APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
SHENZHEN AVATARCONTROLS CO., LTD.

Wifi Plug
Model No.: AWP01L

FCC ID: 2ANJP-AWP01L

Prepared for	:	SHENZHEN AVATARCONTROLS CO., LTD.
Address	:	Room 1008, Weixing building, Keyuan Road, Nanshan district, ShenZhen, Guangdong, 518000, China
Prepared by	:	Shenzhen Accurate Technology Co., Ltd.
Address	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China
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Report No.	:	ATE20171586
Date of Test	:	August 25-26, 2017
Date of Report	:	August 29, 2017

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Description Page

Test Report Certification

Applicant	:	SHENZHEN AVATARCONTROLS CO., LTD.
Address	:	Room 1008, Weixing building, Keyuan Road, Nanshan district, ShenZhen, Guangdong, 518000, China
Manufacturer	:	VIVANT (Dongguan) Intelligent Technolgy Co., Ltd
Address	:	Room 401, Building 6 of Business Accelerator, No.24 Industry East Road, Songshanhu High-tech Industry Development Zone, Dongguan, Guangdong, China
Product	:	Wifi Plug
Model No.	:	AWP01L
Trade name	:	

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.10: 2013

The EUT was tested according to DTS test procedure of Apr 08, 2016 KDB558074 D01 DTS Meas Guidance v03r05 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements. This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test :	August 25-26, 2017
Date of Report :	August 29, 2017
Prepared by :	(Bob Wang, Engineer)
Approved & Authorized Signer :	(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Wifi Plug
Model Number	:	AWP01L
Trade Mark	:	
Frequency Range	:	802.11b/g/n(20MHz): 2412-2462MHz
Number of Channels	:	802.11b/g/n (20MHz):11
Antenna Gain	:	1dBi
Type of Antenna	:	PCB Antenna
Power Supply	:	AC 120V; 60Hz
Data Rate	:	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: up to 150Mbps
Modulation Type	:	CCK, DSSS, OFDM
Applicant	:	SHENZHEN AVATARCONTROLS CO., LTD.
Address	:	Room 1008, Weixing building, Keyuan Road, Nanshan district, ShenZhen, Guangdong, 518000, China.
Manufacturer	:	VIVANT (Dongguan) Intelligent Technolgy Co., Ltd
Address	:	Room 401, Building 6 of Business Accelerator, No.24 Industry East Road, Songshanhu High-tech Industry Development Zone, Dongguan, Guangdong, China
Date of sample received	:	August 20, 2017
Date of Test	:	August 25-26, 2017
Sample No.	:	1701292

1.2.Carrier Frequency of Channels

802.11b, 802.11g, 802.11n (20MHz)

Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437	---	---

1.3.Accessory and Auxiliary Equipment

PC	Manufacturer: LENOVO M/N: 4290-RT8 S/N: R9-FW93G 11/08

1.4.Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358 Listed by Innovation, Science and Economic Development Canada (ISEDC) The Registration Number is 5077A-2 Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193 Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd.
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.5.Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 07, 2017	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 07, 2017	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 07, 2017	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 07, 2017	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 07, 2017	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 07, 2017	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10SS	N/A	Jan. 07, 2017	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	N/A	Jan. 07, 2017	1 Year

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **1.802.11b Transmitting mode**
Low Channel: 2412MHz
Middle Channel: 2437MHz
High Channel: 2462MHz

2.802.11g Transmitting mode
Low Channel: 2412MHz
Middle Channel: 2437MHz
High Channel: 2462MHz

3.802.11n (20MHz) Transmitting mode
Low Channel: 2412MHz
Middle Channel: 2437MHz
High Channel: 2462MHz

3.2.Configuration and peripherals

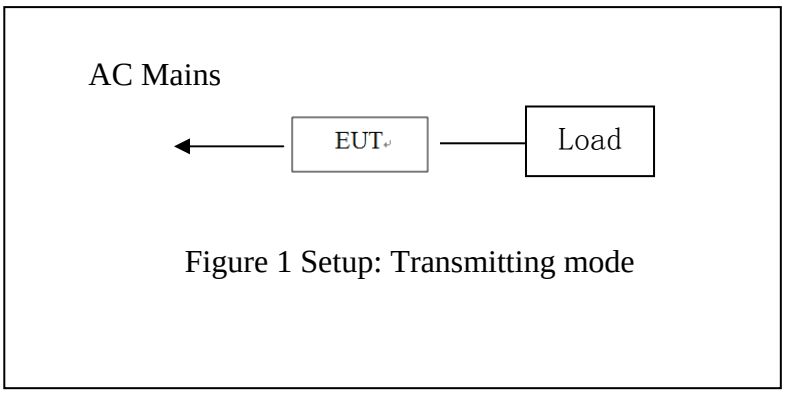


Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Power Line Conducted Emission	Compliant
Section 15.247(a)(2)	6dB&20dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Conducted Spurious Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. POWER LINE CONDUCTED MEASUREMENT

5.1.Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0
NOTE1: The lower limit shall apply at the transition frequencies. NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

5.2.Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

5.3.Operating Condition of EUT

5.3.1.Setup the EUT and simulator as shown as Section 5.1.

5.3.2.Turn on the power of all equipment.

5.3.3.Let the EUT work in test mode and measure it.

5.4.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2014 on Conducted Emission Measurement.
The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

5.5. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Test mode : On (120V/60Hz)

MEASUREMENT RESULT: "VV-0804-02_fin"

2017-8-25 13:49

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.158000	42.80	10.8	66	22.8	QP	L1	GND
0.740000	45.80	11.1	56	10.2	QP	L1	GND
1.276000	38.80	11.2	56	17.2	QP	L1	GND
4.205000	32.50	11.4	56	23.5	QP	L1	GND
5.615000	37.60	11.5	60	22.4	QP	L1	GND
13.850000	33.90	11.6	60	26.1	QP	L1	GND

MEASUREMENT RESULT: "VV-0804-02_fin2"

2017-8-25 13:49

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.206000	33.80	10.8	53	19.6	AV	L1	GND
0.740000	33.10	11.1	46	12.9	AV	L1	GND
1.004000	30.40	11.1	46	15.6	AV	L1	GND
3.620000	31.20	11.4	46	14.8	AV	L1	GND
7.885000	29.20	11.5	50	20.8	AV	L1	GND
12.415000	25.70	11.6	50	24.3	AV	L1	GND

MEASUREMENT RESULT: "VV-0804-01_fin"

2017-8-25 13:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.316000	41.10	10.9	60	18.7	QP	N	GND
0.744000	49.00	11.1	56	7.0	QP	N	GND
0.956000	45.00	11.1	56	11.0	QP	N	GND
3.660000	45.00	11.4	56	11.0	QP	N	GND
8.240000	40.50	11.5	60	19.5	QP	N	GND
13.040000	37.40	11.6	60	22.6	QP	N	GND

MEASUREMENT RESULT: "VV-0804-01_fin2"

2017-8-25 13:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.204000	35.70	10.8	53	17.7	AV	N	GND
0.754000	34.00	11.1	46	12.0	AV	N	GND
0.988000	31.50	11.1	46	14.5	AV	N	GND
3.660000	33.60	11.4	46	12.4	AV	N	GND
5.890000	30.20	11.5	50	19.8	AV	N	GND
15.245000	27.80	11.7	50	22.2	AV	N	GND

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.

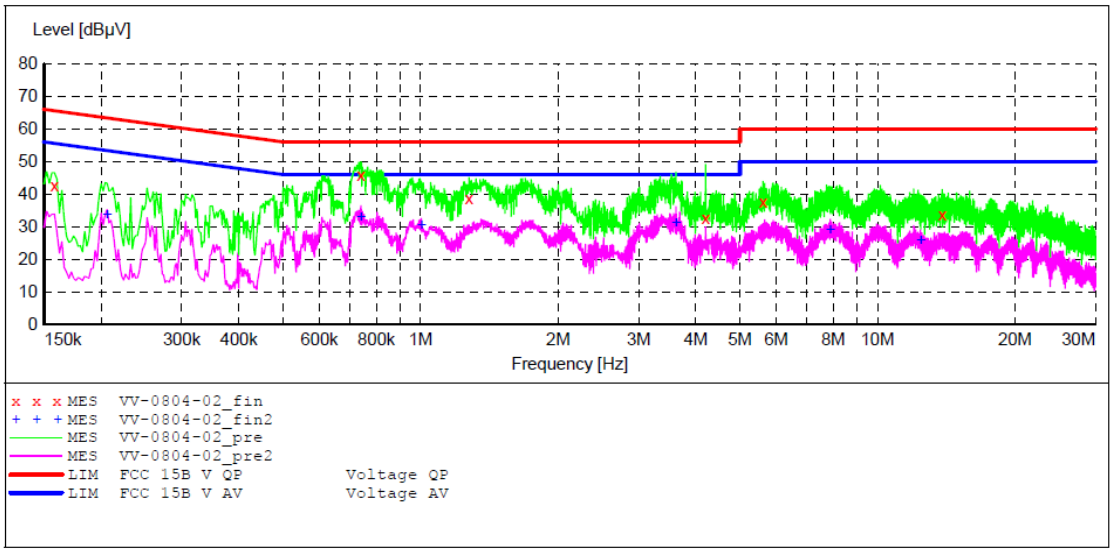
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Wifi Plug  M/N:AWP01L
Manufacturer:         VIVANT
Operating Condition:  On
Test Site:            1#Shielding Room
Operator:             DING
Test Specification:   L  120V/60Hz
Comment:              Report NO.:ATE20171586
Start of Test:        2017-8-25 / 13:47:34
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:            _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   4.5 kHz   QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "VV-0804-02_fin"

2017-8-25 13:49

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.158000	42.80	10.8	66	22.8	QP	L1	GND
0.740000	45.80	11.1	56	10.2	QP	L1	GND
1.276000	38.80	11.2	56	17.2	QP	L1	GND
4.205000	32.50	11.4	56	23.5	QP	L1	GND
5.615000	37.60	11.5	60	22.4	QP	L1	GND
13.850000	33.90	11.6	60	26.1	QP	L1	GND

MEASUREMENT RESULT: "VV-0804-02_fin2"

2017-8-25 13:49

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.206000	33.80	10.8	53	19.6	AV	L1	GND
0.740000	33.10	11.1	46	12.9	AV	L1	GND
1.004000	30.40	11.1	46	15.6	AV	L1	GND
3.620000	31.20	11.4	46	14.8	AV	L1	GND
7.885000	29.20	11.5	50	20.8	AV	L1	GND
12.415000	25.70	11.6	50	24.3	AV	L1	GND

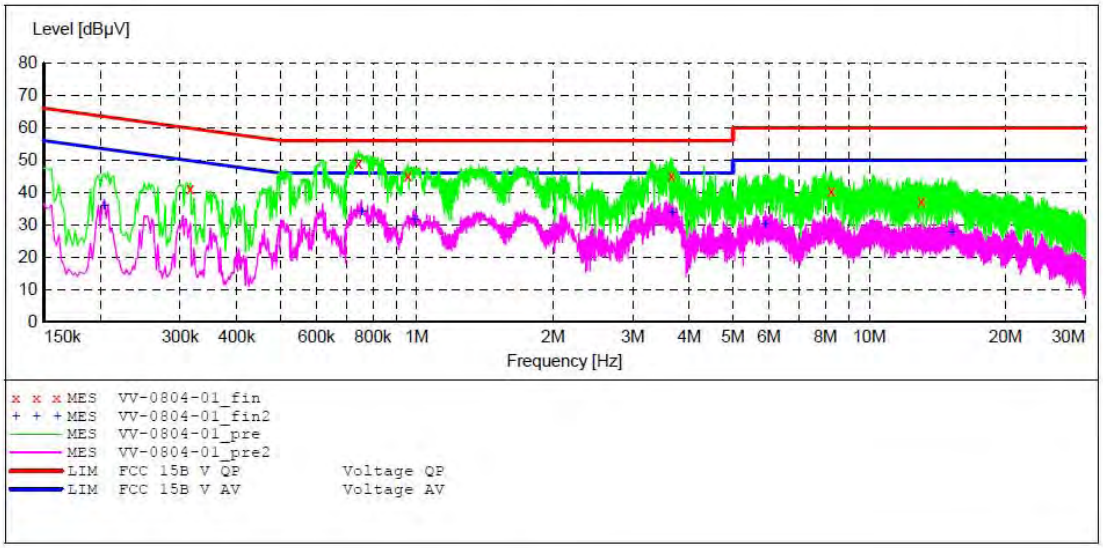
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

```
EUT:                  Wifi Plug  M/N:AWP01L
Manufacturer:         VIVANT
Operating Condition:  On
Test Site:            1#Shielding Room
Operator:             DING
Test Specification:   N  120V/60Hz
Comment:              Report NO.:ATE20171586
Start of Test:        2017-8-25 / 13:44:00
```

SCAN TABLE: "V 150K-30MHz fin"

```
  Short Description:              _SUB_STD_VTERM2 1.70
  Start      Stop       Step      Detector  Meas.     IF       Transducer
  Frequency  Frequency  Width               Time      Bandw.
  150.0 kHz  30.0 MHz   4.5 kHz   QuasiPeak 1.0 s     9 kHz    NSLK8126 2008
                                  Average
```



MEASUREMENT RESULT: "VV-0804-01_fin"

2017-8-25 13:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.316000	41.10	10.9	60	18.7	QP	N	GND
0.744000	49.00	11.1	56	7.0	QP	N	GND
0.956000	45.00	11.1	56	11.0	QP	N	GND
3.660000	45.00	11.4	56	11.0	QP	N	GND
8.240000	40.50	11.5	60	19.5	QP	N	GND
13.040000	37.40	11.6	60	22.6	QP	N	GND

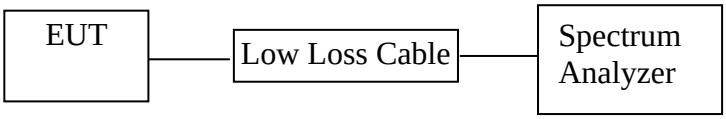
MEASUREMENT RESULT: "VV-0804-01_fin2"

2017-8-25 13:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.204000	35.70	10.8	53	17.7	AV	N	GND
0.754000	34.00	11.1	46	12.0	AV	N	GND
0.988000	31.50	11.1	46	14.5	AV	N	GND
3.660000	33.60	11.4	46	12.4	AV	N	GND
5.890000	30.20	11.5	50	19.8	AV	N	GND
15.245000	27.80	11.7	50	22.2	AV	N	GND

6. 6DB&99% BANDWIDTH MEASUREMENT

6.1. Block Diagram of Test Setup



6.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

ANSI C63.10: The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

6.3. EUT Configuration on Measurement

The equipment is installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

6.5. Test Procedure

1. Set resolution bandwidth (RBW) = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

99% bandwidth

1. Set resolution bandwidth (RBW) = 1%-5% OBW.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth

6.6.Test Result

The test was performed with 802.11b				
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)
Low	2412	10.072	> 0.5MHz	15.352
Middle	2437	10.072	> 0.5MHz	15.276
High	2462	10.101	> 0.5MHz	14.975

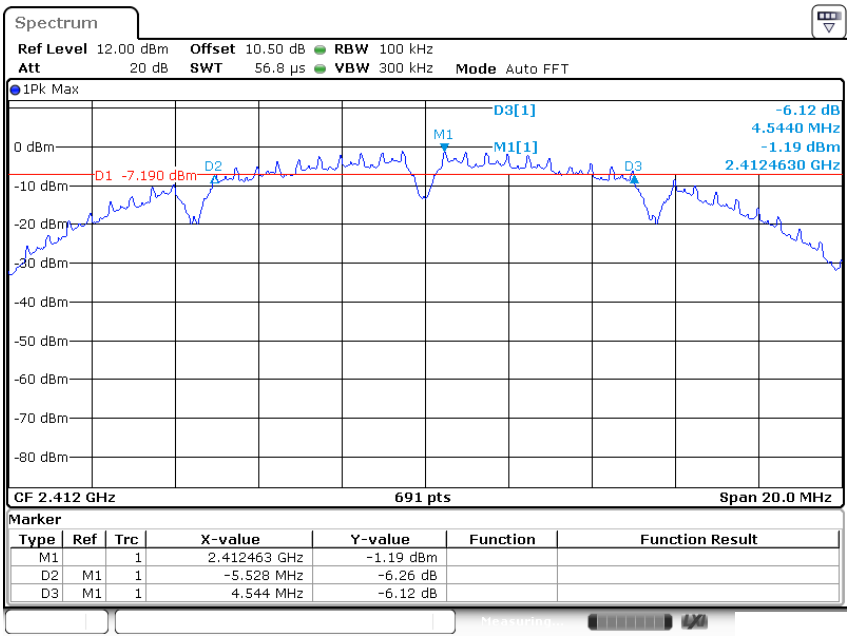
The test was performed with 802.11g				
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)
Low	2412	16.440	> 0.5MHz	16.614
Middle	2437	16.440	> 0.5MHz	16.614
High	2462	16.440	> 0.5MHz	16.573

The test was performed with 802.11n (Bandwidth: 20 MHz)				
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)
Low	2412	17.597	> 0.5MHz	17.855
Middle	2437	17.597	> 0.5MHz	17.855
High	2462	17.598	> 0.5MHz	17.855

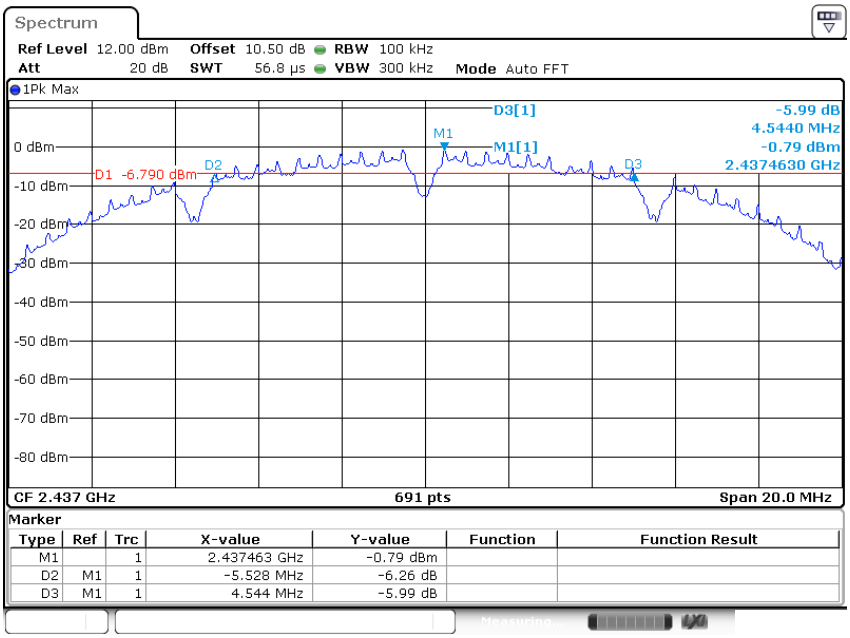
The spectrum analyzer plots are attached as below.

6dB Bandwidth

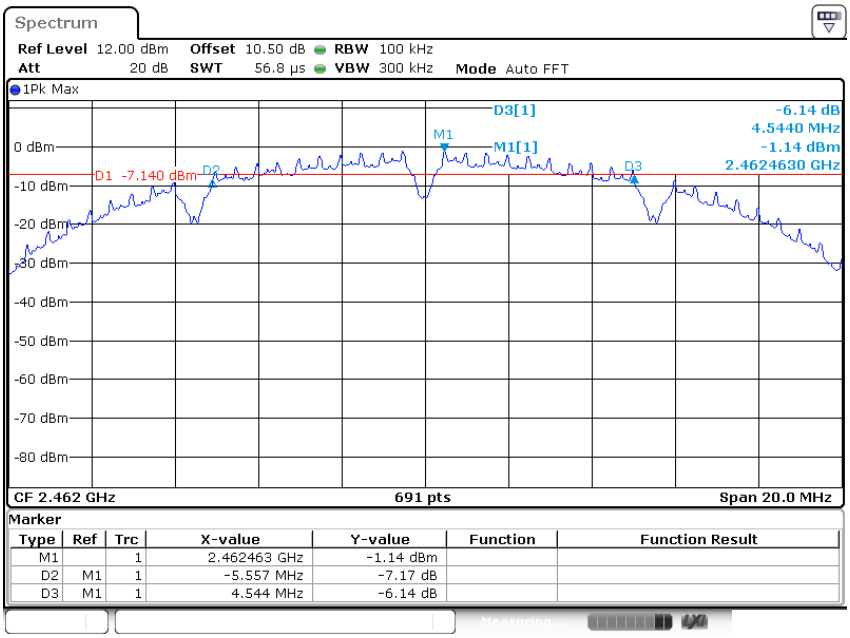
802.11b Channel Low 2412MHz



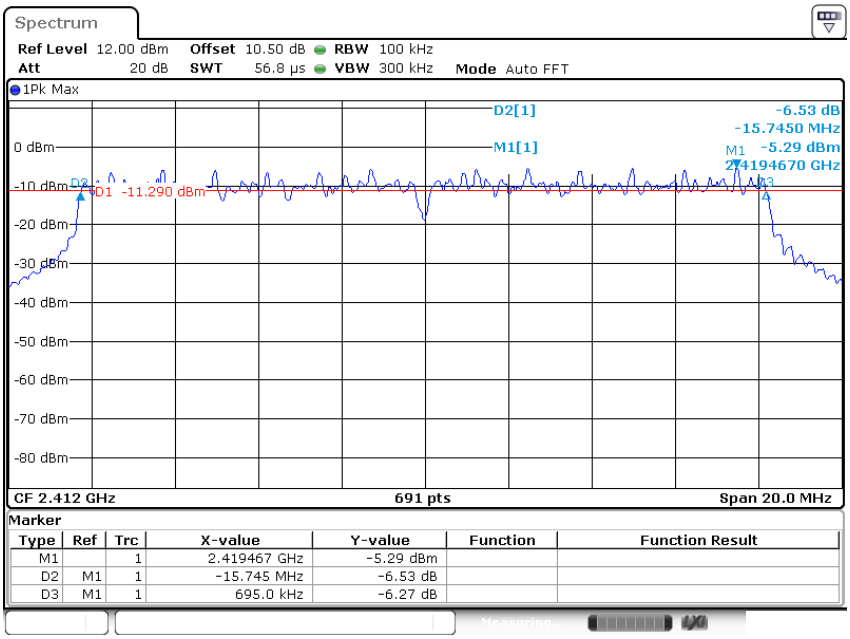
802.11b Channel Middle 2437MHz



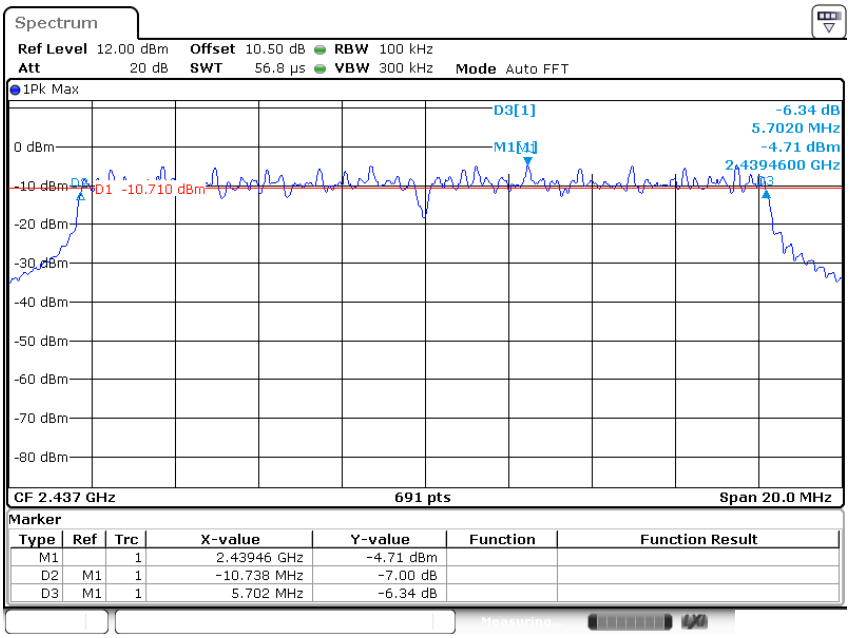
802.11b Channel High 2462MHz



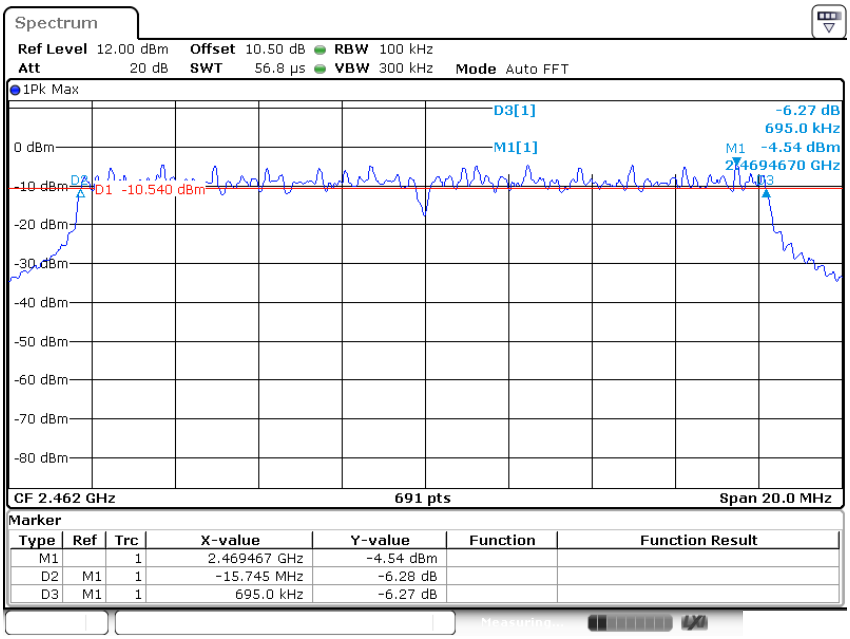
802.11g Channel Low 2412MHz



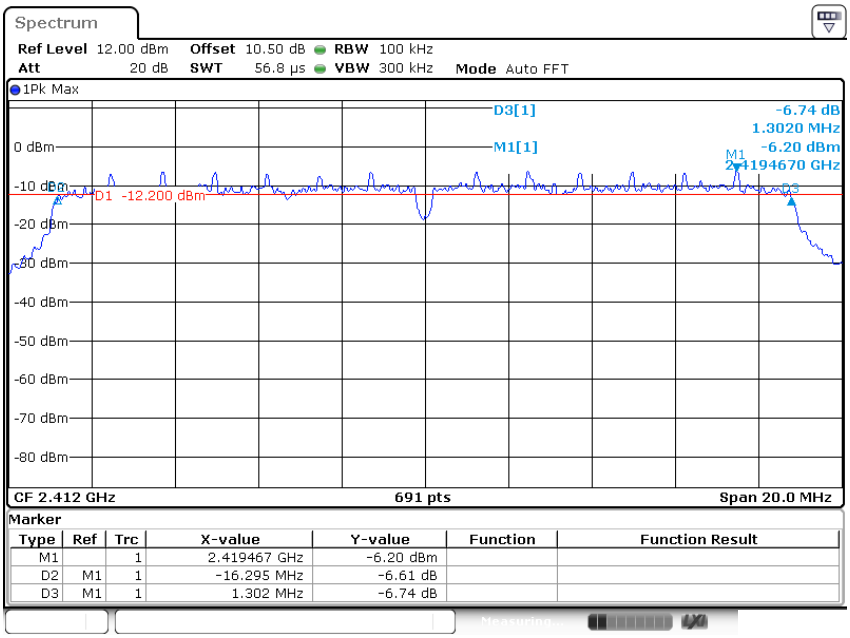
802.11g Channel Middle 2437MHz



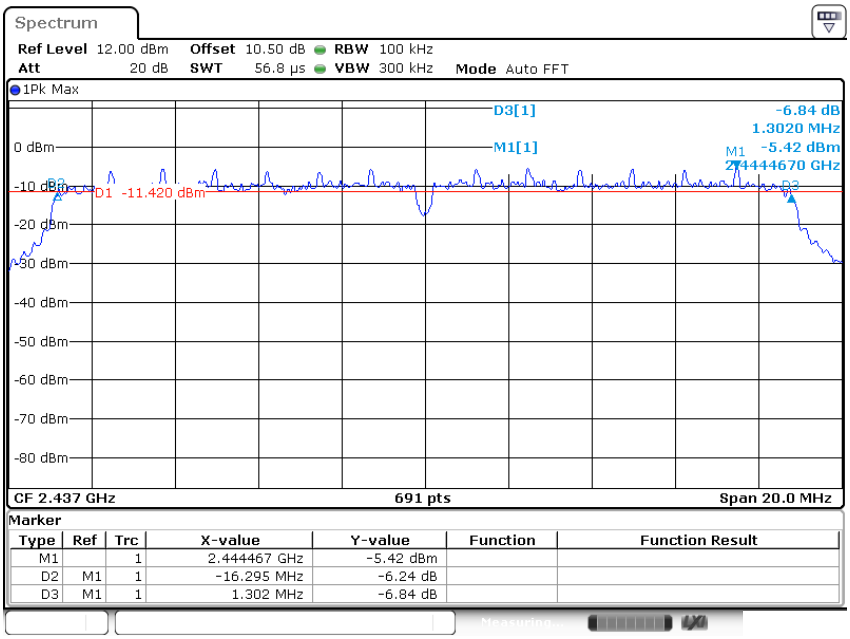
802.11g Channel High 2462MHz



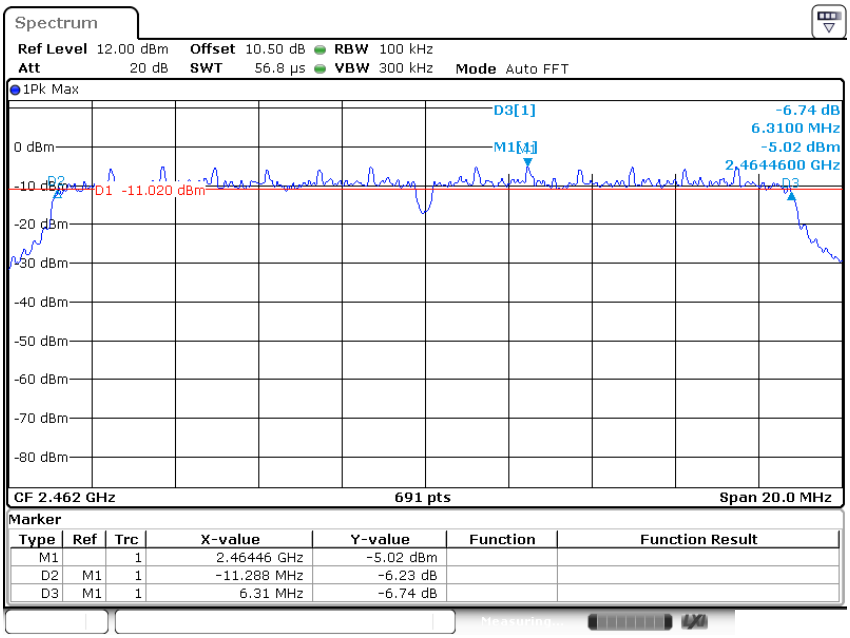
802.11n Channel Low 2412MHz (20MHz)



802.11n Channel Middle 2437MHz(20MHz)

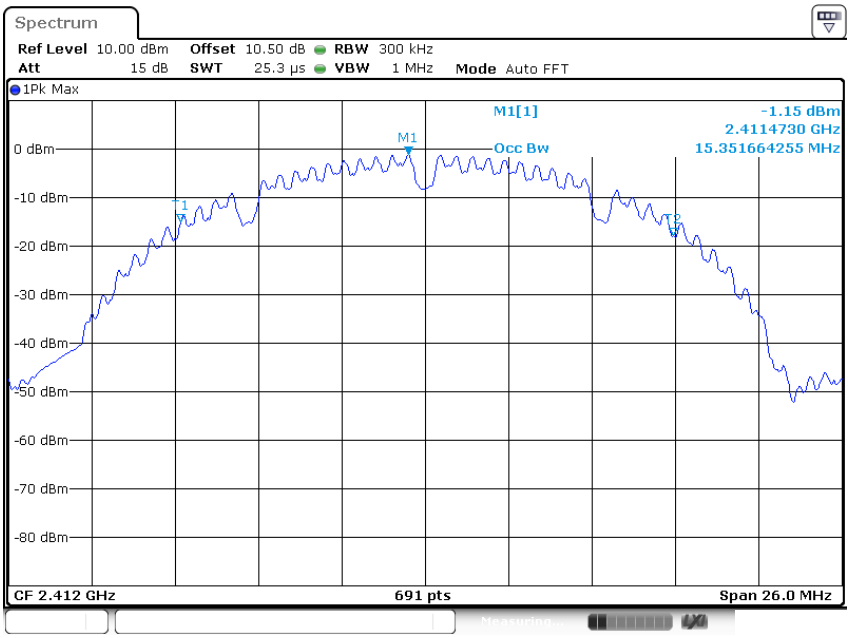


802.11n Channel High 2462MHz(20MHz)

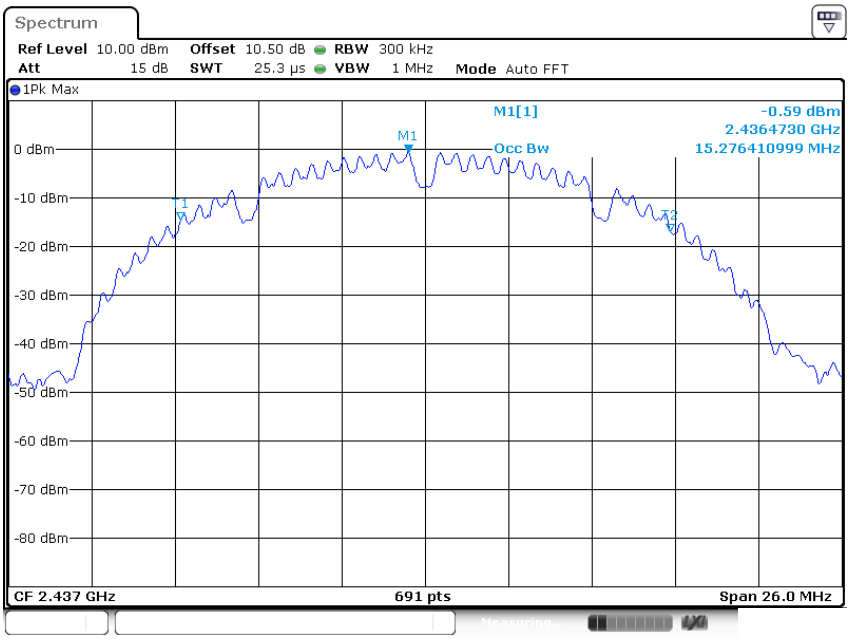


99% Bandwidth

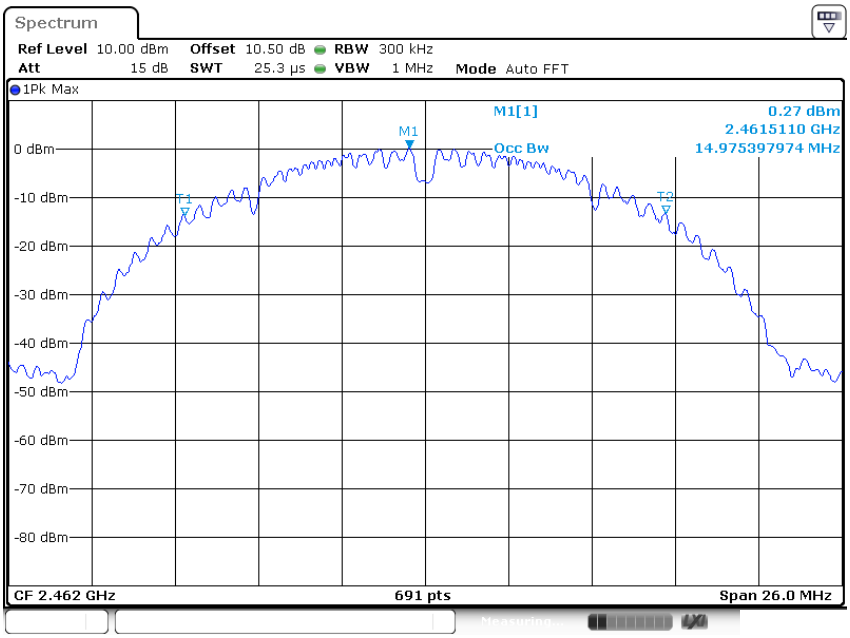
802.11b Channel Low 2412MHz



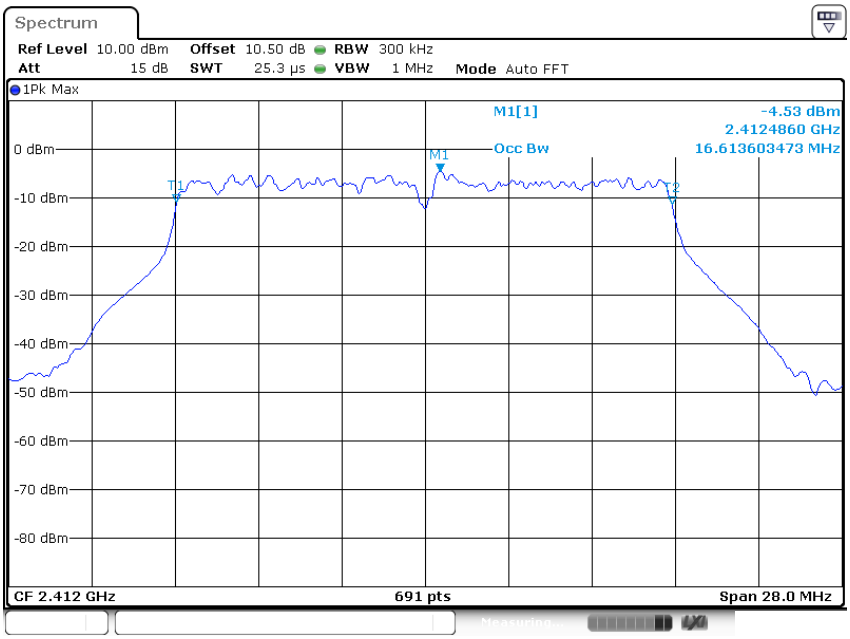
802.11b Channel Middle 2437MHz



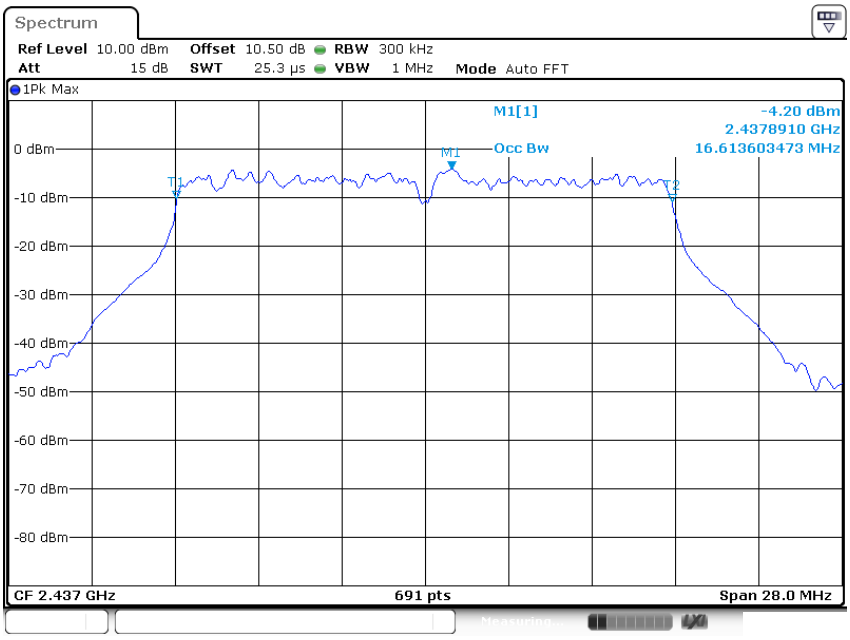
802.11b Channel High 2462MHz



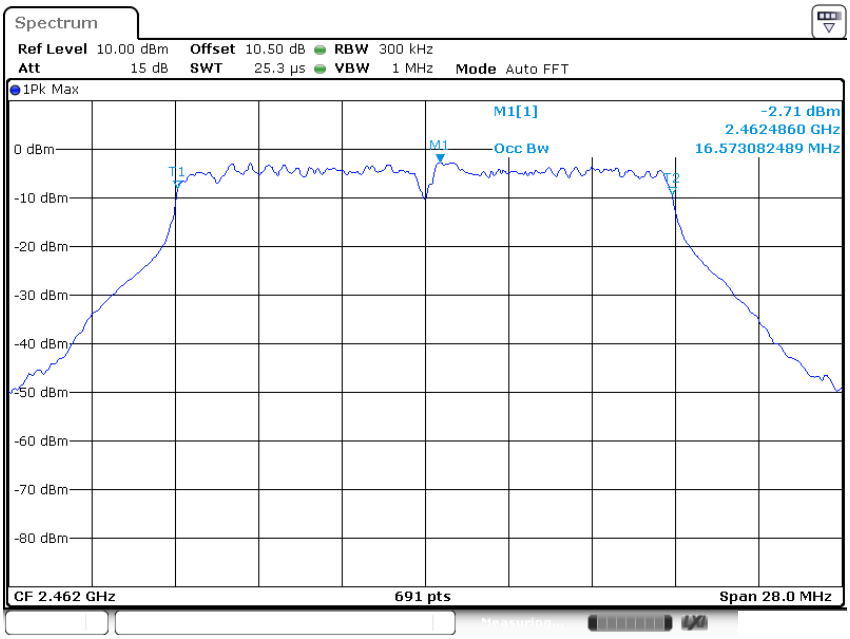
802.11g Channel Low 2412MHz



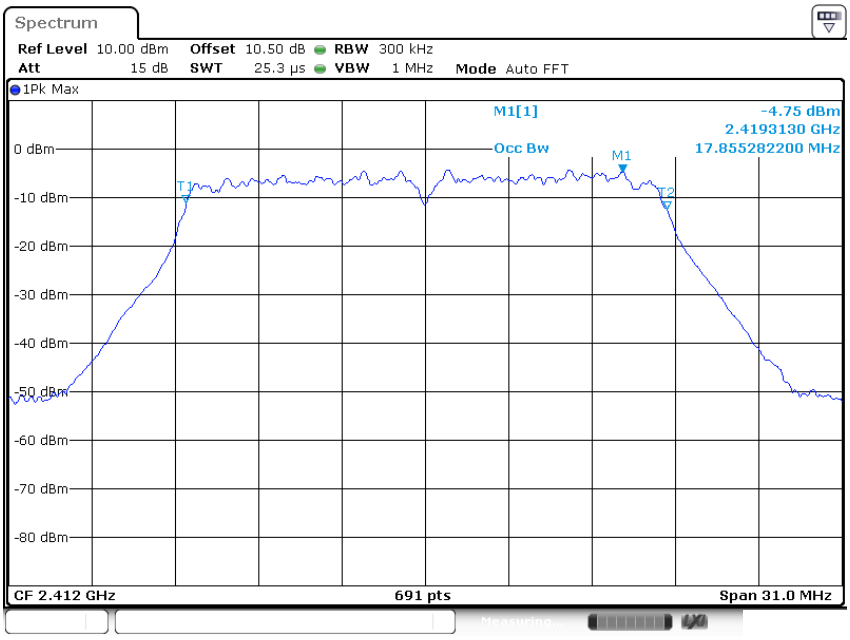
802.11g Channel Middle 2437MHz



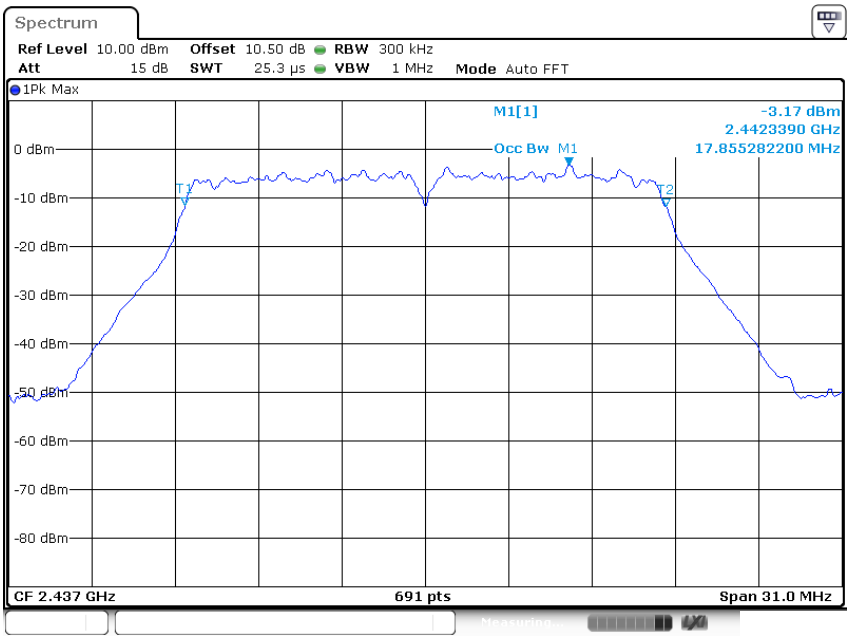
802.11g Channel High 2462MHz



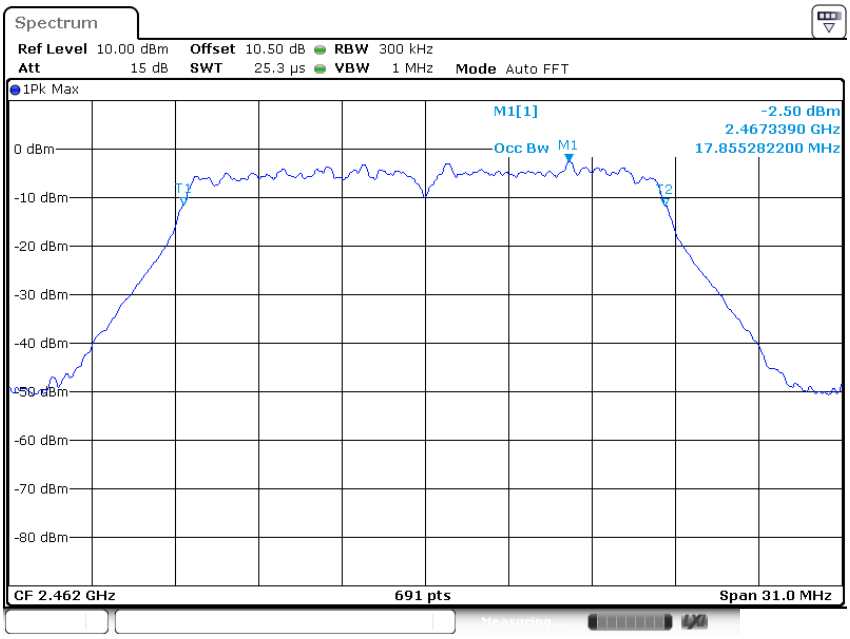
802.11n Channel Low 2412MHz (20MHz)



802.11n Channel Middle 2437MHz(20MHz)

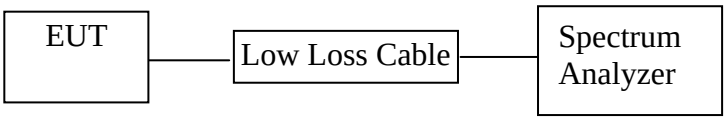


802.11n Channel High 2462MHz(20MHz)



7. MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

7.1.Block Diagram of Test Setup



7.2.The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

7.3.EUT Configuration on Measurement

The equipment is installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.4.Operating Condition of EUT

7.4.1.Setup the EUT and simulator as shown as Section 7.1.

7.4.2.Turn on the power of all equipment.

7.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

7.5.Test Procedure

7.5.1.The EUT was tested according to DTS test procedure of Apr 08, 2016

KDB558074 D01 DTS Meas Guidance v03r05 for compliance to

FCC 47CFR 15.247 requirements.

7.5.2.The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.5.3.Set RBW = 1-5% of the OBW, not to exceed 1 MHz, VBW ≥ 3 x RBW, Sweep time = auto, Set span to at least 1.5 times the OBW, Detector = RMS.

7.5.4.Measurement the Maximum conducted (average) output power.

7.6.Test Result

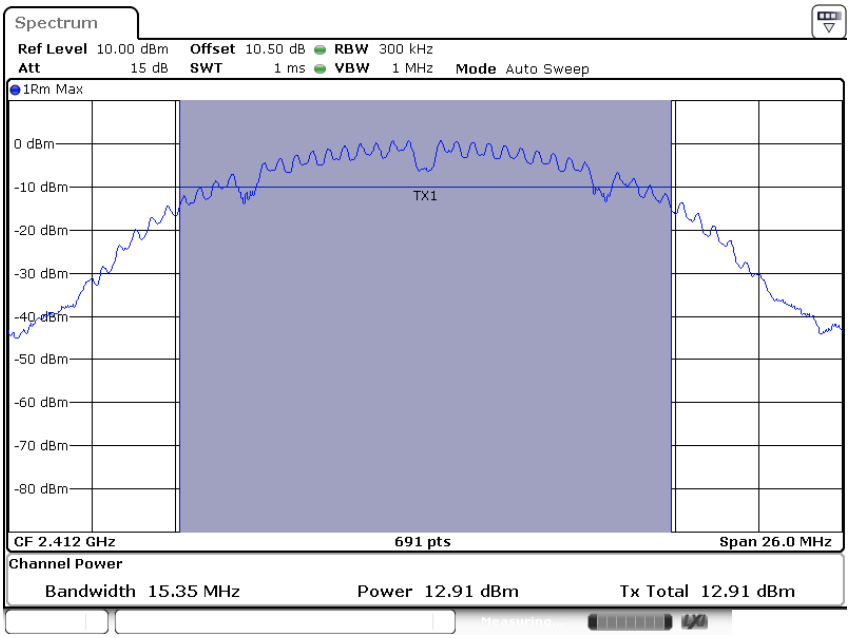
The test was performed with 802.11b				
Channel	Frequency (MHz)	Ave output power (dBm)	Ave output power (mW)	Limits dBm / W
Low	2412	12.91	19.543	30 dBm / 1 W
Middle	2437	13.03	20.091	30 dBm / 1 W
High	2462	13.22	20.989	30 dBm / 1 W

The test was performed with 802.11g				
Channel	Frequency (MHz)	Ave output power (dBm)	Ave output power (mW)	Limits dBm / W
Low	2412	11.02	12.647	30 dBm / 1 W
Middle	2437	11.82	15.205	30 dBm / 1 W
High	2462	10.61	11.508	30 dBm / 1 W

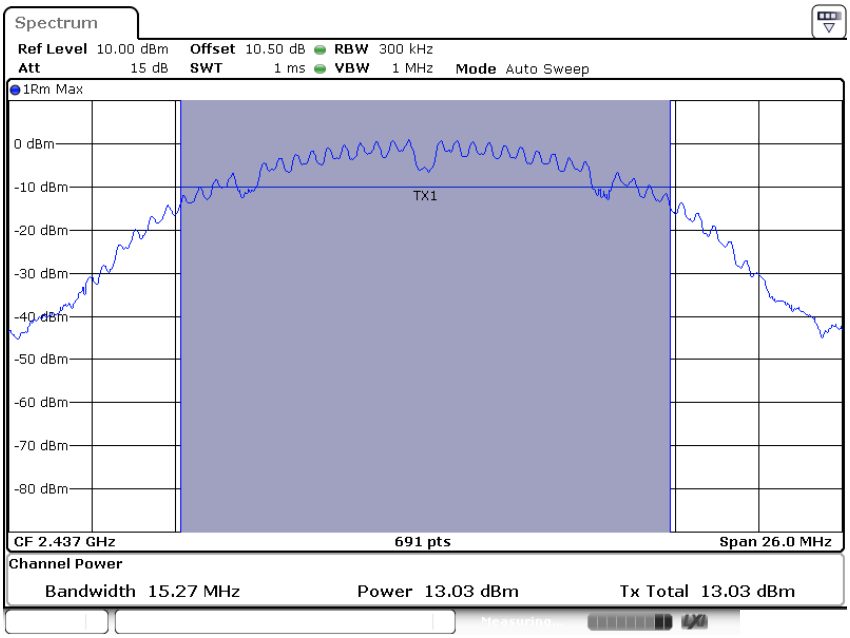
The test was performed with 802.11n (20MHz)				
Channel	Frequency (MHz)	Ave output power (dBm)	Ave output power (mW)	Limits dBm / W
Low	2412	10.90	12.303	30 dBm / 1 W
Middle	2437	11.66	14.655	30 dBm / 1 W
High	2462	10.92	12.359	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

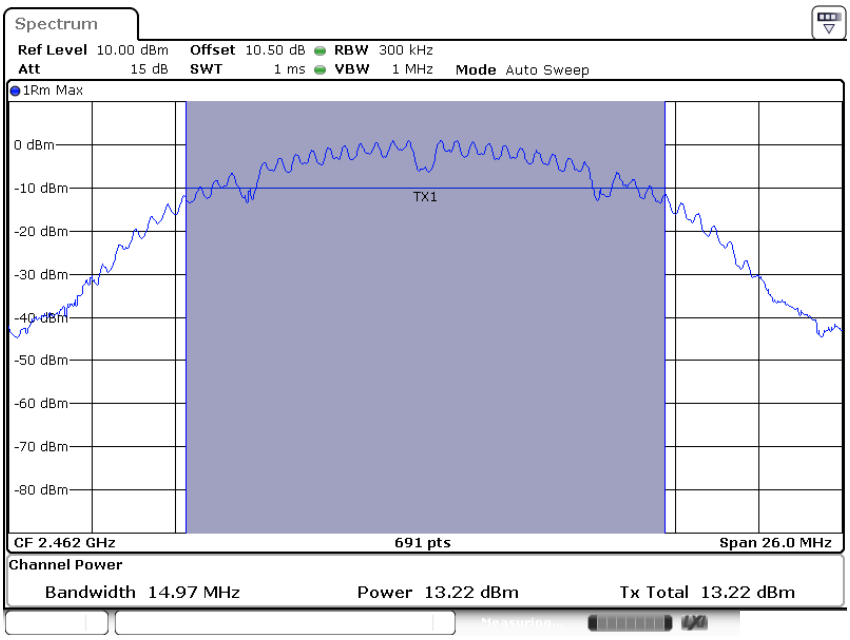
802.11b Channel Low 2412MHz



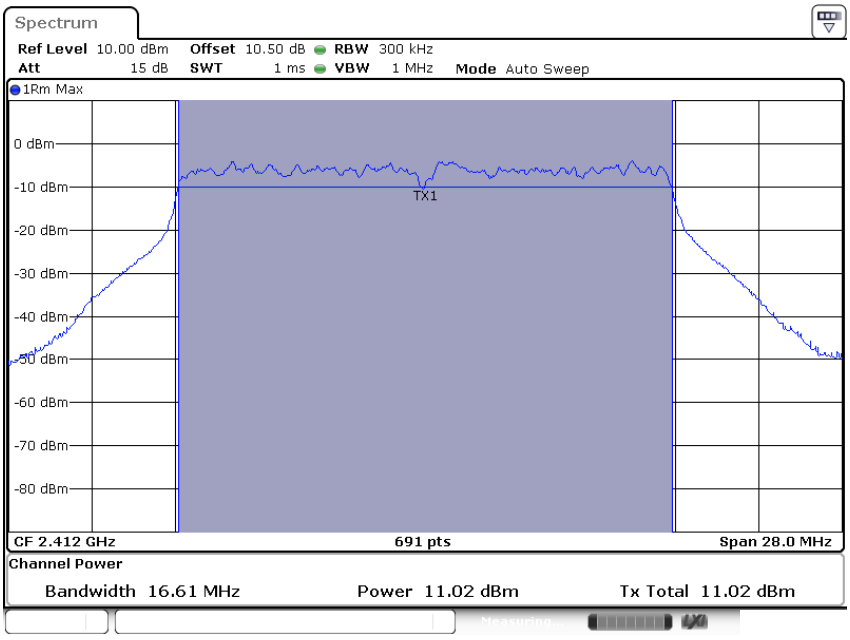
802.11b Channel Middle 2437MHz



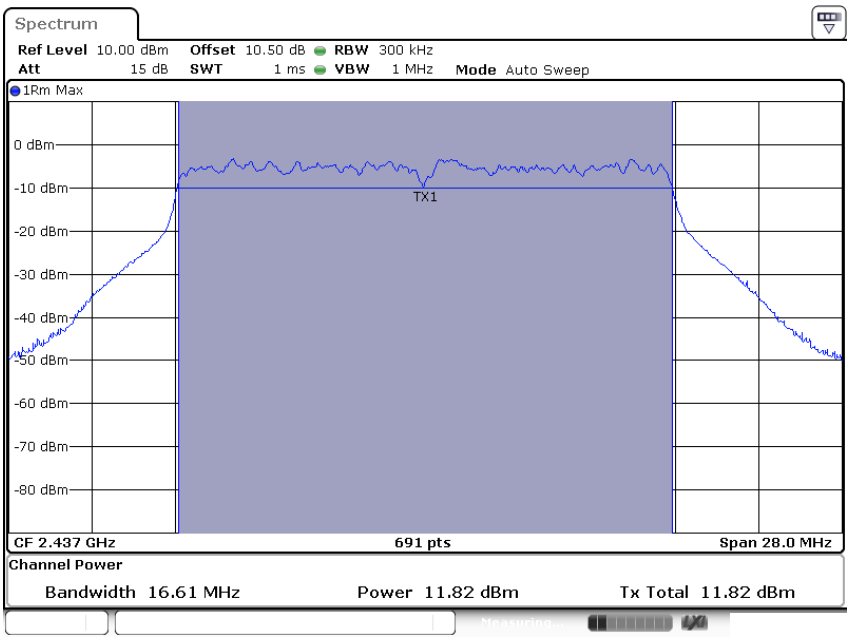
802.11b Channel High 2462MHz



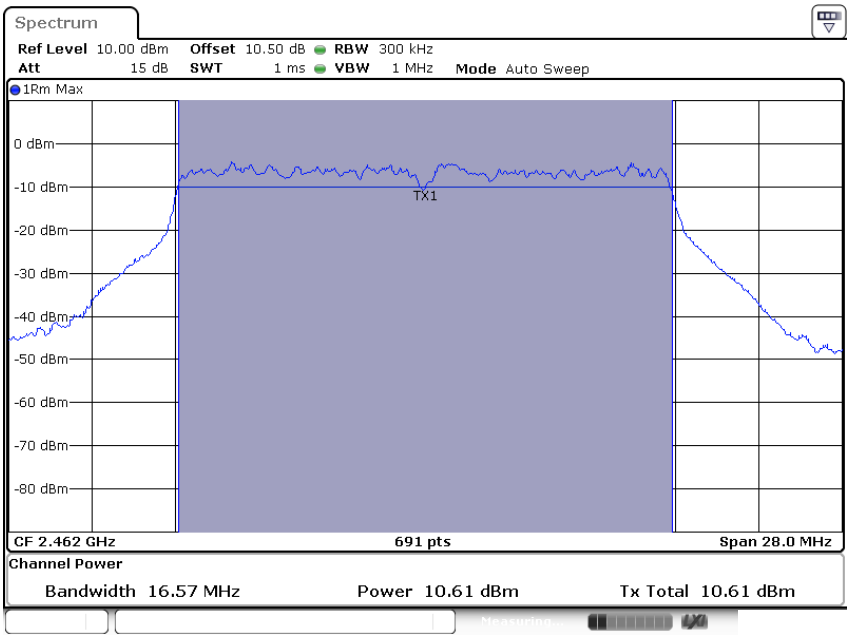
802.11g Channel Low 2412MHz



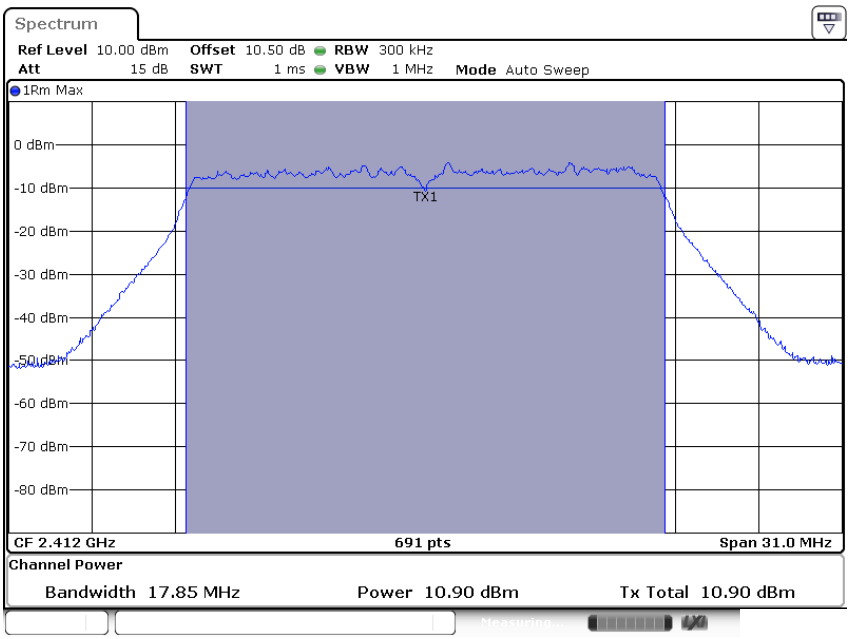
802.11g Channel Middle 2437MHz



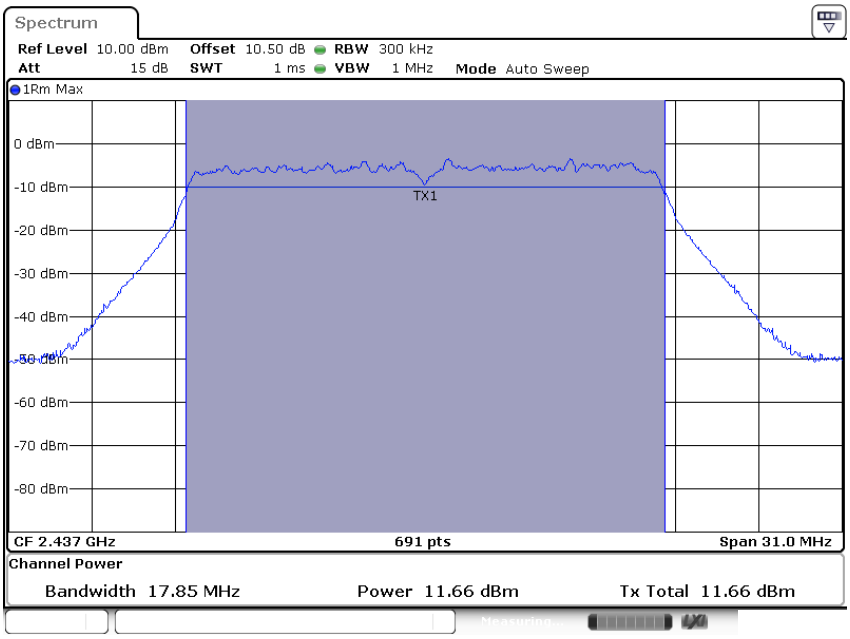
802.11g Channel High 2462MHz



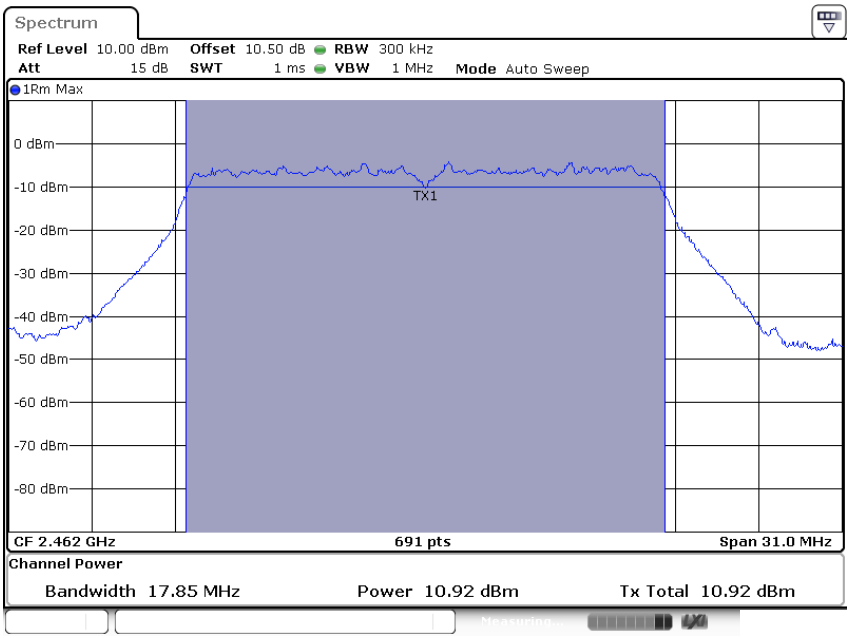
802.11n Channel Low 2412MHz (20MHz)



802.11n Channel Middle 2437MHz (20MHz)

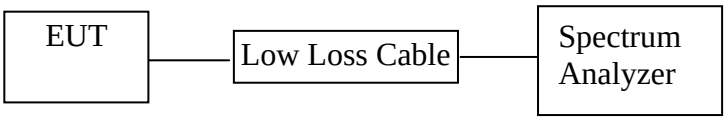


802.11n Channel High 2462MHz (20MHz)



8. POWER SPECTRAL DENSITY MEASUREMENT

8.1.Block Diagram of Test Setup



8.2.The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3.EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8.4.Operating Condition of EUT

8.4.1.Setup the EUT and simulator as shown as Section 8.1.

8.4.2.Turn on the power of all equipment.

8.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

8.5.Test Procedure

8.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.2.Measurement Procedure PKPSD:

This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.

3. Set the RBW 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

8.5.3. Measurement the maximum power spectral density.

8.6.Test Result

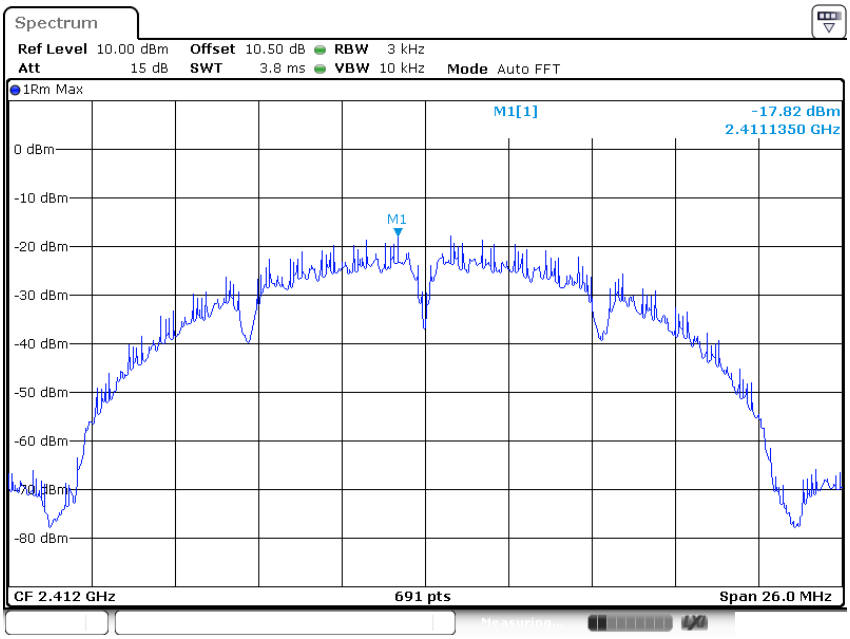
The test was performed with 802.11b			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-17.82	8 dBm
Middle	2437	-17.26	8 dBm
High	2462	-17.15	8 dBm

The test was performed with 802.11g			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-28.21	8 dBm
Middle	2437	-27.92	8 dBm
High	2462	-27.34	8 dBm

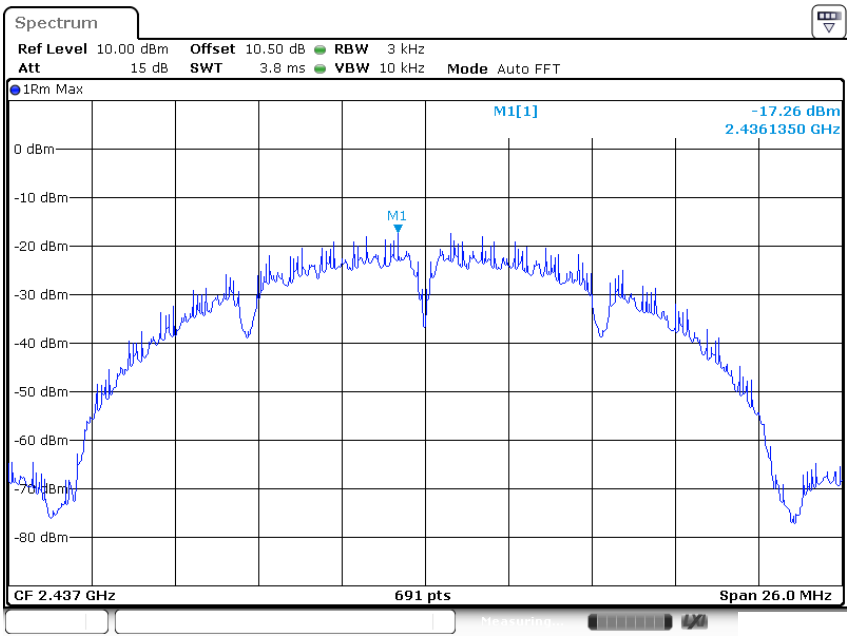
The test was performed with 802.11n (20MHz)			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-27.54	8 dBm
Middle	2437	-27.17	8 dBm
High	2462	-27.28	8 dBm

The spectrum analyzer plots are attached as below.

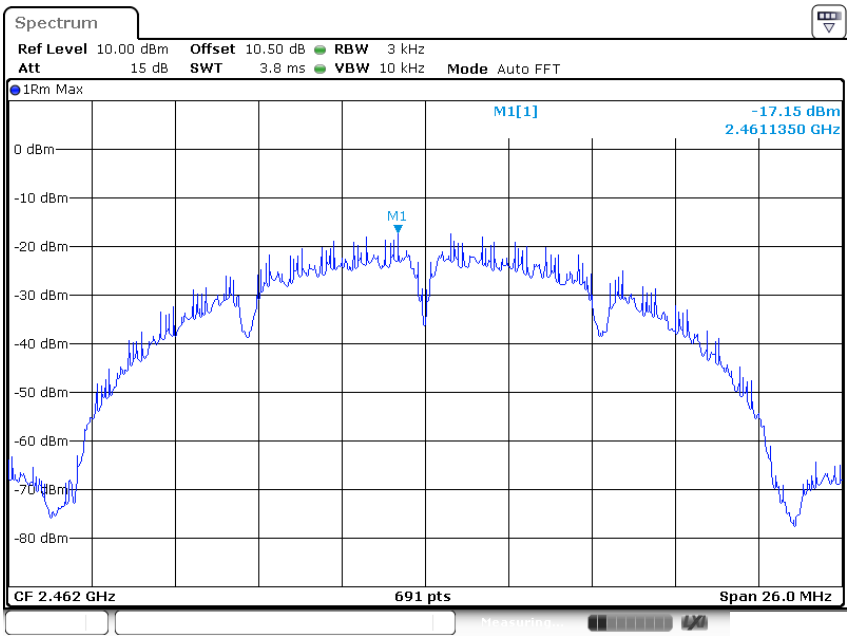
802.11b Channel Low 2412MHz



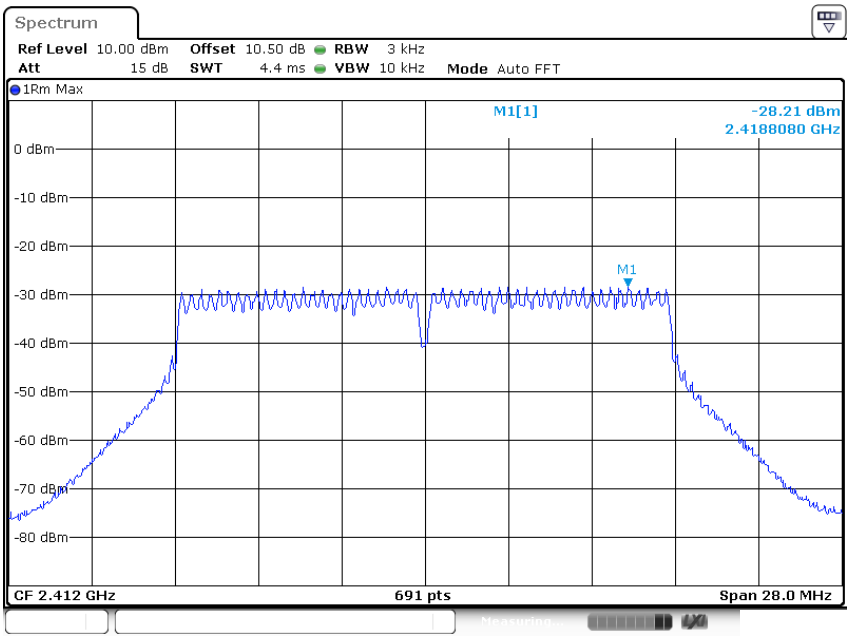
802.11b Channel Middle 2437MHz



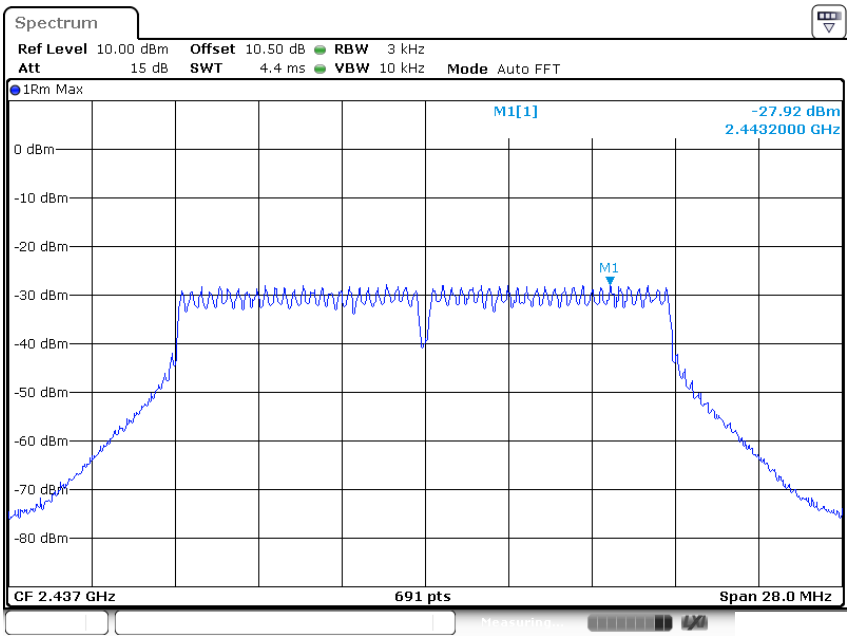
802.11b Channel High 2462MHz



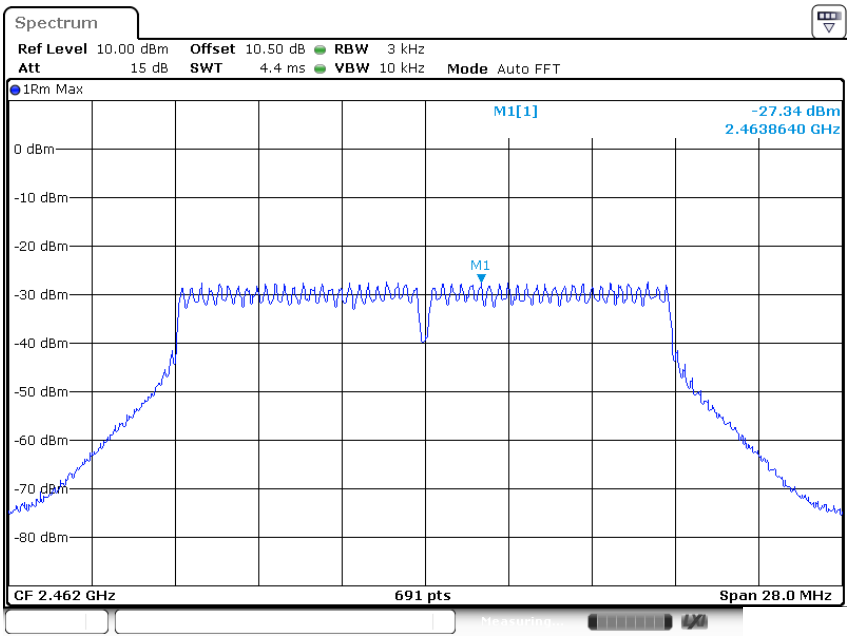
802.11g Channel Low 2412MHz



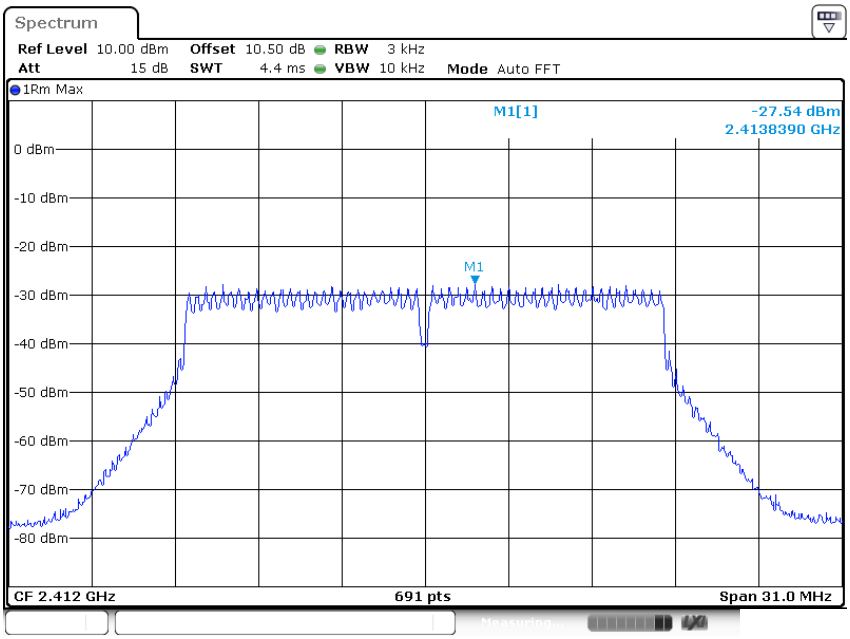
802.11g Channel Middle 2437MHz



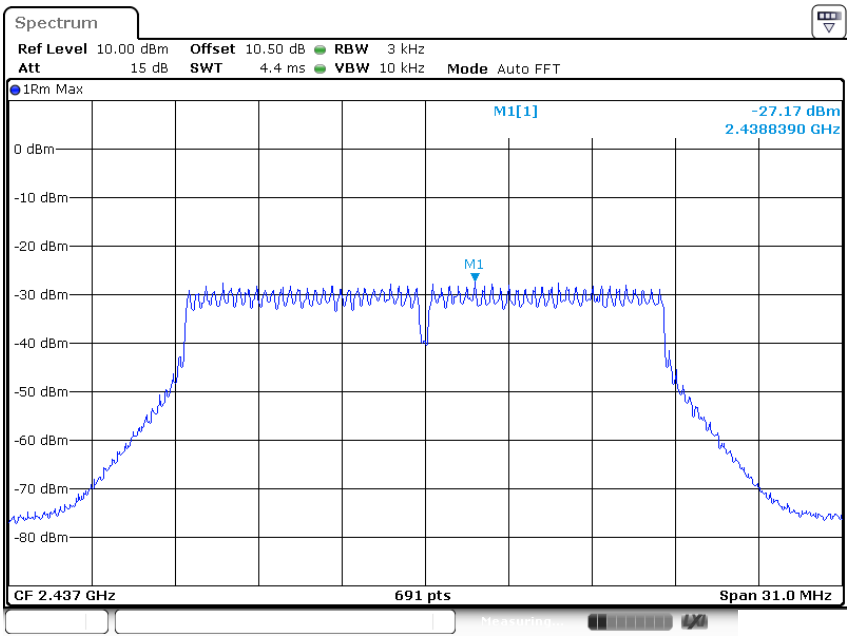
802.11g Channel High 2462MHz



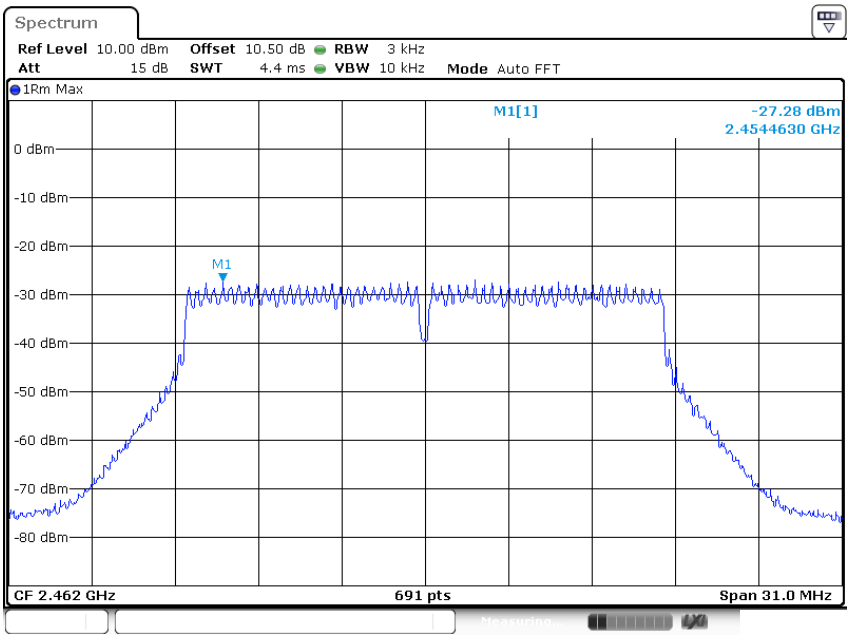
802.11n Channel Low 2412MHz (20MHz)



802.11n Channel Middle 2437MHz (20MHz)

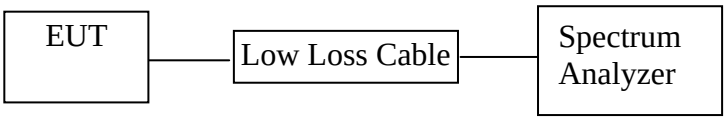


802.11n Channel High 2462MHz(20MHz)



9. BAND EDGE COMPLIANCE TEST

9.1. Block Diagram of Test Setup



9.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

9.3. EUT Configuration on Measurement

The equipment is installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.4. Operating Condition of EUT

9.4.1. Setup the EUT and simulator as shown as Section 9.1.

9.4.2. Turn on the power of all equipment.

9.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2462MHz and 2422MHz, 2452MHz TX frequency to transmit.

9.5. Test Procedure

Conducted Band Edge:

9.5.1. The transmitter output was connected to the spectrum analyzer via a low loss

cable.

9.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

Radiate Band Edge:

9.5.3.The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

9.5.4.The turntable was rotated for 360 degrees to determine the position of maximum emission level.

9.5.5.EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

9.5.6.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

9.5.7.RBW=1MHz, VBW=1MHz

9.5.8.The band edges was measured and recorded.

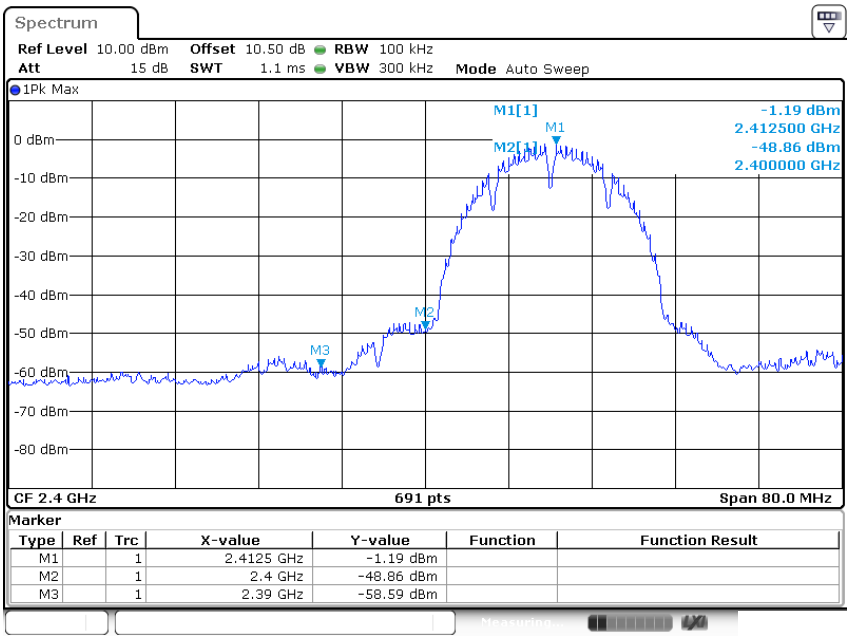
9.6.Test Result

The test was performed with 802.11b			
channel	Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
1	2400	47.67	> 20dBc
11	2483.5	60.74	> 20dBc

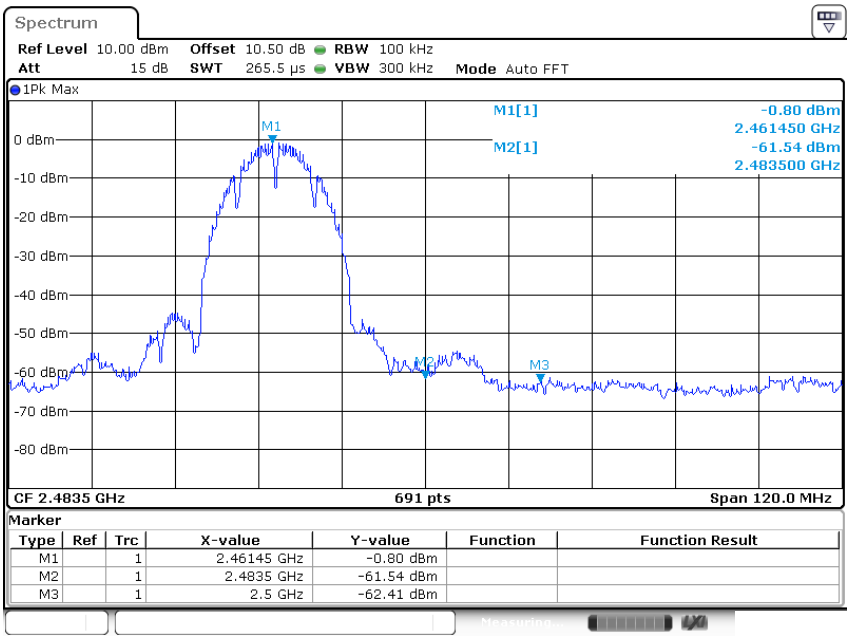
The test was performed with 802.11g			
channel	Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
1	2400	42.70	> 20dBc
11	2483.5	51.96	> 20dBc

The test was performed with 802.11n (20MHz)			
channel	Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
1	2400	39.81	> 20dBc
11	2483.5	53.43	> 20dBc

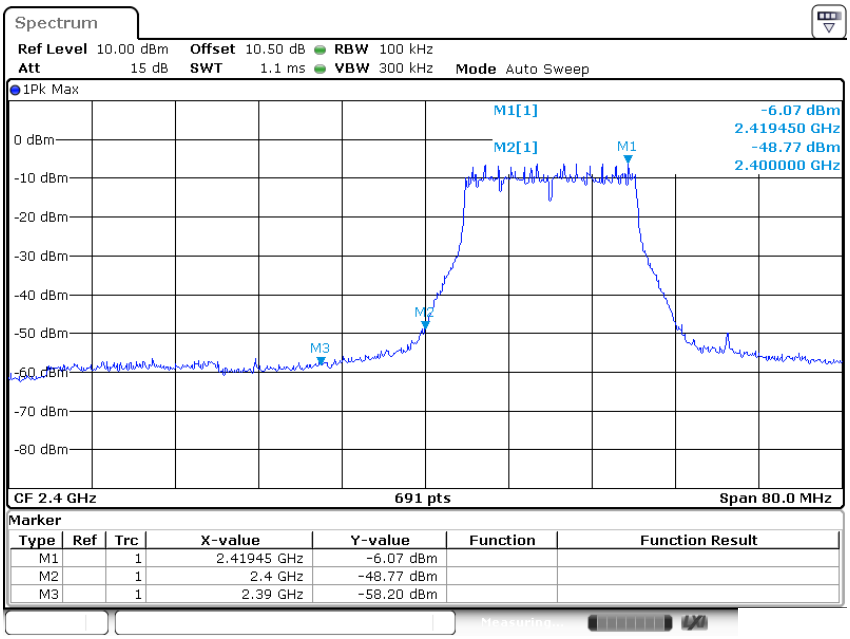
802.11b Channel Low 2412MHz



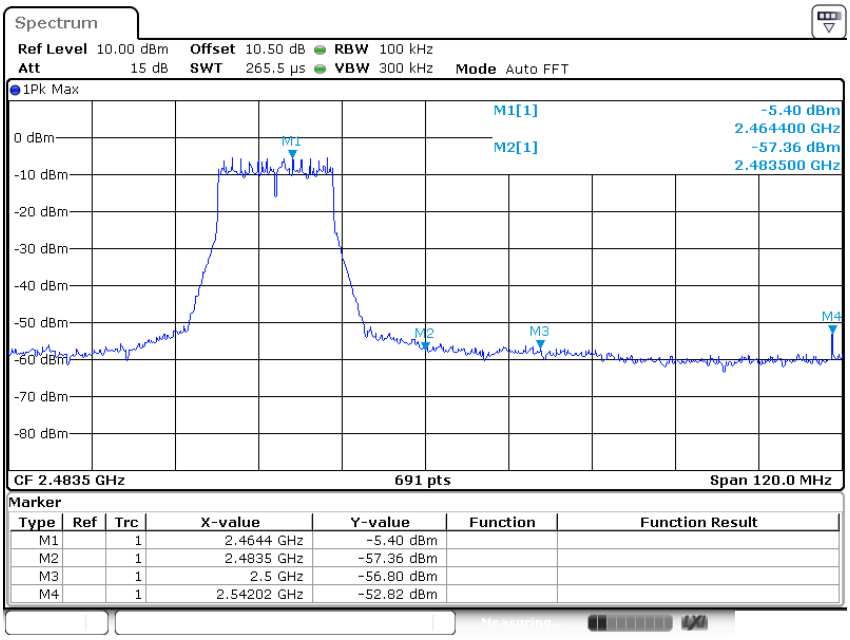
802.11b Channel High 2462MHz



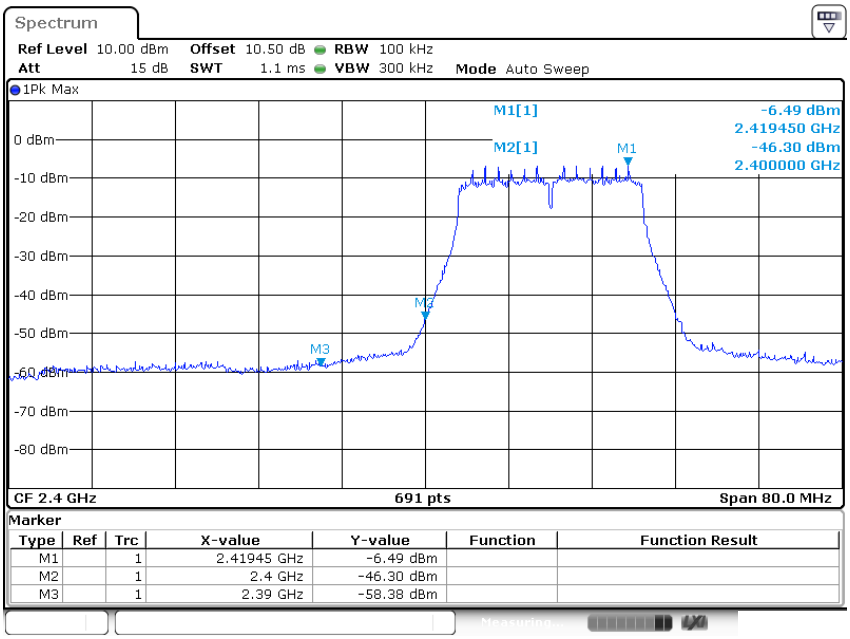
802.11g Channel Low 2412MHz



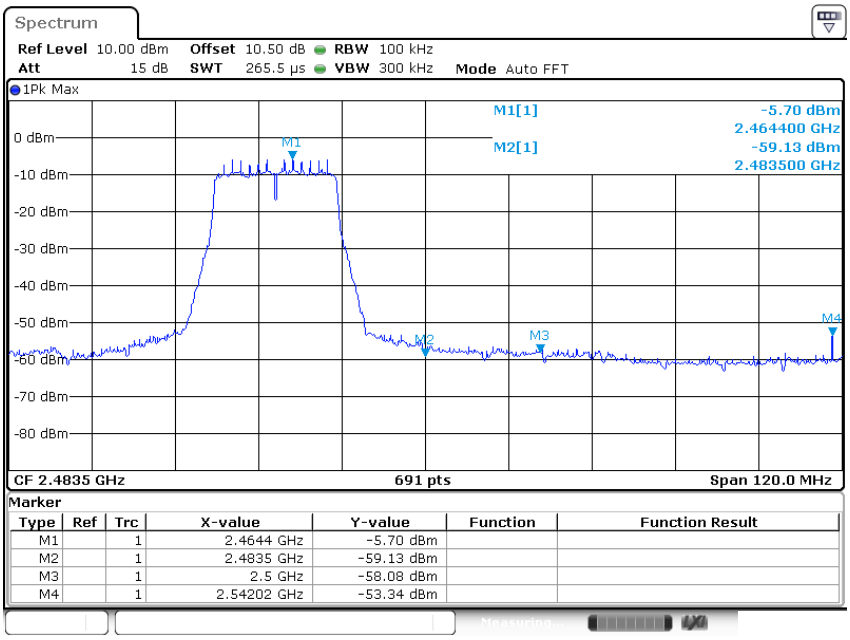
802.11g Channel High 2462MHz



802.11n Channel Low 2412MHz (20MHz)



802.11n Channel High 2462MHz (20MHz)



Radiated Band Edge Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

   Result = Reading + Corrected Factor
3. Display the measurement of peak values.

Test Procedure:

The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

Let the EUT work in TX modes then measure it.
We select 2412MHz, 2462MHz TX frequency to transmit(802.11b/g/n20 mode).

During the radiated emission test, the spectrum analyzer was set with the following configurations:
1.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
2.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
3.All modes of operation were investigated and the worst-case emissions are reported.

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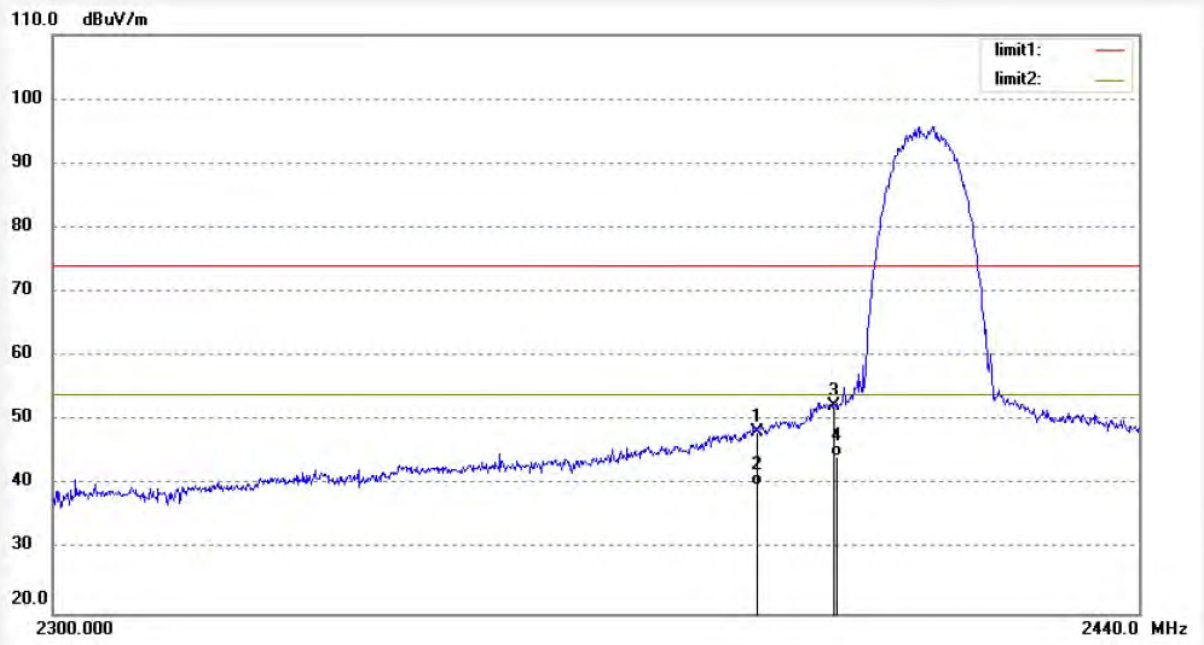
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: ding1 #1409
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 10/09/49
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	54.04	-5.89	48.15	74.00	-25.85	peak	300	175	
2	2390.000	45.87	-5.89	39.98	54.00	-14.02	AVG	300	175	
3	2400.000	58.05	-5.80	52.25	74.00	-21.75	peak	300	93	
4	2400.000	50.13	-5.80	44.33	54.00	-9.67	AVG	300	93	

Note: Average measurement with peak detection at No.2&4

ACCURATE TECHNOLOGY CO., LTD.
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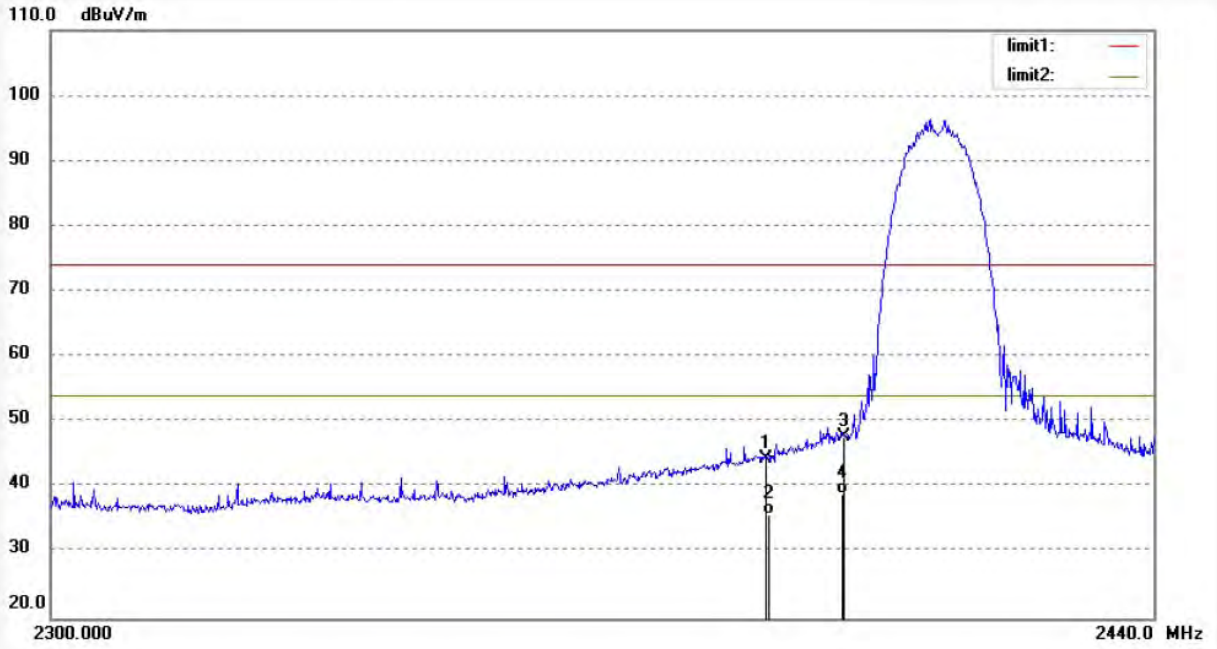
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: ding1 #1408
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 10/07/31
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	50.29	-5.89	44.40	74.00	-29.60	peak	300	144	
2	2390.000	41.67	-5.89	35.78	54.00	-18.22	AVG	300	144	
3	2400.000	53.55	-5.80	47.75	74.00	-26.25	peak	300	219	
4	2400.000	44.82	-5.80	39.02	54.00	-14.98	AVG	300	219	

Note: Average measurement with peak detection at No.2&4

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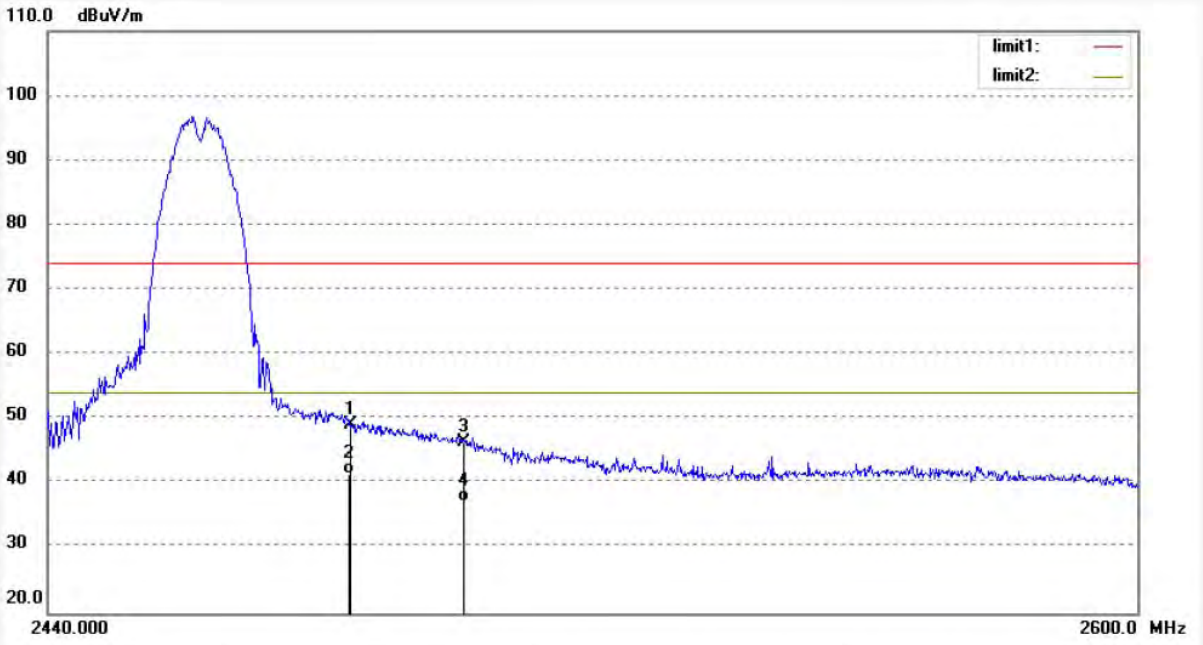
Fax:+86-0755-26503396

Job No.: ding1 #1407	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 10/05/39
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2412MHz(802.11b)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	54.75	-5.51	49.24	74.00	-24.76	peak	300	113	
2	2483.500	46.97	-5.51	41.46	54.00	-12.54	AVG	300	113	
3	2500.000	51.85	-5.50	46.35	74.00	-27.65	peak	300	286	
4	2500.000	42.68	-5.50	37.18	54.00	-16.82	AVG	300	286	

Note: Average measurement with peak detection at No.2&4

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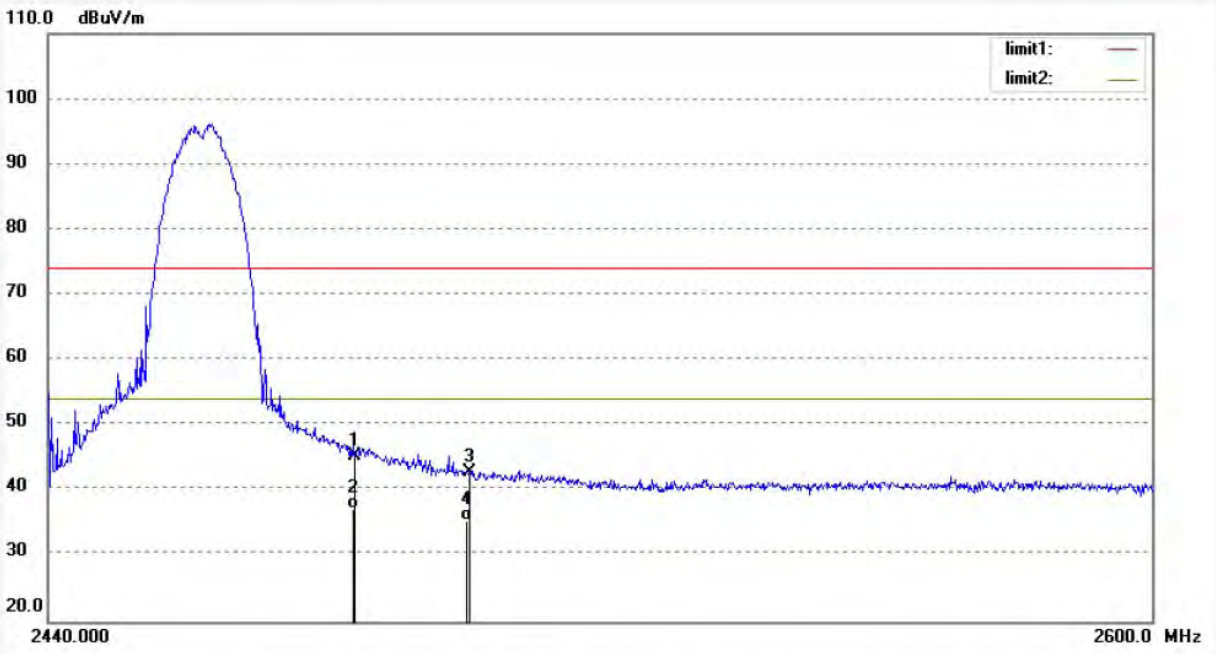
Fax:+86-0755-26503396

Job No.: ding1 #1406
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 10/03/06
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	50.93	-5.51	45.42	74.00	-28.58	peak	300	120	
2	2483.500	42.67	-5.51	37.16	54.00	-16.84	AVG	300	120	
3	2500.000	48.35	-5.50	42.85	74.00	-31.15	peak	300	241	
4	2500.000	40.95	-5.50	35.45	54.00	-18.55	AVG	300	241	

Note: Average measurement with peak detection at No.2&4

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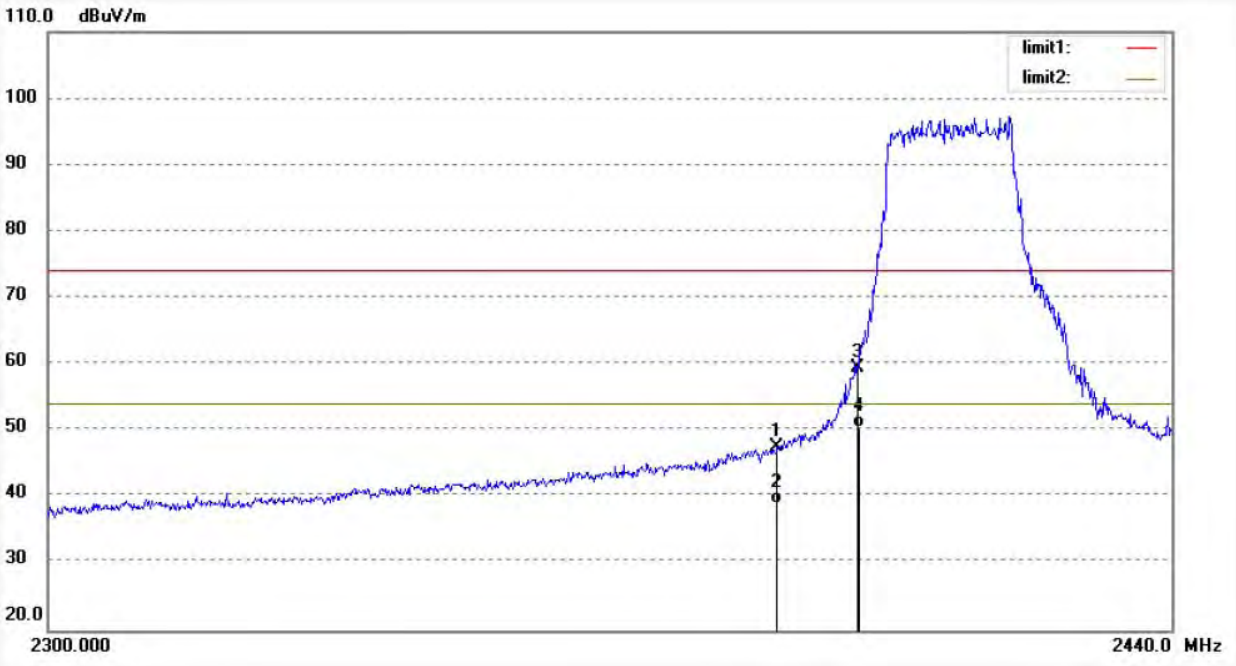
Job No.: ding1 #1402
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/53/12
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	53.43	-5.89	47.54	74.00	-26.46	peak	300	217	
2	2390.000	44.86	-5.89	38.97	54.00	-15.03	AVG	300	217	
3	2400.000	65.40	-5.80	59.60	74.00	-14.40	peak	150	84	
4	2400.000	56.37	-5.80	50.57	54.00	-3.43	AVG	150	84	

Note: Average measurement with peak detection at No.2&4

ACCURATE TECHNOLOGY CO., LTD.
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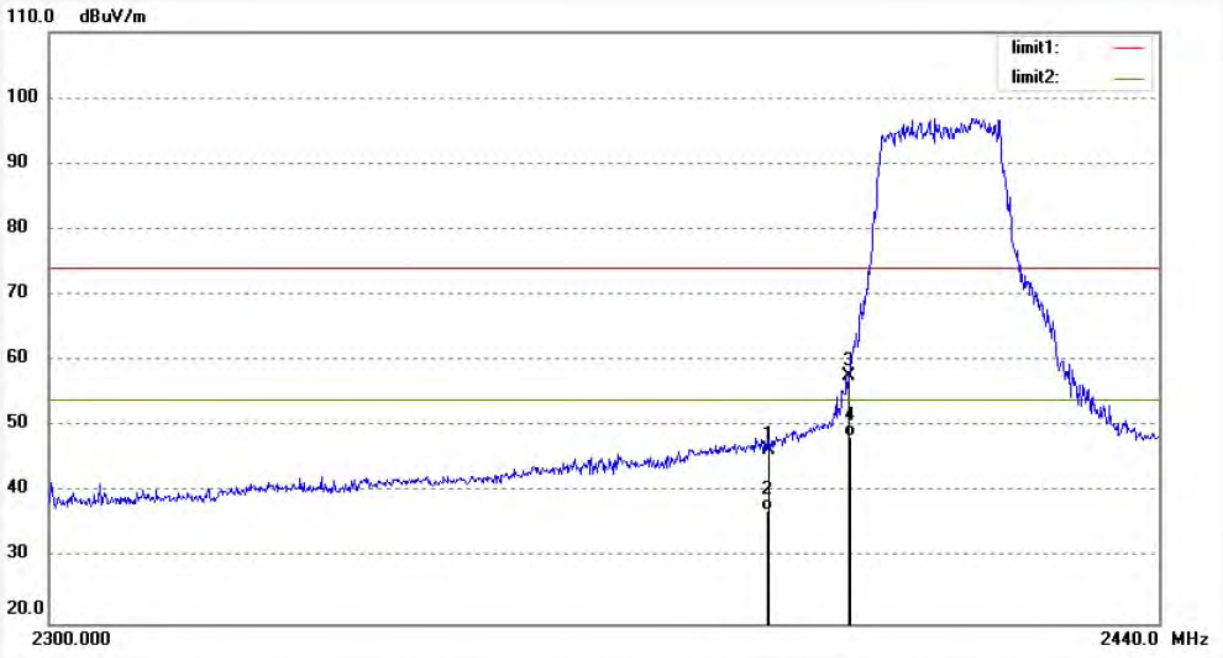
Fax:+86-0755-26503396

Job No.: ding1 #1403
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/57/00
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	52.43	-5.89	46.54	74.00	-27.46	peak	300	105	
2	2390.000	43.17	-5.89	37.28	54.00	-16.72	AVG	300	105	
3	2400.000	63.40	-5.80	57.60	74.00	-16.40	peak	300	229	
4	2400.000	54.26	-5.80	48.46	54.00	-5.54	AVG	300	229	

Note: Average measurement with peak detection at No.2&4

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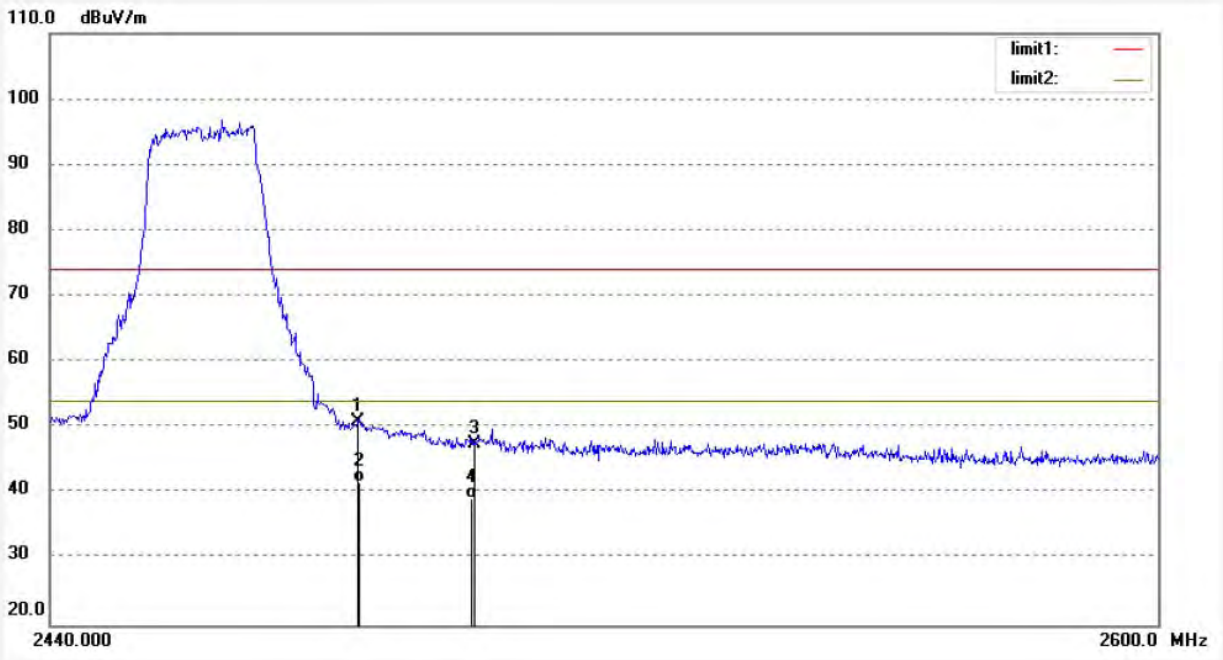
Job No.: ding1 #1404	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 10/01/44
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2412MHz(802.11g)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	56.34	-5.51	50.83	74.00	-23.17	peak	300	214	
2	2483.500	47.32	-5.51	41.81	54.00	-12.19	AVG	300	214	
3	2500.000	53.15	-5.50	47.65	74.00	-26.35	peak	300	149	
4	2500.000	44.69	-5.50	39.19	54.00	-14.81	AVG	300	149	

Note: Average measurement with peak detection at No.2&4

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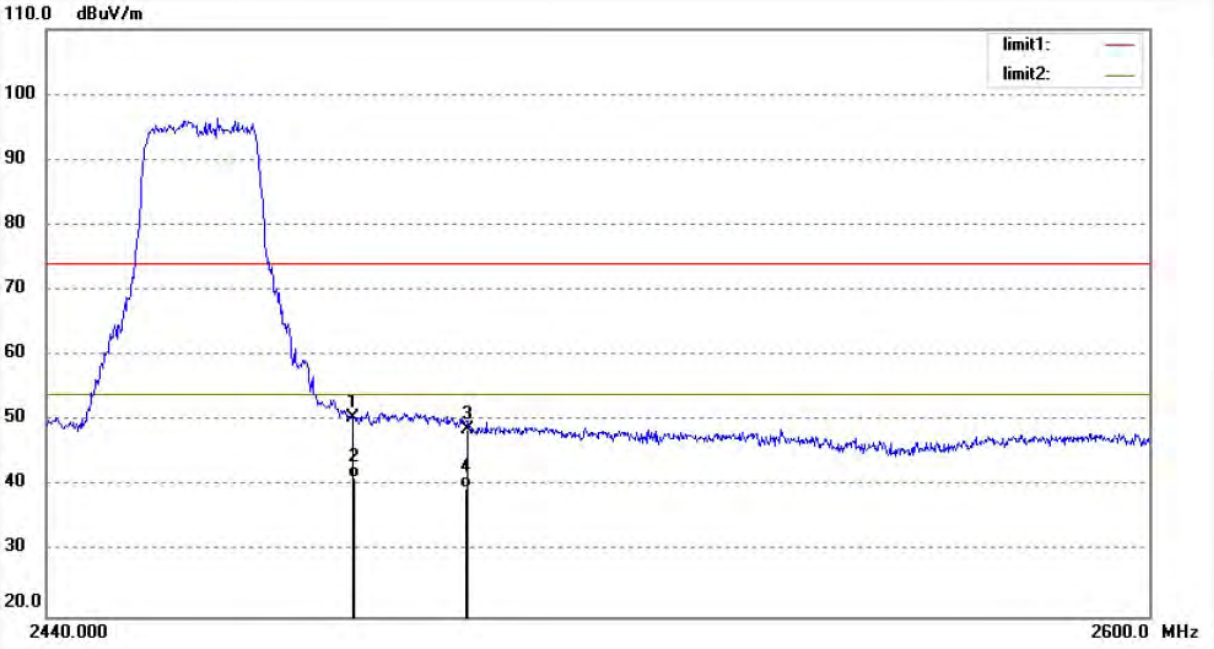
Job No.: ding1 #1405	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 10/02/05
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2412MHz(802.11g)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	55.99	-5.51	50.48	74.00	-23.52	peak	300	157	
2	2483.500	46.78	-5.51	41.27	54.00	-12.73	AVG	300	157	
3	2500.000	54.15	-5.50	48.65	74.00	-25.35	peak	300	45	
4	2500.000	45.16	-5.50	39.66	54.00	-14.34	AVG	300	45	

Note: Average measurement with peak detection at No.2&4

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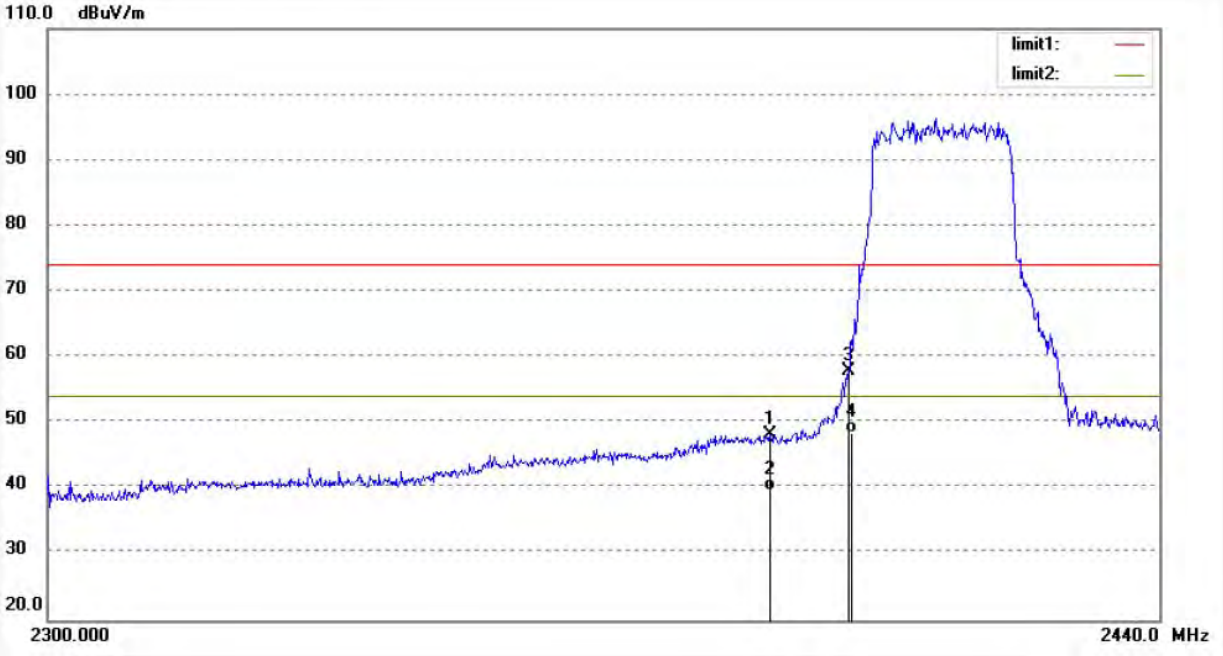
Fax:+86-0755-26503396

Job No.: ding1 #1401	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/48/50
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2412MHz(802.11n20)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	54.22	-5.89	48.33	74.00	-25.67	peak	300	68	
2	2390.000	45.63	-5.89	39.74	54.00	-14.26	AVG	300	68	
3	2400.000	63.63	-5.80	57.83	74.00	-16.17	peak	300	327	
4	2400.000	54.29	-5.80	48.49	54.00	-5.51	AVG	300	327	

Note: Average measurement with peak detection at No.2&4

ACCURATE TECHNOLOGY CO., LTD.
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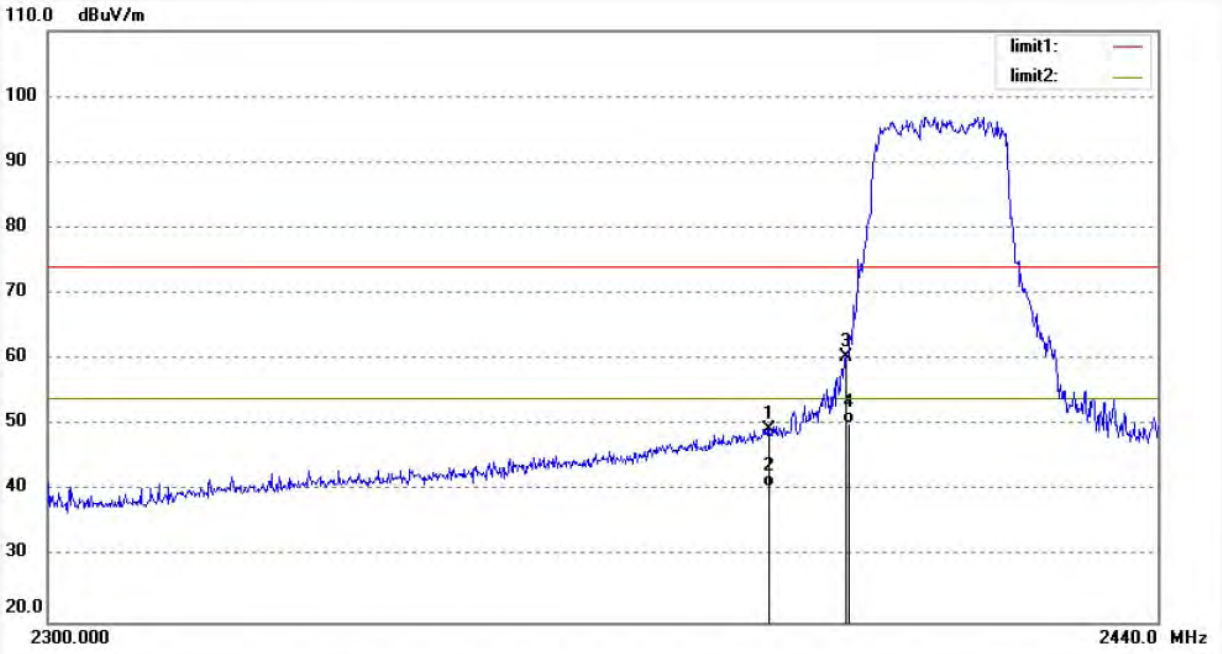
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: ding1 #1400
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/46/31
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	55.22	-5.89	49.33	74.00	-24.67	peak	300	258	
2	2390.000	46.51	-5.89	40.62	54.00	-13.38	AVG	300	258	
3	2400.000	66.13	-5.80	60.33	74.00	-13.67	peak	300	124	
4	2400.000	56.12	-5.80	50.32	54.00	-3.68	AVG	300	124	

Note: Average measurement with peak detection at No.2&4

ACCURATE TECHNOLOGY CO., LTD.
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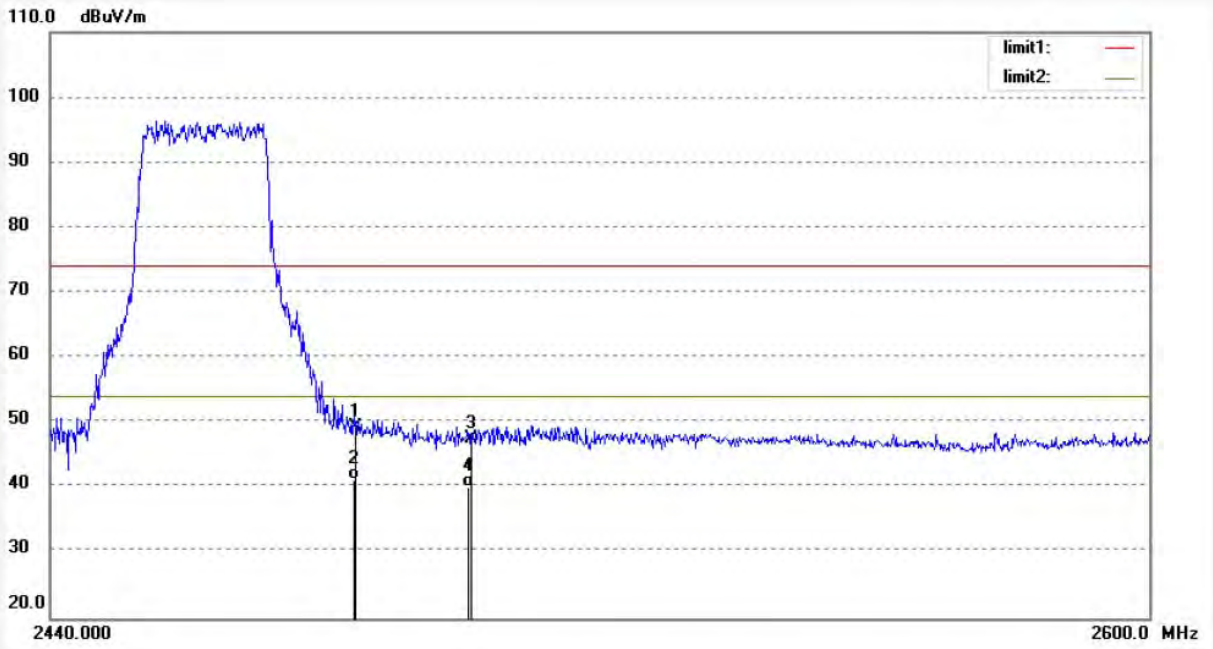
Fax:+86-0755-26503396

Job No.: ding1 #1399
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/43/03
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	54.85	-5.51	49.34	74.00	-24.66	peak	150	98	
2	2483.500	46.71	-5.51	41.20	54.00	-12.80	AVG	150	98	
3	2500.000	53.11	-5.50	47.61	74.00	-26.39	peak	300	234	
4	2500.000	45.62	-5.50	40.12	54.00	-13.88	AVG	300	234	

Note: Average measurement with peak detection at No.2&4

ACCURATE TECHNOLOGY CO., LTD.
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Site: 1# Chamber
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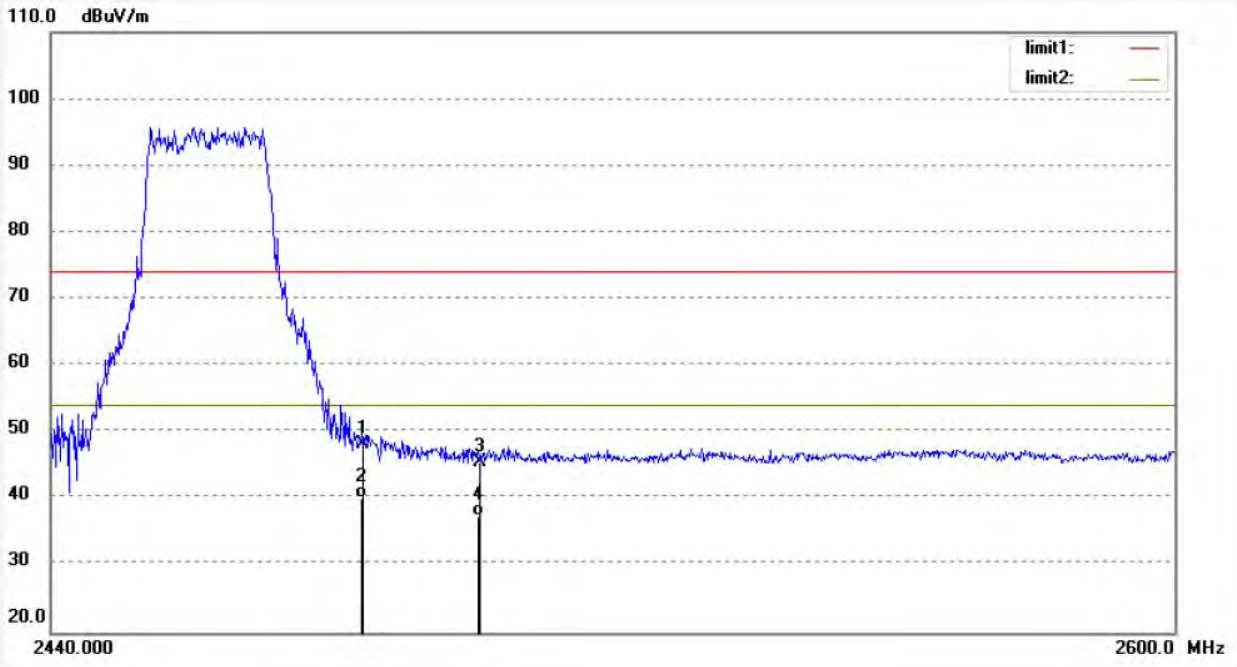
Job No.: ding1 #1398
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/40/31
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	53.85	-5.51	48.34	74.00	-25.66	peak	150	175	
2	2483.500	45.68	-5.51	40.17	54.00	-13.83	AVG	150	175	
3	2500.000	51.11	-5.50	45.61	74.00	-28.39	peak	150	221	
4	2500.000	42.97	-5.50	37.47	54.00	-16.53	AVG	150	221	

Note: Average measurement with peak detection at No.2&4

10.RADIATED SPURIOUS EMISSION TEST

10.1.Block Diagram of Test Setup

10.1.1.Block diagram of connection between the EUT and peripherals

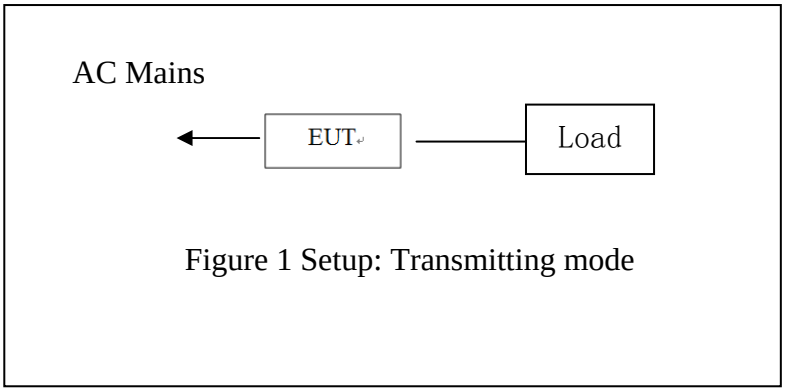
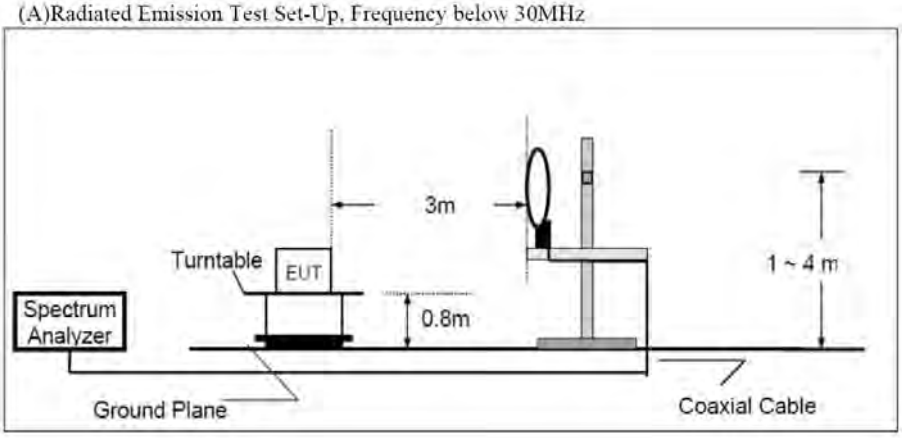


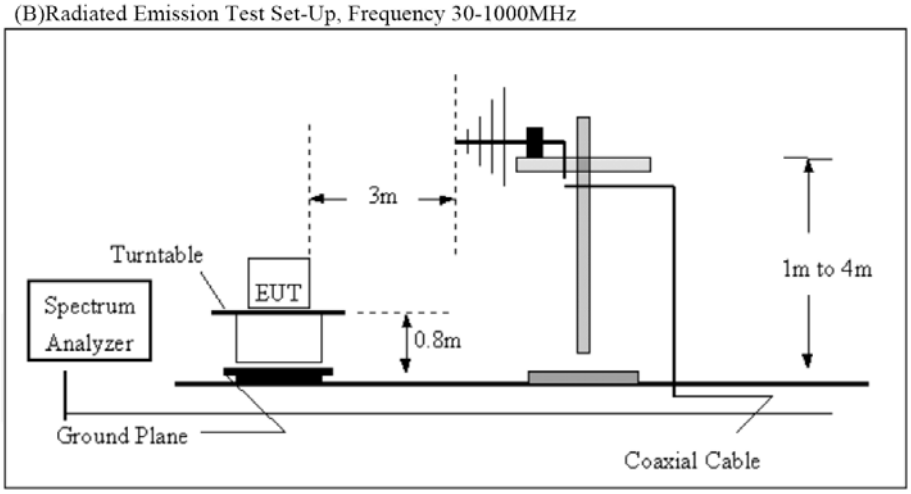
Figure 1 Setup: Transmitting mode

10.1.2.Semi-Anechoic Chamber Test Setup Diagram

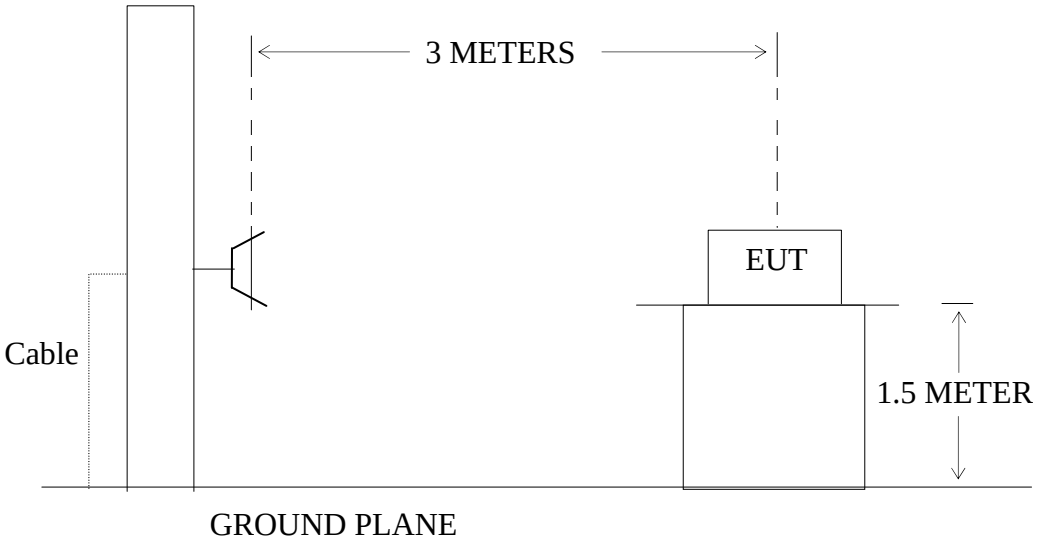
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30-1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



10.2.The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3.Restricted bands of operation

10.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510
[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

10.4.Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

10.5.Operating Condition of EUT

10.5.1.Setup the EUT and simulator as shown as Section 10.1.

10.5.2.Turn on the power of all equipment.

10.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

10.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The worst-case data rate for this channel to be 1Mbps for 802.11b mode and 6Mbps for 802.11g mode and 150Mbps for 802.11n mode, based on previous with 802.11 WLAN product design architectures.

The frequency range from 30MHz to 25000MHz is checked.
Result = Reading + Corrected Factor
Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain
During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

10.7.The Field Strength of Radiation Emission Measurement Results

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by Band Reject Filter in the attached plots.

4. The EUT is tested radiation emission at each test mode (802.11 b/g/n) in three axes. The worst emissions are reported in all test mode and channels.

5. The radiation emissions from 18-25GHz and 9KHz-30MHz are not reported, because the test values lower than the limits of 20dB.

Below 1G

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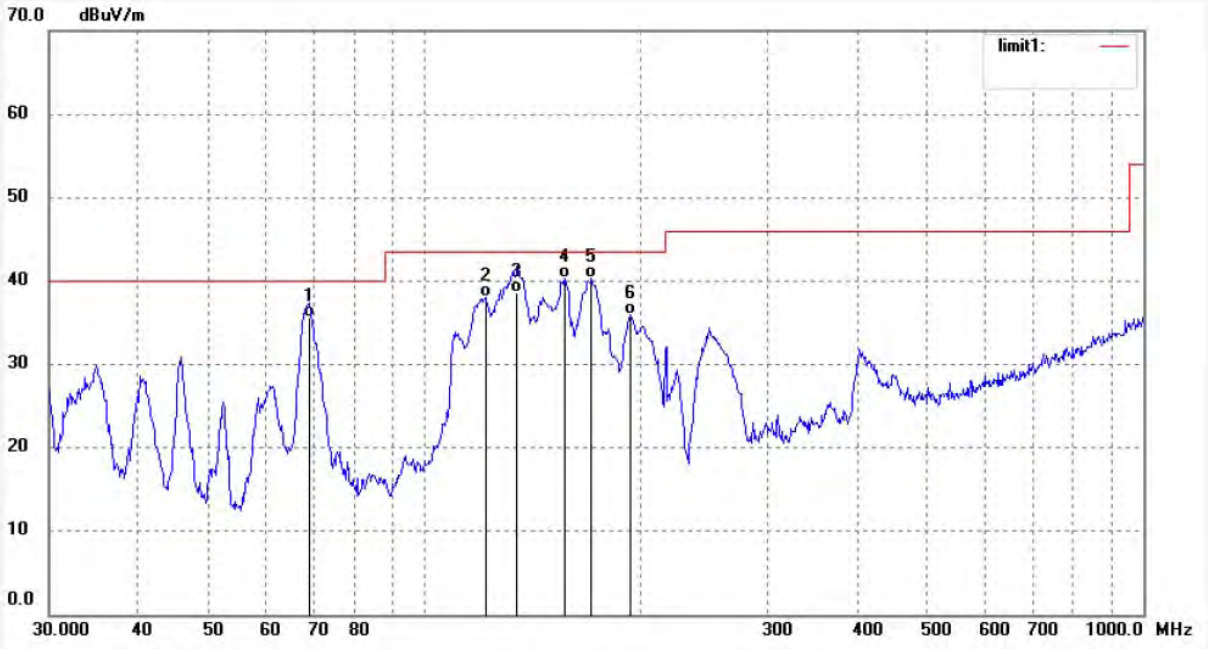
Job No.: ding1 #1374
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 2017/08/25
Time: 18:33:27
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	68.9869	57.61	-22.04	35.57	40.00	-4.43	QP	100	256	
2	121.4623	60.03	-21.96	38.07	43.50	-5.43	QP	100	14	
3	134.4911	60.84	-22.22	38.62	43.50	-4.88	QP	100	274	
4	156.4259	62.16	-21.76	40.40	43.50	-3.10	QP	100	135	
5	170.7878	60.76	-20.38	40.38	43.50	-3.12	QP	100	96	
6	193.1366	55.15	-19.11	36.04	43.50	-7.46	QP	100	203	

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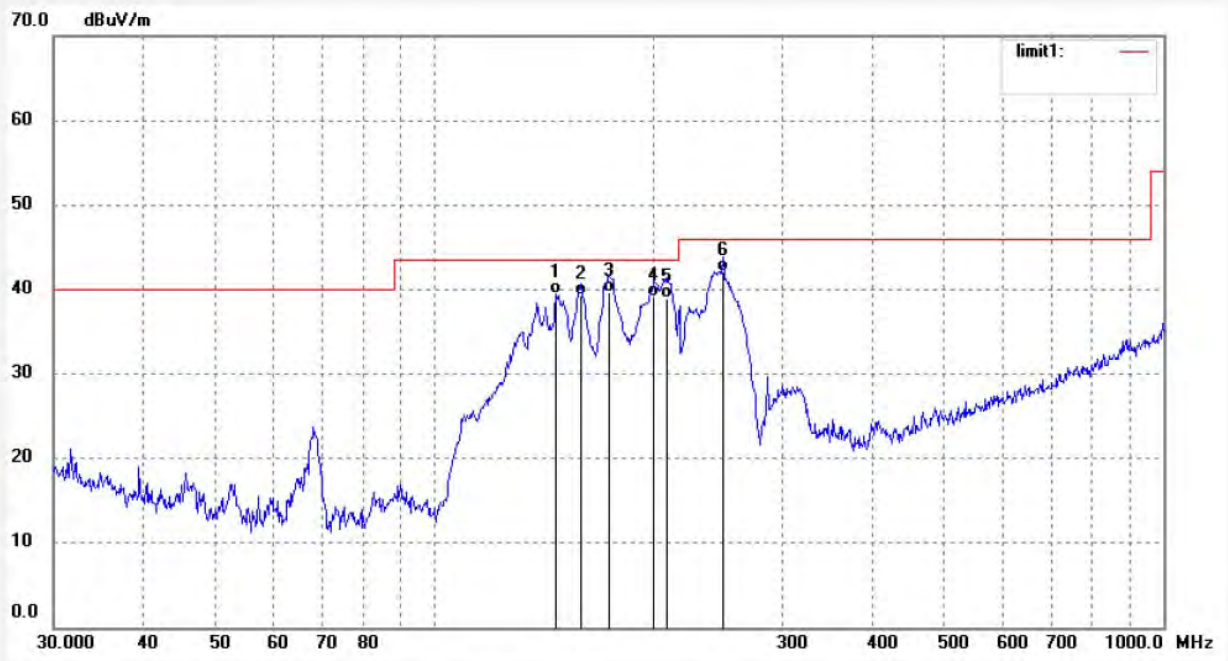
Job No.: ding1 #1375
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2017/08/25
Time: 18:37:41
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	146.8392	61.78	-22.38	39.40	43.50	-4.10	QP	200	36	
2	158.6399	60.78	-21.52	39.26	43.50	-4.24	QP	200	147	
3	173.2051	60.34	-20.62	39.72	43.50	-3.78	QP	100	64	
4	200.0432	57.81	-18.66	39.15	43.50	-4.35	QP	200	55	
5	208.6580	57.36	-18.47	38.89	43.50	-4.61	QP	200	176	
6	248.7319	60.22	-18.14	42.08	46.00	-3.92	QP	200	314	

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Job No.: ding1 #1376
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2017/08/25
Time: 18:42:42
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	151.0252	62.14	-22.26	39.88	43.50	-3.62	QP	200	143	
2	158.6399	60.49	-21.52	38.97	43.50	-4.53	QP	200	159	
3	173.2051	60.23	-20.62	39.61	43.50	-3.89	QP	100	45	
4	207.1968	57.96	-18.47	39.49	43.50	-4.01	QP	200	325	
5	241.8377	60.72	-18.17	42.55	46.00	-3.45	QP	200	96	
6	248.7319	60.74	-18.14	42.60	46.00	-3.40	QP	200	107	

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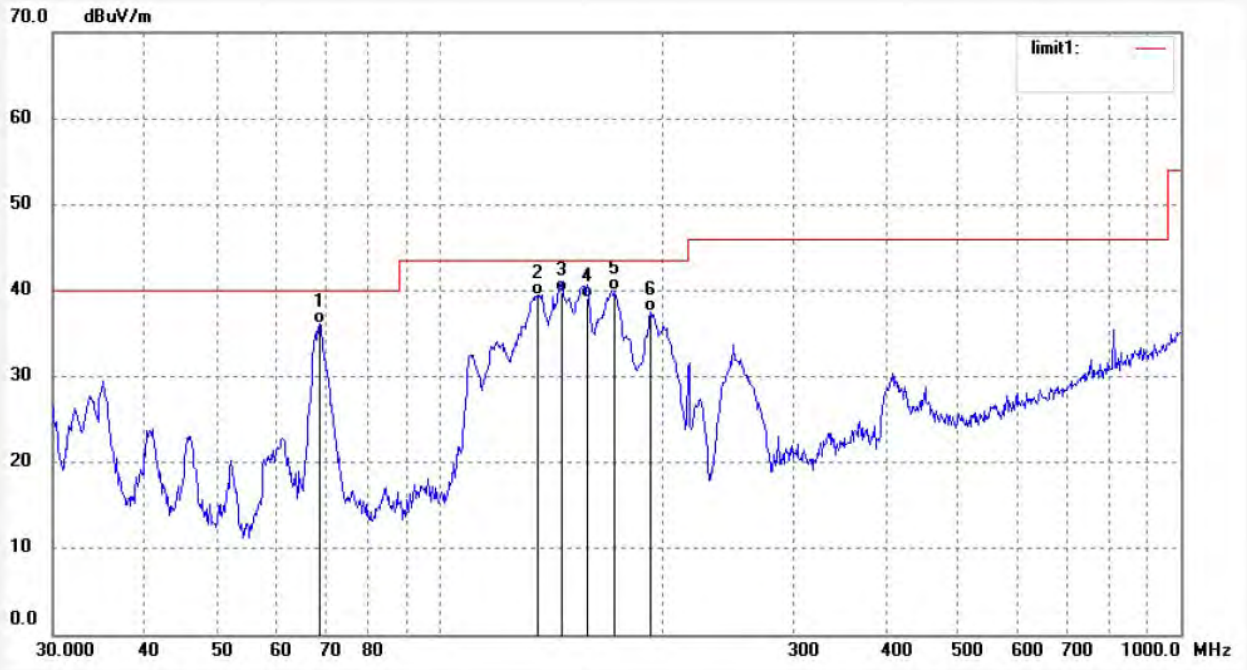
Job No.: ding1 #1377
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 2017/08/25
Time: 18:47:30
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	68.7450	58.11	-22.03	36.08	40.00	-3.92	QP	100	145	
2	135.4395	61.73	-22.24	39.49	43.50	-4.01	QP	100	247	
3	146.3241	62.13	-22.38	39.75	43.50	-3.75	QP	100	29	
4	158.0835	60.77	-21.59	39.18	43.50	-4.32	QP	100	103	
5	171.9922	60.46	-20.50	39.96	43.50	-3.54	QP	100	165	
6	192.4590	56.73	-19.19	37.54	43.50	-5.96	QP	100	178	

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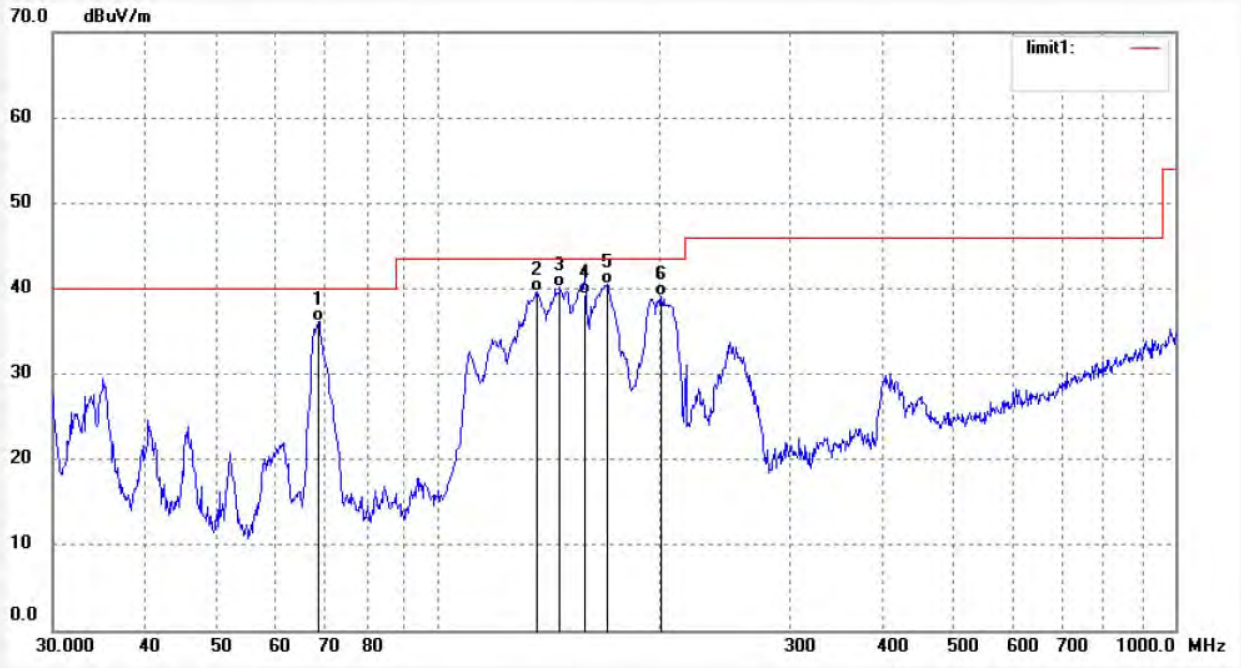
Job No.: ding1 #1378
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 2017/08/25
Time: 18:52:17
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	68.7450	58.12	-22.03	36.09	40.00	-3.91	QP	100	216	
2	135.9163	61.82	-22.25	39.57	43.50	-3.93	QP	100	207	
3	146.3241	62.46	-22.38	40.08	43.50	-3.42	QP	100	156	
4	158.0835	60.95	-21.59	39.36	43.50	-4.14	QP	100	142	
5	169.5919	60.78	-20.34	40.44	43.50	-3.06	QP	100	101	
6	200.7473	57.81	-18.63	39.18	43.50	-4.32	QP	100	97	

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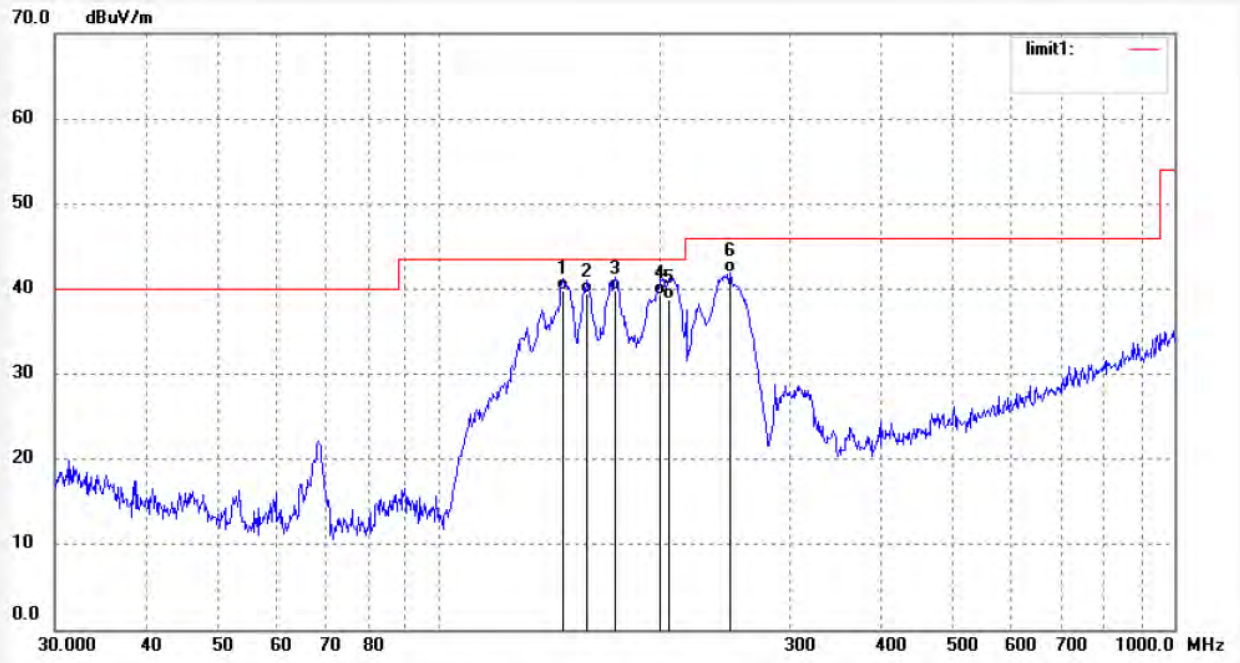
Job No.: ding1 #1379
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2017/08/25
Time: 18:54:33
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	147.3560	62.15	-22.36	39.79	43.50	-3.71	QP	200	257	
2	159.1983	60.84	-21.45	39.39	43.50	-4.11	QP	200	105	
3	173.2051	60.39	-20.62	39.77	43.50	-3.73	QP	200	124	
4	200.0432	57.92	-18.66	39.26	43.50	-4.24	QP	100	139	
5	205.7458	57.28	-18.48	38.80	43.50	-4.70	QP	100	54	
6	248.7319	59.98	-18.14	41.84	46.00	-4.16	QP	200	91	

Above 1G

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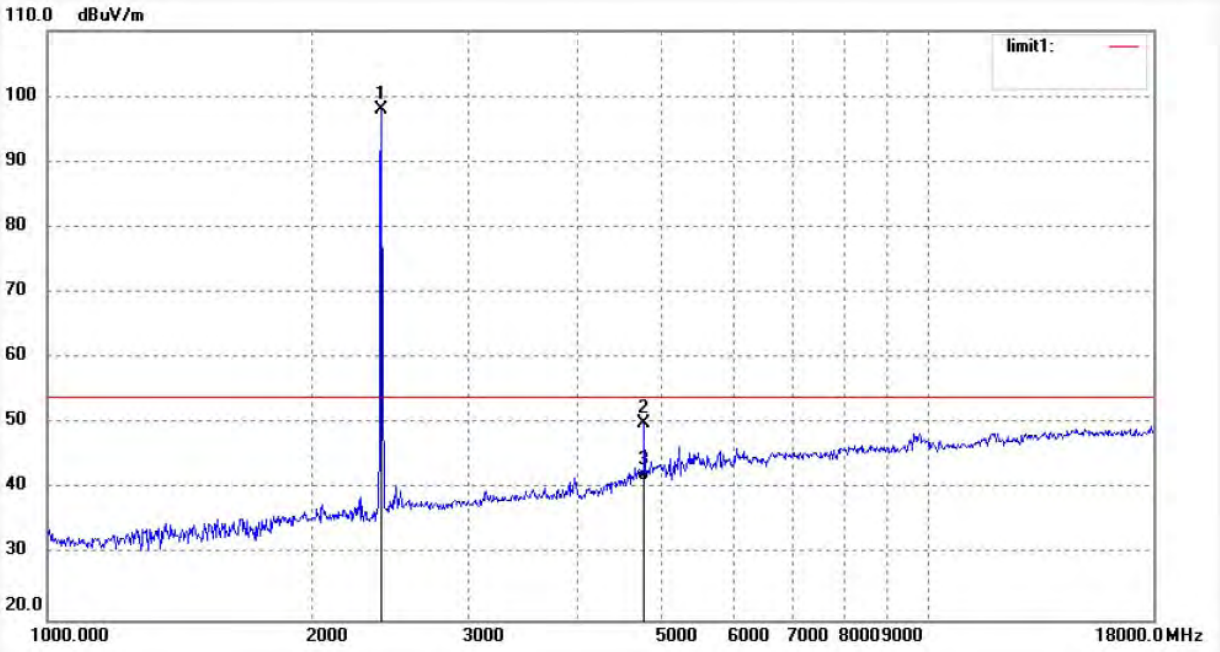
Job No.: ding1 #1380
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 8/37/36
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	103.83	-5.84	97.99			peak	150	204	
2	4824.000	46.77	3.30	50.07	74.00	-23.93	peak	300	104	
3	4824.000	37.94	3.30	41.24	54.00	-12.76	AVG	300	104	

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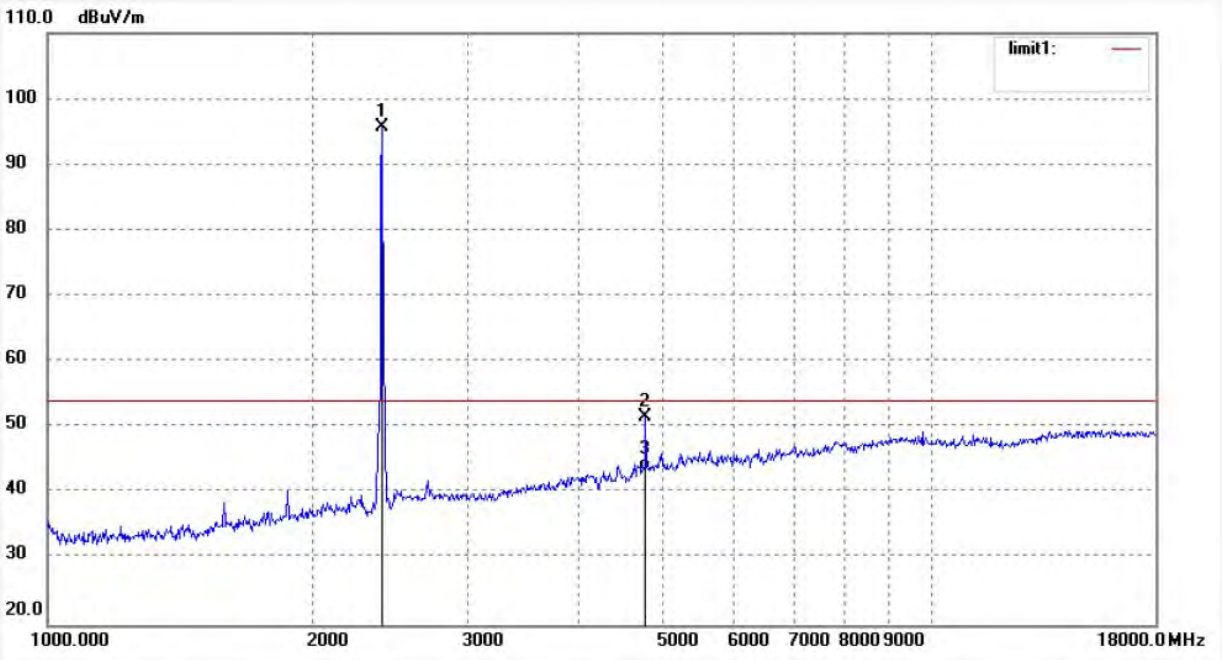
Job No.: ding1 #1381
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 8/39/36
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	101.64	-5.84	95.80			peak	150	113	
2	4824.000	48.35	3.30	51.65	74.00	-22.35	peak	300	176	
3	4824.000	40.17	3.30	43.47	54.00	-10.53	AVG	300	176	

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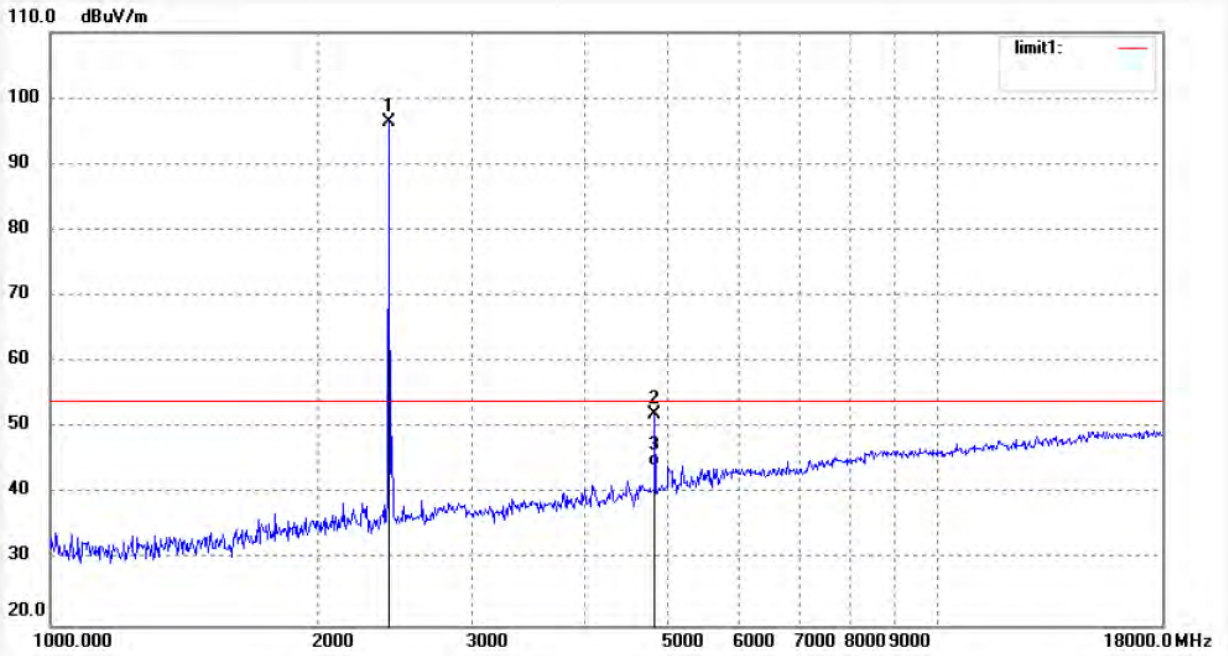
Job No.: ding1 #1382	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 8/50/09
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2437MHz(802.11b)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	102.18	-5.76	96.42			peak	150	202	
2	4874.000	48.38	3.67	52.05	74.00	-21.95	peak	300	125	
3	4874.000	40.59	3.67	44.26	54.00	-9.74	AVG	300	125	

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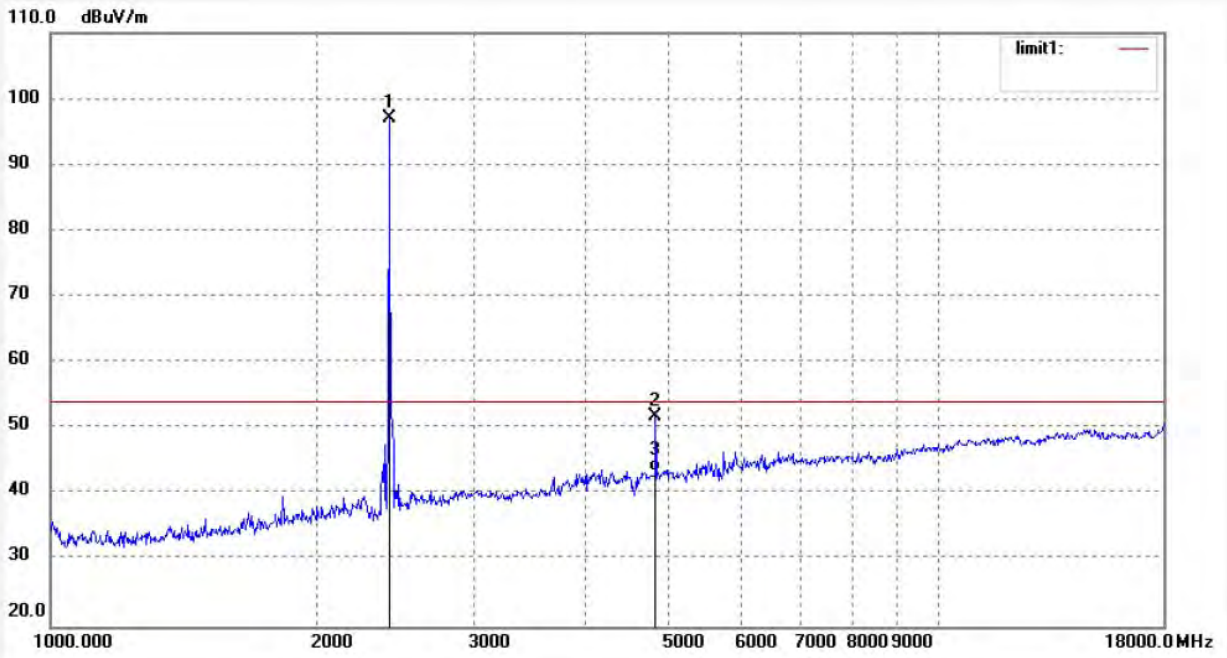
Job No.: ding1 #1383
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 8/51/38
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	102.82	-5.76	97.06			peak	150	301	
2	4874.000	48.27	3.67	51.94	74.00	-22.06	peak	300	158	
3	4874.000	39.87	3.67	43.54	54.00	-10.46	AVG	300	158	

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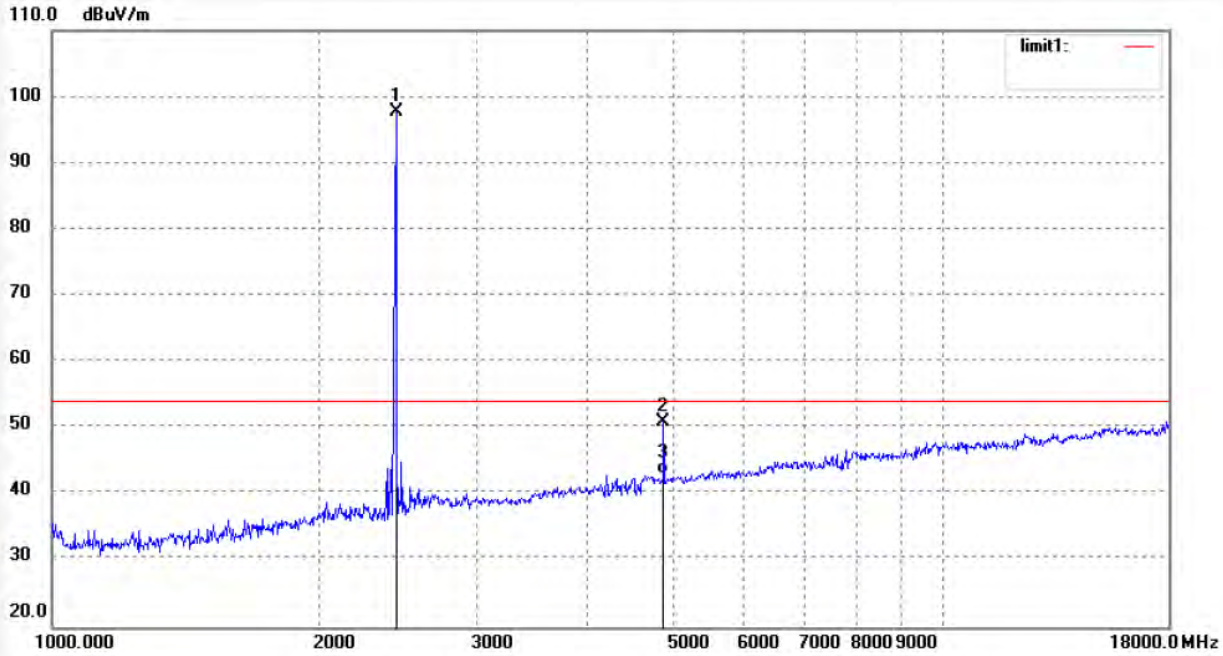
Job No.: ding1 #1384
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 8/54/18
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	103.34	-5.61	97.73			peak	150	115	
2	4924.000	46.75	4.20	50.95	74.00	-23.05	peak	150	59	
3	4924.000	38.96	4.20	43.16	54.00	-10.84	AVG	150	59	

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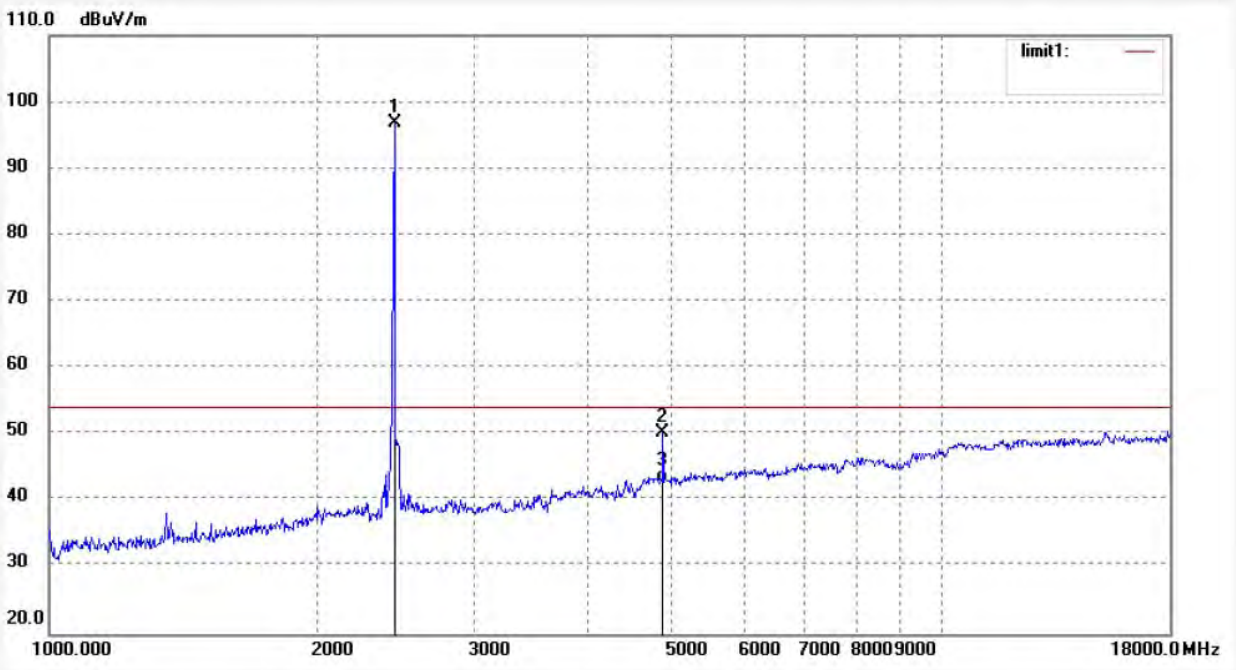
Job No.: ding1 #1385
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11b)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 8/57/07
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	102.34	-5.61	96.73			peak	150	264	
2	4924.000	46.03	4.20	50.23	74.00	-23.77	peak	300	273	
3	4924.000	38.62	4.20	42.82	54.00	-11.18	AVG	300	273	

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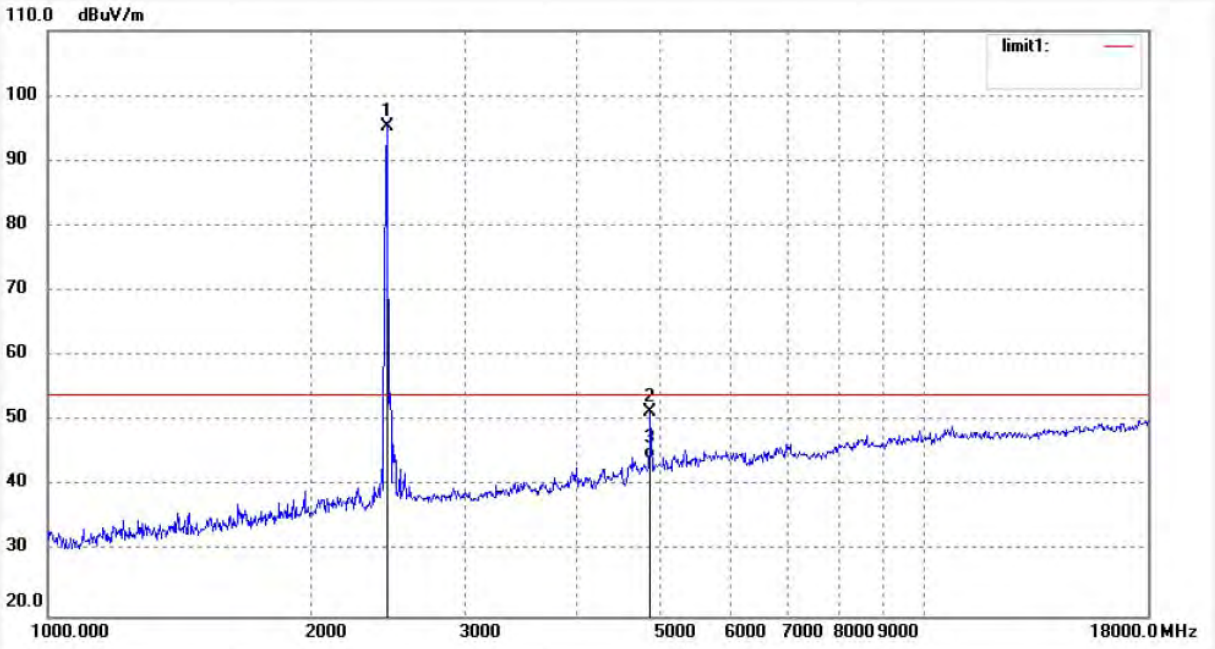
Job No.: ding1 #1386	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/01/38
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2462MHz(802.11g)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	100.87	-5.61	95.26			peak	150	222	
2	4924.000	47.13	4.20	51.33	74.00	-22.67	peak	150	67	
3	4924.000	40.02	4.20	44.22	54.00	-9.78	AVG	150	67	

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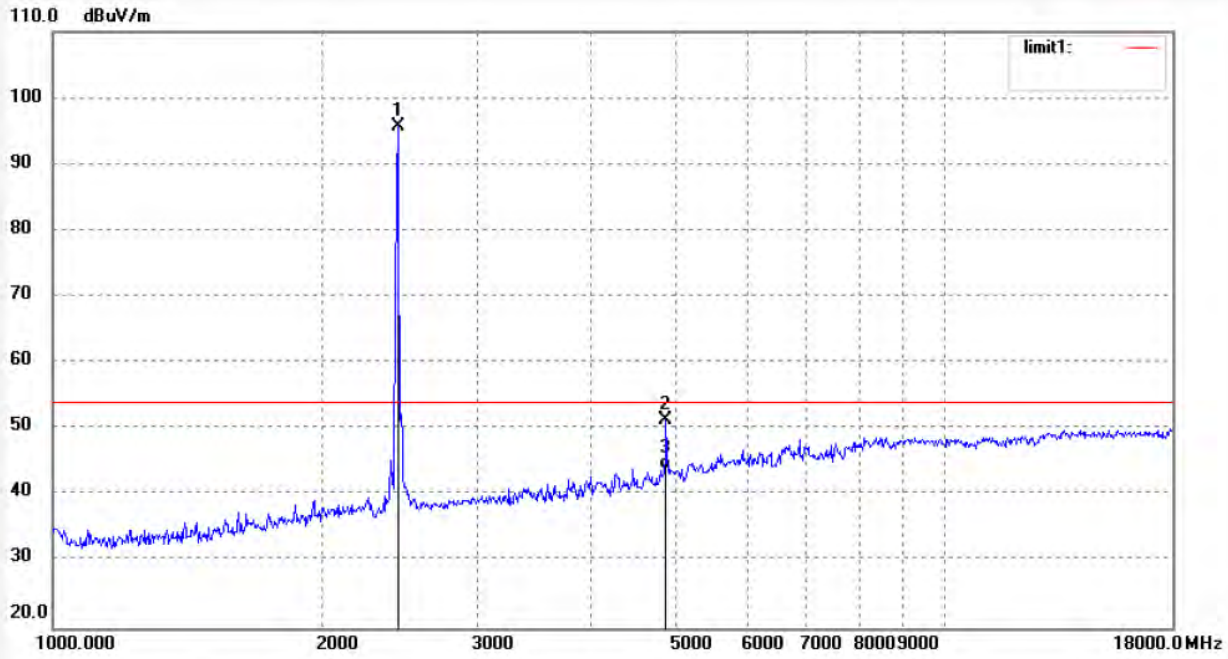
Job No.: ding1 #1387
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/02/53
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	101.37	-5.61	95.76			peak	150	157	
2	4624.000	47.13	4.20	51.33	74.00	-22.67	peak	300	346	
3	4924.000	39.68	4.20	43.88	54.00	-10.12	AVG	300	346	

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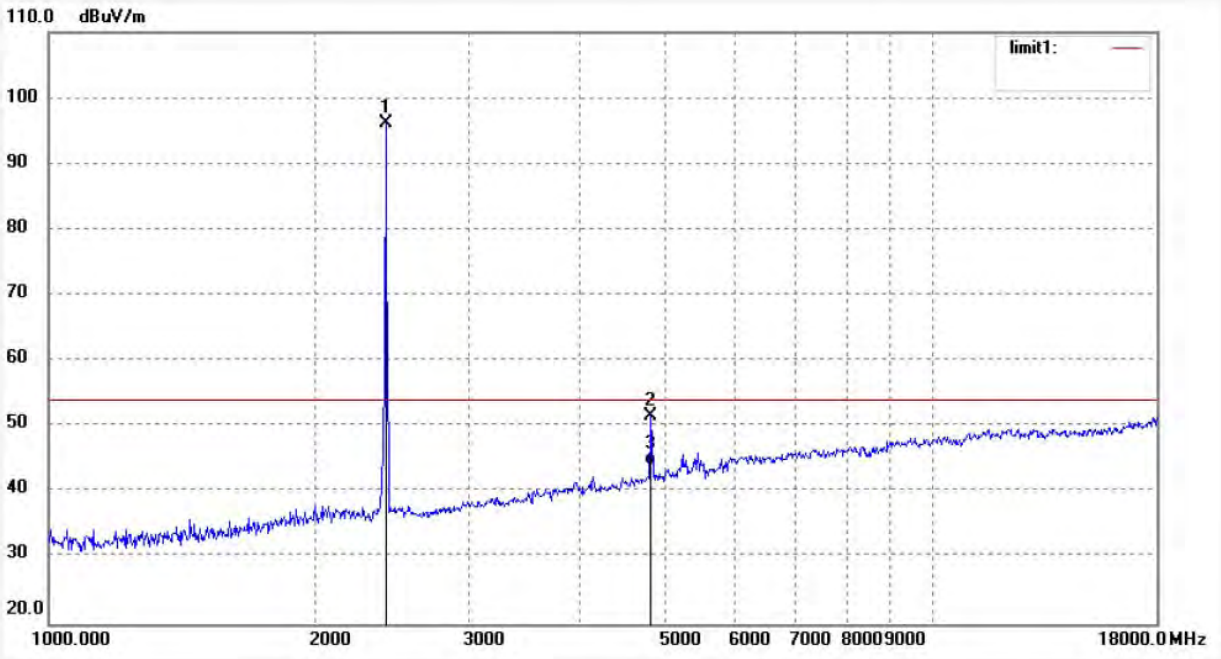
Job No.: ding1 #1388
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/05/49
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	101.96	-5.76	96.20			peak	150	122	
2	4874.000	48.05	3.67	51.72	74.00	-22.28	peak	300	238	
3	4874.000	40.57	3.67	44.24	54.00	-9.76	AVG	300	238	

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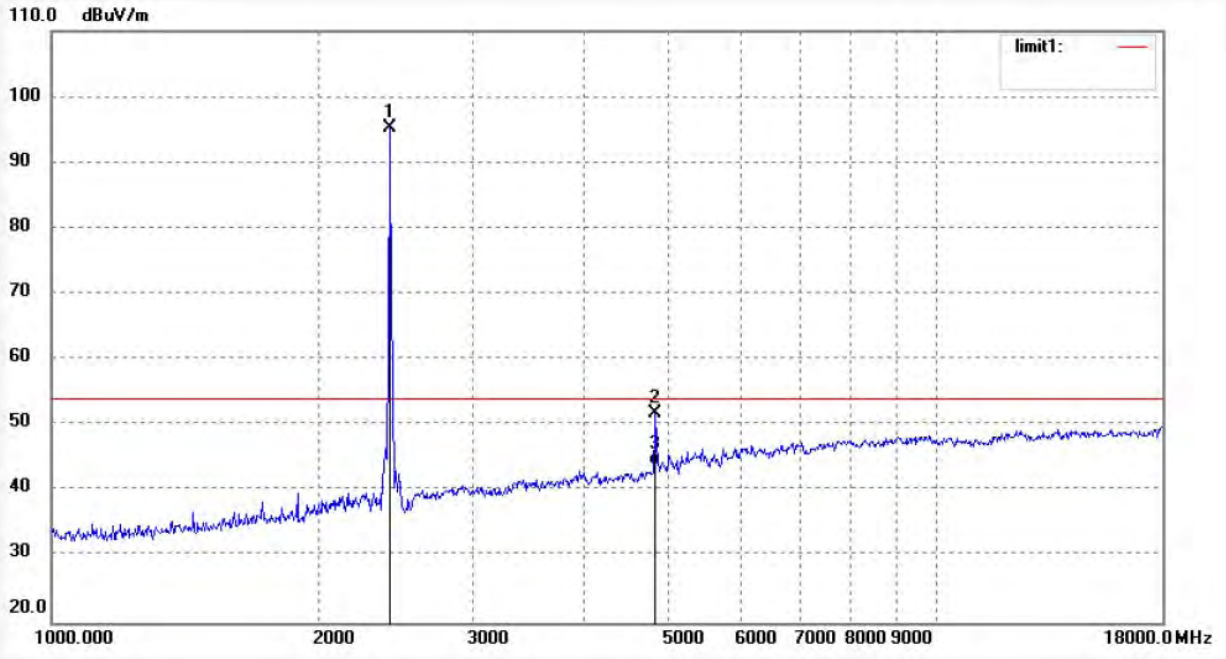
Job No.: ding1 #1389
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/07/57
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	101.06	-5.76	95.30			peak	150	115	
2	4874.000	48.16	3.67	51.83	74.00	-22.17	peak	300	117	
3	4874.000	40.19	3.67	43.86	54.00	-10.14	AVG	300	117	

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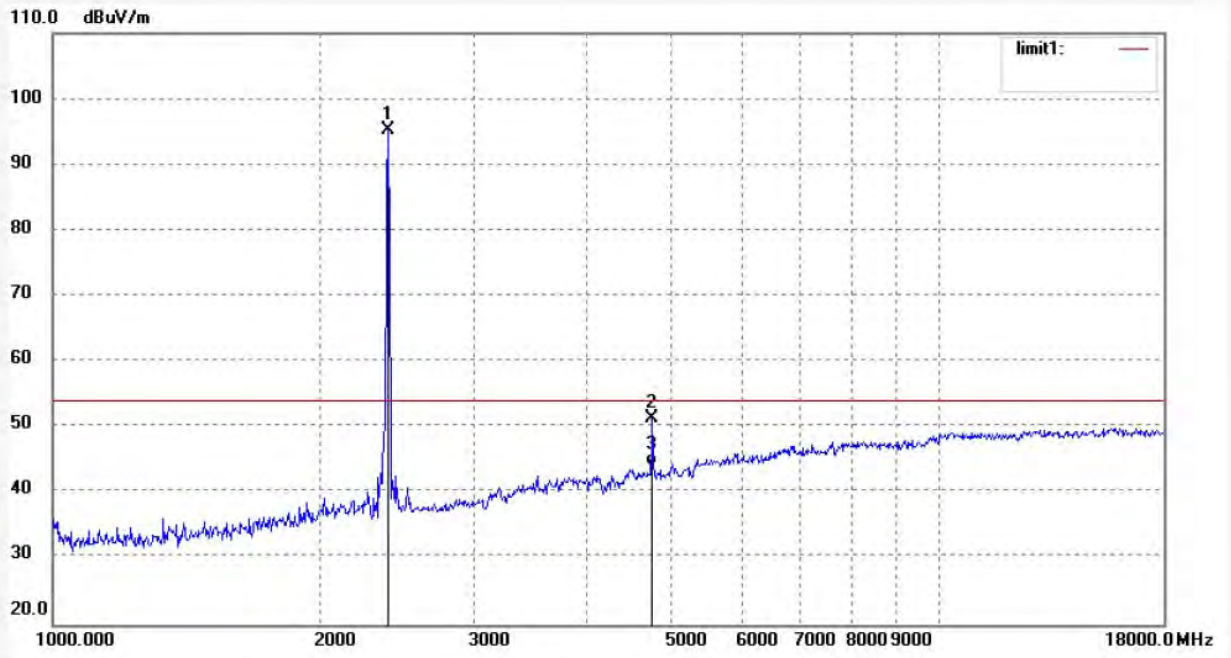
Job No.: ding1 #1390
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/22/06
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	101.09	-5.84	95.25			peak	150	198	
2	4824.000	48.19	3.30	51.49	74.00	-22.51	peak	300	124	
3	4824.000	40.94	3.30	44.24	54.00	-9.76	AVG	300	124	

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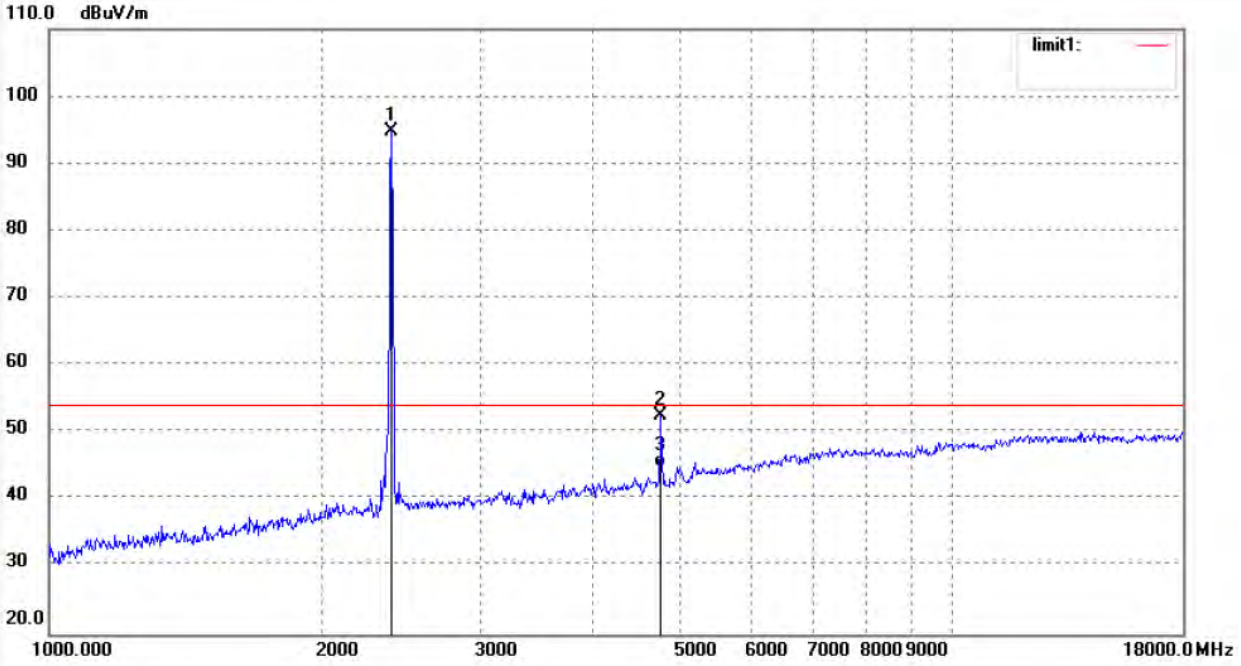
Job No.: ding1 #1391
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11g)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/23/52
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	100.59	-5.84	94.75			peak	150	111	
2	4824.000	49.19	3.30	52.49	74.00	-21.51	peak	300	105	
3	4824.000	41.64	3.30	44.94	54.00	-9.06	AVG	300	105	

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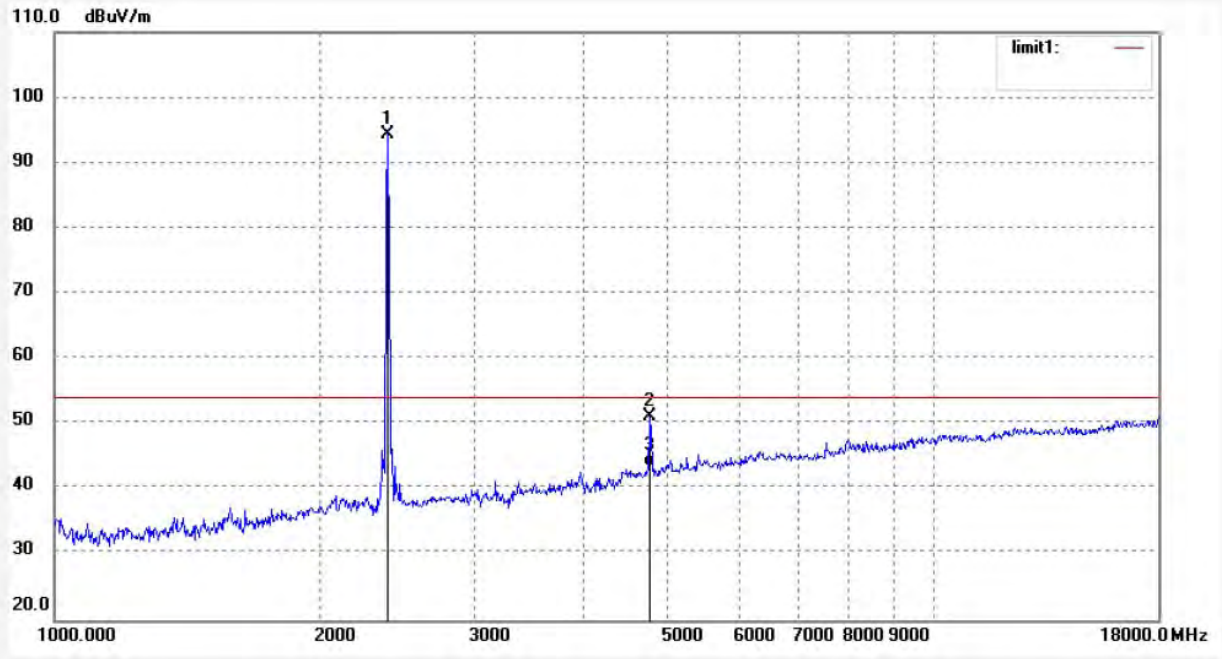
Job No.: ding1 #1392	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/26/47
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2412MHz(802.11n20)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	100.16	-5.84	94.32			peak	150	235	
2	4824.000	47.88	3.30	51.18	74.00	-22.82	peak	300	241	
3	4824.000	40.21	3.30	43.51	54.00	-10.49	AVG	300	241	

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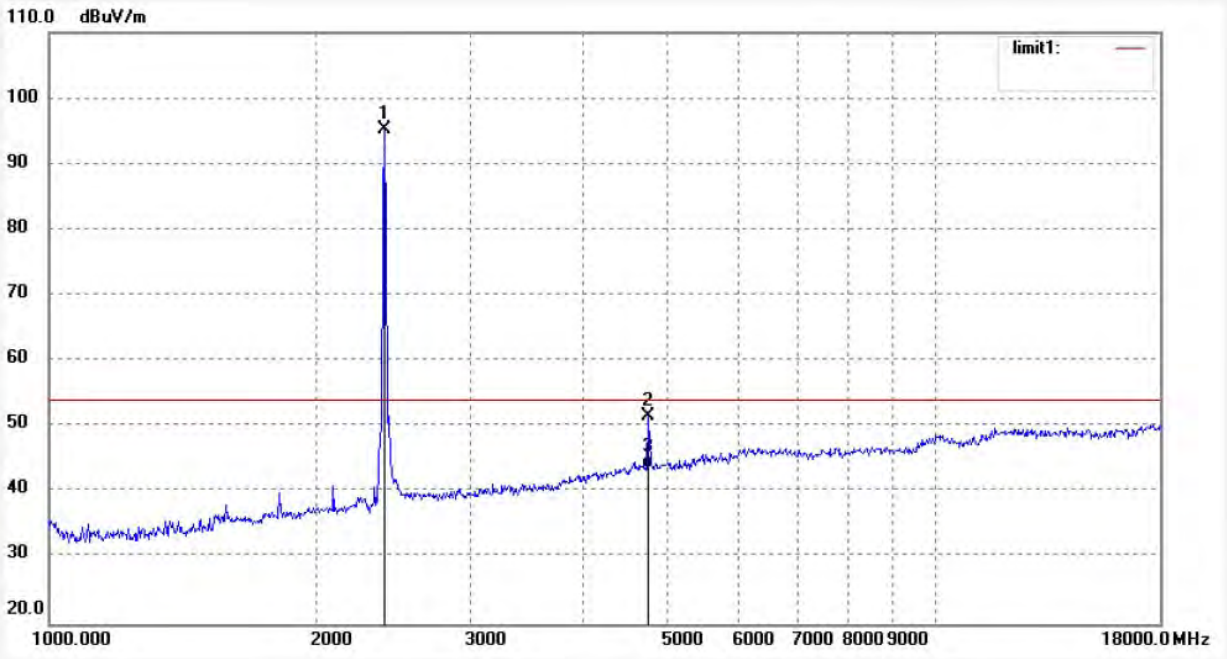
Job No.: ding1 #1393
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2412MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/28/22
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2412.000	101.16	-5.84	95.32			peak	150	147	
2	4824.000	48.46	3.23	51.69	74.00	-22.31	peak	300	102	
3	4824.000	40.54	3.23	43.77	54.00	-10.23	AVG	300	102	

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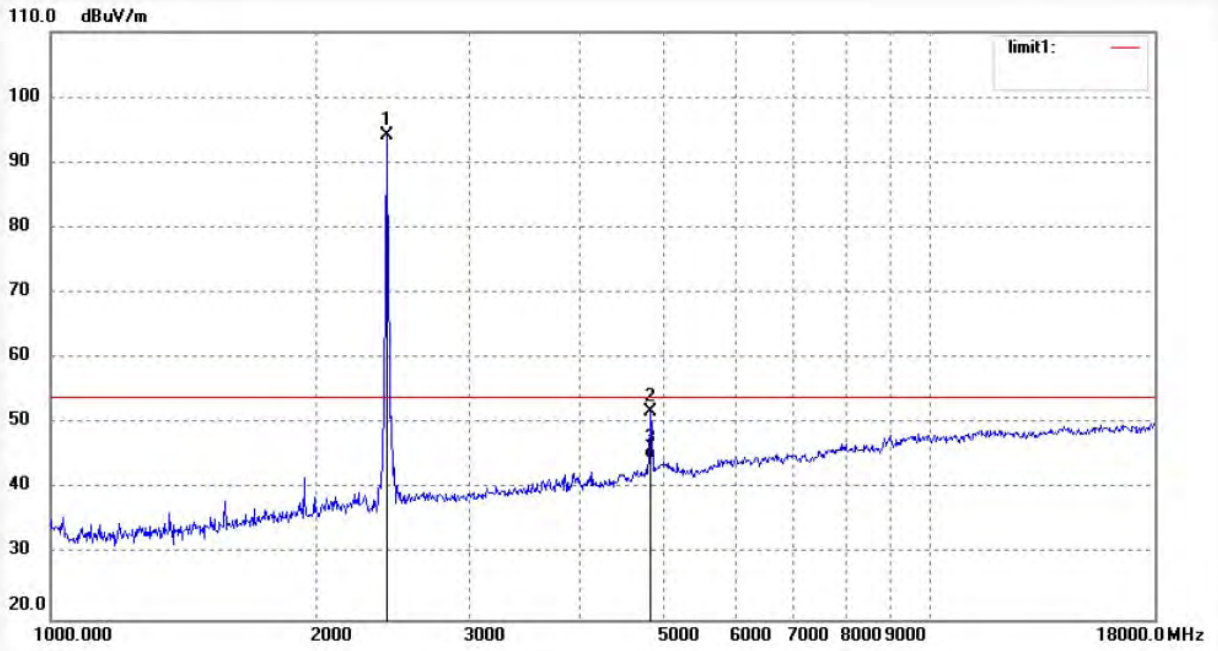
Job No.: ding1 #1394
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/31/26
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	99.90	-5.76	94.14			peak	150	100	
2	4874.000	48.12	3.67	51.79	74.00	-22.21	peak	300	94	
3	4874.000	40.93	3.67	44.60	54.00	-9.40	AVG	300	94	

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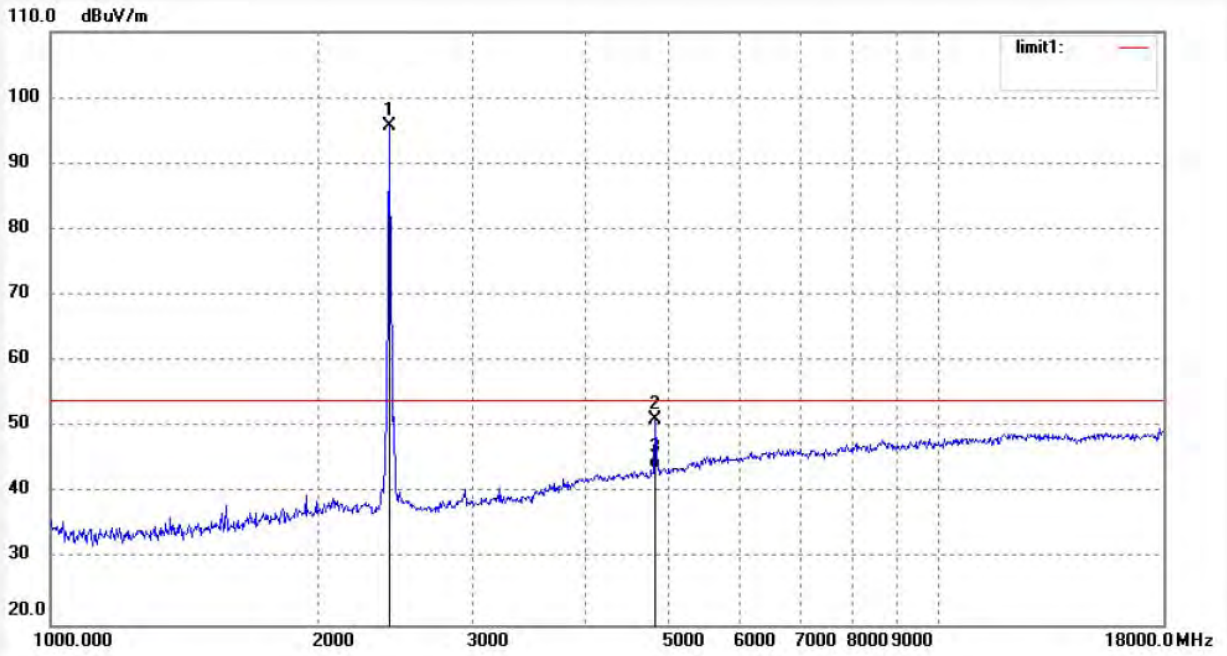
Job No.: ding1 #1395
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2437MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/32/50
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2437.000	101.40	-5.76	95.64			peak	150	222	
2	4874.000	47.58	3.53	51.11	74.00	-22.89	peak	300	159	
3	4874.000	40.12	3.53	43.65	54.00	-10.35	AVG	300	159	

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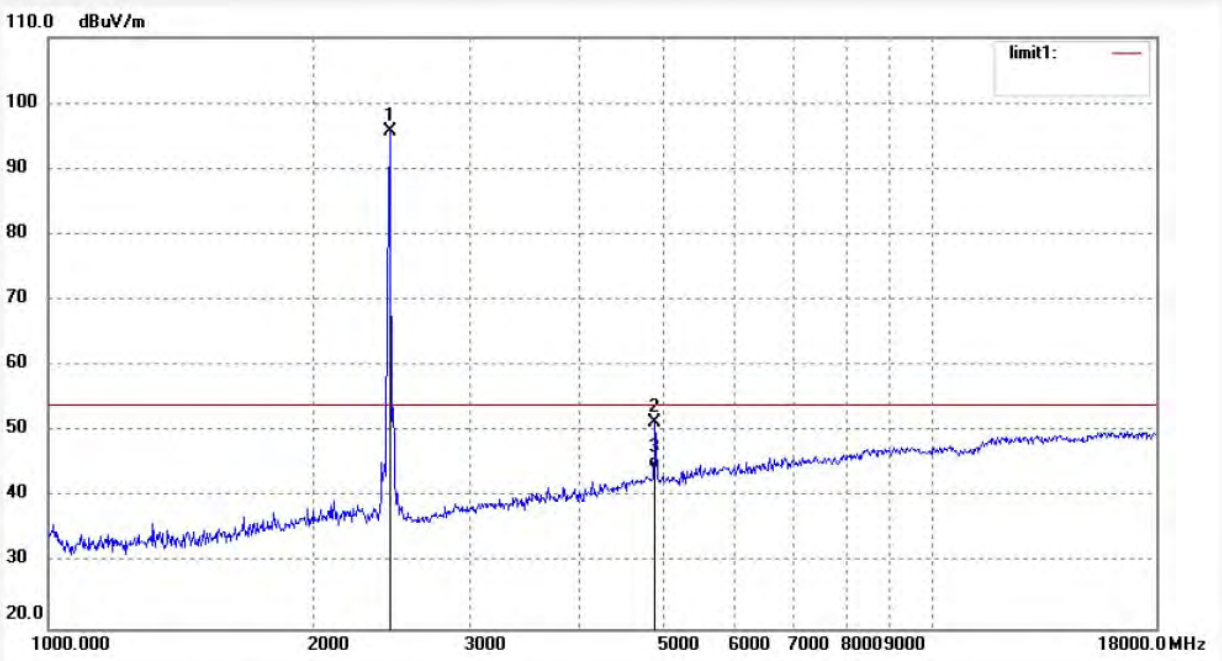
Job No.: ding1 #1396	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 17/08/26/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 9/35/18
EUT: Wifi Plug	Engineer Signature: DING
Mode: TX 2462MHz(802.11n20)	Distance: 3m
Model: AWP01L	
Manufacturer: VIVANT	

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	101.34	-5.61	95.73			peak	150	248	
2	4924.000	47.26	4.20	51.46	44.00	-22.54	peak	150	113	
3	4924.000	40.16	4.20	44.36	54.00	-9.64	AVG	150	113	

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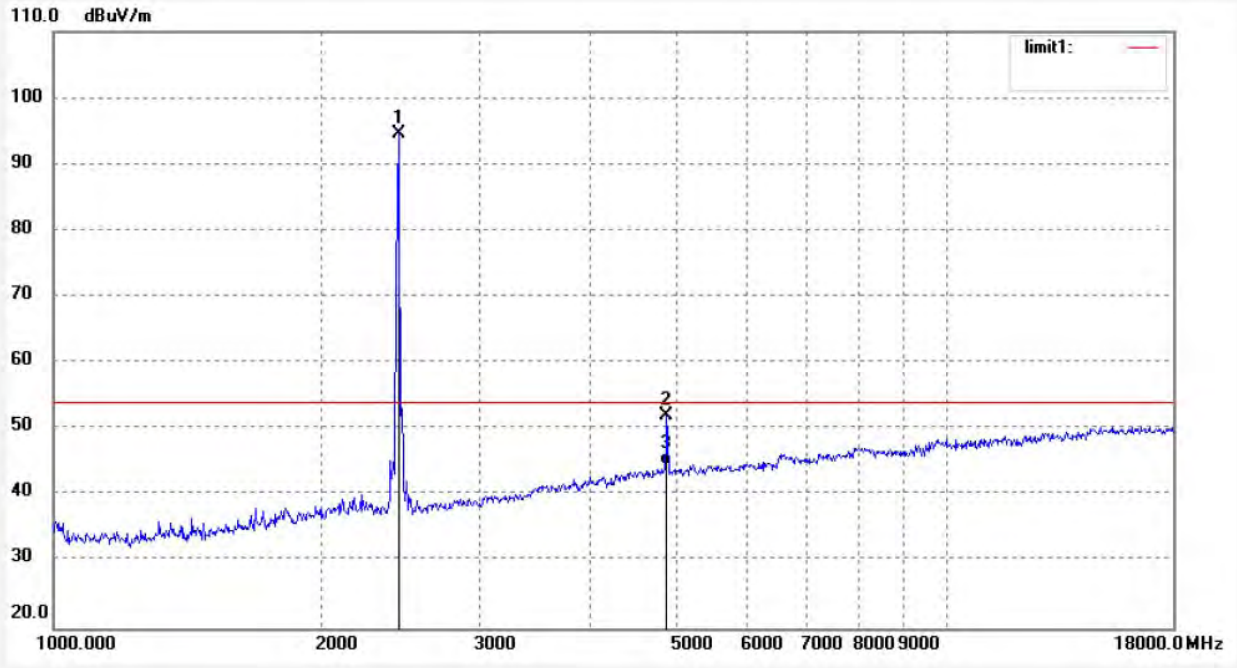
Job No.: ding1 #1397
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Wifi Plug
Mode: TX 2462MHz(802.11n20)
Model: AWP01L
Manufacturer: VIVANT

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 17/08/26/
Time: 9/36/47
Engineer Signature: DING
Distance: 3m

Note: Report NO.:ATE20171586



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2462.000	100.26	-5.61	94.65			peak	150	267	
2	4924.000	47.76	4.20	51.96	54.00	-2.04	peak	150	109	
3	4924.000	40.45	4.20	44.65	54.00	-9.35	AVG	150	109	

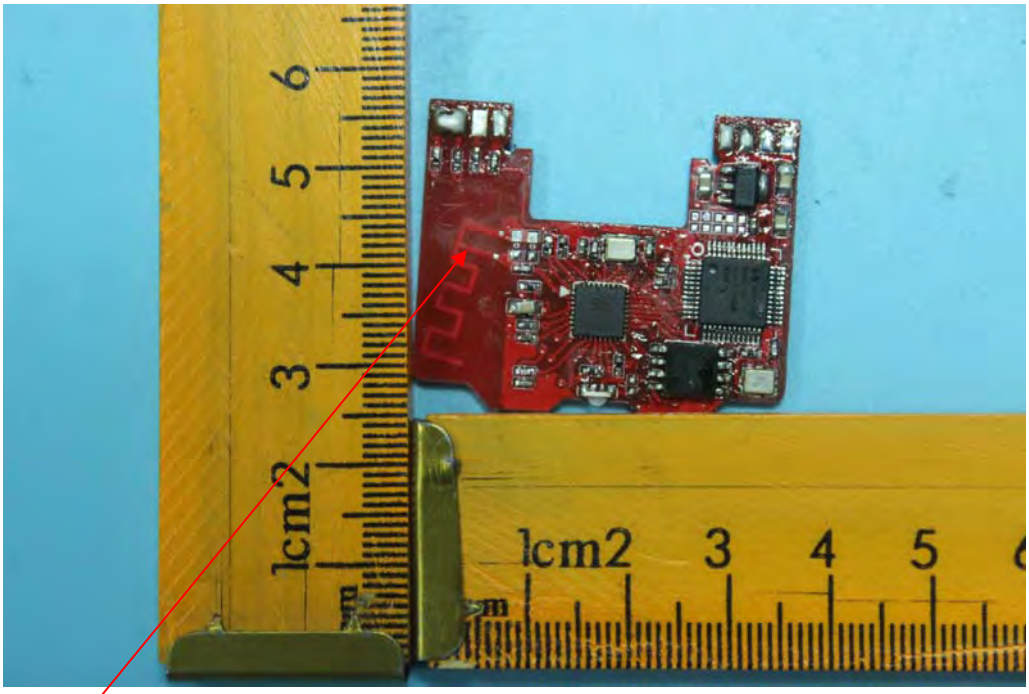
11. ANTENNA REQUIREMENT

11.1. The Requirement

According to Section 15.203, 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.

11.2. Antenna Construction

The module must contain a permanently attached antenna, or contain a unique antenna connector, and be marketed and operated only with specific antenna(s), per Sections 15.203, 15.204(b), 15.204(c), 15.212(a), 2.929(b); The Antenna gain of EUT is 1dBi. Therefore, the equipment complies with the antenna requirement.



Antenna