RF MEASUREMENT REPORT

FCC ID:	DD4MXW6X
Applicant:	Shure Incorporated
Product:	Wireless Microphone
Regulation Model Number (RMN):	MXW6X
Product Number:	MXW6X/C Z10, MXW6X/O Z10 MXW6XW/C Z10, MXW6XW/O Z10
Brand Name:	SHURE, SHURE®
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Receiver Data	2022-11-21
Test Date:	2022-12-04 ~ 2022-12-28

Reviewed By: Jame Yuan

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2211RSU056-U1	V01	Initial Report	2023-03-15	Valid

CONTENTS

Description Page

1. General Information 5

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

2. Test Configuration 8

2.1. Test Mode 8
2.2. Test System Connection Diagram 8
2.3. Test Software 8
2.4. Applied Standards 9
2.5. Test Environment Condition 9

3. Antenna Requirements 10

4. Measuring Instrument 11

5. Decision Rules and Measurement Uncertainty 12

5.1. Decision Rules 12
5.2. Measurement Uncertainty 12

6. Test Result 13

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 Settitng 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

Appendix A - Test Result 27

A.1 Duty Cycle Test Result 27
A.2 6dB Bandwidth Test Result 28
A.3 Output Power Test Result 30
A.4 Power Spectral Density Test Result 31
A.5 Conducted Band Edge and Out-of-Band Emissions Test Result 33
A.6 Radiated Spurious Emission Test Result 38
A.7 Radiated Restricted Band Edge Test Result 42
A.8 AC Conducted Emissions Test Result 58

Appendix B - Test Setup Photograph 60

Appendix C - EUT Photograph 61

1. General Information

1.1. Applicant

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.2. Manufacturer

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐R-20025 ☐G-20034 ☐C-20020 ☐T-20020 ☐R-20141 ☐G-20134 ☐C-20103 ☐T-20104
☐	**Test Site – MRT Shenzhen Laboratory**
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	Wireless Microphone
RMN	MXW6X
Product Number	MXW6X/C Z10, MXW6X/O Z10 MXW6XW/C Z10, MXW6XW/O Z10
Serial No.	3BH14564783 (Conducted testing) 3BH14565152 (Radiated testing)
DECT Specification	1920 ~ 1930MHz
Bluetooth Specification	V5.0 signal mode, BLE only
Antenna Information	Refer to section 1.5
Working Voltage	Power by Li-ion battery or USB-C input
Operating Temperature	5 ~ 40 °C
Accessories	
Rechargeable Li-ion Battery	Model: SB906 Rating: 3.7Vdc, 1150mAh, 4.255Wh
Remark: 1, The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. 2, Product number differences are as follows. MXW6X/C Z10, MXW6X/O Z10: Black enclosure, different built-in MIC MXW6XW/C Z10, MXW6XW/O Z10: White enclosure, different built-in MIC	

1.5. Radio Specification under Test

Bluetooth Frequency	2402 ~ 2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1Mbps & 2Mbps
Antenna Type	Internal Chip
Antenna Gain	2.63dBi

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

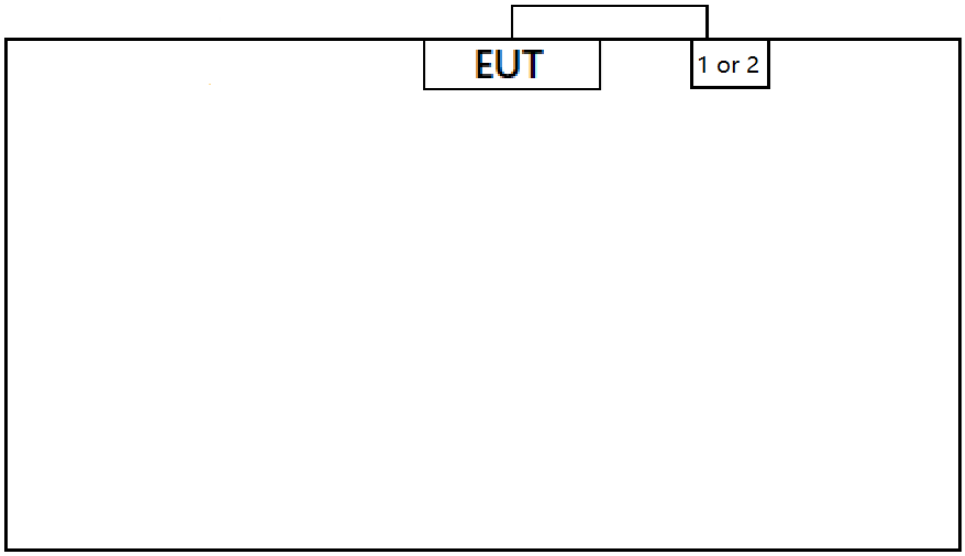
2.1. Test Mode

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

2.2. Test System Connection Diagram

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

Connection Diagram – Radiated Emission testing & AC Conducted Emissions



Product		Manufacturer	Model No.
1	Adapter (for AC Conducted Emissions)	Shure	SBC10-USB15WSUSTWJ
2	Notebook (for RF Test)	Lenovo	E431

2.3. Test Software

The test utility software used during testing was “teraterm”, and the version was V4.85, all test commands were provided by the manufacturer.

2.4. Applied Standards

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

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

2.5. Test Environment Condition

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

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

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

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

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
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	Testo 608-H1	MRTSUE11038	1 year	2023-11-01	WZ-AC2
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
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
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2023-06-06	WZ-SR5
Signal Generator	R&S	SMBV100A	MRTSUE06279	1 year	2023-04-06	WZ-SR5
DECT Tester	RTX	RTX2012	MRTSUE06408	1 year	2024-02-29	WZ-SR5
Signal Generator	Keysight	N5182B	MRTSUE06993	1 year	2023-08-23	WZ-SR5
Signal Generator	Keysight	N5182B	MRTSUE06451	1 year	2023-07-08	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11085	1 year	2023-06-09	WZ-SR5

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

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 30MHz~300MHz: 3.85dB 300MHz~1GHz: 4.36dB 1GHz~40GHz: 4.98dB Vertical: 30MHz~300MHz: 4.06dB 300MHz~1GHz: 5.28dB 1GHz~40GHz: 4.91dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.5dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.2%

6. Test Result

6.1. Summary

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

Notes:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2. All modes of operation and data rates were investigated. 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.

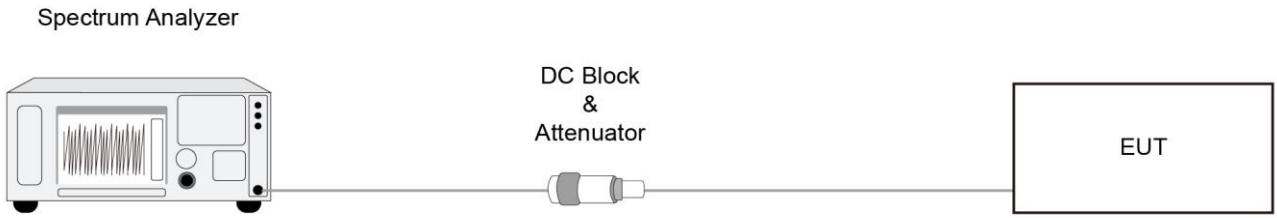
6.2.2. Test Procedure

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 ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

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

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

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.1.3

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.3.3. Test Setting

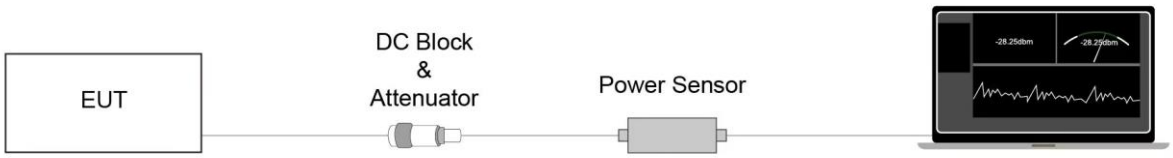
Method PKPM1 (Peak Power Measurement of Signals with DTS BW ≤ 50MHz)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

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

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

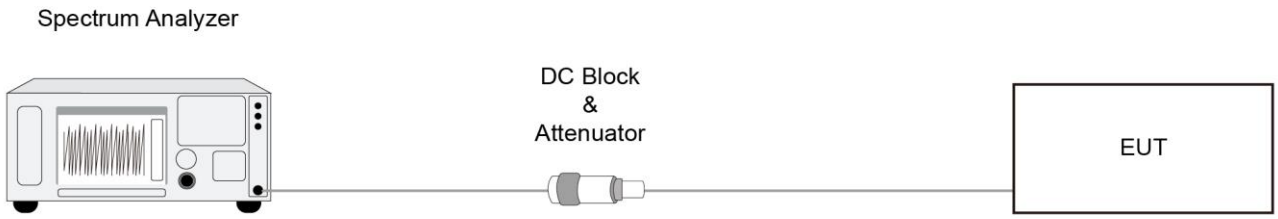
6.4.2. Test Procedure

ANSI C63.10-2013 Section 11.10.2

6.4.3. Test Setting

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

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

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

6.5.1. Test Limit

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

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Settitng

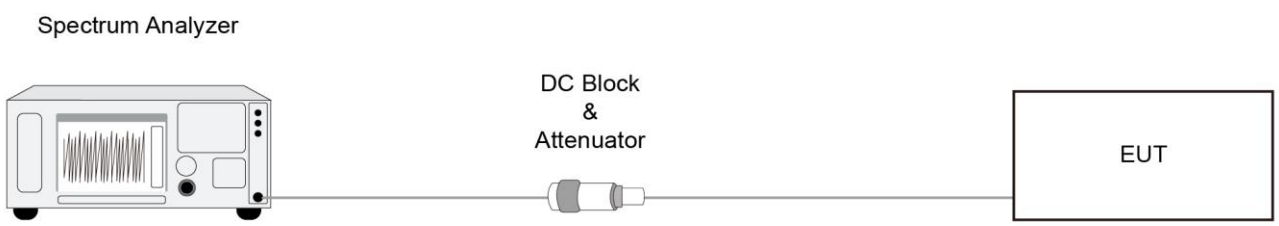
Reference level measurement

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

Emission level measurement

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

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

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

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [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 ≥ 98%, set VBW = 10 Hz.

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

4. Detector = Peak

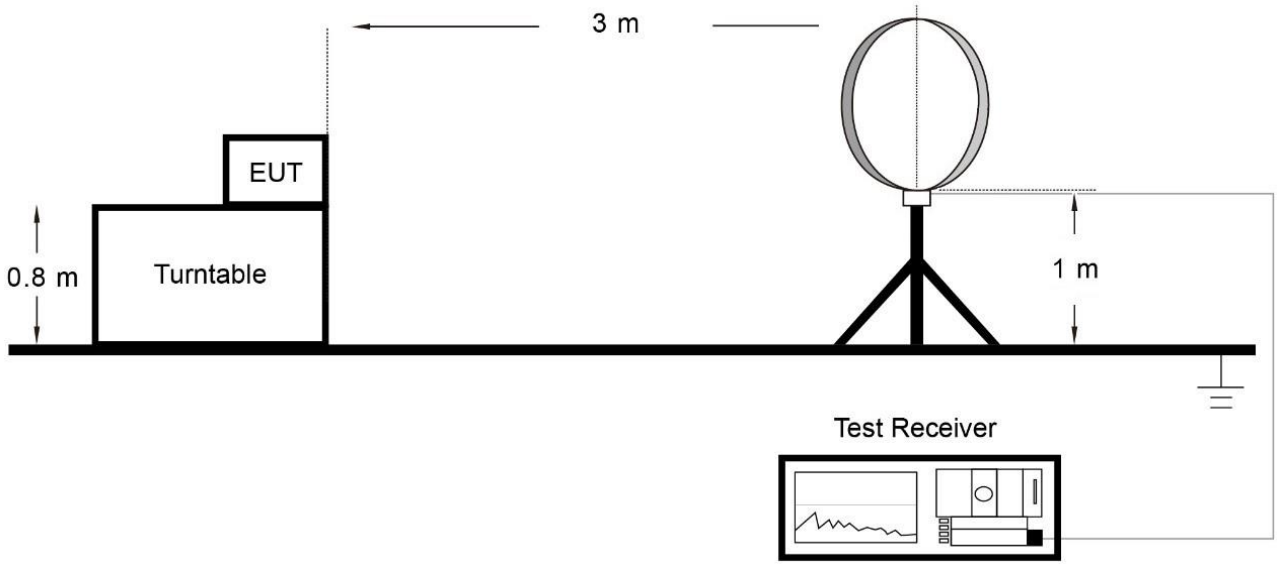
5. Sweep time = auto

6. Trace mode = max hold

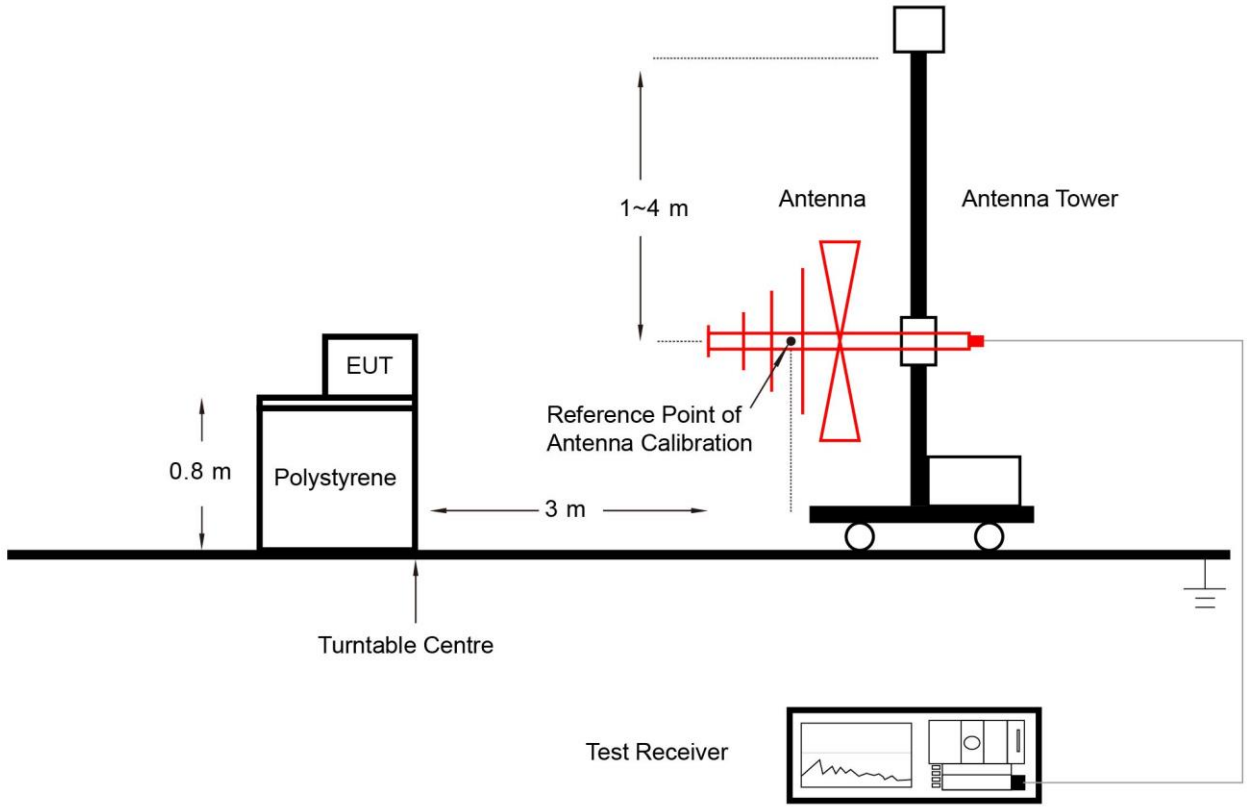
7. Trace was allowed to stabilize

6.6.4. Test Setup

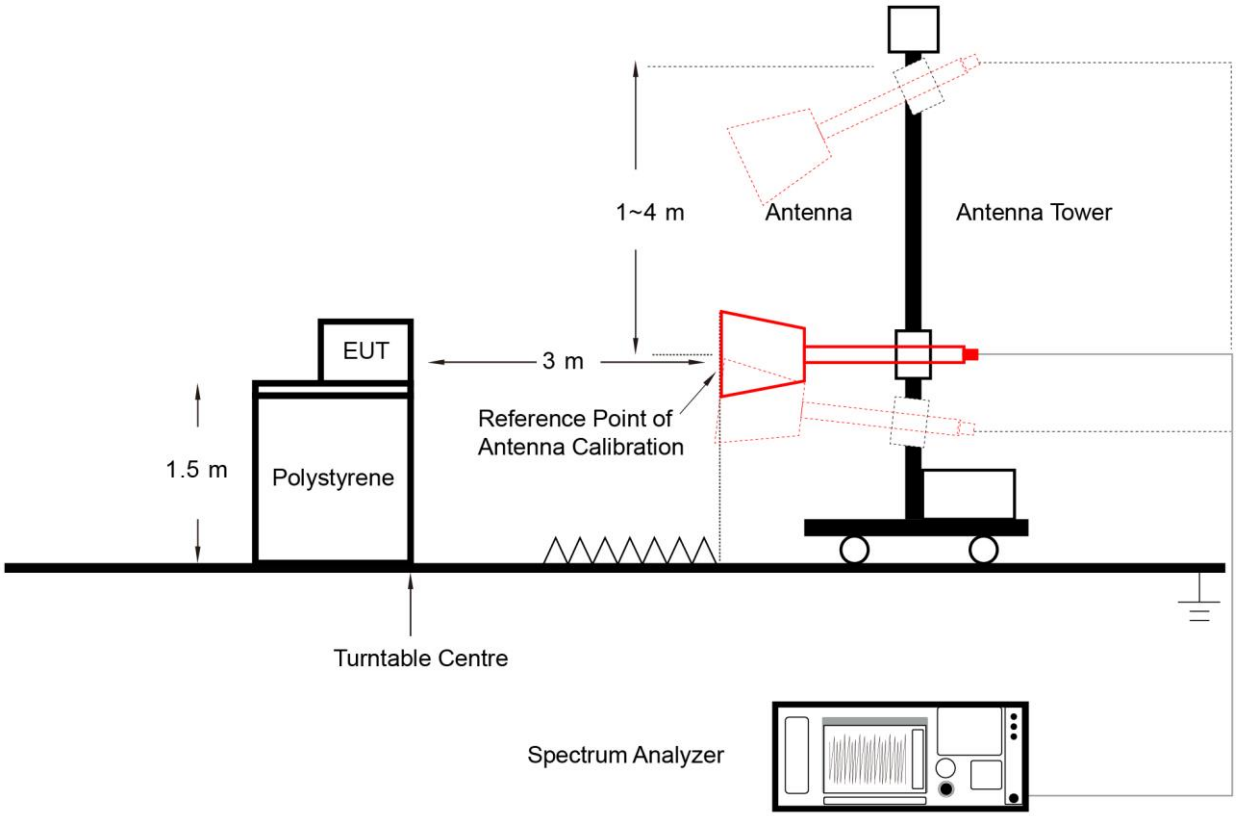
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

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

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

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

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

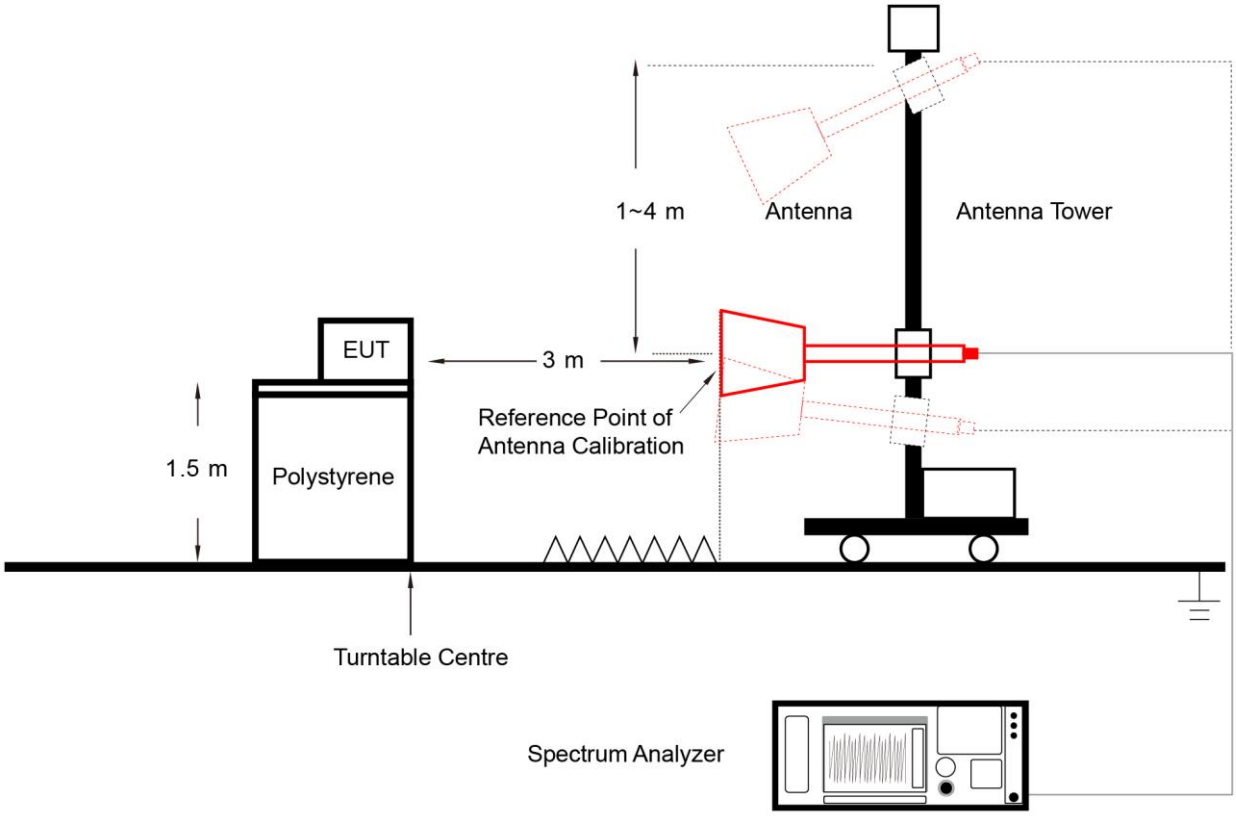
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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 ≥ 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

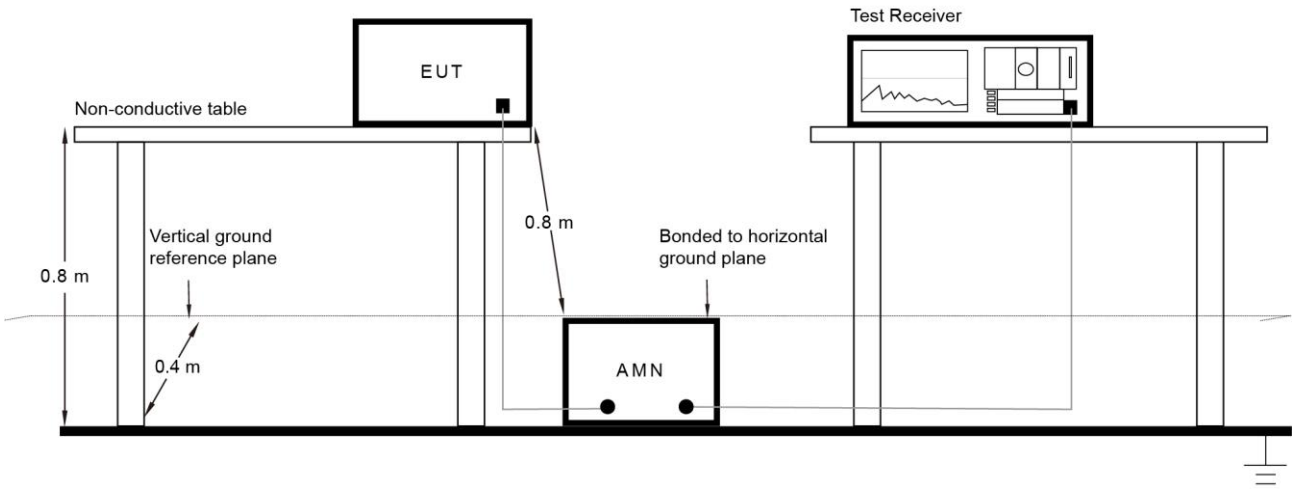
Refer to Appendix A.7.

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



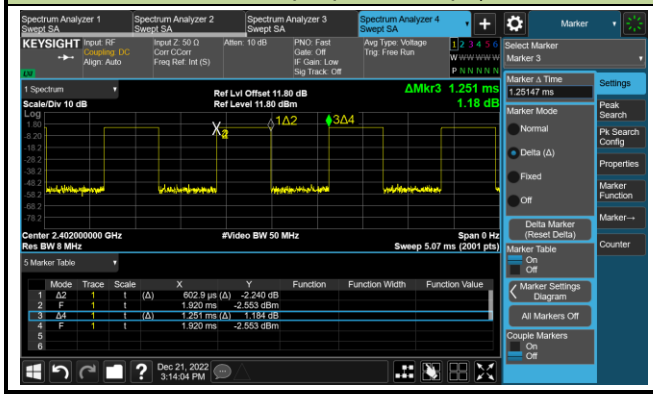
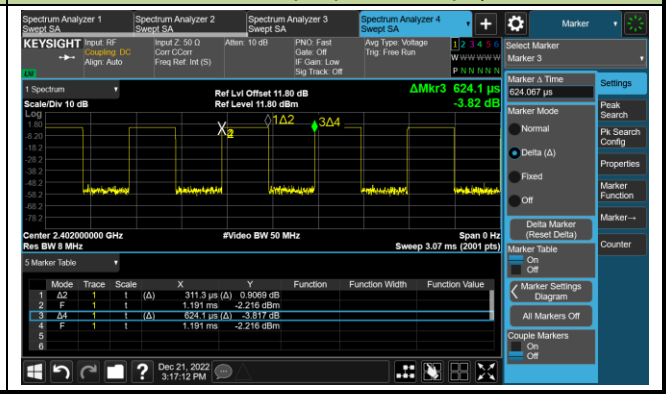
6.8.3. Test Result

Refer to Appendix A.8.

Appendix A - Test Result

A.1 Duty Cycle Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2022-12-21		

Test Mode	Duty Cycle
BLE-1Mbps	48.19%
BLE-2Mbps	49.88%
Duty Cycle (T = Transmission Duration)	
BLE-1Mbps (T = 602.9μs)	BLE-2Mbps (T = 311.3μs)
	

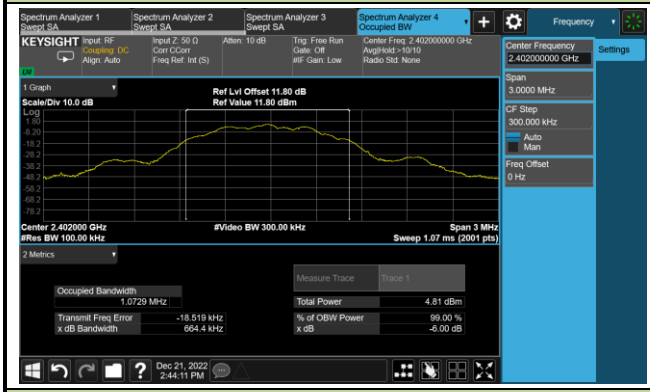
A.2 6dB Bandwidth Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2022-12-21~2022-12-22		

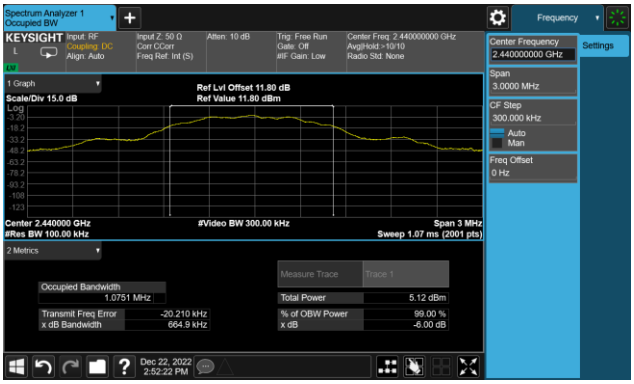
Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (kHz)	Limit (MHz)
BLE	1Mbps	00	2402	664.4	≥ 0.5
BLE	1Mbps	19	2440	664.9	≥ 0.5
BLE	1Mbps	39	2480	658.7	≥ 0.5
BLE	2Mbps	00	2402	973.2	≥ 0.5
BLE	2Mbps	19	2440	968.9	≥ 0.5
BLE	2Mbps	39	2480	969.4	≥ 0.5

BLE-1Mbps 6dB Bandwidth

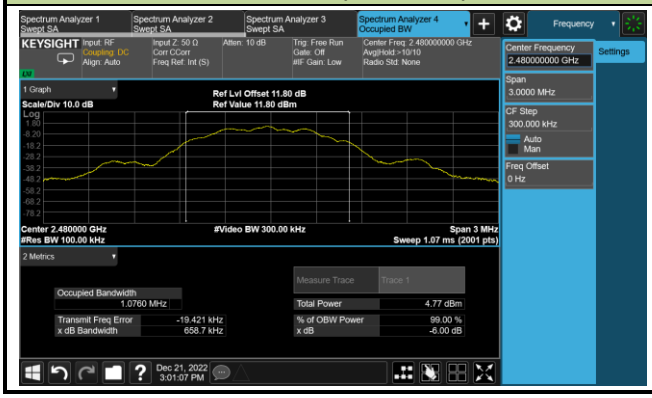
Channel 00 (2402MHz)

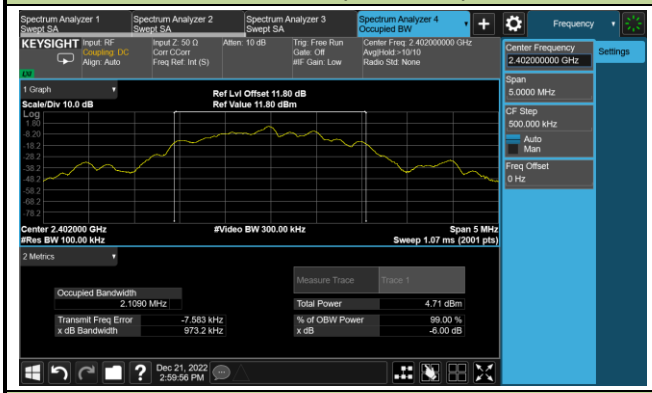
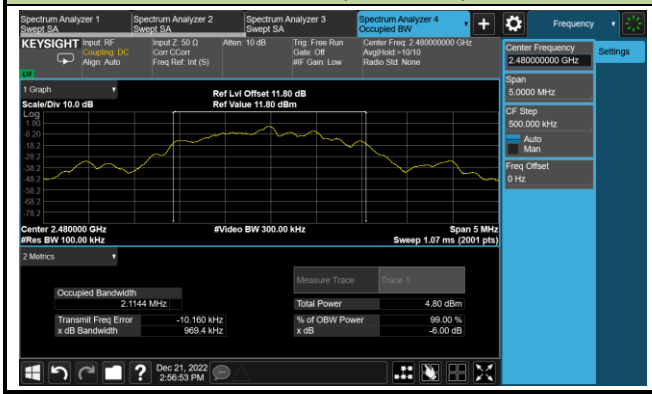


Channel 19 (2440MHz)



Channel 39 (2480MHz)



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

A.3 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2022-12-04		

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	-0.93	≤ 30.00	Pass
BLE	1Mbps	19	2440	-0.41	≤ 30.00	Pass
BLE	1Mbps	39	2480	-0.88	≤ 30.00	Pass
BLE	2Mbps	00	2402	-0.91	≤ 30.00	Pass
BLE	2Mbps	19	2440	-0.39	≤ 30.00	Pass
BLE	2Mbps	39	2480	-0.86	≤ 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	-1.73	≤ 30.00	Pass
BLE	1Mbps	19	2440	-0.73	≤ 30.00	Pass
BLE	1Mbps	39	2480	-1.64	≤ 30.00	Pass
BLE	2Mbps	00	2402	-1.24	≤ 30.00	Pass
BLE	2Mbps	19	2440	-0.82	≤ 30.00	Pass
BLE	2Mbps	39	2480	-1.17	≤ 30.00	Pass

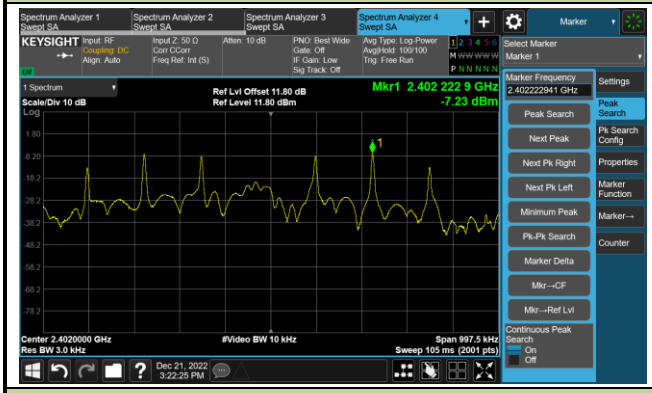
A.4 Power Spectral Density Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2022-12-21~2022-12-22		

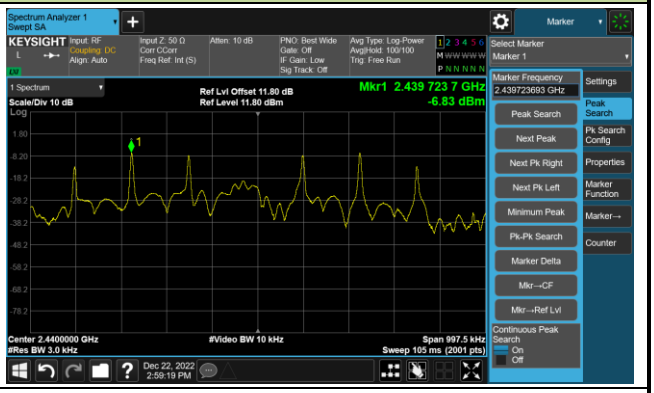
Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1Mbps	00	2402	-7.23	≤ 8.00	Pass
BLE	1Mbps	19	2440	-6.83	≤ 8.00	Pass
BLE	1Mbps	39	2480	-7.13	≤ 8.00	Pass
BLE	2Mbps	00	2402	-8.66	≤ 8.00	Pass
BLE	2Mbps	19	2440	-8.26	≤ 8.00	Pass
BLE	2Mbps	39	2480	-8.53	≤ 8.00	Pass

BLE-1Mbps PSD

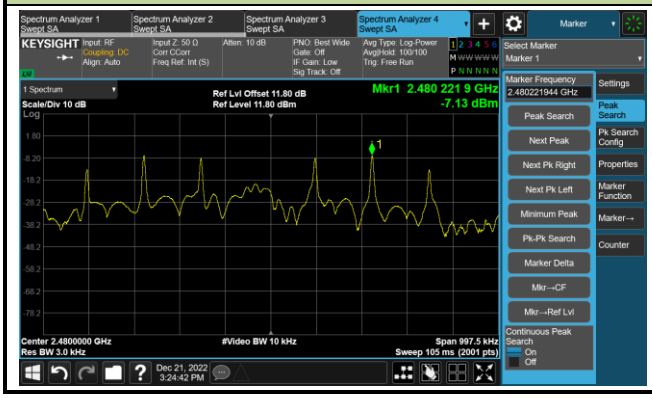
Channel 00 (2402MHz)

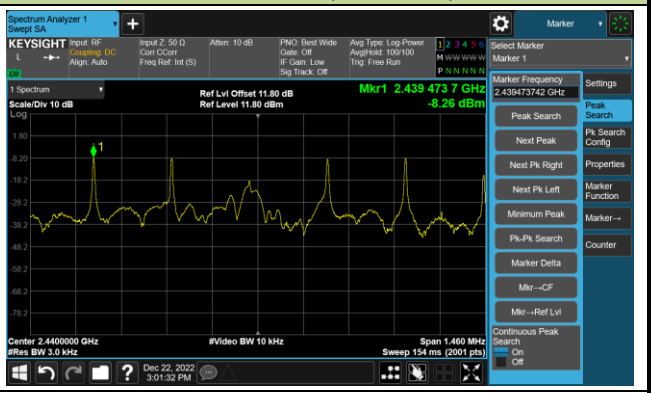


Channel 19 (2440MHz)



Channel 39 (2480MHz)

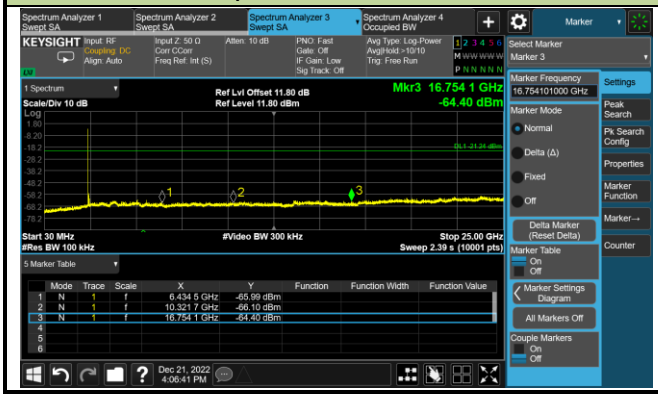


BLE-2Mbps PSD	
Channel 00 (2402MHz)	Channel 19 (2440MHz)
	
Channel 39 (2480MHz)	

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

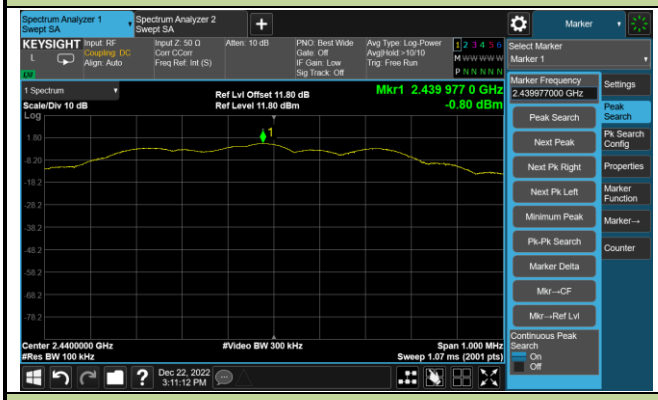
Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2022-12-21~2022-12-22		

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

BLE-1Mbps Out-of-Band Emissions	
Channel 00 (2402MHz)	
100kHz PSD reference Level	Low Band Edge
Spurious Emission	
	

Channel 19 (2440MHz)

100kHz PSD reference Level



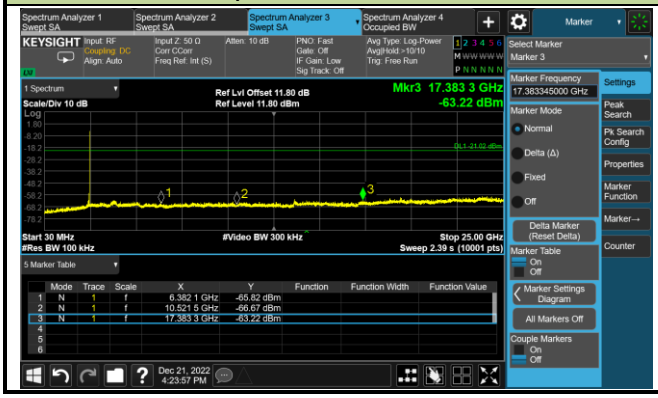
Spurious Emission

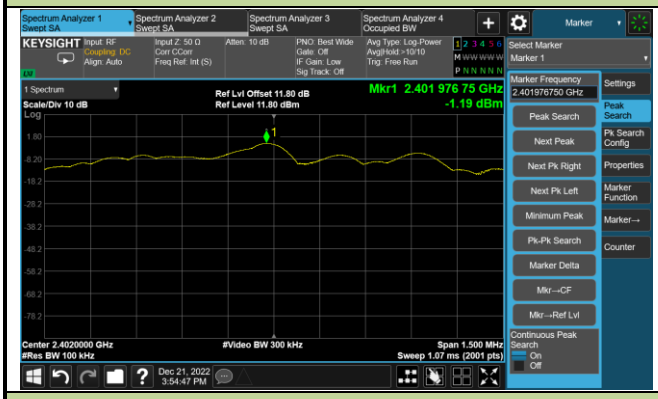
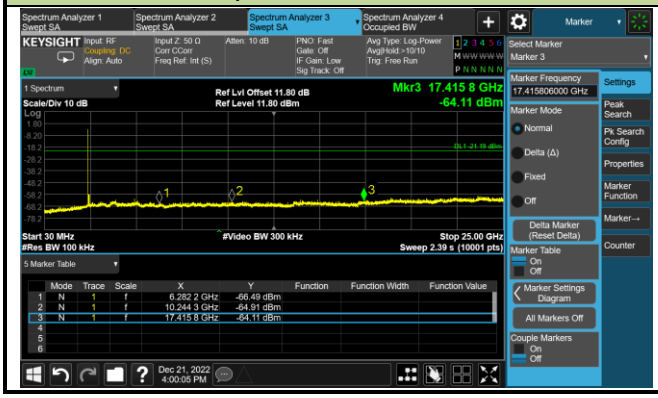
Channel 39 (2480MHz)

100kHz PSD reference Level

High Band Edge

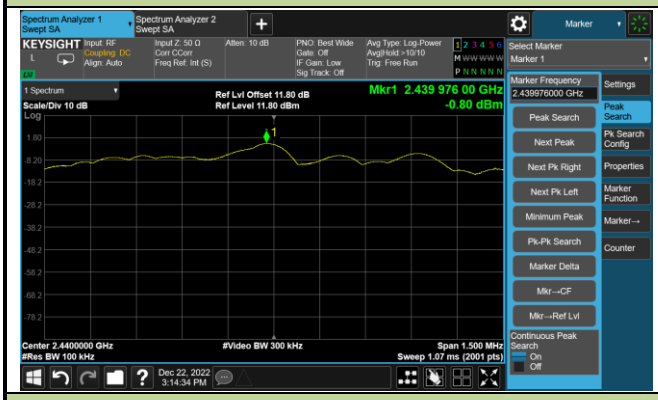
Spurious Emission



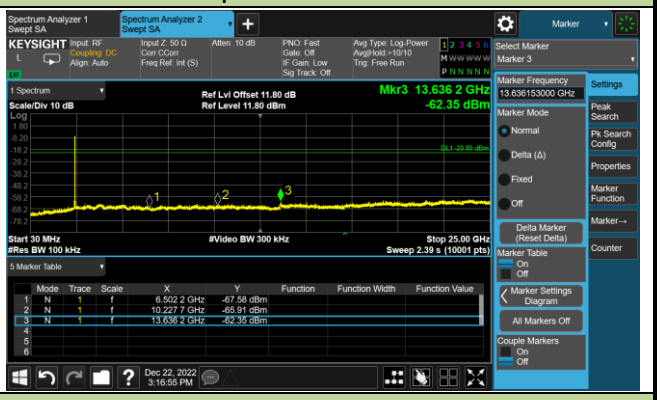
BLE-2Mbps Out-of-Band Emissions	
Channel 00 (2402MHz)	
100kHz PSD reference Level	Low Band Edge
	
Spurious Emission	
	

Channel 19 (2440MHz)

100kHz PSD reference Level

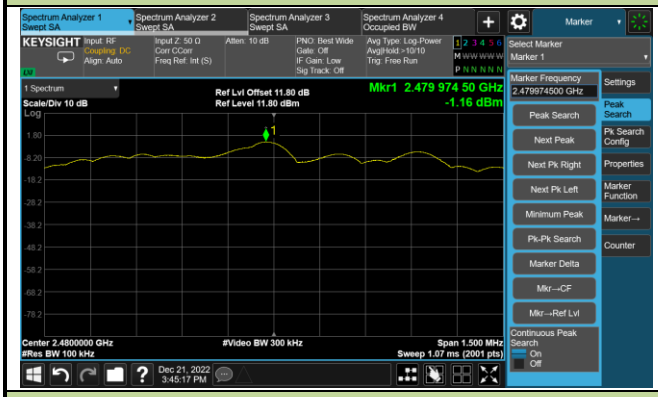


Spurious Emission



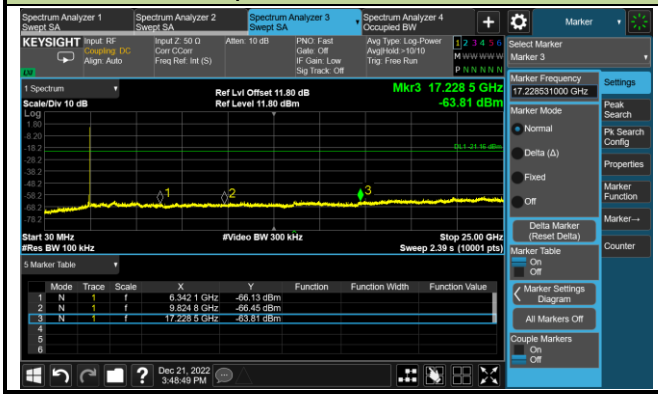
Channel 39 (2480MHz)

100kHz PSD reference Level



High Band Edge

Spurious Emission



A.6 Radiated Spurious Emission Test Result

Test Site	WZ-AC2	Test Engineer	Charles Zhang
Test Date	2022-12-28	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	7689.500	33.4	11.1	44.5	74.0	-29.5	Peak	Horizontal
	9381.000	31.2	14.3	45.5	74.0	-28.5	Peak	Horizontal
	11285.000	31.3	18.0	49.3	74.0	-24.7	Peak	Horizontal
	7638.500	32.8	11.5	44.3	74.0	-29.7	Peak	Vertical
	8165.500	32.7	11.9	44.6	74.0	-29.4	Peak	Vertical
	11004.500	32.4	17.1	49.5	74.0	-24.5	Peak	Vertical
19	7579.000	32.3	11.6	43.9	74.0	-30.1	Peak	Horizontal
	11123.500	31.7	17.4	49.1	74.0	-24.9	Peak	Horizontal
	12058.500	32.6	17.1	49.7	74.0	-24.3	Peak	Horizontal
	7409.000	32.0	11.7	43.7	74.0	-30.3	Peak	Vertical
	8174.000	33.1	11.7	44.8	74.0	-29.2	Peak	Vertical
	11438.000	31.9	17.7	49.6	74.0	-24.4	Peak	Vertical
39	7562.000	31.9	11.6	43.5	74.0	-30.5	Peak	Horizontal
	8242.000	33.2	11.6	44.8	74.0	-29.2	Peak	Horizontal
	11540.000	32.2	17.1	49.3	74.0	-24.7	Peak	Horizontal
	7485.500	31.3	11.5	42.8	74.0	-31.2	Peak	Vertical
	8157.000	32.7	12.0	44.7	74.0	-29.3	Peak	Vertical
	11115.000	31.4	17.5	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	Charles Zhang
Test Date	2022-12-28	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.		

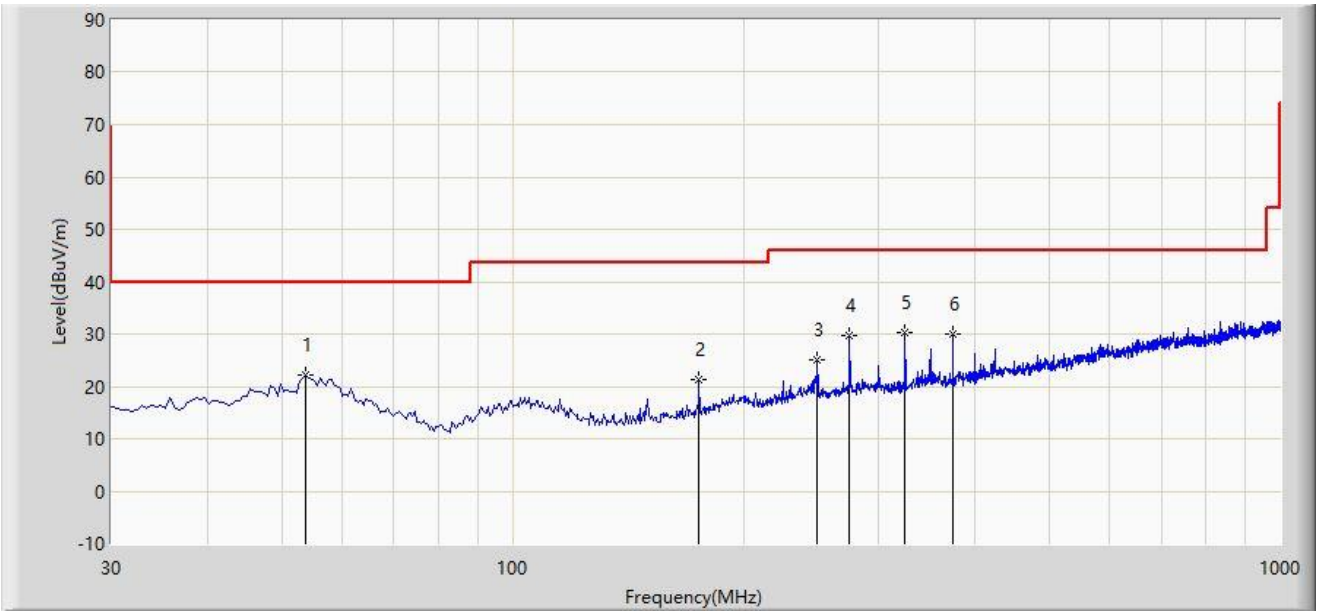
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	5114.000	34.9	4.1	39.0	74.0	-35.0	Peak	Horizontal
	7579.000	32.2	11.6	43.8	74.0	-30.2	Peak	Horizontal
	10902.500	32.7	17.3	50.0	74.0	-24.0	Peak	Horizontal
	4833.500	35.2	3.8	39.0	74.0	-35.0	Peak	Vertical
	7655.500	32.6	11.4	44.0	74.0	-30.0	Peak	Vertical
	11106.500	32.3	17.2	49.5	74.0	-24.5	Peak	Vertical
19	7706.500	32.2	11.2	43.4	74.0	-30.6	Peak	Horizontal
	8361.000	33.2	11.5	44.7	74.0	-29.3	Peak	Horizontal
	10741.000	32.6	16.7	49.3	74.0	-24.7	Peak	Horizontal
	7562.000	32.0	11.6	43.6	74.0	-30.4	Peak	Vertical
	11132.000	31.3	17.3	48.6	74.0	-25.4	Peak	Vertical
	12254.000	32.1	18.0	50.1	74.0	-23.9	Peak	Vertical
39	5114.000	34.6	4.1	38.7	74.0	-35.3	Peak	Horizontal
	7375.000	31.9	11.6	43.5	74.0	-30.5	Peak	Horizontal
	10809.000	31.4	17.3	48.7	74.0	-25.3	Peak	Horizontal
	5054.500	35.0	4.0	39.0	74.0	-35.0	Peak	Vertical
	8216.500	32.9	11.4	44.3	74.0	-29.7	Peak	Vertical
	10894.000	31.9	17.1	49.0	74.0	-25.0	Peak	Vertical

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

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

The Result of Radiated Emission below 1GHz:

Site: WZ-AC2	Test Data: 2022-12-21
Limit: FCC_2.4G_RE(3m)	Engineer: Bob Zhang
Probe: VULB9162_30-7000MHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE-2M at channel 2440MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			53.765	22.061	1.702	-17.939	40.000	20.359	PK
2			175.015	21.355	5.154	-22.145	43.500	16.201	PK
3			249.705	25.128	5.184	-20.872	46.000	19.944	PK
4			274.925	29.589	9.257	-16.411	46.000	20.332	PK
5		*	324.880	30.389	8.929	-15.611	46.000	21.460	PK
6			374.835	30.027	7.357	-15.973	46.000	22.670	PK

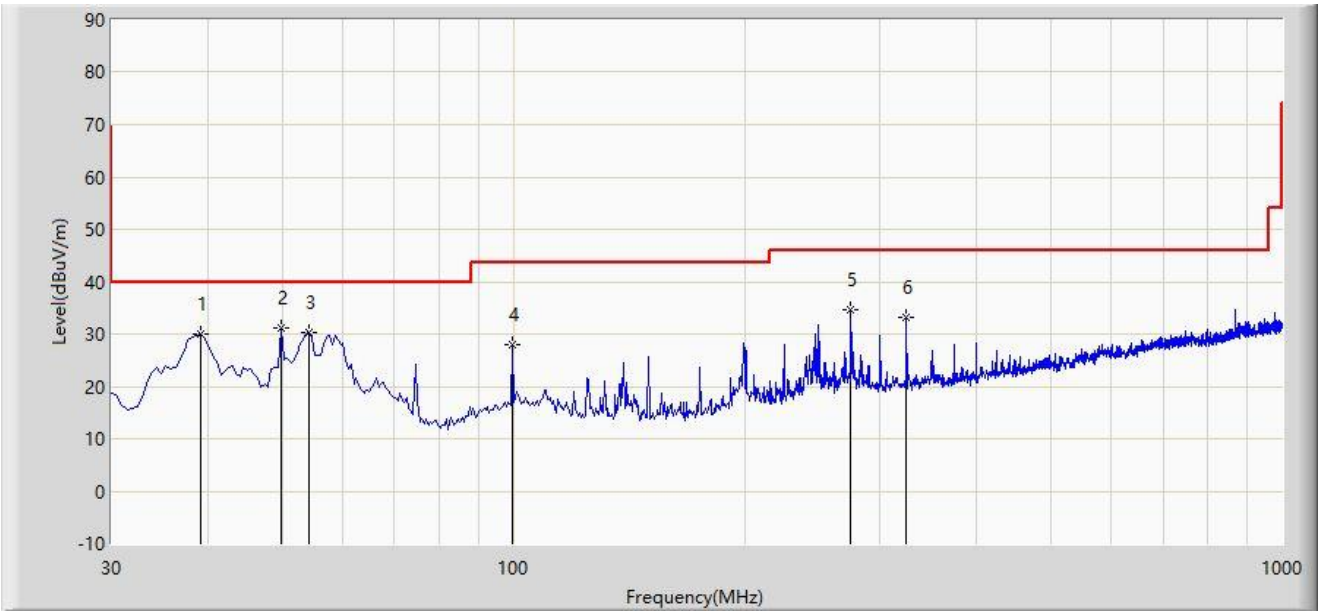
Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

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 Data: 2022-12-21
Limit: FCC_2.4G_RE(3m)	Engineer: Bob Zhang
Probe: VULB9162_30-7000MHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE-2M at channel 2440MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			39.215	30.062	11.590	-9.938	40.000	18.473	PK
2		*	49.885	31.076	10.666	-8.924	40.000	20.410	PK
3			54.250	30.355	10.029	-9.645	40.000	20.326	PK
4			99.840	27.843	9.344	-15.657	43.500	18.499	PK
5			274.925	34.609	14.277	-11.391	46.000	20.332	PK
6			324.880	33.216	11.756	-12.784	46.000	21.460	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

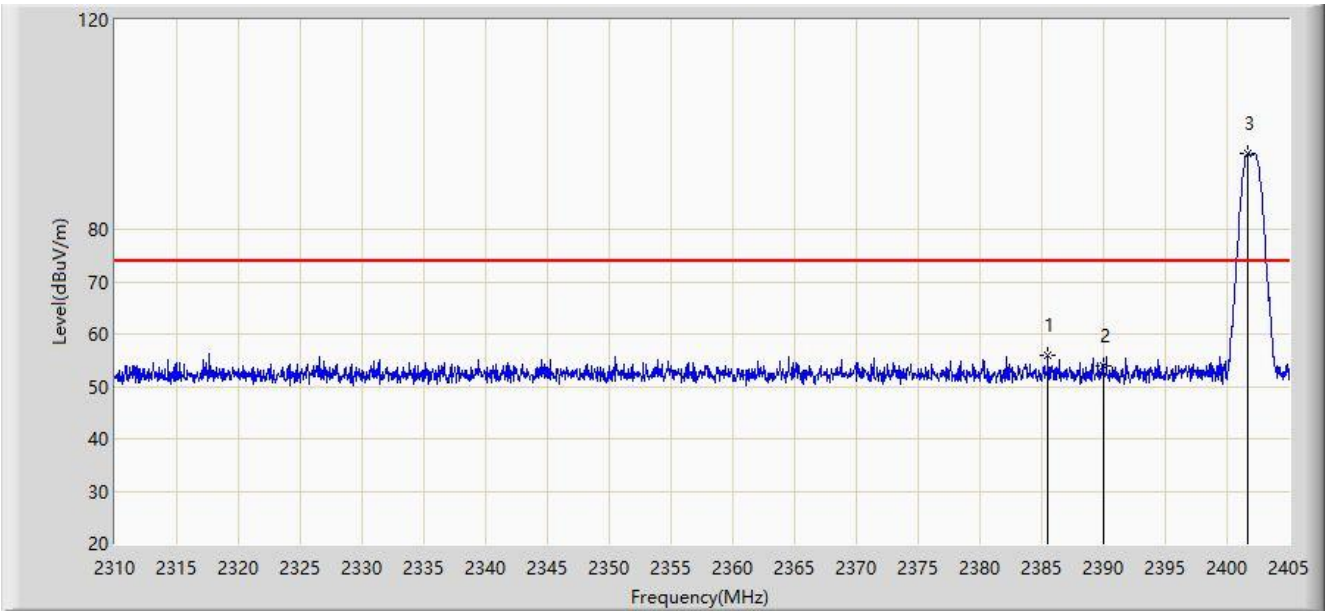
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

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 Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2402MHz	



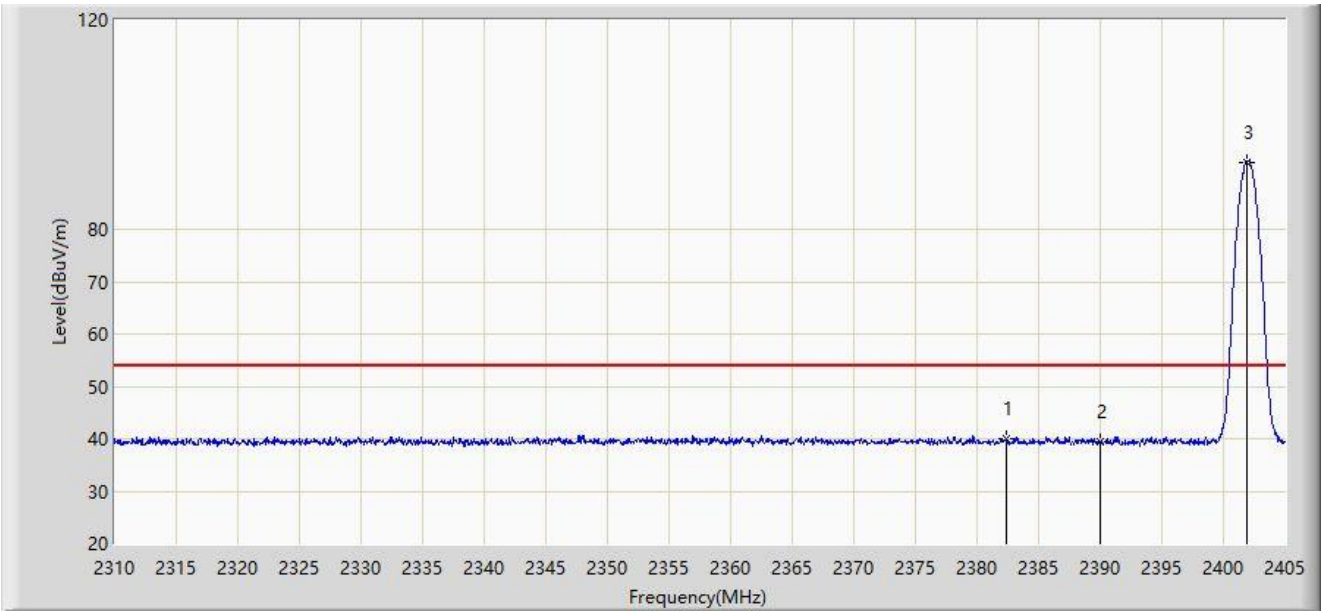
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2385.478	55.945	24.237	-18.055	74.000	31.708	PK
2		2390.000	53.777	22.089	-20.223	74.000	31.688	PK
3		2401.675	94.392	62.746	N/A	N/A	31.646	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2402MHz	



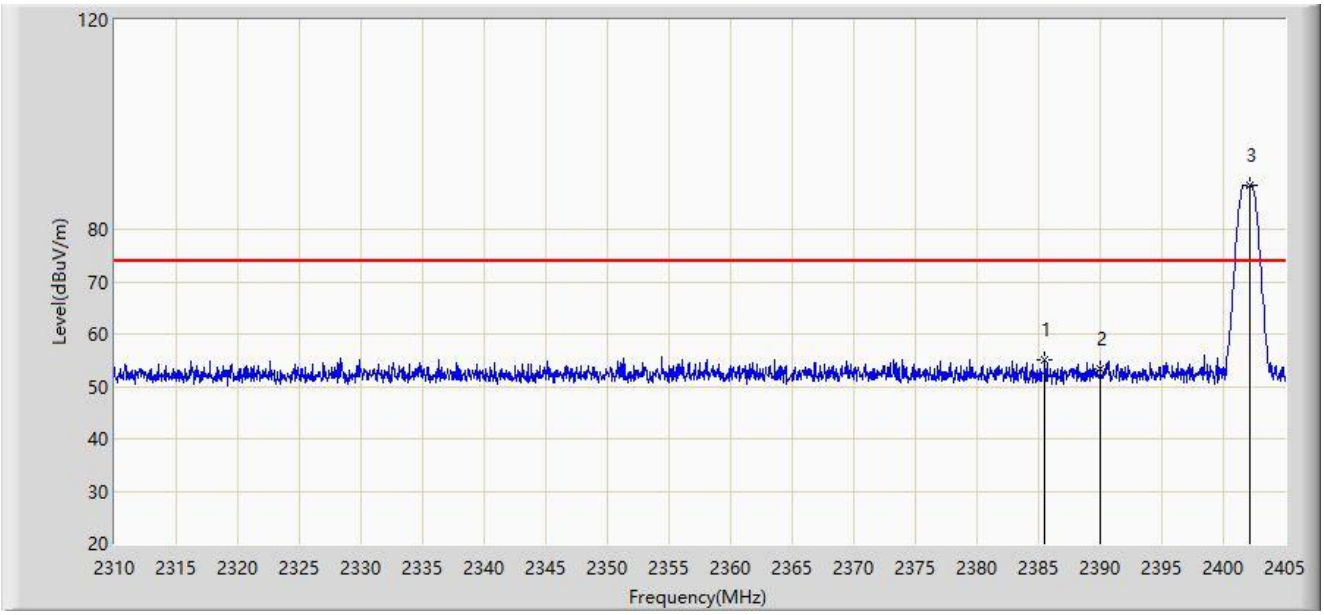
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2382.437	40.070	8.352	-13.930	54.000	31.718	AV
2		2390.000	39.406	7.718	-14.594	54.000	31.688	AV
3		2401.865	92.877	61.231	N/A	N/A	31.646	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2402MHz	



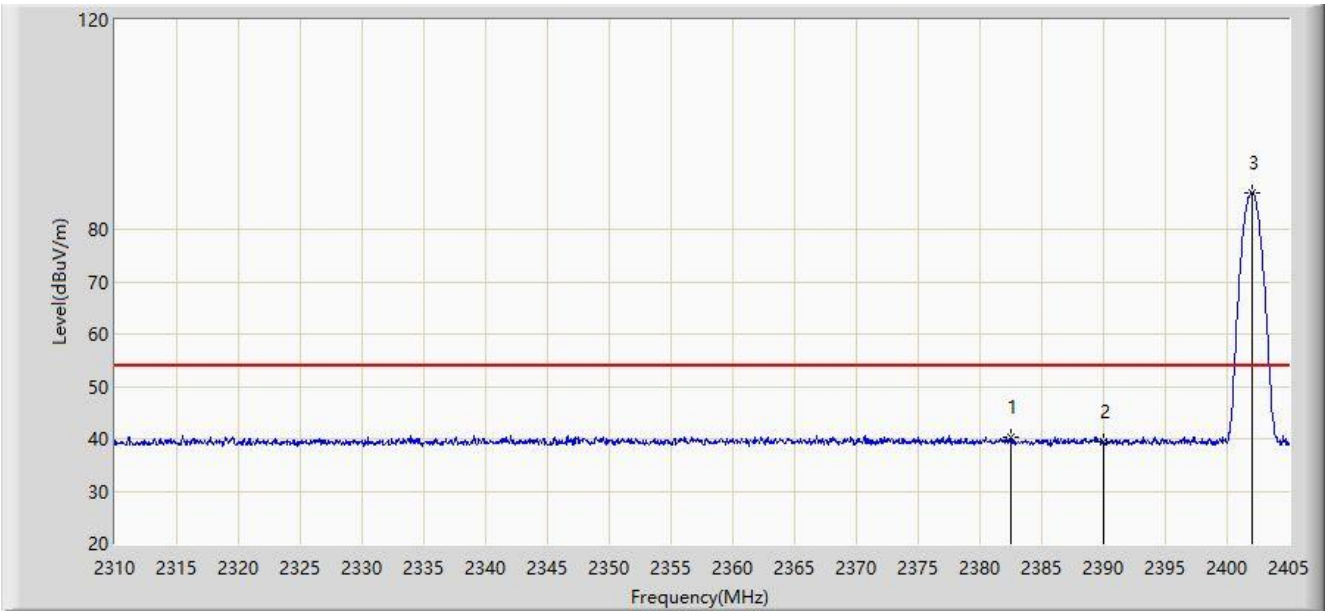
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2385.525	55.009	23.302	-18.991	74.000	31.707	PK
2		2390.000	53.380	21.692	-20.620	74.000	31.688	PK
3		2402.150	88.500	56.855	N/A	N/A	31.645	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2402MHz	



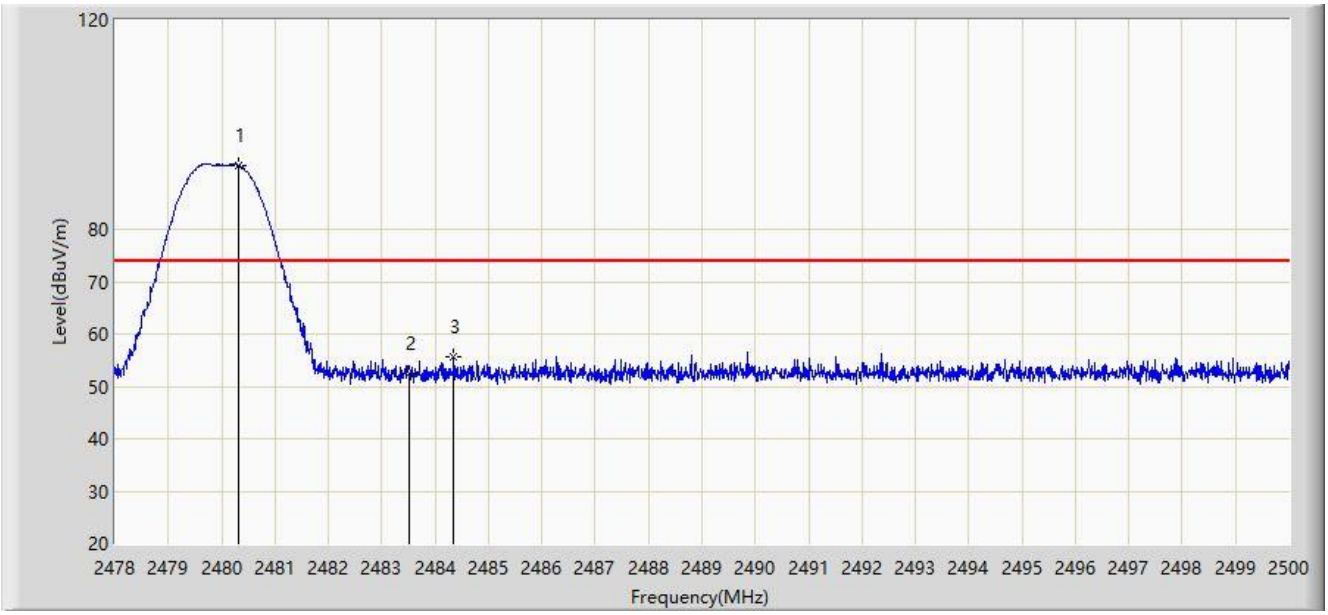
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2382.532	40.367	8.650	-13.633	54.000	31.718	AV
2		2390.000	39.371	7.683	-14.629	54.000	31.688	AV
3		2402.008	87.095	55.450	N/A	N/A	31.646	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2480MHz	



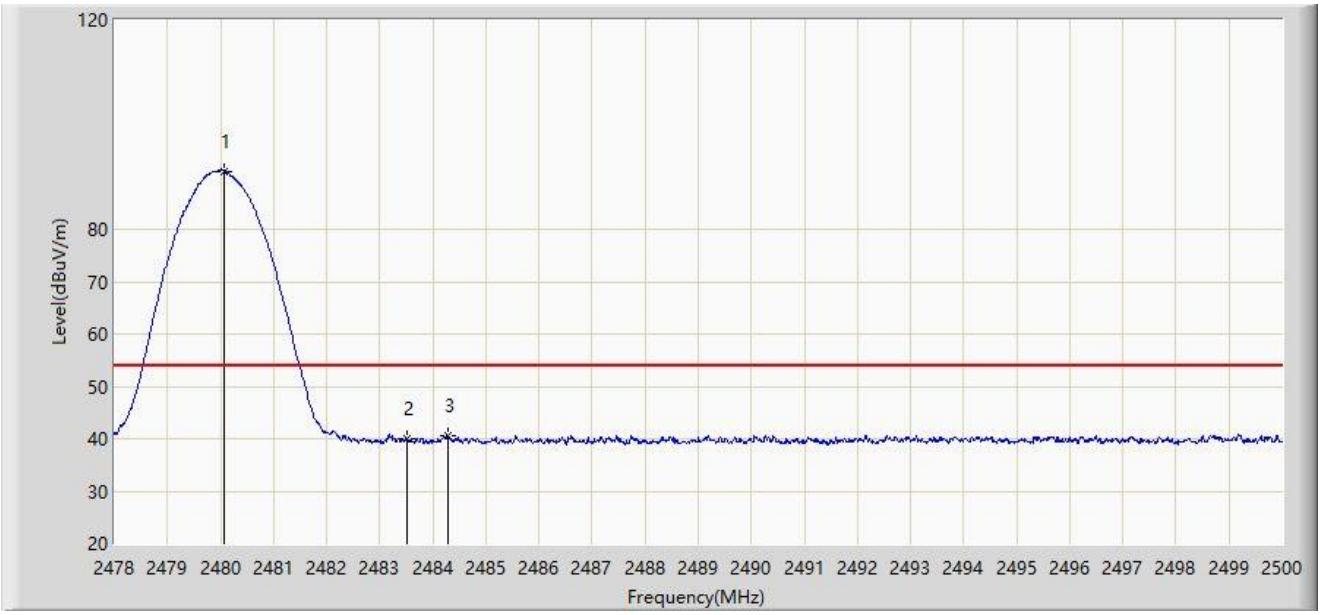
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.310	92.255	60.691	N/A	N/A	31.564	PK
2		2483.500	52.422	20.853	-21.578	74.000	31.569	PK
3	*	2484.347	55.575	24.004	-18.425	74.000	31.570	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2480MHz	



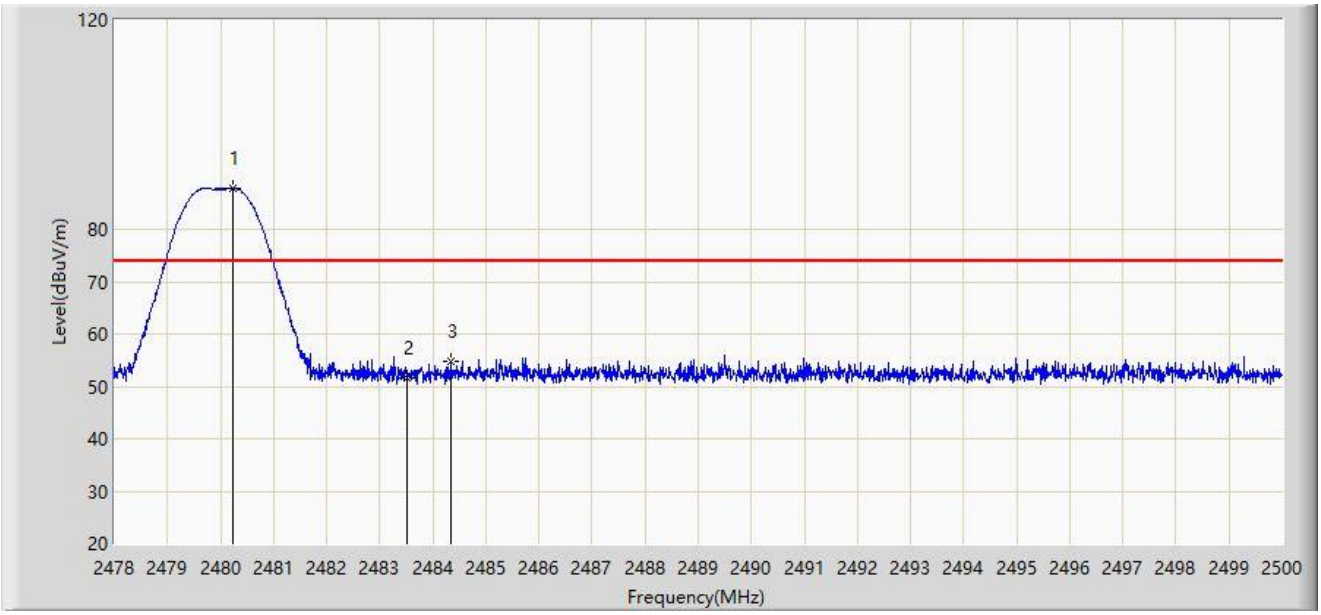
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.079	91.106	59.543	N/A	N/A	31.564	AV
2		2483.500	40.064	8.495	-13.936	54.000	31.569	AV
3	*	2484.281	40.531	8.961	-13.469	54.000	31.570	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2480MHz	



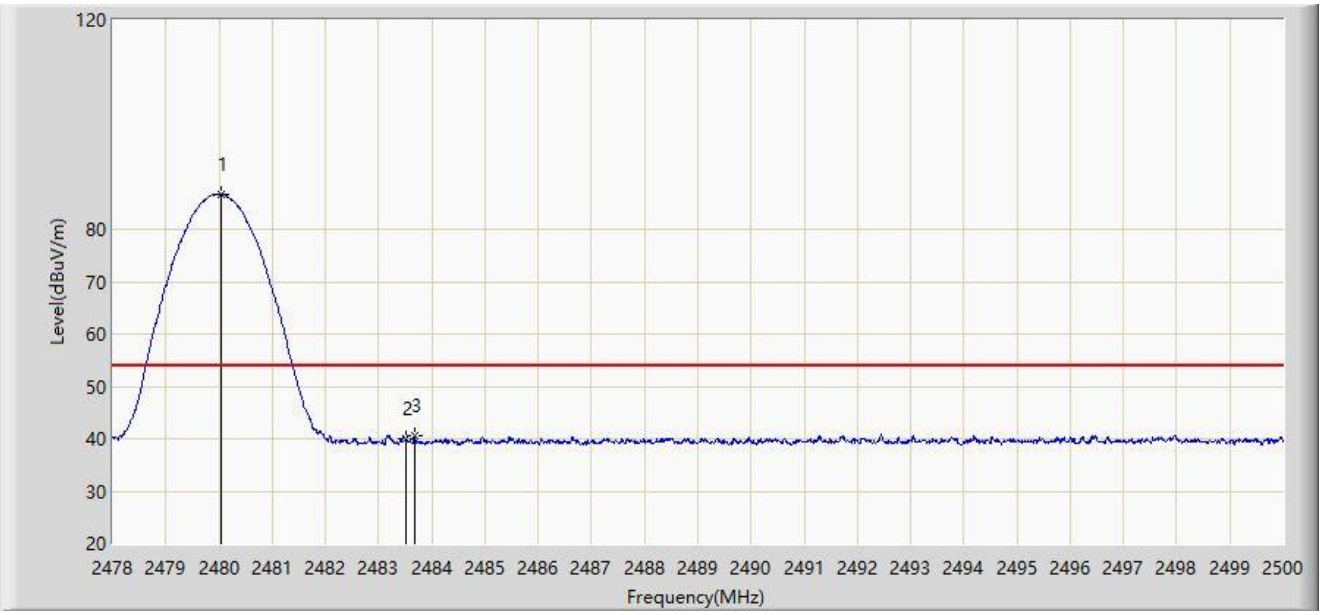
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.244	87.891	56.327	N/A	N/A	31.564	PK
2		2483.500	51.517	19.948	-22.483	74.000	31.569	PK
3	*	2484.347	54.752	23.181	-19.248	74.000	31.570	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 1M at 2480MHz	



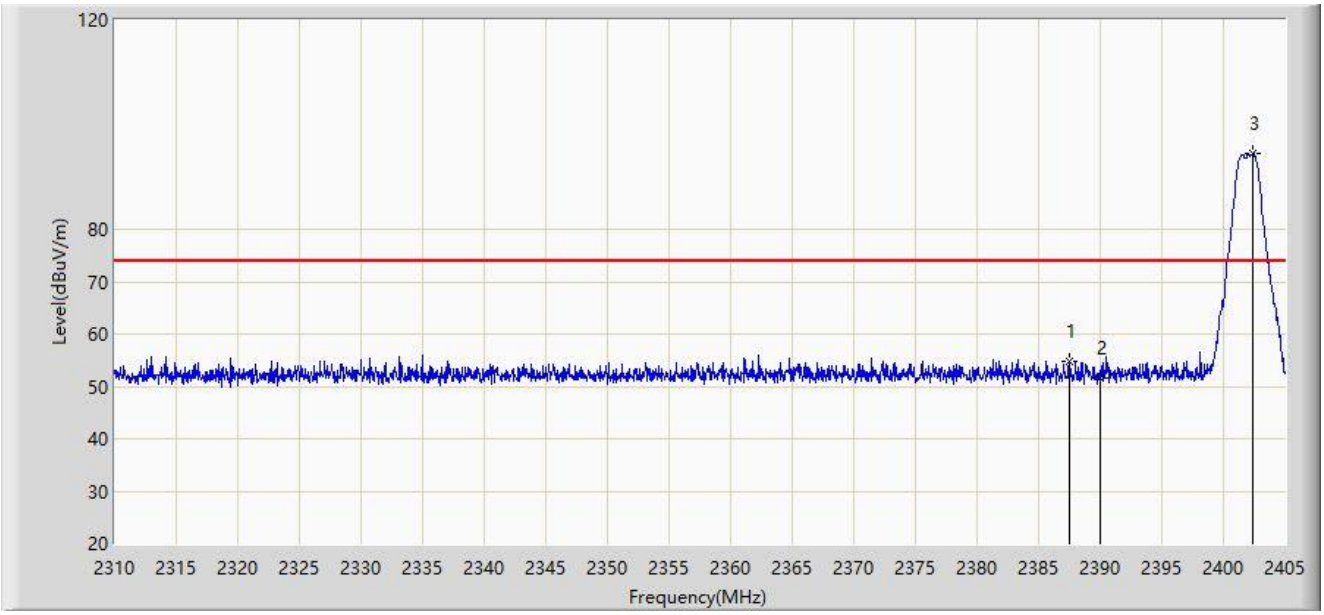
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.046	86.685	55.122	N/A	N/A	31.563	AV
2		2483.500	39.931	8.362	-14.069	54.000	31.569	AV
3	*	2483.676	40.457	8.888	-13.543	54.000	31.569	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2402MHz	



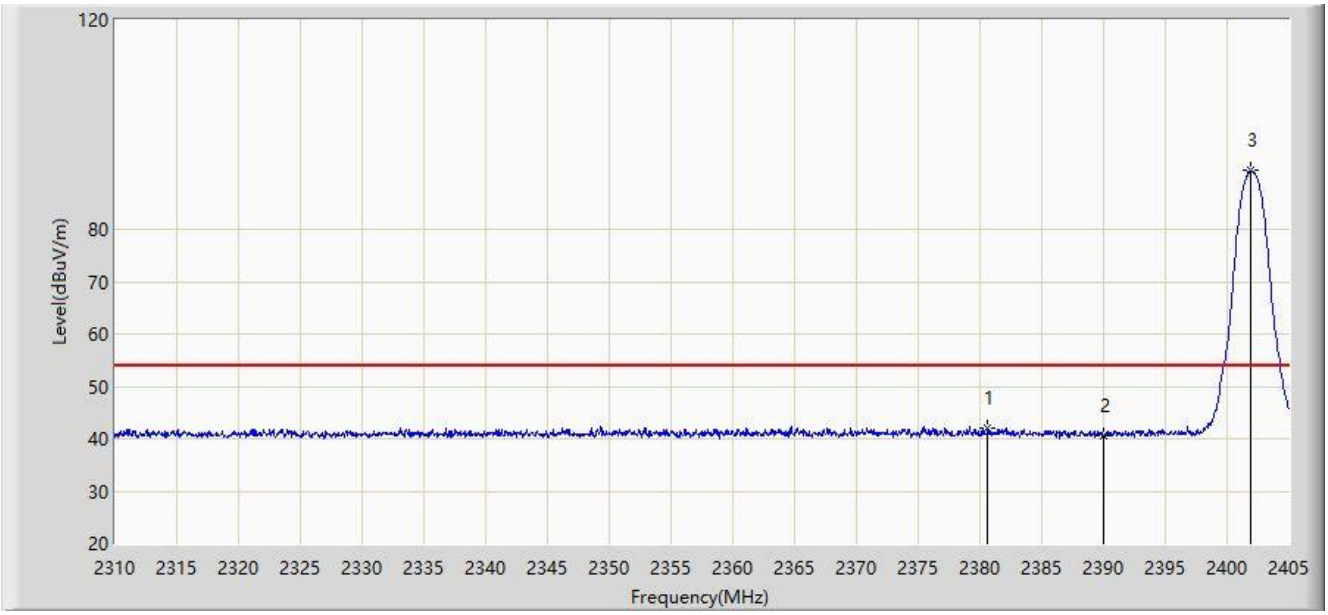
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2387.520	54.770	23.071	-19.230	74.000	31.699	PK
2		2390.000	51.534	19.846	-22.466	74.000	31.688	PK
3		2402.435	94.545	62.901	N/A	N/A	31.645	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2402MHz	



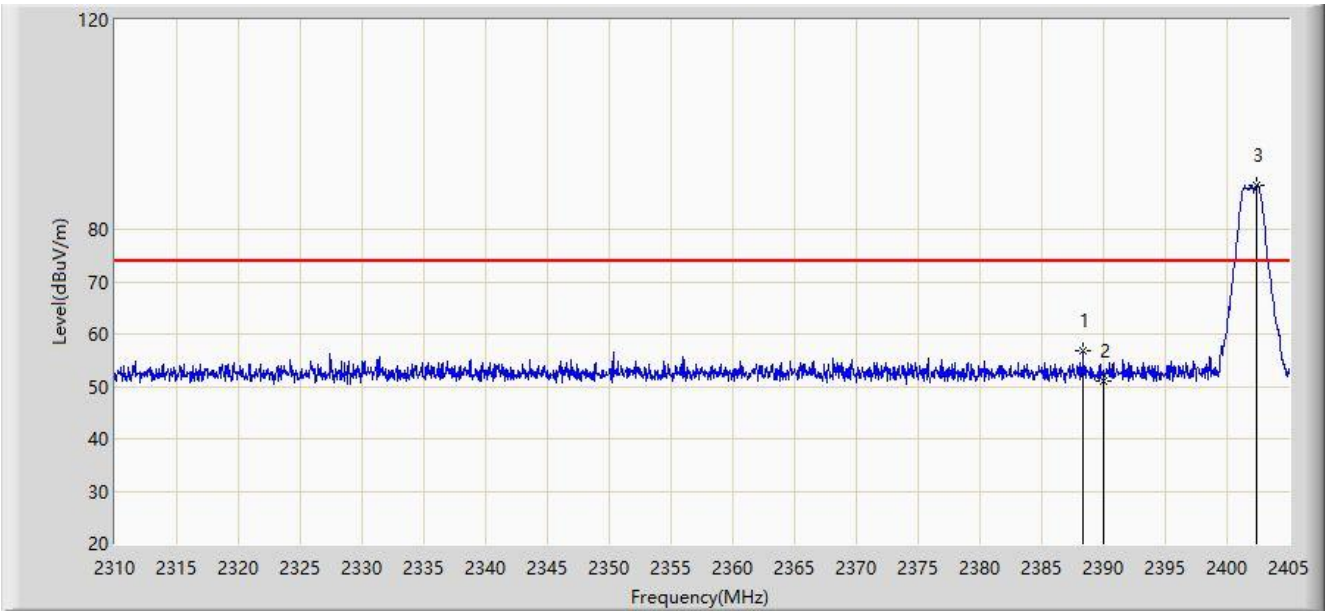
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2380.633	42.059	10.337	-11.941	54.000	31.722	AV
2		2390.000	40.569	8.881	-13.431	54.000	31.688	AV
3		2401.913	91.266	59.620	N/A	N/A	31.646	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2402MHz	



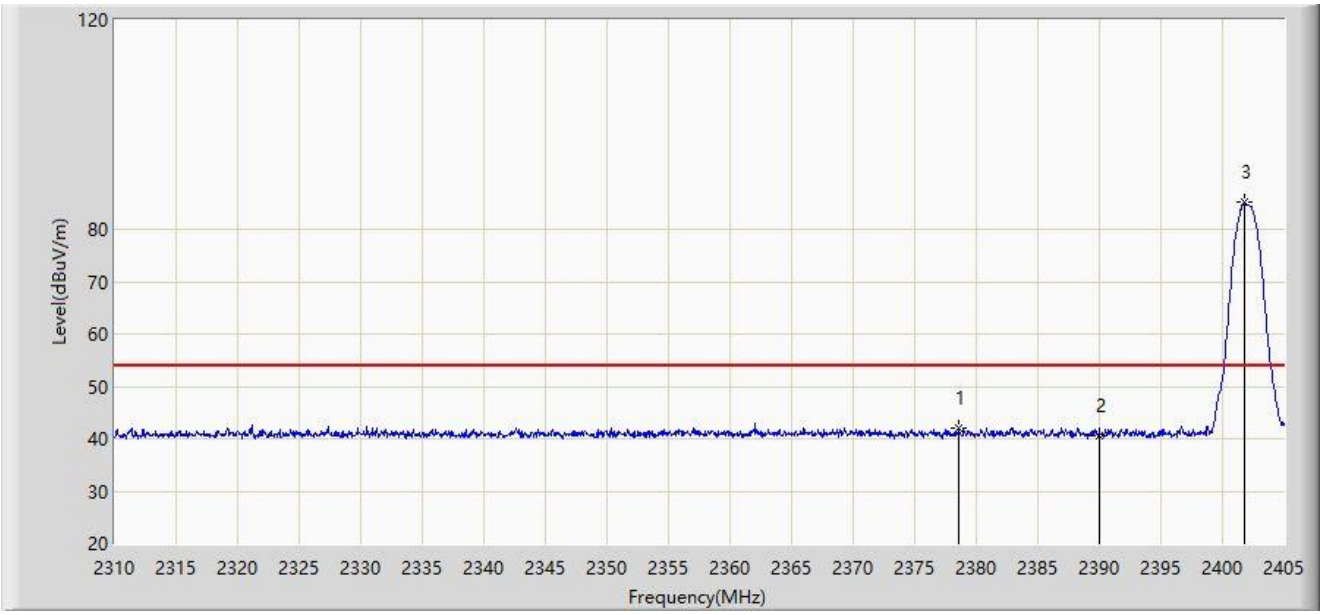
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2388.327	56.742	25.047	-17.258	74.000	31.696	PK
2		2390.000	51.149	19.461	-22.851	74.000	31.688	PK
3		2402.435	88.502	56.858	N/A	N/A	31.645	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2402MHz	



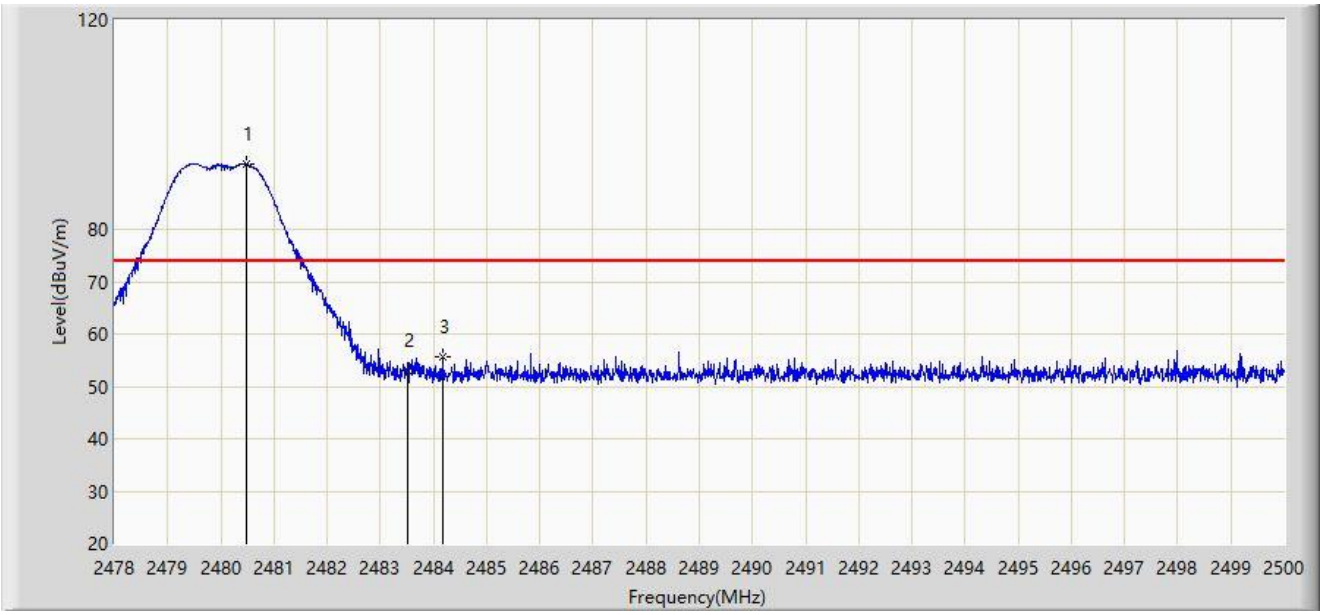
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2378.590	42.046	10.319	-11.954	54.000	31.728	AV
2		2390.000	40.551	8.863	-13.449	54.000	31.688	AV
3		2401.817	85.141	53.495	N/A	N/A	31.646	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2480MHz	



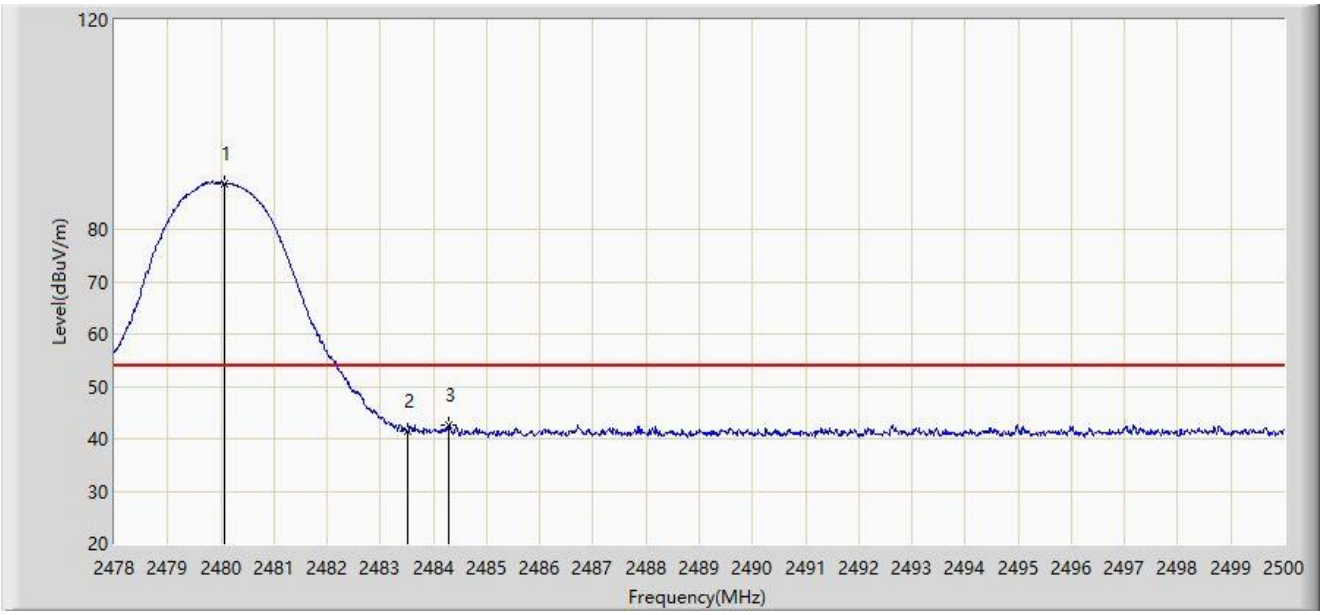
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.486	92.381	60.817	N/A	N/A	31.564	PK
2		2483.500	52.947	21.378	-21.053	74.000	31.569	PK
3	*	2484.171	55.752	24.182	-18.248	74.000	31.570	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Horizontal
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2480MHz	



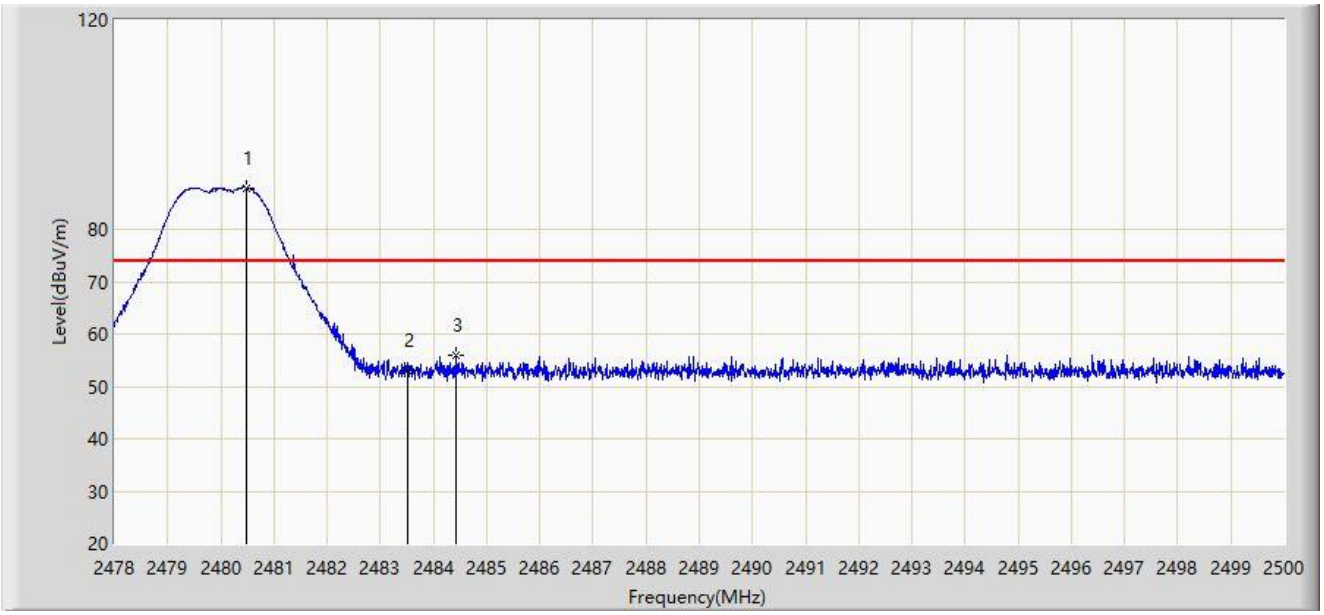
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.079	88.814	57.251	N/A	N/A	31.564	AV
2		2483.500	41.353	9.784	-12.647	54.000	31.569	AV
3	*	2484.292	42.548	10.978	-11.452	54.000	31.570	AV

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2480MHz	



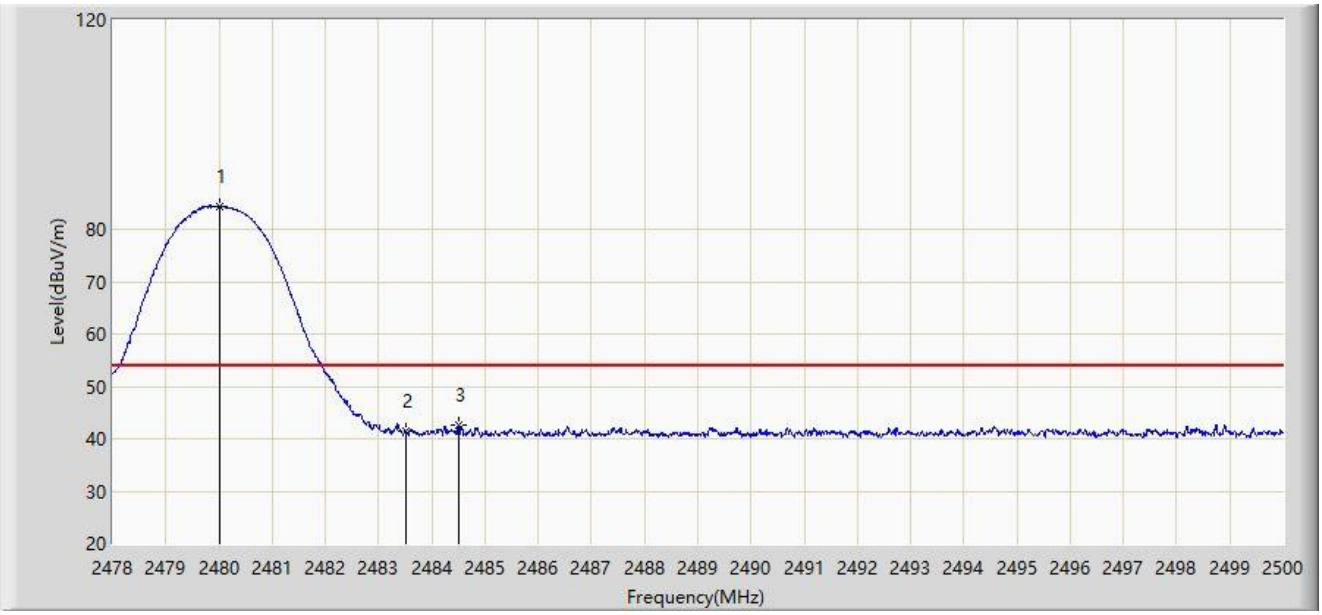
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.486	87.917	56.353	N/A	N/A	31.564	PK
2		2483.500	53.084	21.515	-20.916	74.000	31.569	PK
3	*	2484.424	55.806	24.235	-18.194	74.000	31.570	PK

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

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

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

Site: WZ-AC2	Test Data: 2022-12-28
Limit: FCC_2.4G_RE(3m)	Engineer: Charles Zhang
Probe: BBHA9120D_1457_1-18GHz	Polarity: Vertical
EUT: Wireless Microphone	Power: By PC
Test Mode: Transmit by BLE 2M at 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.002	84.337	52.774	N/A	N/A	31.563	AV
2		2483.500	41.536	9.967	-12.464	54.000	31.569	AV
3	*	2484.501	42.519	10.948	-11.481	54.000	31.570	AV

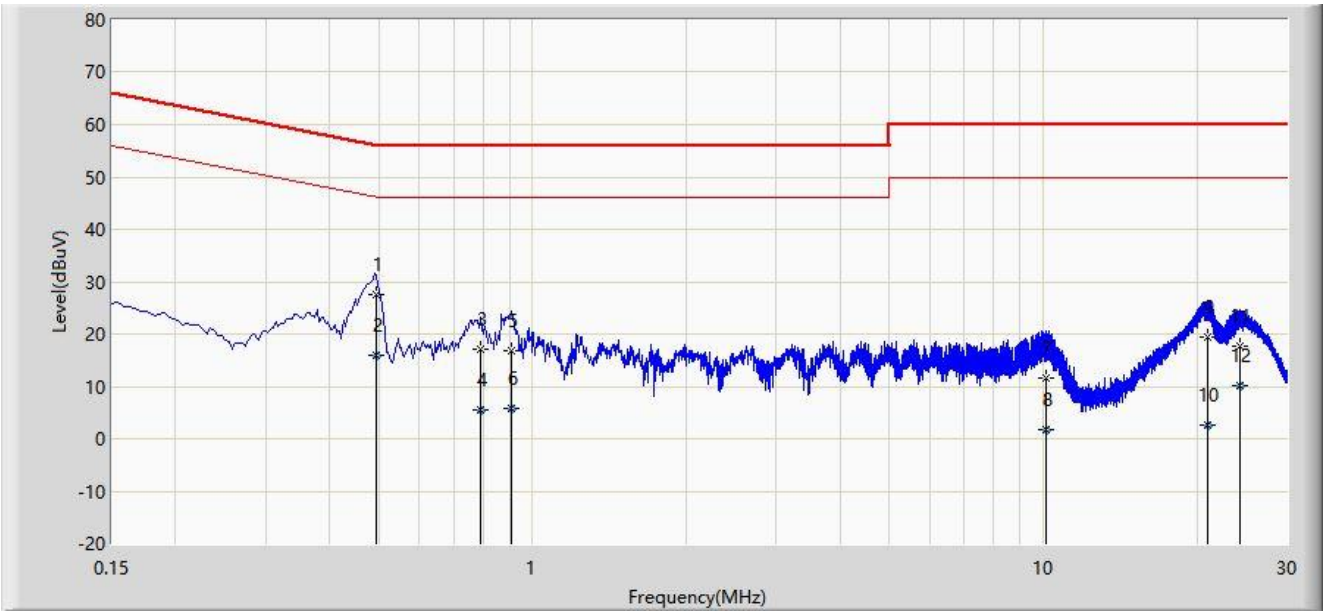
Note 1: " * ", means this data is the worst emission level.

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

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

A.8 AC Conducted Emissions Test Result

Site: WZ-SR2	Test Data: 2022-12-04
Limit: FCC_Part15.207_CE_AC Power	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_E	Polarity: Line
EUT: Wireless Microphone	Power: AC 120V/60Hz
Test Mode: Transmit by BLE at channel 2440MHz	



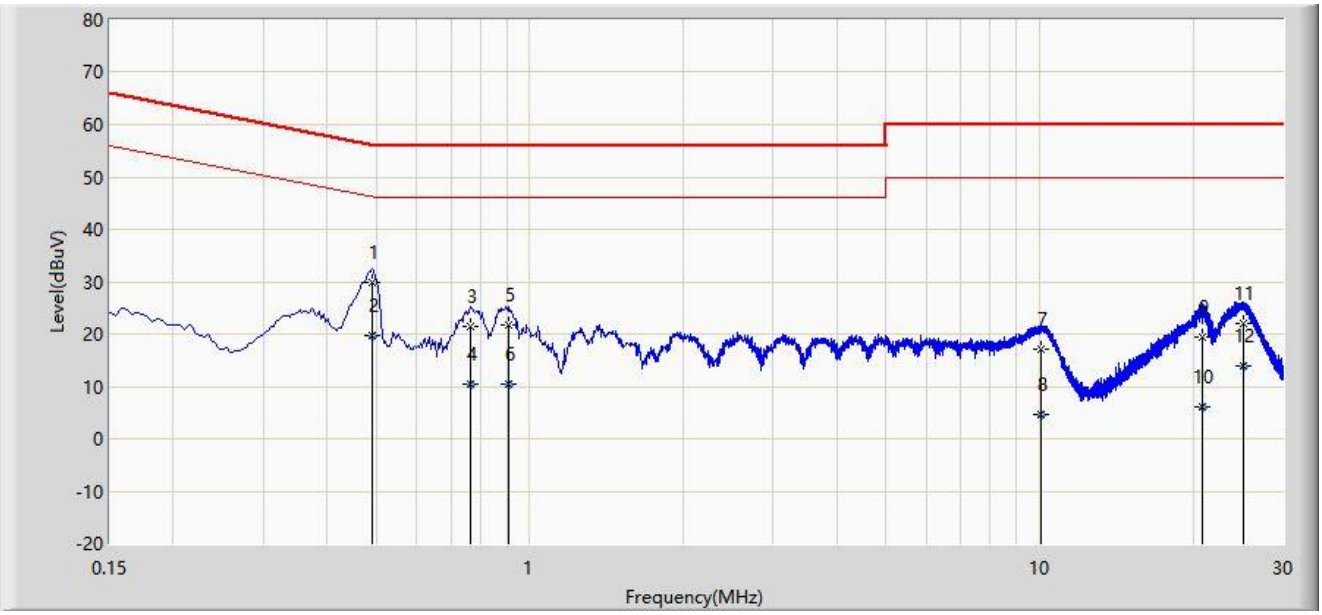
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.494	27.635	17.758	-28.465	56.100	9.876	QP
2		0.494	15.837	5.960	-30.264	46.100	9.876	AV
3		0.790	17.240	7.230	-38.760	56.000	10.010	QP
4		0.790	5.541	-4.469	-40.459	46.000	10.010	AV
5		0.910	16.888	6.815	-39.112	56.000	10.073	QP
6		0.910	5.941	-4.132	-40.059	46.000	10.073	AV
7		10.114	11.457	0.791	-48.543	60.000	10.666	QP
8		10.114	1.878	-8.788	-48.122	50.000	10.666	AV
9		21.046	19.483	7.936	-40.517	60.000	11.546	QP
10		21.046	2.562	-8.984	-47.438	50.000	11.546	AV
11		24.318	17.717	5.960	-42.283	60.000	11.757	QP
12		24.318	10.217	-1.540	-39.783	50.000	11.757	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 Data: 2022-12-04
Limit: FCC_Part15.207_CE_AC Power	Engineer: Alin Zhou
Probe: ENV216_101683_Filter Off_E	Polarity: Neutral
EUT: Wireless Microphone	Power: AC 120V/60Hz
Test Mode: Transmit by BLE at channel 2440MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1	*	0.490	29.831	19.946	-26.336	56.168	9.886	QP
2		0.490	19.695	9.809	-26.473	46.168	9.886	AV
3		0.766	21.342	11.317	-34.658	56.000	10.025	QP
4		0.766	10.464	0.438	-35.536	46.000	10.025	AV
5		0.906	21.679	11.585	-34.321	56.000	10.094	QP
6		0.906	10.301	0.207	-35.699	46.000	10.094	AV
7		10.058	17.055	6.353	-42.945	60.000	10.702	QP
8		10.058	4.552	-6.150	-45.448	50.000	10.702	AV
9		20.886	19.353	7.796	-40.647	60.000	11.556	QP
10		20.886	6.048	-5.508	-43.952	50.000	11.556	AV
11		25.162	21.940	10.148	-38.060	60.000	11.791	QP
12		25.162	13.781	1.990	-36.219	50.000	11.791	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 “2211RSU056-UT” file.

Appendix C - EUT Photograph

Refer to “2211RSU056-UE” file.

The End