

TEST REPORT

Report No.: SHE19020010-03GE

Date: 2020-5-15

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Applicant : Shenzhen UniStrong Science & Technology Co.,Ltd.
Address of Applicant : B,4-4Factory, Zhengcheng Road, Fuyong Baoan District, Shenzhen, China

Product Name : Rugged Smart Tablet
Model No. : UT30P
Sample No. : E19020010-05#01
FCC ID : 2AOPD-UT30P
ISED Number : 11546A-UT30P

Standards : FCC CFR47 Part 15, Subpart E
RSS-Gen (Issue 5, March 2019)
RSS-247 (Issue 2, February 2017)

Date of Receipt : 2020-2-10
Date of Test : 2020-2-10 ~ 2020-5-15
Date of Issue : 2020-5-15

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Revision Record			
Version	Date	Revisions	Revised By
1.0	2019-11-01	Original	--

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1 General Information

1.1 Testing Laboratory

Company Name	ICAS Testing Technology Services (Shanghai) Co., Ltd.
Address	155 Pingbei Rd, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Company Name	Shenzhen UniStrong Science & Technology Co.,Ltd.
Address	B,4-4Factory, Zhengcheng Road, Fuyong Baoan District, Shenzhen, China
Contact Person	Lili Zheng
Telephone	+86-21-54467182
Email	ll.zheng@unistrong.com

1.3 Details of EUT

Product Name	Rugged Smart Tablet
Brand Name	Unistrong
Model No.	UT30P
FCC ID	2AOPD-UT30P
ISED Number	11546A-UT30P
Mode of Operation	WLAN 802.11a/n(HT20/40)/ac(HT20/40/80)
Frequency Range	Band I: 5150 MHz ~ 5250 MHz Band IV: 5725 MHz ~ 5850 MHz
Modulation Type	256QAM, 64QAM, 16QAM, BPSK, QPSK
Channel Bandwidth	802.11a: 20MHz 802.11n: 20MHz, 40MHz 802.11ac: 20MHz, 40MHz, 80MHz
Antenna Type	Internal Antenna
Antenna Gain	1.63 dBi
Extreme Temperature Range	-20℃~ +55℃
Test Voltage	DC 3.8V
Extreme Voltage	Low Voltage: DC 3.0V High Voltage: DC 4.35V
Product Type	Mobile and protable for FCC standard Indoor for IC standard

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1.4 Test Methodology

47 CFR Part 15, Subpart C (10-1-16 Edition)	Miscellaneous Wireless Communications Services
KDB Publication 789033 D02 v02r01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
KDB Publication 662911 D01 v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)
RSS-Gen (Issue 5, March 2019)	General Requirements for Compliance of Radio Apparatus
RSS-247 (Issue 2, February 2017)	Digital Transmission Systems (DTSSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Note(s):

All test items were verified and recorded according to the standards and without any addition/deviation/exclusion during the test.

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2 Test Condition

2.1 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060

2.2 Equipment List

Name of Equipment	Manufacturer	Model	Serial No.	Cal. Due Date
Spectrum Analyzer	Keysight	N9020B	MY59260184	2020-07-28
Spectrum Analyzer	Rohde & Schwarz	FSV40N	101450	2020-06-24
EMI Test Receiver	Rohde & Schwarz	ESPI3	100173	2020-06-19
EMI Test Receiver	Rohde & Schwarz	ESR 7	101911	2020-06-19
V-network	SCHWARZBECK	NSLK 8127	8127-902	2021-02-20
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	100687	2020-08-22
Broadband Antenna	SCHWARZBECK	VULB9163	9163-1037	2020-06-06
Horn Antenna-18G	SCHWARZBECK	BBHA9120D	9120D-1775	2020-06-06
Loop Antenna	SCHWARZBECK	FMZB 1513	N/A	2021-03-19
Horn Antenna-40G	YINGLIAN	LB-180400-KF	N/A	2020-07-26
EMC chamber 9*6*6 (L*W*H)	CHANGNING	966	N/A	2020-06-26
Shielded Enclosure 8*5*4 (L*W*H)	CHANGNING	854	N/A	2020-08-28
Test Software	BL	BL410_E	N/A	N/A
Power meter	Keysight	U2021XA	MY57200011	2020-07-28

2.3 Measurement Uncertainty

Parameter	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	± 1.5 dB
	> 1GHz	± 1.5 dB
Radiated Emission	30 MHz – 1 GHz	± 3 dB
	> 1GHz	± 3 dB

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3 Test Set-up and Operation Modes

3.1 Details of Test Mode

Using test software was control EUT work in continuous transmitter and receiver mode. Select test channel as below:
For 802.11a/n(HT20), 802.11ac(VHT20)

Band I (5150 – 5250 MHz)		Band IV (5725 – 5850 MHz)	
Channel	Frequency	Channel	Frequency
The lowest channel(CH36)	5180MHz	The lowest channel(CH149)	5745MHz
The middle channel(CH44)	5220MHz	The middle channel(CH157)	5785MHz
The highest channel(CH48)	5240MHz	The highest channel(CH165)	5825MHz

For 802.11n(HT40), 802.11ac(VHT40)

Band I (5150 – 5250 MHz)		Band IV (5725 – 5850 MHz)	
Channel	Frequency	Channel	Frequency
The lowest channel(CH38)	5190MHz	The lowest channel(CH151)	5755MHz
The highest channel(CH46)	5230MHz	The highest channel(CH159)	5795MHz

For 802.11ac(VHT80)

Band I (5150 – 5250 MHz)		Band IV (5725 – 5850 MHz)	
Channel	Frequency	Channel	Frequency
The lowest channel(CH42)	5210MHz	The lowest channel(CH155)	5775MHz

Through Pre-scan under all rate at lowest channel, the data rate as below table described is the worst case, so we choose these data rate for test.

Type	Data rate
802.11a	6Mbps
802.11n(HT20), 802.11ac(VHT20)	MCS4
802.11n(HT40), 802.11ac(VHT40)	MCS3
802.11ac(VHT80)	MCS4

The basic operation modes are:

- A. On
 - 1. WLAN mode
 - a. Transmitting
 - b. Receiving
- B. Standby

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C. Off

3.2 Special Accessories and Auxiliary Equipment

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	TP00083A	N/A

3.3 Support Software

Description	Manufacturer	Software Name
Software	Qualcomm	QRCT

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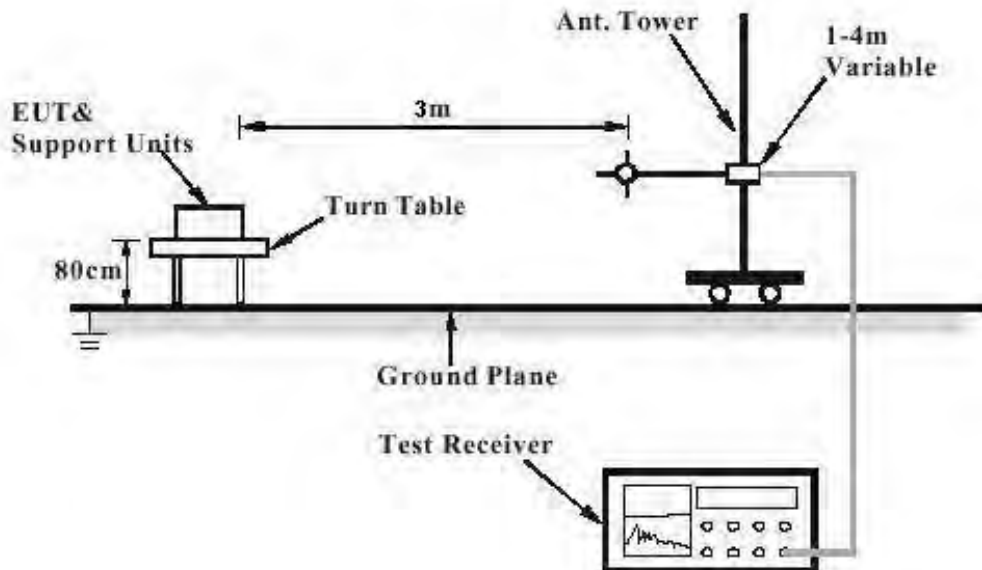
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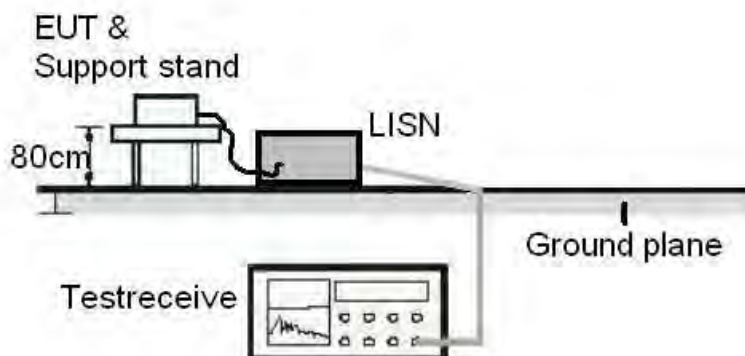
3.4 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test



Note: Measurements above 1GHz are done with a table height of 1.5m. In addition, there is RF absorbing material on the floor of the test site for above 1GHz measurement.

Diagram of Measurement Equipment Configuration for Conduction Measurement



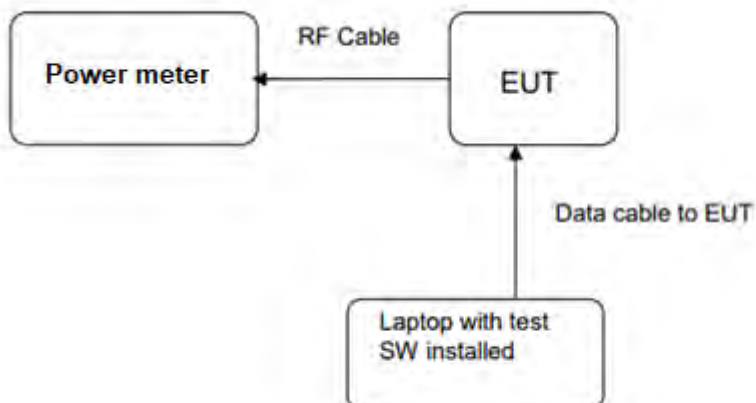
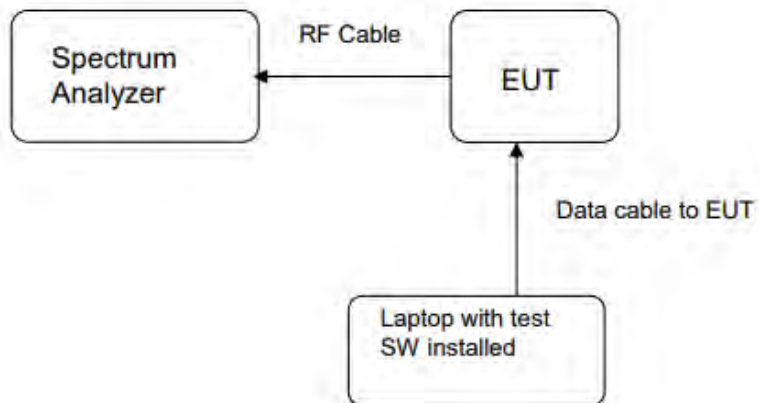
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Diagram of Measurement Equipment Configuration for Transmitter Measurement



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4 Test Results

4.1 Transmitter Requirement & Test Suites

4.1.1 Antenna Requirement

RESULT:

PASS

Test standard : FCC Part 15.407(a), 15.203
RSS-247 6.2

Requirement : The use of approved antennas only with directional
gains that do not exceed 6 dBi

According to the manufacturer declaration, the EUT has an antenna with a gain of 1.63 dBi. The antenna is an antenna with no possibility of replacement with a non-approved antenna by the end-user.

Therefore, the EUT is considered to comply with this provision.

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4.1.2 Peak Output Power and E.I.R.P

RESULT:

PASS

Test standard : FCC Part 15.407(a)
RSS-247 6.2
Requirement : ANSI C63.10-2013, KDB 789033
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 52%

Table 1: Peak Output Power

Band I (5150 – 5250 MHz)

Test Mode	Test Channel (MHz)	Measured Peak Output Power		FCC Limit (mW)
		(dBm)	(mW)	
802.11a	5180	10.88	12.25	250
	5220	10.67	11.67	
	5240	10.51	11.25	
802.11n(HT20)	5180	9.73	9.40	
	5220	9.49	8.89	
	5240	9.45	8.81	
802.11ac(VHT20)	5180	11.46	14.00	
	5220	11.43	13.90	
	5240	11.40	13.80	
802.11n(HT40)	5190	9.82	9.59	
	5230	9.41	8.73	
802.11ac(VHT40)	5190	11.20	13.18	
	5230	11.07	12.79	
802.11ac(VHT80)	5210	10.19	10.45	

Band IV (5725 – 5850 MHz)

Test Mode	Test Channel (MHz)	Measured Peak Output Power		FCC Limit (W)
		(dBm)	(mW)	
802.11a	5745	11.68	14.72	1
	5785	11.27	13.40	

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	5825	11.38	13.74	
802.11n(HT20)	5745	10.77	11.94	
	5785	10.45	11.09	
	5825	10.36	10.86	
802.11ac(VHT20)	5745	12.44	17.54	
	5785	12.24	16.75	
	5825	12.23	16.71	
802.11n(HT40)	5755	9.88	9.73	
	5795	9.91	9.79	
802.11ac(VHT40)	5755	11.97	15.74	
	5795	11.94	15.63	
802.11ac(VHT80)	5775	10.96	12.47	

Table 2: E.I.R.P

Band I (5150 – 5250 MHz)

Test Mode	Test Channel (MHz)	E.I.R.P		IC Limit (mW)
		(dBm)	(mW)	
802.11a	5180	12.51	17.82	200 mW or 10 dBm + 10log B, which is less
	5220	12.3	16.98	
	5240	12.14	16.37	
802.11n(HT20)	5180	11.36	13.68	
	5220	11.12	12.94	
	5240	11.08	12.82	
802.11ac(VHT20)	5180	13.09	20.37	
	5220	13.06	20.23	
	5240	13.03	20.09	
802.11n(HT40)	5190	11.45	13.96	
	5230	11.04	12.71	
802.11ac(VHT40)	5190	12.83	19.19	
	5230	12.7	18.62	
802.11ac(VHT80)	5210	11.82	15.21	

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Band IV (5725 – 5850 MHz)

Test Mode	Test Channel (MHz)	E.I.R.P		IC Limit (mW)
		(dBm)	(mW)	
802.11a	5745	12.77	18.92	200 mW or 10 dBm + 10log B, which is less
	5785	12.36	17.22	
	5825	12.47	17.66	
802.11n(HT20)	5745	11.86	15.35	
	5785	11.54	14.26	
	5825	11.45	13.96	
802.11ac(VHT20)	5745	13.53	22.54	
	5785	13.33	21.53	
	5825	13.32	21.48	
802.11n(HT40)	5755	10.97	12.50	
	5795	11	12.59	
802.11ac(VHT40)	5755	13.06	20.23	
	5795	13.03	20.09	
802.11ac(VHT80)	5775	12.05	16.03	

Note:

B is the 99% emissions bandwidth in MHz.

5G BAND1 antenna peak gain is 1.63

5G BAND4 antenna peak gain is 1.09

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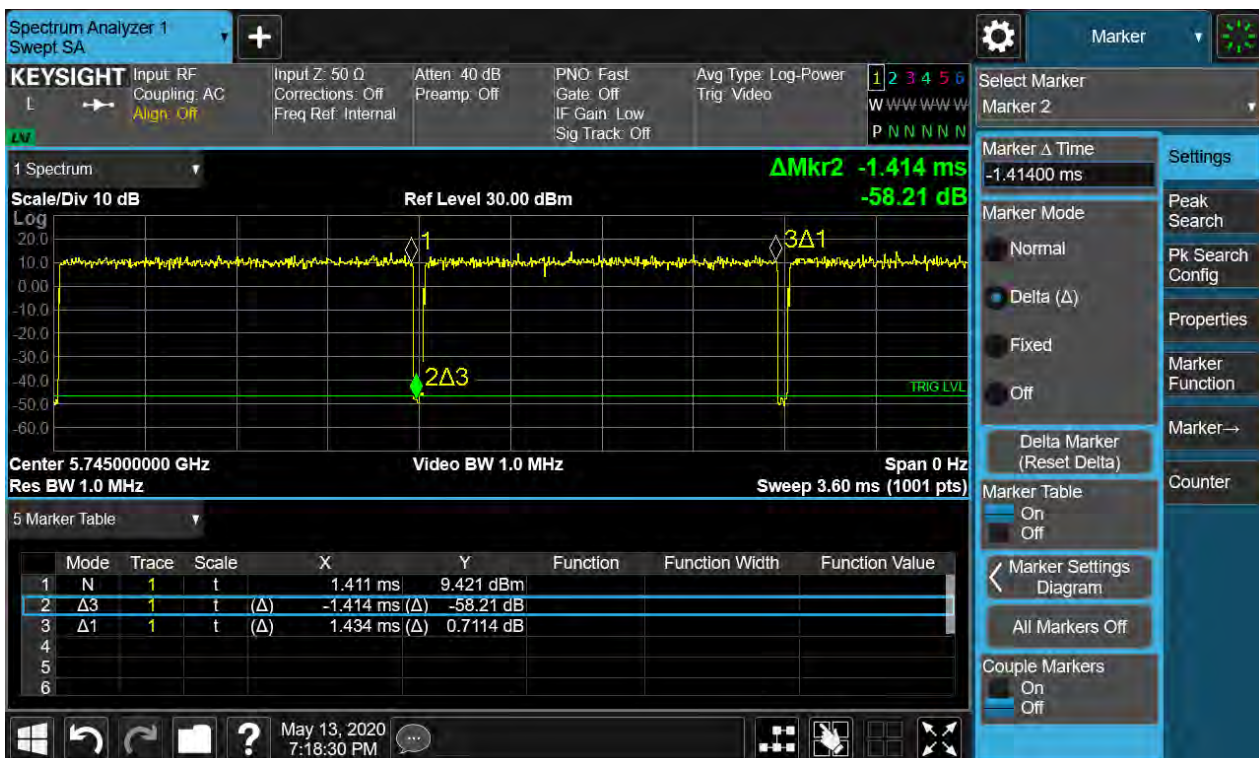
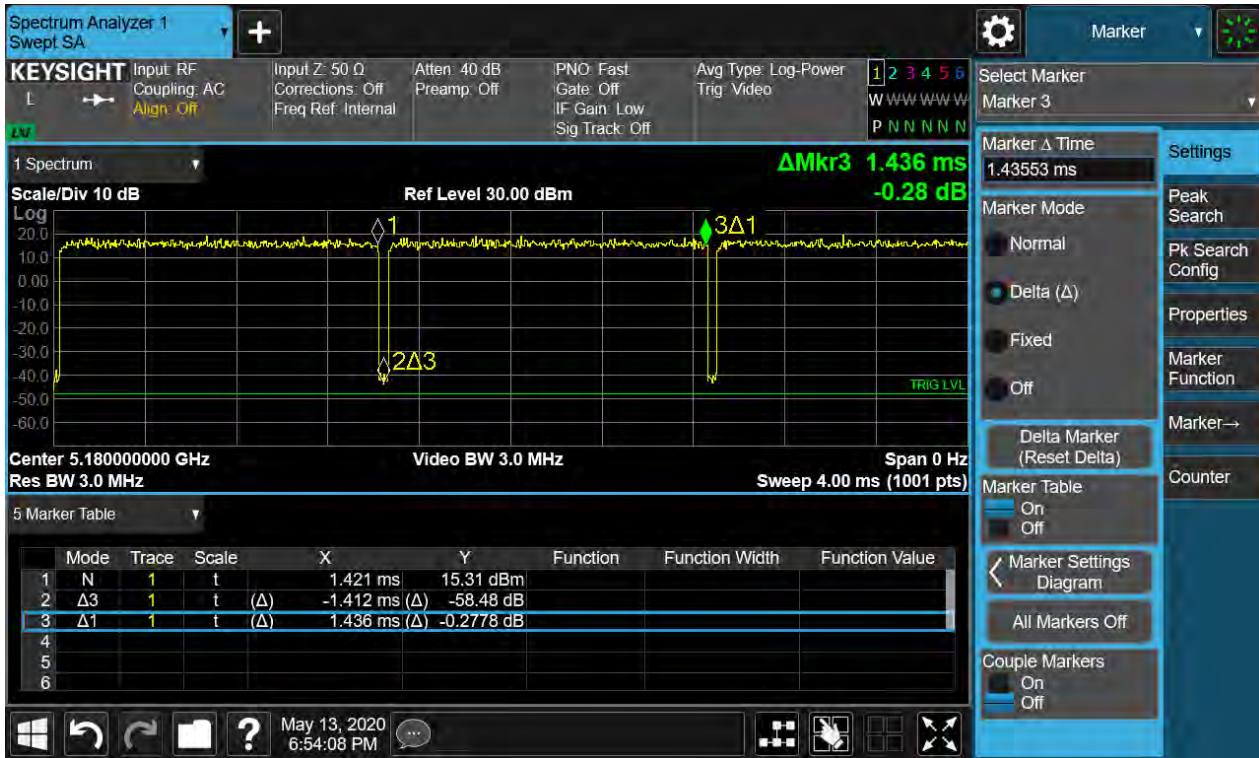
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Duty cycle factor = $10 \cdot \log(1/\text{duty cycle})$

802.11a > 98%



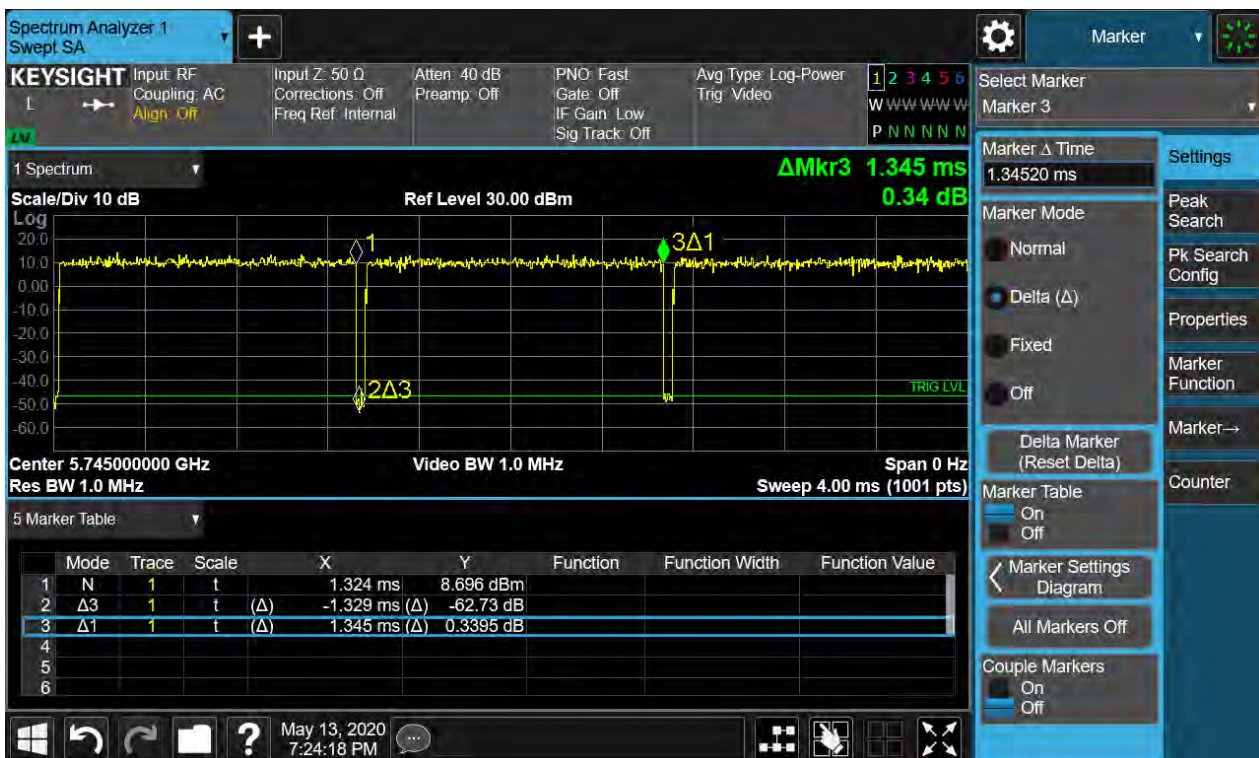
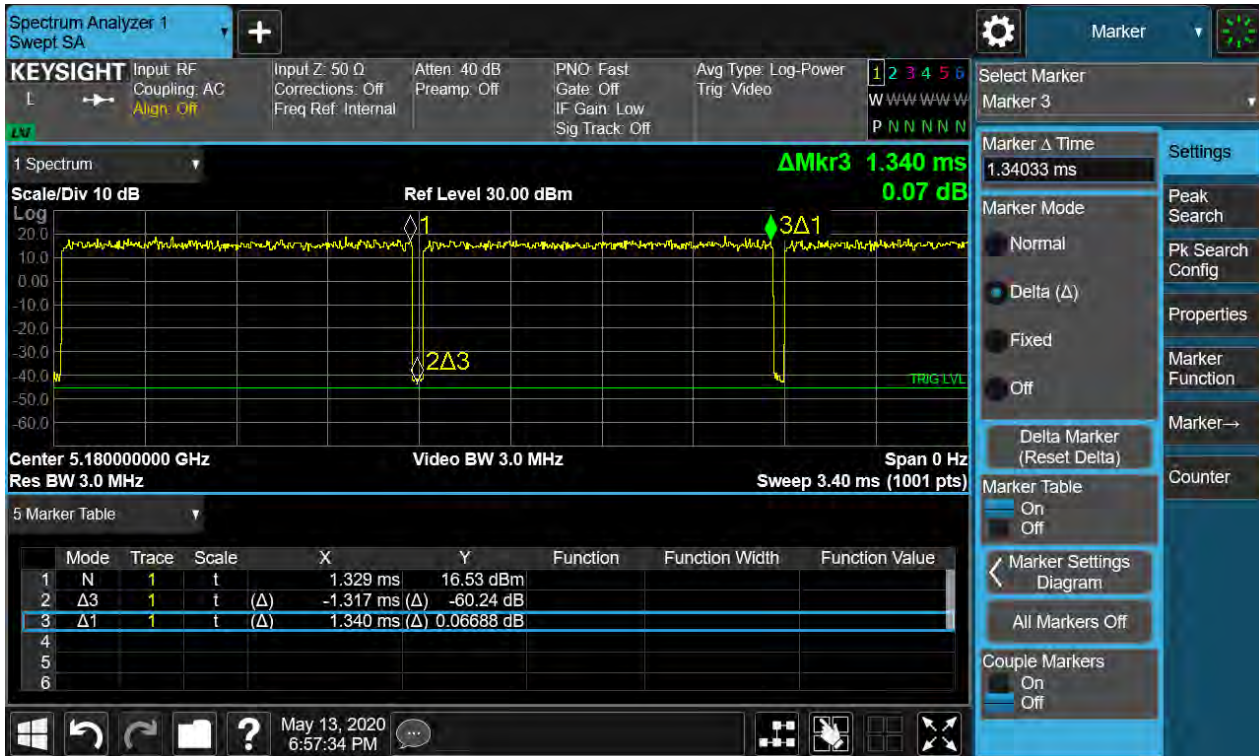
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802.11n20 > 98%



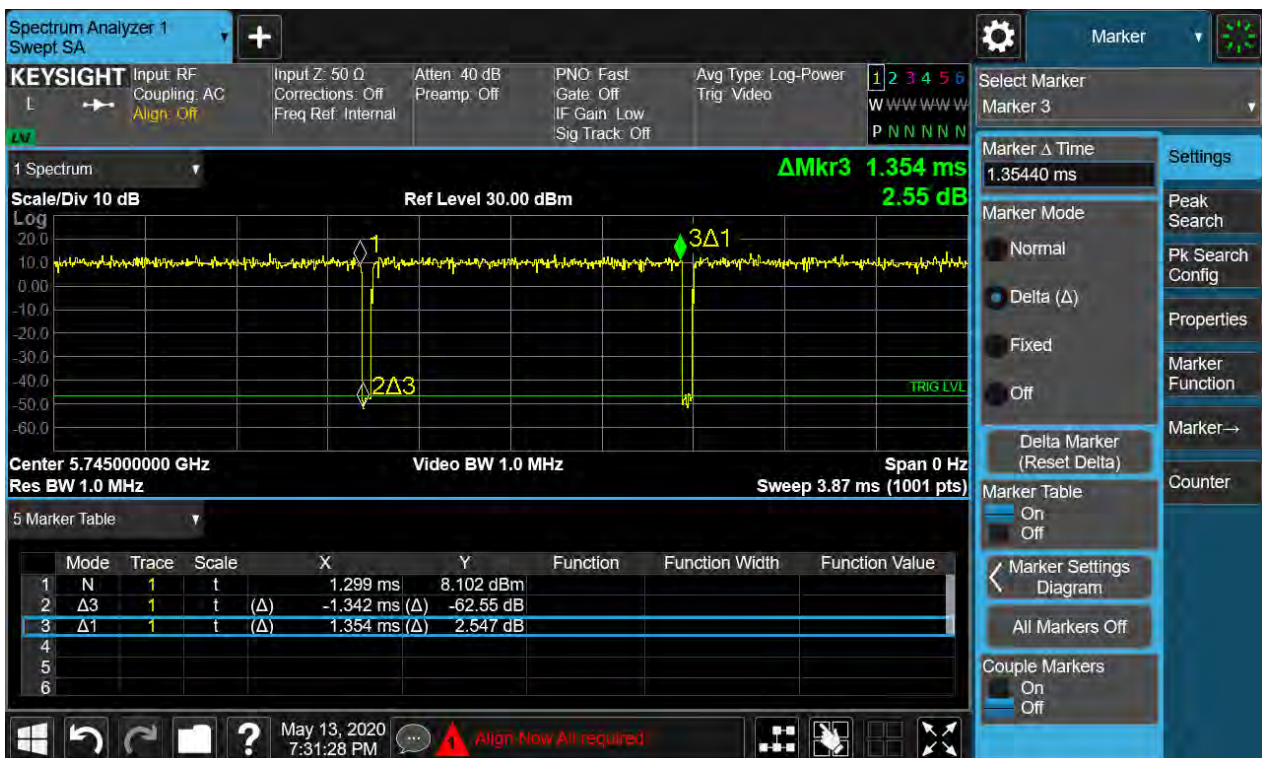
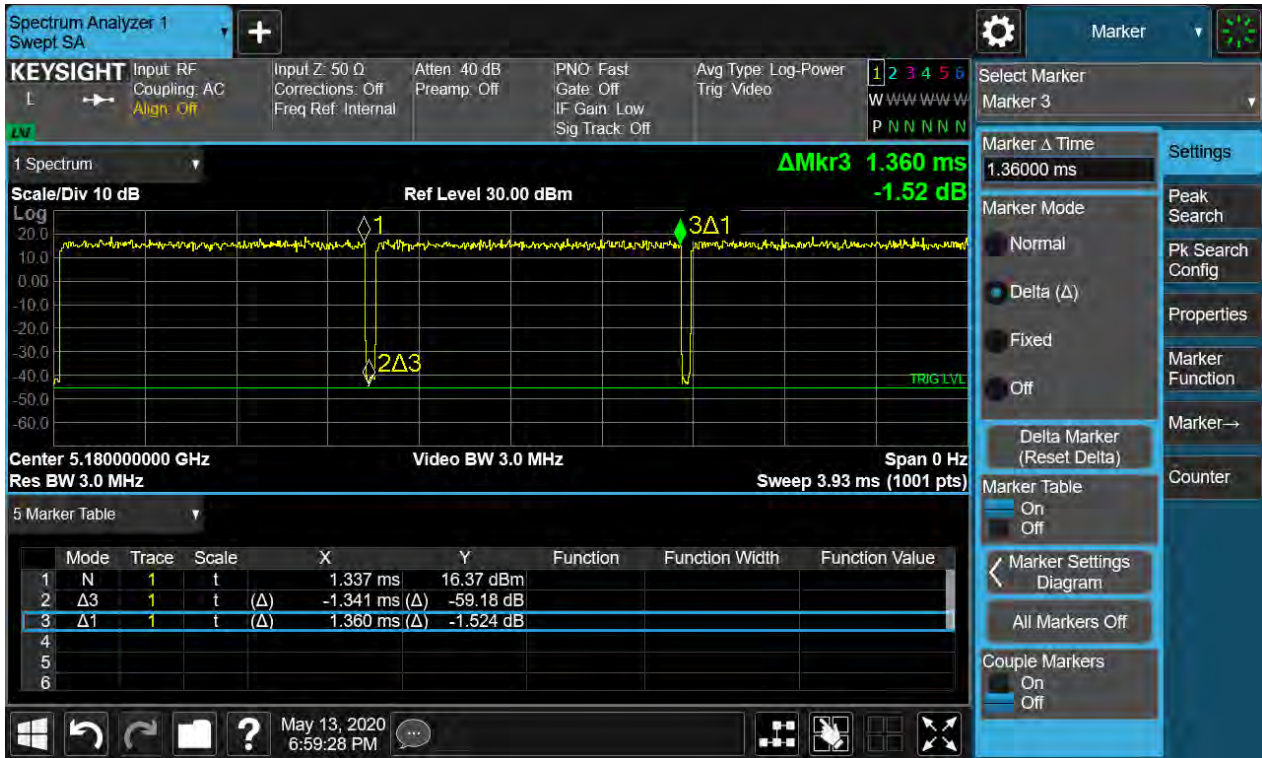
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802.11ac20 > 98%



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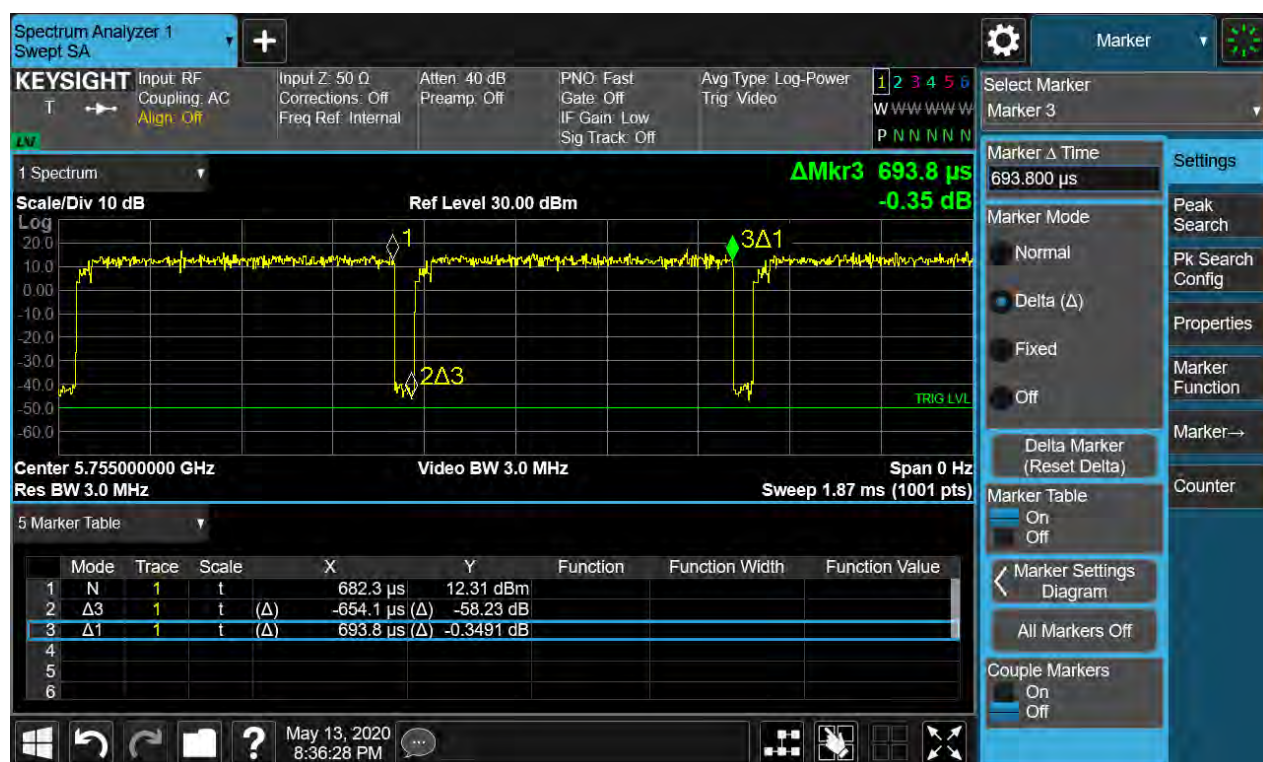
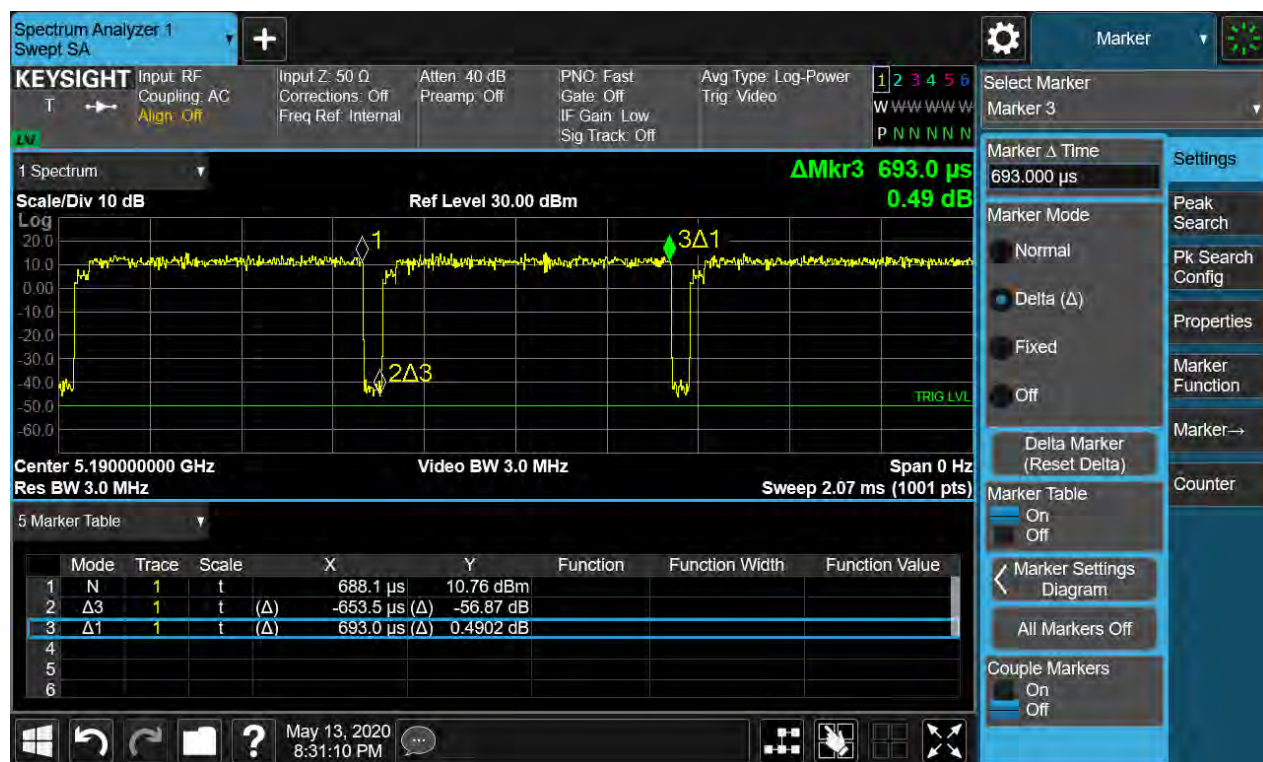
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$$802.11ac40 (B1)=10*\log(1/(653.5/693))=0.25$$

$$802.11ac40 (B4)=10*\log(1/(654.1/693.8))=0.26$$



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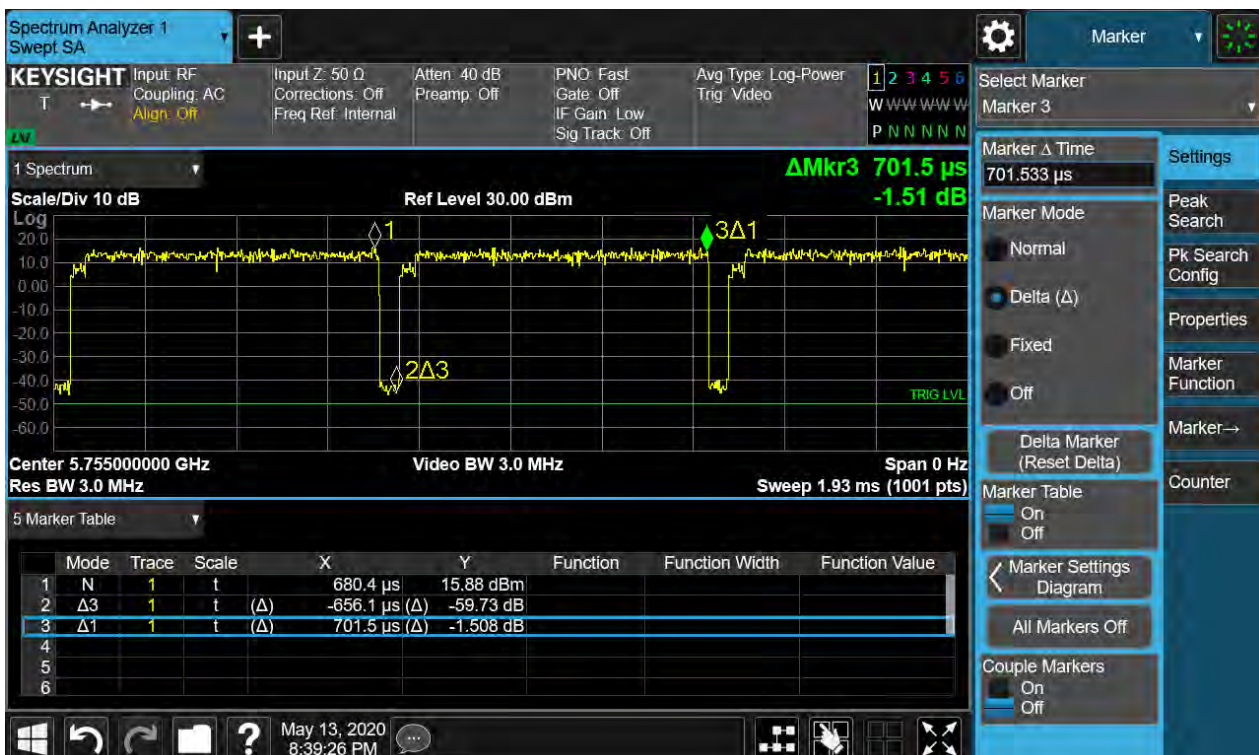
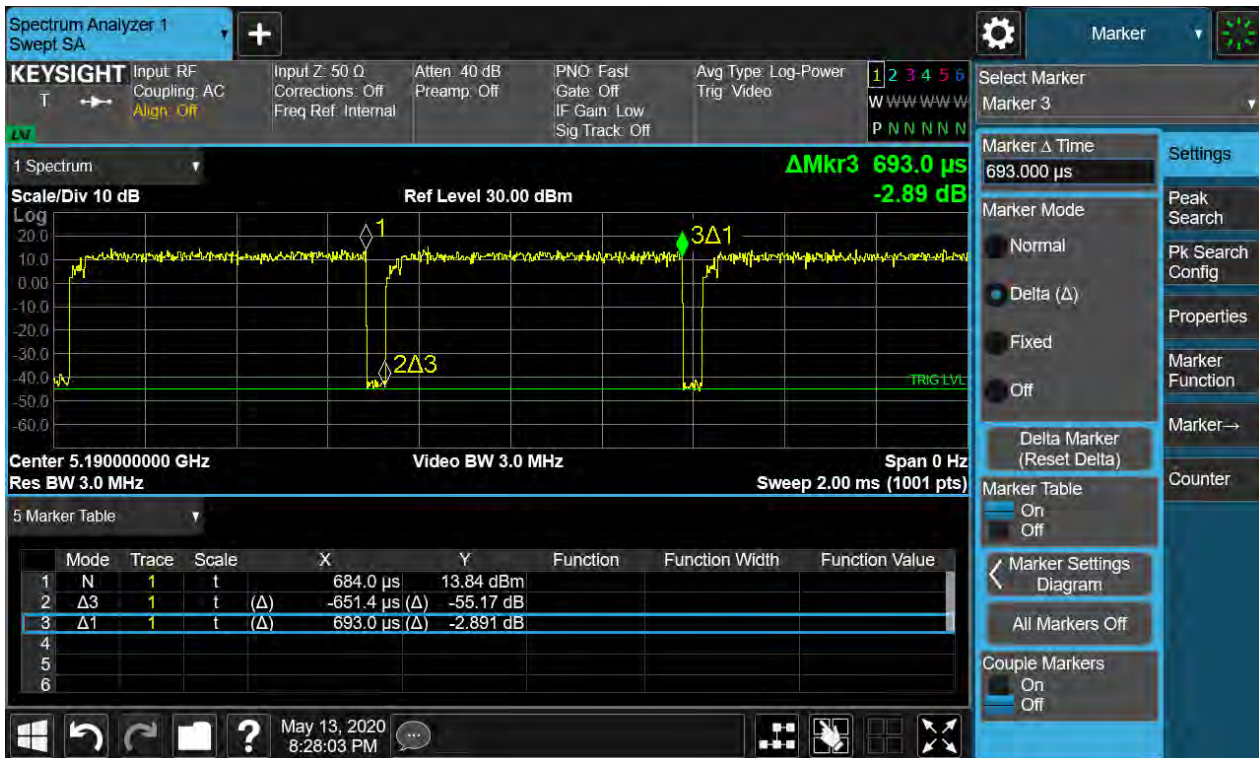
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$$802.11n40 (B1)=10*\log(1/(651.4/693))=0.27$$

$$802.11n40 (B4)=10*\log(1/(656.1/701.5))=0.29$$



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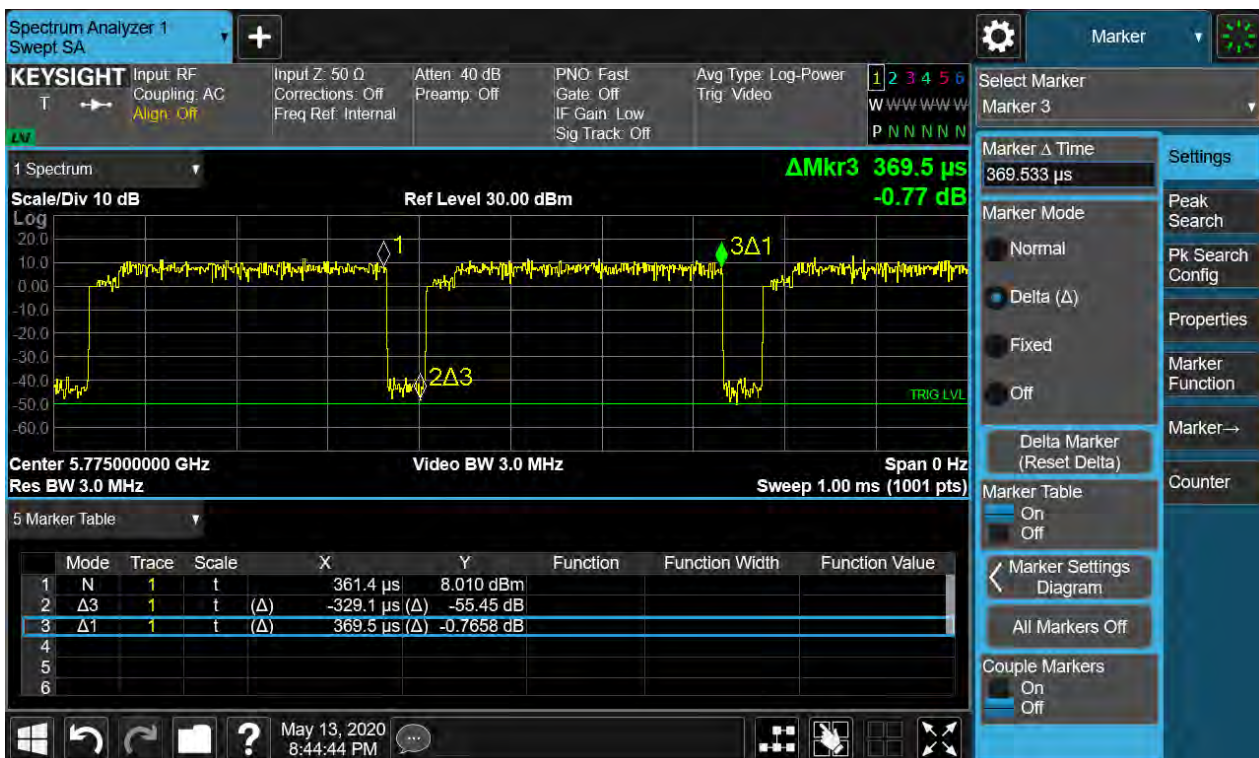
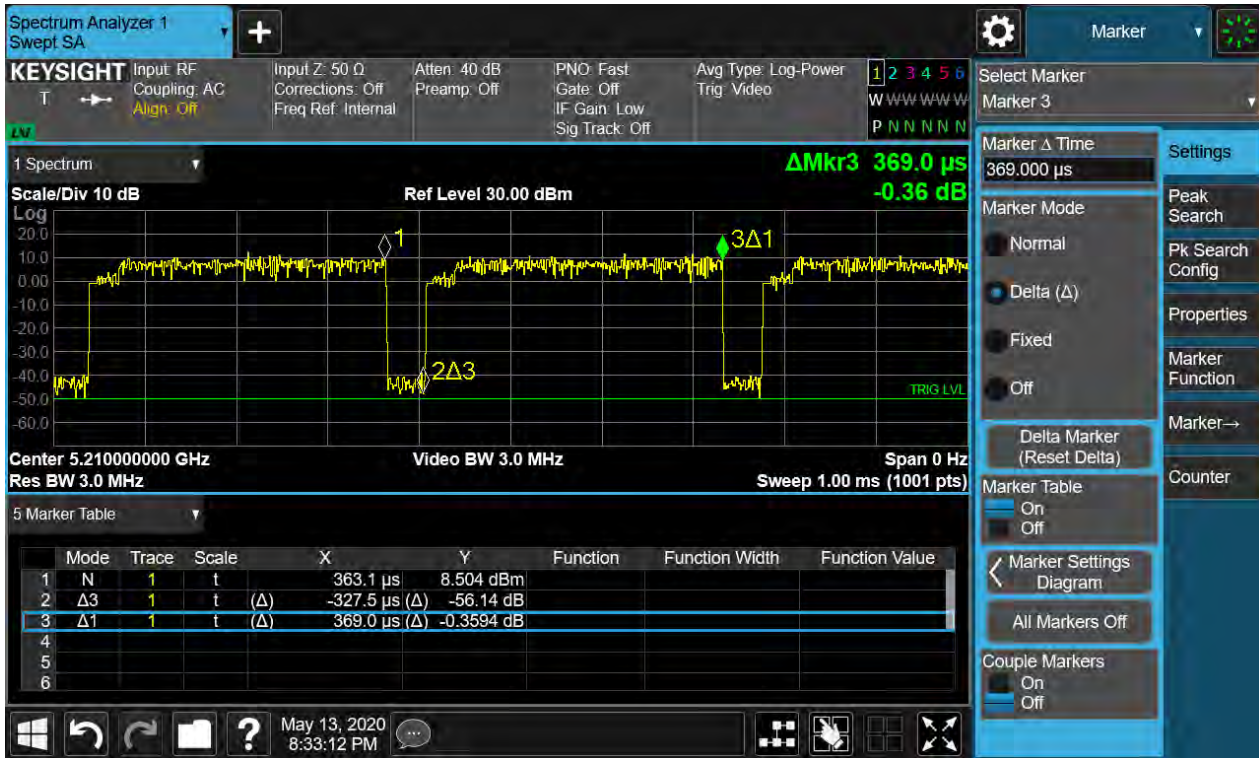
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$$802.11ac80 (B1)=10*\log(1/(327.5/369))=0.52$$

$$802.11ac80 (B4)=10*\log(1/(329.1/369.5))=0.50$$



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4.1.3 26dB Bandwidth and 99% Bandwidth

RESULT:

PASS

Test standard : FCC Part 15.407(a)
RSS-247 6.2
Requirement : ANSI C63.10-2013, KDB 789033
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 52%

Note : 26dB bandwidth RBW is approximately 1% of the emission bandwidth. Based on the spectrum character, use the RBW close to 1% of bandwidth as far as possible.

Table 3: 26dB Bandwidth and 99% Bandwidth

Band I (5150 – 5250 MHz)

Test Mode	Test Channel (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	5180	20.03	17.70
	5220	20.15	17.81
	5240	20.60	17.71
802.11n(HT20)	5180	20.67	18.59
	5220	20.73	18.60
	5240	20.78	18.55
802.11ac(VHT20)	5180	20.69	18.61
	5220	20.86	18.57
	5240	20.64	18.57
802.11n(HT40)	5190	38.21	36.27
	5230	39.14	36.24
802.11ac(VHT40)	5190	43.16	36.37
	5230	42.86	36.40
802.11ac(VHT80)	5210	40.00	74.86

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Band IV (5725 – 5850 MHz)

Test Mode	Test Channel (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	5745	20.22	17.73
	5785	19.89	17.71
	5825	20.58	17.66
802.11n(HT20)	5745	20.58	18.60
	5785	20.92	18.56
	5825	20.81	18.56
802.11ac(VHT20)	5745	20.87	18.58
	5785	20.54	18.61
	5825	20.47	18.60
802.11n(HT40)	5755	39.29	36.34
	5795	38.87	36.30
802.11ac(VHT40)	5755	38.68	36.39
	5795	39.16	36.33
802.11ac(VHT80)	5775	40.00	74.93

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Figure 1: 26dB Bandwidth and 99% Bandwidth, 802.11a, 5180MHz

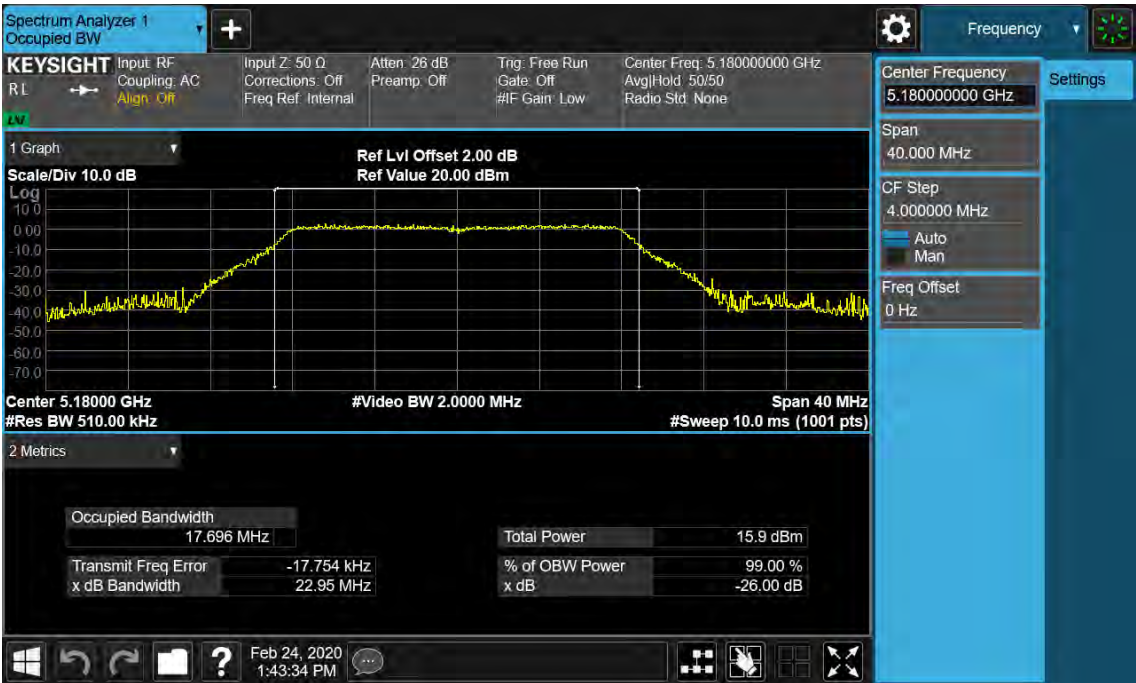
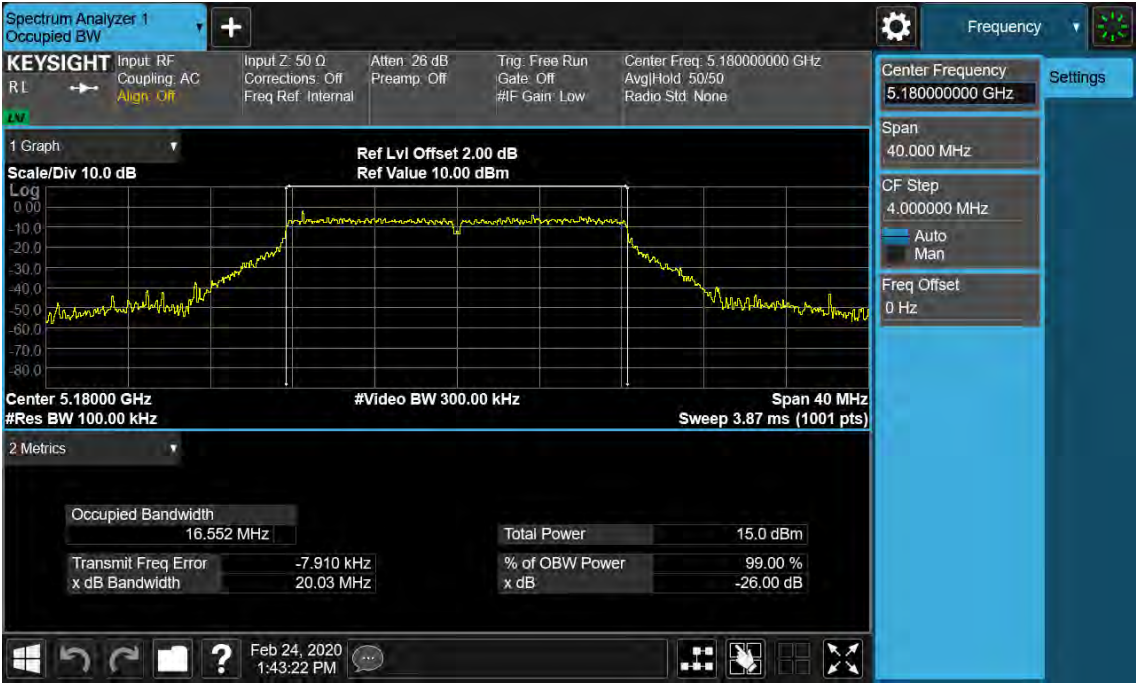


Figure 2: 26dB Bandwidth and 99% Bandwidth, 802.11a, 5220MHz

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Figure 3: 26dB Bandwidth and 99% Bandwidth, 802.11a, 5240MHz

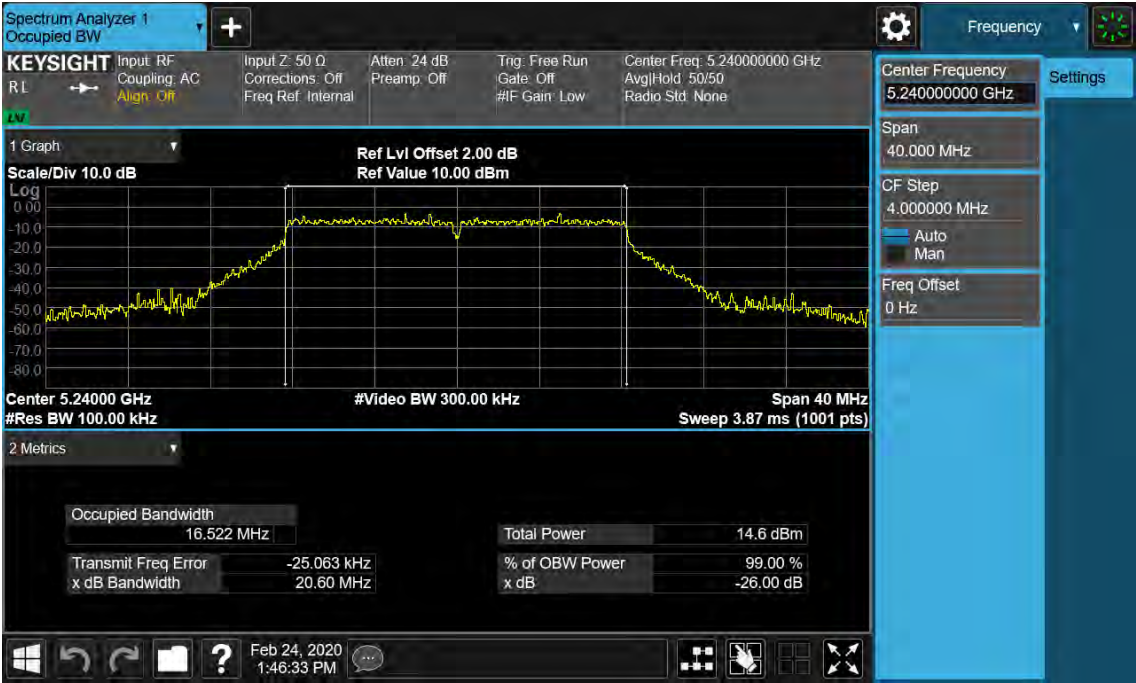


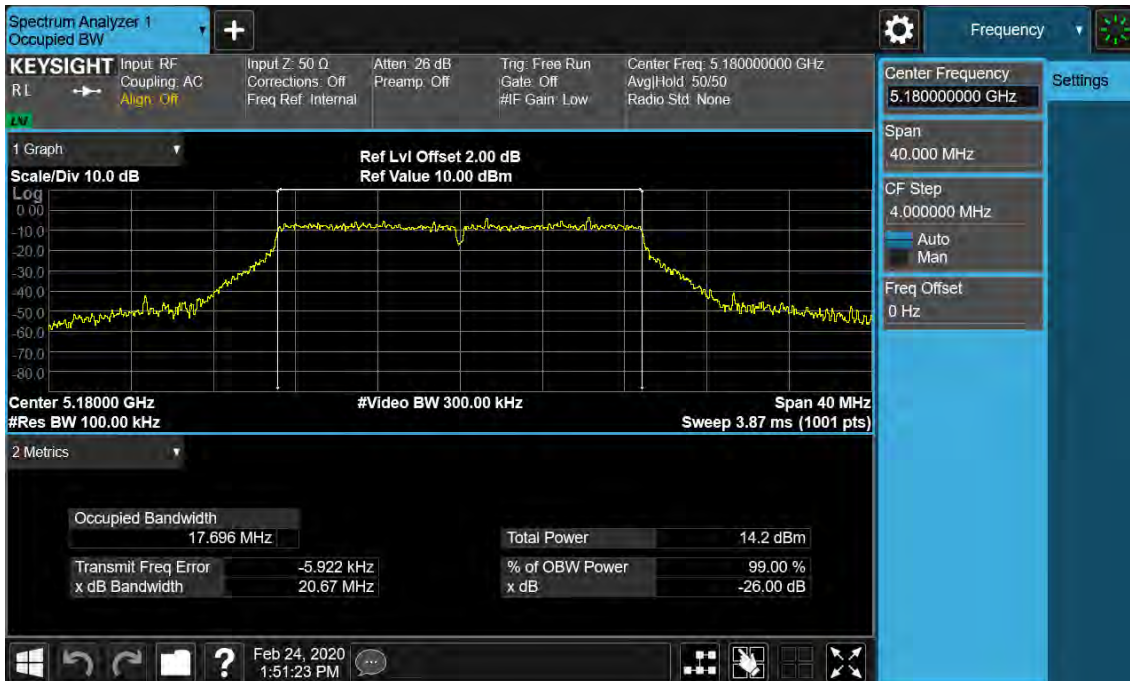
Figure 4: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 5180MHz

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Figure 5: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 5220MHz

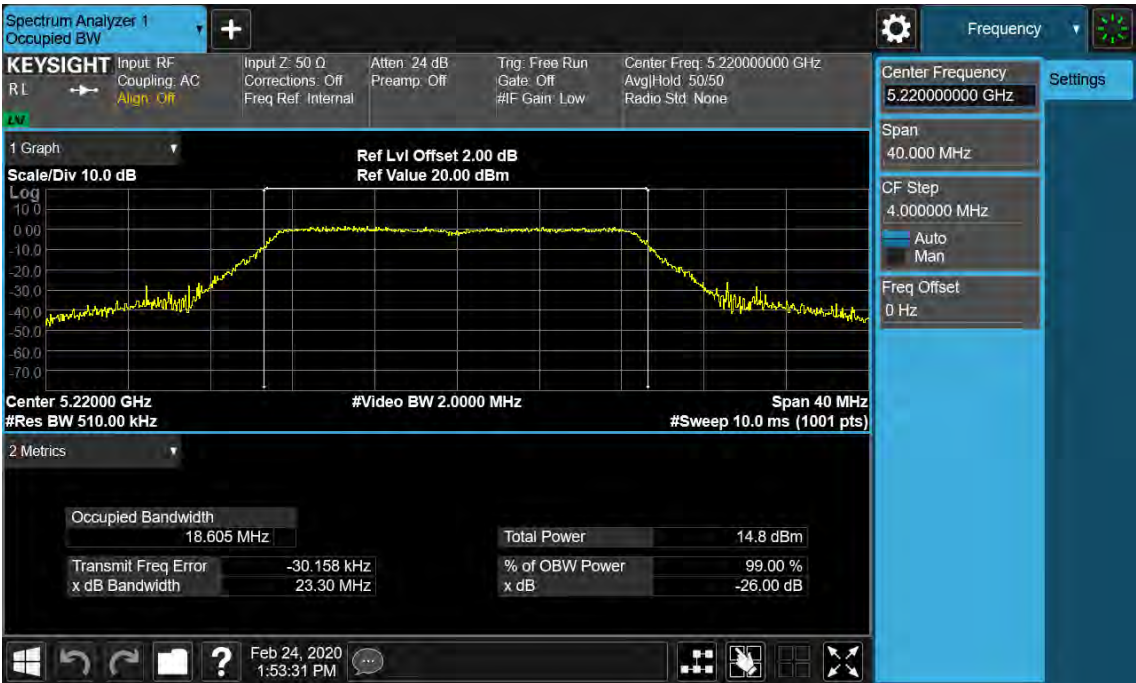
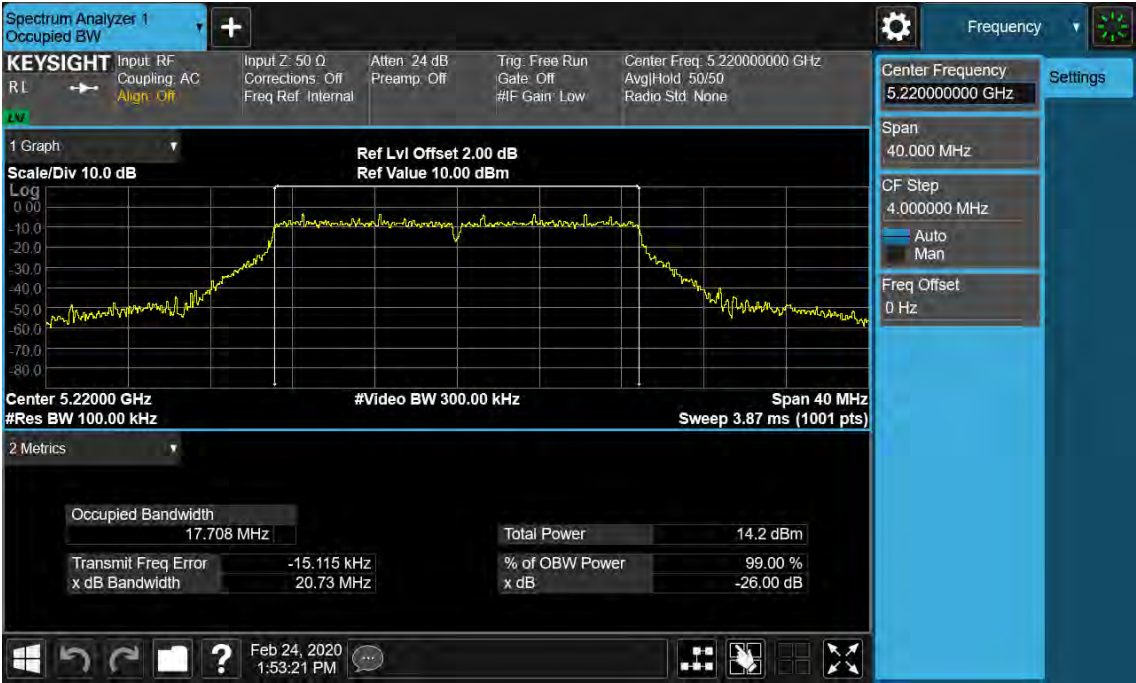


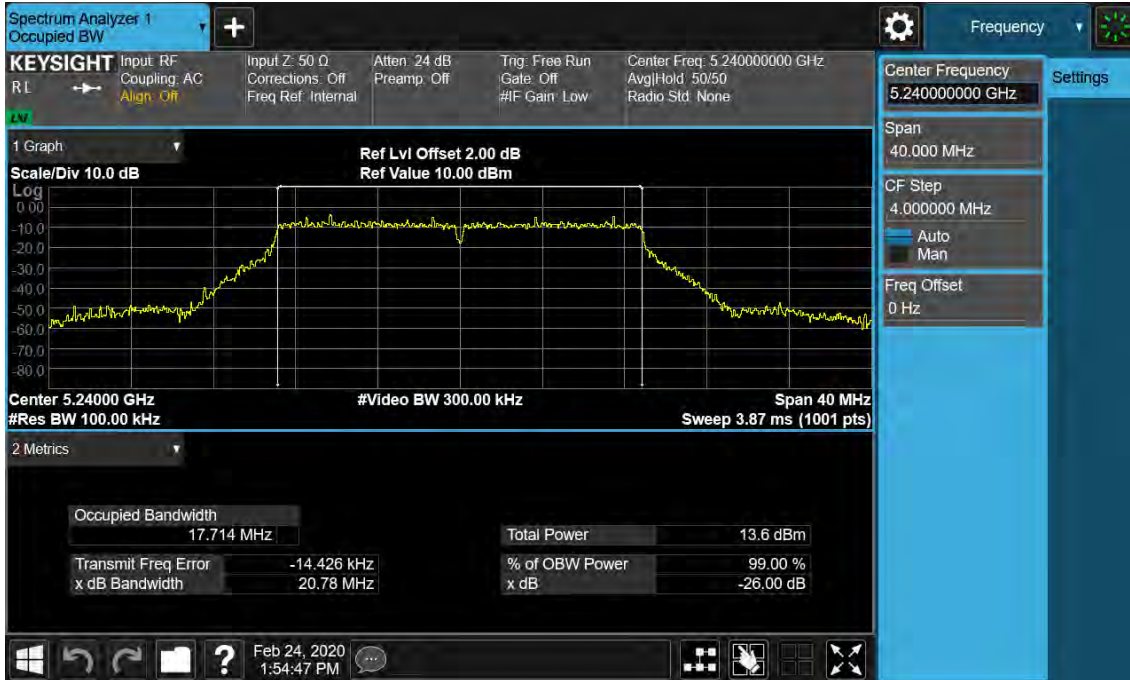
Figure 6: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 5240MHz

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Figure 7: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT20), 5180MHz

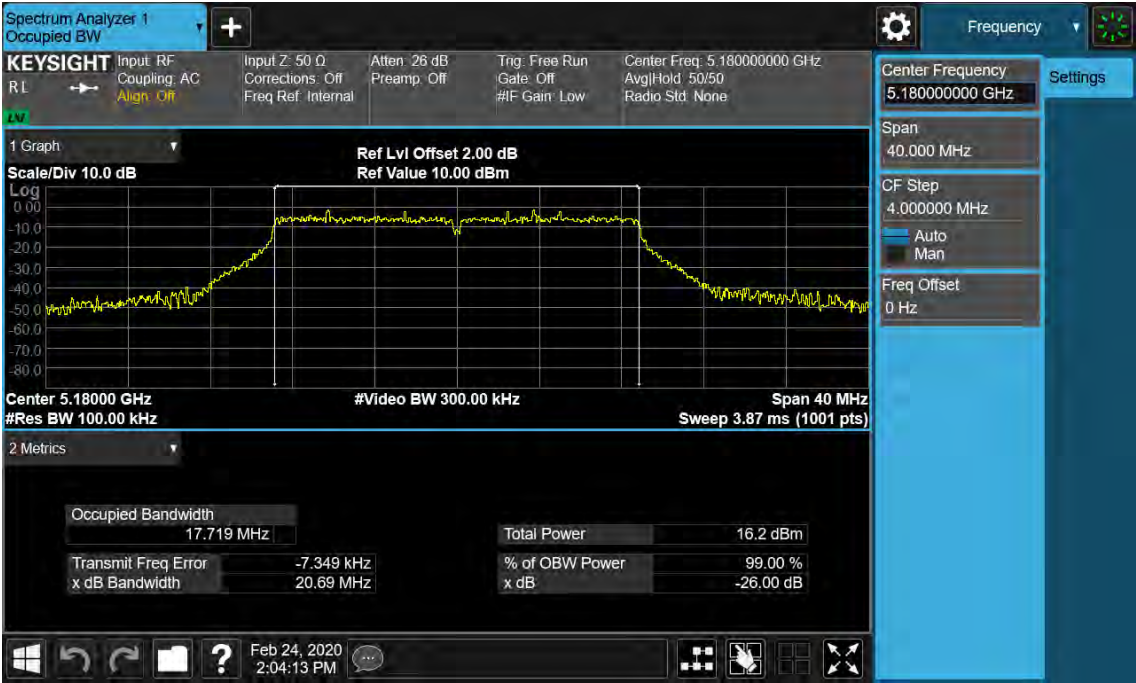


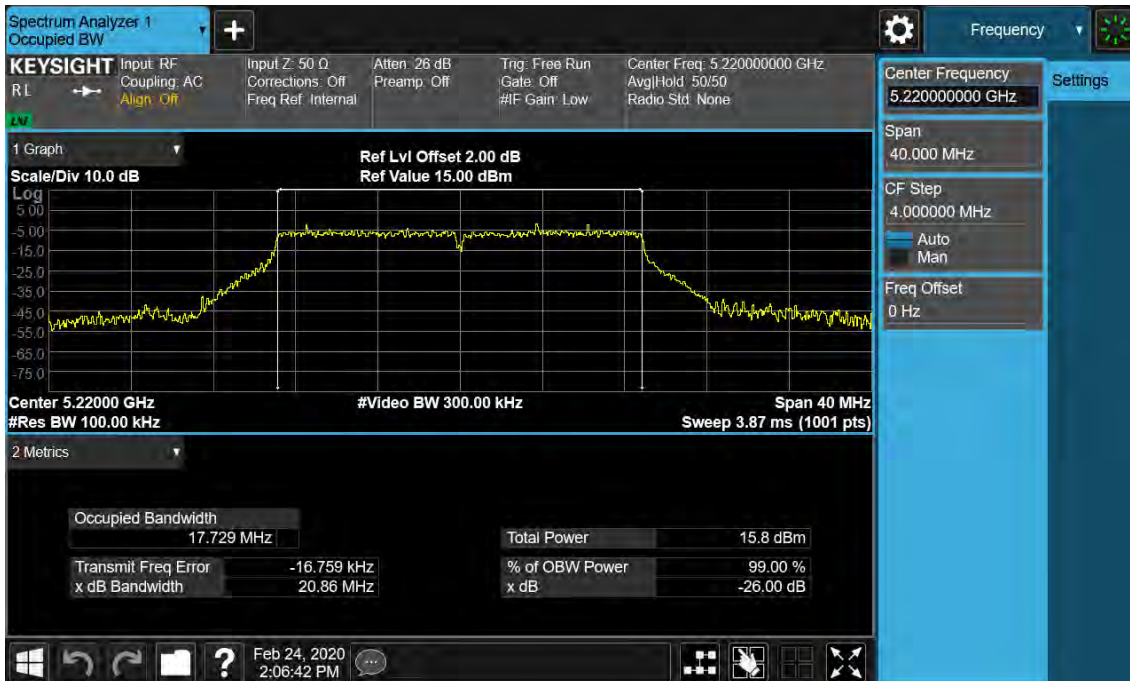
Figure 8: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT20), 5220MHz

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Figure 9: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT20), 5240MHz

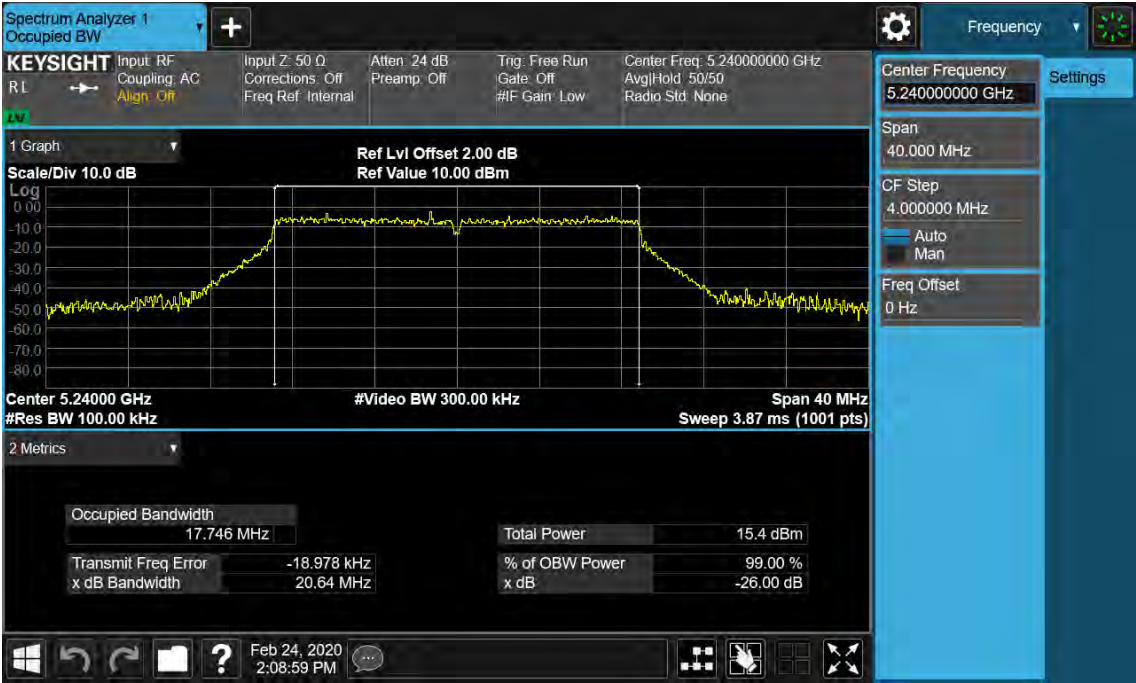


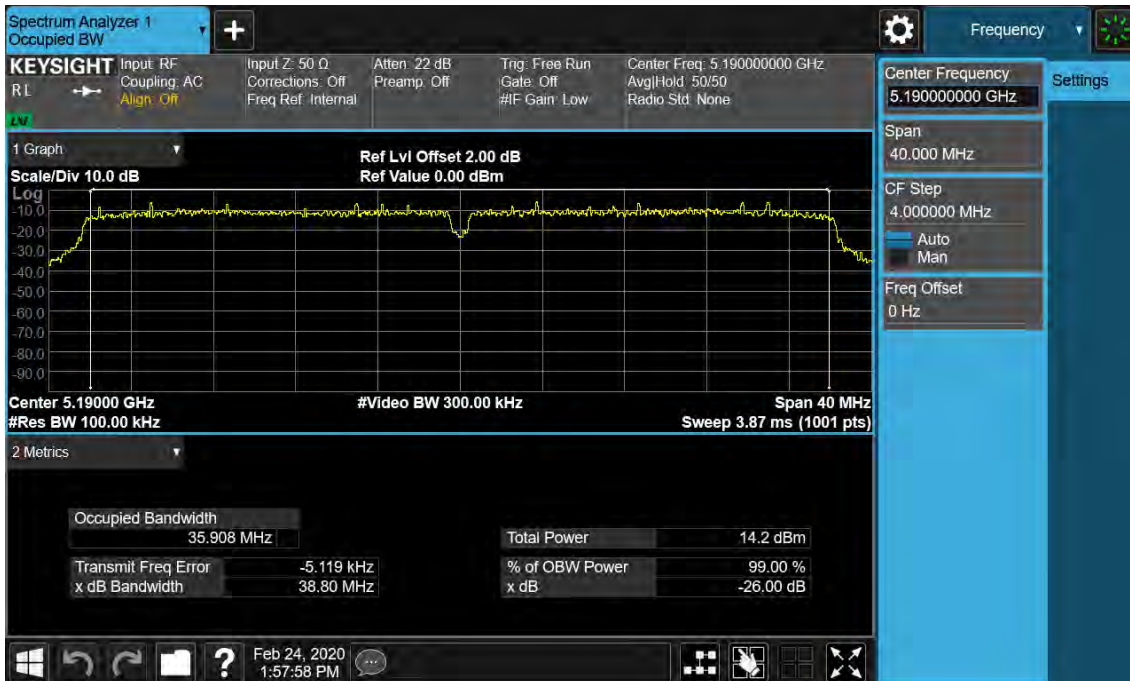
Figure 10: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 5190MHz

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Figure 11: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 5230MHz

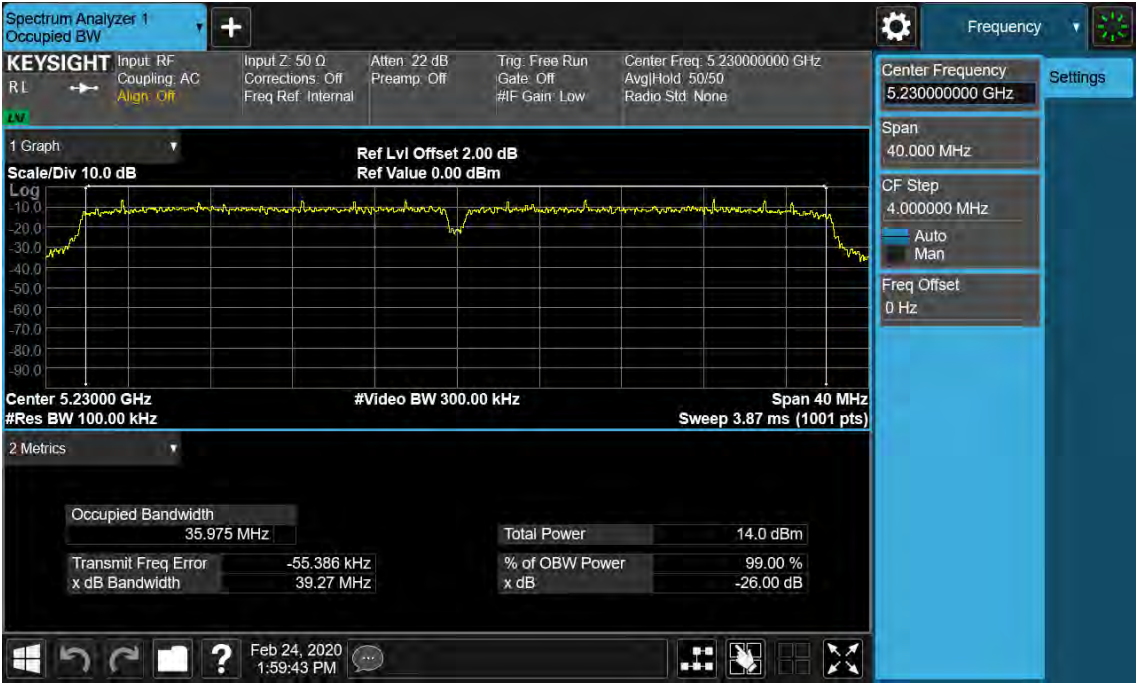


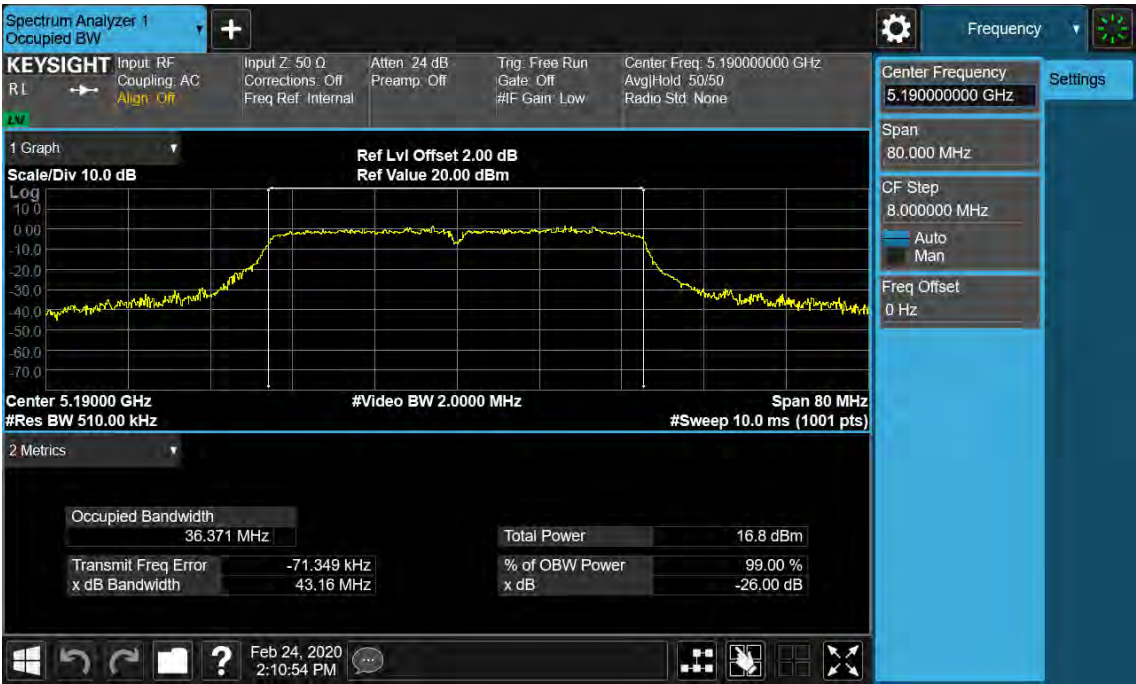
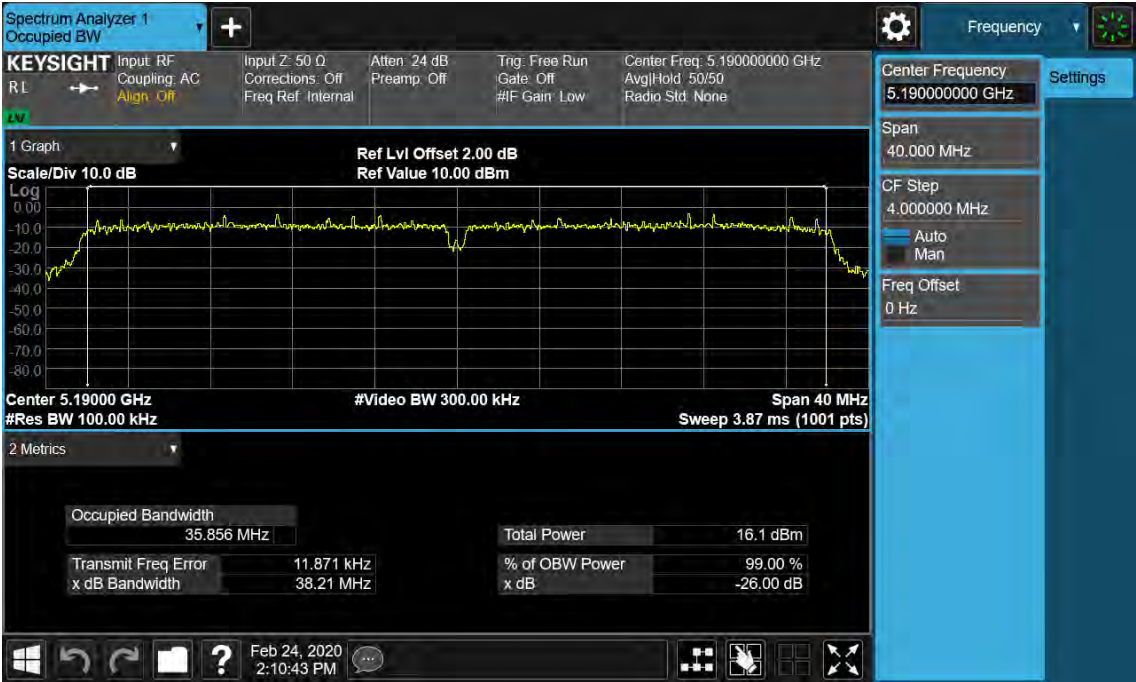
Figure 12: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT40), 5190MHz

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Figure 13: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT40), 5230MHz

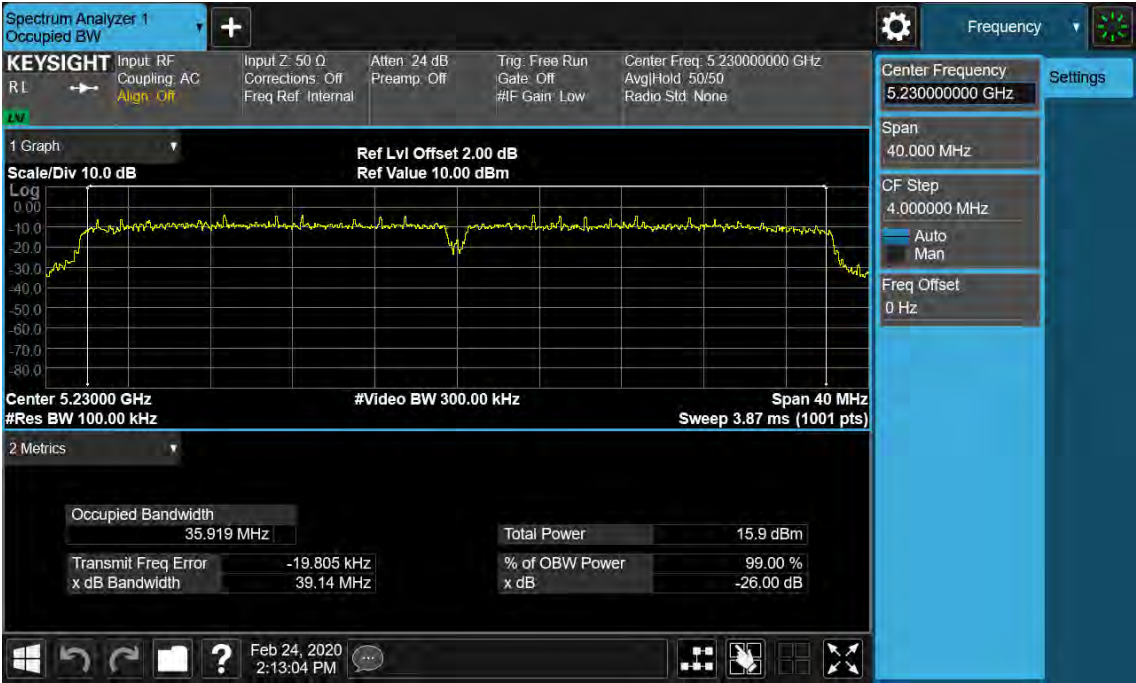


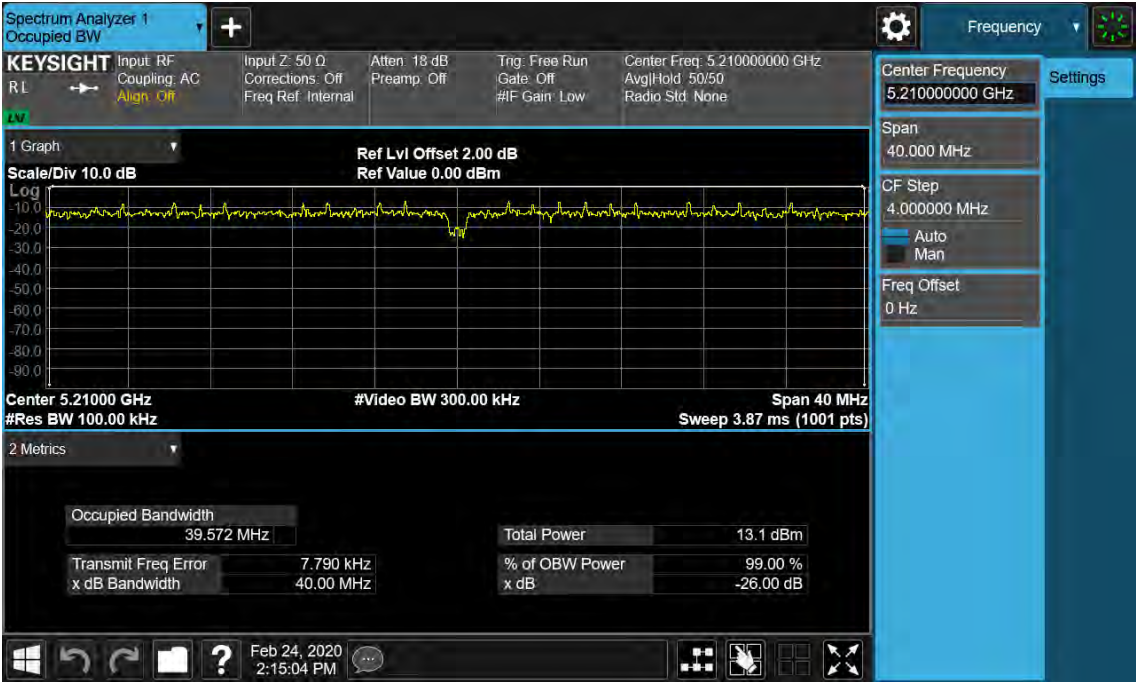
Figure 14: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT80), 5210MHz

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Figure 15: 26dB Bandwidth and 99% Bandwidth, 802.11a, 5745MHz

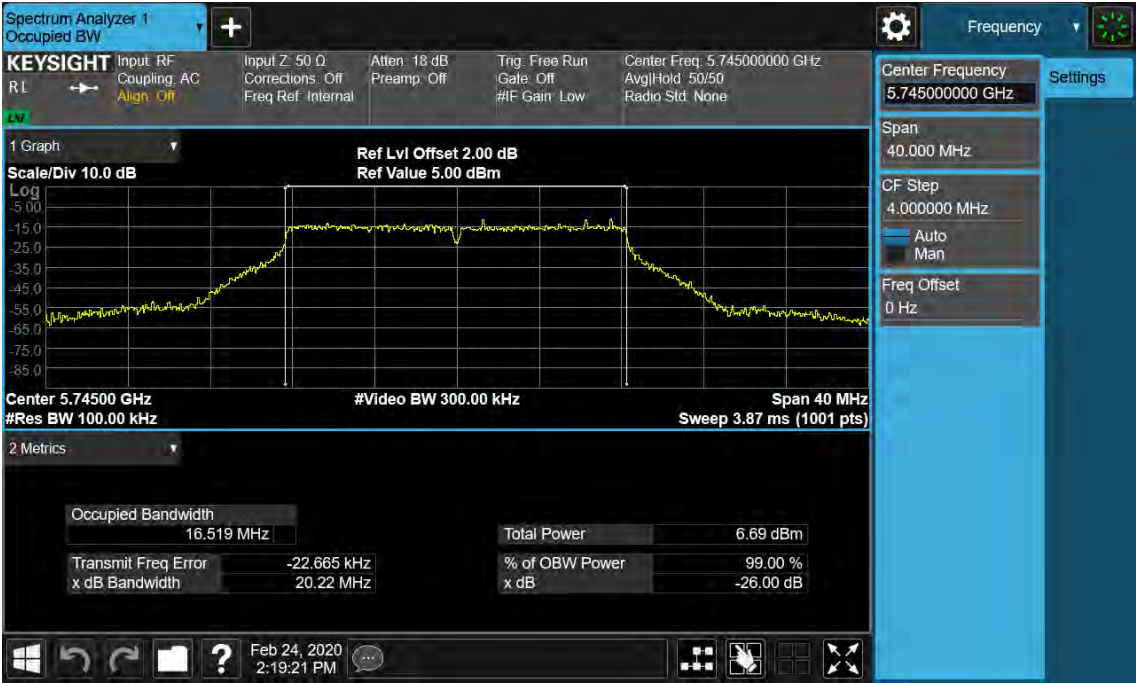


Figure 16: 26dB Bandwidth and 99% Bandwidth, 802.11a, 5785MHz

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Figure 17: 26dB Bandwidth and 99% Bandwidth, 802.11a, 5825MHz

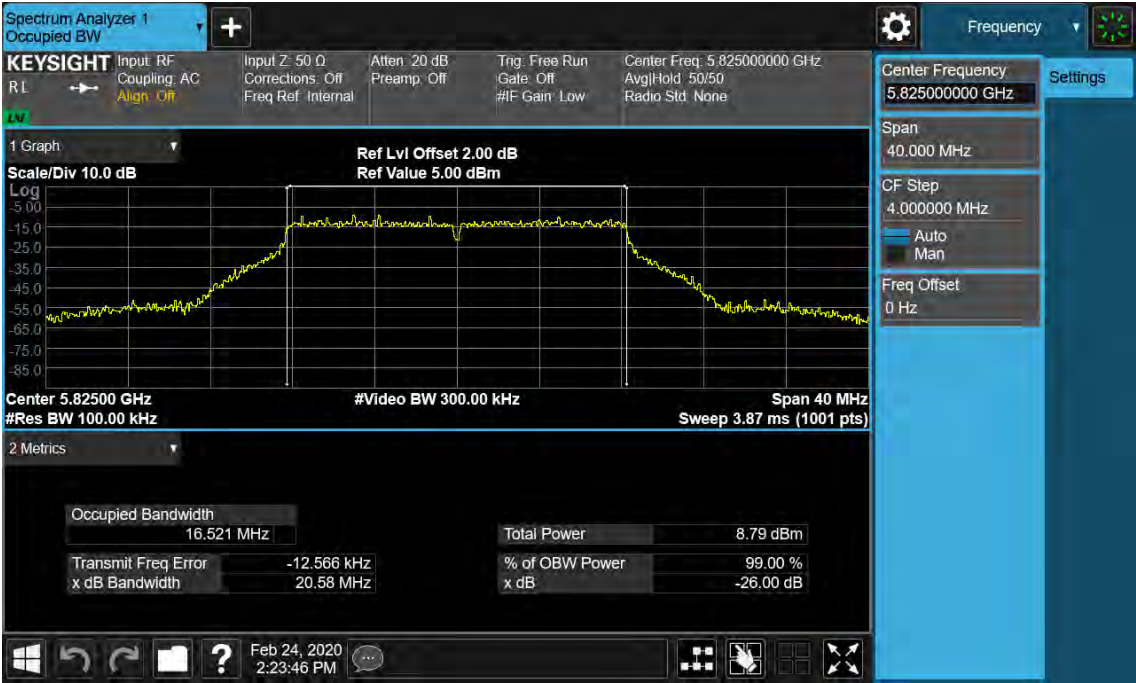


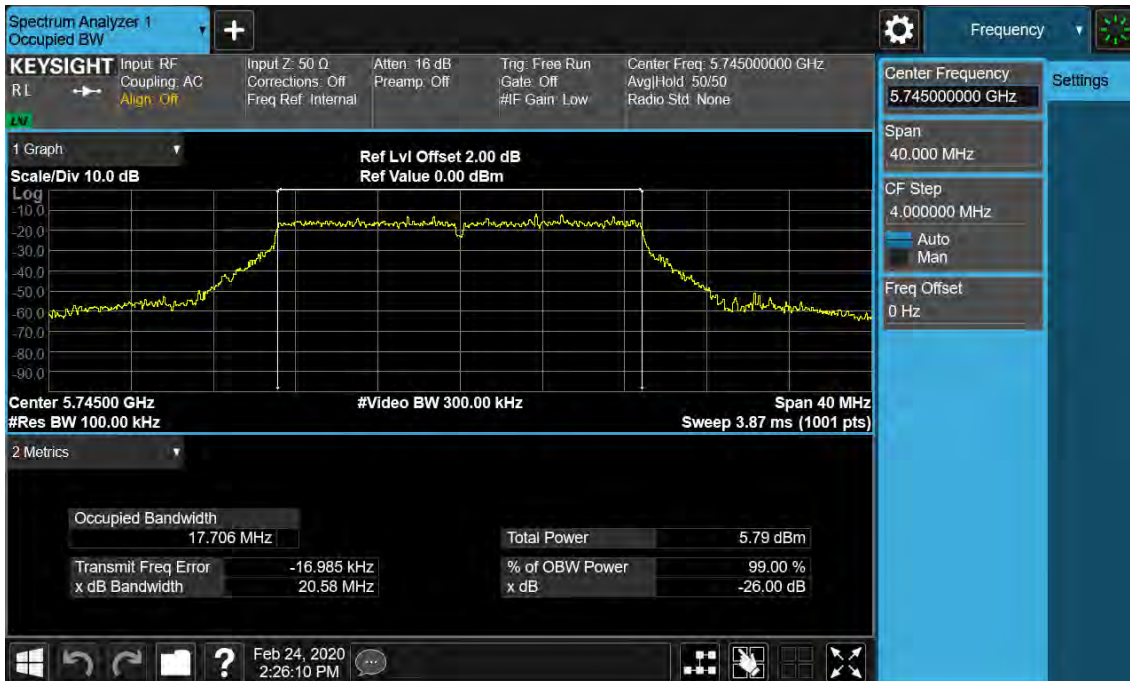
Figure 18: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 5745MHz

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Figure 19: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 5785MHz

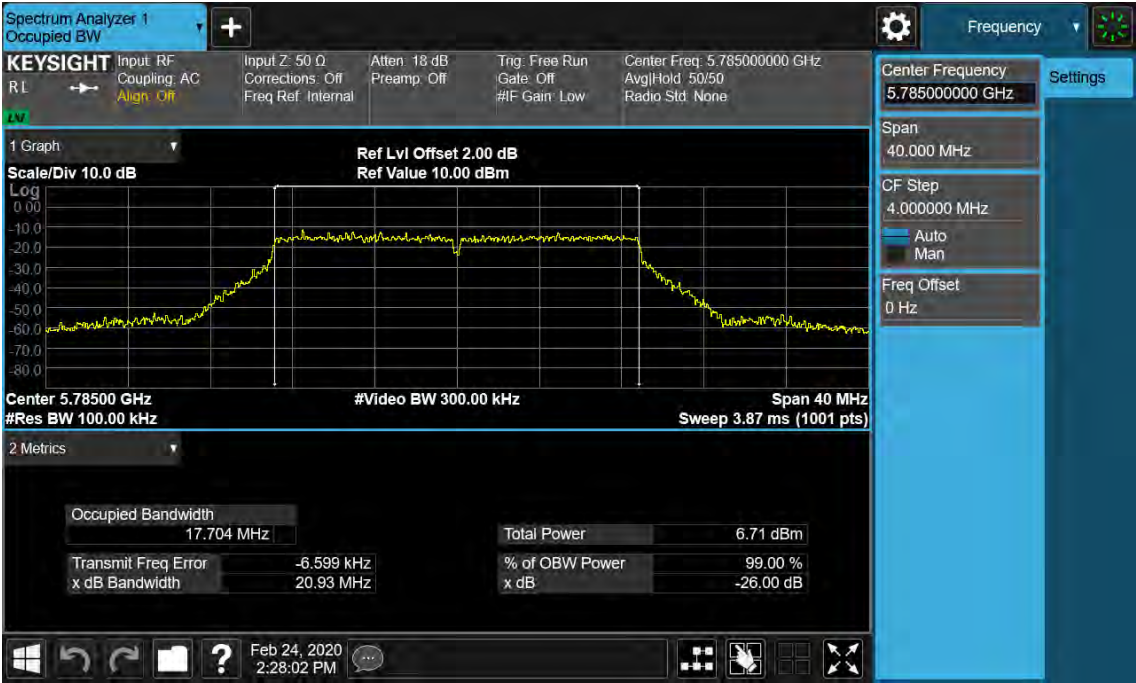


Figure 20: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT20), 5825MHz

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Figure 21: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT20), 5745MHz

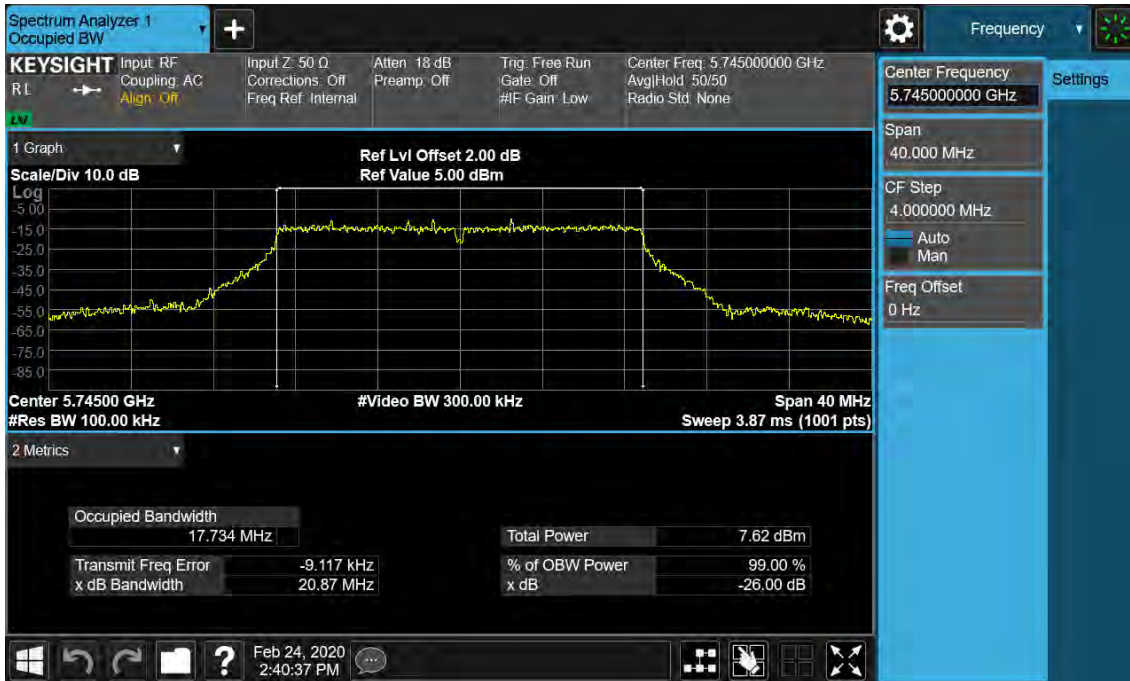


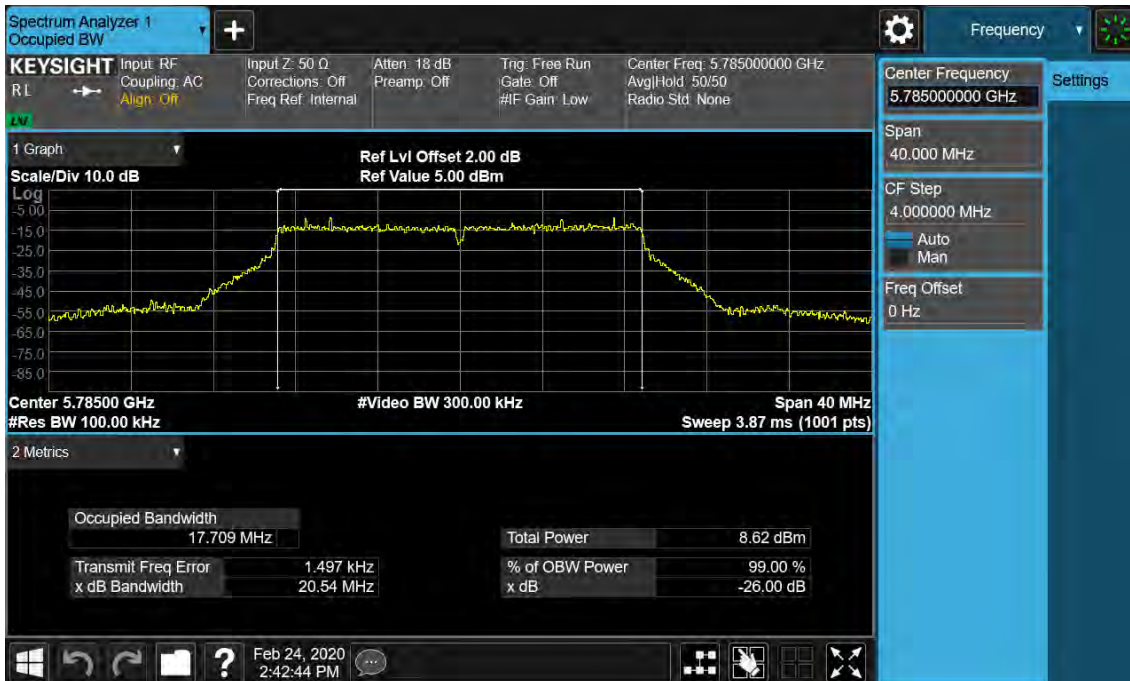
Figure 22: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT20), 5785MHz

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Figure 23: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT20), 5825MHz

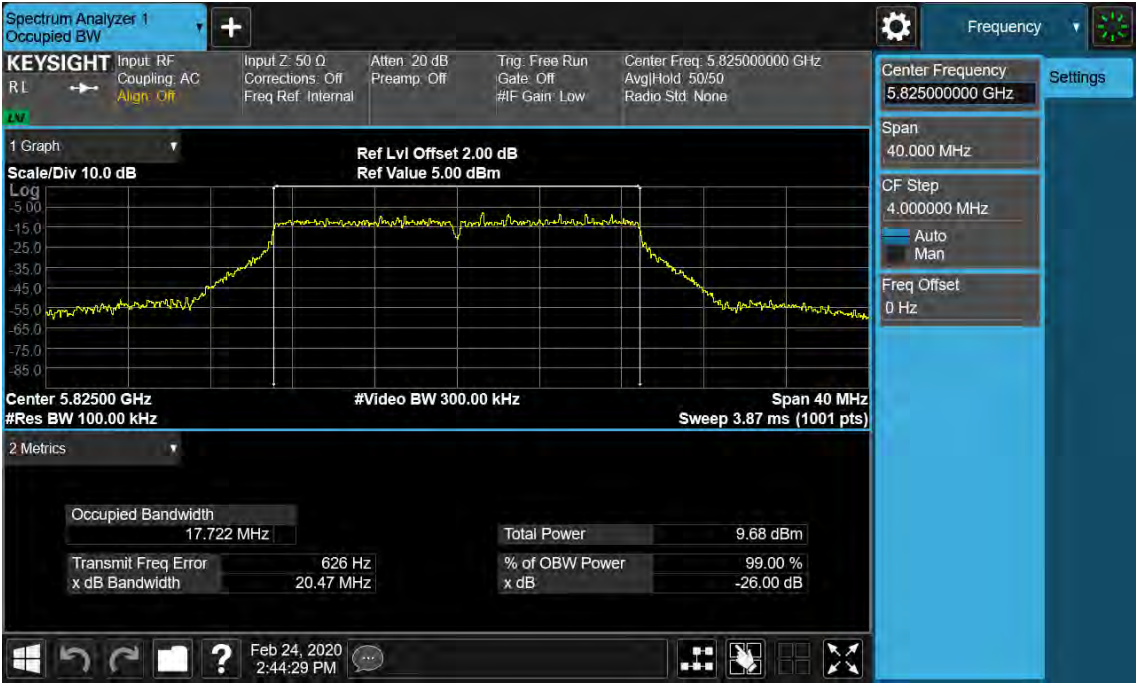


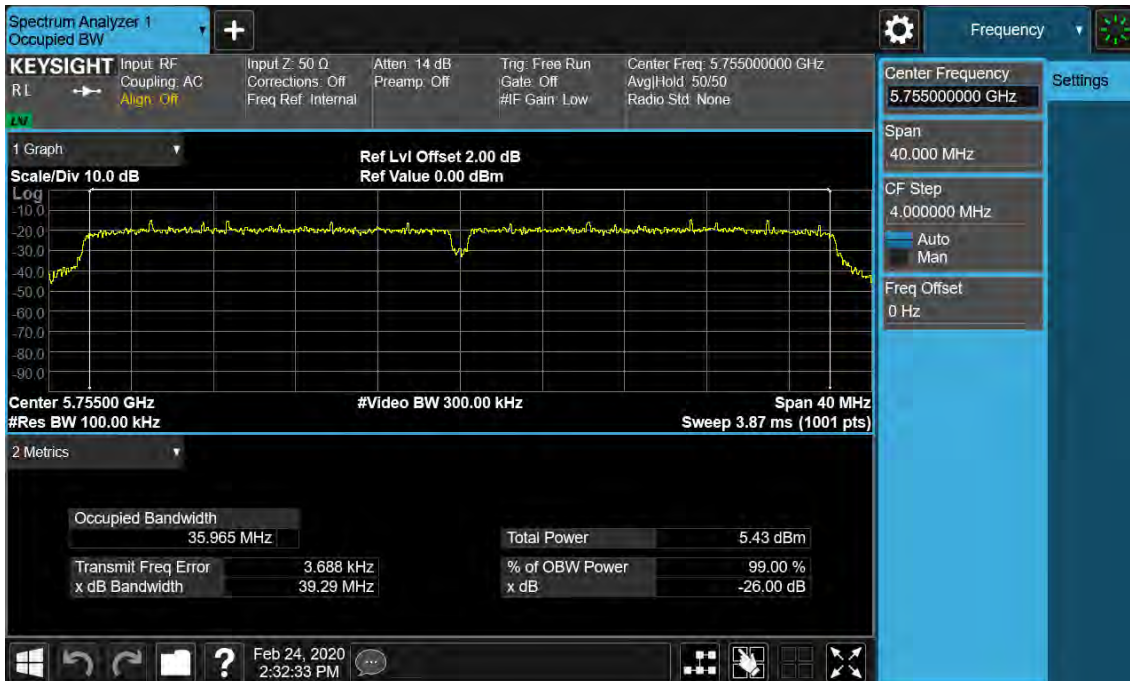
Figure 24: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 5755MHz

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Figure 25: 26dB Bandwidth and 99% Bandwidth, 802.11n(HT40), 5795MHz

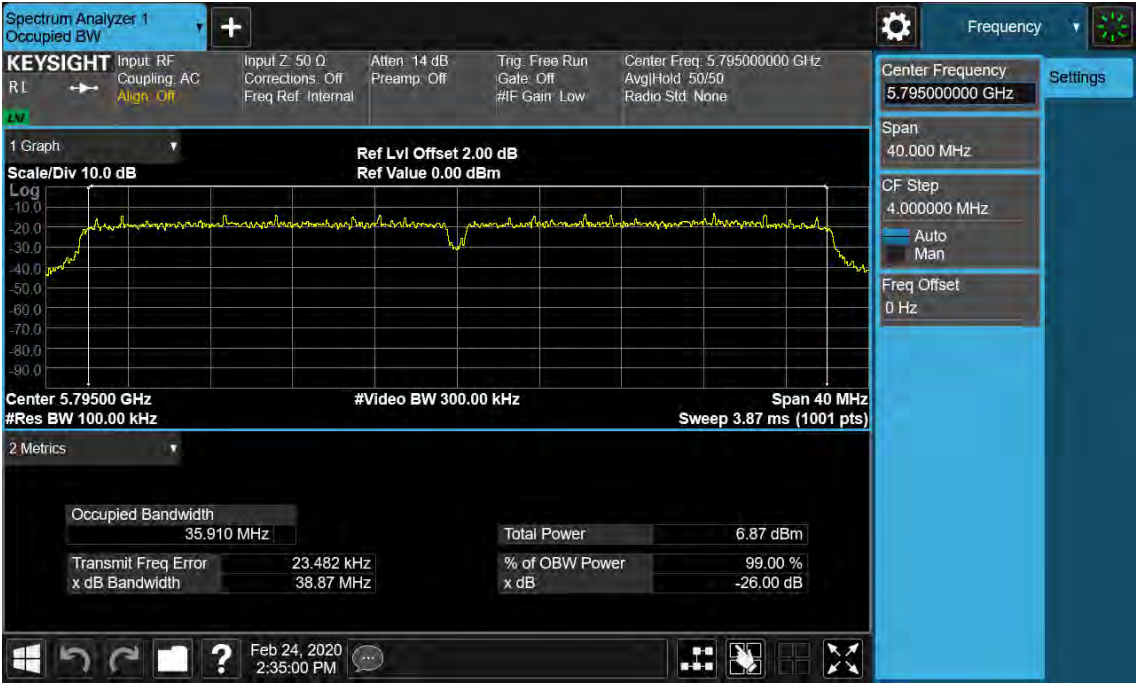


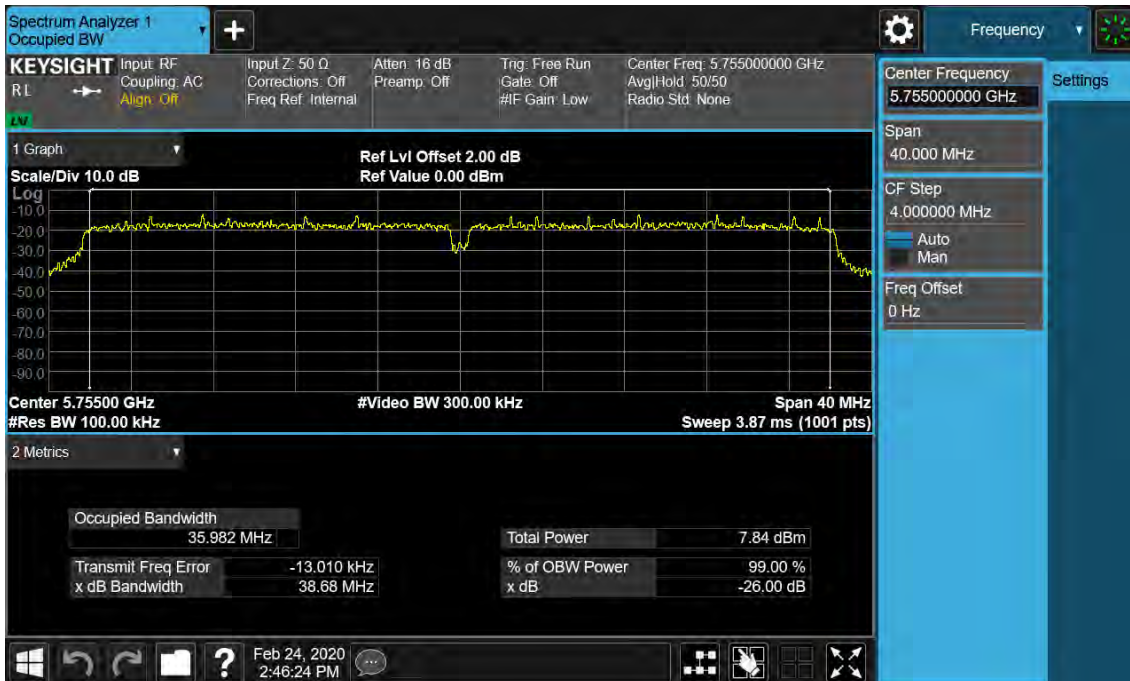
Figure 26: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT40), 5755MHz

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Figure 27: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT40), 5785MHz

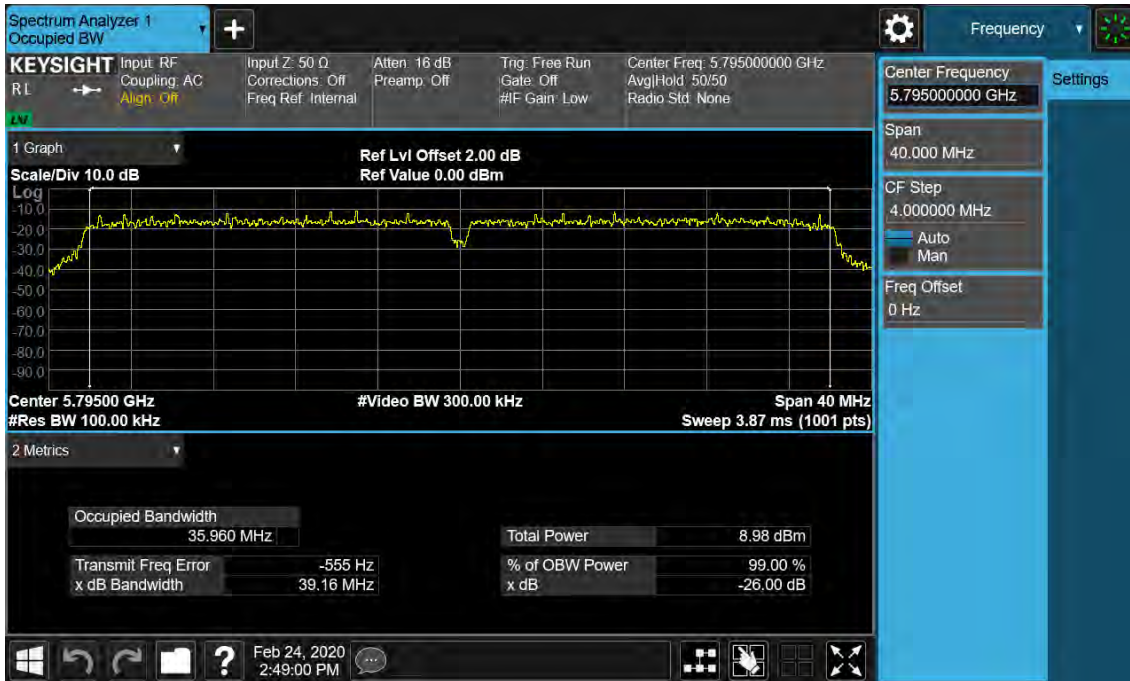


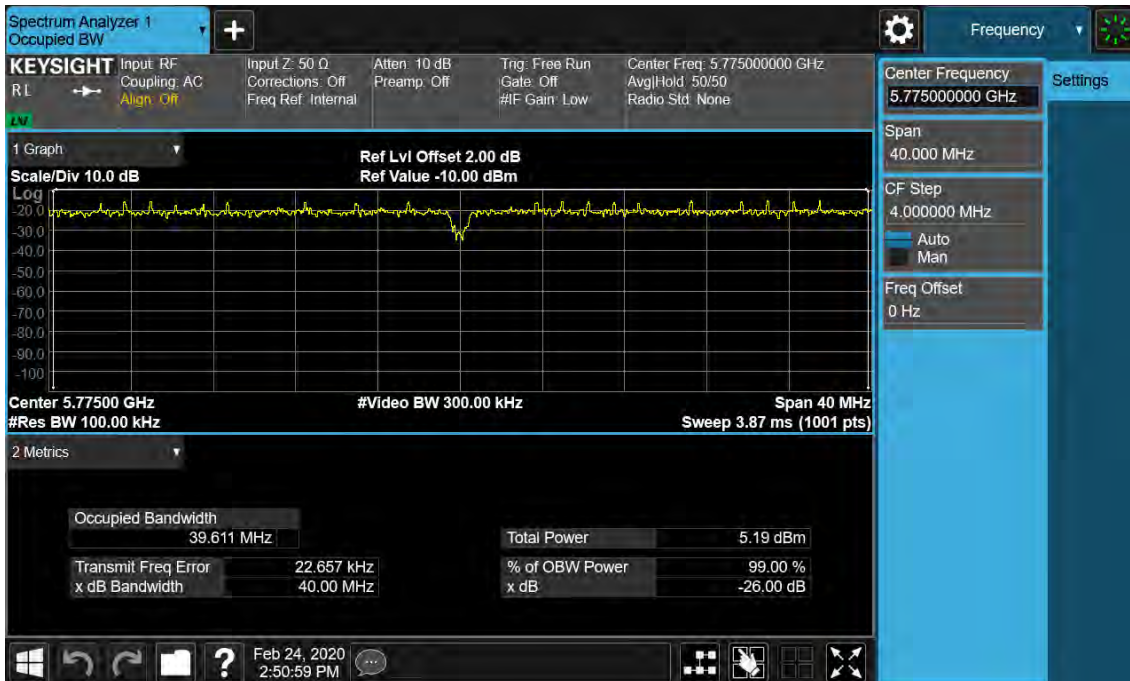
Figure 28: 26dB Bandwidth and 99% Bandwidth, 802.11ac(VHT80), 5775MHz

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4.1.4 6dB Bandwidth

RESULT:

PASS

Test standard : FCC Part 15.407(e)
RSS-247 6.2
Requirement : ANSI C63.10-2013, KDB 789033
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 52%

Table 4: 6dB Bandwidth

Band IV (5725 – 5850 MHz)

Test Mode	Test Channel (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
802.11a	5745	16.47	0.5
	5785	16.47	
	5825	16.52	
802.11n(HT20)	5745	17.67	
	5785	17.67	
	5825	17.67	
802.11ac(VHT20)	5745	17.72	
	5785	17.67	
	5825	17.77	
802.11n(HT40)	5755	35.07	
	5795	35.22	
802.11ac(VHT40)	5755	35.47	
	5795	34.92	
802.11ac(VHT80)	5775	73.97	

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Figure 29: 6dB Bandwidth, 802.11a, 5745MHz



Figure 30: 6dB Bandwidth, 802.11a, 5785MHz



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Figure 31: 6dB Bandwidth, 802.11a, 5825MHz



Figure 32: 6dB Bandwidth, 802.11n(HT20), 5745MHz



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Figure 33: 6dB Bandwidth, 802.11n(HT20), 5785MHz



Figure 34: 6dB Bandwidth, 802.11n(HT20), 5825MHz



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Figure 35: 6dB Bandwidth, 802.11ac(VHT20), 5745MHz



Figure 36: 6dB Bandwidth, 802.11ac(VHT20), 5785MHz



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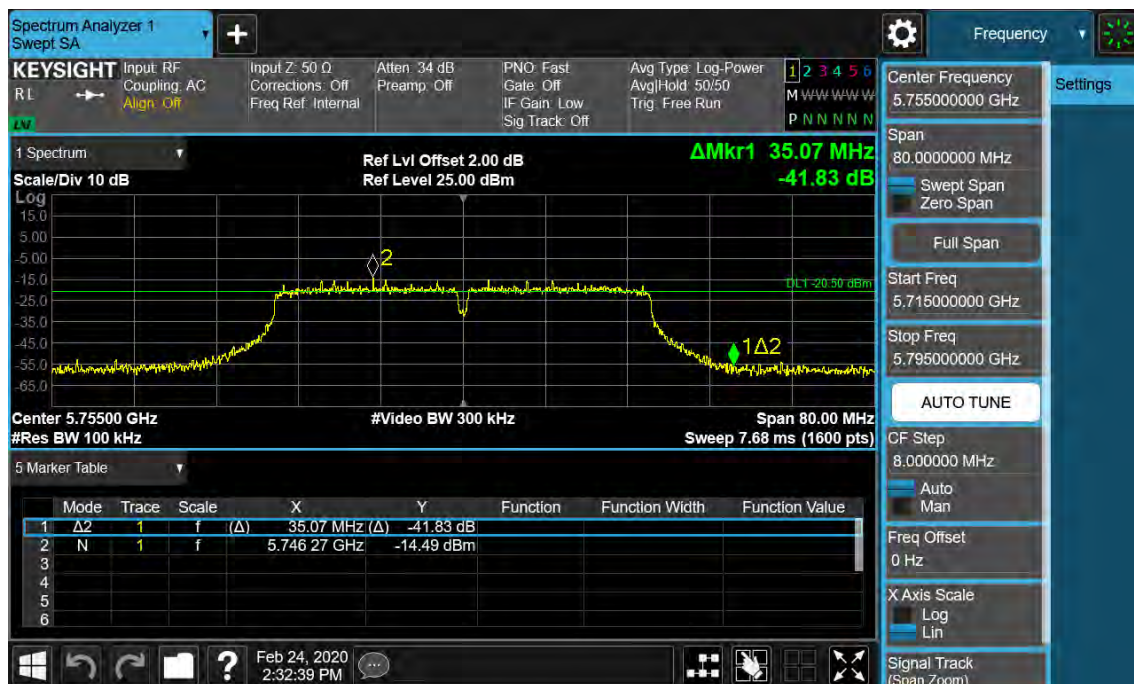
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Figure 37: 6dB Bandwidth, 802.11ac(VHT20), 5825MHz



Figure 38: 6dB Bandwidth, 802.11n(HT40), 5755MHz



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Figure 39: 6dB Bandwidth, 802.11n(HT40), 5795MHz

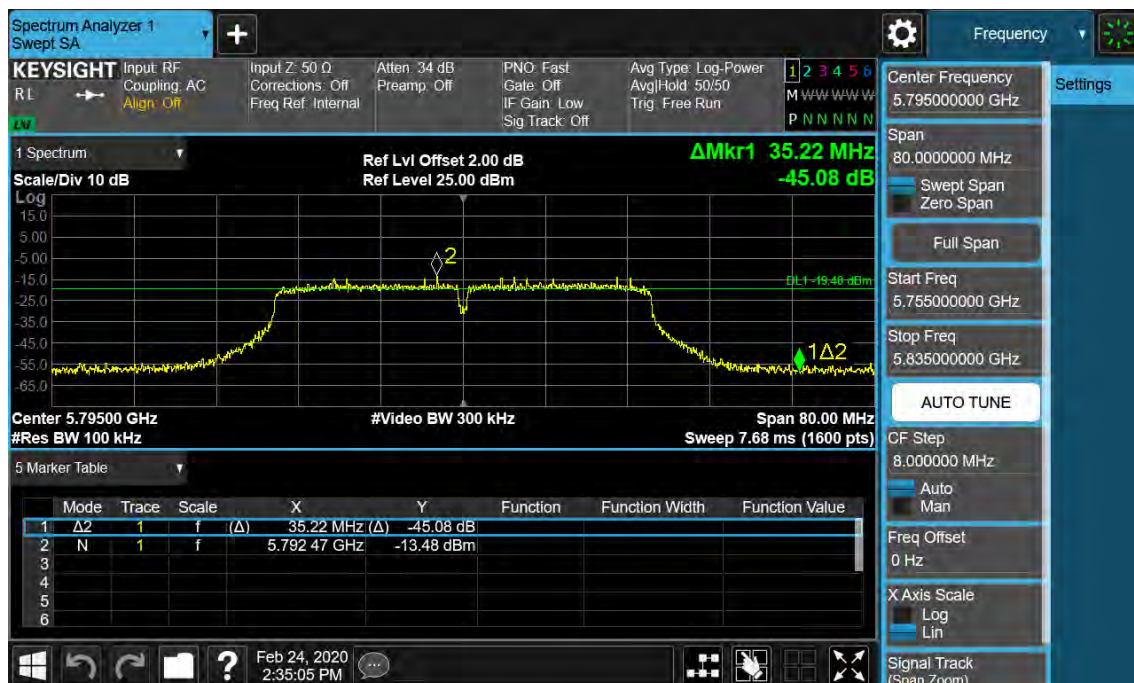
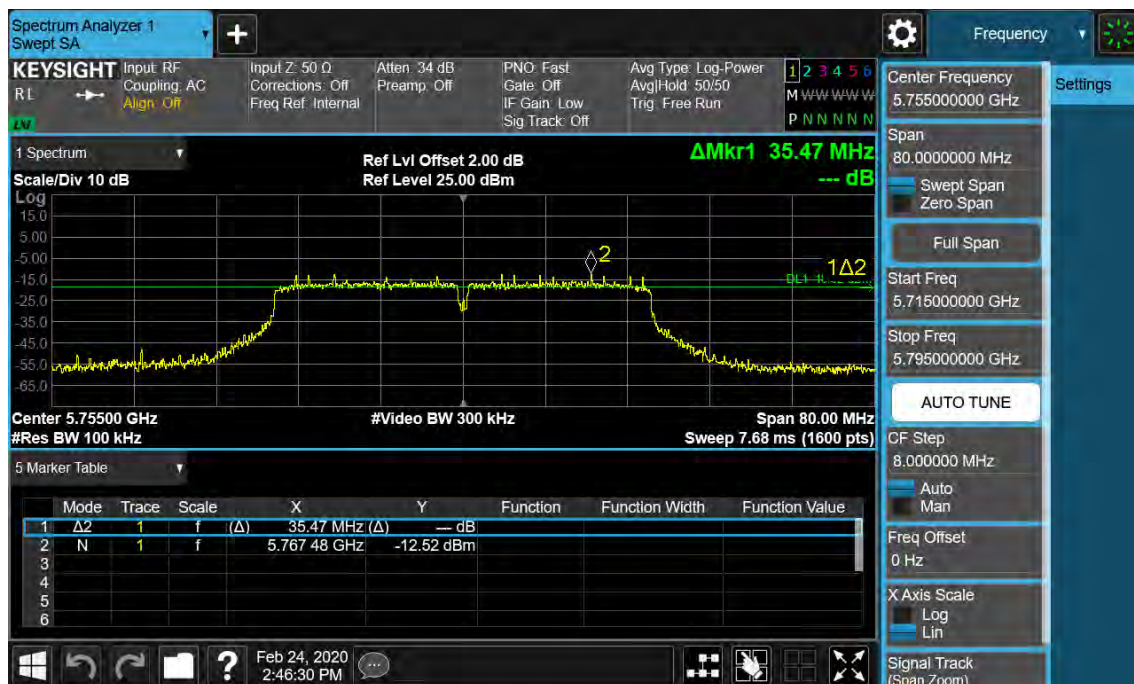


Figure 40: 6dB Bandwidth, 802.11ac(VHT40), 5755MHz



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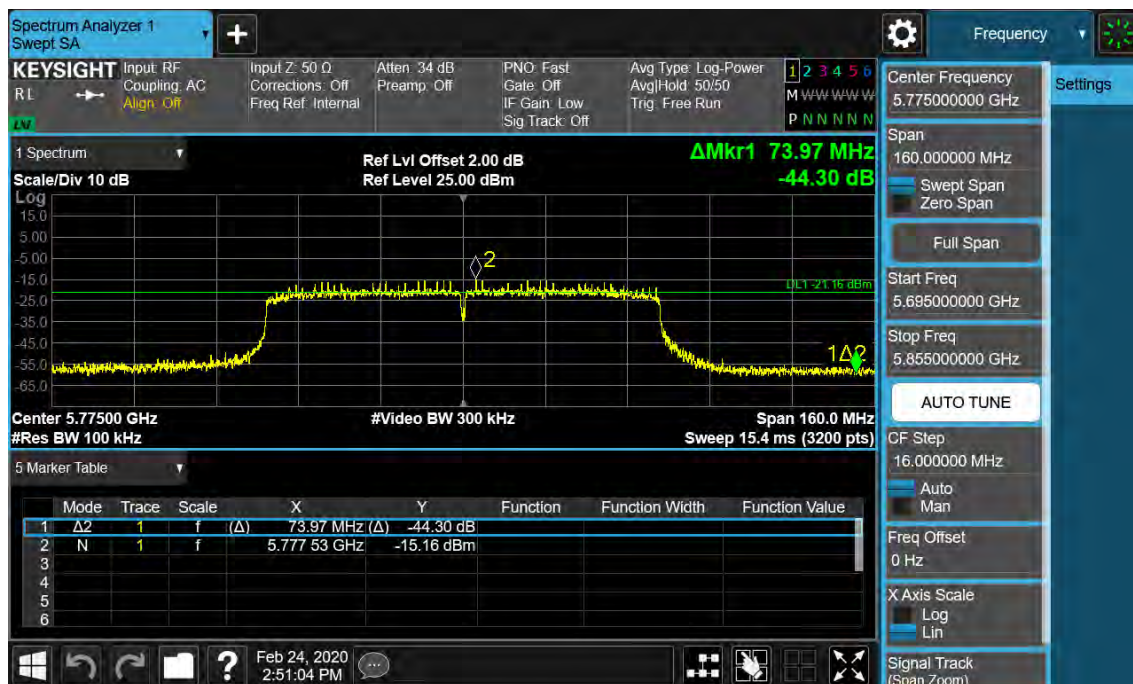
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Figure 41: 6dB Bandwidth, 802.11ac(VHT40), 5785MHz



Figure 42: 6dB Bandwidth, 802.11ac(VHT80), 5775MHz



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4.1.5 Power Spectral Density

RESULT:

PASS

Test standard : FCC Part 15.407(a)
RSS-247 6.2
Requirement : ANSI C63.10-2013, KDB 789033
Kind of test site : Shielded room

Test setup

Test Channel : Low/Middle/High
Operation Mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 52%

Table 5: Power Spectral Density

Band I (5150 – 5250 MHz)

Test Mode	Test Channel (MHz)	PSD (dBm/MHz)	FCC Limit (dBm/MHz)
802.11a	5180	6.057	11
	5220	5.998	
	5240	5.618	
802.11n(HT20)	5180	4.820	
	5220	4.542	
	5240	4.912	
802.11ac(VHT20)	5180	6.617	
	5220	6.348	
	5240	5.848	
802.11n(HT40)	5190	2.241	
	5230	2.057	
802.11ac(VHT40)	5190	3.796	
	5230	3.495	
802.11ac(VHT80)	5210	-3.720	

Band IV (5725 – 5850 MHz)

Test Mode	Test Channel (MHz)	PSD (dBm/MHz)	FCC Limit (dBm/MHz)
802.11a	5745	-2.248	30
	5785	-1.732	
	5825	-0.494	

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802.11n(HT20)	5745	-3.456	
	5785	-1.999	
	5825	-1.590	
802.11ac(VHT20)	5745	-1.652	
	5785	-1.124	
	5825	0.269	
802.11n(HT40)	5755	-6.491	
	5795	-4.086	
802.11ac(VHT40)	5755	-4.302	
	5795	-2.914	
802.11ac(VHT80)	5775	-10.755	

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Figure 43: Power Spectral Density, 802.11a, 5180MHz



Figure 44: Power Spectral Density, 802.11a, 5220MHz



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Keysight Spectrum Analyzer 1
Swept SA

Input RF: Coupling: AC, Corrections: Off, Freq Ref: Internal
Input Z: 50 Ω, #Atten: 30 dB, Preamp: Off
PNO: Fast Gate: Off, IF Gain: Low, Sig Track: Off
Avg Type: Log-Power, Avg/Hold: 100/10, Trig: Free Run

Center Frequency: 5.24000000 GHz
Span: 40.0000000 MHz
Start Freq: 5.220000000 GHz
Stop Freq: 5.260000000 GHz
AUTO TUNE
CF Step: 4.0000000 MHz
Freq Offset: 0 Hz
X Axis Scale: Log
Signal Track: (Span 7 points)

1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.00 dB
Ref Level 22.00 dBm
Mkr1 5.241 67 GHz
5.618 dBm

Center 5.24000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz
Span 40.00 MHz
Sweep 1.00 ms (601 pts)

Spectrum Analyzer 1
Swept SA

KEYSIGHT Input RF Coupling: AC Input Z: 50 Ω Corrections: Off #Atten: 30 dB Preamp: Off PNO: Fast Gate: Off Avg Type: Log-Power Avg/Hold: 100/10 Trig: Free Run

RL $\rightarrow$ Align Off Freq Ref: Internal

1 2 3 4 5 6
A WWW WWW W
P N N N N N

1 Spectrum
Scale/Div 10 dB
Log

Ref Lvl Offset 2.00 dB
Ref Level 22.00 dBm

Mkr1 5.176 07 GHz
4.820 dBm

Center Frequency 5.180000000 GHz
Span 40.0000000 MHz
Swept Span
Zero Span
Full Span
Start Freq 5.160000000 GHz
Stop Freq 5.200000000 GHz
AUTO TUNE
CF Step 4.0000000 MHz
Auto Man
Freq Offset 0 Hz
X Axis Scale Log Lin
Signal Track (Span 7.000 MHz)

Center 5.18000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz
Span 40.00 MHz
Sweep 1.00 ms (601 pts)

Feb 24, 2020 1:51:41 PM

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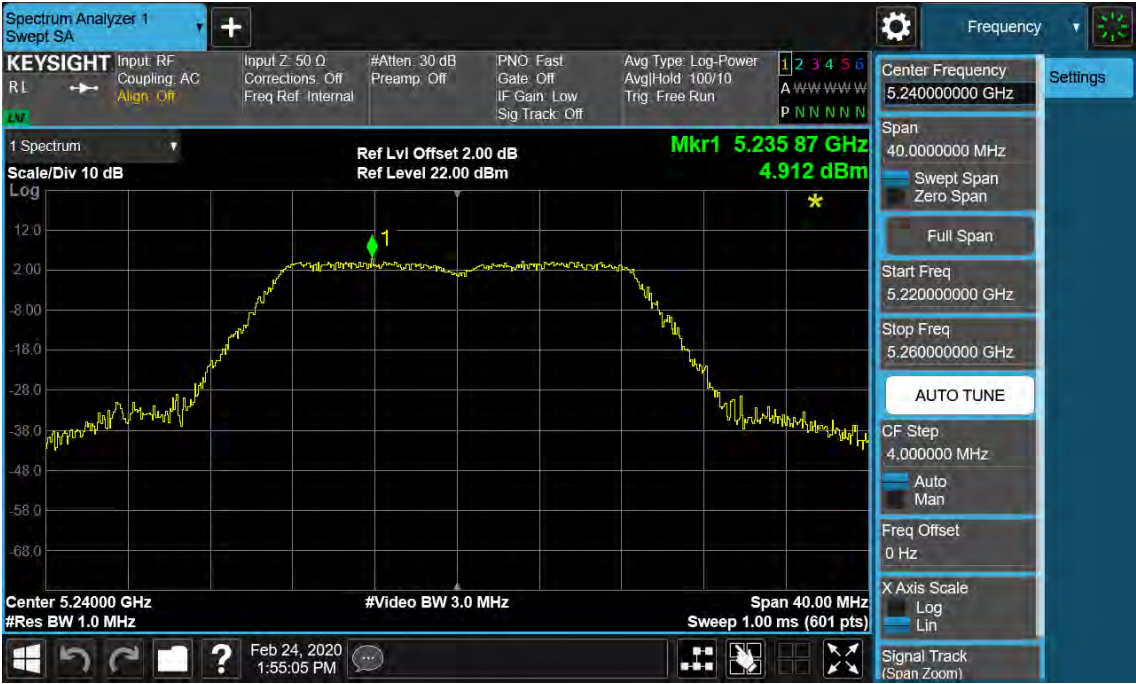
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Figure 47: Power Spectral Density, 802.11n(HT20), 5220MHz



Figure 48: Power Spectral Density, 802.11n(HT20), 5240MHz



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Figure 49: Power Spectral Density, 802.11ac(VHT20), 5180MHz

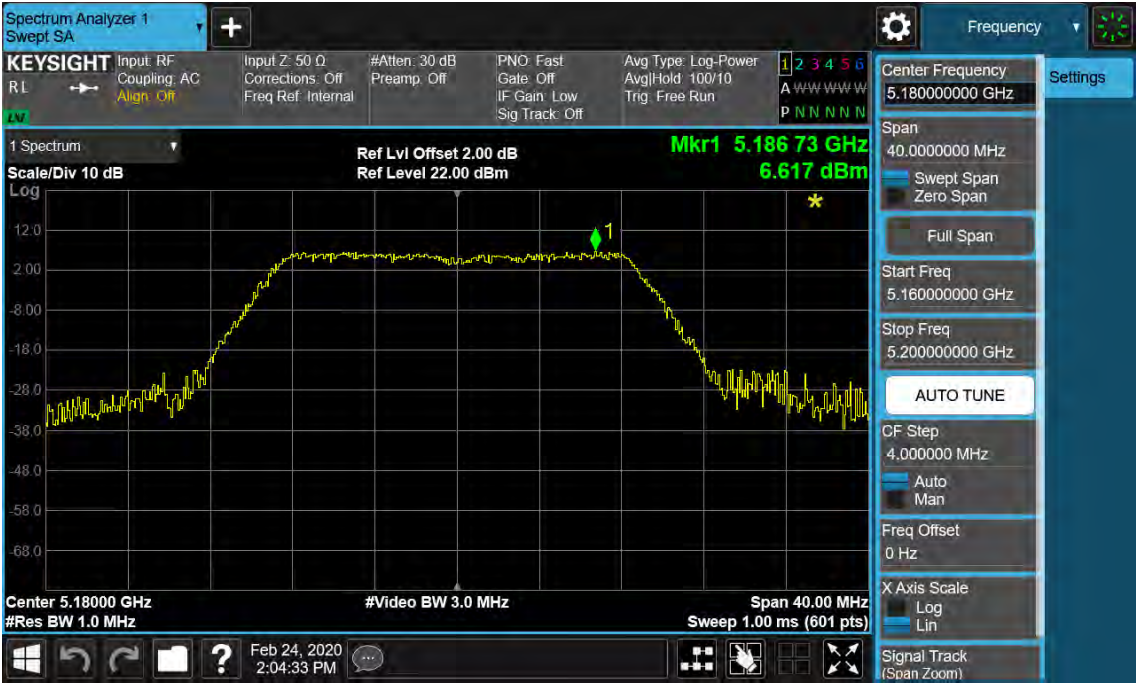
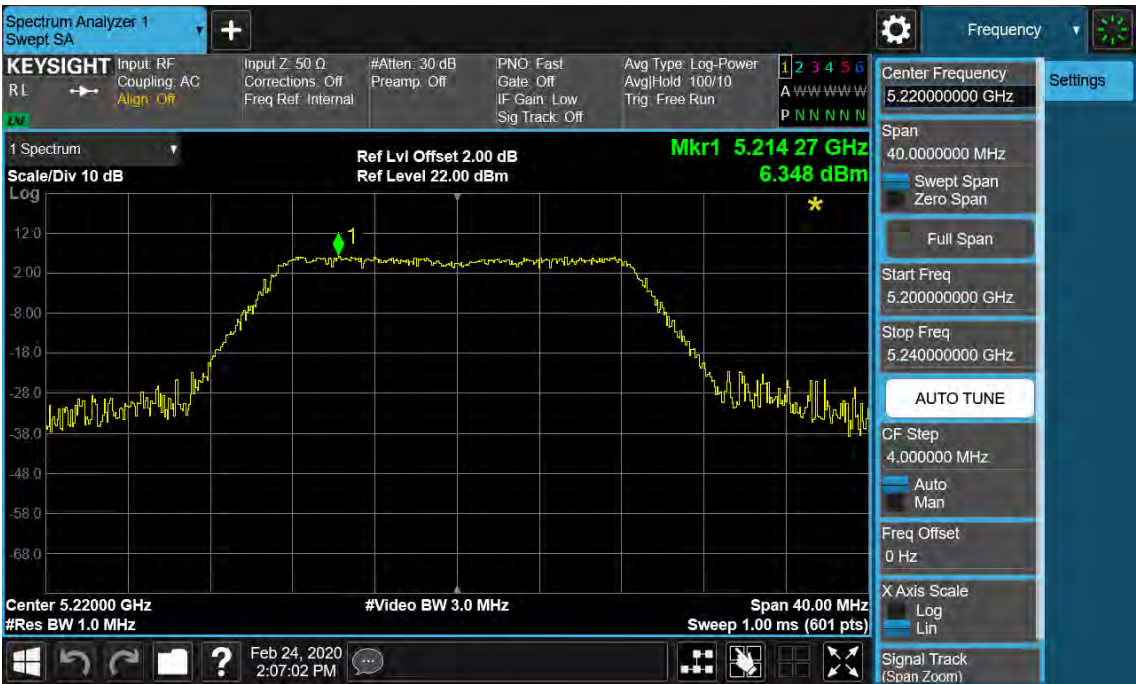


Figure 50: Power Spectral Density, 802.11ac(VHT20), 5220MHz



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Figure 51: Power Spectral Density, 802.11ac(VHT20), 5240MHz

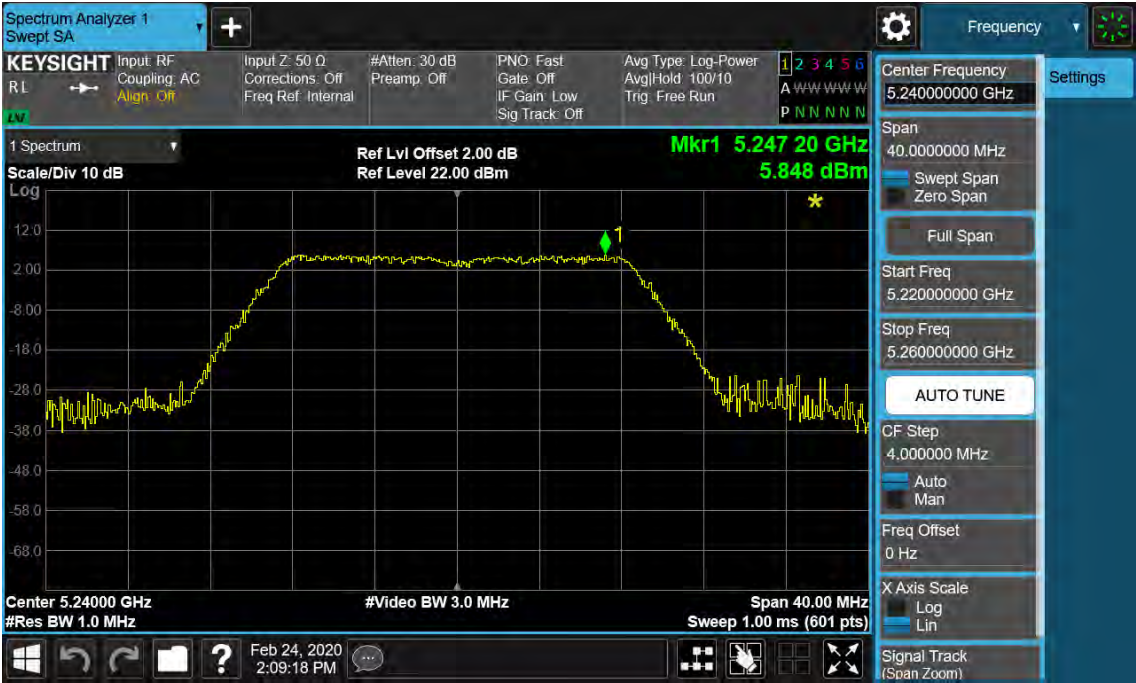
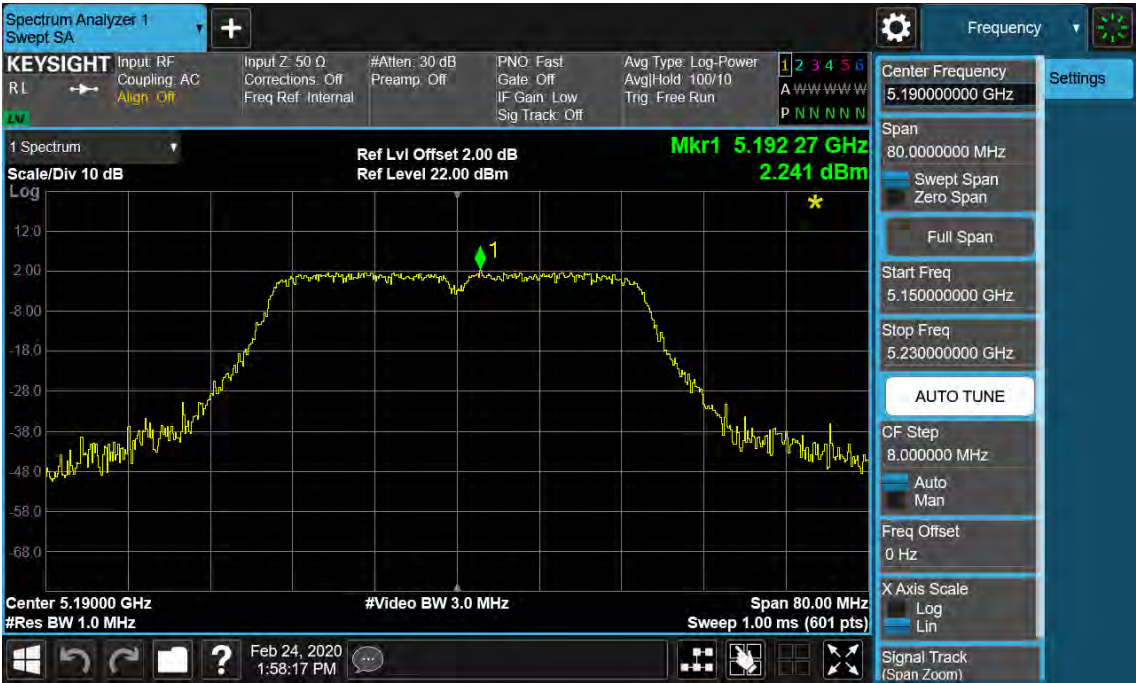


Figure 52: Power Spectral Density, 802.11n(HT40), 5190MHz



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Figure 53: Power Spectral Density, 802.11n(HT40), 5230MHz

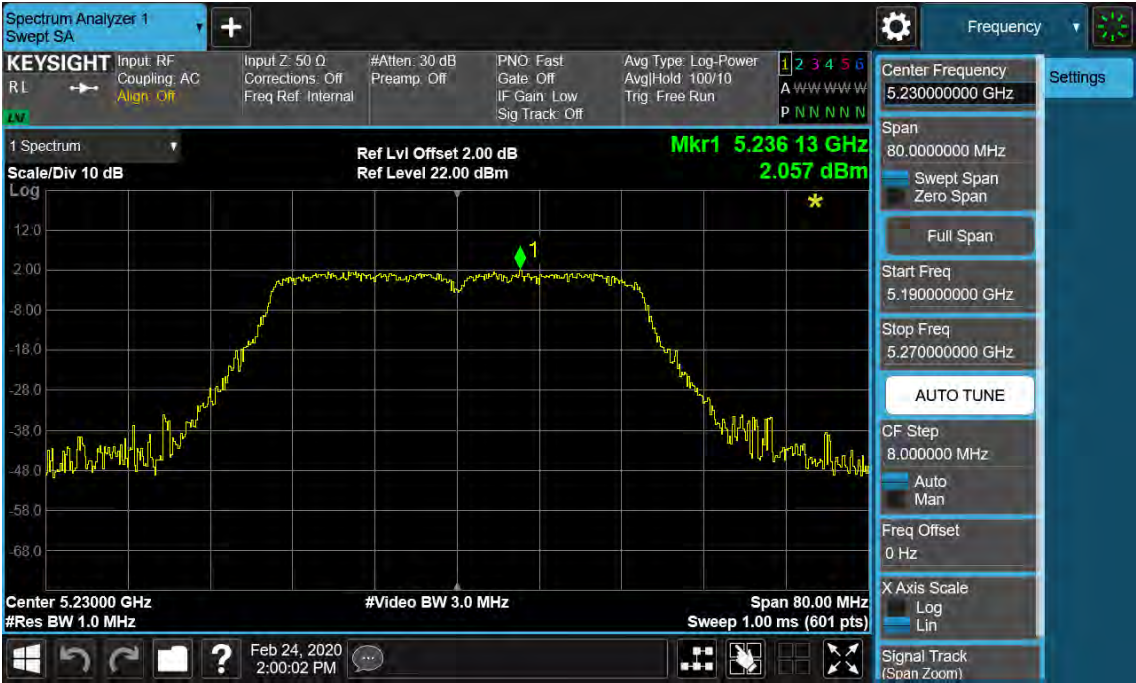


Figure 54: Power Spectral Density, 802.11ac(VHT40), 5190MHz



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Figure 55: Power Spectral Density, 802.11ac(VHT40), 5230MHz

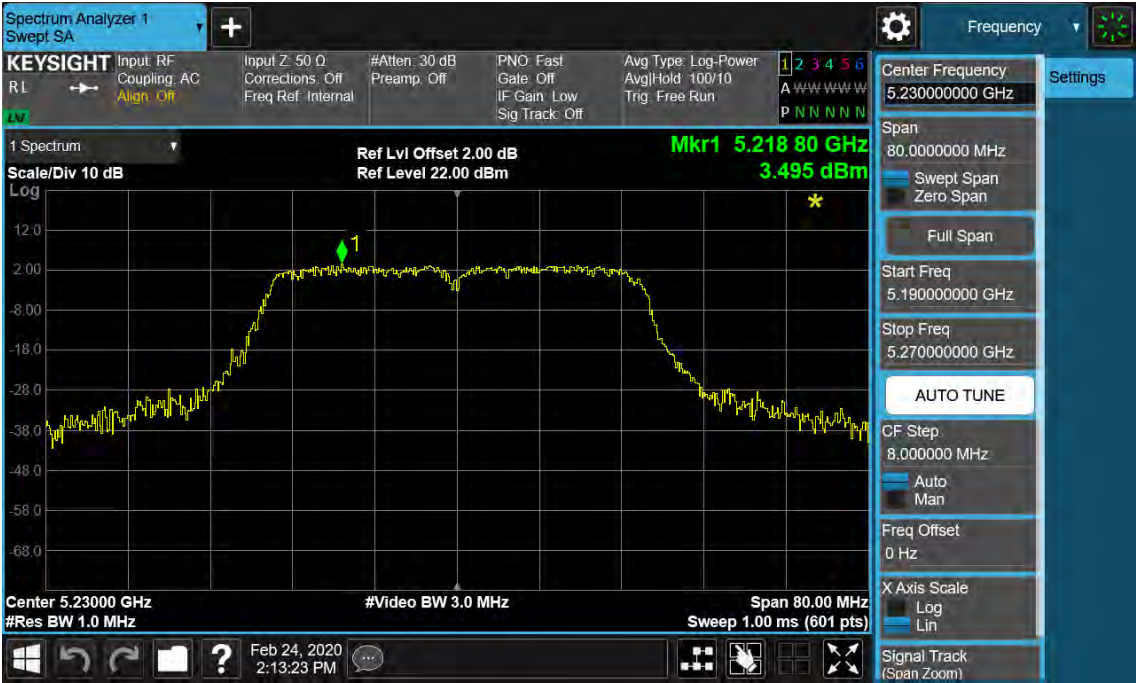
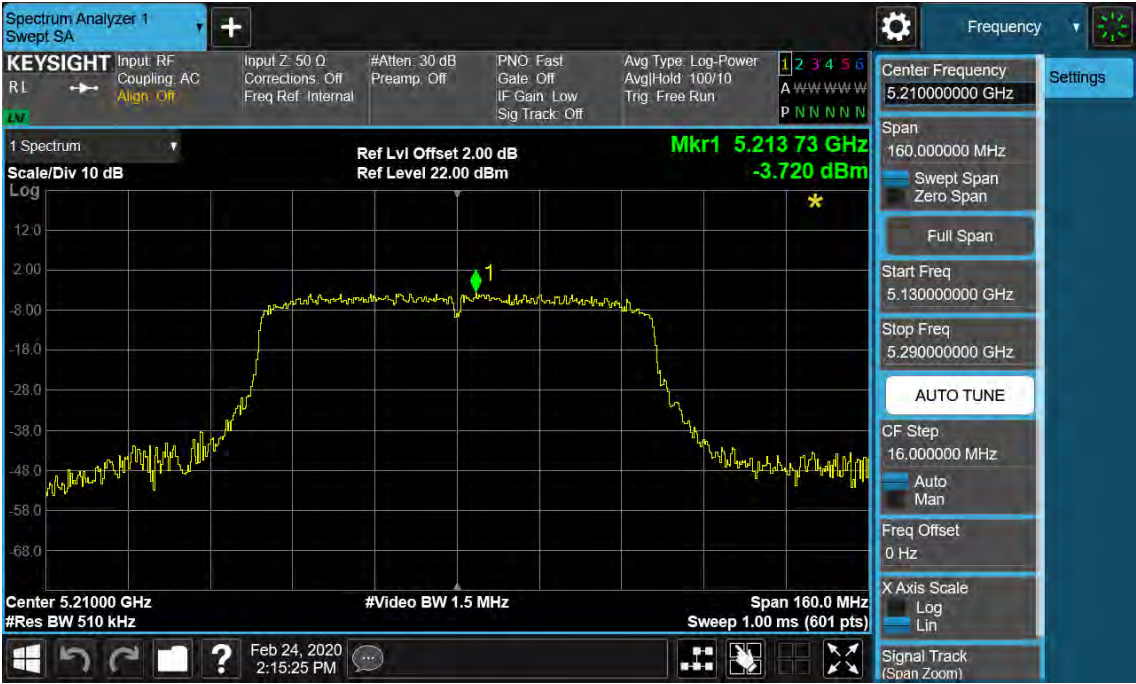


Figure 56: Power Spectral Density, 802.11ac(VHT80), 5210MHz



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Figure 57: Power Spectral Density, 802.11a, 5745MHz

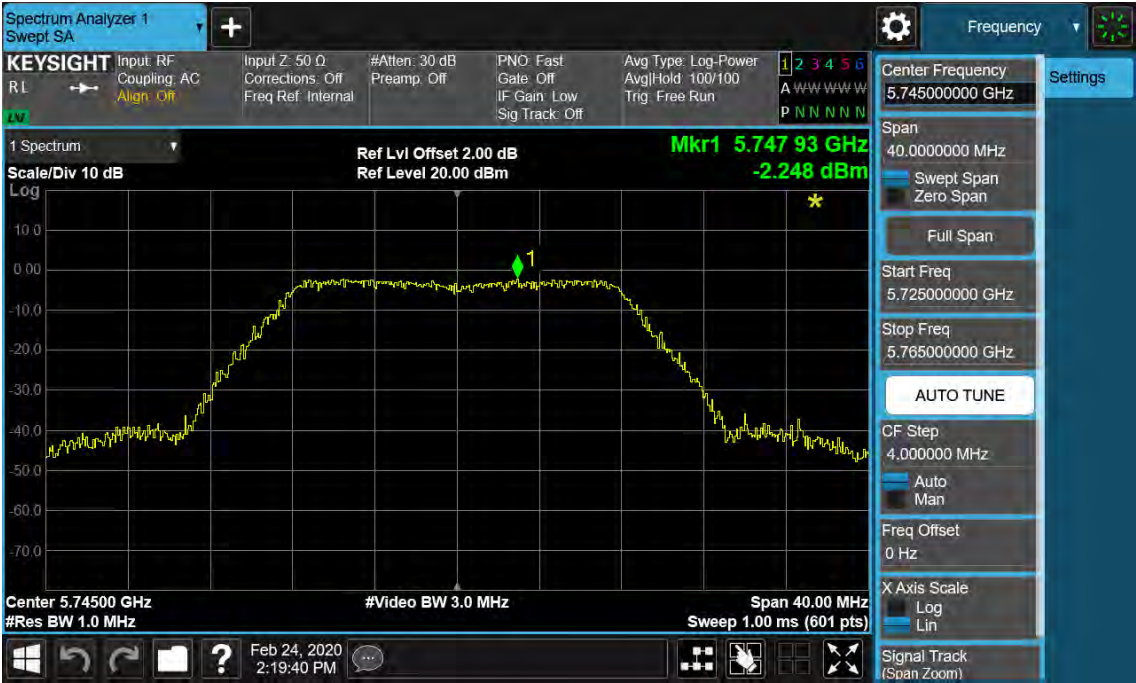
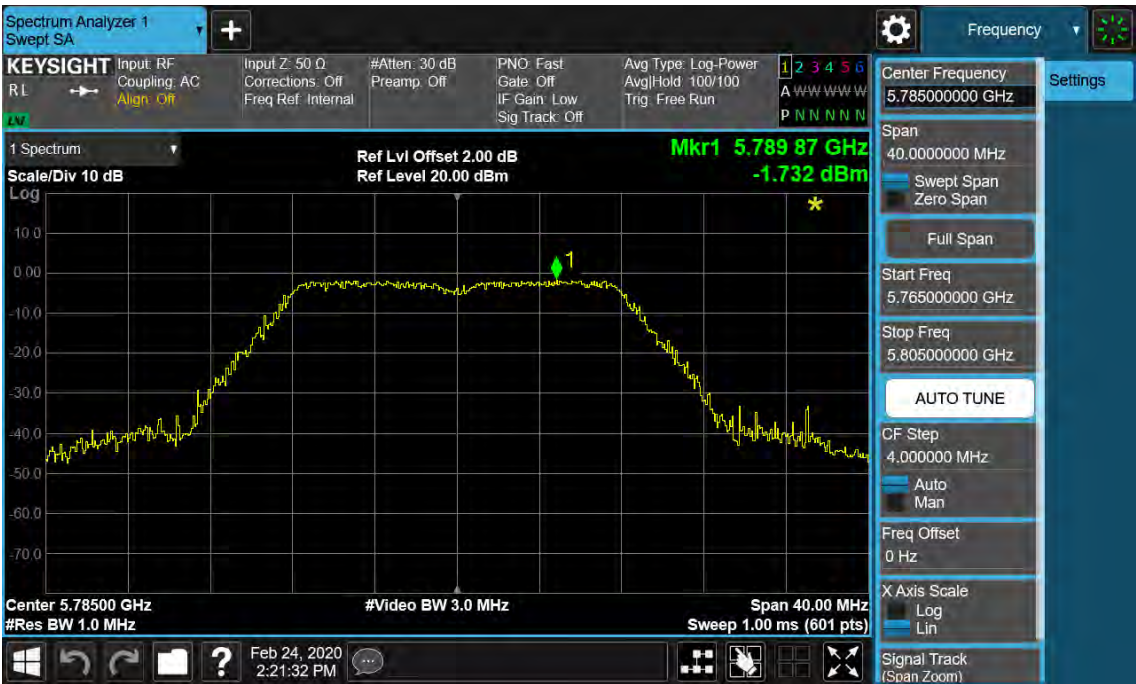


Figure 58: Power Spectral Density, 802.11a, 5785MHz



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Figure 59: Power Spectral Density, 802.11a, 5825MHz

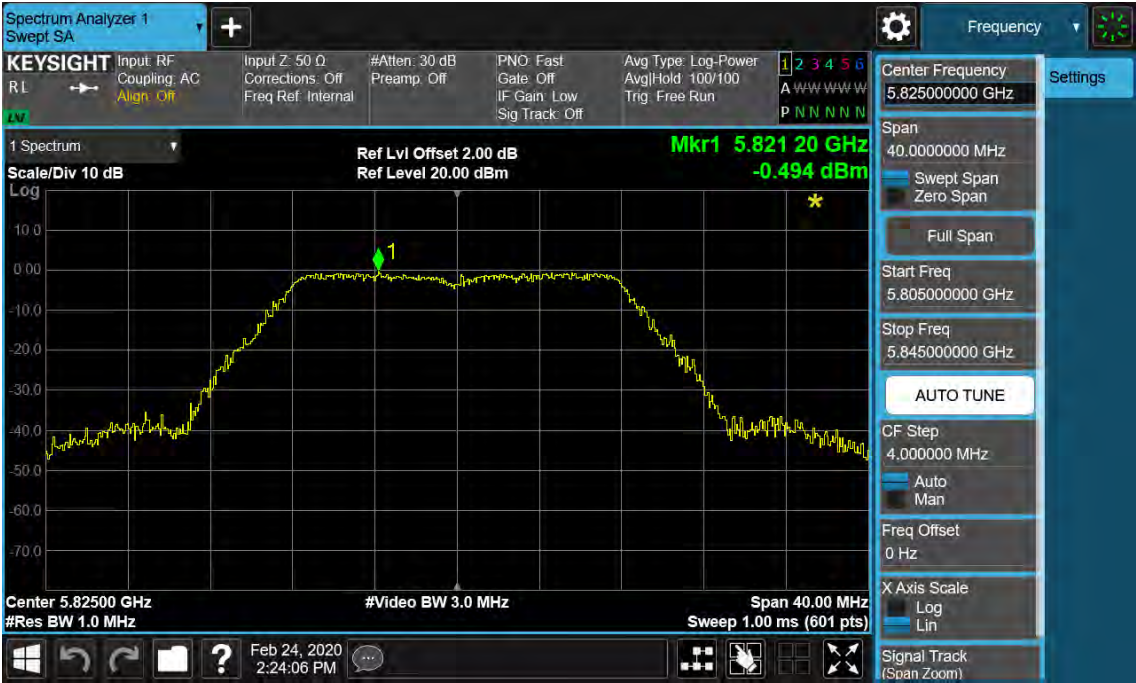
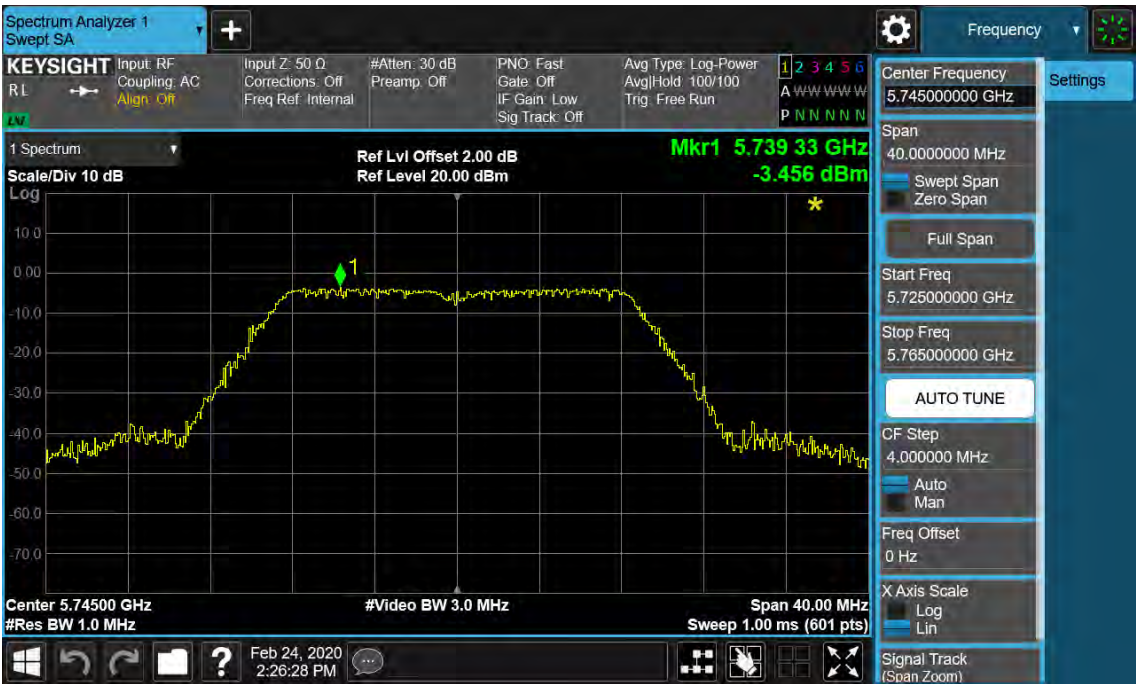


Figure 60: Power Spectral Density, 802.11n(HT20), 5745MHz



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Figure 61: Power Spectral Density, 802.11n(HT20), 5785MHz



Figure 62: Power Spectral Density, 802.11n(HT20), 5825MHz

