RF MEASUREMENT REPORT

FCC ID:	Q9DAPINH605
Applicant:	Hewlett Packard Enterprise
Product:	ACCESS POINT
Model No.:	APINH605
Trademark:	Hewlett Packard Enterprise , HPE aruba networking
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Received Date:	2023-06-25
Test Date:	2023-07-18 ~ 2023-10-10

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 ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2306RSU039-U1	V01	Initial Report	2023-10-11	Invalid
2306RSU039-U1	V02	Add some description and revise some typo	2023-11-29	Valid

CONTENTS

1. General Information

1.1. Applicant

Hewlett Packard Enterprise

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

1.2. Manufacturer

Hewlett Packard Enterprise

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

1.3. Testing Facility

☒	**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.	APINH605
Serial No.	CNQHLHJ07B
Software Version	RAJB-AB06 V2.0
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	BLE only
ZigBee Specification	802.15.4
GNSS Specification	GPS, Galileo, GLONASS
Antenna Information	Refer to Section 1.5
Power Type	AC Adapter Input or PoE Input
Operating Environment	Indoor Use
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Bluetooth Frequency	2402 ~ 2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1Mbps & 2Mbps
Antenna Type	PIFA
Antenna Gain	3.5dBi

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz
03	2408 MHz	04	2410 MHz	05	2412 MHz
06	2414 MHz	07	2416 MHz	08	2418 MHz
09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz
15	2432 MHz	16	2434 MHz	17	2436 MHz
18	2438 MHz	19	2440 MHz	20	2442 MHz
21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz
27	2456 MHz	28	2458 MHz	29	2460 MHz
30	2462 MHz	31	2464 MHz	32	2466 MHz
33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz
39	2480 MHz	--	--	--	--

1.7. Description of Operating Paths

Filter	Specification	Remark
Wi-Fi		
Filter 1#	Band Pass Filter (2412-2472)	Allowing any transmission on all channels
Filter 2#	Band Pass Filter (2402-2447)	Allowing any transmission on 20MHz channels 1 thru 6 and 40MHz channel 3.
Filter 3#	Band Pass Filter (2452-2472)	Allowing any transmission on 20MHz channel 11
Filter 4#	Band Pass Filter (5150-5895)	Allowing any transmission on all channels
Filter 5#	Band Pass Filter (5150-5835)	Allowing any transmission on UNII Band 1/2a/2c/3
Filter 6#	Band Pass Filter (5925-7125)	Allowing any transmission on UNII Band 5/6/7/8
Bluetooth / ZigBee		
Filter 7#	Band Pass Filter (2402-2480)	Allowing any transmission on all channels
Filter 8#	Band Pass Filter (2402-2430)	Allowing transmission on BLE channels 37 (2402MHz) and 38 (2426MHz) and Zigbee channel 11 (2405MHz)
Filter 9#	Band Pass Filter (2478-2482)	Allowing transmission on BLE channel 39 (2480MHz) and Zigbee channel 26(2480MHz)
Note: ZigBee and BLE can't work simultaneously.		

Working Mode

	Radio 0	Radio 1	BLE/ZigBee
1	2.4G_Full Band (Filter 1#)	6G_Full Band (Filter 6#)	---
2	---	6G_Full Band (Filter 6#)	2.4G_Full Band (Filter 7#)
3	2.4G_Low Band (Filter 2#)	6G_Full Band (Filter 6#)	2.4G_High Band (Filter 9#)
4	2.4G_High Band (Filter 3#)	6G_Full Band (Filter 6#)	2.4G_Low Band (Filter 8#)
5	5G_Full Band (Filter 4#)	2.4G_Full Band (Filter 1#)	---
6	5G_Full Band (Filter 4#)	---	2.4G_Full Band (Filter 7#)
7	5G_Full Band (Filter 4#)	2.4G_Low Band (Filter 2#)	2.4G_High Band (Filter 9#)
8	5G_Full Band (Filter 4#)	2.4G_High Band (Filter 3#)	2.4G_Low Band (Filter 8#)
9	5G_Full Band (Filter 5#)	6G_Full Band (Filter 6#)	2.4G_Full Band (Filter 1#)
10	5G_Full Band (Filter 5#)	6G_Full Band (Filter 6#)	2.4G_Full Band (Filter 1#)
11	5G_Full Band (Filter 5#)	6G_Full Band (Filter 6#)	2.4G_Full Band (Filter 1#)
12	5G_Full Band (Filter 5#)	6G_Full Band (Filter 6#)	2.4G_Full Band (Filter 1#)

2. Test Configuration

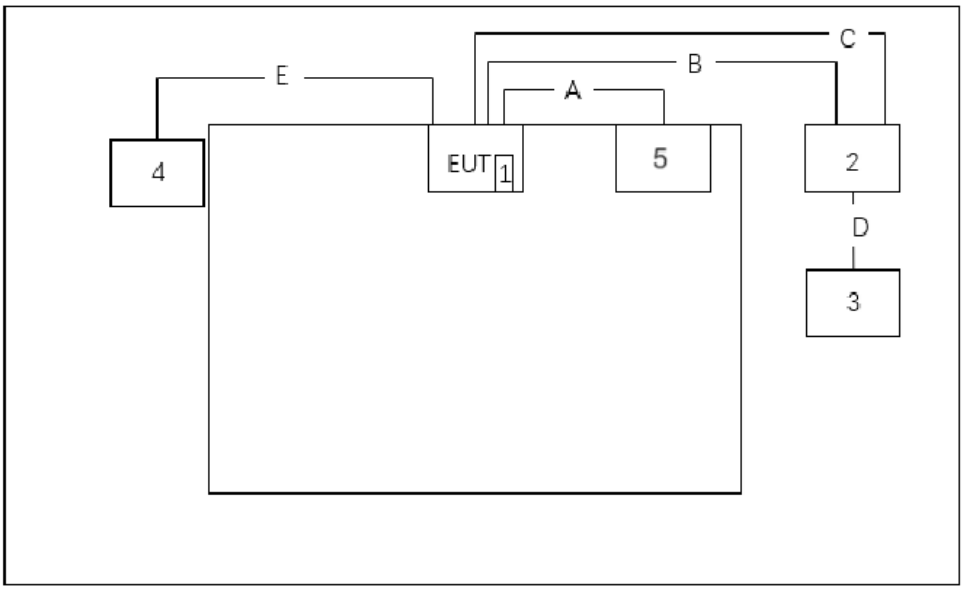
2.1. Test Mode

Mode 1: Transmit by BLE-1Mbps
Mode 2: Transmit by BLE-2Mbps

2.2. Test System Connection Diagram

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

Connection Diagram



Cable Type		Cable Description	Length
A	Power Cable	Non-Shielded	>1.8m
B ~ E	LAN Cable	Non-Shielded, Cat.5e	> 10m
Product		**Manufacturer**	**Model No.**
1	USB Flash	Samsung	16G
2	2.5G Switch	TP-Link	TL-SH1005
3	Notebook	Lenovo	E495
4	AP Router	Aruba	AP303
5	AC/DC Adapter	Delta Electronics, Inc.	ADP-50GR BD

2.3. Test Software

The test utility software used during testing was “telnet”, and the commands were provided by manufacturer.

2.4. Applied Standards

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

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

2.5. Test Environment Condition

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

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

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

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

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06598	1 year	2023-11-05	SIP-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06601	1 year	2023-11-22	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2023-11-27	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06624	1 year	2023-11-27	SIP-AC2
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06647	1 year	2024-06-17	SIP-AC2
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2023-12-22	SIP-AC2
Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2024-05-23	SIP-AC2
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2023-10-25	SIP-AC1
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2023-12-22	SIP-AC1
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2023-11-07	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
Thermohygrometer	testo	608-H1	MRTSUE06620	1 year	2023-11-27	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2024-07-13	SIP-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2023-10-10	SIP-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2023-10-13	SIP-AC1
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2024-06-07	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2024-07-14	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2023-11-01	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2024-01-12	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2023-08-16	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2024-08-04	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2023-12-22	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2023-11-27	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2023-12-28	SIP-AC3
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2024-05-23	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2023-11-27	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2024-04-20	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11038	1 year	2023-11-01	WZ-AC2
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2024-09-17	WZ-AC2
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2024-05-23	WZ-SR2
Shielding Room	MIX-BEP	WZ-SR2	MRTSUE06215	5 years	2026-12-20	WZ-SR2
Thermohygrometer	testo	608-H1	MRTSUE06404	1 year	2024-05-31	WZ-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06615	1 year	2023-10-08	WZ-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06909	1 year	2023-10-27	WZ-SR2

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2024-05-23	WZ-SR5
Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2024-02-29	WZ-SR5
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2024-05-31	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11079	1 year	2024-06-08	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11083	1 year	2024-06-08	WZ-SR5

Software	Version	Function
EMI V3	V 3.0.0	EMI Test Software
Controller_MF 7802BS	1.02	RE Antenna & Turntable
BenchVue Power Meter	2018.1	Power
Controller_MF 7802	1.02	RE Antenna & Turntable

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: 2.59dB Coplanar: 9kHz~30MHz: 2.60dB Horizontal: 30MHz~200MHz: 3.85dB 200MHz~1GHz: 4.36dB 1GHz~40GHz: 4.98dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.28dB 1GHz~40GHz: 4.91dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.5dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.2%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6dB Bandwidth	Conducted	Pass
15.247(b)(3)	Output Power		Pass
15.247(e)	Power Spectral Density		Pass
15.247(d)	Band Edge / Out-of-Band Emissions		Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Notes:

1. 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.
2. For radiated emission test, every axis (X, Y, Z) was also verified. The detailed axis (X, Y, Z) setup refers to “2306RSU039-UT” and axis (X) is the worst condition. The test results shown in the following sections represent the worst-case emissions.

Test Items	Filter 7#	Filter 8#	Filter 9#
6dB Bandwidth	●		
Output Power	●	●	●
Power Spectral Density	●		
Band Edge / Out-of-Band Emissions	●		
Radiated Spurious Emission	●	●	●
Radiated Band Edge	●	●	●
AC Conducted Emissions 150kHz - 30MHz	●		

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

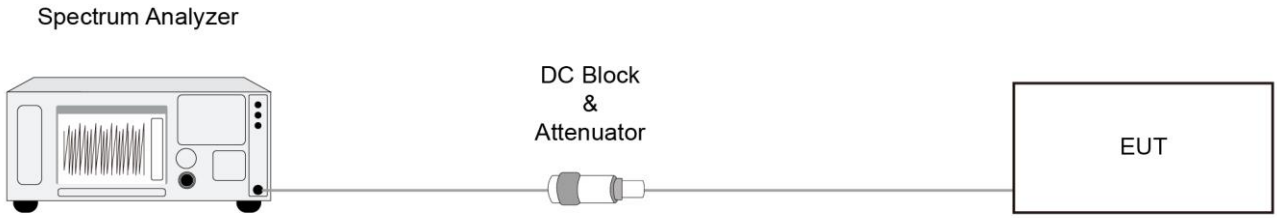
6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set 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

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

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

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

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.1.3

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.3.3. Test Setting

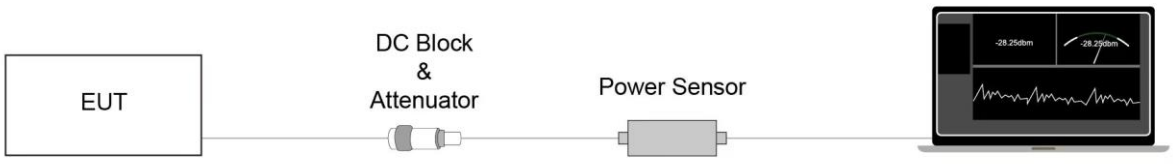
Method PKPM1 (Peak Power Measurement of Signals with DTS BW ≤ 50MHz)

Peak 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 pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

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.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

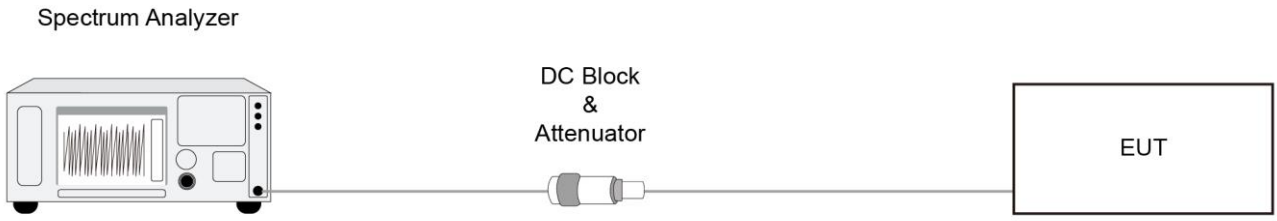
6.4.2. Test Procedure

ANSI C63.10-2013 Section 11.10.2

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Conducted Band Edge and Out-of-Band Emissions Measurement

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Settitng

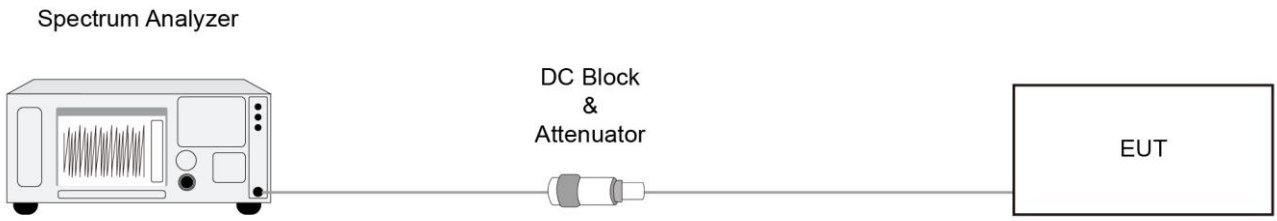
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW ≥ 3 x RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

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

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/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

6.6.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

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

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

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

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

6.6.3. 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.

BLE 1Mbps	VBW = 2700Hz	BLE 2Mbps	VBW = 5100Hz

4. Detector = Peak

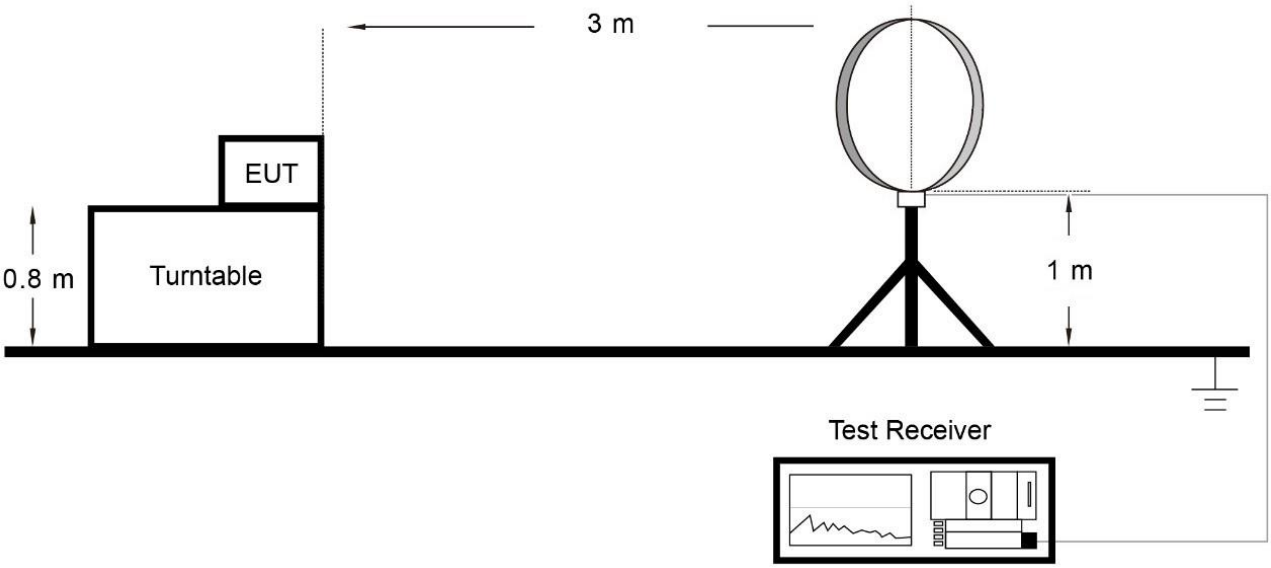
5. Sweep time = auto

6. Trace mode = max hold

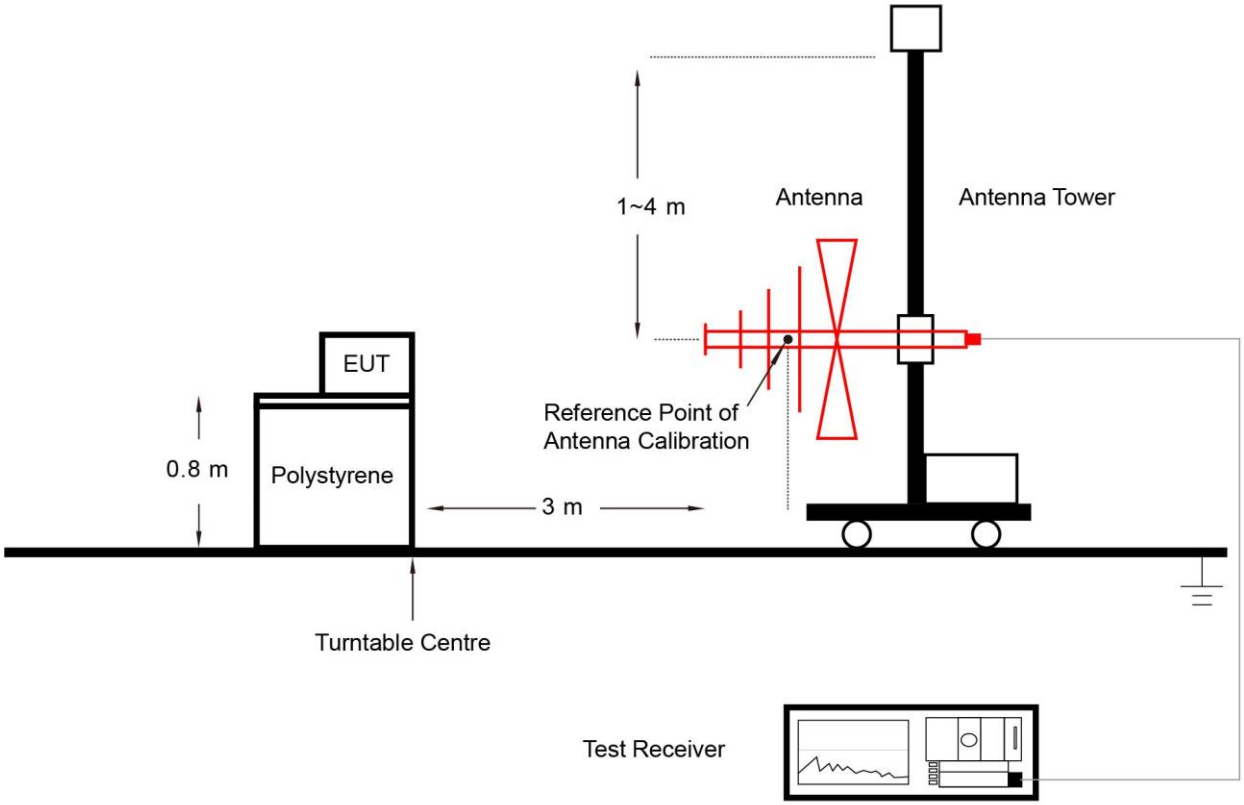
7. Trace was allowed to stabilize

6.6.4. Test Setup

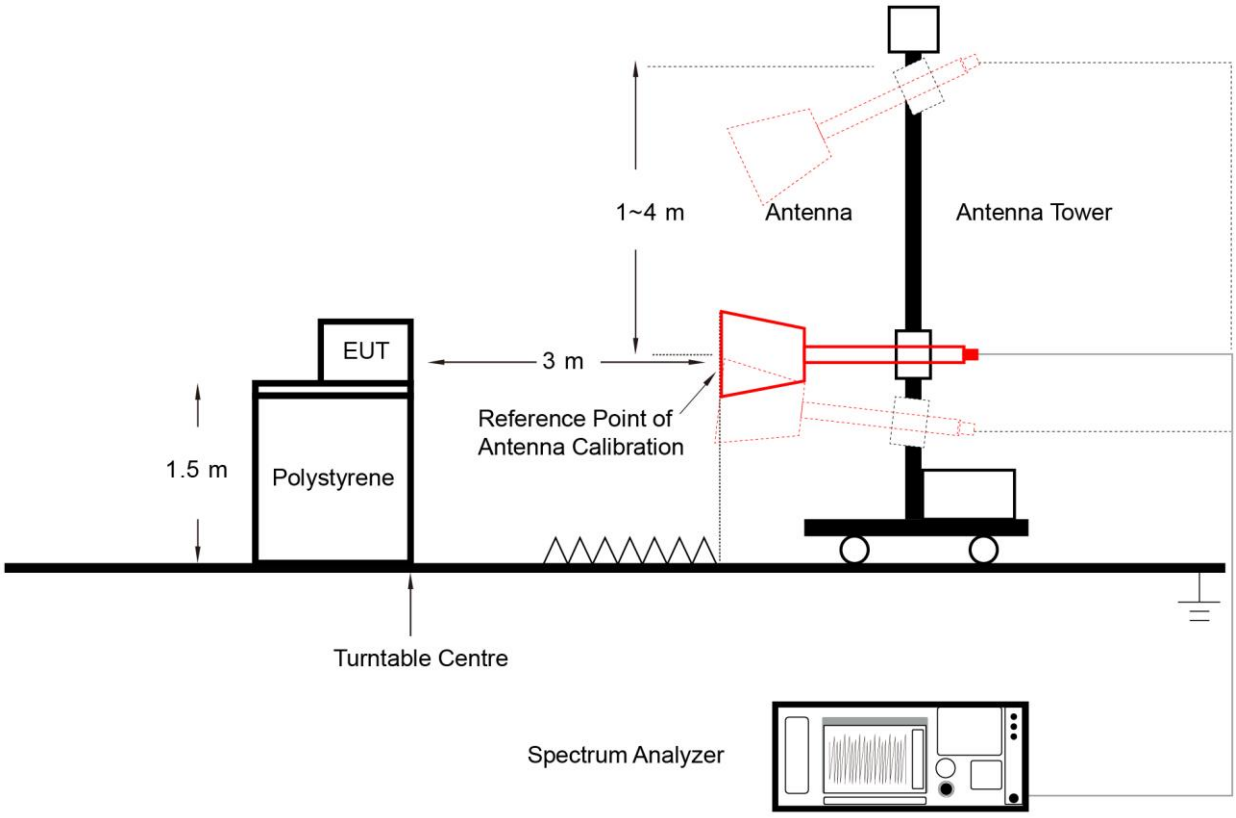
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

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

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

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

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/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

6.7.2. Test Procedure

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

6.7.3. Test Setting

Peak Field Strength Measurements

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

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; 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.

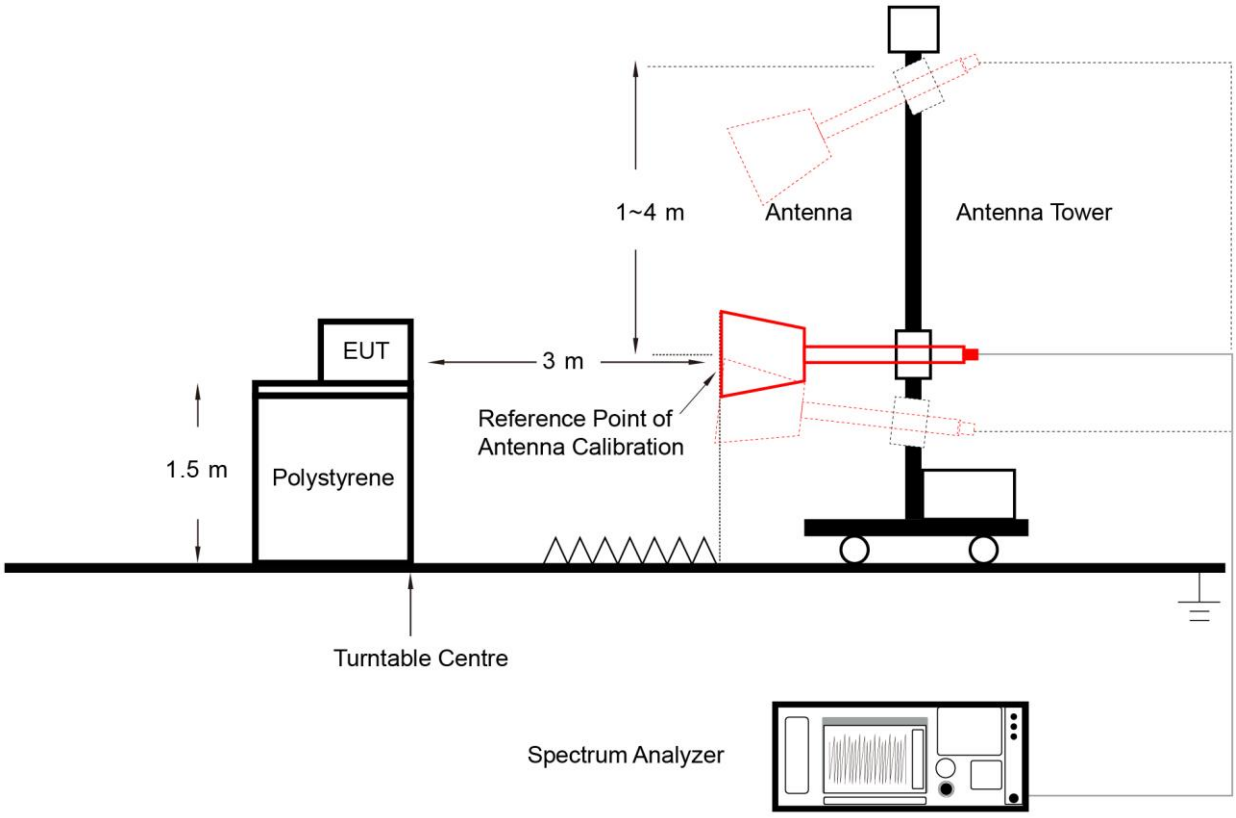
BLE 1Mbps	VBW = 2700Hz	BLE 2Mbps	VBW = 5100Hz

4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display

mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode

5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.7.4. Test Setup



6.7.5. Test Result

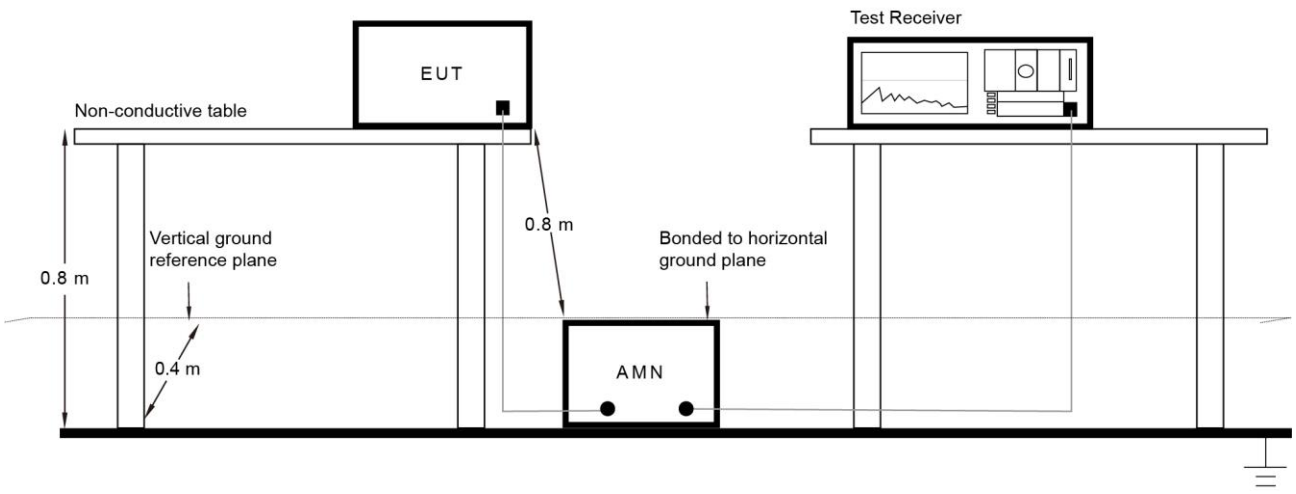
Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 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.		

6.8.2. Test Setup



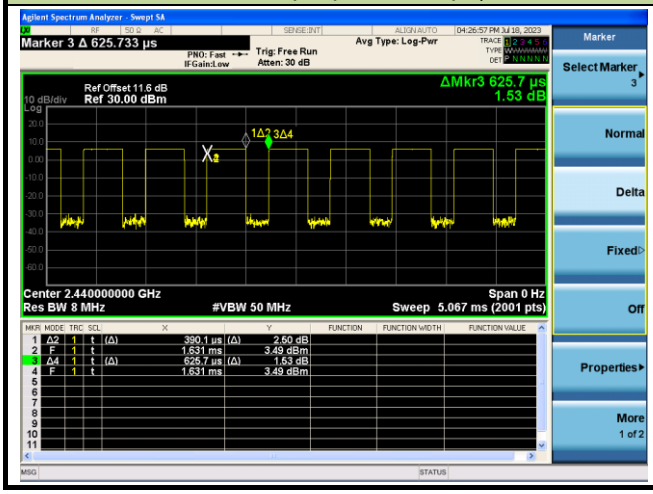
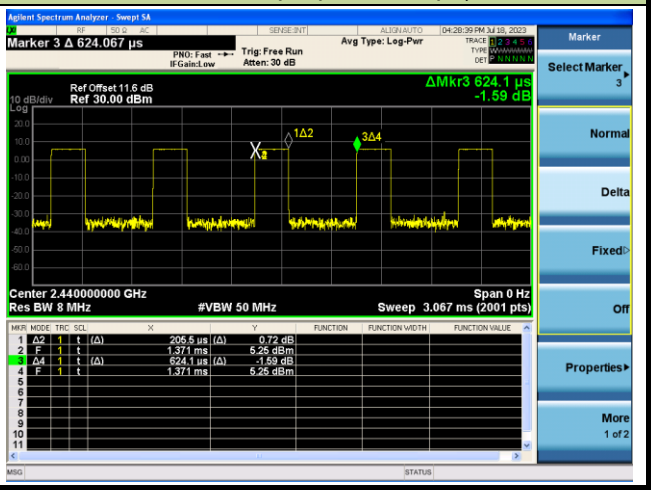
6.8.3. Test Result

Refer to Appendix A.8.

Appendix A - Test Result

A.1 Duty Cycle Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18		

Test Mode	Duty Cycle
BLE-1Mbps	62.35%
BLE-2Mbps	32.93%
Duty Cycle (T = Transmission Duration)	
BLE-1Mbps (T = 390.1μs)	BLE-2Mbps (T = 205.5μs)
	

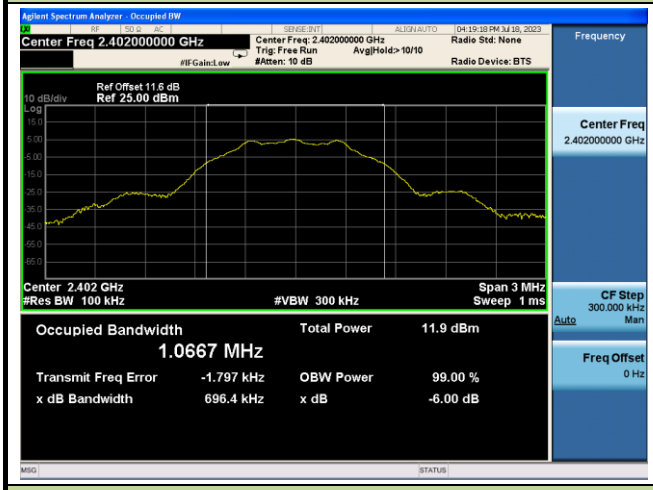
A.2 6dB Bandwidth Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18		

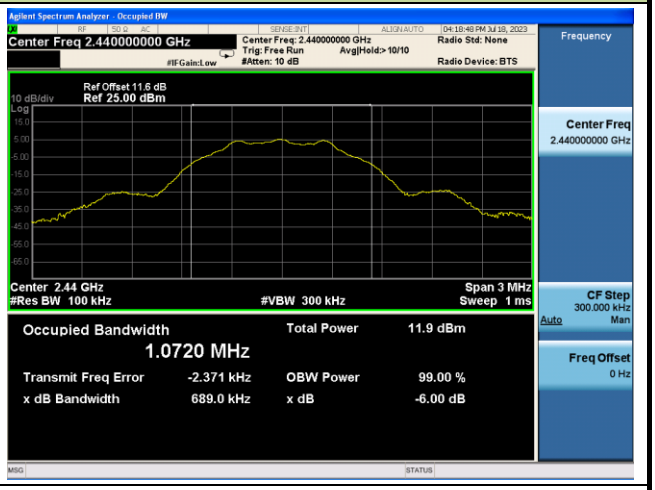
Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
BLE	1Mbps	00	2402	0.6964	≥ 0.5
BLE	1Mbps	19	2440	0.6890	≥ 0.5
BLE	1Mbps	39	2480	0.6892	≥ 0.5
BLE	2Mbps	00	2402	1.149	≥ 0.5
BLE	2Mbps	19	2440	1.123	≥ 0.5
BLE	2Mbps	39	2480	1.150	≥ 0.5

BLE-1Mbps 6dB Bandwidth

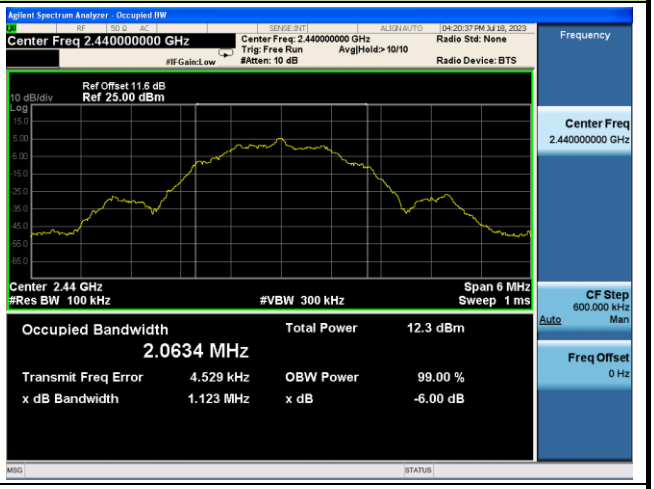
Channel 00 (2402MHz)



Channel 19 (2440MHz)



Channel 39 (2480MHz)

BLE-2Mbps 6dB Bandwidth	
Channel 00 (2402MHz)	Channel 19 (2440MHz)
	
Channel 39 (2480MHz)	
	

A.3 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18	Filter	Filter 7#

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	5.44	≤ 30.00	Pass
BLE	1Mbps	19	2440	5.40	≤ 30.00	Pass
BLE	1Mbps	39	2480	4.83	≤ 30.00	Pass
BLE	2Mbps	00	2402	5.48	≤ 30.00	Pass
BLE	2Mbps	19	2440	5.43	≤ 30.00	Pass
BLE	2Mbps	39	2480	4.93	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	5.30	≤ 30.00	Pass
BLE	1Mbps	19	2440	5.28	≤ 30.00	Pass
BLE	1Mbps	39	2480	4.68	≤ 30.00	Pass
BLE	2Mbps	00	2402	5.33	≤ 30.00	Pass
BLE	2Mbps	19	2440	5.31	≤ 30.00	Pass
BLE	2Mbps	39	2480	4.72	≤ 30.00	Pass

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18	Filter	Filter 8#

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	5.33	≤ 30.00	Pass
BLE	2Mbps	00	2402	5.35	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	5.21	≤ 30.00	Pass
BLE	2Mbps	00	2402	5.22	≤ 30.00	Pass

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18	Filter	Filter 9#

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	39	2480	4.35	≤ 30.00	Pass
BLE	2Mbps	39	2480	4.38	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	39	2480	4.20	≤ 30.00	Pass
BLE	2Mbps	39	2480	4.21	≤ 30.00	Pass

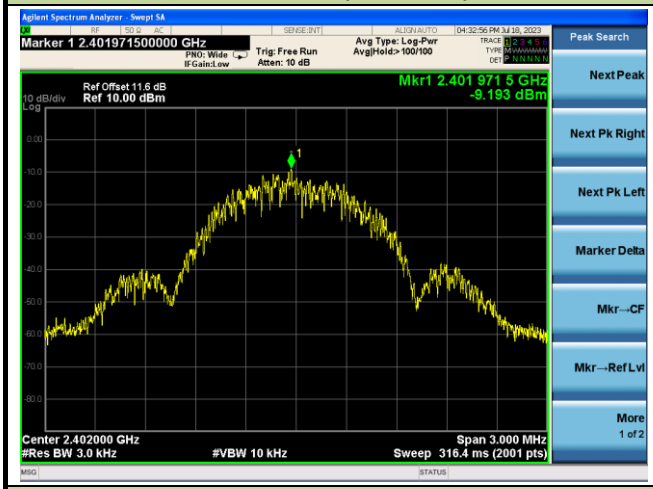
A.4 Power Spectral Density Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18		

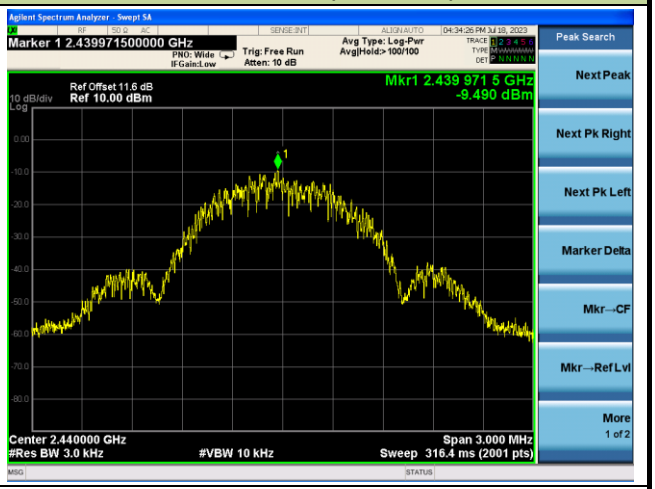
Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1Mbps	00	2402	-9.193	≤ 8.00	Pass
BLE	1Mbps	19	2440	-9.490	≤ 8.00	Pass
BLE	1Mbps	39	2480	-10.587	≤ 8.00	Pass
BLE	2Mbps	00	2402	-11.950	≤ 8.00	Pass
BLE	2Mbps	19	2440	-11.976	≤ 8.00	Pass
BLE	2Mbps	39	2480	-13.085	≤ 8.00	Pass

BLE-1Mbps PSD

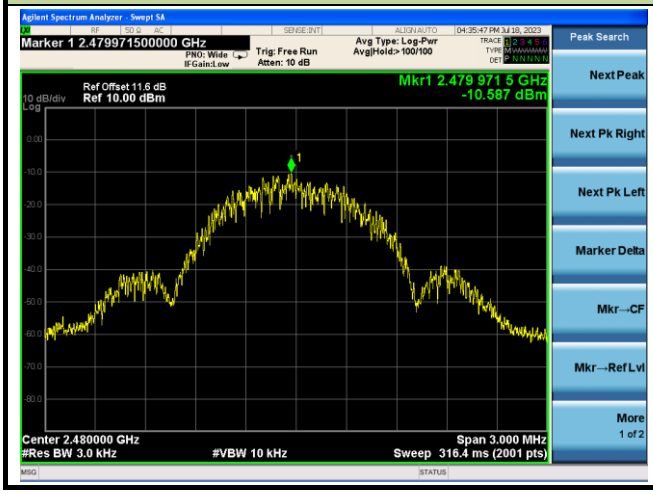
Channel 00 (2402MHz)

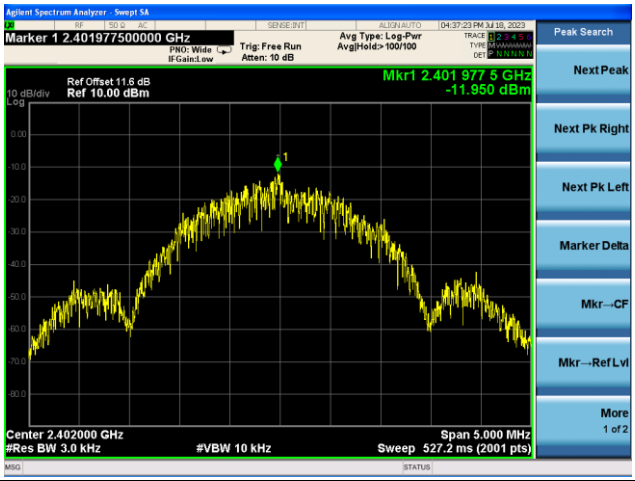
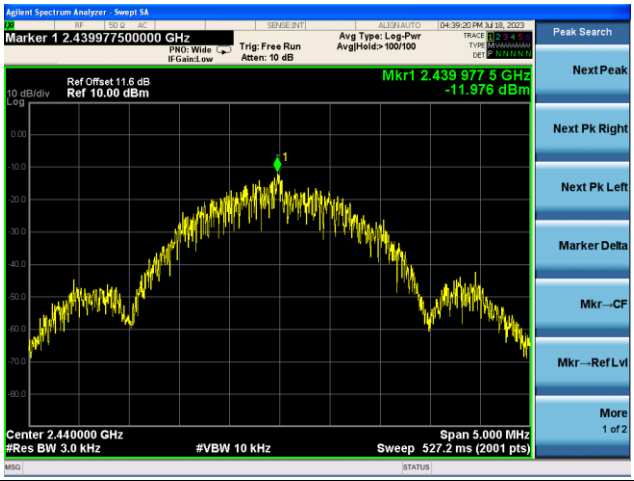
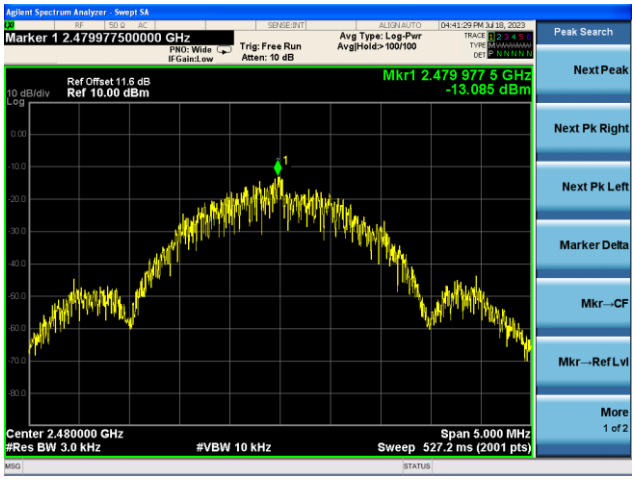


Channel 19 (2440MHz)



Channel 39 (2480MHz)



BLE-2Mbps PSD	
Channel 00 (2402MHz)	Channel 19 (2440MHz)
	
Channel 39 (2480MHz)	
	

A.5 Conducted Band Edge and Out-of-Band Emissions Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2023-07-18		

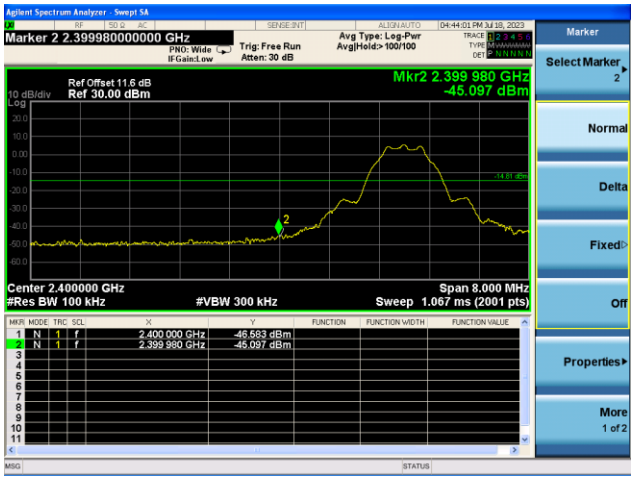
Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	1	19	2440	20	Pass
BLE	1	39	2480	20	Pass
BLE	2	00	2402	20	Pass
BLE	2	19	2440	20	Pass
BLE	2	39	2480	20	Pass

BLE-1Mbps Out-of-Band Emissions

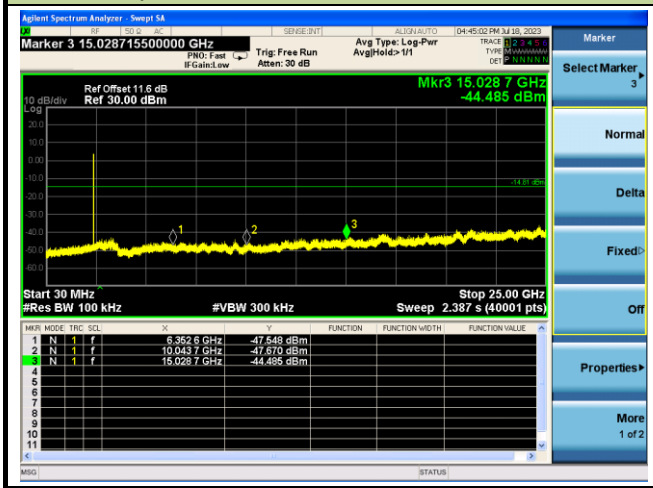
Channel 00 (2402MHz)

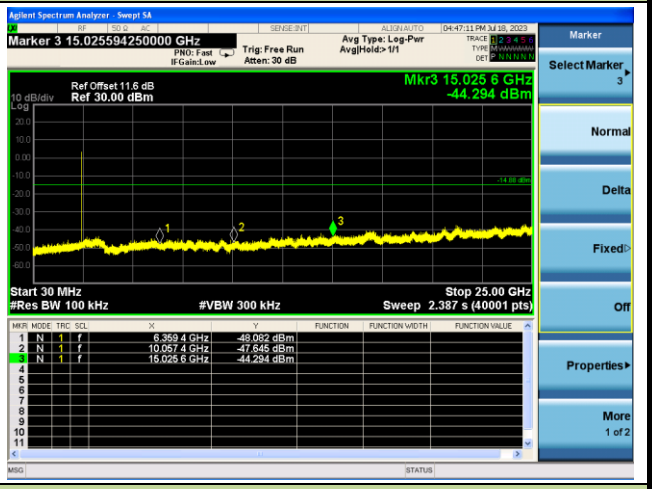
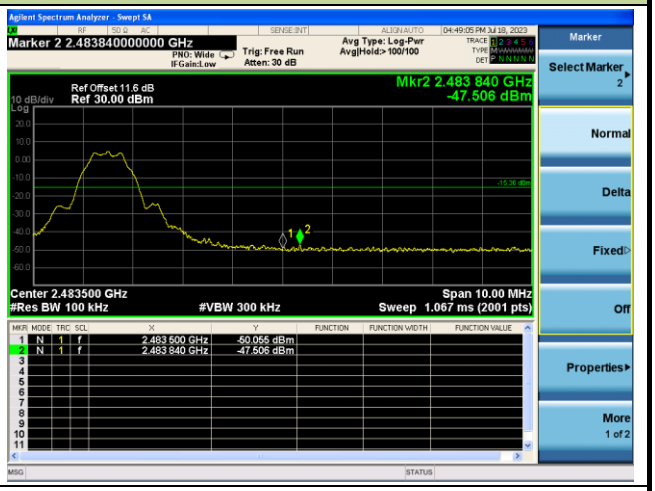
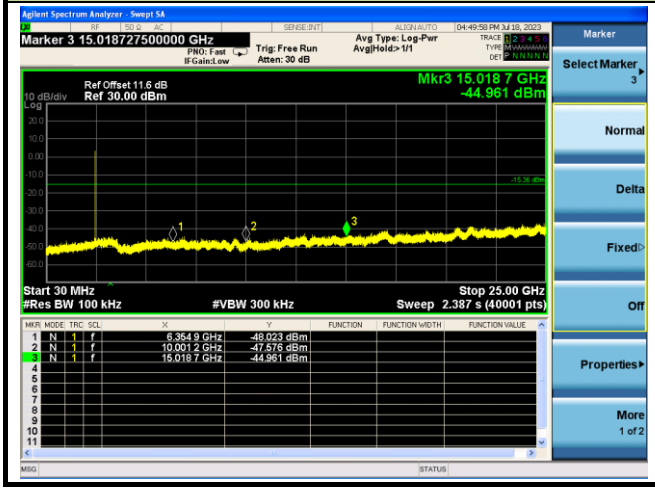
100kHz PSD Reference Level

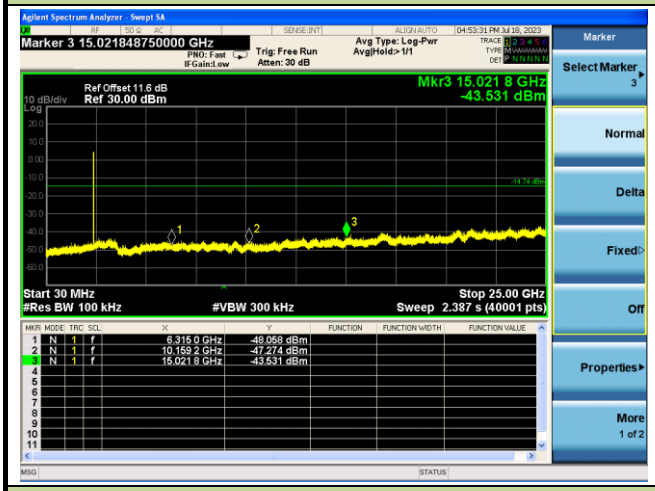
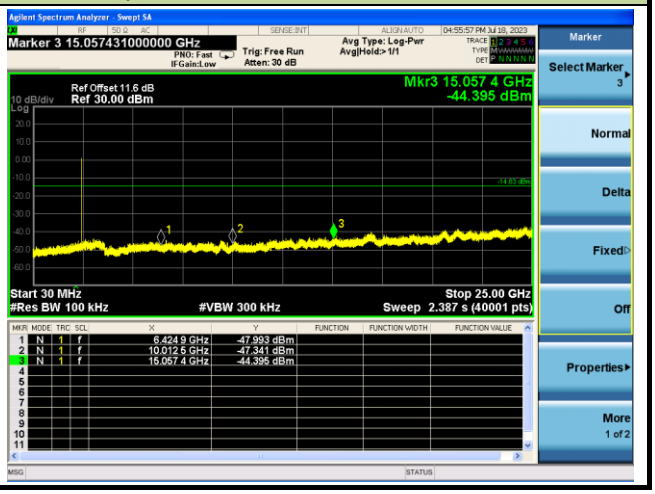
Low Band Edge

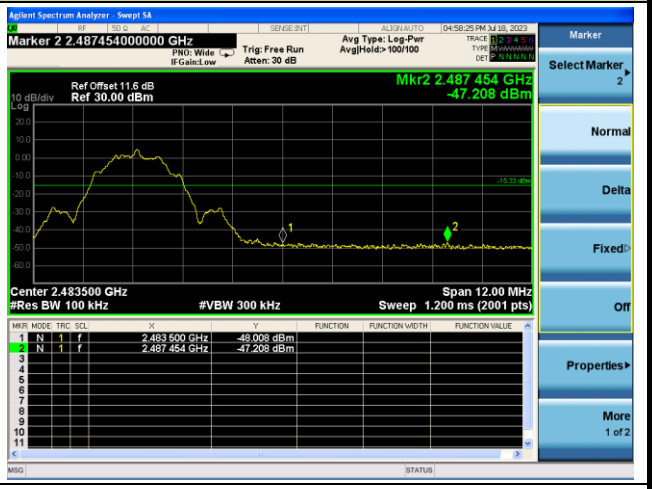
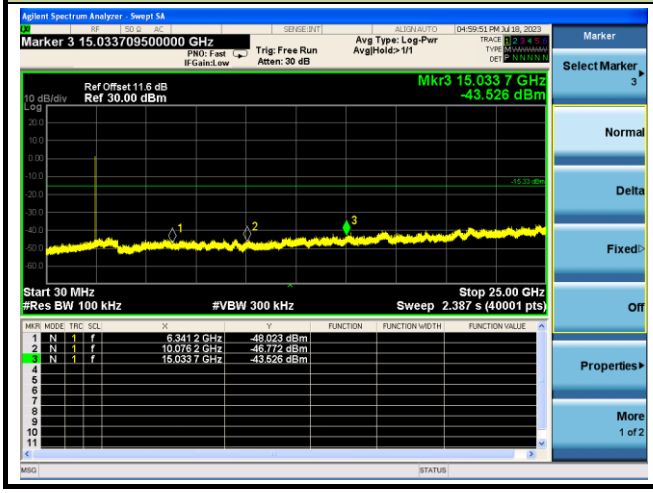


Spurious Emission 30MHz ~ 25GHz



Channel 19 (2440MHz)	
100kHz PSD Reference Level	Spurious Emission 30MHz ~ 25GHz
	
Channel 39 (2480MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission 30MHz ~ 25GHz	
	

BLE-2Mbps Out-of-Band Emissions	
Channel 00 (2402MHz)	
100kHz PSD Reference Level	Low Band Edge
	
Spurious Emission 30MHz ~ 25GHz	
	
Channel 19 (2440MHz)	
100kHz PSD Reference Level	Spurious Emission 30MHz ~ 25GHz
	

Channel 39 (2480MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission 30MHz ~ 25GHz	
	

A.6 Radiated Spurious Emission Test Result

Filter 7#:

Test Site	SIP-AC2	Test Engineer	Fusco Pan
Test Date	2023-07-19	Test Mode	BLE-1Mbps
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.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	7477.0	42.8	2.2	45.0	74.0	-29.0	Peak	Horizontal
	10860.0	41.9	7.5	49.4	74.0	-24.6	Peak	Horizontal
	15577.5	38.5	10.0	48.5	74.0	-25.5	Peak	Horizontal
	7689.5	43.4	1.4	44.8	74.0	-29.2	Peak	Vertical
	8310.0	43.0	2.2	45.2	74.0	-28.8	Peak	Vertical
	11506.0	41.1	8.1	49.2	74.0	-24.8	Peak	Vertical
19	8089.0	42.9	3.3	46.2	74.0	-27.8	Peak	Horizontal
	9330.0	42.2	4.9	47.1	74.0	-26.9	Peak	Horizontal
	11021.5	42.2	7.5	49.7	74.0	-24.3	Peak	Horizontal
	7366.5	43.5	1.5	45.0	74.0	-29.0	Peak	Vertical
	8165.5	42.3	3.0	45.3	74.0	-28.7	Peak	Vertical
	10953.5	41.6	7.4	49.0	74.0	-25.0	Peak	Vertical
39	7256.0	44.0	1.4	45.4	74.0	-28.6	Peak	Horizontal
	8114.5	42.1	3.4	45.5	74.0	-28.5	Peak	Horizontal
	11361.5	43.0	7.2	50.2	74.0	-23.8	Peak	Horizontal
	7732.0	43.0	1.6	44.6	74.0	-29.4	Peak	Vertical
	8080.5	42.3	3.3	45.6	74.0	-28.4	Peak	Vertical
	10809.0	42.0	7.2	49.2	74.0	-24.8	Peak	Vertical

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

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

Test Site	SIP-AC2	Test Engineer	Fusco Pan
Test Date	2023-07-19	Test Mode	BLE-2Mbps
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.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	7613.0	43.5	1.7	45.2	74.0	-28.8	Peak	Horizontal
	8148.5	42.4	3.1	45.5	74.0	-28.5	Peak	Horizontal
	10732.5	43.2	6.5	49.7	74.0	-24.3	Peak	Horizontal
	8097.5	41.9	3.4	45.3	74.0	-28.7	Peak	Vertical
	11021.5	42.7	7.5	50.2	74.0	-23.8	Peak	Vertical
	12109.5	41.2	7.7	48.9	74.0	-25.1	Peak	Vertical
19	7477.0	42.3	2.2	44.5	74.0	-29.5	Peak	Horizontal
	8089.0	42.6	3.3	45.9	74.0	-28.1	Peak	Horizontal
	11319.0	41.7	7.3	49.0	74.0	-25.0	Peak	Horizontal
	7528.0	42.8	1.8	44.6	74.0	-29.4	Peak	Vertical
	8089.0	41.7	3.3	45.0	74.0	-29.0	Peak	Vertical
	10681.5	42.5	6.8	49.3	74.0	-24.7	Peak	Vertical
39	7443.0	42.1	2.2	44.3	74.0	-29.7	Peak	Horizontal
	8140.0	42.1	3.0	45.1	74.0	-28.9	Peak	Horizontal
	11004.5	42.0	7.5	49.5	74.0	-24.5	Peak	Horizontal
	7443.0	42.4	2.2	44.6	74.0	-29.4	Peak	Vertical
	8208.0	43.4	2.6	46.0	74.0	-28.0	Peak	Vertical
	11361.5	41.8	7.2	49.0	74.0	-25.0	Peak	Vertical

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

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

Filter 8#:

Test Site	SIP-AC2	Test Engineer	Fusco Pan
Test Date	2023-07-19	Test Mode	BLE-1Mbps
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.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	7460.0	42.2	2.5	44.7	74.0	-29.3	Peak	Horizontal
	8148.5	42.0	3.1	45.1	74.0	-28.9	Peak	Horizontal
	11013.0	41.3	7.6	48.9	74.0	-25.1	Peak	Horizontal
	7451.5	41.8	2.4	44.2	74.0	-29.8	Peak	Vertical
	8097.5	41.5	3.4	44.9	74.0	-29.1	Peak	Vertical
	10979.0	41.5	7.4	48.9	74.0	-25.1	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m) Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)								

Test Site	SIP-AC2	Test Engineer	Fusco Pan
Test Date	2023-07-19	Test Mode	BLE-2Mbps
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.		

Test Channel	Frequency (MHz)	Reading Level (dBµV)	Factor (dB/m)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
00	7519.5	43.3	1.9	45.2	74.0	-28.8	Peak	Horizontal
	8131.5	42.2	3.2	45.4	74.0	-28.6	Peak	Horizontal
	10979.0	42.4	7.4	49.8	74.0	-24.2	Peak	Horizontal
	7375.0	42.4	1.7	44.1	74.0	-29.9	Peak	Vertical
	8157.0	42.5	3.1	45.6	74.0	-28.4	Peak	Vertical
	10928.0	41.6	7.4	49.0	74.0	-25.0	Peak	Vertical
Note: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m) Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)								

Filter 9#:

Test Site	SIP-AC2	Test Engineer	Fusco Pan
Test Date	2023-07-19	Test Mode	BLE-1Mbps
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.		

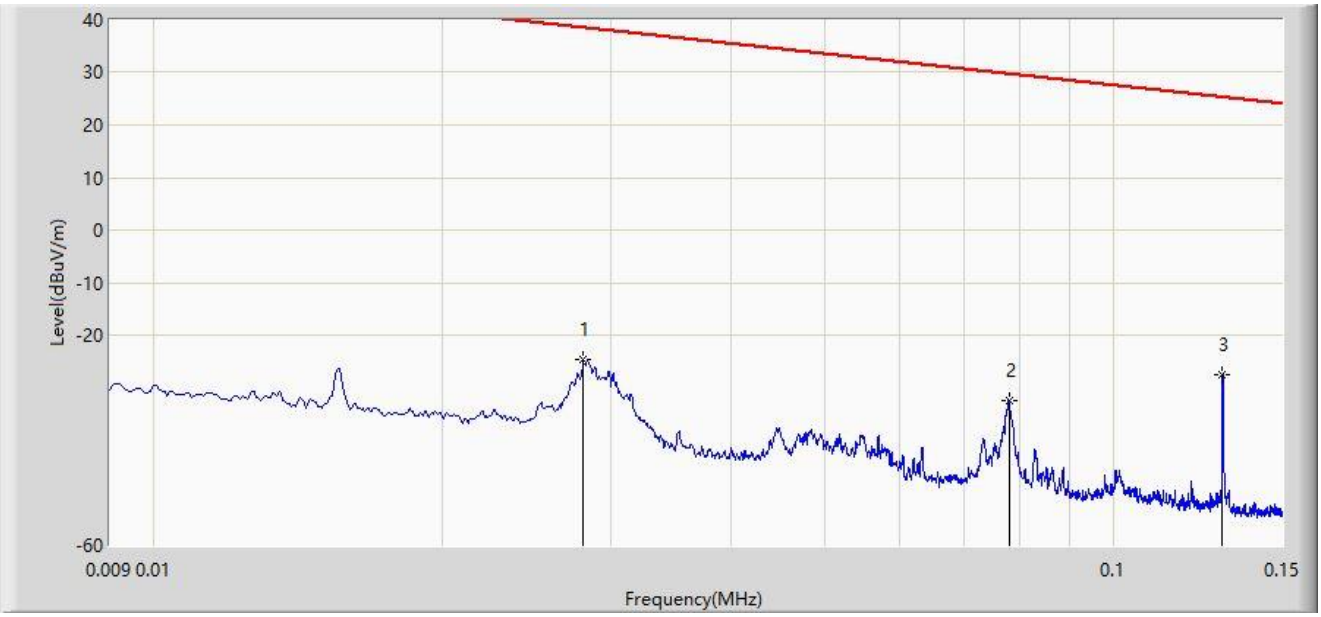
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
39	7715.0	43.4	1.5	44.9	74.0	-29.1	Peak	Horizontal
	8063.5	42.6	3.0	45.6	74.0	-28.4	Peak	Horizontal
	11183.0	42.7	7.1	49.8	74.0	-24.2	Peak	Horizontal
	7672.5	43.7	1.4	45.1	74.0	-28.9	Peak	Vertical
	8131.5	42.3	3.2	45.5	74.0	-28.5	Peak	Vertical
	11472.0	41.7	7.7	49.4	74.0	-24.6	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m) Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)								

Test Site	SIP-AC2	Test Engineer	Fusco Pan
Test Date	2023-07-19	Test Mode	BLE-2Mbps
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.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
39	8089.0	42.5	3.3	45.8	74.0	-28.2	Peak	Horizontal
	11098.0	42.7	7.4	50.1	74.0	-23.9	Peak	Horizontal
	12109.5	41.2	7.7	48.9	74.0	-25.1	Peak	Horizontal
	8089.0	42.3	3.3	45.6	74.0	-28.4	Peak	Vertical
	9313.0	42.4	5.0	47.4	74.0	-26.6	Peak	Vertical
	10970.5	41.6	7.4	49.0	74.0	-25.0	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m) Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)								

The Result of Radiated Emission of 9kHz ~ 30MHz:

Site: WZ-AC2	Test Date: 2023-10-10
Limit: FCC_Part15.209_RSE	Engineer: Bob Zhang
Probe: FMZB1519_0.009-30MHz	Polarity: Coaxial
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		0.028	-24.767	36.127	-63.414	38.647	-60.893	PK
2		0.078	-32.459	29.615	-62.212	29.753	-62.074	PK
3	*	0.130	-27.586	34.561	-52.904	25.319	-62.147	PK

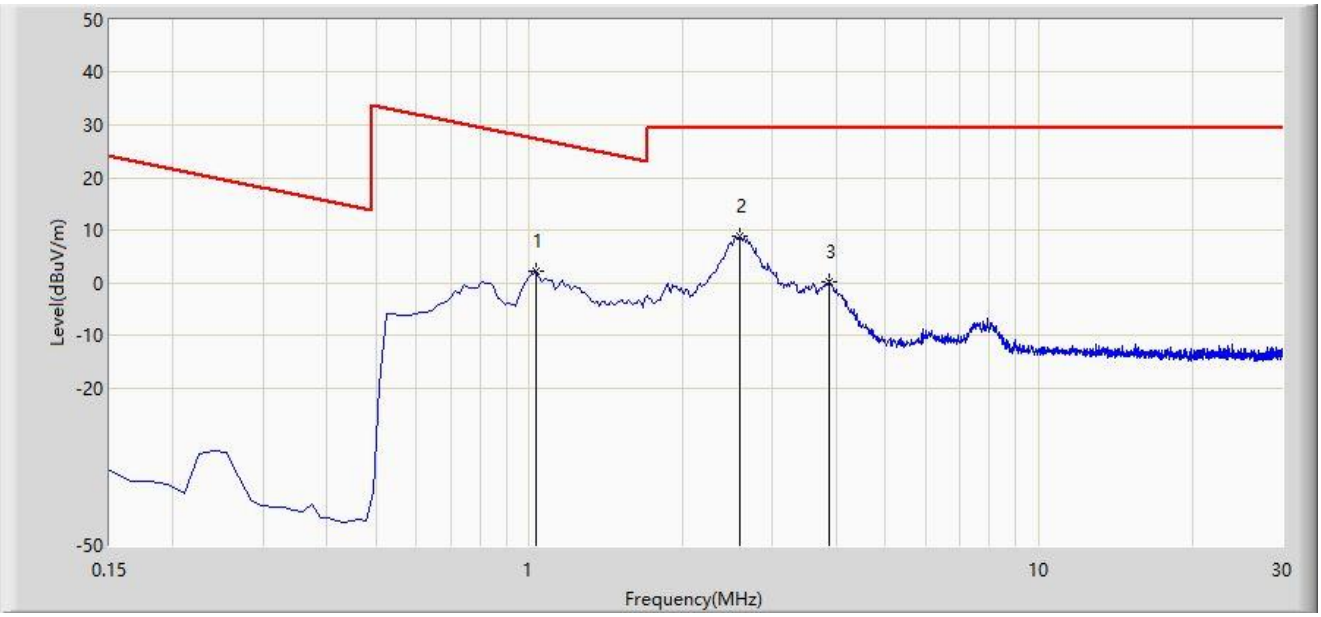
Note 1: " * ", means this data is the worst emission level.

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

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) + 40log(d1/d2) (dB), d1 = 3m, d2 = 300m (9kHz-490kHz) or 30m (490kHz-30MHz).

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

Site: WZ-AC2	Test Date: 2023-10-10
Limit: FCC_Part15.209_RSE	Engineer: Bob Zhang
Probe: FMZB1519_0.009-30MHz	Polarity: Coaxial
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		1.031	2.199	23.983	-25.158	27.357	-21.784	PK
2	*	2.583	8.768	30.574	-20.732	29.500	-21.806	PK
3		3.866	0.253	22.007	-29.247	29.500	-21.754	PK

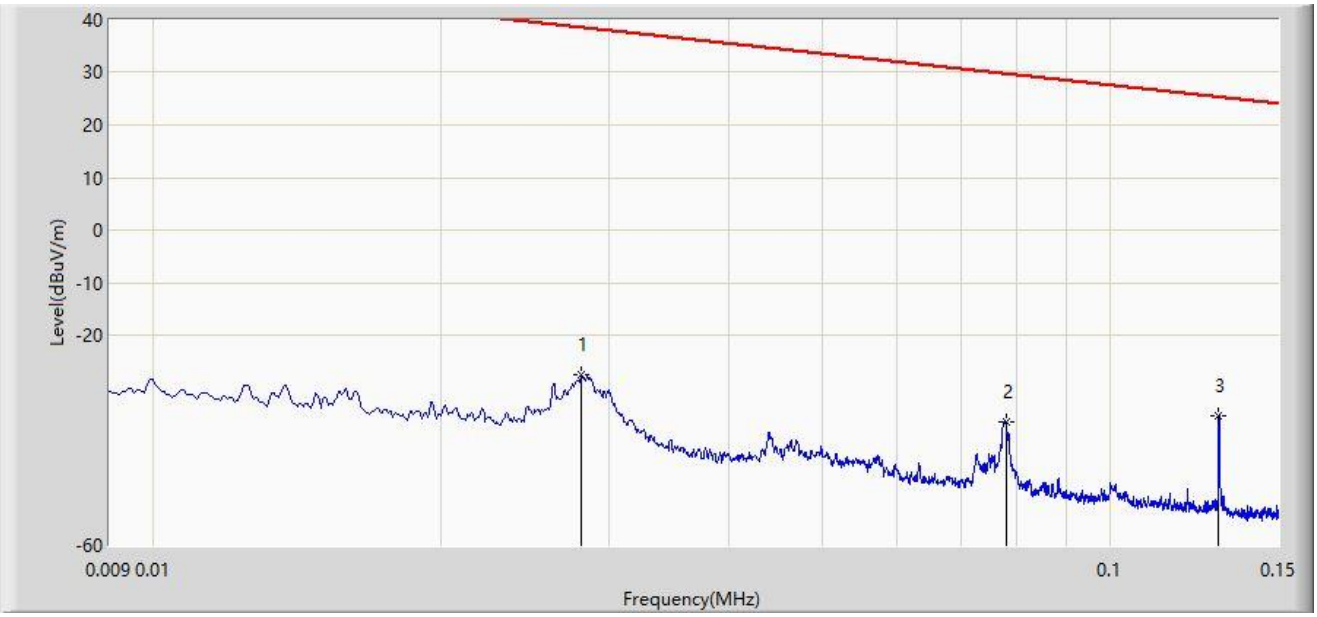
Note 1: " * ", means this data is the worst emission level.

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

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) + 40log(d1/d2) (dB), d1 = 3m, d2 = 300m (9kHz-490kHz) or 30m (490kHz-30MHz).

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

Site: WZ-AC2	Test Date: 2023-10-10
Limit: FCC_Part15.209_RSE	Engineer: Bob Zhang
Probe: FMZB1519_0.009-30MHz	Polarity: Coplanar
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		0.028	-27.440	33.454	-66.087	38.647	-60.893	PK
2		0.078	-36.445	25.629	-66.198	29.753	-62.074	PK
3	*	0.130	-35.310	26.837	-60.628	25.319	-62.147	PK

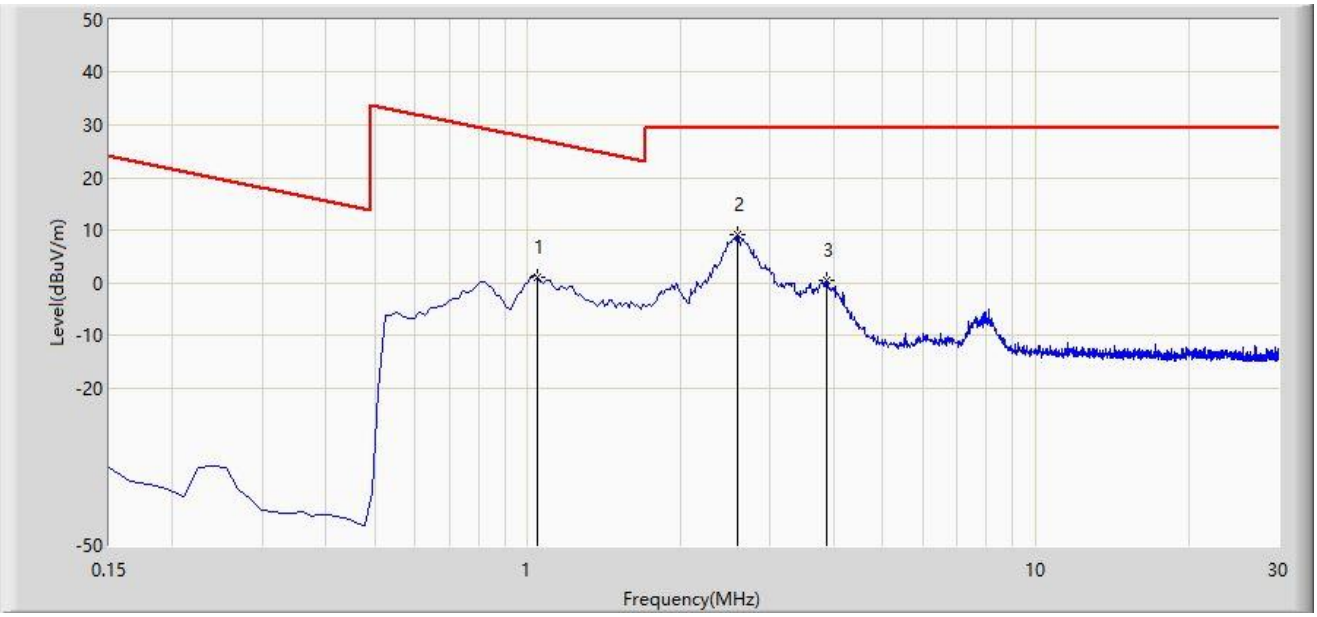
Note 1: " * ", means this data is the worst emission level.

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

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) + 40log(d1/d2) (dB), d1 = 3m, d2 = 300m (9kHz-490kHz) or 30m (490kHz-30MHz).

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

Site: WZ-AC2	Test Date: 2023-10-10
Limit: FCC_Part15.209_RSE	Engineer: Bob Zhang
Probe: FMZB1519_0.009-30MHz	Polarity: Coplanar
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		1.046	1.093	22.878	-26.138	27.232	-21.784	PK
2	*	2.583	9.110	30.916	-20.390	29.500	-21.806	PK
3		3.866	0.330	22.084	-29.170	29.500	-21.754	PK

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

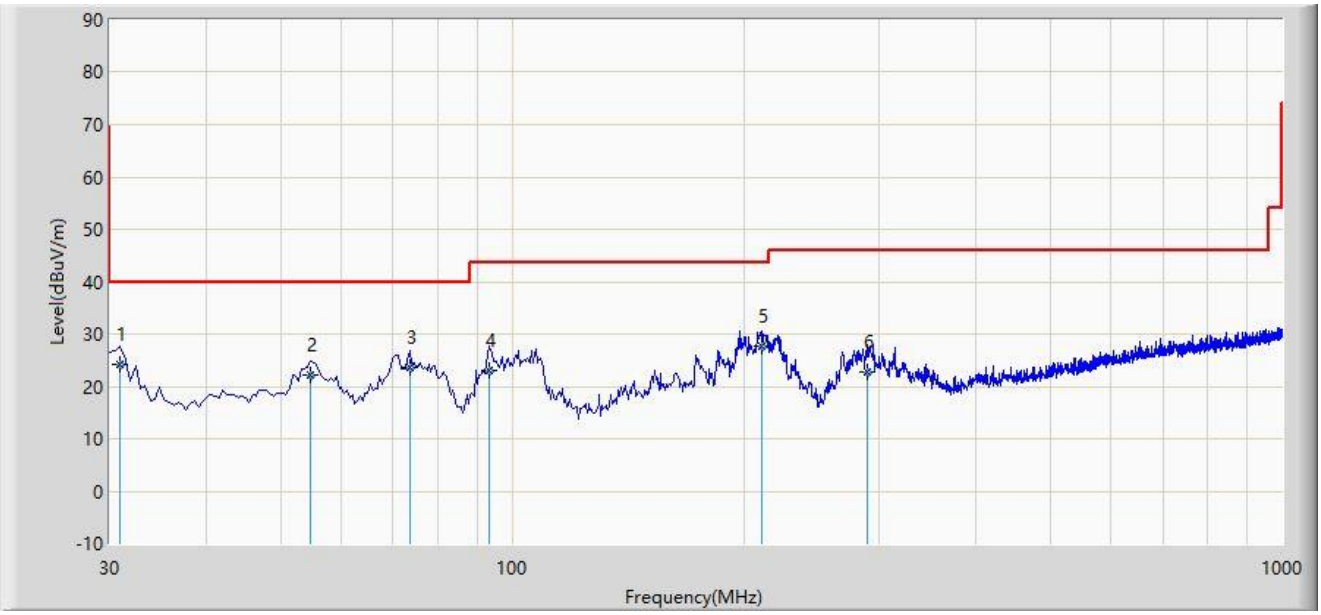
Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) + 40log(d1/d2) (dB), d1 = 3m, d2 = 300m (9kHz-490kHz) or 30m (490kHz-30MHz).

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-AC3	Test Date: 2023-07-30
Limit: FCC_Part15.209_RSE(3m)	Engineer: Wayne Wang
Probe: VULB 9168_00997_25-2000MHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2440MHz	



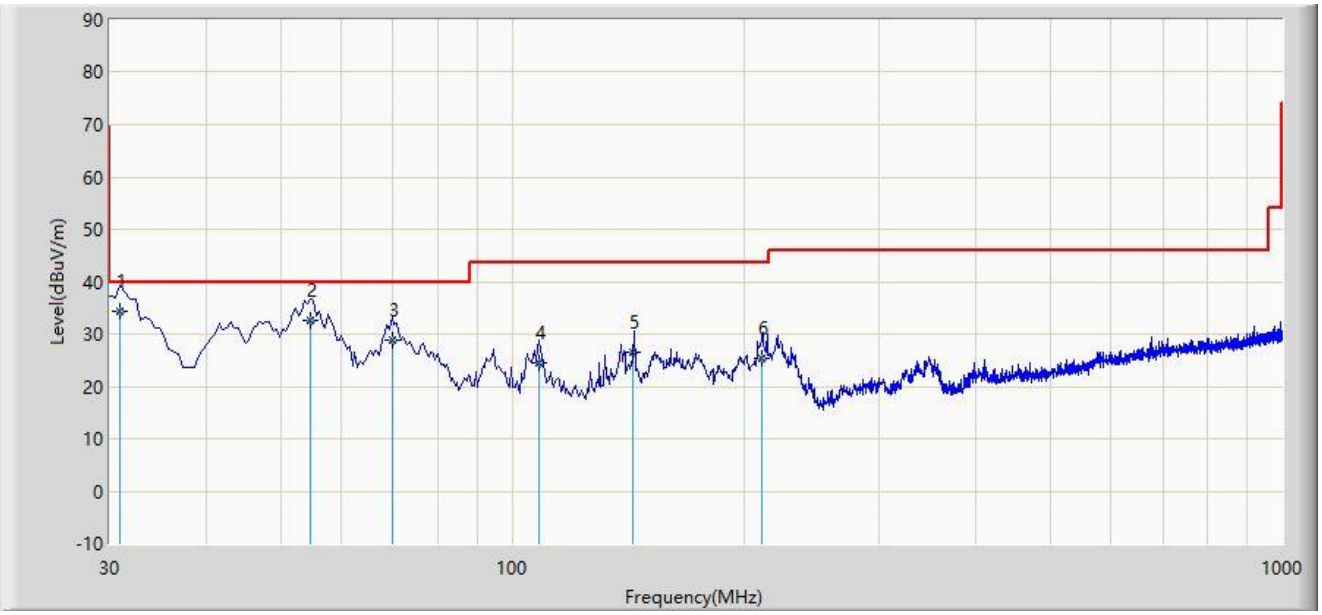
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		30.970	24.063	7.576	-15.937	40.000	16.487	QP
2		54.735	22.208	4.575	-17.792	40.000	17.633	QP
3		73.650	23.563	8.868	-16.437	40.000	14.695	QP
4		93.355	23.179	10.757	-20.321	43.500	12.422	QP
5	*	210.905	27.641	12.750	-15.859	43.500	14.891	QP
6		289.475	22.886	4.575	-23.114	46.000	18.311	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).

Site: SIP-AC3	Test Date: 2023-07-30
Limit: FCC_Part15.209_RSE(3m)	Engineer: Wayne Wang
Probe: VULB 9168_00997_25-2000MHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	30.970	34.258	17.905	-5.742	40.000	16.353	QP
2		54.735	32.613	14.980	-7.387	40.000	17.633	QP
3		69.770	28.733	13.242	-11.267	40.000	15.491	QP
4		108.547	24.604	9.780	-18.896	43.500	14.823	QP
5		143.576	26.437	8.575	-17.063	43.500	17.862	QP
6		211.390	25.463	10.575	-18.037	43.500	14.888	QP

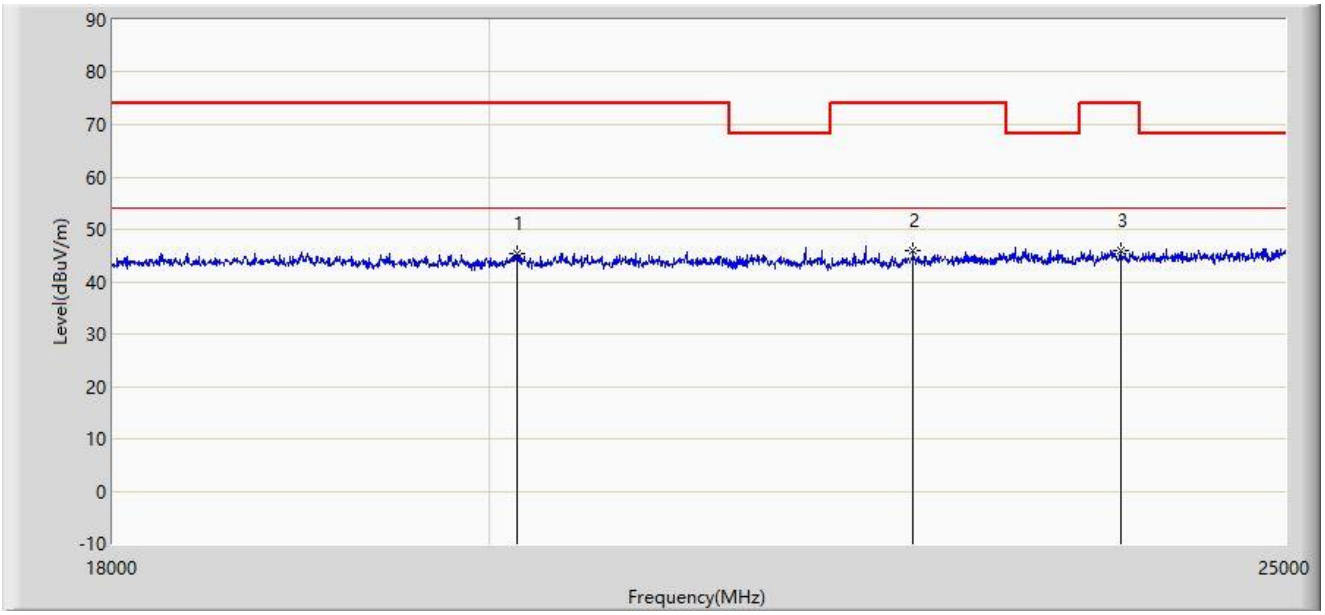
Note 1: " * ", means this data is the worst emission level.

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

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

The Result of Radiated Emission of 18GHz ~ 25GHz:

Site: SIP-AC1	Test Date: 2023-07-30
Limit: FCC_Part15.209_RSE(3m)	Engineer: Wayne Wang
Probe: BBHA 9170_00935_18-40GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		20159.500	45.328	56.292	-28.672	74.000	-10.964	PK
2		22525.500	45.892	55.609	-28.108	74.000	-9.717	PK
3	*	23873.000	46.046	55.240	-27.954	74.000	-9.194	PK

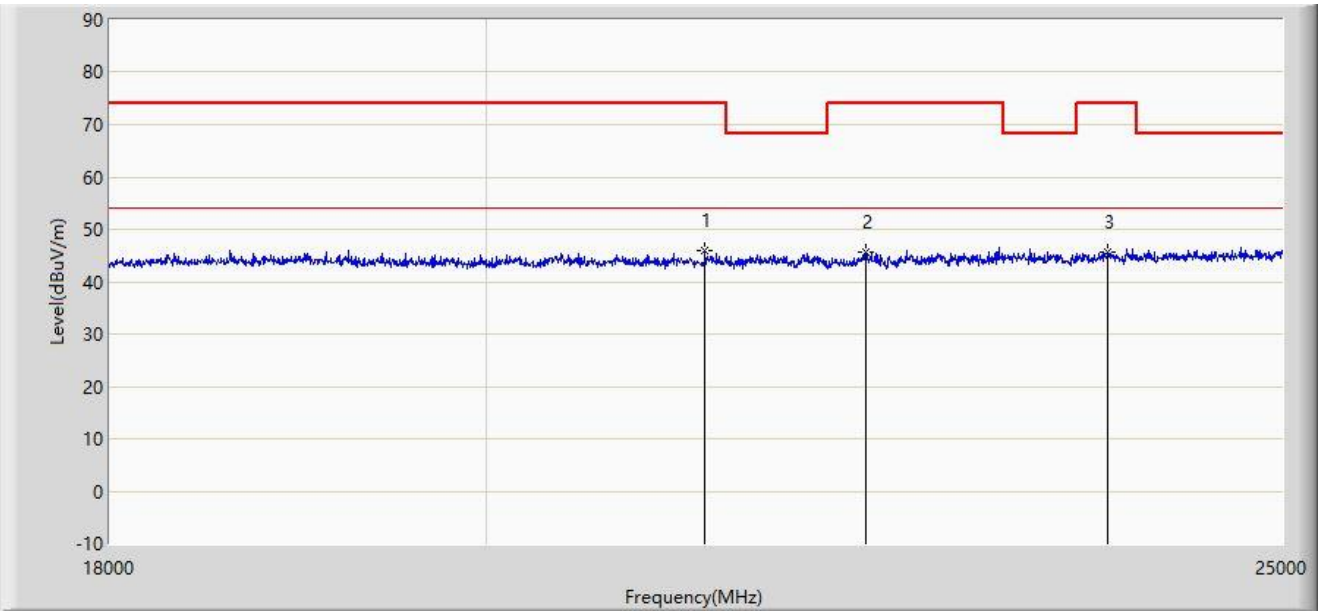
Note 1: " * ", means this data is the worst emission level.

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: 2023-07-30
Limit: FCC_Part15.209_RSE(3m)	Engineer: Wayne Wang
Probe: BBHA 9170_00935_18-40GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	21265.500	46.077	56.687	-27.923	74.000	-10.611	PK
2		22245.500	45.708	55.585	-28.292	74.000	-9.877	PK
3		23810.000	45.534	54.497	-28.466	74.000	-8.963	PK

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

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

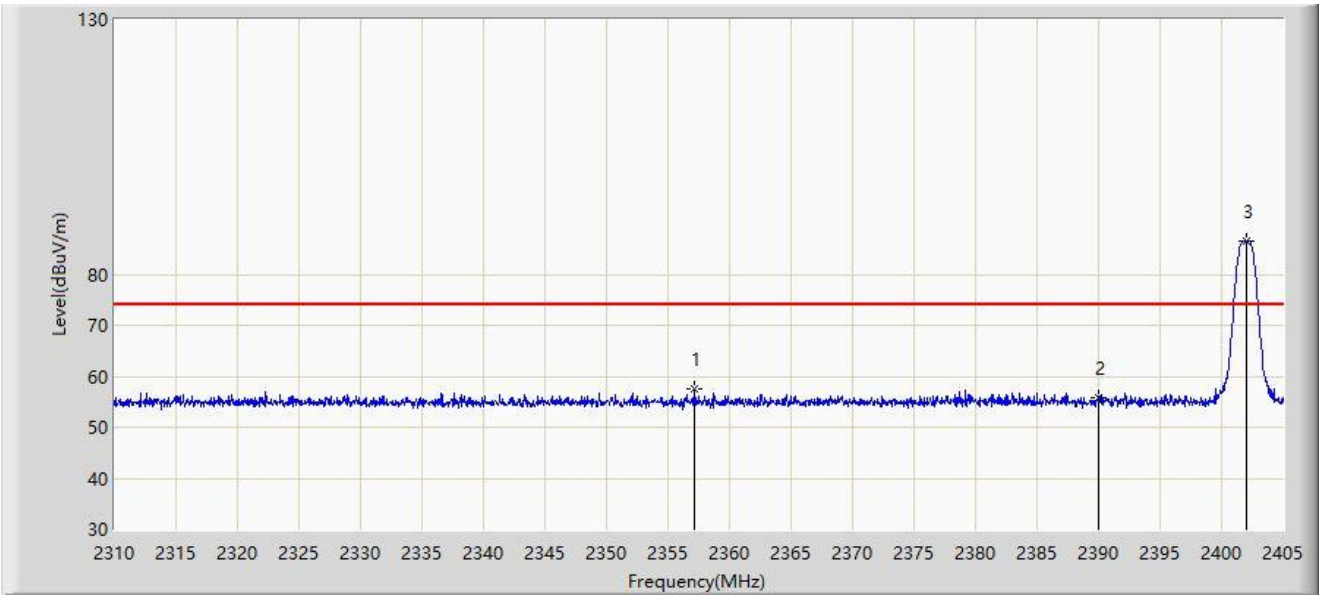
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

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

A.7 Radiated Restricted Band Edge Test Result

Filter 7#:

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



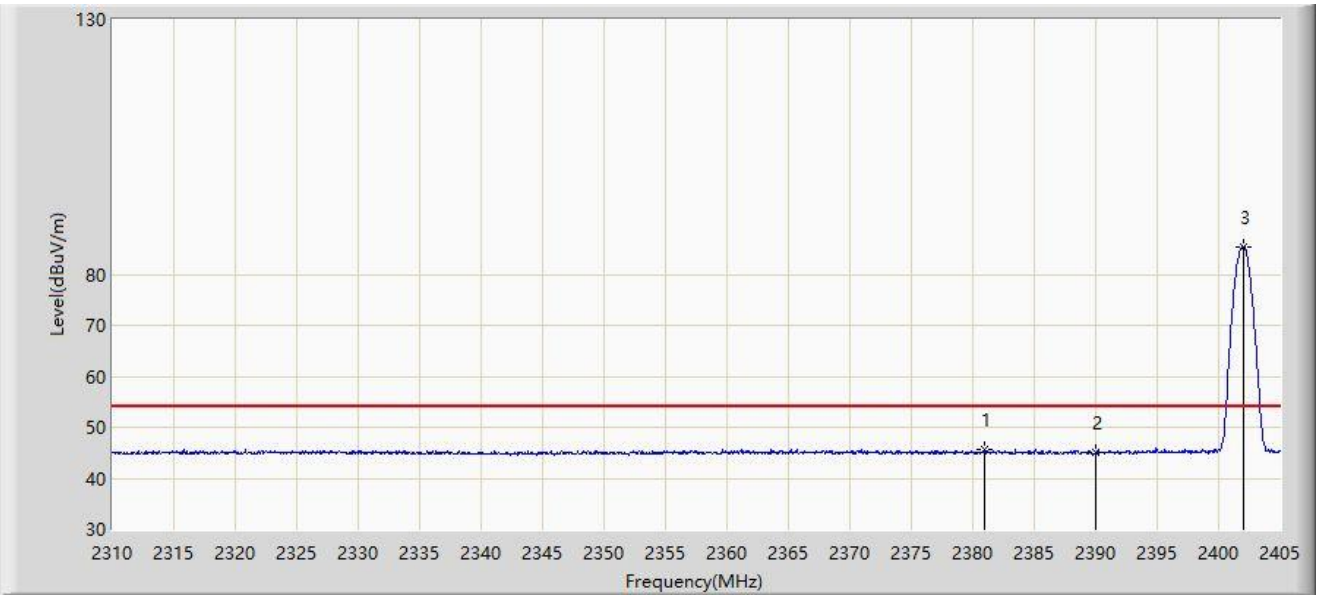
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2357.120	57.491	25.044	-16.509	74.000	32.446	PK
2		2390.000	55.937	23.554	-18.063	74.000	32.382	PK
3		2402.008	86.415	54.068	N/A	N/A	32.347	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



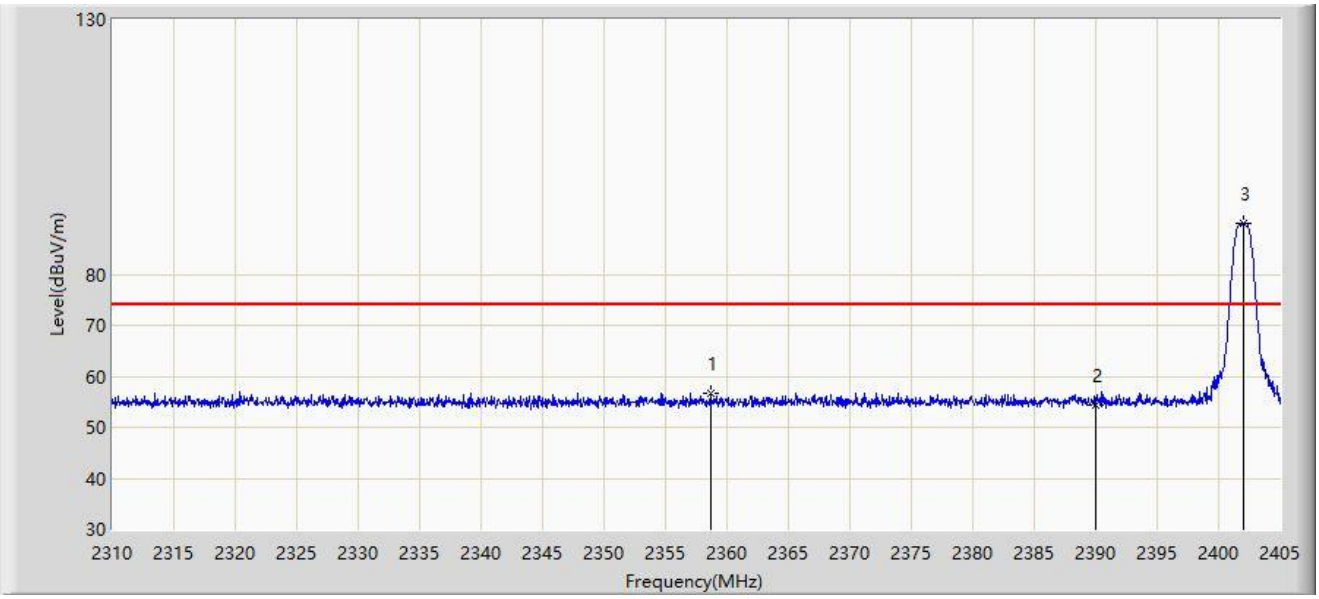
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2380.917	45.524	13.090	-8.476	54.000	32.434	AV
2		2390.000	45.060	12.677	-8.940	54.000	32.382	AV
3		2402.008	85.369	53.022	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



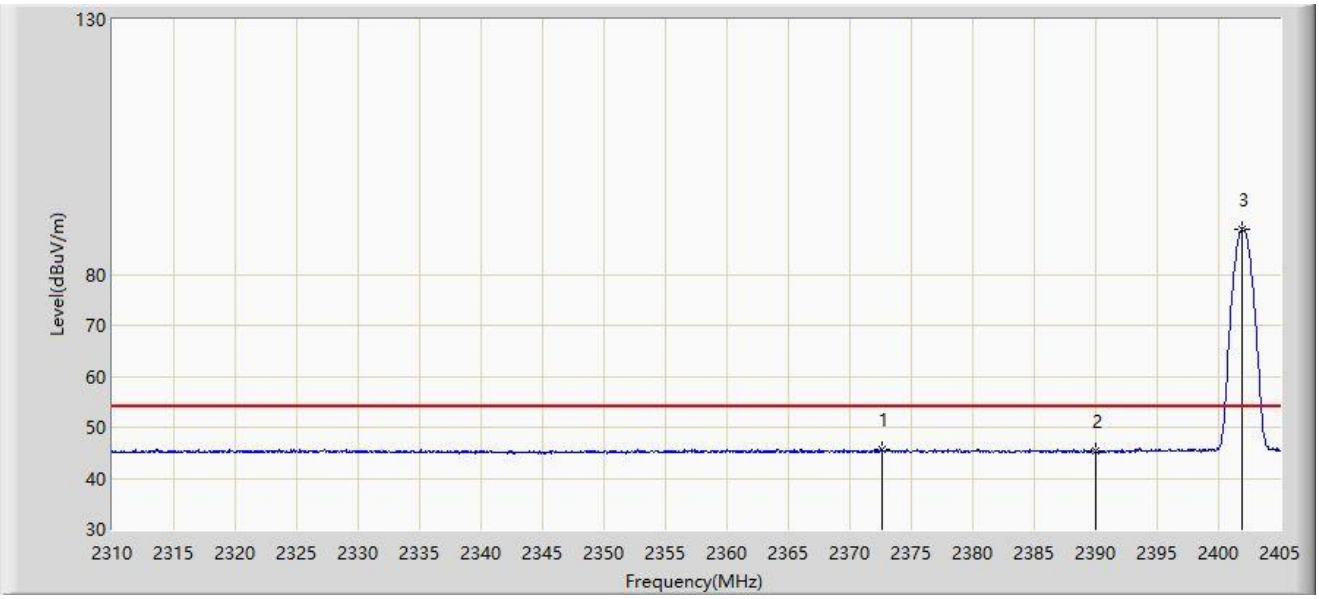
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2358.640	56.676	24.217	-17.324	74.000	32.460	PK
2		2390.000	54.369	21.986	-19.631	74.000	32.382	PK
3		2402.008	89.992	57.645	N/A	N/A	32.347	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



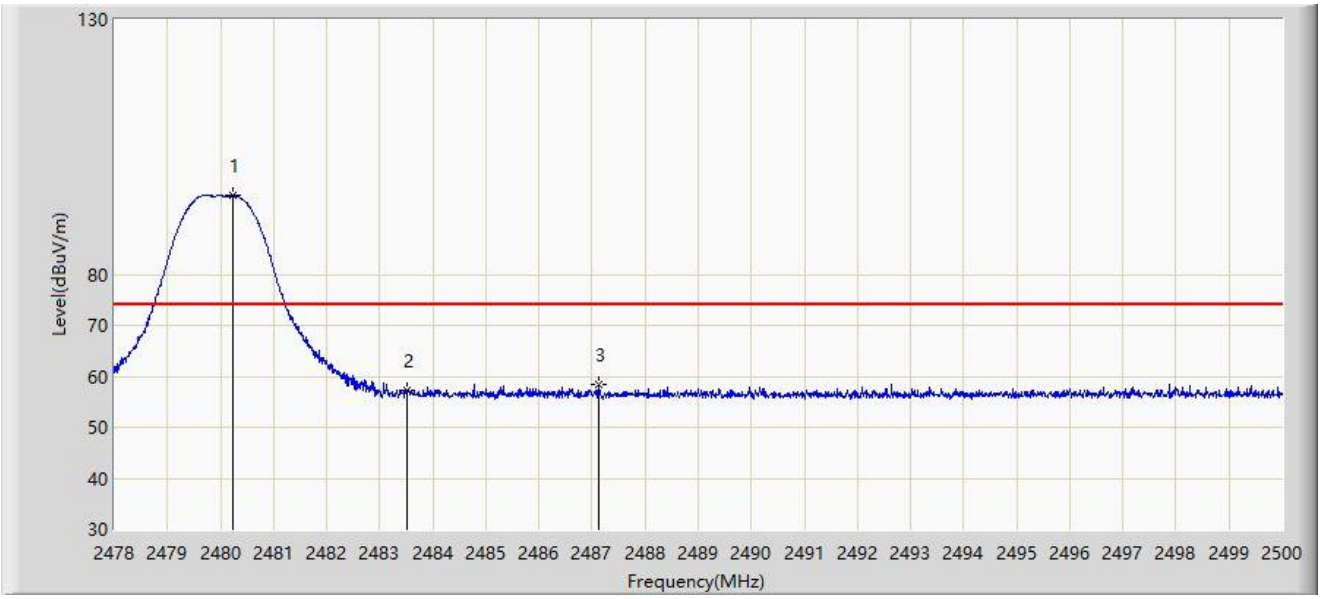
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2372.653	45.710	13.250	-8.290	54.000	32.460	AV
2		2390.000	45.280	12.897	-8.720	54.000	32.382	AV
3		2401.865	88.861	56.513	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



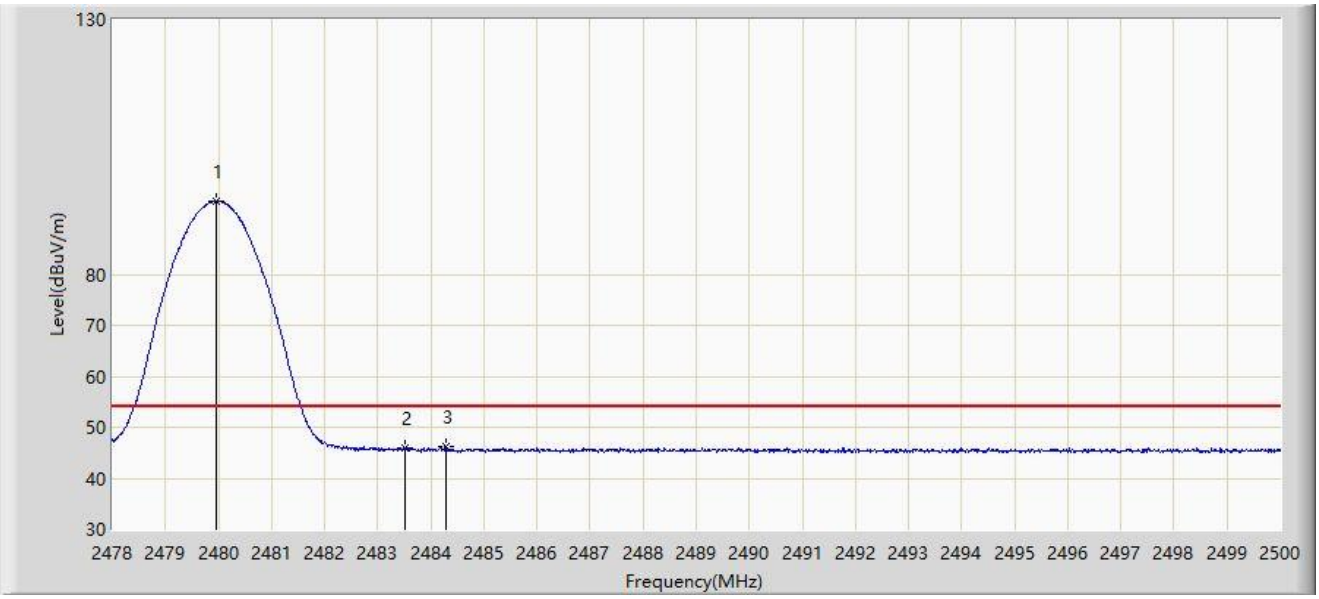
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.244	95.437	63.225	N/A	N/A	32.212	PK
2		2483.500	57.225	25.002	-16.775	74.000	32.222	PK
3	*	2487.119	58.324	26.090	-15.676	74.000	32.235	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



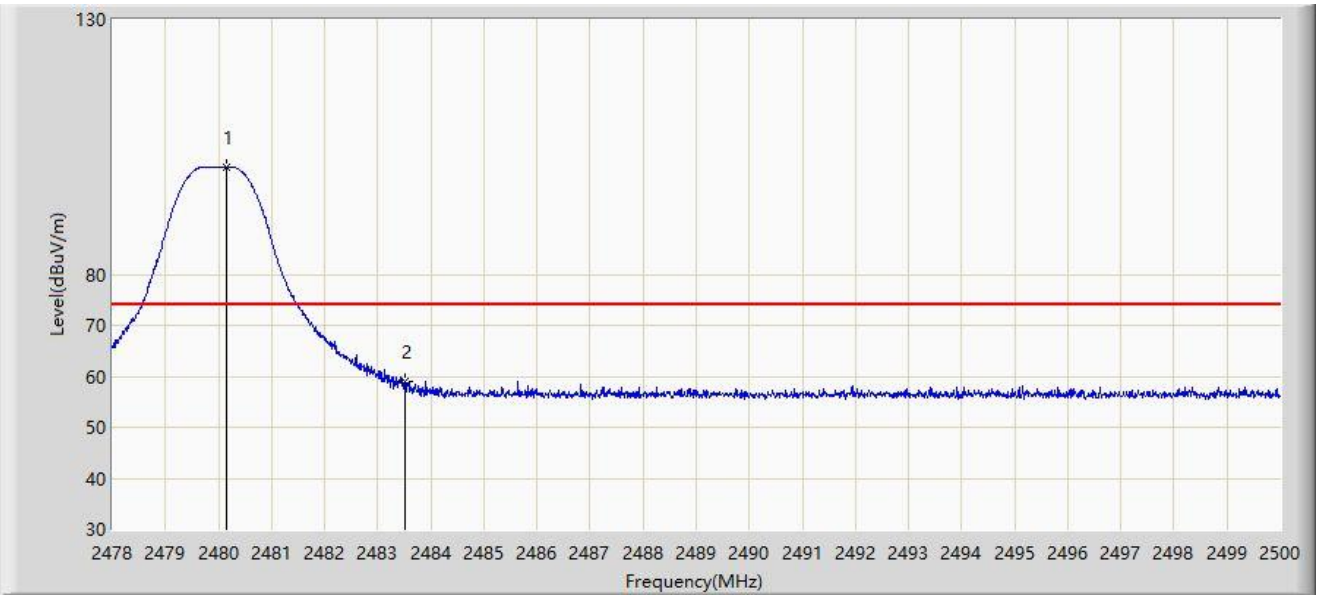
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.969	94.321	62.110	N/A	N/A	32.212	AV
2		2483.500	45.829	13.606	-8.171	54.000	32.222	AV
3	*	2484.281	46.102	13.877	-7.898	54.000	32.225	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



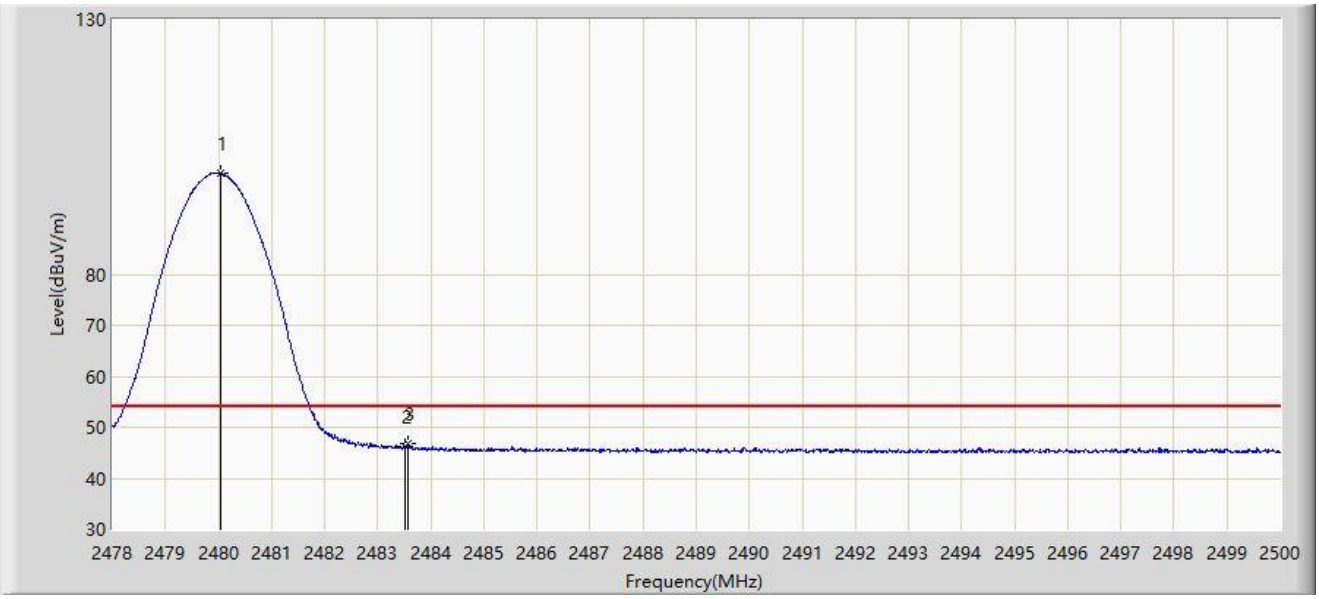
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2480.156	100.966	68.754	N/A	N/A	32.212	PK
2	*	2483.500	59.010	26.787	-14.990	74.000	32.222	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



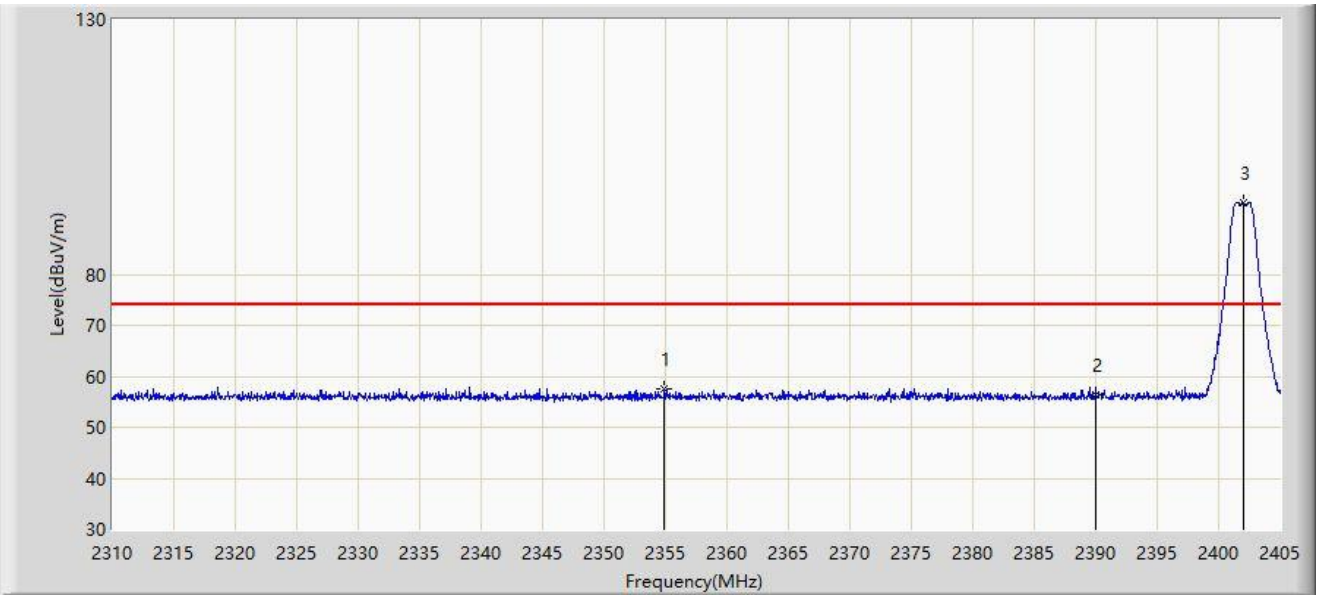
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.046	99.814	67.603	N/A	N/A	32.212	AV
2		2483.500	46.249	14.026	-7.751	54.000	32.222	AV
3	*	2483.566	46.680	14.457	-7.320	54.000	32.223	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



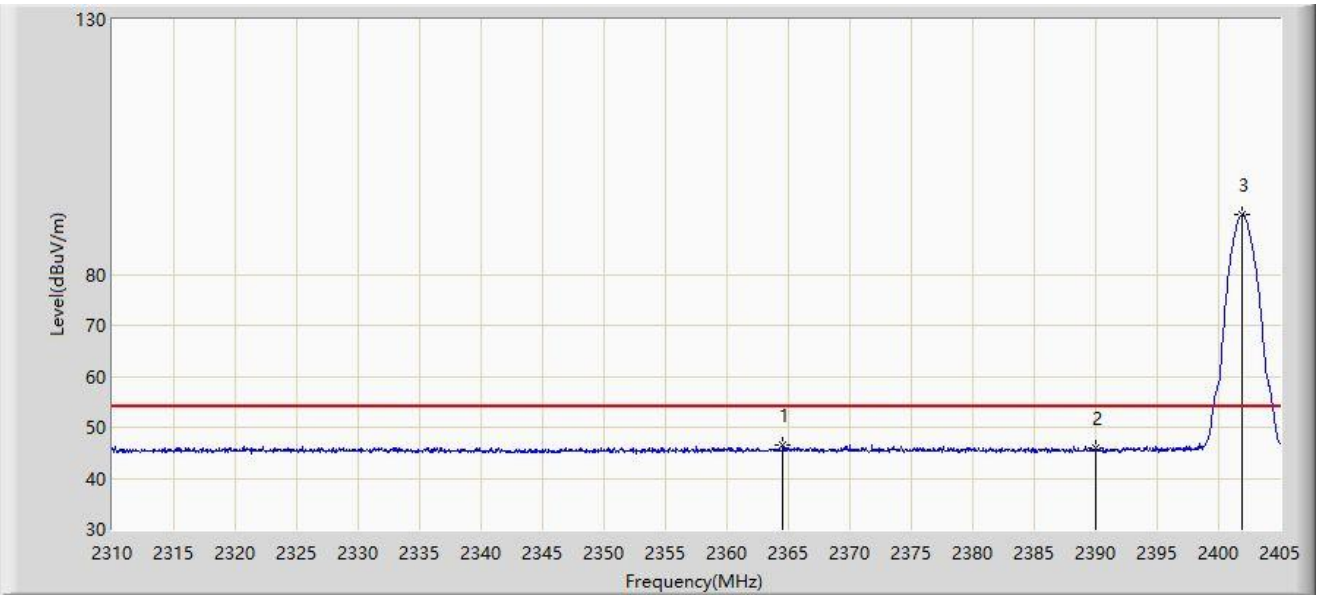
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2354.887	57.599	25.171	-16.401	74.000	32.428	PK
2		2390.000	56.313	23.930	-17.687	74.000	32.382	PK
3		2402.008	94.134	61.787	N/A	N/A	32.347	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



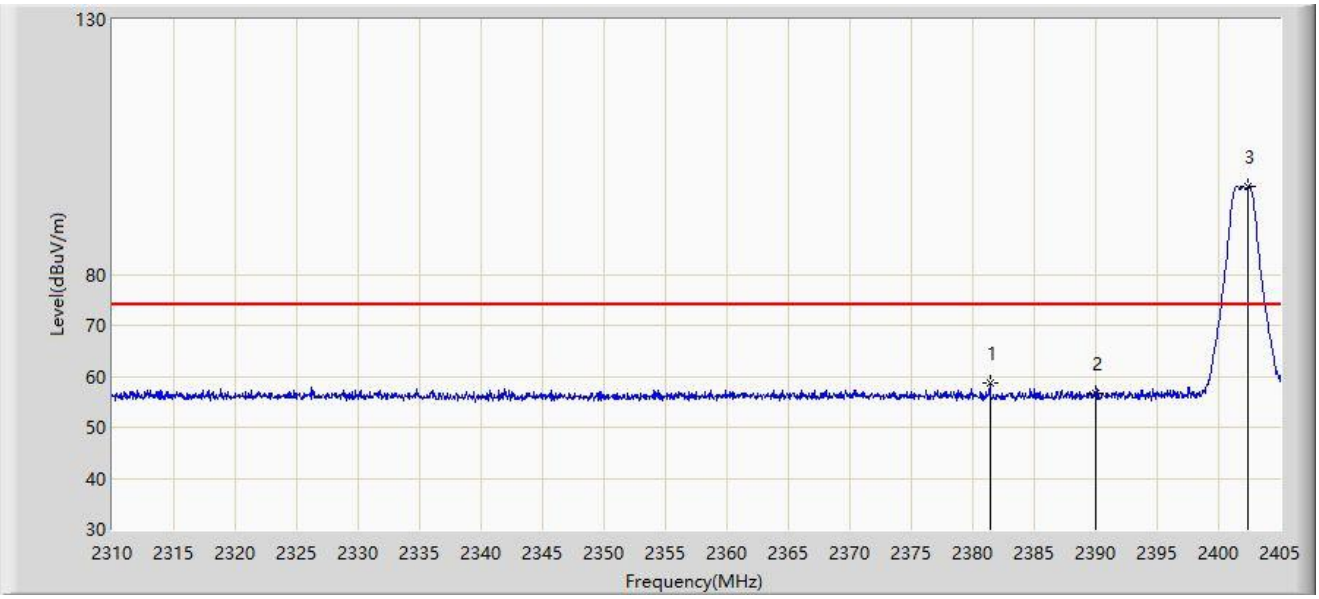
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2364.577	46.461	13.994	-7.539	54.000	32.467	AV
2		2390.000	45.815	13.432	-8.185	54.000	32.382	AV
3		2401.913	91.666	59.319	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



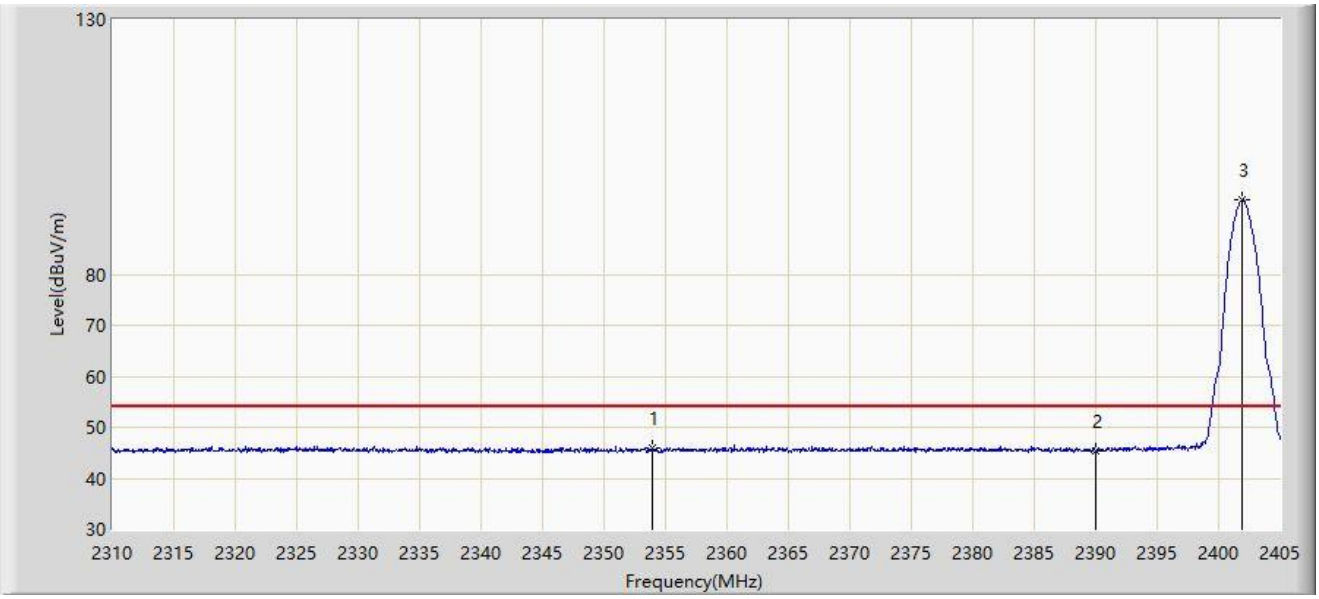
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2381.393	58.595	26.164	-15.405	74.000	32.431	PK
2		2390.000	56.684	24.301	-17.316	74.000	32.382	PK
3		2402.435	97.310	64.963	N/A	N/A	32.346	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



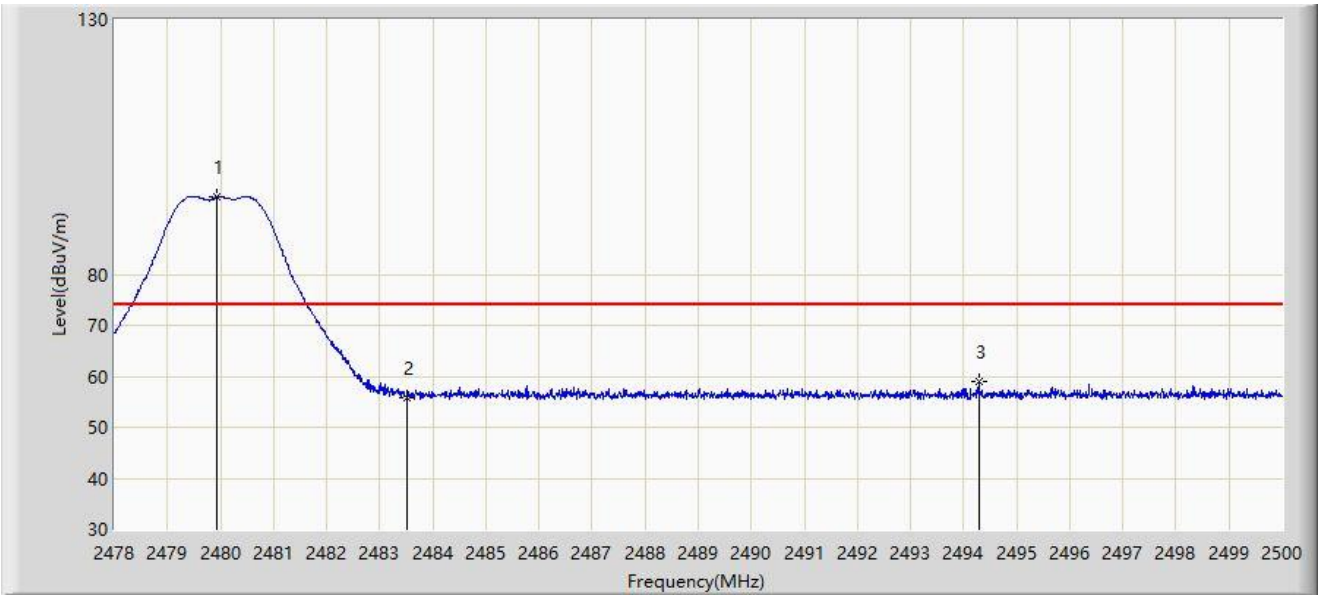
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2353.937	46.022	13.602	-7.978	54.000	32.419	AV
2		2390.000	45.249	12.866	-8.751	54.000	32.382	AV
3		2401.865	94.507	62.159	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



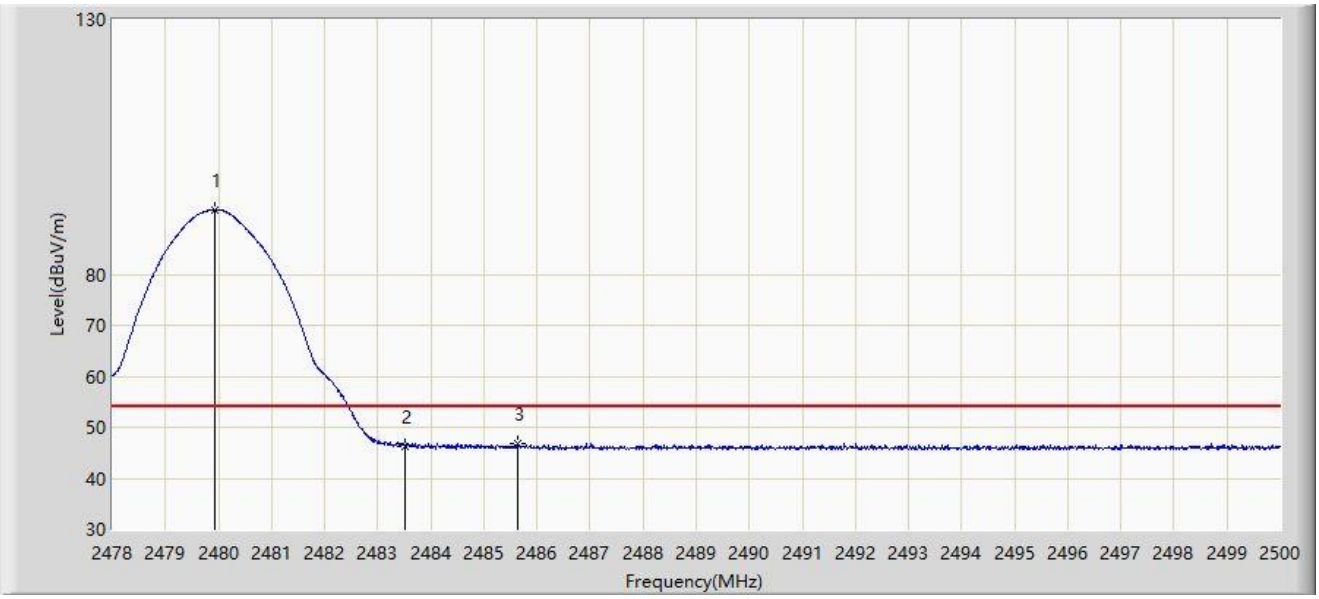
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.936	95.200	62.989	N/A	N/A	32.211	PK
2		2483.500	55.912	23.689	-18.088	74.000	32.222	PK
3	*	2494.280	58.910	26.653	-15.090	74.000	32.258	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



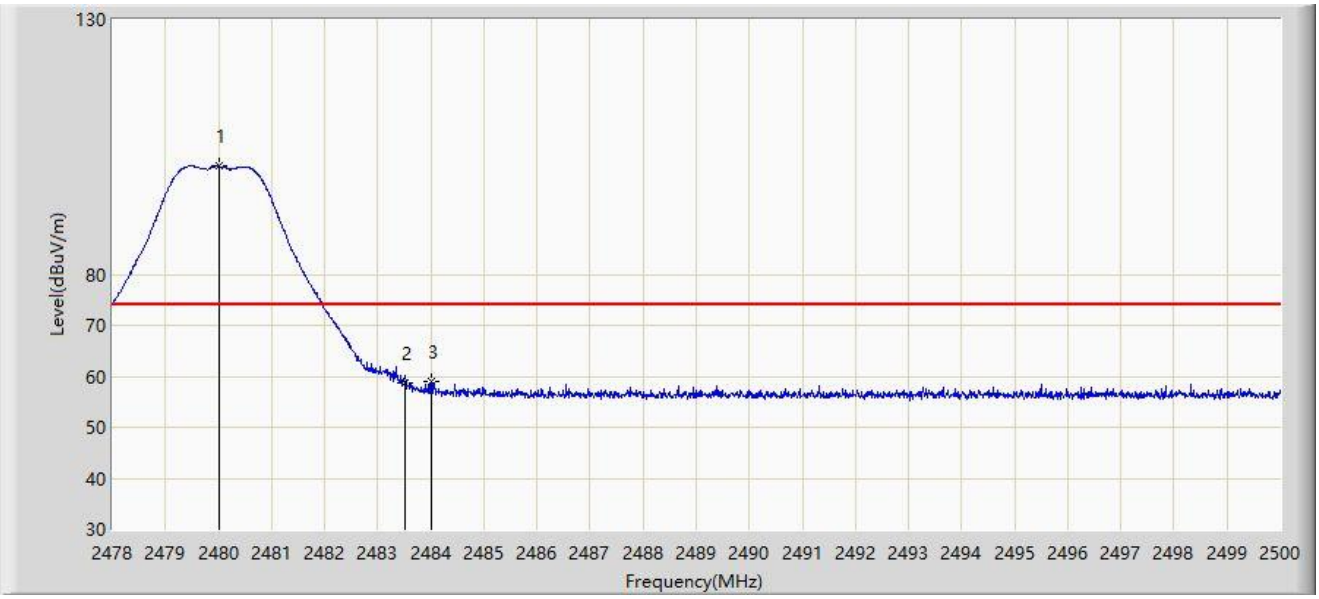
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2479.936	92.715	60.504	N/A	N/A	32.211	AV
2		2483.500	46.305	14.082	-7.695	54.000	32.222	AV
3	*	2485.623	46.787	14.558	-7.213	54.000	32.229	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



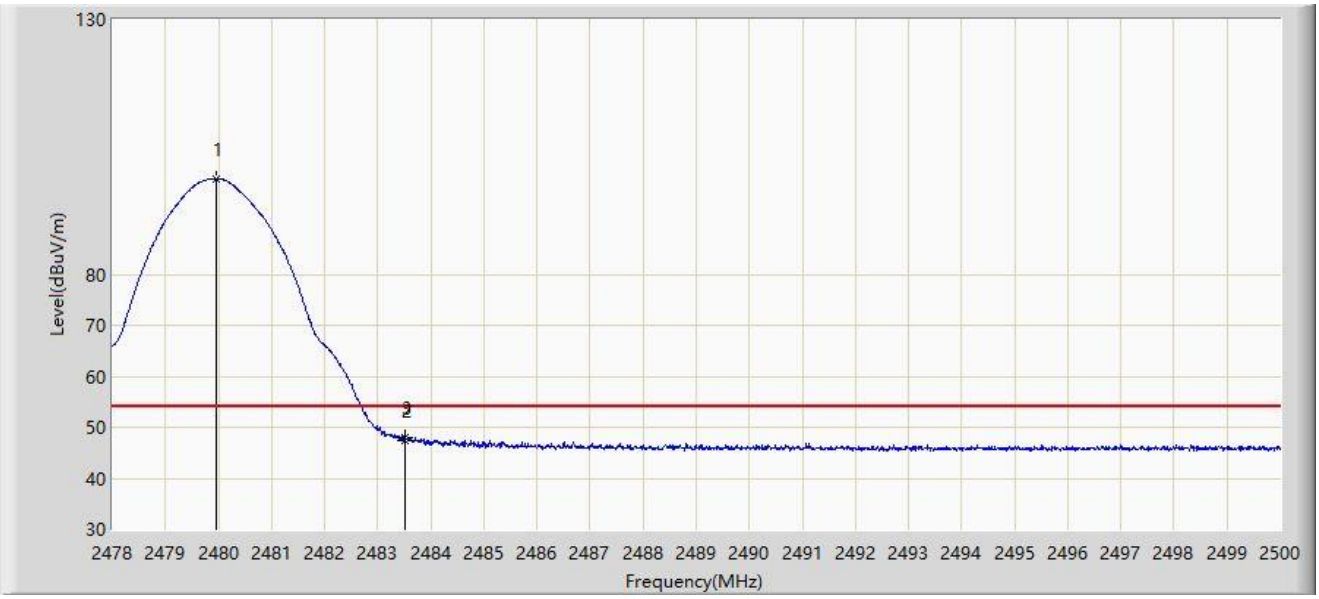
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2480.002	101.208	68.997	N/A	N/A	32.212	PK
2		2483.500	58.575	26.352	-15.425	74.000	32.222	PK
3	*	2484.017	59.006	26.782	-14.994	74.000	32.224	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.969	98.824	66.613	N/A	N/A	32.212	AV
2		2483.500	47.507	15.284	-6.493	54.000	32.222	AV
3	*	2483.511	48.103	15.880	-5.897	54.000	32.222	AV

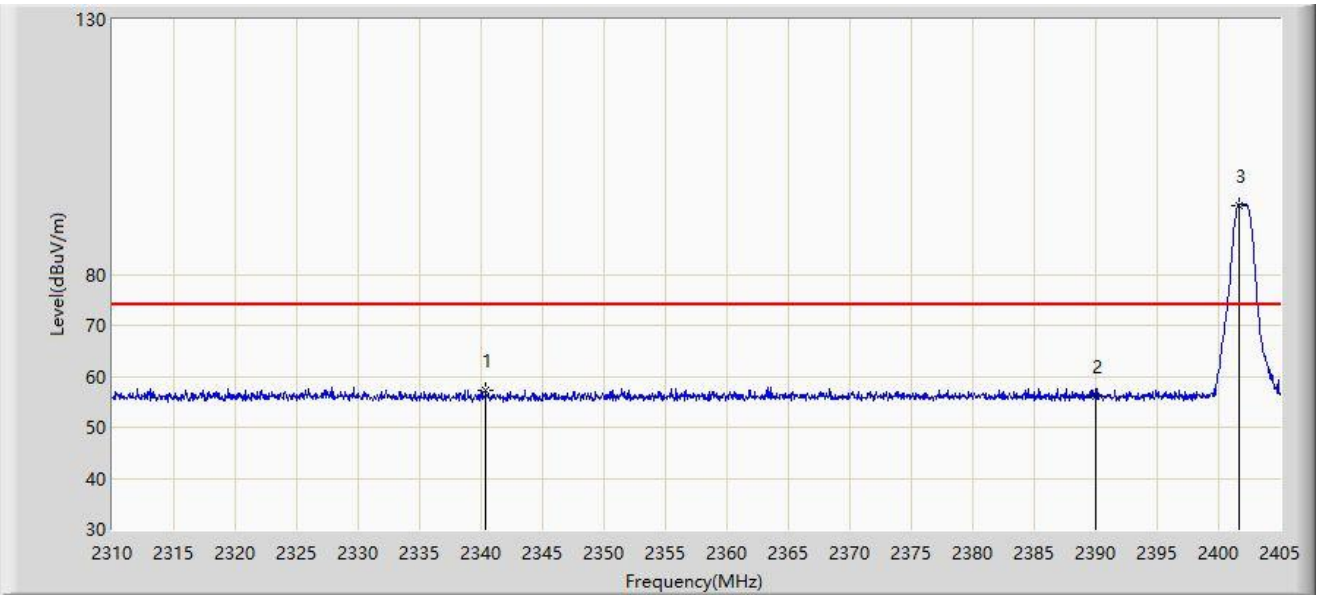
Note 1: " * ", means this data is the worst emission level.

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

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

Filter 8#:

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



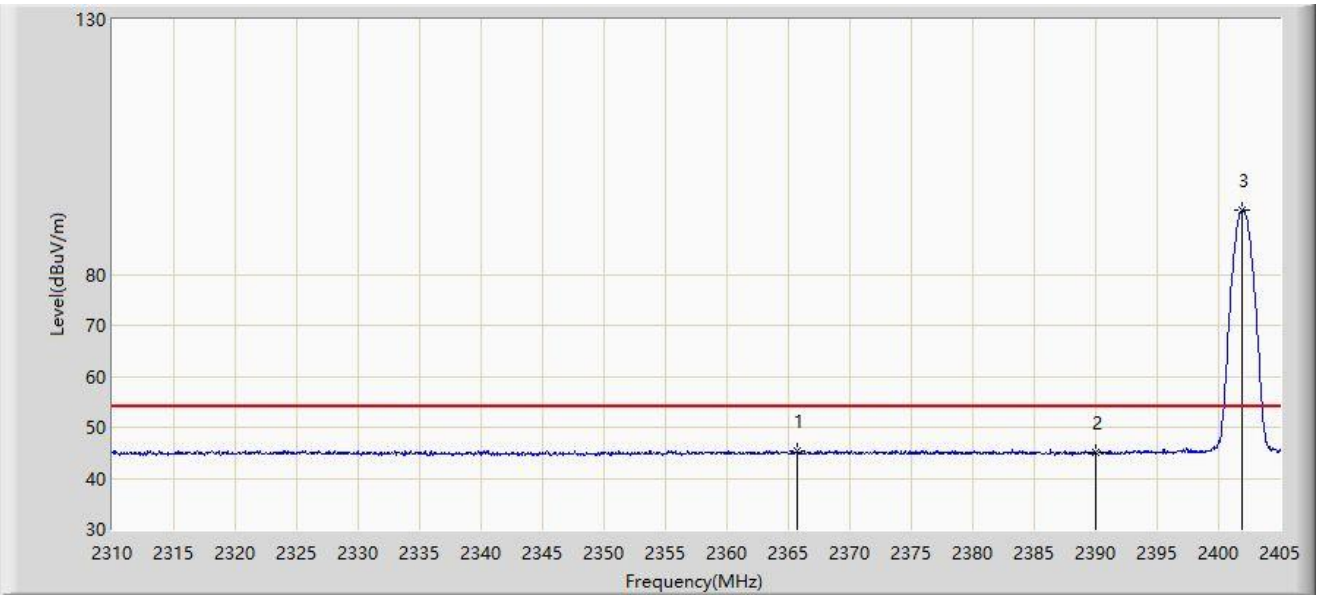
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2340.353	57.277	24.902	-16.723	74.000	32.375	PK
2		2390.000	56.156	23.773	-17.844	74.000	32.382	PK
3		2401.627	93.592	61.244	N/A	N/A	32.348	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



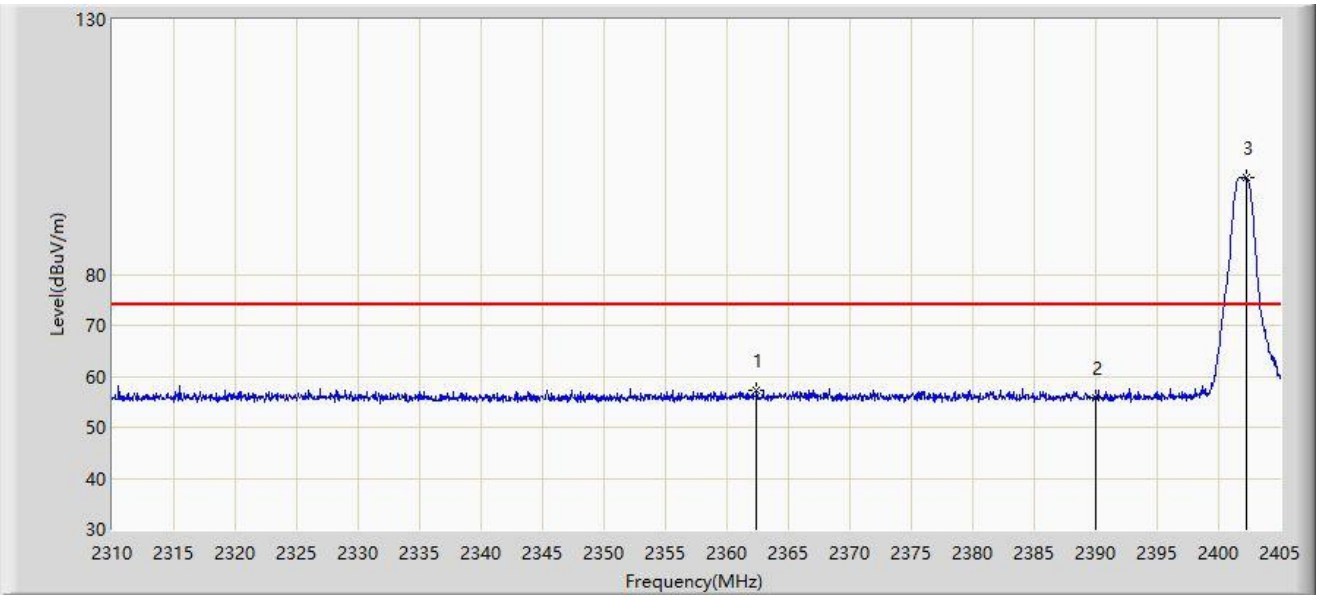
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2365.718	45.390	12.924	-8.610	54.000	32.466	AV
2		2390.000	45.093	12.710	-8.907	54.000	32.382	AV
3		2401.960	92.629	60.282	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



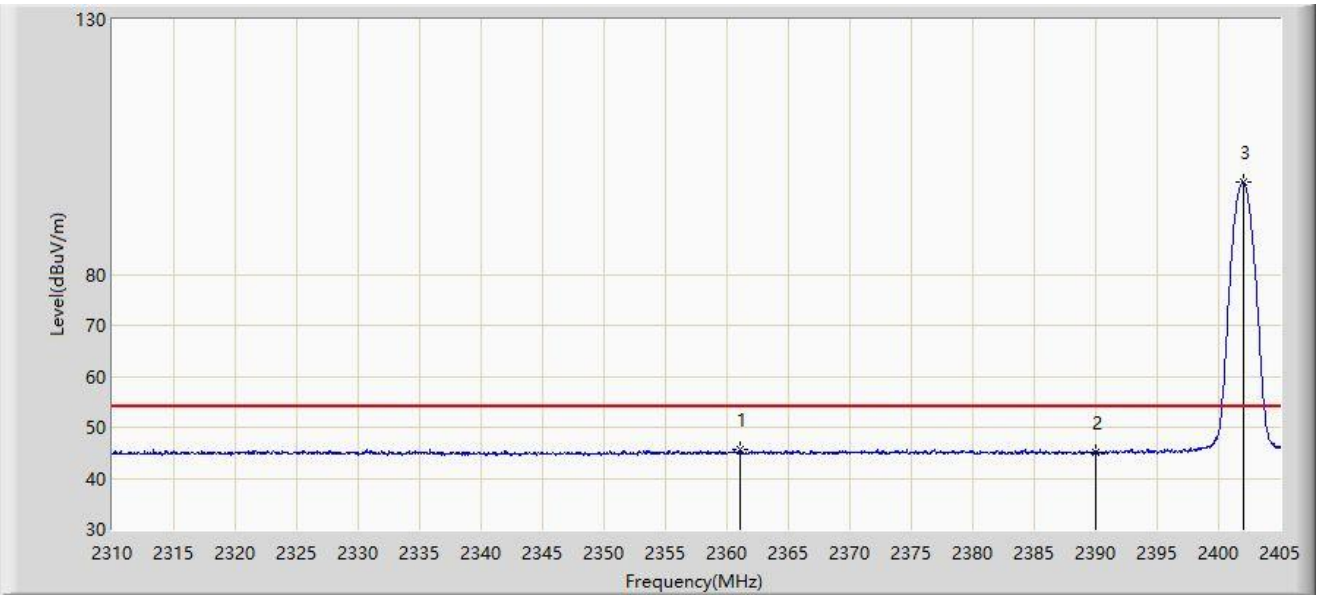
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2362.393	57.198	24.729	-16.802	74.000	32.469	PK
2		2390.000	55.840	23.457	-18.160	74.000	32.382	PK
3		2402.292	98.933	66.586	N/A	N/A	32.346	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2402MHz	



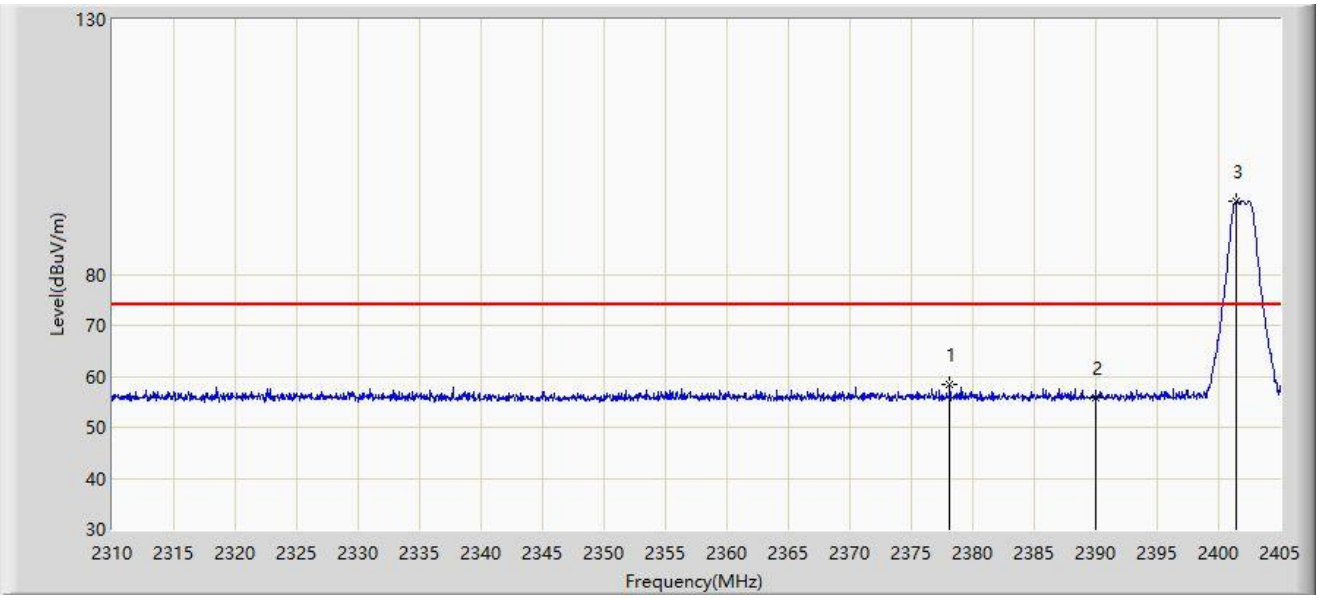
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2361.015	45.616	13.146	-8.384	54.000	32.470	AV
2		2390.000	44.993	12.610	-9.007	54.000	32.382	AV
3		2402.008	97.973	65.626	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



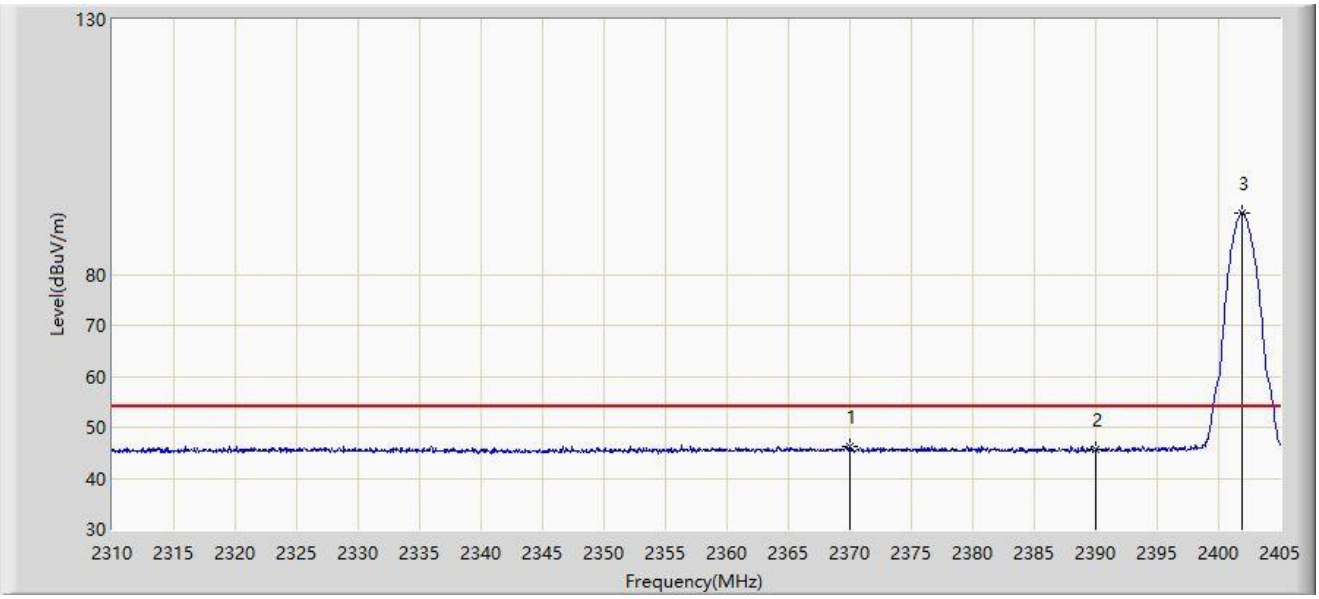
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2378.115	58.332	25.882	-15.668	74.000	32.449	PK
2		2390.000	55.895	23.512	-18.105	74.000	32.382	PK
3		2401.390	94.270	61.922	N/A	N/A	32.348	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



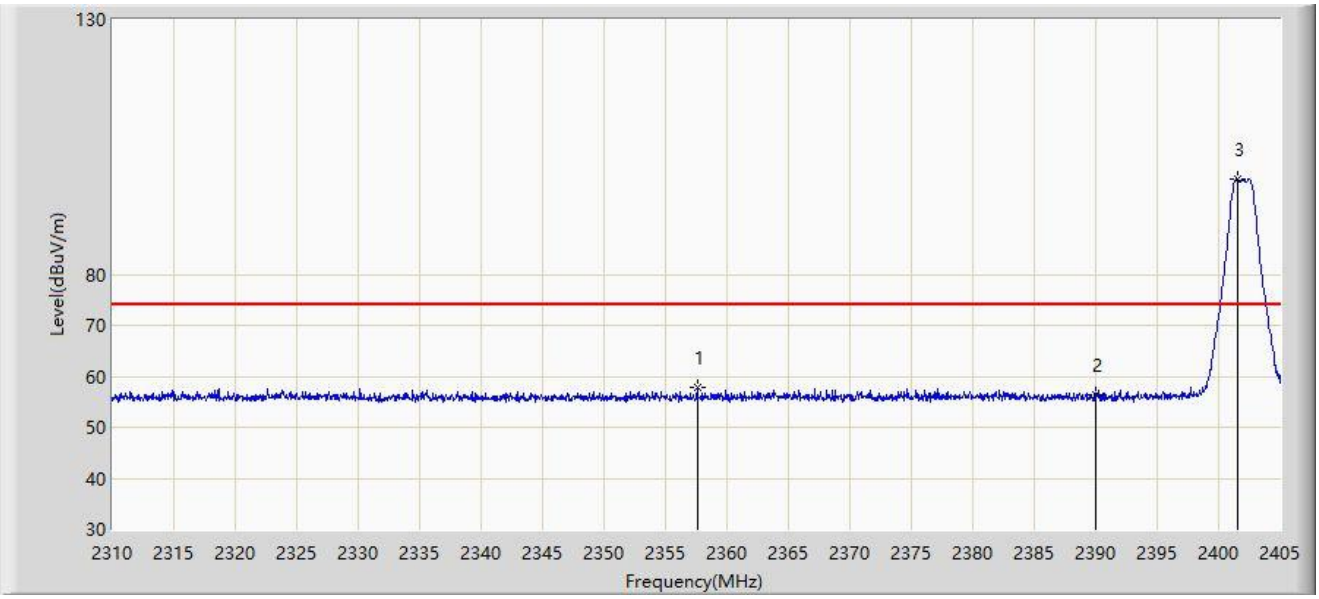
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2369.992	46.338	13.876	-7.662	54.000	32.462	AV
2		2390.000	45.693	13.310	-8.307	54.000	32.382	AV
3		2401.865	91.988	59.640	N/A	N/A	32.347	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



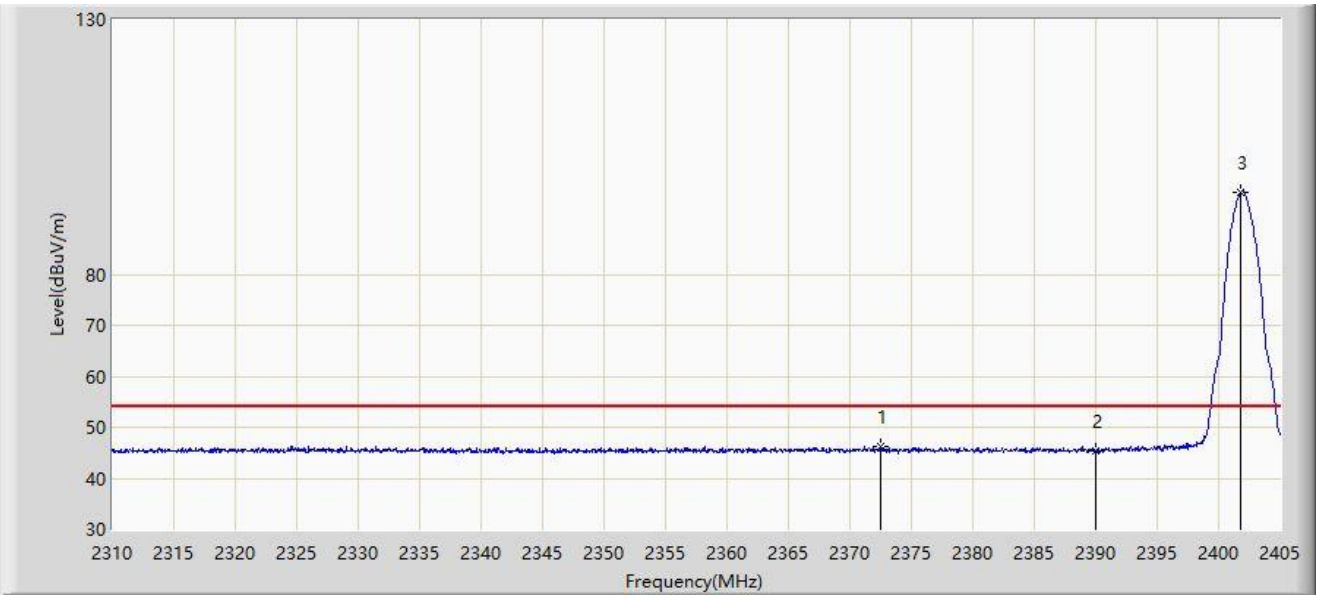
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2357.595	57.709	25.258	-16.291	74.000	32.451	PK
2		2390.000	56.256	23.873	-17.744	74.000	32.382	PK
3		2401.532	98.635	66.287	N/A	N/A	32.348	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2372.558	46.091	13.631	-7.909	54.000	32.460	AV
2		2390.000	45.408	13.025	-8.592	54.000	32.382	AV
3		2401.817	96.162	63.814	N/A	N/A	32.348	AV

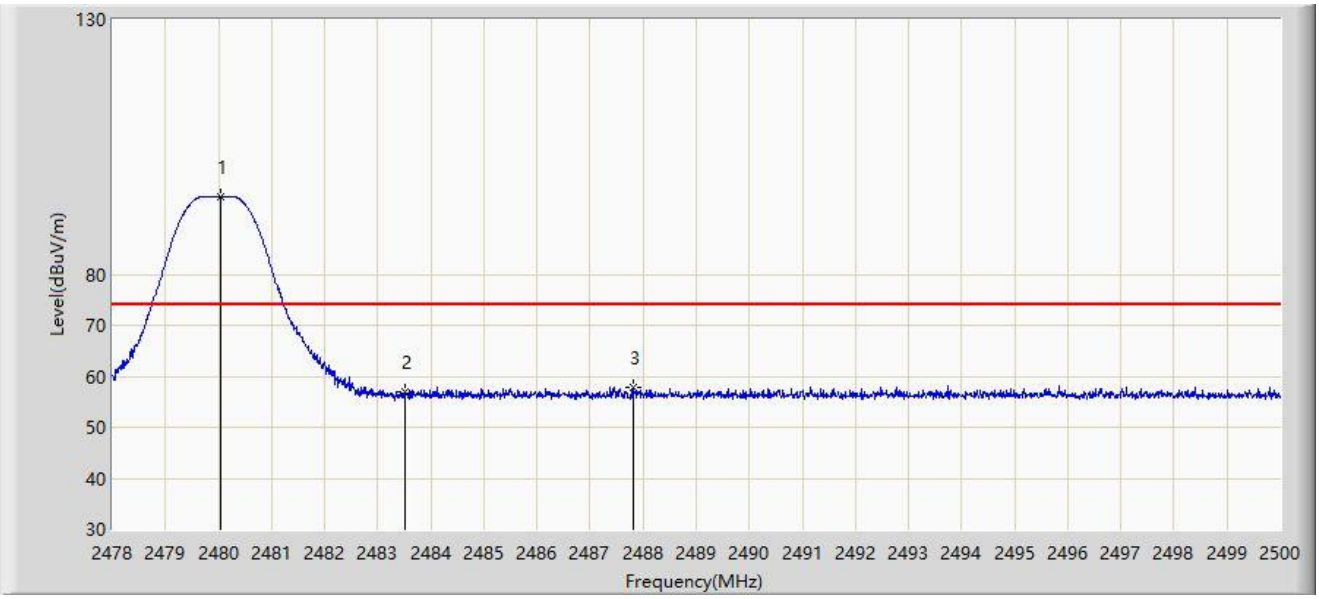
Note 1: " * ", means this data is the worst emission level.

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

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

Filter 9#:

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



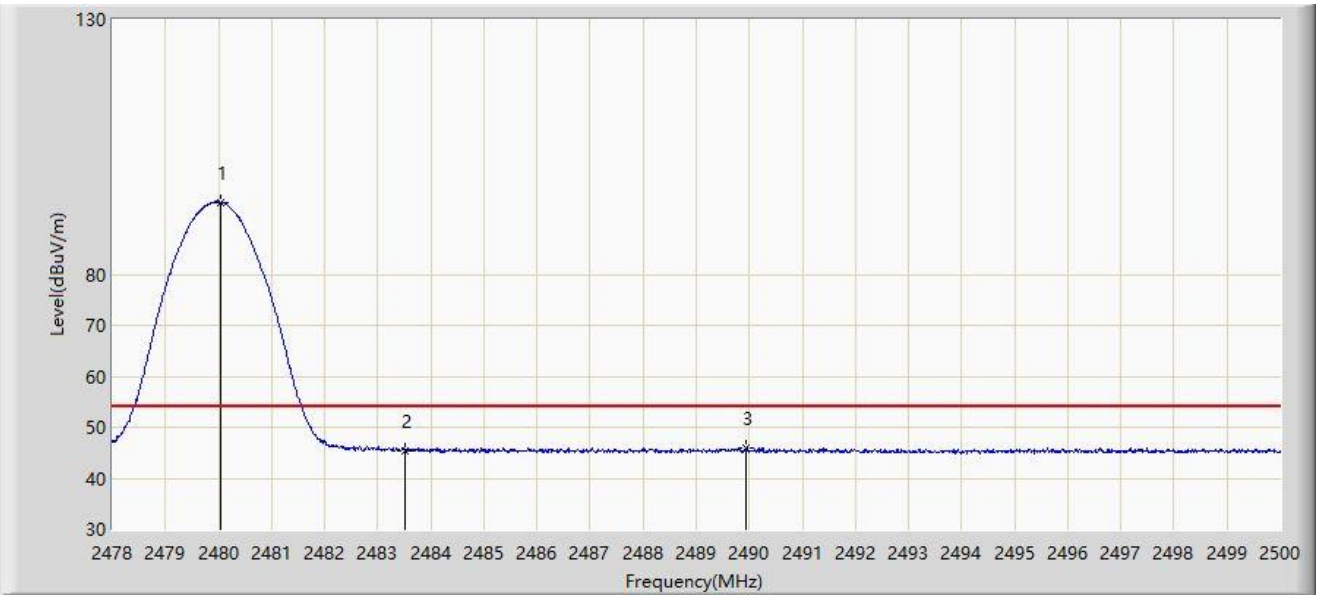
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.046	95.221	63.010	N/A	N/A	32.212	PK
2		2483.500	56.827	24.604	-17.173	74.000	32.222	PK
3	*	2487.812	57.886	25.649	-16.114	74.000	32.236	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



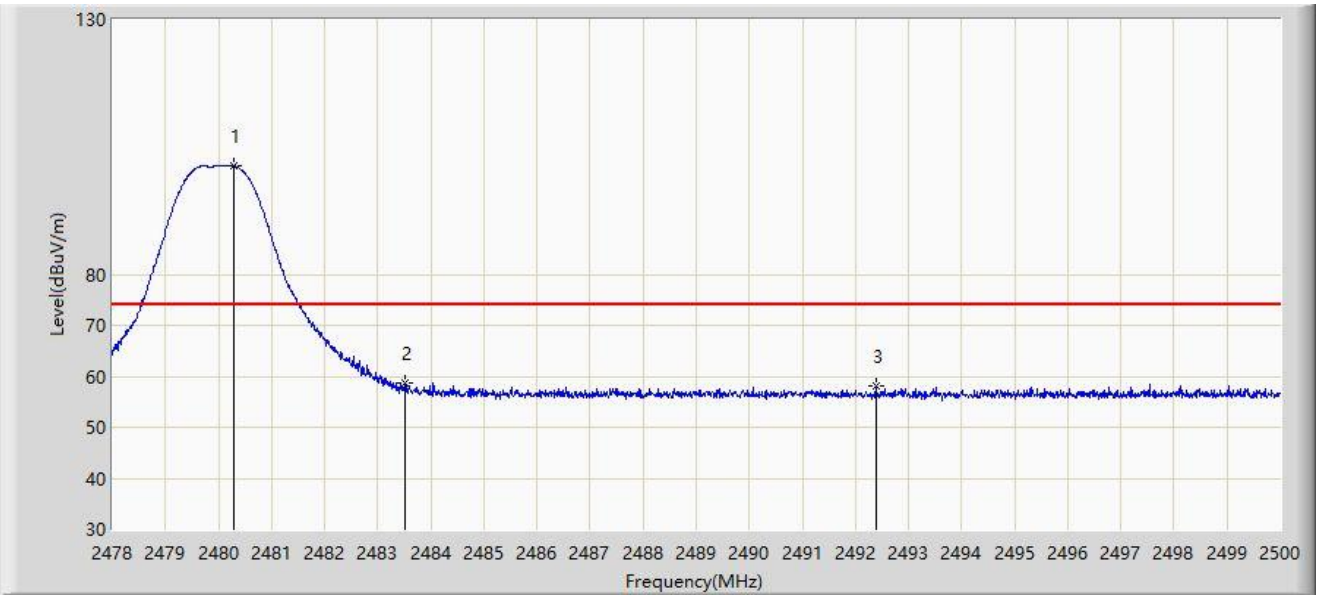
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2480.046	94.138	61.927	N/A	N/A	32.212	AV
2		2483.500	45.453	13.230	-8.547	54.000	32.222	AV
3	*	2489.946	46.006	13.763	-7.994	54.000	32.243	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



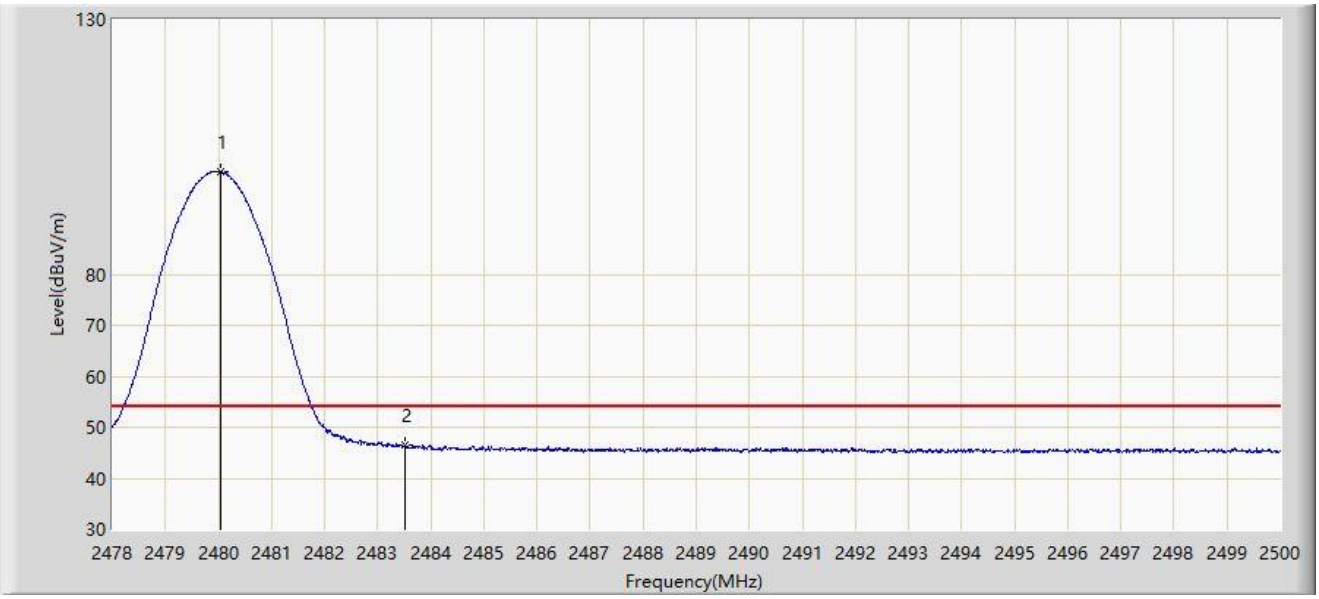
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2480.277	101.287	69.075	N/A	N/A	32.212	PK
2	*	2483.500	58.624	26.401	-15.376	74.000	32.222	PK
3		2492.388	58.174	25.923	-15.826	74.000	32.251	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2480MHz	



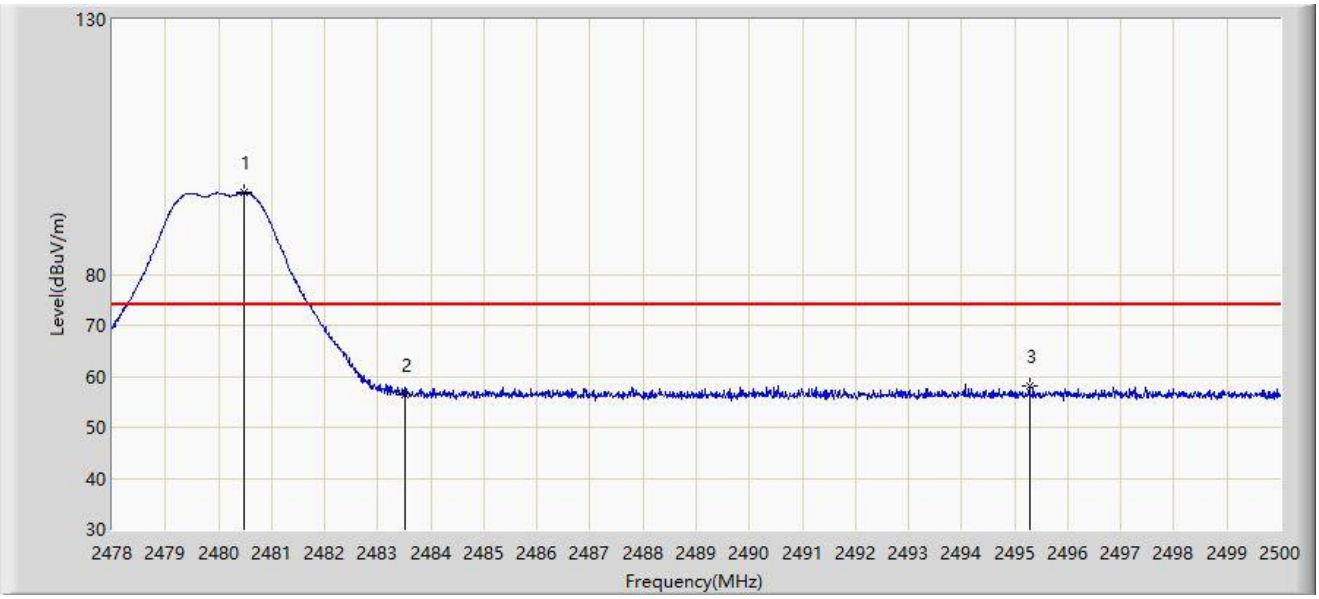
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.046	100.157	67.946	N/A	N/A	32.212	AV
2	*	2483.500	46.521	14.298	-7.479	54.000	32.222	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2480.486	96.001	63.788	N/A	N/A	32.212	PK
2		2483.500	56.300	24.077	-17.700	74.000	32.222	PK
3	*	2495.281	58.186	25.925	-15.814	74.000	32.260	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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	

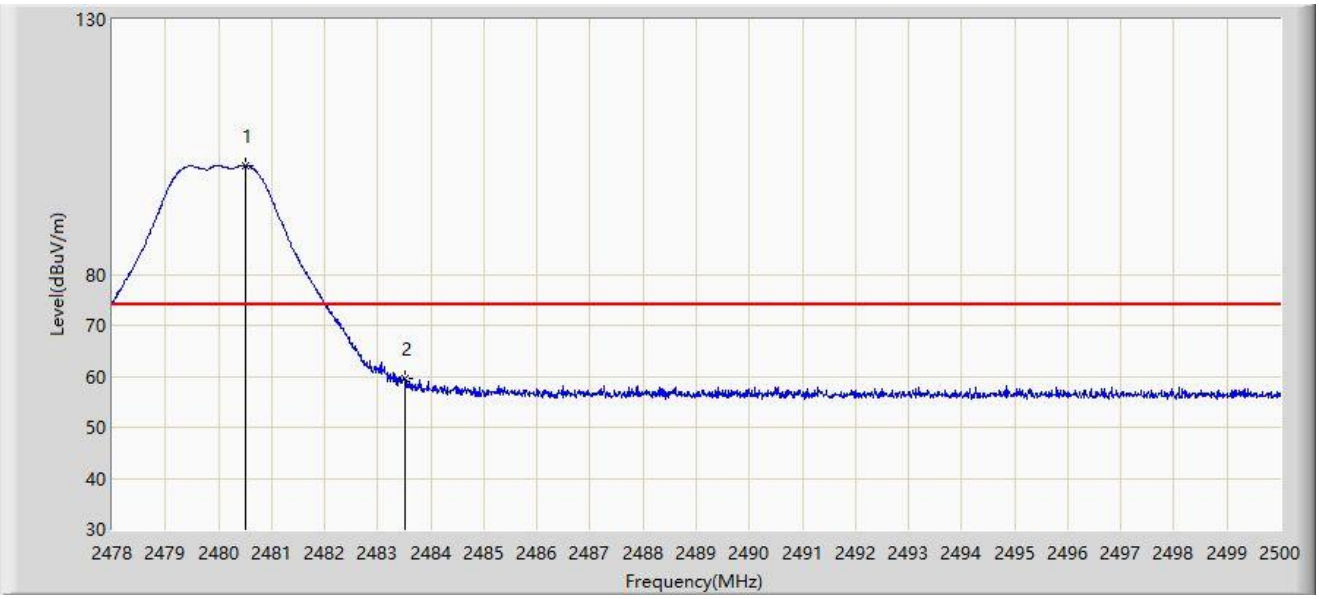
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.936	93.346	61.135	N/A	N/A	32.211	AV
2		2483.500	46.192	13.969	-7.808	54.000	32.222	AV
3	*	2487.460	46.638	14.403	-7.362	54.000	32.236	AV

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



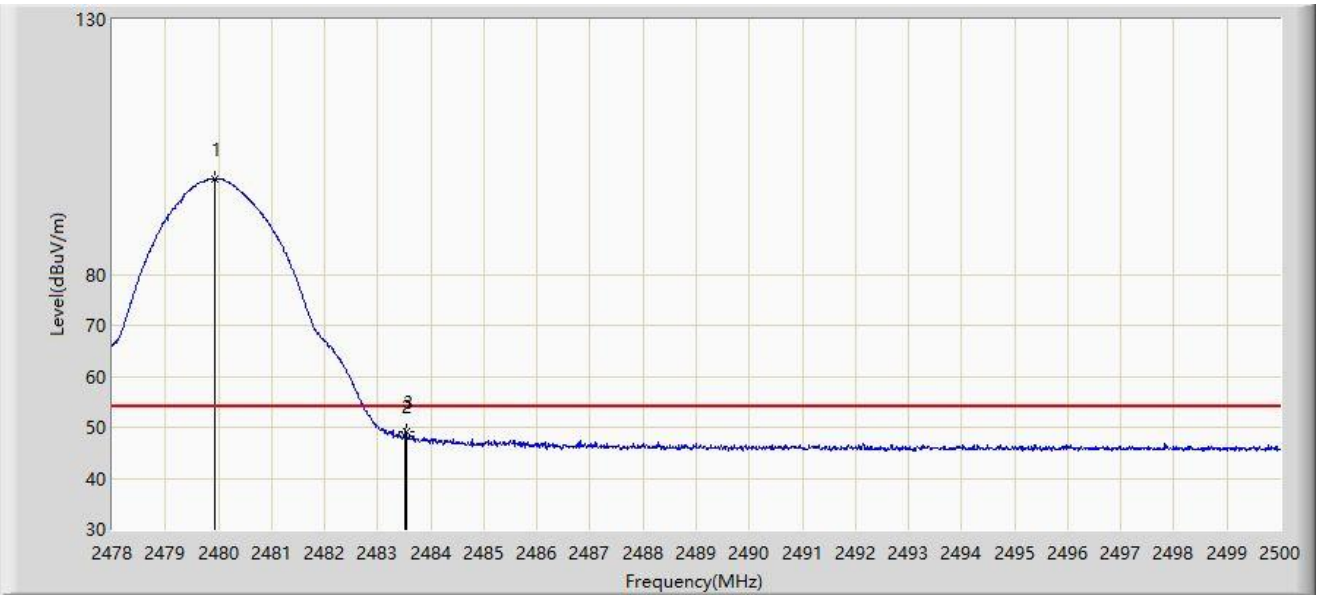
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2480.519	101.346	69.133	N/A	N/A	32.213	PK
2	*	2483.500	59.672	27.449	-14.328	74.000	32.222	PK

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).

Site: SIP-AC2	Test Date: 2023-07-19
Limit: FCC_2.4G_RE(3m)	Engineer: Fusco Pan
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.925	98.791	66.580	N/A	N/A	32.211	AV
2		2483.500	48.268	16.045	-5.732	54.000	32.222	AV
3	*	2483.533	48.990	16.767	-5.010	54.000	32.223	AV

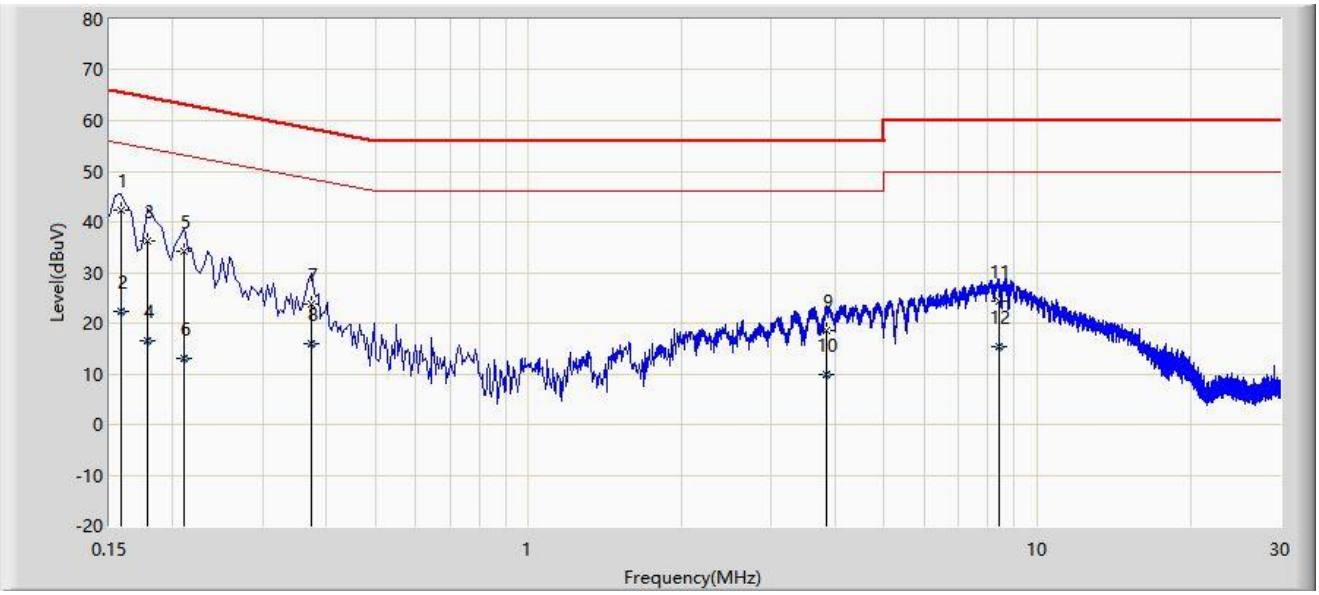
Note 1: " * ", means this data is the worst emission level.

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

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

A.8 AC Conducted Emissions Test Result

Site: WZ-SR2	Test Date: 2023-08-04
Limit: FCC_Part15.207_CE_AC Power	Engineer: Linda Wei
Probe: ENV216_101683_Filter Off_C	Polarity: Line
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at 2440MHz	



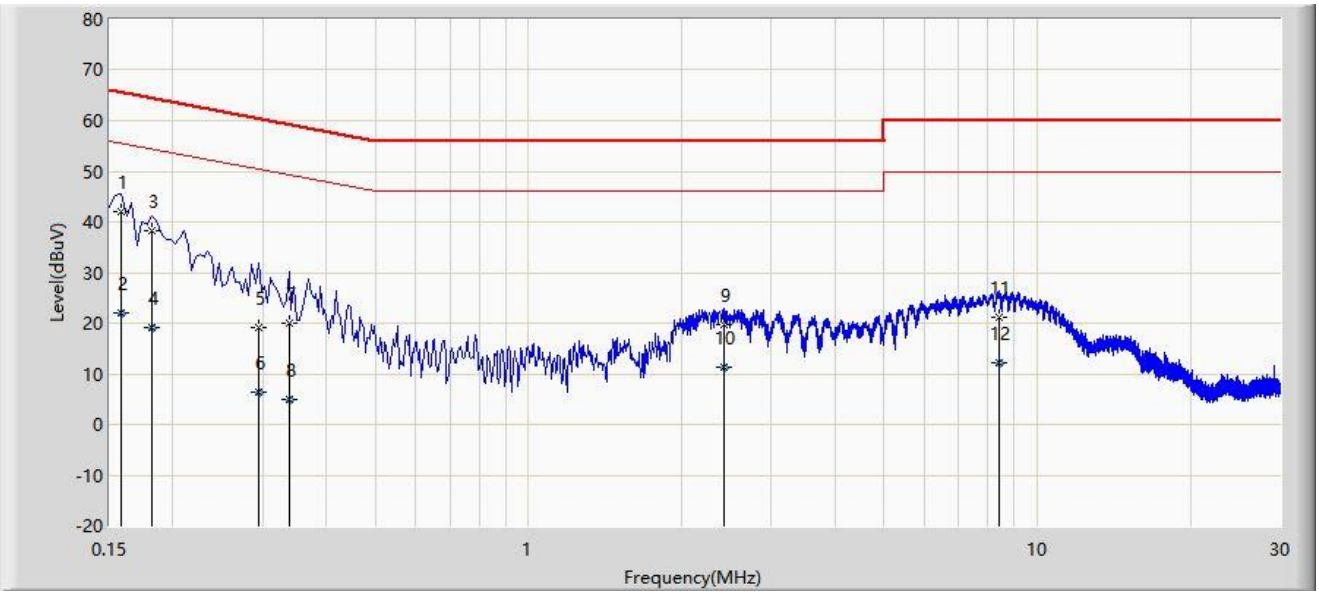
No	Mark	Frequency (MHz)	Measure Level (dBµV)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV)	Factor (dB)	Type
1	*	0.158	42.275	32.559	-23.294	65.568	9.716	QP
2		0.158	22.388	12.673	-33.180	55.568	9.716	AV
3		0.178	36.259	26.539	-28.319	64.578	9.720	QP
4		0.178	16.485	6.764	-38.094	54.578	9.720	AV
5		0.210	34.308	24.579	-28.898	63.205	9.729	QP
6		0.210	13.035	3.306	-40.171	53.205	9.729	AV
7		0.374	23.744	13.960	-34.668	58.412	9.783	QP
8		0.374	16.012	6.228	-32.400	48.412	9.783	AV
9		3.838	18.687	8.536	-37.313	56.000	10.151	QP
10		3.838	9.991	-0.160	-36.009	46.000	10.151	AV
11		8.414	24.353	14.085	-35.647	60.000	10.267	QP
12		8.414	15.407	5.140	-34.593	50.000	10.267	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: WZ-SR2	Test Date: 2023-08-04
Limit: FCC_Part15.207_CE_AC Power	Engineer: Linda Wei
Probe: ENV216_101683_Filter Off_C	Polarity: Neutral
EUT: Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV)	Factor (dB)	Type
1	*	0.158	42.149	32.443	-23.419	65.568	9.706	QP
2		0.158	22.053	12.347	-33.516	55.568	9.706	AV
3		0.182	38.299	28.587	-26.095	64.394	9.711	QP
4		0.182	19.025	9.314	-35.369	54.394	9.711	AV
5		0.294	19.098	9.359	-41.312	60.411	9.740	QP
6		0.294	6.327	-3.413	-44.084	50.411	9.740	AV
7		0.338	20.138	10.380	-39.114	59.252	9.758	QP
8		0.338	4.956	-4.802	-44.296	49.252	9.758	AV
9		2.426	19.631	9.533	-36.369	56.000	10.098	QP
10		2.426	11.395	1.297	-34.605	46.000	10.098	AV
11		8.438	21.026	10.779	-38.974	60.000	10.247	QP
12		8.438	12.145	1.898	-37.855	50.000	10.247	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 “2306RSU039-UT” file.

Appendix C - EUT Photograph

Refer to “2306RSU039-UE” file.

The End