RF MEASUREMENT REPORT

FCC ID:	TK4WLE3000HX
Applicant:	Compex Systems Pte Ltd
Product:	WiFi 6 (802.11ax) 4×4 MU-MIMO Dual Band Module
Model No.:	WLE3000HX, WLE3000HX-I
Brand Name:	COMPEX
FCC Classification:	Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s):	Part 15 Subpart E (Section 15.407)
Result:	Complies
Received Date:	2023-05-08
Test Date:	2023-06-10 ~ 2023-09-07

Reviewed By: Jame Yuan

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

Revision History

Report No.	Version	Description	Issue Date	Note
2305RSU016-U2	V01	Initial Report	2023-09-14	Invalid
2305RSU016-U2	V02	Revised information	2023-09-20	Valid

Note: The report is based on the report “2210RSU016-U3” to add a new antenna. Because the power is lower than before, we only evaluated “Output Power”, “Power Spectral Density”, “Radiated Spurious Emission” and “Radiated Restricted Band Edge”.

CONTENTS

1. General Information

1.1. Applicant

Compex Systems Pte Ltd

No.9 Harrison Road, Harrison Industrial Building, #05-01, Singapore 369651

1.2. Manufacturer

Compex Systems Pte Ltd

No.9 Harrison Road, Harrison Industrial Building, #05-01, Singapore 369651

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: 3261				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	WiFi 6 (802.11ax) 4×4 MU-MIMO Dual Band Module
Model No.	WLE3000HX, WLE3000HX-I
Serial No.	110053492
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Antenna Information	Refer to Section 1.7
Operating Voltage	3.3Vdc
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/ax-HE20: 5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5190~5230MHz, 5270~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80/ax-HE80: 5210MHz, 5290MHz, 5530MHz, 5610 MHz, 5690MHz, 5775MHz For 802.11ac-VHT160/ax-HE160: 5250MHz, 5570MHz	
Type of Modulation	802.11a/n/ac: OFDM 802.11ax: OFDMA	
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 600Mbps 802.11ac: up to 3466.7Mbps 802.11ax: up to 4804Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU

1.6. Working Frequencies

802.11a/n-HT20/ac-VHT20/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	144	5720 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	--	--	--	--

802.11n-HT40/ac-VHT40/ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	151	5755 MHz	159	5795 MHz

802.11ac-VHT80/ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

802.11ac-VHT160/ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250 MHz	114	5570 MHz	--	--

1.7. Antenna Details

Antenna Type	Frequency Band (GHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)
Wi-Fi Internal Antenna (4*4 MIMO) (Model No.: SAA04-222060)			
Directional Panel	2.4 ~ 2.5	13.50	19.52
	5.15 ~ 5.85	15.50	21.52

Remark:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

For CDD transmissions, directional gain is calculated as follows.

Directional gain = $G_{ANT\ Max}$ + 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;

- For power measurements on IEEE 802.11 devices,

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

2. The EUT also supports Beam Forming mode, and the Beam Forming supports 802.11n/ac/ax, not include 802.11a/b/g. Beamforming Directional gain = $G_{ANT\ Max}$ + 10 log (N_{ANT}/ N_{SS}).

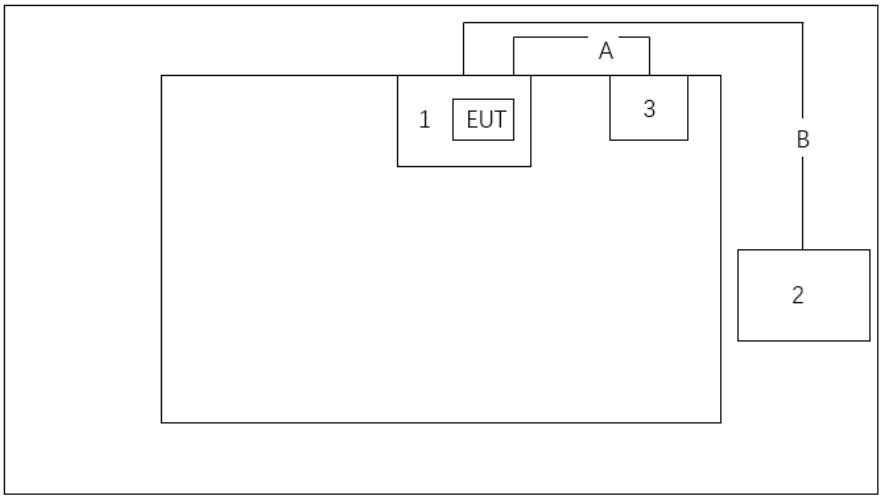
2. Test Configuration

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)
Mode 5: Transmit by 802.11ac-VHT160 (MCS0)
Mode 6: Transmit by 802.11ax-HE20 (MCS0)
Mode 7: Transmit by 802.11ax-HE40 (MCS0)
Mode 8: Transmit by 802.11ax-HE80 (MCS0)
Mode 9: Transmit by 802.11 ax-HE160 (MCS0)
Remark: 1. All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worse data rate which power is the greatest. 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. This device supports 4 Nss and power level is the same of spatial multiplexing. The worst case is Nss=1. 4. After preliminary scan designated by the manufacturer, CDD mode is determined to be the worst case compared to Beamforming mode, hence, all the radiated test is performed in CDD mode. 5. For beamforming operation, manufacturer automatically backs power down based on CDD power. Therefore, only the CDD mode was evaluated in this report. 6. EUT supports one configuration only in 802.11ax full RU mode.

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	Power Cable	Non shielding, 1.5m
B	LAN Cable	Non shielding, >10.0m

Product		Manufacturer	Model No.
1	Host	PicoCELA Inc	PCWL-0510
2	Notebook	Lenovo	E431
3	Adapter	PHIHONG	Model: PSAC60W-120

2.3. Test Software

The test utility software used during testing was “telnet”, and the 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 15.407
- KDB 789033 D02v02r01
- KDB 662911 D01v02r01
- 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 uses a unique IPEX connector.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2023-12-28	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2023-08-22	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2024-08-09	WZ-AC1
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2024-05-07	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2024-06-09	WZ-AC1
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2024-04-20	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE06403	1 year	2024-05-31	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2023-12-28	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2023-11-01	WZ-AC1
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2023-09-29	WZ-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2023-11-05	WZ-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2024-01-12	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2024-05-31	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2024-05-23	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11083	1 year	2024-06-08	WZ-SR5
Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2024-05-23	WZ-SR5
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2024-05-15	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2024-05-23	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2023-11-27	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2023-10-13	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2024-05-07	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2024-04-20	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11038	1 year	2023-11-01	WZ-AC2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
Controller_MF 7802	2.03C	RE Antenna & Turntable
BenchVue Power Meter	2018.1	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: 3.58dB 150kHz~30MHz: 3.20dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz~30MHz: 2.60dB 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.28dB 1GHz~40GHz: 4.98dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.5dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.2%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)(1)(i)(ii), (2), (3)(i)	Maximum Conducted Output Power	Conducted	Pass
15.407(a)(1)(ii), (2), (3)(i), (12)	Peak Power Spectral Density		Pass
15.205, 15.209 15.407(b)(8), (9), (10)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Radiated	Pass

Remark:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3. The total conducted power of the added antenna is less than before, so we only evaluated “Output Power”, “Peak Power Spectral Density”, “Radiated Spurious Emission” and “Radiated Restricted Band Edge” measurements in this report.

6.2. Output Power Measurement

6.2.1. 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 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.

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.

6.2.2. Test Procedure

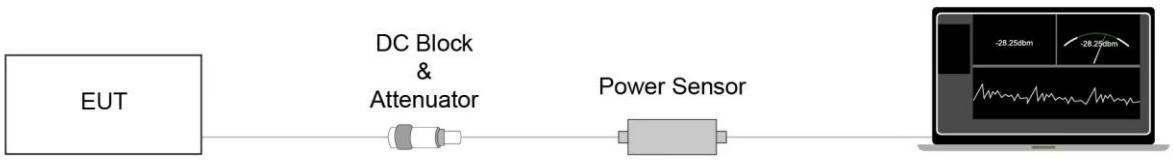
KDB 789033D02v02r01- Section II)E)3)b) Method PM-G

6.2.3. Test Setting

Average Power Measurement

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

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Power Spectral Density Measurement

6.3.1. 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 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 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.

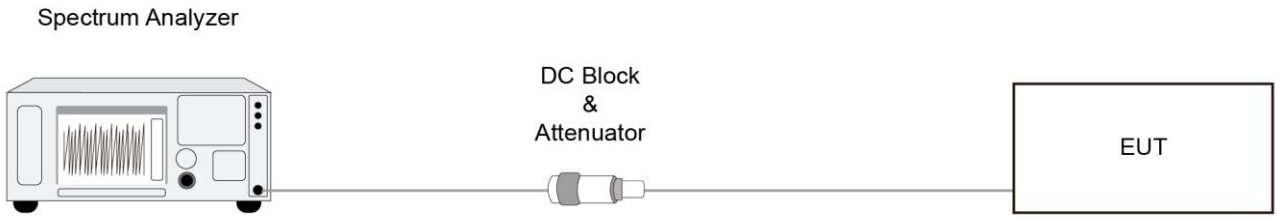
6.3.2. Test Procedure

KDB 789033 D02v02r01-Section Ⅱ)F)

6.3.3. 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.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Radiated Spurious Emission Measurement

6.4.1. Test Limit

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

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

6.4.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.4.3. 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

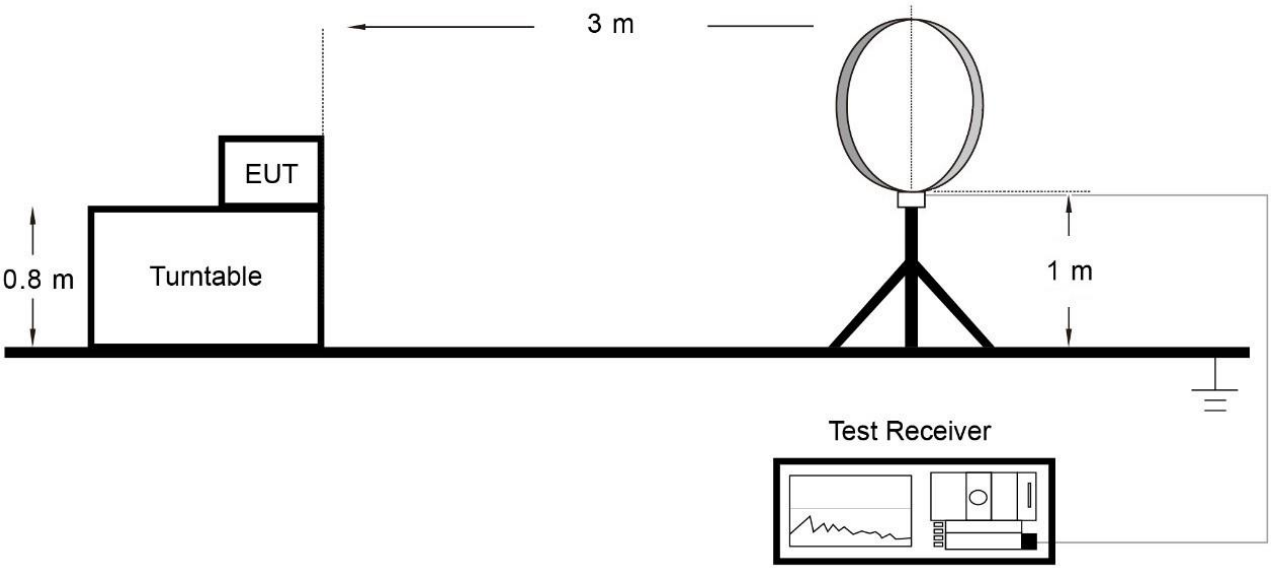
5. Sweep time = auto

6. Trace mode = max hold

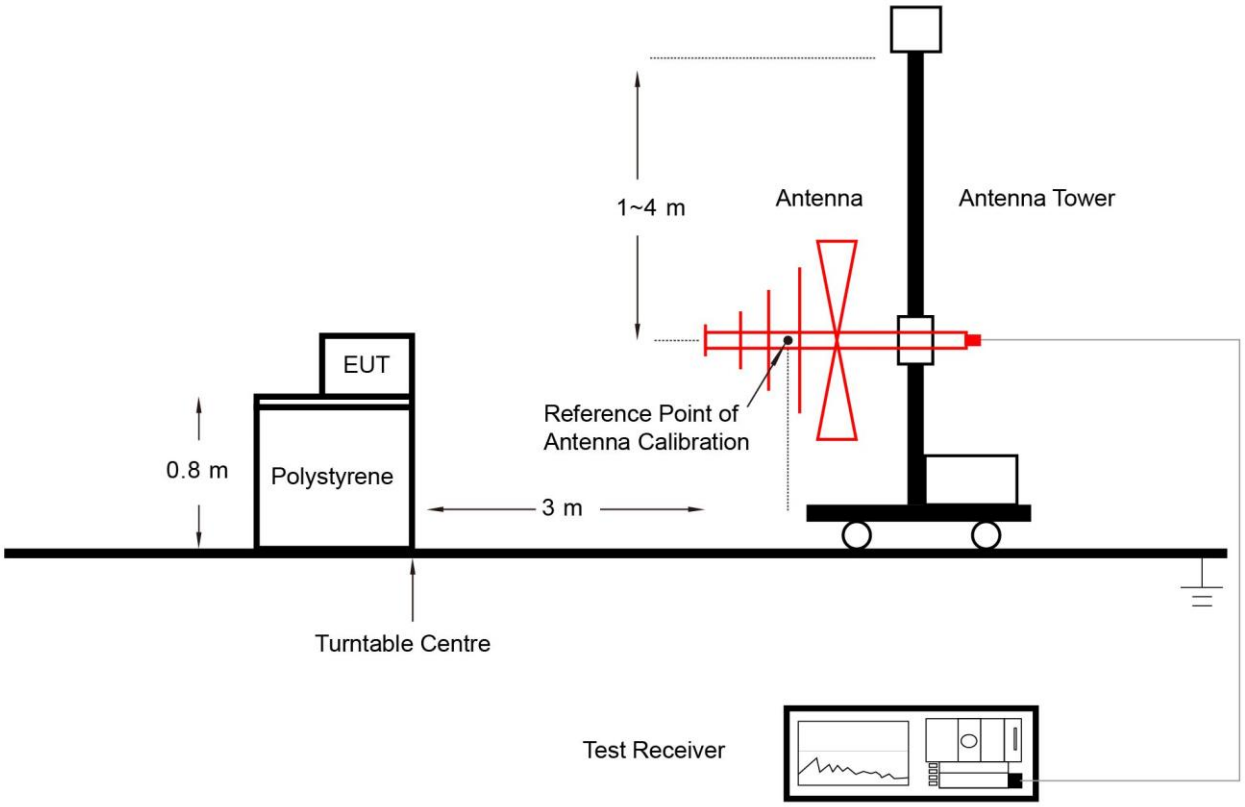
7. Trace was allowed to stabilize

6.4.4. Test Setup

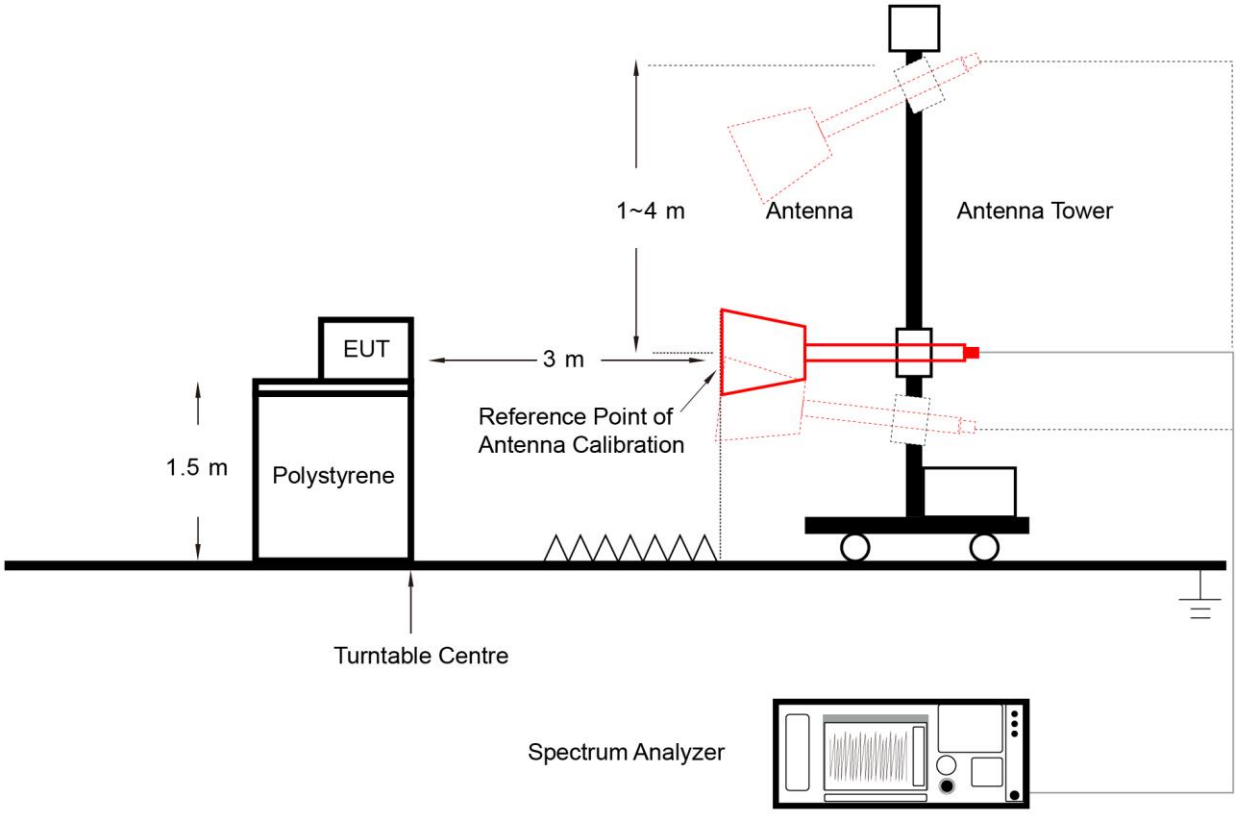
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.4.5. Test Result

Refer to Appendix A.3.

6.5. Radiated Restricted Band Edge Measurement

6.5.1. 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 [μV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.5.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.5.3. Test Setting

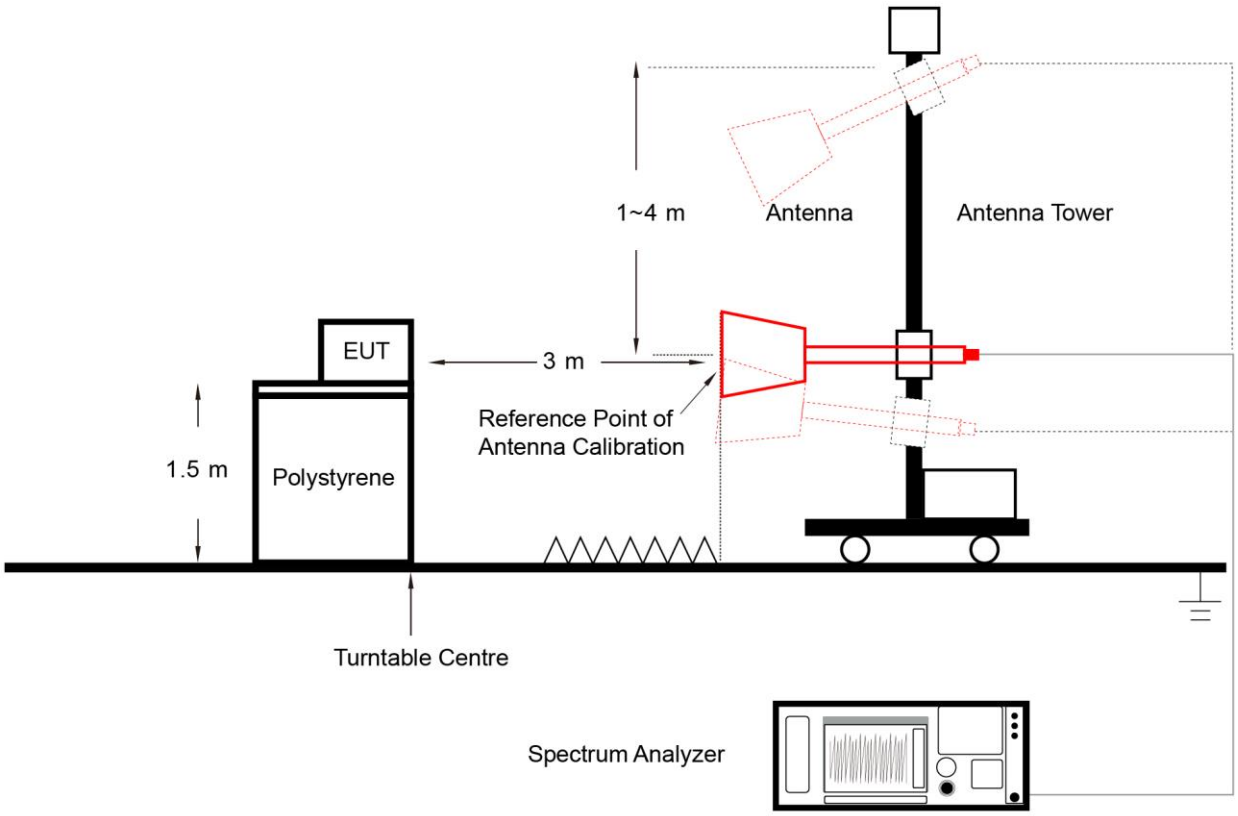
Peak Measurements above 1GHz

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

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.4.

Appendix A – Test Result

A.1 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2023-07-06~2023-08-27	Test Mode	AP Mode
Antenna Model No.	SAA04-222060		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)
				Ant 0	Ant 1	Ant 2	Ant 3		
11a	6Mbps	36	5180	6.20	6.68	6.59	6.50	12.52	≤ 20.50
11a	6Mbps	44	5220	5.80	6.48	6.27	6.19	12.21	≤ 20.50
11a	6Mbps	48	5240	6.47	6.89	6.85	6.55	12.71	≤ 20.50
11a	6Mbps	52	5260	0.36	0.92	0.77	0.46	6.65	≤ 14.48
11a	6Mbps	60	5300	0.18	0.76	0.50	0.16	6.43	≤ 14.48
11a	6Mbps	64	5320	0.30	1.02	0.92	0.42	6.70	≤ 14.48
11a	6Mbps	100	5500	-0.03	0.16	0.08	-0.02	6.07	≤ 14.48
11a	6Mbps	116	5580	0.21	0.39	0.38	0.29	6.34	≤ 14.48
11a	6Mbps	140	5700	-0.23	-0.35	-0.49	-0.38	5.66	≤ 14.48
11a	6Mbps	144	5720	-0.35	-0.06	-0.11	-0.19	5.84	≤ 13.28
11a	6Mbps	149	5745	13.90	14.73	14.36	13.92	20.26	≤ 20.50
11a	6Mbps	157	5785	13.68	14.56	14.30	13.90	20.14	≤ 20.50
11a	6Mbps	165	5825	14.50	14.20	13.33	13.60	19.95	≤ 20.50
11ac-VHT20	MCS0	36	5180	6.59	6.89	6.99	6.81	12.84	≤ 20.50
11ac-VHT20	MCS0	44	5220	6.39	7.18	6.21	6.11	12.51	≤ 20.50
11ac-VHT20	MCS0	48	5240	6.78	7.43	7.30	7.08	13.18	≤ 20.50
11ac-VHT20	MCS0	52	5260	0.60	1.29	1.22	0.80	7.01	≤ 14.48
11ac-VHT20	MCS0	60	5300	0.50	0.98	0.83	0.51	6.73	≤ 14.48
11ac-VHT20	MCS0	64	5320	0.41	1.50	1.40	1.01	7.12	≤ 14.48
11ac-VHT20	MCS0	100	5500	0.39	0.51	0.42	0.36	6.44	≤ 14.48
11ac-VHT20	MCS0	116	5580	0.40	1.03	0.47	0.43	6.61	≤ 14.48
11ac-VHT20	MCS0	140	5700	0.21	0.79	0.36	0.25	6.43	≤ 14.48
11ac-VHT20	MCS0	144	5720	0.68	1.13	1.15	0.88	6.98	≤ 13.40
11ac-VHT20	MCS0	149	5745	14.31	14.18	14.90	13.51	20.27	≤ 20.50
11ac-VHT20	MCS0	157	5785	14.15	14.25	14.66	13.71	20.23	≤ 20.50
11ac-VHT20	MCS0	165	5825	14.21	13.82	14.30	13.93	20.09	≤ 20.50

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)
				Ant 0	Ant 1	Ant 2	Ant 3		
11ac-VHT40	MCS0	38	5190	6.32	7.16	6.32	6.06	12.51	≤ 20.50
11ac-VHT40	MCS0	46	5230	6.50	7.31	6.42	5.86	12.57	≤ 20.50
11ac-VHT40	MCS0	54	5270	3.45	3.85	3.70	3.88	9.74	≤ 14.48
11ac-VHT40	MCS0	62	5310	3.28	4.09	3.78	3.52	9.70	≤ 14.48
11ac-VHT40	MCS0	102	5510	3.75	3.71	3.98	3.66	9.80	≤ 14.48
11ac-VHT40	MCS0	110	5550	3.50	3.73	3.90	3.68	9.73	≤ 14.48
11ac-VHT40	MCS0	134	5670	3.36	4.33	4.03	3.48	9.84	≤ 14.48
11ac-VHT40	MCS0	142	5710	3.35	3.96	3.81	3.15	9.60	≤ 14.48
11ac-VHT40	MCS0	151	5755	13.59	14.35	14.13	13.46	19.92	≤ 20.50
11ac-VHT40	MCS0	159	5795	13.50	14.28	13.78	13.36	19.77	≤ 20.50
11ac-VHT80	MCS0	42	5210	7.50	7.83	7.21	6.47	13.30	≤ 20.50
11ac-VHT80	MCS0	58	5290	6.32	7.16	6.78	6.71	12.77	≤ 14.48
11ac-VHT80	MCS0	106	5530	7.03	7.38	7.43	7.41	13.34	≤ 14.48
11ac-VHT80	MCS0	122	5610	7.25	7.76	7.19	7.22	13.38	≤ 14.48
11ac-VHT80	MCS0	138	5690	6.21	7.29	7.26	6.63	12.89	≤ 14.48
11ac-VHT80	MCS0	155	5775	14.32	14.46	14.72	13.85	20.37	≤ 20.50
11ac-VHT160	MCS0	50	5250	5.33	5.56	5.47	5.05	11.38	≤ 14.48
11ac-VHT160	MCS0	114	5570	5.66	6.10	5.93	5.53	11.83	≤ 14.48
11ax-HE20	MCS0	36	5180	6.91	7.32	7.31	7.13	13.19	≤ 20.50
11ax-HE20	MCS0	44	5220	6.33	6.81	6.21	5.88	12.34	≤ 20.50
11ax-HE20	MCS0	48	5240	6.88	6.80	6.87	5.95	12.66	≤ 20.50
11ax-HE20	MCS0	52	5260	1.02	1.30	1.05	1.00	7.11	≤ 14.48
11ax-HE20	MCS0	60	5300	0.91	1.66	1.60	1.47	7.44	≤ 14.48
11ax-HE20	MCS0	64	5320	0.76	1.63	0.93	0.78	7.06	≤ 14.48
11ax-HE20	MCS0	100	5500	0.71	1.58	1.41	0.89	7.18	≤ 14.48
11ax-HE20	MCS0	116	5580	0.73	0.79	0.73	0.75	6.77	≤ 14.48
11ax-HE20	MCS0	140	5700	0.69	0.91	1.18	1.05	6.98	≤ 14.48
11ax-HE20	MCS0	144	5720	0.43	0.89	0.66	0.46	6.63	≤ 13.48
11ax-HE20	MCS0	149	5745	13.83	14.42	14.30	13.69	20.09	≤ 20.50
11ax-HE20	MCS0	157	5785	13.35	14.32	14.02	13.45	19.82	≤ 20.50
11ax-HE20	MCS0	165	5825	14.33	14.42	13.79	13.83	20.12	≤ 20.50

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)
				Ant 0	Ant 1	Ant 2	Ant 3		
11ax-HE40	MCS0	38	5190	6.90	7.13	6.45	5.96	12.65	≤ 20.50
11ax-HE40	MCS0	46	5230	6.74	7.29	6.60	5.98	12.70	≤ 20.50
11ax-HE40	MCS0	54	5270	4.07	4.53	3.91	3.96	10.15	≤ 14.48
11ax-HE40	MCS0	62	5310	3.82	4.79	4.23	4.01	10.25	≤ 14.48
11ax-HE40	MCS0	102	5510	3.80	3.71	4.05	3.57	9.81	≤ 14.48
11ax-HE40	MCS0	110	5550	4.01	4.33	4.30	4.36	10.27	≤ 14.48
11ax-HE40	MCS0	134	5670	3.46	4.20	4.12	3.55	9.87	≤ 14.48
11ax-HE40	MCS0	142	5710	3.21	4.08	3.88	3.22	9.64	≤ 14.48
11ax-HE40	MCS0	151	5755	13.69	14.45	14.20	13.51	20.00	≤ 20.50
11ax-HE40	MCS0	159	5795	13.92	14.85	14.38	13.82	20.28	≤ 20.50
11ax-HE80	MCS0	42	5210	6.95	7.32	6.62	6.20	12.81	≤ 20.50
11ax-HE80	MCS0	58	5290	6.40	7.21	6.75	6.80	12.82	≤ 14.48
11ax-HE80	MCS0	106	5530	7.17	7.37	7.52	7.45	13.40	≤ 14.48
11ax-HE80	MCS0	122	5610	7.35	7.79	7.21	7.27	13.43	≤ 14.48
11ax-HE80	MCS0	138	5690	6.93	7.79	7.78	7.22	13.47	≤ 14.48
11ax-HE80	MCS0	155	5775	13.42	14.53	14.13	13.60	19.96	≤ 20.50
11ax-HE160	MCS0	50	5250	6.18	6.18	6.12	5.25	11.97	≤ 14.48
11ax-HE160	MCS0	114	5570	7.80	8.55	7.95	7.69	14.03	≤ 14.48

Note 1: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

Note 2: For 5720MHz, Average Power Limit =11+10*log(5+26dBc/2).

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2023-07-06~2023-08-27	Test Mode	AP Mode
Antenna Model No.	SAA04-222060		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Total Average Power (dBm)	Maximum EIRP above 30 degrees (dBm)	Limit (dBm)
11a	6Mbps	36	5180	12.52	20.13	21.00
11a	6Mbps	44	5220	12.21	19.82	21.00
11a	6Mbps	48	5240	12.71	20.32	21.00
11ac-VHT20	MCS0	36	5180	12.84	20.45	21.00
11ac-VHT20	MCS0	44	5220	12.51	20.12	21.00
11ac-VHT20	MCS0	48	5240	13.18	20.79	21.00
11ac-VHT40	MCS0	38	5190	12.51	20.12	21.00
11ac-VHT40	MCS0	46	5230	12.57	20.18	21.00
11ac-VHT80	MCS0	42	5210	13.30	20.91	21.00
11ac-VHT160	MCS0	50	5250	11.38	18.99	21.00
11ax-HE20	MCS0	36	5180	13.19	20.80	21.00
11ax-HE20	MCS0	44	5220	12.34	19.95	21.00
11ax-HE20	MCS0	48	5240	12.66	20.27	21.00
11ax-HE40	MCS0	38	5190	12.65	20.26	21.00
11ax-HE40	MCS0	46	5230	12.70	20.31	21.00
11ax-HE80	MCS0	42	5210	12.81	20.42	21.00
11ax-HE160	MCS0	50	5250	11.97	19.52	21.00

Note: Maximum EIRP above 30 degrees (dBm) = Total Average Power (dBm) + Maximum Antenna Gain above 30 degrees (dBi).

A.2 Power Spectral Density Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2023-07-06~2023-08-27		
Test Item	Power Spectral Density (UNII-Band 1 & UNII-2a & UNII-2c) – AP Mode		
Antenna Model No.	SAA04-222060		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD (dBm/ MHz)				Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)
				Ant 0	Ant 1	Ant 2	Ant 3			
11a	6Mbps	36	5180	-5.32	-5.01	-4.90	-5.18	96.81	1.06	≤ 1.48
11a	6Mbps	44	5220	-5.77	-5.27	-5.30	-5.53	96.81	0.70	≤ 1.48
11a	6Mbps	48	5240	-5.13	-4.52	-4.60	-4.94	96.81	1.37	≤ 1.48
11a	6Mbps	52	5260	-11.52	-10.81	-11.17	-11.19	96.81	-5.00	≤ -4.52
11a	6Mbps	60	5300	-11.59	-10.35	-10.92	-11.11	96.81	-4.81	≤ -4.52
11a	6Mbps	64	5320	-11.71	-10.31	-10.80	-11.01	96.81	-4.77	≤ -4.52
11a	6Mbps	100	5500	-11.33	-10.95	-10.84	-10.97	96.81	-4.86	≤ -4.52
11a	6Mbps	116	5580	-11.08	-10.60	-11.11	-11.15	96.81	-4.82	≤ -4.52
11a	6Mbps	140	5700	-11.64	-10.99	-11.17	-11.45	96.81	-5.15	≤ -4.52
11a	6Mbps	144	5720	-11.78	-11.14	-11.27	-11.87	96.81	-5.34	≤ -4.52
11ac-VHT20	MCS0	36	5180	-5.93	-5.54	-5.53	-5.70	89.38	0.84	≤ 1.48
11ac-VHT20	MCS0	44	5220	-5.87	-5.38	-6.20	-6.56	89.38	0.53	≤ 1.48
11ac-VHT20	MCS0	48	5240	-5.80	-5.00	-5.37	-5.50	89.38	1.10	≤ 1.48
11ac-VHT20	MCS0	52	5260	-11.62	-11.05	-11.12	-11.53	89.38	-4.82	≤ -4.52
11ac-VHT20	MCS0	60	5300	-11.72	-10.60	-10.92	-11.42	89.38	-4.63	≤ -4.52
11ac-VHT20	MCS0	64	5320	-11.73	-10.75	-11.06	-11.49	89.38	-4.73	≤ -4.52
11ac-VHT20	MCS0	100	5500	-11.78	-11.50	-11.47	-11.71	89.38	-5.11	≤ -4.52
11ac-VHT20	MCS0	116	5580	-11.67	-11.21	-11.78	-11.98	89.38	-5.14	≤ -4.52
11ac-VHT20	MCS0	140	5700	-11.87	-11.37	-11.34	-11.83	89.38	-5.09	≤ -4.52
11ac-VHT20	MCS0	144	5720	-11.75	-11.12	-11.21	-11.87	89.38	-4.97	≤ -4.52
11ac-VHT40	MCS0	38	5190	-8.55	-8.44	-9.13	-9.69	81.86	-2.03	≤ 1.48
11ac-VHT40	MCS0	46	5230	-8.89	-8.21	-8.94	-9.62	81.86	-2.00	≤ 1.48
11ac-VHT40	MCS0	54	5270	-12.12	-12.12	-11.52	-12.18	81.86	-5.09	≤ -4.52
11ac-VHT40	MCS0	62	5310	-12.01	-11.38	-11.42	-11.82	81.86	-4.76	≤ -4.52
11ac-VHT40	MCS0	102	5510	-11.94	-11.84	-11.63	-12.06	81.86	-4.97	≤ -4.52
11ac-VHT40	MCS0	110	5550	-12.16	-12.00	-11.71	-12.03	81.86	-5.08	≤ -4.52
11ac-VHT40	MCS0	134	5670	-12.24	-11.44	-11.46	-12.10	81.86	-4.91	≤ -4.52
11ac-VHT40	MCS0	142	5710	-12.24	-11.52	-11.41	-12.24	81.86	-4.94	≤ -4.52

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD (dBm/ MHz)				Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)
				Ant 0	Ant 1	Ant 2	Ant 3			
11ac-VHT80	MCS0	42	5210	-10.83	-10.84	-11.23	-12.00	90.48	-4.74	≤ 1.48
11ac-VHT80	MCS0	58	5290	-12.20	-11.20	-11.67	-11.68	90.48	-5.22	≤ -4.52
11ac-VHT80	MCS0	106	5530	-11.46	-11.35	-11.12	-11.23	90.48	-4.83	≤ -4.52
11ac-VHT80	MCS0	122	5610	-11.34	-10.76	-11.48	-11.36	90.48	-4.77	≤ -4.52
11ac-VHT80	MCS0	138	5690	-12.19	-11.37	-11.23	-12.02	90.48	-5.23	≤ -4.52
11ac-VHT160	MCS0	50	5250	-15.43	-14.90	-15.11	-15.26	88.26	-8.61	≤ -4.52
11ac-VHT160	MCS0	114	5570	-15.08	-14.60	-15.31	-15.30	88.26	-8.50	≤ -4.52
11ax-HE20	MCS0	36	5180	-5.63	-5.30	-5.35	-5.42	92.82	0.92	≤ 1.48
11ax-HE20	MCS0	44	5220	-6.34	-5.71	-6.54	-6.99	92.82	-0.03	≤ 1.48
11ax-HE20	MCS0	48	5240	-5.66	-5.72	-5.77	-6.72	92.82	0.40	≤ 1.48
11ax-HE20	MCS0	52	5260	-11.89	-11.30	-10.96	-11.14	92.82	-4.96	≤ -4.52
11ax-HE20	MCS0	60	5300	-11.47	-10.49	-10.88	-11.08	92.82	-4.62	≤ -4.52
11ax-HE20	MCS0	64	5320	-11.61	-10.46	-10.86	-11.19	92.82	-4.67	≤ -4.52
11ax-HE20	MCS0	100	5500	-11.67	-11.38	-11.50	-11.41	92.82	-5.14	≤ -4.52
11ax-HE20	MCS0	116	5580	-11.35	-10.94	-11.68	-11.54	92.82	-5.02	≤ -4.52
11ax-HE20	MCS0	140	5700	-11.74	-10.90	-11.29	-11.59	92.82	-5.02	≤ -4.52
11ax-HE20	MCS0	144	5720	-11.83	-11.08	-11.29	-11.86	92.82	-5.15	≤ -4.52
11ax-HE40	MCS0	38	5190	-8.71	-8.37	-9.02	-9.53	94.03	-2.60	≤ 1.48
11ax-HE40	MCS0	46	5230	-8.81	-8.14	-8.97	-9.67	94.03	-2.57	≤ 1.48
11ax-HE40	MCS0	54	5270	-11.26	-10.83	-11.04	-11.10	94.03	-4.76	≤ -4.52
11ax-HE40	MCS0	62	5310	-11.38	-10.52	-10.81	-11.08	94.03	-4.65	≤ -4.52
11ax-HE40	MCS0	102	5510	-11.62	-11.39	-11.24	-11.70	94.03	-5.20	≤ -4.52
11ax-HE40	MCS0	110	5550	-11.33	-11.15	-10.88	-10.97	94.03	-4.79	≤ -4.52
11ax-HE40	MCS0	134	5670	-11.96	-11.08	-11.29	-11.16	94.03	-5.07	≤ -4.52
11ax-HE40	MCS0	142	5710	-11.80	-11.27	-11.26	-12.08	94.03	-5.30	≤ -4.52
11ax-HE80	MCS0	42	5210	-11.69	-11.40	-12.07	-12.60	91.88	-5.53	≤ 1.48
11ax-HE80	MCS0	58	5290	-11.86	-11.05	-11.32	-11.44	91.88	-5.02	≤ -4.52
11ax-HE80	MCS0	106	5530	-11.40	-11.17	-10.94	-11.08	91.88	-4.75	≤ -4.52
11ax-HE80	MCS0	122	5610	-11.69	-11.06	-11.66	-11.59	91.88	-5.11	≤ -4.52
11ax-HE80	MCS0	138	5690	-11.64	-10.65	-10.58	-11.30	91.88	-4.63	≤ -4.52
11ax-HE160	MCS0	50	5250	-15.20	-15.17	-15.27	-16.15	92.60	-9.08	≤ -4.52
11ax-HE160	MCS0	114	5570	-12.87	-12.34	-12.97	-13.16	92.60	-6.47	≤ -4.52

Note: When EUT duty cycle < 98%, the total PSD (dBm/MHz) =10*log {$10^{(\text{Ant 0 AVGPSD}/10)}$ + $10^{(\text{Ant 1 AVGPSD}/10)}$ +$10^{(\text{Ant 2 AVGPSD}/10)}$ + $10^{(\text{Ant 3 AVGPSD}/10)}$} +10*log (1/Duty cycle).

When EUT duty cycle ≥ 98%, the total PSD (dBm/MHz) =10*log {$10^{(\text{Ant 0 AVGPSD/10})}$ + $10^{(\text{Ant 1 AVGPSD/10})}$ +$10^{(\text{Ant 2 AVGPSD/10})}$ + $10^{(\text{Ant 3 AVGPSD/10})}$}.

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2023-07-09		
Test Item	Power Spectral Density (UNII-Band 3) – AP Mode		
Antenna Model No.	SAA04-222060		

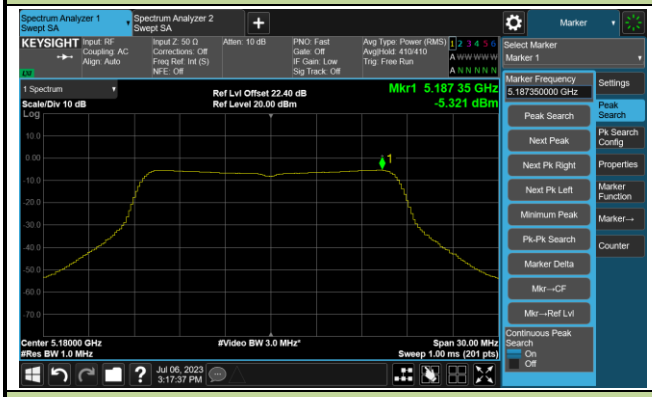
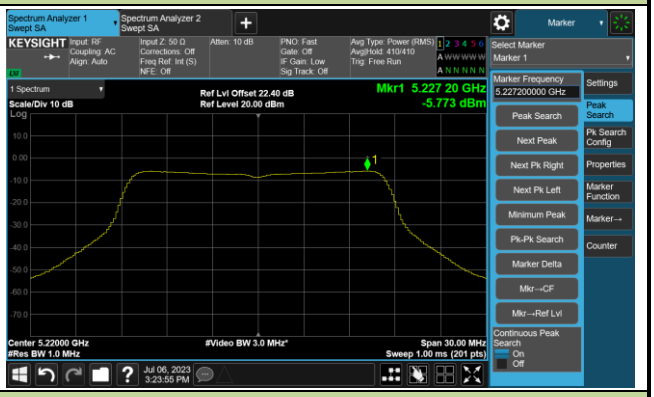
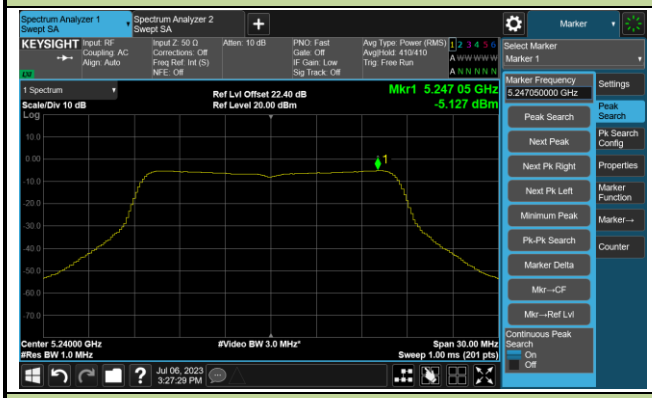
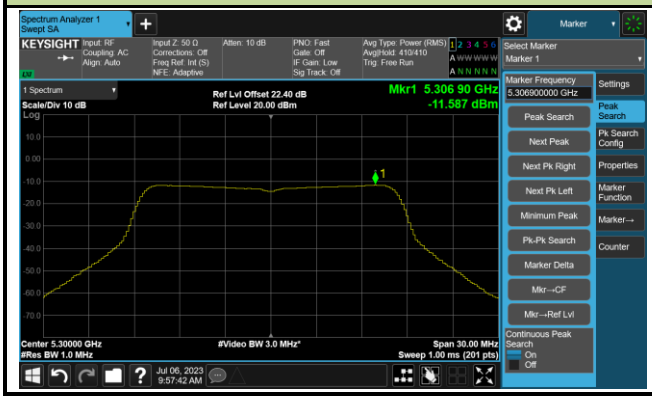
Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD (dBm/ 510KHz)				Duty Cycle (%)	Total PSD (dBm/ 510KHz)	PSD Limit (dBm/ 500KHz)
				Ant 0	Ant 1	Ant 2	Ant 3			
11a	6Mbps	149	5745	-0.49	0.43	0.14	-0.41	96.81	6.10	≤14.48
11a	6Mbps	157	5785	-0.59	0.27	-0.21	-0.52	96.81	5.91	≤14.48
11a	6Mbps	165	5825	0.15	-0.20	-0.92	-0.61	96.81	5.79	≤14.48
11ac-VHT20	MCS0	149	5745	-0.73	-0.66	-0.40	-1.02	89.38	5.81	≤14.48
11ac-VHT20	MCS0	157	5785	-0.79	-0.65	-0.55	-1.27	89.38	5.70	≤14.48
11ac-VHT20	MCS0	165	5825	-0.81	-1.12	-1.20	-1.40	89.38	5.38	≤14.48
11ac-VHT40	MCS0	151	5755	-4.60	-3.82	-4.03	-4.72	81.86	2.62	≤14.48
11ac-VHT40	MCS0	159	5795	-4.86	-3.91	-4.36	-4.88	81.86	2.41	≤14.48
11ac-VHT80	MCS0	155	5775	-6.86	-6.74	-6.34	-7.37	90.48	-0.36	≤14.48
11ax-HE20	MCS0	149	5745	-1.34	-0.60	-1.15	-1.42	92.82	5.23	≤14.48
11ax-HE20	MCS0	157	5785	-1.61	-0.57	-1.31	-1.63	92.82	5.09	≤14.48
11ax-HE20	MCS0	165	5825	-0.47	-0.55	-1.37	-1.26	92.82	5.45	≤14.48
11ax-HE40	MCS0	151	5755	-4.40	-3.60	-3.82	-4.51	94.03	2.22	≤14.48
11ax-HE40	MCS0	159	5795	-4.21	-3.19	-3.67	-4.07	94.03	2.52	≤14.48
11ax-HE80	MCS0	155	5775	-7.61	-6.54	-6.81	-7.55	91.88	-0.71	≤14.48

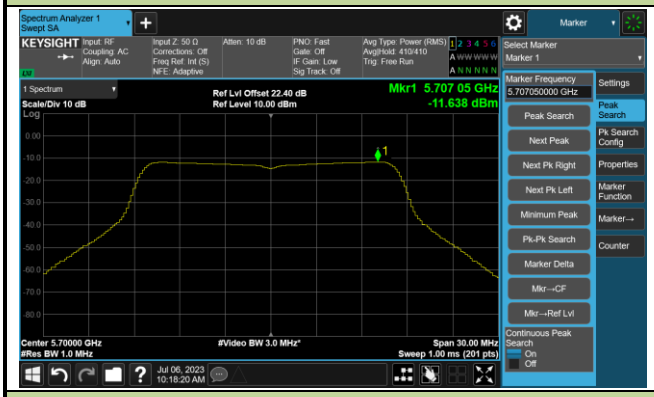
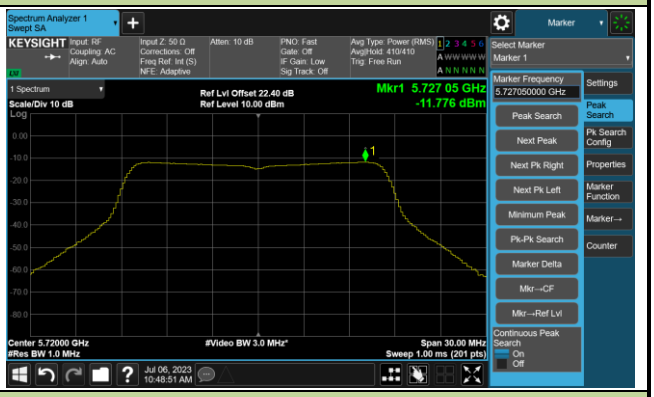
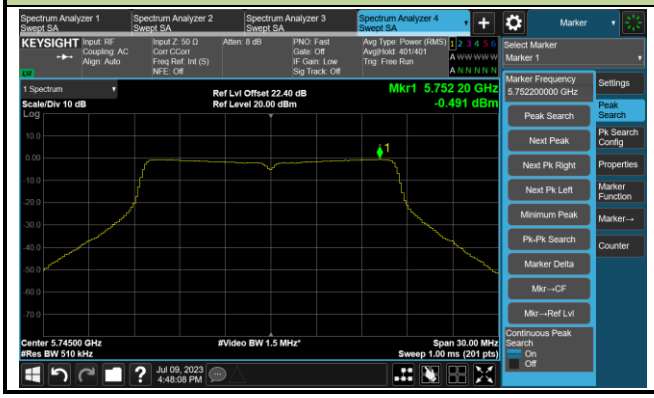
Note 1:

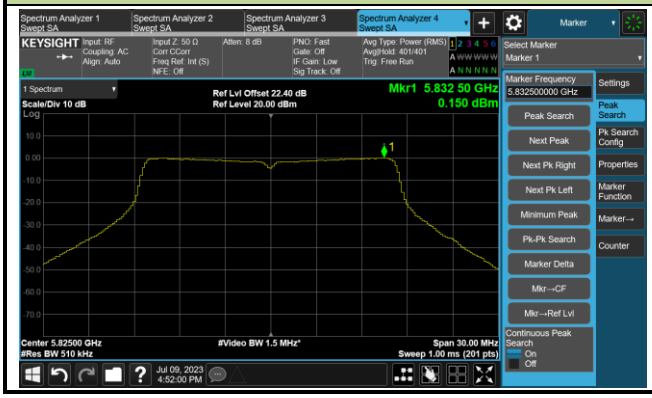
When EUT duty cycle < 98%, the total PSD (dBm/510kHz) =10*log {$10^{(\text{Ant 0 AVGPSD}/10)}$ + $10^{(\text{Ant 1 AVGPSD}/10)}$ +$10^{(\text{Ant 2 AVGPSD}/10)}$ + $10^{(\text{Ant 3 AVGPSD}/10)}$} +10*log (1/Duty cycle).

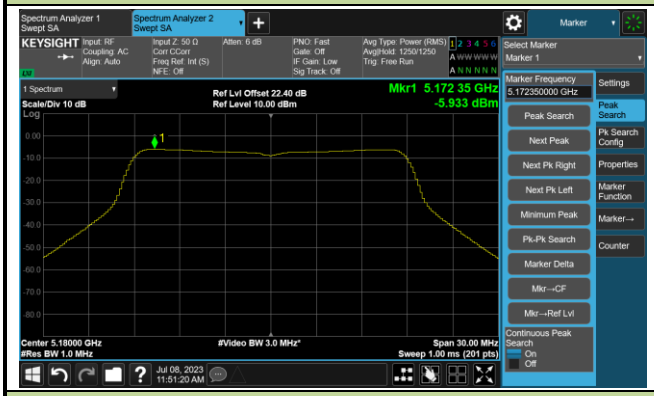
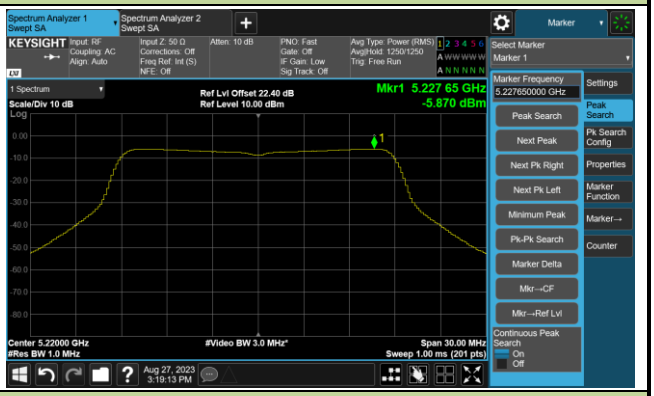
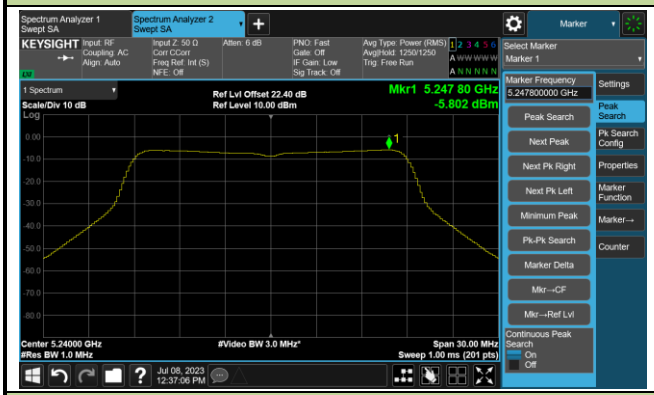
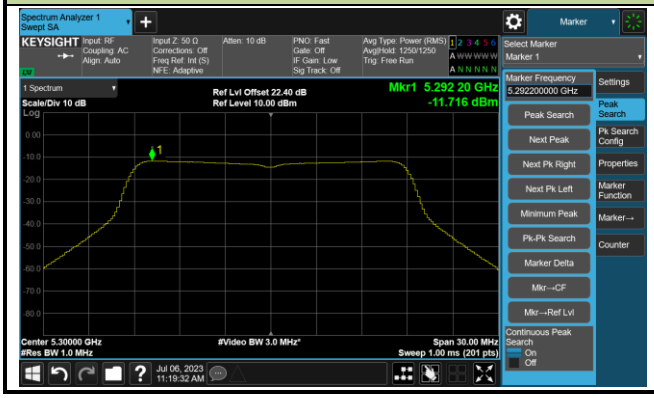
When EUT duty cycle ≥ 98%, the total PSD (dBm/510kHz) =10*log {$10^{(\text{Ant 0 AVGPSD}/10)}$ + $10^{(\text{Ant 1 AVGPSD}/10)}$ +$10^{(\text{Ant 2 AVGPSD}/10)}$ + $10^{(\text{Ant 3 AVGPSD}/10)}$}.

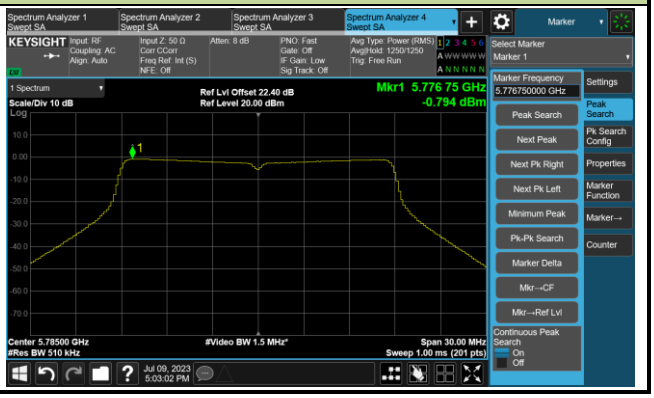
Note 2: PSD Limit (dBm/500KHz) = 30 - (21.52 - 6) = 14.48dBm/MHz.

802.11a Power Spectral Density- Ant 0	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 52 (5260MHz)
	
Channel 60 (5300MHz)	Channel 64 (5320MHz)
	

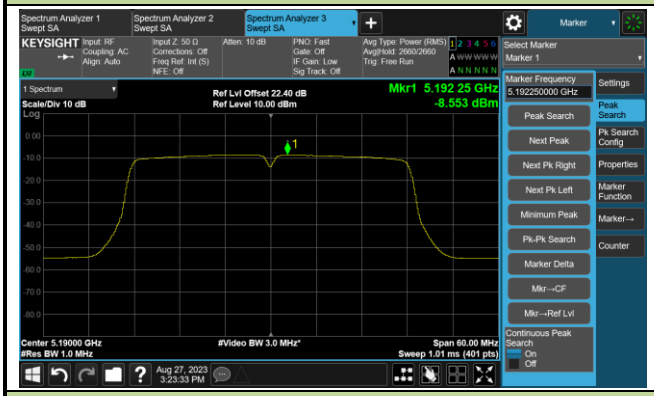
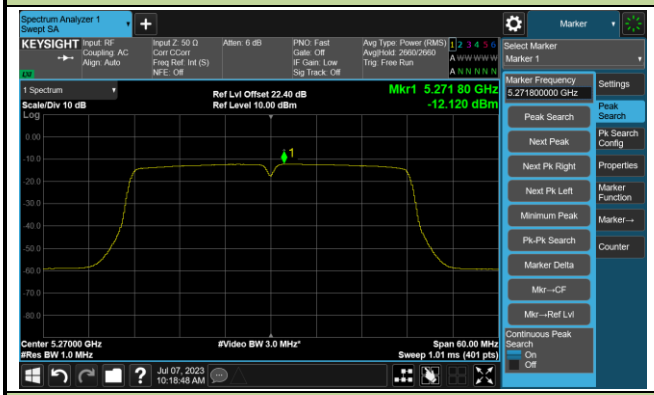
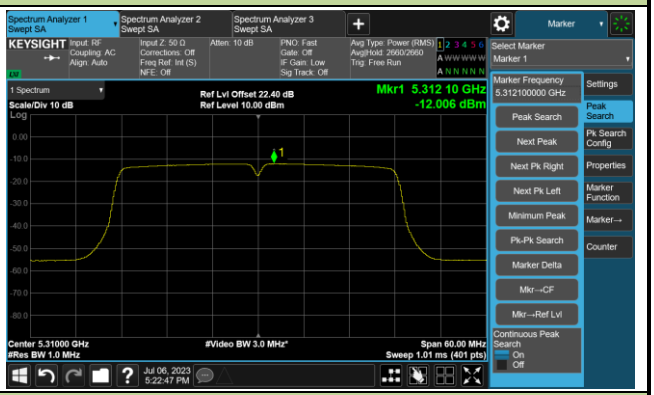
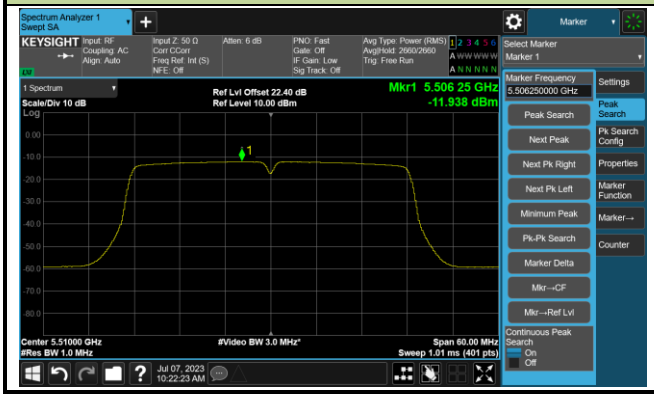
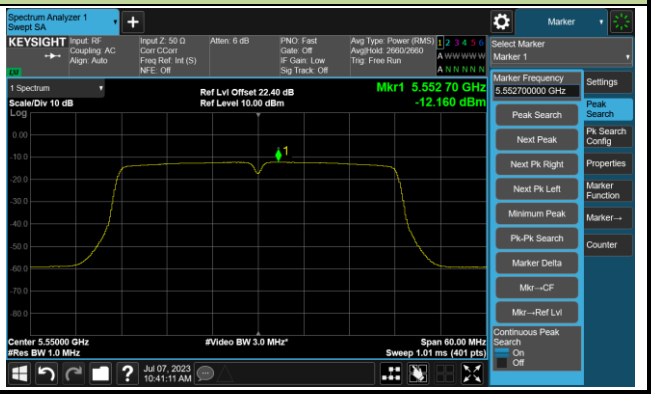
Channel 100 (5500MHz)	Channel 116 (5580MHz)
	
Channel 140 (5700MHz)	**Channel 144(5720MHz)**
	
Channel 149 (5745MHz)	**Channel 157 (5785MHz)**
	

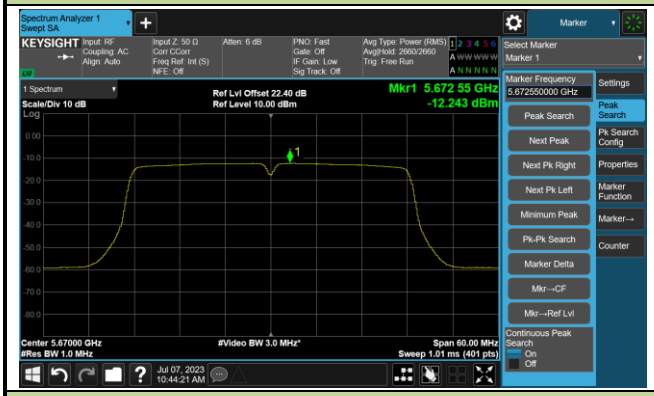
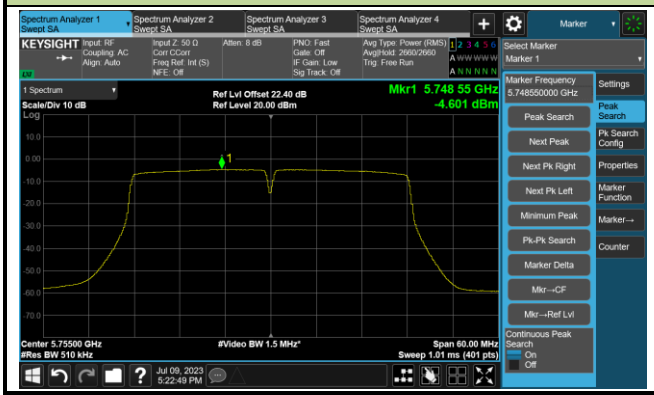
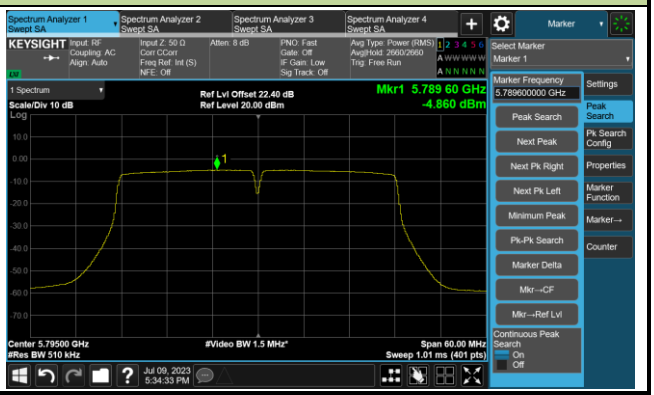
802.11a Power Spectral Density- Ant 0	
Channel 165 (5825MHz)	
	

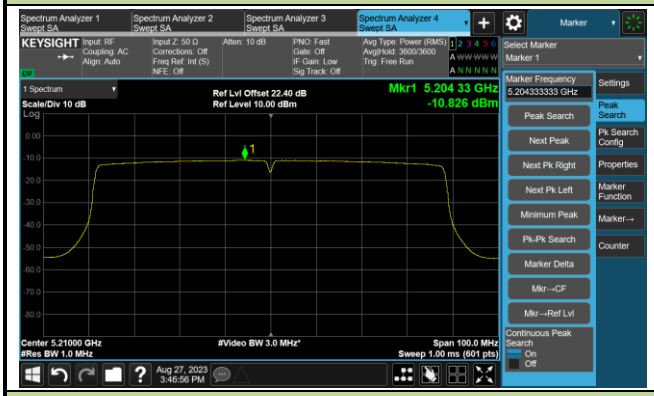
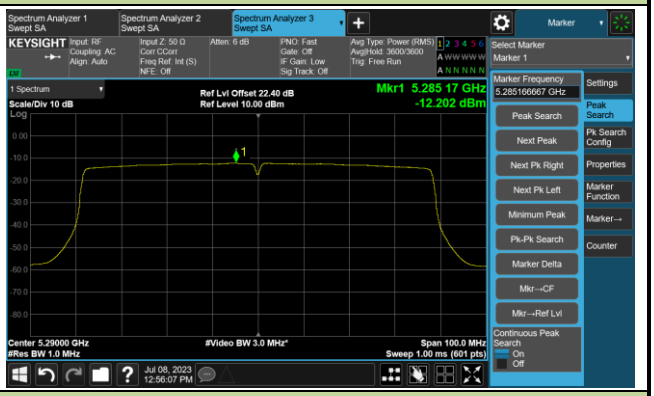
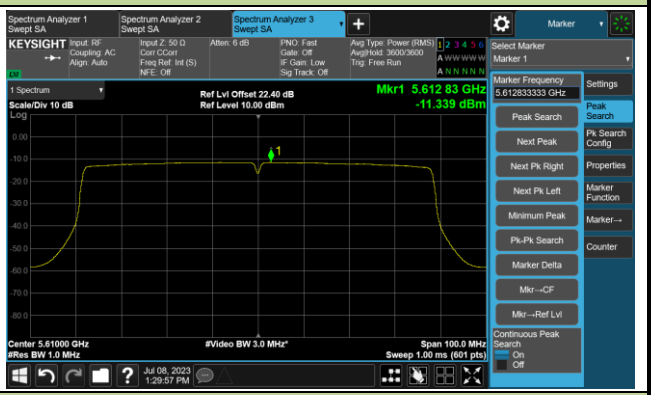
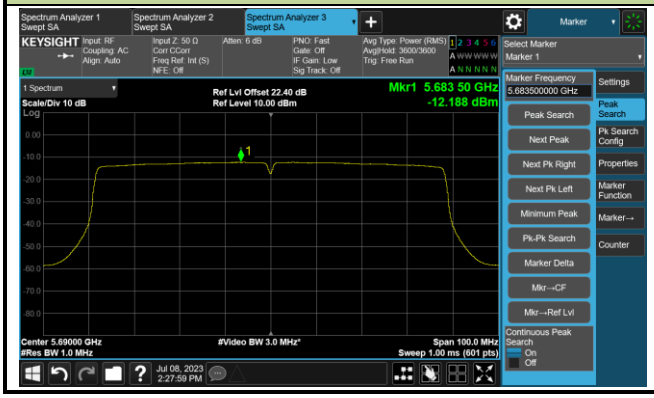
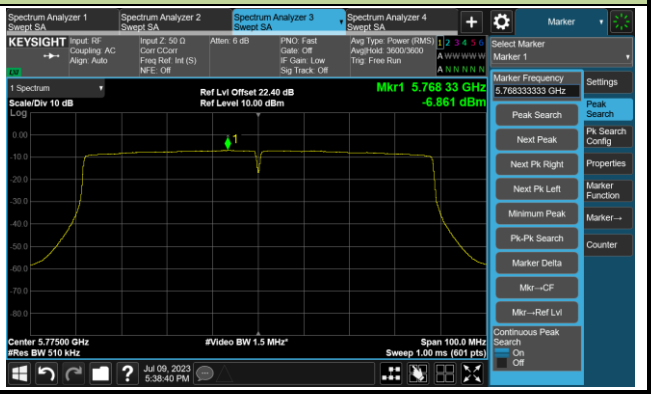
802.11ac-VHT20 Power Spectral Density- Ant 0	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 52 (5260MHz)
	
Channel 60 (5300MHz)	Channel 64 (5320MHz)
	

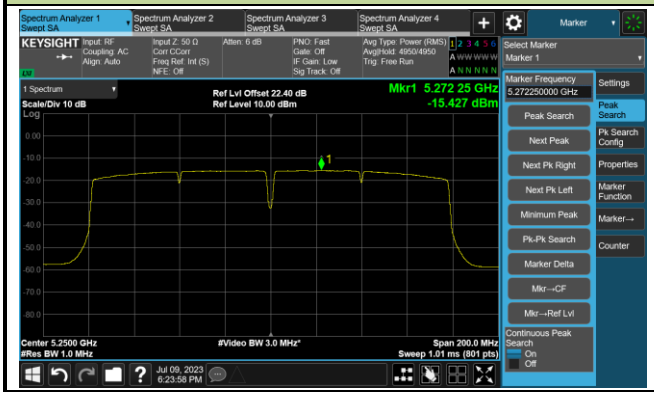
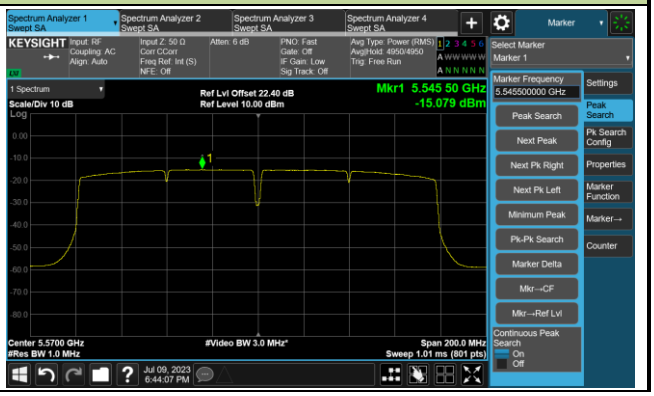
802.11ac-VHT20 Power Spectral Density- Ant 0	
Channel 100 (5500MHz)	Channel 116 (5580MHz)
	
Channel 140 (5700MHz)	Channel 144(5720MHz)
	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	

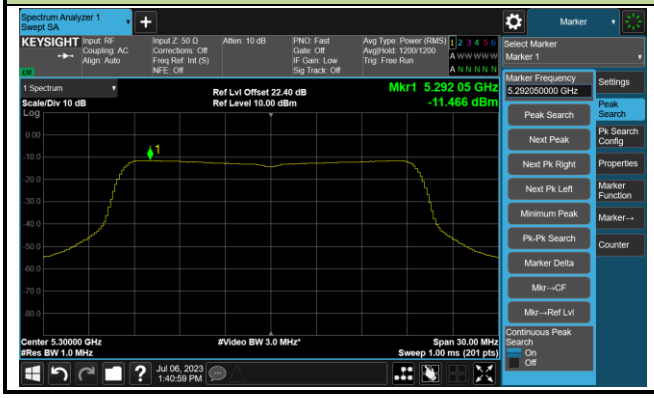
802.11ac-VHT20 Power Spectral Density- Ant 0	
Channel 165 (5825MHz)	
	

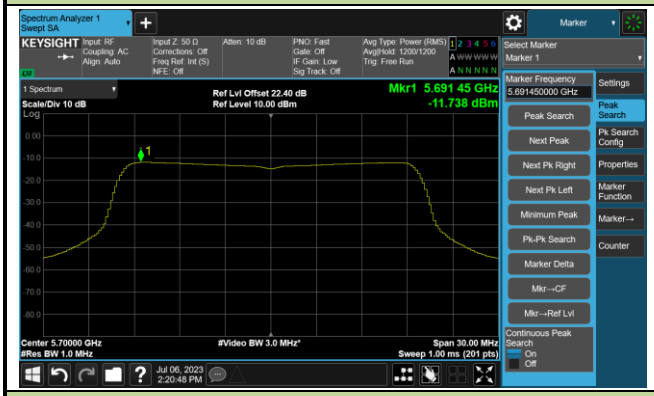
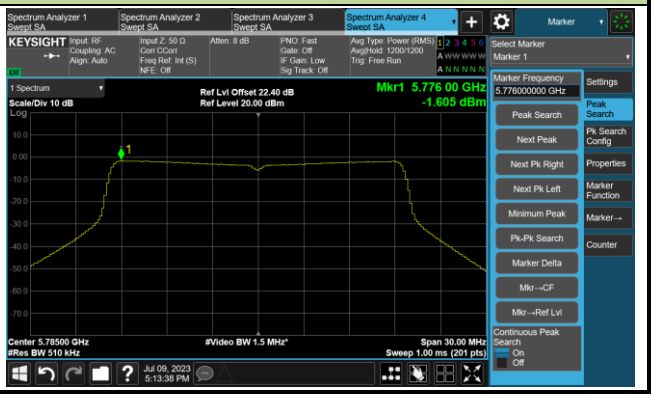
802.11ac-VHT40 Power Spectral Density- Ant 0	
Channel 38 (5190MHz)	Channel 46 (5230MHz)
	
Channel 54 (5270MHz)	Channel 62 (5310MHz)
	
Channel 102 (5510MHz)	Channel 110 (5550MHz)
	

802.11ac-VHT40 Power Spectral Density- Ant 0	
Channel 134 (5670MHz)	Channel 142(5710MHz)
	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

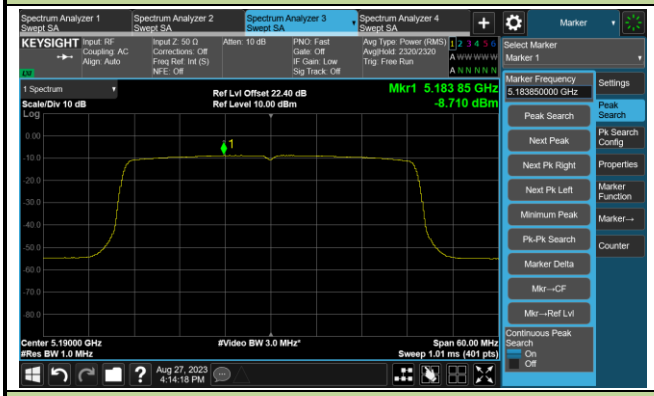
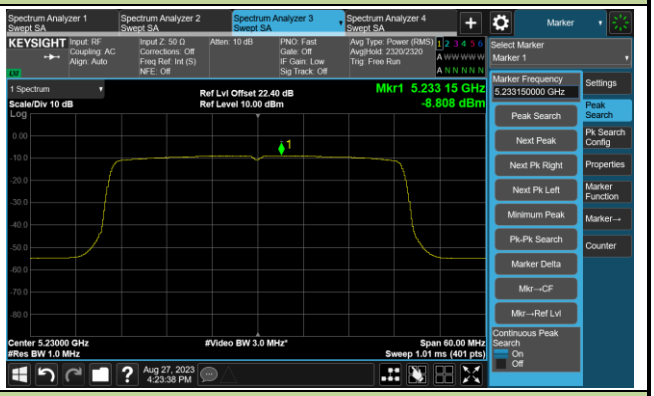
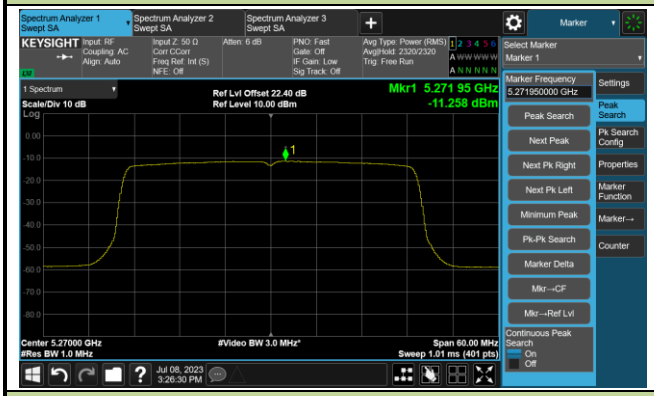
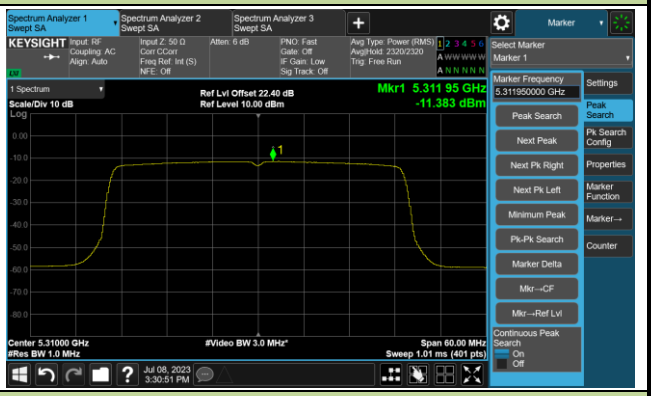
802.11ac-VHT80 Power Spectral Density- Ant 0	
Channel 42 (5210MHz)	Channel 58 (5290MHz)
	
Channel 106 (5530MHz)	Channel 122 (5610MHz)
	
Channel 138 (5690MHz)	Channel 155 (5775MHz)
	

802.11ac-VHT160 Power Spectral Density - Ant 0	
Channel 50 (5250MHz)	Channel 114 (5570MHz)
	

802.11ax-HE20 Power Spectral Density- Ant 0	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 52 (5260MHz)
	
Channel 60 (5300MHz)	Channel 64 (5320MHz)
	

802.11ax-HE20 Power Spectral Density- Ant 0	
Channel 100 (5500MHz)	Channel 116 (5580MHz)
	
Channel 140 (5700MHz)	Channel 144(5720MHz)
	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	

802.11ax-HE20 Power Spectral Density- Ant 0	
Channel 165 (5825MHz)	
	

802.11ax-HE40 Power Spectral Density- Ant 0	
Channel 38 (5190MHz)	Channel 46 (5230MHz)
	
Channel 54 (5270MHz)	Channel 62 (5310MHz)
	
Channel 102 (5510MHz)	Channel 110 (5550MHz)