RF MEASUREMENT REPORT
(Class II Change)

FCC ID	:	2AXJ4EAP650V2
Applicant	:	TP-Link Corporation Limited
Application Type	:	Certification
Product	:	AX3000 Ceiling Mount Wi-Fi 6 Access Point
Model No.	:	EAP650
Series Model No.	:	EAP653, Festa F65
Brand Name	:	tp-link
FCC Classification	:	Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s)	:	Part15 Subpart E (Section 15.407)
Received Date	:	March 19, 2024
Test Date	:	March 26, 2024 ~ April 8, 2024

Test By : Owen Tsai
(Owen Tsai)

Reviewed By : Paddy Chen
(Paddy Chen)

Approved By : Chenz Ker
(Chenz Ker)

Testing Laboratory
3261

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 KDB 789033 D02v02r01. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
2403TW0109-U4	1.0	Original Report	2024-05-09	Valid

Note:
This time, added Model No.: Festa F65 (Changes to some non-RF components, addition of Ipex port and changes to the shell will not affect the RF characteristics), so verification test for Conducted Power, Band Edge & Harmonic worst case, so the FCC C2PC is executed.

FCC Original Report Grant Date: 07/28/2023, FCC ID: 2AXJ4EAP650V2.

CONTENTS

General Information

Applicant	TP-Link Corporation Limited
Applicant Address	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hongkong
Manufacturer	TP-Link Corporation Limited
Manufacturer Address	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hongkong
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 15.407

Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Canada, EU and TELEC Rules.

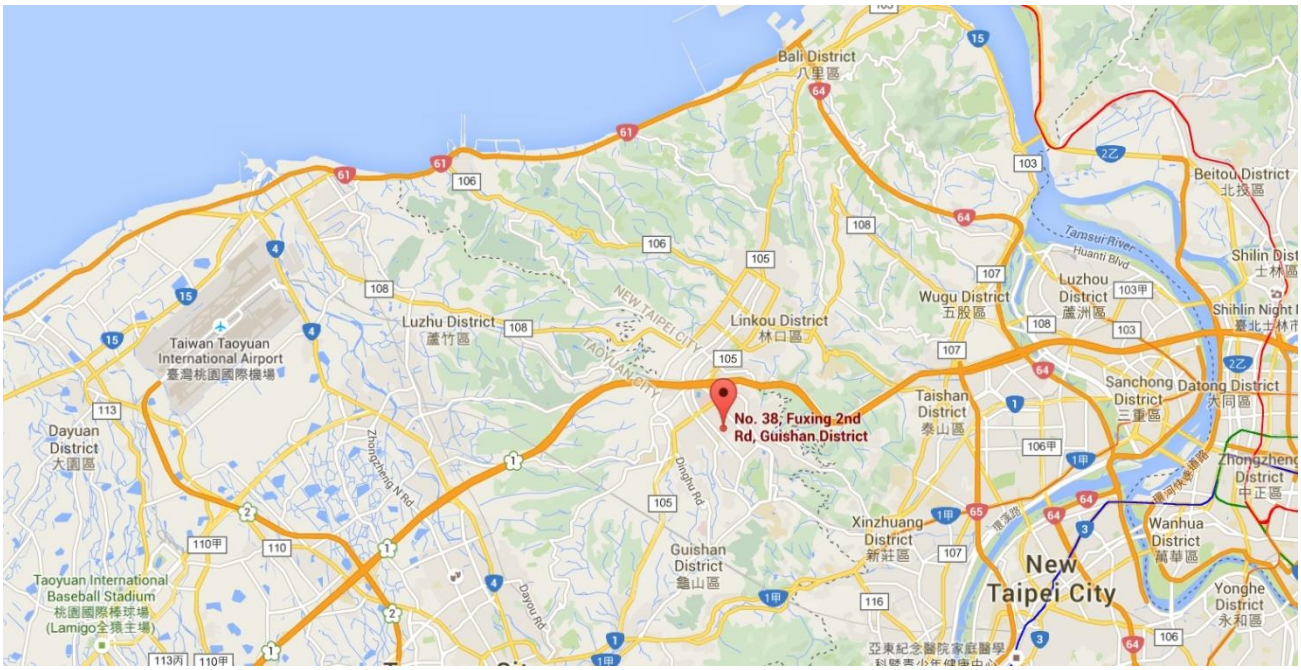
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	AX3000 Ceiling Mount Wi-Fi 6 Access Point
Model No.:	EAP650
Series Model No.	EAP653, Festa F65
Specification	WLAN: 802.11a/b/g/n/ac/ax WPAN: Bluetooth Mode: v5.0 (LE only)
EUT Identification No.	#1-1 (Conducted) #1-2 (Radiated)
Power Supply	AC Adapter or PoE (42.5-57V, 0.6A 802.3at)
Accessory	
Adapter	Brand: TP-Link MODEL: T120120-2B4 INPUT: 100 - 240V ~ 50/60Hz 0.4A. OUTPUT: DC 12V,1.2A Cable Out: Non-shielding, 1.5m

Note:

1. It's exactly the same except that the EAP650 will be sold with a power adapter, which the EAP653 will not. So EAP650 was selected for all tests.
2. The difference between EAP650 and Festa F65 lies in the change of the shell, the other hardware was the same. (declared by the manufacturer).
3. Changes to some non-RF components, addition of Ipex port and changes to the shell will not affect the RF characteristics., So verification test for Conducted Power, Band Edge & Harmonic worst case for Festa F65.

2.2. Product Specification Subjective to this Report

Frequency Range:	For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5190~5230MHz, 5270~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80/ax-HE80: 5210MHz, 5290MHz, 5530MHz, 5610 MHz, 5690MHz, 5775MHz For 802.11ac-VHT160/ax-HE160: 5250MHz, 5570MHz
Type of Modulation:	802.11a/n/ac: OFDM, 802.11ax: OFDMA
Data Rate:	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2402Mbps

Note: For other features of this EUT, test report will be issued separately.

2.3. Working Frequencies for this report

802.11a/n-HT20/ac-VHT20/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	144	5720 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	--	--	--	--

802.11n-HT40/ac-VHT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	151	5755 MHz	159	5795 MHz

802.11ac-VHT80/ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

802.11ac-VHT160/ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250MHz	114	5570 MHz	--	--

2.4. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	T_X Paths	Antenna Gain (dBi)	Beamforming Directional Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
IFA Antenna	2412 ~ 2462	2	3.00	6.01	3.00	6.01
	5180 ~ 5825	3	2.00	6.77	2.00	6.77

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

   If all antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

   • For power spectral density (PSD) measurements on all devices,

   Array Gain = 10 log (N_{ANT}/ N_{SS}) dB;

   • For power measurements on IEEE 802.11 devices,

   Array Gain = 0 dB for $N_{ANT} \leq 4$;

2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11ac/ax, not include 802.11a/b/g/n. BF Directional gain = G_{ANT} + 10 log (N_{ANT}).
3. The information as above is from the antenna specifications.

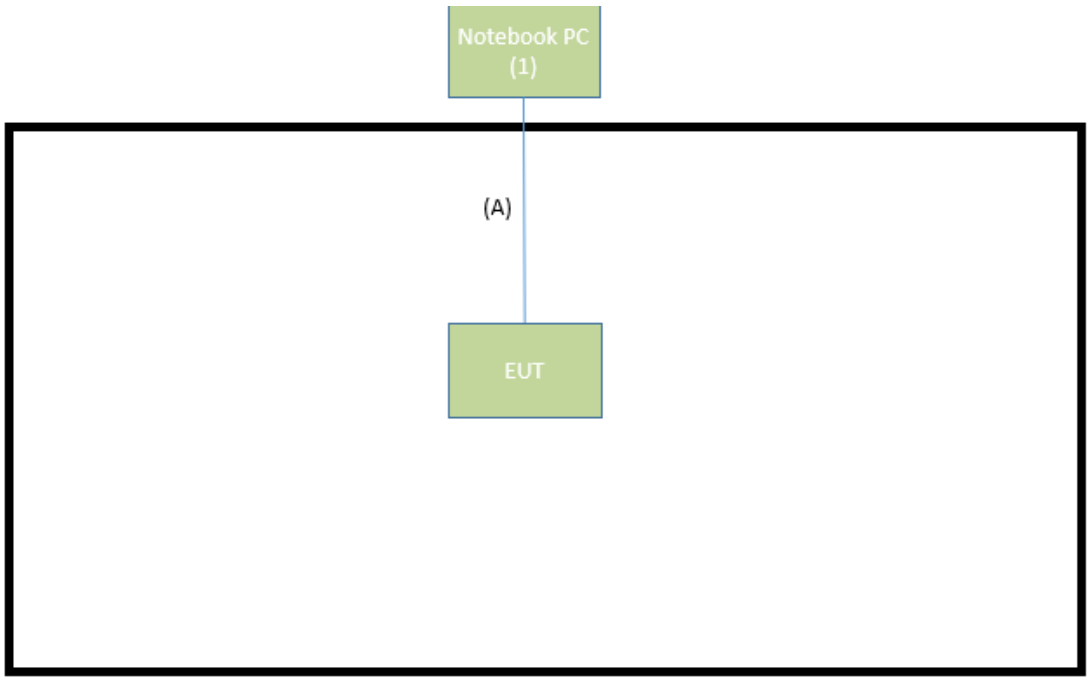
Test Mode	T_X Paths	CDD Mode	Beamforming Mode
802.11b/g/n (DTS)	2	√	X
802.11ax (DTS)	2	√	√
802.11a/n (NII)	3	√	X
802.11ac/ax (NII)	3	√	√

2.5. Test Mode

CDD Mode
Mode 1: Transmit by 802.11a_Nss=1 (6Mbps)
Mode 2: Transmit by 802.11ac-VHT20_Nss=1 (MCS0)
Mode 3: Transmit by 802.11ac-VHT40_Nss=1 (MCS0)
Mode 4: Transmit by 802.11ac-VHT80_Nss=1 (MCS0)
Mode 5: Transmit by 802.11ac-VHT160_Nss=1 (MCS0)
Mode 6: Transmit by 802.11ax-HE20_Nss=1 (MCS0)
Mode 7: Transmit by 802.11ax-HE40_Nss=1 (MCS0)
Mode 8: Transmit by 802.11ax-HE80_Nss=1 (MCS0)
Mode 9: Transmit by 802.11ax-HE160_Nss=1 (MCS0)
Beamforming Mode
Mode 10: Transmit by 802.11ac-VHT20_Nss=1 (MCS0)
Mode 11: Transmit by 802.11ac-VHT40_Nss=1 (MCS0)
Mode 12: Transmit by 802.11ac-VHT80_Nss=1 (MCS0)
Mode 13: Transmit by 802.11ac-VHT160_Nss=1 (MCS0)
Mode 14: Transmit by 802.11ax-HE20_Nss=1 (MCS0)
Mode 15: Transmit by 802.11ax-HE40_Nss=1 (MCS0)
Mode 16: Transmit by 802.11ax-HE80_Nss=1 (MCS0)
Mode 17: Transmit by 802.11ax-HE160_Nss=1 (MCS0)
Remark: 1. For Radiated emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power. 2. This device supports 3 N_{SS} and power level of 3 N_{SS} is less than or equal to the power of 1 N_{SS}. The worst case is N_{SS}=1. 3. Due to the same modulation between 802.11n and 802.11ac, so 802.11n-HT20 and HT40 are covered by 802.11ac-VHT20 and VHT40 in this report, meanwhile, power level for 802.11n-HT20 and HT40 will not be greater than 802.11ac-VHT20 and VHT40. 4. Due to CDD mode was the worst mode, so all test items were evaluated in this report. The beamforming mode only evaluated the RF output power. 5. EUT supports one configuration only in 802.11ax full RU mode. 6. As Designated by manufacturer, the lowest data rate was the worst condition, so all the tests were done with lowest data rate.

2.6. Configuration of Test System

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

Connection Diagram


Signal Cable Type		Signal Cable Description
A	LAN Cable	Shielded, 10.0m

2.7. Test System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

No.	Product	Brand	Model No.	Serial No.	Power Cord
1	Notebook PC	Lenovo	20Y7-006KTW	N/A	Non-shielded, 0.8m

2.8. Description of Test Software

The test utility software used during testing was “MT7981 QA”, the version is ver0.0.2.78.

Note: Final power setting please refer to operational description.

2.9. Applied Standards

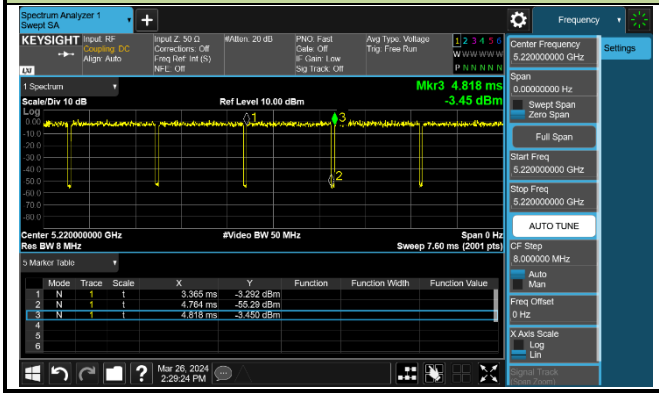
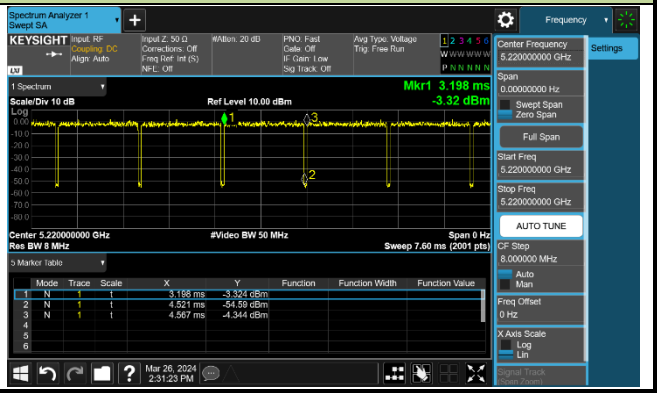
According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

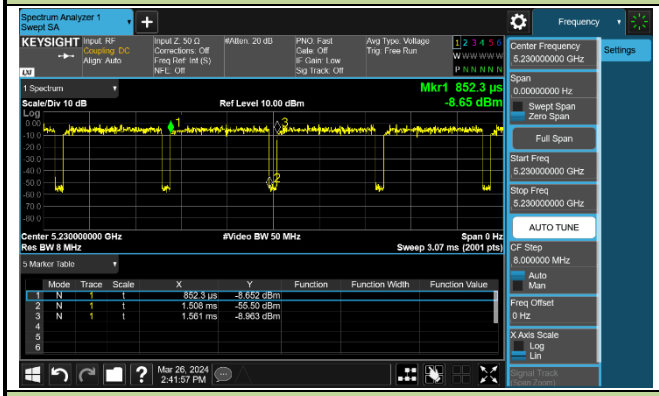
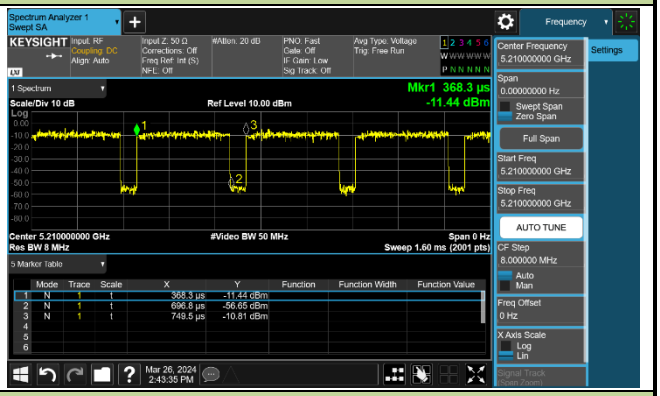
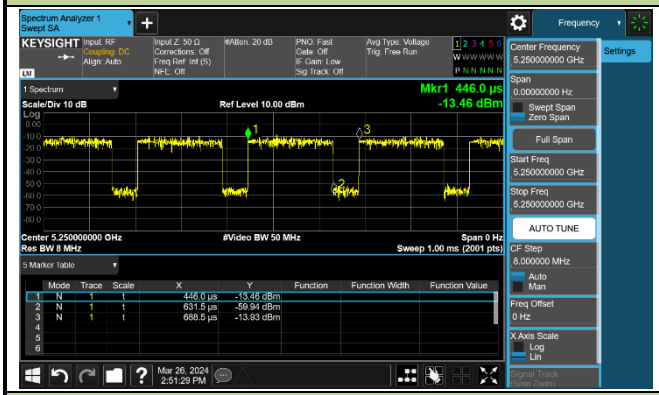
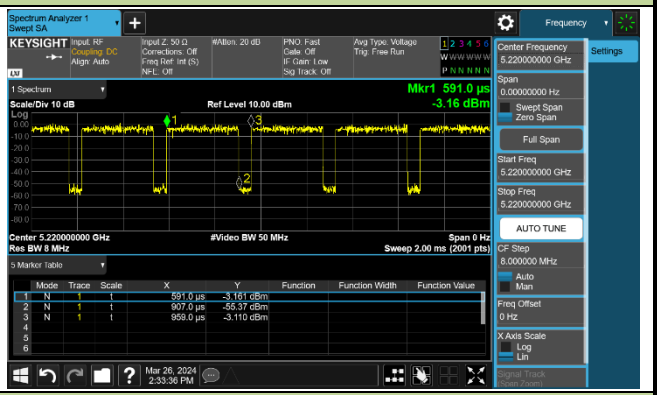
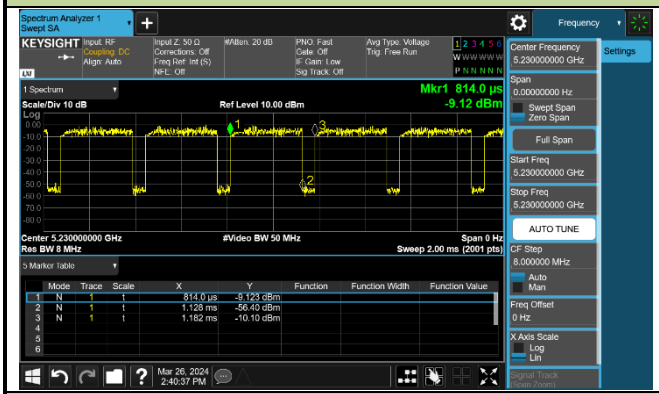
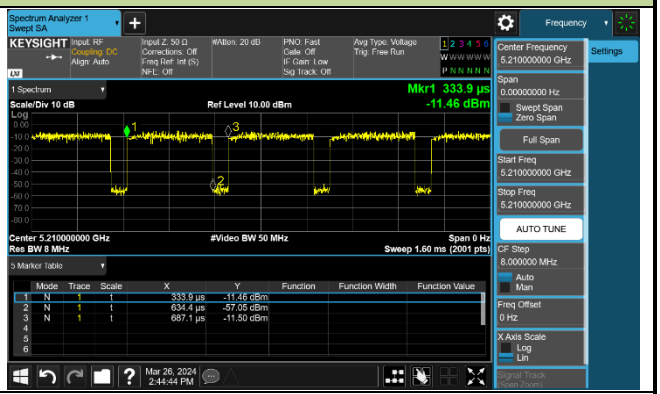
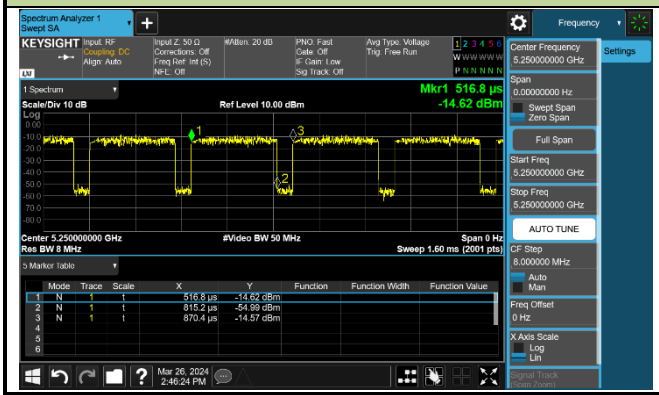
- FCC Part 15.247
- KDB 789033 D02v02r01,
- KDB 662911 D01v02r01
- ANSI C63.10-2013

2.10. Duty Cycle

5GHz (NII) operation is possible in 20MHz, 40MHz, 80MHz and 160MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11a	96.28%
802.11ac-VHT20	96.64%
802.11ac-VHT40	92.52%
802.11ac-VHT80	86.18%
802.11ac-VHT160	76.49%
802.11ax-HE20	85.87%
802.11ax-HE40	85.33%
802.11ax-HE80	85.08%
802.11ax-HE160	84.39%

Duty Cycle (T = Transmission Duration)	
802.11a	802.11ac-VHT20
	

Duty Cycle (T = Transmission Duration)	
802.11ac-VHT40	802.11ac-VHT80
	
802.11ac-VHT160	802.11ax-HE20
	
802.11ax-HE40	802.11ax-HE80
	
802.11ax-HE160	
	

2.11. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.12. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 789033 D02v02r01 were used in the measurement.

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.
The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.
Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.
An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An80cm high PVC support structure is placed on top of the turntable.
For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.
Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. 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.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2025/3/5
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2024/5/10
DIVA PLUS Funk-Wetterstation	TFA	35.1083	MRTTWA00050	1 year	2024/6/15

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Acitve Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2024/5/22
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2024/10/31
Broadband Hornantenna	RFSPIN	DRH18-E	MRTTWA00087	1 year	2024/5/17
Broadband Preamplifier	EMC Instruments corporation	EMC118A45SE	MRTTWA00088	1 year	2024/5/17
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2025/3/26
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2025/3/21
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2025/3/5
Signal Analyzer	R&S	FSVA3044	MRTTWA00092	1 year	2024/6/29
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00034	1 year	2024/6/26
Cable	HUBERSUHNER	EMC105-NM-NM-3000	MRTTWE00035	1 year	2024/6/26
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2024/6/4

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00014	1 year	2024/4/19
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2024/10/17
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2024/7/19
Attenuator	WTI	218FS-20	MRTTWE00026	1 year	2024/11/1
Attenuator	WTI	218FS-10	MRTTWE00027	1 year	2024/6/14
Temperature & Humidity Chamber	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2024/6/14
DIVA PLUS Funk-Wetterstation	TFA	35.1083	MRTTWA00050	1 year	2024/6/15

Software	**Version**	**Function**
e3	9.160520a	EMI Test Software

6. 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.

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 150kHz~30MHz: ± 2.53dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz ~ 1GHz: ± 4.25dB 1GHz ~ 40GHz: ± 4.45dB
Conducted Power (Carrier Power / Power Density)
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 0.84dB
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):± 2.65 dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 3.3%
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±0.82°C/ ±3%
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±78.4Hz

7. TEST RESULT

7.1. Summary

FCC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407(a)	26dB Bandwidth	N/A	Conducted	Pass	Section 7.2
15.407(e)	6dB Bandwidth	≥ 500kHz		Pass	Section 7.3
15.407(a)(1)(ii), (2), (3)(i)	Maximum Conducted Output Power	Refer to section 7.4		Pass	Section 7.4
15.407(h)(1)	Transmit Power Control	≤ 24 dBm		Pass	Section 7.5
15.407(a)(1)(ii), (2), (3)(i), (12)	Peak Power Spectral Density	Refer to section 7.6		Pass	Section 7.6
15.407(g)	Frequency Stability	N/A		Pass	Section 7.7
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions	Refer to Section 7.8	Radiated	Pass	Section 7.8 & 7.9
15.205, 15.209 15.407(b)(8), (9), (10)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in15.209		Pass	
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.10

Notes:

1) Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.
2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
3) For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

7.2. 26dB Bandwidth Measurement

7.2.1.Test Limit

N/A

7.2.2.Test Procedure used

KDB 789033 D02v02r01- Section II)C.1) (26dB Bandwidth)

KDB 789033 D02v02r01- Section II)D) (99% Bandwidth)

7.2.3.Test Setting

26dB Bandwidth

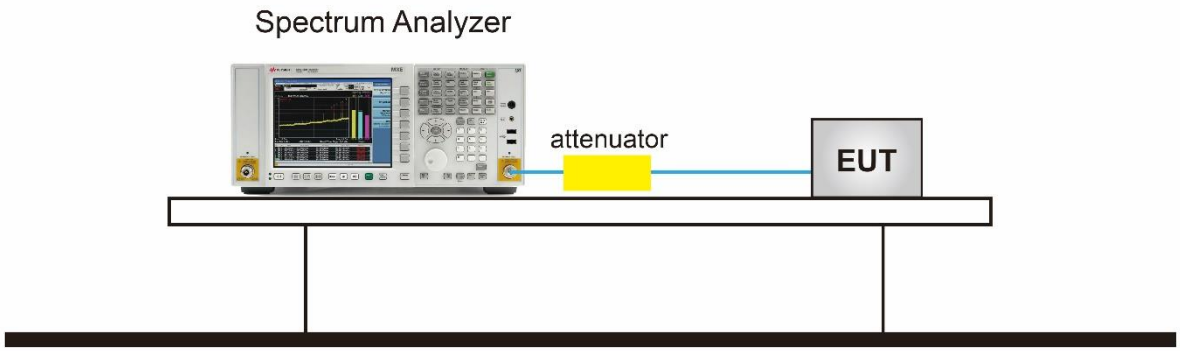
1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 26. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediated power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth.
3. VBW ≥ 3×RBW.
4. Detector = Peak.
5. Trace mode = max hold.

99% Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1% to 5% of the OBW
4. Set VBW ≥ 3×RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall

   be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99% power bandwidth function of the instrument.

7.2.4.Test Setup



7.2.5.Test Result

Please refer to FCC Original Report Grant Date: 07/28/2023, FCC ID: 2AXJ4EAP650V2.

7.3. 6dB Bandwidth Measurement

7.3.1.Test Limit

The minimum 6dBbandwidth shall be at least 500 kHz.

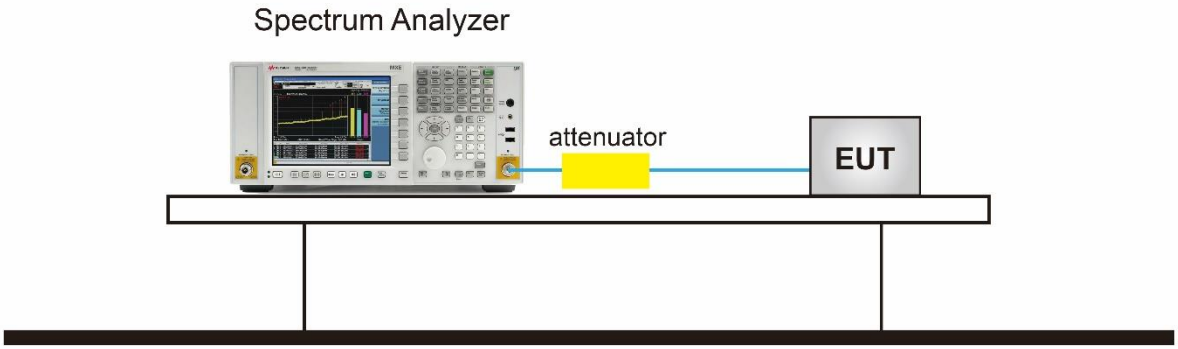
7.3.2.Test Procedure used

KDB 789033 D02v02r01- Section II) C.2

7.3.3.Test Setting

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

7.3.4.Test Setup



7.3.5.Test Result

Please refer to FCC Original Report Grant Date: 07/28/2023, FCC ID: 2AXJ4EAP650V2.

7.4. Output Power Measurement

7.4.1.Test Limit

For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

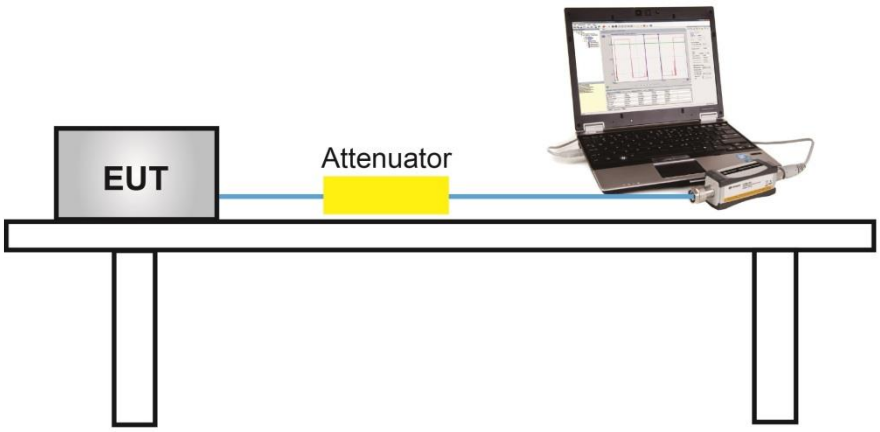
7.4.2.Test Procedure Used

KDB 789033D02v02r01- Section II) E)3)b) Method PM-G

7.4.3.Test Setting

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.

7.4.4.Test Setup



7.4.5.Test Result

Product	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Test Engineer	Marvin
Test Site	SR6	Test Date	2024/3/26~2024/3/27
Test Mode	CDD Mode		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Total Average Power (dBm)	Power Limit (dBm)	Result
11a	6Mbps	36	5180	21.04	20.07	20.85	25.44	≤ 30.00	Pass
11a	6Mbps	44	5220	19.70	19.22	19.74	24.33	≤ 30.00	Pass
11a	6Mbps	48	5240	18.99	18.56	19.02	23.63	≤ 30.00	Pass
11a	6Mbps	52	5260	16.79	15.54	16.29	21.01	≤ 23.98	Pass
11a	6Mbps	60	5300	16.22	14.99	15.82	20.48	≤ 23.98	Pass
11a	6Mbps	64	5320	16.21	15.33	15.81	20.57	≤ 23.98	Pass
11a	6Mbps	100	5500	16.14	16.19	16.31	20.99	≤ 23.98	Pass
11a	6Mbps	116	5580	16.80	16.28	16.09	21.17	≤ 23.98	Pass
11a	6Mbps	140	5700	16.54	15.78	16.07	20.91	≤ 23.98	Pass
11a	6Mbps	144	5720	16.78	15.50	16.22	20.97	≤ 22.72	Pass
11a	6Mbps	149	5745	18.92	17.52	17.69	22.86	≤ 30.00	Pass
11a	6Mbps	157	5785	19.10	17.93	18.44	23.29	≤ 30.00	Pass
11a	6Mbps	165	5825	19.14	18.16	18.52	23.40	≤ 30.00	Pass
11ac-VHT20	MCS0	36	5180	21.93	21.37	21.99	26.54	≤ 30.00	Pass
11ac-VHT20	MCS0	40	5220	20.65	20.14	20.45	25.19	≤ 30.00	Pass
11ac-VHT20	MCS0	48	5240	18.75	18.71	19.05	23.61	≤ 30.00	Pass
11ac-VHT20	MCS0	52	5260	16.71	16.11	16.66	21.27	≤ 23.98	Pass
11ac-VHT20	MCS0	60	5300	15.89	15.67	16.24	20.71	≤ 23.98	Pass
11ac-VHT20	MCS0	64	5320	15.90	15.85	15.94	20.67	≤ 23.98	Pass
11ac-VHT20	MCS0	100	5500	16.42	16.47	16.46	21.22	≤ 23.98	Pass
11ac-VHT20	MCS0	116	5580	17.26	16.32	16.21	21.39	≤ 23.98	Pass
11ac-VHT20	MCS0	140	5700	16.79	16.39	16.50	21.33	≤ 23.98	Pass
11ac-VHT20	MCS0	144	5720	16.86	16.14	16.07	21.14	≤ 22.81	Pass
11ac-VHT20	MCS0	149	5745	19.62	19.01	18.83	23.94	≤ 30.00	Pass
11ac-VHT20	MCS0	157	5785	20.44	19.85	19.77	24.80	≤ 30.00	Pass
11ac-VHT20	MCS0	165	5825	19.81	19.07	19.45	24.23	≤ 30.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Total Average Power (dBm)	Power Limit (dBm)	Result
11ac-VHT40	MCS0	38	5190	20.12	19.96	20.45	24.95	≤ 30.00	Pass
11ac-VHT40	MCS0	46	5230	22.28	22.19	21.96	26.92	≤ 30.00	Pass
11ac-VHT40	MCS0	54	5270	18.92	18.39	18.49	23.38	≤ 23.98	Pass
11ac-VHT40	MCS0	62	5310	17.01	16.80	16.56	21.57	≤ 23.98	Pass
11ac-VHT40	MCS0	102	5510	18.72	18.57	18.73	23.45	≤ 23.98	Pass
11ac-VHT40	MCS0	110	5550	18.93	19.00	18.91	23.72	≤ 23.98	Pass
11ac-VHT40	MCS0	134	5670	18.27	17.68	17.37	22.56	≤ 23.98	Pass
11ac-VHT40	MCS0	142	5710	18.49	18.16	17.56	22.86	≤ 23.98	Pass
11ac-VHT40	MCS0	151	5755	21.01	20.23	20.22	25.27	≤ 30.00	Pass
11ac-VHT40	MCS0	159	5795	20.91	20.31	20.28	25.28	≤ 30.00	Pass
11ac-VHT80	MCS0	42	5210	17.10	17.14	16.89	21.82	≤ 30.00	Pass
11ac-VHT80	MCS0	58	5290	16.15	15.71	15.58	20.59	≤ 23.98	Pass
11ac-VHT80	MCS0	106	5530	18.04	18.39	17.87	22.88	≤ 23.98	Pass
11ac-VHT80	MCS0	122	5610	19.05	18.77	18.46	23.54	≤ 23.98	Pass
11ac-VHT80	MCS0	138	5690	19.18	18.57	18.87	23.65	≤ 23.98	Pass
11ac-VHT80	MCS0	155	5775	19.57	19.14	19.05	24.03	≤ 30.00	Pass
11ac-VHT160	MCS0	50	5250	15.06	14.41	14.67	19.49	≤ 23.98	Pass
11ac-VHT160	MCS0	114	5570	16.22	14.89	16.02	20.52	≤ 23.98	Pass
11ax-HE20	MCS0	36	5180	22.14	22.11	22.13	26.90	≤ 30.00	Pass
11ax-HE20	MCS0	44	5220	21.83	21.89	21.87	26.63	≤ 30.00	Pass
11ax-HE20	MCS0	48	5240	20.95	21.14	21.11	25.84	≤ 30.00	Pass
11ax-HE20	MCS0	52	5260	17.23	16.79	16.73	21.69	≤ 23.98	Pass
11ax-HE20	MCS0	60	5300	16.96	16.45	16.74	21.49	≤ 23.98	Pass
11ax-HE20	MCS0	64	5320	17.24	16.48	16.55	21.54	≤ 23.98	Pass
11ax-HE20	MCS0	100	5500	17.13	16.88	16.38	21.58	≤ 23.98	Pass
11ax-HE20	MCS0	116	5580	17.86	16.98	16.43	21.90	≤ 23.98	Pass
11ax-HE20	MCS0	140	5700	17.45	16.74	16.23	21.61	≤ 23.98	Pass
11ax-HE20	MCS0	144	5720	17.33	16.80	16.39	21.63	≤ 22.90	Pass
11ax-HE20	MCS0	149	5745	19.21	18.51	18.14	23.41	≤ 30.00	Pass
11ax-HE20	MCS0	157	5785	19.58	18.15	18.17	23.46	≤ 30.00	Pass
11ax-HE20	MCS0	165	5825	19.41	18.69	18.86	23.77	≤ 30.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Total Average Power (dBm)	Power Limit (dBm)	Result
11ax-HE40	MCS0	38	5190	20.11	19.74	20.21	24.80	≤ 30.00	Pass
11ax-HE40	MCS0	46	5230	21.73	21.14	22.03	26.42	≤ 30.00	Pass
11ax-HE40	MCS0	54	5270	19.14	18.52	18.85	23.62	≤ 23.98	Pass
11ax-HE40	MCS0	62	5310	17.11	16.87	17.40	21.90	≤ 23.98	Pass
11ax-HE40	MCS0	102	5510	18.76	18.41	18.61	23.37	≤ 23.98	Pass
11ax-HE40	MCS0	110	5550	18.99	18.45	18.54	23.44	≤ 23.98	Pass
11ax-HE40	MCS0	134	5670	19.17	18.38	18.84	23.58	≤ 23.98	Pass
11ax-HE40	MCS0	142	5710	18.86	18.61	18.06	23.29	≤ 23.98	Pass
11ax-HE40	MCS0	151	5755	20.70	19.45	19.56	24.71	≤ 30.00	Pass
11ax-HE40	MCS0	159	5795	20.48	19.32	19.86	24.68	≤ 30.00	Pass
11ax-HE80	MCS0	42	5210	17.30	16.63	16.55	21.61	≤ 30.00	Pass
11ax-HE80	MCS0	58	5290	15.56	14.82	14.74	19.83	≤ 23.98	Pass
11ax-HE80	MCS0	106	5530	18.03	17.47	17.37	22.40	≤ 23.98	Pass
11ax-HE80	MCS0	122	5610	19.21	18.01	18.62	23.41	≤ 23.98	Pass
11ax-HE80	MCS0	138	5690	19.27	17.55	18.38	23.23	≤ 23.98	Pass
11ax-HE80	MCS0	155	5775	20.81	20.11	19.96	25.08	≤ 30.00	Pass
11ax-HE160	MCS0	50	5250	15.37	14.82	15.16	19.89	≤ 23.98	Pass
11ax-HE160	MCS0	114	5570	17.13	16.14	16.76	21.47	≤ 23.98	Pass

Note 1:

The Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)}\}$.

Note 2:

For 5250- 5350MHz and 5470 - 5725MHz Band: Average Power Limit (dBm) = 23.98 dBm.

For 5150 - 5250MHz and 5725 - 5850MHz Bands: Average Power Limit (dBm) = 30 dBm.

For a_ch144 (5720MHz), Average Power Limit (dBm) = 11+10*log(5MHz + BW26dBc/2) = 22.72 dBm

For ac_ch144 (5720MHz), Average Power Limit (dBm) = 11+10*log(5MHz + BW26dBc/2) = 22.81 dBm

For ax_ch144 (5720MHz), Average Power Limit (dBm) = 11+10*log(5MHz + BW26dBc/2) = 22.90 dBm

Product	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Test Engineer	Marvin
Test Site	SR6	Test Date	2024/3/26~2024/3/27
Test Mode	Beamforming Mode		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Total Average Power (dBm)	Power Limit (dBm)	Result
11ac-VHT20	MCS0	36	5180	21.93	21.37	21.99	26.54	≤ 29.23	Pass
11ac-VHT20	MCS0	44	5220	20.65	20.14	20.45	25.19	≤ 29.23	Pass
11ac-VHT20	MCS0	48	5240	18.75	18.71	19.05	23.61	≤ 29.23	Pass
11ac-VHT20	MCS0	52	5260	16.71	16.11	16.66	21.27	≤ 23.21	Pass
11ac-VHT20	MCS0	60	5300	15.89	15.67	16.24	20.71	≤ 23.21	Pass
11ac-VHT20	MCS0	64	5320	15.90	15.85	15.94	20.67	≤ 23.21	Pass
11ac-VHT20	MCS0	100	5500	16.42	16.47	16.46	21.22	≤ 23.21	Pass
11ac-VHT20	MCS0	116	5580	17.26	16.32	16.21	21.39	≤ 23.21	Pass
11ac-VHT20	MCS0	140	5700	16.79	16.39	16.50	21.33	≤ 23.21	Pass
11ac-VHT20	MCS0	144	5720	16.86	16.14	16.07	21.14	≤ 22.03	Pass
11ac-VHT20	MCS0	149	5745	19.62	19.01	18.83	23.94	≤ 29.23	Pass
11ac-VHT20	MCS0	157	5785	20.44	19.85	19.77	24.80	≤ 29.23	Pass
11ac-VHT20	MCS0	165	5825	19.81	19.07	19.45	24.23	≤ 29.23	Pass
11ac-VHT40	MCS0	38	5190	20.12	19.96	20.45	24.95	≤ 29.23	Pass
11ac-VHT40	MCS0	46	5230	22.28	22.19	21.96	26.92	≤ 29.23	Pass
11ac-VHT40	MCS0	54	5270	18.39	17.98	17.78	22.83	≤ 23.21	Pass
11ac-VHT40	MCS0	62	5310	17.01	16.80	16.56	21.57	≤ 23.21	Pass
11ac-VHT40	MCS0	102	5510	18.34	18.53	18.07	23.09	≤ 23.21	Pass
11ac-VHT40	MCS0	110	5550	18.05	17.95	18.11	22.81	≤ 23.21	Pass
11ac-VHT40	MCS0	134	5670	18.27	17.68	17.37	22.56	≤ 23.21	Pass
11ac-VHT40	MCS0	142	5710	18.49	18.16	17.56	22.86	≤ 23.21	Pass
11ac-VHT40	MCS0	151	5755	21.01	20.23	20.22	25.27	≤ 29.23	Pass
11ac-VHT40	MCS0	159	5795	20.91	20.31	20.28	25.28	≤ 29.23	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Total Average Power (dBm)	Power Limit (dBm)	Result
11ac-VHT80	MCS0	42	5210	17.10	17.14	16.89	21.82	≤ 29.23	Pass
11ac-VHT80	MCS0	58	5290	16.15	15.71	15.58	20.59	≤ 23.21	Pass
11ac-VHT80	MCS0	106	5530	18.04	18.39	17.87	22.88	≤ 23.21	Pass
11ac-VHT80	MCS0	122	5610	18.71	18.20	18.21	23.15	≤ 23.21	Pass
11ac-VHT80	MCS0	138	5690	18.87	17.79	18.31	23.12	≤ 23.21	Pass
11ac-VHT80	MCS0	155	5775	19.57	19.14	19.05	24.03	≤ 29.23	Pass
11ac-VHT160	MCS0	50	5250	15.06	14.41	14.67	19.49	≤ 23.21	Pass
11ac-VHT160	MCS0	114	5570	16.22	14.89	16.02	20.52	≤ 23.21	Pass
11ax-HE20	MCS0	36	5180	22.14	22.11	22.13	26.90	≤ 29.23	Pass
11ax-HE20	MCS0	44	5220	21.83	21.89	21.87	26.63	≤ 29.23	Pass
11ax-HE20	MCS0	48	5240	20.95	21.14	21.11	25.84	≤ 29.23	Pass
11ax-HE20	MCS0	52	5260	17.23	16.79	16.73	21.69	≤ 23.21	Pass
11ax-HE20	MCS0	60	5300	16.96	16.45	16.74	21.49	≤ 23.21	Pass
11ax-HE20	MCS0	64	5320	17.24	16.48	16.55	21.54	≤ 23.21	Pass
11ax-HE20	MCS0	100	5500	17.13	16.88	16.38	21.58	≤ 23.21	Pass
11ax-HE20	MCS0	116	5580	17.86	16.98	16.43	21.90	≤ 23.21	Pass
11ax-HE20	MCS0	140	5700	17.45	16.74	16.23	21.61	≤ 23.21	Pass
11ax-HE20	MCS0	144	5720	17.33	16.80	16.39	21.63	≤ 22.13	Pass
11ax-HE20	MCS0	149	5745	19.21	18.51	18.14	23.41	≤ 29.23	Pass
11ax-HE20	MCS0	157	5785	19.58	18.15	18.17	23.46	≤ 29.23	Pass
11ax-HE20	MCS0	165	5825	19.41	18.69	18.86	23.77	≤ 29.23	Pass
11ax-HE40	MCS0	38	5190	20.11	19.74	20.21	24.80	≤ 29.23	Pass
11ax-HE40	MCS0	46	5230	21.73	21.14	22.03	26.42	≤ 29.23	Pass
11ax-HE40	MCS0	54	5270	18.63	17.83	18.02	22.94	≤ 23.21	Pass
11ax-HE40	MCS0	62	5310	17.11	16.87	17.40	21.90	≤ 23.21	Pass
11ax-HE40	MCS0	102	5510	18.25	18.04	18.03	22.88	≤ 23.21	Pass
11ax-HE40	MCS0	110	5550	18.13	18.38	18.34	23.06	≤ 23.21	Pass
11ax-HE40	MCS0	134	5670	18.70	18.01	18.32	23.12	≤ 23.21	Pass
11ax-HE40	MCS0	142	5710	18.55	17.89	17.97	22.92	≤ 23.21	Pass
11ax-HE40	MCS0	151	5755	20.70	19.45	19.56	24.71	≤ 29.23	Pass
11ax-HE40	MCS0	159	5795	20.48	19.32	19.86	24.68	≤ 29.23	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Total Average Power (dBm)	Power Limit (dBm)	Result
11ax-HE80	MCS0	42	5210	17.30	16.63	16.55	21.61	≤ 29.23	Pass
11ax-HE80	MCS0	58	5290	15.56	14.82	14.74	19.83	≤ 23.21	Pass
11ax-HE80	MCS0	106	5530	18.03	17.47	17.37	22.40	≤ 23.21	Pass
11ax-HE80	MCS0	122	5610	18.57	17.86	17.80	22.86	≤ 23.21	Pass
11ax-HE80	MCS0	138	5690	18.84	17.49	17.71	22.83	≤ 23.21	Pass
11ax-HE80	MCS0	155	5775	20.81	20.11	19.96	25.08	≤ 29.23	Pass
11ax-HE160	MCS0	50	5250	15.37	14.82	15.16	19.89	≤ 23.21	Pass
11ax-HE160	MCS0	114	5570	17.13	16.14	16.76	21.47	≤ 23.21	Pass

Note 1:

The Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)}\}$.

Note 2:

For 5150 - 5250MHz and 5725 - 5850MHz Band: Average Power Limit (dBm) = 30 - (6.77- 6) = 29.23dBm

For 5250 - 5350MHz and 5470 - 5725MHz Band: Average Power Limit (dBm) = 23.98 - (6.77- 6) = 23.21dBm.

For ac_ch144 (5720MHz), Average Power Limit (dBm) = $11+10*\log(5\text{MHz} + BW_{26dBc}/2)$ - (6.77- 6)= 22.03dBm

For ax_ch144 (5720MHz), Average Power Limit (dBm) = $11+10*\log(5\text{MHz} + BW_{26dBc}/2)$ - (6.77- 6)= 22.13dBm

7.5. Transmit Power Control

7.5.1.Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

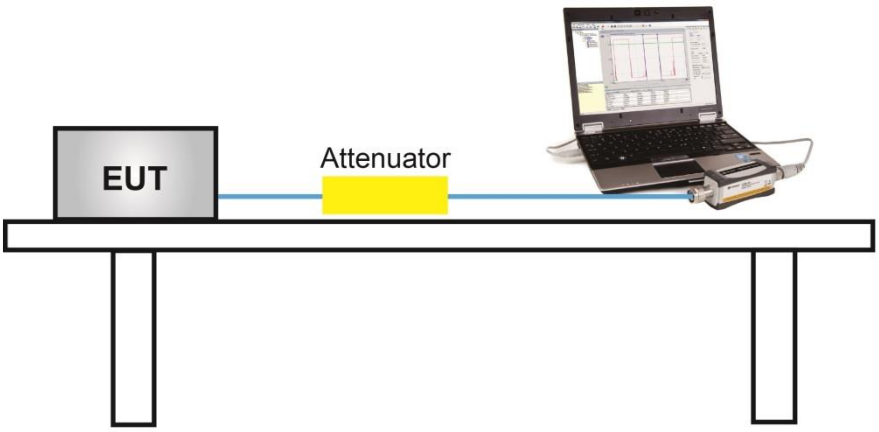
7.5.2.Test Procedure Used

KDB 789033 D02v02r01- Section II) E)3)b) Method PM-G

7.5.3.Test Setting

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. The trace was averaged over 100 traces to obtain the final measured average power.

7.5.4.Test Setup



7.5.5.Test Result

Device supports TPC mechanism, details refer to the operational description.

7.6. Power Spectral Density Measurement

7.6.1.Test Limit

For the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

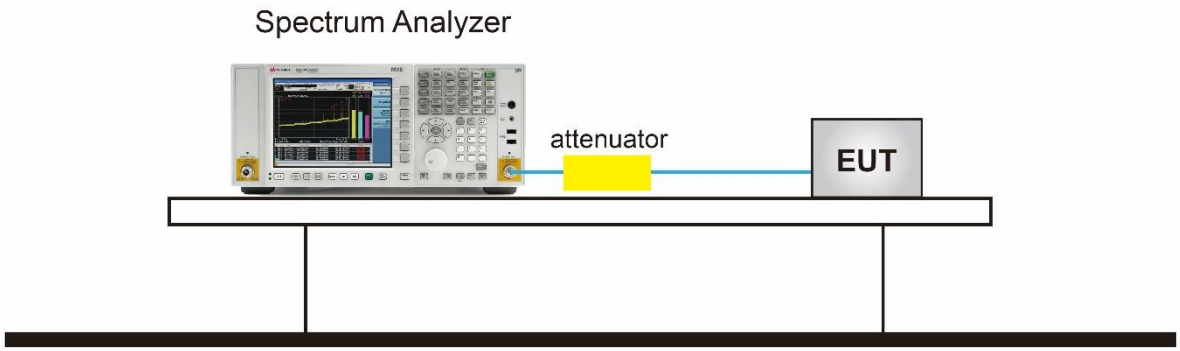
7.6.2.Test Procedure Used

KDB 789033 D02v02r01-Section II) F

7.6.3.Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz, RBW = 510 kHz
4. VBW = 3MHz
5. Number of sweep points ≥ 2 × (span / RBW)
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
10. Add 10*log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10*log(1/0.25) = 6 dB if the duty cycle is 25 percent.

7.6.4.Test Setup



7.6.5.Test Result

Please refer to FCC Original Report Grant Date: 07/28/2023, FCC ID: 2AXJ4EAP650V2.

7.7. Frequency Stability Measurement

7.7.1. Test Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ±20 ppm maximum for the 5GHz band (IEEE 802.11 specification).

7.7.2. Test Limit

Frequency Stability Under Temperature Variations:

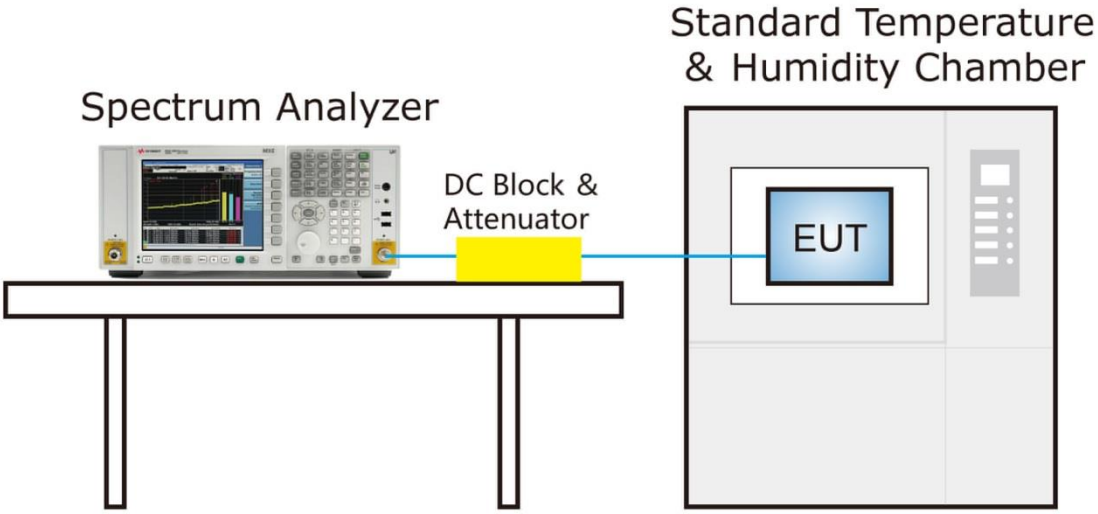
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, recordthe maximum frequency change.

7.7.3. Test Setup



7.7.4. Test Result

Grantee ensure that the product meets e-CFR Title 47 section 15.407(g) and KDB 789033 D02v02r01 frequency stability such that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

7.8. Radiated Spurious Emission Measurement

7.8.1.Test Limit

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 [uV/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

7.8.2.Test Procedure Used

KDB 789033 D02v02r01- Section G

7.8.3.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
>1000 MHz	1 MHz

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 ≥ 98%, set VBW = 10 Hz.

If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.

4. Detector = Peak

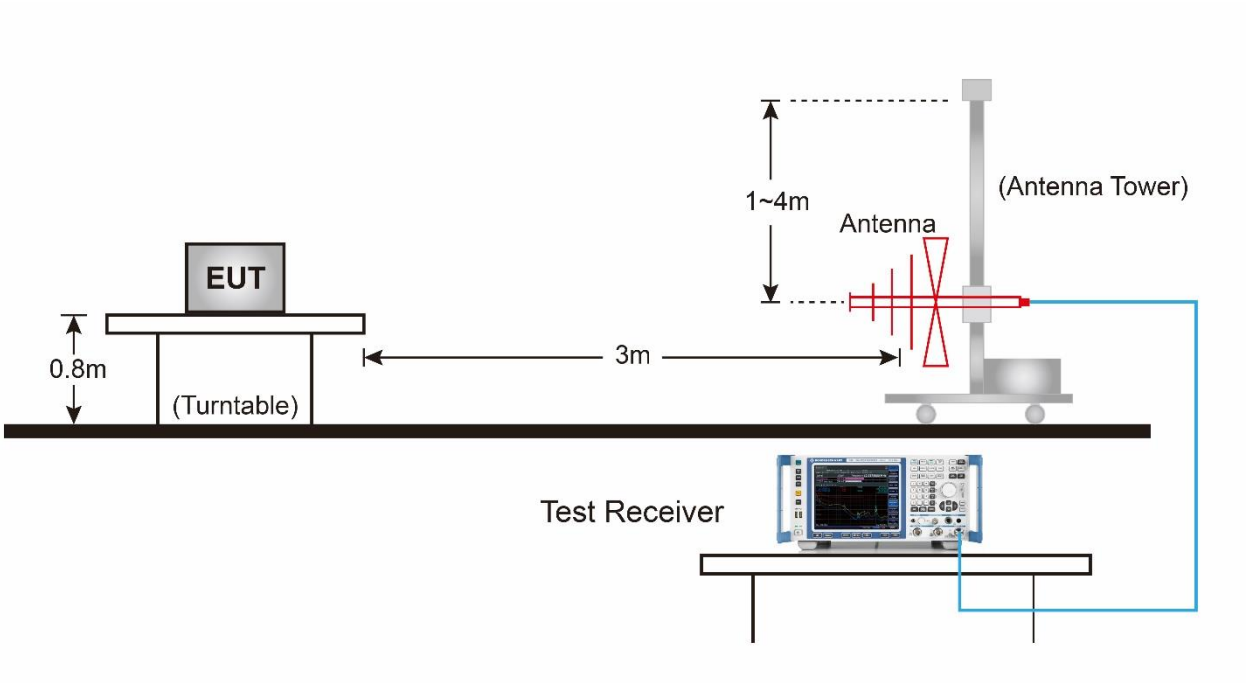
5. Sweep time = auto

6. Trace mode = max hold

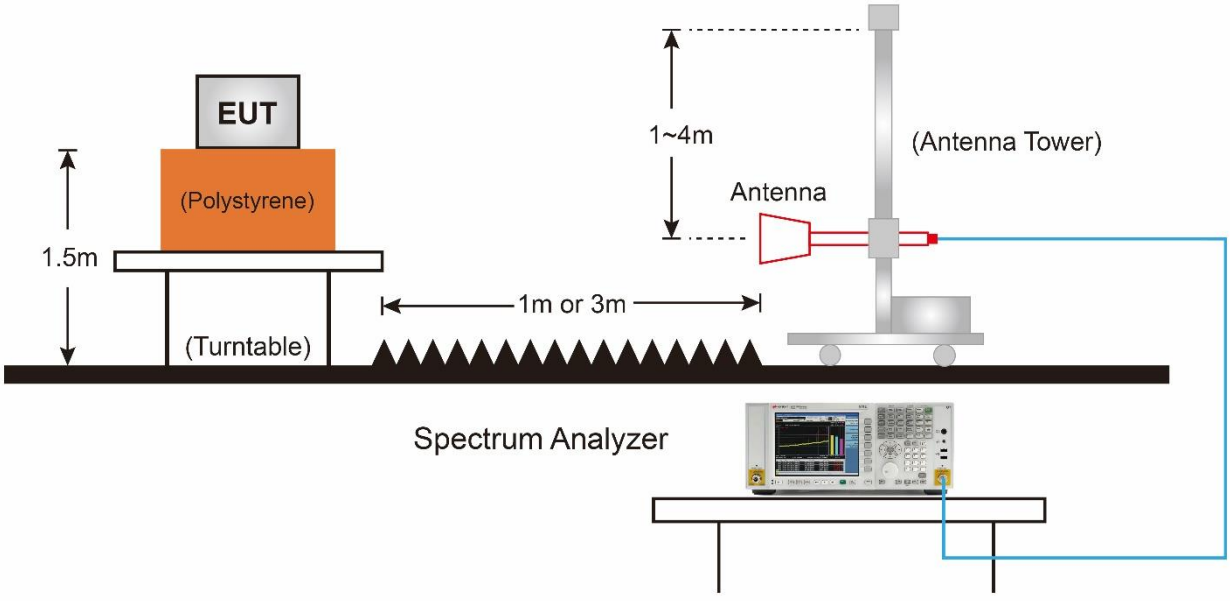
7. Trace was allowed to stabilize

7.8.4.Test Setup

Below 1GHz Test Setup:

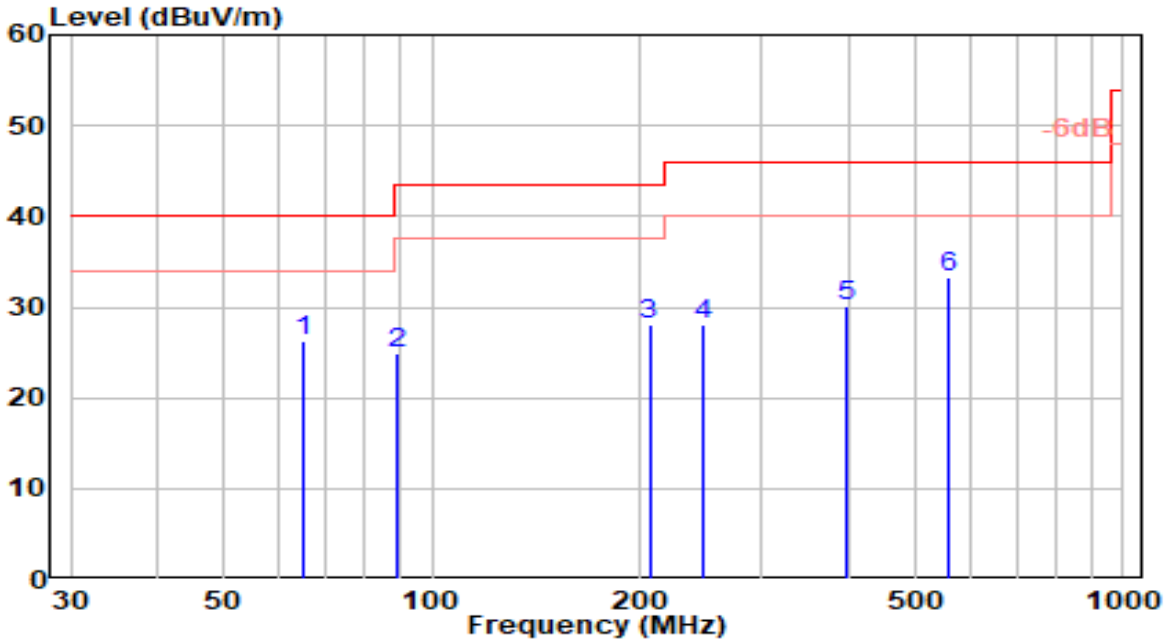


Above 1GHz Test Setup:



7.8.5.Test Result

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-04-03
Factor	VULB 9162	Temp. / Humidity	21°C /63%
Polarity	Horizontal	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band1_TX_CH44_ANT_0+1+2	Test Voltage	AC 120V/60Hz

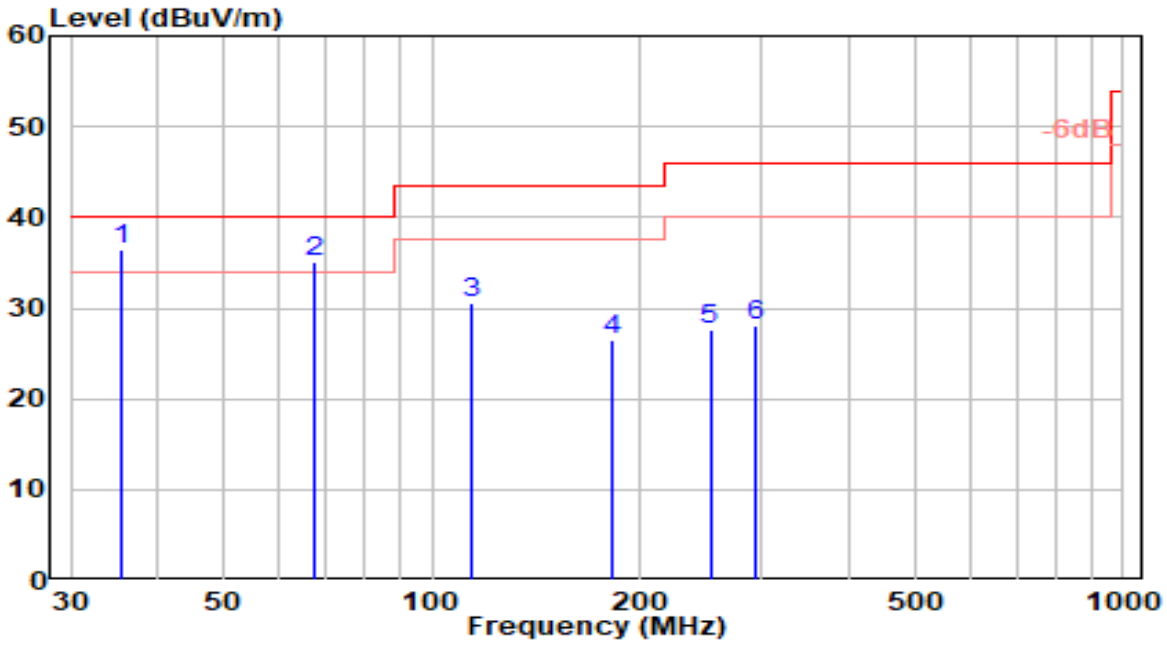


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		65.030	8.82	17.41	26.23	-13.77	40.00	100	288	QP
2		89.050	8.27	16.55	24.82	-18.68	43.50	300	336	QP
3		206.250	10.27	17.82	28.10	-15.40	43.50	140	28	QP
4		247.250	8.33	19.75	28.08	-17.92	46.00	100	120	QP
5		397.200	6.94	23.27	30.21	-15.79	46.00	103	28	QP
6	*	559.550	7.35	26.00	33.35	-12.65	46.00	200	101	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20dB below the permissible value. Therefore, the data is not presented in the report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-04-03
Factor	VULB 9162	Temp. / Humidity	21°C /63%
Polarity	Vertical	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band1_TX_CH44_ANT_0+1+2	Test Voltage	AC 120V/60Hz

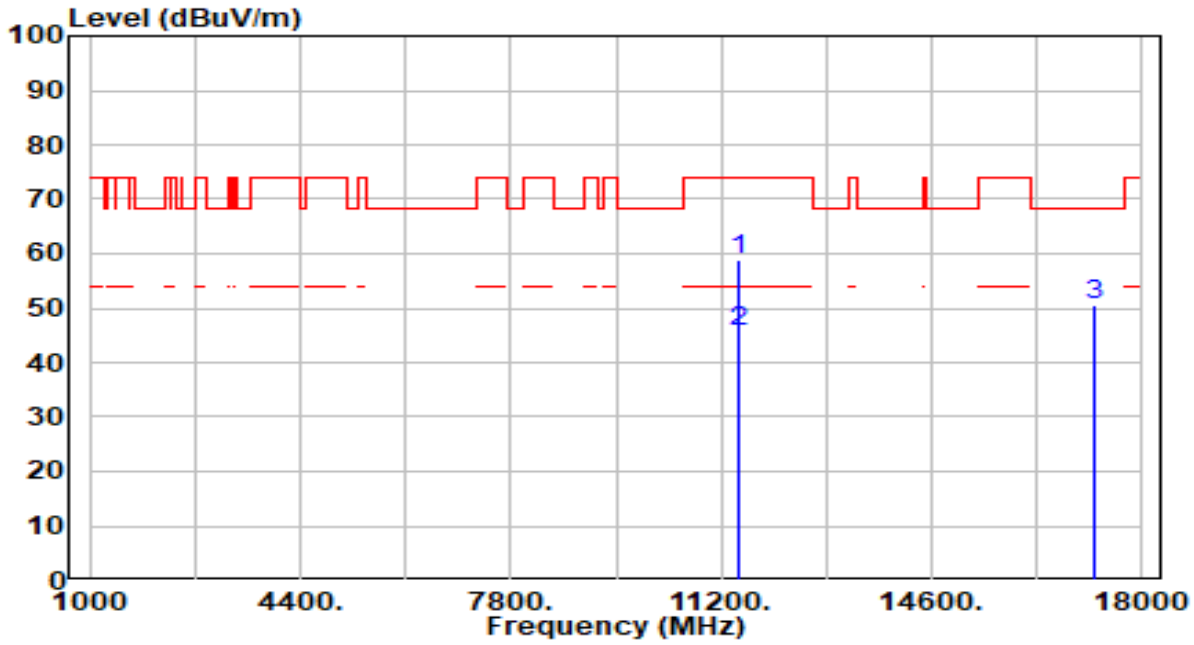


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	35.570	18.50	18.03	36.53	-3.47	40.00	100	24	QP
2		67.750	18.78	16.42	35.20	-4.80	40.00	116	28	QP
3		114.520	12.94	17.69	30.63	-12.87	43.50	100	29	QP
4		182.270	9.88	16.61	26.49	-17.01	43.50	103	28	QP
5		252.490	7.68	19.93	27.61	-18.39	46.00	151	165	QP
6		293.470	7.59	20.52	28.11	-17.89	46.00	151	182	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.
5. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20dB below the permissible value. Therefore, the data is not presented in the report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11a_Band4_TX_CH 149_ANT 0+1+2	Test Voltage	AC 120V/60Hz

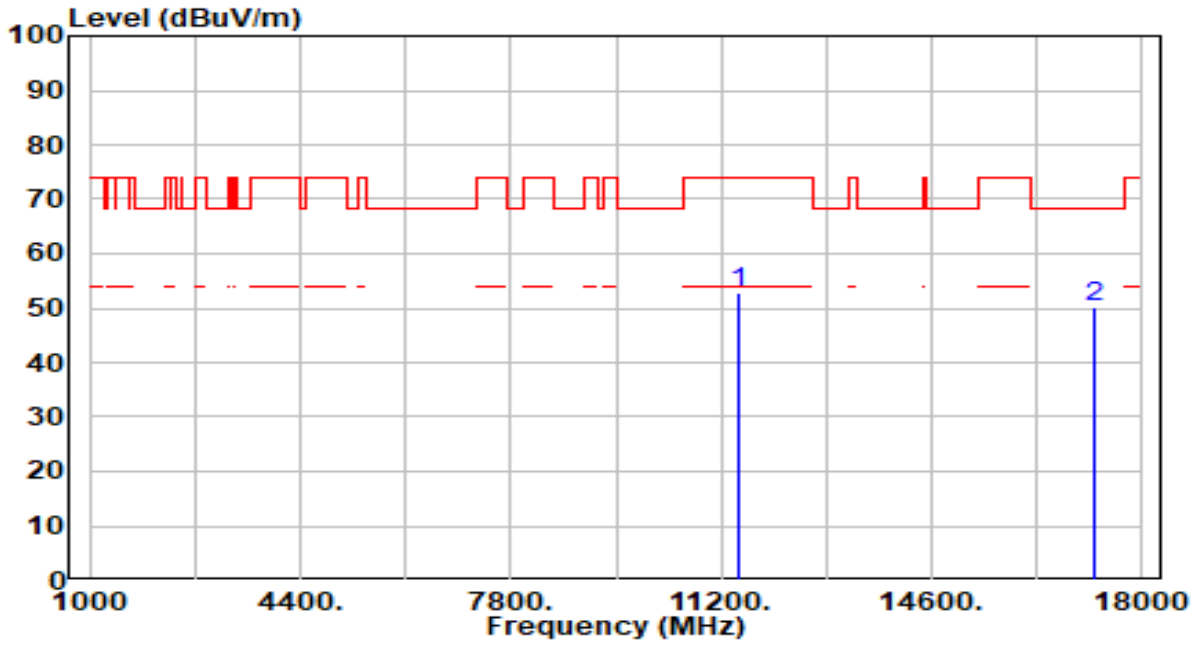


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	11490.000	53.41	5.32	58.73	-15.27	74.00	309	112	Peak
2	*	11490.000	40.24	5.32	45.56	-8.44	54.00	309	112	Average
3		17235.000	44.84	5.71	50.55	-17.65	68.20	309	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11a_Band4_TX_CH 149_ANT 0+1+2	Test Voltage	AC 120V/60Hz

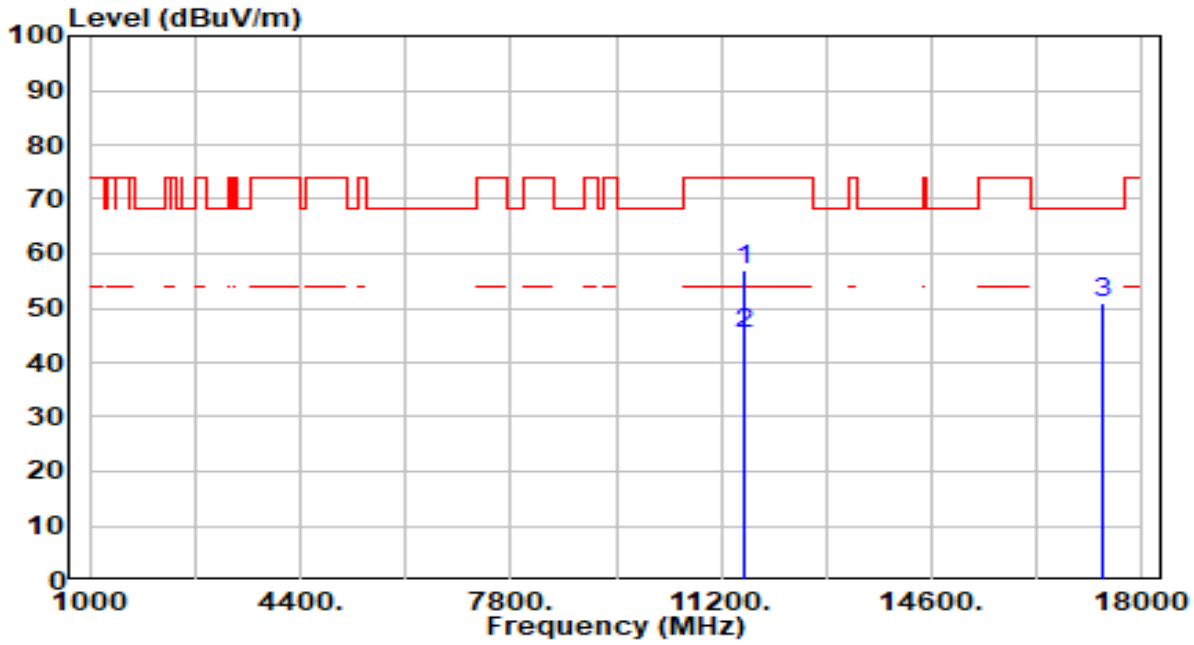


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		11490.000	47.33	5.32	52.65	-21.35	74.00	100	132	Peak
2	*	17235.000	44.33	5.71	50.04	-18.16	68.20	100	201	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11a_Band4_TX_CH 157_ANT 0+1+2	Test Voltage	AC 120V/60Hz

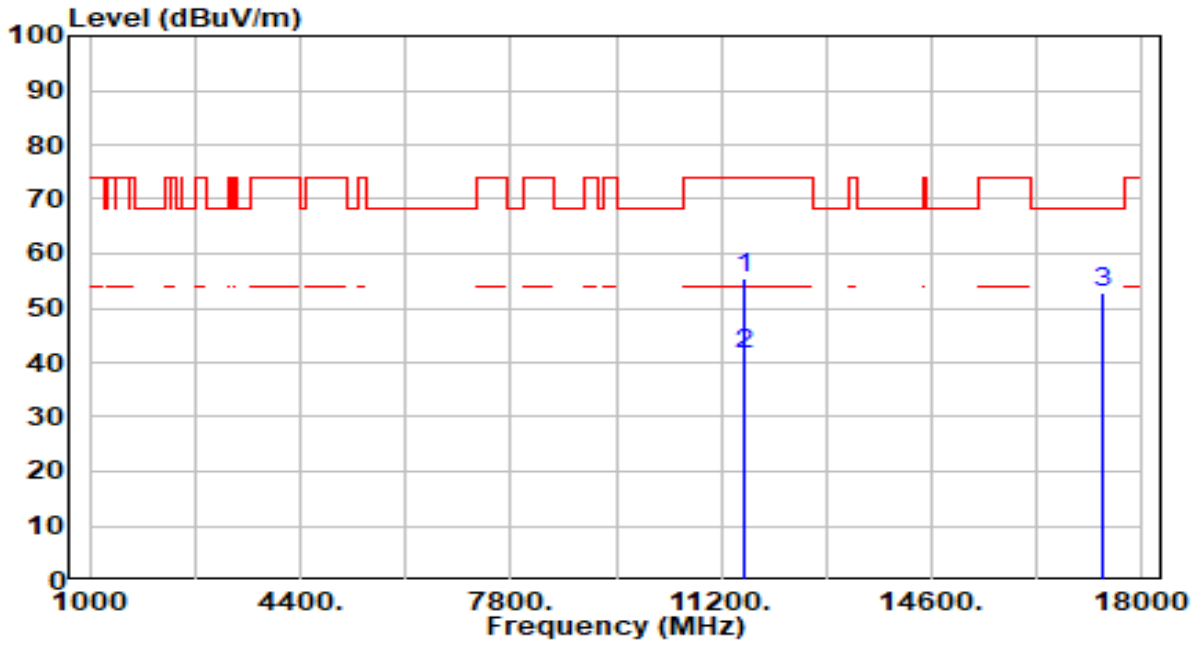


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	11570.000	51.76	5.38	57.14	-16.86	74.00	309	108	Peak
2	*	11570.000	39.97	5.38	45.35	-8.65	54.00	309	108	Average
3		17355.000	45.63	5.39	51.02	-17.18	68.20	309	203	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11a_Band4_TX_CH 157_ANT 0+1+2	Test Voltage	AC 120V/60Hz

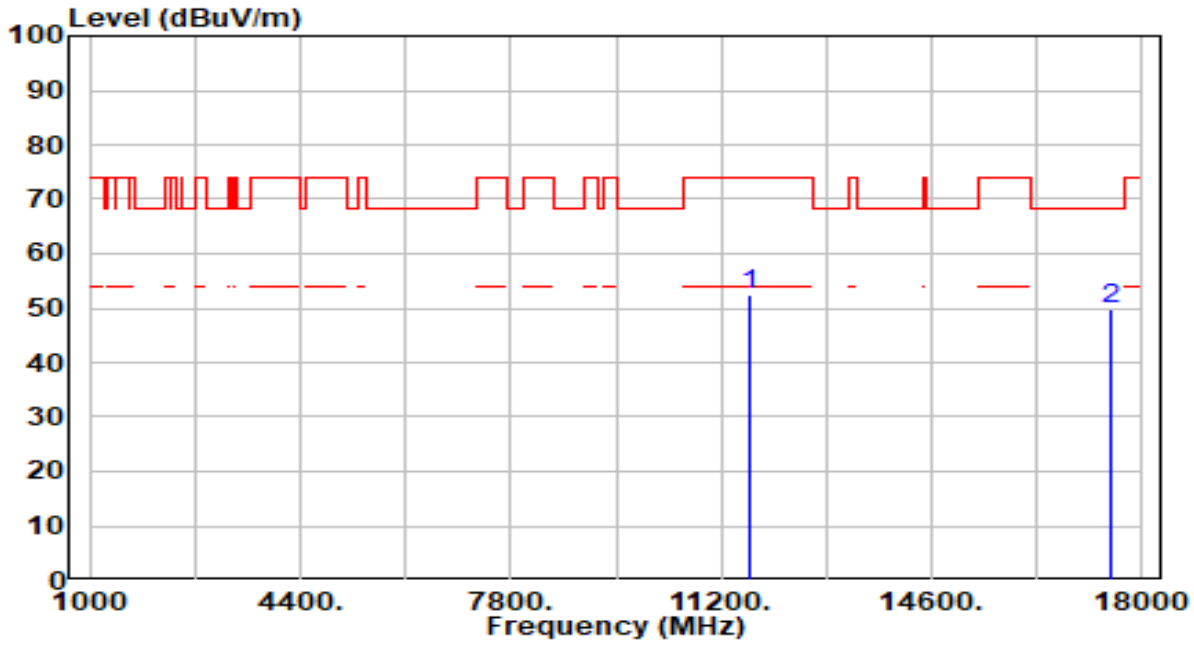


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		11570.000	49.92	5.38	55.30	-18.70	74.00	100	158	Peak
2	*	11570.000	36.12	5.38	41.50	-12.50	54.00	100	158	Average
3	*	17355.000	47.52	5.39	52.91	-15.29	68.20	100	198	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11a_Band4_TX_CH 165_ANT 0+1+2	Test Voltage	AC 120V/60Hz

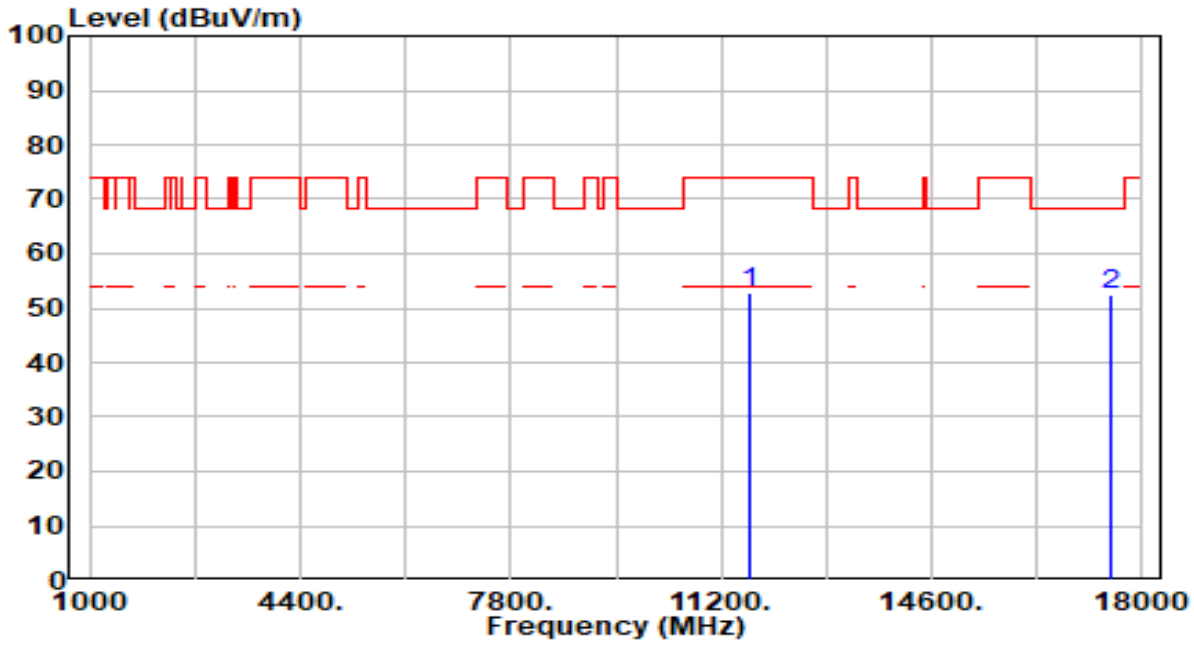


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		11650.000	47.13	5.36	52.49	-21.51	74.00	309	112	Peak
2	*	17475.000	44.45	5.29	49.74	-18.46	68.20	309	198	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11a_Band4_TX_CH 165_ANT 0+1+2	Test Voltage	AC 120V/60Hz

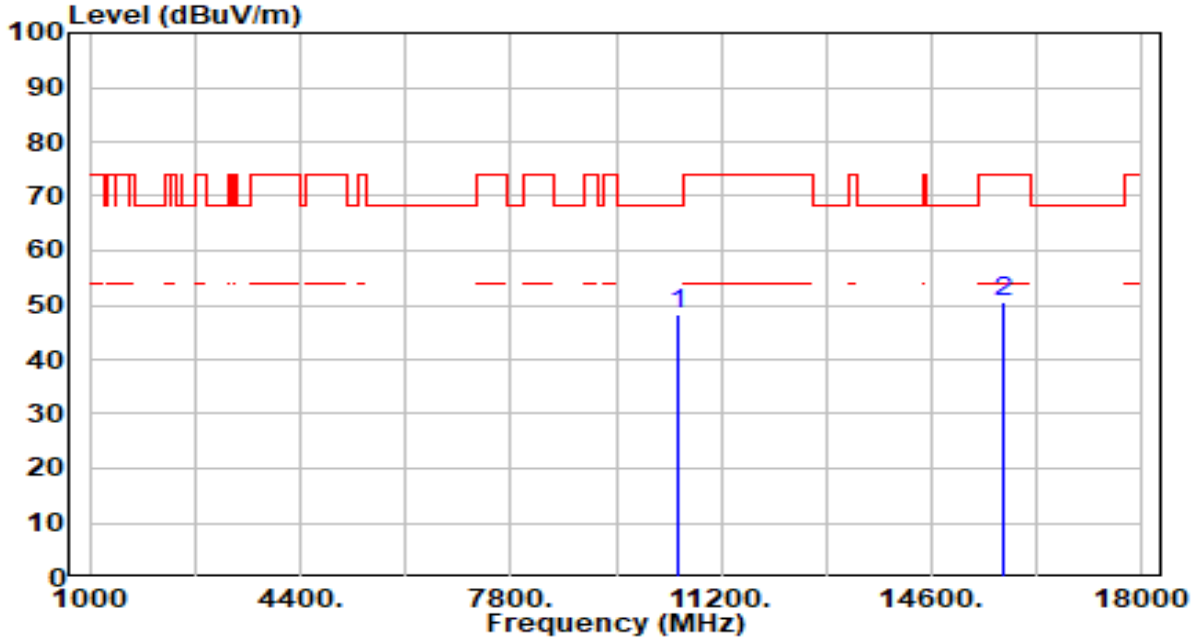


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		11650.000	47.56	5.36	52.92	-21.08	74.00	100	234	Peak
2	*	17475.000	47.02	5.29	52.31	-15.89	68.20	100	150	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11ax-160MHz_Band1,2_TX_CH 50_ANT 0+1+2	Test Voltage	AC 120V/60Hz

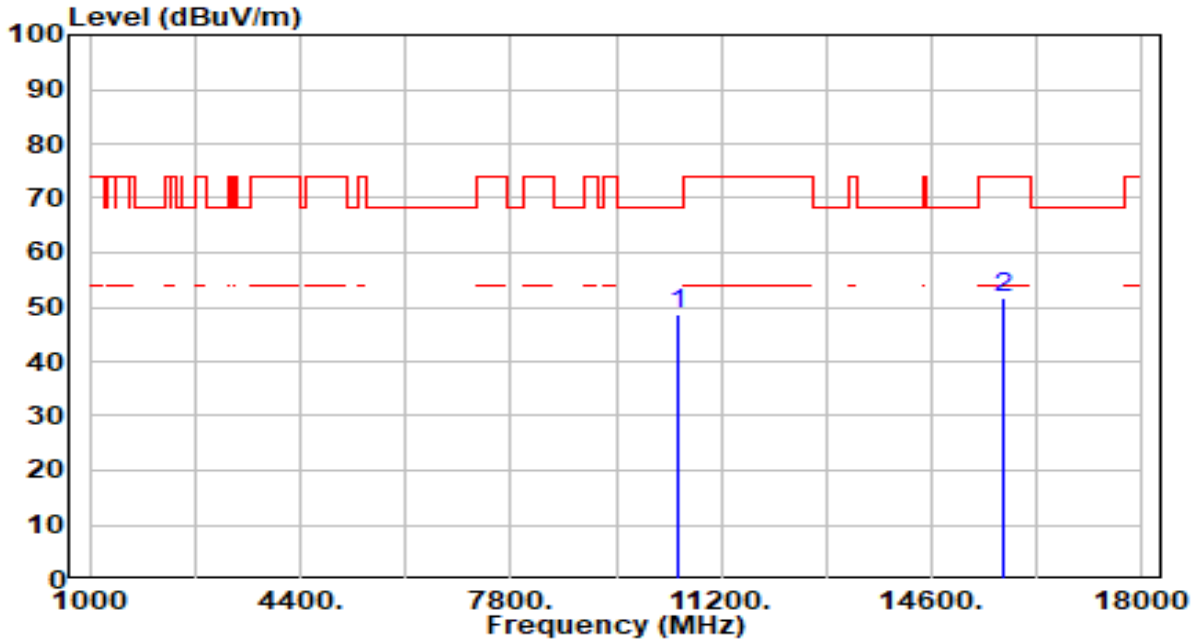


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10500.000	43.58	4.68	48.27	-19.93	68.20	309	98	Peak
2		15750.000	44.14	6.45	50.58	-23.42	74.00	309	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11ax-160MHz_Band1,2_TX_CH 50_ANT 0+1+2	Test Voltage	AC 120V/60Hz

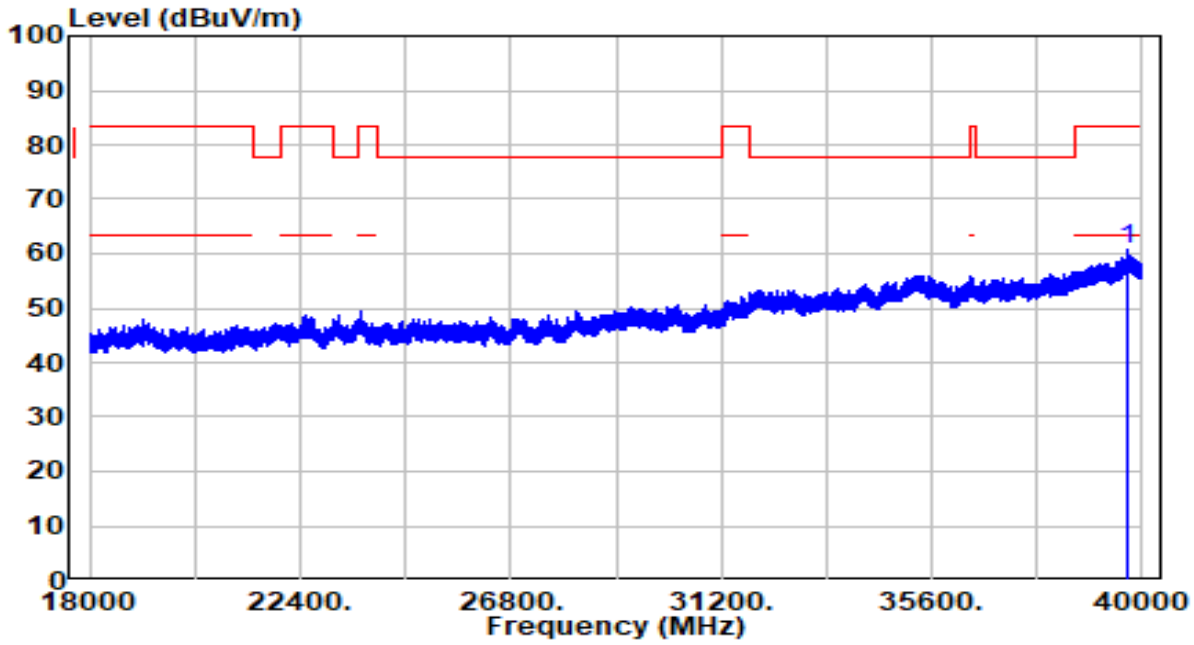


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	10500.000	43.97	4.68	48.66	-19.54	68.20	100	146	Peak
2		15750.000	45.06	6.45	51.51	-22.49	74.00	100	278	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-04-08
Factor	BBHA 9170	Temp. / Humidity	23°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band1_TX_CH44	Test Voltage	AC 120V/60Hz

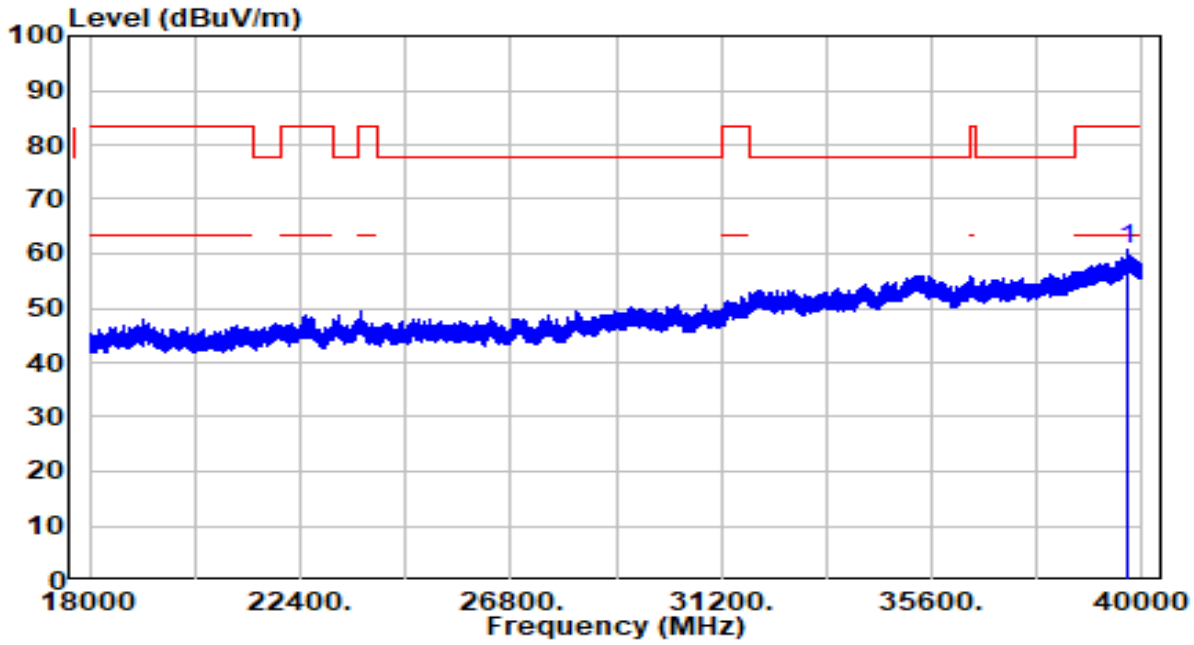


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	39680.310	578.24	-517.50	60.74	-22.76	83.50	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-04-08
Factor	BBHA 9170	Temp. / Humidity	23°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band1_TX_CH44	Test Voltage	AC 120V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	39680.310	34.40	26.34	60.74	-22.76	83.50	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

7.9. Radiated Restricted Band Edge Measurement

7.9.1.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	156.52475-156.525	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	--	--	--

For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing

linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Refer to KDB 789033 D02v02r01 G)2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

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 [uV/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

7.9.2.Test Procedure Used

KDB 789033 D02v02r01- Section G

7.9.3.Test Setting

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

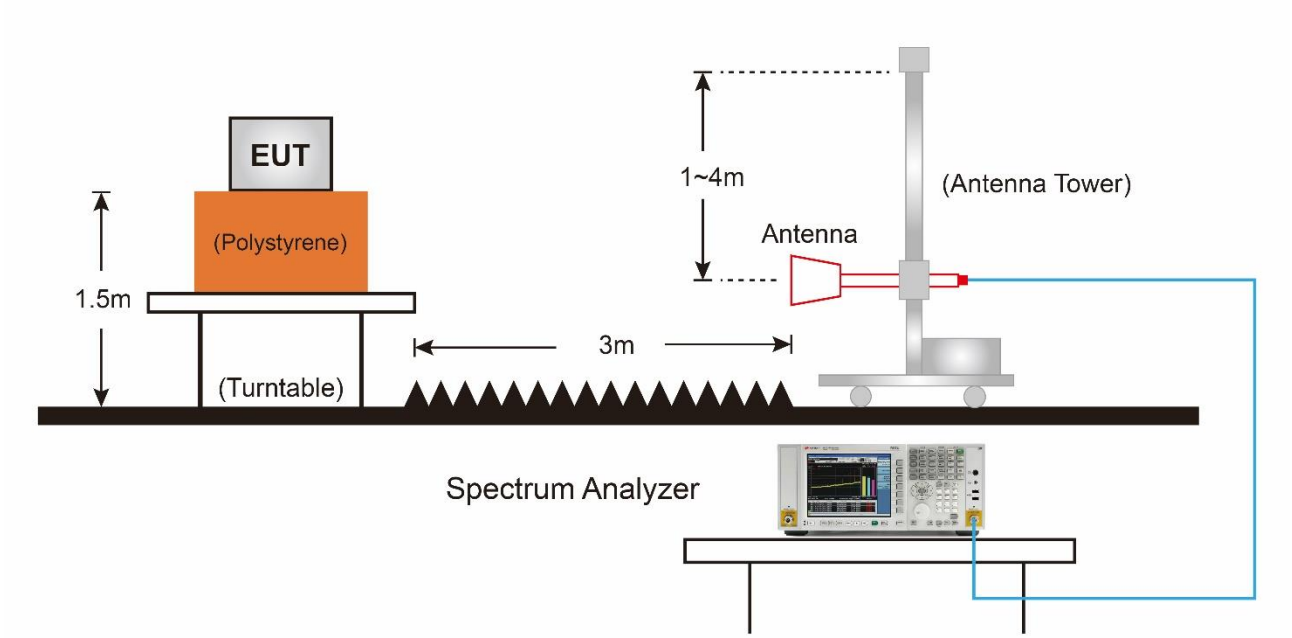
3. VBW, If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW ≤ RBW/100 (i.e., 10 kHz) but not less than 10 Hz. If the EUT duty cycle is < 98%, set VBW ≥ 1/T.

4. Detector = Peak

5. Sweep time = auto

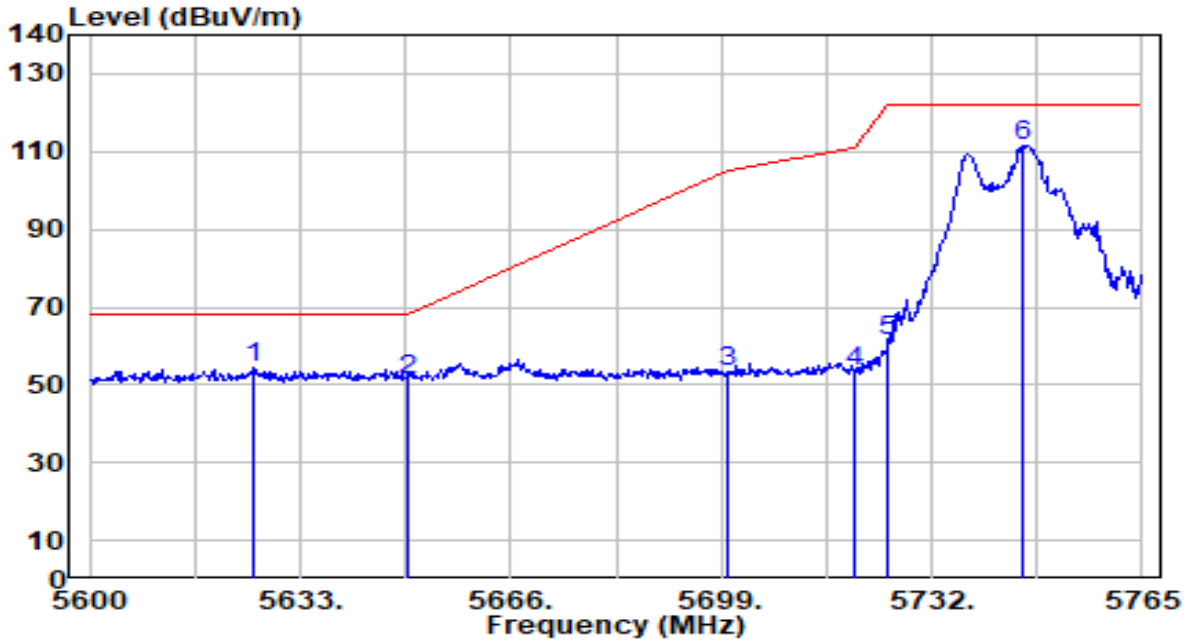
6. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98% duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of 1/x, where x is the duty cycle.

7.9.4.Test Setup



7.9.5.Test Result

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band4_TX_CH 149_ANT 0+1+2	Test Voltage	AC 120V/60Hz

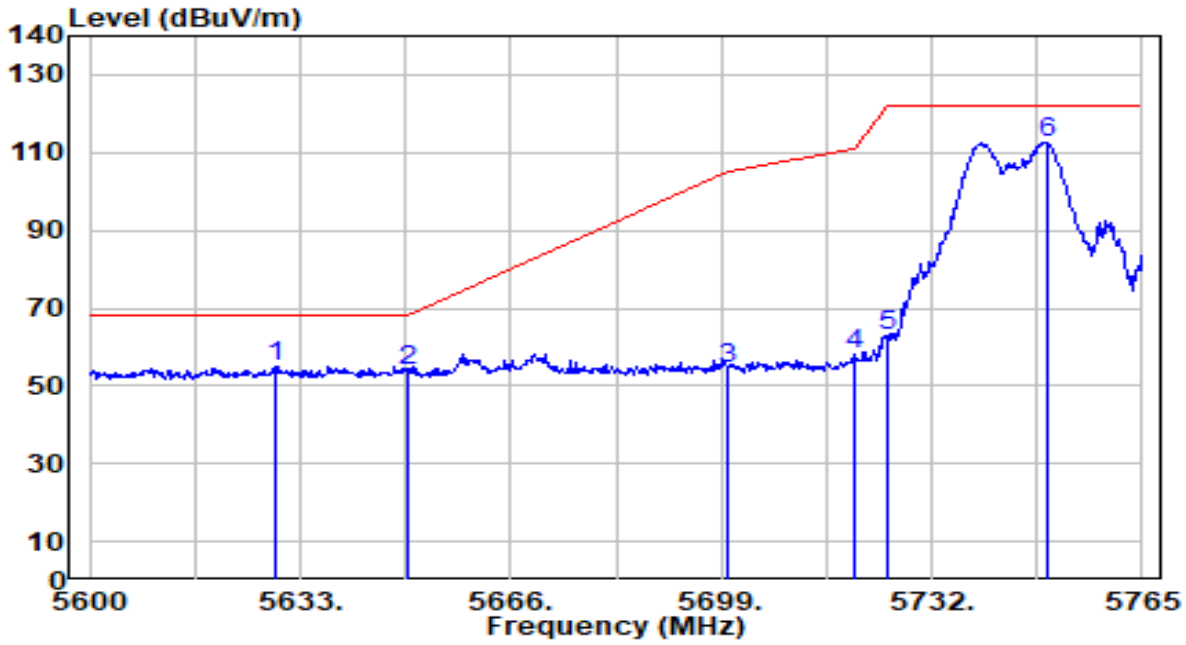


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5625.575	53.36	1.30	54.66	-13.54	68.20	123	239	Peak
2		5650.000	49.79	1.44	51.23	-16.97	68.20	123	239	Peak
3		5700.000	51.87	1.72	53.59	-51.61	105.20	123	239	Peak
4		5720.000	51.73	1.84	53.56	-57.24	110.80	123	239	Peak
5		5725.000	59.63	1.86	61.50	-60.70	122.20	123	239	Peak
6		5746.190	109.72	1.98	111.70	N/A	N/A	123	239	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band4_TX_CH 149_ANT 0+1+2	Test Voltage	AC 120V/60Hz

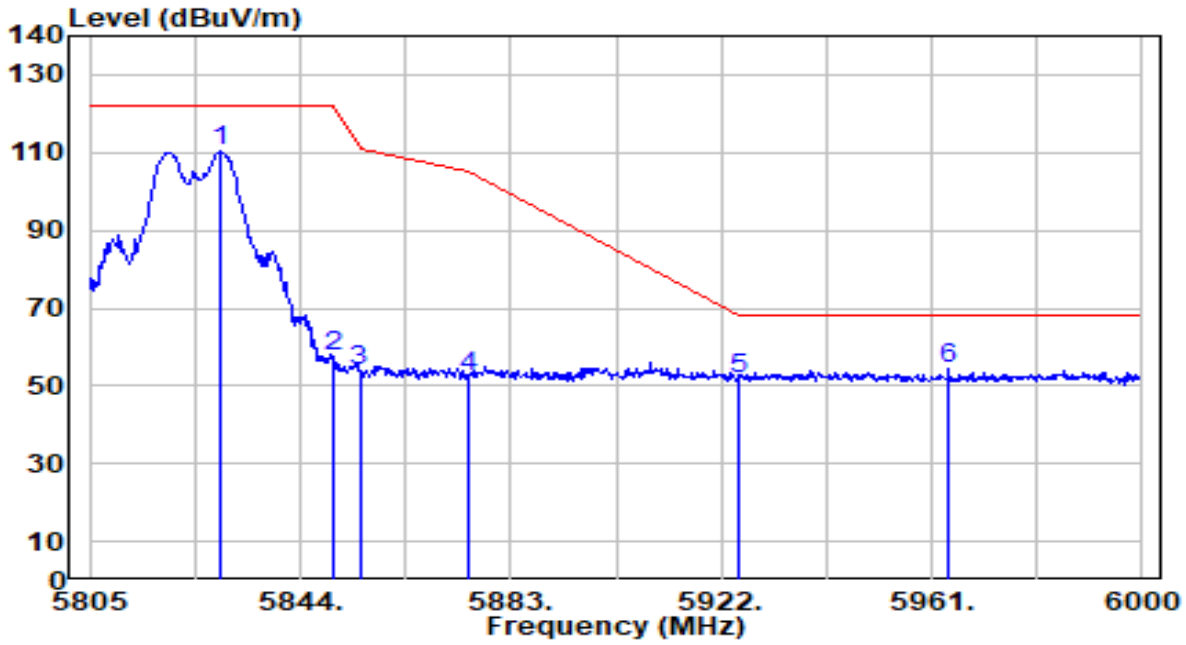


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5629.040	53.51	1.32	54.83	-13.37	68.20	135	189	Peak
2		5650.000	52.67	1.44	54.11	-14.09	68.20	135	189	Peak
3		5700.000	52.71	1.72	54.43	-50.77	105.20	135	189	Peak
4		5720.000	56.17	1.84	58.01	-52.79	110.80	135	189	Peak
5		5725.000	61.23	1.86	63.10	-59.10	122.20	135	189	Peak
6		5750.150	110.41	2.01	112.42	N/A	N/A	135	189	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band4_TX_CH 165_ANT 0+1+2	Test Voltage	AC 120V/60Hz

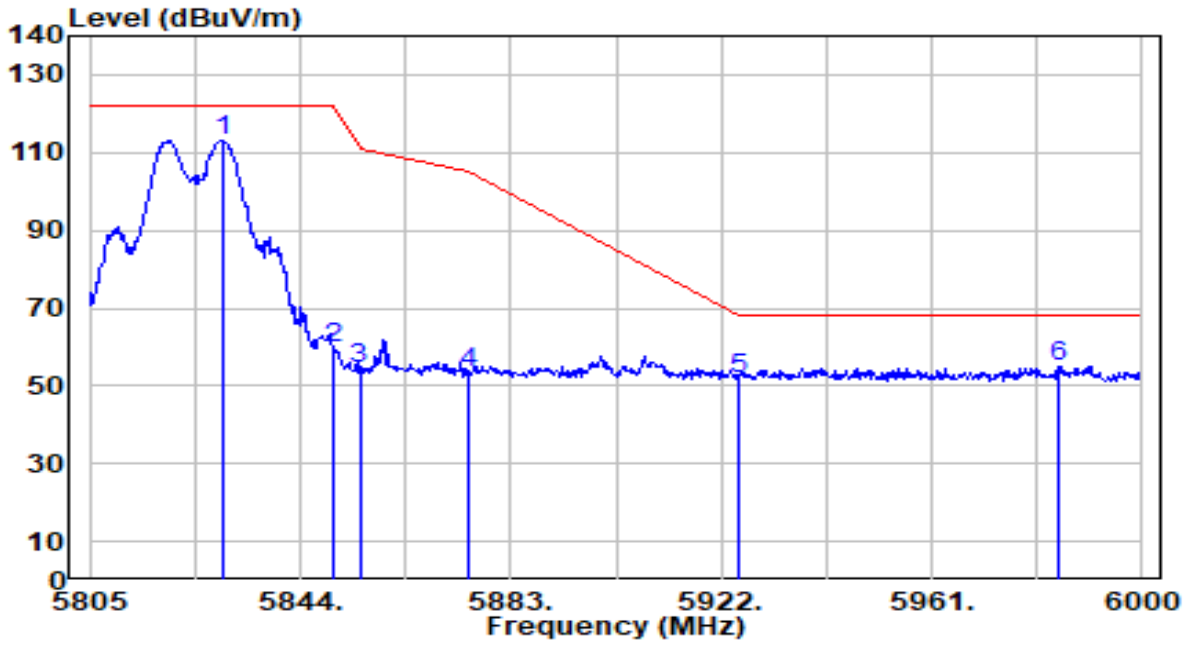


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		5829.180	107.90	2.28	110.18	N/A	N/A	100	180	Peak
2		5850.000	55.12	2.27	57.39	-64.81	122.20	100	180	Peak
3		5855.000	51.45	2.27	53.72	-57.08	110.80	100	180	Peak
4		5875.000	50.15	2.26	52.41	-52.79	105.20	100	180	Peak
5		5925.000	49.50	2.25	51.74	-16.46	68.20	100	180	Peak
6	*	5964.120	52.13	2.23	54.36	-13.84	68.20	100	180	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / You
Test Mode	802.11a_Band4_TX_CH 165_ANT 0+1+2	Test Voltage	AC 120V/60Hz

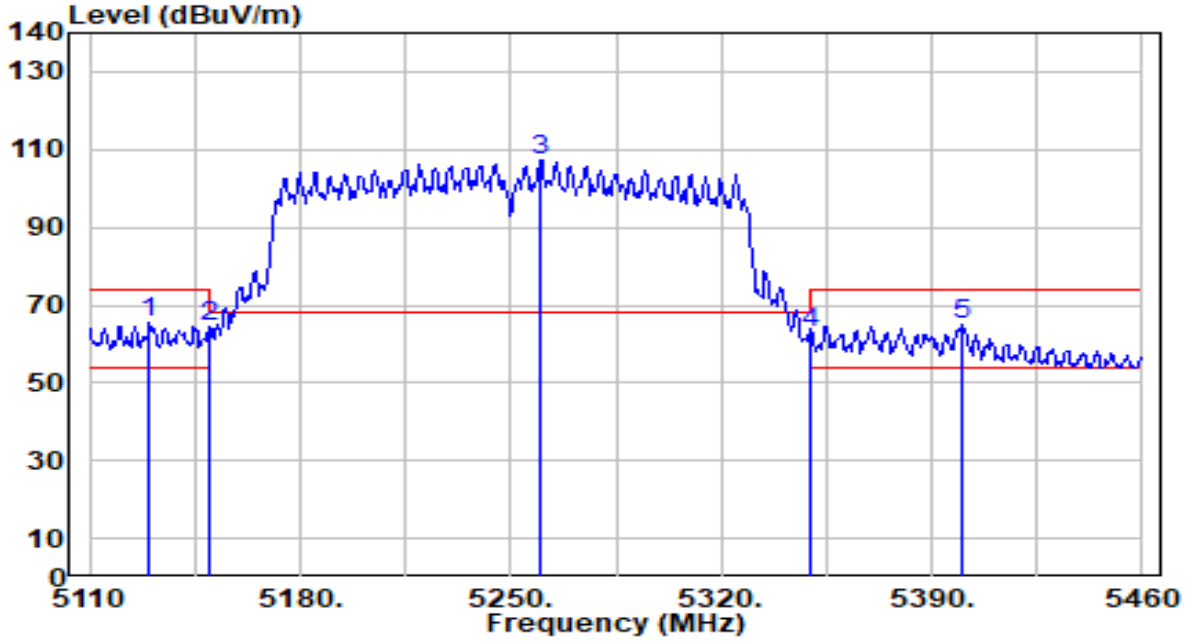


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		5829.765	110.93	2.28	113.21	N/A	N/A	238	215	Peak
2		5850.000	57.30	2.27	59.58	-62.62	122.20	238	215	Peak
3		5855.000	52.04	2.27	54.31	-56.49	110.80	238	215	Peak
4		5875.000	51.07	2.26	53.33	-51.87	105.20	238	215	Peak
5		5925.000	49.49	2.25	51.73	-16.47	68.20	238	215	Peak
6	*	5984.595	52.84	2.23	55.07	-13.13	68.20	238	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11ax-160MHz_Band1,2_TX_CH 50_ANT 0+1+2	Test Voltage	AC 120V/60Hz

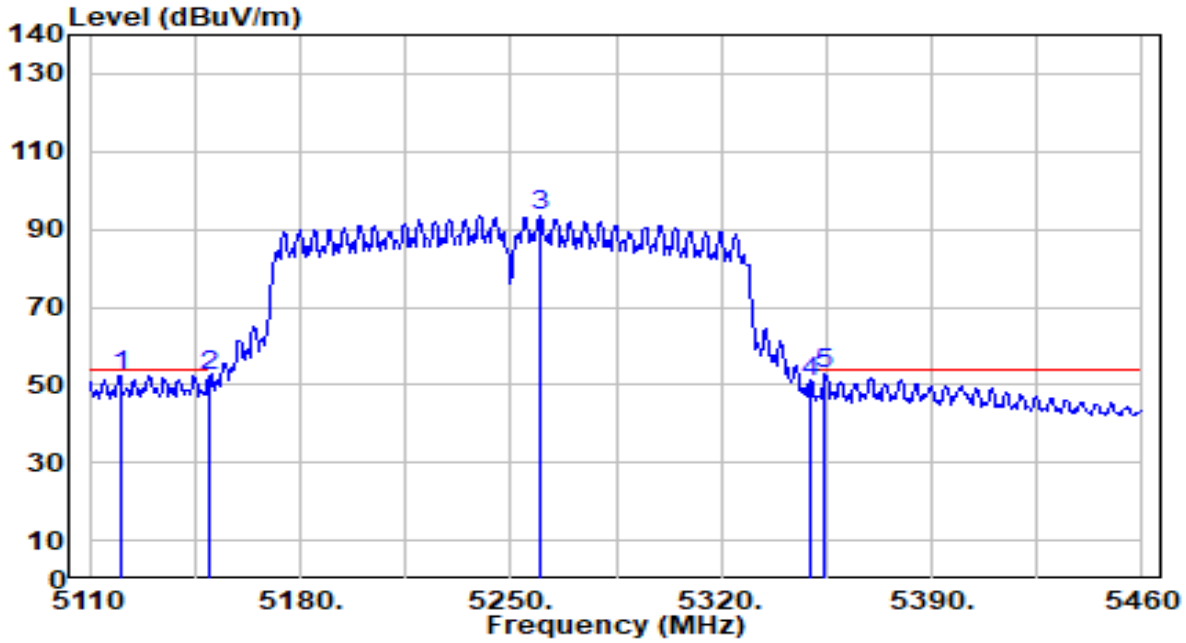


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	5129.950	64.61	0.68	65.29	-8.71	74.00	192	171	Peak
2		5150.000	63.61	0.68	64.29	-9.71	74.00	192	171	Peak
3		5260.150	106.85	0.60	107.46	N/A	N/A	192	171	Peak
4		5350.000	62.31	0.51	62.81	-11.19	74.00	192	171	Peak
5		5400.150	64.56	0.45	65.01	-8.99	74.00	192	171	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Horizontal	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11ax-160MHz_Band1,2_TX_CH 50_ANT 0+1+2	Test Voltage	AC 120V/60Hz

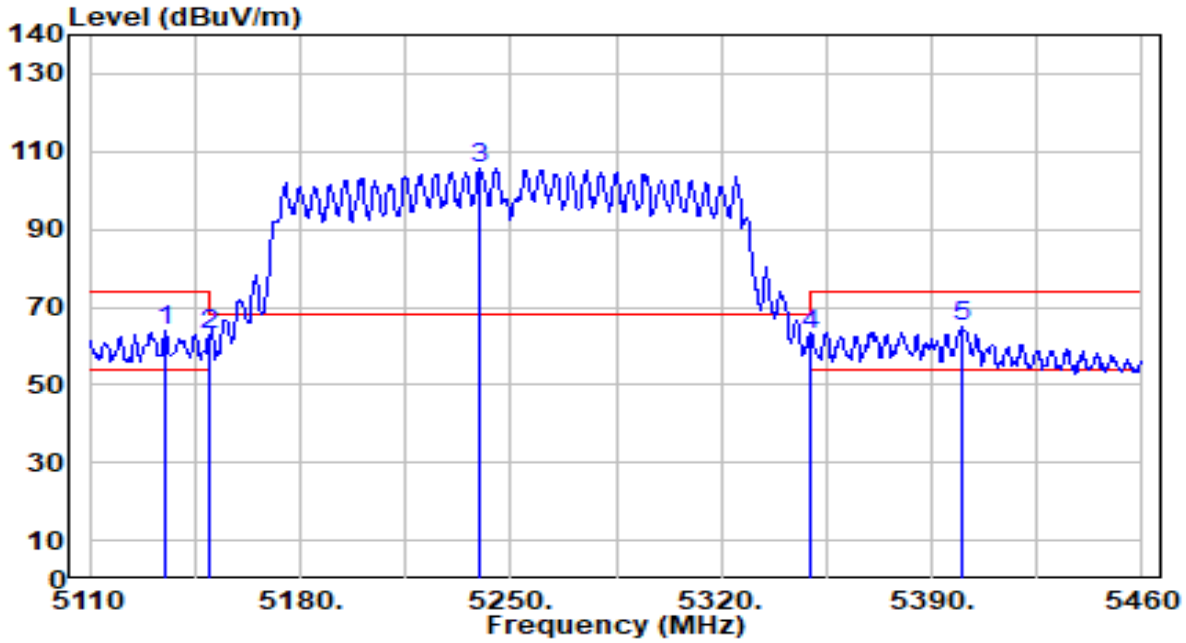


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		5120.150	51.61	0.68	52.29	-1.71	54.00	192	171	Average
2		5150.000	51.72	0.68	52.40	-1.60	54.00	192	171	Average
3		5260.150	92.86	0.60	93.46	N/A	N/A	192	171	Average
4		5350.000	50.17	0.51	50.67	-3.33	54.00	192	171	Average
5	*	5354.650	52.27	0.50	52.77	-1.23	54.00	192	171	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11ax-160MHz_Band1,2_TX_CH 50_ANT 0+1+2	Test Voltage	AC 120V/60Hz

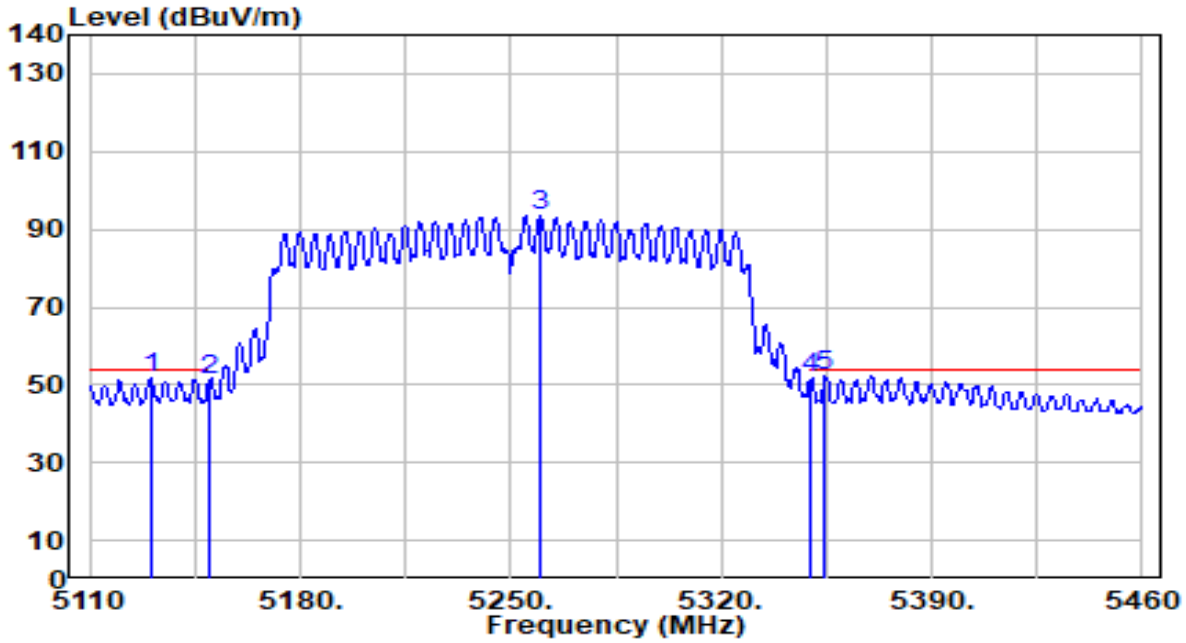


No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		5134.850	63.05	0.68	63.73	-10.27	74.00	200	164	Peak
2		5150.000	62.05	0.68	62.73	-11.27	74.00	200	164	Peak
3		5239.500	105.10	0.63	105.72	N/A	N/A	200	164	Peak
4		5350.000	62.53	0.51	63.04	-10.96	74.00	200	164	Peak
5	*	5400.500	64.73	0.45	65.19	-8.81	74.00	200	164	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AX3000 Ceiling Mount Wi-Fi 6 Access Point	Date of Test	2024-03-26
Factor	DRH18-E	Temp. / Humidity	22°C /61%
Polarity	Vertical	Site / Test Engineer	AC2 / Stanley
Test Mode	802.11ax-160MHz_Band1,2_TX_CH 50_ANT 0+1+2	Test Voltage	AC 120V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB/m)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		5130.300	50.91	0.68	51.59	-2.41	54.00	200	164	Average
2		5150.000	50.66	0.68	51.33	-2.67	54.00	200	164	Average
3		5259.800	93.09	0.60	93.69	N/A	N/A	200	164	Average
4		5350.000	51.01	0.51	51.51	-2.49	54.00	200	164	Average
5	*	5354.650	51.71	0.50	52.21	-1.79	54.00	200	164	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m) + Cable Loss (dB) – Preamplifier(dB) + 10dB Attenuation.
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

7.10.AC Conducted Emissions Measurement

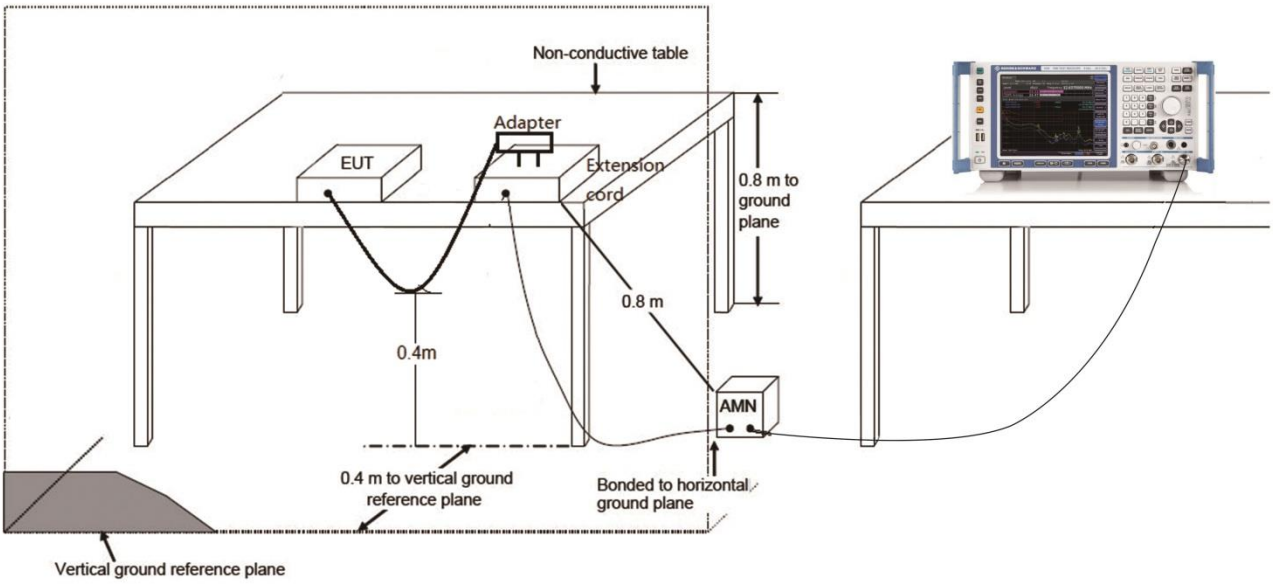
7.10.1.Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBμV)	AV (dBμV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.10.2.Test Setup



7.10.3.Test Result

Please refer to FCC Original Report Grant Date: 07/28/2023, FCC ID: 2AXJ4EAP650V2.

8. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15E of the FCC Rules.

Appendix A : External Photograph

Refer to “2403TW0109-UE” file.

Appendix B : Internal Photograph

Refer to “2403TW0109-UI” file.

Appendix C : Test Setup Photograph

Refer to “2403TW0109-UT” file.

The End