RF MEASUREMENT REPORT

FCC ID:	2AXJ4WR902ACV4
Applicant:	TP-Link Corporation Limited
Product:	AC750 Wi-Fi Travel Router
Model No.:	TL-WR902AC
Brand Name:	tp-link
FCC Classification:	Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s):	Part 15 Subpart E (Section 15.407)
Result:	Complies
Received Date:	2023-05-09
Test Date:	2023-05-09 ~ 2023-05-18

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 KDB789033. 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 (Shenzhen) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2305RSU013-U2	V01	Initial Report	2023-06-07	Valid

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1. General Information

1.1. Applicant

TP-Link Corporation Limited

Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hongkong

1.2. Manufacturer

TP-Link Corporation Limited

Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hongkong

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	AC750 Wi-Fi Travel Router
Model No.	TL-WR902AC
EUT Identification No.	20230412Sampe#01 (For Radiated) 20230412Sampe#02 (For Conducted)
Wi-Fi Specification	802.11a/b/g/n/ac
Antenna Information	refer to section 1.7
Working Voltage	By Adapter
Accessory	
Adapter	Model: AMS135-050200FU Input: 100-240V – 50/60Hz 0.5A/22VA Output: 5V 2.0A
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5775MHz
Type of Modulation	802.11a/n/ac: OFDM
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps

1.6. Working Frequencies

802.11a/n-HT20/ac-VHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	149	5745 MHz	153	5765 MHz
157	5785 MHz	161	5805 MHz	165	5825 MHz

802.11n-HT40/ac-VHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz
159	5795 MHz	--	--	--	--

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775 MHz	--	--

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Tx Paths	Antenna Gain (dBi)	CDD Directional Gain (dBi)	
				For Power	For PSD
Monopole	2.400 ~ 2483.5	2	2.00	2.00	5.01
	5150 ~ 5250 5725 ~ 5850	1	3.00	--	--

Note: The EUT supports Cyclic Delay Diversity (CDD) mode for Wi-Fi 2.4G.

For CDD transmissions, directional gain is calculated as follows, N_{ANT} = 2, N_{SS} = 1.

If all antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,

  Array Gain = 10 log (N_{ANT}/ N_{SS}) dB = 3.01;

- For power measurements on IEEE 802.11 devices,

  Array Gain = 0 dB for $N_{ANT} \leq 4$;

2. Test Configuration

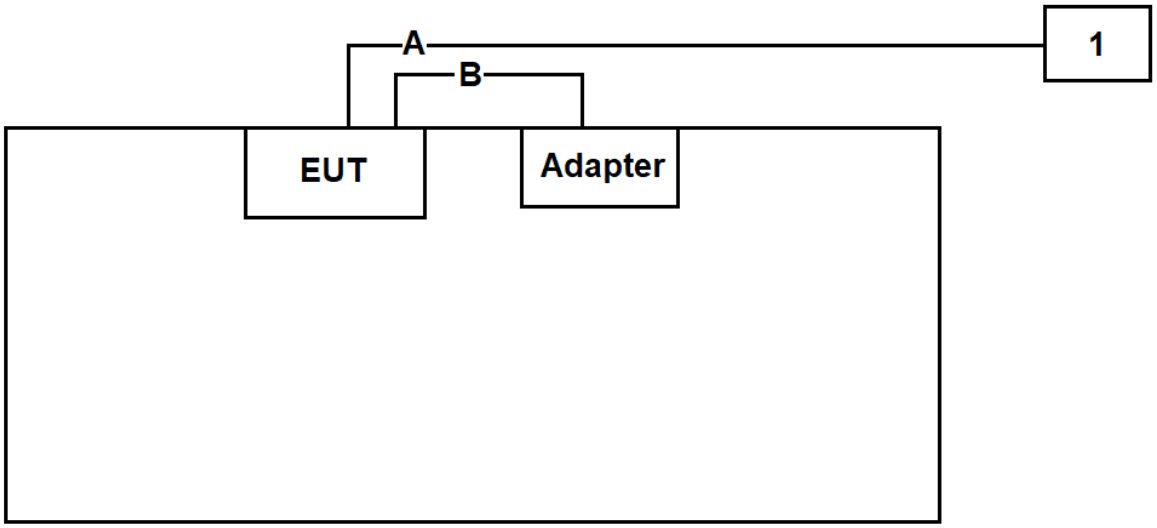
2.1. Test Mode

Mode 1: Transmit by 802.11a (6Mbps)
Mode 2: Transmit by 802.11ac-VHT20 (MCS0)
Mode 3: Transmit by 802.11ac-VHT40 (MCS0)
Mode 4: Transmit by 802.11ac-VHT80 (MCS0)
Note: 1. For Radiated emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power. 2. 802.11n and 802.11ac have same modulation type and same power parameter, so we only show 802.11ac test data in report. 3. All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate.

2.2. Test System Connection Diagram

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

Connection Diagram



Cable Type		Cable Description
A	USB Cable	Non shielded, > 10m
B	Power Cable	Non shielded, < 0.4m

2.3. Test System Details

Product		Manufacturer	Model No.
1	Notebook	HP	735G5

2.4. Test Software

The test utility software used during testing was “Secure CRT”, and the version was 7.0.0.

Note: Final power setting please refer to operational description.

2.5. Applied Standards

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

- FCC Part 15.407
- KDB 789033 D02v02r01
- ANSI C63.10-2013

2.6. 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.	Last Cali. Date	Cali. Due Date	Test Site
Signal Analyzer	Agilent	N9010A	MRTSUE06195	1 year	2023-12-20	NS-AC1/NS-TR2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06292	1 year	2023-10-18	NS-AC1
Anechoic Chamber	BOOMWAVE	NS-AC1	MRTSUE06496	1 year	2023-07-23	NS-AC1
Shielding Room	BOOMWAVE	NS-SR2	MRTSUE06551	5 years	2024-06-03	NS-SR2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06572	1 year	2024-03-31	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
EMI Test Receiver	R&S	ESL3	MRTSUE06576	1 year	2023-06-19	NS-SR2
Two-Line V-Network	R&S	ENV216	MRTSUE06577	1 year	2023-07-03	NS-SR2
Two-Line V-Network	R&S	ENV216	MRTSUE06578	1 year	2023-07-03	NS-SR2
ISN	R&S	ENY81	MRTSUE06579	1 year	2023-06-29	NS-SR2
ISN	R&S	ENY81-CA6	MRTSUE06580	1 year	2023-06-09	NS-SR2
USB Power Sensor	Keysight	U2021XA	MRTSUE06581	1 year	2023-07-13	NS-TR2
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2024-01-12	NS-AC1
Thermohygrometer	DELI	NO.8813	MRTSUE06783	1 year	2023-12-28	NS-TR2
Temperature Chamber	OUKE	OK-TH-100C	MRTSUE06899	1 year	2024-04-26	NS-TR2
Signal Analyzer	Keysight	N9020A	MRTSUE10065	1 year	2023-12-20	NS-AC1/NS-TR2
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2023-12-28	WZ-AC1
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2023-09-29	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE06403	1 year	2023-06-06	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11020	1 year	2024-05-03	NS-AC1
Thermohygrometer	testo	608-H1	MRTSUE11104	1 year	2024-05-03	NS-AC1
Thermohygrometer	testo	608-H1	MRTSUE11106	1 year	2024-05-03	NS-SR2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_T-E-TAC-2	1.02	RE Antenna & Turntable
Controller_MF 7802	2.03C	RE Antenna & Turntable
Agilent Power Panel	V 3.9	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

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

5.2. Measurement Uncertainty

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

AC Conducted Emission Measurement
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
15.407(a)	26dB Bandwidth	Conducted	Pass
15.407(e)	6dB Bandwidth		Pass
15.407(a)(1)(ii), (3)(i)	Maximum Conducted Output Power		Pass
15.407(a)(1)(ii), (3)(i), (12)	Peak Power Spectral Density		Pass
15.407(g)	Frequency Stability		Pass
15.205, 15.209 15.407(b) (1), (4)(i), (8), (9), (10)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	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. 26dB & 99% Bandwidth Measurement

6.2.1. Test Limit

N/A

6.2.2. Test Procedure

KDB 789033 D02v02r01- Section II)C)1) (26dB Bandwidth)

KDB 789033 D02v02r01- Section II)D) (99% Bandwidth)

6.2.3. Test Setting

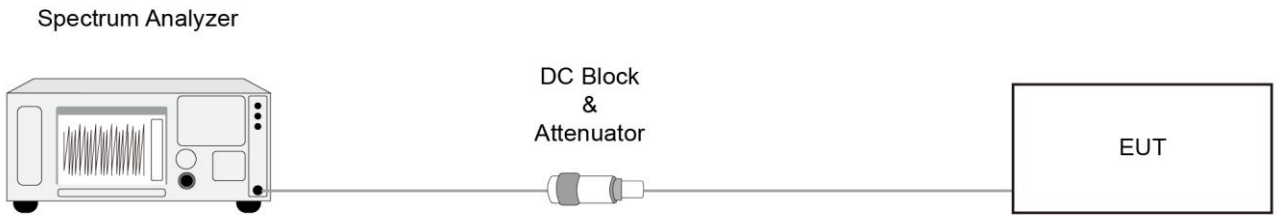
26dB Bandwidth

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

99% Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 1% to 5% of the OBW
3. VBW ≥ 3 × RBW
4. Span = 1.5 times to 5 times the OBW
5. Detector = peak
6. Trace mode = max hold
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. 6dB Bandwidth Measurement

6.3.1. Test Limit

The minimum 6dBbandwidth shall be at least 500 kHz.

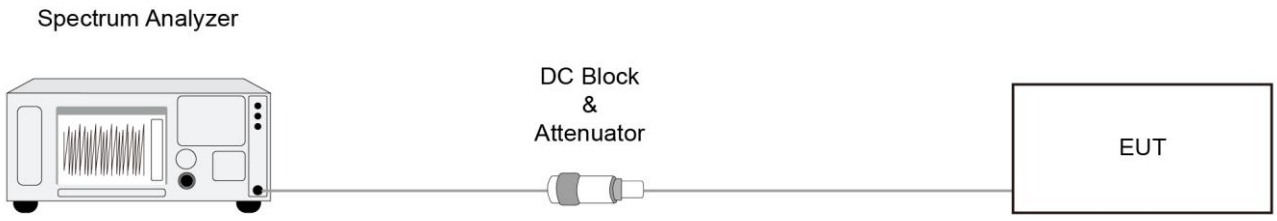
6.3.2. Test Procedure

KDB 789033 D02v02r01- Section II)C)2)

6.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW ≥ 3 × RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Output Power Measurement

6.4.1. Test Limit

For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

6.4.2. Test Procedure

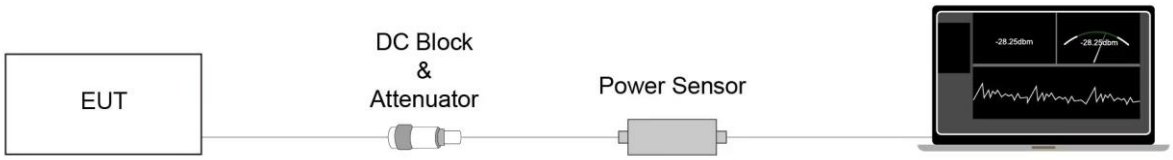
KDB 789033D02v02r01- Section Ⅱ)E)3)b) Method PM-G

6.4.3. 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.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Power Spectral Density Measurement

6.5.1. Test Limit

For the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

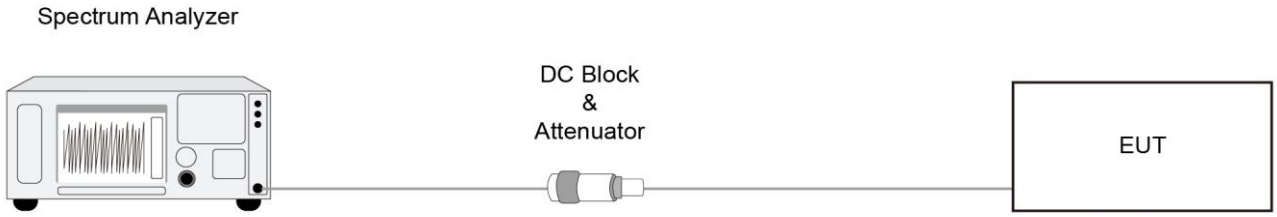
6.5.2. Test Procedure

KDB 789033 D02v02r01-Section Ⅱ)F)

6.5.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz (510kHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz)
4. VBW = 3 × RBW
5. Number of sweep points ≥ 2 × (span / RBW)
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
10. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
11. Add 10*log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10*log(1/0.25) = 6 dB if the duty cycle is 25 percent.

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Frequency Stability Measurement

6.6.1. Test Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

6.6.2. Test Procedure

Frequency Stability Under Temperature Variations:

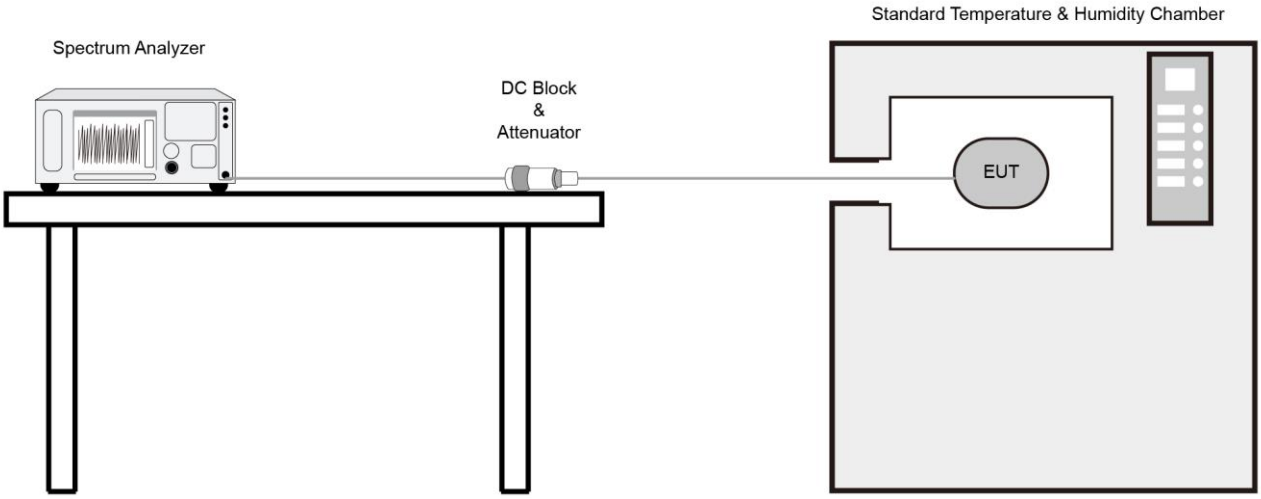
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change.

6.6.3. Test Setup



6.6.4. Test Result

Grantee ensure that the product meets e-CFR Title 47 section 15.407(g) and KDB 789033 D02v02r01 frequency stability such that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

6.7. Radiated Spurious Emission Measurement

6.7.1. 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

6.7.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.7.3. 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

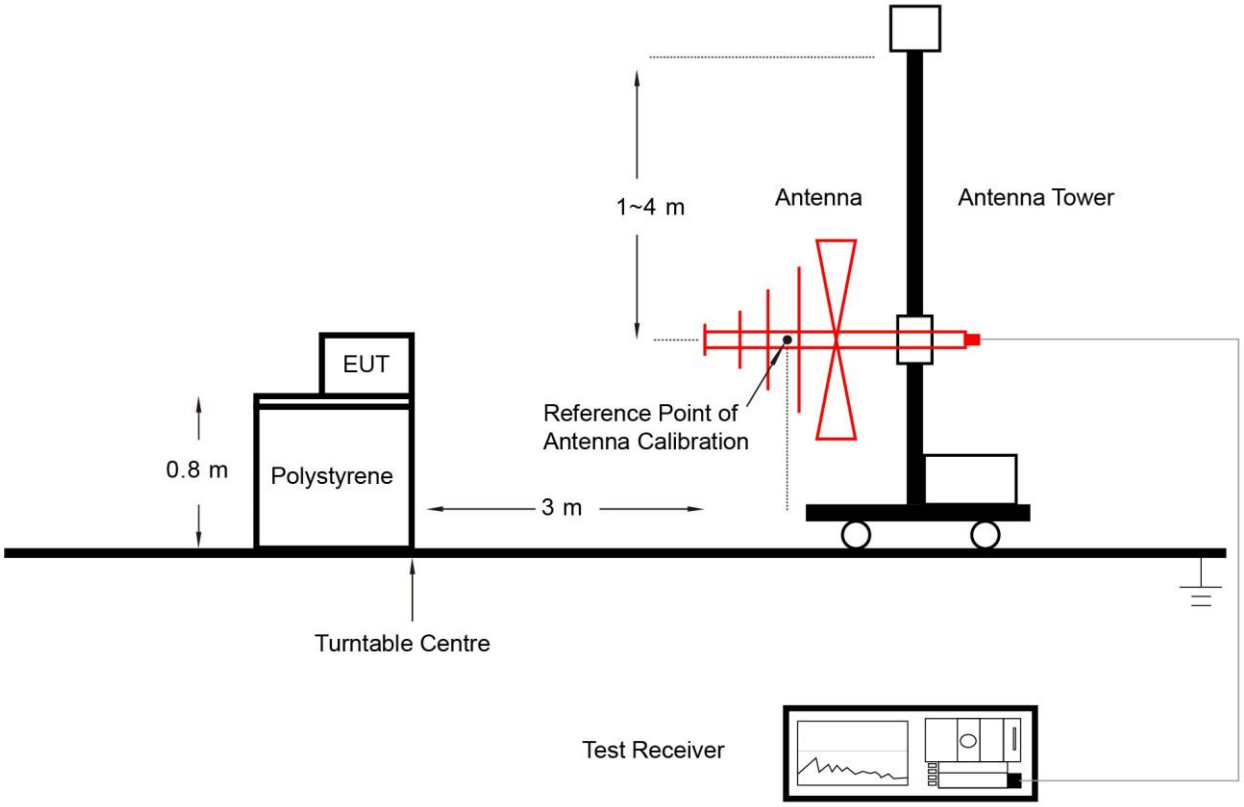
5. Sweep time = auto

6. Trace mode = max hold

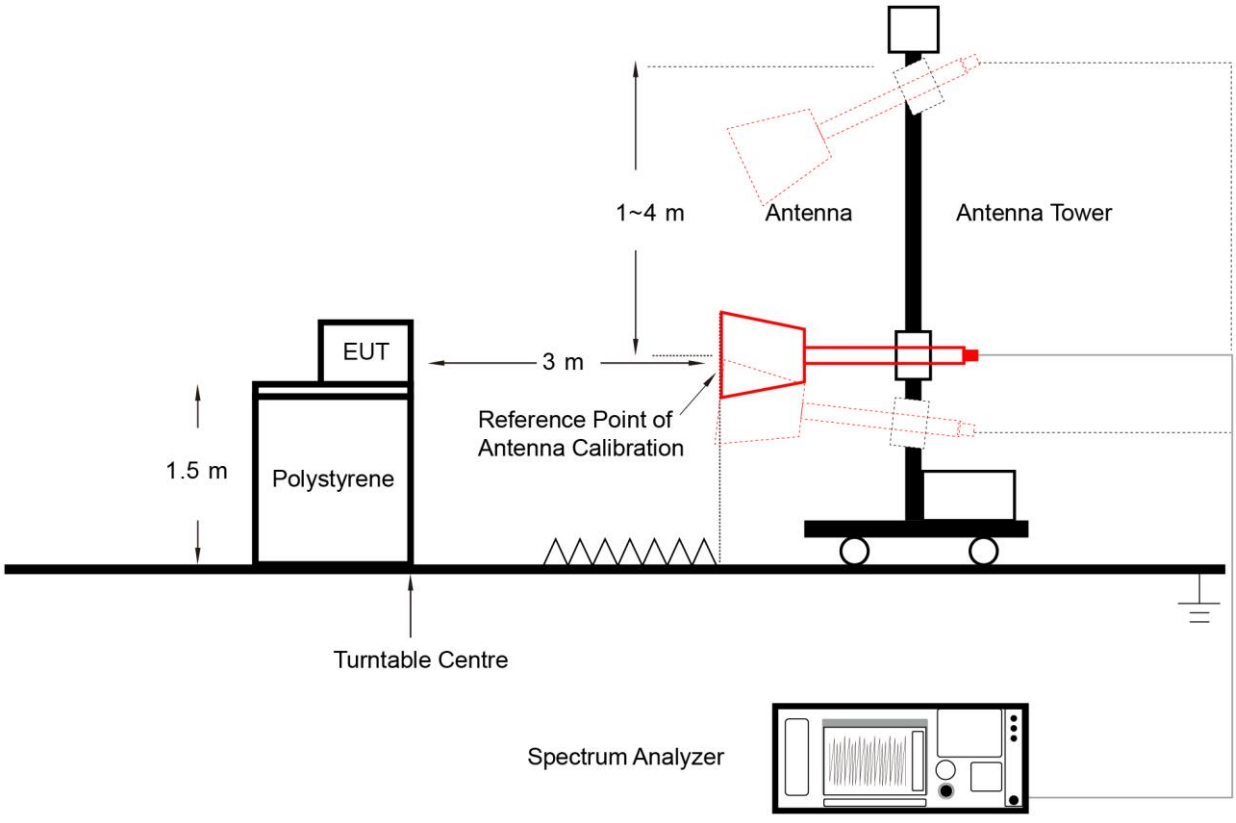
7. Trace was allowed to stabilize

6.7.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.7.5. Test Result

Refer to Appendix A.6.

6.8. Radiated Restricted Band Edge Measurement

6.8.1. 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	--	--	--

For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Refer to KDB 789033 D02v02r01 G)2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

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

6.8.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.8.3. Test Setting

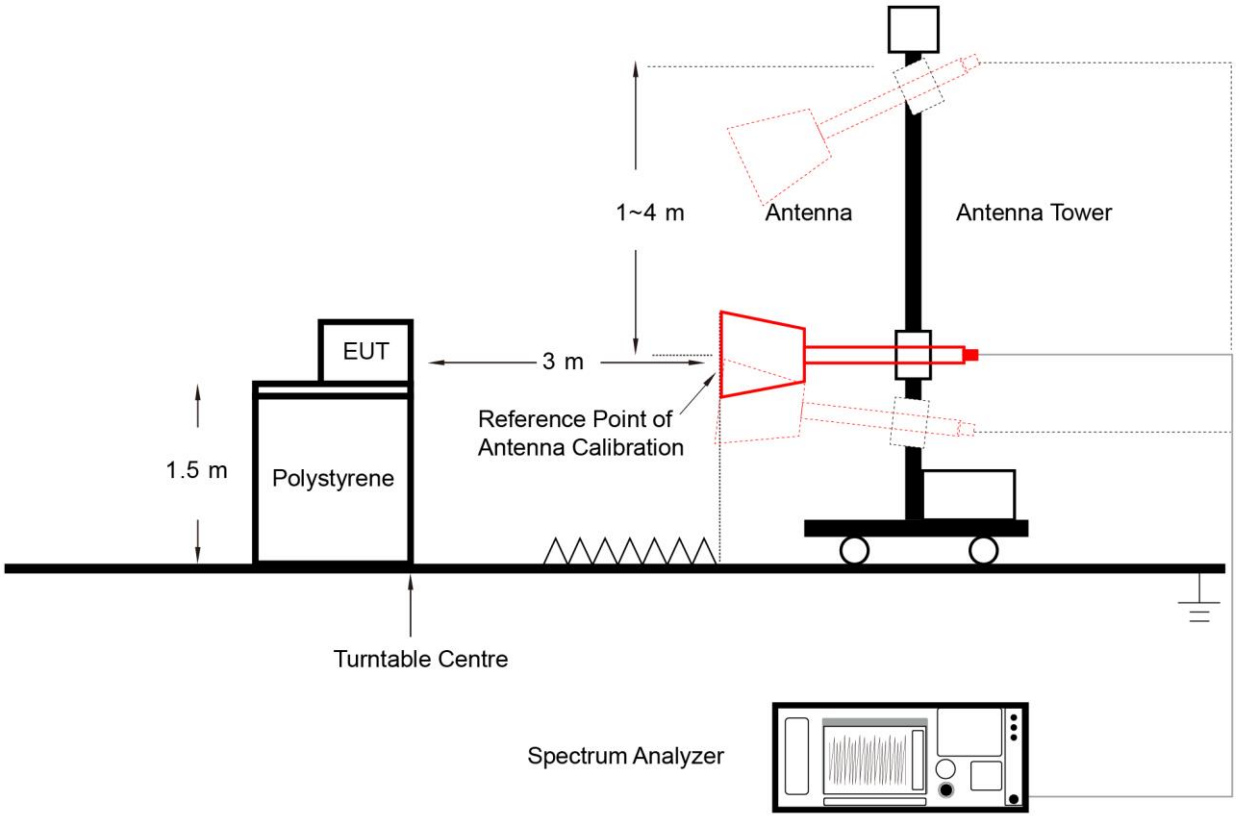
Peak Measurements above 1GHz

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 = 10Hz
4. If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.8.4. Test Setup



6.8.5. Test Result

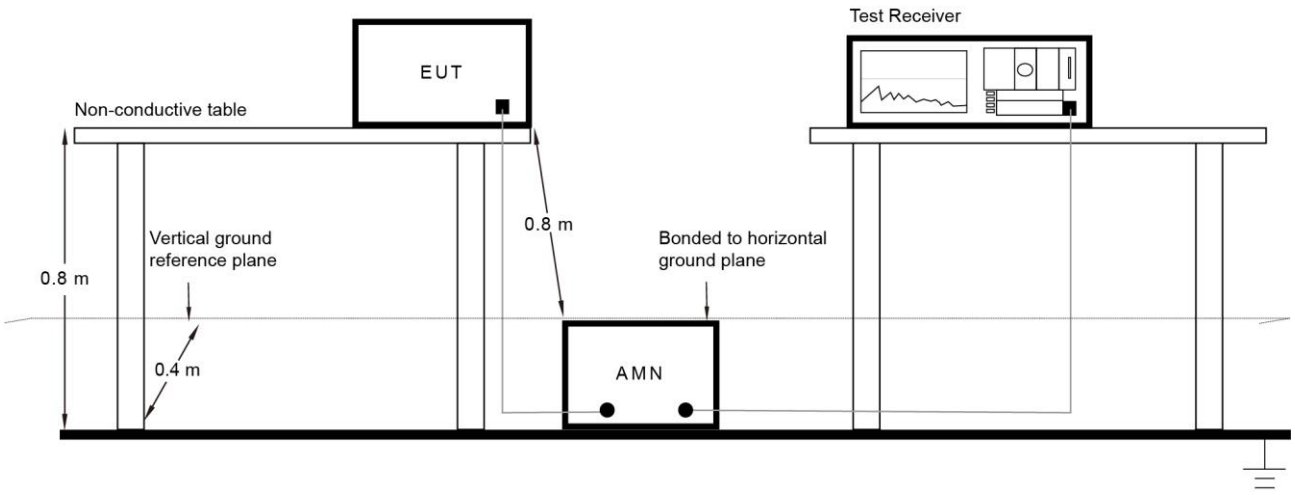
Refer to Appendix A.7.

6.9. AC Conducted Emissions Measurement

6.9.1. Test Limit

FCC Part 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.		

6.9.2. Test Setup



6.9.3. Test Result

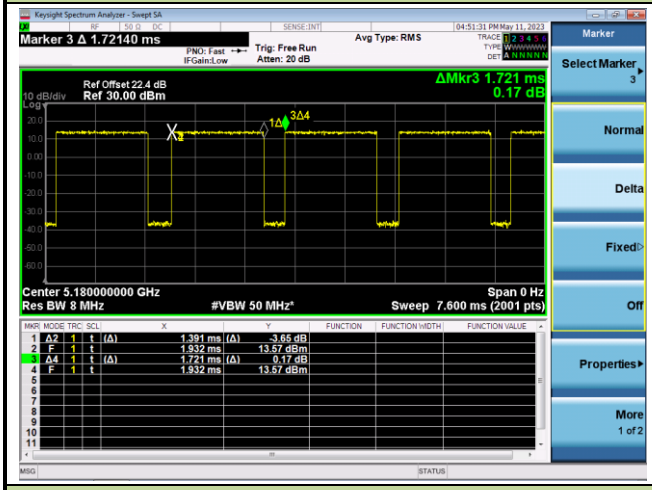
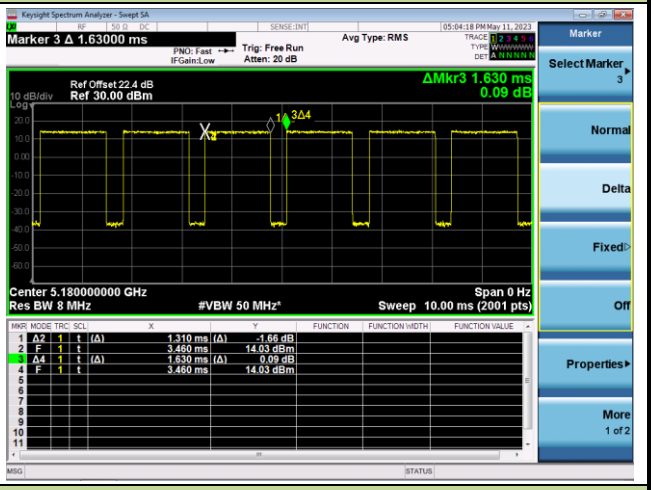
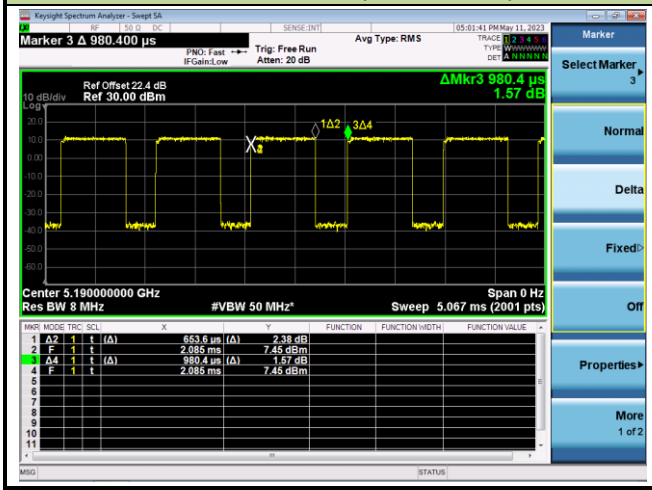
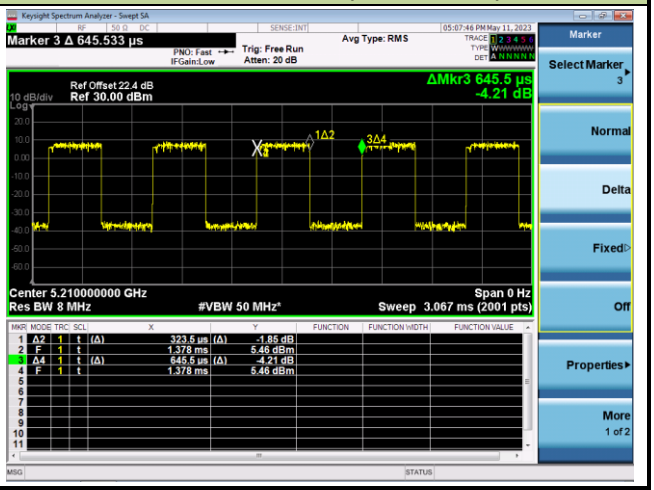
Refer to Appendix A.8.

Appendix A – Test Result

A.1 Duty Cycle Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2023/05/11		

Test Mode	Duty Cycle
802.11a	80.83%
802.11ac-VHT20	80.37%
802.11ac-VHT40	66.67%
802.11ac-VHT80	50.12%

Duty Cycle (T = Transmission Duration)	
802.11a (T = 1.391ms)	802.11ac-VHT20 (T = 1.310ms)
	
802.11ac-VHT40 (T = 653.6us)	802.11ac-VHT80 (T = 323.5us)
	

A.2 26dB Bandwidth Test Result

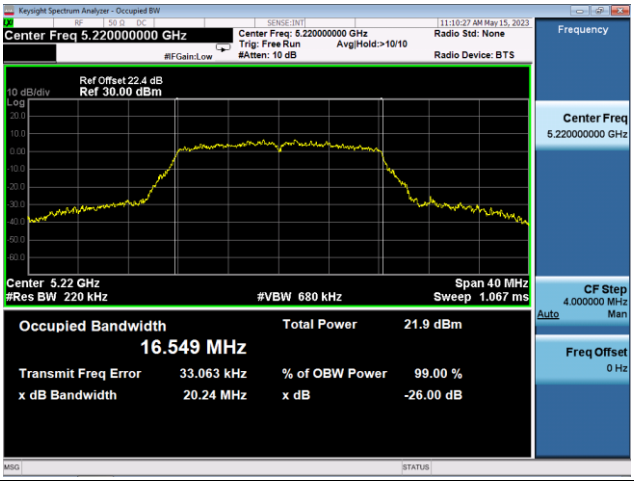
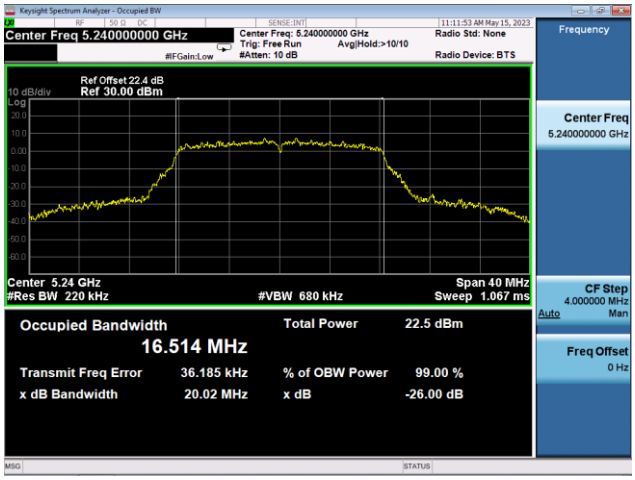
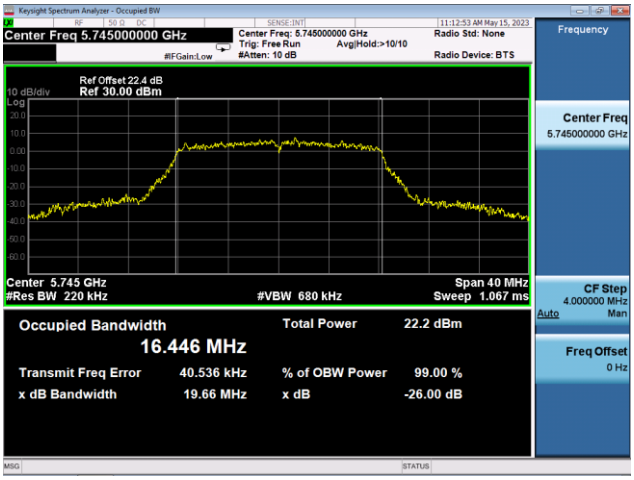
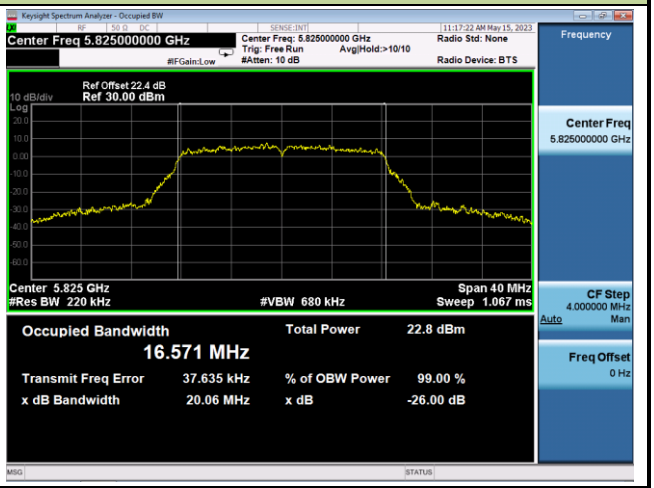
Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2023/05/15		

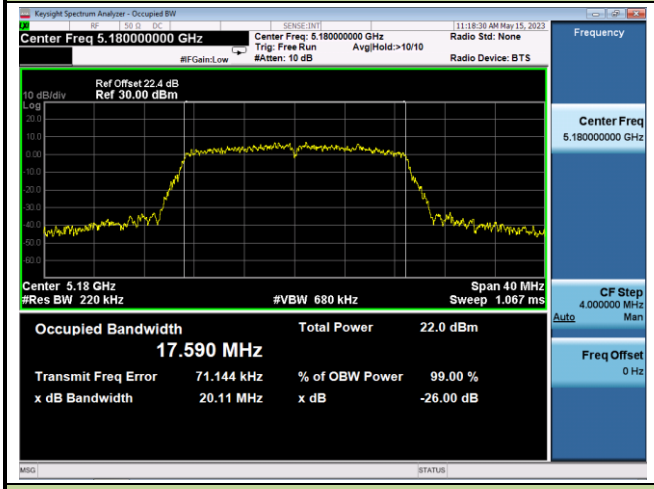
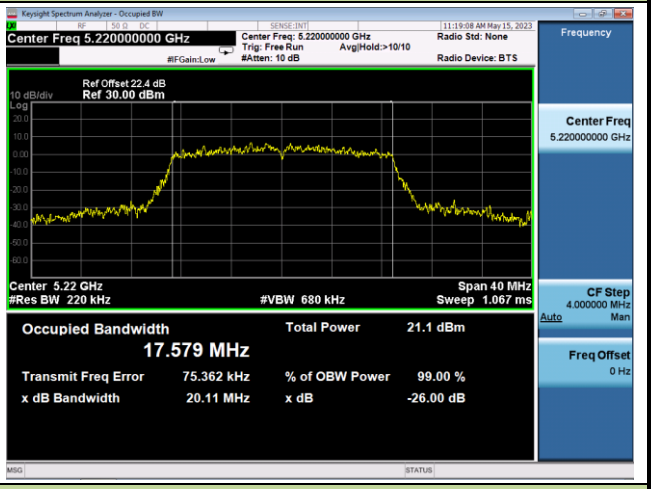
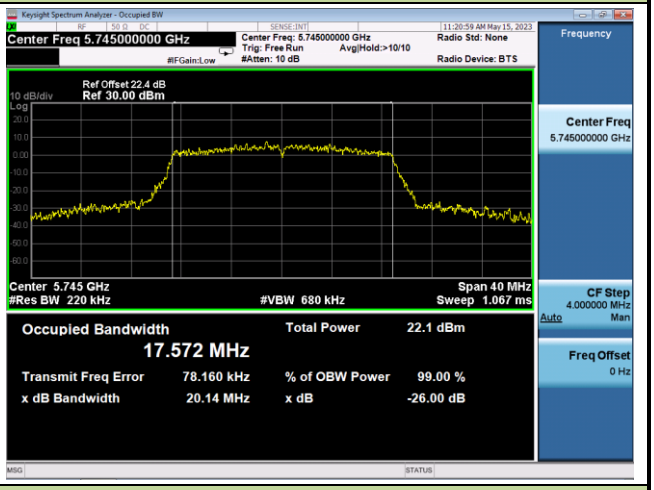
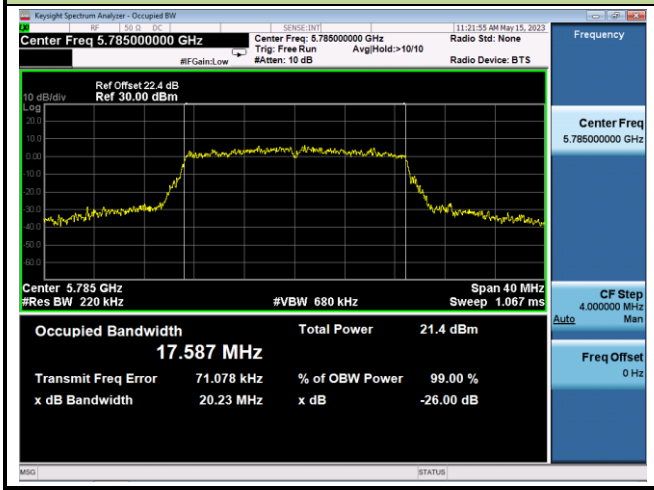
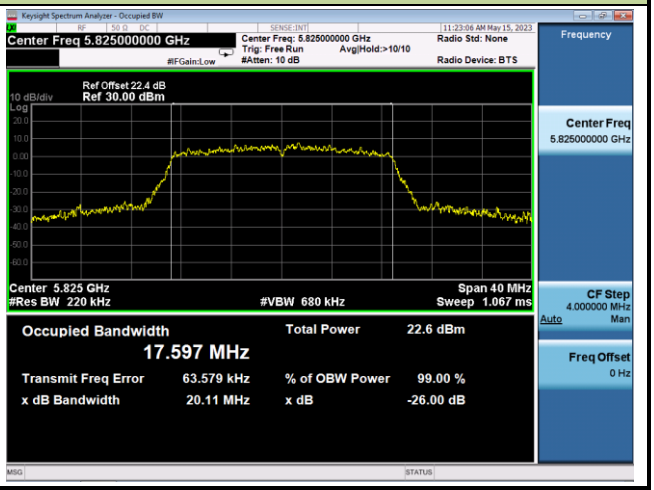
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	6Mbps	36	5180	19.83	16.468
11a	6Mbps	44	5220	20.24	16.549
11a	6Mbps	48	5240	20.02	16.514
11a	6Mbps	149	5745	19.66	16.446
11a	6Mbps	157	5785	20.23	16.524
11a	6Mbps	165	5825	20.06	16.571
11ac-VHT20	MCS0	36	5180	20.11	17.590
11ac-VHT20	MCS0	44	5220	20.11	17.579
11ac-VHT20	MCS0	48	5240	20.02	17.650
11ac-VHT20	MCS0	149	5745	20.14	17.572
11ac-VHT20	MCS0	157	5785	20.23	17.587
11ac-VHT20	MCS0	165	5825	20.11	17.597
11ac-VHT40	MCS0	38	5190	40.30	36.031
11ac-VHT40	MCS0	46	5230	40.72	36.047
11ac-VHT40	MCS0	151	5755	40.51	36.087
11ac-VHT40	MCS0	159	5795	40.56	36.042
11ac-VHT80	MCS0	42	5210	80.97	75.510
11ac-VHT80	MCS0	155	5775	81.20	75.341

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	F_H (MHz)	Limit (MHz)
11a	6Mbps	48	5240	5248.257	< 5250
11ac-VHT20	MCS0	48	5240	5248.825	< 5250
11ac-VHT40	MCS0	46	5230	5248.024	< 5250
11ac-VHT80	MCS0	42	5210	5247.671	< 5250

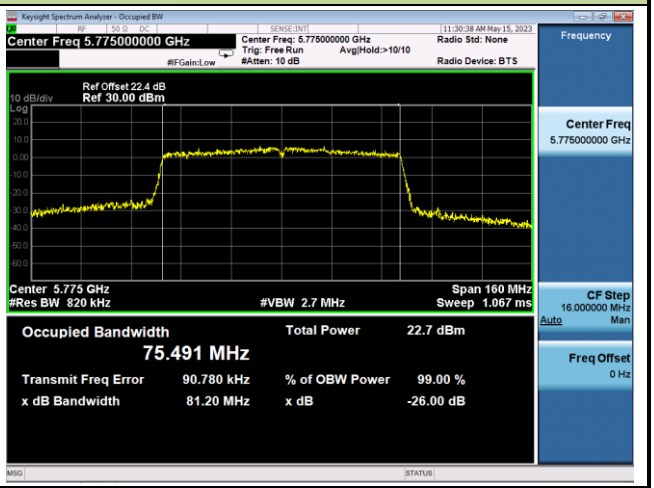
Note: F_H = Centre frequency + 99% OBW / 2

For example, 802.11a 5240MHz, F_H = 5240 MHz + 16.514 MHz / 2 = 5248.257 MHz.

802.11a 26dB Bandwidth	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 149 (5745MHz)
	
Channel 157 (5785MHz)	Channel 165 (5825MHz)
	

802.11ac-VHT20 26dB Bandwidth	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 149 (5745MHz)
	
Channel 157 (5785MHz)	Channel 165 (5825MHz)
	

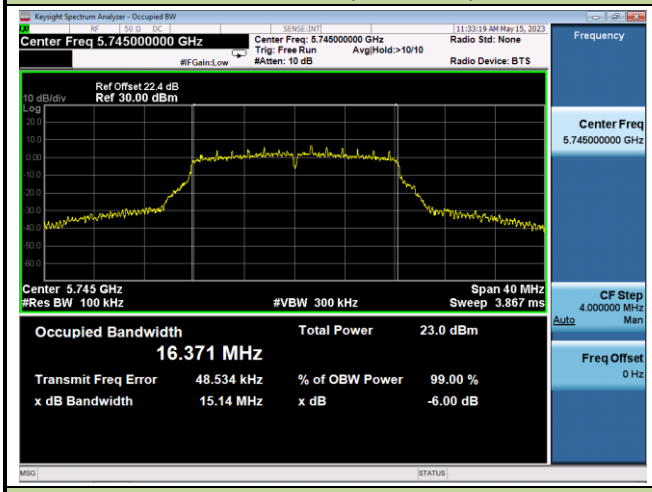
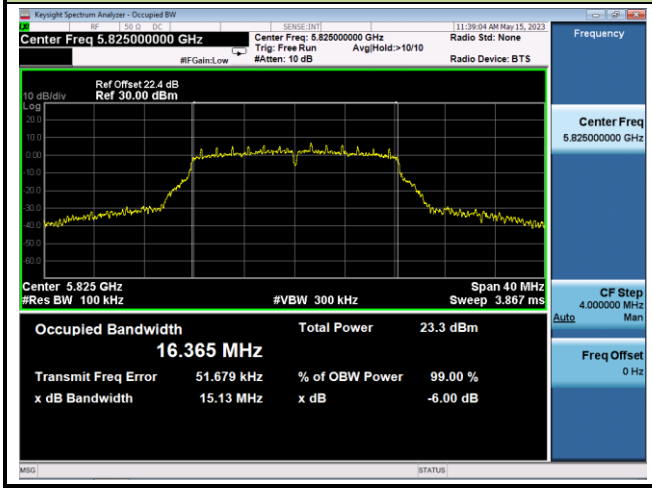
802.11ac-VHT40 26dB Bandwidth	
Channel 38 (5190MHz)	Channel 46 (5230MHz)
	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

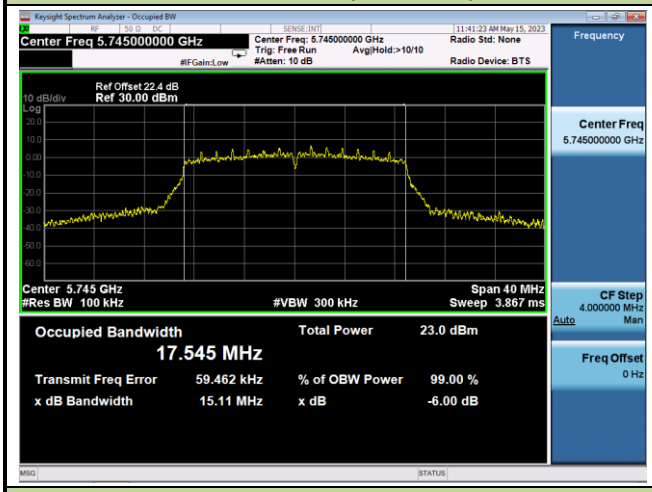
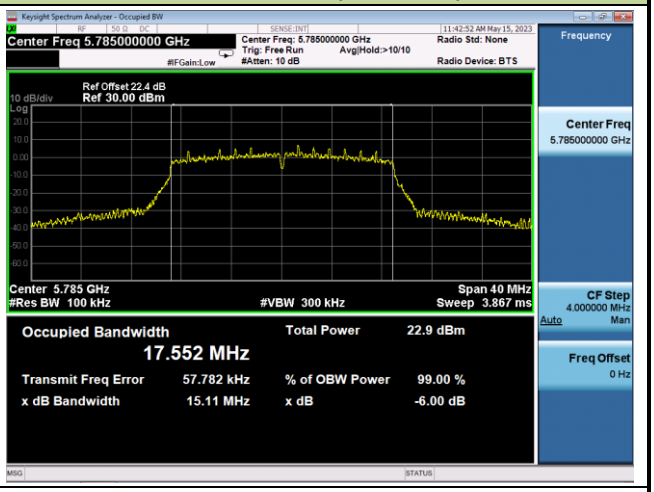
802.11ac-VHT80 26dB Bandwidth	
Channel 42 (5210MHz)	Channel 155 (5775MHz)
	

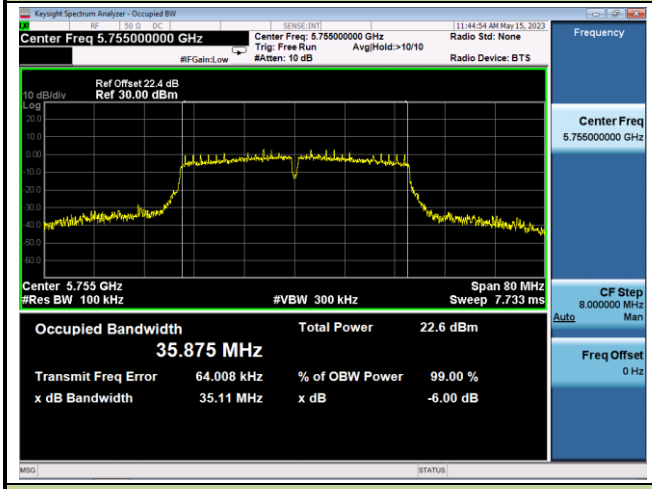
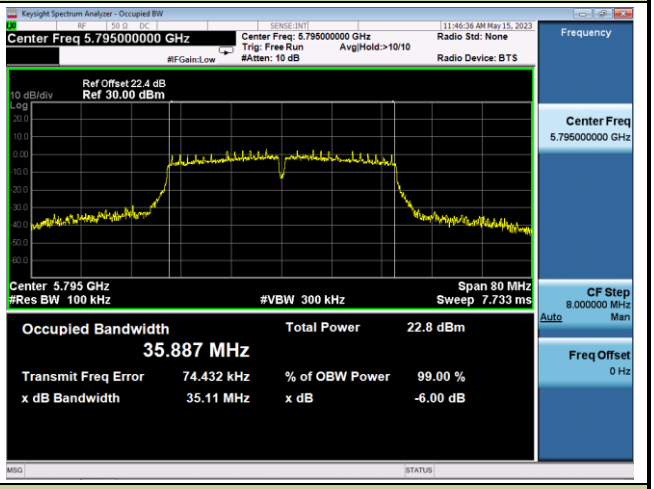
A.3 6dB Bandwidth Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2023/05/15		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11a	6Mbps	149	5745	15.14	≥0.5
11a	6Mbps	157	5785	15.12	≥0.5
11a	6Mbps	165	5825	15.13	≥0.5
11ac-VHT20	MCS0	149	5745	15.11	≥0.5
11ac-VHT20	MCS0	157	5785	15.11	≥0.5
11ac-VHT20	MCS0	165	5825	15.08	≥0.5
11ac-VHT40	MCS0	151	5755	35.11	≥0.5
11ac-VHT40	MCS0	159	5795	35.11	≥0.5
11ac-VHT80	MCS0	155	5775	75.21	≥0.5

802.11a 6dB Bandwidth	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ac-VHT20 6dB Bandwidth	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ac-VHT40 6dB Bandwidth	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	
802.11ac-VHT80 6dB Bandwidth	
Channel 155 (5775MHz)	
	

A.4 Output Power Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2025/05/09~2023/05/17		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Power Limit (dBm)
11a	6Mbps	36	5180	16.54	≤ 30.00
11a	6Mbps	44	5220	16.47	≤ 30.00
11a	6Mbps	48	5240	16.48	≤ 30.00
11a	6Mbps	149	5745	14.59	≤ 30.00
11a	6Mbps	157	5785	16.52	≤ 30.00
11a	6Mbps	165	5825	16.59	≤ 30.00
11ac-VHT20	MCS0	36	5180	16.42	≤ 30.00
11ac-VHT20	MCS0	44	5220	16.51	≤ 30.00
11ac-VHT20	MCS0	48	5240	16.43	≤ 30.00
11ac-VHT20	MCS0	149	5745	15.56	≤ 30.00
11ac-VHT20	MCS0	157	5785	16.40	≤ 30.00
11ac-VHT20	MCS0	165	5825	16.34	≤ 30.00
11ac-VHT40	MCS0	38	5190	16.41	≤ 30.00
11ac-VHT40	MCS0	46	5230	16.49	≤ 30.00
11ac-VHT40	MCS0	151	5755	16.25	≤ 30.00
11ac-VHT40	MCS0	159	5795	16.34	≤ 30.00
11ac-VHT80	MCS0	42	5210	16.38	≤ 30.00
11ac-VHT80	MCS0	155	5775	16.13	≤ 30.00

A.5 Power Spectral Density Test Result

Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2025/05/15~2023/05/17		
Test Item	Power Spectral Density (UNII-Band 1)		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVGPSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)
11a	6Mbps	36	5180	4.777	80.83	5.701	17.00
11a	6Mbps	44	5220	4.162	80.83	5.086	17.00
11a	6Mbps	48	5240	4.578	80.83	5.502	17.00
11ac-VHT20	MCS0	36	5180	4.758	80.37	5.707	17.00
11ac-VHT20	MCS0	44	5220	4.299	80.37	5.248	17.00
11ac-VHT20	MCS0	48	5240	4.031	80.37	4.980	17.00
11ac-VHT40	MCS0	38	5190	1.852	66.67	3.613	17.00
11ac-VHT40	MCS0	46	5230	1.274	66.67	3.035	17.00
11ac-VHT80	MCS0	42	5210	-3.481	50.12	-0.481	17.00

Note: When EUT duty cycle < 98%, the total PSD (dBm/MHz) = AVGPSD +10*log (1/Duty cycle).

When EUT duty cycle ≥ 98%, the total PSD (dBm/MHz) =AVGPSD.

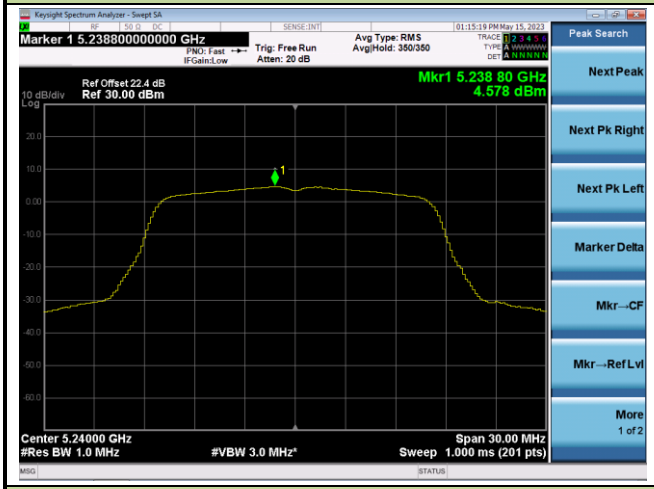
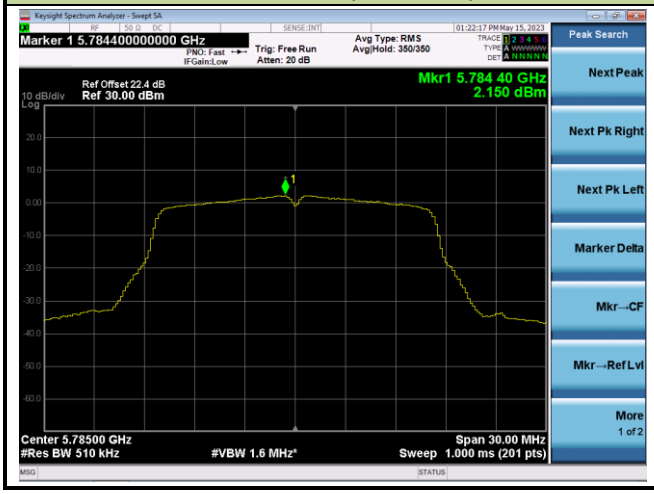
Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2025/05/15~2023/05/17		
Test Item	Power Spectral Density (UNII-Band 3)		

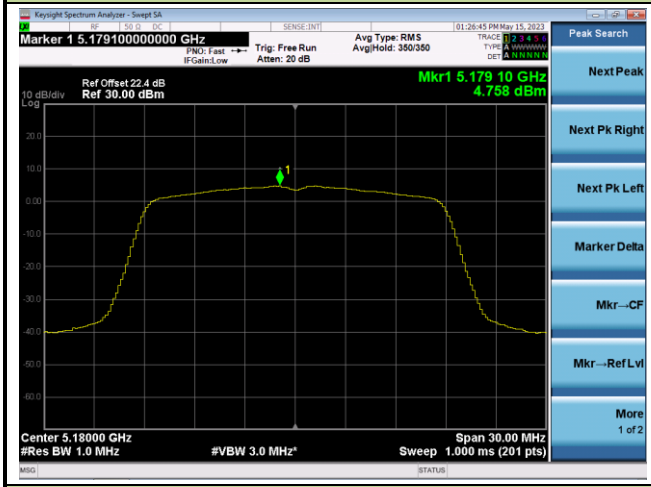
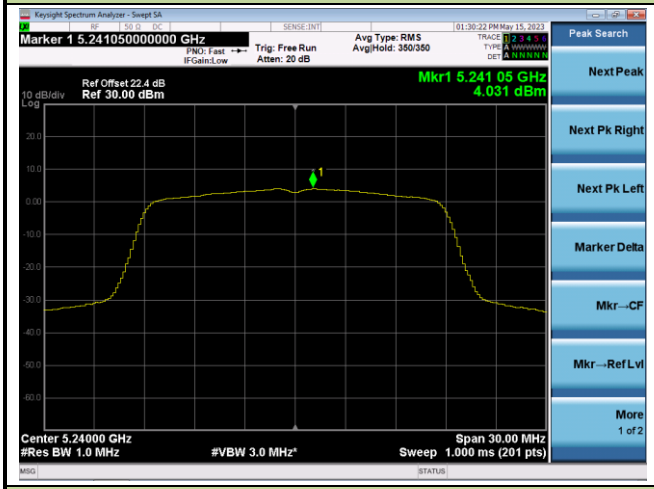
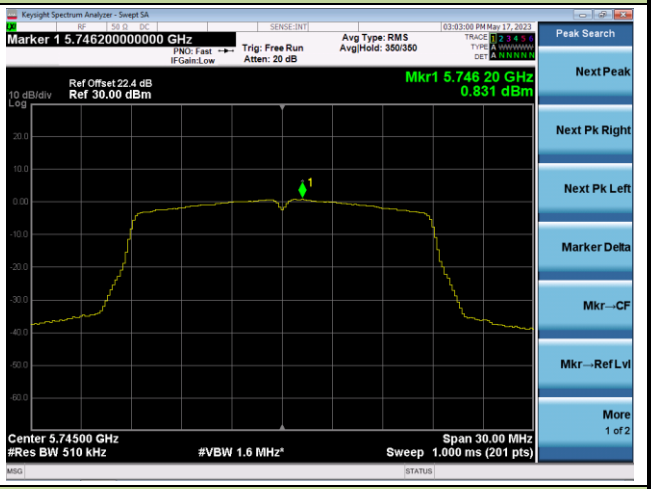
Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVGPSD (dBm/ 510KHz)	Duty Cycle (%)	Total PSD (dBm/ 510KHz)	PSD Limit (dBm/ 500KHz)
11a	6Mbps	149	5745	0.316	80.83	1.240	≤ 30.00
11a	6Mbps	157	5785	2.150	80.83	3.074	≤ 30.00
11a	6Mbps	165	5825	2.026	80.83	2.950	≤ 30.00
11ac-VHT20	MCS0	149	5745	0.831	80.37	1.780	≤ 30.00
11ac-VHT20	MCS0	157	5785	1.753	80.37	2.702	≤ 30.00
11ac-VHT20	MCS0	165	5825	1.458	80.37	2.407	≤ 30.00
11ac-VHT40	MCS0	151	5755	-1.883	66.67	-0.122	≤ 30.00
11ac-VHT40	MCS0	159	5795	-1.504	66.67	0.257	≤ 30.00
11ac-VHT80	MCS0	155	5775	-6.032	50.12	-3.032	≤ 30.00

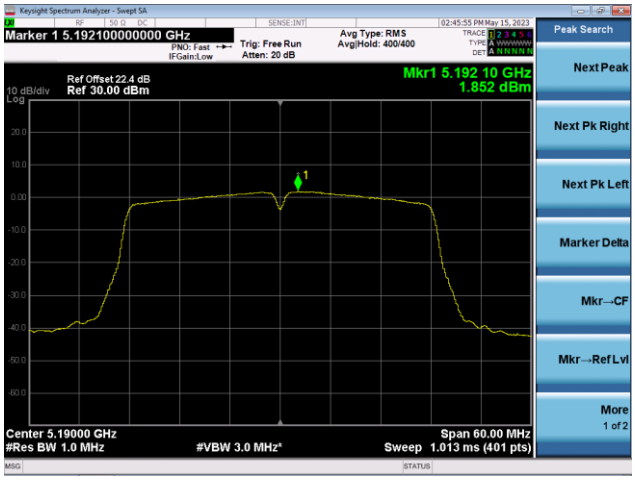
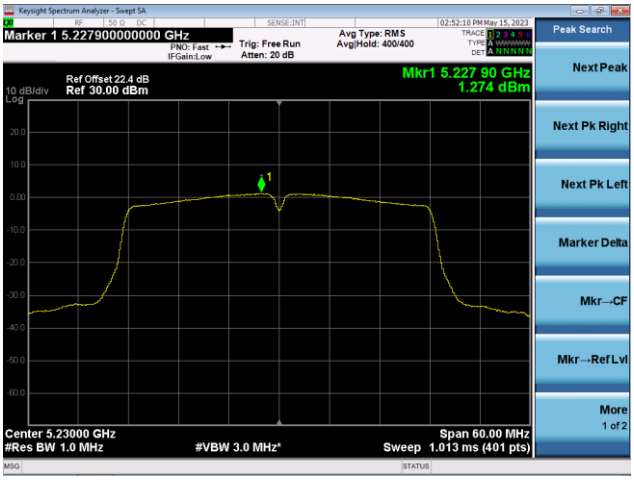
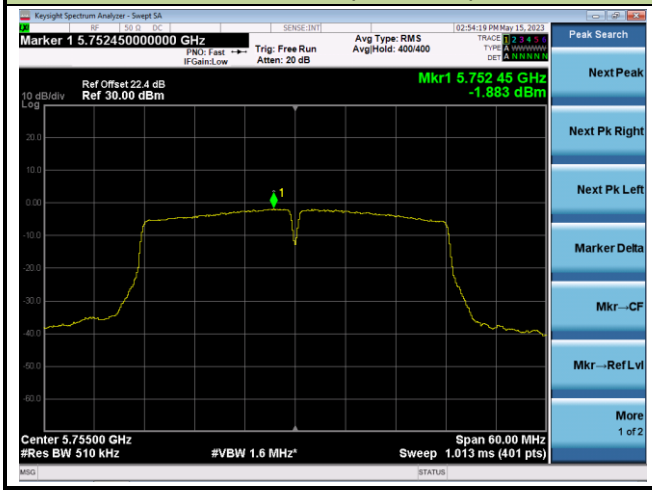
Note :

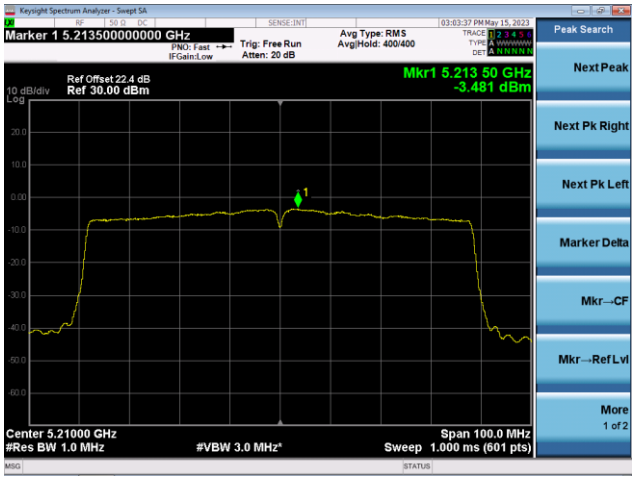
When EUT duty cycle < 98%, the total PSD (dBm/510kHz) = AVGPSD +10*log (1/Duty cycle).

When EUT duty cycle ≥ 98%, the total PSD (dBm/510kHz) = AVGPSD.

802.11a Power Spectral Density	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 149 (5745MHz)
	
Channel 157 (5785MHz)	Channel 165 (5825MHz)
	

802.11ac-VHT20 Power Spectral Density	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 149 (5745MHz)
	
Channel 157 (5785MHz)	Channel 165 (5825MHz)
	

802.11ac-VHT40 Power Spectral Density	
Channel 38 (5190MHz)	Channel 46 (5230MHz)
	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

802.11ac-VHT80 Power Spectral Density	
Channel 42 (5210MHz)	Channel 155 (5775MHz)
	

A.6 Radiated Spurious Emission Test Result

Test Site	NS-AC1	Test Engineer	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11a – Channel 36
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8284.5	40.3	9.3	49.6	74.0	-24.4	Peak	Horizontal
*	10358.5	38.9	13.8	52.7	68.2	-15.5	Peak	Horizontal
	15543.4	38.7	16.6	55.3	74.0	-18.7	Peak	Horizontal
	15543.4	27.1	16.6	43.7	54.0	-10.3	Average	Horizontal
*	17099.0	33.8	17.8	51.6	68.2	-16.6	Peak	Horizontal
	7434.5	35.6	10.2	45.8	74.0	-28.2	Peak	Vertical
*	8684.0	35.8	12.3	48.1	68.2	-20.1	Peak	Vertical
	11200.0	35.4	15.6	51.0	74.0	-23.0	Peak	Vertical
*	12755.5	37.9	14.7	52.6	68.2	-15.6	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11a – Channel 44
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7417.5	37.1	10.3	47.4	74.0	-26.6	Peak	Horizontal
*	10443.5	37.7	13.7	51.4	68.2	-16.8	Peak	Horizontal
	15658.1	39.9	15.3	55.2	74.0	-18.8	Peak	Horizontal
	15658.1	28.9	15.3	44.2	54.0	-9.8	Average	Horizontal
*	17099.0	33.3	17.8	51.1	68.2	-17.1	Peak	Horizontal
	7494.0	36.3	10.0	46.3	74.0	-27.7	Peak	Vertical
	8684.0	36.0	12.3	48.3	68.2	-19.9	Peak	Vertical
*	11905.5	35.7	14.6	50.3	74.0	-23.7	Peak	Vertical
*	13979.5	32.5	16.5	49.0	68.2	-19.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11a – Channel 48
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7434.5	36.5	10.2	46.7	74.0	-27.3	Peak	Horizontal
*	10477.5	38.9	14.2	53.1	68.2	-15.1	Peak	Horizontal
	15718.3	39.9	15.9	55.8	74.0	-18.2	Peak	Horizontal
	15718.3	29.3	15.9	45.2	54.0	-8.8	Average	Horizontal
*	17175.5	33.1	19.1	52.2	68.2	-16.0	Peak	Horizontal
	7477.0	36.4	10.2	46.6	74.0	-27.4	Peak	Vertical
*	10486.0	37.8	14.3	52.1	68.2	-16.1	Peak	Vertical
	12007.5	35.5	14.7	50.2	74.0	-23.8	Peak	Vertical
*	13886.0	32.7	16.3	49.0	68.2	-19.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11a – Channel 149
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8454.5	37.5	10.5	48.0	74.0	-26.0	Peak	Horizontal
*	10154.5	37.4	13.2	50.6	68.2	-17.6	Peak	Horizontal
	11490.2	42.1	15.7	57.8	74.0	-16.2	Peak	Horizontal
	11490.2	35.9	15.7	51.6	54.0	-2.4	Average	Horizontal
*	13979.5	34.2	16.5	50.7	68.2	-17.5	Peak	Horizontal
	9177.0	35.0	12.5	47.5	74.0	-26.5	Peak	Vertical
*	9916.5	37.4	12.3	49.7	68.2	-18.5	Peak	Vertical
	11492.3	37.7	15.7	53.4	74.0	-20.6	Peak	Vertical
	11492.3	30.5	15.7	46.2	54.0	-7.8	Average	Vertical
*	17532.5	35.9	21.5	57.4	68.2	-10.8	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11a – Channel 157
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8454.5	36.9	10.5	47.4	74.0	-26.6	Peak	Horizontal
*	10146.0	37.3	13.2	50.5	68.2	-17.7	Peak	Horizontal
	11570.4	43.2	15.6	58.8	74.0	-15.2	Peak	Horizontal
	11570.4	35.3	15.6	50.9	54.0	-3.1	Average	Horizontal
*	17345.5	35.4	21.6	57.0	68.2	-11.2	Peak	Horizontal
	8454.5	37.3	10.5	47.8	74.0	-26.2	Peak	Vertical
*	9670.0	38.3	11.6	49.9	68.2	-18.3	Peak	Vertical
	11574.0	37.5	15.6	53.1	74.0	-20.9	Peak	Vertical
*	17354.0	35.1	21.6	56.7	68.2	-11.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11a – Channel 165
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	9321.5	39.7	11.9	51.6	74.0	-22.4	Peak	Horizontal
	10027.0	36.3	13.0	49.3	68.2	-18.9	Peak	Horizontal
*	11650.3	46.7	15.9	62.6	74.0	-11.4	Peak	Horizontal
	11650.3	37.5	15.9	53.4	54.0	-0.6	Average	Horizontal
*	13937.0	33.2	17.5	50.7	68.2	-17.5	Peak	Horizontal
	8420.5	37.8	9.9	47.7	74.0	-26.3	Peak	Vertical
	10299.0	36.5	13.4	49.9	68.2	-18.3	Peak	Vertical
*	11650.3	39.0	15.9	54.9	74.0	-19.1	Peak	Vertical
	11650.3	31.5	15.9	47.4	54.0	-6.6	Average	Vertical
*	13988.0	32.8	16.7	49.5	68.2	-18.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT20 – Channel 36
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7409.0	35.8	10.3	46.1	74.0	-27.9	Peak	Horizontal
*	10358.5	38.6	13.8	52.4	68.2	-15.8	Peak	Horizontal
	15538.5	38.4	16.7	55.1	74.0	-18.9	Peak	Horizontal
	15538.5	26.5	16.7	43.2	54.0	-10.8	Average	Horizontal
*	17175.5	33.0	19.1	52.1	68.2	-16.1	Peak	Horizontal
	7477.0	36.1	10.2	46.3	74.0	-27.7	Peak	Vertical
*	8769.0	36.2	12.4	48.6	68.2	-19.6	Peak	Vertical
	11446.5	35.4	15.3	50.7	74.0	-23.3	Peak	Vertical
*	13155.0	32.5	15.6	48.1	68.2	-20.1	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT20 – Channel 44
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	11268.0	35.4	15.4	50.8	74.0	-23.2	Peak	Horizontal
*	13495.0	34.7	17.1	51.8	68.2	-16.4	Peak	Horizontal
	15660.0	39.4	15.2	54.6	74.0	-19.4	Peak	Horizontal
	15660.0	27.9	15.2	43.1	54.0	-10.9	Average	Horizontal
*	17099.0	32.9	17.8	50.7	68.2	-17.5	Peak	Horizontal
	8352.5	37.7	9.7	47.4	74.0	-26.6	Peak	Vertical
*	10137.5	36.6	13.2	49.8	68.2	-18.4	Peak	Vertical
	11055.5	36.1	15.3	51.4	74.0	-22.6	Peak	Vertical
*	13690.5	32.5	16.5	49.0	68.2	-19.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT20 – Channel 48
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7451.5	35.9	10.2	46.1	74.0	-27.9	Peak	Horizontal
*	10477.5	37.6	14.2	51.8	68.2	-16.4	Peak	Horizontal
	15721.2	39.3	15.8	55.1	74.0	-18.9	Peak	Horizontal
	15721.2	29.7	15.8	45.5	54.0	-8.5	Average	Horizontal
*	17107.5	33.0	18.2	51.2	68.2	-17.0	Peak	Horizontal
	8267.5	37.4	9.1	46.5	74.0	-27.5	Peak	Vertical
*	10477.5	37.6	14.2	51.8	68.2	-16.4	Peak	Vertical
	15713.5	37.0	15.9	52.9	74.0	-21.1	Peak	Vertical
*	17107.5	33.1	18.2	51.3	68.2	-16.9	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT20 – Channel 149
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8301.5	38.1	9.3	47.4	74.0	-26.6	Peak	Horizontal
*	10154.5	36.4	13.2	49.6	68.2	-18.6	Peak	Horizontal
	11490.8	46.3	15.7	62.0	74.0	-12.0	Peak	Horizontal
	11490.8	37.6	15.7	53.3	54.0	-0.7	Average	Horizontal
*	13911.5	32.9	16.4	49.3	68.2	-18.9	Peak	Horizontal
	8403.5	36.9	9.8	46.7	74.0	-27.3	Peak	Vertical
*	10044.0	35.9	13.6	49.5	68.2	-18.7	Peak	Vertical
	11491.3	41.0	15.7	56.7	74.0	-17.3	Peak	Vertical
	11491.3	30.7	15.7	46.4	54.0	-7.6	Average	Vertical
*	13903.0	32.7	16.1	48.8	68.2	-19.4	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT20 – Channel 157
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8378.0	37.1	9.9	47.0	74.0	-27.0	Peak	Horizontal
*	9942.0	35.7	13.3	49.0	68.2	-19.2	Peak	Horizontal
	11570.5	45.4	15.6	61.0	74.0	-13.0	Peak	Horizontal
	11570.5	37.1	15.6	52.7	54.0	-1.3	Average	Horizontal
*	17345.5	35.1	21.6	56.7	68.2	-11.5	Peak	Horizontal
	7477.0	36.2	10.2	46.4	74.0	-27.6	Peak	Vertical
*	10137.5	36.5	13.2	49.7	68.2	-18.5	Peak	Vertical
	11571.2	40.7	15.6	56.3	74.0	-17.7	Peak	Vertical
	11571.2	30.9	15.6	46.5	54.0	-7.5	Average	Vertical
*	16504.0	33.6	16.0	49.6	68.2	-18.6	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT20 – Channel 165
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8437.5	36.8	10.2	47.0	74.0	-27.0	Peak	Horizontal
*	10146.0	36.4	13.2	49.6	68.2	-18.6	Peak	Horizontal
	11650.7	46.0	15.9	61.9	74.0	-12.1	Peak	Horizontal
	11650.7	36.0	15.9	51.9	54.0	-2.1	Average	Horizontal
*	17481.5	35.2	21.4	56.6	68.2	-11.6	Peak	Horizontal
	11650.6	39.4	15.9	55.3	74.0	-18.7	Peak	Vertical
	11650.6	30.6	15.9	46.5	54.0	-7.5	Average	Vertical
*	13665.0	34.7	17.0	51.7	68.2	-16.5	Peak	Vertical
	15866.5	33.7	15.6	49.3	74.0	-24.7	Peak	Vertical
*	17099.0	33.9	17.8	51.7	68.2	-16.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT40 – Channel 38
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7426.0	36.1	10.4	46.5	74.0	-27.5	Peak	Horizontal
*	8777.5	36.7	12.2	48.9	68.2	-19.3	Peak	Horizontal
	11421.0	35.4	15.7	51.1	74.0	-22.9	Peak	Horizontal
*	13979.5	33.0	16.5	49.5	68.2	-18.7	Peak	Horizontal
	7409.0	35.6	10.3	45.9	74.0	-28.1	Peak	Vertical
*	8811.5	36.4	12.4	48.8	68.2	-19.4	Peak	Vertical
	10775.0	36.6	14.5	51.1	74.0	-22.9	Peak	Vertical
*	14107.0	34.2	17.2	51.4	68.2	-16.8	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT40 – Channel 46
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8369.5	40.6	9.8	50.4	74.0	-23.6	Peak	Horizontal
*	9525.5	37.6	11.7	49.3	68.2	-18.9	Peak	Horizontal
	11208.5	35.0	15.8	50.8	74.0	-23.2	Peak	Horizontal
*	13886.0	32.7	16.3	49.0	68.2	-19.2	Peak	Horizontal
	7345.8	35.1	10.0	45.1	74.0	-28.9	Peak	Vertical
*	9933.5	36.1	12.9	49.0	68.2	-19.2	Peak	Vertical
	11599.5	34.7	15.8	50.5	74.0	-23.5	Peak	Vertical
*	14039.0	34.2	17.3	51.5	68.2	-16.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT40 – Channel 151
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8335.5	37.2	9.4	46.6	74.0	-27.4	Peak	Horizontal
*	10163.0	36.6	13.1	49.7	68.2	-18.5	Peak	Horizontal
	11512.7	42.7	15.5	58.2	74.0	-15.8	Peak	Horizontal
	11512.7	35.9	15.5	51.4	54.0	-2.6	Average	Horizontal
*	13979.5	32.4	16.5	48.9	68.2	-19.3	Peak	Horizontal
	7366.5	37.4	9.9	47.3	74.0	-26.7	Peak	Vertical
*	8837.0	36.9	12.3	49.2	68.2	-19.0	Peak	Vertical
	11514.5	37.6	15.5	53.1	74.0	-20.9	Peak	Vertical
*	13996.5	33.2	16.9	50.1	68.2	-18.1	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT40 – Channel 159
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8191.0	37.3	9.2	46.5	74.0	-27.5	Peak	Horizontal
*	10129.0	36.3	13.1	49.4	68.2	-18.8	Peak	Horizontal
	11590.3	45.0	15.6	60.6	74.0	-13.4	Peak	Horizontal
	11590.3	34.0	15.6	49.6	54.0	-4.4	Average	Horizontal
*	13792.5	34.4	16.6	51.0	68.2	-17.2	Peak	Horizontal
	7366.5	36.3	9.9	46.2	74.0	-27.8	Peak	Vertical
*	8684.0	35.7	12.3	48.0	68.2	-20.2	Peak	Vertical
	11582.5	36.7	15.6	52.3	74.0	-21.7	Peak	Vertical
*	13894.5	32.9	16.2	49.1	68.2	-19.1	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT80 – Channel 42
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.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	8335.5	39.8	9.4	49.2	74.0	-24.8	Peak	Horizontal
*	10375.5	36.2	13.9	50.1	68.2	-18.1	Peak	Horizontal
	11769.5	34.4	15.0	49.4	74.0	-24.6	Peak	Horizontal
*	14166.5	33.5	17.3	50.8	68.2	-17.4	Peak	Horizontal
	7485.5	36.2	10.1	46.3	74.0	-27.7	Peak	Vertical
*	10409.5	35.5	13.9	49.4	68.2	-18.8	Peak	Vertical
	12007.5	37.2	14.7	51.9	74.0	-22.1	Peak	Vertical
*	13971.0	32.9	16.3	49.2	68.2	-19.0	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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	Flag Yang
Test Date	2023/05/15 ~ 05/18	Test Mode	802.11ac-VHT80 – Channel 155
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.		

Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB/m)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
	7426.0	36.1	10.4	46.5	74.0	-27.5	Peak	Horizontal
*	9967.5	37.3	12.6	49.9	68.2	-18.3	Peak	Horizontal
	11549.8	41.1	15.8	56.9	74.0	-17.1	Peak	Horizontal
	11549.8	32.7	15.8	48.5	54.0	-5.5	Average	Horizontal
*	13886.0	32.9	16.3	49.2	68.2	-19.0	Peak	Horizontal
	8089.0	36.8	9.4	46.2	74.0	-27.8	Peak	Vertical
*	10171.5	37.4	12.9	50.3	68.2	-17.9	Peak	Vertical
	11523.0	35.9	15.5	51.4	74.0	-22.6	Peak	Vertical
*	14039.0	34.4	17.3	51.7	68.2	-16.5	Peak	Vertical

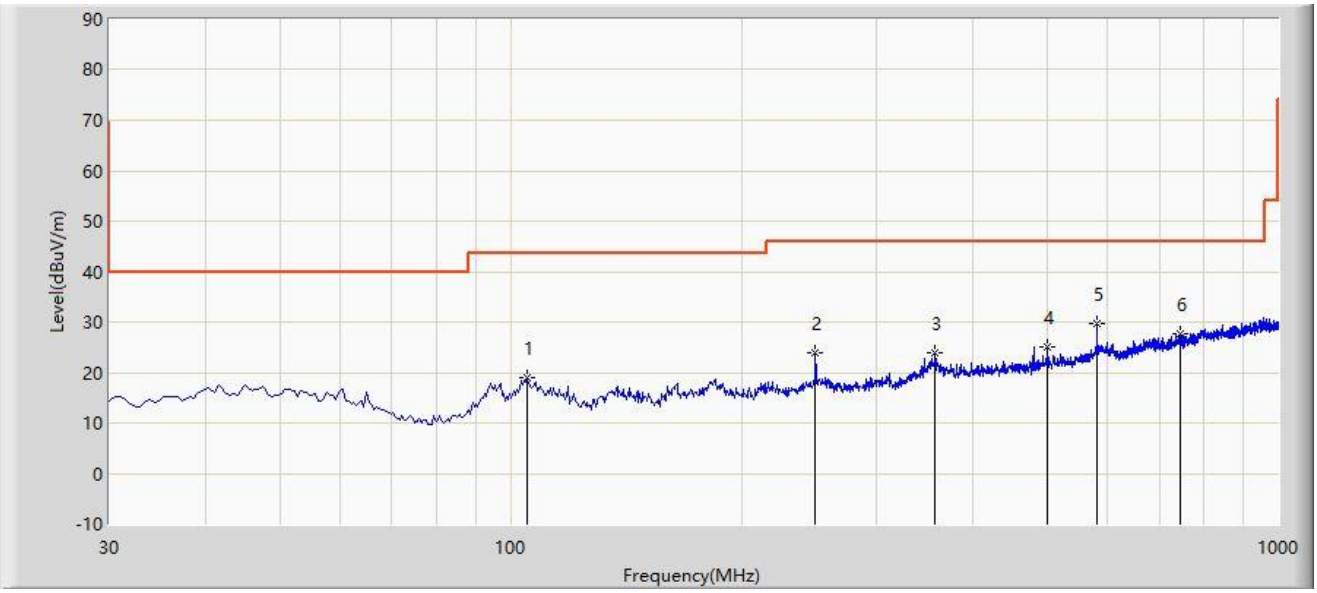
Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBµV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: 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: NS-AC1	Time: 2023/05/11
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: NS-AC1_VULB9162	Polarity: Horizontal
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5745MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		105.175	18.841	3.109	-24.659	43.500	15.732	PK
2		249.705	23.996	6.558	-22.004	46.000	17.438	PK
3		356.890	23.792	4.347	-22.208	46.000	19.445	PK
4		499.965	25.000	2.508	-21.000	46.000	22.492	PK
5	*	579.990	29.707	5.560	-16.293	46.000	24.147	PK
6		744.890	27.784	1.383	-18.216	46.000	26.401	PK

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

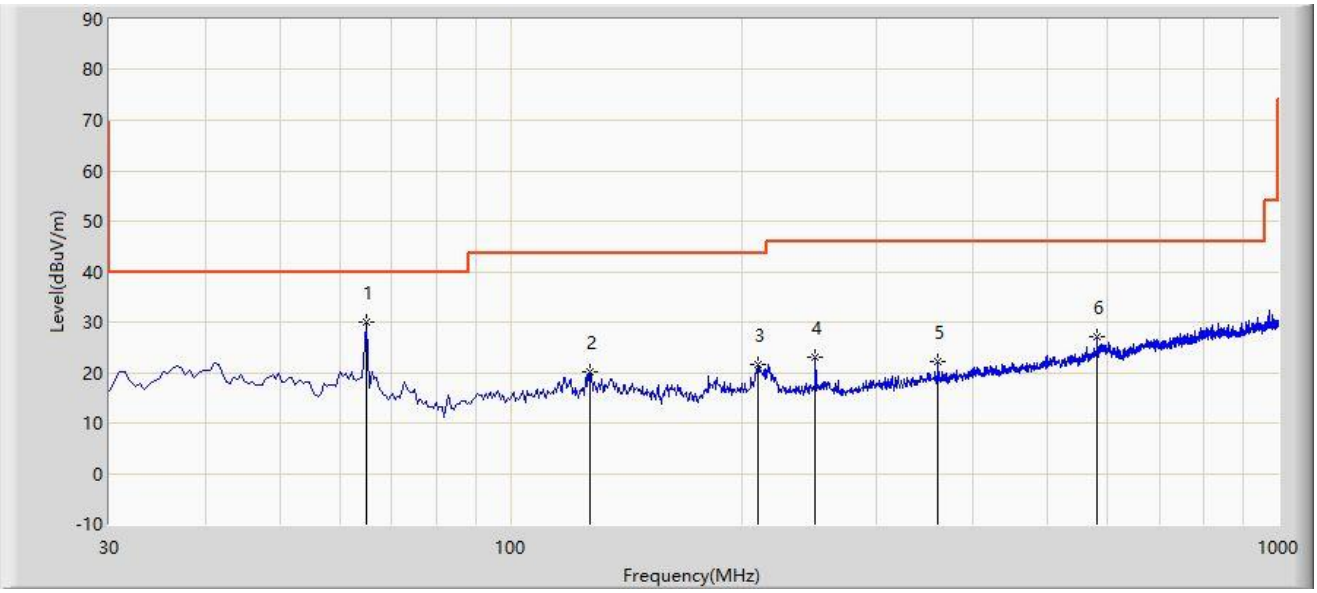
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

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 40GHz) 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	Time: 2023/05/11
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: NS-AC1_VULB9162	Polarity: Vertical
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5745MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	64.920	30.047	14.770	-9.953	40.000	15.277	PK
2		127.000	20.190	6.559	-23.310	43.500	13.632	PK
3		210.420	21.685	6.073	-21.815	43.500	15.612	PK
4		249.705	23.002	5.564	-22.998	46.000	17.438	PK
5		360.770	22.060	2.689	-23.940	46.000	19.371	PK
6		579.990	27.075	2.928	-18.925	46.000	24.147	PK

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

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

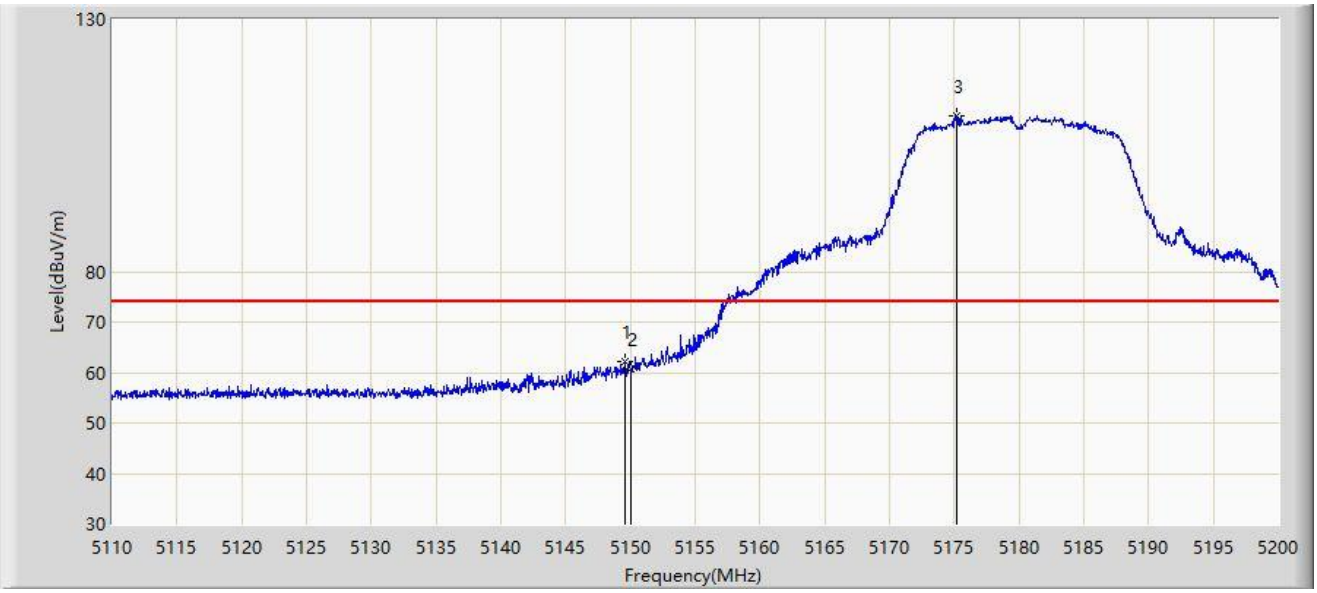
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

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 40GHz) 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	Time: 2023/05/12
Limit: FCC_5G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5180MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5149.555	62.233	59.671	-11.767	74.000	2.562	PK
2		5150.000	60.655	58.096	-13.345	74.000	2.559	PK
3		5175.205	110.918	108.796	N/A	N/A	2.122	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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/12
Limit: FCC_5G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5180MHz	

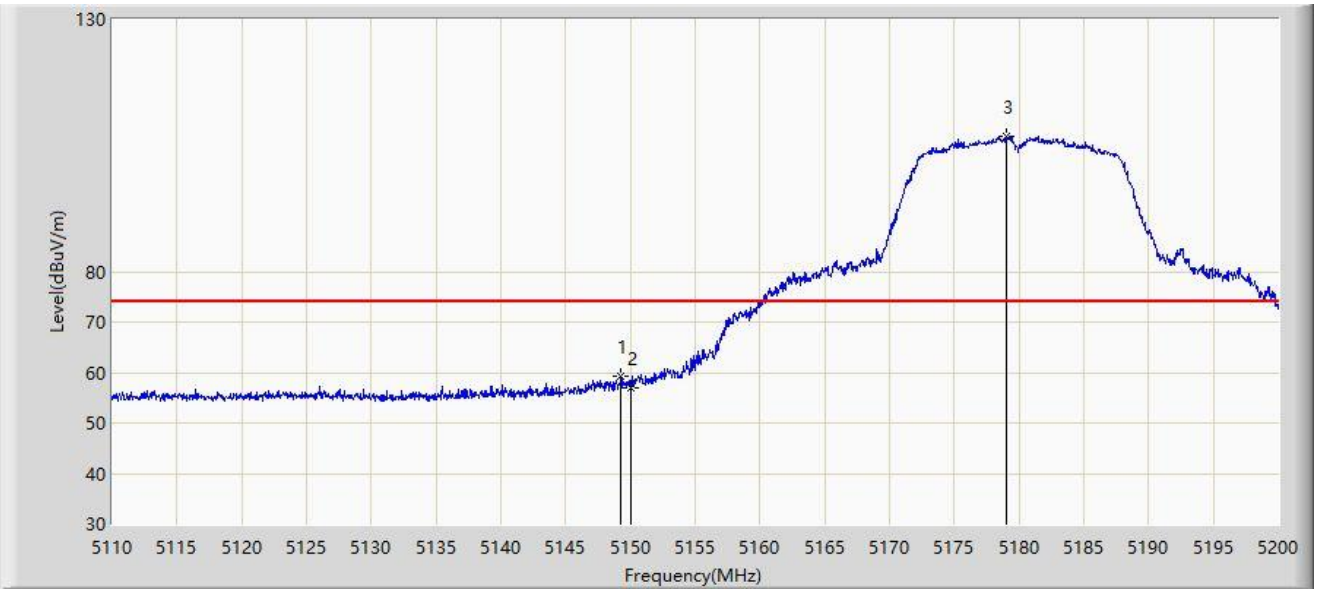
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	5150.000	50.434	47.875	-3.566	54.000	2.559	AV
2		5179.165	103.478	101.485	N/A	N/A	1.994	AV

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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/12
Limit: FCC_5G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5180MHz	



No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5149.240	59.333	56.769	-14.667	74.000	2.564	PK
2		5150.000	56.893	54.334	-17.107	74.000	2.559	PK
3		5179.075	106.888	104.892	N/A	N/A	1.997	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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/12
Limit: FCC_5G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5180MHz	

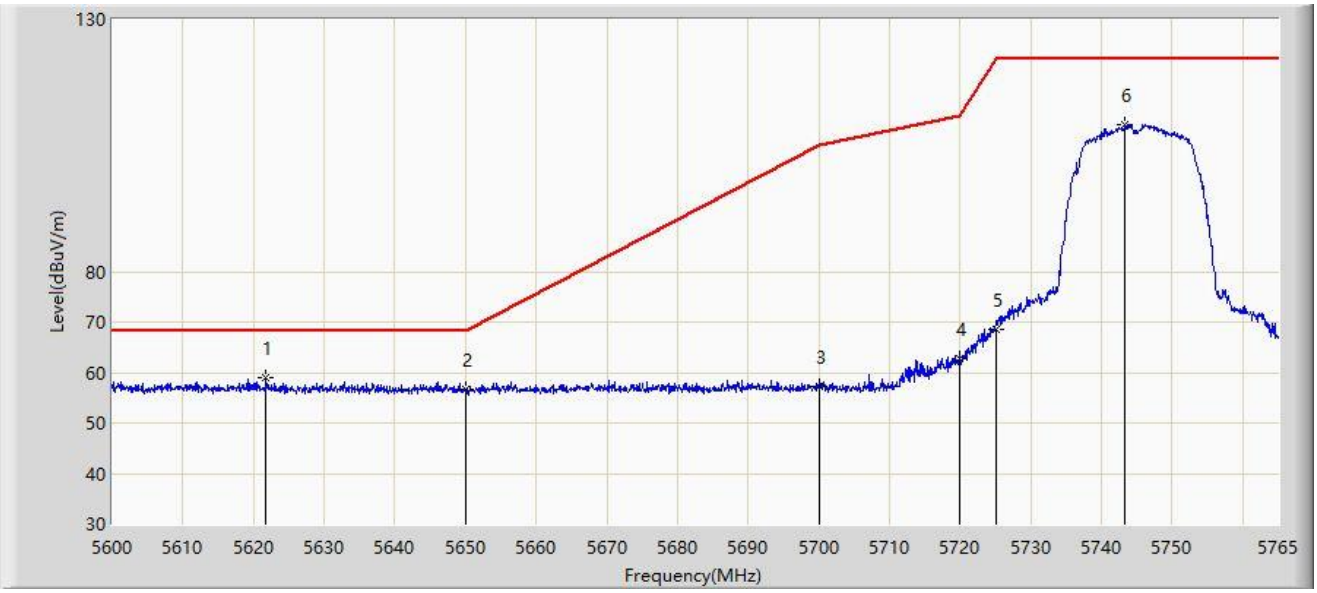
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5150.000	47.459	44.900	-6.541	54.000	2.559	AV
2		5181.010	99.144	97.211	N/A	N/A	1.933	AV

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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/18
Limit: FCC_5.8G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5745MHz	



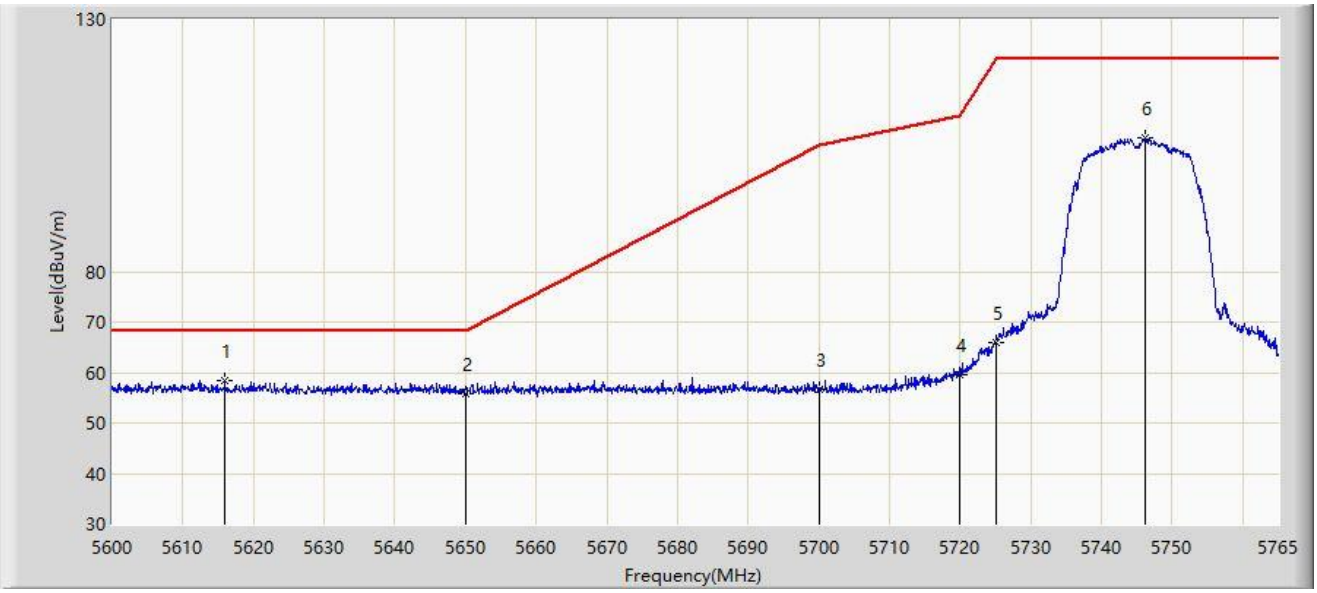
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5621.780	58.982	56.591	-9.218	68.200	2.391	PK
2		5650.000	56.672	54.121	-11.528	68.200	2.552	PK
3		5700.000	57.149	54.282	-48.051	105.200	2.867	PK
4		5720.000	62.648	59.838	-48.152	110.800	2.810	PK
5		5725.000	68.602	65.758	-53.598	122.200	2.844	PK
6		5743.385	109.191	106.160	N/A	N/A	3.031	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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/18
Limit: FCC_5.8G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5745MHz	



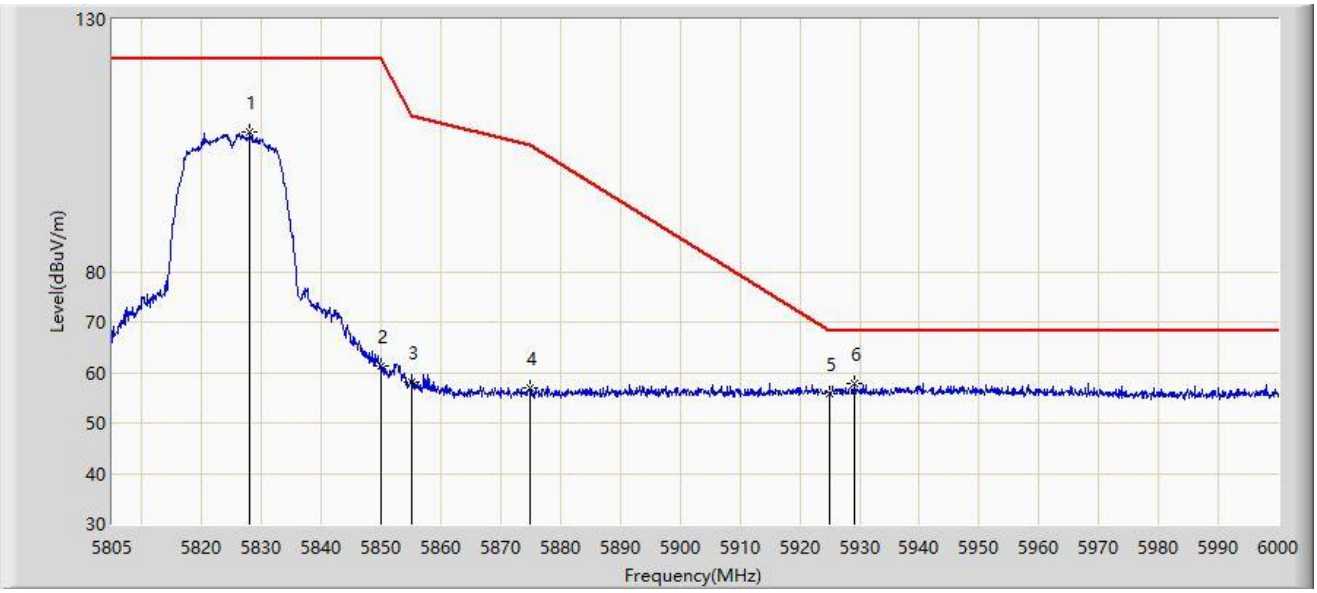
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	5615.922	58.450	56.045	-9.750	68.200	2.404	PK
2		5650.000	55.752	53.201	-12.448	68.200	2.552	PK
3		5700.000	56.542	53.675	-48.658	105.200	2.867	PK
4		5720.000	59.480	56.670	-51.320	110.800	2.810	PK
5		5725.000	66.083	63.239	-56.117	122.200	2.844	PK
6		5746.272	106.613	103.557	N/A	N/A	3.056	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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/12
Limit: FCC_5.8G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5825MHz	



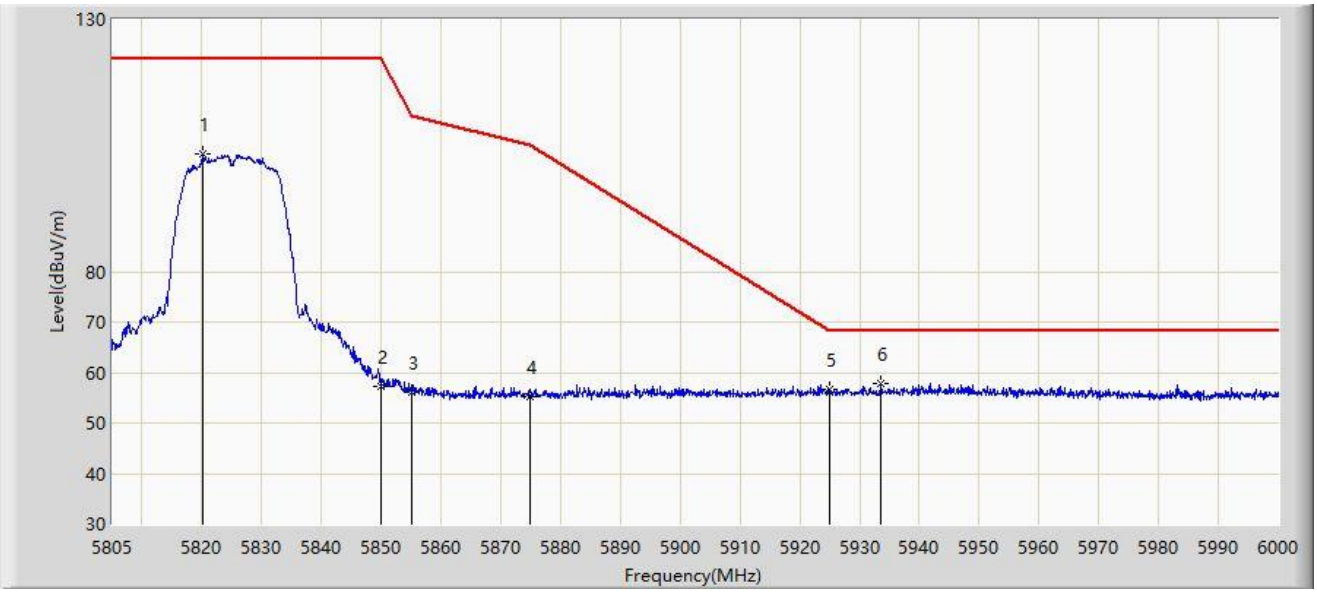
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		5828.010	107.587	104.129	N/A	N/A	3.458	PK
2		5850.000	61.295	57.963	-60.905	122.200	3.333	PK
3		5855.000	58.050	54.710	-52.750	110.800	3.340	PK
4		5875.000	57.038	53.644	-48.162	105.200	3.393	PK
5		5925.000	55.697	51.932	-12.503	68.200	3.766	PK
6	*	5929.020	57.786	53.939	-10.414	68.200	3.847	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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/12
Limit: FCC_5.8G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at 5825MHz	



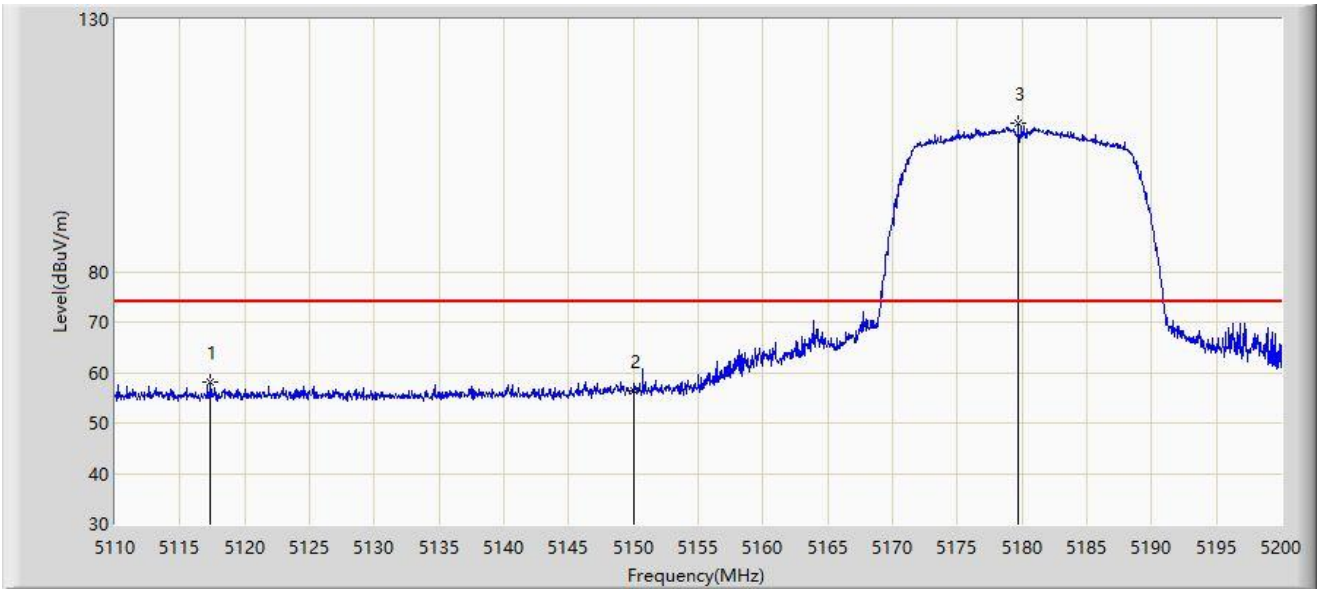
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		5820.210	103.212	99.891	N/A	N/A	3.321	PK
2		5850.000	57.222	53.890	-64.978	122.200	3.333	PK
3		5855.000	55.959	52.619	-54.841	110.800	3.340	PK
4		5875.000	55.269	51.875	-49.931	105.200	3.393	PK
5		5925.000	56.570	52.805	-11.630	68.200	3.766	PK
6	*	5933.603	57.836	53.947	-10.364	68.200	3.888	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) - Pre_Amplifier Gain (dB).

Site: NS-AC1	Time: 2023/05/12
Limit: FCC_5G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: AC750 Wi-Fi Travel Router	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at 5180MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	5117.335	58.005	55.776	-15.995	74.000	2.229	PK
2		5150.000	56.246	53.687	-17.754	74.000	2.559	PK
3		5179.705	109.292	107.316	N/A	N/A	1.976	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) - Pre_Amplifier Gain (dB).