FCC Test Report

Report No.: AGC16253250101FR04

FCC ID	:	2AOVU-SEI900
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Stick 4K
BRAND NAME	:	N/A
MODEL NAME	:	SEI900
APPLICANT	:	Shenzhen SEI Robotics Co., Ltd.
DATE OF ISSUE	:	Feb. 07, 2025
STANDARD(S)	:	FCC Part 15 Subpart E §15.407
REPORT VERSION	:	V1.0

*A*ttestation of *G*lobal *C*ompliance (Shenzhen) Co., Ltd

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Feb. 07, 2025	Valid	Initial Release

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1. General Information

Applicant	Shenzhen SEI Robotics Co., Ltd.
Address	11F, Kangtai Innovation Plaza Building A, No. 222 Kefa Road, Yue Hai Sub-district, Nanshan District, Shenzhen 518054, China
Manufacturer	Shenzhen SEI Robotics Co., Ltd.
Address	11F, Kangtai Innovation Plaza Building A, No. 222 Kefa Road, Yue Hai Sub-district, Nanshan District, Shenzhen 518054, China
Factory	SHENZHEN JIADUN GAOSHI NETWORK TECHNOLOGY CO., LTD
Address	3rd Floor, Building B, No.66 Xinhe Avenue, Buchong Community, Shajing Street, Baoan District, Shenzhen
Product Designation	Stick 4K
Brand Name	N/A
Test Model	SEI900
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Jan. 02, 2025
Date of Test	Jan. 02, 2025 to Jan. 24, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-FCC-5G WLAN-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Cici Li (Project Engineer)	Feb. 07, 2025
Reviewed By	Calvin Liu (Reviewer)	Feb. 07, 2025
Approved By	Angela Li Authorized Officer	Feb. 07, 2025

2. Product Information

2.1 Product Technical Description

Equipment Type	☐ Outdoor access points ☐ Indoor access points ☐ Fixed P2P access points ☒ Client devices
Operation Frequency	☒ U-NII 1:5150MHz~5250MHz ☒ U-NII 2A: 5250MHz~5350MHz ☒ U-NII 2C:5470MHz~5725MHz ☒ U-NII 3: 5725MHz~5850MHz
DFS Design Type	☐ Master ☐ Slave with radar detection ☒ Slave without radar detection
TPC Function	☐ Yes ☒ No
Hardware Version	Amlogic S905Y5-B
Software Version	v14.9.2012
Test Frequency Range	For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5180~5240MHz/5260~5320MHz/5500~5700MHz/5745~5825MHz; For 802.11n-HT40/ac-VHT40/ax-HE40: 5190~5230MHz/5270~5310MHz/5510~5670MHz/5755~5795MHz; For 802.11ac-VHT80/ ax-HE80: 5210MHz/5290MHz/5530~5610MHz/5775MHz
RF Output Power	802.11a:14.82dBm,802.11n(HT20):13.55dBm; 802.11n(HT40):13.84dBm; 802.11ac (VHT20):13.68dBm;802.11ac (VHT40):13.78dBm; 802.11ac (VHT80):13.76dBm;802.11ax (HE20):13.51dBm; 802.11ax (HE40):13.86dBm;802.11ax (HE80):14.00dBm
RF Output Power(MIMO)	802.11n(HT20):16.35dBm; 802.11n(HT40):13.50dBm; 802.11ac (VHT20):16.33dBm;802.11ac (VHT40):16.46dBm; 802.11ac (VHT80):16.37dBm;802.11ax (HE20):16.27dBm; 802.11ax (HE40):16.57dBm;802.11ax (HE80):16.73dBm
Modulation	802.11a/n:(64-QAM, 16-QAM, QPSK, BPSK) OFDM 802.11ac :(256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDM 802.11ax :(1024-QAM,256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDMA
Data Rate	802.11a:6/9/12/18/24/36/48/54Mbps; 802.11n: up to 300Mbps; 802.11ac: up to 866.6Mbps; 802.11ax: up to 1201Mbps
Number of channels	7 channels of U-NII-1 Band;7 channels of U- NII-2A Band 18 channels of U-NII-2C Band;8 channels of U- NII 3 Band
Antenna Designation	PCB Antenna
Antenna Gain	Refer to Chapter 2.9 of the report.
Power Supply	DC 5V

2.2 Table of Carrier Frequency

For 5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (VHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	--	--

For 5260~5320MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20) , 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40) , 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
58	5290 MHz	--	--

For 5500~5700MHz:

11 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

5 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

2 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz

For 5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20) , 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz	--	--

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
155	5775 MHz	--	--

2.3 IEEE 802.11n Modulation Scheme

MCS Index	Nss	Modulation	R	N_{BPSC}	N_{CBPS}		N_{DBPS}		Data rate (Mbps) 800nsGI	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0
6	1	64-QAM	3/4	6	312	648	234	489	58.5	121.5
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	Guard interval

2.4 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: 2AOVU-SEI900 filing to comply with the FCC Part 15 requirements.

2.5 Test Methodology

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
4	KDB 662911	662911 D01 Multiple Transmitter Output v02r01
5	KDB 789033	789033 D02 General U-NII Test Procedures New Rules v02r01

2.6 Special Accessories

Refer to section 4.4.

2.7 Equipment Modifications

Not available for this EUT intended for grant.

2.8 Antenna Requirement

Standard Requirement
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
EUT Antenna:
The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna refer to Section 2.9 of the report

2.9 Description of Available Antennas

Antenna Type	Frequency Band (MHz)	TX Paths	Bandwidth (MHz)	Max Peak Gain (dBi)		Max Directional Gain (dBi)
				Chain A	Chain B	
5G WIFI PCB Antenna List (5GHz 2*2 MIMO)						
PCB Antenna	5150 ~ 5250	2	20,40,80	1.47	0.14	3.84
	5250 ~ 5350	2	20,40,80	1.34	0.97	4.17
	5470 ~ 5725	2	20,40,80	1.75	4.75	6.39
	5725 ~ 5850	2	20,40,80	2.32	3.39	5.88

Note 1: The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11n/ac/ax mode.

Note 2: The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

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 devices:

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

- For power measurements on IEEE 802.1devices:

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

  Array Gain = 0 dB (i.e., no array gain) for channel widths ≥40 MHz for any N_{ANT};

  Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less, for 20 MHz channel widths with $N_{ANT} \geq 5$.

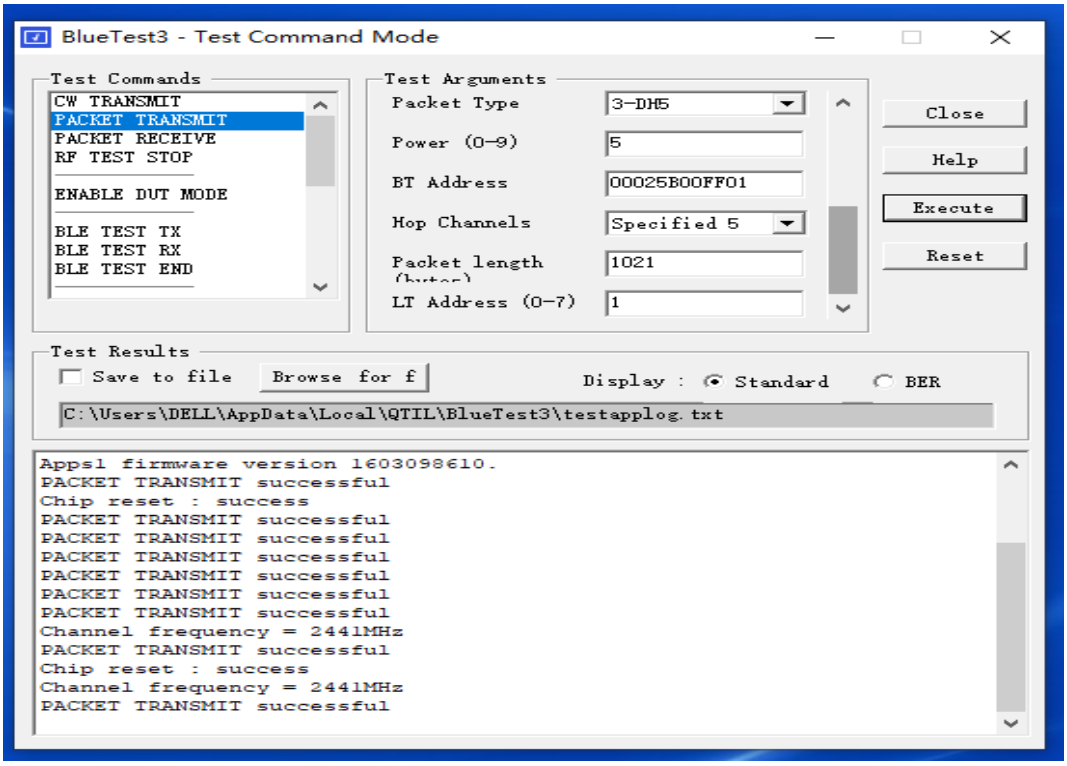
If antenna gains are not equal, Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain.

2.10 Description of Test Software

For IEEE 802.11 mode:

The test utility software used during testing was “adb”

Software Setting Diagram



Test Mode U-NII 1	Channel	Power Index	
		Chain A	Chain B
802.11a	L/M/H	17	16
802.11n(HT20)	L/M/H	16	15
802.11n(HT40)	L/M/H	16	15
802.11ac(VHT20)	L/M/H	16	15
802.11ac(VHT40)	L/M/H	16	15
802.11ac(VHT80)	L/M/H	16	15
802.11ax(HE20)	L/M/H	16	15
802.11ax(HE40)	L/M/H	16	15
802.11ax(HE80)	L/M/H	16	15
Test Mode U-NII 2A	Channel	Power Index	
		Chain A	Chain B
802.11a	L/M/H	17	16
802.11n(HT20)	L/M/H	16	15

802.11n(HT40)	L/M/H	16	15
802.11ac(VHT20)	L/M/H	16	15
802.11ac(VHT40)	L/M/H	16	15
802.11ac(VHT80)	L/M/H	16	15
802.11ax(HE20)	L/M/H	16	15
802.11ax(HE40)	L/M/H	16	15
802.11ax(HE80)	L/M/H	16	15
Test Mode U-NII 2C	Channel	Power Index	
		Chain A	Chain B
802.11a	L/M/H	20	17
802.11n(HT20)	L/M/H	19	16
802.11n(HT40)	L/M/H	19	16
802.11ac(VHT20)	L/M/H	19	16
802.11ac(VHT40)	L/M/H	19	16
802.11ac(VHT80)	L/M/H	16	16
802.11ax(HE20)	L/M/H	19	16
802.11ax(HE40)	L/M/H	19	16
802.11ax(HE80)	L/M/H	16	16
Test Mode U-NII 3	Channel	Power Index	
		Chain A	Chain B
802.11a	L/M/H	19	23
802.11n(HT20)	L/M/H	18	22
802.11n(HT40)	L/M/H	18	22
802.11ac(VHT20)	L/M/H	18	22
802.11ac(VHT40)	L/M/H	18	22
802.11ac(VHT80)	L/M/H	18	22
802.11ax(HE20)	L/M/H	18	22
802.11ax(HE40)	L/M/H	18	22
802.11ax(HE80)	L/M/H	18	22

3. Test Environment

3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

3.3 Environmental Conditions

	Normal Conditions
Temperature range (℃)	15 - 35
Relative humidity range	20% - 75%
Pressure range (kPa)	86 - 106
Power supply	DC 5V

3.4 Measurement Uncertainty

The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	U_c = ±2.9 dB
Uncertainty of Radiated Emission below 1GHz	U_c = ±3.9 dB
Uncertainty of Radiated Emission above 1GHz	U_c = ±4.9 dB
Uncertainty of total RF power, conducted	U_c = ±0.8 dB
Uncertainty of RF power density, conducted	U_c = ±2.6 dB
Uncertainty of spurious emissions, conducted	U_c = ±2 %
Uncertainty of Occupied Channel Bandwidth	U_c = ±2.7 %

3.5 List of Equipment Used

● RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024-05-24	2025-05-23
☒	AGC-ER-E062	Power Sensor	Agilent	U2021XA	MY54110007	2024-02-01	2025-01-31
☒	AGC-ER-E063	Power Sensor	Agilent	U2021XA	MY54110009	2024-02-01	2025-01-31
☒	AGC-EM-A152	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-09-21	2025-09-20
☒	AGC-ER-E083	Signal Generator	Agilent	E4421B	US39340815	2024-05-23	2025-05-22
☒	N/A	RF Connection Cable	N/A	1#	N/A	Each time	N/A
☒	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A
☒	AGC-EM-E061	EXA Signal Analyzer	Aglient	N9010A	MY53470504	2024-05-28	2025-05-27

● Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31
☒	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23
☒	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
☒	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10
☒	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2024-03-31	2025-03-30
☒	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23
☒	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23
☒	AGC-EM-E083	Pre-amplifier	CHENGXI	EMC184045SE	980508	2023-09-20	2025-09-19
☒	AGC-EM-A118	5G Filter	SongYi	N/A	N/A	2024-05-23	2025-05-22
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08
☐	AGC-EM-A139	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

● AC Power Line Conducted Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2024-05-28	2025-05-27
☒	AGC-EM-A130	6dB Attenuator	Eeatsheep	LM-XX-6-5W	DC-6GZ	2023-06-09	2025-06-08
☒	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2024-05-28	2025-05-27

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71
☒	AGC-EM-S003	RE Test System	FARA	EZ-EMC	VRA-03A
☐	AGC-EM-S004	RE Test System	Tonscend	TS+Ver2.1(JS32-RE)	4.0.0.0
☒	AGC-ER-S012	BT/WIFI Test System	Tonscend	JS1120-2	2.6
☒	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0

4.System Test Configuration

4.1 EUT Configuration

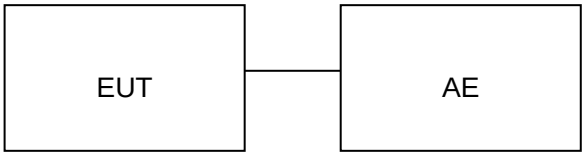
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT Exercise

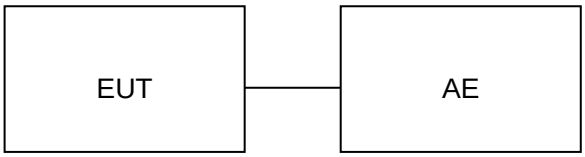
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 Configuration of Tested System

Radiated Emission Configure:



Conducted Emission Configure:



4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement:

☐ Test Accessories Come From The Laboratory

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	--	--	--	--	--

☐ Test Accessories Come From The Manufacturer

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	--	--	--	--	--

4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.407(a/1/2/3)	RF Output Power	Pass
3	§15.407(e)	6 dB Bandwidth	Pass
4	§15.407(a/1/2/3)	26dB Bandwidth	Pass
5	§15.403(i)	99% Occupied Bandwidth	Pass
6	§15.407(a/1/2/3)	Power Spectral Density	Pass
7	§15.407(g)	Frequency Stability	Pass (See Note 1)
8	§15.407(c)	Transmission Discontinuation Requirement	Pass (See Note 2)
9	§15.407(b)(1/2/3/4)	Conducted Band Edge and Out-of-Band Emissions	Pass
10	§15.209,§15.407(b)(1/2/3/4)	Radiated Spurious Emission	Pass
11	§15.207	AC Power Line Conducted Emission	Pass

Note:

1. Refer to the manufacturer's declaration in the user manual.
2. The device operates without the transmission of information.

5. Description of Test Modes

EUT Configure Mode	Applicable To				Description
	RE＞1G	RE＜1G	PLC	APCM	
A	☒	☒	☒	☒	Powered by Adapter with WIFI(5G) Link
B	--	--	--	--	Powered by Battery with WIFI(5G) Link
C	--	--	--	--	Powered by USB with WIFI(5G) Link

Where, **RE＞1G: Radiated Emission above 1GHz** **PLC: Power Line Conducted Emission**

RE＜1G: Radiated Emission below 1GHz **APCM: Antenna Port Conducted Measurement**

NOTE 1: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.

NOTE 2: "--"means no effect.

NOTE 3: The radiation part tests the dual-antenna MIMO as the worst combination.

- **Radiated Emission Test (Above 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (IF EUT with antenna diversity architecture).

☒ Support 802.11ax, device debugging is tested in Full RU state

☒ The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records Chain B as the worst data.

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0

- **Radiated Emission Test (Below 1GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
☒ The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records Chain B as the worst data.
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
A	802.11a	5260-5320	52 to 64	52	OFDM	6.0

- **Power Line Conducted Emission Test:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
☒ The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records Chain B as the worst data.
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
A	802.11a	5260-5320	52 to 64	52	OFDM	6.0

- **Radiated Band edge Measurement:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
☒ Support 802.11ax, device debugging is tested in Full RU state
☒ The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records Chain B as the worst data.
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36	OFDM	6.0
A	802.11n (40MHz)		38 to 46	38	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11ax (80MHz)		42	42	OFDMA	MCS0
A	802.11a	5260-5320	52 to 64	64	OFDM	6.0
A	802.11n (40MHz)		54 to 62	62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11ax (80MHz)		58	58	OFDMA	MCS0
A	802.11a	5500-5700	100 to 140	100	OFDM	6.0
A	802.11n (40MHz)		102 to 134	102	OFDM	MCS0
A	802.11ac (80MHz)		106	106	OFDM	MCS0
A	802.11ax (80MHz)		106	106	OFDMA	MCS0

- **Antenna Port Conducted Measurement:**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).

☒ Support 802.11ax, device debugging is tested in Full RU state

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (20MHz)		36 to 48	36, 40, 48	OFDM	MCS0
A	802.11ac (40MHz)		38 to 46	38, 46	OFDM	MCS0
A	802.11ac (80MHz)		42	42	OFDM	MCS0
A	802.11ax (20MHz)		36 to 48	36, 40, 48	OFDMA	MCS0
A	802.11ax (40MHz)		38 to 46	38, 46	OFDMA	MCS0
A	802.11ax (80MHz)		42	42	OFDMA	MCS0
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	MCS0
A	802.11ac (40MHz)		54 to 62	54, 62	OFDM	MCS0
A	802.11ac (80MHz)		58	58	OFDM	MCS0
A	802.11ax (20MHz)		52 to 64	52, 60, 64	OFDMA	MCS0
A	802.11ax (40MHz)		54 to 62	54, 62	OFDMA	MCS0
A	802.11ax (80MHz)		58	58	OFDMA	MCS0
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (20MHz)		100 to 140	100, 116, 140	OFDM	MCS0
A	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	MCS0
A	802.11ac (80MHz)		106,122	106,122	OFDM	MCS0
A	802.11ax (20MHz)		100 to 140	100, 116, 140	OFDMA	MCS0
A	802.11ax (40MHz)		102 to 134	102, 110, 134	OFDMA	MCS0
A	802.11ax (80MHz)		106,122	106,122	OFDMA	MCS0
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
A	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	MCS0
A	802.11n (40MHz)		151 to 159	151, 159	OFDM	MCS0
A	802.11ac (20MHz)		149 to 165	149, 157, 165	OFDM	MCS0
A	802.11ac (40MHz)		151 to 159	151, 159	OFDM	MCS0
A	802.11ac (80MHz)		155	155	OFDM	MCS0
A	802.11ax (20MHz)		149 to 165	149, 157, 165	OFDM	MCS0
A	802.11ax (40MHz)		151 to 159	151, 159	OFDM	MCS0
A	802.11ax (80MHz)		155	155	OFDMA	MCS0

6. Duty Cycle Measurement

5GHz WLAN (NII) operation is possible in 20MHz, 40MHz and 80MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Average. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Chain A

Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)
Band U-NII1:5150MHz-5250MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/
Band U-NII 2A:5250MHz-5350MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/

Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)
Band U-NII 2C:5470MHz-5725MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/
Band U-NII 3:5725MHz-5850MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/

Chain B

Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)
Band U-NII1:5150MHz-5250MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/
Band U-NII 2A:5250MHz-5350MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/

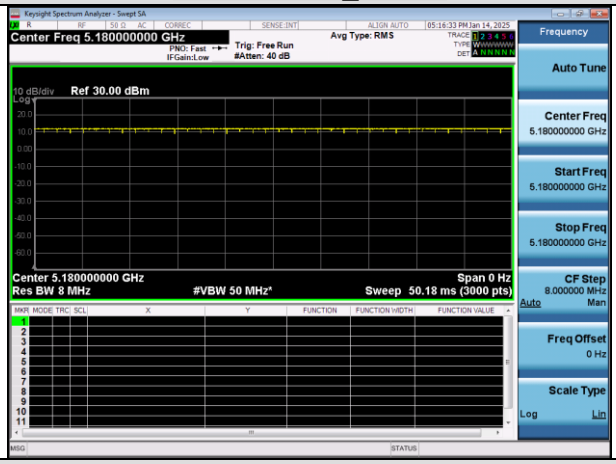
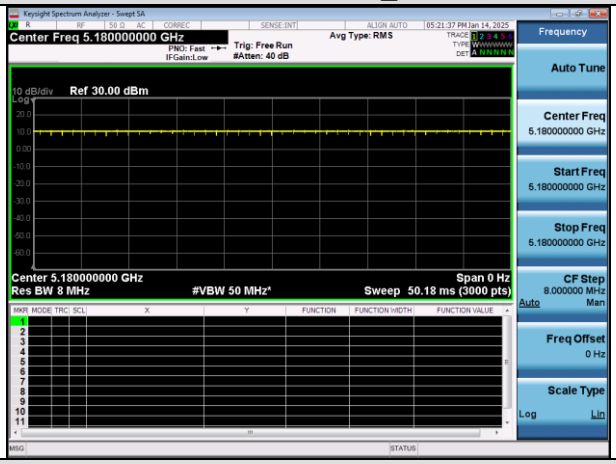
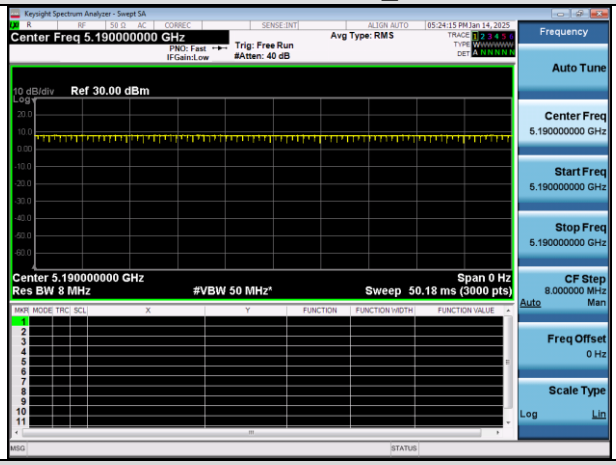
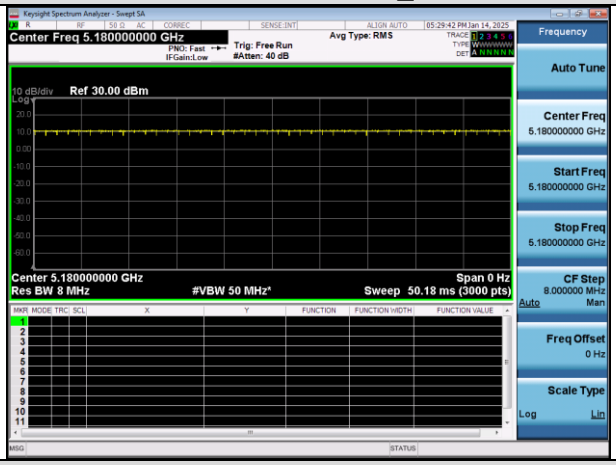
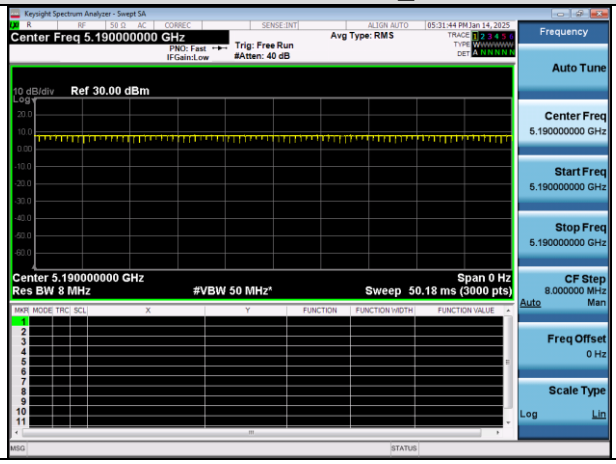
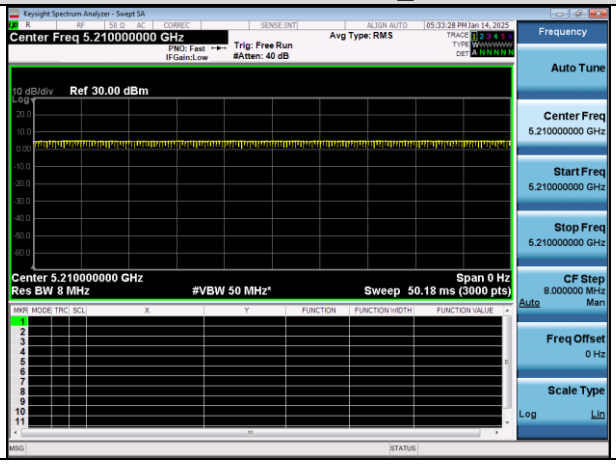
Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)
Band U-NII 2C:5470MHz-5725MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/
Band U-NII 3:5725MHz-5850MHz			
802.11a	6	100	/
802.11n_HT20	MCS0	100	/
802.11n_HT40	MCS0	100	/
802.11ac_VHT20	MCS0	100	/
802.11ac_VHT40	MCS0	100	/
802.11ac_VHT80	MCS0	100	/
802.11ax_HE20	MCS0	100	/
802.11ax_HE40	MCS0	100	/
802.11ax_HE80	MCS0	100	/

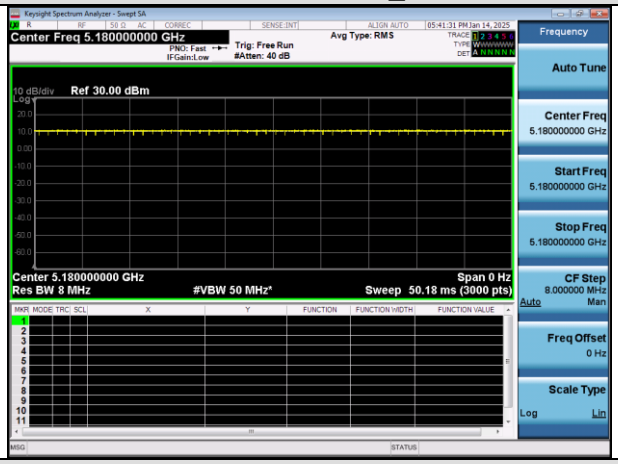
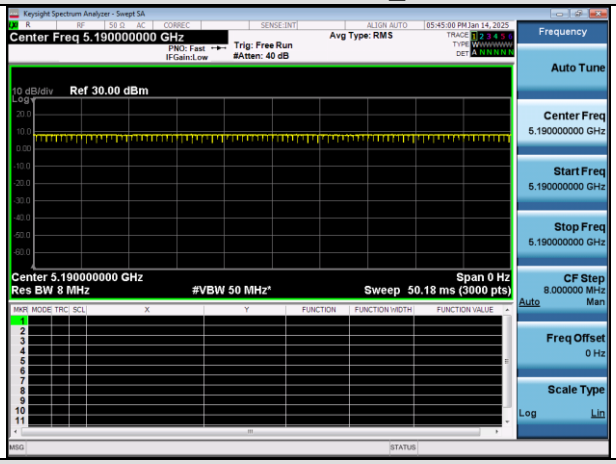
Remark:

1. Duty Cycle factor = 10 * log (1/ Duty cycle)
2. The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value.
3. Involving the test items of duty cycle compensation coefficient, the final results have been added and calculated by the software and presented.

The test plots as follows:

Chain A

IEEE 802.11a_U-NII 1	IEEE 802.11n-HT20_U-NII 1
	
IEEE 802.11n-HT40_U-NII 1	**IEEE 802.11ac-VHT20_U-NII 1**
	
IEEE 802.11ac-VHT40_U-NII 1	**IEEE 802.11ac-VHT80_U-NII 1**
	

IEEE 802.11ax-HE20_U-NII 1	IEEE 802.11ax-HE40_U-NII 1
	
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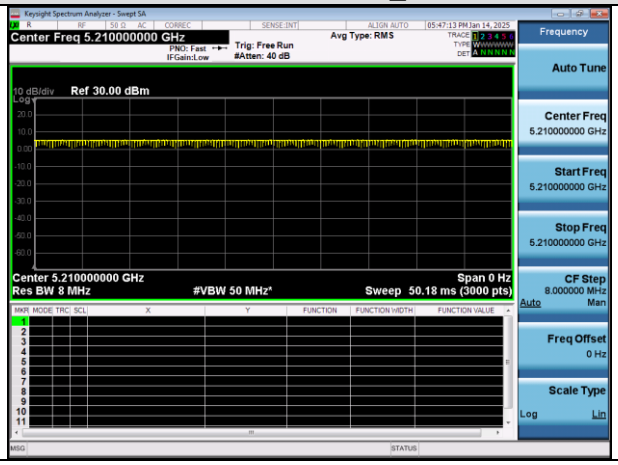
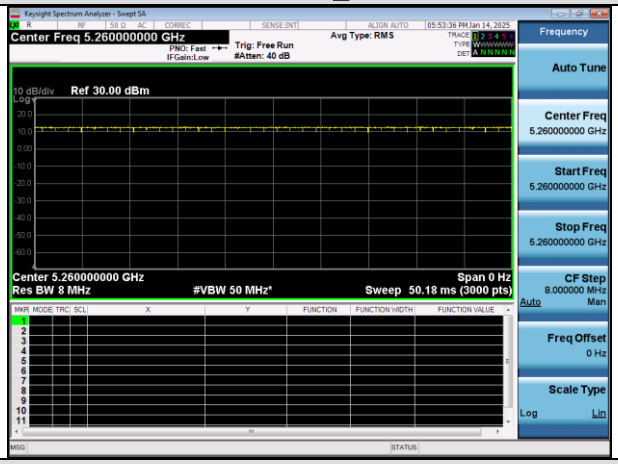
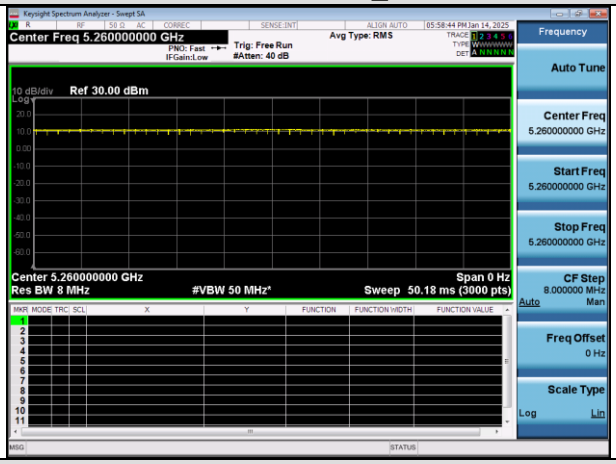
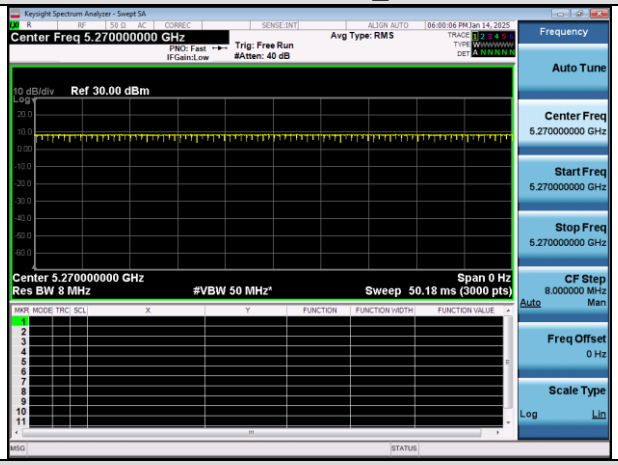
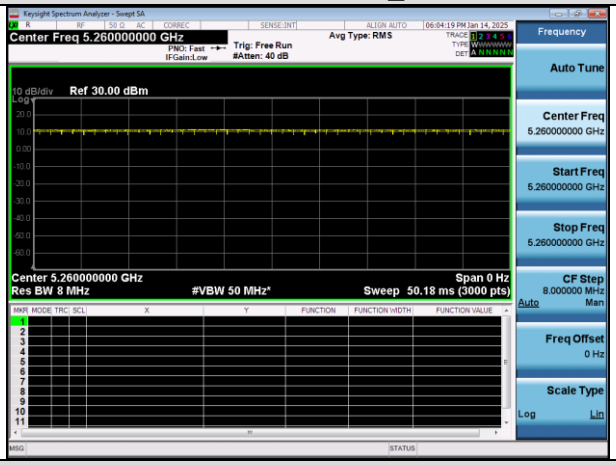
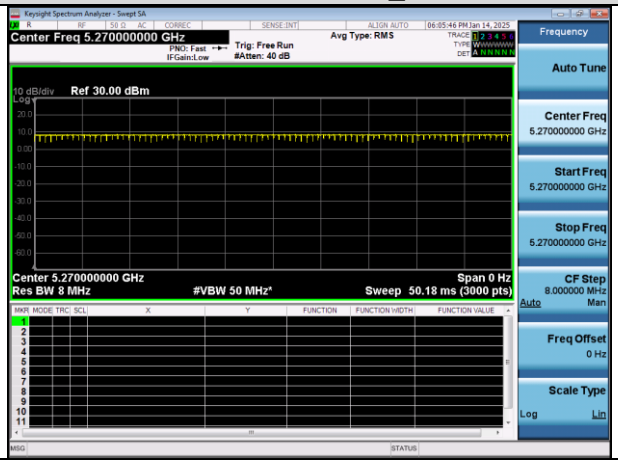
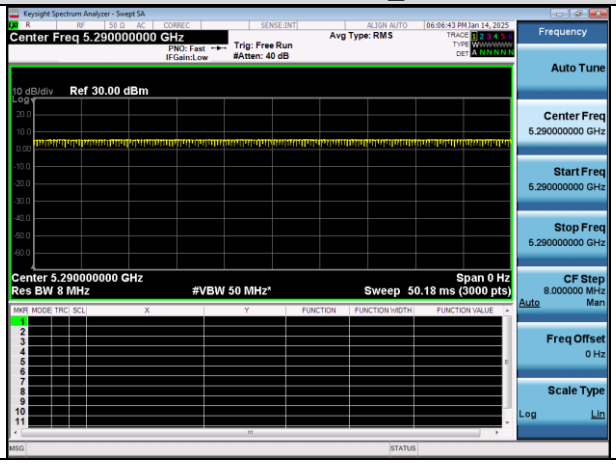
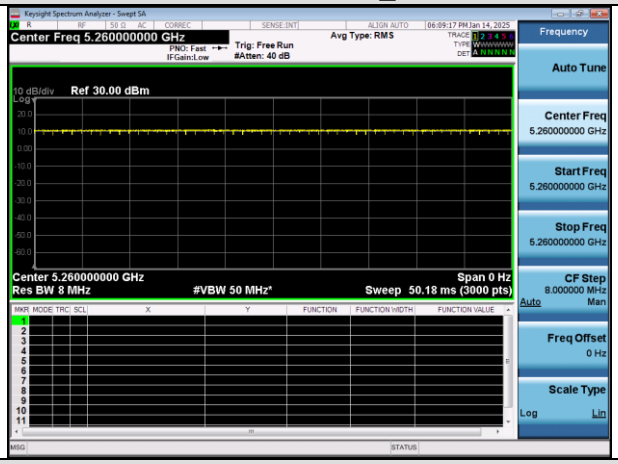
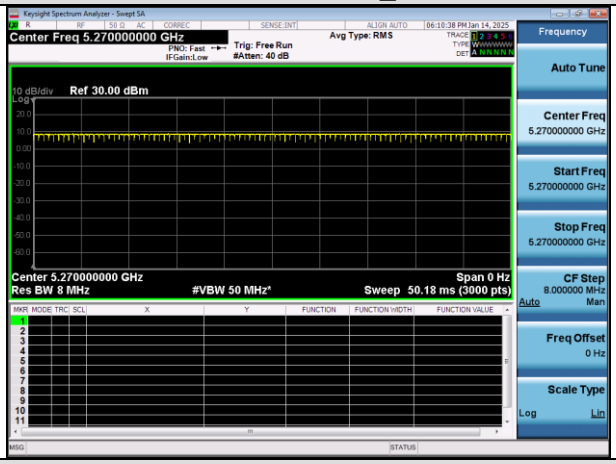
	/

IEEE 802.11a_U-NII 2A	IEEE 802.11n-HT20_U-NII 2A
	
IEEE 802.11n-HT40_U-NII 2A	**IEEE 802.11ac-VHT20_U-NII 2A**
	
IEEE 802.11ac-VHT40_U-NII 2A	**IEEE 802.11ac-VHT80_U-NII 2A**
	

IEEE 802.11ax-HE20_U-NII 2A	IEEE 802.11ax-HE40_U-NII 2A
	
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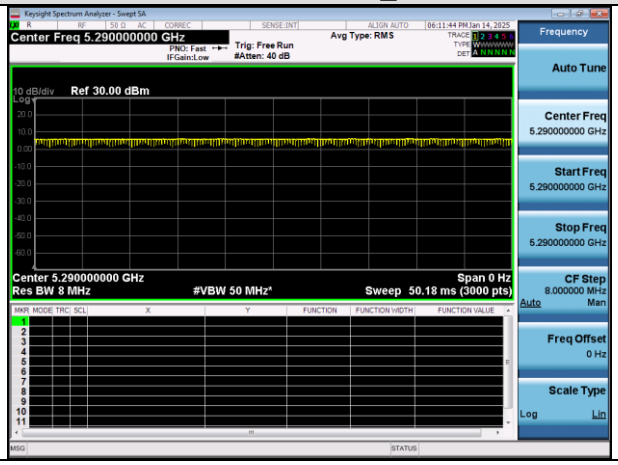
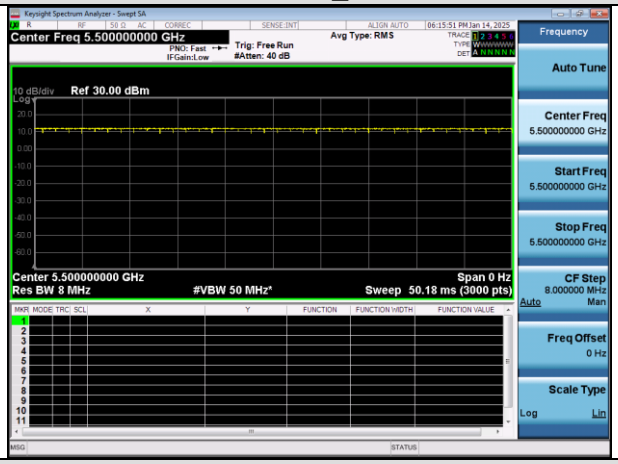
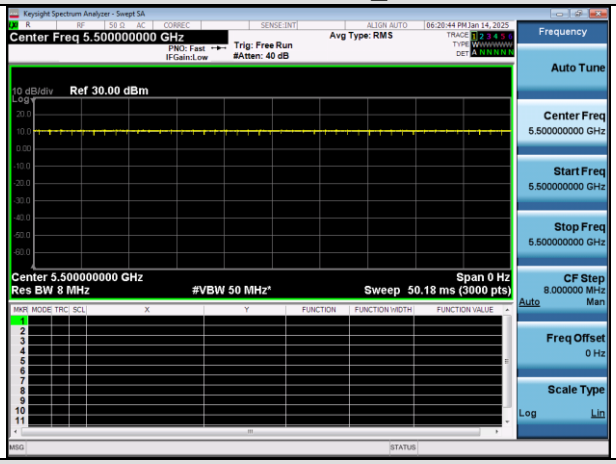
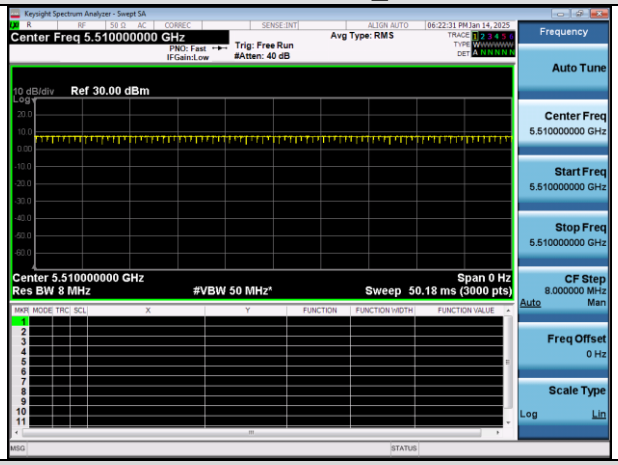
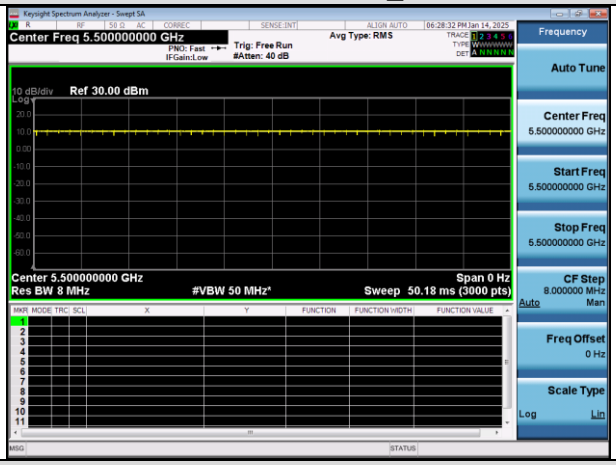
	/

IEEE 802.11a_U-NII 2C	IEEE 802.11n-HT20_U-NII 2C
	
IEEE 802.11n-HT40_U-NII 2C	**IEEE 802.11ac-VHT20_U-NII 2C**
	
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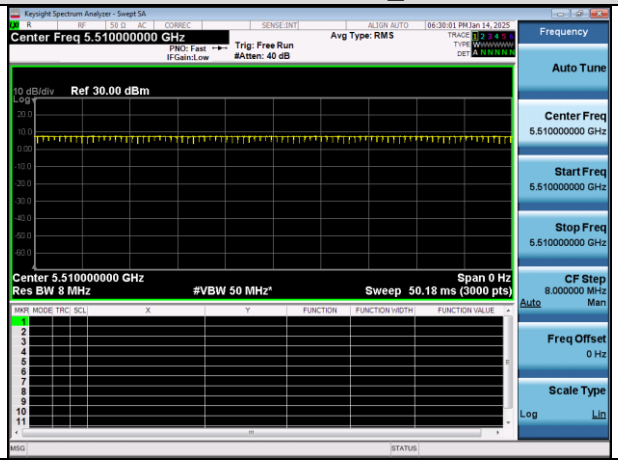
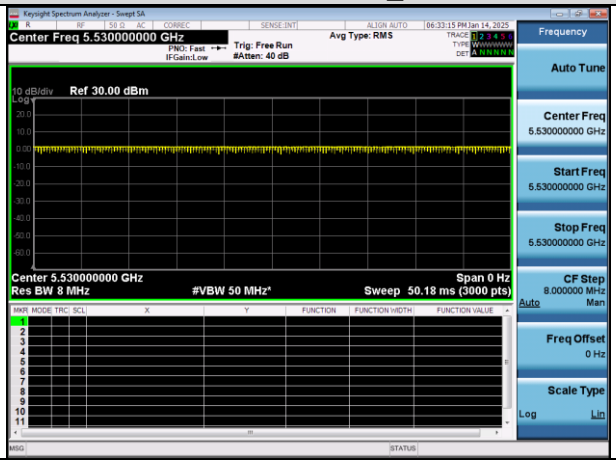
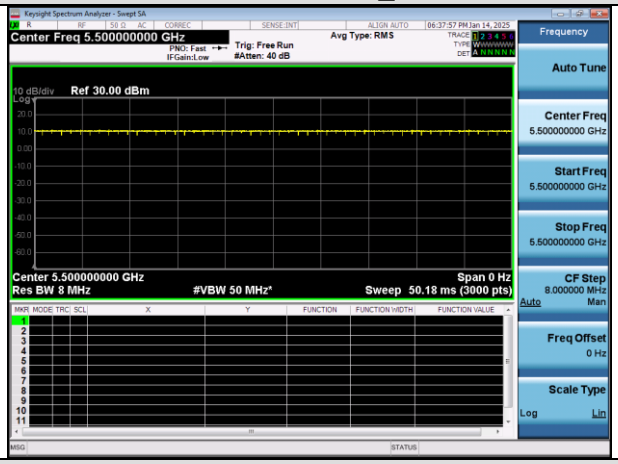
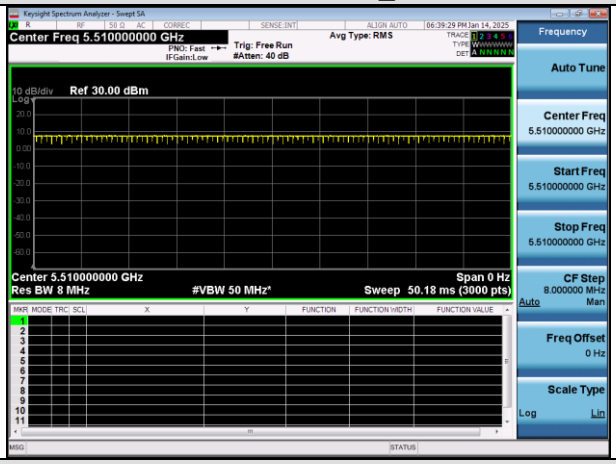
	

IEEE 802.11ax-HE20_U-NII 2C	IEEE 802.11ax-HE40_U-NII 2C
	
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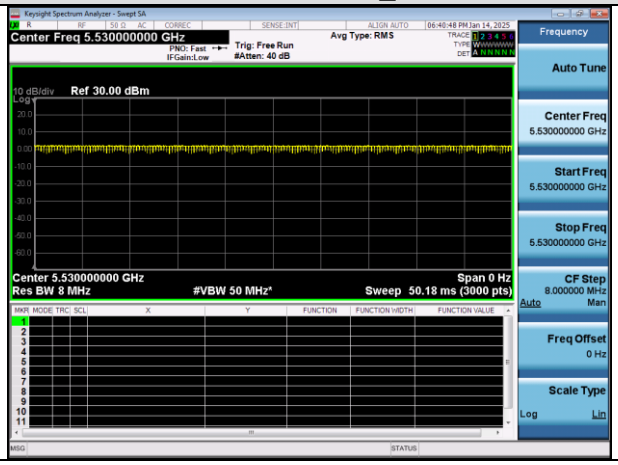
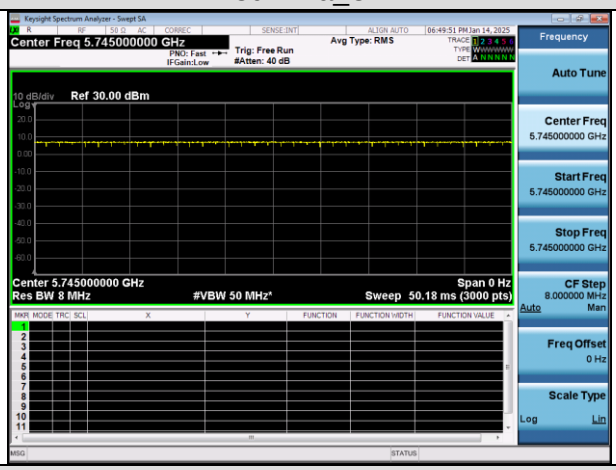
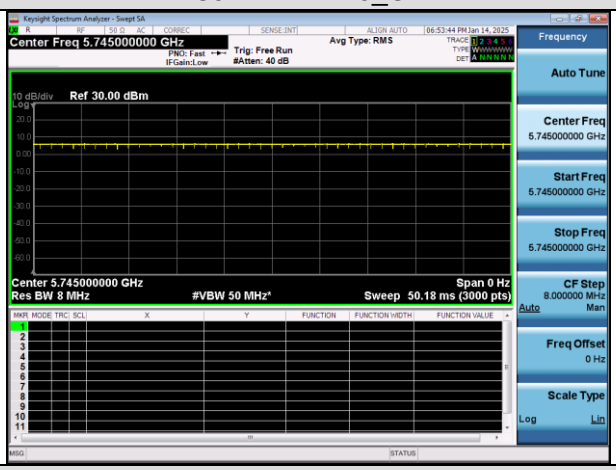
	/

IEEE 802.11a_U-NII 2A	IEEE 802.11n-HT20_U-NII 2A
	
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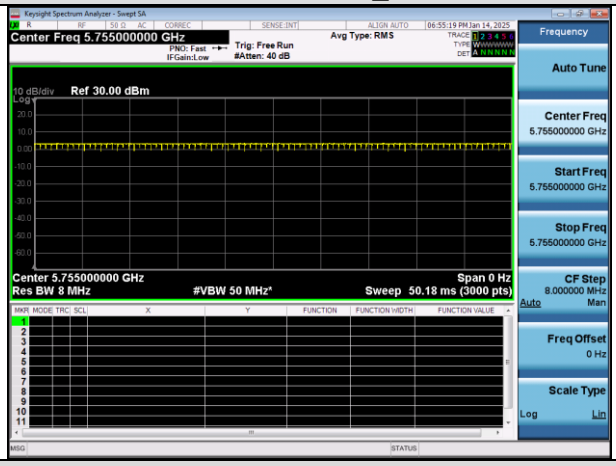	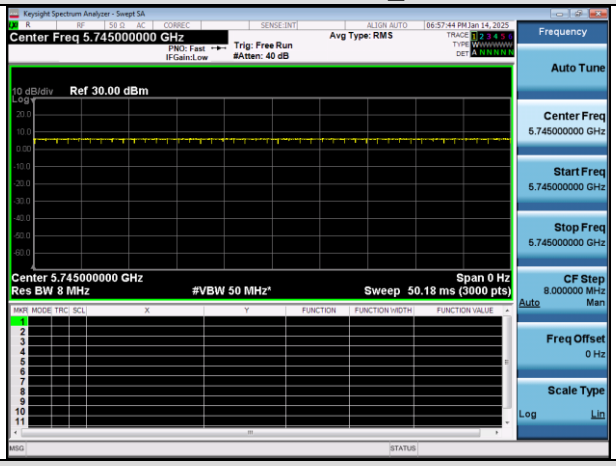
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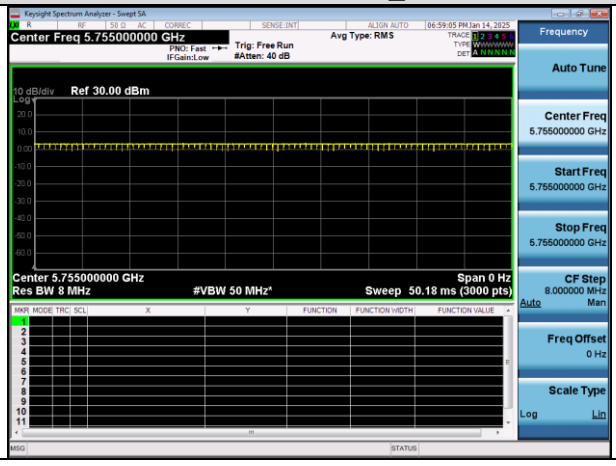	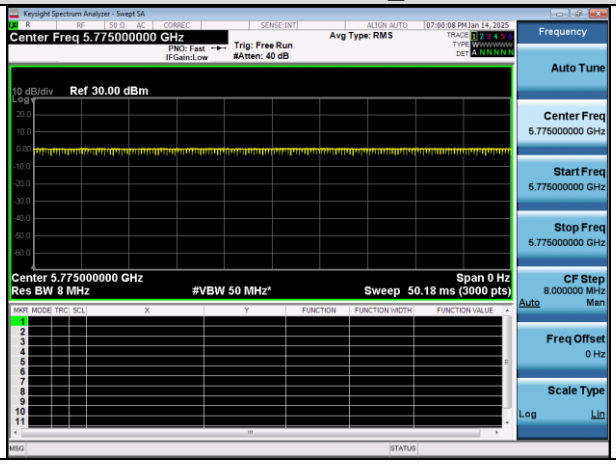

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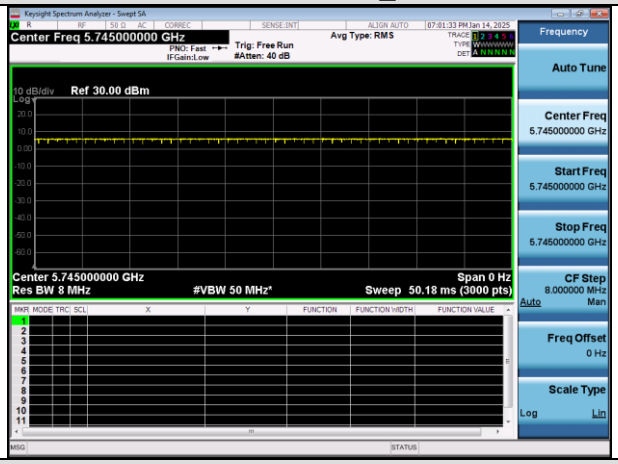	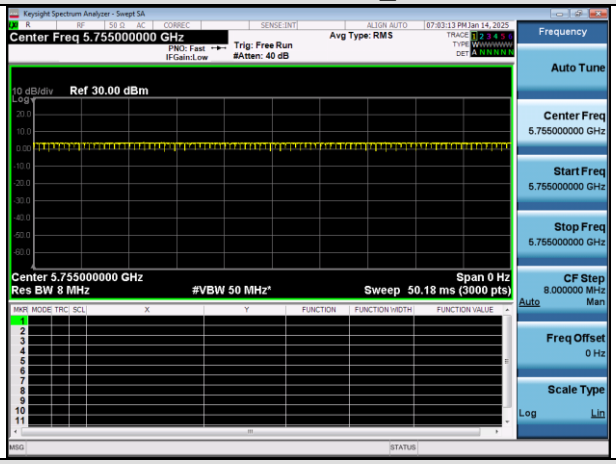
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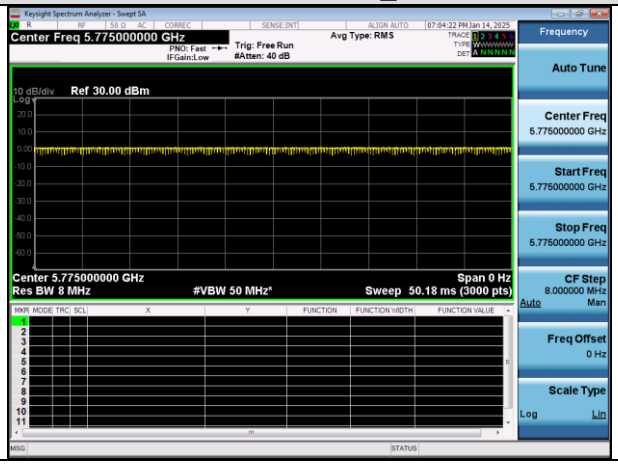	/

Chain B

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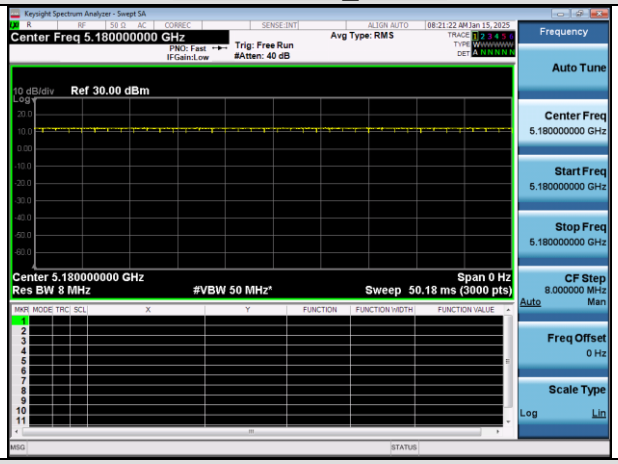	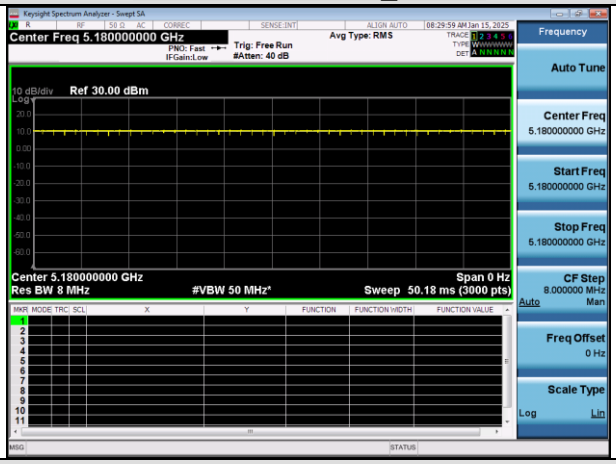
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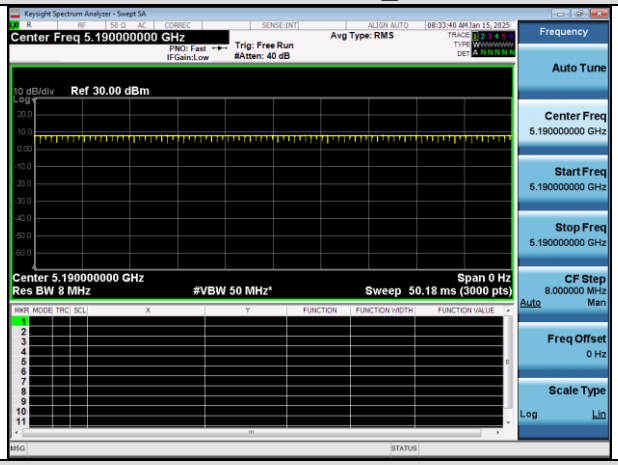	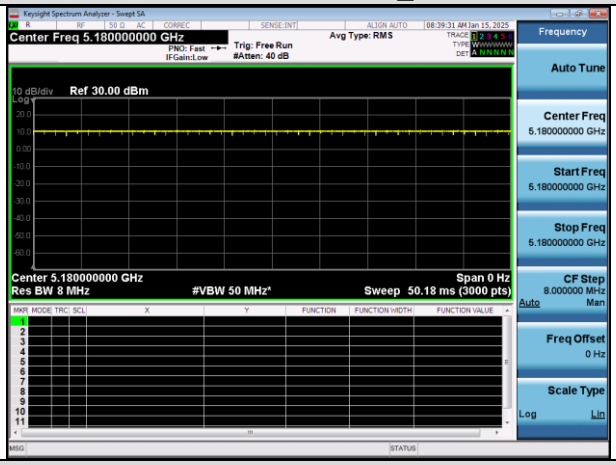
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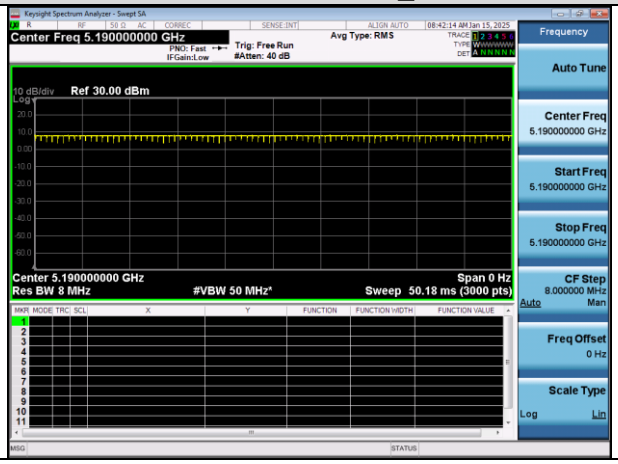
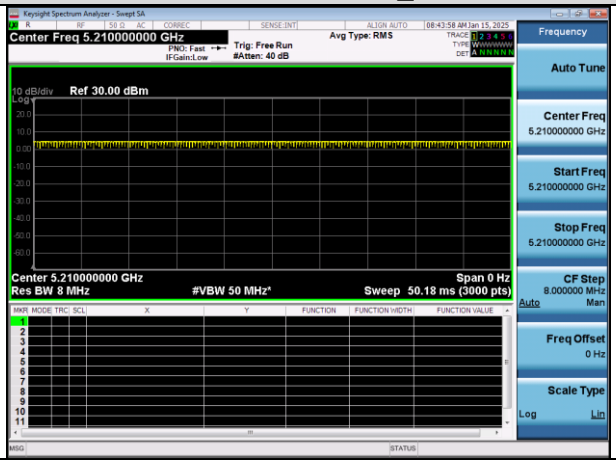
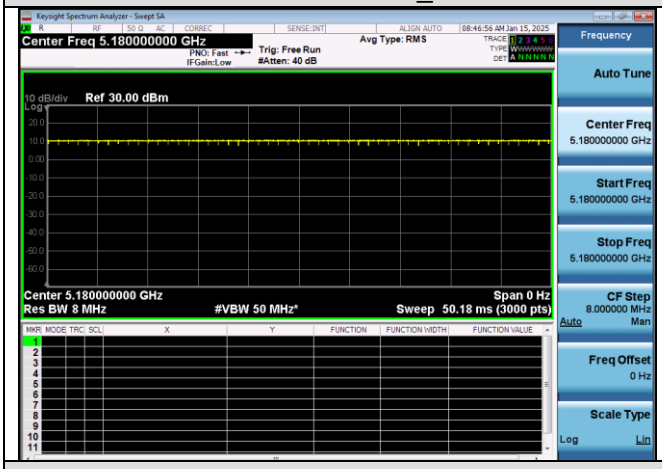
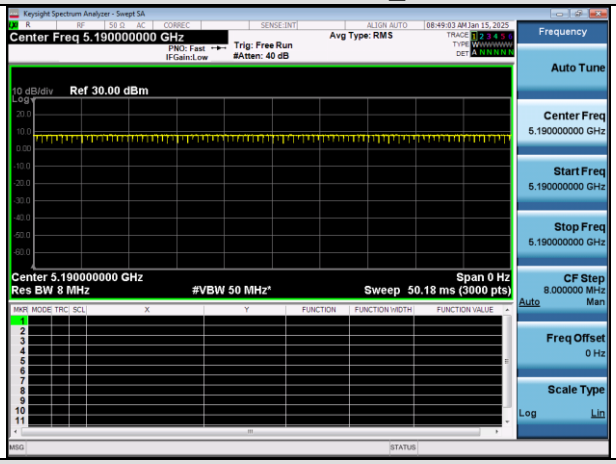
	

IEEE 802.11ax-HE20_U-NII 1	IEEE 802.11ax-HE40_U-NII 1
	
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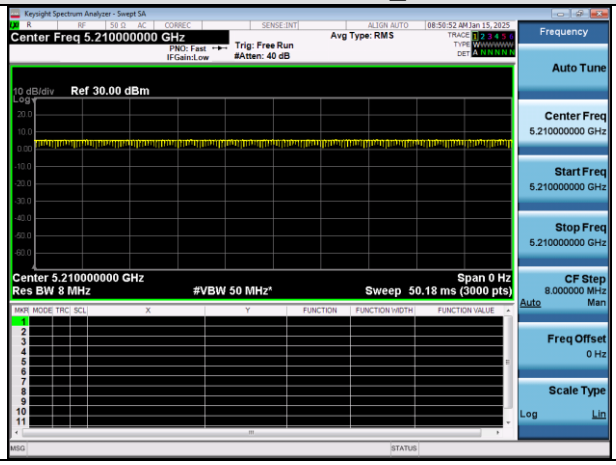	/