TEST REPORT

of

FCC PART 15 SUBPART E

☒ New Application; ☐ Class I PC; ☐ Class II PC

Product :	**Wireless Display Adapter**
Brand:	**j5create**
Model:	**JVAW76**
Model Difference:	**N/A**
FCC ID:	**2AD37JVAW76**
FCC Rule Part:	**§15.407, Cat:NII**
Applicant:	**KaiJet Technology International Corporation**
Address:	**8F., No. 109, Zhongcheng Road, Tucheng Dist., New Taipei City, Taiwan R.O.C**

Test Performed by:

International Standards Laboratory Corp. LT Lab.
TEL: +886-3-263-8888 FAX: +886-3-263-8899
No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan

Report No.: **ISL-21LR206FE**
Issue Date : **2021/08/16**

VERIFICATION OF COMPLIANCE

Applicant:	KaiJet Technology International Corporation
Product Description:	Wireless Display Adapter
Brand Name:	j5create
Model No.:	JVAW76
Model Difference:	N/A
FCC ID:	2AD37JVAW76
Date of test:	2021/07/22 ~ 2021/08/13
Date of EUT Received:	2021/07/22

We hereby certify that:

All the tests in this report have been performed and recorded in accordance with the standards described above and performed by an independent electromagnetic compatibility consultant, International Standards Laboratory Corp.

The test results contained in this report accurately represent the measurements of the characteristics and the energy generated by sample equipment under test at the time of the test. The sample equipment tested as described in this report is in compliance with the limits of above standards.

Test By:	Weitin Chen	***Date:***	2021/08/16
	Weitin Chen / Senior Engineer		
Prepared By:	Gigi yeh	***Date:***	2021/08/16
	Gigi Yeh / Senior Engineer		
Approved By:	Jerry Liu	***Date:***	2021/08/16
	Jerry Liu / Assistant Manager		

Version

Version No.	Date	Description
00	2021/08/16	Initial creation of document

Uncertainty of Measurement

Description Of Test	Uncertainty
Conducted Emission (AC power line)	2.586 dB
Field Strength of Spurious Radiation	≤ 30MHz: 2.96dB 30-1GHz: 4.22 dB 1-40 GHz: 4.08 dB
Conducted Power	2.412 GHz: 1.30 dB 5.805 GHz: 1.55 dB
Power Density	2.412 GHz:1.30 dB 5.805 GHz: 1.67 dB
Frequency	0.0032%
Time	0.01%
DC Voltage	1%

Table of Contents

1. General Information

1.1. Product Description

General:

Product Name	Wireless Display Adapter
Brand Name	j5create
Model Name	JVAW76
Model Difference	N/A
Power Tolerance:	+/- 1 dB
Power Supply	5Vdc from Micro USB
USB Port	One provided for Power

5GHz WLAN: 1TX/1RX

Wi-Fi	Frequency Range (MHz)	Channels	Average Rated Power	Modulation Technology
802.11a	5150 – 5250	4	14.46dBm	OFDM
	5725 – 5850	5	14.47dBm	
802.11n	HT20 5150 – 5250	4	14.23dBm	
	HT20 5725 – 5850	5	14.46dBm	
	HT40 5150 – 5250	2	13.45dBm	
	HT40 5725 – 5850	2	13.27dBm	
802.11ac	VHT20 5150 – 5250	4	14.48dBm	
	VHT20 5725 – 5850	5	14.48dBm	
	VHT40 5150 – 5250	2	13.27dBm	
	VHT40 5725 – 5850	2	13.45dBm	
	VHT80 5150 – 5250	1	12.42dBm	
	VHT80 5725 – 5850	1	12.50dBm	
Modulation type		CCK, DQPSK, DBPSK for DSSS 256QAM.64QAM. 16QAM, QPSK, BPSK for OFDM		
Antenna Designation		PIFA Antenna WiFi 5G Antenna : 1.76 dBi According to KDB662911 D01 SM-MIMO signals could be considered uncorrelated for purposes of directional gain computation. Directional gain = *GANT*		

The EUT is compliance with IEEE 802.11 a/n/ac Standard.
This report applies for Wifi frequency band 5150 MHz– 5250 MHz, 5725 MHz– 5850 MHz
Remark: The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

HW Ver.	AM8270_EZCast_TX_TYPE-C_V4.1
SW Ver.	Realtek 11ac 8821C USB WLAN MP 0.0003.07.20190211
FW Ver.	NA
RF power setting	802.11b : 45 802.11g : 44 802.11n20 : 44 802.11n40 : 40 802.11a : 52 802.11HT20 : 52 802.11HT40 : 50 802.11VHT20 : 52 802.11VHT40 : 50 802.11VHT80 : 50

Channel List

Frequency Band	Modulation Mode	Channel No.	Frequency (MHz)
5150 - 5250 MHz	802.11a 802.11n HT20 802.11ac VHT20	CH 36 CH 40 CH 44 CH 48	5180 5200 5220 5240
	802.11n HT40 802.11ac VHT40	CH 38 CH 46	5190 5230
	802.11ac VHT80	CH 42	5210
5725 - 5850 MHz	802.11a 802.11n HT20 802.11ac VHT20	CH 149 CH 153 CH 157 CH 161 CH 165	5745 5765 5785 5805 5825
	802.11n HT40 802.11ac VHT40	CH 151 CH 159	5755 5795
	802.11ac VHT80	CH 155	5775

Remark: The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: 2AD37JVAW76** filing to comply with Section 15.407 of the FCC Part 15, Subpart E Rules.

1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at an antenna to EUT distance 3 meters.

KDB Document: 789033 D02 General U-NII Test Procedures New Rules v02r01

FCC 14-30 Revision UNII

594280 D02 U-NII Device Security v01r03

1.4. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of International Standards Laboratory Corp. <LT Lab.> No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.10: 2013. FCC Registration Number is: 487532; Designation Number is: TW0997.

1.5. Special Accessories

Not available for this EUT intended for grant.

1.6. Equipment Modifications

Not available for this EUT intended for grant.

2. System Test Configuration

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

2.3. Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 6 of ANSI C63.10: 2013. Con-ducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR 16-1-1 Quasi-Peak and Average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on a turntable which is 0.8 m/1.5m (Frequency above 1GHz) above the ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. The EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. To find out the maximum emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 6, 11 and 12 of ANSI C63.10: 2013.

2.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System

Radiated Emission

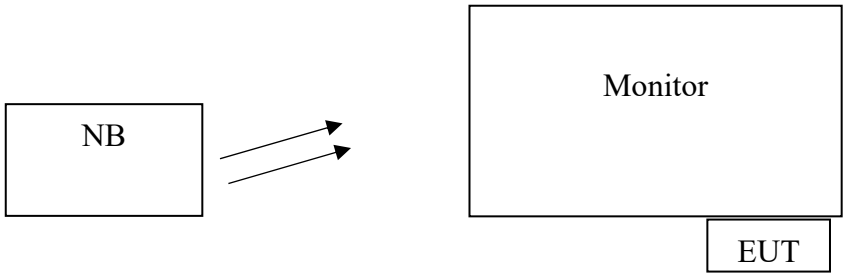


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1	Monitor	DELL	P2416Db	NA	Shielded /1.8m	Non-shielded /1.8m
2	NB	HP	440i	NA	NA	Non-shielded /2m

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

2.5. Duty Cycle

If duty cycle of test signal is ≥ 98 %, duty factor is not required.

If duty cycle of test signal is < 98 %, duty factor shall be considered.

The output power = measured power + duty factor.

Mode	ON time (ms)	Total time (ms)	Duty Cycle	Duty Factor	1/Ton (kHz)	VBW for average detector (kHz)
a	10.000	10.000	100.000%	0.00	--	0.01
HT20	7.533	7.533	100.000%	0.00	--	0.01
HT40	7.533	7.533	100.000%	0.00	--	0.01
VHT20	5.000	5.000	100.000%	0.00	--	0.01
VHT40	5.000	5.000	100.000%	0.00	--	0.01
VHT80	2.533	2.533	100.000%	0.00	--	0.01

3. Summary of Test Results

FCC Rules	Description Of Test	Result
§15.207	AC Power Line Conducted Emission	Compliant
§15.407(a)(2)	Output Power/ EIRP/ Spectral Density Measurement	Compliant
§15.407(a)	26dB Emission Bandwidth	Compliant
§15.407(e)	6dB Emission Bandwidth	Compliant
§15.407(b)	Undesirable Emission – Radiated Measurement	Compliant
§15.407(a)	Antenna Requirement	Compliant

4. Description of Test Modes

The EUT has been tested under operating condition.
Test program used to control the EUT for staying in continuous transmitting mode is programmed.

The modulation and bandwidth are similar for 802.11n mode for 20MHz/40MHz and 802.11ac mode for 20MHz/40MHz/80MHz, therefore investigated worst case to representative mode in test report.

Following channels were selected for the final test as listed below.

Frequency Band (MHz)	Modulation Mode	Test Channel	Data Rate (Mbps)
5150 - 5250	802.11a	36, 40, 48	6
	802.11n HT20	36, 40, 48	6.5
	802.11n HT40	38, 46	13.5
	802.11ac VHT80	42	29.3
5725 - 5850	802.11a	149, 157, 165	6
	802.11n HT20	149, 157, 165	6.5
	802.11n HT40	151, 159	13.5
	802.11ac VHT80	155	29.3

Directional gain = $GANT + 10 \log(NANT)$ dBi

5. Conduced Emission Test

5.1. Standard Applicable

According to §15.207, frequency range within 150kHz to 30MHz shall not exceed the Limit table as below.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

5.2. Measurement Equipment Used:

Location	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Conduction 02	EMI Receiver 14	ROHDE& SCHWARZ	ESCI	101034	05/25/2021	05/25/2022
Conduction 02	Conduction 02-1 Cable	WOKEN	CFD 300-NL	Conduction 02 -1	09/18/2020	09/18/2021
Conduction 02	LISN 26	R&S	ENV216	102378	11/27/2020	11/27/2021
Conduction 02	LISN 21	R&S	ENV216	101476	07/05/2021	07/05/2022
Conduction 02	ISN T4 07	Teseq GmbH	ISN T400A	30449	07/16/2021	07/16/2022
Conduction 02	ISN T8 10	Teseq GmbH	ISN T800	42773	07/16/2021	07/16/2022
Conduction 02	ISN T8 CAT6A 01	SCHWARZBECK	NTFM 8158	8158 0123	01/17/2021	01/17/2022
Conduction 02	Capacitive Voltage Probe 01	SCHAFFNER	CVP 2200A	18711	08/05/2021	08/05/2022
Conduction 02	Current Probe	SCHAFFNER	SMZ 11	18030	03/04/2021	03/04/2022

5.3. EUT Setup:

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10: 2013
2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
3. The LISN was connected with 120Vac/60Hz power source.

5.4. Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.
4. Both 120V & 240V have been verified, and 120V/60Hz was defined as the worst-case and record in the report.

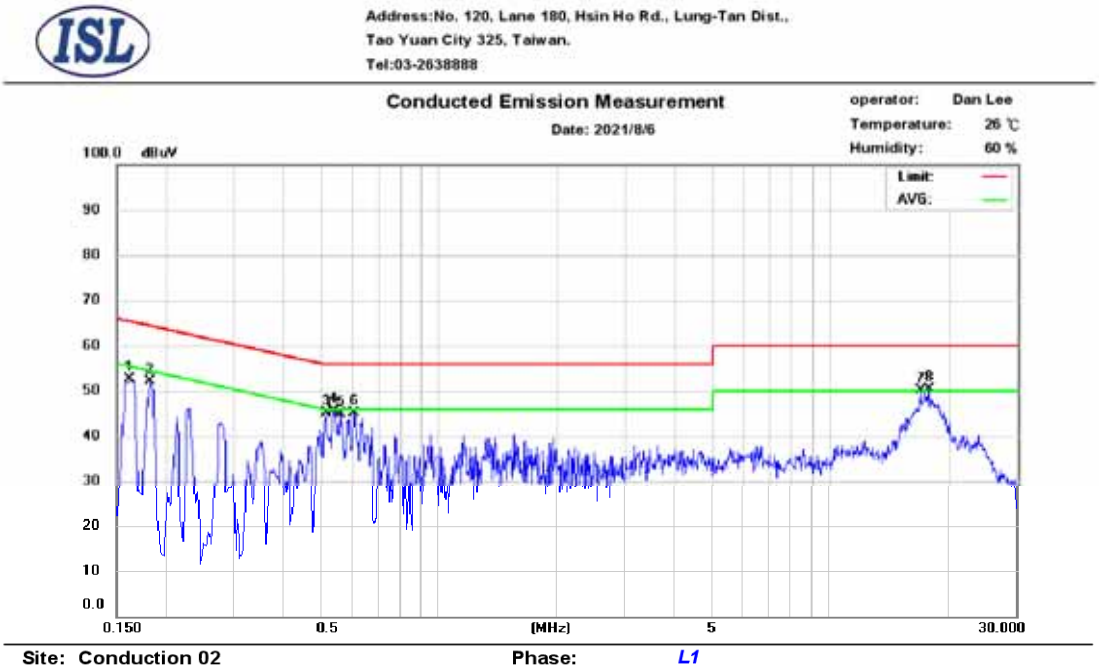
5.5. Measurement Result:

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Note: Refer to next page for measurement data and plots.

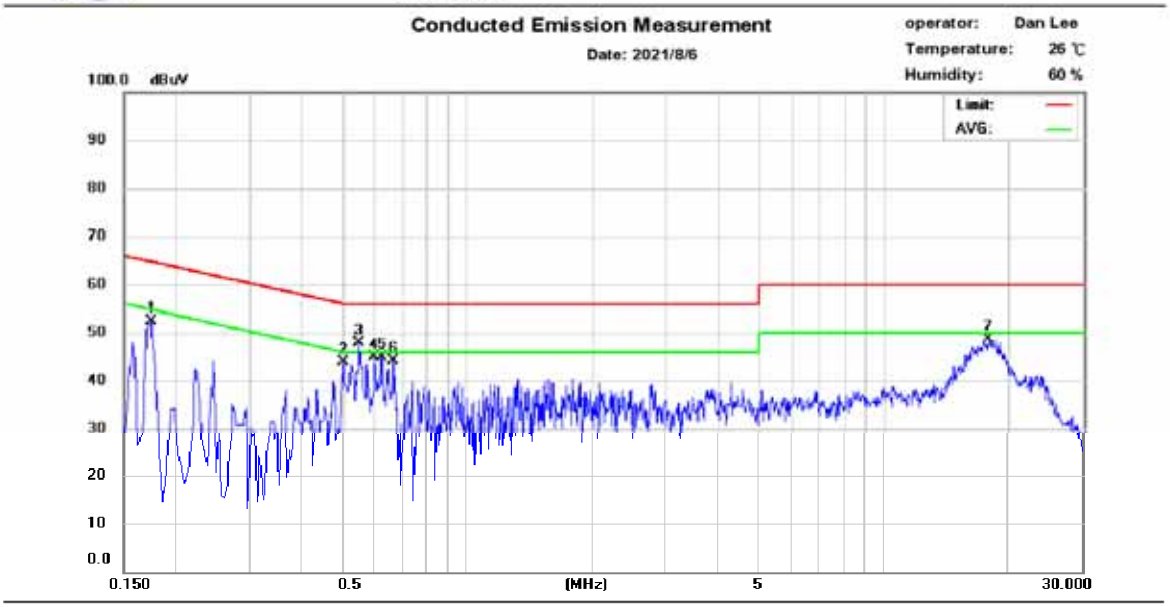
AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	Normal Operation



No.	Frequency (MHz)	QP_R (dBuV)	AVG_R (dBuV)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)
1	0.162	43.11	24.62	9.72	52.83	65.36	-12.53	34.34	55.36	-21.02
2	0.182	39.28	15.79	9.71	48.99	64.39	-15.40	25.50	54.39	-28.89
3	0.514	31.04	17.87	9.71	40.75	56.00	-15.25	27.58	46.00	-18.42
4	0.538	33.67	20.28	9.72	43.39	56.00	-12.61	30.00	46.00	-16.00
5	0.566	29.92	17.05	9.72	39.64	56.00	-16.36	26.77	46.00	-19.23
6	0.606	33.03	22.77	9.72	42.75	56.00	-13.25	32.49	46.00	-13.51
7	16.982	31.66	21.43	9.98	41.64	60.00	-18.36	31.41	50.00	-18.59
8	17.886	32.78	21.52	9.97	42.75	60.00	-17.25	31.49	50.00	-18.51

Address:No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist.,
Tao Yuan City 325, Taiwan.
Tel:03-2638888



Site: Conduction 02 Phase: *N*

No.	Frequency (MHz)	QP_R (dBuV)	AVG_R (dBuV)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)
1	0.174	41.03	22.92	9.72	50.75	64.77	-14.02	32.64	54.77	-22.13
2	0.502	30.44	18.08	9.71	40.15	56.00	-15.85	27.79	46.00	-18.21
3	0.550	34.23	24.13	9.72	43.95	56.00	-12.05	33.85	46.00	-12.15
4	0.598	31.60	19.27	9.72	41.32	56.00	-14.68	28.99	46.00	-17.01
5	0.622	30.76	18.23	9.72	40.48	56.00	-15.52	27.95	46.00	-18.05
6	0.666	28.21	17.99	9.72	37.93	56.00	-18.07	27.71	46.00	-18.29
7	17.690	32.36	20.18	10.04	42.40	60.00	-17.60	30.22	50.00	-19.78

6. OUTPUT POWER / EIRP /SPECTRAL DENSITY MEASUREMENT

6.1. Standard Applicable

According to §15.407(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15 – 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15 – 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15 – 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15 – 5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBiare used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

6.2. Measurement Procedure

For Output Power

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
3. Record the max. reading.
4. Repeat above procedures until all frequency measured were complete.

For Power Spectral Density

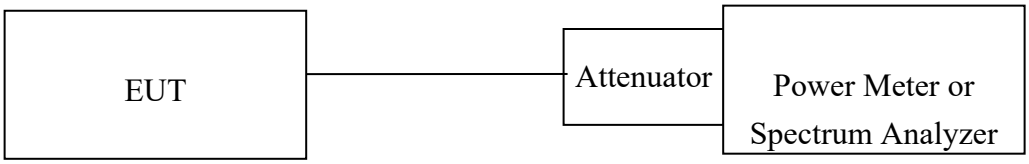
1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
3. Set RBW=1MHz,VBW=3MHz, Span=50MHz (Base Mode), Sweep time = Auto, traces 100 sweeps of video averaging for 5150-5725MHz;
4. Set RBW=500kHz,VBW=1.5MHz, Span=60MHz (Base Mode), Sweep time = Auto, traces 100 sweeps of video averaging for 5725-5850MHz;
5. Record the max. reading.
6. Repeat above procedures until all frequency measured were complete.

Refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

6.3. Measurement Equipment Used:

Location Conducted	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Conducted	Power Meter	Anritsu	ML2495A	1116010	09/25/2020	09/25/2021
Conducted	Power Sensor	Anritsu	MA2411B	34NKF50	09/25/2020	09/25/2021
Conducted	Power Sensor	DARE	RPR3006W	13I00030SNO33	01/04/2021	01/04/2022
Conducted	Power Sensor	DARE	RPR3006W	13I00030SNO34	01/04/2021	01/04/2022
Conducted	Power Sensor	DARE	RPR3006W	14I00889SNO35	06/23/2021	06/23/2022
Conducted	Power Sensor	DARE	RPR3006W	14I00889SNO36	06/23/2021	06/23/2022
Conducted	Temperature Chamber	KSON	THS-B4H100	2287	04/26/2021	04/26/2022
Conducted	DC Power supply	ABM	8185D	N/A	01/05/2021	01/05/2022
Conducted	AC Power supply	EXTECH	CFC105W	NA	N/A	N/A
Conducted	Spectrum analyzer	Keysight	N9010A	MY56070257	09/23/2020	09/23/2021
Conducted	Test Software	DARE	Radiation Ver:2013.1.23	NA	NA	NA
Conducted	Test Software	R&S	CMUGO Ver:2.0.0	N/A	N/A	N/A
Conducted	Universal Digital Radio Communication Tester	R&S	CMU200	111968	11/29/2020	11/29/2021
Conducted	Wideband Radio Communication Tester	R&S	CMW500	1201.002K50108793-JG	10/28/2020	10/28/2021
Conducted	BT Simulator	Agilent	N4010A	MY48100200	NA	NA
Conducted	GPS Simulator	Welnavigate	GS-50	701523	NA	NA
Conducted (TS8997)	Wideband Radio Communication Tester	R&S	CMW500	168811	07/19/2021	07/19/2022
Conducted (TS8997)	Signal Generator	R&S	SMB100B	101085	10/28/2020	10/28/2021
Conducted (TS8997)	Vector Signal Generator	R&S	SMBV100A	263246	10/28/2020	10/28/2021
Conducted (TS8997)	Signal analyzer 40GHz	R&S	FSV40	101884	10/20/2020	10/20/2021
Conducted (TS8997)	OSP150 extension unit CAM-BUS	R&S	OSP150	101107	04/06/2021	04/06/2022
Conducted (TS8997)	Test Software	R&S	EMC32	NA	NA	NA

6.4. Measurement Equipment Used:



6.5. Measurement Result

According to §15.407(a)

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

Band	Mode	Freq. (MHz)	Output Power (dBm)	Duty Factor (dB)	Total Output Power (dBm)	Output Power Limit (dBm)
UNII-1	11a	5180	14.120	0.00	14.12	23.98
		5200	14.400	0.00	14.40	23.98
		5240	14.460	0.00	14.46	23.98
	HT20	5180	14.170	0.00	14.17	23.98
		5200	14.110	0.00	14.11	23.98
		5240	14.230	0.00	14.23	23.98
	HT40	5190	13.450	0.00	13.45	23.98
		5230	13.380	0.00	13.38	23.98
	VHT20	5180	14.270	0.00	14.27	23.98
		5200	14.480	0.00	14.48	23.98
		5240	14.080	0.00	14.08	23.98
	VHT40	5190	13.040	0.00	13.04	23.98
		5230	13.270	0.00	13.27	23.98
	VHT80	5210	12.420	0.00	12.42	23.98

Band	Mode	Freq. (MHz)	Output Power (dBm)	Duty Factor (dB)	Total Output Power (dBm)	Output Power Limit (dBm)
UNII-3	11a	5745	14.420	0.00	14.42	30.00
		5785	14.290	0.00	14.29	30.00
		5825	14.470	0.00	14.47	30.00
	HT20	5745	14.380	0.00	14.38	30.00
		5785	14.460	0.00	14.46	30.00
		5825	14.260	0.00	14.26	30.00
	HT40	5755	13.110	0.00	13.11	30.00
		5795	13.270	0.00	13.27	30.00
	VHT20	5745	14.410	0.00	14.41	30.00
		5785	14.470	0.00	14.47	30.00
		5825	14.480	0.00	14.48	30.00
	VHT40	5755	13.390	0.00	13.39	30.00
		5795	13.450	0.00	13.45	30.00
	VHT80	5775	12.500	0.00	12.50	30.00

Power Spectral Density Measurement:

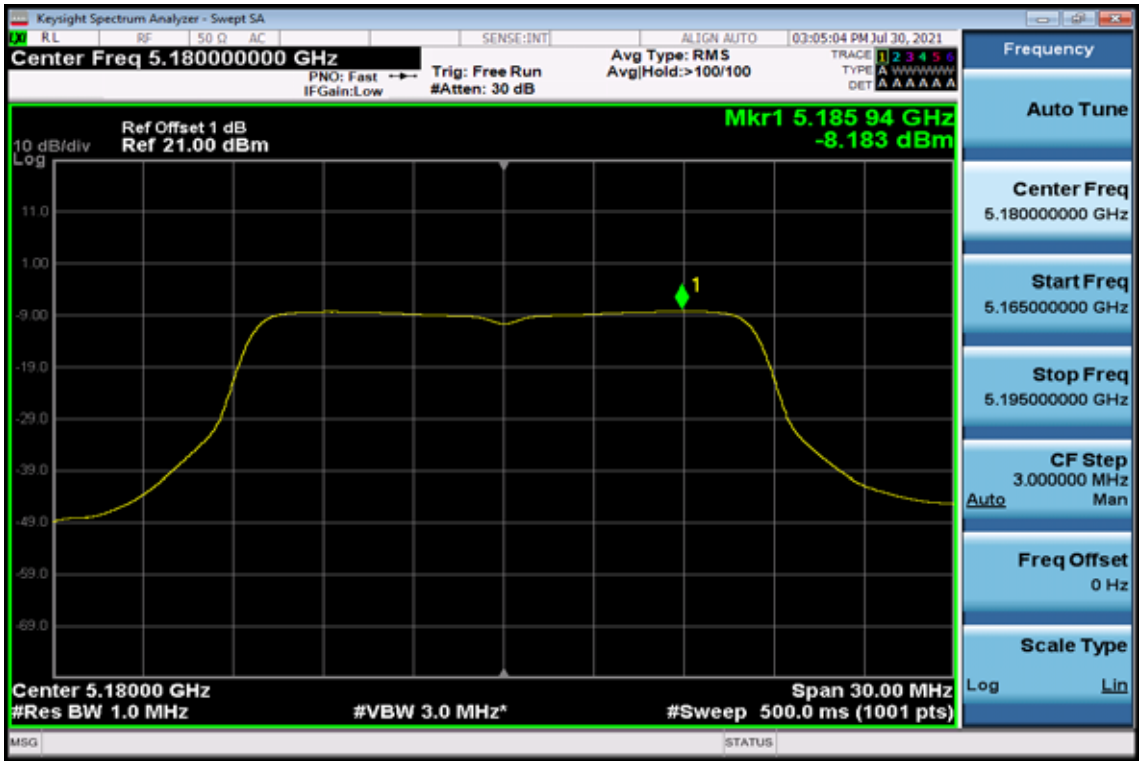
Band	Mode	Frequency (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)
UNII-1	11a	5180	-8.183	0.00	-8.183	23.98
		5200	-8.090	0.00	-8.090	23.98
		5240	-6.646	0.00	-6.646	23.98
	HT20	5180	-9.494	0.00	-9.494	23.98
		5200	-8.866	0.00	-8.866	23.98
		5240	-7.319	0.00	-7.319	23.98
	HT40	5190	-12.557	0.00	-12.557	23.98
		5230	-11.170	0.00	-11.170	23.98
	VHT20	5180	-9.517	0.00	-9.517	23.98
		5200	-9.149	0.00	-9.149	23.98
		5240	-7.527	0.00	-7.527	23.98
	VHT40	5190	-12.929	0.00	-12.929	23.98
		5230	-11.346	0.00	-11.346	23.98
	VHT80	5210	-13.826	0.00	-13.826	23.98

Band	Mode	Frequency (MHz)	PSD (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)
UNII-3	11a	5745	-3.534	0.00	-3.534	30
		5785	-3.084	0.00	-3.084	30
		5825	-2.479	0.00	-2.479	30
	HT20	5745	-3.846	0.00	-3.846	30
		5785	-3.260	0.00	-3.260	30
		5825	-2.724	0.00	-2.724	30
	HT40	5755	-7.119	0.00	-7.119	30
		5795	-6.632	0.00	-6.632	30
	VHT20	5745	-3.641	0.00	-3.641	30
		5785	-3.232	0.00	-3.232	30
		5825	-2.728	0.00	-2.728	30
	VHT40	5755	-7.292	0.00	-7.292	30
		5795	-6.792	0.00	-6.792	30
	VHT80	5775	-8.488	0.00	-8.488	30

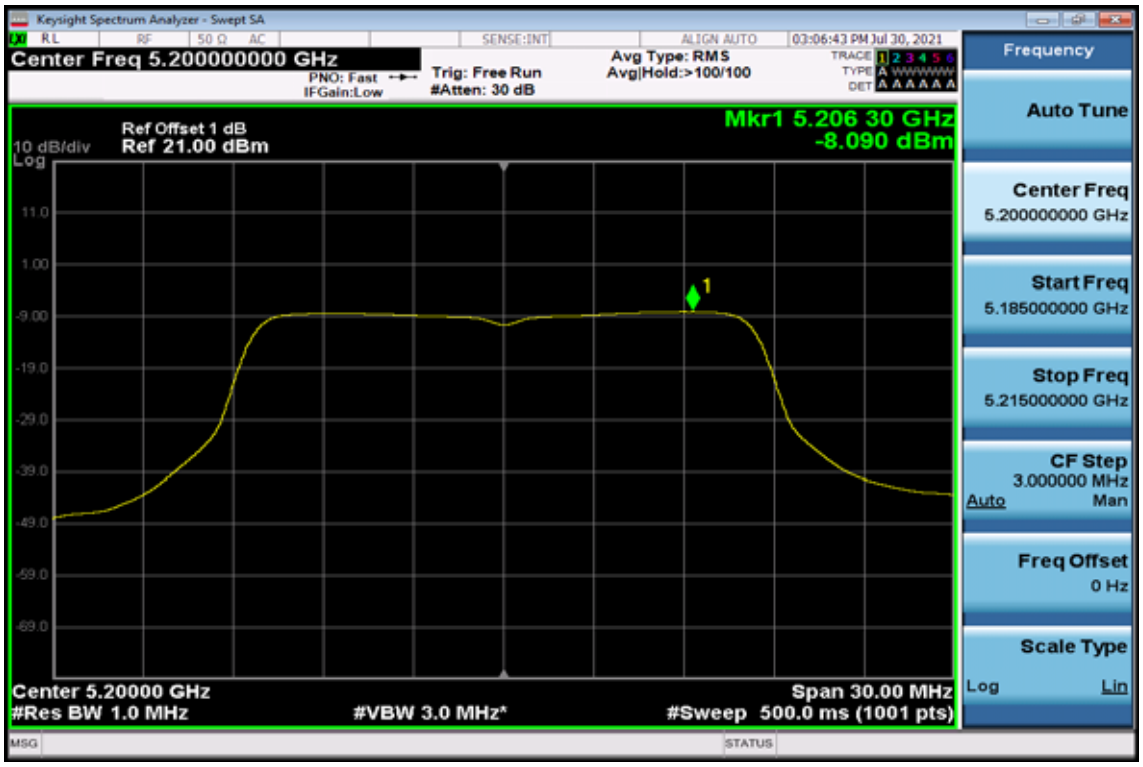
Band UNII-1

802.11a

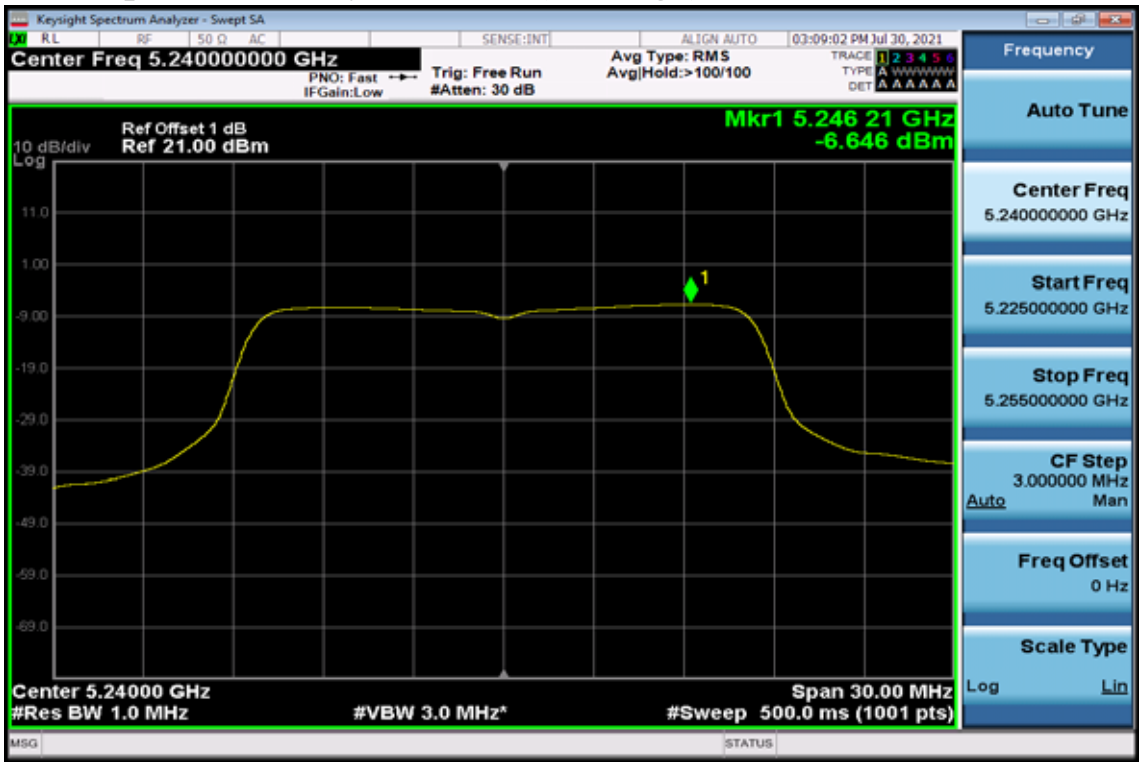
Power Spectral Density Data Plot (CH Low)



Power Spectral Density Data Plot (CH Mid)

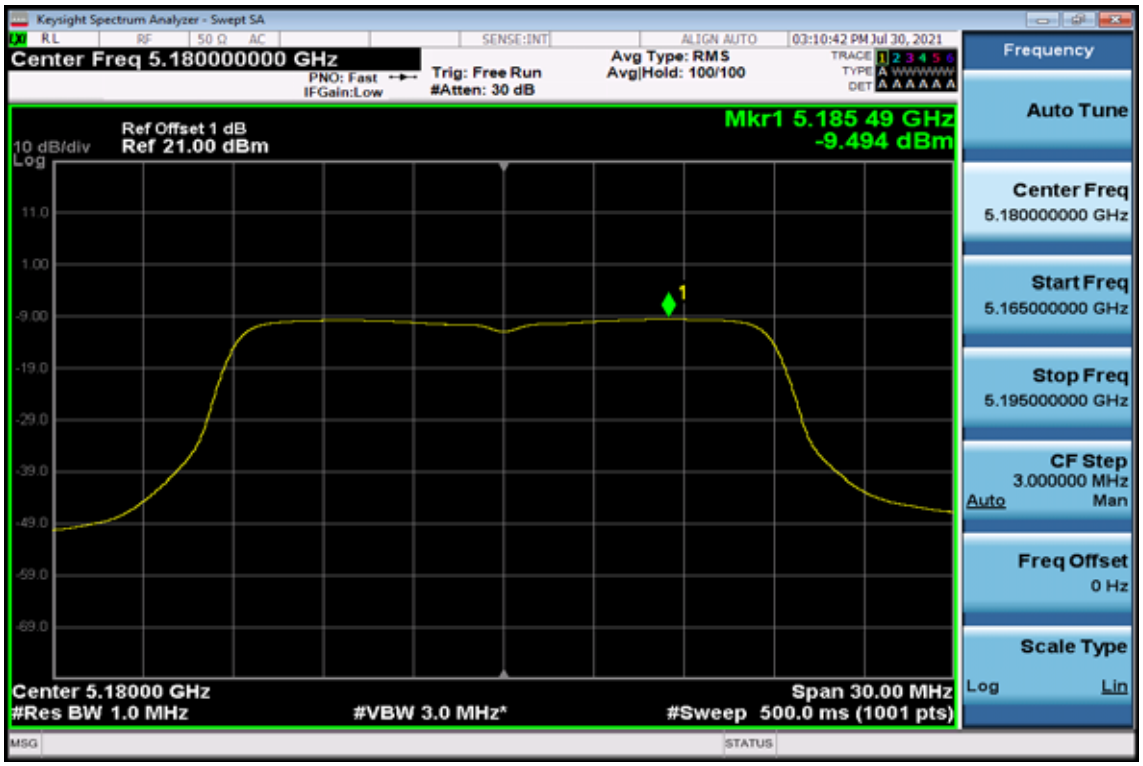


Power Spectral Density Data Plot (CH High)

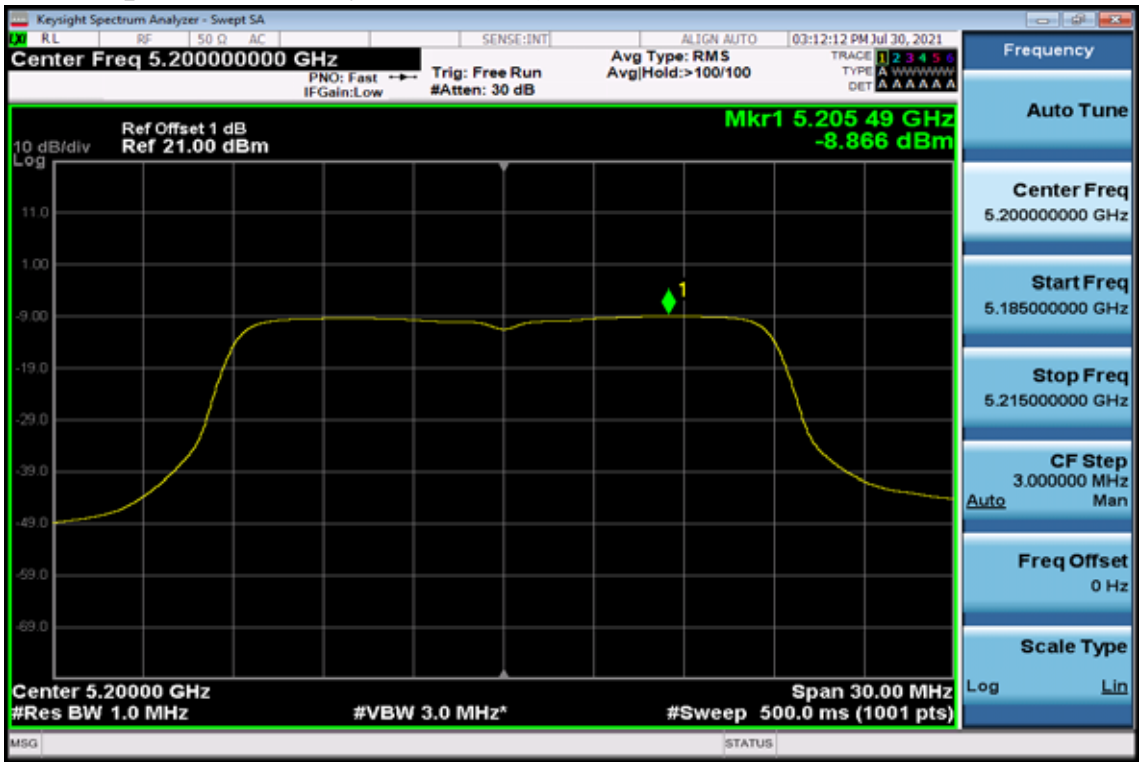


802.11n HT20

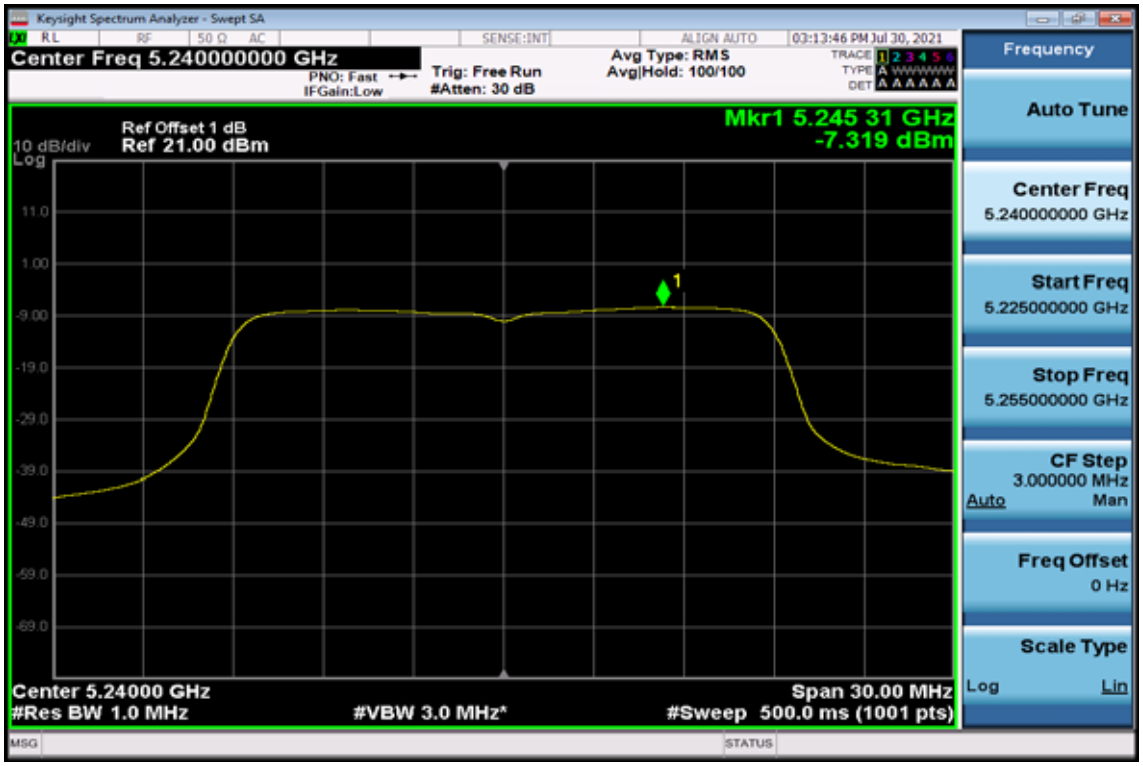
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

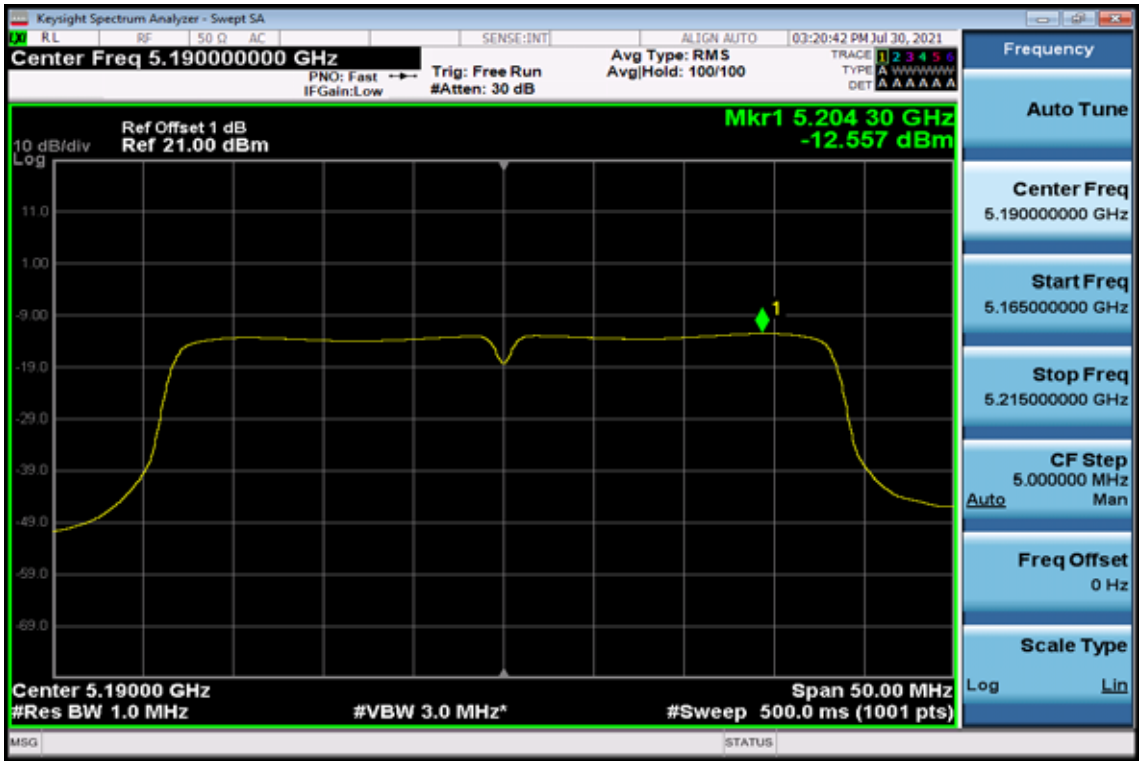


Power Spectral Density Test Plot (CH-High)

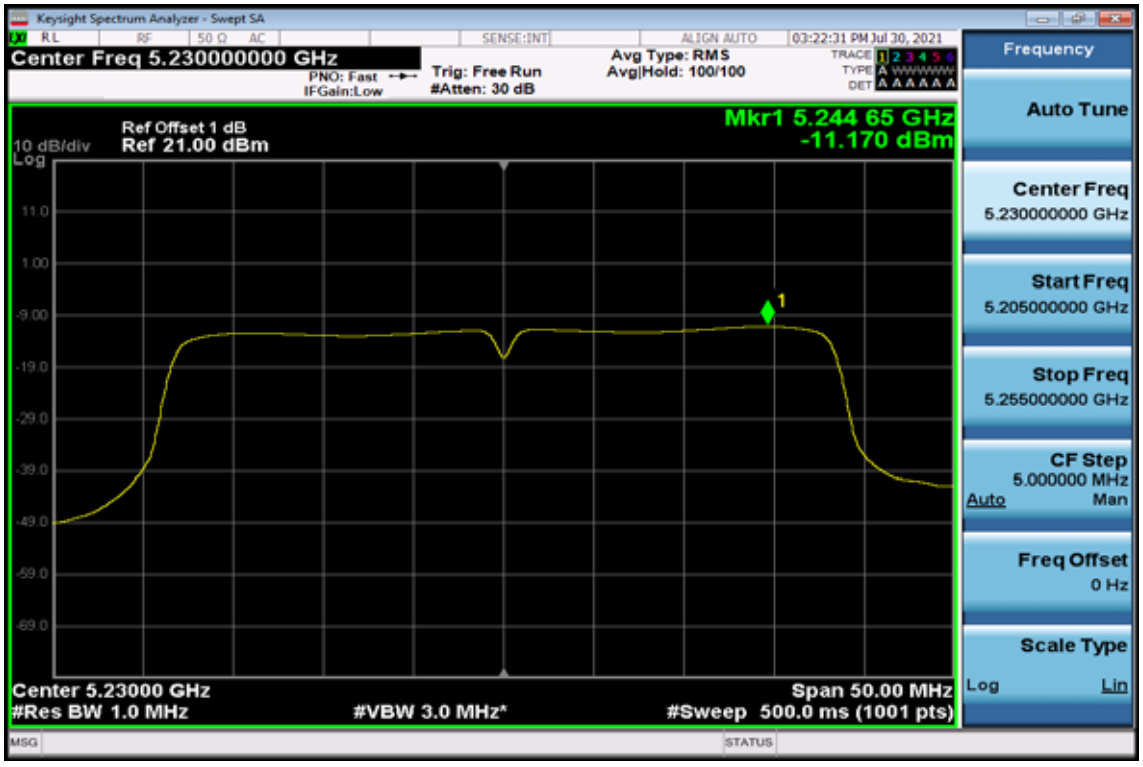


802.11n HT40

Power Spectral Density Test Plot (CH-Low)

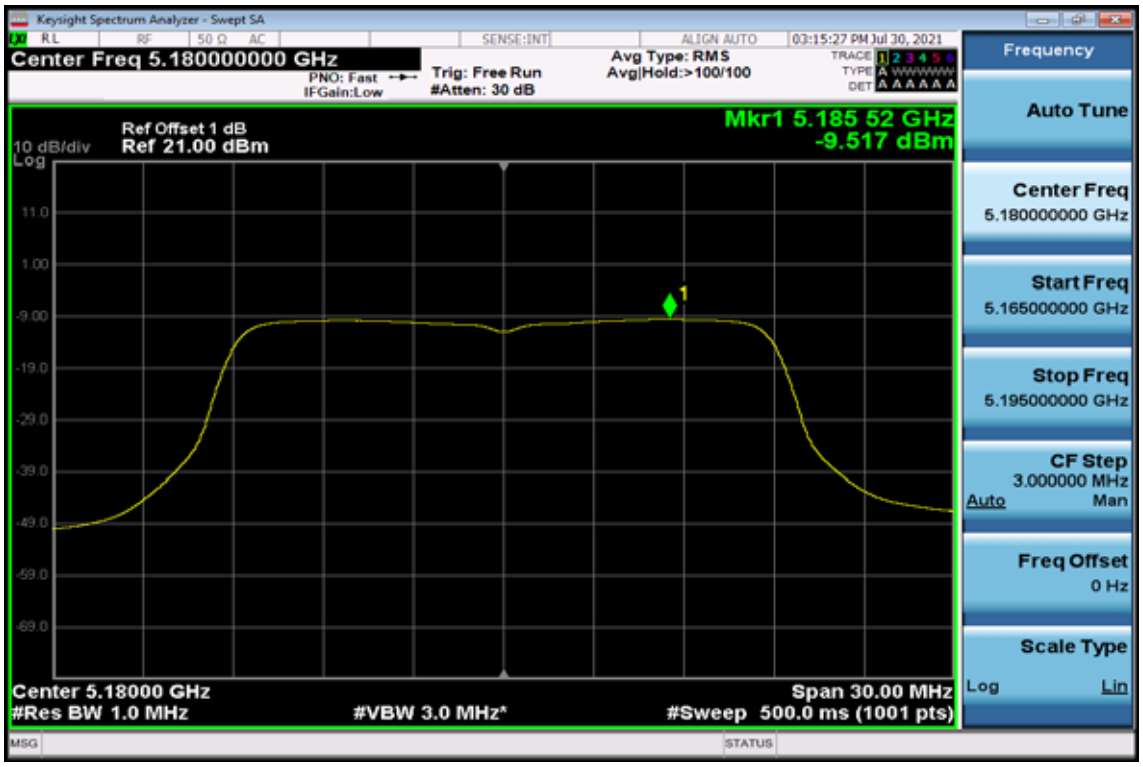


Power Spectral Density Test Plot (CH-High)

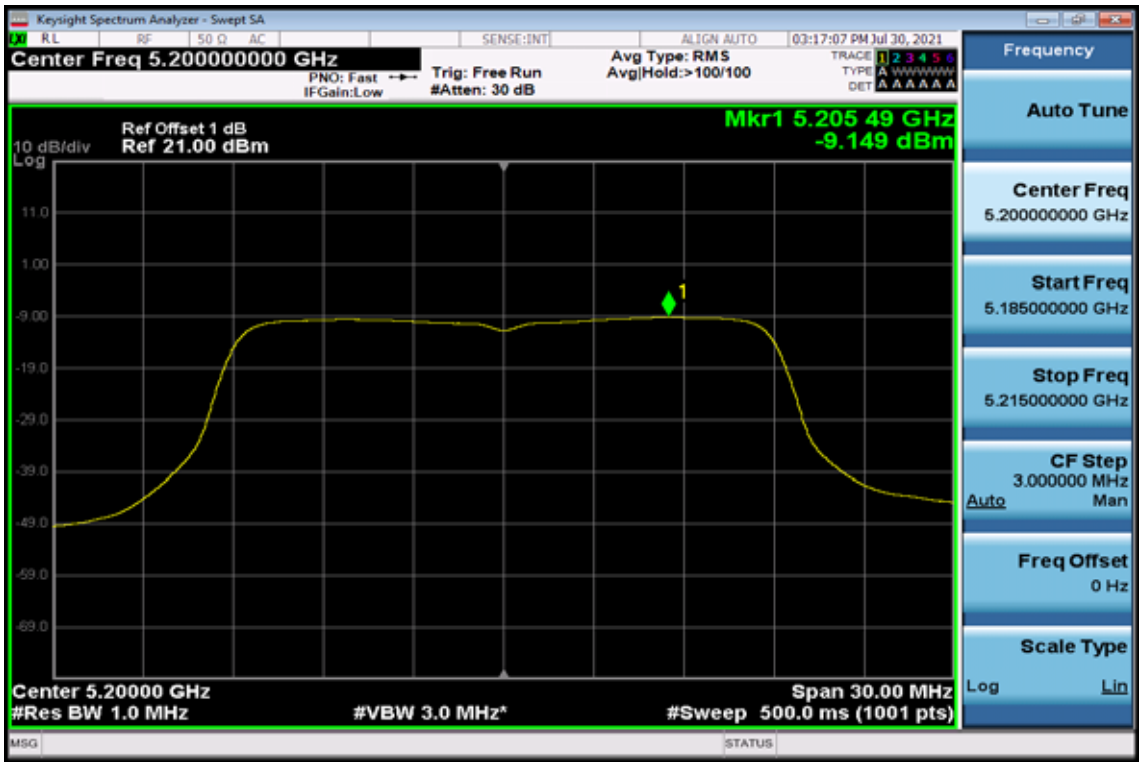


802.11n VHT20

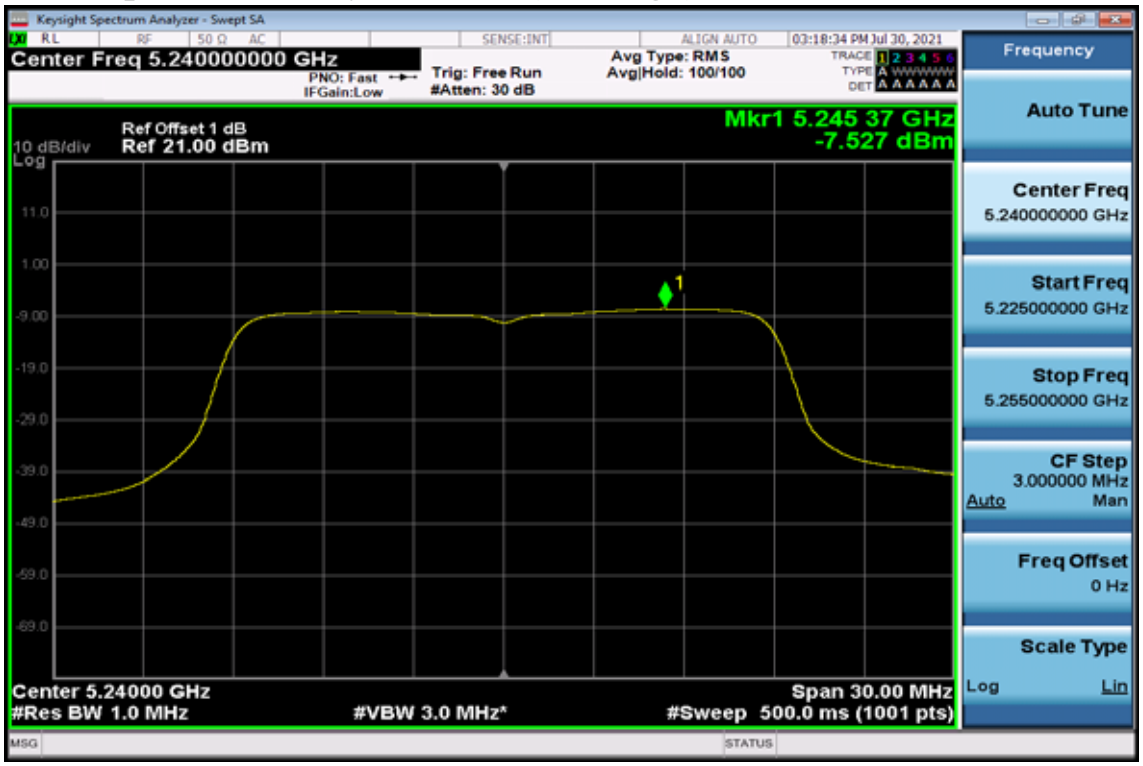
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

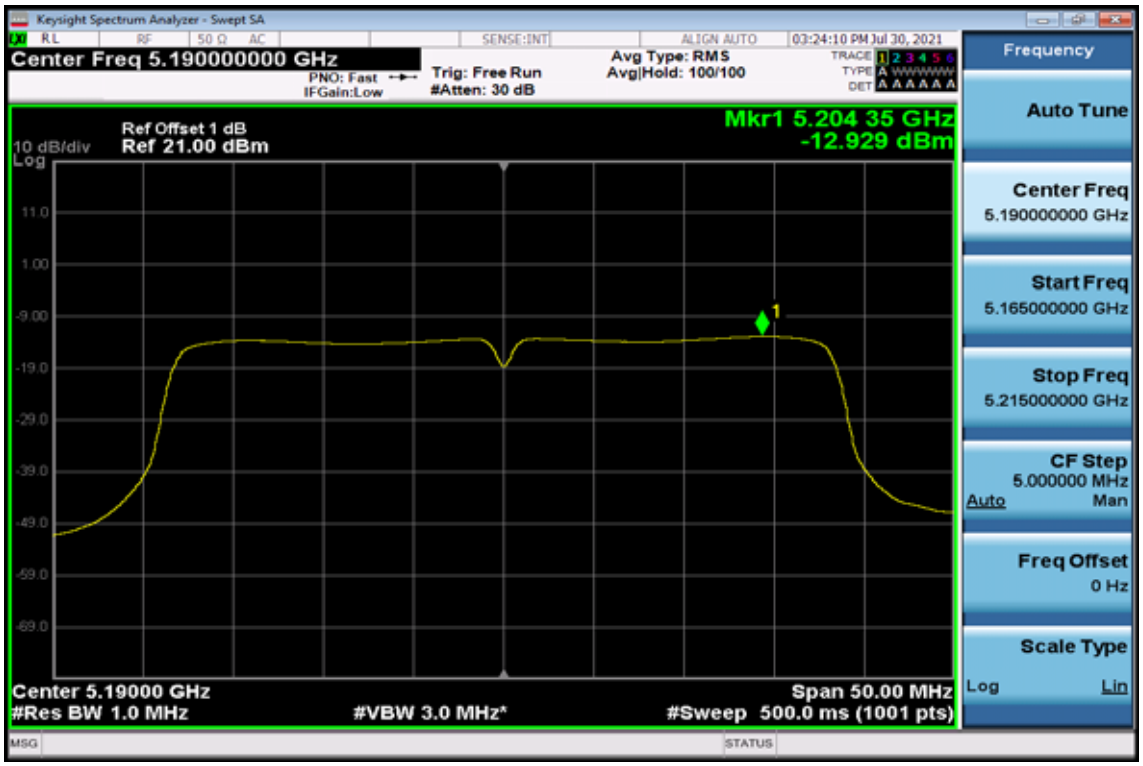


Power Spectral Density Test Plot (CH-High)

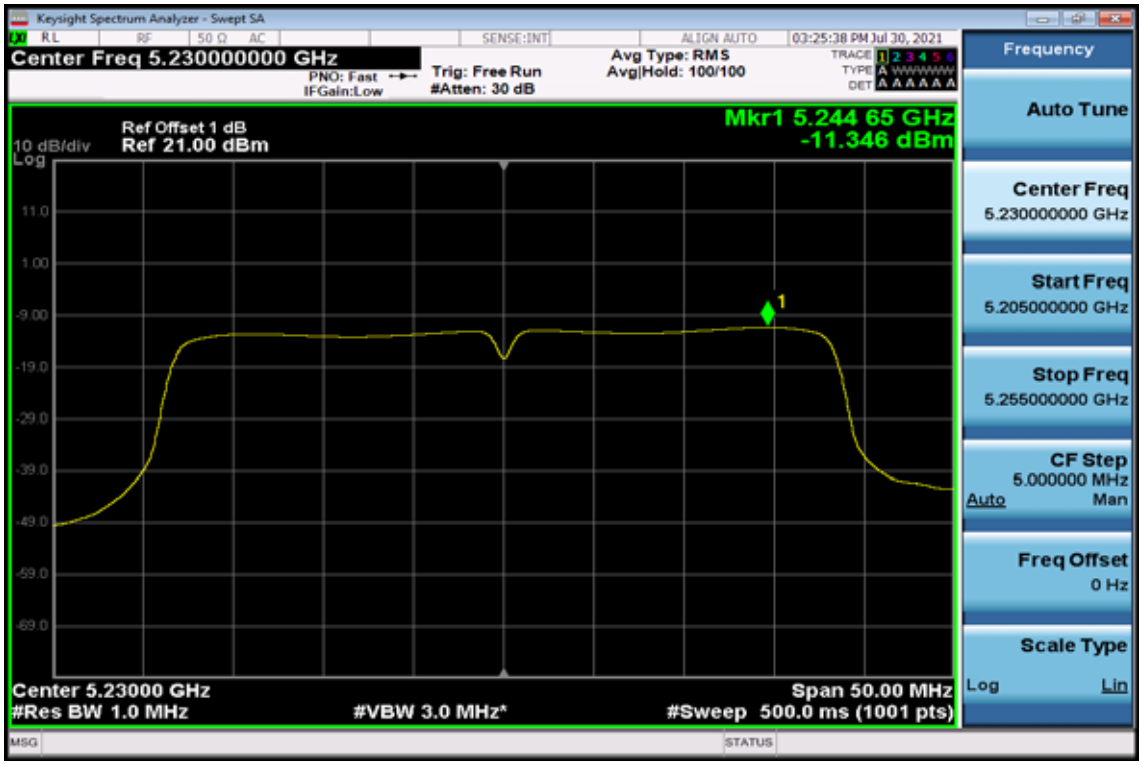


802.11n VHT40

Power Spectral Density Test Plot (CH-Low)

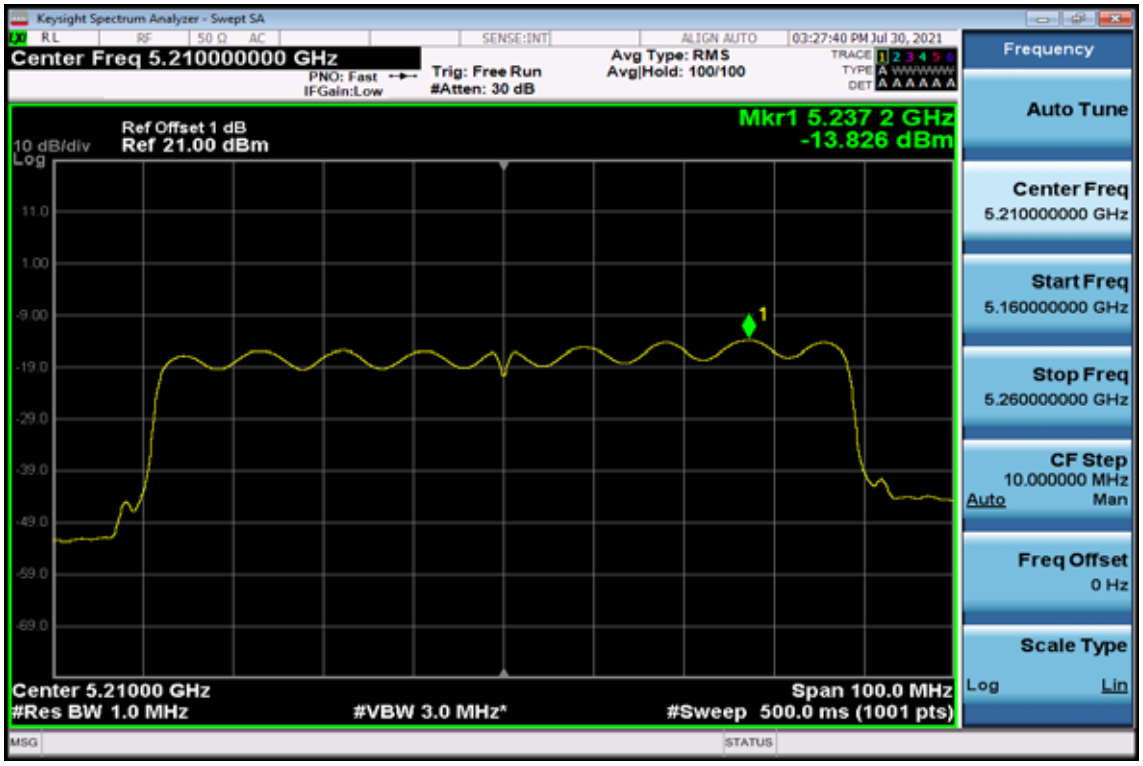


Power Spectral Density Test Plot (CH-High)



802.11ac VHT80

Power Spectral Density Test Plot (CH-Low)



Band UNII-3

802.11a

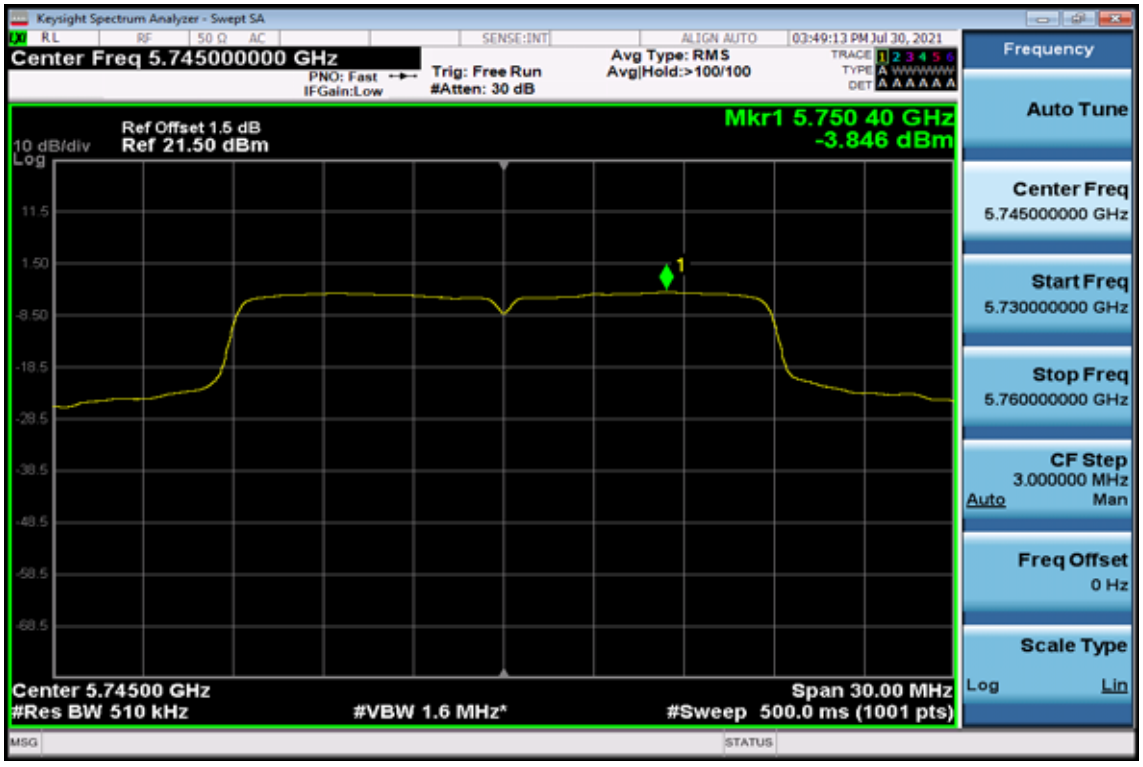
Power Spectral Density Data Plot (CH Low)

Power Spectral Density Data Plot (CH Mid)

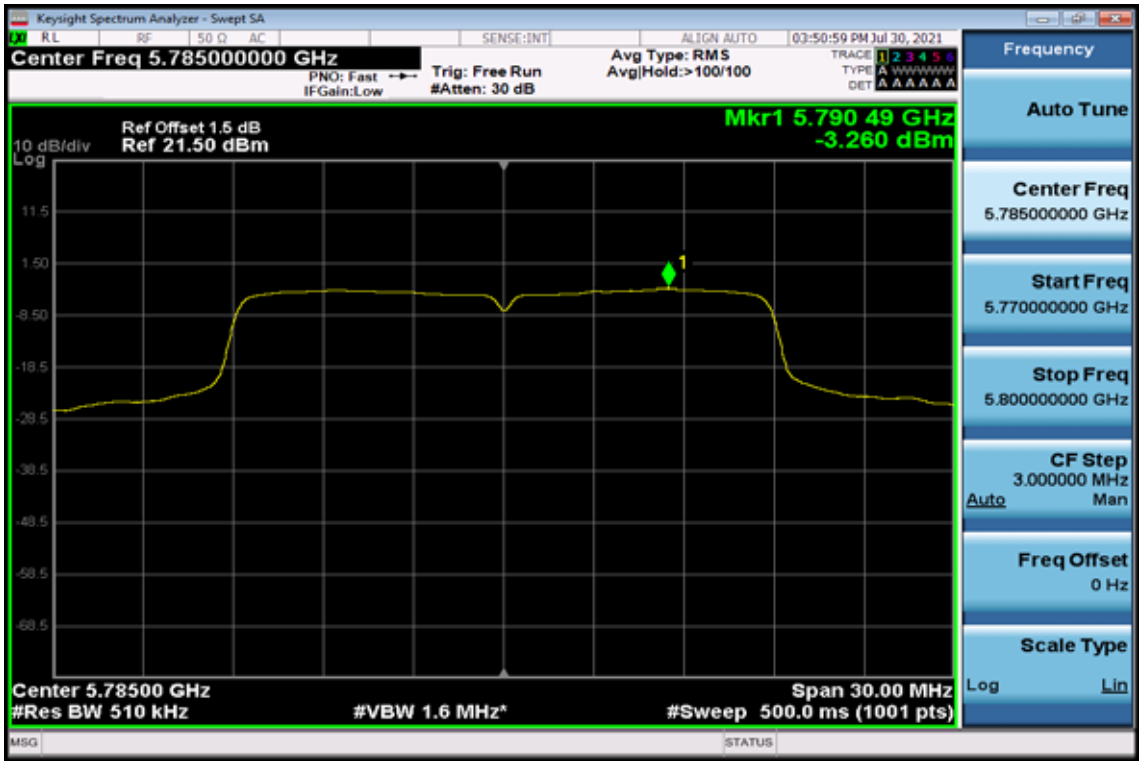
Power Spectral Density Data Plot (CH High)

802.11n HT20

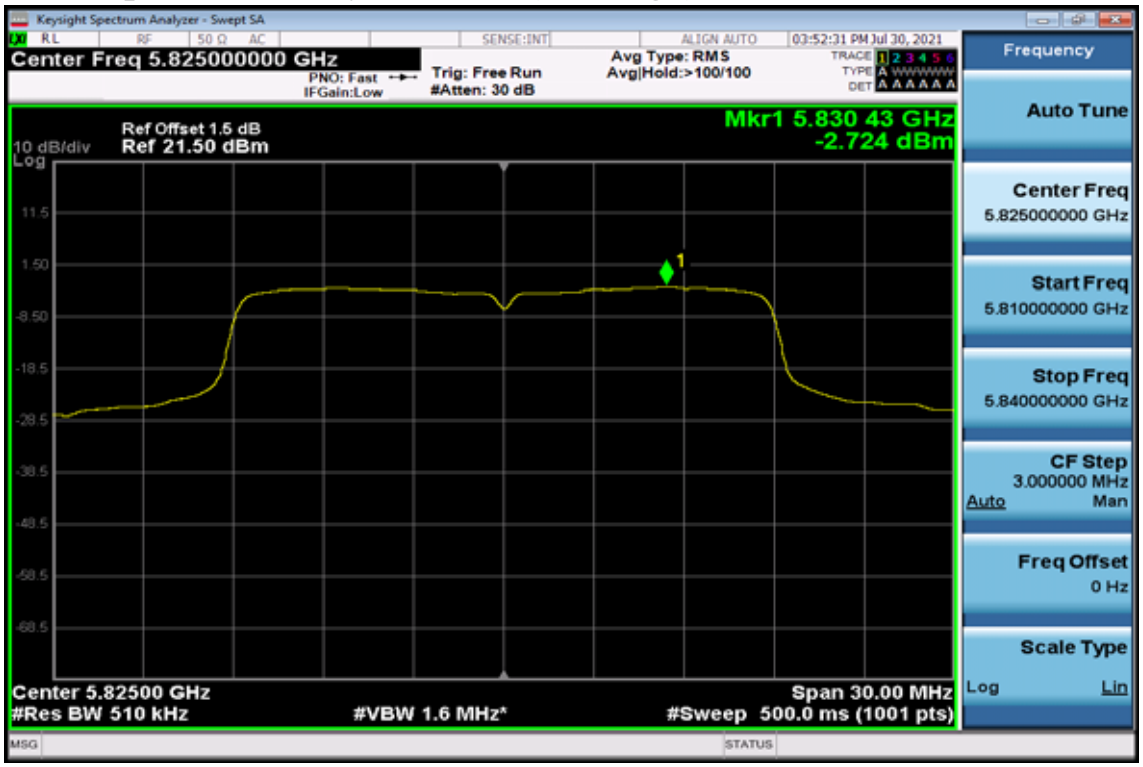
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

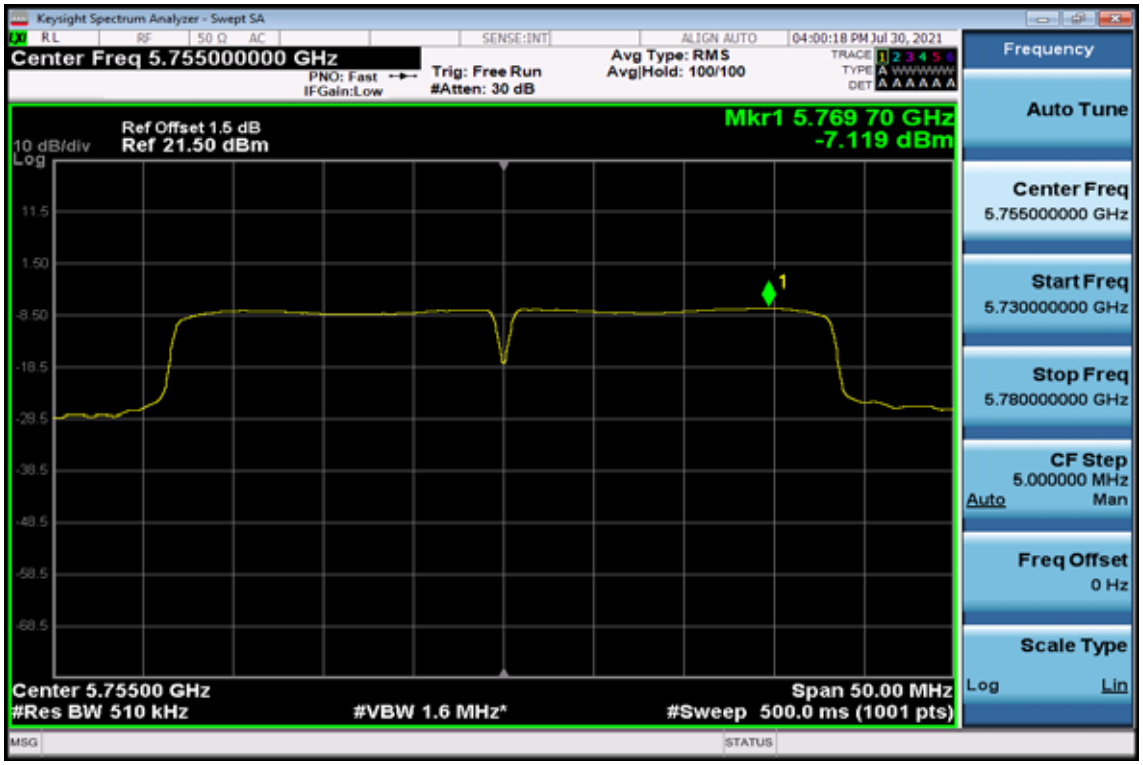


Power Spectral Density Test Plot (CH-High)



802.11n HT40

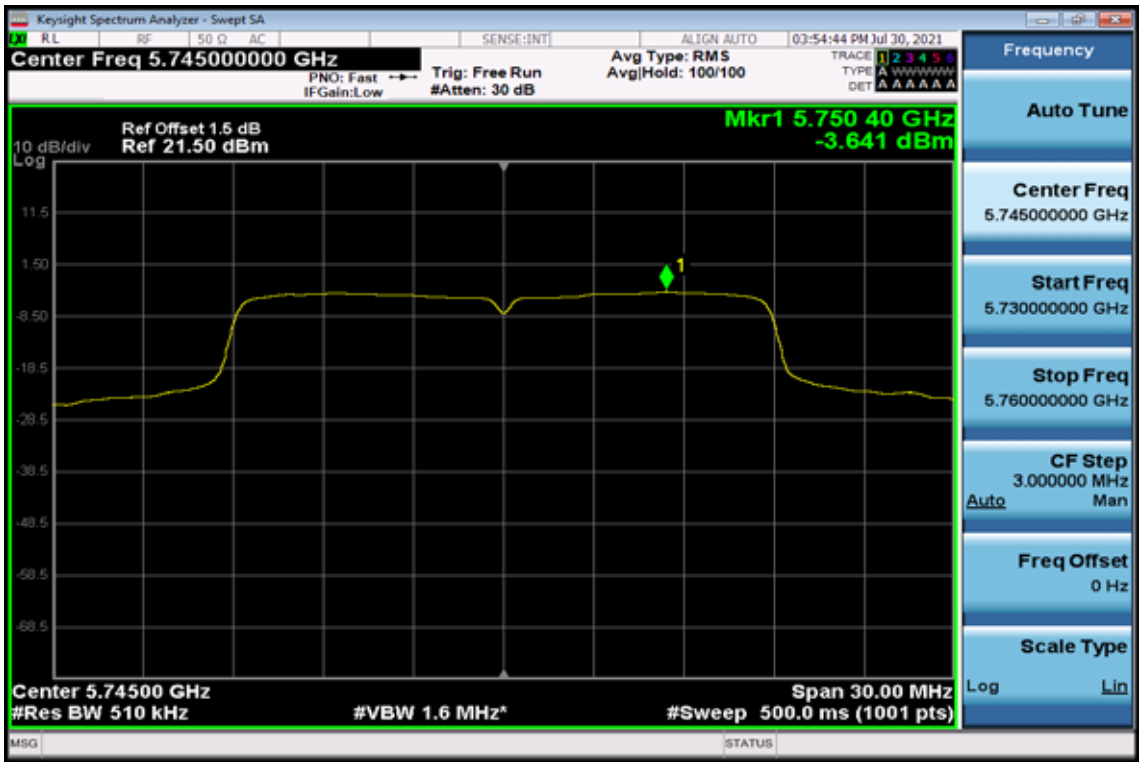
Power Spectral Density Test Plot (CH-Low)



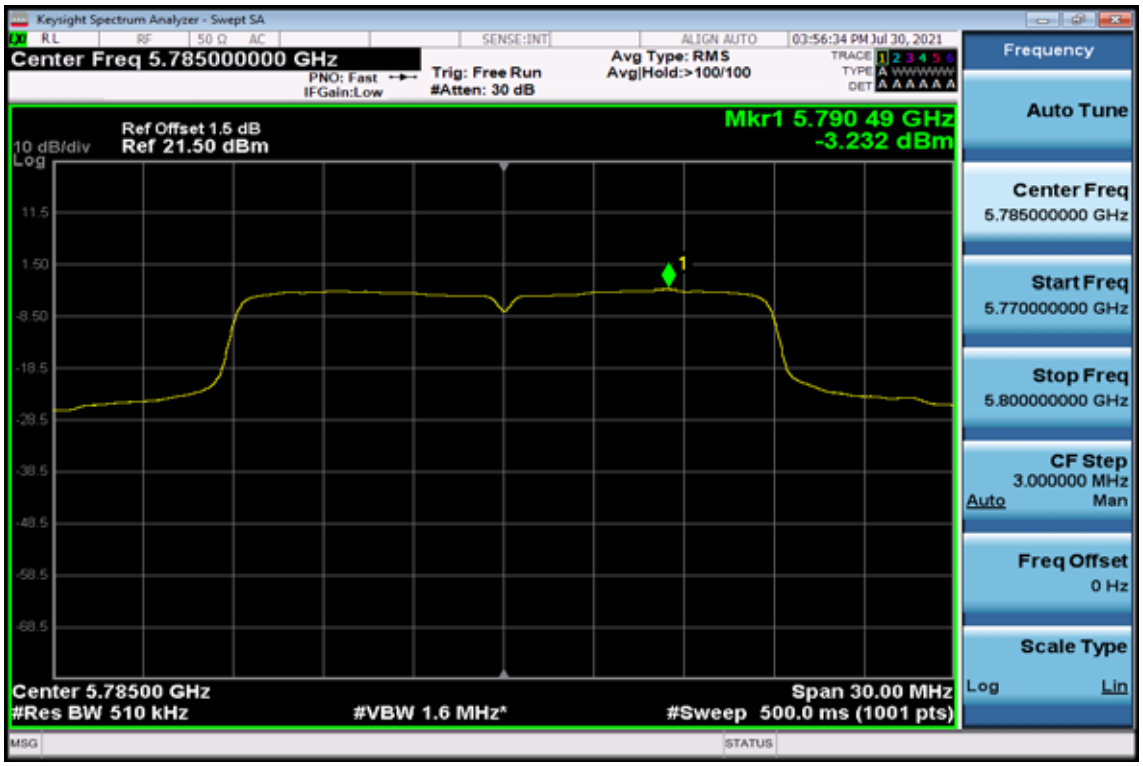
Power Spectral Density Test Plot (CH-High)

802.11n VHT20

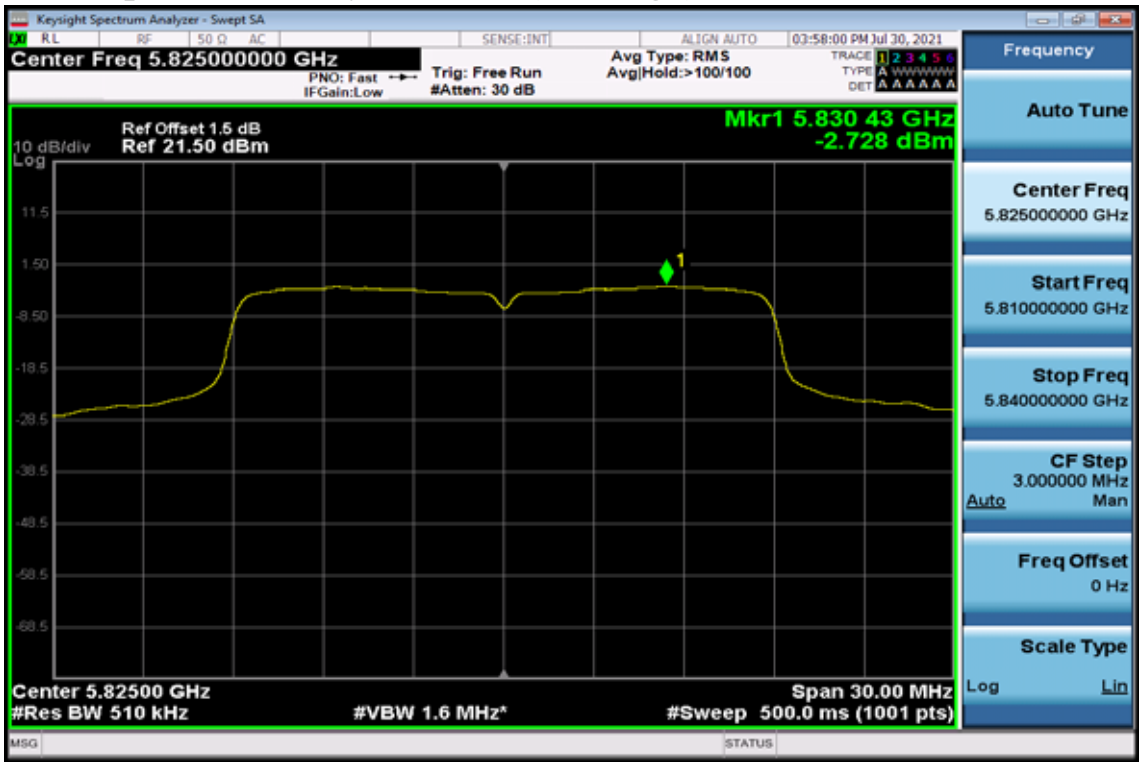
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



Power Spectral Density Test Plot (CH-High)

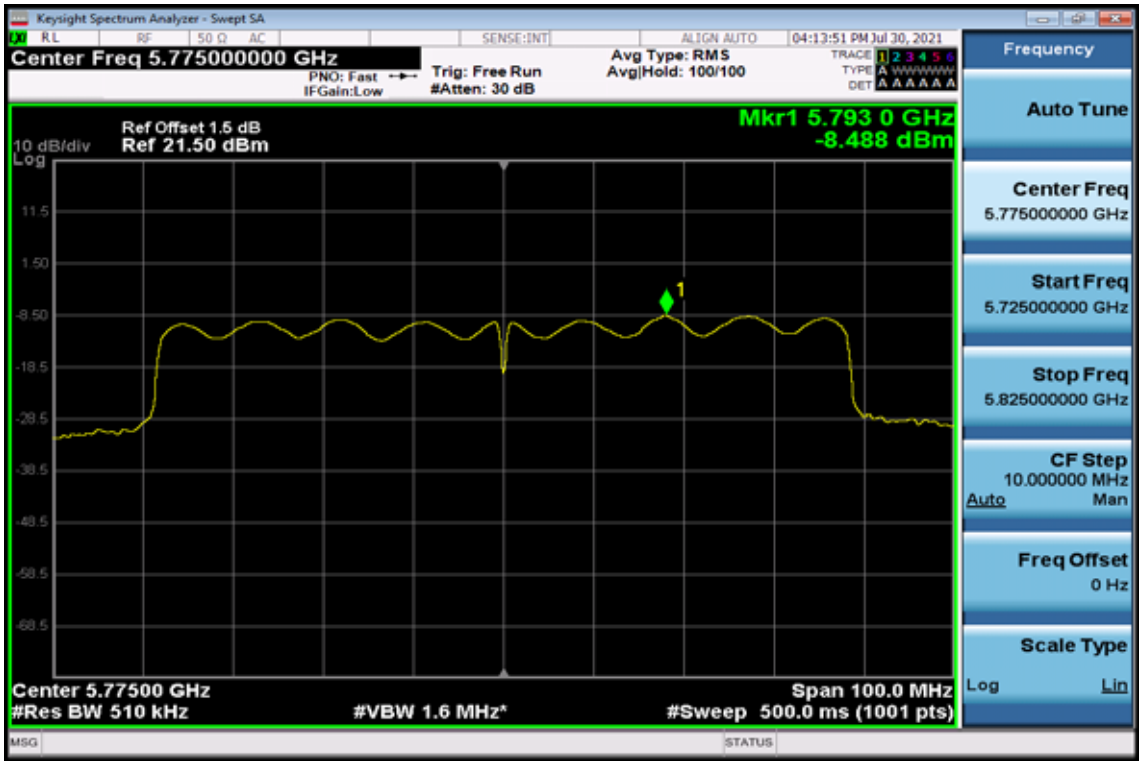


802.11n VHT40

Power Spectral Density Test Plot (CH-Low)

Power Spectral Density Test Plot (CH-High)

802.11ac VHT80
Power Spectral Density Test Plot



7. 26dB /99% Emission Bandwidth Measurement

7.1. Standard Applicable

According to §15.407(a) foe band 1,2,3. No Limit required.

7.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=300kHz, VBW =1MHz, Span= 50MHz, Sweep=auto
4. Mark the peak frequency and –26dB (upper and lower) frequency.
5. Repeat above procedures until all frequency measured were complete.

Refer to section D of KDB Document: KDB 789033 D02 General UNII Test Procedures New Rules v01r03

7.3. Measurement Equipment Used:

Refer to section 6.3 for details.

7.4. Test Set-up:

Refer to section 6.4 for details.

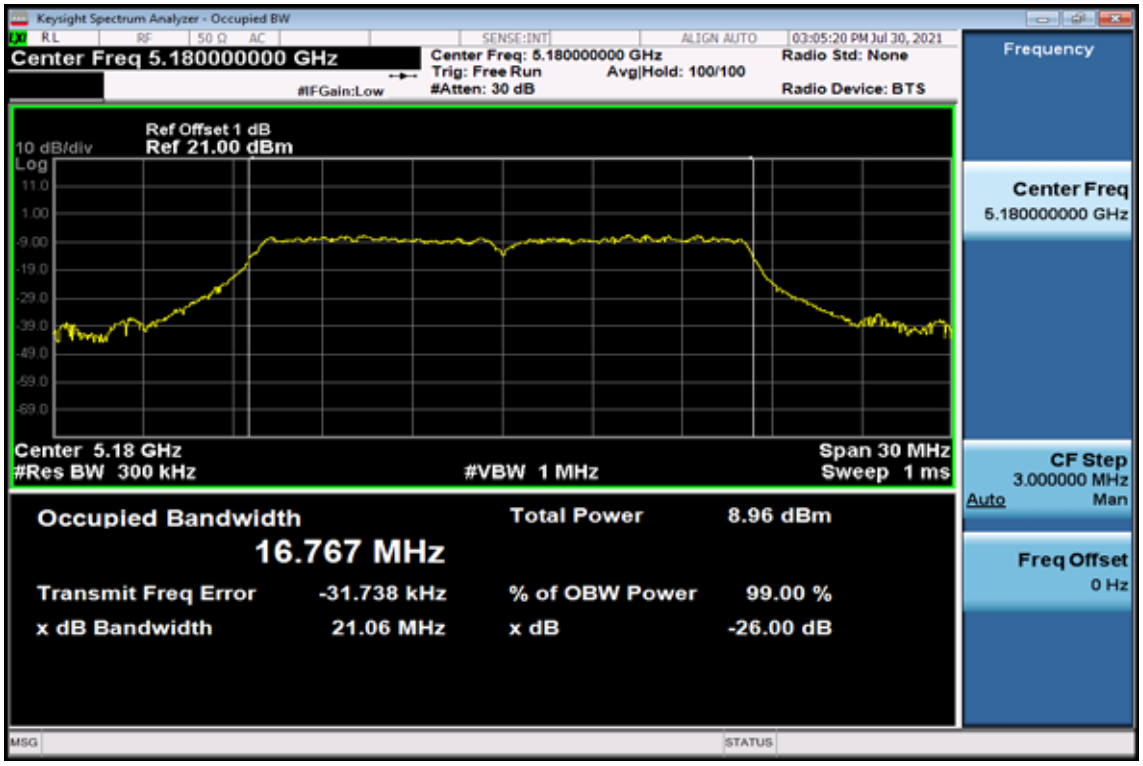
7.5. Measurement Result

Band	Mode	Frequency (MHz)	26dB Bandwidth (MHz)	99% OBW (MHz)
UNII-1	11a	5180	21.06	16.767
		5200	21.13	16.752
		5240	24.04	16.883
	HT20	5180	21.57	17.822
		5200	21.68	17.841
		5240	24.60	17.899
	HT40	5190	42.37	36.423
		5230	43.32	36.360
	VHT20	5180	21.61	17.809
		5200	21.77	17.826
		5240	24.64	17.895
	VHT40	5190	42.53	36.376
		5230	43.56	36.339
	VHT80	5210	84.04	75.640

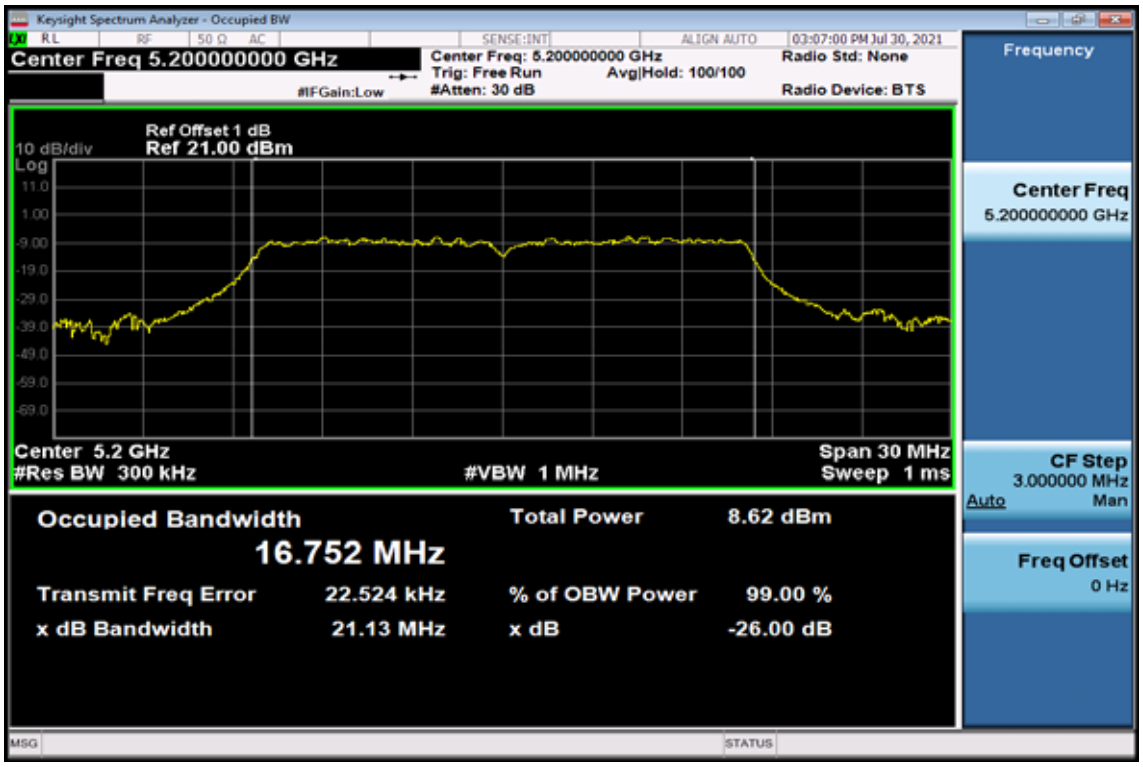
Band UNII-1

802.11a

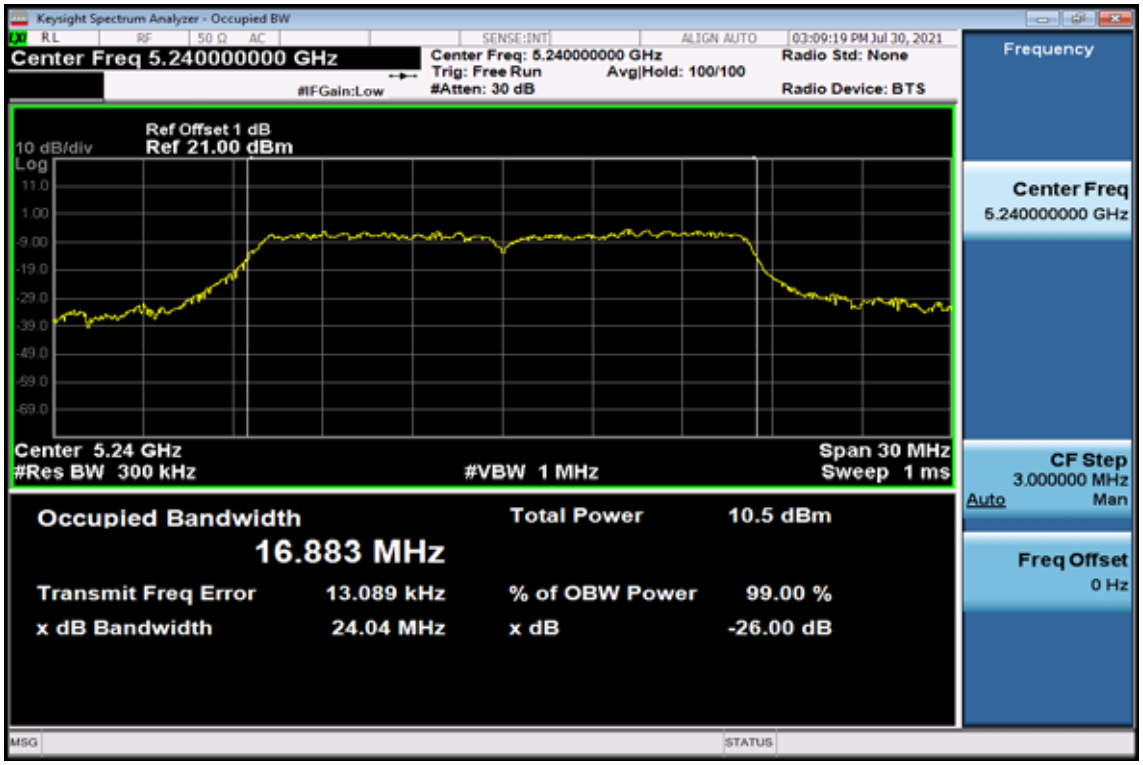
26dB / 99% Band Width Test Data CH-Low



26dB / 99% Band Width Test Data CH-Mid

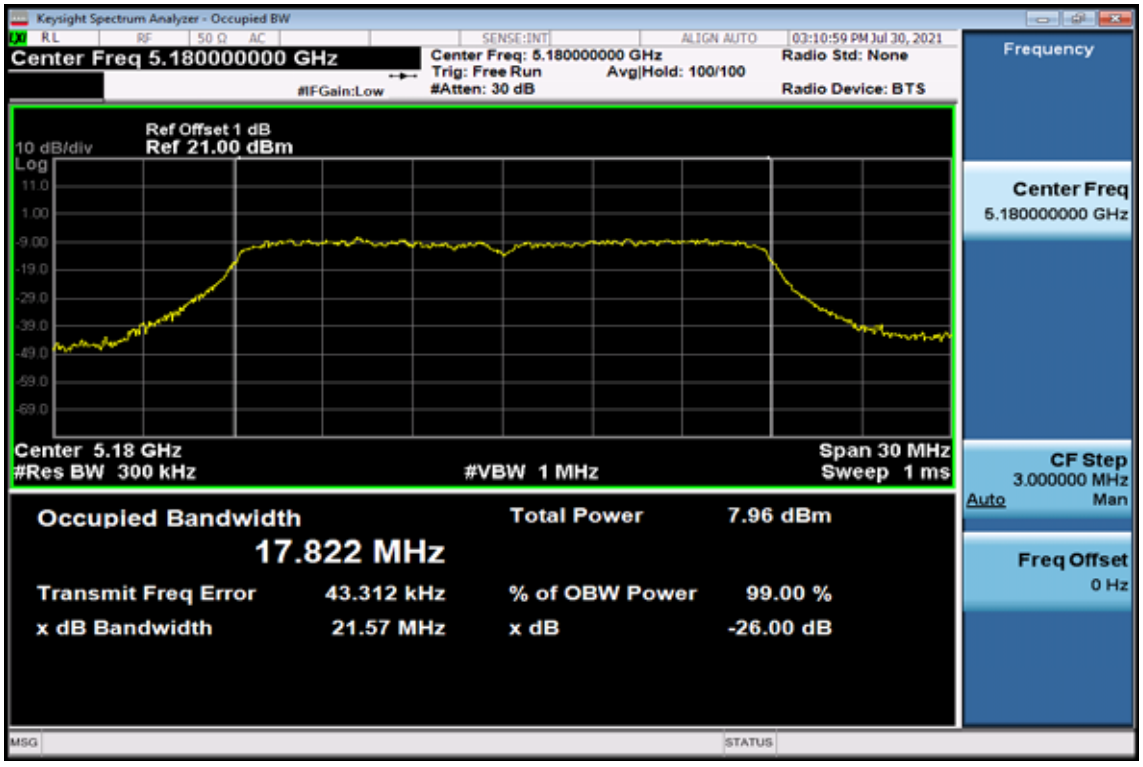


26dB / 99% Band Width Test Data CH-High

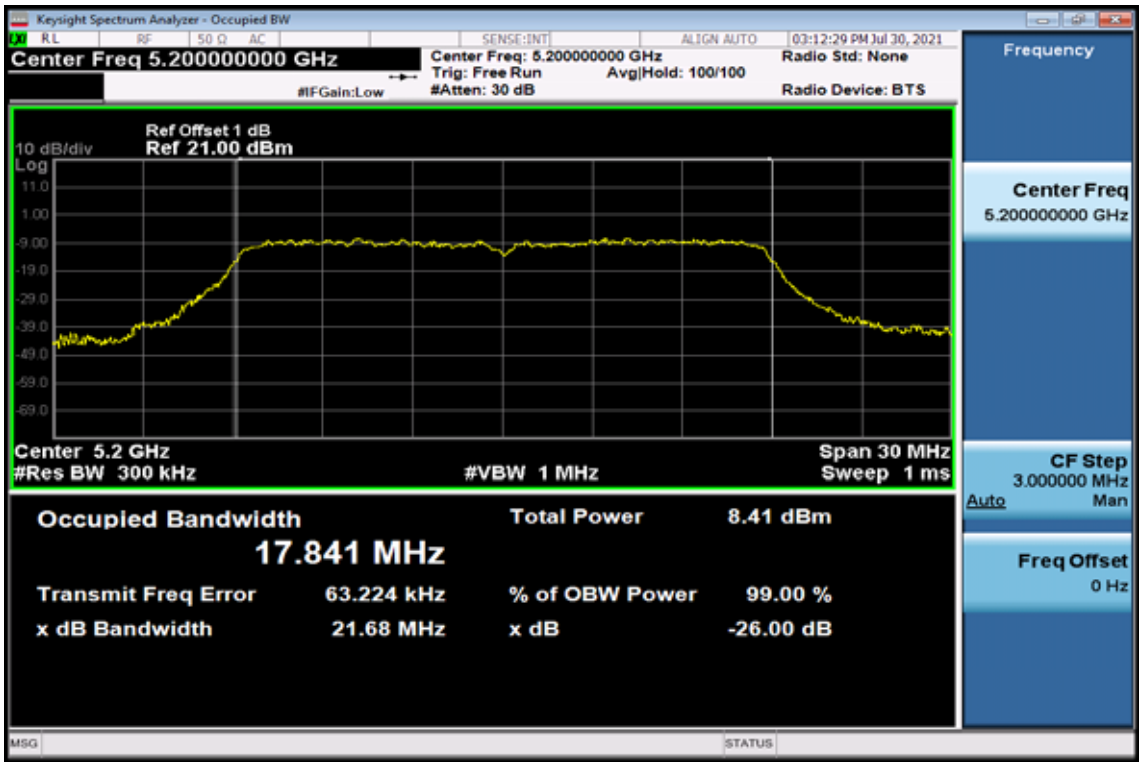


802.11n HT20

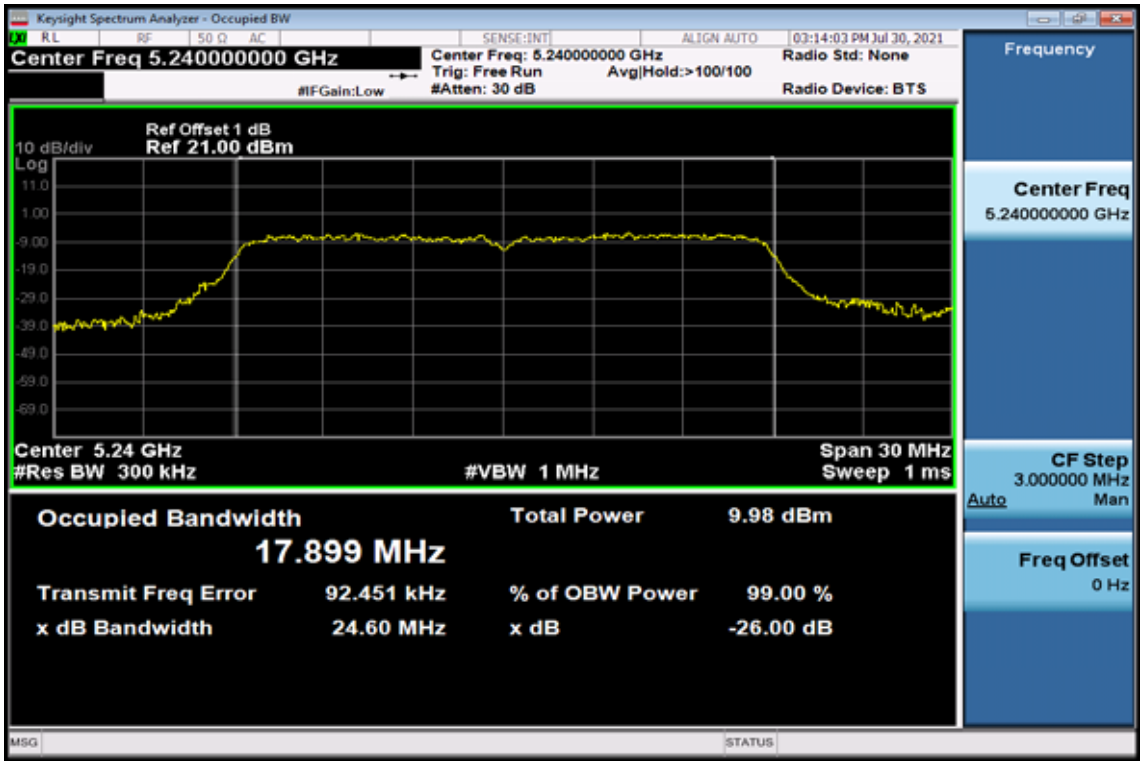
26dB / 99% Band Width Test Data CH-Low



26dB / 99% Band Width Test Data CH-Mid

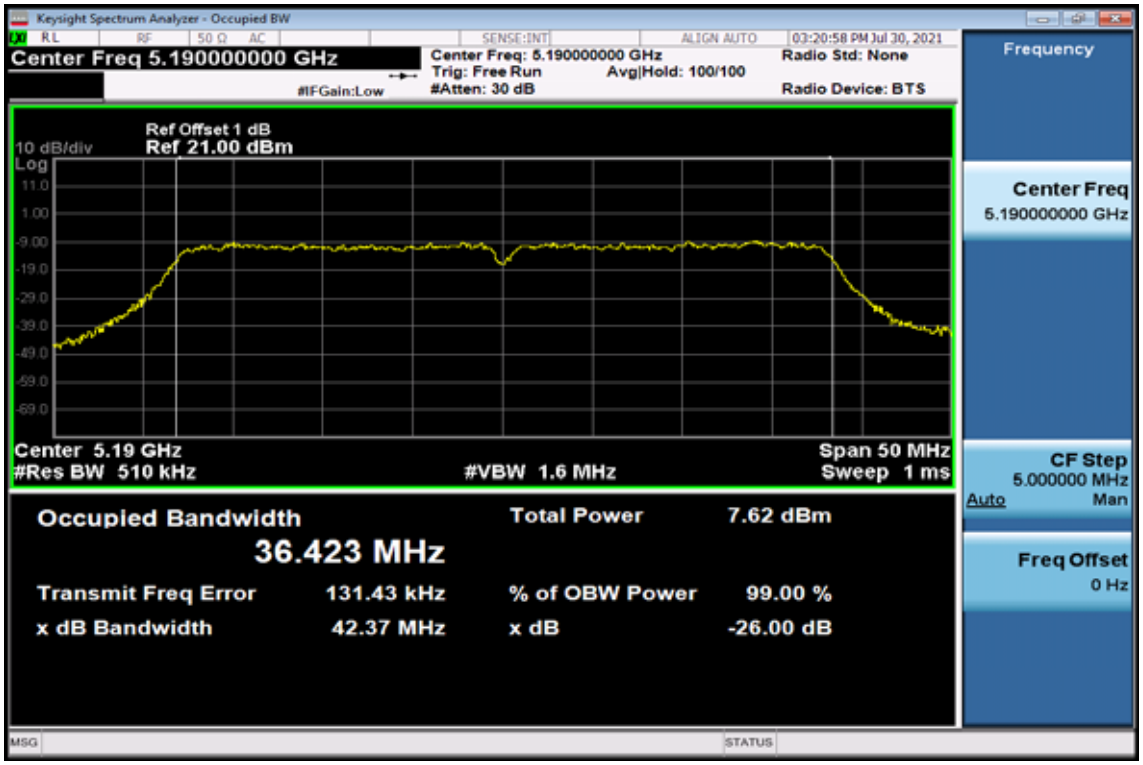


26dB / 99% Band Width Test Data CH-High

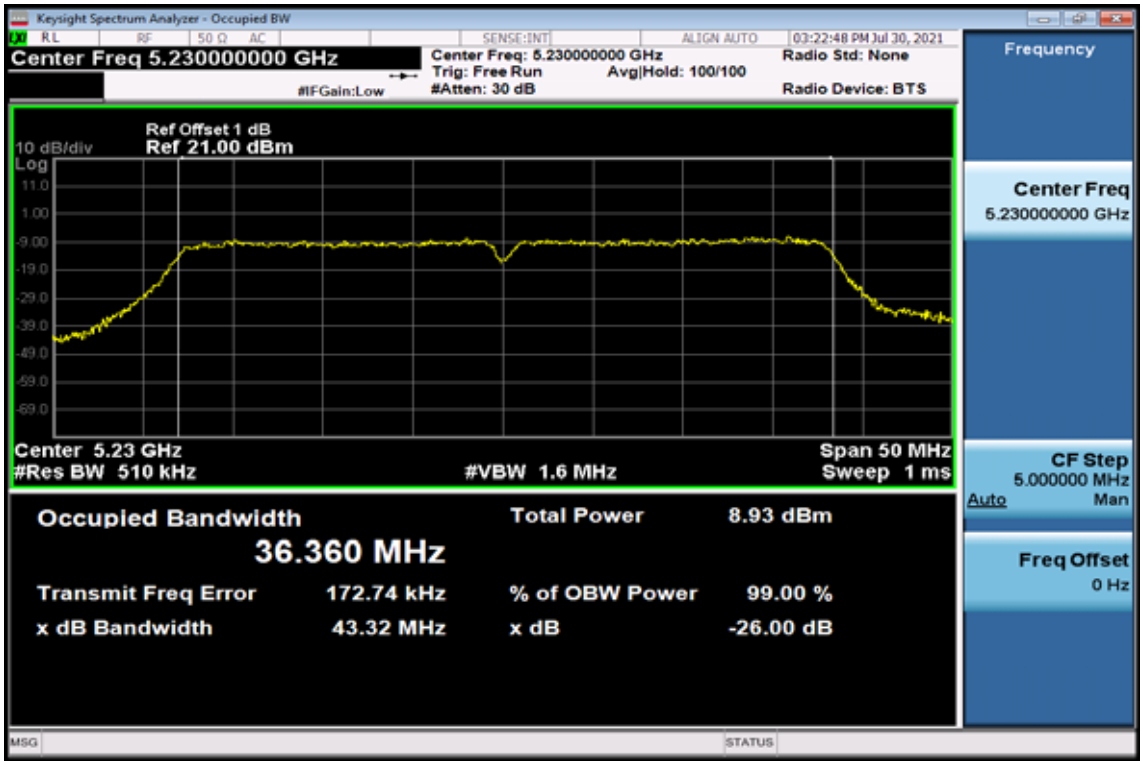


802.11n HT40

26dB / 99% Band Width Test Data CH-Low

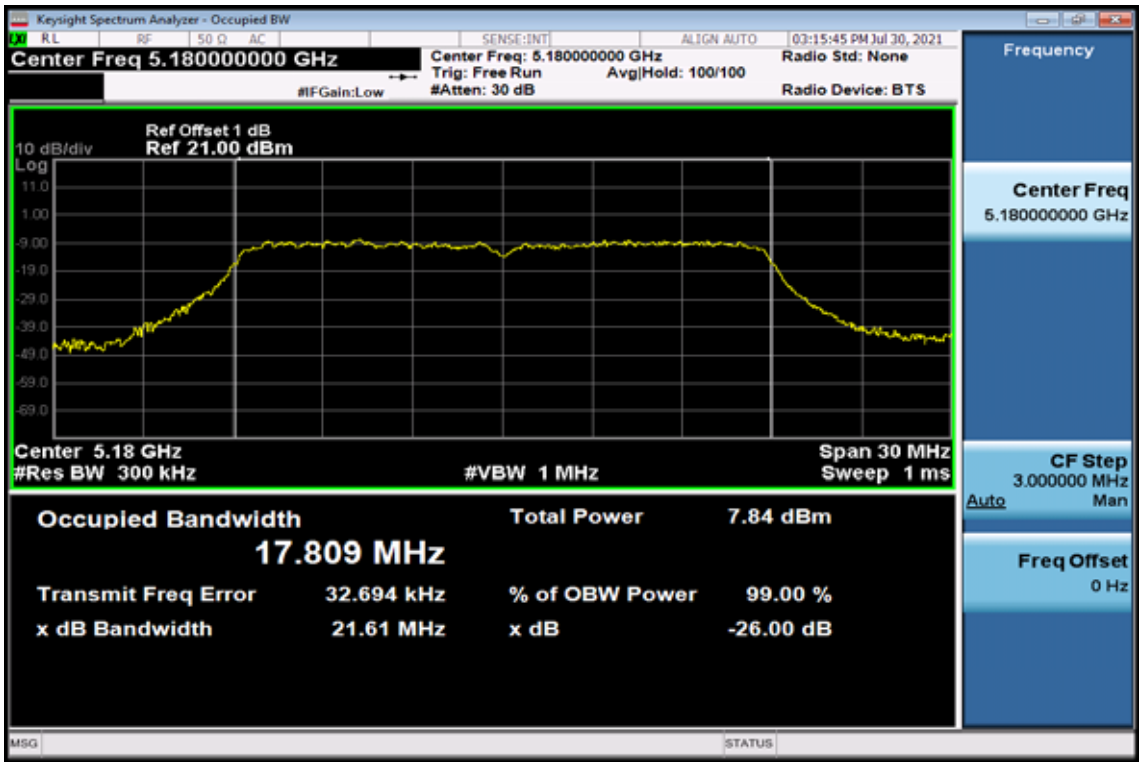


26dB / 99%Band Width Test Data CH-High

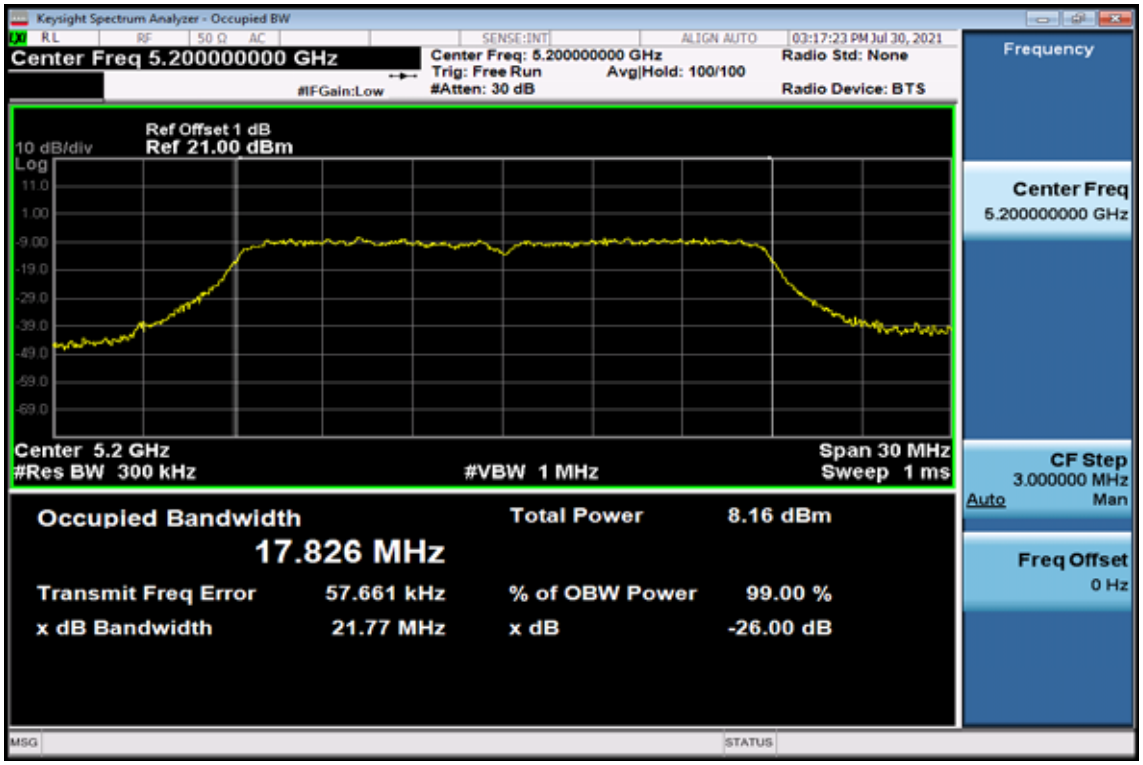


802.11n VHT20

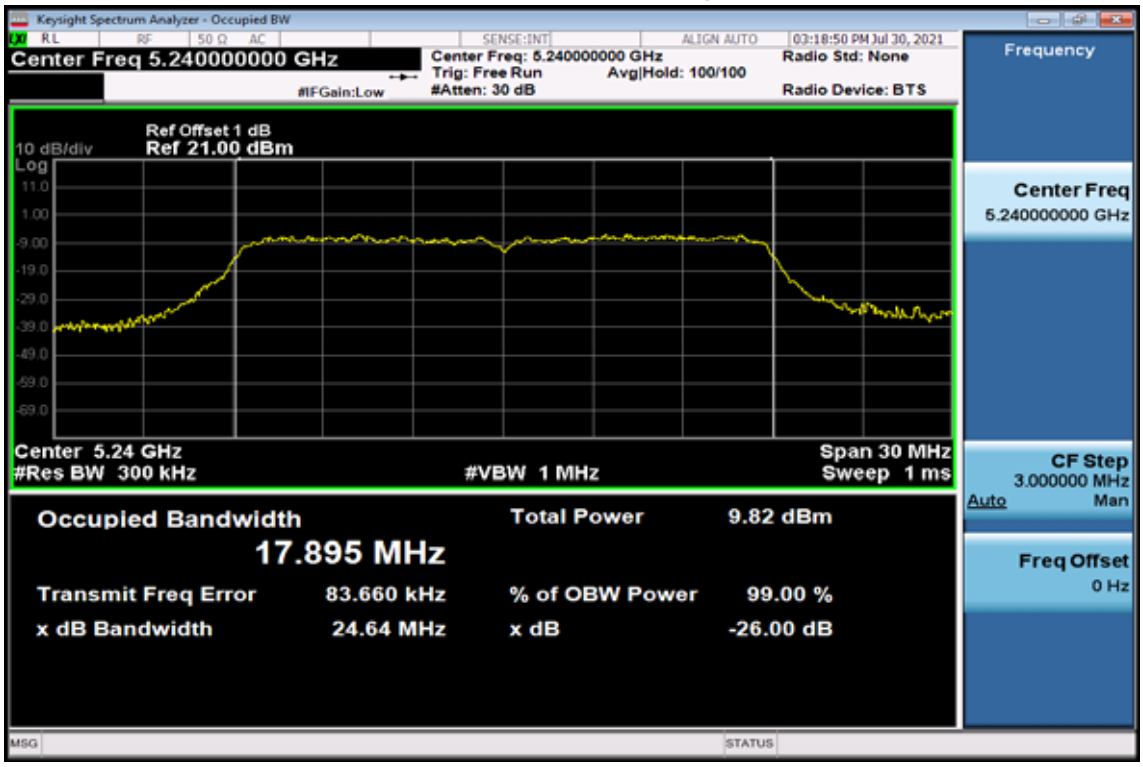
26dB / 99% Band Width Test Data CH-Low



26dB / 99% Band Width Test Data CH-Mid

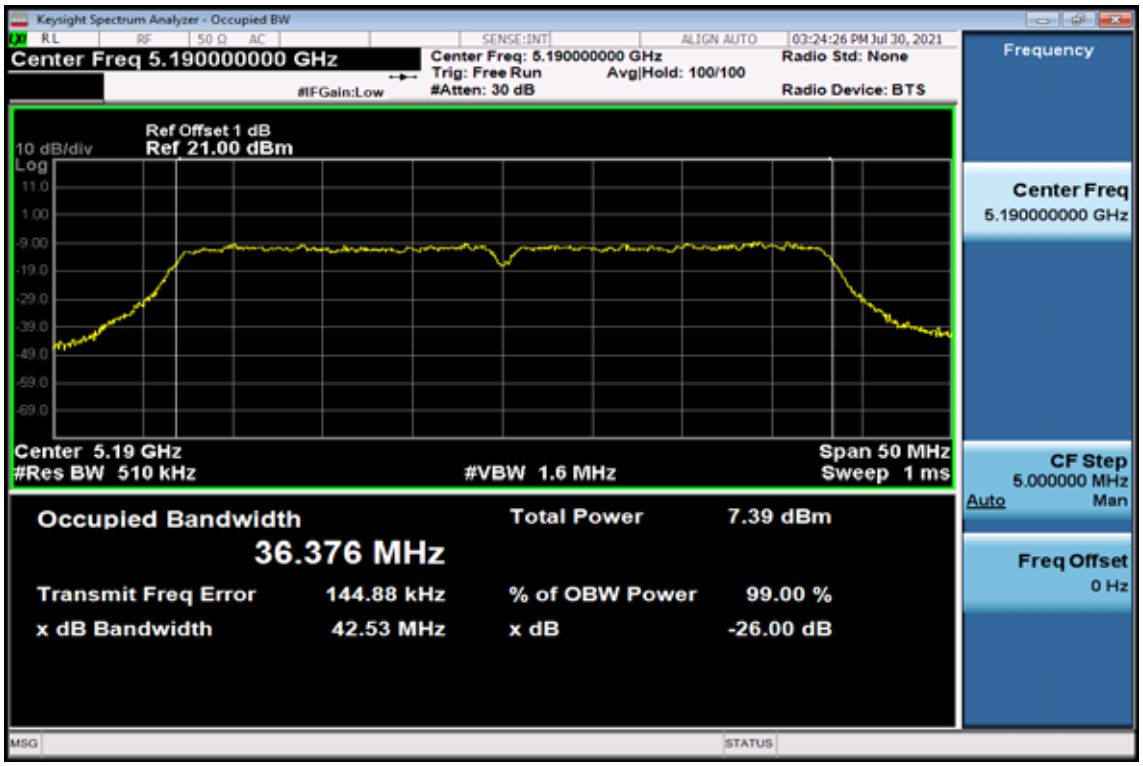


26dB / 99% Band Width Test Data CH-High

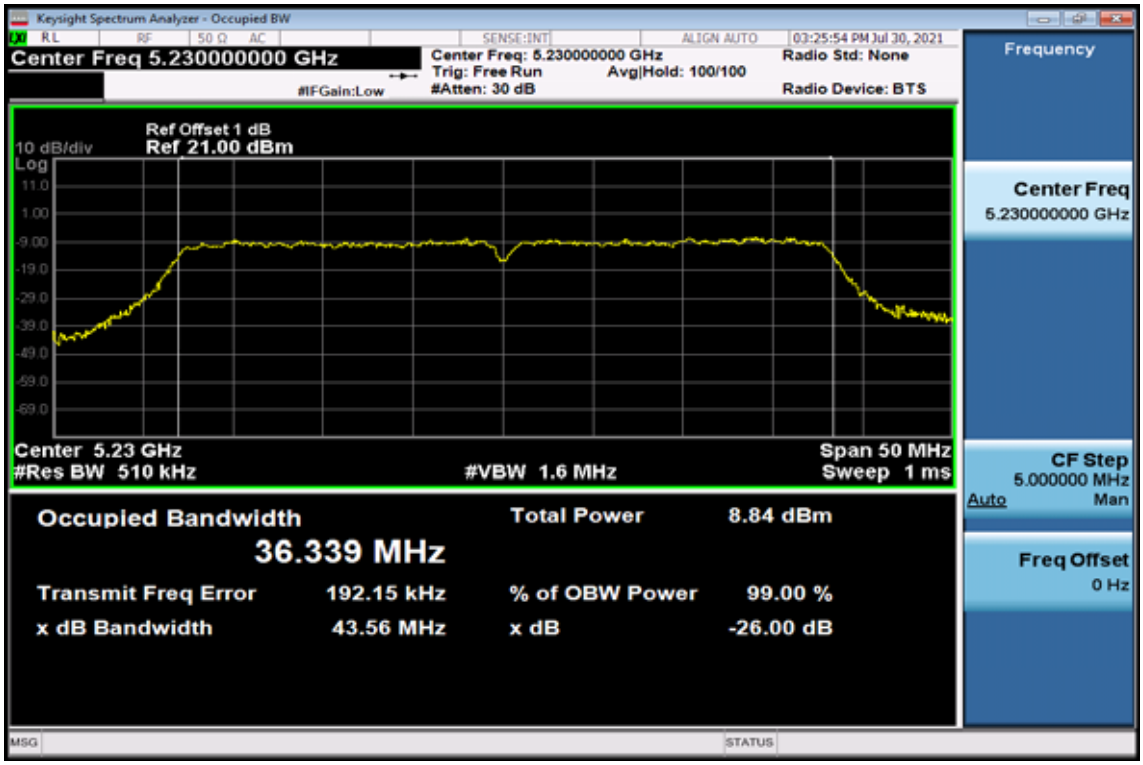


802.11n VHT40

26dB / 99% Band Width Test Data CH-Low

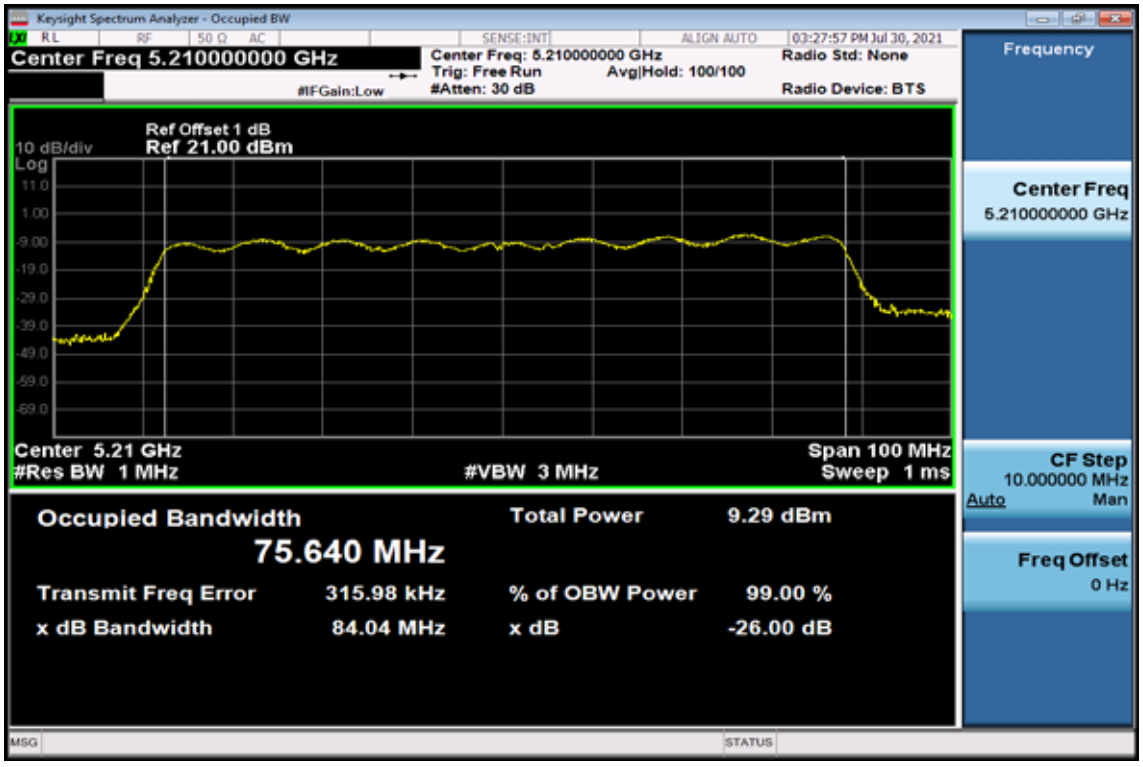


26dB / 99%Band Width Test Data CH-High



802.11ac VHT80

26dB / 99% Band Width Test Data CH-Low



8. 6dB Emission Bandwidth Measurement

8.1. Standard Applicable

According to §15.407 (e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

8.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=100kHz, VBW =300MHz, Span= 50MHz, Sweep=auto
4. Mark the peak frequency and –6dB (upper and lower) frequency.
5. Repeat above procedures until all frequency measured were complete.

Refer to section D of KDB Document: KDB 789033 D02 General UNII Test Procedures New Rules v01r03

8.3. Measurement Equipment Used:

Refer to section 6.3 for details.

8.4. Test Set-up:

Refer to section 6.4 for details.

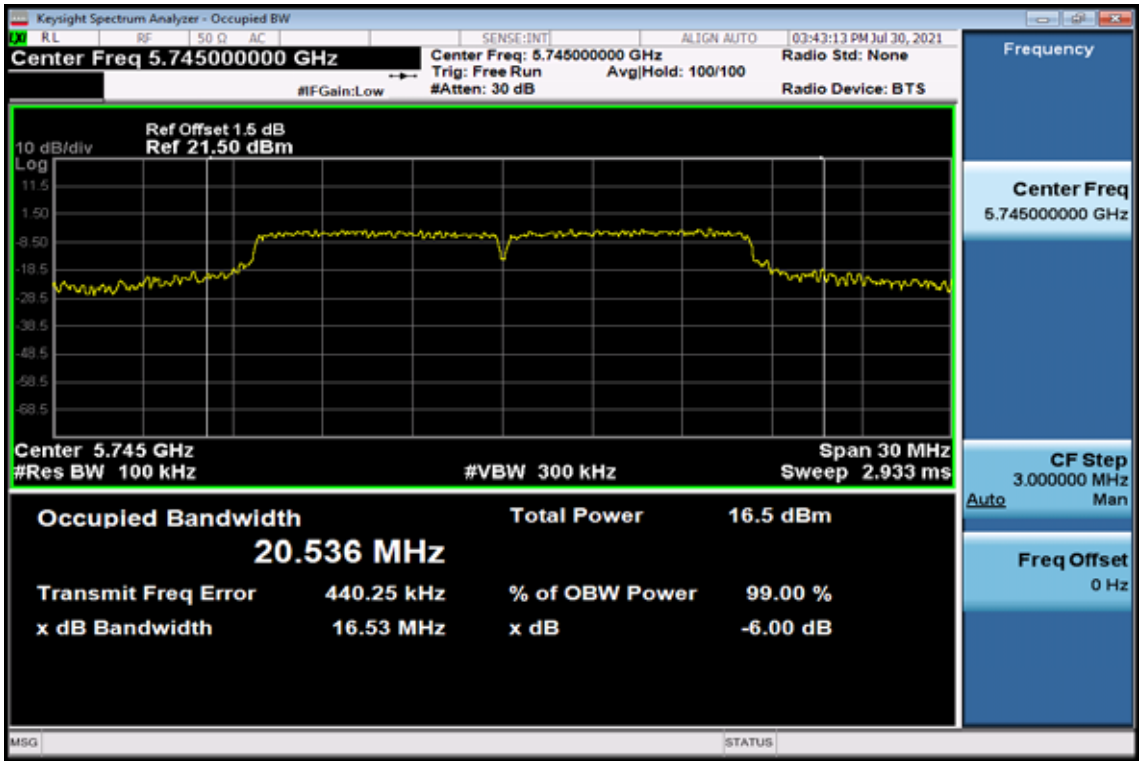
8.5. Measurement Result

Band	Mode	Frequency (MHz)	6dB Bandwidth (MHz)	6dB BW Limit (kHz)
UNII-3	11a	5745	16.53	> 500
		5785	16.53	> 500
		5825	16.52	> 500
	HT20	5745	17.76	> 500
		5785	17.76	> 500
		5825	17.76	> 500
	HT40	5755	36.46	> 500
		5795	36.48	> 500
	VHT20	5745	17.77	> 500
		5785	17.78	> 500
		5825	17.75	> 500
	VHT40	5755	36.51	> 500
		5795	36.48	> 500
	VHT80	5775	76.39	> 500

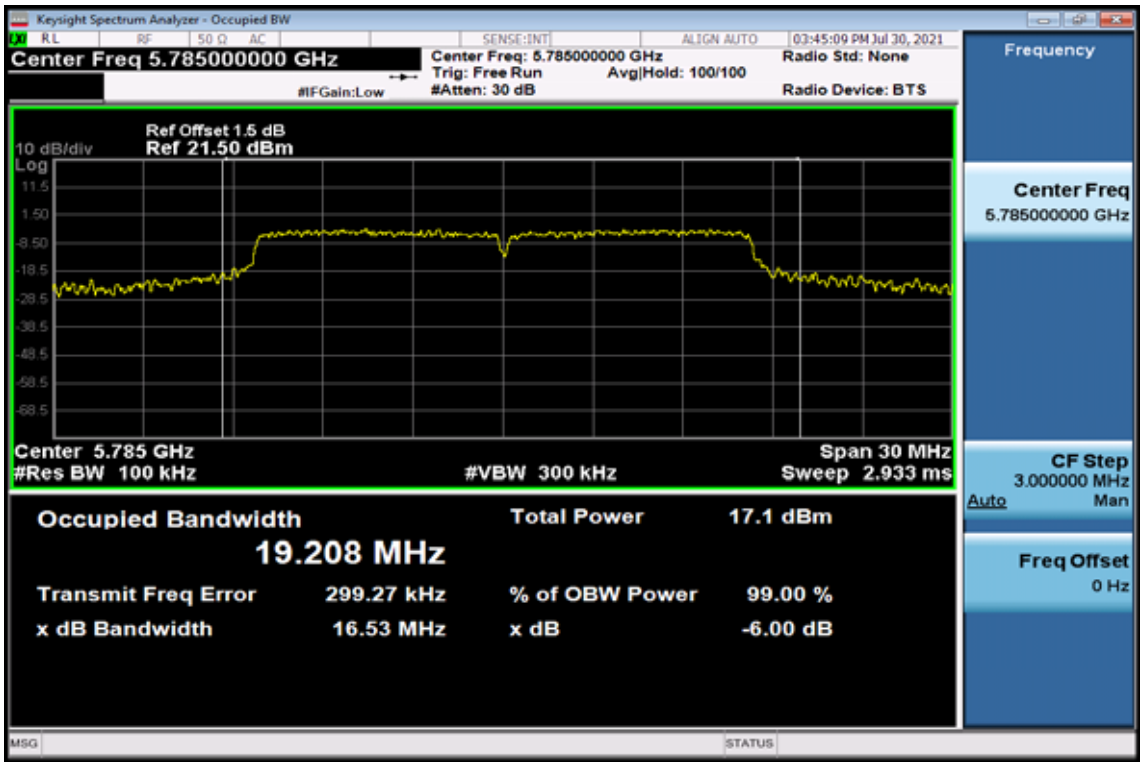
Band UNII-3

802.11a

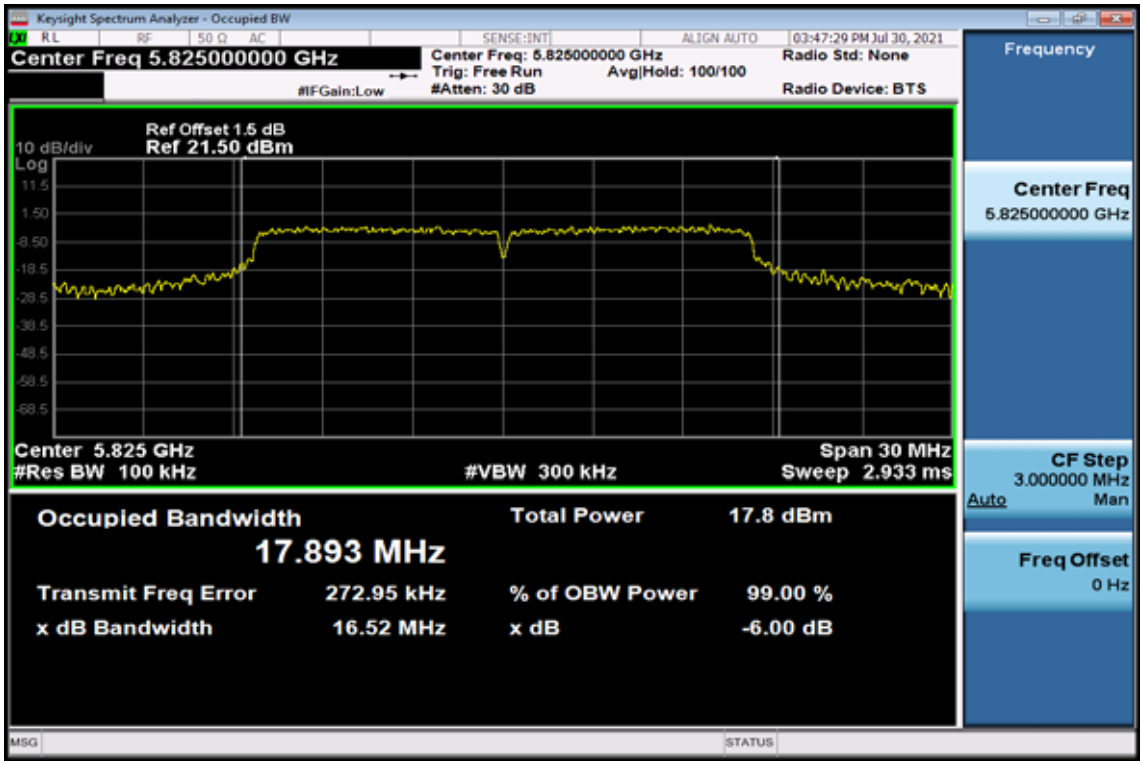
6dB Band Width Test Data CH-Low



6dB Band Width Data CH-Mid

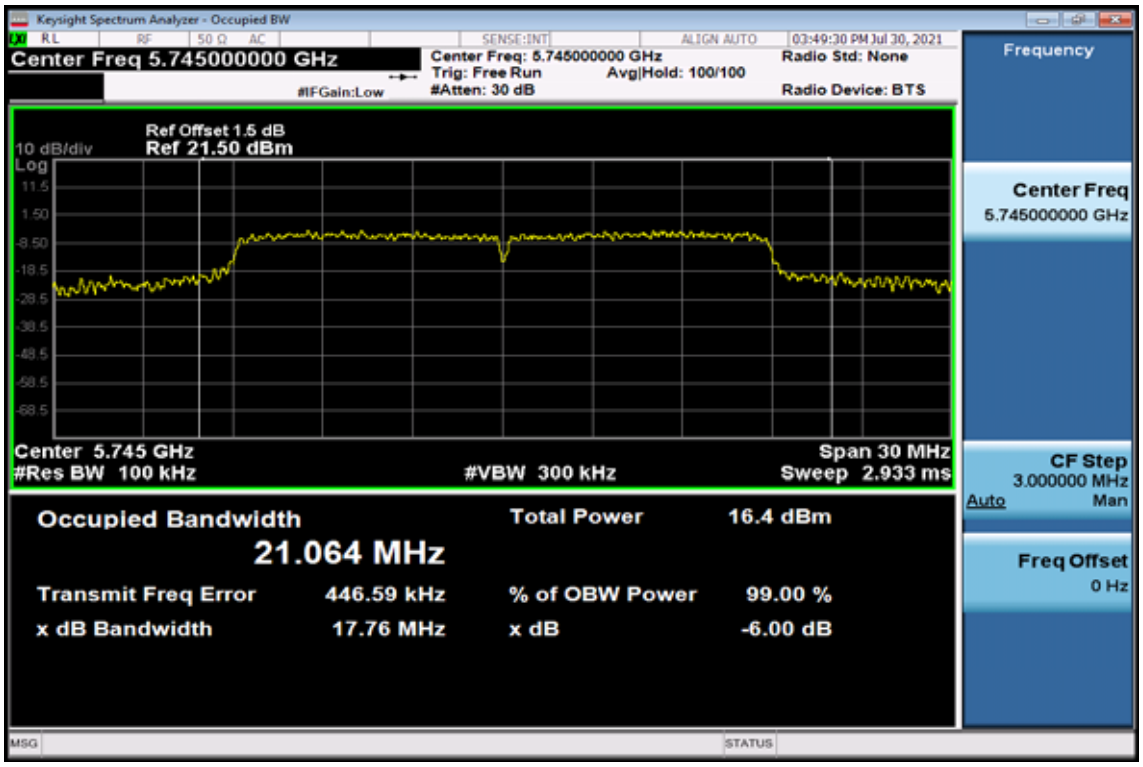


6dB Band Width Data CH-High

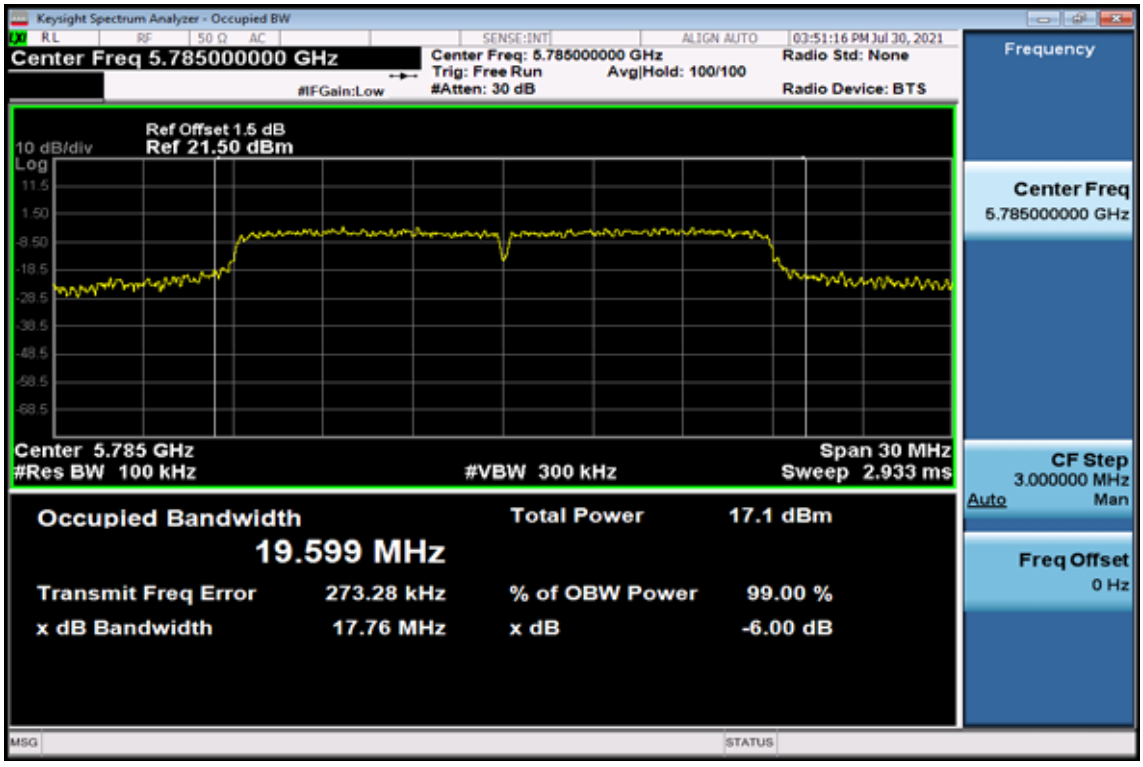


802.11n HT20

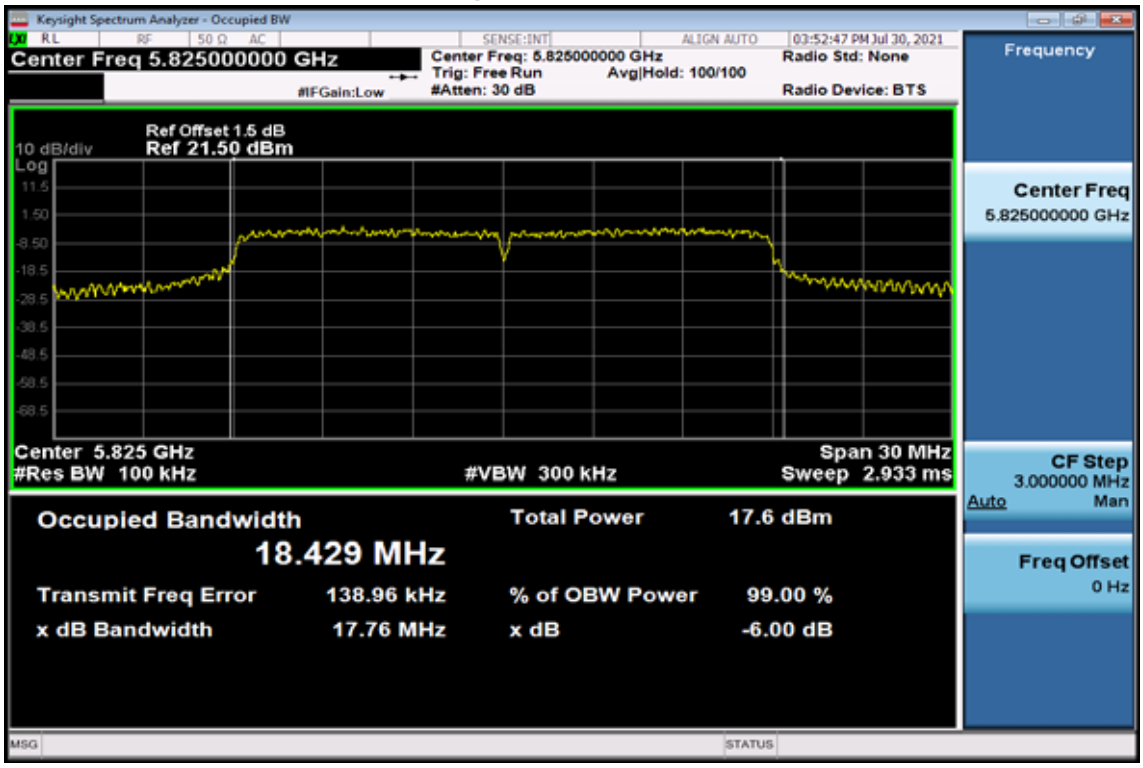
6dB Band Width Data CH-Low



6dB Band Width Data CH-Mid

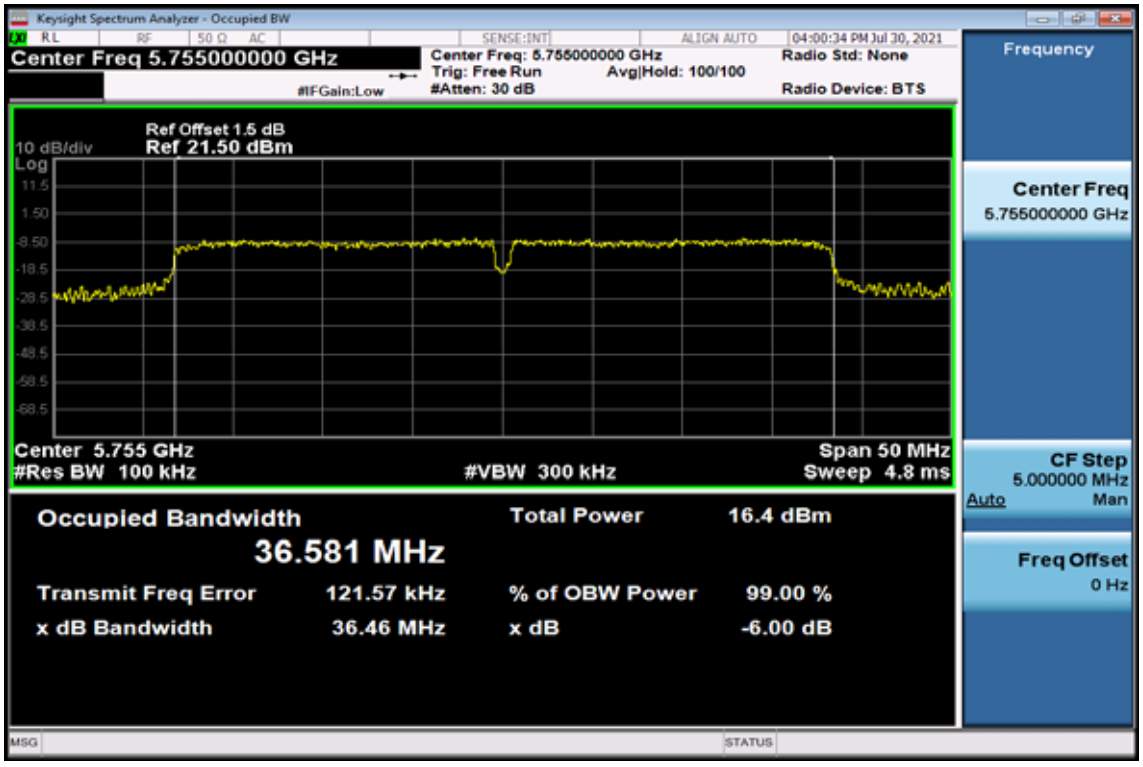


6dB Band Width Data CH-High

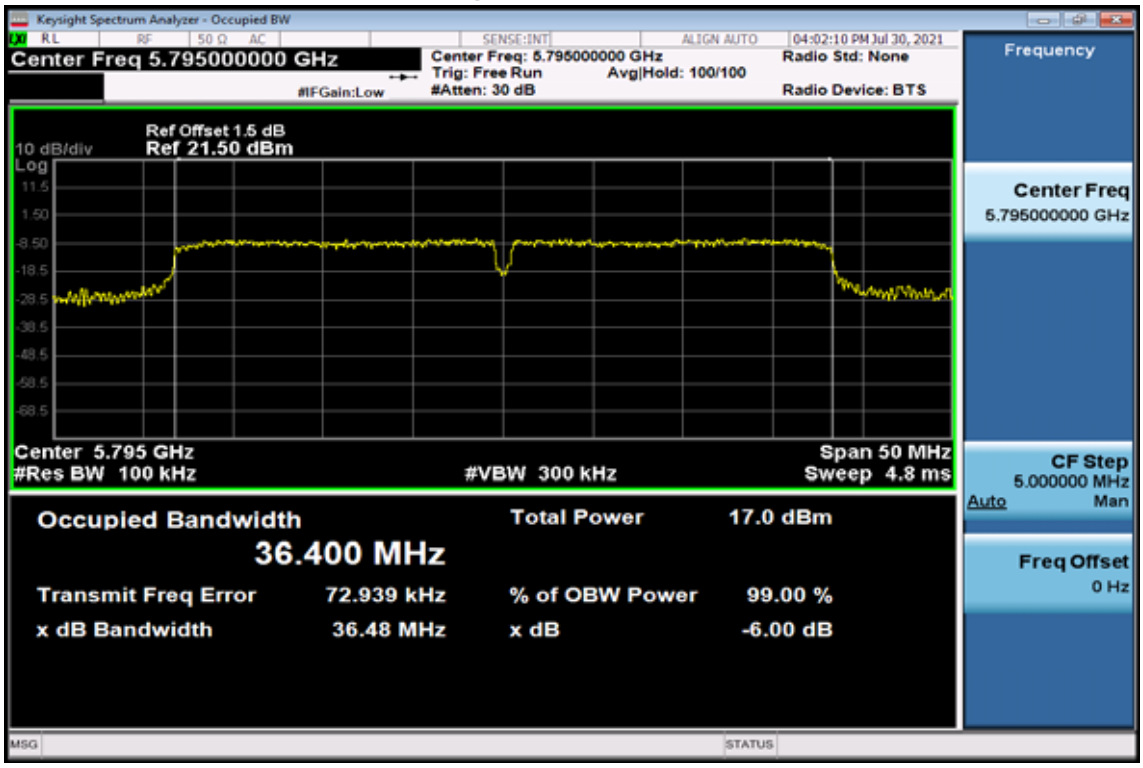


802.11n HT40

6dB Band Width Data CH-Low

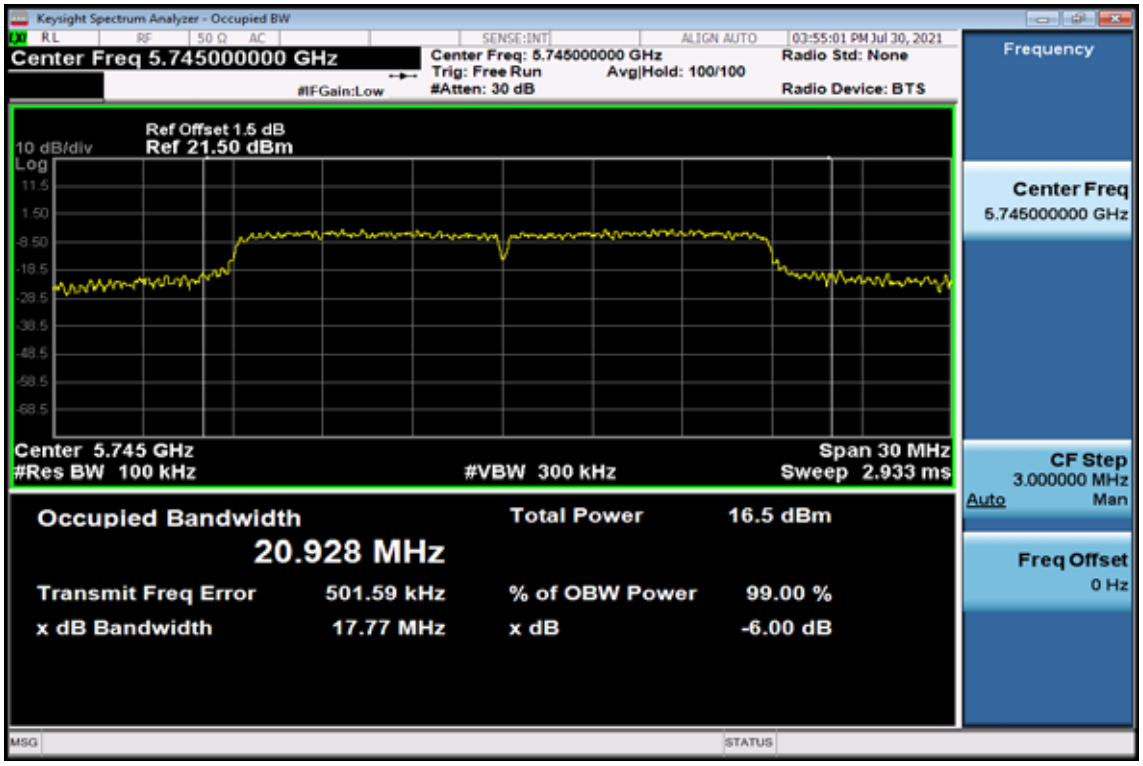


6dB Band Width Data CH-High

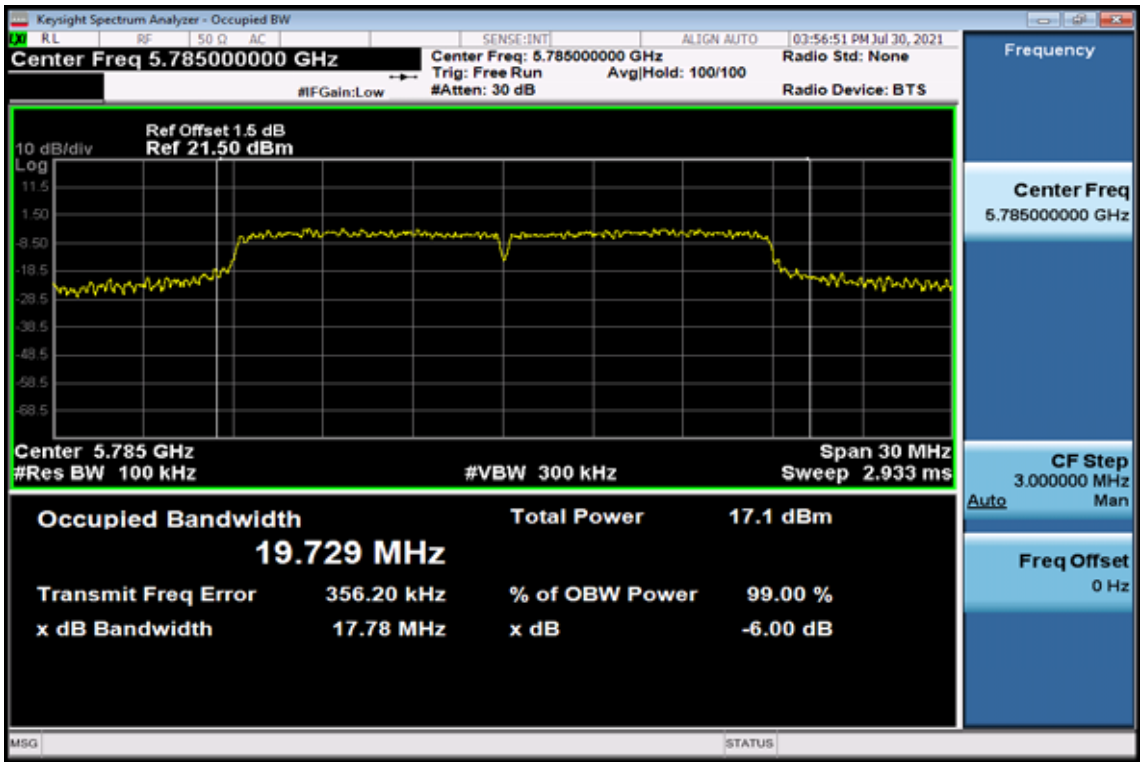


802.11ac VHT20

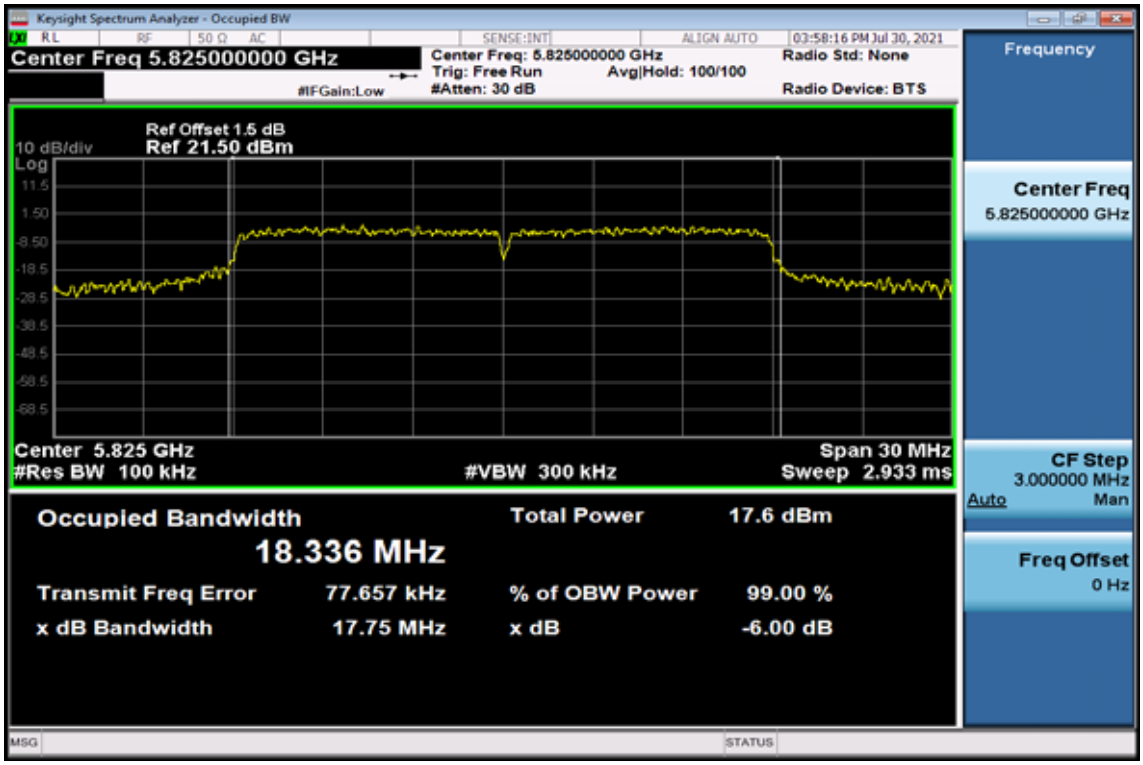
6dB Band Width Data CH-Low



6dB Band Width Data CH-Mid

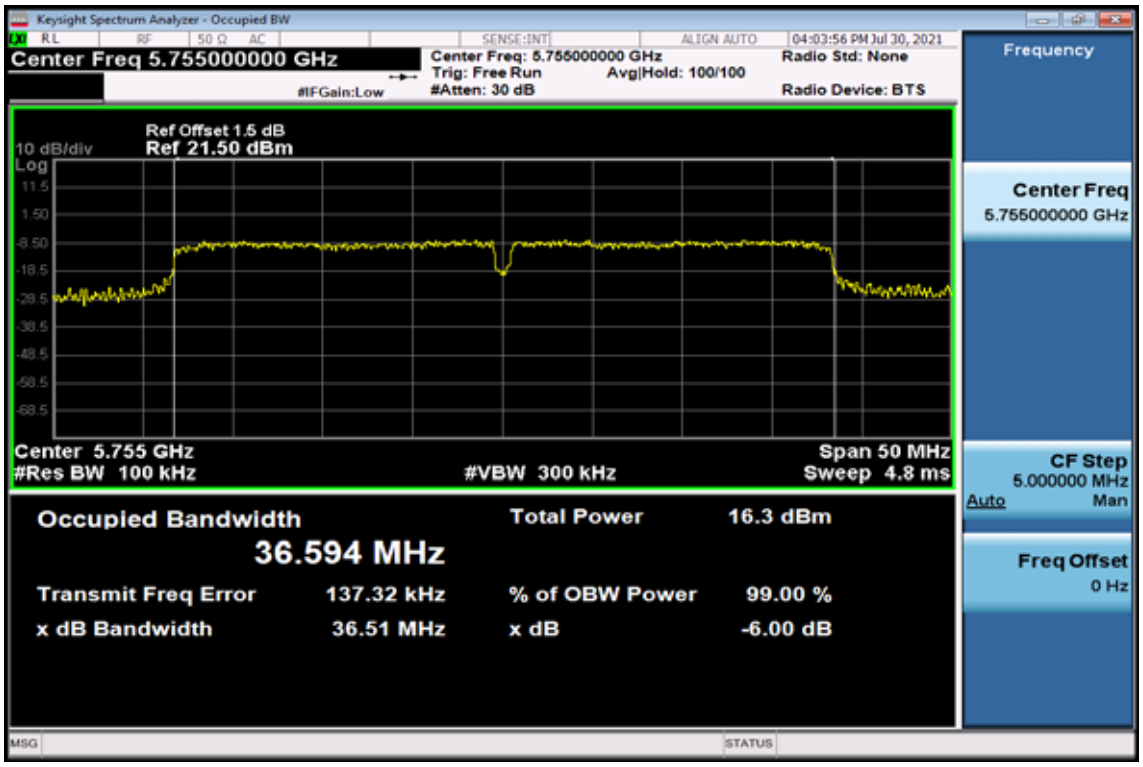


6dB Band Width Data CH-High

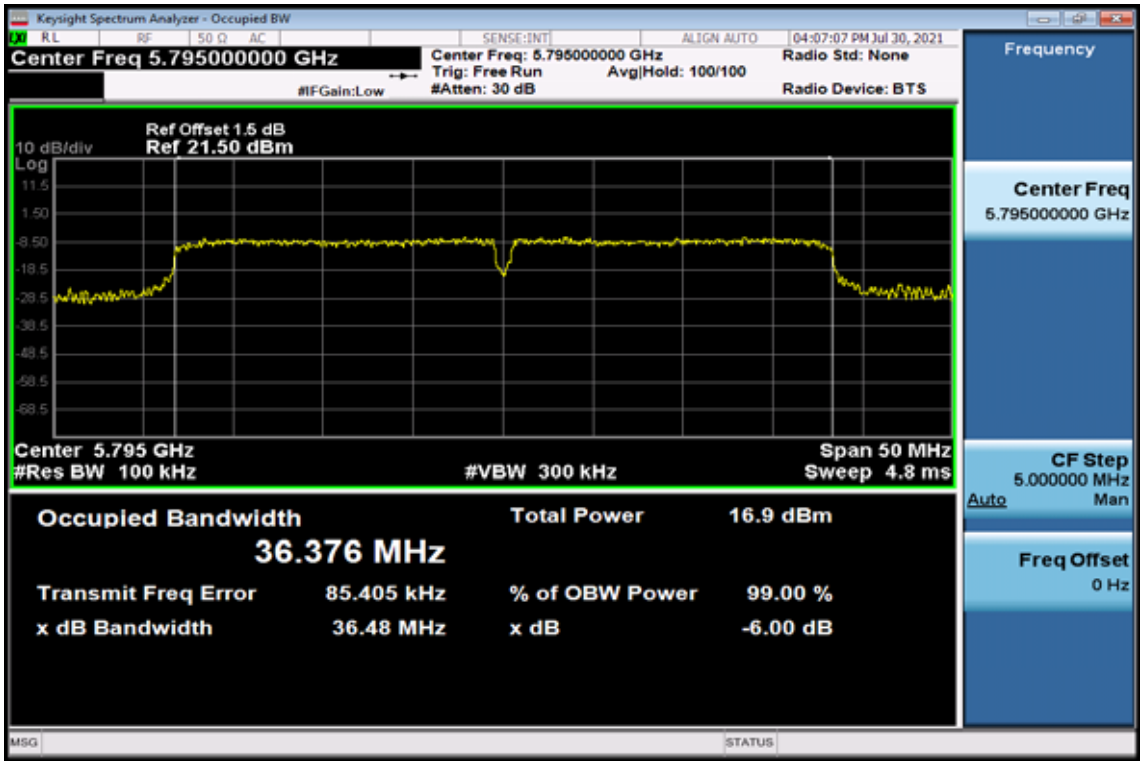


802.11ac VHT40

6dB Band Width Data CH-Low



6dB Band Width Data CH-High



802.11 ac VHT80

6dB Band Width Data CH-Low