FCC Test Report

Report No.: AGC12845220706FE06

FCC ID	:	2A2LL-FJDZ42P-VM
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Vision-based Obstacle Avoidance Module
BRAND NAME	:	N/A
MODEL NAME	:	FJDZ42P-VM
APPLICANT	:	FJ Dynamics Co., Ltd.
DATE OF ISSUE	:	Sep. 02, 2022
STANDARD(S) **TEST PROCEDURE(S)**	:	FCC Part 15.407 KDB 789033 D02 v02r01
REPORT VERSION	:	V1.0

Attestation of ***G***lobal Compliance (Shenzhen) Co., Ltd

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Sep. 02, 2022	Valid	Initial Release

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1. VERIFICATION OF CONFORMITY

Applicant	FJ Dynamics Co.,Ltd.
Address	1709, WeiXing Building 61 GaoXin South 9th Rd, Nanshan District, Shenzhen, China
Manufacturer	FJ Dynamics Technology (Fujian) Co., Ltd.
Address	Room 1701, Floor 17, Unit 2, Huajian Building, No. 12, 16, and 18, East Keji Road, Shangjie Town, Minhou County, Fuzhou City, Fujian Province, China
Factory	FJ Dynamics Technology (Fujian) Co., Ltd.
Address	Unit 3, Yimei Zhineng Industrial Park, No. 30 Zhihui Avenue, Nanyu Town,Gaoxin District, Fuzhou City, Fujian Province, China
Product Designation	Vision-based Obstacle Avoidance Module
Brand Name	N/A
Test Model	FJDZ42P-VM
Date of test	Jul. 25, 2022~Aug. 30, 2022
Deviation	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-BGN/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Prepared By	Bibo Zhang (Project Engineer)	Aug. 30, 2022
Reviewed By	Calvin Liu (Reviewer)	Sep. 02. 2022
Approved By	Max Zhang (Authorized Officer)	Sep. 02. 2022

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as “Vision-based Obstacle Avoidance Module”. It is designed by way of utilizing the OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Equipment Type	☒ Outdoor access points ☐ Indoor access points ☐ Fixed P2P access points ☐ Client devices
Operation Frequency	☒ U-NII 1:5150MHz~5250MHz ☐ U-NII 2A: 5250MHz~5350MHz ☒ U-NII 2C:5470MHz~5725MHz ☒ U-NII 3: 5725MHz~5850MHz
DFS Design Type	☐ Master ☐ Slave with radar detection ☒ Slave without radar detection
TPC Function	☐ Yes ☒ No
Test Frequency Range:	For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5500~5700MHz, 5745~5825MHz For 802.11n-HT40: 5190~5230MHz, 5510~5590MHz, 5755~5795MHz
Max Average Power	IEEE 802.11a:14.39dBm; IEEE 802.11n-HT20:13.92dBm; IEEE 802.11n-HT40:13.81dBm
Max Average Power MIMO	IEEE 802.11a:16.67dBm; IEEE 802.11n-HT20:16.32dBm IEEE 802.11n-HT40:16.07dBm
Modulation	802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM,128QAM)
Number of channels	6 channels of U-NII-1 Band 18 channels of U-NII-2C Band 7 channels of U-NII-3 Band
Hardware Version	WIFI-BOARD-V3
Software Version	0.11.1 (Mon May 21 23:23:31 2018)
Antenna Designation	Outdoor 5G unipolar omnidirectional antenna (Comply with requirements of the FCC part 15.203)
Number of transmit chain	2 (802.11a/n/ac all used two antennas, 802.11a/n support MIMO)
Antenna Gain	Refer to Chapter 2.8 of the report.
Power Supply	DC 12V

2.2. TABLE OF CARRIER FREQUENCYS

For 5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20):

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

For 5500~5720MHz:

12 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

For 5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20):

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

2.3. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2A2LL-FJDZ42P-VM** filing to comply with the FCC Part 15 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013).
Radiated testing was performed at an antenna to EUT distance 3 meters.
Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.407 rules KDB 789033 D02

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.7. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

2.8. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna Type	Frequency Band (MHz)	TX Paths	Bandwidth (MHz)	Max Peak Gain (dBi)		Max Directional Gain (dBi)
				Ant 1	Ant 2	
5G WIFI PIFA Antenna List (5GHz 2*2 MIMO)						
External Antenna	5150 ~ 5250	2	20,40	6.99	6.99	10.00
	5470 ~ 5725	2	20,40	6.99	6.99	10.00
	5725 ~ 5850	2	20,40	6.99	6.99	10.00

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

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

If all antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on devices:

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

- For power measurements on IEEE 802.1devices:

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

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

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

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

3. MEASUREMENT UNCERTAINTY

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

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	U_c = ±3.1 dB
Uncertainty of Radiated Emission below 1GHz	U_c = ±4.0 dB
Uncertainty of Radiated Emission above 1GHz	U_c = ±4.8 dB
Uncertainty of total RF power, conducted	U_c = ±0.8 dB
Uncertainty of RF power density, conducted	U_c = ±2.6 dB
Uncertainty of spurious emissions, conducted	U_c = ±2 %
Uncertainty of Occupied Channel Bandwidth	U_c = ±2 %

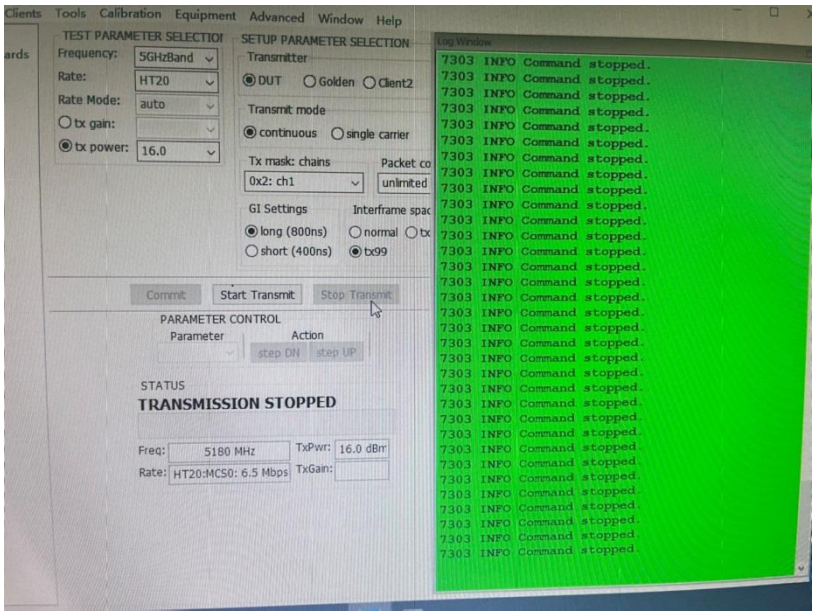
4. DESCRIPTION OF TEST MODES

Mode	Available channel	Tested channel	Modulation	Date rate(Mbps)
802.11a/n	36, 40, 44, 48, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165	36, 40, 48, 100, 120, 140, 149, 157, 165	OFDM	6Mbps/MCS0
802.11n	38, 46, 102, 110, 118, 126, 134, 151, 159;	38, 46, 102, 118, 134, 151, 159	OFDM	MCS0

Note:

1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%.
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

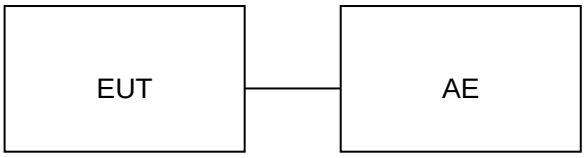
Software Setting



5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure 1:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Vision-based Obstacle Avoidance Module	FJDZ42P-VM	2A2LL-FJDZ42P-VM	EUT

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.407	6dB Bandwidth	Compliant
§15.407	Emission Bandwidth	Compliant
§15.407	Maximum conducted output power	Compliant
§15.407	Conducted Spurious Emission	Compliant
§15.407	Maximum Conducted Output Power Density	Compliant
§15.209	Radiated Emission	Compliant
§15.407	Band Edges	Compliant
§15.207	Line Conduction Emission	Not applicable

6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Mar. 28, 2022	Mar. 27, 2023
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Aug. 04, 2022	Aug. 03, 2023
Power sensor	Aglient	U2021XA	MY54110007	Mar. 04, 2022	Mar. 02, 2023
5GHz Fliter	EM Electronics	5150-5880MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Oct. 31, 2021	Oct. 30, 2023
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Mar. 12, 2022	Mar. 11, 2023
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2021	Apr. 22, 2023
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 08, 2021	Jan. 07, 2023
Test software	Tonscend	JS32-RE (Ver.2.5)	N/A	N/A	N/A

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

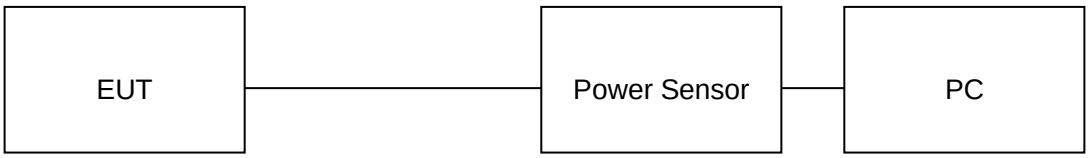
For average power test:

1. Connect EUT RF output port to power sensor through an RF attenuator.
2. Connect the power sensor to the PC.
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Record the maximum power from the software.

Note：The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

7.2. TEST SET-UP

AVERAGE POWER SETUP



7.3. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power for band 5.15-5.25 GHz-antenna 1				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5180	12.81	23.01	Pass
	5200	13.06	23.01	Pass
	5240	**14.39**	23.01	Pass
802.11n20	5180	12.69	23.01	Pass
	5200	13.05	23.01	Pass
	5240	**13.92**	23.01	Pass
802.11n40	5190	12.17	23.01	Pass
	5230	**13.81**	23.01	Pass

Note: Limit=24-(6.99-6)=23.01

Test Data of Conducted Output Power for band 5.15-5.25 GHz-antenna 2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5180	12.11	23.01	Pass
	5200	12.55	23.01	Pass
	5240	12.78	23.01	Pass
802.11n20	5180	12.18	23.01	Pass
	5200	12.51	23.01	Pass
	5240	12.60	23.01	Pass
802.11n40	5190	12.59	23.01	Pass
	5230	12.15	23.01	Pass

Note: Limit=24-(6.99-6)=23.01

Test Data of Conducted Output Power for band 5.15-5.25 GHz-antenna 1+2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5180	15.48	20.00	Pass
	5200	15.82	20.00	Pass
	5240	**16.67**	20.00	Pass
802.11n20	5180	15.45	20.00	Pass
	5200	15.80	20.00	Pass
	5240	**16.32**	20.00	Pass
802.11n40	5190	15.40	20.00	Pass
	5230	**16.07**	20.00	Pass

Note:Limit=24-(10-6)=20.00

Test Data of Conducted Output Power for band 5.47-5.725 GHz-antenna 1				
Test Mode	Test Channel(MHz)	Average Power(dBm)	Limits(dBm)	Pass or Fail
802.11a	5500	11.81	23.01	Pass
	5600	10.49	23.01	Pass
	5700	7.99	23.01	Pass
802.11n20	5500	11.77	23.01	Pass
	5600	10.34	23.01	Pass
	5700	7.90	23.01	Pass
802.11n40	5510	11.62	23.01	Pass
	5590	10.38	23.01	Pass
	5670	8.23	23.01	Pass

Note: Limit=24-(6.99-6)=23.01

Test Data of Conducted Output Power for band 5.47-5.725 GHz-antenna 2				
Test Mode	Test Channel(MHz)	Average Power(dBm)	Limits	Pass or Fail
802.11a	5500	12.18	23.01	Pass
	5600	12.83	23.01	Pass
	5700	**13.23**	23.01	Pass
802.11n20	5500	12.06	23.01	Pass
	5600	12.70	23.01	Pass
	5700	13.08	23.01	Pass
802.11n40	5510	11.22	23.01	Pass
	5590	12.45	23.01	Pass
	5670	13.06	23.01	Pass

Note: Limit=24-(6.99-6)=23.01

Test Data of Conducted Output Power for band 5.47-5.725 GHz-antenna 1+2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5500	15.01	20.00	Pass
	5600	14.83	20.00	Pass
	5700	14.37	20.00	Pass
802.11n20	5500	14.93	20.00	Pass
	5600	14.69	20.00	Pass
	5700	14.23	20.00	Pass
802.11n40	5510	14.43	20.00	Pass
	5590	14.55	20.00	Pass
	5670	14.29	20.00	Pass

Note:Limit=24-(10-6)=20.00

Test Data of Conducted Output Power for band 5.725-5.85 GHz- antenna 1				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5745	11.92	29.01	Pass
	5785	11.68	29.01	Pass
	5825	11.75	29.01	Pass
802.11n20	5745	11.85	29.01	Pass
	5785	11.43	29.01	Pass
	5825	11.63	29.01	Pass
802.11n40	5755	11.62	29.01	Pass
	5795	11.66	29.01	Pass

Note: Limit=30-(6.99-6)=29.01

Test Data of Conducted Output Power for band 5.725-5.85 GHz- antenna 2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5745	12.05	29.01	Pass
	5785	12.21	29.01	Pass
	5825	11.52	29.01	Pass
802.11n20	5745	11.96	29.01	Pass
	5785	12.19	29.01	Pass
	5825	11.68	29.01	Pass
802.11n40	5755	11.75	29.01	Pass
	5795	11.76	29.01	Pass

Note: Limit=30-(6.99-6)=29.01

Test Data of Conducted Output Power for band 5.725-5.85 GHz- antenna 1+2				
Test Mode	Test Channel (MHz)	Average Power (dBm)	Limits (dBm)	Pass or Fail
802.11a	5745	15.00	26.00	Pass
	5785	14.96	26.00	Pass
	5825	14.65	26.00	Pass
802.11n20	5745	14.92	26.00	Pass
	5785	14.84	26.00	Pass
	5825	14.67	26.00	Pass
802.11n40	5755	14.70	26.00	Pass
	5795	14.72	26.00	Pass

Note:Limit=30-(10.00-6)=26.00

8. BANDWIDTH

8.1. MEASUREMENT PROCEDURE

-6dB bandwidth (DTS bandwidth):

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW ≥3*RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

99% occupied bandwidth:

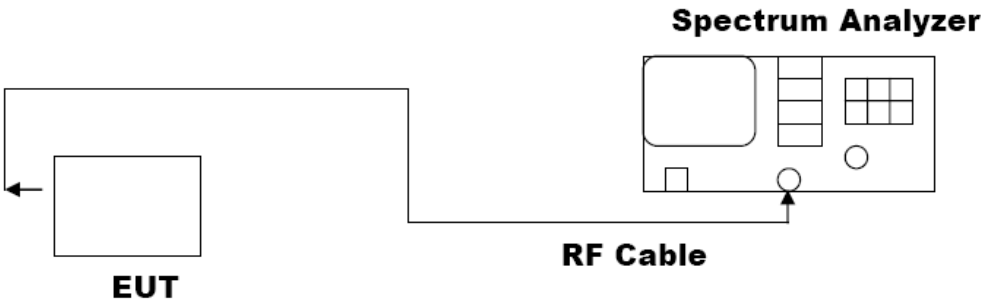
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
   The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

-26dB Bandwidth:

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. 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%.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



8.3. LIMITS AND MEASUREMENT RESULTS

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz-antenna 1					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5180	16.572	22.000	N/A	Pass
	5200	16.550	22.152	N/A	Pass
	5240	16.580	21.614	N/A	Pass
802.11n20	5180	17.664	22.246	N/A	Pass
	5200	17.686	22.823	N/A	Pass
	5240	17.685	22.100	N/A	Pass
802.11n40	5190	36.415	45.879	N/A	Pass
	5230	36.473	45.926	N/A	Pass

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz-antenna 2					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5180	16.561	21.252	N/A	Pass
	5200	16.589	21.831	N/A	Pass
	5240	16.555	22.422	N/A	Pass
802.11n20	5180	17.682	22.206	N/A	Pass
	5200	17.670	22.375	N/A	Pass
	5240	17.691	22.726	N/A	Pass
802.11n40	5190	36.428	45.767	N/A	Pass
	5230	36.389	45.746	N/A	Pass

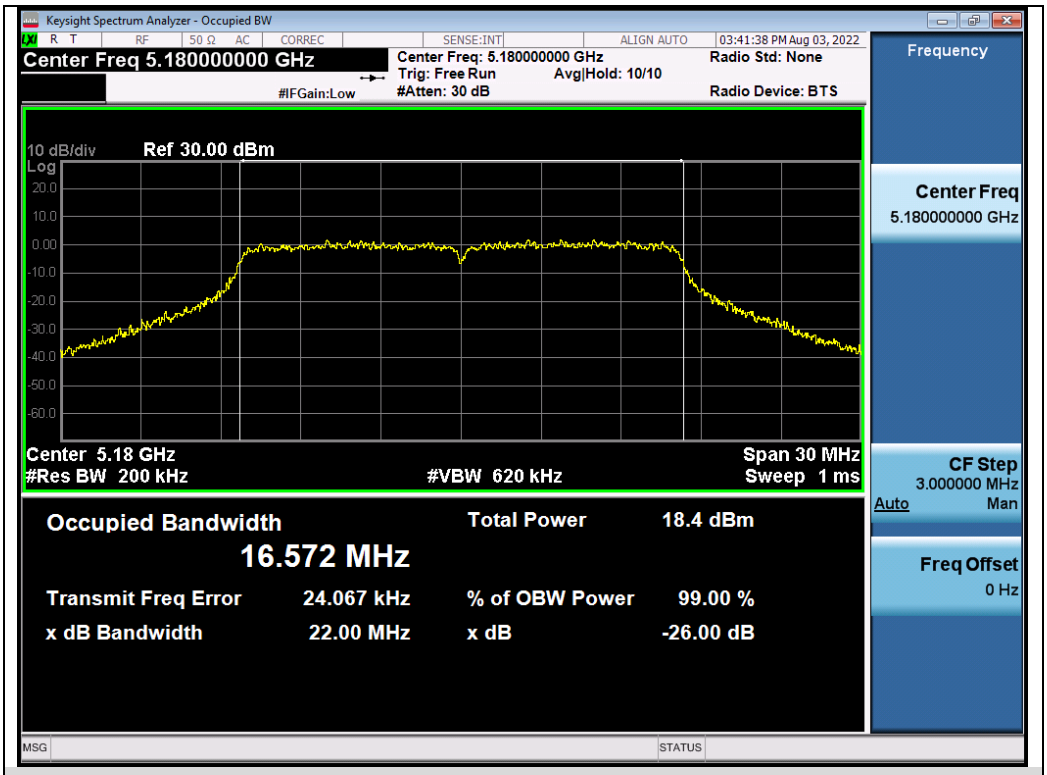
Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.47-5.725 GHz-antenna 1					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5500	16.561	21.814	N/A	Pass
	5600	16.561	21.554	N/A	Pass
	5700	16.560	21.677	N/A	Pass
802.11n20	5500	17.685	22.481	N/A	Pass
	5600	17.688	22.358	N/A	Pass
	5700	17.693	22.281	N/A	Pass
802.11n40	5510	36.367	45.733	N/A	Pass
	5590	36.441	45.259	N/A	Pass
	5670	36.434	45.917	N/A	Pass

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.47-5.725 GHz-antenna 2					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5500	16.579	22.244	N/A	Pass
	5600	16.584	21.664	N/A	Pass
	5700	16.556	21.788	N/A	Pass
802.11n20	5500	17.672	22.837	N/A	Pass
	5600	17.683	22.596	N/A	Pass
	5700	17.667	21.770	N/A	Pass
802.11n40	5510	36.411	45.592	N/A	Pass
	5590	36.452	45.057	N/A	Pass
	5670	36.417	46.336	N/A	Pass

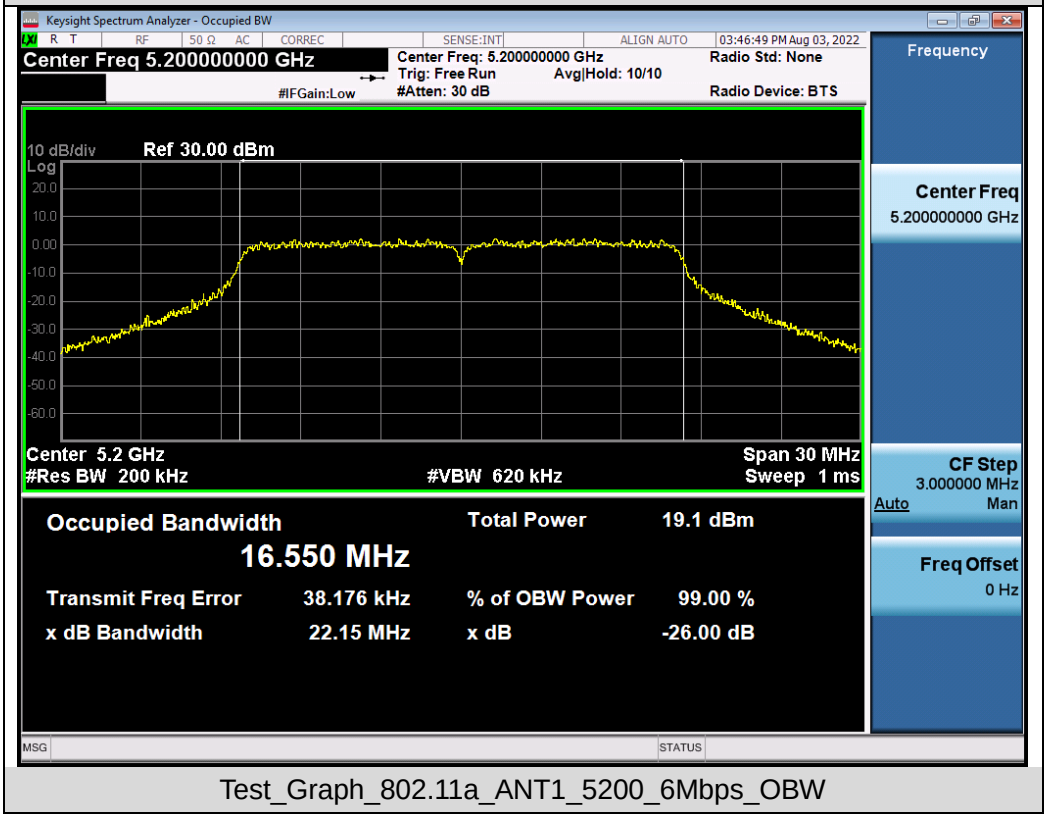
Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz-antenna 1					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5745	16.567	16.361	0.5	Pass
	5785	16.566	16.326	0.5	Pass
	5825	16.566	16.339	0.5	Pass
802.11n20	5745	17.670	17.532	0.5	Pass
	5785	17.685	17.329	0.5	Pass
	5825	17.665	17.535	0.5	Pass
802.11n40	5755	36.373	36.323	0.5	Pass
	5795	36.373	35.736	0.5	Pass

Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz-antenna 2					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5745	16.565	16.355	0.5	Pass
	5785	16.573	16.347	0.5	Pass
	5825	16.593	16.355	0.5	Pass
802.11n20	5745	17.670	17.538	0.5	Pass
	5785	17.665	17.535	0.5	Pass
	5825	17.686	17.293	0.5	Pass
802.11n40	5755	36.374	36.324	0.5	Pass
	5795	36.371	36.044	0.5	Pass

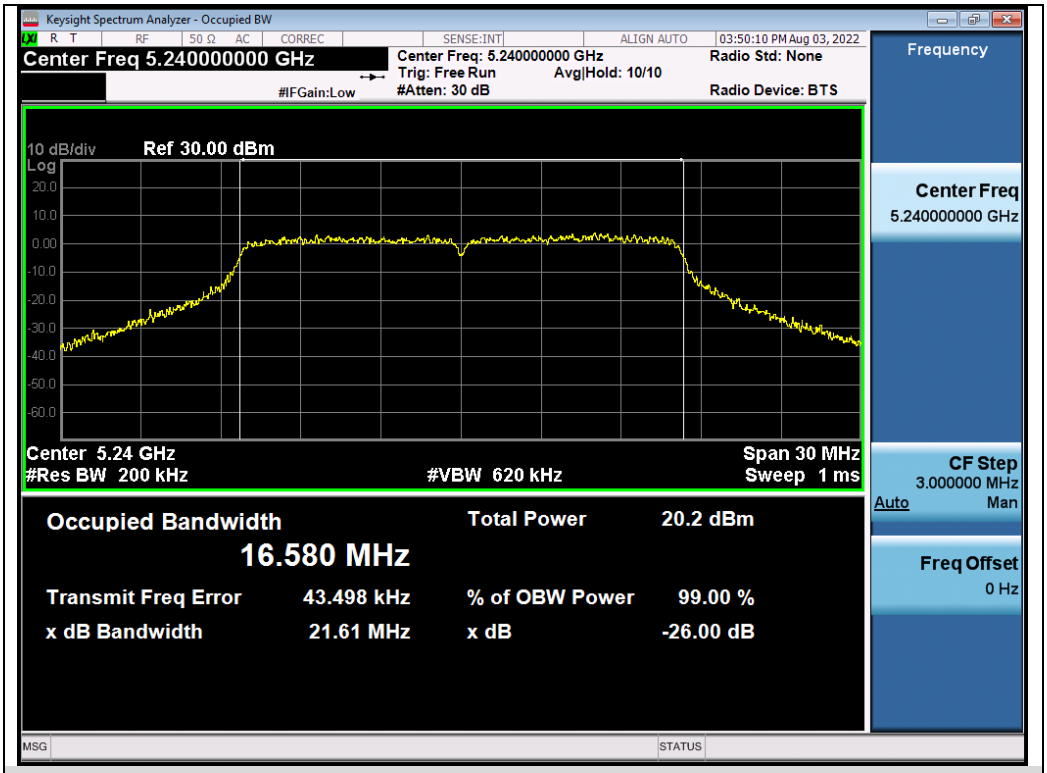
Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz



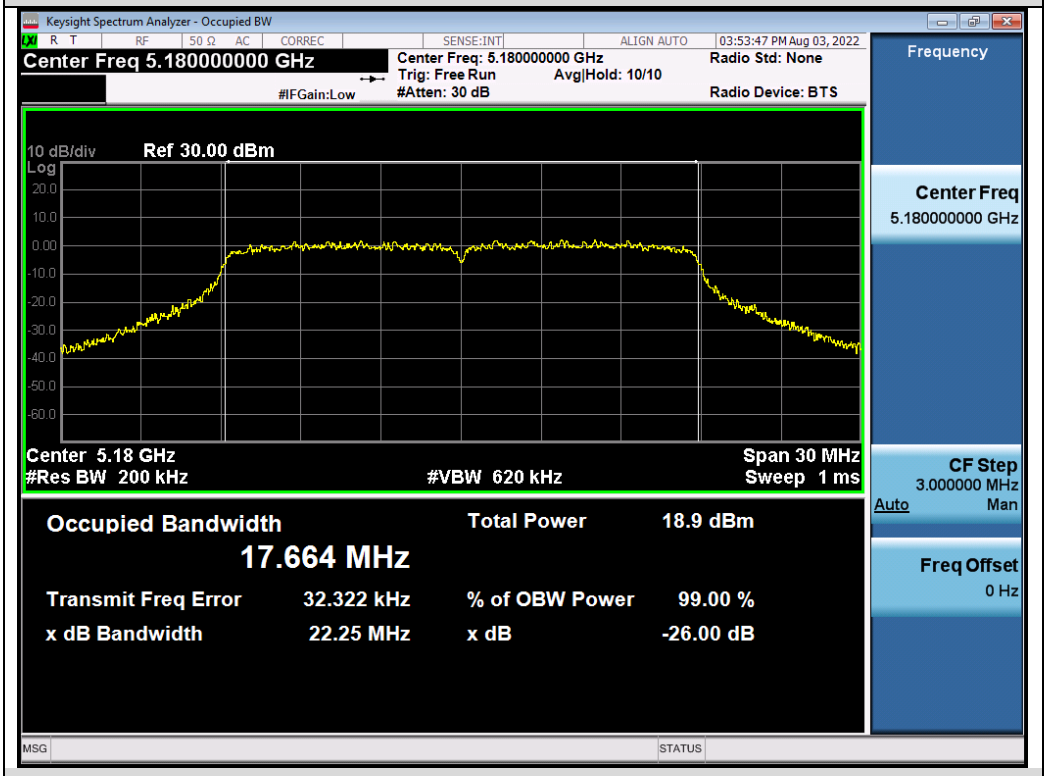
Test_Graph_802.11a_ANT1_5180_6Mbps_OBW



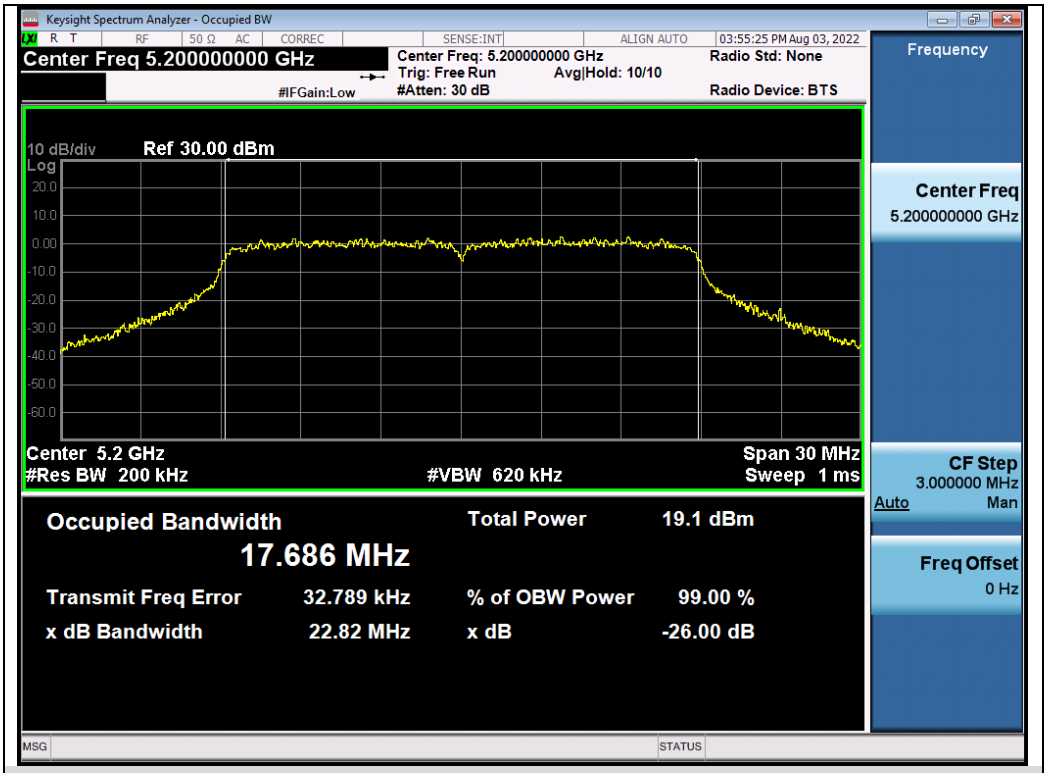
Test_Graph_802.11a_ANT1_5200_6Mbps_OBW



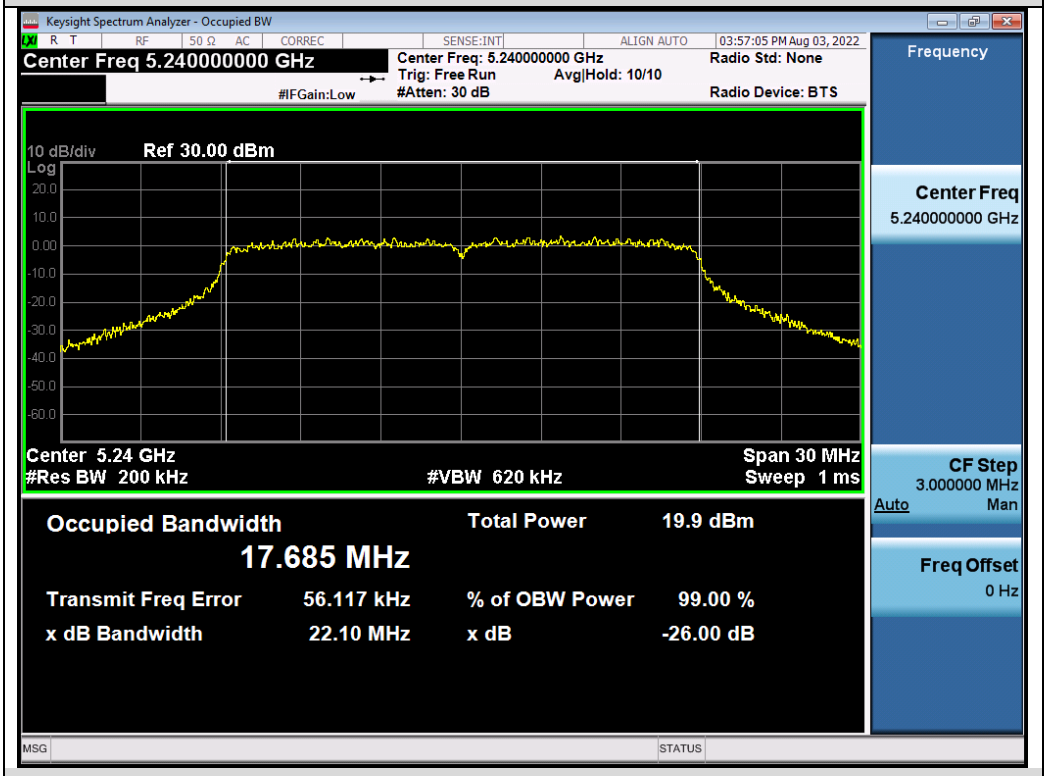
Test_Graph_802.11a_ANT1_5240_6Mbps_OBW



Test_Graph_802.11n20_ANT1_5180_MCS0_OBW



Test_Graph_802.11n20_ANT1_5200_MCS0_OBW



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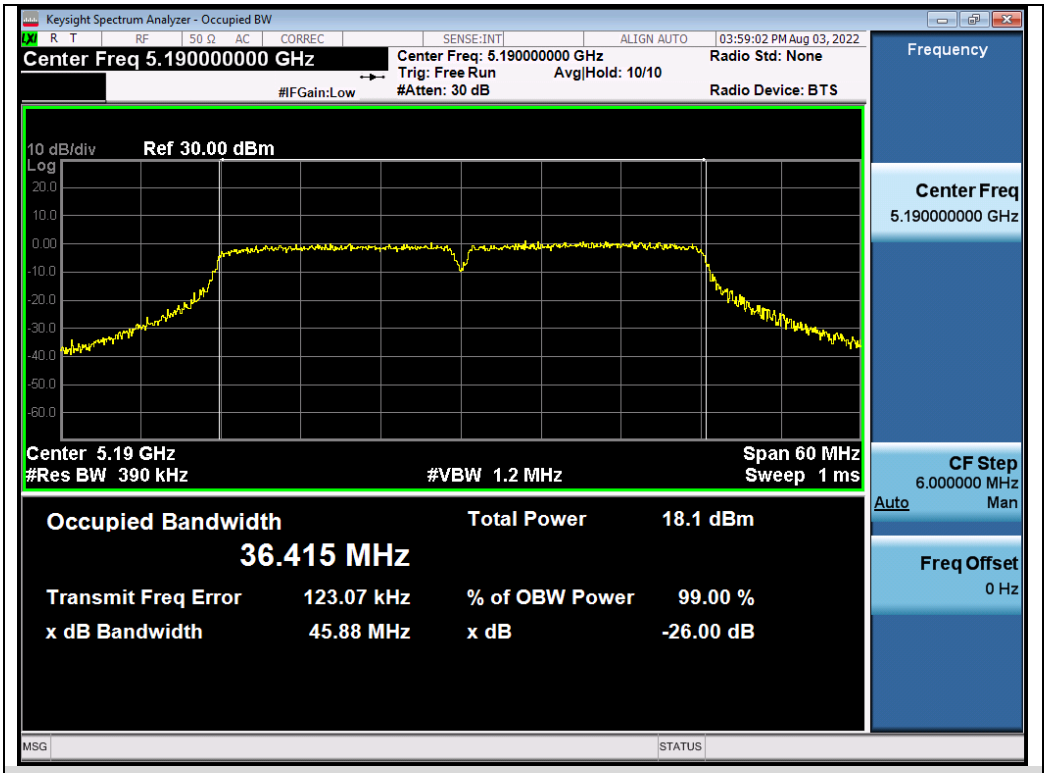
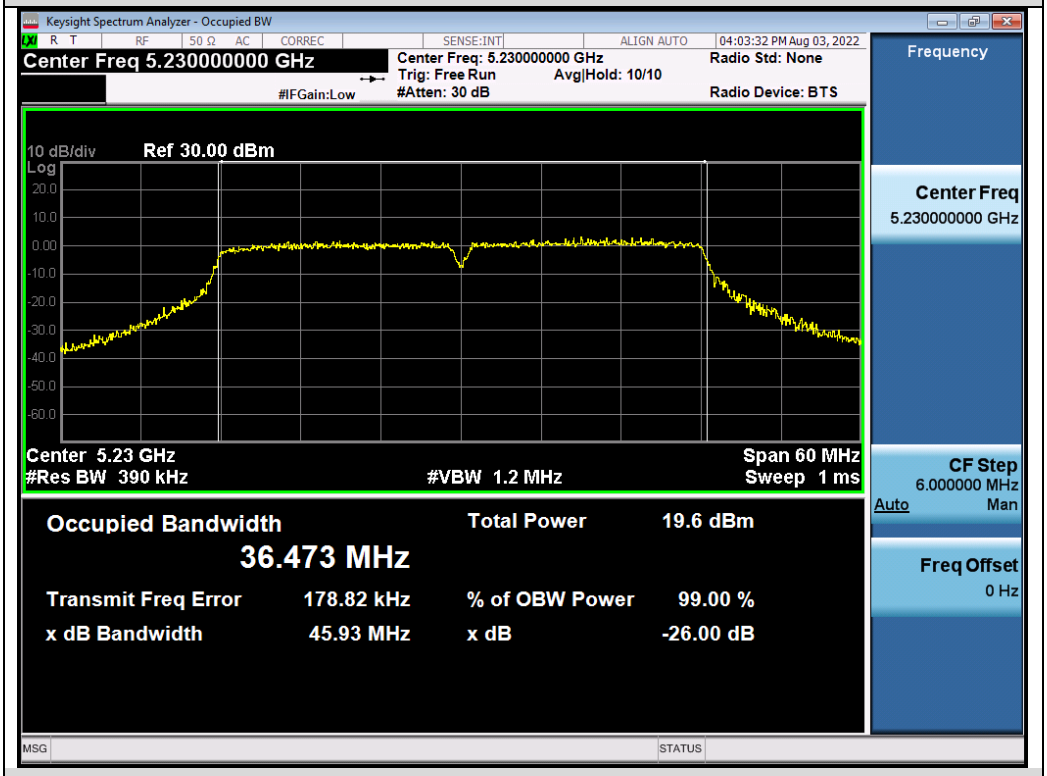
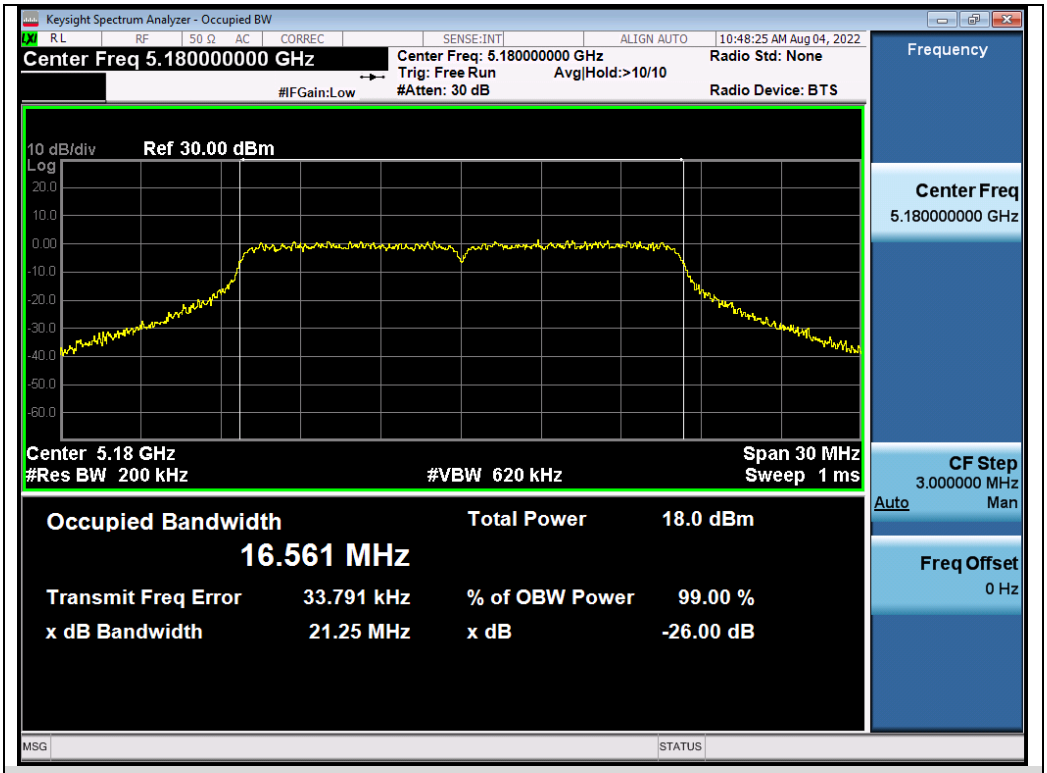


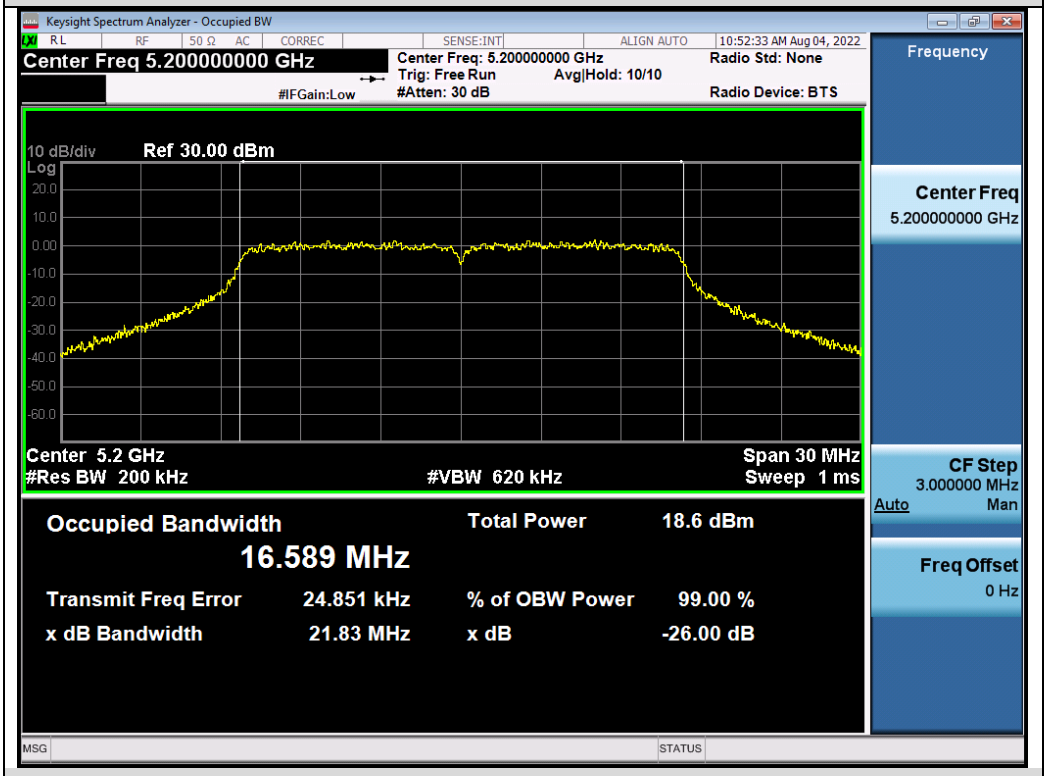
Test_Graph_802.11n40_ANT1_5190_MCS0_OBW



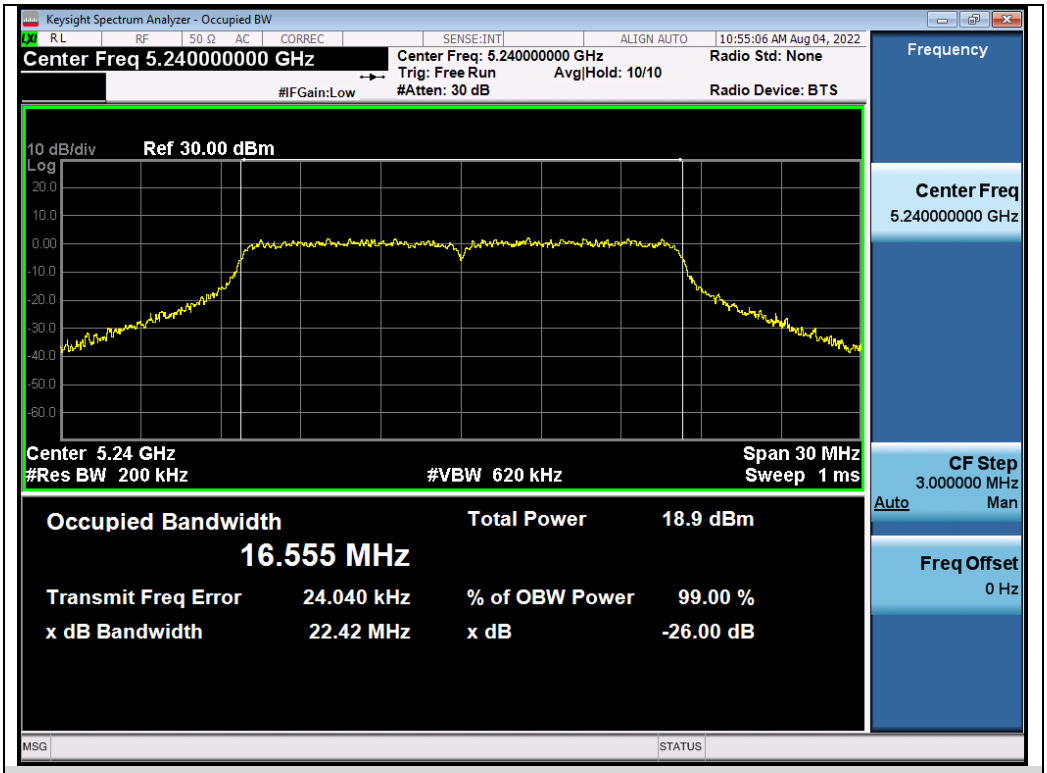
Test_Graph_802.11n40_ANT1_5230_MCS0_OBW



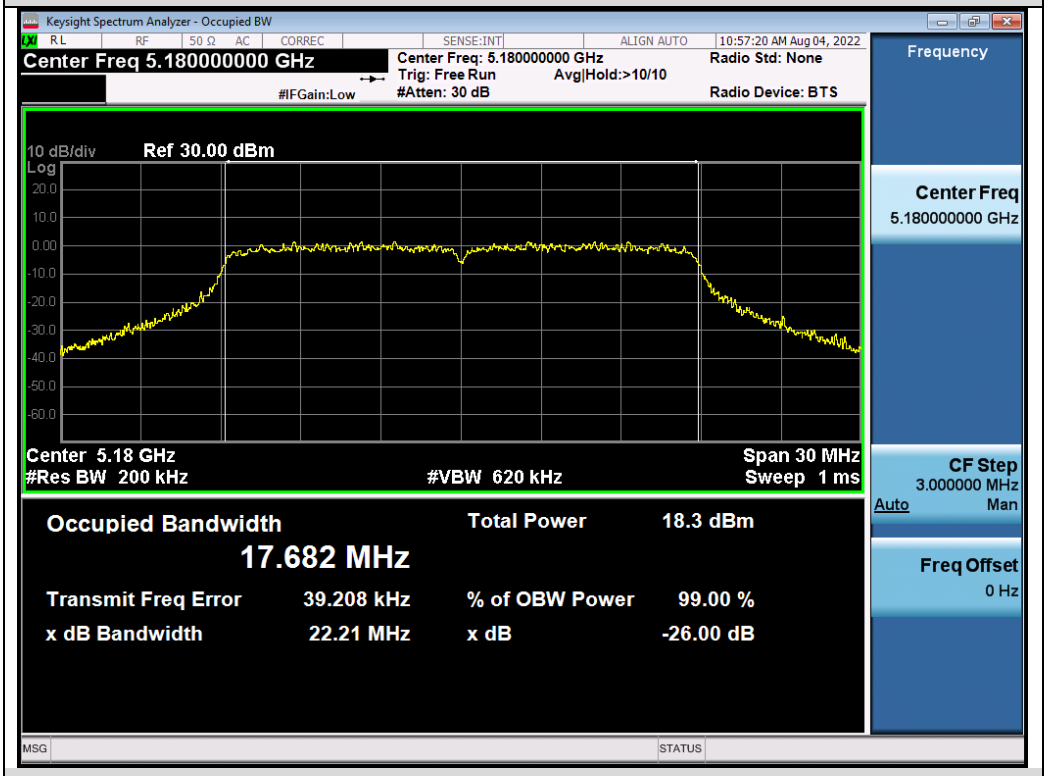
Test_Graph_802.11a_ANT2_5180_6Mbps_OBW



Test_Graph_802.11a_ANT2_5200_6Mbps_OBW



Test_Graph_802.11a_ANT2_5240_6Mbps_OBW



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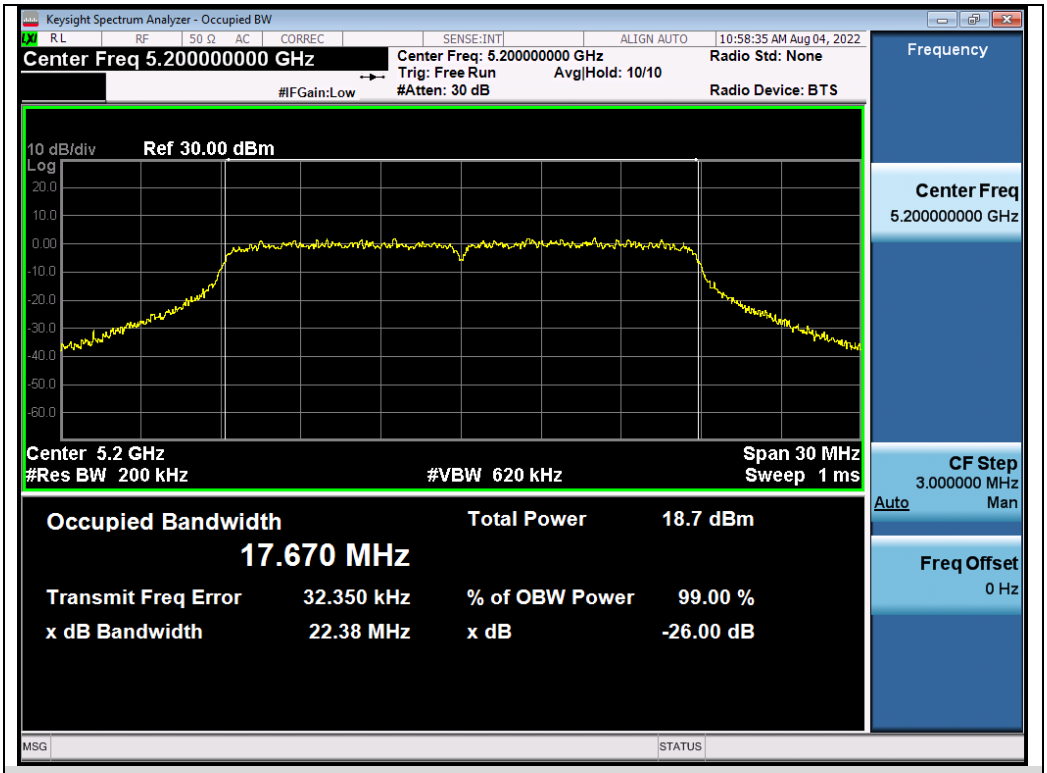

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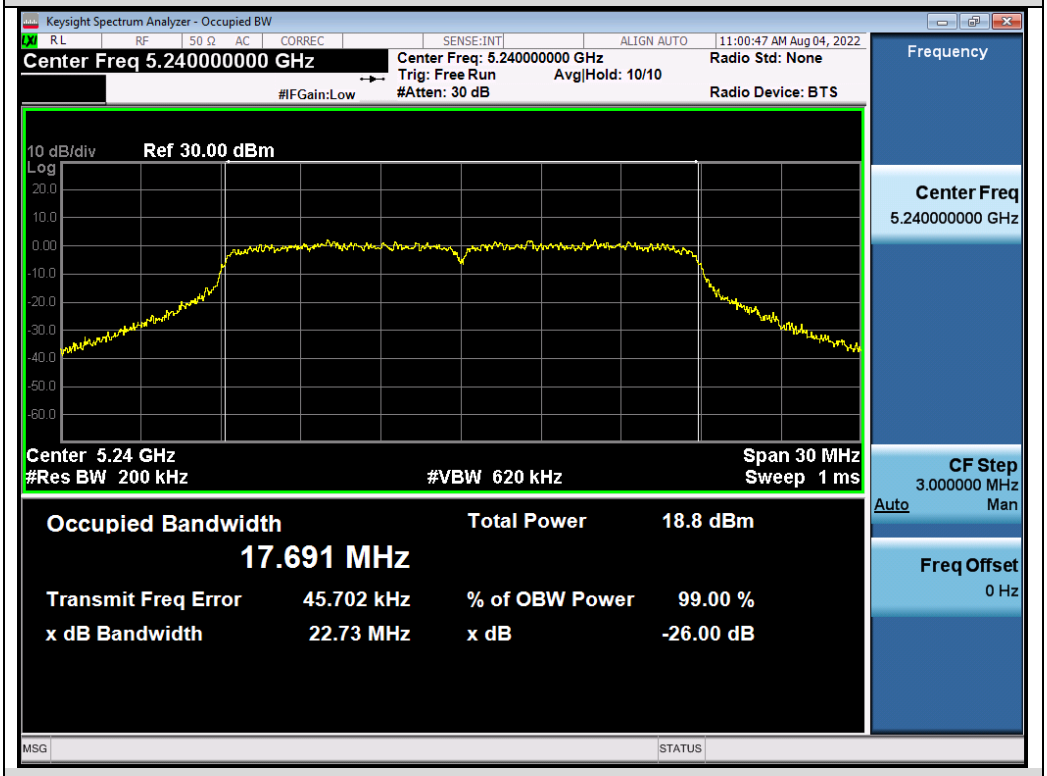
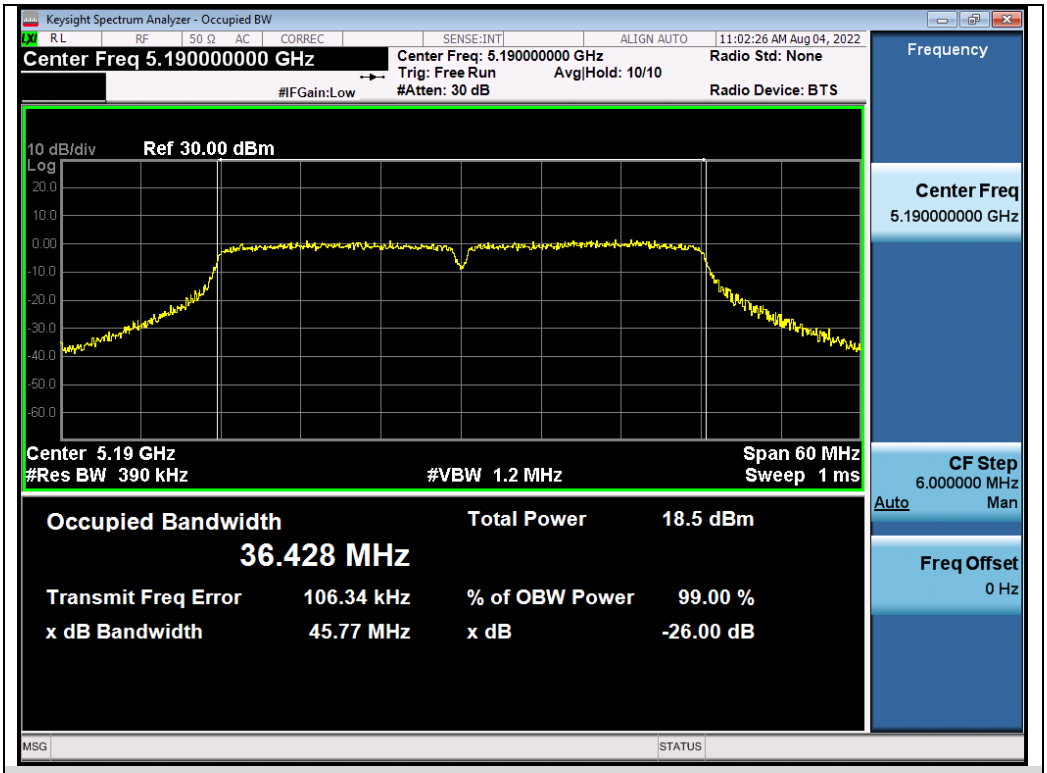
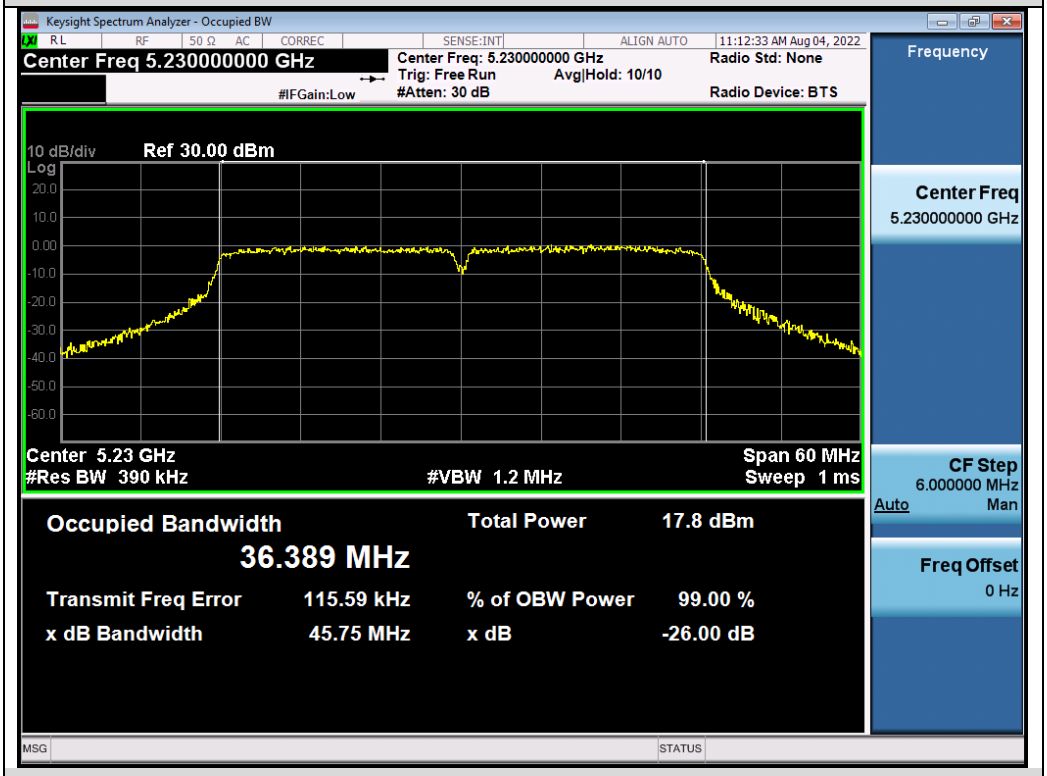


Test_Graph_802.11n20_ANT2_5240_MCS0_OBW

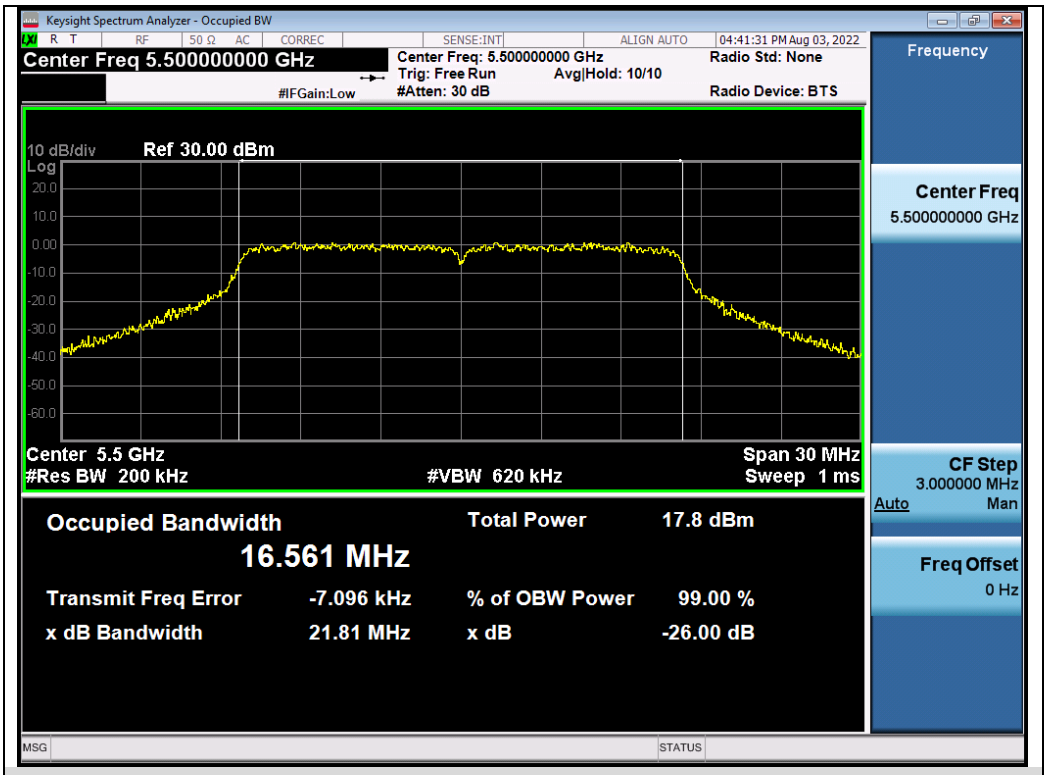


Test_Graph_802.11n40_ANT2_5190_MCS0_OBW

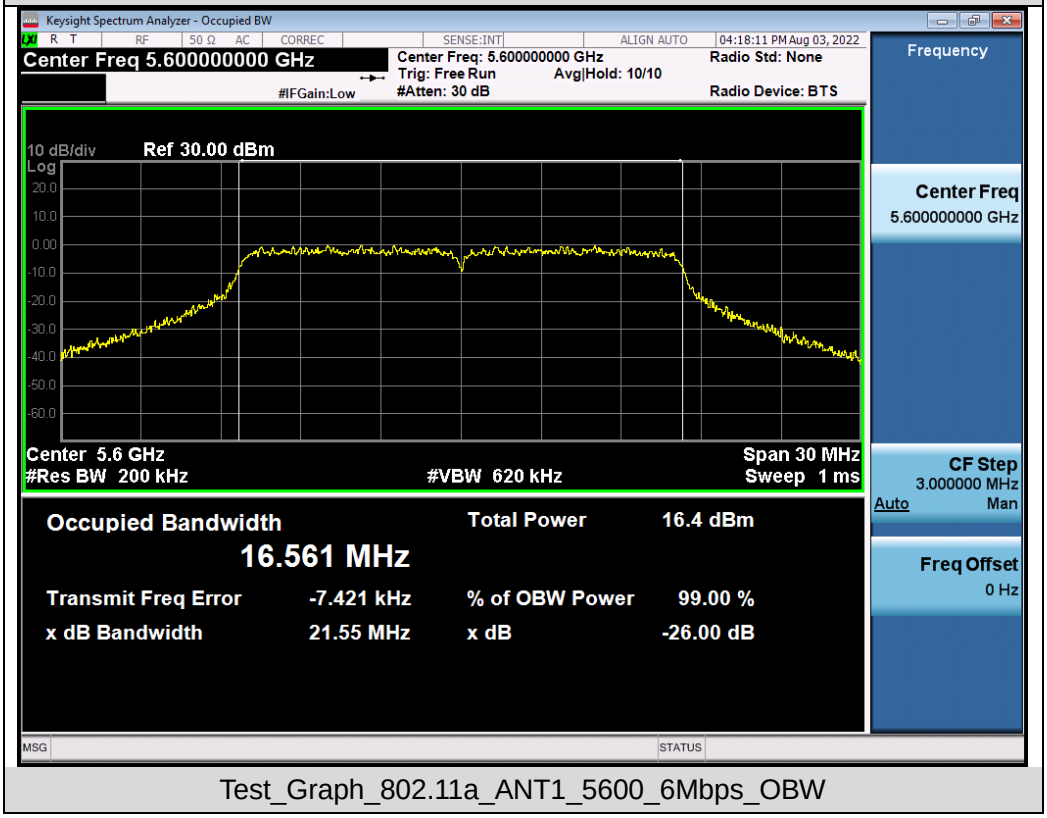


Test_Graph_802.11n40_ANT2_5230_MCS0_OBW

Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.47-5.725 GHz

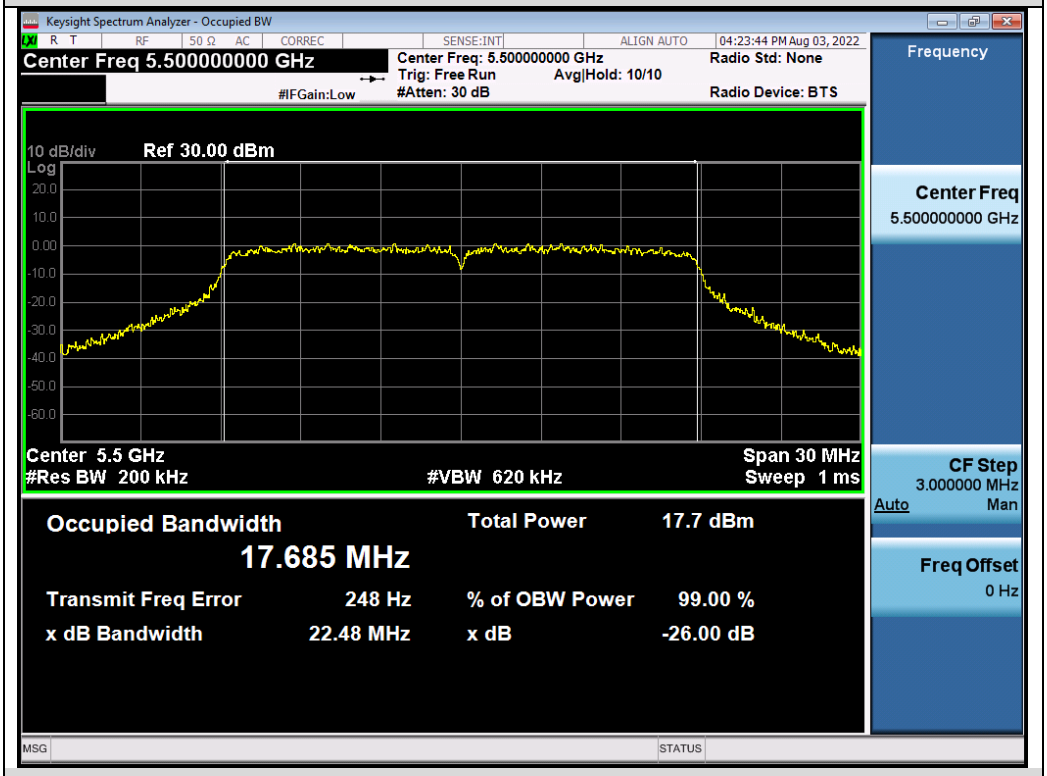


Test_Graph_802.11a_ANT1_5500_6Mbps_OBW



Test_Graph_802.11a_ANT1_5600_6Mbps_OBW

Test_Graph_802.11a_ANT1_5700_6Mbps_OBW



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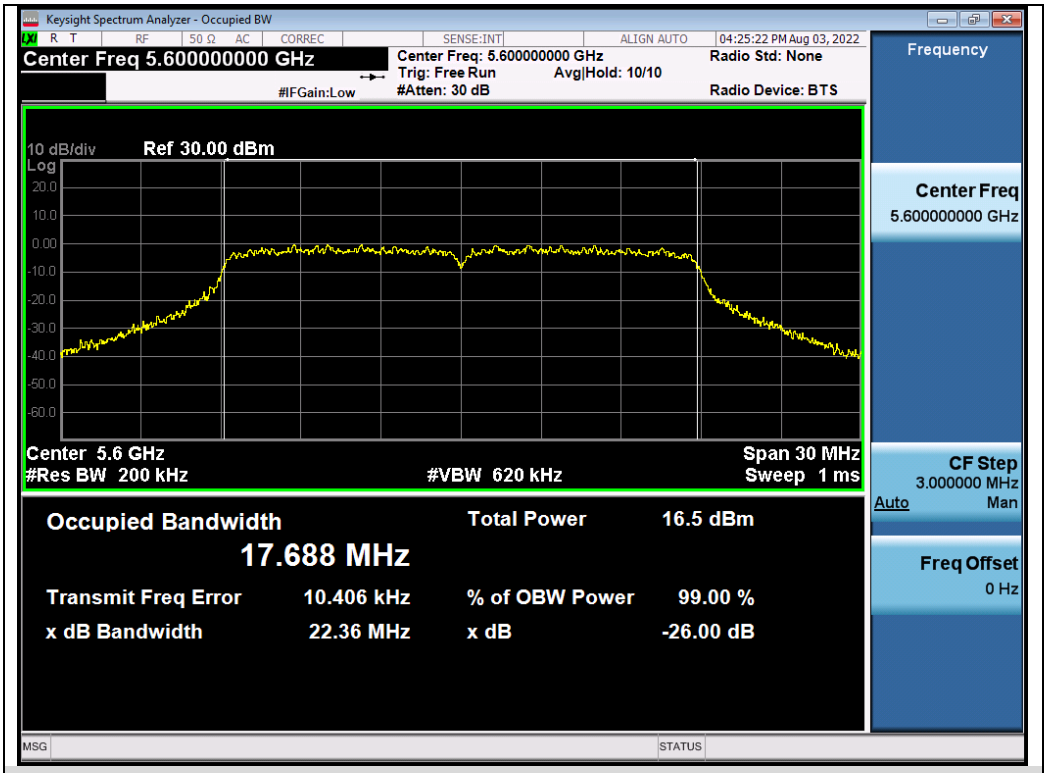

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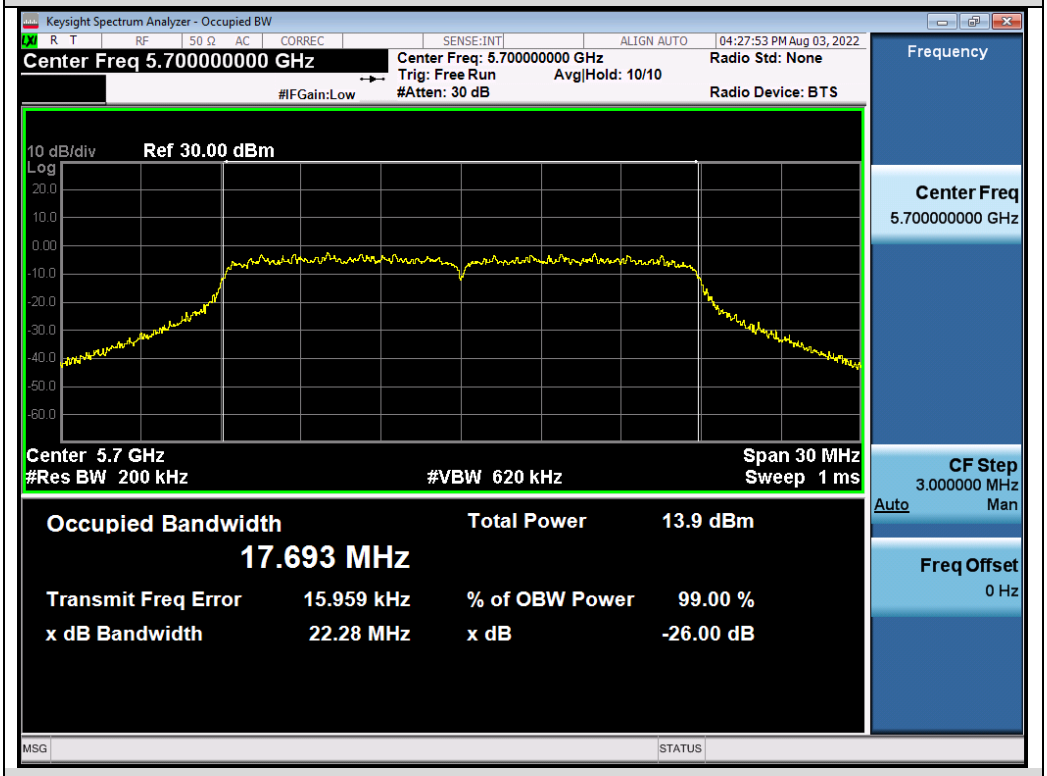

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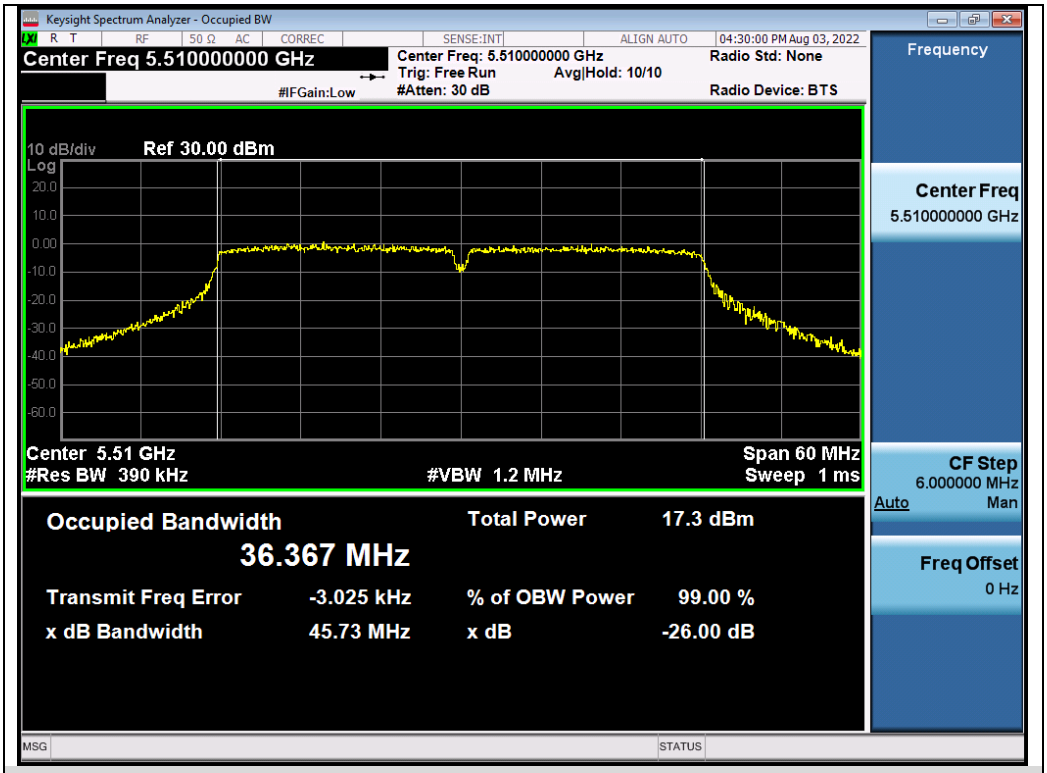
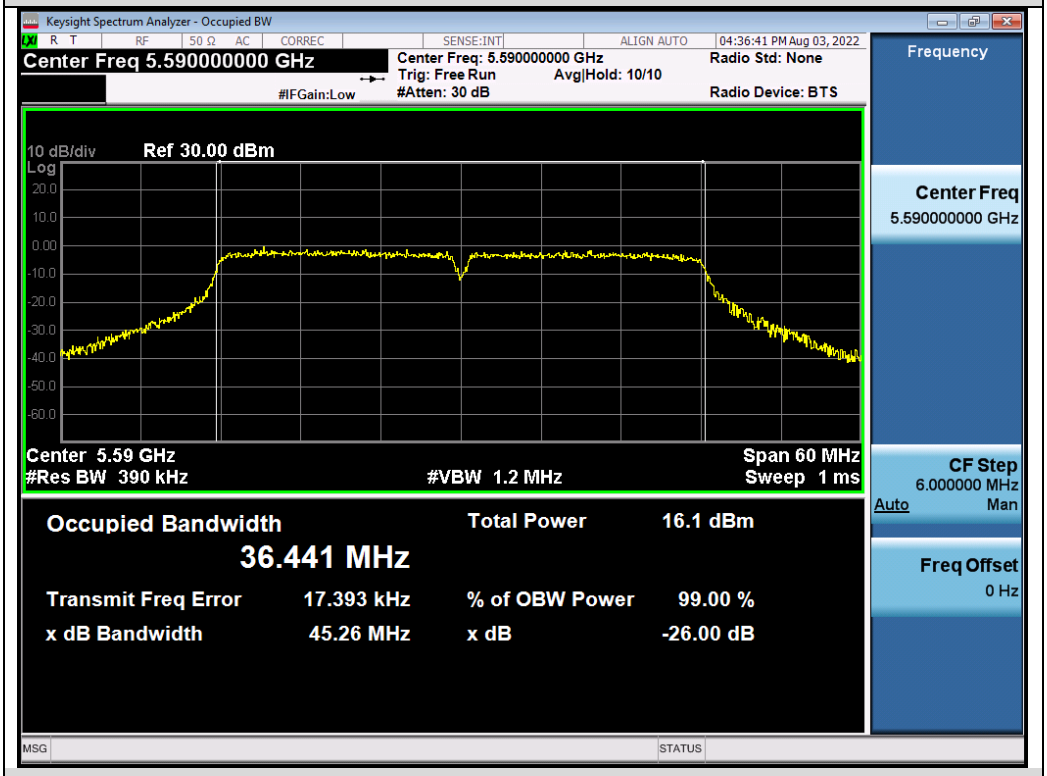
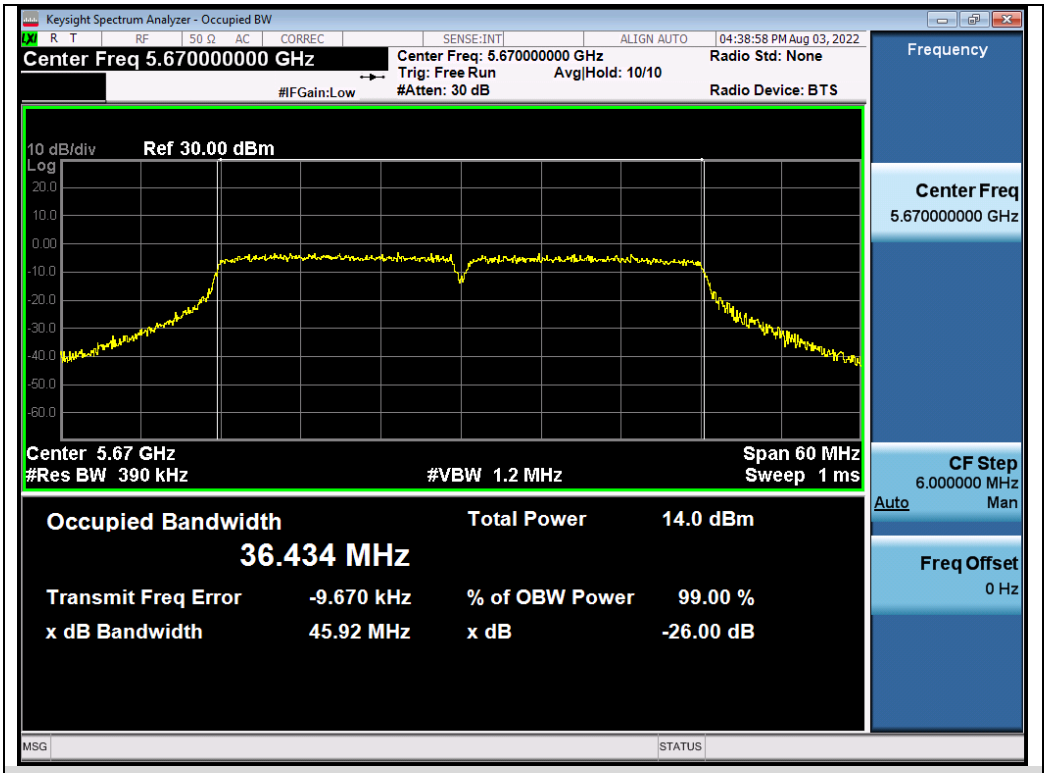


Test_Graph_802.11n40_ANT1_5510_MCS0_OBW



Test_Graph_802.11n40_ANT1_5590_MCS0_OBW



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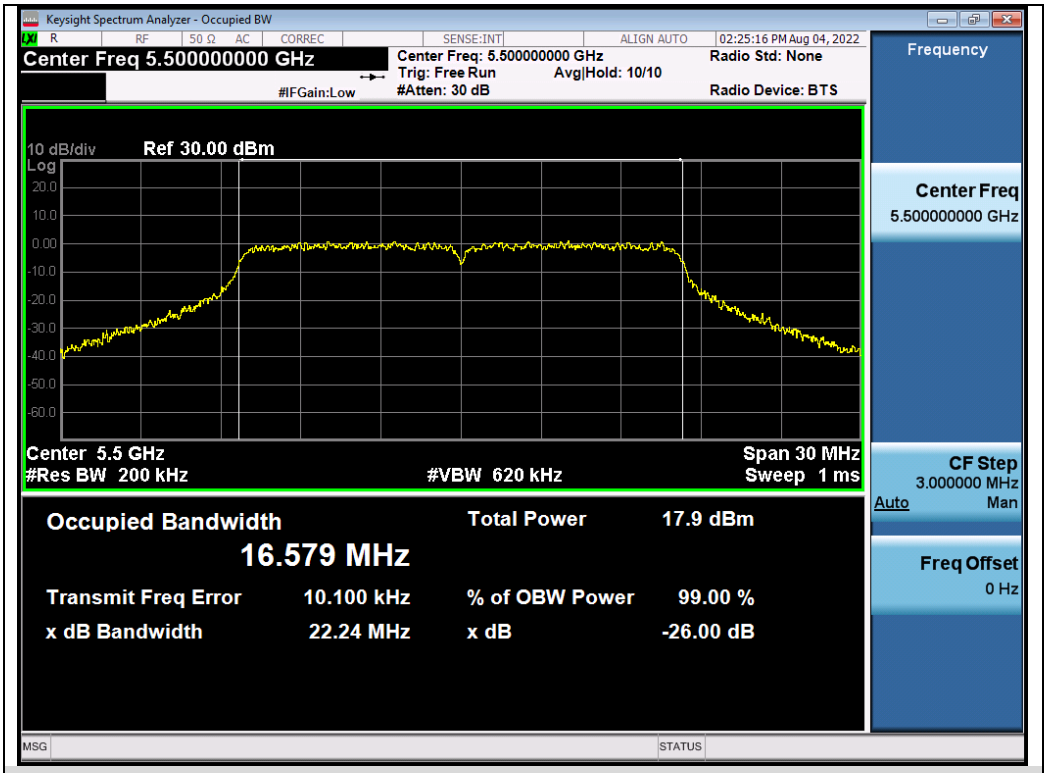
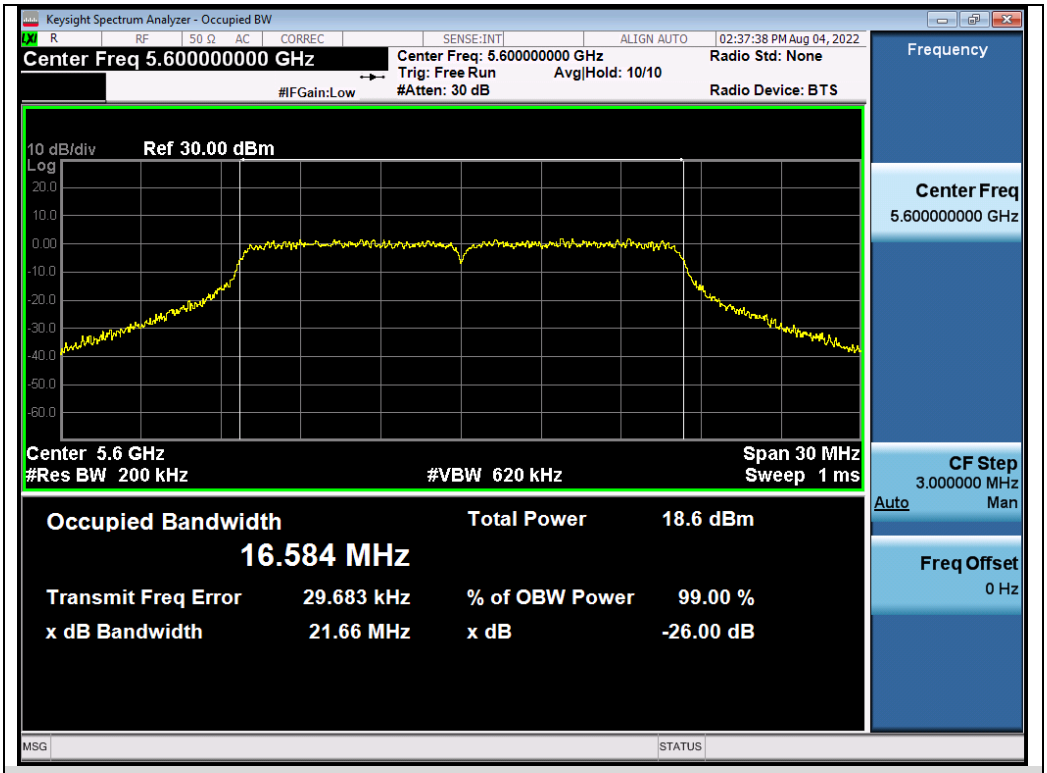


Test_Graph_802.11a_ANT2_5500_6Mbps_OBW



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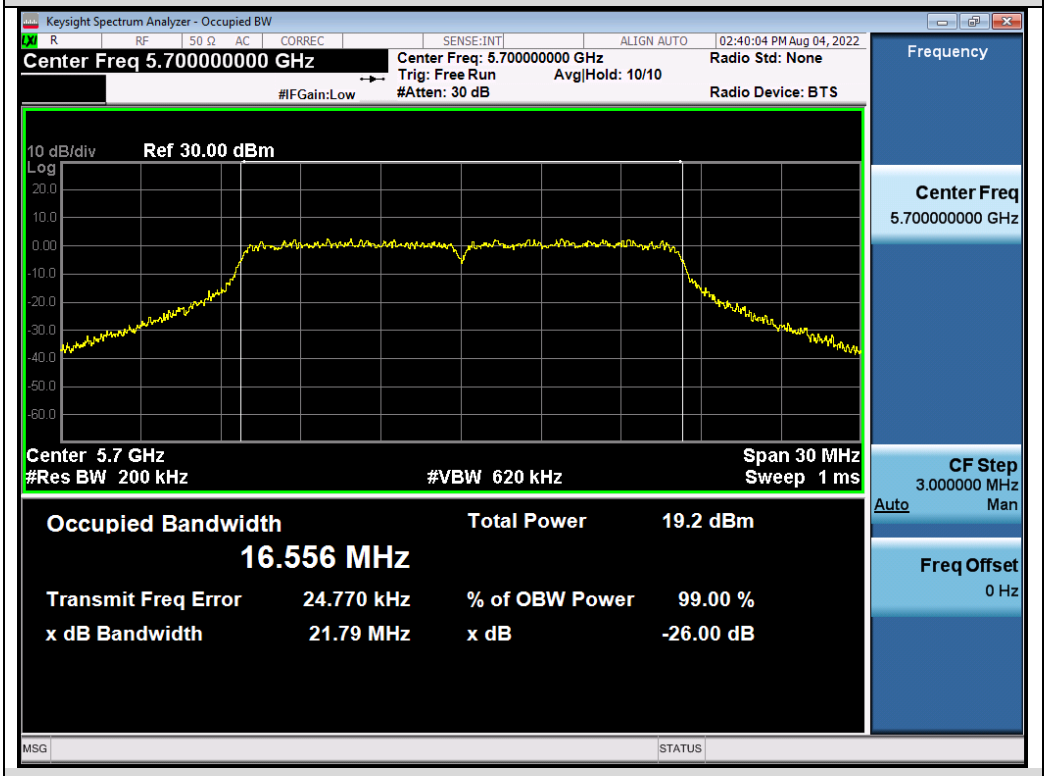
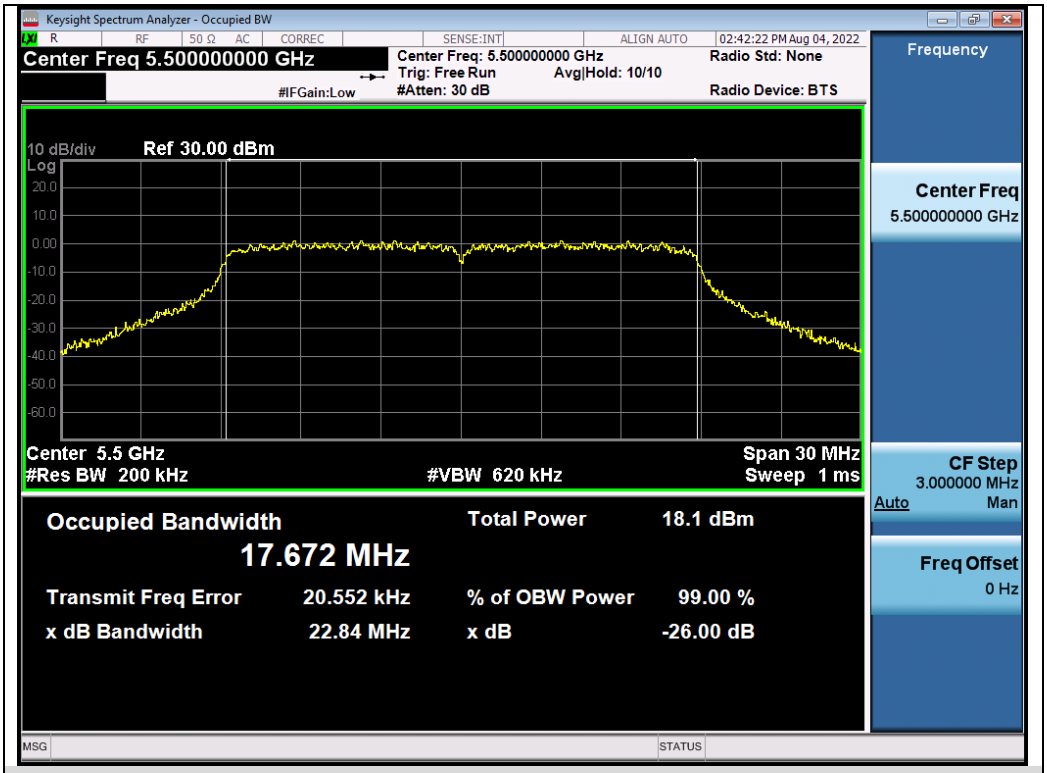
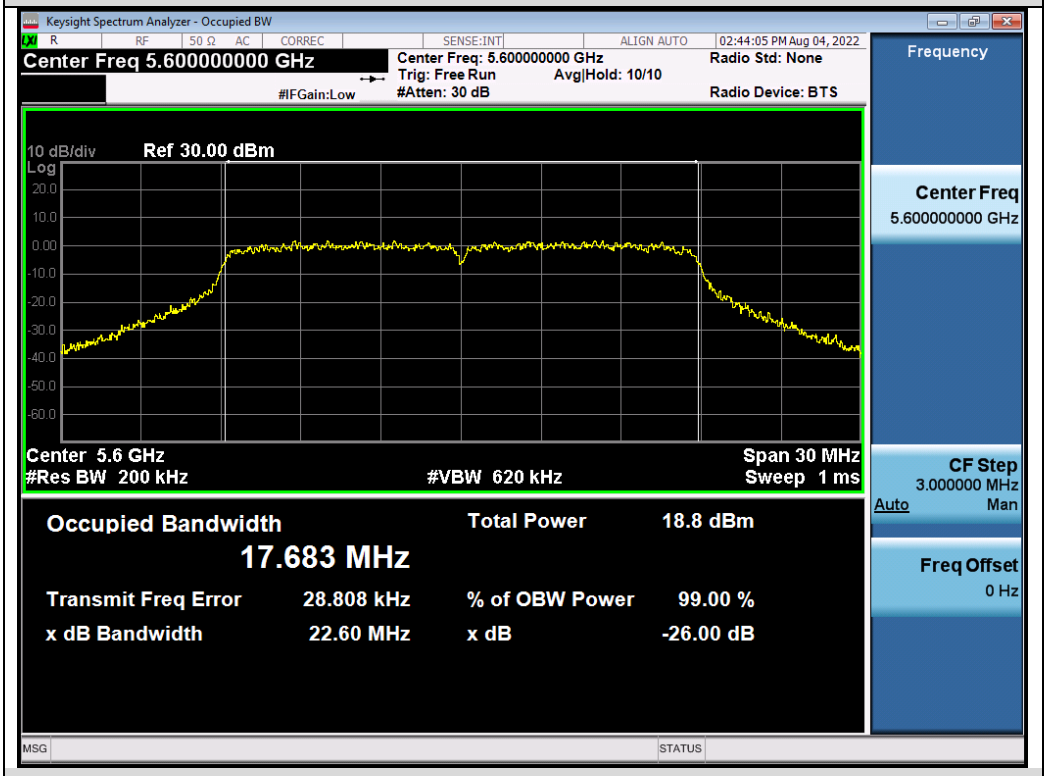


Test_Graph_802.11a_ANT2_5700_6Mbps_OBW

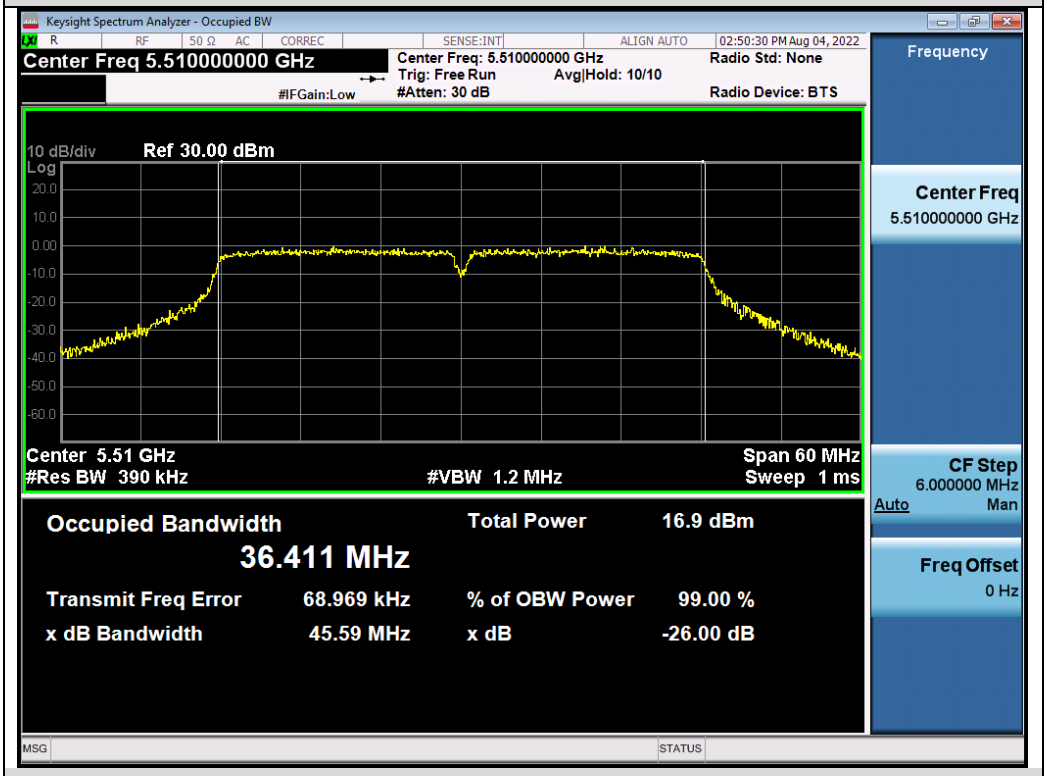


Test_Graph_802.11n20_ANT2_5500_MCS0_OBW



Test_Graph_802.11n20_ANT2_5600_MCS0_OBW

Test_Graph_802.11n20_ANT2_5700_MCS0_OBW



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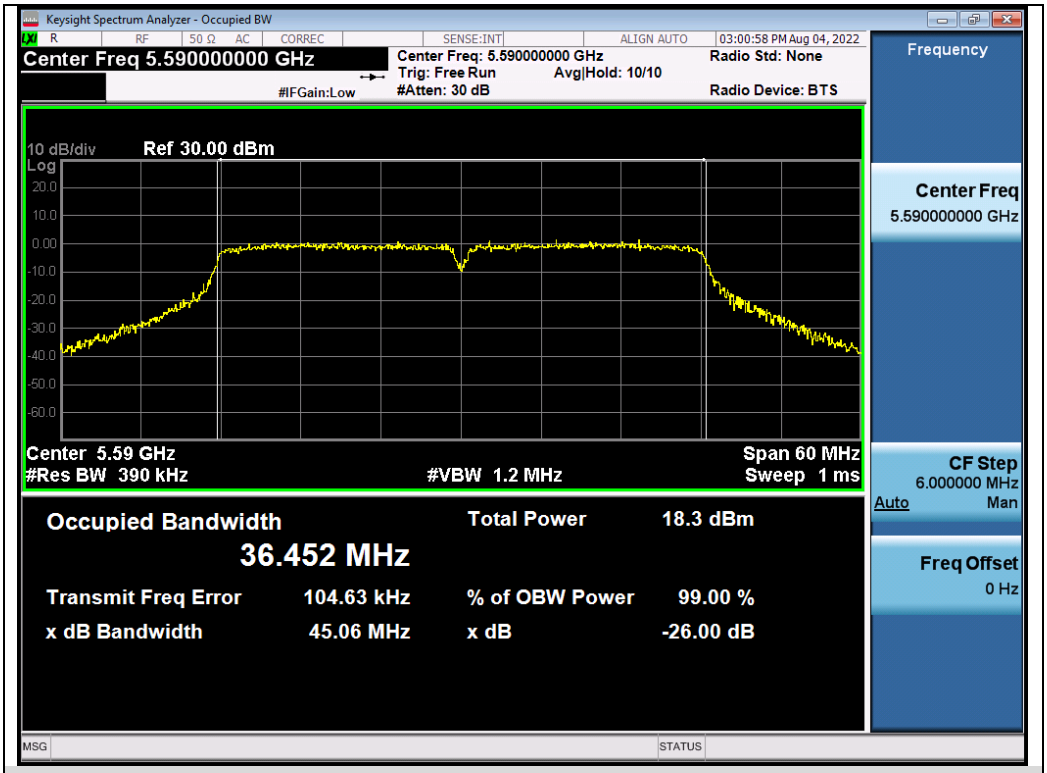

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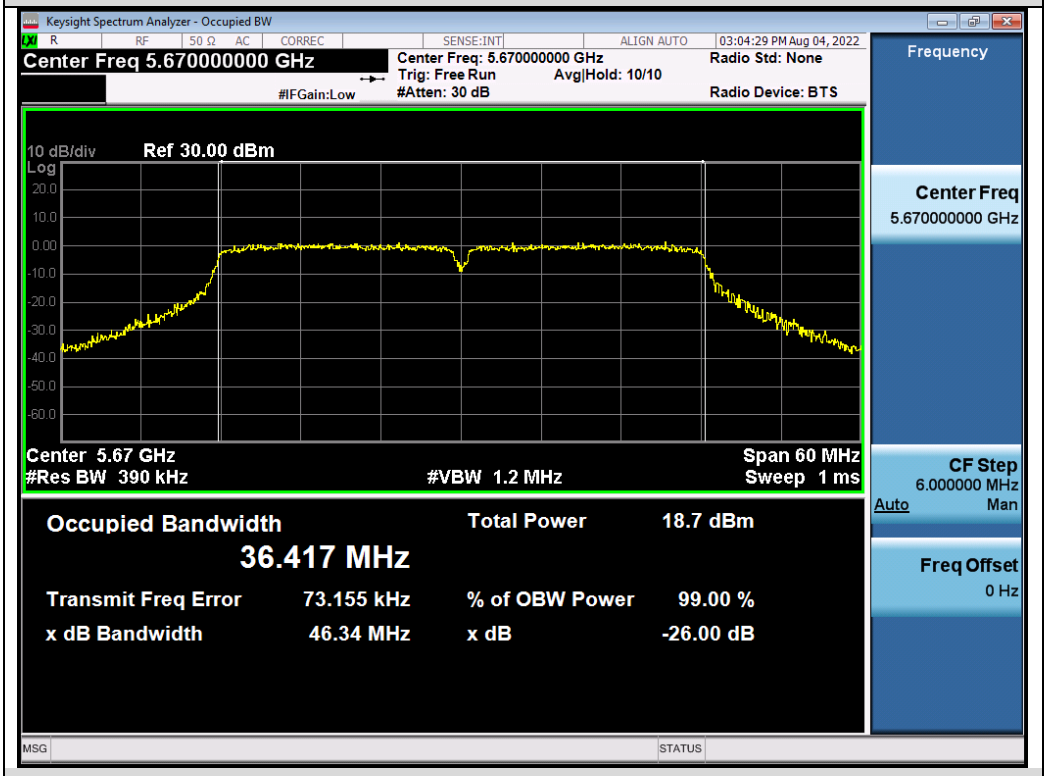
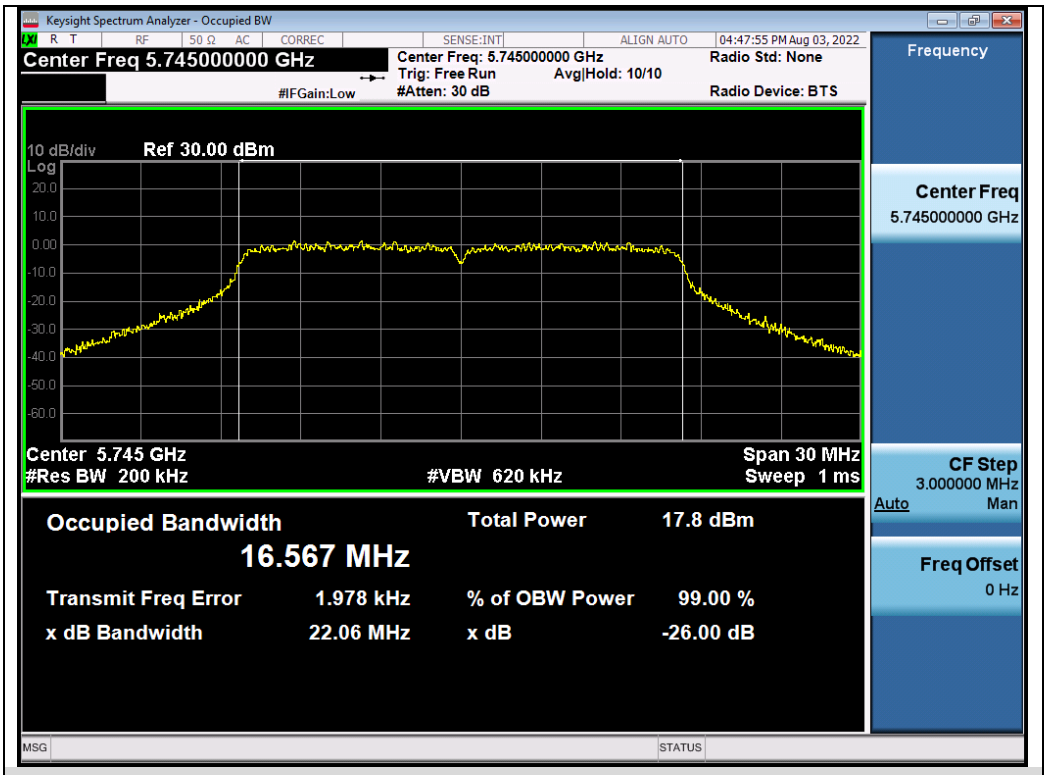
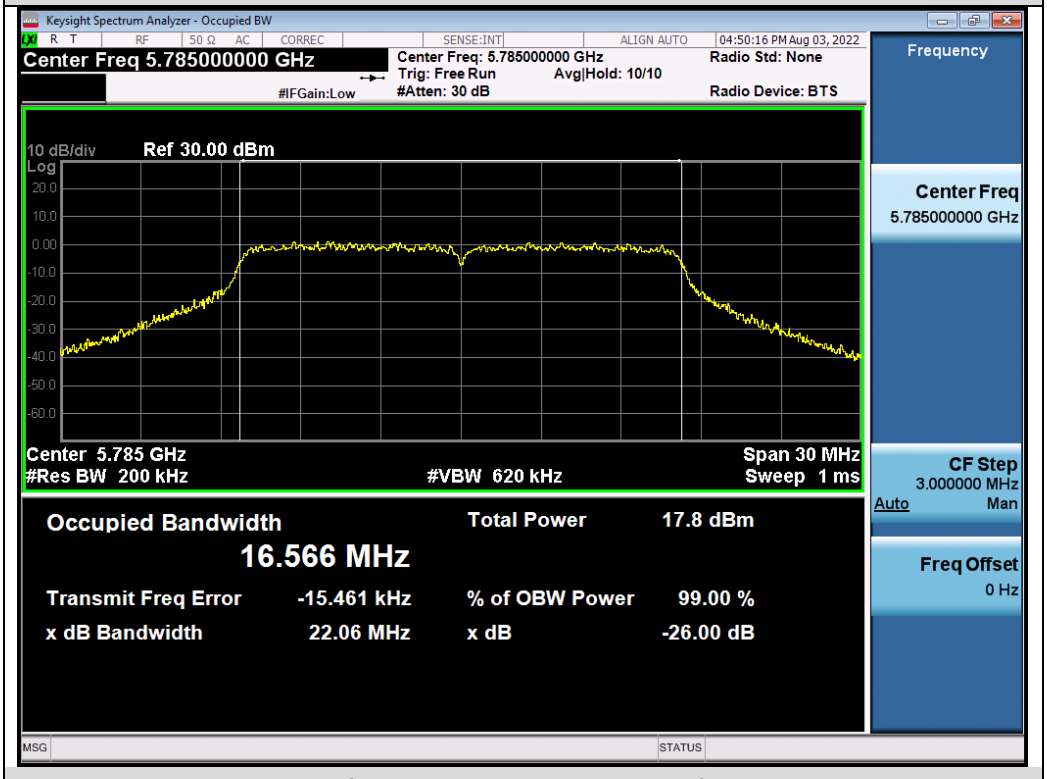


Test_Graph_802.11n40_ANT2_5670_MCS0_OBW

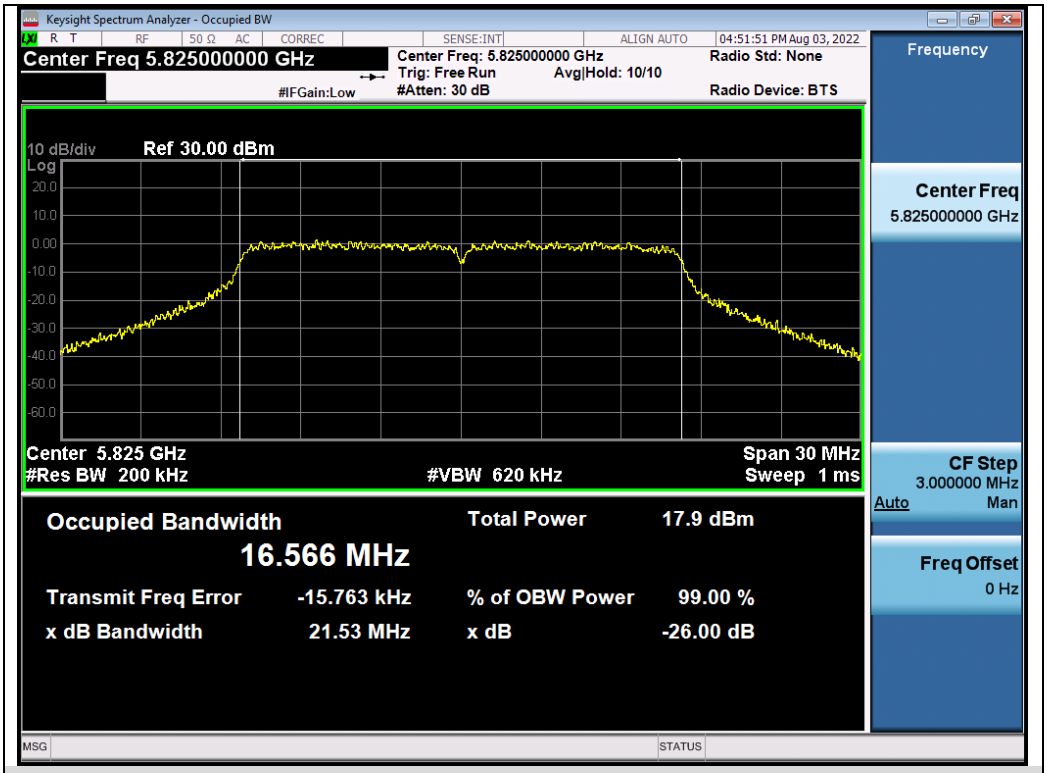
Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz



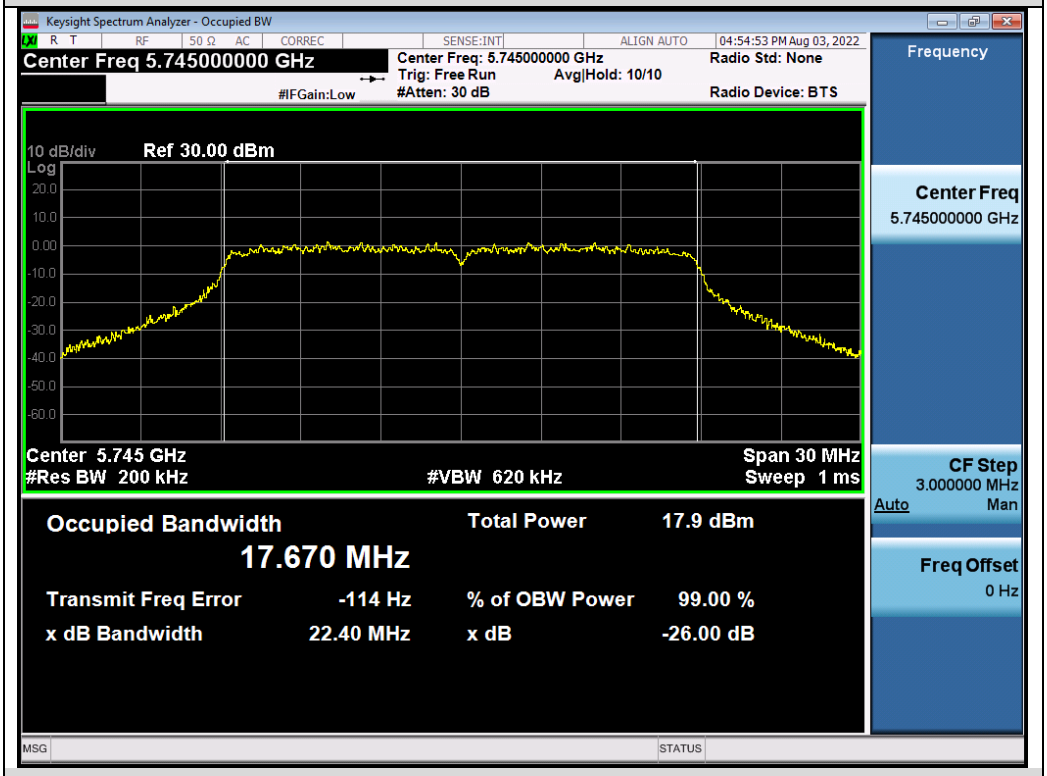
Test_Graph_802.11a_ANT1_5745_6Mbps_OBW



Test_Graph_802.11a_ANT1_5785_6Mbps_OBW



Test_Graph_802.11a_ANT1_5825_6Mbps_OBW



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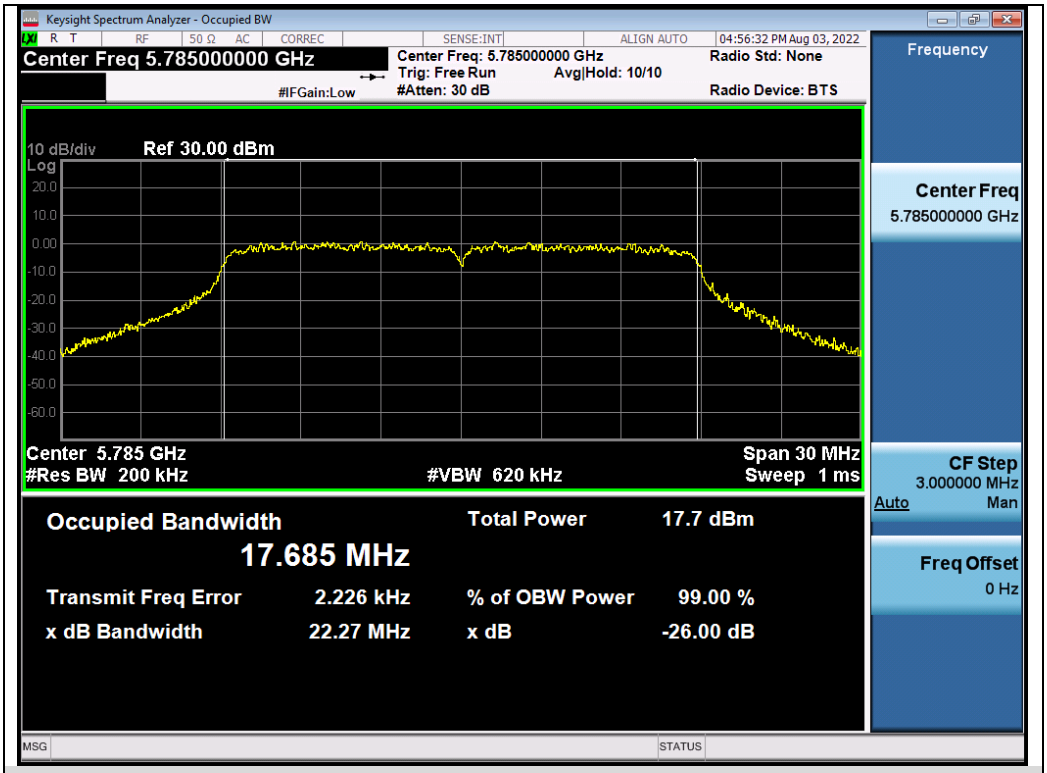

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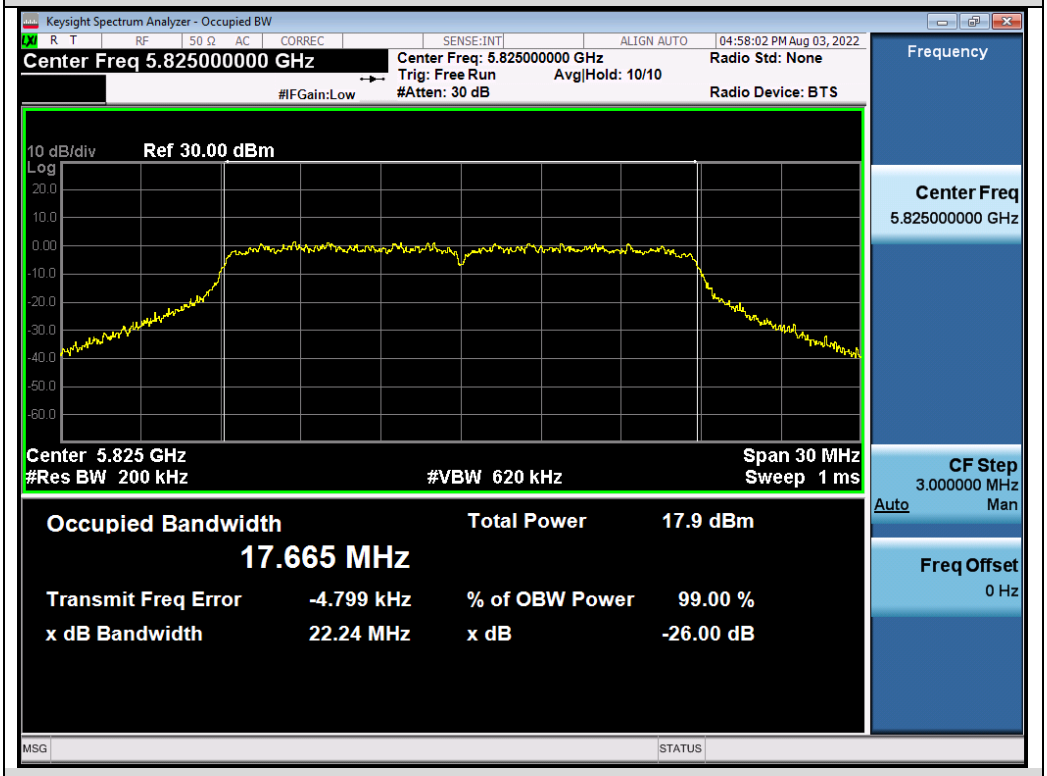
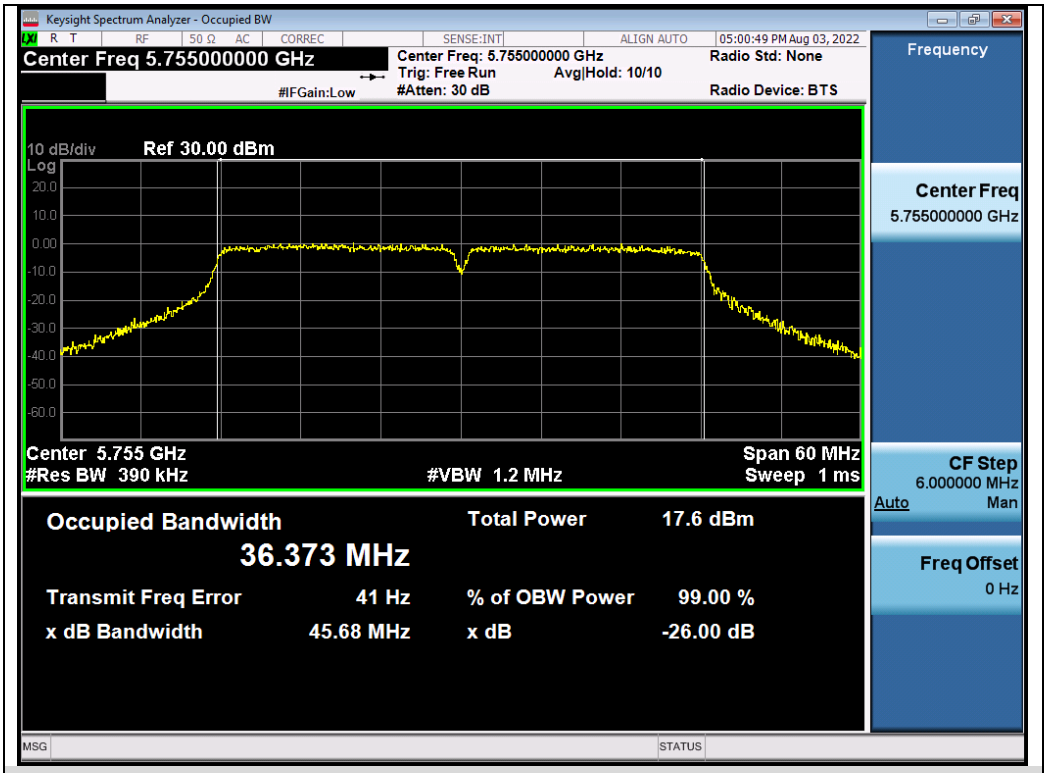
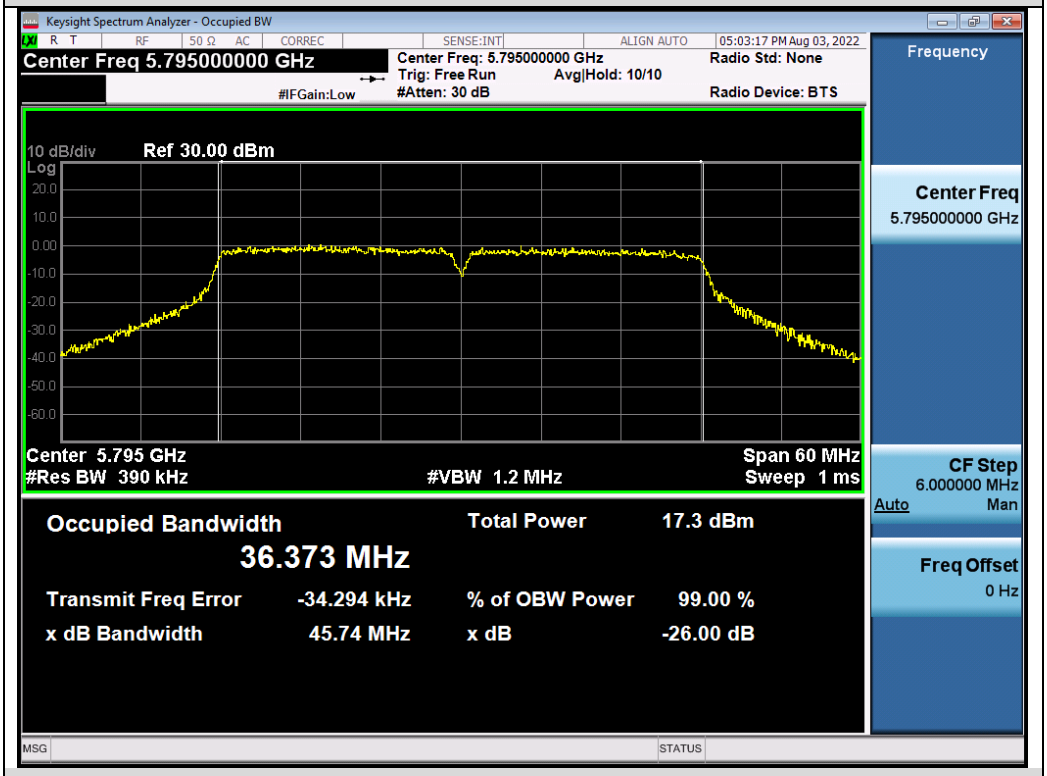


Test_Graph_802.11n20_ANT1_5825_MCS0_OBW

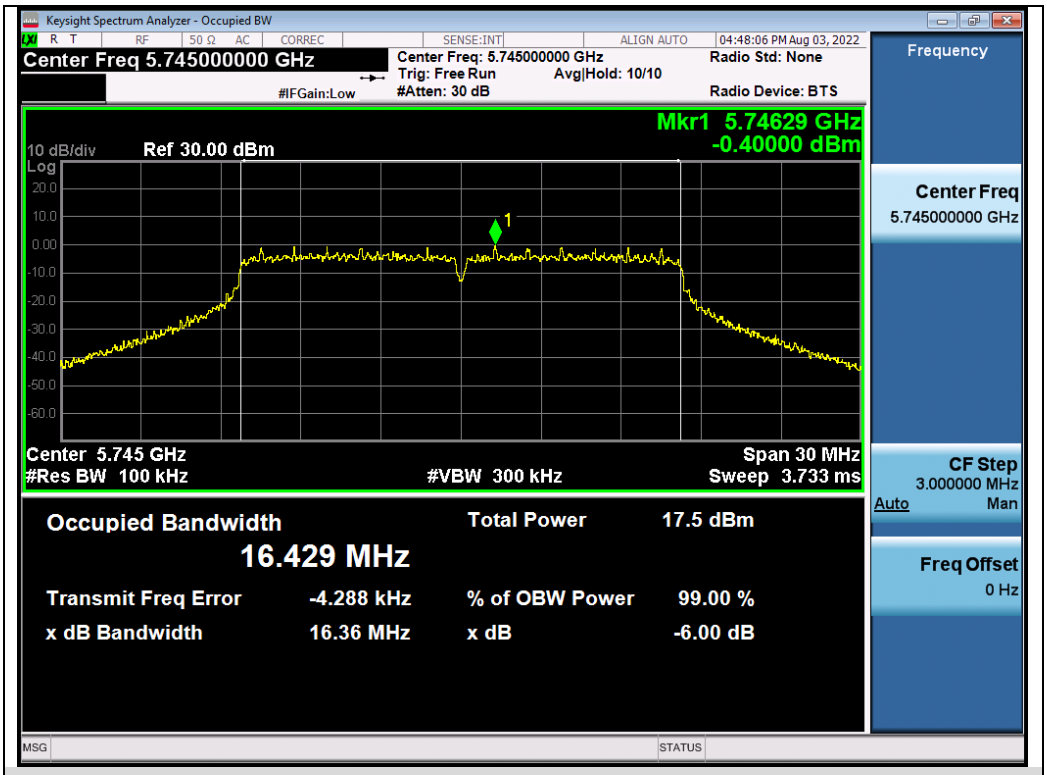


Test_Graph_802.11n40_ANT1_5755_MCS0_OBW



Test_Graph_802.11n40_ANT1_5795_MCS0_OBW

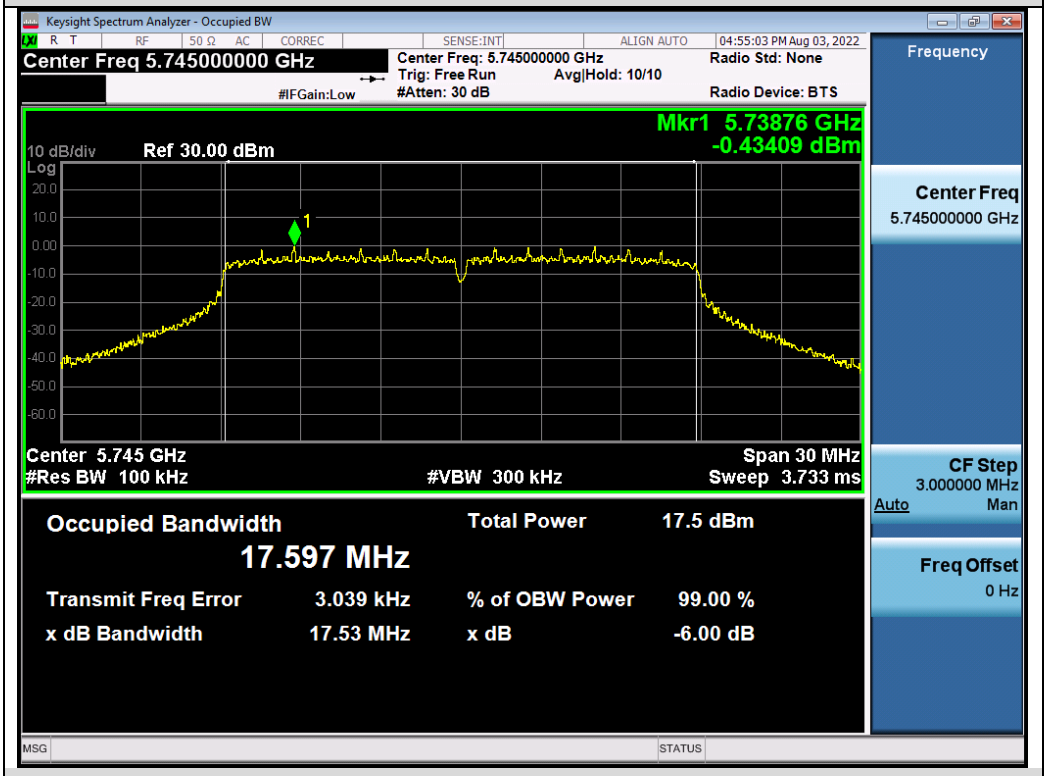
Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz



Test_Graph_802.11a_ANT1_5745_6Mbps_DTSBW

Test_Graph_802.11a_ANT1_5785_6Mbps_DTSBW

Test_Graph_802.11a_ANT1_5825_6Mbps_DTSBW



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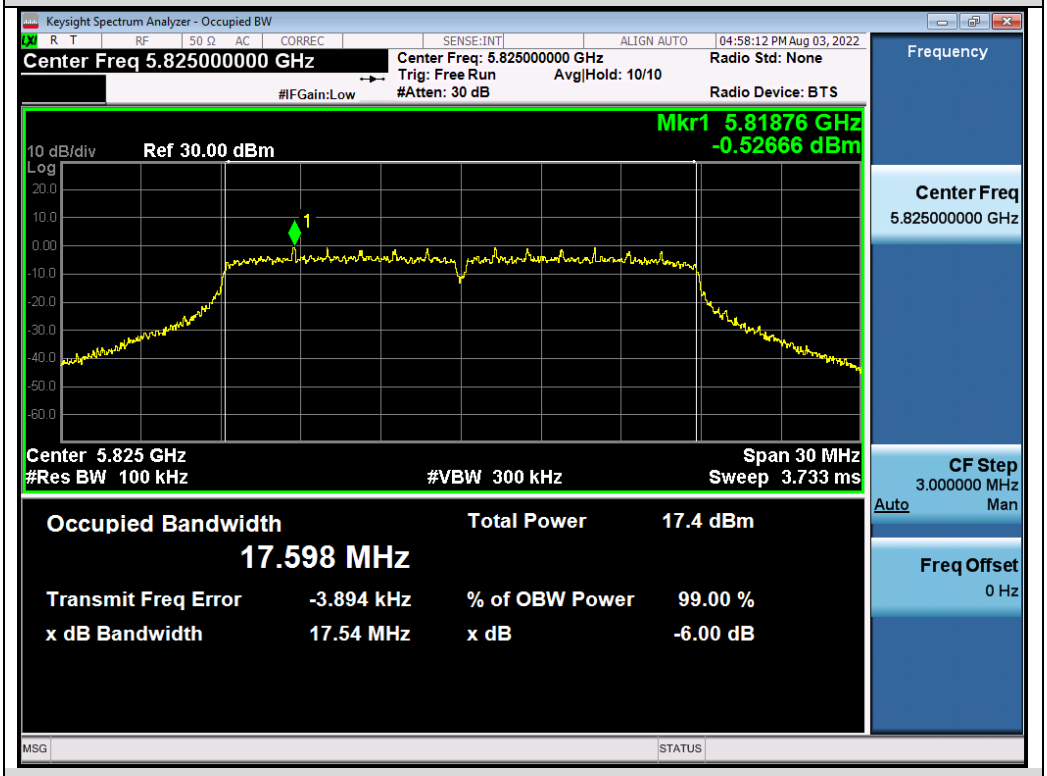
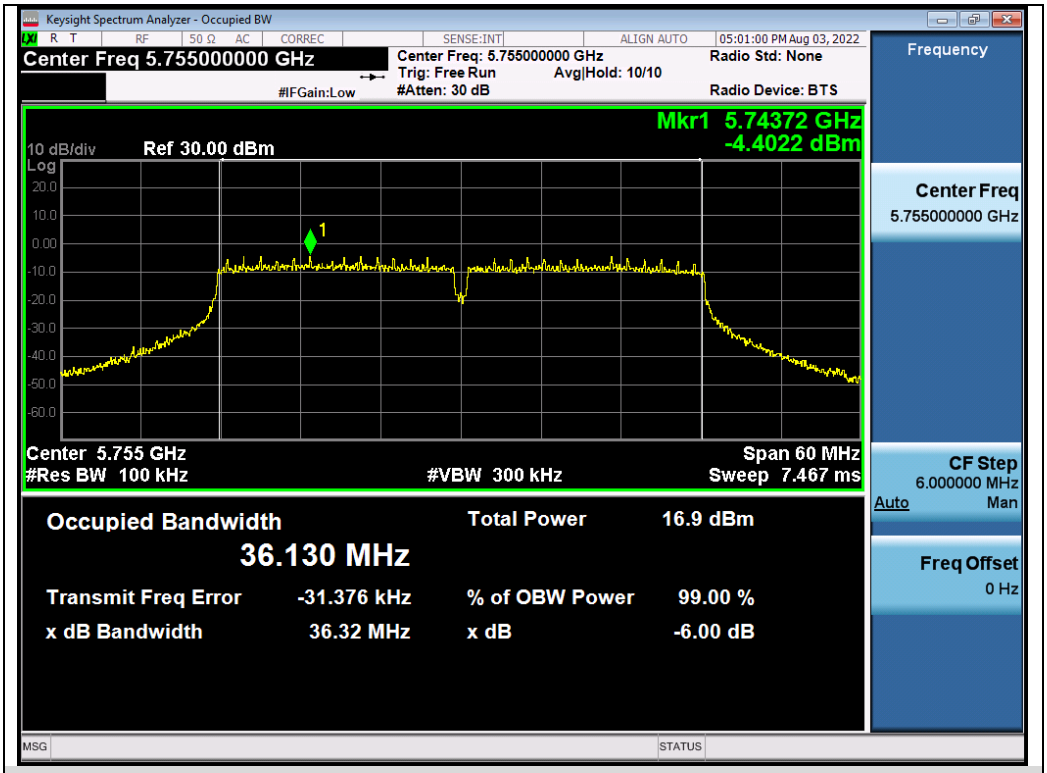
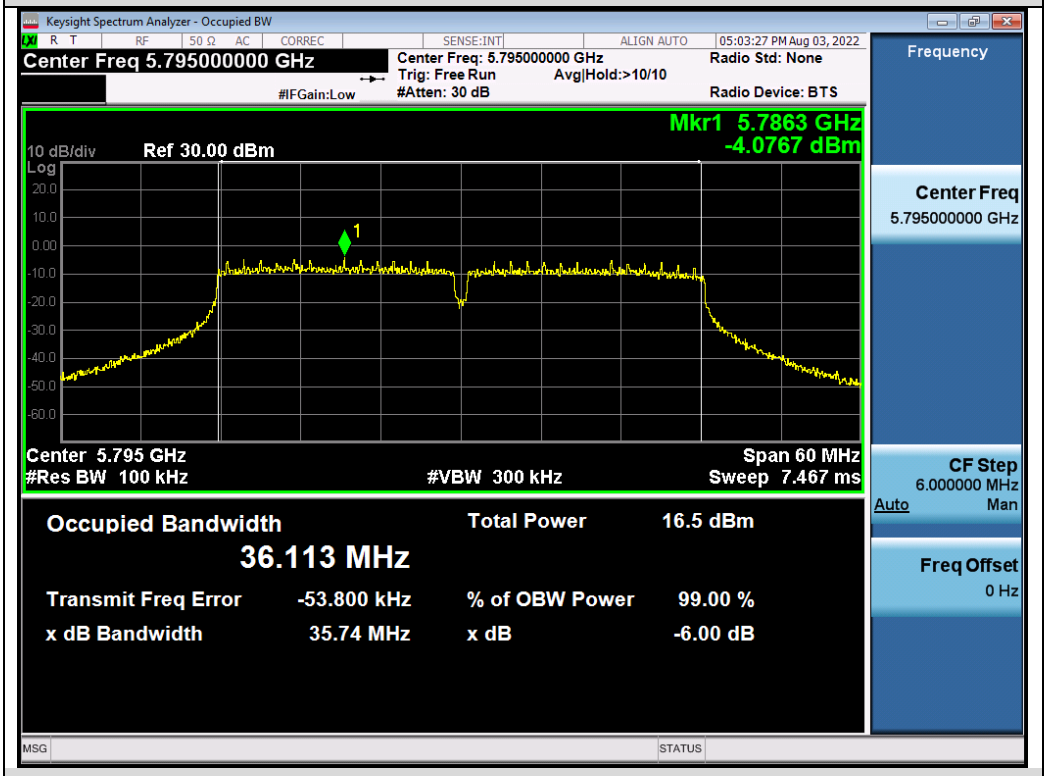


Test_Graph_802.11n20_ANT1_5825_MCS0_DTSBW



Test_Graph_802.11n40_ANT1_5755_MCS0_DTSBW



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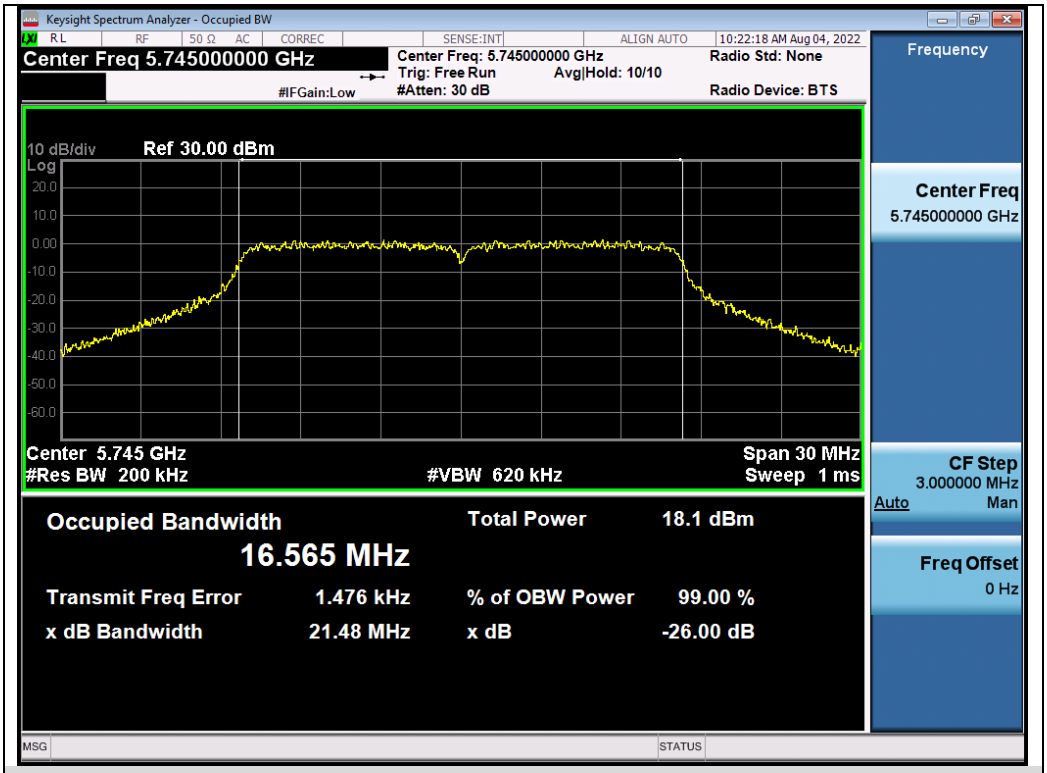
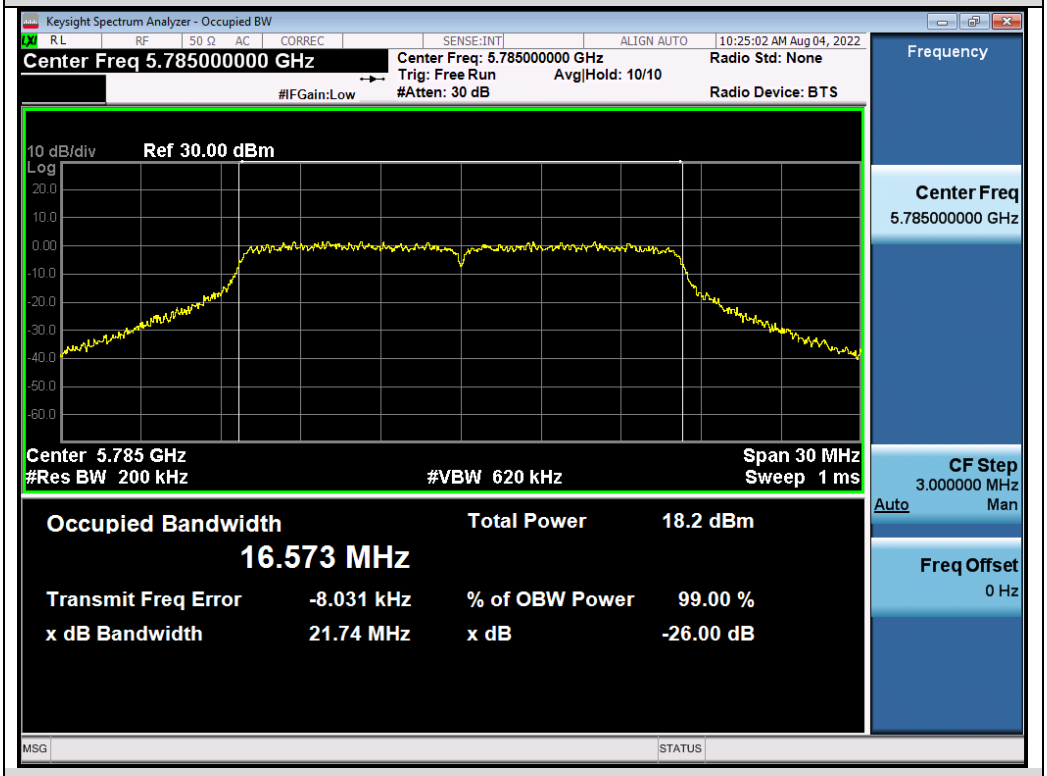
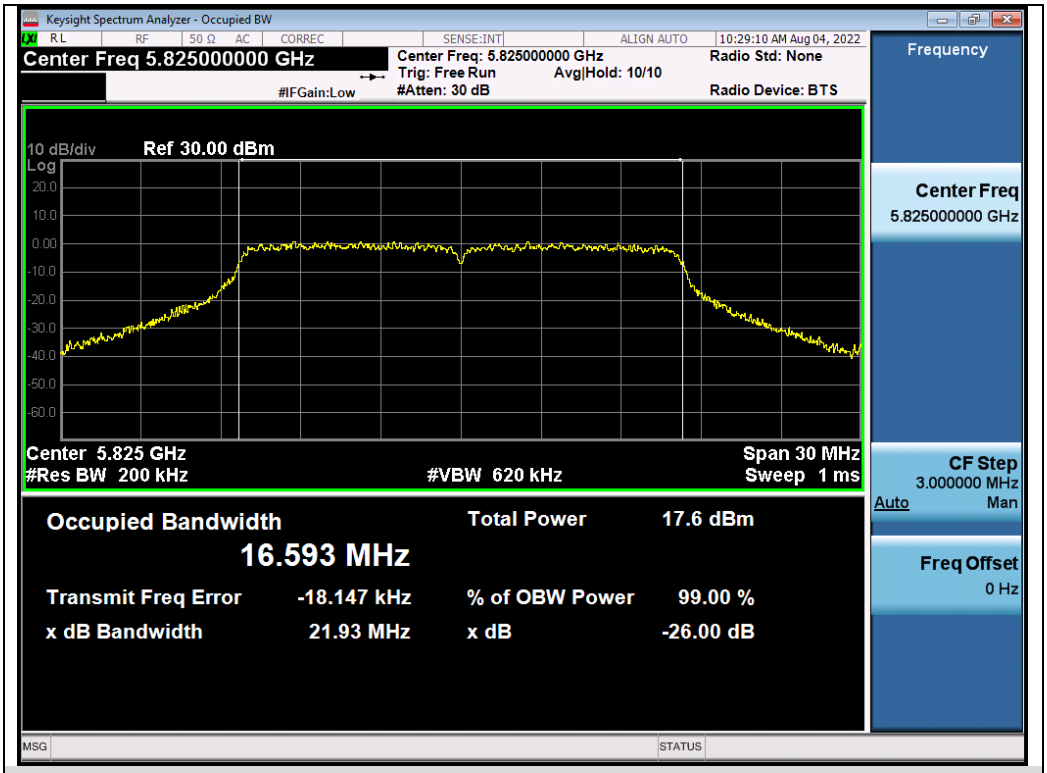


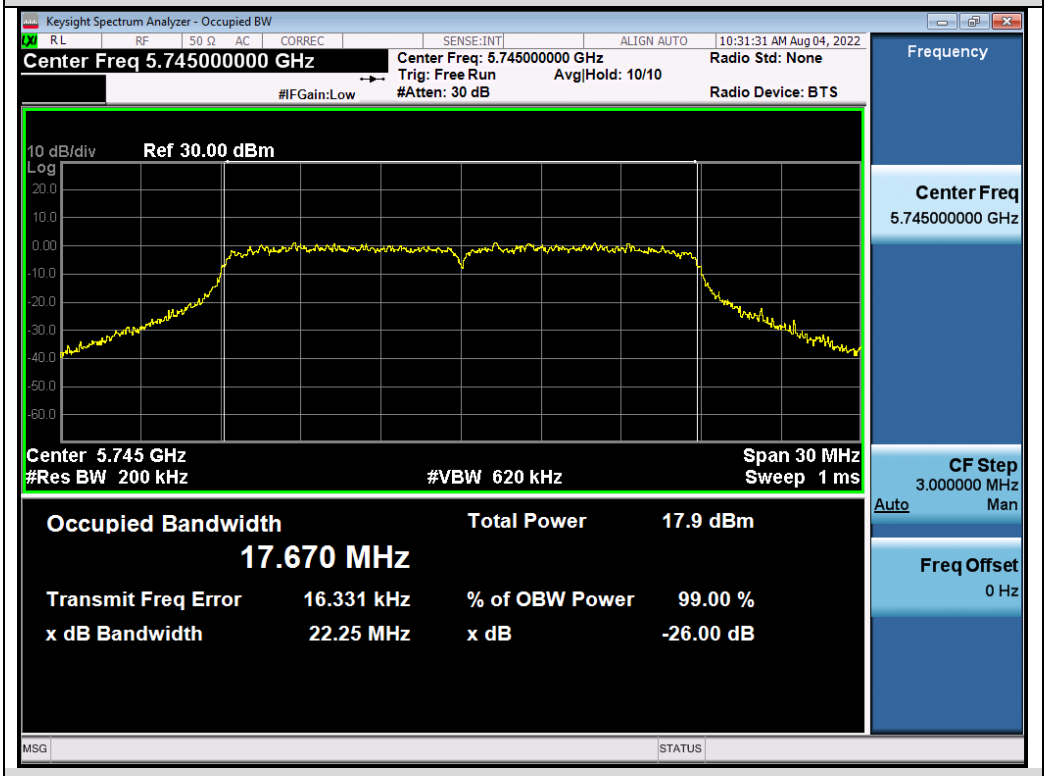
Test_Graph_802.11a_ANT2_5745_6Mbps_OBW



Test_Graph_802.11a_ANT2_5785_6Mbps_OBW



Test_Graph_802.11a_ANT2_5825_6Mbps_OBW



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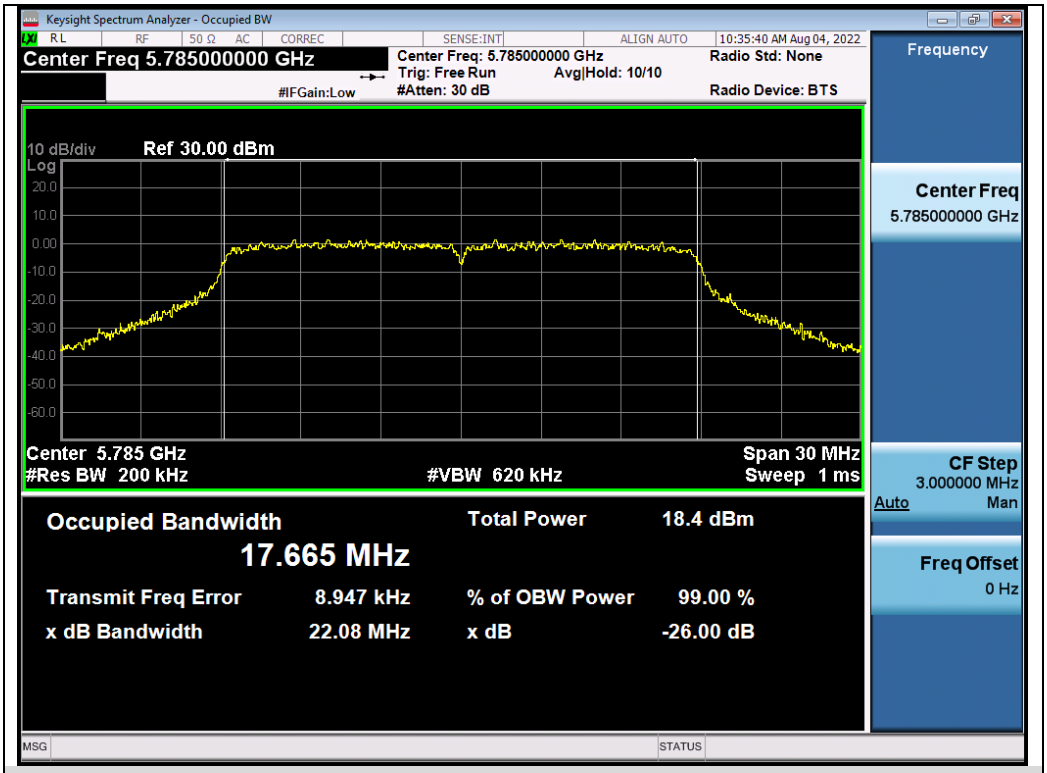

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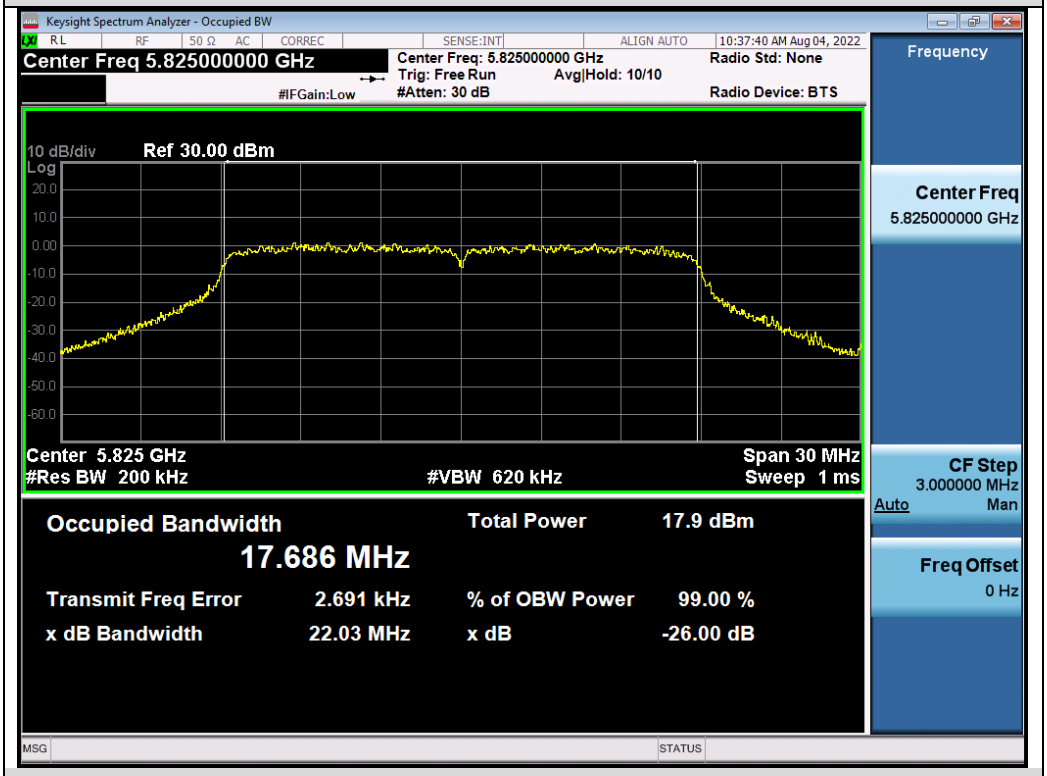
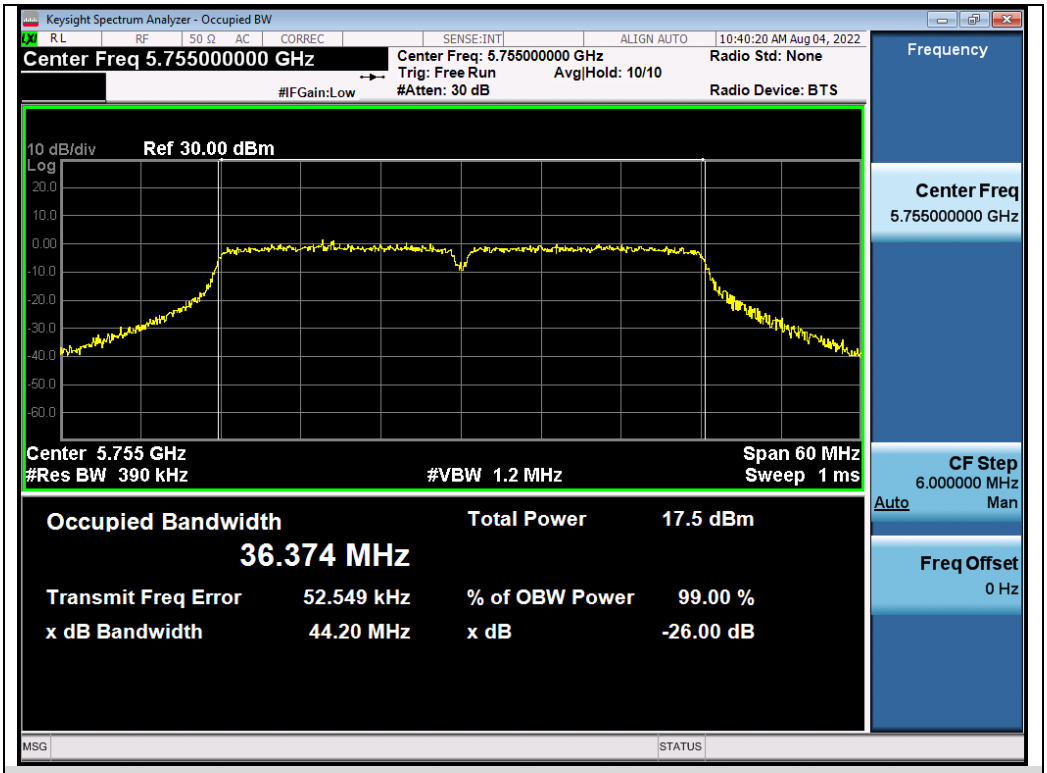
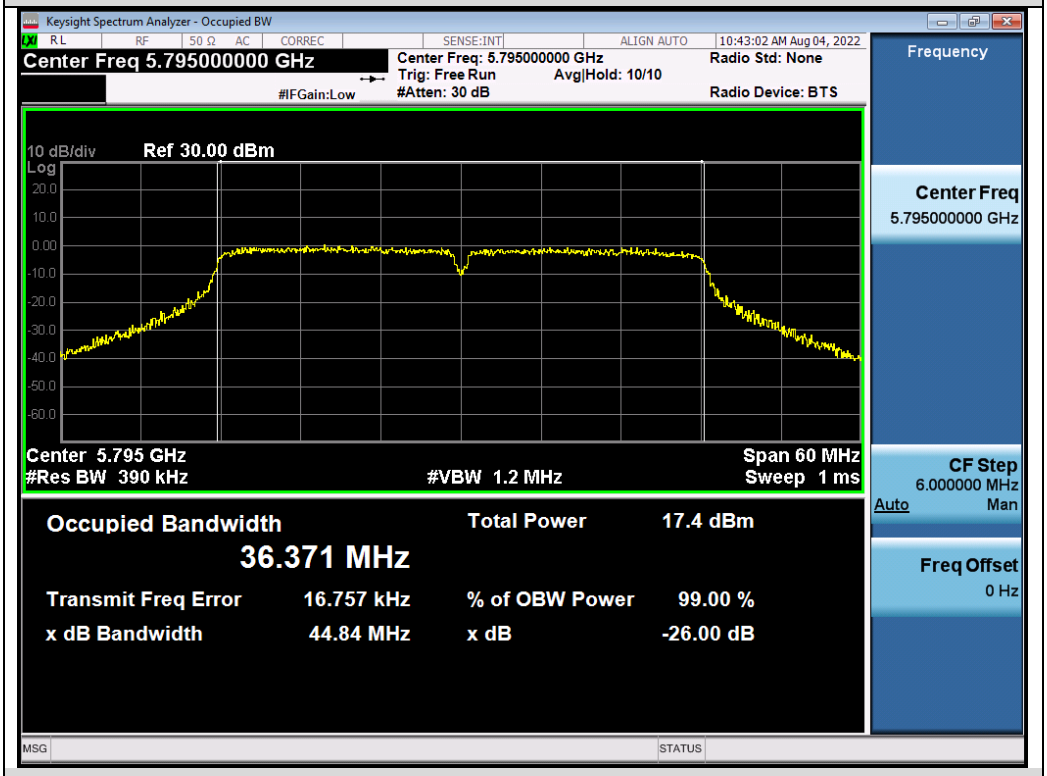


Test_Graph_802.11n20_ANT2_5825_MCS0_OBW



Test_Graph_802.11n40_ANT2_5755_MCS0_OBW



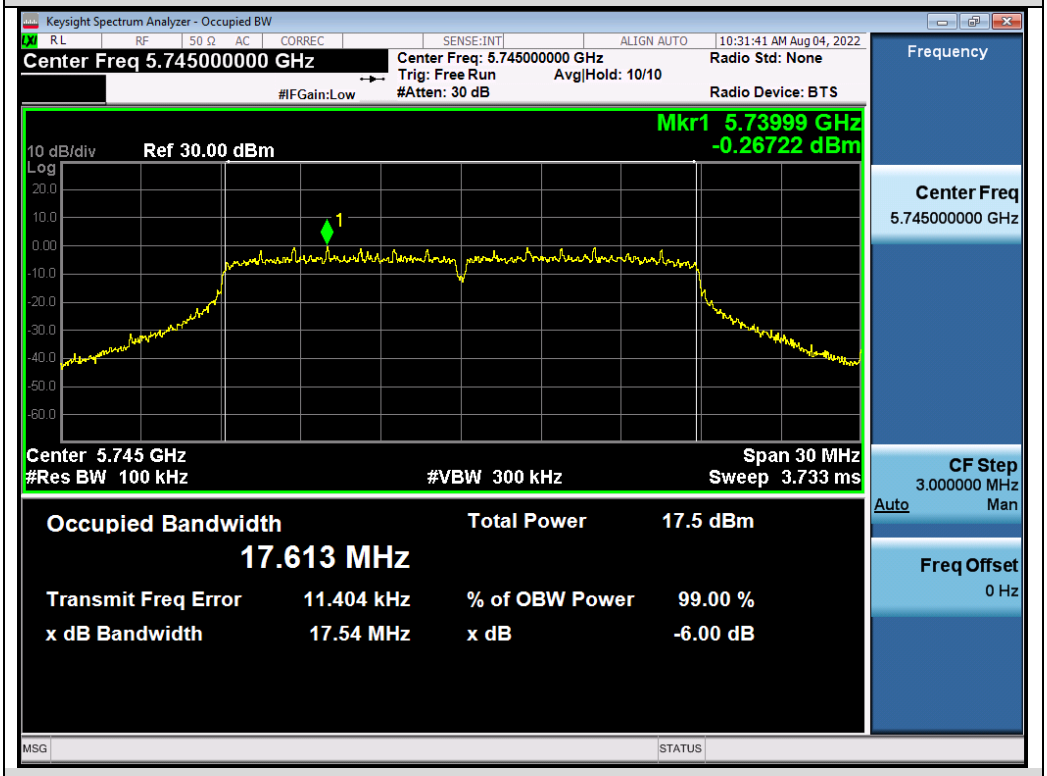
Test_Graph_802.11n40_ANT2_5795_MCS0_OBW

Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz

Test_Graph_802.11a_ANT2_5745_6Mbps_DTSBW

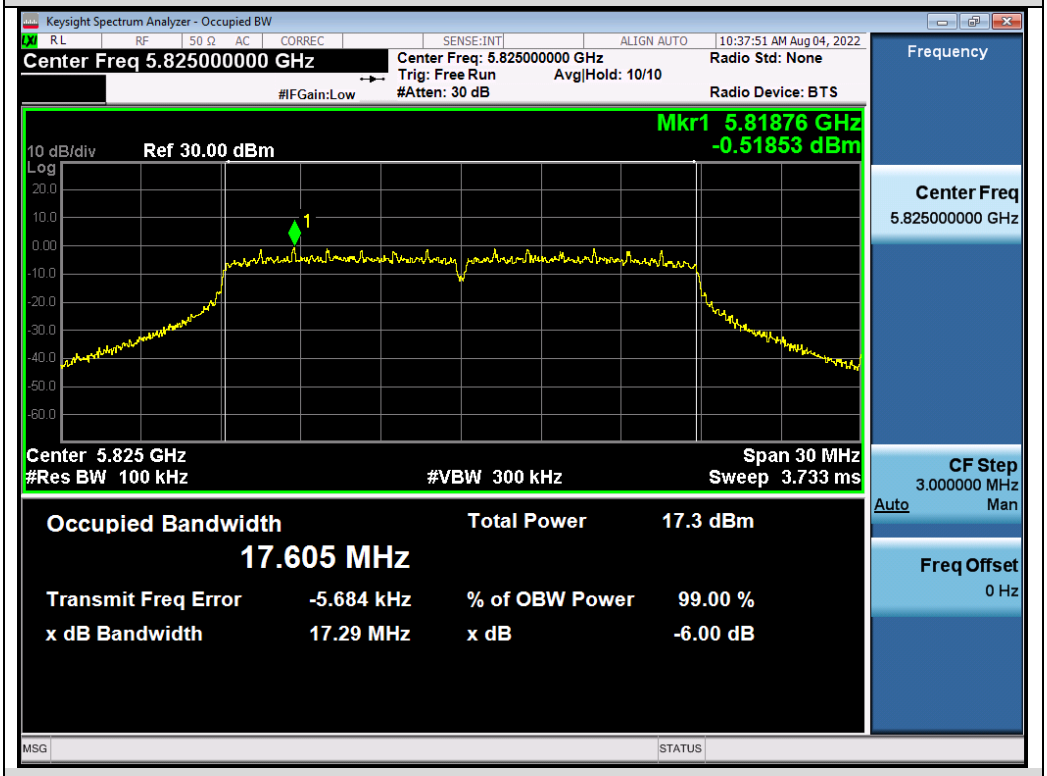
Test_Graph_802.11a_ANT2_5785_6Mbps_DTSBW

Test_Graph_802.11a_ANT2_5825_6Mbps_DTSBW

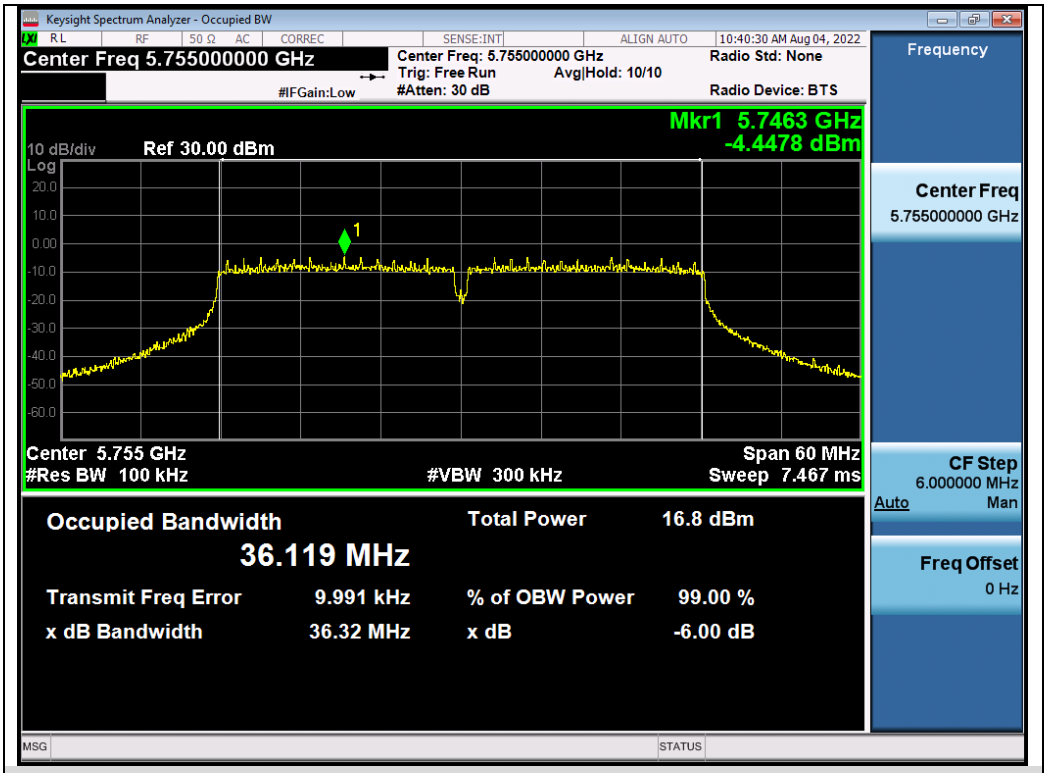


Test_Graph_802.11n20_ANT2_5745_MCS0_DTSBW

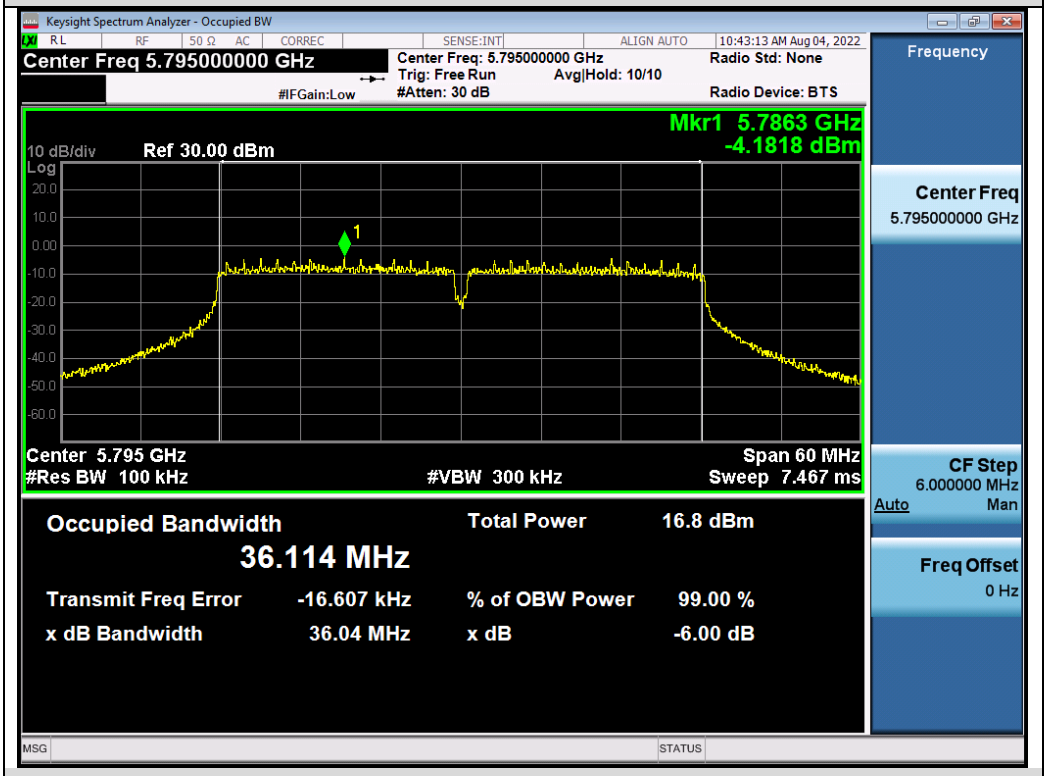
Test_Graph_802.11n20_ANT2_5785_MCS0_DTSBW



Test_Graph_802.11n20_ANT2_5825_MCS0_DTSBW



Test_Graph_802.11n40_ANT2_5755_MCS0_DTSBW



Test_Graph_802.11n40_ANT2_5795_MCS0_DTSBW

9. MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

9.1. MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer to Section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

Refer to Section 6.

9.4. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-antenna 1				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	1.941	10.10	Pass
	5200	1.969	10.10	Pass
	5240	3.349	10.10	Pass
802.11n20	5180	1.435	10.10	Pass
	5200	1.609	10.10	Pass
	5240	2.692	10.10	Pass
802.11n40	5190	-1.790	10.10	Pass
	5230	-0.351	10.10	Pass

Note: Limit=11-(6.9-6)=10.10

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-antenna 2				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	1.054	10.10	Pass
	5200	1.475	10.10	Pass
	5240	1.632	10.10	Pass
802.11n20	5180	0.907	10.10	Pass
	5200	1.127	10.10	Pass
	5240	1.332	10.10	Pass
802.11n40	5190	-1.663	10.10	Pass
	5230	-2.066	10.10	Pass

Note: Limit=11-(6.9-6)=10.10

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-antenna 1+2				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	4.53	7.09	Pass
	5200	4.74	7.09	Pass
	5240	5.59	7.09	Pass
802.11n20	5180	4.19	7.09	Pass
	5200	4.38	7.09	Pass
	5240	5.08	7.09	Pass
802.11n40	5190	1.28	7.09	Pass
	5230	1.89	7.09	Pass

Note:Limit=11-(9.91-6)=7.09

Test Data of Conducted Output Power Density for band 5.47-5.725 GHz-antenna 1				
Test Mode	Test Channel(MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5500	0.983	10.01	Pass
	5600	-0.549	10.01	Pass
	5700	-2.879	10.01	Pass
802.11n20	5500	0.382	10.01	Pass
	5600	-0.897	10.01	Pass
	5700	-3.455	10.01	Pass
802.11n40	5510	-2.593	10.01	Pass
	5590	-3.575	10.01	Pass
	5670	-5.929	10.01	Pass

Note: Limit=11-(6.99-6)=10.01

Test Data of Conducted Output Power Density for band 5.47-5.725 GHz-antenna 2				
Test Mode	Test Channel(MHz)	Average Powe Density(dBm/MHz)	Limits(dBm/MHz)	Pass or Fail
802.11a	5500	1.090	10.01	Pass
	5600	1.802	10.01	Pass
	5700	2.226	10.01	Pass
802.11n20	5500	0.736	10.01	Pass
	5600	1.325	10.01	Pass
	5700	1.832	10.01	Pass
802.11n40	5510	-3.242	10.01	Pass
	5590	-2.022	10.01	Pass
	5670	-1.255	10.01	Pass

Note: Limit=11-(6.99-6)=10.01

Test Data of Conducted Output Power Density for band 5.47-5.725 GHz-antenna 1+2				
Test Mode	Test Channel(MHz)	Average Power Density(dBm/MHz)	Limits(dBm/MHz)	Pass or Fail
802.11a	5500	4.05	7.00	Pass
	5600	3.79	7.00	Pass
	5700	3.39	7.00	Pass
802.11n20	5500	3.57	7.00	Pass
	5600	3.36	7.00	Pass
	5700	2.96	7.00	Pass
802.11n40	5510	0.10	7.00	Pass
	5590	0.28	7.00	Pass
	5670	0.02	7.00	Pass

Note: Limit=11-(10-6)=7.00

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-antenna 1					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-8.305	-1.315	29.01	Pass
	5785	-8.217	-1.227	29.01	Pass
	5825	-8.321	-1.331	29.01	Pass
802.11n20	5745	-8.459	-1.469	29.01	Pass
	5785	-8.977	-1.987	29.01	Pass
	5825	-8.565	-1.575	29.01	Pass
802.11n40	5755	-11.706	-4.716	29.01	Pass
	5795	-11.490	-4.500	29.01	Pass

Note: Limit=30-(6.99-6)=29.01

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-antenna 2					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-8.200	-1.210	29.01	Pass
	5785	-7.557	-0.567	29.01	Pass
	5825	-8.351	-1.361	29.01	Pass
802.11n20	5745	-8.493	-1.503	29.01	Pass
	5785	-7.971	-0.981	29.01	Pass
	5825	-8.416	-1.426	29.01	Pass
802.11n40	5755	-11.622	-4.632	29.01	Pass
	5795	-11.323	-4.333	29.01	Pass

Note: Limit=30-(6.99-6)=29.01

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-5.24	1.75	26.00	Pass
	5785	-4.86	2.13	26.00	Pass
	5825	-5.33	1.66	26.00	Pass
802.11n20	5745	-5.47	1.52	26.00	Pass
	5785	-5.43	1.56	26.00	Pass
	5825	-5.48	1.51	26.00	Pass
802.11n40	5755	-8.65	-1.66	26.00	Pass
	5795	-8.40	-1.41	26.00	Pass

Note:

1. Limit=30-(10.00-6)=26.00
2. Power density(dBm/500kHz) = Power density(dBm/100kHz) +10*log(500/100).
3. The Total PSD (dBm/500kHz) = 10*log {$10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ }(dBm/500kHz)

Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz

Test_Graph_802.11a_ANT1_5180_6Mbps_PSD

Test_Graph_802.11a_ANT1_5200_6Mbps_PSD

Test_Graph_802.11a_ANT1_5240_6Mbps_PSD