RF TEST REPORT

Applicant	Aava Mobile Oy
FCC ID	2ABVH-INARI10E1
Product	10" Tablet Computer
Brand	AAVA
Model	INARI-E-10-WIG-1
Report No.	R2406A0726-R3
Issue Date	September 11, 2024

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2023)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of measurement results

Number	Test Case	Clause in FCC rules	Verdict
1	Average output power	15.407(a)	PASS
2	Occupied bandwidth	15.407(e)	PASS
3	Frequency stability	15.407(g)	PASS
4	Power spectral density	15.407(a)	PASS
5	Unwanted Emissions	15.407(b)	PASS
6	Conducted Emissions	15.207	PASS
Date of Testing: June 24, 2024 ~ September 3, 2024 Date of Sample Received: June 24, 2024			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

1. Test Laboratory

1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
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City:	Shanghai
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E-mail:	Kain.Xu@cpt.eurofinscn.com

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Aava Mobile Oy
Applicant address	Nahkatehtaankatu 2, FI-90130 Oulu, Finland
Manufacturer	Aava Mobile Oy
Manufacturer address	Nahkatehtaankatu 2, FI-90130 Oulu, Finland

2.2. General information

EUT Description			
Model	INARI-E-10-WIG-1		
SN	Conducted: XBBA2FC1700102 Radiated: XBBA2FC1700039		
Hardware Version	EV1		
Software Version	007		
Power Supply	Battery / AC adapter		
Antenna Type	Chip Antenna		
Antenna Connector	A permanently attached antenna (meet with the standard FCC Part 15.203 requirement)		
Antenna Gain	Frequency	Antenna 1(dBi)	Antenna 2(dBi)
	U-NII-1&U-NII-2A	2.30	3.10
	U-NII-2C	3.20	3.20
	U-NII-3	1.90	2.70
Directional Gain	Frequency		For power/PSD(dBi)
	MIMO	U-NII-1&U-NII-2A	2.72
		U-NII-2C	3.20
		U-NII-3	2.32
	Beamforming	U-NII-1&U-NII-2A	6.11
		U-NII-2C	6.21
		U-NII-3	5.71
Operating Frequency Range(s)	U-NII-1: 5150MHz-5250MHz U-NII-2A: 5250MHz -5350MHz U-NII-2C: 5470MHz-5725MHz U-NII-3: 5725MHz -5850MHz		
Modulation Type	802.11a: OFDM		

	802.11n (HT20/HT40): OFDM 802.11ac (VHT20/VHT40/VHT80/VHT160): OFDM 802.11ax (HE20/ HE40/ HE80/HE160): OFDMA
Max. Output Power	21.09 dBm
Operating temperature range	-10 ° C to 50° C
Operating voltage range	3.2 V to 4.4 V
Testing temperature range	-30 ° C to 50° C
State voltage	3.85 V
EUT Accessory	
Battery	Manufacturer: Shenzhen Guangwei Electronic Technology Co., Ltd. Model: AMME5260

Note:
1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.
2. This device support automatically discontinue transmission, while the device is not transmitting any information, the device can automatically discontinue transmission and become standby mode for power saving. The device can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.
3. (a) Manufacturers implements security features in any digitally modulated devices capable of operating in any of the U-Nll bands, so that third parties are not able to reprogram the device to operate outside the parameters for which the device was certified. The software prevents the user from operating the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved for the device. Manufacturers uses means including, but not limited to the use of a private network that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements and must describe the methods in their application for equipment authorization.

3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR47 Part 15E (2023) Unlicensed National Information Infrastructure Devices

ANSI C63.10-2013

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

4. Test Configuration

Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Mode	Data Rate		
	SISO	MIMO	Beamforming
802.11a	6 Mbps	6 Mbps	--
802.11n HT20	MCS 0	MCS 8	MCS 8
802.11n HT40	MCS 0	MCS 8	MCS 8
802.11ac VHT20	MCS 0	MCS 0	MCS 0
802.11ac VHT40	MCS 0	MCS 0	MCS 0
802.11ac VHT80	MCS 0	MCS 0	MCS 0
802.11ac VHT160	MCS 0	MCS 0	MCS 0
802.11ax HE20	MCS 0	MCS 0	MCS 0
802.11ax HE40	MCS 0	MCS 0	MCS 0
802.11ax HE80	MCS 0	MCS 0	MCS 0
802.11ax HE160	MCS 0	MCS 0	MCS 0

The worst case Antenna mode for each of the following tests for Wi-Fi:

Test Cases	Antenna 1	Antenna 2	MIMO	Beamforming
Average conducted output power	O	O	O	802.11n HT20/40 802.11ac VHT20/40/80/160 802.11ax HE 20/40/80/160
Occupied bandwidth	--	--	O	--
Frequency stability	--	--	O	--
Power Spectral Density	O	O	O	802.11n HT20/40 802.11ac VHT20/40/80/160 802.11ax HE 20/40/80/160
Unwanted Emissions	--	--	O	--
Conducted Emissions	--	--	802.11ac VHT80	--
Note：“O”: test all bands				

Wireless Technology and Frequency Range

Wireless Technology		Bandwidth	Channel	Frequency
Wi-Fi	U-NII-1	20 MHz	36	5180MHz
			40	5200MHz
			44	5220MHz
			48	5240MHz
		40 MHz	38	5190MHz
			46	5230MHz
		80 MHz	42	5210MHz
		160 MHz	50	5250MHz
	U-NII-2A	20 MHz	52	5260MHz
			56	5280MHz
			60	5300MHz
			64	5320MHz
		40 MHz	54	5270MHz
			62	5310MHz
		80 MHz	58	5290MHz
	U-NII-2C	20 MHz	100	5500MHz
			104	5520MHz
			108	5540MHz
			112	5560MHz
			116	5580MHz
			120	5600MHz
			124	5620MHz
			128	5640MHz
			132	5660MHz
			136	5680MHz
			140	5700MHz
			144	5720MHz
		40 MHz	102	5510MHz
			110	5550MHz
			118	5590MHz
			126	5630MHz
			134	5670MHz
			142	5710MHz
		80 MHz	106	5530MHz
			122	5610MHz
			138	5690MHz

		160 MHz	114	5570MHz
	U-NII-3	20 MHz	149	5745MHz
			153	5765MHz
			157	5785MHz
			161	5805MHz
			165	5825MHz
		40 MHz	151	5755MHz
			159	5795MHz
		80 MHz	155	5775MHz
Does this device support TPC Function? ☒Yes ☐No				
Does this device support TDWR Band? ☒Yes ☐No				

5. Test Case Results

5.1. Occupied Bandwidth

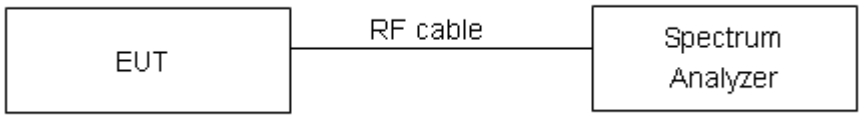
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.
For U-NII-1/U-NII-2A/U-NII-2C, set RBW ≈1% OCB kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.
For U-NII-3, Set RBW = 100 kHz, VBW ≥ 3 × RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.
Use the 99 % power bandwidth function of the instrument

Test Setup



Limits

For U-NII-1/U-NII-2A/U-NII-2C
No specific occupied bandwidth requirements in Part 15.407.
For U-NII-3
Rule FCC Part §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.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

U-NII-1

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5180	16.449	19.312	PASS
	5200	16.445	19.478	PASS
	5240	16.420	19.383	PASS
802.11n HT20	5180	17.647	20.427	PASS
	5200	17.607	20.485	PASS
	5240	17.626	20.476	PASS
802.11n HT40	5190	36.145	40.330	PASS
	5230	36.091	40.156	PASS
802.11ac VHT20	5180	17.613	20.530	PASS
	5200	17.642	20.661	PASS
	5240	17.625	20.572	PASS
802.11ac VHT40	5190	36.150	40.317	PASS
	5230	36.104	40.662	PASS
802.11ac VHT80	5210	75.630	82.433	PASS
802.11ax HE20	5180	18.970	20.946	PASS
	5200	18.958	21.084	PASS
	5240	18.959	21.124	PASS
802.11ax HE40	5190	37.792	40.804	PASS
	5230	37.747	40.739	PASS
802.11ax HE80	5210	77.245	82.830	PASS

U-NII-2A

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5260	16.439	19.497	PASS
	5300	16.437	19.157	PASS
	5320	16.430	19.340	PASS
802.11n HT20	5260	17.622	20.230	PASS
	5300	17.618	20.670	PASS
	5320	17.617	20.514	PASS
802.11n HT40	5270	36.077	40.400	PASS
	5310	36.088	40.220	PASS
802.11ac VHT20	5260	17.637	20.345	PASS
	5300	17.620	20.288	PASS
	5320	17.621	20.505	PASS
802.11ac VHT40	5270	36.073	39.914	PASS
	5310	36.119	39.883	PASS
802.11ac VHT80	5290	75.567	82.354	PASS
802.11ac VHT160	5250	154.906	166.554	PASS
802.11ax HE20	5260	18.959	20.883	PASS
	5300	18.987	20.828	PASS
	5320	18.964	21.164	PASS
802.11ax HE40	5270	37.811	40.586	PASS
	5310	37.768	40.543	PASS
802.11ax HE80	5290	77.304	81.580	PASS
802.11ax HE160	5250	156.485	164.510	PASS

U-NII-2C

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	5500	16.477	19.360	PASS
	5600	16.444	19.270	PASS
	5700	16.442	19.233	PASS
	5720	16.441	19.385	PASS
802.11n HT20	5500	17.626	20.432	PASS
	5600	17.623	20.577	PASS
	5700	17.632	20.572	PASS
	5720	17.645	20.539	PASS
802.11n HT40	5510	36.111	40.012	PASS
	5590	36.097	40.134	PASS
	5670	36.107	40.316	PASS
	5710	36.095	39.940	PASS
802.11ac VHT20	5500	17.637	20.584	PASS
	5600	17.610	20.396	PASS
	5700	17.604	20.395	PASS
	5720	17.630	20.372	PASS
802.11ac VHT40	5510	36.112	39.678	PASS
	5590	36.122	39.912	PASS
	5670	36.108	40.051	PASS
	5710	36.100	39.609	PASS
802.11ac VHT80	5610	75.574	81.861	PASS
	5690	75.614	82.537	PASS
802.11ac VHT160	5570	154.445	165.392	PASS
802.11ax HE20	5500	18.963	21.341	PASS
	5600	18.919	20.842	PASS
	5700	18.936	20.897	PASS
	5720	18.933	21.179	PASS
802.11ax HE40	5510	37.758	40.598	PASS
	5590	37.776	40.256	PASS
	5670	37.815	40.293	PASS
	5710	37.747	40.705	PASS
802.11ax HE80	5610	77.300	82.466	PASS
	5690	77.240	82.453	PASS
802.11ax HE160	5570	156.123	166.085	PASS

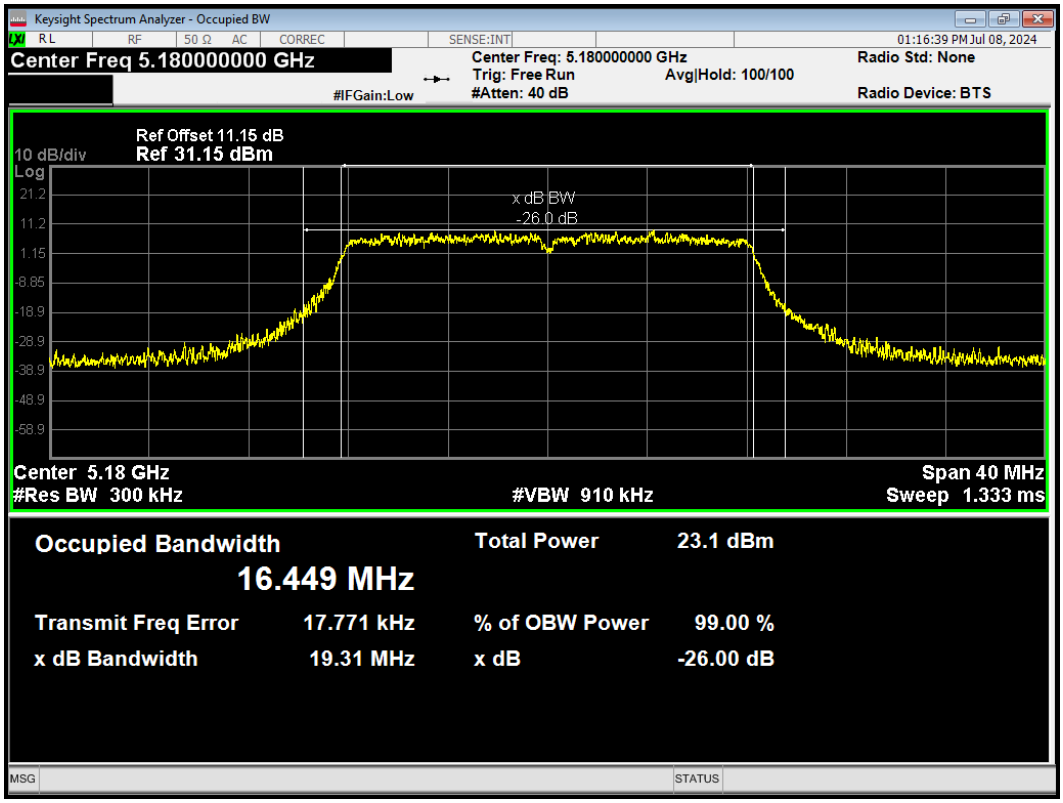
U-NII-3

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	5720	16.477	16.335	500	PASS
	5745	16.433	16.318	500	PASS
	5785	16.432	16.335	500	PASS
	5825	16.443	16.295	500	PASS
802.11n HT20	5720	17.626	17.669	500	PASS
	5745	17.624	17.560	500	PASS
	5785	17.615	17.576	500	PASS
	5825	17.622	17.576	500	PASS
802.11n HT40	5710	36.111	36.290	500	PASS
	5755	36.109	35.925	500	PASS
	5795	36.111	36.280	500	PASS
802.11ac VHT20	5720	17.637	17.329	500	PASS
	5745	17.611	17.562	500	PASS
	5785	17.623	17.641	500	PASS
	5825	17.619	17.575	500	PASS
802.11ac VHT40	5710	36.112	35.872	500	PASS
	5755	36.129	36.059	500	PASS
	5795	36.098	35.683	500	PASS
802.11ac VHT80	5690	75.574	75.540	500	PASS
	5775	75.604	75.326	500	PASS
802.11ax HE20	5720	18.963	18.937	500	PASS
	5745	18.927	19.030	500	PASS
	5785	18.908	18.732	500	PASS
	5825	18.961	18.268	500	PASS
802.11ax HE40	5710	37.758	37.719	500	PASS
	5755	37.789	37.749	500	PASS
	5795	37.773	37.607	500	PASS
802.11ax HE80	5690	77.300	77.571	500	PASS
	5775	77.174	77.112	500	PASS

99% bandwidth

U-NII-1

OBW 802.11a 5180MHz



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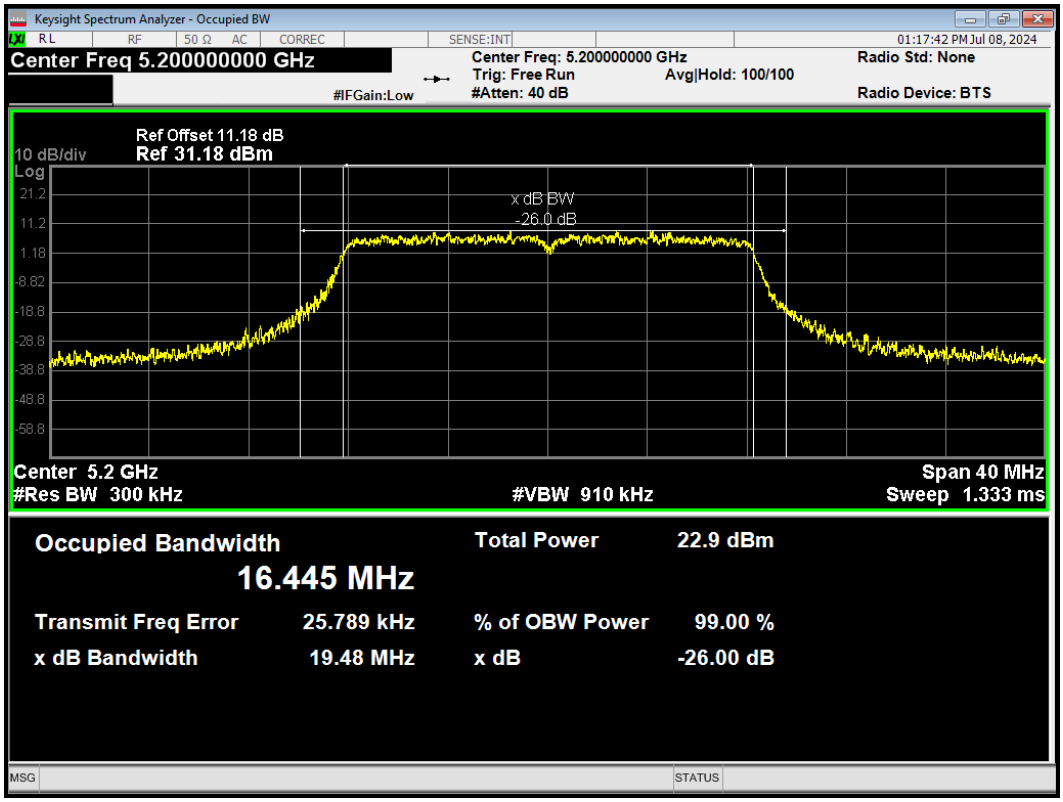

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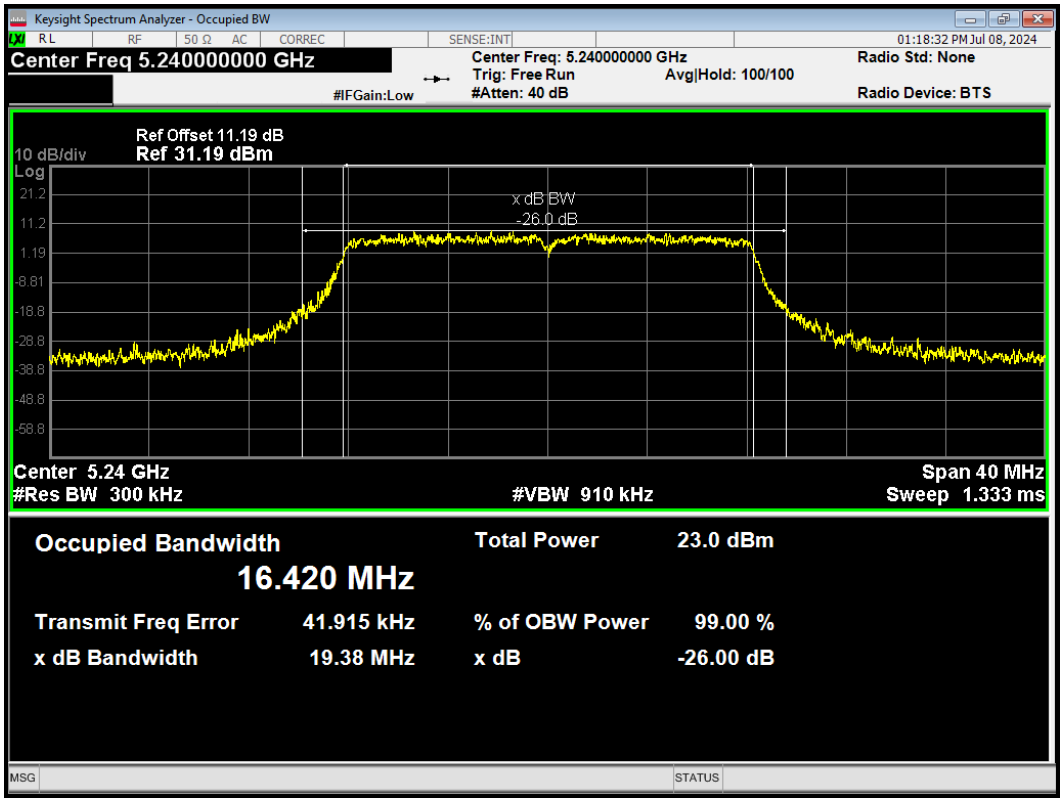
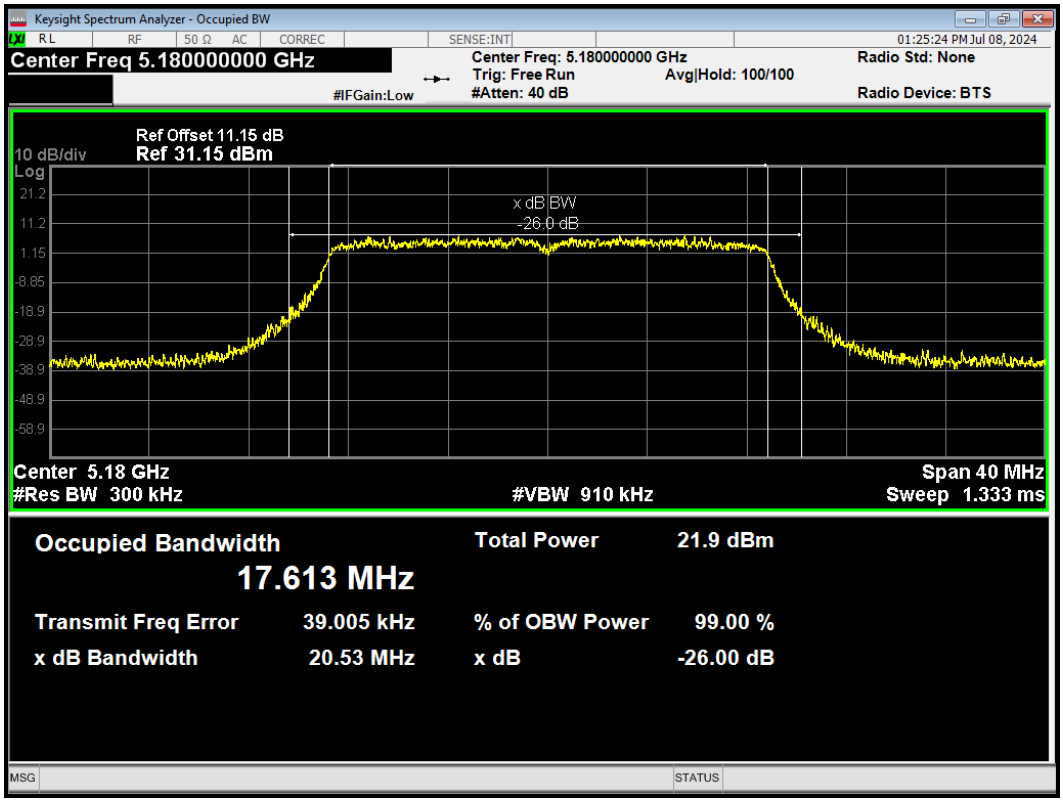


OBW 802.11ac(VHT20) 5180MHz



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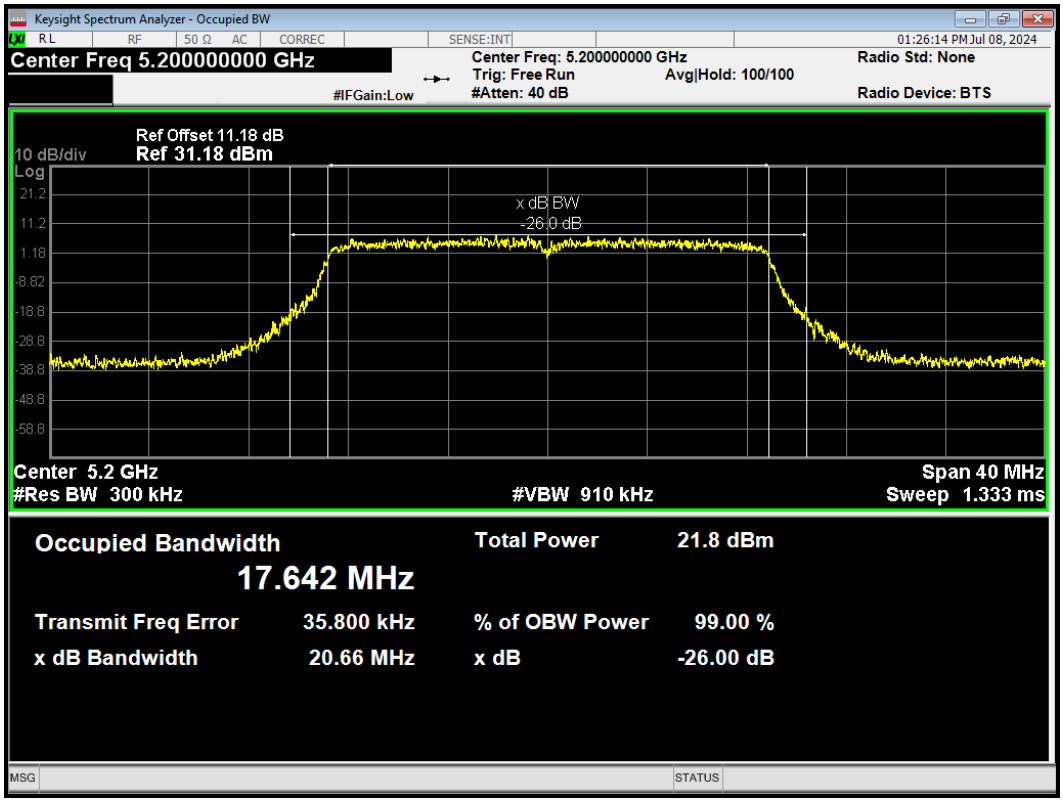

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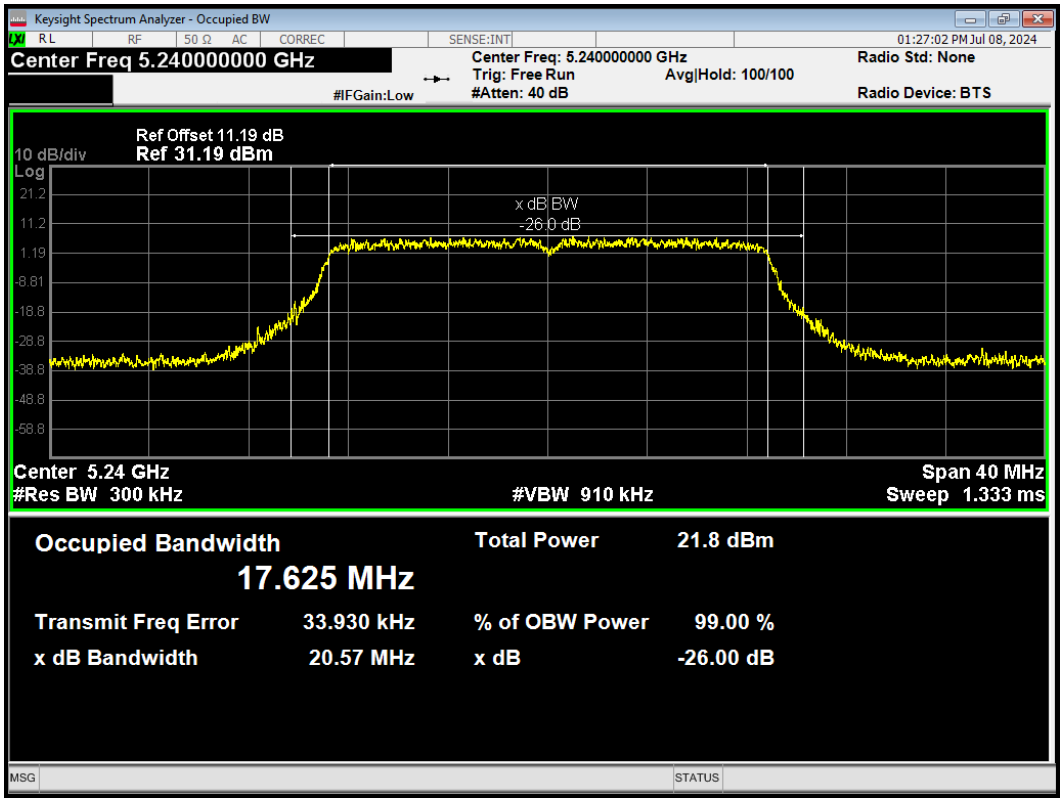
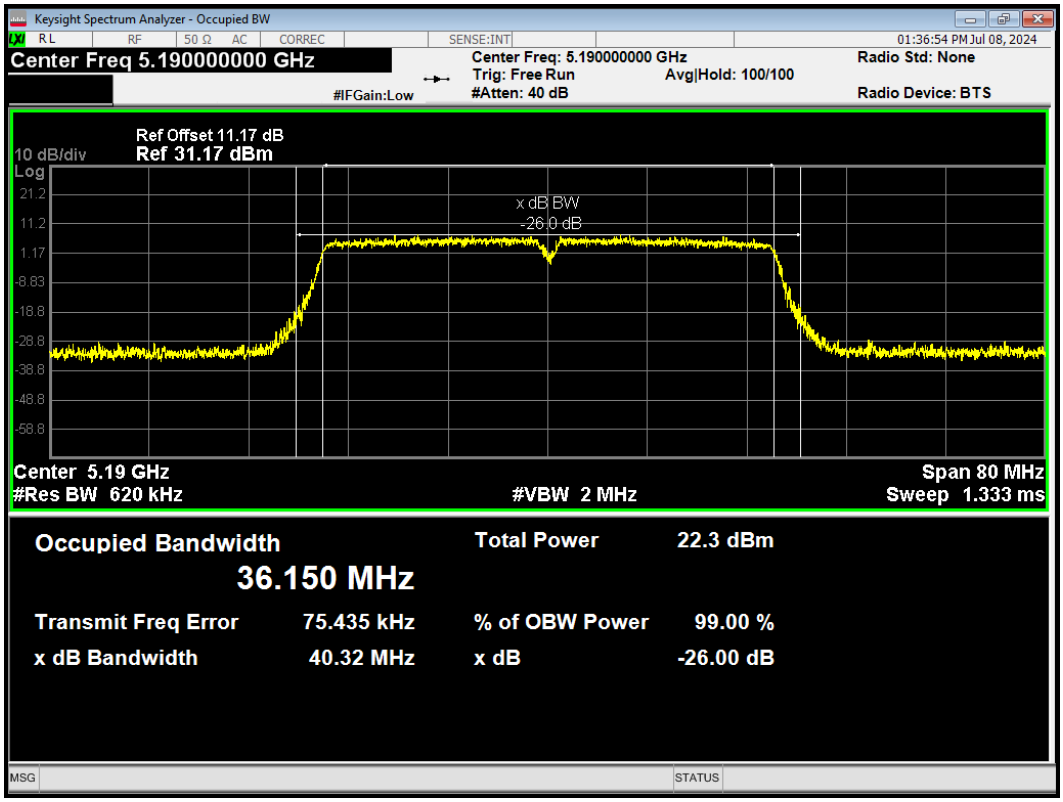


OBW 802.11ac(VHT40) 5190MHz



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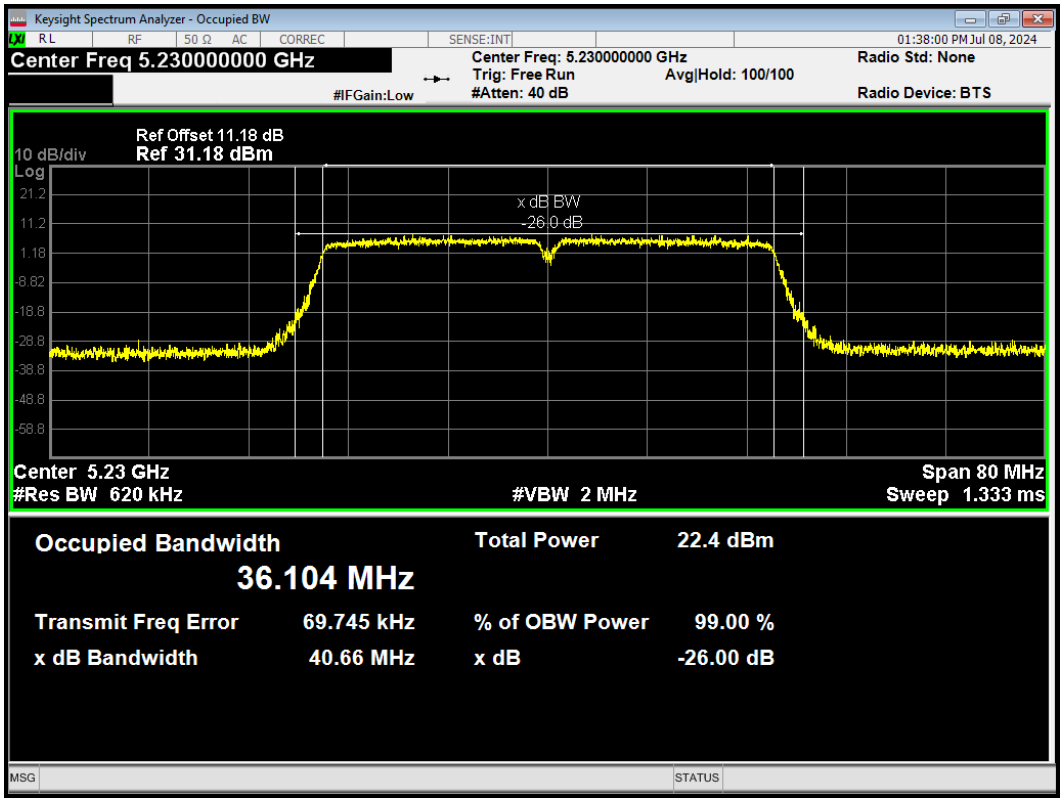

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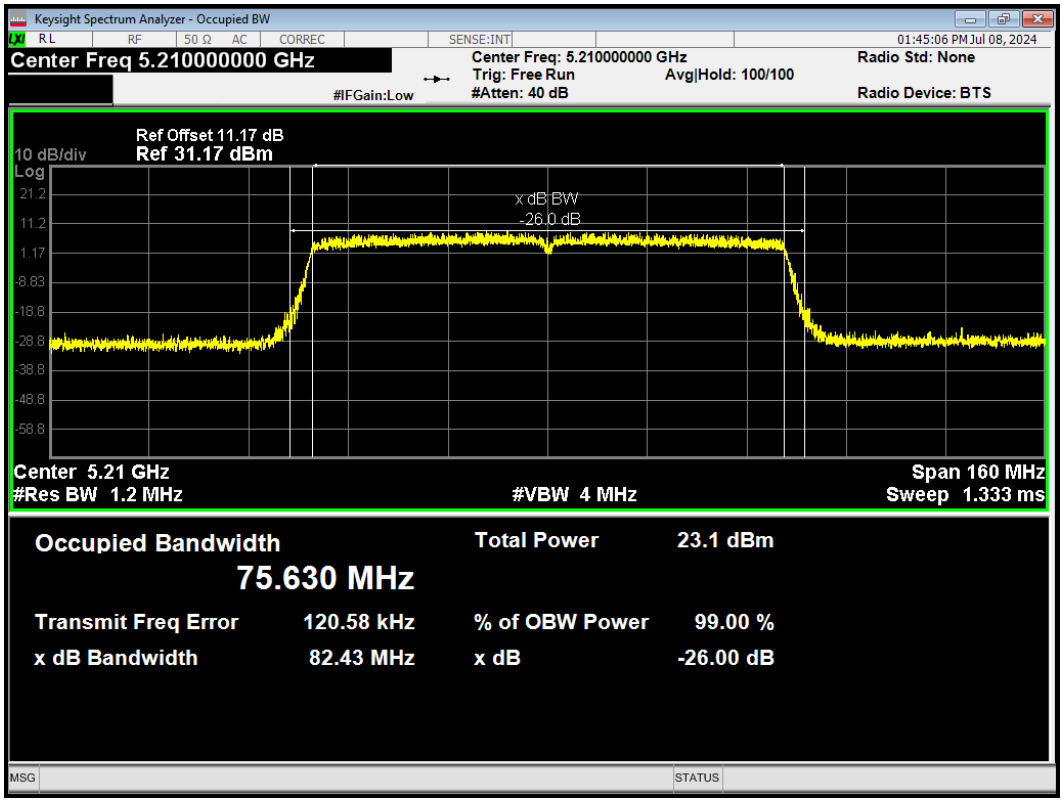
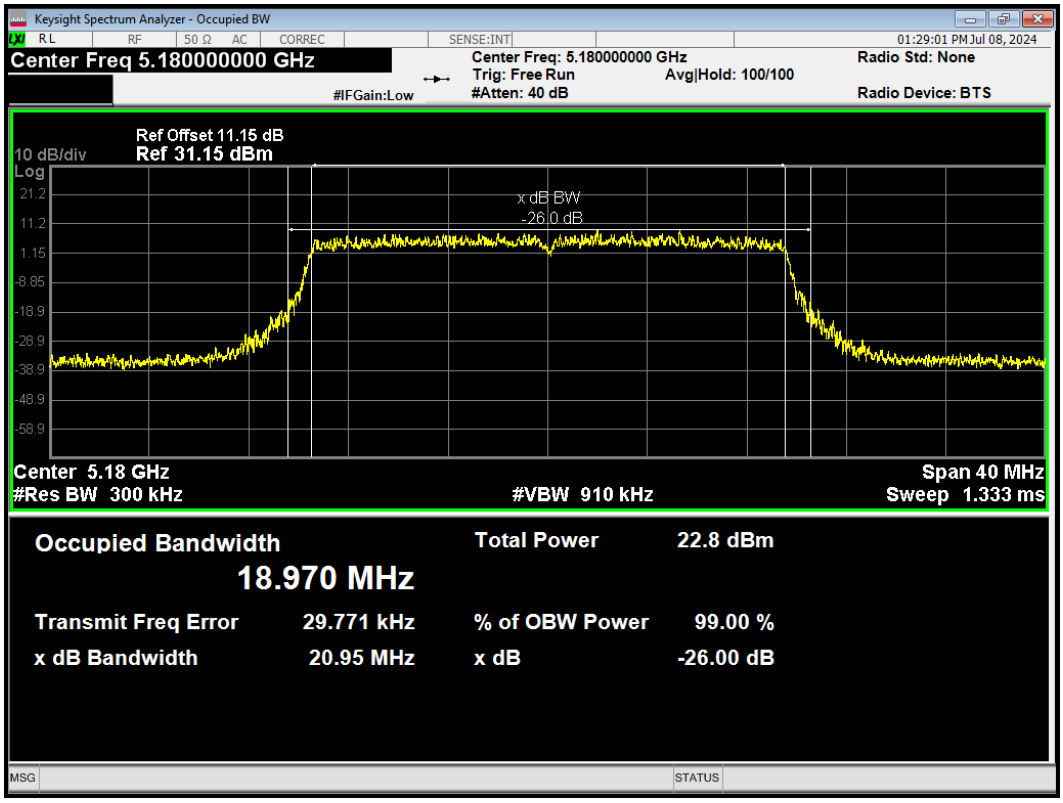
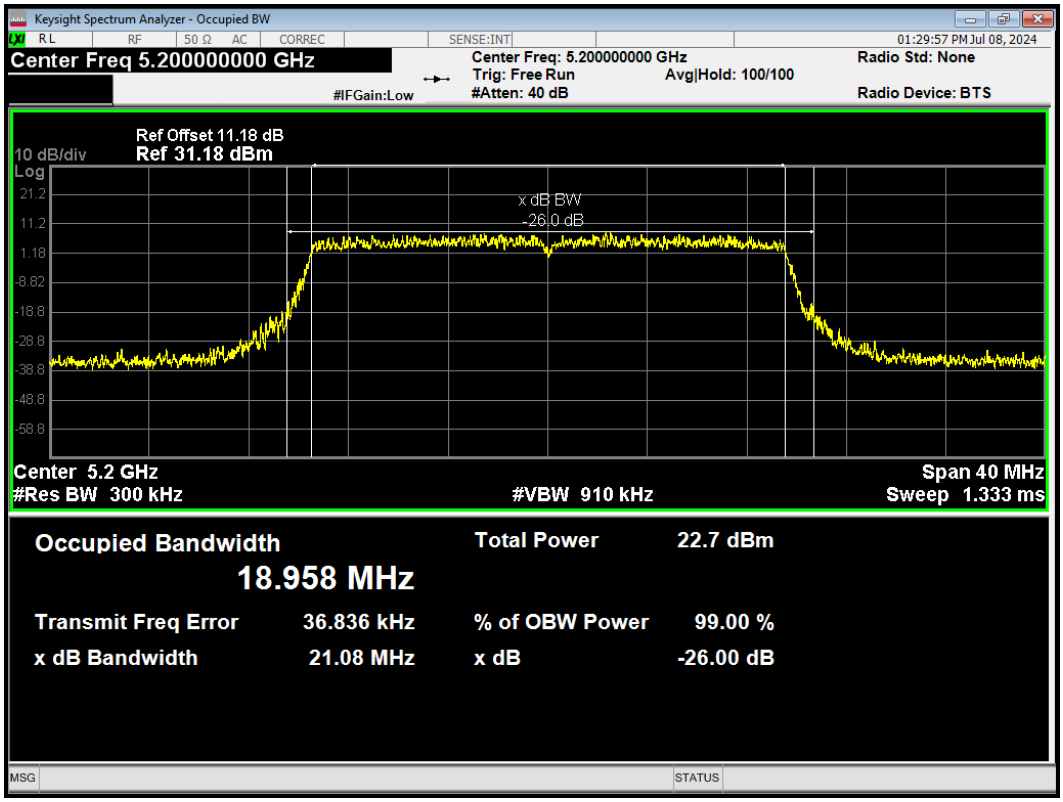


OBW 802.11ax(HE20) 5180MHz



OBW 802.11ax(HE20) 5200MHz



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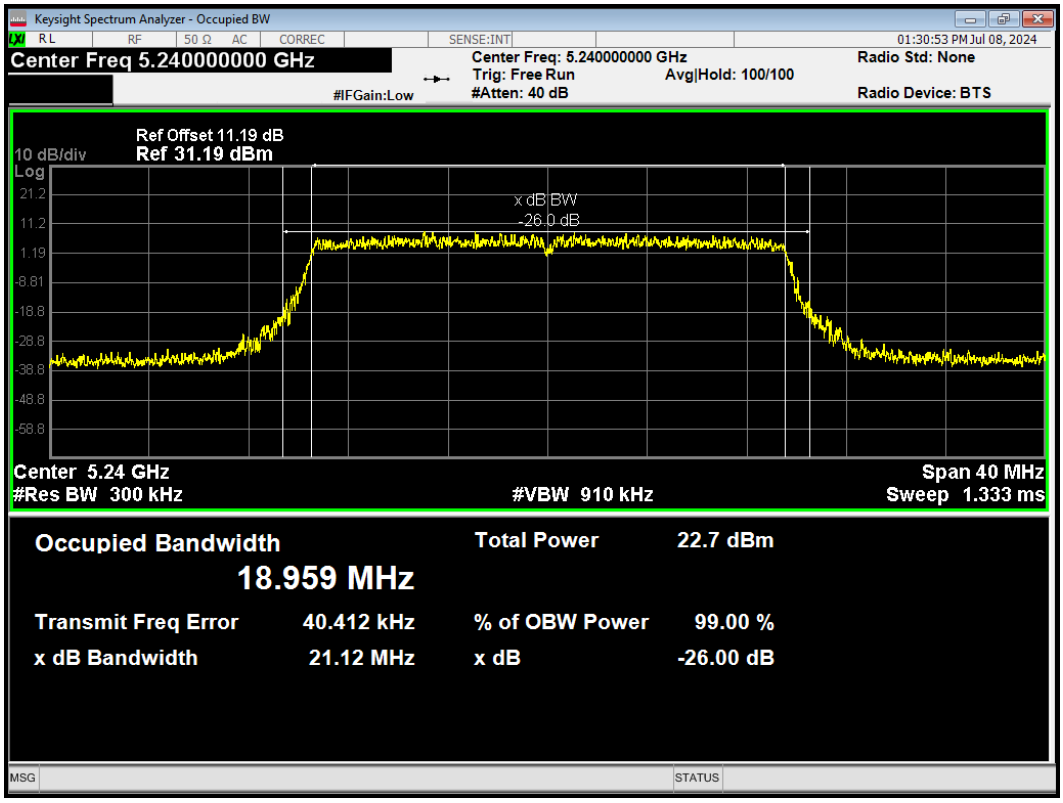

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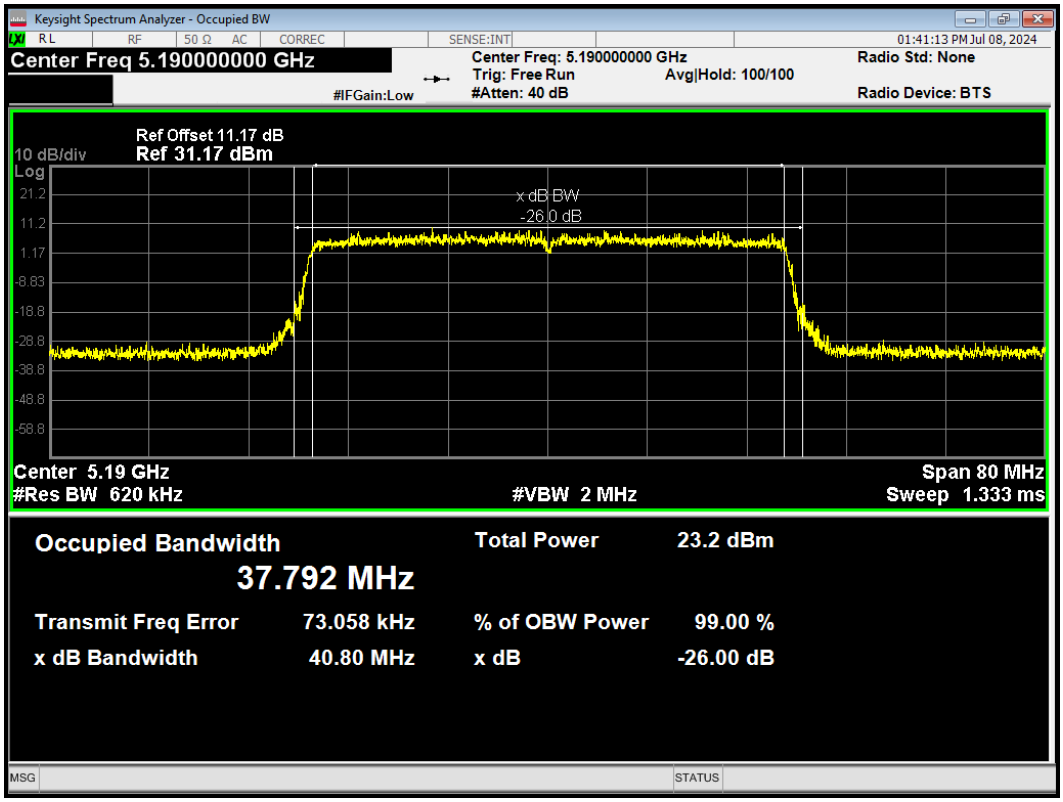

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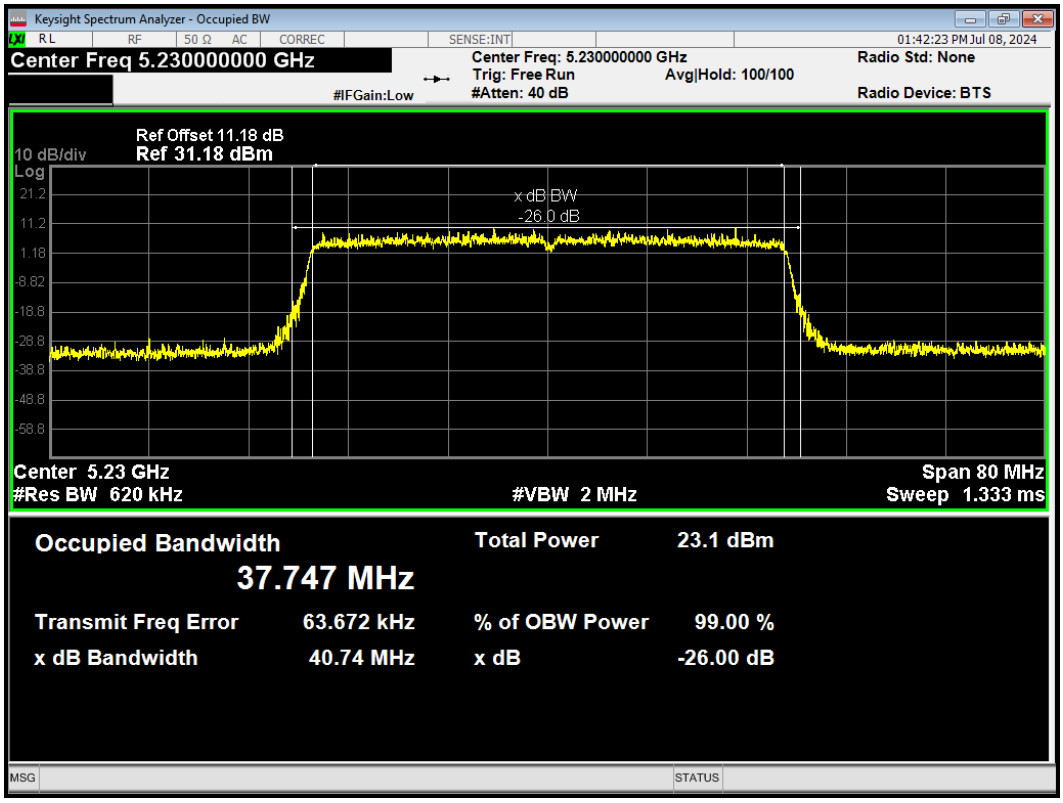

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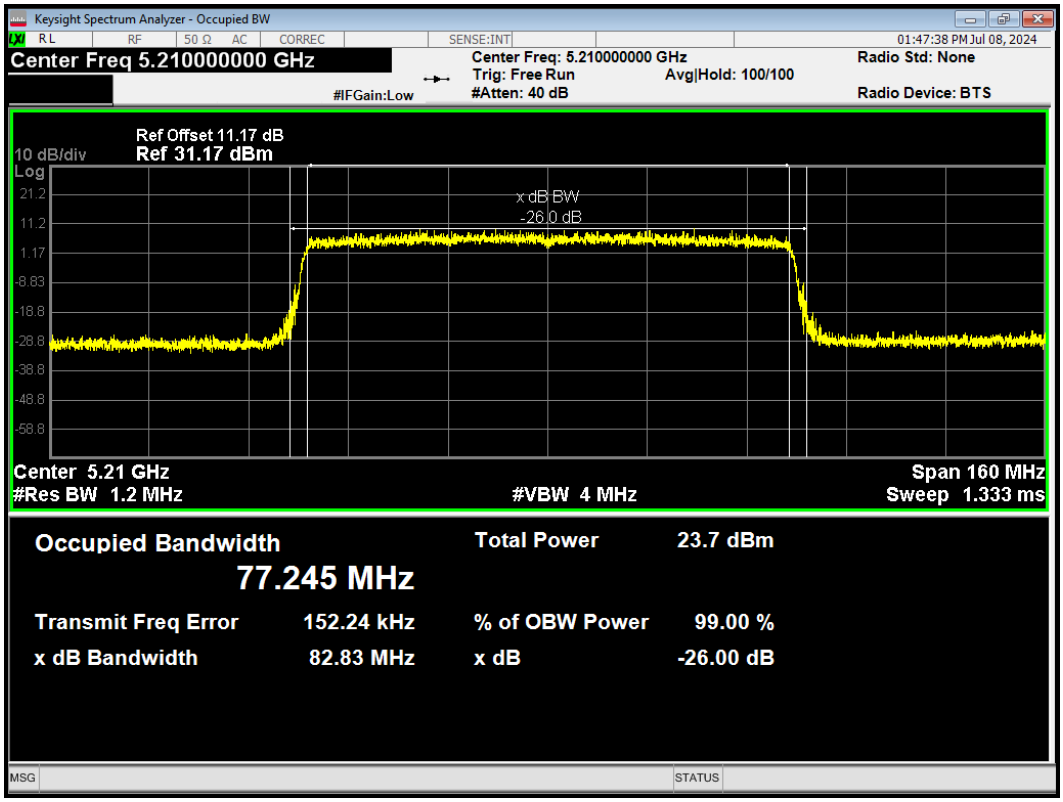
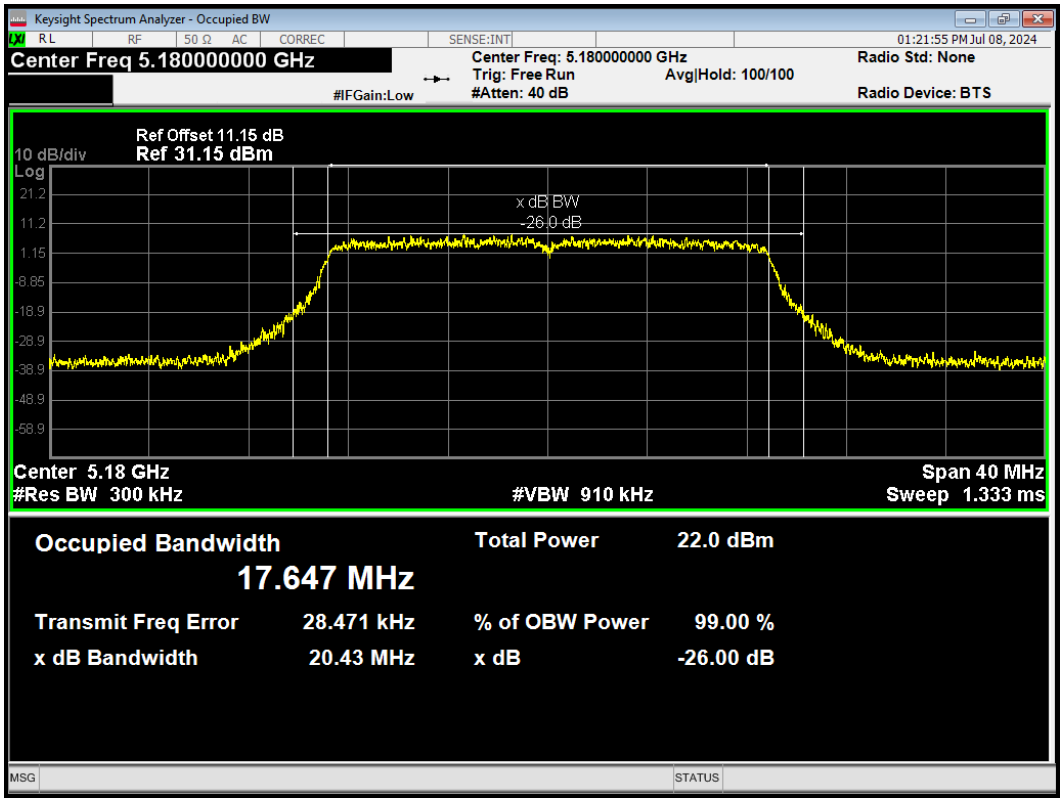
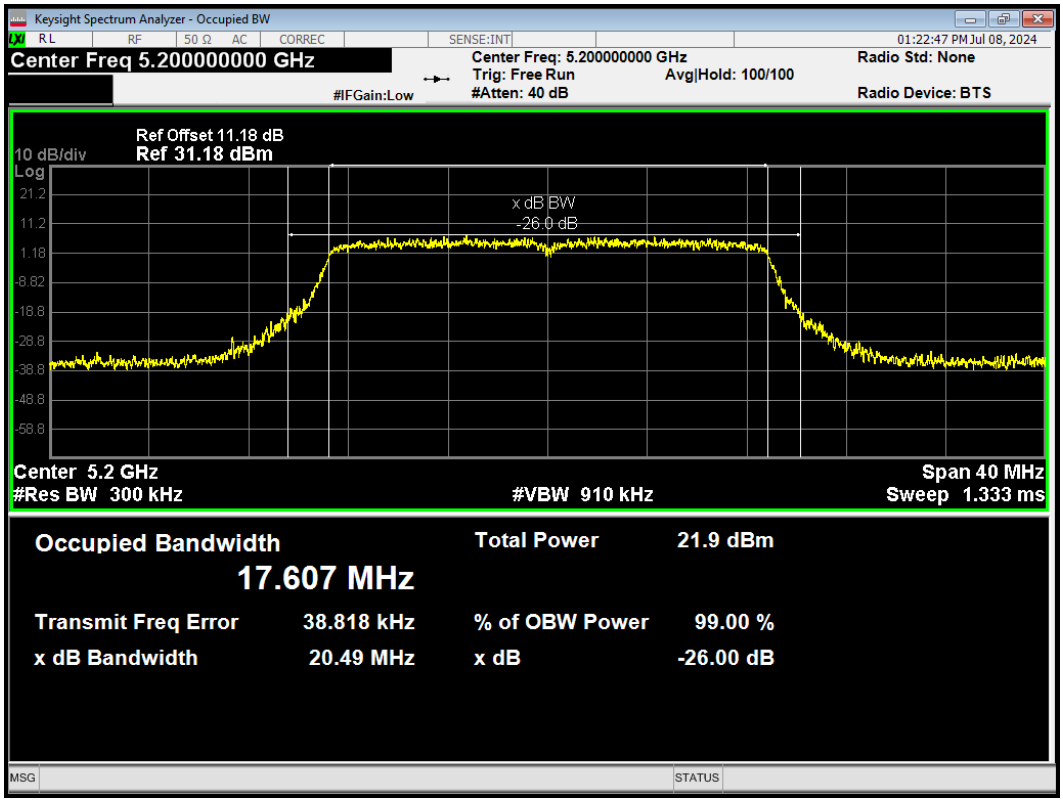


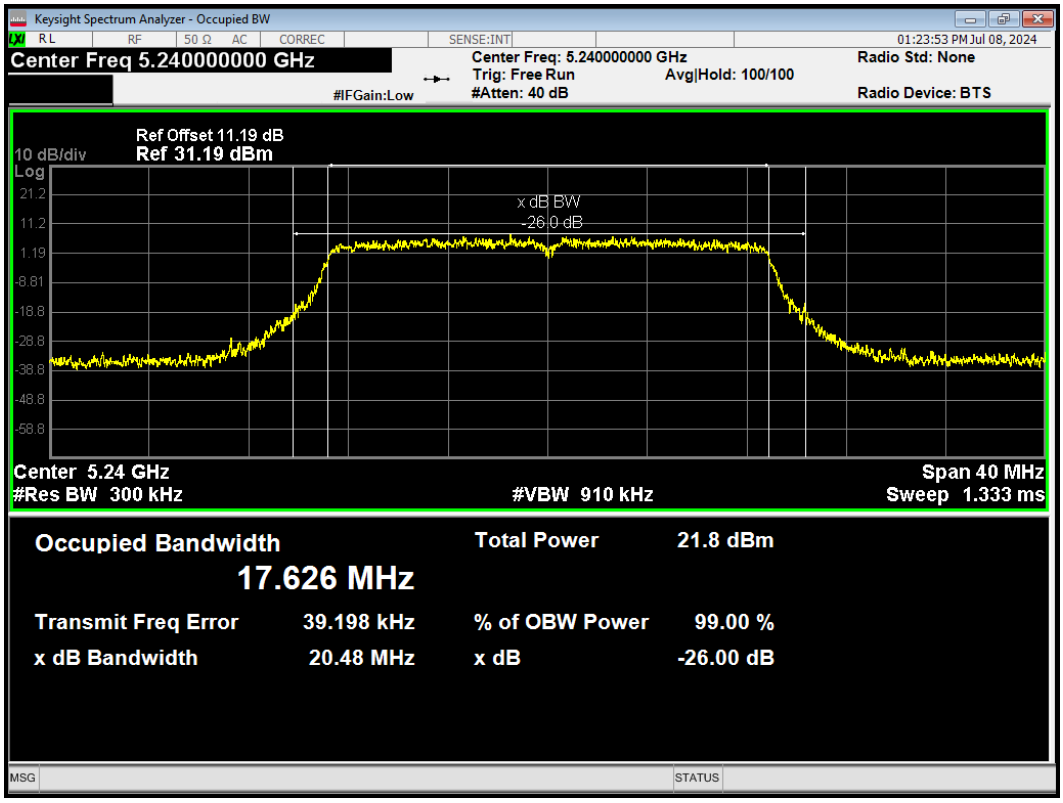
OBW 802.11n(HT20) 5180MHz



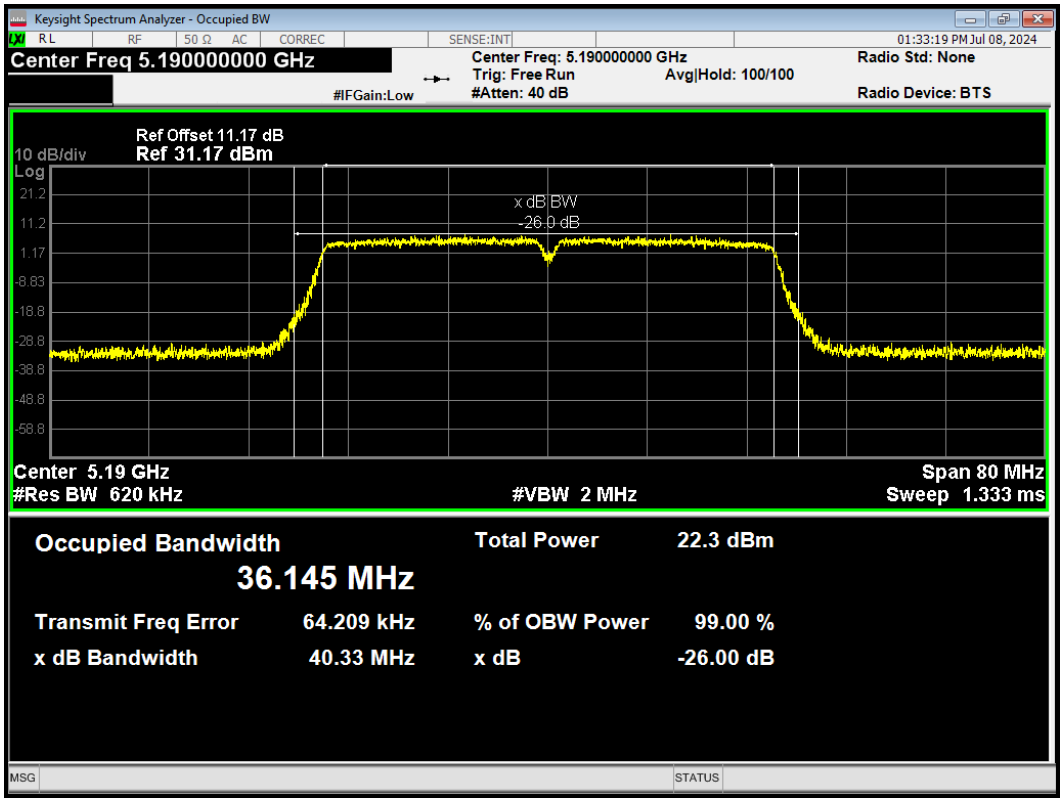
OBW 802.11n(HT20) 5200MHz



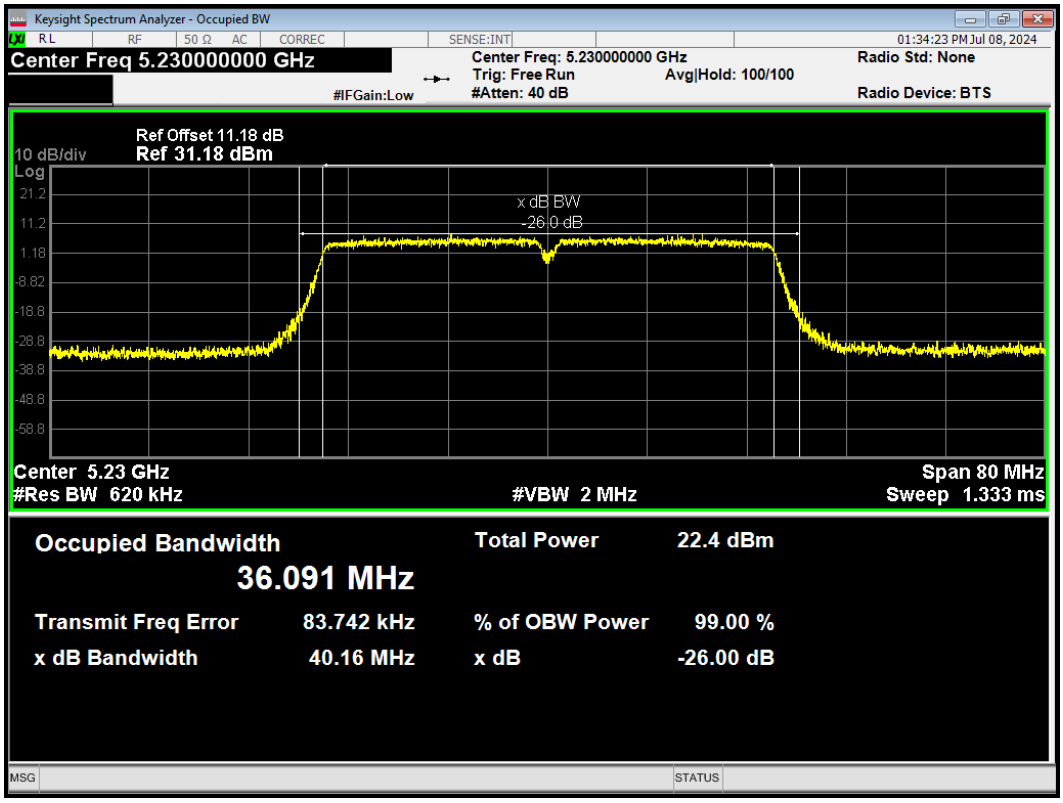
OBW 802.11n(HT20) 5240MHz



OBW 802.11n(HT40) 5190MHz

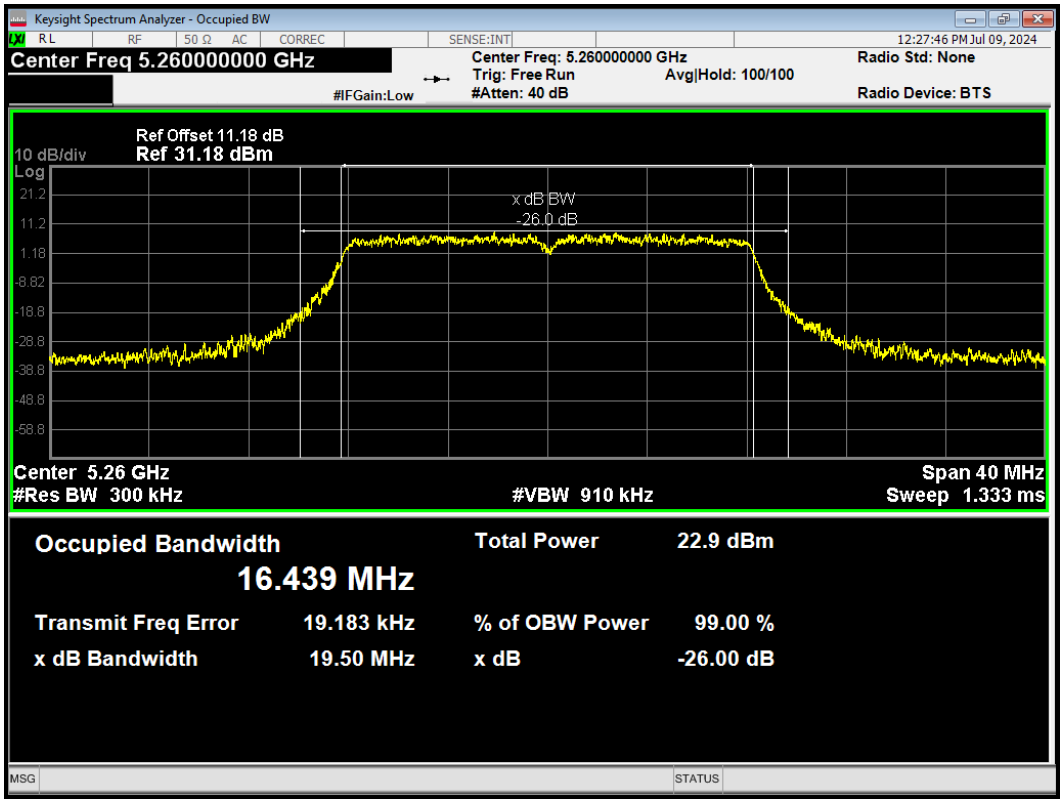


OBW 802.11n(HT40) 5230MHz

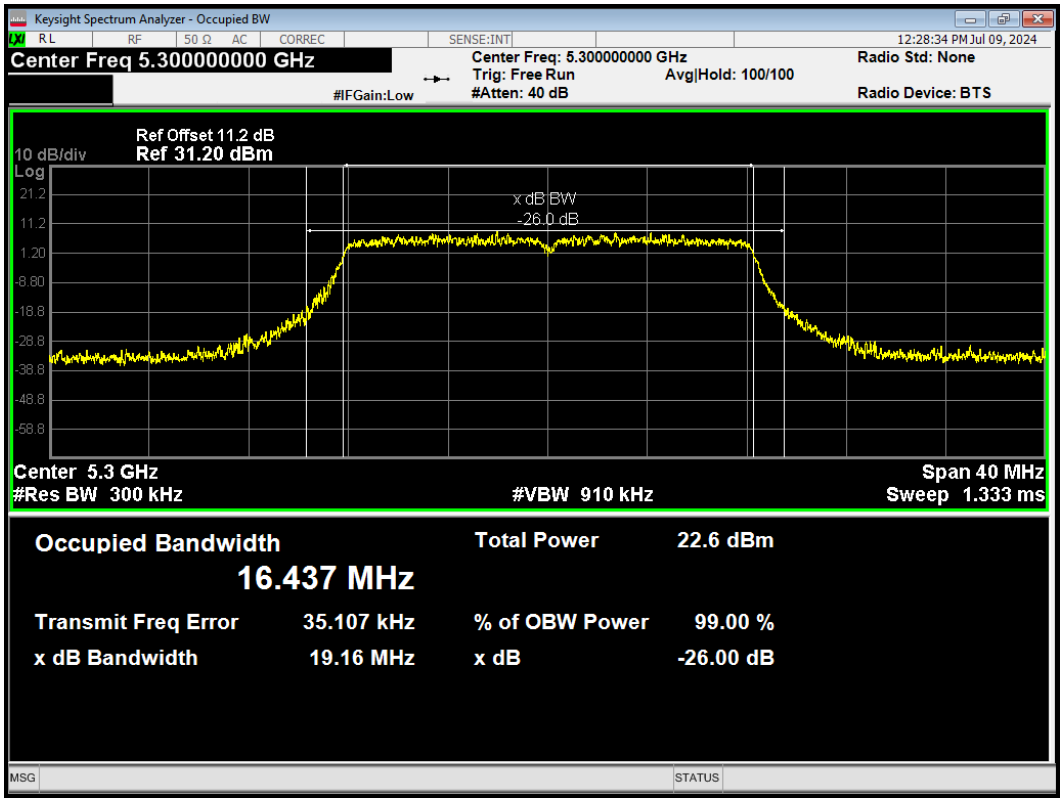


U-NII-2A

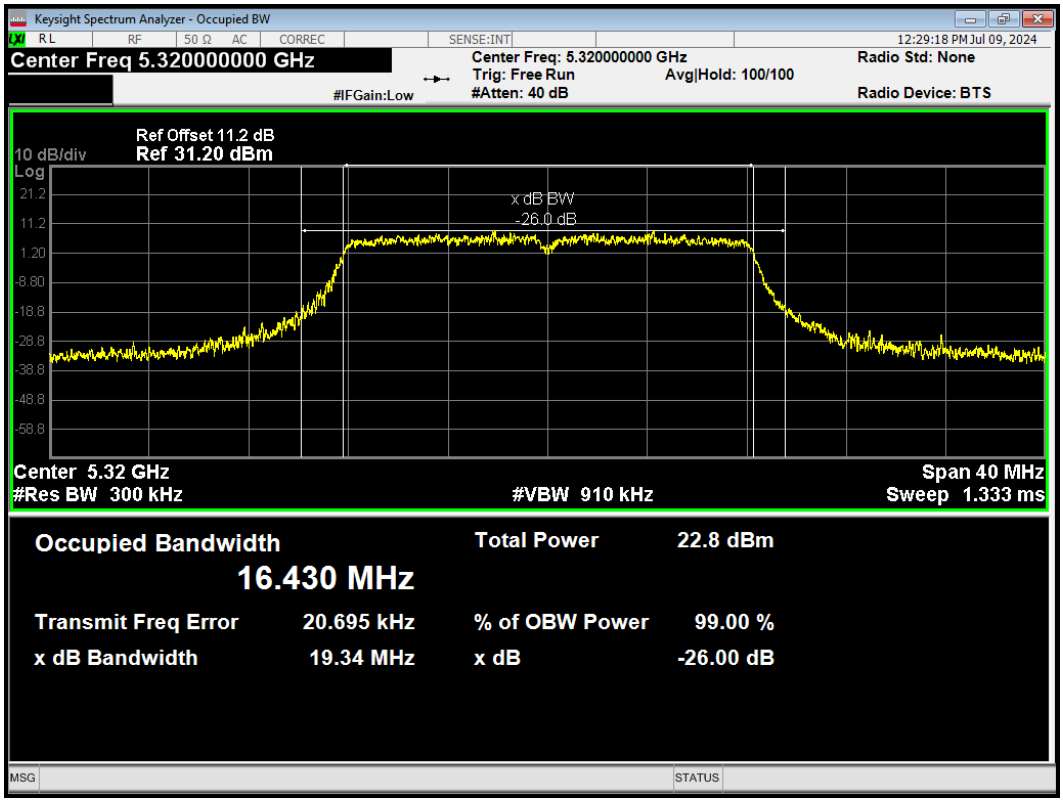
OBW 802.11a 5260MHz



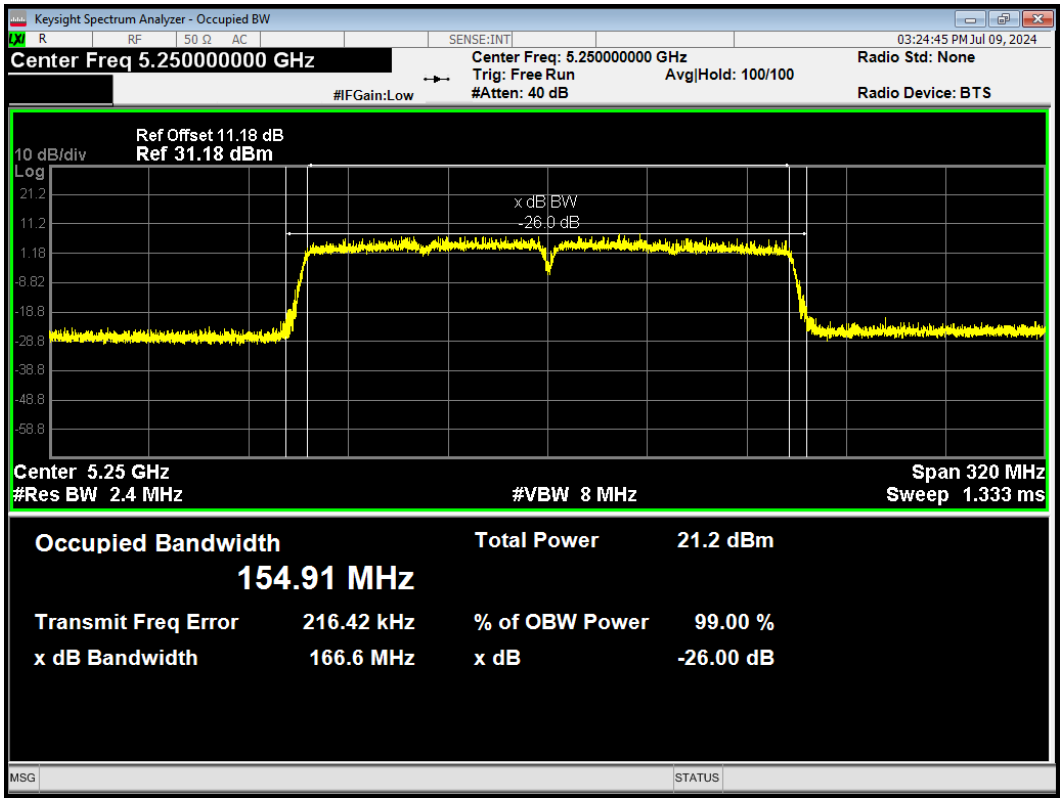
OBW 802.11a 5300MHz



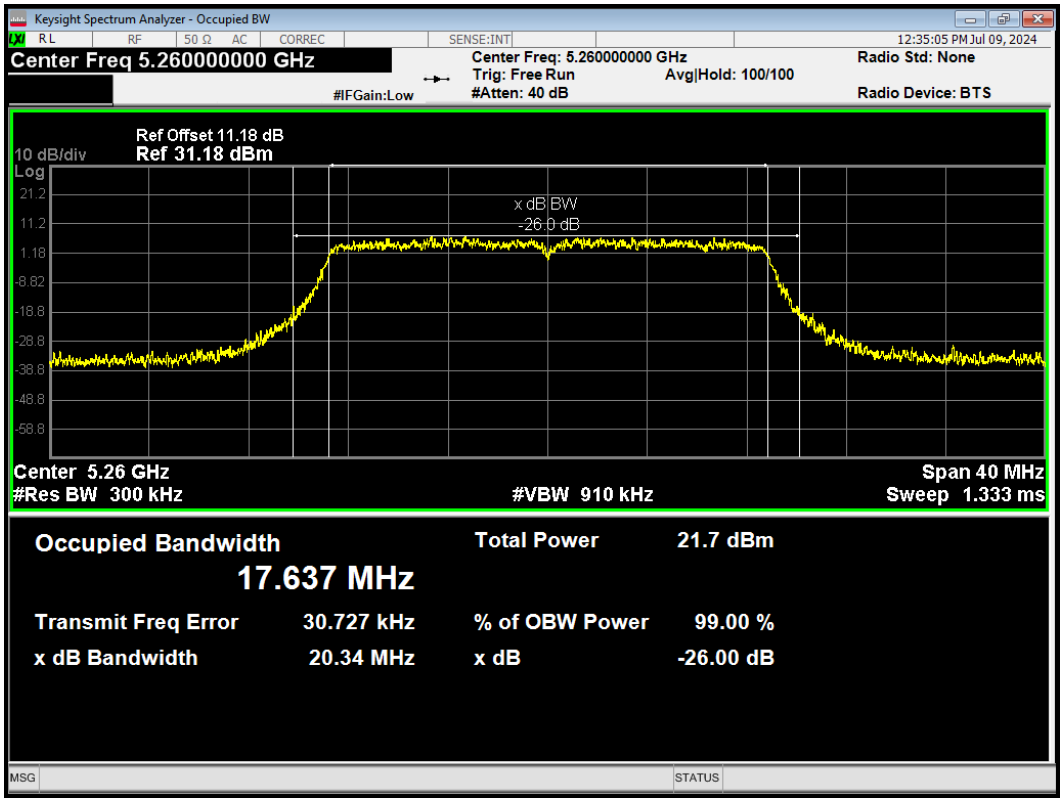
OBW 802.11a 5320MHz



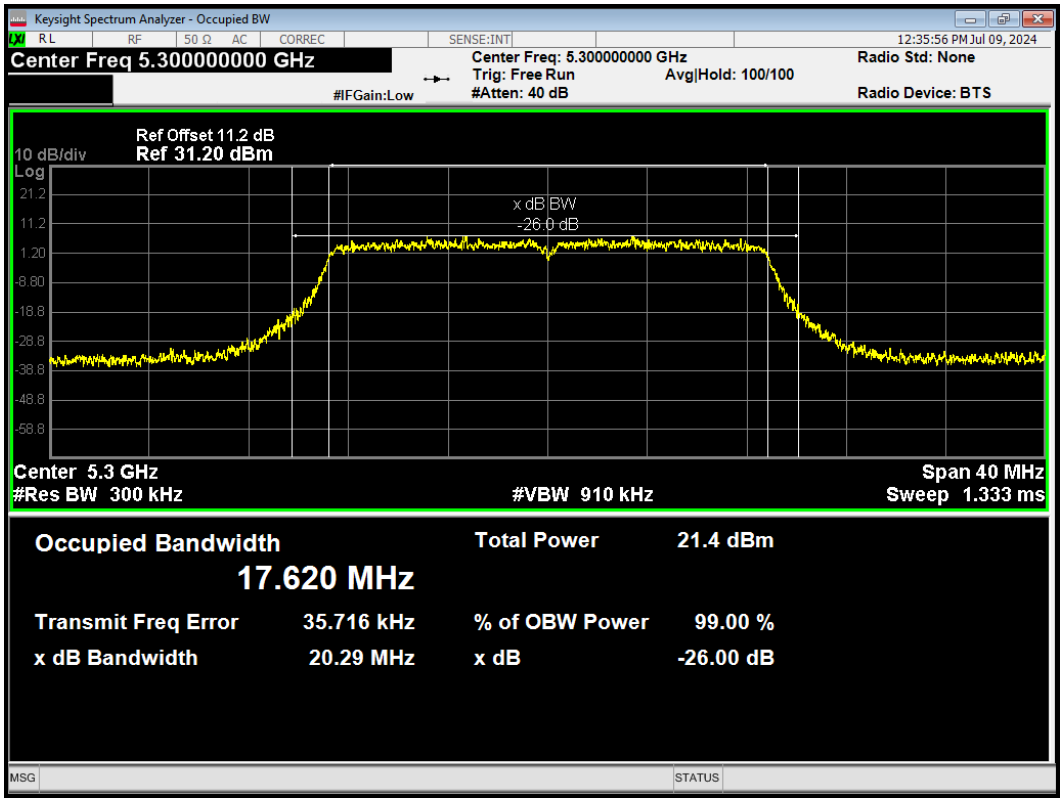
OBW 802.11ac(VHT160) 5250MHz



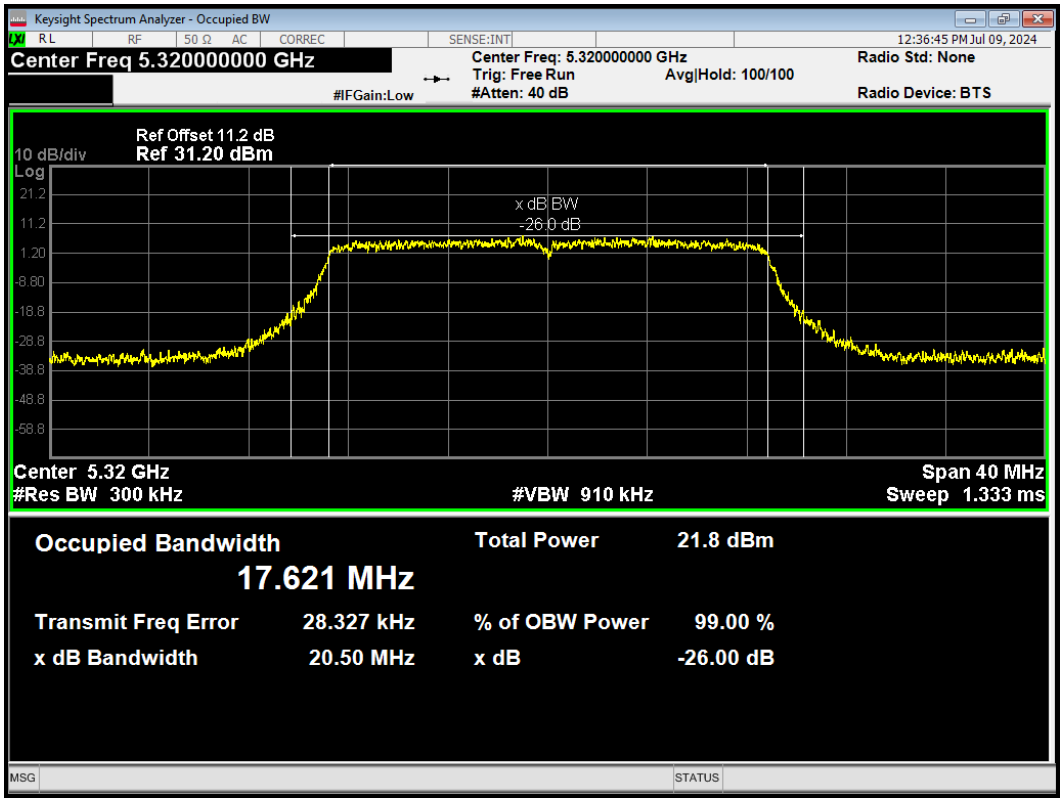
OBW 802.11ac(VHT20) 5260MHz



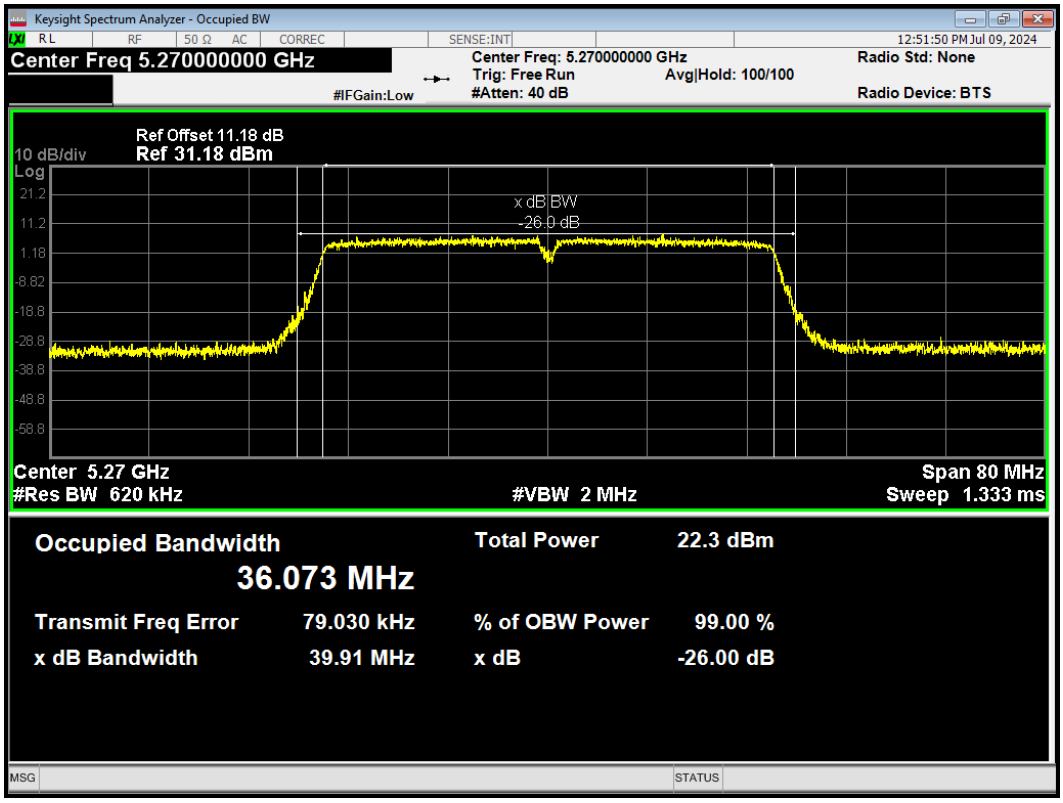
OBW 802.11ac(VHT20) 5300MHz



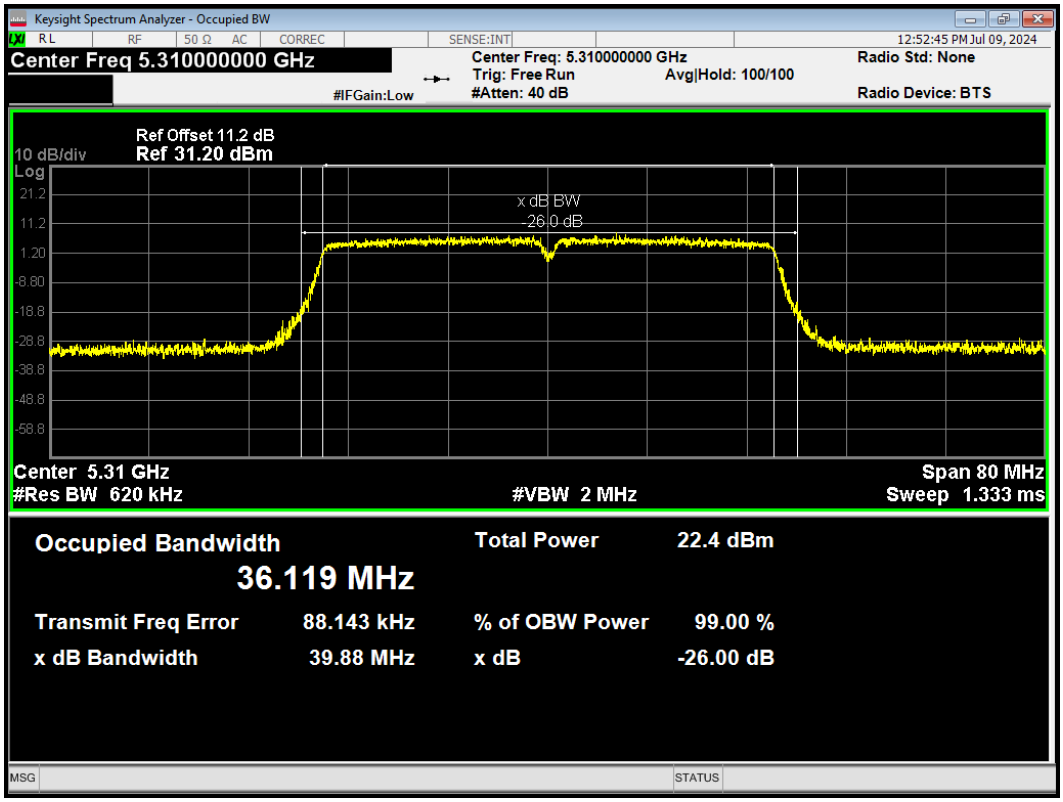
OBW 802.11ac(VHT20) 5320MHz



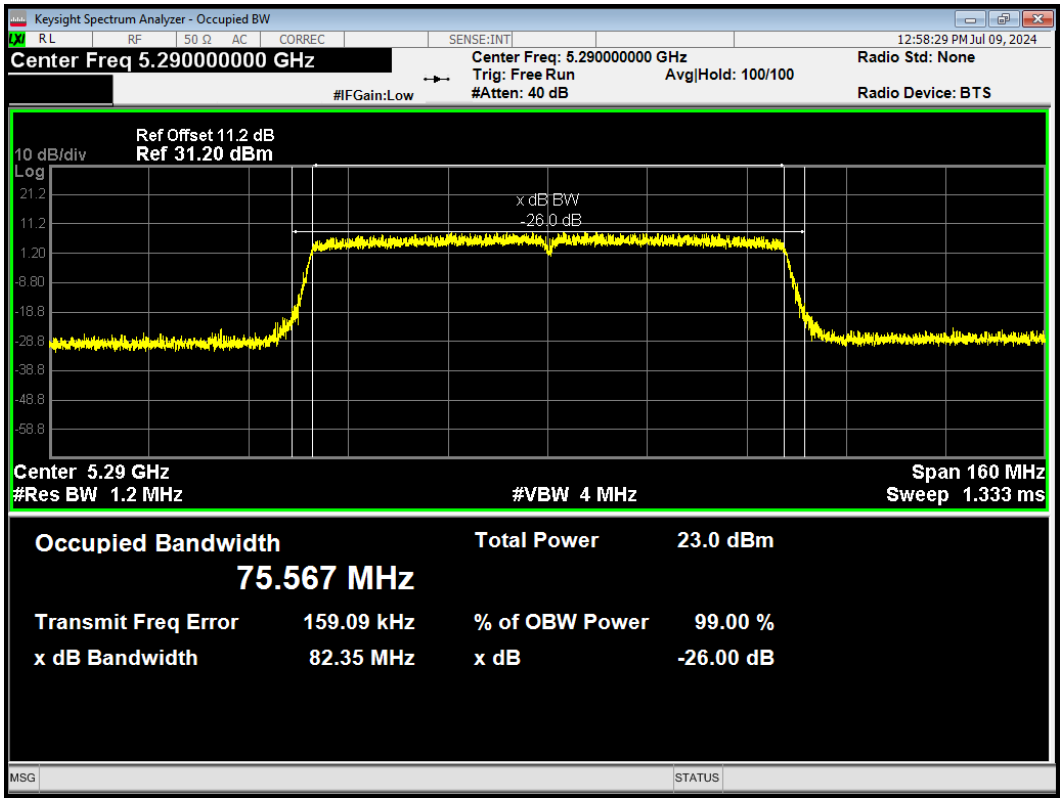
OBW 802.11ac(VHT40) 5270MHz



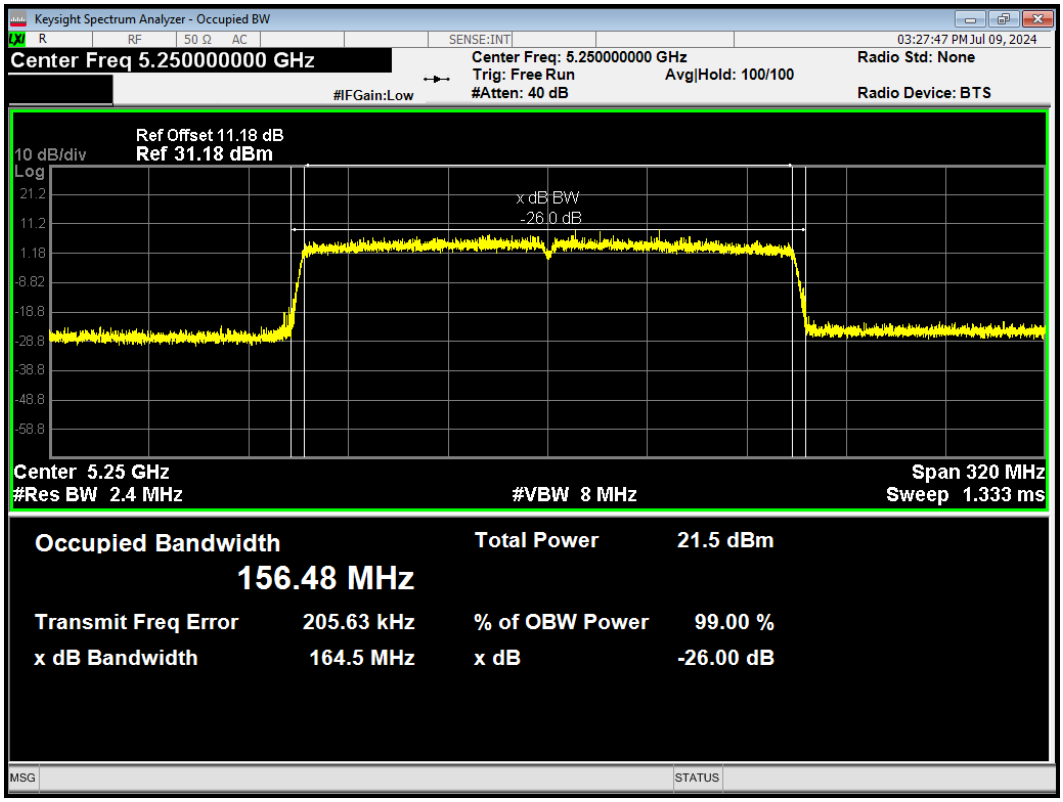
OBW 802.11ac(VHT40) 5310MHz



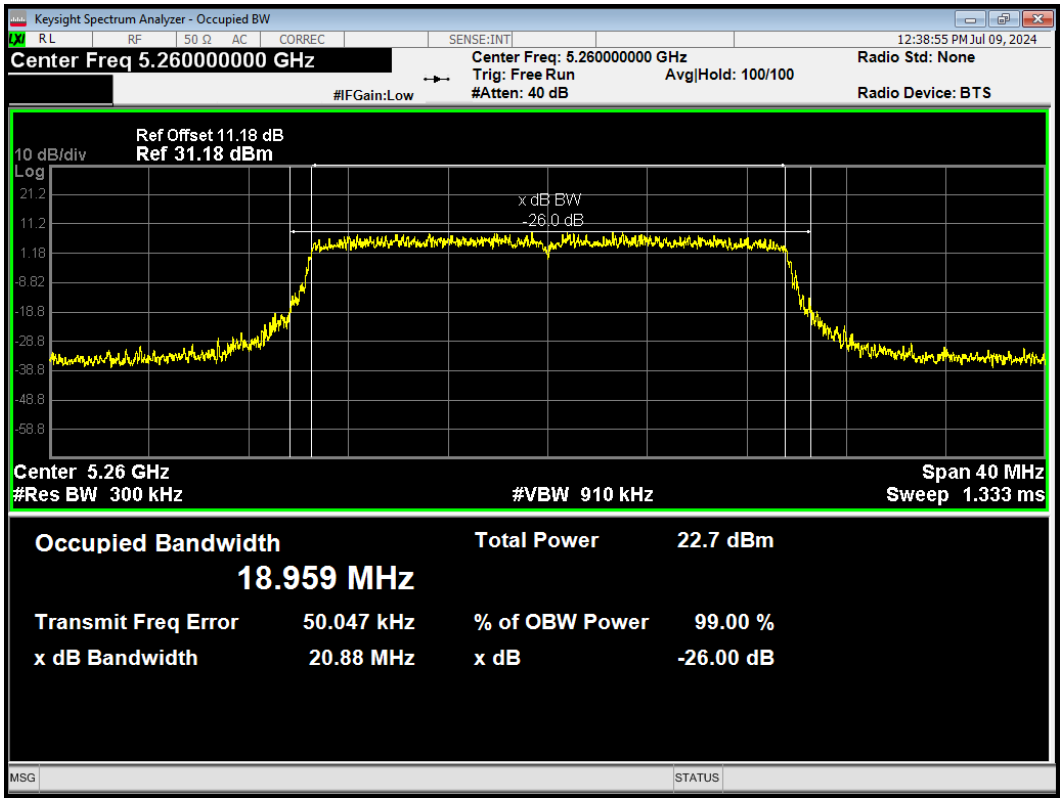
OBW 802.11ac(VHT80) 5290MHz



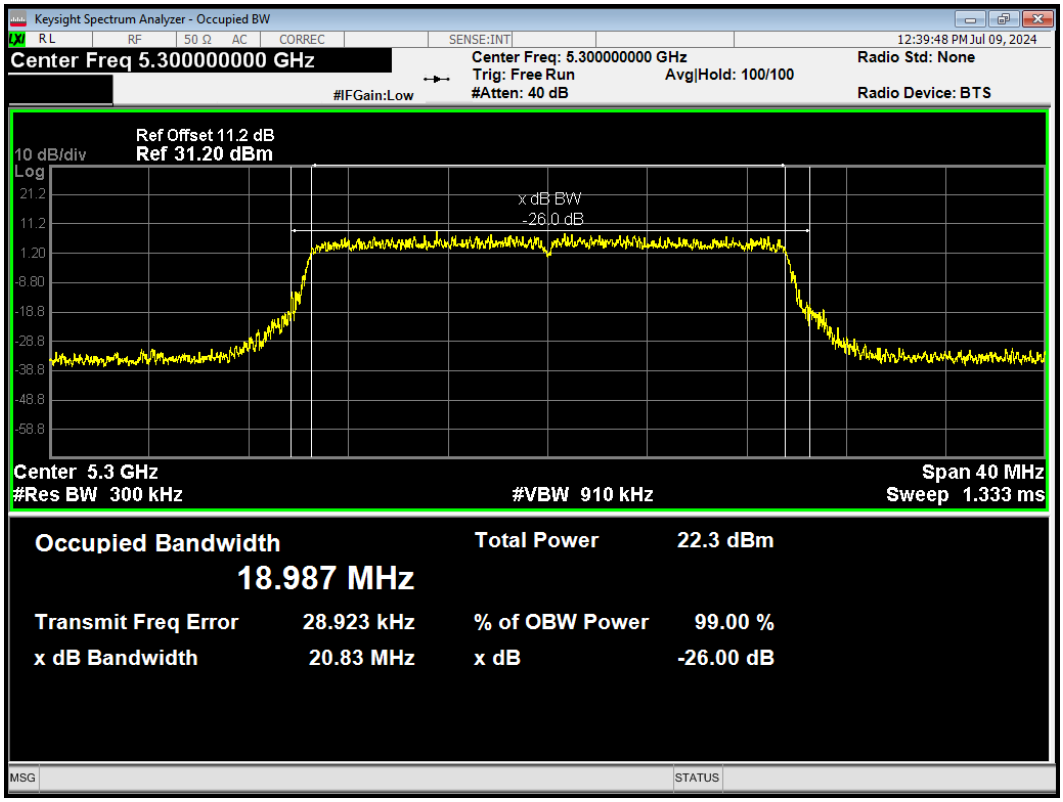
OBW 802.11ax(HE160) 5250MHz



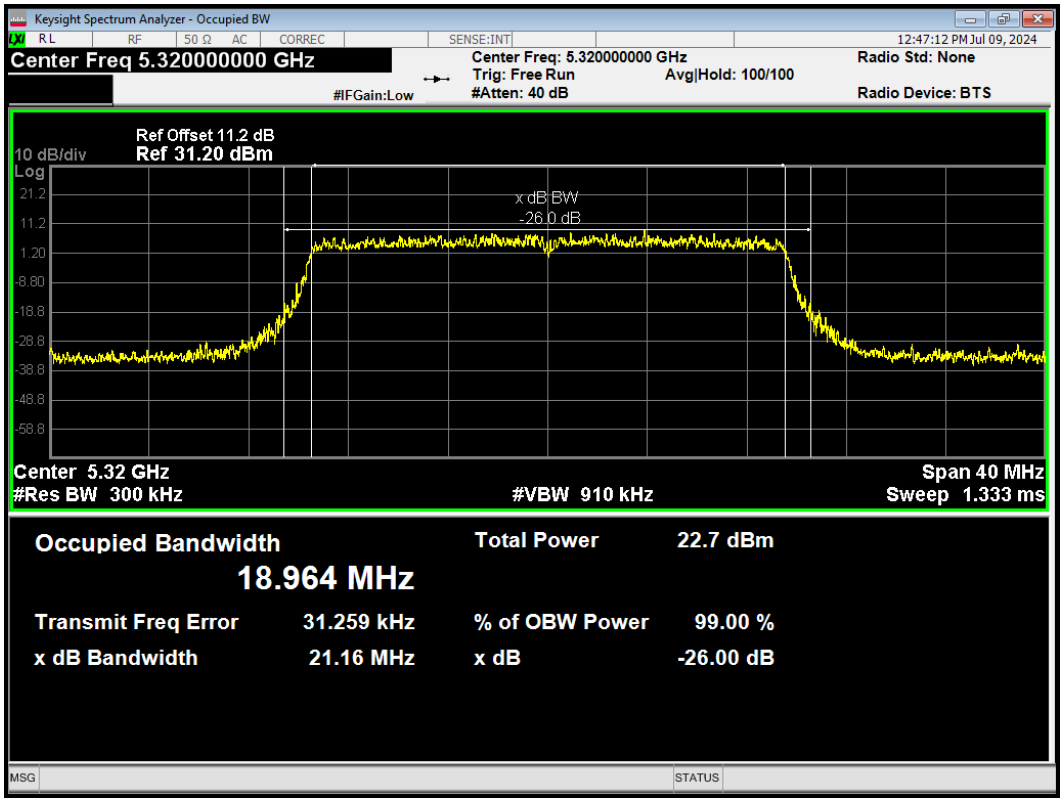
OBW 802.11ax(HE20) 5260MHz



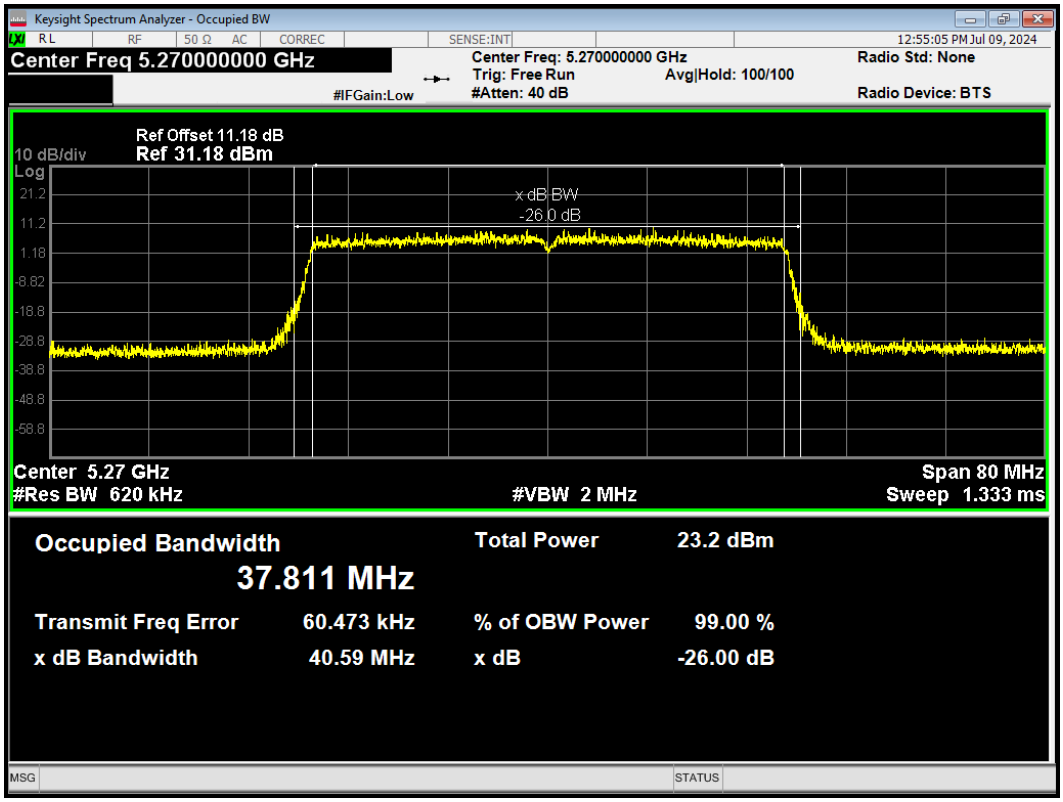
OBW 802.11ax(HE20) 5300MHz



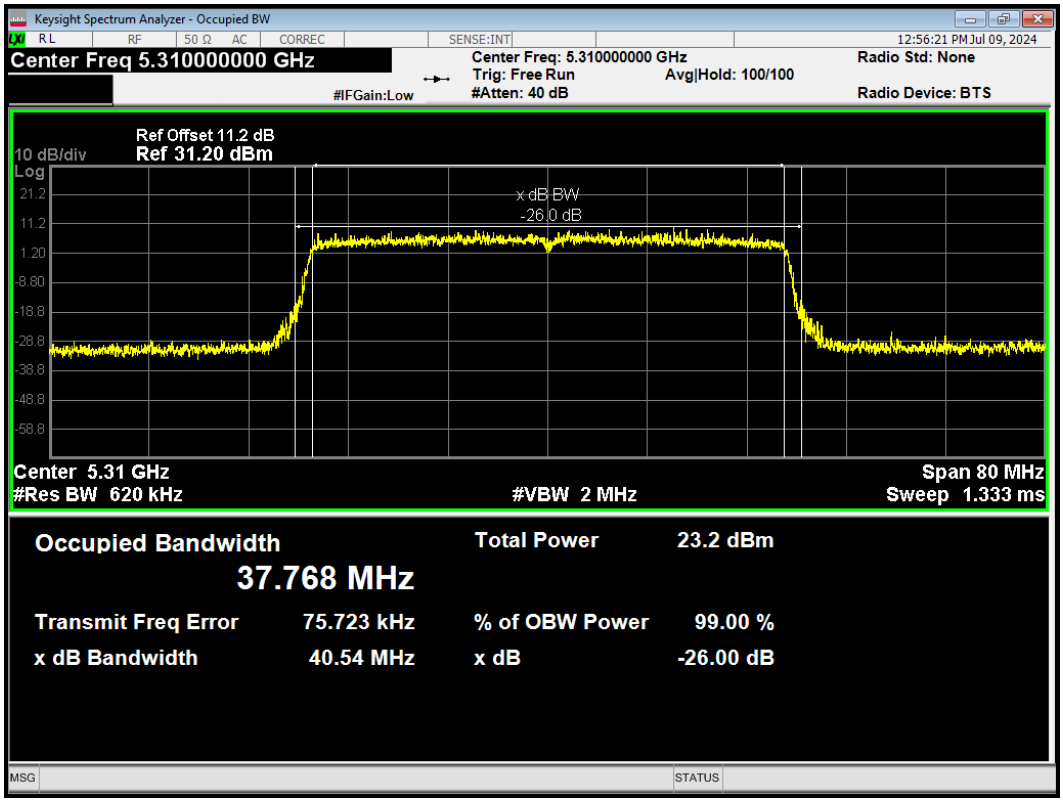
OBW 802.11ax(HE20) 5320MHz



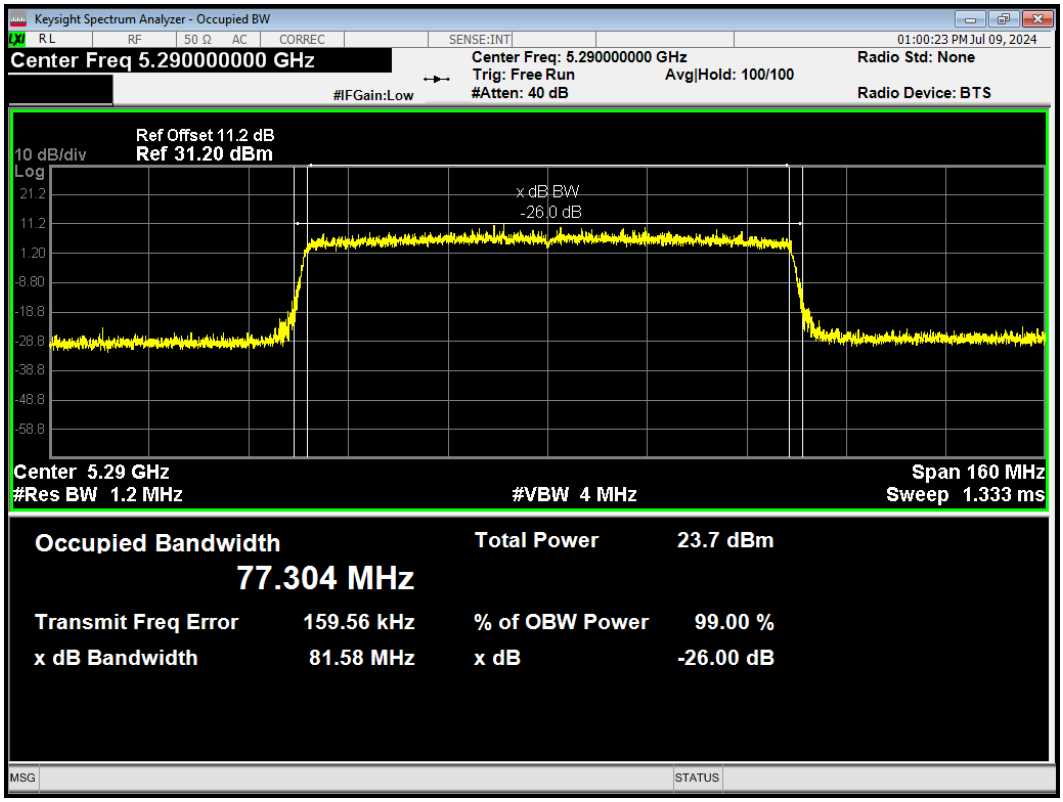
OBW 802.11ax(HE40) 5270MHz



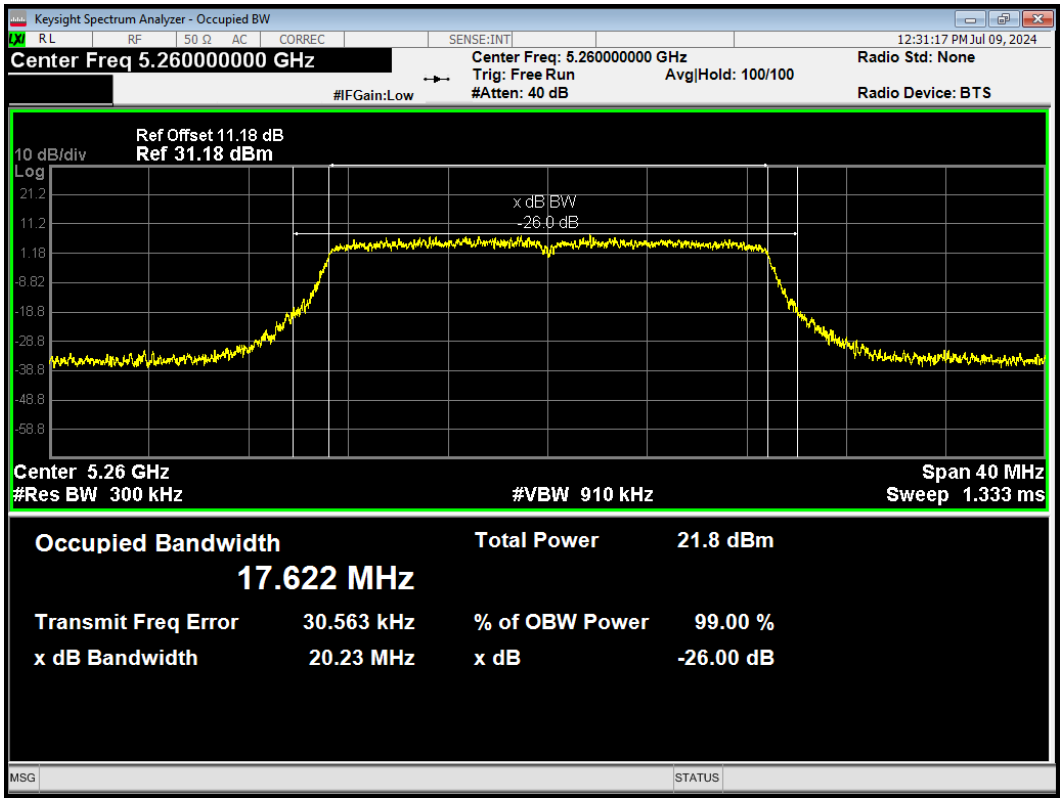
OBW 802.11ax(HE40) 5310MHz



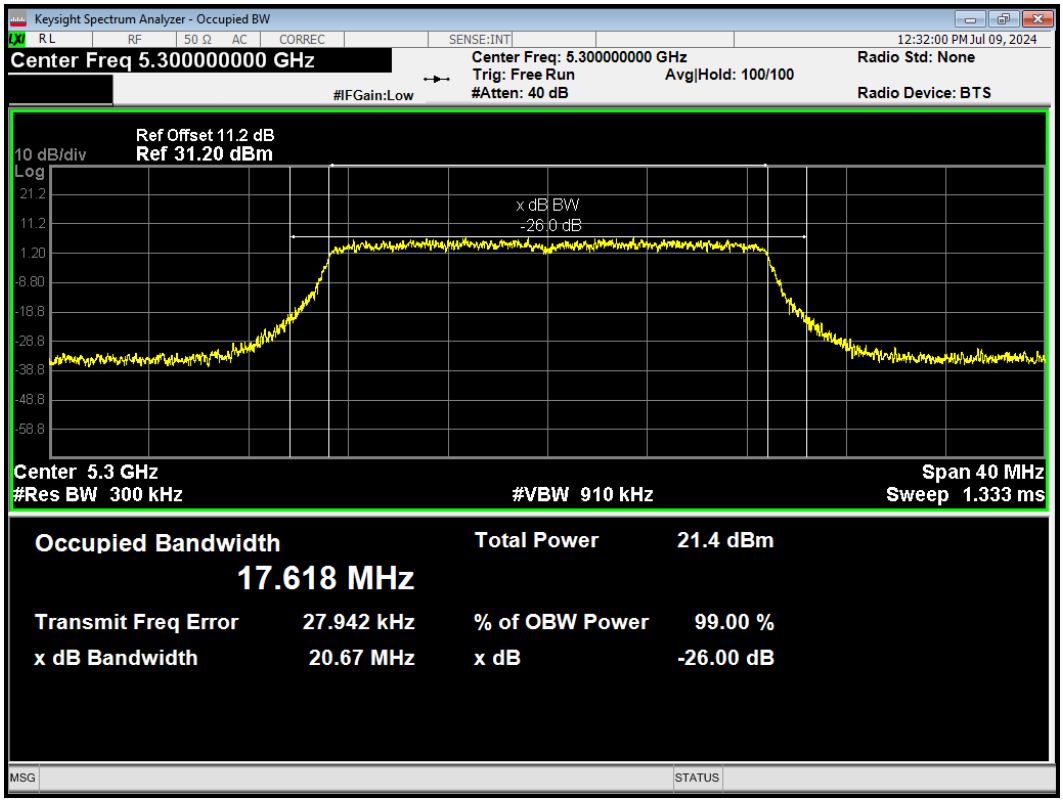
OBW 802.11ax(HE80) 5290MHz



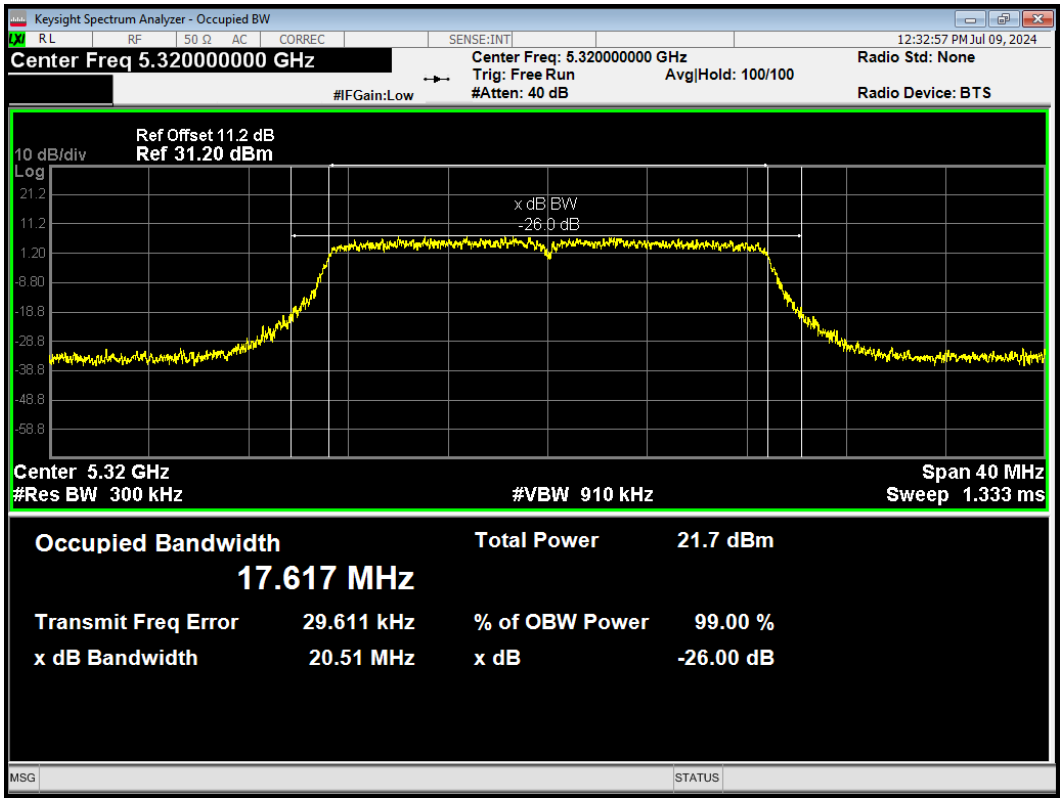
OBW 802.11n(HT20) 5260MHz



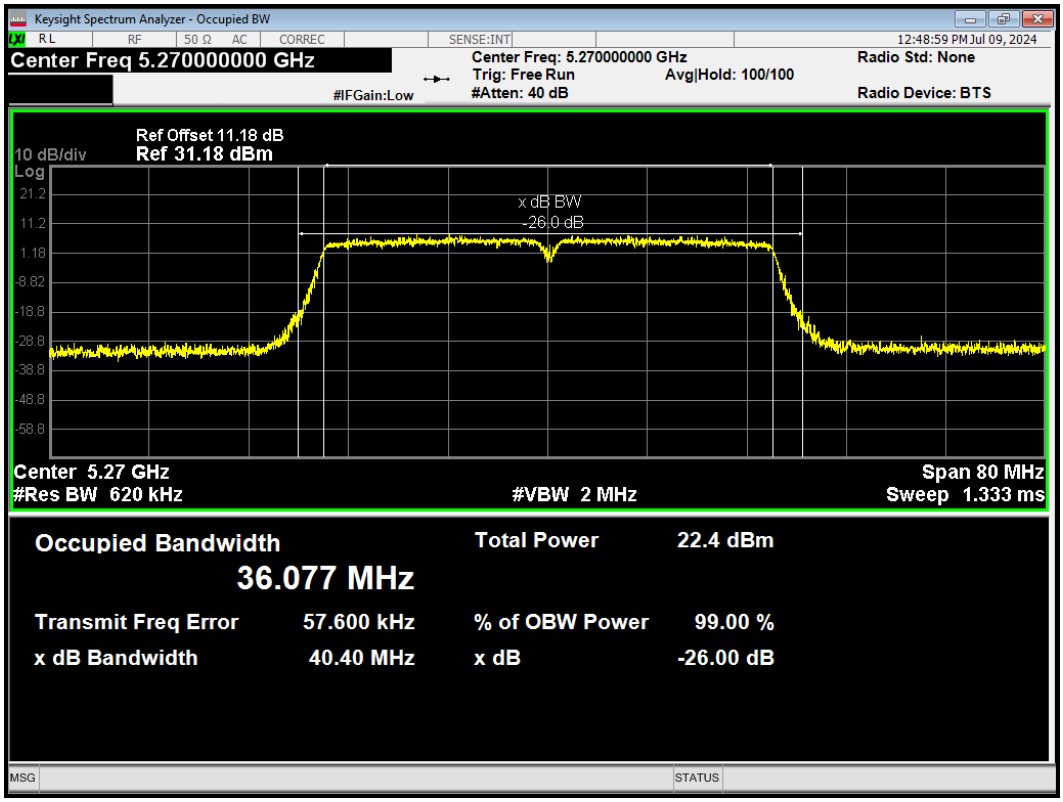
OBW 802.11n(HT20) 5300MHz



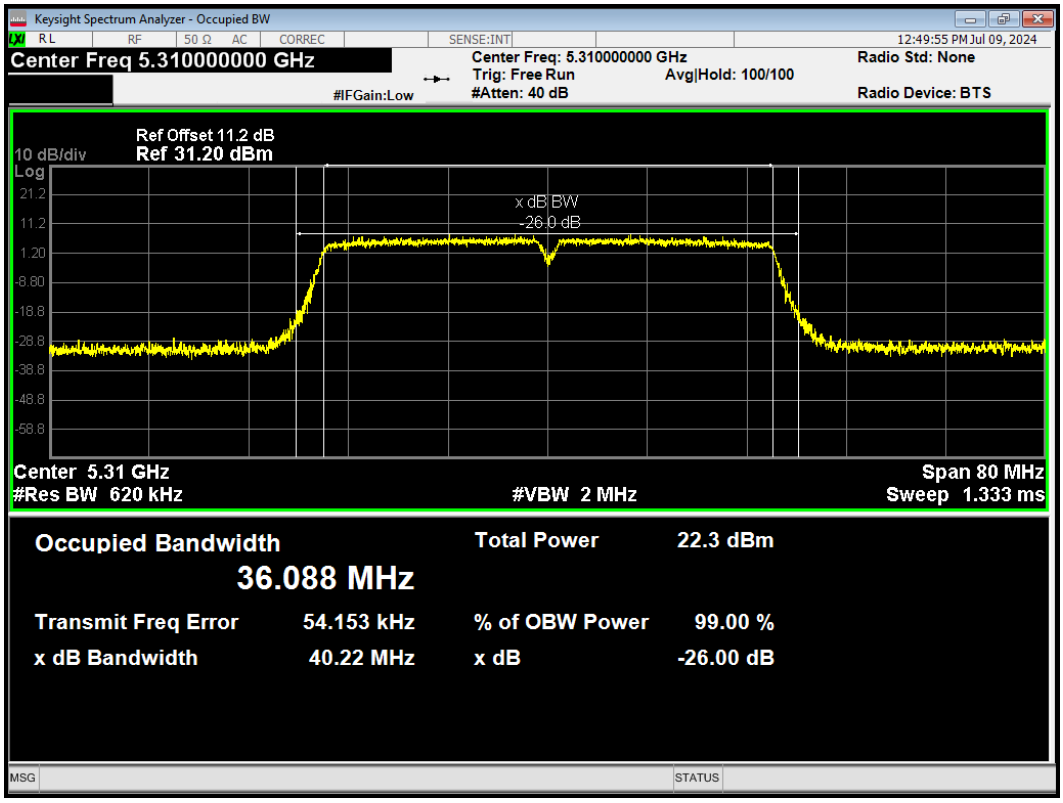
OBW 802.11n(HT20) 5320MHz



OBW 802.11n(HT40) 5270MHz

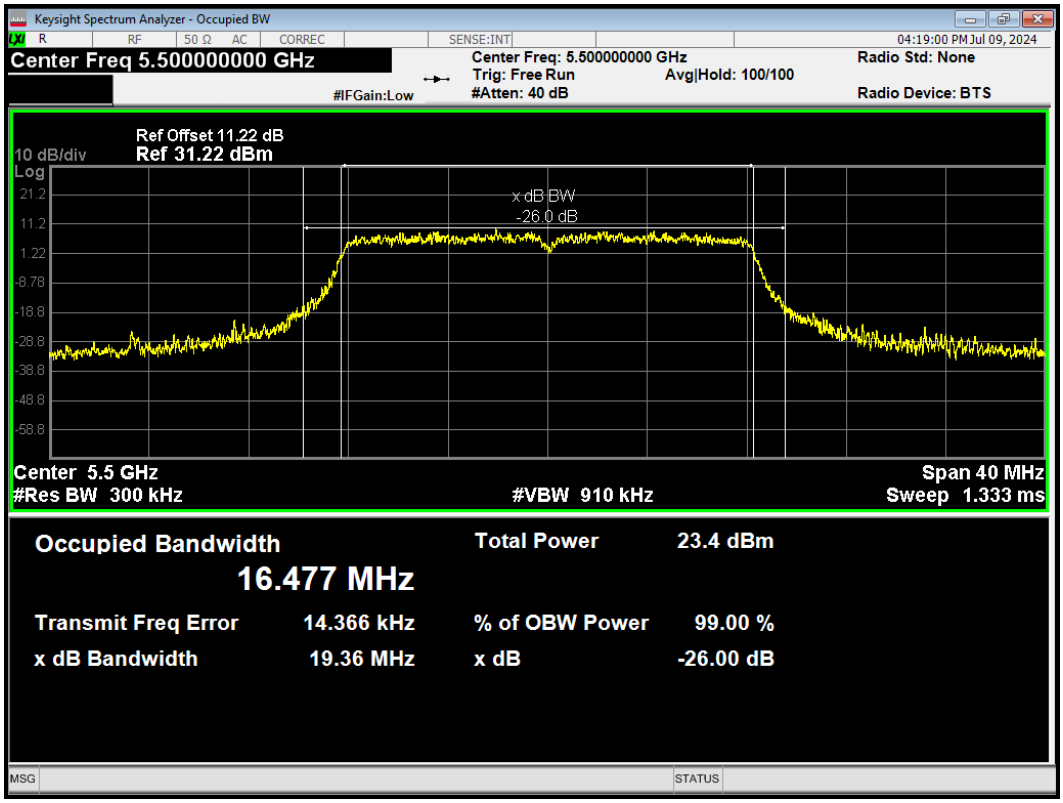


OBW 802.11n(HT40) 5310MHz

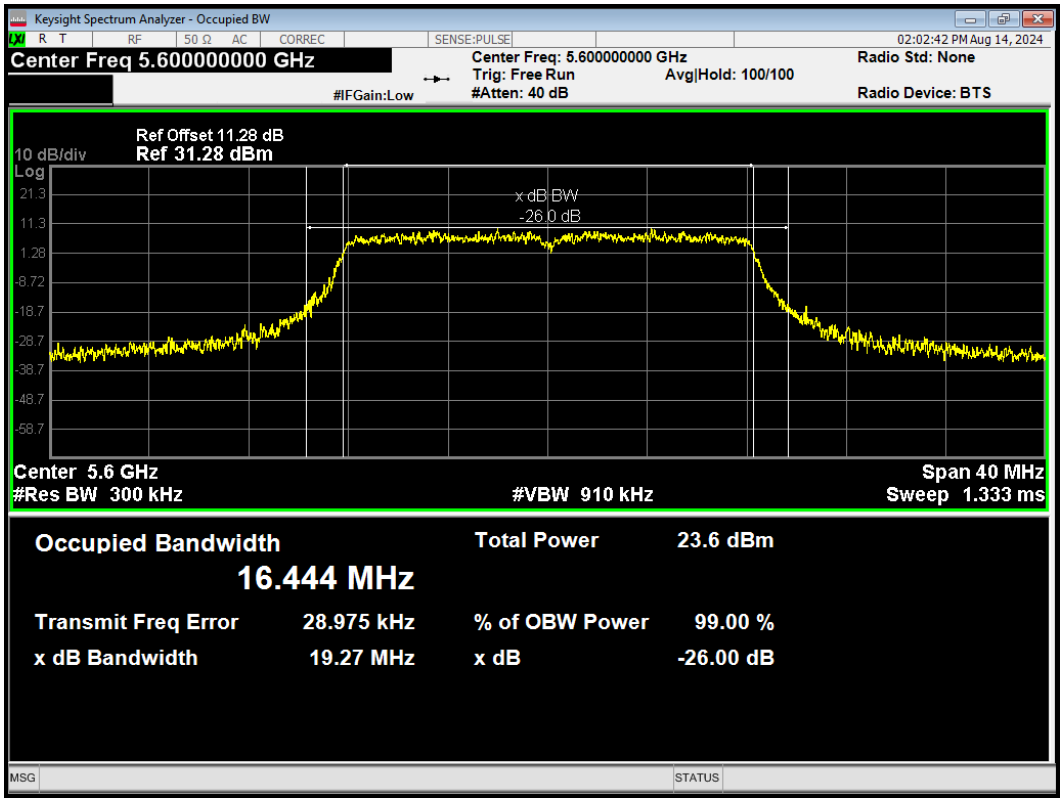


U-NII-2C

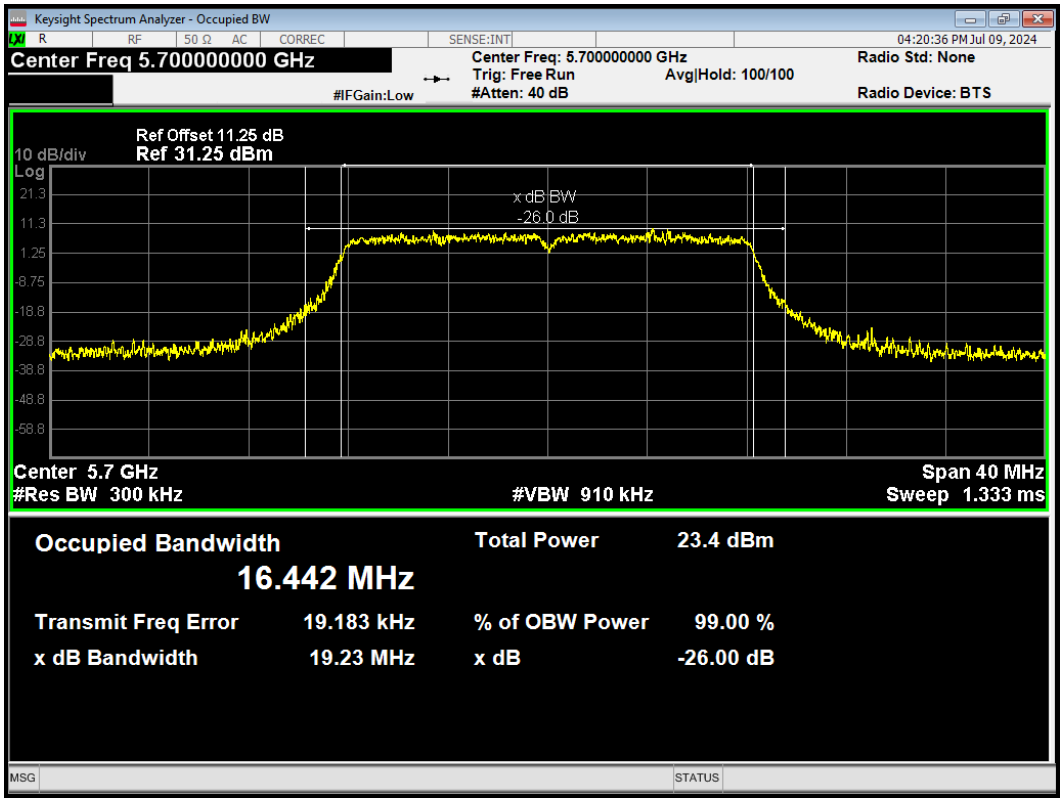
OBW 802.11a 5500MHz



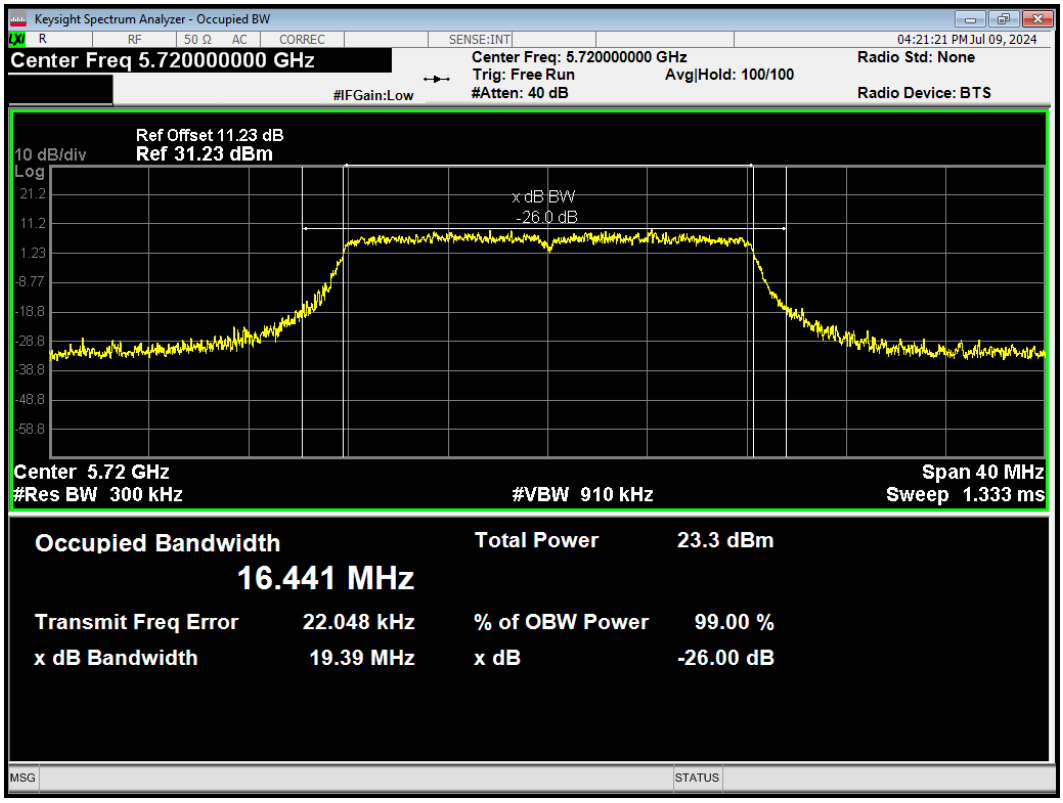
OBW 802.11a 5600MHz



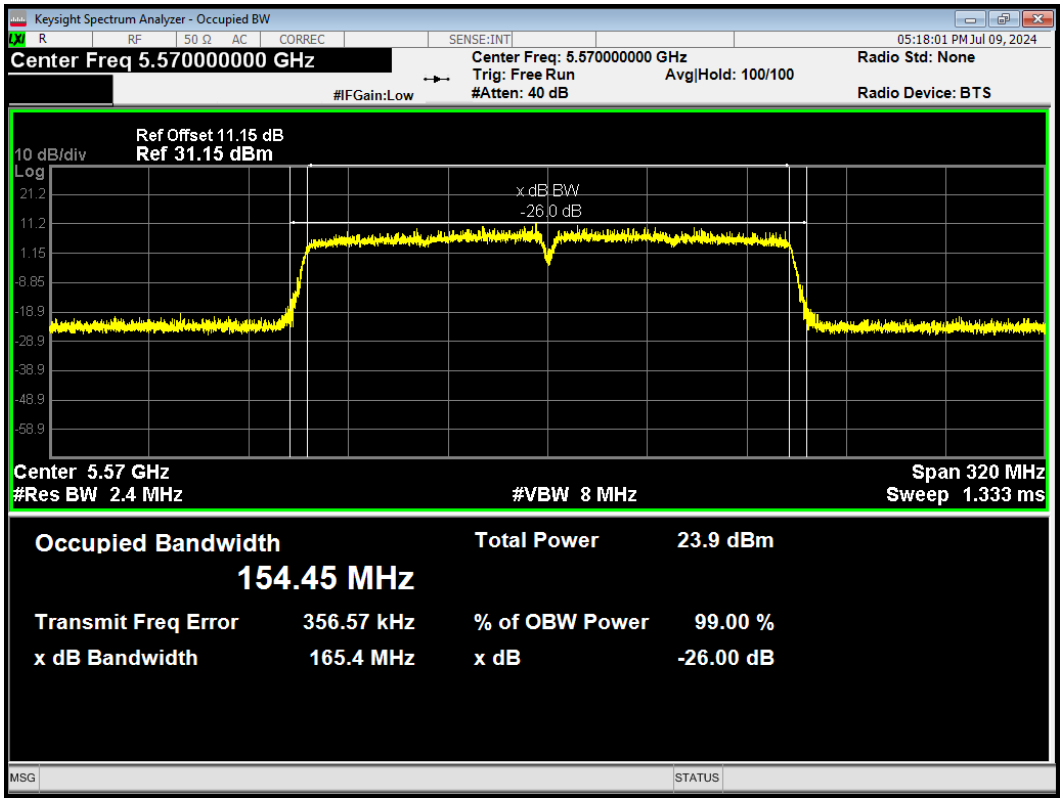
OBW 802.11a 5700MHz



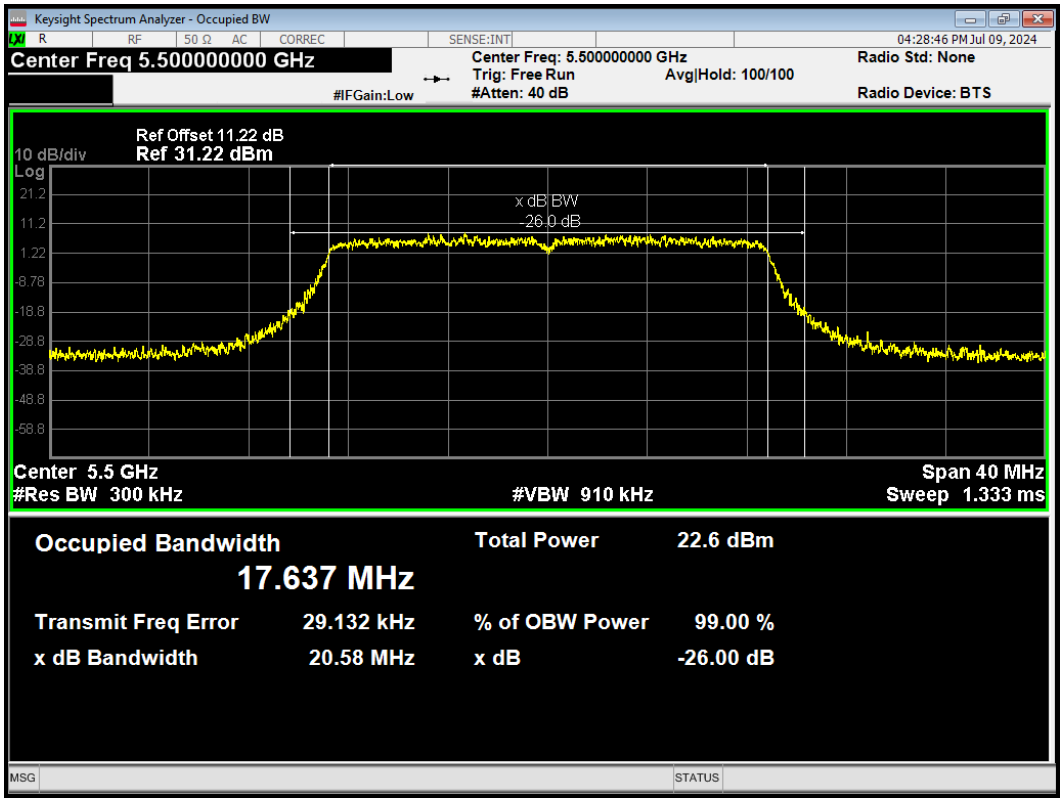
OBW 802.11a 5720MHz



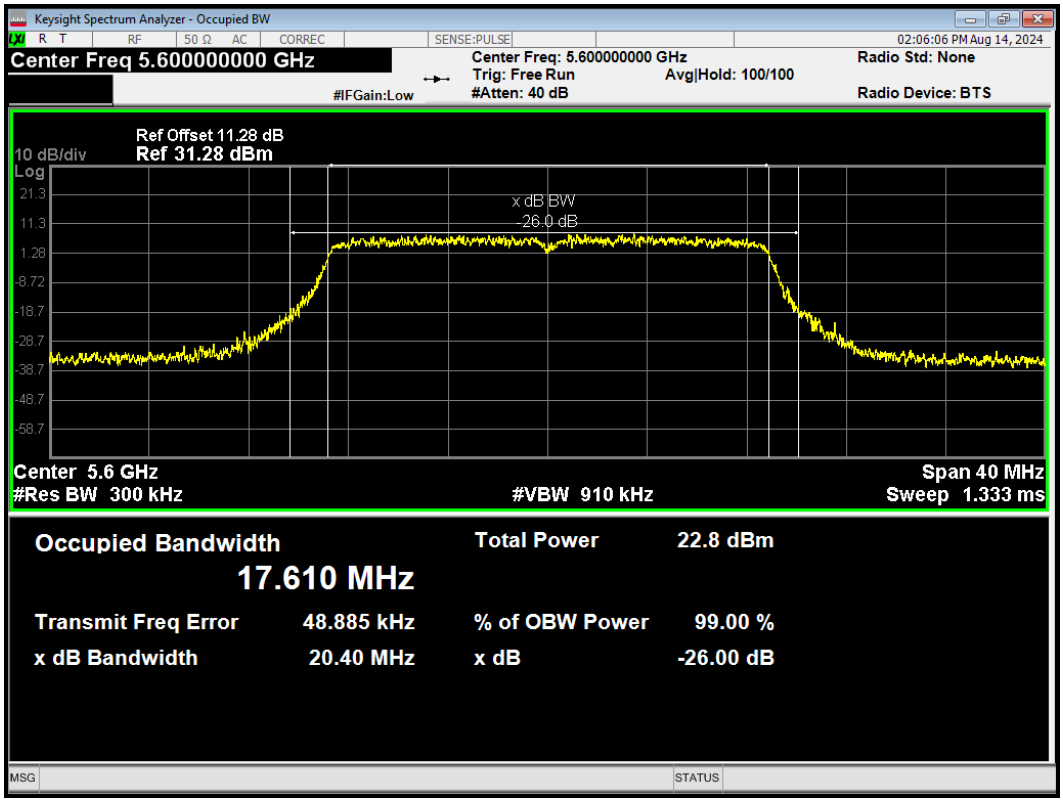
OBW 802.11ac(VHT160) 5570MHz



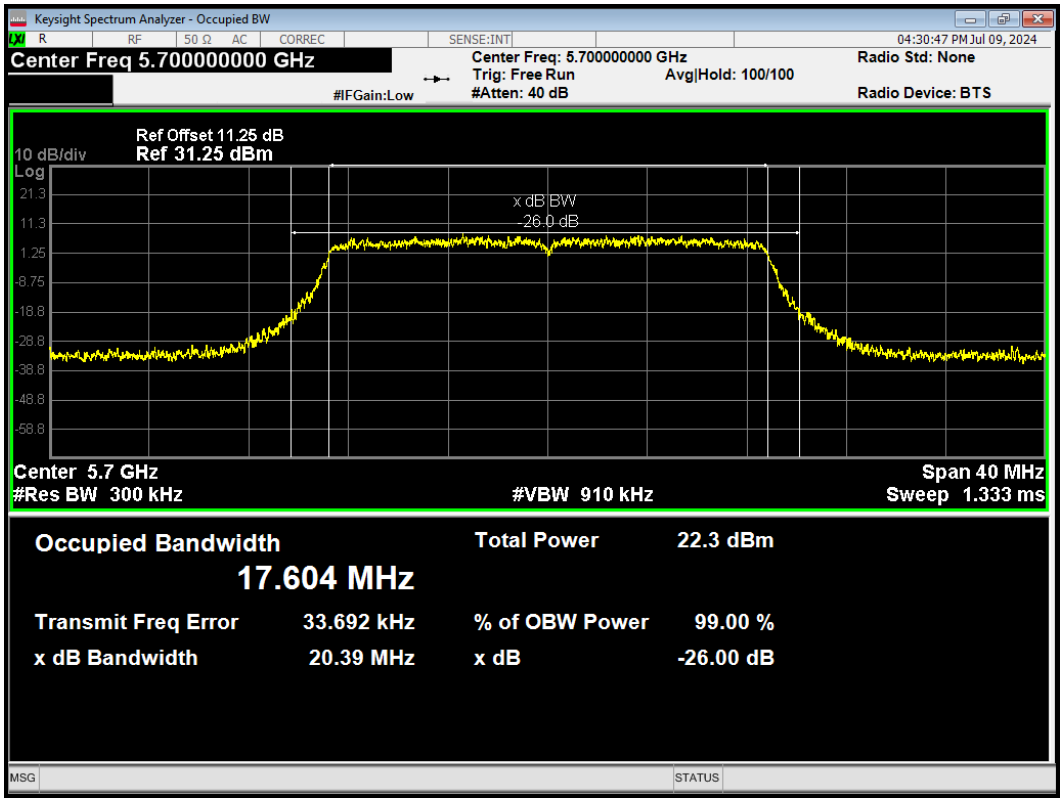
OBW 802.11ac(VHT20) 5500MHz



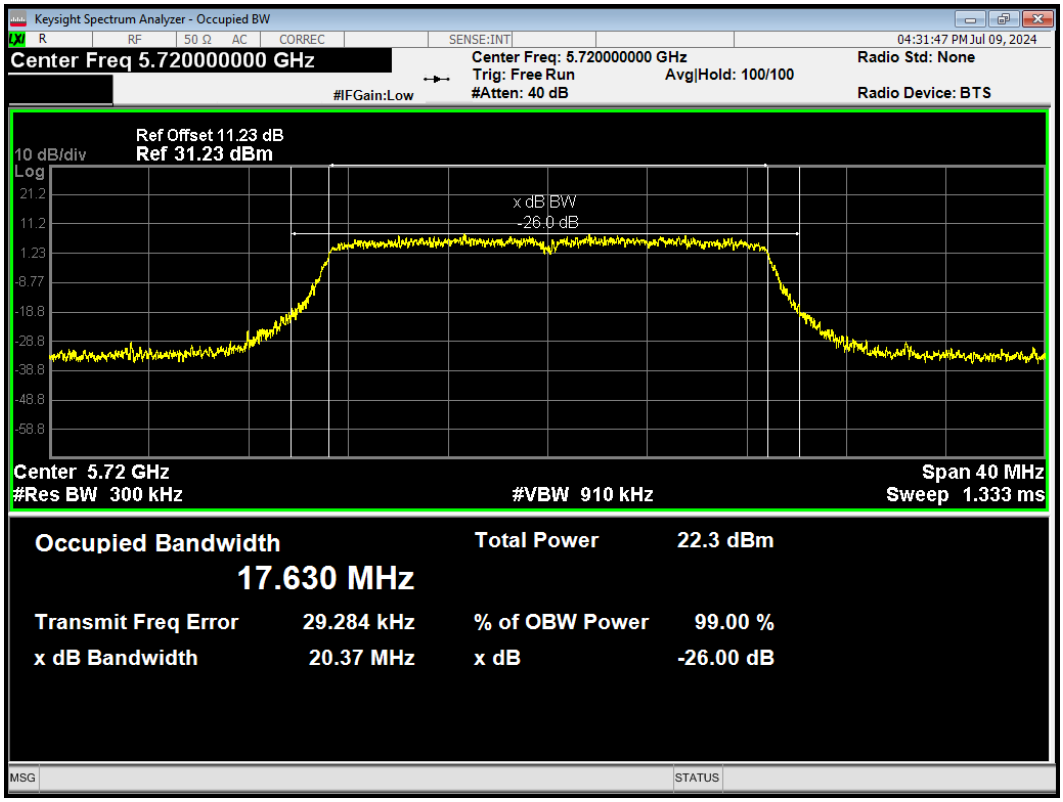
OBW 802.11ac(VHT20) 5600MHz



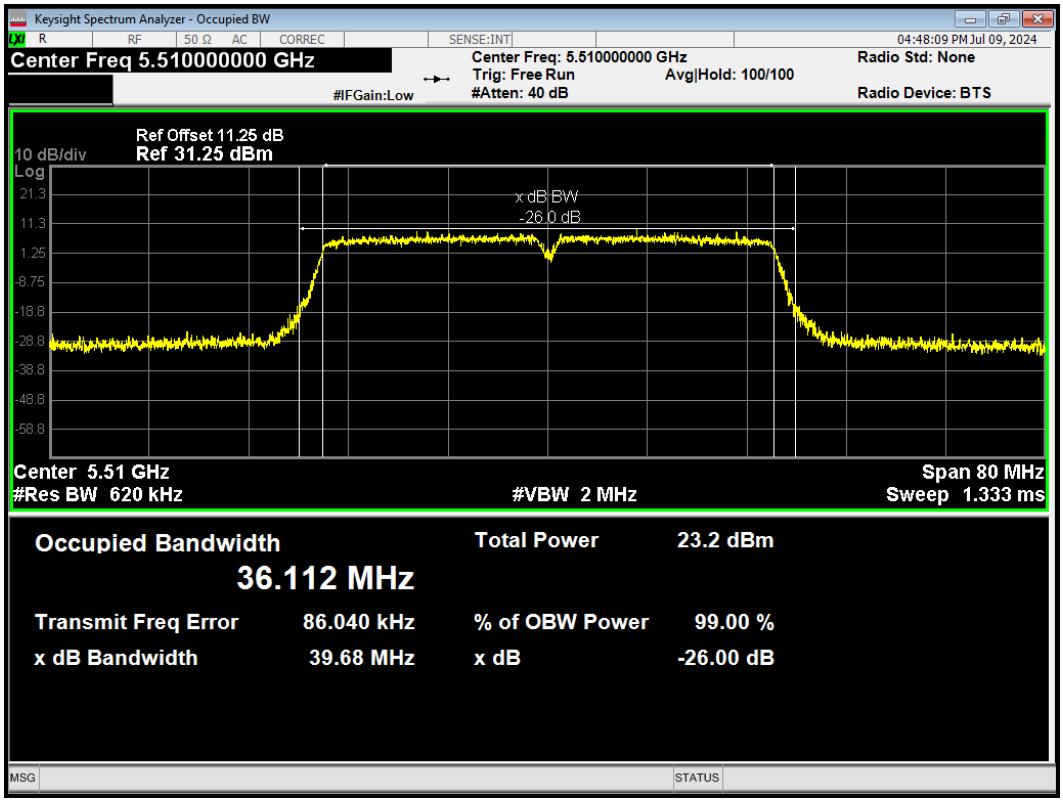
OBW 802.11ac(VHT20) 5700MHz



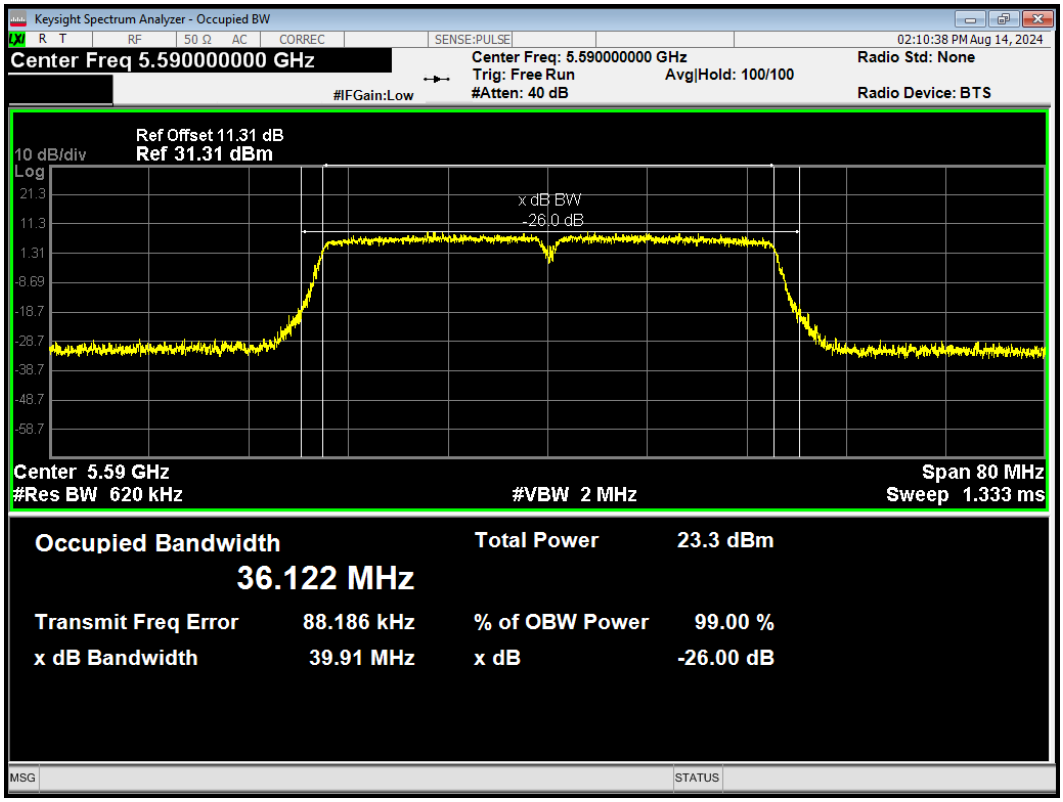
OBW 802.11ac(VHT20) 5720MHz



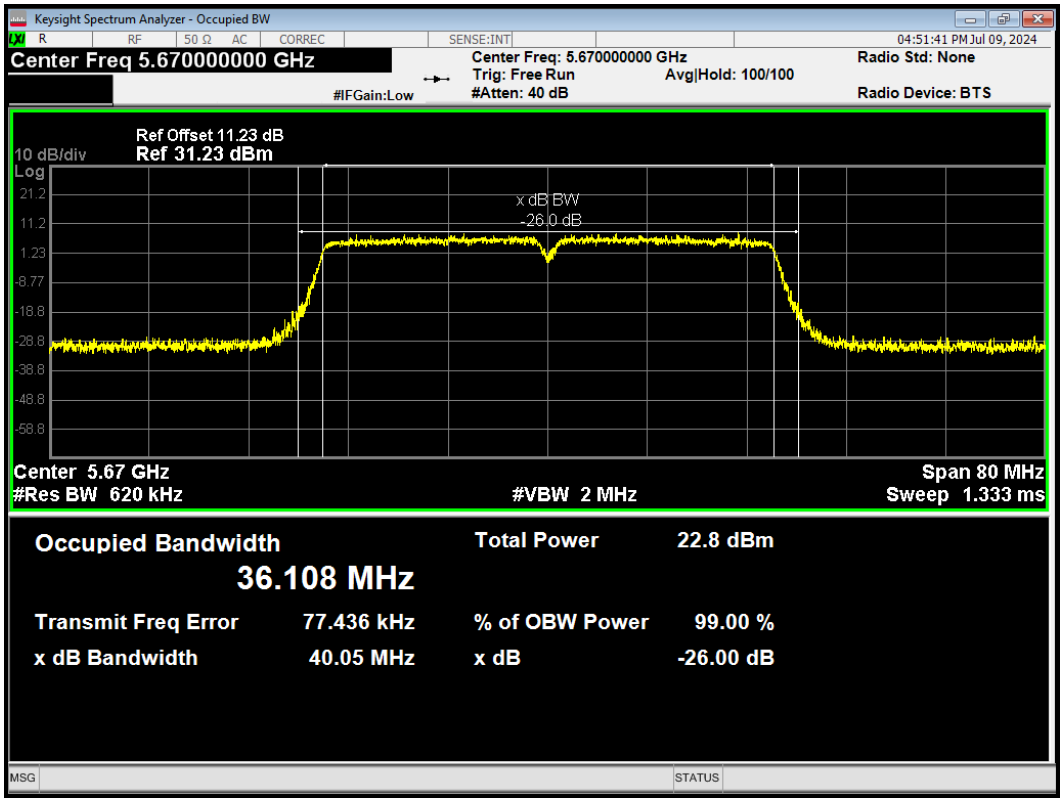
OBW 802.11ac(VHT40) 5510MHz



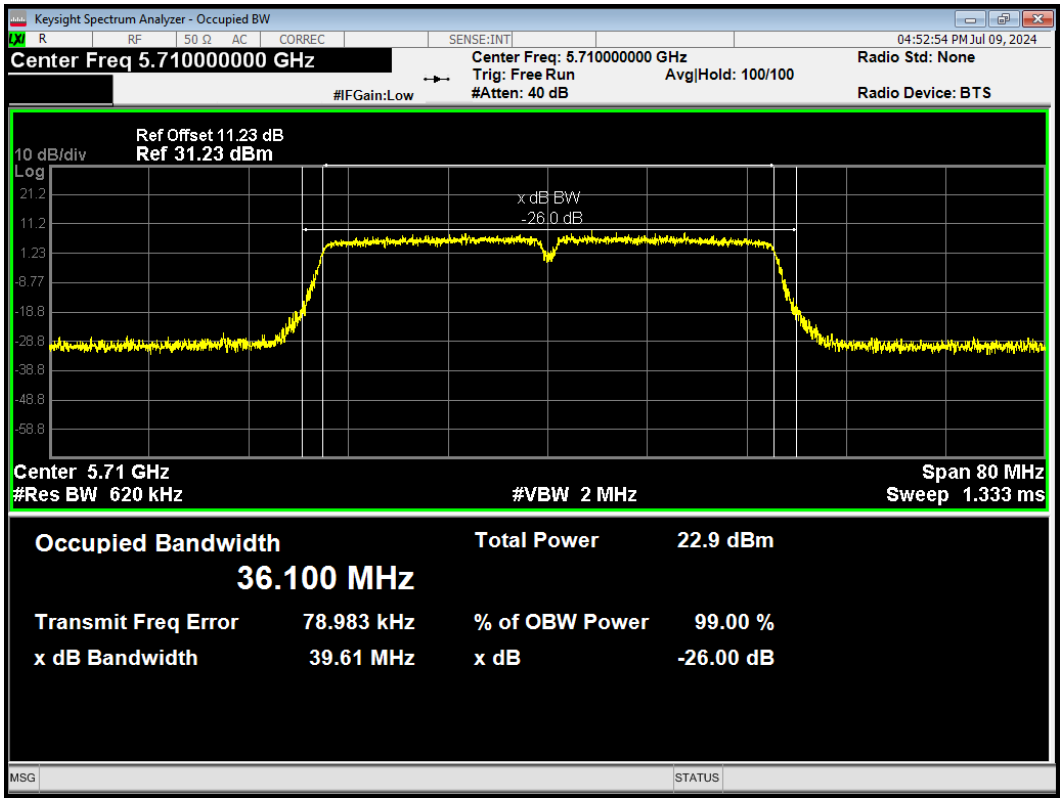
OBW 802.11ac(VHT40) 5590MHz



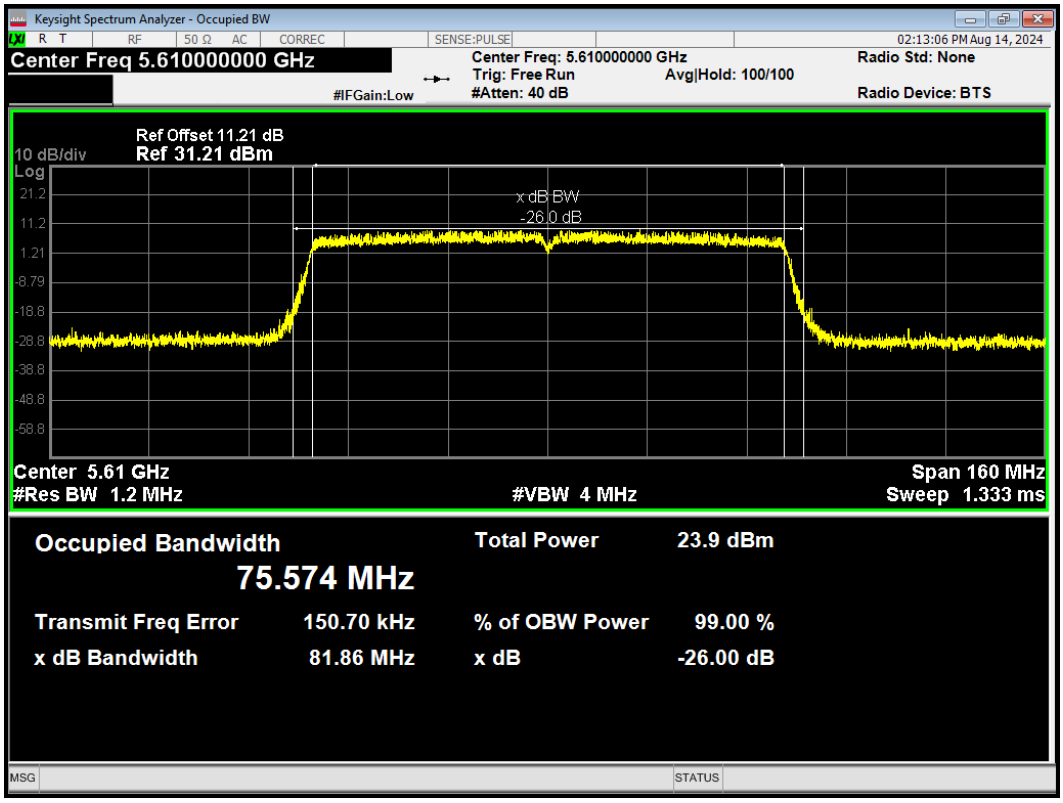
OBW 802.11ac(VHT40) 5670MHz



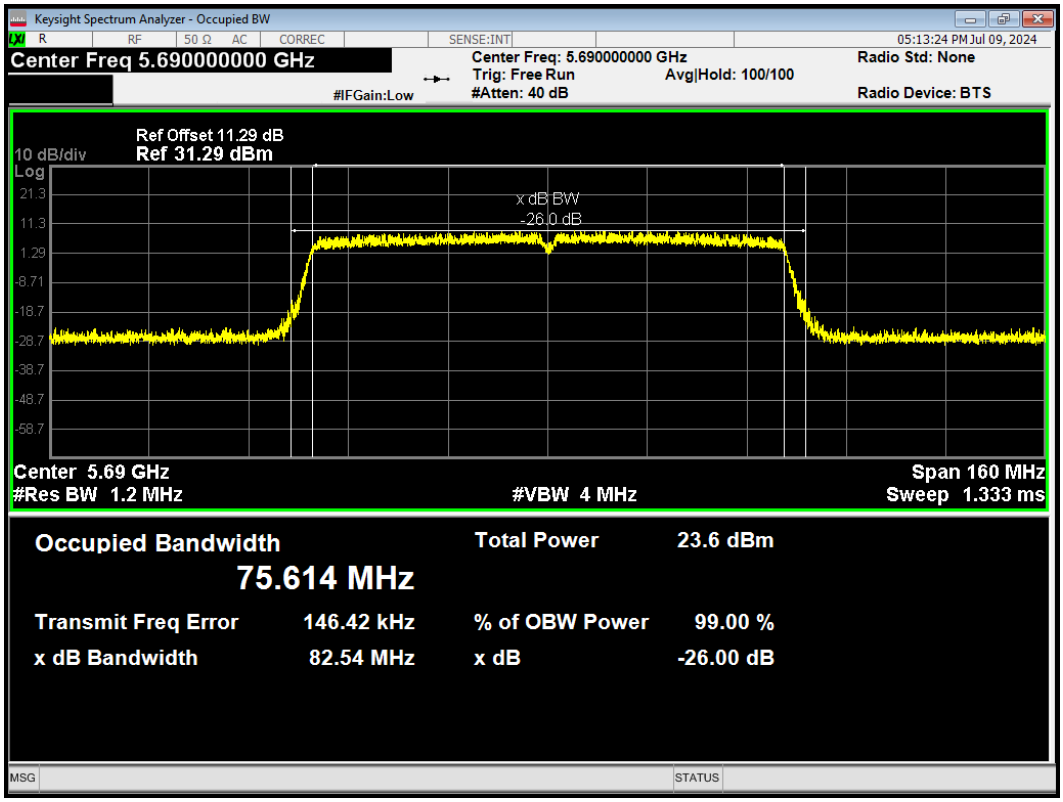
OBW 802.11ac(VHT40) 5710MHz



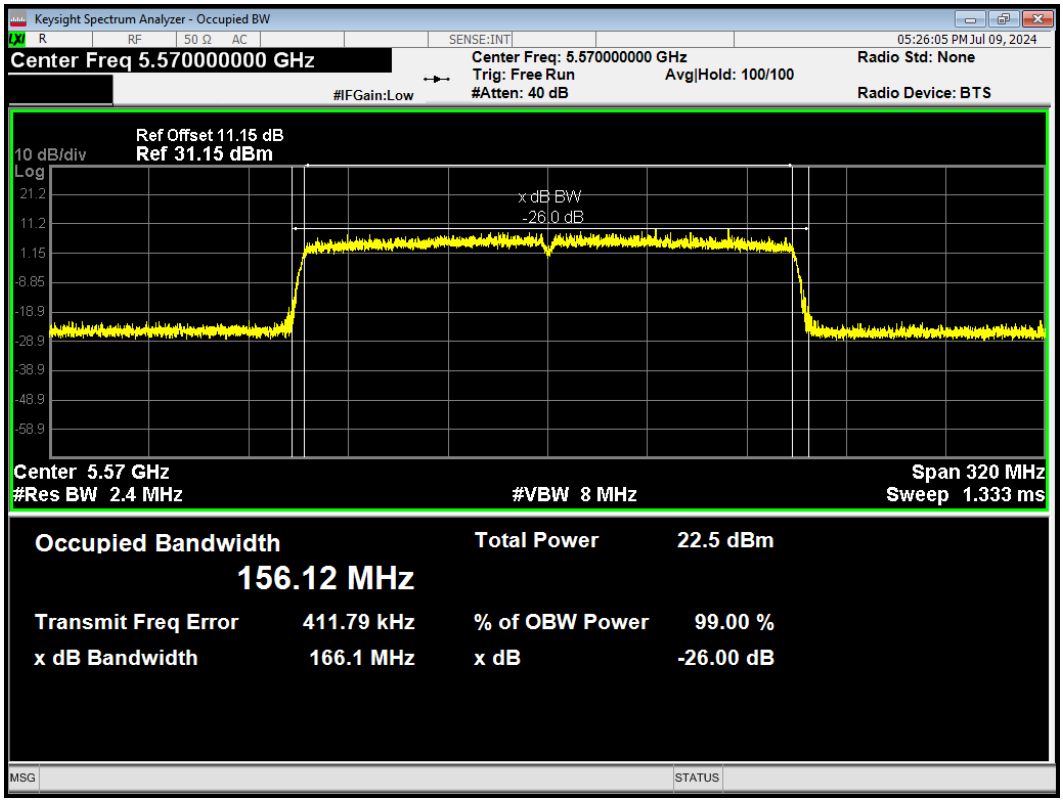
OBW 802.11ac(VHT80) 5610MHz



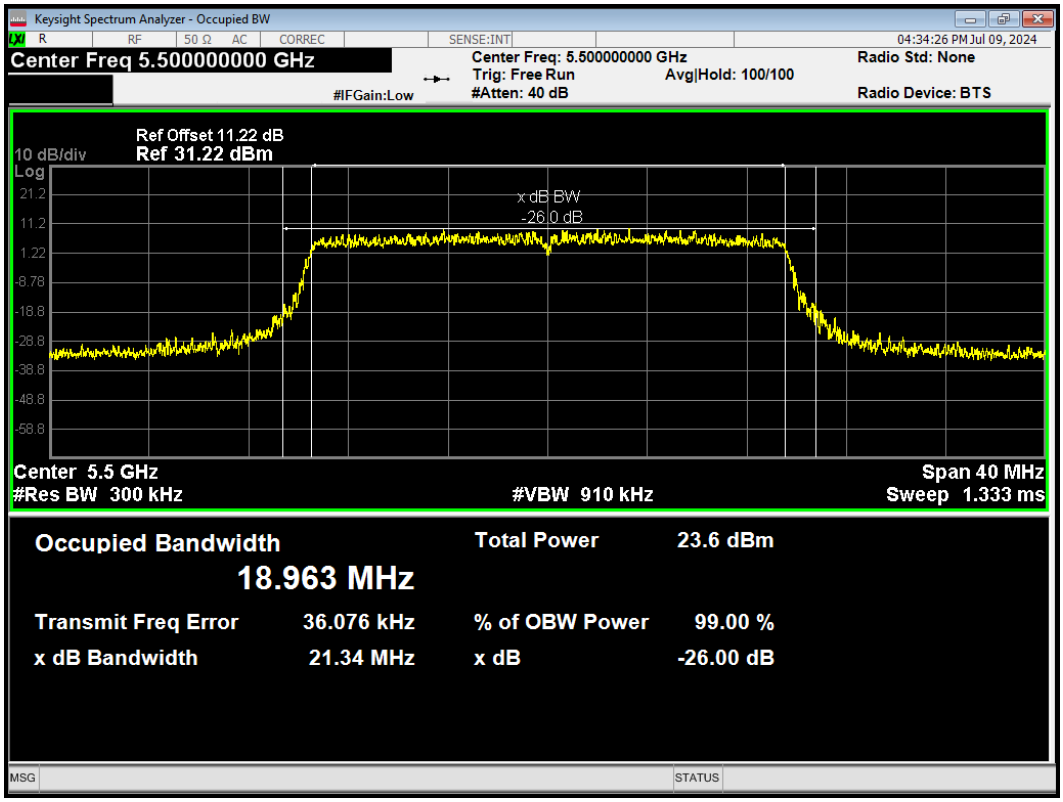
OBW 802.11ac(VHT80) 5690MHz



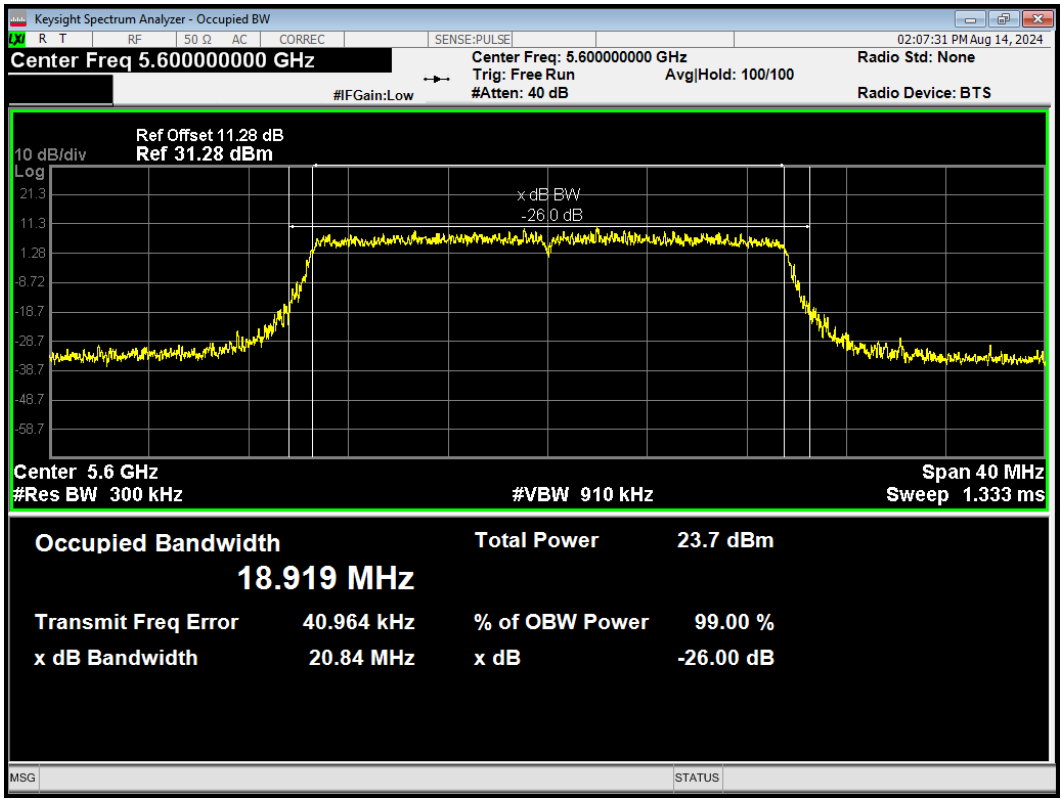
OBW 802.11ax(HE160) 5570MHz



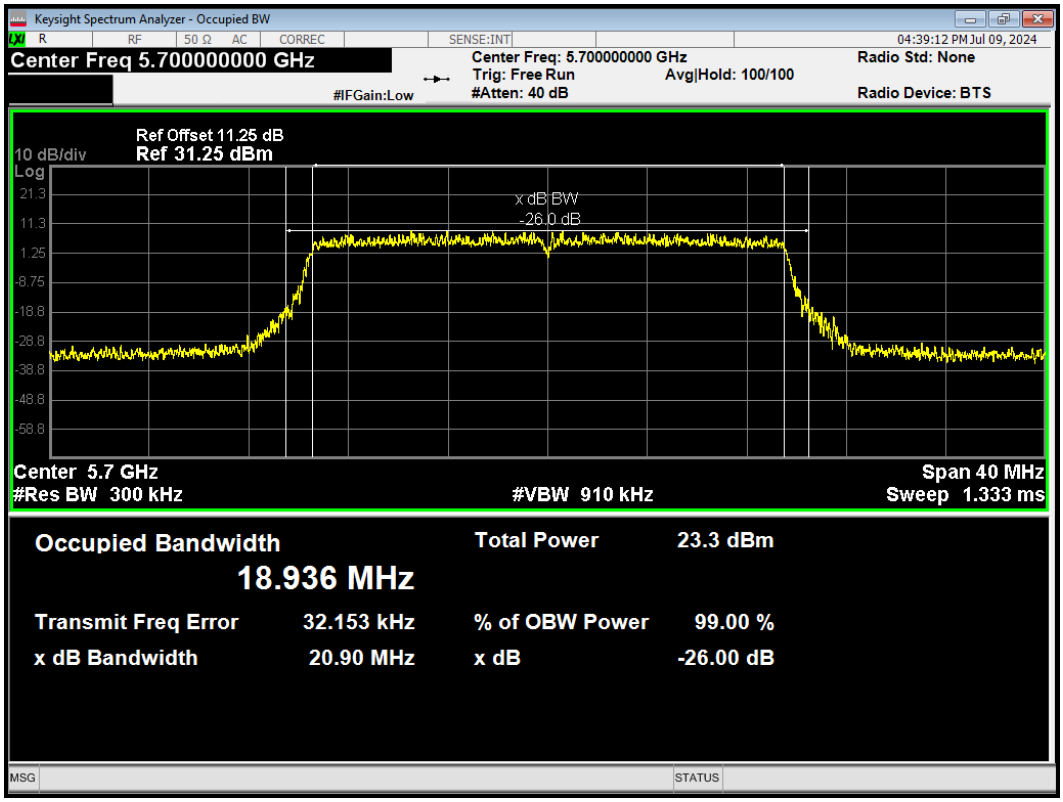
OBW 802.11ax(HE20) 5500MHz



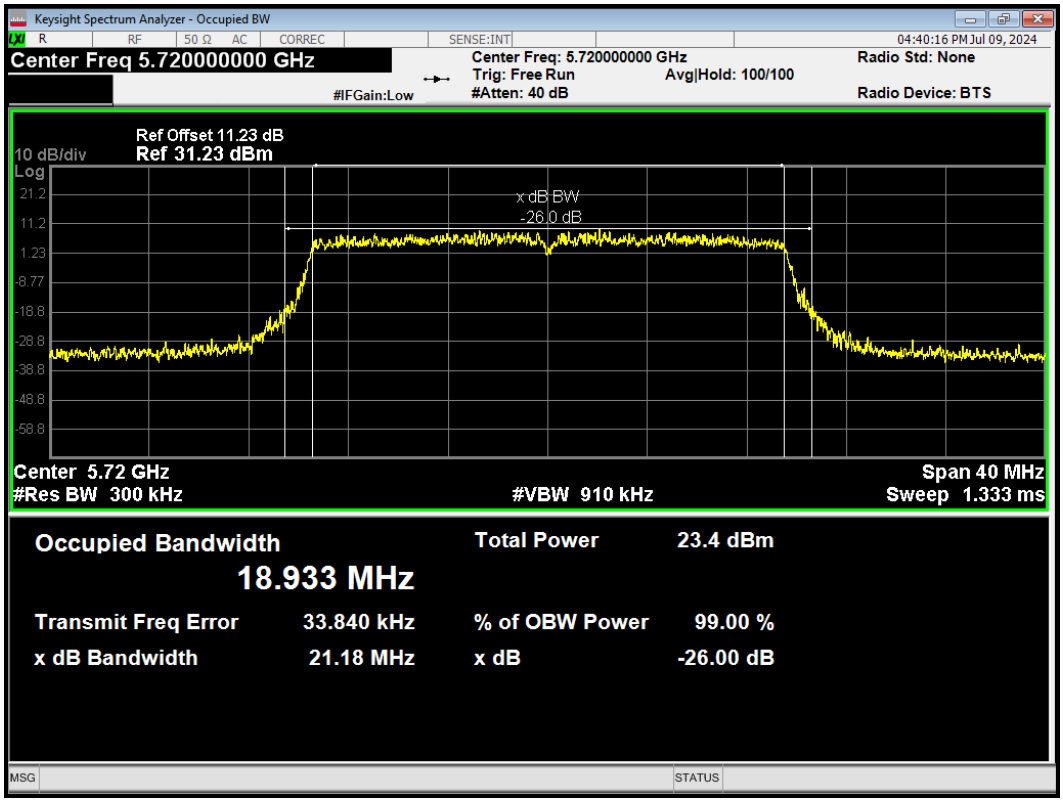
OBW 802.11ax(HE20) 5600MHz



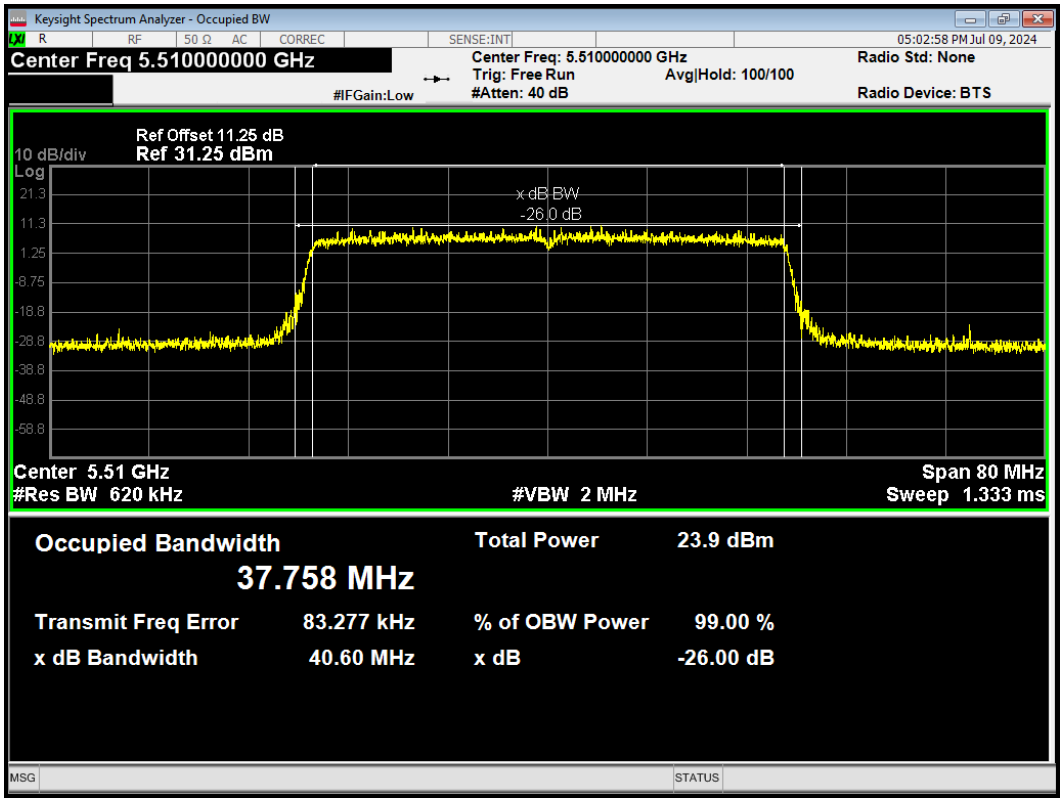
OBW 802.11ax(HE20) 5700MHz



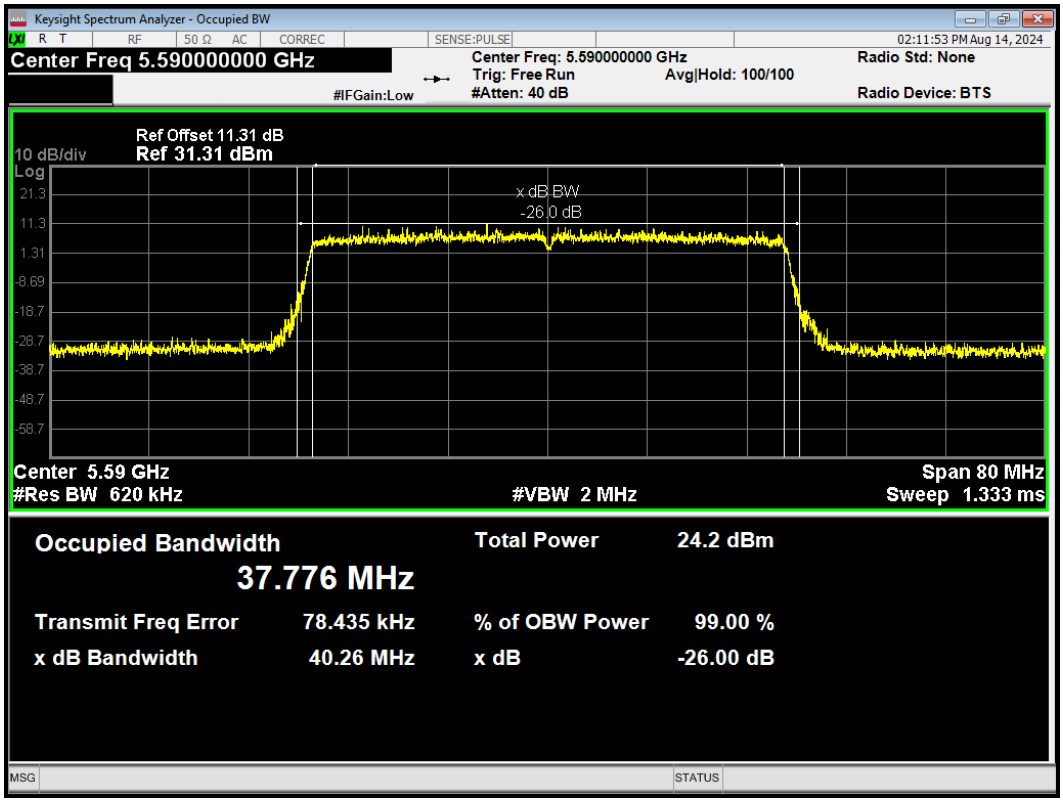
OBW 802.11ax(HE20) 5720MHz



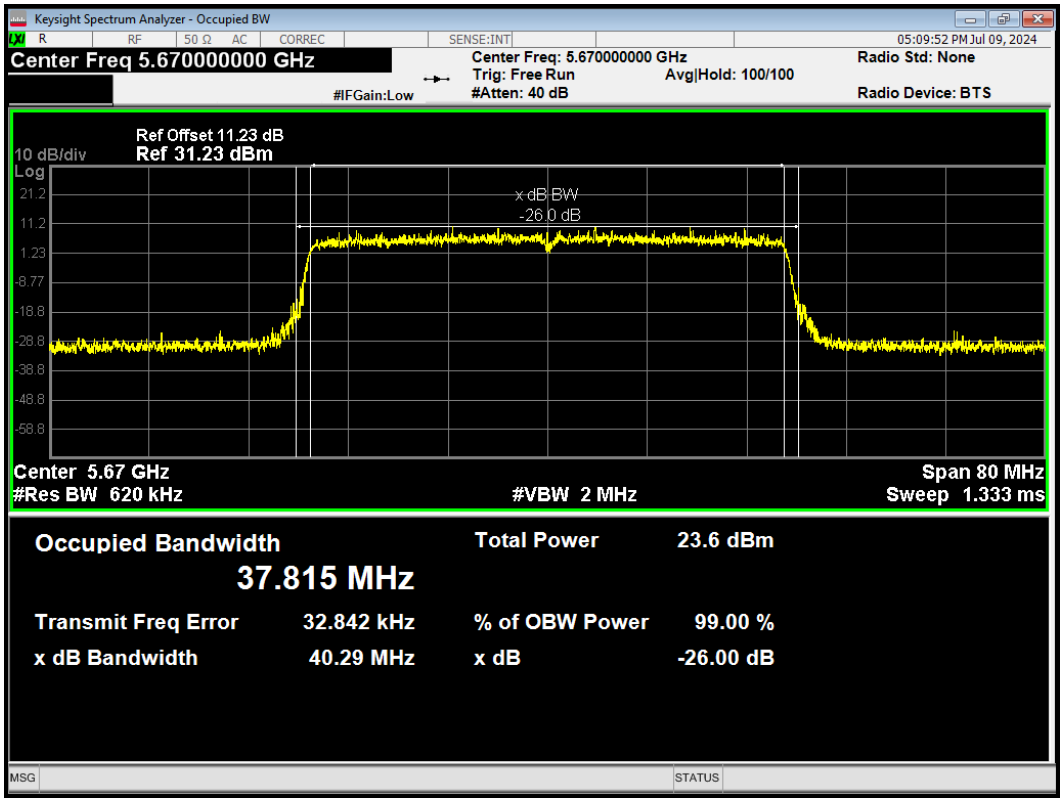
OBW 802.11ax(HE40) 5510MHz



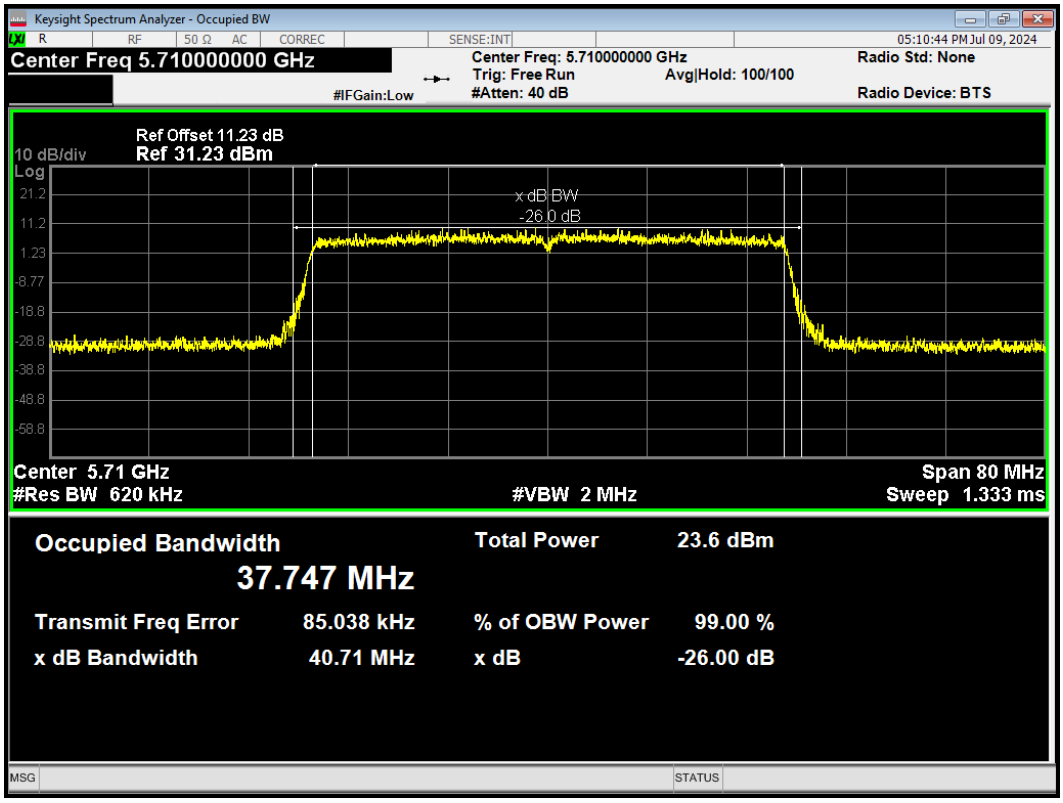
OBW 802.11ax(HE40) 5590MHz



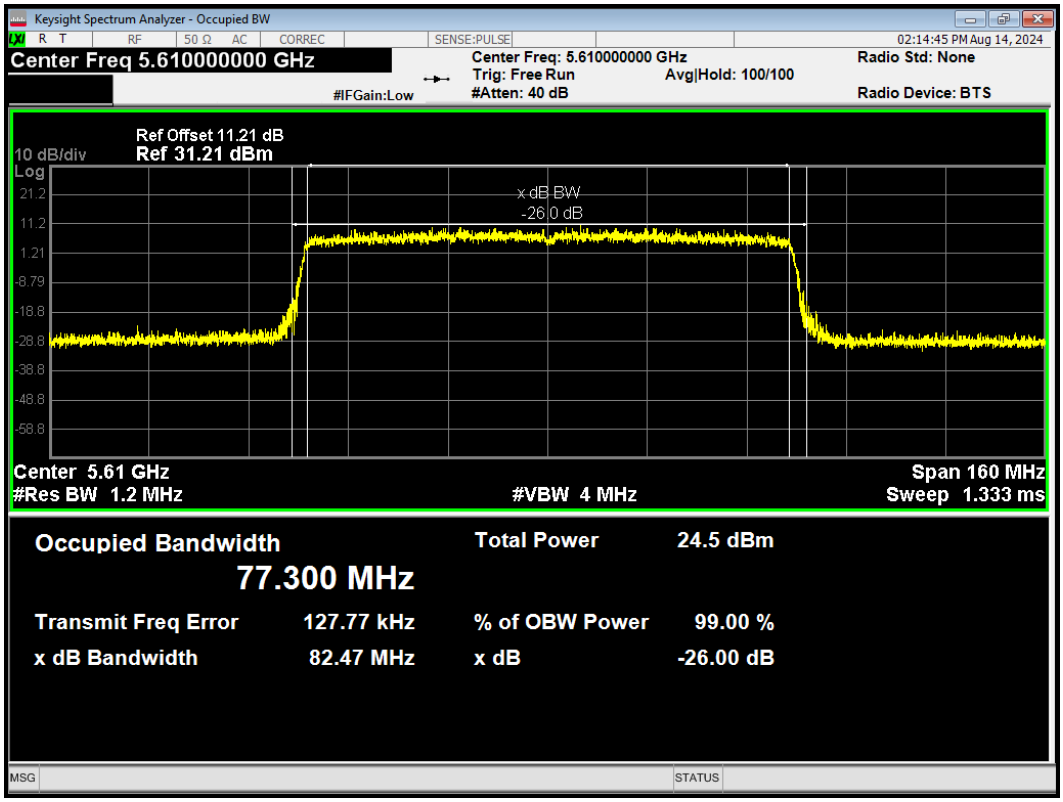
OBW 802.11ax(HE40) 5670MHz



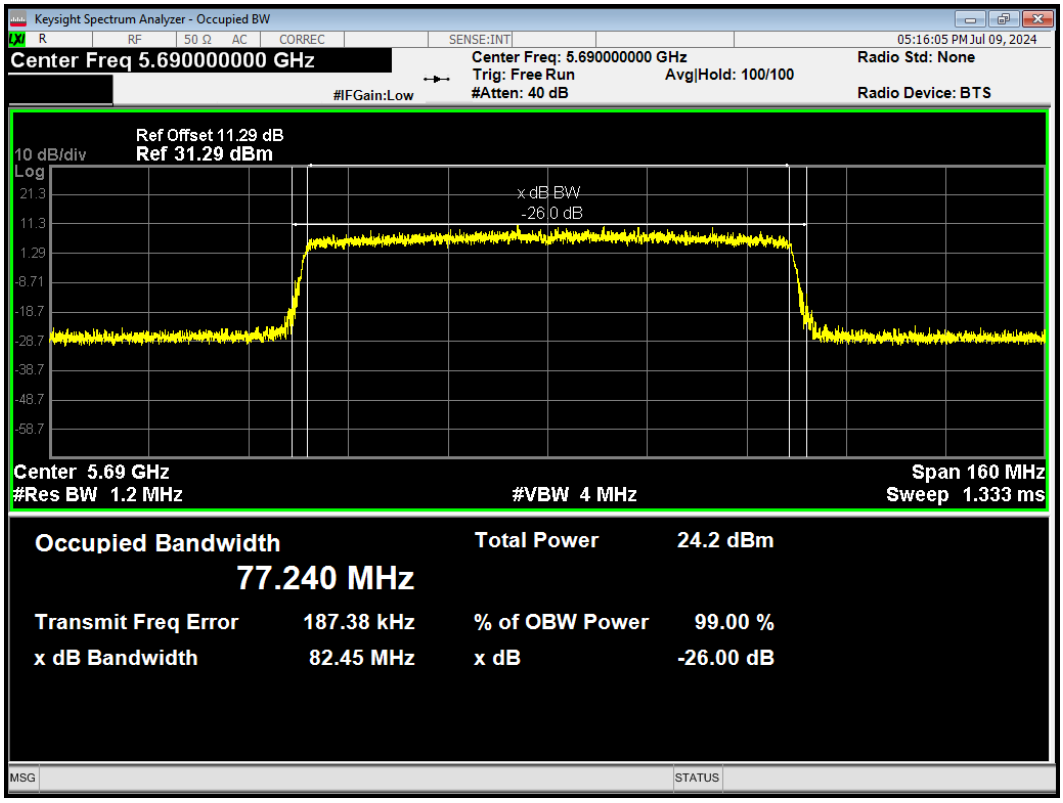
OBW 802.11ax(HE40) 5710MHz



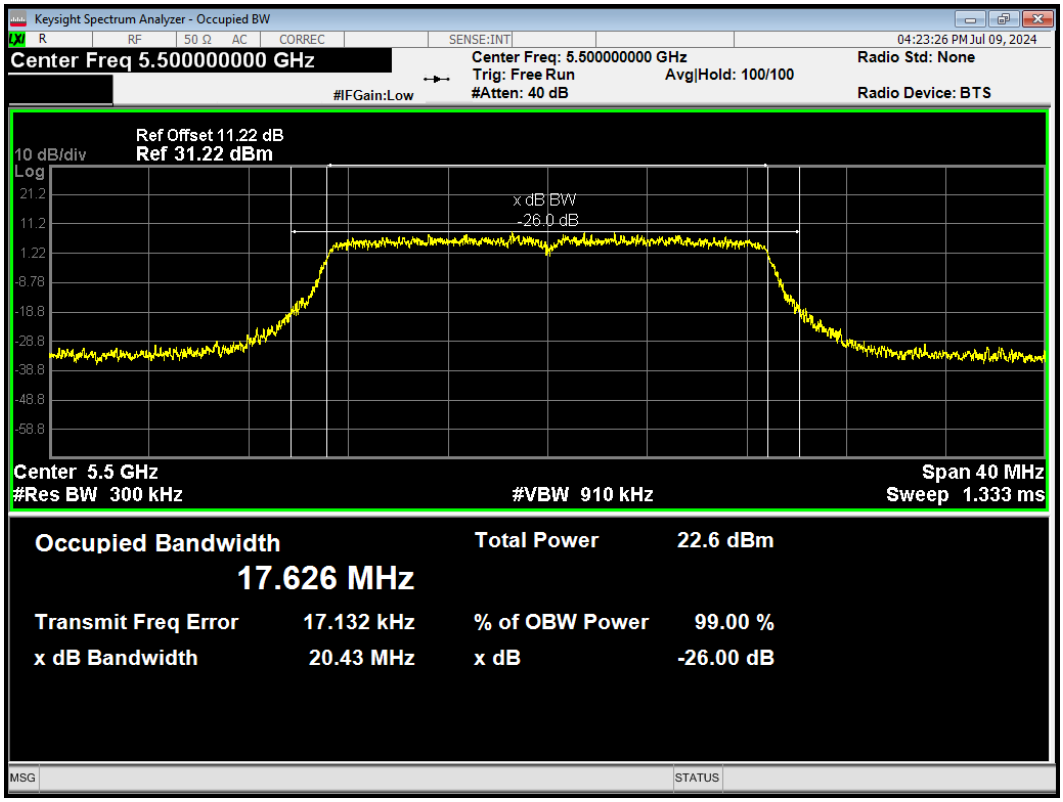
OBW 802.11ax(HE80) 5610MHz



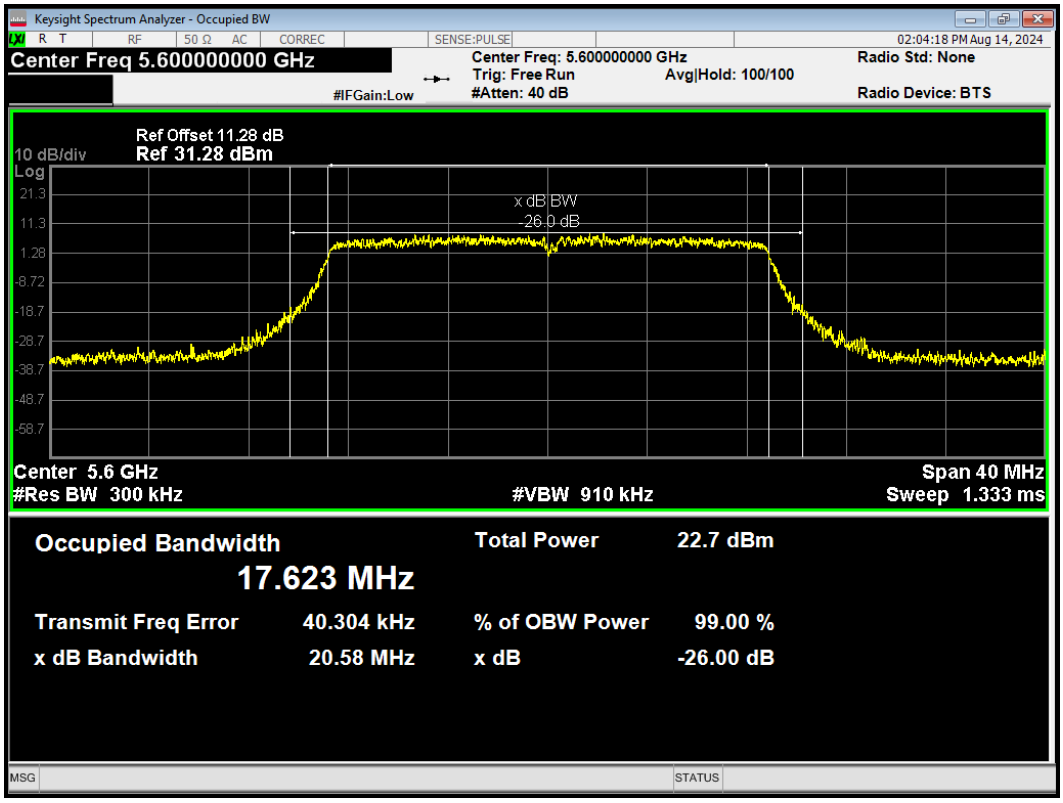
OBW 802.11ax(HE80) 5690MHz



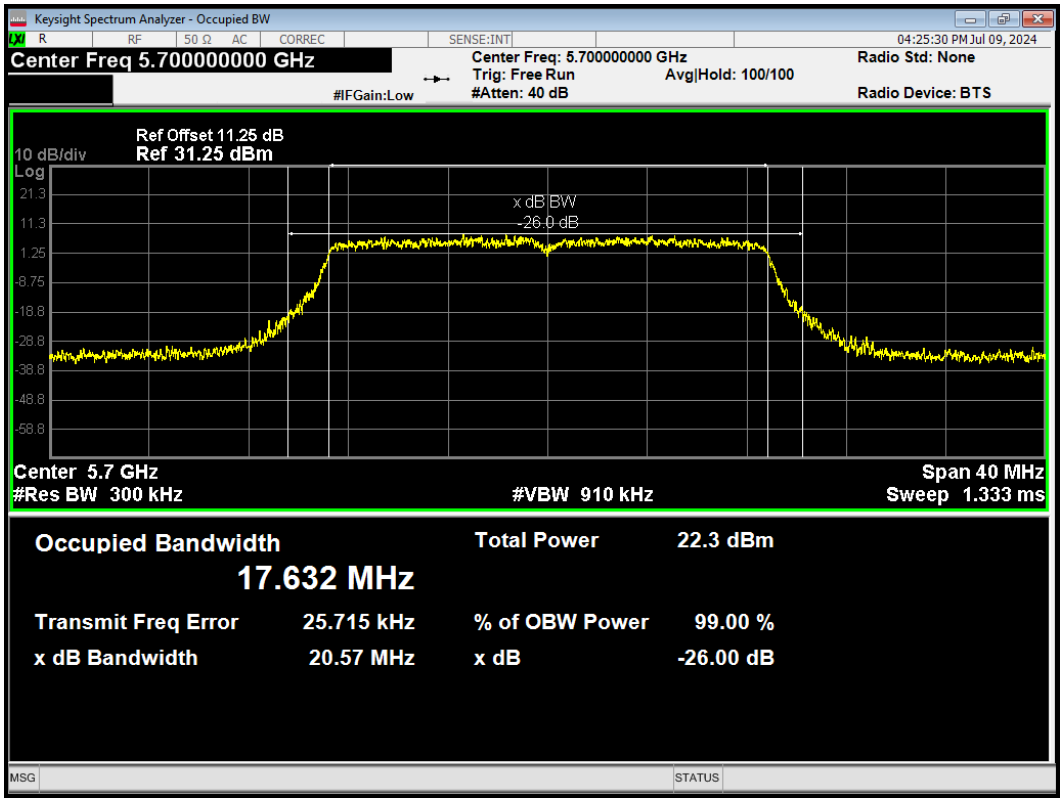
OBW 802.11n(HT20) 5500MHz



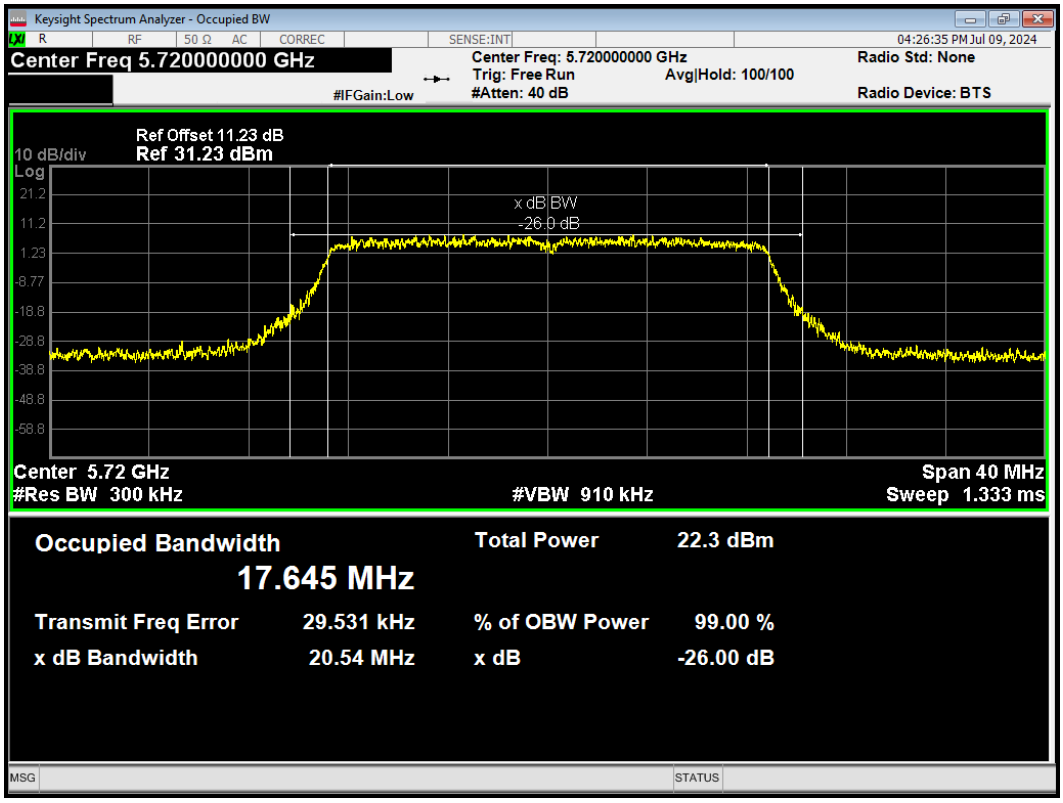
OBW 802.11n(HT20) 5600MHz



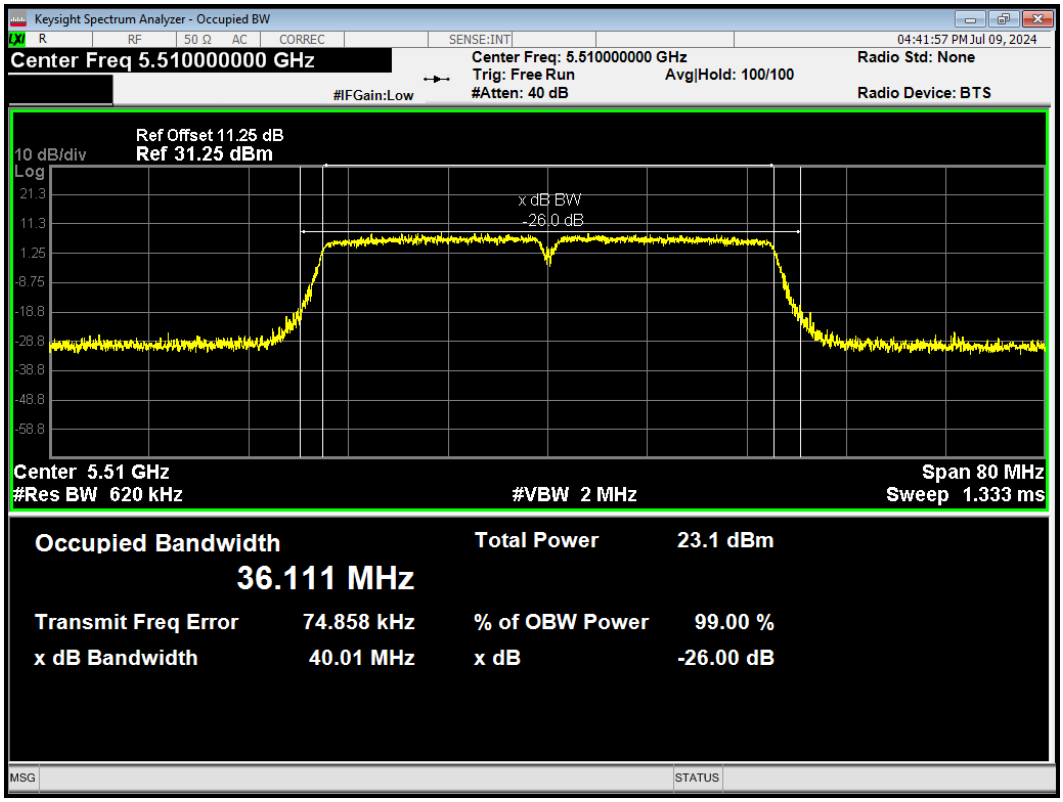
OBW 802.11n(HT20) 5700MHz



OBW 802.11n(HT20) 5720MHz



OBW 802.11n(HT40) 5510MHz



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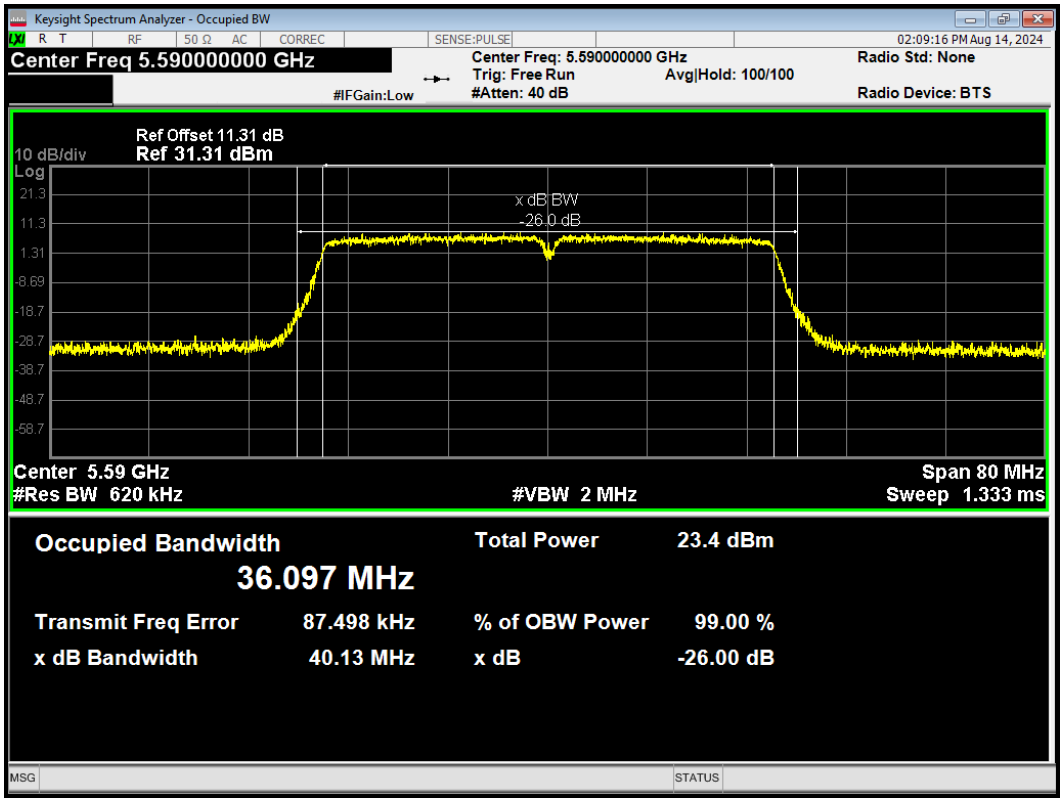

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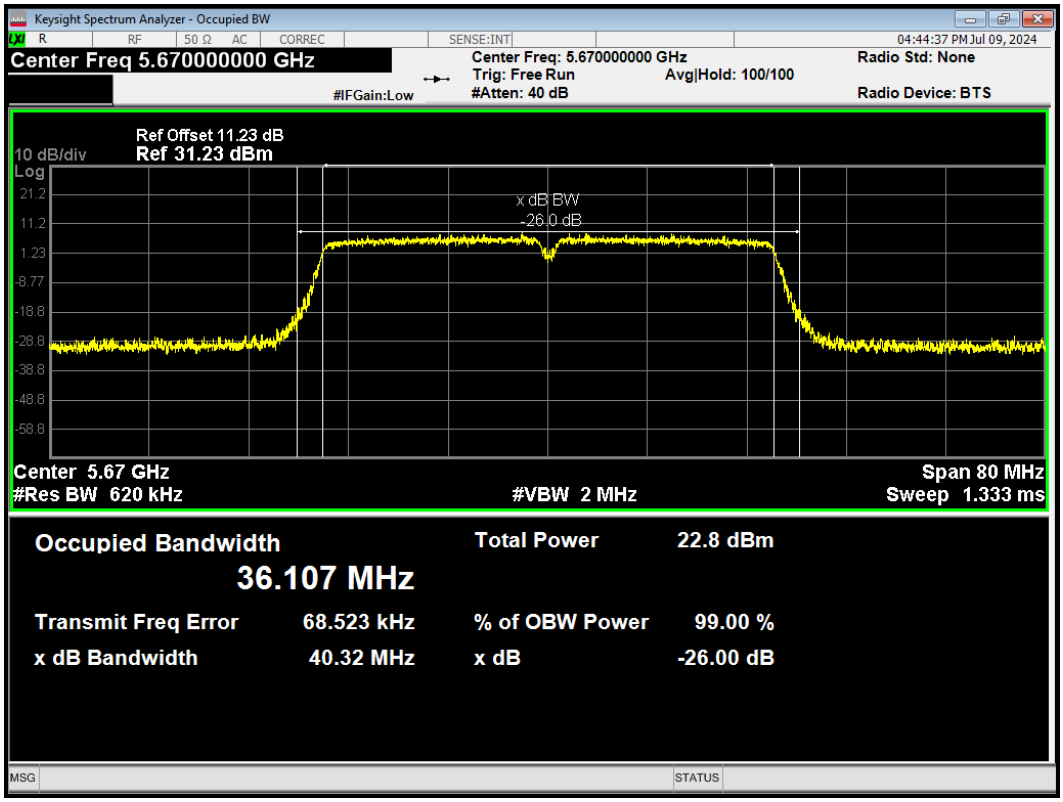
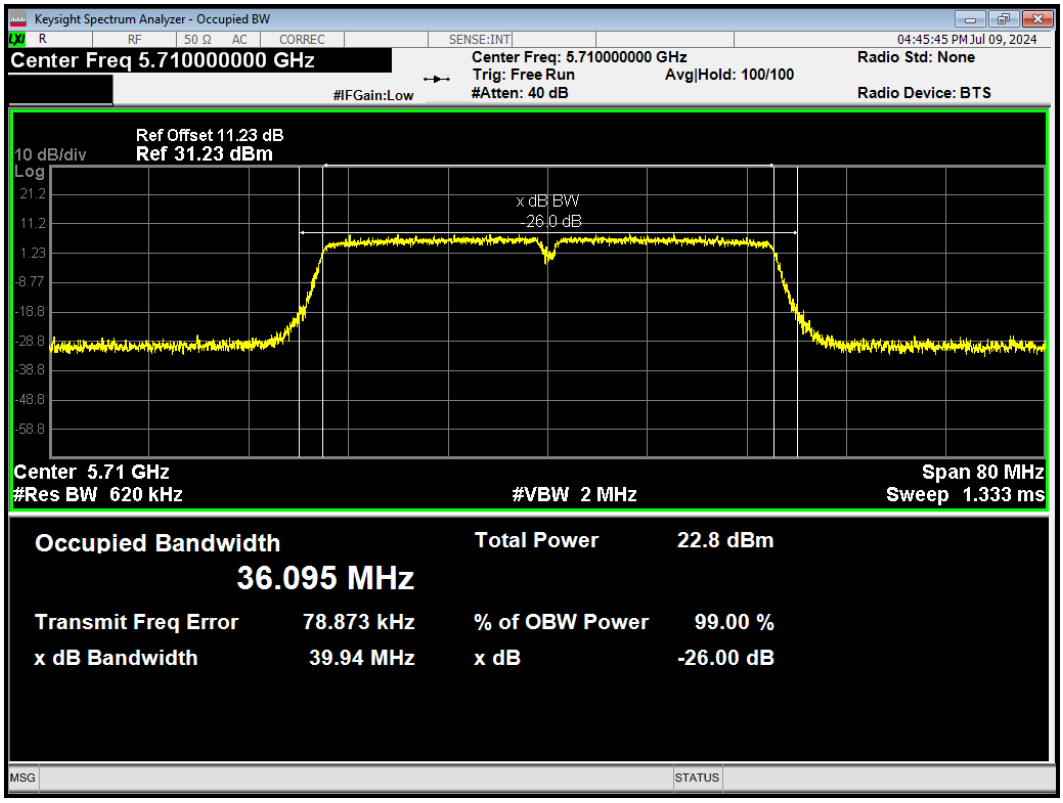
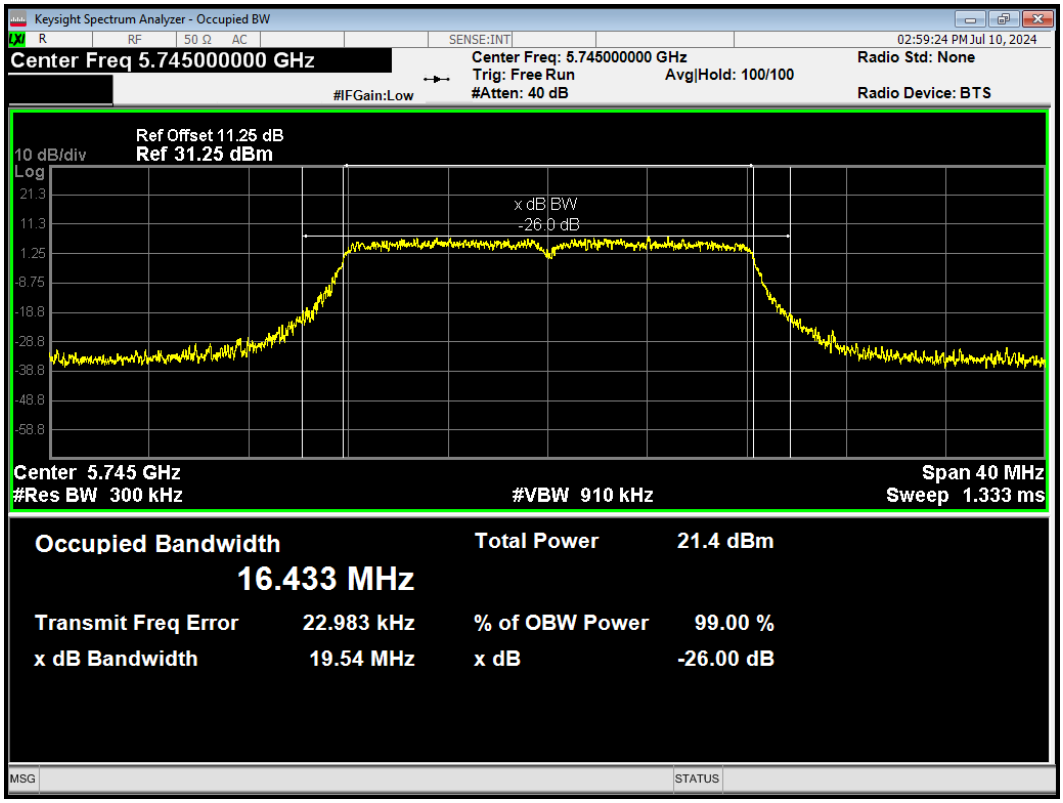


OBW 802.11n(HT40) 5710MHz

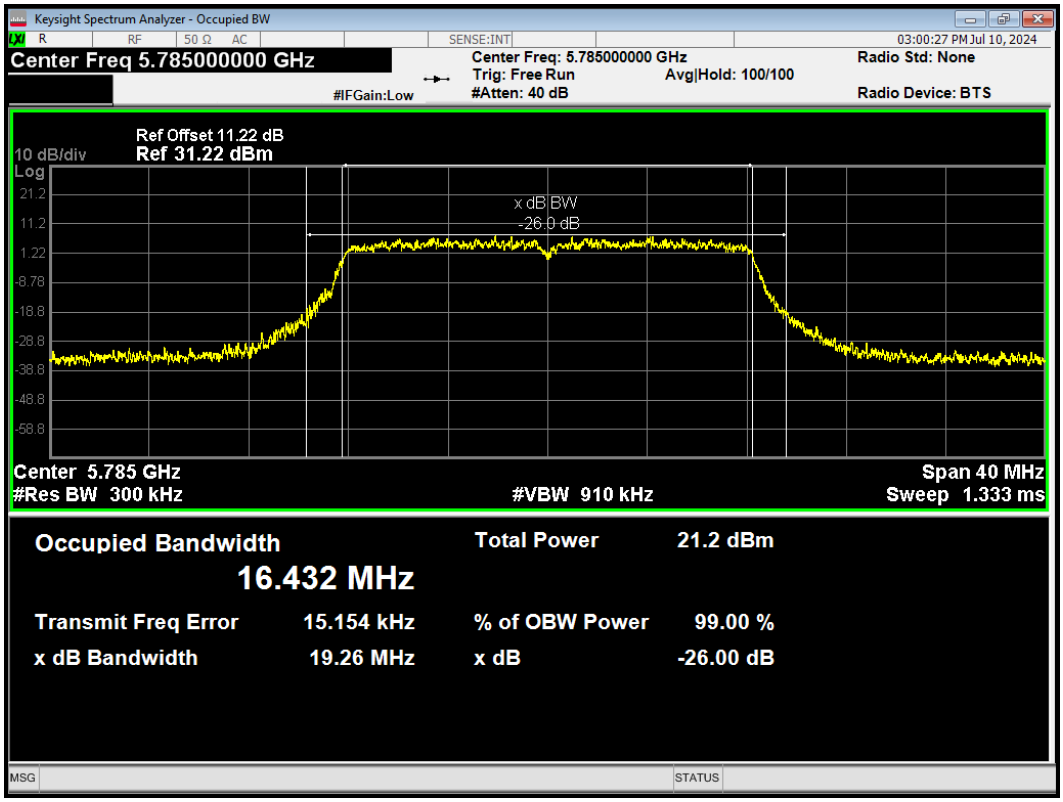


U-NII-3

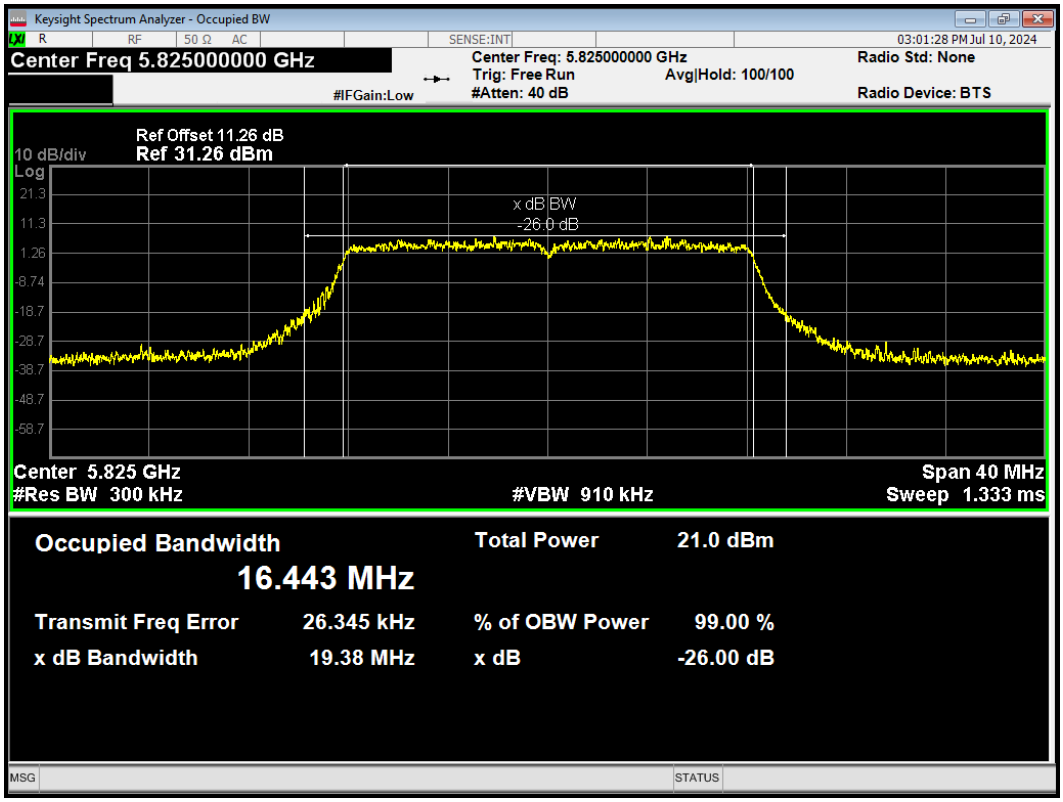
OBW 802.11a 5745MHz



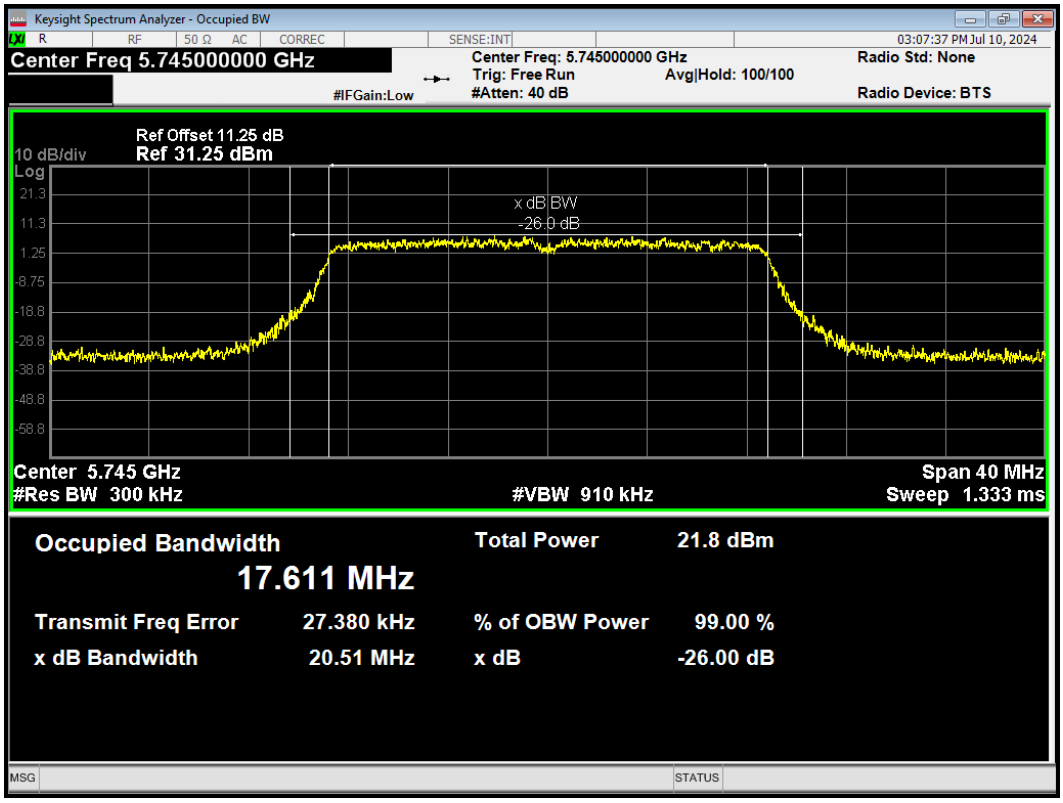
OBW 802.11a 5785MHz



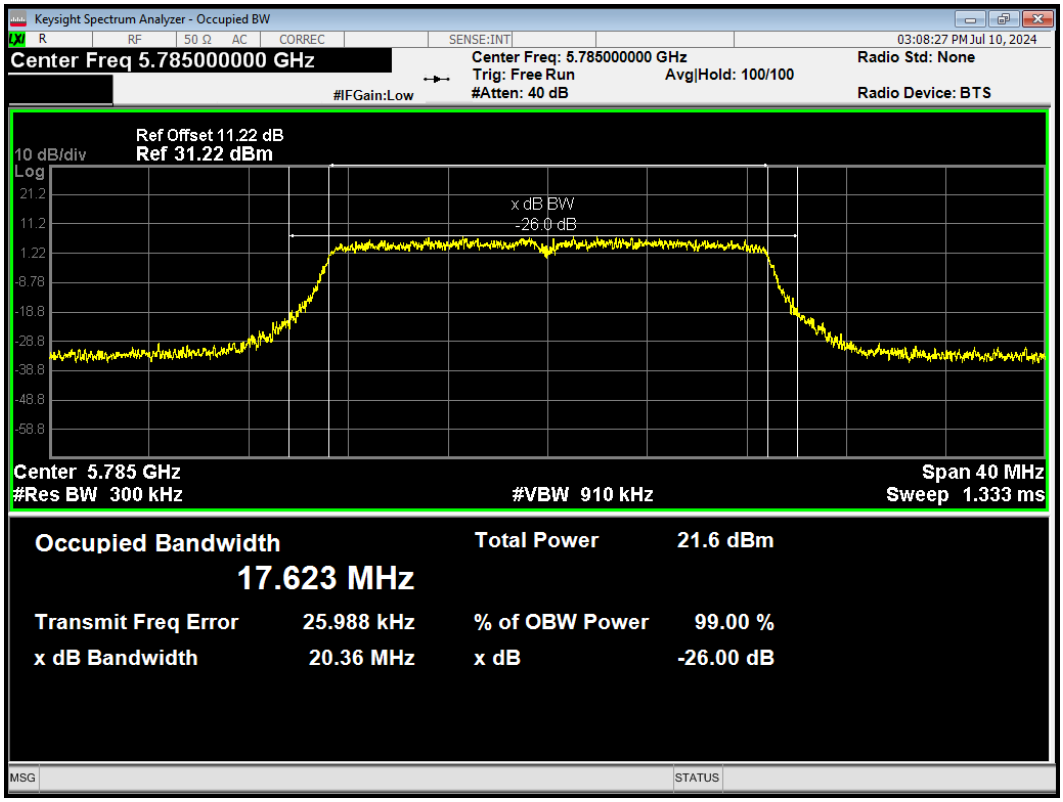
OBW 802.11a 5825MHz



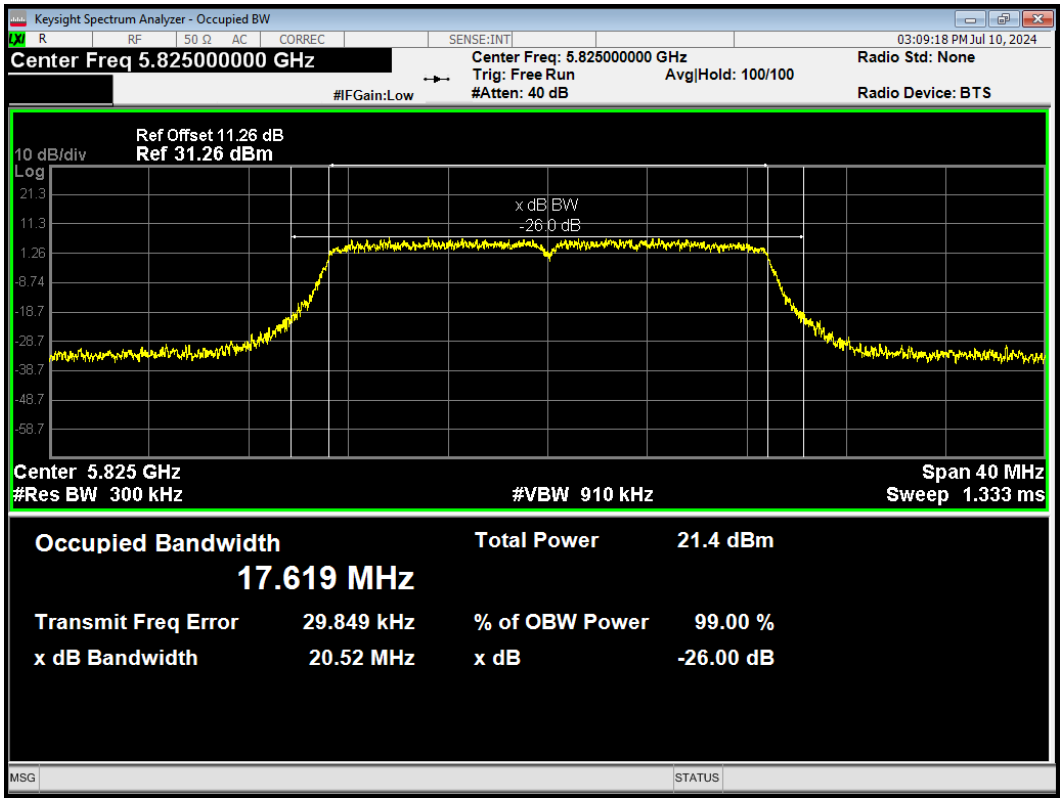
OBW 802.11ac(VHT20) 5745MHz



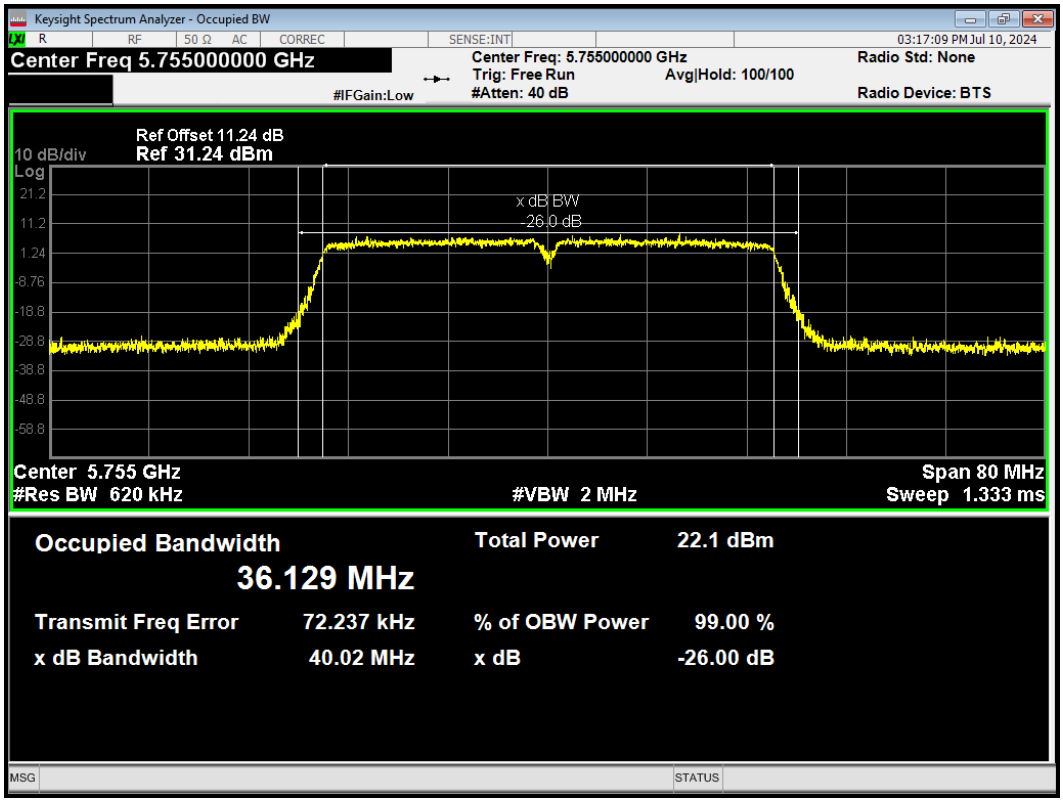
OBW 802.11ac(VHT20) 5785MHz



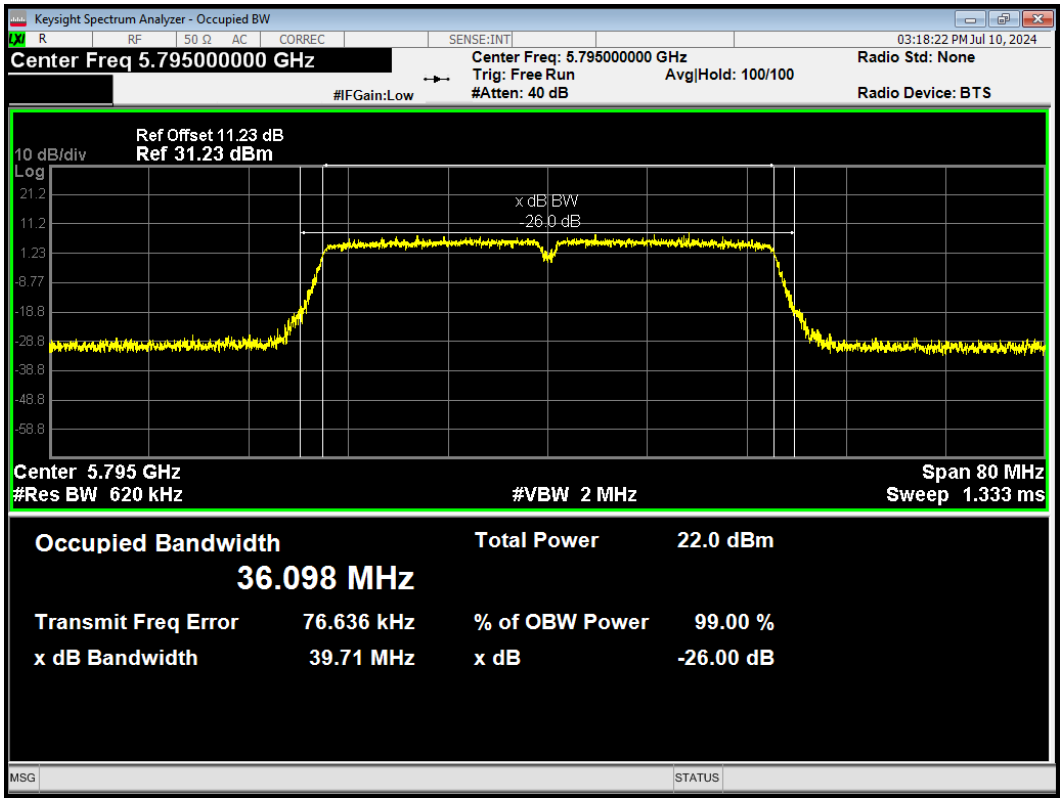
OBW 802.11ac(VHT20) 5825MHz



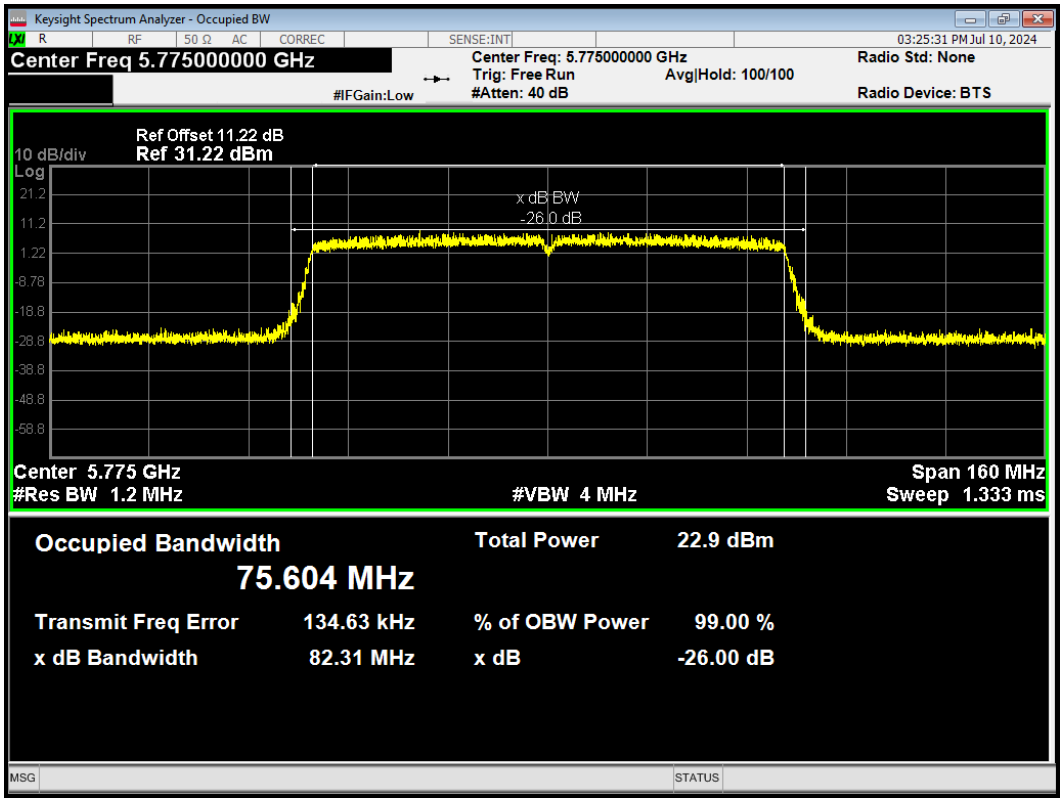
OBW 802.11ac(VHT40) 5755MHz



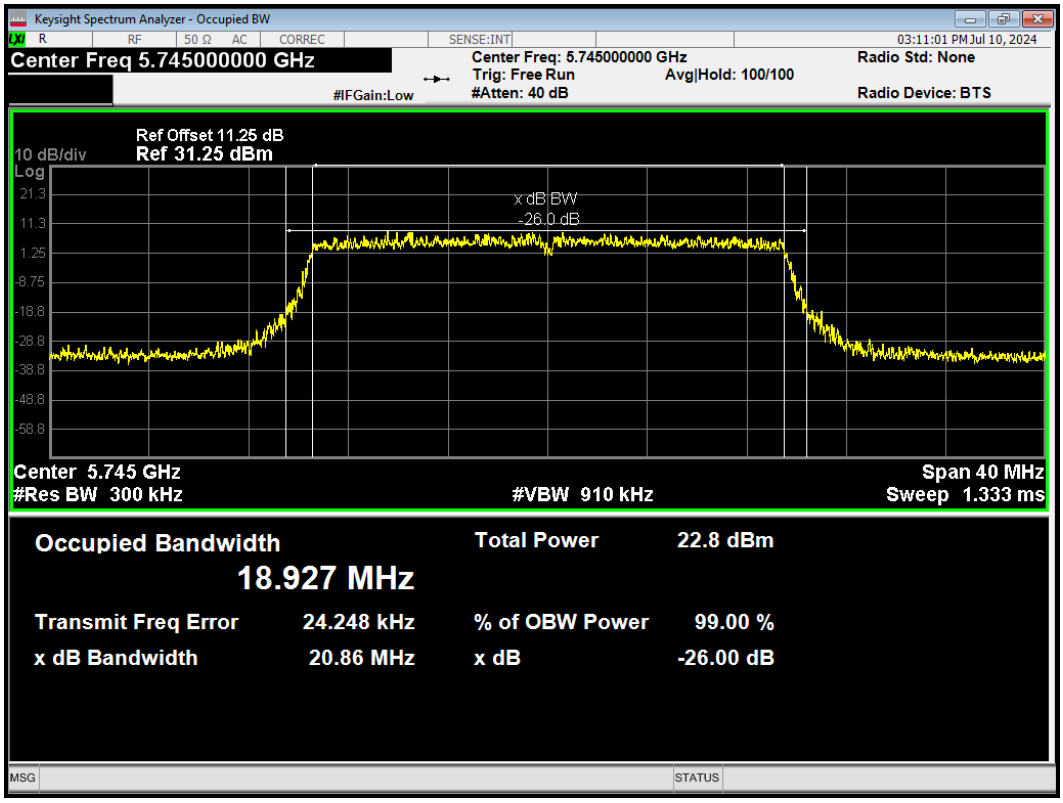
OBW 802.11ac(VHT40) 5795MHz



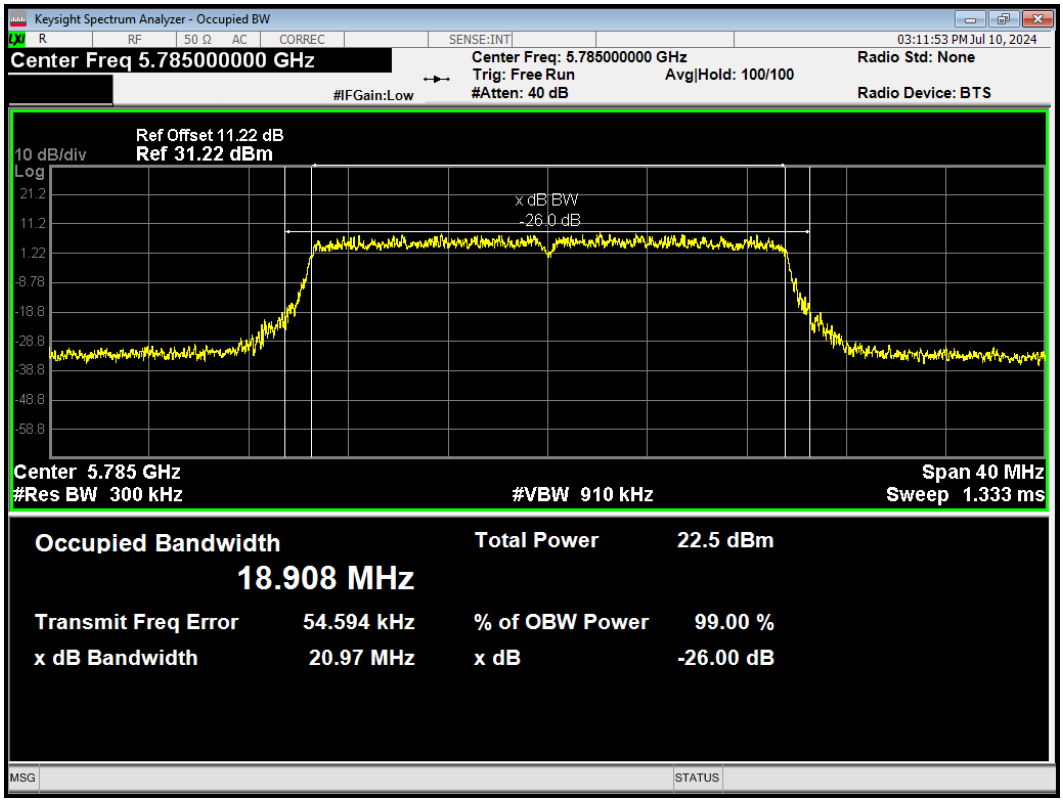
OBW 802.11ac(VHT80) 5775MHz



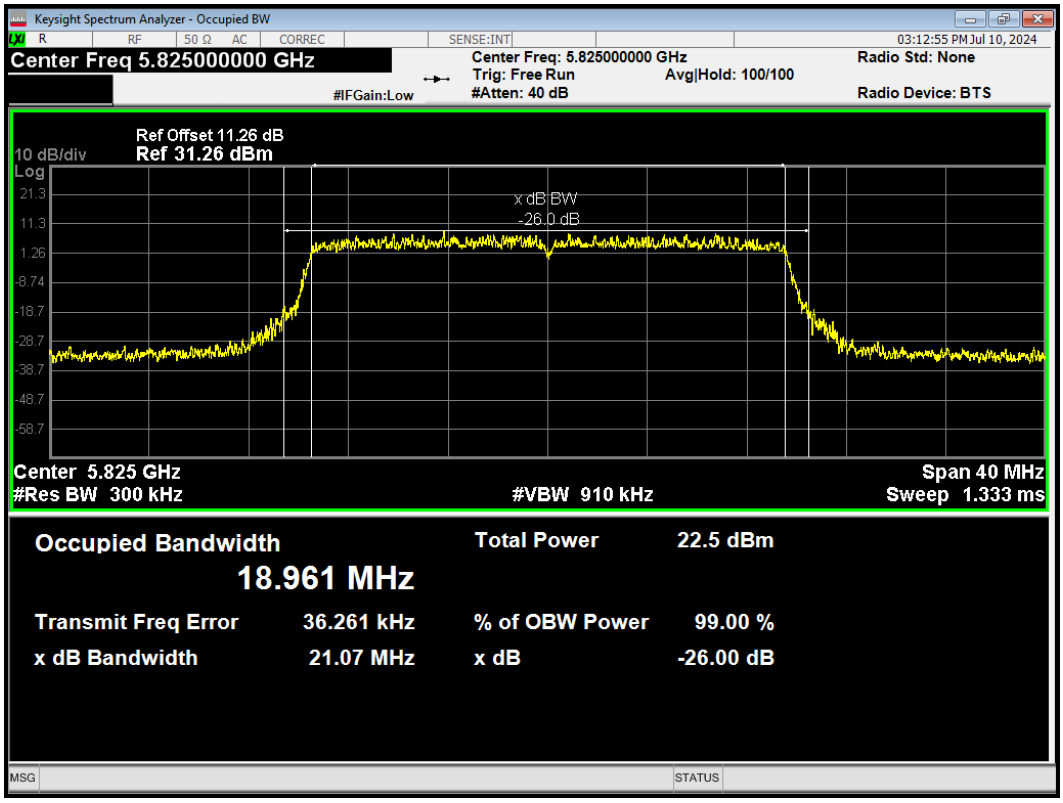
OBW 802.11ax(HE20) 5745MHz



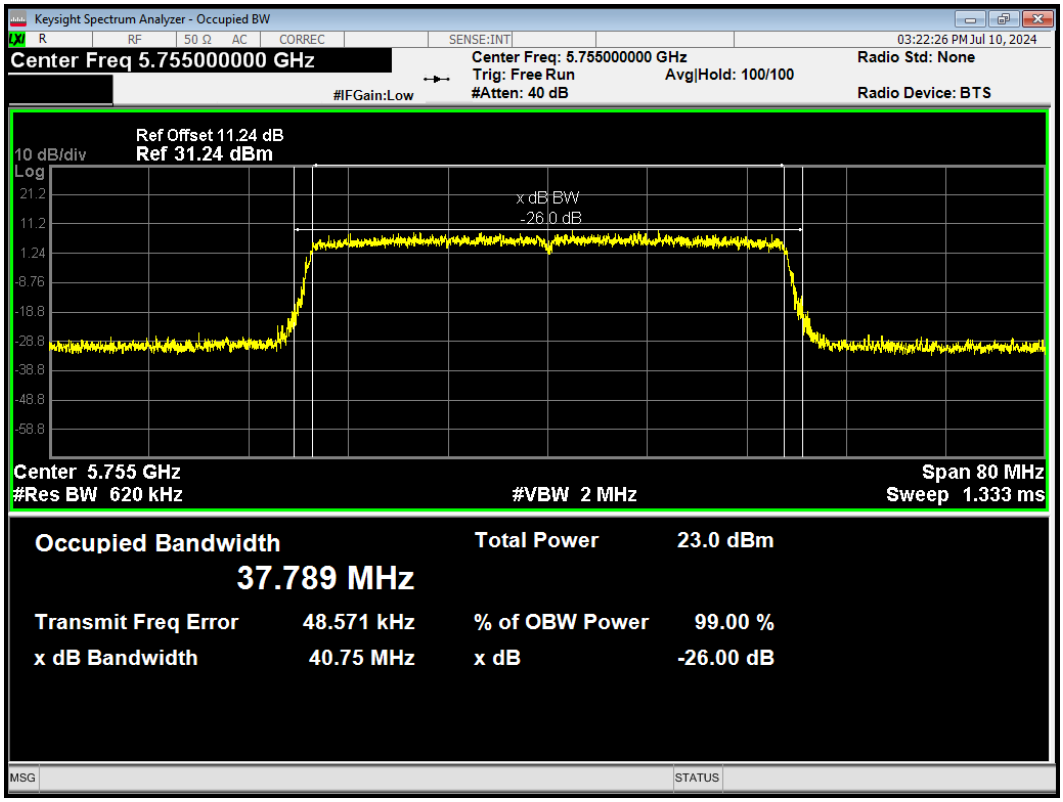
OBW 802.11ax(HE20) 5785MHz



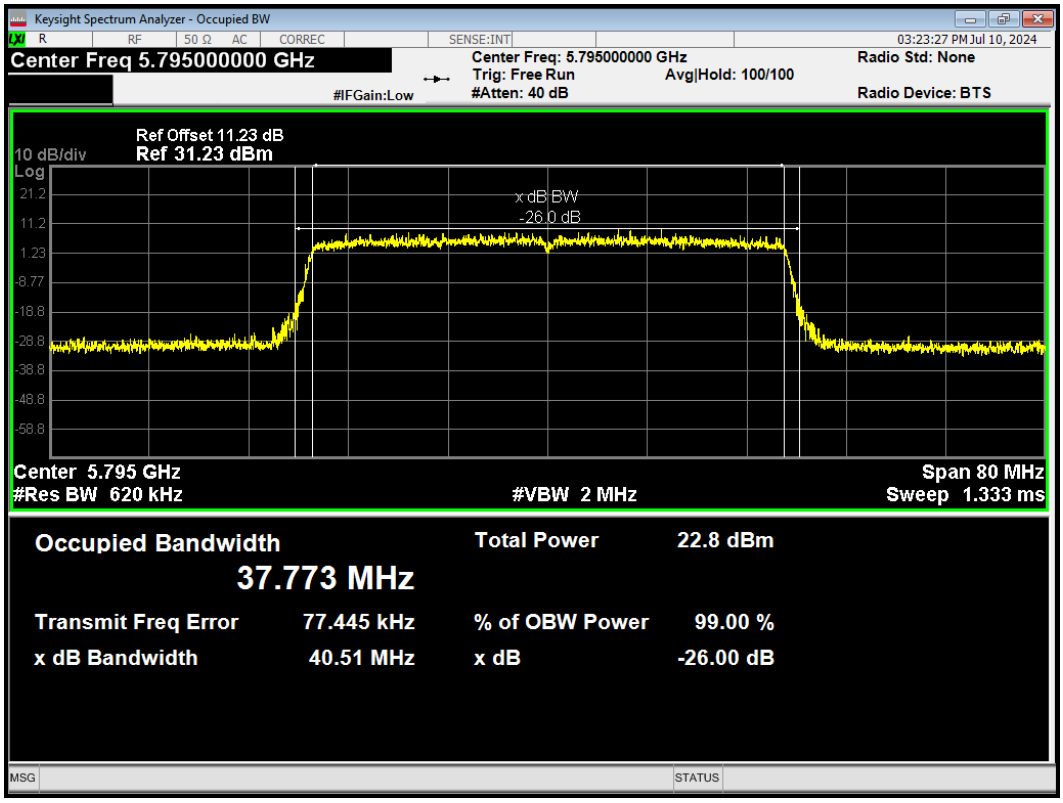
OBW 802.11ax(HE20) 5825MHz



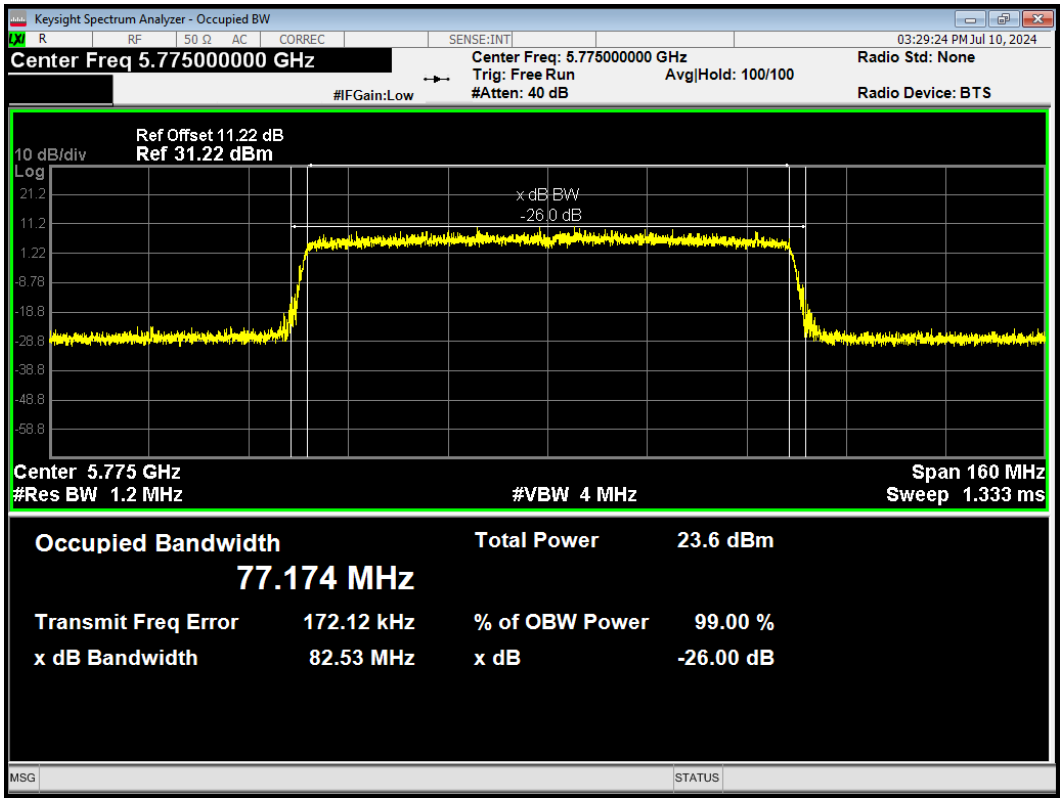
OBW 802.11ax(HE40) 5755MHz



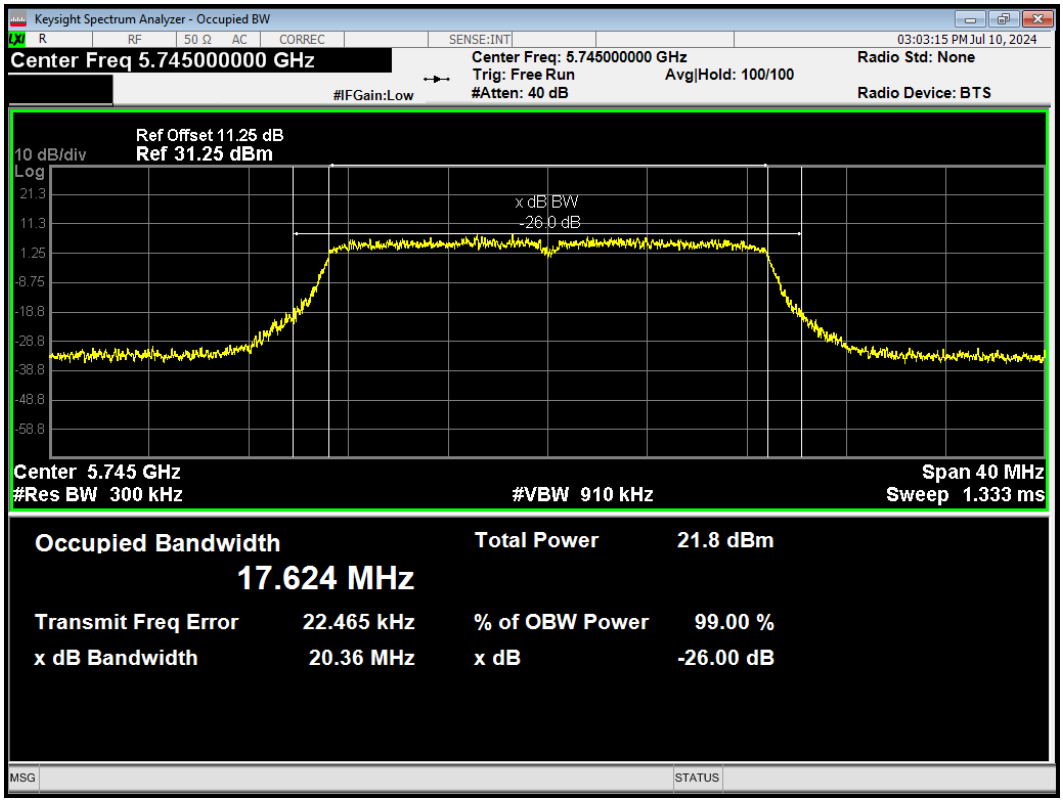
OBW 802.11ax(HE40) 5795MHz



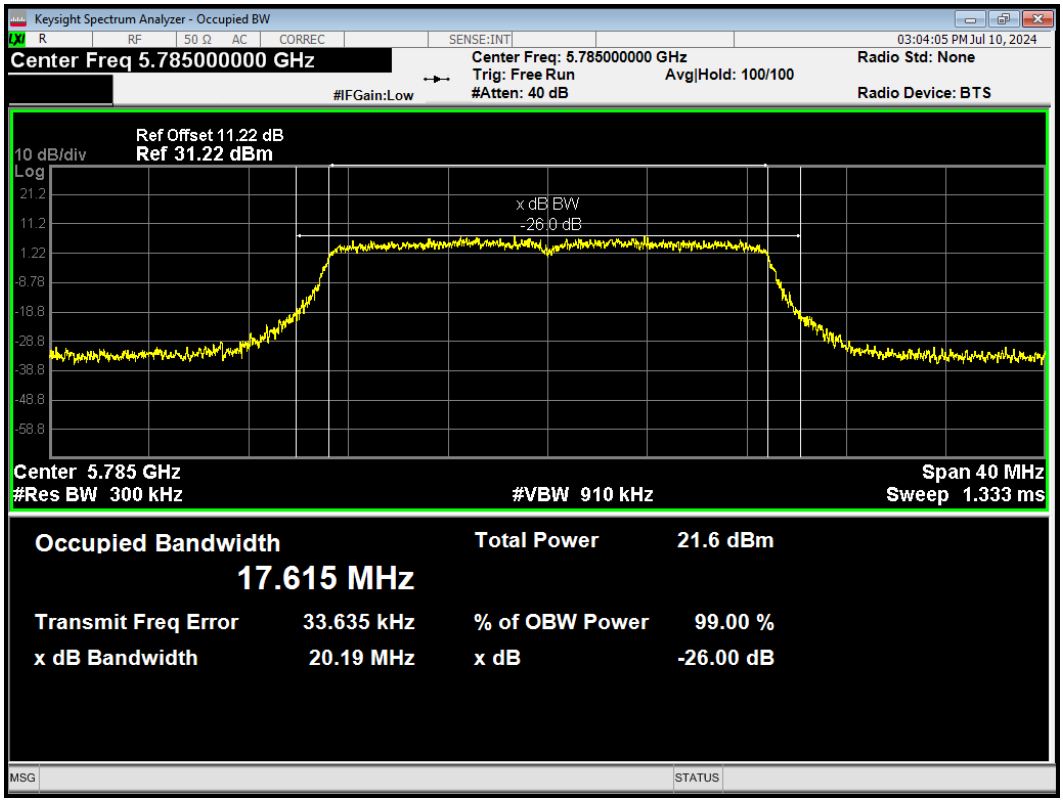
OBW 802.11ax(HE80) 5775MHz



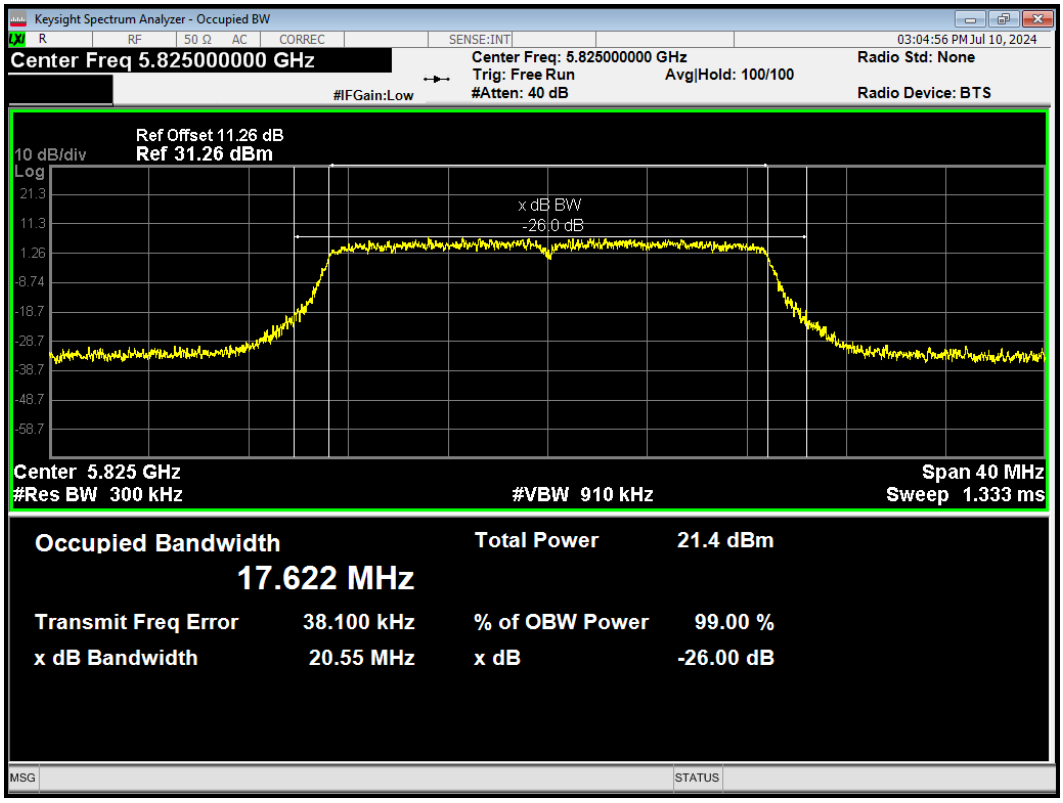
OBW 802.11n(HT20) 5745MHz



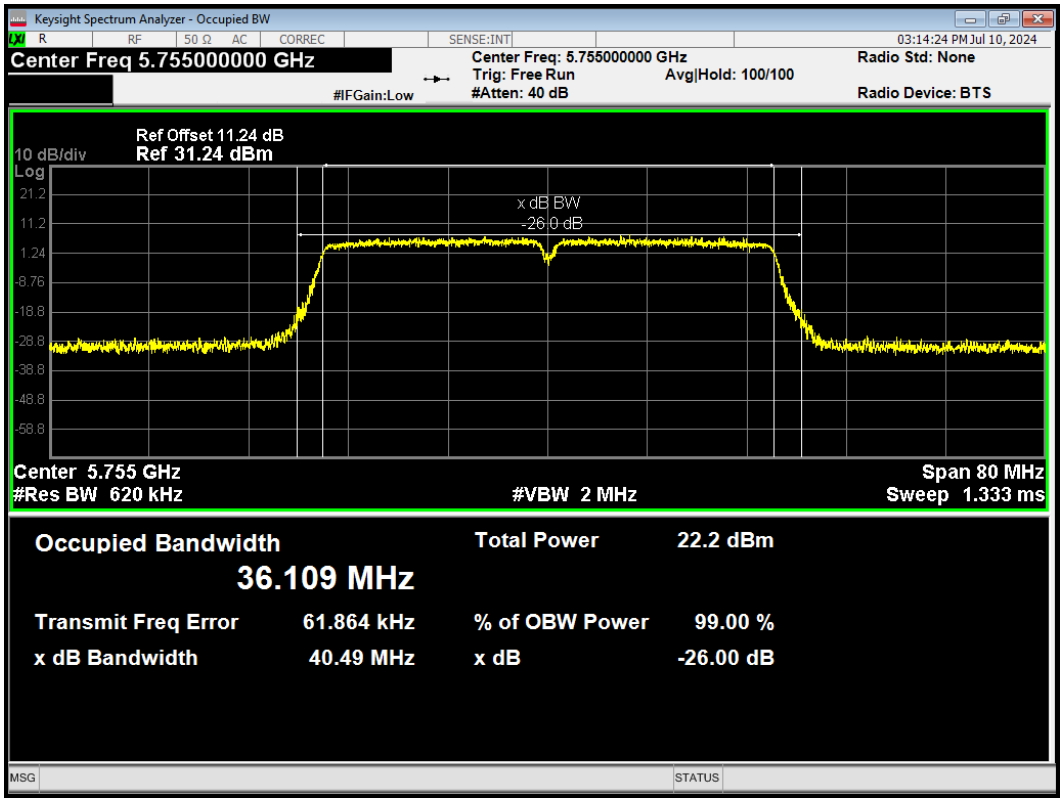
OBW 802.11n(HT20) 5785MHz



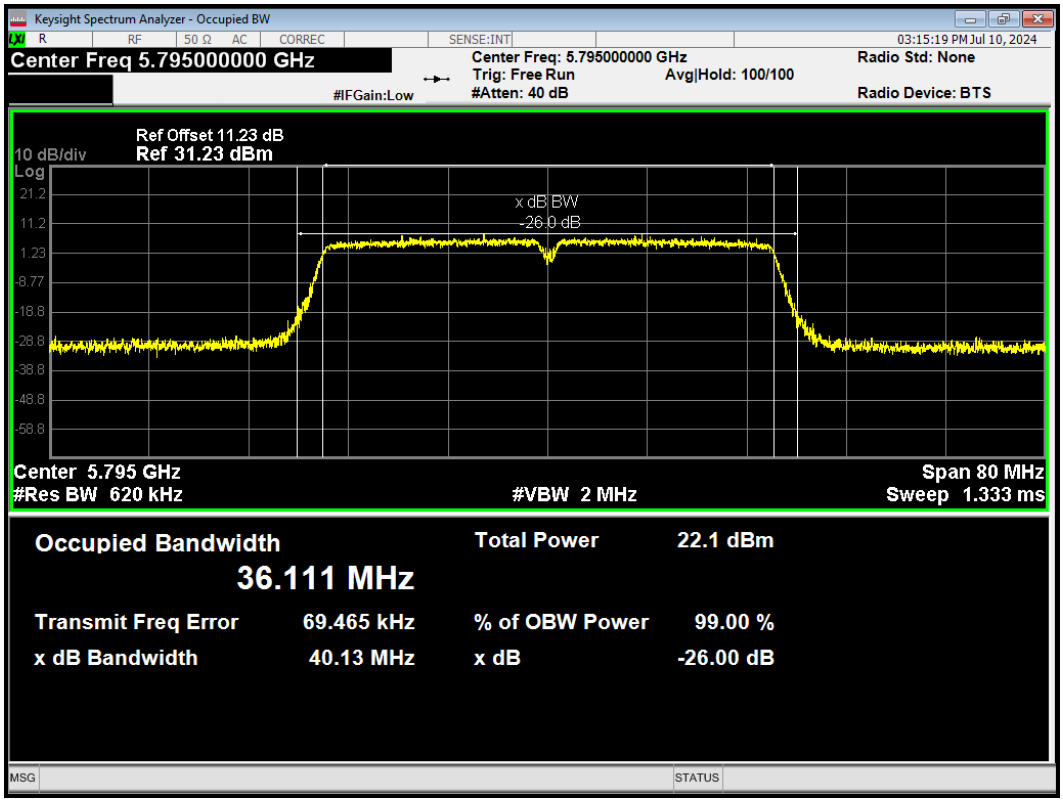
OBW 802.11n(HT20) 5825MHz



OBW 802.11n(HT40) 5755MHz



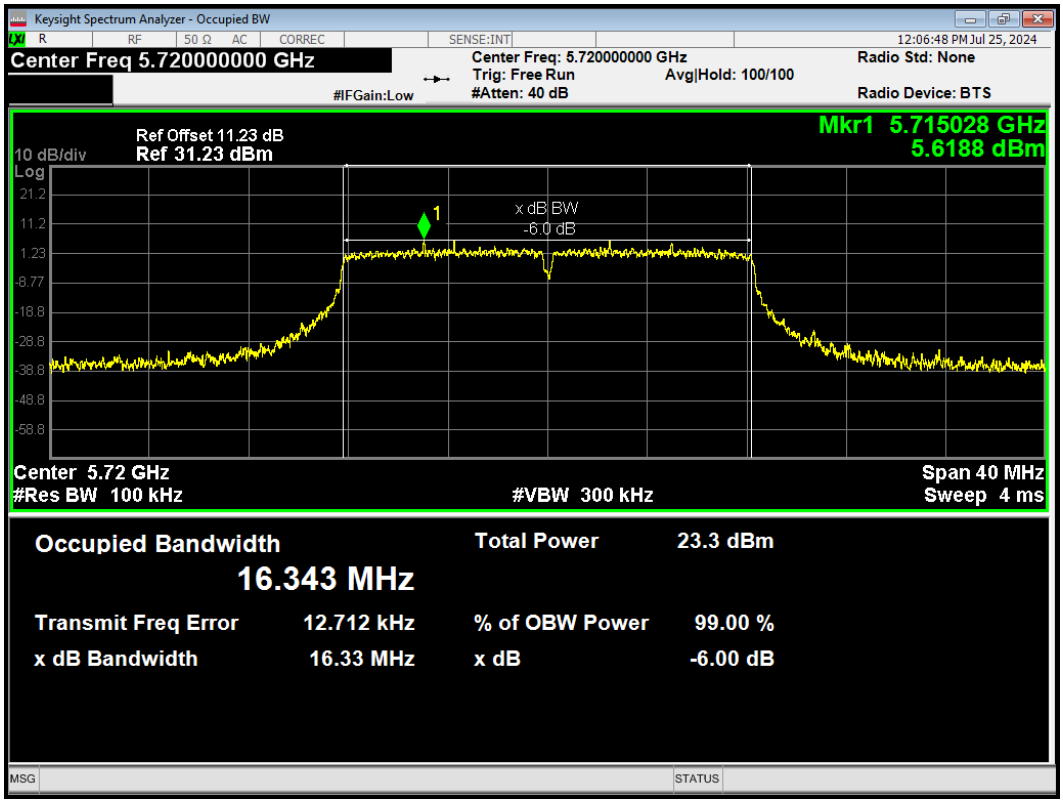
OBW 802.11n(HT40) 5795MHz



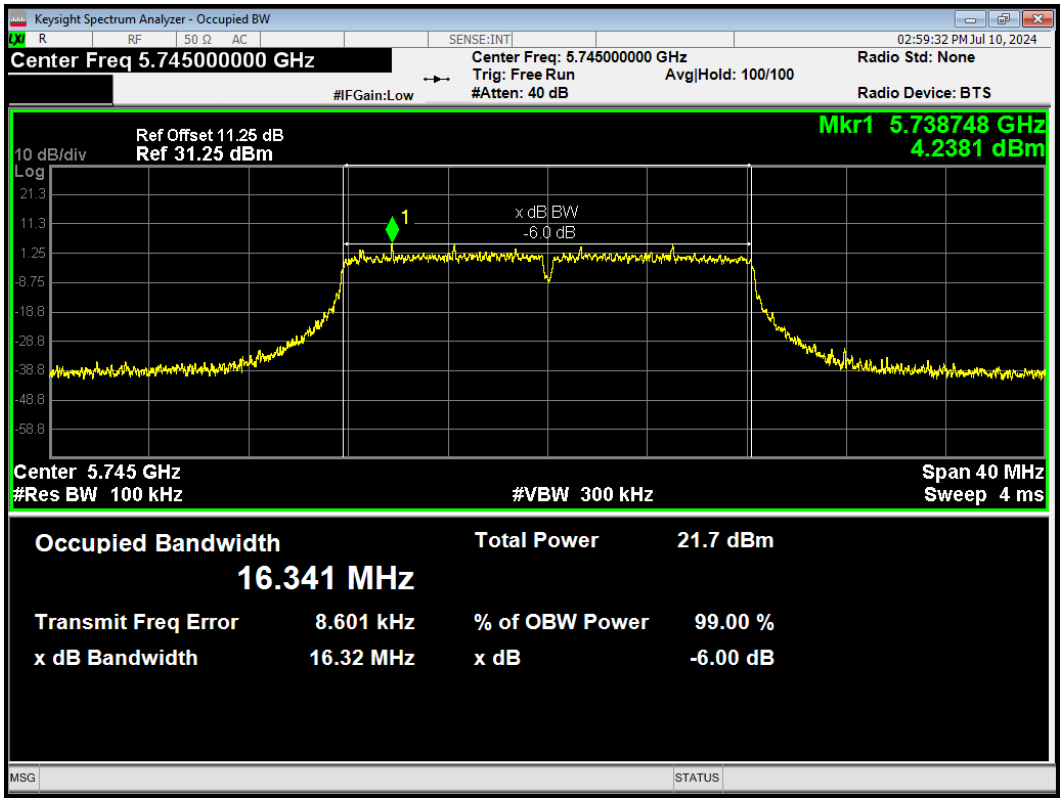
Minimum 6 dB bandwidth

U-NII-3

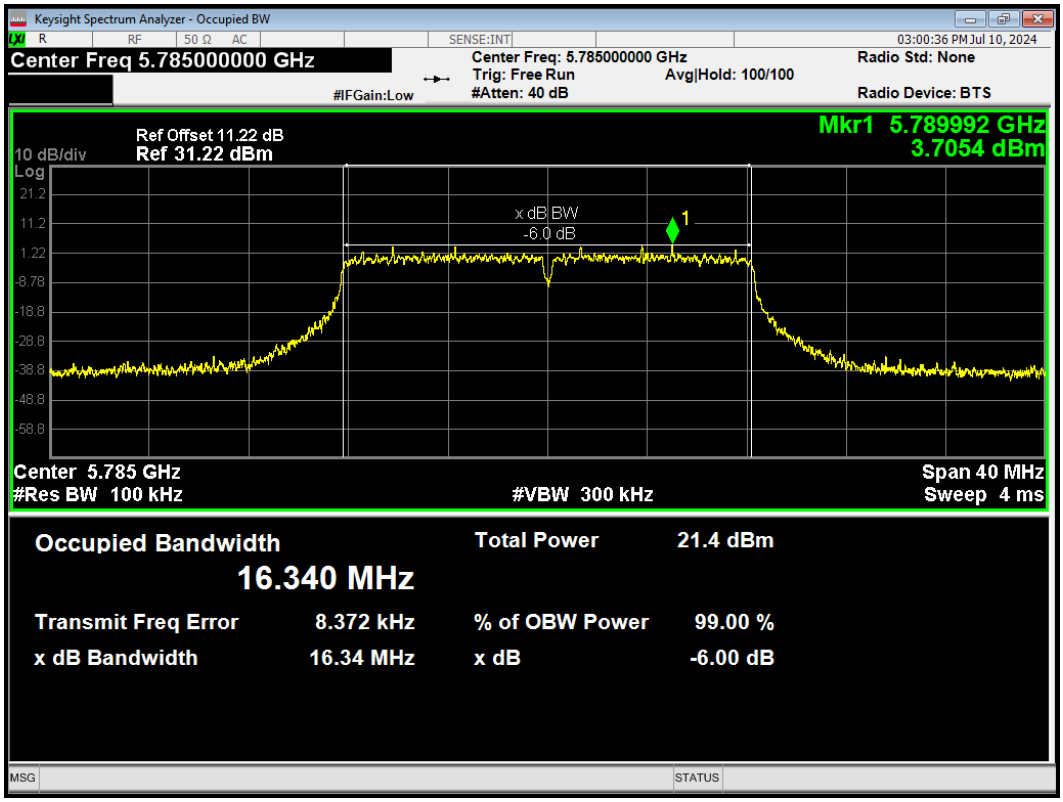
-6dB Bandwidth 802.11a 5720MHz



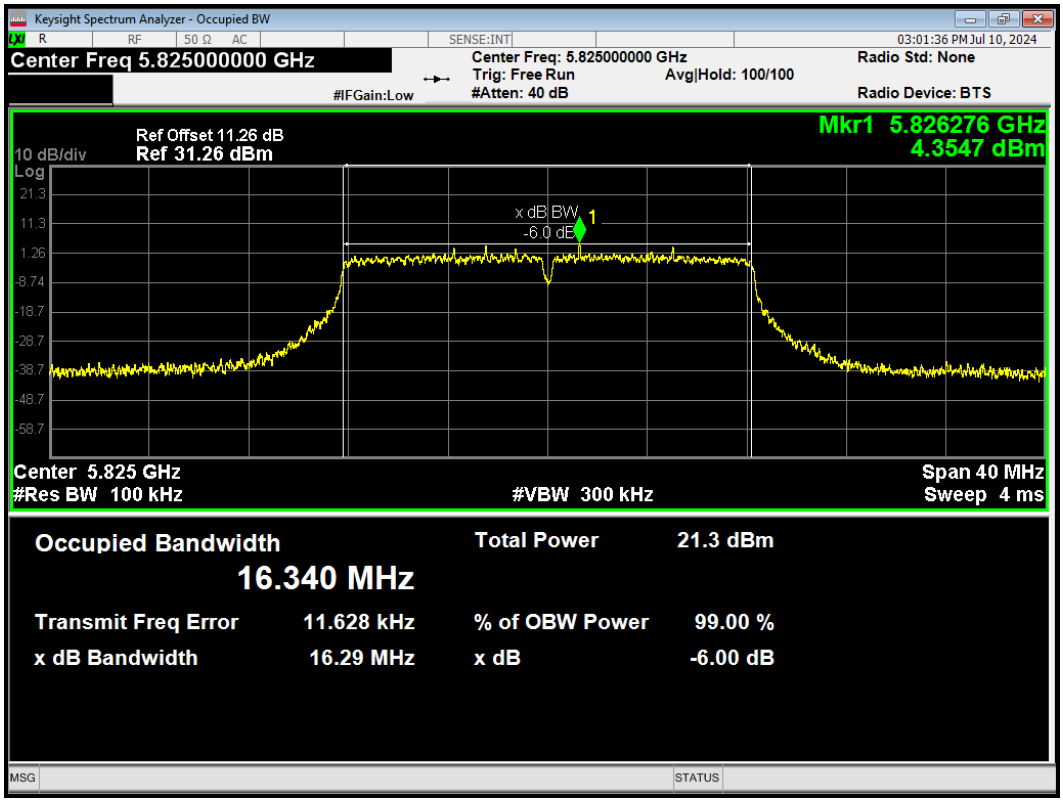
-6dB Bandwidth 802.11a 5745MHz



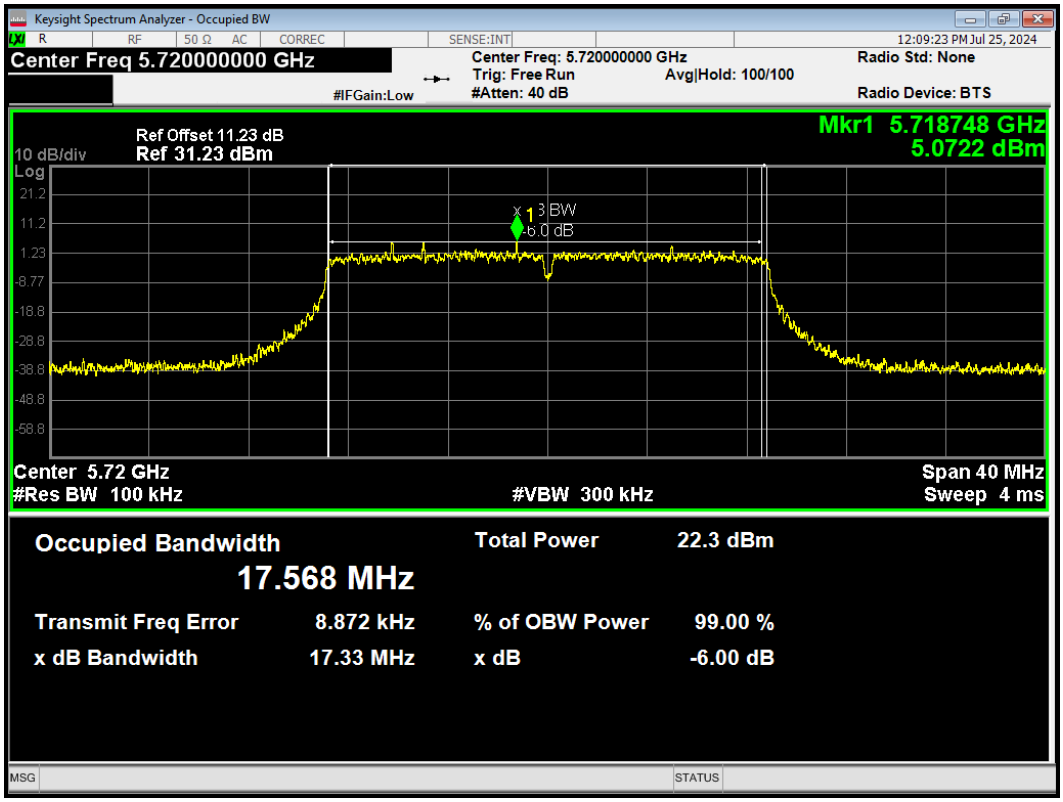
-6dB Bandwidth 802.11a 5785MHz



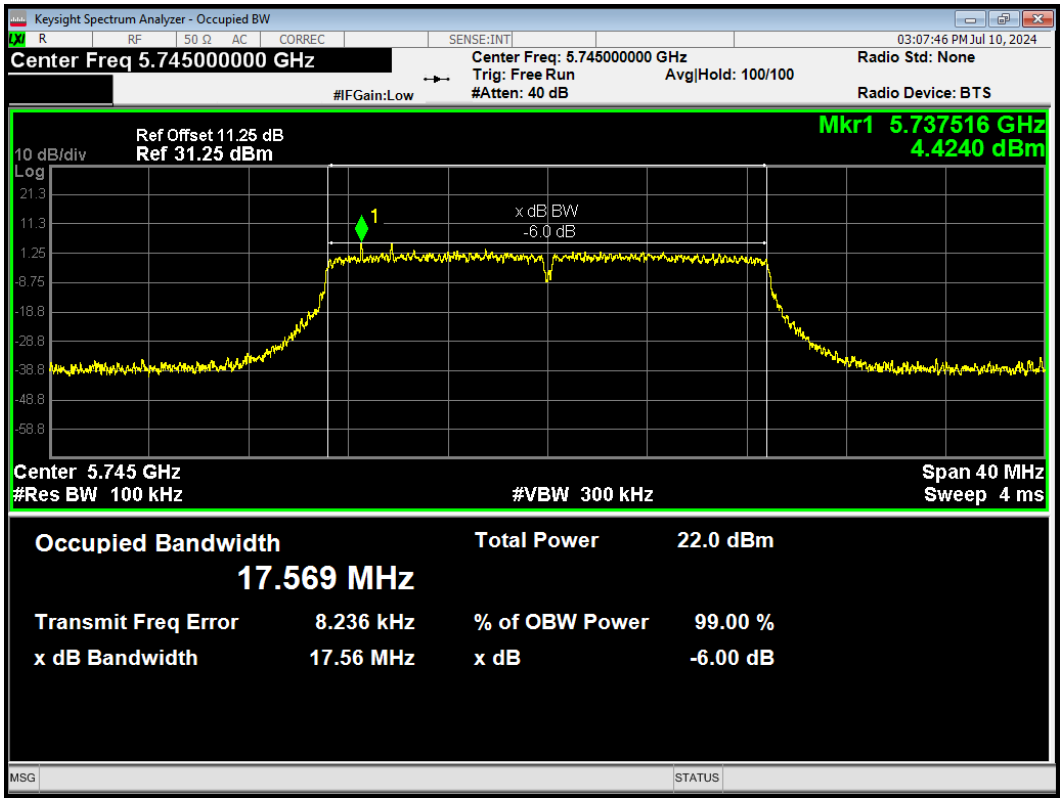
-6dB Bandwidth 802.11a 5825MHz



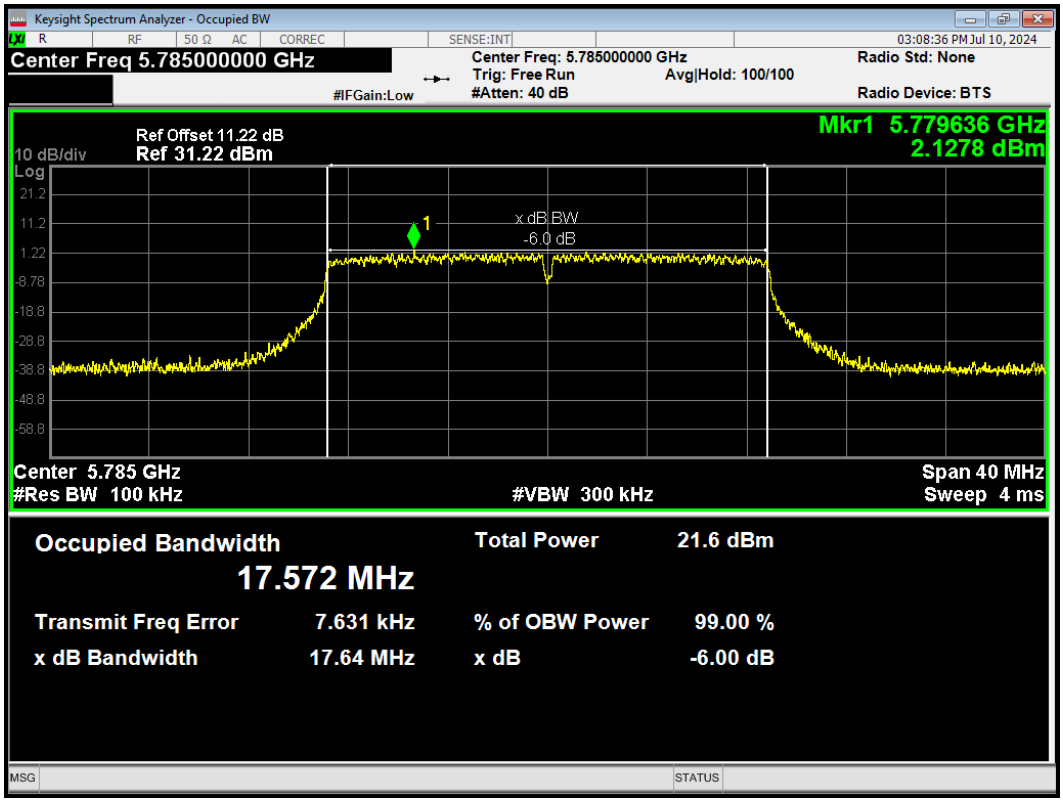
-6dB Bandwidth 802.11ac(VHT20) 5720MHz



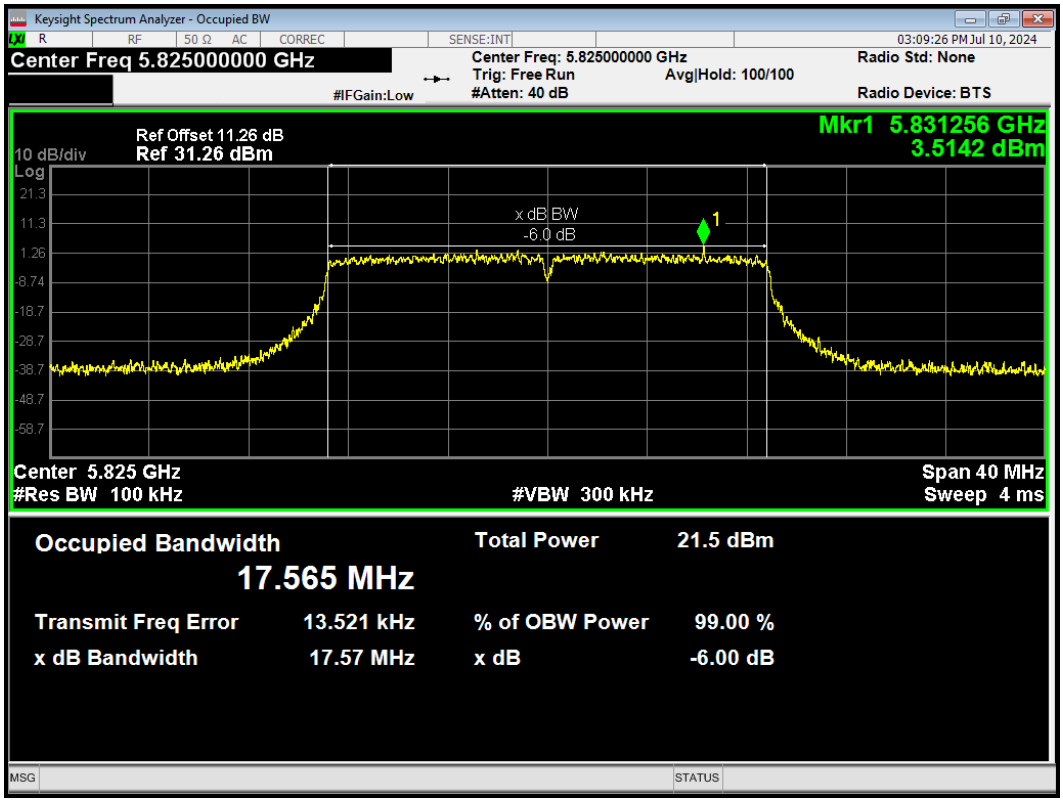
-6dB Bandwidth 802.11ac(VHT20) 5745MHz



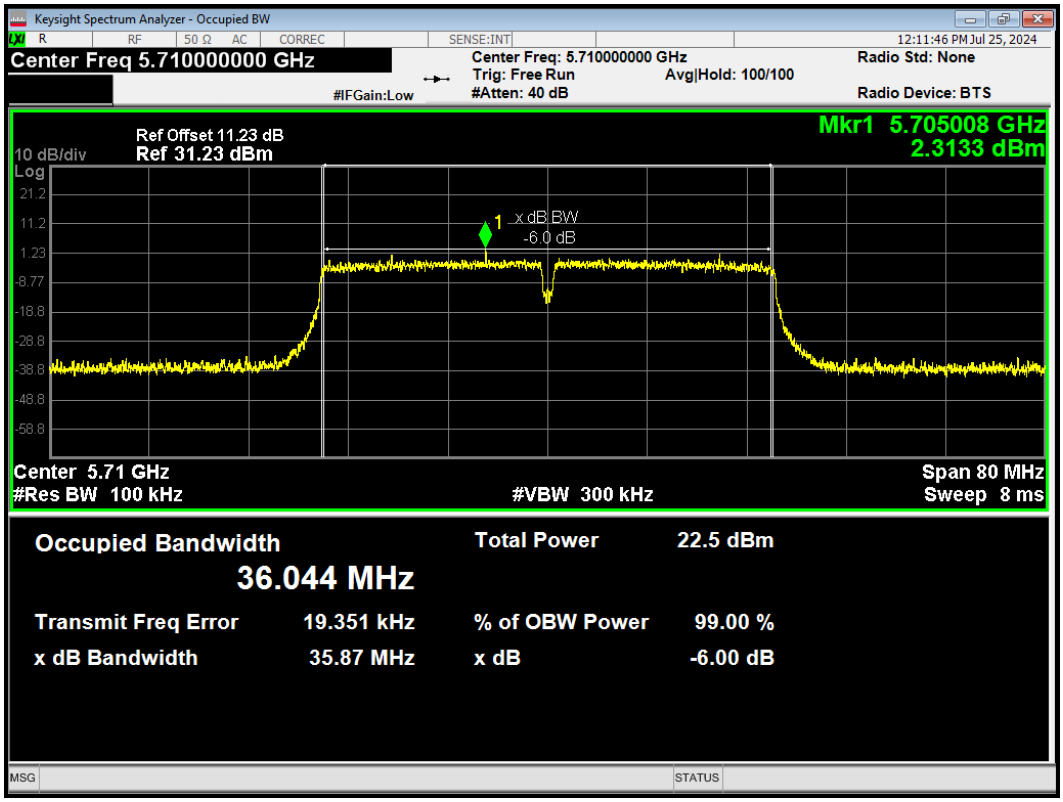
-6dB Bandwidth 802.11ac(VHT20) 5785MHz



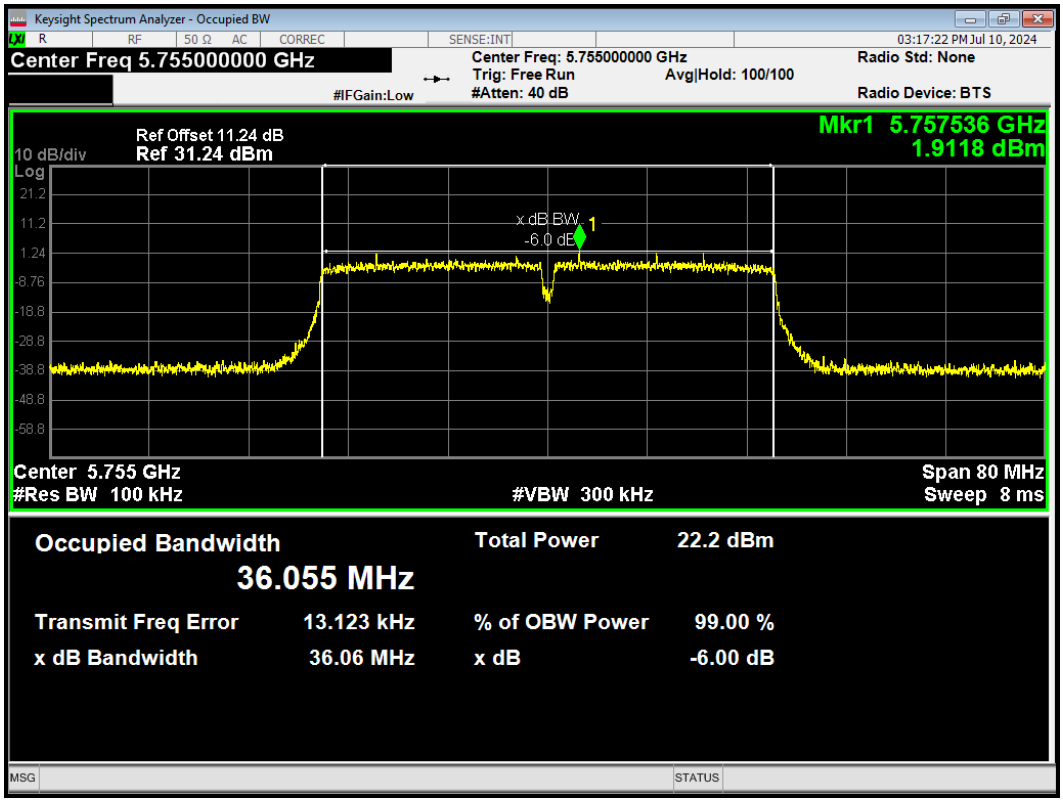
-6dB Bandwidth 802.11ac(VHT20) 5825MHz



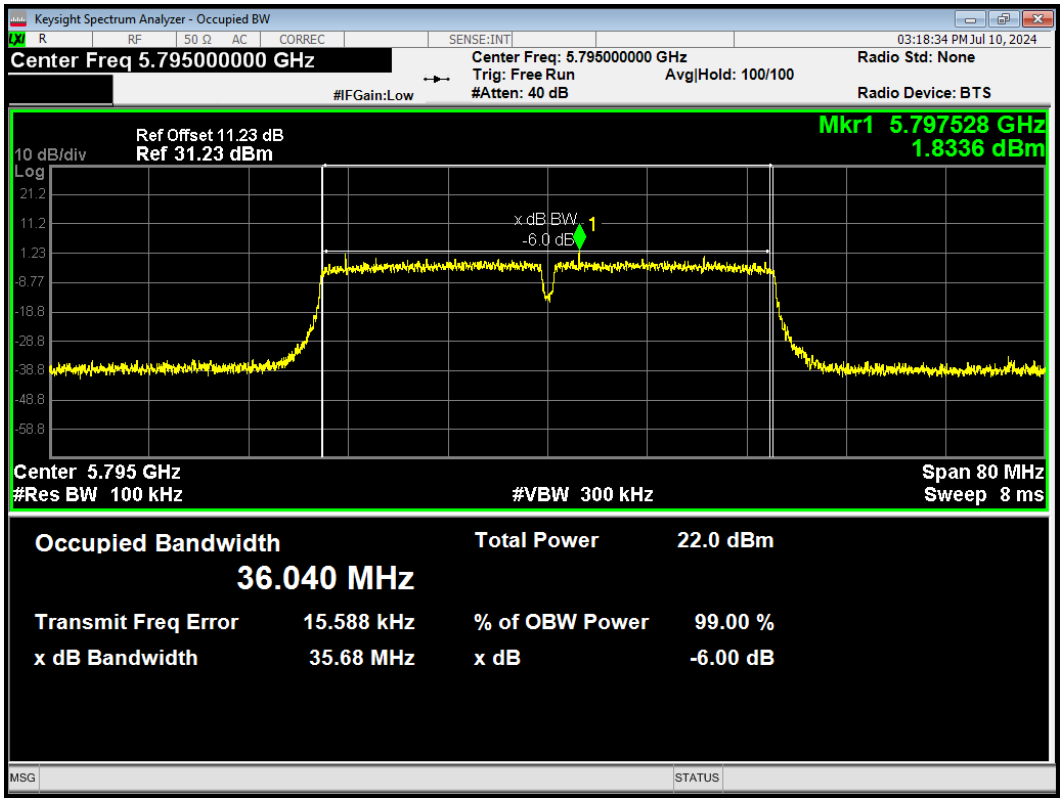
-6dB Bandwidth 802.11ac(VHT40) 5710MHz



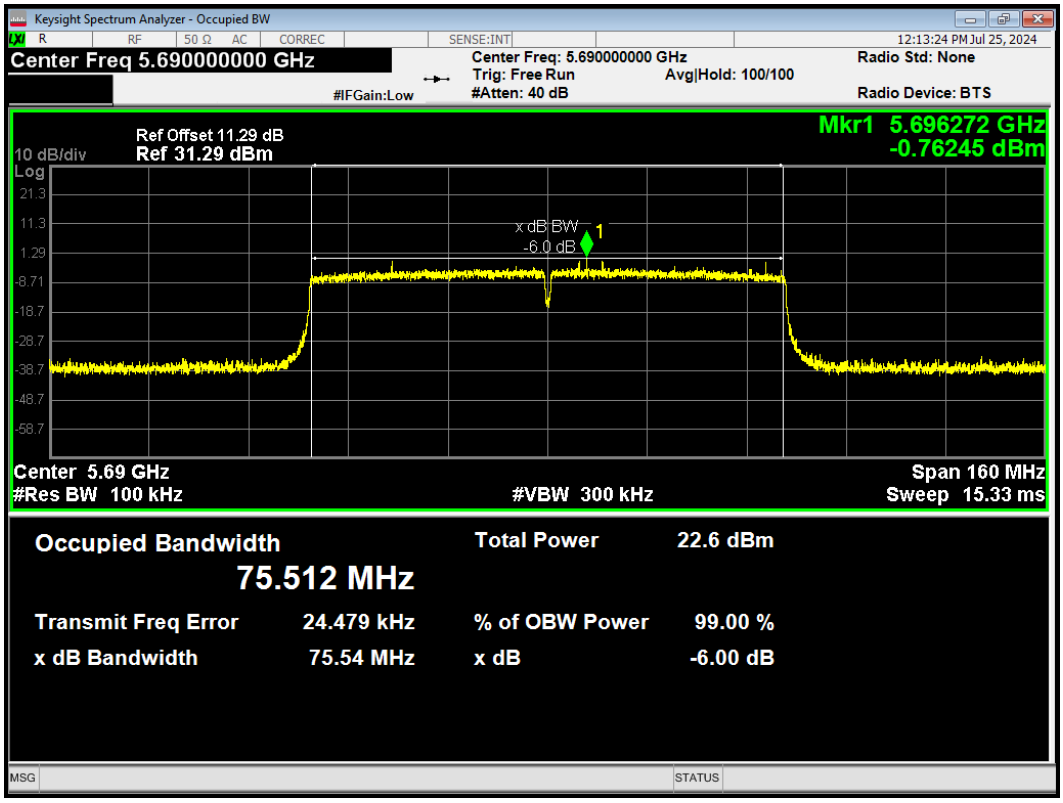
-6dB Bandwidth 802.11ac(VHT40) 5755MHz



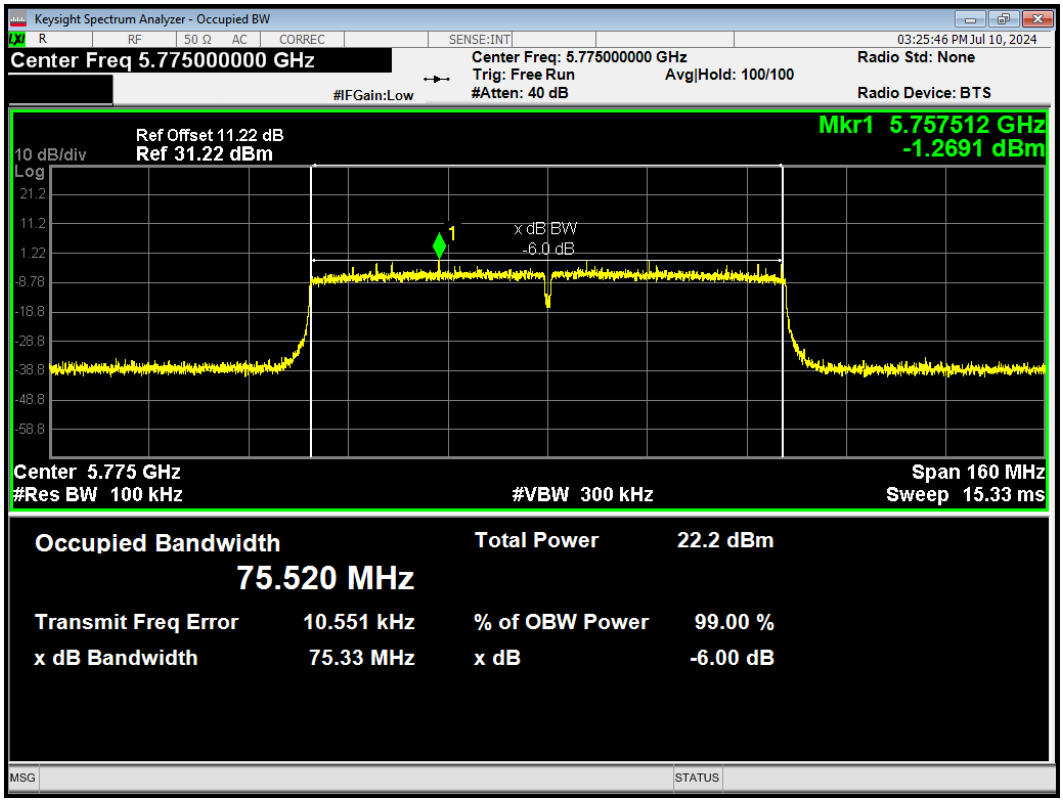
-6dB Bandwidth 802.11ac(VHT40) 5795MHz



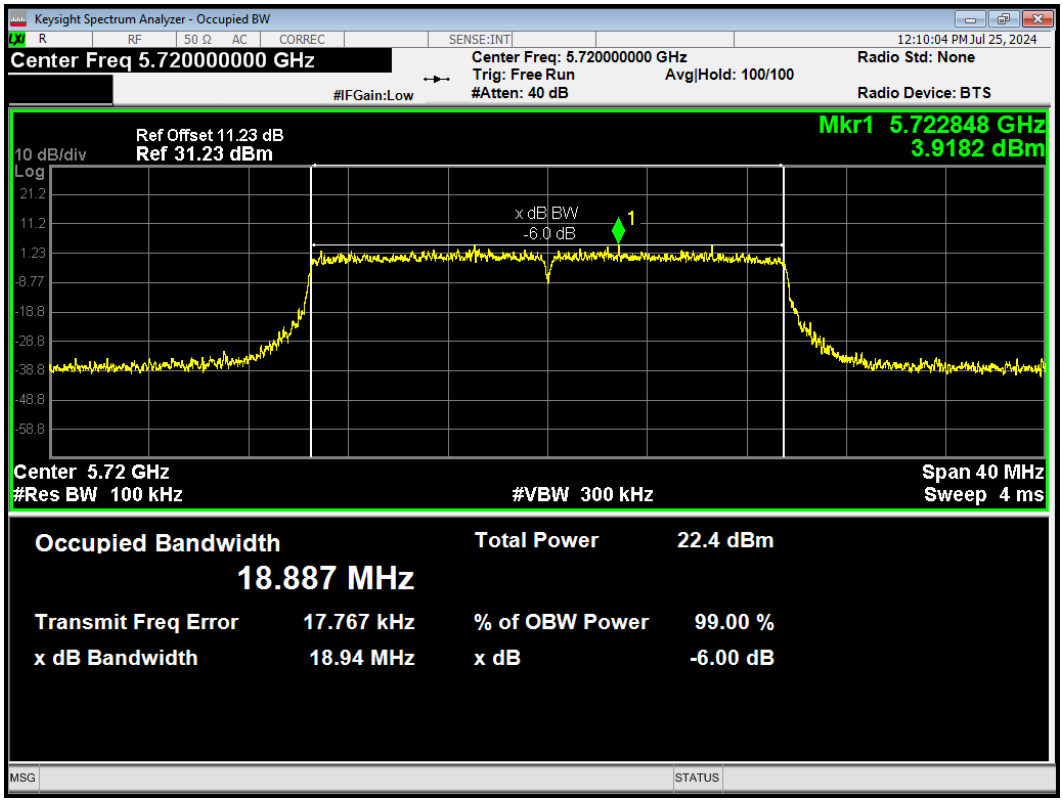
-6dB Bandwidth 802.11ac(VHT80) 5690MHz



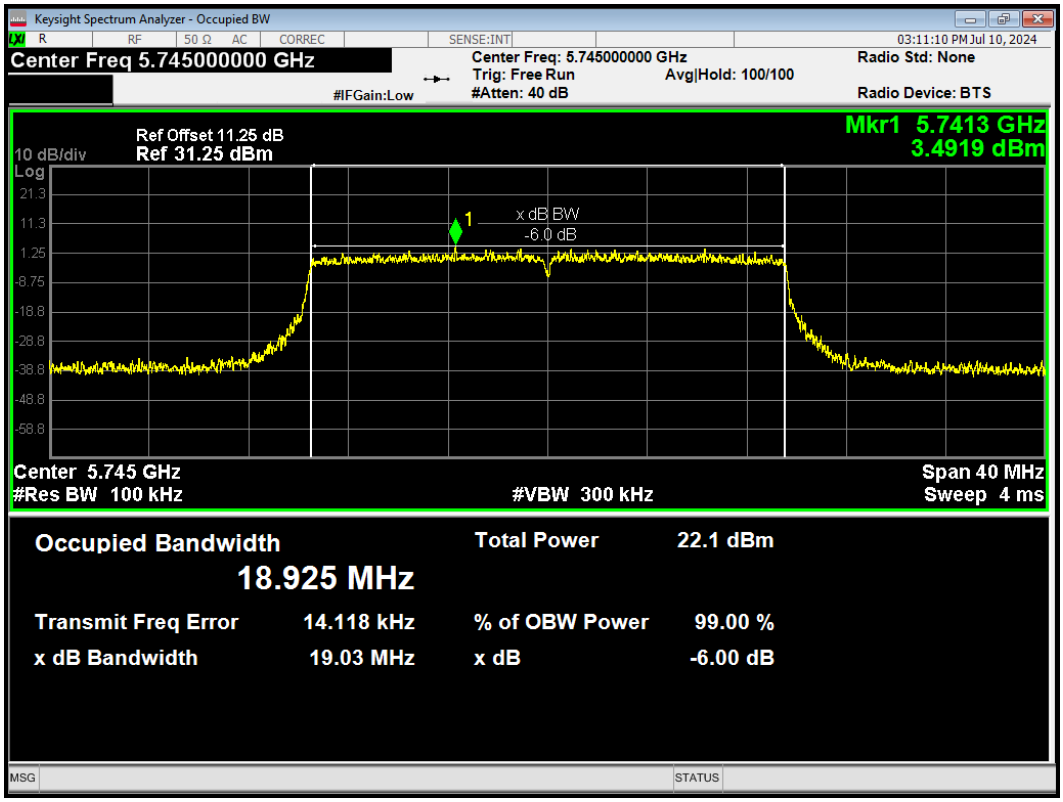
-6dB Bandwidth 802.11ac(VHT80) 5775MHz



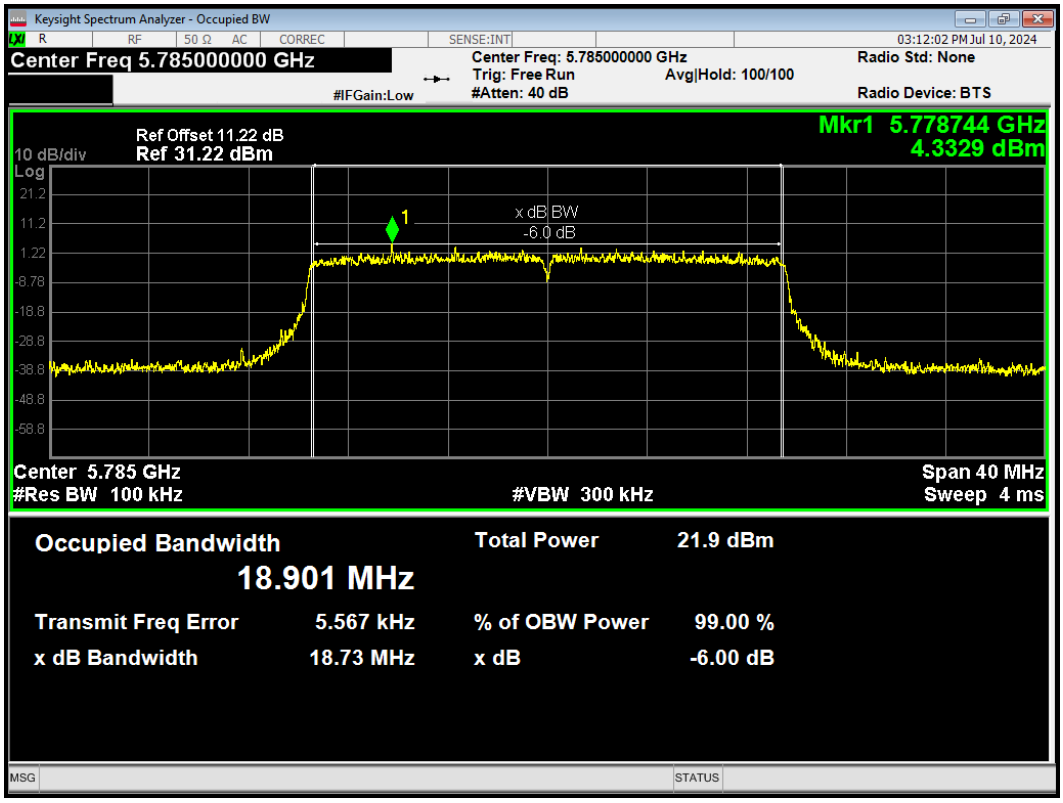
-6dB Bandwidth 802.11ax(HE20) 5720MHz



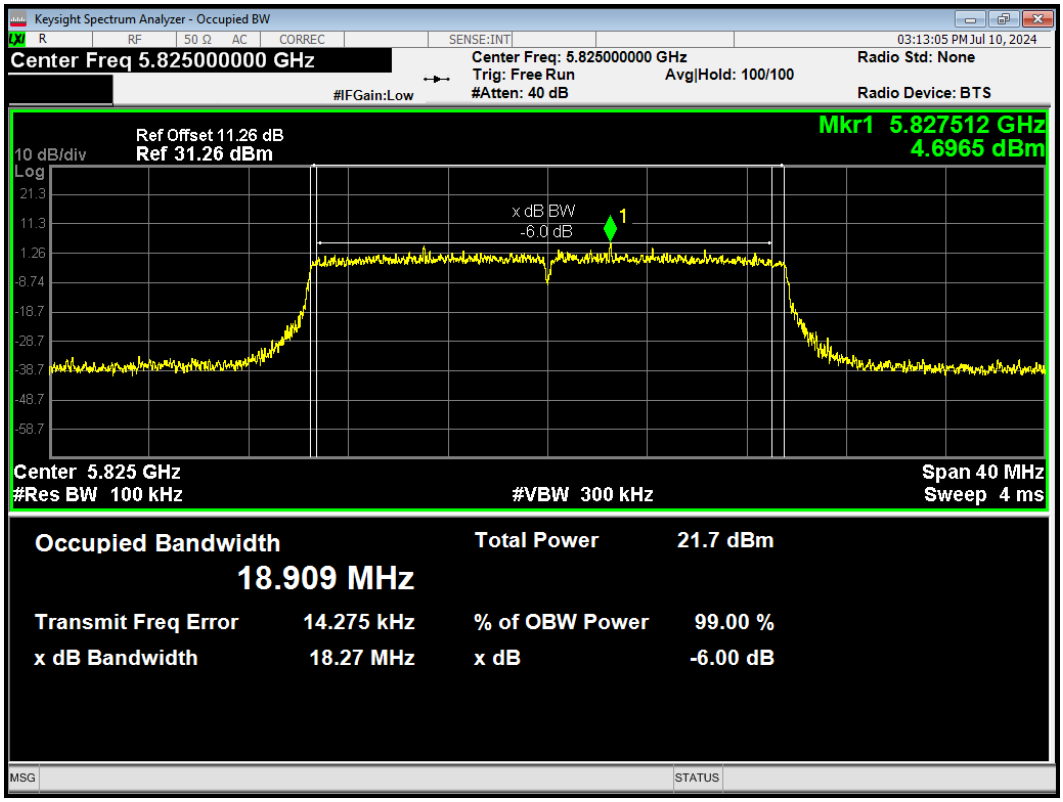
-6dB Bandwidth 802.11ax(HE20) 5745MHz



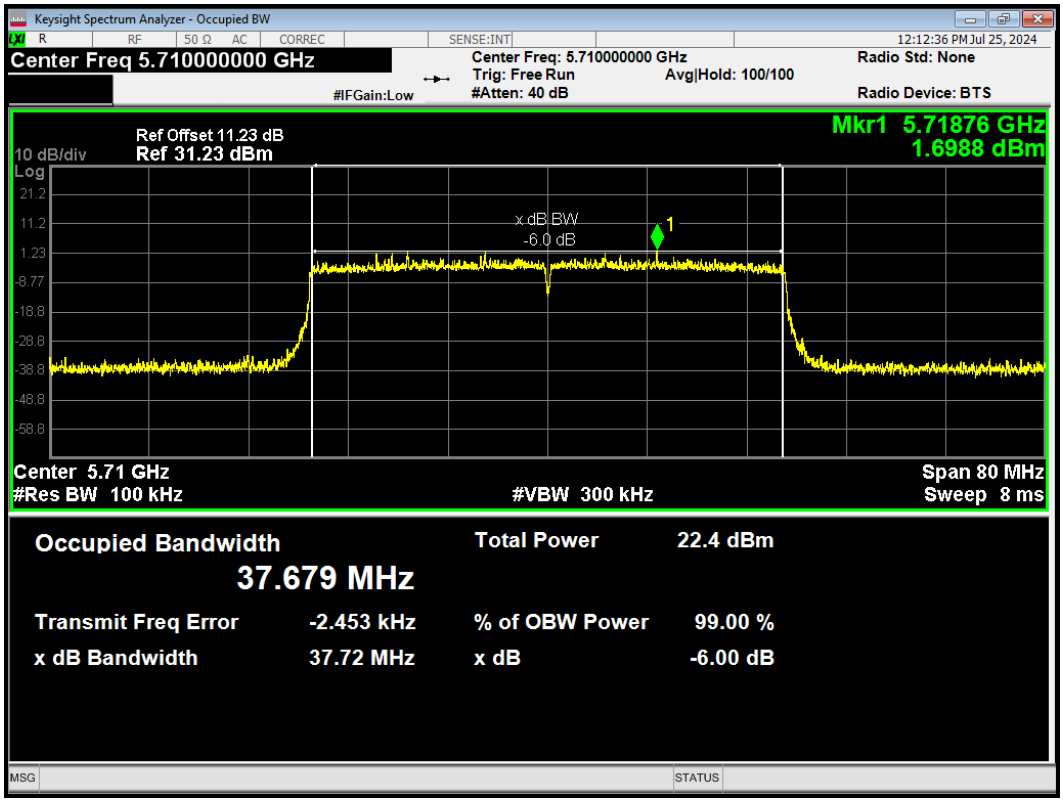
-6dB Bandwidth 802.11ax(HE20) 5785MHz



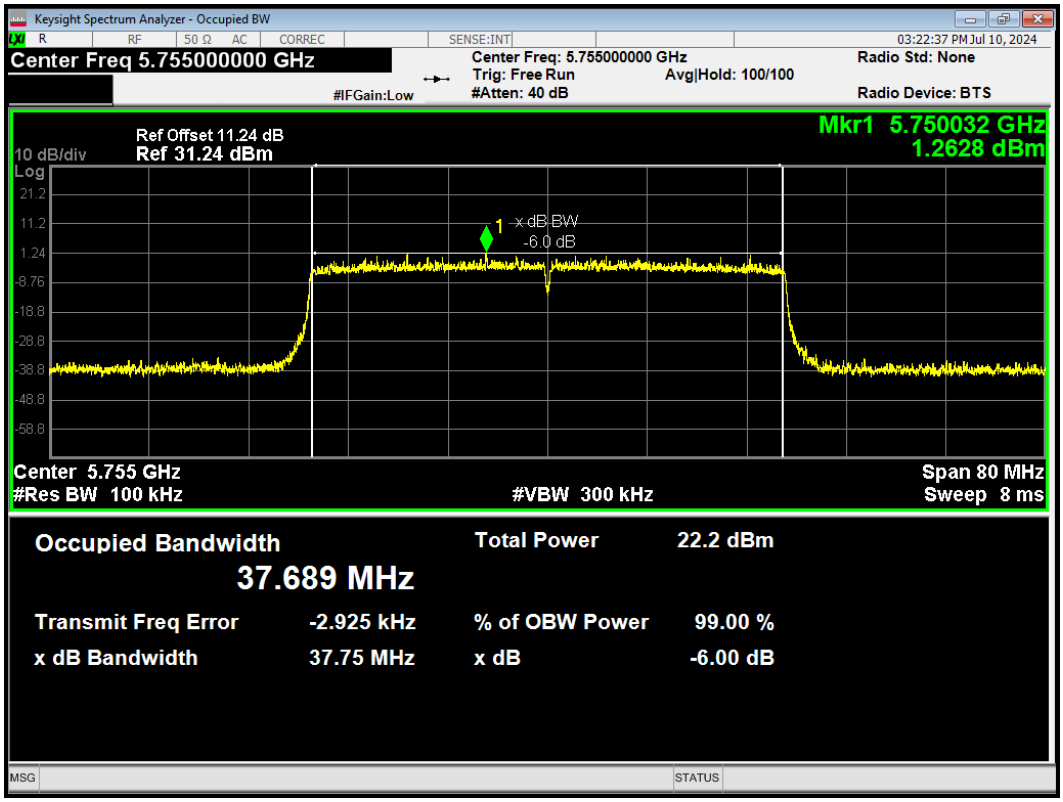
-6dB Bandwidth 802.11ax(HE20) 5825MHz



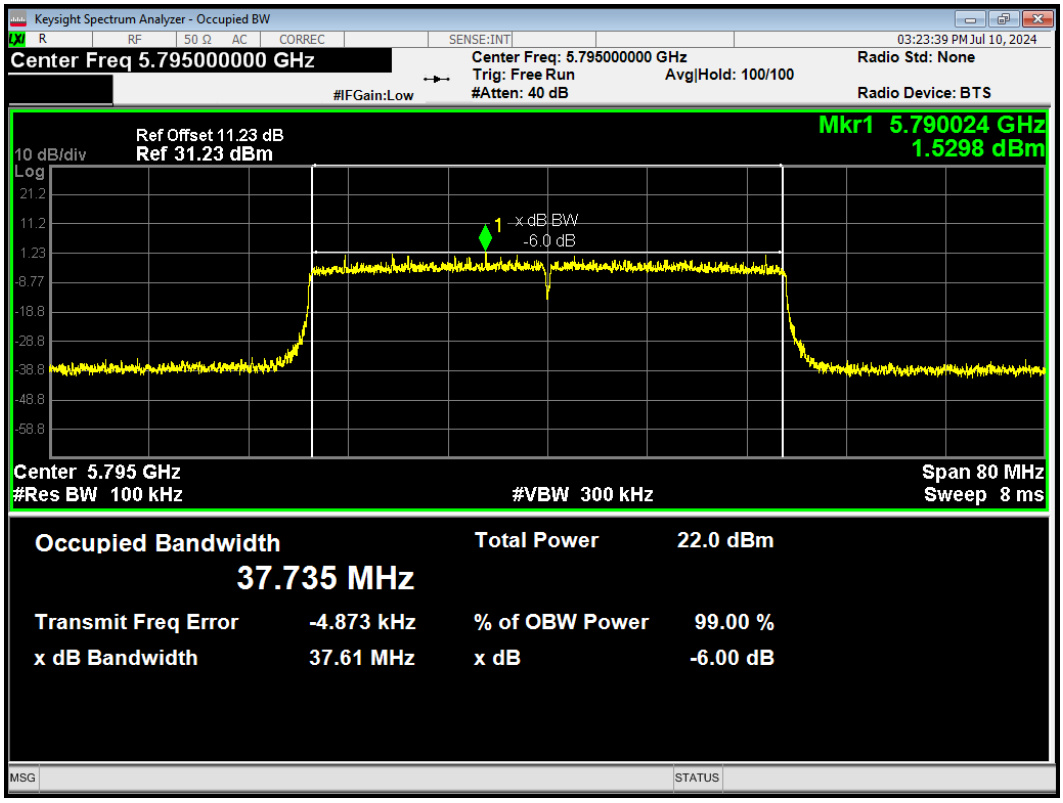
-6dB Bandwidth 802.11ax(HE40) 5710MHz



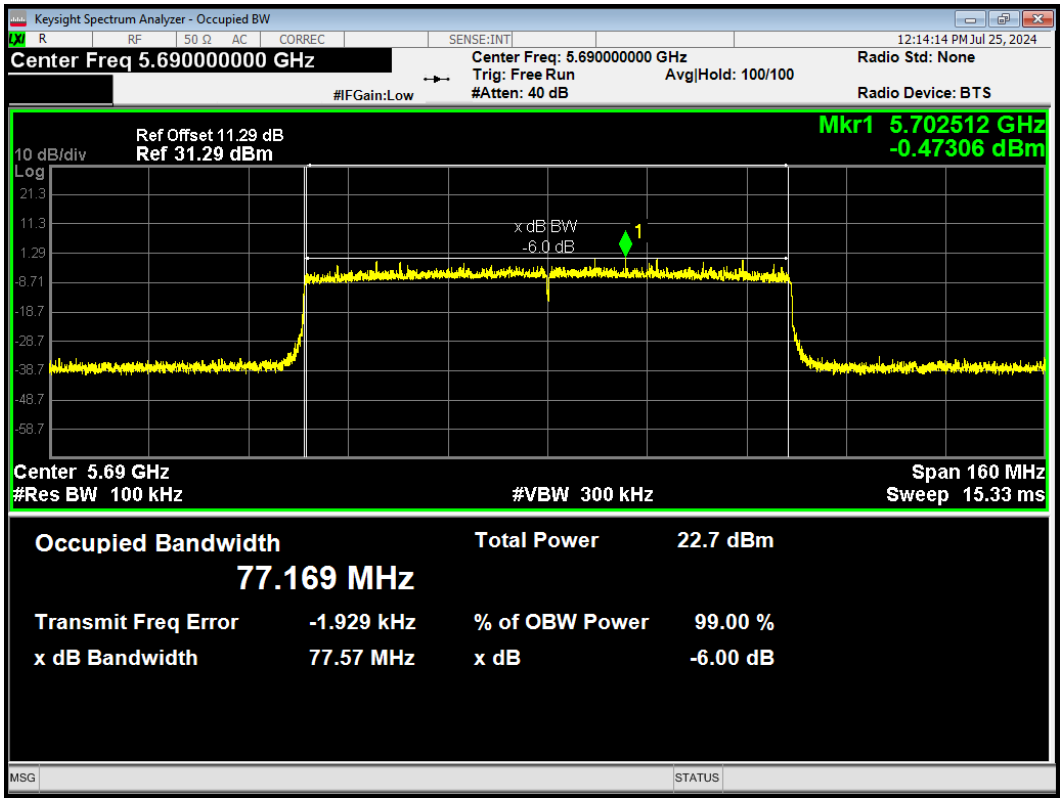
-6dB Bandwidth 802.11ax(HE40) 5755MHz



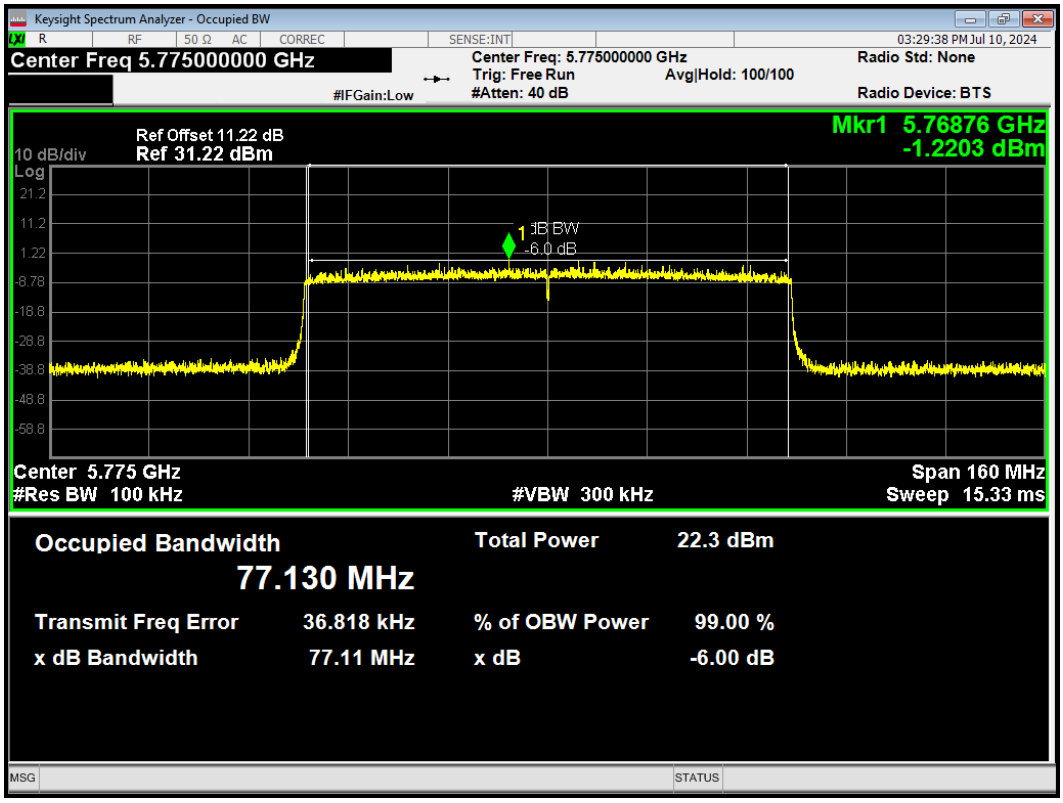
-6dB Bandwidth 802.11ax(HE40) 5795MHz



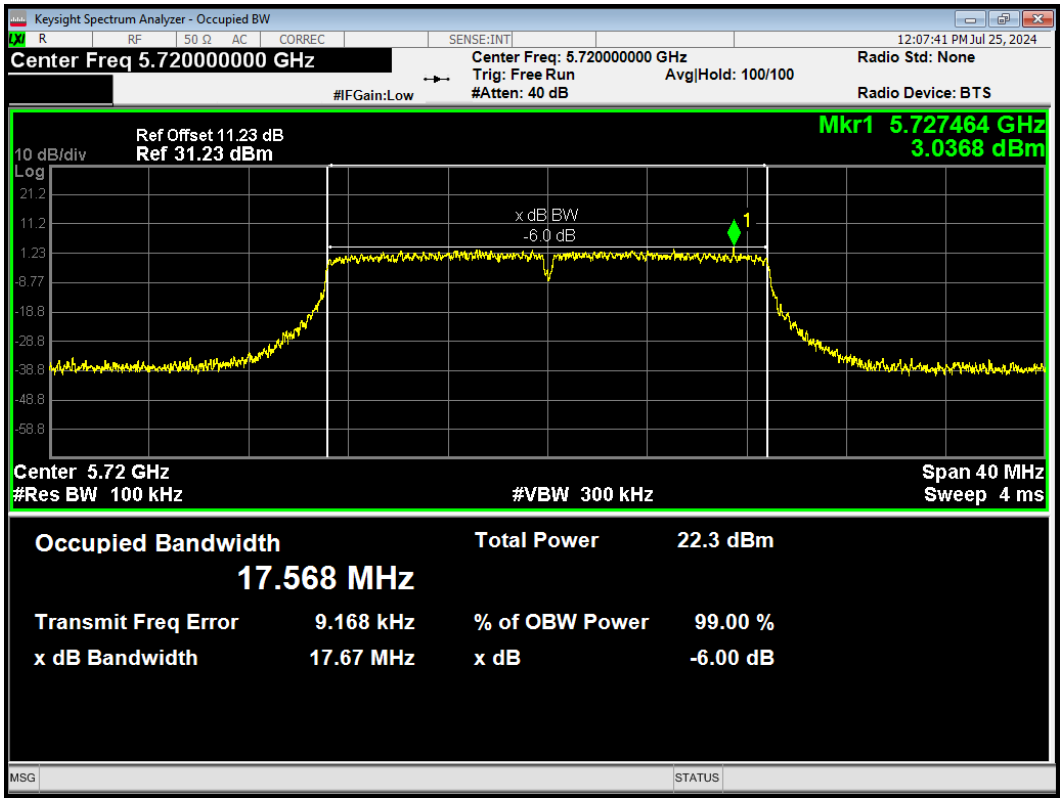
-6dB Bandwidth 802.11ax(HE80) 5690MHz



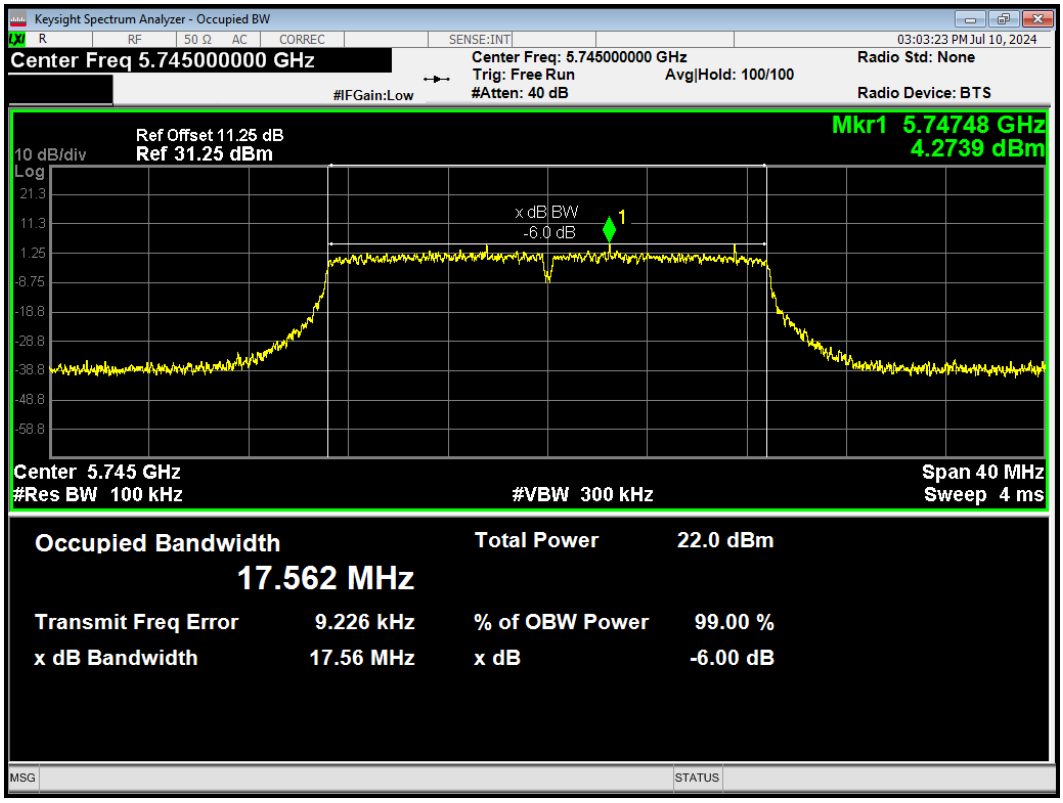
-6dB Bandwidth 802.11ax(HE80) 5775MHz



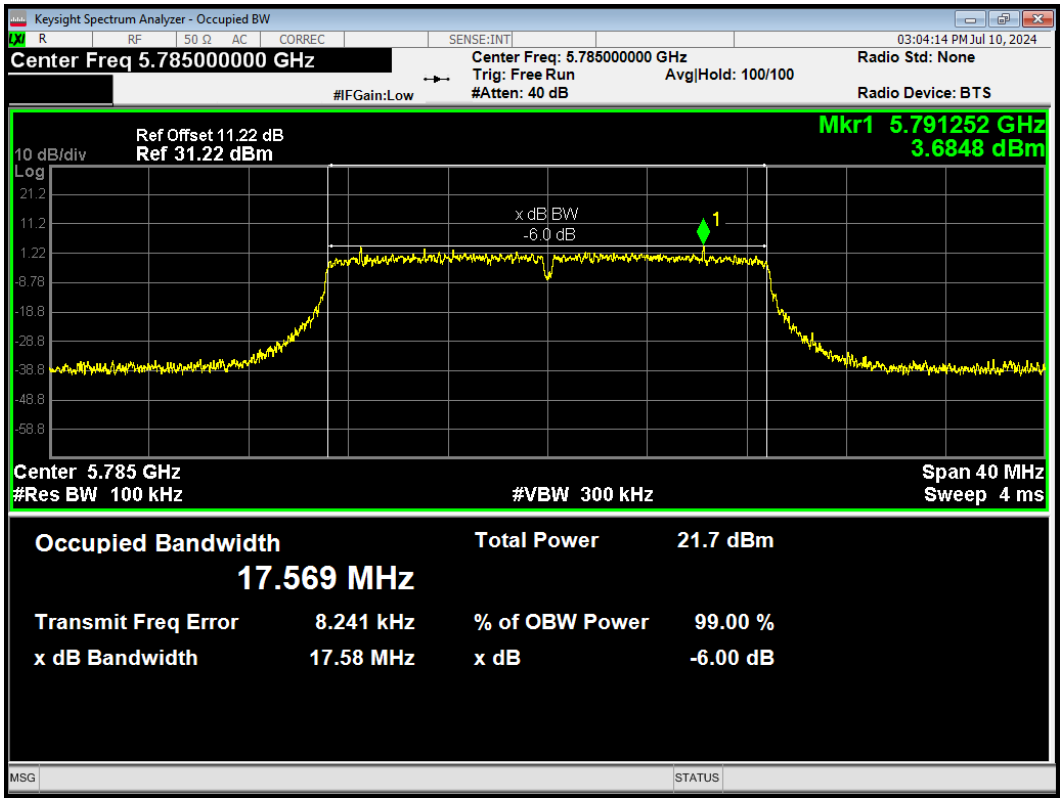
-6dB Bandwidth 802.11n(HT20) 5720MHz



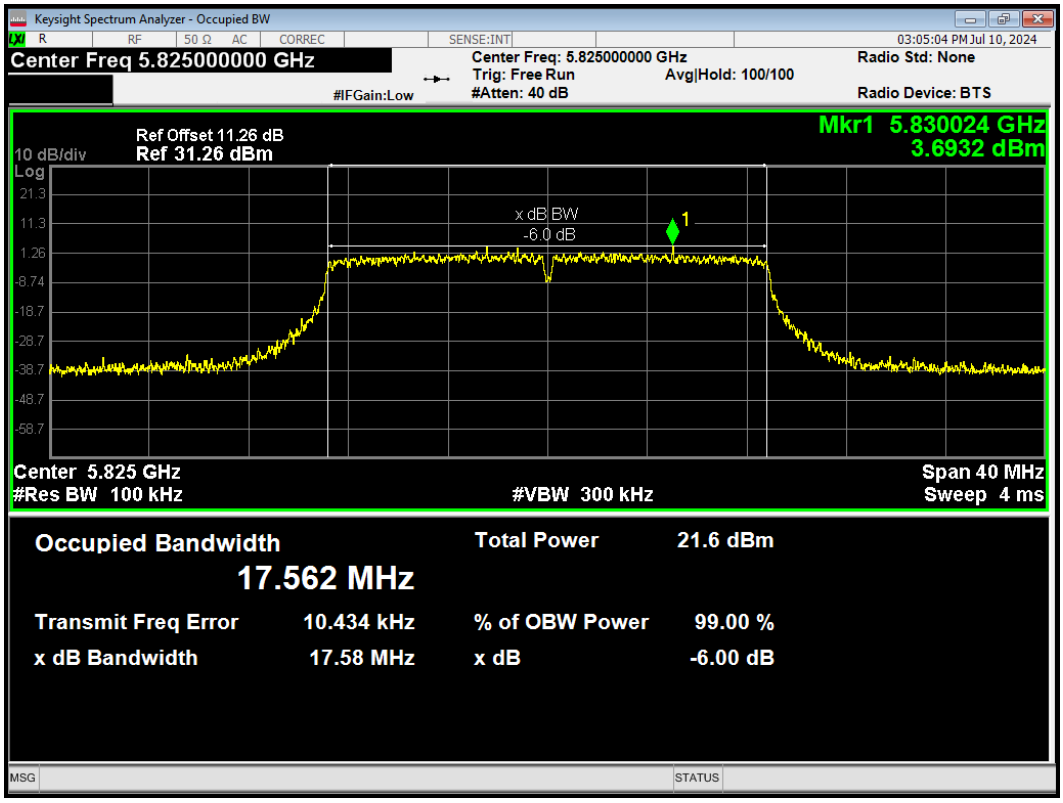
-6dB Bandwidth 802.11n(HT20) 5745MHz



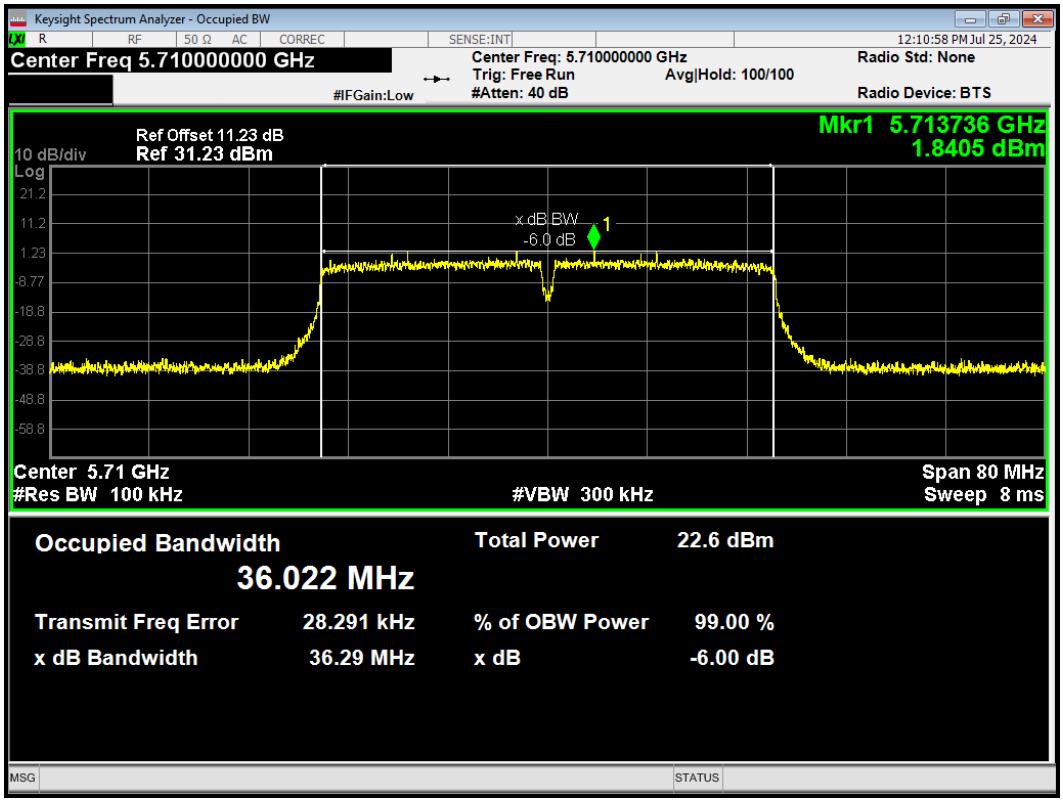
-6dB Bandwidth 802.11n(HT20) 5785MHz



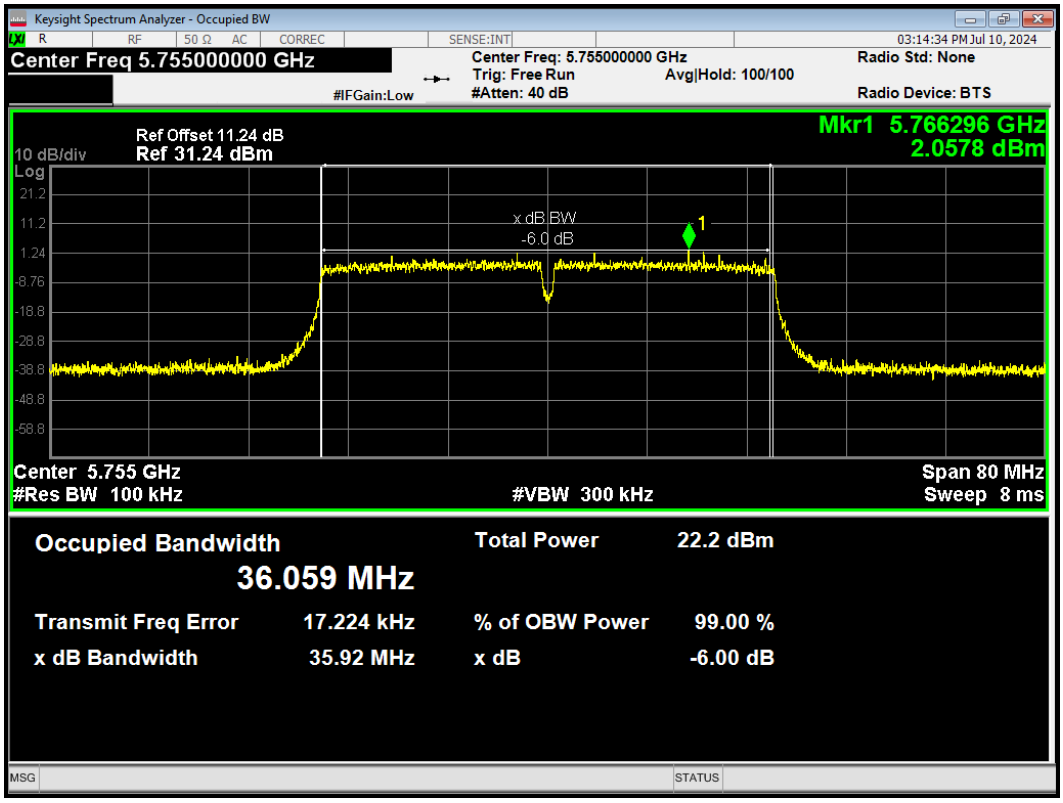
-6dB Bandwidth 802.11n(HT20) 5825MHz



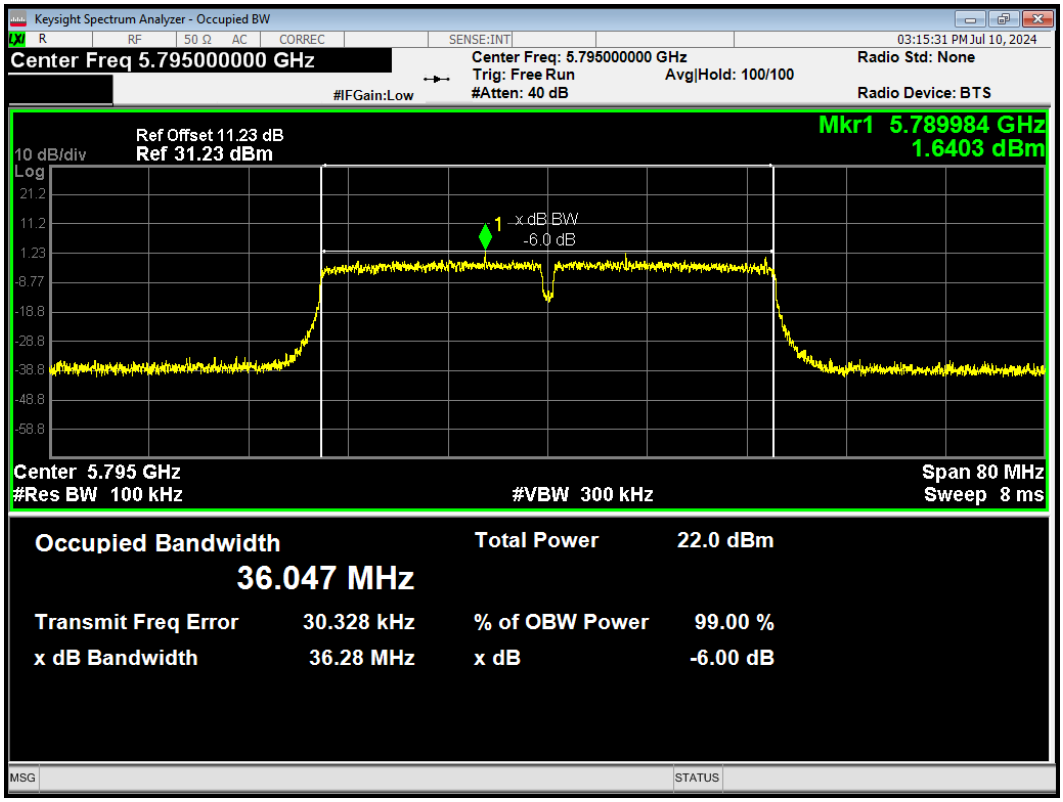
-6dB Bandwidth 802.11n(HT40) 5710MHz



-6dB Bandwidth 802.11n(HT40) 5755MHz



-6dB Bandwidth 802.11n(HT40) 5795MHz



5.2. Average Power Output

Ambient condition

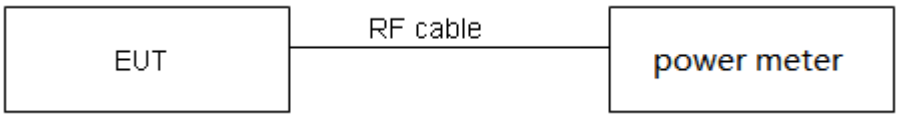
Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test Setup



Limits

Rule FCC Part 15.407(a)(1) / FCC Part 15.407(a) (2) / FCC Part 15.407(a) (3)
(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. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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 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 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.
(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.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.44 dB.

Test Results

Mode	Duty cycle	Duty cycle correction Factor (dB)
802.11a	0.997	0.00
802.11n HT20	0.997	0.00
802.11n HT40	0.997	0.00
802.11ac VHT20	0.997	0.00
802.11ac VHT40	0.997	0.00
802.11ac VHT80	0.997	0.00
802.11ac VHT160	0.997	0.00
802.11ax HE20	0.997	0.00
802.11ax HE40	0.997	0.00
802.11ax HE80	0.997	0.00
802.11ax HE160	0.997	0.00
Note: when Duty cycle≥0.98, Duty cycle correction Factor not required.		

U-NII-1

Power Index					
Test Mode	Channel/ Frequency (MHz)	SISO Antenna 1	SISO Antenna 2	MIMO	Beamforming
802.11a	36/5180	18	17	18	18
	40/5200	18	17	18	18
	48/5240	18	17	18	18
802.11n HT20	36/5180	17	17	17	17
	40/5200	17	17	17	17
	48/5240	17	17	17	17
802.11n HT40	38/5190	17	17	14.5	14.5
	46/5230	17	17	17	17
802.11ac VHT20	36/5180	17	17	17	17
	40/5200	17	17	17	17
	48/5240	17	17	17	17
802.11ac VHT40	38/5190	17	17	15	17
	46/5230	17	17	17	17
802.11ac VHT80	42/5210	17	17	14	14
802.11ax HE20	36/5180	17	17	17	17
	40/5200	17	17	17	17
	48/5240	17	17	17	17
802.11ax HE40	38/5190	17	17	14.5	14.5
	46/5230	17	17	17	17
802.11ax HE80	42/5210	17	17	14	14

U-NII-2A

Power Index					
Test Mode	**Channel/ Frequency (MHz)**	**SISO Antenna 1**	**SISO Antenna 2**	**MIMO**	**Beamforming**
802.11a	52/5260	18	18	18	18
	60/5300	18	18	18	18
	64/5320	18	18	18	18
802.11n HT20	52/5260	17	17	17	17
	60/5300	17	17	17	17
	64/5320	17	17	17	17
802.11n HT40	54/5270	17	17	17	17
	62/5310	17	17	13.5	13.5
802.11ac VHT20	52/5260	17	17	17	17
	60/5300	17	17	17	17
	64/5320	17	17	17	17
802.11ac VHT40	54/5270	17	17	17	17
	62/5310	17	17	17	17
802.11ac VHT80	58/5290	17	17	14.5	14.5
802.11ac VHT160	50/5250	16	16	13	13
802.11ax HE20	52/5260	17	17	17	17
	60/5300	17	17	17	17
	64/5320	17	17	17	17
802.11ax HE40	54/5270	17	17	17	17
	62/5310	17	17	14.5	14.5
802.11ax HE80	58/5290	17	17	13.5	13.5
802.11ax HE160	50/5250	16	16	12	12

U-NII-2C

Power Index					
Test Mode	**Channel/ Frequency (MHz)**	**SISO Antenna 1**	**SISO Antenna 2**	**MIMO**	**Beamforming**
802.11a	100/5500	18	18	16.5	16.5
	120/5600	18	18	17	17
	140/5700	18	18	17	17
	144/5720	18	18	18	18
802.11n HT20	100/5500	17	17	16	16
	120/5600	17	17	17	17
	140/5700	17	17	13	13
	144/5720	17	17	17	17
802.11n HT40	102/5510	17	17	14	14
	118/5590	17	17	17	17
	134/5670	17	17	17	17
	142/5710	17	17	17	17
802.11ac VHT20	100/5500	17	17	17	17
	120/5600	17	17	17	17
	140/5700	17	17	17	17
	144/5720	17	17	17	17
802.11ac VHT40	102/5510	17	17	17	17
	118/5590	17	17	17	17
	134/5670	17	17	17	17
	142/5710	17	17	17	17
802.11ac VHT80	122/5610	17	17	12.5	12.5
	138/5690	17	17	17	17
802.11ac VHT160	114/5570	16	16	13.5	13.5
802.11ax HE20	100/5500	17	17	16	16
	120/5600	17	17	17	17
	140/5700	17	17	12	12
	144/5720	17	17	17	17
802.11ax HE40	102/5510	17	17	13	13
	118/5590	17	17	17	17
	134/5670	17	17	14.5	14.5
	142/5710	17	17	17	17
802.11ax HE80	122/5610	17	17	13	13
	138/5690	17	17	17	17
802.11ax HE160	114/5570	16	16	11.5	11.5

U-NII-3

Power Index					
Test Mode	**Channel/ Frequency (MHz)**	**SISO Antenna 1**	**SISO Antenna 2**	**MIMO**	**Beamforming**
802.11a	144/5720	18	18	18	18
	149/5745	18	18	17	17
	157/5785	18	18	17	17
	165/5825	18	18	18	18
802.11n HT20	144/5720	17	17	17	17
	149/5745	17	17	17	17
	157/5785	17	17	17	17
	165/5825	17	17	17	17
802.11n HT40	142/5720	17	17	17	17
	151/5755	17	17	17	17
	159/5795	17	17	17	17
802.11ac VHT20	144/5720	17	17	17	17
	149/5745	17	17	17	17
	157/5785	17	17	17	17
	165/5825	17	17	17	17
802.11ac VHT40	142/5710	17	17	17	17
	151/5755	17	17	17	17
	159/5795	17	17	17	17
802.11ac VHT80	138/5690	17	17	17	17
	155/5775	17	17	17	17
802.11ax HE20	144/5720	17	17	17	17
	149/5745	17	17	17	17
	157/5785	17	17	17	17
	165/5825	17	17	17	17
802.11ax HE40	142/5710	17	17	17	17
	151/5755	17	17	17	17
	159/5795	17	17	17	17
802.11ax HE80	138/5690	17	17	17	17
	155/5775	17	17	17	17

Test Mode		Channel/ Frequency (MHz)	B=26 dB bandwidth (MHz)	Limit 11 dBm + 10 log B (dBm)	Final Limit (dBm)
U-NII-2A	802.11a	52/5260	19.50	23.90<24	23.90
		60/5300	19.16	23.82<24	23.82
		64/5320	19.34	23.86<24	23.86
	802.11n HT20	52/5260	20.23	24.06>24	24
		60/5300	20.67	24.15>24	24
		64/5320	20.51	24.12>24	24
	802.11n HT40	54/5270	40.40	27.06>24	24
		62/5310	40.22	27.04>24	24
	802.11ac VHT20	52/5260	20.35	24.08>24	24
		60/5300	20.29	24.07>24	24
		64/5320	20.51	24.12>24	24
	802.11ac VHT40	54/5270	39.91	27.01>24	24
		62/5310	39.88	27.01>24	24
	802.11ac VHT80	58/5290	82.35	30.16>24	24
	802.11ac VHT160	50/5250	166.55	33.22>24	24
	802.11ax HE20	52/5260	20.88	24.20>24	24
		60/5300	20.83	24.19>24	24
		64/5320	21.16	24.26>24	24
	802.11ax HE40	54/5270	40.59	27.08>24	24
		62/5310	40.54	27.08>24	24
	802.11ax HE80	58/5290	81.58	30.12>24	24
	802.11ax HE160	50/5250	164.51	33.16>24	24
U-NII-2C	802.11a	100/5500	19.36	23.87<24	23.87
		120/5600	19.27	23.85<24	23.85
		140/5700	19.23	23.84<24	23.84
		144/5720	19.39	23.87<24	23.87
	802.11n HT20	100/5500	20.43	24.10>24	24
		120/5600	20.58	24.13>24	24
		140/5700	20.57	24.13>24	24
		144/5720	20.54	24.13>24	24
	802.11n HT40	102/5510	40.01	27.02>24	24
		118/5590	40.13	27.04>24	24
		134/5670	40.32	27.05>24	24
		142/5710	39.94	27.01>24	24
	802.11ac VHT20	100/5500	20.58	24.14>24	24
		120/5600	20.40	24.10>24	24

		140/5700	20.40	24.10>24	24
		144/5720	20.37	24.09>24	24
	802.11ac VHT40	102/5510	39.68	26.99>24	24
		118/5590	39.91	27.01>24	24
		134/5670	40.05	27.03>24	24
		142/5710	39.61	26.98>24	24
	802.11ac VHT80	122/5610	81.86	30.13>24	24
		138/5690	82.54	30.17>24	24
	802.11ac VHT160	114/5570	165.39	33.19>24	24
	802.11ax HE20	100/5500	21.34	24.29>24	24
		120/5600	20.84	24.19>24	24
		140/5700	20.90	24.20>24	24
		144/5720	21.18	24.26>24	24
	802.11ax HE40	102/5510	40.60	27.09>24	24
		118/5590	40.26	27.05>24	24
		134/5670	40.29	27.05>24	24
		142/5710	40.71	27.10>24	24
	802.11ax HE80	122/5610	82.47	30.16>24	24
		138/5690	82.45	30.16>24	24
	802.11ax HE160	114/5570	166.09	33.20>24	24
Note: 250mW=24dBm					

SISO Antenna 1

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	17.38	17.38	24	PASS
	40/5200	17.28	17.28	24	PASS
	48/5240	17.18	17.18	24	PASS
802.11n HT20	36/5180	16.30	16.30	24	PASS
	40/5200	16.15	16.15	24	PASS
	48/5240	16.10	16.10	24	PASS
802.11n HT40	38/5190	16.35	16.35	24	PASS
	46/5230	16.39	16.39	24	PASS
802.11ac VHT20	36/5180	16.29	16.29	24	PASS
	40/5200	16.14	16.14	24	PASS
	48/5240	16.05	16.05	24	PASS
802.11ac VHT40	38/5190	16.35	16.35	24	PASS
	46/5230	16.36	16.36	24	PASS
802.11ac VHT80	42/5210	16.36	16.36	24	PASS
802.11ax HE20	36/5180	16.31	16.31	24	PASS
	40/5200	16.18	16.18	24	PASS
	48/5240	16.08	16.08	24	PASS
802.11ax HE40	38/5190	16.25	16.25	24	PASS
	46/5230	16.14	16.14	24	PASS
802.11ax HE80	42/5210	16.42	16.42	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	17.19	17.19	23.90	PASS
	60/5300	16.88	16.88	23.82	PASS
	64/5320	17.06	17.06	23.86	PASS
802.11n HT20	52/5260	16.09	16.09	24	PASS
	60/5300	15.72	15.72	24	PASS
	64/5320	16.02	16.02	24	PASS
802.11n HT40	54/5270	16.34	16.34	24	PASS
	62/5310	16.36	16.36	24	PASS
802.11ac VHT20	52/5260	16.03	16.03	24	PASS
	60/5300	15.70	15.70	24	PASS
	64/5320	16.04	16.04	24	PASS
802.11ac VHT40	54/5270	16.29	16.29	24	PASS
	62/5310	16.39	16.39	24	PASS
802.11ac VHT80	58/5290	16.24	16.24	24	PASS
802.11ac VHT160	50/5250	14.56	14.56	24	PASS
802.11ax HE20	52/5260	16.13	16.13	24	PASS
	60/5300	15.78	15.78	24	PASS
	64/5320	16.08	16.08	24	PASS
802.11ax HE40	54/5270	16.25	16.25	24	PASS
	62/5310	16.33	16.33	24	PASS
802.11ax HE80	58/5290	16.29	16.29	24	PASS
802.11ax HE160	50/5250	14.53	14.53	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	17.86	17.86	23.87	PASS
	120/5600	17.99	17.99	23.85	PASS
	140/5700	17.72	17.72	23.84	PASS
	144/5720	16.52	16.52	23.87	PASS
802.11n HT20	100/5500	16.90	16.90	24	PASS
	120/5600	17.06	17.06	24	PASS
	140/5700	16.70	16.70	24	PASS
	144/5720	15.45	15.45	24	PASS
802.11n HT40	102/5510	17.15	17.15	24	PASS
	118/5590	17.47	17.47	24	PASS
	134/5670	16.84	16.84	24	PASS
	142/5710	16.24	16.24	24	PASS
802.11ac VHT20	100/5500	16.90	16.90	24	PASS
	120/5600	17.04	17.04	24	PASS
	140/5700	16.65	16.65	24	PASS
	144/5720	15.42	15.42	24	PASS
802.11ac VHT40	102/5510	17.26	17.26	24	PASS
	118/5590	17.34	17.34	24	PASS
	134/5670	16.84	16.84	24	PASS
	142/5710	16.17	16.17	24	PASS
802.11ac VHT80	122/5610	17.14	17.14	24	PASS
	138/5690	16.37	16.37	24	PASS
802.11ac VHT160	114/5570	16.71	16.71	24	PASS
802.11ax HE20	100/5500	16.95	16.95	24	PASS
	120/5600	17.09	17.09	24	PASS
	140/5700	16.73	16.73	24	PASS
	144/5720	15.40	15.40	24	PASS
802.11ax HE40	102/5510	17.02	17.02	24	PASS
	118/5590	17.30	17.30	24	PASS
	134/5670	16.64	16.64	24	PASS
	142/5710	15.99	15.99	24	PASS
802.11ax HE80	122/5610	17.20	17.20	24	PASS
	138/5690	16.41	16.41	24	PASS
802.11ax HE160	114/5570	15.40	15.40	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	144/5720	10.17	10.17	30	PASS
	149/5745	16.97	16.97	30	PASS
	157/5785	16.83	16.83	30	PASS
	165/5825	16.87	16.87	30	PASS
802.11n HT20	144/5720	9.67	9.67	30	PASS
	149/5745	16.11	16.11	30	PASS
	157/5785	15.85	15.85	30	PASS
	165/5825	15.75	15.75	30	PASS
802.11n HT40	142/5720	5.62	5.62	30	PASS
	151/5755	16.25	16.25	30	PASS
	159/5795	16.12	16.12	30	PASS
802.11ac VHT20	144/5720	9.64	9.64	30	PASS
	149/5745	16.09	16.09	30	PASS
	157/5785	15.82	15.82	30	PASS
	165/5825	15.76	15.76	30	PASS
802.11ac VHT40	142/5710	5.56	5.56	30	PASS
	151/5755	16.20	16.20	30	PASS
	159/5795	16.05	16.05	30	PASS
802.11ac VHT80	138/5690	2.01	2.01	30	PASS
	155/5775	16.08	16.08	30	PASS
802.11ax HE20	144/5720	9.99	9.99	30	PASS
	149/5745	16.15	16.15	30	PASS
	157/5785	15.91	15.91	30	PASS
	165/5825	15.82	15.82	30	PASS
802.11ax HE40	142/5710	6.12	6.12	30	PASS
	151/5755	16.14	16.14	30	PASS
	159/5795	15.95	15.95	30	PASS
802.11ax HE80	138/5690	2.86	2.86	30	PASS
	155/5775	16.18	16.18	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

SISO Antenna 2

U-NII-1

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	36/5180	16.32	16.32	24	PASS
	40/5200	16.22	16.22	24	PASS
	48/5240	16.15	16.15	24	PASS
802.11n HT20	36/5180	16.20	16.20	24	PASS
	40/5200	15.97	15.97	24	PASS
	48/5240	15.73	15.73	24	PASS
802.11n HT40	38/5190	16.34	16.34	24	PASS
	46/5230	15.87	15.87	24	PASS
802.11ac VHT20	36/5180	16.18	16.18	24	PASS
	40/5200	15.95	15.95	24	PASS
	48/5240	15.67	15.67	24	PASS
802.11ac VHT40	38/5190	16.33	16.33	24	PASS
	46/5230	16.03	16.03	24	PASS
802.11ac VHT80	42/5210	16.14	16.14	24	PASS
802.11ax HE20	36/5180	16.21	16.21	24	PASS
	40/5200	15.97	15.97	24	PASS
	48/5240	15.71	15.71	24	PASS
802.11ax HE40	38/5190	16.11	16.11	24	PASS
	46/5230	15.83	15.83	24	PASS
802.11ax HE80	42/5210	16.22	16.22	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	52/5260	15.80	15.80	23.90	PASS
	60/5300	15.57	15.57	23.82	PASS
	64/5320	15.68	15.68	23.86	PASS
802.11n HT20	52/5260	16.17	16.17	24	PASS
	60/5300	16.01	16.01	24	PASS
	64/5320	16.28	16.28	24	PASS
802.11n HT40	54/5270	16.12	16.12	24	PASS
	62/5310	16.35	16.35	24	PASS
802.11ac VHT20	52/5260	16.14	16.14	24	PASS
	60/5300	15.97	15.97	24	PASS
	64/5320	16.26	16.26	24	PASS
802.11ac VHT40	54/5270	16.07	16.07	24	PASS
	62/5310	16.23	16.23	24	PASS
802.11ac VHT80	58/5290	16.21	16.21	24	PASS
802.11ac VHT160	50/5250	15.52	15.52	24	PASS
802.11ax HE20	52/5260	15.91	15.91	24	PASS
	60/5300	15.76	15.76	24	PASS
	64/5320	16.04	16.04	24	PASS
802.11ax HE40	54/5270	16.04	16.04	24	PASS
	62/5310	16.22	16.22	24	PASS
802.11ax HE80	58/5290	16.31	16.31	24	PASS
802.11ax HE160	50/5250	15.49	15.49	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	100/5500	16.23	16.23	23.87	PASS
	120/5600	16.34	16.34	23.85	PASS
	140/5700	16.16	16.16	23.84	PASS
	144/5720	16.45	16.45	23.87	PASS
802.11n HT20	100/5500	15.29	15.29	24	PASS
	120/5600	15.44	15.44	24	PASS
	140/5700	15.22	15.22	24	PASS
	144/5720	15.40	15.40	24	PASS
802.11n HT40	102/5510	15.47	15.47	24	PASS
	118/5590	15.77	15.77	24	PASS
	134/5670	15.72	15.72	24	PASS
	142/5710	16.08	16.08	24	PASS
802.11ac VHT20	100/5500	15.31	15.31	24	PASS
	120/5600	15.43	15.43	24	PASS
	140/5700	15.22	15.22	24	PASS
	144/5720	15.37	15.37	24	PASS
802.11ac VHT40	102/5510	15.50	15.50	24	PASS
	118/5590	15.81	15.81	24	PASS
	134/5670	15.50	15.50	24	PASS
	142/5710	16.08	16.08	24	PASS
802.11ac VHT80	122/5610	15.58	15.58	24	PASS
	138/5690	16.34	16.34	24	PASS
802.11ac VHT160	114/5570	15.31	15.31	24	PASS
802.11ax HE20	100/5500	15.35	15.35	24	PASS
	120/5600	15.45	15.45	24	PASS
	140/5700	15.24	15.24	24	PASS
	144/5720	15.35	15.35	24	PASS
802.11ax HE40	102/5510	15.32	15.32	24	PASS
	118/5590	15.65	15.65	24	PASS
	134/5670	15.50	15.50	24	PASS
	142/5710	15.98	15.98	24	PASS
802.11ax HE80	122/5610	15.67	15.67	24	PASS
	138/5690	16.37	16.37	24	PASS
802.11ax HE160	114/5570	15.29	15.29	24	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

U-NII-3

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	Limit (dBm)	Conclusion
802.11a	144/5720	10.29	10.29	30	PASS
	149/5745	17.36	17.36	30	PASS
	157/5785	17.10	17.10	30	PASS
	165/5825	16.90	16.90	30	PASS
802.11n HT20	144/5720	9.78	9.78	30	PASS
	149/5745	16.40	16.40	30	PASS
	157/5785	16.02	16.02	30	PASS
	165/5825	15.91	15.91	30	PASS
802.11n HT40	142/5720	5.76	5.76	30	PASS
	151/5755	16.57	16.57	30	PASS
	159/5795	16.26	16.26	30	PASS
802.11ac VHT20	144/5720	9.76	9.76	30	PASS
	149/5745	16.36	16.36	30	PASS
	157/5785	15.99	15.99	30	PASS
	165/5825	15.86	15.86	30	PASS
802.11ac VHT40	142/5710	5.80	5.80	30	PASS
	151/5755	16.63	16.63	30	PASS
	159/5795	16.21	16.21	30	PASS
802.11ac VHT80	138/5690	2.18	2.18	30	PASS
	155/5775	16.24	16.24	30	PASS
802.11ax HE20	144/5720	10.14	10.14	30	PASS
	149/5745	16.42	16.42	30	PASS
	157/5785	16.02	16.02	30	PASS
	165/5825	15.92	15.92	30	PASS
802.11ax HE40	142/5710	6.34	6.34	30	PASS
	151/5755	16.44	16.44	30	PASS
	159/5795	16.09	16.09	30	PASS
802.11ax HE80	138/5690	3.12	3.12	30	PASS
	155/5775	16.29	16.29	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

MIMO

U-NII-1

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	36/5180	17.23	17.23	16.17	16.17	19.74	24	PASS
	44/5220	18.46	18.46	17.66	17.66	21.09	24	PASS
	48/5240	18.40	18.40	17.47	17.47	20.97	24	PASS
802.11n HT20	36/5180	17.50	17.50	16.63	16.63	20.10	24	PASS
	44/5220	17.38	17.38	16.60	16.60	20.02	24	PASS
	48/5240	17.28	17.28	16.55	16.55	19.94	24	PASS
802.11n HT40	38/5190	14.43	14.43	14.98	14.98	17.72	24	PASS
	46/5230	17.30	17.30	16.76	16.76	20.05	24	PASS
802.11ac VHT20	36/5180	17.51	17.51	16.64	16.64	20.11	24	PASS
	44/5220	17.36	17.36	16.61	16.61	20.01	24	PASS
	48/5240	17.28	17.28	16.53	16.53	19.93	24	PASS
802.11ac VHT40	38/5190	14.36	14.36	14.91	14.91	17.65	24	PASS
	46/5230	17.43	17.43	16.71	16.71	20.09	24	PASS
802.11ac VHT80	42/5210	13.97	13.97	14.44	14.44	17.22	24	PASS
802.11ax HE20	36/5180	17.54	17.54	16.66	16.66	20.13	24	PASS
	44/5220	17.40	17.40	16.64	16.64	20.05	24	PASS
	48/5240	17.32	17.32	16.56	16.56	19.97	24	PASS
802.11ax HE40	38/5190	14.35	14.35	14.91	14.91	17.65	24	PASS
	46/5230	17.38	17.38	16.70	16.70	20.06	24	PASS
802.11ax HE80	42/5210	14.05	14.05	14.50	14.50	17.29	24	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power $=10\log(10^{(\text{Power antenna1 in dBm}/10)}+10^{(\text{Power antenna2 in dBm}/10)})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain $= 10\log[(10^{G1/10} + 10^{G2/10})/N_{ANT}]$ dBi $= 10\log[(10^{2.30/10} + 10^{3.10/10})/2] = 2.72$ dBi< 6dBi. So the power limit is 24dBm

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	52/5260	18.27	18.27	17.52	17.52	20.92	23.90	PASS
	60/5300	18.18	18.18	17.51	17.51	20.87	23.82	PASS
	64/5320	18.40	18.40	17.50	17.50	20.98	23.86	PASS
802.11n HT20	52/5260	17.40	17.40	16.66	16.66	20.06	24	PASS
	60/5300	17.12	17.12	16.46	16.46	19.81	24	PASS
	64/5320	17.36	17.36	16.55	16.55	19.99	24	PASS
802.11n HT40	54/5270	17.51	17.51	16.72	16.72	20.14	24	PASS
	62/5310	13.10	13.10	13.81	13.81	16.48	24	PASS
802.11ac VHT20	52/5260	17.38	17.38	16.62	16.62	20.03	24	PASS
	60/5300	17.06	17.06	16.45	16.45	19.77	24	PASS
	64/5320	17.32	17.32	16.50	16.50	19.94	24	PASS
802.11ac VHT40	54/5270	17.47	17.47	16.66	16.66	20.09	24	PASS
	62/5310	17.48	17.48	16.71	16.71	20.12	24	PASS
802.11ac VHT80	58/5290	13.91	13.91	14.66	14.66	17.31	24	PASS
802.11ac VHT160	50/5250	13.69	16.00	14.07	14.07	18.15	24	PASS
802.11ax HE20	52/5260	17.36	17.36	16.63	16.63	20.02	24	PASS
	60/5300	16.96	16.96	16.35	16.35	19.68	24	PASS
	64/5320	17.25	17.25	16.46	16.46	19.88	24	PASS
802.11ax HE40	54/5270	17.41	17.41	16.61	16.61	20.04	24	PASS
	62/5310	14.05	14.05	14.80	14.80	17.45	24	PASS
802.11ax HE80	58/5290	13.13	13.13	13.75	13.75	16.46	24	PASS
802.11ax HE160	50/5250	12.54	16.00	13.30	13.30	17.87	24	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power $=10\log(10^{(\text{Power antenna1 in dBm}/10)}+10^{(\text{Power antenna2 in dBm}/10)})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain $= 10\log[(10^{G1/10} + 10^{G2/10})/N_{ANT}]$ dBi $= 10\log[(10^{2.30/10} + 10^{3.10/10})/2] = 2.72$ dBi< 6dBi. So the power limit is 24dBm

U-NII-2C

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	100/5500	15.95	15.95	16.14	16.14	19.06	23.87	PASS
	120/5600	15.96	15.96	15.94	15.94	18.96	23.85	PASS
	140/5700	16.57	16.57	15.66	15.66	19.15	23.84	PASS
	144/5720	16.76	16.76	15.93	15.93	19.37	23.87	PASS
802.11n HT20	100/5500	15.24	15.24	14.54	14.54	17.91	24	PASS
	120/5600	16.74	16.74	15.34	15.34	19.11	24	PASS
	140/5700	12.25	12.25	11.64	11.64	14.97	24	PASS
	144/5720	15.68	15.68	15.02	15.02	18.37	24	PASS
802.11n HT40	102/5510	14.18	14.18	13.33	13.33	16.79	24	PASS
	118/5590	17.36	17.36	15.94	15.94	19.72	24	PASS
	134/5670	16.89	16.89	16.24	16.24	19.59	24	PASS
	142/5710	16.50	16.50	15.89	15.89	19.21	24	PASS
802.11ac VHT20	100/5500	17.03	17.03	15.86	15.86	19.49	24	PASS
	120/5600	16.93	16.93	15.54	15.54	19.30	24	PASS
	140/5700	16.79	16.79	16.07	16.07	19.46	24	PASS
	144/5720	15.68	15.68	15.02	15.02	18.37	24	PASS
802.11ac VHT40	102/5510	17.26	17.26	16.10	16.10	19.73	24	PASS
	118/5590	17.39	17.39	15.95	15.95	19.74	24	PASS
	134/5670	16.86	16.86	16.24	16.24	19.57	24	PASS
	142/5710	16.40	16.40	15.81	15.81	19.12	24	PASS
802.11ac VHT80	122/5610	13.25	13.25	11.89	11.89	15.63	24	PASS
	138/5690	16.64	16.64	16.01	16.01	19.34	24	PASS
802.11ac VHT160	144/5720	13.47	13.47	13.77	13.77	16.63	24	PASS
802.11ax HE20	100/5500	15.78	15.78	15.05	15.05	18.44	24	PASS
	120/5600	16.98	16.98	15.54	15.54	19.33	24	PASS
	140/5700	11.73	11.73	11.83	11.83	14.79	24	PASS
	144/5720	15.63	15.63	14.95	14.95	18.31	24	PASS
802.11ax HE40	102/5510	13.03	13.03	12.28	12.28	15.68	24	PASS
	118/5590	17.32	17.32	15.90	15.90	19.68	24	PASS
	134/5670	14.15	14.15	14.43	14.43	17.30	24	PASS
	142/5710	16.26	16.26	15.70	15.70	18.99	24	PASS
802.11ax HE80	122/5610	13.30	13.30	11.97	11.97	15.70	24	PASS
	138/5690	16.69	16.69	16.05	16.05	19.39	24	PASS
802.11ax HE160	114/5570	11.17	11.17	11.69	11.69	14.45	24	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power $=10\log(10^{(\text{Power antenna1 in dBm/10})}+10^{(\text{Power antenna2 in dBm/10})})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{3.20/10}$ + $10^{3.20/10}$)/2] = 3.20 dBi< 6dBi. So the power limit is 24dBm

U-NII-3

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11a	144/5720	11.51	11.51	8.80	8.80	13.37	30	PASS
	149/5745	16.21	16.21	16.50	16.50	19.37	30	PASS
	157/5785	15.95	15.95	16.17	16.17	19.07	30	PASS
	165/5825	15.79	15.79	16.30	16.30	19.07	30	PASS
802.11n HT20	144/5720	10.95	10.95	8.17	8.17	12.79	30	PASS
	149/5745	16.54	16.54	16.19	16.19	19.38	30	PASS
	157/5785	16.28	16.28	15.92	15.92	19.11	30	PASS
	165/5825	16.13	16.13	15.58	15.58	18.87	30	PASS
802.11n HT40	142/5710	6.81	6.81	4.12	4.12	8.68	30	PASS
	151/5755	16.06	16.06	15.86	15.86	18.97	30	PASS
	159/5795	15.84	15.84	15.61	15.61	18.73	30	PASS
802.11ac VHT20	144/5720	10.91	10.91	8.14	8.14	12.75	30	PASS
	149/5745	16.52	16.52	16.20	16.20	19.37	30	PASS
	157/5785	16.25	16.25	15.89	15.89	19.08	30	PASS
	165/5825	16.12	16.12	15.55	15.55	18.86	30	PASS
802.11ac VHT40	142/5710	6.88	6.88	4.18	4.18	8.75	30	PASS
	151/5755	16.07	16.07	15.89	15.89	18.99	30	PASS
	159/5795	15.77	15.77	15.58	15.58	18.68	30	PASS
802.11ac VHT80	138/5690	3.30	3.30	0.79	0.79	5.24	30	PASS
	155/5775	15.89	15.89	15.70	15.70	18.80	30	PASS
802.11ax HE20	144/5720	11.30	11.30	8.46	8.46	13.12	30	PASS
	149/5745	16.55	16.55	16.21	16.21	19.39	30	PASS
	157/5785	15.68	15.68	15.47	15.47	18.59	30	PASS
	165/5825	15.53	15.53	15.15	15.15	18.36	30	PASS
802.11ax HE40	142/5710	7.44	7.44	4.71	4.71	9.30	30	PASS
	151/5755	16.02	16.02	15.84	15.84	18.94	30	PASS
	159/5795	15.73	15.73	15.55	15.55	18.65	30	PASS
802.11ax HE80	138/5690	4.19	4.19	1.62	1.62	6.10	30	PASS
	155/5775	15.96	15.96	15.78	15.78	18.88	30	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =10log($10^{(\text{Power antenna1 in dBm/10})}$+$10^{(\text{Power antenna2 in dBm/10})}$).

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)d)(ii): If antenna gains are not equal, If all transmit signals are completely uncorrelated, then

Directional gain = 10 log[($10^{G1/10}$ + $10^{G2/10}$)/N_{ANT}] dBi = 10 log[($10^{1.90/10}$ + $10^{2.70/10}$)/2] = 2.32 dBi< 6dBi. So the power limit is 30dBm.

Beamforming

U-NII-1

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11n HT20	36/5180	17.04	17.04	16.50	16.50	19.79	23.89	PASS
	44/5220	16.82	16.82	16.43	16.43	19.64	23.89	PASS
	48/5240	16.90	16.90	16.41	16.41	19.67	23.89	PASS
802.11n HT40	38/5190	14.24	14.24	14.74	14.74	17.51	23.89	PASS
	46/5230	17.16	17.16	16.61	16.61	19.90	23.89	PASS
802.11ac VHT20	36/5180	16.94	16.94	16.41	16.41	19.69	23.89	PASS
	44/5220	16.87	16.87	16.42	16.42	19.66	23.89	PASS
	48/5240	16.88	16.88	16.41	16.41	19.66	23.89	PASS
802.11ac VHT40	38/5190	14.24	14.24	14.79	14.79	17.54	23.89	PASS
	46/5230	17.16	17.16	16.65	16.65	19.92	23.89	PASS
802.11ac VHT80	42/5210	13.80	13.80	14.24	14.24	17.03	23.89	PASS
802.11ax HE20	36/5180	17.01	17.01	16.47	16.47	19.76	23.89	PASS
	44/5220	16.90	16.90	16.45	16.45	19.69	23.89	PASS
	48/5240	16.91	16.91	16.43	16.43	19.69	23.89	PASS
802.11ax HE40	38/5190	14.09	14.09	14.68	14.68	17.41	23.89	PASS
	46/5230	17.09	17.09	16.58	16.58	19.85	23.89	PASS
802.11ax HE80	42/5210	13.82	13.82	14.31	14.31	17.09	23.89	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =10log($10^{(\text{Power antenna1 in dBm/10})}$+$10^{(\text{Power antenna2 in dBm/10})}$).

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)e)(ii): If antenna gains are not equal, the user may use either of the following methods to calculate directional gain, provided that each transmit antenna is driven by only one spatial stream: Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain.

Directional gain = $G_{ANT\ MAX}$ + 10 log(N_{ANT}/Nss)=3.10+10log (2/1) =6.11

So the power limit is 24-(directional gain-6 dBi) =24-(6.11-6) =23.89 dBm.

U-NII-2A

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)			
802.11n HT20	52/5260	16.99	16.99	16.51	16.51	19.77	23.89	PASS
	60/5300	16.72	16.72	15.96	15.96	19.37	23.89	PASS
	64/5320	16.89	16.89	16.12	16.12	19.53	23.89	PASS
802.11n HT40	54/5270	17.18	17.18	16.56	16.56	19.89	23.89	PASS
	62/5310	12.95	12.95	13.73	13.73	16.37	23.89	PASS
802.11ac VHT20	52/5260	17.02	17.02	16.53	16.53	19.79	23.89	PASS
	60/5300	16.71	16.71	15.99	15.99	19.38	23.89	PASS
	64/5320	16.90	16.90	16.15	16.15	19.55	23.89	PASS
802.11ac VHT40	54/5270	17.15	17.15	16.56	16.56	19.87	23.89	PASS
	62/5310	17.12	17.12	16.34	16.34	19.76	23.89	PASS
802.11ac VHT80	58/5290	13.65	13.65	14.43	14.43	17.06	23.89	PASS
802.11ac VHT160	50/5250	13.52	16.00	13.93	13.93	18.10	23.89	PASS
802.11ax HE20	52/5260	17.06	17.06	16.59	16.59	19.84	23.89	PASS
	60/5300	16.75	16.75	16.02	16.02	19.41	23.89	PASS
	64/5320	16.94	16.94	16.19	16.19	19.59	23.89	PASS
802.11ax HE40	54/5270	17.10	17.10	16.49	16.49	19.82	23.89	PASS
	62/5310	13.74	13.74	14.52	14.52	17.16	23.89	PASS
802.11ax HE80	58/5290	12.95	12.95	13.52	13.52	16.26	23.89	PASS
802.11ax HE160	50/5250	12.32	16.00	13.07	13.07	17.79	23.89	PASS

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power $=10\log(10^{(\text{Power antenna1 in dBm/10})}+10^{(\text{Power antenna2 in dBm/10})})$.

2. Direction gain calculation according to KDB662911 D01 Multiple Transmitter Output v02r01 F)2)e)(ii): If antenna gains are not equal, the user may use either of the following methods to calculate directional gain, provided that each transmit antenna is driven by only one spatial stream: Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain.

Directional gain = $G_{ANT\ MAX} + 10\log(N_{ANT}/Nss)=3.10+10\log(2/1) =6.11$

So the power limit is 24-(directional gain-6 dBi) =24-(6.11-6) =23.89 dBm.