RF MEASUREMENT REPORT

FCC ID:	VPYLBEE5HY1MW
Applicant:	Murata Manufacturing Co., Ltd.
Product:	Communication Module
Model No.:	LBEE5HY1MW
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Test Date:	2022-08-31 ~ 2022-09-08

Reviewed By: Sunny Sun

Approved By: Robin Wu

Revision History

Report No.	Version	Description	Issue Date	Note
2208RSU054-U2	Rev. 01	Initial Report	2022-09-27	Invalid
2208RSU054-U2	Rev. 02	Update CIIPC Description	2022-10-11	Valid

Note: This report is prepared for FCC Class II permissive change for changing antenna type, antenna gain and reduce power, so output power and radiated spurious emissions test were evaluated.

CONTENTS

1. General Information

1.1. Applicant

Murata Manufacturing Co., Ltd.

10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan

1.2. Manufacturer

Murata Manufacturing Co., Ltd.

10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan

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	Communication Module
Model No.	LBEE5HY1MW
Test Sample ID.	20220820Sample#19
Wi-Fi Specification	802.11a/b/g/n
Bluetooth Specification	BR & EDR
Antenna Information	Refer to clause 1.6
Working Voltage	DC 3.3V
Working Temperature	-30 ~ 85 °C
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462MHz
Channel Number	802.11b/g/n-HT20: 11
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 72.2Mbps

1.6. Antenna information

Antenna Type	Frequency Band (MHz)	Max Antenna Gain (dBi)
Wi-Fi Antenna (SISO Mode)		
PCB Antenna	2412 ~ 2462	2.10
	5150 ~ 5250	3.50
	5250 ~ 5350	3.50
Bluetooth Antenna		
PCB Antenna	2402 ~ 2480	2.10

1.7. Working Frequencies

802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

2. Test Configuration

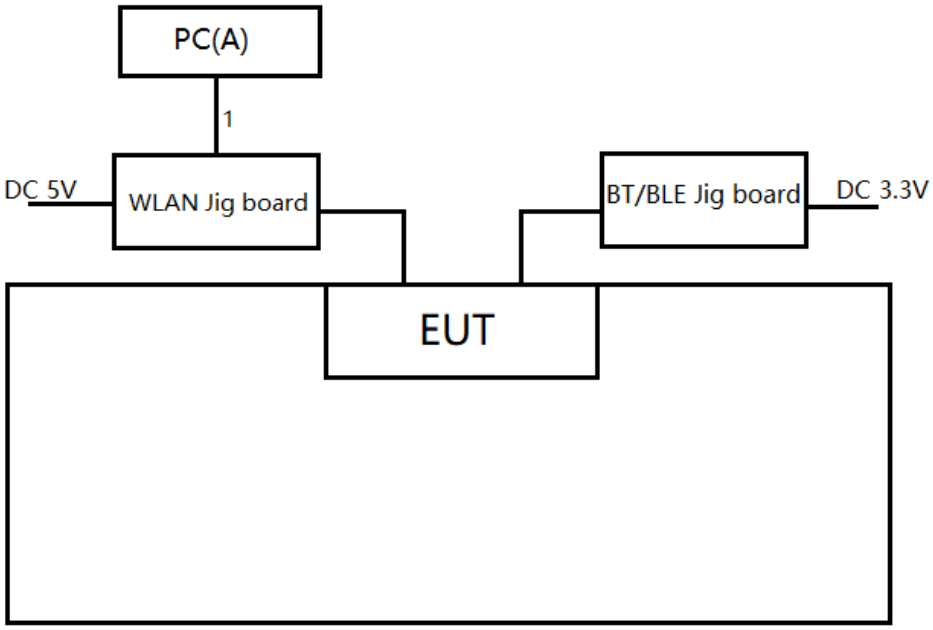
2.1. Test Mode

Mode 1: Transmit by 802.11b (11Mbps)
Mode 2: Transmit by 802.11g (6Mbps)
Mode 3: Transmit by 802.11n-HT20 (MCS0)

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.

Connection Diagram



Product		Manufacturer	Model No.
A	Notebook (for RF Test)	HP	HP-TPN-I125
Cable Type		Cable Description	
1	USB Cable	Shielded, 3.0m	

2.3. Test Software

The test utility software used during testing was “Tera Term.exe”, and the version was 4.106.

Note: Final parameter value was as following.

Test Mode	Test Channel No.	Test Frequency (MHz)	Power Parameter Value
802.11b	1	2412	56.00
	6	2437	56.00
	11	2462	56.00
802.11g	1	2412	40.00
	6	2437	52.00
	11	2462	40.00
802.11n-HT20	1	2412	40.00
	6	2437	52.00
	11	2462	40.00

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.**

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
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2022-12-29	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2023-03-14	SIP-AC3
Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2023-09-06	SIP-AC3
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2023-06-08	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06598	1 year	2022-11-09	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2023-07-30	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2022-11-02	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2022-11-28	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2023-01-13	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2023-08-16	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2022-12-23	SIP-AC3
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2023-02-22	SIP-TR1
Thermohygrometer	testo	Testo 608-H1	MRTSUE11022	1 year	2022-11-02	SIP-TR1
Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2023-07-08	SIP-TR1
USB Power Sensor	Keysight	U2021XA	MRTSUE06595	1 year	2023-08-23	SIP-TR1

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software

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.

Radiated Emission
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(b)(3)	Output Power	Conducted	Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass

Remark:

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

6.2. Output Power Measurement

6.2.1. 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.

6.2.2. Test Procedure

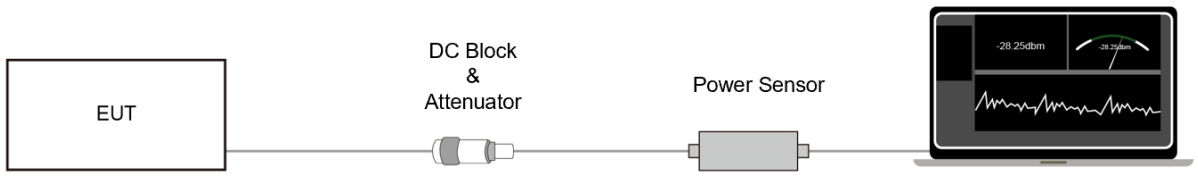
ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.2.3. Test Setting

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.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Radiated Spurious Emission Measurement

6.3.1. 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

6.3.2. 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)

6.3.3. 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

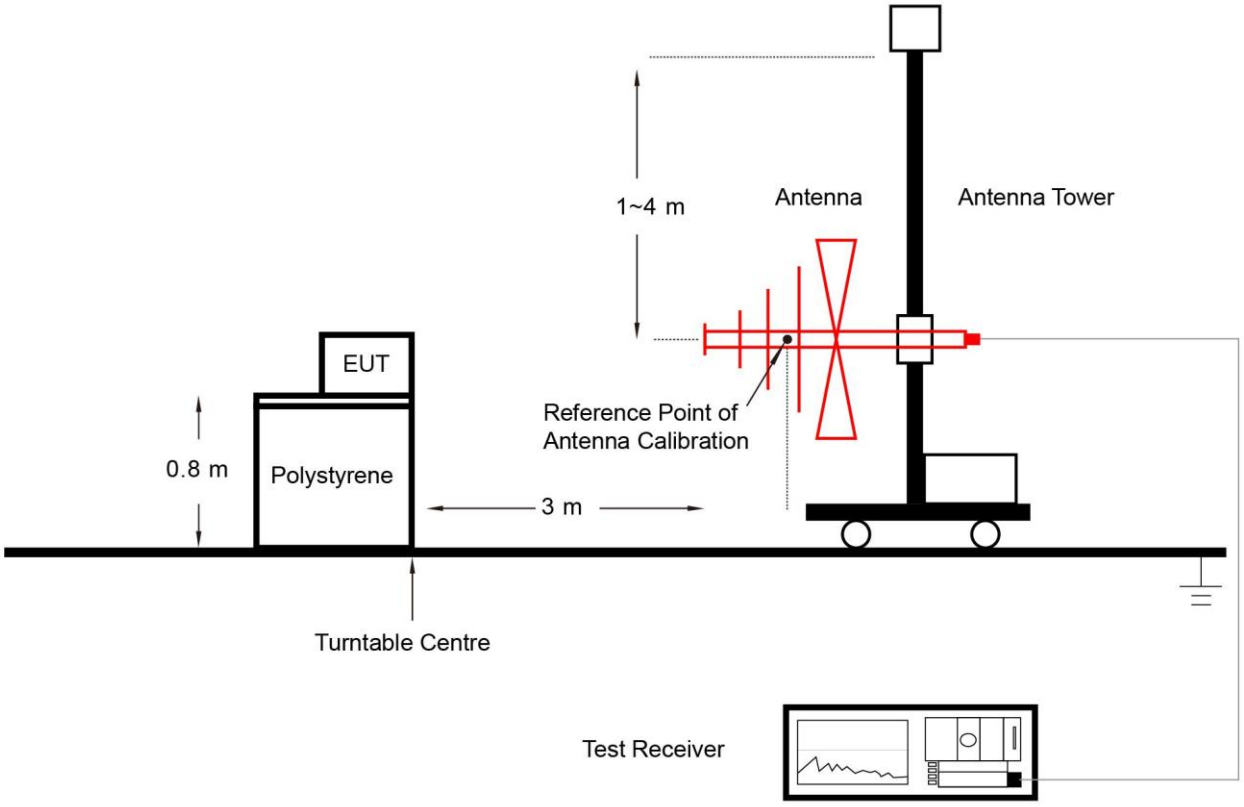
5. Sweep time = auto

6. Trace mode = max hold

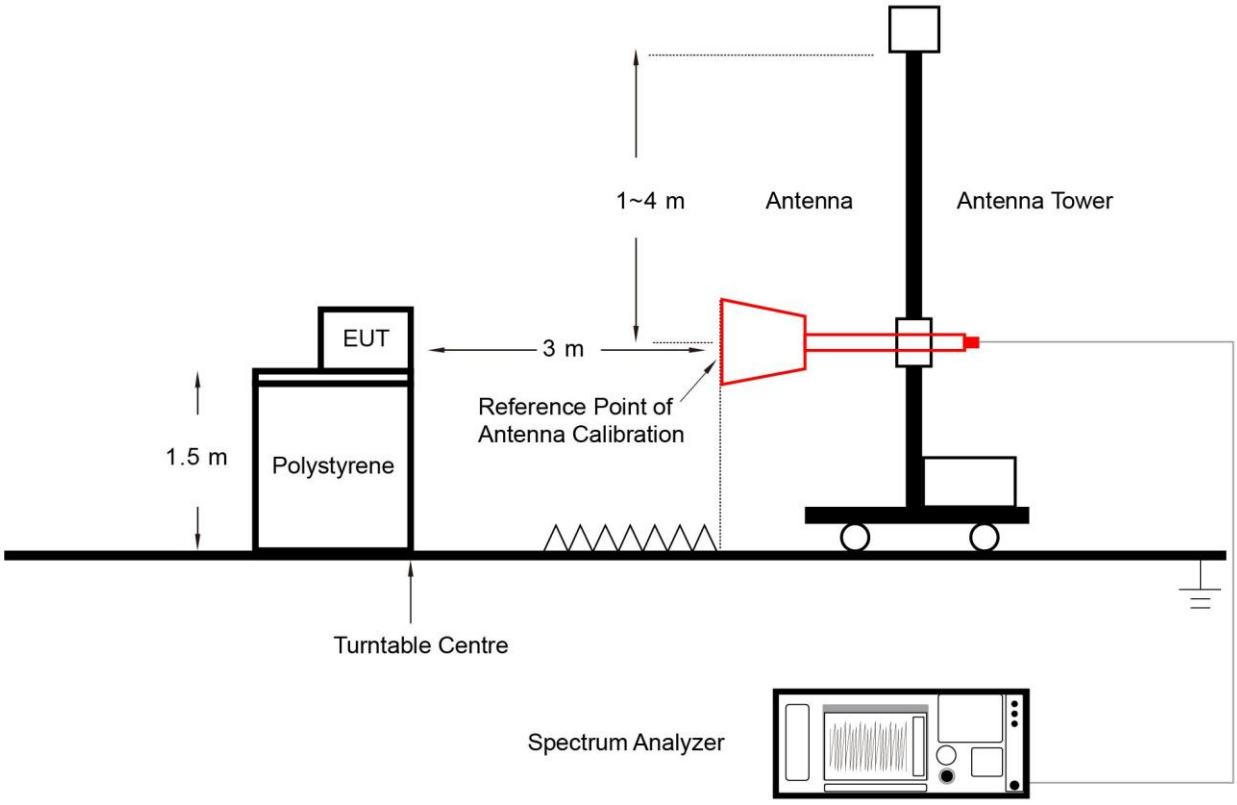
7. Trace was allowed to stabilize

6.3.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Radiated Restricted Band Edge Measurement

6.4.1. 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

6.4.2. Test Procedure

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

6.4.3. Test Setting

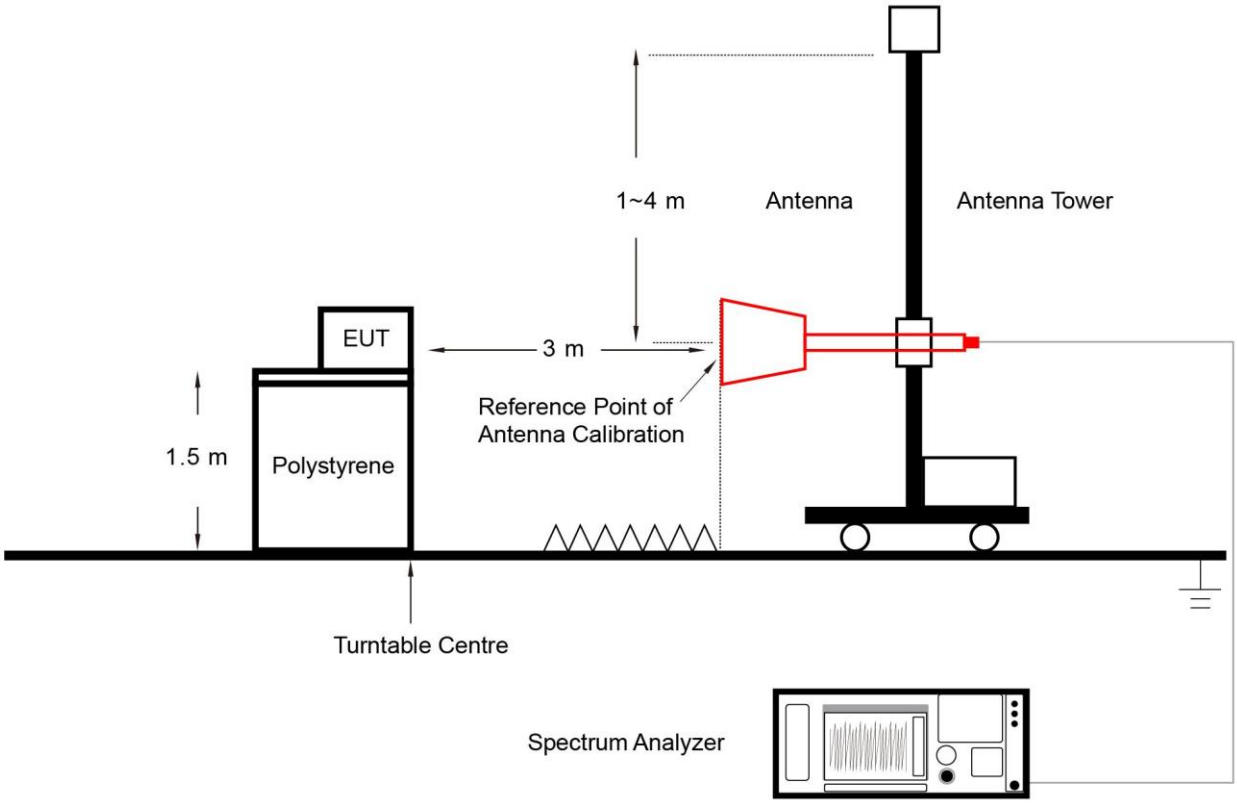
Peak Field Strength Measurements

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

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.3.

Appendix A – Test Result

A.1 Output Power Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (gray marker) for final test of each channel.

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate / MCS	Average Power (dBm)
802.11b	20	1	2412	1Mbps	14.08
				5.5Mbps	14.57
				11Mbps	14.78
802.11g	20	1	2412	6Mbps	10.73
				24Mbps	10.54
				54Mbps	10.26
802.11n	20	1	2412	MCS0	10.22
				MCS3	10.16
				MCS7	10.13

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2022-08-31 ~ 2022-09-06		

Test Result of Peak Output Power

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Peak Power (dBm)	Limit (dBm)
11b	11Mbps	01	2412	17.82	≤ 30.00
11b	11Mbps	06	2437	17.66	≤ 30.00
11b	11Mbps	11	2462	17.73	≤ 30.00
11g	6Mbps	01	2412	21.31	≤ 30.00
11g	6Mbps	06	2437	22.96	≤ 30.00
11g	6Mbps	11	2462	21.73	≤ 30.00
11n-HT20	MCS0	01	2412	20.64	≤ 30.00
11n-HT20	MCS0	06	2437	22.49	≤ 30.00
11n-HT20	MCS0	11	2462	20.43	≤ 30.00

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Limit (dBm)
11b	11Mbps	01	2412	14.78	≤ 30.00
11b	11Mbps	06	2437	14.66	≤ 30.00
11b	11Mbps	11	2462	14.75	≤ 30.00
11g	6Mbps	01	2412	10.73	≤ 30.00
11g	6Mbps	06	2437	13.90	≤ 30.00
11g	6Mbps	11	2462	10.52	≤ 30.00
11n-HT20	MCS0	01	2412	10.22	≤ 30.00
11n-HT20	MCS0	06	2437	13.55	≤ 30.00
11n-HT20	MCS0	11	2462	10.23	≤ 30.00

A.2 Radiated Spurious Emission Test Result

Test Site	SIP-AC3	Test Engineer	Simon Lu
Test Date	2022-09-07	Test Mode:	802.11b
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
01	8403.5	49.5	-4.0	45.5	74.0	-28.5	Peak	Horizontal
	11693.0	48.9	-3.0	45.9	74.0	-28.1	Peak	Horizontal
	15943.0	46.0	4.2	50.2	74.0	-23.8	Peak	Horizontal
	8191.0	49.0	-4.2	44.8	74.0	-29.2	Peak	Vertical
	11140.5	48.5	-2.6	45.9	74.0	-28.1	Peak	Vertical
	15492.5	46.0	4.0	50.0	74.0	-24.0	Peak	Vertical
06	8327.0	49.3	-4.1	45.2	74.0	-28.8	Peak	Horizontal
	11438.0	48.1	-2.7	45.4	74.0	-28.6	Peak	Horizontal
	15849.5	45.9	4.1	50.0	74.0	-24.0	Peak	Horizontal
	8369.5	48.5	-3.9	44.6	74.0	-29.4	Peak	Vertical
	12339.0	48.7	-2.5	46.2	74.0	-27.8	Peak	Vertical
	15679.5	45.6	4.1	49.7	74.0	-24.3	Peak	Vertical
11	8378.0	48.6	-3.9	44.7	74.0	-29.3	Peak	Horizontal
	11319.0	48.6	-2.7	45.9	74.0	-28.1	Peak	Horizontal
	15662.5	46.8	4.1	50.9	74.0	-23.1	Peak	Horizontal
	8191.0	48.8	-4.2	44.6	74.0	-29.4	Peak	Vertical
	11234.0	49.1	-2.5	46.6	74.0	-27.4	Peak	Vertical
	15416.0	46.3	4.1	50.4	74.0	-23.6	Peak	Vertical

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

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

Test Site	SIP-AC3	Test Engineer	Simon Lu
Test Date	2022-09-07	Test Mode:	802.11g
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
01	8335.5	48.4	-4.0	44.4	74.0	-29.6	Peak	Horizontal
	12101.0	48.7	-2.8	45.9	74.0	-28.1	Peak	Horizontal
	15645.5	45.9	4.1	50.0	74.0	-24.0	Peak	Horizontal
	8276.0	48.5	-4.1	44.4	74.0	-29.6	Peak	Vertical
	11531.5	46.4	-3.3	43.1	74.0	-30.9	Peak	Vertical
	15645.5	45.1	4.1	49.2	74.0	-24.8	Peak	Vertical
06	8352.5	48.8	-4.0	44.8	74.0	-29.2	Peak	Horizontal
	11990.5	48.9	-2.9	46.0	74.0	-28.0	Peak	Horizontal
	15858.0	46.1	4.1	50.2	74.0	-23.8	Peak	Horizontal
	8216.5	48.8	-4.2	44.6	74.0	-29.4	Peak	Vertical
	11659.0	48.6	-2.9	45.7	74.0	-28.3	Peak	Vertical
	15917.5	45.7	4.2	49.9	74.0	-24.1	Peak	Vertical
11	8437.5	49.2	-3.9	45.3	74.0	-28.7	Peak	Horizontal
	12262.5	50.2	-2.7	47.5	74.0	-26.5	Peak	Horizontal
	15960.0	45.2	4.4	49.6	74.0	-24.4	Peak	Horizontal
	8497.0	48.4	-3.6	44.8	74.0	-29.2	Peak	Vertical
	11310.5	48.9	-2.8	46.1	74.0	-27.9	Peak	Vertical
	15883.5	46.4	4.2	50.6	74.0	-23.4	Peak	Vertical

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

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

Test Site	SIP-AC3	Test Engineer	Simon Lu
Test Date	2022-09-07	Test Mode:	802.11n-HT20
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.		

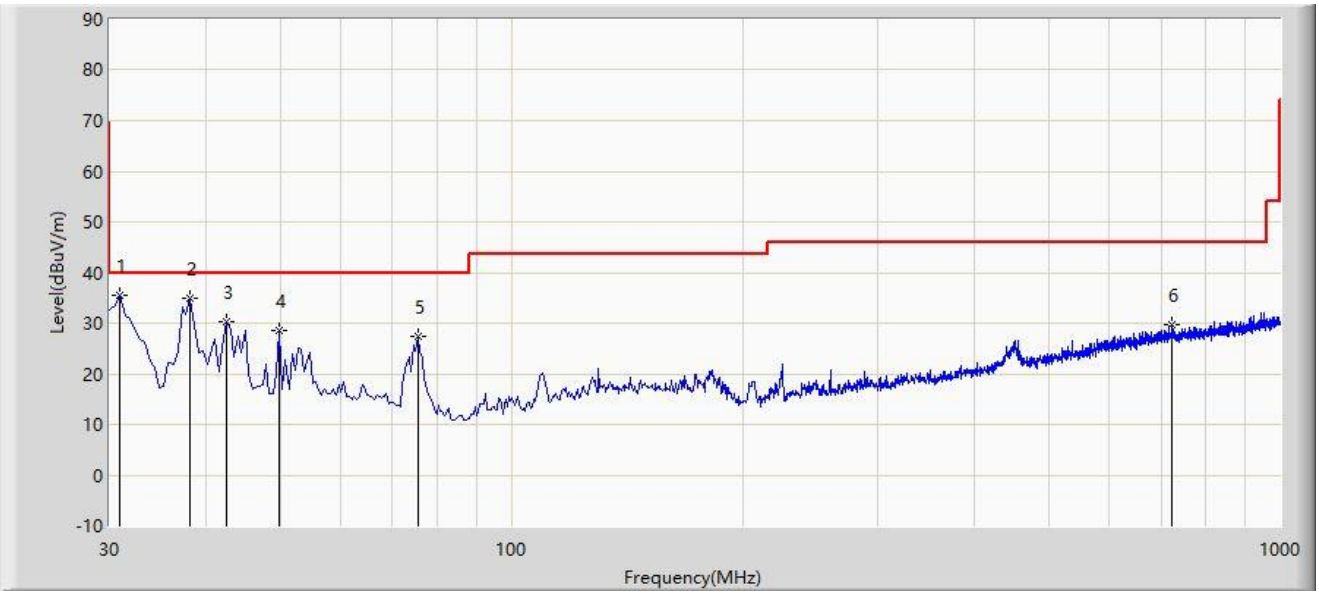
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
01	8165.5	49.3	-4.5	44.8	74.0	-29.2	Peak	Horizontal
	11225.5	49.0	-2.7	46.3	74.0	-27.7	Peak	Horizontal
	15441.5	45.8	4.1	49.9	74.0	-24.1	Peak	Horizontal
	8429.0	48.6	-4.0	44.6	74.0	-29.4	Peak	Vertical
	11548.5	48.8	-3.3	45.5	74.0	-28.5	Peak	Vertical
	15892.0	46.3	4.2	50.5	74.0	-23.5	Peak	Vertical
06	8199.5	48.2	-4.2	44.0	74.0	-30.0	Peak	Horizontal
	11234.0	48.8	-2.5	46.3	74.0	-27.7	Peak	Horizontal
	15892.0	46.0	4.2	50.2	74.0	-23.8	Peak	Horizontal
	8216.5	49.3	-4.2	45.1	74.0	-28.9	Peak	Vertical
	11803.5	48.9	-3.3	45.6	74.0	-28.4	Peak	Vertical
	15917.5	46.0	4.2	50.2	74.0	-23.8	Peak	Vertical
11	8497.0	48.4	-3.6	44.8	74.0	-29.2	Peak	Horizontal
	11778.0	48.7	-3.2	45.5	74.0	-28.5	Peak	Horizontal
	16096.0	46.3	4.3	50.6	74.0	-23.4	Peak	Horizontal
	8199.5	48.4	-4.2	44.2	74.0	-29.8	Peak	Vertical
	11395.5	49.1	-3.0	46.1	74.0	-27.9	Peak	Vertical
	15849.5	46.4	4.1	50.5	74.0	-23.5	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 Result of Radiated Emission below 1GHz:

Site: SIP-AC3	Test Date: 2022-09-08
Limit: FCC_Part15.209_RE(3m)	Engineer: Simon Lu
Probe: VULB 9168_00997_25-2000MHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	30.970	35.454	19.101	-4.546	40.000	16.353	PK
2		38.245	34.830	17.425	-5.170	40.000	17.405	PK
3		42.610	30.161	12.316	-9.839	40.000	17.845	PK
4		49.885	28.659	10.753	-11.341	40.000	17.906	PK
5		75.590	27.290	12.958	-12.710	40.000	14.332	PK
6		723.550	29.729	2.663	-16.271	46.000	27.066	PK

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

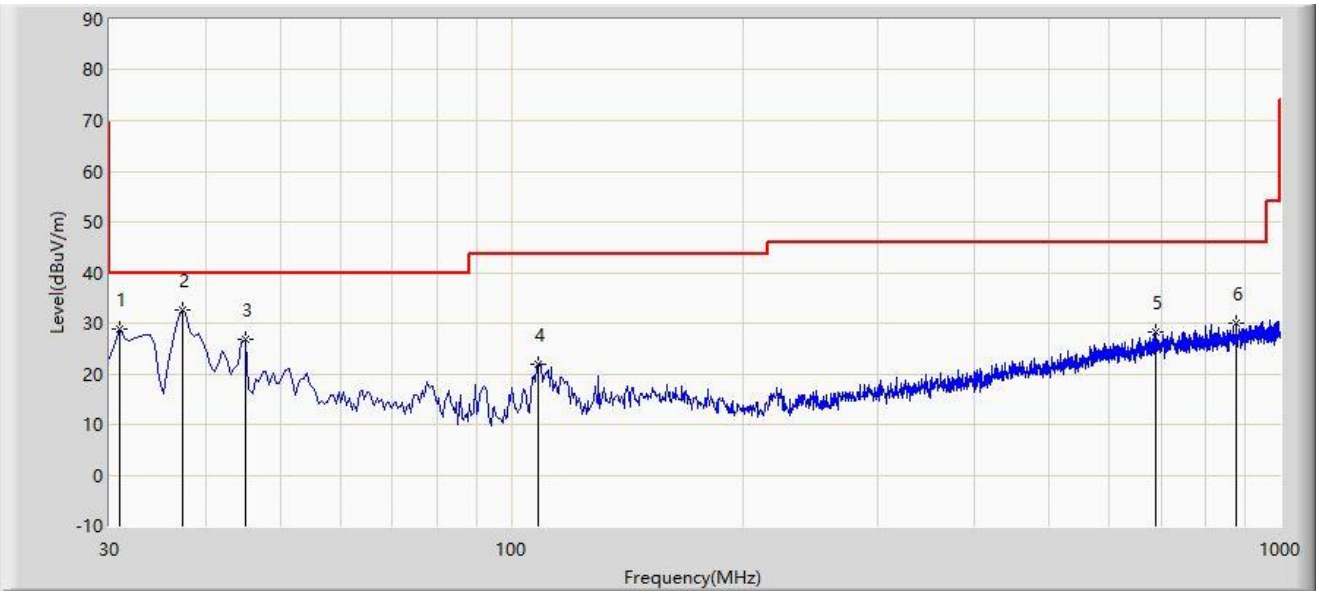
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

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

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

Note 5: 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: SIP-AC3	Test Date: 2022-09-08
Limit: FCC_Part15.209_RE(3m)	Engineer: Simon Lu
Probe: VULB 9168_00997_25-2000MHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2412MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		30.970	28.749	12.396	-11.251	40.000	16.353	PK
2	*	37.275	32.509	15.222	-7.491	40.000	17.288	PK
3		45.035	26.712	8.703	-13.288	40.000	18.008	PK
4		108.570	21.936	7.259	-21.564	43.500	14.677	PK
5		688.145	28.143	1.630	-17.857	46.000	26.513	PK
6		877.780	29.903	1.116	-16.097	46.000	28.787	PK

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

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

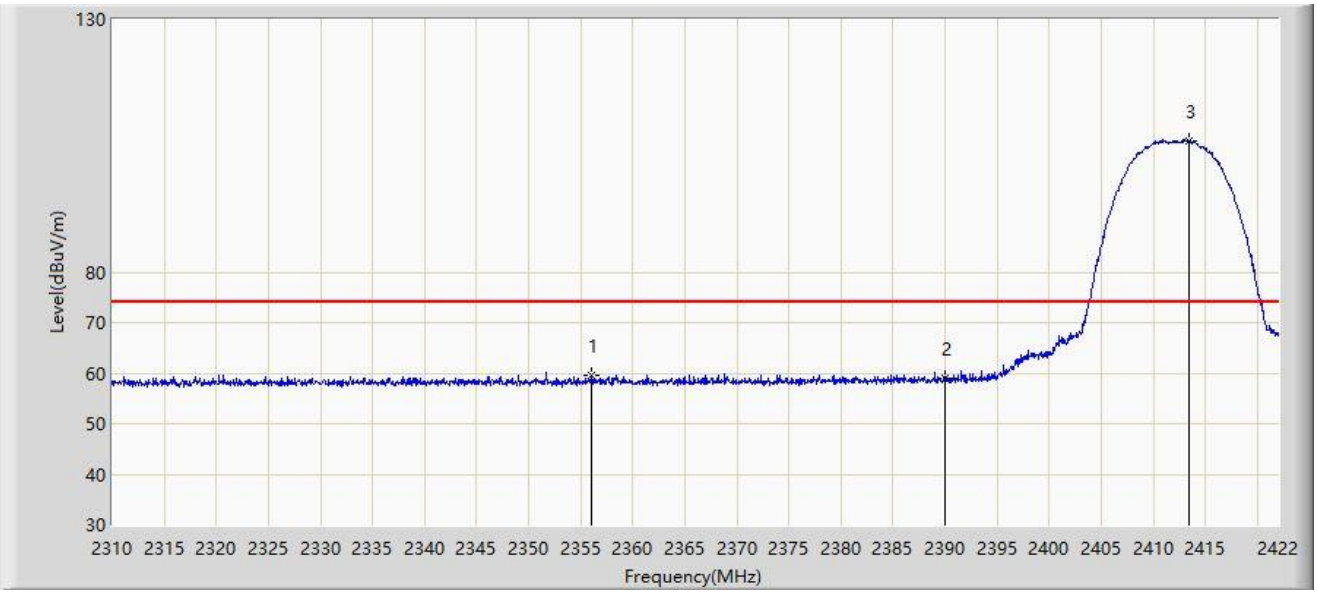
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

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

Note 5: 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.3 Radiated Restricted Band Edge Test Result

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2412MHz	



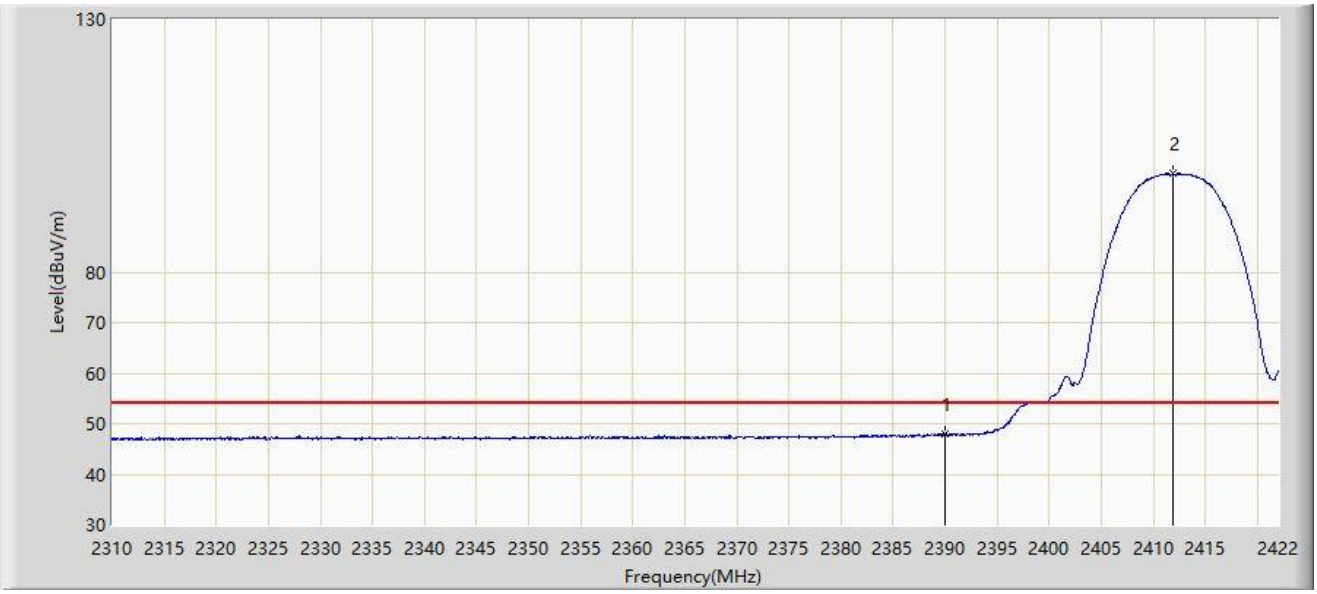
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2355.976	59.678	27.830	-14.322	74.000	31.847	PK
2		2390.000	58.968	27.039	-15.032	74.000	31.929	PK
3		2413.432	106.000	73.924	N/A	N/A	32.076	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2412MHz	



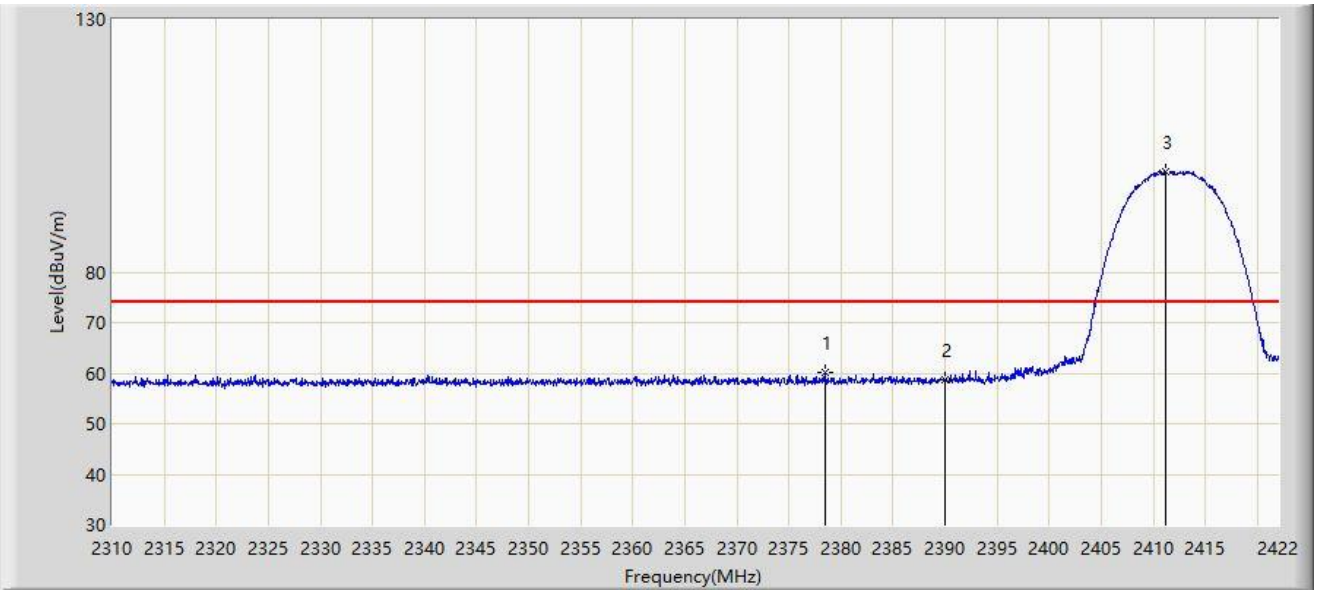
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2390.000	47.890	15.961	-6.110	54.000	31.929	AV
2		2411.864	99.438	67.360	N/A	N/A	32.077	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2412MHz	



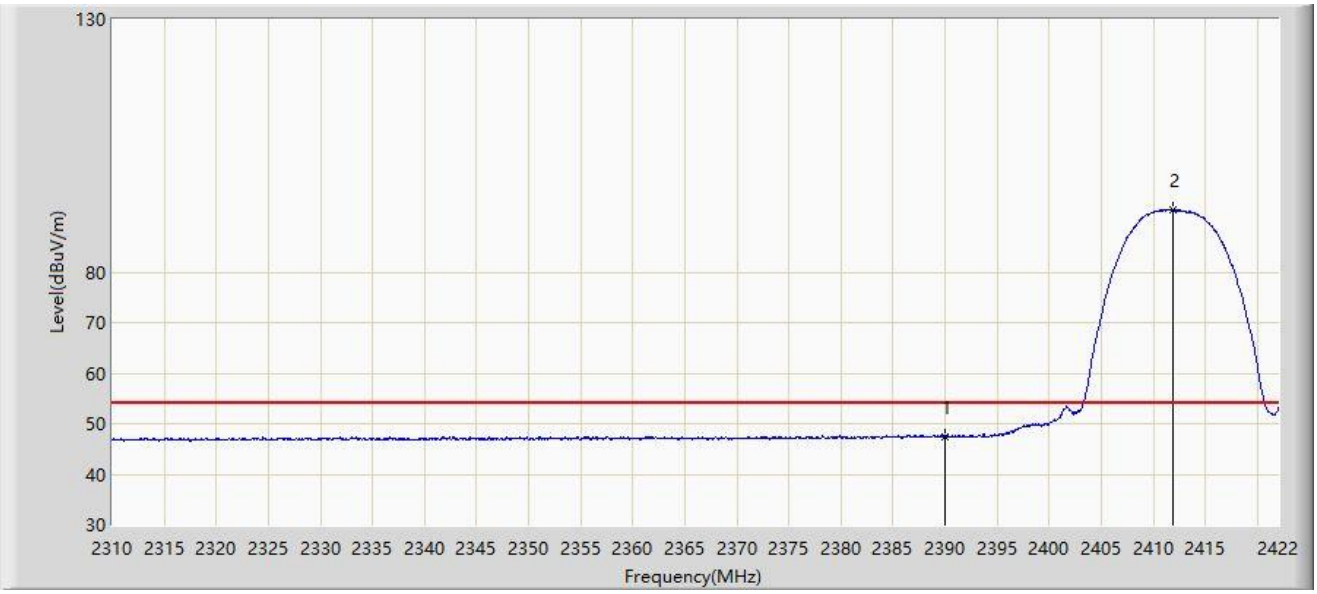
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2378.488	60.093	28.234	-13.907	74.000	31.860	PK
2		2390.000	58.573	26.644	-15.427	74.000	31.929	PK
3		2411.136	99.998	67.920	N/A	N/A	32.078	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2412MHz	



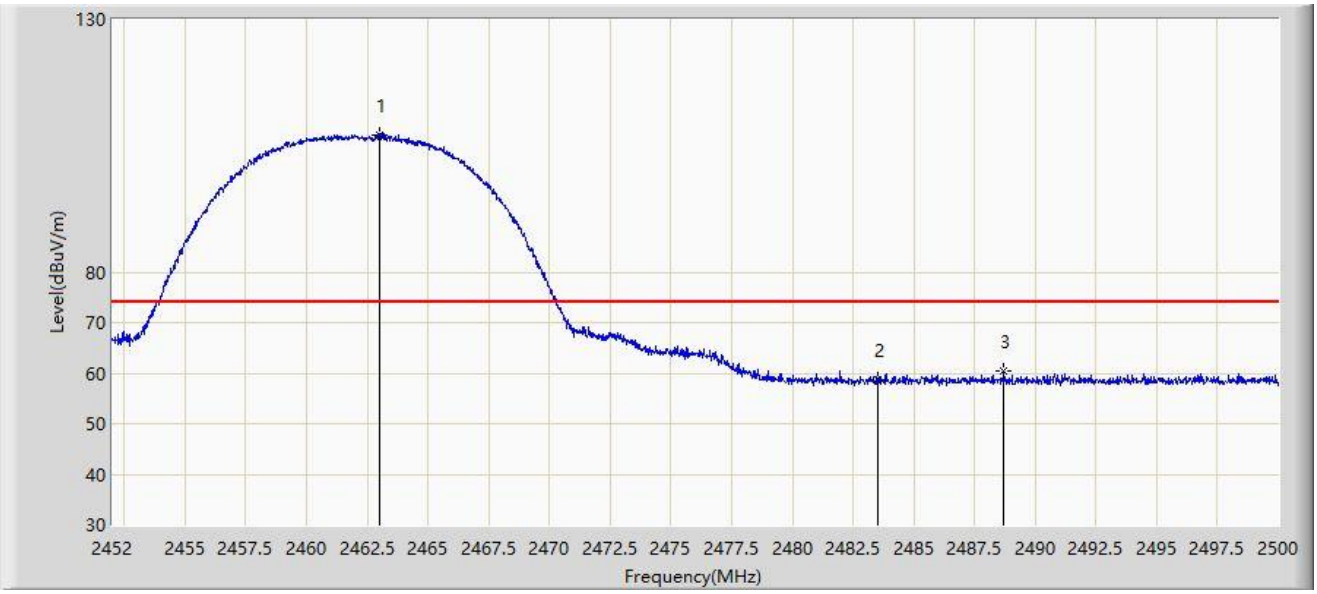
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2390.000	47.501	15.572	-6.499	54.000	31.929	AV
2		2411.920	92.358	60.280	N/A	N/A	32.077	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2462MHz	



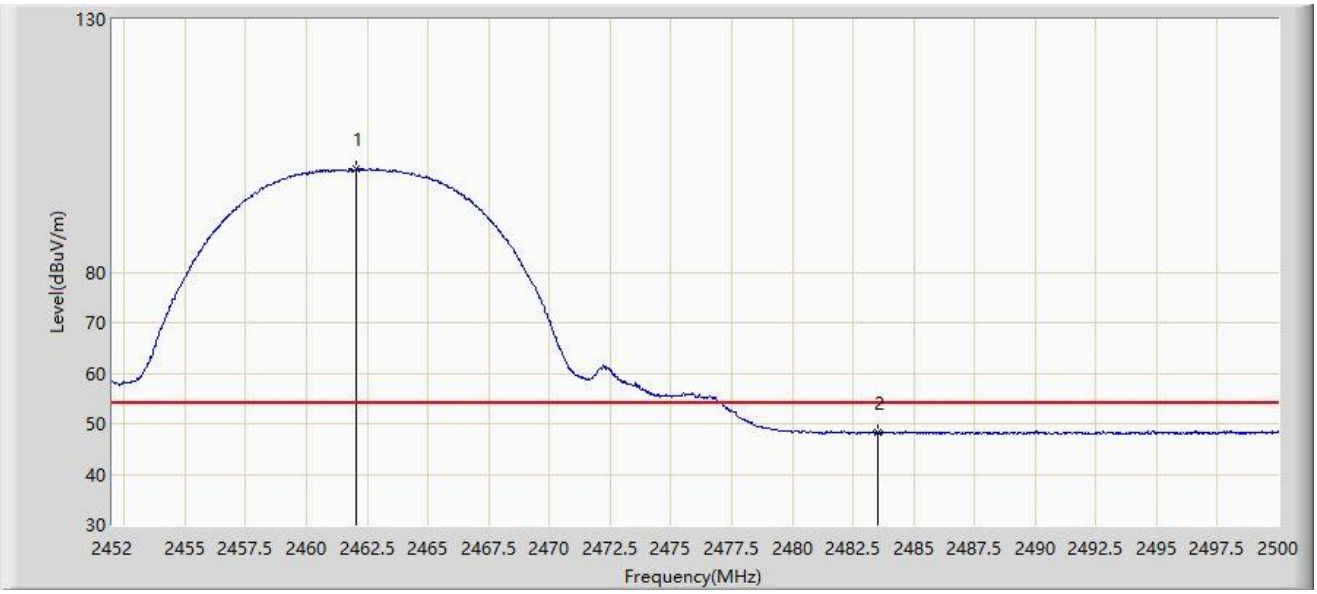
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2462.992	107.189	74.970	N/A	N/A	32.220	PK
2		2483.500	58.642	26.337	-15.358	74.000	32.305	PK
3	*	2488.720	60.488	28.157	-13.512	74.000	32.331	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2462MHz	



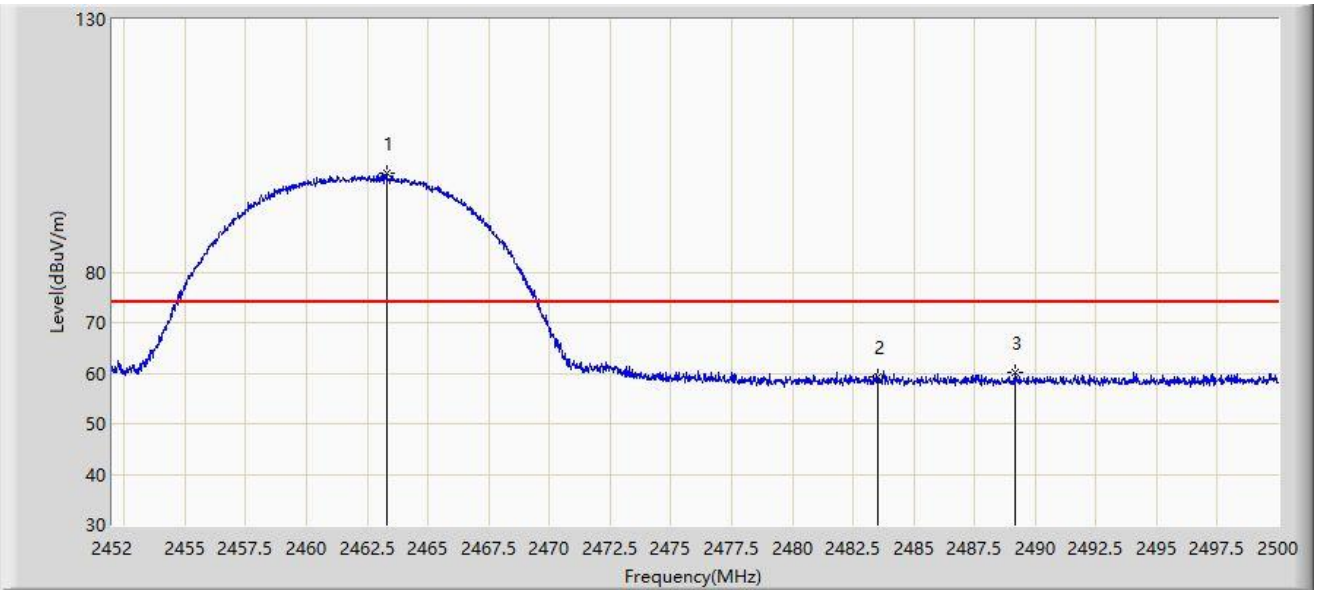
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2462.056	100.360	68.145	N/A	N/A	32.215	AV
2	*	2483.500	48.159	15.854	-5.841	54.000	32.305	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2462MHz	



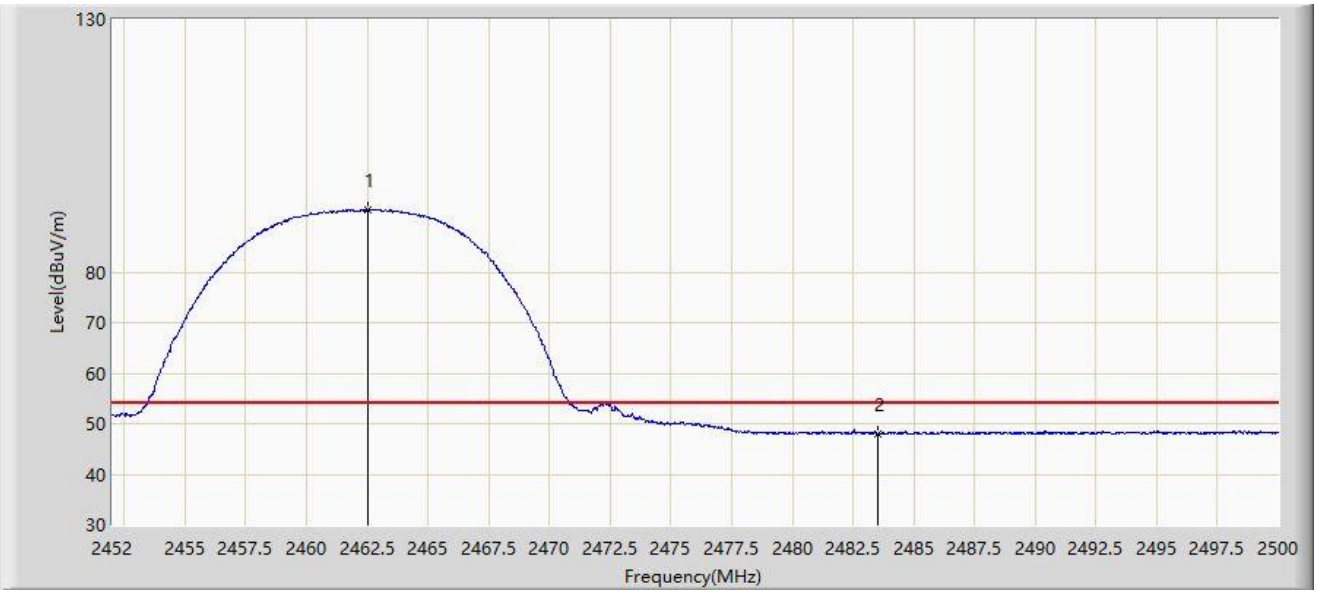
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2463.280	99.435	67.215	N/A	N/A	32.221	PK
2		2483.500	59.204	26.899	-14.796	74.000	32.305	PK
3	*	2489.152	60.015	27.681	-13.985	74.000	32.333	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11b at 2462MHz	



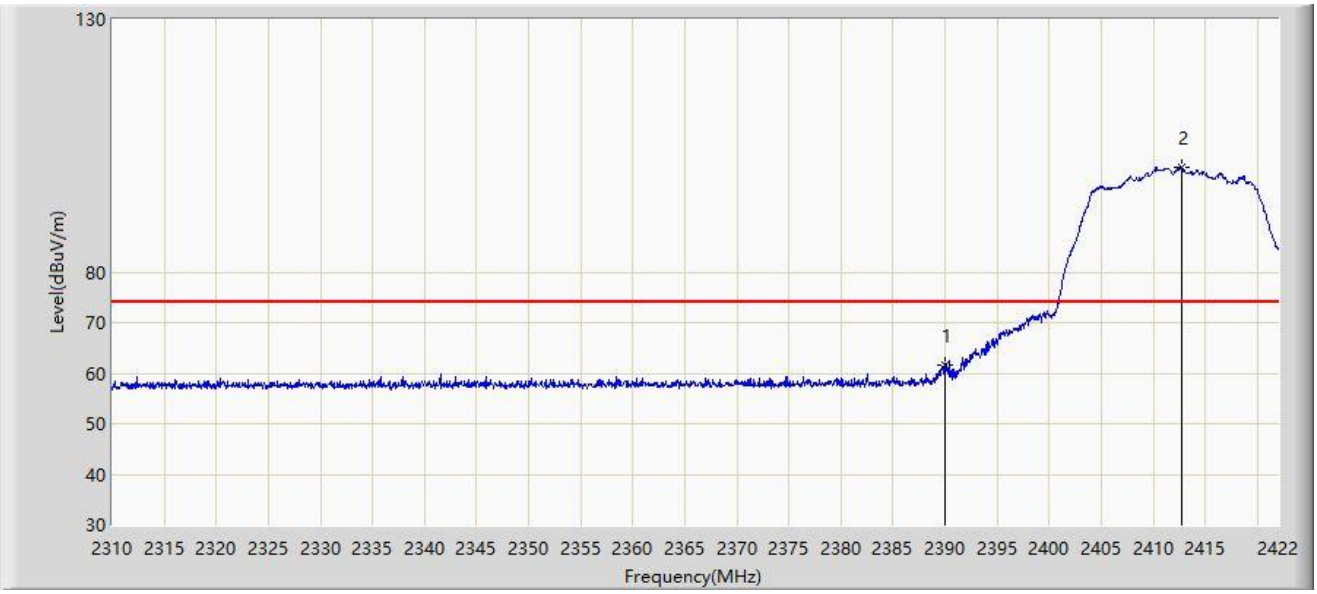
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2462.512	92.279	60.062	N/A	N/A	32.217	AV
2	*	2483.500	48.094	15.789	-5.906	54.000	32.305	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2412MHz	



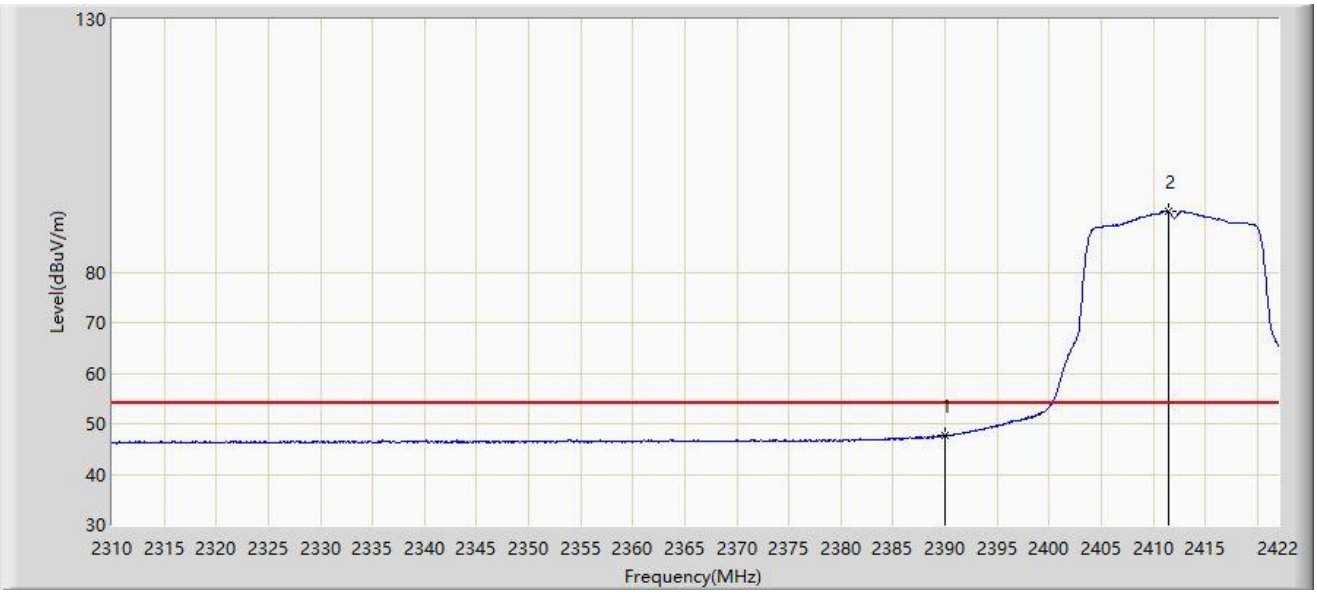
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2390.000	61.599	29.670	-12.401	74.000	31.929	PK
2		2412.760	100.780	68.703	N/A	N/A	32.077	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2412MHz	



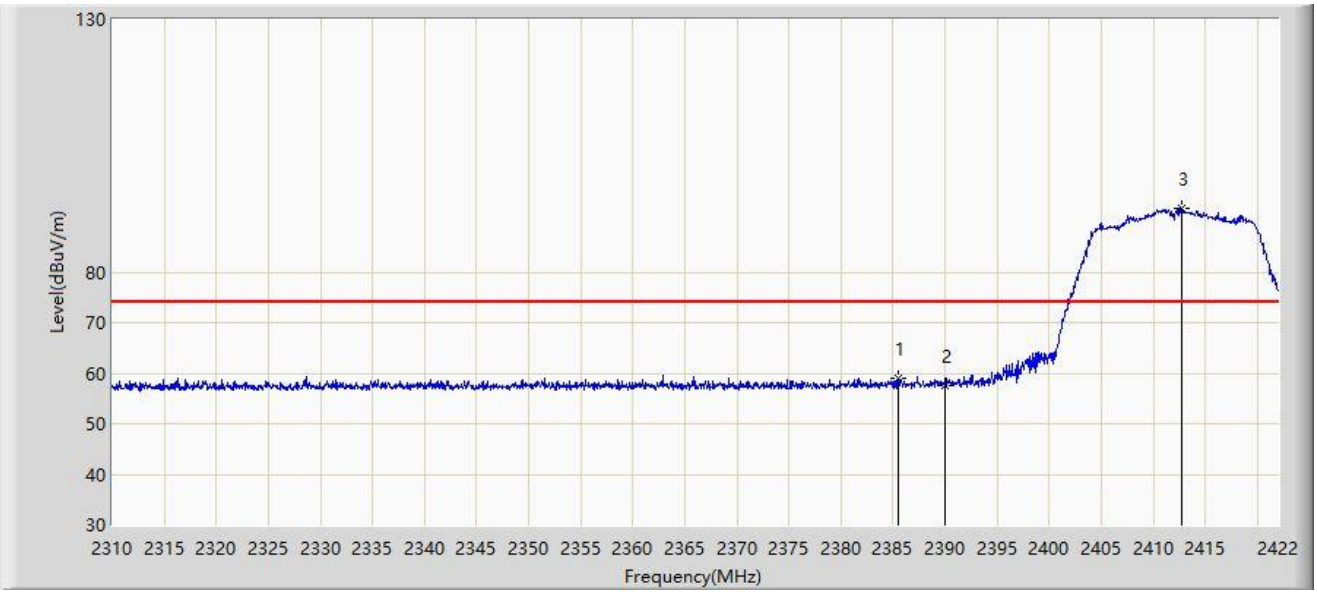
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2390.000	47.659	15.730	-6.341	54.000	31.929	AV
2		2411.472	91.981	59.903	N/A	N/A	32.078	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2412MHz	



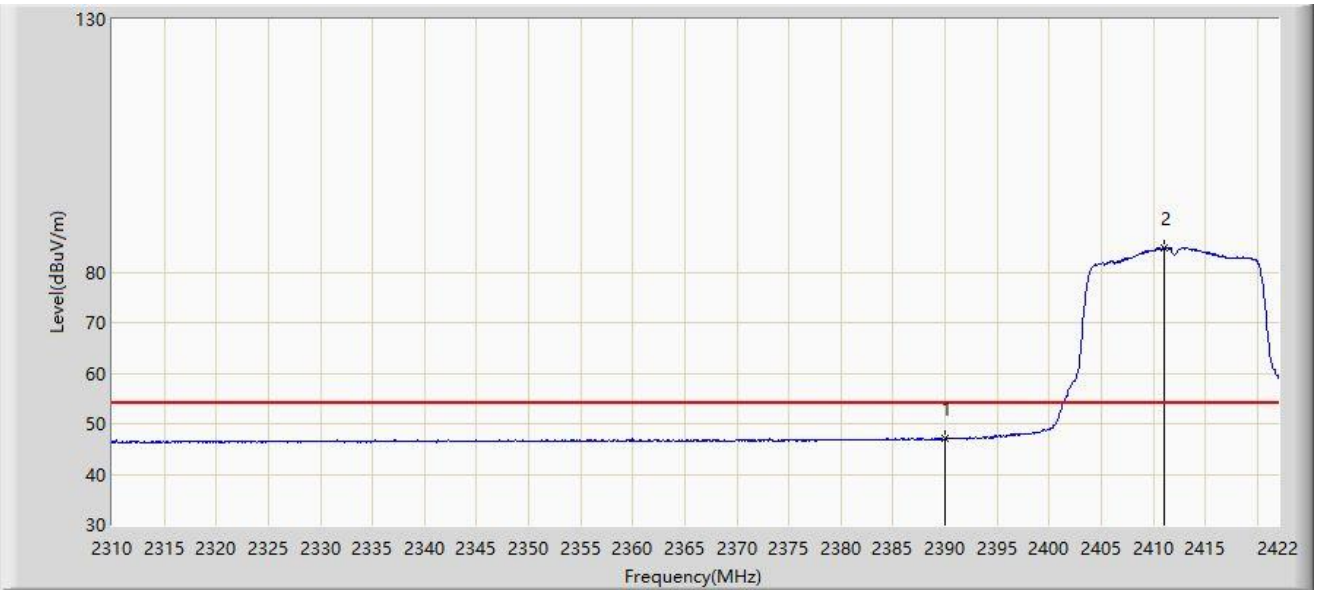
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2385.488	59.056	27.154	-14.944	74.000	31.901	PK
2		2390.000	57.664	25.735	-16.336	74.000	31.929	PK
3		2412.704	92.652	60.575	N/A	N/A	32.077	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2412MHz	



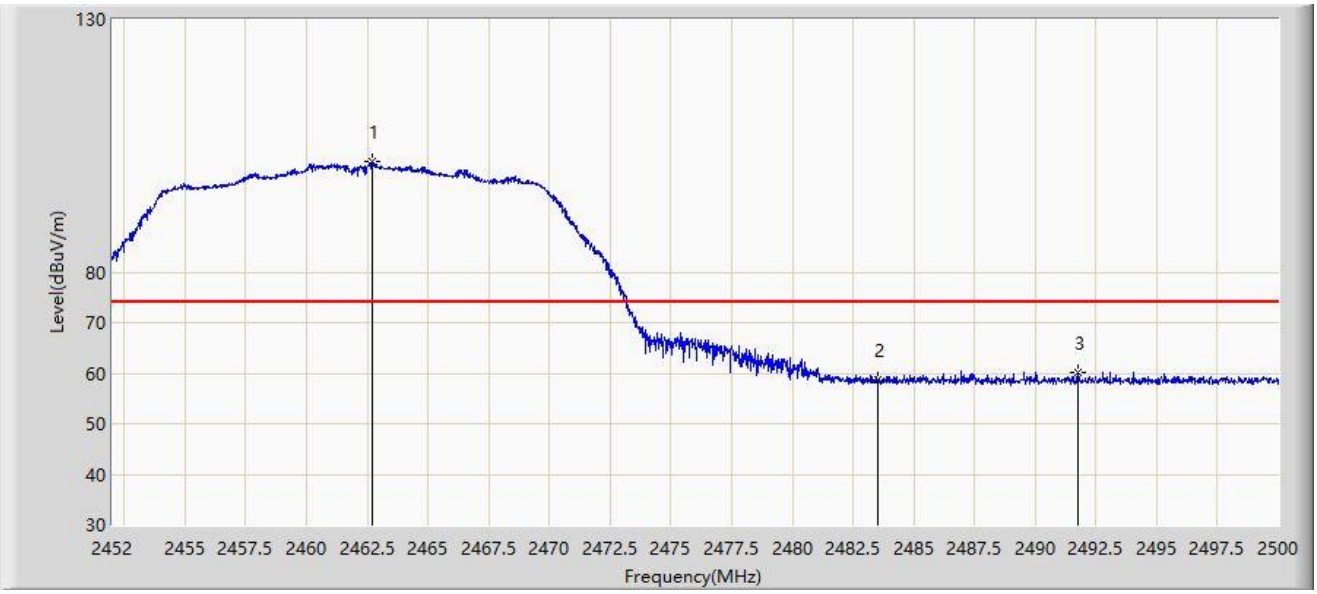
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2390.000	47.004	15.075	-6.996	54.000	31.929	AV
2		2411.024	84.853	52.775	N/A	N/A	32.078	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2462MHz	



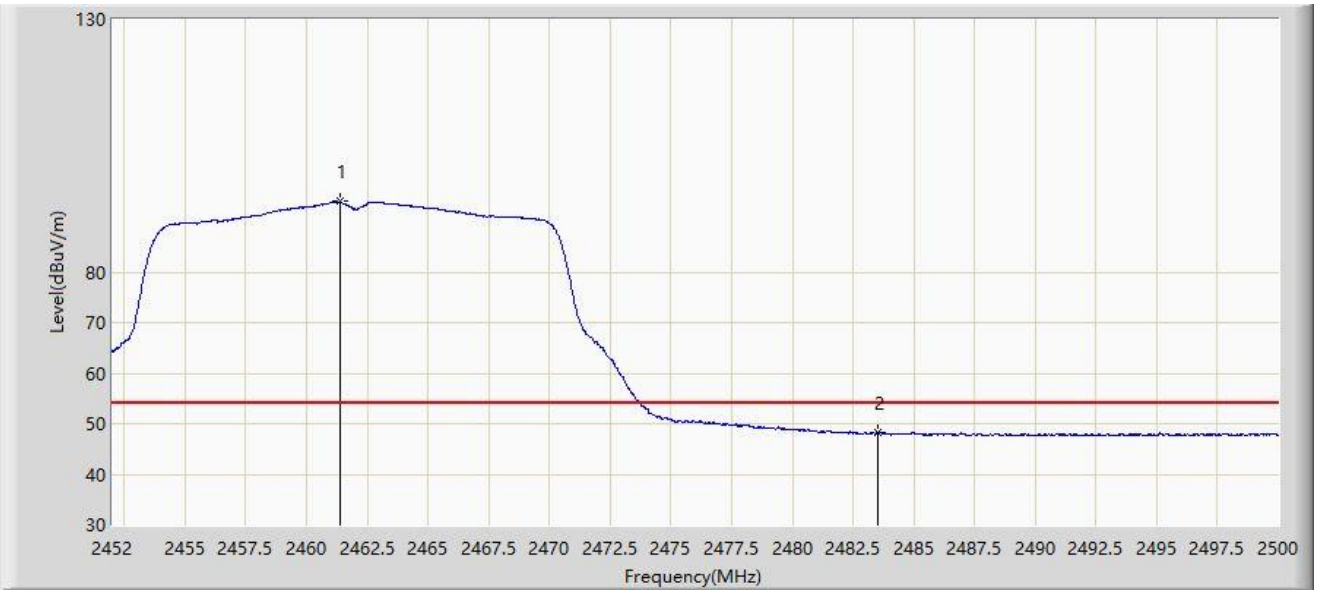
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2462.728	101.740	69.522	N/A	N/A	32.218	PK
2		2483.500	58.693	26.388	-15.307	74.000	32.305	PK
3	*	2491.744	60.115	27.768	-13.885	74.000	32.347	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2462MHz	



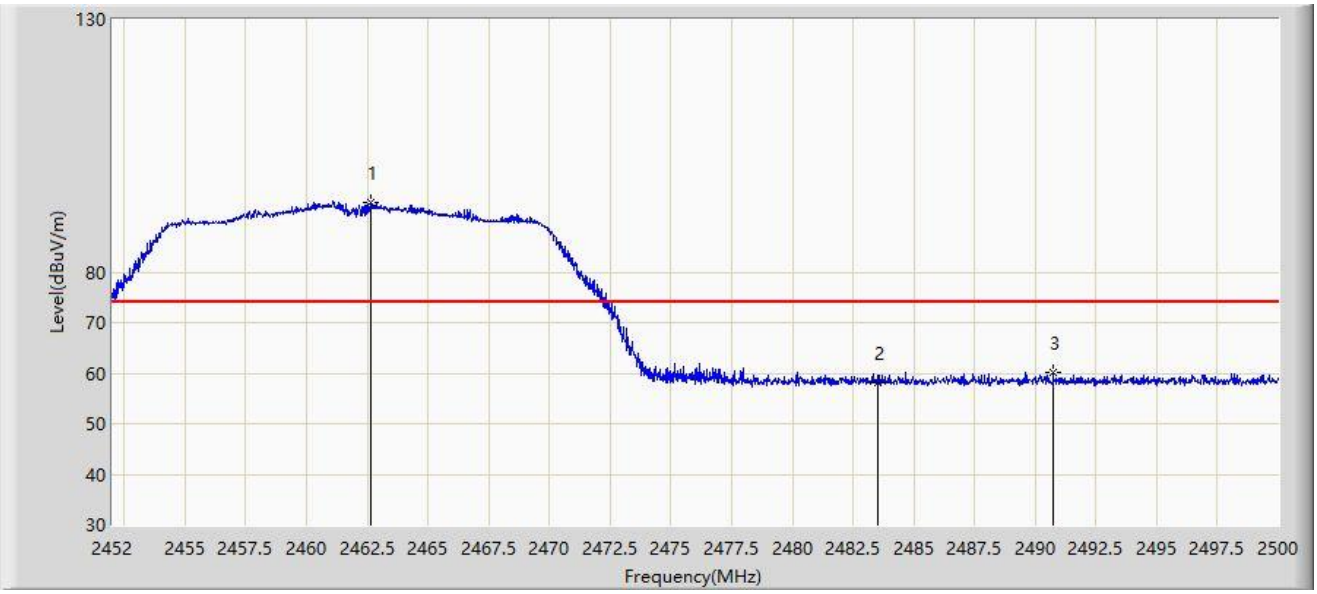
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2461.384	93.918	61.707	N/A	N/A	32.211	AV
2	*	2483.500	48.177	15.872	-5.823	54.000	32.305	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2462MHz	



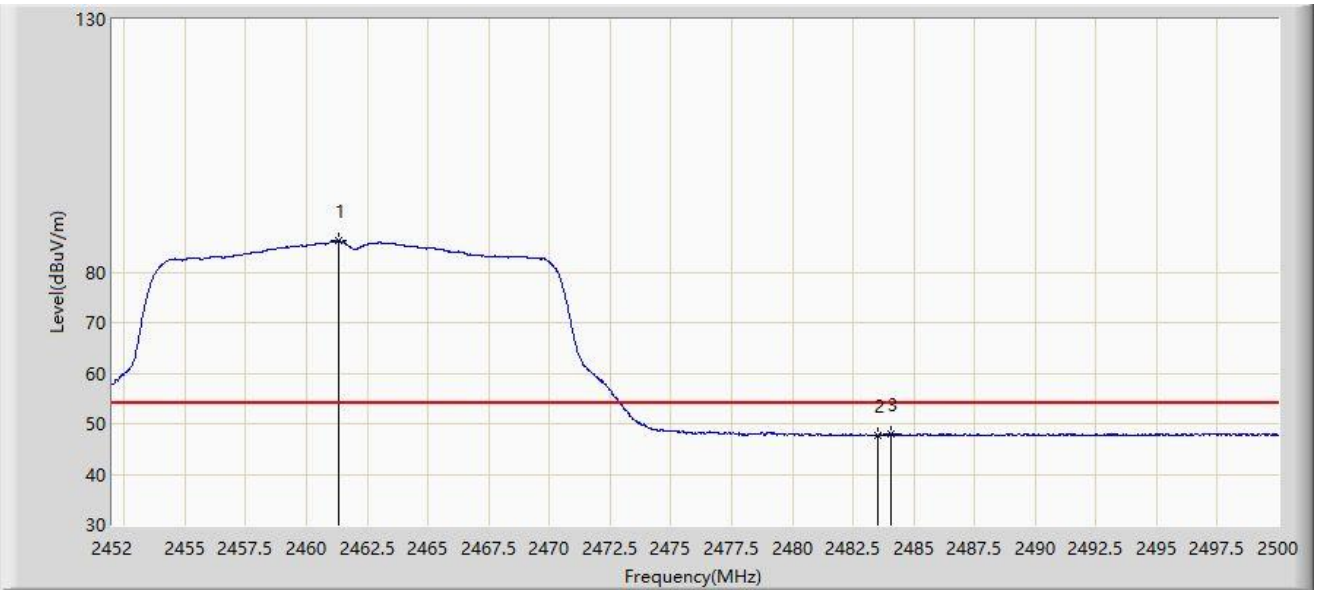
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2462.656	93.880	61.662	N/A	N/A	32.217	PK
2		2483.500	58.249	25.944	-15.751	74.000	32.305	PK
3	*	2490.736	60.027	27.686	-13.973	74.000	32.342	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11g at 2462MHz	



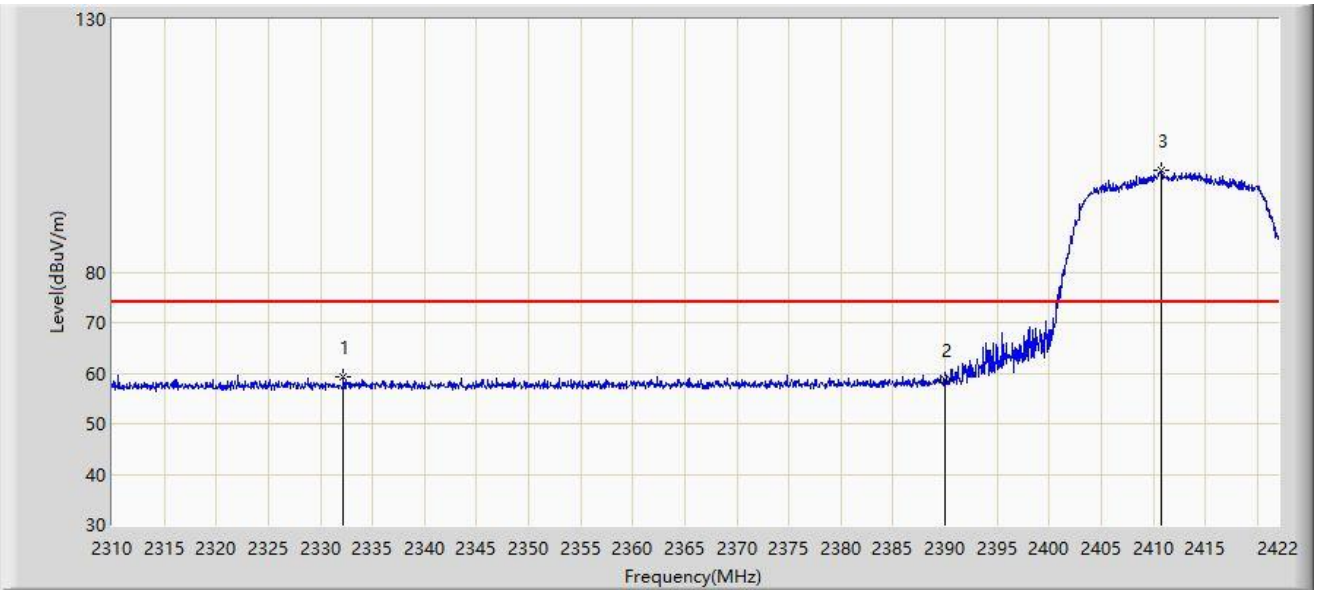
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2461.312	86.135	53.924	N/A	N/A	32.211	AV
2		2483.500	47.742	15.437	-6.258	54.000	32.305	AV
3	*	2484.088	48.030	15.722	-5.970	54.000	32.308	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



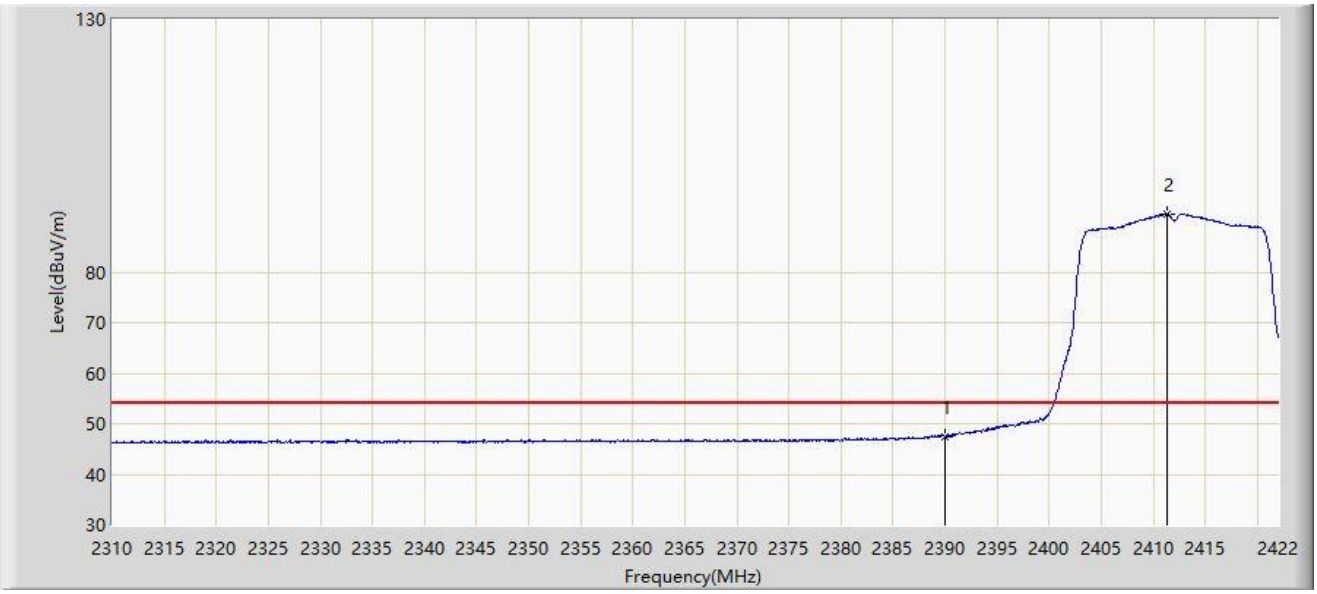
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2332.232	59.247	27.460	-14.753	74.000	31.787	PK
2		2390.000	58.576	26.647	-15.424	74.000	31.929	PK
3		2410.800	100.203	68.126	N/A	N/A	32.077	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



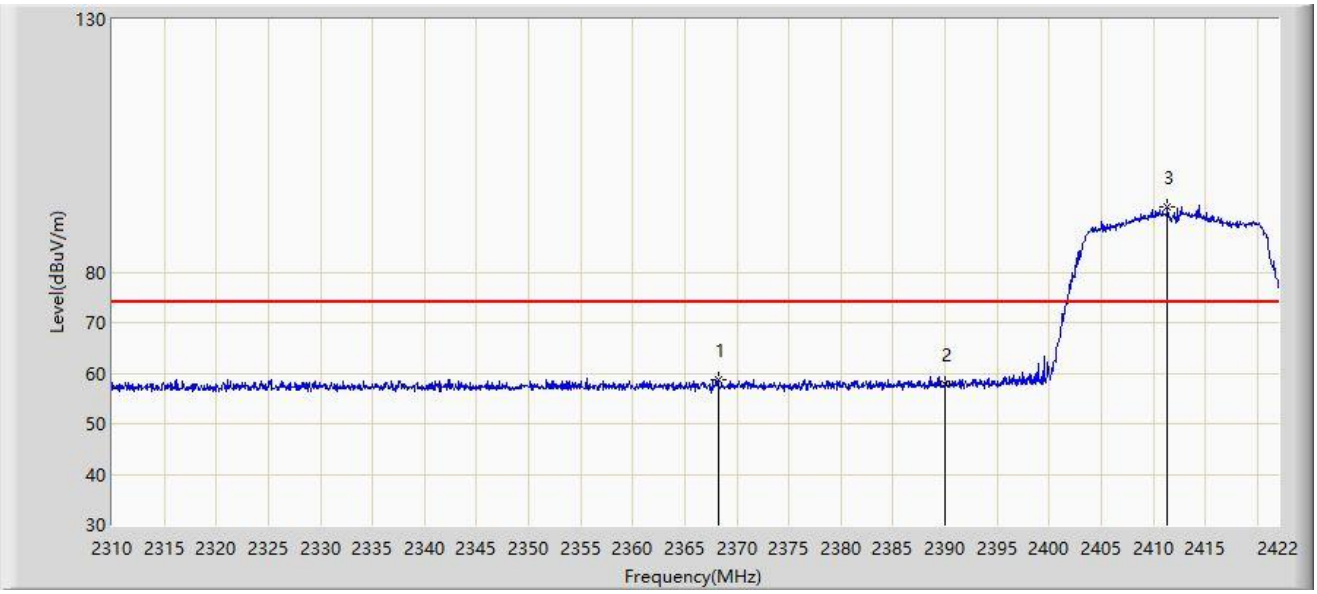
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2390.000	47.438	15.509	-6.562	54.000	31.929	AV
2		2411.304	91.445	59.367	N/A	N/A	32.078	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



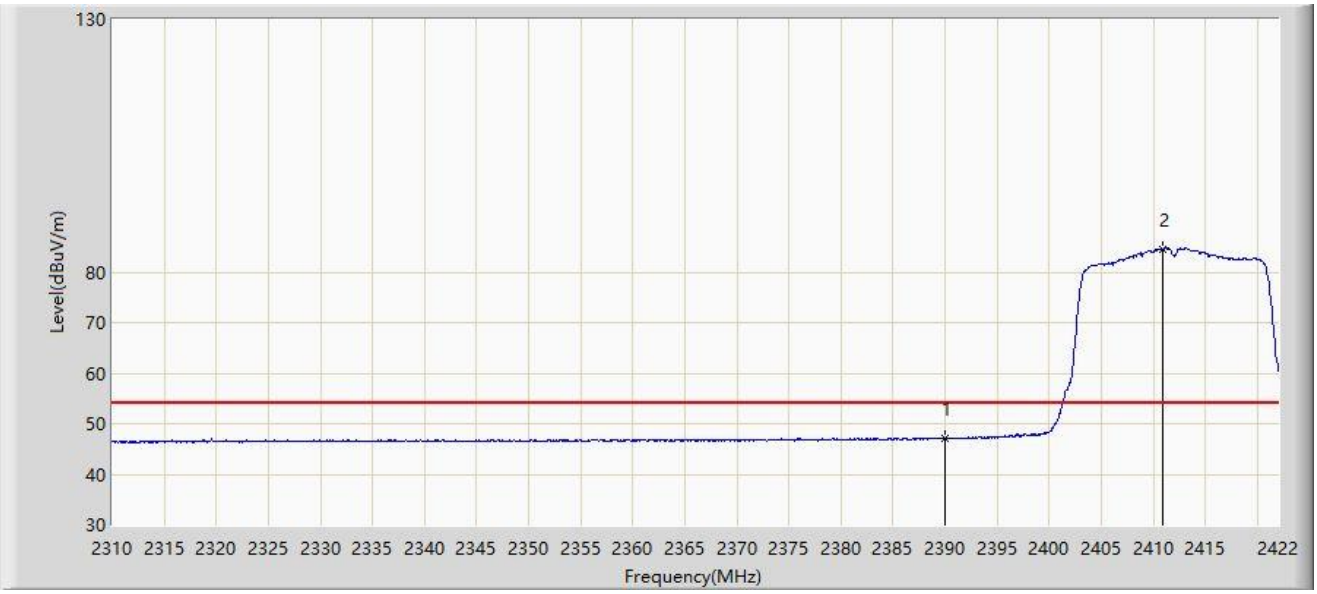
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2368.184	58.815	26.957	-15.185	74.000	31.858	PK
2		2390.000	57.803	25.874	-16.197	74.000	31.929	PK
3		2411.360	92.920	60.842	N/A	N/A	32.078	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2412MHz	



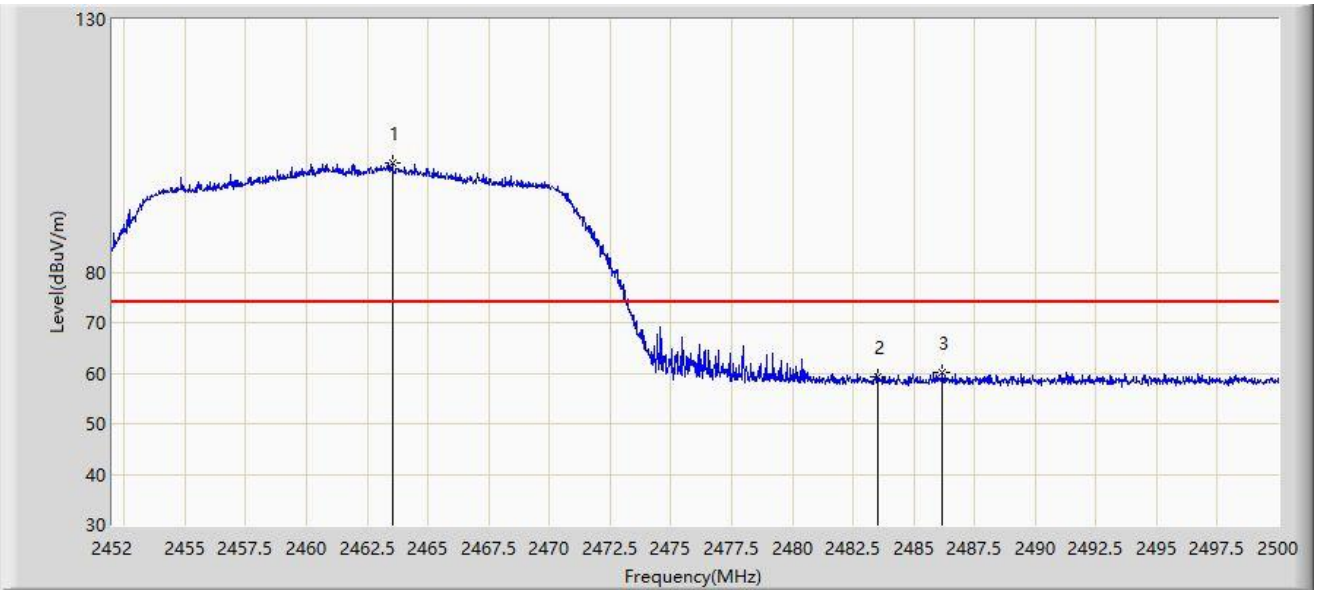
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2390.000	47.051	15.122	-6.949	54.000	31.929	AV
2		2410.968	84.554	52.476	N/A	N/A	32.078	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2462MHz	



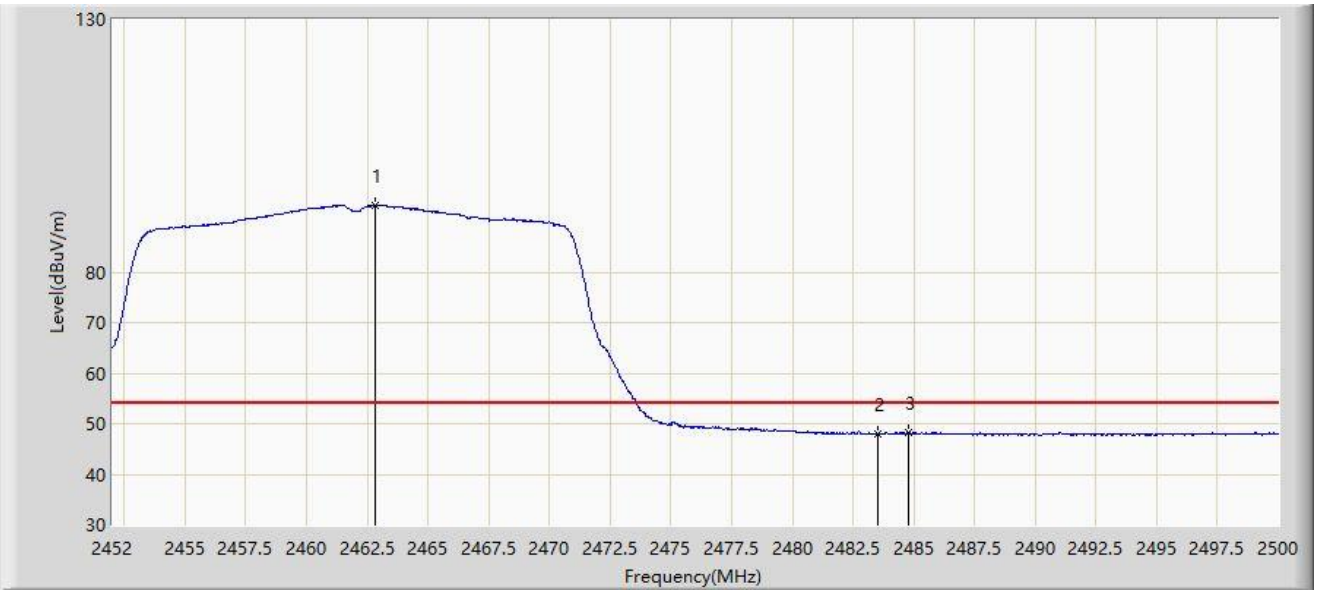
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2463.520	101.713	69.492	N/A	N/A	32.221	PK
2		2483.500	59.241	26.936	-14.759	74.000	32.305	PK
3	*	2486.176	60.113	27.794	-13.887	74.000	32.319	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Horizontal
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2462MHz	



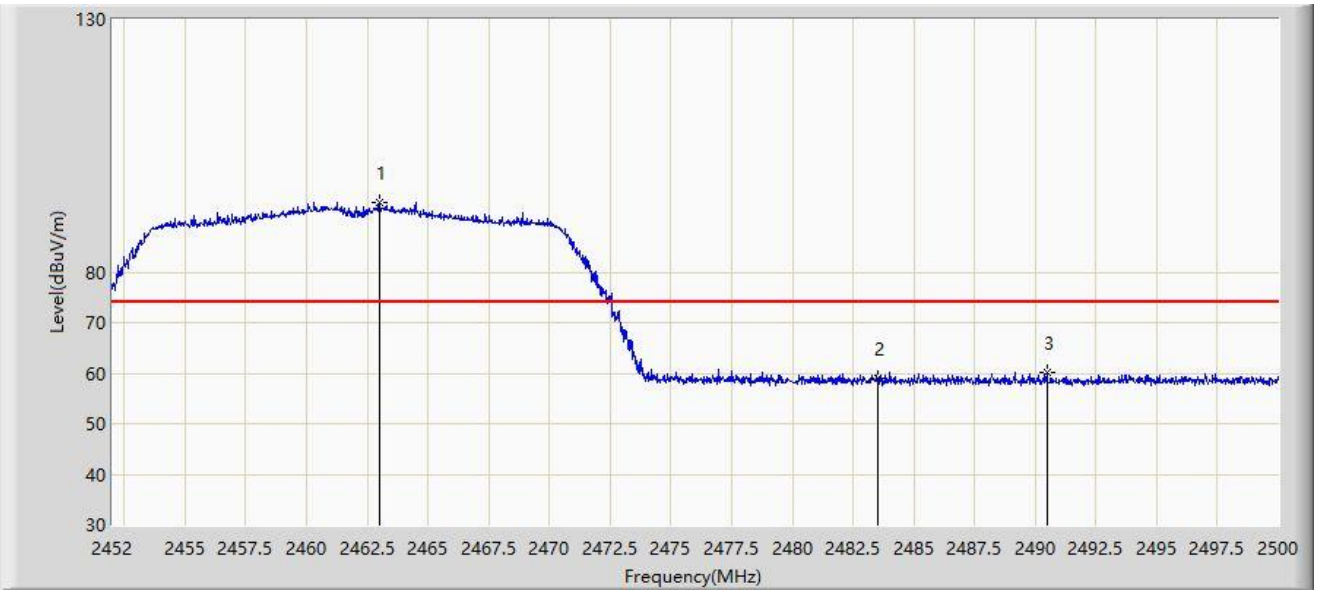
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2462.848	93.198	60.980	N/A	N/A	32.218	AV
2		2483.500	48.004	15.699	-5.996	54.000	32.305	AV
3	*	2484.808	48.362	16.050	-5.638	54.000	32.312	AV

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2462MHz	



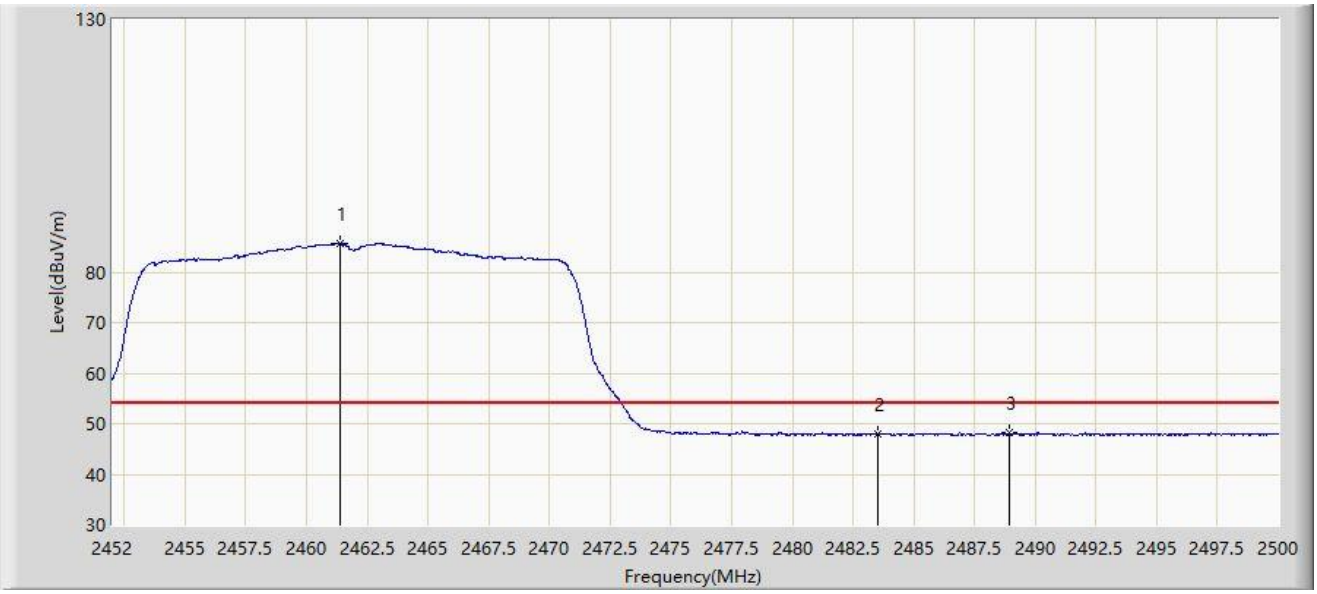
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2463.016	93.671	61.452	N/A	N/A	32.220	PK
2		2483.500	58.941	26.636	-15.059	74.000	32.305	PK
3	*	2490.472	60.286	27.946	-13.714	74.000	32.340	PK

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

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

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

Site: SIP-AC3	Test Date: 2022-09-07
Limit: FCC_Part15_15.209 RE(3m)	Engineer: Simon Lu
Probe: HF907_102861_1-18GHz	Polarity: Vertical
EUT: Communication Module	Power: DC 3.3V
Test Mode: Transmit by 802.11n-HT20 at 2462MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2461.384	85.656	53.445	N/A	N/A	32.211	AV
2		2483.500	47.881	15.576	-6.119	54.000	32.305	AV
3	*	2488.936	48.193	15.861	-5.807	54.000	32.333	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).

Appendix B – Test Setup Photograph

Refer to “2208RSU054-UT” file.

Appendix C – EUT Photograph

Refer to “2208RSU054-UE” file.

The End