



FCC RF Test Report

APPLICANT : TP-LINK TECHNOLOGIES CO., LTD.
EQUIPMENT : AC1200 Wireless Dual Band DOCSIS 3.0 Cable
Modem Router
BRAND NAME : TP-LINK
MODEL NAME : Archer CR500
MARKETING NAME : AC1200 Wireless Dual Band DOCSIS 3.0 Cable
Modem Router
FCC ID : TE7CR500V1
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product testing was completed on Jun. 24, 2016. We, SPORTON INTERNATIONAL (SHENZHEN) 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 (SHENZHEN) INC., the test report shall not be reproduced except in full.

Prepared by: Ken Chen / Manager

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL (SHENZHEN) INC.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR631009-01A	Rev. 01	This project is FCC change ID application; The difference between previous and current is changing the FCC ID: TE7CR700V2 to TE7CR500V1, equipment name and model name. Based on the similarity between two products, the test result is not affected; all test cases were leveraged on original report (Sporton Report Number FR631009A).	Sep. 27, 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 0.3 dB at 2386.410 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 0.58 dB at 0.640 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

TP-LINK TECHNOLOGIES CO., LTD.

Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd.,
Nanshan, Shenzhen, China

1.2 Manufacturer

TP-LINK TECHNOLOGIES CO., LTD.

Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd.,
Nanshan, Shenzhen, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	AC1200 Wireless Dual Band DOCSIS 3.0 Cable Modem Router
Brand Name	TP-LINK
Model Name	Archer CR500
Marketing Name	AC1200 Wireless Dual Band DOCSIS 3.0 Cable Modem Router
FCC ID	TE7CR500V1
EUT supports Radios application	WLAN2.4GHz 802.11b/g/n HT20/HT40/ WLAN5GHz 802.11a/n HT20/HT40/ WLAN5GHz 802.11ac VHT20/VHT40/VHT80
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification												
Tx/Rx Channel Frequency Range		802.11b/g/n : 2412 MHz ~ 2462 MHz										
Maximum (Average) Output Power to antenna		802.11b : 29.56 dBm (0.9036 W) 802.11g : 27.42 dBm (0.5521 W) 802.11n HT20 : 27.98 dBm (0.6281 W) 802.11n HT40 : 25.52 dBm (0.3565 W)										
Antenna Type		<Ant 1> 802.11b/g/n : Omni directional Antenna with gain 3.20 dBi <Ant 2> 802.11b/g/n : Omni directional Antenna with gain 2.10 dBi <Ant 3> 802.11b/g/n : Omni directional Antenna with gain 1.60 dBi										
Type of Modulation		802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)										
Antenna Function for Transmitter		<table><tr><td></td><td>Chain Port 0 Ant. 1</td><td>Chain Port 1 Ant. 2</td><td>Chain Port 2 Ant. 3</td></tr><tr><td>802.11 b/g/n MIMO</td><td>V</td><td>V</td><td>V</td></tr></table>				Chain Port 0 Ant. 1	Chain Port 1 Ant. 2	Chain Port 2 Ant. 3	802.11 b/g/n MIMO	V	V	V
	Chain Port 0 Ant. 1	Chain Port 1 Ant. 2	Chain Port 2 Ant. 3									
802.11 b/g/n MIMO	V	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 (SHENZHEN) INC.	
Test Site Location	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595	
Test Site No.	Sporton Site No.	
	TH01-SZ	CO01-SZ

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755- 3320-2398	
Test Site No.	Sporton Site No.	FCC Registration No.
	03CH03-SZ	565805

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).

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

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

2.1 Carrier Frequency and Channel

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

2.2 Pre-Scanned RF Power

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

MIMO <Ant. 1+2+3>

802.11b				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Average Power (dBm)	29.56	29.44	29.46	29.52

802.11g								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	27.42	27.34	27.30	27.34	27.37	27.36	27.36	27.39

2.4GHz 802.11n HT20								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	27.98	27.73	27.88	27.86	27.94	27.89	27.85	27.91

2.4GHz 802.11n HT40								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	25.52	25.38	25.40	25.39	25.45	25.44	25.41	25.38

Note: MIMO Ant. 1+2+3 is a calculated result from sum of the power MIMO Ant. 1, MIMO Ant. 2 and MIMO Ant. 3.

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.

MIMO Antenna

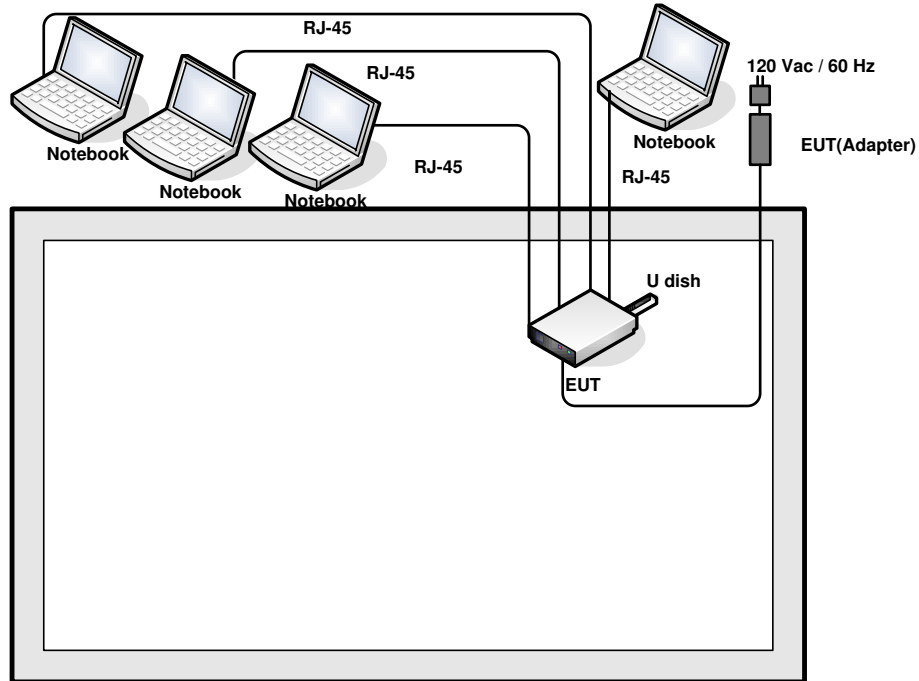
<2.4GHz>

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

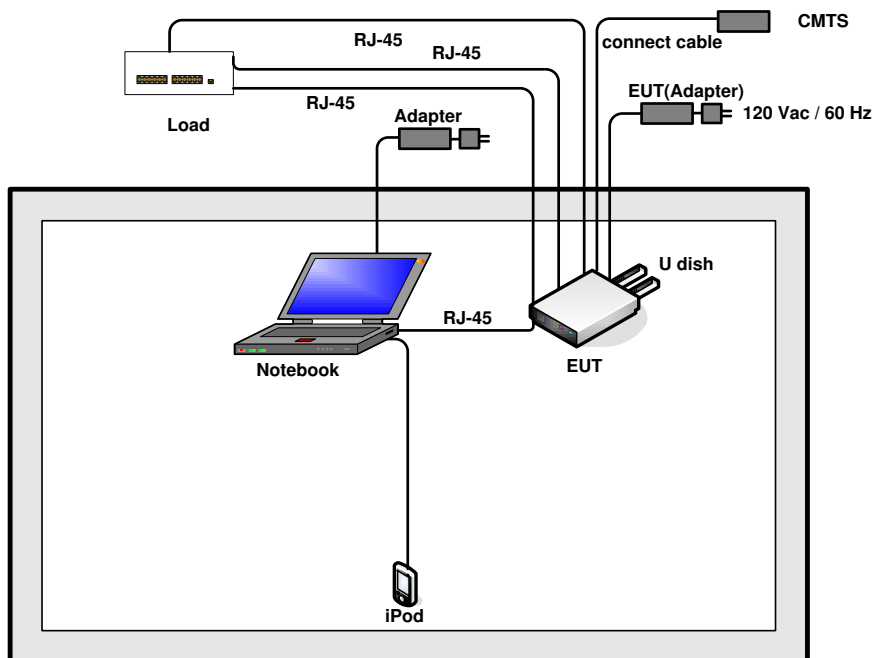
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4G) Link + Cable Link with Coaxial line port + LAN Link with Notebook + LAN Load + USB Link with U-dish + Adapter
Remark:	For Radiated TCs, the tests were performed with adapter, U- dish and Notebook.

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	CMTS	TOPVISION	CC8800	N/A	N/A	N/A
2.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 0.8 m DC O/P: Shielded, 1.8 m
4.	Notebook	DELL	P08S	QDS-BRCM1030	N/A	AC I/P: Unshielded, 0.9 m DC O/P: Shielded, 1.8 m
5.	Notebook	DELL	Vostro1440	FCC DoC	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8 m
6.	U dish	Kingston	DT101G2	FCC DoC	N/A	N/A
7.	U dish	Kingston	N/A	N/A	N/A	N/A
8.	Load	N/A	N/A	N/A	N/A	N/A
9.	SD Card	SanDisk	4G Class 4	FCC DoC	N/A	N/A
10.	iPod Earphone	Apple	MC690ZP/A	FCC DoC	Unshielded, 1.6 m	N/A
11.	connect cable	N/A	N/A	N/A	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 Notebook under large package sizes transmission.



2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.0 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5.0 + 10 = 15.0 \text{ (dB)}\end{aligned}$$

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.

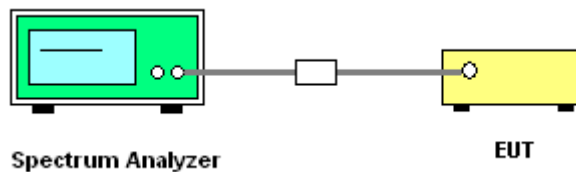
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

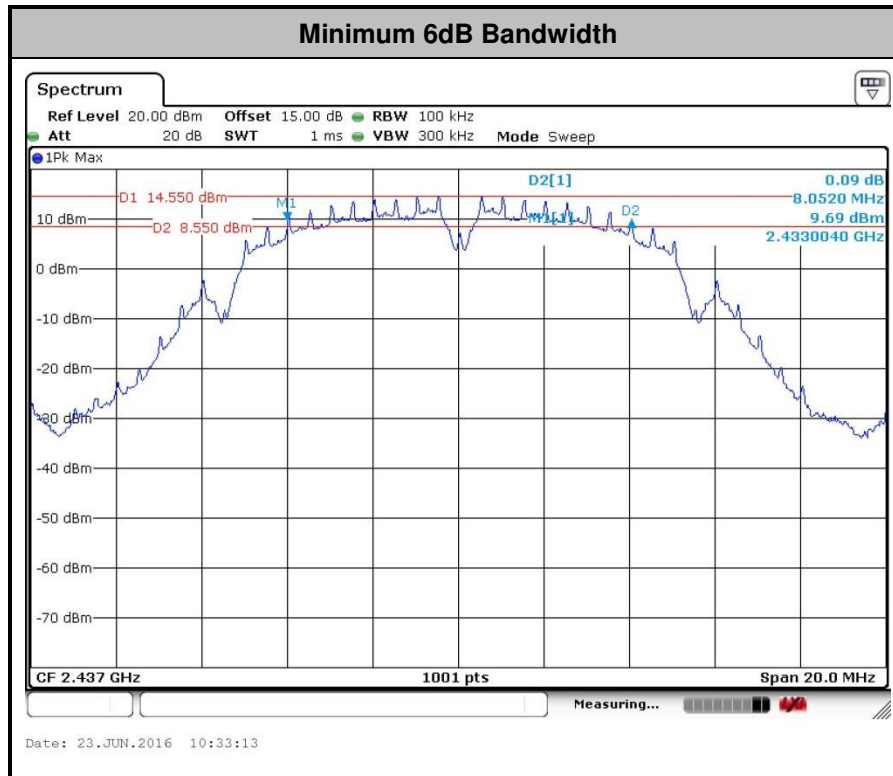
1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit 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 of this report.



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

3.2 Maximum Average Output Power Measurement

3.2.1 Limit of Average Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for average output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the average 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.

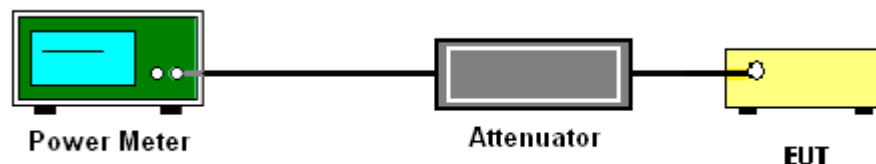
3.2.2 Measuring Instruments

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 9.2.3.1 Method AVGPM (Measurement using an RF average power meter).
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 report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this report.

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 AVGPS-3 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 = RMS, Sweep time = auto couple. Allow max hold to run for at least 60 s, or longer as needed to allow the trace to stabilize. Use the peak marker function to determine the maximum power level.
6. Number of points in sweep $\geq 2 \text{ Span} / \text{RBW}$. (This ensures that bin-to-bin spacing is $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins)
7. Measure and record the results in the test report.
8. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

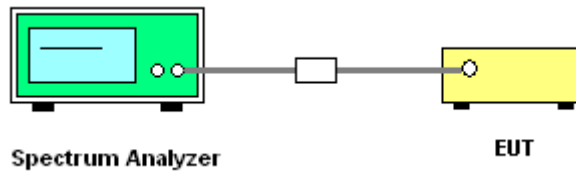
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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.

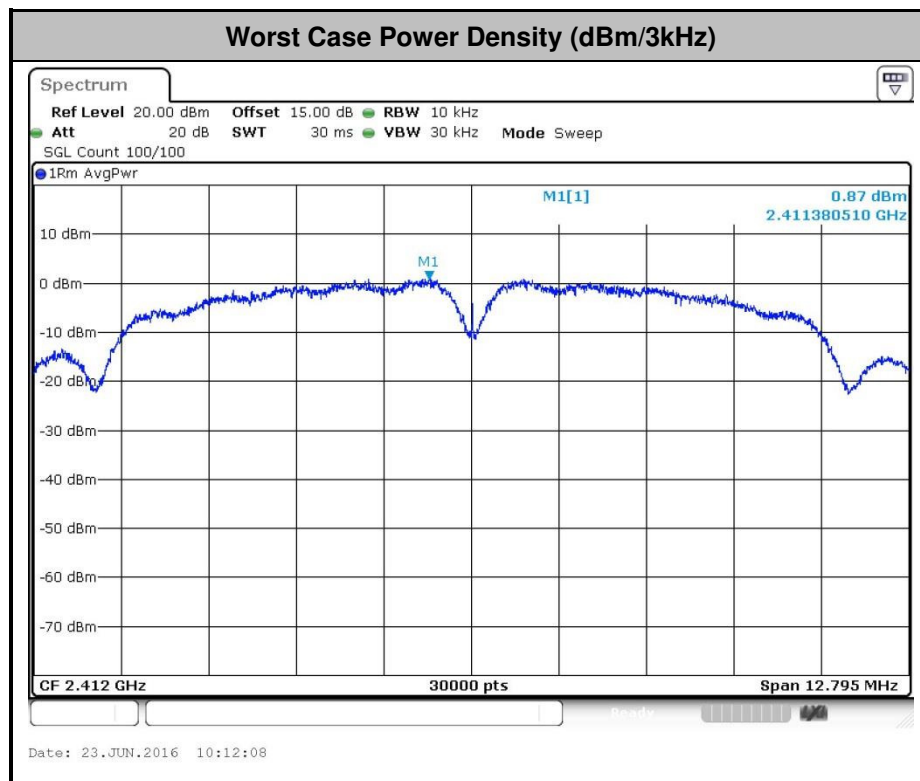
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=3)

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A of this 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).

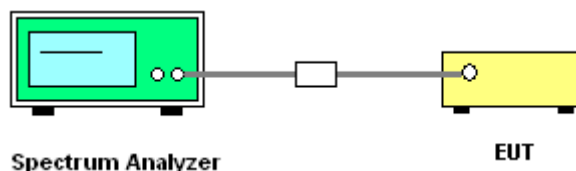
3.4.2 Measuring Instruments

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

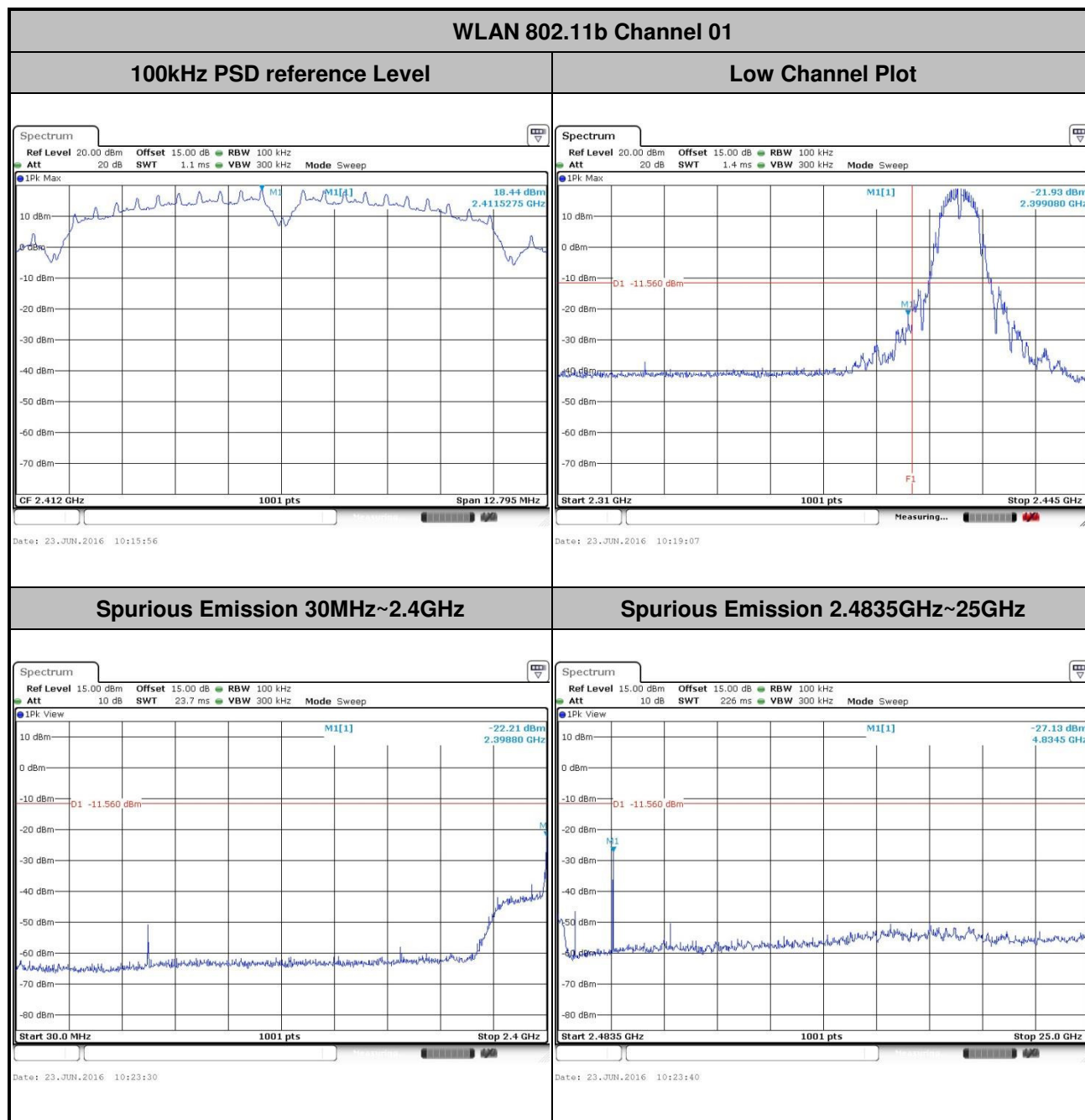




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

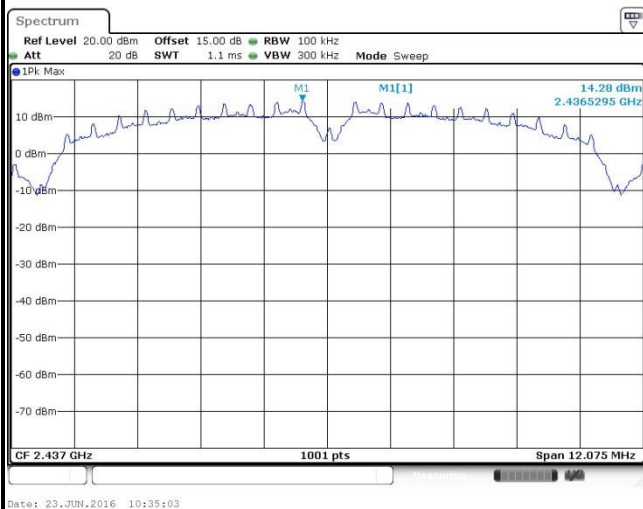
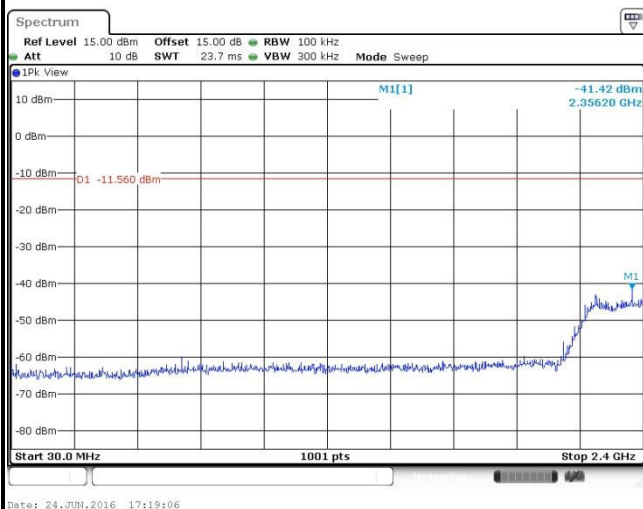
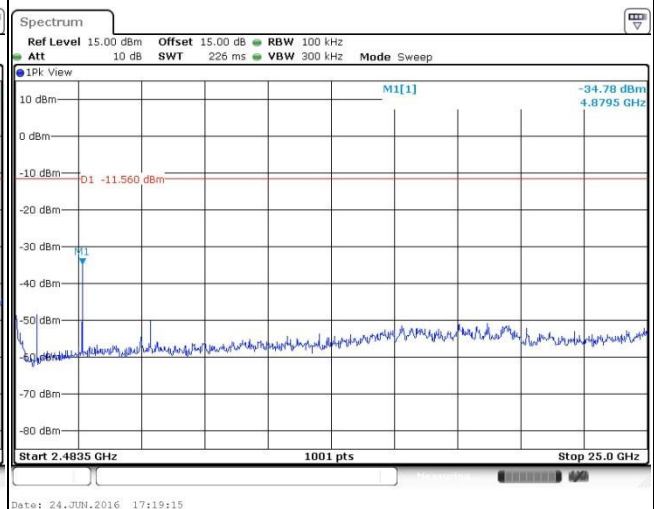
Number of TX = 3, Ant. 1 (Measured)

Number of TX	3	Ant. :	1
Test Mode :	802.11b	Temperature :	24~26℃
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Tiny You



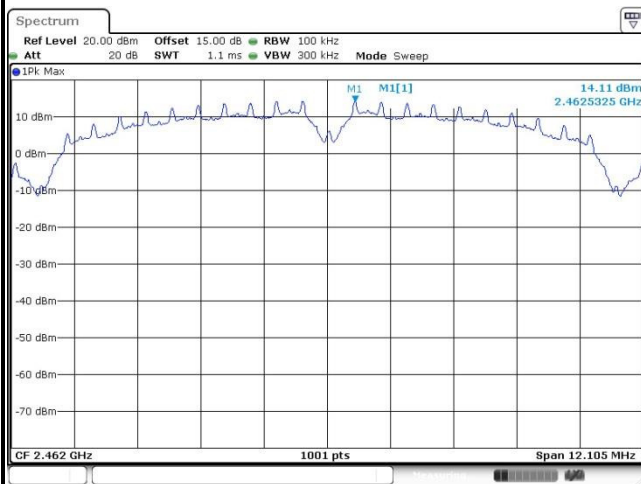


Number of TX :	3	Ant. :	1
Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

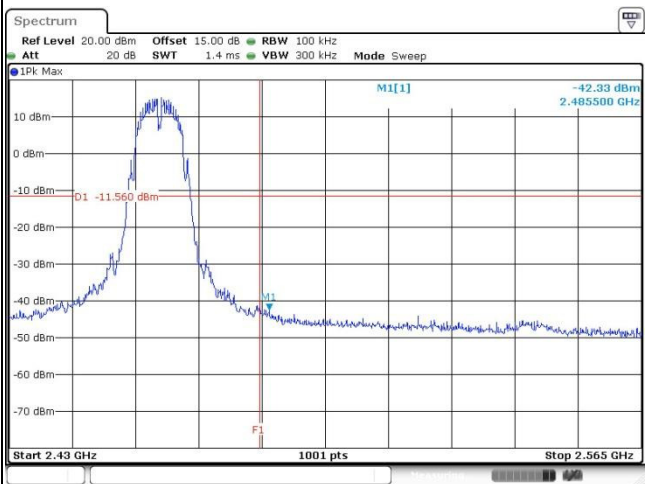
WLAN 802.11b Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**



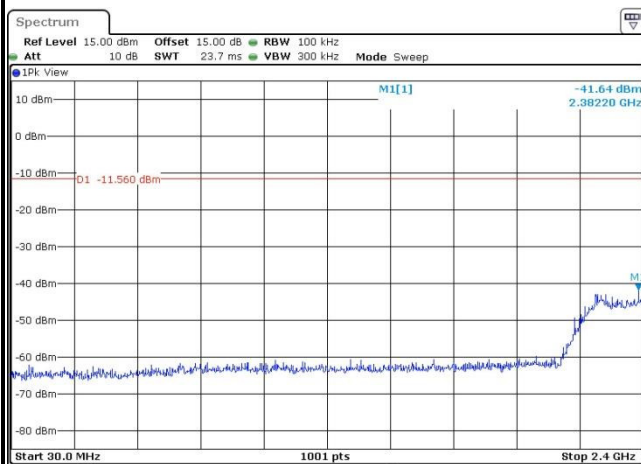
Number of TX :	3	Ant. :	1
Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	2.4GHz High	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Tiny You

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

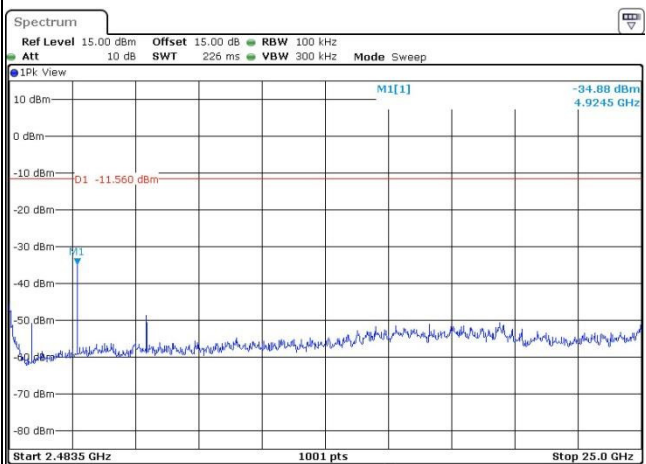
Date: 23.JUN.2016 10:44:24

High Channel Plot

Date: 24.JUN.2016 17:18:04

Spurious Emission 30MHz~2.4GHz

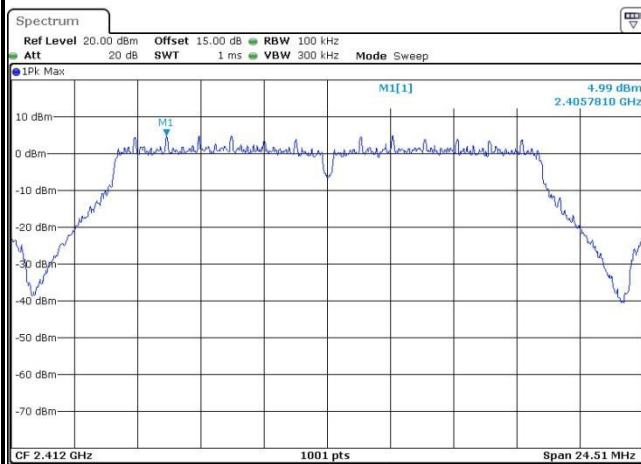
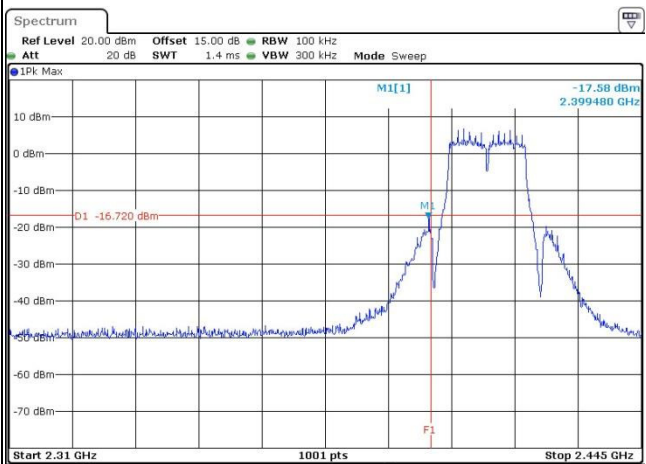
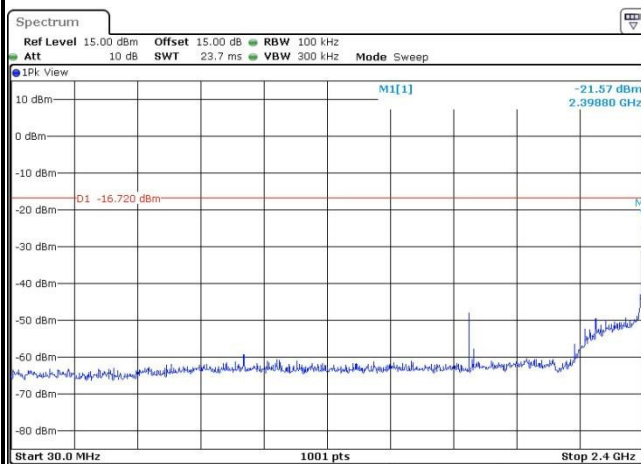
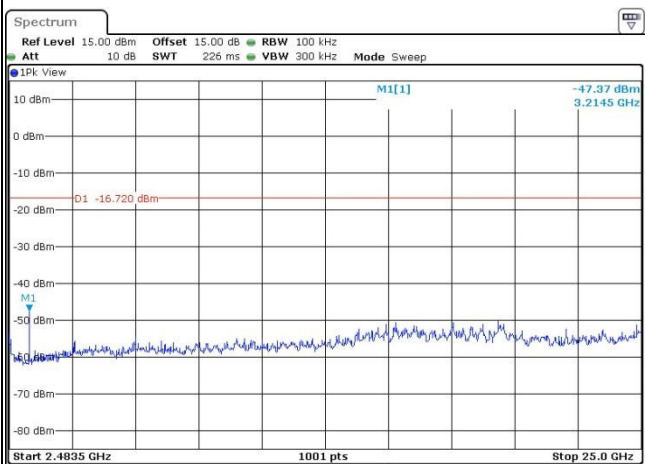
Date: 24.JUN.2016 17:18:17

Spurious Emission 2.4835GHz~25GHz

Date: 24.JUN.2016 17:18:25

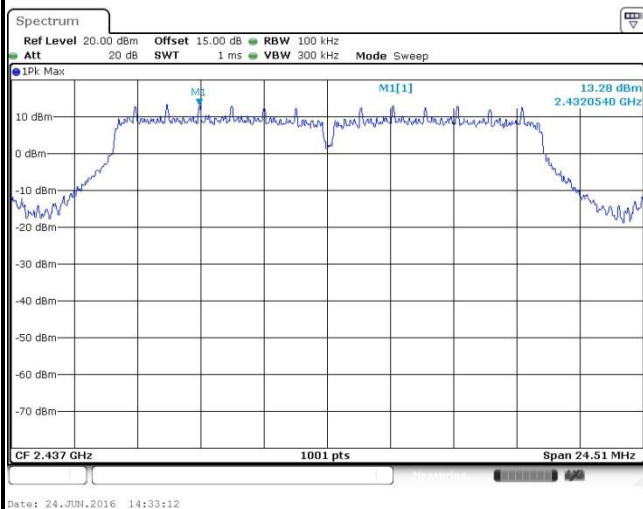
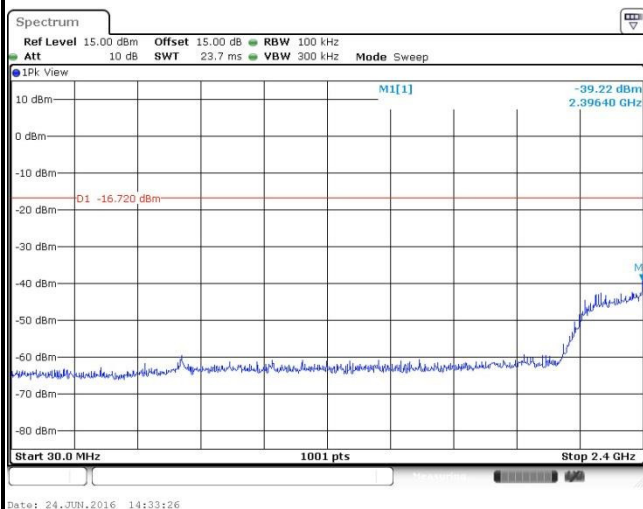
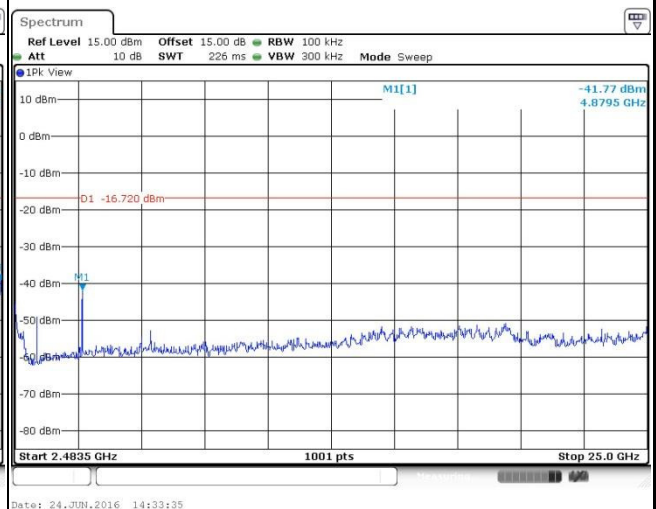


Number of TX :	3	Ant. :	1
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11g Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

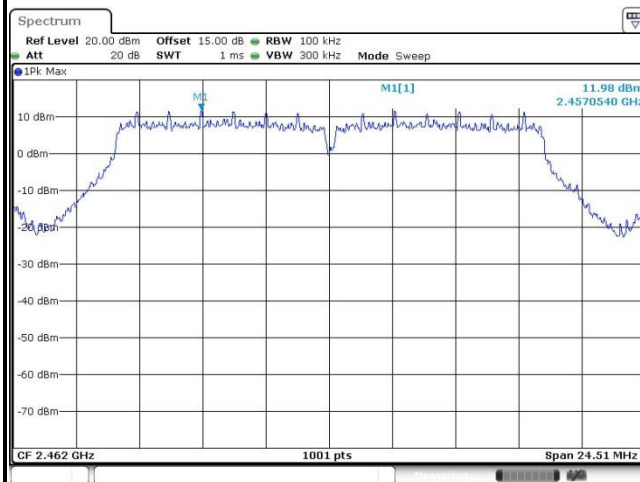
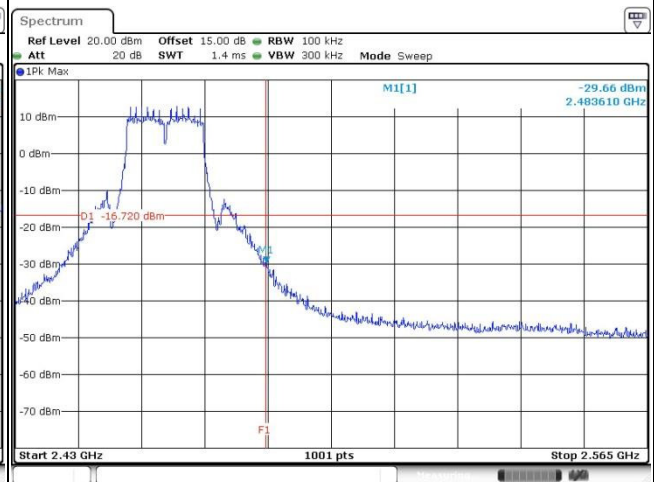
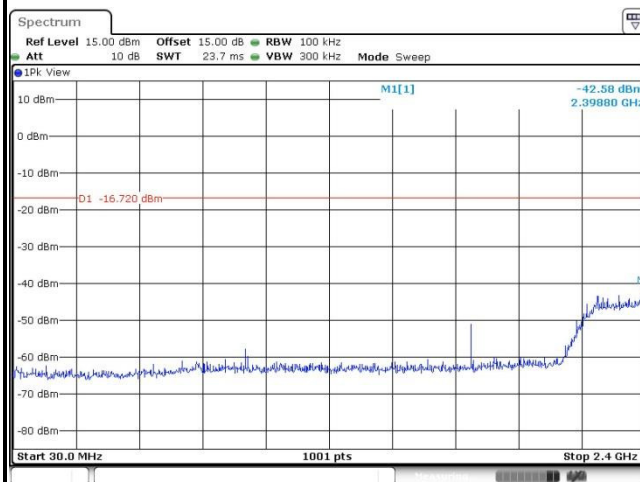
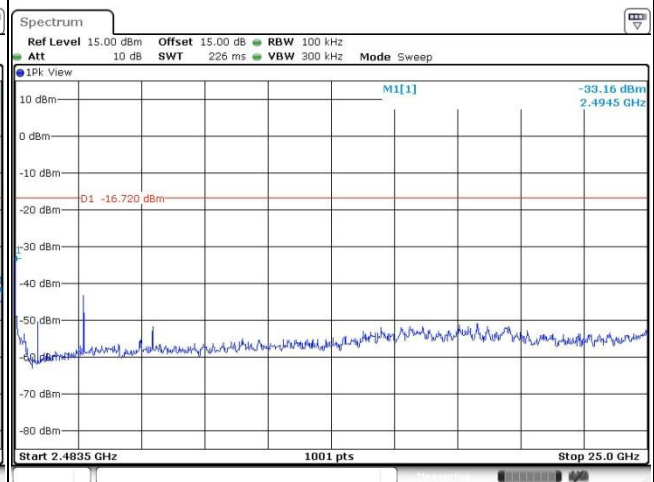


Number of TX :	3	Ant. :	1
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11g Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

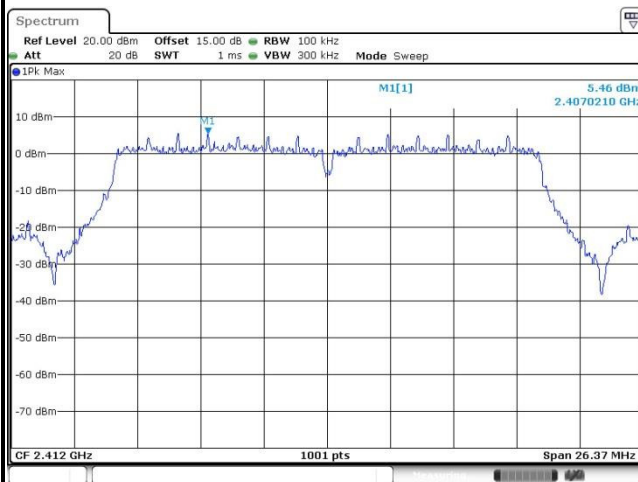
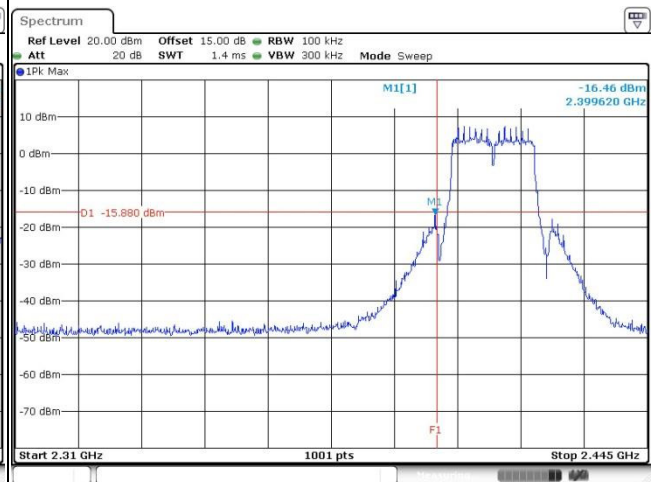
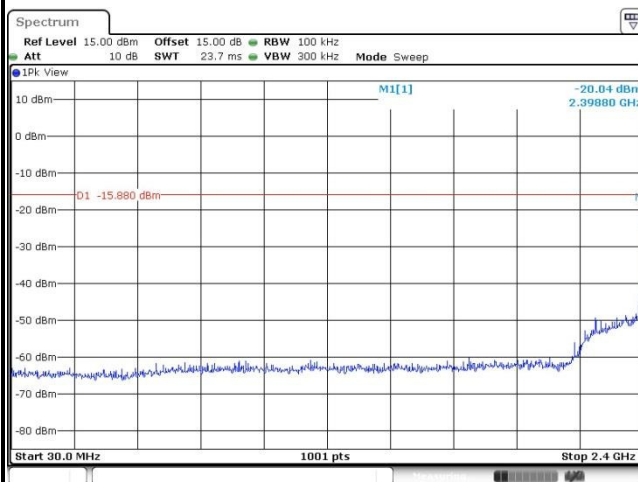
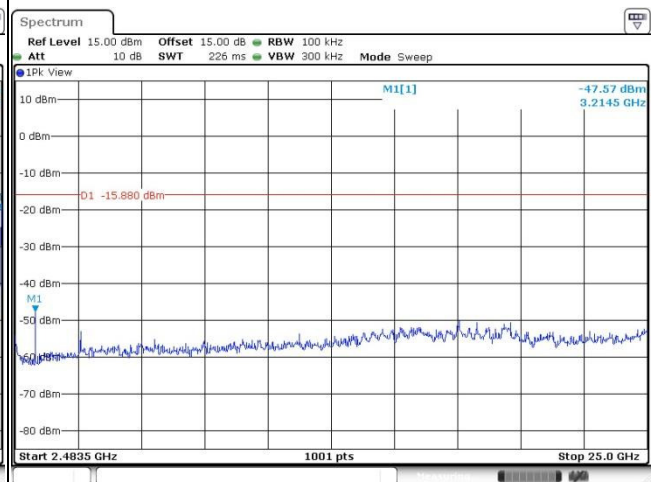


Number of TX :	3	Ant. :	1
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	2.4GHz High	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11g Channel 11**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

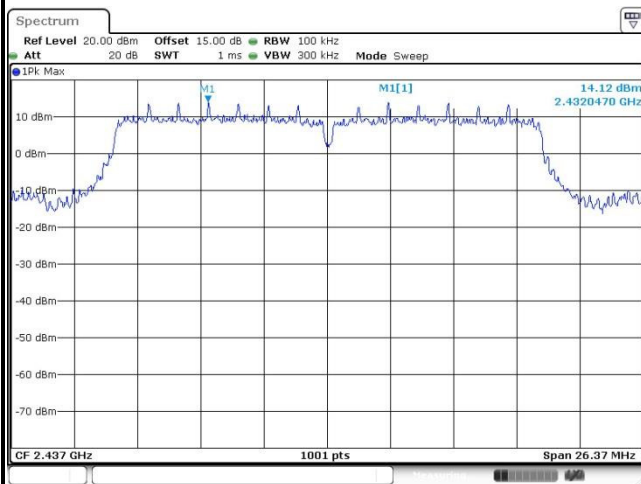
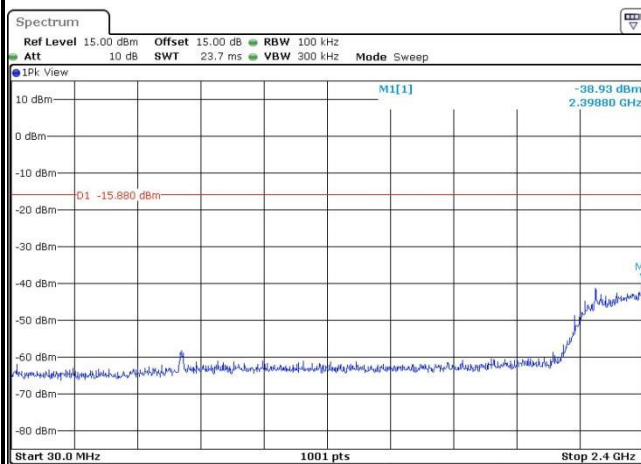
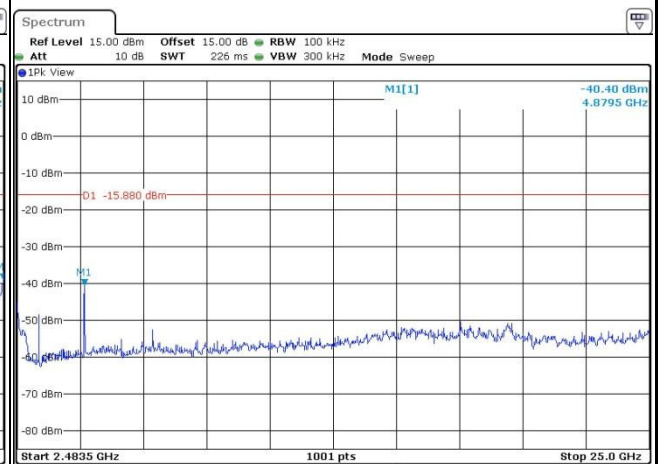


Number of TX :	3	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

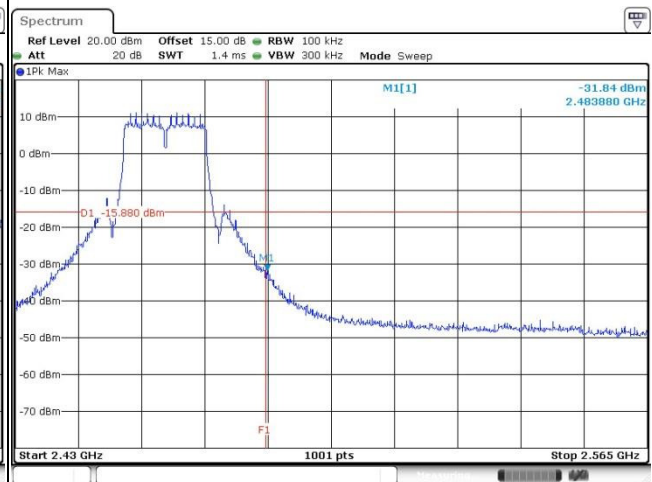
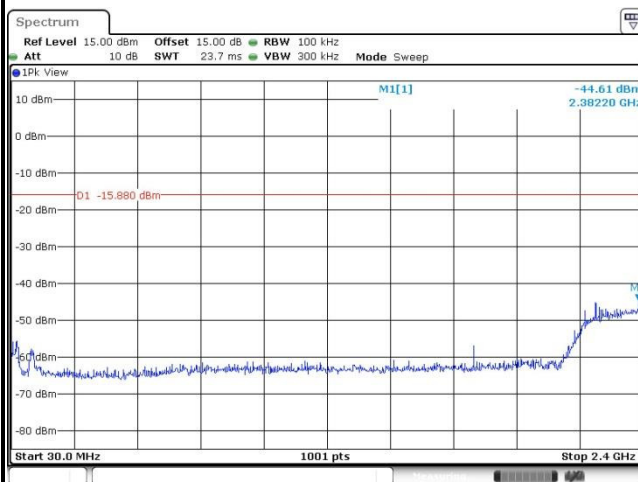
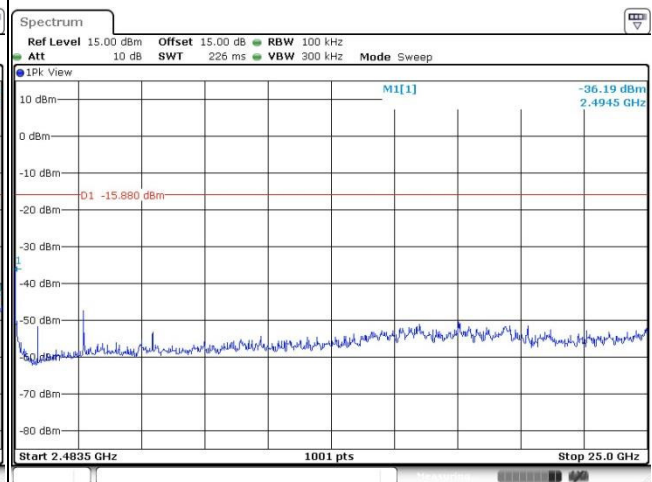


Number of TX :	3	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

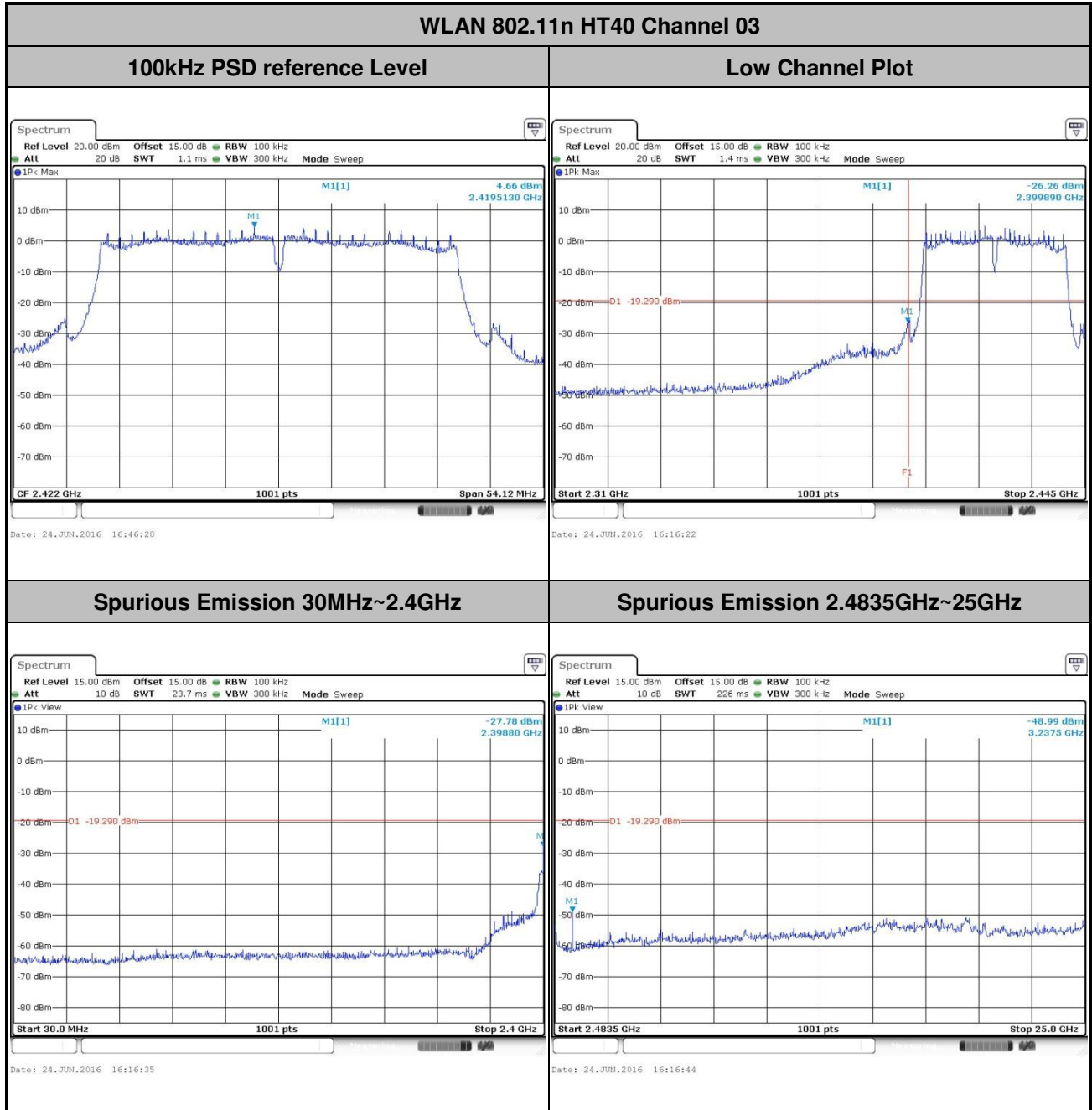


Number of TX :	3	Ant. :	1
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	2.4GHz High	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 11**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

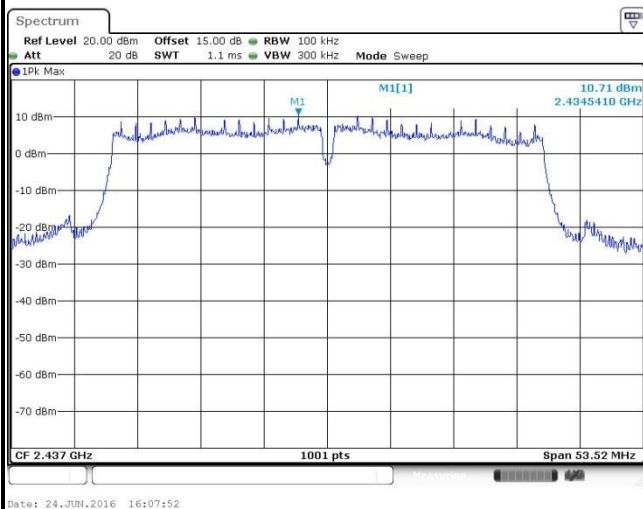
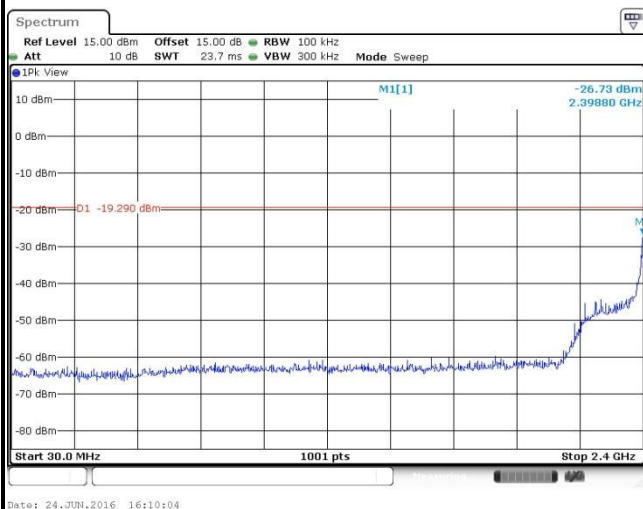
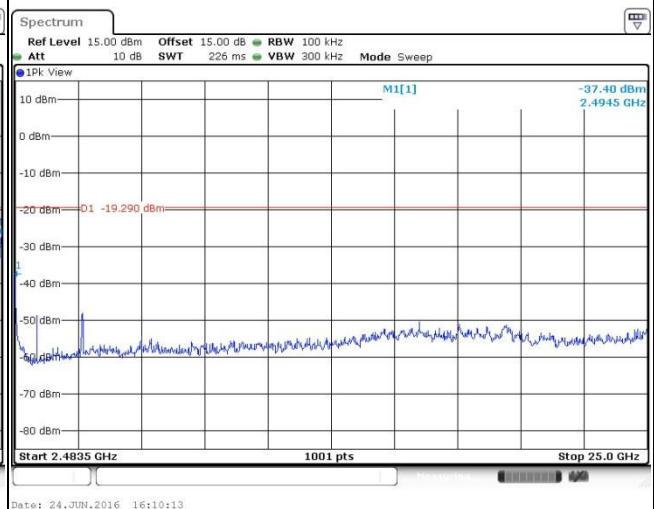


Number of TX :	3	Ant. :	1
Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	03	Test Engineer :	Tiny You



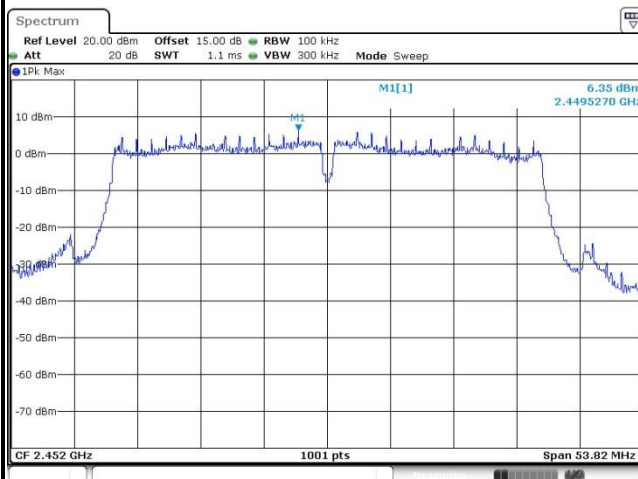


Number of TX :	3	Ant. :	1
Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

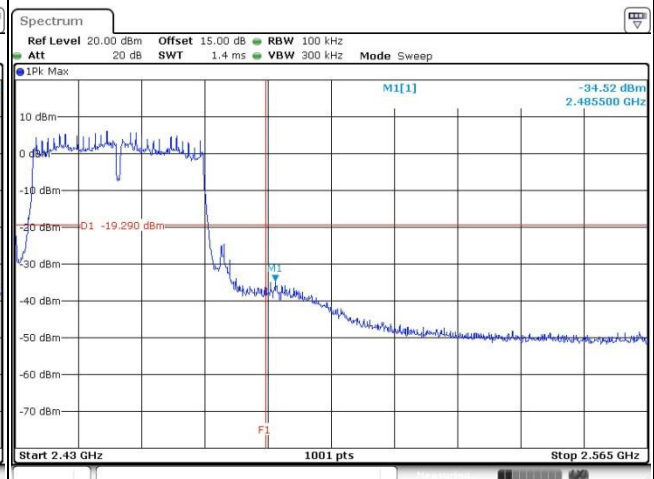
WLAN 802.11n HT40 Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**



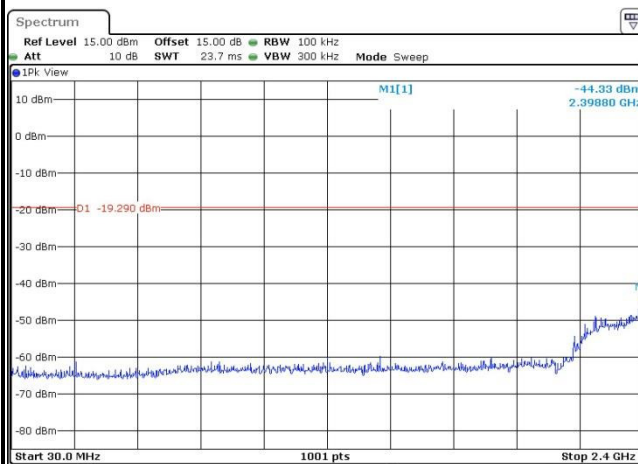
Number of TX :	3	Ant. :	1
Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	2.4GHz High	Relative Humidity :	50~53%
Test Channel :	09	Test Engineer :	Tiny You

WLAN 802.11n HT40 Channel 09**100kHz PSD reference Level**

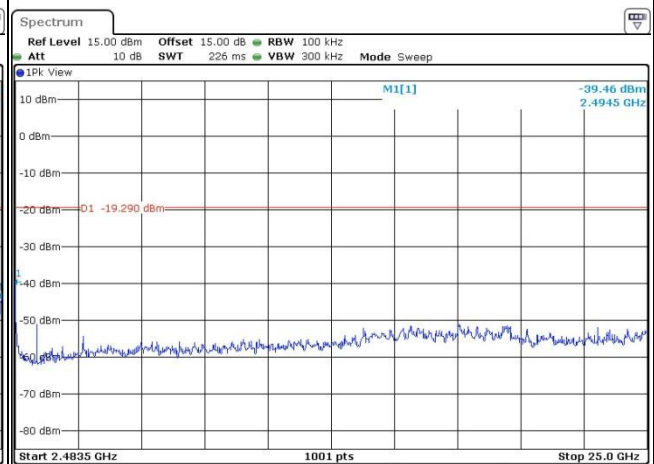
Date: 24.JUN.2016 16:35:24

High Channel Plot

Date: 24.JUN.2016 16:29:56

Spurious Emission 30MHz~2.4GHz

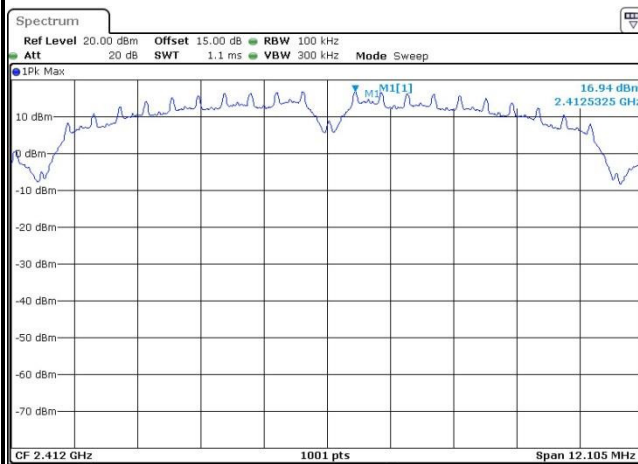
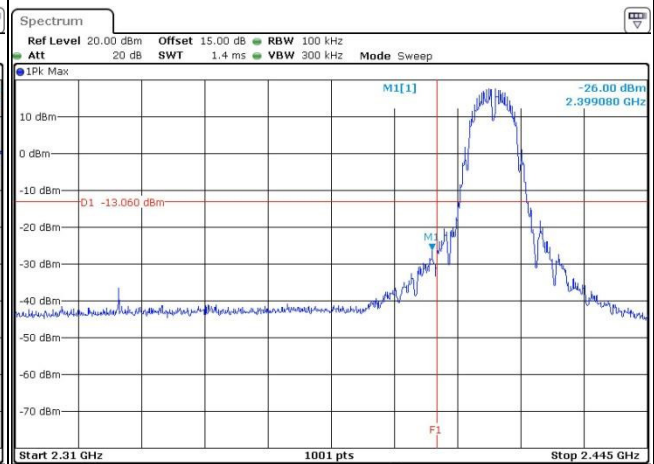
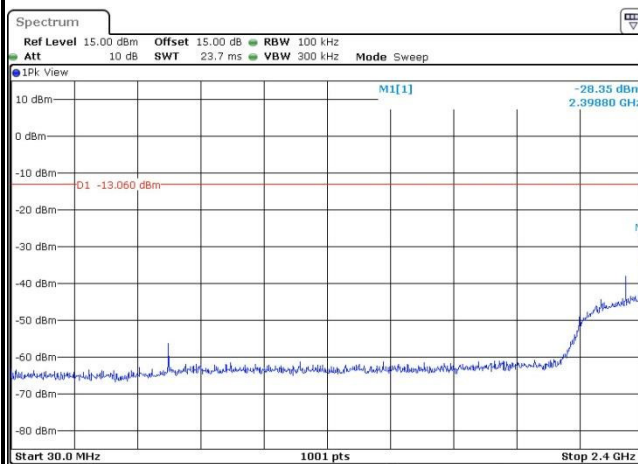
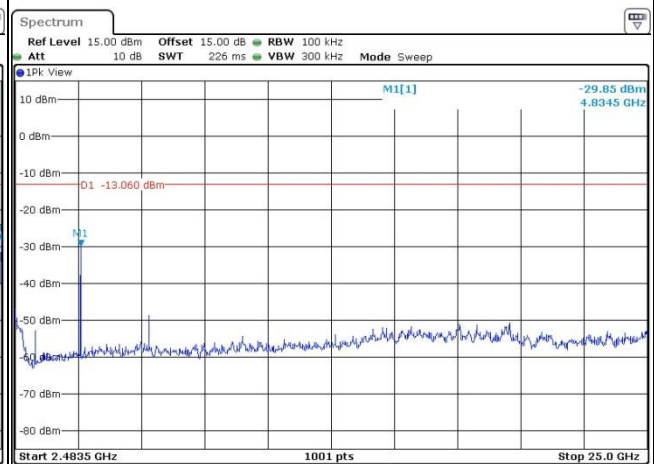
Date: 24.JUN.2016 16:31:16

Spurious Emission 2.4835GHz~25GHz

Date: 24.JUN.2016 16:31:25

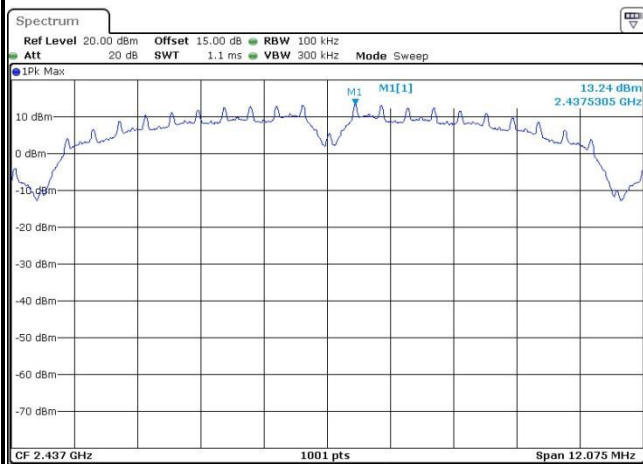
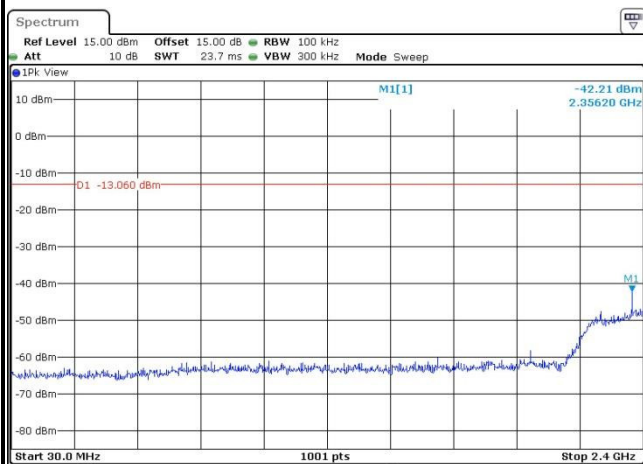
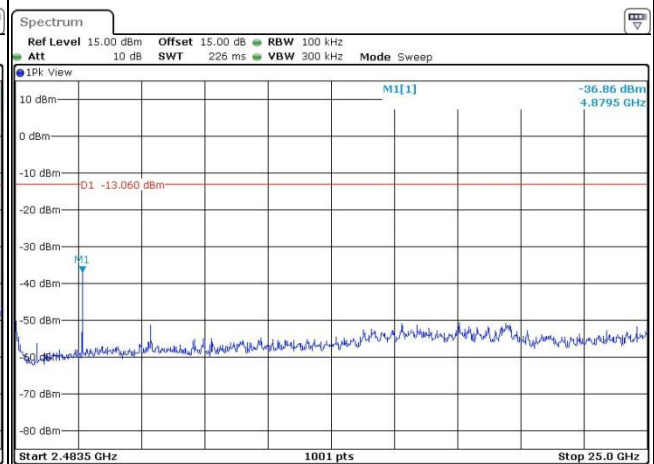
**Number of TX = 3, Ant. 2 (Measured)**

Number of TX	3	Ant. :	2
Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11b Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

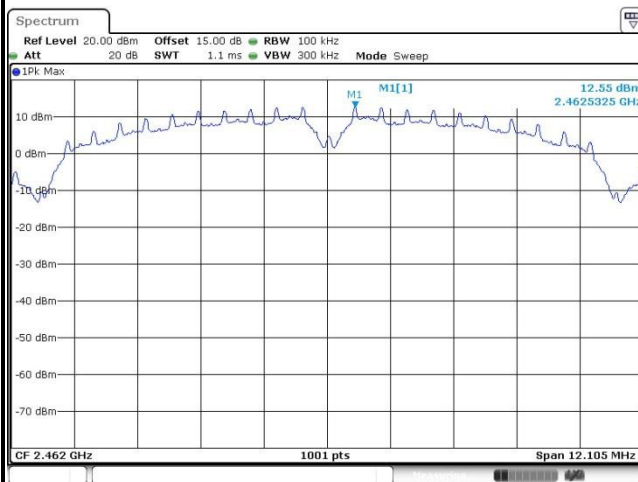
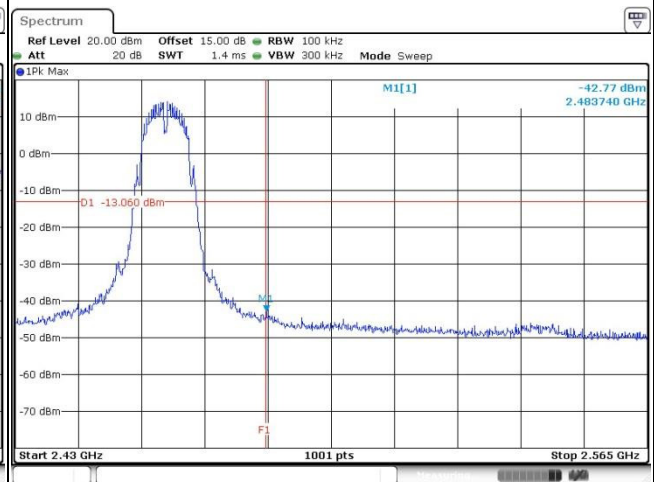
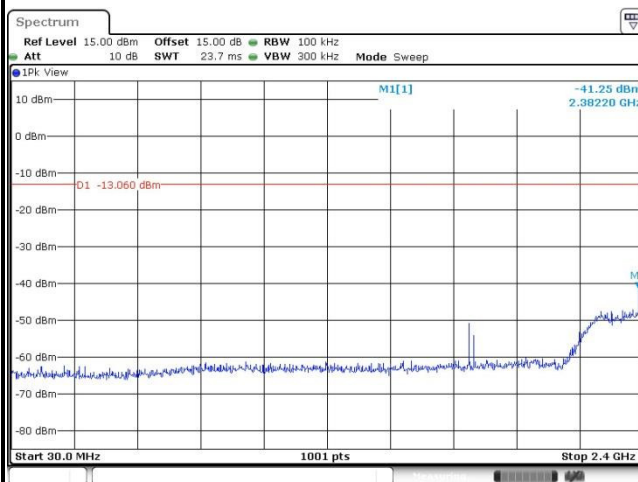
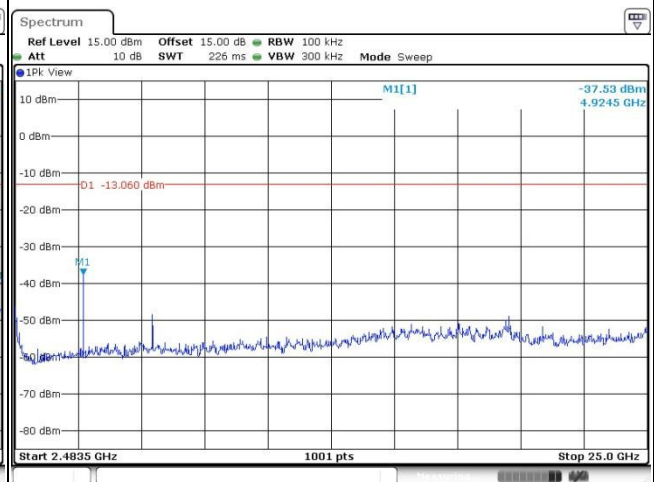


Number of TX :	3	Ant. :	2
Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11b Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

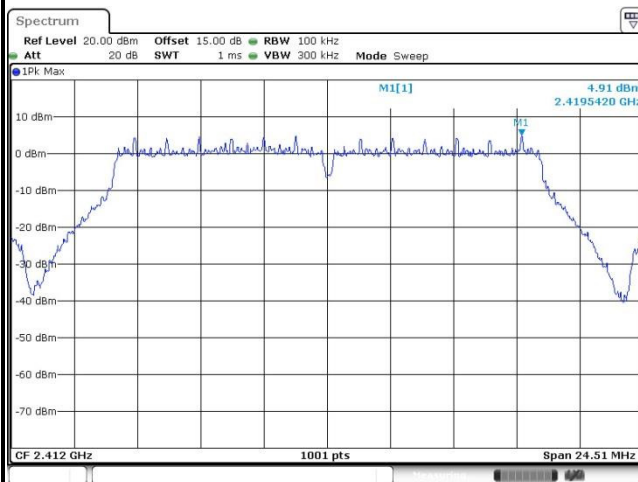
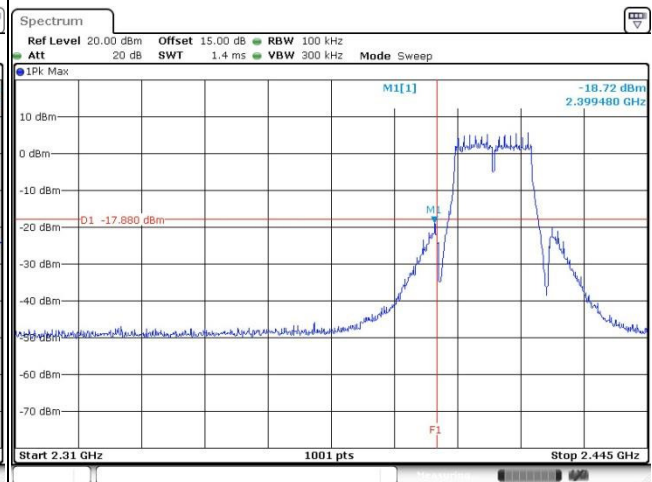
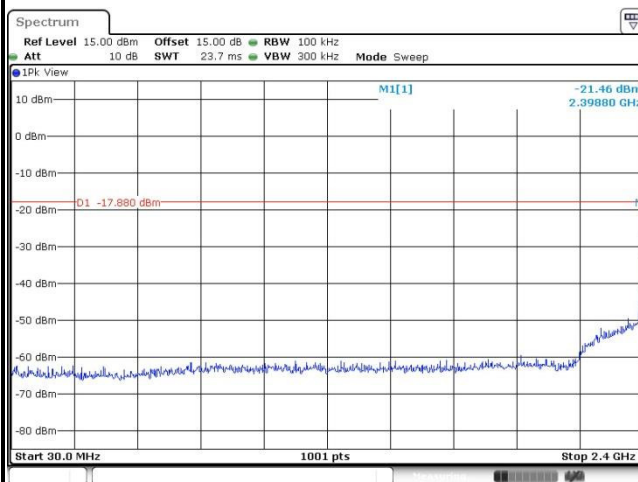
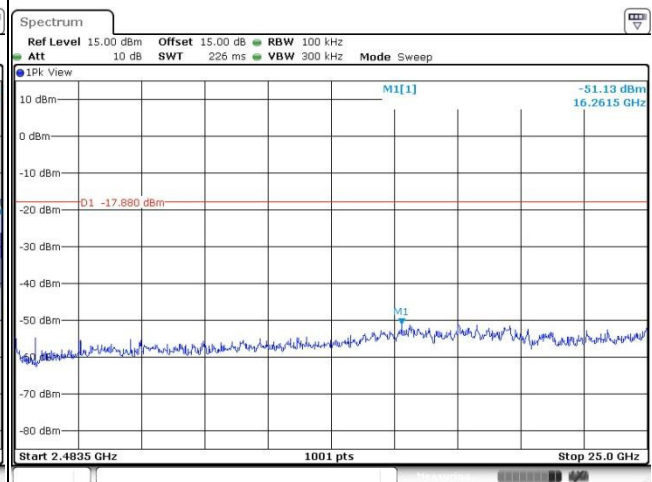


Number of TX :	3	Ant. :	2
Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	2.4GHz High	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11b Channel 11**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

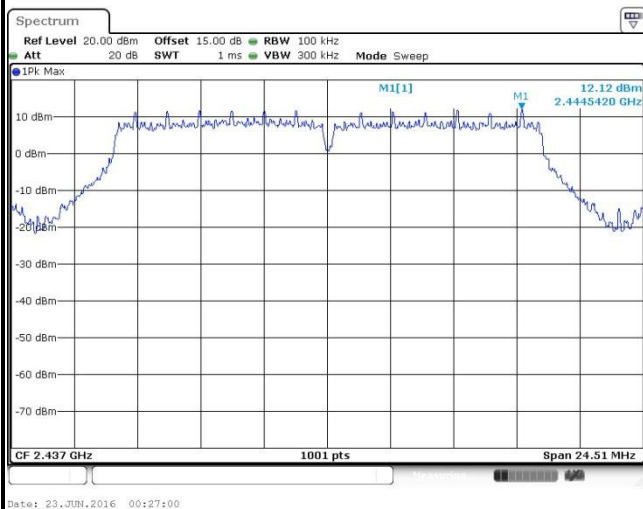
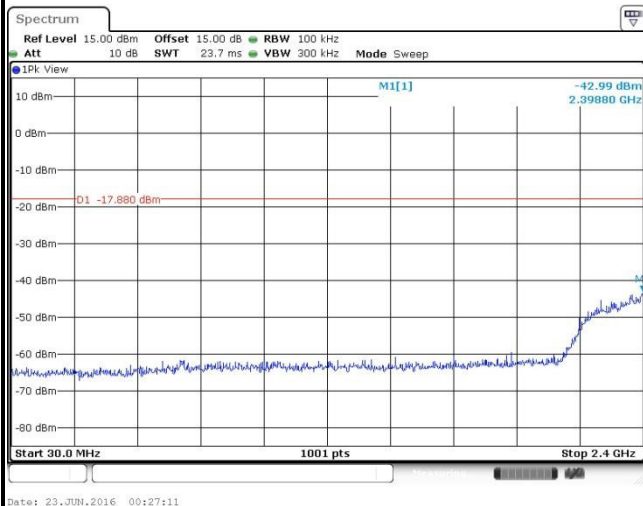
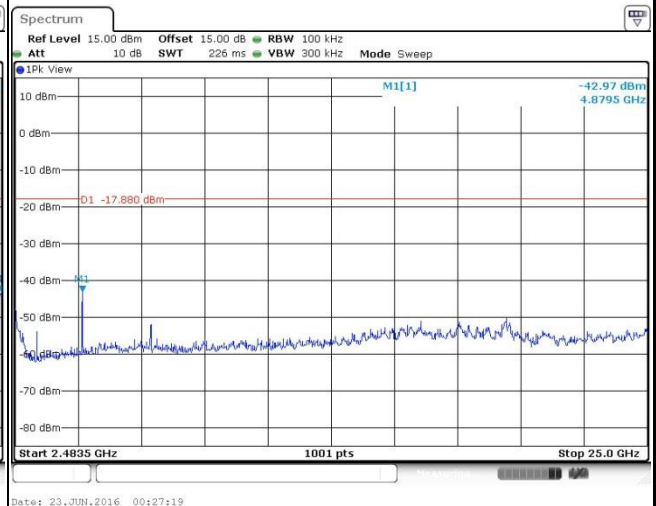


Number of TX :	3	Ant. :	2
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11g Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

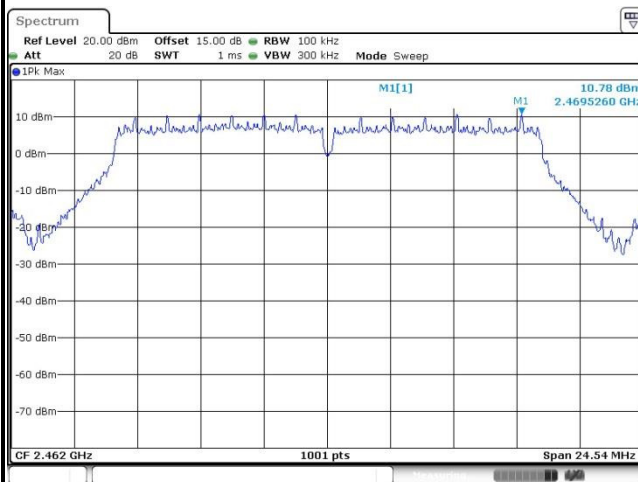
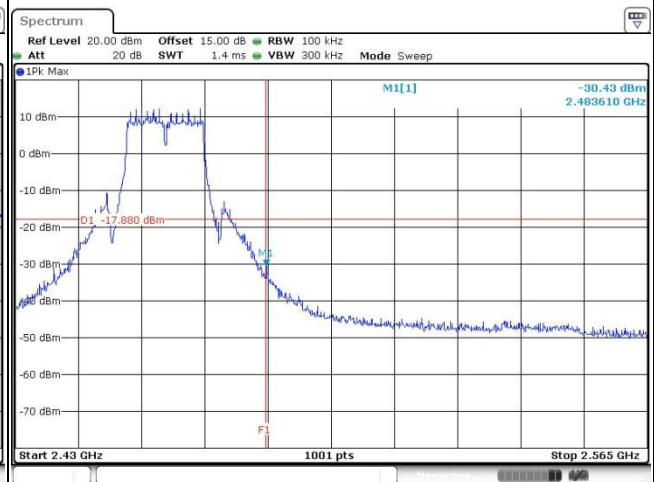
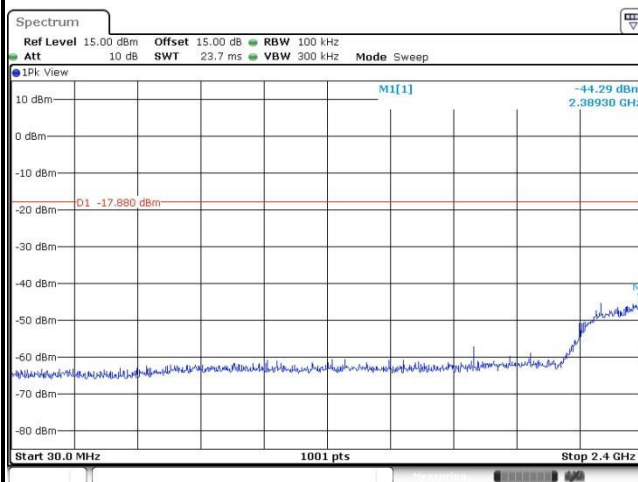
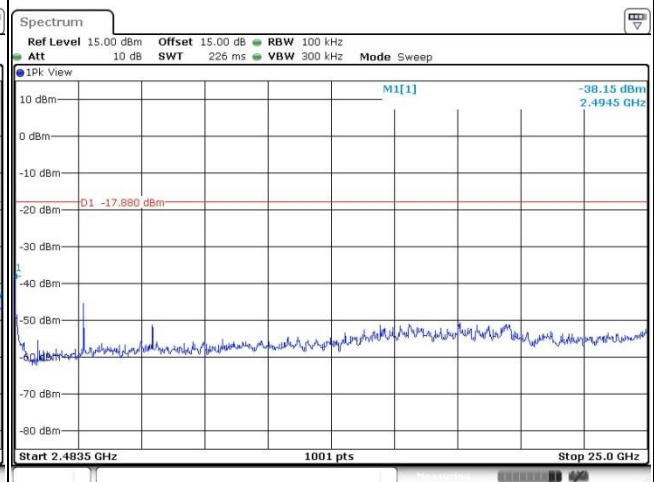


Number of TX :	3	Ant. :	2
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11g Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

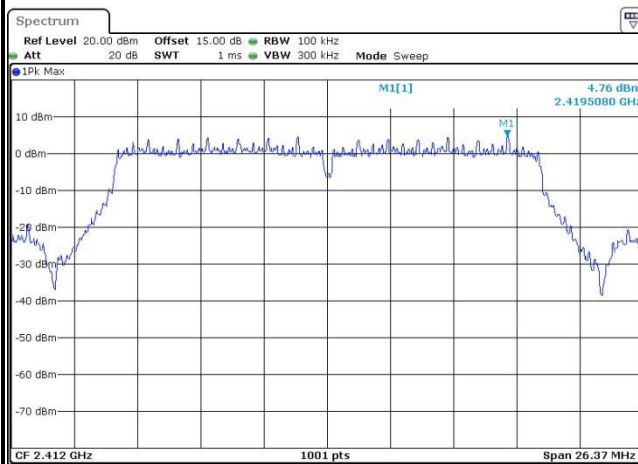
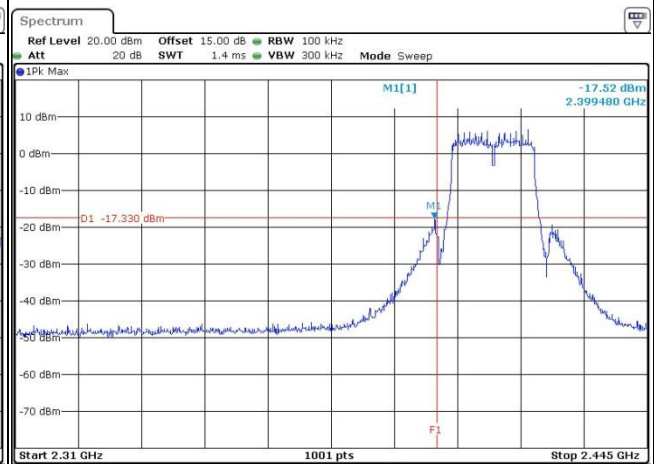
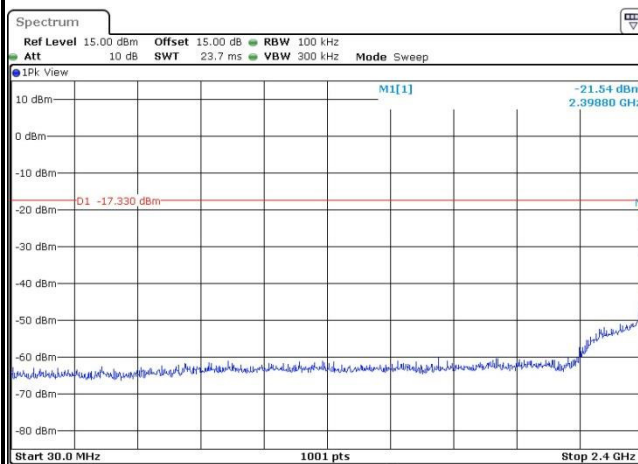
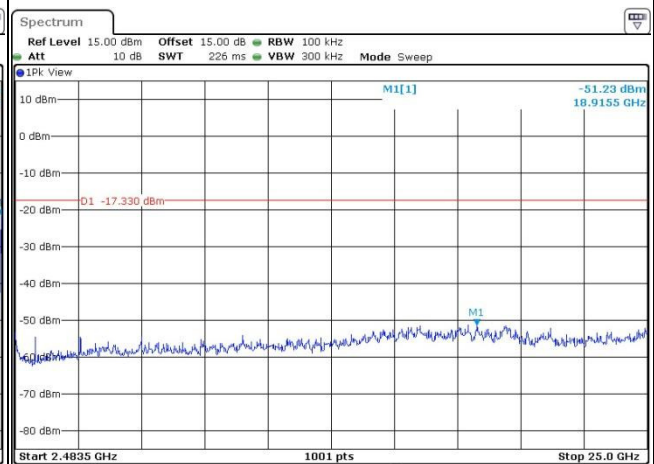


Number of TX :	3	Ant. :	2
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	2.4GHz High	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Tiny You

WLAN 802.11g Channel 11**100kHz PSD reference Level****High Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**

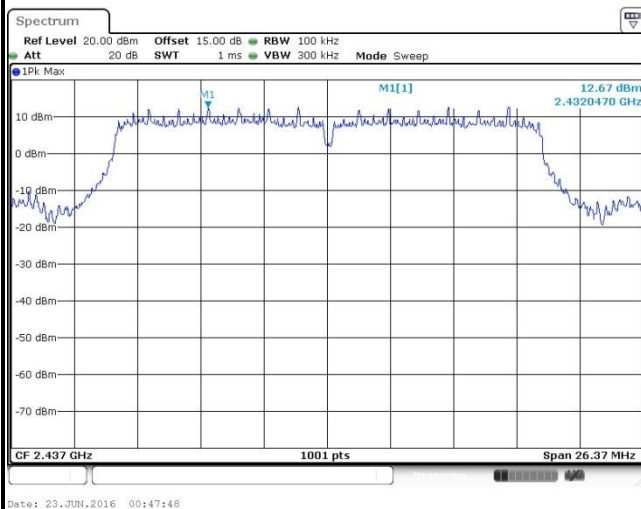
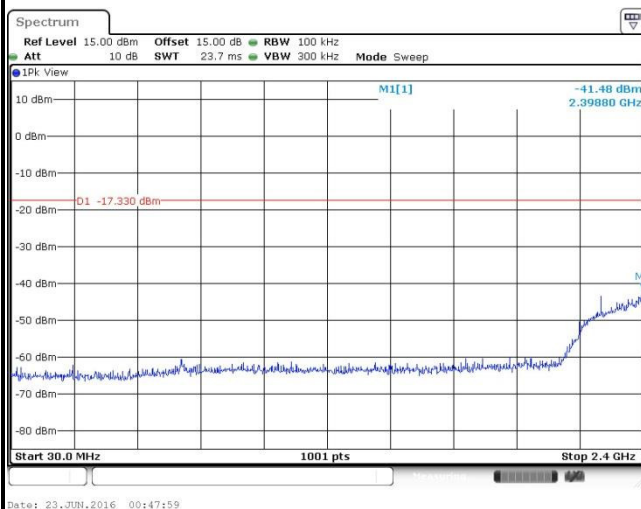


Number of TX :	3	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	2.4GHz Low	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 01**100kHz PSD reference Level****Low Channel Plot****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**



Number of TX :	3	Ant. :	2
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	2.4GHz Mid	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Tiny You

WLAN 802.11n HT20 Channel 06**100kHz PSD reference Level****Spurious Emission 30MHz~2.4GHz****Spurious Emission 2.4835GHz~25GHz**