



REPORT No.: SZ24070164W03

# TEST REPORT

**APPLICANT** : Linkplay Technology Inc.

**PRODUCT NAME** : WiiM Amp Pro Stereo Streaming Amplifier

**MODEL NAME** : AMP002

**BRAND NAME** : WiiM

**FCC ID** : 2BABF-AMP002

**STANDARD(S)** : 47 CFR Part 15 Subpart C

**RECEIPT DATE** : 2024-07-17

**TEST DATE** : 2024-07-22 to 2024-08-22

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Change History		
Version	Date	Reason for change
1.0	2024-09-05	First edition



# 1. Summary of Test Result

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
1	15.203	Antenna Requirement	N/A	N/A	N/A <sub>Note1</sub>	N/A
2	N/A	Duty Cycle of Test Signal	N/A	N/A	N/A <sub>Note1</sub>	N/A
3	15.247(b)	Maximum Peak Conducted Output Power	N/A	N/A	N/A <sub>Note1</sub>	N/A
4	15.247(b)	Maximum Average Conducted Output Power	N/A	N/A	N/A <sub>Note1</sub>	N/A
5	15.247(a)	Bandwidth	N/A	N/A	N/A <sub>Note1</sub>	N/A
6	15.247(d)	Conducted Spurious Emission and Band Edge	N/A	N/A	N/A <sub>Note1</sub>	N/A
7	15.247(e)	Power Spectral Density	N/A	N/A	N/A <sub>Note1</sub>	N/A
8	15.207	Conducted Emission	Aug. 13, 2024	Wang Deyong	PASS	No deviation
9	15.247(d)	Restricted Frequency Bands	Aug. 09, 2024	Gao Jianrou	PASS	No deviation
10	15.209, 15.247(d)	Radiated Emission	Aug. 08, 2024	Gao Jianrou	PASS	No deviation

**Note 1:** The test results of all conducted test items please refer to the module FCC test report (Report No.: SZ24040154W03), which issued on Jul. 26, 2024.

**Note 2:** The tests were performed according to the method of measurements prescribed in ANSI C63.10-2013 and KDB 558074 D01 v05r02.

**Note 3:** Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

**Note 4:** When the test result is a critical value, we will use the measurement uncertainty give the



judgment result based on the 95% confidence intervals.

## 1.1. Testing Applied Standards

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

- 47 CFR Part 15 Subpart C Radio Frequency Devices



## 1.2. Test Equipment List

### 1.2.1 Conducted Emission Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2024.07.02	2025.07.01
LISN	8127449	NSLK 8127	Schwarzbeck	2024.07.02	2025.07.01
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2024.07.02	2025.07.01
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	2024.07.02	2025.07.01

### 1.2.2 List of Software Used

Description	Manufacturer	Software Version
Morlab EMCR	Morlab	V1.2
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

**1.2.3 Radiated Test Equipment**

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2024.06.03	2025.06.02
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2024.06.22	2025.06.21
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L32 03	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.07.03	2025.07.02
Notch Filter	N/A	WRCG-2400-2483.5-60SS	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09



### 1.3. Measurement Uncertainty

Test Items	Uncertainty	Remark
Restricted Frequency Bands	±5%	Confidence levels of 95%
Radiated Emission	±2.95dB	Confidence levels of 95%
Conducted Emission	±2.44dB	Confidence levels of 95%

### 1.4. Testing Laboratory

Laboratory Name	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone	+86 755 36698555
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FCC Designation Number	CN1192
FCC Test Firm Registration Number	226174



## 2. General Description

### 2.1. Information of Applicant and Manufacturer

<b>Applicant</b>	Linkplay Technology Inc.
<b>Applicant Address</b>	8000 Jarvis Avenue Suite #130, Newark, CA 94560
<b>Manufacturer</b>	Linkplay Technology Inc.
<b>Manufacturer Address</b>	8000 Jarvis Avenue Suite #130, Newark, CA 94560

### 2.2. Information of EUT

<b>Product Name:</b>	WiiM Amp Pro Stereo Streaming Amplifier
<b>Sample No.:</b>	5#
<b>Hardware Version:</b>	A98D V02+Main Board V02
<b>Software Version:</b>	Linkplay.5.2.623341
<b>Modulation Technology:</b>	DSSS, OFDM, OFDMA
<b>Modulation Type:</b>	Refer to section2.3
<b>Wireless Technology:</b>	802.11b, 802.11g, 802.11n (HT20), 802.11ax (HEW20)
<b>Operating Frequency Range:</b>	2412MHz–2462MHz
<b>Antenna Type:</b>	PIFA Antenna
<b>Antenna Gain:</b>	ANT1: 3.46dBi; ANT2: 3.46dBi

**Note 1:** The test results of all conducted test items please refer to the module FCC test report (Report No.: SZ24040154W03), which issued on Jul. 26, 2024. We only recorded the radiated test result in this report.

**Note 2:** The EUT has two antennas and it operates in single antenna. Both of the two antennas were evaluated separately, only the worst test result (ANT1) were recorded in the test report.

**Note 3:** For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.





### 2.3.Channel List of EUT

Nominal Channel Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	<b>1</b>	<b>2412</b>	8	2447
	2	2417	9	2452
	3	2422	10	2457
	4	2427	<b>11</b>	<b>2462</b>
	5	2432		
	<b>6</b>	<b>2437</b>		
	7	2442		

**Note 1:** The black bold channels were selected for test.

## 2.4. Test Configuration of EUT

### 2.4.1. Modulation Type and Data Rate of EUT

Mode	Bandwidth (MHz)	Modulation Technology	Modulation Type	Data Rate	RU Size
802.11b	20	DSSS	<b>DBPSK</b>	1/2/5.5/11Mbps	N/A
			DQPSK		
			CCK		
802.11g	20	OFDM	<b>BPSK</b>	6/9/12/18/24/36/48/54 Mbps	N/A
			QPSK		
			16QAM		
			64QAM		
802.11n	20 (HT20/40)	OFDM	<b>BPSK</b>	<b>MCS0~MCS7</b>	N/A
			QPSK		
			16QAM		
			64QAM		
802.11ax	20 (HEW20)	OFDM/ OFDMA	<b>BPSK</b>	<b>MSC0~MCS11</b>	26/52/106
			QPSK		
			16QAM		
			64QAM		
			256QAM		
			1024QAM		

**Note1:** The worst-case mode (bold face) in all data rates has been determined during the pre-scan, only the test data of the worst-case were recorded in this report.

**Note2:** The RF signal transmission of EUT is controlled by the build-in engineering mode which is provided by the manufacturer. The recorded power setting value is the maximum that the engineering mode has configuration during testing.

### 2.4.2.802.11ax RU Allocation

BW (MHz)	RU Size			User	RU Offset
	Full (Tone)	Partial			
		(Tone)	BW (MHz)		
20	242	26	2	9	@0/1/2/3/4/5/6/7/8
		52	4	4	@37/38/39/40
		106	8	2	@53/54

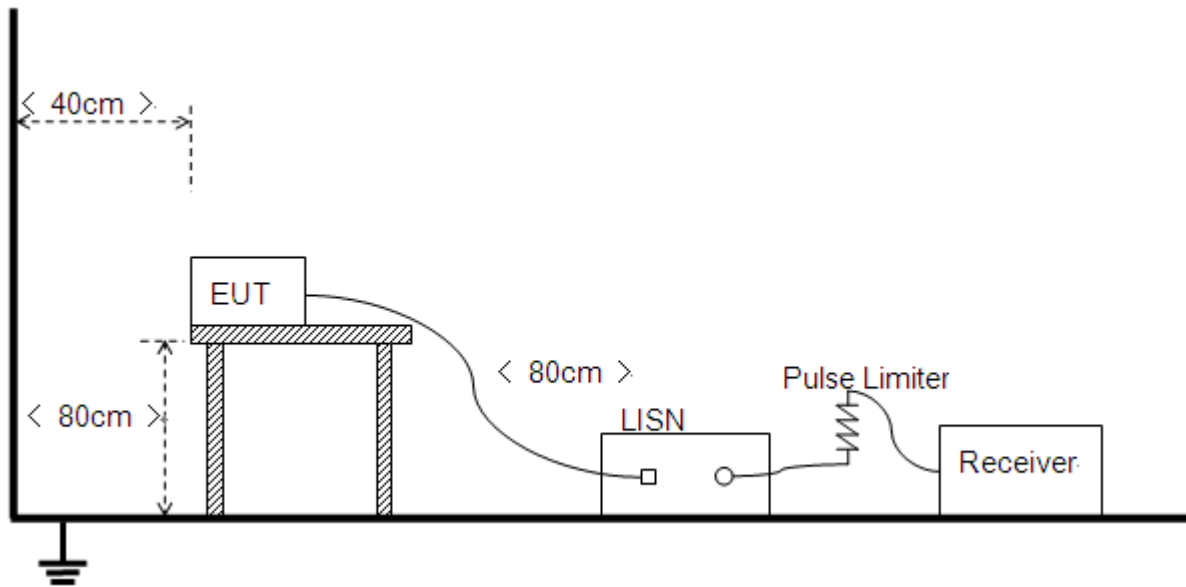


## 2.5. Test Conditions

Temperature (°C)	15–35
Relative Humidity (%)	30–60
Atmospheric Pressure (kPa)	86–106

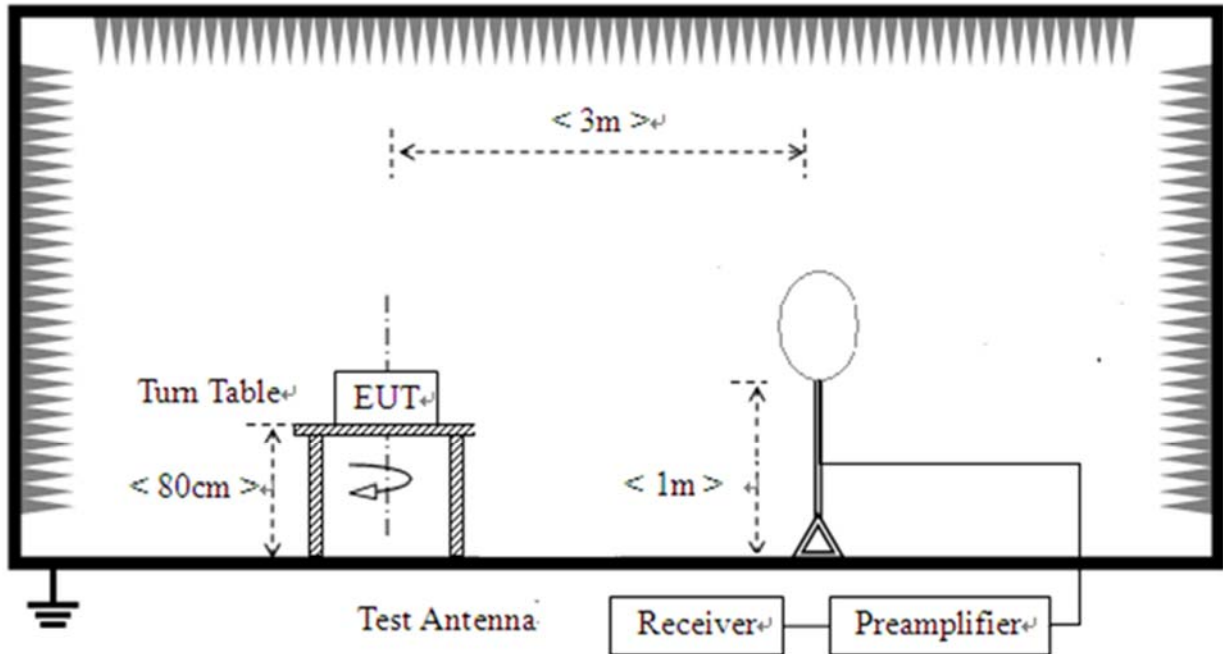
## 2.6. Test Setup Layout Diagram

### 2.6.1. Conducted Emission Measurement

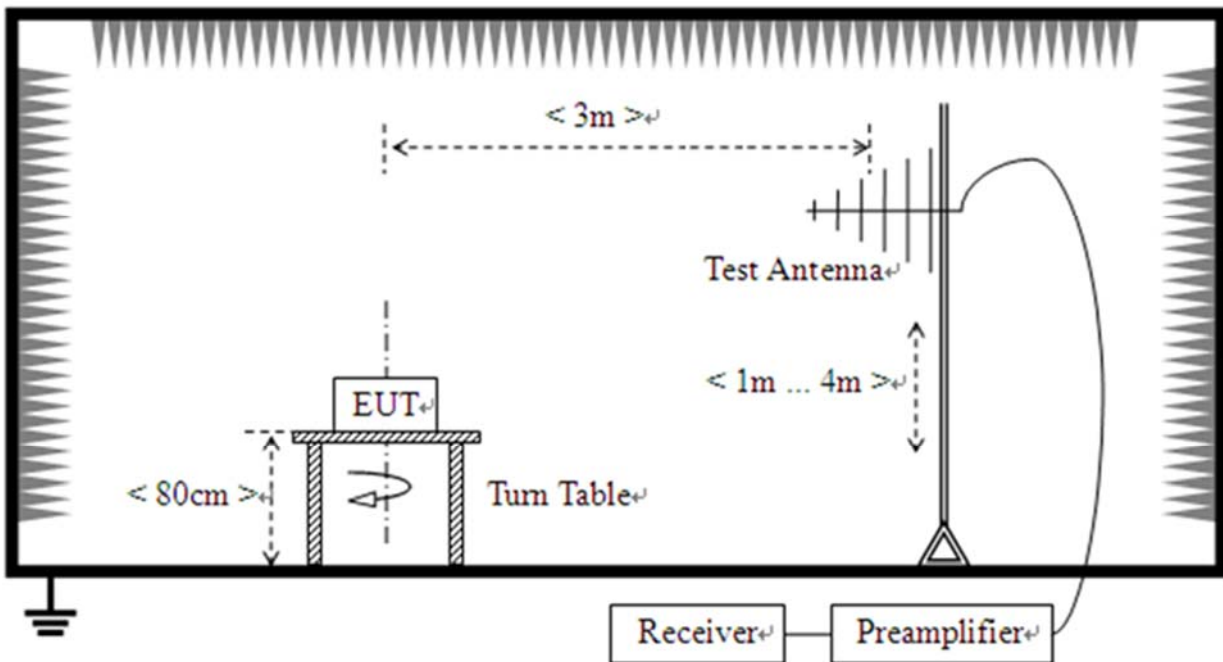


## 2.6.2.Radiation Measurement

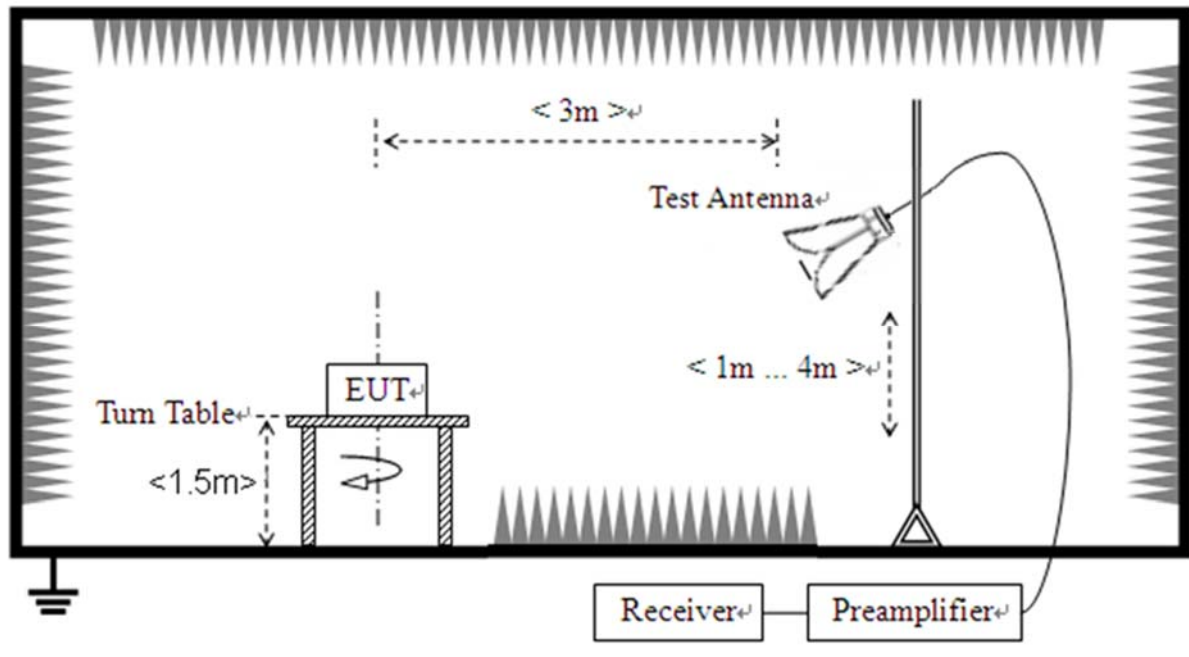
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz



## 3. Test Results

### 3.1. Conducted Emission

#### 3.1.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

#### 3.1.2. Test Procedures

The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.

#### 3.1.3. Test Setup Layout

Refer to chapter 2.6.2 in this report.

#### 3.1.4. Test Result

Refer to Annex A.1 in this report.

## 3.2. Restricted Frequency Bands

### 3.2.1. Requirement

According to FCC section 15.247(d), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 3.2.2. Test Procedures

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for  $f \geq 1\text{GHz}$ , 100 kHz for  $f < 1\text{GHz}$

VBW = 3 MHz

Sweep = auto

Detector function = peak/average

Trace = max hold

Allow the trace to stabilize

### 3.2.3. Test Setup Layout

Refer to chapter 2.6.3 in this report.

### 3.2.4. Test Result

Refer to Annex A.2 in this report.





### 3.3. Radiated Emission

#### 3.3.1. Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ( $\mu\text{V}/\text{m}$ )	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

**Note1:** For above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

**Note2:** For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK). In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).



### **3.3.2.Test Procedures**

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

### **3.3.3.Test Setup Layout**

Refer to chapter 2.6.3 in this report.

### **3.3.4.Test Result**

Refer to Annex A.3 in this report.



## Annex A Test Data and Result

### A.1. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

**Note:** Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

#### A. Test Setup:

Test Mode: EUT + PC +PC Adapter + WIFI TX

Test voltage: AC 120V/60Hz

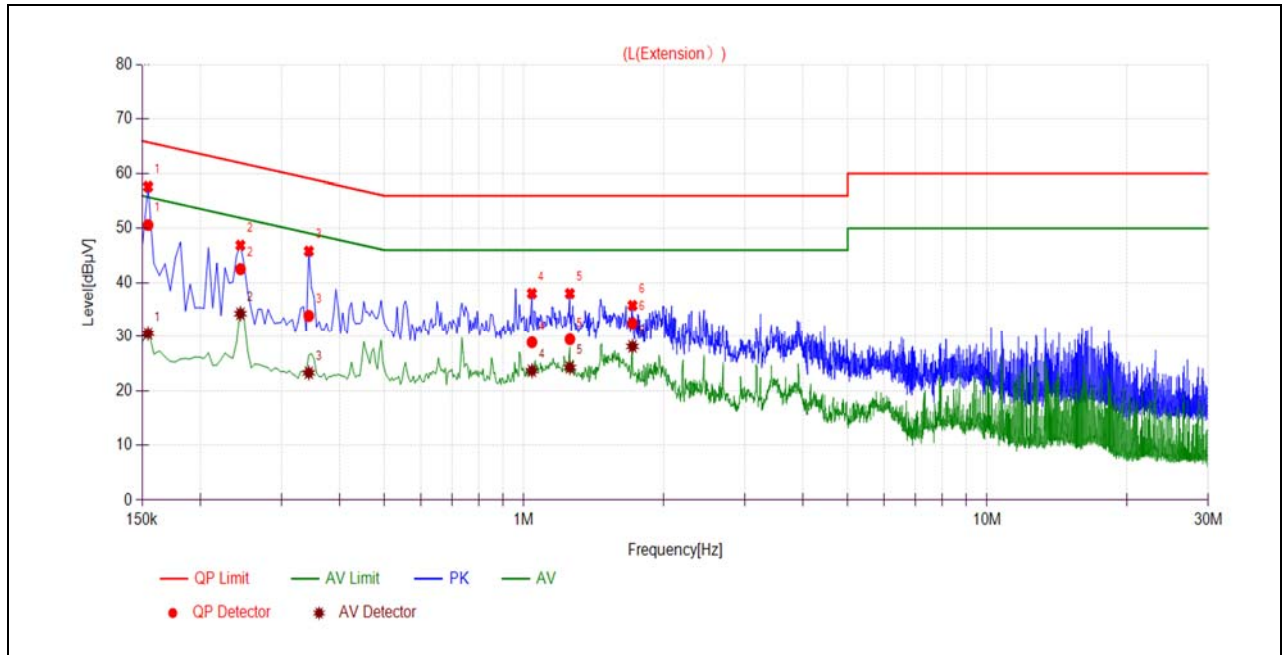
The measurement results are obtained as below:

$E [dB\mu V] = U_R + L_{Cable\ loss} [dB] + A_{Factor}$

$U_R$ : Receiver Reading

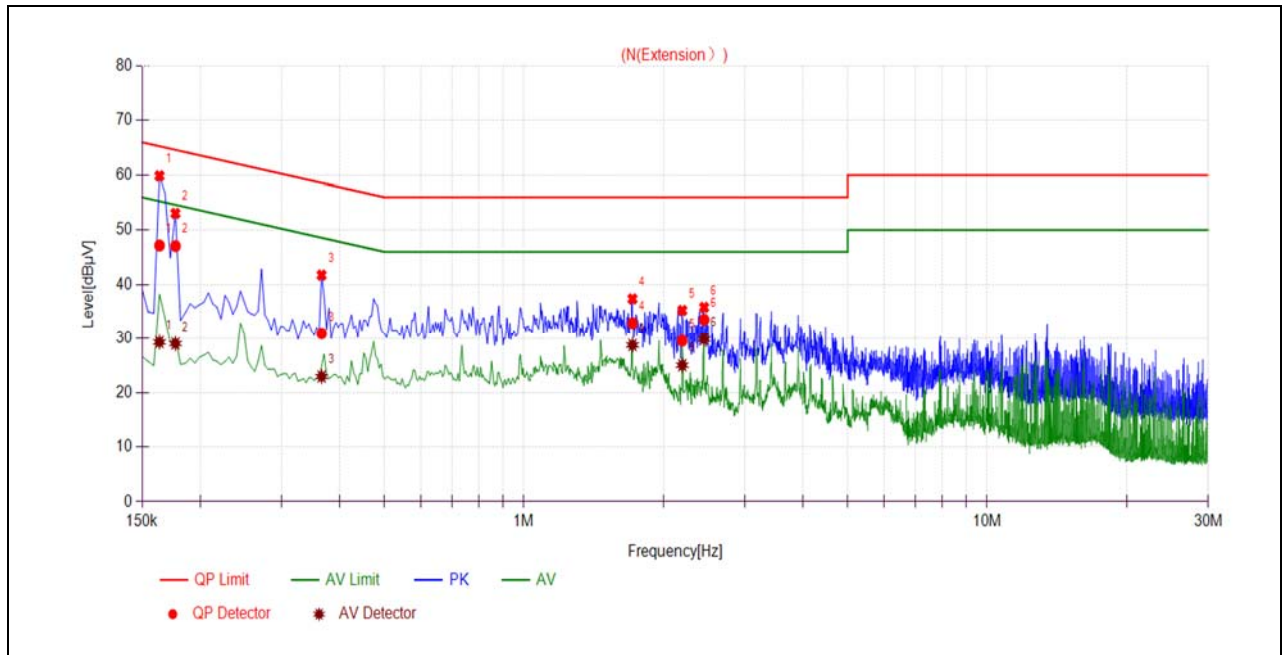
$A_{Factor}$ : Voltage division factor of LISN

## B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1545	50.62	30.56	65.75	55.75	Line	PASS
2	0.2445	42.50	34.29	61.94	51.94		PASS
3	0.3435	33.88	23.26	59.12	49.12		PASS
4	1.0411	28.90	23.64	56.00	46.00		PASS
5	1.2571	29.45	24.25	56.00	46.00		PASS
6	1.7159	32.48	28.12	56.00	46.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1635	47.18	29.31	65.28	55.28	Neutral	PASS
2	0.1770	47.08	29.03	64.62	54.62		PASS
3	0.3660	30.95	22.93	58.59	48.59		PASS
4	1.7162	32.90	28.76	56.00	46.00		PASS
5	2.1973	29.58	25.03	56.00	46.00		PASS
6	2.4497	33.53	29.87	56.00	46.00		PASS



## A.2. Restricted Frequency Bands

The lowest and highest channels are tested to verify the Restricted Frequency Bands.

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

$A_T$ : Total correction Factor except Antenna

$U_R$ : Receiver Reading

$G_{\text{preamp}}$ : Preamplifier Gain

$A_{\text{Factor}}$ : Antenna Factor at 3m

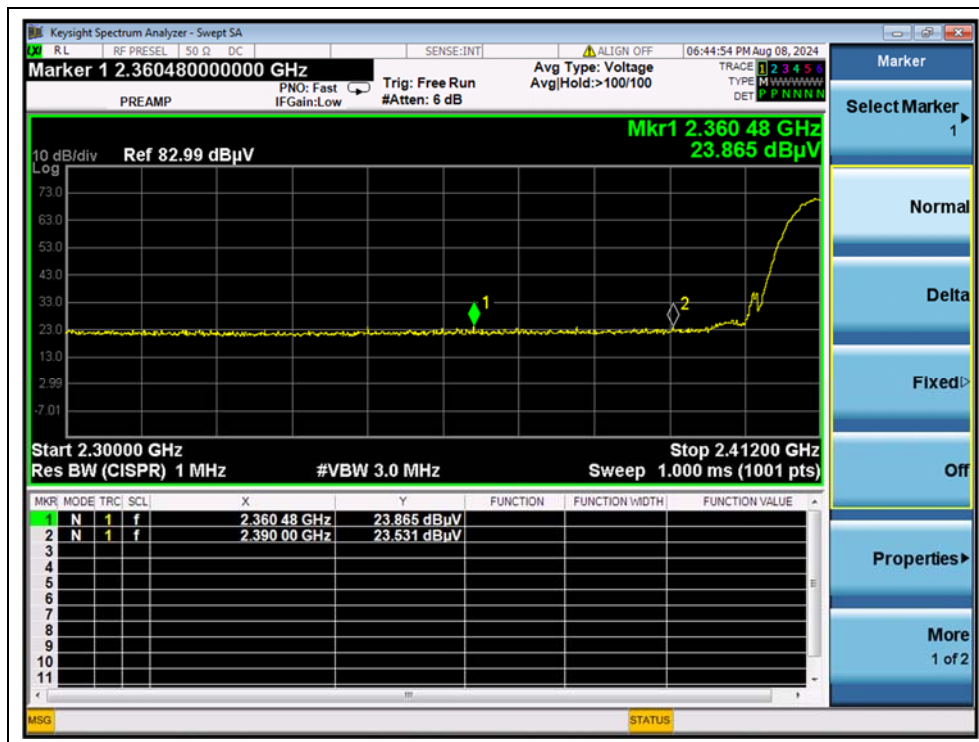
**Note 1:** Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (Horizontal) was recorded in this test report.

**Note 2:** Restricted Frequency Bands were performed in X, Y, Z axis direction, and only the worst axis test condition was recorded in this test report.

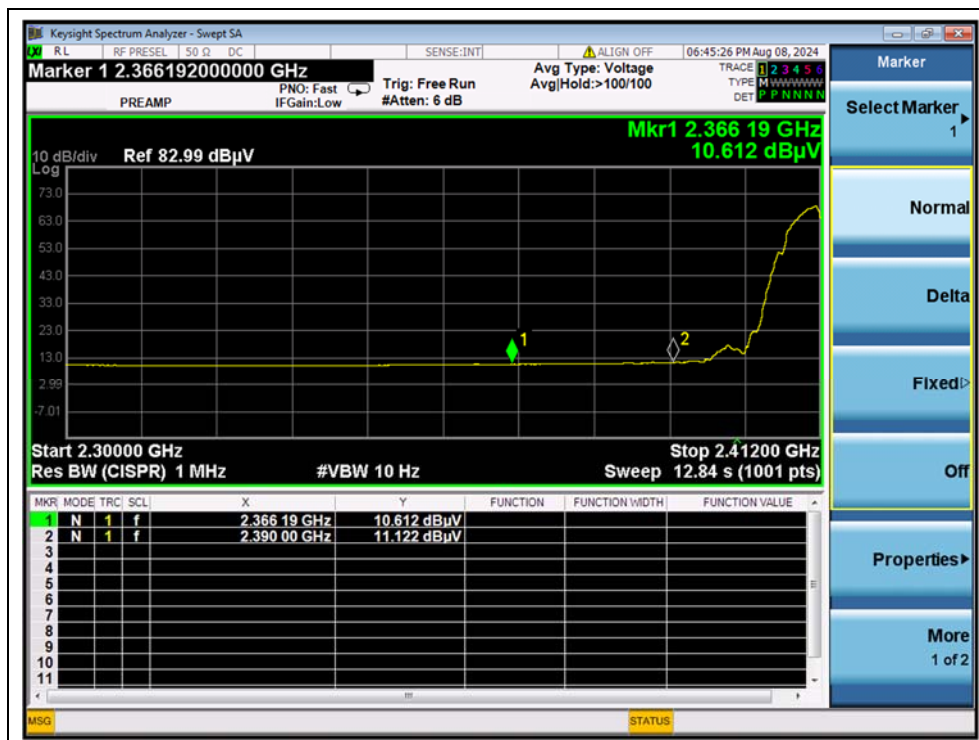
**Note 3:** All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

### 802.11b Mode

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{\text{Factor}}$ (dB@3m)	Max. Emission $E$ (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
1	2360.48	PK	23.87	6.74	27.20	57.81	74	PASS
1	2390.00	AV	11.12	6.74	27.20	45.06	54	PASS
11	2488.87	PK	23.39	6.74	27.20	57.33	74	PASS
11	2485.71	AV	12.15	6.74	27.20	46.09	54	PASS

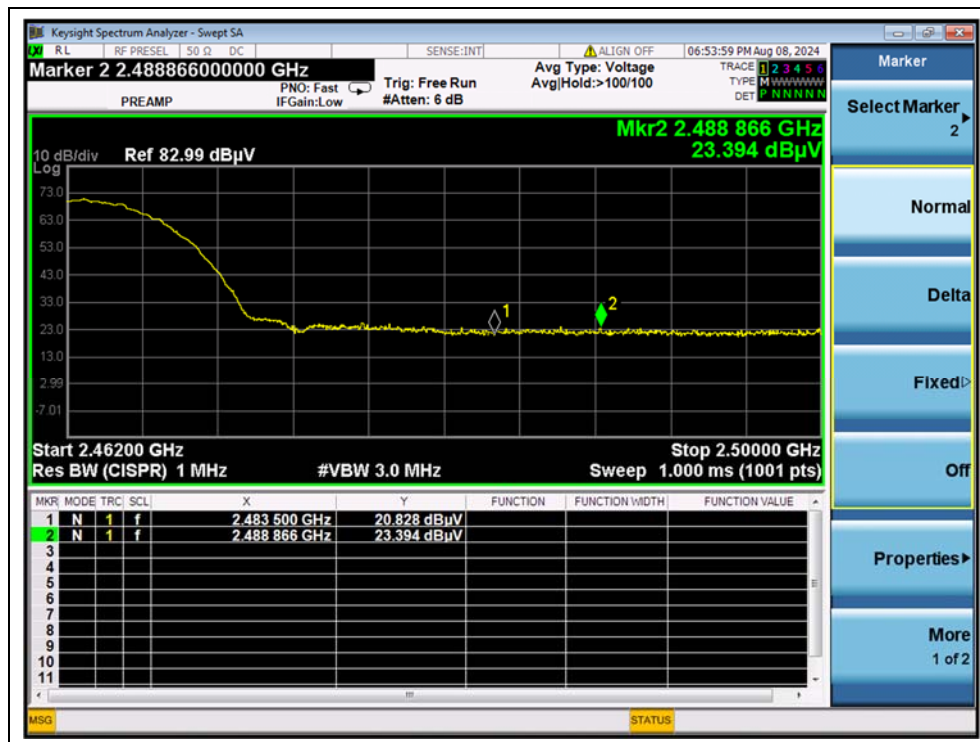


(PEAK, Channel 1, 802.11b)



(AVERAGE, Channel 1, 802.11b)





(PEAK, Channel 11, 802.11b)



(AVERAGE, Channel 11, 802.11b)





802.11ax (HEW20) RU26 Mode

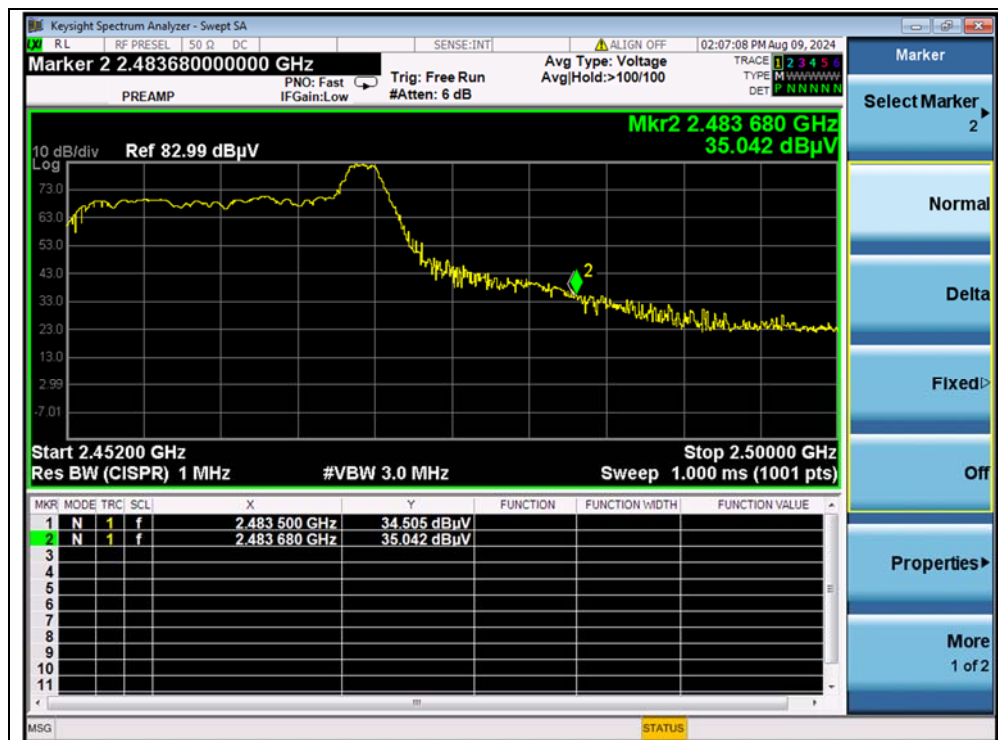
Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dBμV)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission $E$ (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2388.35	PK	36.42	6.74	27.20	70.36	74	PASS
1	2386.52	AV	14.81	6.74	27.20	48.75	54	PASS
11	2483.68	PK	35.04	6.74	27.20	68.98	74	PASS
11	2483.63	AV	15.27	6.74	27.20	49.21	54	PASS



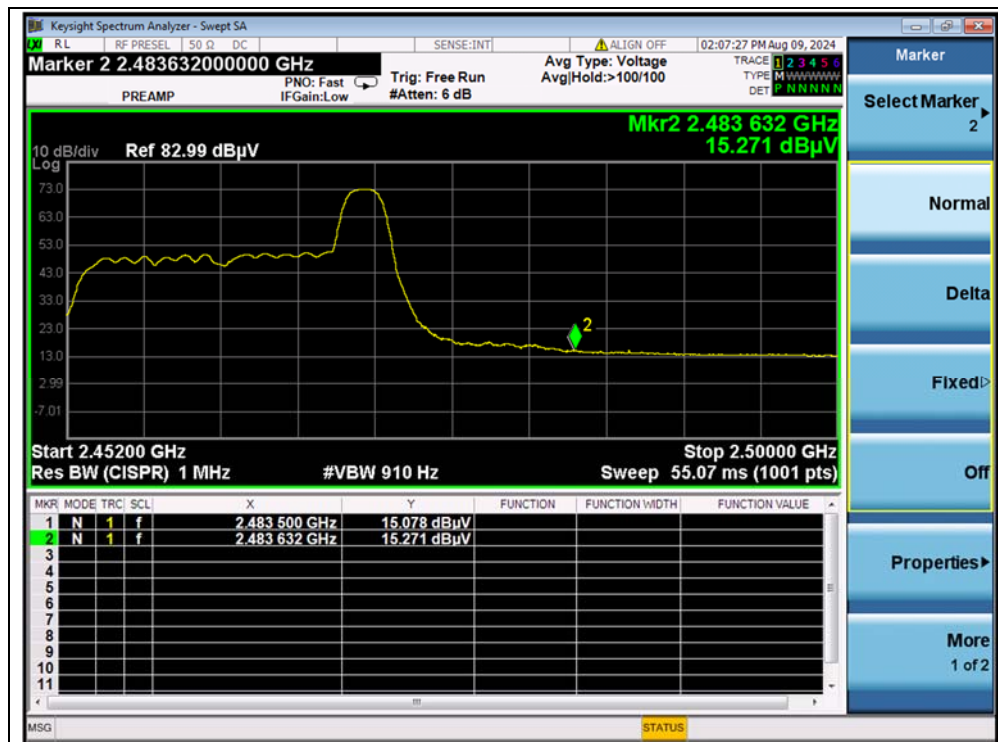
(PEAK, Channel 1, 802.11ax (HEW20) RU26)



(AVERAGE, Channel 1, 802.11ax (HEW20) RU26)



(PEAK, Channel 11, 802.11ax (HEW20) RU26)



(AVERAGE, Channel 11, 802.11ax (HEW20) RU26)



### A.3. Radiated Emission

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

$A_T$ : Total correction Factor except Antenna

$U_R$ : Receiver Reading

$G_{\text{preamp}}$ : Preamplifier Gain

$A_{\text{Factor}}$ : Antenna Factor at 3m

During the test, the total correction Factor  $A_T$  and  $A_{\text{Factor}}$  were built in test software.

**Note1:** All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

**Note2:** For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

**Note3:** For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

**Note 4** All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded.

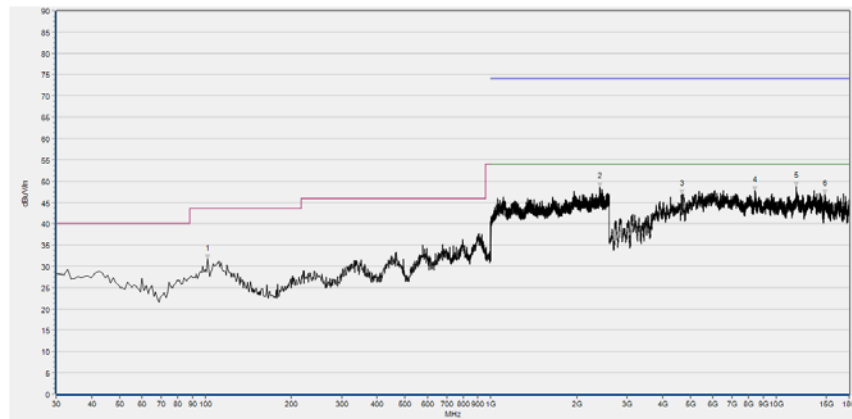
Field strength of fundamental:

Frequency (MHz)	Reading_Peak (dB $\mu$ V/m)	Antenna Factor (dB)	Path Loss (dB)	Final_Peak (dB $\mu$ V/m)	Antenna Polarity
2410.40	60.67	27.20	6.74	94.61	Horizontal

The field strength (the lowest) of fundamenta is more than 20dB higher than the unwanted emissions, in accordance with FCC part 15.215(b).

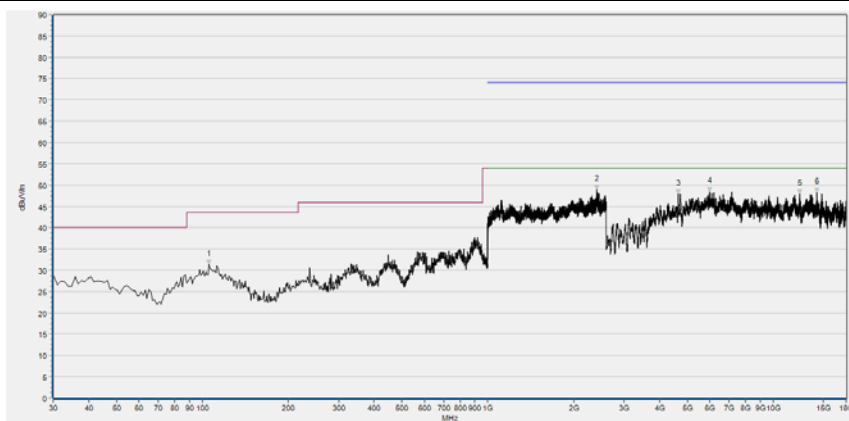
**802.11b Mode**

## Plot for Channel 1



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
101.780	31.75	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2405.867	48.64	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4669.760	46.87	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8433.520	47.69	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
11769.160	48.76	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
14824.520	46.98	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

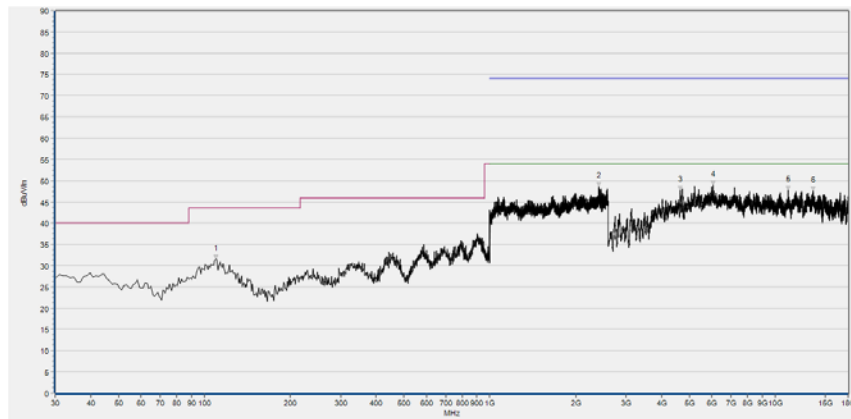


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
105.660	31.36	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2411.200	48.94	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4654.360	47.90	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5981.840	48.39	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12394.400	47.98	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
14202.360	48.26	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

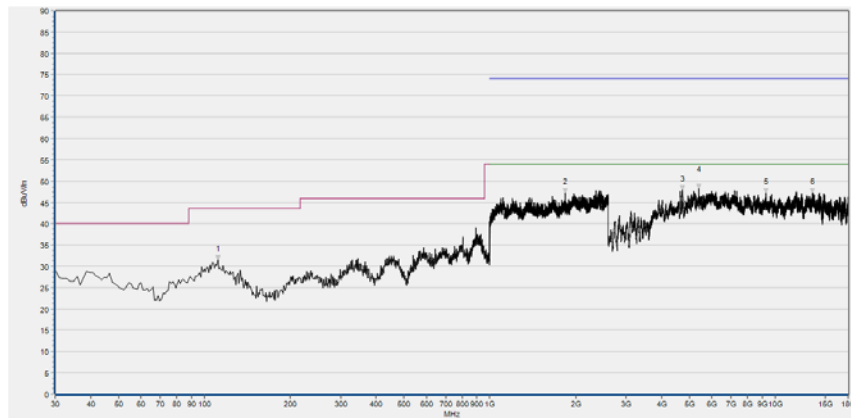


Plot for Channel 6



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
109.540	31.43	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2410.133	48.62	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4651.280	47.77	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6046.520	48.91	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
11073.080	47.74	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
13546.320	47.57	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

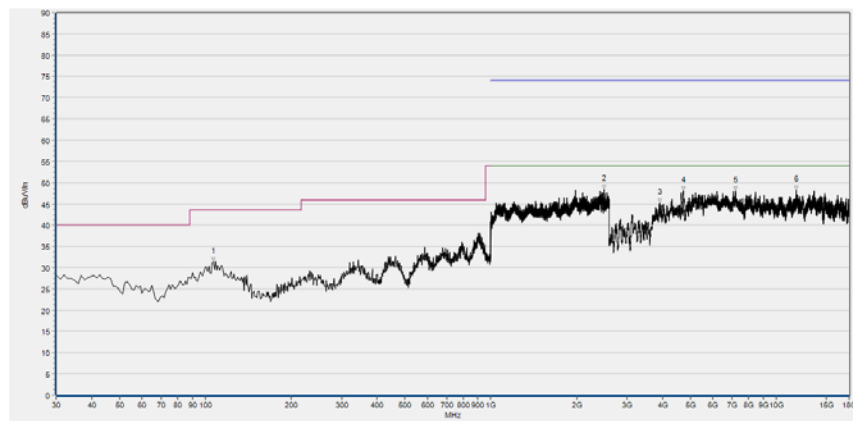


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
111.480	31.46	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1837.333	47.33	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4740.600	47.91	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5390.480	48.26	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9299.000	47.27	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
13475.480	47.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

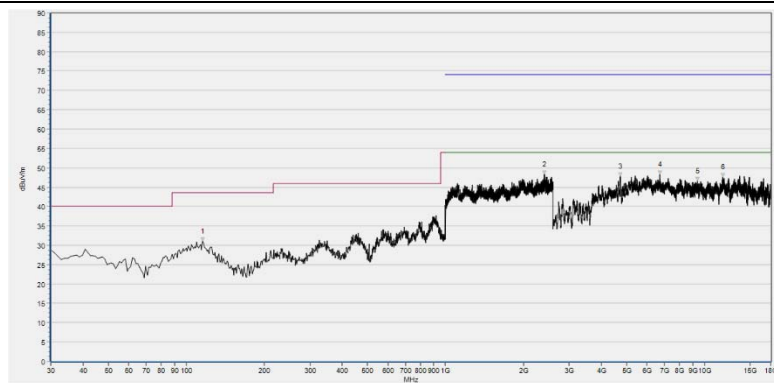


Plot for Channel 11



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
106.630	31.29	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2487.467	48.38	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3905.920	45.22	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4725.200	48.12	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7195.360	48.03	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
11778.400	48.20	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
115.360	31.06	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2406.400	48.21	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4725.200	47.78	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
6708.720	48.34	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9379.080	46.60	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
11753.760	47.64	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

END OF REPORT