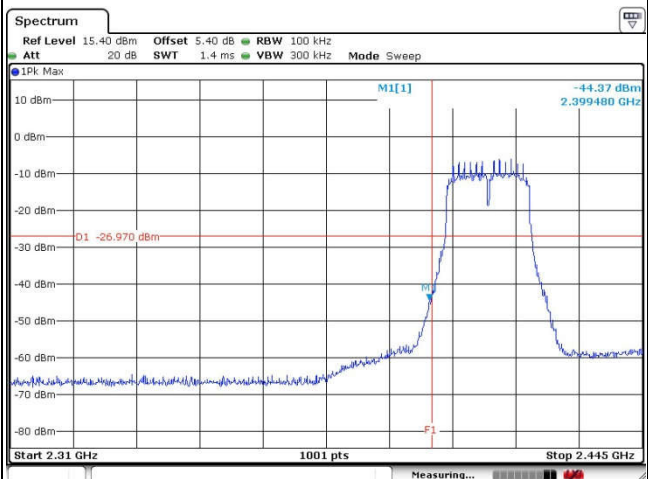




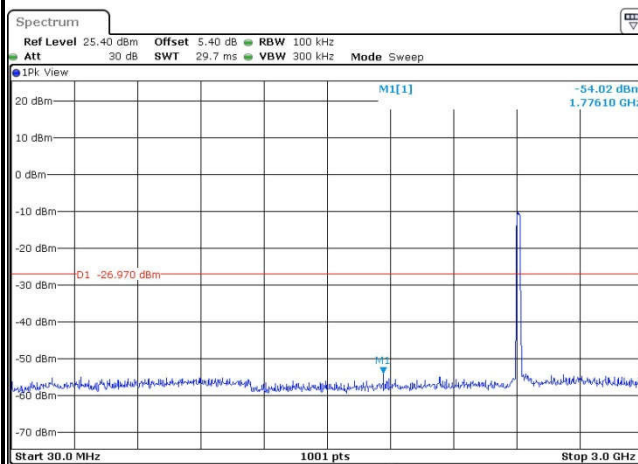
Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	Issac Song

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level**

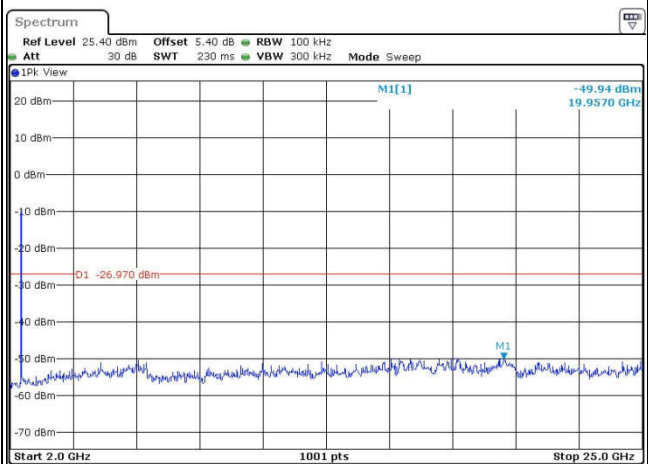
Date: 8 APR 2016 02:25:14

Low Channel Plot

Date: 8 APR 2016 02:26:47

Spurious Emission 30MHz~3GHz

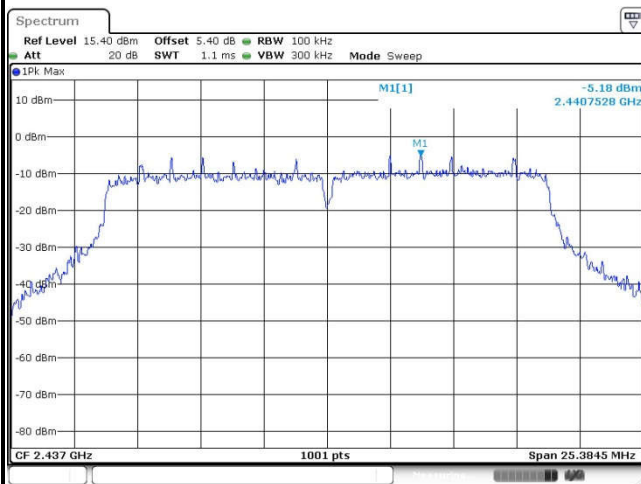
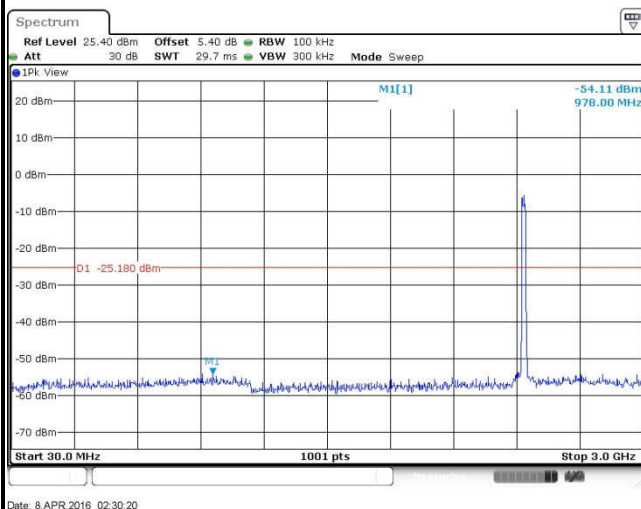
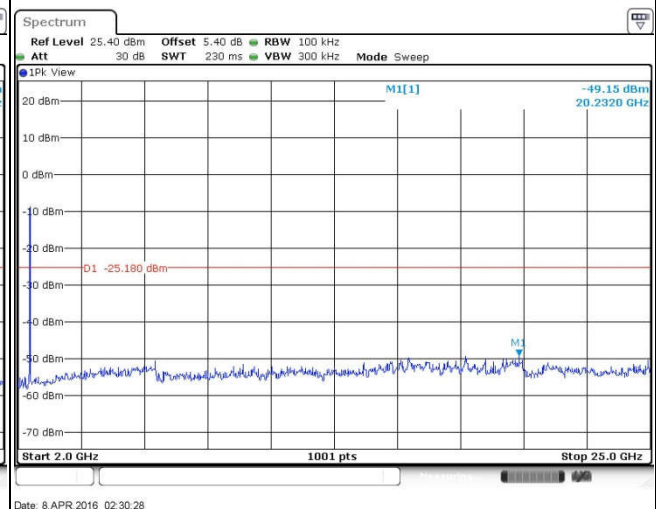
Date: 8 APR 2016 02:27:01

Spurious Emission 2GHz~25GHz

Date: 8 APR 2016 02:27:09

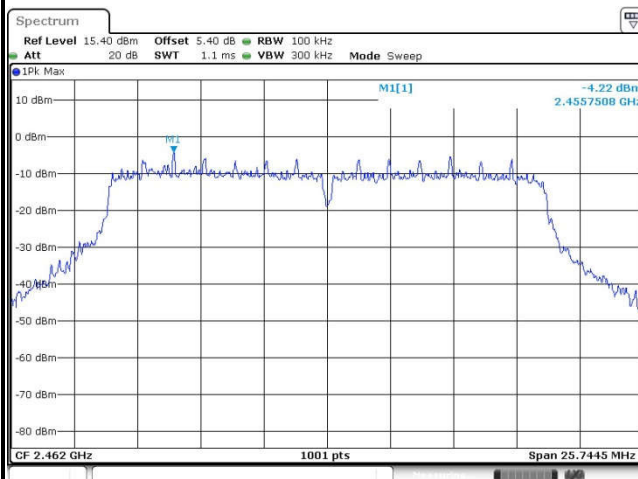
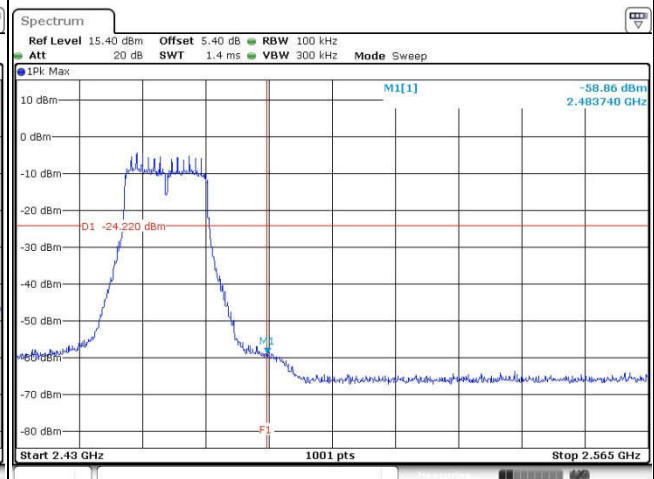
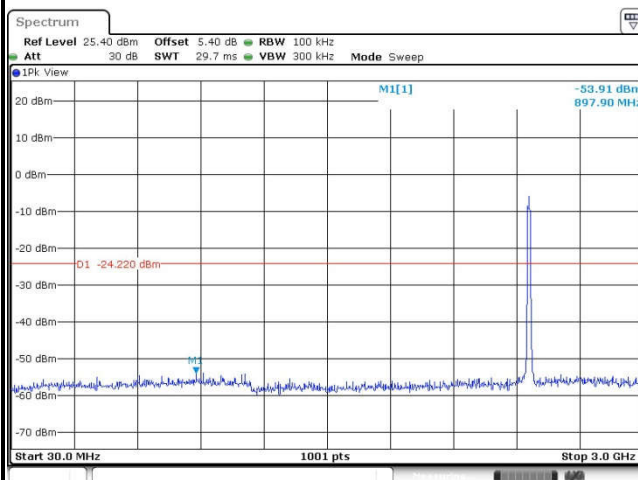


Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	49~51%
Test Channel :	06	Test Engineer :	Issac Song

WLAN 802.11n HT20 Channel 06**100kHz PSD reference Level****Mid Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**



Number of TX :	2	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	24~25°C
Test Band :	2.4GHz High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	Issac Song

WLAN 802.11n HT20 Channel 11**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~3GHz****Spurious Emission 2GHz~25GHz**