

# RF MEASUREMENT REPORT

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**FCC ID:** SFK-WF402XLE  
**Applicant:** CIG Shanghai Co., Ltd.  
**Product:** XLE Location Beacon AC Power  
**Model No.:** WF-402CB-XLE  
**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:** 2023-02-09 ~ 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.

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### Revision History

Report No.	Version	Description	Issue Date	Note
2302RSU019-U1	V01	Initial Report	2023-04-21	Valid

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## 1. General Information

### 1.1. Applicant

CIG Shanghai Co., Ltd.

5F, Building 8, NO.2388 CHENHANG ROAD, MINHANG DISTRICT, SHANGHAI

### 1.2. Manufacturer

CIG Shanghai Co., Ltd.

5F, Building 8, NO.2388 CHENHANG ROAD, MINHANG DISTRICT, SHANGHAI

### 1.3. Testing Facility

<input checked="" type="checkbox"/>	<b>Test Site – MRT Suzhou Laboratory</b>								
	<b>Laboratory Location (Suzhou - Wuzhong)</b>								
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China								
	<b>Laboratory Location (Suzhou - SIP)</b>								
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China								
	<b>Laboratory Accreditations</b>								
	A2LA: 3628.01 <span style="float: right;">CNAS: L10551</span>								
	FCC: CN1166 <span style="float: right;">ISED: CN0001</span>								
	VCCI: <table style="margin-left: 100px; border: none;"> <tr> <td><input type="checkbox"/>R-20025</td> <td><input type="checkbox"/>G-20034</td> <td><input type="checkbox"/>C-20020</td> <td><input type="checkbox"/>T-20020</td> </tr> <tr> <td><input type="checkbox"/>R-20141</td> <td><input type="checkbox"/>G-20134</td> <td><input type="checkbox"/>C-20103</td> <td><input type="checkbox"/>T-20104</td> </tr> </table>	<input type="checkbox"/> R-20025	<input type="checkbox"/> G-20034	<input type="checkbox"/> C-20020	<input type="checkbox"/> T-20020	<input type="checkbox"/> R-20141	<input type="checkbox"/> G-20134	<input type="checkbox"/> C-20103	<input type="checkbox"/> T-20104
<input type="checkbox"/> R-20025	<input type="checkbox"/> G-20034	<input type="checkbox"/> C-20020	<input type="checkbox"/> T-20020						
<input type="checkbox"/> R-20141	<input type="checkbox"/> G-20134	<input type="checkbox"/> C-20103	<input type="checkbox"/> T-20104						
<input type="checkbox"/>	<b>Test Site – MRT Shenzhen Laboratory</b>								
	<b>Laboratory Location (Shenzhen)</b>								
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China								
	<b>Laboratory Accreditations</b>								
	A2LA: 3628.02 <span style="float: right;">CNAS: L10551</span>								
	FCC: CN1284 <span style="float: right;">ISED: CN0105</span>								
<input type="checkbox"/>	<b>Test Site – MRT Taiwan Laboratory</b>								
	<b>Laboratory Location (Taiwan)</b>								
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)								
	<b>Laboratory Accreditations</b>								
	TAF: L3261-190725								
	FCC: 291082, TW3261 <span style="float: right;">ISED: TW3261</span>								

#### 1.4. Product Information

Product Name	XLE Location Beacon AC Power
Model No.	WF-402CB-XLE
EUT Identification No.	20230206Sample#24
Bluetooth Specification	V5.0 (BLE 1Mbps & 2Mbps)
Antenna Information	Refer to Section 1.5
Working Voltage	AC125V / 60Hz
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
Antenna Type	SMT Antenna
Antenna Gain	2.5 dBi

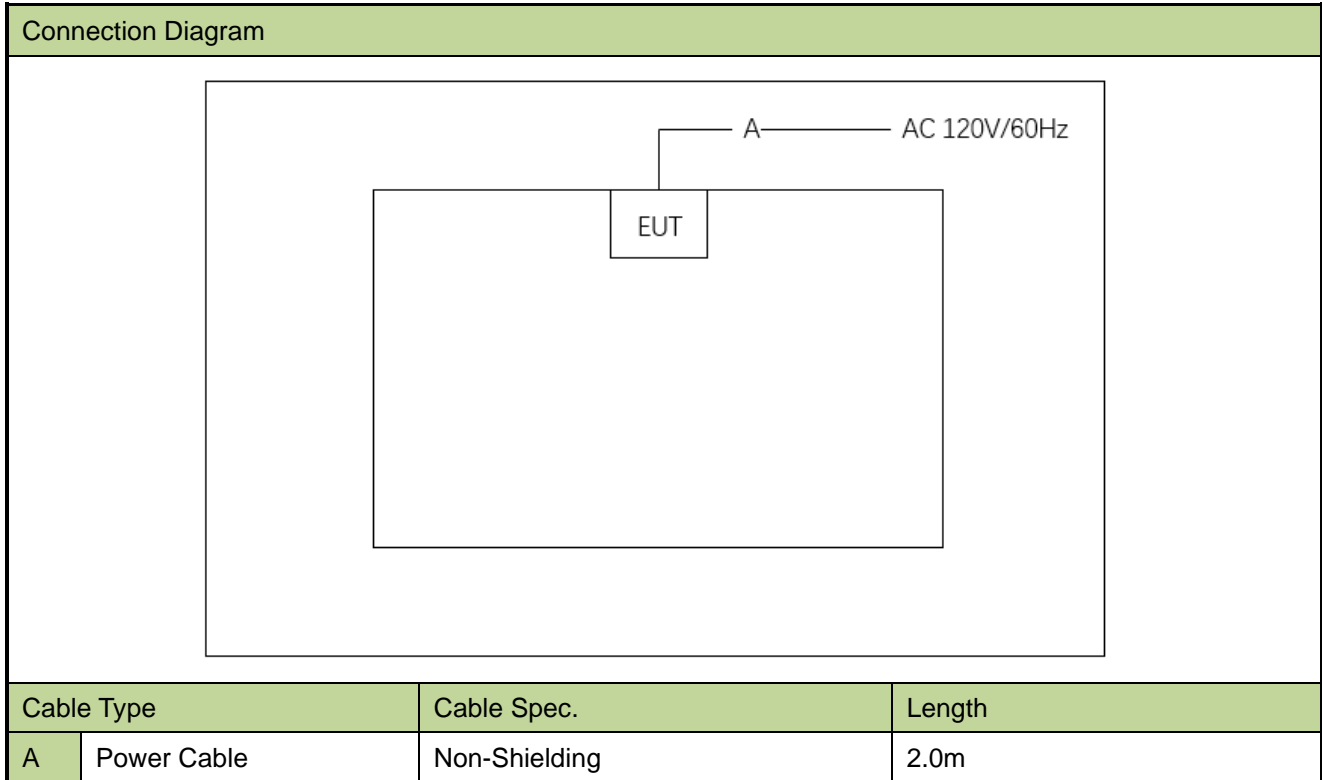
#### 1.6. Working Frequencies

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	--	--	--	--

## 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.

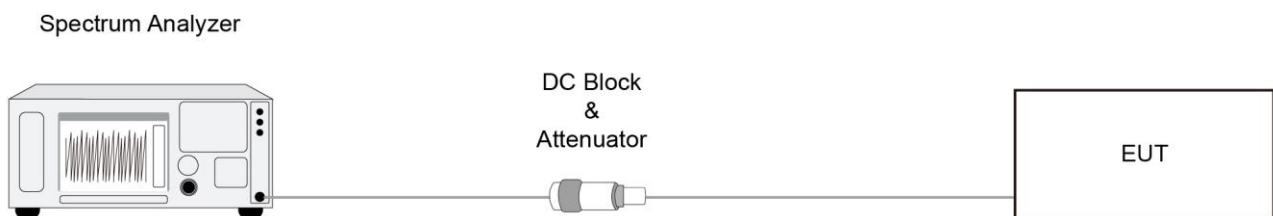
### 6.2.2. Test Procedure

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

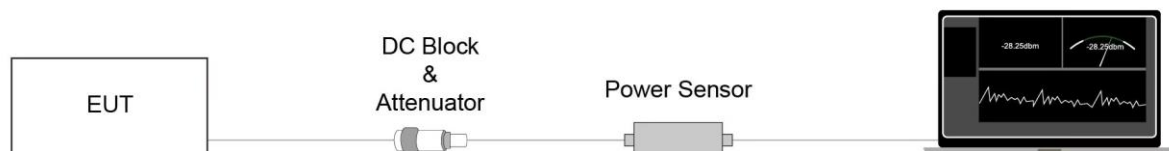
##### **Method PKPM1 (Peak Power Measurement of Signals with DTS BW $\leq$ 50MHz)**

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.

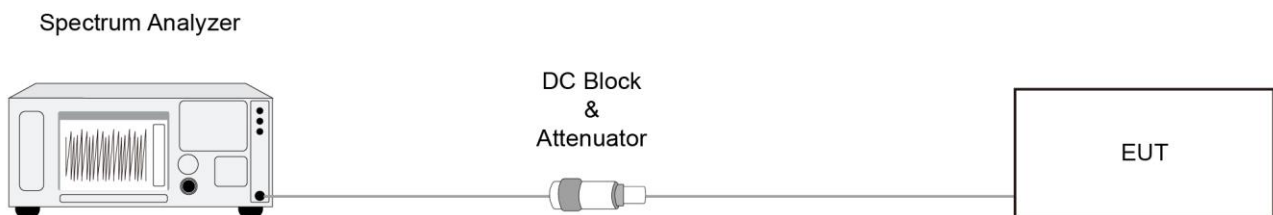
### 6.4.2. Test Procedure

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**

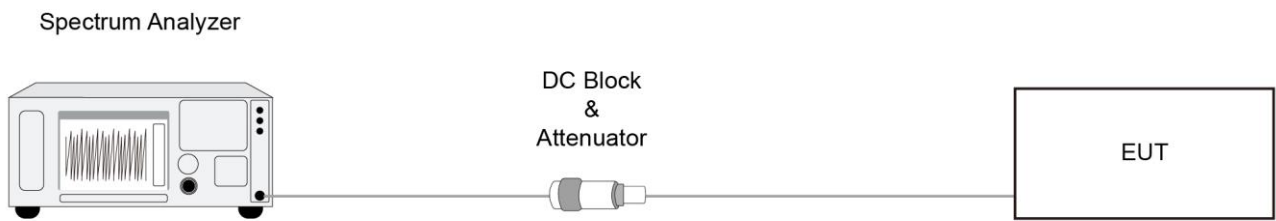
#### **Reference level measurement**

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**

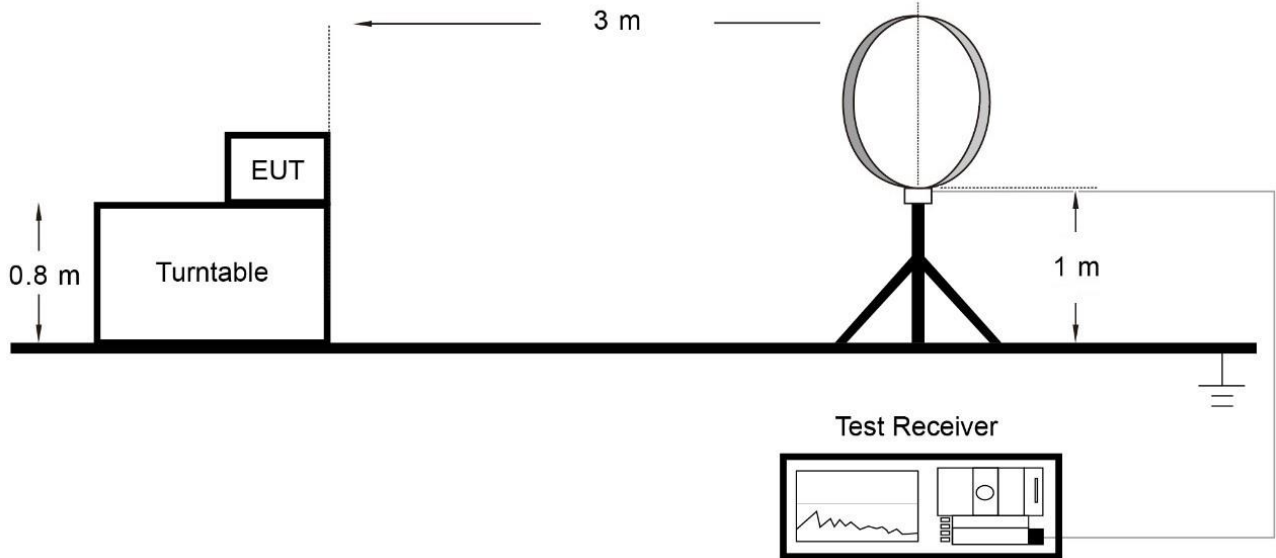
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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

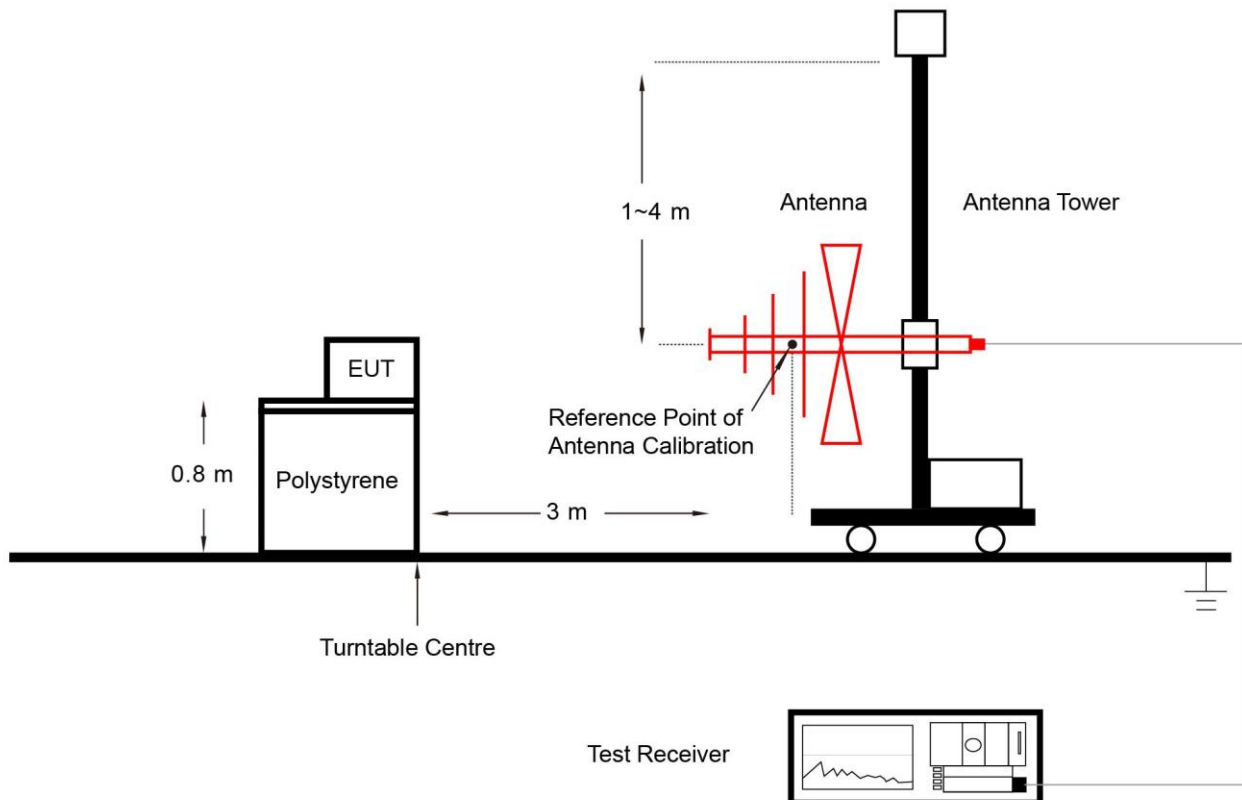
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.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

### 6.6.4. Test Setup

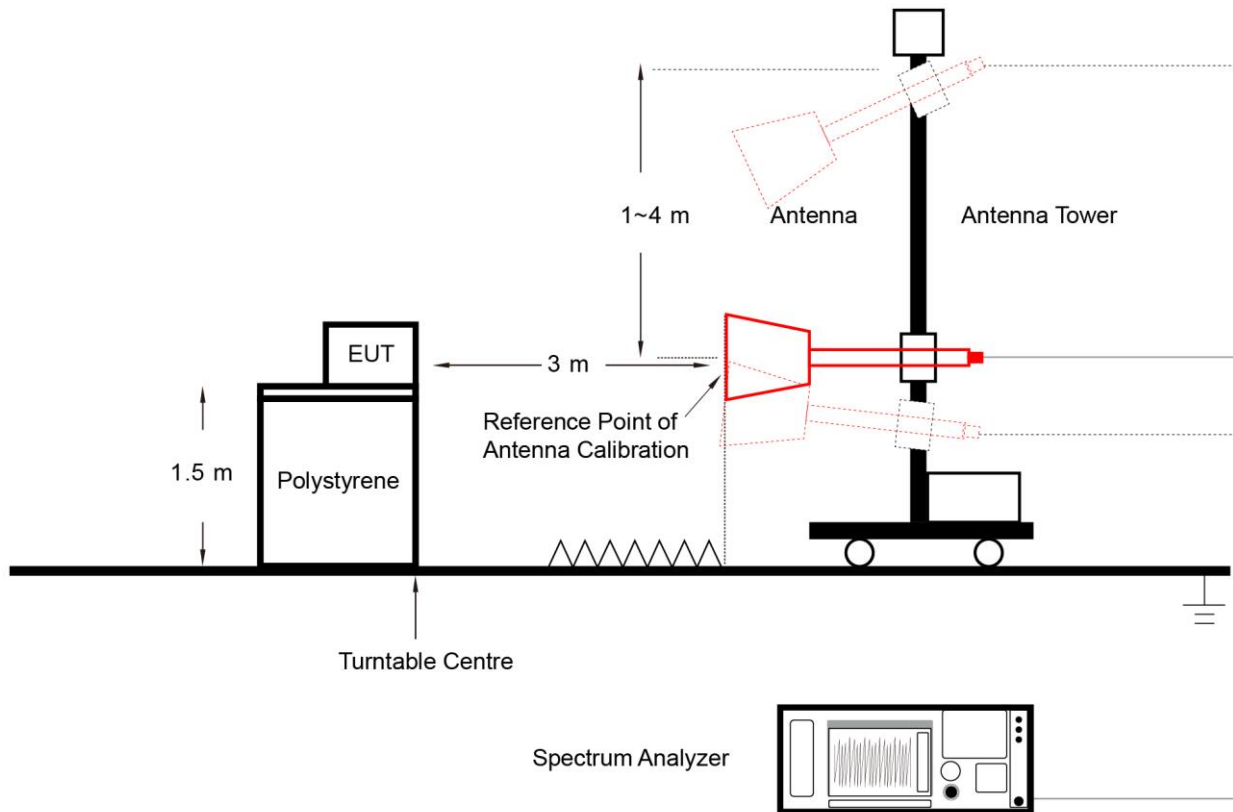
Below 30MHz Test Setup:



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

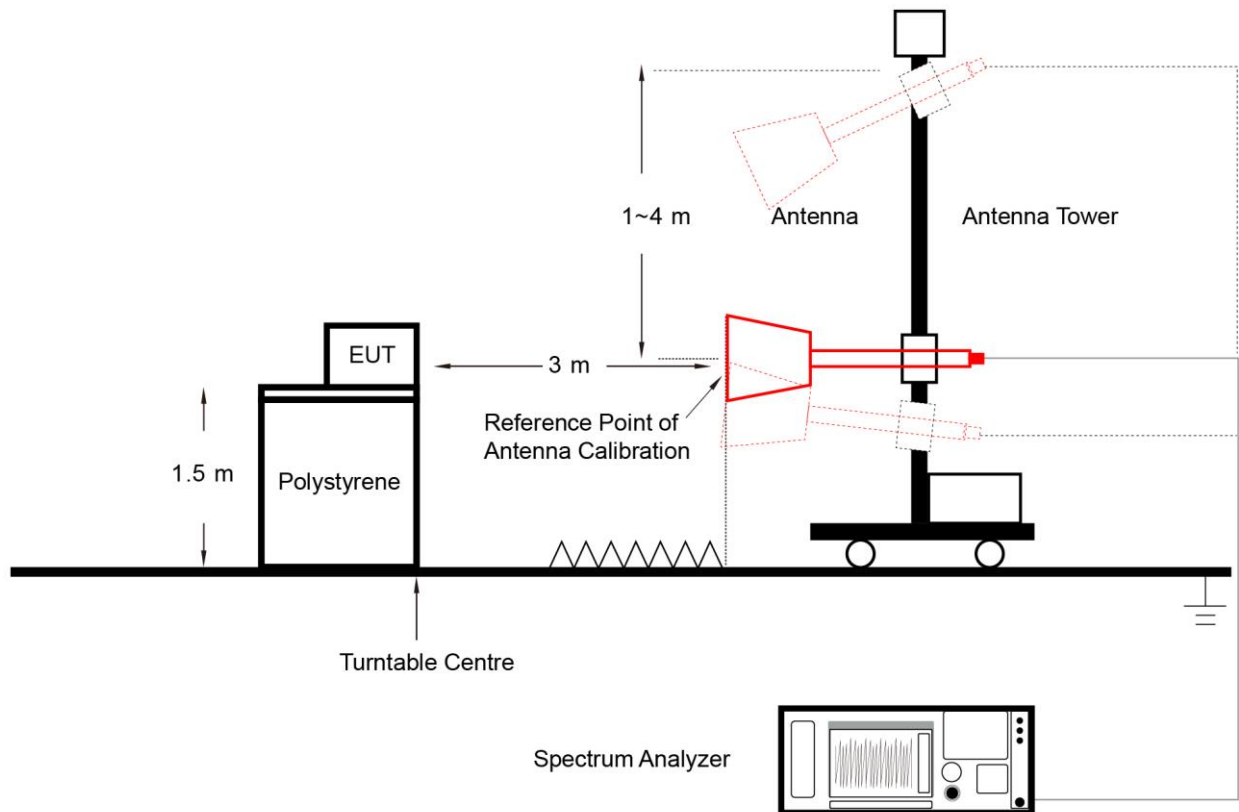
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### 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

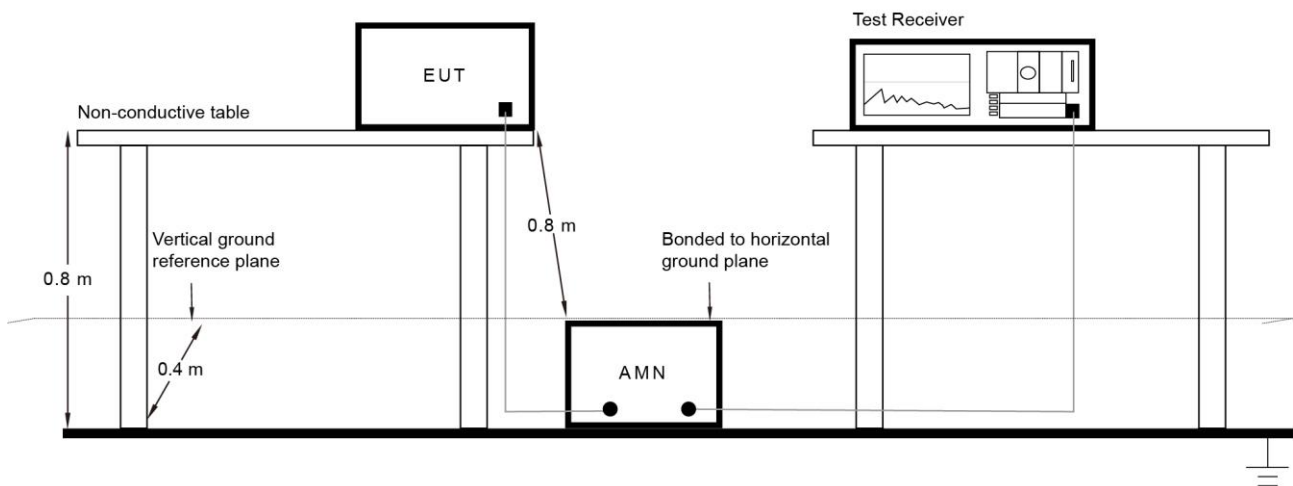
### 6.8.1. Test Limit

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

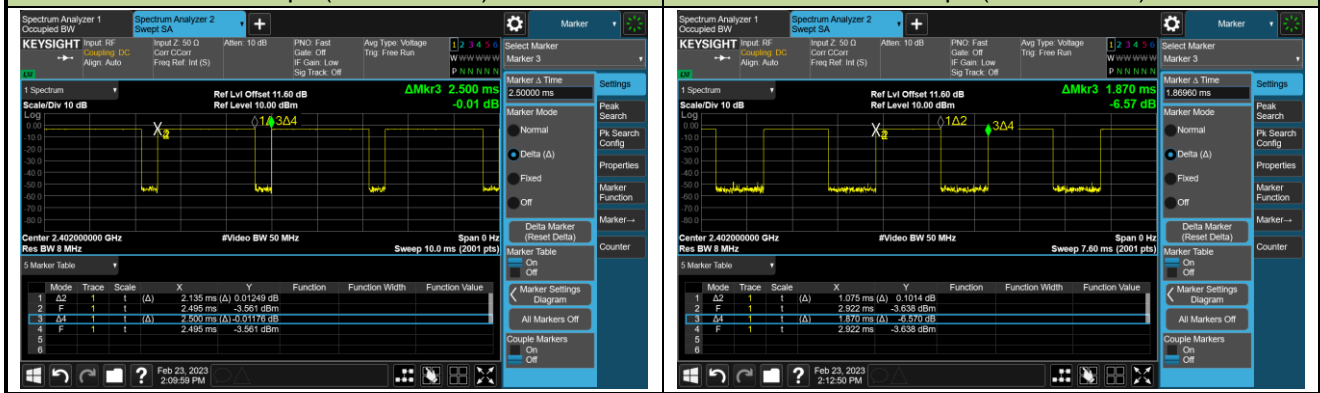
Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-23		

Test Mode	Duty Cycle
BLE 1Mbps	85.40%
BLE 2Mbps	57.49%

Duty Cycle (T = Transmission Duration)

BLE 1Mbps (T = 2.135ms)

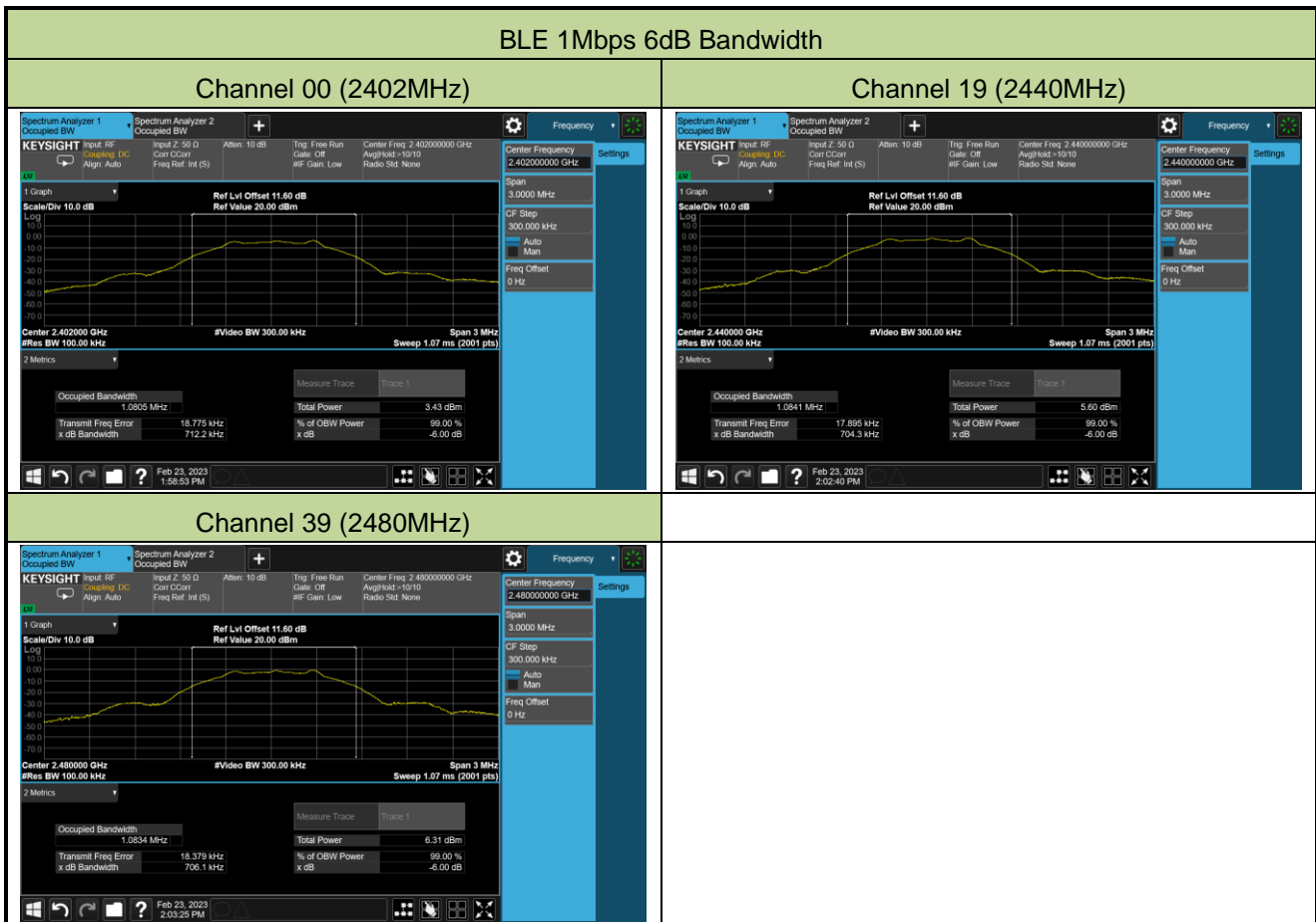
BLE 2Mbps (T = 1.075ms)



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

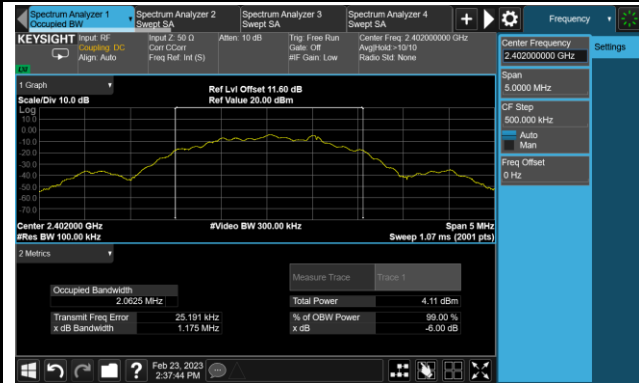
Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-23		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
BLE	1Mbps	00	2402	0.7122	≥ 0.5
BLE	1Mbps	19	2440	0.7043	≥ 0.5
BLE	1Mbps	39	2480	0.7061	≥ 0.5
BLE	2Mbps	00	2402	1.175	≥ 0.5
BLE	2Mbps	19	2440	1.145	≥ 0.5
BLE	2Mbps	39	2480	1.166	≥ 0.5

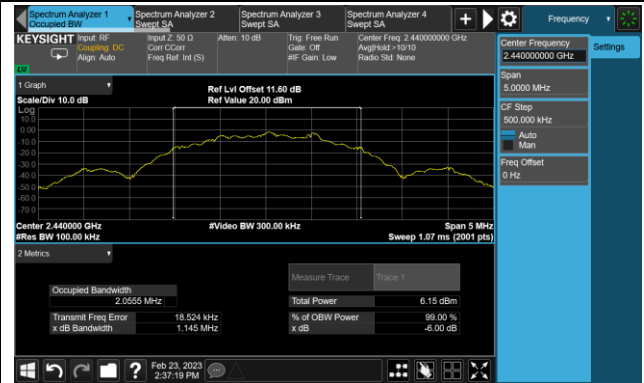


BLE 2Mbps 6dB Bandwidth

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	2023-02-23		

**Test Result of Peak Output Power**

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	0.68	≤ 30.00	Pass
BLE	1Mbps	19	2440	2.42	≤ 30.00	Pass
BLE	1Mbps	39	2480	3.26	≤ 30.00	Pass
BLE	2Mbps	00	2402	0.52	≤ 30.00	Pass
BLE	2Mbps	19	2440	2.36	≤ 30.00	Pass
BLE	2Mbps	39	2480	3.36	≤ 30.00	Pass

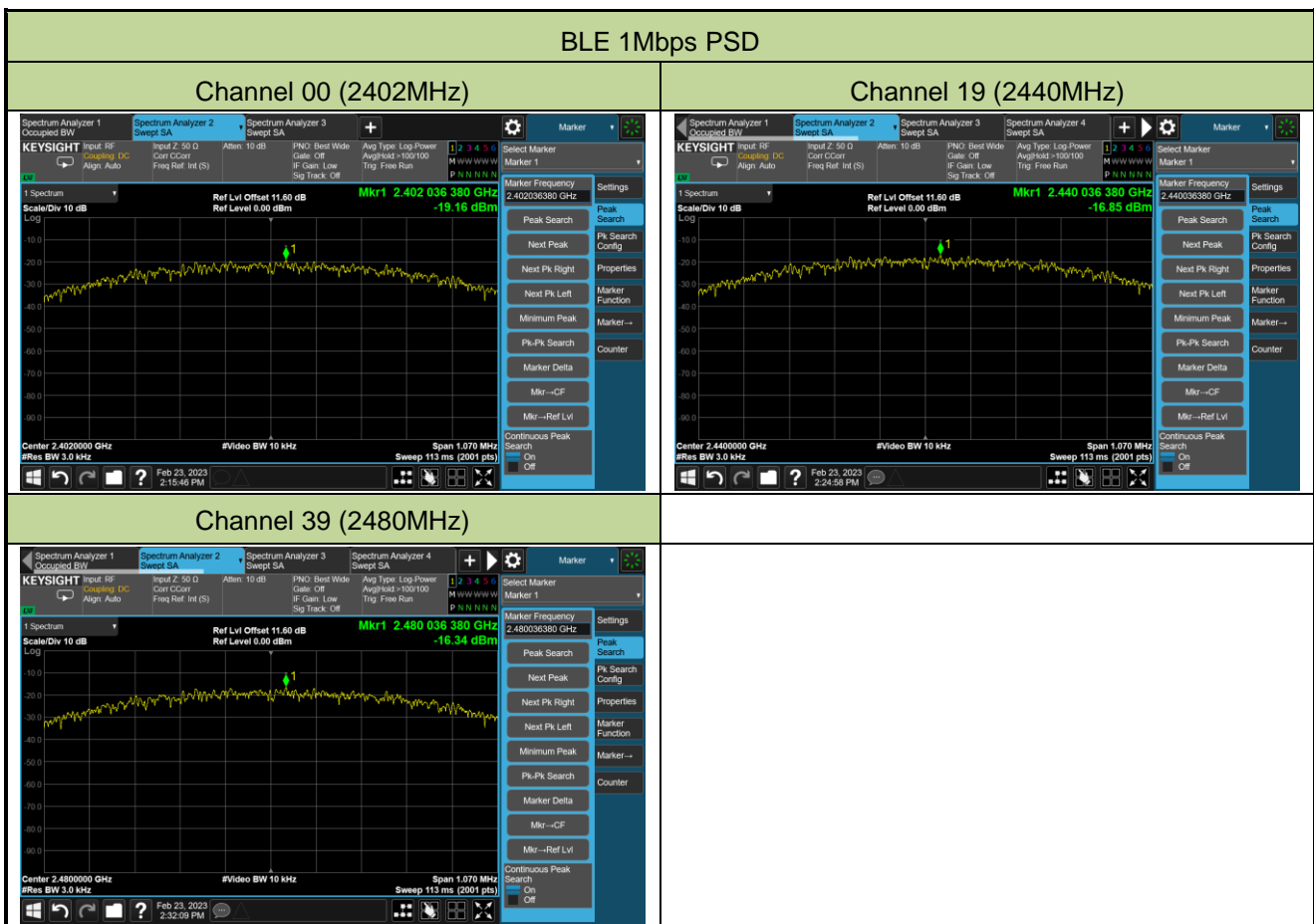
**Test Result of Average Output Power (Reporting Only)**

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	0.41	≤ 30.00	Pass
BLE	1Mbps	19	2440	2.18	≤ 30.00	Pass
BLE	1Mbps	39	2480	3.12	≤ 30.00	Pass
BLE	2Mbps	00	2402	0.20	≤ 30.00	Pass
BLE	2Mbps	19	2440	2.22	≤ 30.00	Pass
BLE	2Mbps	39	2480	3.18	≤ 30.00	Pass

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

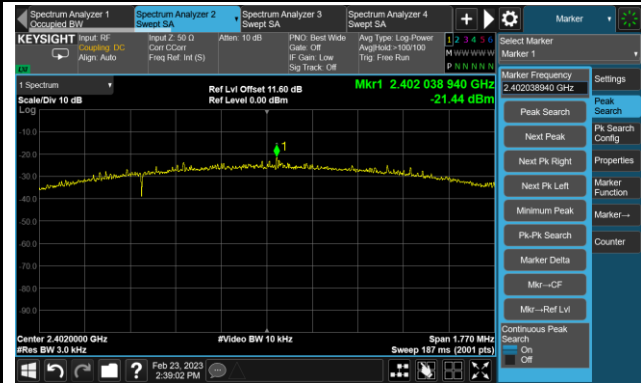
Test Site	WZ-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-23		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1Mbps	00	2402	-19.16	≤ 8.00	Pass
BLE	1Mbps	19	2440	-16.85	≤ 8.00	Pass
BLE	1Mbps	39	2480	-16.34	≤ 8.00	Pass
BLE	2Mbps	00	2402	-21.44	≤ 8.00	Pass
BLE	2Mbps	19	2440	-19.31	≤ 8.00	Pass
BLE	2Mbps	39	2480	-18.40	≤ 8.00	Pass



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-TR3	Test Engineer	Lynn Yang
Test Date	2023-02-23		

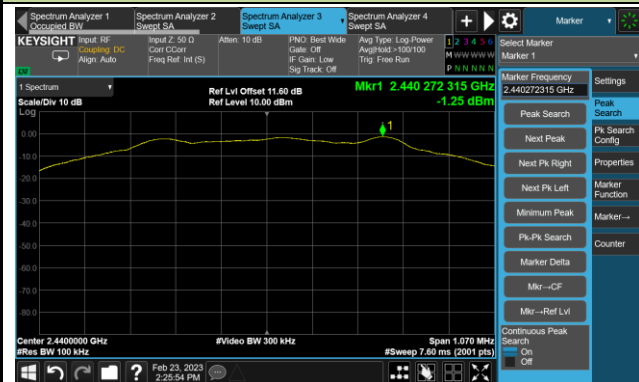
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	1	19	2440	20	Pass
BLE	1	39	2480	20	Pass
BLE	2	00	2402	20	Pass
BLE	2	19	2440	20	Pass
BLE	2	39	2480	20	Pass

**BLE 1Mbps Out-of-Band Emissions**  
**Channel 00 (2402MHz)**

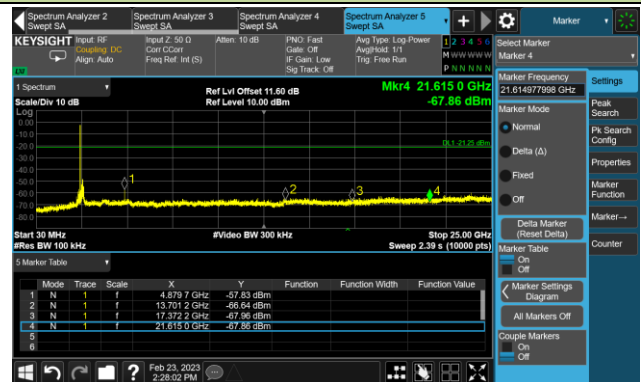
100kHz PSD Reference Level	Low Band Edge

### Channel 19 (2440MHz)

#### 100kHz PSD Reference Level

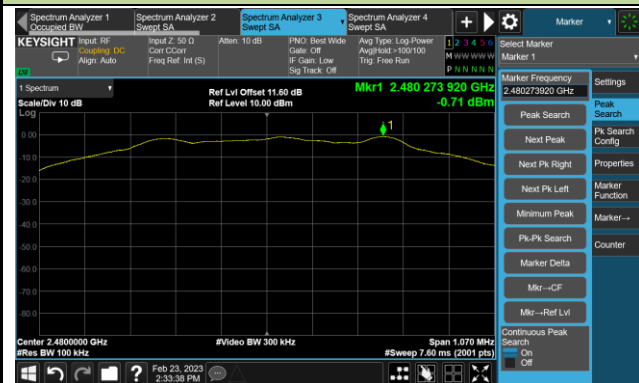


#### Spurious Emission 30MHz ~ 25GHz



### Channel 39 (2480MHz)

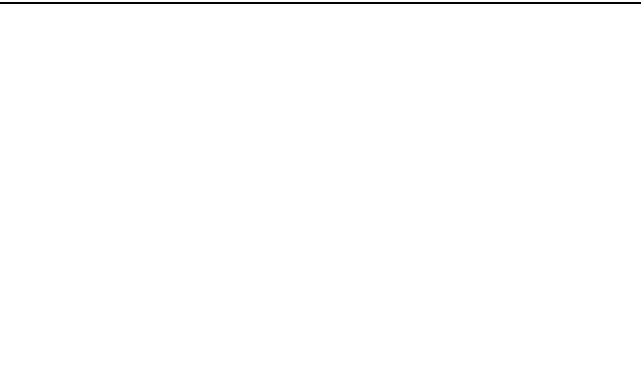
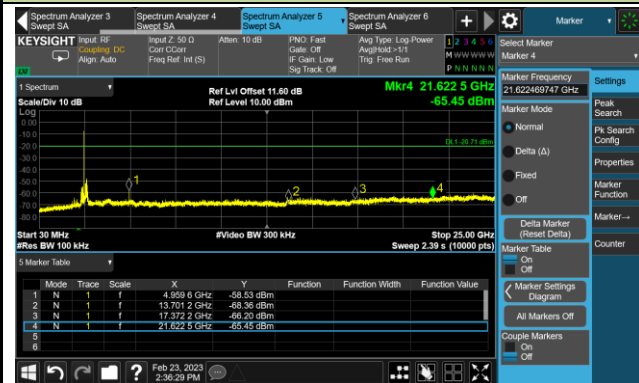
#### 100kHz PSD Reference Level



#### High Band Edge



#### Spurious Emission 30MHz ~ 25GHz

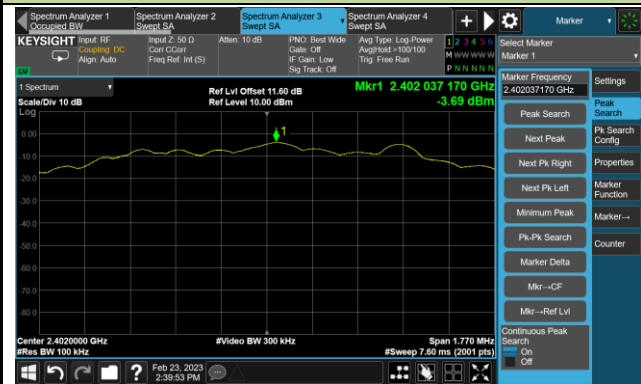




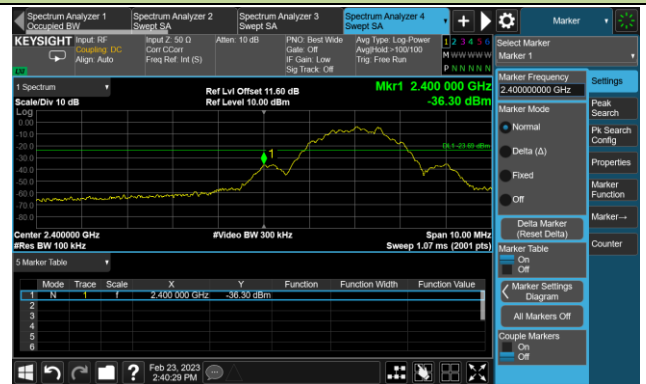
## BLE 2Mbps Out-of-Band Emissions

### Channel 00 (2402MHz)

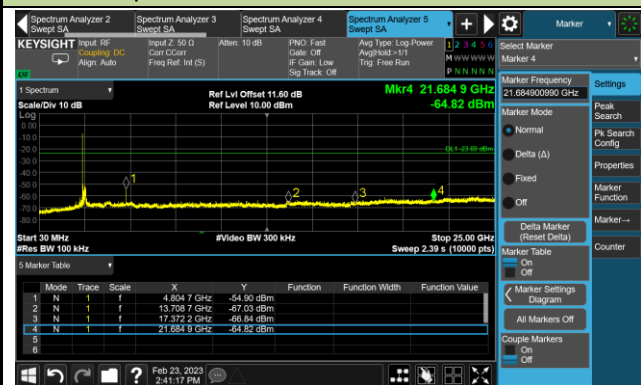
#### 100kHz PSD Reference Level



#### Low Band Edge

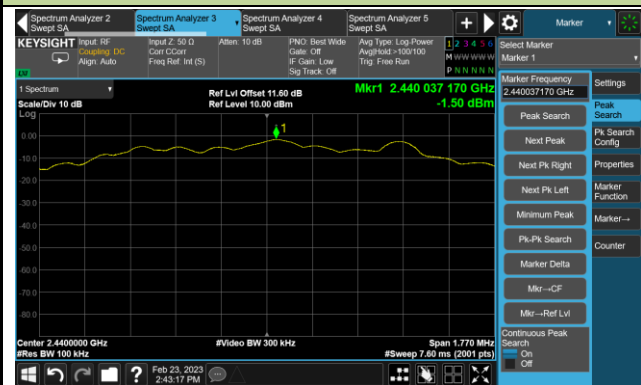


#### Spurious Emission 30MHz ~ 25GHz

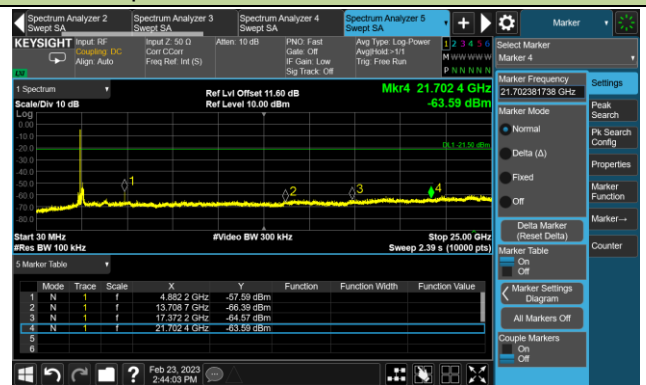


### Channel 19 (2440MHz)

#### 100kHz PSD Reference Level

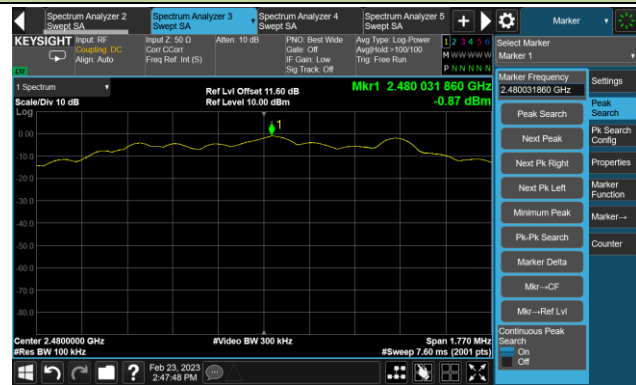


#### Spurious Emission 30MHz ~ 25GHz

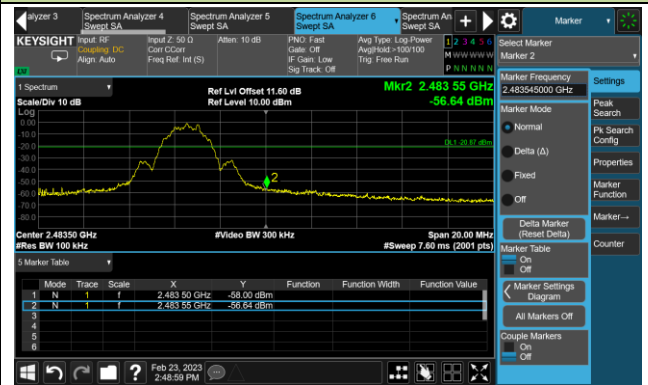


### Channel 39 (2480MHz)

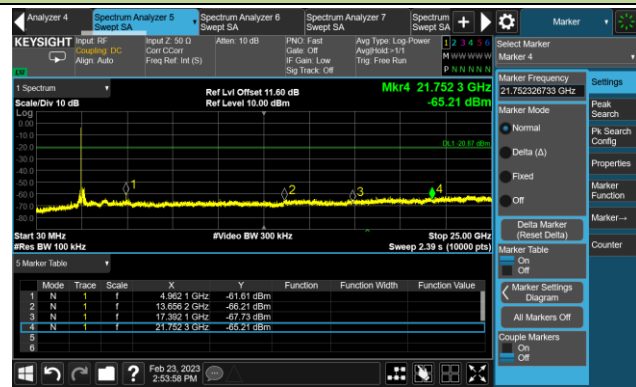
#### 100kHz PSD Reference Level



#### High Band Edge



#### Spurious Emission 30MHz ~ 25GHz



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

Test Site	WZ-AC2	Test Engineer	Dick Shen
Test Date	2023-02-10~2023-02-12	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	4944.0	35.4	3.8	39.2	74.0	-34.8	Peak	Horizontal
	7647.0	31.8	11.5	43.3	74.0	-30.7	Peak	Horizontal
	10843.0	31.8	17.3	49.1	74.0	-24.9	Peak	Horizontal
	4196.0	35.8	1.2	37.0	74.0	-37.0	Peak	Vertical
	7366.5	32.1	11.6	43.7	74.0	-30.3	Peak	Vertical
	11123.5	31.7	17.4	49.1	74.0	-24.9	Peak	Vertical
19	4876.0	36.6	3.7	40.3	74.0	-33.7	Peak	Horizontal
	7315.5	34.5	11.2	45.7	74.0	-28.3	Peak	Horizontal
	10613.5	33.3	16.4	49.7	74.0	-24.3	Peak	Horizontal
	4876.0	37.9	3.7	41.6	74.0	-32.4	Peak	Vertical
	7324.0	32.5	11.2	43.7	74.0	-30.3	Peak	Vertical
	11633.5	31.0	17.6	48.6	74.0	-25.4	Peak	Vertical
39	7443.0	33.1	11.6	44.7	74.0	-29.3	Peak	Horizontal
	10911.0	31.0	17.6	48.6	74.0	-25.4	Peak	Horizontal
	14472.5	30.9	19.8	50.7	74.0	-23.3	Peak	Horizontal
	4961.0	36.8	3.5	40.3	74.0	-33.7	Peak	Vertical
	7443.0	33.5	11.6	45.1	74.0	-28.9	Peak	Vertical
	10919.5	31.6	17.3	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	WZ-AC2	Test Engineer	Dick Shen
Test Date	2023-02-10~2023-02-12	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.		

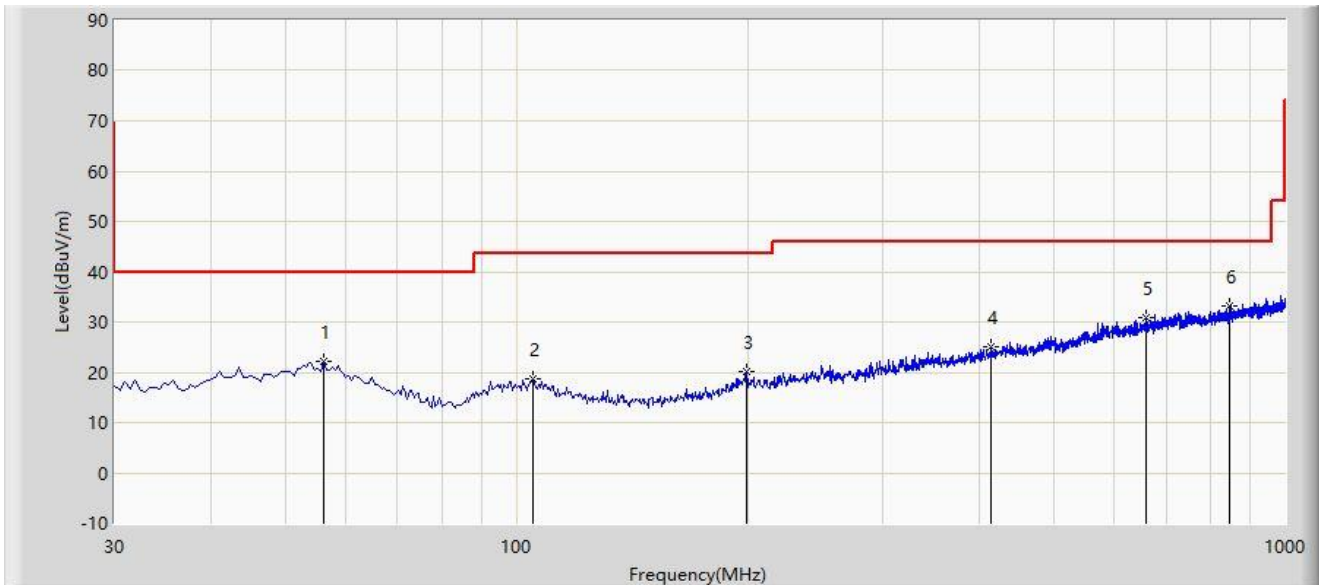
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	4680.5	34.8	3.4	38.2	74.0	-35.8	Peak	Horizontal
	7613.0	32.9	11.3	44.2	74.0	-29.8	Peak	Horizontal
	11013.0	32.2	16.9	49.1	74.0	-24.9	Peak	Horizontal
	3720.0	36.7	-0.2	36.5	74.0	-37.5	Peak	Vertical
	7519.5	31.6	11.5	43.1	74.0	-30.9	Peak	Vertical
	10894.0	31.5	17.1	48.6	74.0	-25.4	Peak	Vertical
19	3873.0	37.0	0.2	37.2	74.0	-36.8	Peak	Horizontal
	4842.0	34.8	3.8	38.6	74.0	-35.4	Peak	Horizontal
	11098.0	31.8	16.8	48.6	74.0	-25.4	Peak	Horizontal
	3720.0	36.0	-0.2	35.8	74.0	-38.2	Peak	Vertical
	4876.0	39.8	3.7	43.5	74.0	-30.5	Peak	Vertical
	11276.5	31.9	17.9	49.8	74.0	-24.2	Peak	Vertical
39	3643.5	37.4	-0.5	36.9	74.0	-37.1	Peak	Horizontal
	4961.0	36.0	3.5	39.5	74.0	-34.5	Peak	Horizontal
	11115.0	31.7	17.5	49.2	74.0	-24.8	Peak	Horizontal
	4961.0	37.0	3.5	40.5	74.0	-33.5	Peak	Vertical
	10707.0	32.9	16.5	49.4	74.0	-24.6	Peak	Vertical
	11574.0	30.8	18.0	48.8	74.0	-25.2	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_RE(3m)	Engineer: Dick Shen
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
<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			56.190	22.093	1.949	-17.907	40.000	20.144	PK
2			105.175	18.634	0.091	-24.866	43.500	18.543	PK
3			199.265	20.124	1.306	-23.376	43.500	18.818	PK
4			414.120	25.063	1.564	-20.937	46.000	23.499	PK
5			658.075	30.887	3.083	-15.113	46.000	27.804	PK
6		*	845.285	33.219	2.833	-12.781	46.000	30.386	PK

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

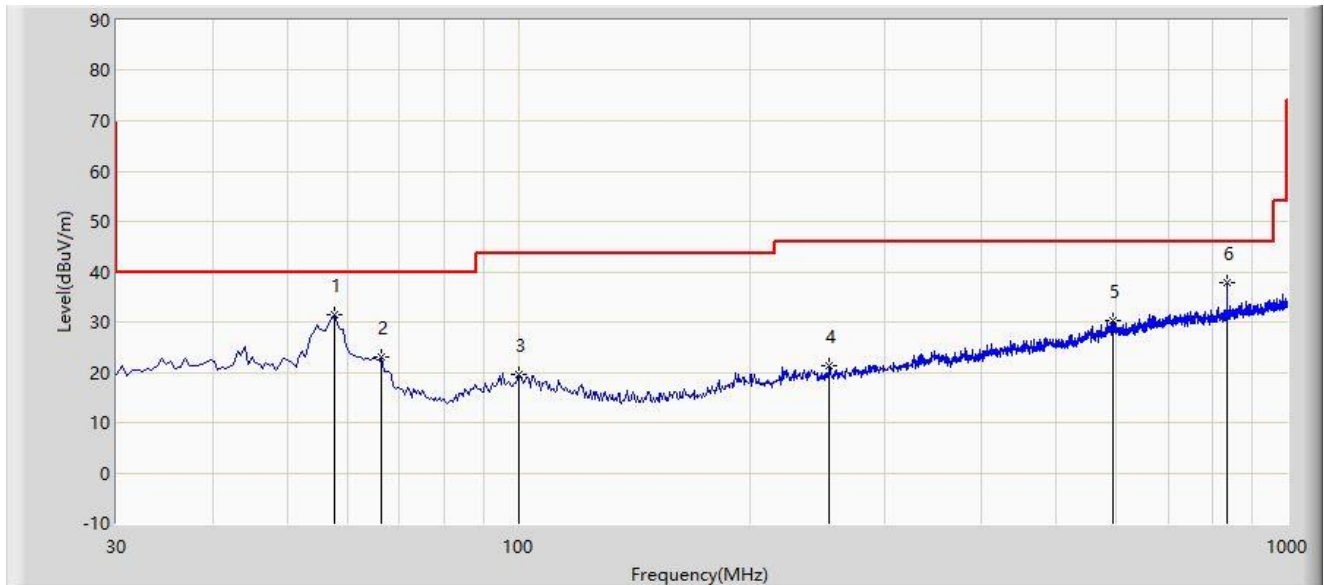
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

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_RE(3m)	Engineer: Dick Shen
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
<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			57.645	31.494	11.536	-8.506	40.000	19.958	PK
2			66.375	22.970	4.991	-17.030	40.000	17.979	PK
3			100.325	19.613	1.088	-23.887	43.500	18.525	PK
4			254.070	21.270	1.285	-24.730	46.000	19.985	PK
5			593.085	30.326	3.390	-15.674	46.000	26.936	PK
6		*	835.100	37.772	7.572	-8.228	46.000	30.200	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)

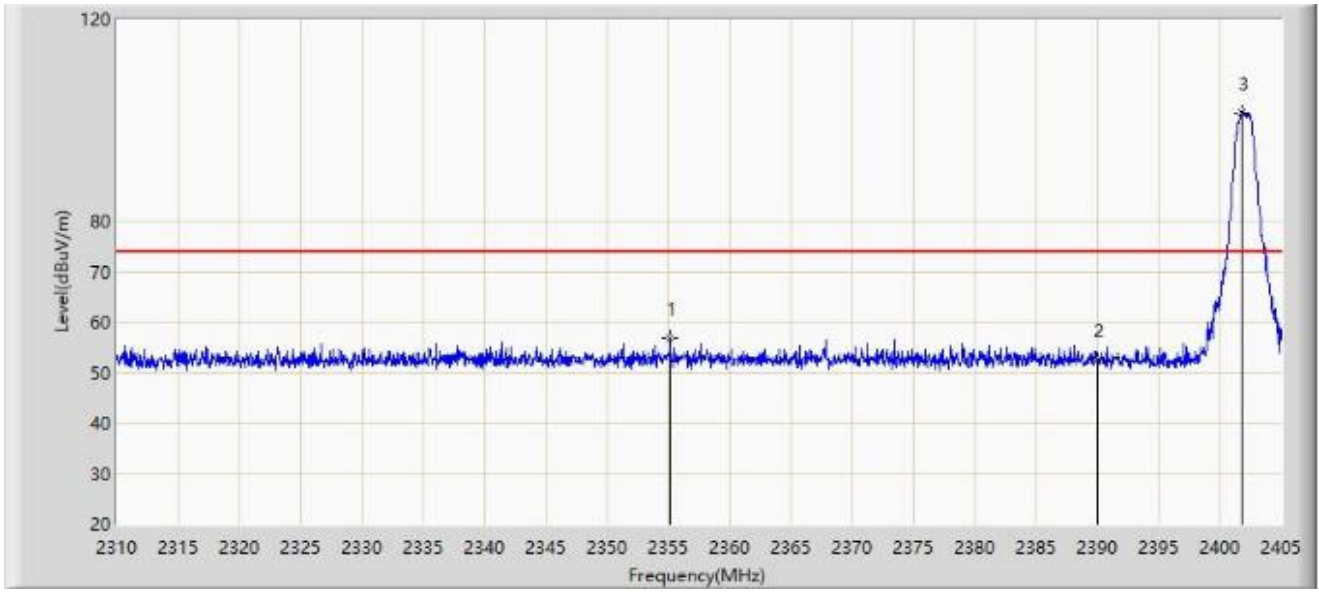
Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



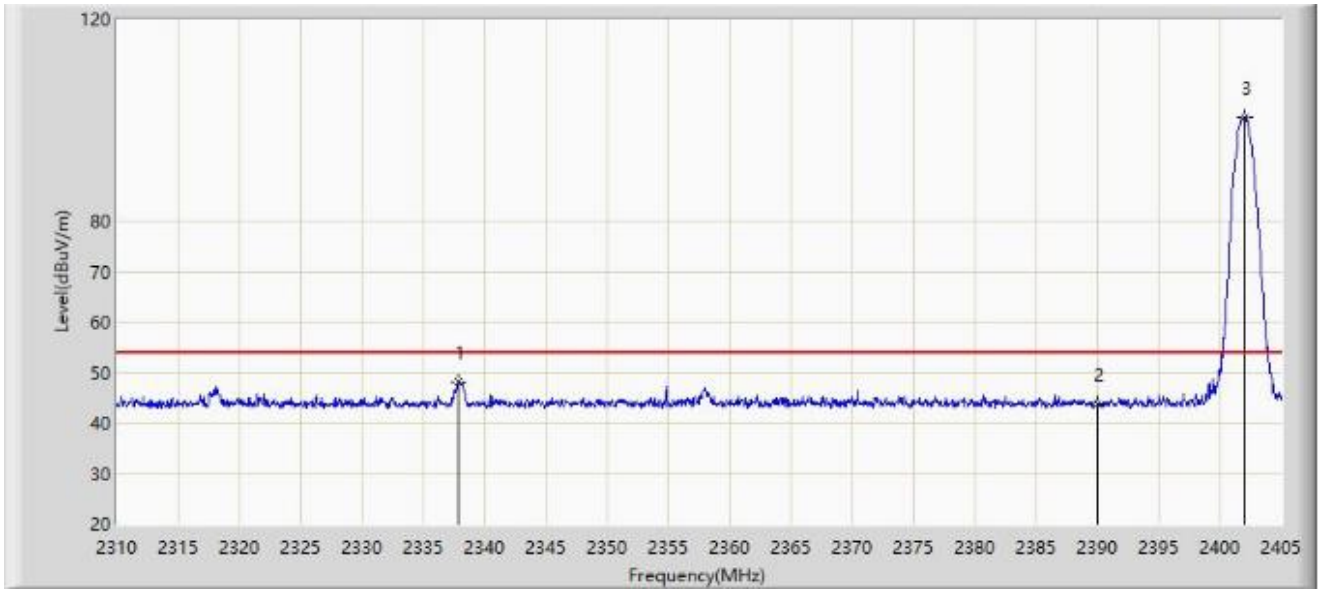
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2355.125	56.837	25.068	-17.163	74.000	31.769	PK
2			2390.000	52.373	20.685	-21.627	74.000	31.688	PK
3		*	2401.770	101.541	69.895	N/A	N/A	31.646	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
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			2337.883	48.131	16.318	-5.869	54.000	31.813	AV
2			2390.000	43.792	12.104	-10.208	54.000	31.688	AV
3		*	2402.055	100.716	69.071	N/A	N/A	31.646	AV

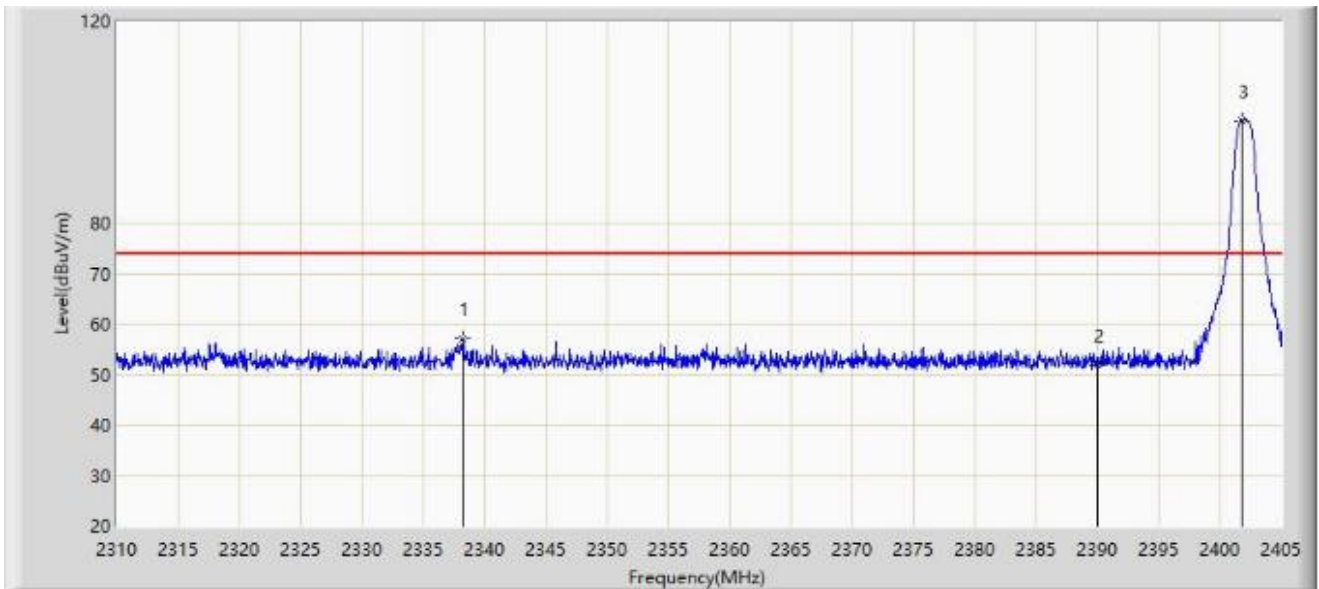
Note 1: " \* ", means this data is the worst emission level.

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



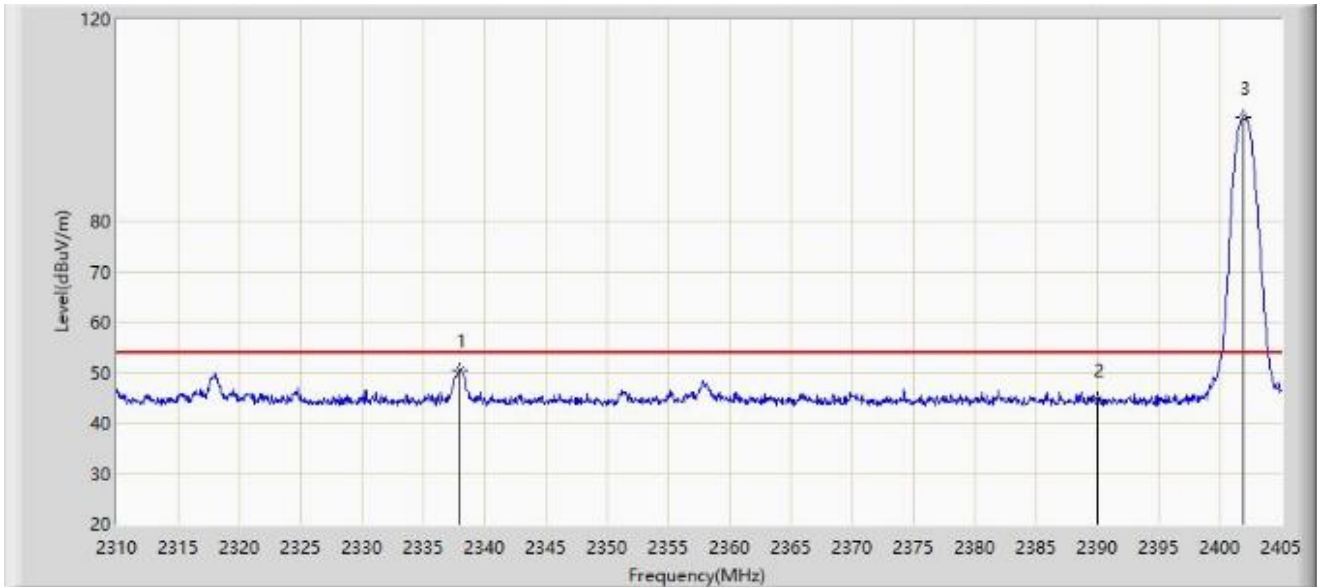
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2338.215	57.114	25.302	-16.886	74.000	31.812	PK
2			2390.000	51.789	20.101	-22.211	74.000	31.688	PK
3		*	2401.817	100.325	68.679	N/A	N/A	31.646	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2402MHz	



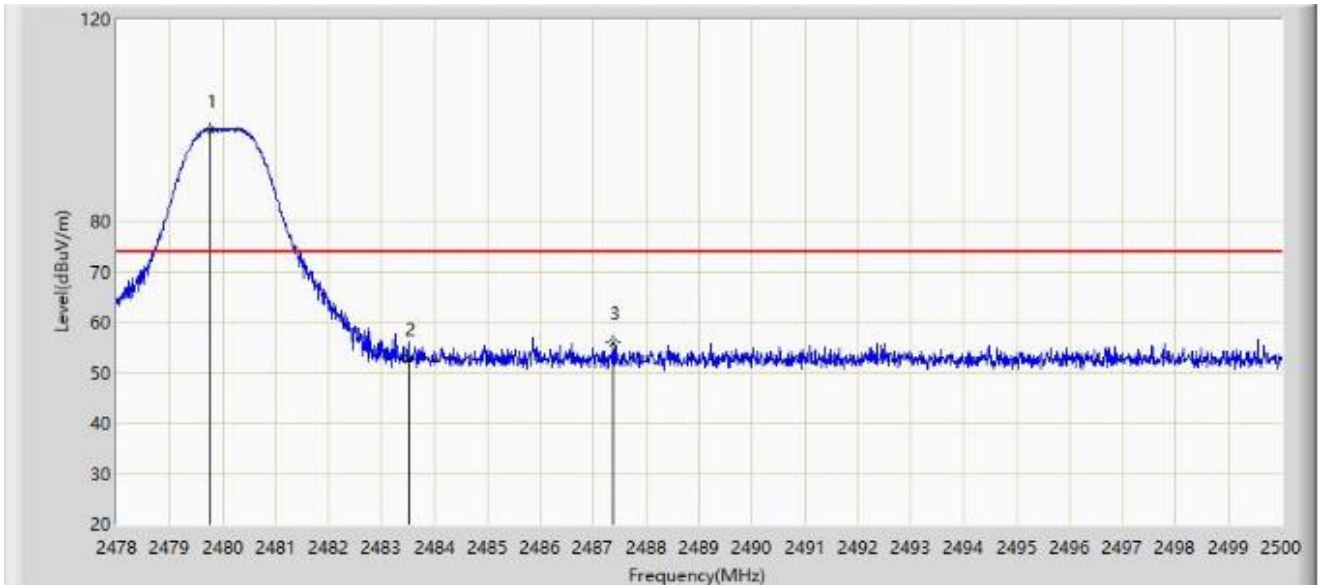
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2337.930	50.422	18.609	-3.578	54.000	31.813	AV
2			2390.000	44.668	12.980	-9.332	54.000	31.688	AV
3		*	2401.960	100.669	69.024	N/A	N/A	31.646	AV

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



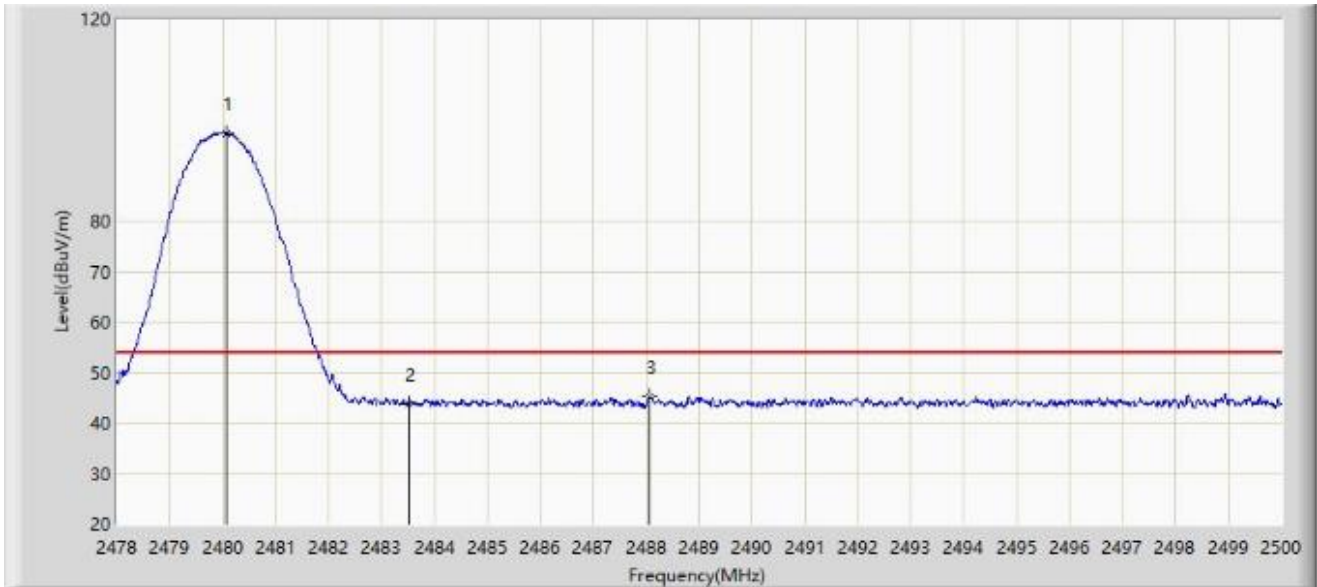
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2479.771	98.003	66.440	N/A	N/A	31.563	PK
2			2483.500	52.716	21.147	-21.284	74.000	31.569	PK
3			2487.361	55.834	24.258	-18.166	74.000	31.576	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



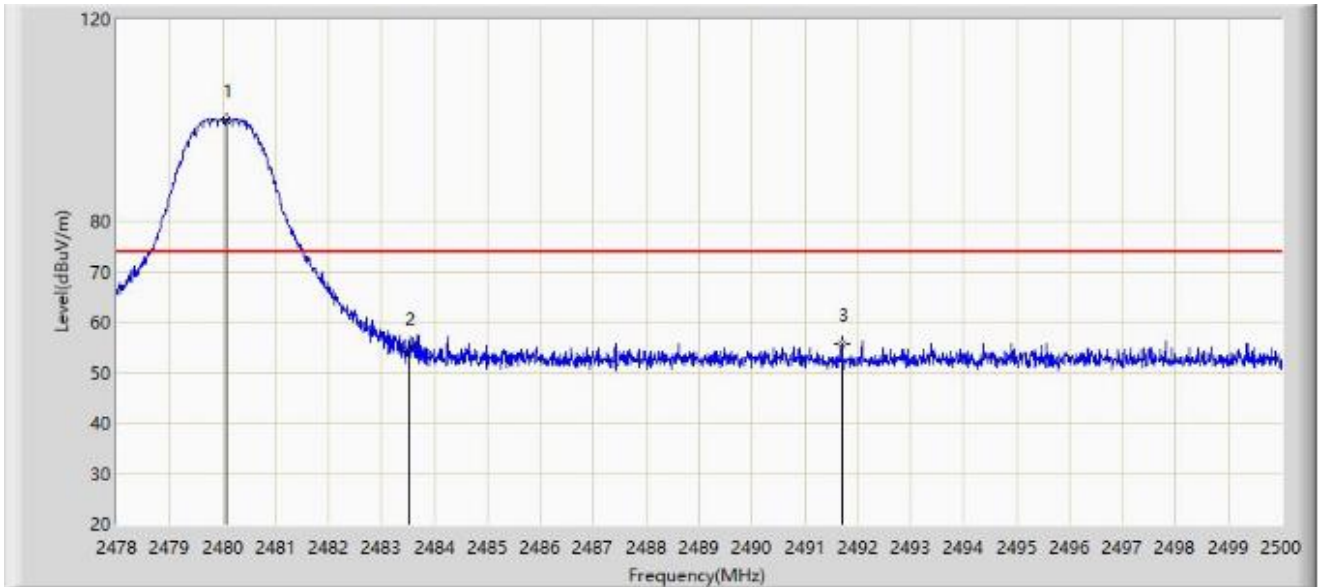
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.057	97.492	65.929	N/A	N/A	31.563	AV
2			2483.500	43.708	12.139	-10.292	54.000	31.569	AV
3			2488.065	45.149	13.572	-8.851	54.000	31.577	AV

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



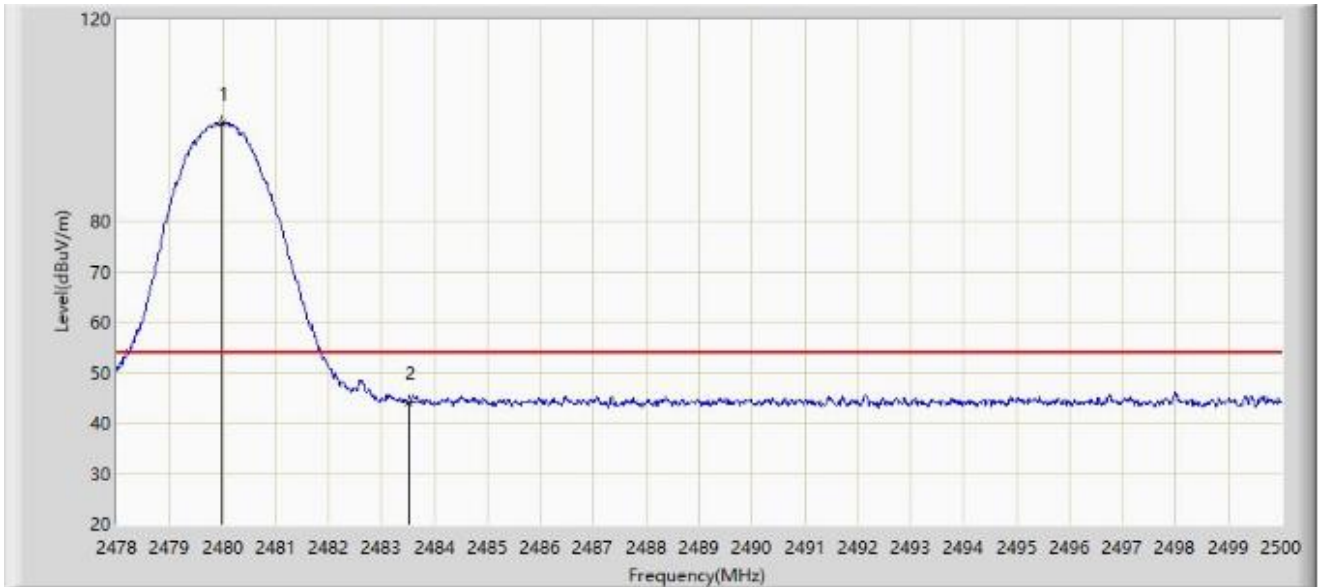
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.057	100.073	68.510	N/A	N/A	31.563	PK
2			2483.500	54.885	23.316	-19.115	74.000	31.569	PK
3			2491.695	55.745	24.162	-18.255	74.000	31.583	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1Mbps at 2480MHz	



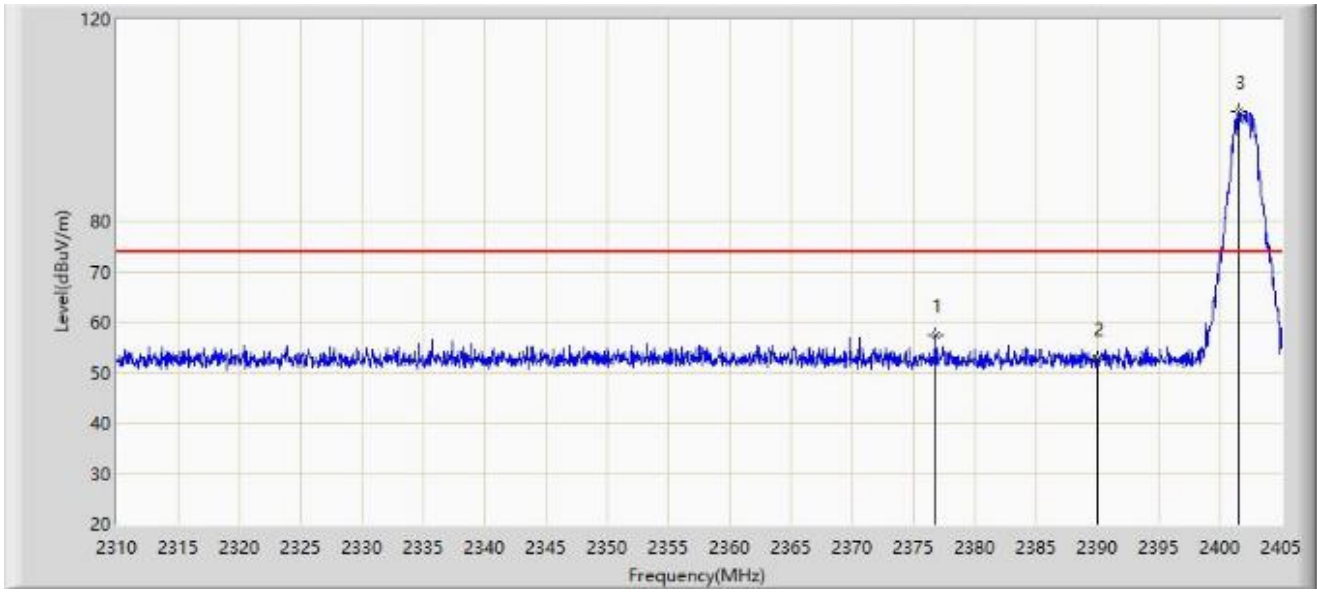
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2479.991	99.371	67.808	N/A	N/A	31.563	AV
2			2483.500	44.183	12.614	-9.817	54.000	31.569	AV

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



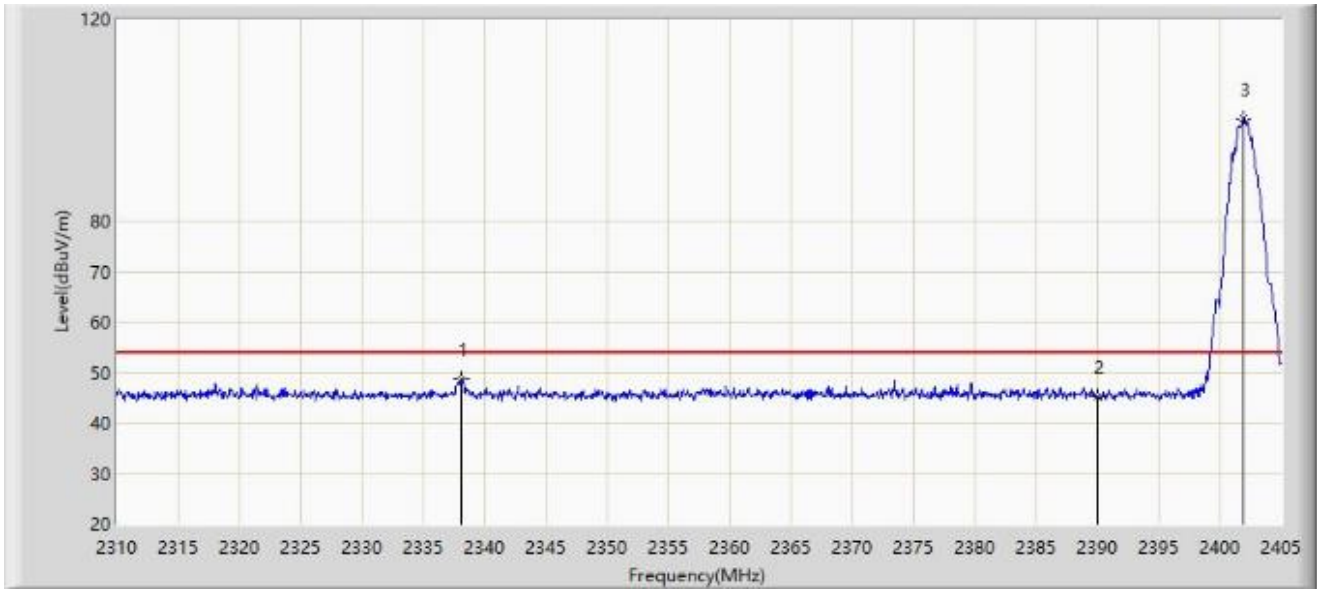
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2376.833	57.425	25.693	-16.575	74.000	31.732	PK
2			2390.000	52.611	20.923	-21.389	74.000	31.688	PK
3		*	2401.580	101.652	70.005	N/A	N/A	31.647	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
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			2338.120	48.820	17.008	-5.180	54.000	31.813	AV
2			2390.000	45.271	13.583	-8.729	54.000	31.688	AV
3		*	2401.865	100.348	68.702	N/A	N/A	31.646	AV

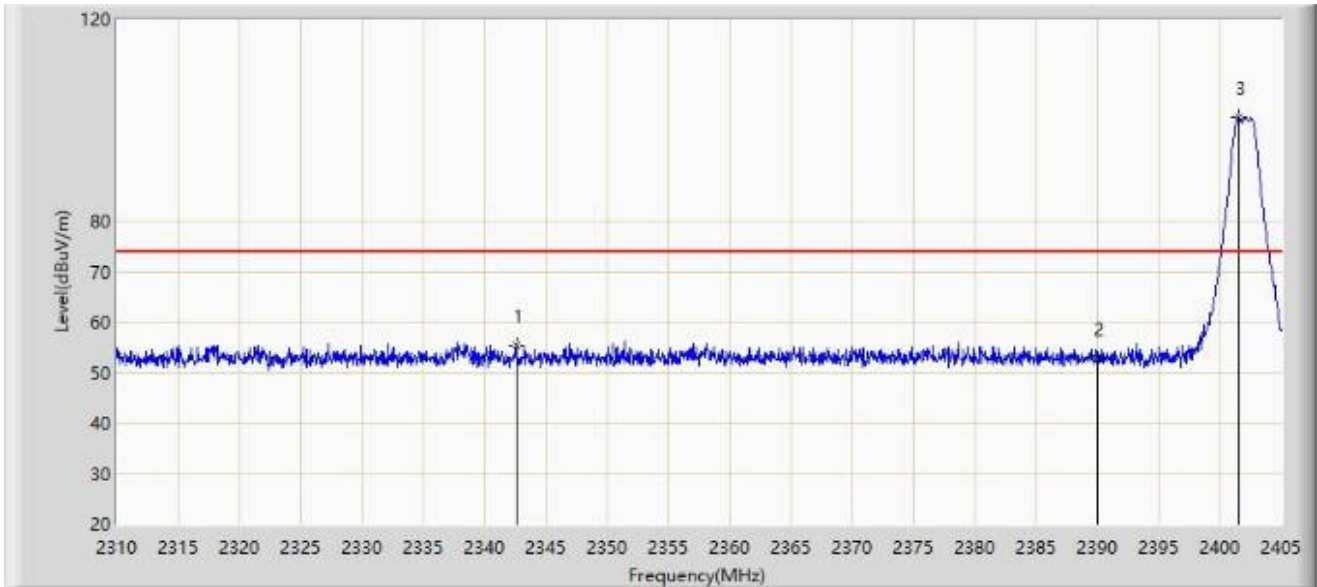
Note 1: " \* ", means this data is the worst emission level.

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



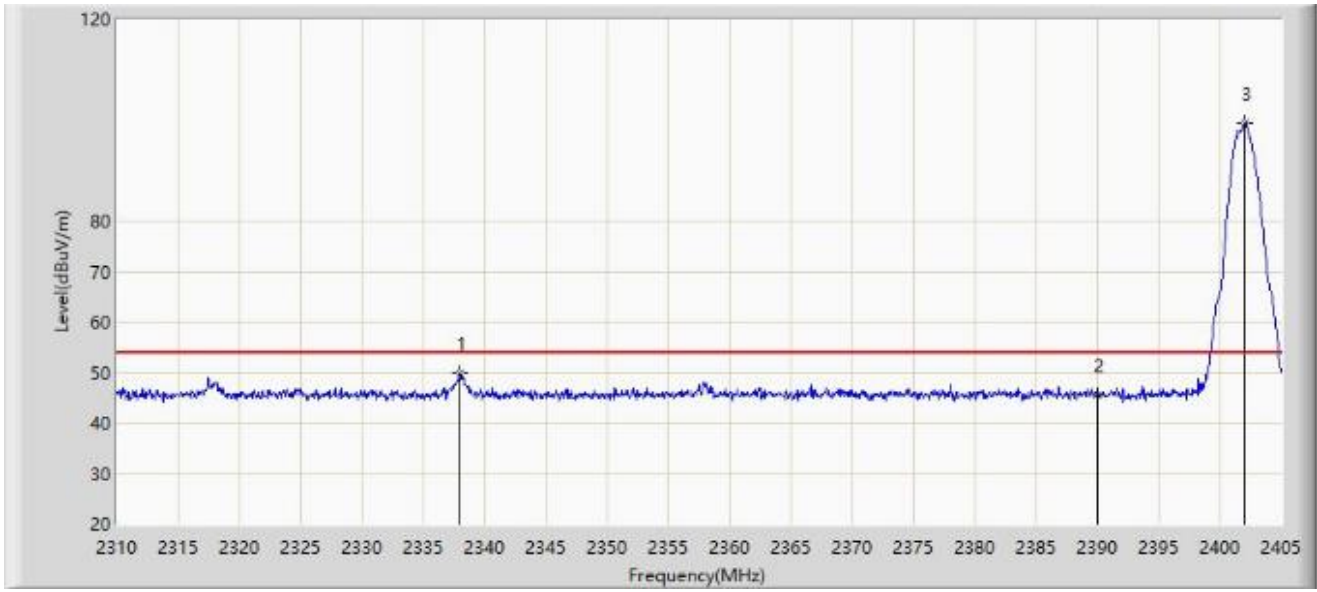
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2342.585	55.380	23.585	-18.620	74.000	31.795	PK
2			2390.000	52.833	21.145	-21.167	74.000	31.688	PK
3		*	2401.532	100.603	68.956	N/A	N/A	31.647	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2Mbps at 2402MHz	



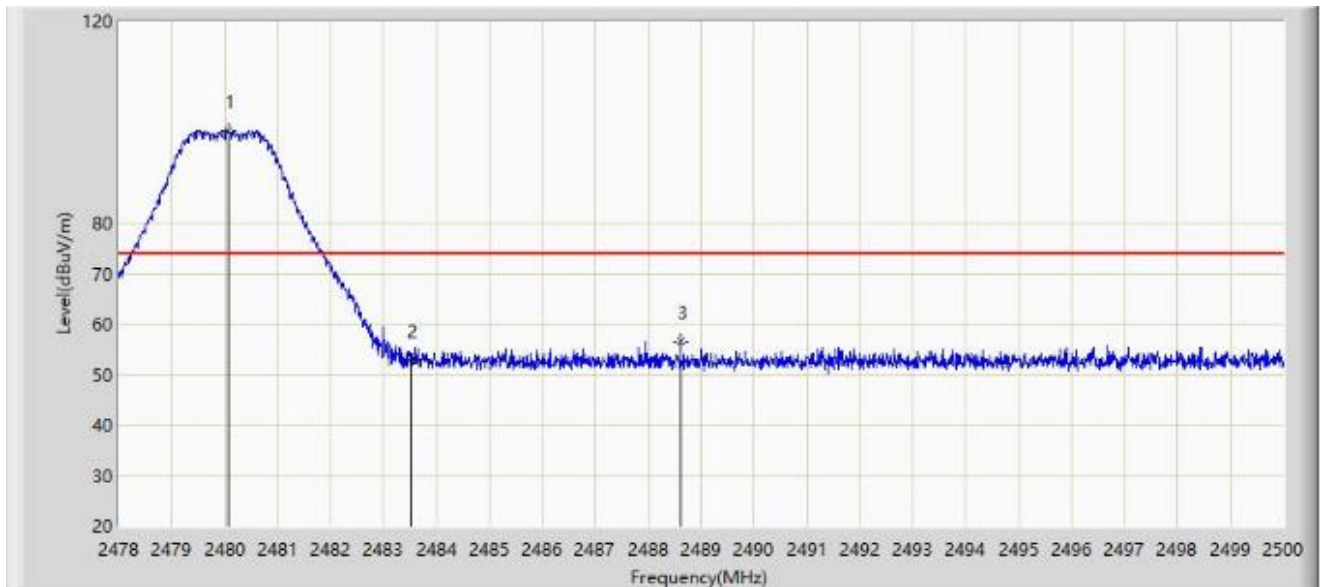
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2338.025	49.756	17.943	-4.244	54.000	31.813	AV
2			2390.000	45.581	13.893	-8.419	54.000	31.688	AV
3		*	2402.055	99.540	67.895	N/A	N/A	31.646	AV

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



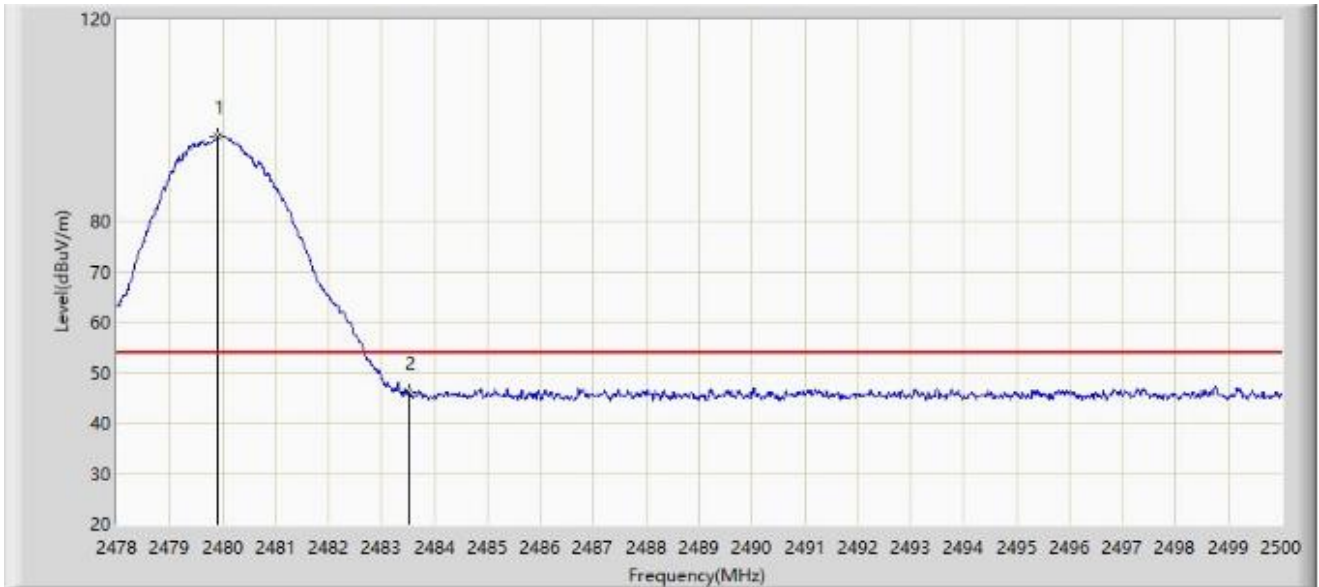
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.079	98.167	66.604	N/A	N/A	31.564	PK
2			2483.500	52.833	21.264	-21.167	74.000	31.569	PK
3			2488.615	56.574	24.996	-17.426	74.000	31.578	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



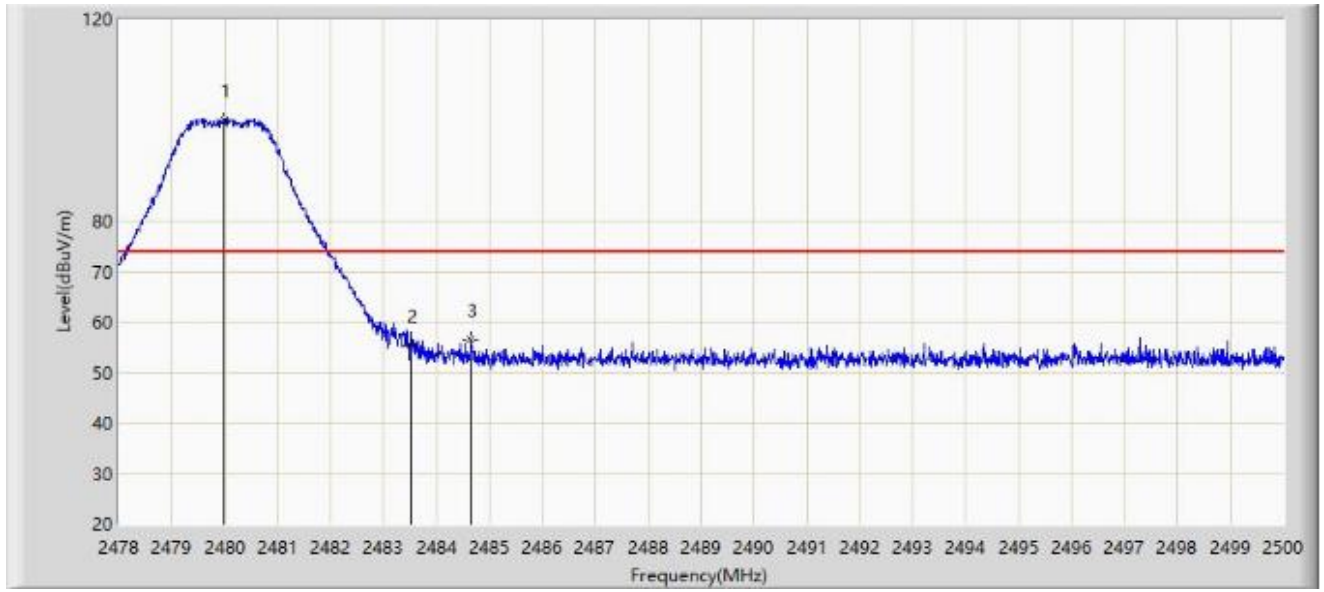
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2479.903	96.875	65.312	N/A	N/A	31.563	AV
2			2483.500	46.074	14.505	-7.926	54.000	31.569	AV

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2Mbps at 2480MHz	



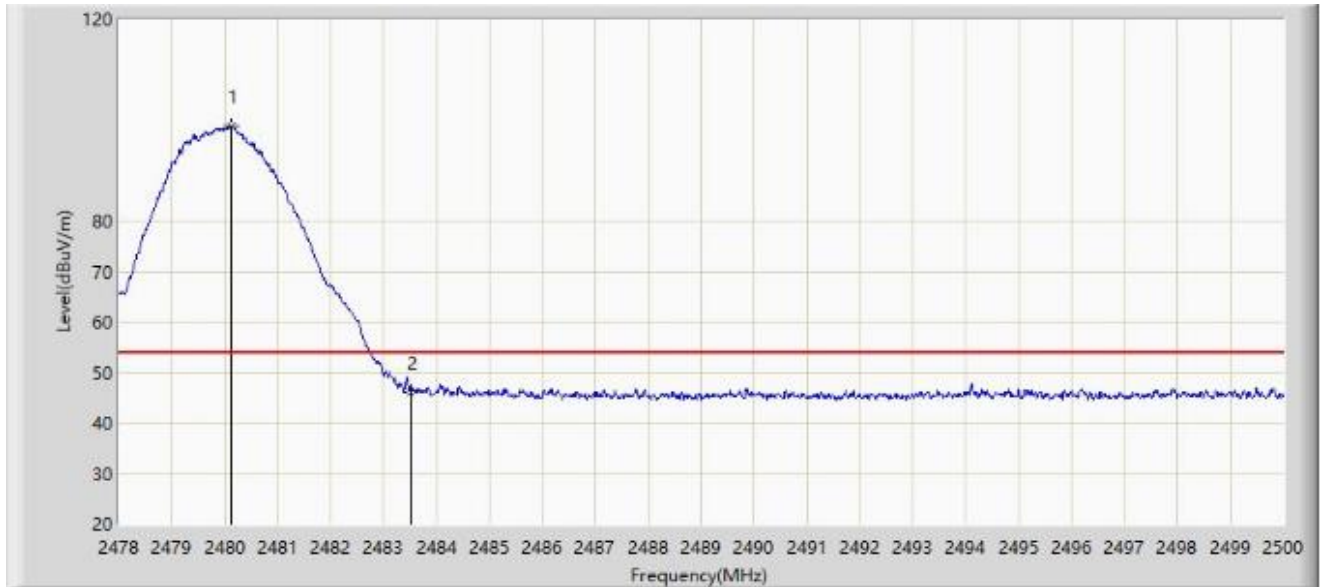
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2479.980	100.004	68.441	N/A	N/A	31.563	PK
2			2483.500	55.500	23.931	-18.500	74.000	31.569	PK
3			2484.655	56.521	24.950	-17.479	74.000	31.571	PK

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: 2023-02-09
Limit: FCC_2.4G_RE(3m)	Engineer: Dick Shen
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: XLE Location Beacon AC Power	Power: AC 120V/60Hz
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		*	2480.112	98.809	67.246	N/A	N/A	31.564	AV
2			2483.500	46.231	14.662	-7.769	54.000	31.569	AV

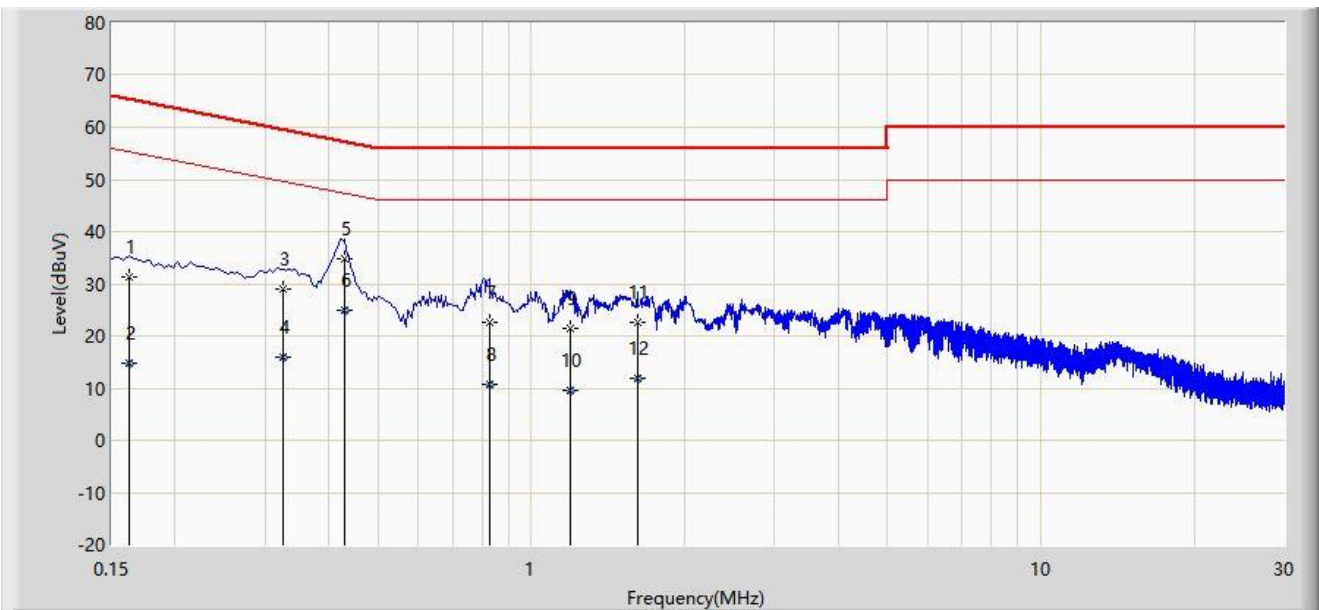
Note 1: " \* ", means this data is the worst emission level.

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).

### 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: XLE Location Beacon AC Power	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	31.437	21.557	-33.924	65.361	9.880	QP
2		0.162	14.639	4.759	-40.722	55.361	9.880	AV
3		0.326	29.096	19.187	-30.457	59.552	9.909	QP
4		0.326	15.828	5.919	-33.724	49.552	9.909	AV
5		0.430	34.833	24.900	-22.419	57.253	9.933	QP
6	*	0.430	24.914	14.981	-22.338	47.253	9.933	AV
7		0.826	22.661	12.700	-33.339	56.000	9.961	QP
8		0.826	10.660	0.699	-35.340	46.000	9.961	AV
9		1.194	21.526	11.542	-34.474	56.000	9.984	QP
10		1.194	9.533	-0.451	-36.467	46.000	9.984	AV
11		1.614	22.505	12.512	-33.495	56.000	9.993	QP
12		1.614	11.743	1.751	-34.257	46.000	9.993	AV

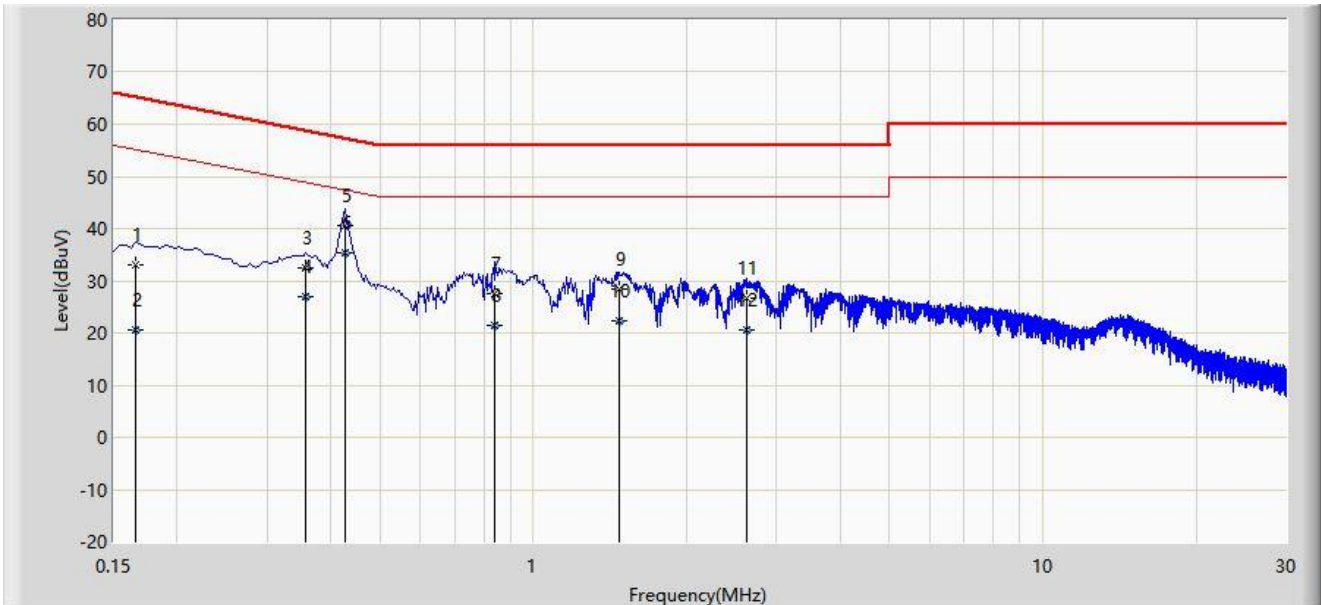
Note 1: " \* ", means this data is the worst emission level.

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: XLE Location Beacon AC Power	Power: AC 120V/60Hz
<b>Test Mode:</b> Transmit by BLE 1Mbps at channel 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V)	Reading Level (dB $\mu$ V)	Margin (dB)	Limit (dB $\mu$ V)	Factor (dB)	Type
1		0.166	33.177	23.273	-31.982	65.158	9.903	QP
2		0.166	20.724	10.821	-34.434	55.158	9.903	AV
3		0.358	32.422	22.486	-26.353	58.775	9.936	QP
4		0.358	26.948	17.012	-21.826	48.775	9.936	AV
5		0.426	40.563	30.615	-16.768	57.330	9.948	QP
6	*	0.426	35.439	25.491	-11.891	47.330	9.948	AV
7		0.838	27.615	17.626	-28.385	56.000	9.989	QP
8		0.838	21.475	11.487	-24.525	46.000	9.989	AV
9		1.470	28.482	18.472	-27.518	56.000	10.010	QP
10		1.470	22.233	12.223	-23.767	46.000	10.010	AV
11		2.626	26.707	16.564	-29.293	56.000	10.143	QP
12		2.626	20.642	10.499	-25.358	46.000	10.143	AV

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

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

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



## **Appendix B - Test Setup Photograph**

Refer to "2302RSU019-UT" file.

## Appendix C - EUT Photograph

Refer to "2302RSU019-UE" file.

————— The End —————