

TEST REPORT



CTK Co., Ltd.
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Report No.:
CTK-2024-02776
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1. Applicant

- Name : Samsung Electronics Co Ltd
- Address : 19 Chapin Rd, Building D. Pine Brook, New Jersey, United States
- Date of Receipt : 2024-09-24

2. Manufacturer

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea

3. Factory

- Name #1: CHEMTRONICS CO.,LTD.
- Address #1: 35, Buk-ri, Namsa-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea
- Name #2: Chengdu Xuguang Technology Co., Ltd.
- Address #2: No.86 2nd Section, Park Road, Longquanyi District, Chengdu City, Sichuan Province, P.R.China
- Name #3: CHEMTROVINA COMPANY LIMITED
- Address #3: Nhon Trach 2 - Loc Khang IZ, Hiep Phuoc Town, Nhon Trach District, Dong Nai Province, Vietnam
- Name #4: SJIT CO., LTD.
- Address #4: 54-11, Dongtanhana 1gil, Hwaseong-si, Gyeonggi-Do, Korea
- Name #5: SJIT VINA Co., Ltd
- Address #5: Lot X2, Ho Nai Industrial Zone, Ho Nai 3 Commune, Trang Bom District, Dong Nai Province, Vietnam
- Name #6: XUGUANG TECHNOLOGY (VIETNAM) COMPANY LIMITED
- Address #6: Factory No. 4, Lot CN1, An Duong Industrial Park, Hong Phong Commune, An Duong District, Hai Phong City, Vietnam

4. Use of Report : For FCC Conformance

5. Test Sample / Model: Wi-Fi/BT Transceiver / WCF734M

6. Date of Test : 2024-10-02 to 2024-10-29

7. Test Standard(method) used : FCC 47 CFR part 15 subpart E 15.407

8. Testing Environment: refer to 12 page

9. Test Results : Compliance



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10. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

(Address : (Unhak-Dong) 5, Dongbu-ro 221beon-gil, Cheoin-gu, Yong-in-si,
Gyeonggi-do, Korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This report cannot be reproduced or copied without the written consent of CTK.

Approval	Tested by	Technical Manager
	Su-jun Hwang: (Signature)	Won-Jae Hwang: (Signature)

Remark. This report is not related to KOLAS accreditation and relevant regulation.

2024-10-29

CTK Co., Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2024-10-29	Issued (CTK-2024-02776)	all

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1. General Product Description

1.1 Applicant Information

Company	Samsung Electronics Co., Ltd.
Contact Point	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea
Contact Person	Name : Minhyung Cho E-mail : mh719.cho@samsung.com Tel : +82-31-277-2688 Fax : -

1.2 Product Information

FCC ID	A3LWCF734M	
Product Description	Wi-Fi/BT Transceiver	
Model name	WCF734M	
Variant Model name	-	
Operating Frequency	UNII 1	20 MHz_BW : 5 180 MHz – 5 240 MHz 40 MHz_BW : 5 190 MHz – 5 230 MHz 80 MHz_BW : 5 210 MHz
	UNII 2A	20 MHz_BW : 5 260 MHz – 5 320 MHz 40 MHz_BW : 5 270 MHz – 5 310 MHz 80 MHz_BW : 5 290 MHz
	UNII 2C	20 MHz_BW : 5 500 MHz – 5 720 MHz 40 MHz_BW : 5 510 MHz – 5 710 MHz 80 MHz_BW : 5 530 MHz – 5 690 MHz
	UNII 3	20 MHz_BW : 5 745 MHz – 5 825 MHz 40 MHz_BW : 5 755 MHz – 5 795 MHz 80 MHz_BW : 5 775 MHz
RF Output Power	802.11a : 19.34 dBm (85.901 mW) 802.11n_HT20 : 20.65 dBm (116.15 mW) 802.11n_HT40 : 21.32 dBm (135.52 mW) 802.11ac_VHT20 : 20.85 dBm (121.62 mW) 802.11ac_VHT40 : 21.26 dBm (133.66 mW) 802.11ac_VHT80 : 20.30 dBm (107.15 mW)	
Antenna Specification	Antenna type : Metal Antenna	
	UNII 1, UNII 2A	Peak Gain : 0.82 dBi (ANT L), 0.43 dBi (ANT R)
	UNII 2C, UNII 3	Peak Gain : 1.04 dBi (ANT L), 1.20 dBi (ANT R)
Antenna Configurations	802.11a : SISO(ANT L, ANT R) 802.11n : SISO(ANT L, ANT R), MIMO(ANT L+ANT R) 802.11ac : SISO(ANT L, ANT R), MIMO(ANT L+ANT R)	
Type of Modulation	802.11a/n/ac : OFDM	
Data Rate	802.11a : 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps 802.11n : up to 300 Mbps 802.11ac : up to 867 Mbps	
Power Source	DC 5 V	
Hardware Rev	WCF734M	
Software Rev	FC *0.*	

Dynamic Frequency Selection

Slave without radar detection

RF Power setting in Test SW

Mode	Band	Frequency	Power Setting Value		
			ANTR	ANTL	ANTR+ANTL
802.11a	UNII 1	5 180 MHz	15.5	13	
		5 200 MHz ~ 5 240 MHz		16	
	UNII 2A	5 260 MHz ~ 5 300 MHz	14.5	16	
		5 320 MHz		14	
	UNII 2C	5 500 MHz	14.5	12.5	
		5 700 MHz	13.5	11.5	
		Other	16	15	
	UNII 3	5 745 MHz ~ 5 825 MHz	16	16	
802.11n_HT20	UNII 1	5 180 MHz ~ 5 240 MHz			10
	UNII 2A	5 320 MHz			12.5
		Other			13
	UNII 2C	5 500 MHz			11
		5 700 MHz			9
		Other			13.5
	UNII 3	5 745 MHz ~ 5 825 MHz			15
802.11ac_VHT20	UNII 1	5 180 MHz ~ 5 240 MHz			10.5
	UNII 2A	5 260 MHz ~ 5 320 MHz			13.5
	UNII 2C	5 500 MHz			12
		5 700 MHz			10
		Other			13.5
	UNII 3	5 745 MHz ~ 5 825 MHz			15
802.11n_HT40	UNII 1	5 190 MHz			8.5
		5 230 MHz			14
	UNII 2A	5 270 MHz			15
		5 310 MHz			9.5
	UNII 2C	5 510 MHz			7.5
		5 670 MHz			11
		Other			15
	UNII 3	5 755 MHz ~ 5 795 MHz			15
802.11ac_VHT40	UNII 1	5 190 MHz			10
		5 230 MHz			14
	UNII 2A	5 270 MHz			15
		5 310 MHz			10
	UNII 2C	5 510 MHz			9
		5 670 MHz			13
		Other			15
	UNII 3	5 755 MHz ~ 5 795 MHz			15
802.11ac_VHT80	UNII 1	5 210 MHz			8.5
	UNII 2A	5 290 MHz			10.5
	UNII 2C	5 530 MHz			9
		Other			15
	UNII 3	5 775 MHz			14

1.3 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	15-bs563TU	CND7253R5S
AC/DC Adapter	HP	HSTNN-LA40	-
Note Computer	Samsung Electronics Co., Ltd.	NT550XEZ	5RNV9FCW400658Y
AC/DC Adapter	SOLUM VINA COMPANY LIMITED	EP-TA845 001	-
Note Computer	Samsung Electronics Co., Ltd.	NT550XEZ	5RNV9FCW400963T
AC/DC Adapter	SOLUM VINA COMPANY LIMITED	EP-TA845 001	-

1.4 Model Differences

Not applicable

2. Accreditations

2.1 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	CN : 8737A CAB ID : KR0025
KOREA	NRRA	KR0025

2.2 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

3. Test Specifications

3.1 Standards

FCC Part Section(s)	Requirement(s)	Limit	Status (Note 1)	Test Condition
15.407 (e)	6 dB Bandwidth	> 500 kHz (5 725 – 5 850 MHz)	C	Conducted
15.407 (a)	26 dB Bandwidth and 99% Bandwidth	NA	C	
15.407 (a)(1),(2),(3)	Conducted Output Power	< 250 mW (5 150 – 5 250 MHz) < 250 mW (5 250 – 5 350 MHz, 5 470 – 5 725 MHz) < 1 W (5 725 – 5 850 MHz)	C	
15.407 (a)(1),(2),(3)	Power Spectral Density	< 11 dBm/MHz (5 150 – 5 250 MHz) < 11 dBm/MHz (5 250 – 5 350 MHz, 5 470 – 5 725 MHz) < 30 dBm/500 KHz (5 725 – 5 850 MHz)	C	
15.407 (g)	Frequency Stability	NA	C	
15.407 (b)	Undesirable emission	< -27 dBm/MHz EIRP (5 150 – 5 250 MHz, 5 250 – 5 350 MHz, 5 470 – 5 725 MHz) < -27 dBm/MHz EIRP < 10 dBm/MHz EIRP < 15.6 dBm/MHz EIRP < 27 dBm/MHz EIRP (5 725 – 5 850 MHz)	C	Radiated
15.205, 15.407 (b)(9),(10)	Radiated Spurious Emission	15.209(a)	C	
15.407 (b)(9)	AC Conducted Emissions	15.207(a)	C	Line Conducted
<u>Note 1:</u> C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable				
<u>Note 2:</u> The data in this test report are traceable to the national or international standards.				
<u>Note 3:</u> The sample was tested according to the following specification: FCC Part 15.407, ANSI C63.10-2013				
<u>Note 4:</u> The tests were performed according to the method of measurements prescribed in KDB No.789033				

3.2 Mode of operation during the test

The EUT is operated in a manner representative of the typical of the equipments.
During at testing, system components were manipulated within the confines of typical usage to maximize each emission.

For WLAN function, the engineering test program was provided and enabled to make EUT continuous transmit.

All modulation modes were tests. The results are only attached worst cases.

Test Frequency & Bandwidth

- 802.11a, 802.11n_HT20, 802.11ac_VHT20

	Lowest channel	Middle channel	Highest channel
UNII 1	5 180 MHz	5 200 MHz	5 240 MHz
UNII 2A	5 260 MHz	5 300 MHz	5 320 MHz
UNII 2C	5 500 MHz	5 600 MHz	5 700 MHz, 5 720 MHz
UNII 3	5 745 MHz	5 785 MHz	5 825 MHz

- 802.11n_HT40, 802.11ac_VHT40

	Lowest channel	Middle channel	Highest channel
UNII 1	5 190 MHz	-	5 230 MHz
UNII 2A	5 270 MHz	-	5 310 MHz
UNII 2C	5 510 MHz	5 590 MHz	5 670 MHz, 5 710 MHz
UNII 3	5 755 MHz	-	5 795 MHz

- 802.11ac_VHT80

	Lowest channel	Middle channel	Highest channel
UNII 1	5 210 MHz	-	-
UNII 2A	5 290 MHz	-	-
UNII 2C	5 530 MHz	5 610 MHz	5 690 MHz
UNII 3	5 775 MHz	-	-

Test mode & Worst case

Test mode	Modulation	Data rate	Duty Cycle	Duty Cycle Factor
802.11a	OFDM	6 Mbps	97.89 %	0.09 dB
802.11n_HT20		MCS 0	97.74 %	0.10 dB
802.11n_HT40		MCS 0	95.00 %	0.22 dB
802.11ac_VHT20		MNSS 0	95.49 %	0.20 dB
802.11ac_VHT40		MNSS 0	91.17 %	0.40 dB
802.11ac_VHT80		MNSS 0	58.18 %	2.35 dB

3.3 Device Modifications

The following modifications were necessary for compliance:

Not applicable

3.4 Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
 Coverage factor $k = 2$, Confidence levels of 95 %

Description	Uncertainty
Conducted RF Output Power	1.5 dB (C.L.: Approx. 95 %, $k = 2$)
Power Spectral Density	1.5 dB (C.L.: Approx. 95 %, $k = 2$)
Occupied Bandwidth	0.1 MHz (C.L.: Approx. 95 %, $k = 2$)
Unwanted Emission(conducted)	3.0 dB (C.L.: Approx. 95 %, $k = 2$)
Radiated Emissions ($f \leq 1$ GHz)	3.82 dB (C.L.: Approx. 95 %, $k = 2$)
Radiated Emissions ($f > 1$ GHz)	4.50 dB (C.L.: Approx. 95 %, $k = 2$)
Line Conducted Emission	2.00 dB (C.L.: Approx. 95 %, $k = 2$)

3.5 Test Software

Conducted Test	Ics Pro Ver. 6.0.3
Radiated Test	EP5RE Ver. 6.0.1.0, ES10 Ver. 10.001
Line Conducted Test	EMC32 Ver. 10.50.00

Test program

Conducted Test, Radiated Test, Line Conducted Test	QATool_Dbg(0.0.1.85), WCN Combo Tool(2.1952.00)
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3.6 Testing Environment

Test Item	Test Date	Temperature (℃)	Relative Humidity (%)
6 dB Bandwidth	2024-10-29	24	50
26 dB Bandwidth and 99% Bandwidth	2024-10-29	24	50
Conducted Output Power	2024-10-29	24	50
Power Spectral Density	2024-10-29	24	50
Frequency Stability	2024-10-21	22	47
Radiated Emissions (1GHz Adobe)	2024-10-02 ~ 2024-10-28	22 ~ 24	43 ~ 54
Radiated Emissions (1GHz Below)	2024-10-03, 2024-10-17	21	47 ~ 48
AC Conducted Emissions	2024-10-17	22	49

4. Technical Characteristic Test

4.1 6dB Bandwidth

Test Procedures

KDB 789033 – Section C.2
ANSI C63.10-2013 - Section 6.9.2

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 Settings :

Center frequency = the highest, middle and the lowest channels

- a) RBW = 100 kHz
- b) VBW $\geq 3 \times$ RBW
- c) Detector = peak
- d) Trace mode = Max hold
- e) Sweep = auto couple
- 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.

Minimum Standard:

6 dB Bandwidth > 500 kHz

Test Data:

ANT L

	6 dB Bandwidth (MHz)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5 745 MHz	15.12	15.70	15.14
5 785 MHz	15.11	16.51	15.13
5 825 MHz	15.11	15.71	15.14
Measurement uncertainty	± 0.1 MHz		

	6 dB Bandwidth (MHz)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5 755 MHz	35.70	35.20
5 795 MHz	35.30	35.15
Measurement uncertainty	± 0.1 MHz	

	6 dB Bandwidth (MHz)
Mode	802.11ac_VHT80
Frequency	
5 775 MHz	76.41
Measurement uncertainty	± 0.1 MHz

ANT R

	6 dB Bandwidth (MHz)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5 745 MHz	15.33	15.11	15.67
5 785 MHz	15.10	15.12	15.13
5 825 MHz	15.12	15.12	15.13
Measurement uncertainty	± 0.1 MHz		

	6 dB Bandwidth (MHz)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5 755 MHz	35.49	35.43
5 795 MHz	35.44	35.20
Measurement uncertainty	± 0.1 MHz	

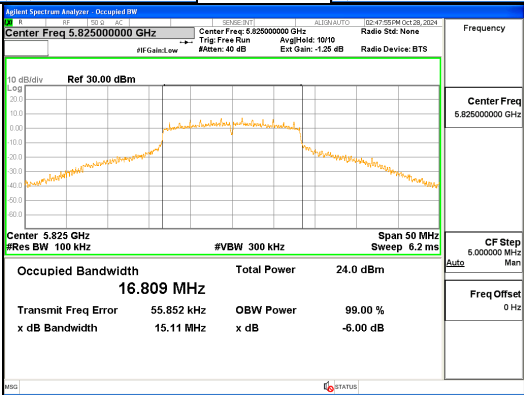
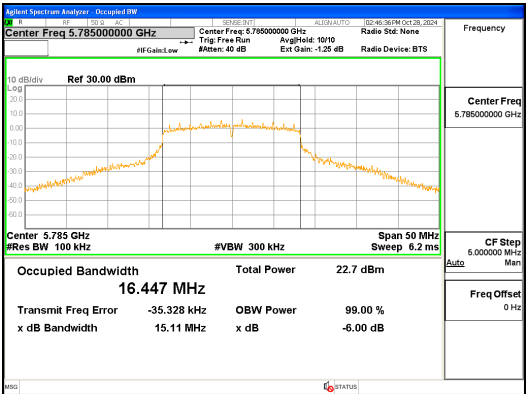
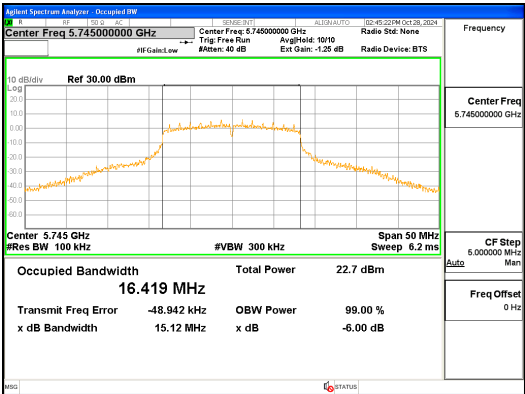
	6 dB Bandwidth (MHz)
Mode	802.11ac_VHT80
Frequency	
5 775 MHz	76.42
Measurement uncertainty	± 0.1 MHz

See next pages for actual measured spectrum plots.

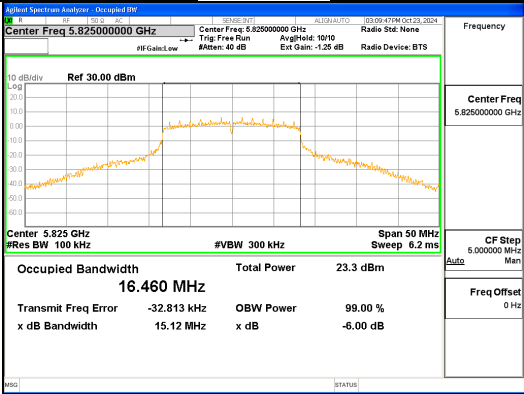
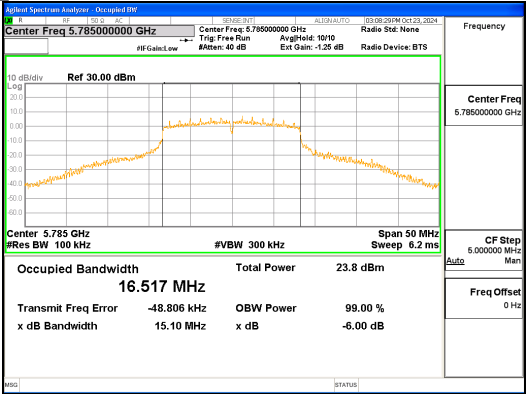
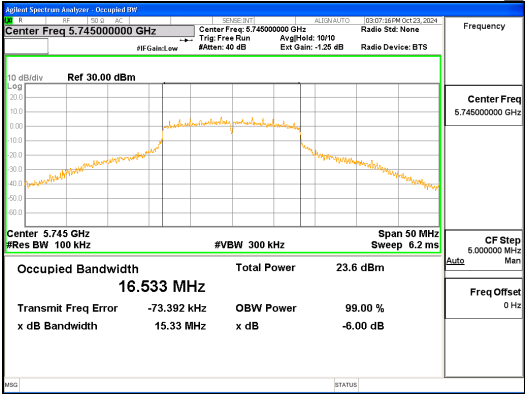


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ANT L_802.11a_UNII 3

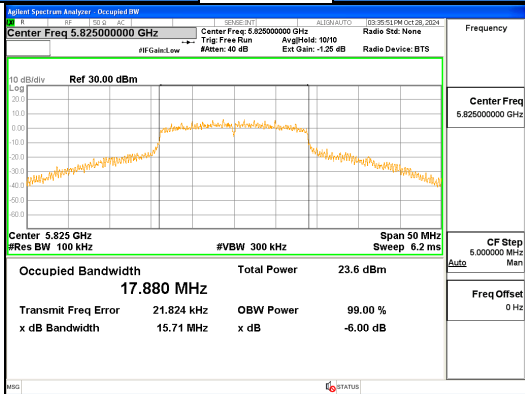
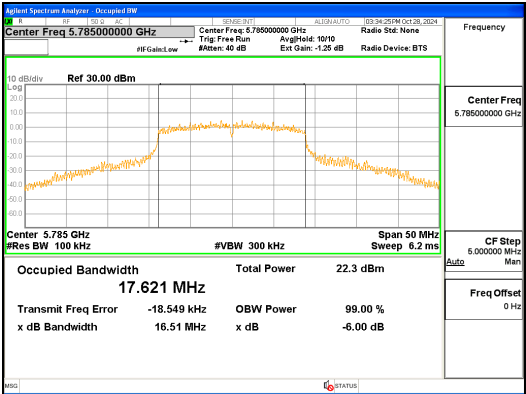
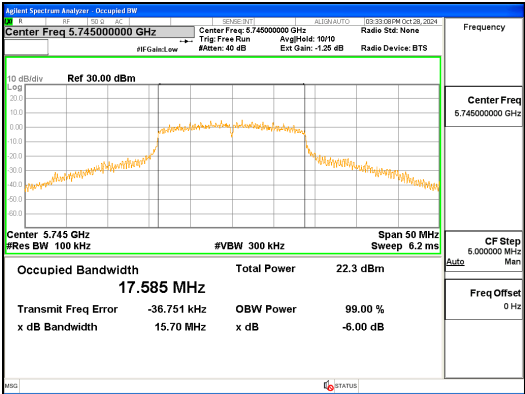


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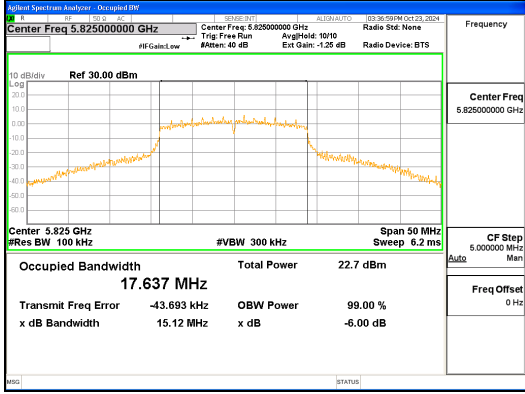
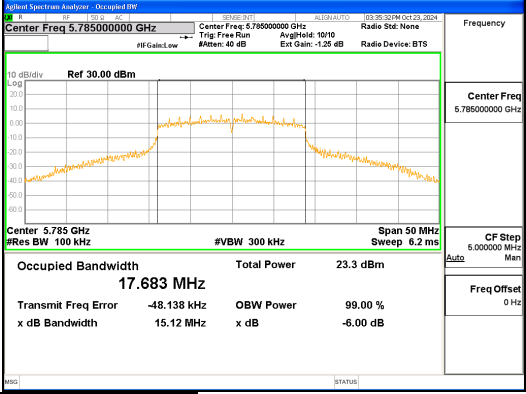
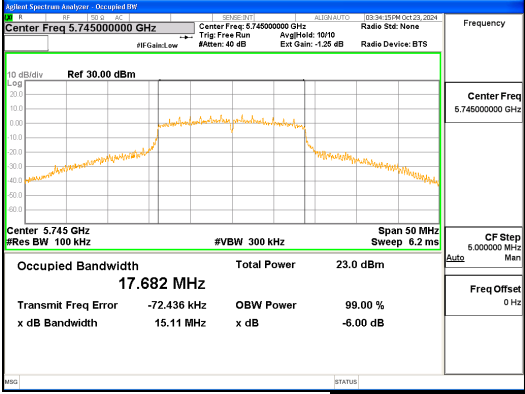


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ANT L_802.11n_HT20_UNII 3

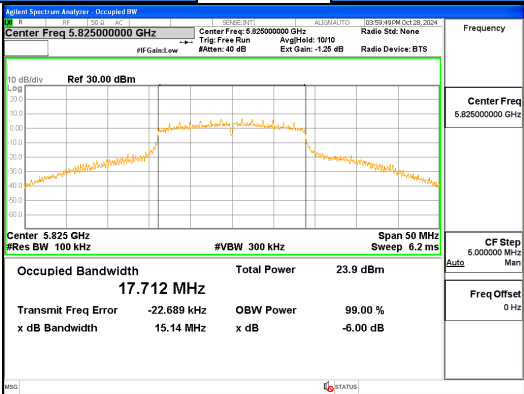
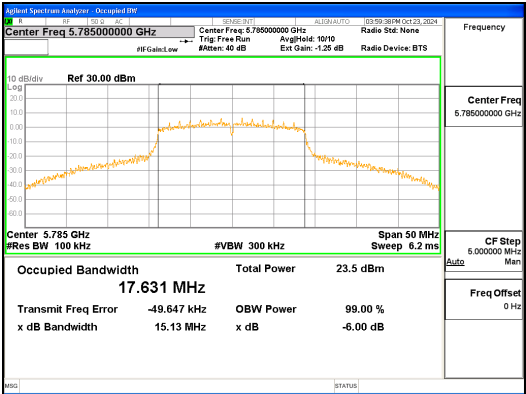
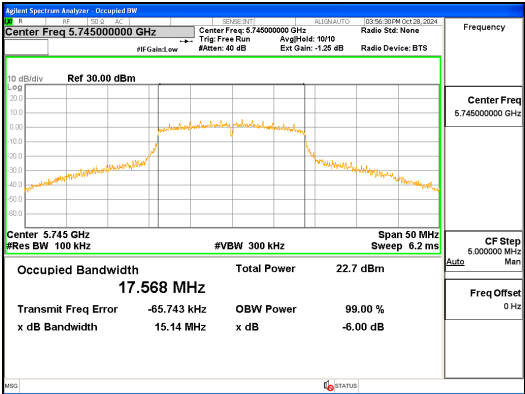


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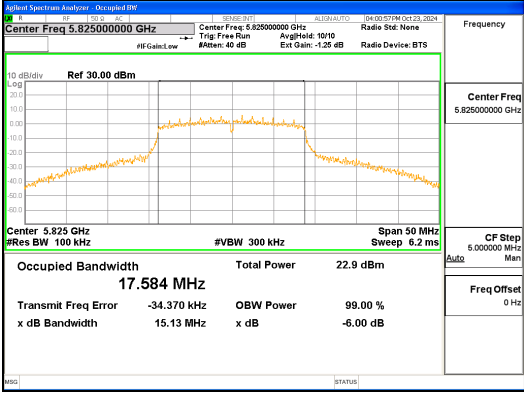
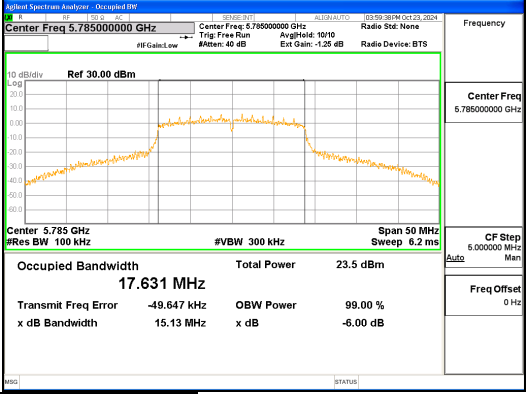
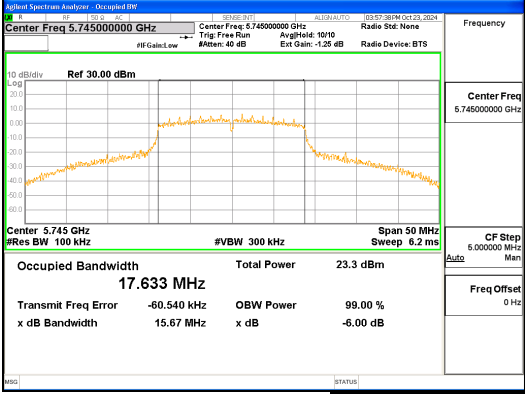


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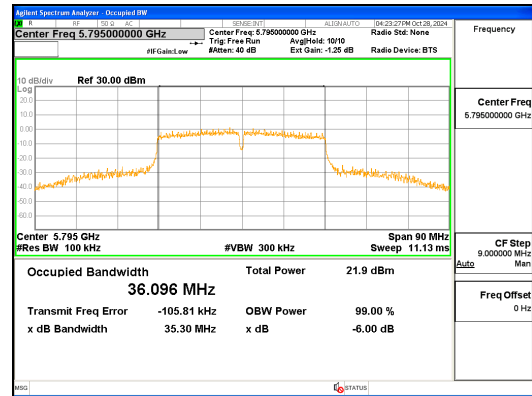
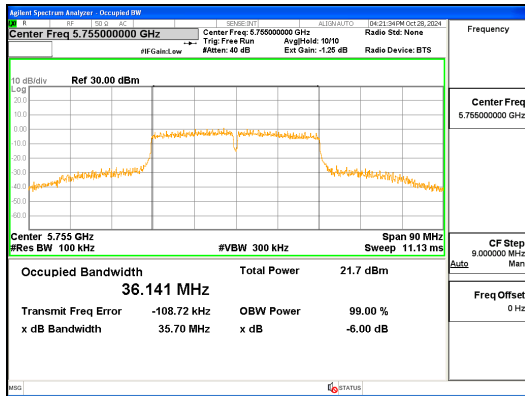


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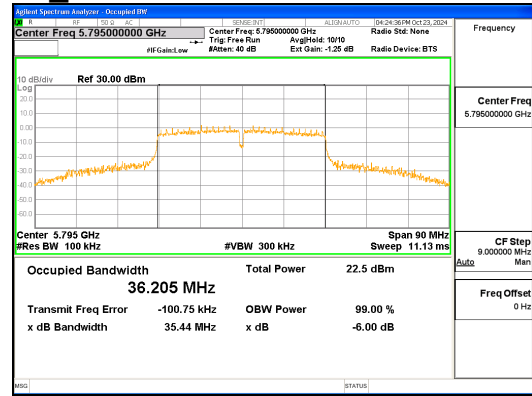
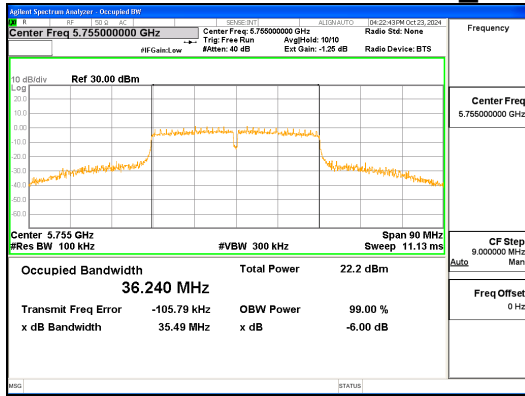


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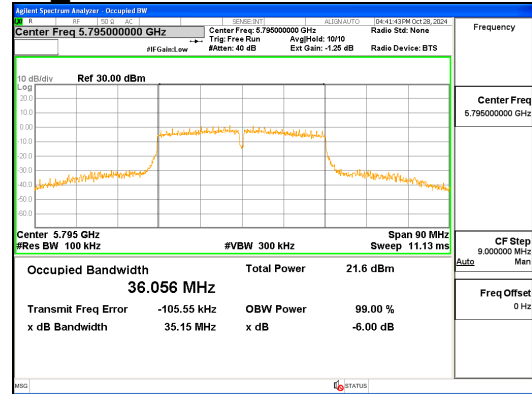
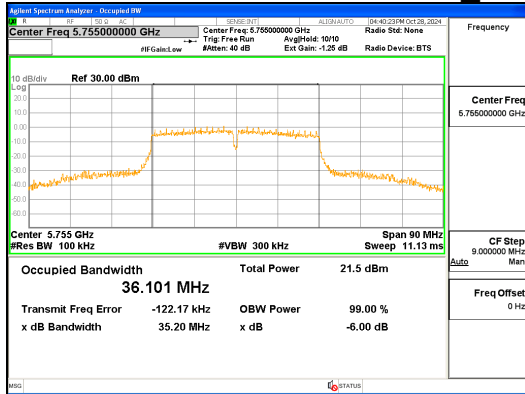
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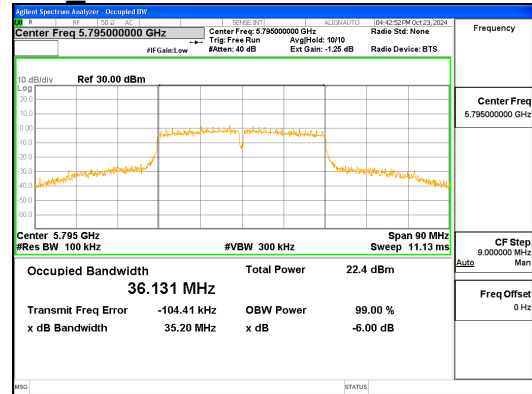
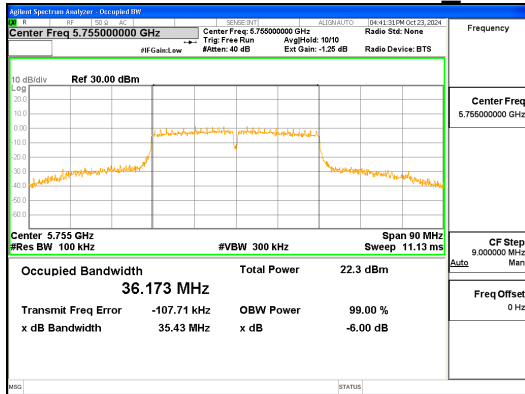
ANT L_802.11n_HT40_UNII 3



ANT R_802.11n_HT40_UNII 3



ANT L_802.11ac_VHT40_UNII 3

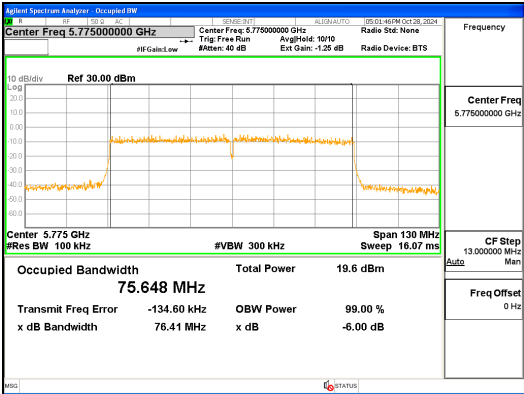


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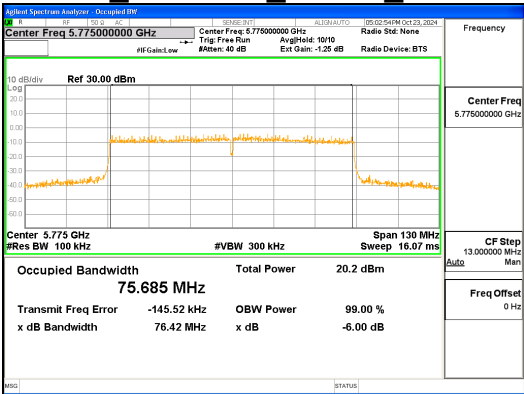


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ANT L_802.11ac_VHT80_UNII 3



ANT R_802.11ac_VHT80_UNII 3

4.2 26 dB Bandwidth and 99% Bandwidth

Test Procedures

KDB 789033 – Section C.1
ANSI C63.10-2013 - Section 6.9.2

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 26 dB relative to the maximum level measured in the fundamental emission.

Test Procedures

KDB 789033 – Section C.1
ANSI C63.10-2013 - Section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

Test Settings :

Center frequency = the highest, middle and the lowest channels

- a) RBW = approximately 1 % of the emission bandwidth
- b) VBW $\geq$ RBW
- c) Detector = peak
- d) Trace mode = Max hold
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Minimum Standard:

NA

Test Data:

ANT L

	26 dB Bandwidth and 99 % Bandwidth (MHz)					
Mode	802.11a		802.11n_HT20		802.11ac_VHT20	
Frequency	26 dB	99 %	26 dB	99 %	26 dB	99 %
5 180 MHz	19.97	16.48	19.81	17.52	19.94	17.55
5 200 MHz	27.76	16.98	19.95	17.54	19.92	17.55
5 240 MHz	26.20	16.96	19.87	17.54	19.84	17.56
5 260 MHz	27.79	17.21	25.61	17.64	21.04	17.65
5 300 MHz	27.97	16.96	21.92	17.62	20.13	17.61
5 320 MHz	20.51	16.56	21.35	17.60	21.10	17.65
5 500 MHz	19.52	16.48	19.88	17.54	19.91	17.56
5 600 MHz	29.67	17.10	30.81	17.94	25.48	17.81
5 700 MHz	19.48	16.45	19.87	17.52	19.87	17.54
5 720 MHz	28.51	16.88	26.48	17.81	21.25	17.70
5 745 MHz	26.07	17.25	27.19	17.89	21.45	17.87
5 785 MHz	26.73	17.36	27.27	18.00	21.38	17.87
5 825 MHz	30.03	17.92	32.03	18.60	29.08	18.13
Measurement uncertainty	± 0.1 MHz					

	26 dB Bandwidth and 99% Bandwidth (MHz)			
Mode	802.11n_HT40		802.11ac_VHT40	
Frequency	26 dB	99 %	26 dB	99 %
5 190 MHz	40.05	36.19	40.15	36.15
5 230 MHz	46.52	36.33	40.41	36.17
5 270 MHz	60.24	36.57	62.88	36.39
5 310 MHz	39.97	36.17	40.06	36.07
5 510 MHz	39.78	36.13	39.91	36.04
5 590 MHz	70.47	37.26	68.70	36.69
5 670 MHz	39.93	36.24	40.09	36.19
5 710 MHz	63.51	36.60	63.17	36.38
5 755 MHz	46.82	36.42	40.69	36.24
5 795 MHz	46.97	36.30	40.25	36.13
Measurement uncertainty	± 0.1 MHz			

	26 dB Bandwidth and 99% Bandwidth (MHz)	
Mode	802.11ac_VHT80	
Frequency	26 dB	99 %
5 210 MHz	80.13	75.82
5 290 MHz	79.91	75.86
5 530 MHz	79.65	75.73
5 610 MHz	119.24	76.30
5 690 MHz	121.90	76.22
5 775 MHz	79.41	75.71
Measurement uncertainty	± 0.1 MHz	

ANT R

	26 dB Bandwidth and 99 % Bandwidth (MHz)					
Mode	802.11a		802.11n_HT20		802.11ac_VHT20	
Frequency	26 dB	99 %	26 dB	99 %	26 dB	99 %
5 180 MHz	21.47	16.58	19.96	17.54	19.88	17.52
5 200 MHz	22.57	16.62	19.91	17.54	19.89	17.51
5 240 MHz	21.40	16.57	19.96	17.54	19.94	17.52
5 260 MHz	21.46	16.59	19.94	17.61	20.69	17.56
5 300 MHz	21.52	16.60	20.92	17.61	20.66	17.56
5 320 MHz	22.51	16.62	20.49	17.60	22.30	17.58
5 500 MHz	20.37	16.54	19.88	17.54	19.94	17.51
5 600 MHz	25.63	16.79	20.41	17.63	19.95	17.58
5 700 MHz	20.35	16.50	19.93	17.54	19.90	17.50
5 720 MHz	26.71	16.87	20.79	17.64	20.65	17.58
5 745 MHz	28.29	17.53	31.61	18.49	29.15	18.14
5 785 MHz	28.17	17.59	30.89	18.46	26.98	18.15
5 825 MHz	28.01	17.32	30.09	18.31	25.43	18.04
Measurement uncertainty	± 0.1 MHz					

	26 dB Bandwidth and 99% Bandwidth (MHz)			
Mode	802.11n_HT40		802.11ac_VHT40	
Frequency	26 dB	99 %	26 dB	99 %
5 190 MHz	40.30	36.15	40.64	36.14
5 230 MHz	43.31	36.27	40.88	36.26
5 270 MHz	63.69	36.49	61.52	36.42
5 310 MHz	40.09	36.14	40.51	36.10
5 510 MHz	40.23	36.11	40.48	36.11
5 590 MHz	65.35	36.44	53.78	36.39
5 670 MHz	40.28	36.16	40.61	36.18
5 710 MHz	65.29	36.54	59.35	36.43
5 755 MHz	67.70	36.68	61.59	36.60
5 795 MHz	67.67	36.56	60.25	36.50
Measurement uncertainty	± 0.1 MHz			

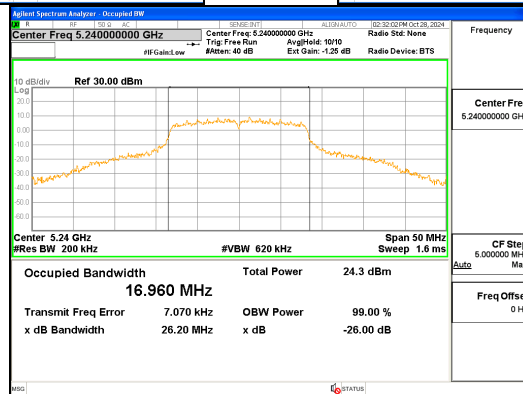
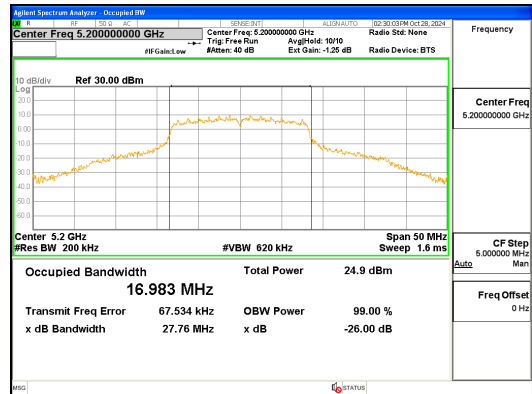
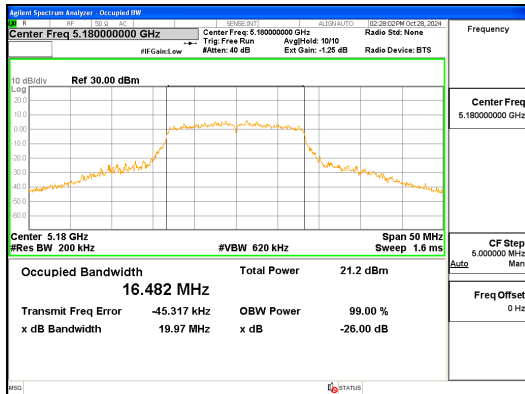
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Mode	802.11ac_VHT80	
Frequency	26 dB	99 %
5 210 MHz	80.50	75.80
5 290 MHz	80.83	75.79
5 530 MHz	80.61	75.78
5 610 MHz	97.10	76.01
5 690 MHz	109.86	76.05
5 775 MHz	83.84	75.78
Measurement uncertainty	± 0.1 MHz	

See next pages for actual measured spectrum plots.

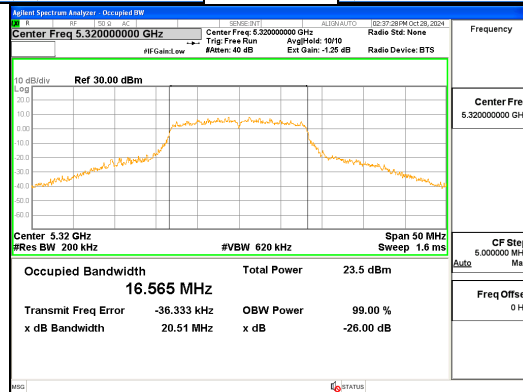
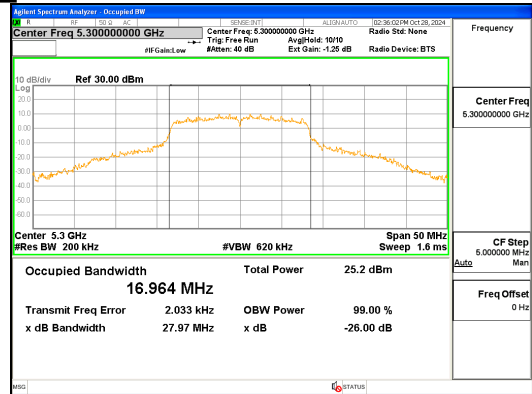
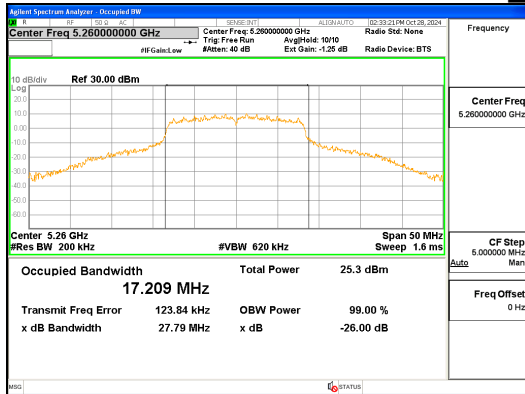


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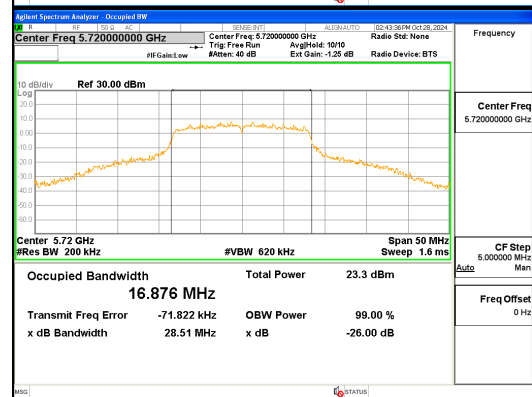
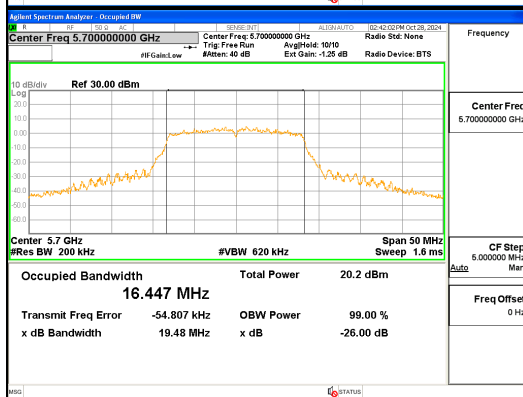
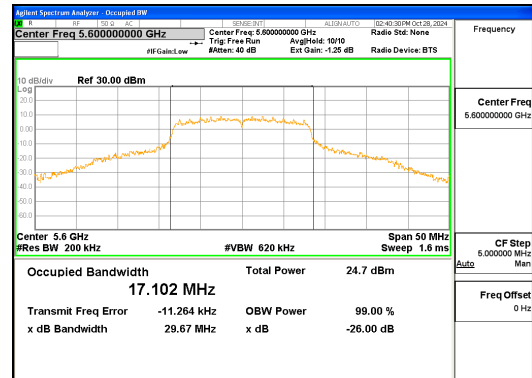
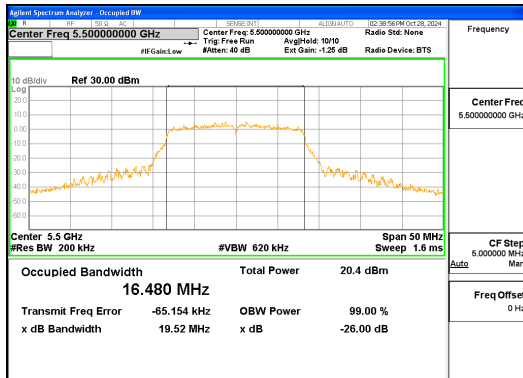
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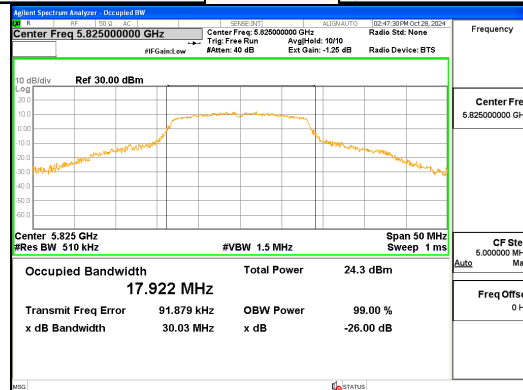
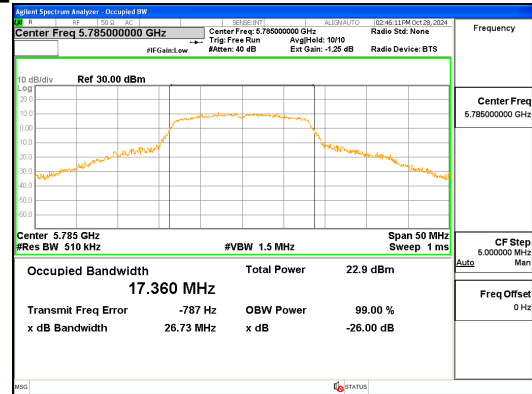
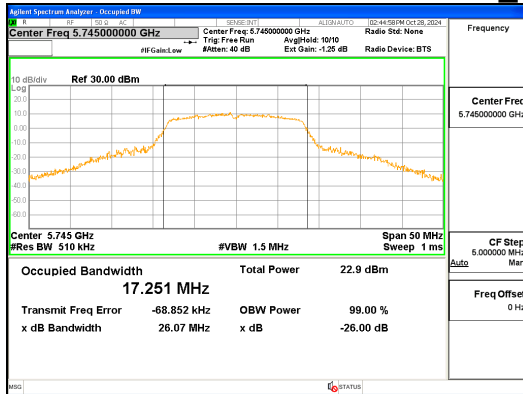
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ANT L_802.11a_UNII 2A



ANT L_802.11a_UNII 2C

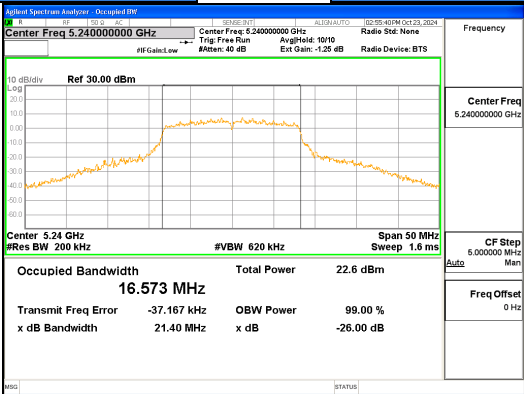
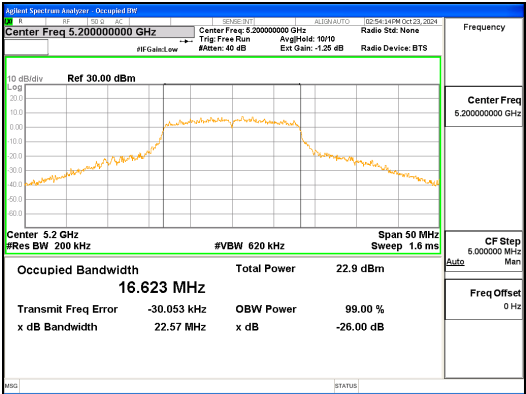
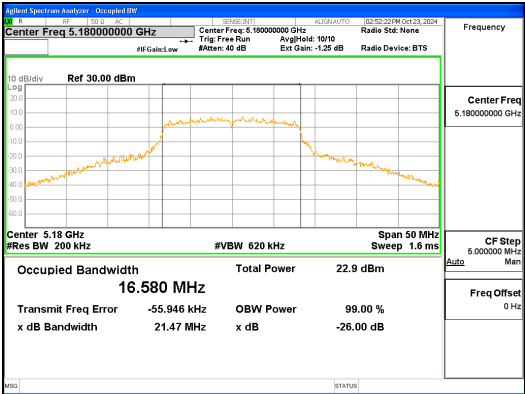


ANT L_802.11a_UNII 3

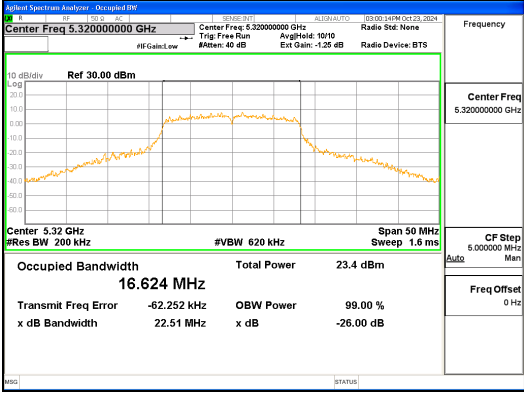
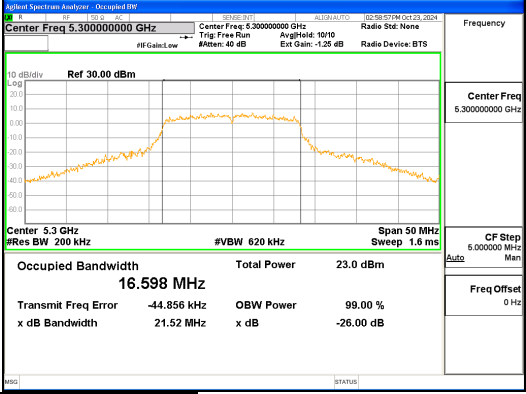
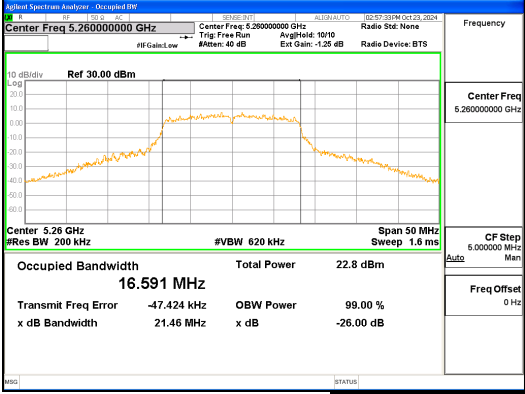


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ANT R_802.11a_UNII 1

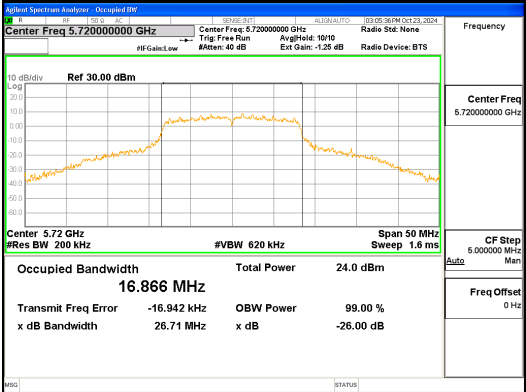
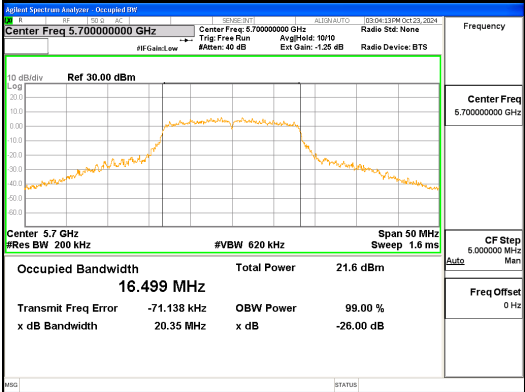
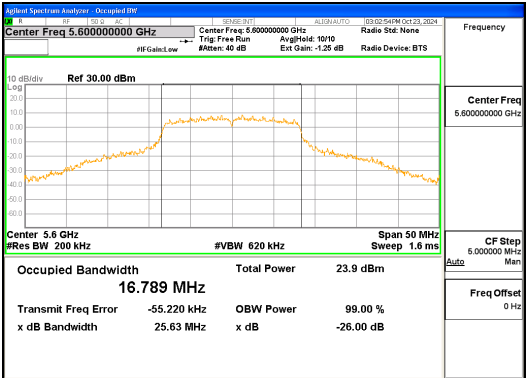
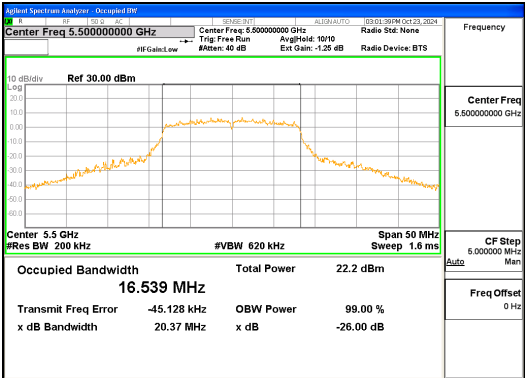


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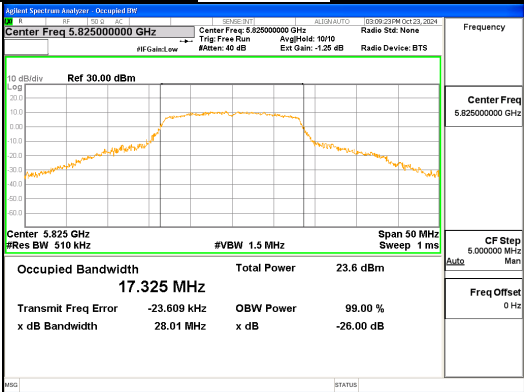
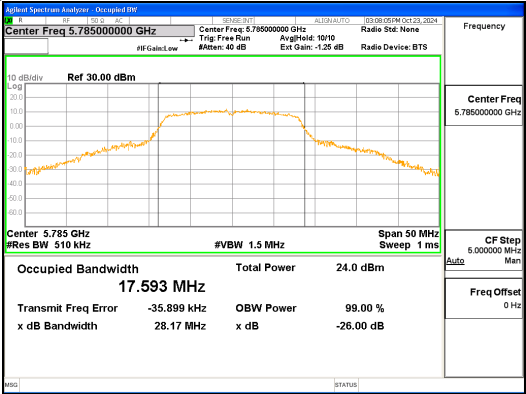
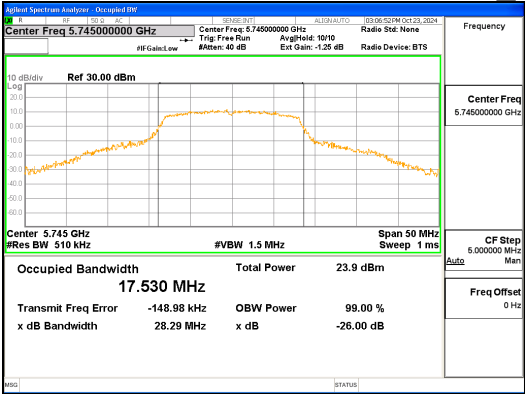


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ANT R_802.11a_UNII 2C

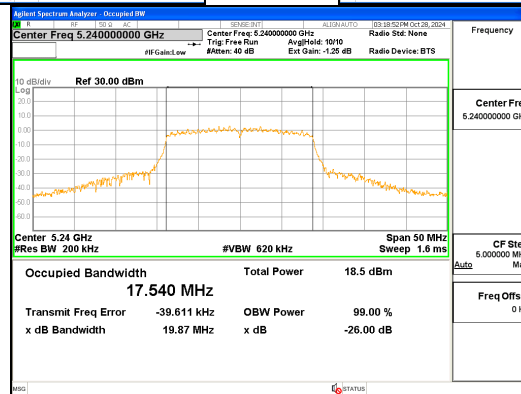
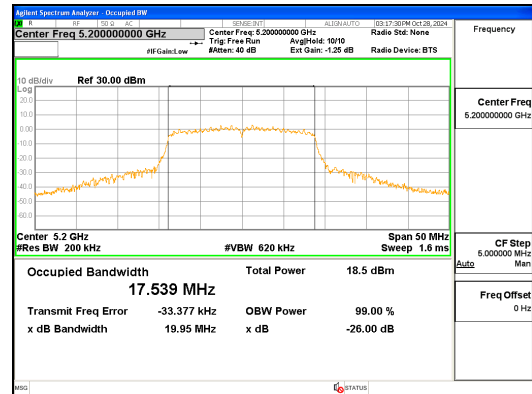
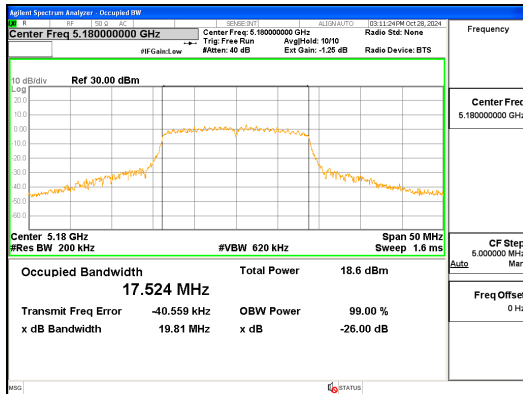


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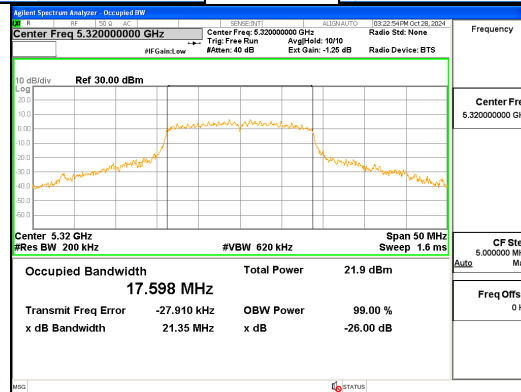
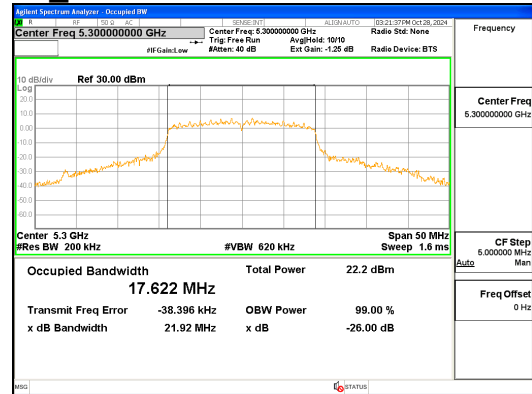
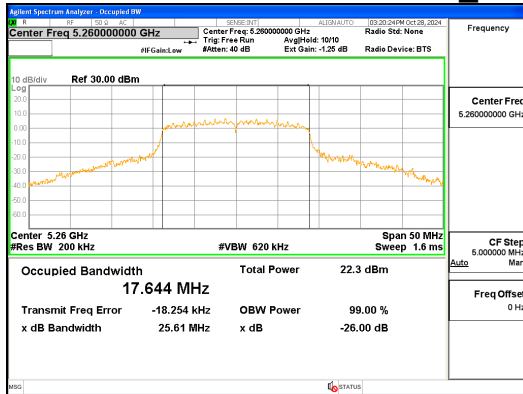


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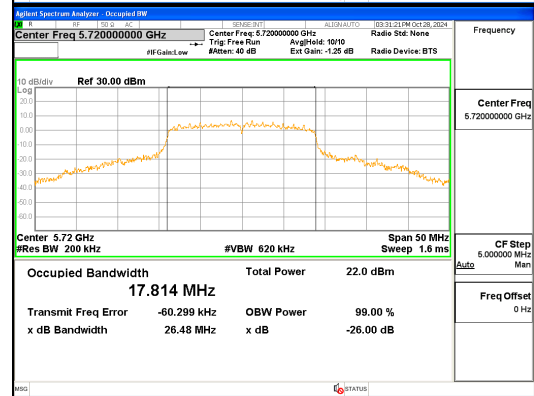
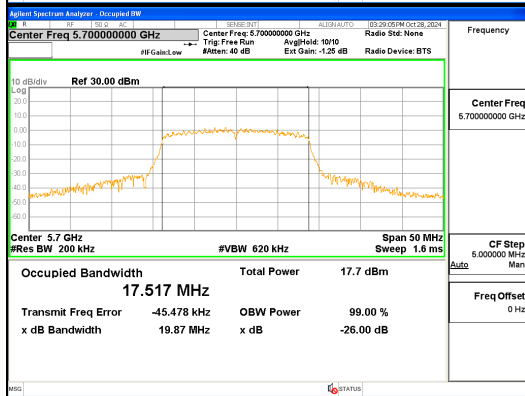
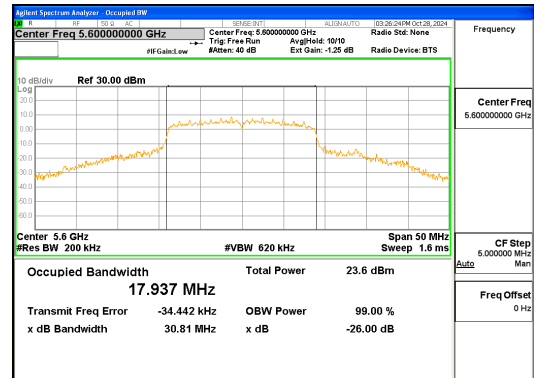
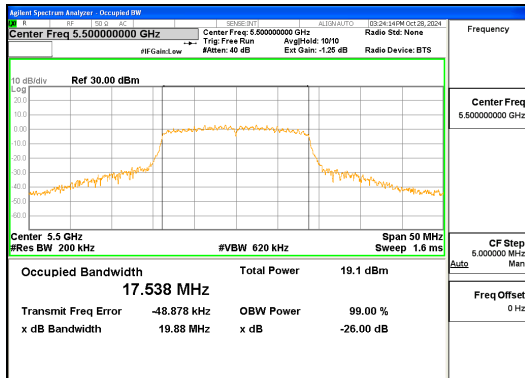


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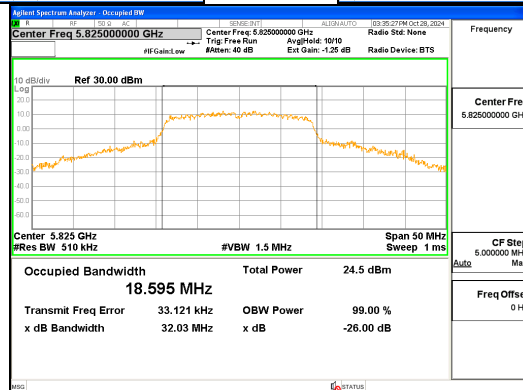
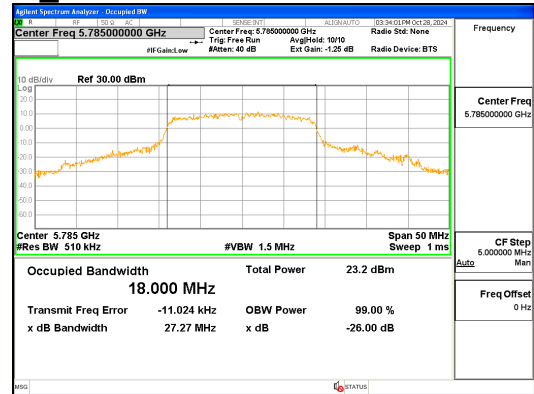
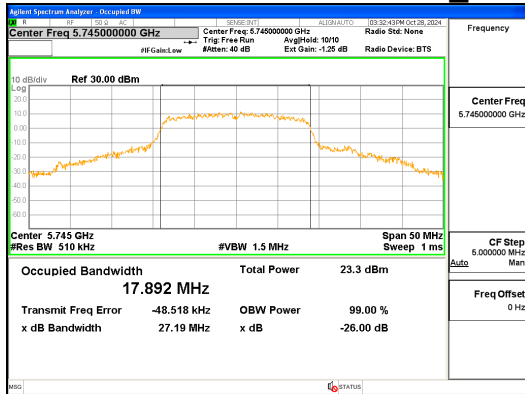


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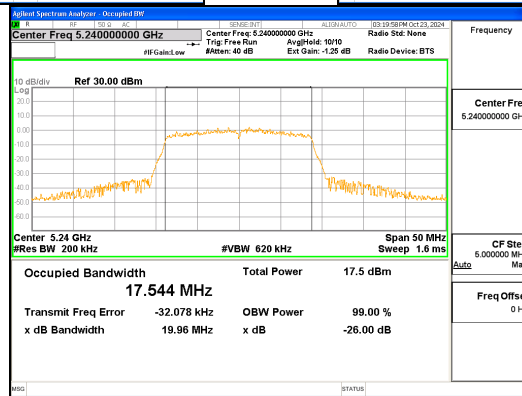
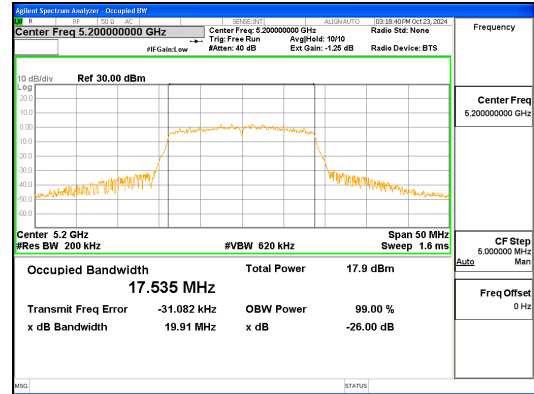
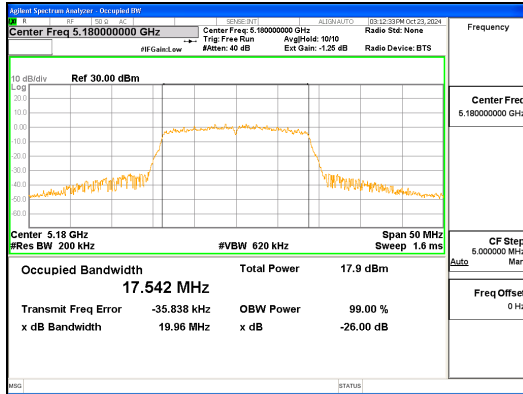


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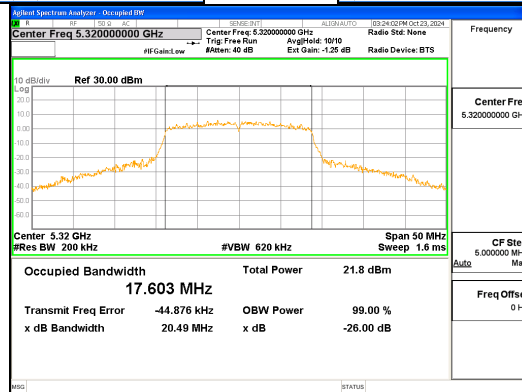
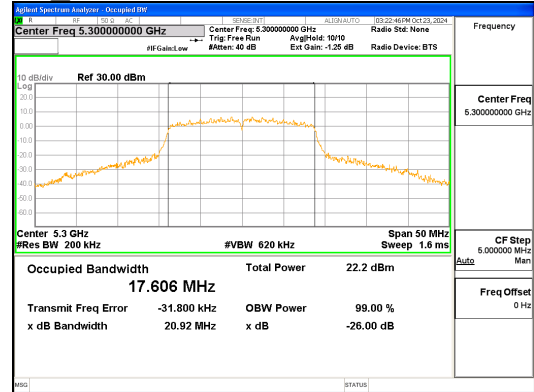
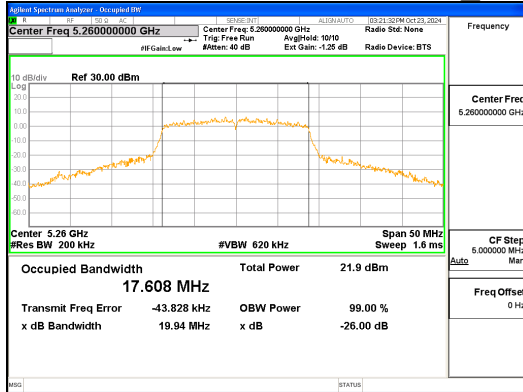


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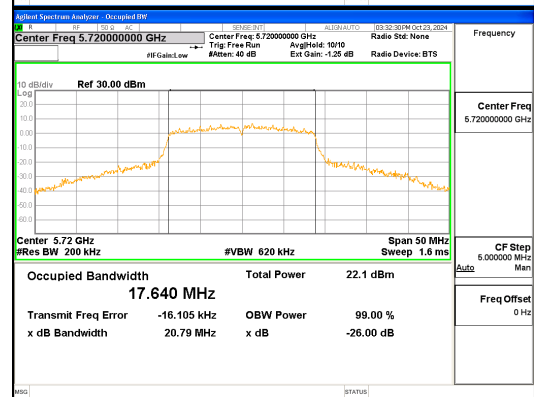
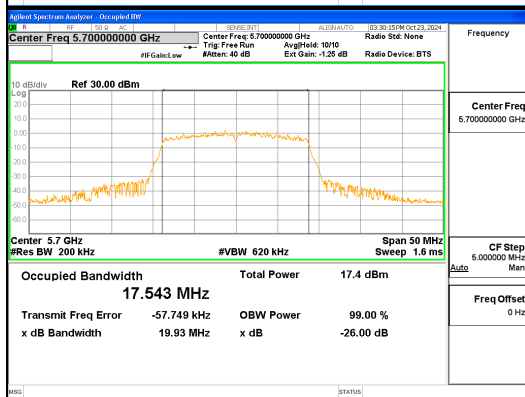
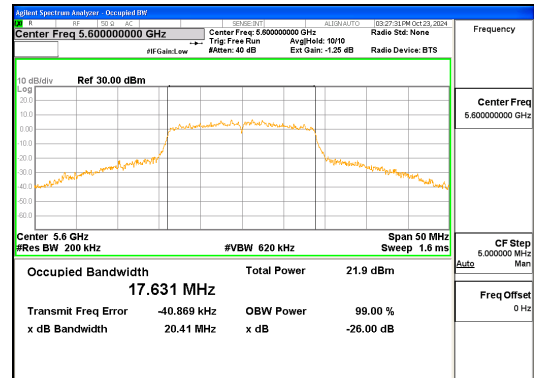
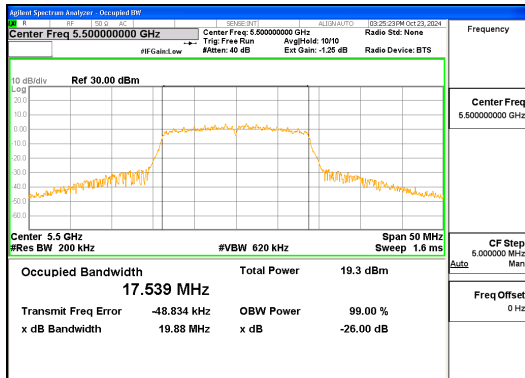


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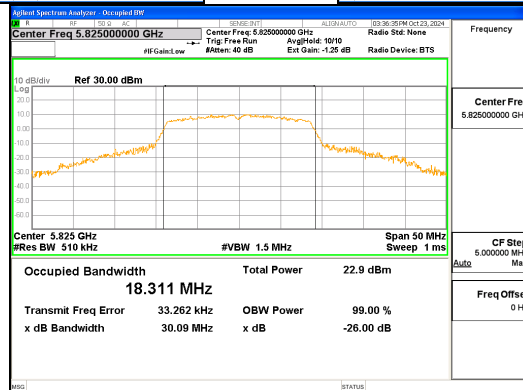
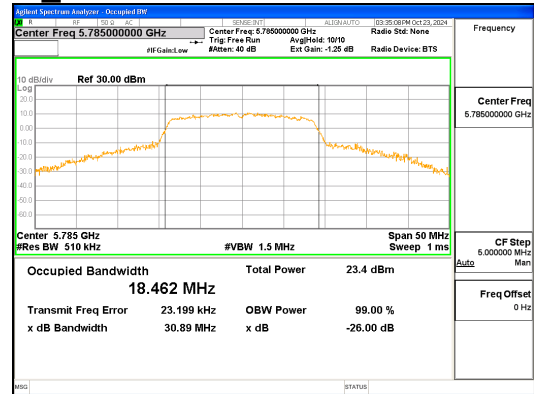
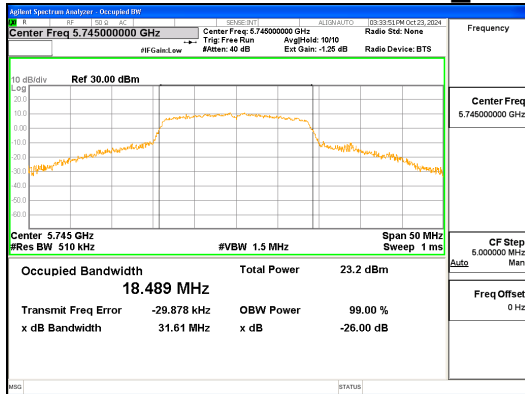


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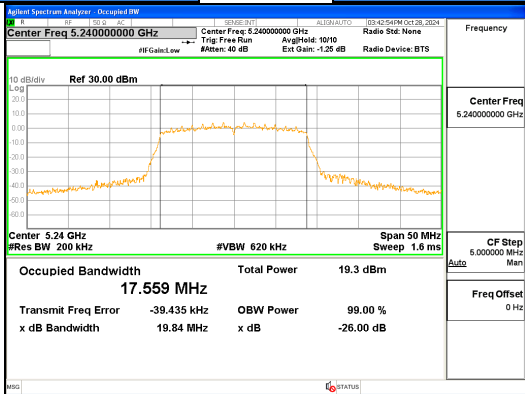
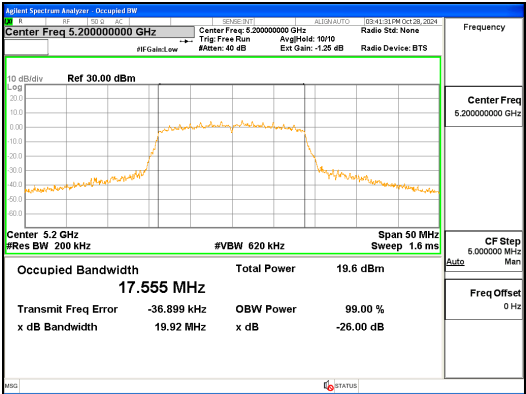
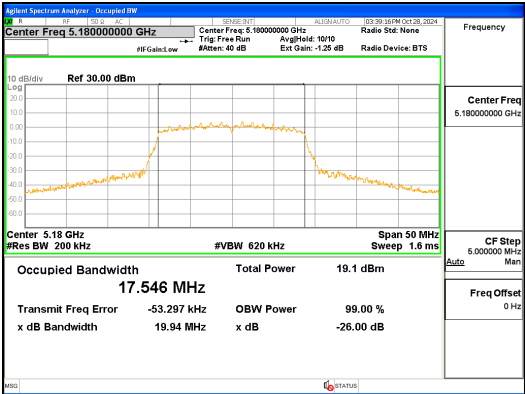


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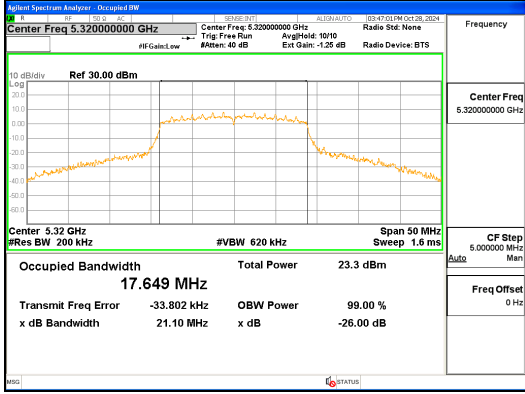
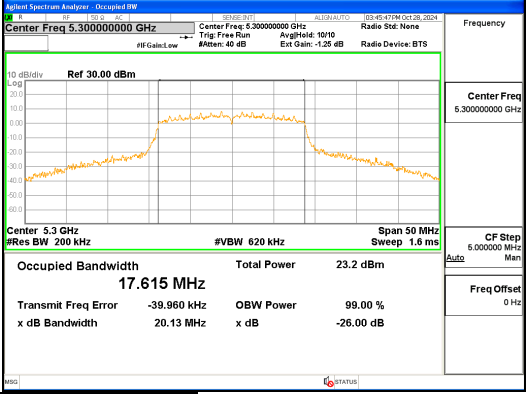
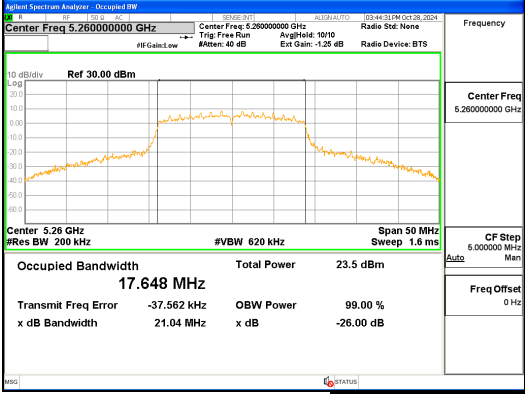


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ANT L_802.11ac_VHT20_UNII 1

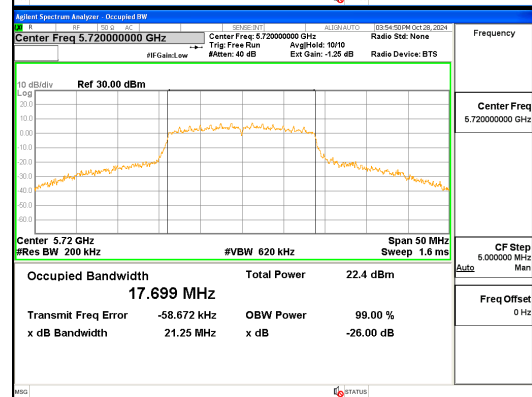
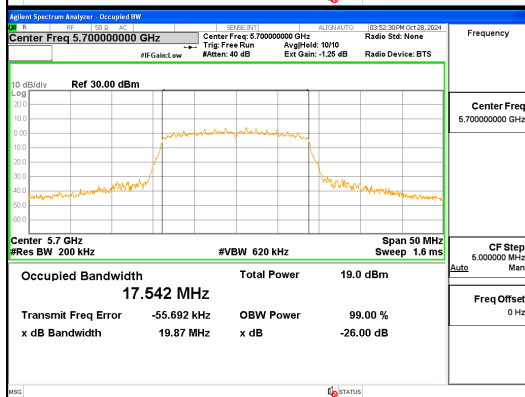
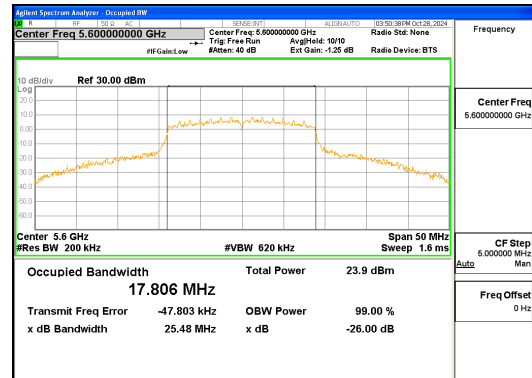
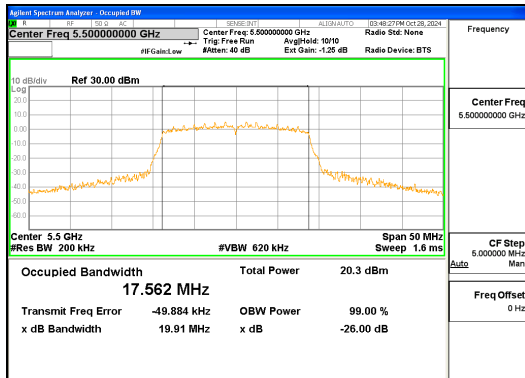


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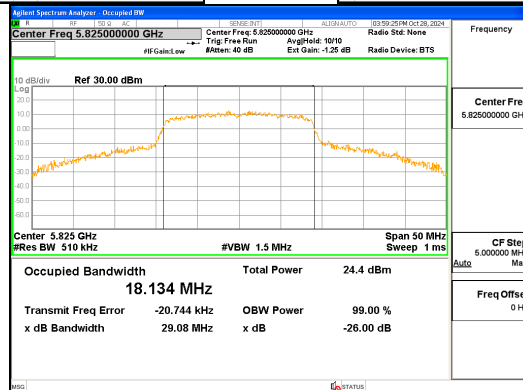
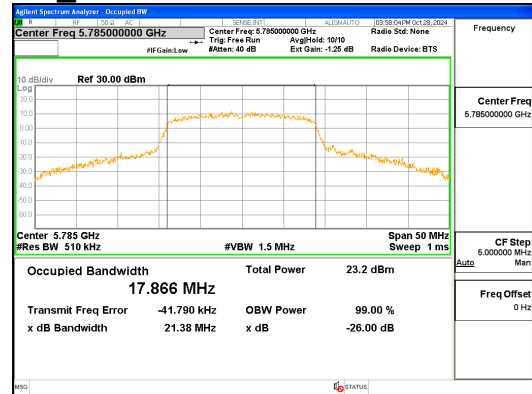
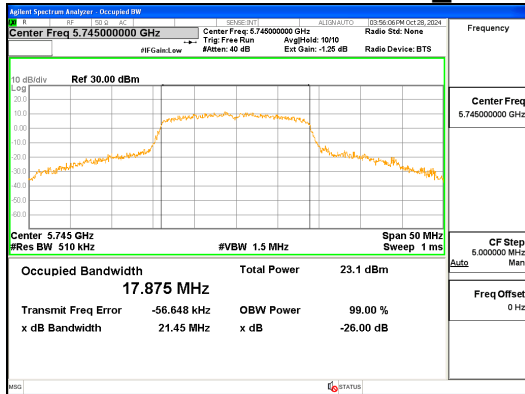


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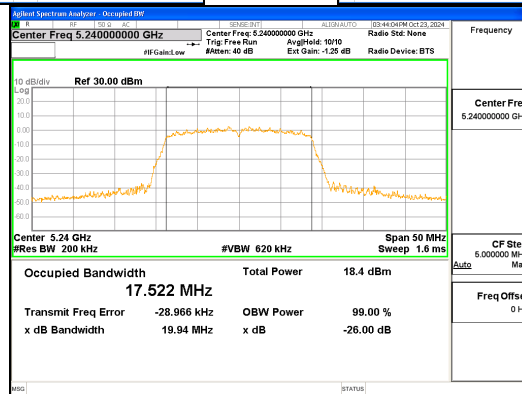
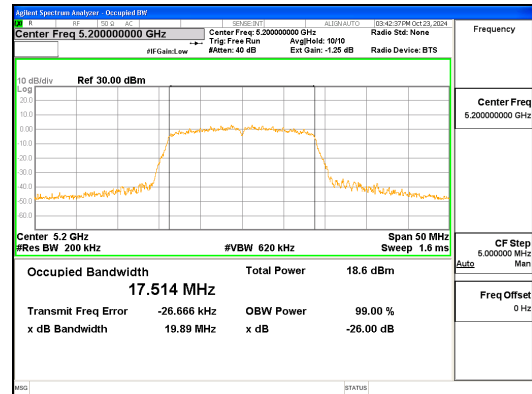
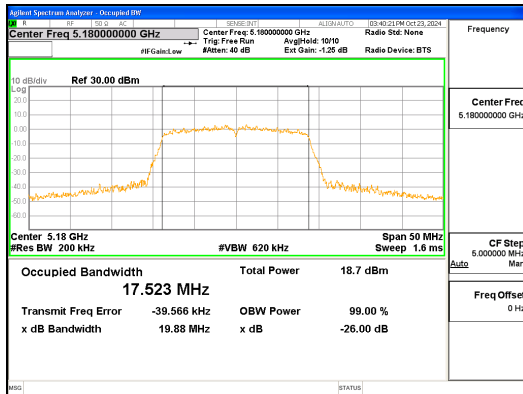
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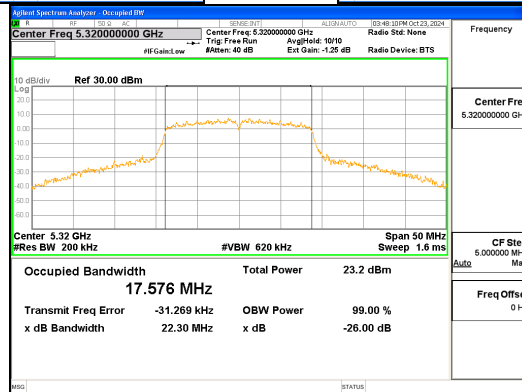
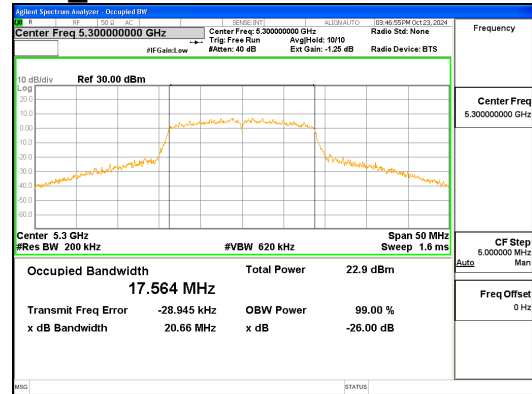
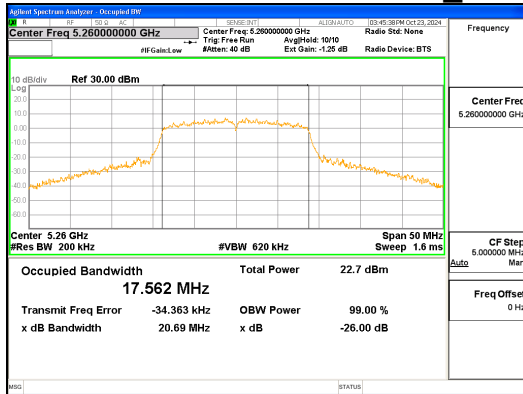
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ANT L_802.11ac_VHT20_UNII 3



ANT R_802.11ac_VHT20_UNII 1

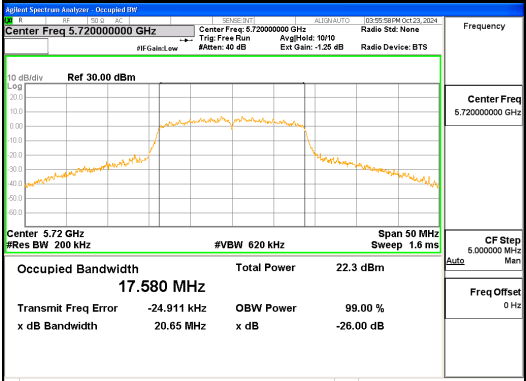
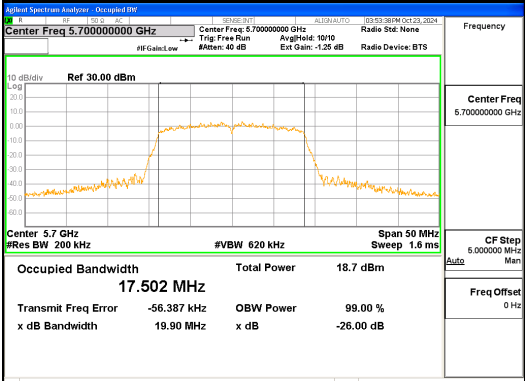
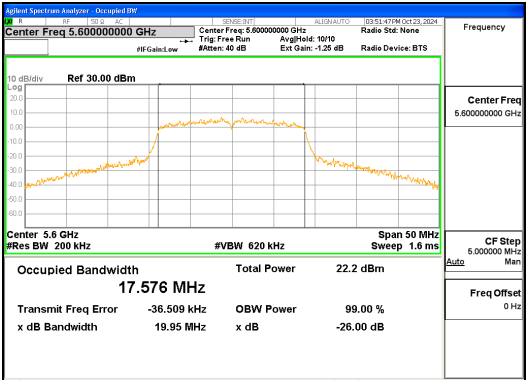
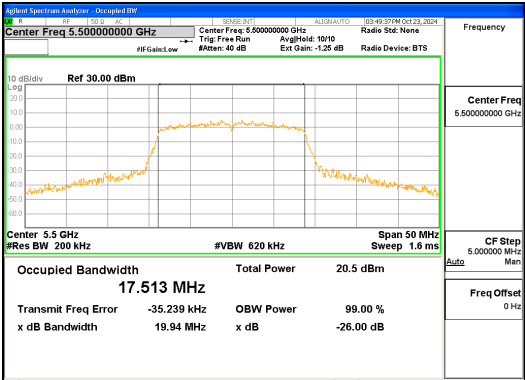


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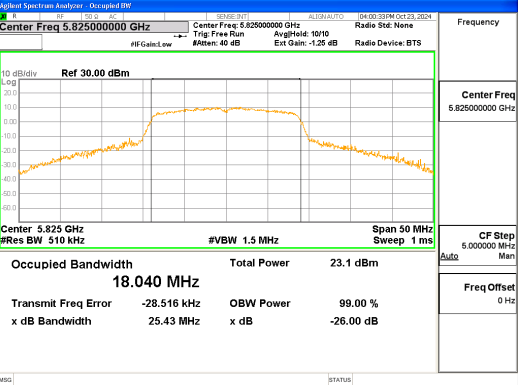
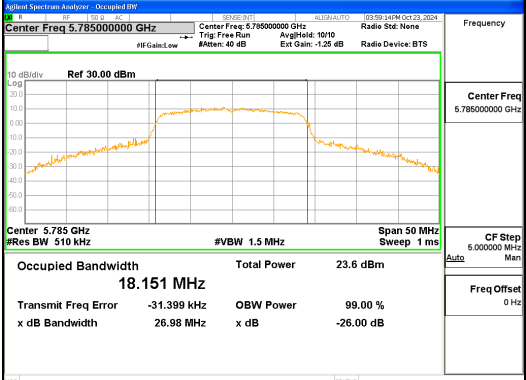
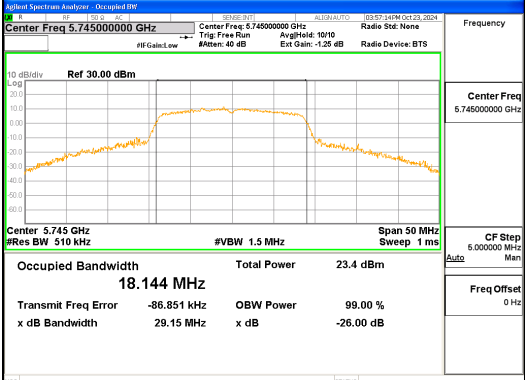


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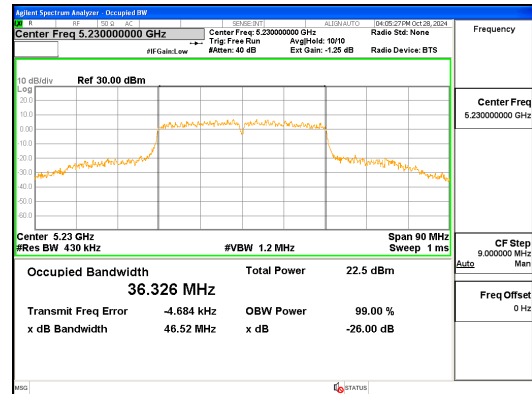
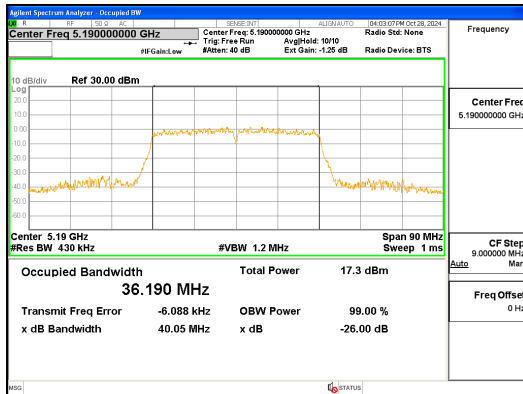
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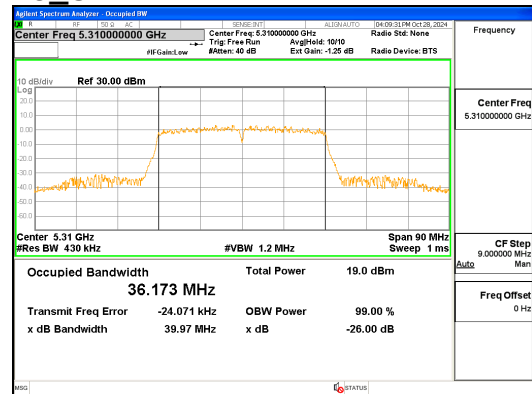
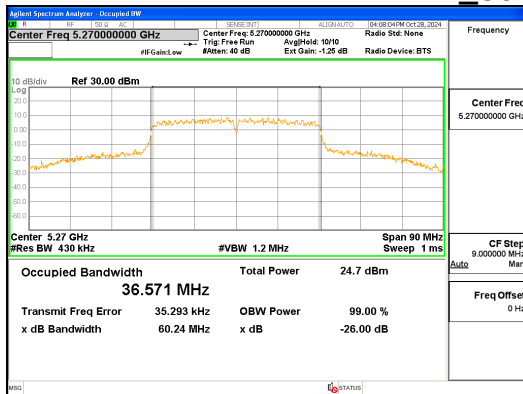
ANT R_802.11ac_VHT20_UNII 2C



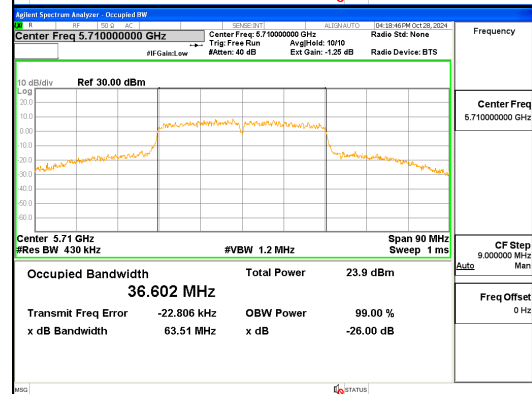
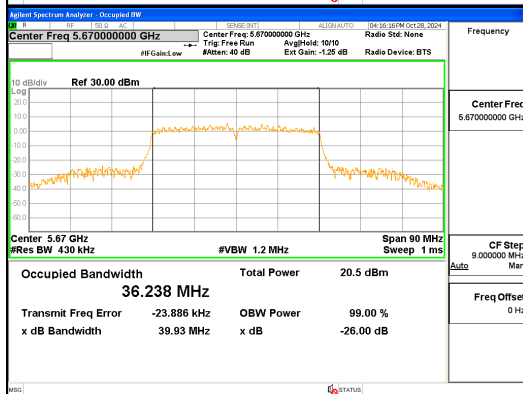
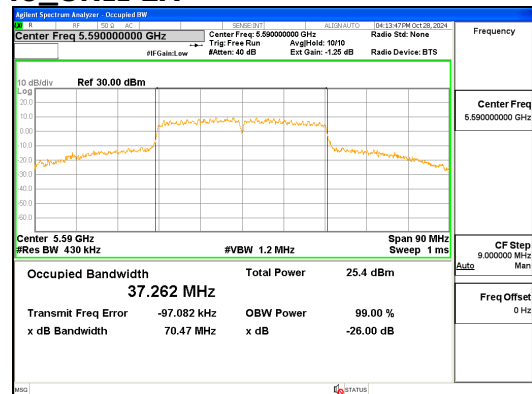
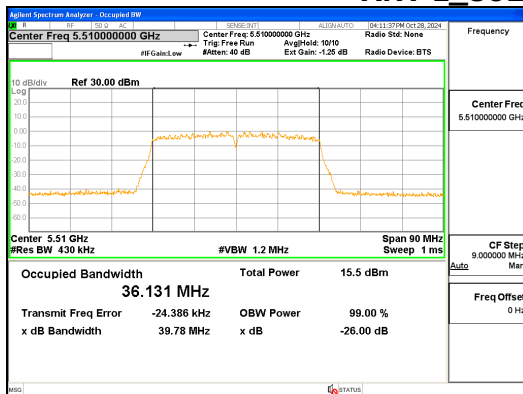
ANT R_802.11ac_VHT20_UNII 3



ANT L_802.11n_HT40_UNII 1



ANT L_802.11n_HT40_UNII 2A

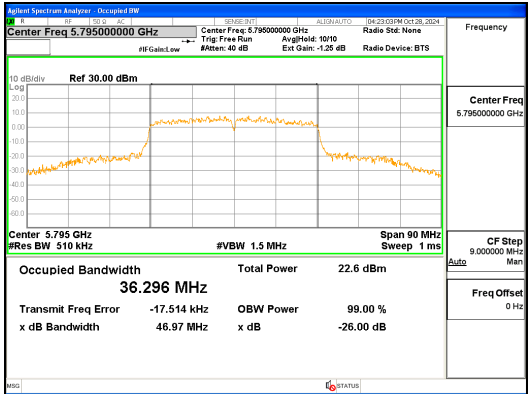
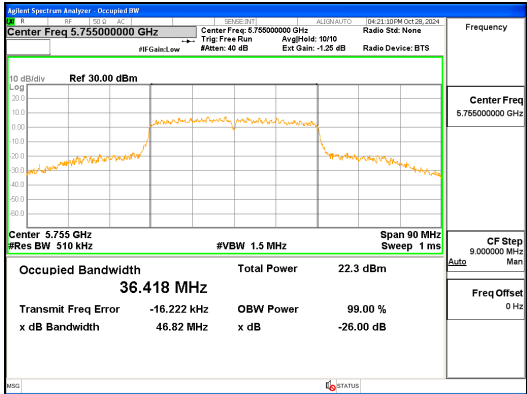


ANT L_802.11n_HT40_UNII 2C



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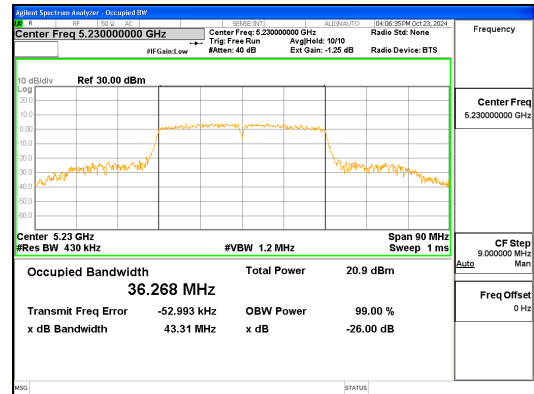
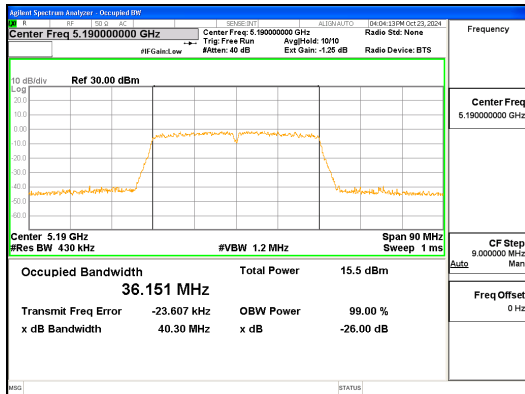


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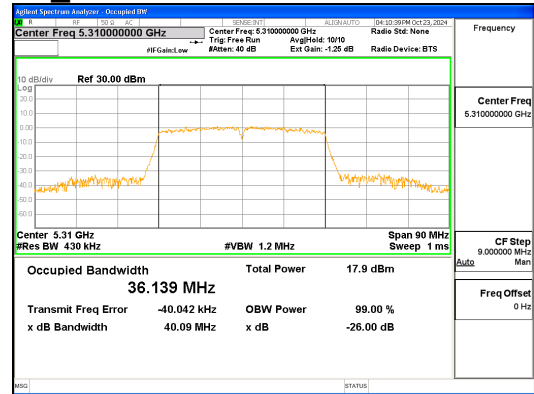
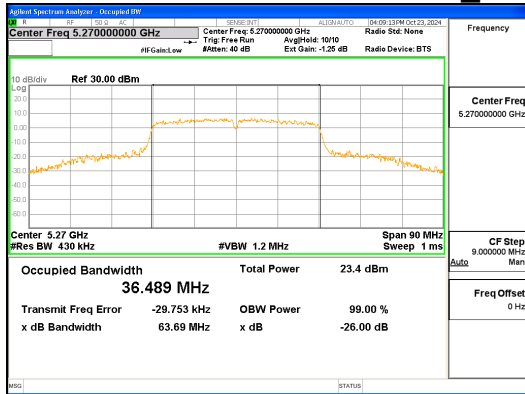


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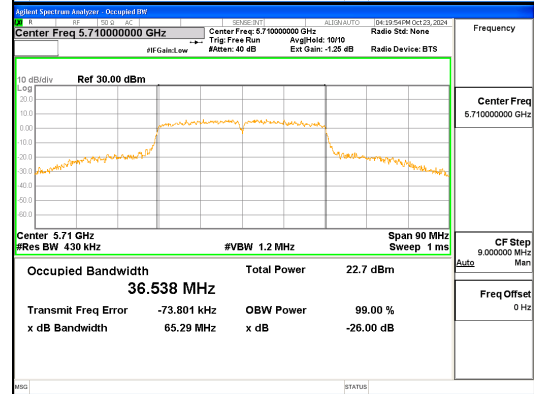
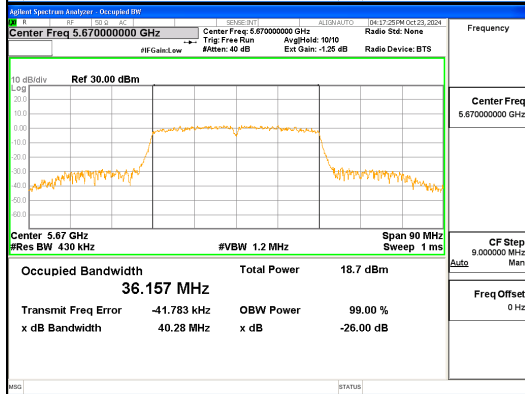
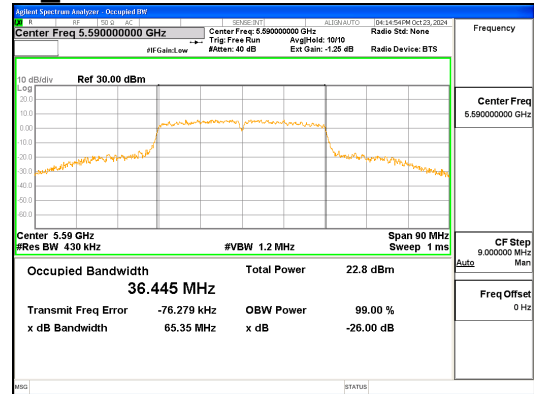
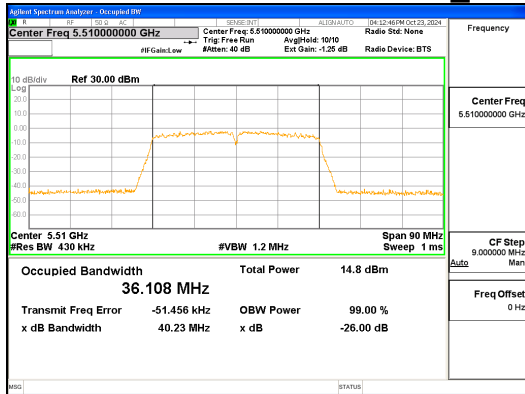
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ANT R_802.11n_HT40_UNII 1



ANT R_802.11n_HT40_UNII 2A



ANT R_802.11n_HT40_UNII 2C