



RF MEASUREMENT REPORT

FCC ID: Q9DAP22D
Applicant: Hewlett Packard Enterprise
Product: ACCESS POINT
Model No.: APINH505
Marketing Name: AP22D
Trademark:  , 
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2023-07-12
Test Date: 2023-07-20 ~ 2023-07-26

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2307RSU029-U2	V01	Initial Report	2023-10-23	Invalid
2307RSU029-U2	V02	Add spot-check error	2023-11-29	Valid

Note 1: The product is a variation on the existing APINH505 that had FCC approval (FCC ID: Q9DAPINH505). The differences are shown in the table below.

Parts of Product	Modification
Top Cover	Yes, changed. ION style look USB port removed No hidden LED
Light Pipe	Yes, Changed. Bring to top cover, no hidden LED.
BLE/ZigBee	Yes, Changed. BLE/ZigBee circuit and antenna removed.
Others	No Change

The applicant remeasured a set of antenna gain that slightly different than before.

Frequency	Original Wi-Fi Antenna Gain	Current Wi-Fi Antenna Gain
	(dBi)	(dBi)
2400	2.91	2.84
2450	3.28	3.17
2500	3.15	2.80
5150	2.15	3.12
5550	2.43	2.12
5850	2.85	2.31

Note 2: Spot-check tests were done on these items (Output Power & Radiated Spurious Emission & Radiated Restricted Band Edge) based on worst-case results reported in the original FCC ID filing.

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1. General Information

1.1. Applicant

Hewlett Packard Enterprise
6280 America Center Drive, San Jose CA 95002, United States

1.2. Manufacturer

Hewlett Packard Enterprise
6280 America Center Drive, San Jose CA 95002, United States

1.3. Testing Facility

<input checked="" type="checkbox"/>	<p>Test Site – MRT Suzhou Laboratory</p> <hr/> <p>Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China</p> <p>Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China</p> <hr/> <p>Laboratory Accreditations</p> <p>A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001</p> <p>VCCI: <input type="checkbox"/>R-20025 <input type="checkbox"/>G-20034 <input type="checkbox"/>C-20020 <input type="checkbox"/>T-20020 <input type="checkbox"/>R-20141 <input type="checkbox"/>G-20134 <input type="checkbox"/>C-20103 <input type="checkbox"/>T-20104</p>
<input type="checkbox"/>	<p>Test Site – MRT Shenzhen Laboratory</p> <hr/> <p>Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China</p> <hr/> <p>Laboratory Accreditations</p> <p>A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105</p>
<input type="checkbox"/>	<p>Test Site – MRT Taiwan Laboratory</p> <hr/> <p>Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)</p> <hr/> <p>Laboratory Accreditations</p> <p>TAF: 3261 FCC: 291082, TW3261 ISED: TW3261</p>

1.4. Product Information

Product Name	ACCESS POINT
Model No.	APINH505
Marketing Name	AP22D
Serial No.	CNQMM1F006
Software Version	v1.46
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Operating Temp.	0 ~ 40°C
Power Supply	AC/DC Adapter or PoE Input
Accessory	
AC/DC Adapter	Model No.: ADP-50GR BD Input: 100-240V ~ 1.3A 50-60Hz Output: 48.0V = 1.042A 50.016W
PoE Injector	Model: POE60U-1BT-5 Input: 100-240V ~ 50-60Hz 1.3A Output: 56V 0.535A
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	802.11b/g/n-HT20/ax-HE20: 2412 ~ 2462MHz 802.11n-HT40/ax-HE40: 2422 ~ 2452MHz	
Channel Number	802.11b/g/n-HT20/ax-HE20: 11 802.11n-HT40/ax-HE40: 7	
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM 802.11ax: OFDMA	
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ax: up to 573.6Mbps	
Support RU	<input checked="" type="checkbox"/> Full RU	<input type="checkbox"/> Partial RU

1.6. Working Frequencies

802.11b/g/n-HT20/ax-HE20

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

802.11n-HT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	--	--	--	--

1.7. Antenna Details

Antenna Type	Frequency Band	Tx Paths	Uncorrelated Gain (dBi)	CDD Correlated Gain (dBi)
Wi-Fi Internal Antenna				
Dipole	2412 ~ 2462	2	3.17	6.15
Dipole	5150 ~ 5850	2	3.12	6.11

Note 1: In accordance with KDB 662911 D01v02r01, uncorrelated directional gain was applied for calculating max conducted output power limit and correlated directional gain was applied for calculating PSD limit.

Note 2: The directional gain calculation refers to antenna report provided by the applicant.

2. Test Configuration

2.1. Test Mode

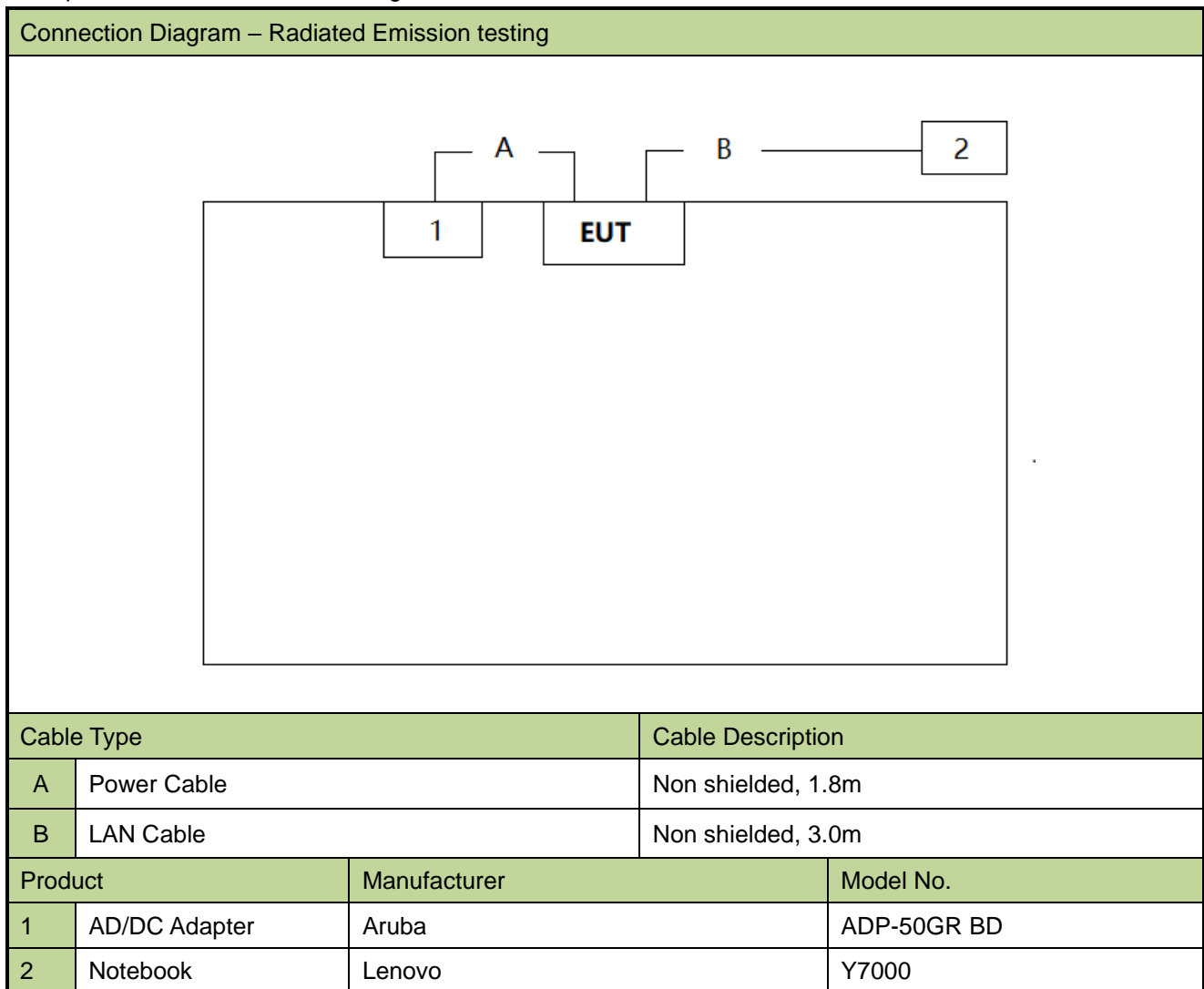
Mode 1: Transmit by 802.11n-HT20_Nss=1 (MCS3)

Mode 2: Transmit by 802.11n-HT40_Nss=1 (MCS4)

Note: For Radiated Spurious Emission and Radiated Restricted Band Edge, the modulation and the data rate picked for testing are determined by the original report.

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.



2.3. Test Software

The test utility software used during testing was “accessMTool” and the version was “3.2.1.5”.

2.4. Applied Standards

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

- FCC Part 15.247
- KDB 558074 D01v05r02
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2024-05-15	WZ-AC2
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2023-09-29	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2024-05-23	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2023-11-27	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2023-10-13	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2024-05-07	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2024-04-20	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2023-11-05	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2024-01-12	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11038	1 year	2023-11-01	WZ-AC2
USB Power Sensor	Boonton	55006	MRTSUE06109	1 year	2024-02-29	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802	1.02	RE Antenna & Turntable
Agilent Power Analyzer/Agilent Power Panel	V R03.09.00	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
Coaxial:	9kHz~30MHz: 2.61dB
Coplanar:	9kHz~30MHz: 2.62dB
Horizontal:	30MHz~200MHz: 3.79dB
	200MHz~1GHz: 3.91dB
	1GHz~40GHz: 4.99dB
Vertical:	30MHz~200MHz: 4.06dB
	200MHz~1GHz: 5.21dB
	1GHz~40GHz: 4.90dB
Output Power	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$):	
1.4dB	

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(b)(3)	Output Power	Conducted	Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass

Note: For Radiated Spurious Emission and Radiated Restricted Band Edge, the EUT setup for testing is determined by the original report.

6.2. Output Power Measurement

6.2.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2.2. Test Procedure

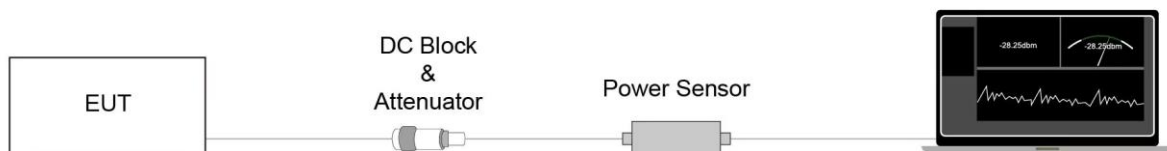
ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.2.3. Test Setting

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Radiated Spurious Emission Measurement

6.3.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.3.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

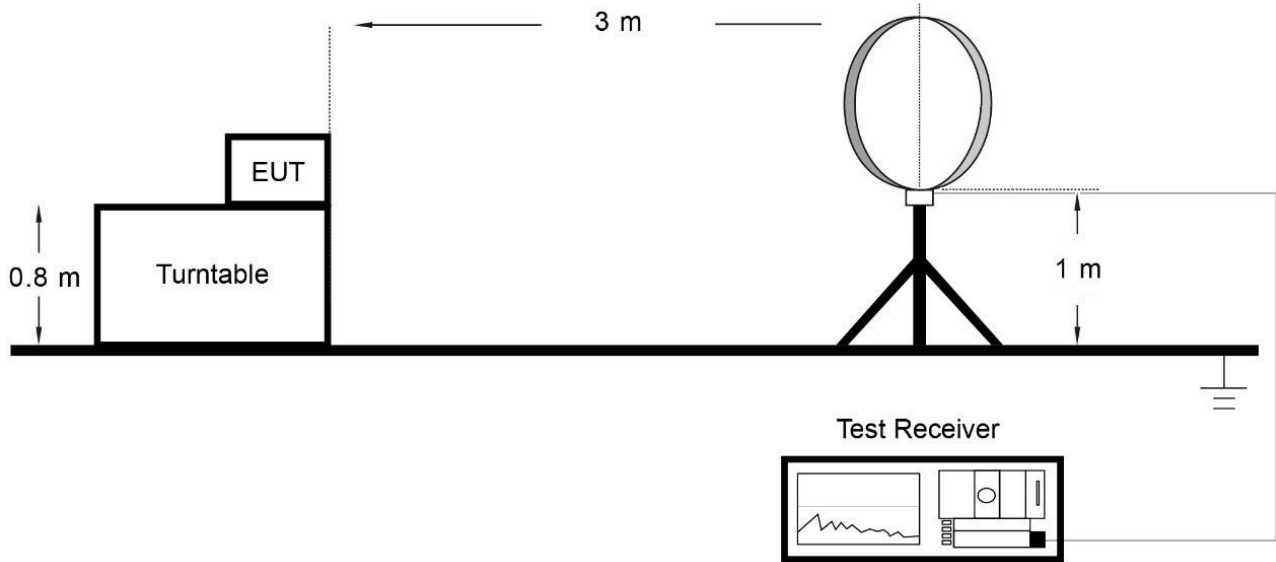
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.

802.11n-HT20 MCS3	VBW = 2.0KHz	802.11n-HT40 MCS4	VBW = 5.6KHz
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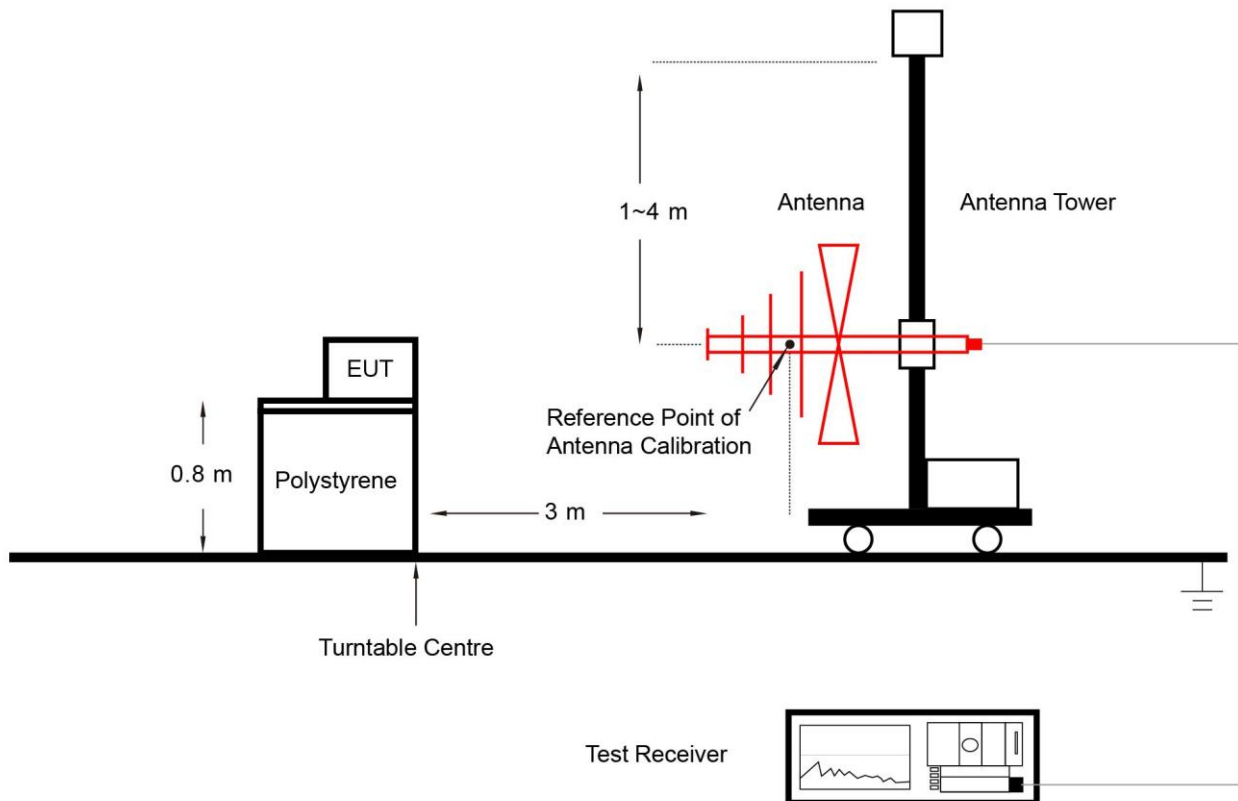
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.3.4. Test Setup

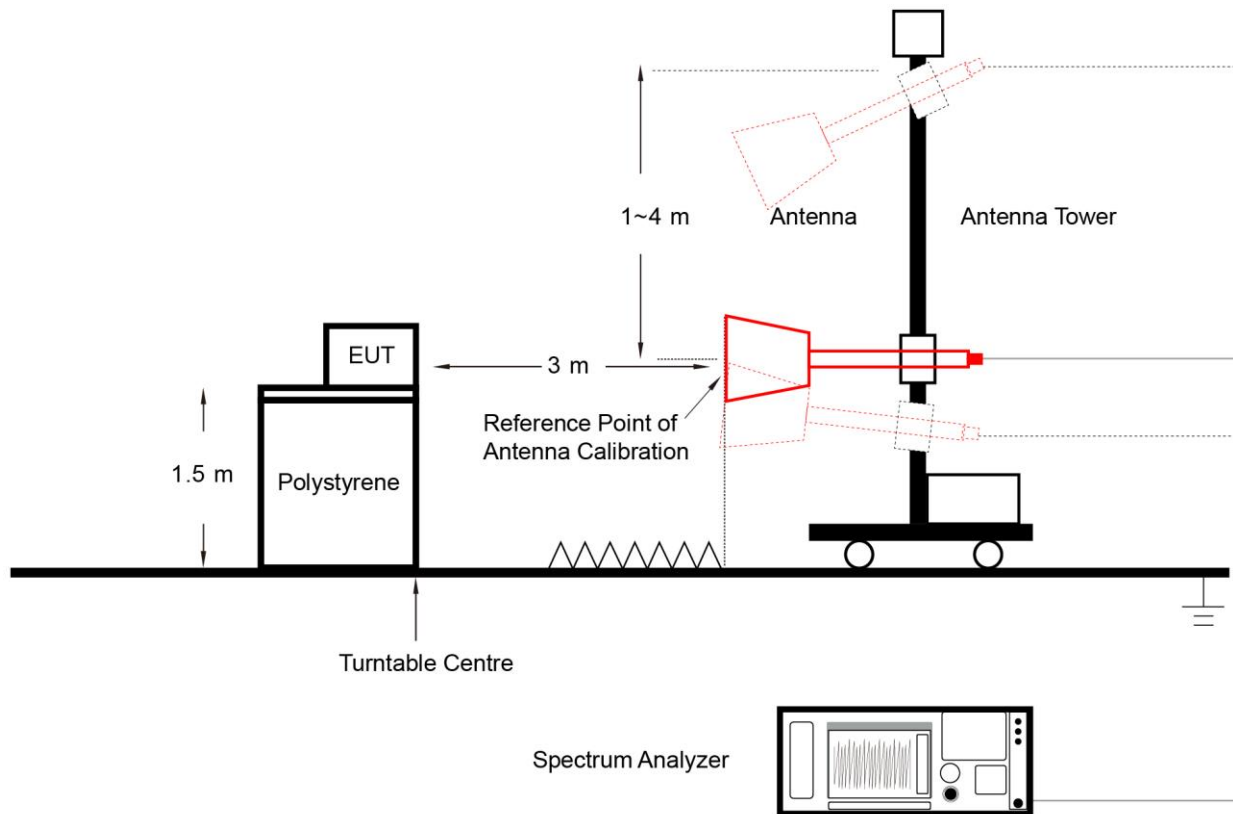
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Radiated Restricted Band Edge Measurement

6.4.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (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	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.4.2. Test Procedure

ANSI C63.10-2013 Section 6.3 & 6.6 & 11.13

6.4.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

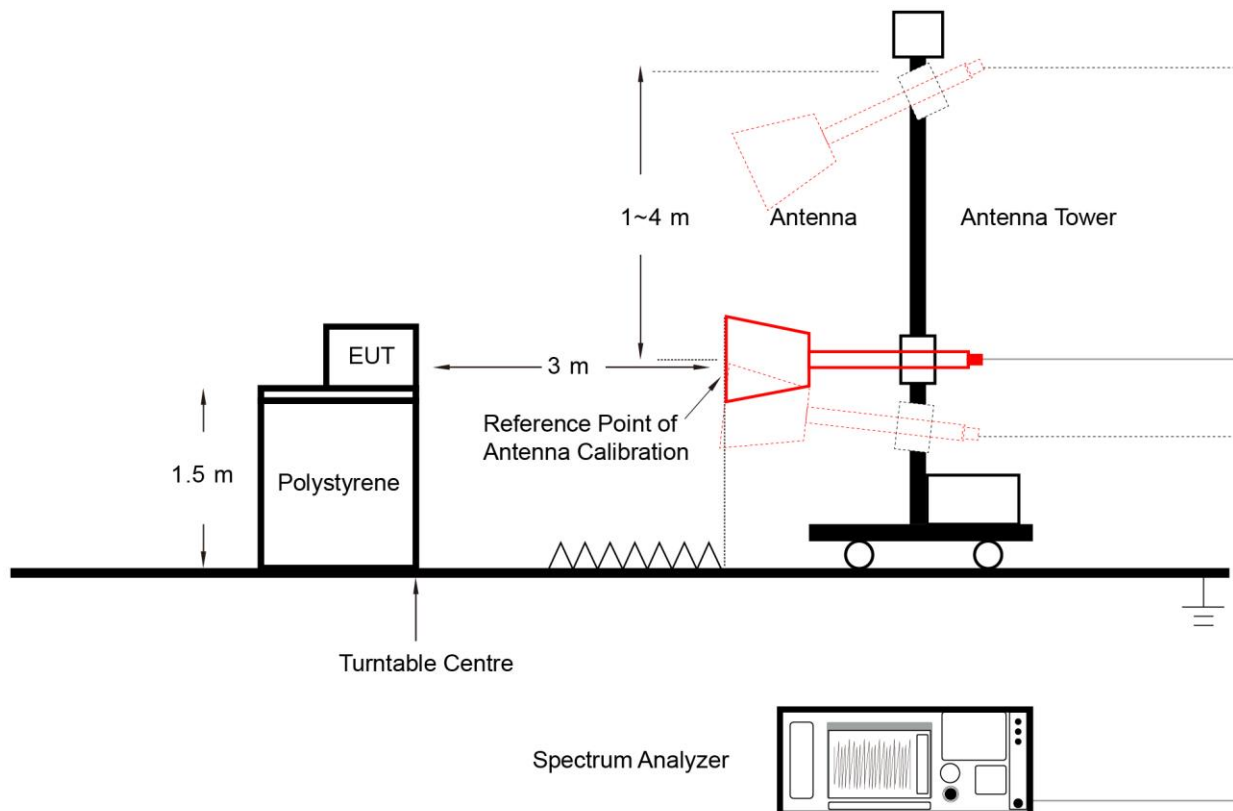
Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$

802.11n-HT20 MCS3	VBW = 2.0KHz	802.11n-HT40 MCS4	VBW = 5.6KHz
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4. Average Type = Voltage
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.3.

Appendix A – Test Result

A.1 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-20		
Remark	Spot Check		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Output Power (dBm)	Ant 1 Output Power (dBm)	Output Power (dBm)	Limit (dBm)
11n-HT20_Nss=1	MCS3	01	2412	16.11	15.92	19.03	≤ 30.00
11n-HT40_Nss=1	MCS4	09	2452	13.85	14.01	16.94	≤ 30.00

Note: Output Power (dBm) = $10 \cdot \log(10^{(\text{Ant0 Output Power (dBm)/10})} + 10^{(\text{Ant1 Output Power (dBm)/10})})$.

Spot-check Error (From KDB 484596 D01 Referencing Test Data v02r01)

Worst Case Spot-check Error	Limit	Result
1.46%	25%	Pass

Note: Spot-check Error = $|\text{spot check data} - \text{reference data}| / |\text{reference data}|$

For example, $|79.92\text{mW} - 81.10\text{mW}| / 81.10 * 100 = 1.46\%$

A.2 Radiated Spurious Emission Test Result

Test Site	WZ-AC2	Test Engineer	Edith Yu
Test Date	2023-07-23	Test Mode:	802.11n-HT20
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		
Remark	Spot Check		

Test Channel	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Polarization
01	4689.0	34.7	3.8	38.5	74.0	-35.5	Peak	Horizontal
	7443.0	32.7	12.0	44.8	74.0	-29.2	Peak	Horizontal
	11642.0	31.7	17.9	49.6	74.0	-24.4	Peak	Horizontal
	4833.5	35.7	3.3	39.0	74.0	-35.0	Peak	Vertical
	7383.5	32.7	11.6	44.3	74.0	-29.7	Peak	Vertical
	11565.5	31.6	17.7	49.3	74.0	-24.7	Peak	Vertical

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	WZ-AC2	Test Engineer	Edith Yu
Test Date	2023-07-23	Test Mode:	802.11n-HT40
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		
Remark	Spot Check		

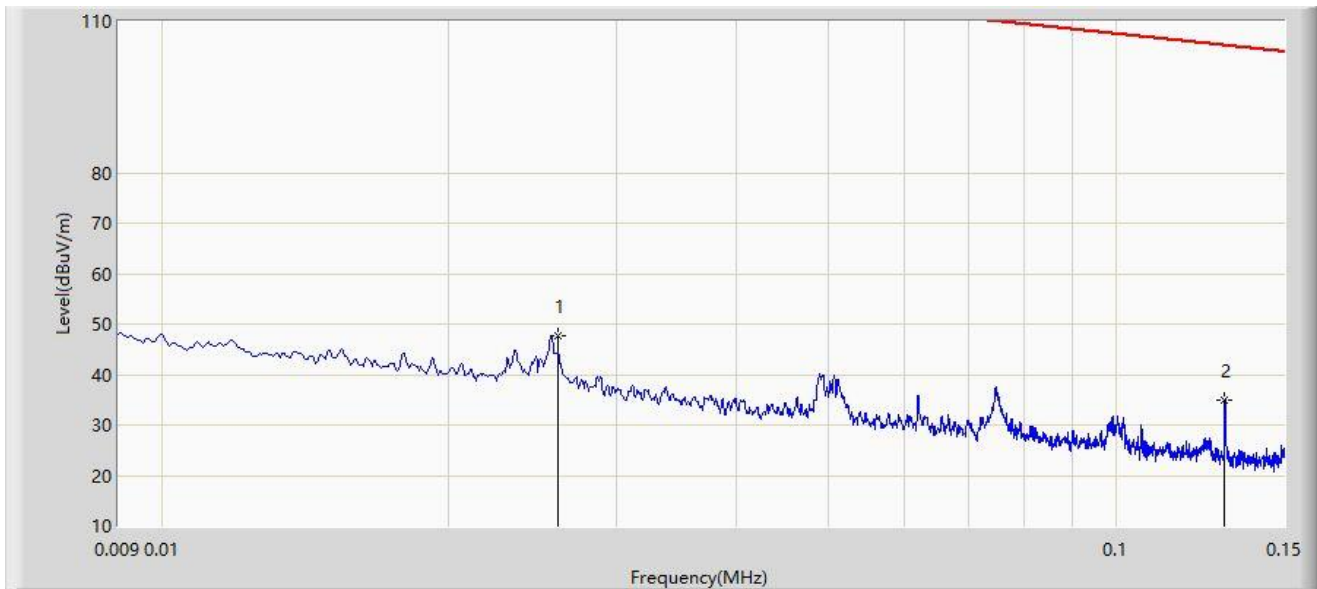
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
09	4740.0	36.2	3.7	39.9	74.0	-34.1	PK	Horizontal
	7545.0	32.6	11.9	44.6	74.0	-29.4	PK	Horizontal
	11557.0	31.8	17.8	49.6	74.0	-24.4	PK	Horizontal
	4842.0	35.5	3.3	38.8	74.0	-35.2	PK	Vertical
	8131.5	32.9	11.8	44.7	74.0	-29.3	PK	Vertical
	11718.5	31.5	17.8	49.3	74.0	-24.7	PK	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission between 9KHz-30MHz:

Site: WZ-AC2	Time: 2023/07/24 - 23:04
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: FMZB1519_0.009-30MHz	Polarity: Coaxial
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		0.026	47.645	28.930	-71.645	119.290	18.716	PK
2	*	0.130	34.983	17.800	-70.336	105.319	17.183	PK

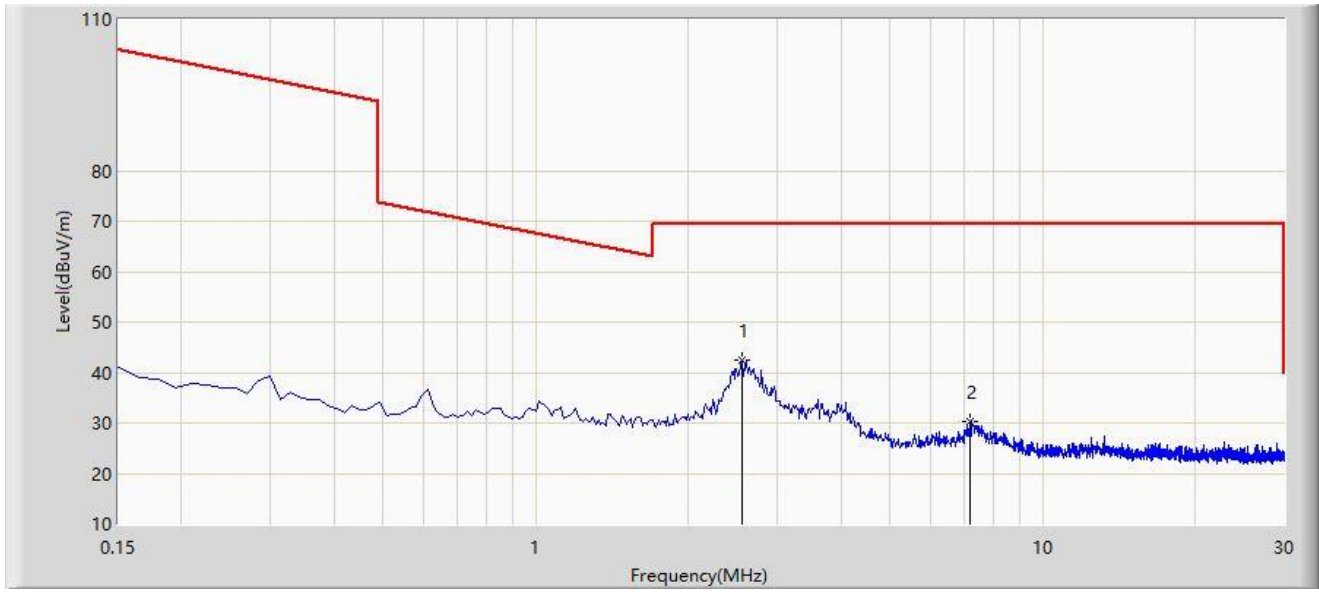
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Site: WZ-AC2	Time: 2023/07/24 - 23:10
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: FMZB1519_0.009-30MHz	Polarity: Coaxial
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2.553	42.547	24.981	-26.953	69.500	17.566	PK
2		7.210	30.387	13.033	-39.113	69.500	17.354	PK

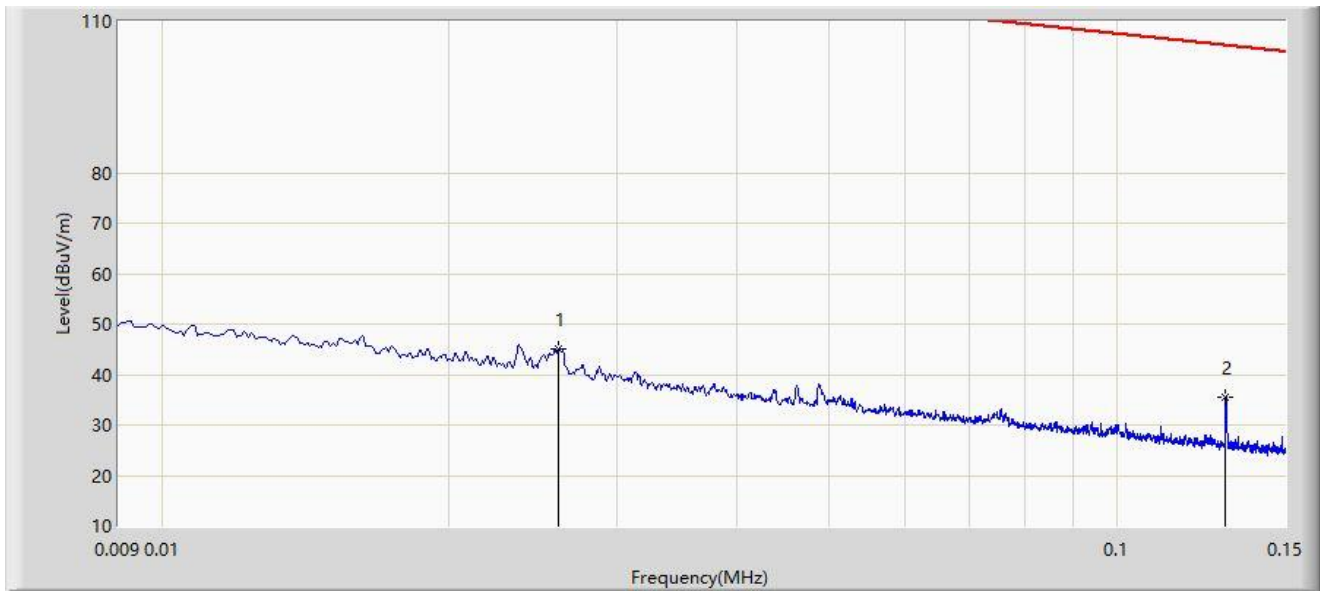
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Site: WZ-AC2	Time: 2023/07/24 - 23:11
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: FMZB1519_0.009-30MHz	Polarity: Coplanar
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		0.026	45.062	26.347	-74.228	119.290	18.716	PK
2	*	0.130	35.494	18.311	-69.825	105.319	17.183	PK

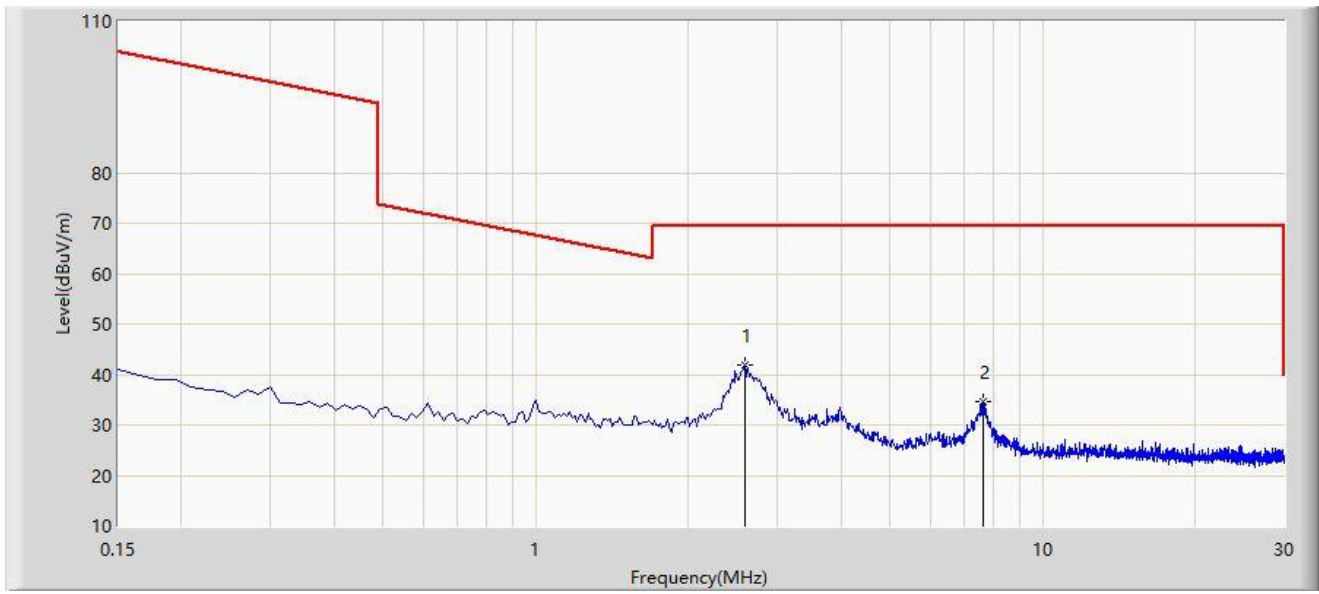
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Site: WZ-AC2	Time: 2023/07/24 - 23:15
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: FMZB1519_0.009-30MHz	Polarity: Coplanar
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1	*	2.583	41.745	24.179	-27.755	69.500	17.566	PK
2		7.642	34.508	17.161	-34.992	69.500	17.347	PK

Note 1: " * ", means this data is the worst emission level.

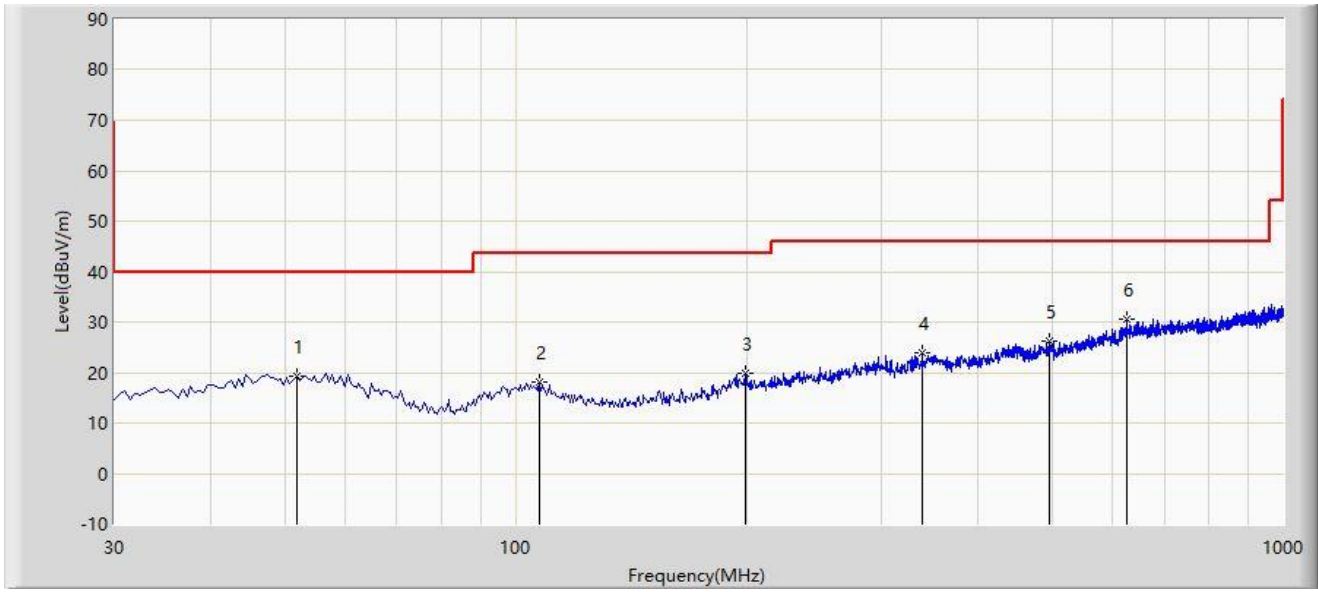
Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

The Result of Radiated Spurious Emission between 30MHz-1GHz:

Site: WZ-AC2	Time: 2023/07/24 - 23:37
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		51.825	19.233	-1.226	-20.767	40.000	20.458	PK
2		107.600	18.133	-0.271	-25.367	43.500	18.404	PK
3		199.265	19.895	0.988	-23.605	43.500	18.907	PK
4		338.945	23.911	1.616	-22.089	46.000	22.295	PK
5		496.085	26.205	0.958	-19.795	46.000	25.248	PK
6	*	625.095	30.526	3.279	-15.474	46.000	27.246	PK

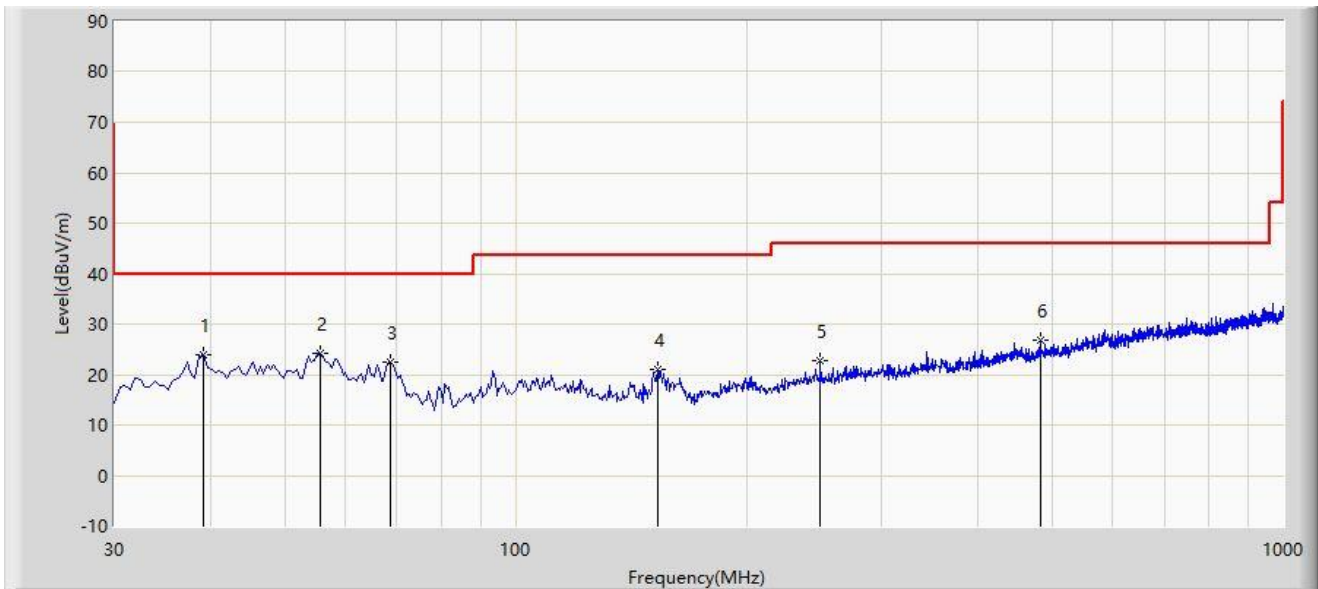
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Site: WZ-AC2	Time: 2023/07/24 - 23:39
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		39.215	23.973	5.467	-16.027	40.000	18.507	PK
2	*	55.705	24.328	4.098	-15.672	40.000	20.229	PK
3		68.800	22.491	5.212	-17.509	40.000	17.279	PK
4		153.190	21.123	5.689	-22.377	43.500	15.434	PK
5		249.705	22.877	2.823	-23.123	46.000	20.054	PK
6		483.475	26.850	1.736	-19.150	46.000	25.114	PK

Note 1: " * ", means this data is the worst emission level.

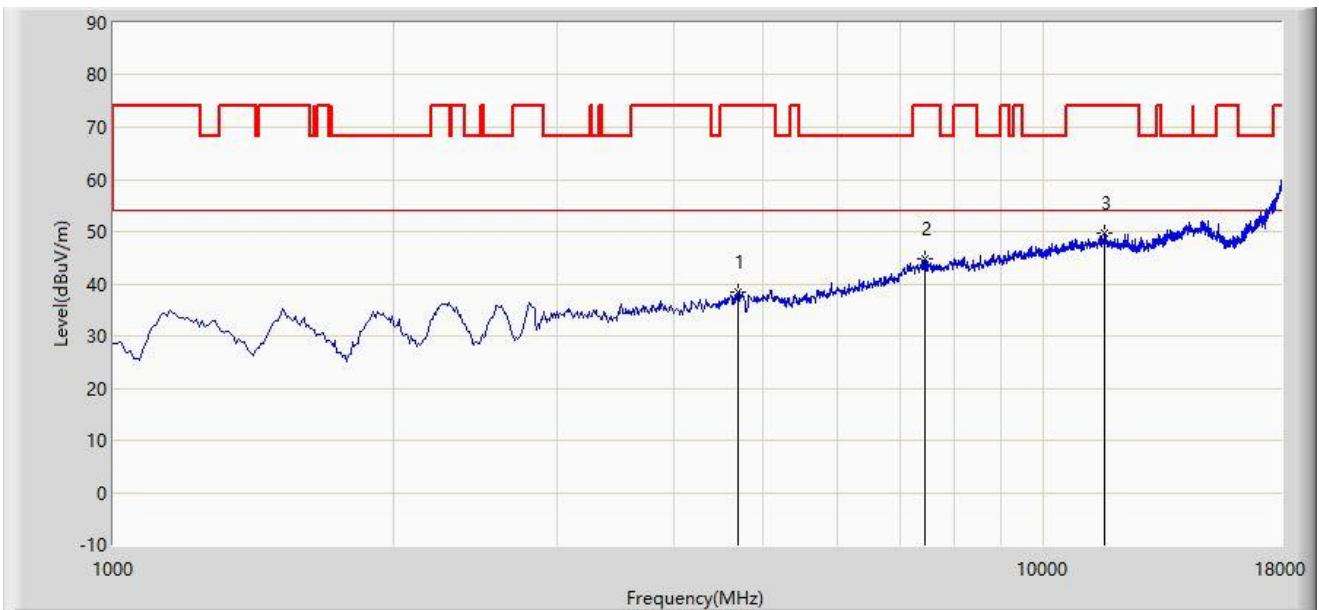
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

The Result of Radiated Spurious Emission between 1GHz-18GHz:

Site: WZ-AC2	Time: 2023/07/23 - 16:31
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		4689.000	38.513	34.724	-35.487	74.000	3.789	PK
2		7443.000	44.768	32.737	-29.232	74.000	12.030	PK
3	*	11642.000	49.599	31.719	-24.401	74.000	17.879	PK

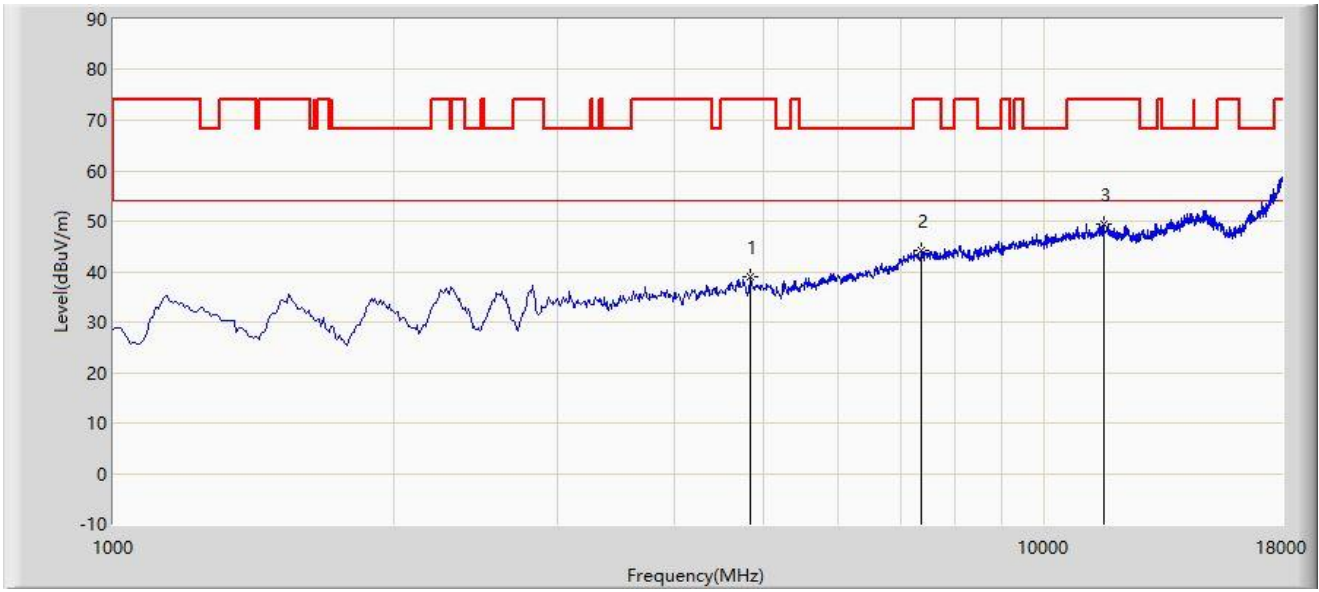
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

Site: WZ-AC2	Time: 2023/07/23 - 16:37
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		4833.500	38.971	35.687	-35.029	74.000	3.284	PK
2		7383.500	44.340	32.701	-29.660	74.000	11.639	PK
3	*	11565.500	49.293	31.572	-24.707	74.000	17.721	PK

Note 1: " * ", means this data is the worst emission level.

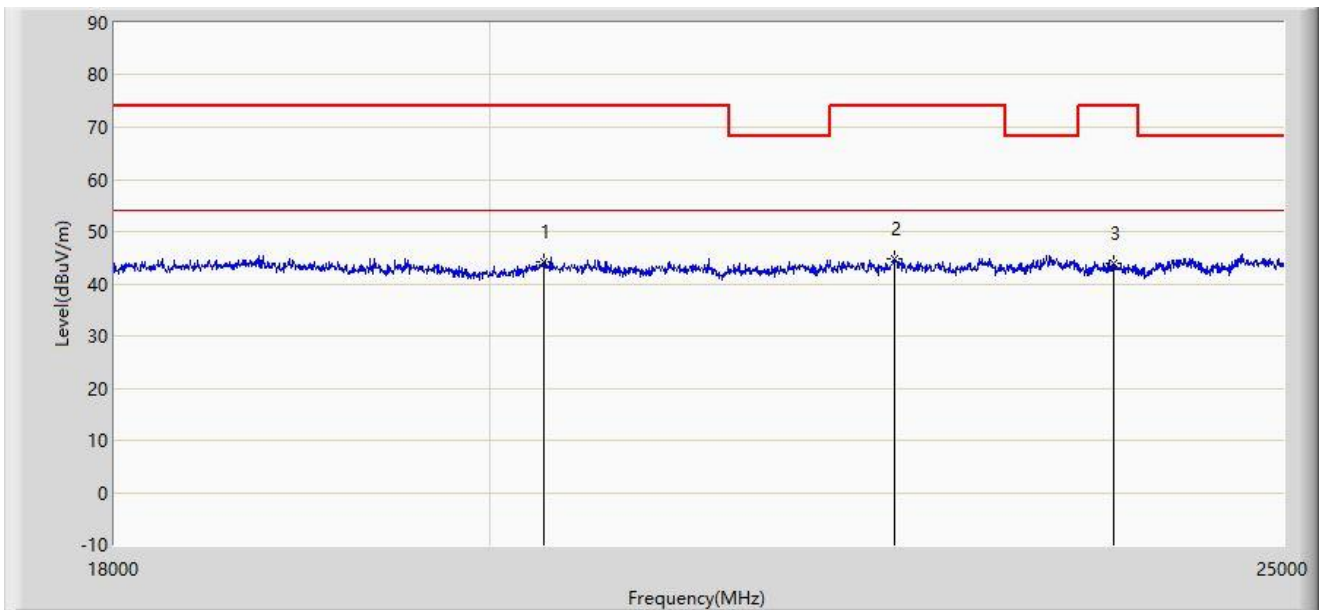
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

The Result of Radiated Spurious Emission above 18GHz:

Site: WZ-AC2	Time: 2023/07/26 - 10:54
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: BBHA9170_993_18-40GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		20310.000	44.292	54.063	-29.708	74.000	-9.771	PK
2	*	22413.500	44.858	52.720	-29.142	74.000	-7.862	PK
3		23834.500	43.940	50.889	-30.060	74.000	-6.949	PK

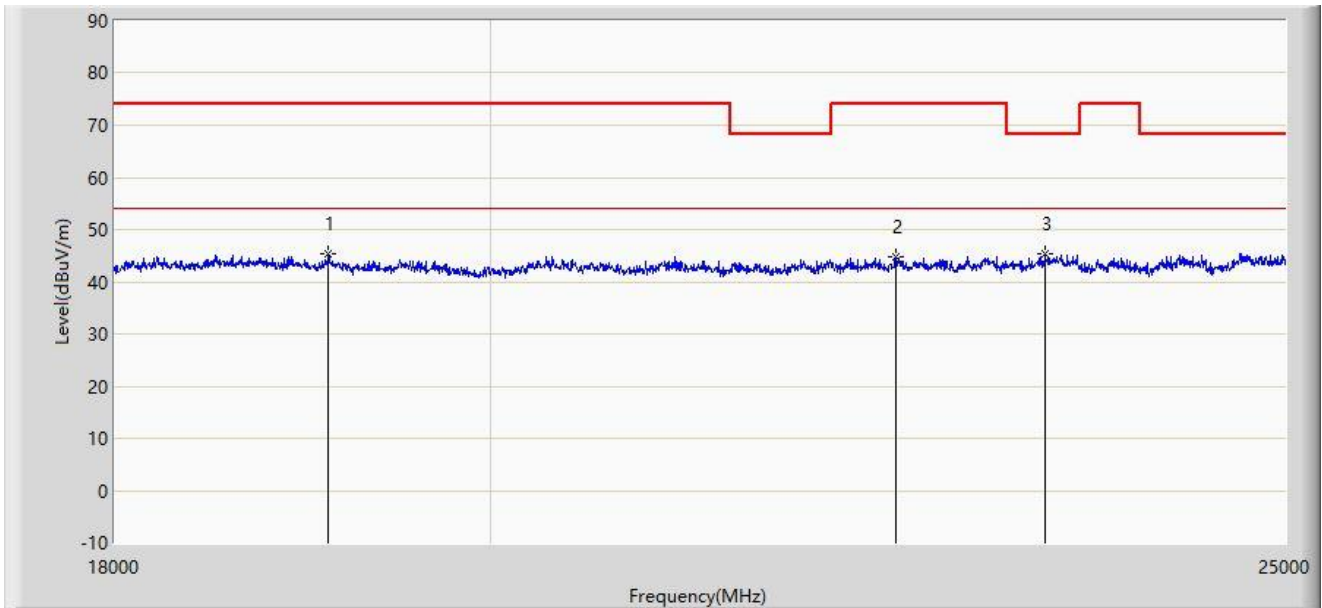
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

Site: WZ-AC2	Time: 2023/07/26 - 10:57
Limit: FCC_Part15.209_RSE(3m)	Engineer: Edith Yu
Probe: BBHA9170_993_18-40GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Note: Transmit by 802.11n-HT20 at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		19113.000	45.491	55.802	-28.509	74.000	-10.311	PK
2		22413.500	44.743	52.605	-29.257	74.000	-7.862	PK
3	*	23372.500	45.313	52.319	-22.887	68.200	-7.006	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

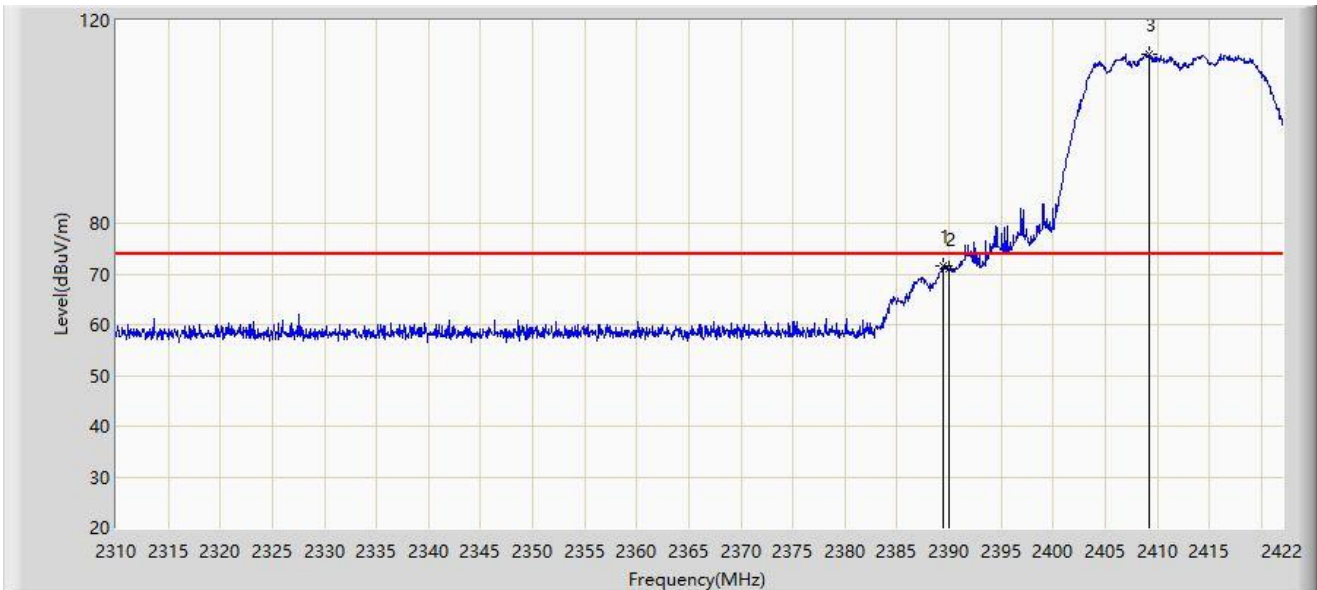
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

A.3 Radiated Restricted Band Edge Test Result

Spot Check

Site: WZ-AC2	Test Date: 2023-07-20
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



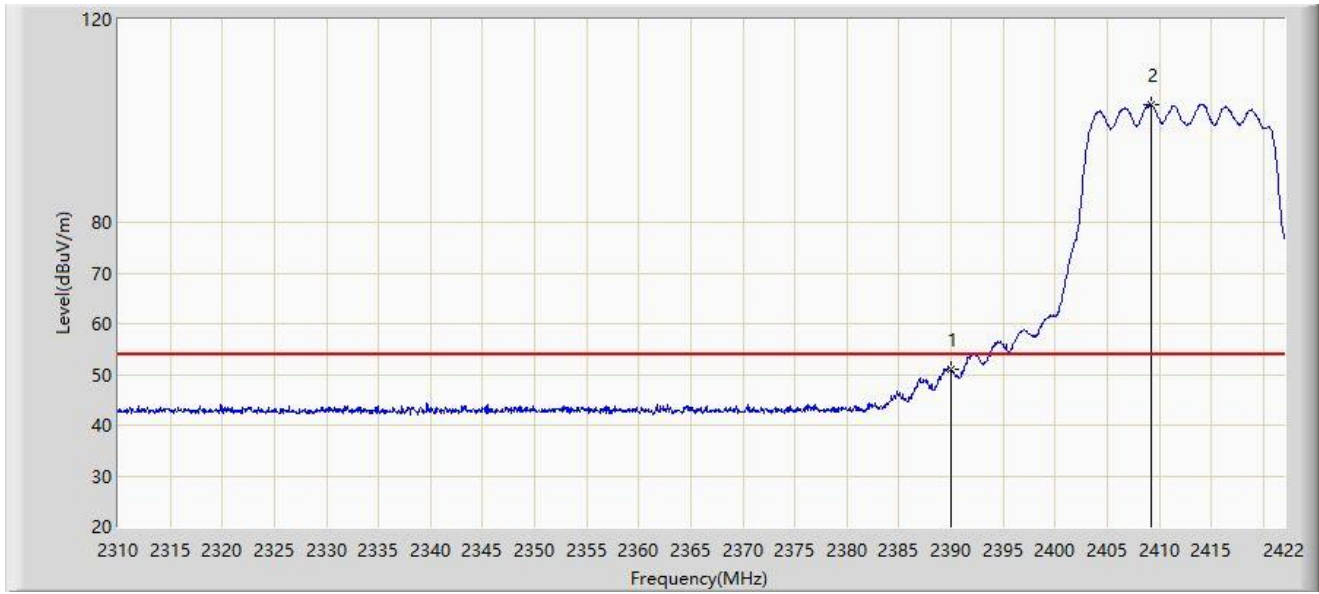
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1	*	2389.464	71.588	39.970	-2.412	74.000	31.618	PK
2		2390.000	71.022	39.407	-2.978	74.000	31.615	PK
3		2409.232	113.393	81.865	N/A	N/A	31.529	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



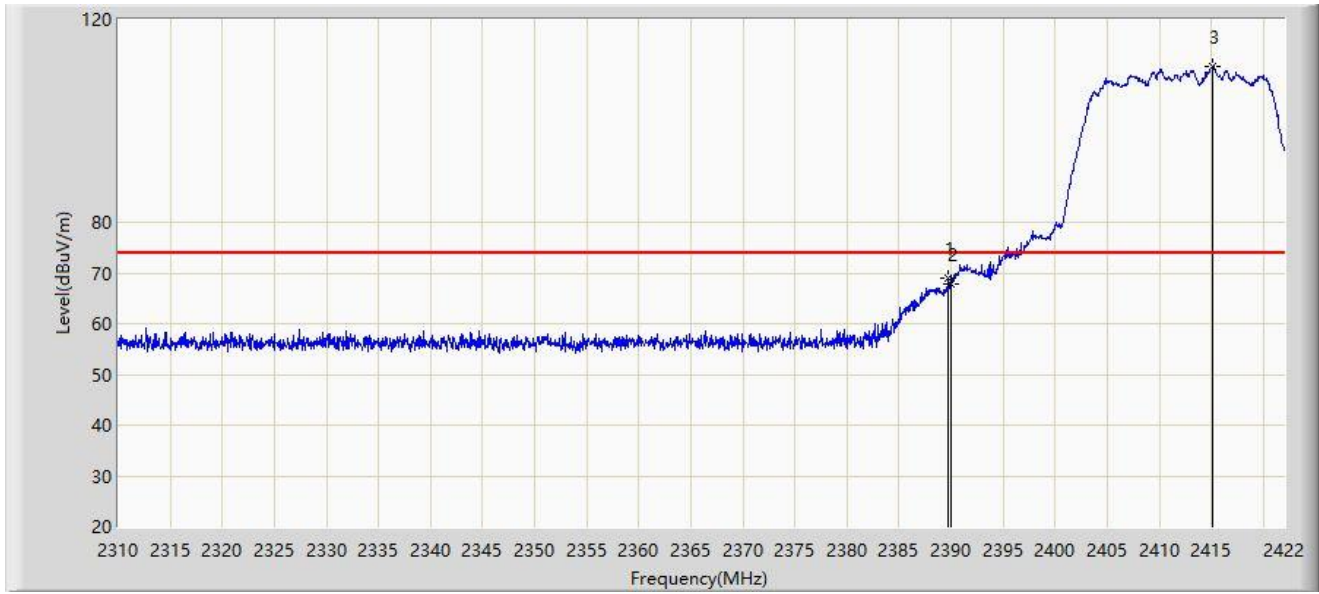
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1	*	2390.000	50.937	19.322	-3.063	54.000	31.615	AV
2		2409.232	103.112	71.584	N/A	N/A	31.529	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



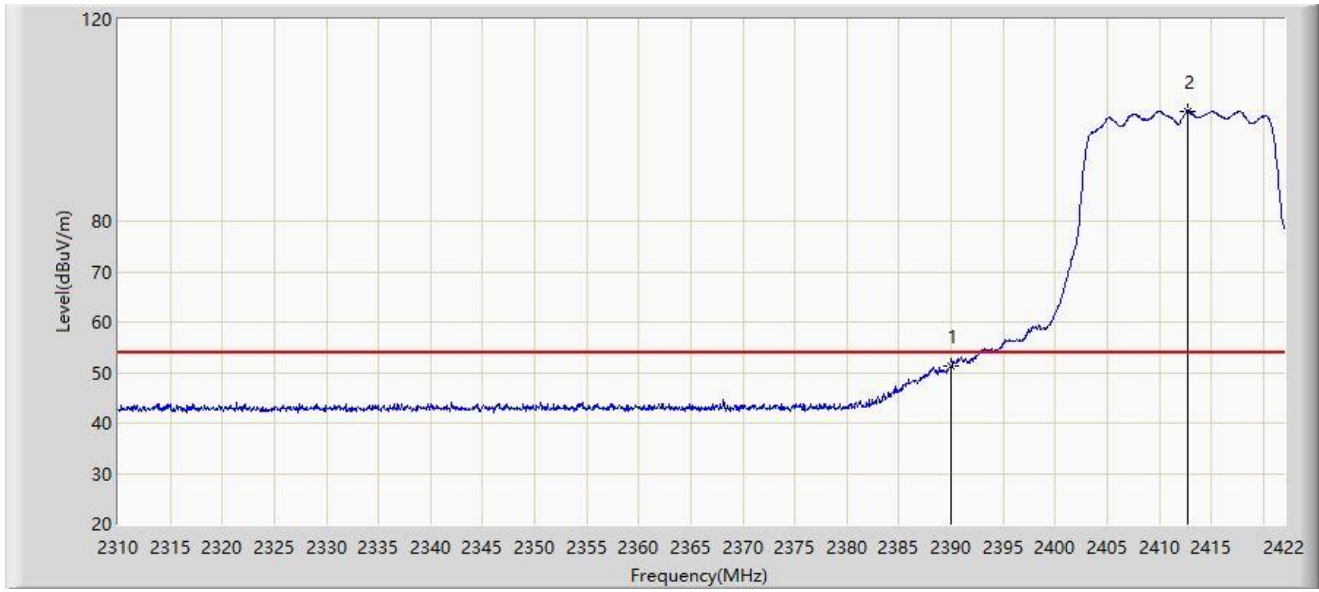
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1	*	2389.744	69.049	37.432	-4.951	74.000	31.617	PK
2		2390.000	67.871	36.256	-6.129	74.000	31.615	PK
3		2415.168	110.724	79.214	N/A	N/A	31.510	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



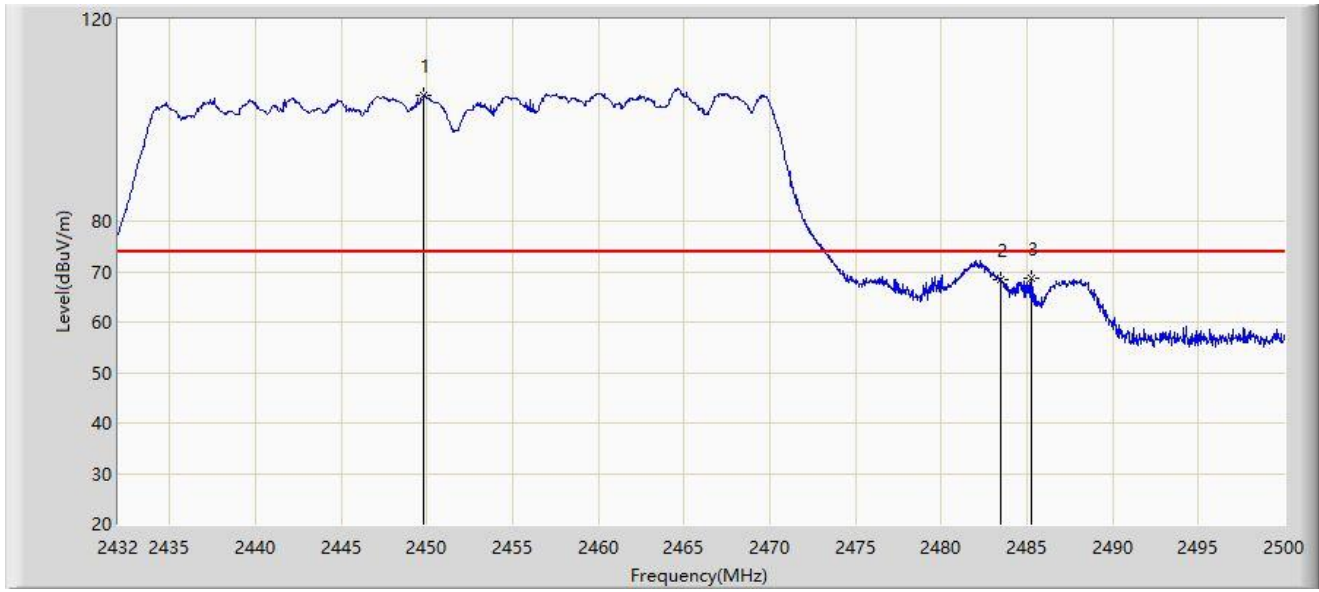
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1	*	2390.000	51.302	19.687	-2.698	54.000	31.615	AV
2		2412.704	101.874	70.356	N/A	N/A	31.518	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at 2452MHz	



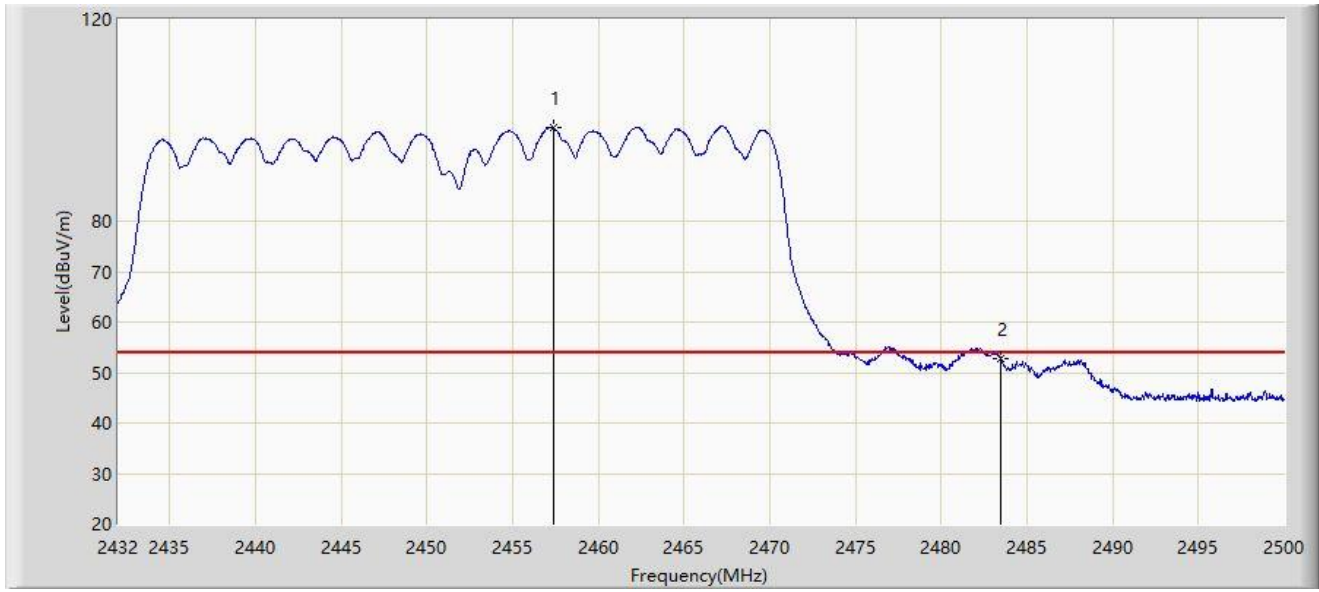
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		2449.850	105.010	73.527	N/A	N/A	31.483	PK
2		2483.500	68.293	36.793	-5.707	74.000	31.500	PK
3	*	2485.278	68.701	37.200	-5.299	74.000	31.501	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at 2452MHz	



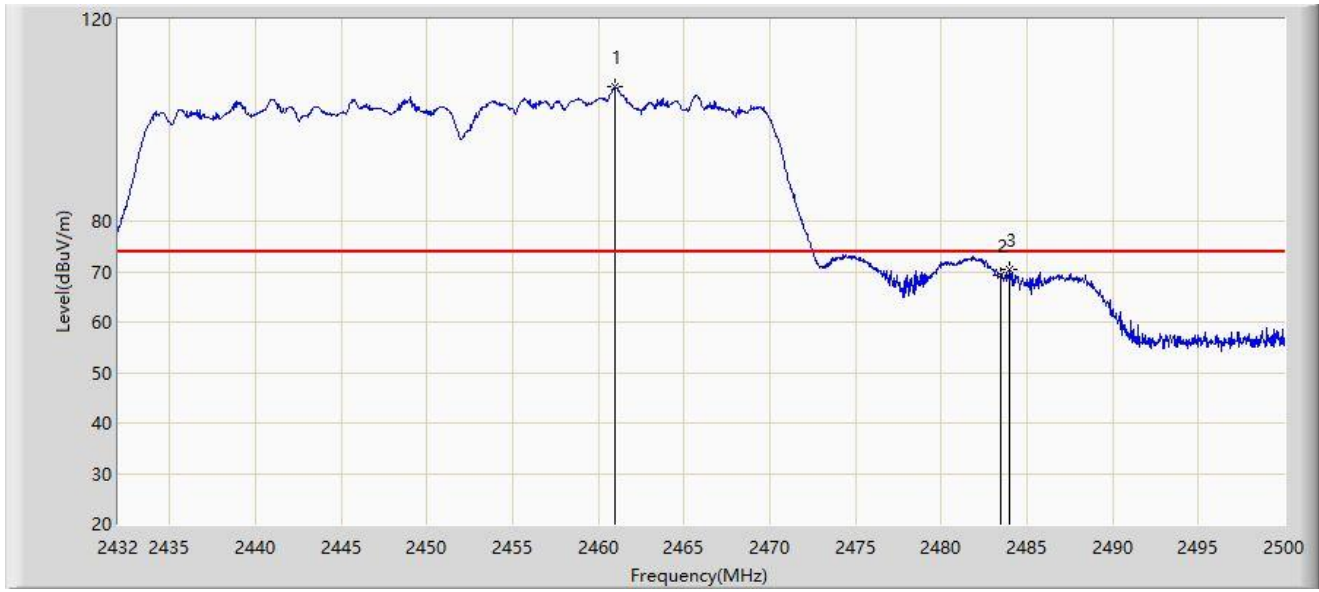
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		2457.364	98.449	66.966	N/A	N/A	31.483	AV
2	*	2483.500	52.880	21.380	-1.120	54.000	31.500	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at 2452MHz	



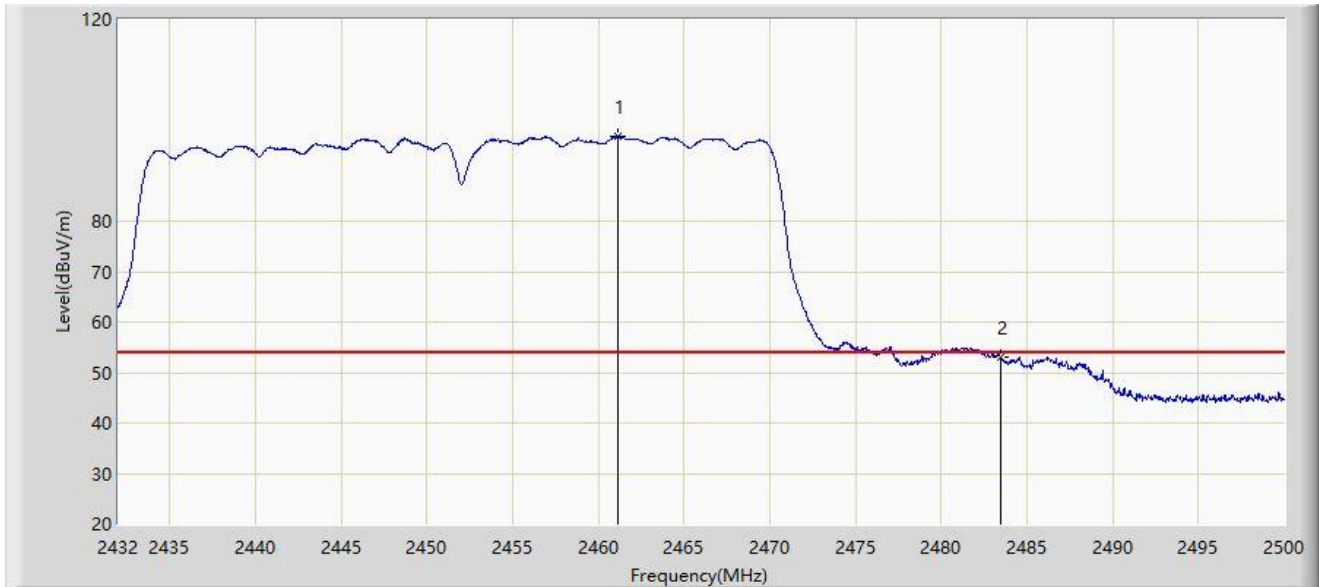
No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		2460.968	106.548	75.062	N/A	N/A	31.486	PK
2		2483.500	69.145	37.645	-4.855	74.000	31.500	PK
3	*	2483.986	70.525	39.024	-3.475	74.000	31.501	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: WZ-AC2	Test Date: 2023-07-21
Limit: FCC_2.4G_RE(3m)	Engineer: Edith Yu
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at 2452MHz	



No	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		2461.104	96.900	65.414	N/A	N/A	31.486	AV
2	*	2483.500	52.962	21.462	-1.038	54.000	31.500	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Spot-check Error (From KDB 484596 D01 Referencing Test Data v02r01)

Worst Case Spot-check Error	Limit	Result
2.20%	25%	Pass

Note: Spot-check Error = $|\text{spot check data} - \text{reference data}| / |\text{reference data}|$

For example, $|51.302 - 50.2| / 50.2 * 100 = 2.20\%$

Appendix B – Test Setup Photograph

Refer to “2307RSU029-UT” file.

Appendix C – EUT Photograph

Refer to “2307RSU029-UE” file.

_____ The End _____