FCC RADIO TEST REPORT

Applicant	:	FN-LINK TECHNOLOGY LIMITED
Address	:	No.8, Litong Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan China
Manufacturer	:	FN-LINK TECHNOLOGY LIMITED
Address	:	No.8, Litong Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan China
Factory	:	FN-LINK TECHNOLOGY LIMITED
Address	:	No.8, Litong Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan China
Product Name	:	WIFI+BT Module
Brand Name	:	FN-LINK
Model No.	:	6252B-SR
FCC ID	:	2AATL-6252B-SR
Measurement Standard	:	47 CFR FCC PART 15 Subpart E (section 407)
Receipt Date of Samples	:	April 11, 2022
Date of Tested	:	April 11, 2022 to May 05, 2022
Date of Report	:	May 17, 2022

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.

Prepared by

Alina Guo / Project Engineer

Approved by

Iori Fan / Authorized Signatory

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Revision History

Report Number	Description	Issued Date
NTC2204107FV00	Initial Issue	2022-05-17

1. Summary of Test Result

FCC Rules	Description of Test	Result	Remarks
§15.207 (a)	AC Power Conducted Emission	PASS	---
§15.407(a)	Max. Conducted Output Power	PASS	---
§15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	PASS	---
§15.407(e)	6dB Bandwidth	PASS	---
§15.407(a)	Power Spectral Density	PASS	---
§15.407(b) §15.205	Radiated Emissions	PASS	---
§15.407(b)	Band Edge Emissions	PASS	---
§15.407(g)	Frequency Stability	PASS	---
§15.203	Antenna Requirement	PASS	---
§15.407(h)	Dynamic Frequency Selection	PASS	---

2. General Description of EUT

Product Information	
Product name:	WIFI+BT Module
Main Model Name:	6252B-SR
Additional Model Name:	N/A
Model Difference:	N/A
S/N:	2204-1408
Brand Name	FN-LINK
Hardware version:	Not stated
Software version:	Not stated
Rating:	DC 3.3V
Classification:	Class B
Typical arrangement:	Table-top
I/O Port:	N/A
Accessories Information	
Adapter:	N/A
Cable:	N/A
Other:	N/A
Additional Information	
Note:	N/A
Remark:	All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.

Technical Specification	
Frequency Range:	5180-5240MHz 5260-5320MHz, 5500-5700MHz 5745-5825MHz
Modulation Technology:	DSSS, OFDM
Modulation Type:	BPSK, QPSK for 802.11a 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for 802.11n/ac/ax
Number of Channel:	U-NII-1, U-NII-2A: 4 Channel for 802.11a/n(HT20)/ax(HE20)/ac(VHT20) 2 Channel for 802.11n(HT40)/ac(VHT40)/ax(HE40) 1 Channel for 802.11ac(VHT80)/ax(HE80) U-NII-2C: 11 Channel for 802.11a/n(HT20)/ax(HE20))/ac(VHT20) 5 Channel for 802.11n(HT40)/ac(VHT40)/ax(HE40) 2 Channel for 802.11ac(VHT80)/ax(HE80) U-NII-3: 5 Channel for 802.11a/n(HT20)/ax(HE20))/ac(VHT20) 2 Channel for 802.11n(HT40)/ac(VHT40)/ax(HE40) 1 Channel for 802.11ac(VHT80)/ax(HE80)
Antenna Type:	Diople antenna *2
Antenna Gain:	See Antenna Information
Type:	Client without Radar detection.

Antenna Information

Ant. (Chain)	Brand	Model name	Antenna Type	Connector	Gain (dBi)	Application range
1,2	FN-LINK	K212-10037-A	Diople	RP-SMA(M)	2.98	2.4G Band
					3.59	U-NII-1 Band
					3.79	U-NII-2A Band
					4.56	U-NII-2C Band
					3.85	U-NII-3 Band

Note: U-NII-1 Band Antenna Directional gain = 3.59 dBi +10 log(2)=6.60dBi

U-NII-2A Band Antenna Directional gain = 3.79 dBi +10 log(2)=6.80dBi

U-NII-2C Band Antenna Directional gain = 4.56 dBi +10 log(2)=7.57dBi

U-NII-3 Band Antenna Directional gain = 3.85 dBi +10 log(2)=6.86dBi

Channel List					
U-NII-1 Band 5180~5240MHz					
IEEE 802.11a/n(HT20)/ac(VHT20)/ax(HE20)		IEEE 802.11n(HT40)/ac(VHT40) /ax(HE40)		IEEE 802.11 ac (VHT80) /ax(HE80)	
Channel	Frequency MHz	Channel	Frequency MHz	Channel	Frequency MHz
36	5180	38	5190	42	5210
40	5200	46	5230	-	-
44	5220	-	-	-	-
48	5240	-	-	-	-
U-NII-2A Band 5260-5320MHz					
52	5260	54	5270	58	5290
56	5280	62	5310	-	-
60	5300	-	-	-	-
64	5320	-	-	-	-
U-NII-2C Band 5500-5700MHz					
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	-	-
112	5560	126	5630	-	-
116	5580	134	5670	-	-
132	5660	-	-	-	-
136	5680	-	-	-	-
140	5700	-	-	-	-

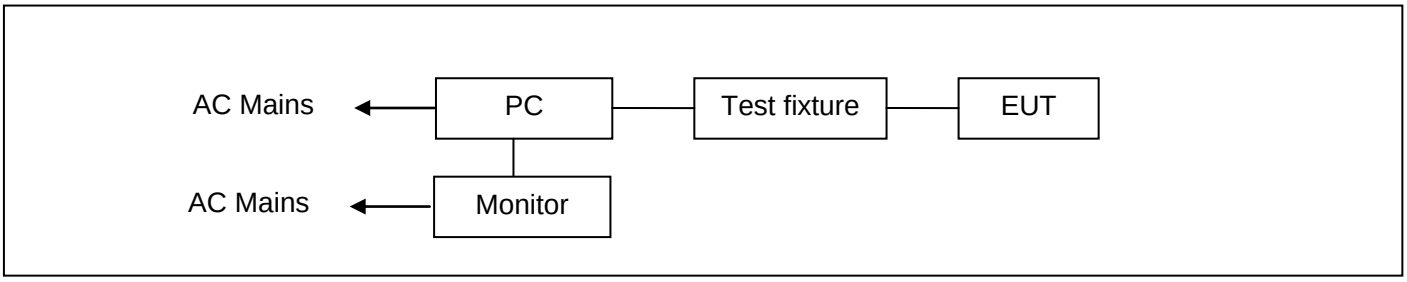
U-NII-3 Band 5745~5825MHz					
IEEE 802.11a/n(HT20)/ac(VHT20) /ax(HE20)		IEEE 802.11n(HT40)/ac(VHT40) /ax(HE40)		IEEE 802.11 ac (VHT80) /ax(HE80)	
Channel	Frequency MHz	Channel	Frequency MHz	Channel	Frequency MHz
149	5745	151	5755	155	5775
153	5765	159	5795	-	-
157	5785	-	-		
161	5805	-	-		
165	5825	-	-		

3. Test Channels and Modes Detail

No.	Mode	Channel	Frequency (MHz)	Remark
1	TX	36	5180	IEEE 802.11a/n(HT20)/ac(HT20) /ax(HE20)
		40	5200	IEEE 802.11a/n(HT20)/ac(HT20) /ax(HE20)
		48	5240	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		52	5260	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		60	5300	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		64	5320	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		100	5500	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		116	5580	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		140	5700	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		149	5745	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		157	5785	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		165	5825	IEEE 802.11a/n(HT20) /ac(HT20) /ax(HE20)
		38	5190	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		46	5230	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		54	5270	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		62	5310	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		102	5510	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		134	5670	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		151	5755	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)
		159	5795	IEEE 802.11n(HT40) /ac(VHT40) /ax(HE40)

No.	Mode	Channel	Frequency (MHz)	Remark
1	TX	42	5210	IEEE 802.11ac(VHT80)/ax(HE80)
		58	5290	IEEE 802.11ac(VHT80)/ax(HE80)
		122	5610	IEEE 802.11ac(VHT80)/ax(HE80)
		155	5775	IEEE 802.11ac(VHT80)/ax(HE80)
2.	Normal Mode	---	---	---
Note: TX mode means that the EUT was programmed to be in continuously transmitting mode.				

4. Configuration of EUT



5. Modification of EUT

No modifications are made to the EUT during all test items.

6. Description of Support Device

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Brand	M/N	S/N	Cable Specification	Remarks
1.	Assemble Computer	---	---	---	CPU: Intel Core Processors i5-10400 @ 4.3GHz Mother board: ASUS PRIME B460-PLUS Display: NVIDA 1050TI (1290MHz) Memory: Netac DDR4 3200MHz 8GB HDD: ST1000DM010 PC Power:CoolerMaster MPW-5001-ACABW-CN Power Cord: 1.8m Unshielded	---
2.	Monitor	DELL	S2240Tb	CN-0FP53P-74261-3AL-0CYU	Adapter: Manufacturer: CWT M/N: KPL-050F-VI I/P:AC100-240V50/60Hz,1.7A O/P:12V4.17A 50W AC Line: 1.15m unshielded DC Line: 1.21m unshielded with a core	---
3.	Test fixture	---	---	---	---	Provided by manufacturer
4.	Monitor	AOC	E960SN	AMHE39A001421P9	Power Cord: 1.8m Unshielded, with core	---
5.	Monitor	Dell	U2718Q	CN-05DWRH-	Power Cord: 1.8m Unshielded, with core	---
6.	Keyboard	DELL	KB216d	---	USB Line: 1.21m unshielded	---
7.	Mouse	DELL	MS116p	---	USB Line: 1.21m unshielded	---
8.	Router	LINKSYS	WRT32X	22C1060B704756	---	---
9.	Adapter (for router)	LINKSYS	Mu42-3120300-A1	---	1.50m unshielded	Input: AC 100-240V 50/60Hz 1.5A Output: DC 12V 3A

Software	Power Setting								
AX Series MP Toolkit	---	Ant_1				Ant_2			
		U-NII-1	U-NII-2A	U-NII-2C	U-NII-3	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
	IEEE 802.11a	13	13	13	13	13	13	13	13
	IEEE 802.11n(HT20)	11	11	11	11	11	11	11	11
	IEEE 802.11ax(HE20)	7	7	7	7	7	7	7	7
	IEEE 802.11ac(VHT20)	10	10	10	10	10	10	10	10
	IEEE 802.11n(HT40)	11	11	11	11	11	11	11	11
	IEEE 802.11ax(HE40)	8	8	8	8	8	8	8	8
	IEEE 802.11ac(VHT40)	10	10	10	10	10	10	10	10
	IEEE 802.11ac(VHT80)	10	10	10	10	10	10	10	10
	IEEE 802.11ax(HE80)	8	8	8	8	8	8	8	8

7. Test Facility and Location

Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and Authorizations	:	The Laboratory has been assessed and proved to be in compliance with CNAS/CL01 Listed by CNAS, August 13, 2018 The Certificate Registration Number is L5795. The Certificate is valid until August 13, 2024 The Laboratory has been assessed and proved to be in compliance with ISO17025 Listed by A2LA, November 01, 2017 The Certificate Registration Number is 4429.01 Listed by FCC, November 06, 2017 Test Firm Registration Number is 907417 Listed by Industry Canada, June 08, 2017 The Certificate Registration Number is 46405-9743A
Test Site Location	:	Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China

8. Applicable Standards and References

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

Test Standards:

47 CFR Part 15, Subpart E, 15.407

ANSI C63.10-2013

References Test Guidance:

KDB 789033 D02 v02r01

KDB 905462 D03 v01r02

9. Deviations and Abnormalities from Standard Conditions

No additions, deviations and exclusions from the standard.

10. Test Conditions

No.	Test Item	Test Mode	Test Voltage	Tested by	Remarks
1.	AC Power Conducted Emission	2	AC 120V/60Hz	Sean	See note 1
2.	Max. Conducted Output Power	1	DC 3.3V	Sean	See note 1
3.	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	1	DC 3.3V	Sean	See note 1
4.	6dB Bandwidth	1	DC 3.3V	Sean	See note 1
5.	Power Spectral Density	1	DC 3.3V	Sean	See note 1
6.	Radiated Emissions	1, 2	DC 3.3V	Sean	See note 1,3
7.	Band Edge Emissions	1	DC 3.3V	Sean	See note 1
8.	Frequency Stability	1	DC 3.3V	Sean	See note 1
9.	Antenna Requirement	---	---	---	See note 1
10.	Dynamic Frequency Selection	1	DC 3.3V	Sean	See note 1

Note:

1. The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35℃, 30~70%, 86~106kPa.
2. AC 120V 60Hz is come from the PC.

11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	±2.52 dB	---
2.	Radiated Emission Test	9KHz ~ 30MHz	±2.60 dB	---
		30MHz ~ 1GHz	±4.68 dB	---
		1GHz ~ 18GHz	±5.14 dB	---
		18GHz ~ 40GHz	±5.14 dB	---
3.	RF Conducted Test	10Hz ~ 40GHz	±1.06 dB	---

Note:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The measurement uncertainly levels above are estimated and calculated according to CISPR 16-4-2.
3. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

12. Sample Calculations

Conducted Emission						
Freq. (MHz)	**Reading Level (dBuV)**	**Correct Factor (dB)**	**Measurement (dBuV)**	**Limit (dBuV)**	**Over (dB)**	**Detector**
0.1900	30.10	10.60	40.70	79.00	-38.30	QP

Where,

Freq.	= Emission frequency in MHz
Reading Level	= Spectrum Analyzer/Receiver Reading
Corrector Factor	= Insertion loss of LISN + Cable Loss + RF Switching Unit attenuation
Measurement	= Reading + Corrector Factor
Limit	= Limit stated in standard
Margin	= Measurement - Limit
Detector	= Reading for Quasi-Peak / Average / Peak

Radiated Spurious Emissions and Restricted Bands						
Freq. (MHz)	**Reading Level (dBuV)**	**Correct Factor (dB/m)**	**Measurement (dBuV/m)**	**Limit (dBuV/m)**	**Over (dB)**	**Detector**
60.0700	45.88	-18.38	27.50	49.00	-21.50	QP

Where,

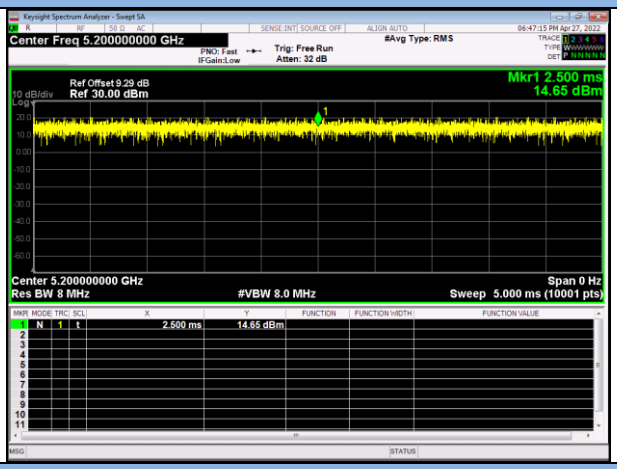
Freq.	= Emission frequency in MHz
Reading Level	= Spectrum Analyzer/Receiver Reading
Corrector Factor	= Antenna Factor + Cable Loss - Pre-amplifier
Measurement	= Reading + Corrector Factor
Limit	= Limit stated in standard
Over	= Margin, which calculated by Measurement - Limit
Detector	= Reading for Quasi-Peak / Average / Peak

Note: For all conducted test items, the spectrum analyzer offset or transducer is derived from RF cable loss and attenuator factor. The offset or transducer is equal to the RF cable loss plus attenuator factor.

13. Duty cycle

Operation Band (MHz)	Mode	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	1/T minimum VBW (kHz)	Duty Cycle Factor (dB)
U-NII-1	802.11a	-	-	100.00%	1.00	0
	802.11n(HT20)	-	-	100.00%	1.00	0
	802.11n(HT40)	-	-	100.00%	1.00	0
	802.11ac(VHT20)	-	-	100.00%	1.00	0
	802.11ac(VHT40)	-	-	100.00%	1.00	0
	802.11ac(VHT80)	-	-	100.00%	1.00	0
	802.11ax(HE20)	-	-	100.00%	1.00	0
	802.11ax(HE40)	-	-	100.00%	1.00	0
	802.11ax(HE80)	-	-	100.00%	1.00	0
U-NII-2A	802.11a	-	-	100.00%	1.00	0
	802.11n(HT20)	-	-	100.00%	1.00	0
	802.11n(HT40)	-	-	100.00%	1.00	0
	802.11ac(VHT20)	-	-	100.00%	1.00	0
	802.11ac(VHT40)	-	-	100.00%	1.00	0
	802.11ac(VHT80)	-	-	100.00%	1.00	0
	802.11ax(HE20)	-	-	100.00%	1.00	0
	802.11ax(HE40)	-	-	100.00%	1.00	0
	802.11ax(HE80)	-	-	100.00%	1.00	0
U-NII-2C	802.11a	-	-	100.00%	1.00	0
	802.11n(HT20)	-	-	100.00%	1.00	0
	802.11n(HT40)	-	-	100.00%	1.00	0
	802.11ac(VHT20)	-	-	100.00%	1.00	0
	802.11ac(VHT40)	-	-	100.00%	1.00	0
	802.11ac(VHT80)	-	-	100.00%	1.00	0
	802.11ax(HE20)	-	-	100.00%	1.00	0
	802.11ax(HE40)	-	-	100.00%	1.00	0
	802.11ax(HE80)	-	-	100.00%	1.00	0

Operation Band (MHz)	Mode	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	1/T minimum VBW (kHz)	Duty Cycle Factor (dB)
U-NII-1	802.11a	-	-	100.00%	1.00	0
	802.11n(HT20)	-	-	100.00%	1.00	0
	802.11n(HT40)	-	-	100.00%	1.00	0
	802.11ac(VHT20)	-	-	100.00%	1.00	0
	802.11ac(VHT40)	-	-	100.00%	1.00	0
	802.11ac(VHT80)	-	-	100.00%	1.00	0
	802.11ax(HE20)	-	-	100.00%	1.00	0
	802.11ax(HE40)	-	-	100.00%	1.00	0
	802.11ax(HE80)	-	-	100.00%	1.00	0
U-NII-3	802.11a	-	-	100.00%	1.00	0
	802.11n(HT20)	-	-	100.00%	1.00	0
	802.11n(HT40)	-	-	100.00%	1.00	0
	802.11ac(VHT20)	-	-	100.00%	1.00	0
	802.11ac(VHT40)	-	-	100.00%	1.00	0
	802.11ac(VHT80)	-	-	100.00%	1.00	0
	802.11ax(HE20)	-	-	100.00%	1.00	0
	802.11ax(HE40)	-	-	100.00%	1.00	0
	802.11ax(HE80)	-	-	100.00%	1.00	0
Remark: Duty Cycle= (Ton/ Ton+off)*100% Duty Cycle factor=10*log(1/ Duty cycle)						

U-NII-1 Band
IEEE 802.11a

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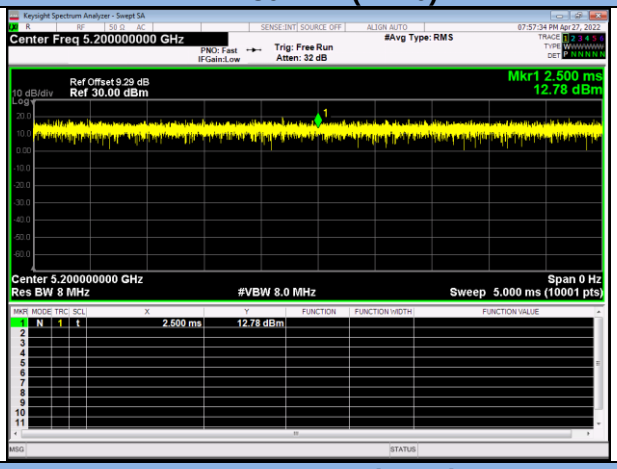
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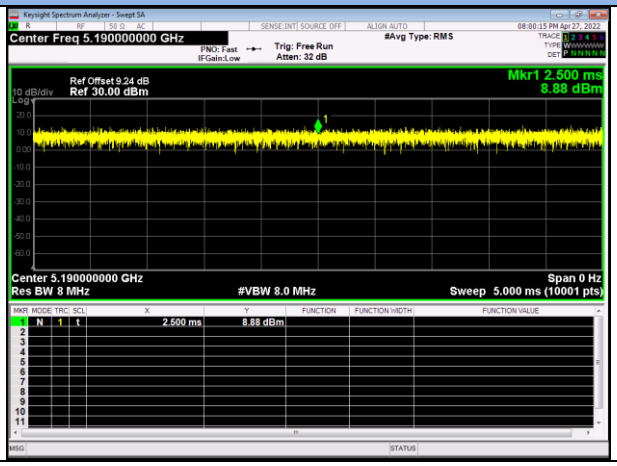

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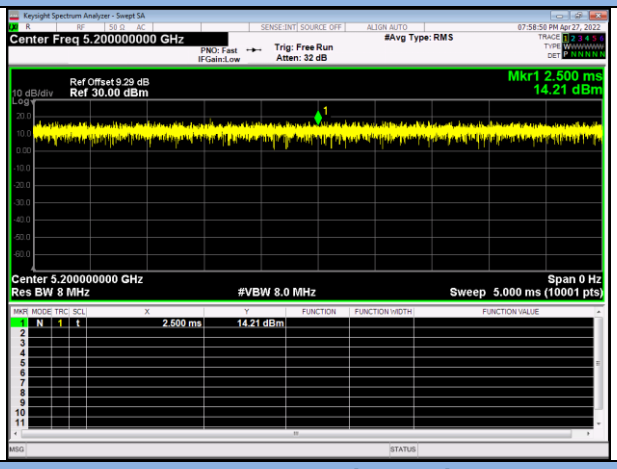
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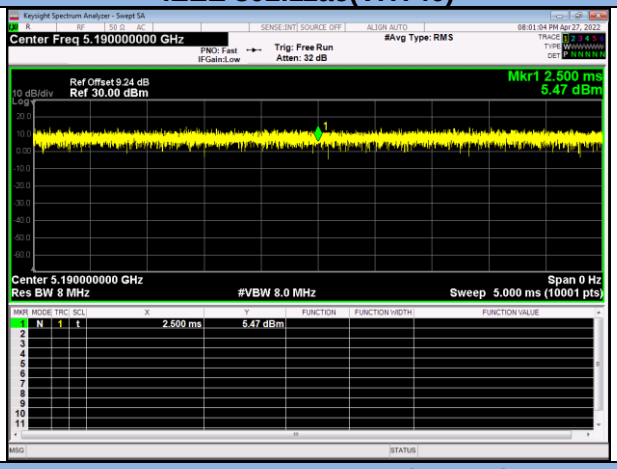
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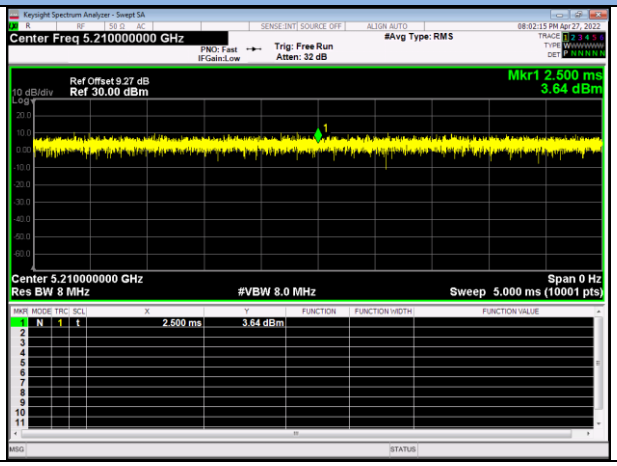

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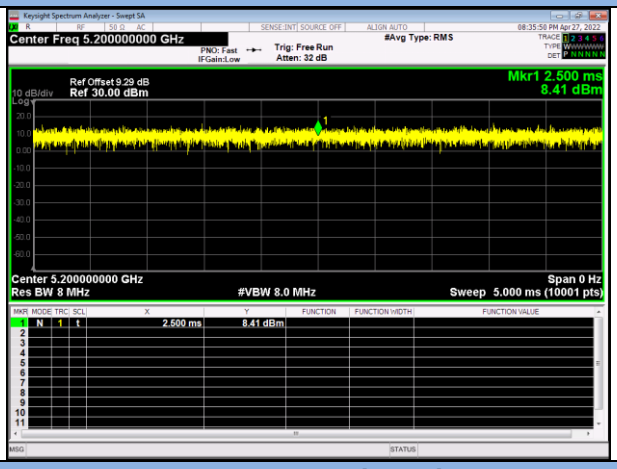
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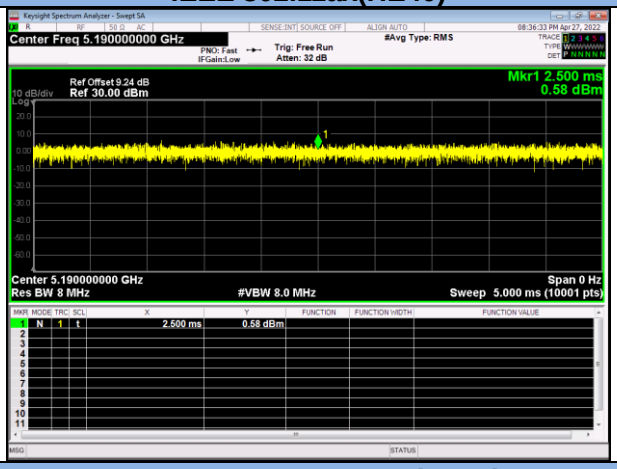
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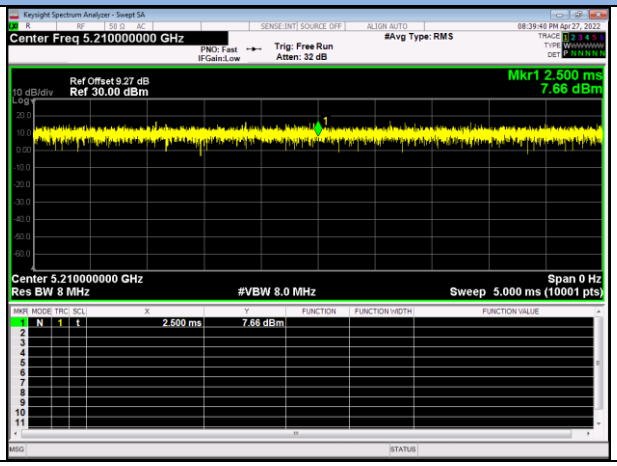
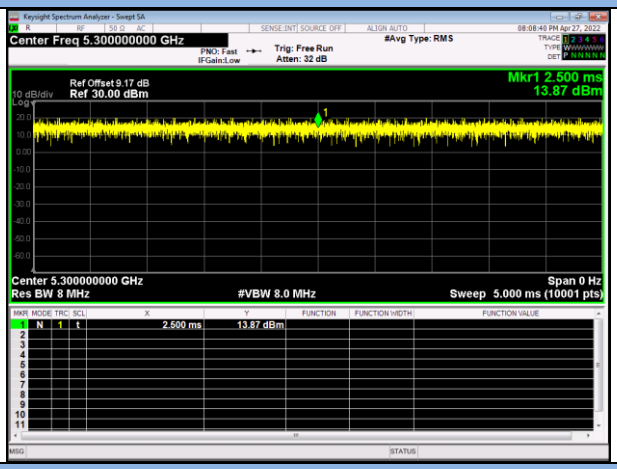


U-NII-2A Band
IEEE 802.11a

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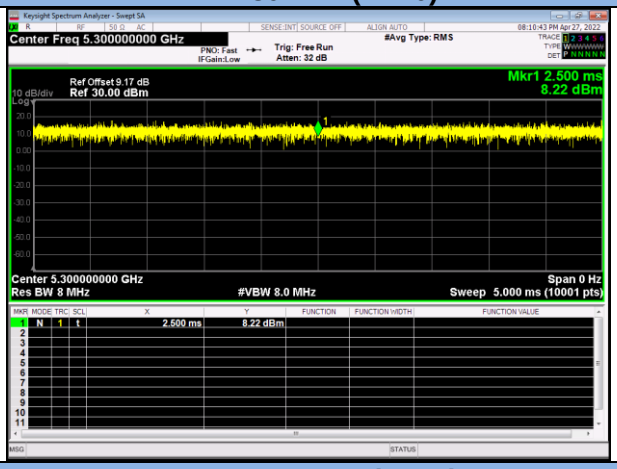
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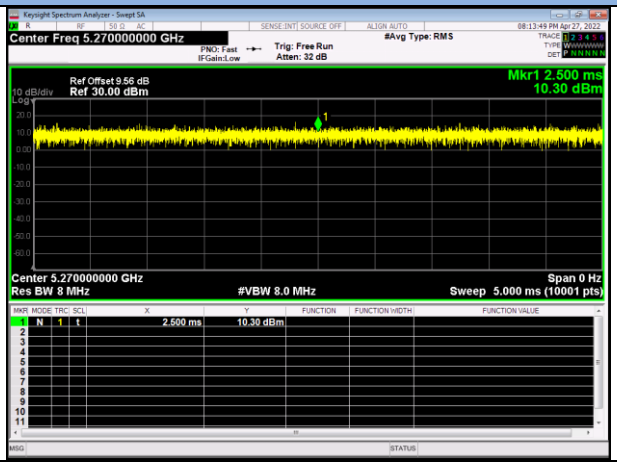
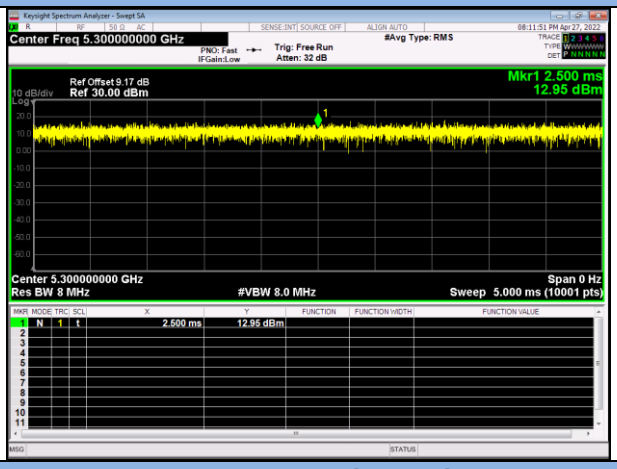


IEEE 802.11ac(VHT20)

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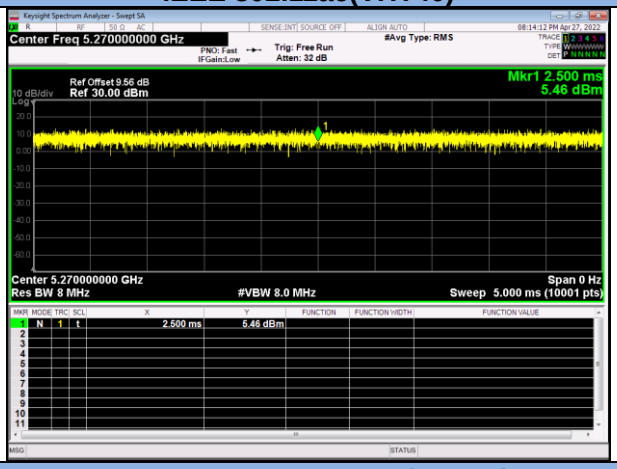
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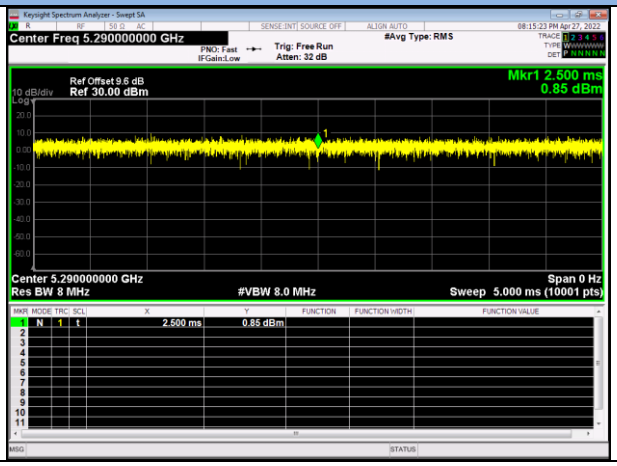
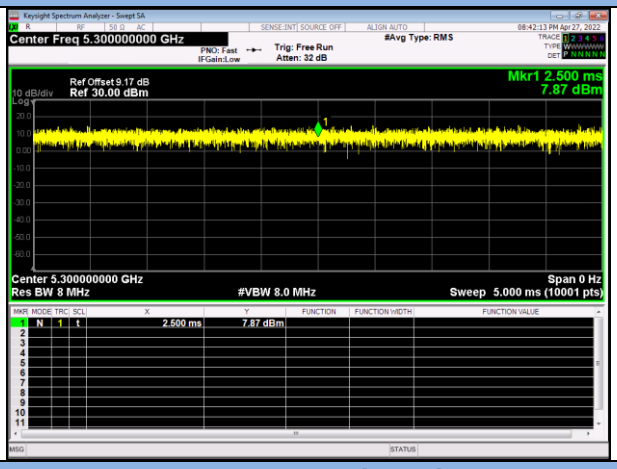


IEEE 802.11ax(HE20)

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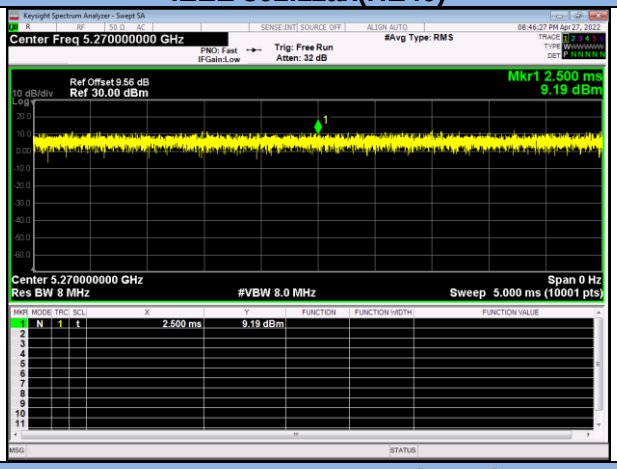
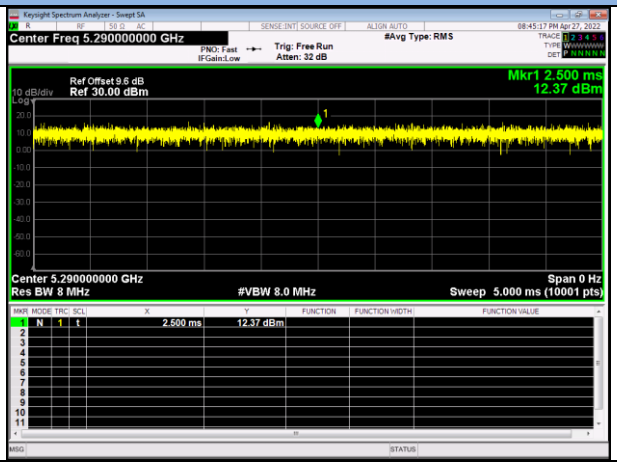
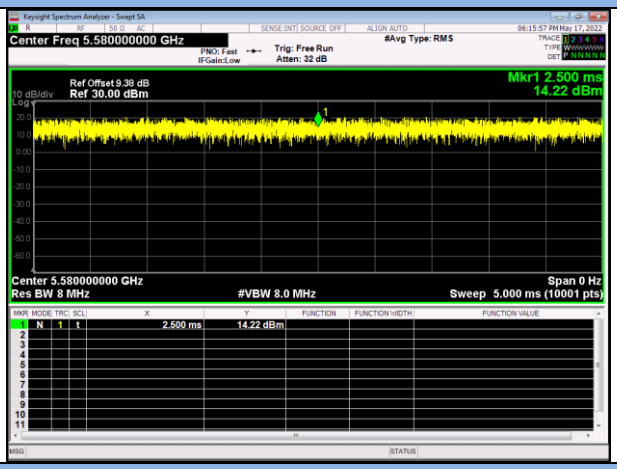
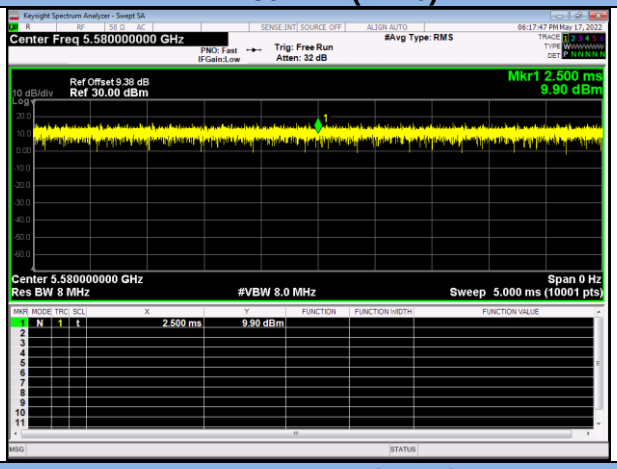
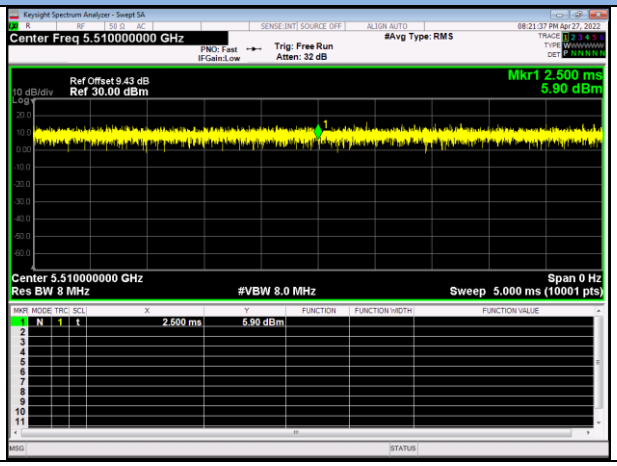
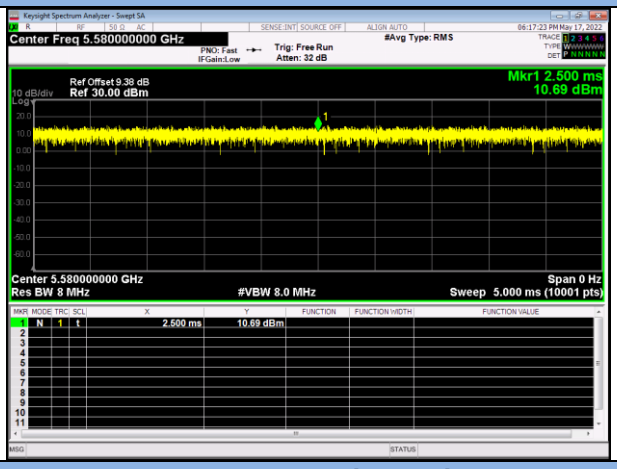
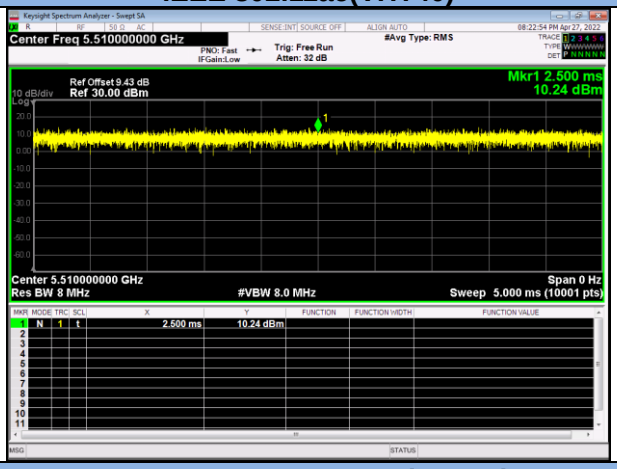
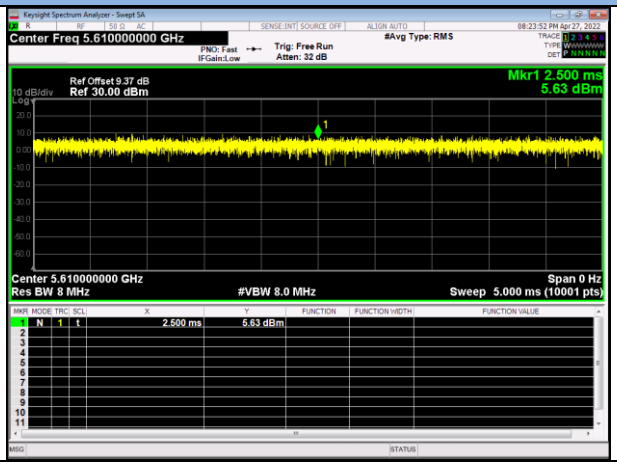
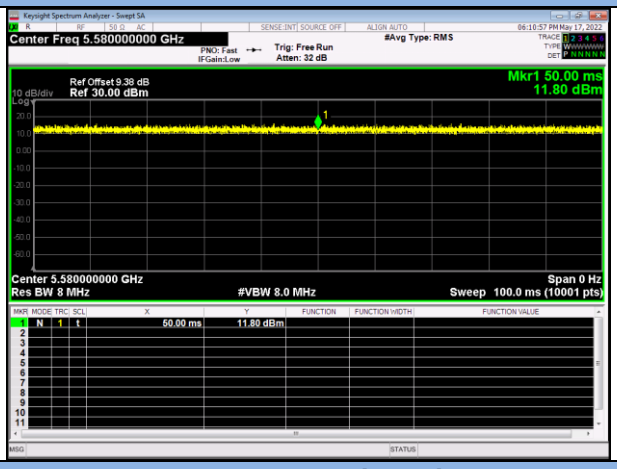

IEEE 802.11ax(HE80)


U-NII-2C Band
IEEE 802.11a

IEEE 802.11n(HT20)

802.11n(HT40)


IEEE 802.11ac(VHT20)

IEEE 802.11ac(VHT40)

IEEE 802.11ac(VHT80)


IEEE 802.11ax(HE20)

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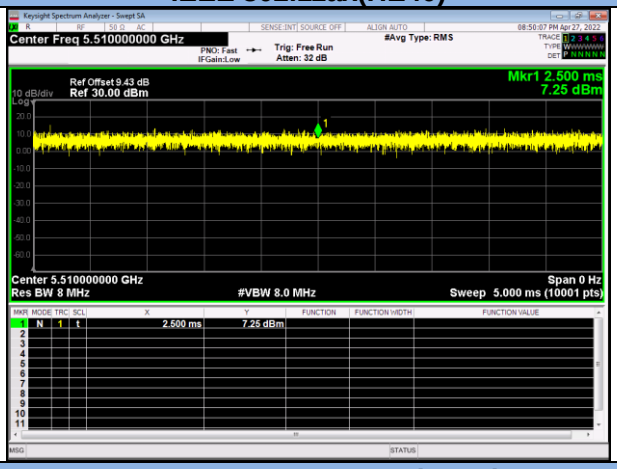
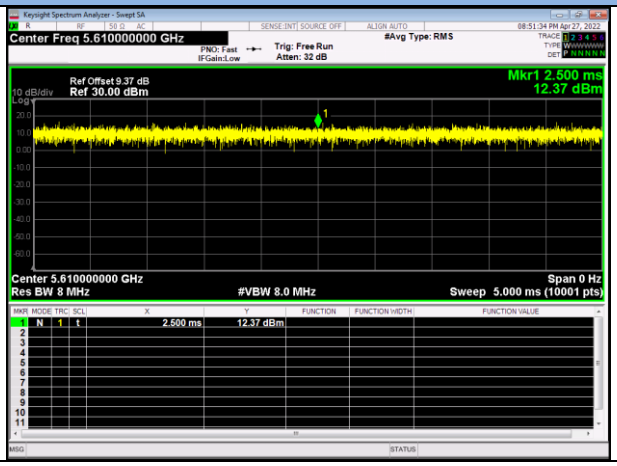
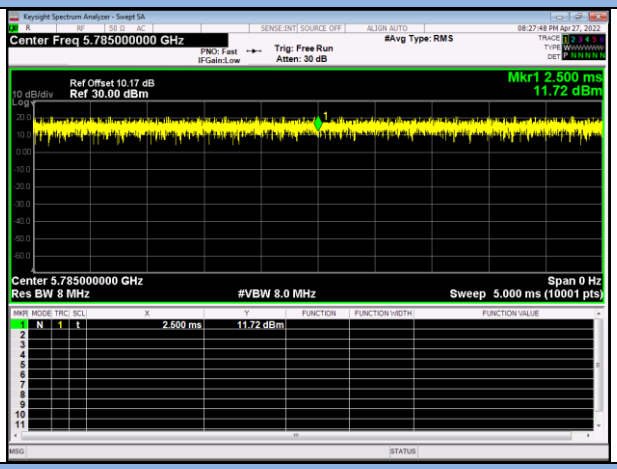
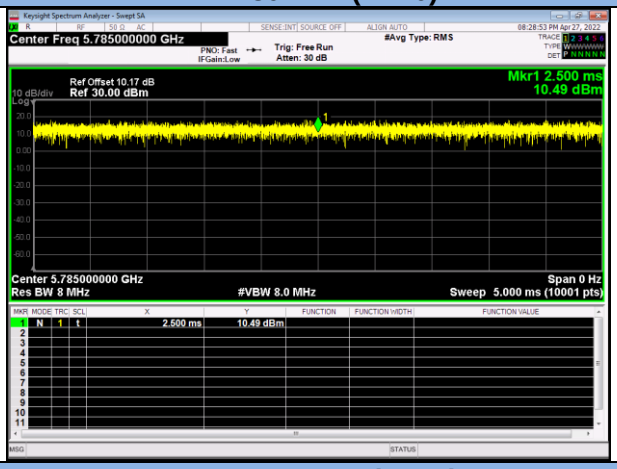
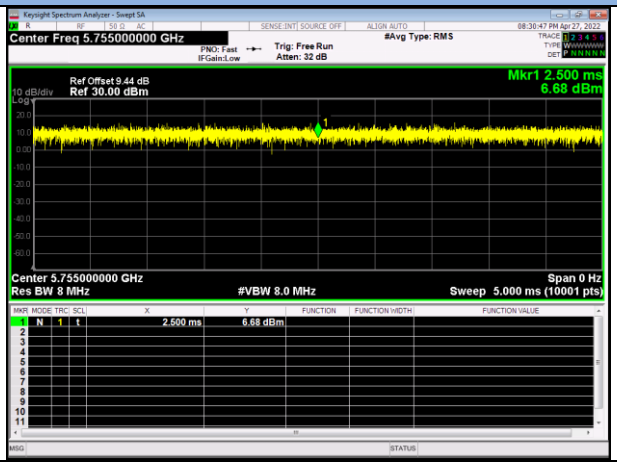
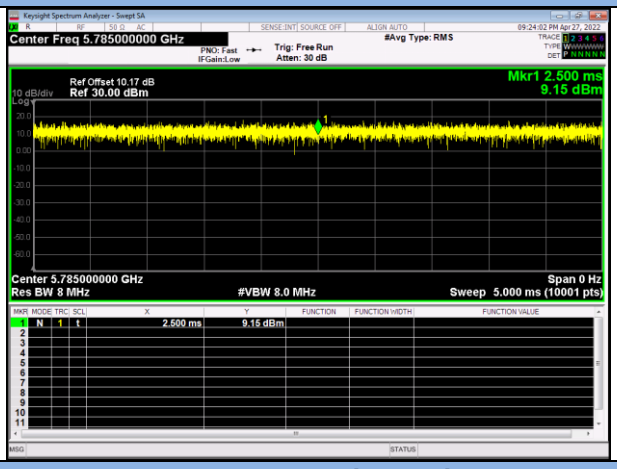
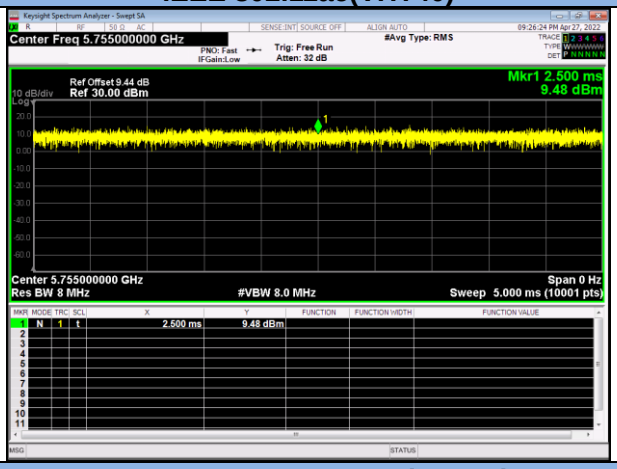
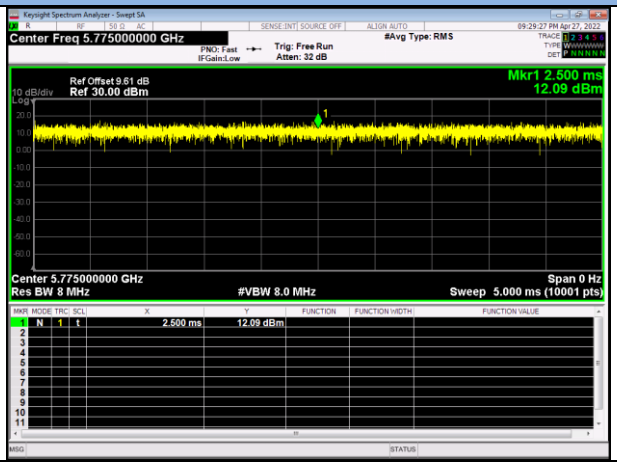
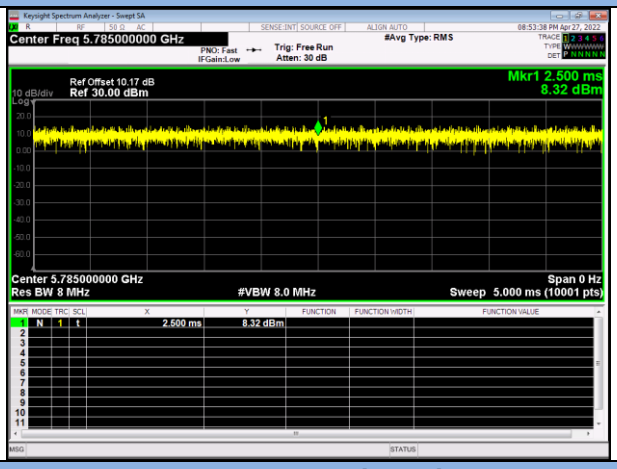
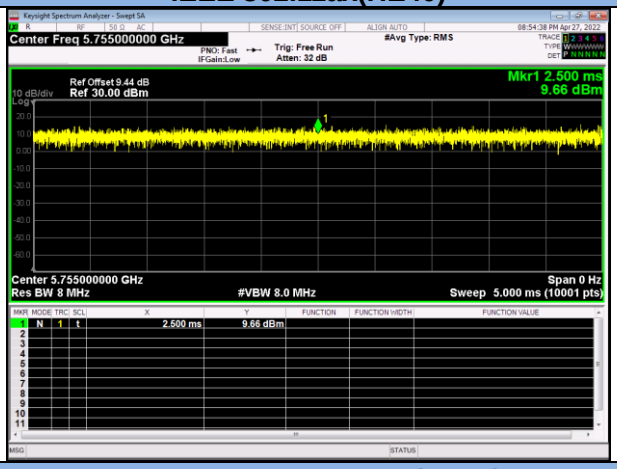
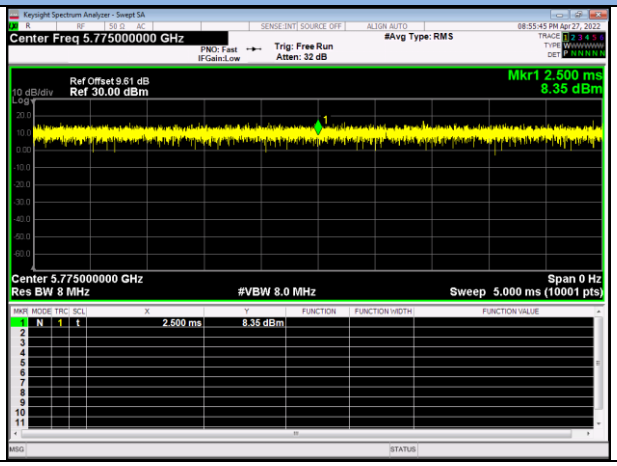

IEEE 802.11ax(HE80)


U-NII-3 Band
IEEE 802.11a

IEEE 802.11n(HT20)

802.11n(HT40)


IEEE 802.11ac(VHT20)

IEEE 802.11ac(VHT40)

IEEE 802.11ac(VHT80)


IEEE 802.11ax(HE20)

IEEE 802.11ax(HE40)

IEEE 802.11ax(HE80)


14. Test Items and Results

14.1 Conducted Emissions Measurement

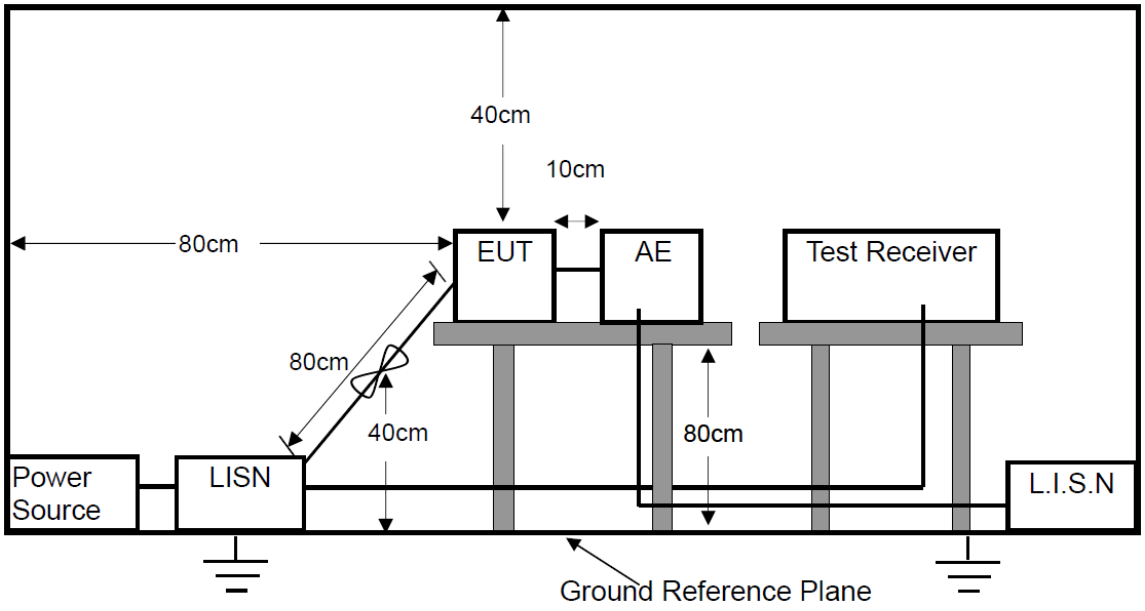
LIMITS

According to the requirements of FCC PART 15.207, the limits are as follows:

Frequency (MHz)	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

Note: 1. If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurements with the average detector are considered to be met.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz.

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

a. The EUT was placed on a wooden table 0.8m height from the metal ground plan and 0.4m from the conducting wall of the shielding room and it was kept at 0.8m from any other grounded conducting surface.

b. All I/O cables and support devices were positioned as per ANSI C63.10.

c. Connect mains power port of the EUT to a line impedance stabilization network (LISN).

d. Connect all support devices to the other LISN and AAN, if needed.

e. Scan the frequency range from 150KHz to 30MHz at both sides of AC line for maximum conducted interference checking and record the test data.

TEST RESULTS

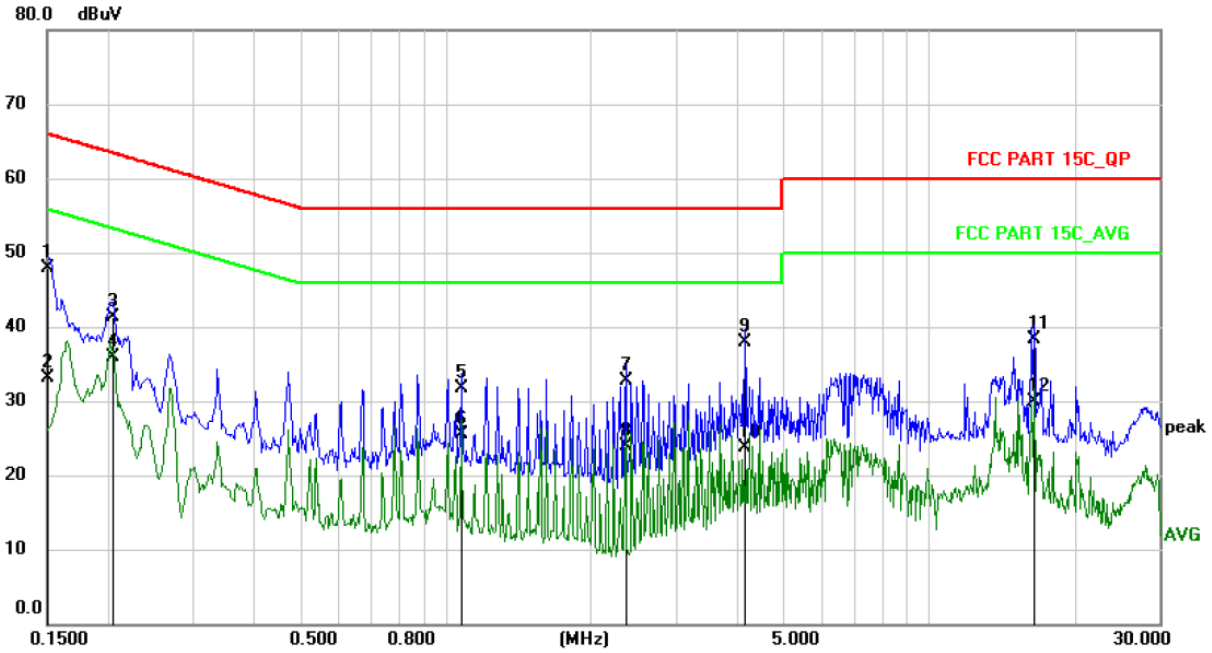
PASS

Please refer to the following pages.

M/N: 6252B-SR	Testing Voltage: AC 120V/60Hz
Phase: L1	Detector: QP & AVG
Test Mode: 2	

Conducted Emission Measurement

Date: 2022/4/22 Time: 18:39:06

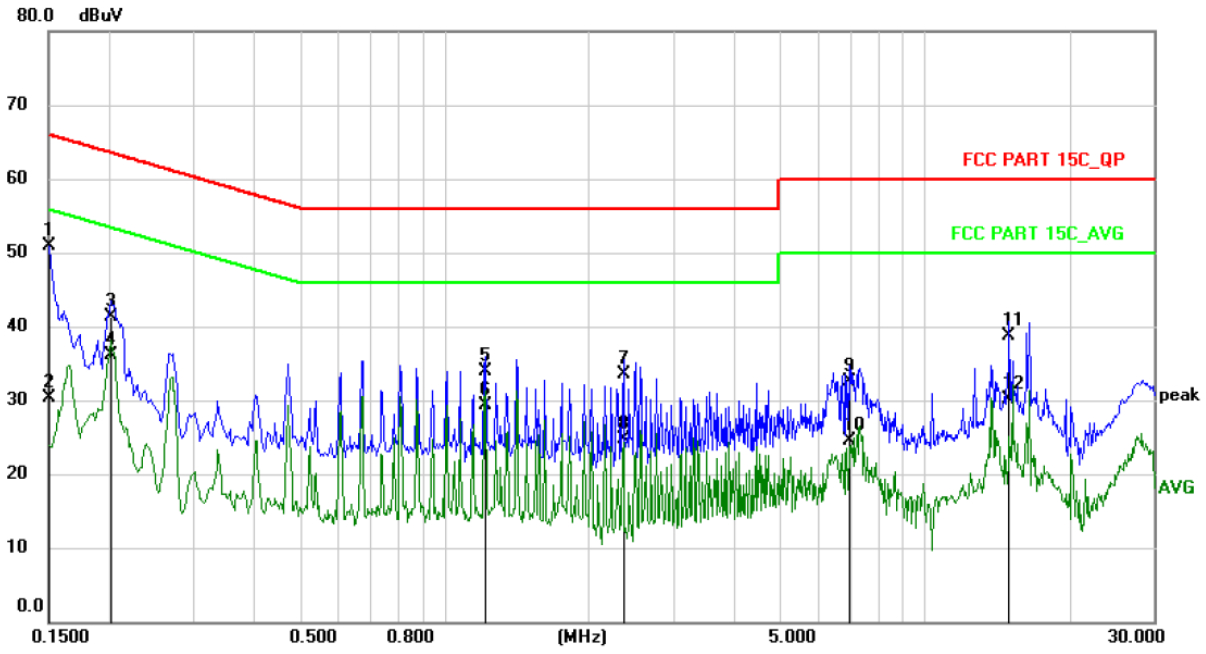


No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1500	37.20	10.80	48.00	66.00	-18.00	QP	
2	0.1500	22.40	10.80	33.20	56.00	-22.80	AVG	
3	0.2050	30.60	10.80	41.40	63.41	-22.01	QP	
4 *	0.2050	25.20	10.80	36.00	53.41	-17.41	AVG	
5	1.0766	20.90	10.80	31.70	56.00	-24.30	QP	
6	1.0766	14.80	10.80	25.60	46.00	-20.40	AVG	
7	2.3584	22.00	10.80	32.80	56.00	-23.20	QP	
8	2.3584	13.10	10.80	23.90	46.00	-22.10	AVG	
9	4.1574	27.10	10.80	37.90	56.00	-18.10	QP	
10	4.1574	12.90	10.80	23.70	46.00	-22.30	AVG	
11	16.4856	27.50	10.80	38.30	60.00	-21.70	QP	
12	16.4856	19.10	10.80	29.90	50.00	-20.10	AVG	

M/N: 6252B-SR	Testing Voltage: AC 120V/60Hz
Phase: N	Detector: QP & AVG
Test Mode: 2	

Conducted Emission Measurement

Date: 2022/4/22 Time: 18:44:06



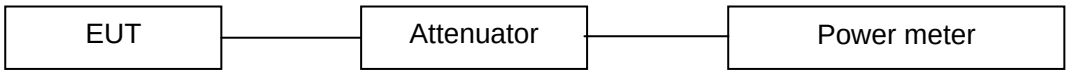
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	40.20	10.80	51.00	66.00	-15.00	QP	
2		0.1500	19.50	10.80	30.30	56.00	-25.70	AVG	
3		0.2017	30.60	10.80	41.40	63.54	-22.14	QP	
4		0.2017	25.30	10.80	36.10	53.54	-17.44	AVG	
5		1.2161	23.10	10.80	33.90	56.00	-22.10	QP	
6		1.2161	18.60	10.80	29.40	46.00	-16.60	AVG	
7		2.3584	22.70	10.80	33.50	56.00	-22.50	QP	
8		2.3584	13.90	10.80	24.70	46.00	-21.30	AVG	
9		6.9508	21.80	10.80	32.60	60.00	-27.40	QP	
10		6.9508	13.70	10.80	24.50	50.00	-25.50	AVG	
11		14.9860	27.90	10.80	38.70	60.00	-21.30	QP	
12		14.9860	19.30	10.80	30.10	50.00	-19.90	AVG	

14.2 Maximum Conducted Output Power Measurement

LIMITS

Operation Band	EUT category	Limit
☒5180~5240MHz	☐Outdoor Access Point	1 Watt (30dBm) (Max. e.i.r.p ≤ 125mW(21dBm) at any elevation angle above 30 degrees as measured from the horizon)
	☐Fixed point-to-point Access Point	1 Watt (30dBm)
	☐Indoor Access Point	1 Watt (30dBm)
	☒Mobile and Portable client device	250mW (24dBm)
☒5260~5320MHz	-	250mW (24dBm)
☒5500~5700MHz	-	250mW (24dBm)
☒5745~5825MHz	-	1 Watt (30dBm)

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB789033 v02r01 for compliance testing of Unlicensed National Information Infrastructure (U-NII) Device -section (E) Maximum conducted output power.
3. Measurement using a power meter (PM) =b Method PM-G (Measurement using a gated RF average power meter).

TEST RESULTS

PASS

Please refer to the following table.

U-NII-1						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5180	6		14.798			24
Channel: 5200	6		14.395			24
Channel: 5240	6		14.210			24
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5180	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	23.40
	MCS 0	MCS 8	11.822	9.167	13.703	
Channel: 5200	MCS 0	MCS 8	12.277	9.447	14.098	23.40
Channel: 5240	MCS 0	MCS 8	10.885	9.411	13.220	23.40
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5190	MCS 0	MCS 8	11.599	9.112	13.541	23.40
Channel: 5230	MCS 0	MCS 8	11.443	9.558	13.612	23.40
IEEE 802.11ac (VHT20) Mode (OFDM7.42, Antenna Gain=3.59dBi)						
Channel: 5180	MCS 0	MCS 8	10.218	8.311	12.378	23.40
Channel: 5200	MCS 0	MCS 8	11.590	8.366	13.280	23.40
Channel: 5240	MCS 0	MCS 8	10.322	8.424	12.487	23.40
IEEE 802.11ac (VHT40) Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5190	MCS 0	MCS 8	10.95	8.152	12.783	23.40
Channel: 5230	MCS 0	MCS 8	10.697	8.541	12.762	23.40
IEEE 802.11ac (VHT80) Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5210	MCS 0	MCS 8	9.361	8.260	11.855	23.40

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 3.59dBi + 10log(2) = 6.61 dBi > 6 dBi, Therefore the limit drop of 0.60dBm.

U-NII-1						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11ax (HE20) Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5180	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	23.40
	MCS 0	MCS 8	9.124	7.001	11.199	
Channel: 5200	MCS 0	MCS 8	8.826	5.196	10.390	23.40
Channel: 5240	MCS 0	MCS 8	8.459	5.668	10.294	23.40
IEEE 802.11ax (HE40) Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5190	MCS 0	MCS 8	9.531	7.013	12.338	23.40
Channel: 5230	MCS 0	MCS 8	8.132	5.304	11.912	23.40
IEEE 802.11ax (HE80) Mode (OFDM, Antenna Gain=3.59dBi)						
Channel: 5210	MCS 0	MCS 8	7.814	7.417	10.633	23.40

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 3.59dBi + 10log(2) = 6.60 dBi > 6 dBi, Therefore the limit drop of 0.60dBm.

U-NII-2A						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5260	6		14.195			24
Channel: 5300	6		13.927			24
Channel: 5320	6		13.665			24
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5260	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	23.20
	MCS 0	MCS 8	11.301	9.223	13.395	
Channel: 5300	MCS 0	MCS 8	11.192	9.487	13.434	23.20
Channel: 5320	MCS 0	MCS 8	10.317	9.454	12.918	23.20
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5270	MCS 0	MCS 8	11.382	9.278	13.467	23.20
Channel: 5310	MCS 0	MCS 8	10.677	9.541	13.158	23.20
IEEE 802.11ac (VHT20) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5260	MCS 0	MCS 8	10.014	8.27	12.238	23.20
Channel: 5300	MCS 0	MCS 8	10.236	8.363	12.410	23.20
Channel: 5320	MCS 0	MCS 8	9.428	8.610	12.049	23.20
IEEE 802.11ac (VHT40) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5270	MCS 0	MCS 8	10.581	8.216	12.567	23.20
Channel: 5310	MCS 0	MCS 8	9.867	8.536	12.263	23.20
IEEE 802.11ac (VHT80) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5290	MCS 0	MCS 8	9.381	8.970	12.191	23.20

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 3.79dBi + 10log(2) = 6.80 dBi > 6 dBi, Therefore the limit drop of 0.80dBm.

U-NII-2A						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11ax (HE20) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5260	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	23.20
	MCS 0	MCS 8	8.518	5.446	10.257	
Channel: 5300	MCS 0	MCS 8	7.769	5.398	9.754	23.20
Channel: 5320	MCS 0	MCS 8	7.824	5.494	9.823	23.20
IEEE 802.11ax (HE40) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5270	MCS 0	MCS 8	8.402	6.812	10.689	23.20
Channel: 5310	MCS 0	MCS 8	8.026	6.661	10.410	23.20
IEEE 802.11ax (HE80) Mode (OFDM, Antenna Gain=3.79dBi)						
Channel: 5290	MCS 0	MCS 8	8.863	7.003	11.045	23.20.

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 3.79dBi + 10log(2) = 6.80 dBi > 6 dBi, Therefore the limit drop of 0.80dBm.

U-NII-2C						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5500	6		13.450			24
Channel: 5580	6		14.499			24
Channel: 5700	6		15.131			24
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5500	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	22.43
	MCS 0	MCS 8	11.468	9.664	13.670	
Channel: 5580	MCS 0	MCS 8	11.949	9.695	13.071	22.43
Channel: 5700	MCS 0	MCS 8	12.345	10.762	14.636	22.43
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5510	MCS 0	MCS 8	11.877	9.024	13.692	22.43
Channel: 5670	MCS 0	MCS 8	11.422	10.942	14.198	22.43
IEEE 802.11ac (VHT20) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5500	MCS 0	MCS 8	11.383	9.138	13.414	22.43
Channel: 5580	MCS 0	MCS 8	10.325	9.592	11.963	22.43
Channel: 5700	MCS 0	MCS 8	10.950	9.678	13.373	22.43
IEEE 802.11ac (VHT40) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5510	MCS 0	MCS 8	10.940	7.809	12.662	22.43
Channel: 5670	MCS 0	MCS 8	10.376	9.992	13.197	22.43
IEEE 802.11ac (VHT80) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5610	MCS 0	MCS 8	8.813	9.190	12.017	22.43

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 4.56dBi + 10log(2) =7.57 dBi > 6 dBi, Therefore the limit drop of 1.57dBm.

U-NII-2C						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11ax (HE20) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5500	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	22.43
	MCS 0	MCS 8	7.238	7.568	10.414	
Channel: 5580	MCS 0	MCS 8	7.807	6.971	8.947	22.43
Channel: 5700	MCS 0	MCS 8	8.981	6.700	11.000	22.43
IEEE 802.11ax (HE40) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5510	MCS 0	MCS 8	7.408	7.614	10.523	22.43
Channel: 5670	MCS 0	MCS 8	8.414	8.110	11.274	22.43
IEEE 802.11ax (HE80) Mode (OFDM, Antenna Gain=4.56dBi)						
Channel: 5610	MCS 0	MCS 8	7.606	7.627	10.626	22.43

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 4.56dBi + 10log(2) =7.57 dBi > 6 dBi, Therefore the limit drop of 1.57dBm.

U-NII-3						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11a Mode (OFDM, Antenna Gain=3.6dBi)						
Channel: 5745	6		14.655			30
Channel: 5785	6		15.054			30
Channel: 5825	6		14.923			30
IEEE 802.11n(HT20)Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5745	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	29.14
	MCS 0	MCS 8	12.260	11.604	14.955	
Channel: 5785	MCS 0	MCS 8	11.943	11.832	14.898	29.14
Channel: 5825	MCS 0	MCS 8	12.342	11.095	14.774	29.14
IEEE 802.11n(HT40) Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5755	MCS 0	MCS 8	11.895	11.552	14.738	29.14
Channel: 5795	MCS 0	MCS 8	11.966	11.496	14.748	29.14
IEEE 802.11ac (VHT20) Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5745	MCS 0	MCS 8	11.419	10.140	13.836	29.14
Channel: 5785	MCS 0	MCS 8	10.937	10.668	13.815	29.14
Channel: 5825	MCS 0	MCS 8	11.589	10.106	13.922	29.14
IEEE 802.11ac (VHT40) Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5755	MCS 0	MCS 8	11.465	10.465	14.004	29.14
Channel: 5795	MCS 0	MCS 8	11.701	10.543	14.170	29.14
IEEE 802.11ac (VHT80) Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5775	MCS 0	MCS 8	10.608	10.111	13.377	29.14

Note: 1. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

2. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

3. Directional Gain = 3.85dBi + 10log(2) =6.86 dBi > 6 dBi, Therefore the limit drop of 0.86dBm.

U-NII-3						
Frequency MHz	Data Rate Mbps		Average Output Power dBm			Limit dBm
IEEE 802.11ax (HE20) Mode (OFDM7.42, Antenna Gain=3.85dBi)						
Channel: 5180	SISO	MIMO	ANT_1 (SISO)	ANT_2 (SISO)	Ant_1+ANT_2 (MIMO)	29.14
	MCS 0	MCS 8	8.303	8.850	11.596	
Channel: 5200	MCS 0	MCS 8	8.817	7.689	11.300	29.14
Channel: 5240	MCS 0	MCS 8	8.635	7.177	10.976	29.14
IEEE 802.11ax (HE40) Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5190	MCS 0	MCS 8	7.599	7.377	10.500	29.14
Channel: 5230	MCS 0	MCS 8	8.286	7.321	10.842	29.14
IEEE 802.11ax (HE80) Mode (OFDM, Antenna Gain=3.85dBi)						
Channel: 5210	MCS 0	MCS 8	7.125	6.306	9.745	29.14

Note: 4. As for IEEE 802.11a mode, both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.

5. As for IEEE 802.11n/ac mode, EUT working in MIMO mode. Directional Gain for MIMO.

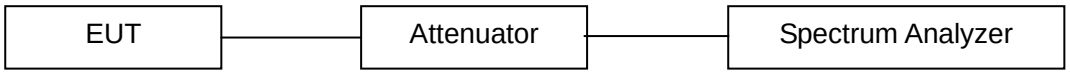
6. Directional Gain = 3.85dBi + 10log(2) = 6.86 dBi > 6 dBi, Therefore the limit drop of 0.86dBm.

14.3 6dB Bandwidth Measurement

LIMITS

The minimum 6dB bandwidth shall be at least 500 kHz

BLOCK DIAGRAM OF TEST SETUP



TEST PROCEDURES

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer was set as below according to ANSI C63.10 clause 11.8.1:

a. Set the RBW = 100KHz.

b. Set the VBW ≥ 3 x RBW

c. Set the Detector = peak.

d. Set the Sweep time = auto couple.

e. Set the Trace mode = max hold.

f. Allow trace to fully stabilize.

g. 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.

TEST RESULTS

PASS

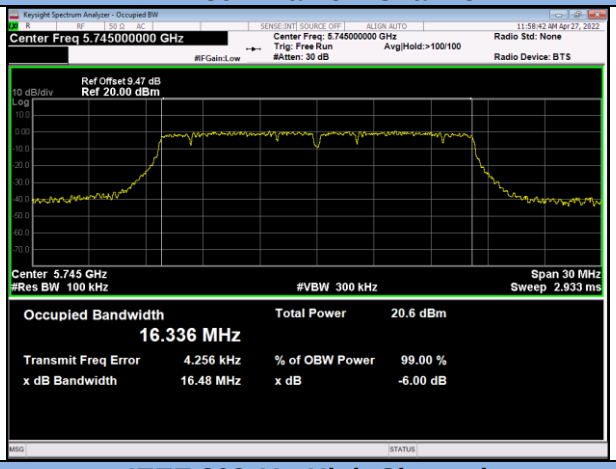
Please refer to the following tables.

U-NII-3 Band			
Frequency MHz	Data Rate Mbps	6dB Bandwidth MHz	Limit
IEEE 802.11a Mode (OFDM)			
Channel: 5745	6	16.48	>500KHz
Channel: 5785	6	16.49	>500KHz
Channel: 5825	6	16.47	>500KHz
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5745	MCS0	17.67	>500KHz
Channel: 5785	MCS0	17.66	>500KHz
Channel: 5825	MCS0	17.67	>500KHz
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5755	MCS0	36.52	>500KHz
Channel: 5795	MCS0	36.53	>500KHz
IEEE 802.11ac (VHT20) Mode (OFDM)			
Channel: 5745	MCS0	17.69	>500KHz
Channel: 5785	MCS0	17.68	>500KHz
Channel: 5825	MCS0	17.65	>500KHz
IEEE 802.11ac (VHT40) Mode (OFDM)			
Channel: 5755	MCS0	36.51	>500KHz
Channel: 5795	MCS0	36.52	>500KHz
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5775	MCS0	75.71	>500KHz
Note: Both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.			

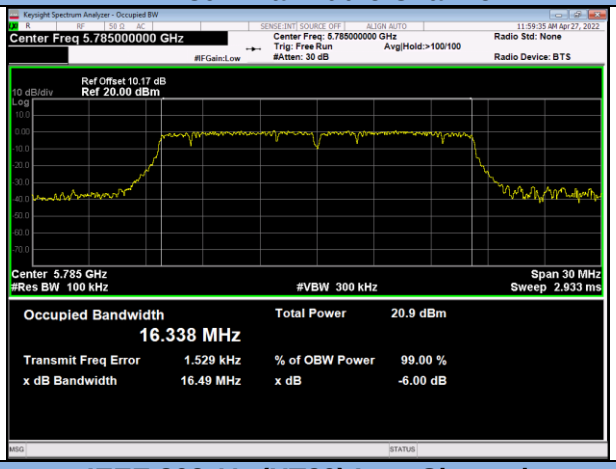
U-NII-3 Band			
Frequency MHz	Data Rate Mbps	6dB Bandwidth MHz	Limit
IEEE 802.11ax (HE20) Mode (OFDM)			
Channel: 5745	MCS0	19.02	>500KHz
Channel: 5785	MCS0	19.00	>500KHz
Channel: 5825	MCS0	18.98	>500KHz
IEEE 802.11ax (HE40) Mode (OFDM)			
Channel: 5755	MCS0	37.96	>500KHz
Channel: 5795	MCS0	38.02	>500KHz
IEEE 802.11ax (HE80) Mode (OFDM)			
Channel: 5775	MCS0	77.53	>500KHz
Note: Both of antennas have considered during pre-test, but only the worst case (ANT_1) was recorded.			

U-NII-3

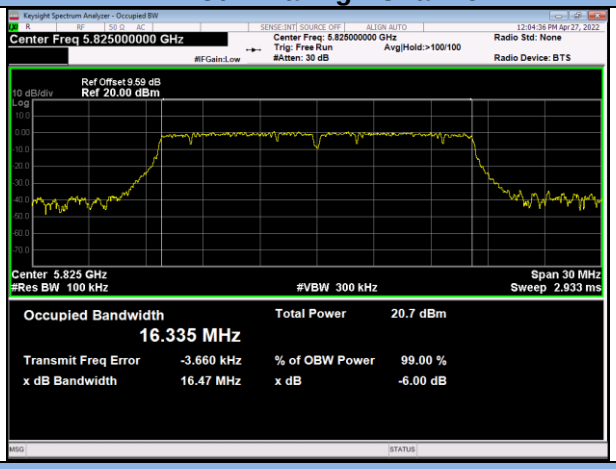
IEEE 802.11a Low Channel



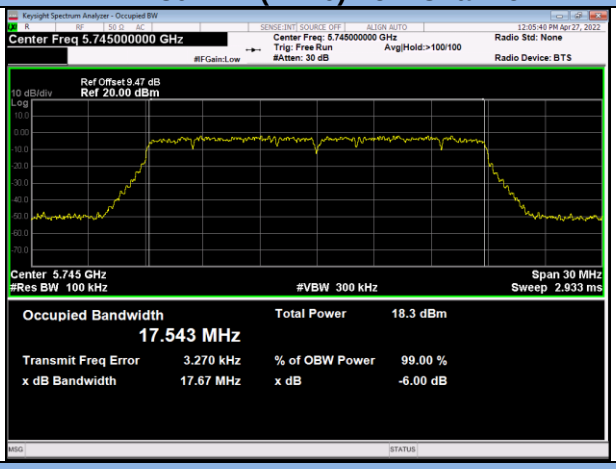
IEEE 802.11a Middle Channel



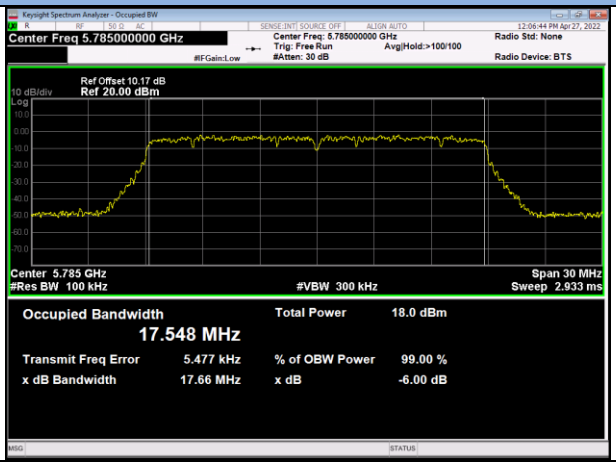
IEEE 802.11a High Channel



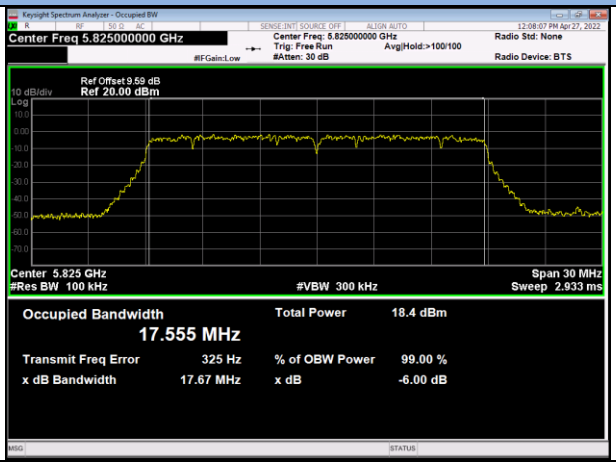
IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

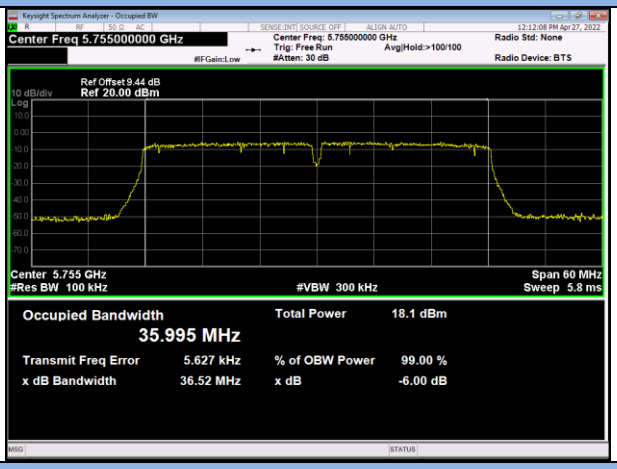


IEEE 802.11n(HT20) High Channel

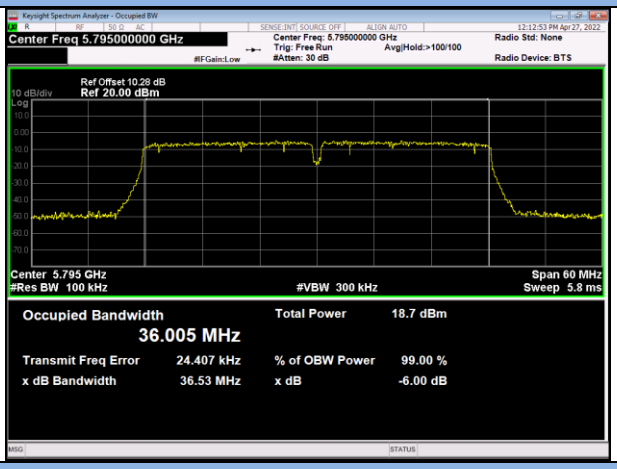


U-NII-3

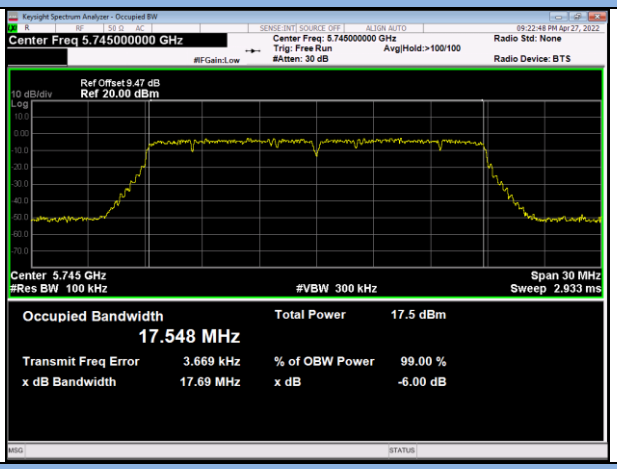
IEEE 802.11n(HT40) Low Channel



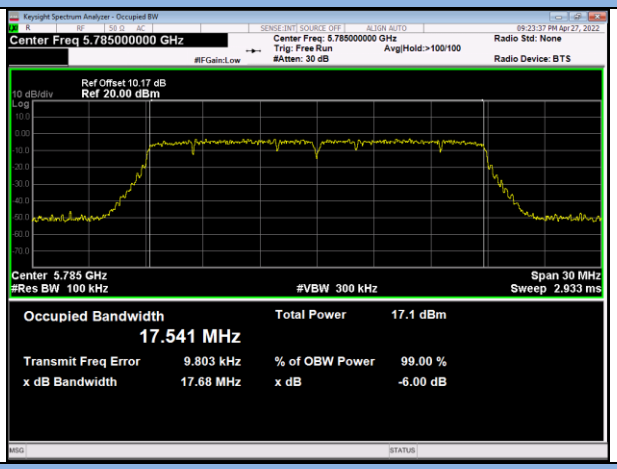
IEEE 802.11n(HT40) High Channel



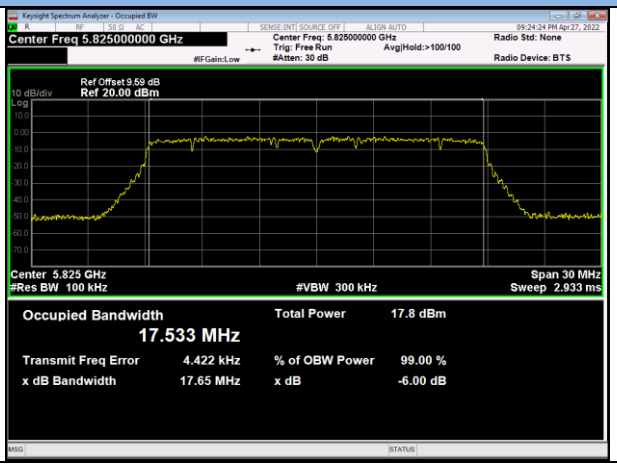
IEEE 802.11ac(VHT20) Low Channel



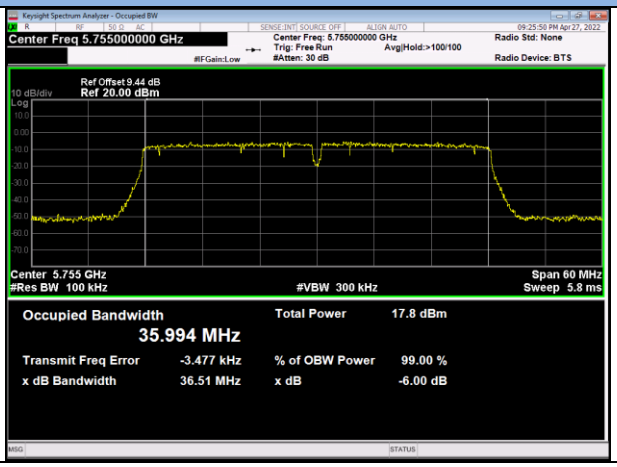
IEEE 802.11ac(VHT20) Middle Channel



IEEE 802.11ac(VHT20) High Channel

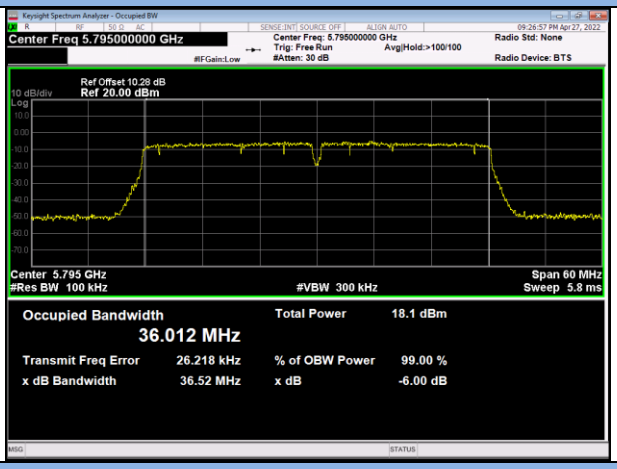


IEEE 802.11ac(VHT40) Low Channel

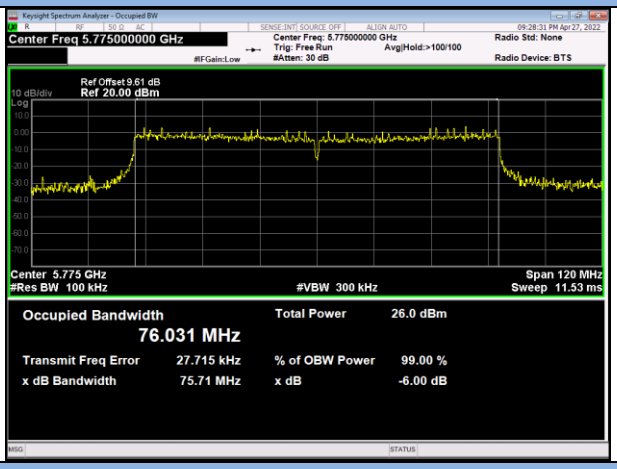


U-NII-3

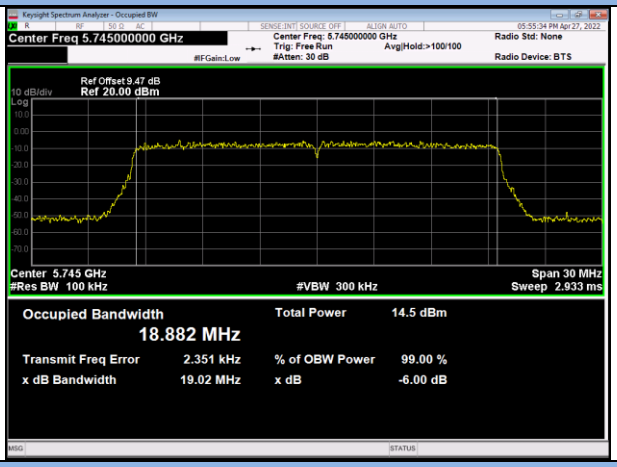
IEEE 802.11ac(VHT40) High Channel



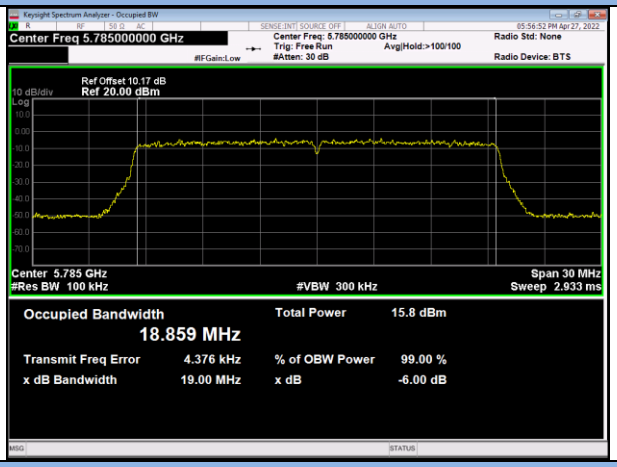
IEEE 802.11ac(VHT80)



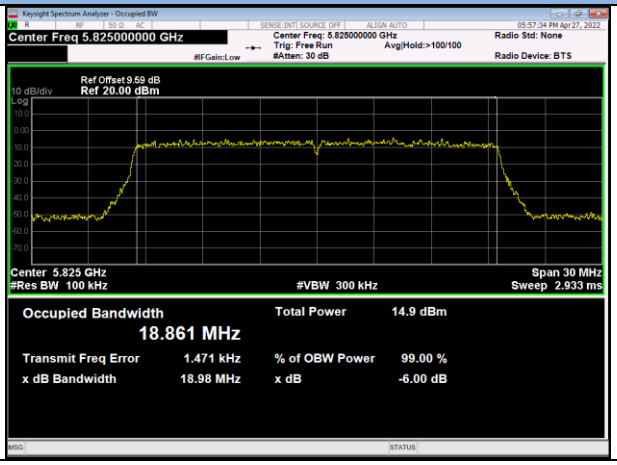
IEEE 802.11ax(HE20) Low Channel



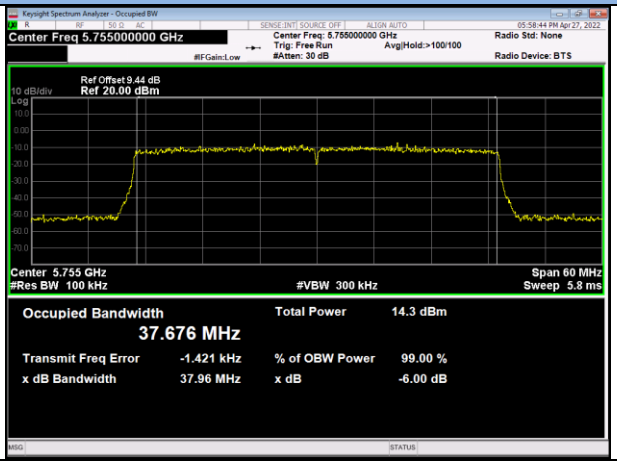
IEEE 802.11ax(HE20) Middle Channel



IEEE 802.11ax(HE20) High Channel



IEEE 802.11ax(HE40) Low Channel



U-NII-3	
IEEE 802.11ax(HE40) High Channel	**IEEE 802.11ax(HE80)**