



RF MEASUREMENT REPORT

FCC ID: N73-AP60-UWB
Applicant: Mine Site Technologies Pty Ltd
Product: AXON RANGE
Model No.: A-AP60-300
Brand Name: MINE SITE TECHNOLOGIES
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2025-01-07
Test Date: 2025-01-20 ~ 2025-02-15

Reviewed By:

Vincent Yu

Vincent Yu

Approved By:

Robin Wu

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. Testing was performed in accordance with the applicable measurement procedures. The test results reported herein apply only to the specific 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
R25S1031026-U201	V01	Initial Report	2026-04-10	Invalid
R25S1031026-U201	V02	Add RSE worst-case data	2026-04-28	Valid

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1. General Information

1.1. Applicant

Mine Site Technologies Pty Ltd
113 Wicks Road, North Ryde, NSW, 2113, Australia

1.2. Manufacturer

Mine Site Technologies Pty Ltd
113 Wicks Road, North Ryde, NSW, 2113, Australia

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 Location (Suzhou - Wujiang) Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People’s Republic of China Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001
☐	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 FCC: CN1284 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	AXON RANGE
Model No.	A-AP60-300
Brand Name	MINE SITE TECHNOLOGIES
EUT Identification No.	20250107Sample#04
Bluetooth Specification	Bluetooth_LE
UWB Specification	6489.6 MHz
Antenna Information	Refer to section 1.5
Operating Temperature	-20 °C ~ 70 °C
Product Voltage	mini-PCIE 3.3 V DC
Note: The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Bluetooth Frequency	2400 ~ 2483.5 MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1 Mbps, 2 Mbps, 500 kbps, 125 kbps
Antenna Type	Omni-Directional Antenna
Antenna Gain	2.50 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	--	--	--	--

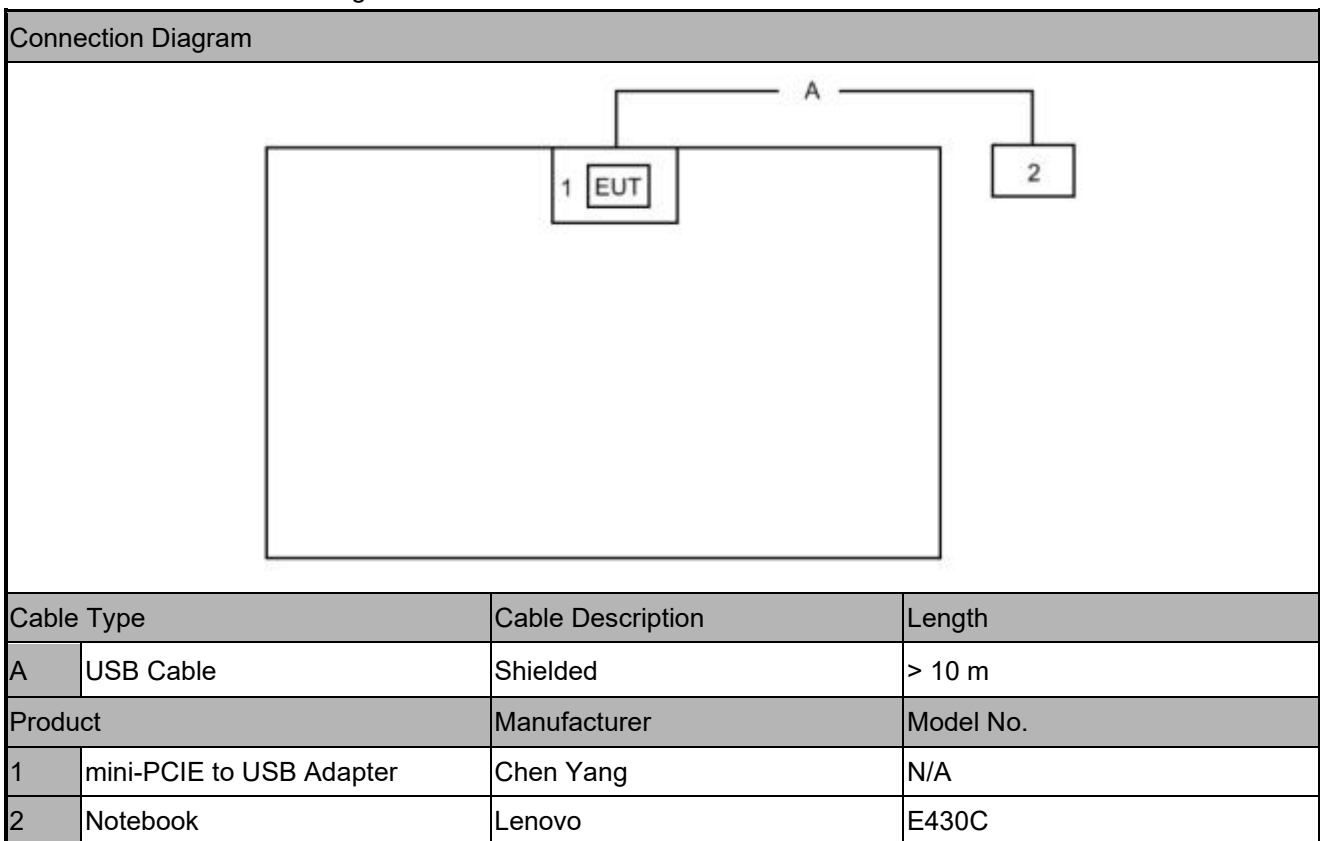
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by BLE-1 Mbps
Mode 2: Transmit by BLE-2 Mbps
Mode 3: Transmit by BLE-500 kbps
Mode 4: Transmit by BLE-125 kbps

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10-2020 was used to reference the appropriate EUT setup for radiated emissions testing.



2.3. Test Software

The test utility software used during testing was “IPOP” (the version was 4.1), and the commands were provided by the manufacturer.

Final power setting please refer to operational description.

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 C63.10-2020
- ANSI C63.10-2020/Cor1-2023
- ANSI C63.10a-2024

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 uses a unique coupling.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE07110	1 year	2025-04-24	WJ-AC1
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2025-04-28	WJ-AC1
Signal Analyzer	R&S	FSW26	MRTSUE07225	1 year	2025-07-31	WJ-AC1
Active Loop Antenna	Schwarzbeck	FMZB 519-60 D	MRTSUE07076	1 year	2025-11-19	WJ-AC1
TRILOG Broad Band Antenna	Schwarzbeck	VULB 9163	MRTSUE07099	1 year	2025-04-24	WJ-AC1
Horn Antenna	ETS	3117	MRTSUE06257	1 year	2025-09-08	WJ-AC1
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2025-05-14	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11314	1 year	2025-06-24	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11333	1 year	2025-06-24	WJ-AC1
Anechoic Chamber	TDK	WJ-AC1	MRTSUE07115	1 year	2025-05-17	WJ-AC1
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07148	1 year	2025-05-11	WJ-AC1
Broadband Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE07100	1 year	2025-04-24	WJ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE07103	1 year	2025-04-14	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11315	1 year	2025-06-24	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11332	1 year	2025-06-24	WJ-AC2
Anechoic Chamber	TDK	WJ-AC2	MRTSUE07117	1 year	2025-05-14	WJ-AC2
Signal Analyzer	Keysight	N9020B	MRTSUE07037	1 year	2025-09-03	WJ-SR3
Thermohygrometer	testo	608-H1	MRTSUE11331	1 year	2025-06-24	WJ-SR3
Shielding Room	TDK	WJ-SR3	MRTSUE07125	N/A	N/A	WJ-SR3

Software	Version	Function
e3	230711	EMI Test Software
CONTROLLER CO3000	v 1.03.02	RE Antenna & Turntable
Agilent Power Panel	V 3.9	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

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

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9 kHz ~ 150 kHz: 3.58 dB 150 kHz ~ 30 MHz: 3.20 dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9 kHz ~ 30 MHz: 2.61 dB Coplanar: 9 kHz ~ 30 MHz: 2.62 dB Horizontal: 30 MHz ~ 200 MHz: 3.79 dB 200 MHz ~ 1 GHz: 3.91 dB 1 GHz ~ 40 GHz: 4.99 dB Vertical: 30 MHz ~ 200 MHz: 4.06 dB 200 MHz ~ 1 GHz: 5.21 dB 1 GHz ~ 40 GHz: 4.90 dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.2 dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.4 dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.2 dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.7%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6 dB 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 150 kHz - 30 MHz	Line Conducted	N/A

Notes:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3. "N/A" means that this item is not applicable, and the detail information refer to relevant section.

6.2. 6 dB Bandwidth Measurement

6.2.1. Test Limit

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

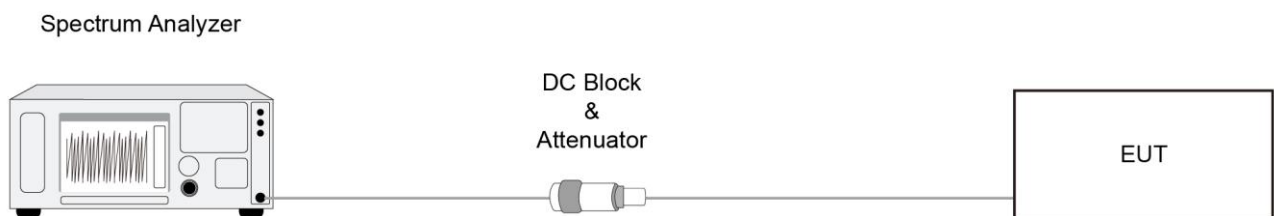
6.2.2. Test Procedure

ANSI C63.10-2020 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6 dB 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. RBW = 1% to 5% of the OBW, but not less than 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 (30 dBm).

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 C63.10-2020 - Section 11.9.1.2

ANSI C63.10-2020 - Section 11.9.2.3.2

6.3.3. Test Setting

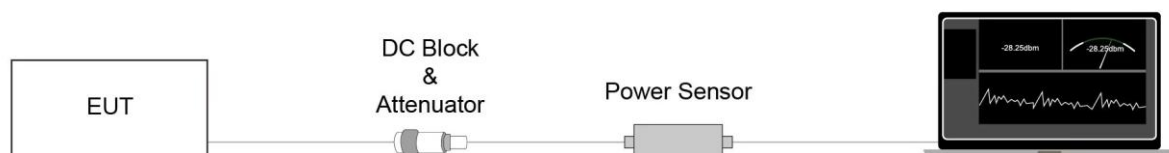
Method PKPM1 (Peak Power Measurement of Signals with DTS BW $\leq$ 50 MHz)

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 = 50 MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50 MHz.

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 8 dBm in any 3 kHz band.

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

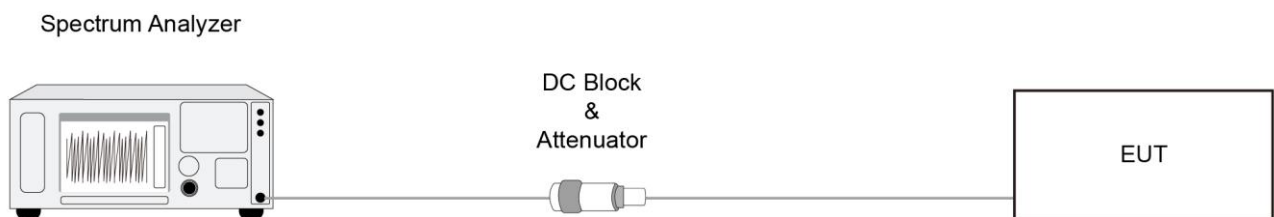
6.4.2. Test Procedure

ANSI C63.10-2020 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 = 3 kHz
4. VBW = 10 kHz
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 20 dB 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 C63.10-2020 - Section 11.11

6.5.3. Test Setting

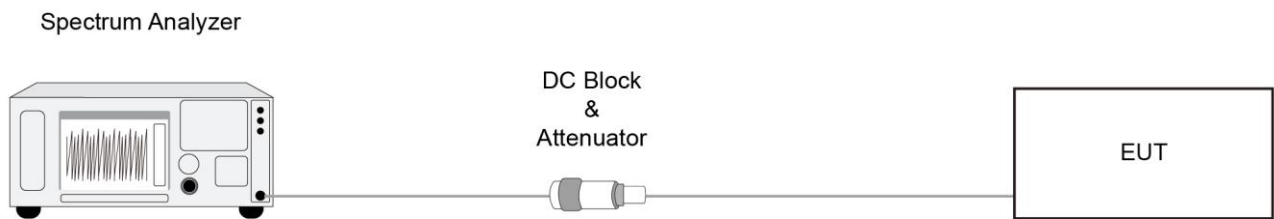
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 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 = 100 kHz
3. VBW = 300 kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

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

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.6.2. Test Procedure

ANSI C63.10-2020 - Section 11.11 & 11.12

ANSI C63.10-2020 - Section 6.3 (General Requirements)

ANSI C63.10-2020 - Section 6.4 (Standard test method below 30 MHz)

ANSI C63.10-2020 - Section 6.5 (Standard test method above 30 MHz to 1 GHz)

ANSI C63.10-2020 - Section 6.6 (Standard test method above 1 GHz)

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
> 1000 MHz	1 MHz

Quasi-Peak Measurements below 1 GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1 MHz
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 1 GHz

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

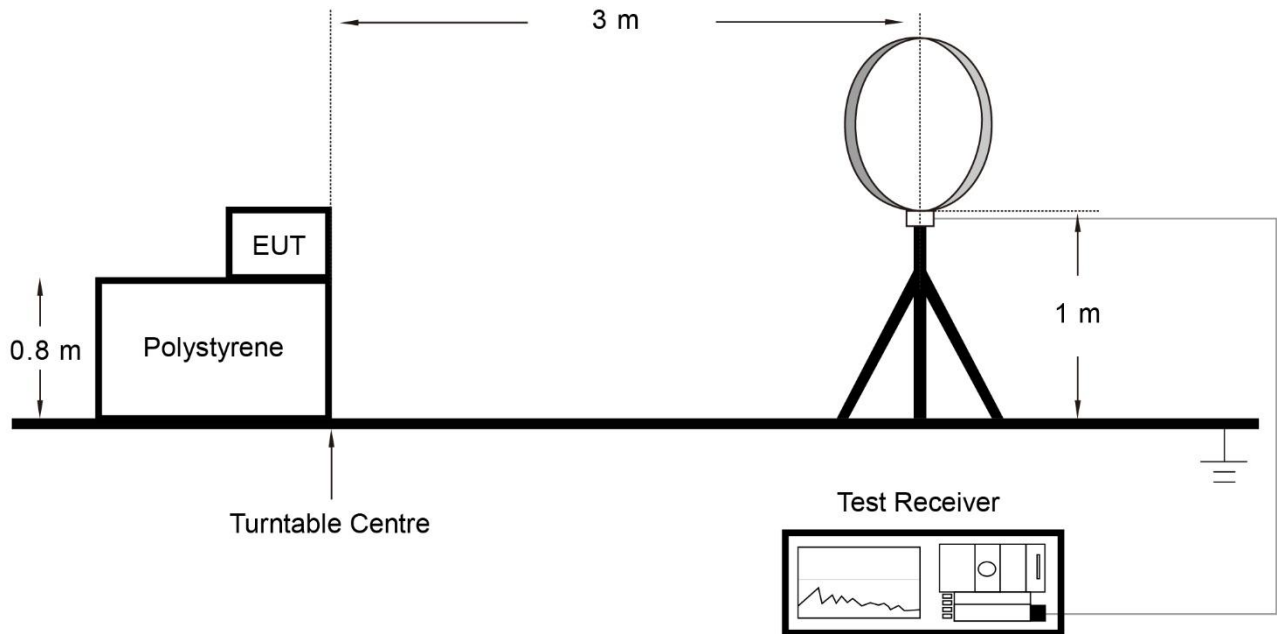
Average Measurements above 1GHz (Method VB)

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 = 10Hz

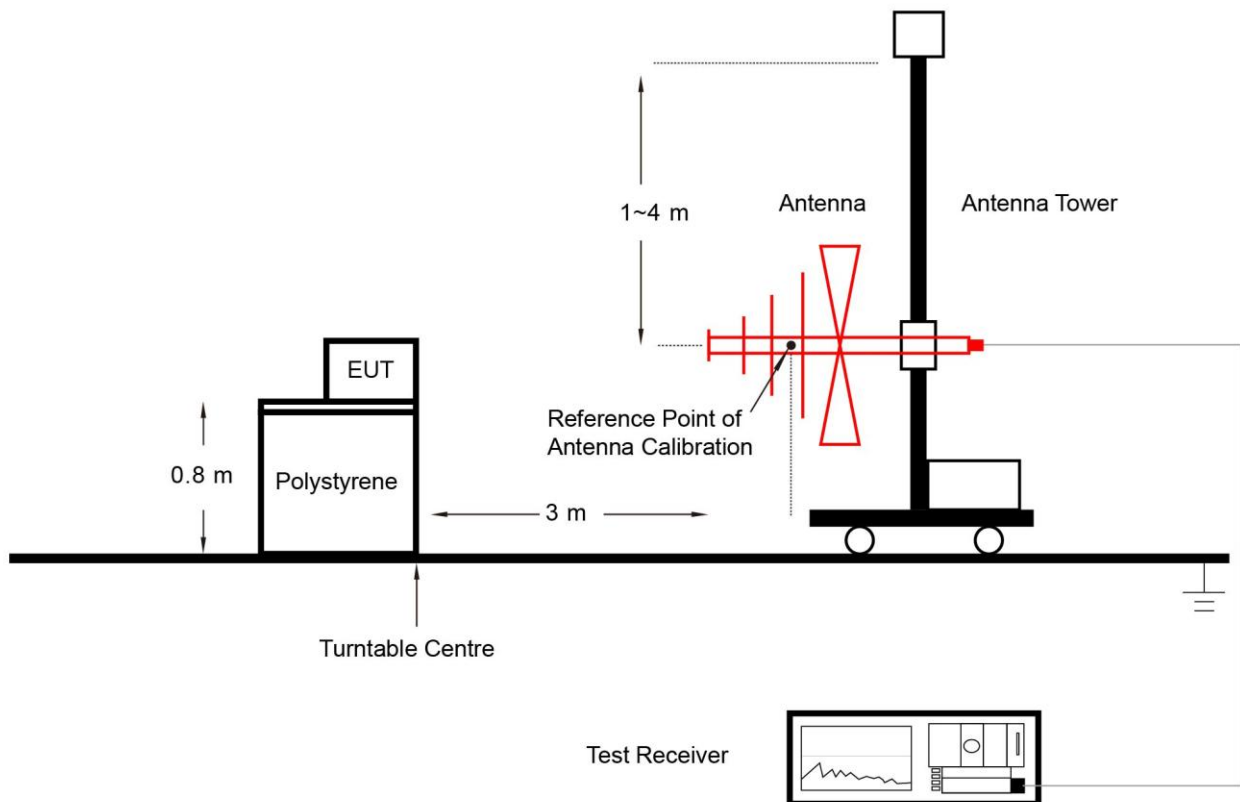
If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear 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. Trace was allowed to stabilize

6.6.4. Test Setup

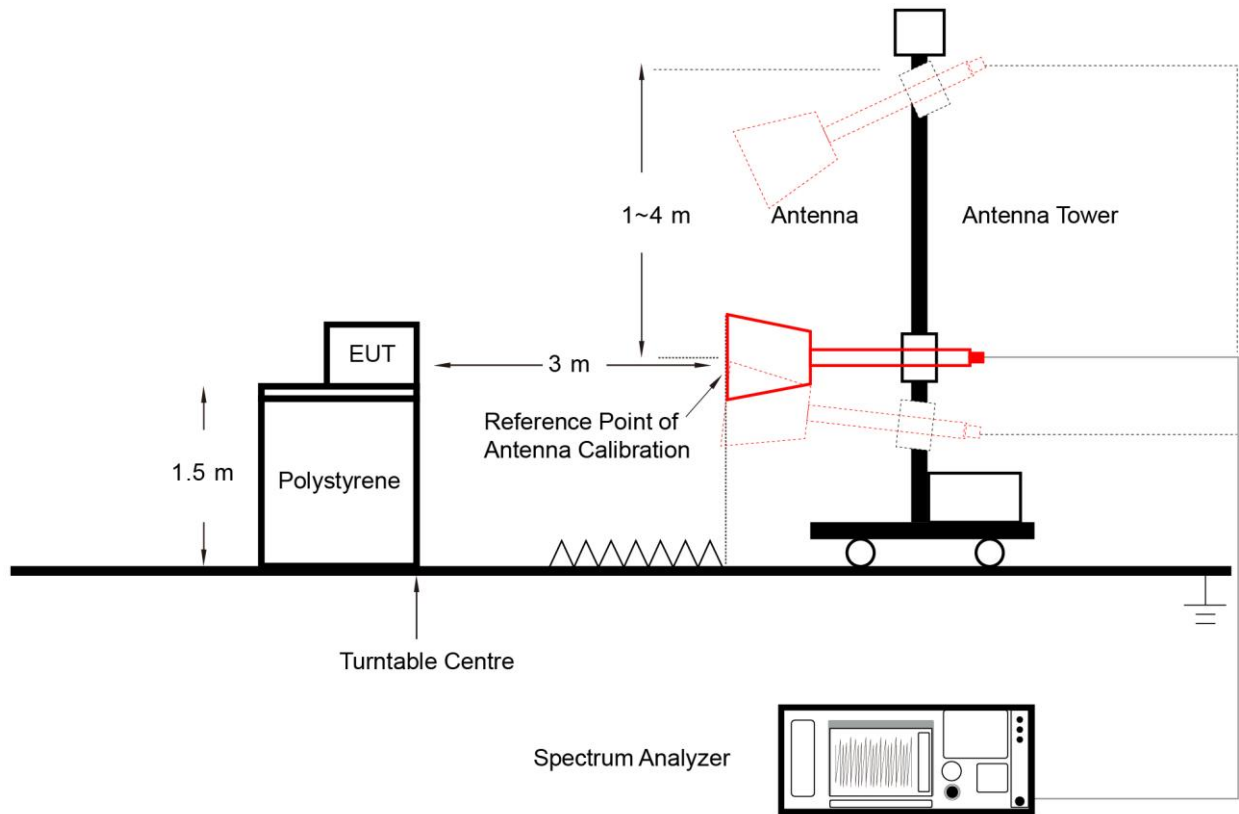
Below 30 MHz Test Setup:



Below 1 GHz Test Setup:



Above 1 GHz 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 [μ V/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 C63.10-2020 - Section 6.3 & 6.6 & 11.12

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 = 1 MHz
3. VBW = 3 MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

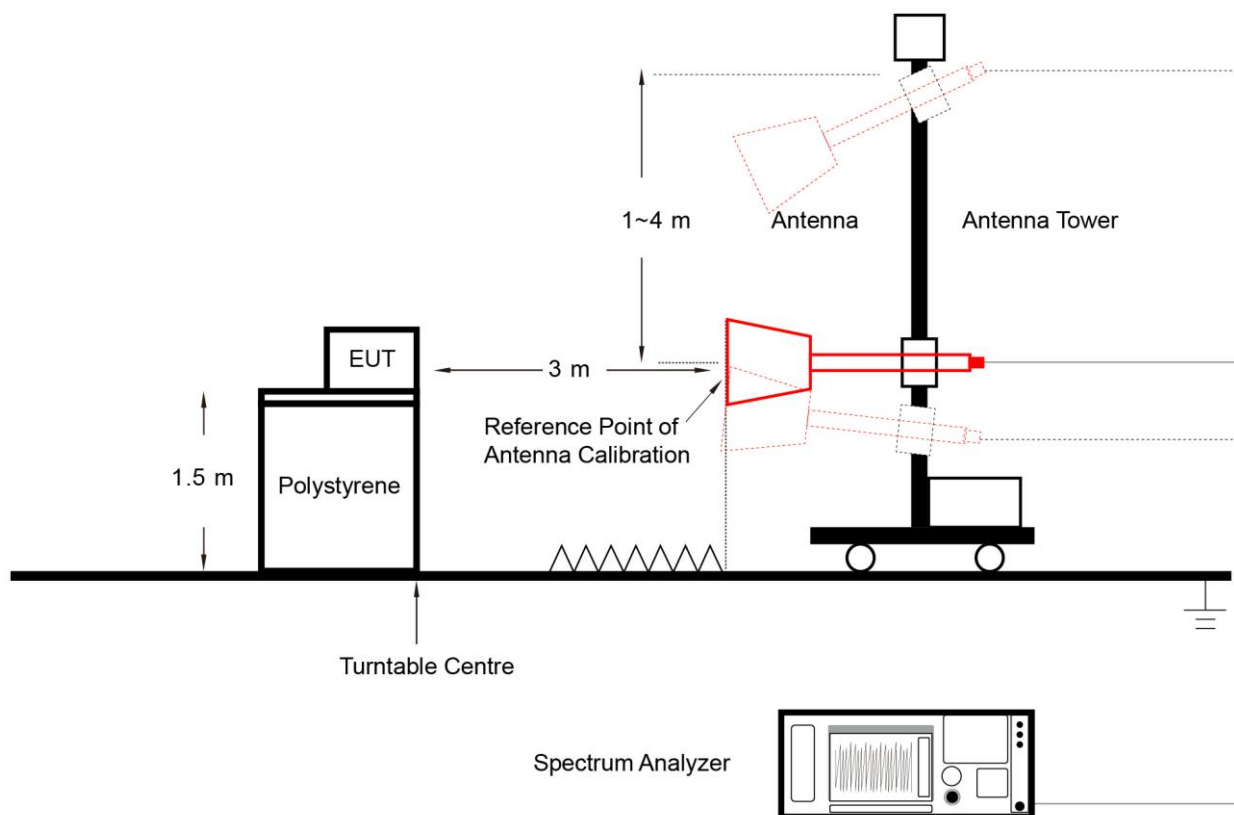
Average Field Strength Measurements

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

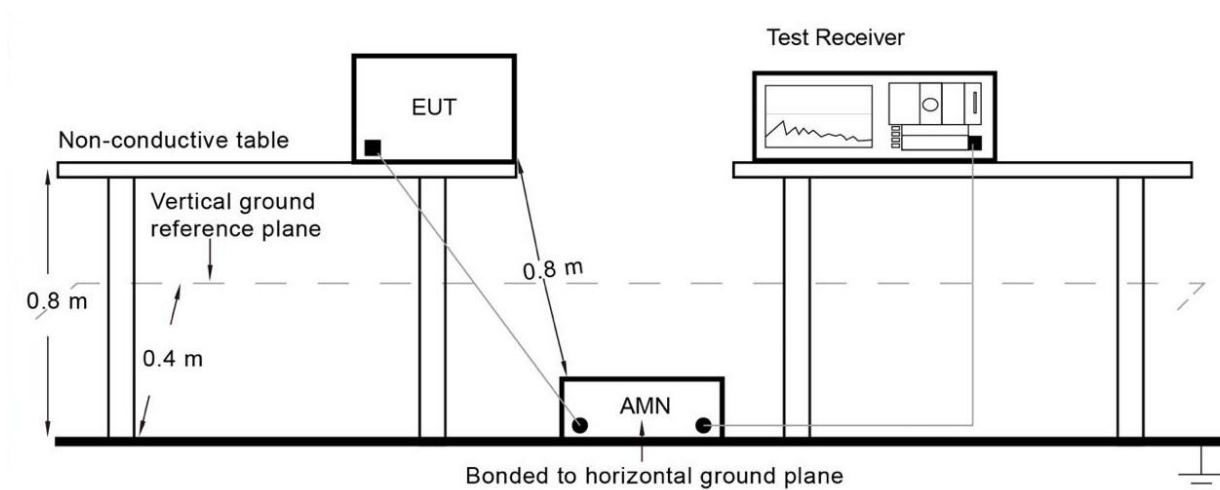
6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
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 0.15 MHz to 0.5 MHz.

6.8.2. Test Setup



6.8.3. Test Result

The EUT is powered by DC supply, so this item is not applicable.

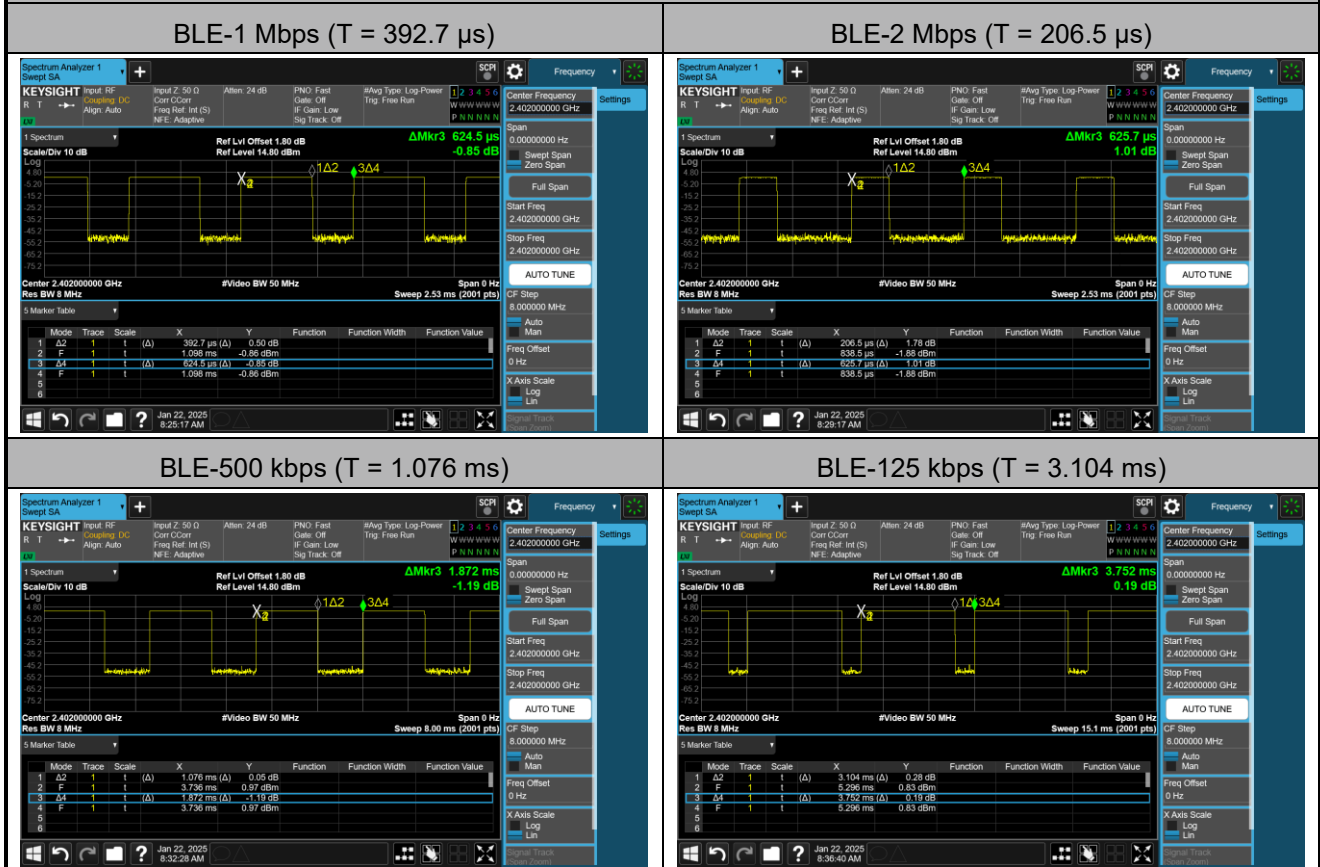
Appendix A - Test Result

A.1 Duty Cycle Test Result

Test Site	WJ-SR3	Test Engineer	Simon Lu
Test Date	2025-01-22		

Test Mode	Duty Cycle
BLE-1 Mbps	62.88%
BLE-2 Mbps	33.00%
BLE-500 kbps	57.48%
BLE-125 kbps	82.73%

Duty Cycle (T = Transmission Duration)



A.2 6 dB Bandwidth Test Result

Test Site	WJ-SR3	Test Engineer	Simon Lu
Test Date	2025-01-20		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)
BLE	1 Mbps	00	2402	0.6853	≥ 0.5
BLE	1 Mbps	19	2440	0.6866	≥ 0.5
BLE	1 Mbps	39	2480	0.6850	≥ 0.5
BLE	2 Mbps	00	2402	1.130	≥ 0.5
BLE	2 Mbps	19	2440	1.134	≥ 0.5
BLE	2 Mbps	39	2480	1.121	≥ 0.5
BLE	500 kbps	00	2402	0.6859	≥ 0.5
BLE	500 kbps	19	2440	0.6915	≥ 0.5
BLE	500 kbps	39	2480	0.6840	≥ 0.5
BLE	125 kbps	00	2402	0.6070	≥ 0.5
BLE	125 kbps	19	2440	0.6093	≥ 0.5
BLE	125 kbps	39	2480	0.6053	≥ 0.5

BLE-1 Mbps 6 dB Bandwidth

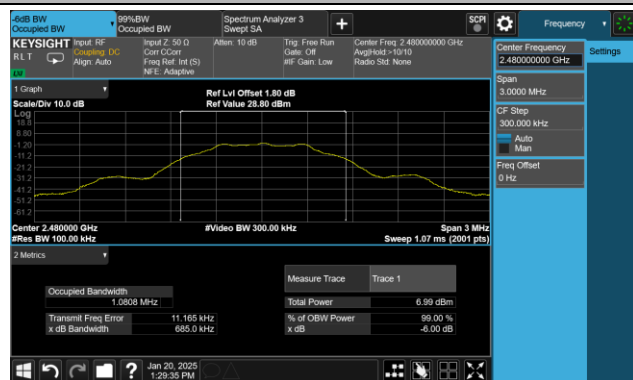
Channel 00 (2402 MHz)



Channel 19 (2440 MHz)



Channel 39 (2480 MHz)

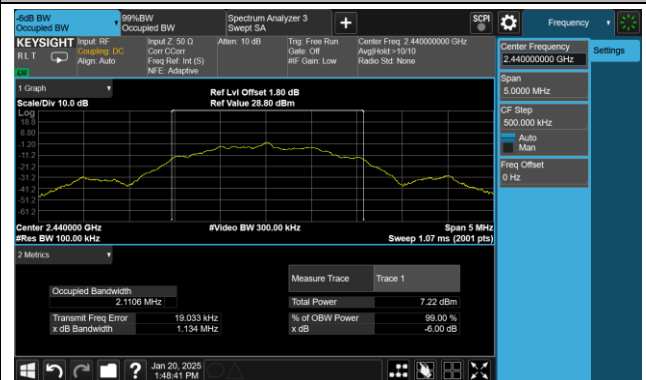


BLE-2 Mbps 6 dB Bandwidth

Channel 00 (2402 MHz)



Channel 19 (2440 MHz)



Channel 39 (2480 MHz)



BLE-500 kbps 6 dB Bandwidth

Channel 00 (2402 MHz)



Channel 19 (2440 MHz)

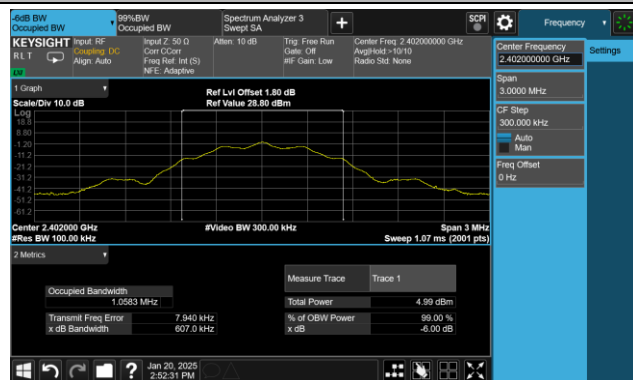


Channel 39 (2480 MHz)



BLE-125 kbps 6 dB Bandwidth

Channel 00 (2402 MHz)



Channel 19 (2440 MHz)



Channel 39 (2480 MHz)



A.3 Output Power Test Result

Test Site	WJ-SR3	Test Engineer	Simon Lu
Test Date	2025-01-20		

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1 Mbps	00	2402	0.05	≤ 30.00	Pass
BLE	1 Mbps	19	2440	-0.19	≤ 30.00	Pass
BLE	1 Mbps	39	2480	-0.40	≤ 30.00	Pass
BLE	2 Mbps	00	2402	0.05	≤ 30.00	Pass
BLE	2 Mbps	19	2440	-0.18	≤ 30.00	Pass
BLE	2 Mbps	39	2480	-0.40	≤ 30.00	Pass
BLE	500 kbps	00	2402	0.06	≤ 30.00	Pass
BLE	500 kbps	19	2440	-0.18	≤ 30.00	Pass
BLE	500 kbps	39	2480	-0.40	≤ 30.00	Pass
BLE	125 kbps	00	2402	0.06	≤ 30.00	Pass
BLE	125 kbps	19	2440	-0.19	≤ 30.00	Pass
BLE	125 kbps	39	2480	-0.40	≤ 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	1 Mbps	00	2402	-0.12	≤ 30.00	Pass
BLE	1 Mbps	19	2440	-0.29	≤ 30.00	Pass
BLE	1 Mbps	39	2480	-0.51	≤ 30.00	Pass
BLE	2 Mbps	00	2402	-0.13	≤ 30.00	Pass
BLE	2 Mbps	19	2440	-0.29	≤ 30.00	Pass
BLE	2 Mbps	39	2480	-0.51	≤ 30.00	Pass
BLE	500 kbps	00	2402	-0.13	≤ 30.00	Pass
BLE	500 kbps	19	2440	-0.29	≤ 30.00	Pass
BLE	500 kbps	39	2480	-0.51	≤ 30.00	Pass
BLE	125 kbps	00	2402	-0.13	≤ 30.00	Pass
BLE	125 kbps	19	2440	-0.28	≤ 30.00	Pass
BLE	125 kbps	39	2480	-0.51	≤ 30.00	Pass

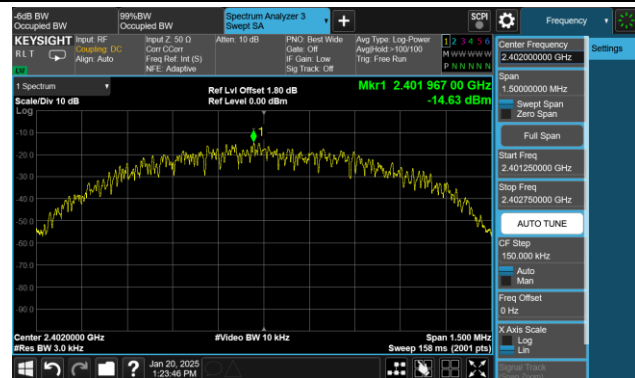
A.4 Power Spectral Density Test Result

Test Site	WJ-SR3	Test Engineer	Simon Lu
Test Date	2025-01-20		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Result
BLE	1 Mbps	00	2402	-14.63	≤ 8.00	Pass
BLE	1 Mbps	19	2440	-14.71	≤ 8.00	Pass
BLE	1 Mbps	39	2480	-15.05	≤ 8.00	Pass
BLE	2 Mbps	00	2402	-17.15	≤ 8.00	Pass
BLE	2 Mbps	19	2440	-17.22	≤ 8.00	Pass
BLE	2 Mbps	39	2480	-17.66	≤ 8.00	Pass
BLE	500 kbps	00	2402	-6.16	≤ 8.00	Pass
BLE	500 kbps	19	2440	-6.24	≤ 8.00	Pass
BLE	500 kbps	39	2480	-6.56	≤ 8.00	Pass
BLE	125 kbps	00	2402	-5.71	≤ 8.00	Pass
BLE	125 kbps	19	2440	-6.13	≤ 8.00	Pass
BLE	125 kbps	39	2480	-6.48	≤ 8.00	Pass

BLE-1 Mbps PSD

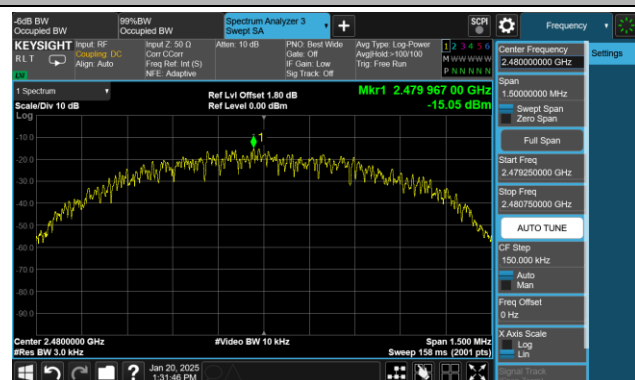
Channel 00 (2402 MHz)



Channel 19 (2440 MHz)

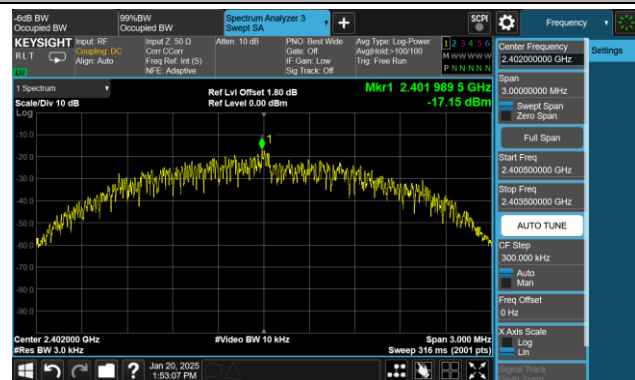


Channel 39 (2480 MHz)

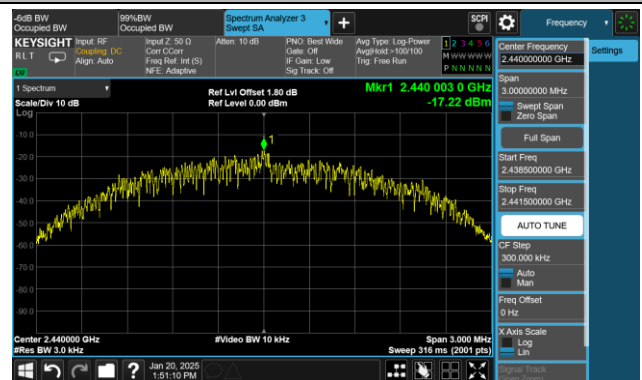


BLE-2 Mbps PSD

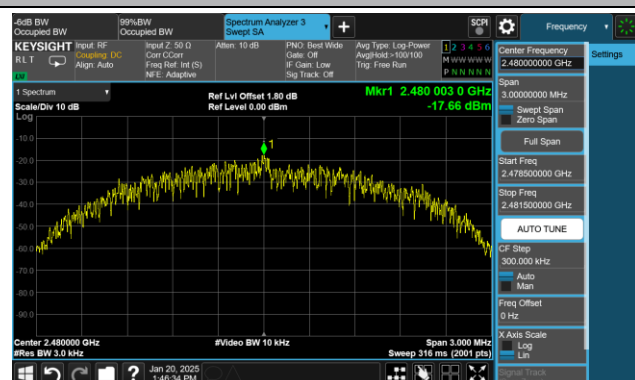
Channel 00 (2402 MHz)



Channel 19 (2440 MHz)

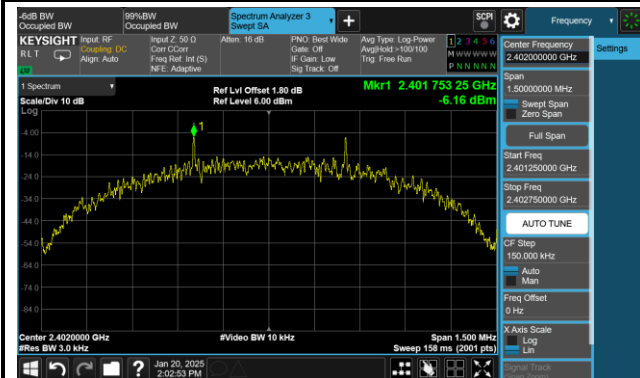


Channel 39 (2480 MHz)

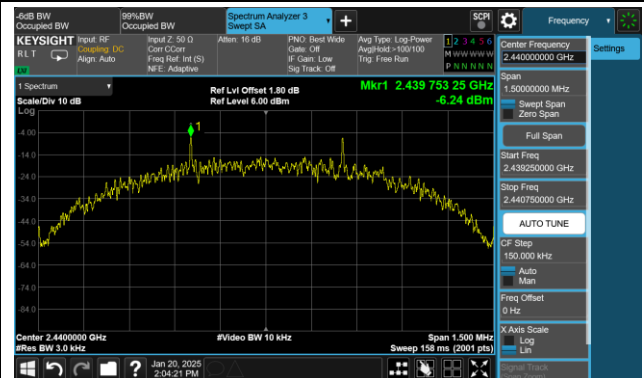


BLE-500 kbps PSD

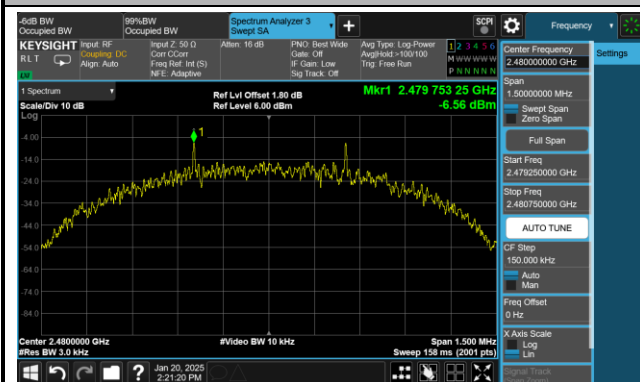
Channel 00 (2402 MHz)



Channel 19 (2440 MHz)

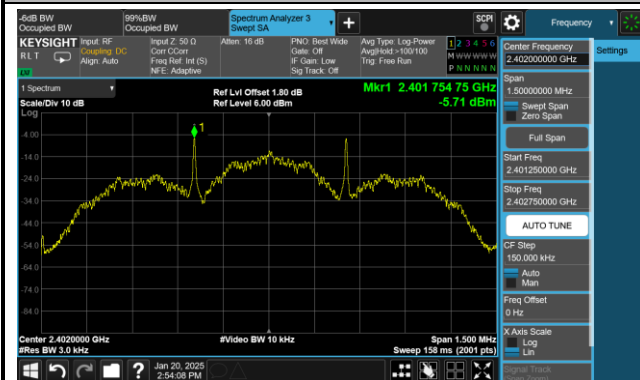


Channel 39 (2480 MHz)

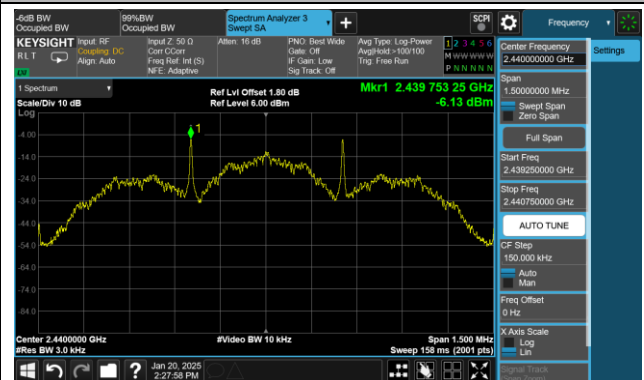


BLE-125 kbps PSD

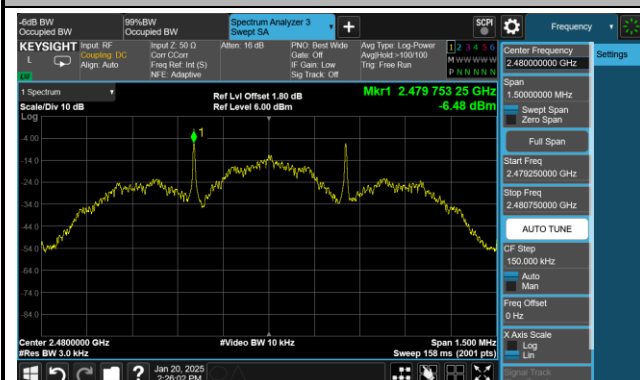
Channel 00 (2402 MHz)



Channel 19 (2440 MHz)



Channel 39 (2480 MHz)



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

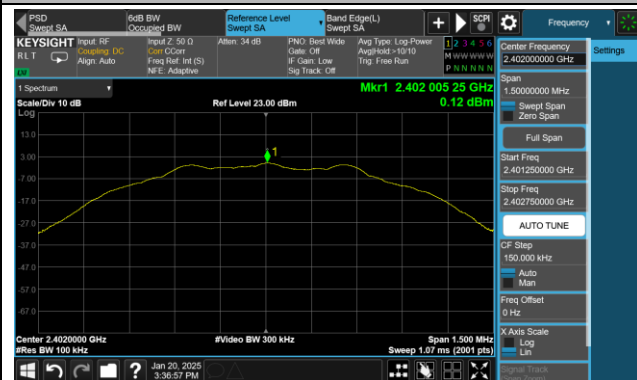
Test Site	WJ-SR3	Test Engineer	Simon Lu
Test Date	2025-01-21		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1 Mbps	00	2402	20	Pass
BLE	1 Mbps	19	2440	20	Pass
BLE	1 Mbps	39	2480	20	Pass
BLE	2 Mbps	00	2402	20	Pass
BLE	2 Mbps	19	2440	20	Pass
BLE	2 Mbps	39	2480	20	Pass
BLE	500 kbps	00	2402	20	Pass
BLE	500 kbps	19	2440	20	Pass
BLE	500 kbps	39	2480	20	Pass
BLE	125 kbps	00	2402	20	Pass
BLE	125 kbps	19	2440	20	Pass
BLE	125 kbps	39	2480	20	Pass

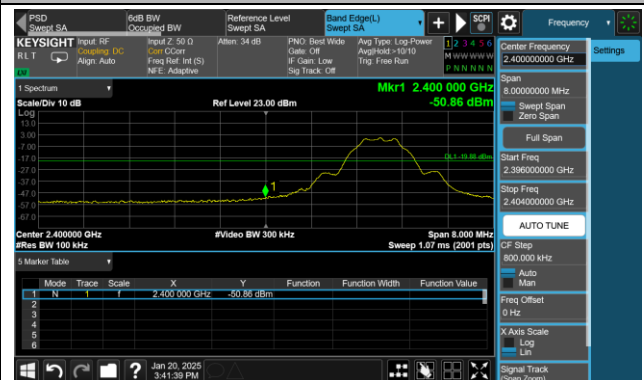
BLE-1 Mbps Out-of-Band Emissions

Channel 00 (2402 MHz)

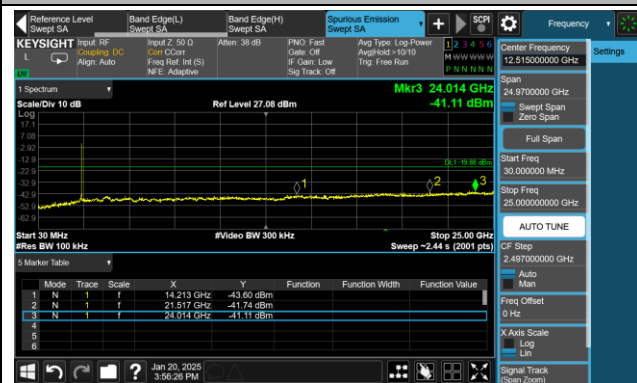
100kHz PSD Reference Level



Low Band Edge

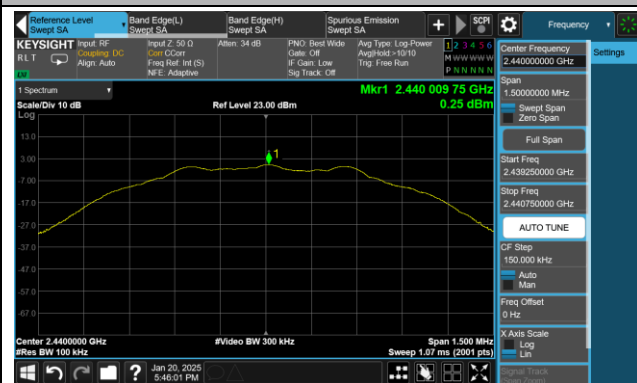


Spurious Emission 30 MHz ~ 25 GHz

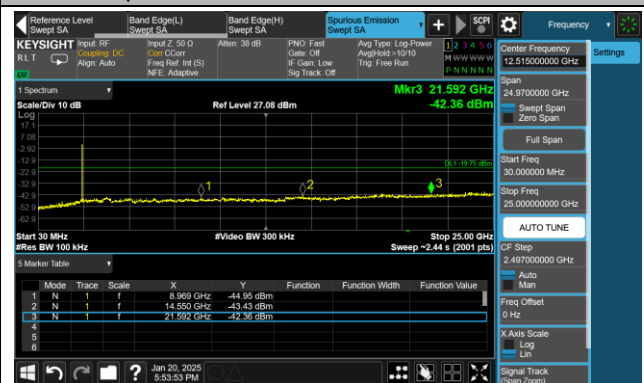


Channel 19 (2440 MHz)

100kHz PSD Reference Level

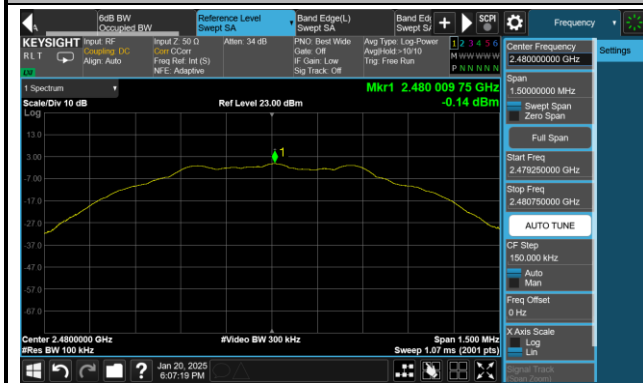


Spurious Emission 30 MHz ~ 25 GHz

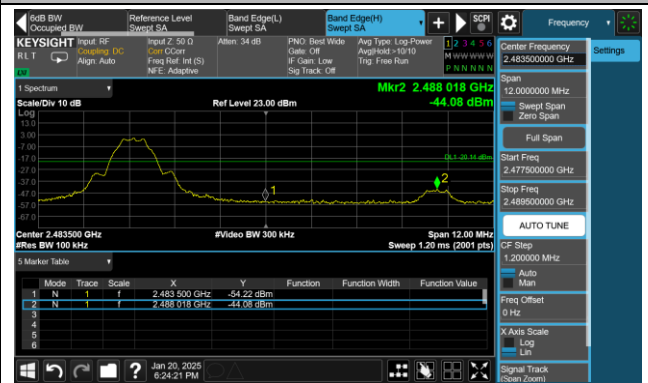


Channel 39 (2480 MHz)

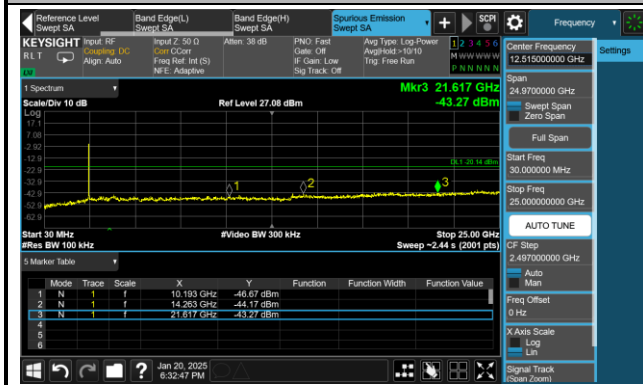
100kHz PSD Reference Level



High Band Edge



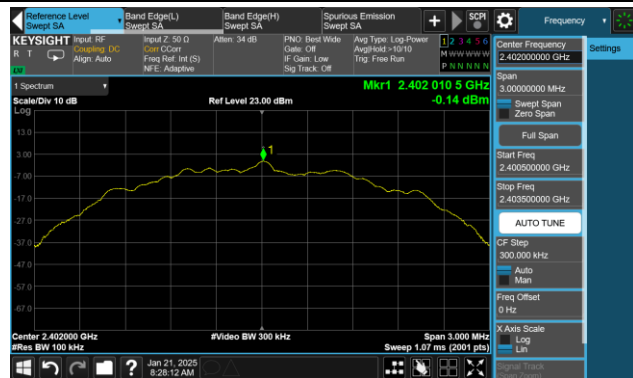
Spurious Emission 30 MHz ~ 25 GHz



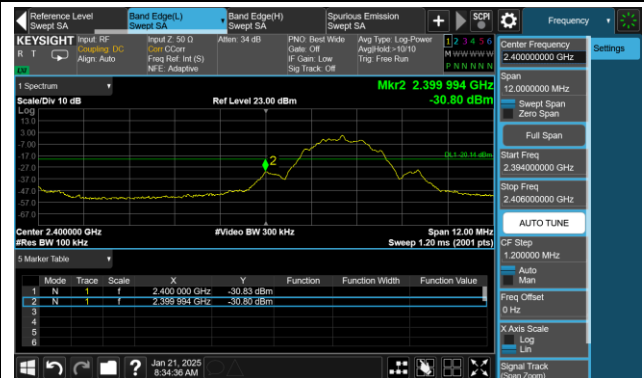
BLE-2 Mbps Out-of-Band Emissions

Channel 00 (2402 MHz)

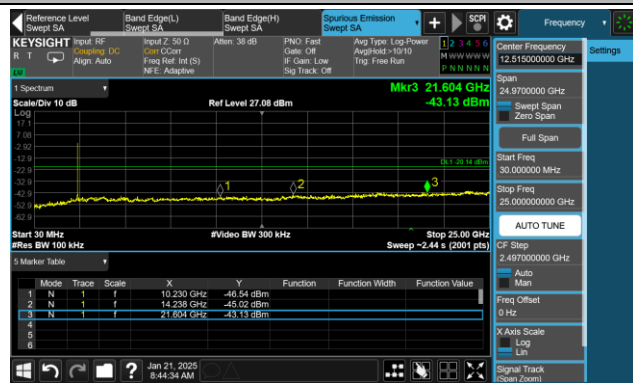
100kHz PSD Reference Level



Low Band Edge

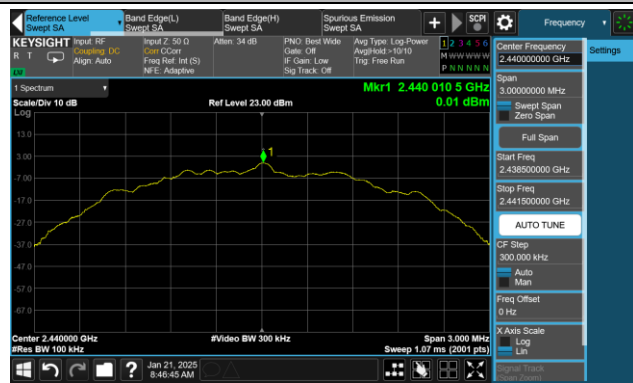


Spurious Emission 30 MHz ~ 25 GHz

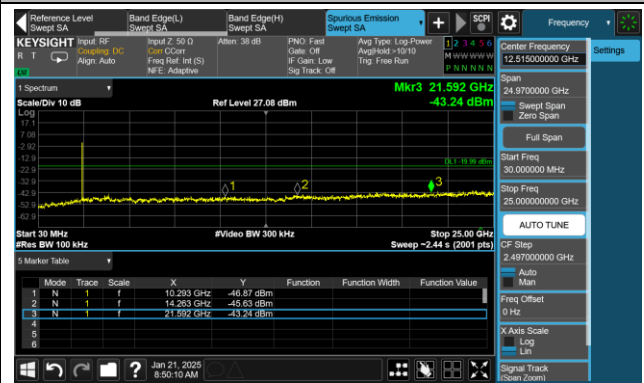


Channel 19 (2440 MHz)

100kHz PSD Reference Level



Spurious Emission 30 MHz ~ 25 GHz

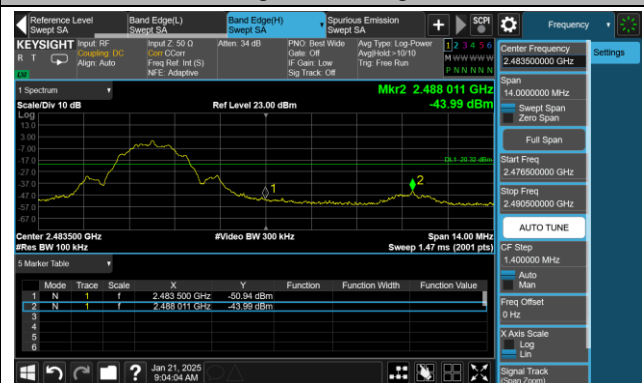


Channel 39 (2480 MHz)

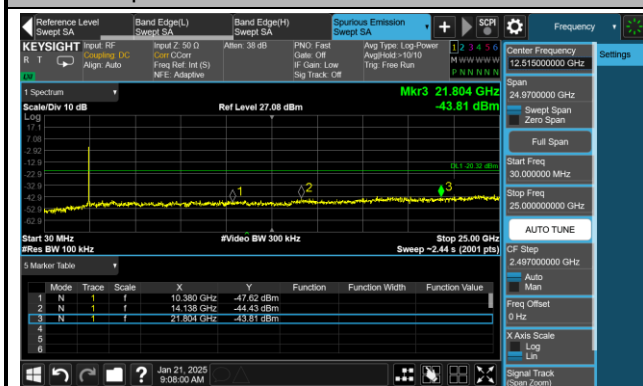
100kHz PSD Reference Level



High Band Edge



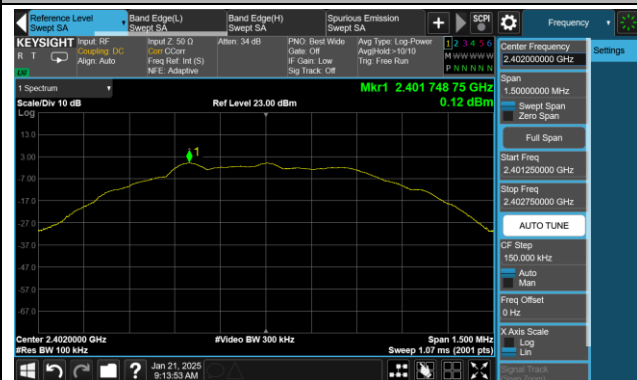
Spurious Emission 30 MHz ~ 25 GHz



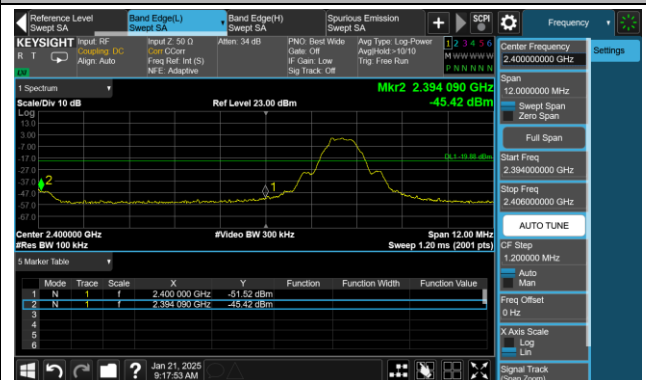
BLE-500 kbps Out-of-Band Emissions

Channel 00 (2402 MHz)

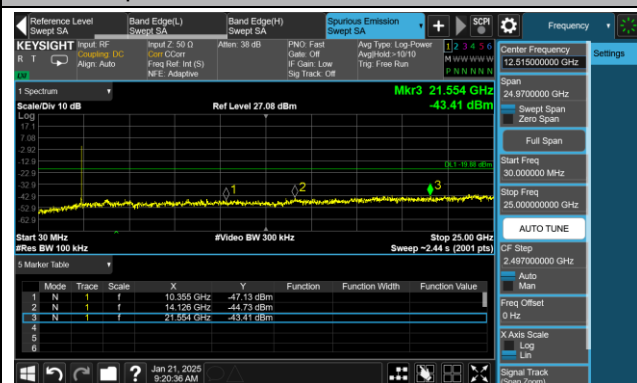
100kHz PSD Reference Level



Low Band Edge

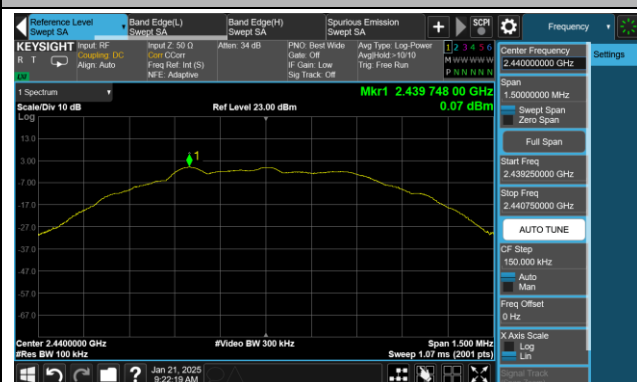


Spurious Emission 30 MHz ~ 25 GHz

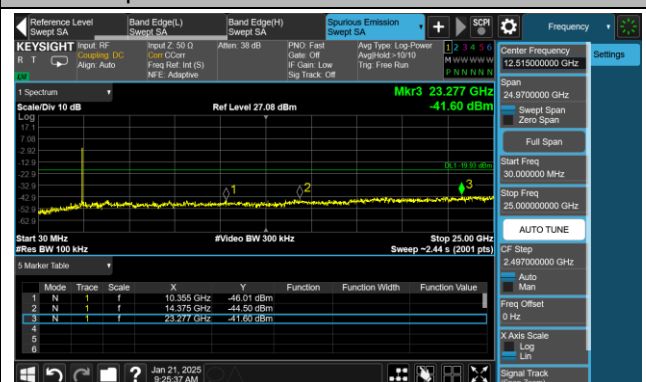


Channel 19 (2440 MHz)

100kHz PSD Reference Level

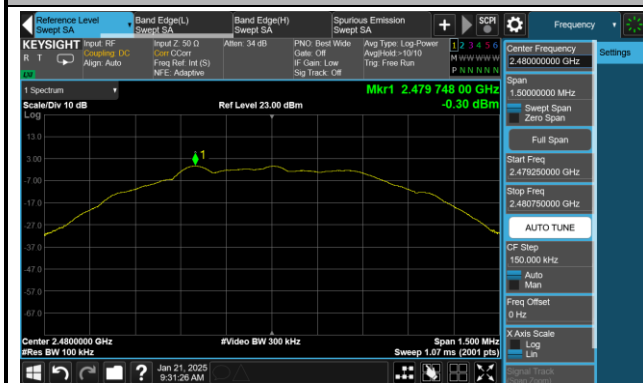


Spurious Emission 30 MHz ~ 25 GHz

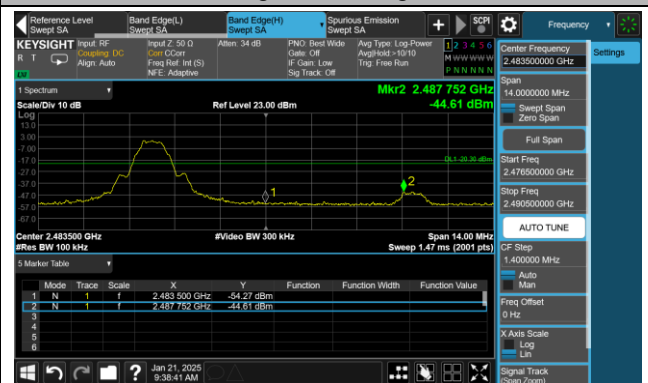


Channel 39 (2480 MHz)

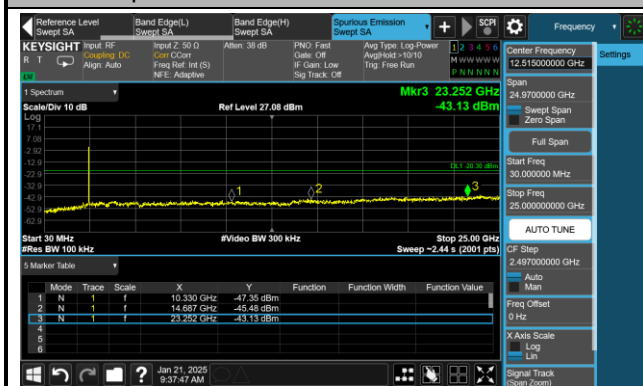
100kHz PSD Reference Level



High Band Edge



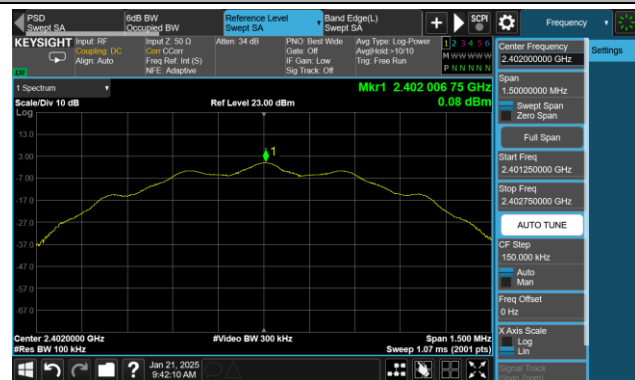
Spurious Emission 30 MHz ~ 25 GHz



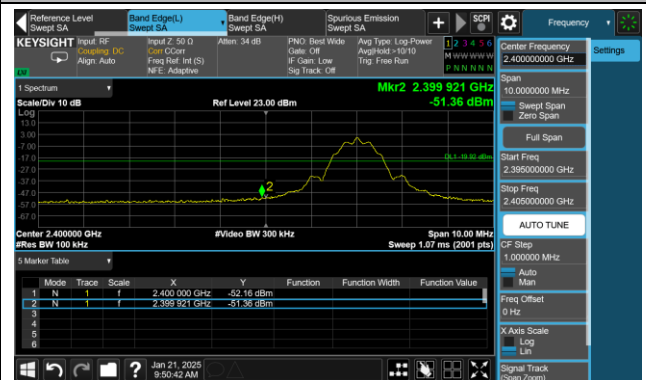
BLE-125 kbps Out-of-Band Emissions

Channel 00 (2402 MHz)

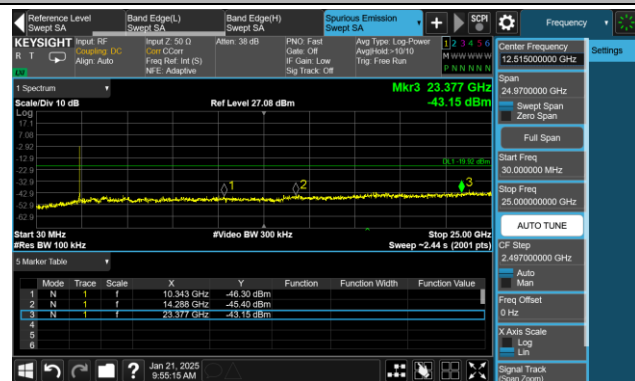
100kHz PSD Reference Level



Low Band Edge

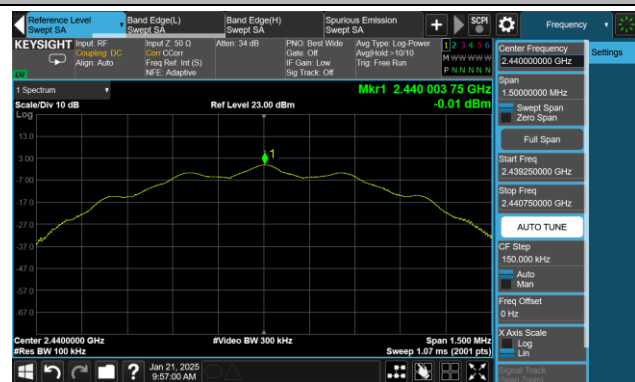


Spurious Emission 30 MHz ~ 25 GHz

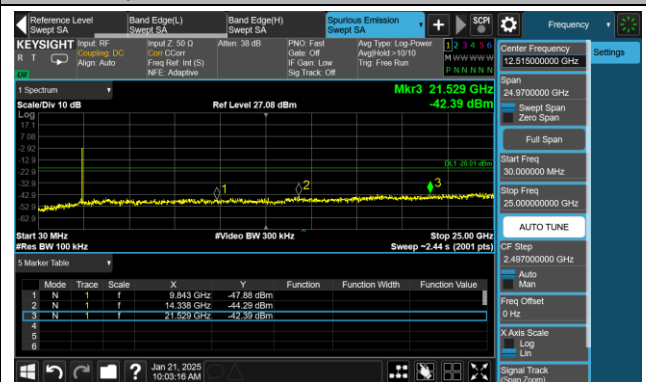


Channel 19 (2440 MHz)

100kHz PSD Reference Level

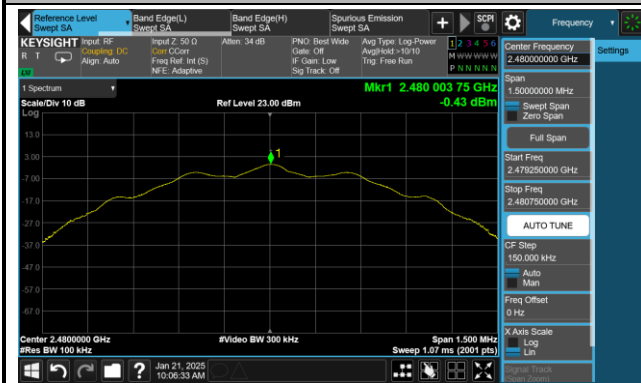


Spurious Emission 30 MHz ~ 25 GHz

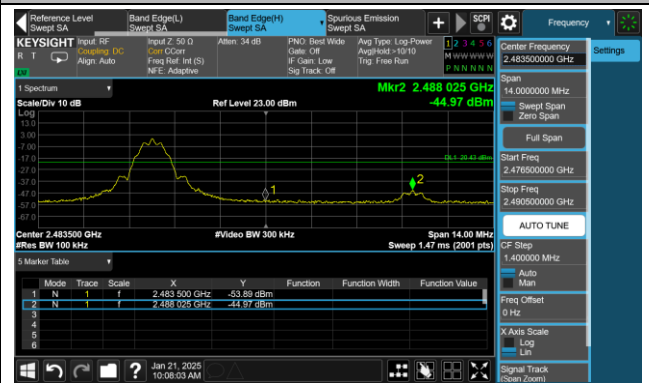


Channel 39 (2480 MHz)

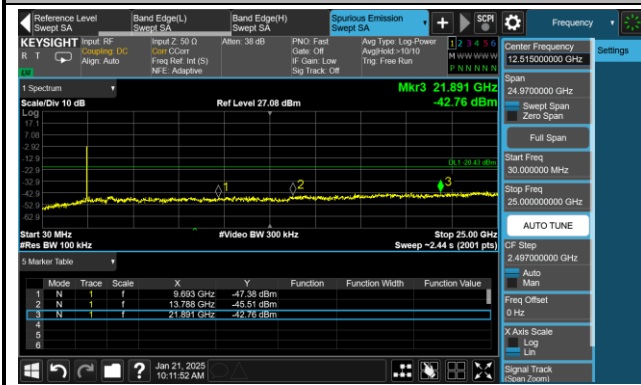
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30 MHz ~ 25 GHz



A.6 Radiated Spurious Emission Test Result

Test Site	WJ-AC1	Test Engineer	Carl Jiang
Test Date	2025-02-07	Test Mode	BLE-1 Mbps
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	4804.6	41.8	8.3	50.1	54.0	-3.9	Average	Horizontal
	4804.6	44.6	8.3	52.9	74.0	-21.1	Peak	Horizontal
	11676.0	28.6	19.5	48.1	74.0	-25.9	Peak	Horizontal
	17853.8	13.0	28.8	41.8	54.0	-12.2	Average	Horizontal
	17853.8	26.8	28.8	55.6	74.0	-18.4	Peak	Horizontal
	4751.9	35.3	8.3	43.6	74.0	-30.4	Peak	Vertical
	11897.0	28.3	20.1	48.4	74.0	-25.6	Peak	Vertical
	17913.3	13.0	28.8	41.8	54.0	-12.2	Average	Vertical
	17913.3	24.1	28.8	52.9	74.0	-21.1	Peak	Vertical
19	4879.4	38.1	8.4	46.5	54.0	-7.5	Average	Horizontal
	4879.4	41.3	8.4	49.7	74.0	-24.3	Peak	Horizontal
	7420.9	31.1	13.6	44.7	74.0	-29.3	Peak	Horizontal
	17862.3	13.1	29.2	42.3	54.0	-11.7	Average	Horizontal
	17862.3	24.4	29.2	53.6	74.0	-20.4	Peak	Horizontal
	4088.9	34.3	7.2	41.5	74.0	-32.5	Peak	Vertical
	11912.3	30.0	20.1	50.1	74.0	-23.9	Peak	Vertical
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Vertical
	17909.9	24.7	28.7	53.4	74.0	-20.6	Peak	Vertical
39	4959.3	36.5	8.4	44.9	54.0	-9.1	Average	Horizontal
	4959.3	40.0	8.4	48.4	74.0	-25.6	Peak	Horizontal
	11684.5	28.9	19.5	48.4	74.0	-25.6	Peak	Horizontal
	17716.1	13.0	29.3	42.3	54.0	-11.7	Average	Horizontal
	17716.1	25.1	29.3	54.4	74.0	-19.6	Peak	Horizontal
	4760.4	34.7	8.4	43.1	74.0	-30.9	Peak	Vertical
	11772.9	29.9	19.7	49.6	74.0	-24.4	Peak	Vertical
	17862.3	13.1	29.2	42.3	54.0	-11.7	Average	Vertical
	17862.3	24.8	29.2	54.0	74.0	-20.0	Peak	Vertical

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

$\text{Factor (dB/m)} = \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)} - \text{Pre_Amplifier Gain (dB)}$
--

Test Site	WJ-AC1	Test Engineer	Carl Jiang
Test Date	2025-02-07	Test Mode	BLE-2 Mbps
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	4802.9	37.1	8.3	45.4	54.0	-8.6	Average	Horizontal
	4802.9	43.3	8.3	51.6	74.0	-22.4	Peak	Horizontal
	12413.8	28.7	21.2	49.9	74.0	-24.1	Peak	Horizontal
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Horizontal
	17909.9	23.6	28.7	52.3	74.0	-21.7	Peak	Horizontal
	4932.1	34.4	8.4	42.8	74.0	-31.2	Peak	Vertical
	12109.5	28.5	20.6	49.1	74.0	-24.9	Peak	Vertical
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Vertical
	17909.9	24.6	28.7	53.3	74.0	-20.7	Peak	Vertical
19	4881.1	33.2	8.4	41.6	54.0	-12.4	Average	Horizontal
	4881.1	40.0	8.4	48.4	74.0	-25.6	Peak	Horizontal
	11725.3	29.1	19.6	48.7	74.0	-25.3	Peak	Horizontal
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Horizontal
	17909.9	24.3	28.7	53.0	74.0	-21.0	Peak	Horizontal
	4765.5	34.6	8.4	43.0	74.0	-31.0	Peak	Vertical
	11677.7	28.5	19.5	48.0	74.0	-26.0	Peak	Vertical
	17909.9	13.2	28.7	41.9	54.0	-12.1	Average	Vertical
	17909.9	23.5	28.7	52.2	74.0	-21.8	Peak	Vertical
39	4961.0	32.9	8.4	41.3	54.0	-12.7	Average	Horizontal
	4961.0	39.2	8.4	47.6	74.0	-26.4	Peak	Horizontal
	12218.3	28.8	20.8	49.6	74.0	-24.4	Peak	Horizontal
	17909.9	13.0	28.7	41.7	54.0	-12.3	Average	Horizontal
	17909.9	24.4	28.7	53.1	74.0	-20.9	Peak	Horizontal
	4814.8	34.0	8.4	42.4	74.0	-31.6	Peak	Vertical
	11303.7	29.3	18.7	48.0	74.0	-26.0	Peak	Vertical
	17909.9	13.0	28.7	41.7	54.0	-12.3	Average	Vertical
	17909.9	24.1	28.7	52.8	74.0	-21.2	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)

Test Site	WJ-AC1	Test Engineer	Carl Jiang
Test Date	2025-02-07	Test Mode	BLE-500 kbps
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	4804.6	41.3	8.3	49.6	54.0	-4.4	Average	Horizontal
	4804.6	43.5	8.3	51.8	74.0	-22.2	Peak	Horizontal
	12323.7	28.8	21.0	49.8	74.0	-24.2	Peak	Horizontal
	17909.9	13.2	28.7	41.9	54.0	-12.1	Average	Horizontal
	17909.9	24.4	28.7	53.1	74.0	-20.9	Peak	Horizontal
	4119.5	35.3	7.2	42.5	74.0	-31.5	Peak	Vertical
	11694.7	28.7	19.5	48.2	74.0	-25.8	Peak	Vertical
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Vertical
	17909.9	24.2	28.7	52.9	74.0	-21.1	Peak	Vertical
19	4879.4	38.2	8.4	46.6	54.0	-7.4	Average	Horizontal
	4879.4	40.1	8.4	48.5	74.0	-25.5	Peak	Horizontal
	12248.9	28.2	21.0	49.2	74.0	-24.8	Peak	Horizontal
	17909.9	13.2	28.7	41.9	54.0	-12.1	Average	Horizontal
	17909.9	24.6	28.7	53.3	74.0	-20.7	Peak	Horizontal
	4007.3	34.6	7.1	41.7	74.0	-32.3	Peak	Vertical
	11553.6	28.3	19.3	47.6	74.0	-26.4	Peak	Vertical
	17862.3	13.1	29.2	42.3	54.0	-11.7	Average	Vertical
	17862.3	24.4	29.2	53.6	74.0	-20.4	Peak	Vertical
39	4961.0	37.4	8.4	45.8	54.0	-8.2	Average	Horizontal
	4961.0	39.8	8.4	48.2	74.0	-25.8	Peak	Horizontal
	11694.7	29.3	19.5	48.8	74.0	-25.2	Peak	Horizontal
	17862.3	13.0	29.2	42.2	54.0	-11.8	Average	Horizontal
	17862.3	24.3	29.2	53.5	74.0	-20.5	Peak	Horizontal
	4845.4	35.4	8.2	43.6	74.0	-30.4	Peak	Vertical
	12124.8	28.3	20.7	49.0	74.0	-25.0	Peak	Vertical
	17862.3	13.0	29.2	42.2	54.0	-11.8	Average	Vertical
	17862.3	24.7	29.2	53.9	74.0	-20.1	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	WJ-AC1	Test Engineer	Carl Jiang
Test Date	2025-02-07	Test Mode	BLE-125 kbps
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.		

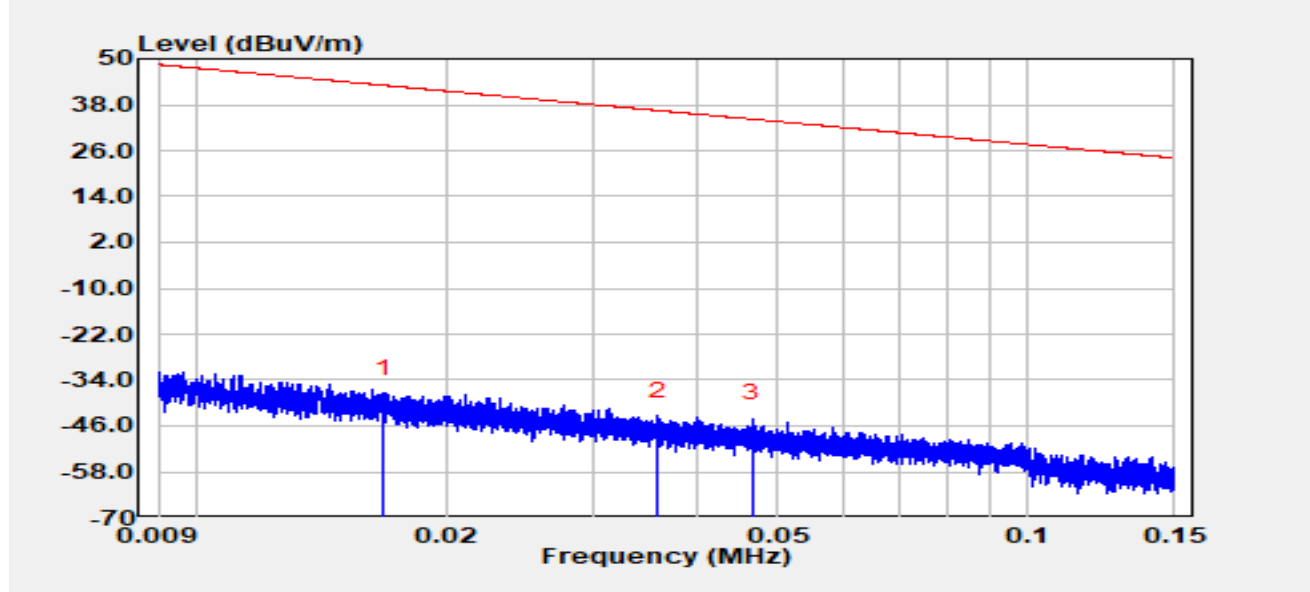
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	4804.6	41.7	8.3	50.0	54.0	-4.0	Average	Horizontal
	4804.6	43.7	8.3	52.0	74.0	-22.0	Peak	Horizontal
	12104.4	28.6	20.7	49.3	74.0	-24.7	Peak	Horizontal
	17909.9	13.0	28.7	41.7	54.0	-12.3	Average	Horizontal
	17909.9	23.8	28.7	52.5	74.0	-21.5	Peak	Horizontal
	4141.6	34.2	7.4	41.6	74.0	-32.4	Peak	Vertical
	11693.0	29.0	19.5	48.5	74.0	-25.5	Peak	Vertical
	17862.3	13.1	29.2	42.3	54.0	-11.7	Average	Vertical
	17862.3	25.0	29.2	54.2	74.0	-19.8	Peak	Vertical
19	4879.4	38.2	8.4	46.6	54.0	-7.4	Average	Horizontal
	4879.4	41.9	8.4	50.3	74.0	-23.7	Peak	Horizontal
	11795.0	29.1	19.8	48.9	74.0	-25.1	Peak	Horizontal
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Horizontal
	17909.9	25.3	28.7	54.0	74.0	-20.0	Peak	Horizontal
	4284.4	35.1	7.6	42.7	74.0	-31.3	Peak	Vertical
	11801.8	29.2	19.8	49.0	74.0	-25.0	Peak	Vertical
	17862.3	13.0	29.2	42.2	54.0	-11.8	Average	Vertical
	17862.3	24.7	29.2	53.9	74.0	-20.1	Peak	Vertical
39	4961.0	38.3	8.4	46.7	54.0	-7.3	Average	Horizontal
	4961.0	41.5	8.4	49.9	74.0	-24.1	Peak	Horizontal
	11701.5	29.6	19.5	49.1	74.0	-24.9	Peak	Horizontal
	17909.9	13.1	28.7	41.8	54.0	-12.2	Average	Horizontal
	17909.9	25.0	28.7	53.7	74.0	-20.3	Peak	Horizontal
	4595.5	34.9	8.2	43.1	74.0	-30.9	Peak	Vertical
	11040.2	29.7	18.4	48.1	74.0	-25.9	Peak	Vertical
	17909.9	13.0	28.7	41.7	54.0	-12.3	Average	Vertical
	17909.9	23.8	28.7	52.5	74.0	-21.5	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 Worst-case Result of Radiated Emission for 9 kHz ~ 30 MHz:

Site	WJ-AC1	Test Date	2025-02-08
Temperature	14.2°C	Humidity	23.5%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Coaxial
Test Mode	Transmit by BLE 1M at 2402MHz		

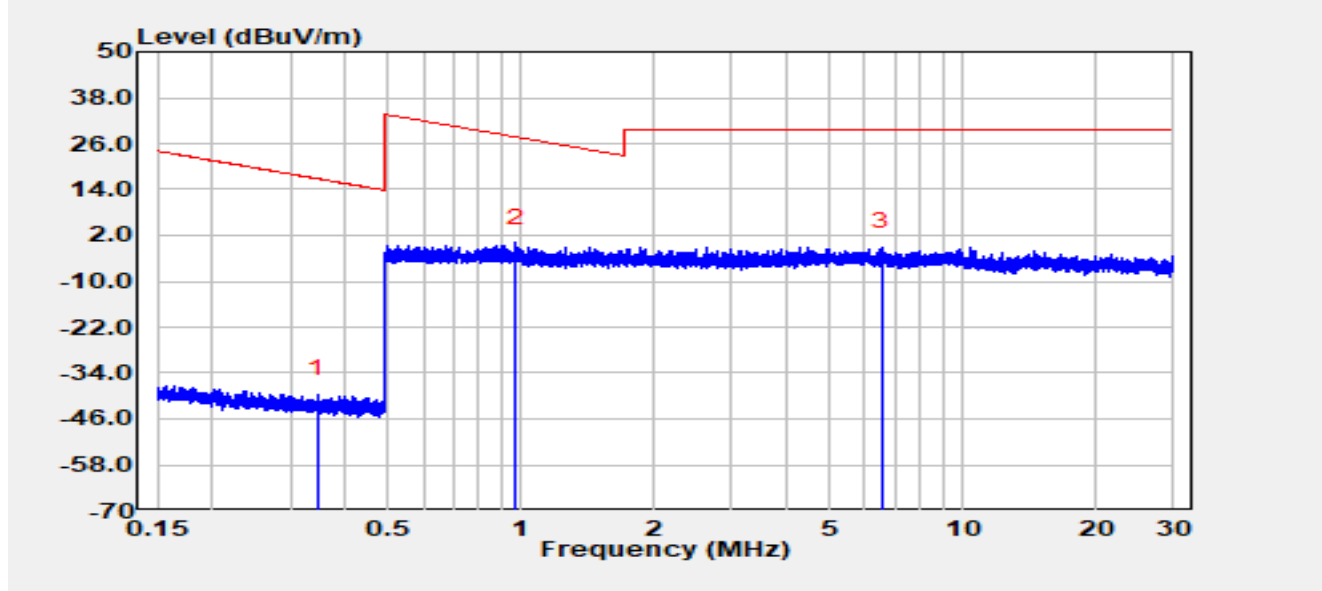


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		0.02	22.18	-59.72	-37.54	-80.62	43.07	Peak
2		0.04	16.69	-60.13	-43.45	-79.93	36.48	Peak
3	*	0.05	16.08	-60.18	-44.10	-78.32	34.22	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) + 40log(d1/d2) (dB), d1 = 3 m, d2 = 300 m (9 kHz - 490 kHz) or 30 m (490 kHz - 30 MHz).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-08
Temperature	14.2°C	Humidity	23.5%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Coaxial
Test Mode	Transmit by BLE 1M at 2402MHz		

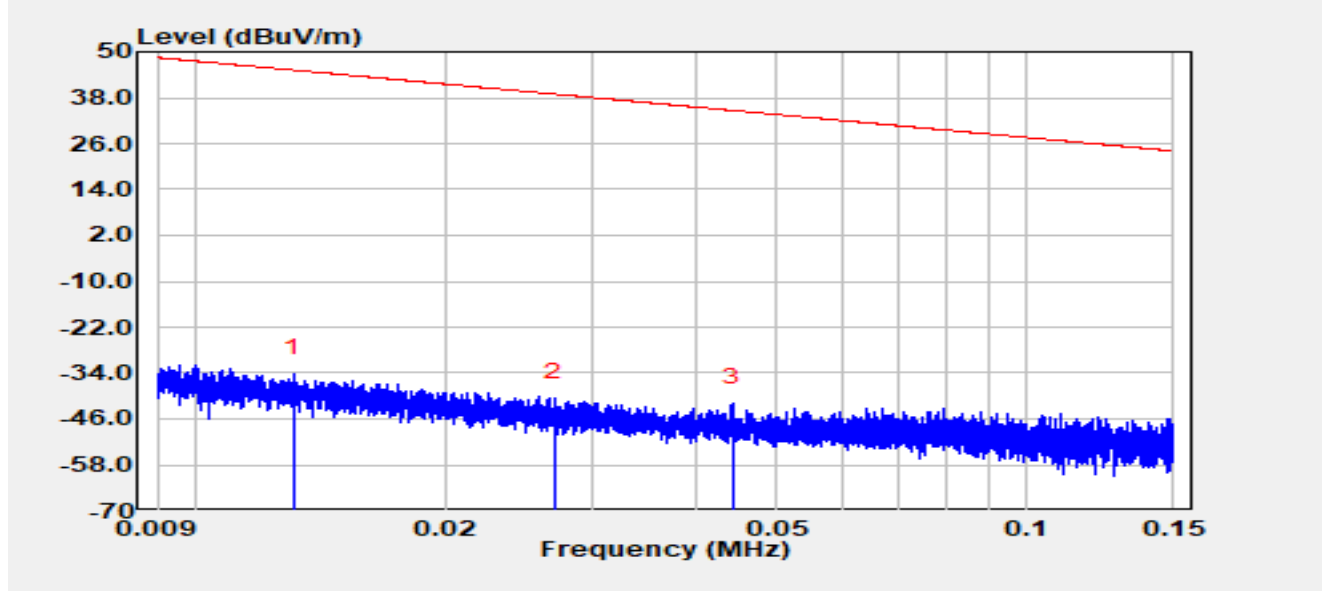


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		0.34	20.67	-60.32	-39.65	-56.50	16.85	Peak
2	*	0.97	20.38	-20.35	0.03	-27.85	27.88	Peak
3		6.57	19.33	-20.40	-1.07	-30.57	29.50	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) + $40\log(d1/d2)$ (dB), $d1 = 3$ m, $d2 = 300$ m (9 kHz - 490 kHz) or 30 m (490 kHz - 30 MHz).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-08
Temperature	14.2°C	Humidity	23.5%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Coplanar
Test Mode	Transmit by BLE 1M at 2402MHz		

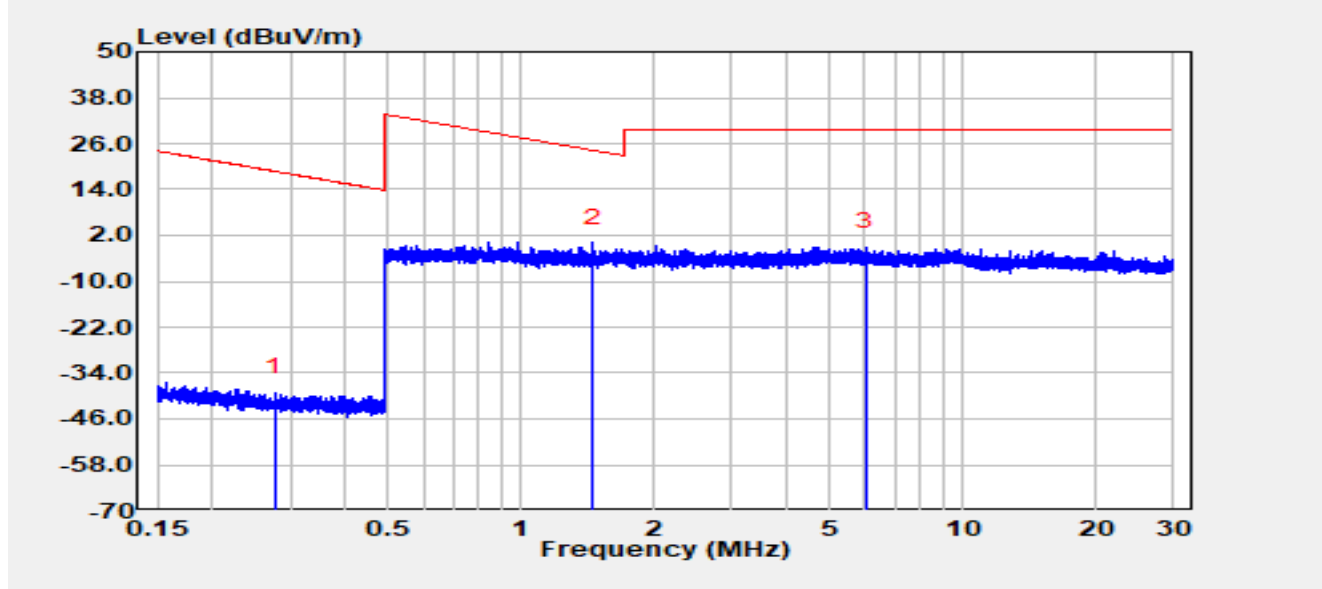


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		0.01	25.29	-59.48	-34.19	-79.42	45.24	Peak
2		0.03	19.69	-60.04	-40.35	-79.33	38.97	Peak
3	*	0.04	18.36	-60.17	-41.81	-76.49	34.68	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) + $40\log(d1/d2)$ (dB), $d1 = 3$ m, $d2 = 300$ m (9 kHz - 490 kHz) or 30 m (490 kHz - 30 MHz).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-08
Temperature	14.2°C	Humidity	23.5%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Coplanar
Test Mode	Transmit by BLE 1M at 2402MHz		



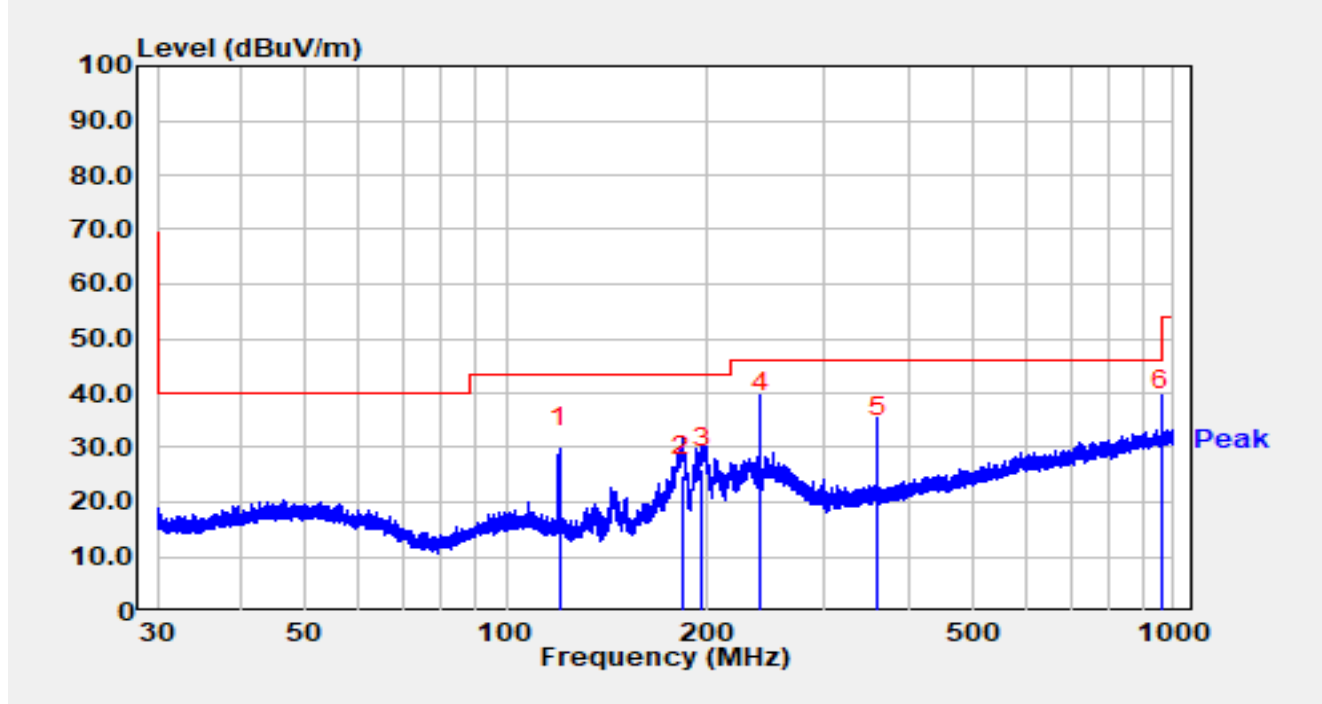
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		0.28	21.15	-60.30	-39.15	-57.92	18.77	Peak
2	*	1.45	20.39	-20.27	0.12	-24.29	24.41	Peak
3		6.03	19.42	-20.45	-1.03	-30.53	29.50	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) + $40\log(d1/d2)$ (dB), $d1 = 3$ m, $d2 = 300$ m (9 kHz - 490 kHz) or 30 m (490 kHz - 30 MHz).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

The Worst-case Result of Radiated Emission for 30 MHz ~ 1 GHz:

Site	WJ-AC1	Test Date	2025-02-07
Temperature	15.4 °C	Humidity	30.1 %
Limit	FCC_Part 15.209_RSE(3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Horizontal
Test Mode	Transmit by BLE 1M at 2402 MHz		

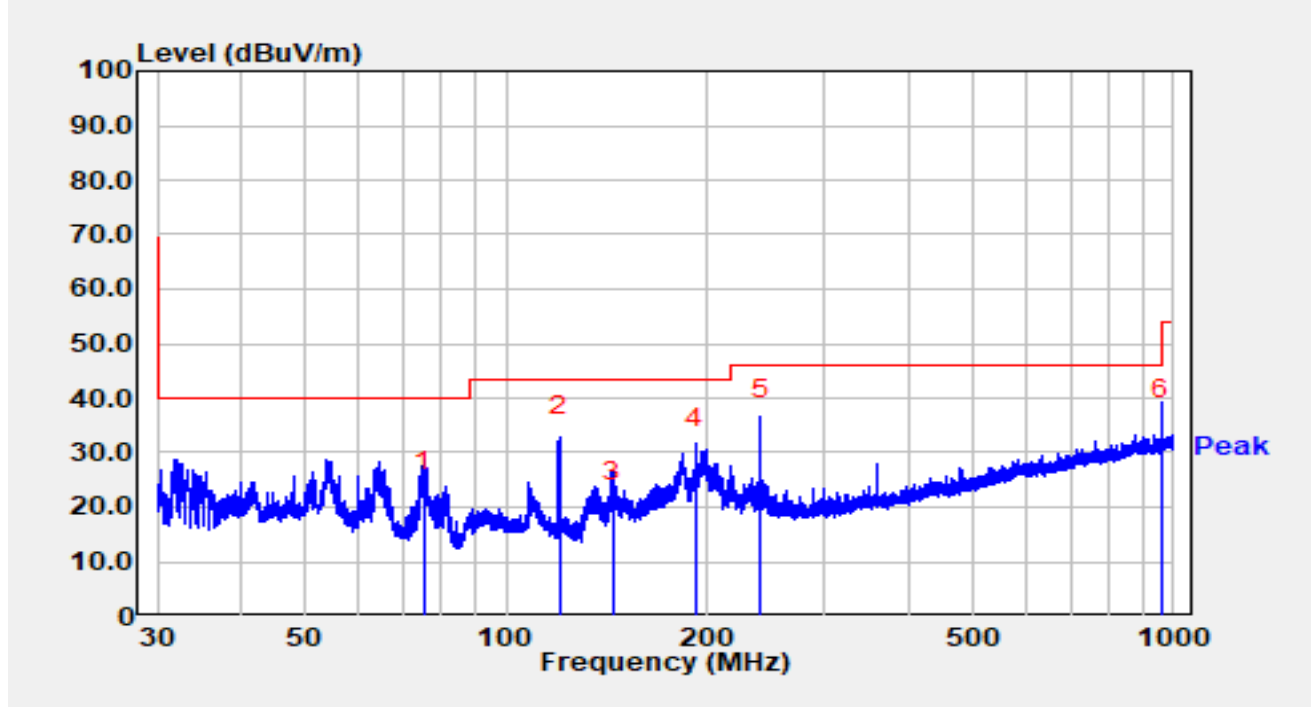


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		119.982	14.00	15.96	29.96	-13.54	43.50	QP
2		183.844	8.50	16.37	24.87	-18.63	43.50	QP
3		196.786	8.30	17.77	26.07	-17.43	43.50	QP
4	*	239.987	17.10	19.18	36.28	-9.72	46.00	QP
5		360.069	9.60	22.29	31.89	-14.11	46.00	QP
6		960.140	5.80	31.15	36.95	-17.05	54.00	QP

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-07
Temperature	15.4 °C	Humidity	30.1 %
Limit	FCC_Part 15.209_RSE(3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Vertical
Test Mode	Transmit by BLE 1M at 2402 MHz		



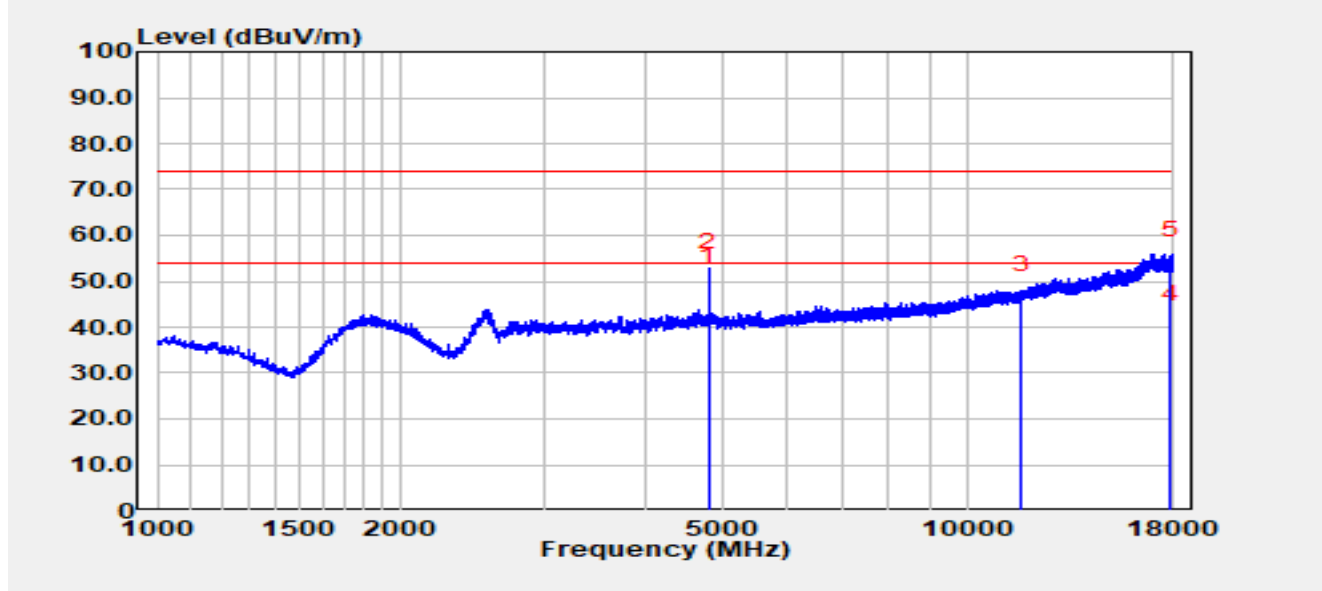
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		75.209	9.00	13.78	22.78	-17.22	40.00	QP
2		119.982	17.20	15.96	33.16	-10.34	43.50	QP
3		144.791	7.00	14.10	21.10	-22.40	43.50	QP
4		192.014	13.50	17.30	30.80	-12.70	43.50	QP
5	*	239.987	17.00	19.18	36.18	-9.82	46.00	QP
6		960.140	5.00	31.15	36.15	-17.85	54.00	QP

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

The Worst-case Result of Radiated Emission for 1 ~ 18 GHz:

Site	WJ-AC1	Test Date	2025-02-07
Temperature	15.4°C	Humidity	30.1%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Horizontal
Test Mode	Transmit by BLE 1M at 2402MHz		

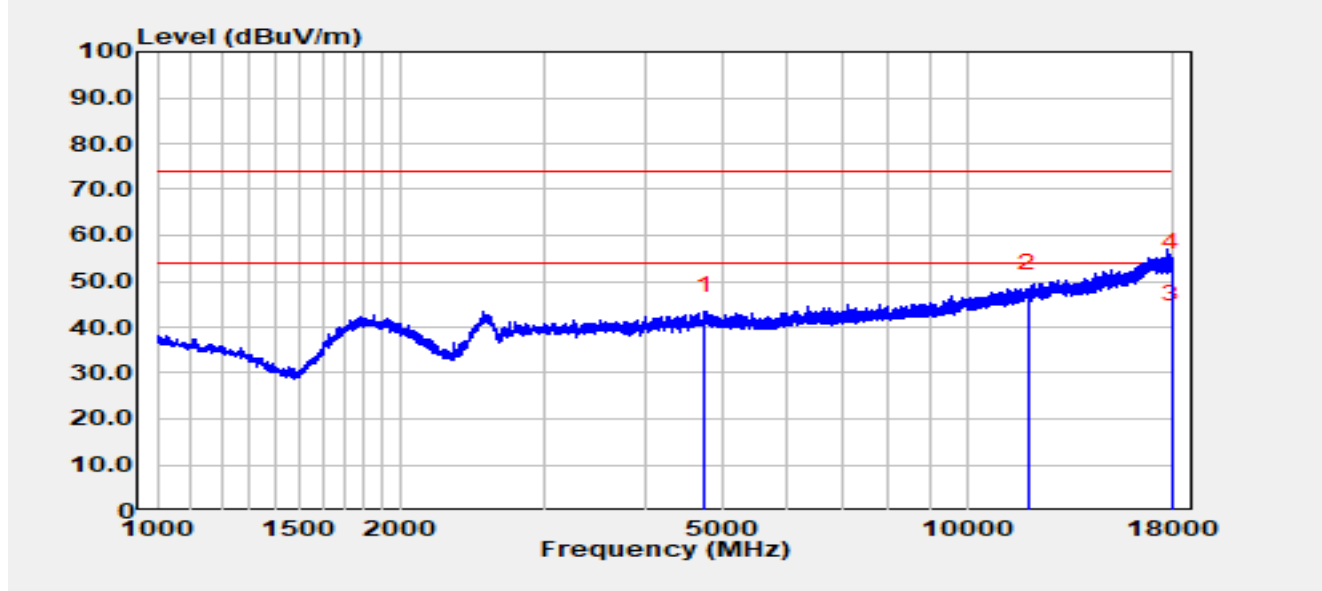


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	4804.60	41.82	8.31	50.13	-3.87	54.00	Average
2		4804.60	44.60	8.31	52.91	-21.09	74.00	Peak
3		11676.00	28.59	19.52	48.11	-25.89	74.00	Peak
4		17853.80	13.01	28.78	41.79	-12.21	54.00	Average
5		17853.80	26.78	28.78	55.56	-18.44	74.00	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-07
Temperature	15.4°C	Humidity	30.1%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Vertical
Test Mode	Transmit by BLE 1M at 2402MHz		



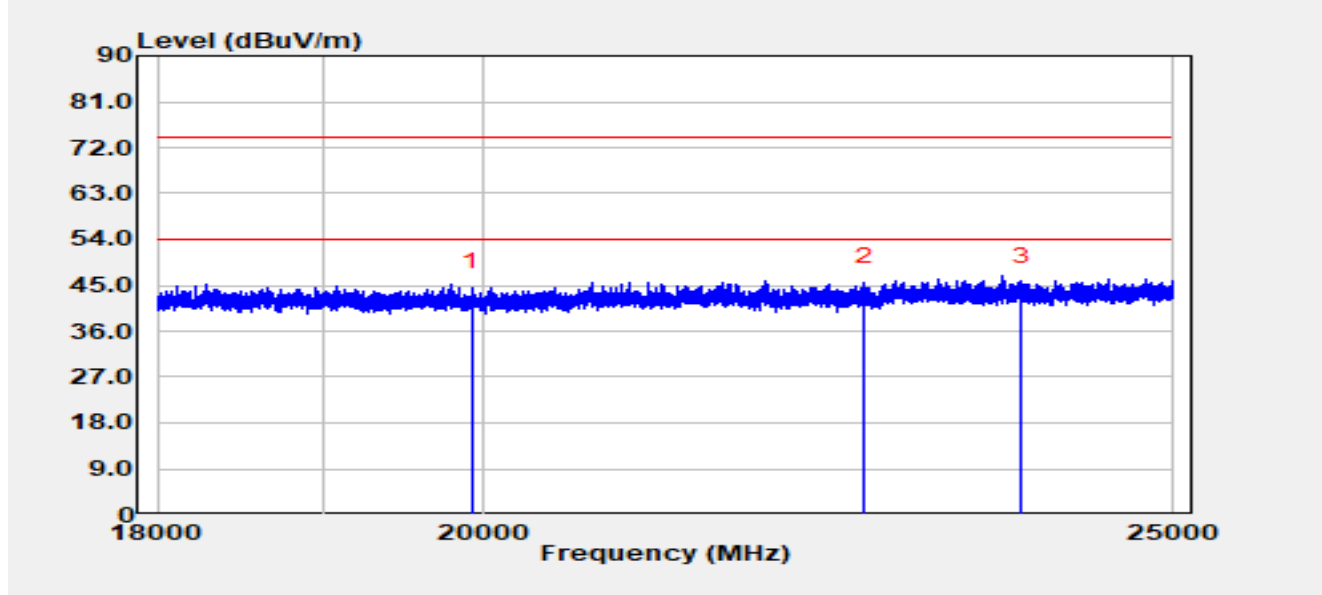
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		4751.90	35.25	8.28	43.53	-30.47	74.00	Peak
2		11897.00	28.29	20.13	48.43	-25.57	74.00	Peak
3	*	17913.30	13.03	28.81	41.84	-12.16	54.00	Average
4		17913.30	24.11	28.81	52.92	-21.08	74.00	Peak

Notes:

- " * " indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

The Worst-case Result of Radiated Emission for above 18 GHz:

Site	WJ-AC2	Test Date	2025-02-15
Temperature	20.3°C	Humidity	39.3%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Horizontal
Test Mode	Transmit by BLE 1M at 2402MHz		

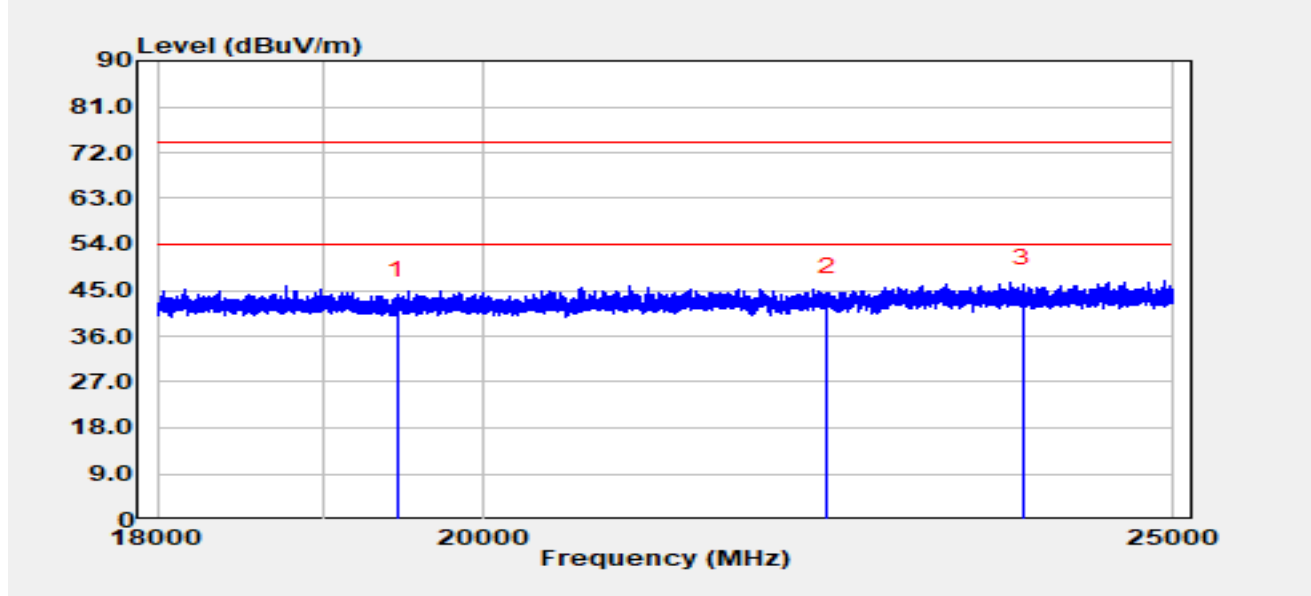


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		19928.50	52.77	-8.17	44.60	-29.40	74.00	Peak
2		22626.30	50.35	-4.76	45.59	-28.41	74.00	Peak
3	*	23802.30	49.66	-3.92	45.74	-28.26	74.00	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement(dBμV/m) = Reading(dBμV) + C.F (dB/m).

Site	WJ-AC2	Test Date	2025-02-15
Temperature	20.3°C	Humidity	39.3%
Limit	FCC_Part 15.209_RSE (3m)	Test Engineer	Carl Jiang
Test Voltage	By PC	Polarity	Vertical
Test Mode	Transmit by BLE 1M at 2402MHz		



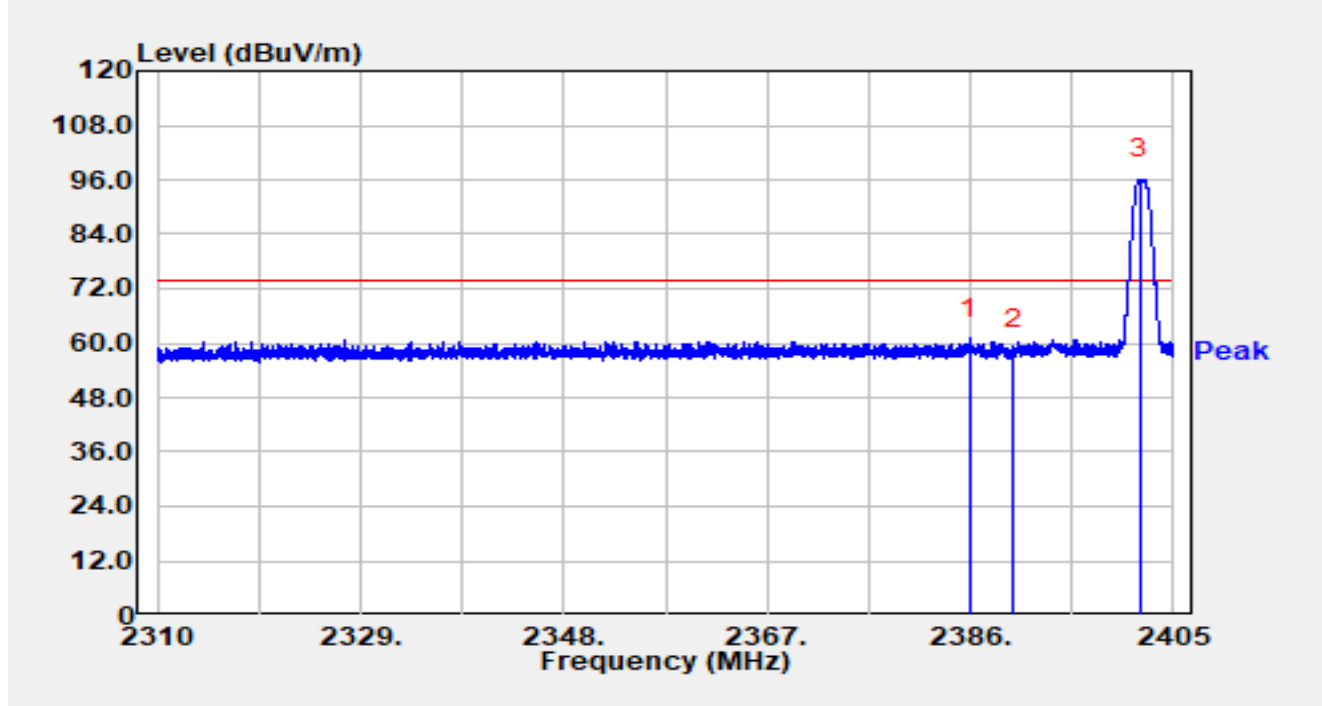
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		19452.50	52.15	-8.06	44.09	-29.91	74.00	Peak
2		22347.00	49.80	-5.23	44.56	-29.44	74.00	Peak
3	*	23810.70	50.32	-3.98	46.34	-27.66	74.00	Peak

Notes:

- "*" indicates the worst-case emission level observed during the measurement.
- C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - AMP (dB).
- Measurement(dBμV/m) = Reading(dBμV) + C.F (dB/m).

A.7 Radiated Restricted Band Edge Test Result

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Horizontal
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2402 MHz		

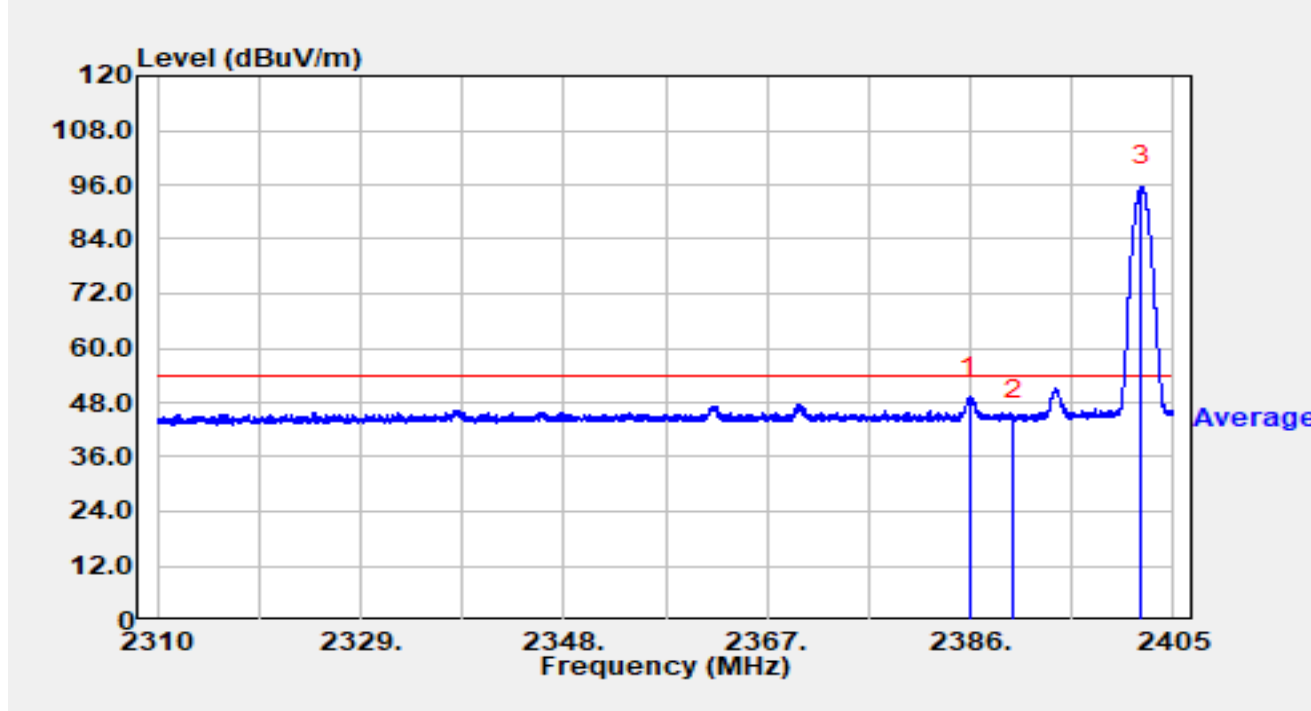


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2385.934	24.10	36.81	60.91	-13.09	74.00	Peak
2		2390.000	21.69	36.83	58.52	-15.48	74.00	Peak
3		2401.799	59.18	36.92	96.09	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Horizontal
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2402 MHz		

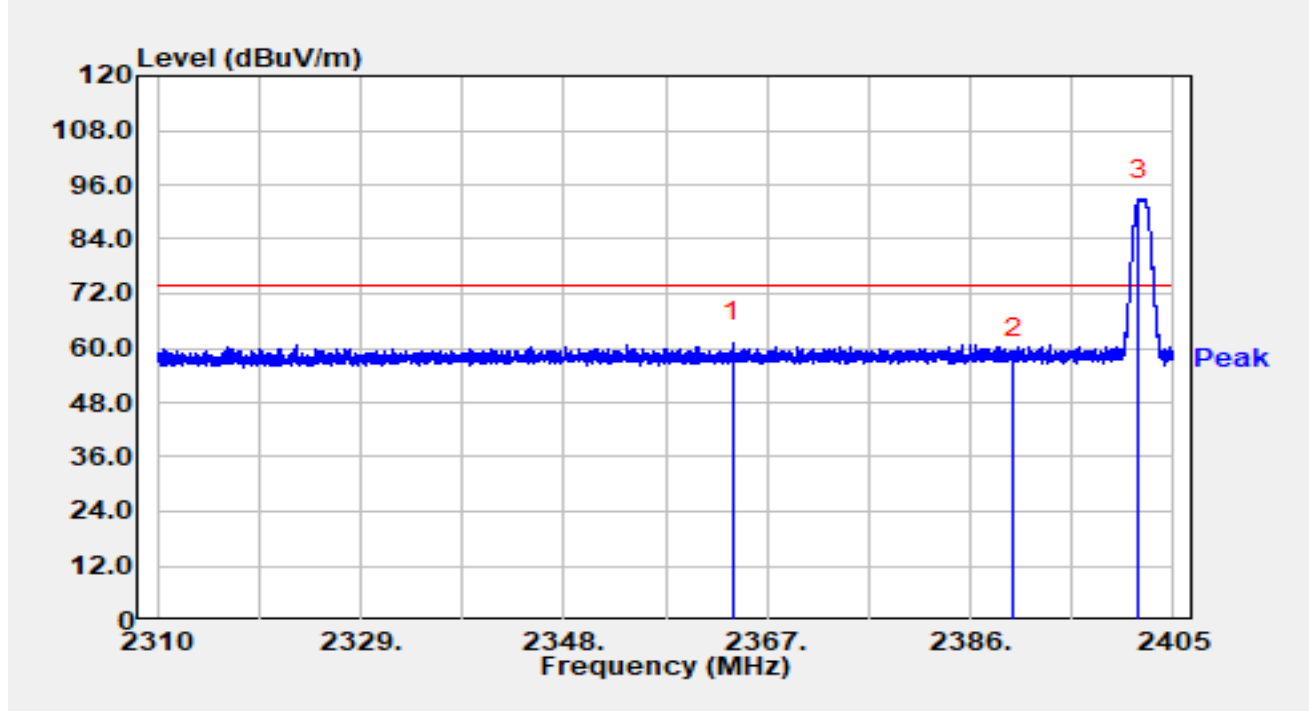


No	Mark	Frequency (MHz)	Reading (dBUV)	C.F (dB/m)	Measurement (dBUV/m)	Margin (dB)	Limit (dBUV/m)	Detector
1	*	2385.934	12.50	36.81	49.31	-4.69	54.00	Average
2		2390.000	7.27	36.83	44.10	-9.90	54.00	Average
3		2402.017	58.76	36.92	95.67	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBUV/m) = Reading (dBUV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Vertical
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2402 MHz		

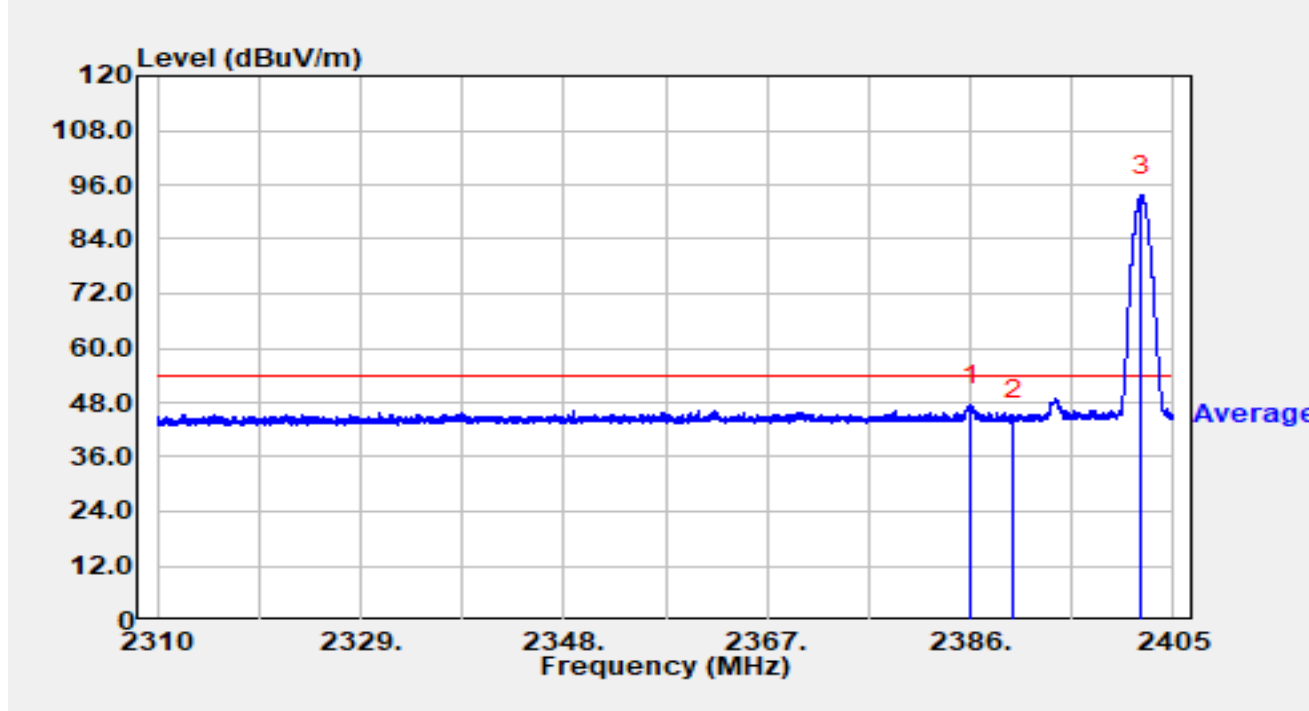


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2363.751	24.48	36.72	61.20	-12.80	74.00	Peak
2		2390.000	21.12	36.83	57.95	-16.05	74.00	Peak
3		2401.789	55.85	36.91	92.77	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Vertical
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2402 MHz		

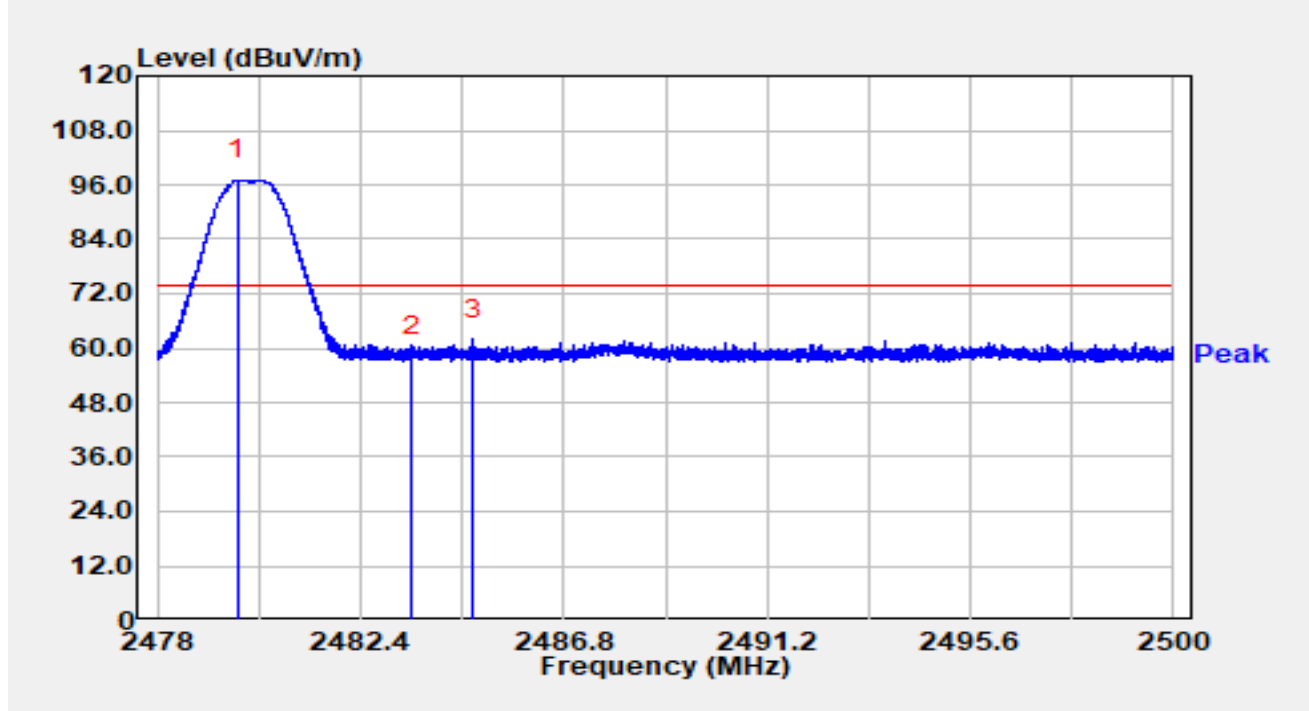


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2386.104	10.52	36.81	47.33	-6.67	54.00	Average
2		2390.000	7.26	36.83	44.09	-9.91	54.00	Average
3		2401.998	56.70	36.92	93.61	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Horizontal
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2480 MHz		

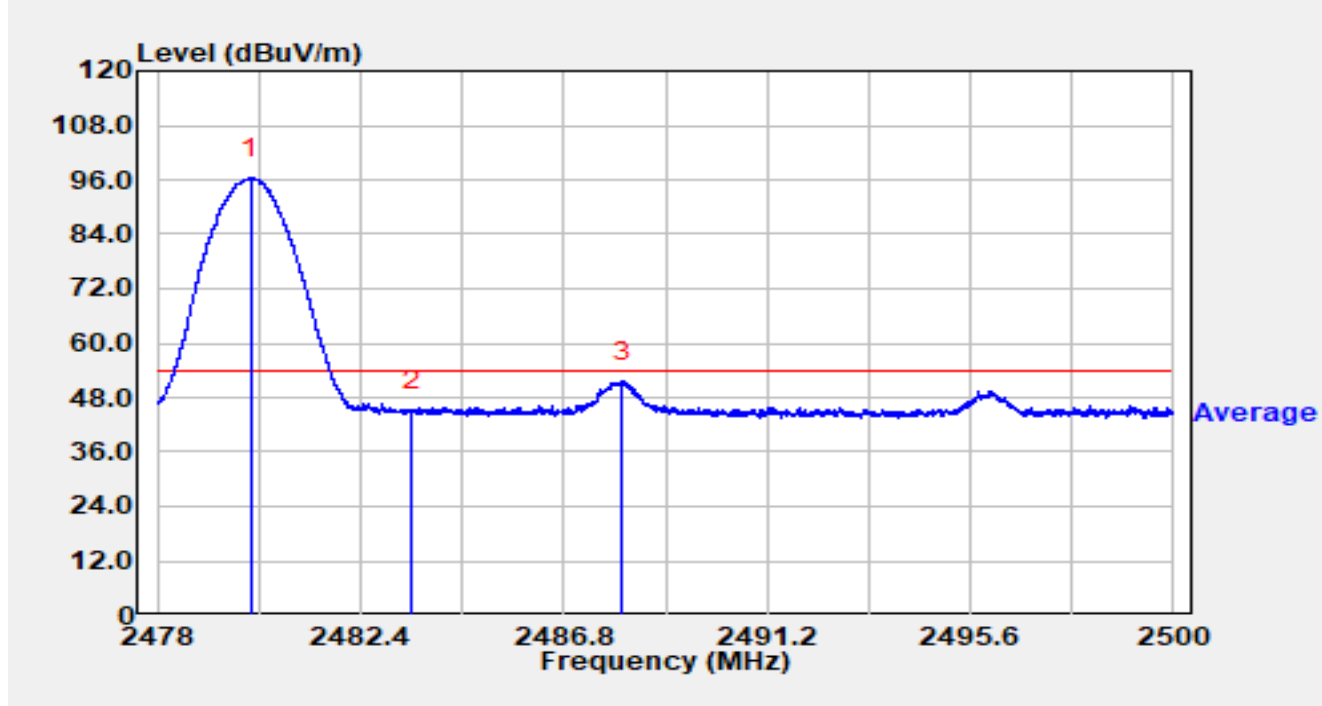


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2479.736	60.05	37.04	97.09	N/A	N/A	Peak
2		2483.500	21.29	37.05	58.34	-15.66	74.00	Peak
3	*	2484.838	24.79	37.06	61.85	-12.15	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Horizontal
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2480 MHz		

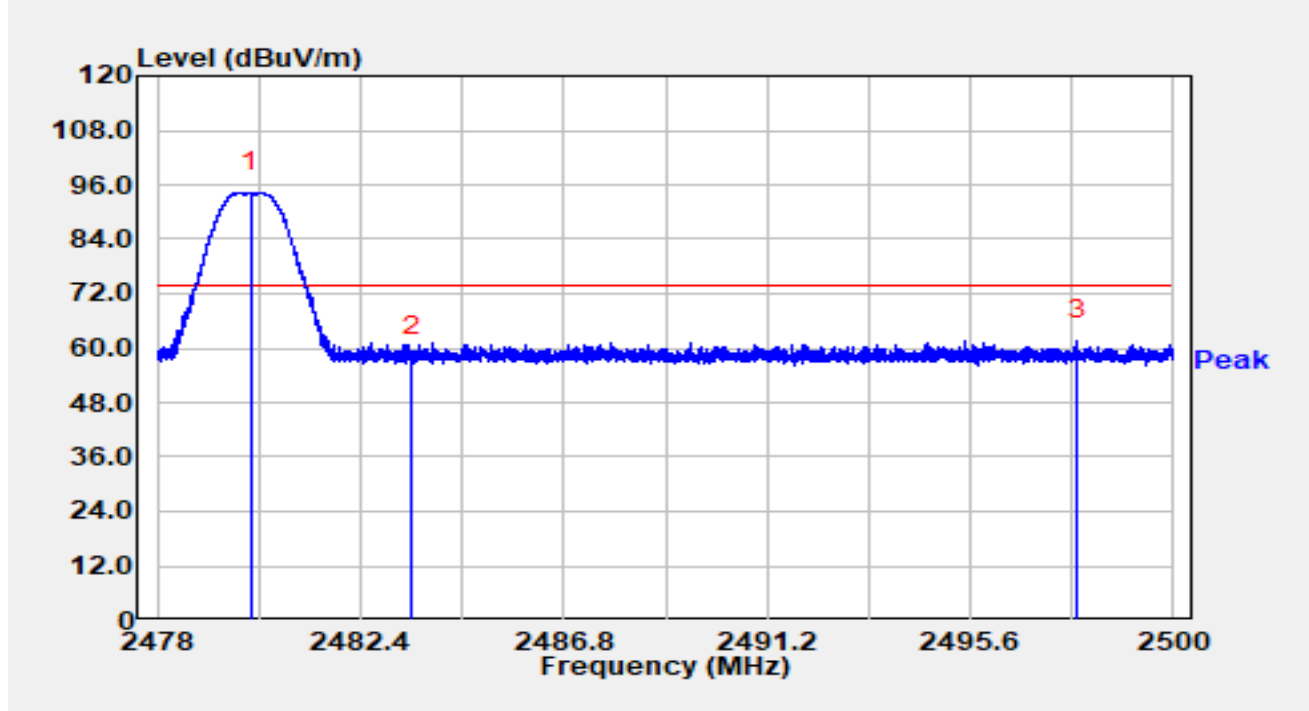


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2480.017	59.26	37.04	96.30	N/A	N/A	Average
2		2483.500	8.06	37.05	45.12	-8.88	54.00	Average
3	*	2488.076	14.40	37.07	51.47	-2.53	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Vertical
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2480 MHz		

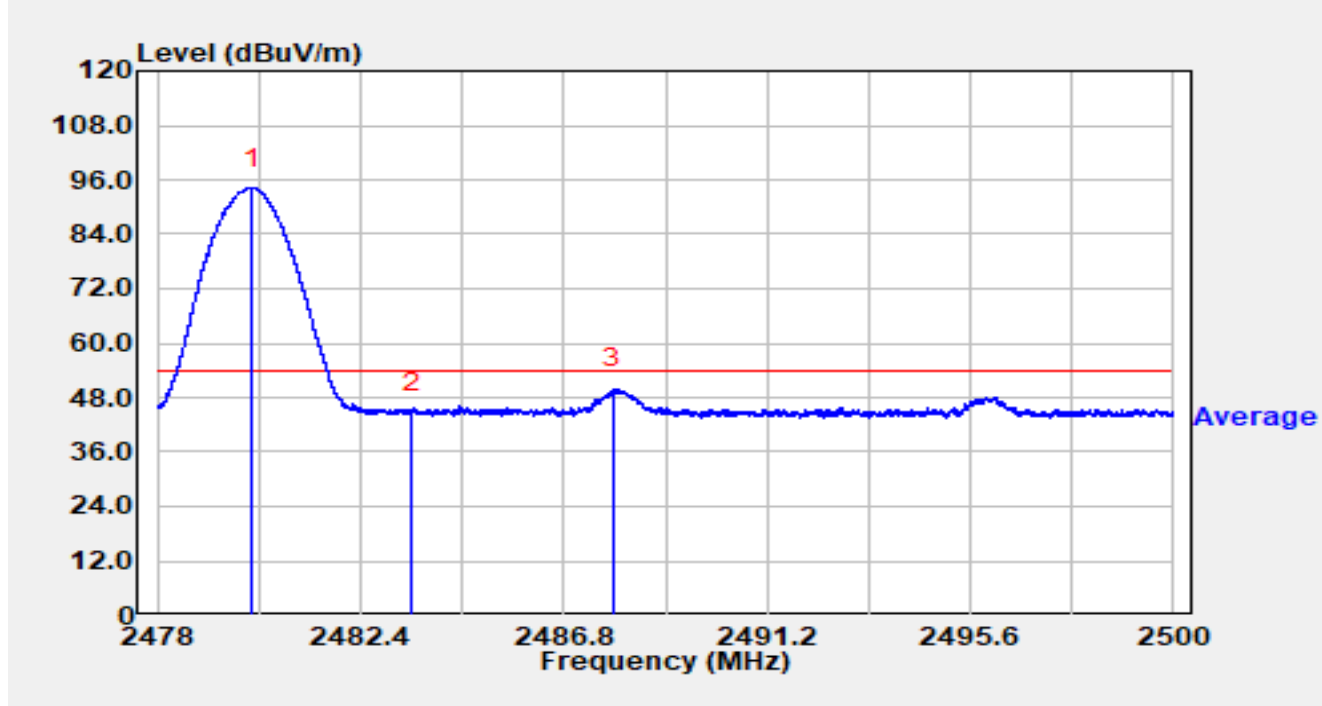


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2480.020	57.18	37.04	94.22	N/A	N/A	Peak
2		2483.500	20.94	37.05	57.99	-16.01	74.00	Peak
3	*	2497.925	24.62	37.08	61.70	-12.30	74.00	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Vertical
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 1M at 2480 MHz		

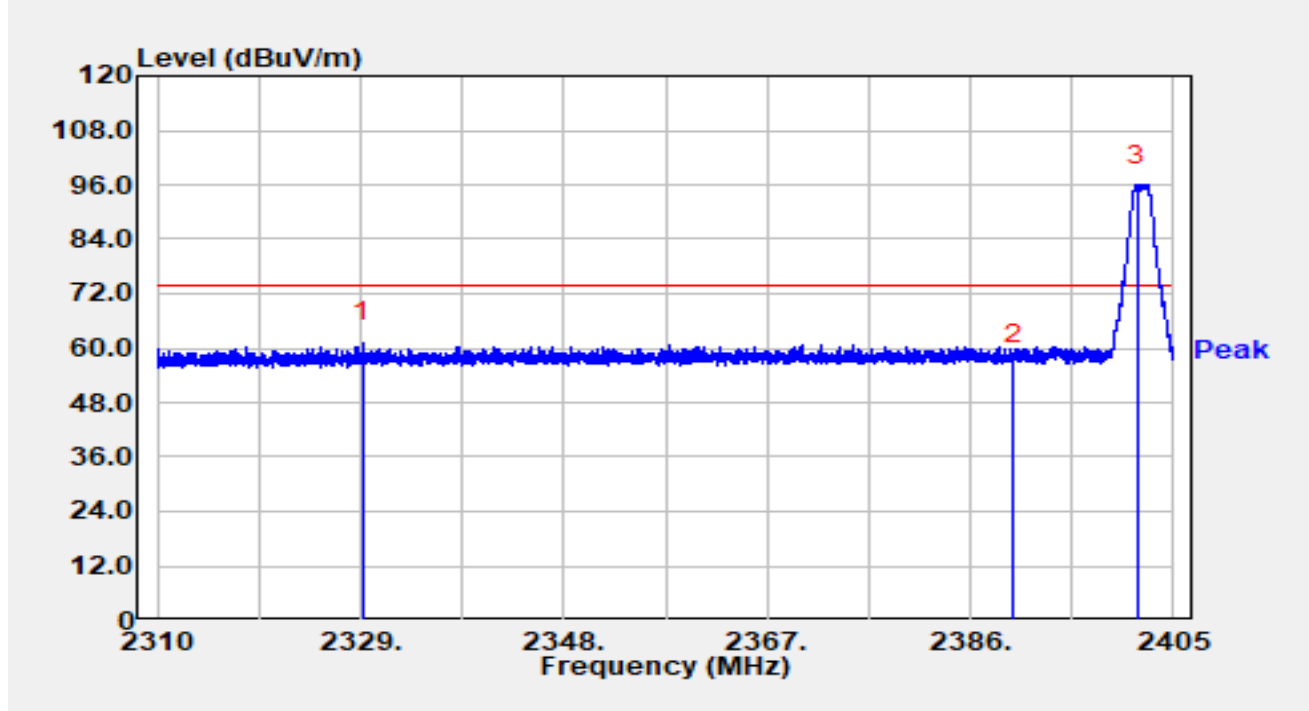


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		2480.044	57.12	37.04	94.16	N/A	N/A	Average
2		2483.500	7.58	37.05	44.63	-9.37	54.00	Average
3	*	2487.876	12.95	37.07	50.02	-3.98	54.00	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Horizontal
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 2M at 2402 MHz		

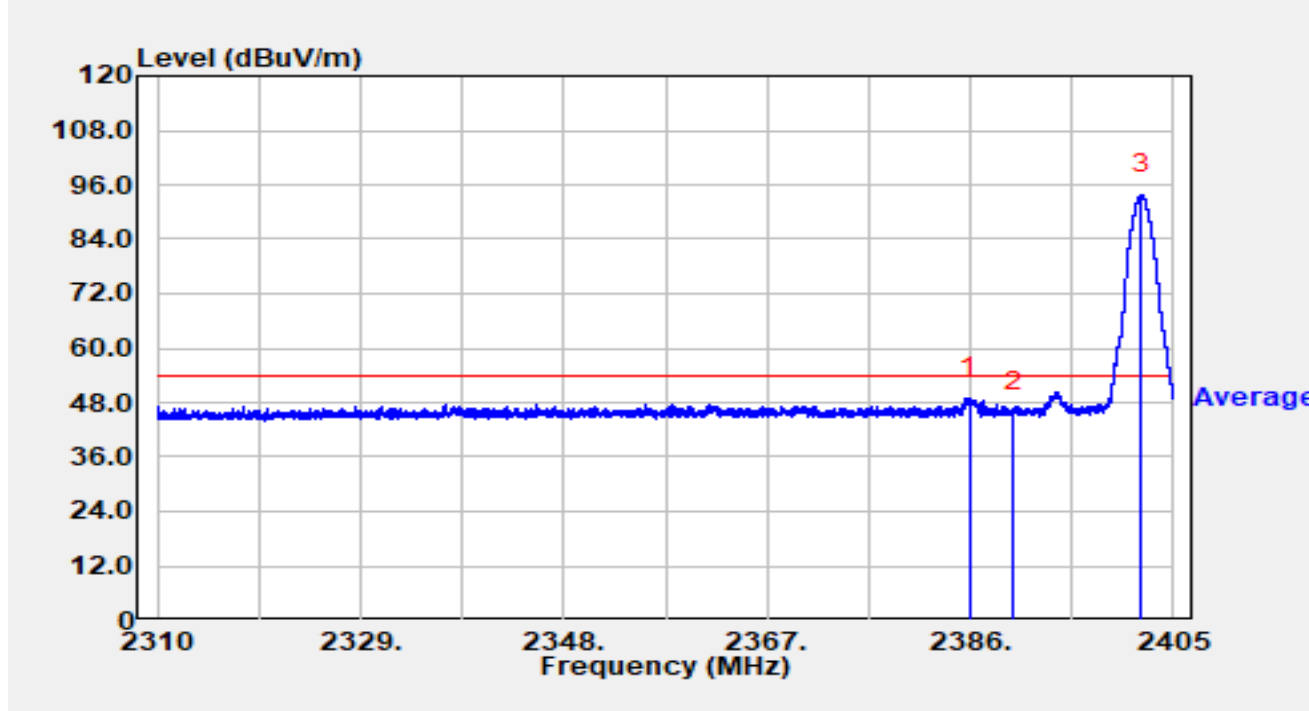


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2329.190	24.49	36.64	61.14	-12.86	74.00	Peak
2		2390.000	19.46	36.83	56.29	-17.71	74.00	Peak
3		2401.552	59.02	36.91	95.94	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Horizontal
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 2M at 2402 MHz		

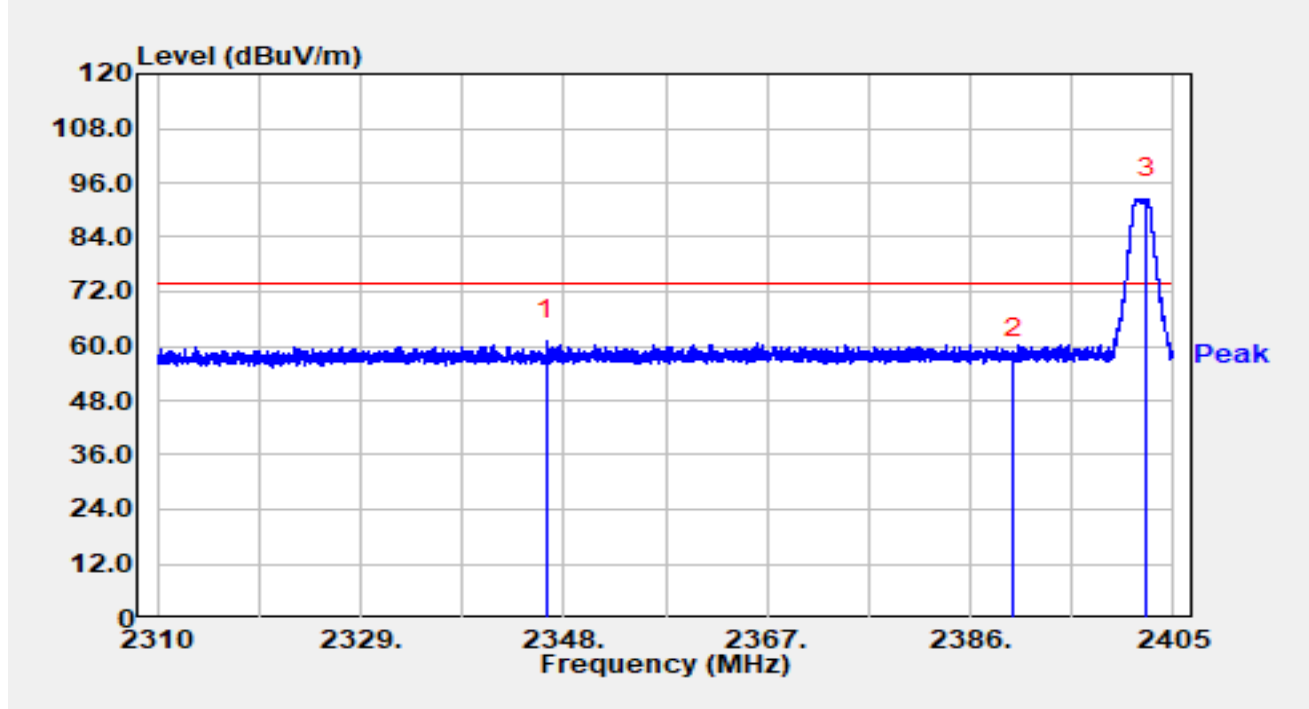


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2385.905	12.20	36.81	49.01	-4.99	54.00	Average
2		2390.000	8.98	36.83	45.81	-8.19	54.00	Average
3		2401.931	56.91	36.92	93.83	N/A	N/A	Average

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

Site	WJ-AC1	Test Date	2025-02-05
Temperature	16.8 °C	Humidity	37.1 %
Limit	FCC_Part 15_Band Edge(3m)	Test Engineer	Carl Jiang
Factor	Horn 3117_06257	Polarity	Vertical
EUT	AXON RANGE	Test Voltage	By PC
Test Mode	Transmit by BLE 2M at 2402 MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	2346.404	24.47	36.70	61.17	-12.83	74.00	Peak
2		2390.000	20.56	36.83	57.39	-16.61	74.00	Peak
3		2402.473	55.65	36.92	92.57	N/A	N/A	Peak

Notes:

1. " * ", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).