

# FCC REPORT (WIFI)

**Applicant:** Autel Intelligent Technology Corp., Ltd.

**Address of Applicant:** 7th-8th, 10th Floor, Bldg. B1, Zhiyuan, Xueyuan Rd., Xili, Nanshan, Shenzhen, China

## Equipment Under Test (EUT)

**Product Name:** ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM

**Model No.:** MaxiSys Ultra

**Trade mark:** AUTEL

**FCC ID:** WQ8MAXISYSULTRA

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247

**Date of sample receipt:** 23 May., 2019

**Date of Test:** 24 May., to 23 Sep., 2019

**Date of report issued:** 24 Sep., 2019

**Test Result:** PASS\*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang  
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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## 2 Version

Version No.	Date	Description
00	24 Sep., 2019	Original

Tested by:

YT Yang

Date:

24 Sep., 2019

Test Engineer

Reviewed by:

Winner Zhang

Date:

24 Sep., 2019

Project Engineer

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## 4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (b)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247 (d)	Pass
Spurious Emission	15.205 & 15.209	Pass
All measurement data were performed in accordance with ANSI C63.10: 2013 and KDB 558074 D01 15.247 Meas Guidance v05r02 of test method.		
<i>Remark:</i> 1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: Not Applicable.		

## 5 General Information

### 5.1 Client Information

Applicant:	Autel Intelligent Technology Corp., Ltd.
Address:	7th-8th, 10th Floor, Bldg. B1, Zhiyuan, Xueyuan Rd., Xili, Nanshan, Shenzhen, China
Manufacturer:	Autel Intelligent Technology Corp., Ltd.
Address:	7th-8th, 10th Floor, Bldg. B1, Zhiyuan, Xueyuan Rd., Xili, Nanshan, Shenzhen, China
Factory1:	Autel Intelligent Technology Corp., Ltd.
Address:	6th Floor, Building 1, Yanxiang Zhigu, NO.11 Gaoxin West Rd, Guangming New District, Shenzhen City, Guangdong Province, China.
Factory2:	AUTEL VIETNAM COMPANY LIMITED
Address:	4th Floor, Factory#6, Land#CN1, An Duong Industrial Zone, Hong Phong Township, An Duong County, Hai Phong, VietNam

### 5.2 General Description of E.U.T.

Product Name:	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM
Model No.:	MaxiSys Ultra
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20))
Channel numbers:	11 for 802.11b/802.11g/802.11(HT20)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps
Data speed (IEEE 802.11n):	Up to 150 Mbps
Antenna Type:	Internal Antenna
Antenna gain:	Left module: ANT 1: 2.4G Wi-Fi: 2.3 dBi, ANT 2: 2.4G Wi-Fi: 4.8 dBi, Right module: ANT 3: 2.4G Wi-Fi: 4.5 dBi, ANT 4: 2.4G Wi-Fi: 2.3 dBi,
Power supply:	Rechargeable Li-ion Battery DC3.8V, 18000mAh
AC adapter:	Adapter 1: Model: GME36A-120300FDS Input: 100-240V, 50/60Hz, 1.2A Output: 12V, 3A Adapter 2: Model : A361-120300DI Input: 100-240V, 50/60Hz, 1.5A Output:12V,3000mA Adapter 3: Model : J361-120300DI

	Input: 100-240V, 50/60Hz, 1.5A Output:12V,3000mA							
Test Sample Condition:	The test samples were provided in good working order with no visible defects.							
<b>Operation Frequency each of channel for 802.11b/g/n(H20)</b>								
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz	
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz	
3	2422MHz	6	2437MHz	9	2452MHz			

Note:

- For 802.11n-HT40 mode, the channel number is from 3 to 9;
- Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel.

### 5.3 Test environment and test mode

<b>Operating Environment:</b>	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
<b>Test mode:</b>	
Transmitting mode	Keep the EUT in continuous transmitting with modulation
The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
<b>Per-scan all kind of data rate, the follow list were the worst case.</b>	
Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(H20)	6.5Mbps
Remark: 802.11b/802.11g support SISO, 802.11n20 support MIMO	

### 5.4 Description of Support Units

The EUT has been tested as an independent unit.

### 5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.38 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.36 dB (k=2)

## 5.6 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

## 5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

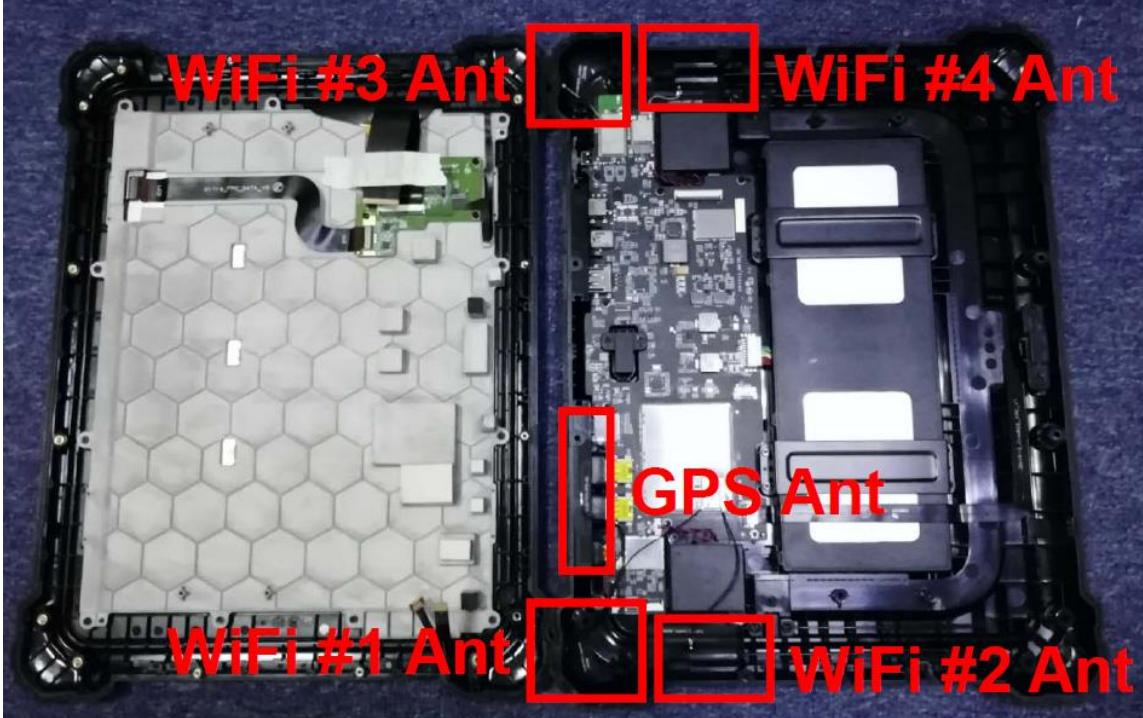
## 5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-18-2019	03-17-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-18-2019	03-17-2020
Pre-amplifier	CD	PAP-1G18	11804	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-18-2019	03-17-2020
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-18-2019	03-17-2020
Cable	MICRO-COAX	MFR64639	K10742-5	03-18-2019	03-17-2020
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-18-2019	03-17-2020
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0		

<b>Conducted Emission:</b>					
<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date (mm-dd-yy)</b>	<b>Cal. Due date (mm-dd-yy)</b>
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-18-2019	03-17-2020
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-18-2019	03-17-2020
LISN	CHASE	MN2050D	1447	03-18-2019	03-17-2020
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019
Cable	HP	10503A		07-21-2019	07-20-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		

## 6 Test results and Measurement Data

### 6.1 Antenna requirement

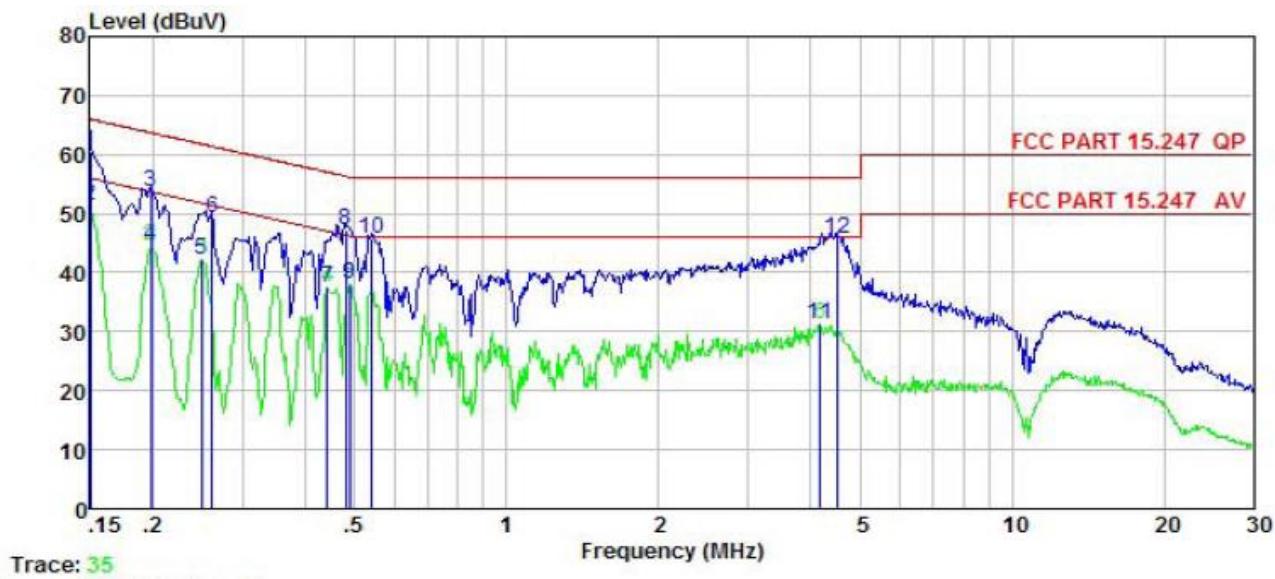
<b>Standard requirement:</b>	FCC Part 15 C Section 15.203 /247(b)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	15.247(b) (4) requirement: (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
<b>E.U.T Antenna:</b>	The Wi-Fi antenna is an Internal antenna which cannot replace by end-user, the best case gain of the antenna is 4.8 dBi.
 A photograph showing the internal components of a device, specifically focusing on the antenna area. There are five red boxes highlighting the locations of the antennas. From left to right, the labels are: WiFi #1 Ant, WiFi #2 Ant, WiFi #3 Ant, GPS Ant, and WiFi #4 Ant. The WiFi #3 and WiFi #4 antennas are located at the top, WiFi #1 and WiFi #2 are at the bottom, and the GPS Ant is in the center between them. <b>WiFi #3 Ant</b> <b>WiFi #4 Ant</b> <b>GPS Ant</b> <b>WiFi #1 Ant</b> <b>WiFi #2 Ant</b>	

## 6.2 Conducted Emission

Test Requirement:	FCC Part 15 C Section 15.207														
Test Frequency Range:	150 kHz to 30 MHz														
Class / Severity:	Class B														
Receiver setup:	RBW=9 kHz, VBW=30 kHz														
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>* Decreases with the logarithm of the frequency.</p>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
Test procedure	<ol style="list-style-type: none"> <li>The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.</li> </ol>														
Test setup:	<p><b>Reference Plane</b></p> <p>LISN → AUX Equipment → E.U.T → EMI Receiver → AC power</p> <p>Test table/Insulation plane</p> <p>40cm      80cm</p> <p><i>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</i></p>														
Test Instruments:	Refer to section 5.8 for details														
Test mode:	Refer to section 5.3 for details														
Test results:	Passed														

## Measurement Data:

<b>Product name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product model:</b>	MaxiSys Ultra
<b>Test by:</b>	YT	<b>Test mode:</b>	2.4G Wi-Fi Tx mode
<b>Test frequency:</b>	150 kHz ~ 30 MHz	<b>Phase:</b>	Line
<b>Test voltage:</b>	AC 120 V/60 Hz	<b>Environment:</b>	Temp: 22.5°C Huni: 55%

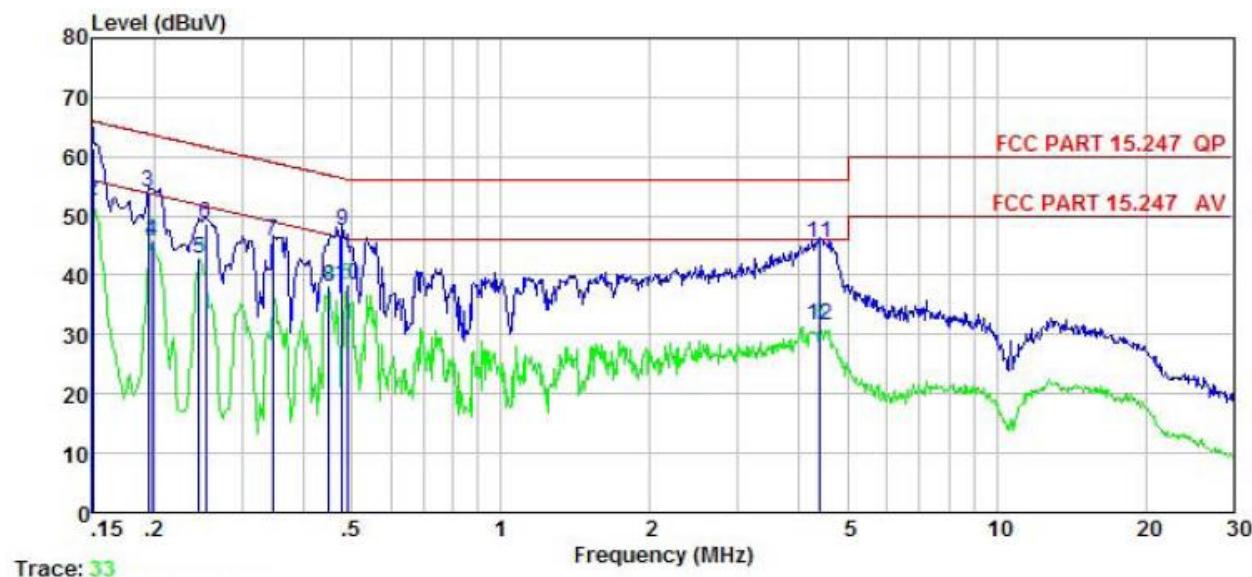


Freq MHz	Read Level dBuV	LISN Factor dB	Cable Loss dB	Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1 0.150	50.05	-0.45	10.78	60.38	66.00	-5.62	QP
2 0.150	41.01	-0.45	10.78	51.34	56.00	-4.66	Average
3 0.198	43.31	-0.41	10.76	53.66	63.71	-10.05	QP
4 0.198	34.15	-0.41	10.76	44.50	53.71	-9.21	Average
5 0.249	32.00	-0.40	10.75	42.35	51.78	-9.43	Average
6 0.262	39.05	-0.39	10.75	49.41	61.38	-11.97	QP
7 0.442	27.17	-0.38	10.74	37.53	47.02	-9.49	Average
8 0.481	36.79	-0.39	10.75	47.15	56.32	-9.17	QP
9 0.489	27.61	-0.39	10.76	37.98	46.19	-8.21	Average
10 0.541	35.27	-0.39	10.76	45.64	56.00	-10.36	QP
11 4.180	20.80	-0.47	10.88	31.21	46.00	-14.79	Average
12 4.525	35.30	-0.47	10.87	45.70	56.00	-10.30	QP

## Notes:

- An initial pre-scan was performed on the line and neutral lines with peak detector.
- Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- Final Level = Receiver Read level + LISN Factor + Cable Loss.
- Test all adapters and modes to reflect only the worst mode

<b>Product name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product model:</b>	MaxiSys Ultra
<b>Test by:</b>	YT	<b>Test mode:</b>	2.4G Wi-Fi Tx mode
<b>Test frequency:</b>	150 kHz ~ 30 MHz	<b>Phase:</b>	Neutral
<b>Test voltage:</b>	AC 120 V/60 Hz	<b>Environment:</b>	Temp: 22.5°C Huni: 55%

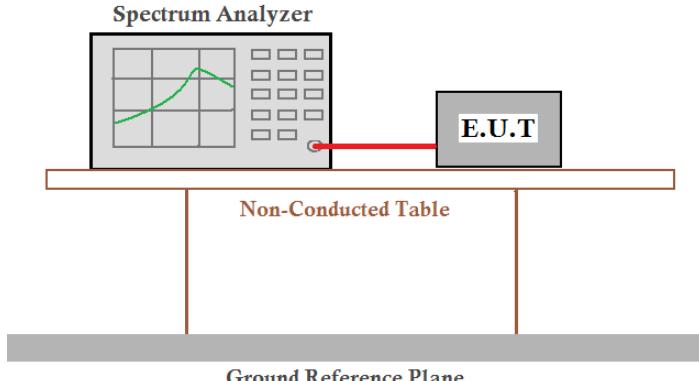


Freq MHz	Read Level dBuV	LISN Factor dB	Cable Loss dB	Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1 0.150	51.29	-0.68	10.78	61.39	66.00	-4.61	QP
2 0.150	42.40	-0.68	10.78	52.50	56.00	-3.50	Average
3 0.194	43.84	-0.69	10.76	53.91	63.84	-9.93	QP
4 0.198	35.55	-0.69	10.76	45.62	53.71	-8.09	Average
5 0.246	32.57	-0.66	10.75	42.66	51.91	-9.25	Average
6 0.253	38.66	-0.65	10.75	48.76	61.64	-12.88	QP
7 0.346	35.54	-0.64	10.73	45.63	59.05	-13.42	QP
8 0.449	27.98	-0.65	10.74	38.07	46.89	-8.82	Average
9 0.479	37.40	-0.65	10.75	47.50	56.36	-8.86	QP
10 0.489	28.38	-0.65	10.76	38.49	46.19	-7.70	Average
11 4.407	35.22	-0.71	10.87	45.38	56.00	-10.62	QP
12 4.407	21.54	-0.71	10.87	31.70	46.00	-14.30	Average

**Notes:**

- An initial pre-scan was performed on the line and neutral lines with peak detector.
- Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- Final Level =Receiver Read level + LISN Factor + Cable Loss.
- Test all adapters and modes to reflect only the worst mode

### 6.3 Conducted Output Power

Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data:****Left module:**

Mode	Test CH	Ant. Port	Conducted Output power (dBm)	Total power (dBm)	Limit (dBm)	Result
802.11b	Lowest	TX1	13.88	/	29.35	Pass
		TX2	13.49			
	Middle	TX1	14.22	/	29.35	Pass
		TX2	13.82			
	Highest	TX1	14.09	/	29.35	Pass
		TX2	13.65			
802.11g	Lowest	TX1	14.32	/	29.35	Pass
		TX2	15.02			
	Middle	TX1	14.46	/	29.35	Pass
		TX2	15.30			
	Highest	TX1	14.36	/	29.35	Pass
		TX2	15.30			
802.11n(HT20)	Lowest	TX1	14.41	17.68	29.35	Pass
		TX2	14.92			
	Middle	TX1	14.71	18.07	29.35	Pass
		TX2	15.39			
	Highest	TX1	14.40	17.80	29.35	Pass
		TX2	15.14			

**Remark:**

1. Because transmit signals are correlated, Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ , So the Directional gain=  $10 \log[(10^{(2.3/20)} + 10^{(4.8/20)})^2/2] = 6.65 \text{ dBi}$
2. The directional Gain of antenna is greater than 6 dBi, so the limit of power is 29.35 dBm.

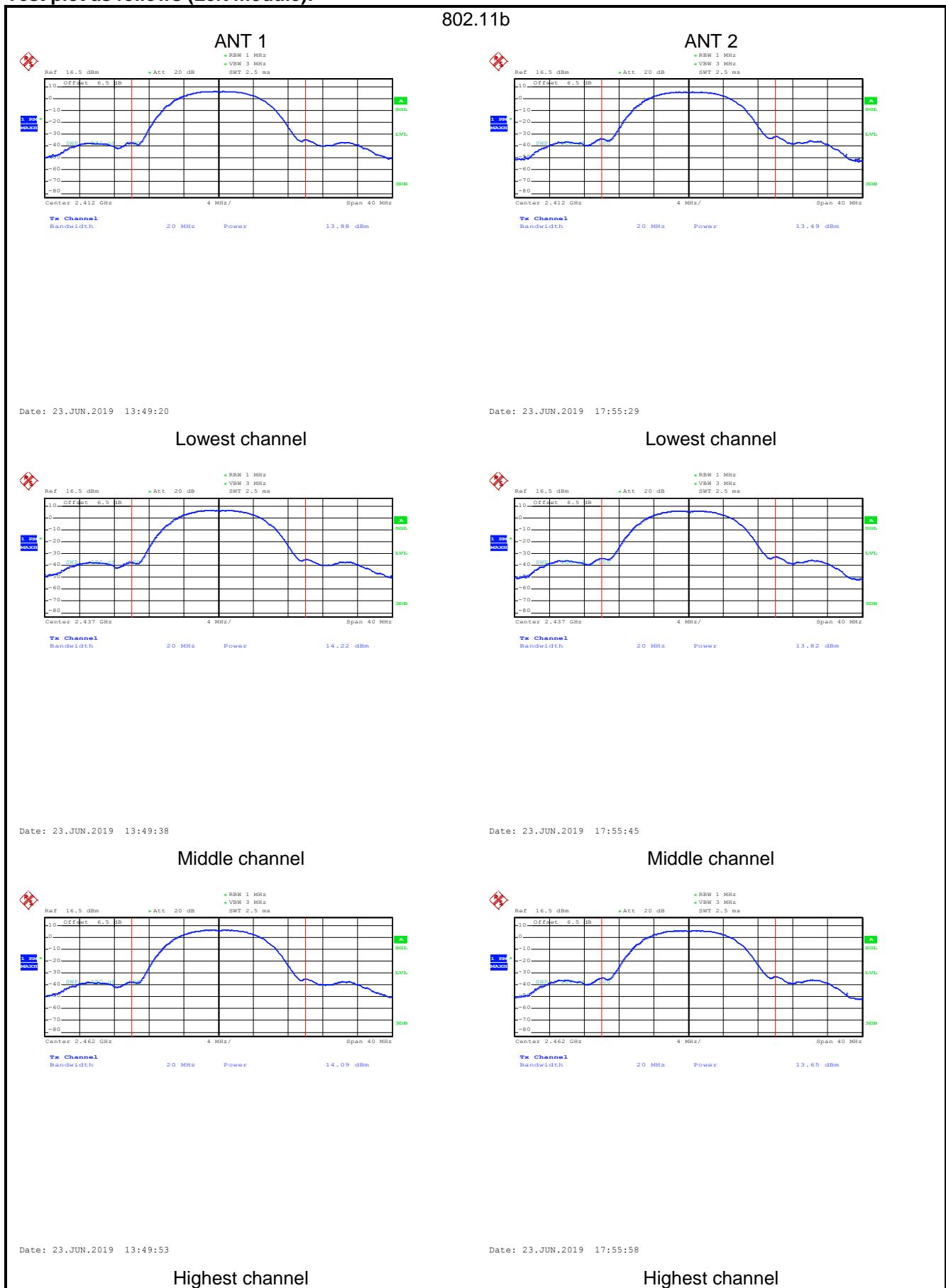
**Measurement Data:****Right module:**

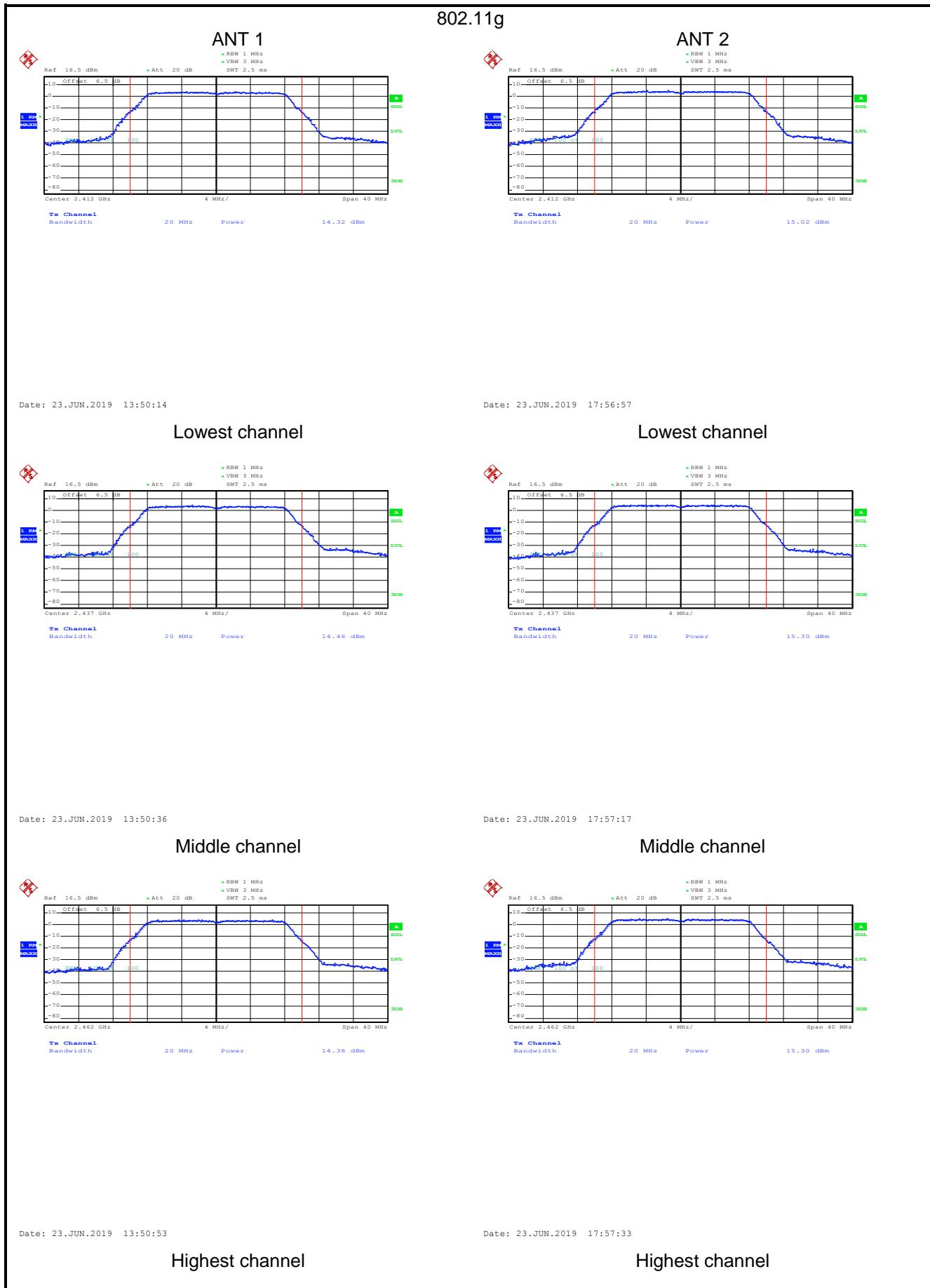
Mode	Test CH	Ant. Port	Conducted Output power (dBm)	Total power (dBm)	Limit (dBm)	Result
802.11b	Lowest	TX3	14.59	/	29.52	Pass
		TX4	13.97			
	Middle	TX3	14.82	/	29.52	Pass
		TX4	13.91			
	Highest	TX3	14.58	/	29.52	Pass
		TX4	13.52			
802.11g	Lowest	TX3	16.12	/	29.52	Pass
		TX4	15.29			
	Middle	TX3	16.06	/	29.52	Pass
		TX4	15.26			
	Highest	TX3	15.93	/	29.52	Pass
		TX4	14.81			
802.11n(HT20)	Lowest	TX3	16.02	18.65	29.52	Pass
		TX4	15.23			
	Middle	TX3	16.08	18.59	29.52	Pass
		TX4	15.02			
	Highest	TX3	15.91	18.37	29.52	Pass
		TX4	14.74			

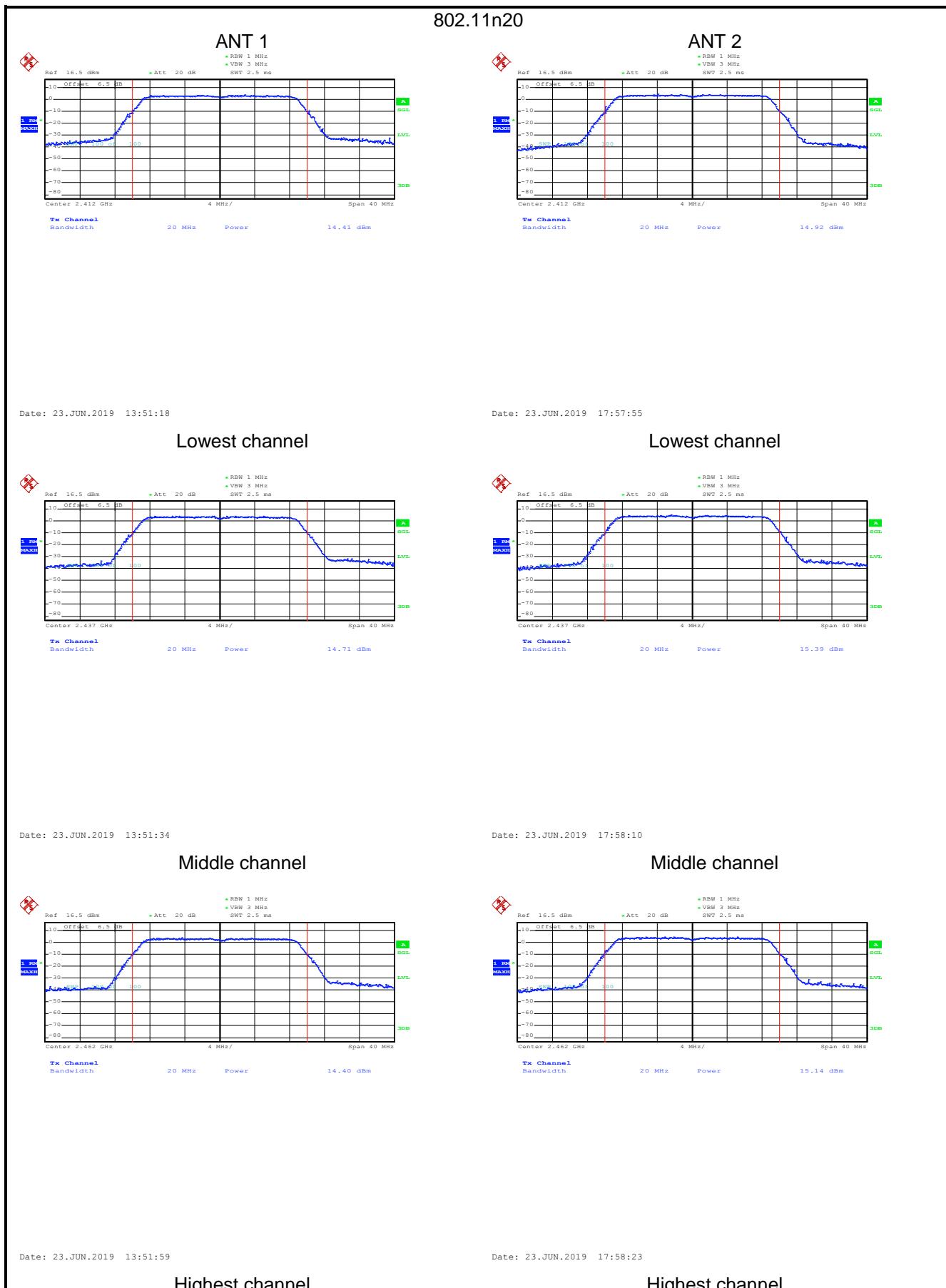
**Remark:**

- Because transmit signals are correlated, Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ , So the Directional gain=  $10 \log[(10^{(4.5/20)} + 10^{(2.3/20)})^2/2] = 6.48 \text{dBi}$
- The directional Gain of antenna is greater than 6 dBi, so the limit of power is 29.52 dBm.

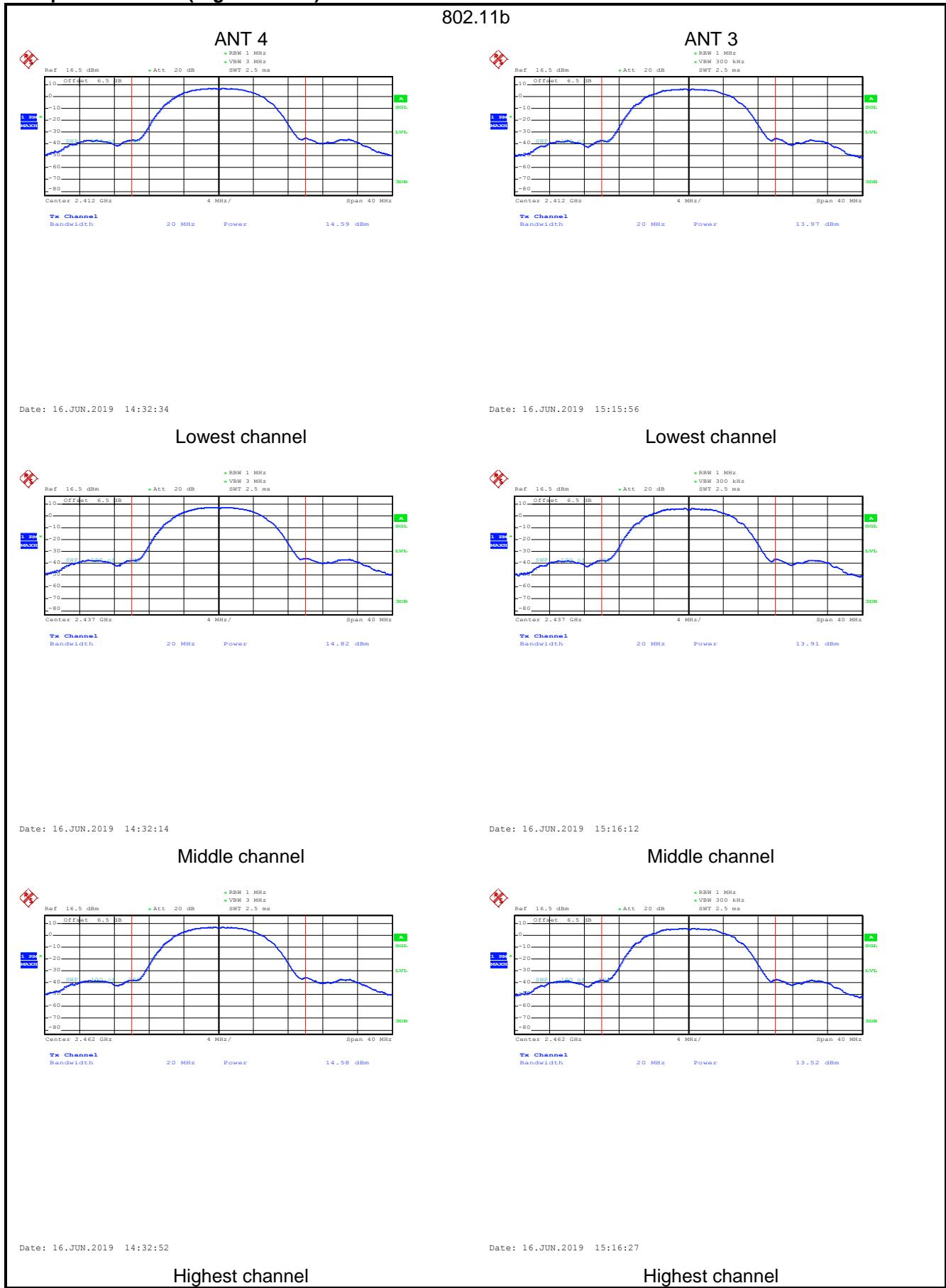
Test plot as follows (Left module):

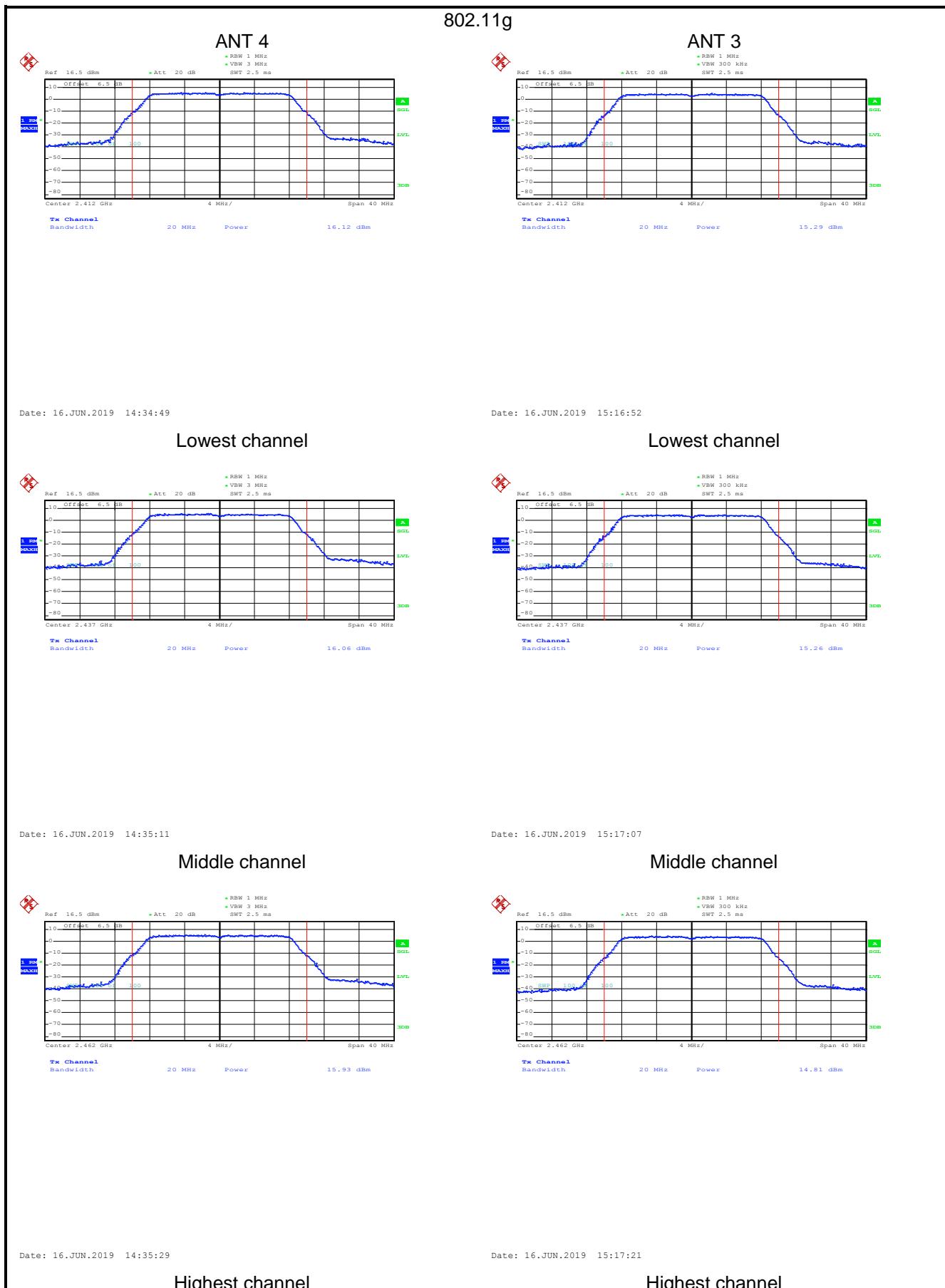


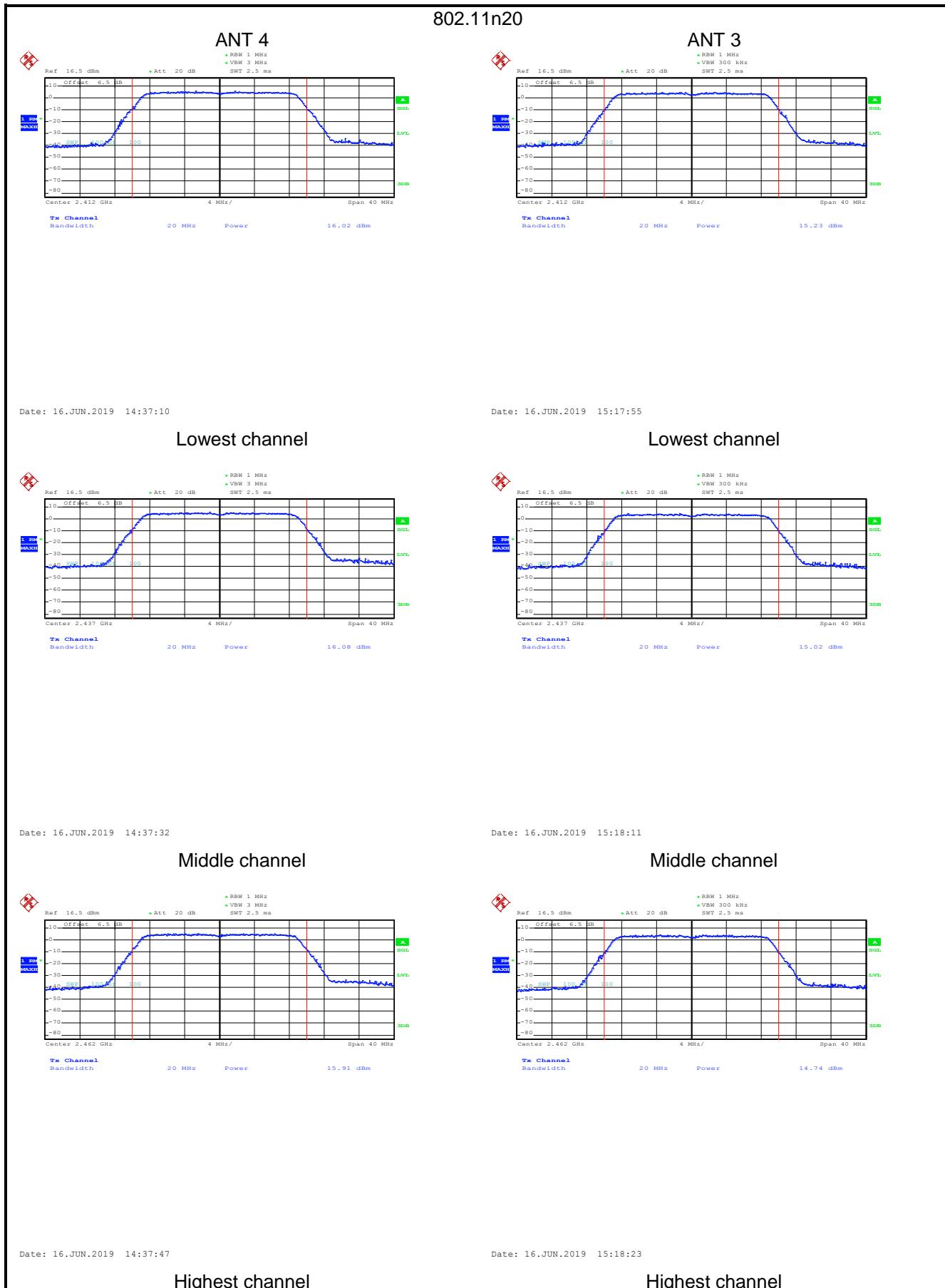




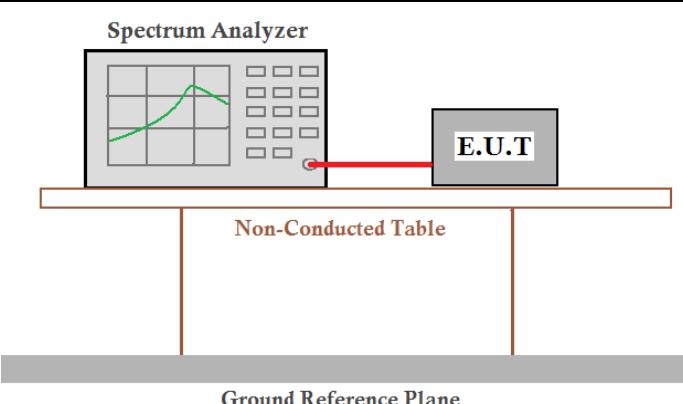
Test plot as follows (Right module):







## 6.4 Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	>500kHz
Test setup:	 <p>The diagram illustrates the measurement setup. A Spectrum Analyzer is positioned at the top left, displaying a green waveform on its screen. A red line extends from the analyzer's output port to a grey rectangular box labeled 'E.U.T' (Equipment Under Test). This 'E.U.T' box rests on a light-colored rectangular platform labeled 'Non-Conducted Table'. Below the table is a thick grey horizontal bar labeled 'Ground Reference Plane'.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

### Measurement Data (Left module ANT1) :

Test CH	6dB Emission Bandwidth (MHz)			Limit(kHz)	Result
	802.11b	802.11g	802.11n(H20)		
Lowest	9.20	16.56	17.76	>500	Pass
Middle	9.20	16.56	17.84		
Highest	9.20	16.56	17.76		
Test CH	99% Occupy Bandwidth (MHz)			Limit(kHz)	Result
	802.11b	802.11g	802.11n(HT20)		
Lowest	11.60	17.36	18.24	N/A	N/A
Middle	11.60	17.36	18.32		
Highest	11.52	17.36	18.24		

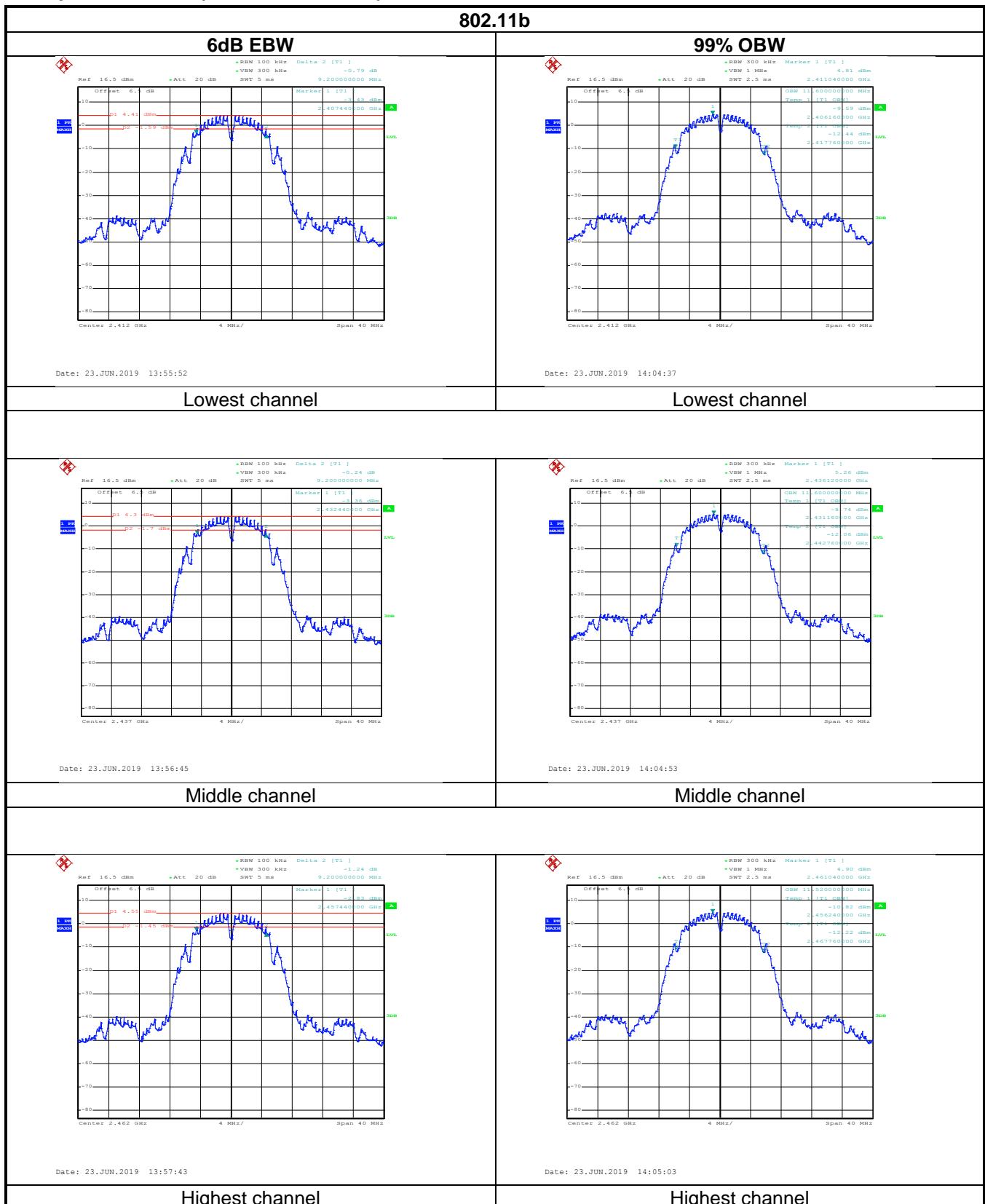
Remark: The ANT 1 and ANT 2 are the same chip control, pre-scan ANT 1 and ANT 2, found ANT 1 was worse case mode. The report only reflects the worst mode.

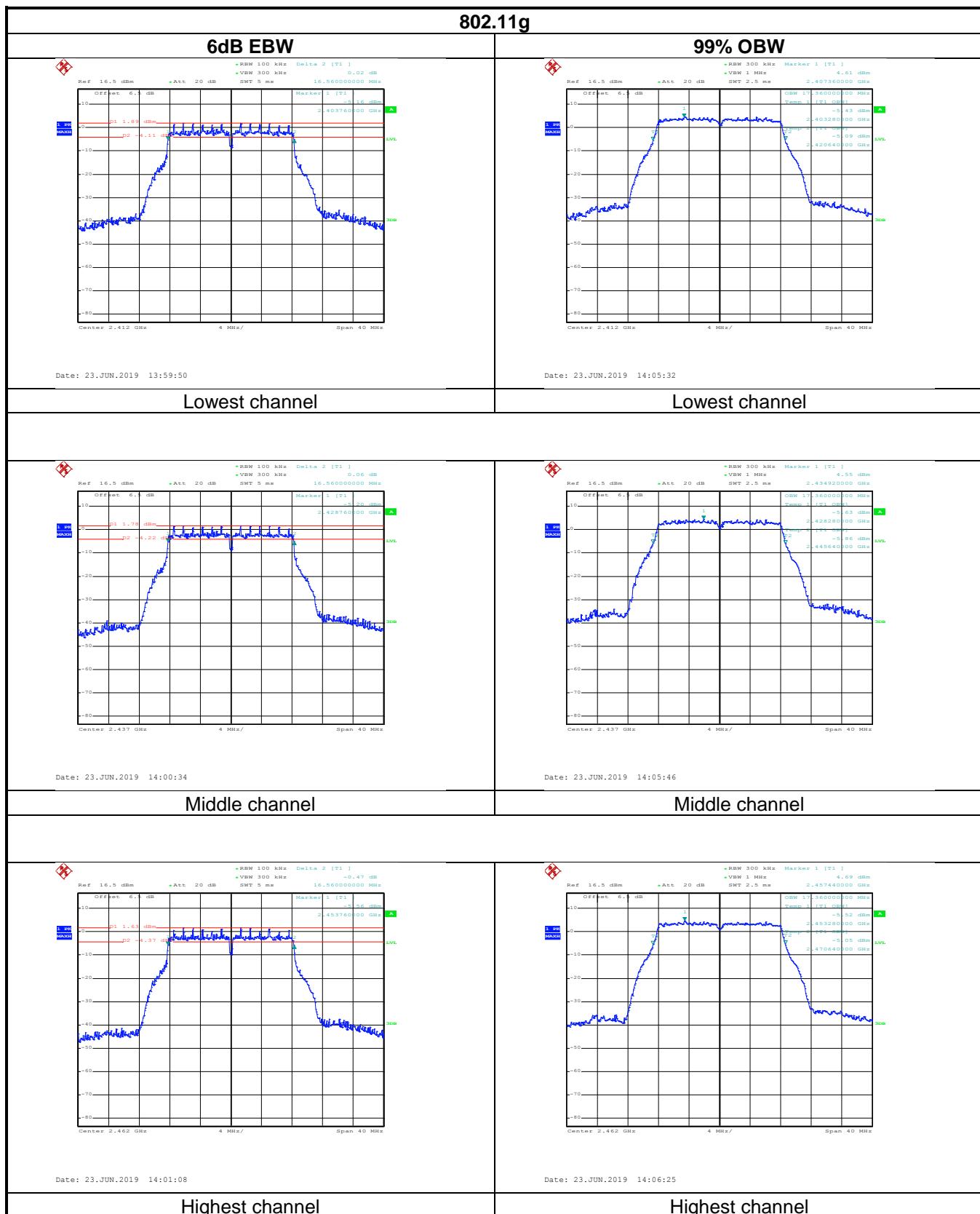
**Measurement Data (Right module ANT3):**

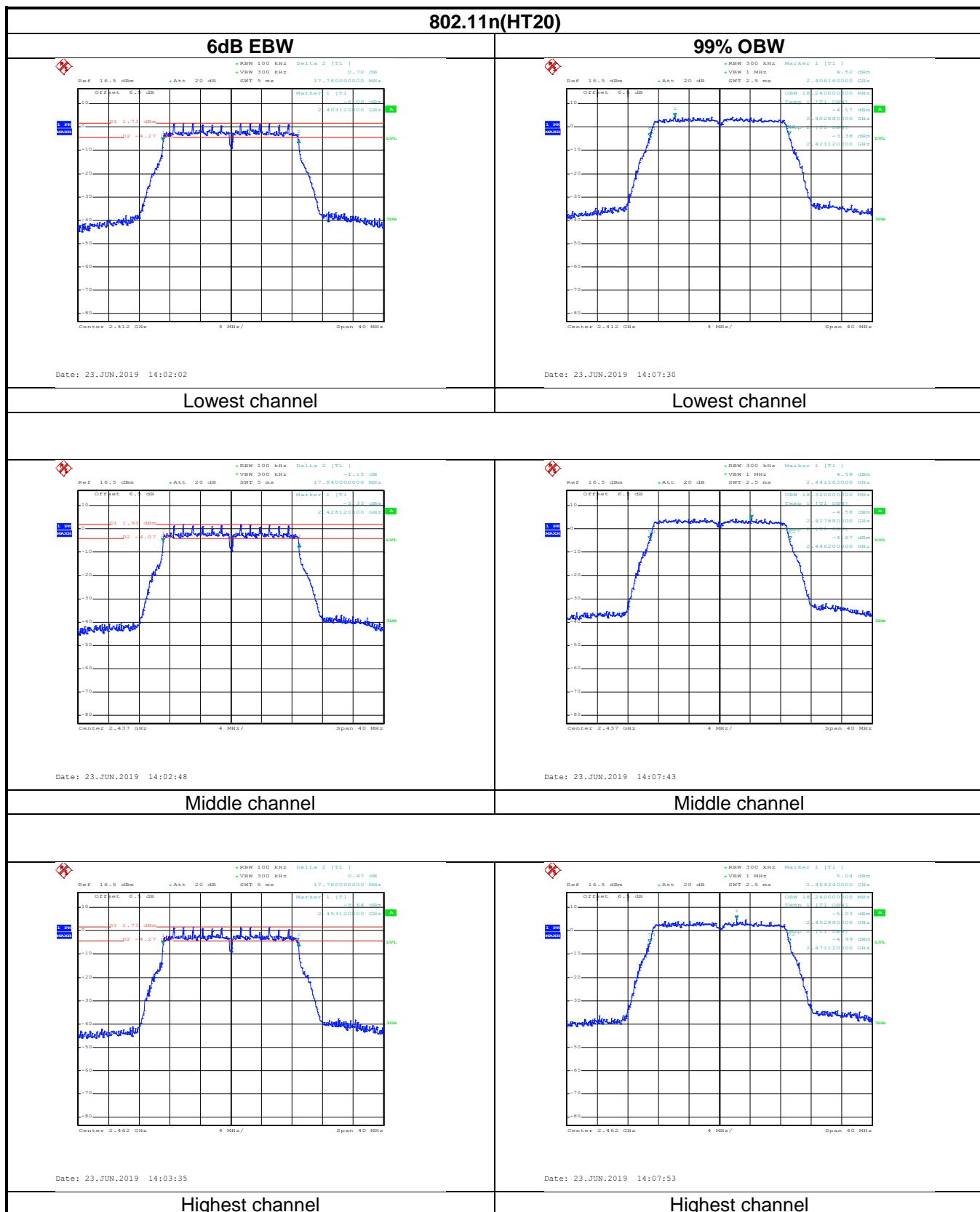
Test CH	6dB Emission Bandwidth (MHz)			Limit(kHz)	Result
	802.11b	802.11g	802.11n(H20)		
Lowest	9.20	16.64	17.84	>500	Pass
Middle	9.20	16.48	17.84		
Highest	9.28	16.56	17.84		
Test CH	99% Occupy Bandwidth (MHz)			Limit(kHz)	Result
	802.11b	802.11g	802.11n(HT20)		
Lowest	11.60	17.28	18.32	N/A	N/A
Middle	11.60	17.28	18.32		
Highest	11.60	17.28	18.32		

Remark: The ANT 3 and ANT 4 are the same chip control, pre-scan ANT 3 and ANT 4, found ANT 3 was worse case mode. The report only reflects the worst mode.

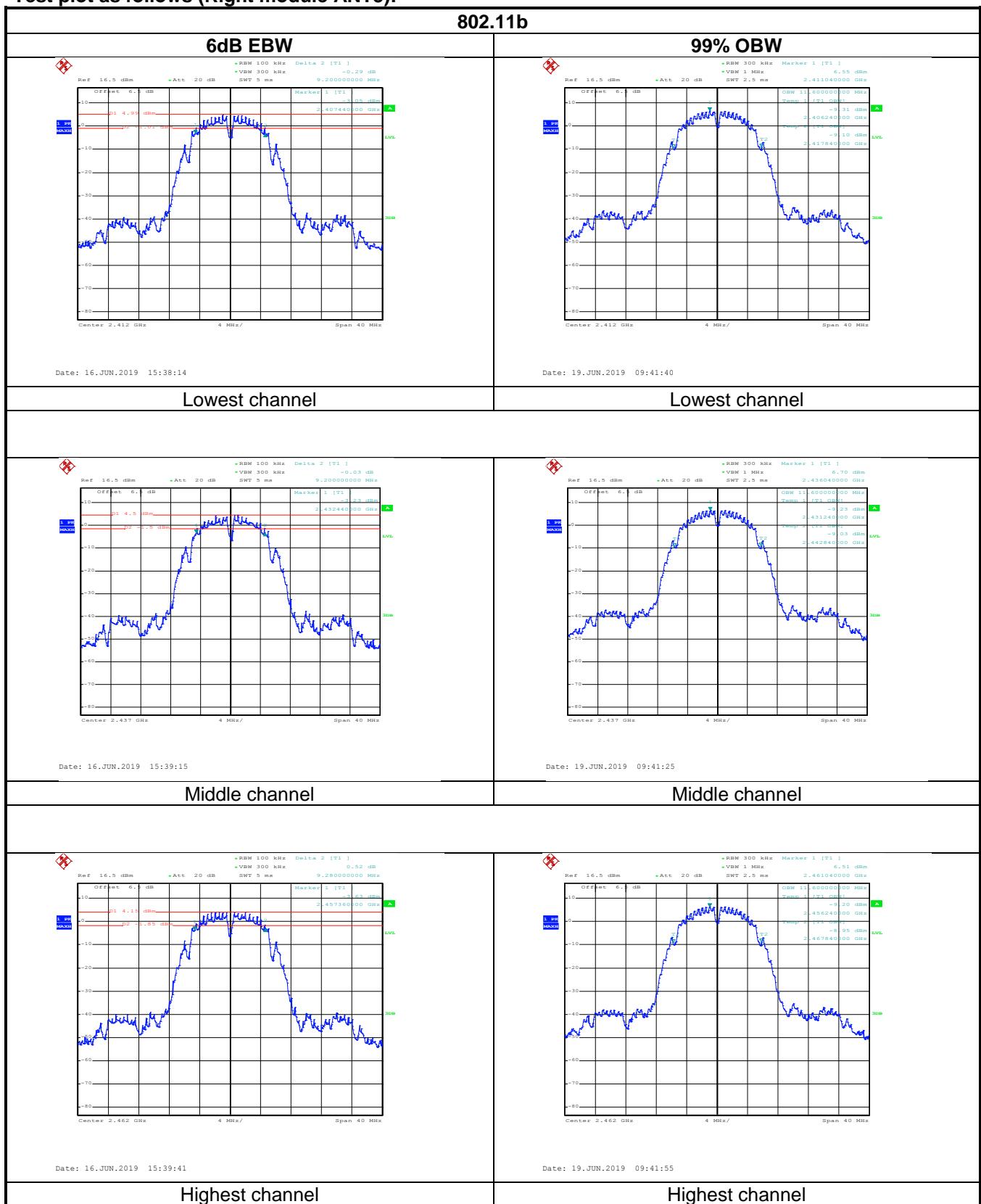
Test plot as follows (Left module ANT1):

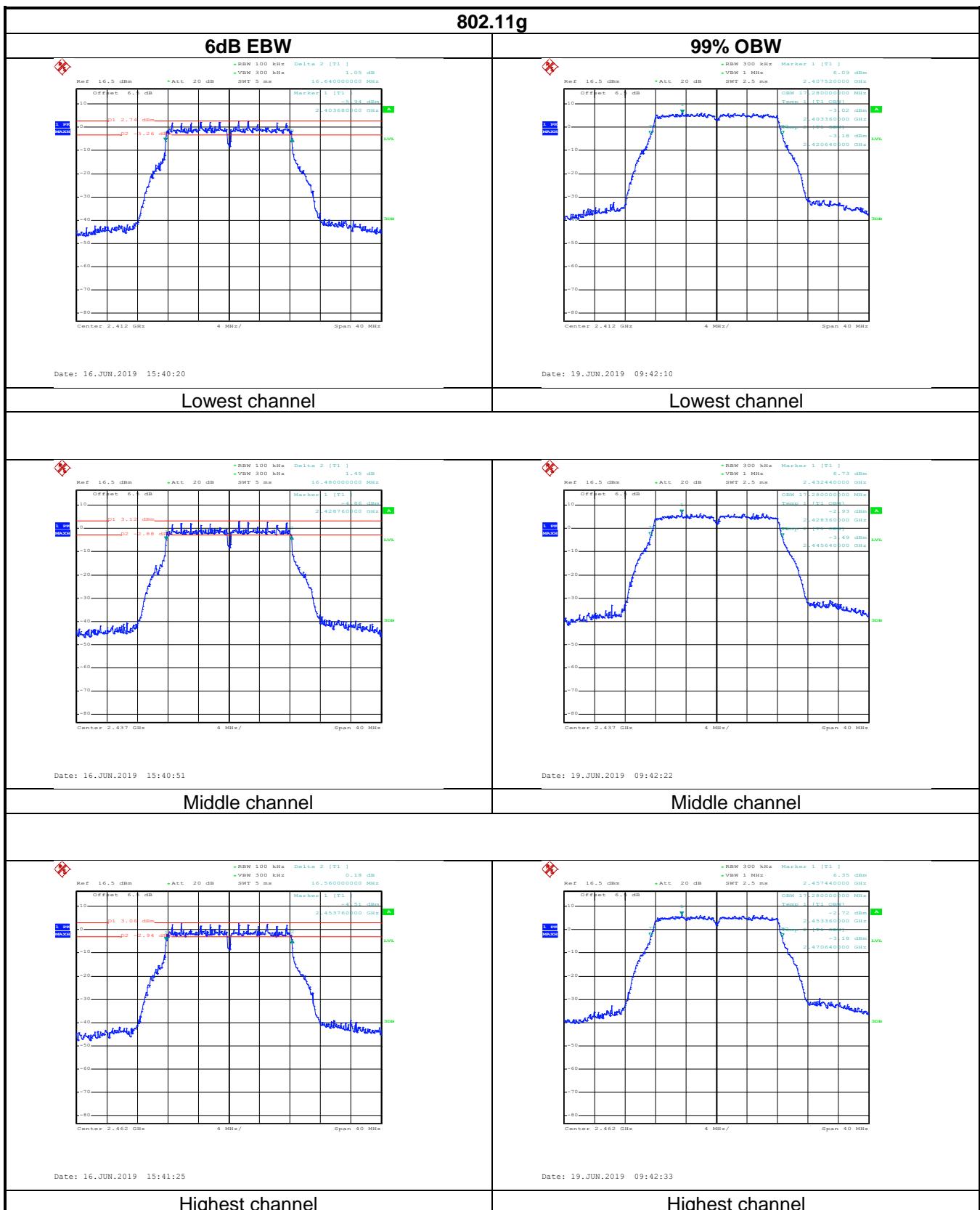


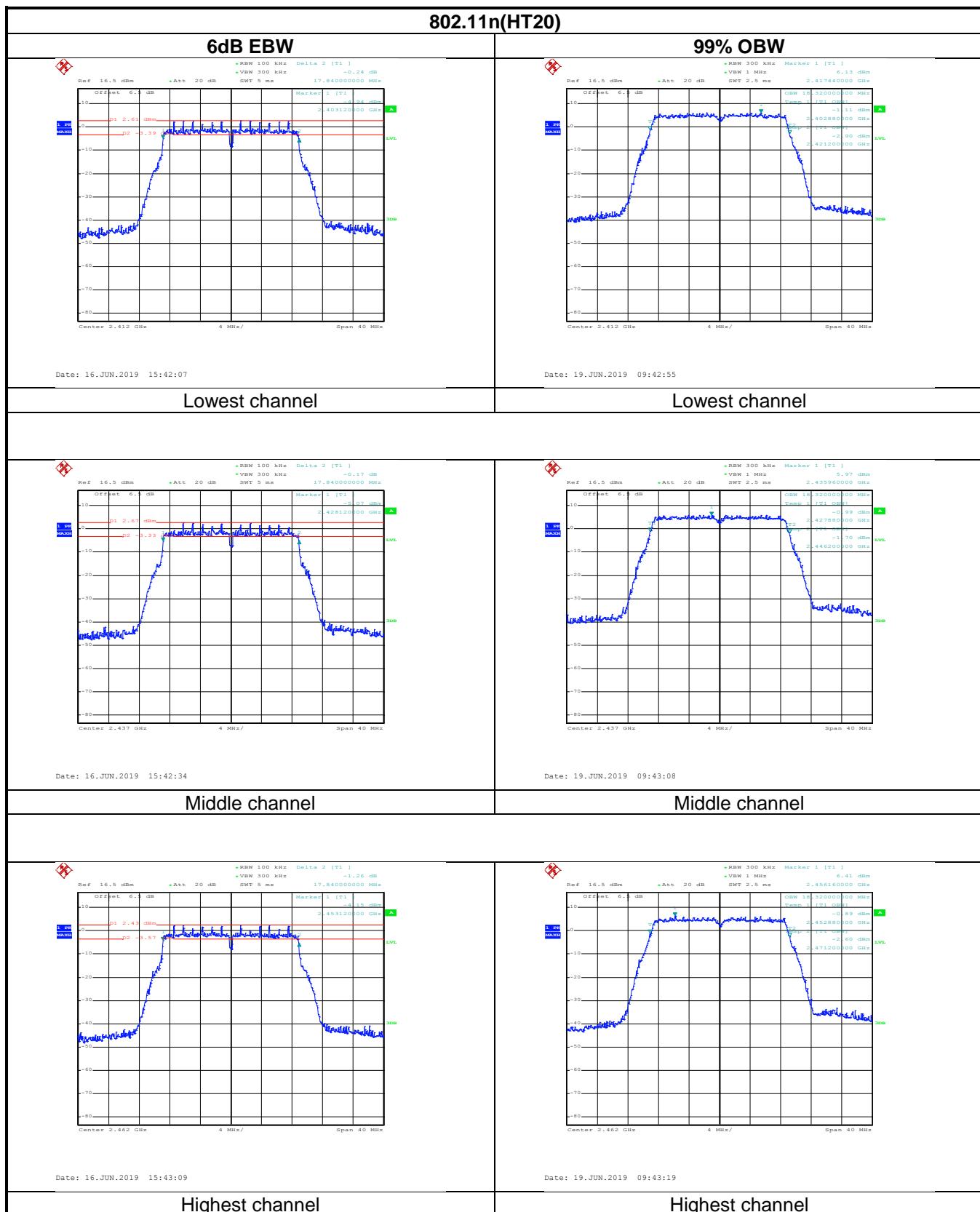




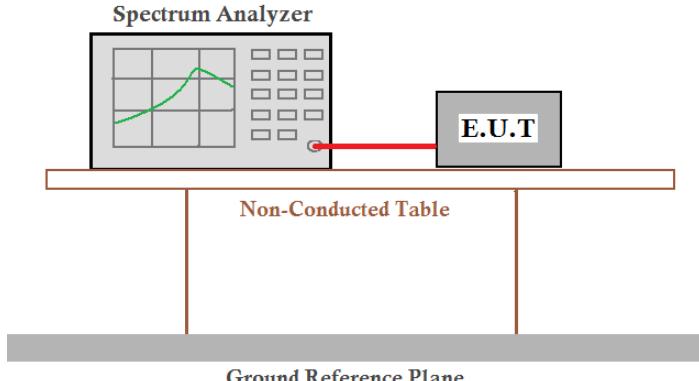
Test plot as follows (Right module ANT3):







## 6.5 Power Spectral Density

Test Requirement:	FCC Part 15 C Section 15.247 (e)
Limit:	8dBm
Test setup:	 <p>The diagram illustrates a non-conducted test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. The E.U.T is placed on a Non-Conducted Table. The entire assembly rests on a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data:****Left module:**

Mode	Test Channel	Ant. Port	PSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
802.11b	Lowest	TX1	4.38	/	7.35	Pass
		TX2	4.74			
	Middle	TX1	4.32	/	7.35	Pass
		TX2	4.88			
	Highest	TX1	4.97	/	7.35	Pass
		TX2	4.58			
802.11g	Lowest	TX1	1.48	/	7.35	Pass
		TX2	2.39			
	Middle	TX1	1.85	/	7.35	Pass
		TX2	2.51			
	Highest	TX1	1.62	/	7.35	Pass
		TX2	2.59			
802.11n(HT20) (MIMO)	Lowest	TX1	1.99	3.92	7.35	Pass
		TX2	-0.52			
	Middle	TX1	1.79	3.49	7.35	Pass
		TX2	-1.41			
	Highest	TX1	1.66	4.11	7.35	Pass
		TX2	0.47			

**Remark:**

1. Because transmit signals are correlated, Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ , So the Directional gain =  $10 \log[(10^{(2.3/20)} + 10^{(4.8/20)})^2 / 2] = 6.65 \text{ dBi}$ .
2. The directional Gain of antenna is greater than 6 dBi, so the limit of PSD is 7.35 dBm.

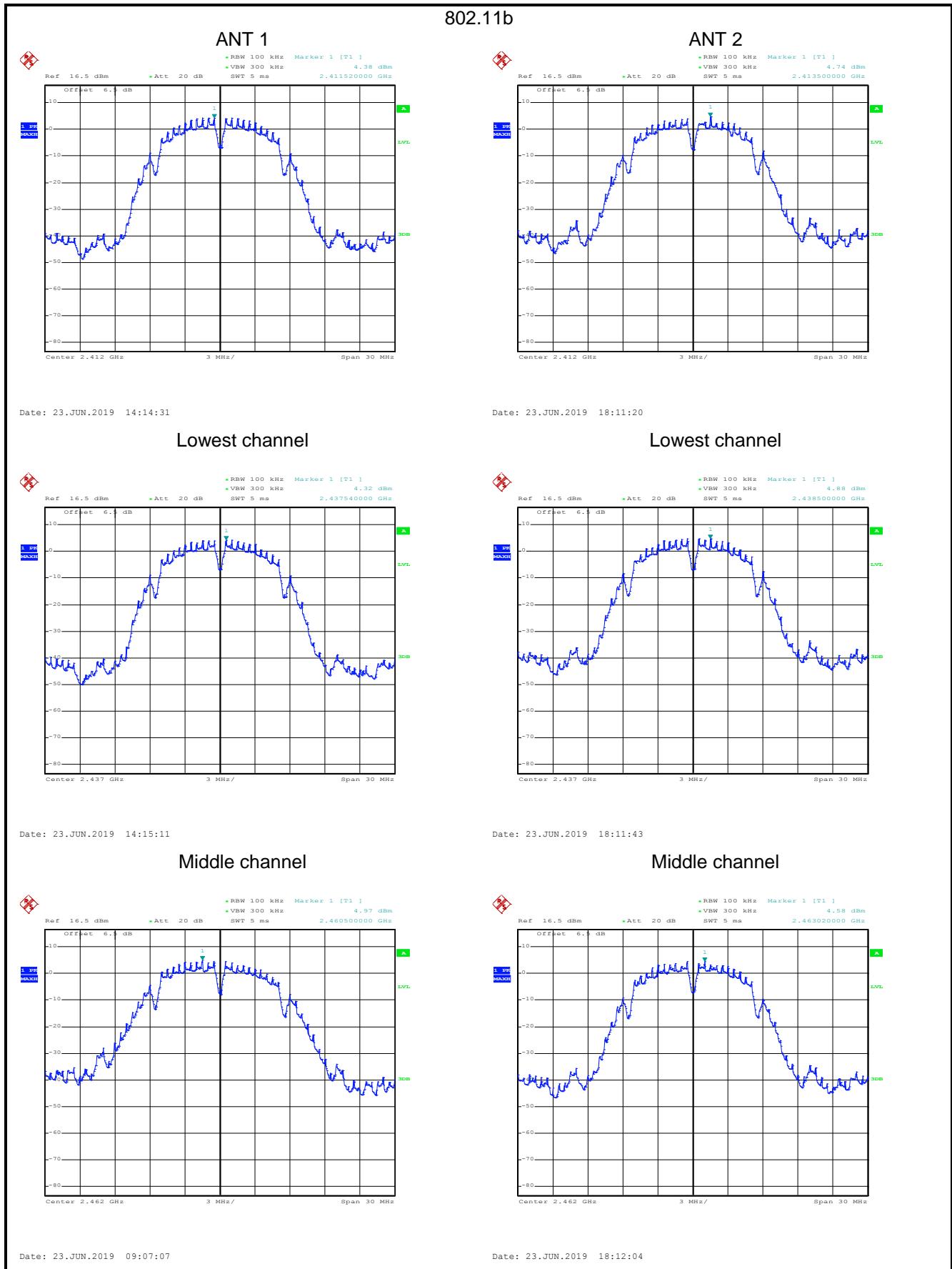
## Right module:

Mode	Test Channel	Ant. Port	PSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
802.11b	Lowest	TX3	4.60	/	7.52	Pass
		TX4	4.86			
	Middle	TX3	4.98	/	7.52	Pass
		TX4	4.89			
	Highest	TX3	4.84	/	7.52	Pass
		TX4	4.76			
802.11g	Lowest	TX3	3.05	/	7.52	Pass
		TX4	2.90			
	Middle	TX3	3.25	/	7.52	Pass
		TX4	2.99			
	Highest	TX3	3.25	/	7.52	Pass
		TX4	2.63			
802.11n(HT20)	Lowest	TX3	3.07	5.92	7.52	Pass
		TX4	2.75			
	Middle	TX3	3.18	6.01	7.52	Pass
		TX4	2.82			
	Highest	TX3	3.13	5.81	7.52	Pass
		TX4	2.45			

## Remark:

1. Because transmit signals are correlated, Directional gain =  $10 \log[(10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(GN/20)})^2 / N_{ANT}]$ , So the Directional gain=  $10 \log[(10^{(2.3/20)} + 10^{(4.8/20)})^2 / 2] = 6.48 \text{ dBi}$ .
2. The directional Gain of antenna is greater than 6 dBi, so the limit of PSD is 7.52 dBm.

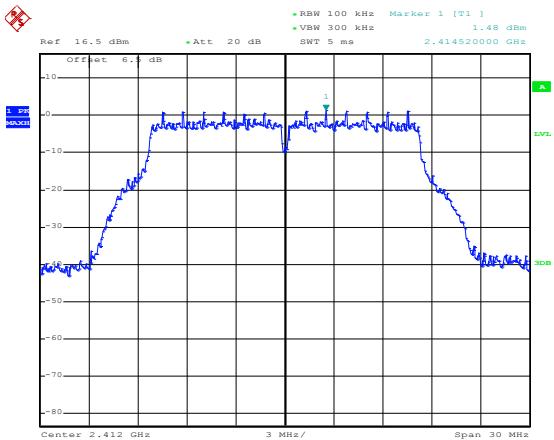
Test plot as follows (Left module):



Highest channel

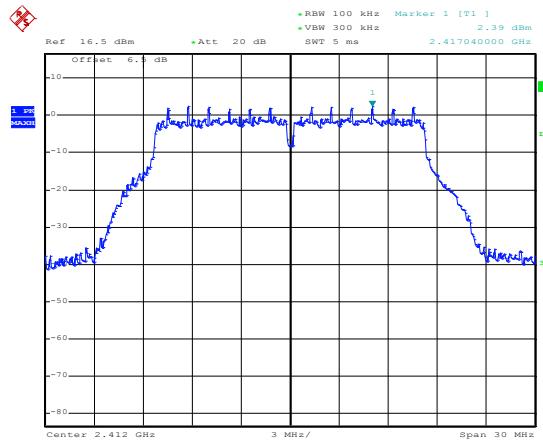
802.11g

ANT 1



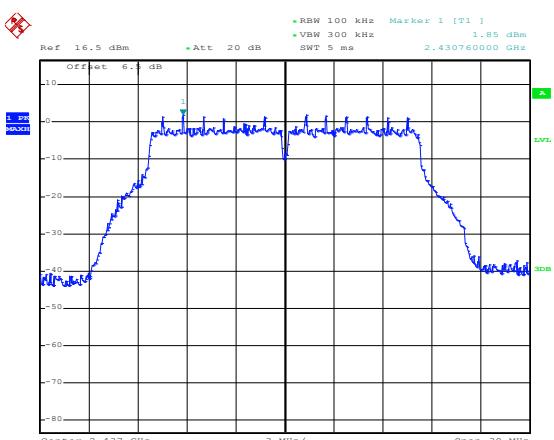
Highest channel

ANT 2



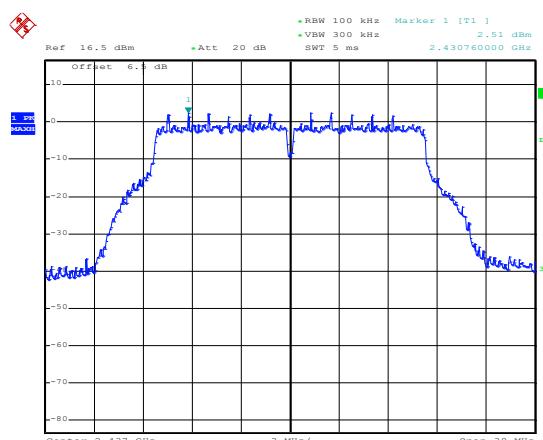
Date: 23.JUN.2019 14:16:05

Lowest channel



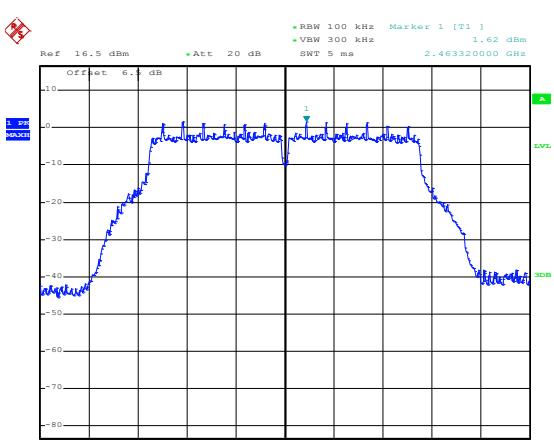
Date: 23.JUN.2019 18:12:47

Lowest channel



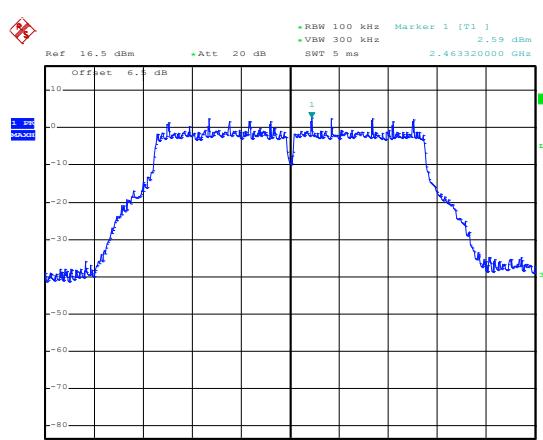
Date: 23.JUN.2019 14:16:50

Middle channel



Date: 23.JUN.2019 18:16:00

Middle channel



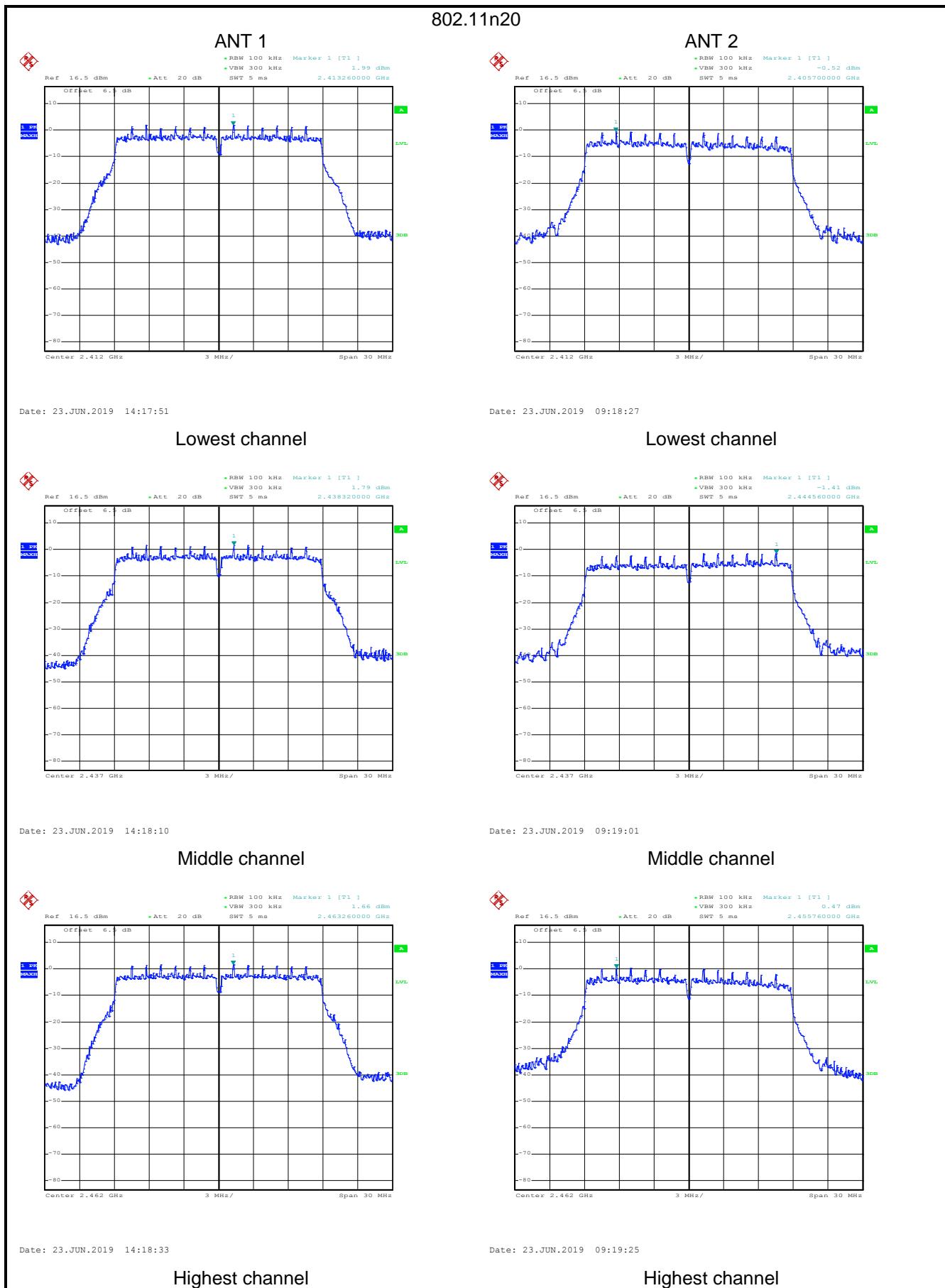
Date: 23.JUN.2019 14:17:12

Highest channel

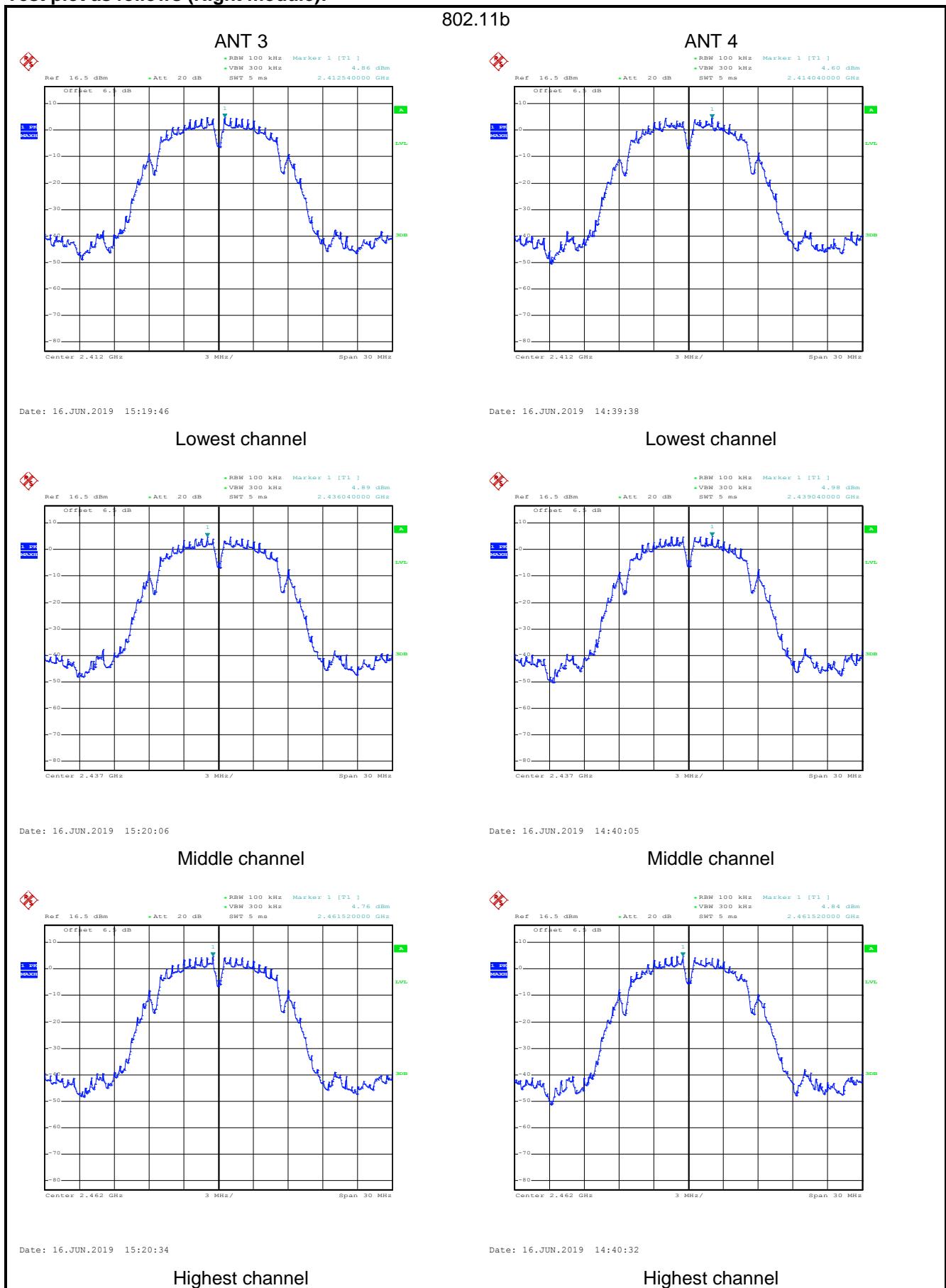
Highest channel

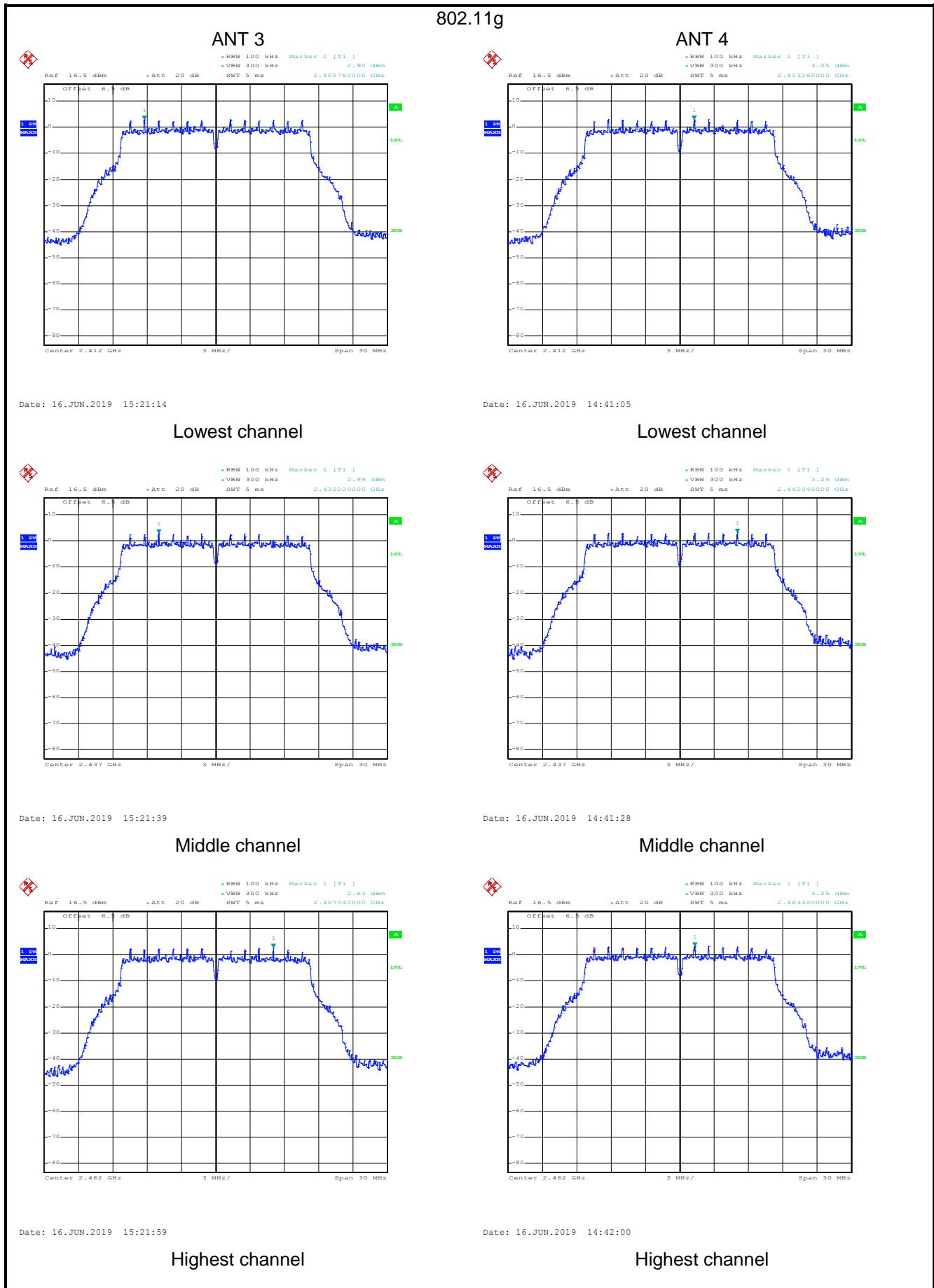
Shenzhen Zhongjian Nanfang Testing Co., Ltd.  
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,  
Bao'an District, Shenzhen, Guangdong, China  
Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

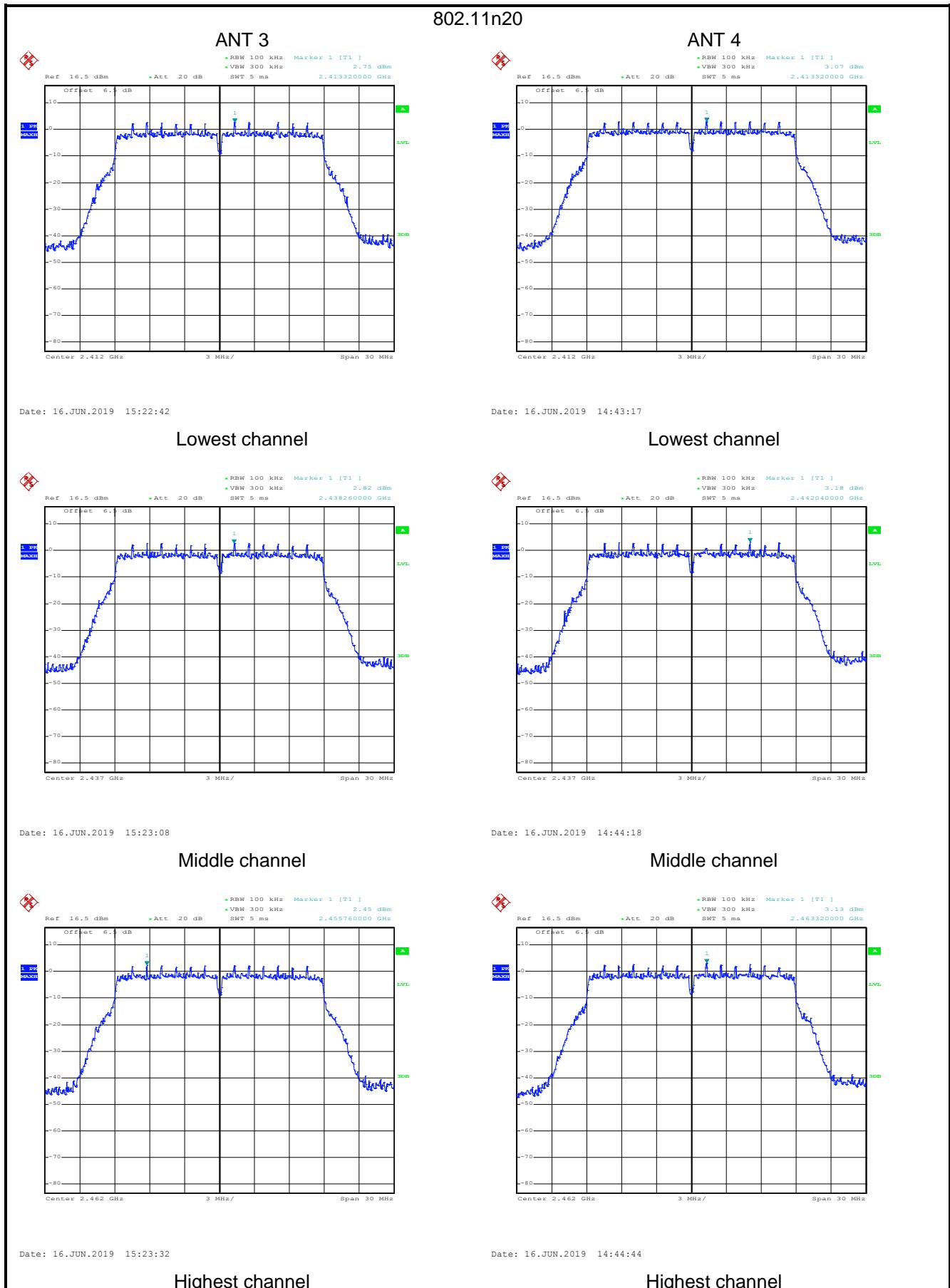
Project No.: CCISE1905123



Test plot as follows (Right module):

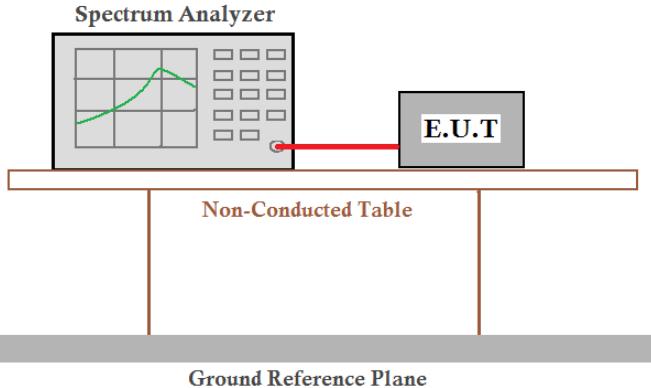




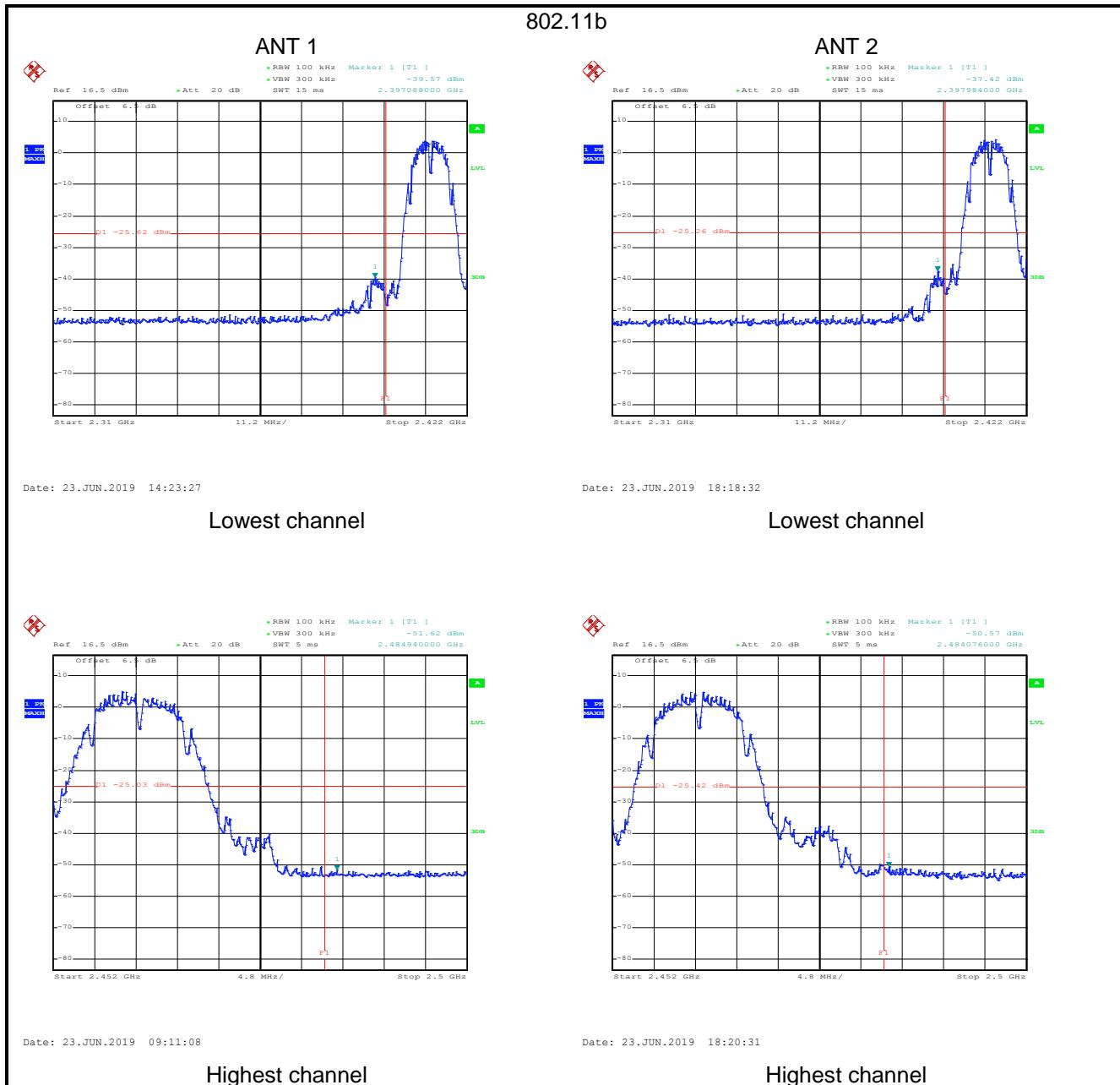


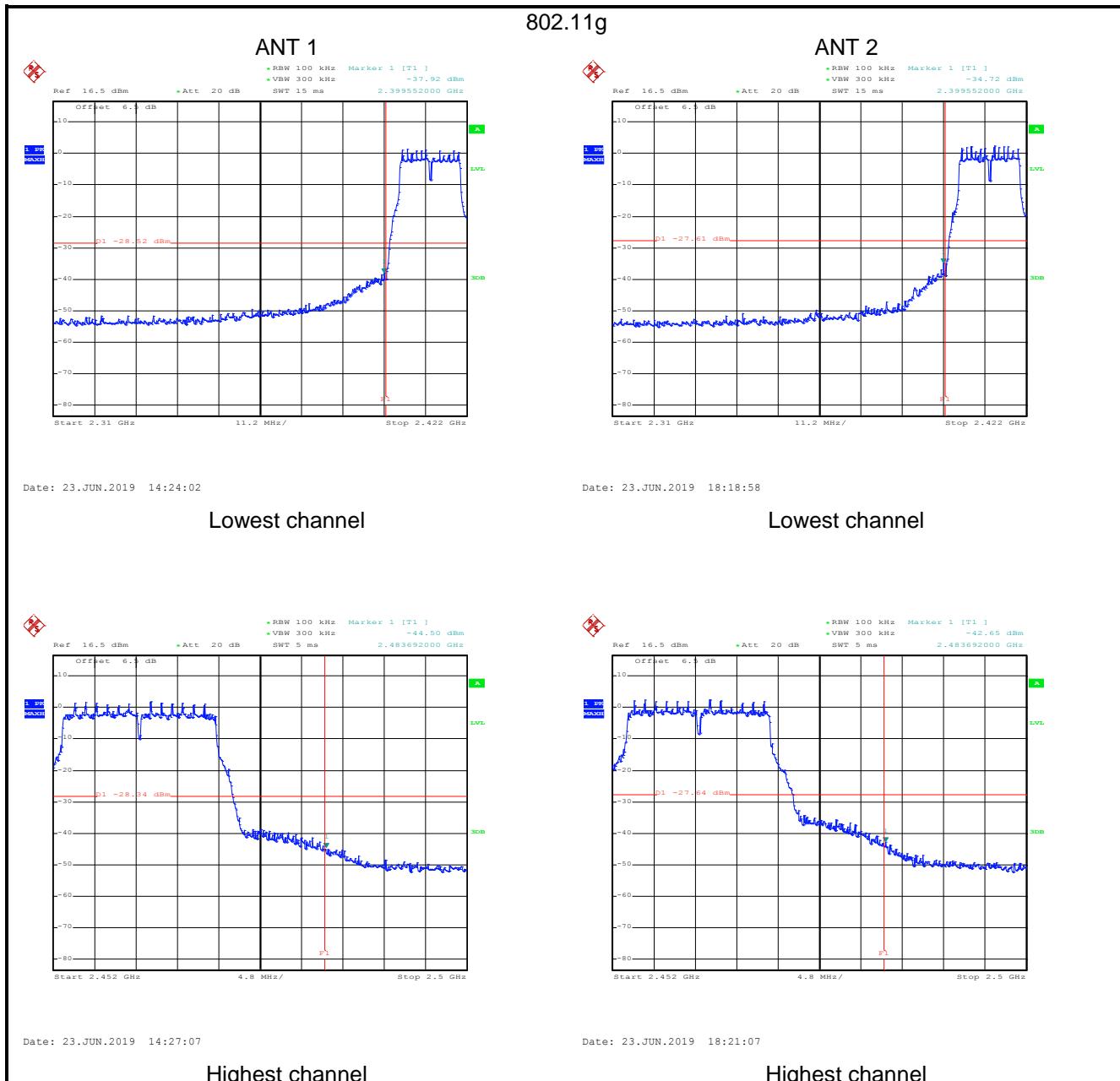
## 6.6 Band Edge

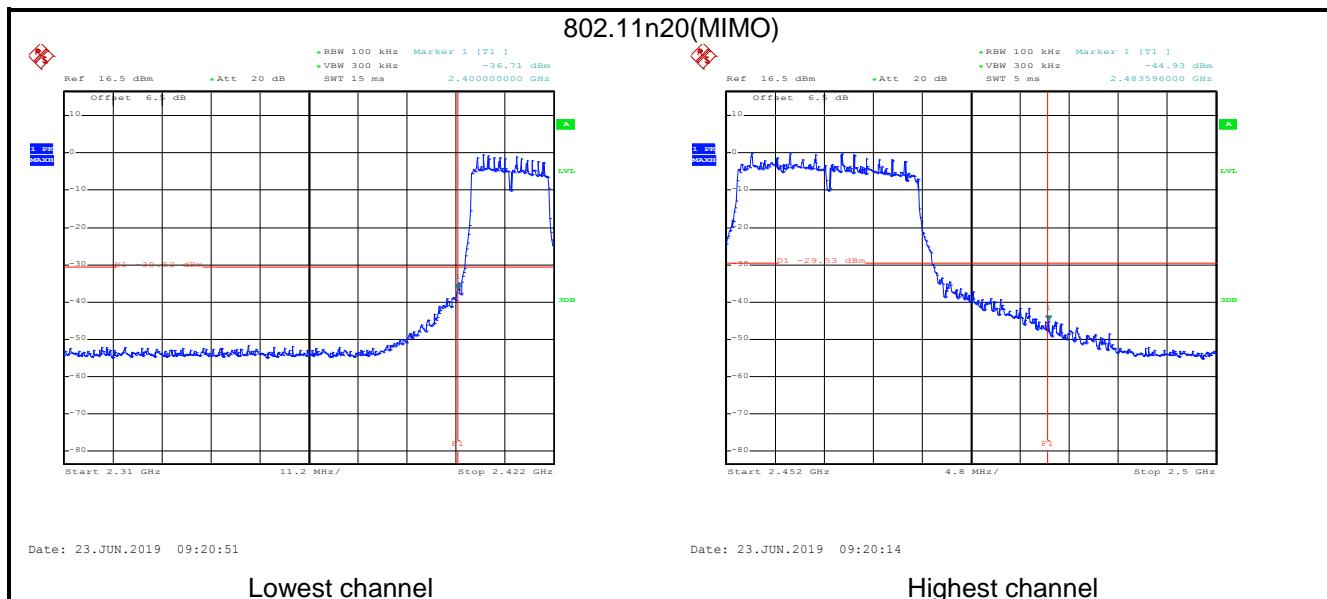
### 6.6.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

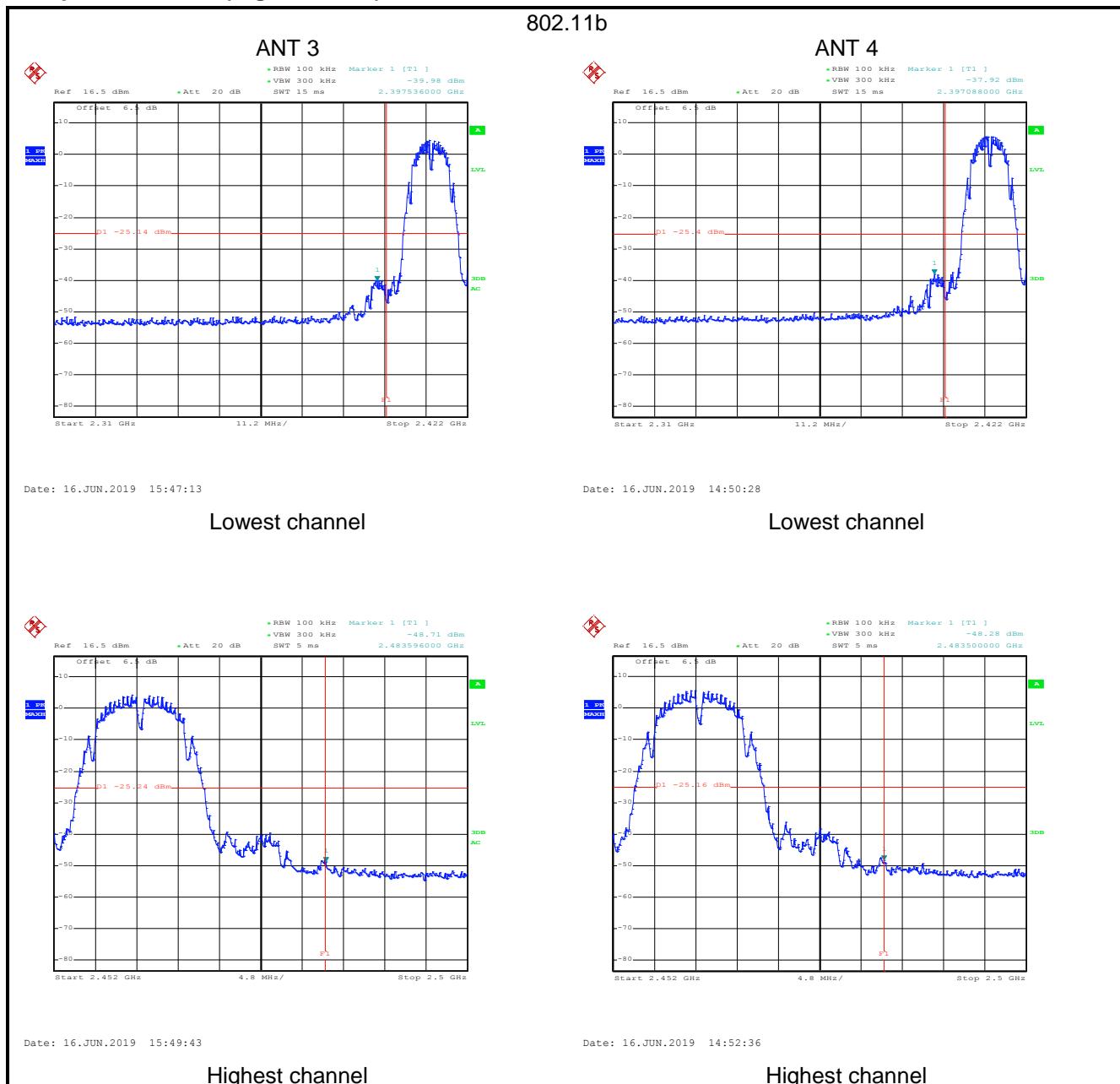
Test plot as follows (Left module):

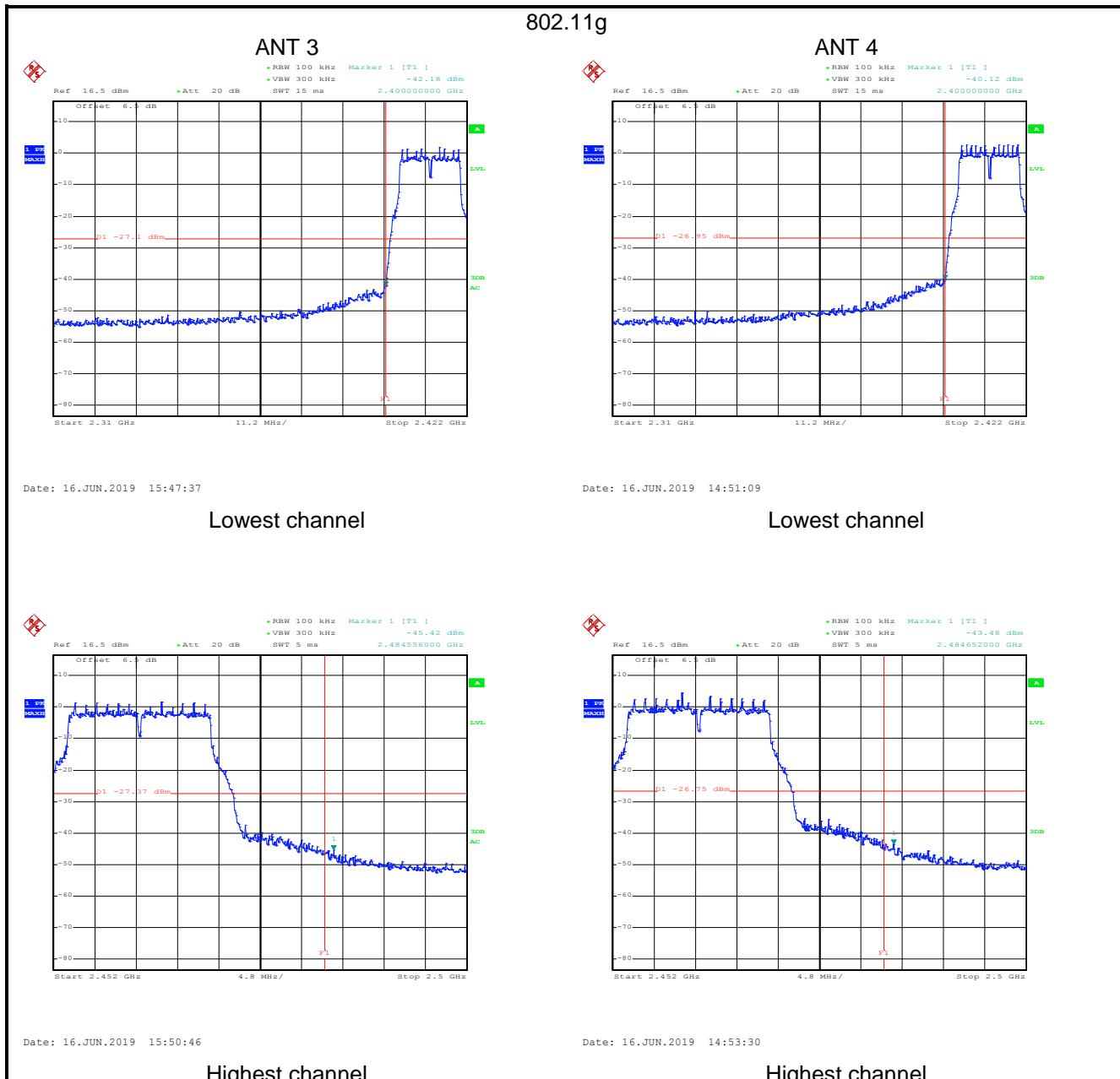


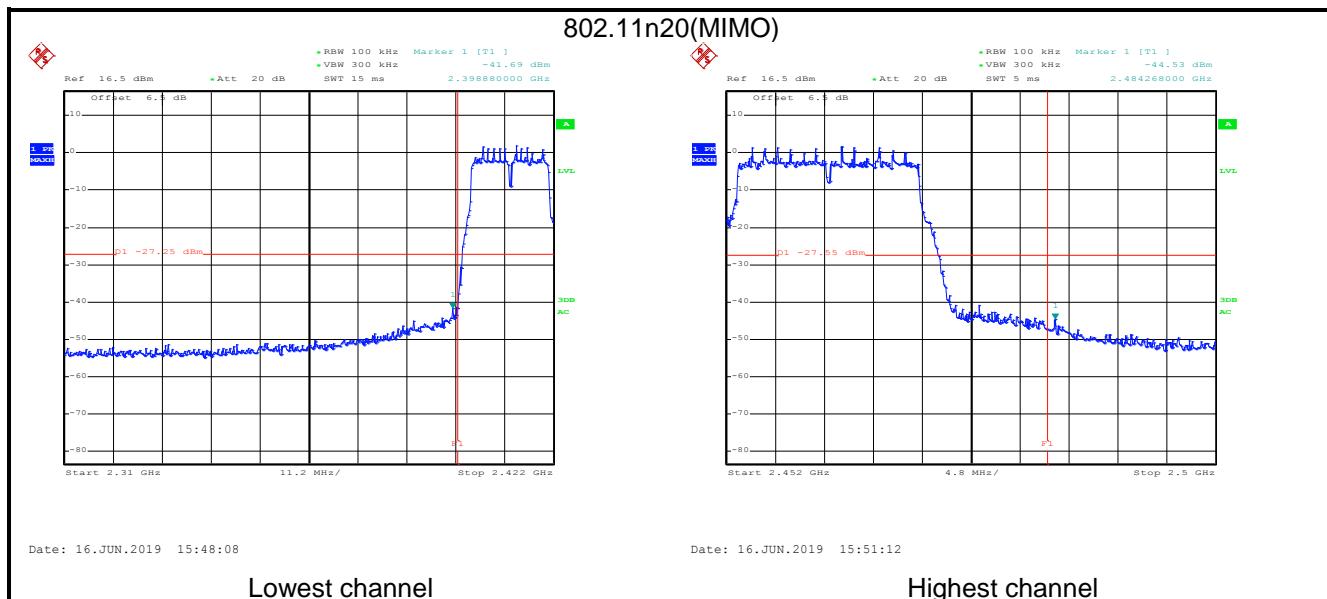




Test plot as follows (Right module):





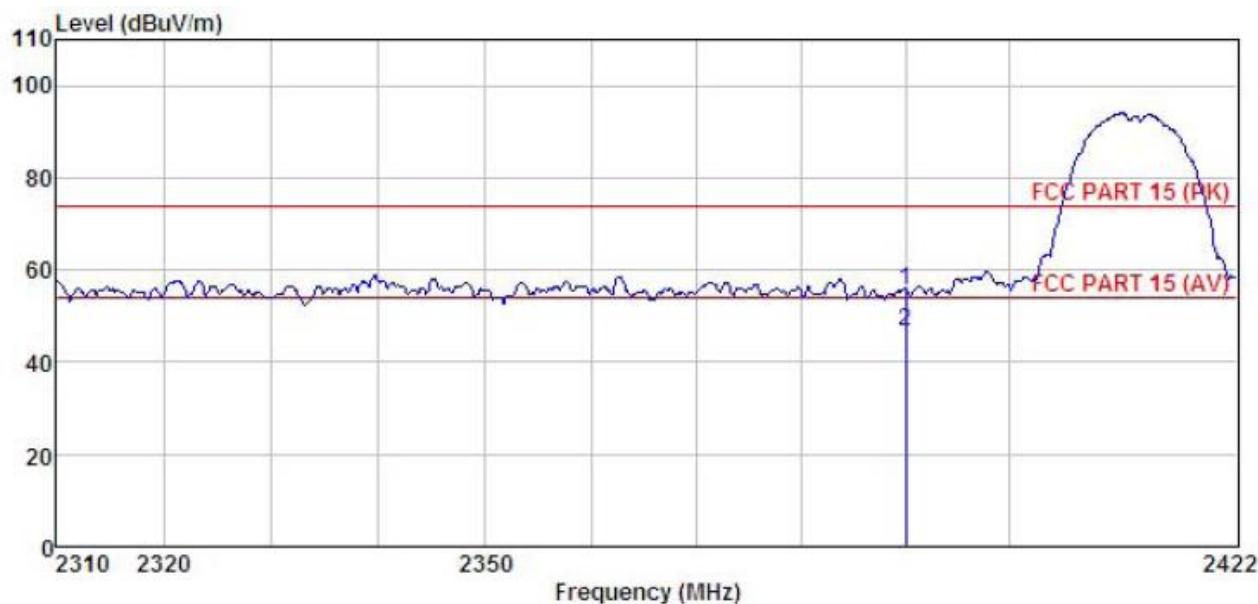


### 6.6.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205										
Test Frequency Range:	2.3GHz to 2.5GHz										
Test Distance:	3m										
Receiver setup:	Frequency	Detector	RBW	VBW	Remark						
	Above 1GHz	Peak	1MHz	3MHz	Peak Value						
Limit:	Frequency	Limit (dBuV/m @3m)		Remark							
	Above 1GHz	54.00		Average Value							
Test Procedure:		<ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>									
Test setup:											
Test Instruments:	Refer to section 5.8 for details										
Test mode:	Refer to section 5.3 for details										
Test results:	Passed										

## 802.11b mode (Left module ANT 1):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

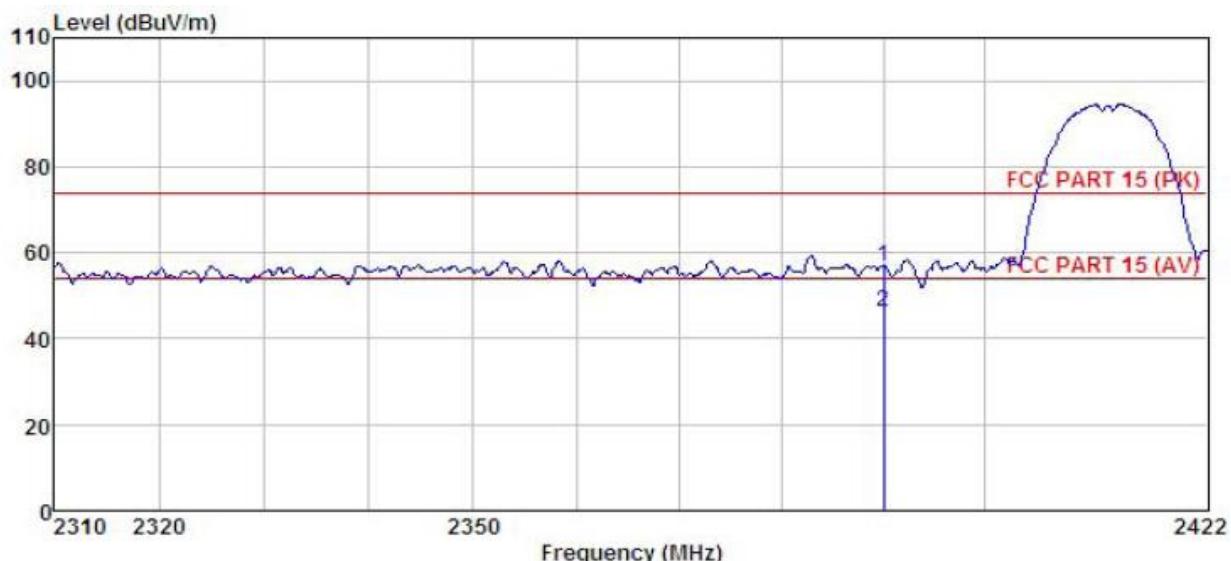


Freq	ReadAntenna Level	Cable Loss	Preamp Factor	Limit Level	Over Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	22.24	27.07	4.69	0.00	55.68	74.00 -18.32 Peak
2	2390.000	13.25	27.07	4.69	0.00	46.69	54.00 -7.31 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



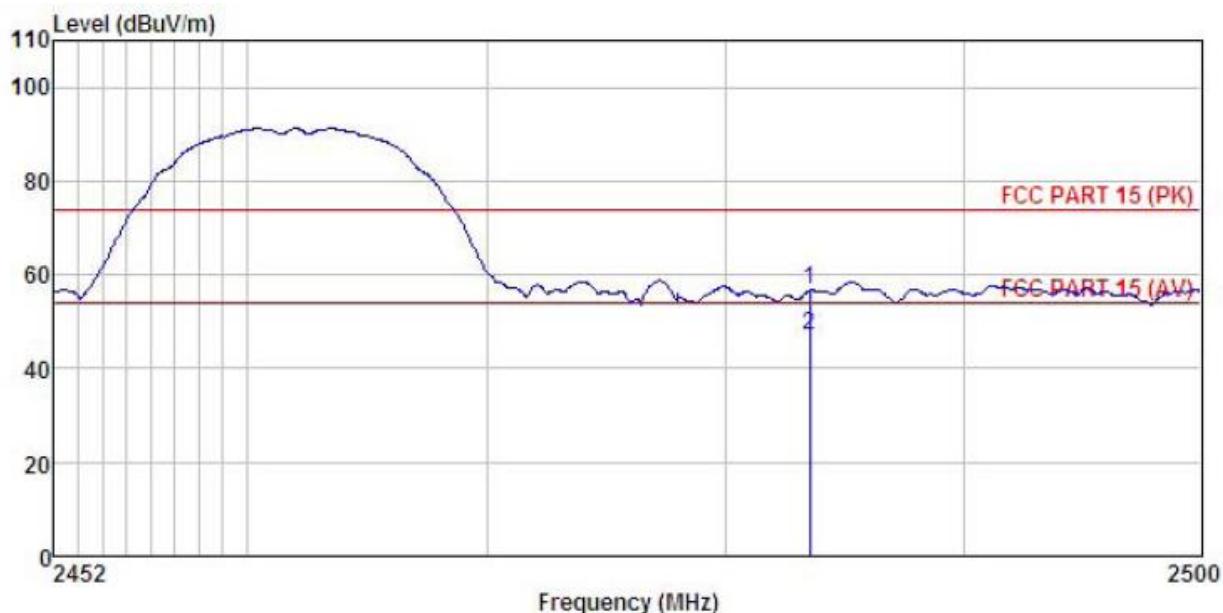
Freq	ReadAntenna Level	Cable Loss Factor	Preamp Factor	Limit Level	Over Line	Over Limit	Remark
------	-------------------	-------------------	---------------	-------------	-----------	------------	--------

	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	23.54	27.08	4.69	0.00	56.99	74.00	-17.01 Peak
2	2390.000	12.94	27.08	4.69	0.00	46.39	54.00	-7.61 Average

*Remark:*

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

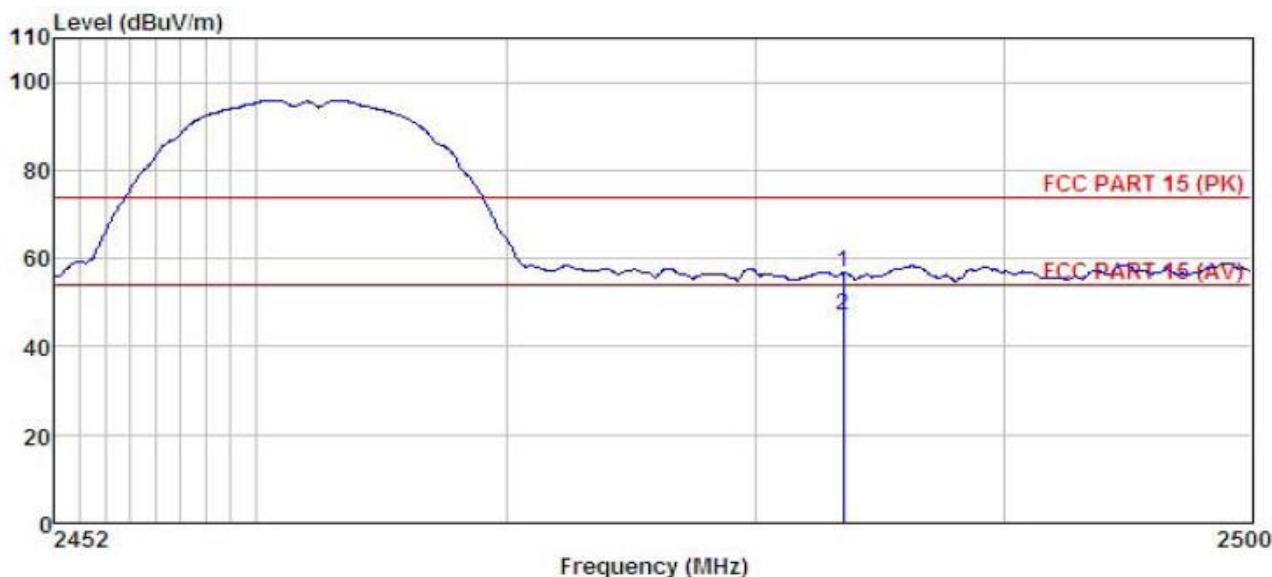


Freq MHz	Read	Antenna Level dBuV	Cable Loss Factor	Preamp Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Limit dB	Remark
	Antenna Level Factor	Cable Loss Factor	Preamp Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Limit dBuV/m	Over Limit dB	
1 2483.500	22.78	27.36	4.81	0.00	56.65	74.00	-17.35	Peak
2 2483.500	13.06	27.36	4.81	0.00	46.93	54.00	-7.07	Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



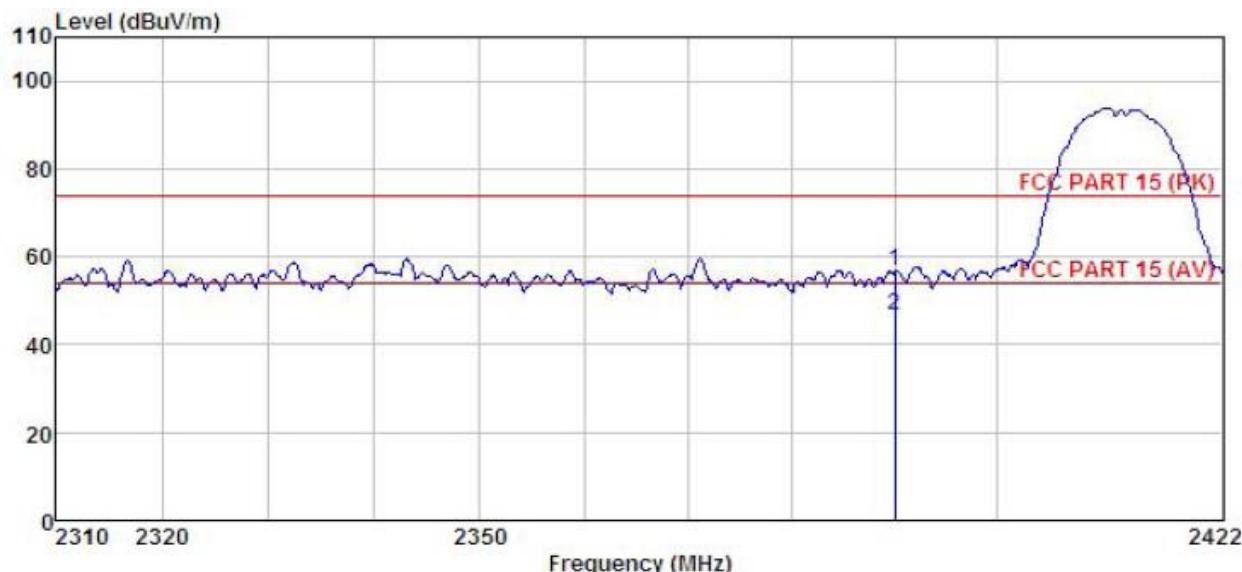
Freq	Read	Antenna	Cable	Preamp	Limit	Over	Line	Limit	Over
	Freq	Level	Factor	Loss					
MHz	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	dB
1	2483.500	22.83	27.35	4.81	0.00	56.69	74.00	-17.31	Peak
2	2483.500	13.11	27.35	4.81	0.00	46.97	54.00	-7.03	Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11b mode (Left module ANT 2):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

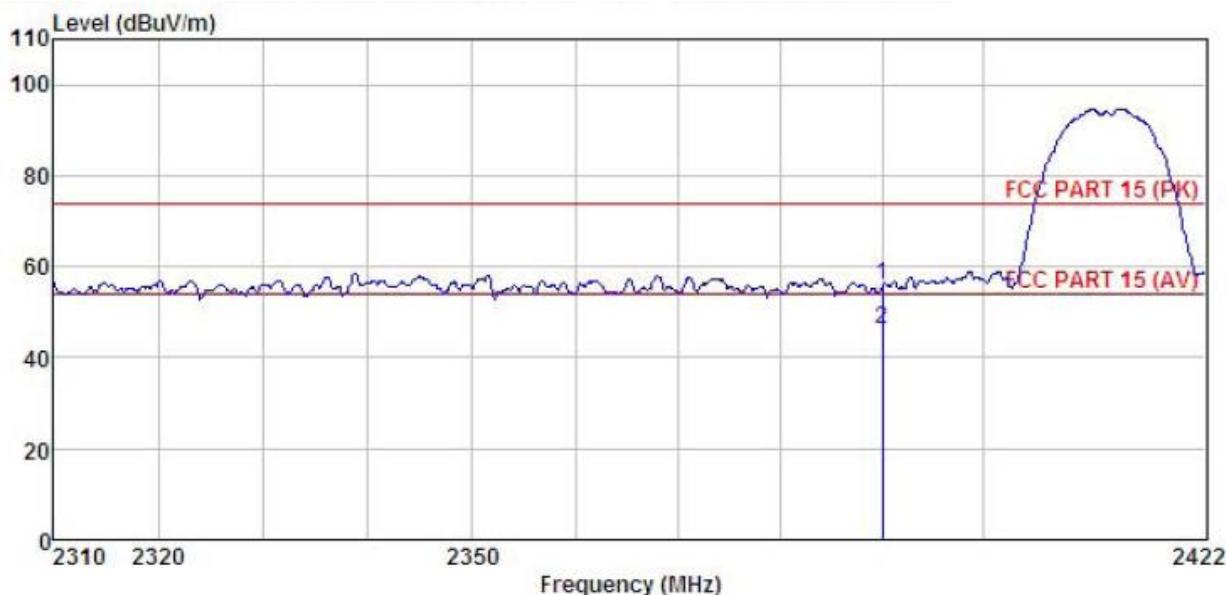


Freq	ReadAntenna	Cable	Preamp	Limit	Over	Line	Limit	Remark
	Level	Factor	Loss					
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 2390.000	23.47	27.07	4.69	0.00	56.91	74.00	-17.09	Peak
2 2390.000	13.12	27.07	4.69	0.00	46.56	54.00	-7.44	Average

## Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

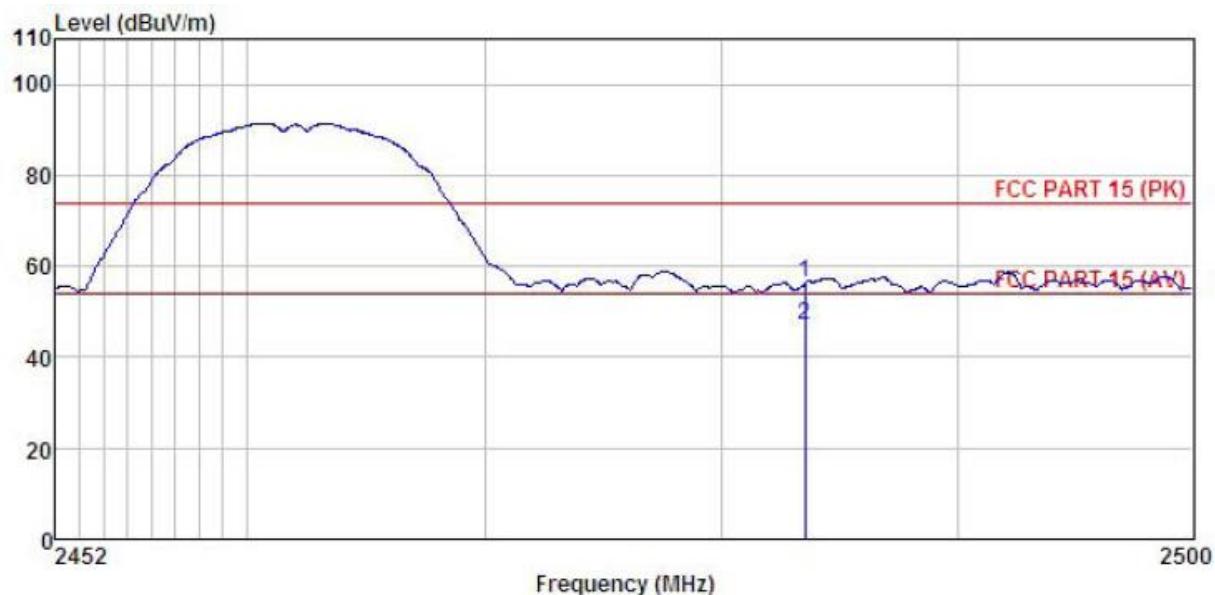


	ReadAntenna Freq	Cable Level Factor	Preamp Loss Factor	Limit Level	Line Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dB
1	2390.000	22.64	27.08	4.69	0.00	56.09 74.00 -17.91 Peak
2	2390.000	12.85	27.08	4.69	0.00	46.30 54.00 -7.70 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

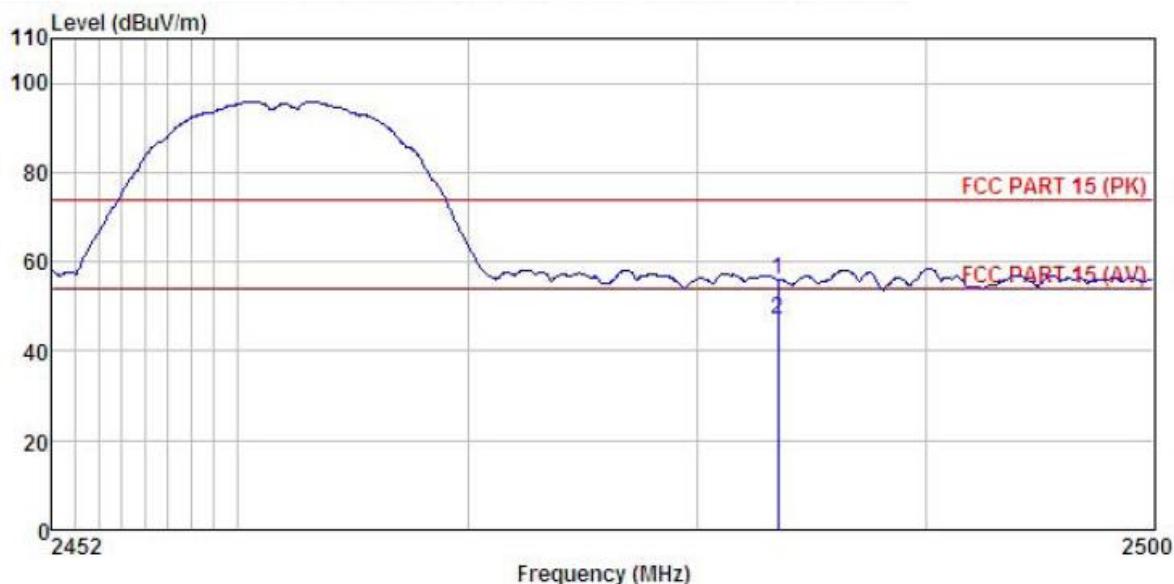


Freq MHz	Read	Antenna Level Factor	Cable Loss Factor	Preamp Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Limit dB	Remark
	Antenna Level dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	dB	
1 2483.500	22.48	27.36	4.81	0.00	56.35	74.00	-17.65	Peak
2 2483.500	13.21	27.36	4.81	0.00	47.08	54.00	-6.92	Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



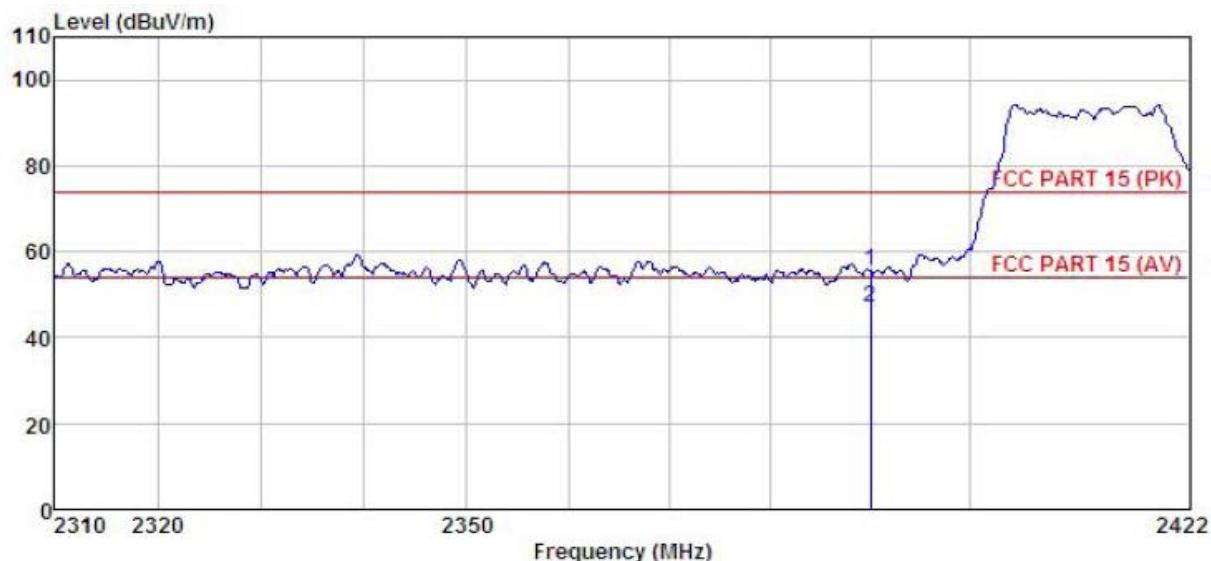
	ReadAntenna Freq		Cable Level	Preamp Factor	Limit Loss		Over Line Limit	Over Line Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	22.13	27.35	4.81	0.00	55.99	74.00	-18.01 Peak
2	2483.500	13.11	27.35	4.81	0.00	46.97	54.00	-7.03 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11g mode (Left module ANT 1):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

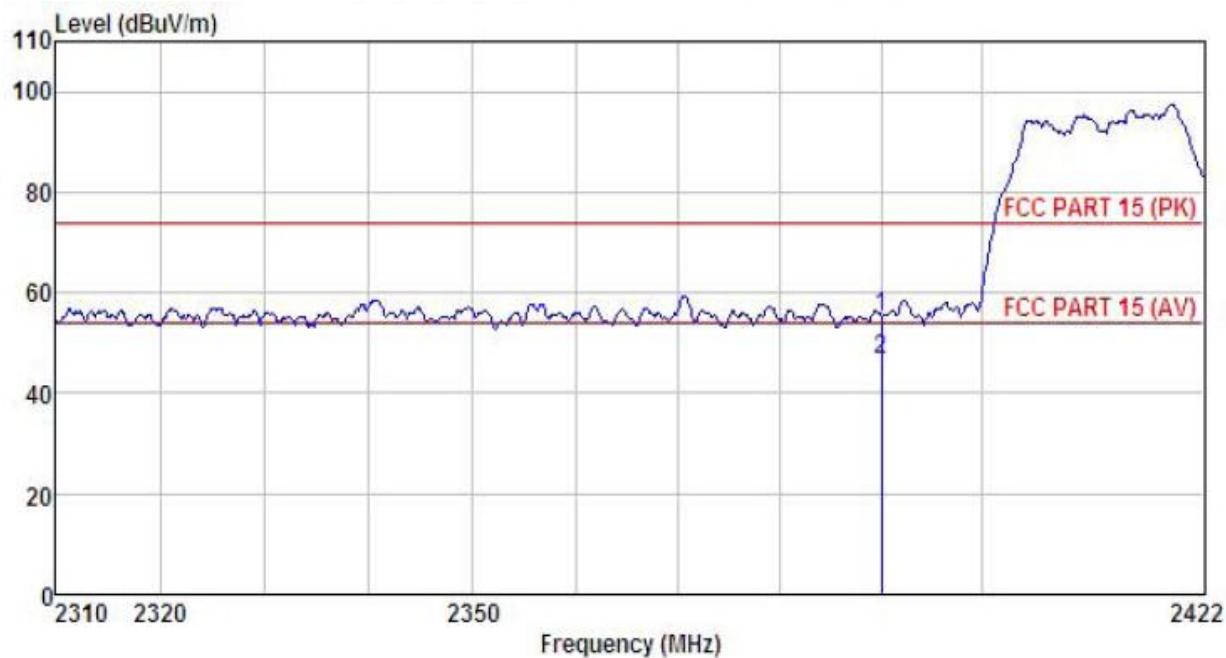


Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Line Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2390.000	22.17	27.07	4.69	0.00	55.61	74.00	-18.39 Peak
2	2390.000	13.70	27.07	4.69	0.00	47.14	54.00	-6.86 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

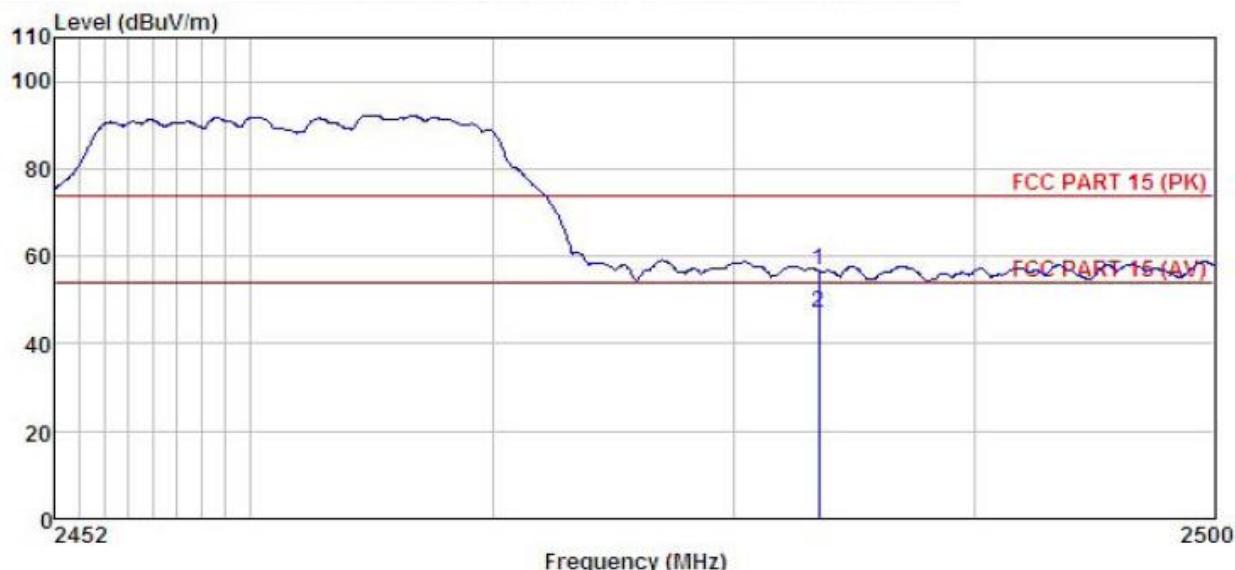


Freq MHz	Read	Antenna Level	Cable Loss	Preamp Factor	Line Level	Limit dBuV/m	Over Line dB	Over Limit dB	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 2390.000	21.77	27.08	4.69	0.00	55.22	74.00	-18.78	Peak	
2 2390.000	13.31	27.08	4.69	0.00	46.76	54.00	-7.24	Average	

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

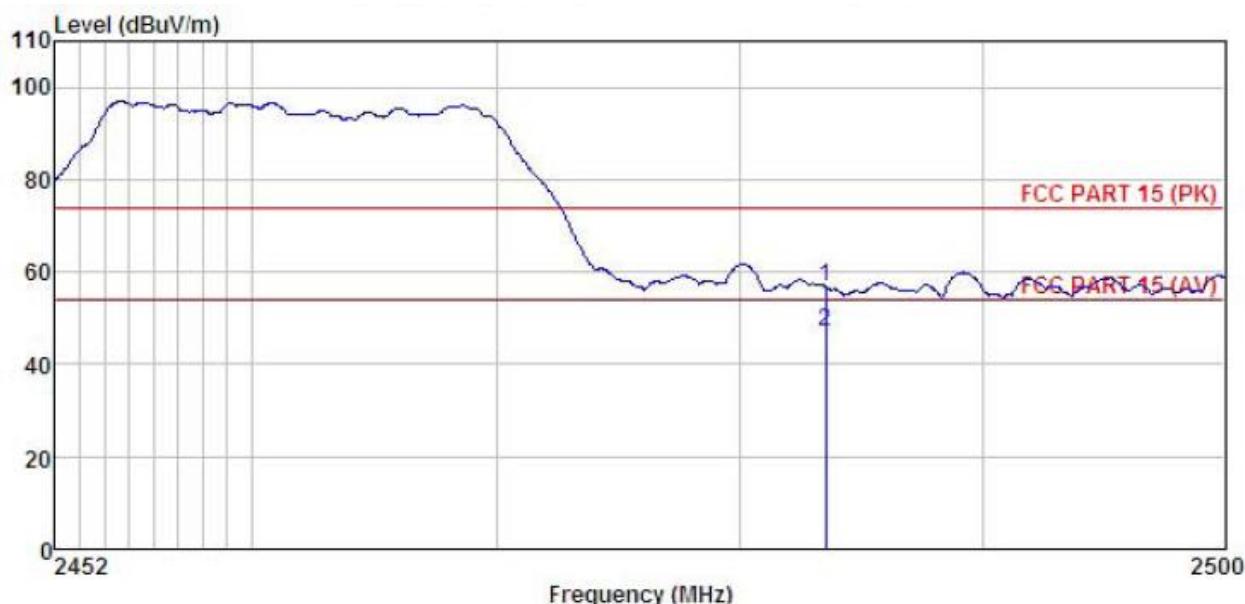


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	Freq	Level	Factor	Loss	Factor	Line	Line	
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	22.86	27.36	4.81	0.00	56.73	74.00	-17.27 Peak
2	2483.500	13.20	27.36	4.81	0.00	47.07	54.00	-6.93 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



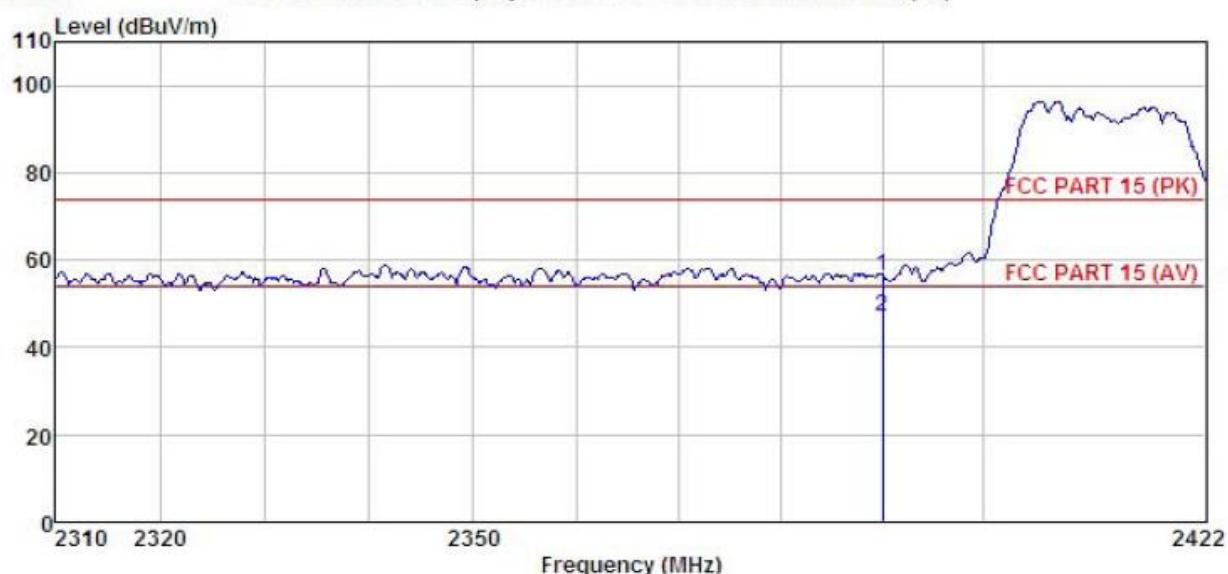
Freq	ReadAntenna		Cable Preamp		Limit	Over Line	Over Limit	Remark
	Freq	Level	Antenna Factor	Cable Loss				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	23.01	27.35	4.81	0.00	56.87	74.00	-17.13 Peak
2	2483.500	13.38	27.35	4.81	0.00	47.24	54.00	-6.76 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11g mode (Left module ANT 2):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

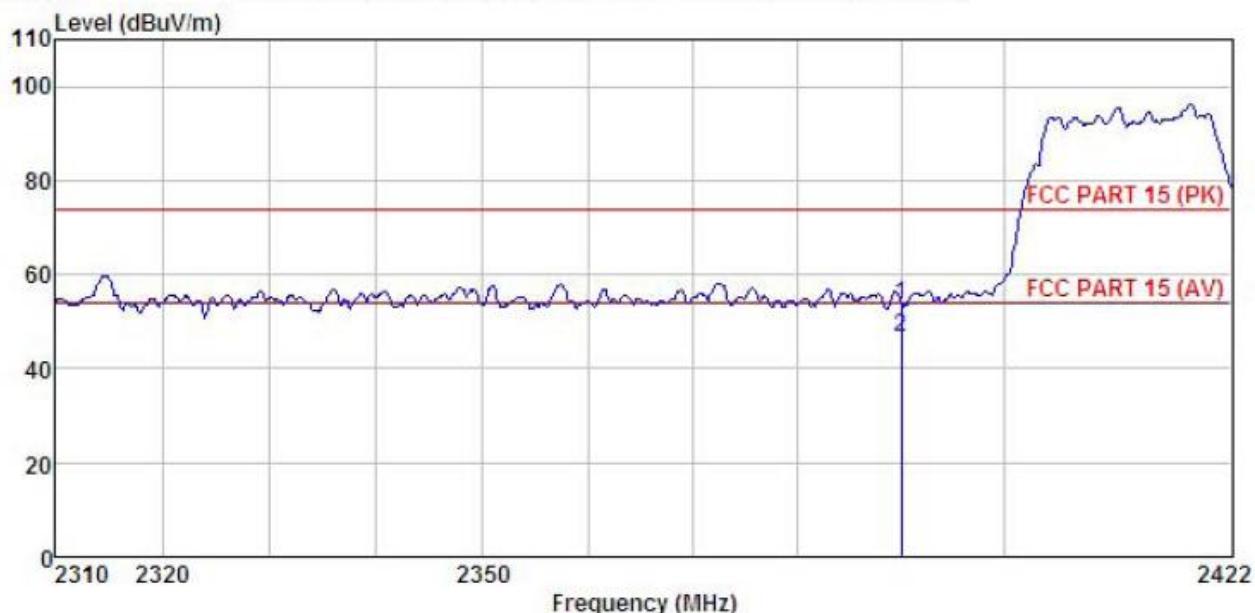


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	Level	Factor	Loss	Level				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	22.90	27.07	4.69	0.00	56.34	74.00	-17.66 Peak
2	2390.000	13.69	27.07	4.69	0.00	47.13	54.00	-6.87 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

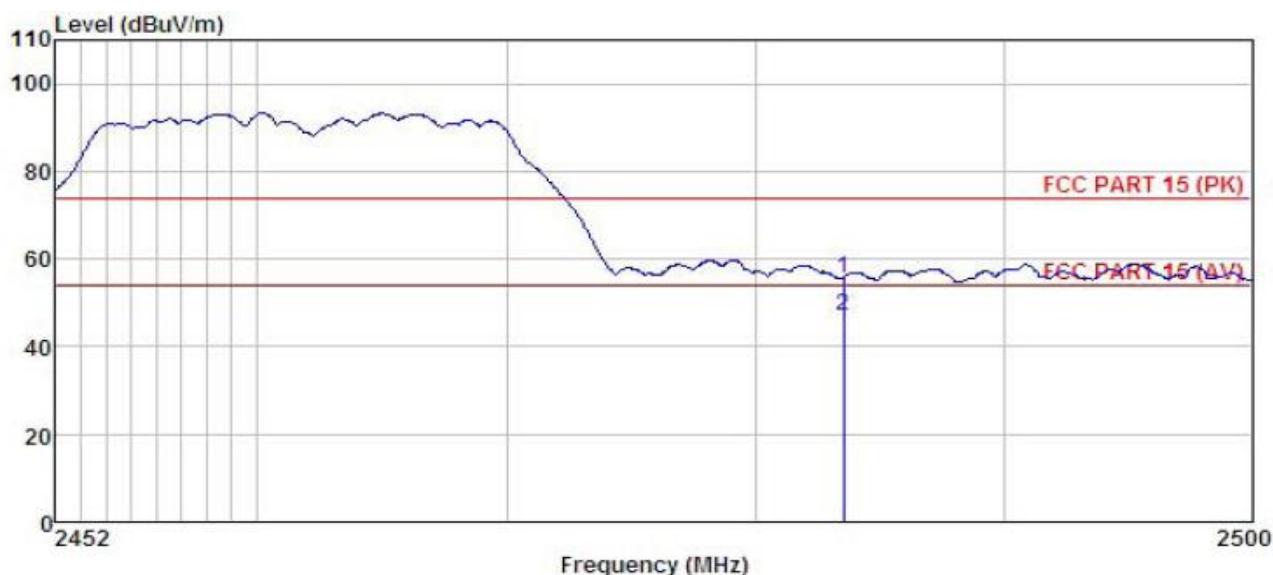


	Read	Antenna	Cable	Preamp		Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Line	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	20.33	27.08	4.69	0.00	53.78	74.00	-20.22 Peak
2	2390.000	13.40	27.08	4.69	0.00	46.85	54.00	-7.15 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

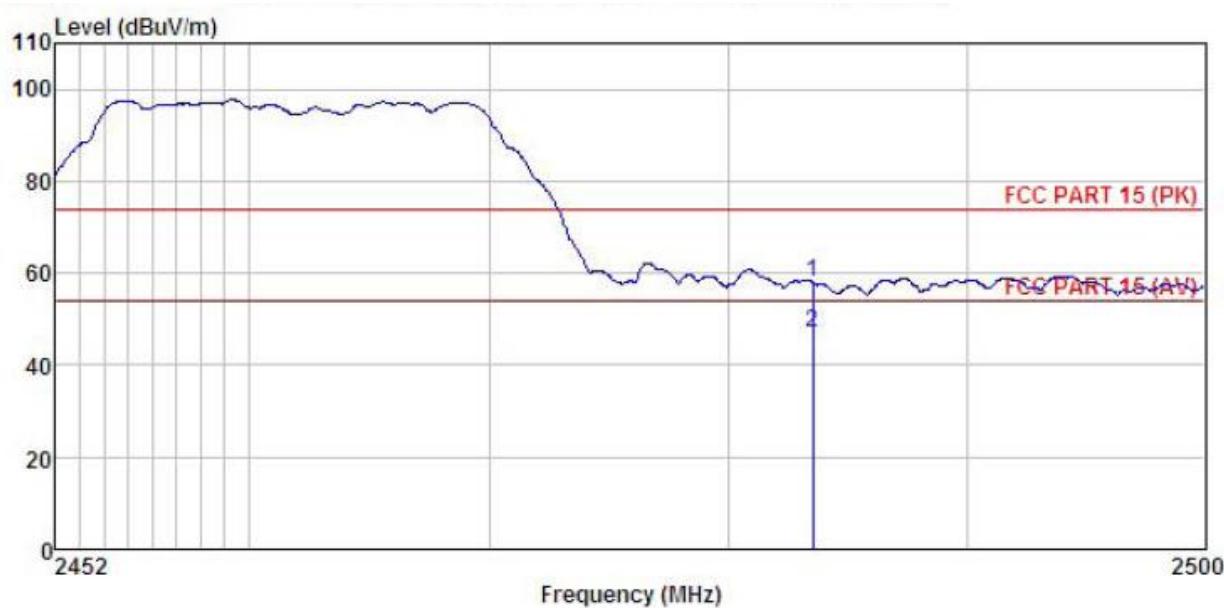


Freq	Read	Antenna	Cable	Preamp	Limit	Line	Over	Remark
	Freq	Level	Factor	Loss				
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	21.87	27.36	4.81	0.00	55.74	74.00	-18.26 Peak
2	2483.500	13.21	27.36	4.81	0.00	47.08	54.00	-6.92 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



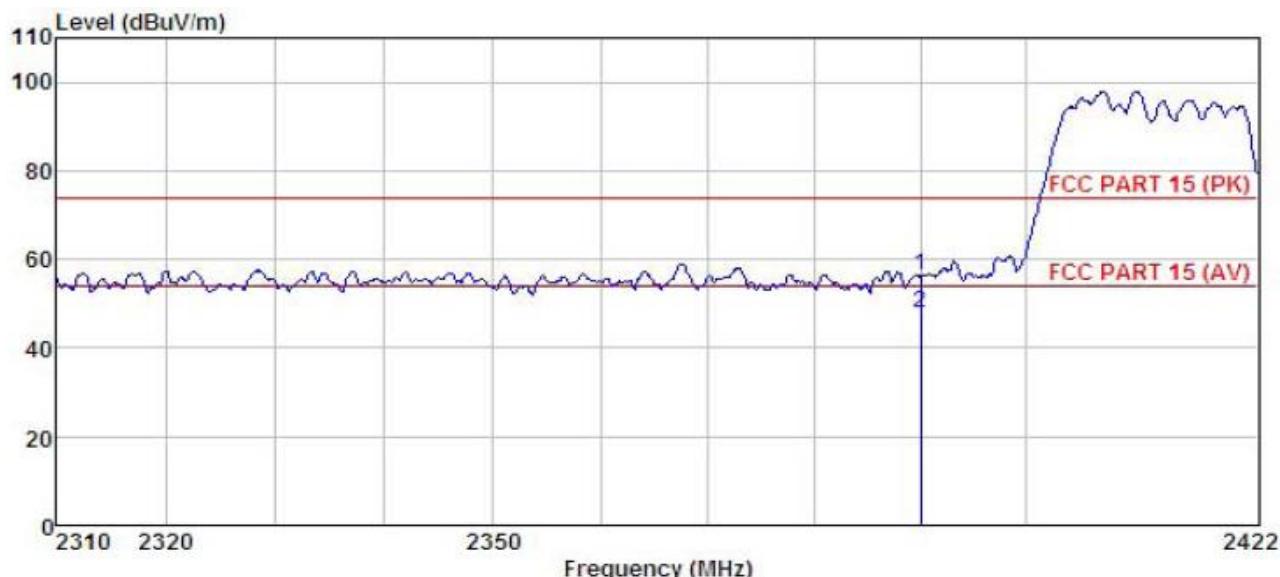
	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	24.17	27.35	4.81	0.00	58.03	74.00	-15.97 Peak
2	2483.500	13.40	27.35	4.81	0.00	47.26	54.00	-6.74 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11n20 mode (Left module):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

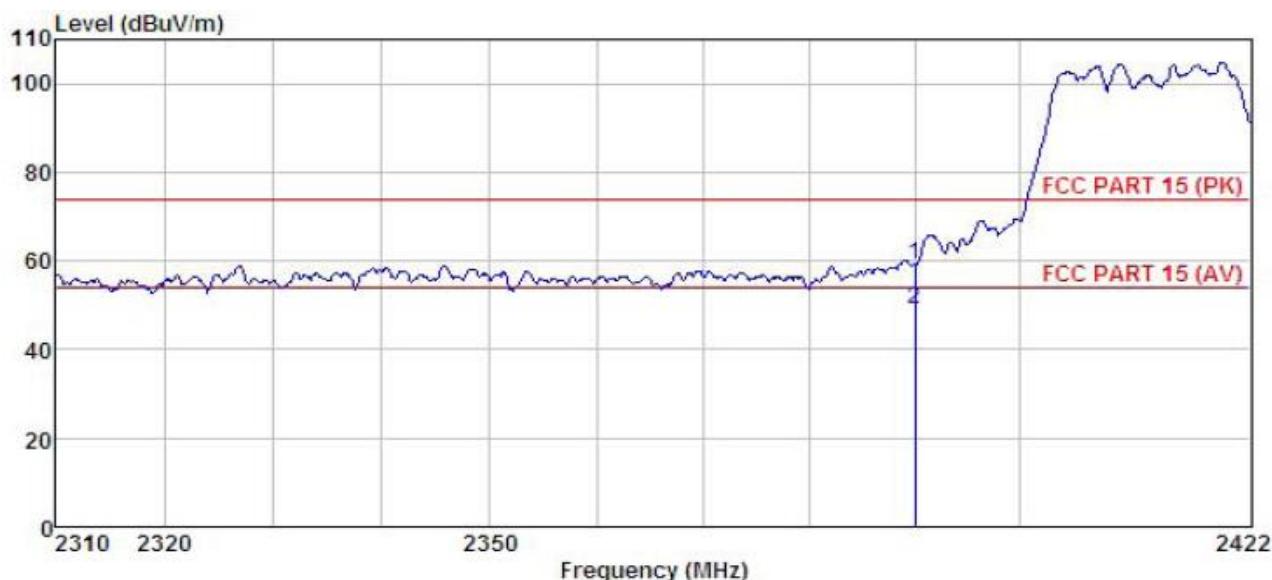


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	Freq	Level	Factor	Loss	Factor	Line		
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	22.79	27.07	4.69	0.00	56.23	74.00	-17.77 Peak
2	2390.000	14.47	27.07	4.69	0.00	47.91	54.00	-6.09 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

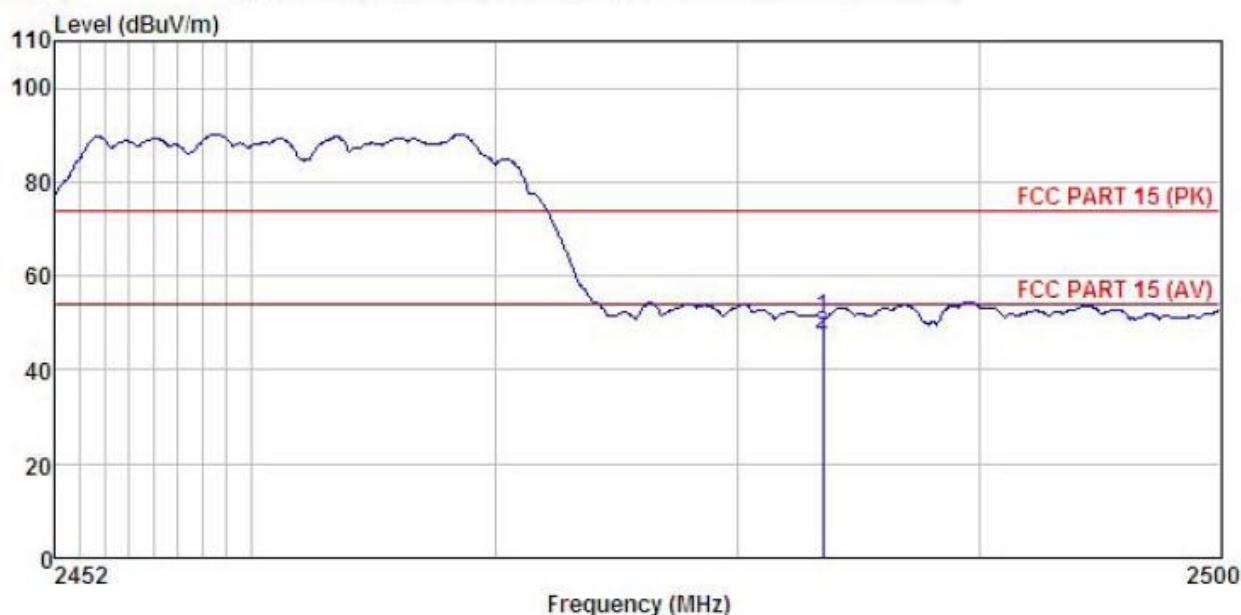


Freq MHz	ReadAntenna Level dBuV	Antenna Factor	Cable Loss dB	Preamp Level dB	dBuV/m	Limit Line dBuV/m	Over Line dB	Over Limit Remark
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2390.000	25.92	27.08	4.69	0.00	59.37	74.00	-14.63	Peak
2 2390.000	15.81	27.08	4.69	0.00	49.26	54.00	-4.74	Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

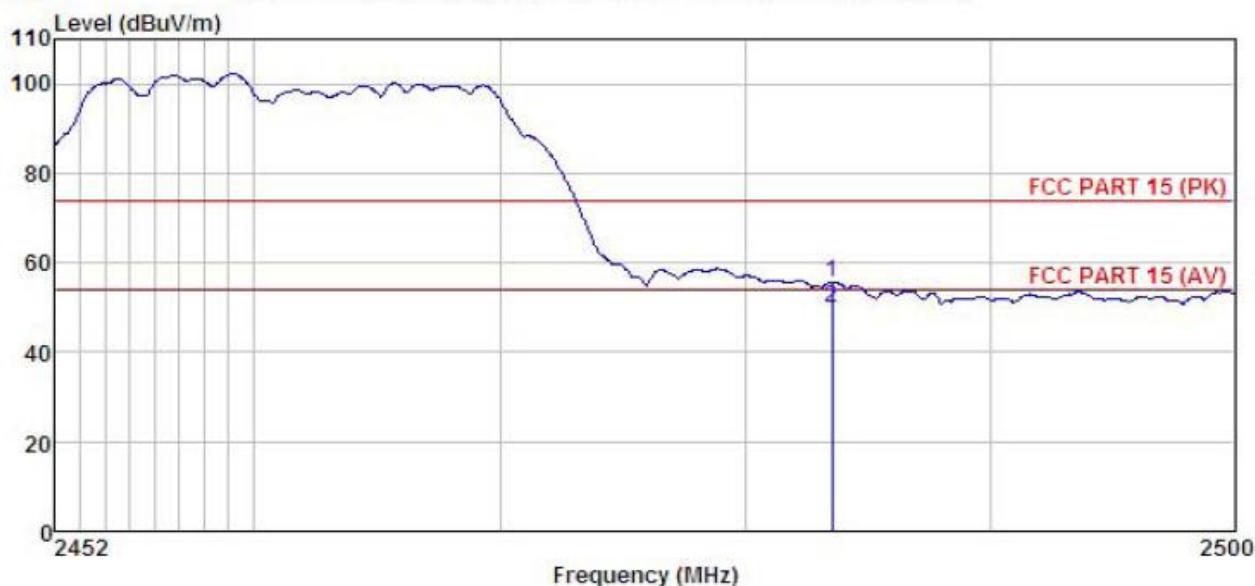


Freq	ReadAntenna		Cable Preamp		Limit	Over Line	Over Limit	Remark
	Level	Factor	Loss	Factor				
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	17.32	27.36	4.81	0.00	51.19	74.00	-22.81 Peak
2	2483.500	13.44	27.36	4.81	0.00	47.31	54.00	-6.69 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



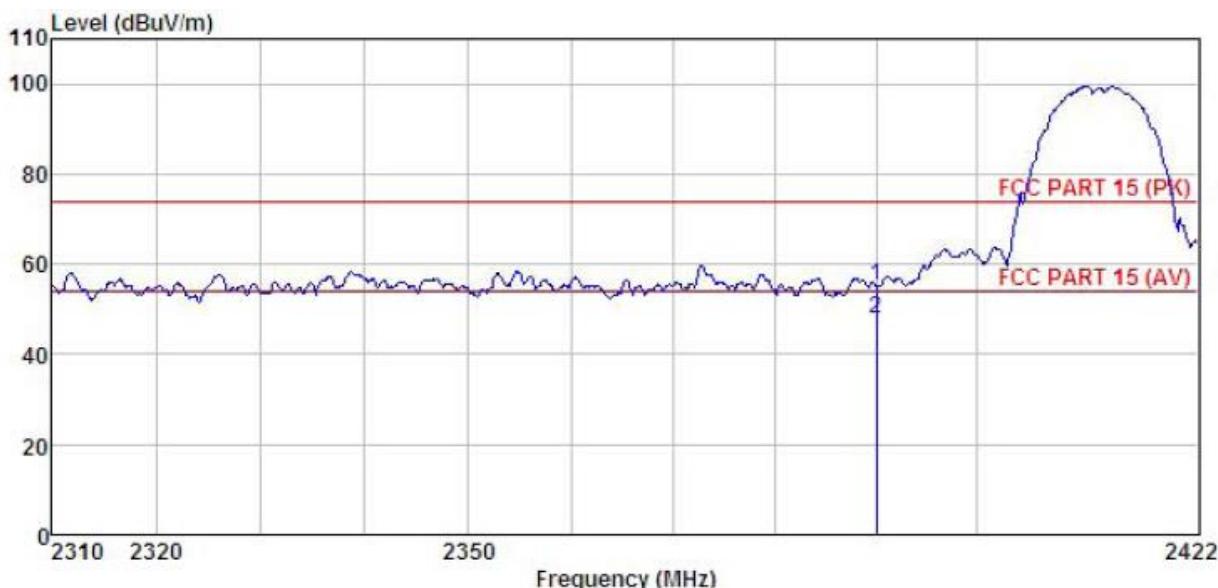
Freq	Read	Antenna	Cable	Preamp	Limit	Over	Line	Limit	Remark
	Freq	Level	Factor	Loss					
MHz	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	21.86	27.35	4.81	0.00	55.72	74.00	-18.28	Peak
2	2483.500	16.25	27.35	4.81	0.00	50.11	54.00	-3.89	Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11b mode (Right module ANT 3):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

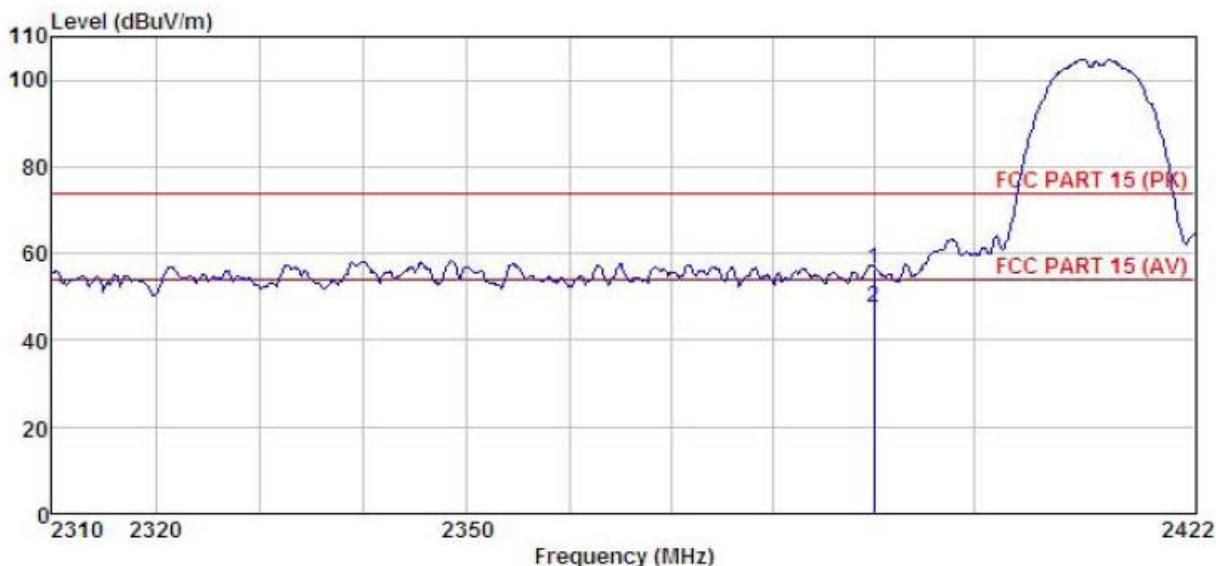


Freq	ReadAntenna Level	Cable Loss	Preamp Factor	Limit Level	Line Limit	Over Line	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1 2390.000	21.82	27.07	4.69	0.00	55.26	74.00	-18.74 Peak
2 2390.000	14.32	27.07	4.69	0.00	47.76	54.00	-6.24 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

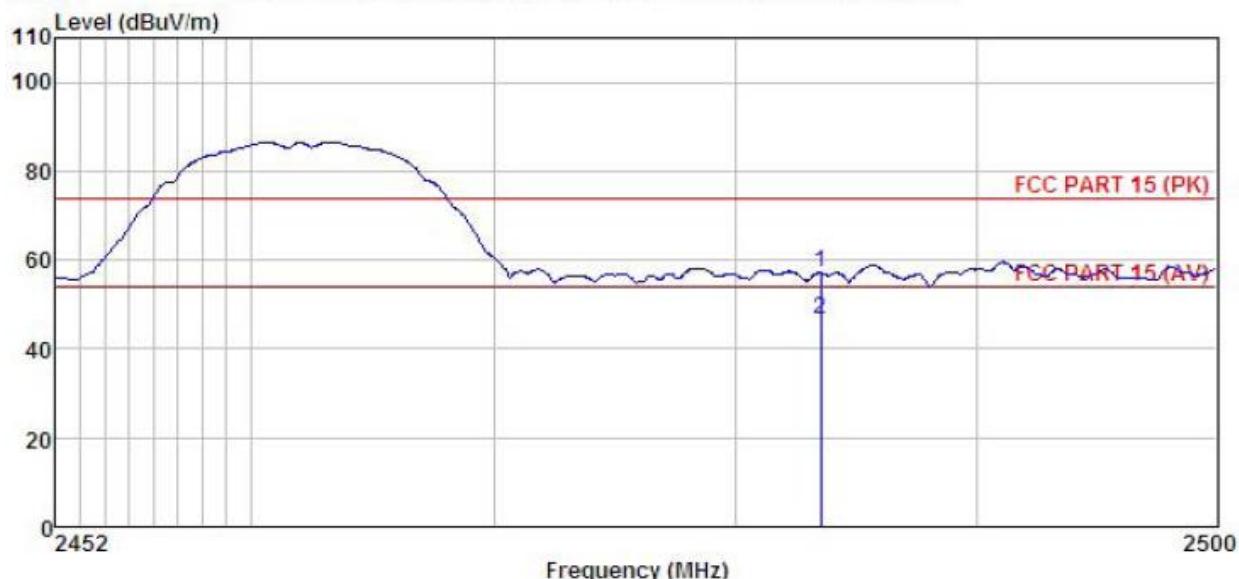


	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	23.10	27.08	4.69	0.00	56.55	74.00	-17.45 Peak
2	2390.000	13.99	27.08	4.69	0.00	47.44	54.00	-6.56 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

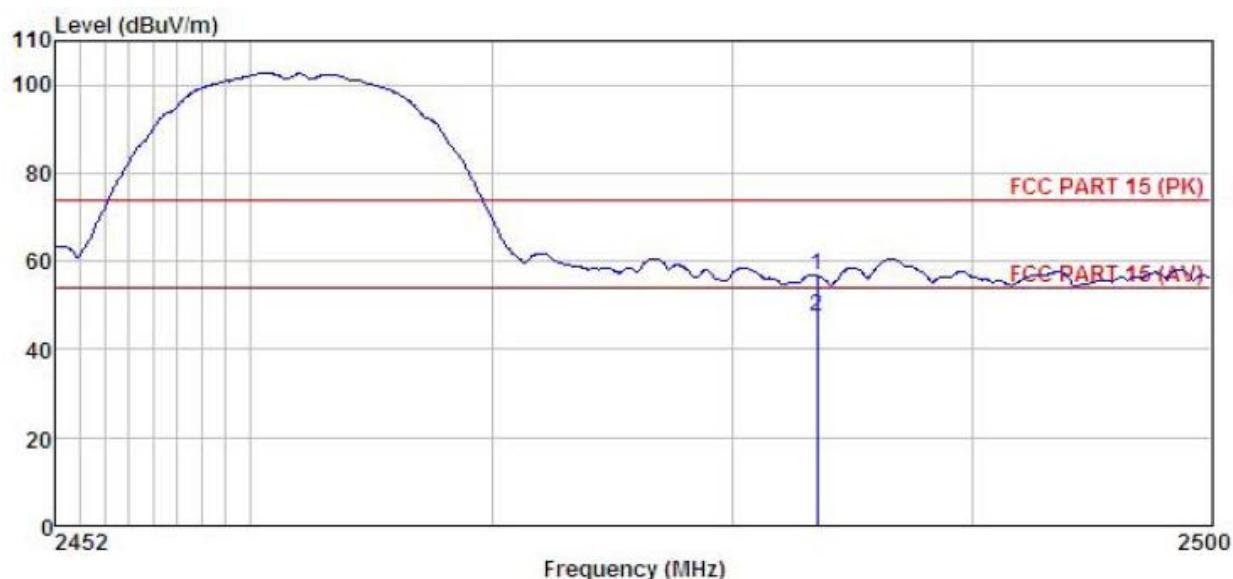


Freq MHz	Read	Antenna Level Factor	Cable Loss Factor	Preamp Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Line dB	Over Line Remark
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1 2483.500	23.19	27.36	4.81	0.00	57.06	74.00	-16.94	Peak
2 2483.500	12.99	27.36	4.81	0.00	46.86	54.00	-7.14	Average

## Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



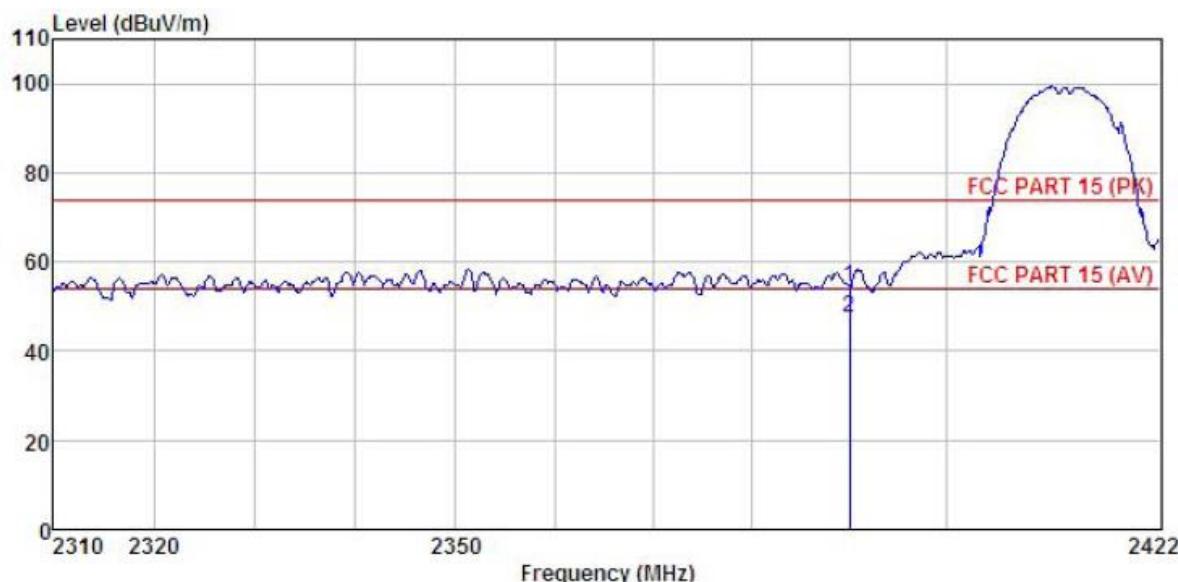
Freq	ReadAntenna	Cable	Preamp	Limit	Over	Remark		
	Freq	Level	Factor	Loss	Factor	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	22.83	27.35	4.81	0.00	56.69	74.00	-17.31 Peak
2	2483.500	13.46	27.35	4.81	0.00	47.32	54.00	-6.68 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11b mode (Right module ANT 4):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

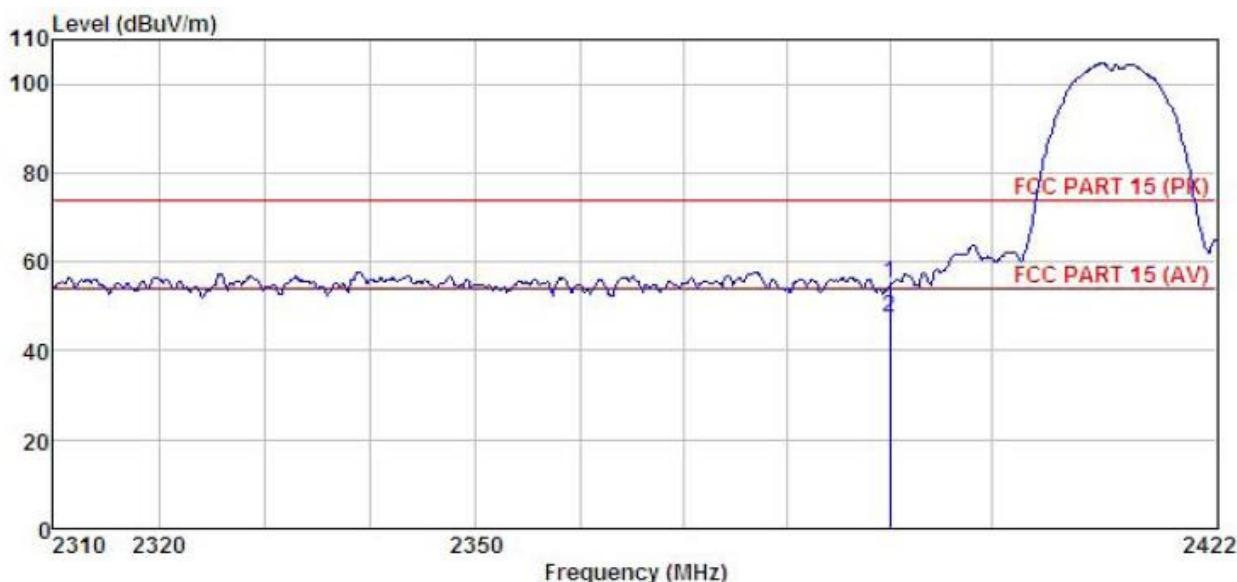


Freq	ReadAntenna Level	Cable Loss	Preamp Factor	Limit Level	Line Limit	Over Line Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	20.94	27.07	4.69	0.00	54.38	74.00 -19.62 Peak
2	2390.000	14.06	27.07	4.69	0.00	47.50	54.00 -6.50 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

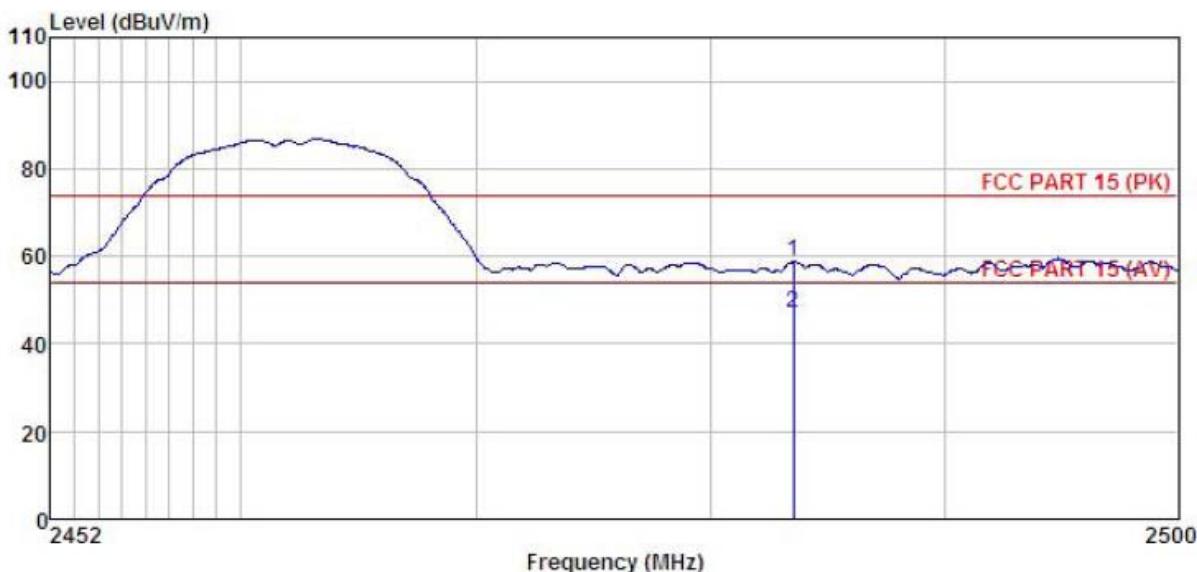


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	Freq	Level	Factor	Loss	Factor	Line		
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	21.70	27.08	4.69	0.00	55.15	74.00	-18.85 Peak
2	2390.000	13.87	27.08	4.69	0.00	47.32	54.00	-6.68 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

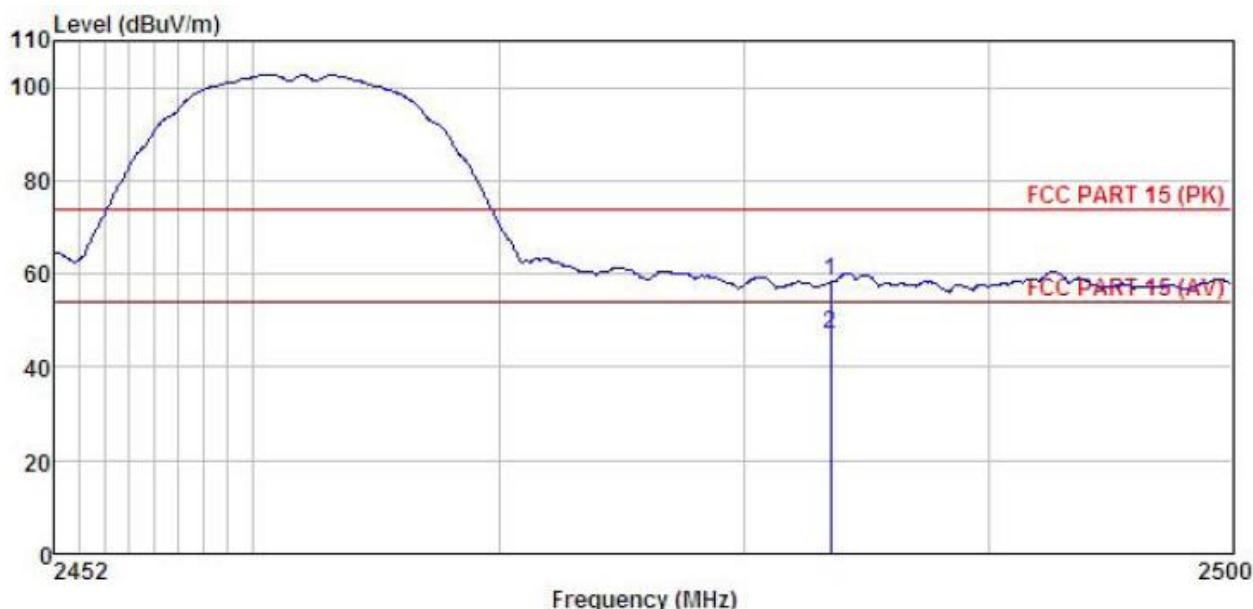


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	Freq	Level	Factor	Loss	Factor	Level	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	24.86	27.36	4.81	0.00	58.73	74.00 -15.27 Peak
2	2483.500	13.10	27.36	4.81	0.00	46.97	54.00 -7.03 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11b Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



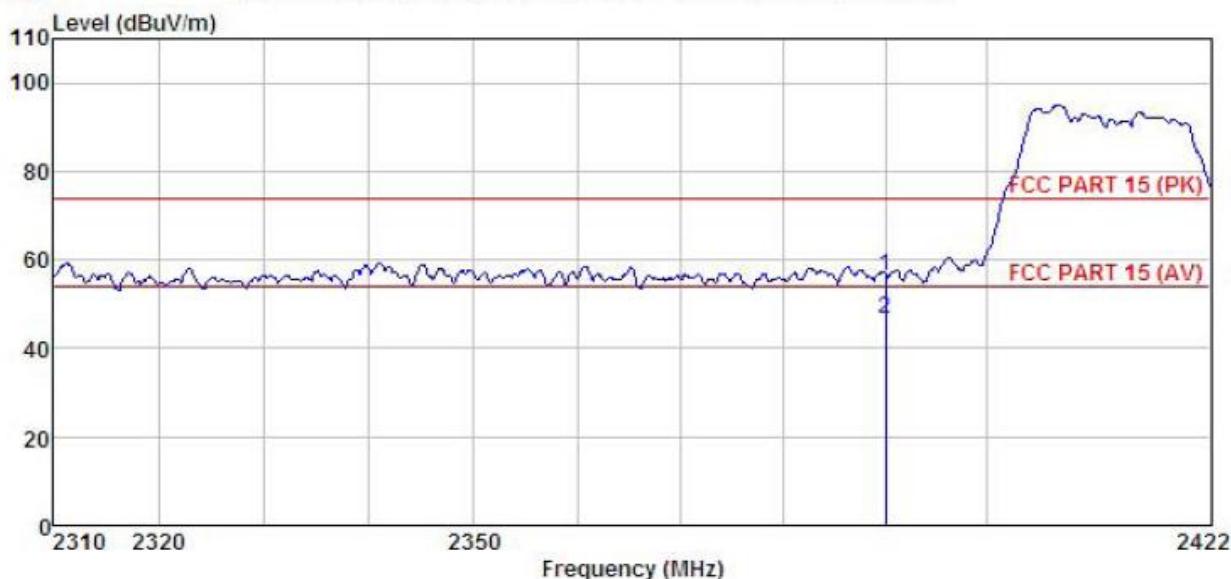
Freq MHz	Read	Antenna Level Factor	Cable Loss Factor	Preamp Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Limit dB	Remark
	Antenna Level dBuV	Cable Loss dB/m	Preamp Level dB	Final Level dBuV/m				
1 2483.500	24.43	27.35	4.81	0.00	58.29	74.00	-15.71	Peak
2 2483.500	13.35	27.35	4.81	0.00	47.21	54.00	-6.79	Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11g mode (Right module ANT 3):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

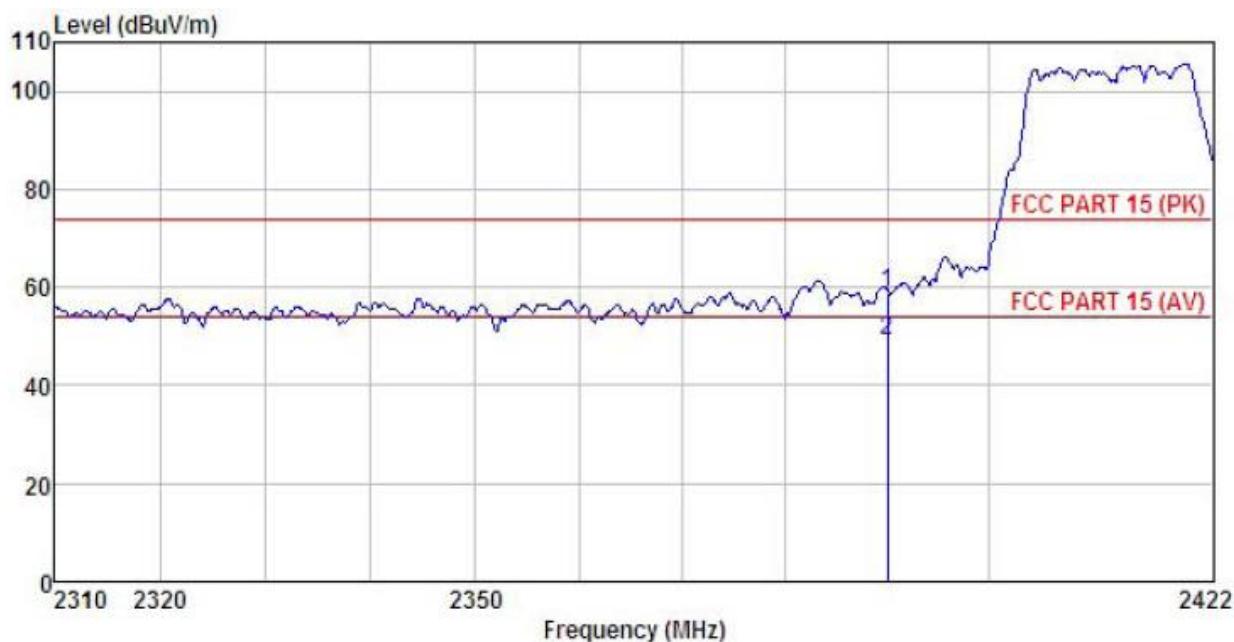


Freq MHz	ReadAntenna Level	Cable Loss Factor	Preamp Level	Limit Line	Over Line Limit	Remark
	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB
1 2390.000	23.13	27.07	4.69	0.00	56.57	74.00 -17.43 Peak
2 2390.000	13.36	27.07	4.69	0.00	46.80	54.00 -7.20 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

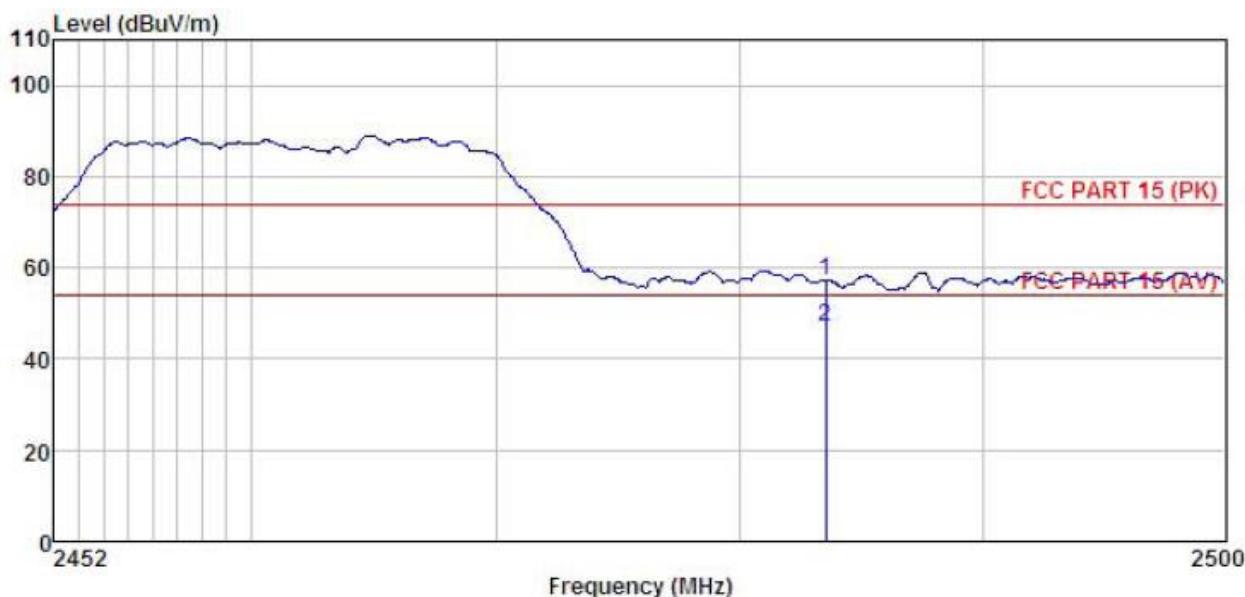


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	Freq	Level	Factor	Loss	Factor	Line	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	25.50	27.08	4.69	0.00	58.95	74.00 -15.05 Peak
2	2390.000	15.59	27.08	4.69	0.00	49.04	54.00 -4.96 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

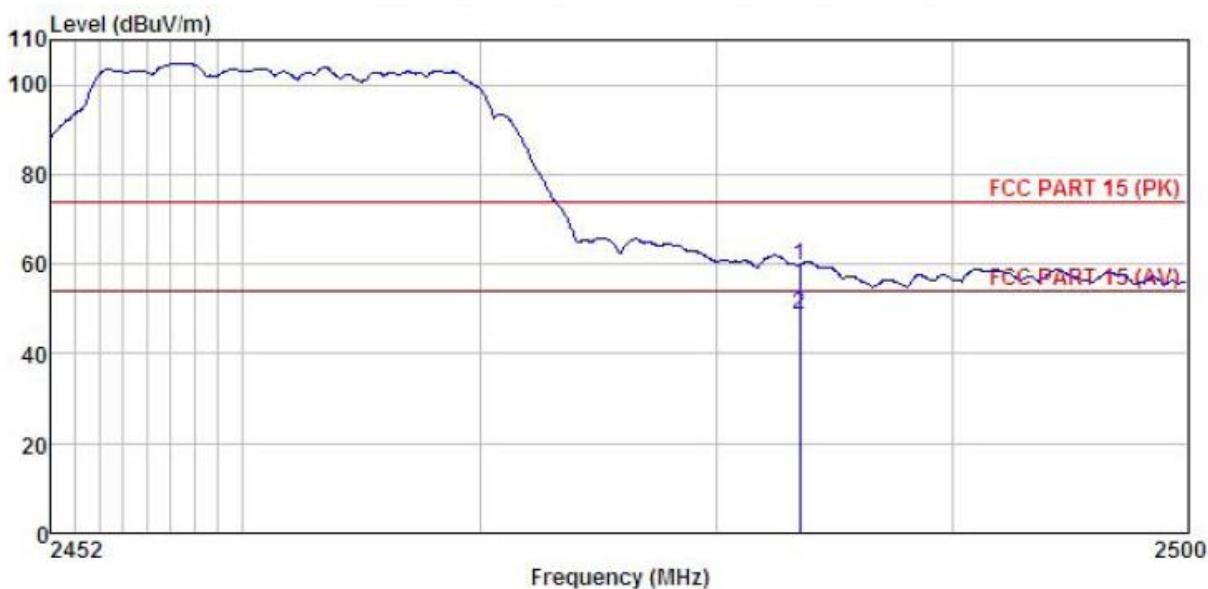


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	Freq	Level	Factor	Loss	Factor	Line		
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	23.55	27.36	4.81	0.00	57.42	74.00	-16.58 Peak
2	2483.500	13.24	27.36	4.81	0.00	47.11	54.00	-6.89 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



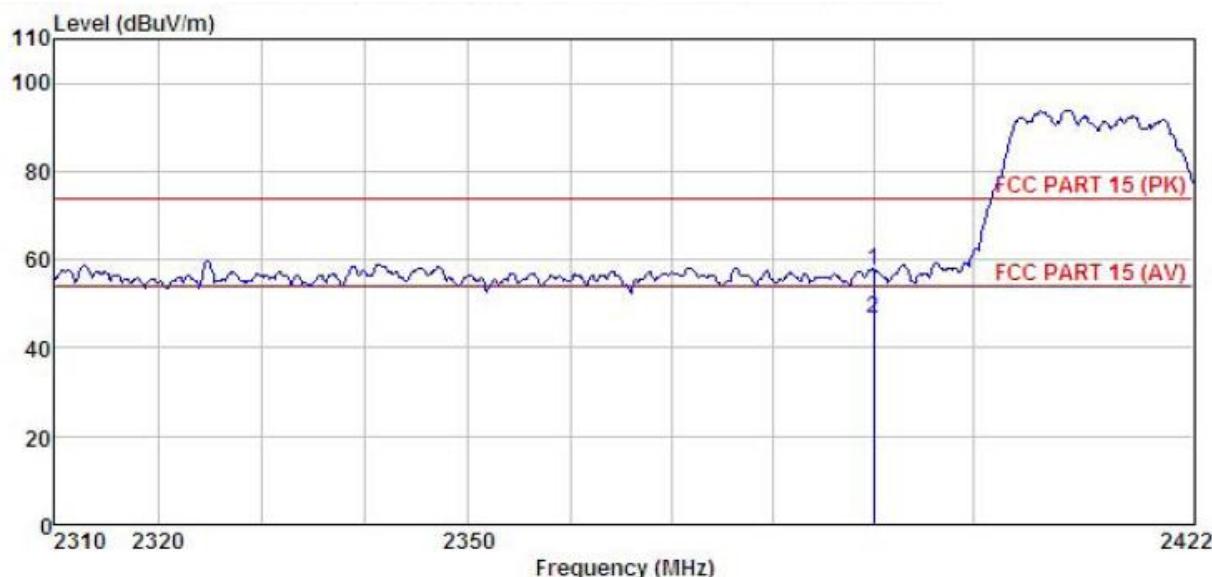
Freq MHz	Read	Antenna Level dBuV	Cable Loss dB	Preamp Factor dB	Limit Line dBuV/m	Over Line Limit dB	Over Limit Remark
	Freq MHz	Antenna Level dBuV/m	Cable Loss dB	Preamp Factor dB	Limit Line dBuV/m	Over Line Limit dB	Remark
1 2483.500	25.88	27.35	4.81	0.00	59.74	74.00	-14.26 Peak
2 2483.500	14.90	27.35	4.81	0.00	48.76	54.00	-5.24 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11g mode (Right module ANT 4):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

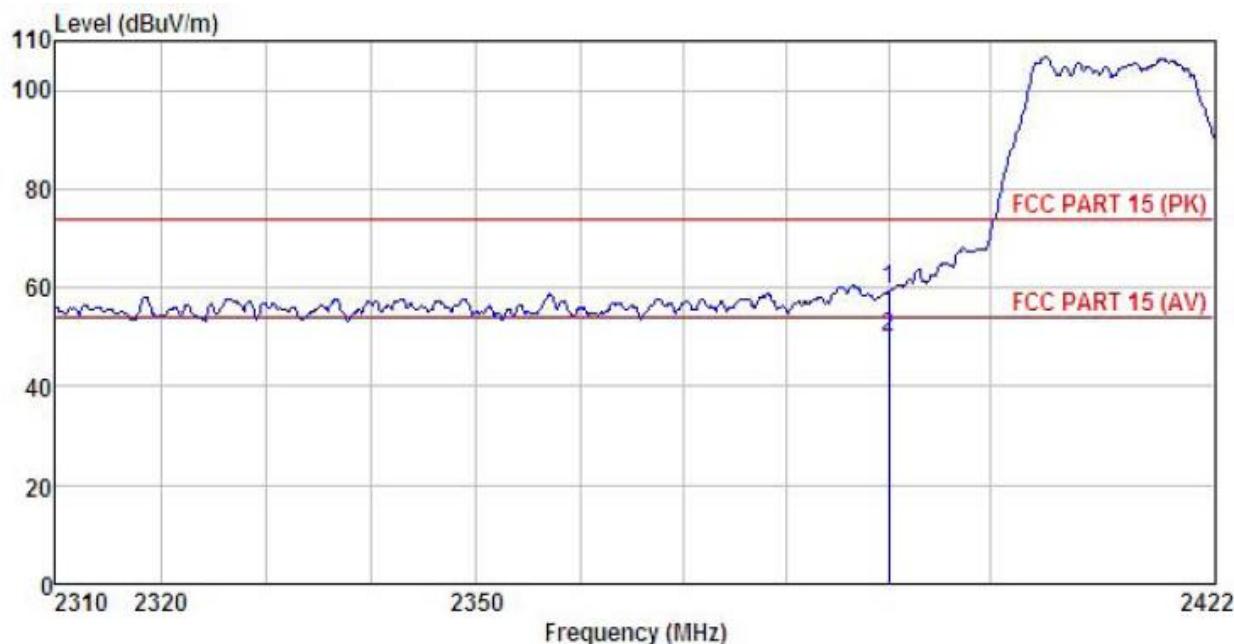


Freq	ReadAntenna		Cable Preamp		Limit Line	Over Line	Remark
	Freq	Level Factor	Cable Loss	Preamp Factor			
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	24.15	27.07	4.69	0.00	57.59	74.00 -16.41 Peak
2	2390.000	13.38	27.07	4.69	0.00	46.82	54.00 -7.18 Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

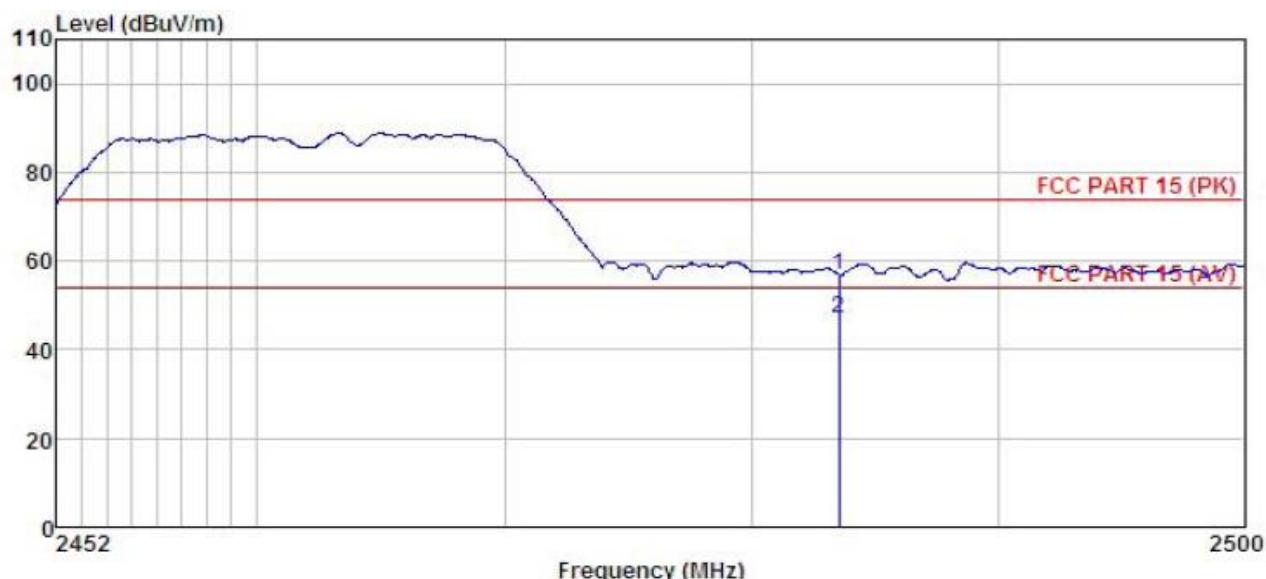


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark	
	MHz	Level	Factor	Loss	Level	Line		
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2390.000	26.07	27.08	4.69	0.00	59.52	74.00	-14.48 Peak
2	2390.000	16.46	27.08	4.69	0.00	49.91	54.00	-4.09 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

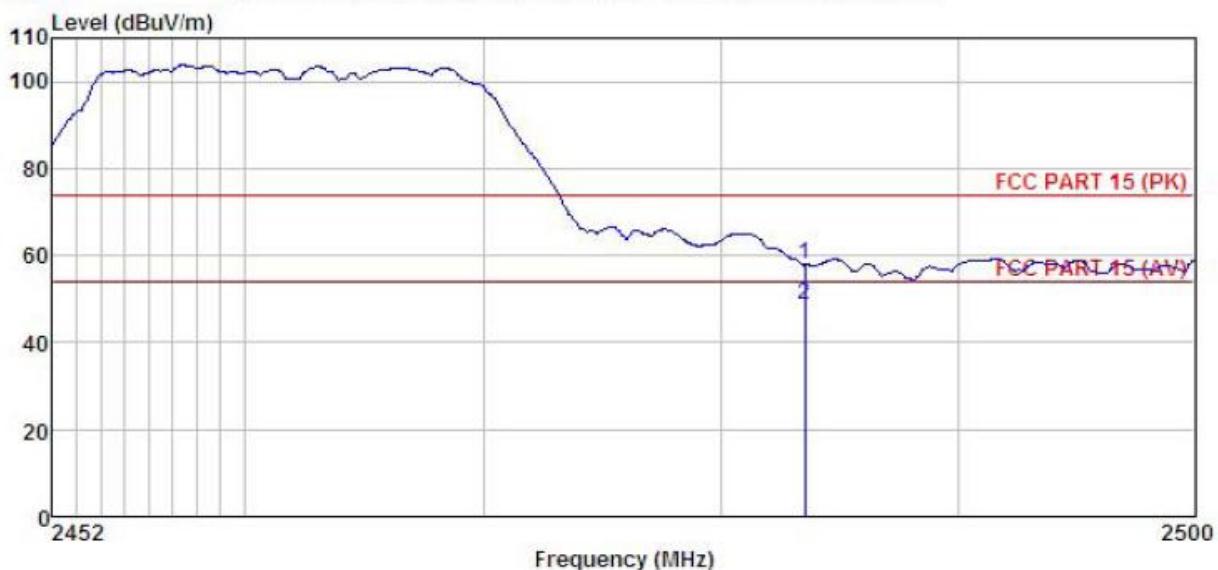


Freq	Read	Antenna	Cable	Preamp	Limit	Over	Line	Limit	Over
	Freq	Level	Factor	Loss					
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	dB
1	2483.500	23.14	27.36	4.81	0.00	57.01	74.00	-16.99	Peak
2	2483.500	13.09	27.36	4.81	0.00	46.96	54.00	-7.04	Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11g Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



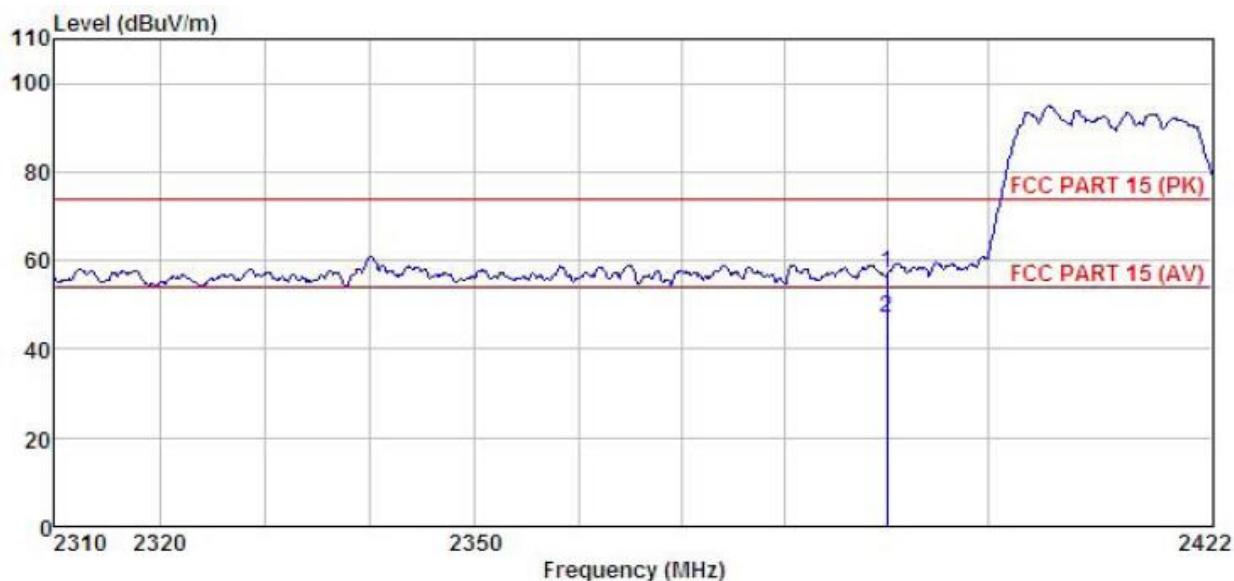
	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	2483.500	24.05	27.35	4.81	0.00	57.91	74.00	-16.09 Peak
2	2483.500	14.89	27.35	4.81	0.00	48.75	54.00	-5.25 Average

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 802.11n20 mode (Right module):

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

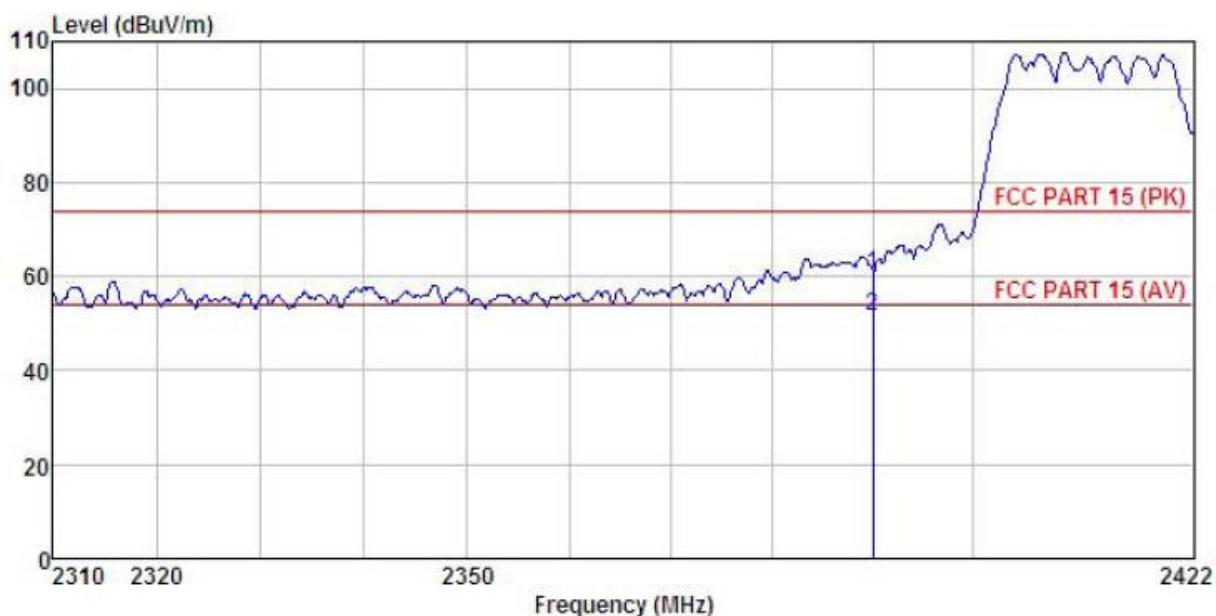


Freq	Read	Antenna	Cable	Preamp	Limit	Line	Over	Remark
	Freq	Level	Factor	Loss				
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 2390.000	23.78	27.07	4.69	0.00	57.22	74.00	-16.78	Peak
2 2390.000	13.62	27.07	4.69	0.00	47.06	54.00	-6.94	Average

## Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Lowest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

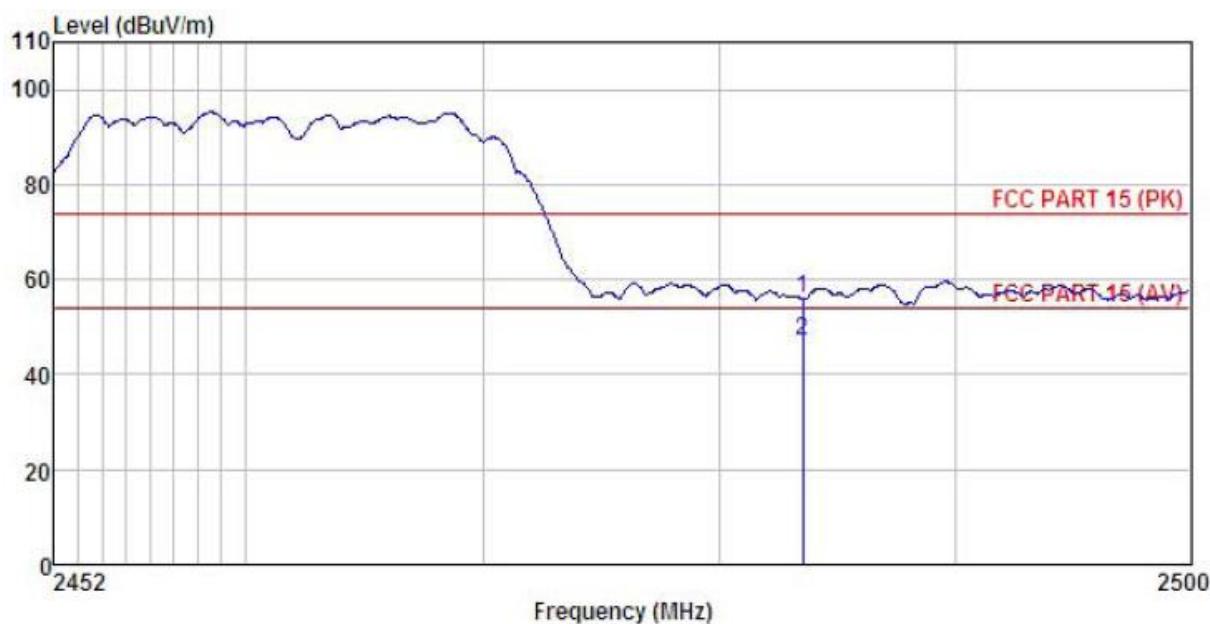


Freq MHz	Read	Antenna Level Factor	Cable Loss Factor	Preamp Level dB	Limit Line dBuV/m	Over Line dBuV/m	Over Line dB	Remark
	Antenna Level dBuV	Cable Loss dB/m	Preamp Level dB	Over Line dBuV/m				
1 2390.000	27.23	27.08	4.69	0.00	60.68	74.00	-13.32	Peak
2 2390.000	18.10	27.08	4.69	0.00	51.55	54.00	-2.45	Average

## Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

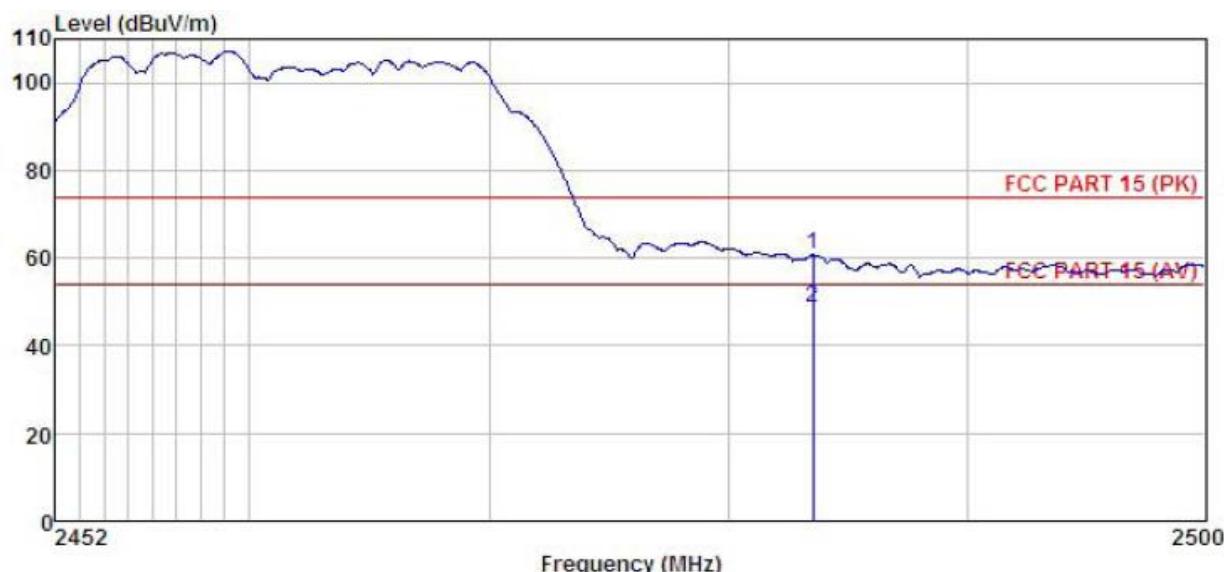


Freq	ReadAntenna		Cable Preamp		Limit Line	Over Limit	Remark
	Freq	Level Factor	Cable Loss Factor	Preamp Level			
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	2483.500	22.32	27.36	4.81	0.00	56.19	74.00 -17.81 Peak
2	2483.500	13.40	27.36	4.81	0.00	47.27	54.00 -6.73 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	802.11n(HT20) Tx mode
<b>Test Channel:</b>	Highest channel	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



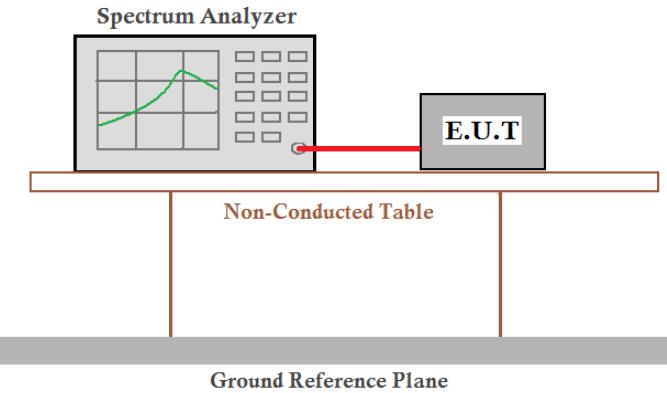
	ReadAntenna Freq	Cable Level Factor	Preamp Loss Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dB
1	2483.500	26.86	27.35	4.81	0.00	60.72	74.00 -13.28 Peak
2	2483.500	15.02	27.35	4.81	0.00	48.88	54.00 -5.12 Average

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

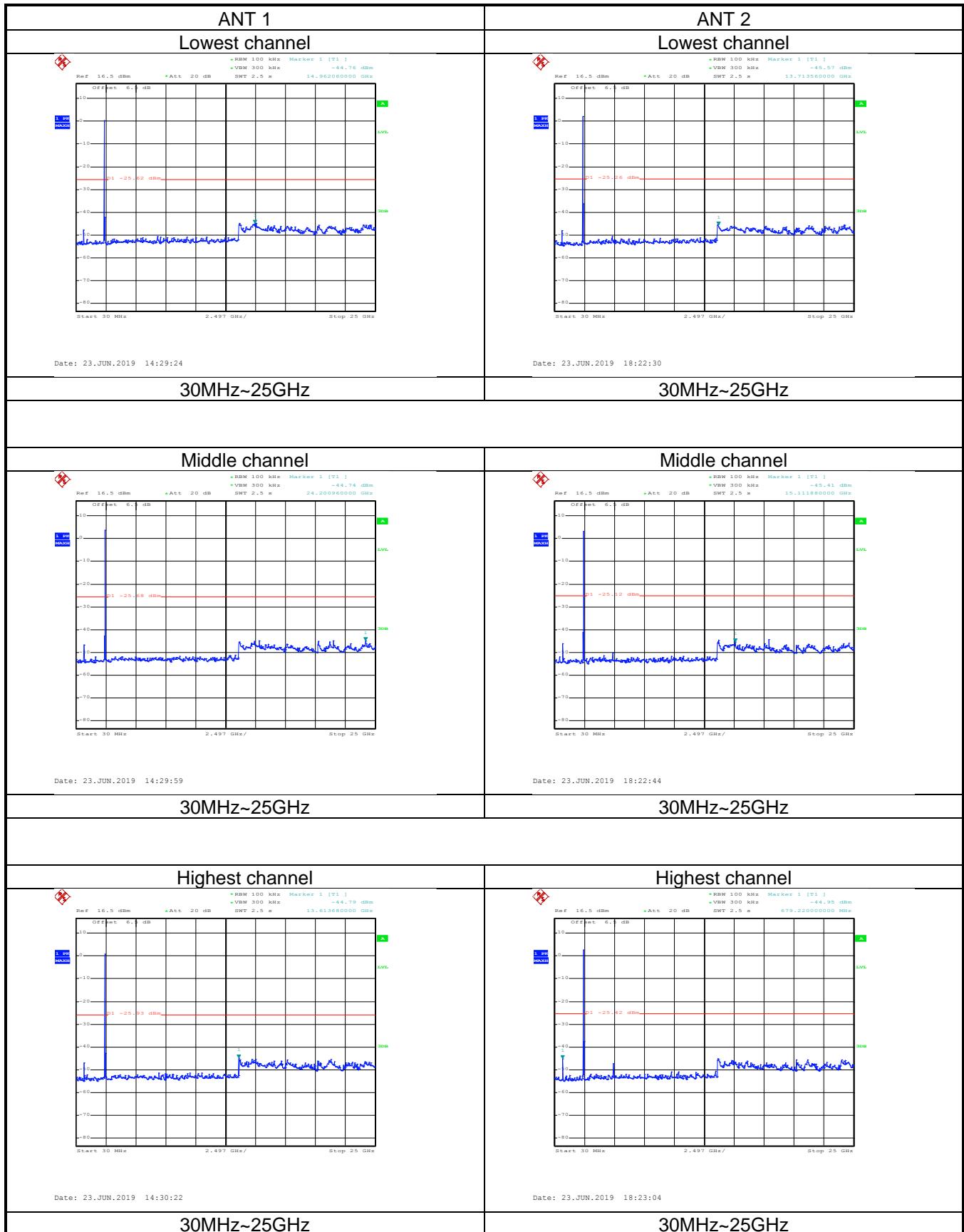
## 6.7 Spurious Emission

### 6.7.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
Test setup:	
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

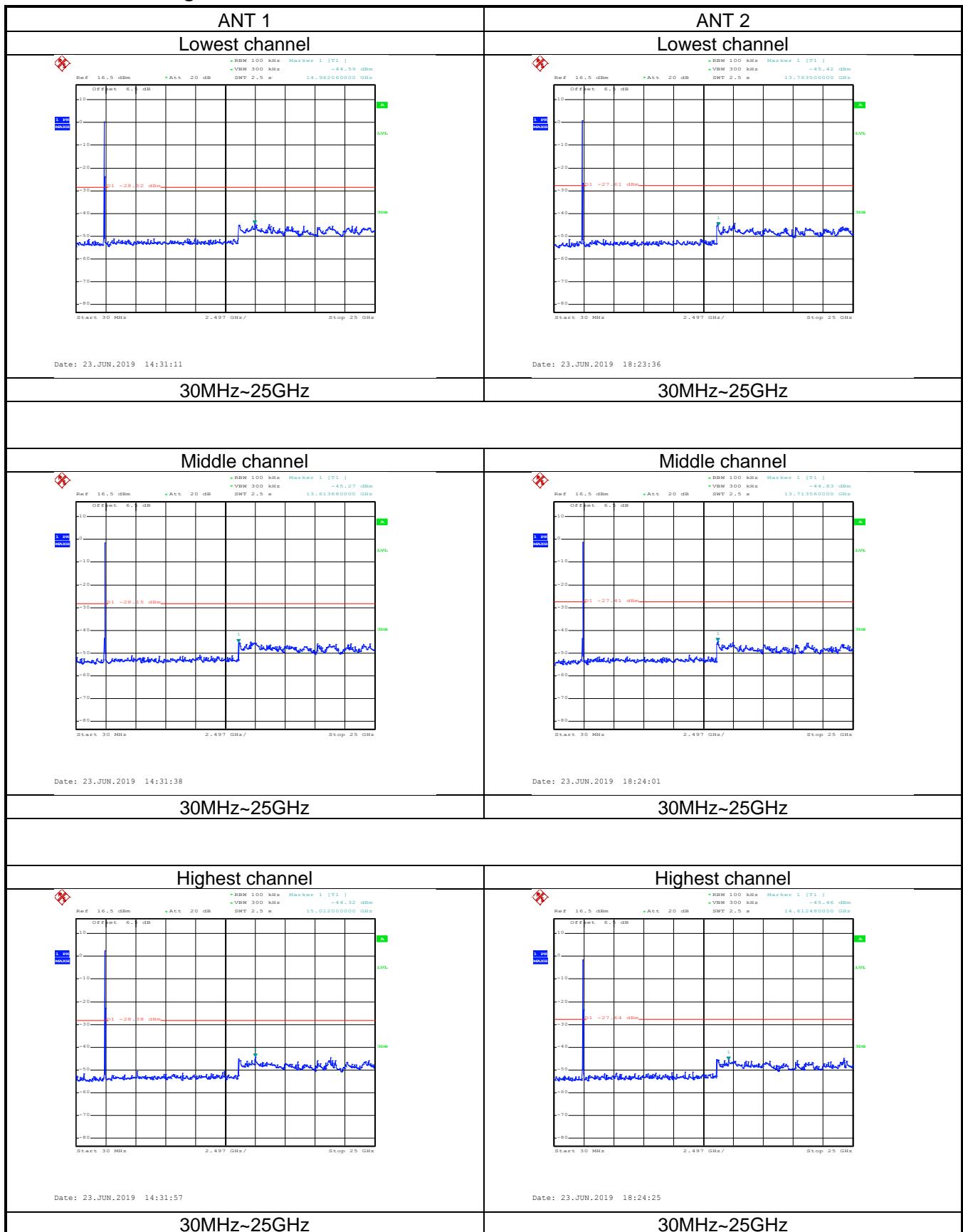
**Test plot as follows:**

**Left module 802.11b mode:**



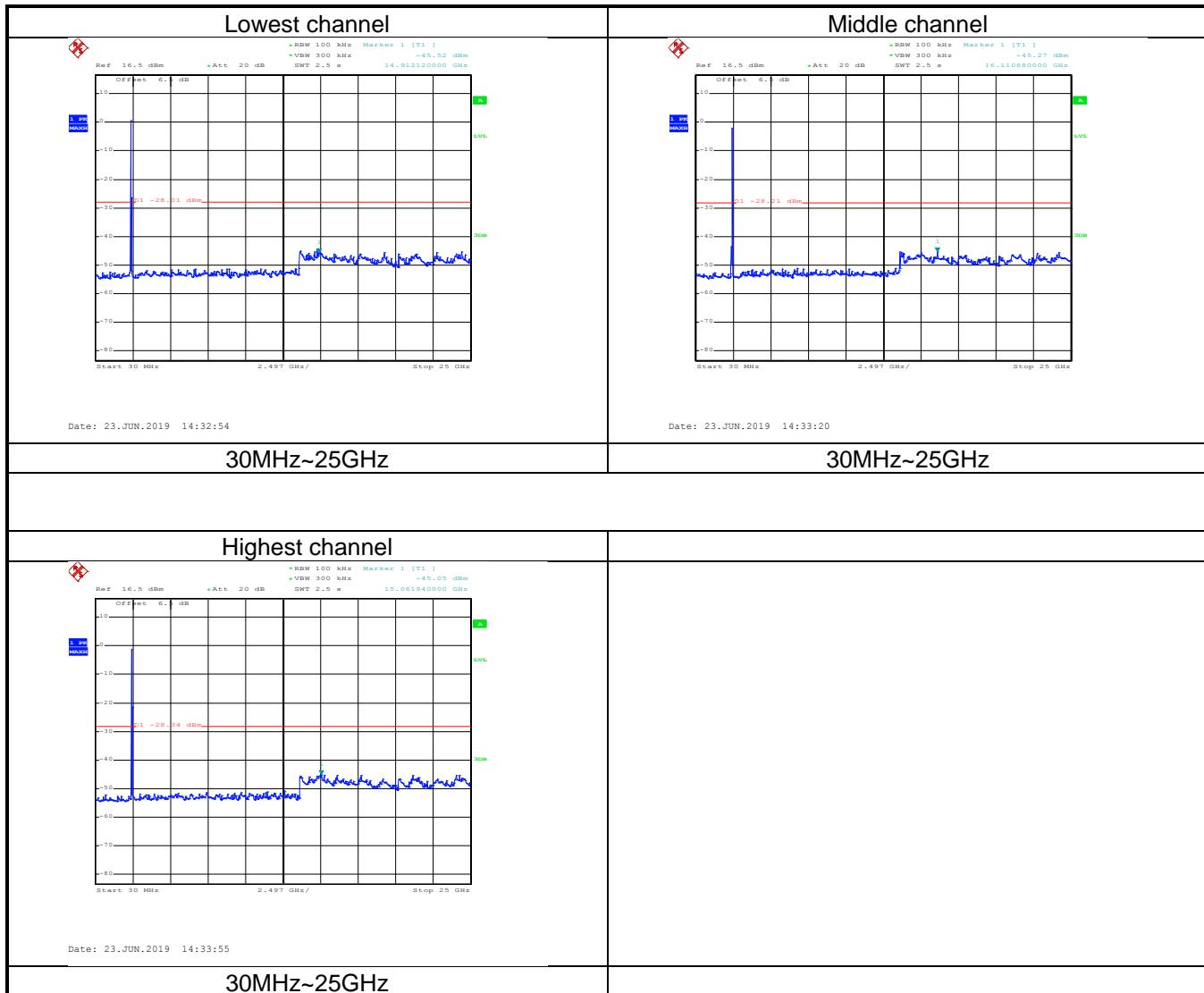
**Test plot as follows:**

**Left module 802.11g mode:**



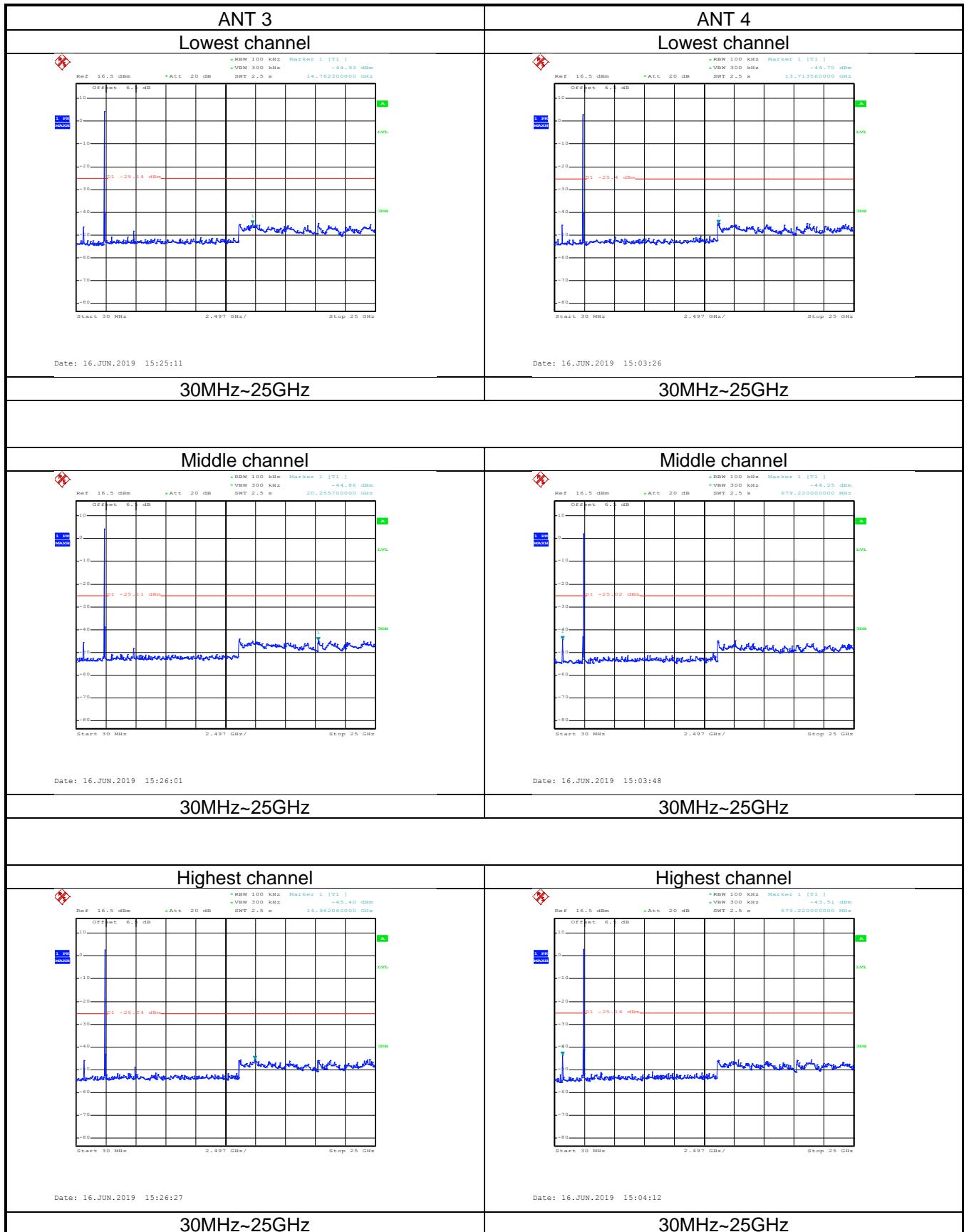
**Test plot as follows:**

**Left module 802.11n20 mode:**



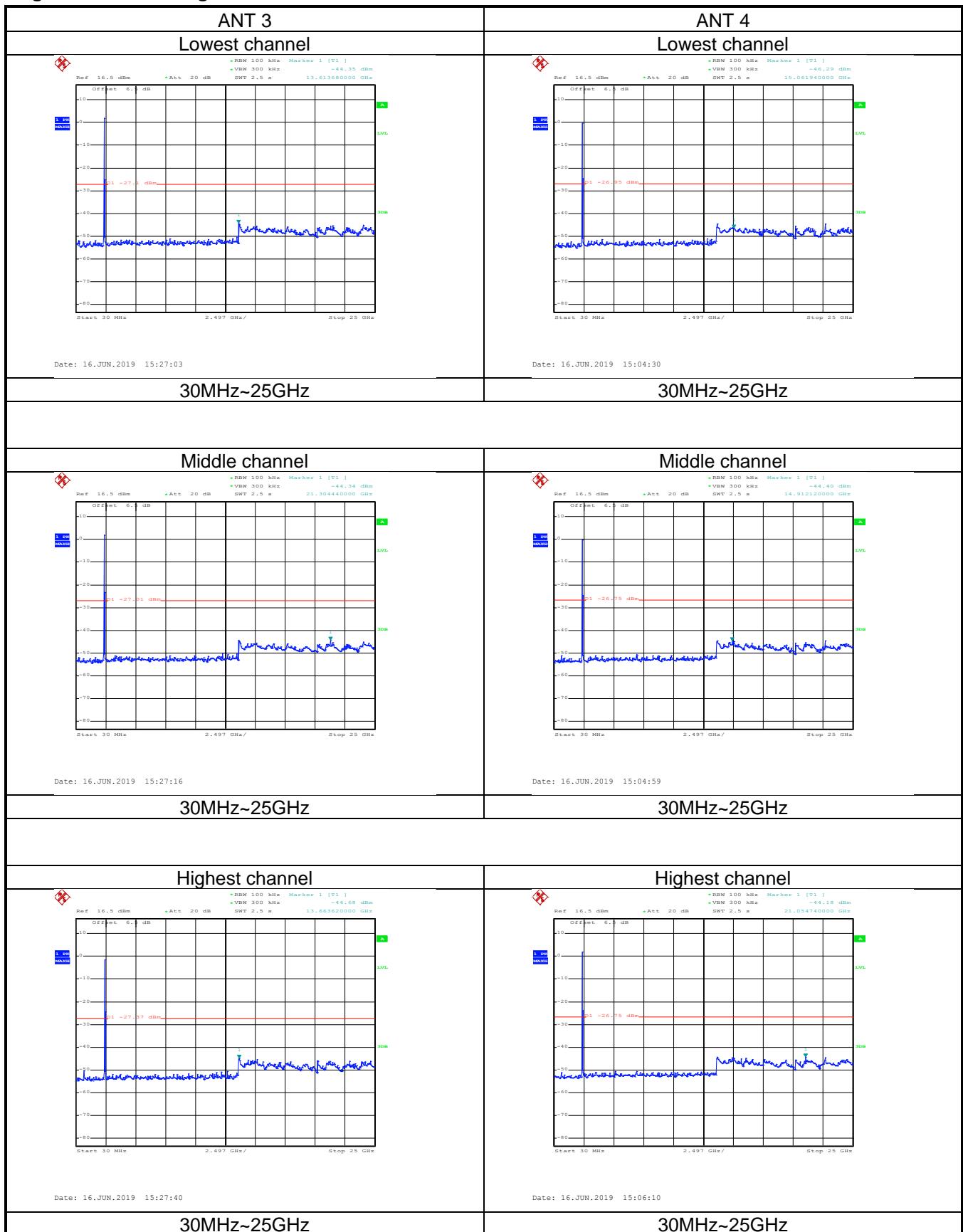
**Test plot as follows:**

**Right module 802.11b mode:**



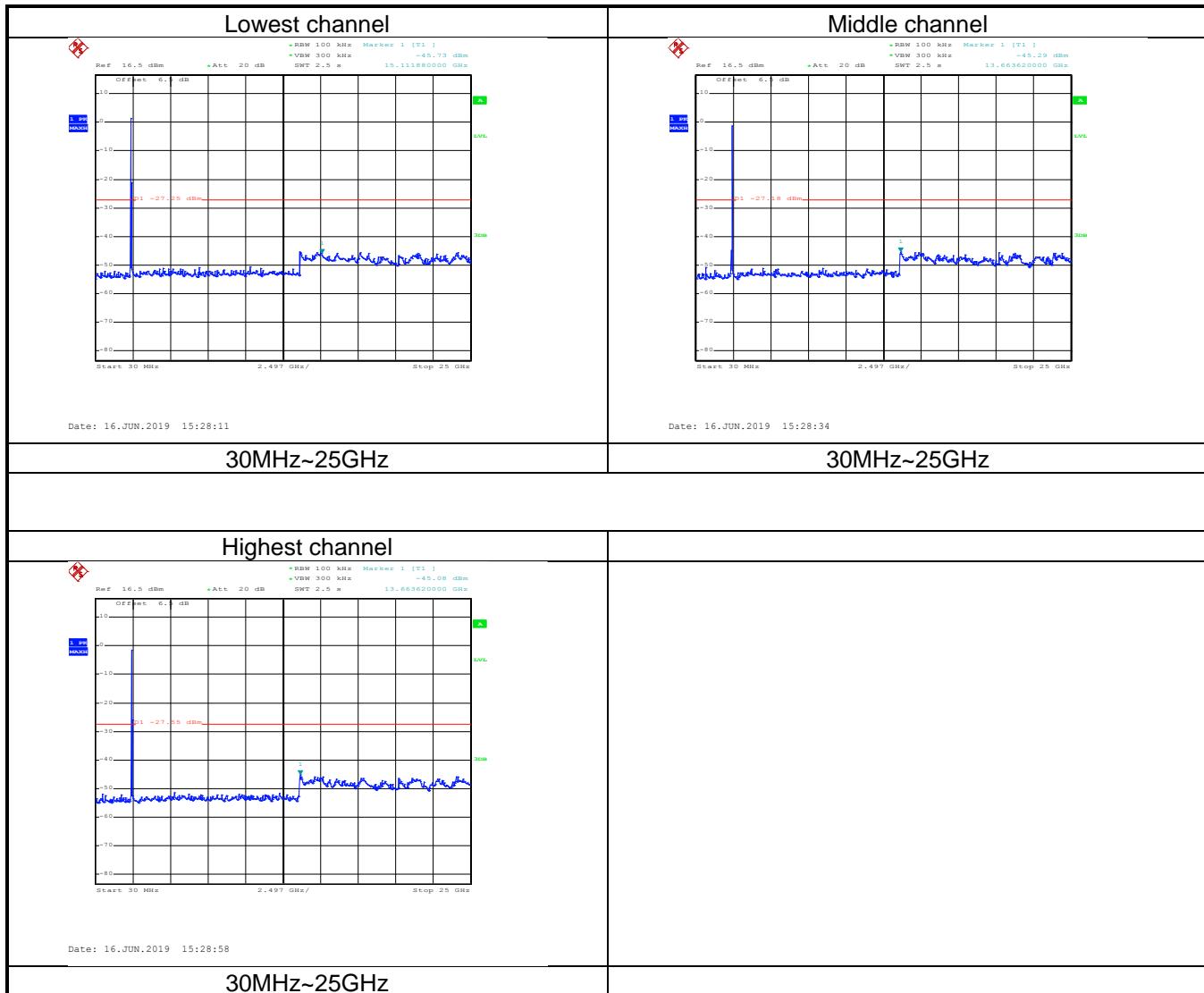
**Test plot as follows:**

**Right module 802.11g mode:**



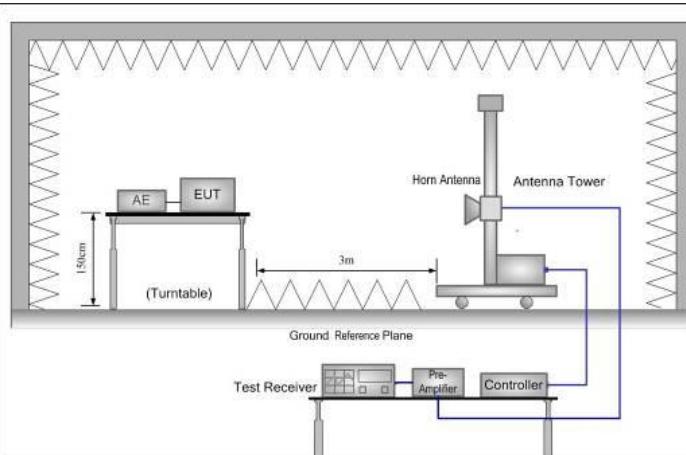
**Test plot as follows:**

**Right module 802.11n20 mode:**



### 6.7.2 Radiated Emission Method

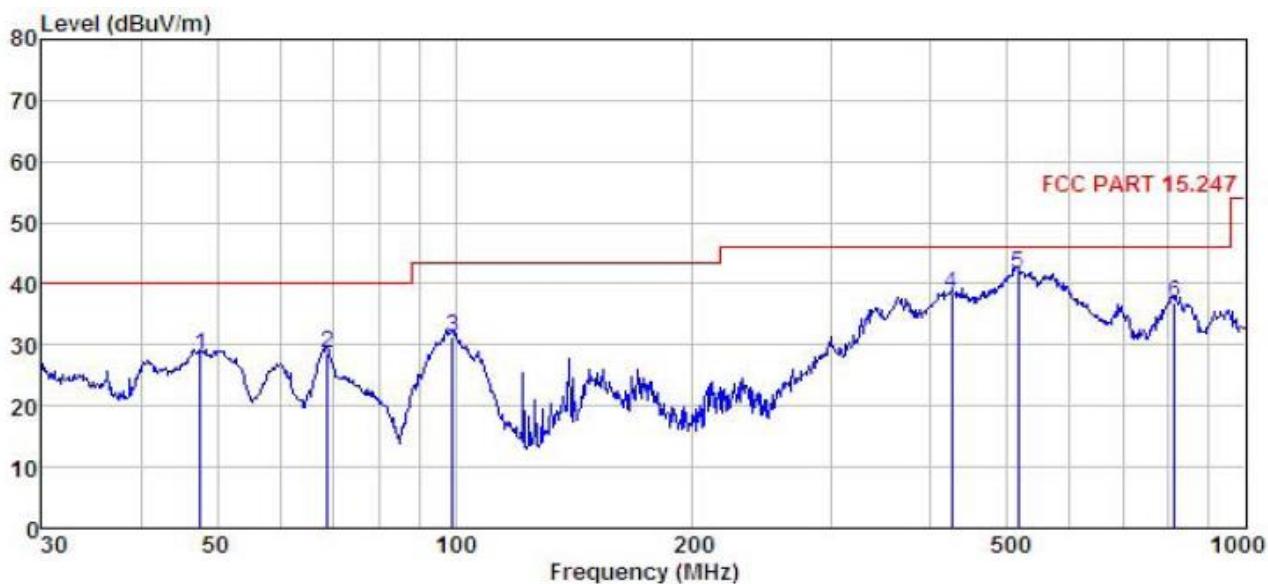
Test Requirement:	FCC Part 15 C Section 15.209 and 15.205						
Test Frequency Range:	9kHz to 25GHz						
Test Distance:	3m						
Receiver setup:	Frequency	Detector	RBW	VBW	Remark		
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value		
	Above 1GHz	Peak	1MHz	3MHz	Peak Value		
Limit:	Frequency	Limit (dBuV/m @3m)		Remark			
		30MHz-88MHz	40.0	Quasi-peak Value			
	88MHz-216MHz	43.5	46.0	Quasi-peak Value			
		216MHz-960MHz	54.0	Quasi-peak Value			
	Above 1GHz	54.0	74.0	Average Value			
				Peak Value			
Test Procedure:	<ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>						
Test setup:	<p>Below 1GHz</p> <p>Above 1GHz</p>						



Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	<ol style="list-style-type: none"><li>1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li><li>2. 9 kHz to 30MHz is too low, so only shows the data of above 30MHz in this report.</li></ol>

**Measurement Data (worst case):****Below 1GHz:**

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	Wi-Fi Tx mode
<b>Test Frequency:</b>	30 MHz ~ 1 GHz	<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%

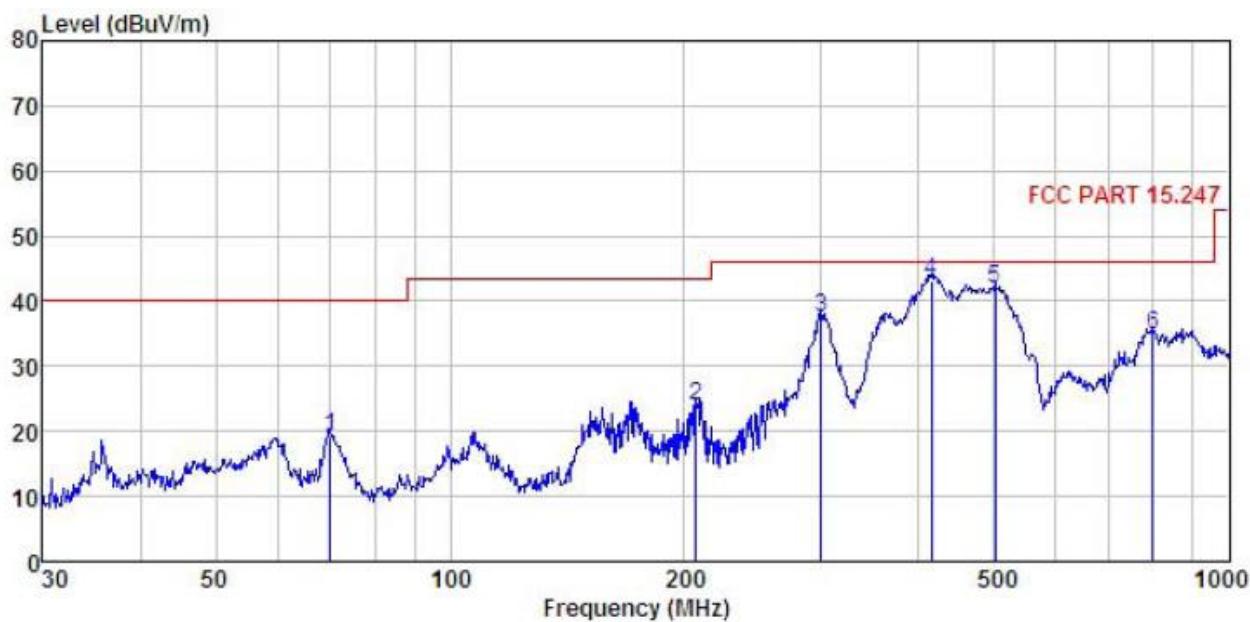


Freq MHz	ReadAntenna Level Factor		Cable Preamp Loss Factor		Limit Line dBuV/m	Over Line dB	Over Limit Remark
	MHz	dBuV	dB/m	dB			
1	47.659	44.62	12.20	1.27	29.84	28.25	40.00 -11.75 QP
2	68.872	48.12	8.74	1.49	29.73	28.62	40.00 -11.38 QP
3	99.180	46.61	12.32	1.95	29.53	31.35	43.50 -12.15 QP
4	425.028	48.07	15.90	3.14	28.83	38.28	46.00 -7.72 QP
5	515.437	48.77	18.26	3.70	29.00	41.73	46.00 -4.27 QP
6	813.112	39.06	21.81	4.31	28.14	37.04	46.00 -8.96 QP

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Test all adapters and modes to reflect only the worst mode

<b>Product Name:</b>	ADVANCED DIAGNOSTIC & MEASUREMENT SYSTEM	<b>Product Model:</b>	MaxiSys Ultra
<b>Test By:</b>	YT	<b>Test mode:</b>	Wi-Fi Tx mode
<b>Test Frequency:</b>	30 MHz ~ 1 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



Freq MHz	Read	Antenna	Cable	Preamp	Limit Line dBuV/m	Over Line dBuV/m	Over Limit dB	Remark
	Level dBuV	Factor	Loss Factor	Level dB				
1 70.090	39.03	8.50	1.52	29.72	19.33	40.00	-20.67	QP
2 207.123	38.99	10.92	2.86	28.78	23.99	43.50	-19.51	QP
3 299.316	49.39	13.60	2.94	28.45	37.48	46.00	-8.52	QP
4 414.722	53.20	15.64	3.12	28.81	43.15	46.00	-2.85	QP
5 501.179	49.06	18.20	3.63	28.96	41.93	46.00	-4.07	QP
6 798.980	37.31	21.50	4.35	28.20	34.96	46.00	-11.04	QP

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Test all adapters and modes to reflect only the worst mode

## Above 1GHz (Left Module ANT1):

802.11b								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	53.25	30.94	6.81	41.82	49.18	74.00	-24.82	Vertical
4824.00	54.11	30.94	6.81	41.82	50.04	74.00	-23.96	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	47.52	30.94	6.81	41.82	43.45	54.00	-10.55	Vertical
4824.00	46.89	30.94	6.81	41.82	42.82	54.00	-11.18	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	55.74	31.20	6.85	41.84	51.95	74.00	-22.05	Vertical
4874.00	56.36	31.20	6.85	41.84	52.57	74.00	-21.43	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	46.53	31.20	6.85	41.84	42.74	54.00	-11.26	Vertical
4874.00	48.22	31.20	6.85	41.84	44.43	54.00	-9.57	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	54.74	31.46	6.89	41.86	51.23	74.00	-22.77	Vertical
4924.00	53.66	31.46	6.89	41.86	50.15	74.00	-23.85	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	47.15	31.46	6.89	41.86	43.64	54.00	-10.36	Vertical
4924.00	46.57	31.46	6.89	41.86	43.06	54.00	-10.94	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## Above 1GHz (Left Module ANT2):

802.11b								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	56.22	30.94	6.81	41.82	52.15	74.00	-21.85	Vertical
4824.00	55.19	30.94	6.81	41.82	51.12	74.00	-22.88	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	48.52	30.94	6.81	41.82	44.45	54.00	-9.55	Vertical
4824.00	47.12	30.94	6.81	41.82	43.05	54.00	-10.95	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	55.75	31.20	6.85	41.84	51.96	74.00	-22.04	Vertical
4874.00	53.63	31.20	6.85	41.84	49.84	74.00	-24.16	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	49.52	31.20	6.85	41.84	45.73	54.00	-8.27	Vertical
4874.00	50.47	31.20	6.85	41.84	46.68	54.00	-7.32	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	56.32	31.46	6.89	41.86	52.81	74.00	-21.19	Vertical
4924.00	53.49	31.46	6.89	41.86	49.98	74.00	-24.02	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	48.52	31.46	6.89	41.86	45.01	54.00	-8.99	Vertical
4924.00	46.19	31.46	6.89	41.86	42.68	54.00	-11.32	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## Above 1GHz (Left Module ANT1):

802.11g								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	56.23	30.94	6.81	41.82	52.16	74.00	-21.84	Vertical
4824.00	54.74	30.94	6.81	41.82	50.67	74.00	-23.33	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	49.35	30.94	6.81	41.82	45.28	54.00	-8.72	Vertical
4824.00	48.55	30.94	6.81	41.82	44.48	54.00	-9.52	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	54.16	31.20	6.85	41.84	50.37	74.00	-23.63	Vertical
4874.00	53.36	31.20	6.85	41.84	49.57	74.00	-24.43	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	45.53	31.20	6.85	41.84	41.74	54.00	-12.26	Vertical
4874.00	46.87	31.20	6.85	41.84	43.08	54.00	-10.92	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	54.15	31.46	6.89	41.86	50.64	74.00	-23.36	Vertical
4924.00	56.85	31.46	6.89	41.86	53.34	74.00	-20.66	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	47.15	31.46	6.89	41.86	43.64	54.00	-10.36	Vertical
4924.00	46.39	31.46	6.89	41.86	42.88	54.00	-11.12	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## Above 1GHz (Left Module ANT2):

802.11g								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	56.32	30.94	6.81	41.82	52.25	74.00	-21.75	Vertical
4824.00	55.74	30.94	6.81	41.82	51.67	74.00	-22.33	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	46.52	30.94	6.81	41.82	42.45	54.00	-11.55	Vertical
4824.00	47.89	30.94	6.81	41.82	43.82	54.00	-10.18	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	55.63	31.20	6.85	41.84	51.84	74.00	-22.16	Vertical
4874.00	56.48	31.20	6.85	41.84	52.69	74.00	-21.31	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	46.52	31.20	6.85	41.84	42.73	54.00	-11.27	Vertical
4874.00	47.11	31.20	6.85	41.84	43.32	54.00	-10.68	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	55.63	31.46	6.89	41.86	52.12	74.00	-21.88	Vertical
4924.00	56.47	31.46	6.89	41.86	52.96	74.00	-21.04	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	48.52	31.46	6.89	41.86	45.01	54.00	-8.99	Vertical
4924.00	46.22	31.46	6.89	41.86	42.71	54.00	-11.29	Horizontal
Remark:								
3. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.								
4. The emission levels of other frequencies are very lower than the limit and not show in test report.								

**Above 1GHz (Left Module):**

802.11n(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	54.25	36.06	6.81	41.82	55.30	74.00	-18.70	Vertical
4824.00	56.98	36.06	6.81	41.82	58.03	74.00	-15.97	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	47.58	36.06	6.81	41.82	48.63	54.00	-5.37	Vertical
4824.00	46.22	36.06	6.81	41.82	47.27	54.00	-6.73	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	56.43	36.32	6.85	41.84	57.76	74.00	-16.24	Vertical
4874.00	57.18	36.32	6.85	41.84	58.51	74.00	-15.49	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	46.36	36.32	6.85	41.84	47.69	54.00	-6.31	Vertical
4874.00	48.55	36.32	6.85	41.84	49.88	54.00	-4.12	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	56.25	36.58	6.89	41.86	57.86	74.00	-16.14	Vertical
4924.00	57.12	36.58	6.89	41.86	58.73	74.00	-15.27	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	46.53	36.58	6.89	41.86	48.14	54.00	-5.86	Vertical
4924.00	47.11	36.58	6.89	41.86	48.72	54.00	-5.28	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

**Above 1GHz (Right Module ANT1):**

802.11b								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	52.62	30.94	6.81	41.82	48.55	74.00	-25.45	Vertical
4824.00	54.18	30.94	6.81	41.82	50.11	74.00	-23.89	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	46.36	30.94	6.81	41.82	42.29	54.00	-11.71	Vertical
4824.00	48.55	30.94	6.81	41.82	44.48	54.00	-9.52	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	55.45	31.20	6.85	41.84	51.66	74.00	-22.34	Vertical
4874.00	53.98	31.20	6.85	41.84	50.19	74.00	-23.81	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	47.15	31.20	6.85	41.84	43.36	54.00	-10.64	Vertical
4874.00	48.19	31.20	6.85	41.84	44.40	54.00	-9.60	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	55.47	31.46	6.89	41.86	51.96	74.00	-22.04	Vertical
4924.00	54.19	31.46	6.89	41.86	50.68	74.00	-23.32	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	46.36	31.46	6.89	41.86	42.85	54.00	-11.15	Vertical
4924.00	47.51	31.46	6.89	41.86	44.00	54.00	-10.00	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## Above 1GHz (Right Module ANT2):

802.11b								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	55.25	30.94	6.81	41.82	51.18	74.00	-22.82	Vertical
4824.00	54.98	30.94	6.81	41.82	50.91	74.00	-23.09	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	49.63	30.94	6.81	41.82	45.56	54.00	-8.44	Vertical
4824.00	48.77	30.94	6.81	41.82	44.70	54.00	-9.30	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	56.36	31.20	6.85	41.84	52.57	74.00	-21.43	Vertical
4874.00	54.18	31.20	6.85	41.84	50.39	74.00	-23.61	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	46.35	31.20	6.85	41.84	42.56	54.00	-11.44	Vertical
4874.00	47.18	31.20	6.85	41.84	43.39	54.00	-10.61	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	55.52	31.46	6.89	41.86	52.01	74.00	-21.99	Vertical
4924.00	54.19	31.46	6.89	41.86	50.68	74.00	-23.32	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	46.25	31.46	6.89	41.86	42.74	54.00	-11.26	Vertical
4924.00	47.18	31.46	6.89	41.86	43.67	54.00	-10.33	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

**Above 1GHz (Right Module ANT1):**

802.11g								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	55.46	30.94	6.81	41.82	51.39	74.00	-22.61	Vertical
4824.00	54.19	30.94	6.81	41.82	50.12	74.00	-23.88	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	48.52	30.94	6.81	41.82	44.45	54.00	-9.55	Vertical
4824.00	49.33	30.94	6.81	41.82	45.26	54.00	-8.74	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	55.29	31.20	6.85	41.84	51.50	74.00	-22.50	Vertical
4874.00	54.18	31.20	6.85	41.84	50.39	74.00	-23.61	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	46.35	31.20	6.85	41.84	42.56	54.00	-11.44	Vertical
4874.00	47.87	31.20	6.85	41.84	44.08	54.00	-9.92	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	55.98	31.46	6.89	41.86	52.47	74.00	-21.53	Vertical
4924.00	56.63	31.46	6.89	41.86	53.12	74.00	-20.88	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	46.53	31.46	6.89	41.86	43.02	54.00	-10.98	Vertical
4924.00	47.85	31.46	6.89	41.86	44.34	54.00	-9.66	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

## Above 1GHz (Right Module ANT2):

802.11g								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	55.45	30.94	6.81	41.82	51.38	74.00	-22.62	Vertical
4824.00	56.98	30.94	6.81	41.82	52.91	74.00	-21.09	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	46.36	30.94	6.81	41.82	42.29	54.00	-11.71	Vertical
4824.00	48.77	30.94	6.81	41.82	44.70	54.00	-9.30	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	56.74	31.20	6.85	41.84	52.95	74.00	-21.05	Vertical
4874.00	56.22	31.20	6.85	41.84	52.43	74.00	-21.57	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	47.52	31.20	6.85	41.84	43.73	54.00	-10.27	Vertical
4874.00	48.55	31.20	6.85	41.84	44.76	54.00	-9.24	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	54.87	31.46	6.89	41.86	51.36	74.00	-22.64	Vertical
4924.00	56.98	31.46	6.89	41.86	53.47	74.00	-20.53	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	49.52	31.46	6.89	41.86	46.01	54.00	-7.99	Vertical
4924.00	48.55	31.46	6.89	41.86	45.04	54.00	-8.96	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

**Above 1GHz (Right Module):**

802.11n(HT20)								
Test channel: Lowest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	56.63	36.06	6.81	41.82	57.68	74.00	-16.32	Vertical
4824.00	55.71	36.06	6.81	41.82	56.76	74.00	-17.24	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	46.55	36.06	6.81	41.82	47.60	54.00	-6.40	Vertical
4824.00	47.52	36.06	6.81	41.82	48.57	54.00	-5.43	Horizontal
Test channel: Middle channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	55.87	36.32	6.85	41.84	57.20	74.00	-16.80	Vertical
4874.00	56.19	36.32	6.85	41.84	57.52	74.00	-16.48	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	44.52	36.32	6.85	41.84	45.85	54.00	-8.15	Vertical
4874.00	46.98	36.32	6.85	41.84	48.31	54.00	-5.69	Horizontal
Test channel: Highest channel								
Detector: Peak Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	55.74	36.58	6.89	41.86	57.35	74.00	-16.65	Vertical
4924.00	54.19	36.58	6.89	41.86	55.80	74.00	-18.20	Horizontal
Detector: Average Value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	45.55	36.58	6.89	41.86	47.16	54.00	-6.84	Vertical
4924.00	46.13	36.58	6.89	41.86	47.74	54.00	-6.26	Horizontal

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.