



RF MEASUREMENT REPORT

FCC ID: SFKWF196
Applicant: CIG Shanghai Co., Ltd.
Product: Tri-band 4x4 Wi-Fi 6E Wireless AP
Model No.: WF-196, API7340
Brand Name: CIG, Actiontec
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Result: Complies
Test Date: 2022-08-01 ~ 2022-08-20

Reviewed By:



Kevin Guo

Approved By:



Robin Wu



The test results relate only to the samples tested.

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

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

Revision History

Report No.	Version	Description	Issue Date	Note
2207RSU033-U1	Rev. 01	Initial Report	2022-09-02	Valid

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1. General Information

1.1. Applicant

CIG Shanghai Co., Ltd.

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

1.2. Manufacturer

CIG Shanghai Co., Ltd.

5F, Building 8, NO.2388 CHENGHANG ROAD, MINHANG DISTRTCT, SHANGHAI

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 FCC: CN1166 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104 CNAS: L10551 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 CNAS: L10551 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	Tri-band 4x4 Wi-Fi 6E Wireless AP
Model No.	WF-196, API7340
EUT Identification No.	20220719Sample#07
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	V5.0 (BLE only)
Antenna Information	Refer to Section 1.7
Power Type	AC Adapter Input or PoE Input
Operating Environment	Indoor Use
Remark: 1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. 2. Different models correspond to different brands, and the others are exactly the same.	

1.5. Radio Specification under Test

Bluetooth Frequency	2402 ~ 2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1Mbps & 2Mbps

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz
03	2408 MHz	04	2410 MHz	05	2412 MHz
06	2414 MHz	07	2416 MHz	08	2418 MHz
09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz
15	2432 MHz	16	2434 MHz	17	2436 MHz
18	2438 MHz	19	2440 MHz	20	2442 MHz
21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz
27	2456 MHz	28	2458 MHz	29	2460 MHz
30	2462 MHz	31	2464 MHz	32	2466 MHz
33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz
39	2480 MHz	--	--	--	--

1.7. Antenna Details

Antenna Type	Frequency (MHz)	TX Path	Antenna Gain (dBi)				Directional Gain (dBi)	
			Ant 0	Ant 1	Ant 2	Ant 3	Correlated	Uncorrelated
Wi-Fi Antenna								
PIFA	2412 ~ 2462	4	4.1	3.2	4.4	3.7	8.3	2.3
	5150 ~ 5850	4	4.4	4.2	3.7	4.1	9.0	3.0
	5925 ~ 7125	4	6.6	6.2	3.3	6.1	8.8	3.1
Bluetooth Antenna								
PIFA	2402 ~ 2480	1	4.2				--	
Remark:								
1. The antenna gain and directional gain refer to manufacturer’s antenna specification. 2. The device supports CDD Mode and STBC mode, details refer to the table as below. 3. CDD signals are correlated, the directional gain as follows, For power measurements: Array Gain = 0 dB for $N_{ANT} \leq 4$, the directional gain = max antenna gain + array gain For power spectral density (PSD) measurements: the max directional gain (each angle) = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ 4. STBC signals are uncorrelated, the directional gain as follows, the max directional gain (each angle) = $10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N_{ANT}]$								

Test Mode	T _x Paths	CDD Mode	STBC Mode
Wi-Fi 2.4G			
802.11b/g	4	√	X
802.11n/ax	4	X	√
Wi-Fi 5G			
802.11a	4	√	X
802.11n/ac/ax	4	X	√
Wi-Fi 6G			
802.11ax	4	X	√
Remark: "√" means "Support", "X" means "Not support".			

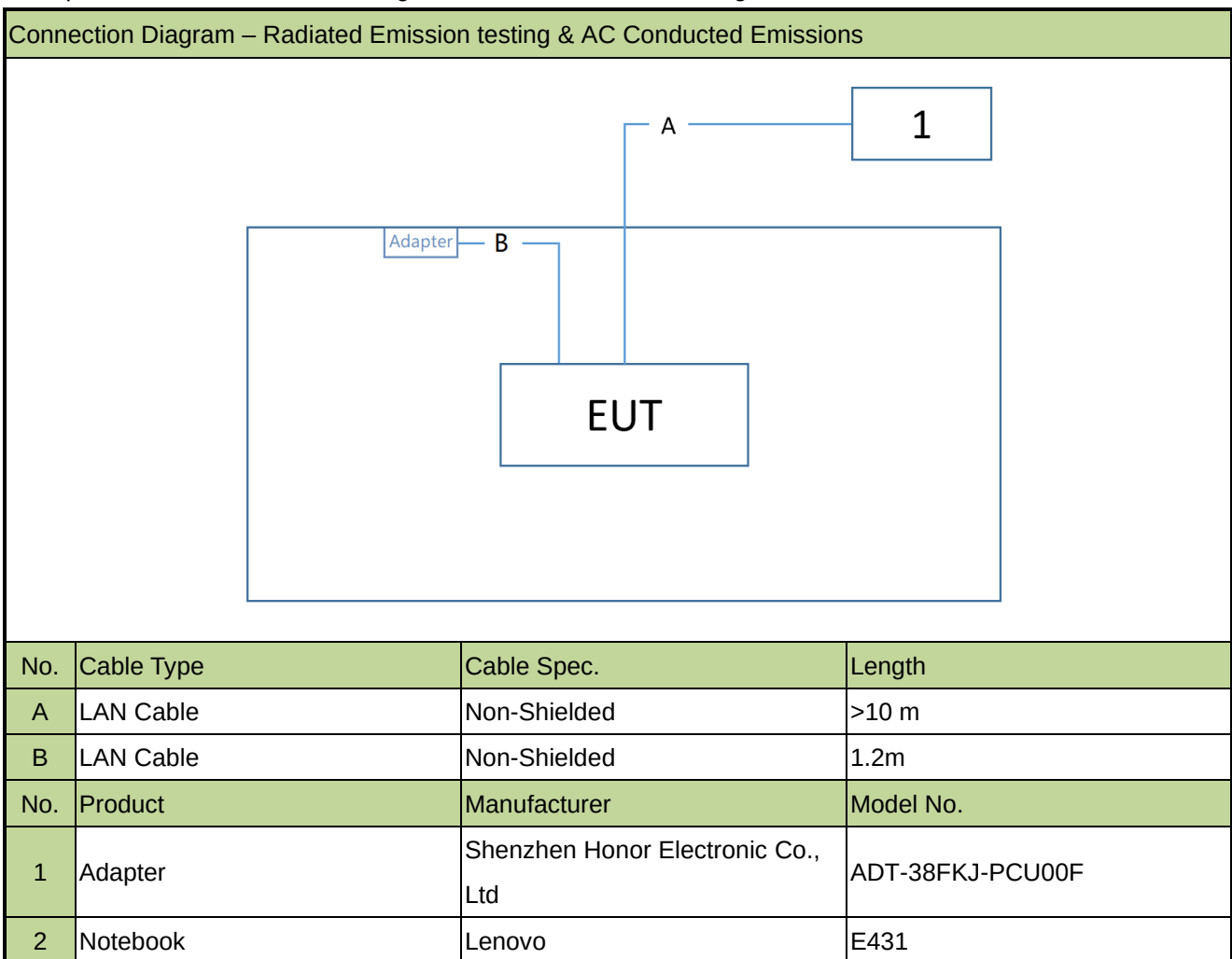
2. Test Configuration

2.1. Test Mode

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

2.2. Test System Connection Diagram

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



Note: Adapter is provided by manufacturer for test only, it will not be sold with product.

2.3. Test Software

The test utility software used during testing was “telnet”, and commands were provided by manufacturer.

2.4. Applied Standards

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

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

2.5. Test Environment Condition

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

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

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

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

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06292	1 year	2022-10-20	NS-AC1
Anechoic Chamber	BOOMWAVE	NS-AC1	MRTSUE06496	1 year	2023-07-23	NS-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06572	1 year	2023-04-01	NS-AC1
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06573	1 year	2023-06-21	NS-AC1
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06574	1 year	2023-07-11	NS-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06575	1 year	2023-06-19	NS-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2023-01-13	NS-AC1
Thermohygrometer	testo	Testo 608-H1	MRTSUE11020	1 year	2023-05-15	NS-AC1
Thermohygrometer	testo	Testo 608-H1	MRTSUE11104	1 year	2023-05-03	NS-AC1
Signal Analyzer	Agilent	N9010A	MRTSUE06195	1 year	2023-04-13	NS-AC1/NS-TR2
Signal Analyzer	Keysight	N9020A	MRTSUE10065	1 year	2023-01-11	NS-AC1/NS-TR2
USB Power Sensor	Keysight	U2021XA	MRTSUE06581	1 year	2023-07-13	NS-TR2
Thermohygrometer	DELI	NO.8813	MRTSUE06783	1 year	2023-04-14	NS-TR2
Temperature Chamber	OUKE	OK-TH-100C	MRTSUE06899	1 year	2022-11-01	NS-TR2
Attenuator	MVE	MVE2213	MRTSUE11062	1 year	2023-06-09	NS
Attenuator	MVE	MVE2213	MRTSUE11063	1 year	2023-06-09	NS
Attenuator	MVE	MVE2213	MRTSUE11064	1 year	2023-06-09	NS
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2023-06-04	WZ-SR2
Shielding Room	MIX-BEP	WZ-SR2	MRTSUE06215	N/A	N/A	WZ-SR2
Thermohygrometer	testo	608-H1	MRTSUE06404	1 year	2023-06-06	WZ-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06615	1 year	2022-10-13	WZ-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06909	1 year	2022-11-01	WZ-SR2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_T-E-TAC-2	1.02	RE Antenna & Turntable
BenchVue Power Meter	2021	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
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
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
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.28%

6. Test Result

6.1. Summary

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

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

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

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

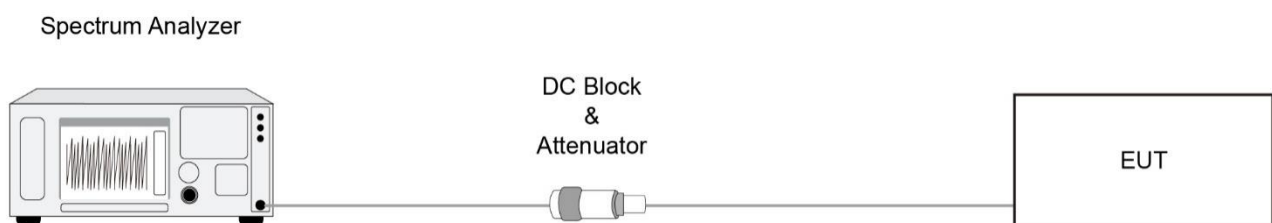
6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

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

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

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.1.3

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.3.3. Test Setting

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

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

Average Power Measurement

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

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

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

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

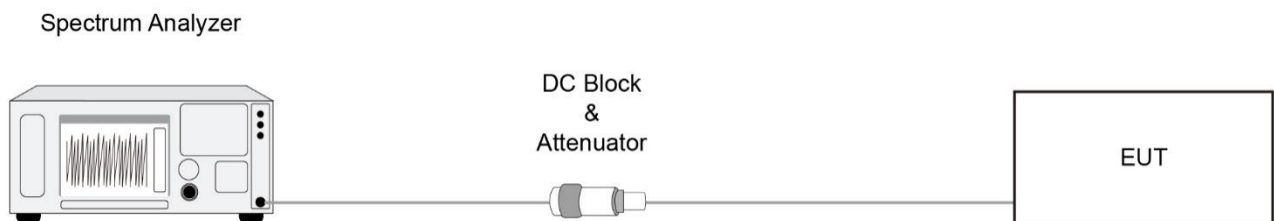
6.4.2. Test Procedure

ANSI C63.10-2013 Section 11.10.2

6.4.3. Test Setting

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

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

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

6.5.1. Test Limit

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

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Settling

Reference level measurement

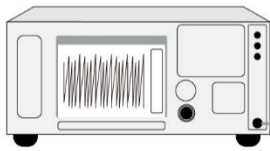
1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

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

6.5.4. Test Setup

Spectrum Analyzer



DC Block
&
Attenuator



EUT



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

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

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

6.6.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

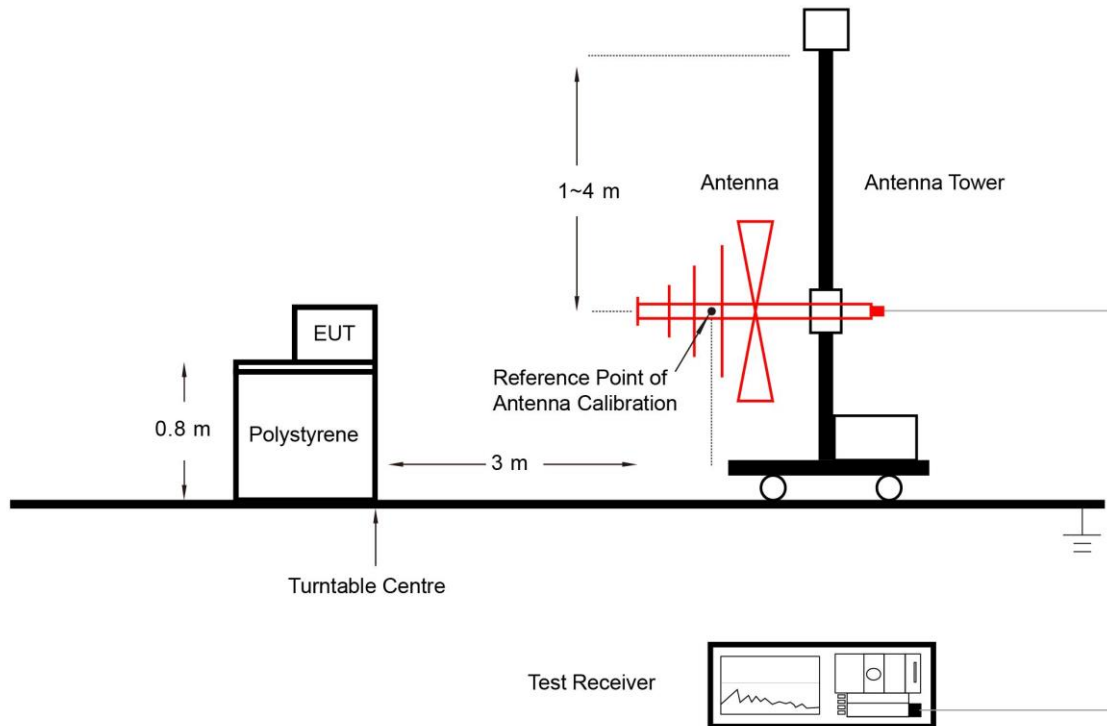
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

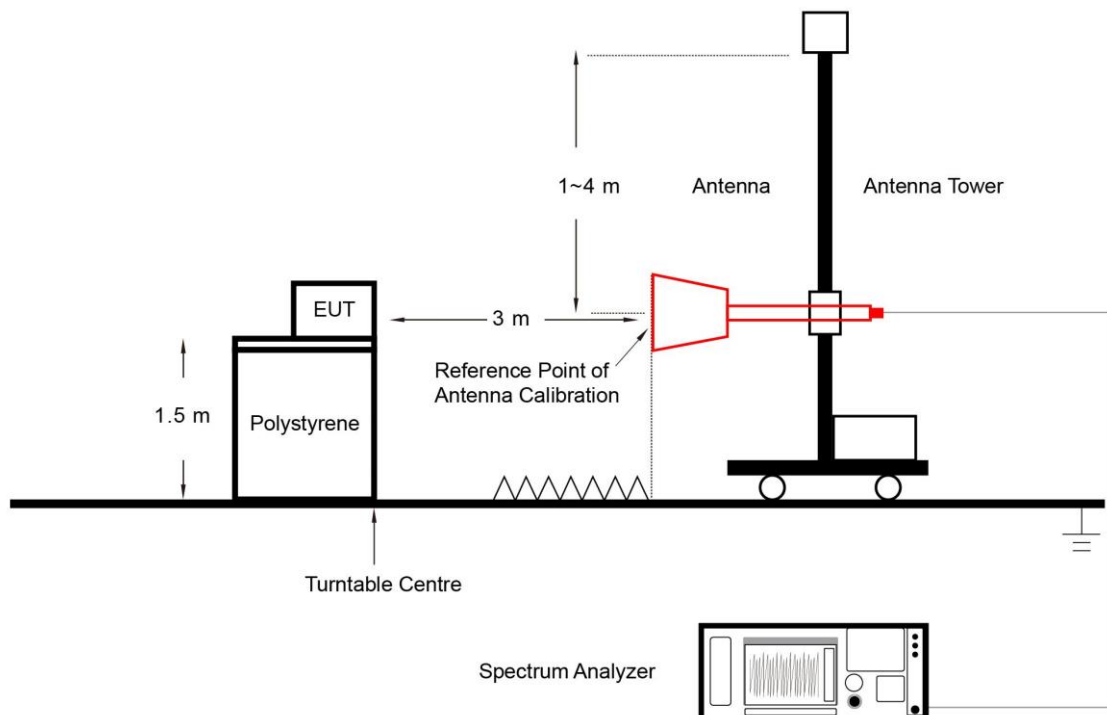
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4.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

6.6.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

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

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

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

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

6.7.2. Test Procedure

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

6.7.3. Test Setting

Peak Field Strength Measurements

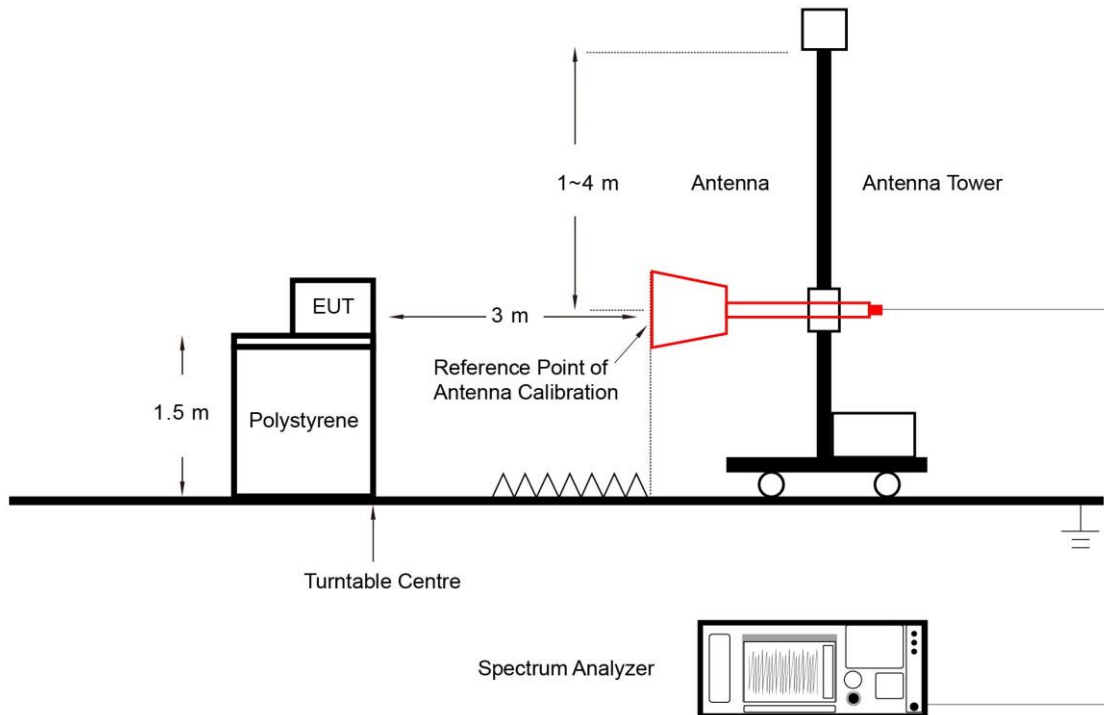
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak

6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.7.4. Test Setup



6.7.5. Test Result

Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

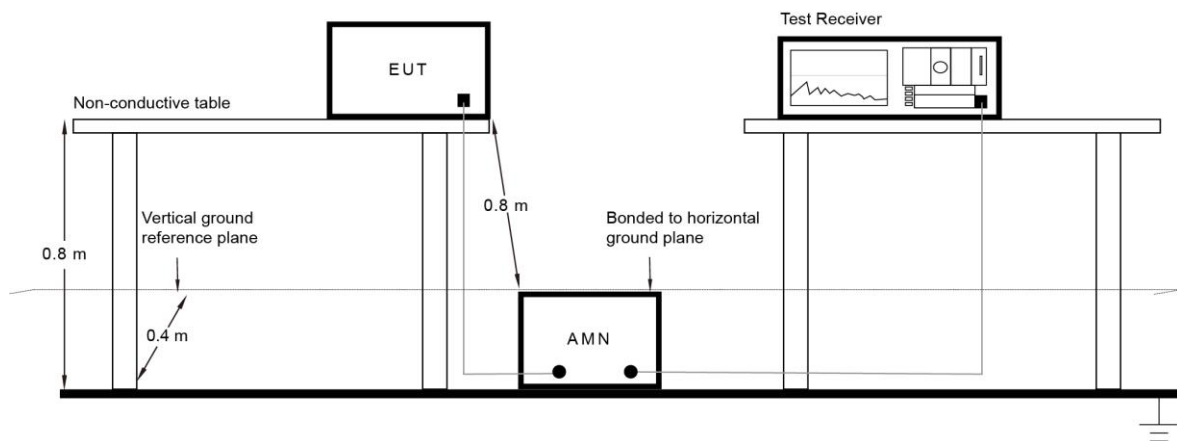
6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.8.2. Test Setup



6.8.3. Test Result

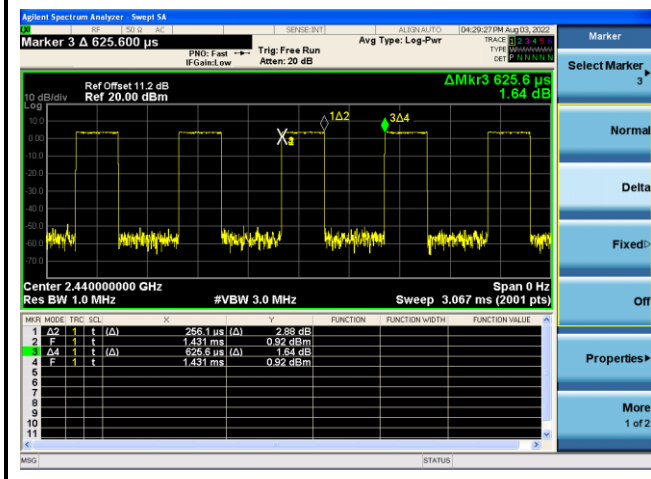
Refer to Appendix A.8.

Appendix A - Test Result

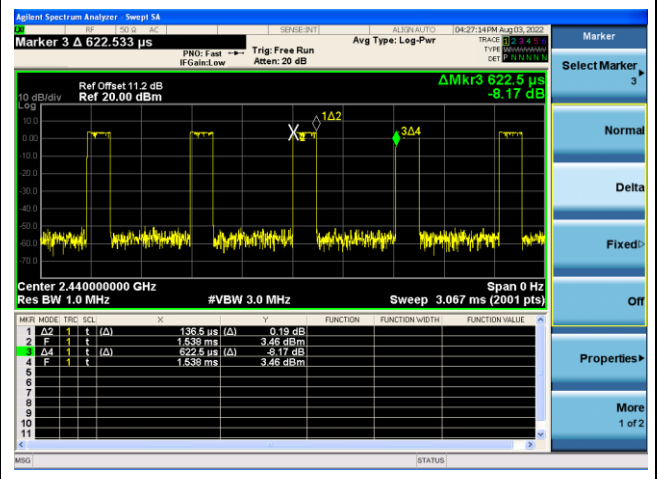
A.1 Duty Cycle Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2022-08-03		

Test Mode	Duty Cycle
BLE-1Mbps	40.94%
BLE-2Mbps	21.93%
Duty Cycle (T = Transmission Duration)	
BLE-1Mbps (T = 256.1 μ s)	BLE-2Mbps (T = 136.5 μ s)



Marker	Time (μs)	Amplitude (dB)
1	256.1	2.88
2	1.431	0.92
3	625.6	1.64

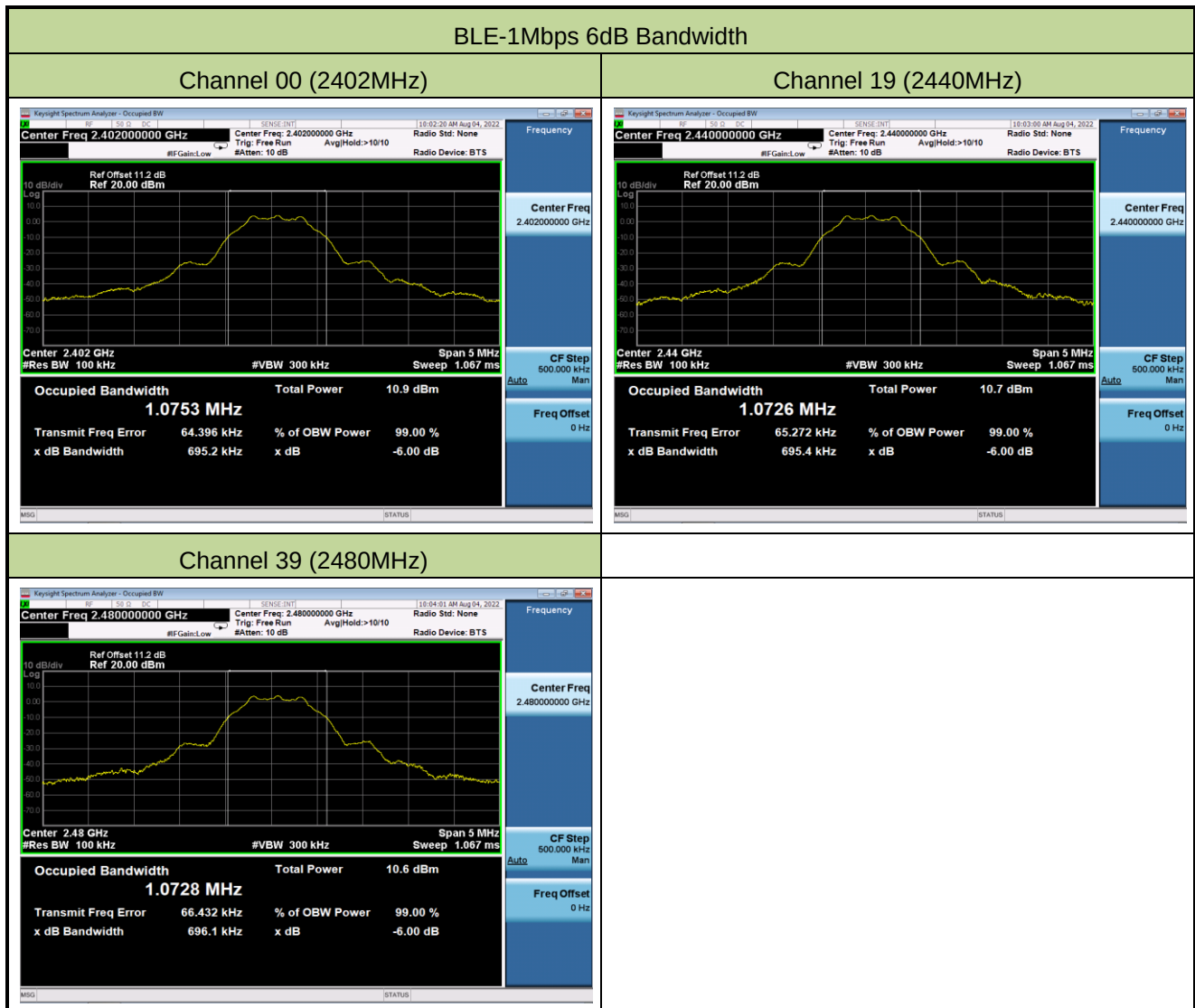


Marker	Time (μs)	Amplitude (dB)
1	136.5	0.19
2	1.539	3.46
3	622.5	-8.17

A.2 6dB Bandwidth Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2022-08-04		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
BLE	1Mbps	00	2402	0.695	≥ 0.5
BLE	1Mbps	19	2440	0.695	≥ 0.5
BLE	1Mbps	39	2480	0.696	≥ 0.5
BLE	2Mbps	00	2402	1.192	≥ 0.5
BLE	2Mbps	19	2440	1.193	≥ 0.5
BLE	2Mbps	39	2480	1.194	≥ 0.5

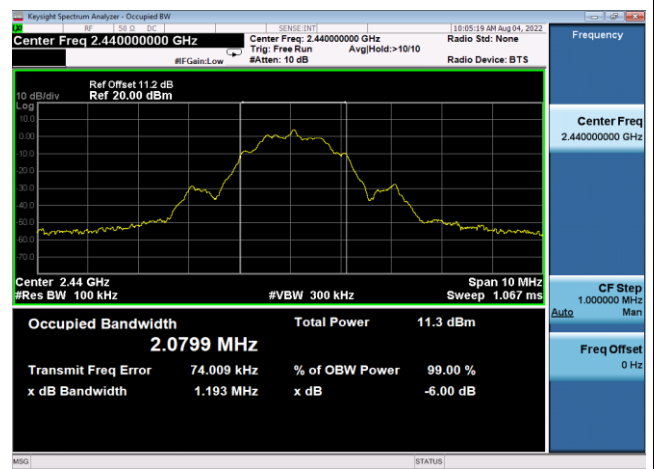


BLE-2Mbps 6dB Bandwidth

Channel 00 (2402MHz)



Channel 19 (2440MHz)



Channel 39 (2480MHz)



A.3 Output Power Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2022-08-04		

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	4.08	≤ 30.00	Pass
BLE	1Mbps	19	2440	4.05	≤ 30.00	Pass
BLE	1Mbps	39	2480	3.94	≤ 30.00	Pass
BLE	2Mbps	00	2402	4.11	≤ 30.00	Pass
BLE	2Mbps	19	2440	4.04	≤ 30.00	Pass
BLE	2Mbps	39	2480	3.95	≤ 30.00	Pass

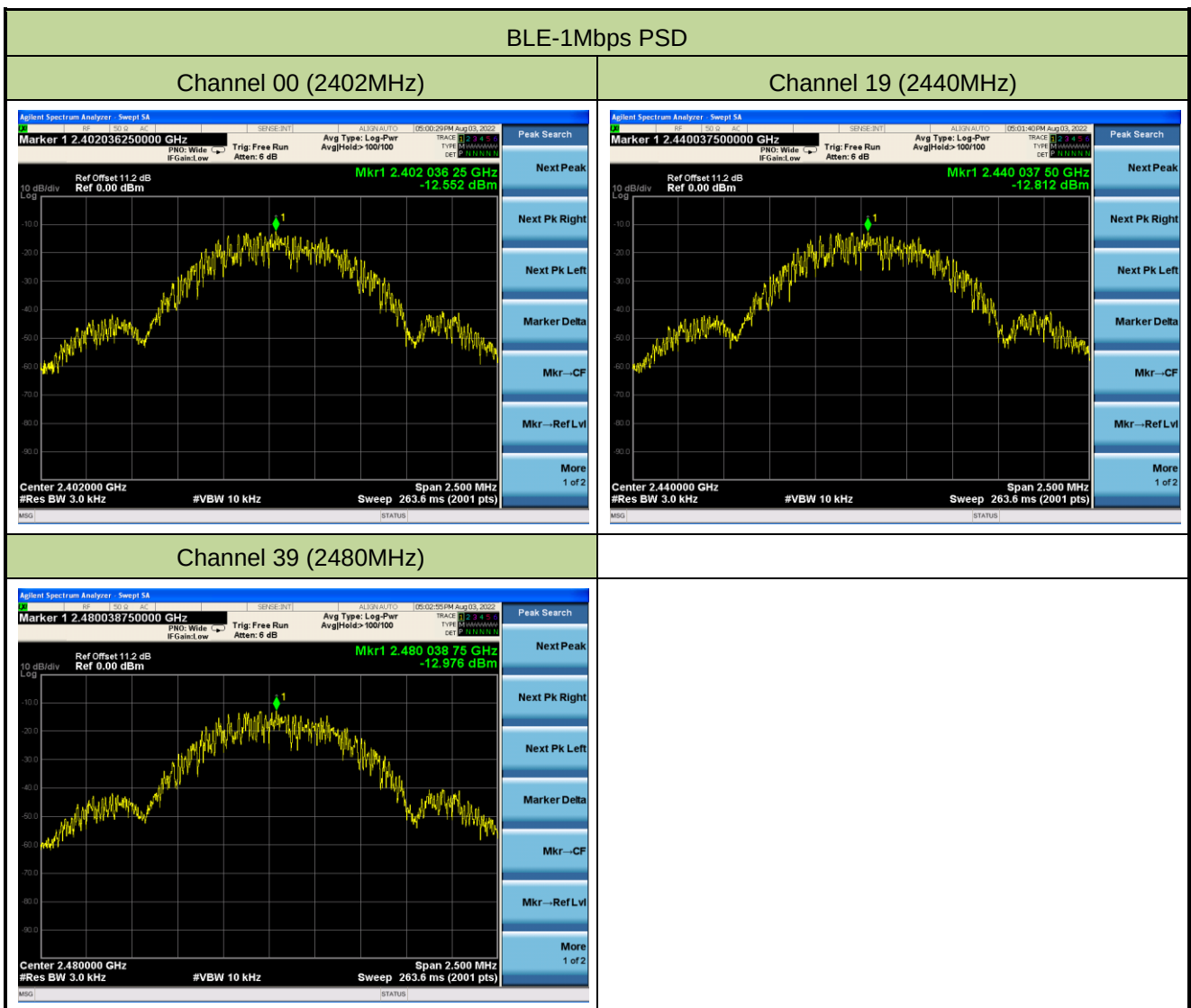
Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	3.95	≤ 30.00	Pass
BLE	1Mbps	19	2440	3.90	≤ 30.00	Pass
BLE	1Mbps	39	2480	3.81	≤ 30.00	Pass
BLE	2Mbps	00	2402	3.98	≤ 30.00	Pass
BLE	2Mbps	19	2440	3.91	≤ 30.00	Pass
BLE	2Mbps	39	2480	3.91	≤ 30.00	Pass

A.4 Power Spectral Density Test Result

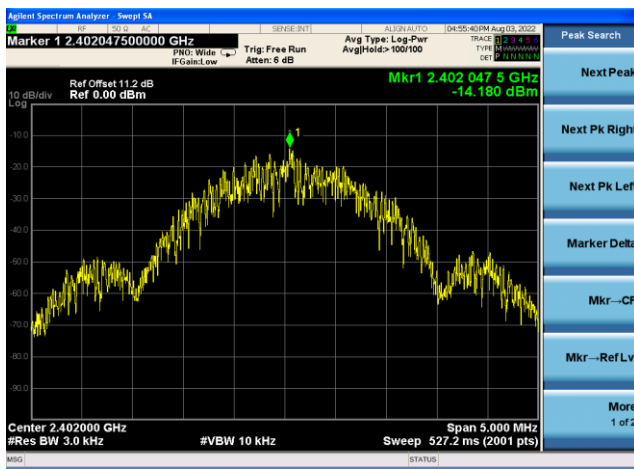
Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2022-08-03		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1Mbps	00	2402	-12.55	≤ 8.00	Pass
BLE	1Mbps	19	2440	-12.81	≤ 8.00	Pass
BLE	1Mbps	39	2480	-12.98	≤ 8.00	Pass
BLE	2Mbps	00	2402	-14.18	≤ 8.00	Pass
BLE	2Mbps	19	2440	-14.32	≤ 8.00	Pass
BLE	2Mbps	39	2480	-14.63	≤ 8.00	Pass

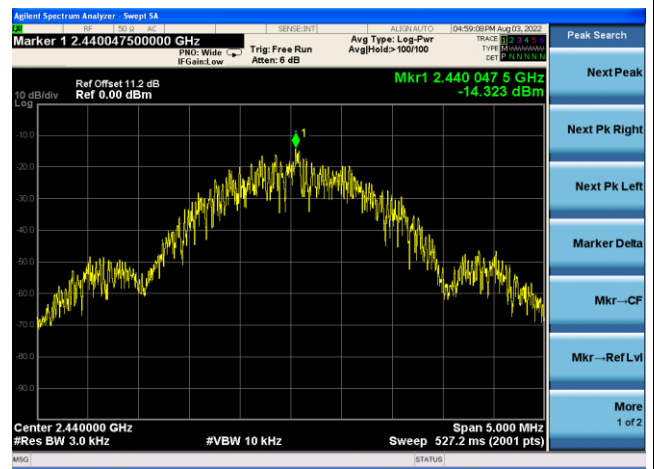


BLE-2Mbps PSD

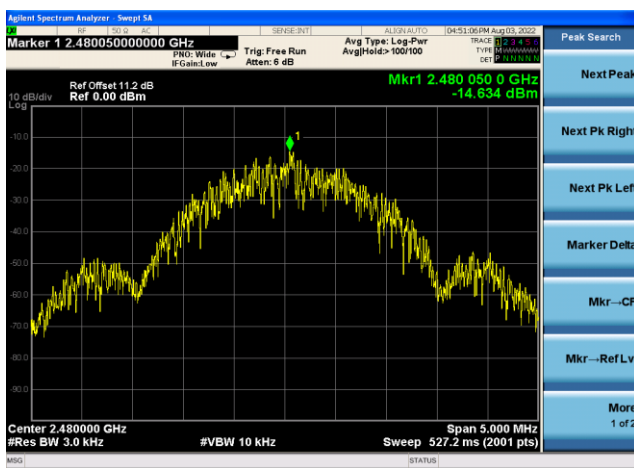
Channel 00 (2402MHz)



Channel 19 (2440MHz)



Channel 39 (2480MHz)



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

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2022-08-03		

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



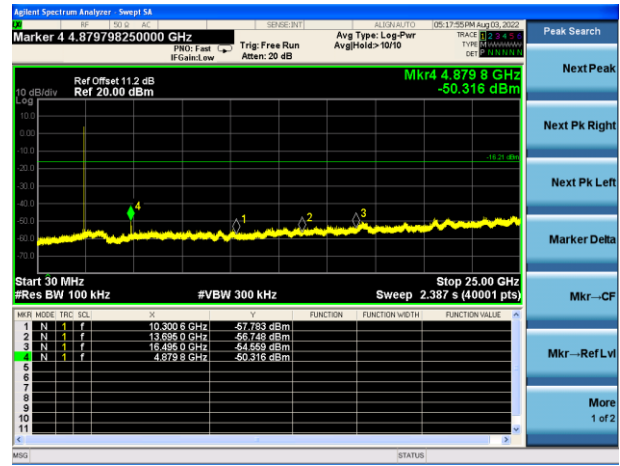
BLE-1Mbps Out-of-Band Emissions

Channel 19 (2440MHz)

100kHz PSD Reference Level

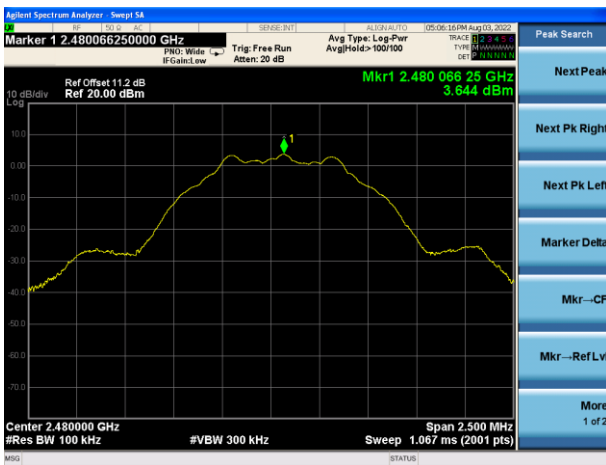


Spurious Emission 30MHz ~ 25GHz



Channel 39 (2480MHz)

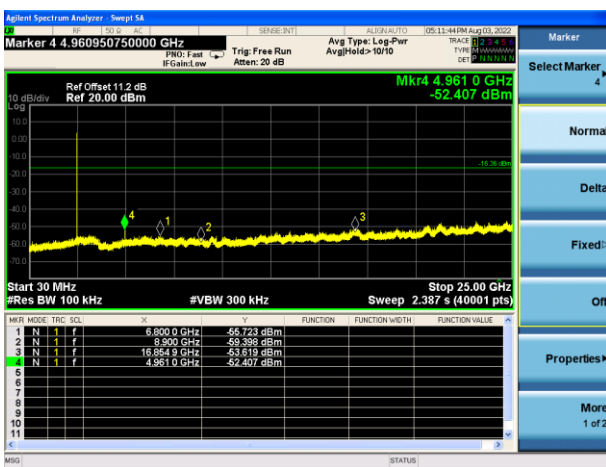
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

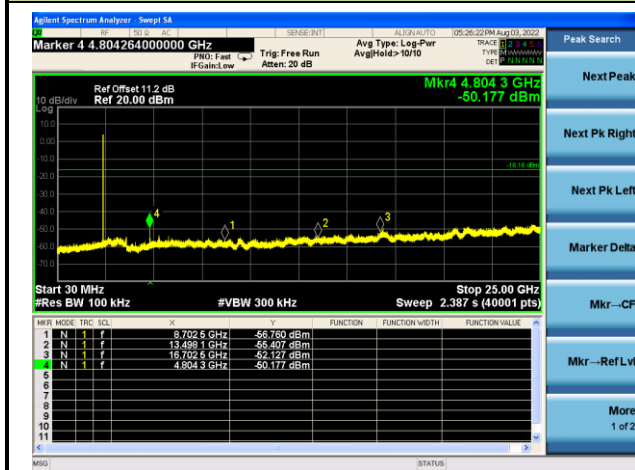
100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz

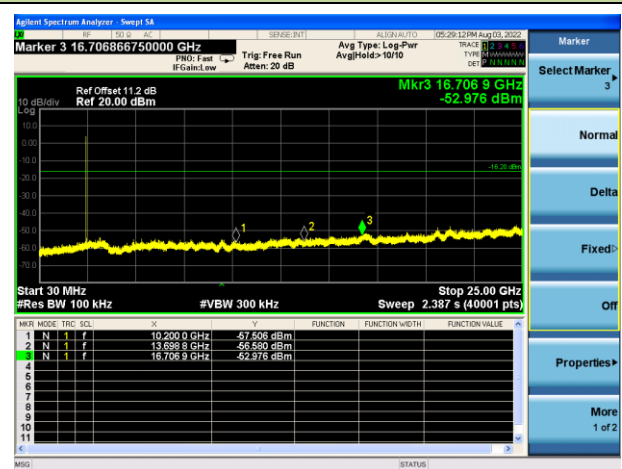


Channel 19 (2440MHz)

100kHz PSD Reference Level



Spurious Emission 30MHz ~ 25GHz



BLE-2Mbps Out-of-Band Emissions

Channel 39 (2480MHz)

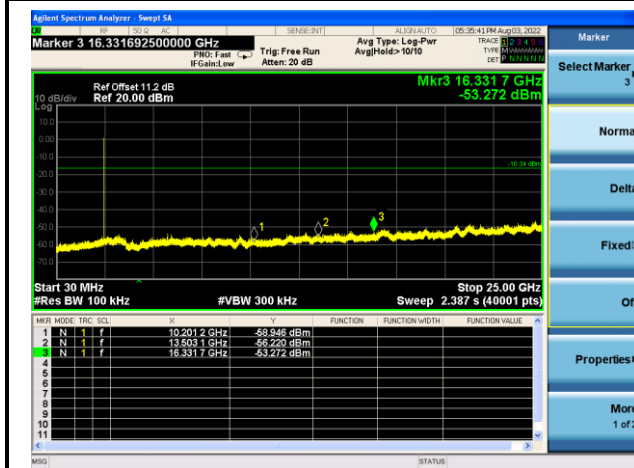
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



A.6 Radiated Spurious Emission Test Result

Test Site	NS-AC1	Test Engineer	Ted Chen
Test Date	2022-08-01~2022-08-02	Test Mode:	BLE-1Mbps
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	4808.0	43.9	1.5	45.4	74.0	-28.6	Peak	Horizontal
	7366.5	36.3	9.9	46.2	74.0	-27.8	Peak	Horizontal
	11429.5	34.6	15.5	50.1	74.0	-23.9	Peak	Horizontal
	4808.0	44.3	1.5	45.8	74.0	-28.2	Peak	Vertical
	7494.0	36.9	9.9	46.8	74.0	-27.2	Peak	Vertical
	11735.5	32.3	15.0	47.3	74.0	-26.7	Peak	Vertical
19	4876.0	44.7	1.5	46.2	74.0	-27.8	Peak	Horizontal
	6780.0	39.4	6.6	46.0	74.0	-28.0	Peak	Horizontal
	9457.5	38.1	11.5	49.6	74.0	-24.4	Peak	Horizontal
	4884.5	46.1	1.5	47.6	74.0	-26.4	Peak	Vertical
	8412.0	38.5	10.1	48.6	74.0	-25.4	Peak	Vertical
	12075.5	36.1	15.3	51.4	74.0	-22.6	Peak	Vertical
39	4961.0	43.7	1.8	45.5	74.0	-28.5	Peak	Horizontal
	7273.0	37.0	9.5	46.5	74.0	-27.5	Peak	Horizontal
	12483.5	36.9	14.7	51.6	74.0	-22.4	Peak	Horizontal
	4961.0	46.0	1.8	47.8	74.0	-26.2	Peak	Vertical
	8412.0	37.7	10.1	47.8	74.0	-26.2	Peak	Vertical
	12058.5	35.7	15.1	50.8	74.0	-23.2	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	NS-AC1	Test Engineer	Ted Chen
Test Date	2022-08-01~2022-08-02	Test Mode:	BLE-2Mbps
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

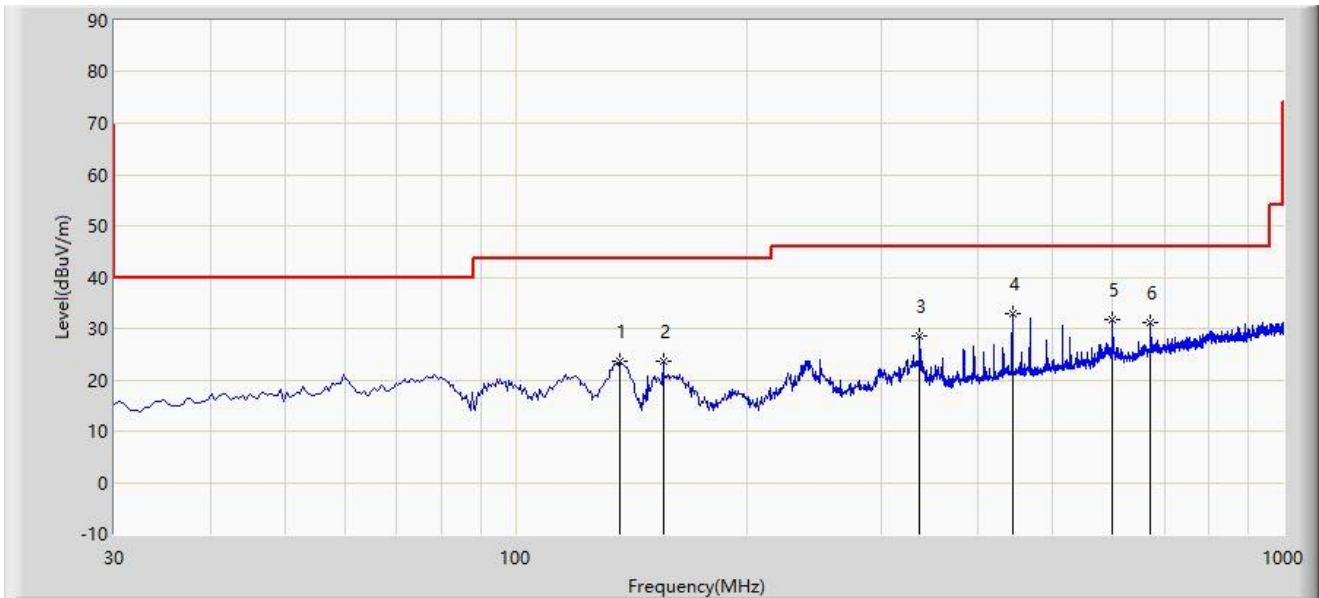
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	4808.0	44.2	1.5	45.7	74.0	-28.3	Peak	Horizontal
	7638.5	34.4	9.3	43.7	74.0	-30.3	Peak	Horizontal
	11735.5	32.7	15.0	47.7	74.0	-26.3	Peak	Horizontal
	4799.5	42.8	1.5	44.3	74.0	-29.7	Peak	Vertical
	8378.0	37.2	10.1	47.3	74.0	-26.7	Peak	Vertical
	12050.0	36.1	15.0	51.1	74.0	-22.9	Peak	Vertical
19	4876.0	43.1	1.5	44.6	74.0	-29.4	Peak	Horizontal
	7630.0	37.0	9.4	46.4	74.0	-27.6	Peak	Horizontal
	11455.0	36.2	15.4	51.6	74.0	-22.4	Peak	Horizontal
	4876.0	44.3	1.5	45.8	74.0	-28.2	Peak	Vertical
	8811.5	36.9	12.5	49.4	74.0	-24.6	Peak	Vertical
	11302.0	36.0	16.0	52.0	74.0	-22.0	Peak	Vertical
39	4961.0	44.2	1.8	46.0	74.0	-28.0	Peak	Horizontal
	7409.0	36.4	10.3	46.7	74.0	-27.3	Peak	Horizontal
	10690.0	36.5	14.7	51.2	74.0	-22.8	Peak	Horizontal
	4961.0	44.4	1.8	46.2	74.0	-27.8	Peak	Vertical
	7485.5	36.5	10.0	46.5	74.0	-27.5	Peak	Vertical
	11072.5	35.3	16.1	51.4	74.0	-22.6	Peak	Vertical

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

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

The Test Result of Radiated Emission below 1GHz:

Site: NS-AC1	Test Date: 2022-08-02
Limit: FCC_Part15.209_RSE(3m)	Engineer: Ted Chen
Probe: NS-AC1_VULB9162	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		136.700	23.525	10.915	-19.975	43.500	12.610	PK
2		155.615	23.613	10.753	-19.887	43.500	12.860	PK
3		335.550	28.476	9.146	-17.524	46.000	19.331	PK
4	*	443.705	33.018	11.729	-12.982	46.000	21.289	PK
5		599.875	31.822	7.185	-14.178	46.000	24.637	PK
6		671.655	31.251	5.371	-14.749	46.000	25.880	PK

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

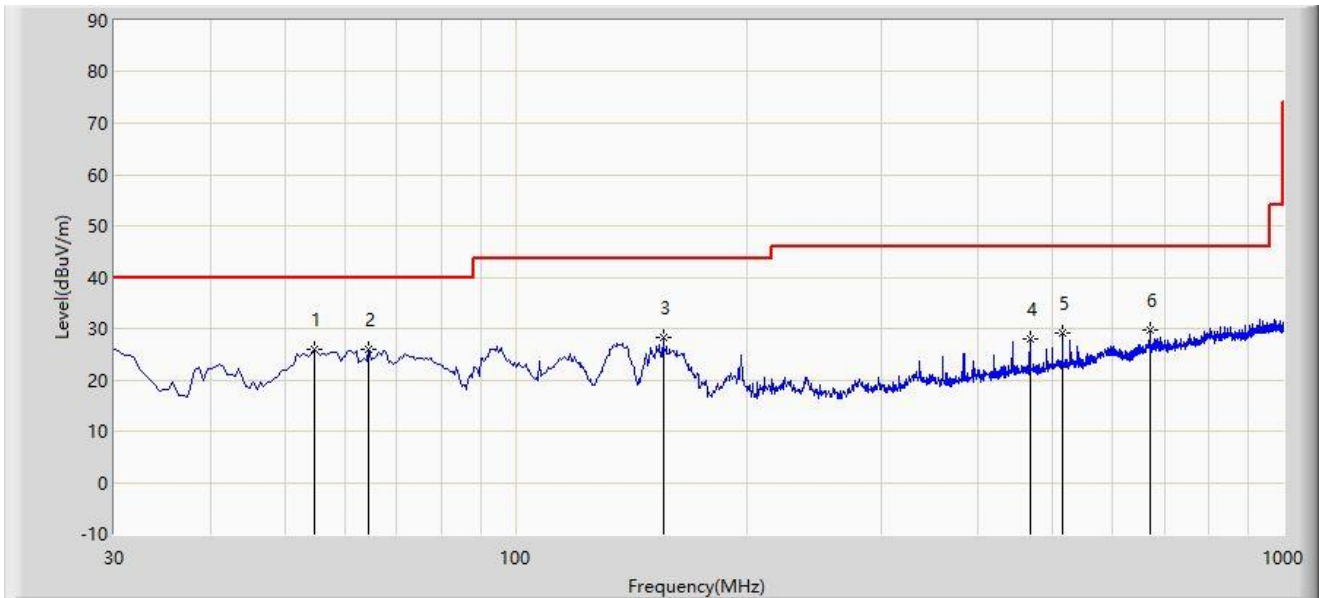
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

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 ~ 30MHz, 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: NS-AC1	Test Date: 2022-08-02
Limit: FCC_Part15.209_RSE(3m)	Engineer: Ted Chen
Probe: NS-AC1_VULB9162	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1	*	54.735	25.988	8.396	-14.012	40.000	17.592	PK
2		64.435	25.866	10.457	-14.134	40.000	15.409	PK
3		155.615	28.298	15.438	-15.202	43.500	12.860	PK
4		467.955	28.087	6.413	-17.913	46.000	21.675	PK
5		515.970	29.252	6.522	-16.748	46.000	22.730	PK
6		671.655	29.760	3.880	-16.240	46.000	25.880	PK

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

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

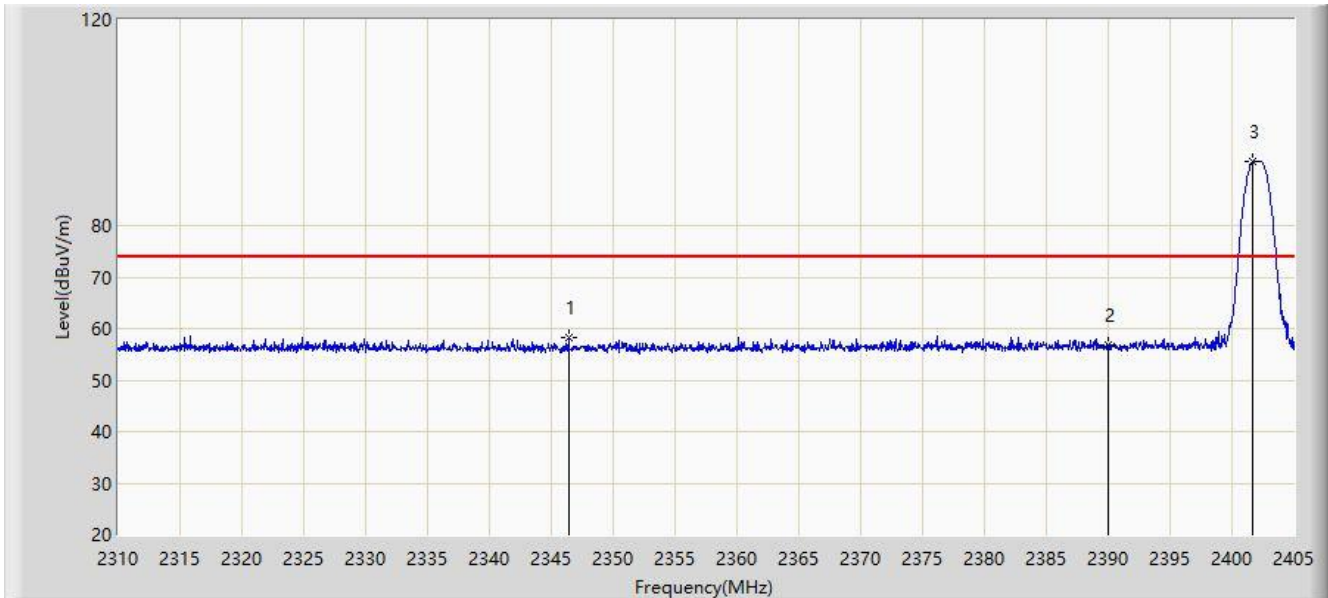
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

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 ~ 30MHz, 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

A.7 Radiated Restricted Band Edge Test Result

Site: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2402MHz	



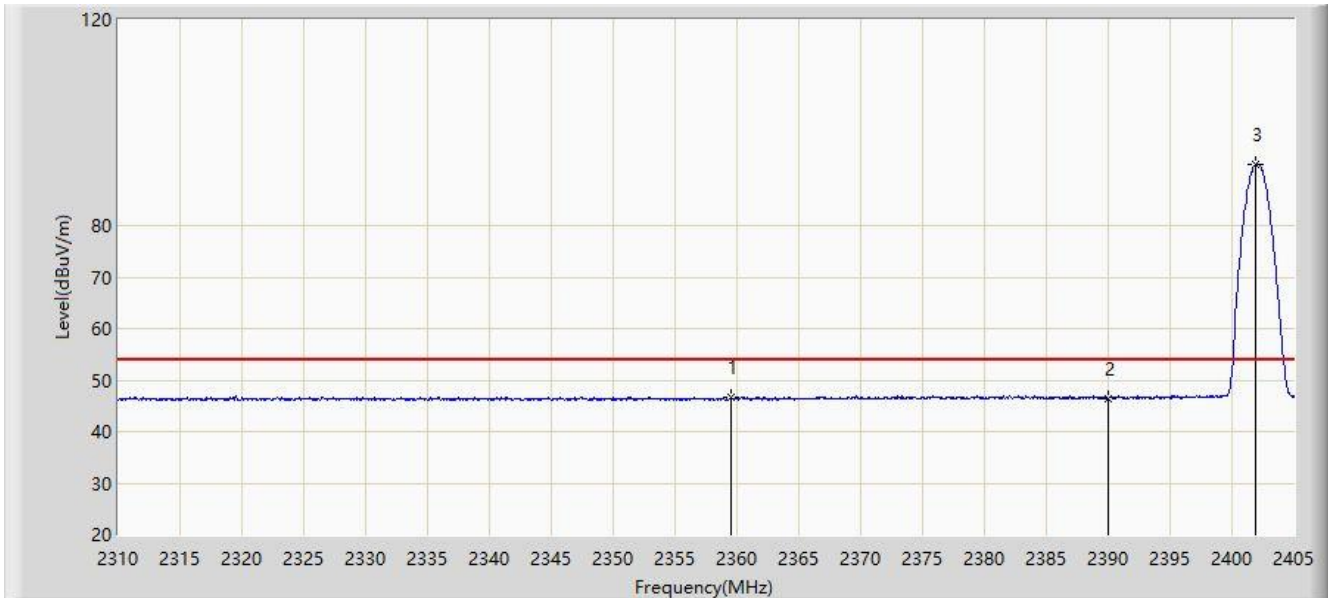
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2346.385	58.264	27.350	-15.736	74.000	30.914	PK
2		2390.000	56.727	25.904	-17.273	74.000	30.823	PK
3		2401.675	92.452	61.640	N/A	N/A	30.812	PK

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2402MHz	



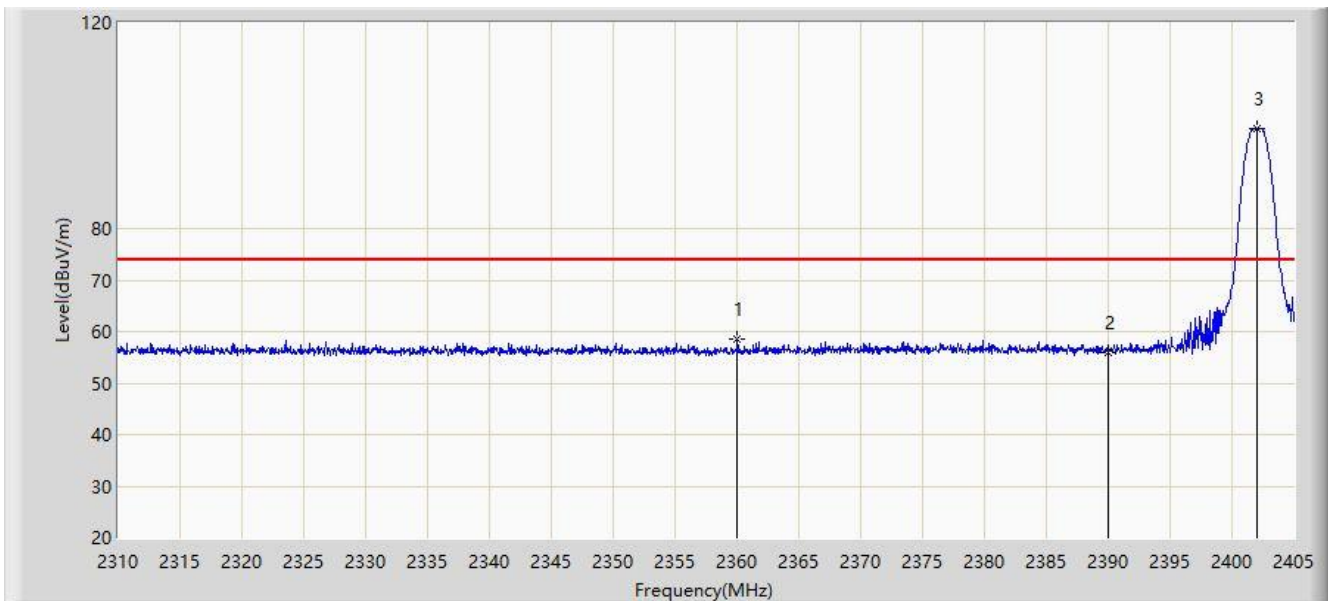
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2359.495	46.708	15.885	-7.292	54.000	30.824	AV
2		2390.000	46.438	15.615	-7.562	54.000	30.823	AV
3		2401.960	91.987	61.174	N/A	N/A	30.813	AV

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2402MHz	



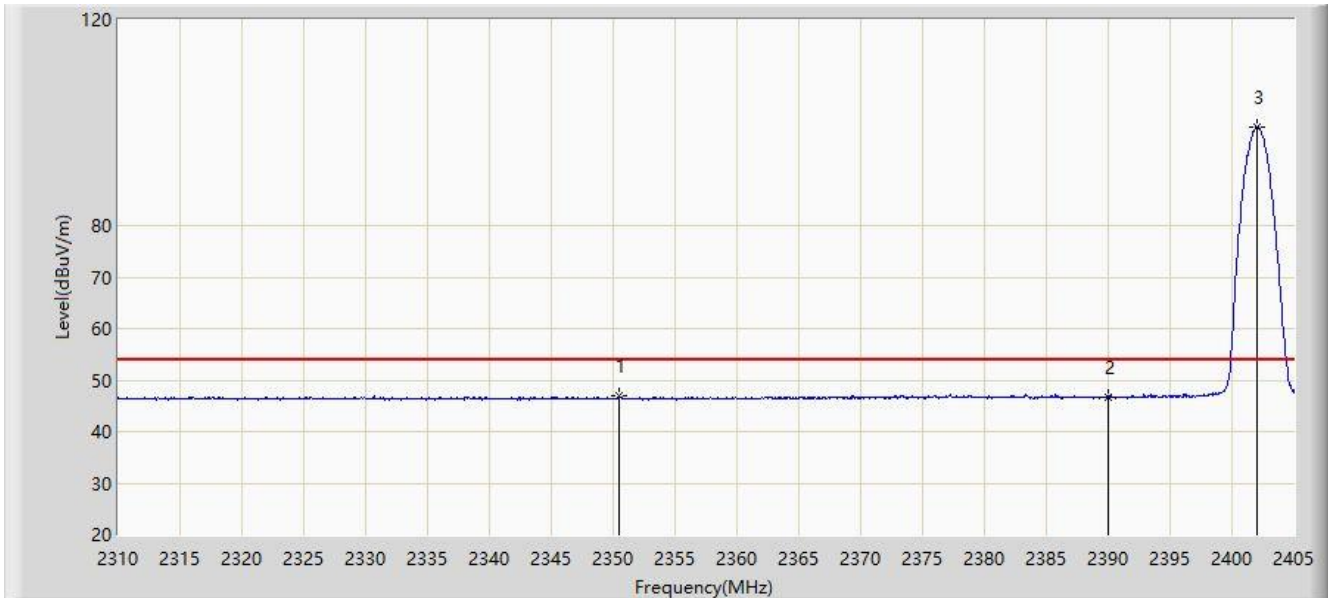
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2360.018	58.588	27.768	-15.412	74.000	30.820	PK
2		2390.000	56.073	25.250	-17.927	74.000	30.823	PK
3		2402.055	99.495	68.681	N/A	N/A	30.813	PK

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2402MHz	



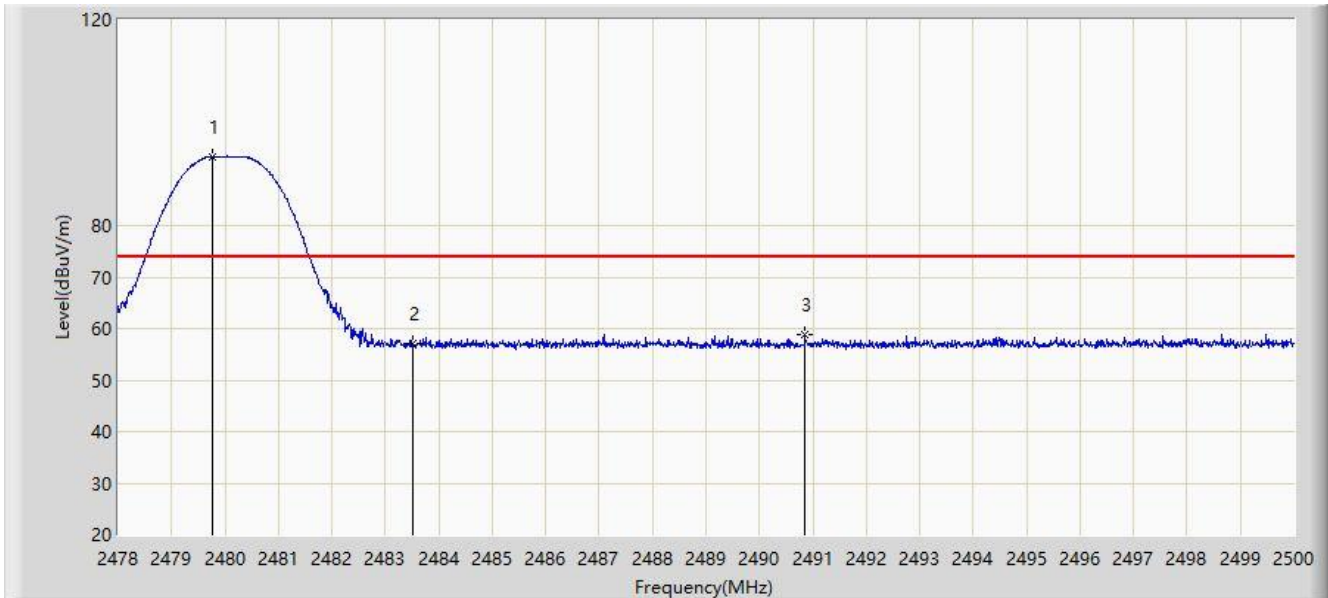
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2350.470	46.863	15.977	-7.137	54.000	30.885	AV
2		2390.000	46.646	15.823	-7.354	54.000	30.823	AV
3		2402.008	99.081	68.268	N/A	N/A	30.813	AV

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2480MHz	



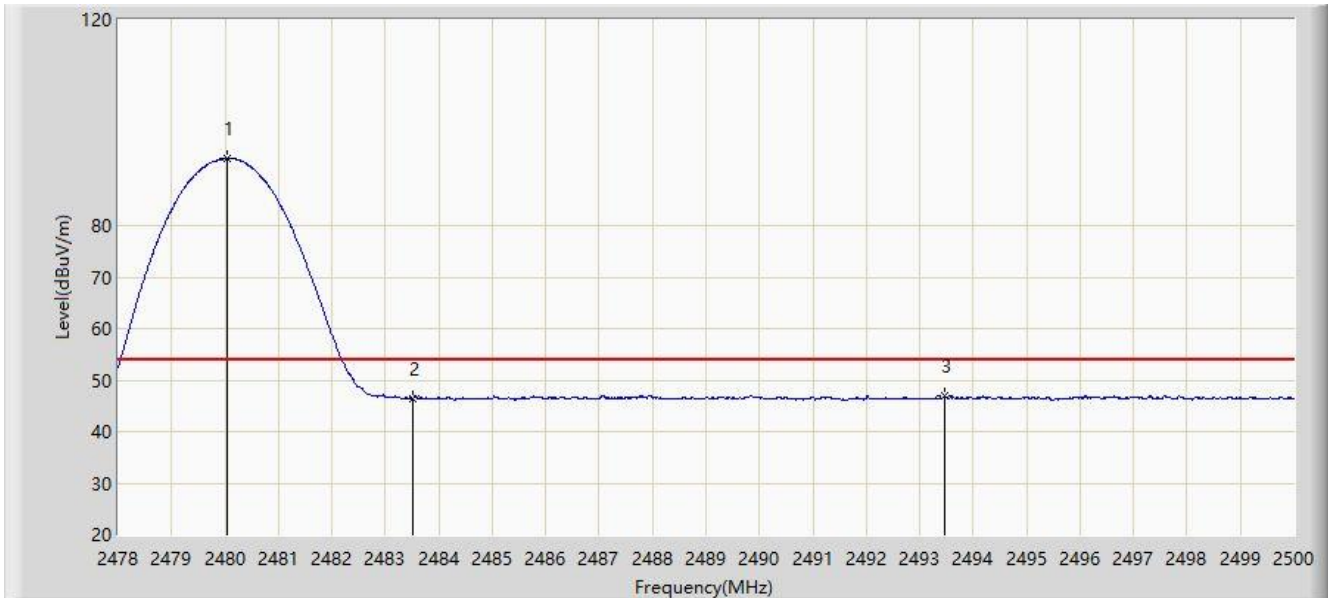
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.760	93.464	62.732	N/A	N/A	30.733	PK
2		2483.500	57.030	26.295	-16.970	74.000	30.734	PK
3	*	2490.848	58.742	28.003	-15.258	74.000	30.739	PK

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2480MHz	



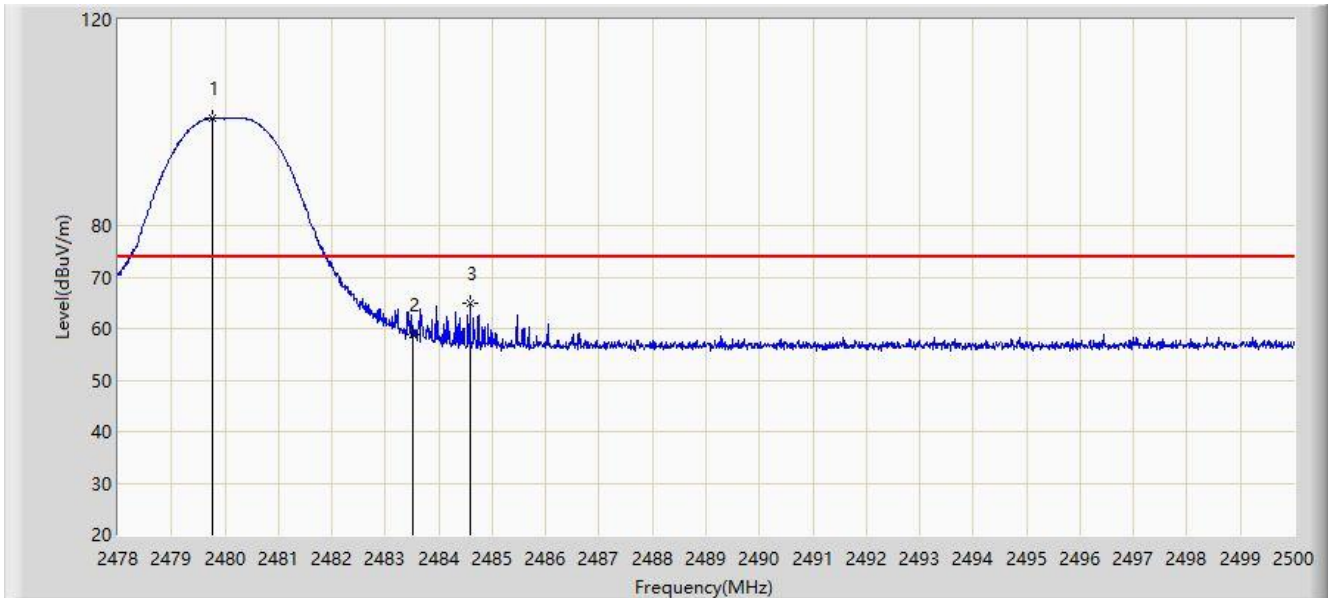
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.035	93.030	62.297	N/A	N/A	30.733	AV
2		2483.500	46.432	15.697	-7.568	54.000	30.734	AV
3	*	2493.466	46.874	16.133	-7.126	54.000	30.740	AV

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2480MHz	



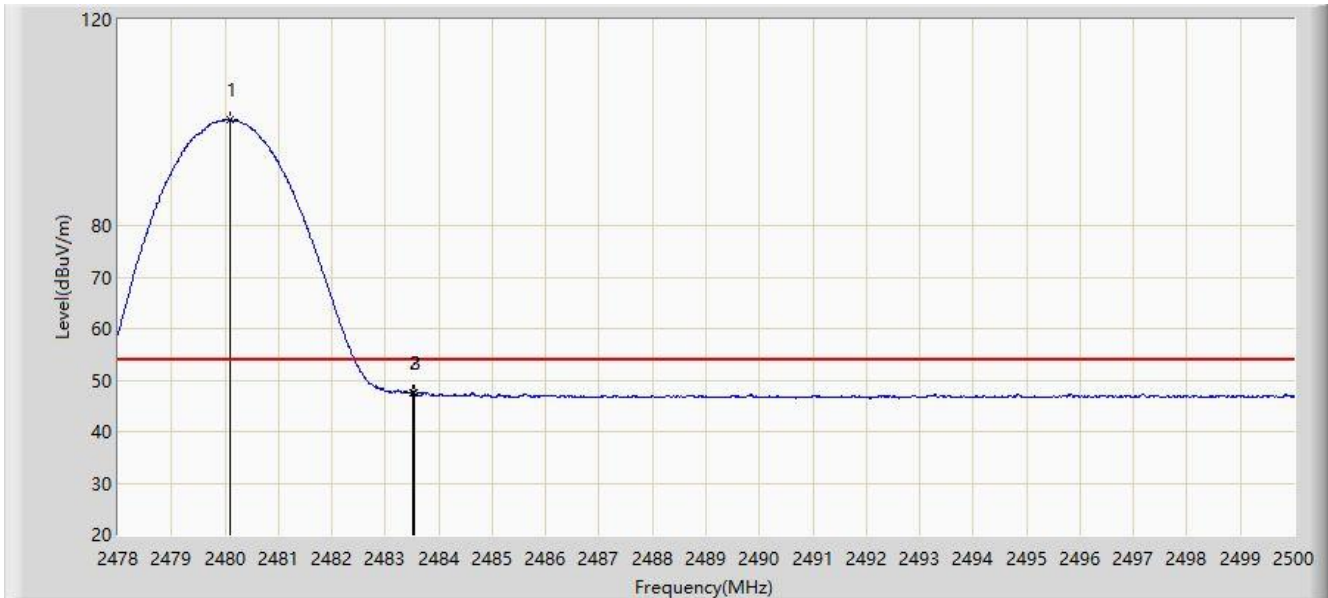
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.760	100.833	70.101	N/A	N/A	30.733	PK
2		2483.500	58.780	28.045	-15.220	74.000	30.734	PK
3	*	2484.578	65.015	34.280	-8.985	74.000	30.736	PK

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 1M at channel 2480MHz	



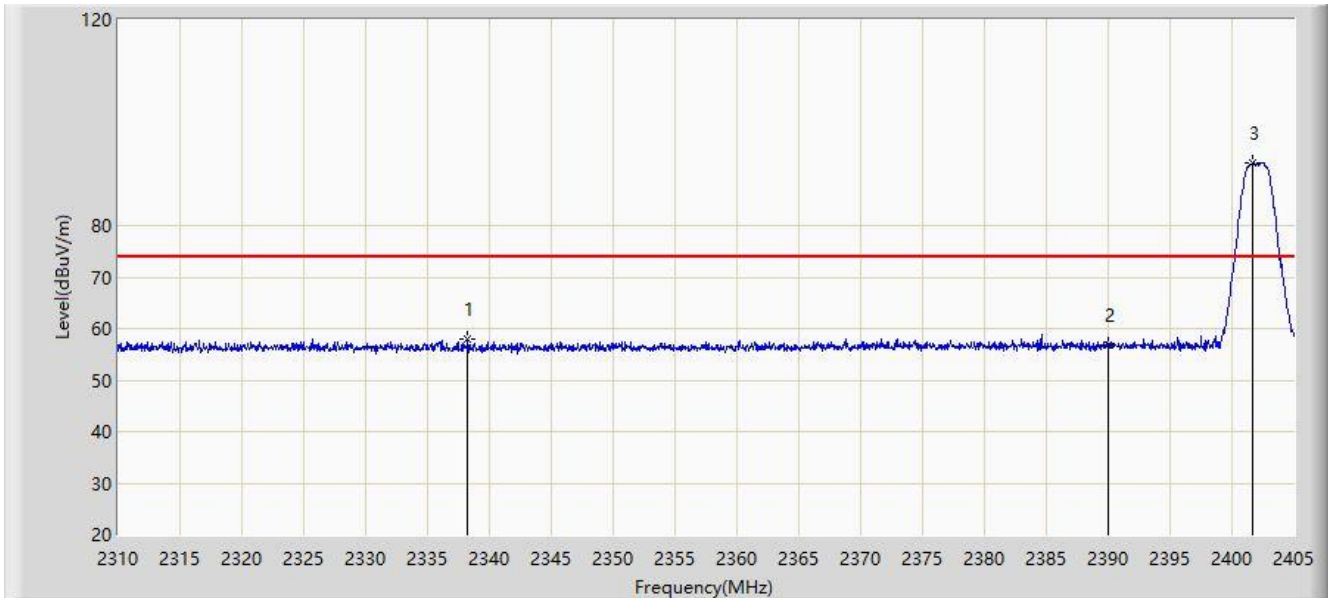
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.090	100.604	69.871	N/A	N/A	30.733	AV
2		2483.500	47.497	16.762	-6.503	54.000	30.734	AV
3	*	2483.533	47.555	16.820	-6.445	54.000	30.735	AV

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



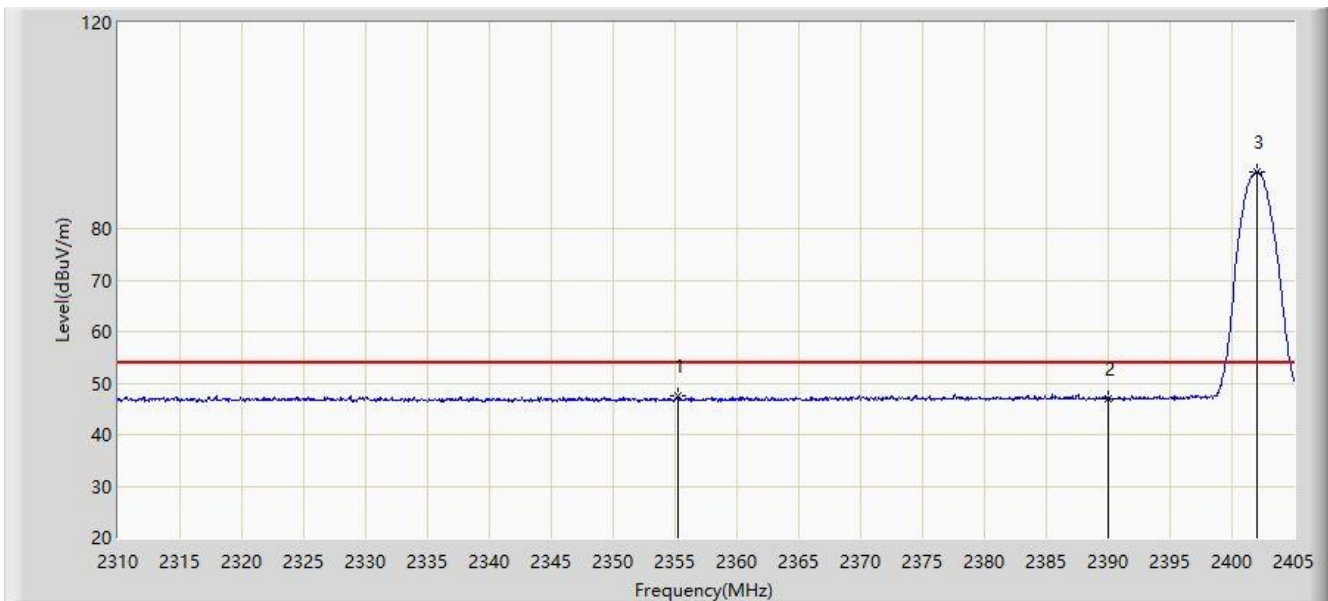
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2338.215	57.955	27.000	-16.045	74.000	30.955	PK
2		2390.000	56.882	26.059	-17.118	74.000	30.823	PK
3		2401.627	92.289	61.477	N/A	N/A	30.812	PK

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



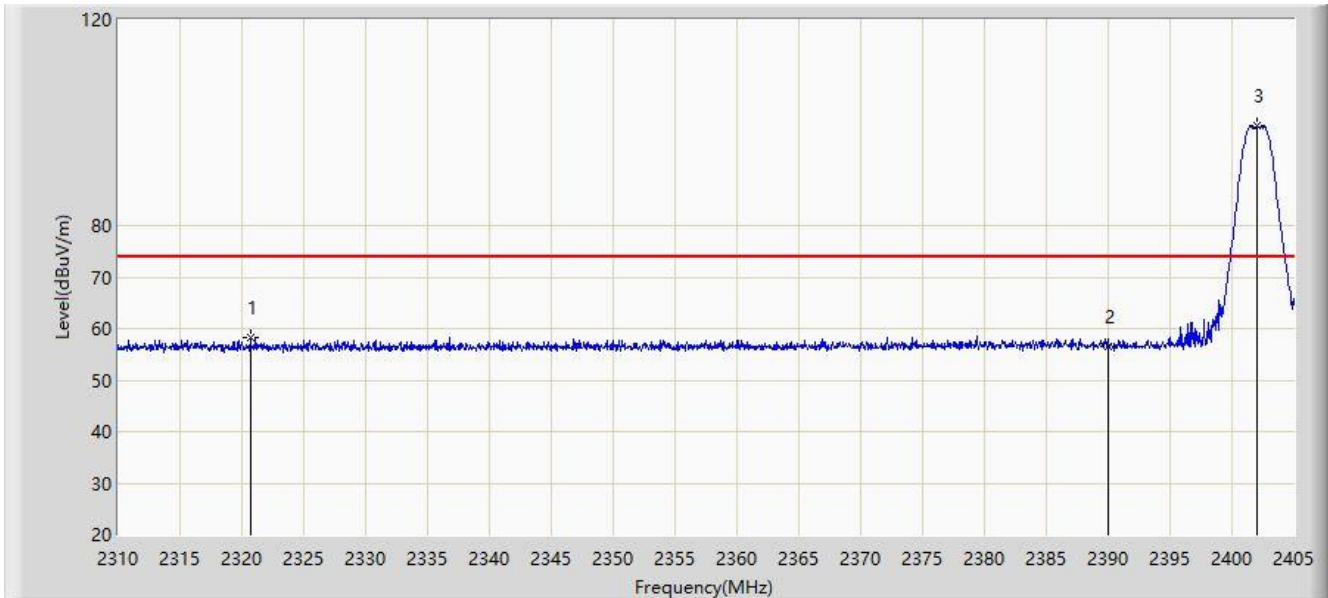
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2355.268	47.552	16.699	-6.448	54.000	30.853	AV
2		2390.000	46.869	16.046	-7.131	54.000	30.823	AV
3		2402.055	91.060	60.246	N/A	N/A	30.813	AV

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



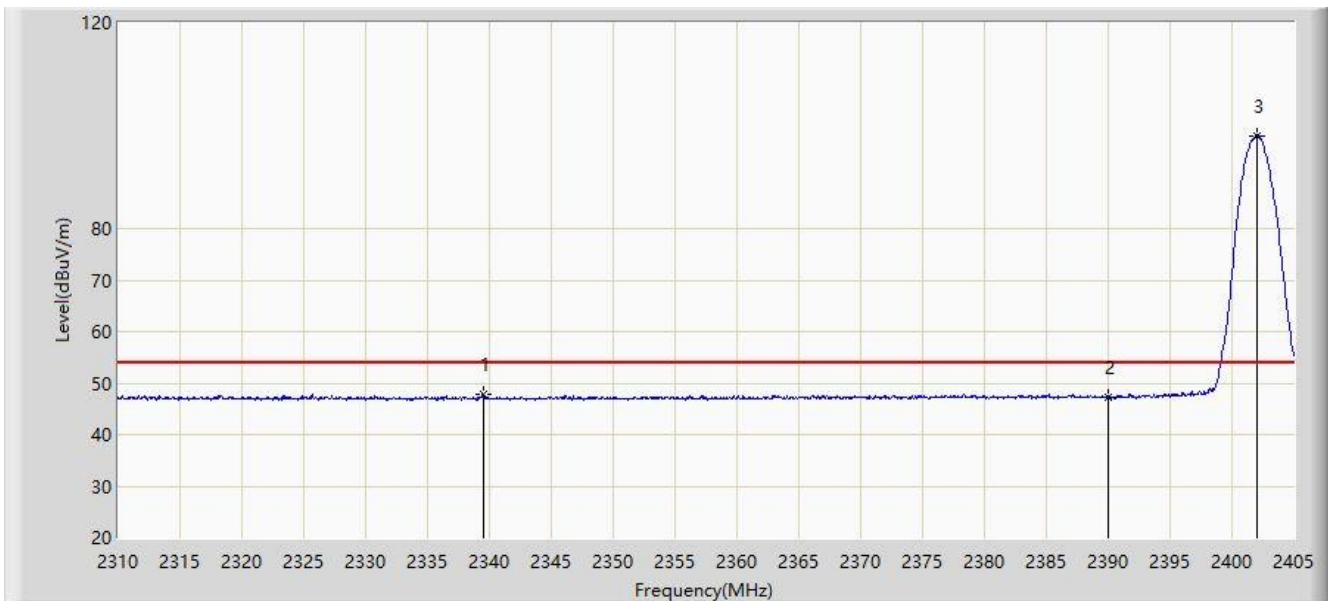
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2320.687	58.170	27.159	-15.830	74.000	31.011	PK
2		2390.000	56.464	25.641	-17.536	74.000	30.823	PK
3		2402.055	99.314	68.500	N/A	N/A	30.813	PK

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: NS-AC1	Test Date: 2022-08-01
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



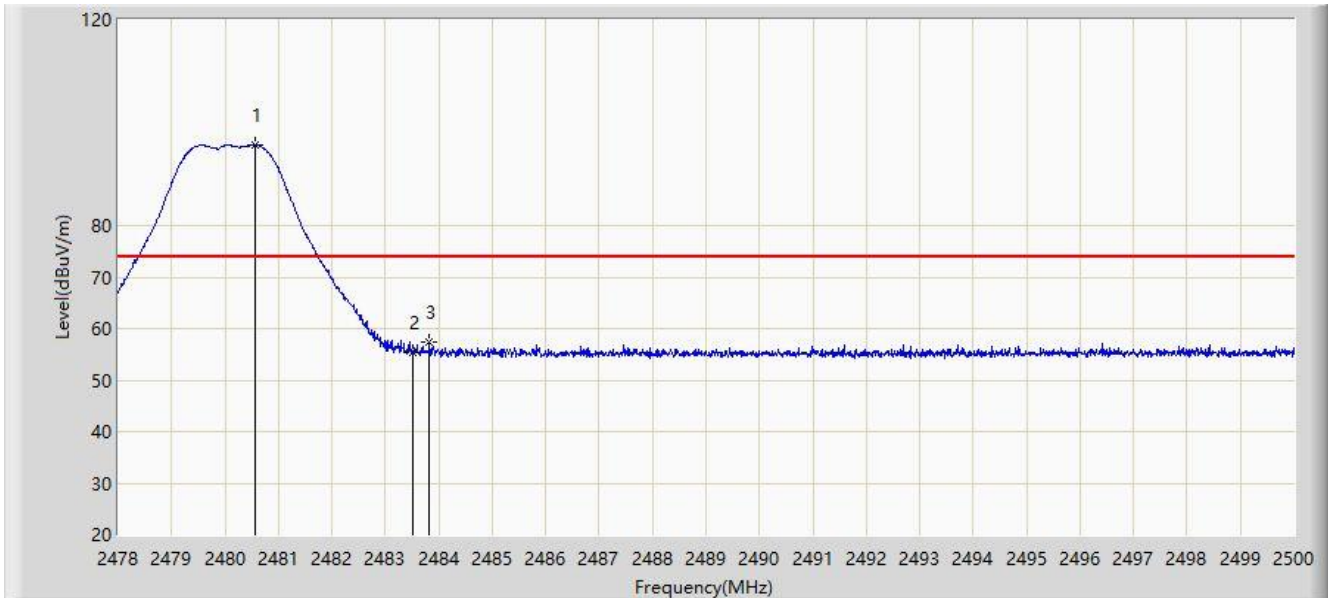
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2339.498	47.751	16.801	-6.249	54.000	30.951	AV
2		2390.000	47.390	16.567	-6.610	54.000	30.823	AV
3		2402.008	98.114	67.301	N/A	N/A	30.813	AV

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: NS-AC1	Test Date: 2022-08-04
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2480MHz	



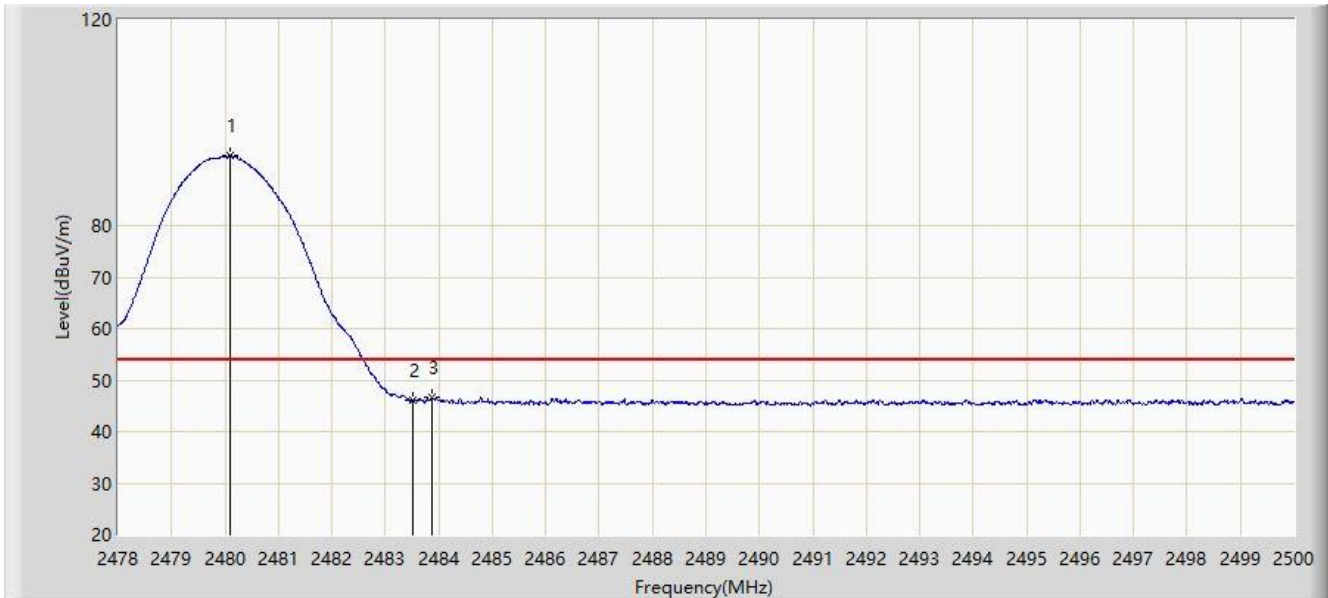
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.552	95.637	64.904	N/A	N/A	30.733	PK
2		2483.500	55.302	24.567	-18.698	74.000	30.734	PK
3	*	2483.819	57.401	26.666	-16.599	74.000	30.735	PK

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: NS-AC1	Test Date: 2022-08-04
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2480MHz	



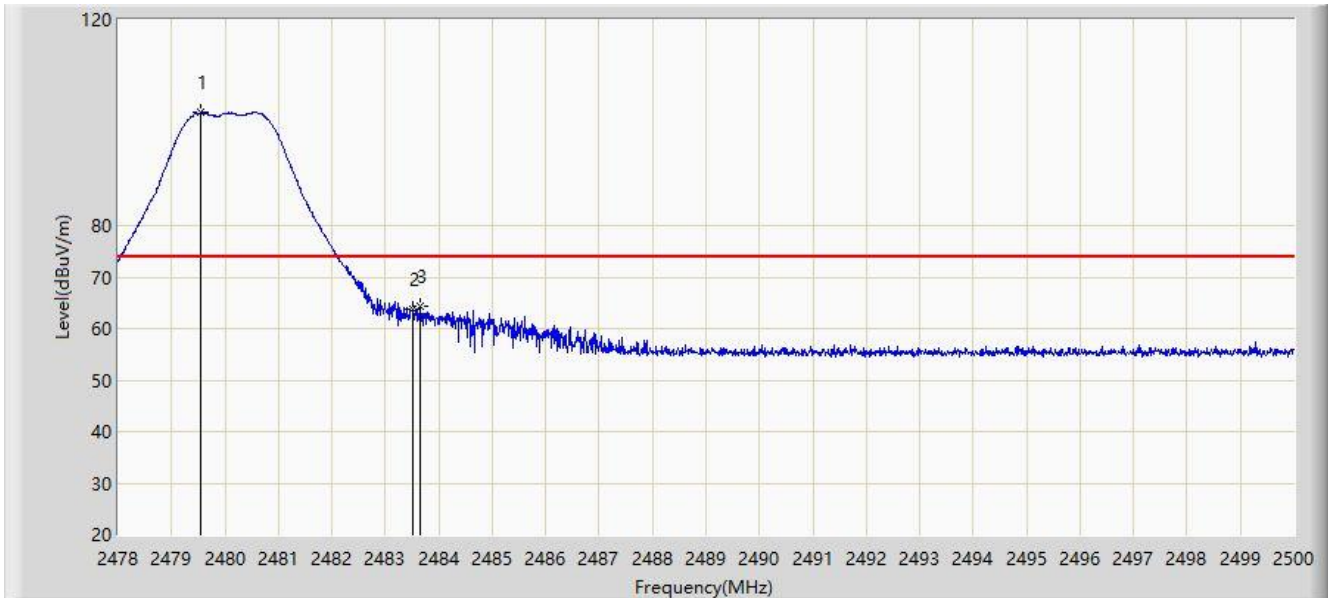
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.101	93.502	62.769	N/A	N/A	30.733	AV
2		2483.500	46.125	15.390	-7.875	54.000	30.734	AV
3	*	2483.885	46.702	15.967	-7.298	54.000	30.735	AV

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: NS-AC1	Test Date: 2022-08-04
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2480MHz	



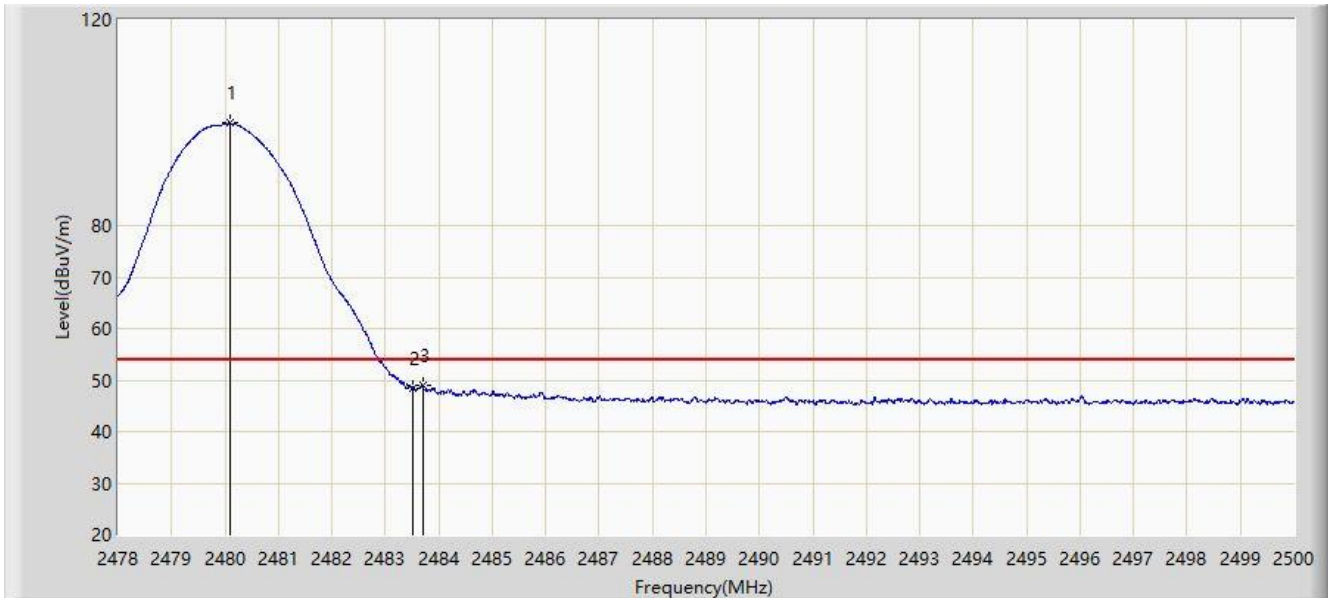
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.551	102.019	71.287	N/A	N/A	30.733	PK
2		2483.500	63.650	32.915	-10.350	74.000	30.734	PK
3	*	2483.665	64.435	33.700	-9.565	74.000	30.735	PK

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: NS-AC1	Test Date: 2022-08-04
Limit: FCC_2.4G_RE(3m)	Engineer: Ted Chen
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.090	99.877	69.144	N/A	N/A	30.733	AV
2		2483.500	48.322	17.587	-5.678	54.000	30.734	AV
3	*	2483.698	49.025	18.290	-4.975	54.000	30.735	AV

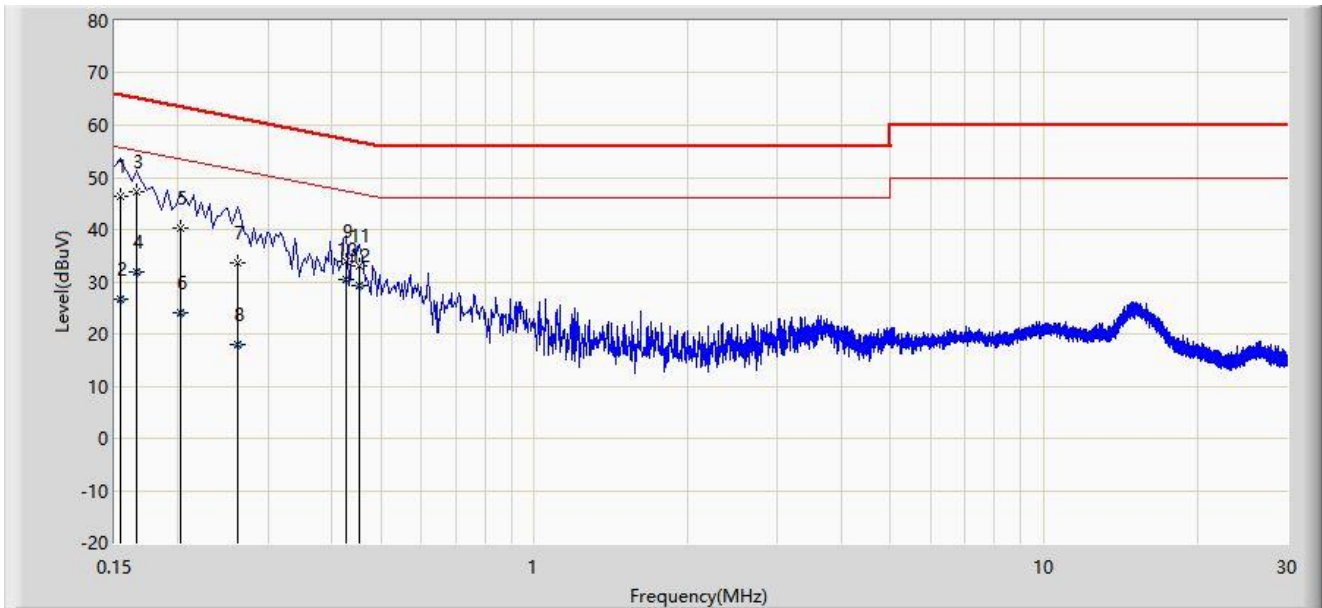
Note 1: " * ", means this data is the worst emission level.

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

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

A.8 AC Conducted Emissions Test Result

Site: WZ-SR2	Test Date: 2022-08-20
Limit: FCC_Part15.207_CE_AC Power	Engineer: Helen Han
Probe: ENV216_101683_Filter Off_E	Polarity: Line
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



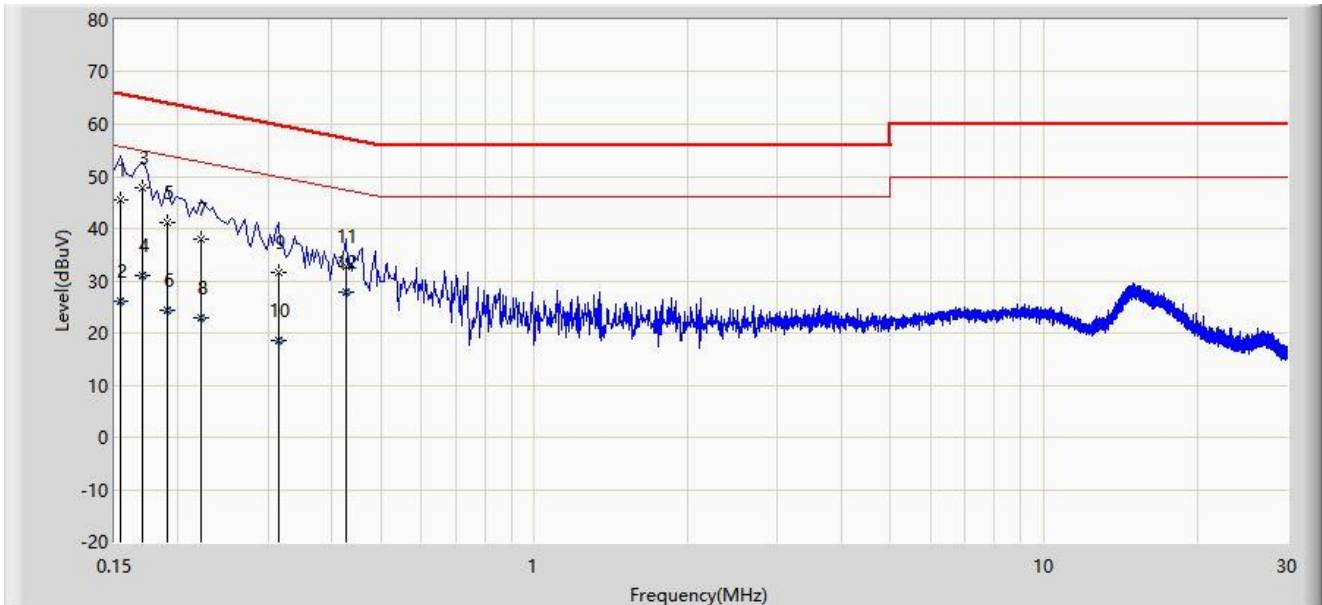
No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.154	46.309	36.430	-19.472	65.781	9.878	QP
2		0.154	26.607	16.728	-29.174	55.781	9.878	AV
3		0.166	47.256	37.376	-17.902	65.158	9.880	QP
4		0.166	31.901	22.021	-23.257	55.158	9.880	AV
5		0.202	40.274	30.392	-23.254	63.528	9.881	QP
6		0.202	24.109	14.227	-29.419	53.528	9.881	AV
7		0.262	33.625	23.731	-27.742	61.368	9.894	QP
8		0.262	18.011	8.117	-33.357	51.368	9.894	AV
9		0.426	33.862	23.930	-23.468	57.330	9.933	QP
10	*	0.426	30.512	20.579	-16.819	47.330	9.933	AV
11		0.454	32.973	23.034	-23.828	56.802	9.939	QP
12		0.454	29.233	19.294	-17.568	46.802	9.939	AV

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

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

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

Site: WZ-SR2	Test Date: 2022-08-20
Limit: FCC_Part15.207_CE_AC Power	Engineer: Helen Han
Probe: ENV216_101683_Filter Off_E	Polarity: Neutral
EUT: Tri-band 4x4 Wi-Fi 6E Wireless AP	Power: AC 120V/60Hz
Test Mode: Transmit by BLE 2M at channel 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.154	45.424	35.523	-20.358	65.781	9.901	QP
2		0.154	26.094	16.193	-29.687	55.781	9.901	AV
3	*	0.170	47.696	37.792	-17.264	64.960	9.904	QP
4		0.170	30.940	21.036	-24.021	54.960	9.904	AV
5		0.190	41.205	31.297	-22.832	64.037	9.908	QP
6		0.190	24.453	14.545	-29.584	54.037	9.908	AV
7		0.222	37.933	28.020	-24.810	62.744	9.913	QP
8		0.222	22.900	12.987	-29.844	52.744	9.913	AV
9		0.314	31.580	21.651	-28.284	59.864	9.929	QP
10		0.314	18.572	8.643	-31.292	49.864	9.929	AV
11		0.426	32.664	22.717	-24.666	57.330	9.948	QP
12		0.426	27.759	17.811	-19.572	47.330	9.948	AV

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

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

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

Appendix B - Test Setup Photograph

Refer to “2207RSU033-UT” file.

Appendix C - EUT Photograph

Refer to “2207RSU033-UE” file.

_____ The End _____