RF MEASUREMENT REPORT

FCC ID:	Q9DAPIN0615
Applicant:	Hewlett Packard Enterprise Company
Product:	ACCESS POINT
Model No.:	APIN0615
Marketing Name:	AP32
Trademark:	Hewlett Packard Enterprise, HPE aruba networking
FCC Classification:	Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s):	Part 15 Subpart E (Section 15.407)
Result:	Complies
Received Date:	2023-08-25
Test Date:	2023-10-23 ~ 2023-12-29

Reviewed By: Jame Yuan

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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 KDB789033 and KDB 291074. 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
2308RSU066-U5	V01	Initial Report	2023-11-18	Invalid
2308RSU066-U5	V02	Add spot check test data	2024-01-05	Valid

Note 1: The product is a variation on the existing APIN0615 that had FCC approval (FCC ID: Q9DAPIN0615).

The differences are shown in the table below.

Parts of Product	Modification
Top cover	Change ION style look.
Bottom Cover	Yes, Changed Painted white
Light pipe	Yes, Changed. Move to the edge for consistent ION ID
USB Port	Removed
Antenna	Remove BLE/ZigBee/GPS Antenna
PCB	Remove BLE/ZigBee/GPS chipset and match circuit

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

Frequency Range (MHz)	**Original Wi-Fi Antenna Gain**	**Current Wi-Fi Antenna Gain**
	(dBi)	(dBi)
2400 ~ 2480(Radio 0)	2.0	1.5
2400 ~ 2480(Radio 1)	0.6	1.6
5150 ~ 5895	3.8	3.8
5925 ~ 7125	3.5	3.9

Note 2: Most test data refer to original test report no. 2108RSU088-U1. Spot-check tests were done on these items based on worst-case results reported in the original FCC ID filing.

Test Description	Verdict
Occupied Bandwidth	Data referencing with spot check
Output Power	Data referencing with spot check
Peak Power Spectral Density	Data referencing with spot check
Radiated Spurious Emission and Band Edge	Data referencing with spot check
AC Conducted Emissions 150kHz - 30MHz	Full test

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1. General Information

1.1. Applicant

Hewlett Packard Enterprise Company

6280 America Center Drive, San Jose CA 95002, United States

1.2. Manufacturer

Hewlett Packard Enterprise Company

6280 America Center Drive, San Jose CA 95002, United States

1.3. Testing Facility

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

1.4. Product Information

Product Name	ACCESS POINT
Model No.	APIN0615
Marketing Name:	AP32
Serial No.	CNQSM1H00H
Software Version	v0.1.12
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Power Type	AC Adapter or PoE Injector input
Operating Temp.	0 ~ 50 °C
Operating Environment	Indoor Use
Accessories	
AC/DC Adapter	Model: WB-18Q12R Input: 100-240V ~ 50/60Hz, 0.5A Max Output: 12.0V, 1.5A, 18W
PoE Injector	Model: ADH-30CR BB Input: 100-240V ~ 1.0A 50-60Hz Output: 55V, 0.55A 30.25W
Remark: 1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. 2. AC Power Adapter and PoE Injector are not sold with Product.	

1.5. Radio Specification under Test

Frequency Range	For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5845MHz, 5865MHz, 5885MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5835MHz, 5875MHz For 802.11ac-VHT80/ax-HE80: 5855MHz For 802.11ac-VHT160/ax-HE160: 5815MHz	
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 1733.4Mbps 802.11ax: up to 2402Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU

1.6. Working Frequencies

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

Channel	Frequency	Channel	Frequency	Channel	Frequency
169	5845 MHz	173	5865 MHz	177	5885 MHz

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

Channel	Frequency	Channel	Frequency	Channel	Frequency
167	5835 MHz	175	5875 MHz	--	--

802.11ac-VHT80/ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
171	5855 MHz	--	--	--	--

802.11ac-VHT160/ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
163	5815 MHz	--	--	--	--

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Tx Paths	Uncorrelated Gain (dBi)	Correlated Gain (dBi)
PIFA	2412 ~ 2462 (Radio 0)	2	1.5	4.4
PIFA	2412 ~ 2462 (Radio 1)	2	1.6	4.5
PIFA	5150 ~ 5895	2	3.8	6.8
PIFA	5925 ~ 7125	2	3.9	6.9

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

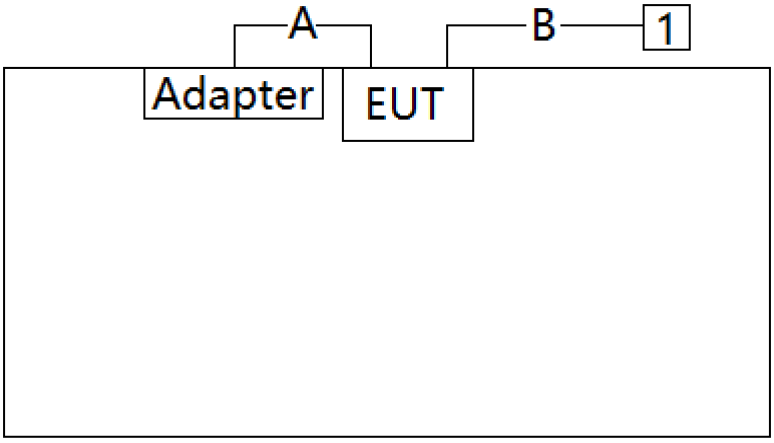
2.1. Test Mode

Mode 1: Transmit by 802.11a_N_{SS}=1 (6Mbps)
Mode 2: Transmit by 802.11ac-VHT20_N_{SS}=1 (MCS0)
Mode 3: Transmit by 802.11ac-VHT40_N_{SS}=1 (MCS0)
Mode 4: Transmit by 802.11ac-VHT80_N_{SS}=1 (MCS0)
Mode 5: Transmit by 802.11ac-VHT160_N_{SS}=1 (MCS0)
Mode 6: Transmit by 802.11ax-HE20_N_{SS}=1 (MCS0)
Mode 7: Transmit by 802.11ax-HE40_N_{SS}=1 (MCS0)
Mode 8: Transmit by 802.11ax-HE80_N_{SS}=1 (MCS0)
Mode 9: Transmit by 802.11ax-HE160_N_{SS}=1 (MCS0)

Note: These test modes (worst case) are from the original report.

2.2. Test System Connection Diagram

Connection Diagram



Cable Type		Cable Description
A	Power Cable	Non shielded, 2.0m
B	LAN Cable	Non shielded, 3.0m

Product		Manufacturer	Model No.
1	Notebook	ThinkPad	E495

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 15.407
- KDB 789033 D02v02r01
- KDB 291074 D02v01
- KDB 662911 D01v02r01
- ANSI C63.10-2013

2.5. Test Environment Condition

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

3. Antenna Requirements

KDB 291074 DR01: An Indoor Access point in the U-NII-4 band (5.850-5.895 GHz) and U-NII -3 & -4 span channels must use an integrated antenna

- The antenna of the device is built in and locked inside the enclosure.

4. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2023-12-28	SIP-AC1
				1 year	2024-12-17	SIP-AC1
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2023-12-22	SIP-AC1
				1 year	2024-12-21	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2024-05-23	SIP-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2024-09-24	SIP-AC1
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2023-11-07	SIP-AC1
				1 year	2024-11-02	SIP-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2024-10-09	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2024-09-27	SIP-AC1
Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2024-06-17	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06616	1 year	2023-11-01	SIP-AC1
				1 year	2024-10-28	SIP-AC1
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2024-01-12	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2024-07-13	SIP-AC1
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2024-02-26	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2024-10-23	SIP-AC1
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2024-02-12	SIP-TR1
Thermohygrometer	testo	608-H1	MRTSUE11022	1 year	2024-10-28	SIP-TR1
USB Power Sensor	Keysight	U2021XA	MRTSUE06596	1 year	2024-07-31	SIP-TR1
Signal Analyzer	Keysight	N9010B	MRTSUE07036	1 year	2024-02-29	SIP-TR1
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2024-05-23	SIP-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2024-05-23	SIP-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06614	1 year	2024-10-23	SIP-SR2
Thermohygrometer	testo	608-H1	MRTSUE06621	1 year	2024-11-03	SIP-SR2
Shielding Room	MIX-BEP	SIP-SR2	MRTSUE06949	5 years	2024-10-23	SIP-SR2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802BS	1.02	RE Antenna & Turntable
BenchVue Power Meter	2019	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.

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
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
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.4dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.7%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)	26dB Bandwidth	Conducted	Pass
15.407(e)	6dB Bandwidth		Pass
15.407(a)(3)(ii)	Maximum Conducted Output Power		Pass
15.407(a)(3)(ii)(12)	Peak Power Spectral Density		Pass
15.407(b)(5)	Undesirable Emissions	Radiated	Pass
15.205, 15.209 15.407(b)(5)(i), (8), (9)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)		Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

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

6.2. 26dB & 99% Bandwidth Measurement

6.2.1. Test Limit

N/A

6.2.2. Test Procedure

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

KDB 789033 D02v02r01- Section D (99% Bandwidth)

6.2.3. Test Setting

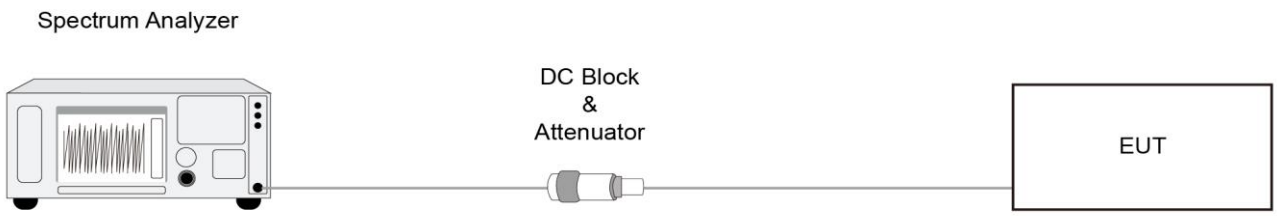
26dB Bandwidth

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 > 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. Detector = Peak.
6. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. 6dB Bandwidth Measurement

6.3.1. Test Limit

The minimum 6dBbandwidth shall be at least 500 kHz.

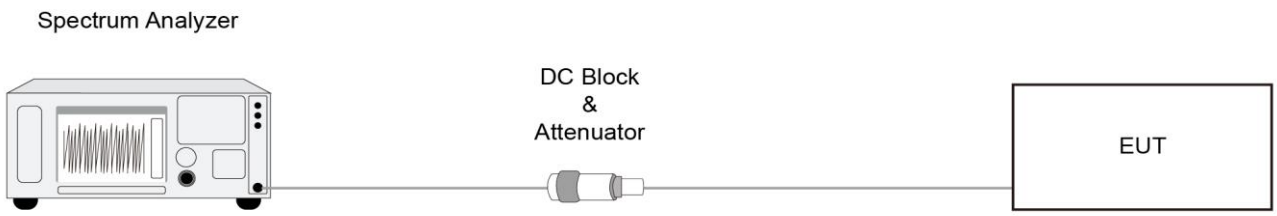
6.3.2. Test Procedure

KDB 789033 D02v02r01- Section C.2

6.3.3. 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.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Output Power Measurement

6.4.1. Test Limit

For an indoor access point operating in the 5.850-5.895 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. Indoor access points operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 36 dBm.

6.4.2. Test Procedure

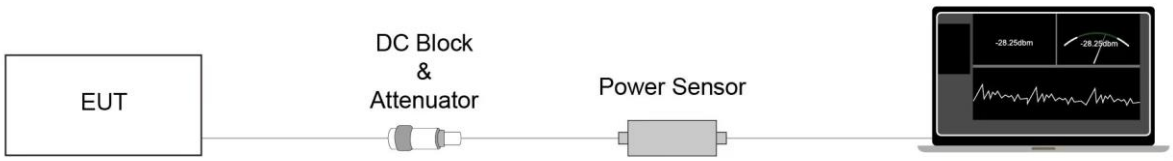
KDB 789033D02v02r01- Section E)3)b) Method PM-G

6.4.3. 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.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Power Spectral Density Measurement

6.5.1. Test Limit

For an indoor access point operating in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 20 dBm e.i.r.p. in any 1-megahertz band.

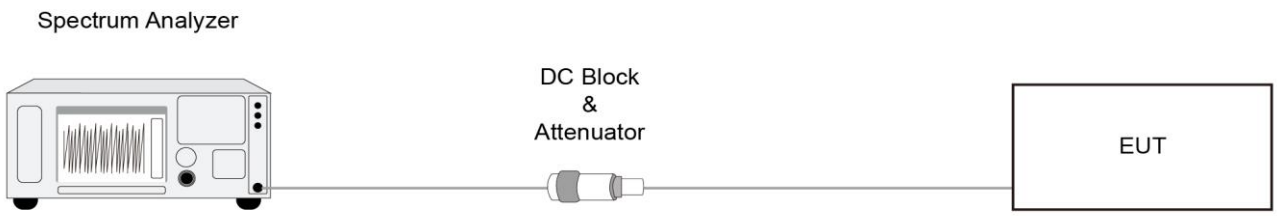
6.5.2. Test Procedure

KDB 789033 D02v02r01-SectionF

6.5.3. 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
4. VBW = 3 × RBW
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.

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Frequency Stability Measurement

6.6.1. 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.

6.6.2. Test Procedure

Frequency Stability Under Temperature Variations:

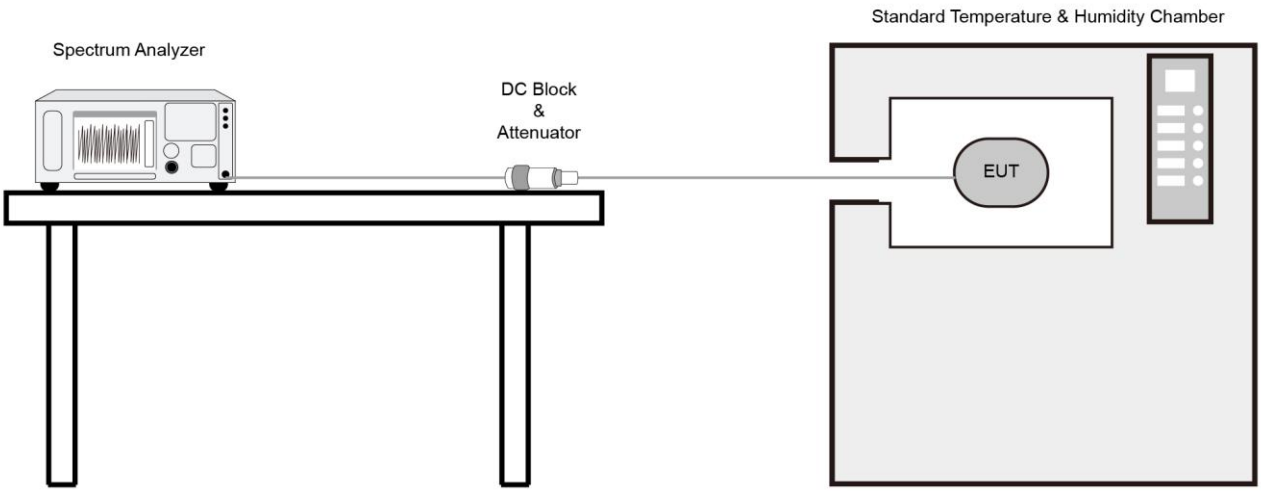
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain 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, record the maximum frequency change.

6.6.3. Test Setup



6.6.4. Test Result

Refer to Appendix A.6.

6.7. Radiated Spurious Emission Measurement

6.7.1. 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	Field Strength	Measured Distance
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

6.7.2. Test Procedure

KDB 789033 D02v02r01- Section G.

6.7.3. 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 ≥ 98%, set VBW = 10 Hz.

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

802.11a	VBW = 470Hz	802.11ax-HE20	VBW = 680Hz
802.11ac-VHT20	VBW = 510Hz	802.11ax-HE40	VBW = 1.3kHz
802.11ac-VHT40	VBW = 1.1kHz	802.11ax-HE80	VBW = 2.4kHz
802.11ac-VHT80	VBW = 2.2kHz	802.11ax-HE160	VBW = 4.3kHz
802.11ac-VHT160	VBW = 3.9kHz		

4. Detector = Peak

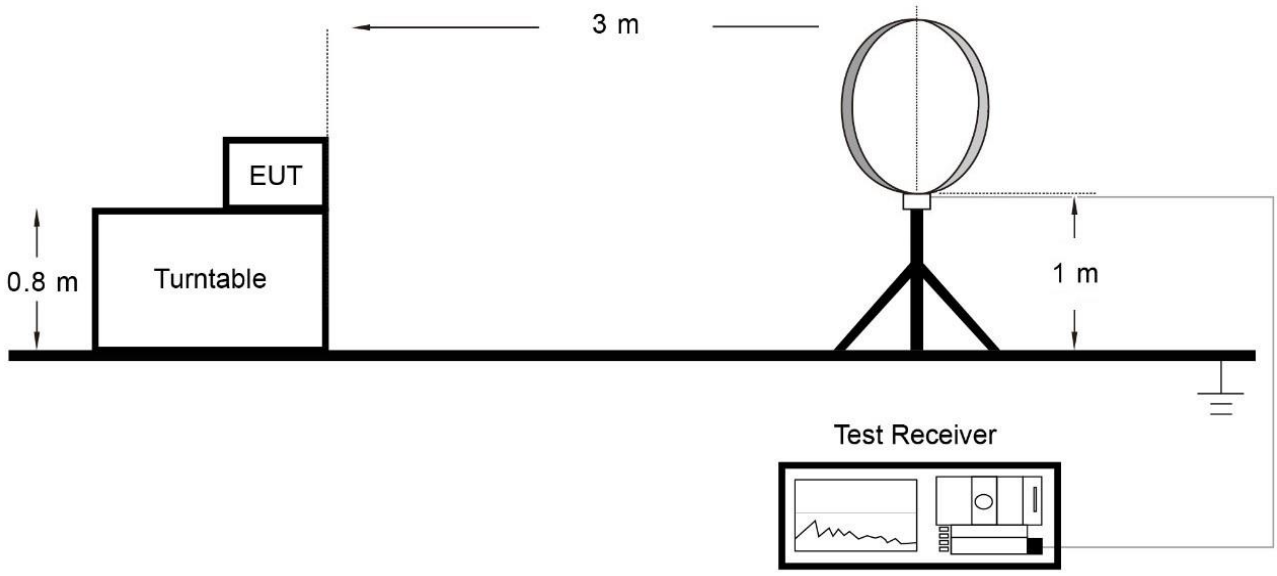
5. Sweep time = auto

6. Trace mode = max hold

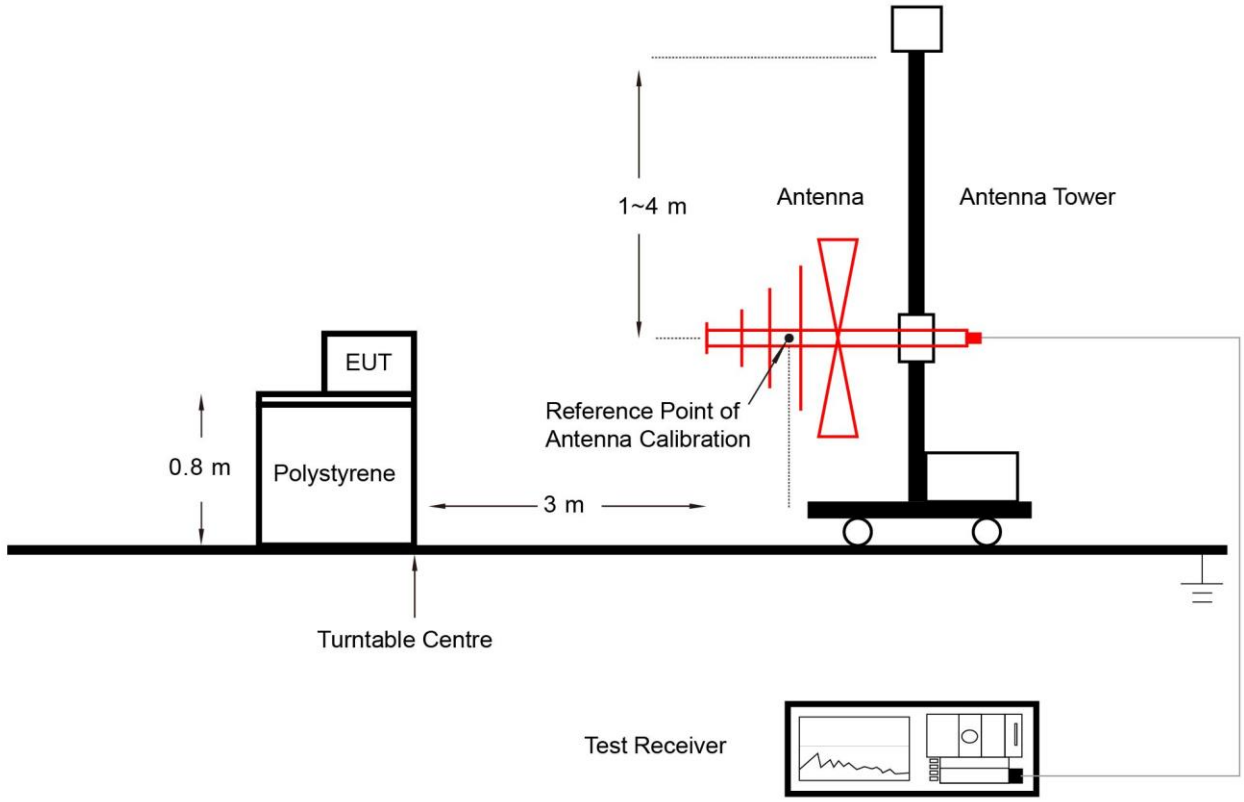
7. Trace was allowed to stabilize

6.7.4. Test Setup

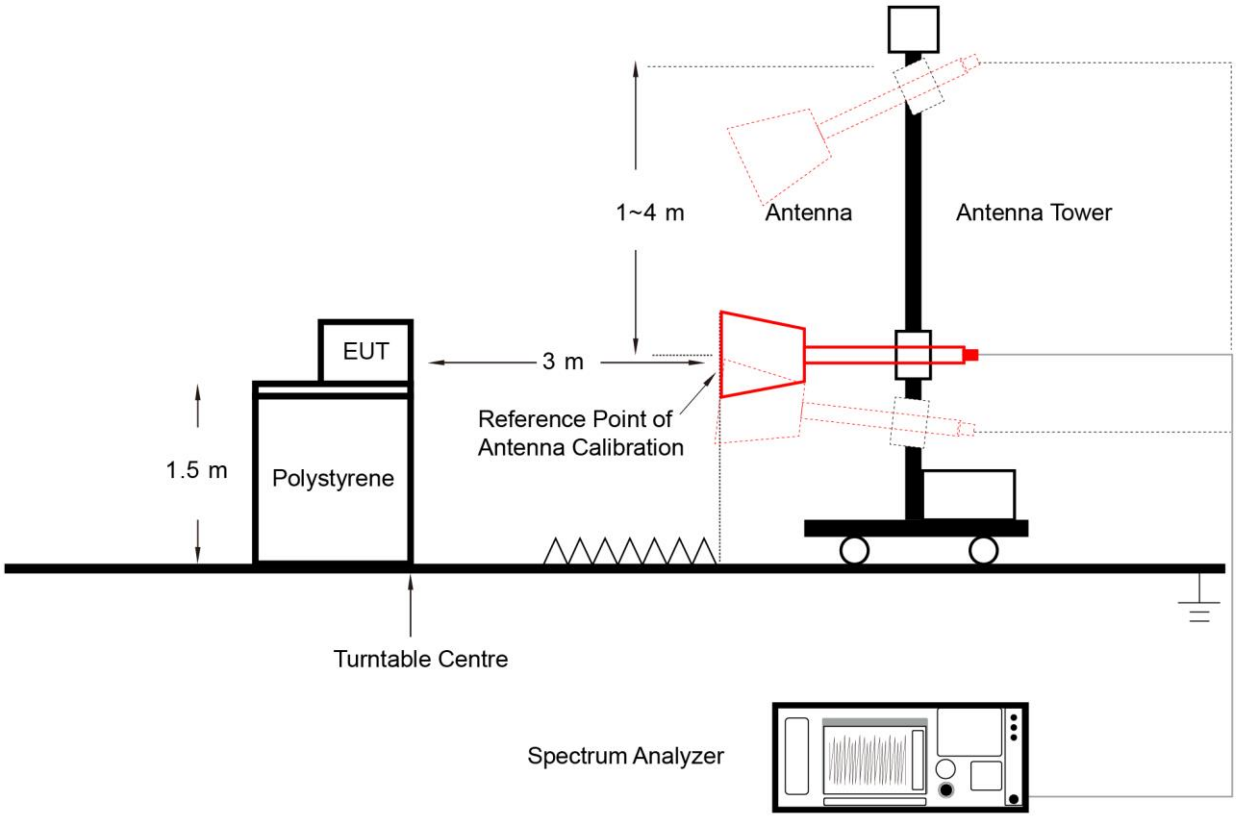
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.7.5. Test Result

Refer to Appendix A.7.

6.8. Radiated Restricted Band Edge Measurement

6.8.1. 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	--	--	--

For 15.407(b) requirement:

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.

For an indoor access point, all emissions at or above 5.895GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of -7 dBm/MHz at or above 5.925GHz.

For indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of −27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.

E [dBµV/m] = EIRP [dBm] + 95.2, for example, -27 dBm/MHz = 68.2 dBµV/m

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

6.8.2. Test Procedure

KDB 789033 D02v02r01- Section G

6.8.3. 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

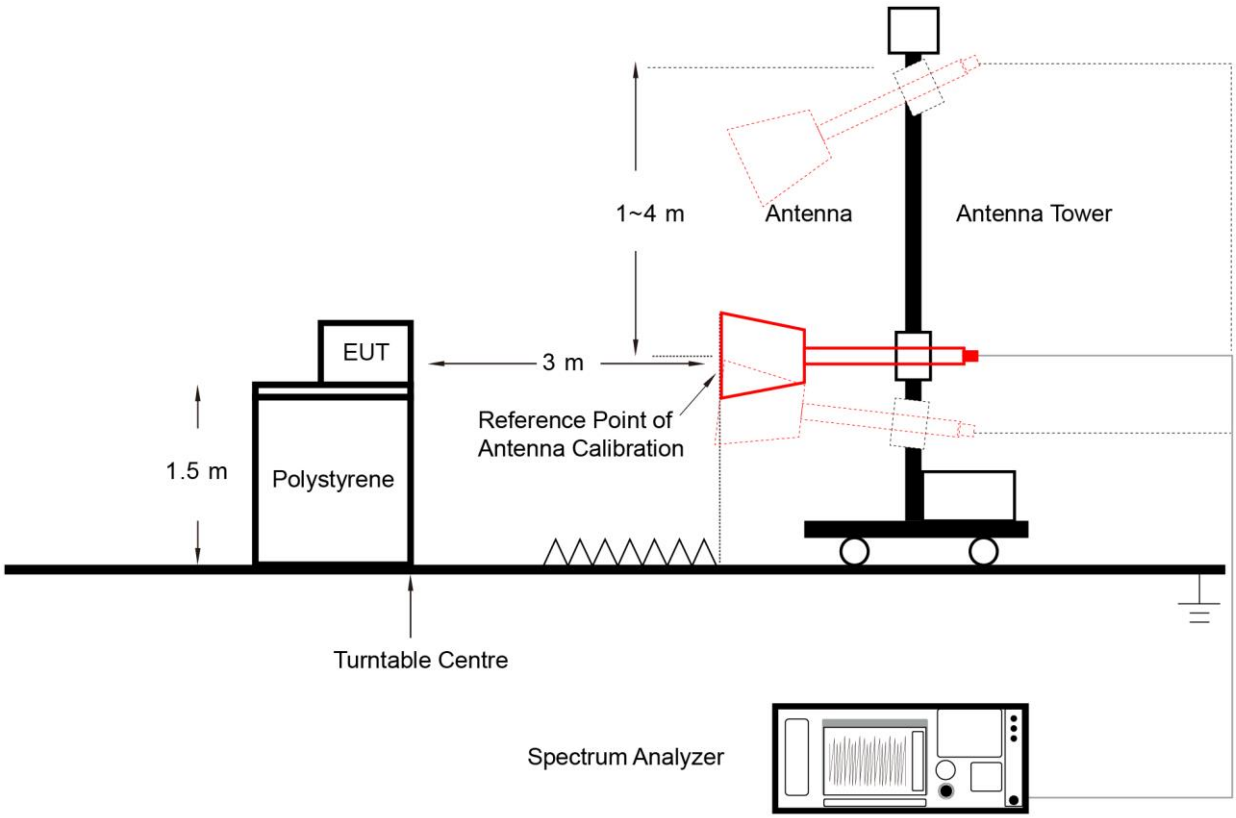
Average Measurements above 1GHz (Method VB)

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 = 10Hz
4. If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration

802.11a	VBW = 470Hz	802.11ax-HE20	VBW = 680Hz
802.11ac-VHT20	VBW = 510Hz	802.11ax-HE40	VBW = 1.3kHz
802.11ac-VHT40	VBW = 1.1kHz	802.11ax-HE80	VBW = 2.4kHz
802.11ac-VHT80	VBW = 2.2kHz	802.11ax-HE160	VBW = 4.3kHz
802.11ac-VHT160	VBW = 3.9kHz		

5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.8.4. Test Setup



6.8.5. Test Result

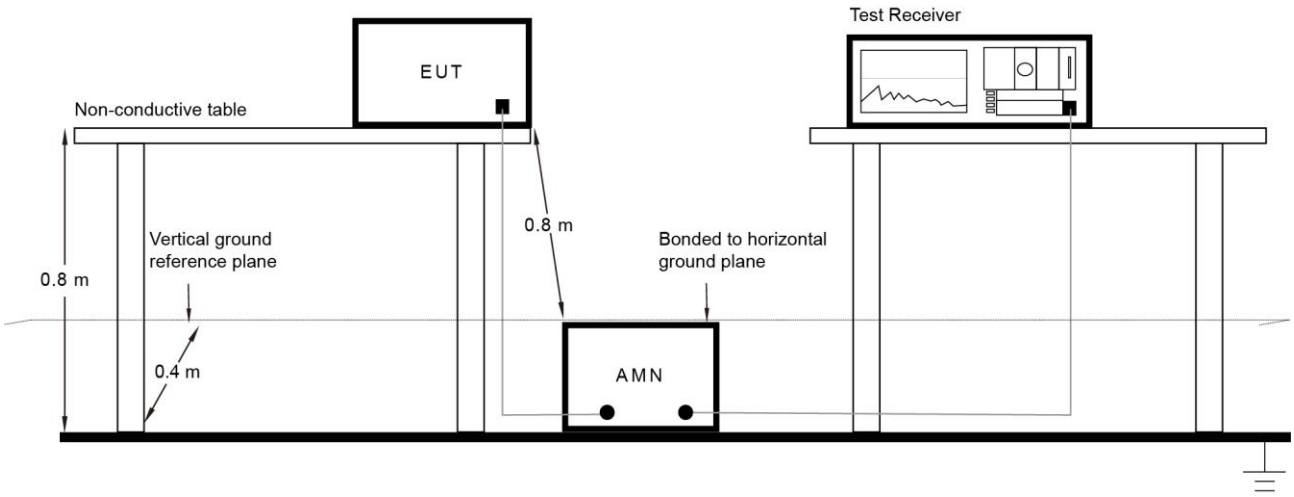
Refer to Appendix A.8.

6.9. AC Conducted Emissions Measurement

6.9.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
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.		

6.9.2. Test Setup



6.9.3. Test Result

Refer to Appendix A.9.

Appendix A – Test Result

A.1 Duty Cycle Test Result

Refer to MRT report no. 2108RSU088-U1 Appendix A.1.

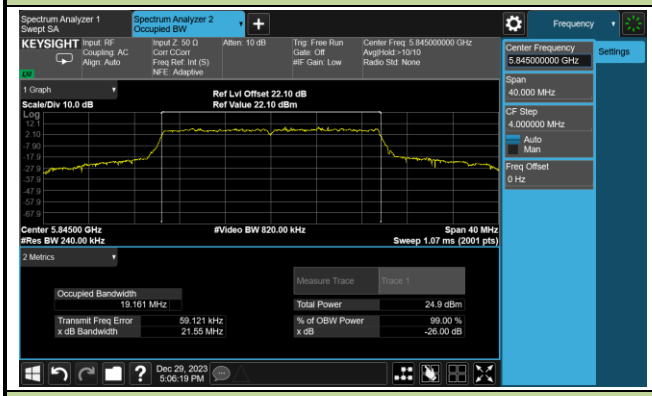
A.2 26dB & 99% Bandwidth Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-29		
Remark	Spot Check		

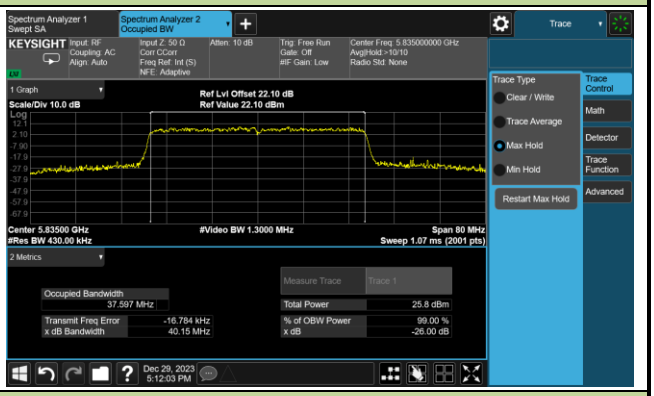
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
11ax-HE20	MCS0	169	5845	21.55	19.161
11ax-HE40	MCS0	167	5835	40.15	37.597
11ax-HE80	MCS0	171	5855	80.39	76.919
11ax-HE160	MCS0	163	5815	163.50	155.22

26dB & 99% Bandwidth

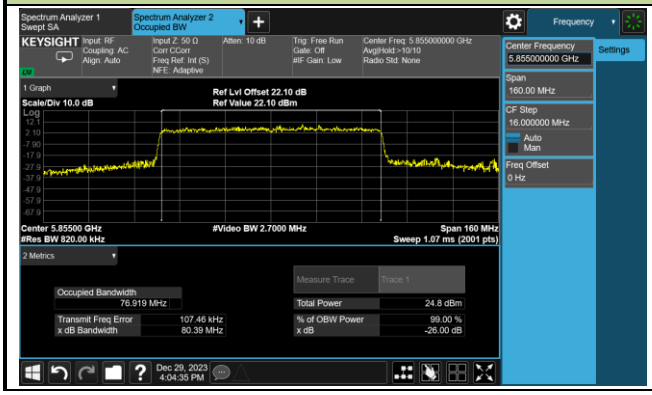
802.11ax-HE20 Channel 169 (5845MHz)



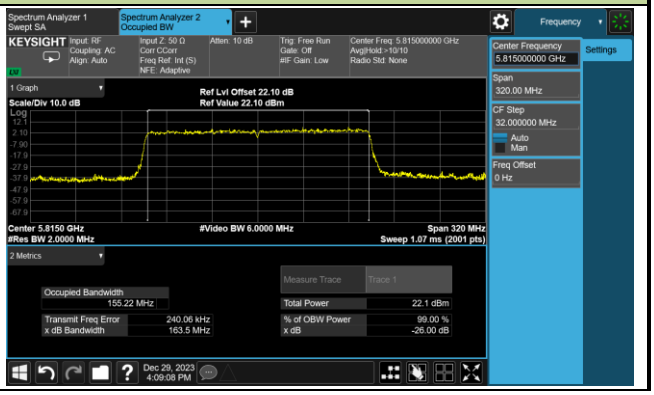
802.11ax-HE40 Channel 167 (5835MHz)



802.11ax-HE80 Channel 171 (5855MHz)



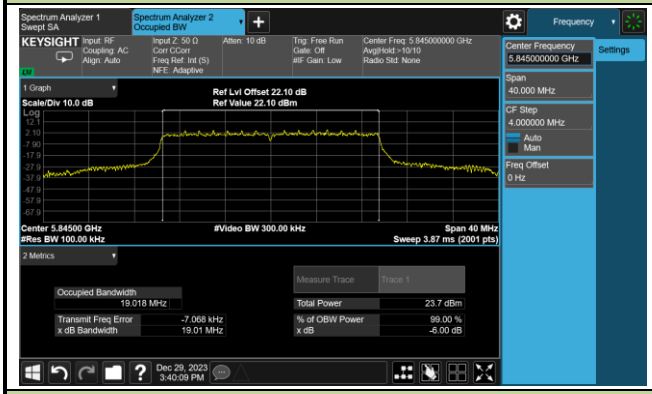
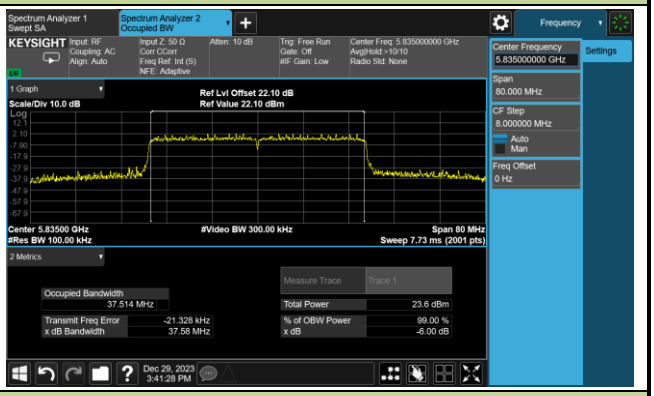
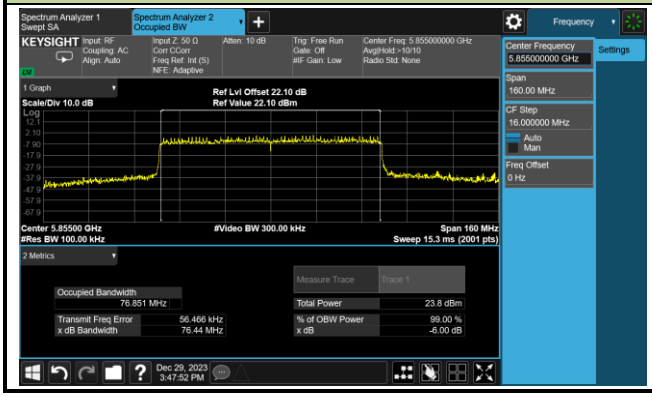
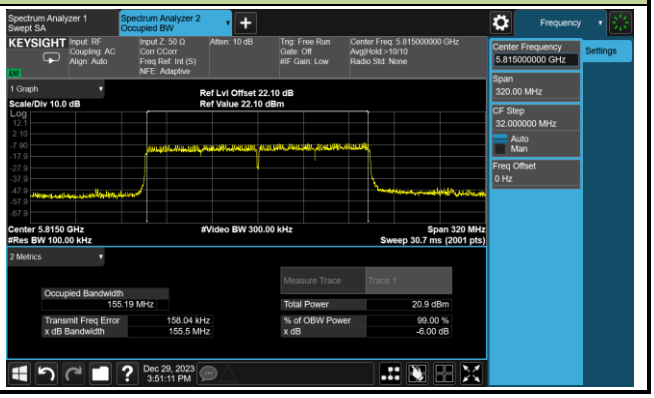
802.11ax-HE160 Channel 163 (5815MHz)



A.3 6dB Bandwidth Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-29		
Remark	Spot Check		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11ax-HE20	MCS0	169	5845	19.01	≥ 0.5
11ax-HE40	MCS0	167	5835	37.58	≥ 0.5
11ax-HE80	MCS0	171	5855	76.44	≥ 0.5
11ax-HE160	MCS0	163	5815	155.50	≥ 0.5

6dB Bandwidth	
802.11ax-HE20 Channel 169 (5845MHz)	802.11ax-HE40 Channel 167 (5835MHz)
	
802.11ax-HE80 Channel 171 (5855MHz)	802.11ax-HE160 Channel 163 (5815MHz)
	

A.4 Output Power Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-10-30		
Remark	Spot Check		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Antenna Gain (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)
				Ant 0	Ant 1				
a	6Mbps	169	5845	17.87	17.91	20.90	3.80	24.70	≤ 36.00
ac-VHT20	MCS0	169	5845	17.84	18.15	21.01	3.80	24.81	≤ 36.00
ac-VHT40	MCS0	167	5835	17.92	17.72	20.83	3.80	24.63	≤ 36.00
ac-VHT80	MCS0	171	5855	17.84	17.56	20.71	3.80	24.51	≤ 36.00
ac-VHT160	MCS0	163	5815	14.52	14.28	17.41	3.80	21.21	≤ 36.00
ax-HE20	MCS0	169	5845	17.90	18.06	20.99	3.80	24.79	≤ 36.00
ax-HE40	MCS0	167	5835	18.24	18.04	21.15	3.80	24.95	≤ 36.00
ax-HE80	MCS0	171	5855	17.97	17.88	20.94	3.80	24.74	≤ 36.00
ax-HE160	MCS0	163	5815	14.88	14.36	17.64	3.80	21.44	≤ 36.00

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

Note 2: EIRP Power (dBm) = Total Average Power (dBm) + Antenna Gain (dBi).

A.5 Power Spectral Density Test Result

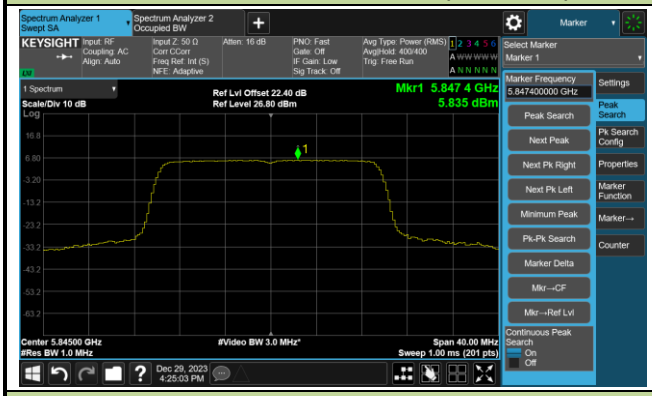
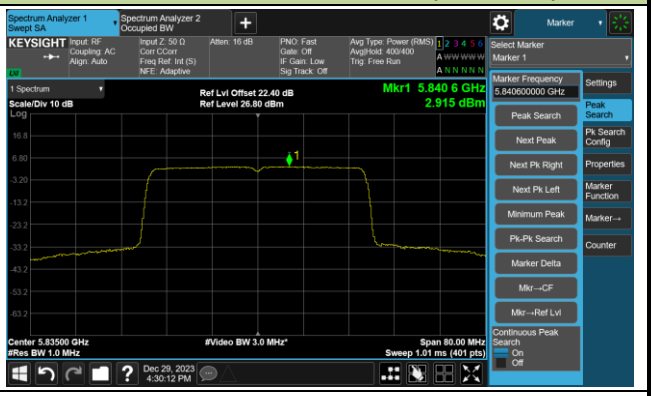
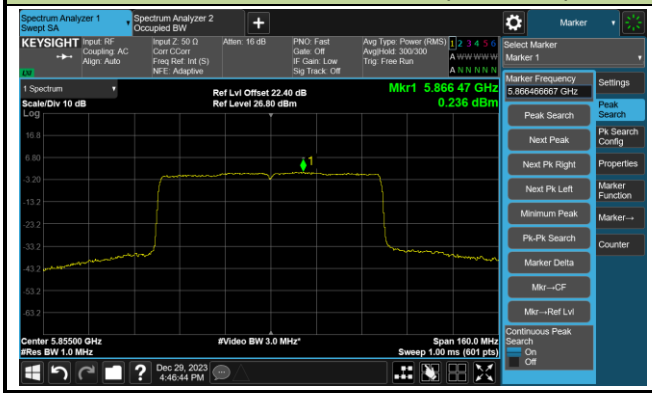
Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-29		
Remark	Spot Check		

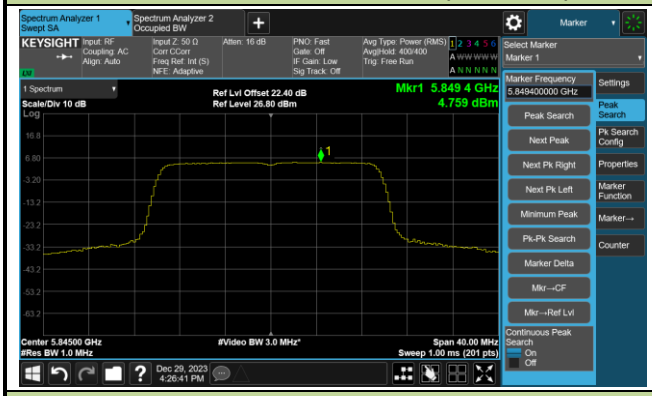
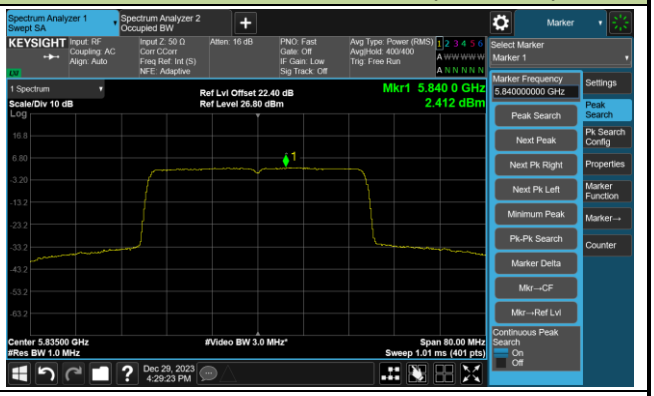
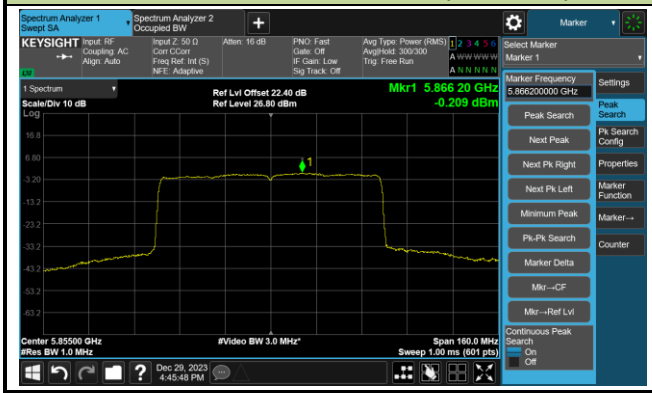
Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD (dBm/MHz)		Duty Cycle (%)	Total PSD (dBm/ MHz)	EIRP PSD (dBm/ MHz)	EIRP PSD Limit (dBm/MHz)
				Ant 0	Ant 1				
11ax-HE20	MCS0	169	5845	5.835	4.759	97.69	8.44	15.24	≤ 20.00
11ax-HE40	MCS0	167	5835	2.915	2.412	95.84	5.87	12.67	≤ 20.00
11ax-HE80	MCS0	171	5855	0.236	-0.209	92.46	3.37	10.17	≤ 20.00

Note 1: When EUT duty cycle < 98%, the total PSD (dBm/MHz) =10*log {$10^{(\text{Ant 0 AVGPSD}/10)}$ + $10^{(\text{Ant 1 AVGPSD}/10)}$} +10*log (1/Duty cycle).

Note 2: EIRP PSD (dBm/MHz) = Total PSD (dBm/MHz) + Directional Antenna Gain for PSD (dBi).

Note 3: For Channels span the 5.725-5.850 GHz and 5.850-5.895 GHz bands, we record the maximum level of 5.725-5.850 GHz and 5.850-5.895 GHz with RBW=1MHz, and the level complied with the 5.850-5.895 GHz EIRP PSD Limit.

Power Spectral Density - Ant 0	
802.11ax-HE20 Channel 169 (5845MHz)	802.11ax-HE40 Channel 167 (5835MHz)
	
802.11ax-HE80 Channel 171 (5855MHz)	
	

Power Spectral Density - Ant 1	
802.11ax-HE20 Channel 169 (5845MHz)	802.11ax-HE40 Channel 167 (5835MHz)
	
802.11ax-HE80 Channel 171 (5855MHz)	
	

A.6 Frequency Stability Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-29		
Remark	Spot Check		
Test Mode	5845MHz (Carrier Mode)		

Voltage (%)	Power (VAC)	Temp (°C)	Frequency Tolerance (ppm)			
			0 minutes	2 minutes	5 minutes	10 minutes
100	120	- 20	11.28	11.27	11.27	11.26

Note: Frequency Tolerance (ppm) = {[Measured Frequency (Hz) - Declared Frequency (Hz)] / Declared Frequency (Hz)} *10^6.

A.7 Radiated Spurious Emission Test Result

Test Site	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11a – Channel 169
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	10086.5	46.4	-4.3	42.1	108.2	-66.1	Peak	Horizontal
	12041.5	46.4	-3.0	43.4	74.0	-30.6	Peak	Horizontal
*	13614.0	45.2	-0.4	44.8	108.2	-63.4	Peak	Horizontal
	15586.0	43.1	3.6	46.7	74.0	-27.3	Peak	Horizontal
	9066.5	47.3	-4.9	42.4	74.0	-31.6	Peak	Vertical
*	10010.0	46.1	-4.4	41.7	108.2	-66.5	Peak	Vertical
	11514.5	45.4	-3.2	42.2	74.0	-31.8	Peak	Vertical
*	13886.0	44.7	-0.5	44.2	108.2	-64.0	Peak	Vertical

Note 1: “*” is not in restricted band.

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

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

Test Site	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ac-VHT20 – Channel 169
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
*	10001.5	47.8	-4.5	43.3	108.2	-64.9	Peak	Horizontal
	11412.5	46.0	-3.5	42.5	74.0	-31.5	Peak	Horizontal
	12279.5	45.5	-2.8	42.7	74.0	-31.3	Peak	Horizontal
*	13784.0	44.8	-0.6	44.2	108.2	-64.0	Peak	Horizontal
	8412.0	47.2	-5.7	41.5	74.0	-32.5	Peak	Vertical
	11939.5	46.3	-3.1	43.2	74.0	-30.8	Peak	Vertical
*	13622.5	45.9	-0.9	45	108.2	-63.2	Peak	Vertical
*	14812.5	44.7	1.2	45.9	108.2	-62.3	Peak	Vertical

Note 1: “*” is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ac-VHT40 – Channel 167
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
*	10163.0	47.0	-4.5	42.5	108.2	-65.7	Peak	Horizontal
	11506.0	47.2	-3.1	44.1	74.0	-29.9	Peak	Horizontal
*	13775.5	45.8	-0.5	45.3	108.2	-62.9	Peak	Horizontal
	15577.5	43.9	3.4	47.3	74.0	-26.7	Peak	Horizontal
	8242.0	45.4	-5.4	40.0	74.0	-34.0	Peak	Vertical
	11489.0	46.0	-3.2	42.8	74.0	-31.2	Peak	Vertical
*	13724.5	45.5	-0.7	44.8	108.2	-63.4	Peak	Vertical
*	15008.0	43.9	1.3	45.2	108.2	-63.0	Peak	Vertical

Note 1: “*” is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ac-VHT80 – Channel 171
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	8140.0	48.5	-5.7	42.8	74.0	-31.2	Peak	Horizontal
*	10231.0	48.4	-5.1	43.3	108.2	-64.9	Peak	Horizontal
	11191.5	46.8	-3.8	43.0	74.0	-31.0	Peak	Horizontal
*	14081.5	44.9	-0.5	44.4	108.2	-63.8	Peak	Horizontal
	8429.0	47.0	-5.5	41.5	74.0	-32.5	Peak	Vertical
	11353.0	47.2	-2.9	44.3	74.0	-29.7	Peak	Vertical
*	13614.0	44.4	-0.4	44.0	108.2	-64.2	Peak	Vertical
*	15271.5	43.9	1.9	45.8	108.2	-62.4	Peak	Vertical

Note 1: "*" is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ac-VHT160 – Channel 163
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	8369.5	47.0	-5.2	41.8	74.0	-32.2	Peak	Horizontal
	11489.0	46.1	-3.2	42.9	74.0	-31.1	Peak	Horizontal
*	13886.0	45.5	-0.5	45.0	108.2	-63.2	Peak	Horizontal
*	14914.5	45.0	1.3	46.3	108.2	-61.9	Peak	Horizontal
	8429.0	46.6	-5.5	41.1	74.0	-32.9	Peak	Vertical
	11463.5	47.2	-3.5	43.7	74.0	-30.3	Peak	Vertical
*	13801.0	45.7	-0.4	45.3	108.2	-62.9	Peak	Vertical
*	14727.5	45.1	1.3	46.4	108.2	-61.8	Peak	Vertical

Note 1: “*” is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ax-HE20 – Channel 169
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	8429.0	47.8	-5.5	42.3	74.0	-31.7	Peak	Horizontal
	11463.5	47.2	-3.5	43.7	74.0	-30.3	Peak	Horizontal
*	13801.0	45.7	-0.4	45.3	108.2	-62.9	Peak	Horizontal
*	14727.5	45.1	1.3	46.4	108.2	-61.8	Peak	Horizontal
	9092.0	46.9	-5.0	41.9	74.0	-32.1	Peak	Vertical
*	10163.0	47.2	-4.5	42.7	108.2	-65.5	Peak	Vertical
	11412.5	46.8	-3.5	43.3	74.0	-30.7	Peak	Vertical
*	13835.0	45.1	-0.7	44.4	108.2	-63.8	Peak	Vertical

Note 1: "*" is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ax-HE40 – Channel 167
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	9058.0	48.0	-5.0	43.0	74.0	-31.0	Peak	Horizontal
*	10010.0	46.4	-4.4	42.0	108.2	-66.2	Peak	Horizontal
	11404.0	46.6	-3.7	42.9	74.0	-31.1	Peak	Horizontal
*	13622.5	45.9	-0.9	45.0	108.2	-63.2	Peak	Horizontal
	10639.0	46.8	-4.4	42.4	74.0	-31.6	Peak	Vertical
	11939.5	45.8	-3.1	42.7	74.0	-31.3	Peak	Vertical
*	13605.5	45.2	-0.7	44.5	108.2	-63.7	Peak	Vertical
*	14634.0	44.1	1.0	45.1	108.2	-63.1	Peak	Vertical

Note 1: “*” is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ax-HE80 – Channel 171
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	9151.5	46.3	-5.3	41.0	74.0	-33.0	Peak	Horizontal
	11378.5	46.1	-3.4	42.7	74.0	-31.3	Peak	Horizontal
*	12747.0	46.1	-2.5	43.6	108.2	-64.6	Peak	Horizontal
*	13801.0	44.2	-0.4	43.8	108.2	-64.4	Peak	Horizontal
*	9950.5	47.5	-4.7	42.8	108.2	-65.4	Peak	Vertical
	11506.0	46.0	-3.1	42.9	74.0	-31.1	Peak	Vertical
	12679.0	46.1	-2.5	43.6	74.0	-30.4	Peak	Vertical
*	13801.0	45.3	-0.4	44.9	108.2	-63.3	Peak	Vertical

Note 1: “*” is not in restricted band.

Note 2: 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	SIP-AC1	Test Engineer	Fusco Pan
Test Date	2023-10-23 ~ 2023-10-24	Test Mode	802.11ax-HE160 – Channel 163
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	9168.5	45.8	-5.2	40.6	74.0	-33.4	Peak	Horizontal
*	10282.0	47.3	-4.4	42.9	108.2	-65.3	Peak	Horizontal
	11718.5	45.8	-3.3	42.5	74.0	-31.5	Peak	Horizontal
*	13614.0	44.0	-0.4	43.6	108.2	-64.6	Peak	Horizontal
	9075.0	46.2	-4.8	41.4	74.0	-32.6	Peak	Vertical
*	10171.5	47.3	-4.5	42.8	108.2	-65.4	Peak	Vertical
	11897.0	45.6	-2.9	42.7	74.0	-31.3	Peak	Vertical
*	13801.0	45.4	-0.4	45.0	108.2	-63.2	Peak	Vertical

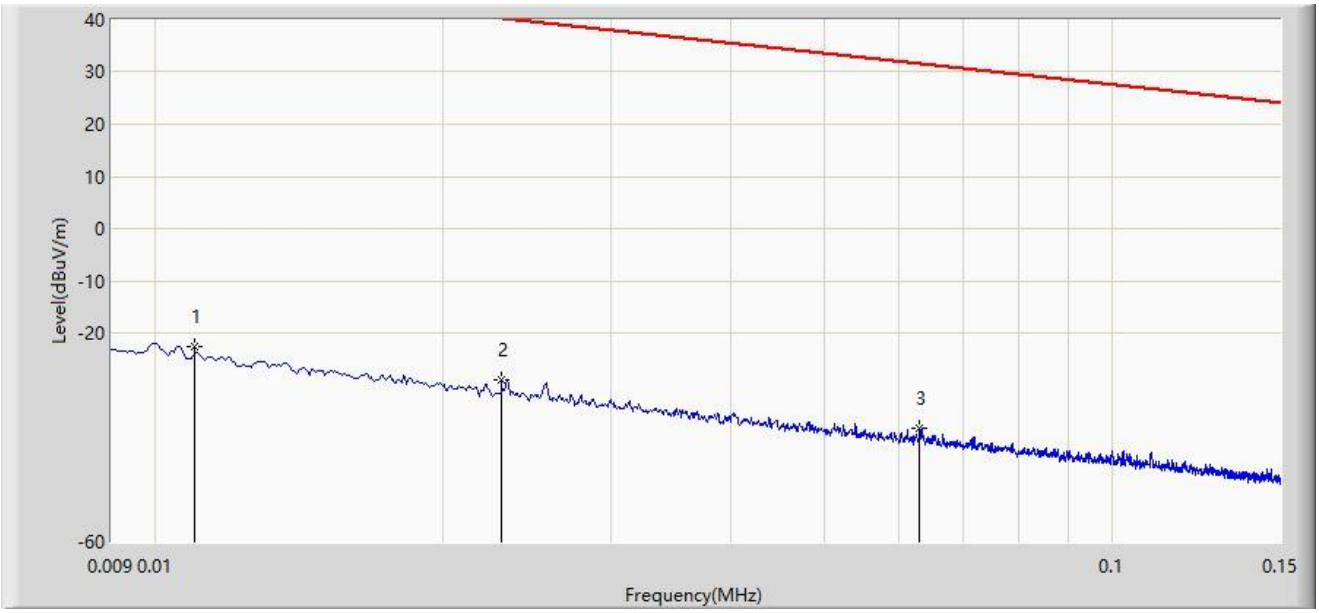
Note 1: “*” is not in restricted band.

Note 2: 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)

The Result of Radiated Emission below 30MHz:

Site: SIP-AC1	Test Date: 2023/10/26
Limit: FCC_Part 15.209_RSE(3m)_PK(9k-30M)	Engineer: Mero Zhou
Probe: FMZB1519B_9kHz-30MHz	Polarity: Coaxial
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	0.011	-22.495	37.064	-69.253	46.758	-59.559	PK
2		0.023	-29.070	30.977	-69.425	40.355	-60.047	PK
3		0.063	-38.243	22.564	-69.850	31.607	-60.807	PK

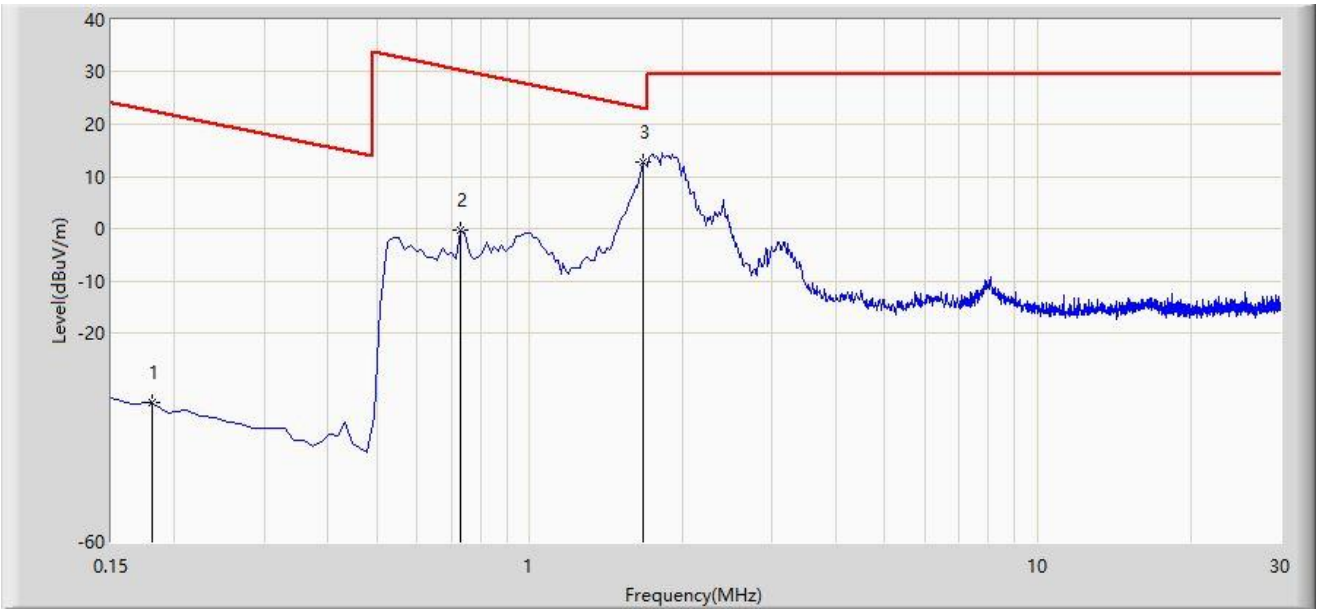
Note 1: " * ", means this data is the worst emission level.

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: SIP-AC1	Test Date: 2023/10/26
Limit: FCC_Part 15.209_RSE(3m)_PK(9k-30M)	Engineer: Mero Zhou
Probe: FMZB1519B_9kHz-30MHz	Polarity: Coaxial
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		0.180	-33.331	27.635	-55.825	22.494	-60.966	PK
2		0.732	-0.400	21.589	-30.724	30.324	-21.990	PK
3	*	1.672	12.753	34.432	-10.416	23.169	-21.679	PK

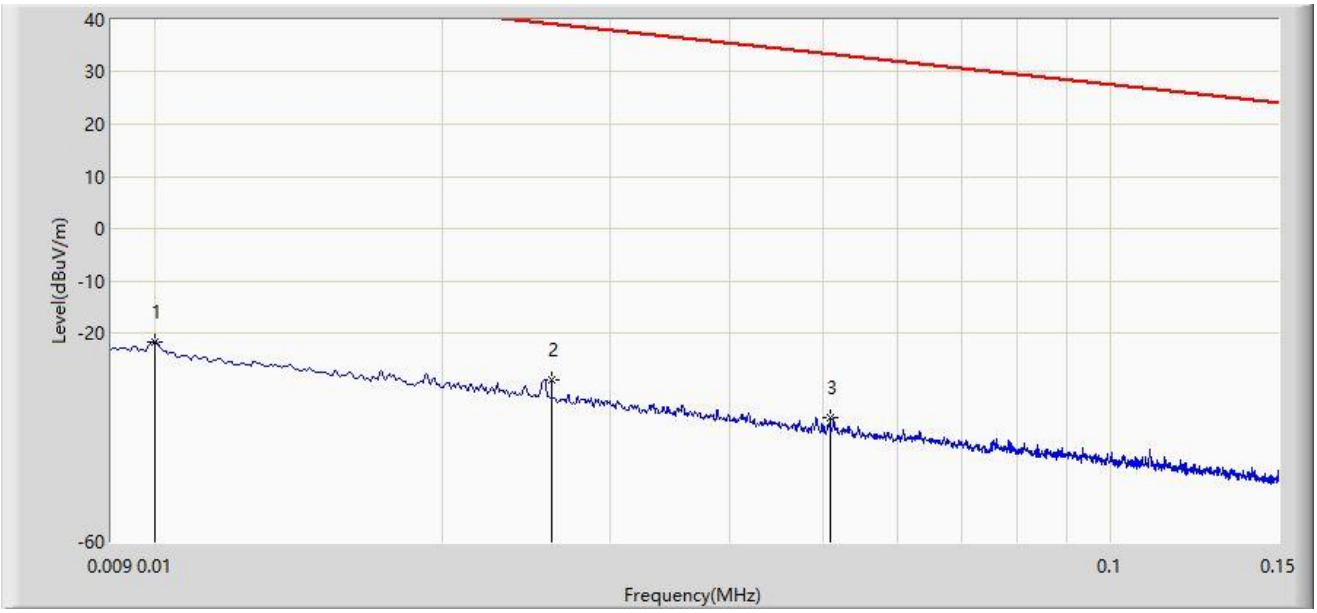
Note 1: " * ", means this data is the worst emission level.

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: SIP-AC1	Test Date: 2023/10/26
Limit: FCC_Part 15.209_RSE(3m)_PK(9k-30M)	Engineer: Mero Zhou
Probe: FMZB1519B_9kHz-30MHz	Polarity: Coplanar
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		0.010	-21.823	37.696	-69.408	47.585	-59.519	PK
2	*	0.026	-29.030	31.139	-68.320	39.290	-60.169	PK
3		0.051	-36.222	24.530	-69.664	33.442	-60.752	PK

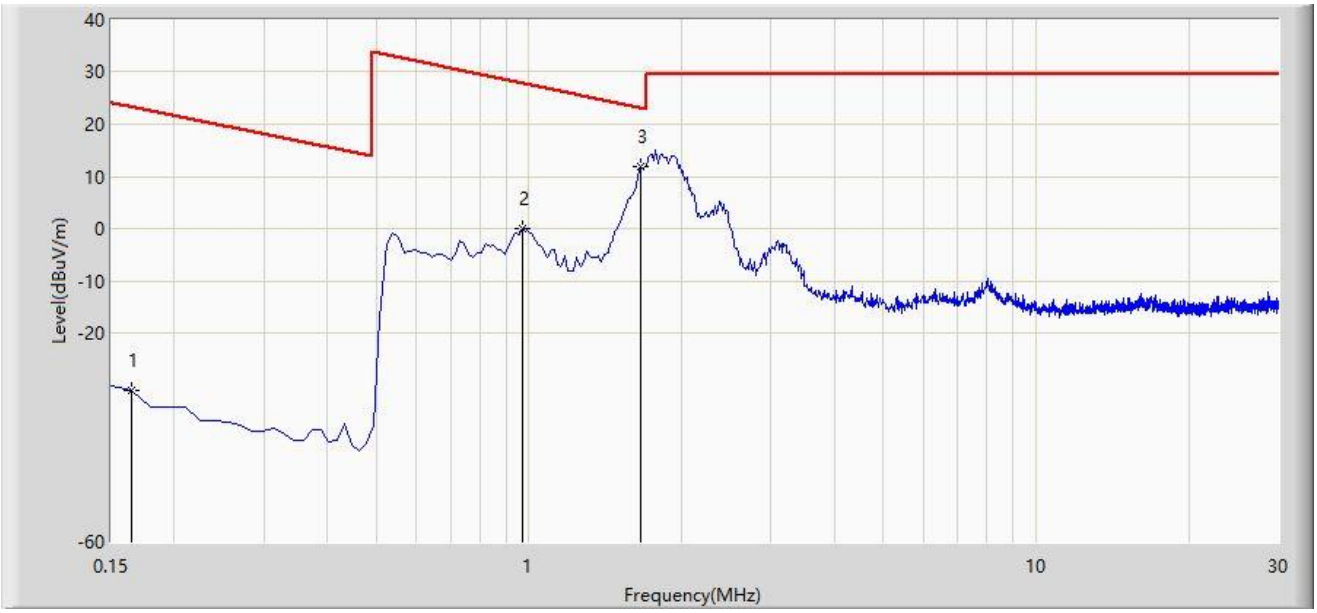
Note 1: " * ", means this data is the worst emission level.

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: SIP-AC1	Test Date: 2023/10/26
Limit: FCC_Part 15.209_RSE(3m)_PK(9k-30M)	Engineer: Mero Zhou
Probe: FMZB1519B_9kHz-30MHz	Polarity: Coplanar
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		0.165	-30.939	30.021	-54.188	23.249	-60.960	PK
2		0.971	-0.025	21.989	-27.901	27.876	-22.014	PK
3	*	1.657	11.962	33.650	-11.285	23.247	-21.688	PK

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

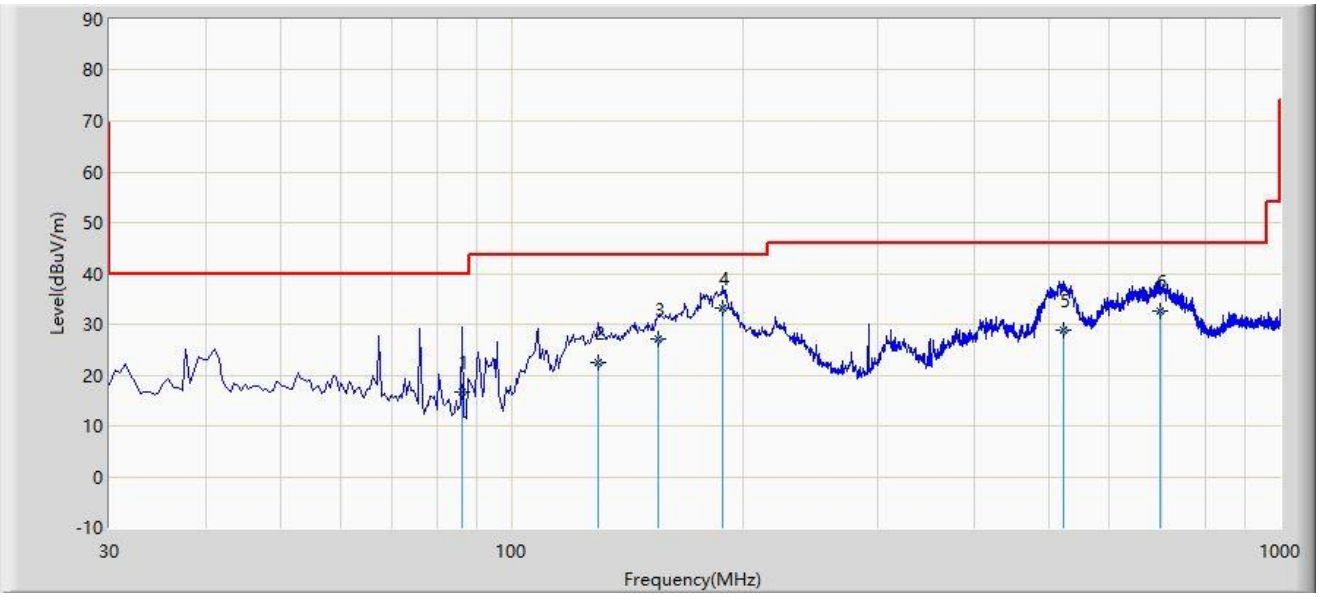
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

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 Emission below 1GHz:

Site: SIP-AC1	Test Date: 2023-11-01
Limit: FCC_Part15.209_RSE(3m)	Engineer: Mero Zhou
Probe: VULB 9168_00998_25-2000MHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		86.260	16.726	4.400	-23.274	40.000	12.326	QP
2		129.910	22.538	6.000	-20.962	43.500	16.538	QP
3		155.130	27.203	9.000	-16.297	43.500	18.203	QP
4	*	188.595	33.068	17.800	-10.432	43.500	15.268	QP
5		522.760	28.837	5.200	-17.163	46.000	23.637	QP
6		697.845	32.753	5.800	-13.247	46.000	26.953	QP

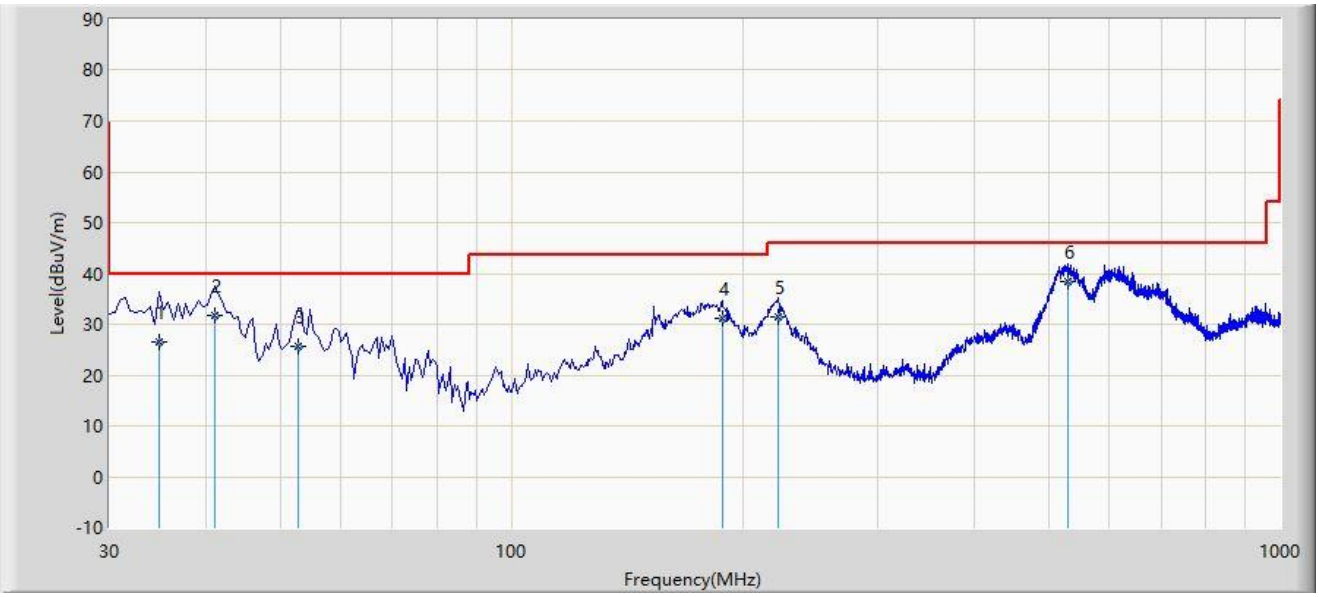
Note 1: " * ", means this data is the worst emission level.

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: SIP-AC1	Test Date: 2023-11-01
Limit: FCC_Part15.209_RSE(3m)	Engineer: Mero Zhou
Probe: VULB 9168_00998_25-2000MHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		34.850	26.654	9.800	-13.346	40.000	16.855	QP
2		41.155	31.639	14.000	-8.361	40.000	17.639	QP
3		52.795	25.694	7.800	-14.306	40.000	17.893	QP
4		188.110	31.101	15.800	-12.399	43.500	15.301	QP
5		222.545	31.594	16.900	-14.406	46.000	14.694	QP
6	*	529.065	38.506	14.800	-7.494	46.000	23.706	QP

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

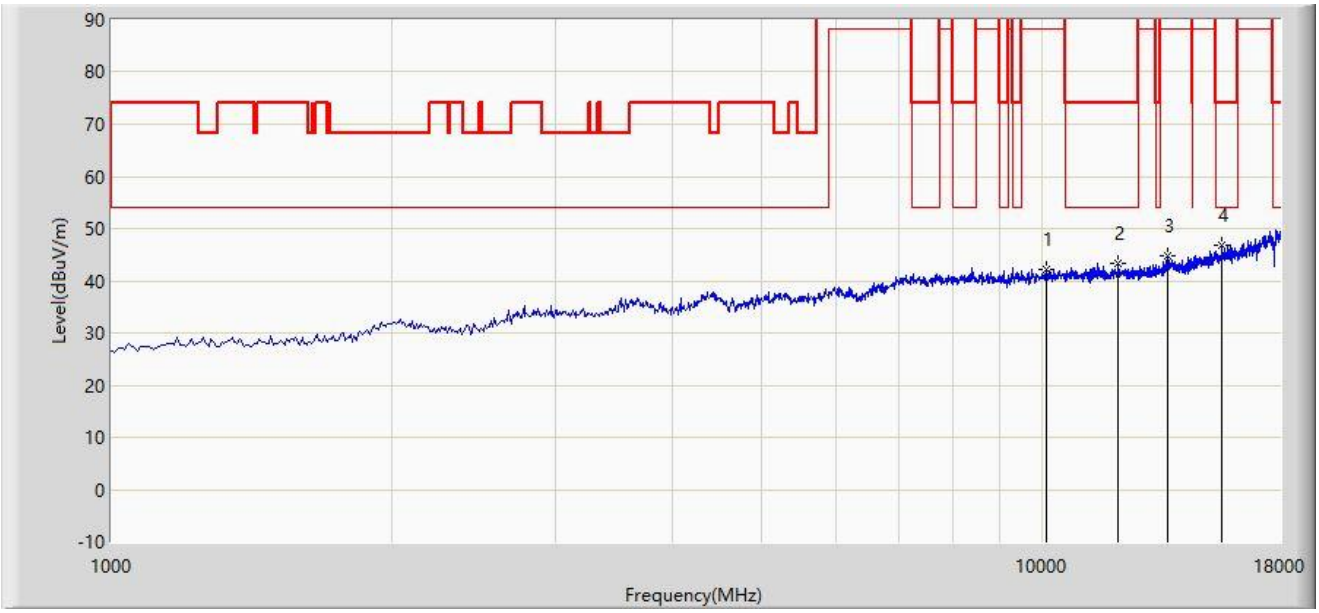
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

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 Emission between 1GHz ~ 18GHz:

Site: SIP-AC1	Test Date: 2023/10/23
Limit: FCC_Part15.209_RSE(3m)_5.9G	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Data: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		10086.500	42.094	46.391	-66.106	108.200	-4.298	PK
2		12041.500	43.350	46.379	-30.650	74.000	-3.029	PK
3		13614.000	44.826	45.229	-63.374	108.200	-0.403	PK
4	*	15586.000	46.701	43.124	-27.299	74.000	3.577	PK

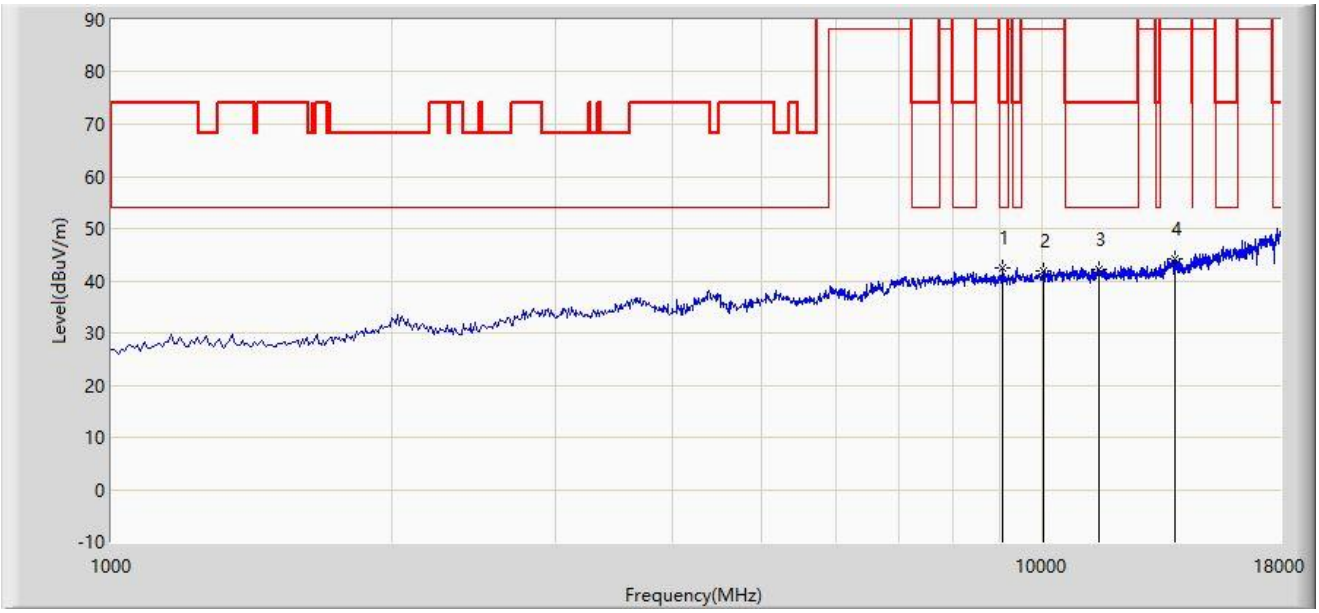
Note 1: " * ", means this data is the worst emission level.

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: SIP-AC1	Test Date: 2023/10/23
Limit: FCC_Part15.209_RSE(3m)_5.9G	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Data: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	9066.500	42.477	47.349	-31.523	74.000	-4.872	PK
2		10010.000	41.770	46.143	-66.430	108.200	-4.373	PK
3		11514.500	42.203	45.427	-31.797	74.000	-3.225	PK
4		13886.000	44.160	44.660	-64.040	108.200	-0.500	PK

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

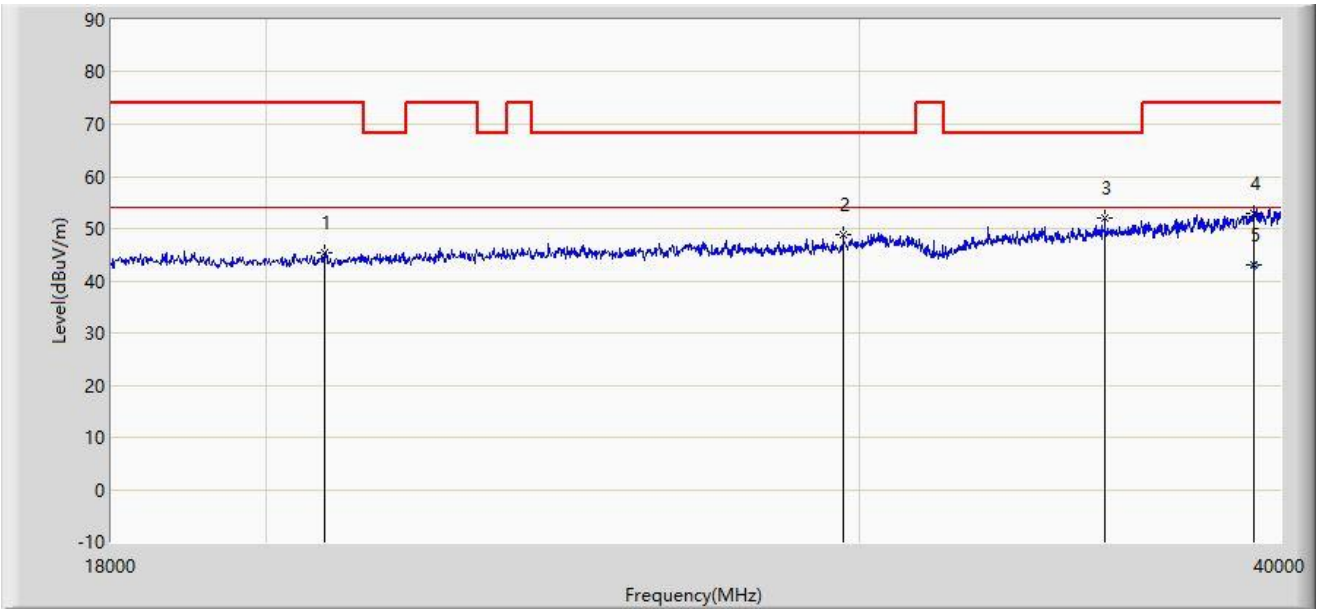
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

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 Emission between 18GHz ~ 40GHz:

Site: SIP-AC2	Test Date: 2023/10/25
Limit: FCC_Part15.209_RSE(3m)	Engineer: Fusco Pan
Probe: BBHA 9170_00934_18-40GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		20827.000	45.496	56.574	-28.504	74.000	-11.079	PK
2		29682.000	48.818	57.946	-19.382	68.200	-9.128	PK
3		35490.000	51.979	58.618	-16.221	68.200	-6.639	PK
4		39274.000	52.966	53.226	-21.034	74.000	-0.260	PK
5	*	39274.000	42.960	43.220	-11.040	54.000	-0.260	AV

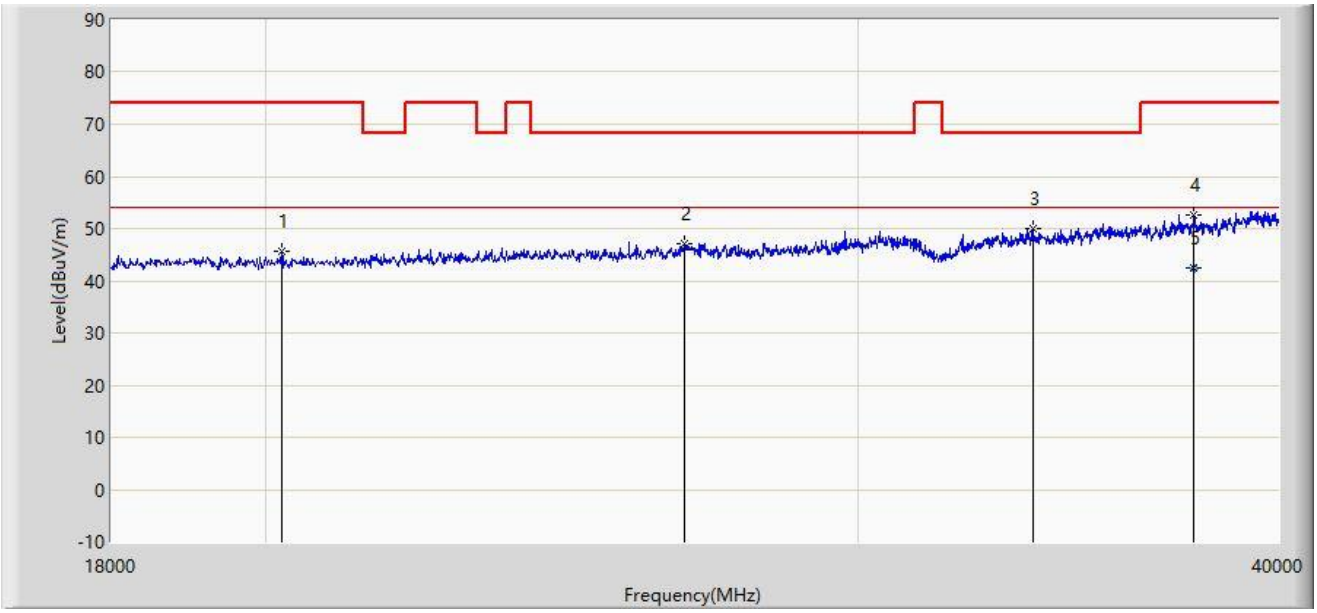
Note 1: " * ", means this data is the worst emission level.

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: SIP-AC2	Test Date: 2023/10/25
Limit: FCC_Part15.209_RSE(3m)	Engineer: Fusco Pan
Probe: BBHA 9170_00934_18-40GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		20233.000	45.563	57.202	-28.437	74.000	-11.638	PK
2		26646.000	47.072	55.191	-21.128	68.200	-8.119	PK
3		33818.000	49.995	59.208	-18.205	68.200	-9.213	PK
4		37767.000	52.739	55.819	-21.261	74.000	-3.081	PK
5	*	37767.000	42.580	45.660	-11.420	54.000	-3.081	AV

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

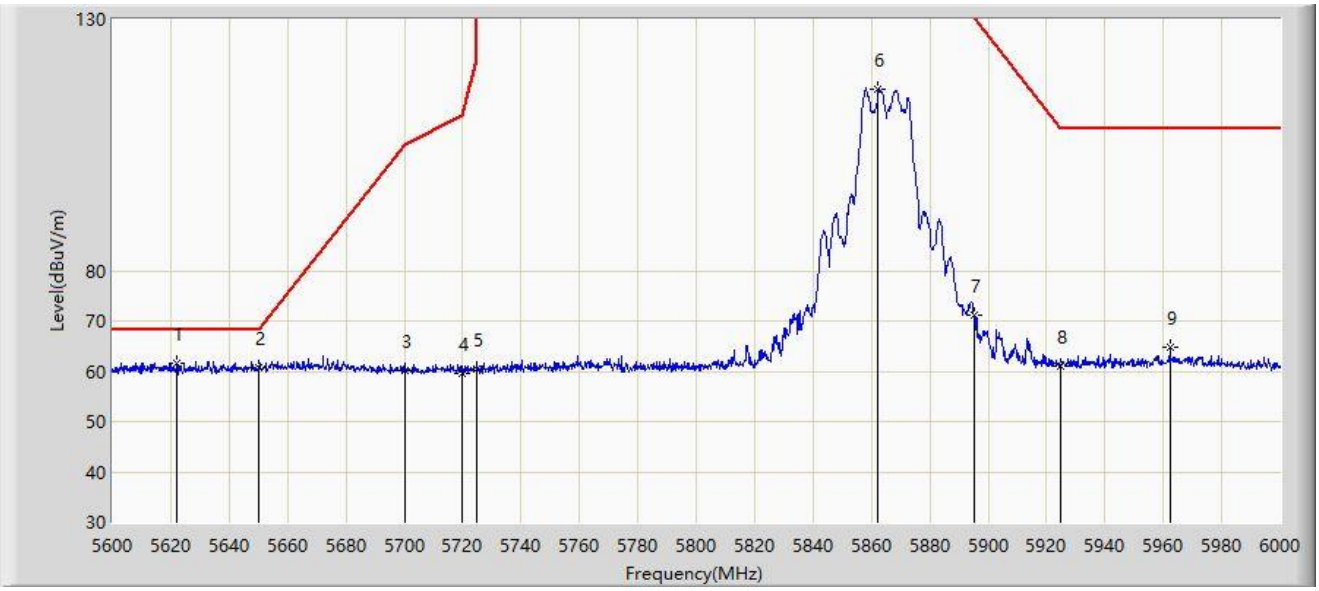
Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

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.

A.8 Radiated Restricted Band Edge Test Result

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



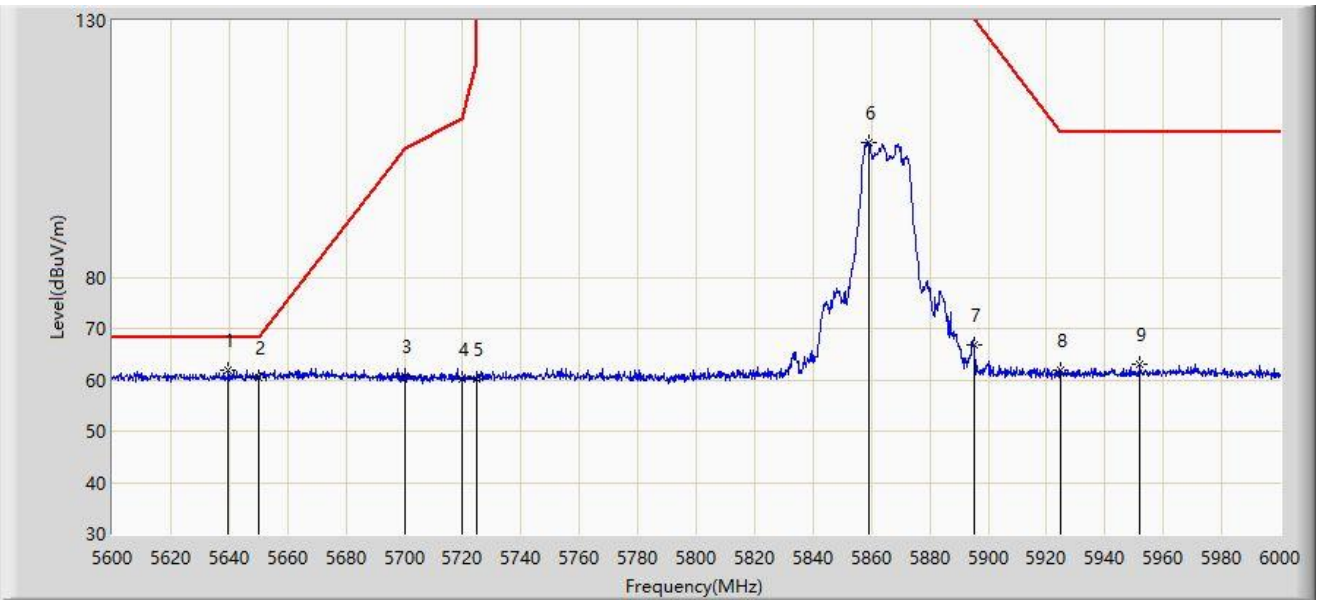
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5622.200	61.640	70.932	-6.560	68.200	-9.292	PK
2		5650.000	60.664	69.632	-7.536	68.200	-8.968	PK
3		5700.000	60.023	69.320	-45.177	105.200	-9.297	PK
4		5720.000	59.631	68.924	-51.169	110.800	-9.293	PK
5		5725.000	60.404	69.671	-61.796	122.200	-9.267	PK
6		5862.400	115.963	124.593	N/A	N/A	-8.631	PK
7		5895.000	71.209	79.969	-58.991	130.200	-8.760	PK
8		5925.000	61.011	69.625	-47.189	108.200	-8.614	PK
9		5962.400	64.904	73.229	-43.296	108.200	-8.325	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11a at 5845MHz	



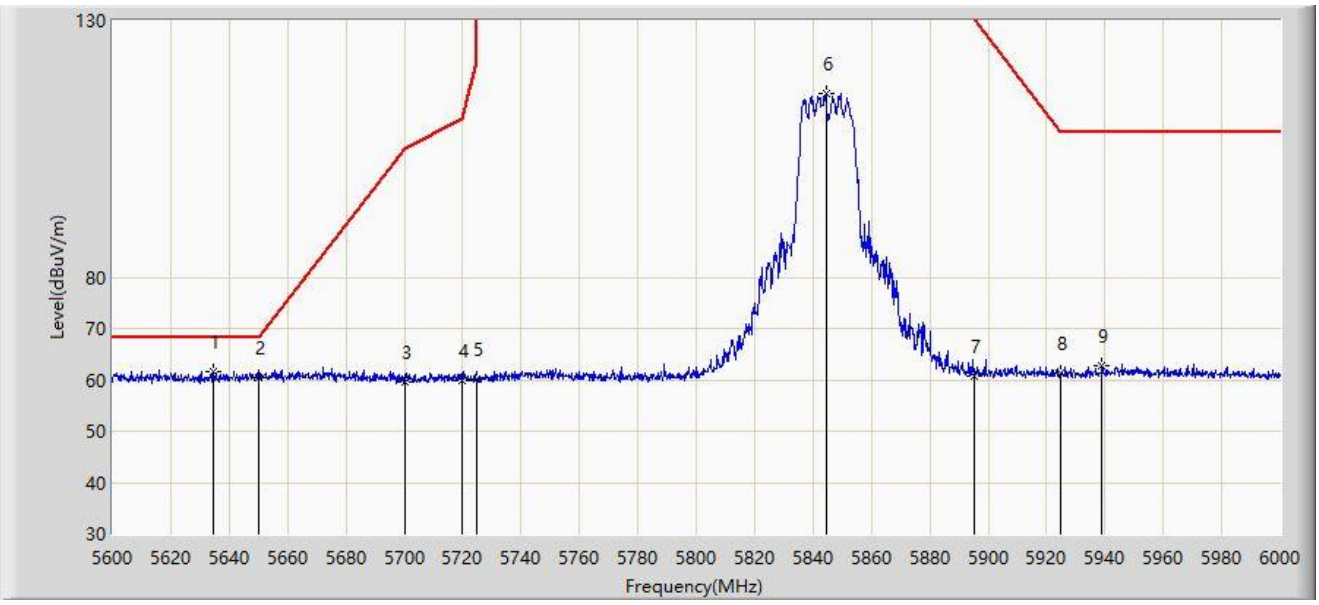
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5639.800	61.985	71.131	-6.215	68.200	-9.147	PK
2		5650.000	60.427	69.395	-7.773	68.200	-8.968	PK
3		5700.000	60.599	69.896	-44.601	105.200	-9.297	PK
4		5720.000	60.146	69.439	-50.654	110.800	-9.293	PK
5		5725.000	60.032	69.299	-62.168	122.200	-9.267	PK
6		5859.000	106.355	114.955	N/A	N/A	-8.600	PK
7		5895.000	66.888	75.648	-63.312	130.200	-8.760	PK
8		5925.000	61.903	70.517	-46.297	108.200	-8.614	PK
9		5952.000	63.175	71.651	-45.025	108.200	-8.475	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT20 at 5845MHz	



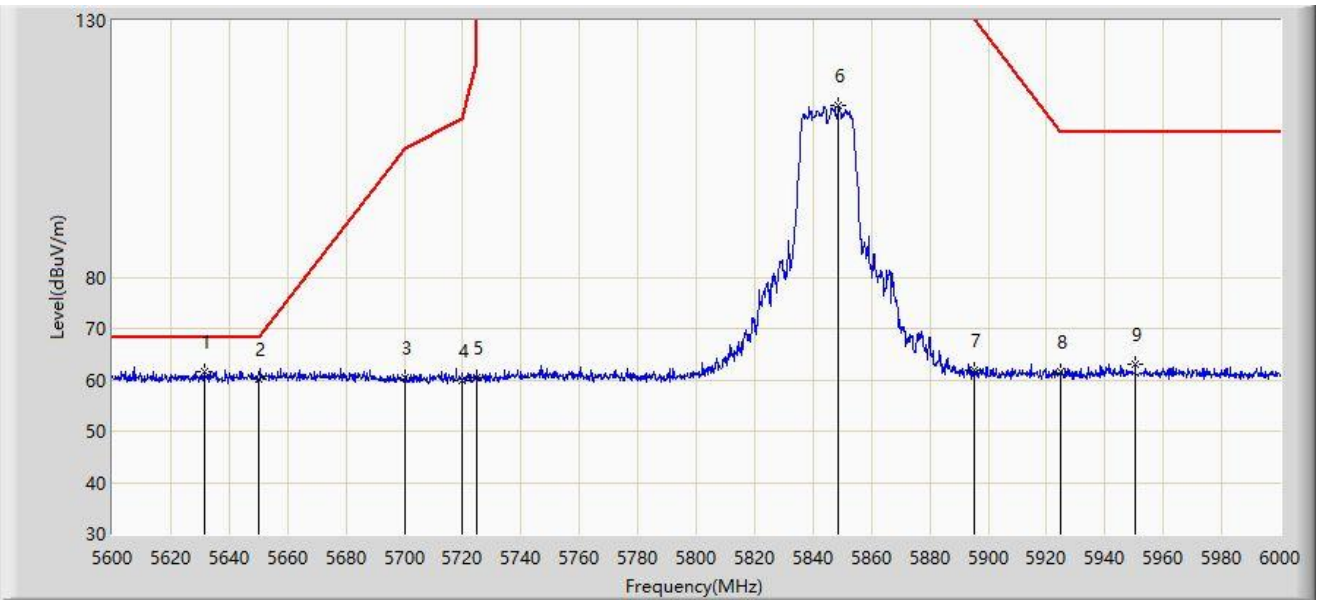
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5634.800	61.523	70.721	-6.677	68.200	-9.198	PK
2		5650.000	60.573	69.541	-7.627	68.200	-8.968	PK
3		5700.000	59.637	68.934	-45.563	105.200	-9.297	PK
4		5720.000	59.897	69.190	-50.903	110.800	-9.293	PK
5		5725.000	60.230	69.497	-61.970	122.200	-9.267	PK
6		5844.400	115.898	124.376	N/A	N/A	-8.477	PK
7		5895.000	60.863	69.623	-69.337	130.200	-8.760	PK
8		5925.000	61.222	69.836	-46.978	108.200	-8.614	PK
9		5939.000	62.819	71.404	-45.381	108.200	-8.585	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT20 at 5845MHz	



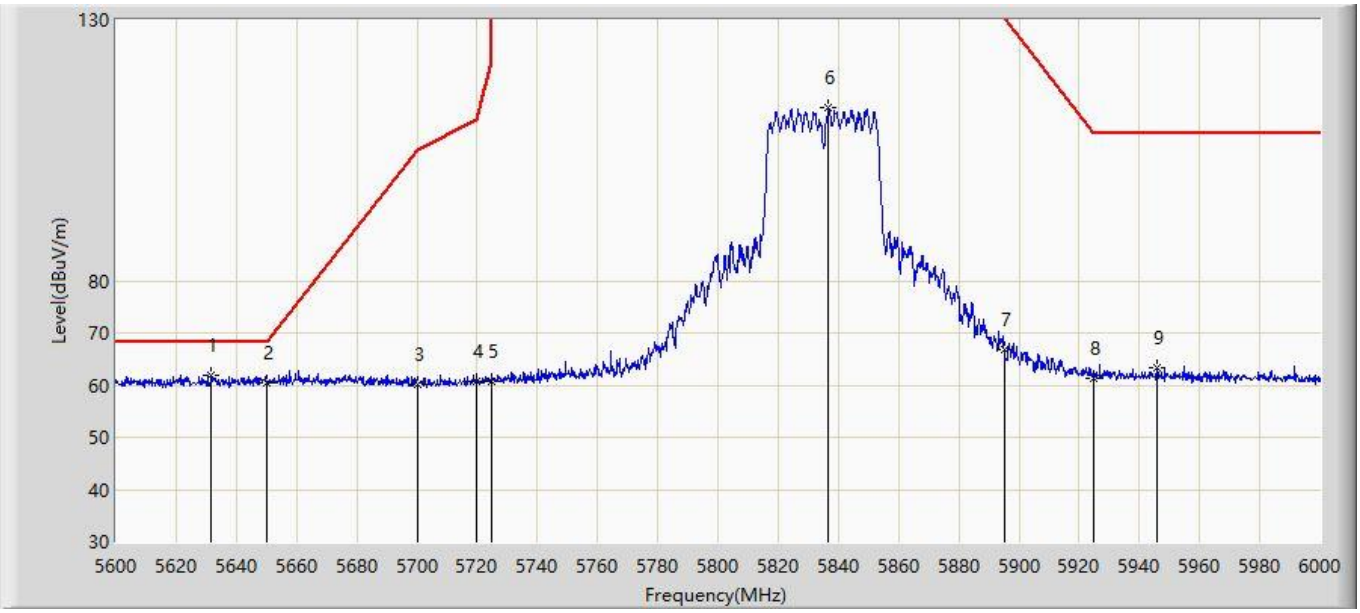
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5631.400	61.635	70.867	-6.565	68.200	-9.233	PK
2		5650.000	60.191	69.159	-8.009	68.200	-8.968	PK
3		5700.000	60.482	69.779	-44.718	105.200	-9.297	PK
4		5720.000	59.903	69.196	-50.897	110.800	-9.293	PK
5		5725.000	60.360	69.627	-61.840	122.200	-9.267	PK
6		5848.800	113.407	121.911	N/A	N/A	-8.505	PK
7		5895.000	61.795	70.555	-68.405	130.200	-8.760	PK
8		5925.000	61.524	70.138	-46.676	108.200	-8.614	PK
9		5950.400	63.121	71.620	-45.079	108.200	-8.499	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT40 at 5835MHz	



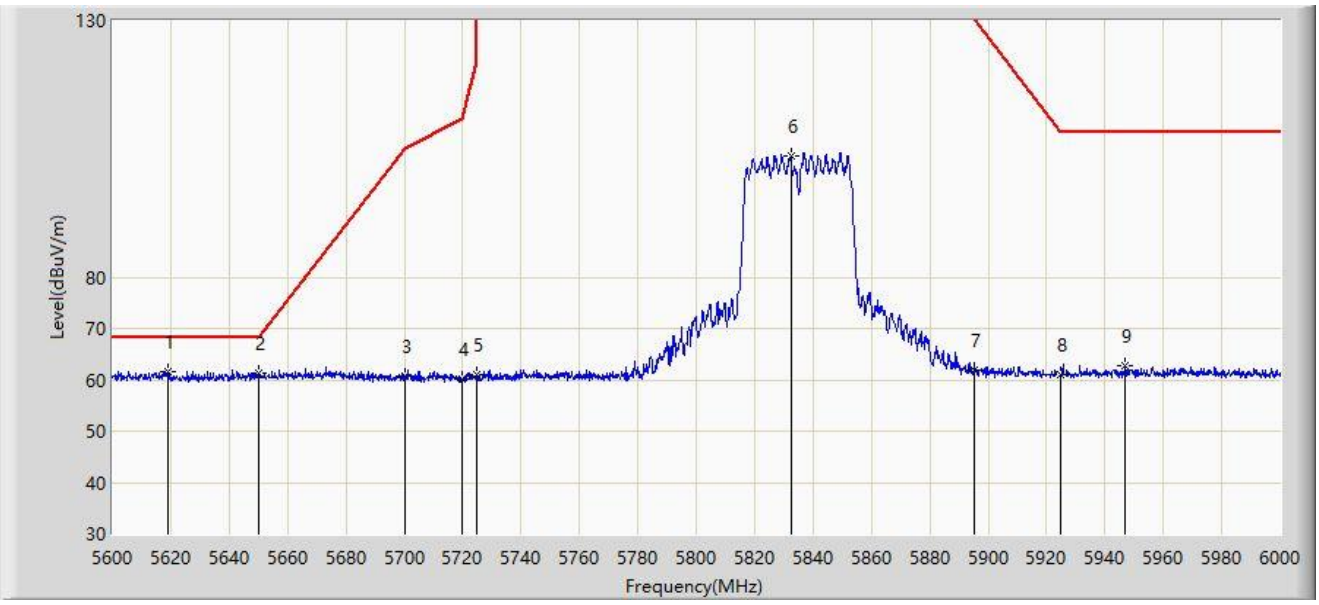
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	5631.600	61.877	71.107	-6.323	68.200	-9.231	PK
2		5650.000	60.395	69.363	-7.805	68.200	-8.968	PK
3		5700.000	60.117	69.414	-45.083	105.200	-9.297	PK
4		5720.000	60.582	69.875	-50.218	110.800	-9.293	PK
5		5725.000	60.691	69.958	-61.509	122.200	-9.267	PK
6		5836.800	113.277	121.870	N/A	N/A	-8.593	PK
7		5895.000	66.821	75.581	-63.379	130.200	-8.760	PK
8		5925.000	61.365	69.979	-46.835	108.200	-8.614	PK
9		5945.800	63.419	71.973	-44.781	108.200	-8.553	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT40 at 5835MHz	



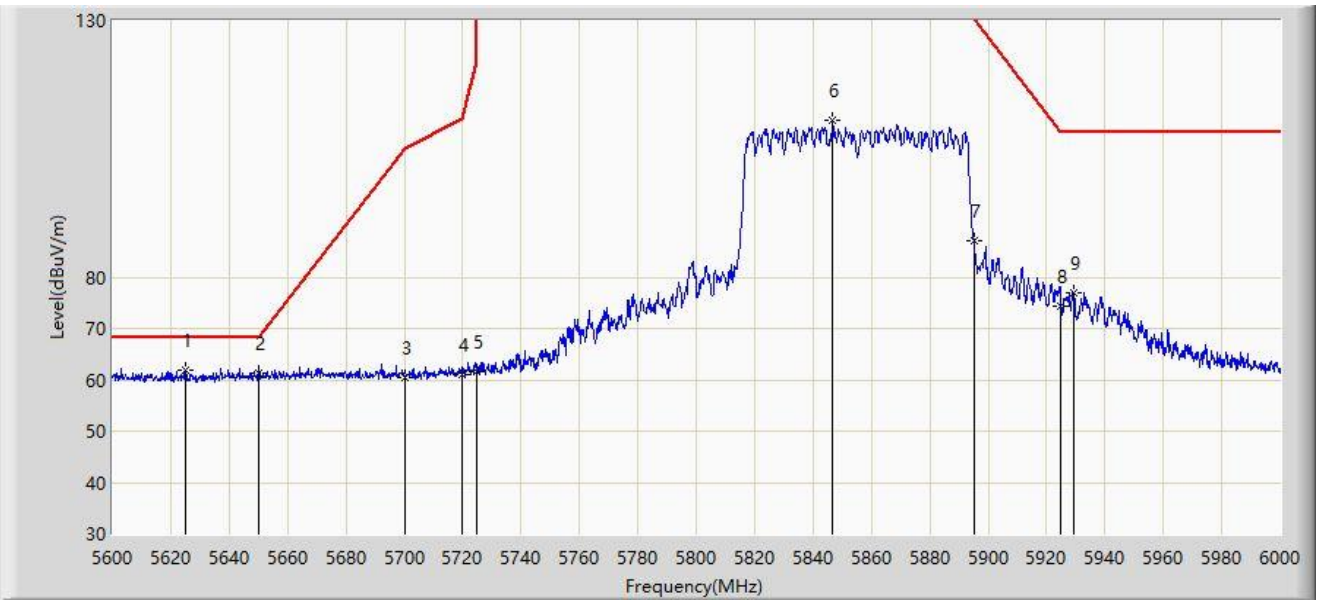
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5619.200	61.542	70.806	-6.658	68.200	-9.265	PK
2		5650.000	61.329	70.297	-6.871	68.200	-8.968	PK
3		5700.000	60.595	69.892	-44.605	105.200	-9.297	PK
4		5720.000	60.089	69.382	-50.711	110.800	-9.293	PK
5		5725.000	61.147	70.414	-61.053	122.200	-9.267	PK
6		5832.400	103.561	112.221	N/A	N/A	-8.659	PK
7		5895.000	61.998	70.758	-68.202	130.200	-8.760	PK
8		5925.000	61.075	69.689	-47.125	108.200	-8.614	PK
9		5947.000	62.852	71.400	-45.348	108.200	-8.548	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT80 at 5855MHz	



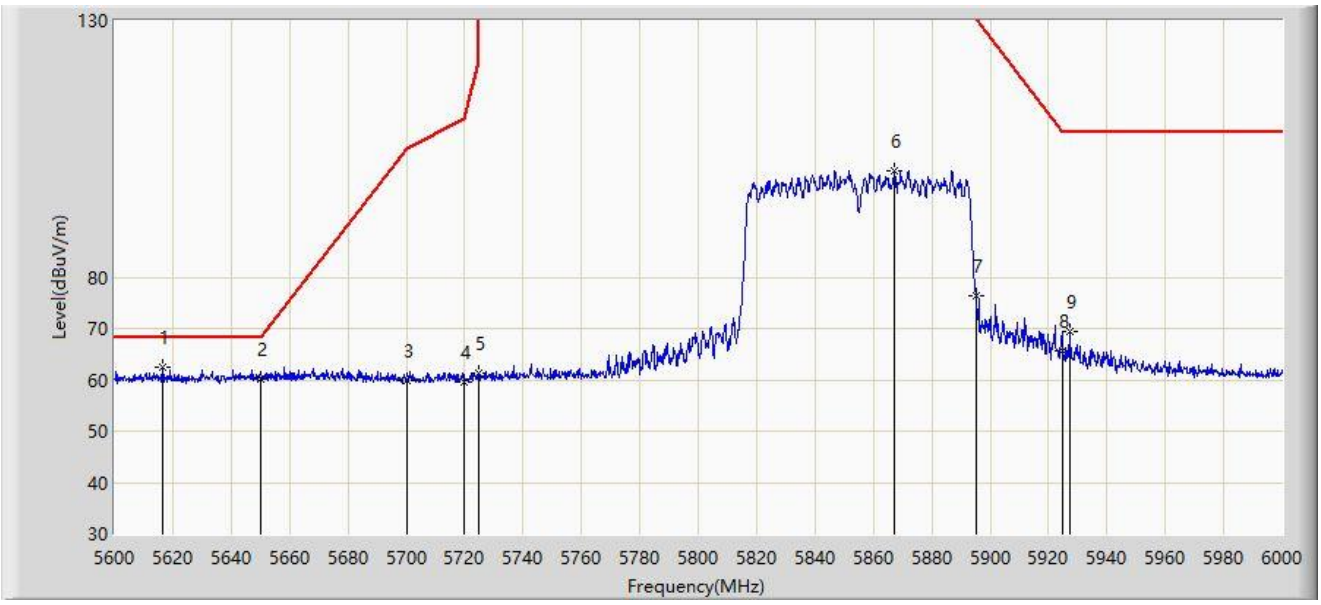
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5625.200	61.916	71.212	-6.284	68.200	-9.295	PK
2		5650.000	61.266	70.234	-6.934	68.200	-8.968	PK
3		5700.000	60.408	69.705	-44.792	105.200	-9.297	PK
4		5720.000	61.023	70.316	-49.777	110.800	-9.293	PK
5		5725.000	61.483	70.750	-60.717	122.200	-9.267	PK
6		5846.800	110.443	118.929	N/A	N/A	-8.486	PK
7		5895.000	87.131	95.891	-43.069	130.200	-8.760	PK
8		5925.000	74.391	83.005	-33.809	108.200	-8.614	PK
9		5929.200	77.025	85.649	-31.175	108.200	-8.624	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT80 at 5855MHz	



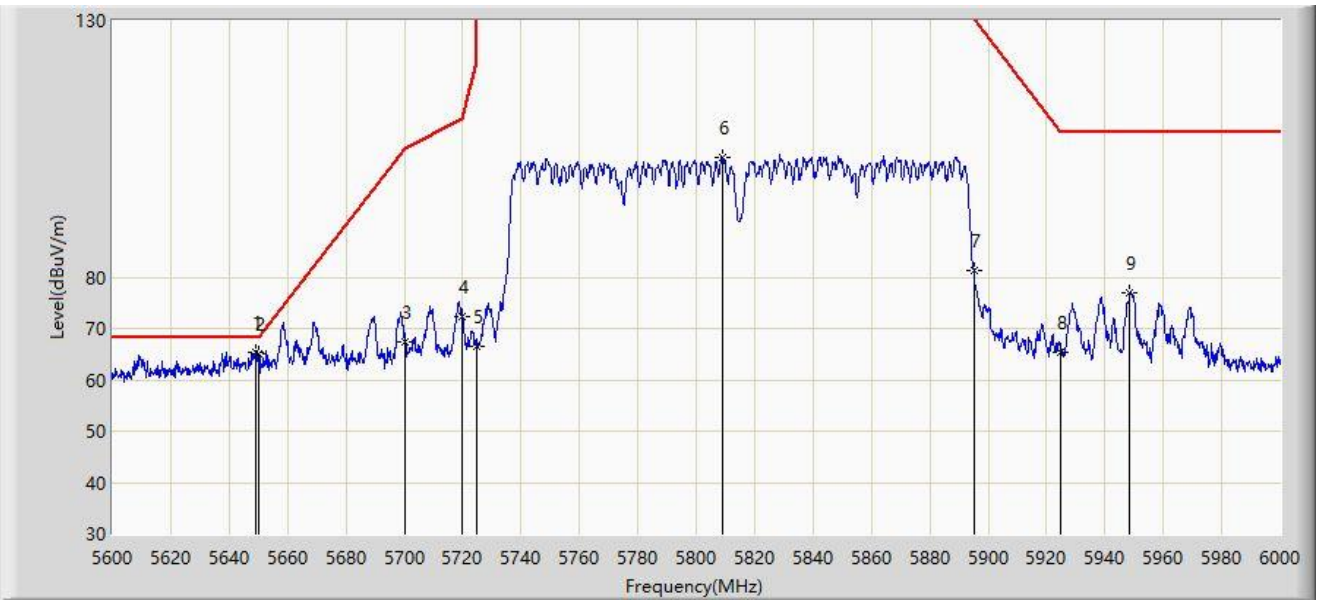
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5616.600	62.428	71.669	-5.772	68.200	-9.240	PK
2		5650.000	60.215	69.183	-7.985	68.200	-8.968	PK
3		5700.000	59.845	69.142	-45.355	105.200	-9.297	PK
4		5720.000	59.617	68.910	-51.183	110.800	-9.293	PK
5		5725.000	61.321	70.588	-60.879	122.200	-9.267	PK
6		5867.400	100.724	109.377	N/A	N/A	-8.653	PK
7		5895.000	76.387	85.147	-53.813	130.200	-8.760	PK
8		5925.000	65.708	74.322	-42.492	108.200	-8.614	PK
9		5927.200	69.457	78.076	-38.743	108.200	-8.619	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT160 at 5815MHz	



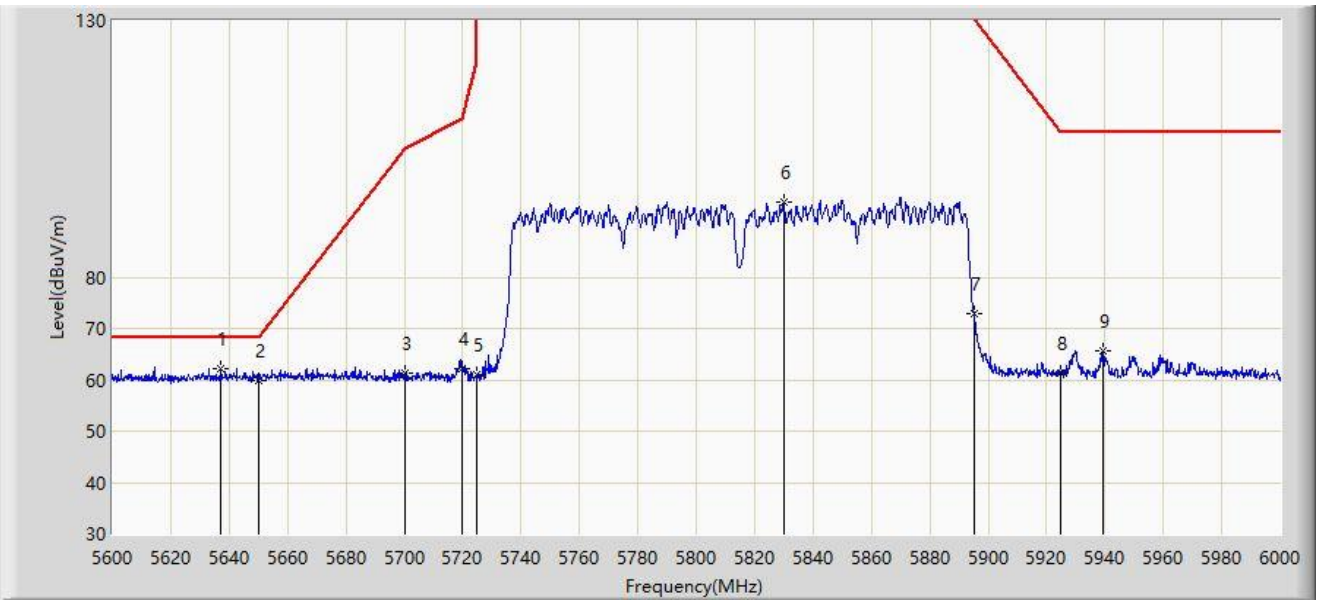
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5649.000	65.288	74.274	-2.912	68.200	-8.987	PK
2		5650.000	64.961	73.929	-3.239	68.200	-8.968	PK
3		5700.000	67.258	76.555	-37.942	105.200	-9.297	PK
4		5720.000	72.216	81.509	-38.584	110.800	-9.293	PK
5		5725.000	66.525	75.792	-55.675	122.200	-9.267	PK
6		5808.800	103.383	112.354	N/A	N/A	-8.972	PK
7		5895.000	81.377	90.137	-48.823	130.200	-8.760	PK
8		5925.000	65.446	74.060	-42.754	108.200	-8.614	PK
9		5948.600	76.937	85.462	-31.263	108.200	-8.525	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ac-VHT160 at 5815MHz	



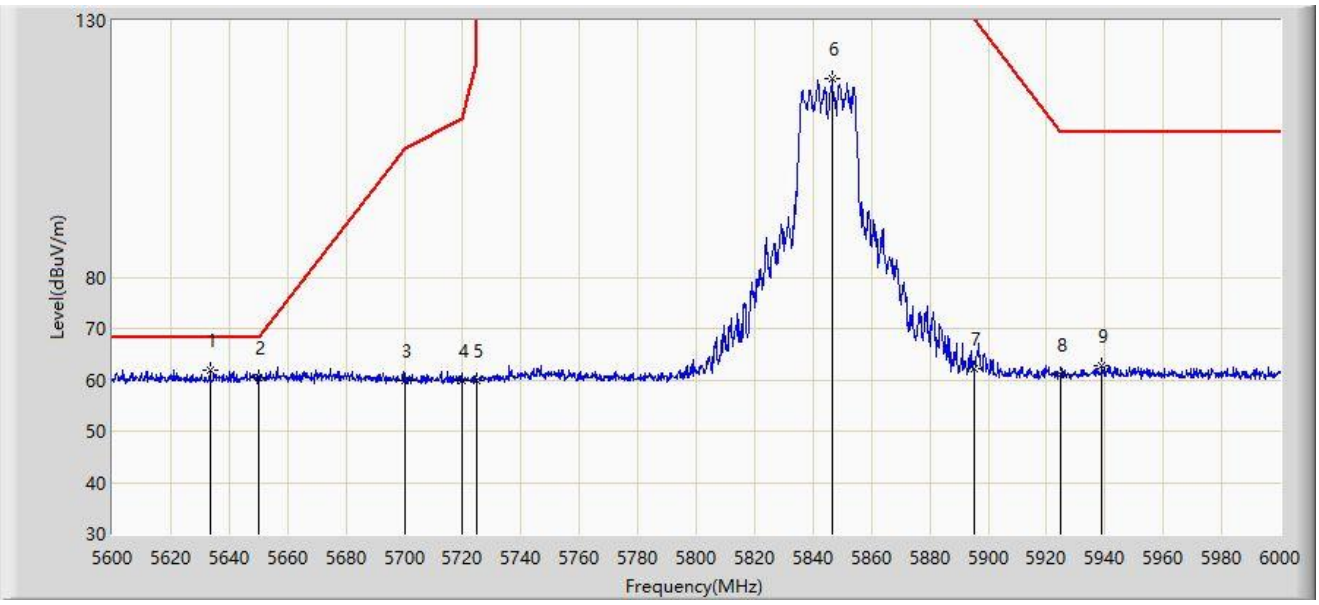
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5637.200	62.179	71.352	-6.021	68.200	-9.174	PK
2		5650.000	59.887	68.855	-8.313	68.200	-8.968	PK
3		5700.000	61.207	70.504	-43.993	105.200	-9.297	PK
4		5720.000	62.204	71.497	-48.596	110.800	-9.293	PK
5		5725.000	61.084	70.351	-61.116	122.200	-9.267	PK
6		5830.000	94.779	103.475	N/A	N/A	-8.696	PK
7		5895.000	72.779	81.539	-57.421	130.200	-8.760	PK
8		5925.000	61.374	69.988	-46.826	108.200	-8.614	PK
9		5939.400	65.726	74.309	-42.474	108.200	-8.582	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE20 at 5845MHz	



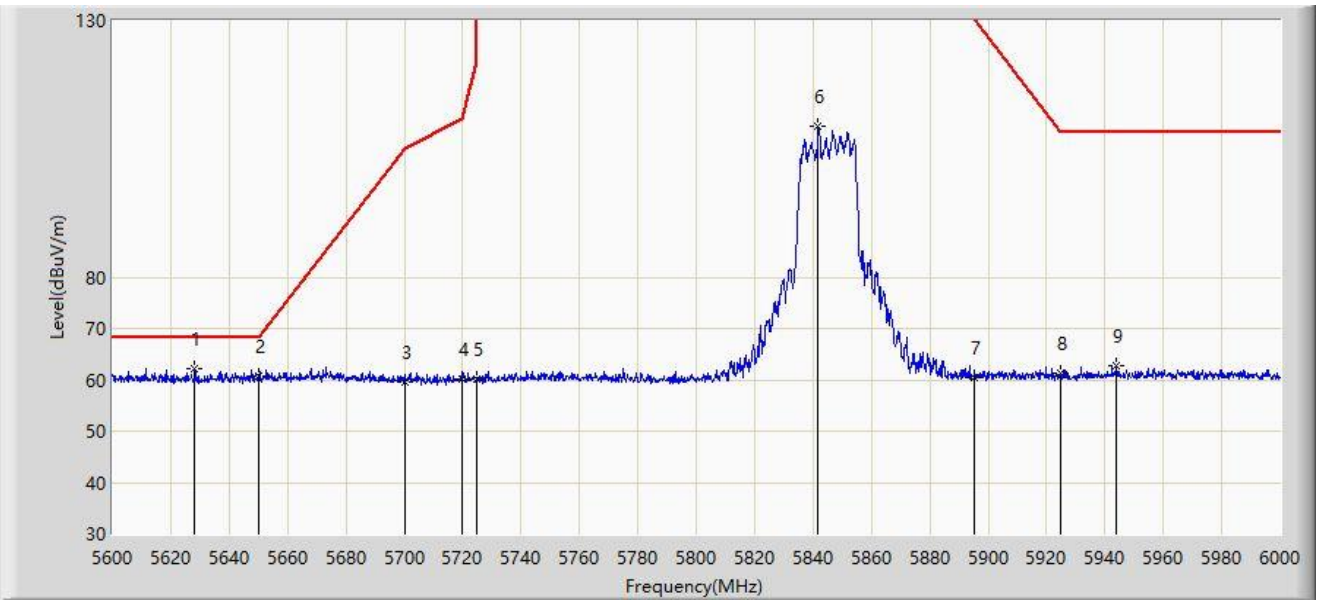
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5633.400	61.885	71.097	-6.315	68.200	-9.212	PK
2		5650.000	60.484	69.452	-7.716	68.200	-8.968	PK
3		5700.000	59.762	69.059	-45.438	105.200	-9.297	PK
4		5720.000	59.962	69.255	-50.838	110.800	-9.293	PK
5		5725.000	59.817	69.084	-62.383	122.200	-9.267	PK
6		5846.600	118.582	127.066	N/A	N/A	-8.483	PK
7		5895.000	62.209	70.969	-67.991	130.200	-8.760	PK
8		5925.000	61.096	69.710	-47.104	108.200	-8.614	PK
9		5939.000	62.800	71.385	-45.400	108.200	-8.585	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE20 at 5845MHz	



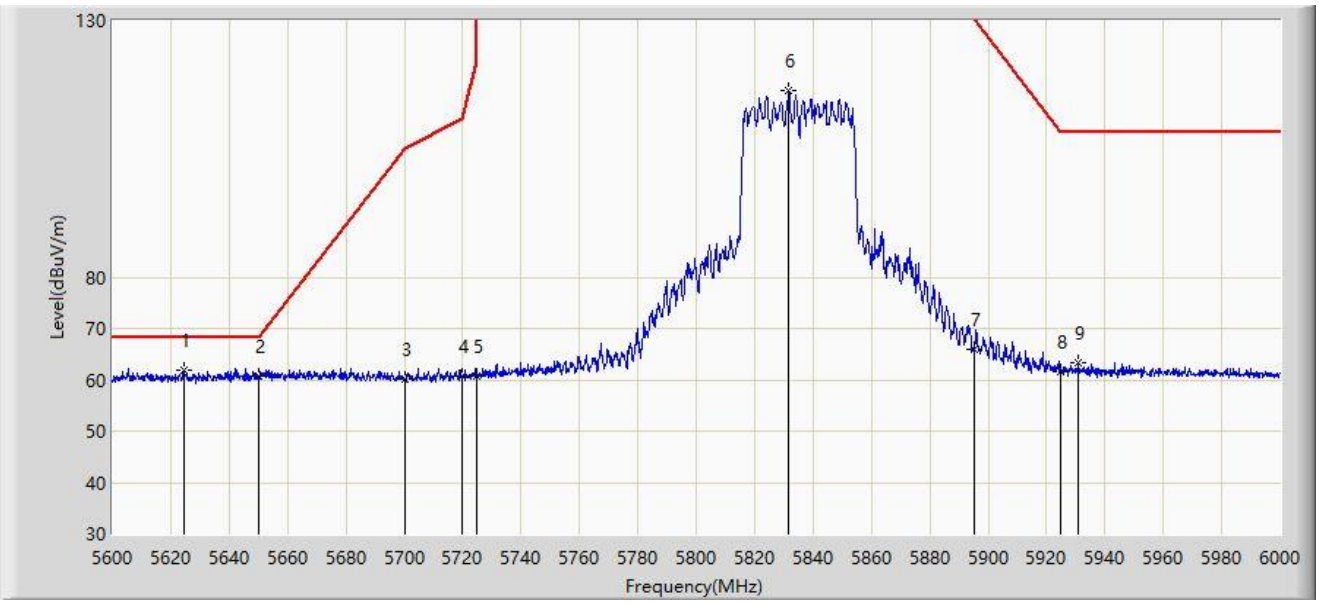
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5628.200	62.070	71.335	-6.130	68.200	-9.265	PK
2		5650.000	60.604	69.572	-7.596	68.200	-8.968	PK
3		5700.000	59.549	68.846	-45.651	105.200	-9.297	PK
4		5720.000	60.135	69.428	-50.665	110.800	-9.293	PK
5		5725.000	60.018	69.285	-62.182	122.200	-9.267	PK
6		5841.800	109.461	117.978	N/A	N/A	-8.518	PK
7		5895.000	60.370	69.130	-69.830	130.200	-8.760	PK
8		5925.000	61.166	69.780	-47.034	108.200	-8.614	PK
9		5944.000	62.808	71.370	-45.392	108.200	-8.561	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE40 at 5835MHz	



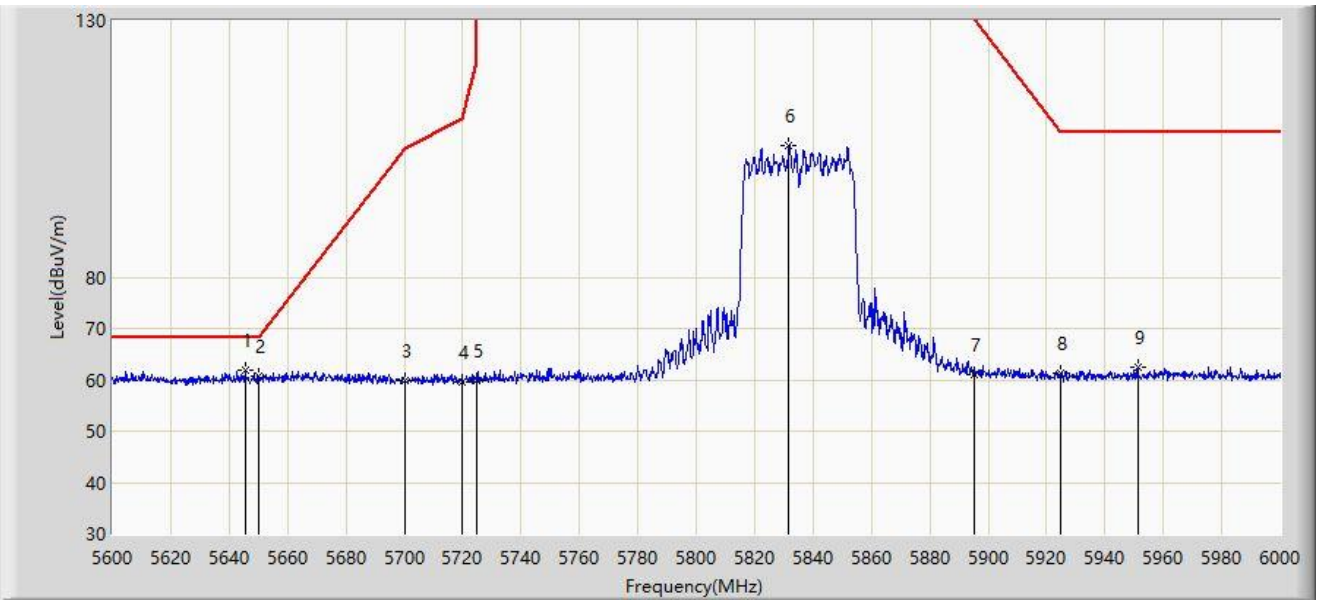
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5624.400	61.839	71.143	-6.361	68.200	-9.304	PK
2		5650.000	60.806	69.774	-7.394	68.200	-8.968	PK
3		5700.000	60.152	69.449	-45.048	105.200	-9.297	PK
4		5720.000	60.685	69.978	-50.115	110.800	-9.293	PK
5		5725.000	60.663	69.930	-61.537	122.200	-9.267	PK
6		5831.600	116.433	125.105	N/A	N/A	-8.672	PK
7		5895.000	65.893	74.653	-64.307	130.200	-8.760	PK
8		5925.000	61.702	70.316	-46.498	108.200	-8.614	PK
9		5930.800	63.299	71.922	-44.901	108.200	-8.623	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE40 at 5835MHz	



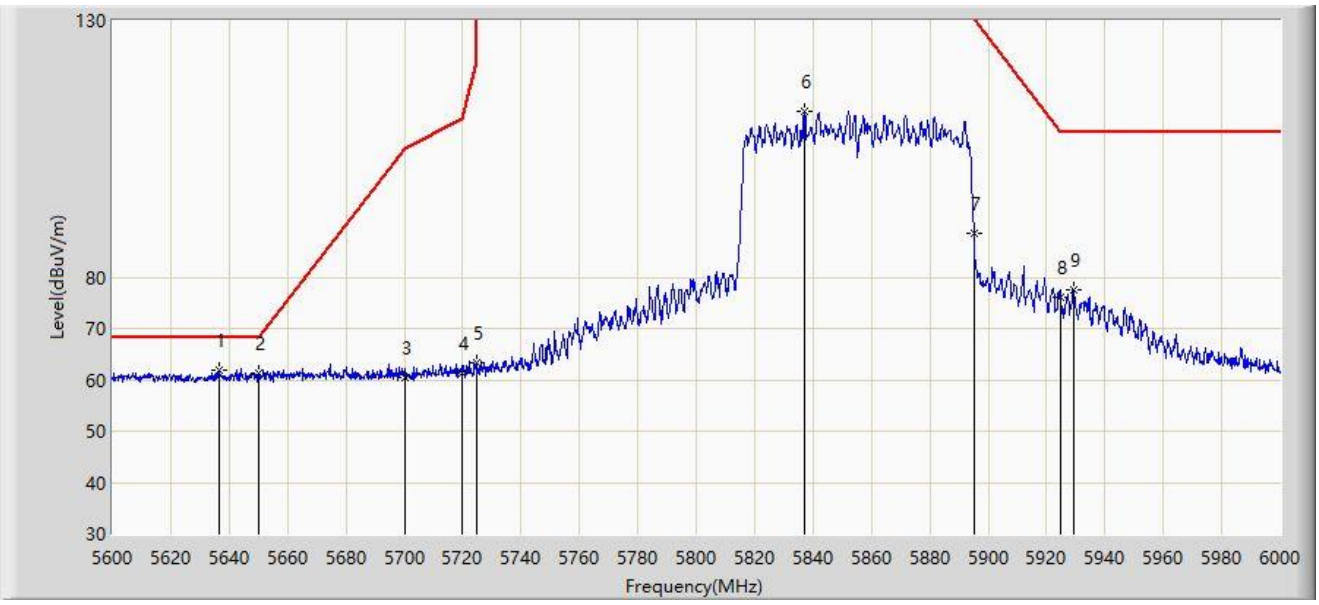
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5645.400	61.908	70.961	-6.292	68.200	-9.052	PK
2		5650.000	60.816	69.784	-7.384	68.200	-8.968	PK
3		5700.000	59.966	69.263	-45.234	105.200	-9.297	PK
4		5720.000	59.611	68.904	-51.189	110.800	-9.293	PK
5		5725.000	59.889	69.156	-62.311	122.200	-9.267	PK
6		5831.800	105.645	114.314	N/A	N/A	-8.670	PK
7		5895.000	60.871	69.631	-69.329	130.200	-8.760	PK
8		5925.000	61.392	70.006	-46.808	108.200	-8.614	PK
9		5951.200	62.513	71.000	-45.687	108.200	-8.487	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE80 at 5855MHz	



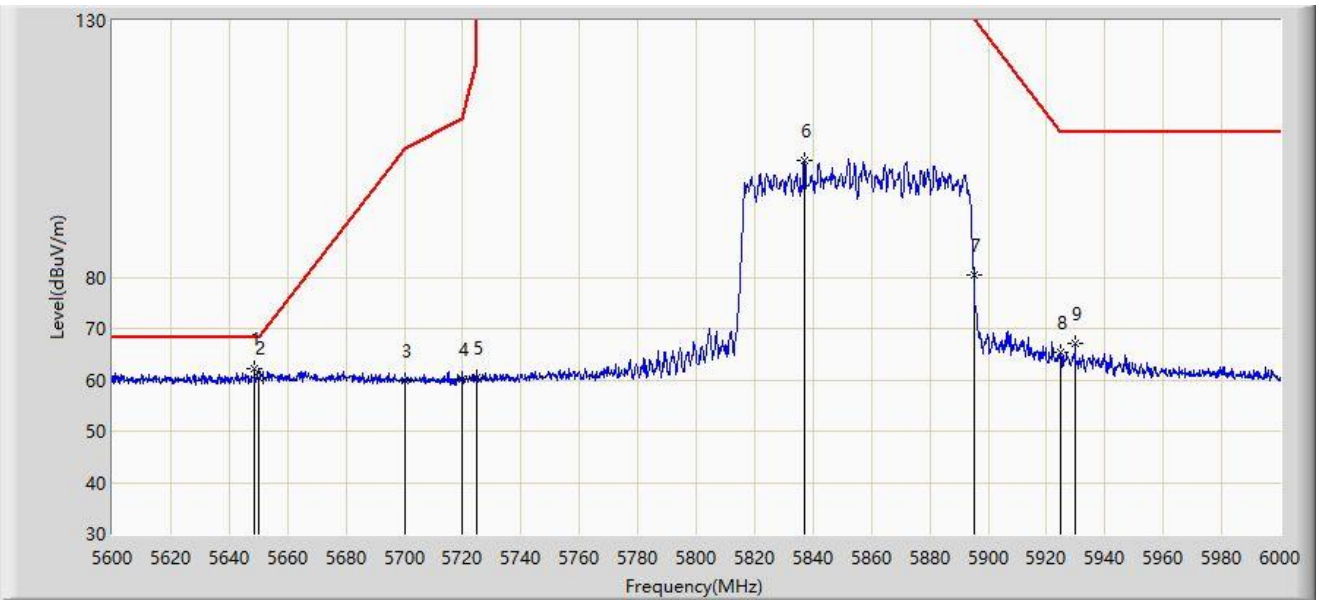
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5636.400	61.977	71.158	-6.223	68.200	-9.182	PK
2		5650.000	61.300	70.268	-6.900	68.200	-8.968	PK
3		5700.000	60.334	69.631	-44.866	105.200	-9.297	PK
4		5720.000	61.319	70.612	-49.481	110.800	-9.293	PK
5		5725.000	63.216	72.483	-58.984	122.200	-9.267	PK
6		5837.000	112.243	120.833	N/A	N/A	-8.590	PK
7		5895.000	88.611	97.371	-41.589	130.200	-8.760	PK
8		5925.000	76.202	84.816	-31.998	108.200	-8.614	PK
9		5929.400	77.449	86.074	-30.751	108.200	-8.625	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE80 at 5855MHz	



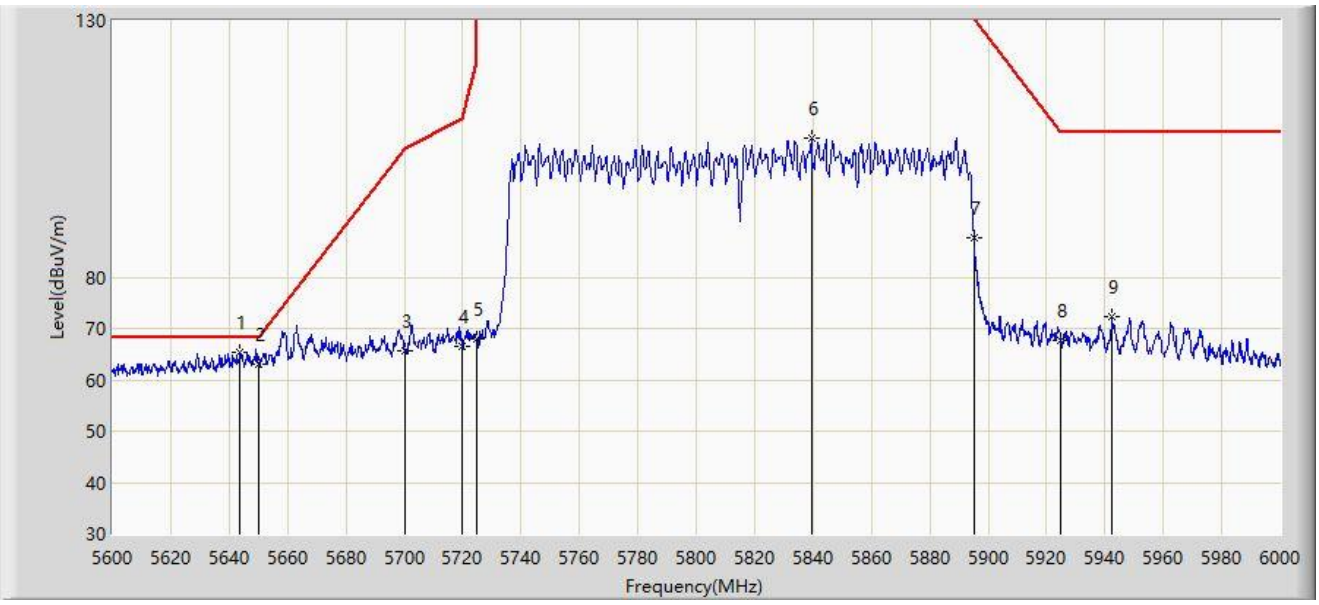
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5648.600	62.076	71.070	-6.124	68.200	-8.994	PK
2		5650.000	60.510	69.478	-7.690	68.200	-8.968	PK
3		5700.000	59.718	69.015	-45.482	105.200	-9.297	PK
4		5720.000	60.211	69.504	-50.589	110.800	-9.293	PK
5		5725.000	60.410	69.677	-61.790	122.200	-9.267	PK
6		5837.200	102.845	111.432	N/A	N/A	-8.587	PK
7		5895.000	80.405	89.165	-49.795	130.200	-8.760	PK
8		5925.000	65.259	73.873	-42.941	108.200	-8.614	PK
9		5929.800	67.177	75.803	-41.023	108.200	-8.626	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE160 at 5815MHz	



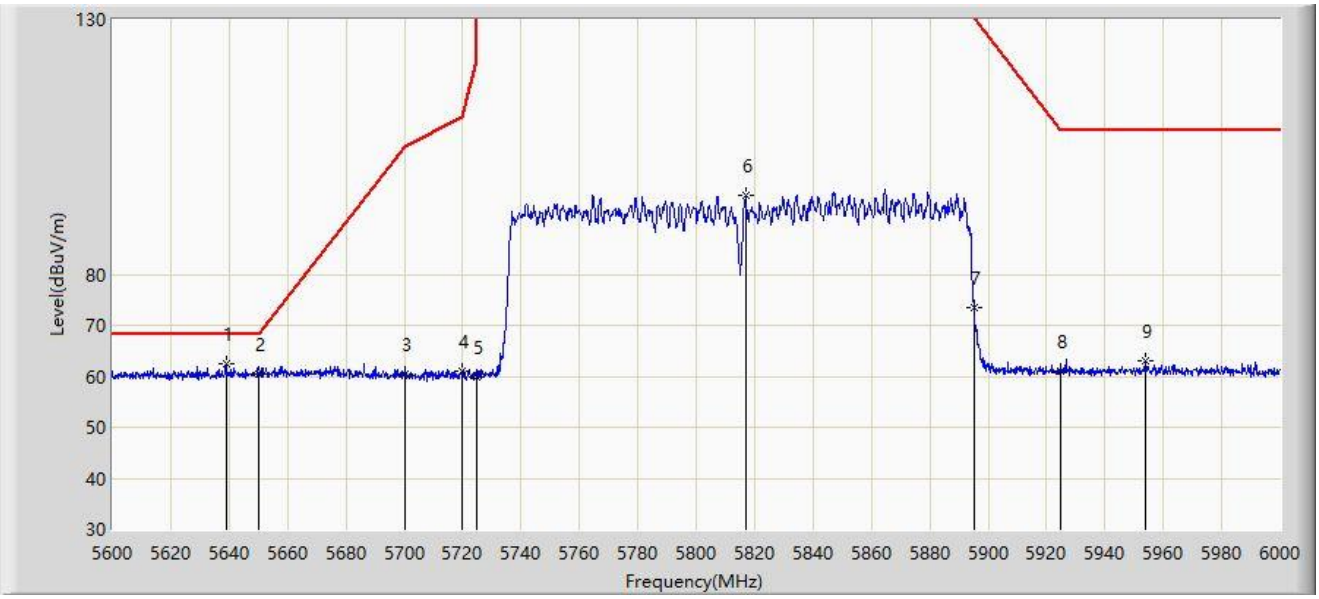
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5643.800	65.322	74.404	-2.878	68.200	-9.082	PK
2		5650.000	62.925	71.893	-5.275	68.200	-8.968	PK
3		5700.000	65.560	74.857	-39.640	105.200	-9.297	PK
4		5720.000	66.515	75.808	-44.285	110.800	-9.293	PK
5		5725.000	67.838	77.105	-54.362	122.200	-9.267	PK
6		5839.400	106.984	115.538	N/A	N/A	-8.554	PK
7		5895.000	87.562	96.322	-42.638	130.200	-8.760	PK
8		5925.000	67.580	76.194	-40.620	108.200	-8.614	PK
9		5942.400	72.212	80.781	-35.988	108.200	-8.569	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).

Site: SIP-AC1	Test Date: 2023-10-23
Limit: FCC_5.9G_RE(3m)	Engineer: Fusco Pan
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: ACCESS POINT	Power: By PoE
Test Mode: Transmit by 802.11ax-HE160 at 5815MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5639.000	62.376	71.531	-5.824	68.200	-9.155	PK
2		5650.000	60.323	69.291	-7.877	68.200	-8.968	PK
3		5700.000	60.308	69.605	-44.892	105.200	-9.297	PK
4		5720.000	61.062	70.355	-49.738	110.800	-9.293	PK
5		5725.000	59.782	69.049	-62.418	122.200	-9.267	PK
6		5817.000	95.441	104.303	N/A	N/A	-8.863	PK
7		5895.000	73.537	82.297	-56.663	130.200	-8.760	PK
8		5925.000	60.970	69.584	-47.230	108.200	-8.614	PK
9		5954.000	63.002	71.449	-45.198	108.200	-8.446	PK

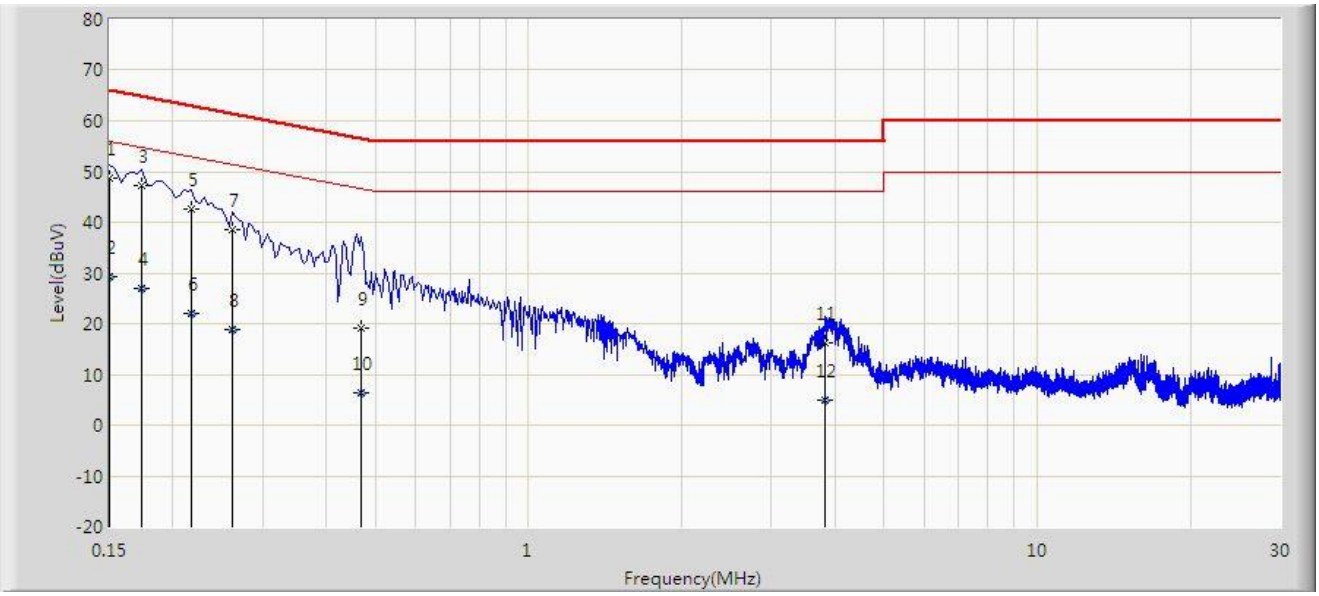
Note 1: " * ", means this data is the worst emission level.

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).

A.9 AC Conducted Emissions Test Result

Site: SIP-SR2	Test Date: 2023-12-29
Temperature: 17.6°C	Humidity: 49.1%
Limit: FCC_Part15.207_CE_AC Power	Engineer: Mark Long
Probe: SIP-SR2-ENV216_101684_E	Polarity: Line
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ax-HE20 at 5845MHz	



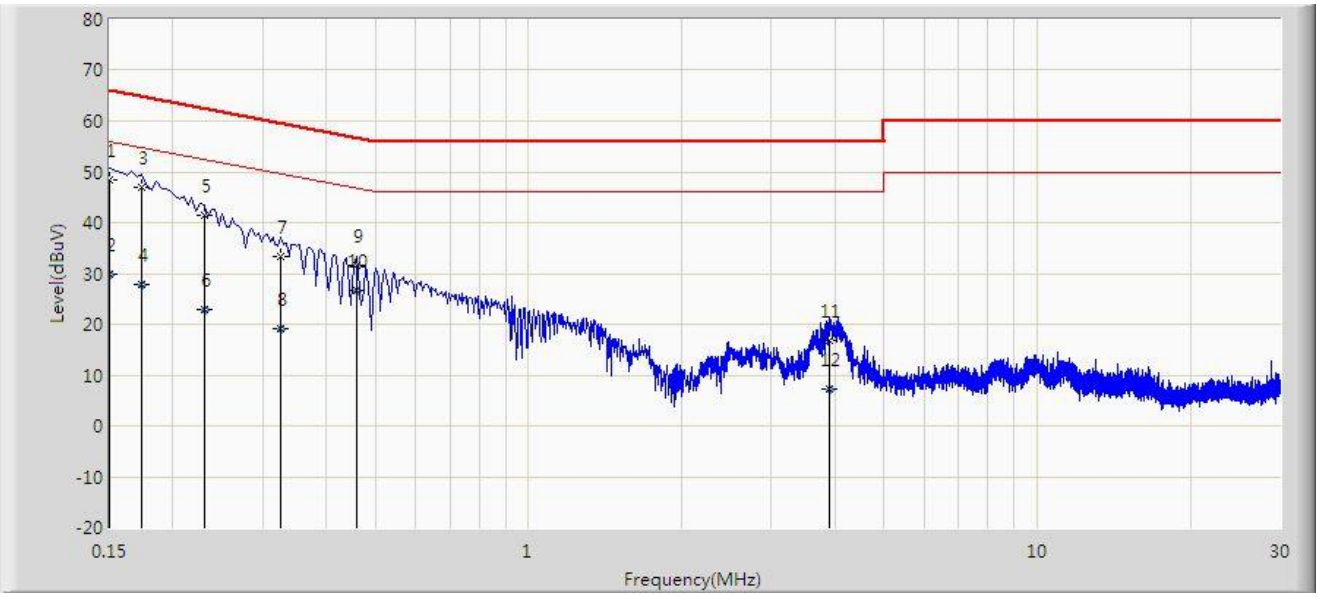
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.150	48.619	38.967	-17.381	66.000	9.651	QP
2		0.150	29.233	19.582	-26.767	56.000	9.651	AV
3	*	0.174	47.389	37.736	-17.378	64.767	9.653	QP
4		0.174	26.880	17.227	-27.887	54.767	9.653	AV
5		0.218	42.714	33.009	-20.180	62.895	9.706	QP
6		0.218	21.969	12.263	-30.926	52.895	9.706	AV
7		0.262	38.613	28.896	-22.754	61.368	9.717	QP
8		0.262	18.798	9.081	-32.570	51.368	9.717	AV
9		0.470	19.181	9.444	-37.333	56.514	9.737	QP
10		0.470	6.356	-3.381	-40.158	46.514	9.737	AV
11		3.826	16.314	6.418	-39.686	56.000	9.896	QP
12		3.826	4.978	-4.918	-41.022	46.000	9.896	AV

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

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

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SIP-SR2	Test Date: 2023-12-29
Temperature: 17.6°C	Humidity: 49.1%
Limit: FCC_Part15.207_CE_AC Power	Engineer: Mark Long
Probe: SIP-SR2-ENV216_101684_E	Polarity: Neutral
EUT: ACCESS POINT	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ax-HE20 at 5845MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.150	48.323	38.671	-17.677	66.000	9.652	QP
2		0.150	29.797	20.145	-26.203	56.000	9.652	AV
3		0.174	47.073	37.423	-17.694	64.767	9.650	QP
4		0.174	27.872	18.222	-26.895	54.767	9.650	AV
5		0.230	41.330	31.627	-21.119	62.450	9.704	QP
6		0.230	22.994	13.290	-29.456	52.450	9.704	AV
7		0.326	33.406	23.677	-26.146	59.552	9.729	QP
8		0.326	19.051	9.322	-30.501	49.552	9.729	AV
9		0.458	31.510	21.780	-25.219	56.729	9.730	QP
10		0.458	26.525	16.795	-20.203	46.729	9.730	AV
11		3.906	16.949	7.061	-39.051	56.000	9.888	QP
12		3.906	7.217	-2.671	-38.783	46.000	9.888	AV

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

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

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Appendix B – Test Setup Photograph

Refer to “2308RSU066-UT” file.

Appendix C – EUT Photograph

Refer to “2308RSU066-UE” file.

The End