

# RF MEASUREMENT REPORT

---

**FCC ID:** SFK-WF402WP  
**Applicant:** CIG Shanghai Co., Ltd.  
**Product:** WP Access Point  
**Model No.:** WF-402AP-WP  
**Brand Name:** LinkLabs  
**FCC Classification:** Digital Transmission System (DTS)  
**FCC Rule Part(s):** Part 15 Subpart C (Section 15.247)  
**Result:** Complies  
**Received Date:** 2023-02-06  
**Test Date:** 2023-02-12 ~ 2023-02-24

**Reviewed By:**

\_\_\_\_\_  
Kevin Guo

**Approved By:**

\_\_\_\_\_  
Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

---

### Revision History

Report No.	Version	Description	Issue Date	Note
2302RSU018-U1	V01	Initial Report	2023-04-21	Valid

## CONTENTS

Description	Page
<b>1. General Information .....</b>	<b>5</b>
1.1. Applicant .....	5
1.2. Manufacturer .....	5
1.3. Testing Facility .....	5
1.4. Product Information .....	6
1.5. Radio Specification under Test .....	6
1.6. Working Frequencies .....	7
1.7. Antenna Details .....	7
<b>2. Test Configuration .....</b>	<b>8</b>
2.1. Test System Connection Diagram .....	8
2.2. Test Software .....	9
2.3. Applied Standards .....	9
2.4. Test Environment Condition .....	9
<b>3. Antenna Requirements .....</b>	<b>10</b>
<b>4. Measuring Instrument .....</b>	<b>11</b>
<b>5. Decision Rules and Measurement Uncertainty .....</b>	<b>12</b>
5.1. Decision Rules .....	12
5.2. Measurement Uncertainty .....	12
<b>6. Test Result .....</b>	<b>13</b>
6.1. Summary .....	13
6.2. 6dB Bandwidth Measurement .....	14
6.2.1. Test Limit .....	14
6.2.2. Test Procedure .....	14
6.2.3. Test Setting .....	14
6.2.4. Test Setup .....	14
6.2.5. Test Result .....	14
6.3. Output Power Measurement .....	15
6.3.1. Test Limit .....	15
6.3.2. Test Procedure .....	15
6.3.3. Test Setting .....	15
6.3.4. Test Setup .....	15
6.3.5. Test Result .....	15
6.4. Power Spectral Density Measurement .....	16
6.4.1. Test Limit .....	16
6.4.2. Test Procedure .....	16
6.4.3. Test Setting .....	16

6.4.4.	Test Setup .....	16
6.4.5.	Test Result .....	16
6.5.	Conducted Band Edge and Out-of-Band Emissions Measurement .....	17
6.5.1.	Test Limit .....	17
6.5.2.	Test Procedure .....	17
6.5.3.	Test Settintg .....	17
6.5.4.	Test Setup .....	17
6.5.5.	Test Result .....	18
6.6.	Radiated Spurious Emission Measurement.....	19
6.6.1.	Test Limit .....	19
6.6.2.	Test Procedure .....	19
6.6.3.	Test Setting .....	19
6.6.4.	Test Setup .....	21
6.6.5.	Test Result .....	22
6.7.	Radiated Restricted Band Edge Measurement .....	23
6.7.1.	Test Limit .....	23
6.7.2.	Test Procedure .....	24
6.7.3.	Test Setting .....	24
6.7.4.	Test Setup .....	25
6.7.5.	Test Result .....	25
6.8.	AC Conducted Emissions Measurement .....	26
6.8.1.	Test Limit .....	26
6.8.2.	Test Setup .....	26
6.8.3.	Test Result .....	26
<b>Appendix A - Test Result.....</b>		<b>27</b>
A.1	Duty Cycle Test Result .....	27
A.2	6dB Bandwidth Test Result .....	28
A.3	Output Power Test Result .....	31
A.4	Power Spectral Density Test Result.....	32
A.5	Conducted Band Edge and Out-of-Band Emissions Test Result.....	35
A.6	Radiated Spurious Emission Test Result.....	43
A.7	Radiated Restricted Band Edge Test Result.....	47
A.8	AC Conducted Emissions Test Result .....	63
<b>Appendix B - Test Setup Photograph .....</b>		<b>65</b>
<b>Appendix C - EUT Photograph .....</b>		<b>66</b>



#### 1.4. Product Information

Product Name	WP Access Point
Model No.	WF-402AP-WP
EUT Identification No.	20230206Sample#23
Bluetooth Specification	V5.0 (BLE 1Mbps & 2Mbps)
Antenna Information	Refer to Section 1.7
Working Voltage	DC 5V
Note: 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

### 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. Antenna Details

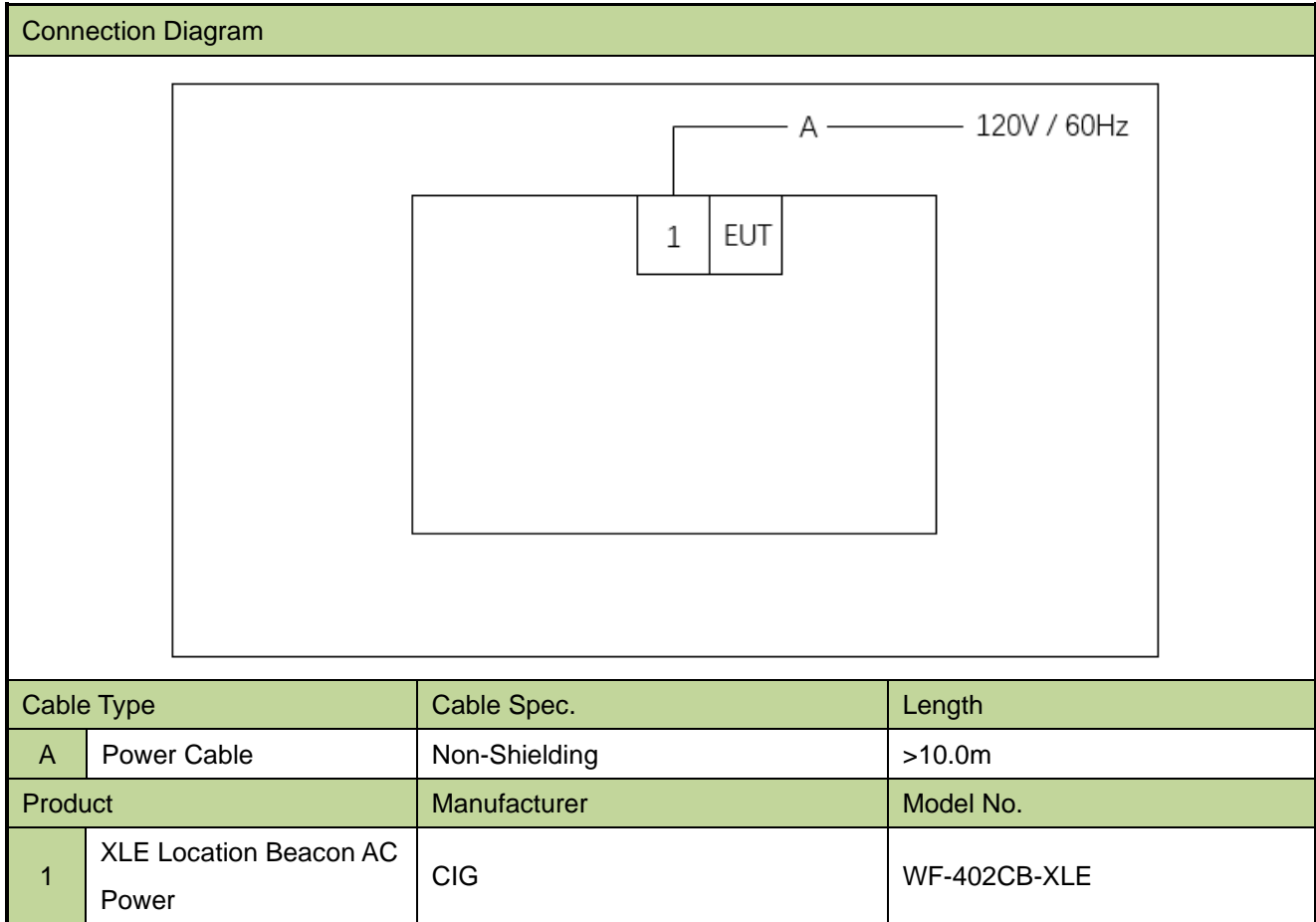
Antenna Type	Frequency Band (MHz)	Tx Paths	Antenna Gain (dBi)	
			Ant 1	Ant 2
SMT Antenna	2402 ~ 2480	2	2.5	2.5

Note: Device has two identical Bluetooth modules and supports the MIMO function only.

## 2. Test Configuration

### 2.1. 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.





## 2.2. Test Software

The test utility software used during testing was “nRF\_DTM”.

## 2.3. 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

## 2.4. 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
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2023-09-29	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2023-11-05	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2024-01-12	WZ-AC2
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2023-05-20	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2023-06-04	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2023-11-27	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2023-10-13	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2023-05-08	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2023-04-21	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11038	1 year	2023-11-01	WZ-AC2
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2023-10-08	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2023-06-06	WZ-TR3
Signal Analyzer	Keysight	N9010B	MRTSUE07027	1 year	2023-11-25	WZ-TR3
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2023-06-04	WZ-TR3
Attenuator	MVE	MVE2213	MRTSUE11085	1 year	2023-06-09	WZ-TR3
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2023-06-04	WZ-SR2
Shielding Room	MIX-BEP	WZ-SR2	MRTSUE06215	5 years	2026-12-20	WZ-SR2
Thermohygrometer	testo	608-H1	MRTSUE06404	1 year	2023-06-06	WZ-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06909	1 year	2023-10-27	WZ-SR2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802	1.02	RE Antenna & Turntable
BenchVue Power Meter	2018.1	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  $k = 2$ .

<b>AC Conducted Emission Measurement</b>
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
<b>Radiated Disturbance</b>
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
<b>Spurious Emissions, Conducted</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 2.3dB
<b>Output Power</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 1.5dB
<b>Power Spectrum Density</b>
Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): 2.3dB
<b>Occupied Bandwidth</b>
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:

- 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.
- For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

## 6.2. 6dB Bandwidth Measurement

### 6.2.1. Test Limit

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

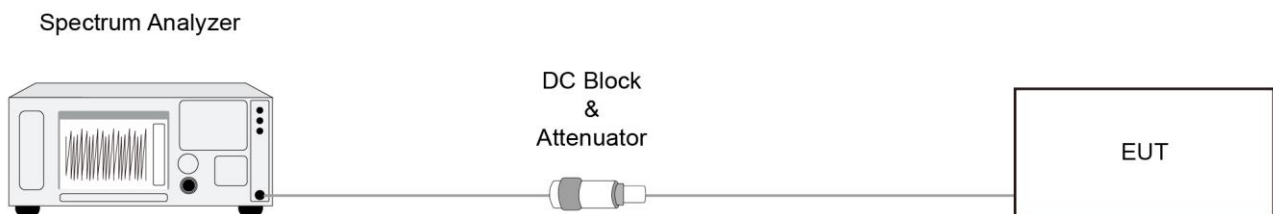
### 6.2.2. Test Procedure

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.  $VBW \geq 3 \times RBW$
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

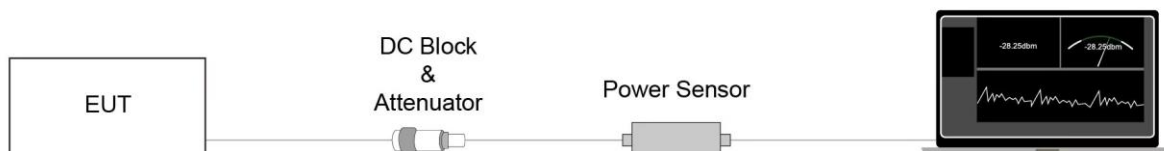
##### **Method PKPM1 (Peak Power Measurement of Signals with DTS BW ≤ 50MHz)**

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.

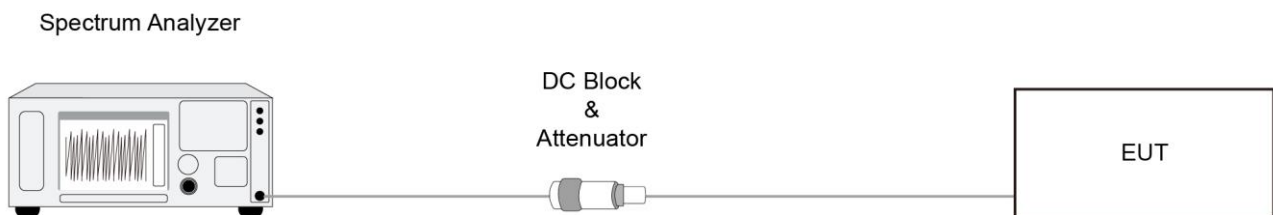
### 6.4.2. Test Procedure

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 Setting

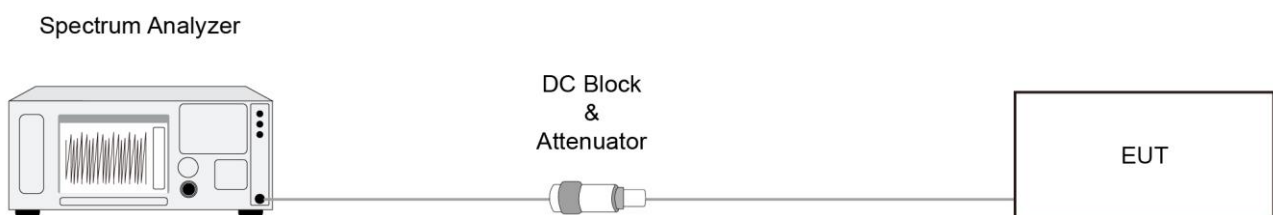
#### Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to  $\geq 1.5$  times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW  $\geq 3 \times$  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 [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

### 6.6.2. 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**

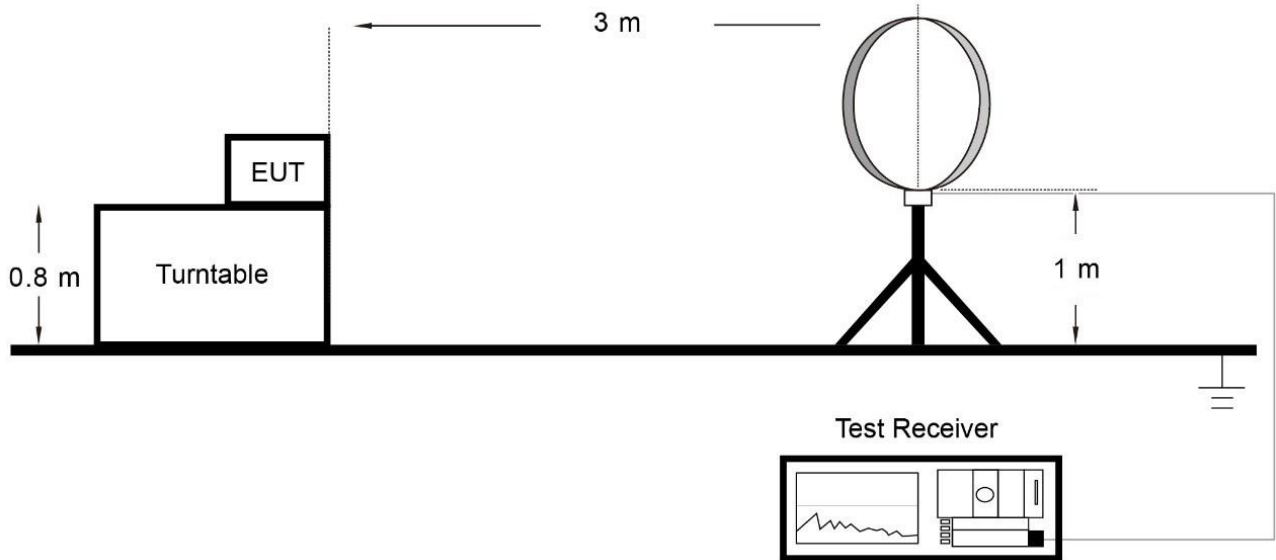
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Average Measurements above 1GHz (Method VB)**

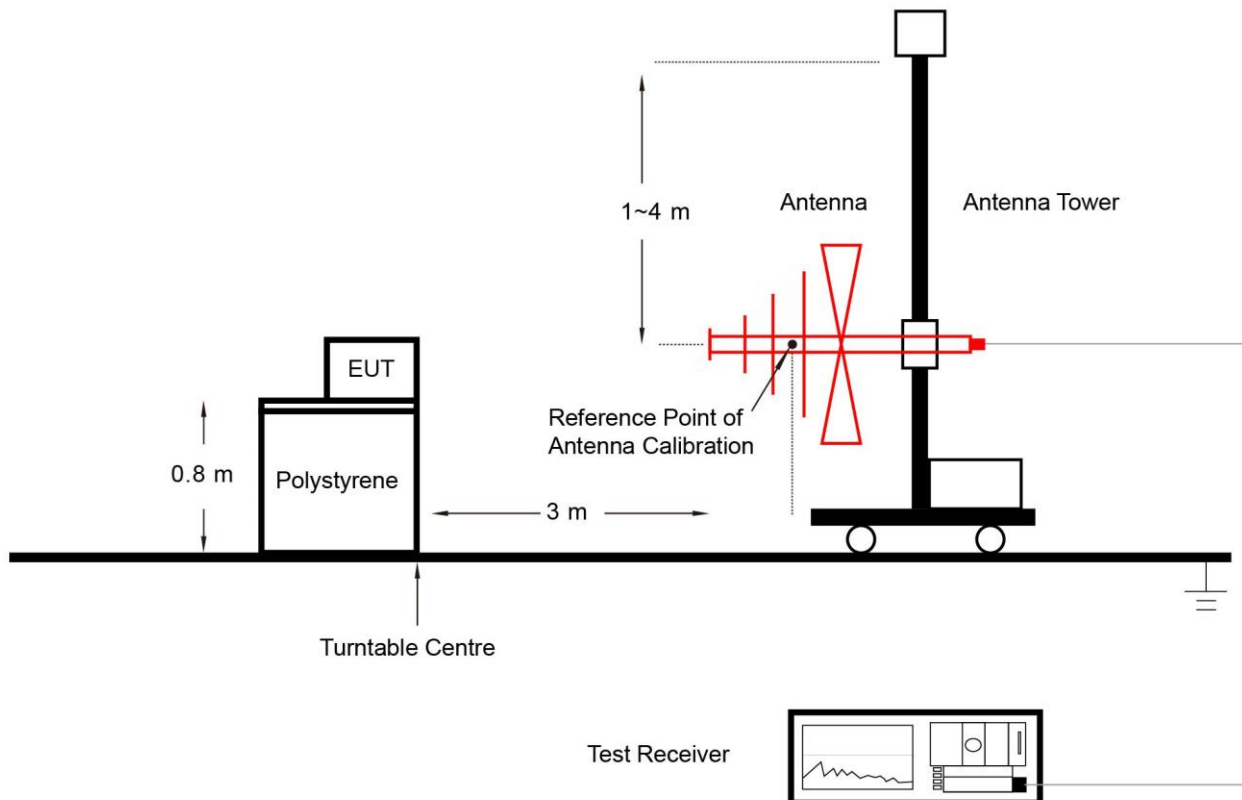
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

### 6.6.4. Test Setup

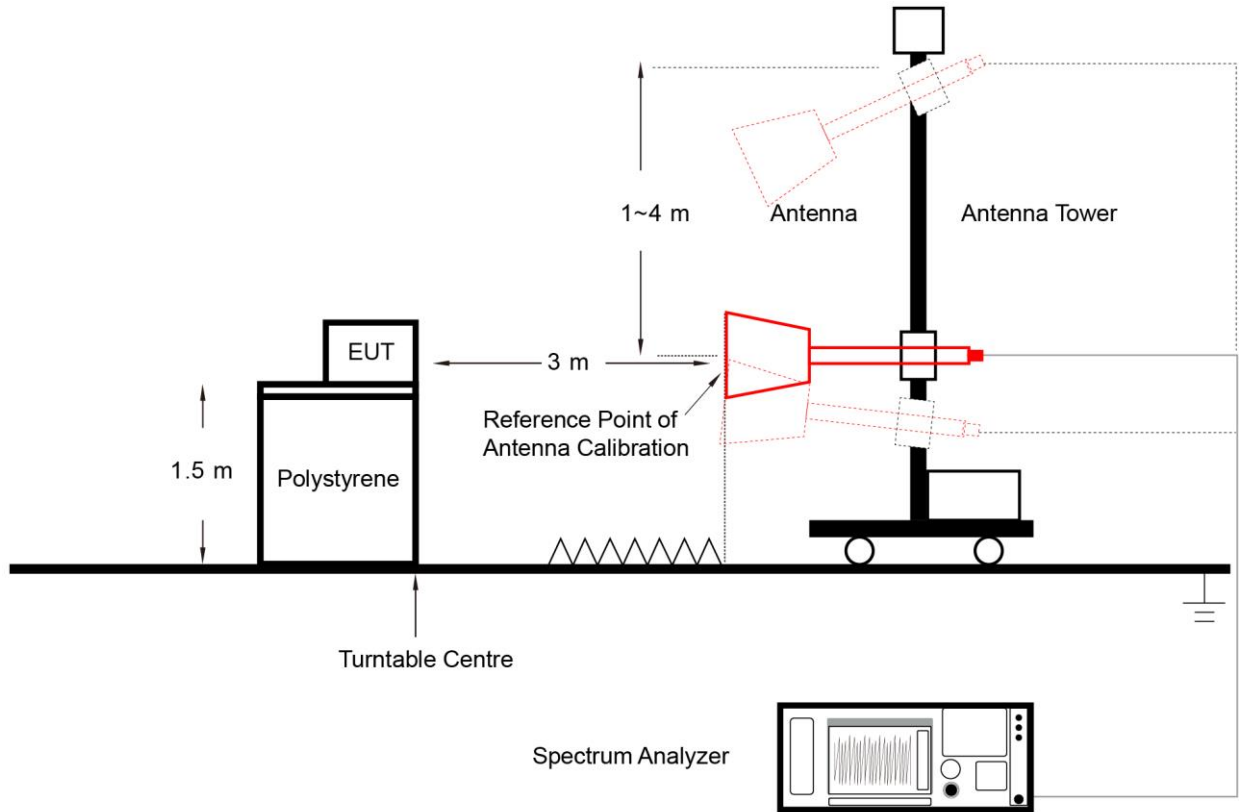
Below 30MHz Test Setup:



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
<sup>1</sup> 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	( <sup>2</sup> )
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 [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

### 6.7.2. 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

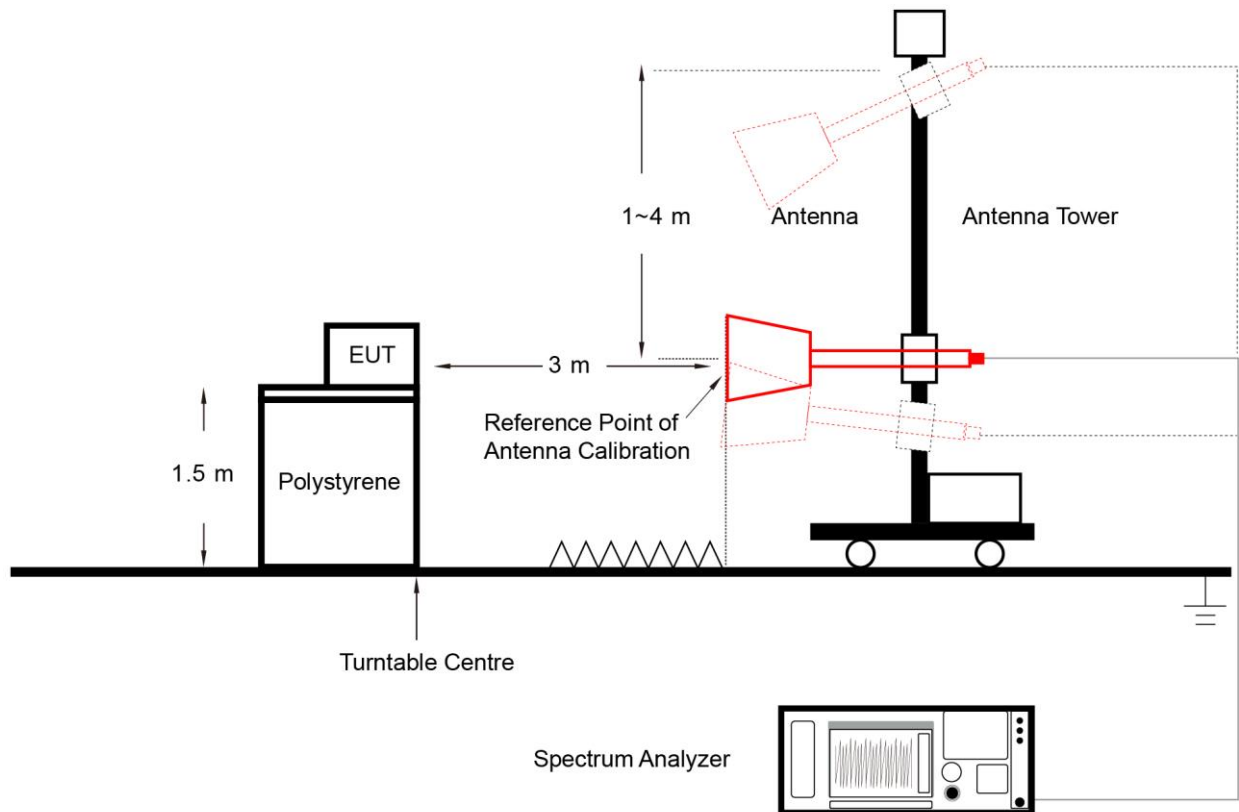
#### Average Field Strength Measurements

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

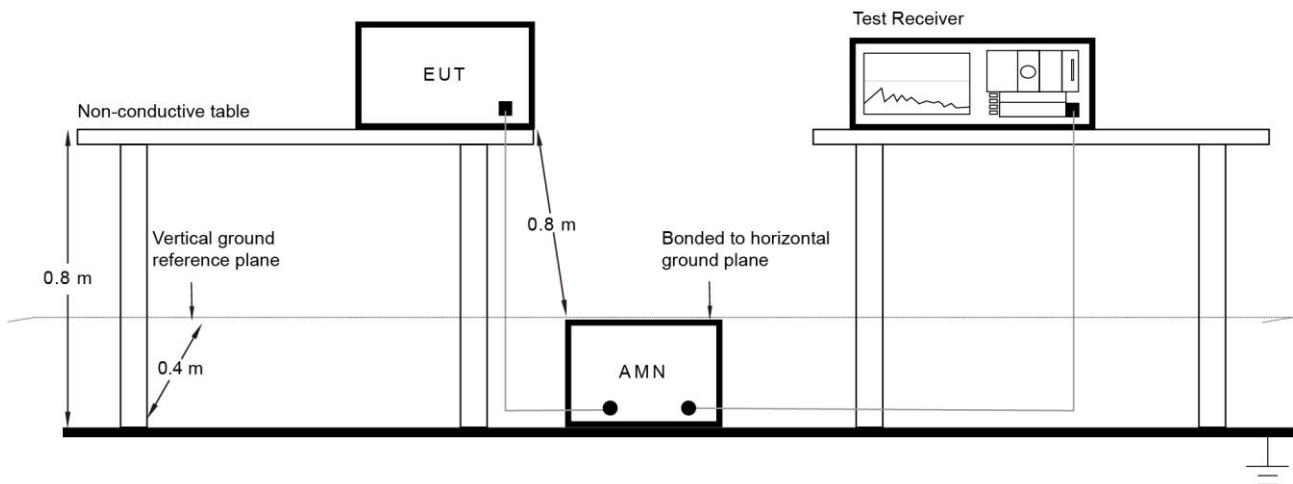
### 6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (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.

### 6.8.2. 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-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-22		

Test Mode	Duty Cycle
BLE 1Mbps	85.40%
BLE 2Mbps	57.23%

Duty Cycle (T = Transmission Duration)

BLE 1Mbps (T = 2.135ms)

BLE 2Mbps (T = 1.072ms)



**A.2 6dB Bandwidth Test Result**

Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-22~2023-02-23		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
<b>Ant 1</b>					
BLE	1Mbps	00	2402	0.7117	≥ 0.5
BLE	1Mbps	19	2440	0.7072	≥ 0.5
BLE	1Mbps	39	2480	0.6883	≥ 0.5
BLE	2Mbps	00	2402	1.152	≥ 0.5
BLE	2Mbps	19	2440	1.165	≥ 0.5
BLE	2Mbps	39	2480	1.132	≥ 0.5
<b>Ant 2</b>					
BLE	1Mbps	00	2402	0.6979	≥ 0.5
BLE	1Mbps	19	2440	0.6968	≥ 0.5
BLE	1Mbps	39	2480	0.6955	≥ 0.5
BLE	2Mbps	00	2402	1.159	≥ 0.5
BLE	2Mbps	19	2440	1.152	≥ 0.5
BLE	2Mbps	39	2480	1.155	≥ 0.5

## BLE 1Mbps 6dB Bandwidth – Ant 1

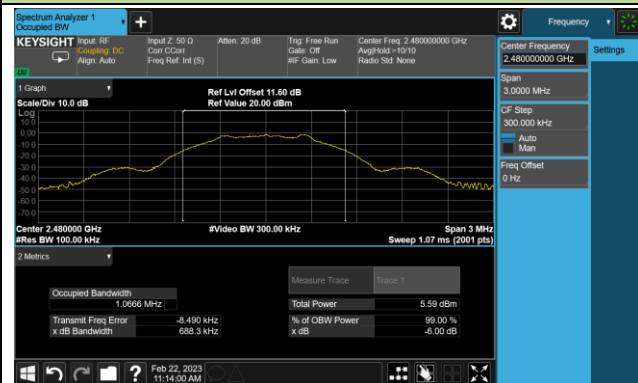
Channel 00 (2402MHz)



Channel 19 (2440MHz)

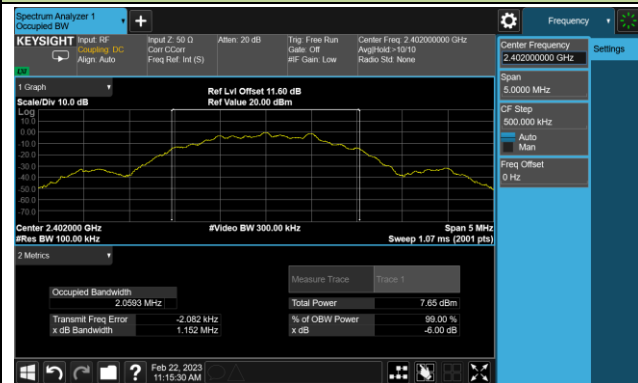


Channel 39 (2480MHz)



## BLE 2Mbps 6dB Bandwidth – Ant 1

Channel 00 (2402MHz)



Channel 19 (2440MHz)

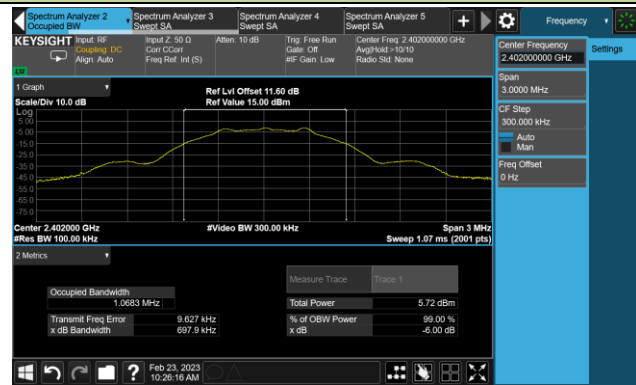


Channel 39 (2480MHz)

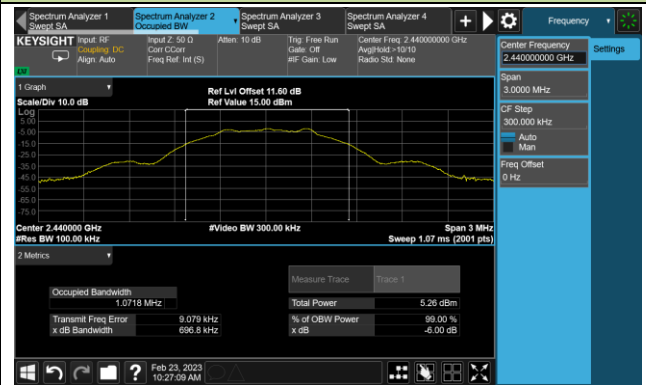


## BLE 1Mbps 6dB Bandwidth– Ant 2

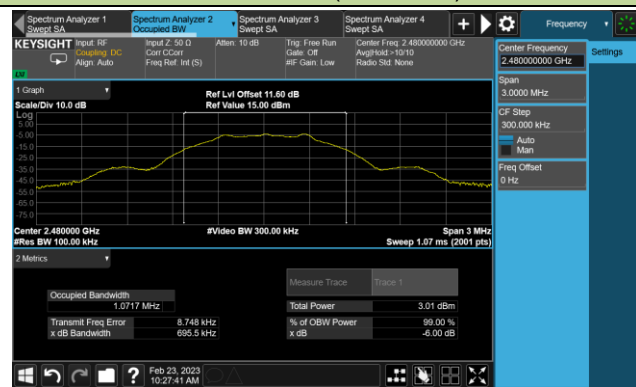
## Channel 00 (2402MHz)



## Channel 19 (2440MHz)



## Channel 39 (2480MHz)



## BLE 2Mbps 6dB Bandwidth– Ant 2

## Channel 00 (2402MHz)



## Channel 19 (2440MHz)



## Channel 39 (2480MHz)



### A.3 Output Power Test Result

Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-22		

#### Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)		Total Peak Power (dBm)	Limit (dBm)	Result
				Ant 1	Ant 2			
BLE	1Mbps	00	2402	4.73	3.44	7.14	≤ 30.00	Pass
BLE	1Mbps	19	2440	4.71	3.47	7.14	≤ 30.00	Pass
BLE	1Mbps	39	2480	3.59	1.64	5.73	≤ 30.00	Pass
BLE	2Mbps	00	2402	4.72	3.48	7.15	≤ 30.00	Pass
BLE	2Mbps	19	2440	4.67	3.52	7.14	≤ 30.00	Pass
BLE	2Mbps	39	2480	3.72	1.74	5.85	≤ 30.00	Pass

Note: Total Peak Power (dBm) =  $10 \cdot \log(10^{(\text{Ant 1 Peak Power}/10)} + 10^{(\text{Ant 2 Peak Power}/10)})$  (dBm).

#### Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)		Total AV Power (dBm)	Limit (dBm)	Result
				Ant 1	Ant 2			
BLE	1Mbps	00	2402	4.01	2.59	6.37	≤ 30.00	Pass
BLE	1Mbps	19	2440	3.93	2.70	6.37	≤ 30.00	Pass
BLE	1Mbps	39	2480	2.95	0.93	5.07	≤ 30.00	Pass
BLE	2Mbps	00	2402	4.05	2.51	6.36	≤ 30.00	Pass
BLE	2Mbps	19	2440	4.02	2.77	6.45	≤ 30.00	Pass
BLE	2Mbps	39	2480	3.15	1.09	5.25	≤ 30.00	Pass

Note: Total AV Power (dBm) =  $10 \cdot \log(10^{(\text{Ant 1 AV Power}/10)} + 10^{(\text{Ant 2 AV Power}/10)})$  (dBm).

**A.4 Power Spectral Density Test Result**

Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-22~2023-02-23		

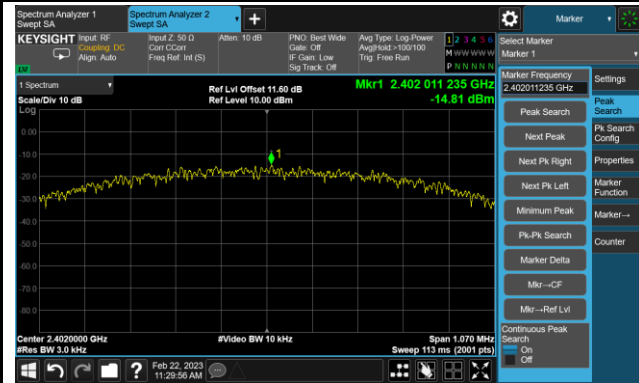
Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD (dBm / 3kHz)		Total PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
				Ant 1	Ant 2			
BLE	1Mbps	00	2402	-14.81	-16.80	-12.68	≤ 8.00	Pass
BLE	1Mbps	19	2440	-15.43	-17.36	-13.28	≤ 8.00	Pass
BLE	1Mbps	39	2480	-16.38	-19.46	-14.64	≤ 8.00	Pass
BLE	2Mbps	00	2402	-16.59	-18.73	-14.52	≤ 8.00	Pass
BLE	2Mbps	19	2440	-17.32	-19.11	-15.11	≤ 8.00	Pass
BLE	2Mbps	39	2480	-18.18	-21.53	-16.53	≤ 8.00	Pass

Note: Total PSD (dBm / 3kHz) =  $10 \cdot \log(10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)})$  (dBm / 3kHz).

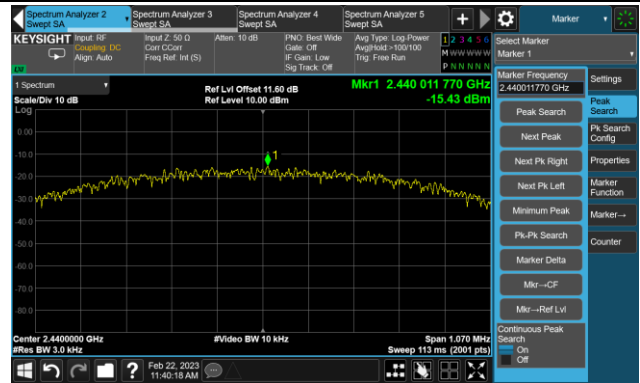


BLE 1Mbps PSD – Ant 1

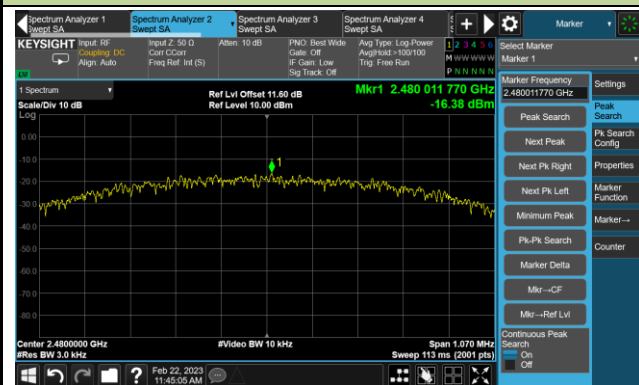
Channel 00 (2402MHz)



Channel 19 (2440MHz)

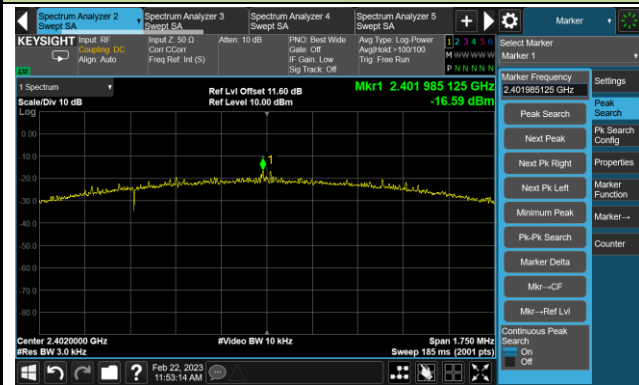


Channel 39 (2480MHz)

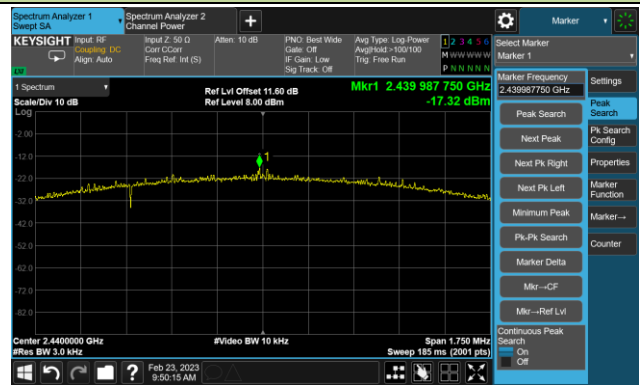


BLE 2Mbps PSD – Ant 1

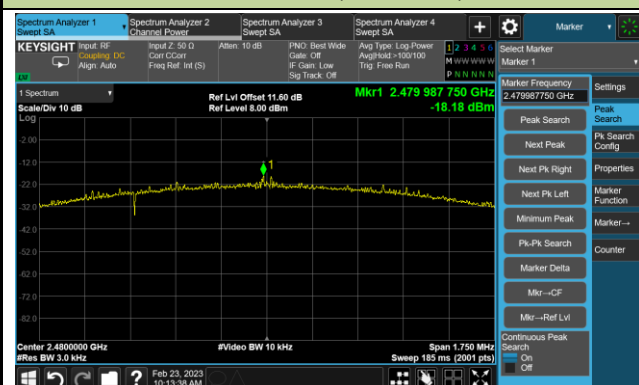
Channel 00 (2402MHz)



Channel 19 (2440MHz)

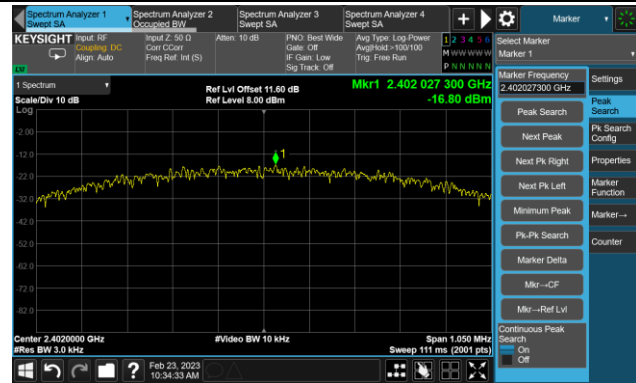


Channel 39 (2480MHz)

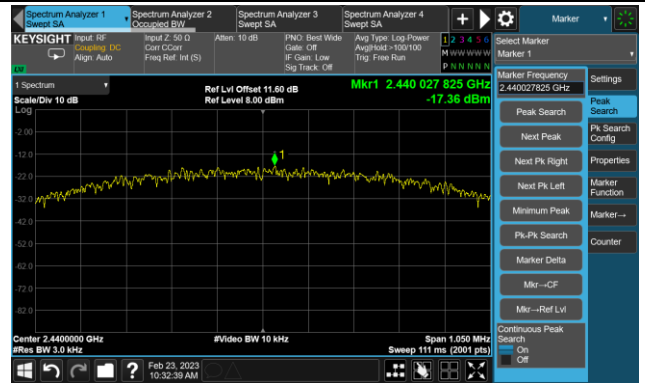


BLE 1Mbps PSD – Ant 2

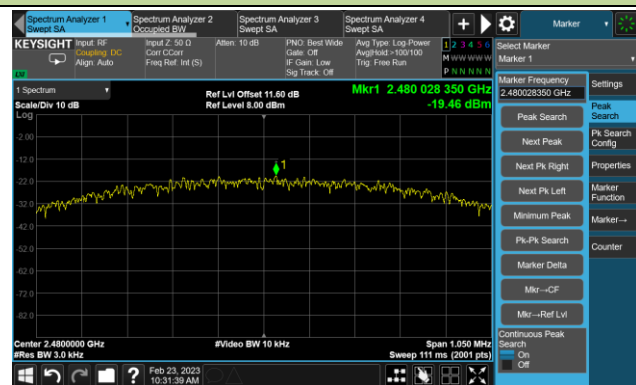
Channel 00 (2402MHz)



Channel 19 (2440MHz)

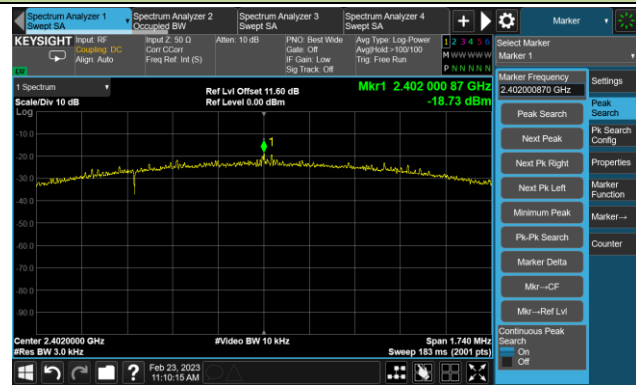


Channel 39 (2480MHz)



BLE 2Mbps PSD – Ant 2

Channel 00 (2402MHz)



Channel 19 (2440MHz)



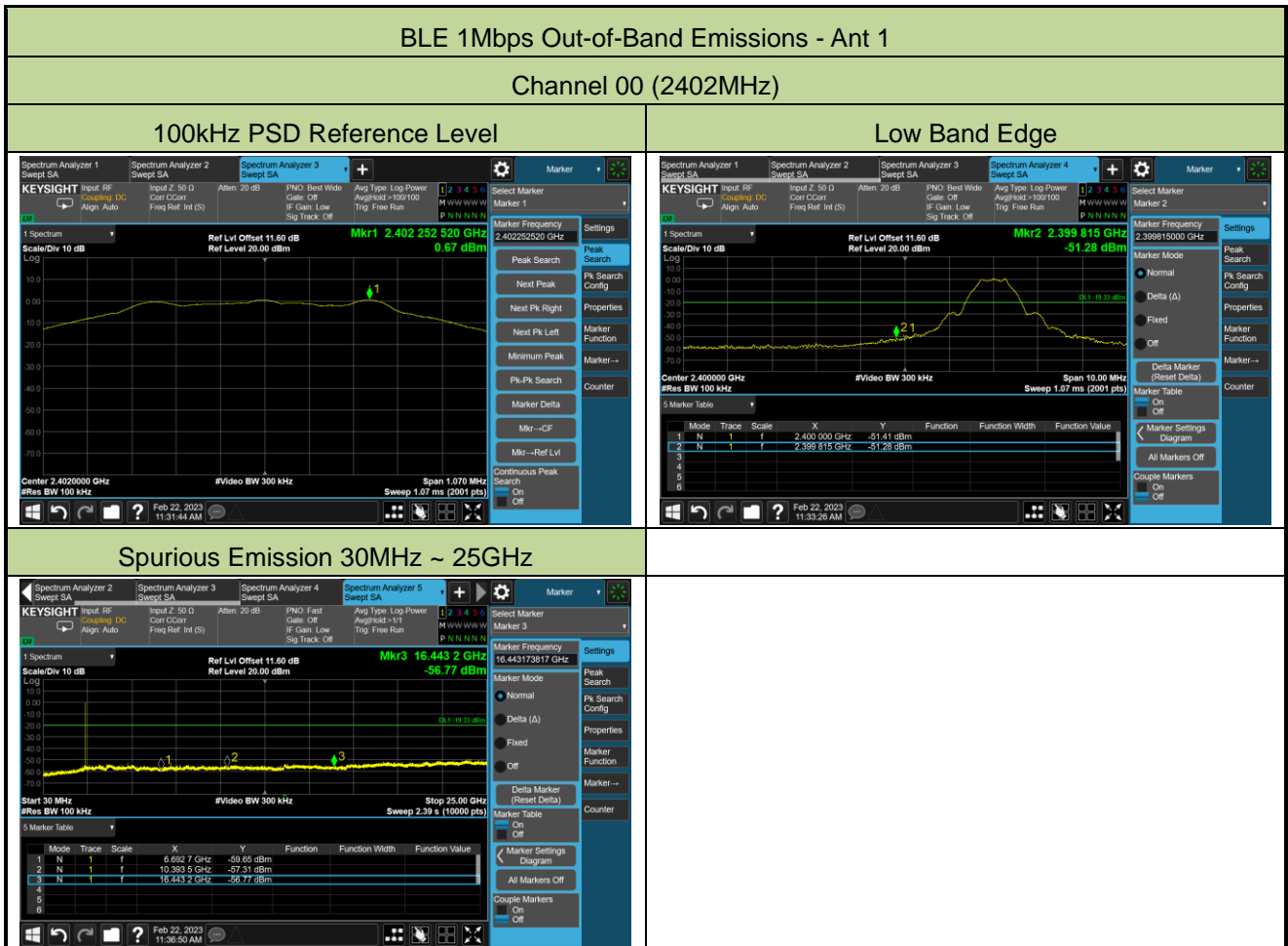
Channel 39 (2480MHz)



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

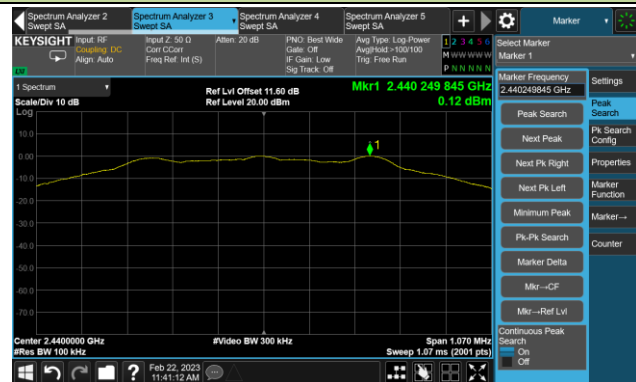
Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-22~2023-02-23		

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

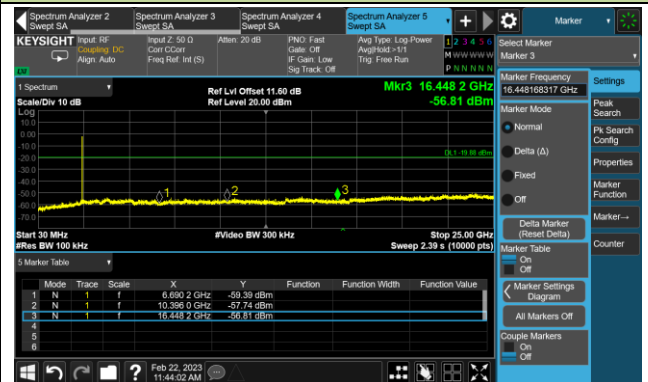


### Channel 19 (2440MHz)

#### 100kHz PSD Reference Level

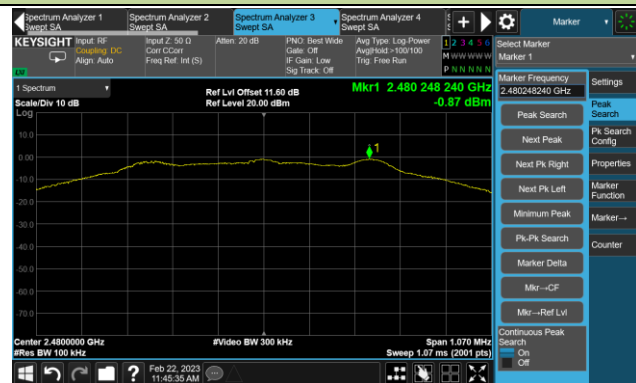


#### Spurious Emission 30MHz ~ 25GHz



### Channel 39 (2480MHz)

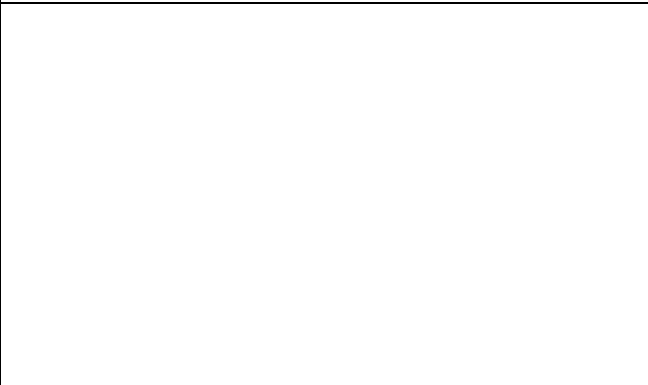
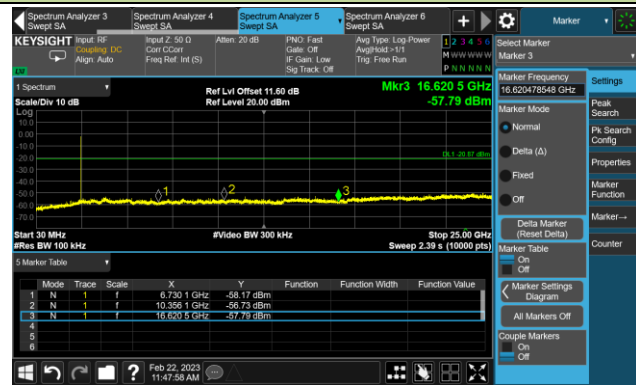
#### 100kHz PSD Reference Level



#### High Band Edge



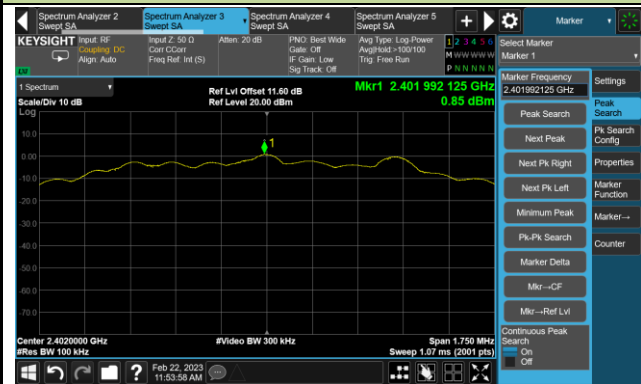
#### Spurious Emission 30MHz ~ 25GHz



## BLE 2Mbps Out-of-Band Emissions - Ant 1

### Channel 00 (2402MHz)

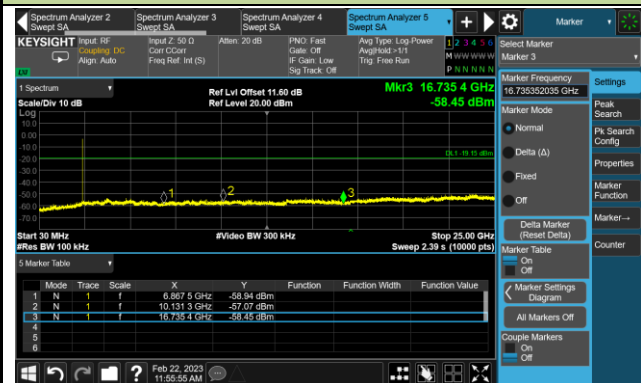
#### 100kHz PSD Reference Level



#### Low Band Edge

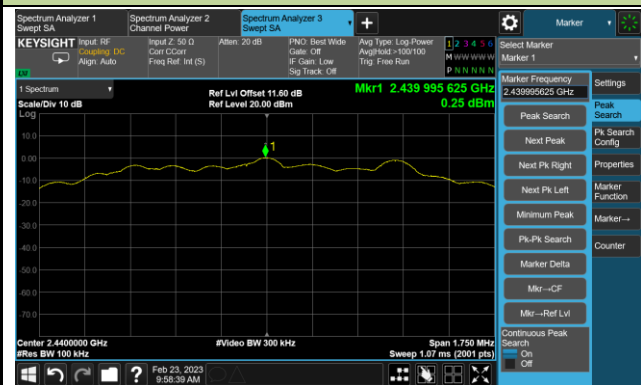


#### Spurious Emission 30MHz ~ 25GHz

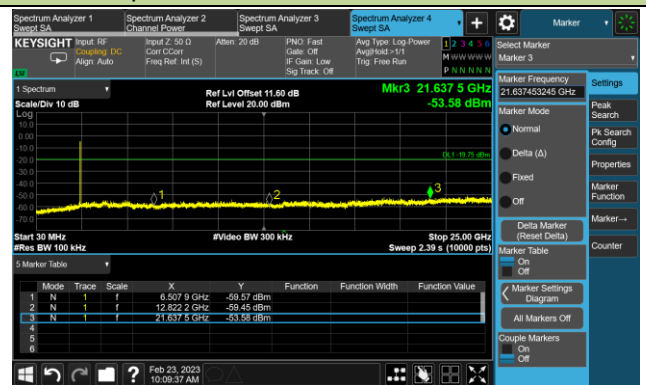


### Channel 19 (2440MHz)

#### 100kHz PSD Reference Level

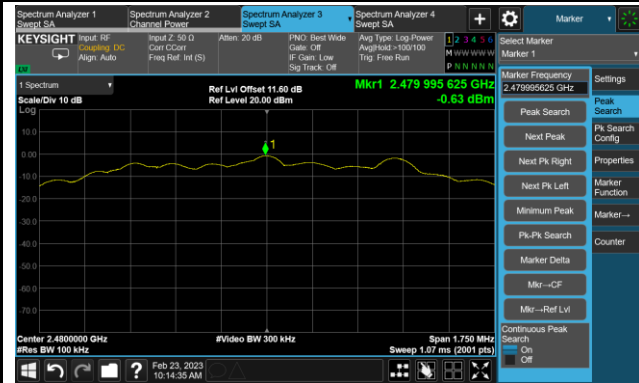


#### Spurious Emission 30MHz ~ 25GHz

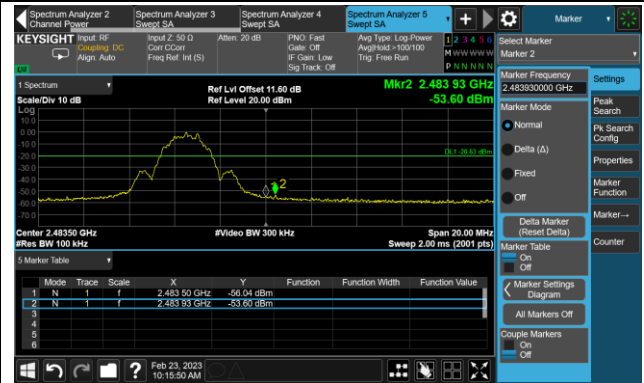


### Channel 39 (2480MHz)

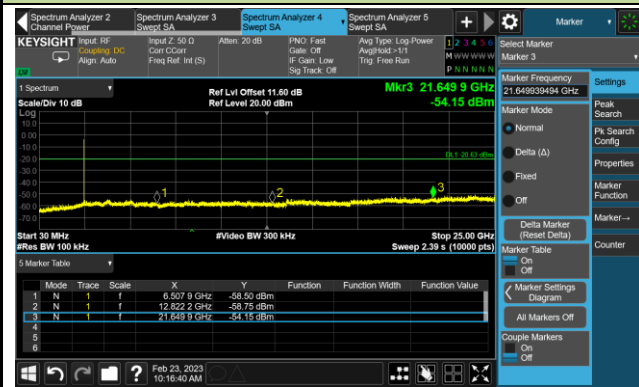
#### 100kHz PSD Reference Level



#### High Band Edge



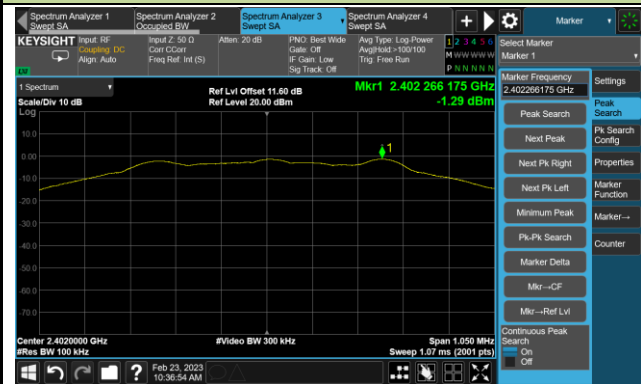
#### Spurious Emission 30MHz ~ 25GHz



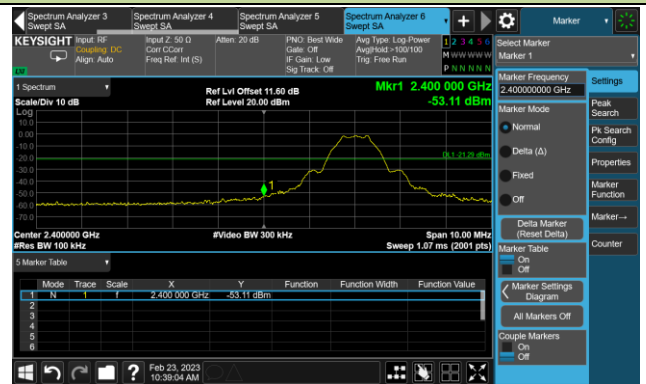
## BLE 1Mbps Out-of-Band Emissions - Ant 2

### Channel 00 (2402MHz)

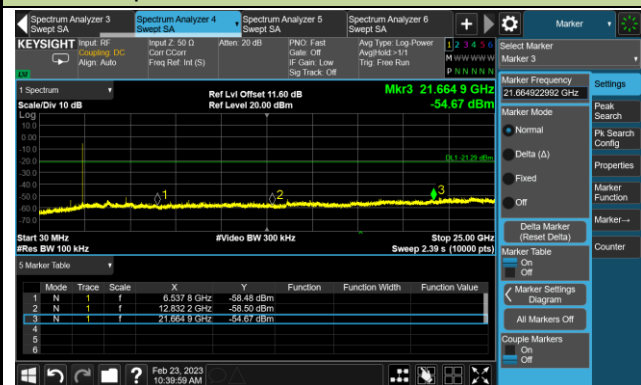
#### 100kHz PSD Reference Level



#### Low Band Edge

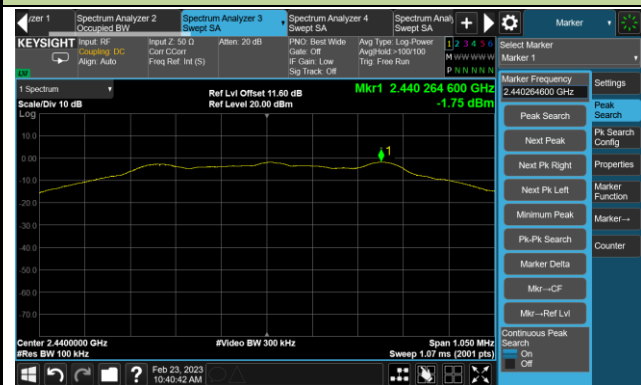


#### Spurious Emission 30MHz ~ 25GHz

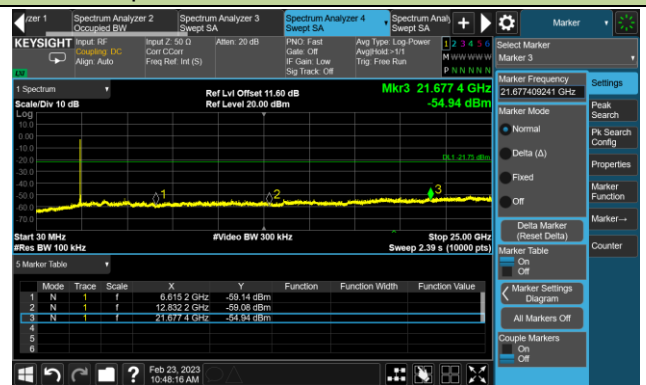


### Channel 19 (2440MHz)

#### 100kHz PSD Reference Level

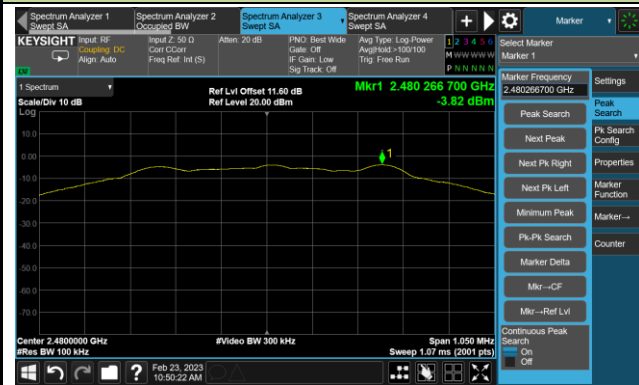


#### Spurious Emission 30MHz ~ 25GHz

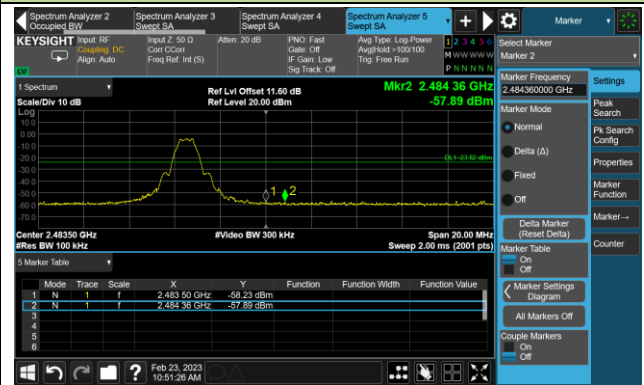


### Channel 39 (2480MHz)

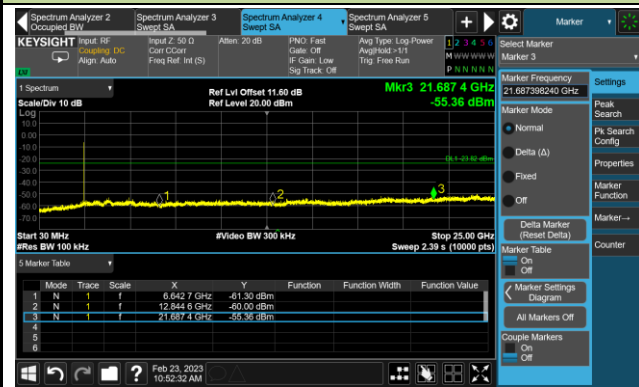
#### 100kHz PSD Reference Level



#### High Band Edge



#### Spurious Emission 30MHz ~ 25GHz

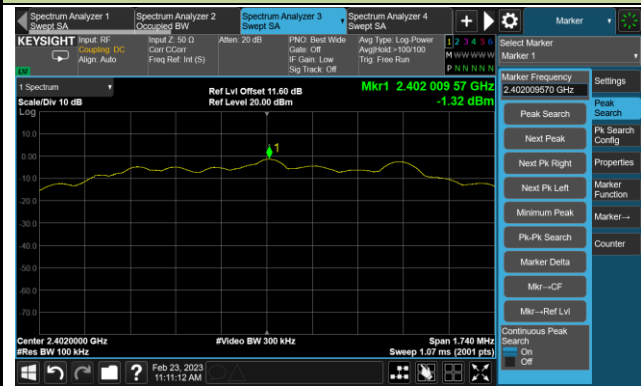




### BLE 2Mbps Out-of-Band Emissions - Ant 2

#### Channel 00 (2402MHz)

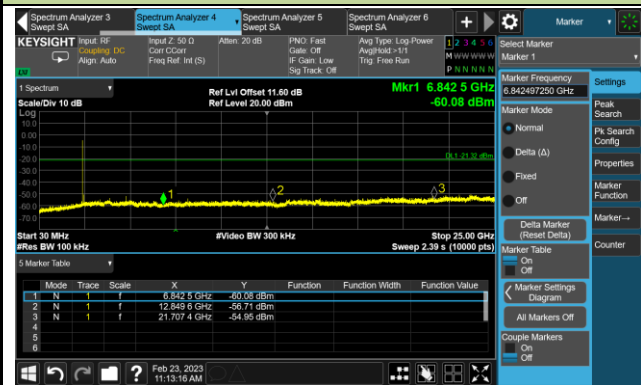
##### 100kHz PSD Reference Level



##### Low Band Edge

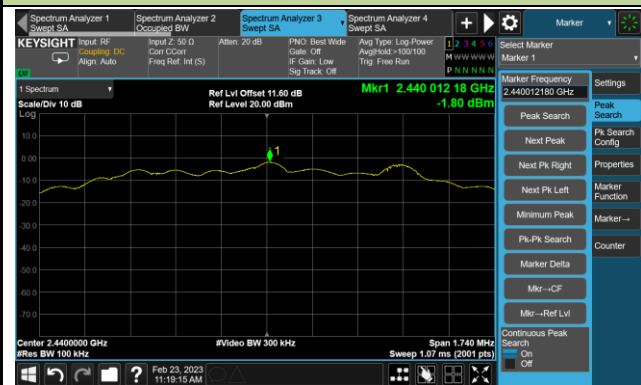


##### Spurious Emission 30MHz ~ 25GHz



#### Channel 19 (2440MHz)

##### 100kHz PSD Reference Level

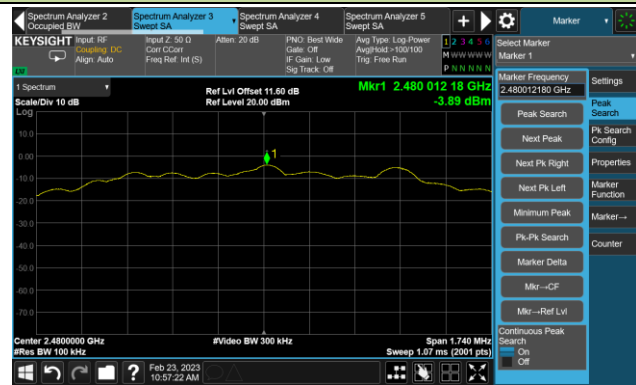


##### Spurious Emission 30MHz ~ 25GHz

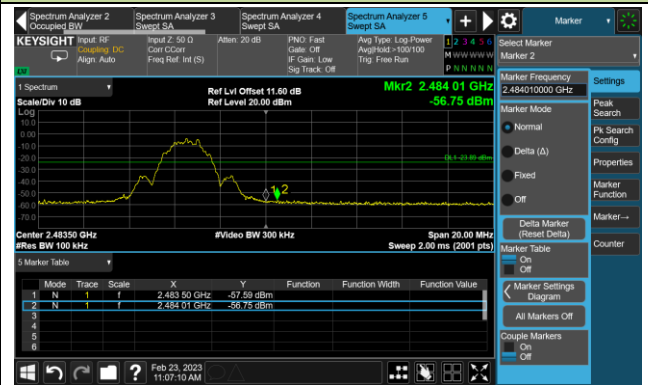


### Channel 39 (2480MHz)

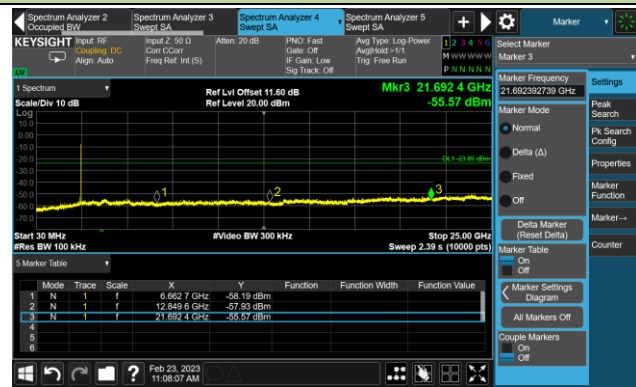
#### 100kHz PSD Reference Level



#### High Band Edge



#### Spurious Emission 30MHz ~ 25GHz



**A.6 Radiated Spurious Emission Test Result**

Test Site	WZ-AC2	Test Engineer	Dick Shen
Test Date	2023-02-12	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	3873.0	36.5	0.2	36.7	74.0	-37.3	Peak	Horizontal
	7460.0	32.2	11.3	43.5	74.0	-30.5	Peak	Horizontal
	10817.5	31.2	17.4	48.6	74.0	-25.4	Peak	Horizontal
	3890.0	36.0	0.3	36.3	74.0	-37.7	Peak	Vertical
	4825.0	34.6	3.8	38.4	74.0	-35.6	Peak	Vertical
	11285.0	31.2	18.0	49.2	74.0	-24.8	Peak	Vertical
19	4680.5	35.3	3.4	38.7	74.0	-35.3	Peak	Horizontal
	7324.0	33.3	11.2	44.5	74.0	-29.5	Peak	Horizontal
	11081.0	32.3	17.0	49.3	74.0	-24.7	Peak	Horizontal
	3728.5	37.0	-0.2	36.8	74.0	-37.2	Peak	Vertical
	7324.0	33.7	11.2	44.9	74.0	-29.1	Peak	Vertical
	10996.0	31.6	17.3	48.9	74.0	-25.1	Peak	Vertical
39	3711.5	35.0	-0.3	34.7	74.0	-39.3	Peak	Horizontal
	4816.5	33.1	3.7	36.8	74.0	-37.2	Peak	Horizontal
	10911.0	31.9	17.6	49.5	74.0	-24.5	Peak	Horizontal
	4204.5	35.8	1.2	37.0	74.0	-37.0	Peak	Vertical
	4825.0	35.2	3.8	39.0	74.0	-35.0	Peak	Vertical
	11055.5	32.1	17.1	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	WZ-AC2	Test Engineer	Dick Shen
Test Date	2023-02-12	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.		

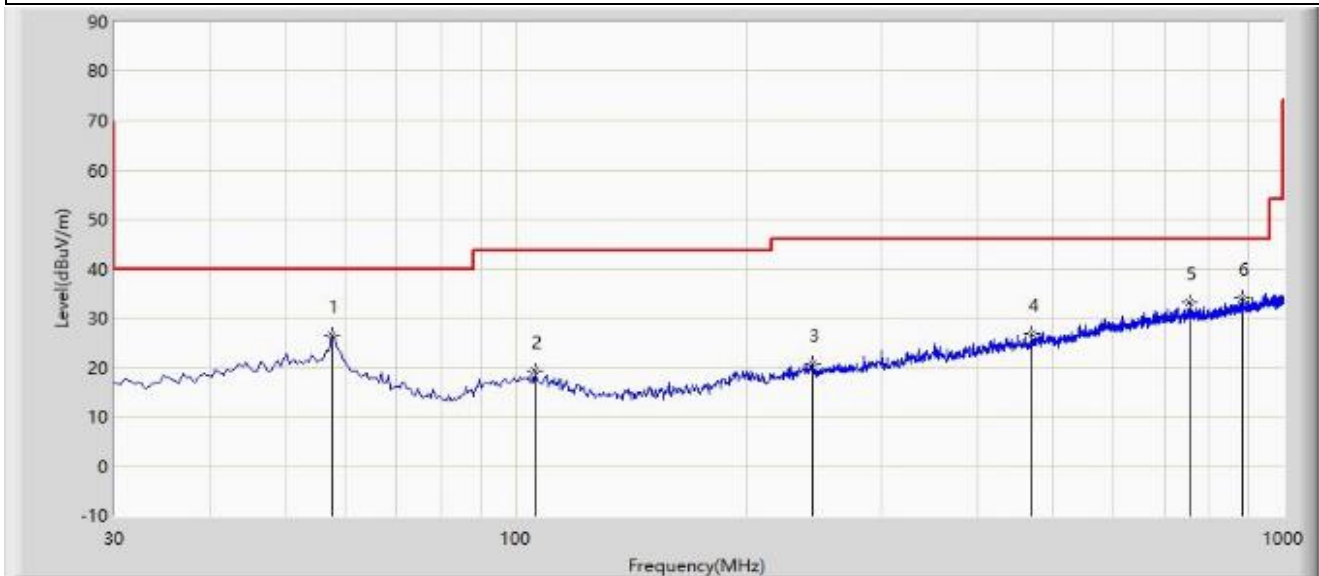
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	4264.0	35.6	1.7	37.3	74.0	-36.7	Peak	Horizontal
	7392.0	32.3	11.4	43.7	74.0	-30.3	Peak	Horizontal
	10987.5	31.5	17.3	48.8	74.0	-25.2	Peak	Horizontal
	4901.5	35.0	3.7	38.7	74.0	-35.3	Peak	Vertical
	7417.5	32.0	11.9	43.9	74.0	-30.1	Peak	Vertical
	10919.5	31.3	17.3	48.6	74.0	-25.4	Peak	Vertical
19	5097.0	36.9	3.9	40.8	74.0	-33.2	Peak	Horizontal
	8140.0	31.5	12.1	43.6	74.0	-30.4	Peak	Horizontal
	11200.0	30.7	17.9	48.6	74.0	-25.4	Peak	Horizontal
	4842.0	34.9	3.8	38.7	74.0	-35.3	Peak	Vertical
	8157.0	32.5	12.0	44.5	74.0	-29.5	Peak	Vertical
	11166.0	31.5	17.3	48.8	74.0	-25.2	Peak	Vertical
39	4748.5	35.1	3.8	38.9	74.0	-35.1	Peak	Horizontal
	7604.5	32.3	11.3	43.6	74.0	-30.4	Peak	Horizontal
	11327.5	31.8	17.6	49.4	74.0	-24.6	Peak	Horizontal
	3949.5	37.2	0.4	37.6	74.0	-36.4	Peak	Vertical
	5063.0	34.2	4.2	38.4	74.0	-35.6	Peak	Vertical
	11004.5	32.3	17.1	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)

**The Result of Radiated Emission below 1GHz:**

Site: WZ-AC2	Test Date: 2023-02-13
Limit: FCC_Part15.209_RSE(3m)	Engineer: Dick Shen
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V

**Test Mode:** Transmit by BLE 1Mbps at channel 2402MHz


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			57.645	26.621	6.663	-13.379	40.000	19.958	PK
2			106.145	19.252	0.773	-24.248	43.500	18.479	PK
3			243.400	20.737	0.881	-25.263	46.000	19.856	PK
4			469.895	26.850	2.583	-19.150	46.000	24.266	PK
5			754.105	33.277	3.778	-12.723	46.000	29.499	PK
6		*	882.630	33.978	3.114	-12.022	46.000	30.864	PK

 Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

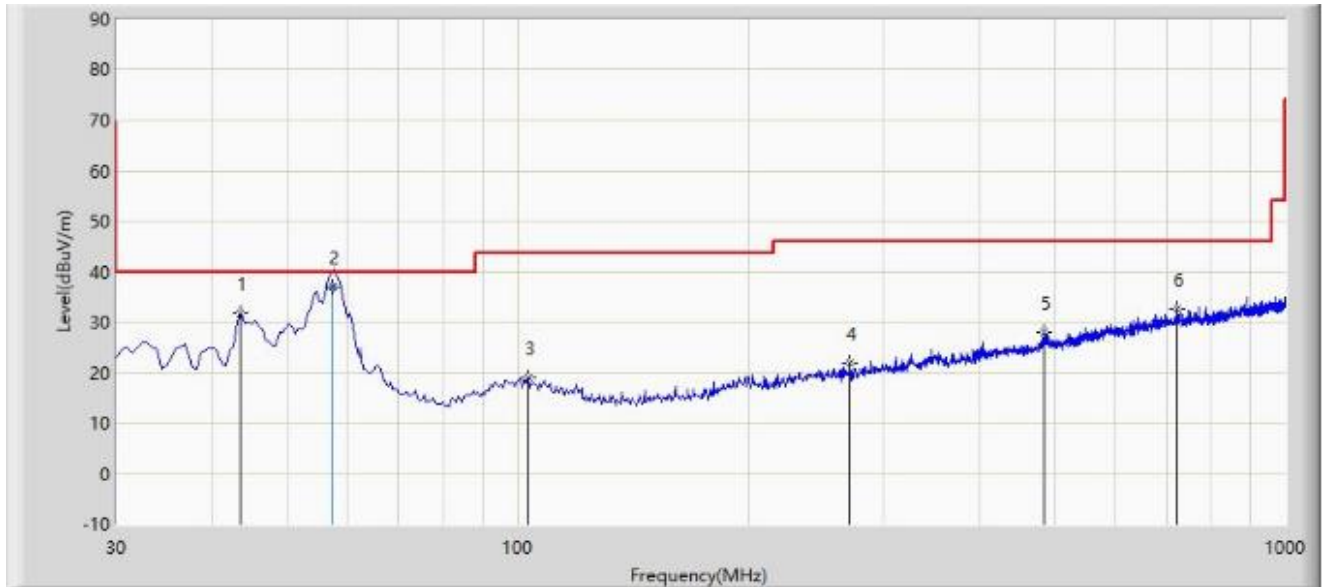
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

Site: WZ-AC2	Test Date: 2023-02-13
Limit: FCC_Part15.209_RSE(3m)	Engineer: Dick Shen
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
<b>Test Mode:</b> Transmit by BLE 1Mbps at channel 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			43.580	31.608	11.907	-8.392	40.000	19.701	PK
2		*	57.490	36.880	16.900	-3.120	40.000	19.981	QP
3			103.235	19.082	0.496	-24.418	43.500	18.586	PK
4			271.045	21.793	1.535	-24.207	46.000	20.258	PK
5			484.445	27.884	2.895	-18.116	46.000	24.988	PK
6			724.520	32.701	3.923	-13.299	46.000	28.778	PK

Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

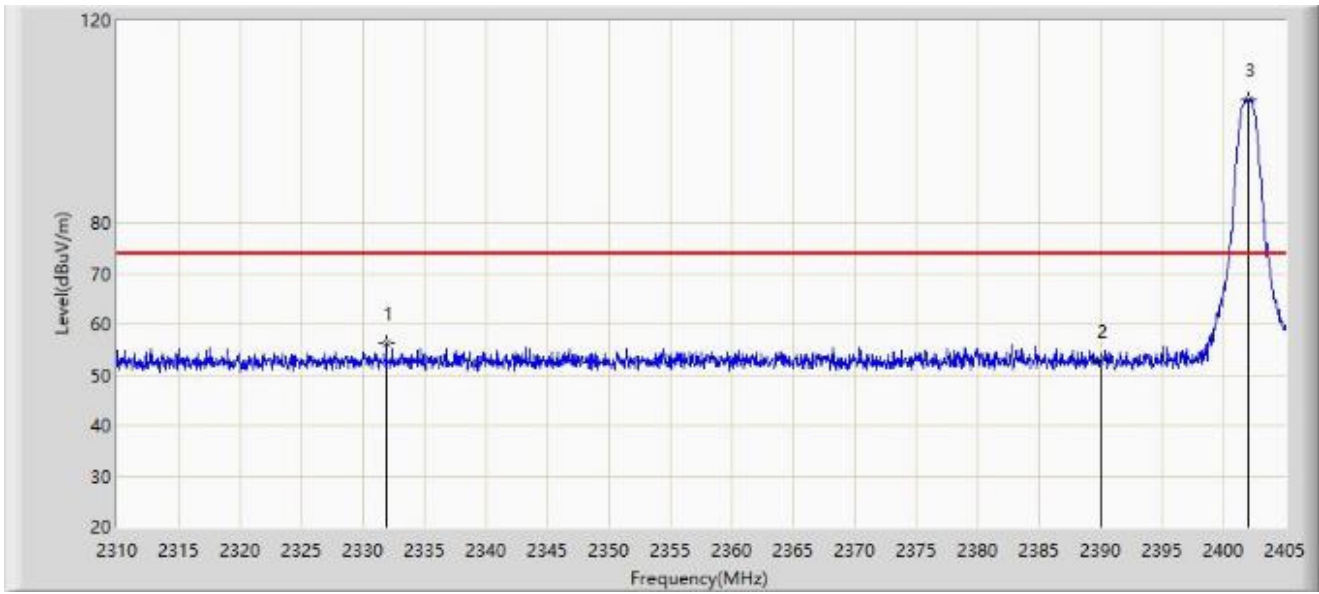
Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

**A.7 Radiated Restricted Band Edge Test Result**

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



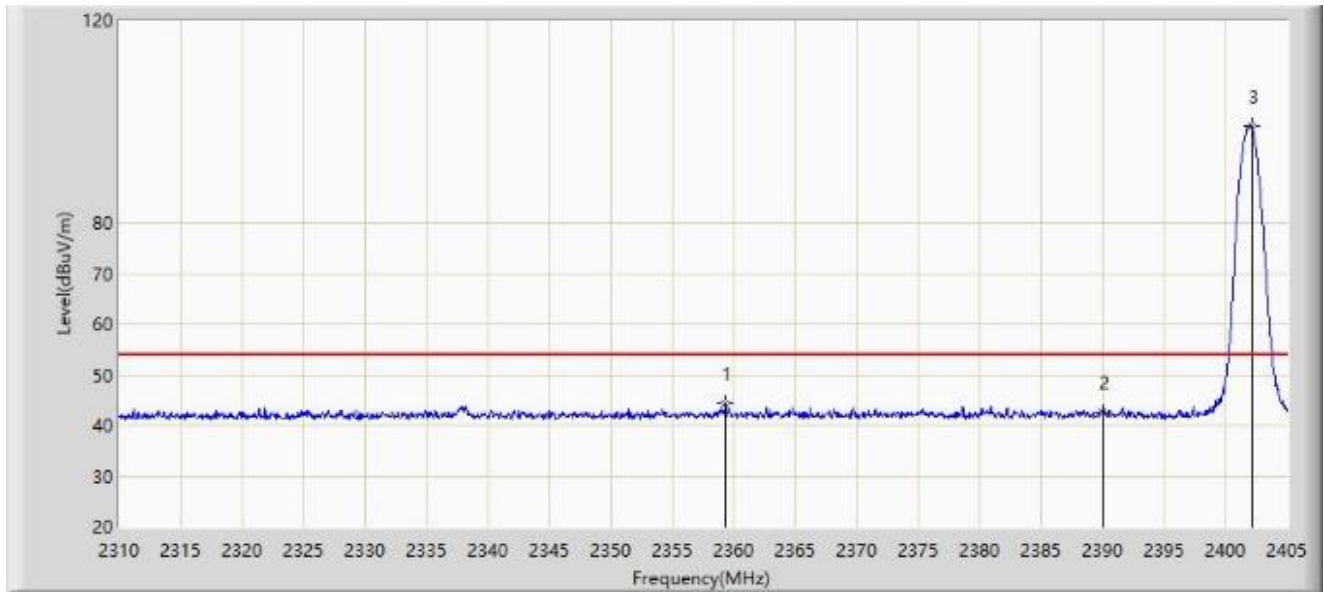
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2331.897	56.348	24.512	-17.652	74.000	31.836	PK
2			2390.000	52.725	21.037	-21.275	74.000	31.688	PK
3		*	2402.008	104.393	72.748	N/A	N/A	31.646	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2359.305	44.207	12.438	-9.793	54.000	31.769	AV
2			2390.000	42.479	10.791	-11.521	54.000	31.688	AV
3		*	2402.103	99.050	67.405	N/A	N/A	31.645	AV

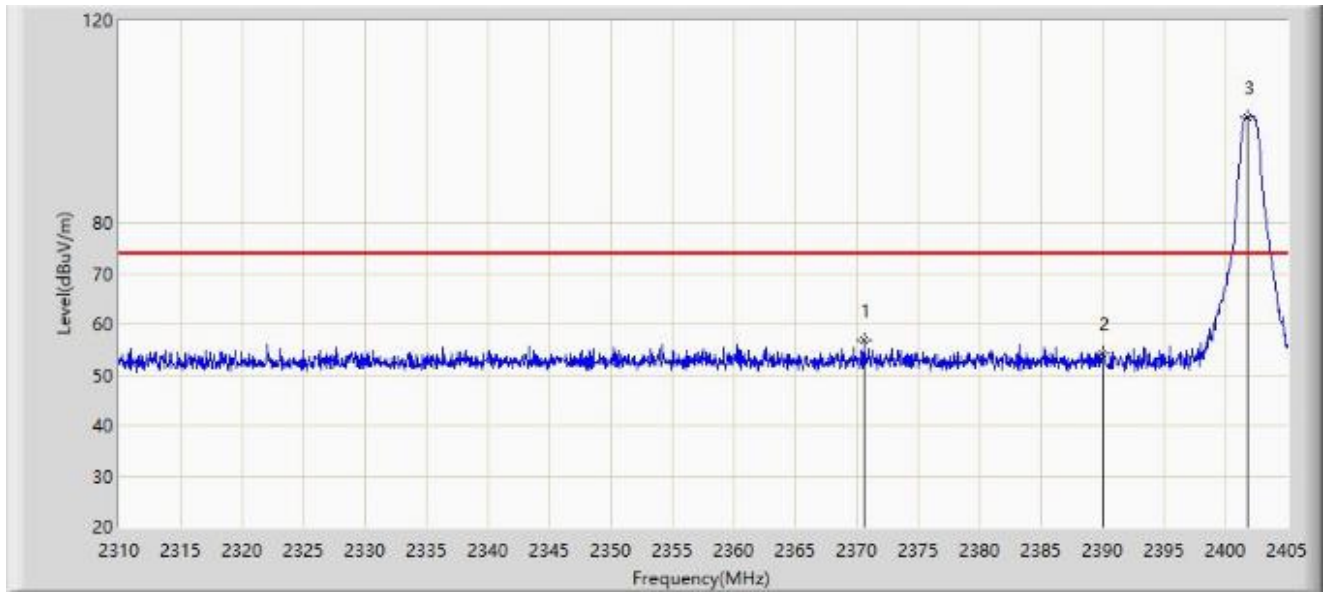
Note 1: " \* ", means this data is the worst emission level.

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

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



Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



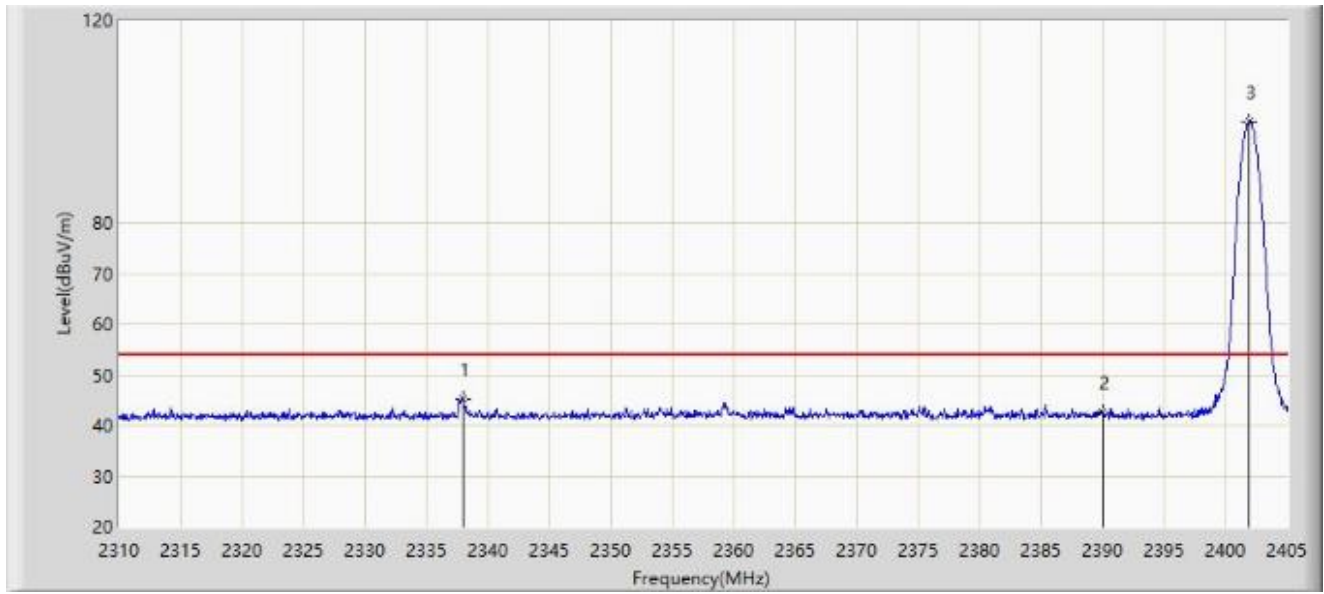
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2370.562	56.742	24.990	-17.258	74.000	31.752	PK
2			2390.000	54.171	22.483	-19.829	74.000	31.688	PK
3		*	2401.817	100.981	69.335	N/A	N/A	31.646	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



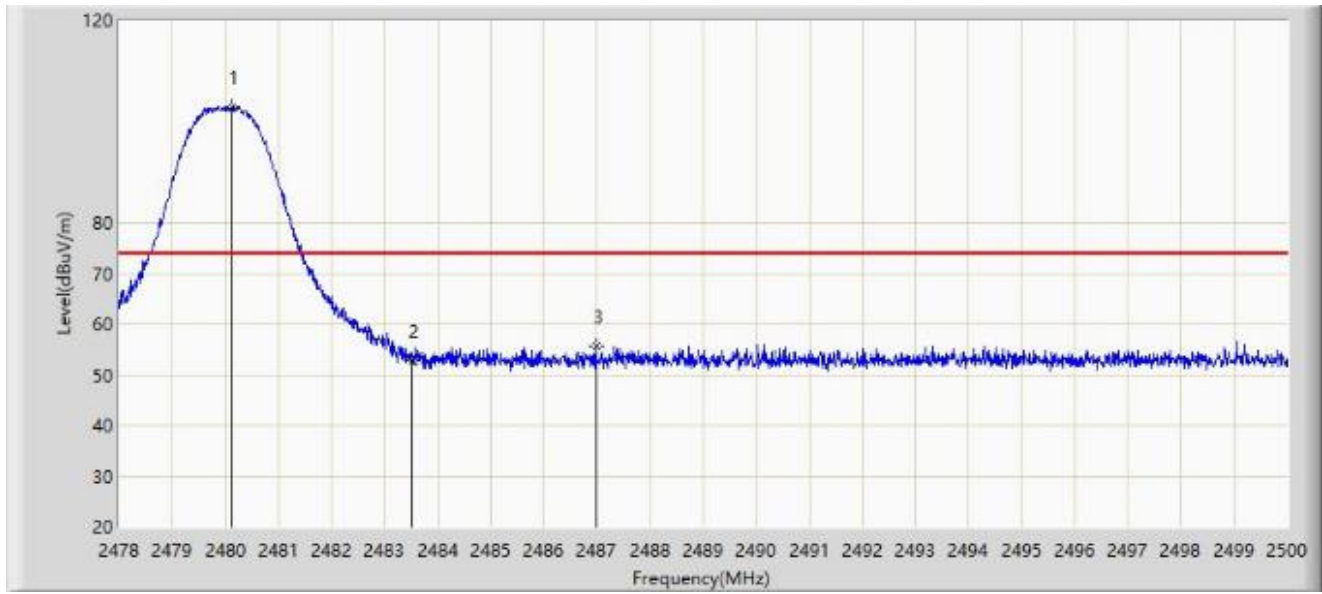
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2337.930	45.322	13.509	-8.678	54.000	31.813	AV
2			2390.000	42.513	10.825	-11.487	54.000	31.688	AV
3		*	2401.865	100.106	68.460	N/A	N/A	31.646	AV

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



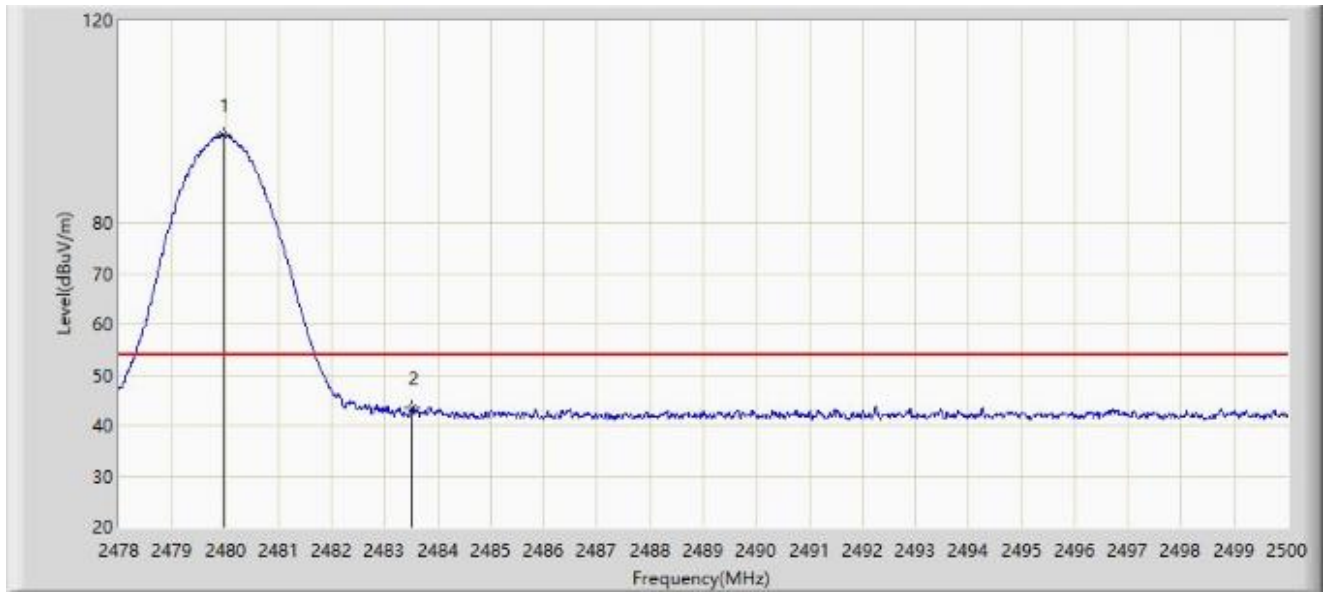
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.134	102.802	71.239	N/A	N/A	31.564	PK
2			2483.500	52.888	21.319	-21.112	74.000	31.569	PK
3			2486.976	55.644	24.069	-18.356	74.000	31.575	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



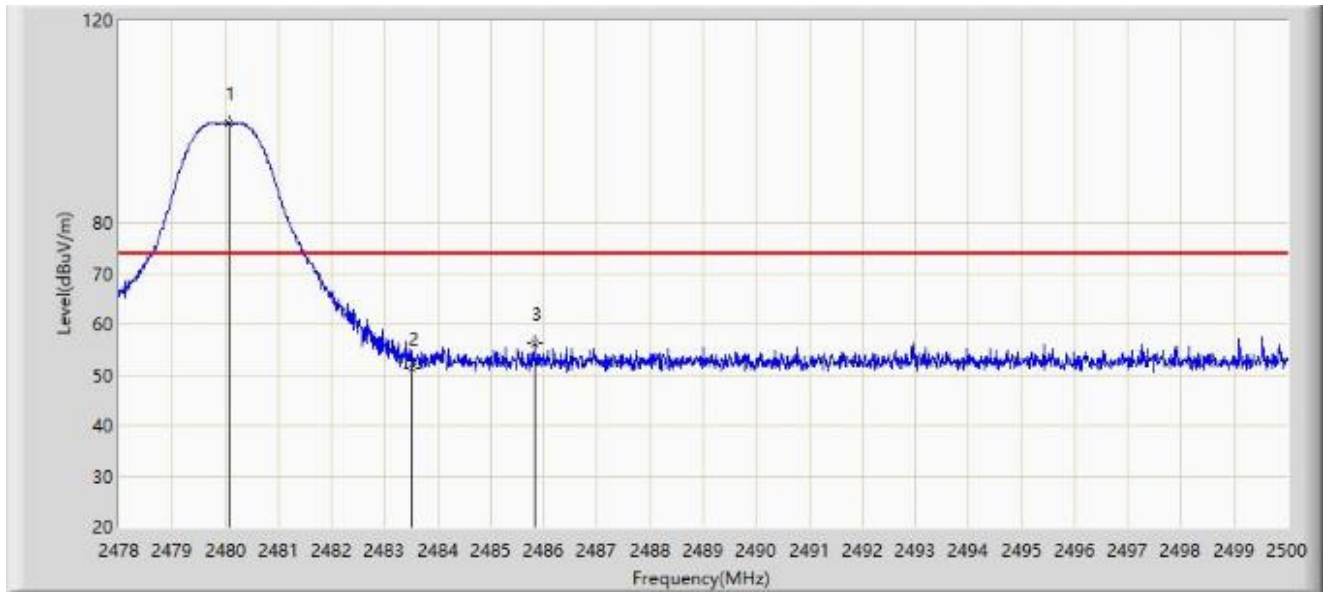
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2479.947	97.488	65.925	N/A	N/A	31.563	AV
2			2483.500	43.413	11.844	-10.587	54.000	31.569	AV

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



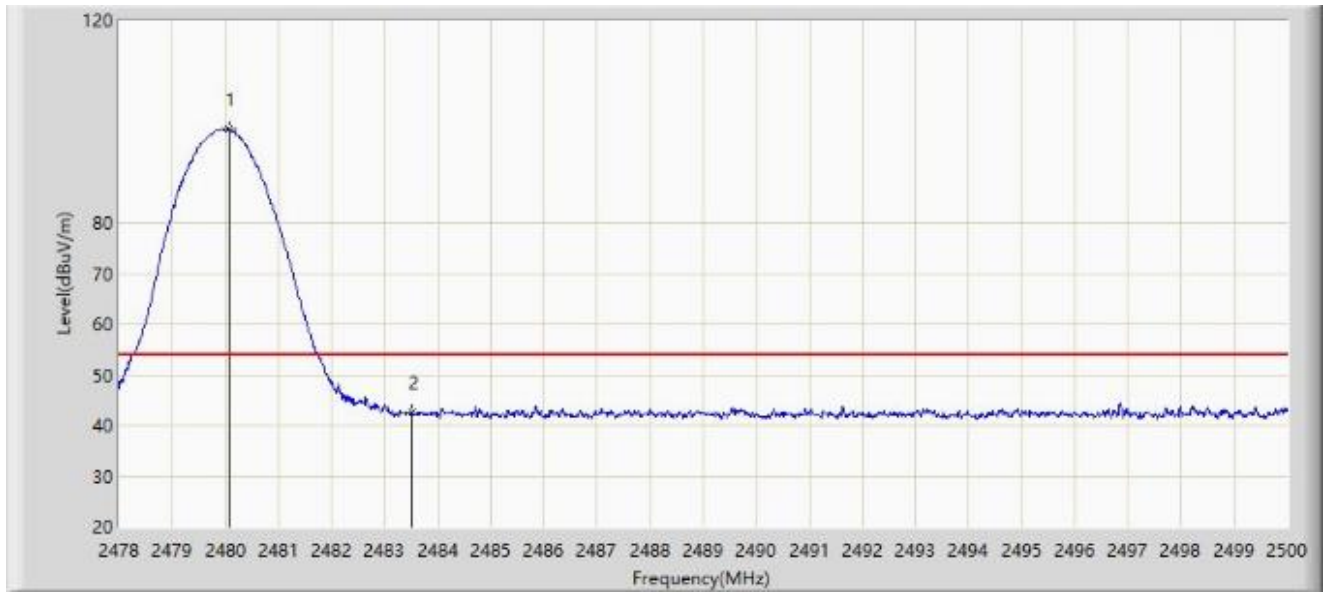
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.068	99.749	68.186	N/A	N/A	31.563	PK
2			2483.500	51.437	19.868	-22.563	74.000	31.569	PK
3			2485.821	56.282	24.709	-17.718	74.000	31.573	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



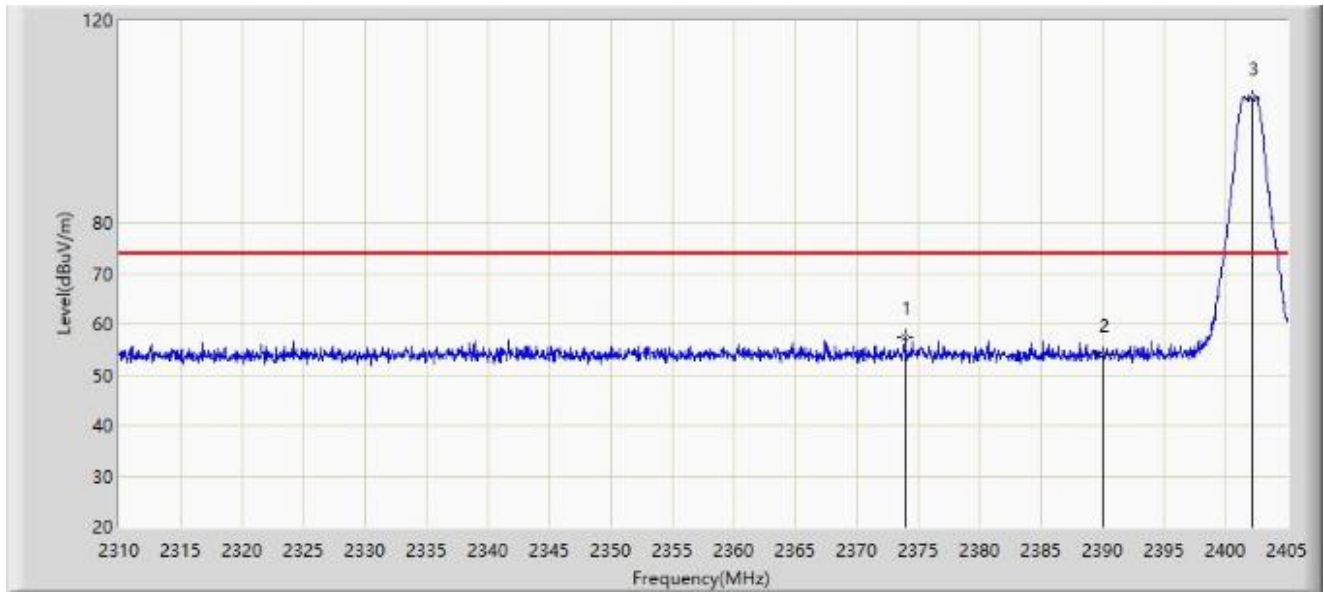
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.068	98.551	66.988	N/A	N/A	31.563	AV
2			2483.500	42.486	10.917	-11.514	54.000	31.569	AV

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



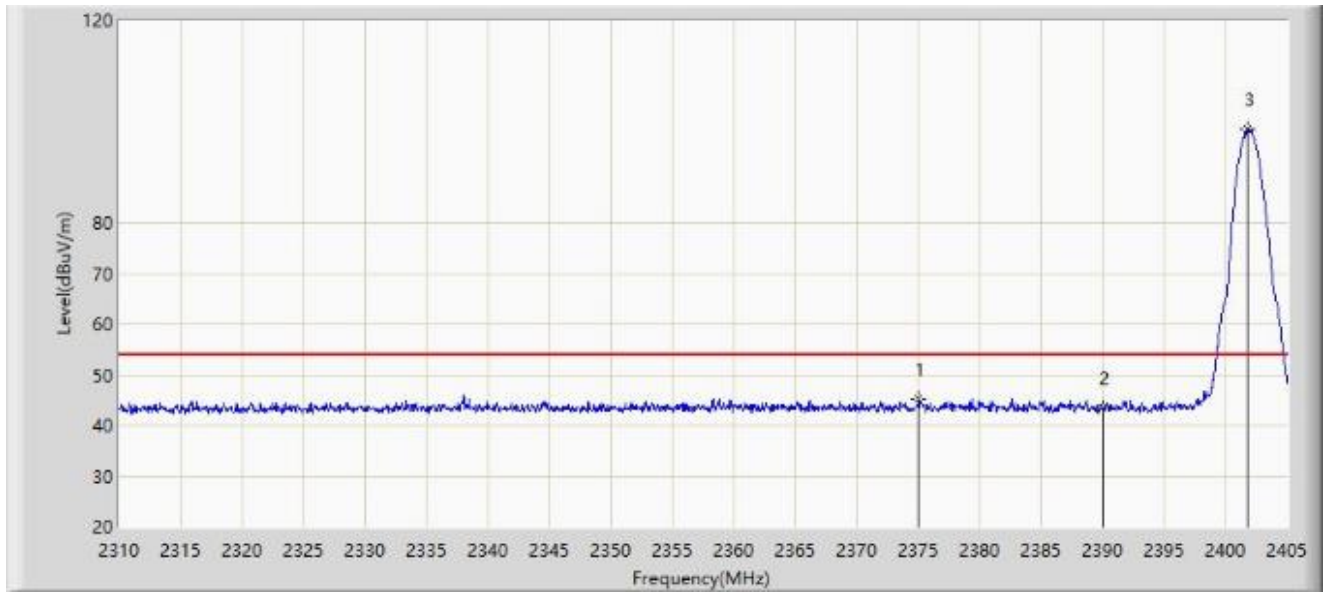
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2373.887	57.416	25.674	-16.584	74.000	31.742	PK
2			2390.000	53.913	22.225	-20.087	74.000	31.688	PK
3		*	2402.103	104.652	73.007	N/A	N/A	31.645	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2375.028	45.101	13.363	-8.899	54.000	31.738	AV
2			2390.000	43.352	11.664	-10.648	54.000	31.688	AV
3		*	2401.817	98.434	66.788	N/A	N/A	31.646	AV

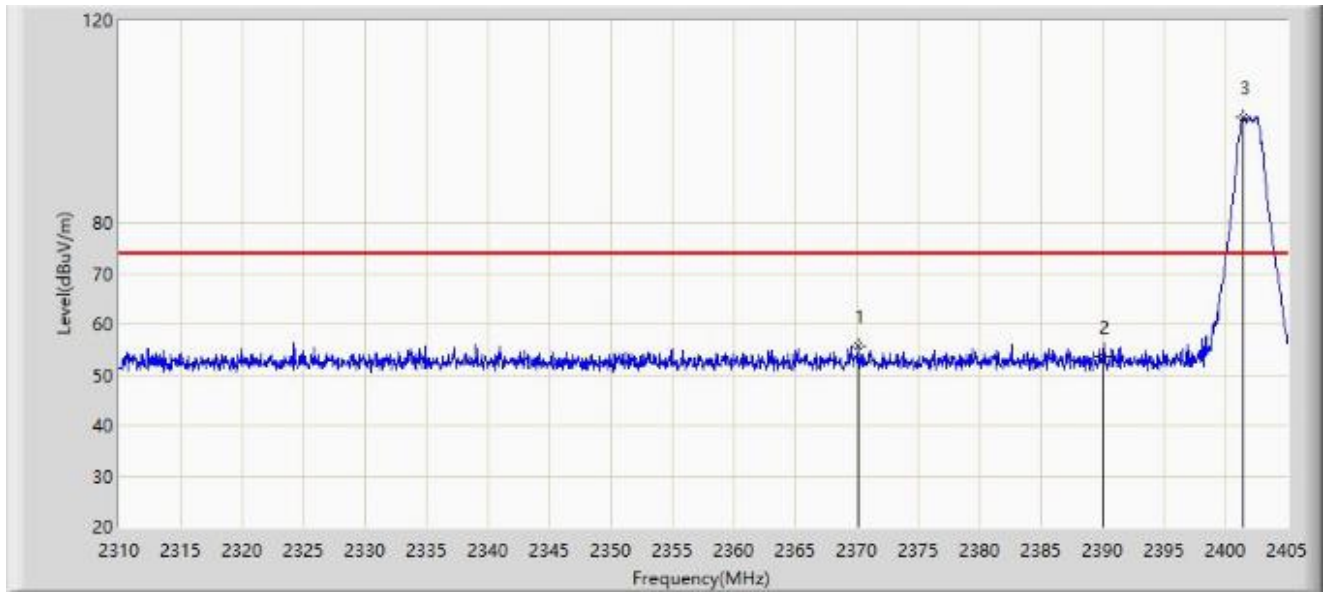
Note 1: " \* ", means this data is the worst emission level.

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

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



Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



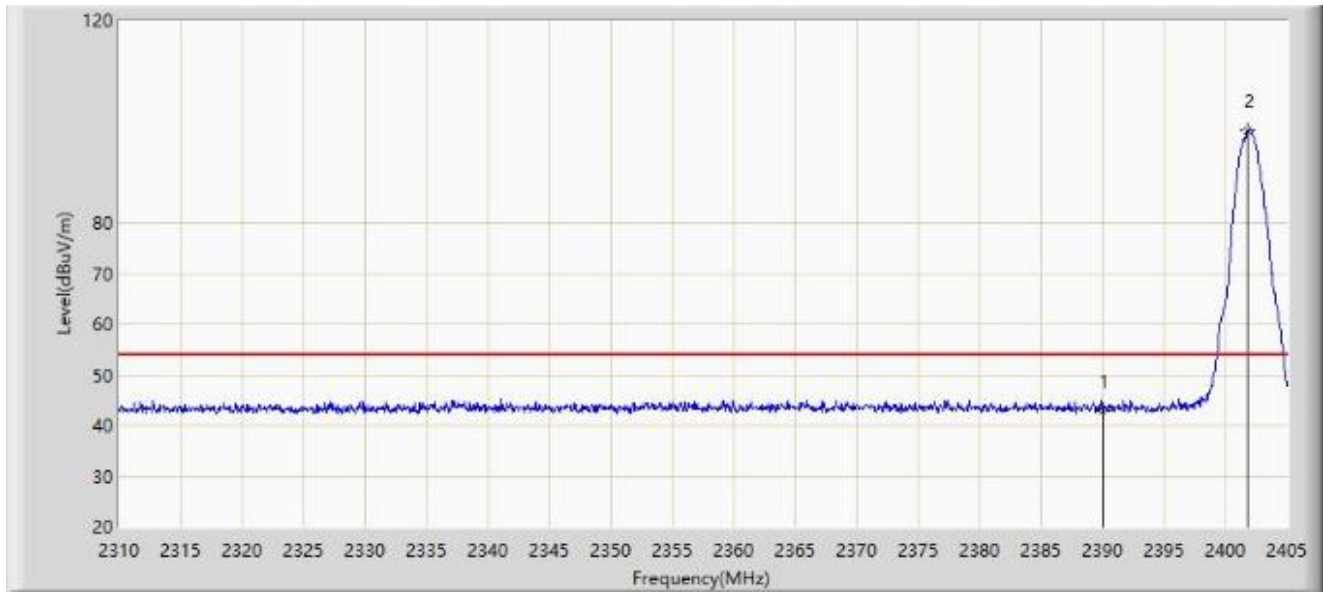
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2370.087	55.565	23.811	-18.435	74.000	31.754	PK
2			2390.000	53.598	21.910	-20.402	74.000	31.688	PK
3		*	2401.390	100.833	69.186	N/A	N/A	31.647	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



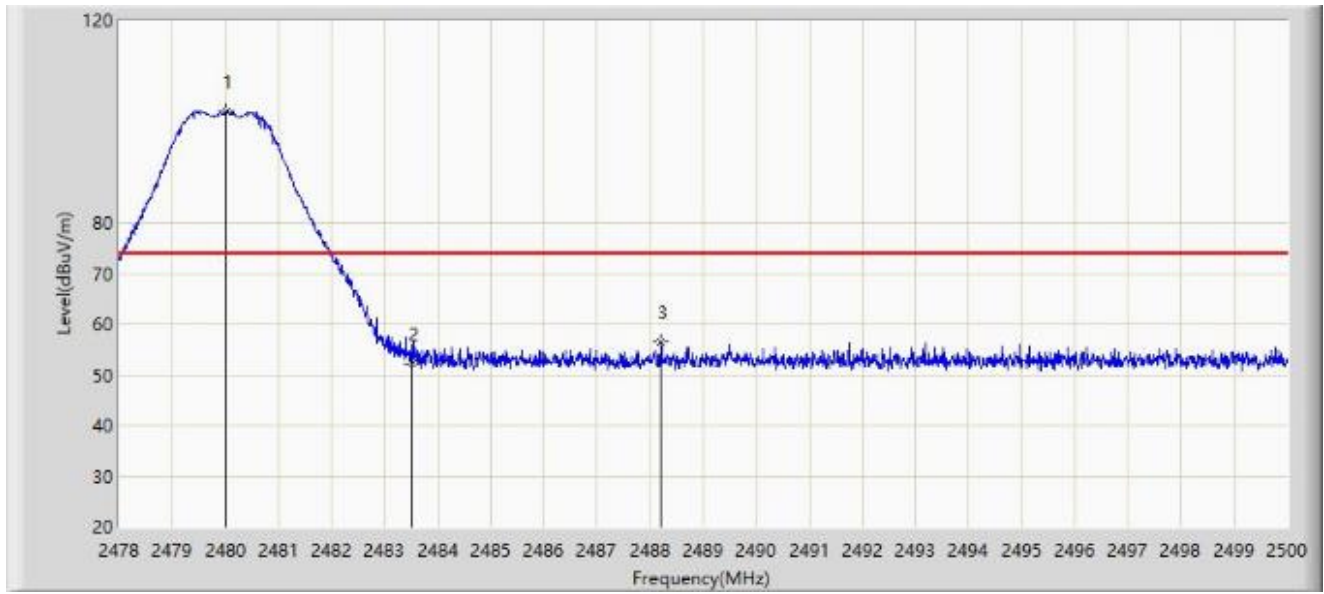
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2390.000	42.990	11.302	-11.010	54.000	31.688	AV
2		*	2401.817	98.158	66.512	N/A	N/A	31.646	AV

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



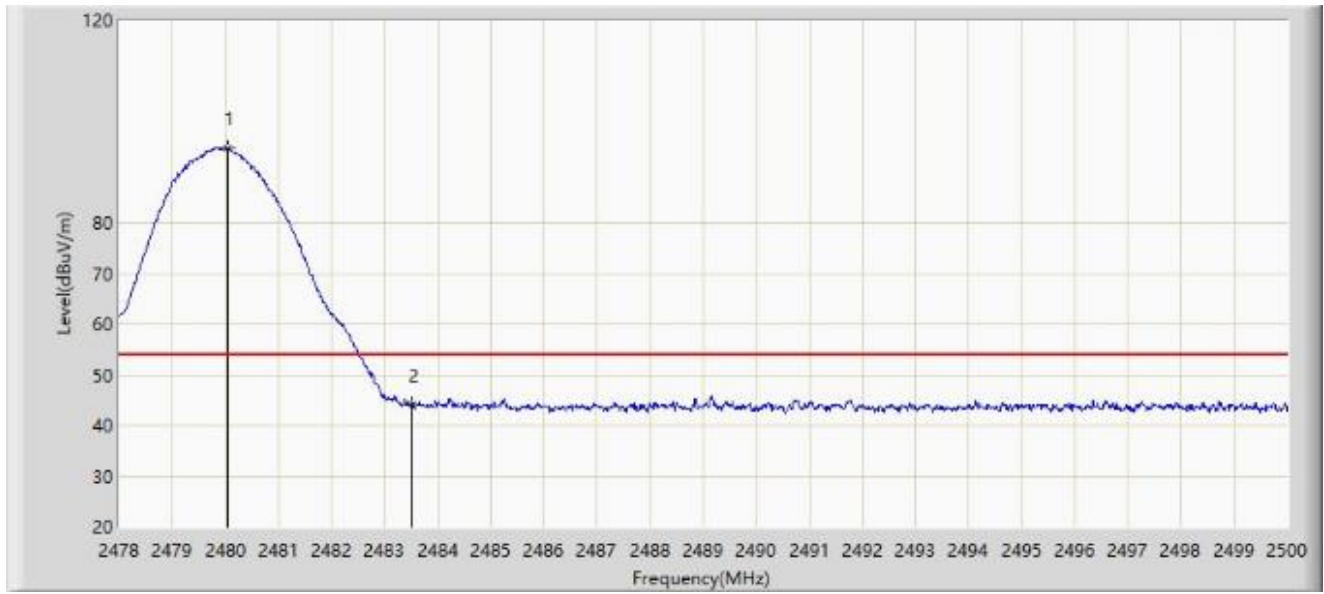
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.013	101.960	70.397	N/A	N/A	31.563	PK
2			2483.500	52.239	20.670	-21.761	74.000	31.569	PK
3			2488.197	56.455	24.878	-17.545	74.000	31.577	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



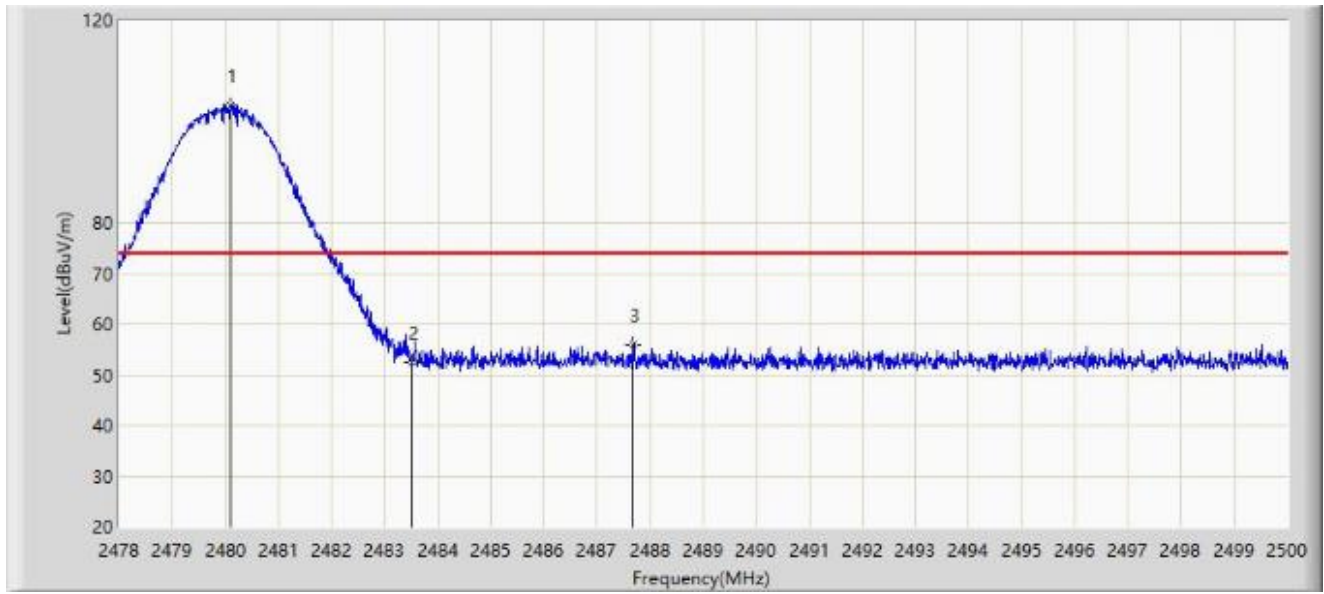
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.035	94.840	63.277	N/A	N/A	31.563	AV
2			2483.500	44.060	12.491	-9.940	54.000	31.569	AV

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



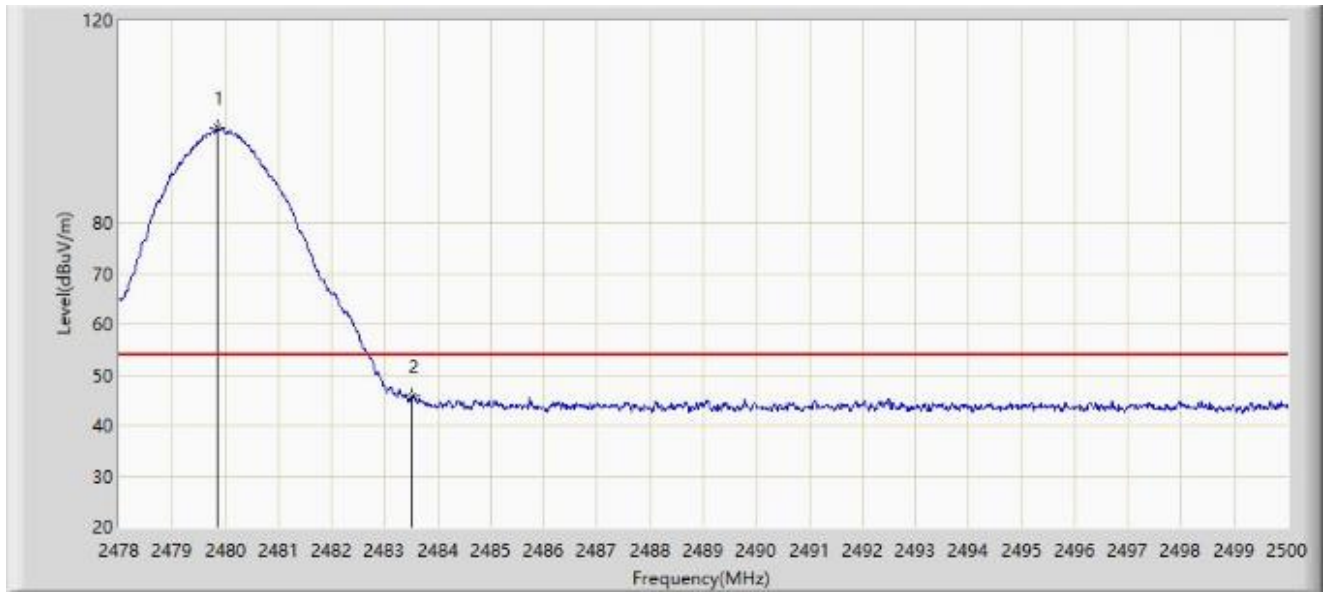
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.101	103.240	71.677	N/A	N/A	31.564	PK
2			2483.500	52.387	20.818	-21.613	74.000	31.569	PK
3			2487.680	55.832	24.256	-18.168	74.000	31.576	PK

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

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

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

Site: WZ-AC2	Test Date: 2023-02-12
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: WP Access Point	Power: By DC 5V
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2479.848	98.751	67.188	N/A	N/A	31.563	AV
2			2483.500	45.897	14.328	-8.103	54.000	31.569	AV

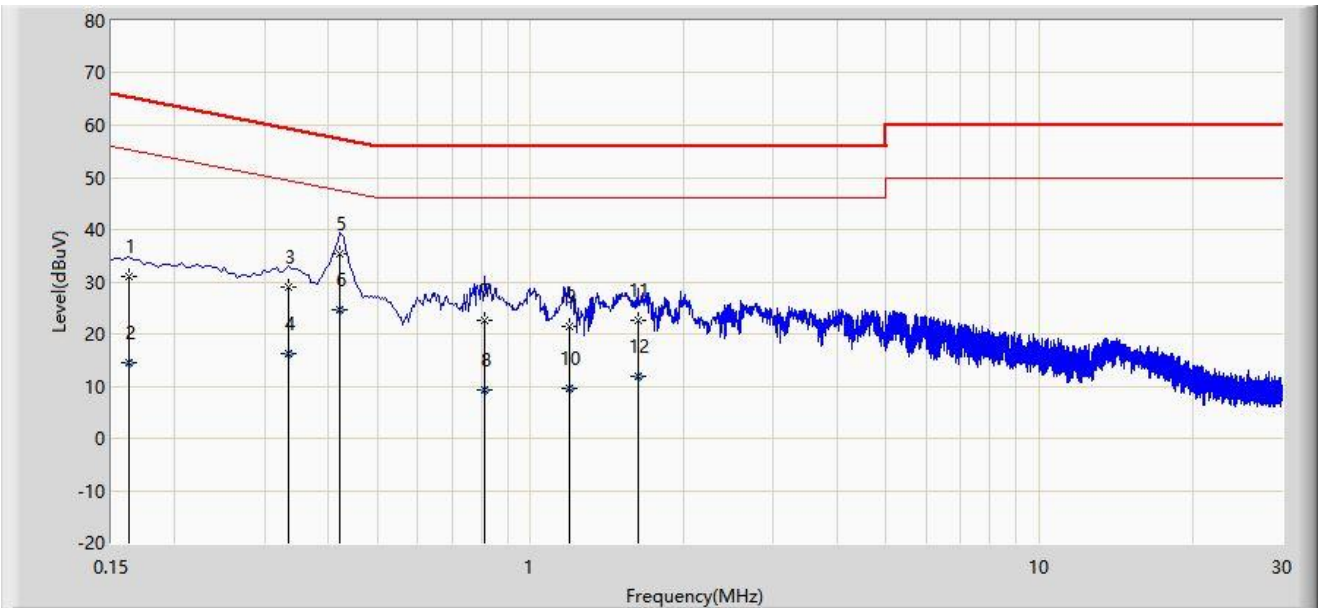
Note 1: " \* ", means this data is the worst emission level.

Note 2: Measure Level (dBuV/m) = Reading Level (dBuV) + 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: 2023-02-24
Limit: FCC_Part15.207_CE_AC Power	Engineer: Helen Han
Probe: ENV216_101683_Filter Off_E	Polarity: Line
EUT: WP Access Point	Power: AC 120V/60Hz
<b>Test Mode:</b> Transmit by BLE 1Mbps at channel 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.162	31.106	21.226	-34.255	65.361	9.880	QP
2		0.162	14.431	4.551	-40.930	55.361	9.880	AV
3		0.334	28.939	19.029	-30.412	59.351	9.911	QP
4		0.334	16.168	6.257	-33.184	49.351	9.911	AV
5	*	0.422	35.272	25.341	-22.137	57.409	9.932	QP
6		0.422	24.765	14.834	-22.644	47.409	9.932	AV
7		0.814	22.560	12.599	-33.440	56.000	9.961	QP
8		0.814	9.362	-0.598	-36.638	46.000	9.961	AV
9		1.194	21.431	11.447	-34.569	56.000	9.984	QP
10		1.194	9.482	-0.502	-36.518	46.000	9.984	AV
11		1.626	22.568	12.576	-33.432	56.000	9.993	QP
12		1.626	11.780	1.787	-34.220	46.000	9.993	AV

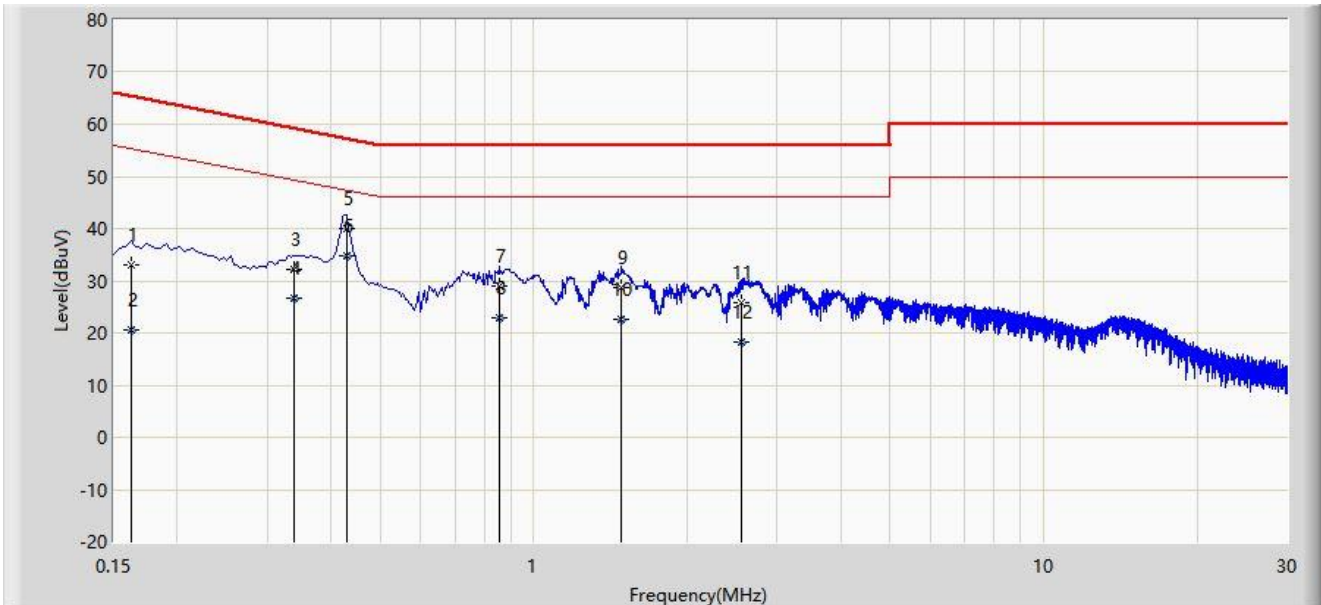
Note 1: " \* ", means this data is the worst emission level.

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: 2023-02-24
Limit: FCC_Part15.207_CE_AC Power	Engineer: Helen Han
Probe: ENV216_101683_Filter Off_E	Polarity: Neutral
EUT: WP Access Point	Power: AC 120V/60Hz
<b>Test Mode:</b> Transmit by BLE 1Mbps at channel 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.162	32.906	23.003	-32.455	65.361	9.903	QP
2		0.162	20.472	10.570	-34.888	55.361	9.903	AV
3		0.338	32.085	22.152	-27.167	59.252	9.933	QP
4		0.338	26.556	16.624	-22.696	49.252	9.933	AV
5		0.430	39.872	29.923	-17.381	57.253	9.948	QP
6	*	0.430	34.685	24.737	-12.567	47.253	9.948	AV
7		0.854	29.034	19.044	-26.966	56.000	9.989	QP
8		0.854	22.829	12.840	-23.171	46.000	9.989	AV
9		1.486	28.775	18.765	-27.225	56.000	10.010	QP
10		1.486	22.651	12.641	-23.349	46.000	10.010	AV
11		2.558	25.758	15.628	-30.242	56.000	10.130	QP
12		2.558	18.350	8.220	-27.650	46.000	10.130	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 "2302RSU018-UT" file.

## Appendix C - EUT Photograph

Refer to "2302RSU018-UE" file.

————— The End —————