

TEST REPORT



CTK Co., Ltd.

(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea
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Fax: +82-31-624-9501

Report No.:
CTK-2024-03272
Page (1) / (184) Pages

1. Applicant

- Name : Samsung Electronics Co Ltd
- Address : 19 Chapin Rd, Building D. Pine Brook, New Jersey, United States
- Date of Receipt : 2024-09-26

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 / WCF730M

6. Date of Test : 2024-10-31 to 2024-12-03

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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Report No.:
CTK-2024-03272
Page (2) / (184) Pages

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.

2024-12-03

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Report No.:
CTK-2024-03272
Page (3) / (184) Pages

REPORT REVISION HISTORY

Date	Revision	Page No
2024-12-03	Issued (CTK-2024-03272)	all

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Report No.:
CTK-2024-03272
Page (4) / (184) Pages

CONTENTS

1. General Product Description	5
1.1 Applicant Information	5
1.2 Product Information.....	5
1.3 Peripheral Devices	6
1.4 Model Differences	6
2. Accreditations	7
2.1 Laboratory Accreditations and Listings	7
2.2 Calibration Details of Equipment Used for Measurement	7
3. Test Specifications	8
3.1 Standards.....	8
3.2 Mode of operation during the test.....	9
3.3 Device Modifications	11
3.4 Maximum Measurement Uncertainty	11
3.5 Test Software.....	11
3.6 Testing Environment	12
4. Technical Characteristic Test.....	13
4.1 6dB Bandwidth.....	13
4.2 26 dB Bandwidth and 99% Bandwidth.....	21
4.3 OUTPUT POWER	48
4.4 Power Spectral Density	78
4.5 Frequency Stability	108
4.6 Unwanted Emissions	110
4.7 AC Conducted Emissions	180
APPENDIX A – Test Equipment Used For Tests	183

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CTK-2024-03272
Page (5) / (184) Pages

1. General Product Description

1.1 Applicant Information

Company	Samsung Electronics Co Ltd
Contact Point	19 Chapin Rd, Building D. Pine Brook, New Jersey, United States
Contact Person	Name : JENNI CHUN E-mail : j1.chun@samsung.com Tel : 973-808-6375 Fax : -

1.2 Product Information

FCC ID	A3LWCF730M	
Product Description	Wi-Fi/BT Transceiver	
Model name	WCF730M	
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 : 17.62 dBm (57.81 mW) 802.11n_HT20 : 17.62 dBm (57.81 mW) 802.11n_HT40 : 18.26 dBm (66.99 mW) 802.11ac_VHT20 : 17.59 dBm (57.41 mW) 802.11ac_VHT40 : 18.22 dBm (66.37 mW) 802.11ac_VHT80 : 17.96 dBm (62.52 mW)	
Antenna Specification	Antenna type : Chip Antenna	
	UNII 1, UNII 2A	Peak Gain : 0.54 dBi (ANT1), 1.58 dBi (ANT2)
	UNII 2C, UNII 3	Peak Gain : 1.69 dBi (ANT1), 3.75 dBi (ANT2)
Antenna Configurations	802.11a : SISO(ANT1, ANT2) 802.11n : SISO(ANT1, ANT2), MIMO(ANT1+ANT2) 802.11ac : SISO(ANT1, ANT2), MIMO(ANT1+ANT2)	
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	WCF730M	
Software Rev	FC *0.*	
Dynamic Frequency Selection	Slave without radar detection	



RF Power setting in Test SW

Mode	Band	Frequency	Power Setting Value		
			ANT1	ANT2	ANT1 +ANT2
802.11a	UNII 1	5 180 MHz ~ 5 240 MHz	14.5	12.5	
	UNII 2A	5 260 MHz ~ 5 320 MHz	15	13	
	UNII 2C	5 500 MHz	13	13	
		5 700 MHz		12.5	
		Other		15	
	UNII 3	5 745 MHz ~ 5 825 MHz	11.5	15	
802.11n_HT20	UNII 1	5 180 MHz ~ 5 240 MHz			9.5
	UNII 2A	5 260 MHz ~ 5 320 MHz			11
	UNII 2C	5 700 MHz			11
		Other			12
	UNII 3	5 745 MHz ~ 5 825 MHz			11
802.11ac_VHT20	UNII 1	5 180 MHz ~ 5 240 MHz			10
	UNII 2A	5 260 MHz ~ 5 320 MHz			12
	UNII 2C	5 500 MHz ~ 5 720 MHz			11.5
	UNII 3	5 745 MHz ~ 5 825 MHz			10.5
802.11n_HT40	UNII 1	5 190 MHz ~ 5 230 MHz			13
	UNII 2A	5 270 MHz			14
		5 310 MHz			13.5
	UNII 2C	5 510 MHz			10.5
		Other			11.5
	UNII 3	5 755 MHz ~ 5 795 MHz			10.5
802.11ac_VHT40	UNII 1	5 190 MHz ~ 5 230 MHz			12
	UNII 2A	5 270 MHz ~ 5 310 MHz			13.5
	UNII 2C	5 510 MHz			11
		Other			12
	UNII 3	5 755 MHz ~ 5 795 MHz			11
802.11ac_VHT80	UNII 1	5 210 MHz			12.5
	UNII 2A	5 290 MHz			12.5
	UNII 2C	5 530 MHz			9.5
		Other			14
	UNII 3	5 775 MHz			12

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

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Report No.:
CTK-2024-03272
Page (7) / (184) Pages

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.

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Report No.:
CTK-2024-03272
Page (8) / (184) Pages

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				

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Report No.:
CTK-2024-03272
Page (9) / (184) Pages

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

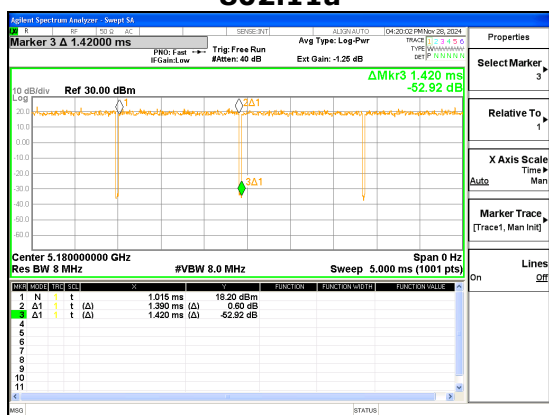
	Lowest channel	Middle channel	Highest channel
UNII 1	5 210 MHz	-	-
UNII 2A	5 290 MHz	-	-
UNII 2C	5 530 MHz	5 610 MHz	5 690 MHz
UNII 3	5 775 MHz	-	-



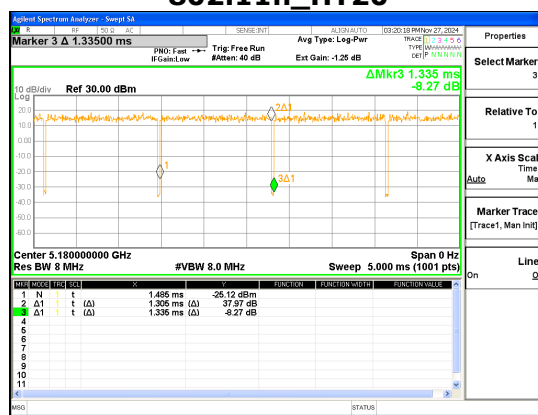
Test mode & Worst case

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	97.75 %	0.10 dB
802.11n_HT40		MCS 0	95.29 %	0.21 dB
802.11ac_VHT20		MNSS 0	95.51 %	0.20 dB
802.11ac_VHT40		MNSS 0	92.38 %	0.34 dB
802.11ac_VHT80		MNSS 0	58.23 %	2.35 dB

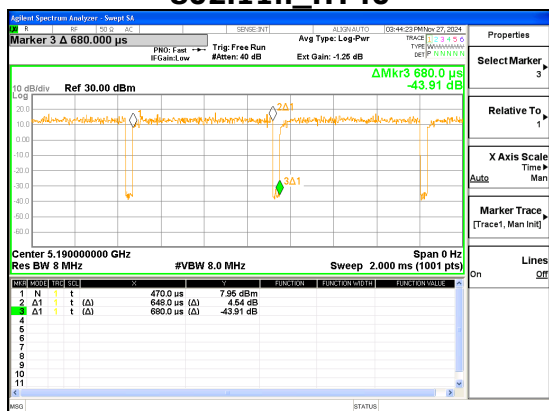
802.11a



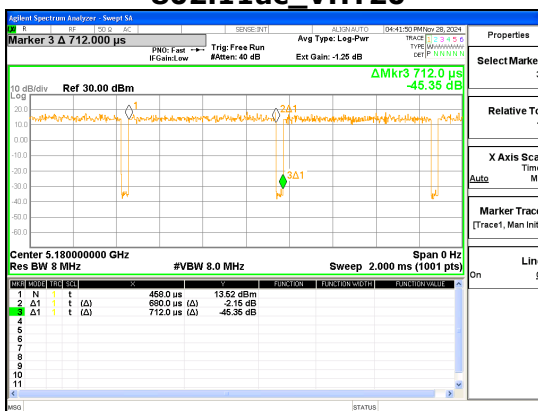
802.11n_HT20



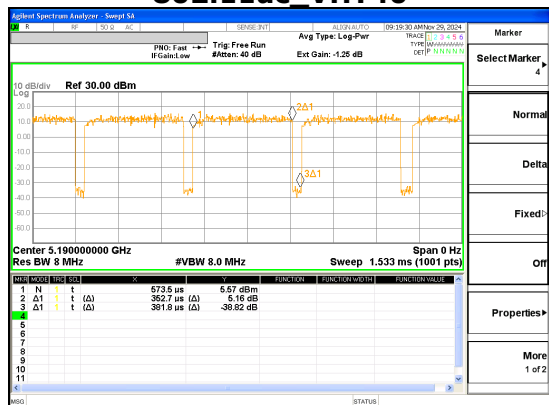
802.11n_HT40



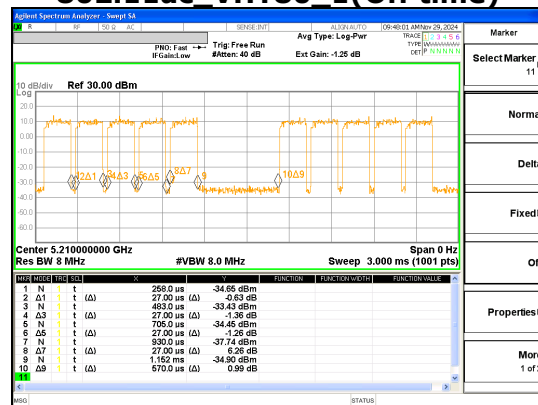
802.11ac_VHT20



802.11ac_VHT40

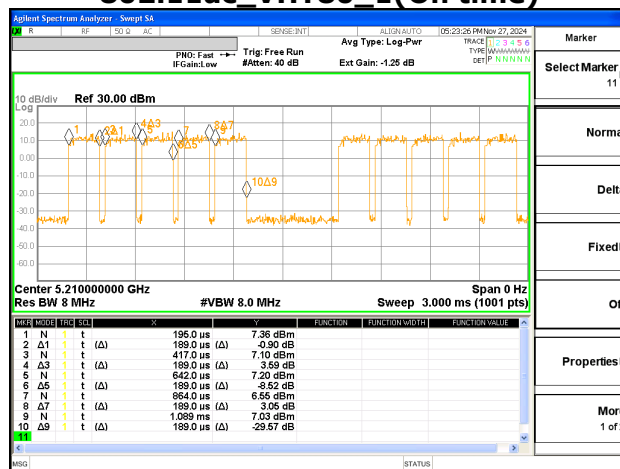


802.11ac_VHT80_1(Off time)





802.11ac_VHT80_1(On time)



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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Report No.:
CTK-2024-03272
Page (12) / (184) Pages

3.6 Testing Environment

Test Item	Test Date	Temperature (℃)	Relative Humidity (%)
6 dB Bandwidth	2024-11-27 ~ 2024-11-29	21 ~ 23	37 ~ 39
26 dB Bandwidth and 99% Bandwidth			
Conducted Output Power			
Power Spectral Density			
Frequency Stability	2024-10-31	23	50
Radiated Emissions (1GHz Adobe)	2024-11-21 ~ 2024-11-28	20 ~ 22	38 ~ 40
Radiated Emissions (1GHz Below)	2024-11-14	20	39
AC Conducted Emissions	2024-12-03	24	25

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Report No.:
CTK-2024-03272
Page (13) / (184) Pages

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:

ANT1

	6 dB Bandwidth (MHz)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5 745 MHz	15.12	15.10	15.33
5 785 MHz	15.13	15.11	15.12
5 825 MHz	15.13	15.14	15.13
Measurement uncertainty	± 0.1 MHz		

	6 dB Bandwidth (MHz)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5 755 MHz	35.46	35.71
5 795 MHz	35.41	35.14
Measurement uncertainty	± 0.1 MHz	

	6 dB Bandwidth (MHz)
Mode	802.11ac_VHT80
Frequency	
5 775 MHz	76.02
Measurement uncertainty	± 0.1 MHz



ANT2

	6 dB Bandwidth (MHz)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5 745 MHz	15.44	15.94	16.33
5 785 MHz	15.12	15.94	16.33
5 825 MHz	15.12	16.13	16.31
Measurement uncertainty	± 0.1 MHz		

	6 dB Bandwidth (MHz)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5 755 MHz	36.06	36.06
5 795 MHz	35.74	36.04
Measurement uncertainty	± 0.1 MHz	

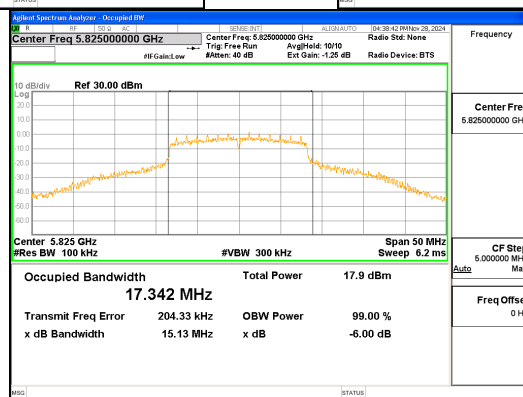
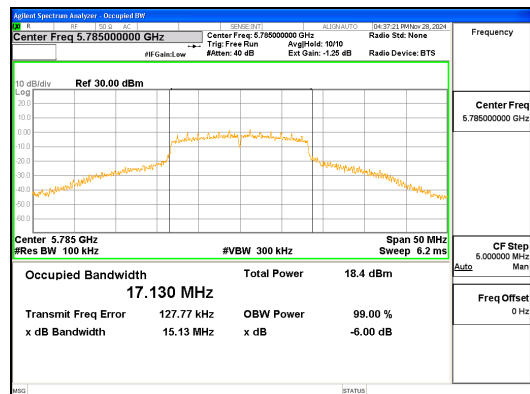
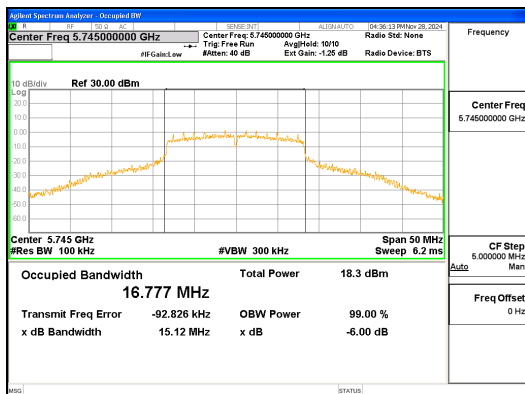
	6 dB Bandwidth (MHz)
Mode	802.11ac_VHT80
Frequency	
5 775 MHz	76.42
Measurement uncertainty	± 0.1 MHz

See next pages for actual measured spectrum plots.

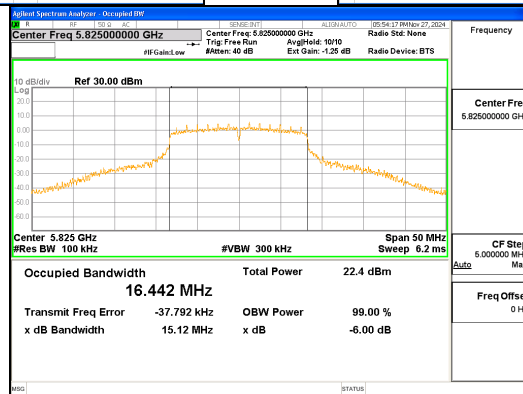
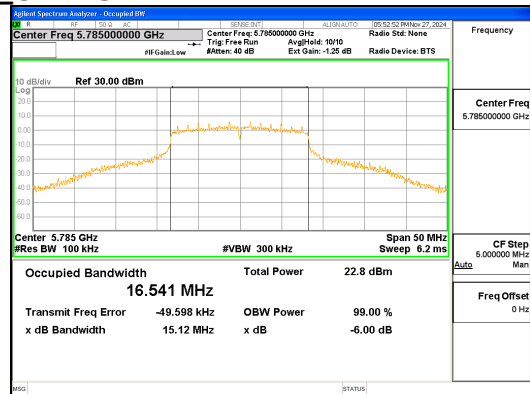
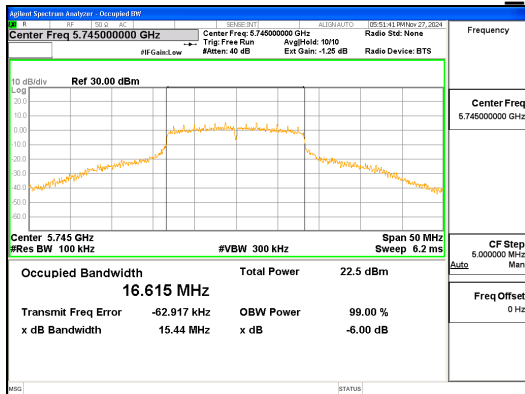


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Report No.:
CTK-2024-03272
Page (16) / (184) Pages



ANT1_802.11a_UNII 3

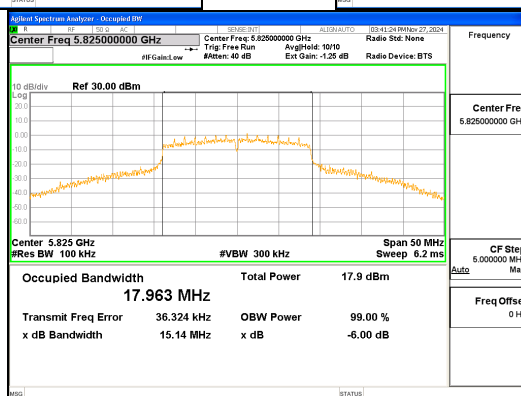
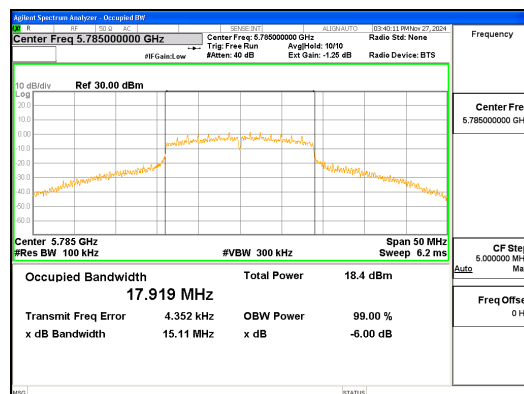
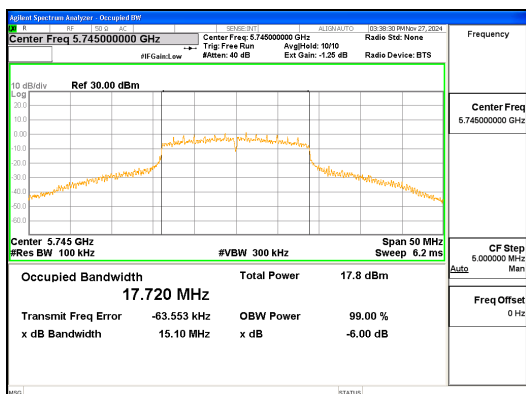


ANT2_802.11a_UNII 3

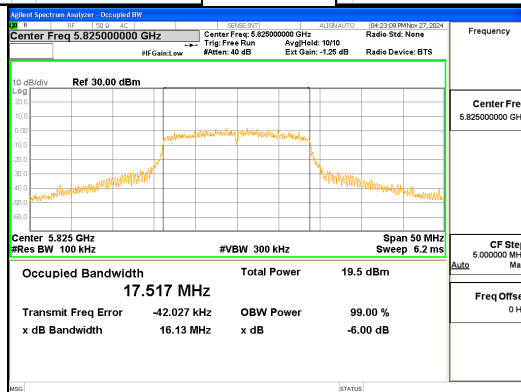
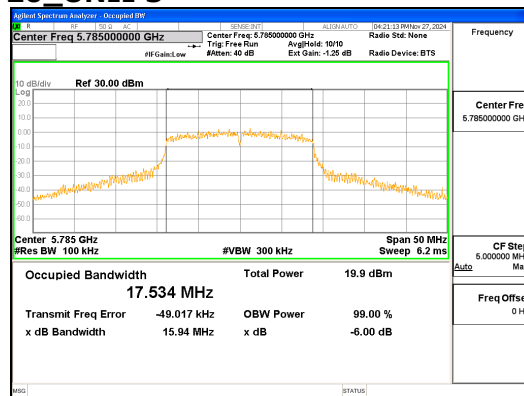
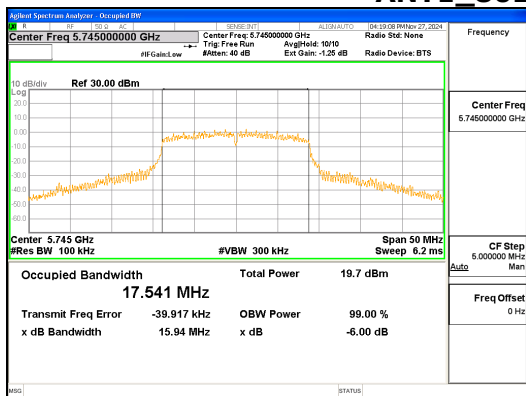


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Report No.:
CTK-2024-03272
Page (17) / (184) Pages



ANT1_802.11n_HT20_UNII 3

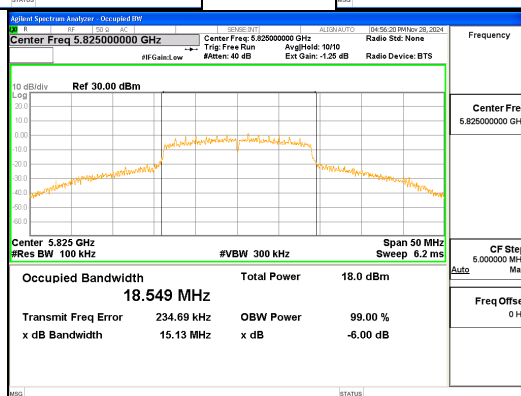
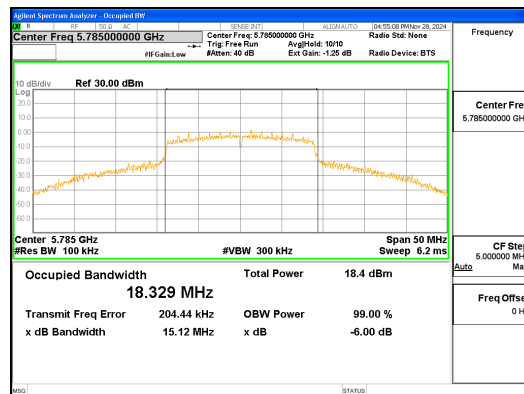
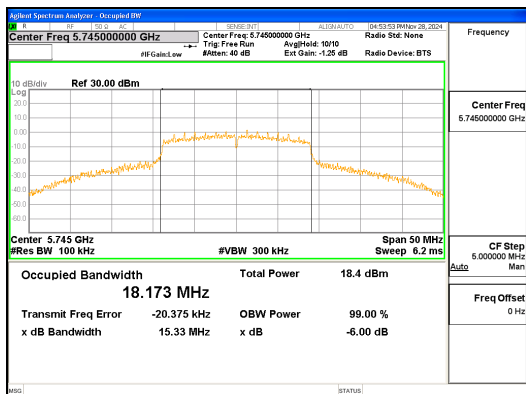


ANT2_802.11n_HT20_UNII 3

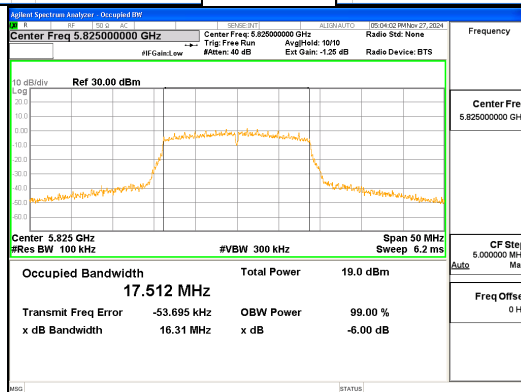
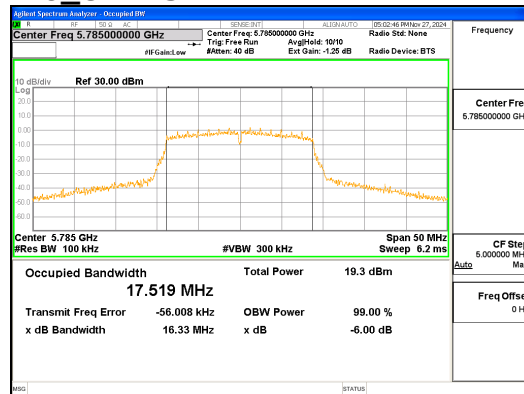
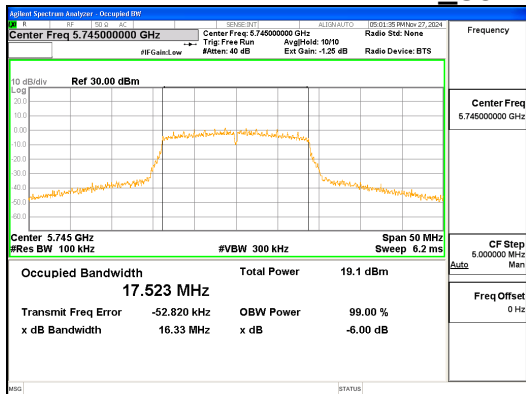


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Report No.:
CTK-2024-03272
Page (18) / (184) Pages



ANT1_802.11ac_VHT20_UNII 3

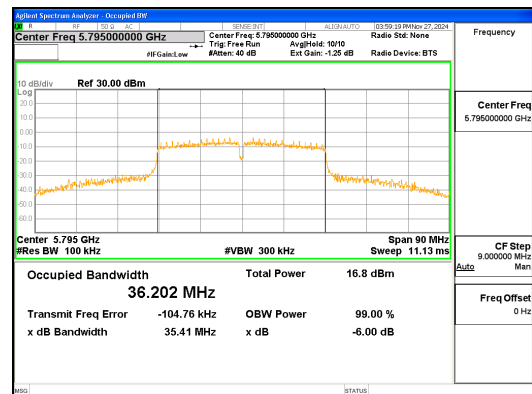
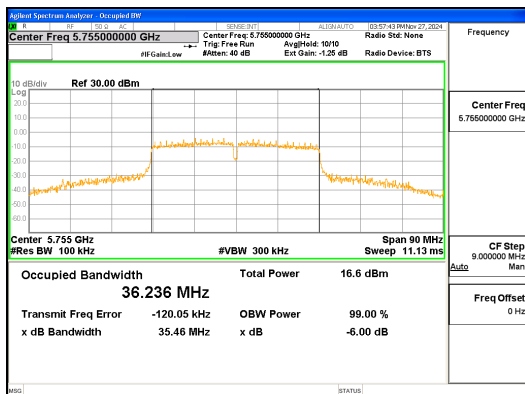


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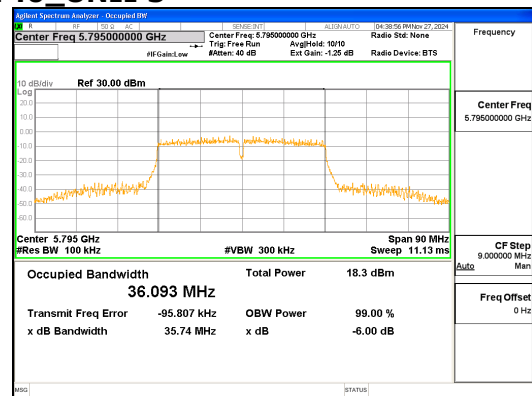
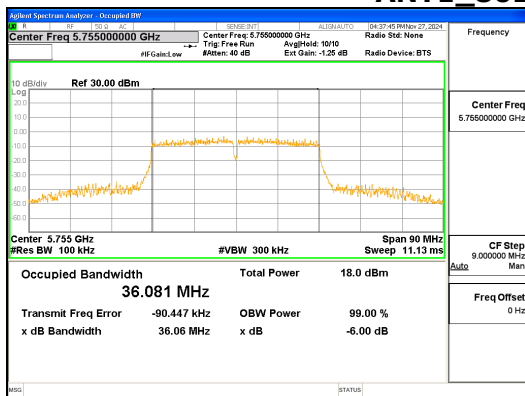


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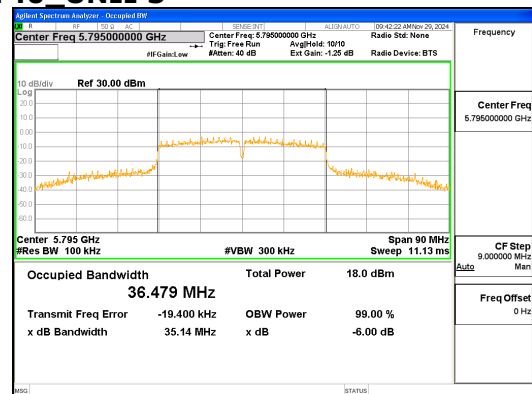
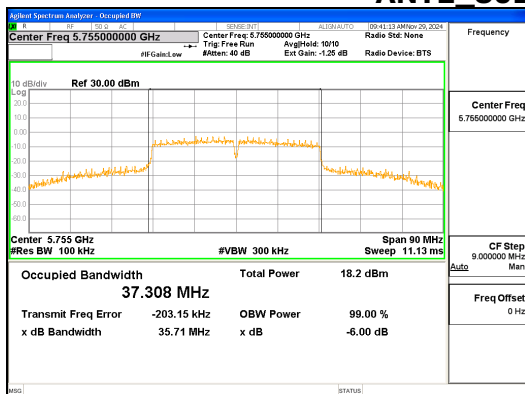
Report No.:
CTK-2024-03272
Page (19) / (184) Pages



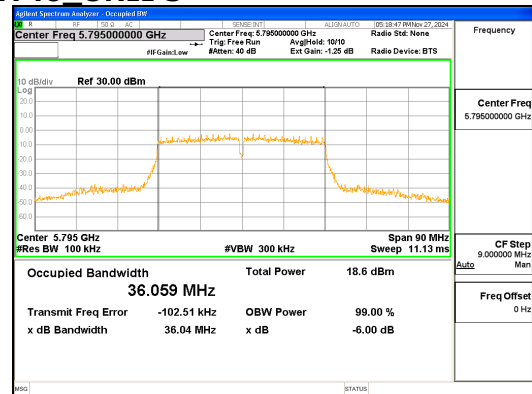
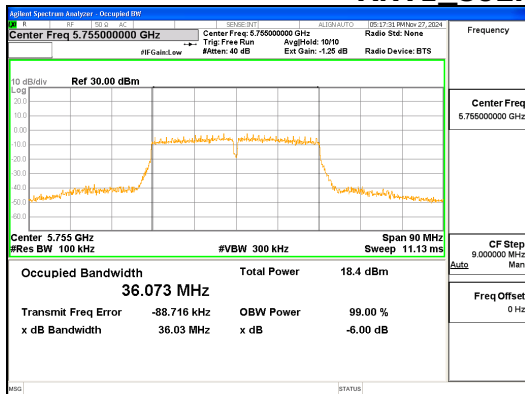
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ANT2_802.11n_HT40_UNII 3



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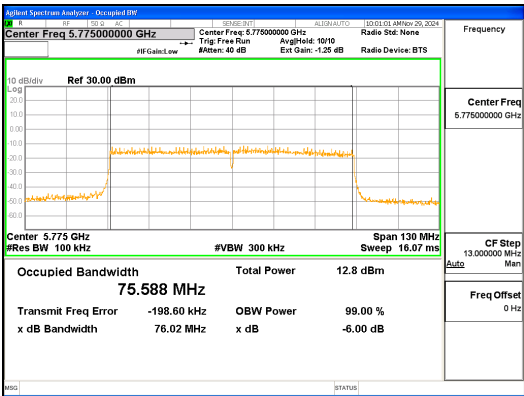


ANT2_802.11ac_VHT40_UNII 3



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CTK-2024-03272
Page (20) / (184) Pages



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Report No.:
CTK-2024-03272
Page (21) / (184) Pages

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:

ANT1

	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	20.06	16.50	19.96	17.54	19.88	17.51
5 200 MHz	20.43	16.52	19.97	17.55	20.03	17.53
5 240 MHz	21.30	16.58	20.04	17.54	20.02	17.53
5 260 MHz	21.23	16.55	19.96	17.54	19.94	17.51
5 300 MHz	21.40	16.56	19.93	17.57	19.90	17.52
5 320 MHz	21.34	16.59	19.93	17.54	20.14	17.53
5 500 MHz	21.31	16.57	21.21	17.66	20.05	17.57
5 600 MHz	25.50	16.77	30.38	18.12	26.31	17.7
5 700 MHz	29.66	17.26	31.05	18.18	29.19	18.07
5 720 MHz	31.18	18.41	29.19	17.95	31.55	18.47
5 745 MHz	30.27	17.90	32.59	18.61	34.16	19.04
5 785 MHz	32.94	18.26	35.69	19.36	34.21	19.22
5 825 MHz	32.91	18.39	36.26	19.48	36.27	19.53
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	40.66	36.23	40.40	36.17
5 230 MHz	40.33	36.21	40.59	36.14
5 270 MHz	40.78	36.22	40.64	36.18
5 310 MHz	40.87	36.23	40.6	36.21
5 510 MHz	40.17	36.13	40.49	36.11
5 590 MHz	50.25	36.31	61.72	36.48
5 670 MHz	53.38	36.33	61.71	36.57
5 710 MHz	61.38	36.52	74.38	37.61
5 755 MHz	65.73	36.68	75.75	38.81
5 795 MHz	66.10	36.55	72.82	37.76
Measurement uncertainty	± 0.1 MHz			

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Report No.:
CTK-2024-03272
Page (23) / (184) Pages

	26 dB Bandwidth and 99% Bandwidth (MHz)	
Mode	802.11ac_VHT80	
Frequency	26 dB	99 %
5 210 MHz	80.95	75.83
5 290 MHz	81.18	75.78
5 530 MHz	80.78	75.79
5 610 MHz	123.56	76.45
5 690 MHz	129.50	76.72
5 775 MHz	80.23	75.69
Measurement uncertainty	± 0.1 MHz	



ANT2

	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	19.53	16.50	19.75	17.51	19.86	17.55
5 200 MHz	19.99	16.47	19.73	17.50	19.85	17.53
5 240 MHz	19.57	16.45	19.81	17.50	19.83	17.53
5 260 MHz	19.59	16.49	19.99	17.54	19.95	17.55
5 300 MHz	19.48	16.49	19.99	17.52	19.90	17.55
5 320 MHz	19.89	16.49	19.99	17.53	19.86	17.55
5 500 MHz	19.97	16.50	20.68	17.57	19.90	17.58
5 600 MHz	25.63	16.80	20.87	17.60	20.00	17.57
5 700 MHz	21.40	16.58	20.93	17.59	20.02	17.59
5 720 MHz	26.37	17.00	25.08	17.65	20.00	17.58
5 745 MHz	28.83	17.62	22.23	17.72	20.25	17.79
5 785 MHz	28.89	17.58	21.27	17.70	20.34	17.79
5 825 MHz	25.72	17.28	20.77	17.66	20.25	17.72
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	39.99	36.18	40.02	36.05
5 230 MHz	39.83	36.22	39.90	36.08
5 270 MHz	39.84	36.26	40.06	36.13
5 310 MHz	39.99	36.27	40.23	36.08
5 510 MHz	39.71	36.18	39.88	36.04
5 590 MHz	40.01	36.26	40.15	36.10
5 670 MHz	40.00	36.20	40.05	36.11
5 710 MHz	40.22	36.25	40.12	36.16
5 755 MHz	40.13	36.31	40.27	36.14
5 795 MHz	39.87	36.26	40.16	36.15
Measurement uncertainty	± 0.1 MHz			



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Report No.:
CTK-2024-03272
Page (25) / (184) Pages

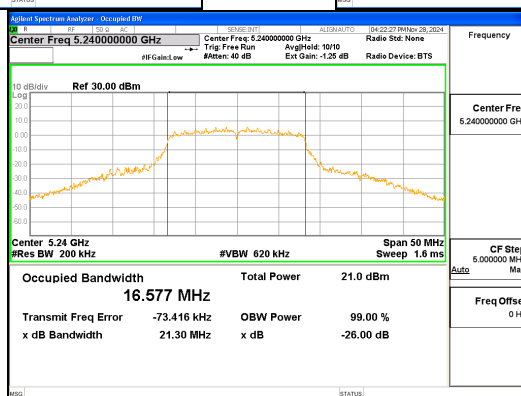
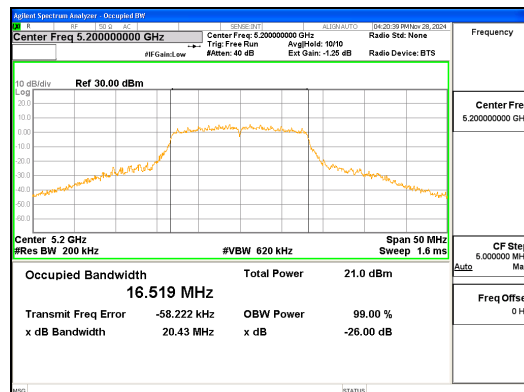
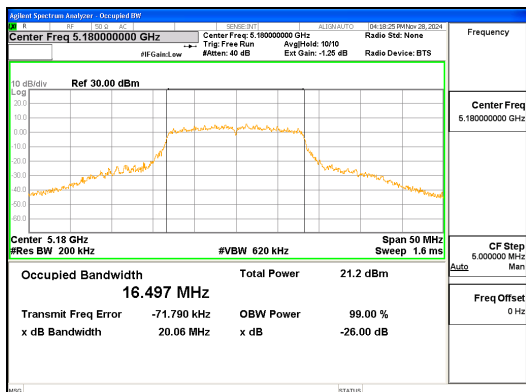
	26 dB Bandwidth and 99% Bandwidth (MHz)	
Mode	802.11ac_VHT80	
Frequency	26 dB	99 %
5 210 MHz	79.96	75.73
5 290 MHz	79.71	75.72
5 530 MHz	79.68	75.72
5 610 MHz	84.34	75.82
5 690 MHz	83.83	76.01
5 775 MHz	79.55	75.70
Measurement uncertainty	± 0.1 MHz	

See next pages for actual measured spectrum plots.

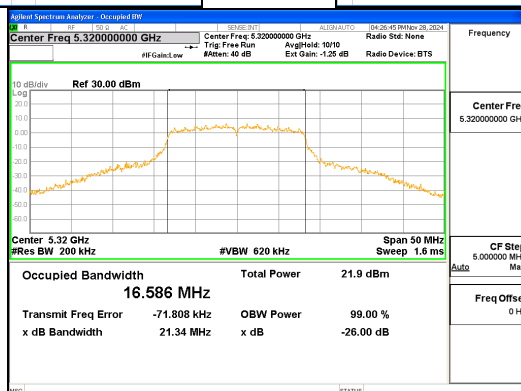
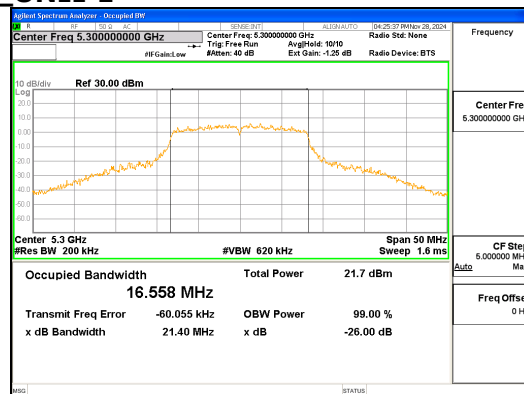
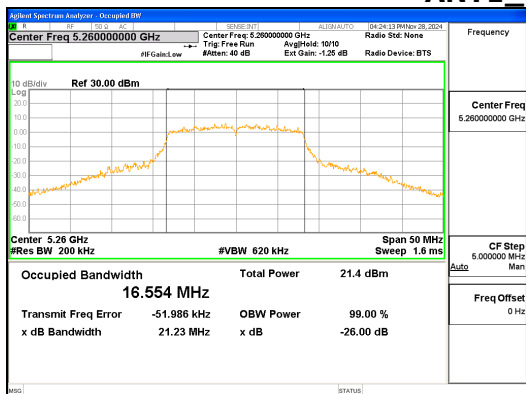


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Report No.:
CTK-2024-03272
Page (26) / (184) Pages



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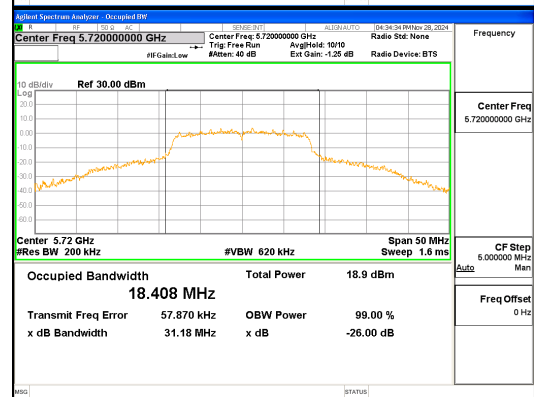
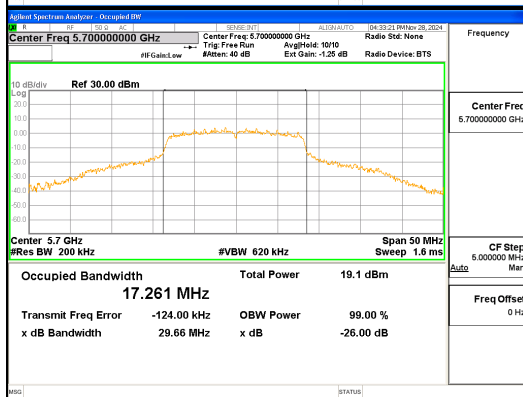
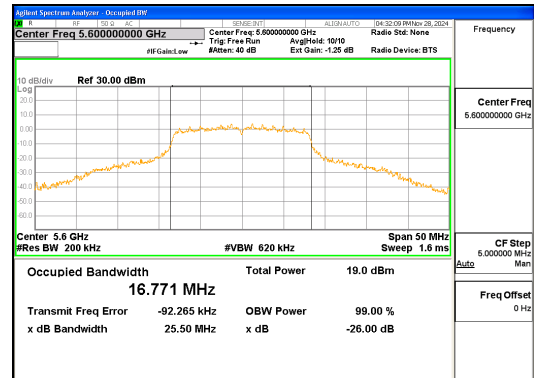
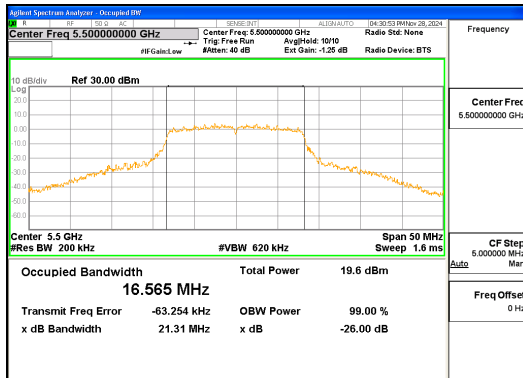


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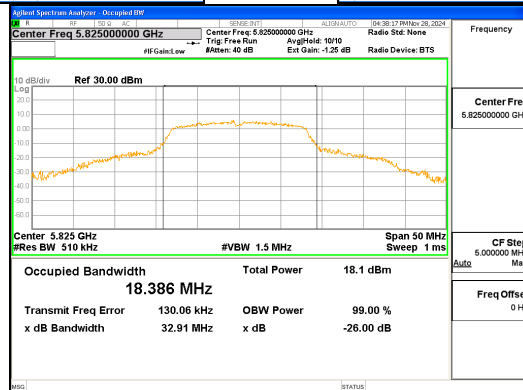
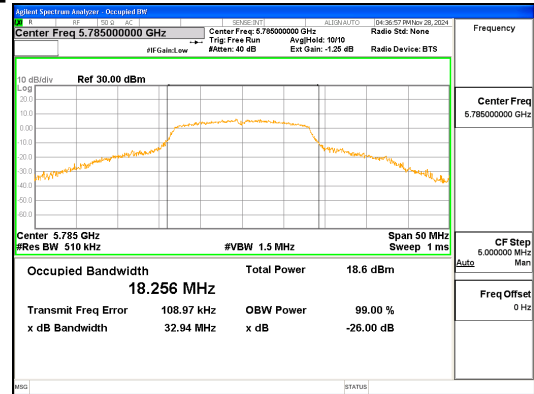
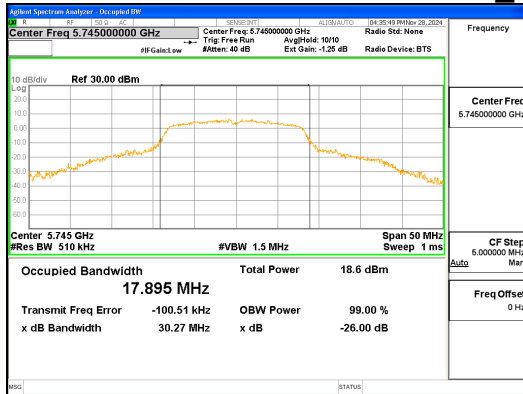


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Report No.:
CTK-2024-03272
Page (27) / (184) Pages



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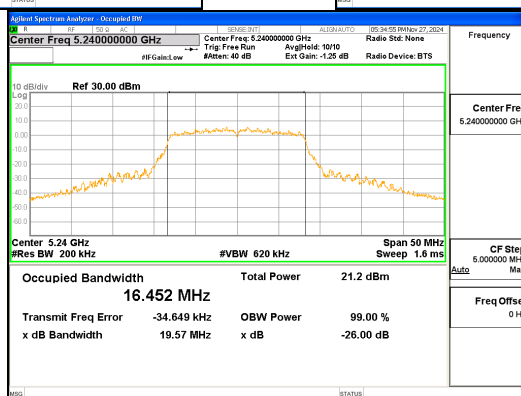
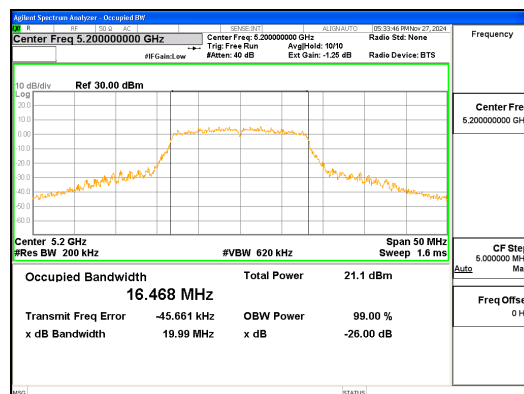
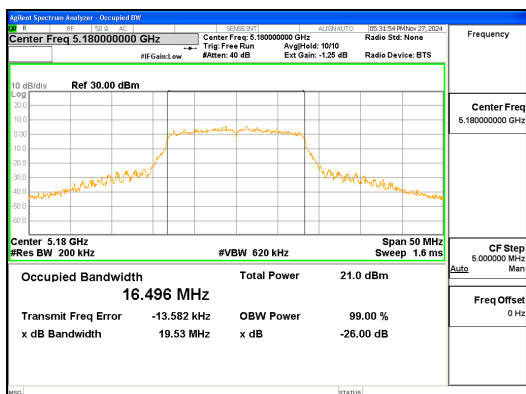


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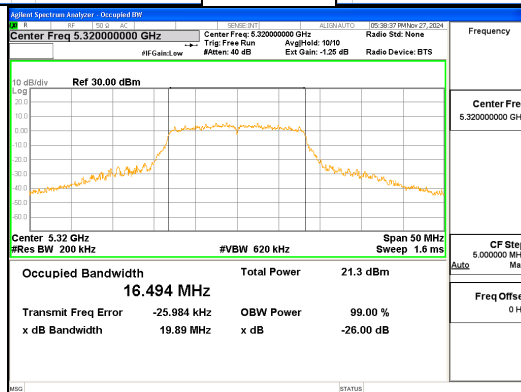
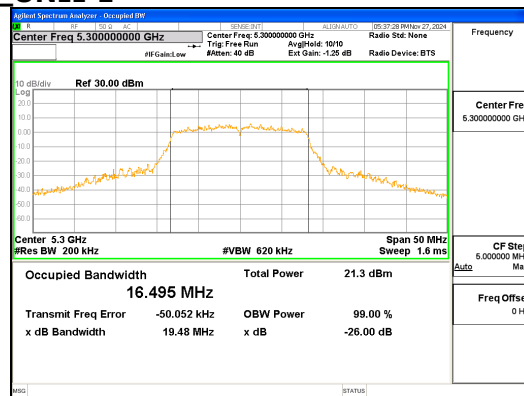
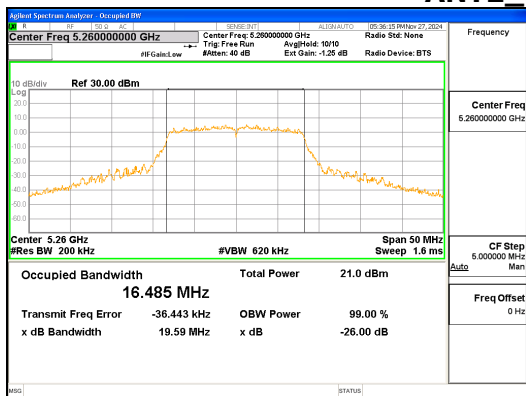


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Report No.:
CTK-2024-03272
Page (28) / (184) Pages



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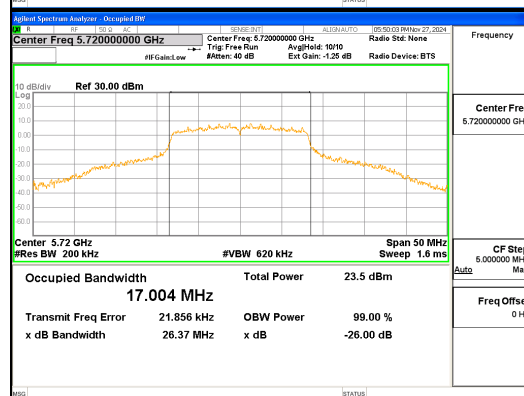
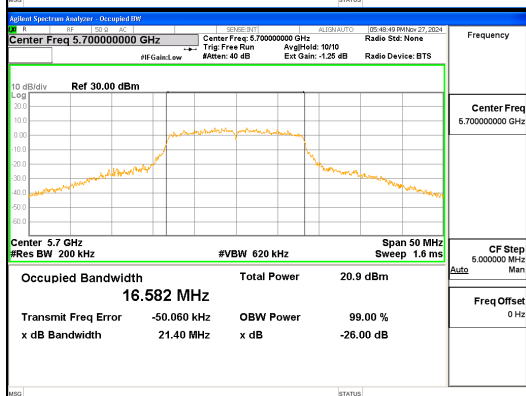
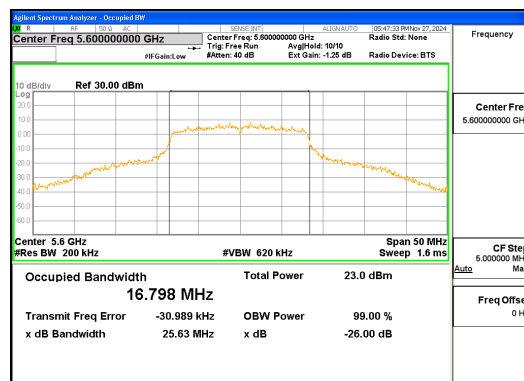
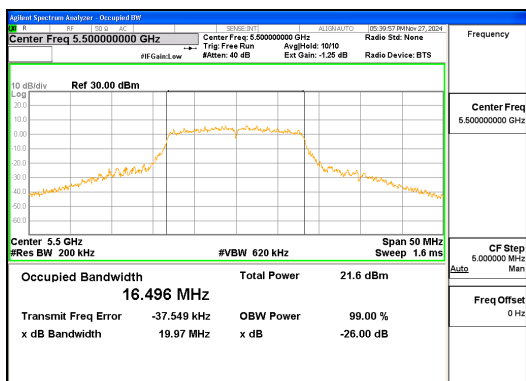


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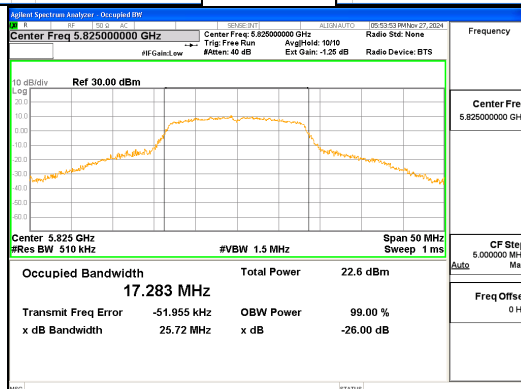
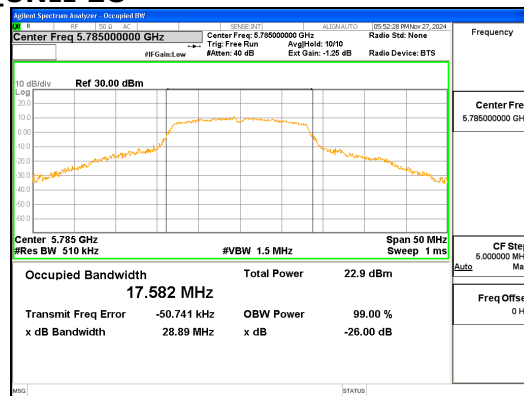
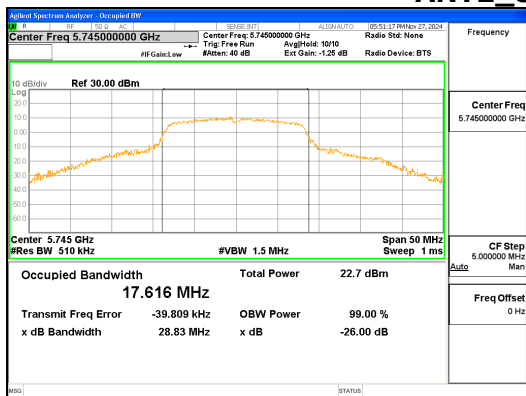


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Report No.:
CTK-2024-03272
Page (29) / (184) Pages



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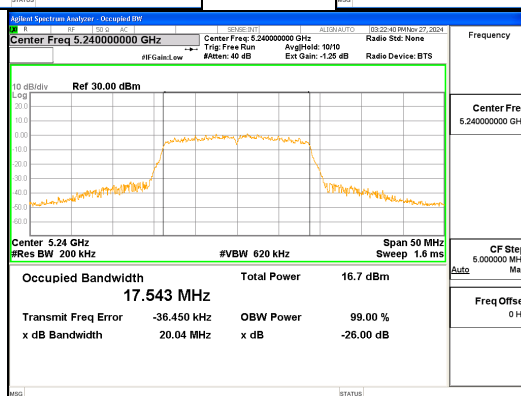
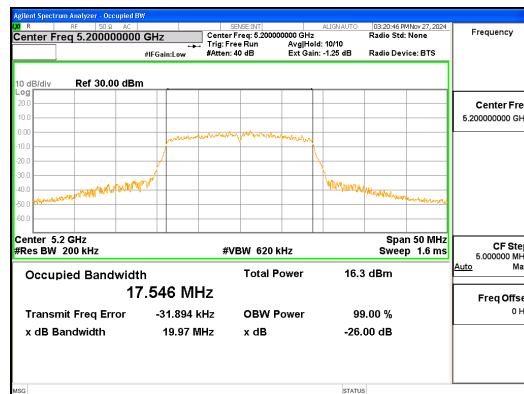
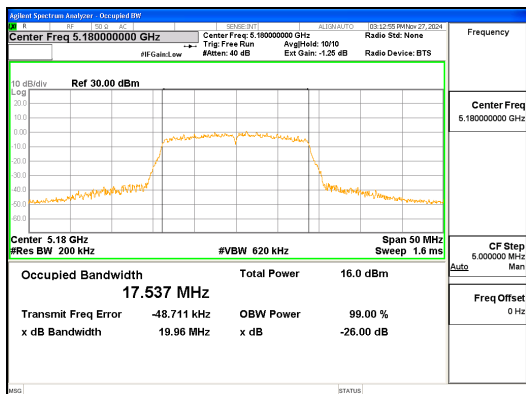


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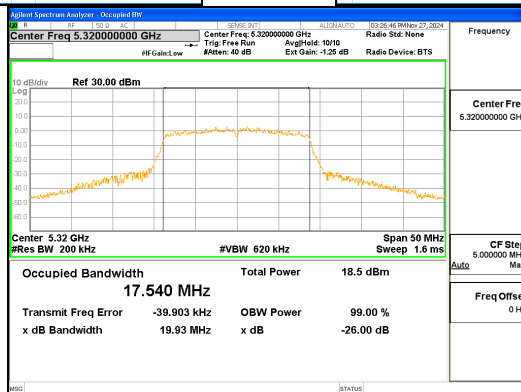
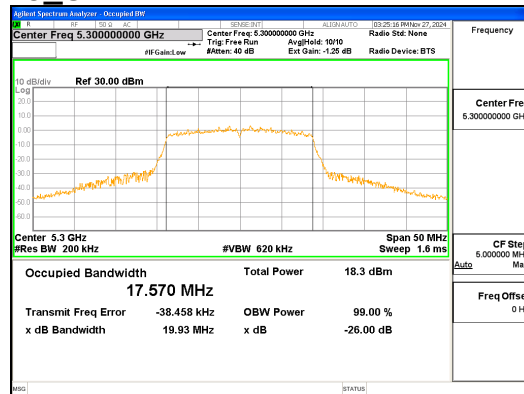
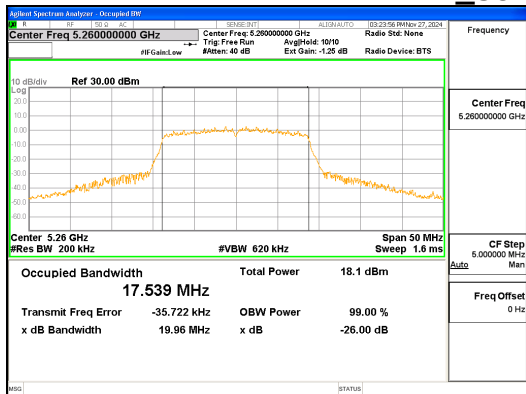


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Report No.:
CTK-2024-03272
Page (30) / (184) Pages



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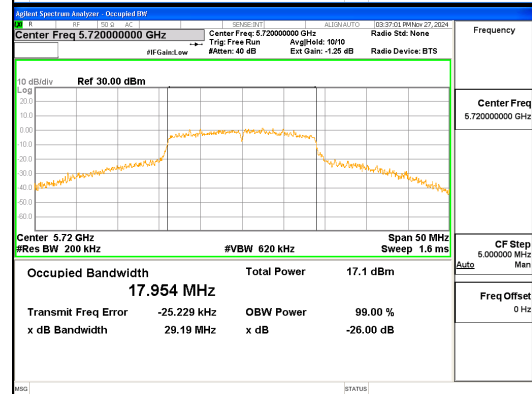
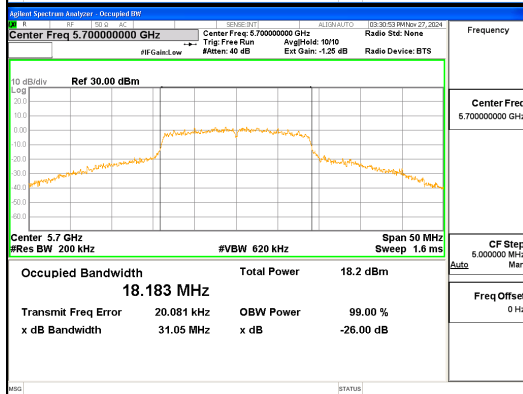
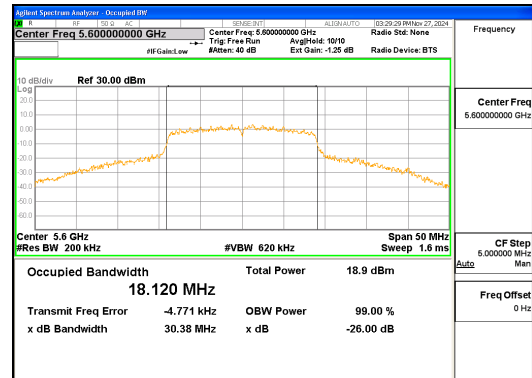
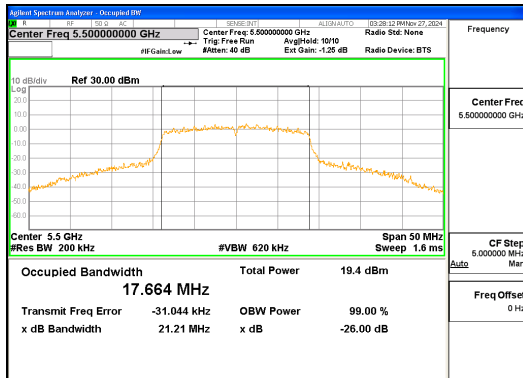


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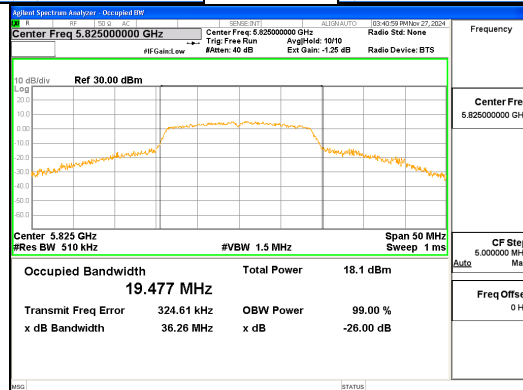
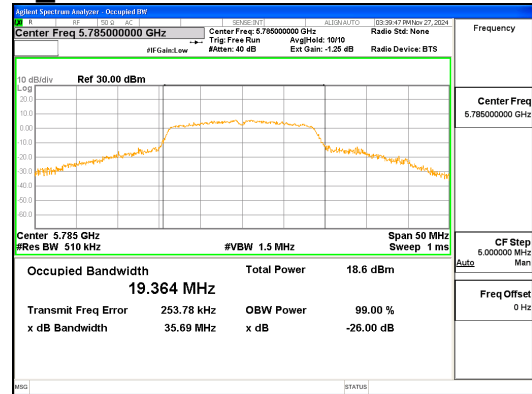
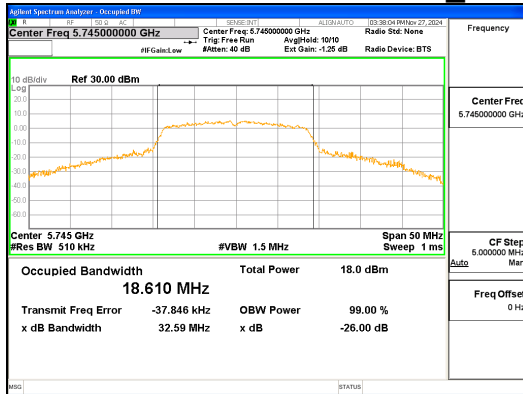


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Report No.:
CTK-2024-03272
Page (31) / (184) Pages



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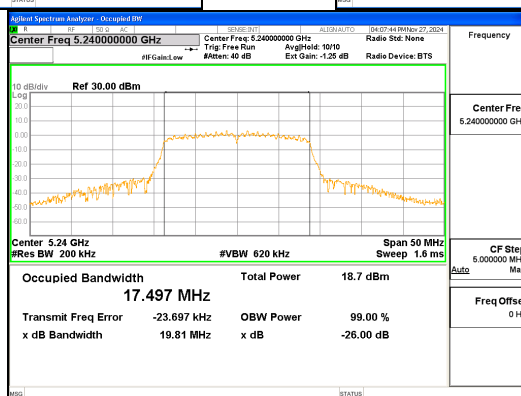
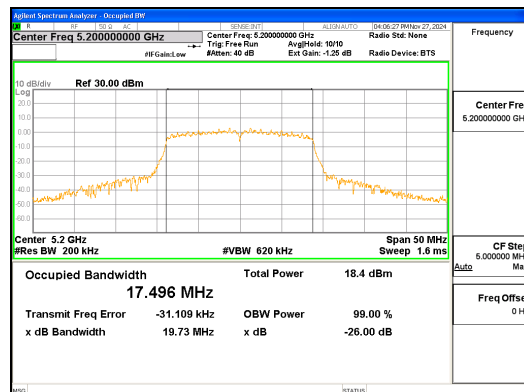
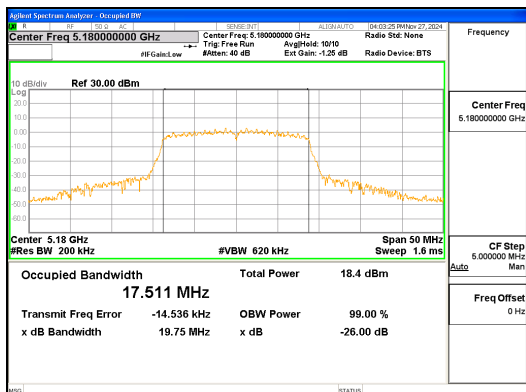


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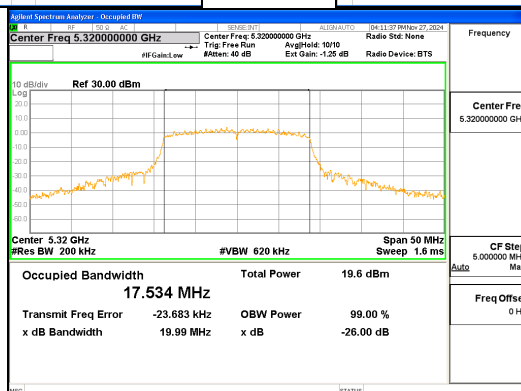
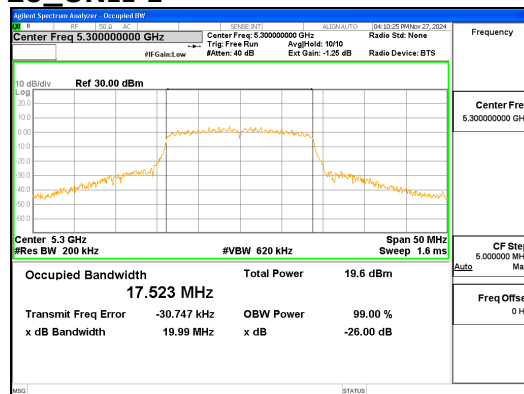
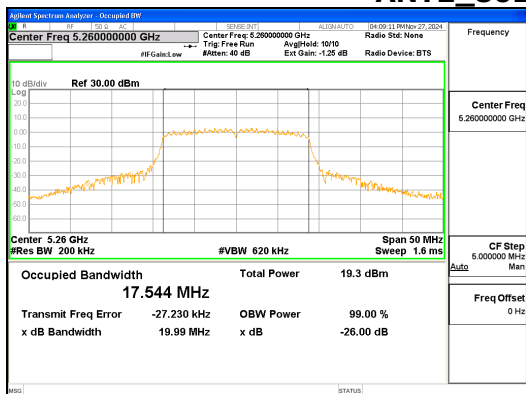


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Report No.:
CTK-2024-03272
Page (32) / (184) Pages



ANT2_802.11n_HT20_UNII 1

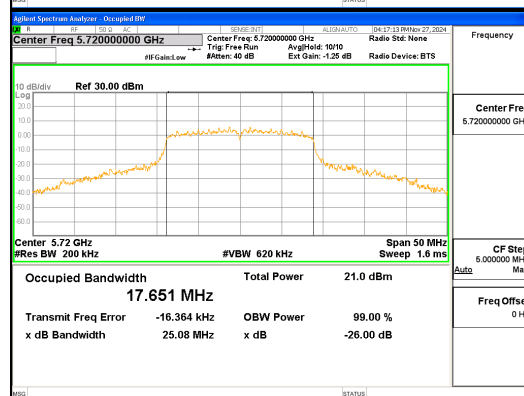
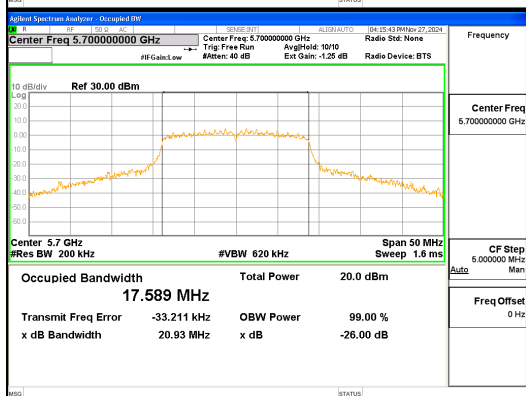
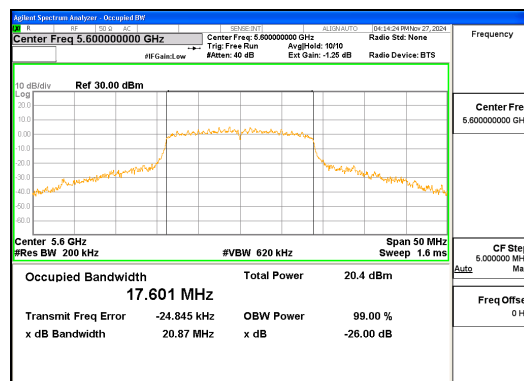
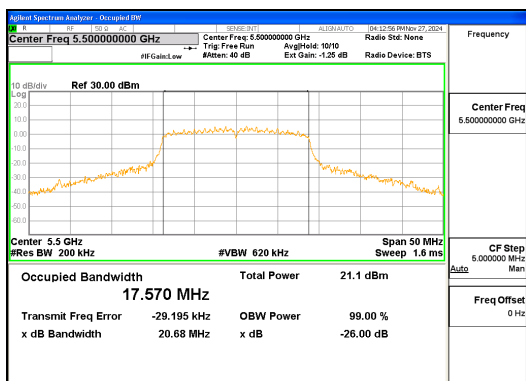


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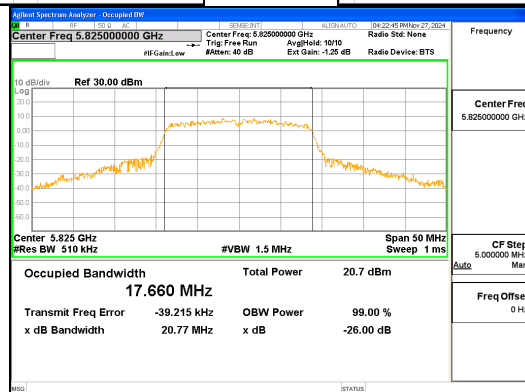
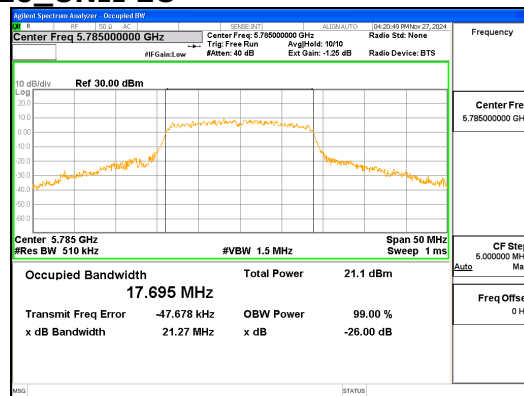
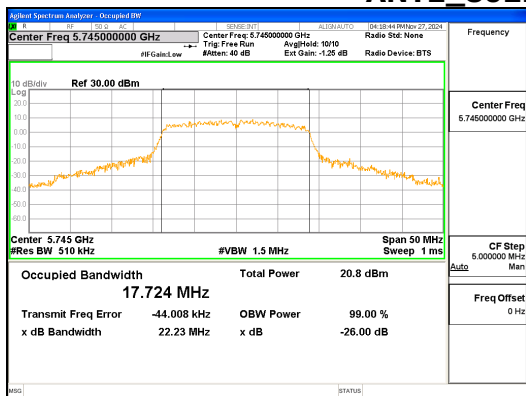


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Report No.:
CTK-2024-03272
Page (33) / (184) Pages



ANT2_802.11n_HT20_UNII 2C

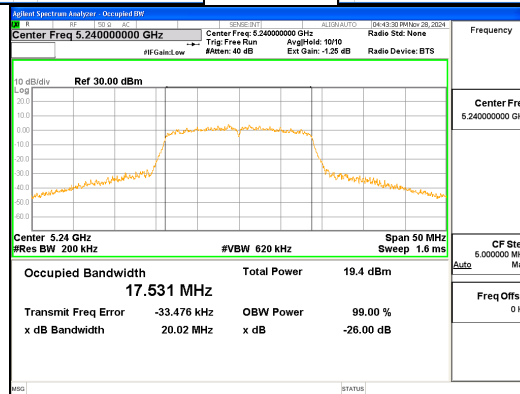
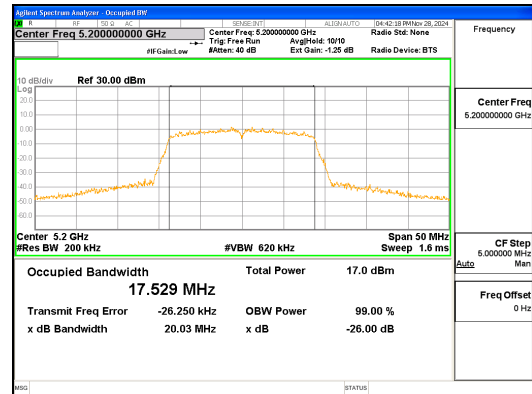
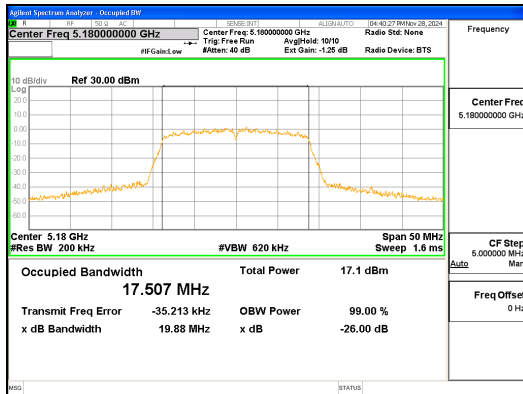


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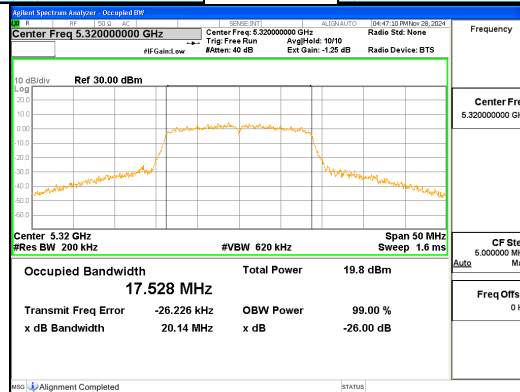
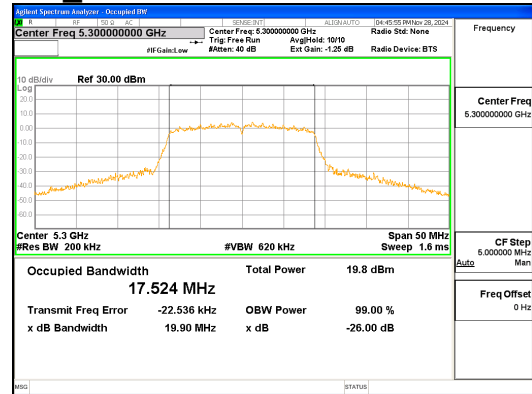
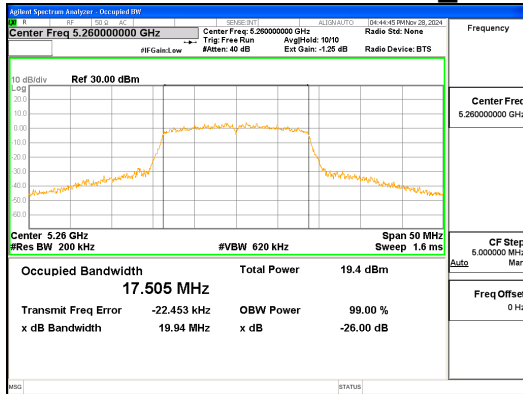


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Report No.:
CTK-2024-03272
Page (34) / (184) Pages



ANT1_802.11ac_VHT20_UNII 1

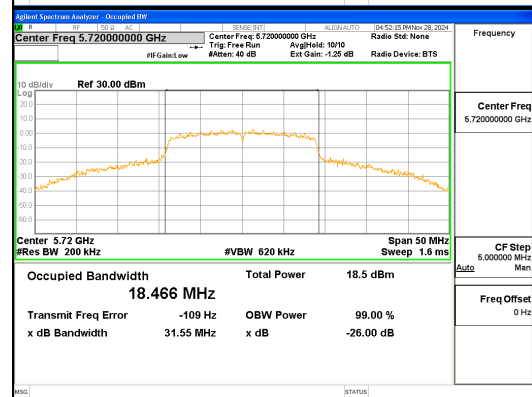
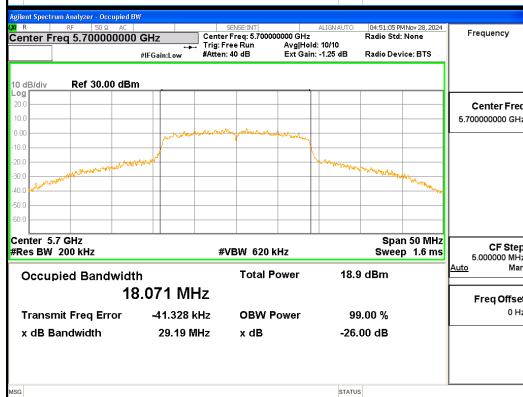
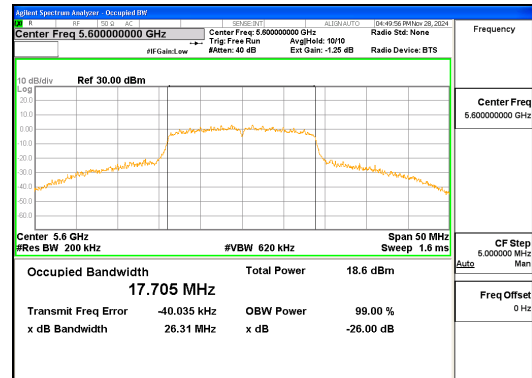
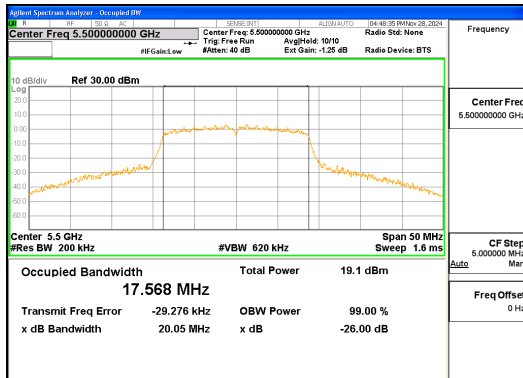


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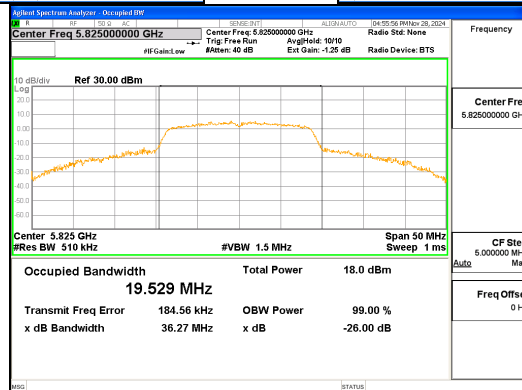
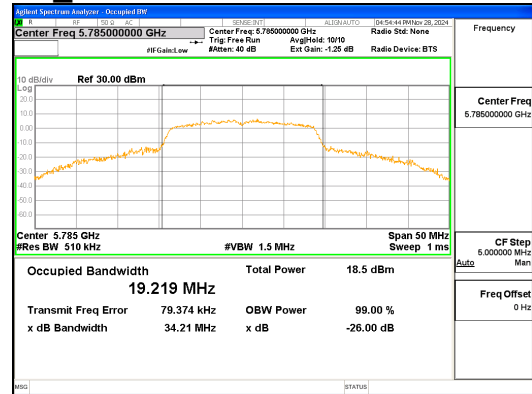
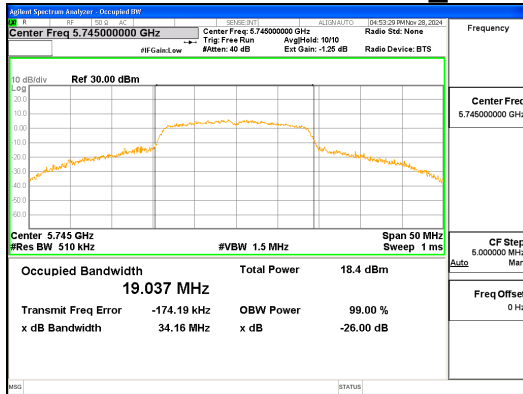


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Report No.:
CTK-2024-03272
Page (35) / (184) Pages



ANT1_802.11ac_VHT20_UNII 2C

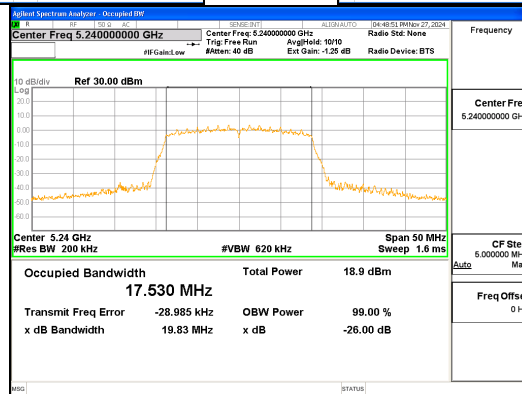
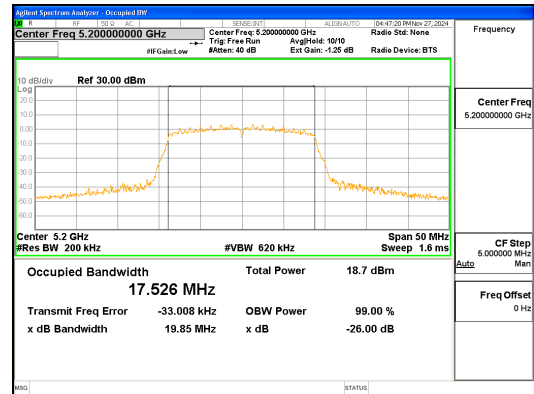
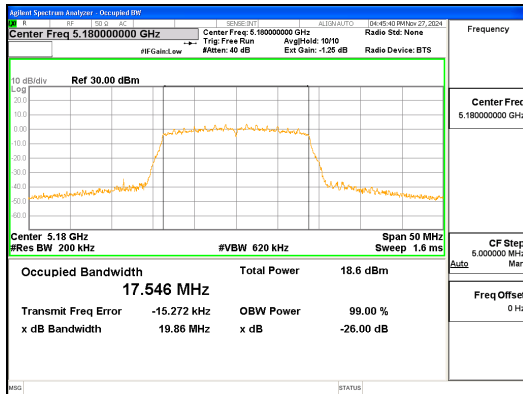


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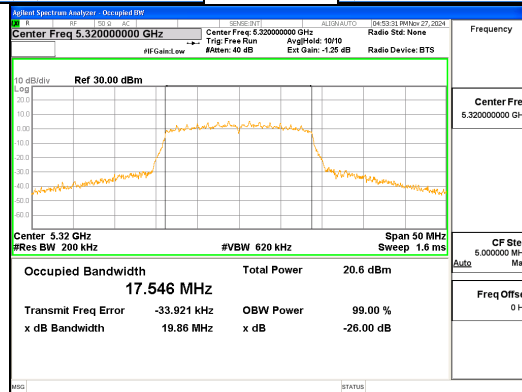
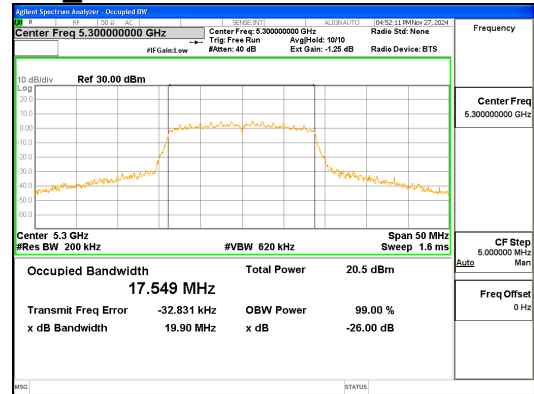
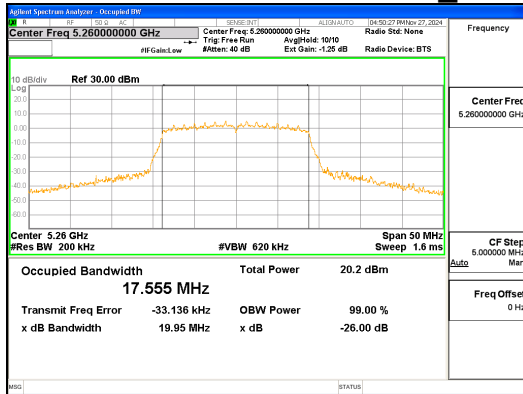


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Report No.:
CTK-2024-03272
Page (36) / (184) Pages



ANT2_802.11ac_VHT20_UNII 1

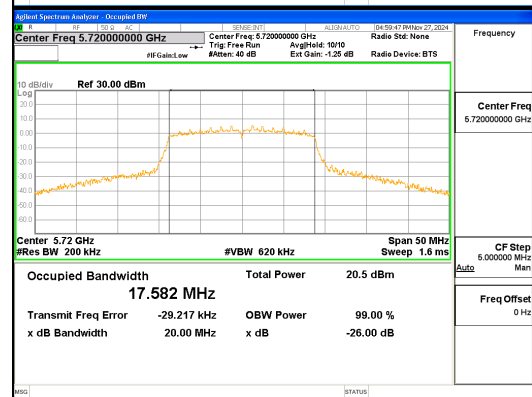
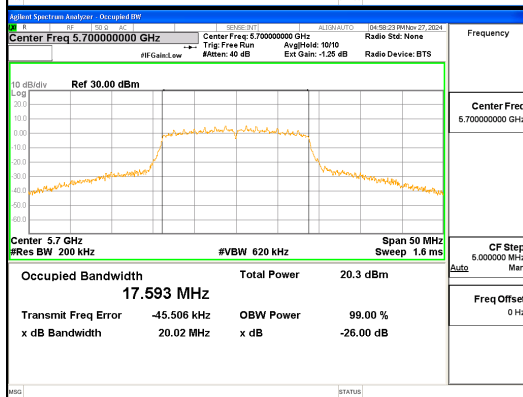
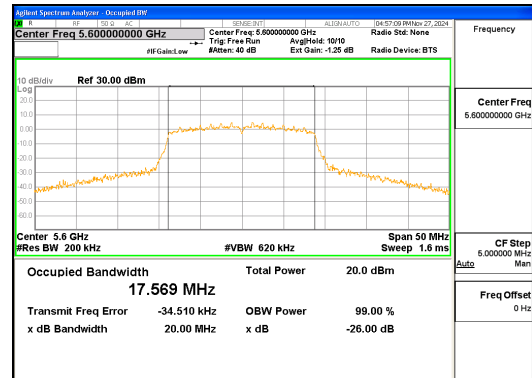
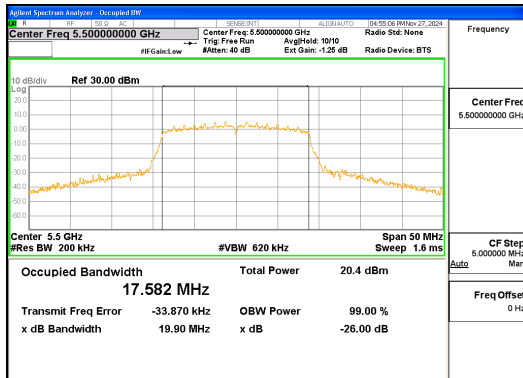


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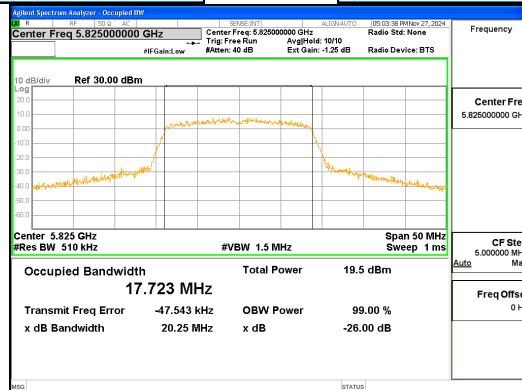
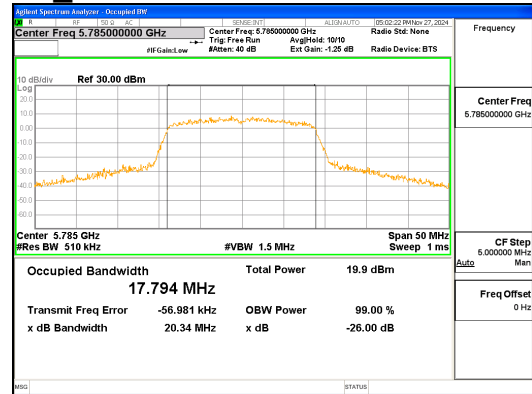
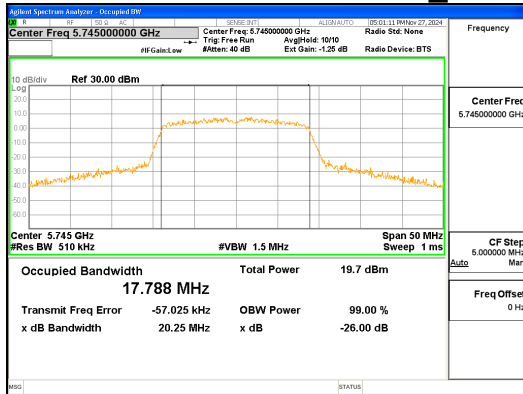


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Report No.:
CTK-2024-03272
Page (37) / (184) Pages



ANT2_802.11ac_VHT20_UNII 2C

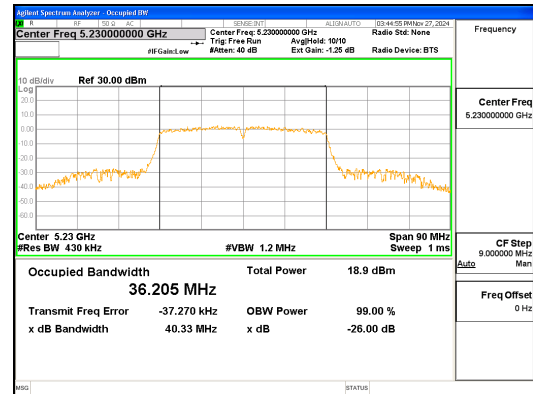
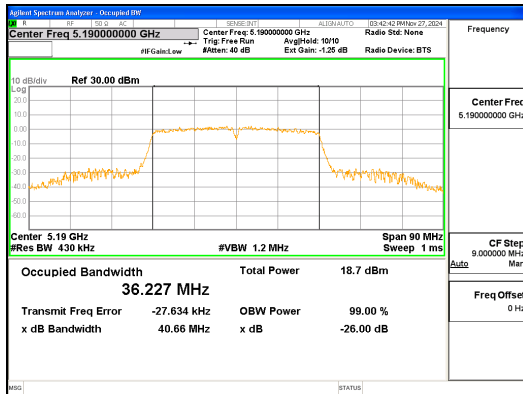


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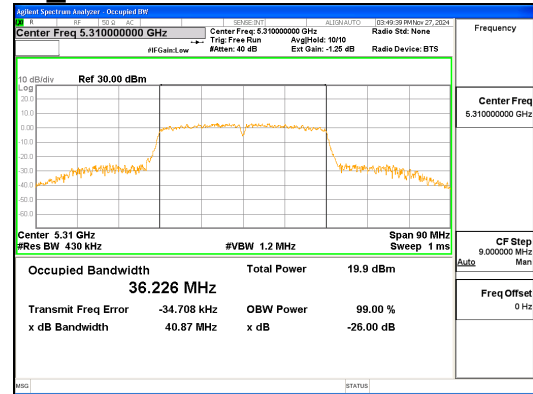
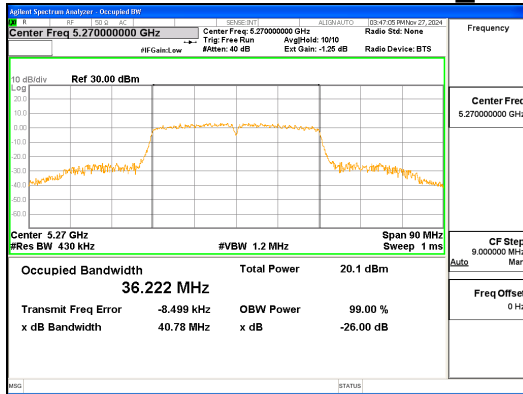


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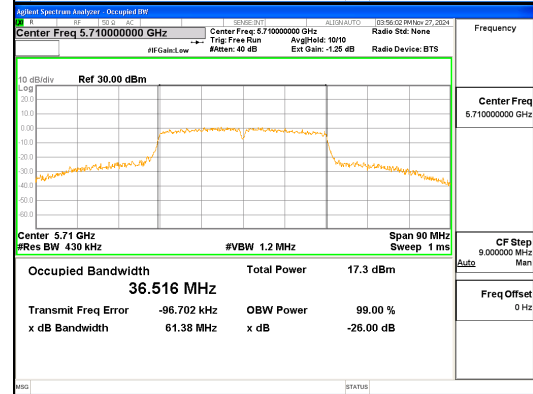
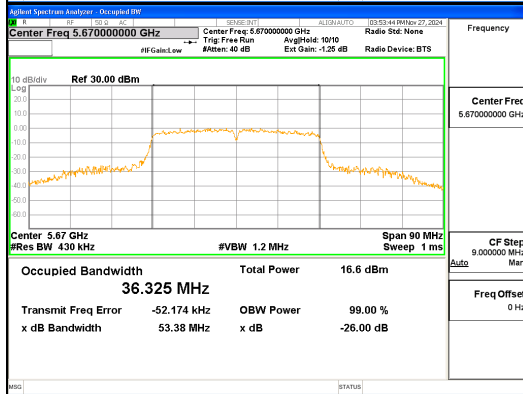
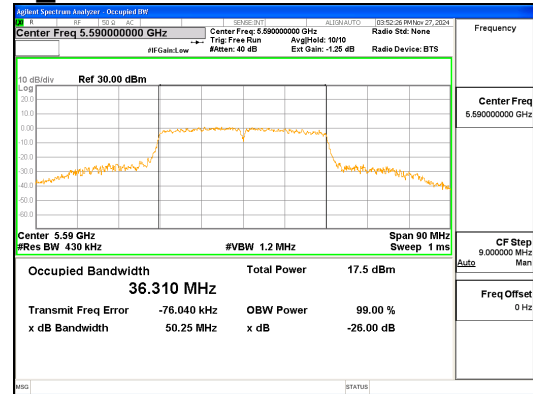
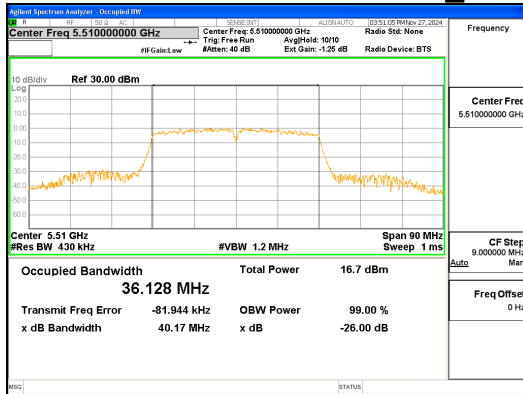
Report No.:
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Page (38) / (184) Pages



ANT1_802.11n_HT40_UNII 1



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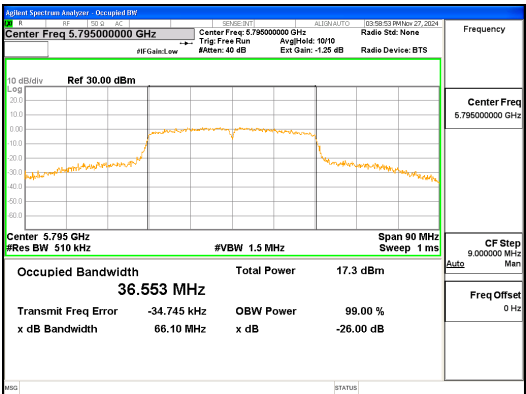
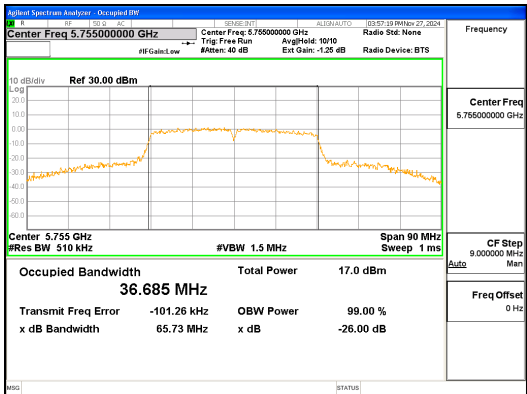


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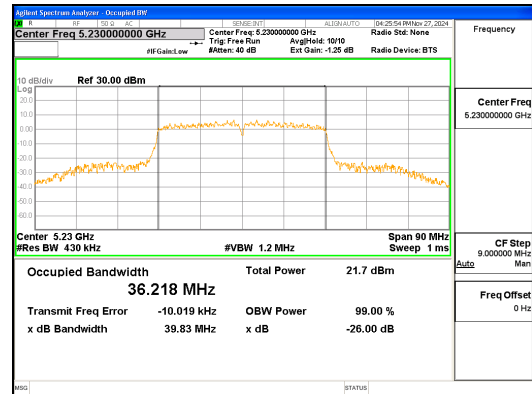
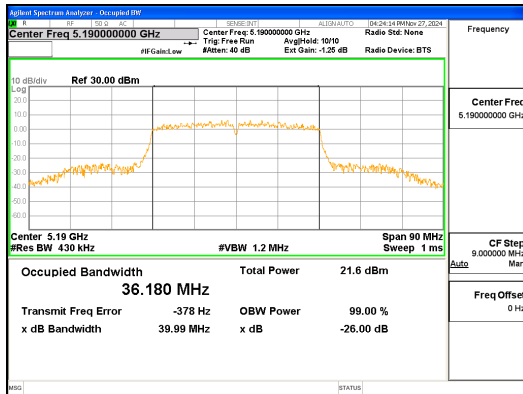


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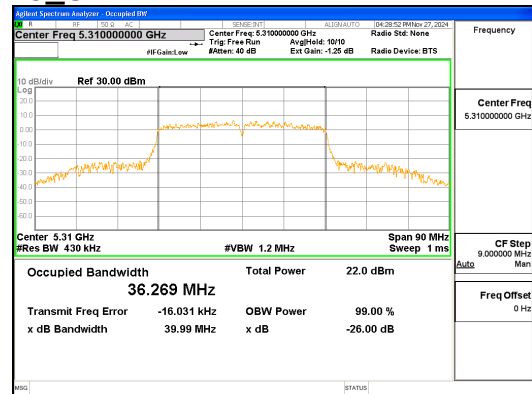
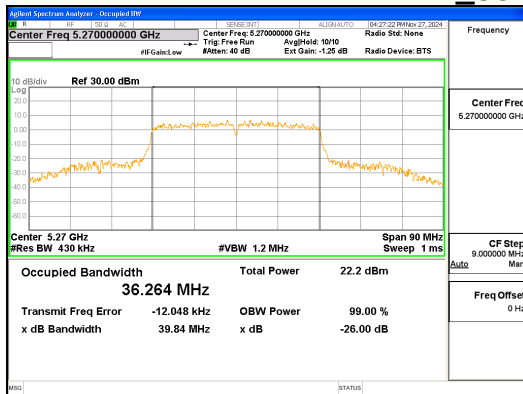
Report No.:
CTK-2024-03272
Page (39) / (184) Pages



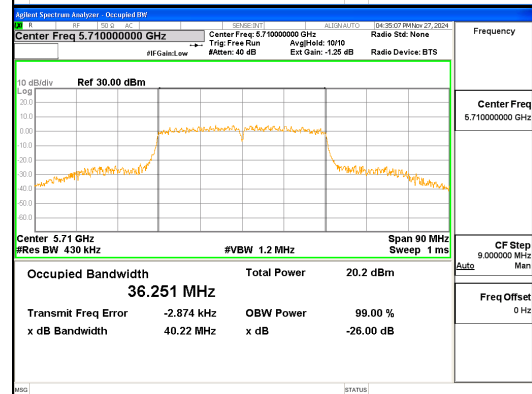
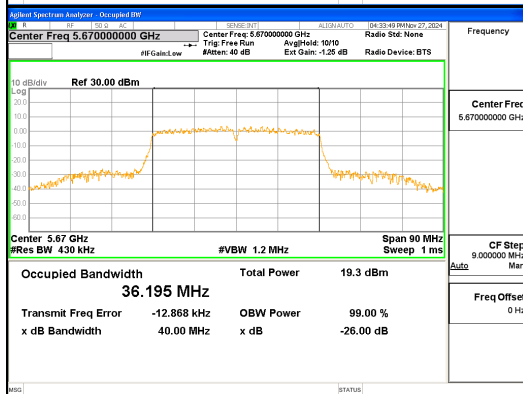
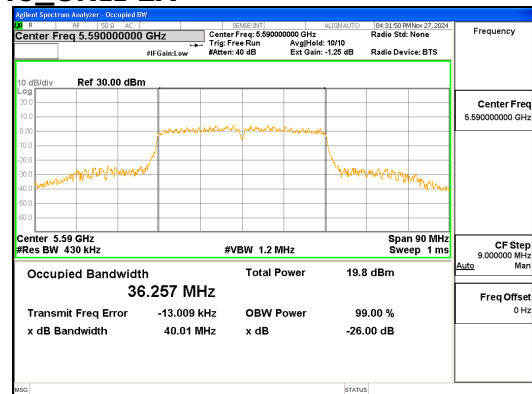
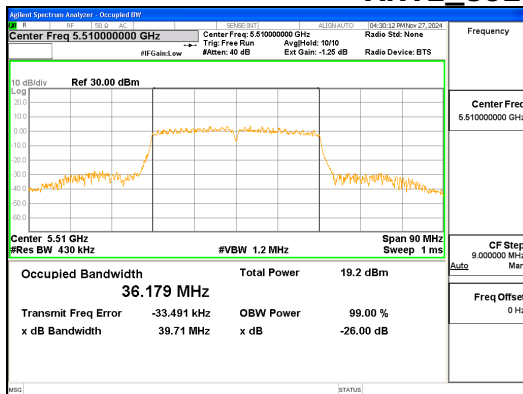
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ANT2_802.11n_HT40_UNII 1



ANT2_802.11n_HT40_UNII 2A

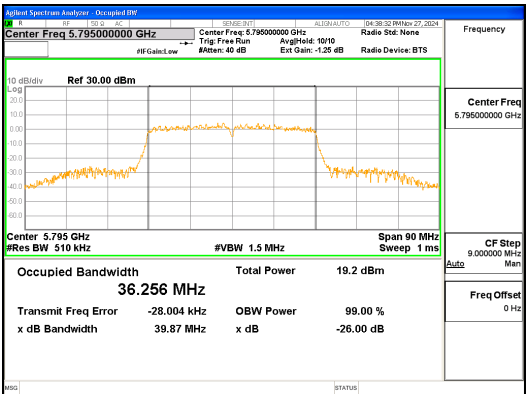
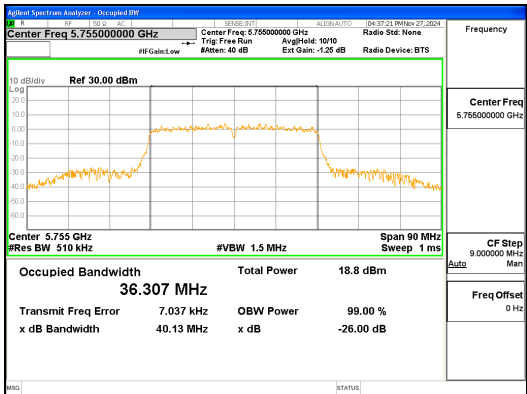


ANT2_802.11n_HT40_UNII 2C



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Report No.:
CTK-2024-03272
Page (41) / (184) Pages

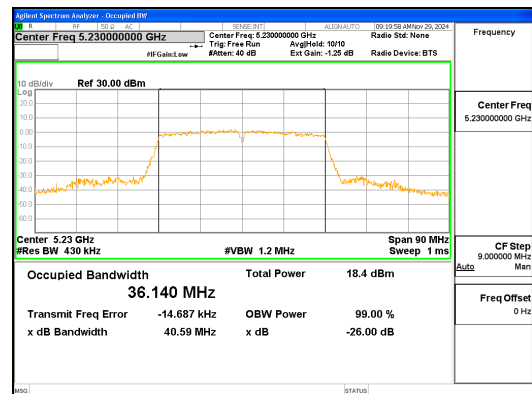
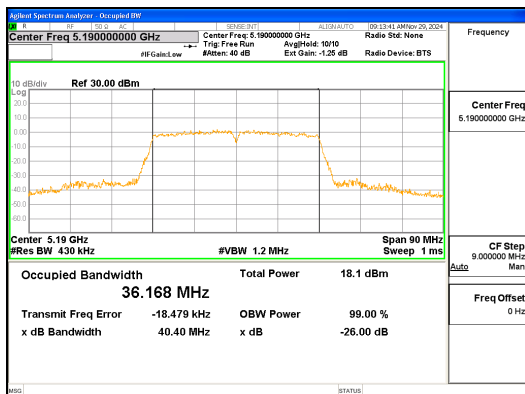


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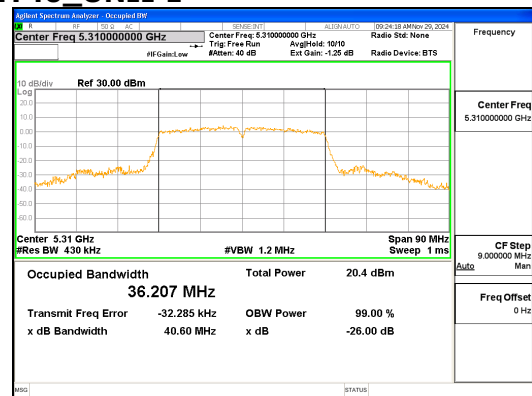
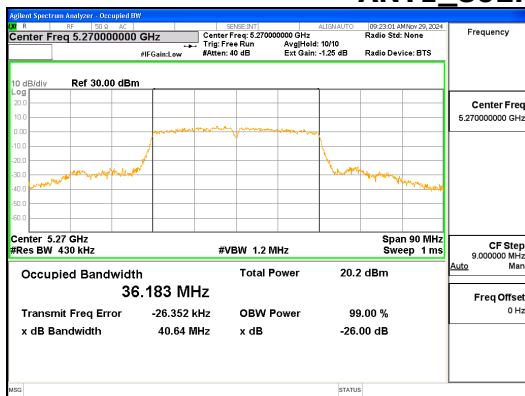


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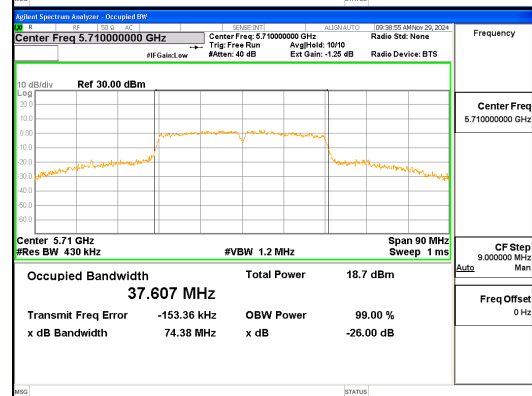
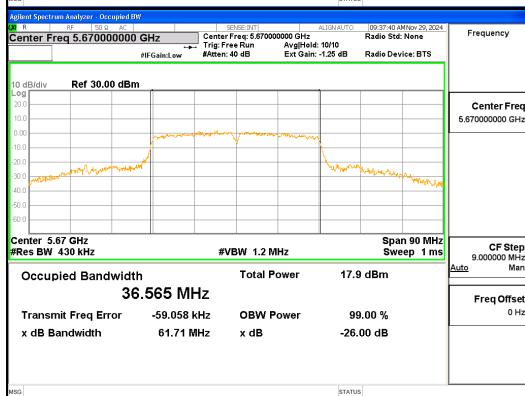
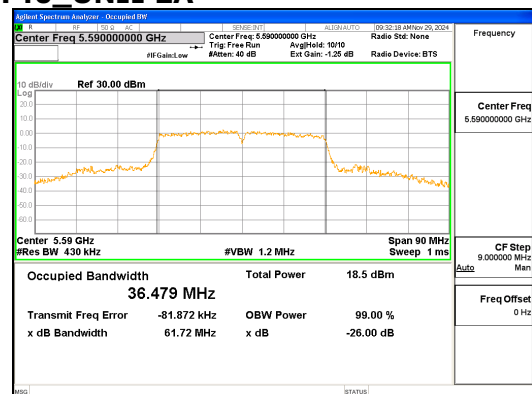
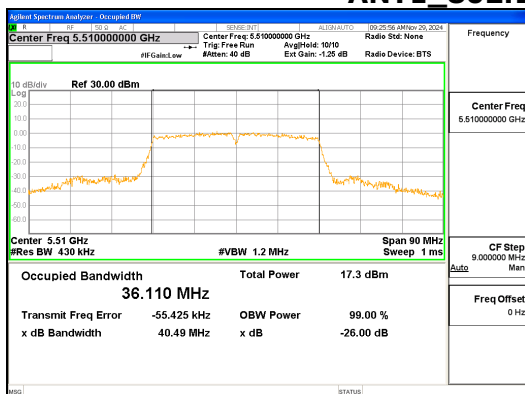
Report No.:
CTK-2024-03272
Page (42) / (184) Pages



ANT1_802.11ac_VHT40_UNII 1



ANT1_802.11ac_VHT40_UNII 2A

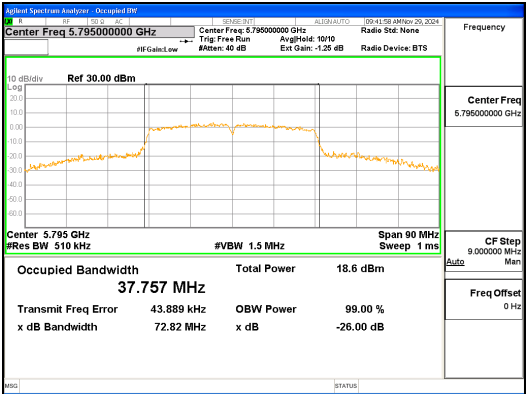
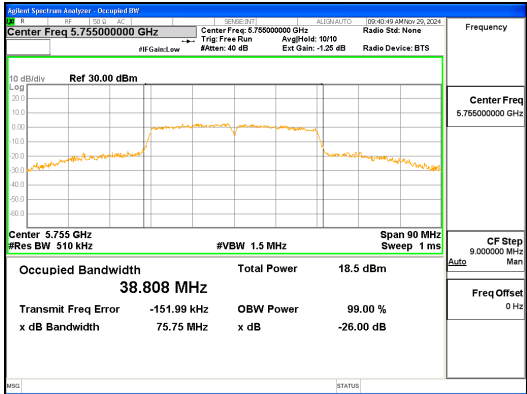


ANT1_802.11ac_VHT40_UNII 2C



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Report No.:
CTK-2024-03272
Page (43) / (184) Pages

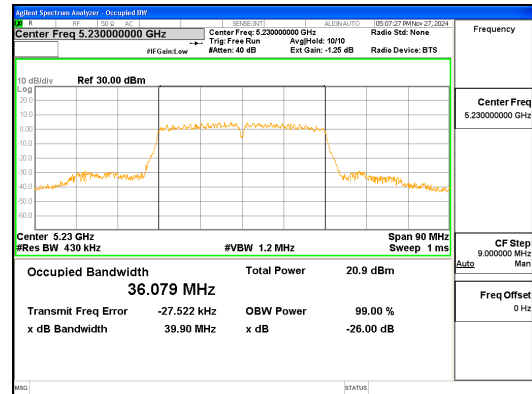
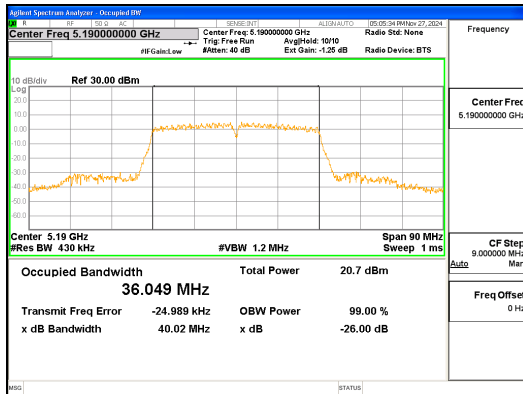


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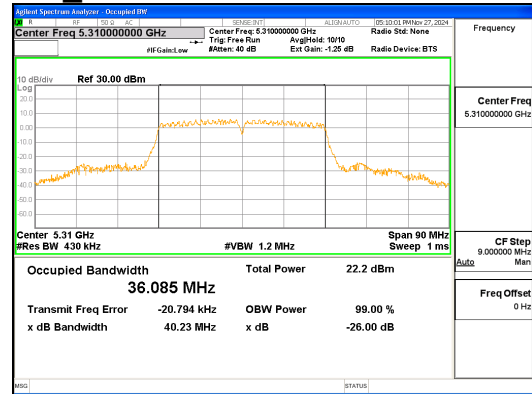
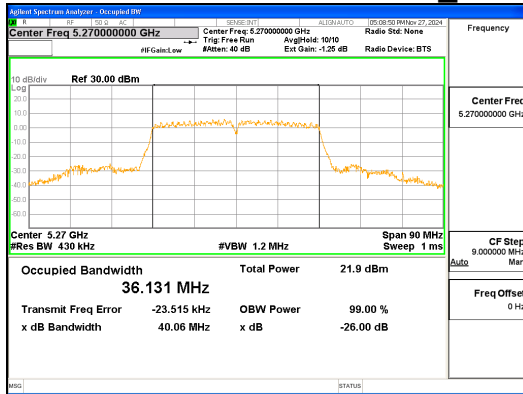


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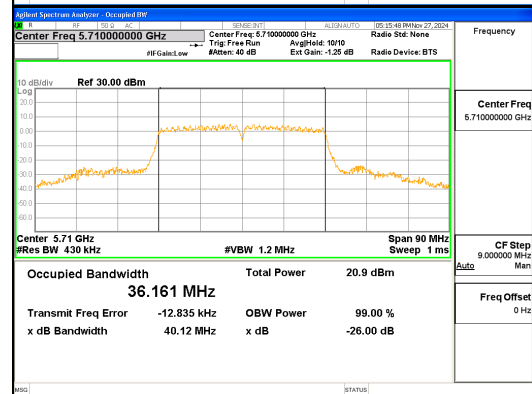
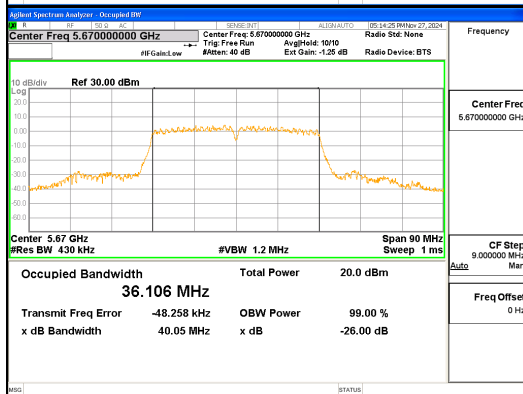
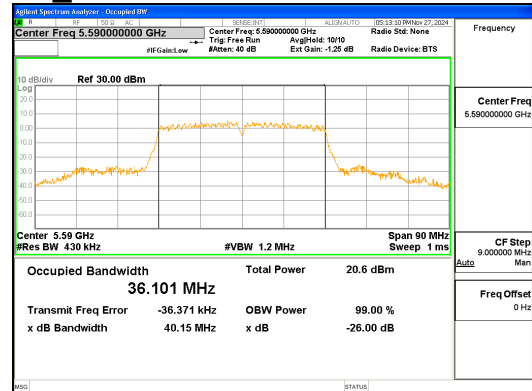
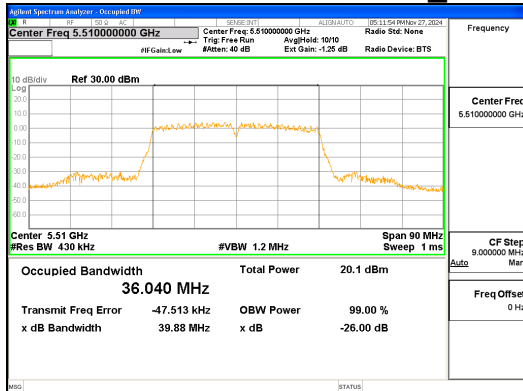
Report No.:
CTK-2024-03272
Page (44) / (184) Pages



ANT2_802.11ac_VHT40_UNII 1



ANT2_802.11ac_VHT40_UNII 2A

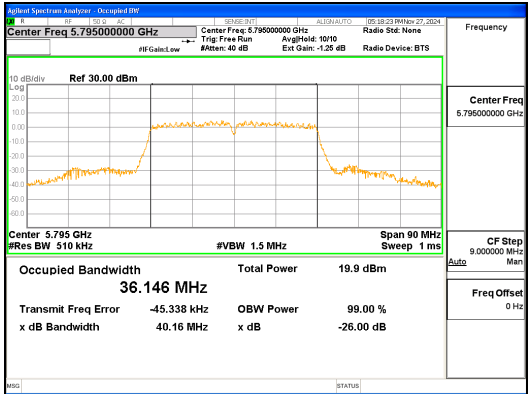
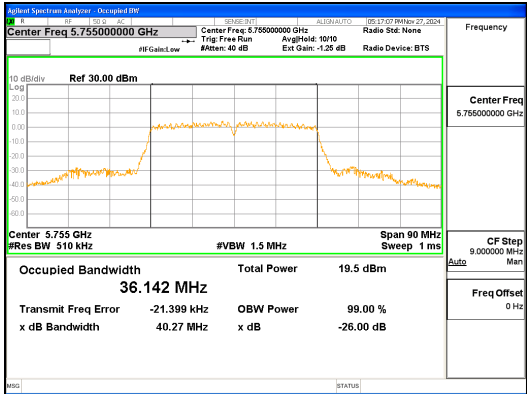


ANT2_802.11ac_VHT40_UNII 2C



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Report No.:
CTK-2024-03272
Page (45) / (184) Pages

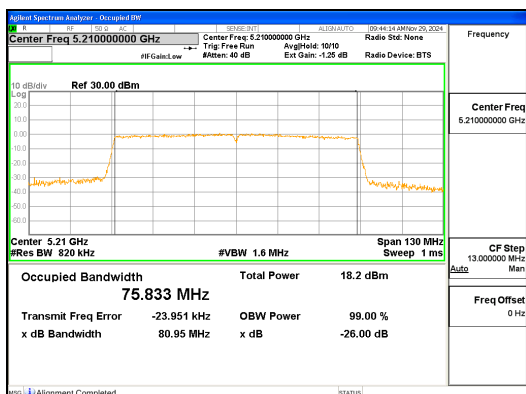


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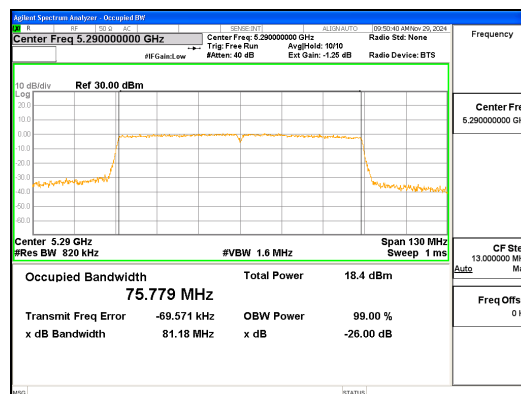


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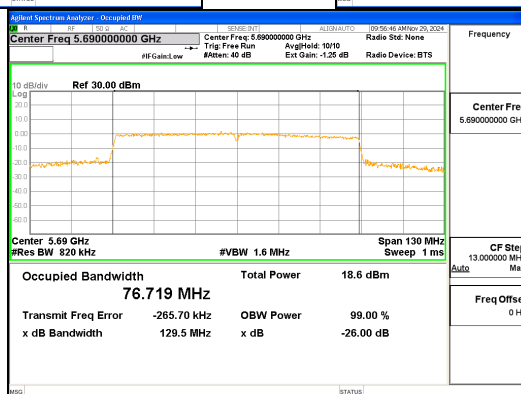
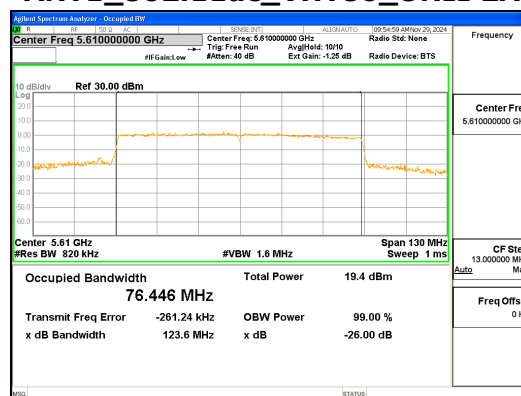
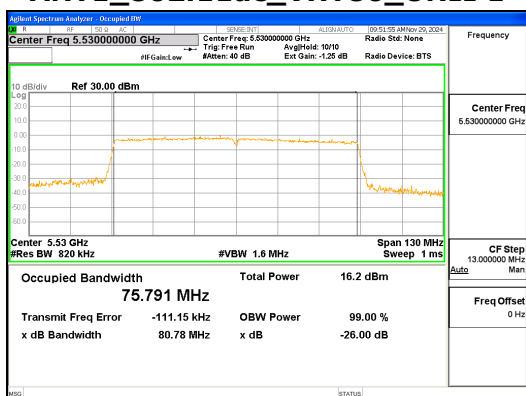
Report No.:
CTK-2024-03272
Page (46) / (184) Pages



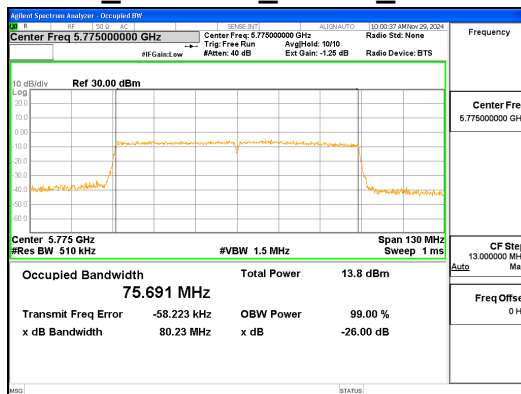
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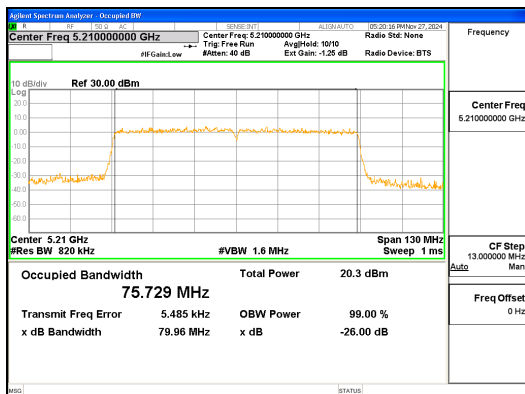


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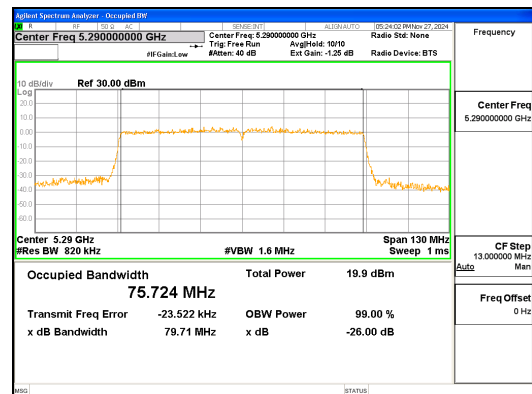


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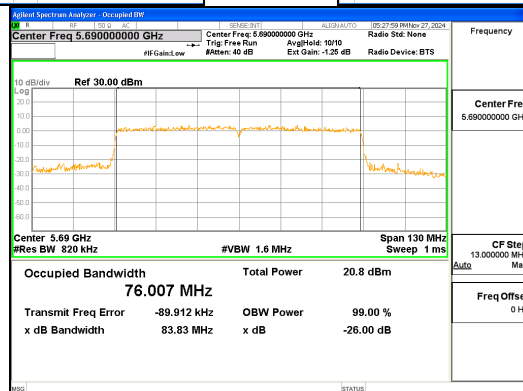
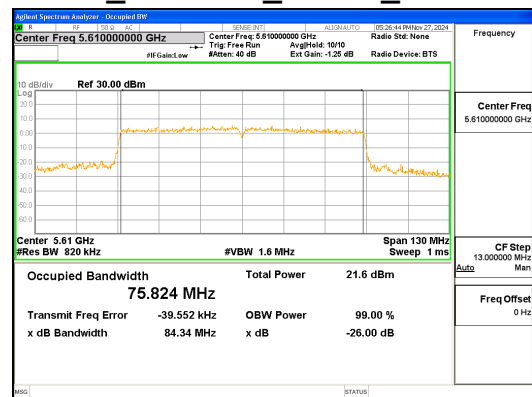
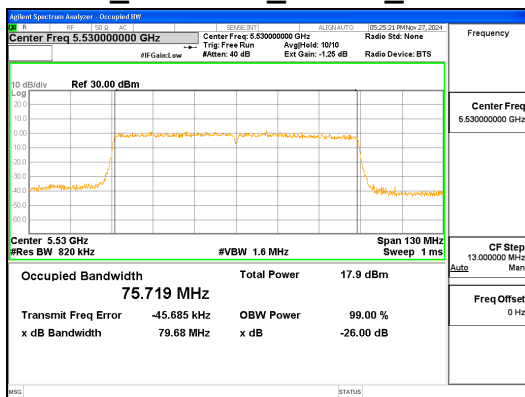
Report No.:
CTK-2024-03272
Page (47) / (184) Pages



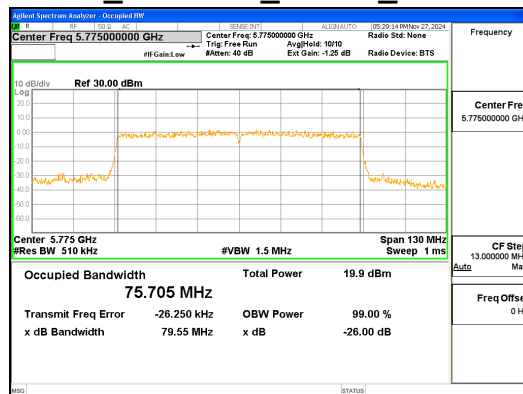
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ANT2_802.11ac_VHT80_UNII 2C



ANT2_802.11ac_VHT80_UNII 3