

FCC Test Report

Report No.: AGC10540201101FE06

FCC ID : GSS-VS18188
APPLICATION PURPOSE : Original Equipment
PRODUCT DESIGNATION : ViewBoard Cast Button
BRAND NAME : ViewSonic
MODEL NAME : VS18188
APPLICANT : ViewSonic Corporation
DATE OF ISSUE : Dec. 04, 2020
STANDARD(S) : FCC Part 15.407
TEST PROCEDURE(S) : KDB 789033 D02 v02r01
REPORT VERSION : V1.0



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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Dec. 04, 2020	Valid	Initial Release

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1. VERIFICATION OF CONFORMITY

Applicant	ViewSonic Corporation
Address	10 Pointe Drive, Suite 200, Brea, CA 92821, United States
Manufacturer	ViewSonic Corporation
Address	10 Pointe Drive, Suite 200, Brea, CA 92821, United States
Factory	Global Brands Manufacture (Dong Guan) Ltd.,
Address	Yue Yuen Industrial Estate. Huang Jiang Town, Dong Guan City, Guang Dong Province, China Zip: 523758.
Product Designation	ViewBoard Cast Button
Brand Name	ViewSonic
Test Model	VS18188
Date of test	Nov. 17, 2020 to Dec. 04, 2020
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

Sky Dong

Sky Dong
(Project Engineer)

Dec. 04, 2020

Reviewed By

Max Zhang

Max Zhang
(Reviewer)

Dec. 04, 2020

Approved By

Forrest Lei

Forrest Lei
(Authorized Officer)

Dec. 04, 2020

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2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as “ViewBoard Cast Button”. 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

Operation Frequency	5150 MHz~5250MHz; 5725 MHz~5825MHz
Output Power	IEEE 802.11a20:12.45dBm; IEEE 802.11n(20):11.91dBm; IEEE802.11n(40):15.26dBm; IEEE 802.11ac(20):13.04dBm; IEEE 802.11ac(40):16.36dBm; IEEE 802.11ac(80):16.72dBm
Modulation	BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM,OFDM
Number of channels	15
Hardware Version	V1.4
Software Version	V1.10.17
Antenna Designation	FPC Antenna(Comply with requirements of the FCC part 15.203)
Antenna Gain	3dBi
Power Supply	DC 5V by PC

Note:

1. The EUT is designed as client without radar detection.
2. The device do not support TPC.

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2.2. TABLE OF CARRIER FREQUENCIES

Frequency Band	Channel Number	Frequency	Frequency Band	Channel Number	Frequency
5150 GHz~ 5250GHz	36	5180 MHz	5725 GHz~ 5850GHz	149	5745 MHz
	38	5190 MHz		151	5755 MHz
	40	5200 MHz		153	5765 MHz
	42	5210 MHz		155	5775MHz
	44	5220 MHz		157	5785 MHz
	46	5230 MHz		159	5795 MHz
	48	5240 MHz		161	5805 MHz
				165	5825MHz

Note: For 20MHZ bandwidth system use Channel 36,40,44,48,149,153,157,161,165; For 40MHZ bandwidth system use Channel 38,46,151,159. For 80MHZ bandwidth system use Channel 42,155.

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

This submittal(s) (test report) is intended for **FCC ID: GSS-VS18188** 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.

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3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in measurement” (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission, $U_c = \pm 3.2$ dB
- Uncertainty of Radiated Emission below 1GHz, $U_c = \pm 3.9$ dB
- Uncertainty of Radiated Emission above 1GHz, $U_c = \pm 4.8$ dB

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4. DESCRIPTION OF TEST MODES

Mode	Available channel	Tested channel	Modulation	Date rate(Mbps)
802.11a/n/ac20	36,40,44,48,149,153,157,161,165	36,40, 48,149,157,165	OFDM	6Mbps/MCS0
802.11n/ac40	38,46,151,159	38,46, 151,159	OFDM	MCS0
802.11ac80	42, 155	42, 155	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.
3. The test software is the WL Command which can set the EUT into the individual test modes.

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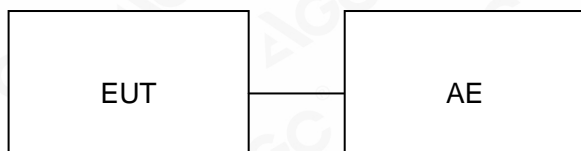
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5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure 1:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	ViewBoard Cast Button	VS18188	GSS-VS18188	EUT
2	PC	Nbl-WAQ9R	DC 5V	AE

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	Compliant

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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 CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	May 15, 2020	May 14, 2021
LISN	R&S	ESH2-Z5	100086	Jul. 03,2020	Jul. 02,2021
Test software	R&S	ES-K1 (Ver V1.71)	N/A	N/A	N/A

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	May 15, 2020	May 14, 2021
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 12, 2019	Dec. 11, 2020
Power sensor	Aglient	U2021XA	MY54110007	Jun. 08, 2020	Jun. 07, 2021
2.4GHz Fliter	EM Electronics	2400-2500MHz	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	Sep.21, 2019	Sep. 20, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 17, 2019	May 16, 2021
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Sep. 20, 2019	Sep. 19, 2021
Test software	FARA	EZ-EMC (Ver RA-03A)	N/A	N/A	N/A

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7. MAXIMUM CONDUCTED OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

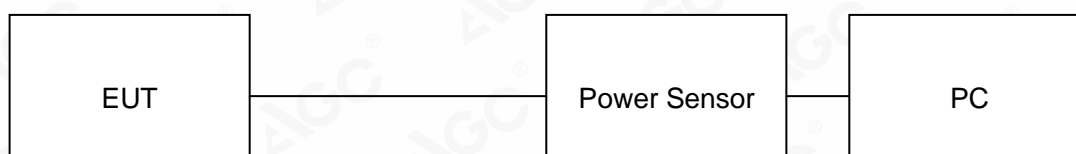
For average power test:

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



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7.3. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION			
Frequency (MHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
5180	11.70	30	Pass
5200	11.44	30	Pass
5240	11.44	30	Pass
5745	11.57	30	Pass
5785	12.35	30	Pass
5825	12.45	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11N20 MODULATION			
Frequency (MHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
5180	11.20	30	Pass
5200	10.85	30	Pass
5240	11.81	30	Pass
5745	11.91	30	Pass
5785	11.84	30	Pass
5825	11.88	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11N40 MODULATION			
Frequency (MHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
5190	14.39	30	Pass
5230	13.67	30	Pass
5755	15.26	30	Pass
5795	15.04	30	Pass

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LIMITS AND MEASUREMENT RESULT FOR 802.11AC20 MODULATION			
Frequency (MHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
5180	12.17	30	Pass
5200	12.09	30	Pass
5240	12.03	30	Pass
5745	12.10	30	Pass
5785	13.04	30	Pass
5825	12.98	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11AC40 MODULATION			
Frequency (MHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
5190	14.32	30	Pass
5230	13.44	30	Pass
5755	13.50	30	Pass
5795	16.36	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11AC80 MODULATION			
Frequency (MHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
5210	14.91	30	Pass
5775	16.72	30	Pass

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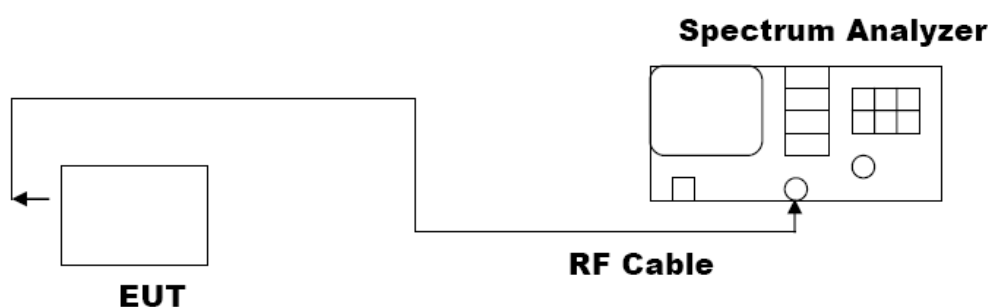
8. 6dB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

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 $\geq 3 \times$ 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.

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)



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8.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION				
Applicable Limits	Applicable Limits			
	Test Data (MHz)			Criteria
	Frequency (MHz)	-6dB Bandwidth	99.00% Occupied Bandwidth	
>500KHZ	5745MHz	16.31	16.583	PASS
	5785MHz	16.35	16.602	PASS
	5825MHz	16.34	16.603	PASS

LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION				
Applicable Limits	Applicable Limits			
	Test Data (MHz)			Criteria
	Frequency (MHz)	-6dB Bandwidth	99.00% Occupied Bandwidth	
>500KHZ	5745MHz	17.53	17.744	PASS
	5785MHz	17.55	17.736	PASS
	5825MHz	17.54	17.749	PASS
	5755MHz	36.33	36.129	PASS
	5795MHz	36.33	36.202	PASS

LIMITS AND MEASUREMENT RESULT FOR 802.11AC20/40/80 MODULATION				
Applicable Limits	Applicable Limits			
	Test Data (MHz)			Criteria
	Frequency (MHz)	-6dB Bandwidth	99.00% Occupied Bandwidth	
>500KHZ	5745MHz	17.65	17.739	PASS
	5785MHz	17.55	17.699	PASS
	5825MHz	17.63	17.728	PASS
	5755MHz	36.21	36.465	PASS
	5795MHz	36.40	36.413	PASS
	5775MHz	75.76	75.591	PASS

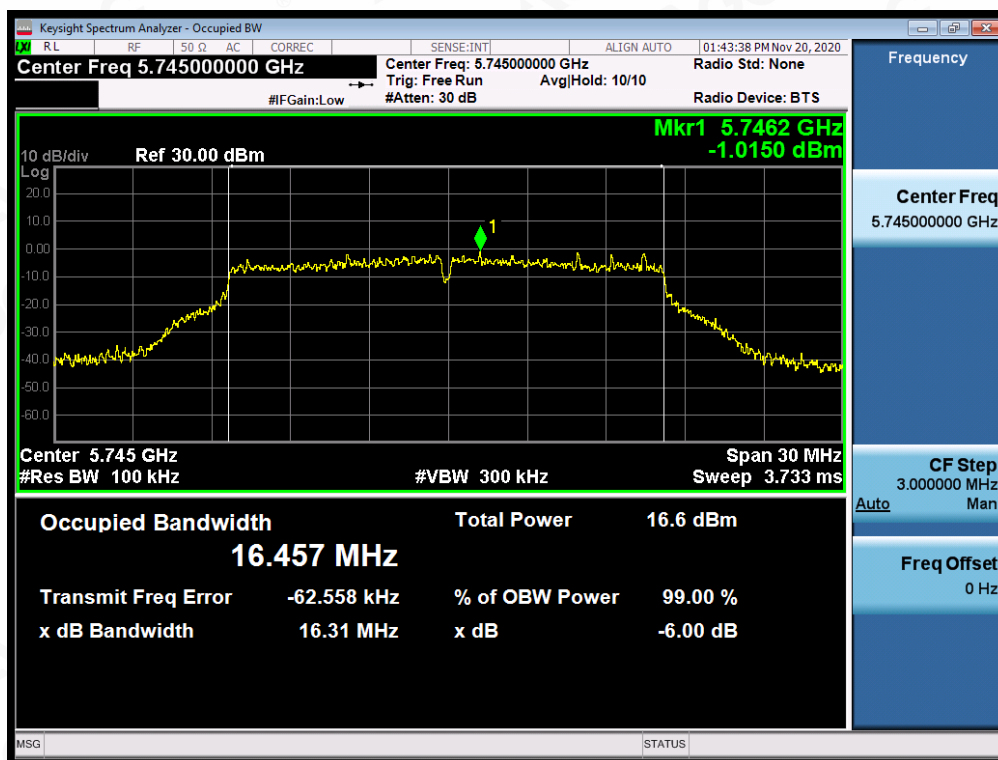
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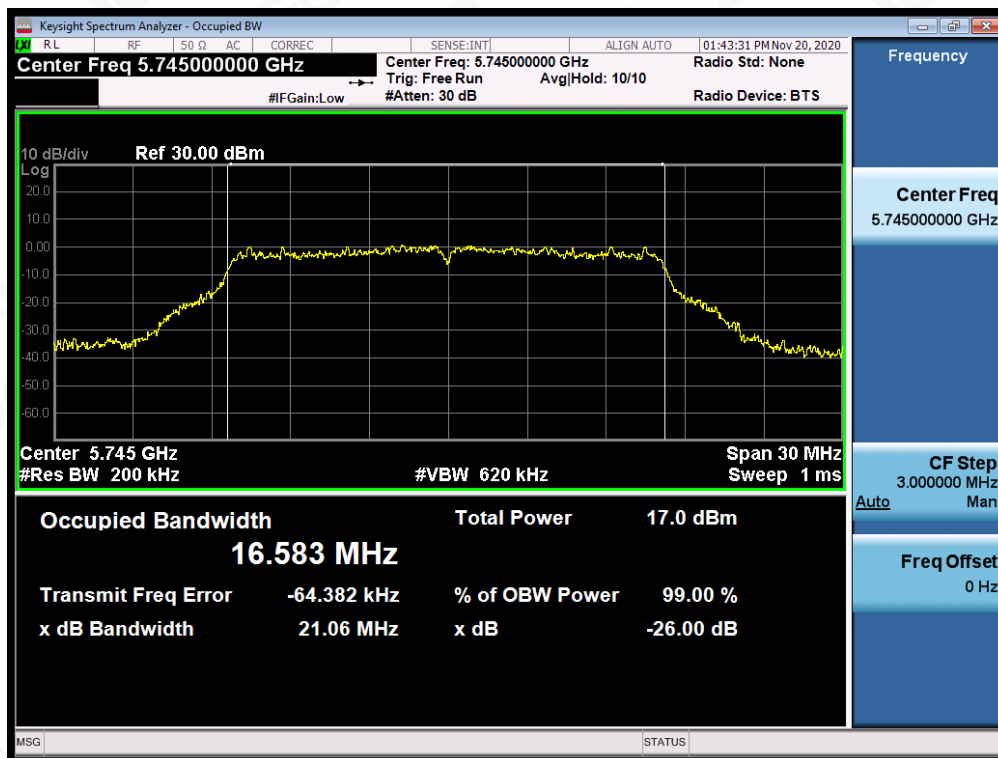


802.11a20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5745MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5745MHz (99% BANDWIDTH)



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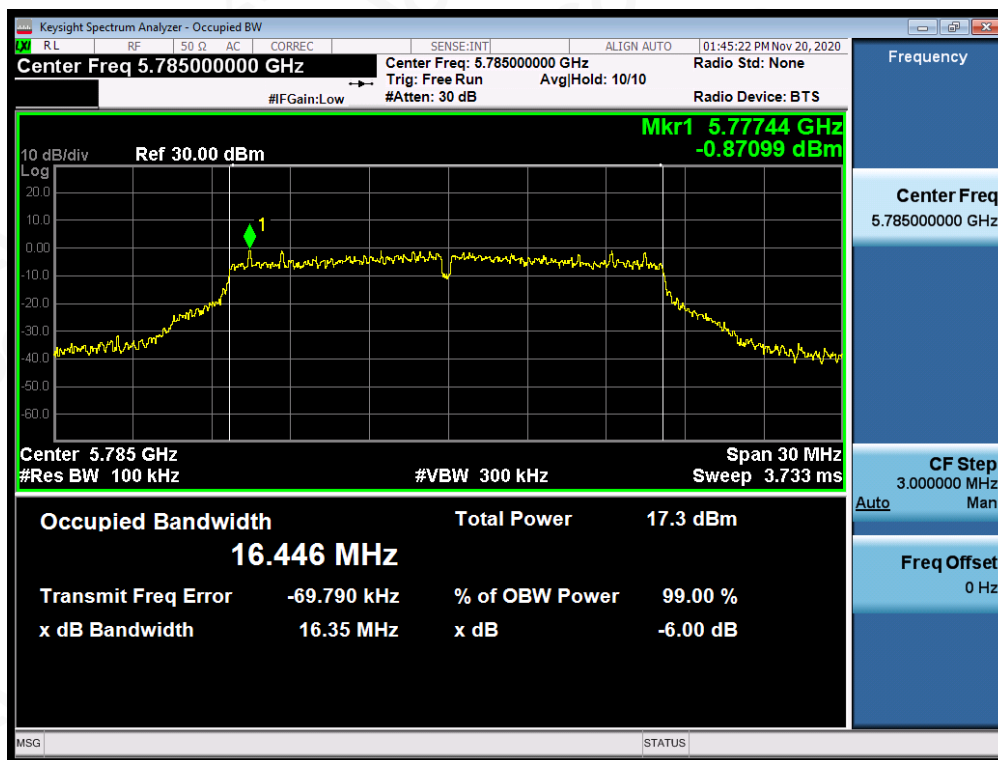
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TEST PLOT OF BANDWIDTH FOR 5785MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5785MHz (99% BANDWIDTH)

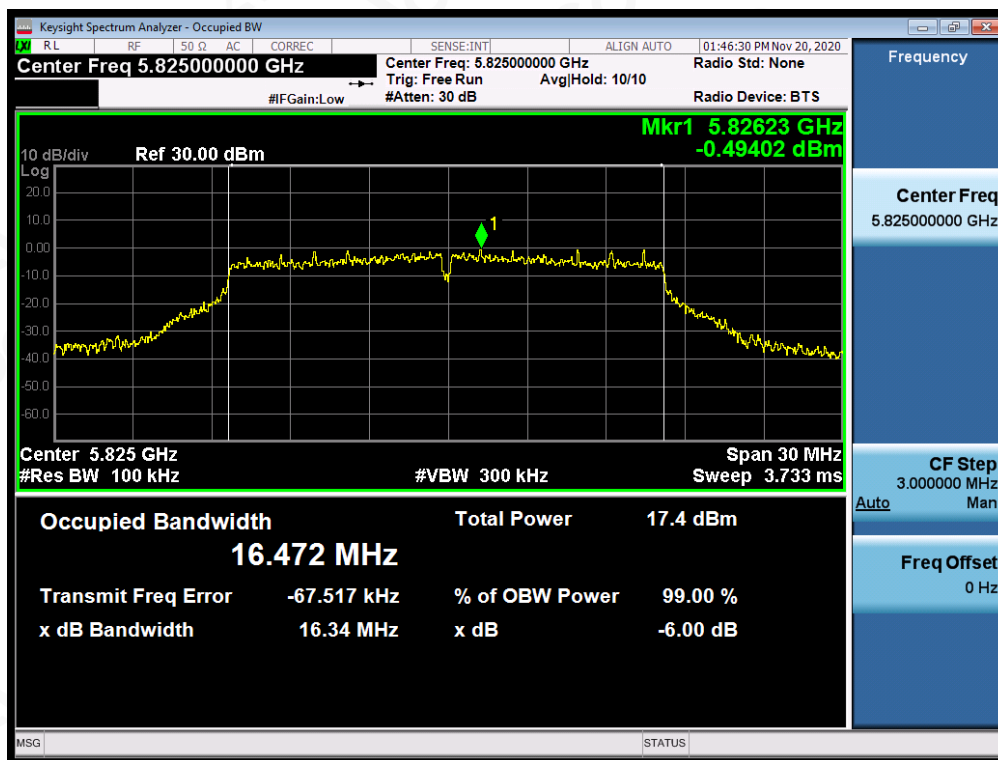


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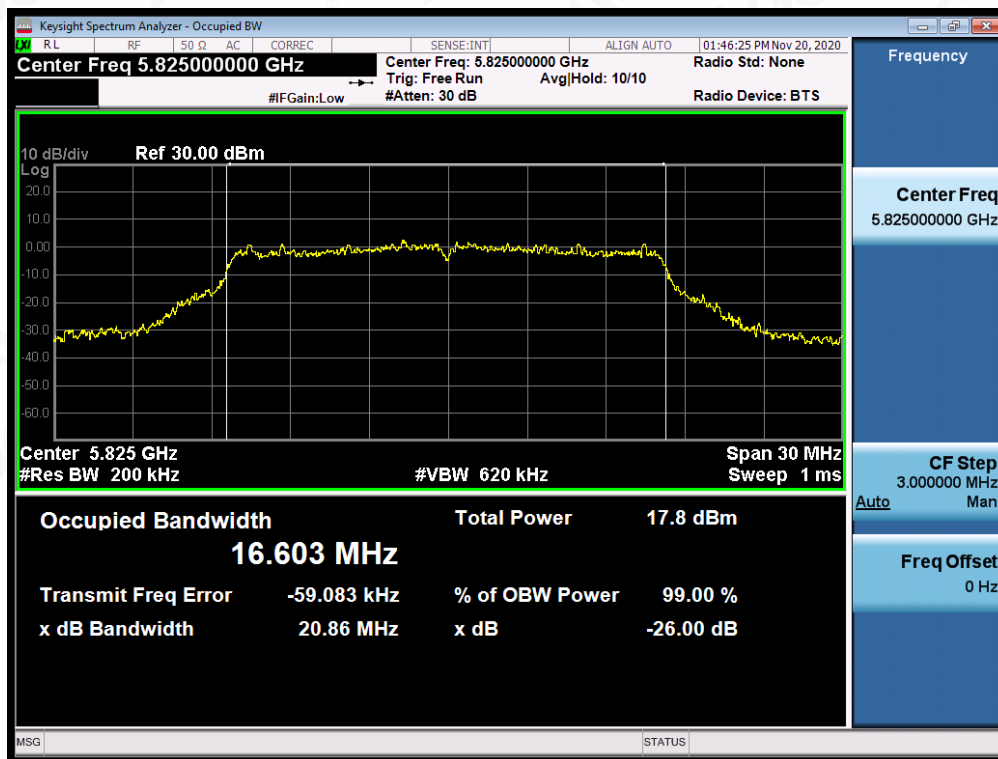
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TEST PLOT OF BANDWIDTH FOR 5825MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5825MHz (99% BANDWIDTH)



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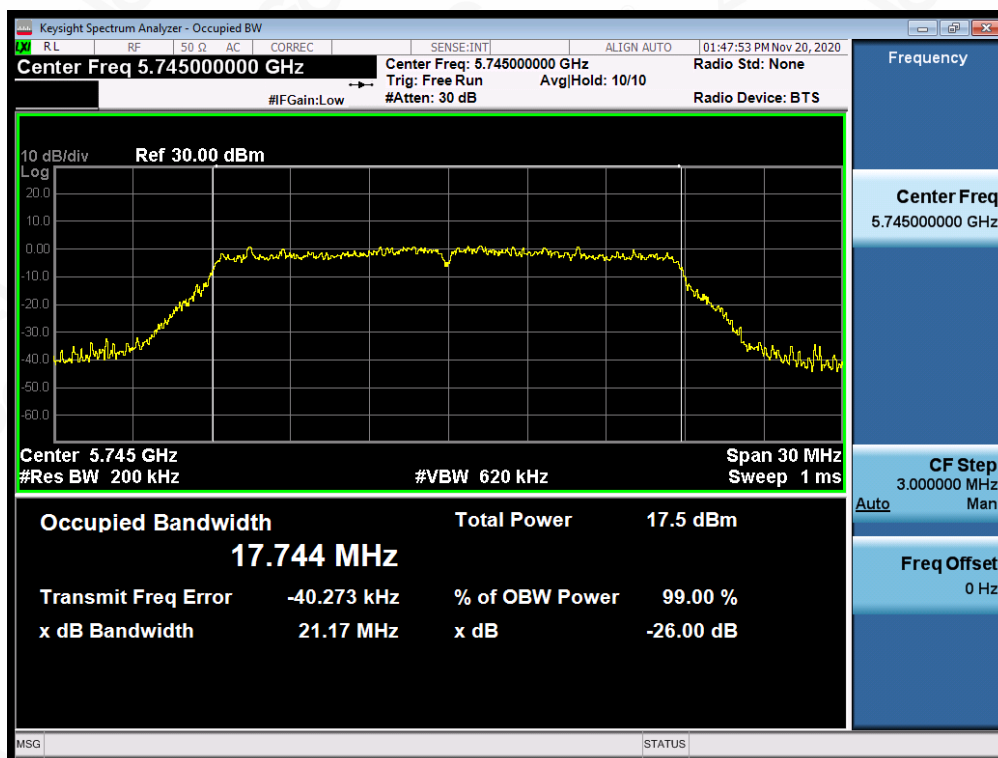


802.11n20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5745MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5745MHz (99% BANDWIDTH)



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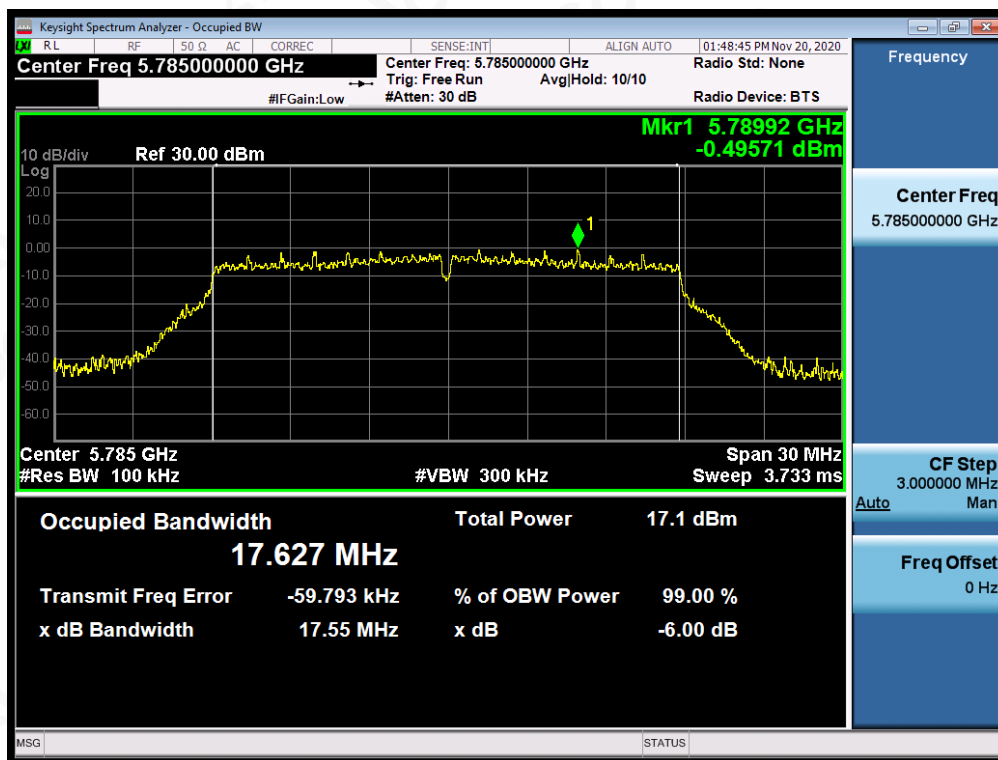
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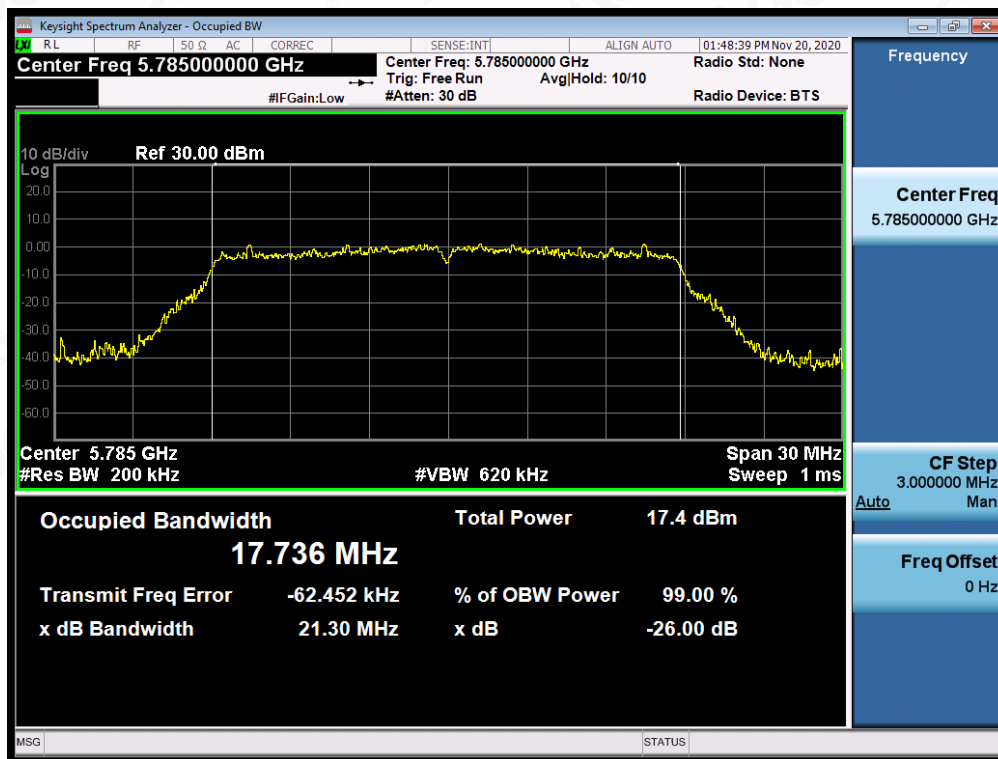
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TEST PLOT OF BANDWIDTH FOR 5785MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5785MHz (99% BANDWIDTH)

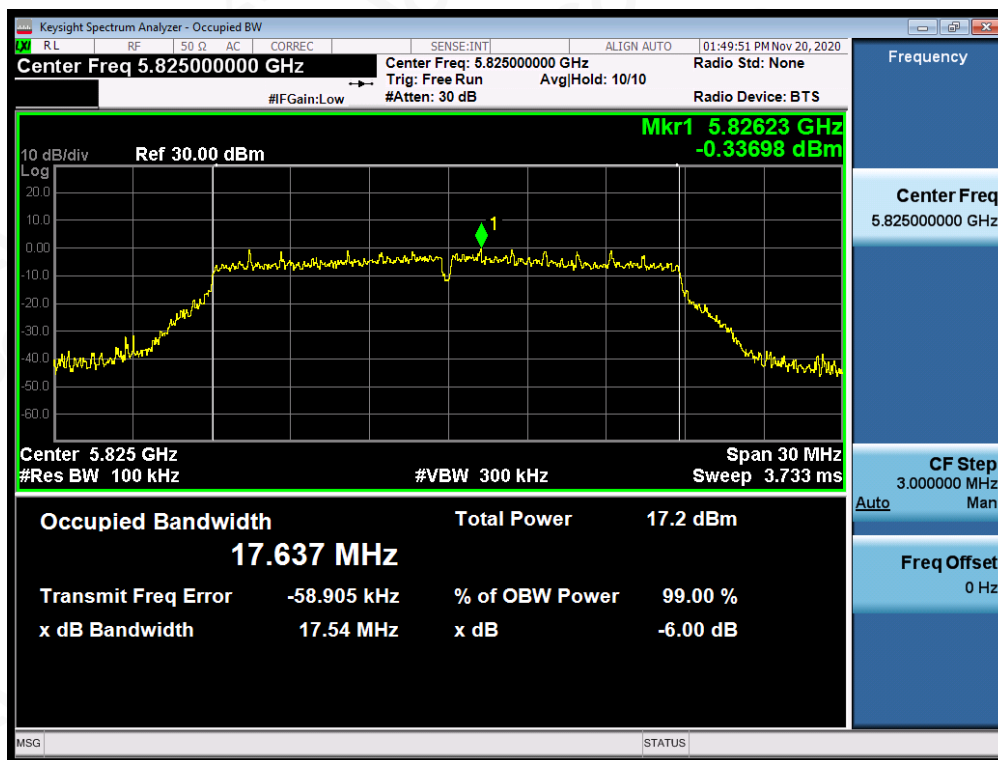


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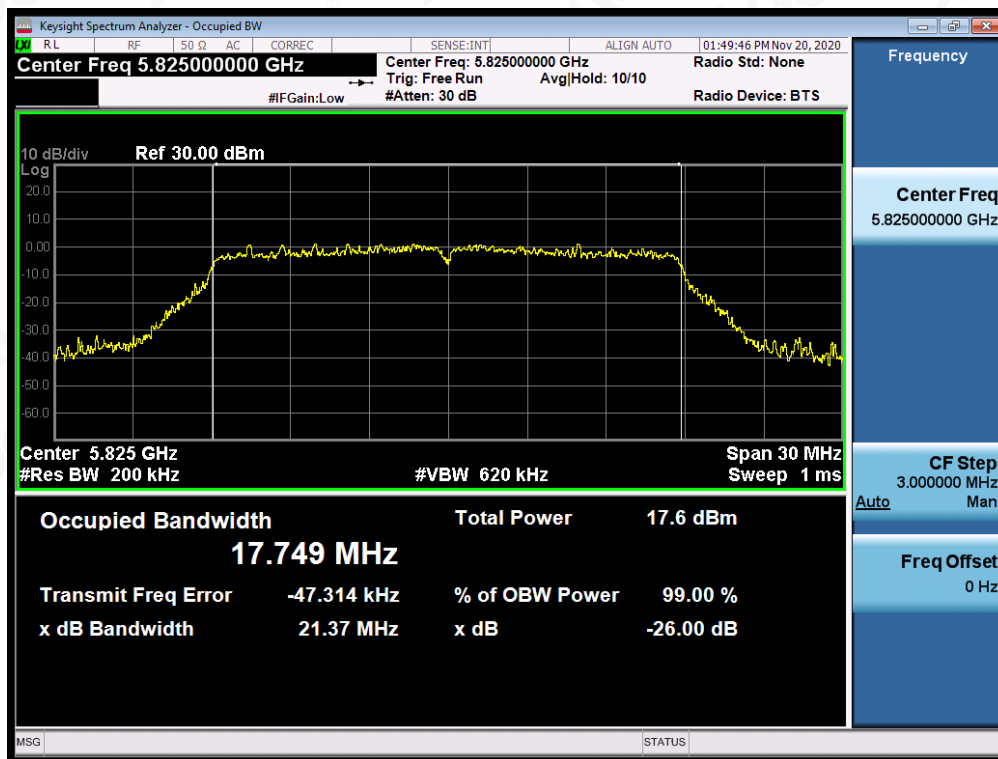
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TEST PLOT OF BANDWIDTH FOR 5825MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5825MHz (99% BANDWIDTH)



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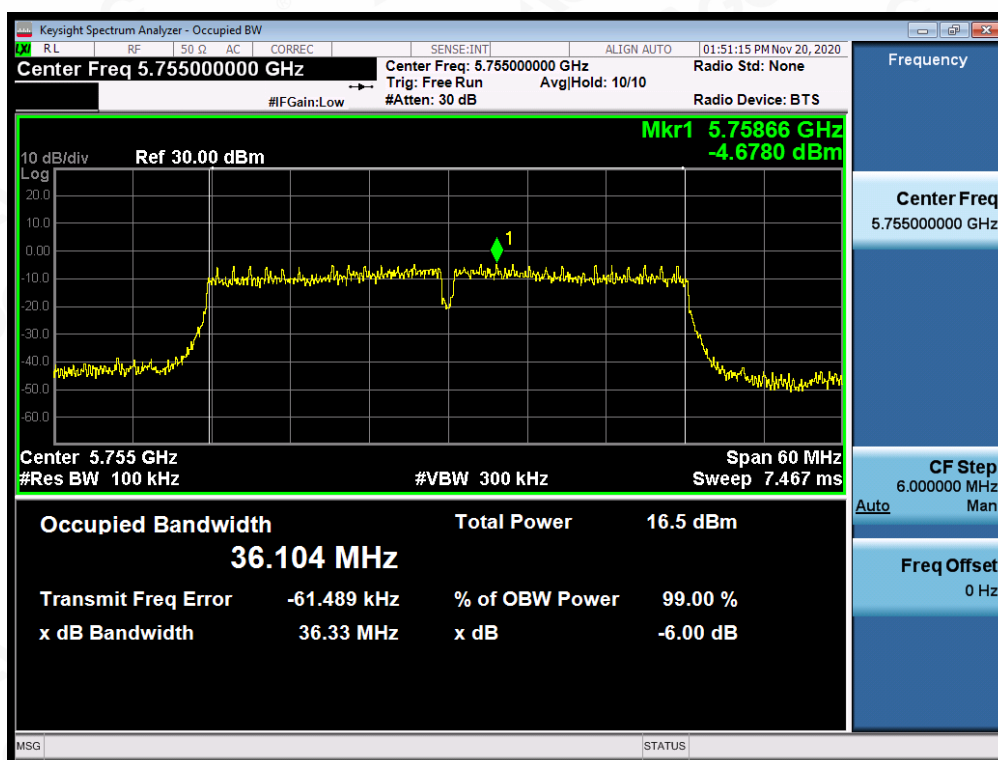
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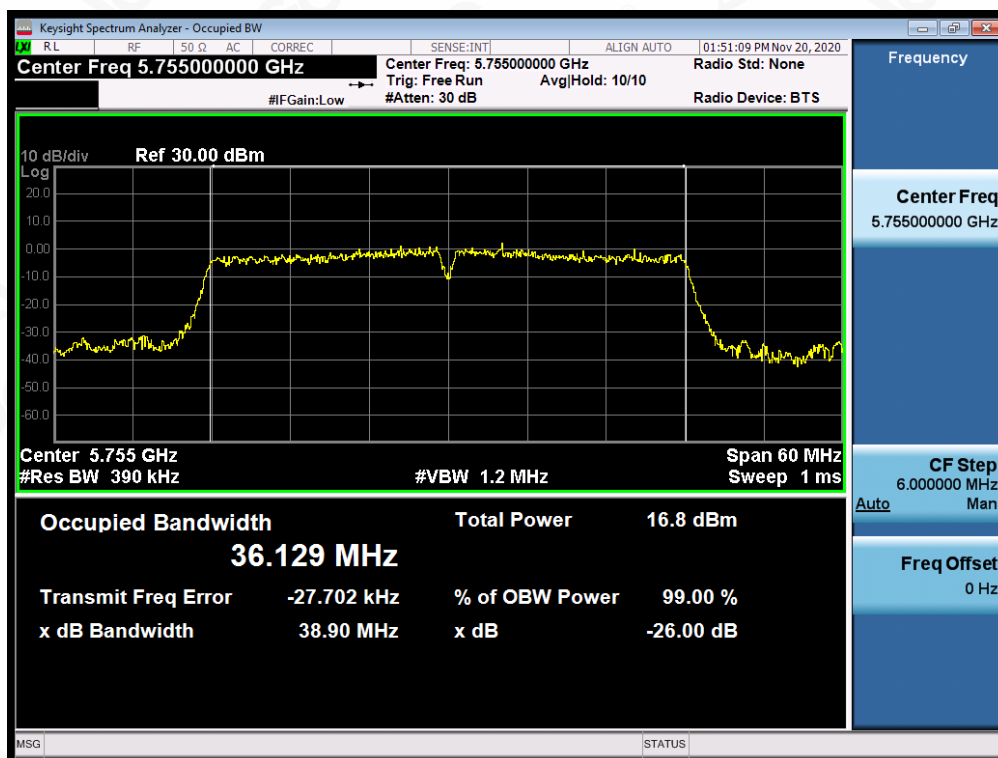


802.11n40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5755MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5755MHz (99% BANDWIDTH)



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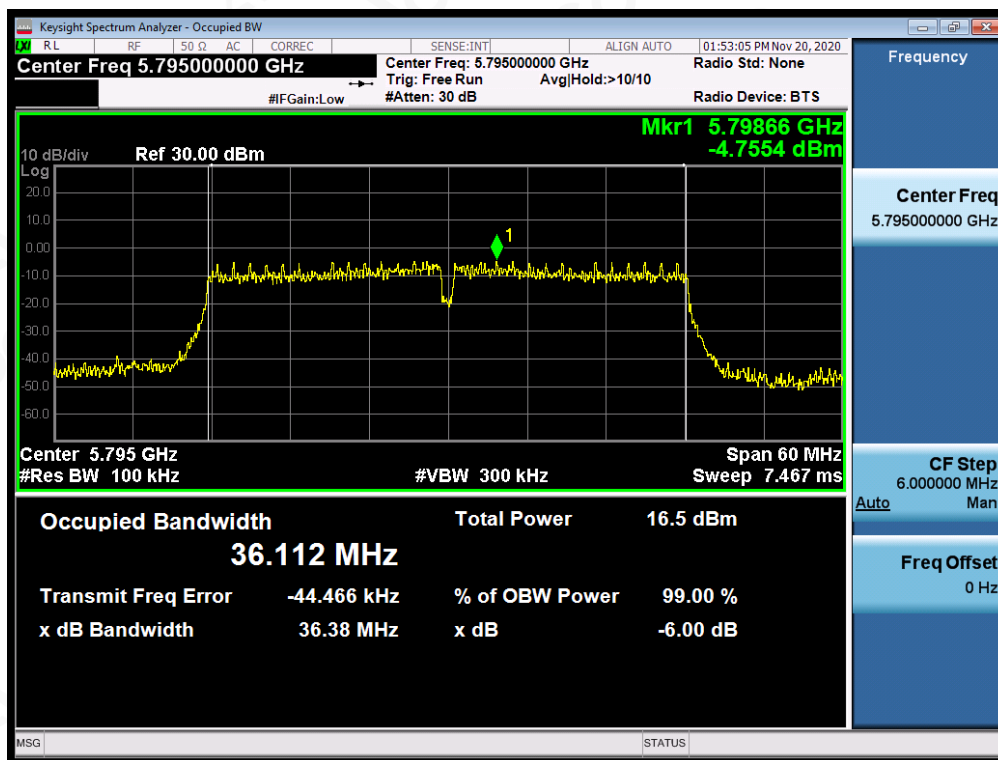
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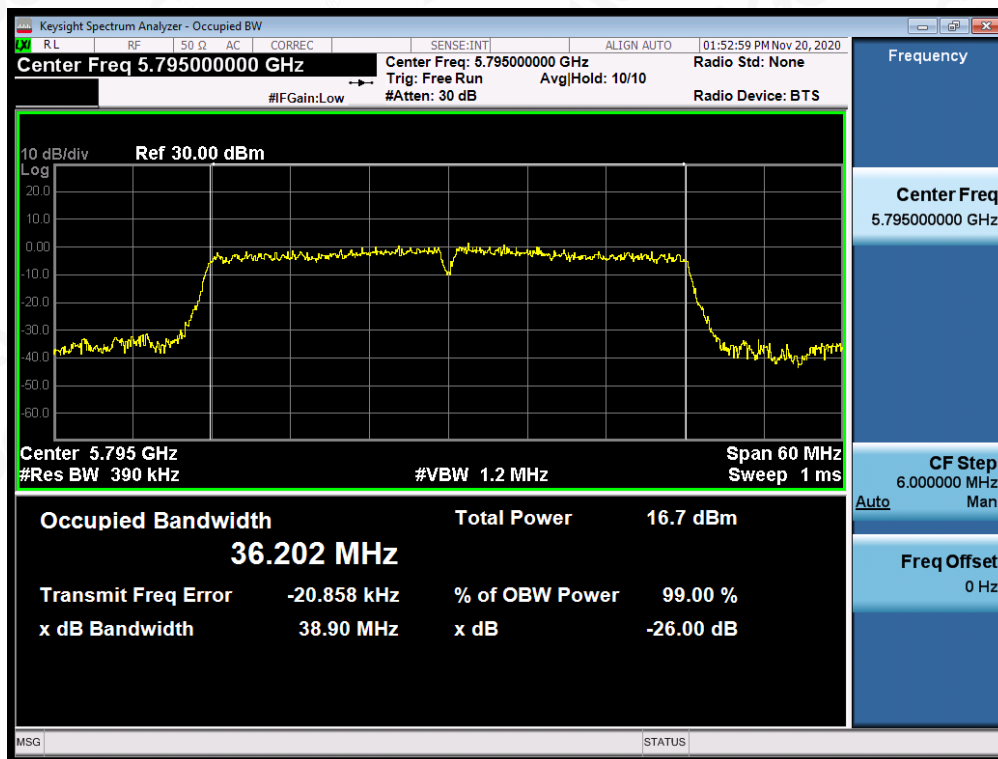
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TEST PLOT OF BANDWIDTH FOR 5795MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5795MHz (99% BANDWIDTH)



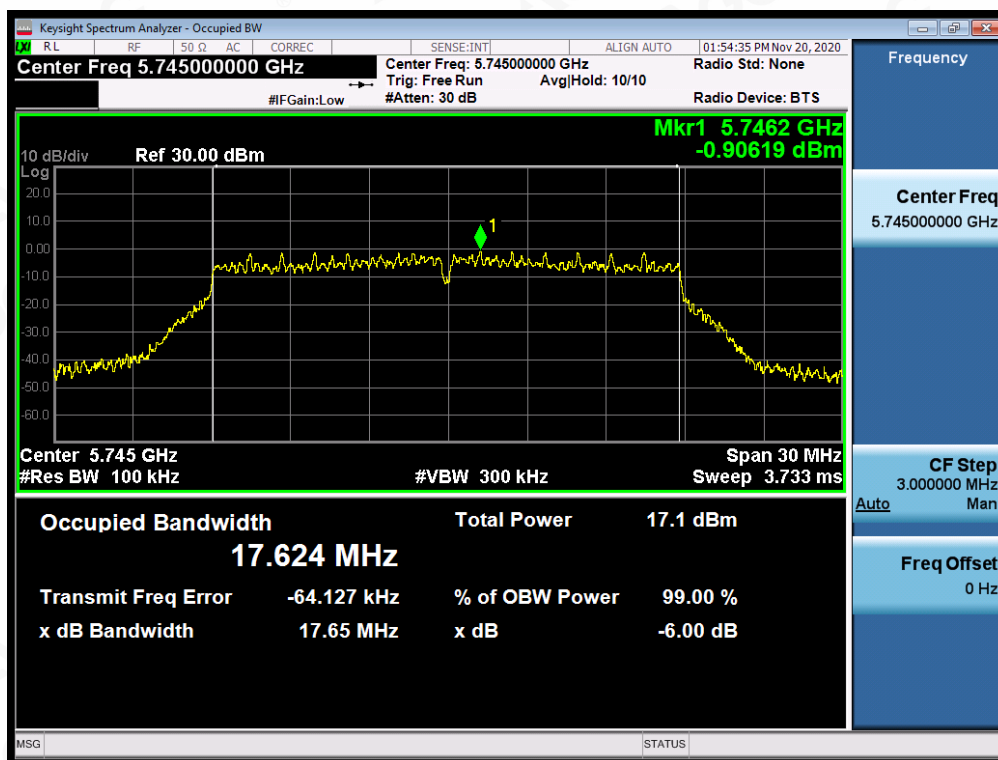
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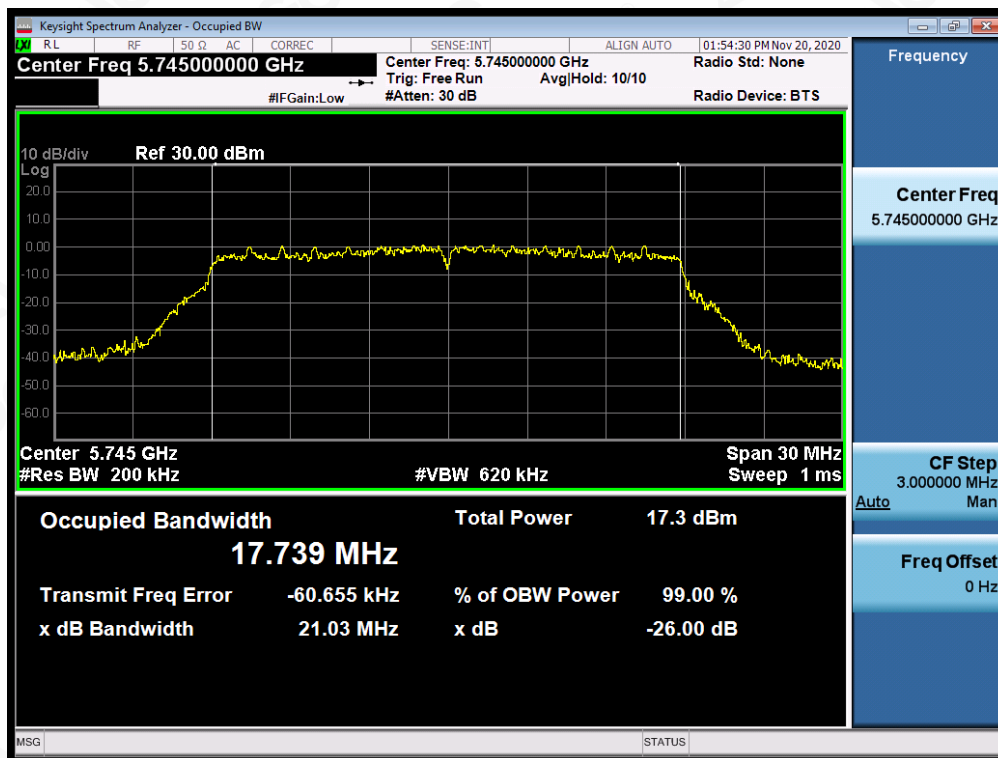


802.11ac20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5745MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5745MHz (99% BANDWIDTH)

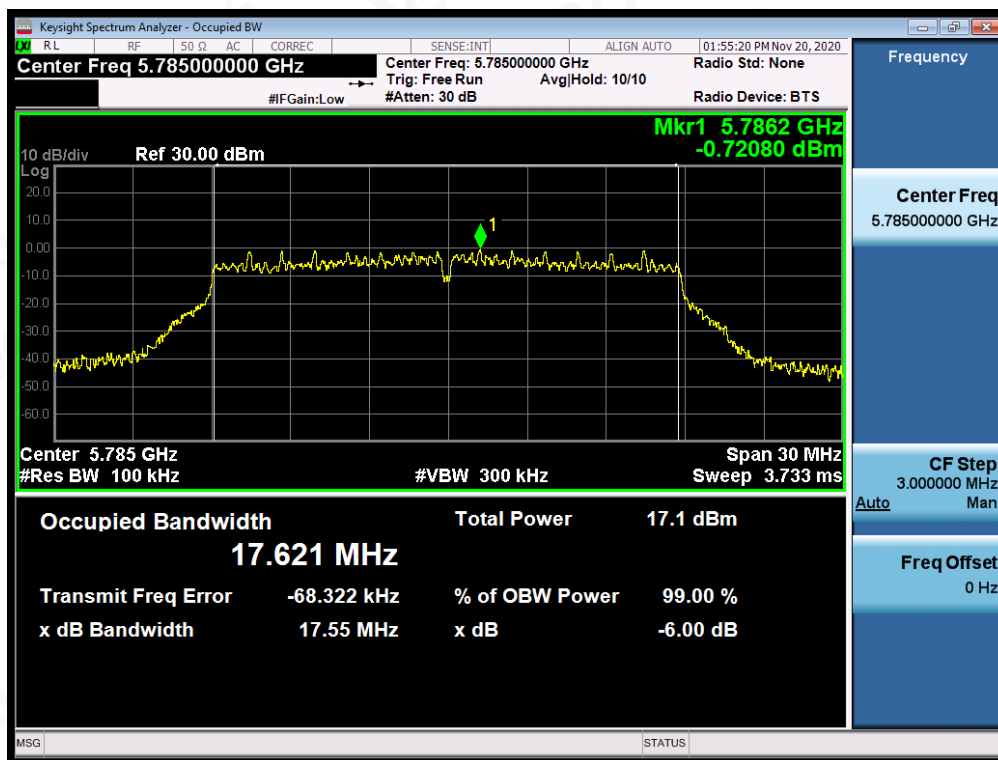


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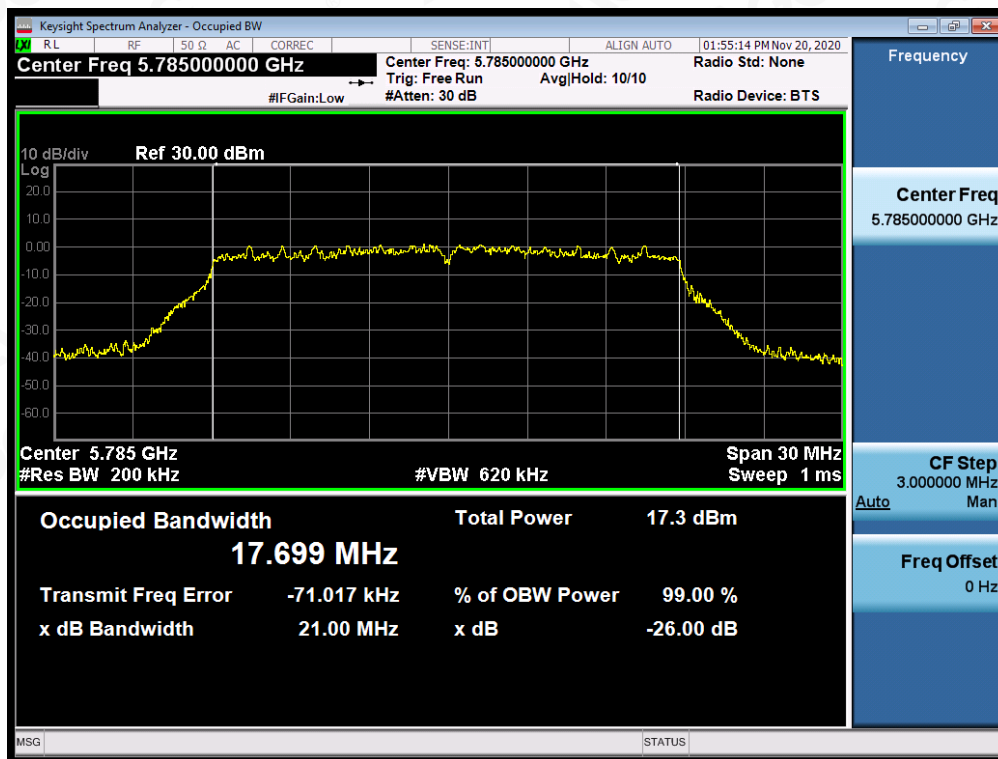
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TEST PLOT OF BANDWIDTH FOR 5785MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5785MHz (99% BANDWIDTH)

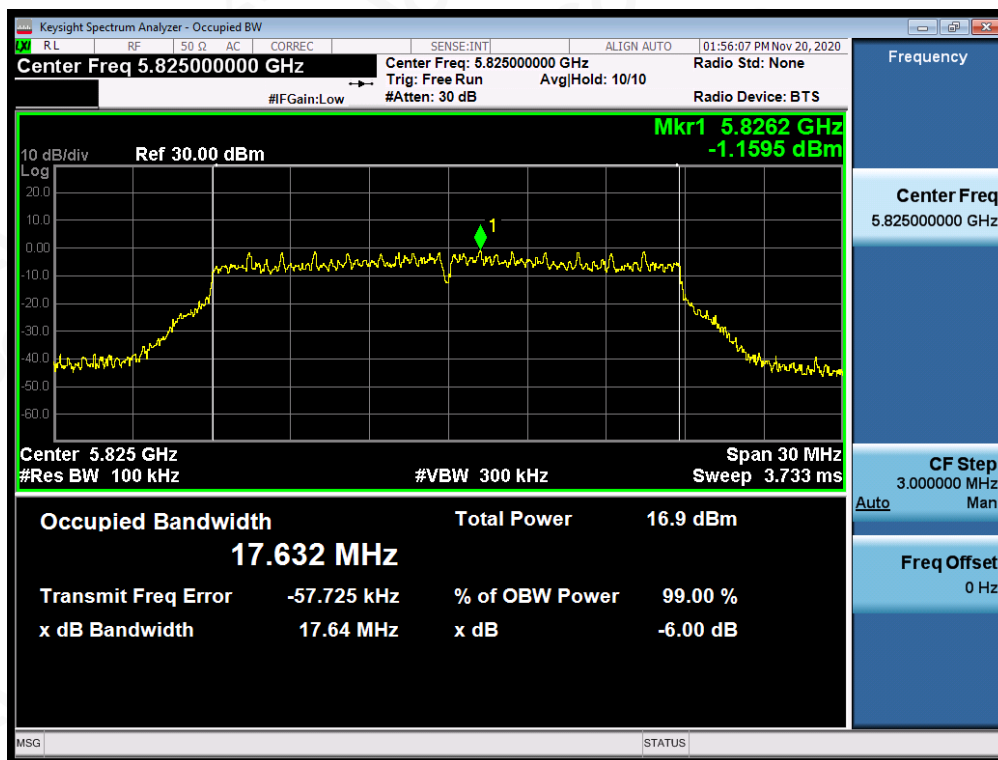


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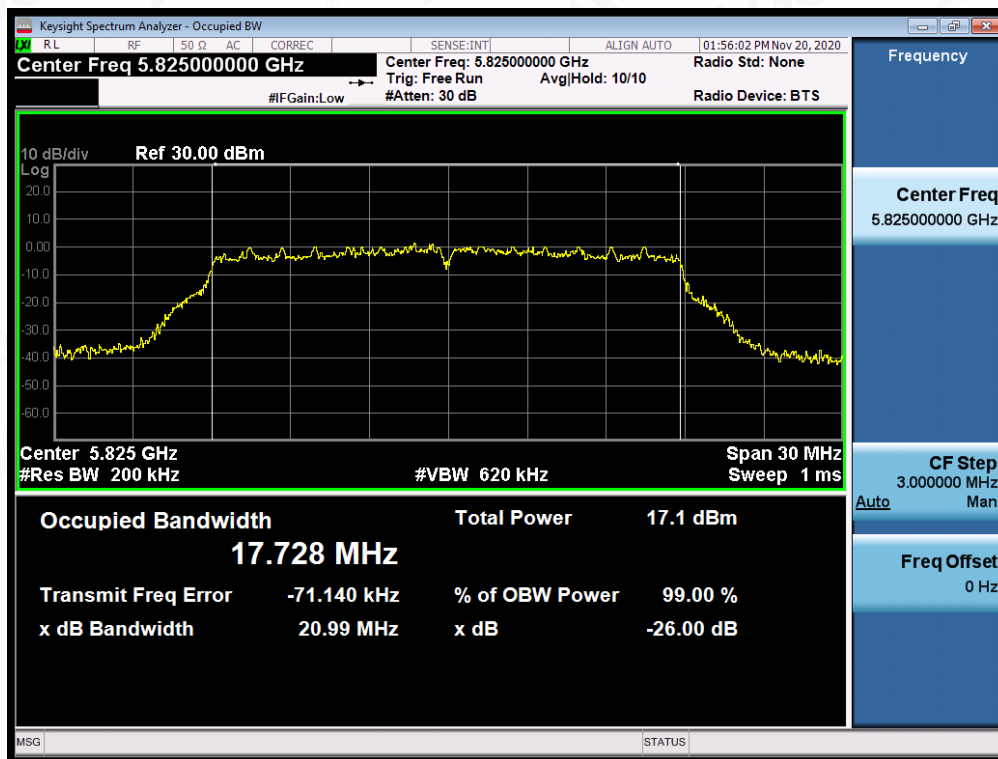
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TEST PLOT OF BANDWIDTH FOR 5825MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5825MHz (99% BANDWIDTH)



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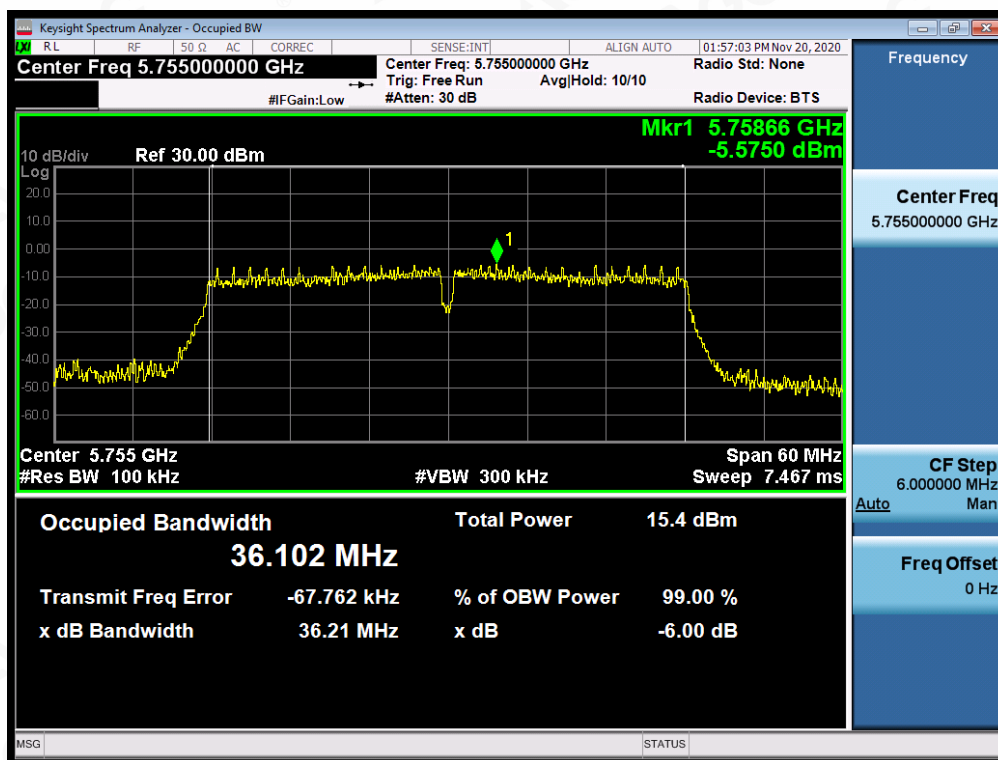
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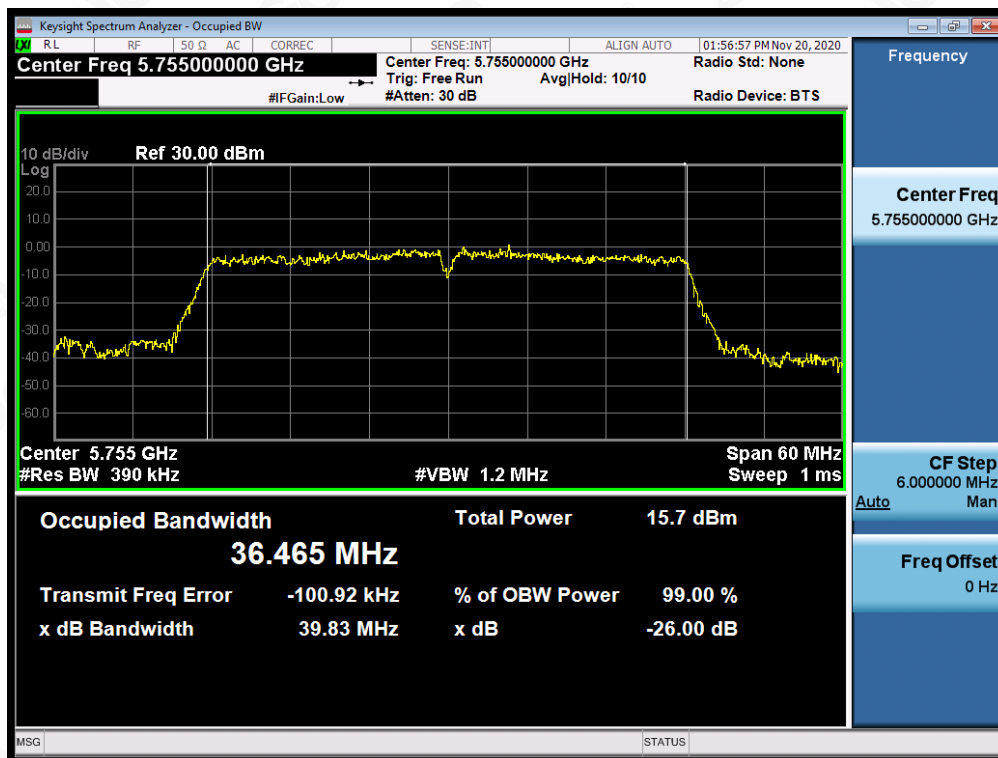


802.11ac40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5755MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5755MHz (99% BANDWIDTH)



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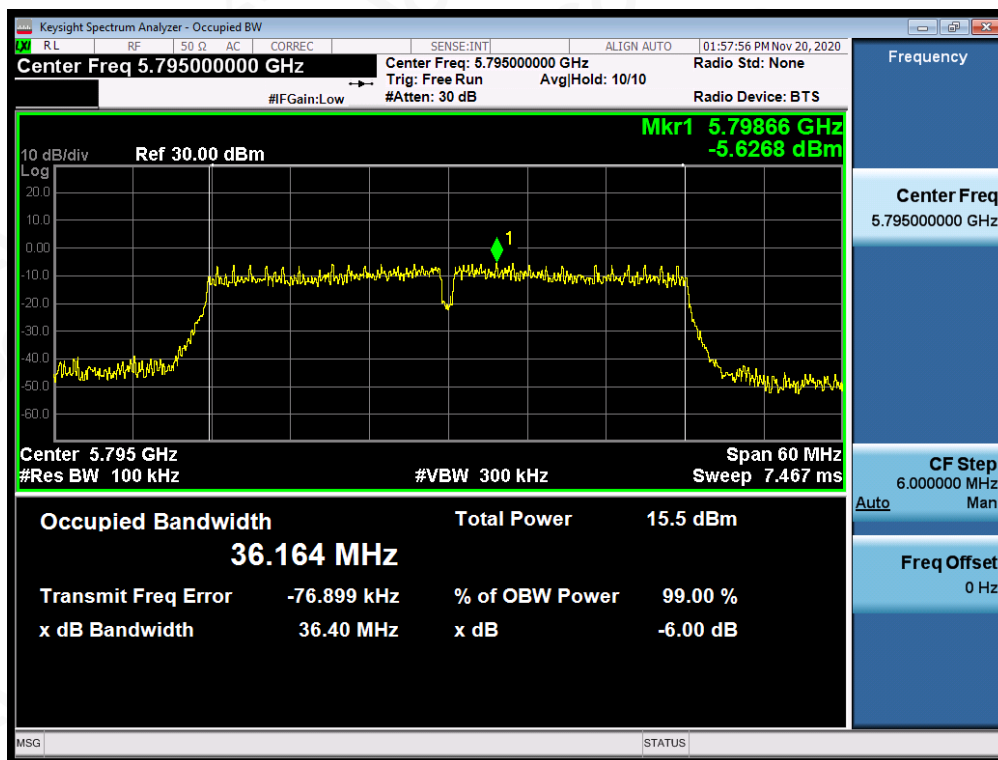
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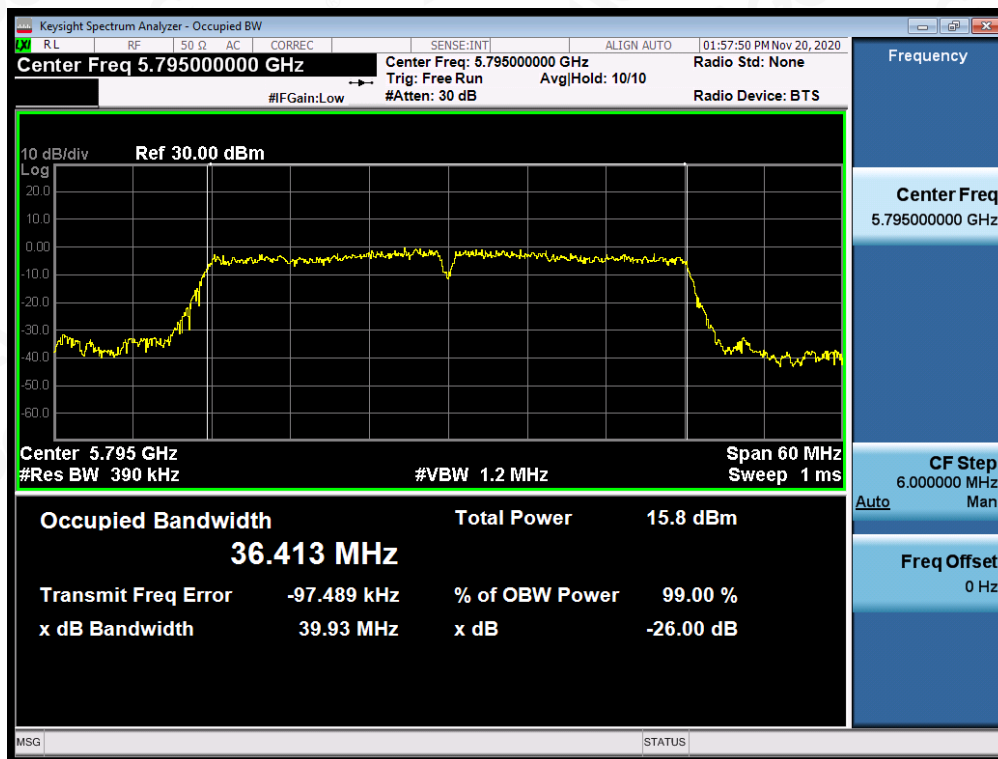
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TEST PLOT OF BANDWIDTH FOR 5795MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5795MHz (99% BANDWIDTH)



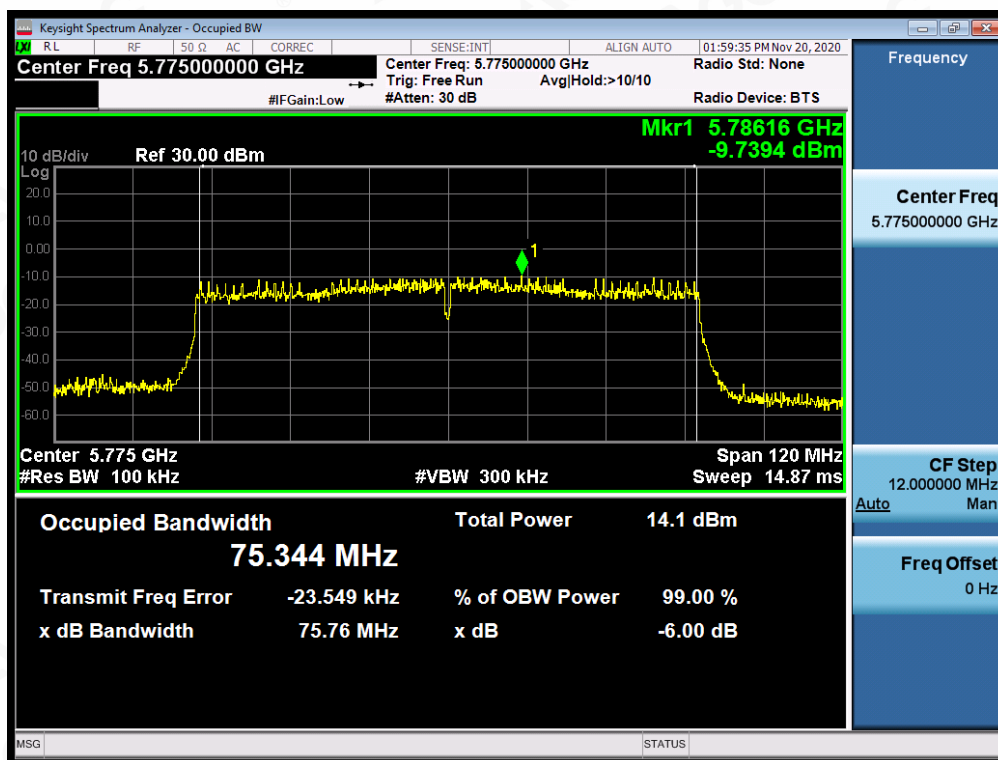
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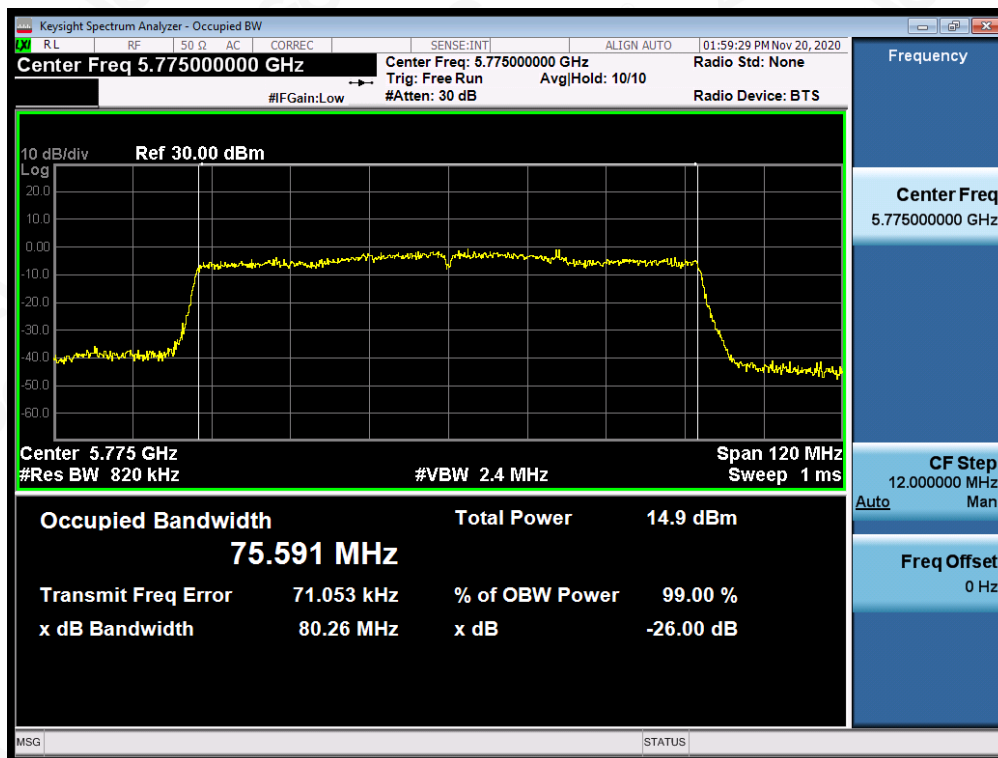


802.11ac80 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5775MHz (-6dB BANDWIDTH)



TEST PLOT OF BANDWIDTH FOR 5775MHz (99% BANDWIDTH)



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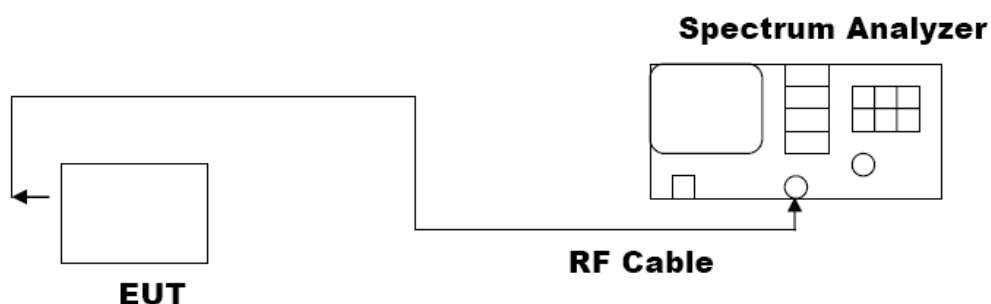
9. EMISSION BANDWIDTH

9.1. MEASUREMENT PROCEDURE

- Set RBW = approximately 1% of the emission bandwidth.
 - Set the VBW > RBW.
 - Detector = Peak.
 - Trace mode = max hold.
 - 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.

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



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9.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION				
Applicable Limits	Applicable Limits			
	Test Data (MHz)			Criteria
	Frequency (MHz)	-26dB Bandwidth	99.00% Occupied Bandwidth	
Within the Band	5180MHz	21.07	16.625	PASS
	5200MHz	21.05	16.587	PASS
	5240MHz	21.15	16.605	PASS

LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION				
Applicable Limits	Applicable Limits			
	Test Data (MHz)			Criteria
	Frequency (MHz)	-26dB Bandwidth	99.00% Occupied Bandwidth	
Within the Band	5180MHz	21.37	17.745	PASS
	5200MHz	21.41	17.753	PASS
	5240MHz	22.05	17.771	PASS
	5190MHz	39.25	36.026	PASS
	5230MHz	39.34	36.214	PASS

LIMITS AND MEASUREMENT RESULT FOR 802.11AC20/40/80 MODULATION				
Applicable Limits	Applicable Limits			
	Test Data (MHz)			Criteria
	Frequency (MHz)	-26dB Bandwidth	99.00% Occupied Bandwidth	
Within the Band	5180MHz	21.03	17.697	PASS
	5200MHz	21.18	17.727	PASS
	5240MHz	21.12	17.732	PASS
	5190MHz	42.74	36.333	PASS
	5230MHz	39.89	36.362	PASS
	5210MHz	79.98	75.639	PASS

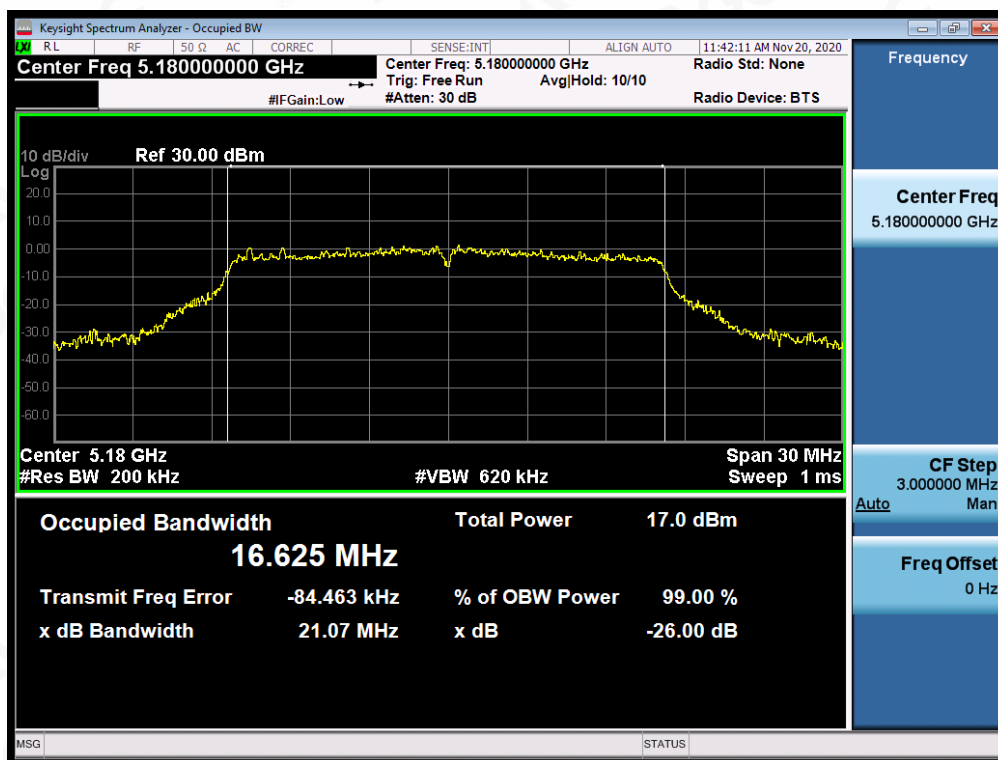
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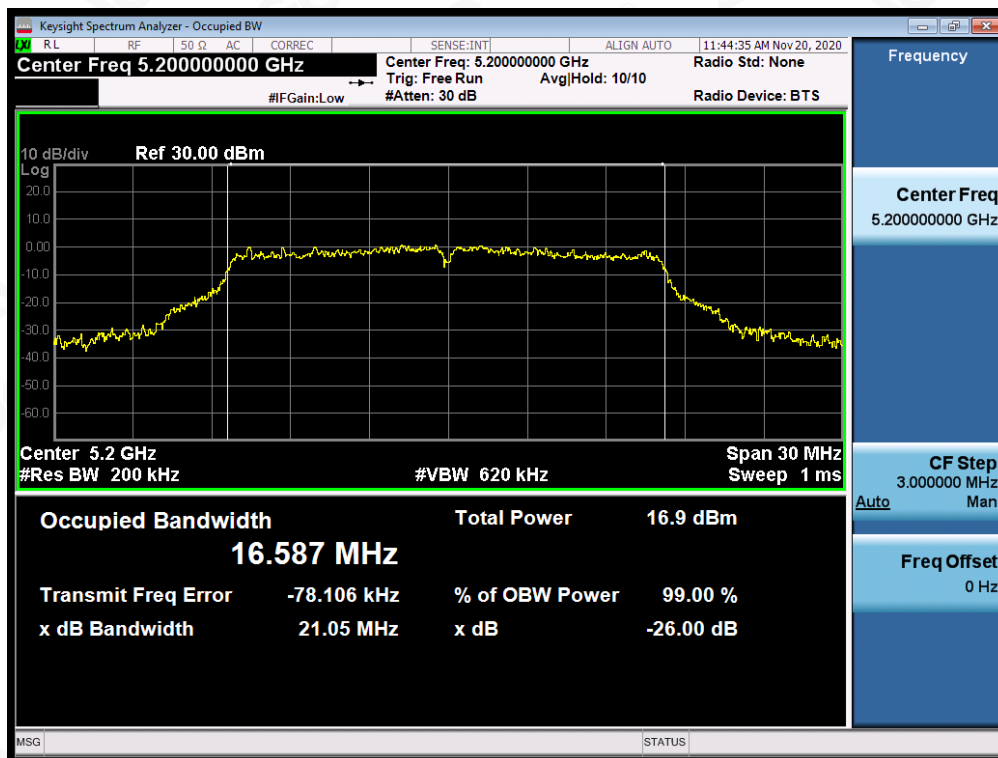


802.11a20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz

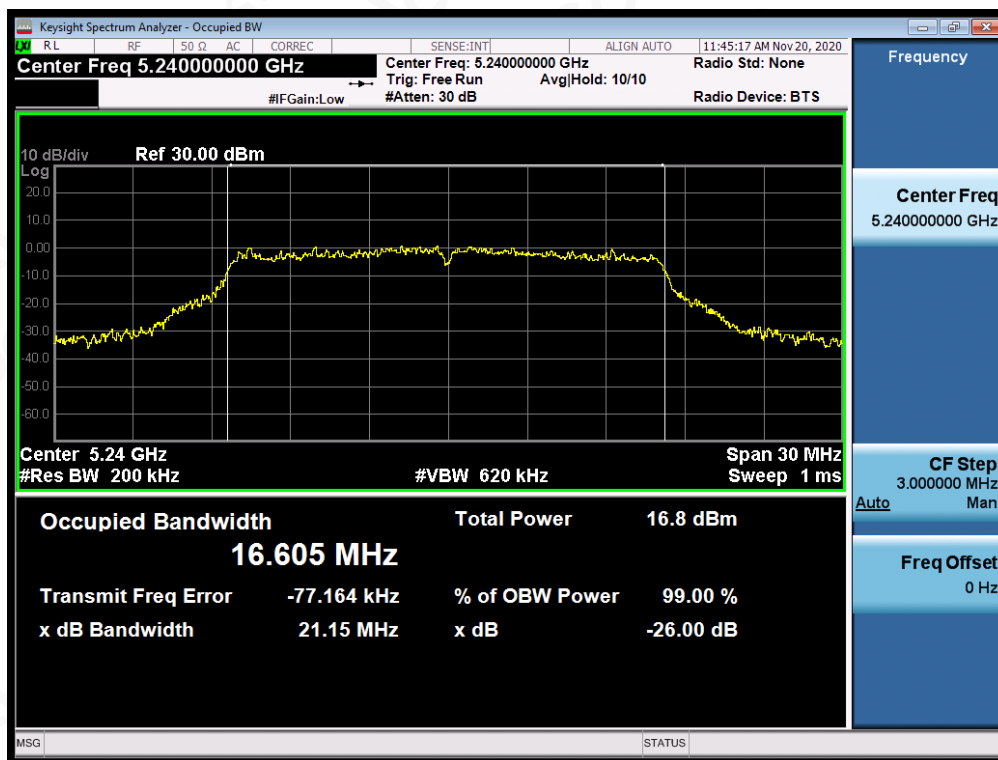


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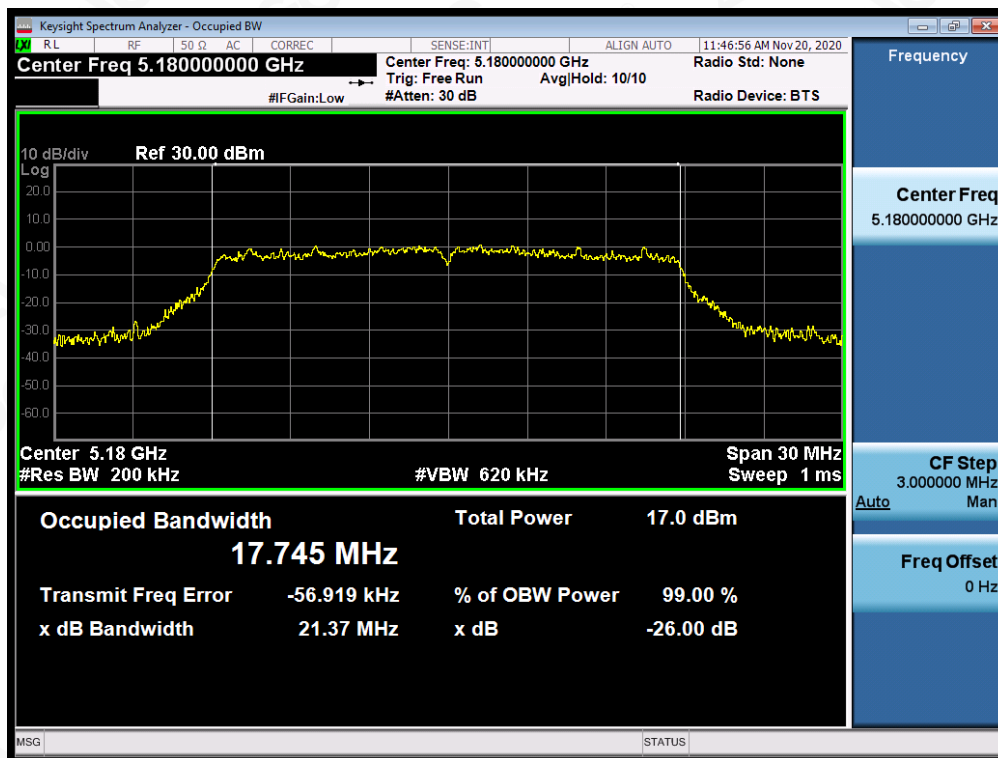


TEST PLOT OF BANDWIDTH FOR 5240MHz



802.11n20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5180MHz

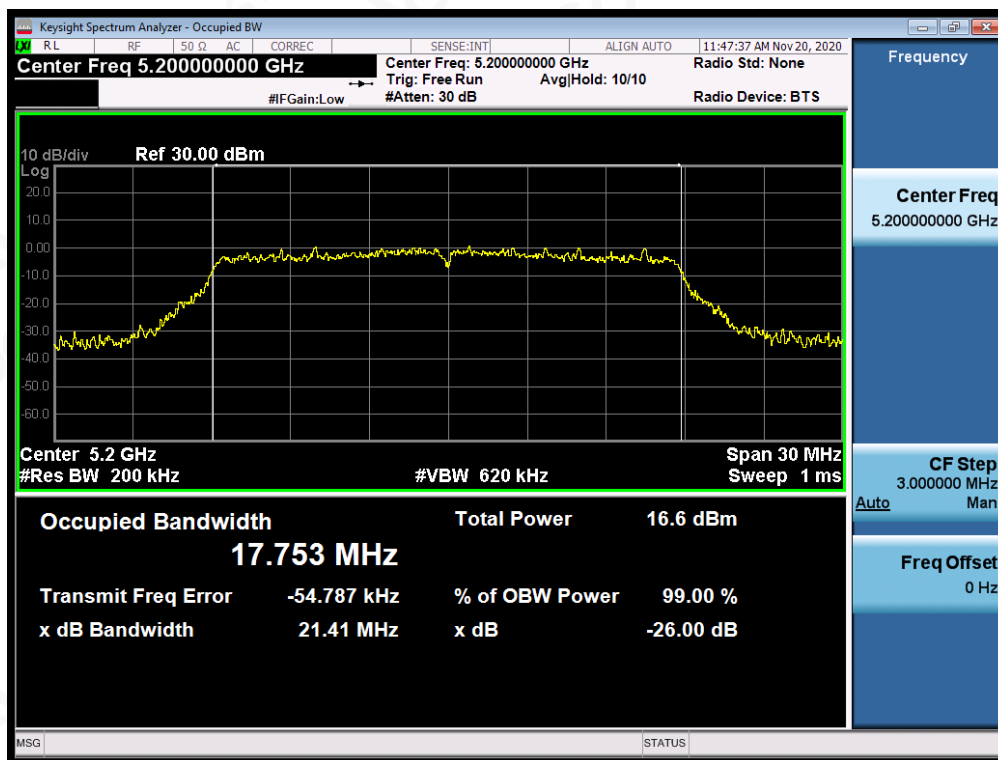


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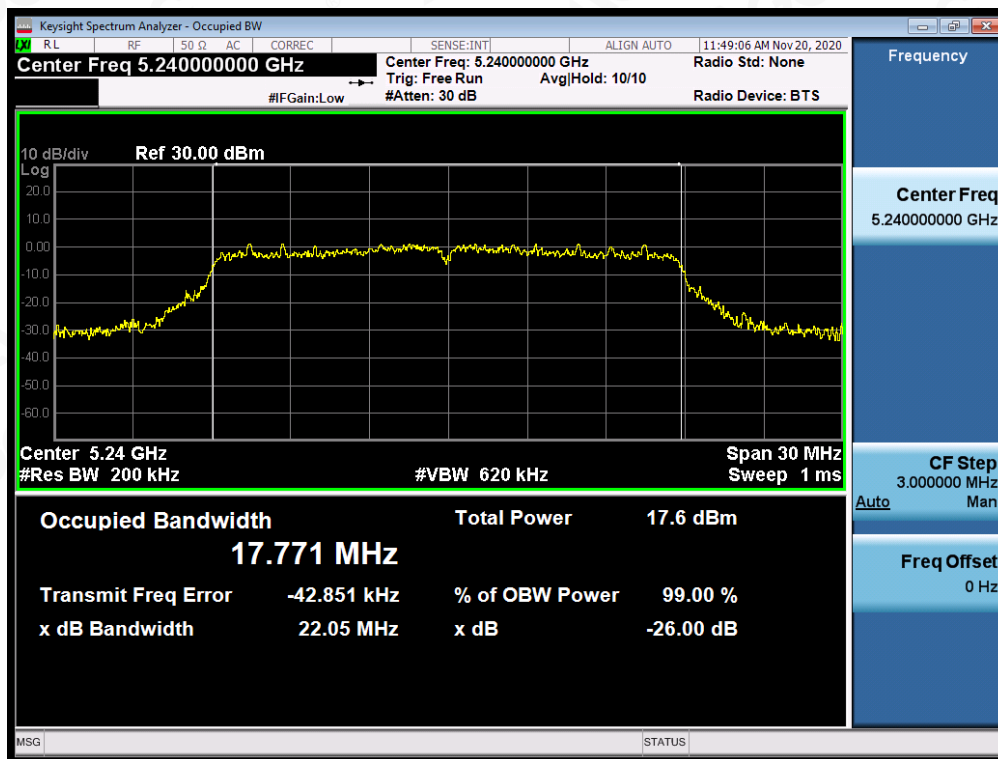
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TEST PLOT OF BANDWIDTH FOR 5200MHz



TEST PLOT OF BANDWIDTH FOR 5240MHz



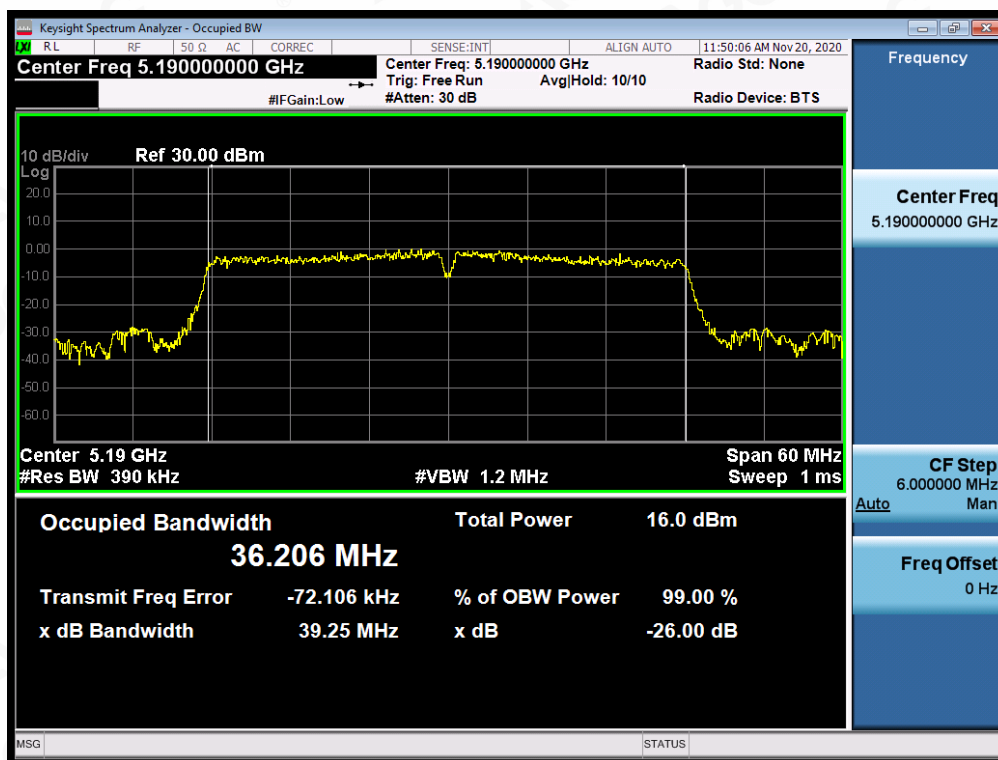
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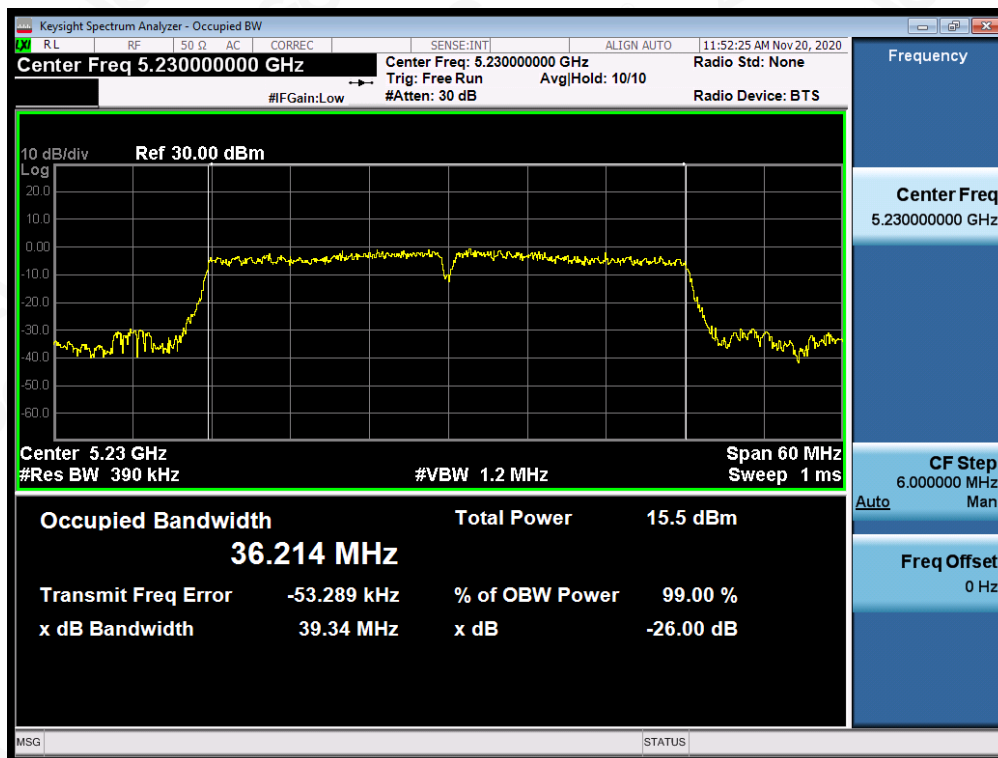


802.11n40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5190MHz



TEST PLOT OF BANDWIDTH FOR 5230MHz



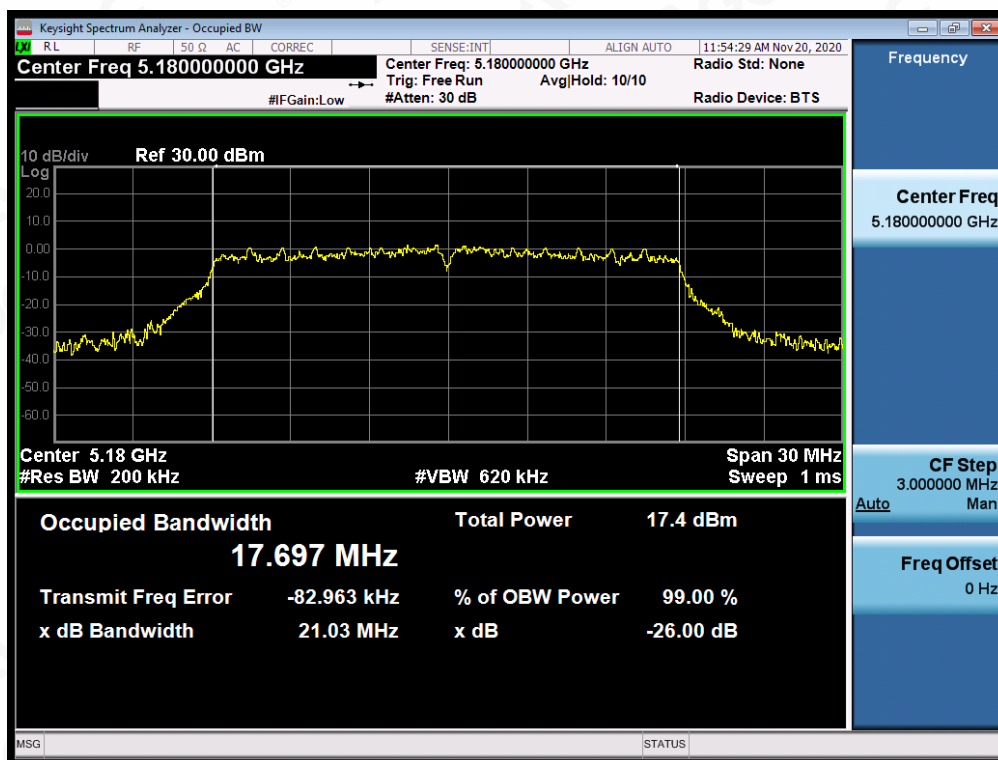
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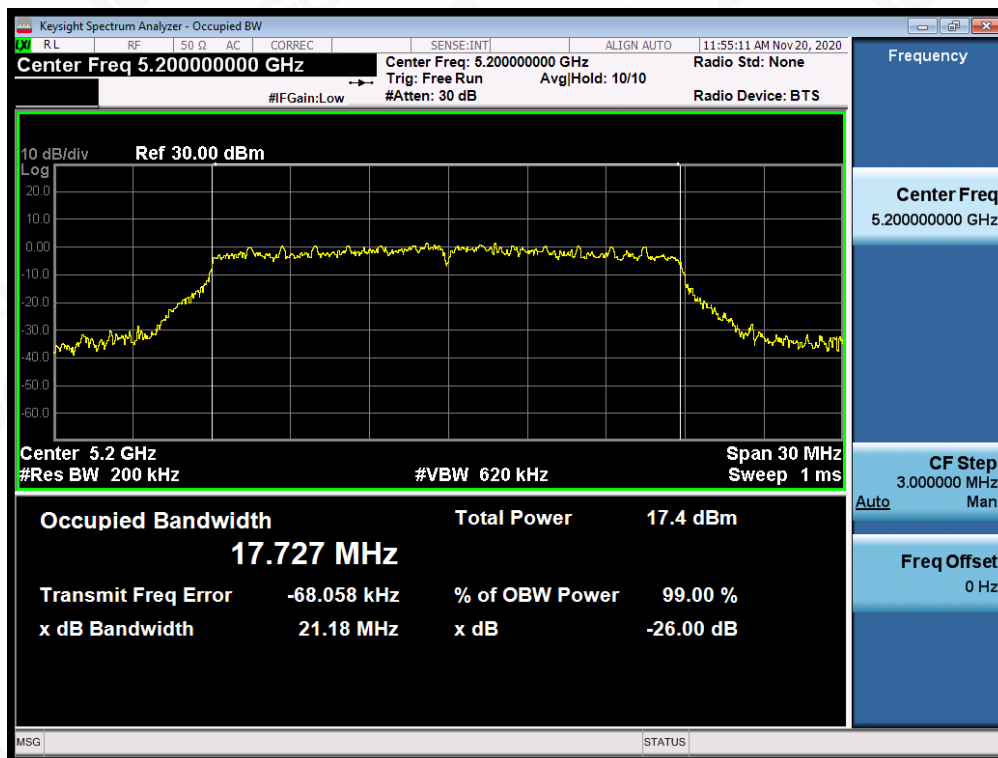


802.11ac20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5180MHz



TEST PLOT OF BANDWIDTH FOR 5200MHz

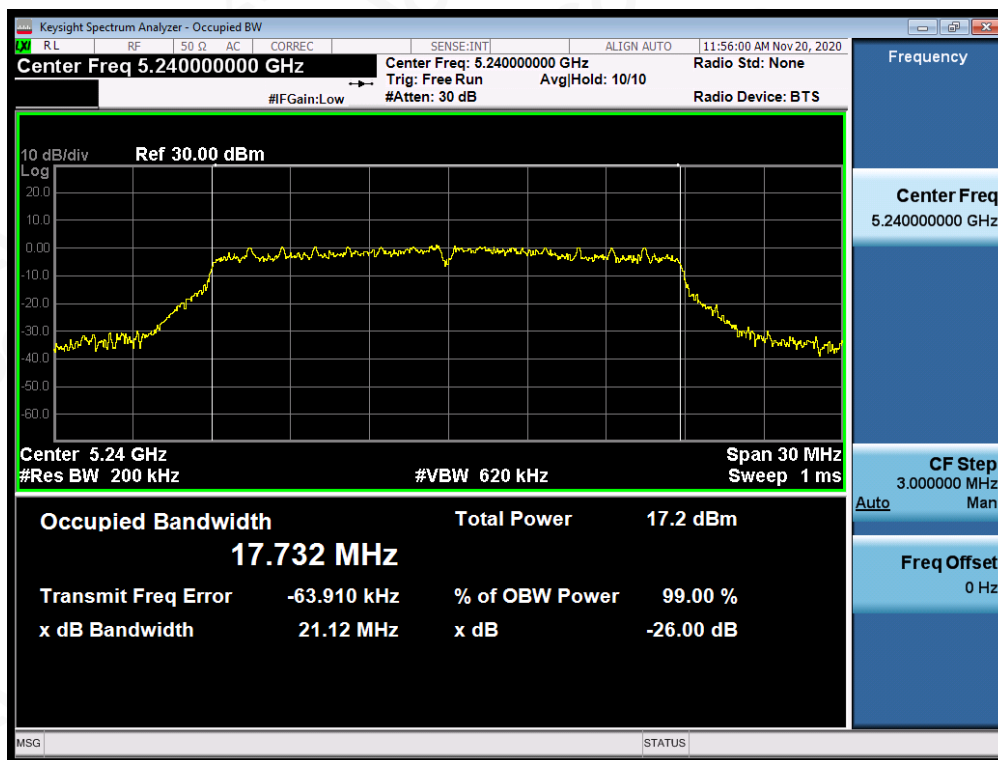


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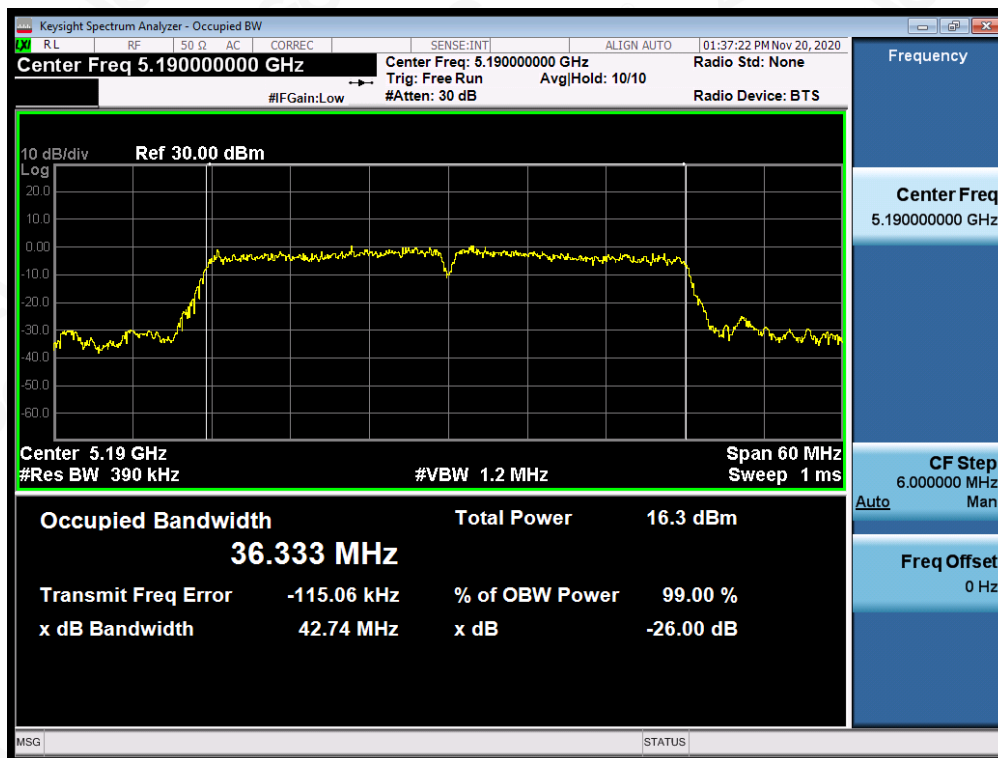


TEST PLOT OF BANDWIDTH FOR 5240MHz



802.11ac40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5190MHz

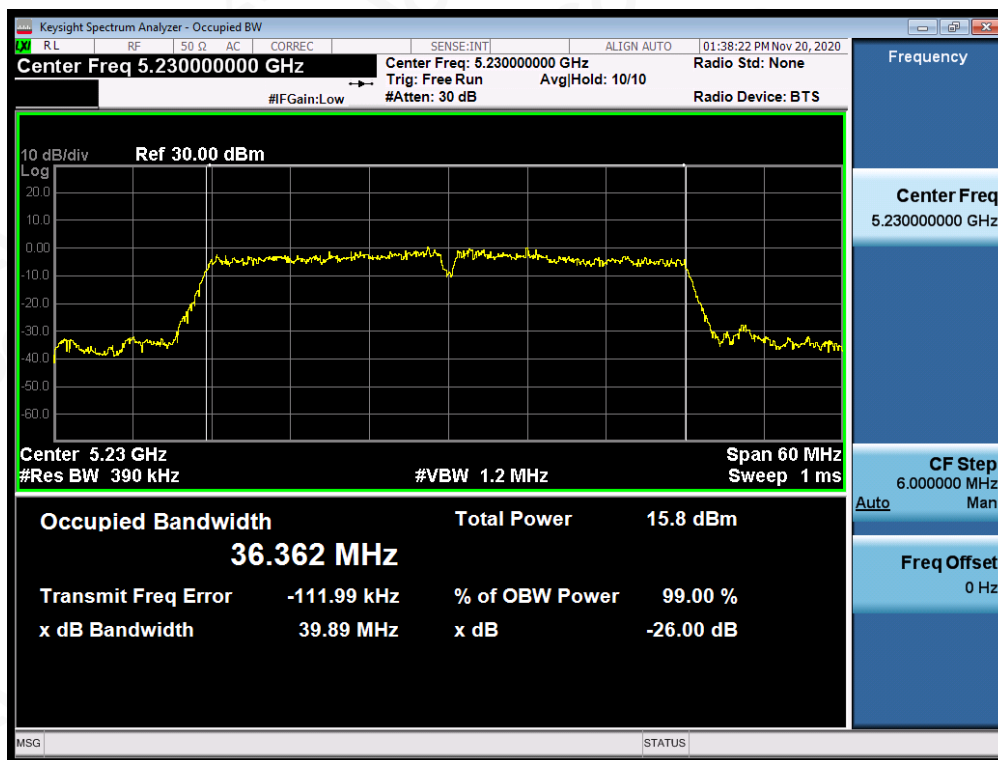


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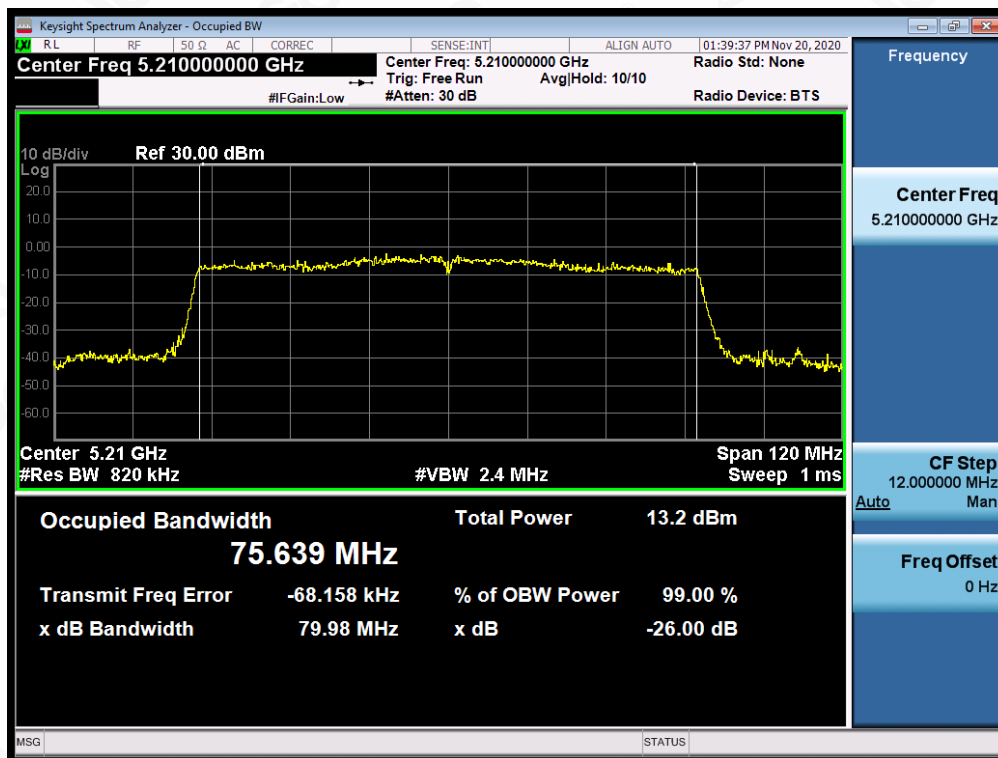


TEST PLOT OF BANDWIDTH FOR 5230MHz



802.11ac80 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5210MHz



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10. MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2.

10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION			
Frequency (MHz)	Power density (dBm/MHz)	Applicable Limits (dBm)	Pass or Fail
5180	1.540	17	Pass
5200	1.235	17	Pass
5240	1.337	17	Pass
Frequency (MHz)	Power density (30dBm/500kHz)	Applicable Limits (30dBm/500kHz)	Pass or Fail
5745	-1.130	30	Pass
5785	-0.427	30	Pass
5825	-0.363	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11N20 MODULATION			
Frequency (MHz)	Power density (dBm/MHz)	Applicable Limits (dBm)	Pass or Fail
5180	0.915	17	Pass
5200	0.611	17	Pass
5240	1.506	17	Pass
Frequency (MHz)	Power density (30dBm/500kHz)	Applicable Limits (30dBm/500kHz)	Pass or Fail
5745	-1.281	30	Pass
5785	-1.080	30	Pass
5825	-1.138	30	Pass

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LIMITS AND MEASUREMENT RESULT FOR 802.1N40 MODULATION			
Frequency (MHz)	Power density (dBm/MHz)	Applicable Limits (dBm)	Pass or Fail
5190	1.105	17	Pass
5230	0.175	17	Pass
Frequency (MHz)	Power density (30dBm/500kHz)	Applicable Limits (30dBm/500kHz)	Pass or Fail
5755	-0.501	30	Pass
5795	-0.895	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.11AC20 MODULATION			
Frequency (MHz)	Power density (dBm/MHz)	Applicable Limits (dBm)	Pass or Fail
5180	1.588	17	Pass
5200	2.076	17	Pass
5240	1.824	17	Pass
Frequency (MHz)	Power density (30dBm/500kHz)	Applicable Limits (30dBm/500kHz)	Pass or Fail
5745	-0.912	30	Pass
5785	0.118	30	Pass
5825	0.284	30	Pass

LIMITS AND MEASUREMENT RESULT FOR 802.1AC40 MODULATION			
Frequency (MHz)	Power density (dBm/MHz)	Applicable Limits (dBm)	Pass or Fail
5190	1.181	17	Pass
5230	0.192	17	Pass
Frequency (MHz)	Power density (30dBm/500kHz)	Applicable Limits (30dBm/500kHz)	Pass or Fail
5755	-2.024	30	Pass
5795	0.529	30	Pass

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LIMITS AND MEASUREMENT RESULT FOR 802.1AC80 MODULATION			
Frequency (MHz)	Power density (dBm/MHz)	Applicable Limits (dBm)	Pass or Fail
5210	-1.030	17	Pass
Frequency (MHz)	Power density (30dBm/500kHz)	Applicable Limits (30dBm/500kHz)	Pass or Fail
5775	-1.585	30	Pass

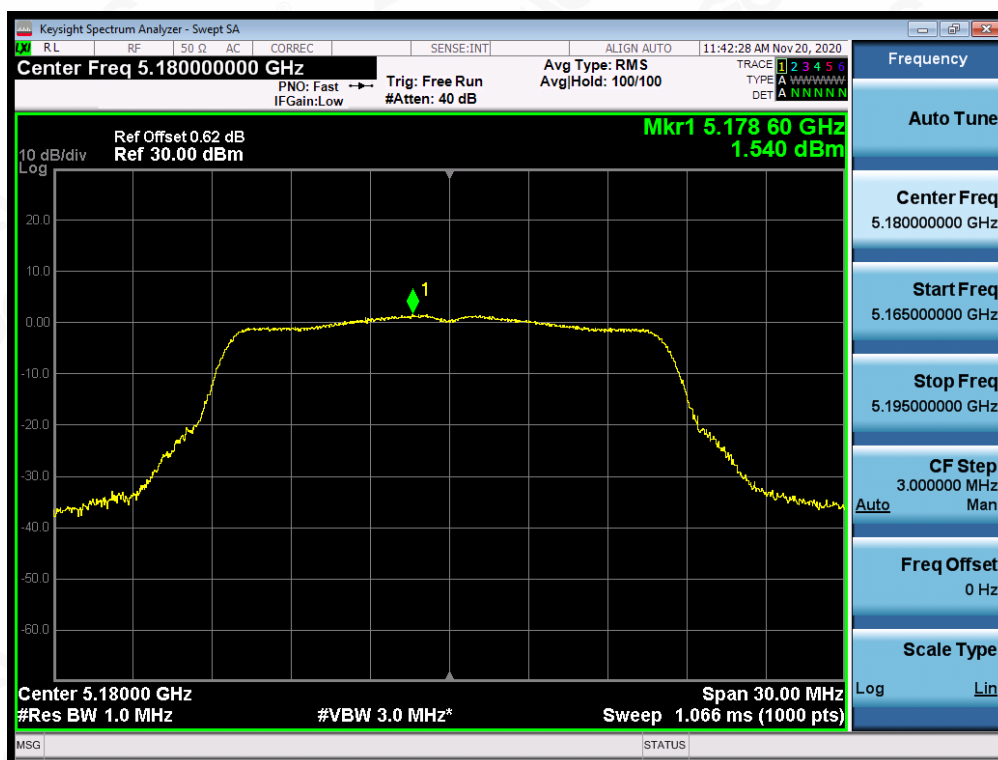
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802.11a20 TEST RESULT

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz



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TEST PLOT OF SPECTRAL DENSITY FOR 5240MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz



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TEST PLOT OF SPECTRAL DENSITY FOR 5785MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5825MHz



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802.11n20 TEST RESULT

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz



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TEST PLOT OF SPECTRAL DENSITY FOR 5240MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz



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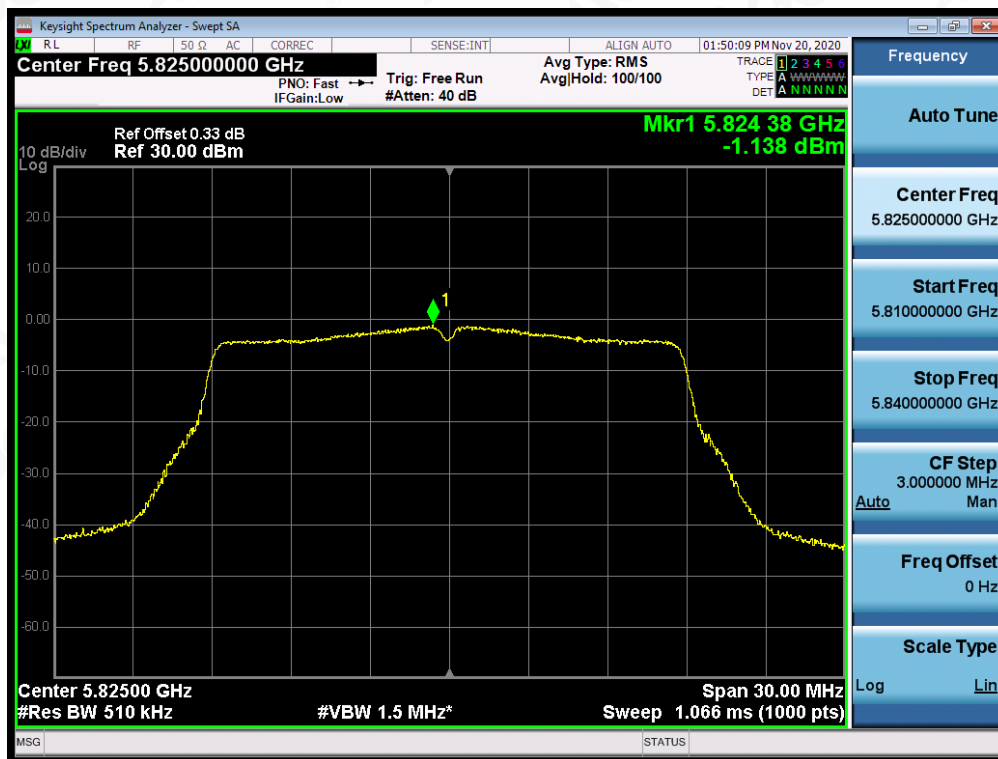
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TEST PLOT OF SPECTRAL DENSITY FOR 5785MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5825MHz



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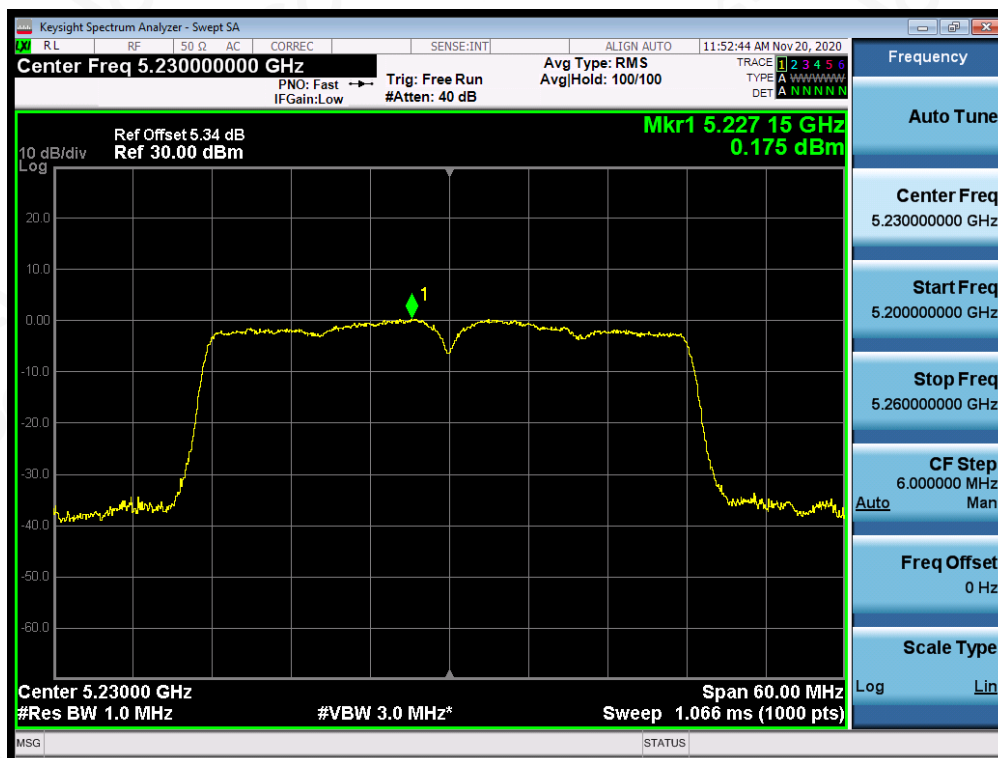


802.11n40 TEST RESULT

TEST PLOT OF SPECTRAL DENSITY FOR 5190MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5230MHz

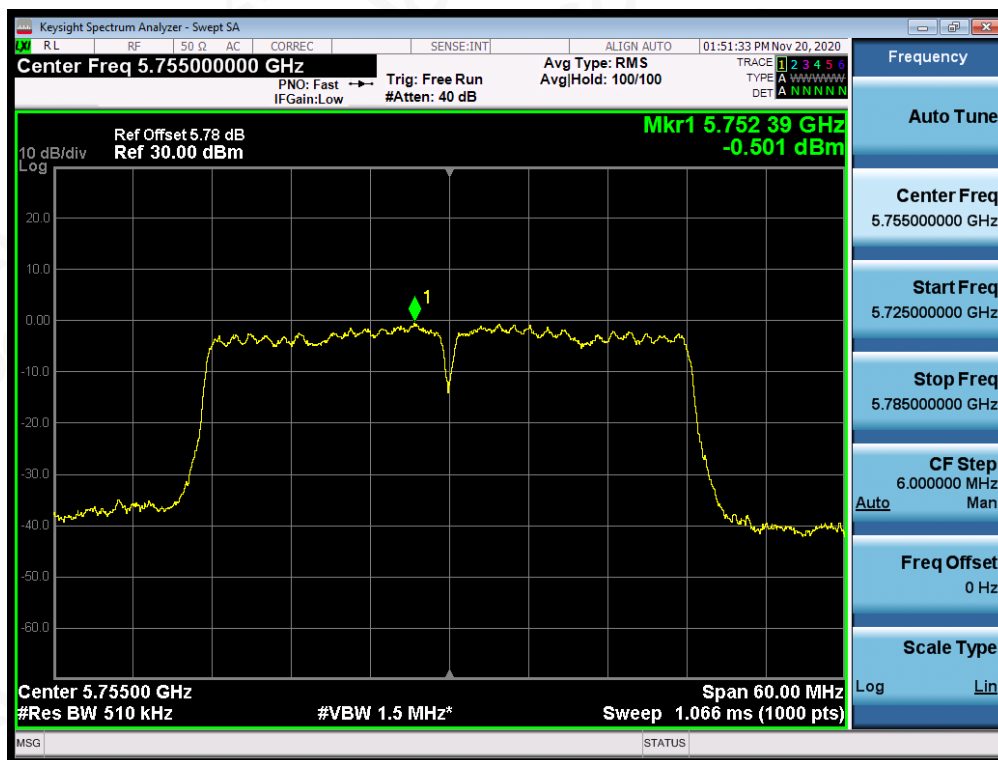


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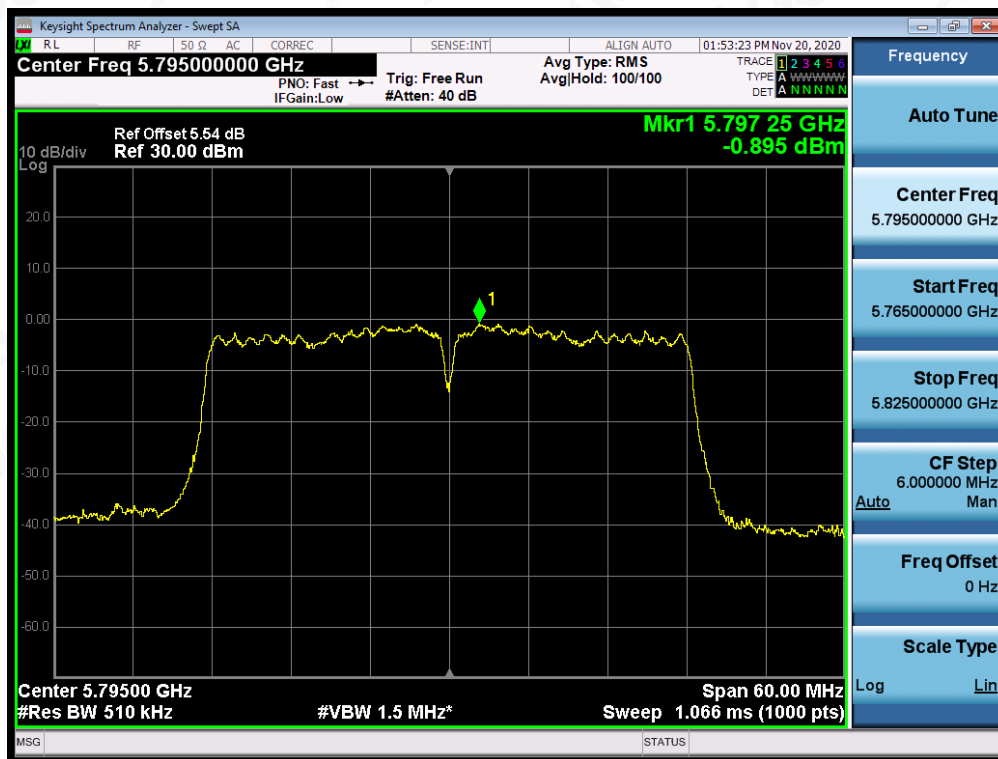
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TEST PLOT OF SPECTRAL DENSITY FOR 5755MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5795MHz



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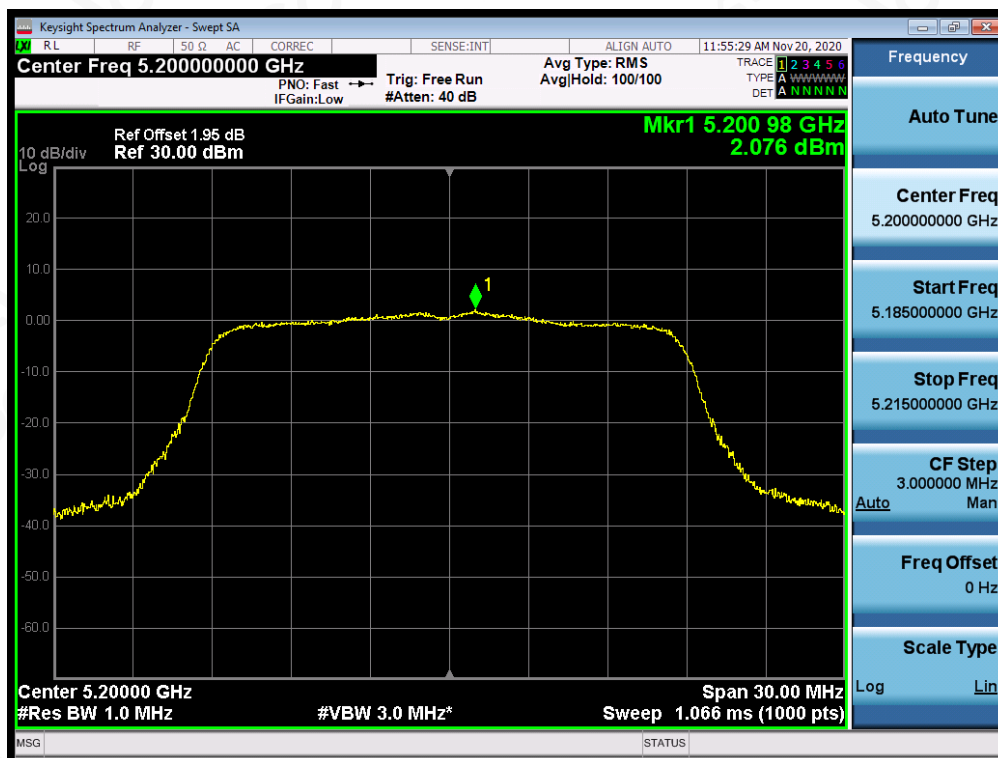


802.11ac20 TEST RESULT

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz



TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz



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