



RF TEST REPORT

Applicant	Honor Device Co., Ltd.
FCC ID	2AYGCVNE-LX3
Product	Smart Phone
Model	VNE-LX3
Report No.	R2207A0619-R7V1
Issue Date	August 2, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2021)**. 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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Version	Revision description	Issue Date
Rev.0	Initial issue of report.	July 25, 2022
Rev.1	Update information.	August 2, 2022
Note: This revised report (Report No. R2207A0619-R7V1) supersedes and replaces the previously issued report (Report No. R2207A0619-R7). Please discard or destroy the previously issued report and dispose of it accordingly.		

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: July 9, 2022 ~ July 22, 2022			
Date of Sample Received: July 5, 2022			
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 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 **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)

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)

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

1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: Building 3, No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City: Shanghai
Post code: 201201
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Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Honor Device Co., Ltd.
Applicant address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
Manufacturer	Honor Device Co., Ltd.
Manufacturer address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

2.2. General information

EUT Description			
Model		VNE-LX3	
SN		A96BNU2625200516	
Hardware Version		HL1VNEM	
Software Version		2.1.0.34(SP02C900E5R1P1)	
Power Supply		Battery / AC adapter	
Antenna Type		Internal Antenna	
Antenna Gain		-0.5dBi	
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/n (HT20/HT40) : OFDM 802.11ac (VHT20/VHT40/VHT80): OFDM	
Max. Power		17.92dBm	
Testing temperature range:		0 ° C to +35° C	
Operating temperature range:		0 ° C to +35° C	
Operating voltage range:		3.6V to 4.45 V	
State DC voltage:		3.87V	
EUT Accessory			
Accessory	Model	Manufacture	No.
Adapter	HW-050200E02	Honor Device Co., Ltd. (Manufacturer: Huntkey)	1
		Honor Device Co., Ltd. (Manufacturer: BYD)	2
	HW-050200B02	Honor Device Co., Ltd. (Manufacturer: Huntkey)	3
		Honor Device Co., Ltd.	4



		(Manufacturer: BYD)	
	HW-050200U02	Honor Device Co., Ltd. (Manufacturer: Huntkey)	5
		Honor Device Co., Ltd. (Manufacturer: BYD)	6
Battery	HB496590EFW	Honor Device Co., Ltd. (Manufacturer: SCUD)	1
		Honor Device Co., Ltd. (Manufacturer: NVT)	2
	HB496590EFW-F	Honor Device Co., Ltd. (Manufacturer: SCUD)	3
		Honor Device Co., Ltd. (Manufacturer: NVT)	4
Earphone	MEND1532B528C00	Jiangxi Lianchuang Hongsheng Electronic Co., LTD.	1
	1293-3283-3.5mm-339	BOLUO COUNTY QUANCHENG ELECTRONIC CO.,LTD.	2
Data Cable	RY0002	NingBo Broad Telecommunication Co., Ltd.	1
	AU2-CRO013HF	Freeport Resources Enterprises Corp.	2
	2120-00001-0	MING JI ELECTRONICS CO., LTD.	3
	L125UC007-CS-H	LUXSHARE PRECISION INDUSTRY CO., LTD.	4
	CUDU01B-HC451-EH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	5

Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.

2. There is more than one Adapter/Battery/Data cable/Earphone, each one should be applied throughout the compliance test respectively, and however, only the worst case (Adapter 6 / Battery 3 /Data cable 1/ Earphone 1) will be recorded in this report.



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 (2021) Unlicensed National Information Infrastructure Devices

ANSI C63.10-2013

Reference standard:

KDB 789033 D02 General UNII Test Procedures New Rules 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
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0



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
	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
	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
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

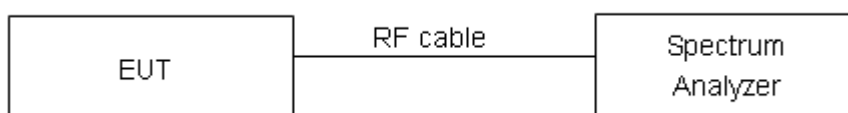
For U-NII-1/U-NII-2A/U-NII-2C, set RBW $\approx 1\%$ OCB kHz, VBW $\geq 3 \times$ RBW, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

For U-NII-3, Set RBW = 100 kHz, VBW $\geq 3 \times$ 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

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	36/5180	16.535	20.16	PASS
	40/5200	16.525	19.97	PASS
	44/5220	16.561	20.08	PASS
	48/5240	16.536	19.90	PASS
802.11n HT20	36/5180	17.642	20.31	PASS
	40/5200	17.620	20.19	PASS
	44/5220	17.670	22.73	PASS
	48/5240	17.621	24.17	PASS
802.11n HT40	38/5190	36.009	40.71	PASS
	46/5230	36.003	40.80	PASS
802.11ac VHT20	36/5180	17.642	20.28	PASS
	40/5200	17.645	20.41	PASS
	44/5220	17.652	21.57	PASS
	48/5240	17.598	20.23	PASS
802.11ac VHT40	38/5190	35.997	40.83	PASS
	46/5230	36.056	40.88	PASS
802.11ac VHT80	42/5210	75.305	81.13	PASS



U-NII-2A

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	52/5260	16.533	20.29	PASS
	56/5280	16.535	20.14	PASS
	60/5300	16.509	19.80	PASS
	64/5320	16.495	20.11	PASS
802.11n HT20	52/5260	17.633	22.39	PASS
	56/5280	17.640	22.60	PASS
	60/5300	17.593	20.36	PASS
	64/5320	17.626	20.56	PASS
802.11n HT40	54/5270	36.004	40.72	PASS
	62/5310	35.996	40.82	PASS
802.11ac VHT20	52/5260	17.579	20.39	PASS
	56/5280	17.609	20.40	PASS
	60/5300	17.612	20.25	PASS
	64/5320	17.613	20.29	PASS
802.11ac VHT40	54/5270	35.999	40.66	PASS
	62/5310	36.048	40.92	PASS
802.11ac VHT80	58/5290	75.351	81.30	PASS



U-NII-2C

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11a	100/5500	16.507	20.18	PASS
	104/5520	16.507	19.84	PASS
	108/5540	16.559	21.03	PASS
	120/5600	16.540	20.06	PASS
	140/5700	16.548	19.81	PASS
	144/5720	13.316	15.24	PASS
802.11n HT20	100/5500	17.629	20.32	PASS
	104/5520	17.641	20.29	PASS
	108/5540	17.600	20.96	PASS
	120/5600	17.601	22.77	PASS
	140/5700	17.633	23.58	PASS
	144/5720	13.839	18.66	PASS
802.11n HT40	102/5510	35.995	40.41	PASS
	110/5550	35.972	40.80	PASS
	118/5590	35.983	40.61	PASS
	134/5670	36.010	41.05	PASS
	142/5710	32.809	35.55	PASS
802.11ac VHT20	100/5500	17.612	20.11	PASS
	104/5520	17.623	20.23	PASS
	108/5540	17.599	20.41	PASS
	120/5600	17.622	20.38	PASS
	140/5700	17.591	20.31	PASS
	144/5720	13.769	15.28	PASS
802.11ac VHT40	102/5510	35.973	41.17	PASS
	110/5550	35.990	40.90	PASS
	118/5590	35.938	40.62	PASS
	134/5670	36.004	41.02	PASS
	142/5710	32.777	35.55	PASS
802.11ac VHT80	106/5530	75.345	80.49	PASS
	122/5610	75.207	81.18	PASS
	138/5690	72.055	75.36	PASS



U-NII-3

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 6 dB bandwidth (MHz)	Limit (kHz)	Conclusion
802.11a	144/5720	16.095	3.22	500	PASS
	149/5745	20.772	15.09	500	PASS
	153/5765	16.553	14.73	500	PASS
	157/5785	16.544	14.37	500	PASS
	165/5825	16.587	15.42	500	PASS
802.11n HT20	144/5720	17.271	3.65	500	PASS
	149/5745	20.957	15.09	500	PASS
	153/5765	17.646	16.29	500	PASS
	157/5785	17.689	15.09	500	PASS
	165/5825	17.642	15.39	500	PASS
802.11n HT40	142/5710	20.127	3.19	500	PASS
	151/5755	36.090	34.98	500	PASS
	159/5795	35.996	35.04	500	PASS
802.11ac VHT20	144/5720	4.707	3.51	500	PASS
	149/5745	21.673	15.11	500	PASS
	153/5765	17.652	15.33	500	PASS
	157/5785	17.629	13.83	500	PASS
	165/5825	17.613	15.29	500	PASS
802.11ac VHT40	142/5710	16.767	3.17	500	PASS
	151/5755	36.021	33.85	500	PASS
	159/5795	35.972	35.02	500	PASS
802.11ac VHT80	138/5690	5.314	3.18	500	PASS
	155/5775	75.299	75.05	500	PASS

U-NII-1, 802.11a
Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT20
Carrier frequency (MHz): 5180



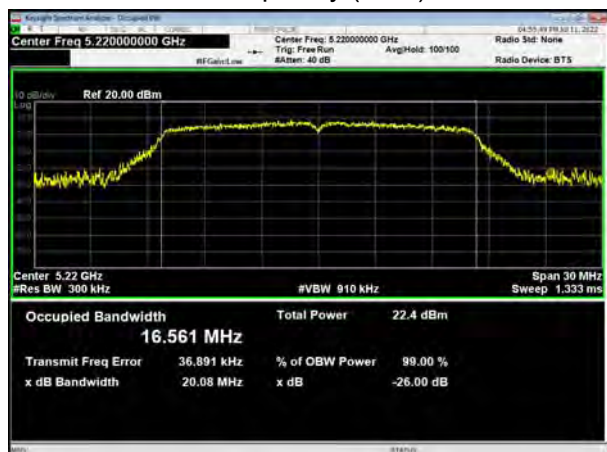
U-NII-1, 802.11a
Carrier frequency (MHz): 5200



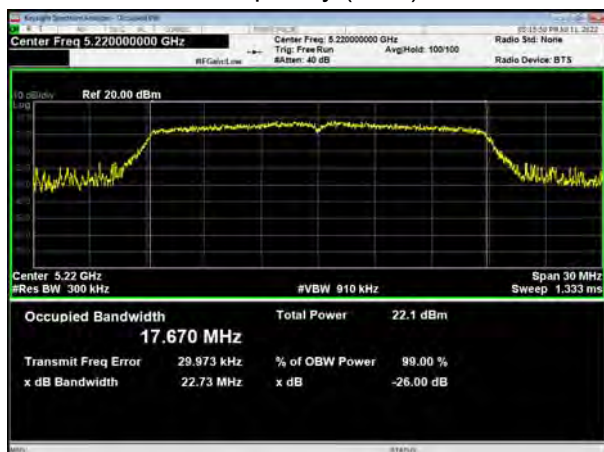
U-NII-1, 802.11n HT20
Carrier frequency (MHz): 5200



U-NII-1, 802.11a
Carrier frequency (MHz): 5220



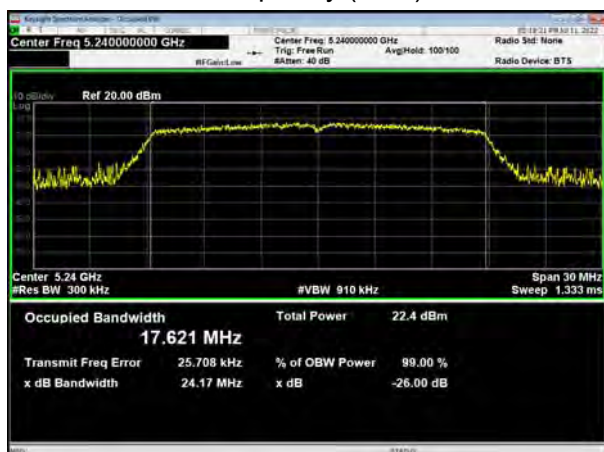
U-NII-1, 802.11n HT20
Carrier frequency (MHz): 5220



U-NII-1, 802.11a
Carrier frequency (MHz):5240



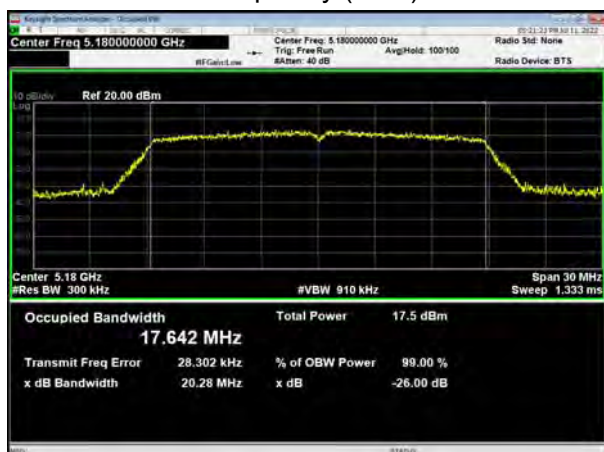
U-NII-1, 802.11n HT20
Carrier frequency (MHz):5240



U-NII-1, 802.11n HT40
Carrier frequency (MHz): 5190



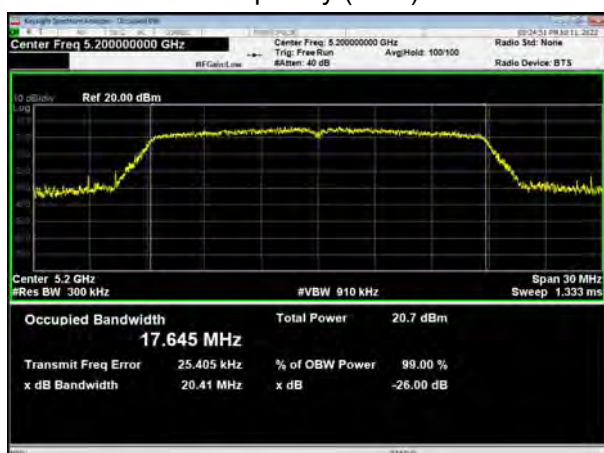
U-NII-1, 802.11ac VHT20
Carrier frequency (MHz): 5180



U-NII-1, 802.11n HT40
Carrier frequency (MHz): 5230



U-NII-1, 802.11ac VHT20
Carrier frequency (MHz): 5200



U-NII-1, 802.11ac VHT40 Carrier frequency (MHz): 5190



U-NII-1, 802.11ac VHT20 Carrier frequency (MHz): 5220



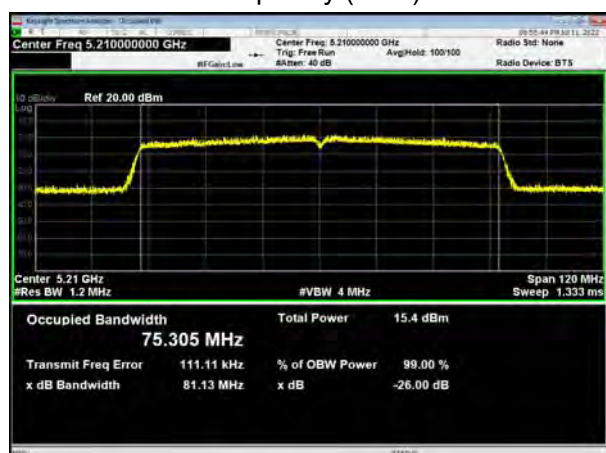
U-NII-1, 802.11ac VHT40 Carrier frequency (MHz): 5230



U-NII-1, 802.11ac VHT20 Carrier frequency (MHz): 5240

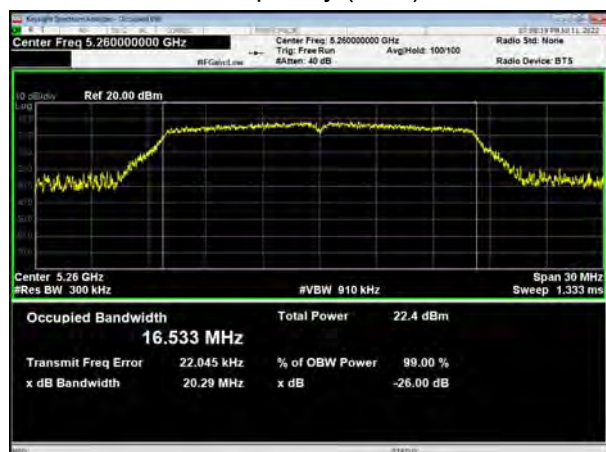


U-NII-1, 802.11ac VHT80 Carrier frequency (MHz): 5210

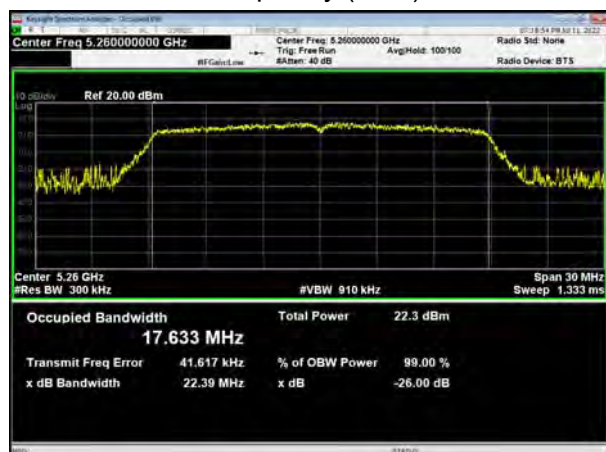


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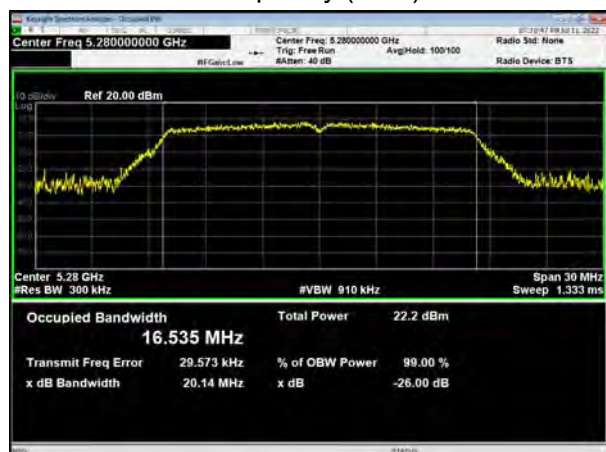
U-NII-2A, 802.11a
Carrier frequency (MHz): 5260



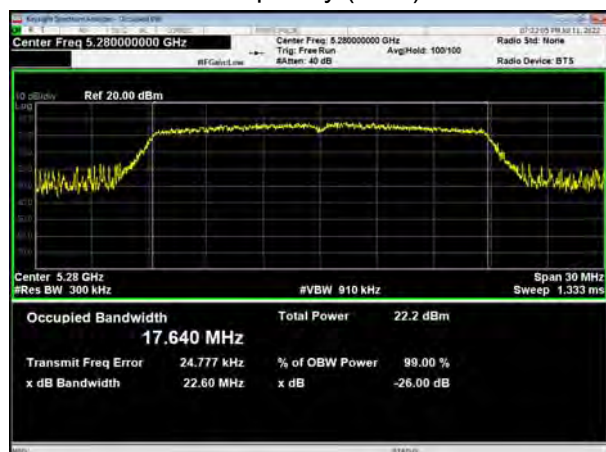
U-NII-2A, 802.11n HT20
Carrier frequency (MHz): 5260



U-NII-2A, 802.11a
Carrier frequency (MHz): 5280



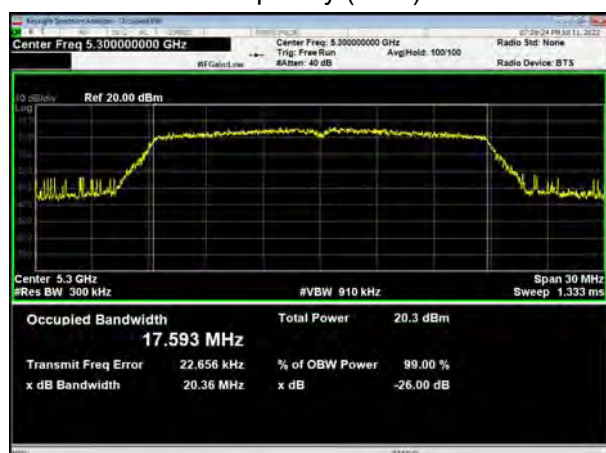
U-NII-2A, 802.11n HT20
Carrier frequency (MHz): 5280



U-NII-2A, 802.11a
Carrier frequency (MHz): 5300



U-NII-2A, 802.11n HT20
Carrier frequency (MHz): 5300



U-NII-2A, 802.11a
Carrier frequency (MHz):5320



U-NII-2A, 802.11n HT20
Carrier frequency (MHz):5320



U-NII-2A, 802.11n HT40
Carrier frequency (MHz): 5270



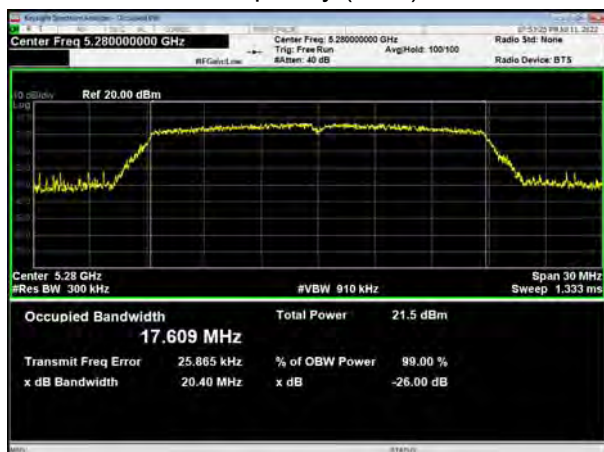
U-NII-2A, 802.11ac VHT20
Carrier frequency (MHz):5260



U-NII-2A, 802.11n HT40
Carrier frequency (MHz): 5310



U-NII-2A, 802.11ac VHT20
Carrier frequency (MHz): 5280



U-NII-2A, 802.11ac VHT40 Carrier frequency (MHz): 5270



U-NII-2A, 802.11ac VHT20 Carrier frequency (MHz): 5300



U-NII-2A, 802.11ac VHT40 Carrier frequency (MHz): 5310



U-NII-2A, 802.11ac VHT20 Carrier frequency (MHz): 5320



U-NII-2A, 802.11ac VHT80 Carrier frequency (MHz): 5290



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U-NII-2C, 802.11a
Carrier frequency (MHz): 5500



U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5500



U-NII-2C, 802.11a
Carrier frequency (MHz): 5520



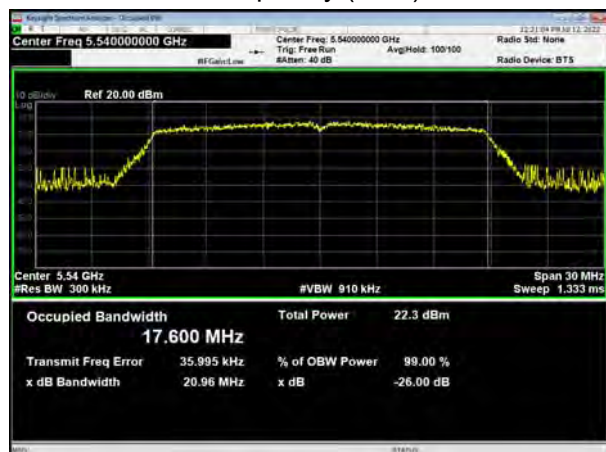
U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5520



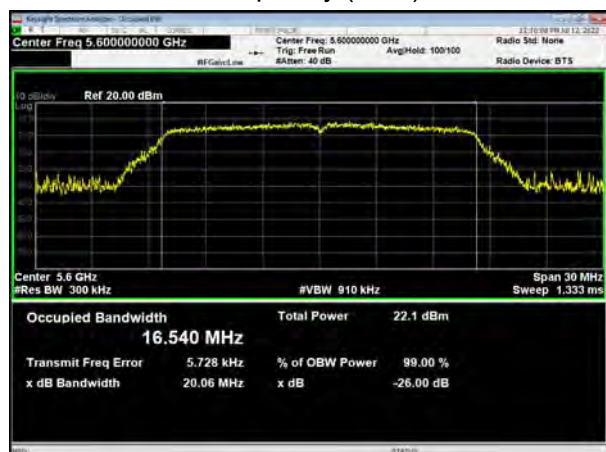
U-NII-2C, 802.11a
Carrier frequency (MHz): 5540



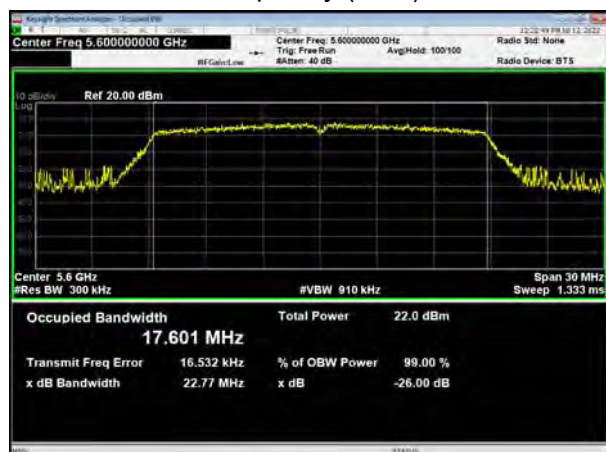
U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5540



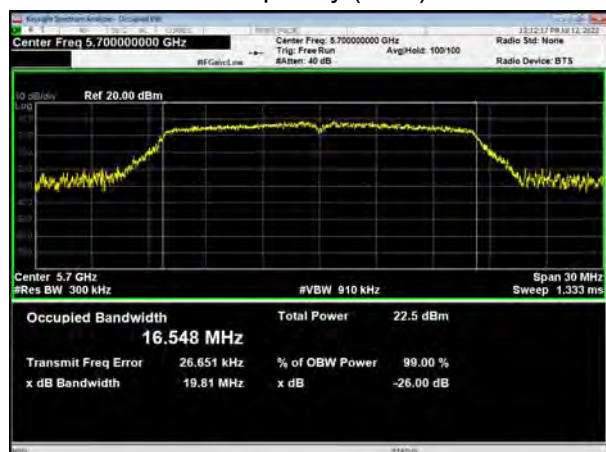
U-NII-2C, 802.11a
Carrier frequency (MHz): 5600



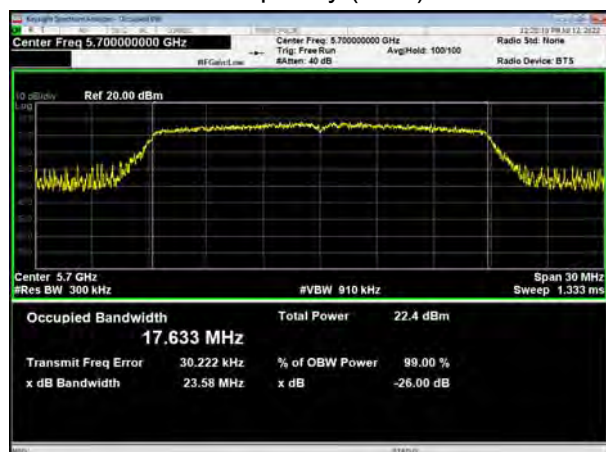
U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5600



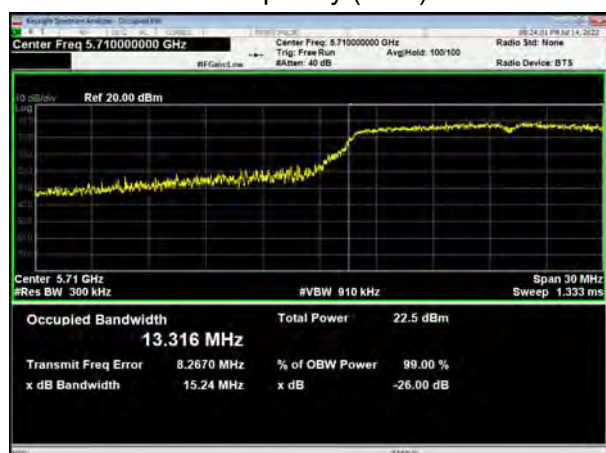
U-NII-2C, 802.11a
Carrier frequency (MHz): 5700



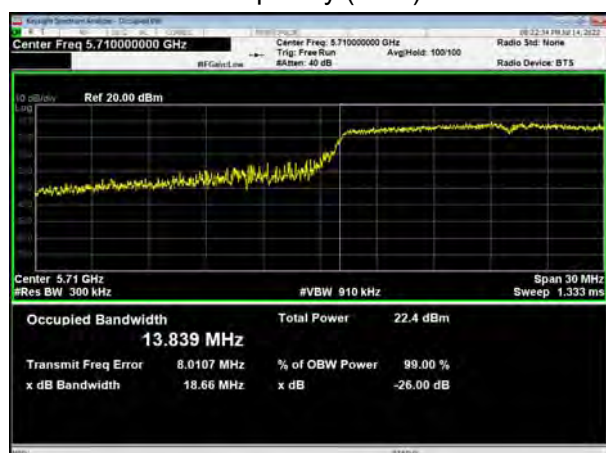
U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5700



U-NII-2C, 802.11a
Carrier frequency (MHz): 5720



U-NII-2C, 802.11n HT20
Carrier frequency (MHz): 5720



U-NII-2C, 802.11n HT40 Carrier frequency (MHz): 5510



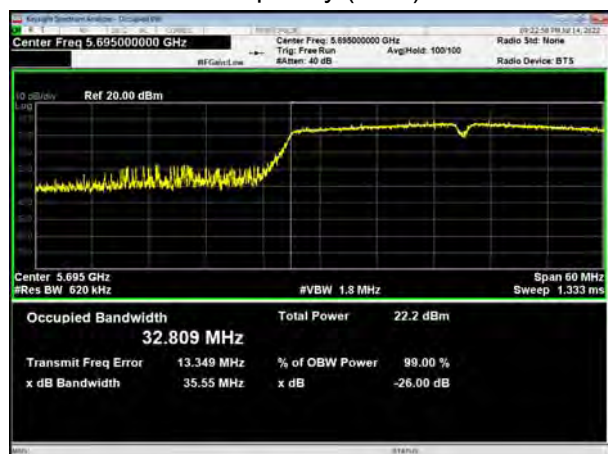
U-NII-2C, 802.11n HT40 Carrier frequency (MHz): 5670



U-NII-2C, 802.11n HT40 Carrier frequency (MHz): 5550



U-NII-2C, 802.11n HT40 Carrier frequency (MHz): 5710



U-NII-2C, 802.11n HT40 Carrier frequency (MHz): 5590



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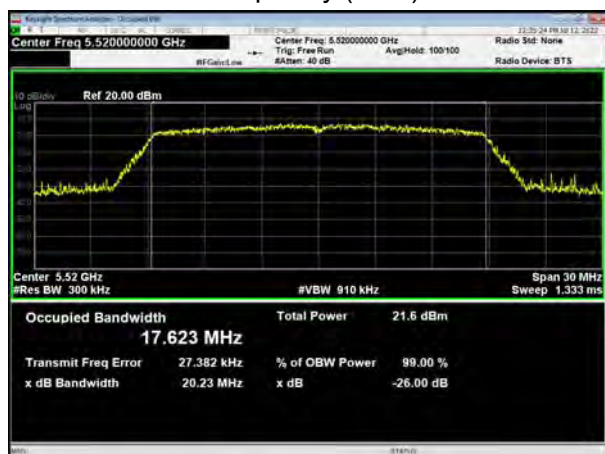
U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5500



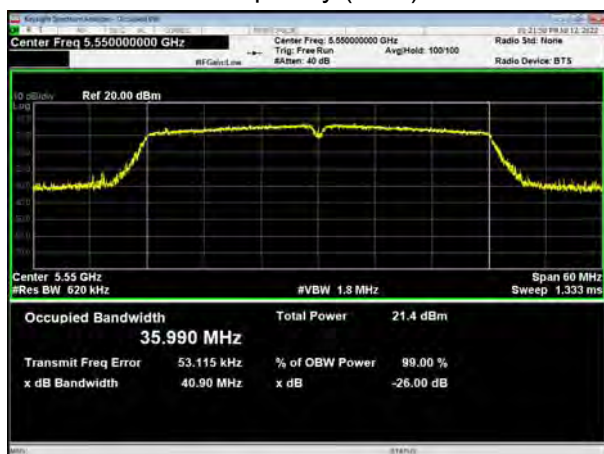
U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5510



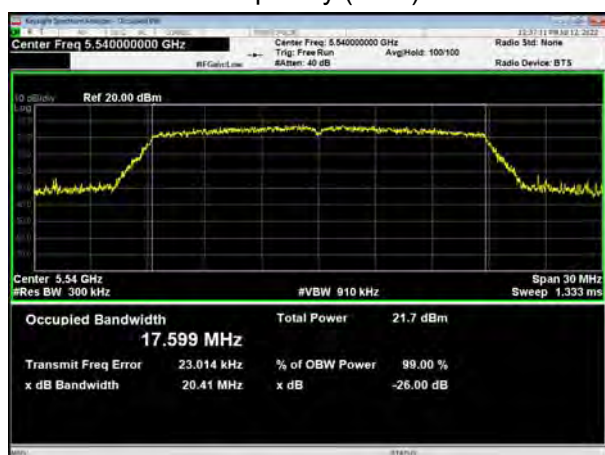
U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5520



U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5550



U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5540



U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5590



U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5600



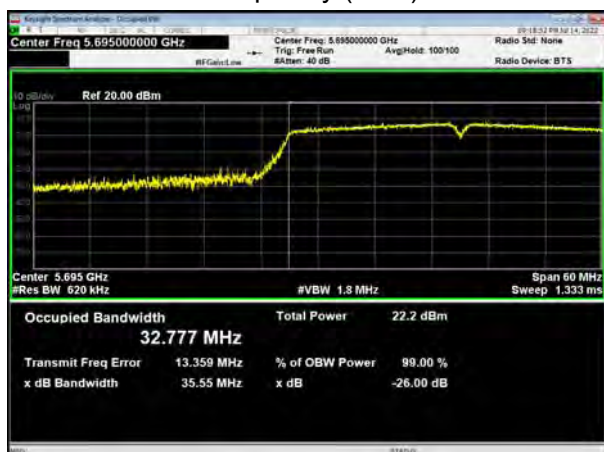
U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5670



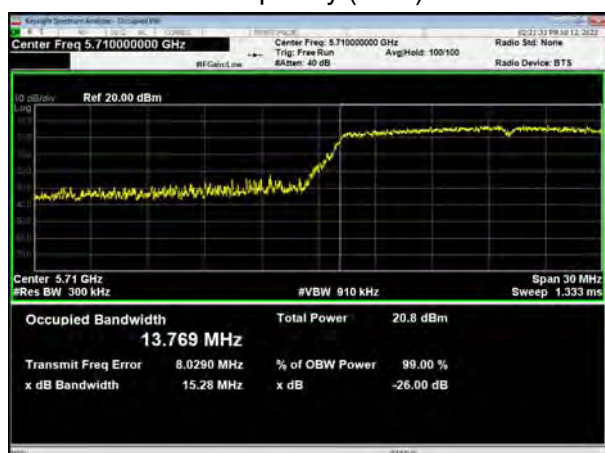
U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5700



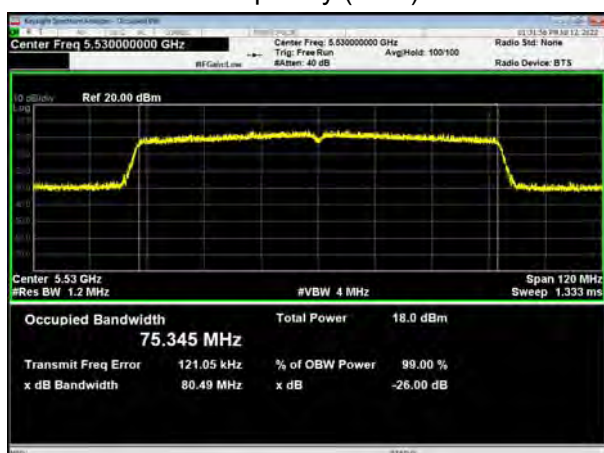
U-NII-2C, 802.11ac VHT40
Carrier frequency (MHz): 5710



U-NII-2C, 802.11ac VHT20
Carrier frequency (MHz): 5720



U-NII-2C, 802.11ac VHT80
Carrier frequency (MHz): 5530





U-NII-2C, 802.11ac VHT80
Carrier frequency (MHz): 5610



U-NII-2C, 802.11ac VHT80
Carrier frequency (MHz): 5690





99% bandwidth

U-NII-3, 802.11a

Carrier frequency (MHz): 5720



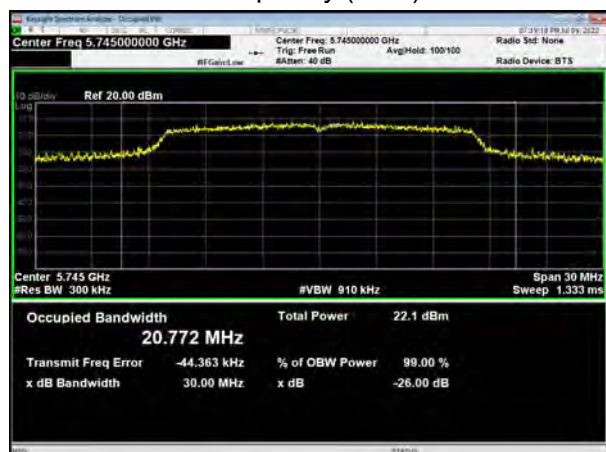
U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5720



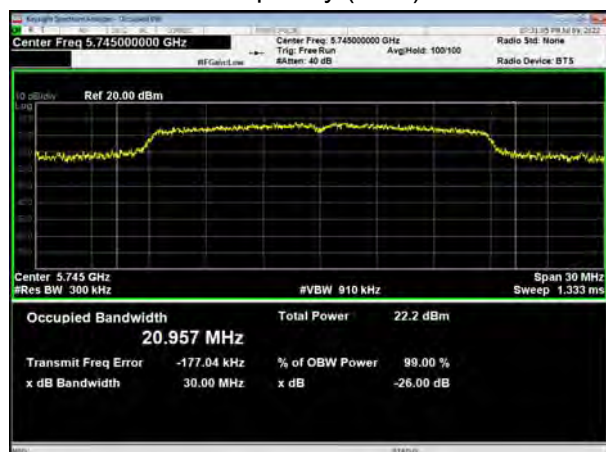
U-NII-3, 802.11a

Carrier frequency (MHz): 5745



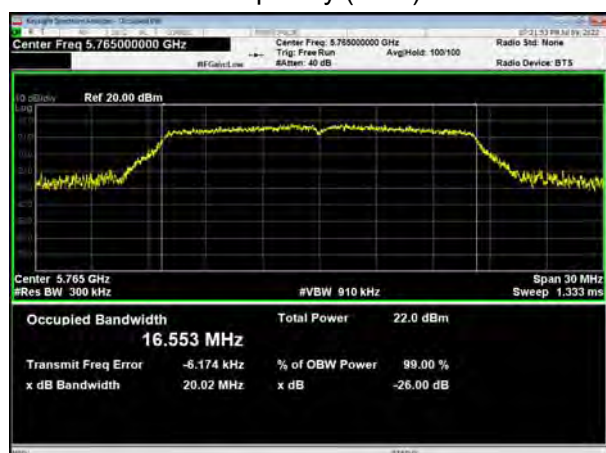
U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5745



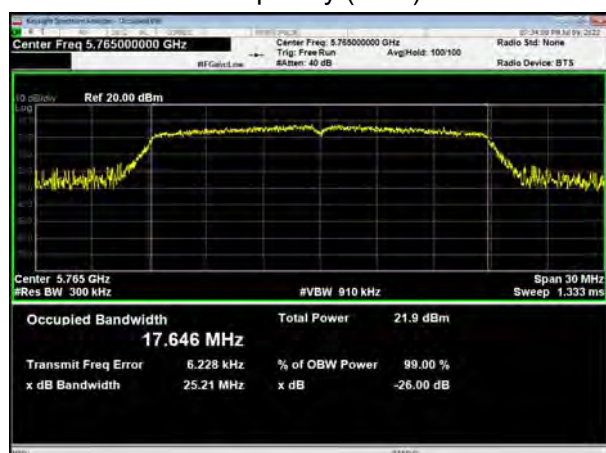
U-NII-3, 802.11a

Carrier frequency (MHz): 5765

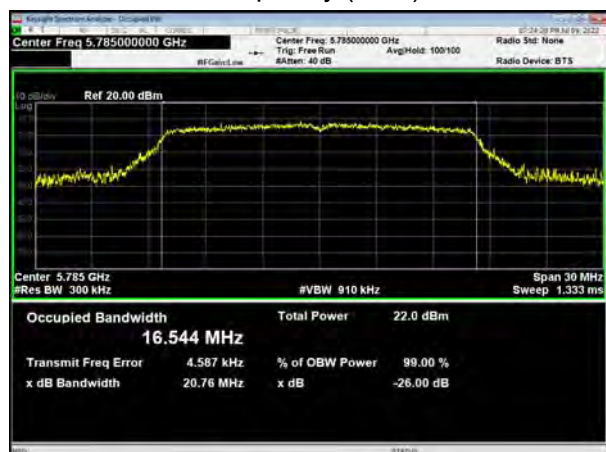


U-NII-3, 802.11n HT20

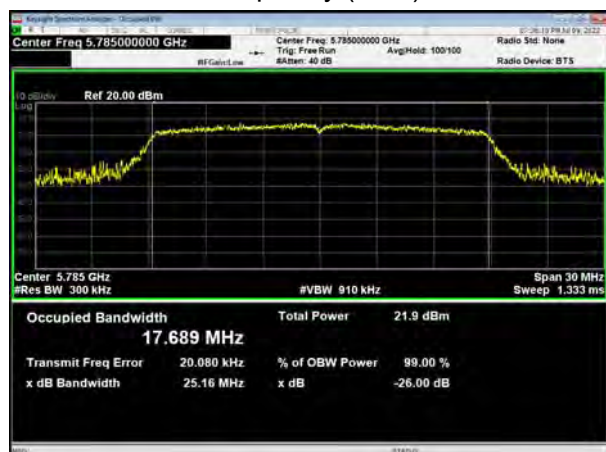
Carrier frequency (MHz): 5765



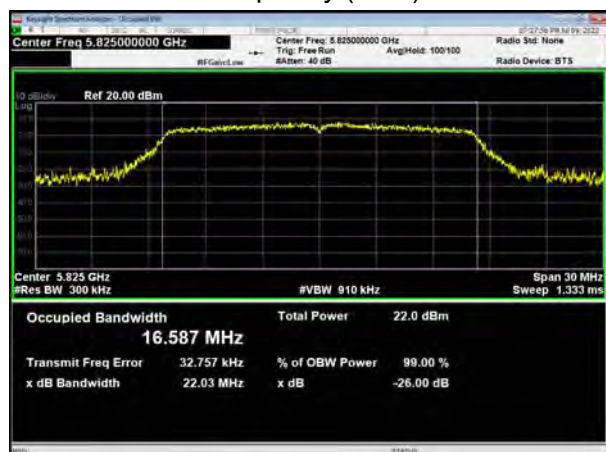
U-NII-3, 802.11a
Carrier frequency (MHz): 5785



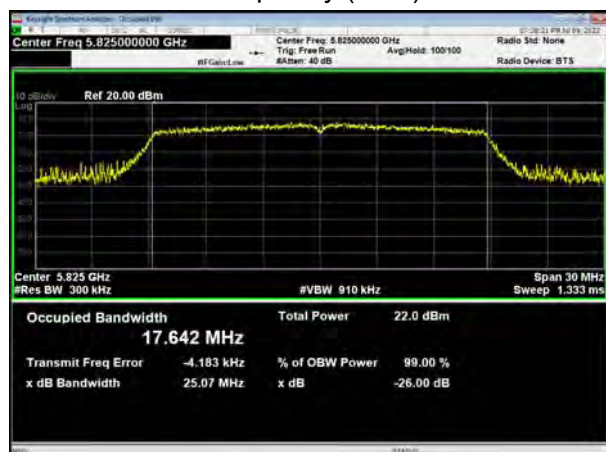
U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5785



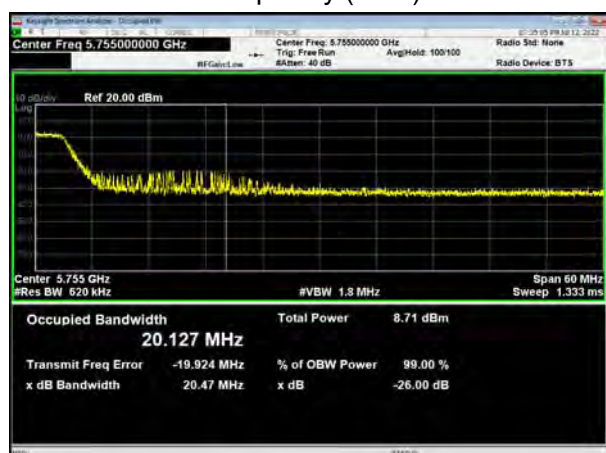
U-NII-3, 802.11a
Carrier frequency (MHz): 5825



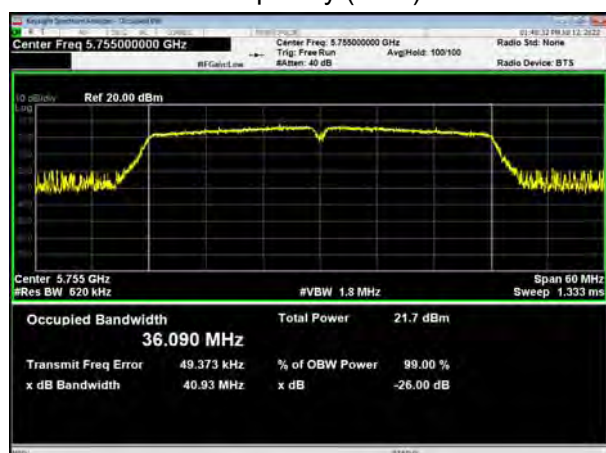
U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5710



U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5755



U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5795



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U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5720



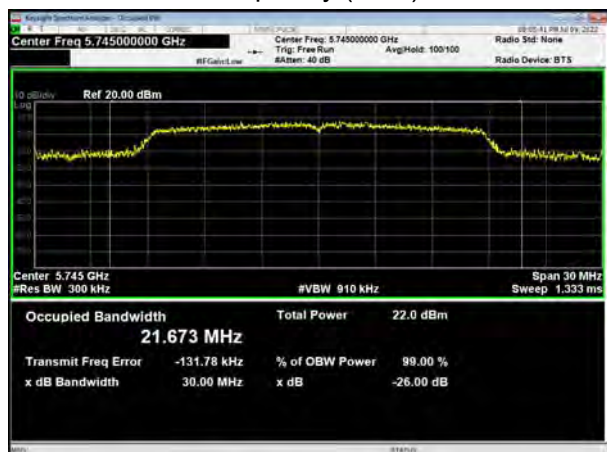
U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5785



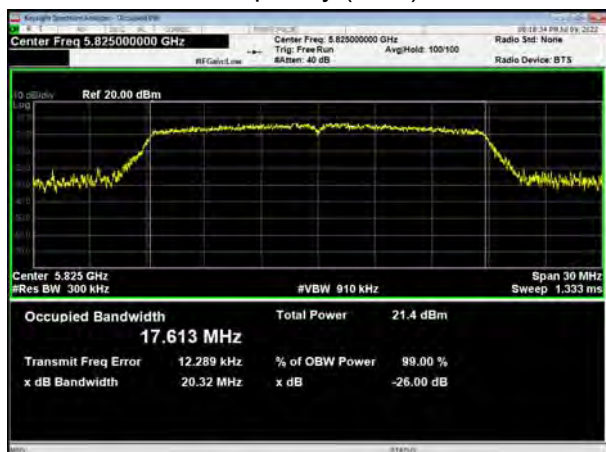
U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5745



U-NII-3, 802.11ac VHT20

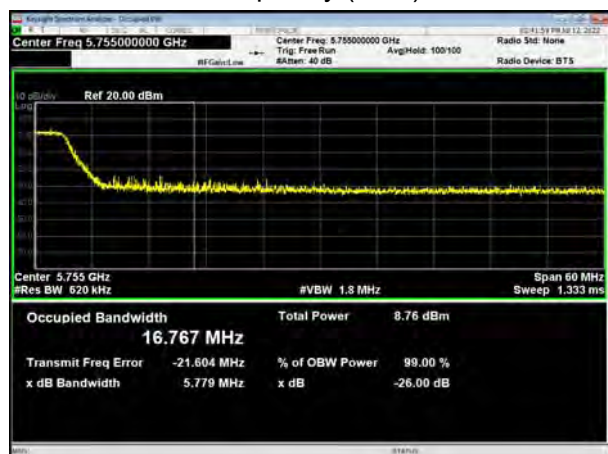
Carrier frequency (MHz): 5825



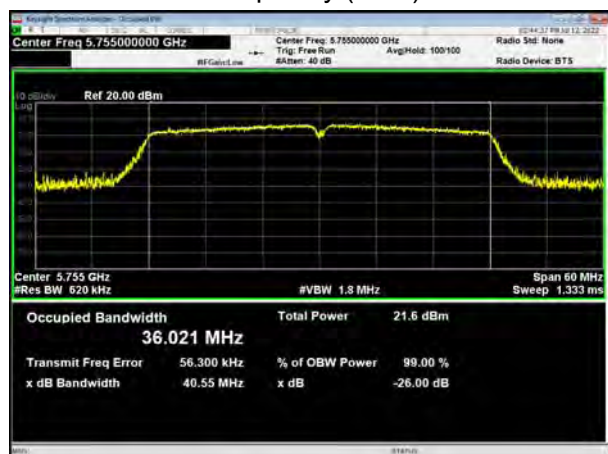
U-NII-3, 802.11ac VHT20 Carrier frequency (MHz): 5765



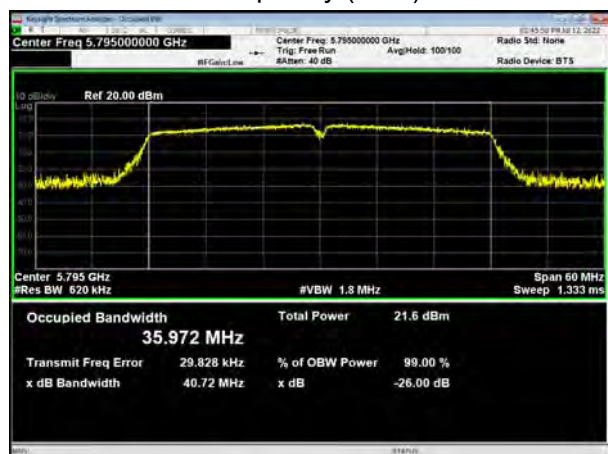
U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5710



U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT80 Carrier frequency (MHz): 5690



U-NII-3, 802.11ac VHT80 Carrier frequency (MHz): 5775



Minimum 6 dB bandwidth

U-NII-3, 802.11a

Carrier frequency (MHz): 5740



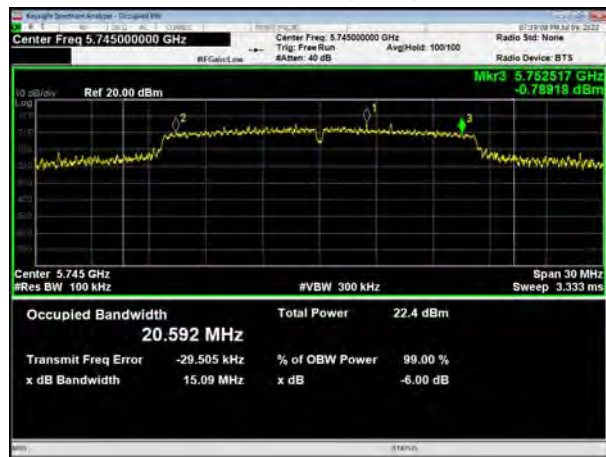
U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5740



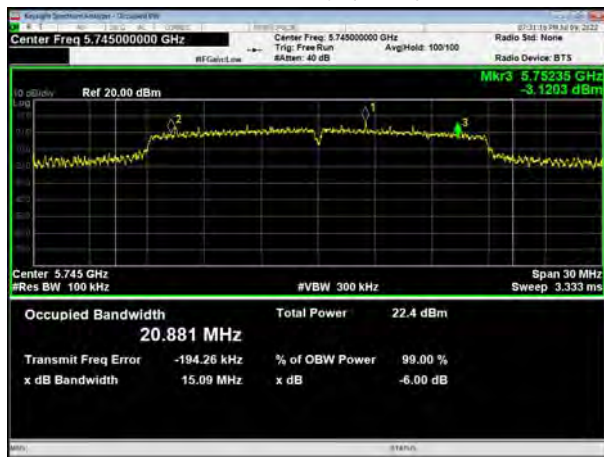
U-NII-3, 802.11a

Carrier frequency (MHz): 5745



U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5745



U-NII-3, 802.11a

Carrier frequency (MHz): 5765



U-NII-3, 802.11n HT20

Carrier frequency (MHz): 5765



U-NII-3, 802.11a
Carrier frequency (MHz): 5785



U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5785



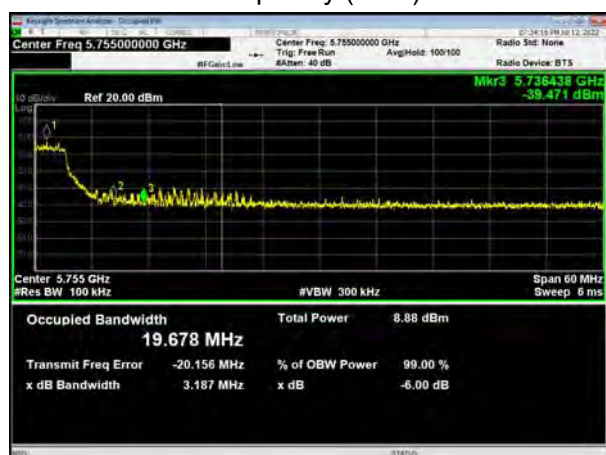
U-NII-3, 802.11a
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT20
Carrier frequency (MHz): 5825



U-NII-3, 802.11n HT40
Carrier frequency (MHz): 5710



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U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5755



U-NII-3, 802.11n HT40

Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5740



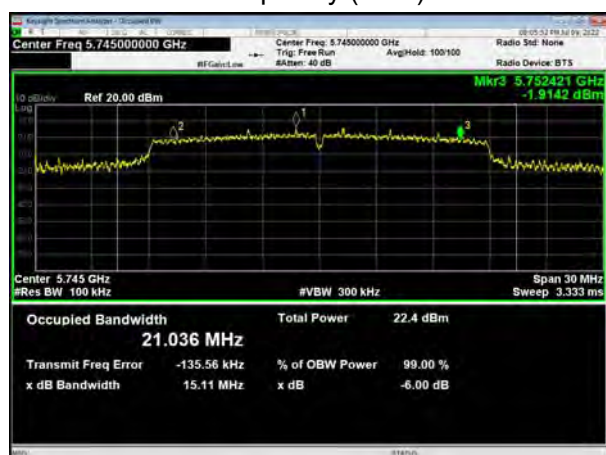
U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5785



U-NII-3, 802.11ac VHT20

Carrier frequency (MHz): 5745



U-NII-3, 802.11ac VHT20

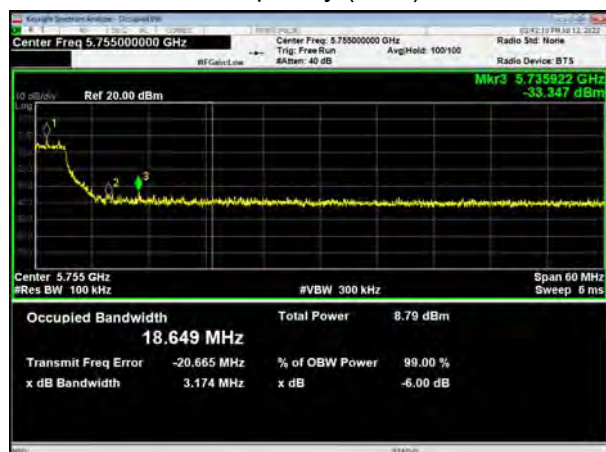
Carrier frequency (MHz): 5825



U-NII-3, 802.11ac VHT20 Carrier frequency (MHz): 5765



U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5710



U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5755



U-NII-3, 802.11ac VHT40 Carrier frequency (MHz): 5795



U-NII-3, 802.11ac VHT80 Carrier frequency (MHz): 5690



U-NII-3, 802.11ac VHT80 Carrier frequency (MHz): 5775



5.2. Average Power Output

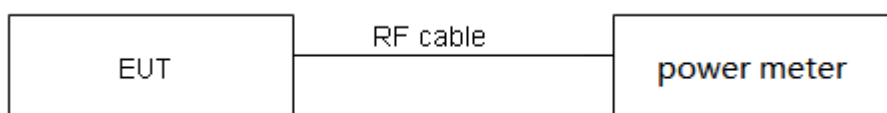
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

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

Test Setup



Limits

Rule FCC Part 15.407(a)(1)(2)(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	T _{on} (ms)	T _(on+off) (ms)	Duty cycle	Duty cycle correction Factor(dB)
802.11a	1.39	1.44	0.97	0.15
802.11n HT20	1.30	1.35	0.96	0.16
802.11n HT40	0.65	0.69	0.94	0.26
802.11ac VHT20	1.31	1.36	0.96	0.16
802.11ac VHT40	0.65	0.70	0.93	0.32
802.11ac VHT80	0.32	0.37	0.86	0.63

Note: when Duty cycle ≥ 0.98 , Duty cycle correction Factor not required.

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	20.29	24.07>24	24.00
		56/5280	20.14	24.04>24	24.00
		60/5300	19.80	23.97<24	23.97
		64/5320	20.11	24.03>24	24.00
	802.11n HT20	52/5260	22.39	24.50>24	24.00
		56/5280	22.60	24.54>24	24.00
		60/5300	20.36	24.09>24	24.00
		64/5320	20.56	24.13>24	24.00
	802.11n HT40	54/5270	40.72	27.10>24	24.00
		62/5310	40.82	27.11>24	24.00
	802.11ac VHT20	52/5260	20.39	24.09>24	24.00
		56/5280	20.40	24.10>24	24.00
		60/5300	20.25	24.06>24	24.00
		64/5320	20.29	24.07>24	24.00
	802.11ac VHT40	54/5270	40.66	27.09>24	24.00
		62/5310	40.92	27.12>24	24.00
	802.11ac VHT80	58/5290	81.30	30.10>24	24.00
U-NII-2C	802.11a	100/5500	20.18	24.05>24	24.00
		104/5520	19.84	23.98<24	23.98
		108/5540	21.03	24.23>24	24.00
		120/5600	20.06	24.02>24	24.00
		140/5700	19.81	23.97<24	23.97
		144/5720	15.24	22.83<24	22.83
	802.11n	100/5500	20.32	24.08>24	24.00



	HT20	104/5520	20.29	24.07>24	24.00
		108/5540	20.96	24.21>24	24.00
		120/5600	22.77	24.57>24	24.00
		140/5700	23.58	24.73>24	24.00
		144/5720	18.66	23.71<24	23.71
	802.11n HT40	102/5510	40.41	27.06>24	24.00
		110/5550	40.80	27.11>24	24.00
		118/5590	40.61	27.09>24	24.00
		134/5670	41.05	27.13>24	24.00
		142/5710	35.55	26.51>24	24.00
	802.11ac VHT20	100/5500	20.11	24.03>24	24.00
		104/5520	20.23	24.06>24	24.00
		108/5540	20.41	24.10>24	24.00
		120/5600	20.38	24.09>24	24.00
		140/5700	20.31	24.08>24	24.00
		144/5720	15.28	22.84<24	22.84
	802.11ac VHT40	102/5510	41.17	27.15>24	24.00
		110/5550	40.90	27.12>24	24.00
		118/5590	40.62	27.09>24	24.00
		134/5670	41.02	27.13>24	24.00
		142/5710	35.55	26.51>24	24.00
	802.11ac VHT80	106/5530	80.49	30.06>24	24.00
		122/5610	81.18	30.09>24	24.00
		138/5690	75.36	29.77>24	24.00
Note: 250mW=24dBm					

Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor



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	13.40	13.55	24.00	PASS
	40/5200	16.43	16.58	24.00	PASS
	44/5220	17.23	17.38	24.00	PASS
	48/5240	17.34	17.49	24.00	PASS
802.11n HT20	36/5180	13.11	13.27	24.00	PASS
	40/5200	16.15	16.31	24.00	PASS
	44/5220	17.73	17.89	24.00	PASS
	48/5240	17.07	17.23	24.00	PASS
802.11n HT40	38/5190	9.90	10.16	24.00	PASS
	46/5230	15.54	15.80	24.00	PASS
802.11ac VHT20	36/5180	12.56	12.72	24.00	PASS
	40/5200	15.65	15.81	24.00	PASS
	44/5220	16.62	16.78	24.00	PASS
	48/5240	16.59	16.75	24.00	PASS
802.11ac VHT40	38/5190	9.96	10.28	24.00	PASS
	46/5230	15.50	15.82	24.00	PASS
802.11ac VHT80	42/5210	9.66	10.29	24.00	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	16.93	17.08	24.00	PASS
	56/5280	16.87	17.02	24.00	PASS
	60/5300	14.81	14.96	23.97	PASS
	64/5320	12.26	12.41	24.00	PASS
802.11n HT20	52/5260	16.75	16.91	24.00	PASS
	56/5280	16.73	16.89	24.00	PASS
	60/5300	14.60	14.76	24.00	PASS
	64/5320	12.20	12.36	24.00	PASS
802.11n HT40	54/5270	14.06	14.32	24.00	PASS
	62/5310	9.92	10.18	24.00	PASS
802.11ac VHT20	52/5260	16.19	16.35	24.00	PASS
	56/5280	16.04	16.20	24.00	PASS
	60/5300	14.55	14.71	24.00	PASS
	64/5320	12.01	12.17	24.00	PASS
802.11ac VHT40	54/5270	14.01	14.33	24.00	PASS
	62/5310	9.88	10.20	24.00	PASS
802.11ac VHT80	58/5290	8.79	9.42	24.00	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	14.59	14.74	24.00	PASS
	104/5520	17.24	17.39	24.00	PASS
	108/5540	17.77	17.92	24.00	PASS
	120/5600	17.53	17.68	24.00	PASS
	140/5700	17.46	17.61	24.00	PASS
	144/5720	16.78	16.93	24.00	PASS
802.11n HT20	100/5500	14.46	14.62	24.00	PASS
	104/5520	17.04	17.20	24.00	PASS
	108/5540	17.54	17.70	24.00	PASS
	120/5600	17.38	17.54	24.00	PASS
	140/5700	17.40	17.56	24.00	PASS
	144/5720	16.48	16.64	23.71	PASS
802.11n HT40	102/5510	13.18	13.44	24.00	PASS
	110/5550	16.48	16.74	24.00	PASS
	118/5590	16.33	16.59	24.00	PASS
	134/5670	12.62	12.88	24.00	PASS
	142/5710	16.00	16.26	24.00	PASS
802.11ac VHT20	100/5500	14.50	14.66	24.00	PASS
	104/5520	17.29	17.45	24.00	PASS
	108/5540	17.01	17.17	24.00	PASS
	120/5600	16.86	17.02	24.00	PASS
	140/5700	10.09	10.25	24.00	PASS
	144/5720	15.94	16.10	22.84	PASS
802.11ac VHT40	102/5510	13.25	13.57	24.00	PASS
	110/5550	16.47	16.79	24.00	PASS
	118/5590	16.20	16.52	24.00	PASS
	134/5670	12.69	13.01	24.00	PASS
	142/5710	15.95	16.27	24.00	PASS
802.11ac VHT80	106/5530	11.72	12.35	24.00	PASS
	122/5610	14.72	15.35	24.00	PASS
	138/5690	15.57	16.20	24.00	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	9.18	9.33	30	PASS
	149/5745	17.34	17.49	30	PASS
	153/5765	17.16	17.31	30	PASS
	157/5785	17.06	17.21	30	PASS
	165/5825	17.03	17.18	30	PASS
802.11n HT20	144/5720	9.43	9.59	30	PASS
	149/5745	17.17	17.33	30	PASS
	153/5765	16.99	17.15	30	PASS
	157/5785	16.93	17.09	30	PASS
	165/5825	16.95	17.11	30	PASS
802.11n HT40	142/5710	3.53	3.79	30	PASS
	151/5755	15.98	16.24	30	PASS
	159/5795	15.91	16.17	30	PASS
802.11ac VHT20	144/5720	8.92	9.08	30	PASS
	149/5745	16.69	16.85	30	PASS
	153/5765	16.56	16.72	30	PASS
	157/5785	16.60	16.76	30	PASS
	165/5825	16.52	16.68	30	PASS
802.11ac VHT40	142/5710	3.50	3.82	30	PASS
	151/5755	16.00	16.32	30	PASS
	159/5795	15.91	16.23	30	PASS
802.11ac VHT80	138/5690	-0.20	0.12	30	PASS
	155/5775	15.31	15.94	30	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor					

5.3. Frequency Stability

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

1. Frequency stability with respect to ambient temperature

- Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.
- Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
- Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
- While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
- Measure the frequency at each of frequencies specified in 5.6.
- Switch OFF the EUT but do not switch OFF the oscillator heater.
- Lower the chamber temperature by not more than 10°C, and allow the temperature inside the chamber to stabilize.
- Repeat step f) through step i) down to the lowest specified temperature.

2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

- Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.



- b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- c) Measure the frequency at each of the frequencies specified in 5.6.
- d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Measurement Uncertainty

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

**Test Results**

Voltage (V)	Temperature (°C)	U-NII-1 Test Results			
		5200MHz			
		1min	2min	5min	10min
3.87	0	5200.00703	5200.004455	5199.995601	5199.990549
3.87	5	5200.000394	5199.995703	5199.987526	5199.986482
3.87	10	5199.993997	5199.988252	5199.978157	5199.981678
3.87	15	5199.987681	5199.981221	5199.974481	5199.976588
3.87	20	5199.987124	5199.979936	5199.969687	5199.968017
3.87	25	5199.978653	5199.971995	5199.967521	5199.959015
3.87	30	5199.972105	5199.970416	5199.957557	5199.956854
3.87	35	5199.968039	5199.967006	5199.948621	5199.954736
3.6	20	5199.967946	5199.961133	5199.948378	5199.953202
4.45	20	5199.962604	5199.960612	5199.947218	5199.950237
Max. ΔMHz		-0.037395668	-0.039388293	-0.052781993	-0.049762637
PPM		-7.191474592	-7.574671823	-10.15038329	-9.56973791

Voltage (V)	Temperature (°C)	U-NII-2A Test Results			
		5300MHz			
		1min	2min	5min	10min
3.87	0	5299.999081	5299.991197	5299.990196	5299.980555
3.87	5	5299.992879	5299.986383	5299.983574	5299.973312
3.87	10	5299.985424	5299.978727	5299.978082	5299.963733
3.87	15	5299.983942	5299.969917	5299.977534	5299.959128
3.87	20	5299.97798	5299.965693	5299.976993	5299.953947
3.87	25	5299.969041	5299.959439	5299.969717	5299.950994
3.87	30	5299.960572	5299.953577	5299.963861	5299.945412
3.87	35	5299.957555	5299.943856	5299.956768	5299.941031
3.6	20	5299.95121	5299.937456	5299.950387	5299.939349
4.45	20	5299.945951	5299.928804	5299.943592	5299.931748
Max. ΔMHz		-0.054049361	-0.071195684	-0.056407514	-0.068252434
PPM		-10.19799261	-13.43314792	-10.64292721	-12.87781768



Voltage (V)	Temperature (°C)	U-NII-2C Test Results			
		5580MHz			
		1min	2min	5min	10min
3.87	0	5579.999061	5579.99789	5579.988282	5579.986439
3.87	5	5579.989459	5579.992398	5579.984517	5579.985365
3.87	10	5579.98914	5579.983317	5579.984456	5579.979238
3.87	15	5579.982538	5579.974832	5579.975497	5579.971932
3.87	20	5579.975953	5579.969595	5579.970144	5579.962475
3.87	25	5579.975399	5579.966543	5579.967998	5579.953664
3.87	30	5579.96808	5579.96517	5579.96496	5579.947998
3.87	35	5579.960665	5579.960676	5579.95626	5579.943616
3.6	20	5579.958665	5579.950983	5579.955484	5579.937817
4.45	20	5579.956302	5579.947844	5579.946788	5579.928798
3.87	0	5579.999061	5579.99789	5579.988282	5579.986439
Max. ΔMHz		-0.043698455	-0.052156217	-0.053212011	-0.07120182
PPM		-7.8312643	-9.346992324	-9.53620276	-12.76018281

Voltage (V)	Temperature (°C)	U-NII-3 Test Results			
		5785MHz			
		1min	2min	5min	10min
3.87	0	5784.999074	5784.995901	5784.989045	5784.983625
3.87	5	5784.997755	5784.98873	5784.981894	5784.976038
3.87	10	5784.988709	5784.987011	5784.972508	5784.974973
3.87	15	5784.985027	5784.978572	5784.970609	5784.972929
3.87	20	5784.976647	5784.978319	5784.968343	5784.965487
3.87	25	5784.974576	5784.971868	5784.967945	5784.9621
3.87	30	5784.97133	5784.969032	5784.962952	5784.956375
3.87	35	5784.963178	5784.967536	5784.960546	5784.947515
3.6	20	5784.959658	5784.958554	5784.952873	5784.940477
4.45	20	5784.954396	5784.957666	5784.948261	5784.932807
3.87	0	5784.999074	5784.995901	5784.989045	5784.983625
Max. ΔMHz		-0.045604289	-0.04233434	-0.05173904	-0.067192746
PPM		-7.883195967	-7.317949805	-8.943654286	-11.61499503

5.4. Power Spectral Density

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

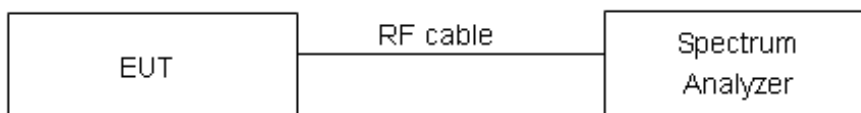
Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz, 5.250-5.350GHz, 5.470-5.725GHz.
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD 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)/ Part 15.407(a)(2) / Part 15.407(a)(3)

For an indoor access point operating in the band 5.15-5.25 GHz, 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.

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.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, 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.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz 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.

Frequency Bands/MHz	Limits
5150-5250	11dBm/MHz
5.25-5.35 GHz and 5.47-5.725 GHz	11dBm/MHz
5725-5850	30dBm/500kHz

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.75\text{dB}$.

**Test Results:**

Note: Power Spectral Density =Read Value+Duty cycle correction factor

U-NII-1

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	36/5180	3.71	3.86	11.00	PASS
	40/5200	6.88	7.03	11.00	PASS
	44/5220	7.82	7.97	11.00	PASS
	48/5240	7.81	7.96	11.00	PASS
802.11n HT20	36/5180	3.17	3.33	11.00	PASS
	40/5200	6.44	6.60	11.00	PASS
	44/5220	8.21	8.37	11.00	PASS
	48/5240	7.33	7.49	11.00	PASS
802.11n HT40	38/5190	-2.66	-2.40	11.00	PASS
	46/5230	2.71	2.97	11.00	PASS
802.11ac VHT20	36/5180	2.74	2.90	11.00	PASS
	40/5200	5.92	6.08	11.00	PASS
	44/5220	6.95	7.11	11.00	PASS
	48/5240	6.73	6.89	11.00	PASS
802.11ac VHT40	38/5190	-2.47	-2.15	11.00	PASS
	46/5230	2.73	3.05	11.00	PASS
802.11ac VHT80	42/5210	-5.92	-5.29	11.00	PASS



U-NII-2A

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	52/5260	7.24	7.39	11.00	PASS
	56/5280	7.55	7.70	11.00	PASS
	60/5300	5.17	5.32	11.00	PASS
	64/5320	2.82	2.97	11.00	PASS
802.11n HT20	52/5260	6.98	7.14	11.00	PASS
	56/5280	7.14	7.30	11.00	PASS
	60/5300	5.01	5.17	11.00	PASS
	64/5320	2.97	3.13	11.00	PASS
802.11n HT40	54/5270	1.33	1.59	11.00	PASS
	62/5310	-2.46	-2.20	11.00	PASS
802.11ac VHT20	52/5260	6.39	6.55	11.00	PASS
	56/5280	6.28	6.44	11.00	PASS
	60/5300	4.93	5.09	11.00	PASS
	64/5320	2.57	2.73	11.00	PASS
802.11ac VHT40	54/5270	1.35	1.67	11.00	PASS
	62/5310	-2.70	-2.38	11.00	PASS
802.11ac VHT80	58/5290	-6.83	-6.20	11.00	PASS



U-NII-2C

Mode	Channel Number	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11a	100/5500	5.15	5.30	11.00	PASS
	104/5520	7.66	7.81	11.00	PASS
	108/5540	8.26	8.41	11.00	PASS
	120/5600	8.01	8.16	11.00	PASS
	140/5700	8.09	8.24	11.00	PASS
	144/5720	7.87	8.02	11.00	PASS
802.11n HT20	100/5500	5.23	5.39	11.00	PASS
	104/5520	7.38	7.54	11.00	PASS
	108/5540	7.96	8.12	11.00	PASS
	120/5600	7.77	7.93	11.00	PASS
	140/5700	7.65	7.81	11.00	PASS
	144/5720	7.56	7.72	11.00	PASS
802.11n HT40	102/5510	0.58	0.84	11.00	PASS
	110/5550	3.83	4.09	11.00	PASS
	118/5590	3.69	3.95	11.00	PASS
	134/5670	0.02	0.28	11.00	PASS
	142/5710	3.74	4.00	11.00	PASS
802.11ac VHT20	100/5500	4.92	5.08	11.00	PASS
	104/5520	7.50	7.66	11.00	PASS
	108/5540	8.07	8.23	11.00	PASS
	120/5600	7.38	7.54	11.00	PASS
	140/5700	0.56	0.72	11.00	PASS
	144/5720	7.11	7.27	11.00	PASS
802.11ac VHT40	102/5510	0.89	1.21	11.00	PASS
	110/5550	3.86	4.18	11.00	PASS
	118/5590	3.81	4.13	11.00	PASS
	134/5670	0.14	0.46	11.00	PASS
	142/5710	3.57	3.89	11.00	PASS
802.11ac VHT80	106/5530	-3.86	-3.54	11.00	PASS
	122/5610	-1.10	-0.78	11.00	PASS
	138/5690	-0.16	0.16	11.00	PASS



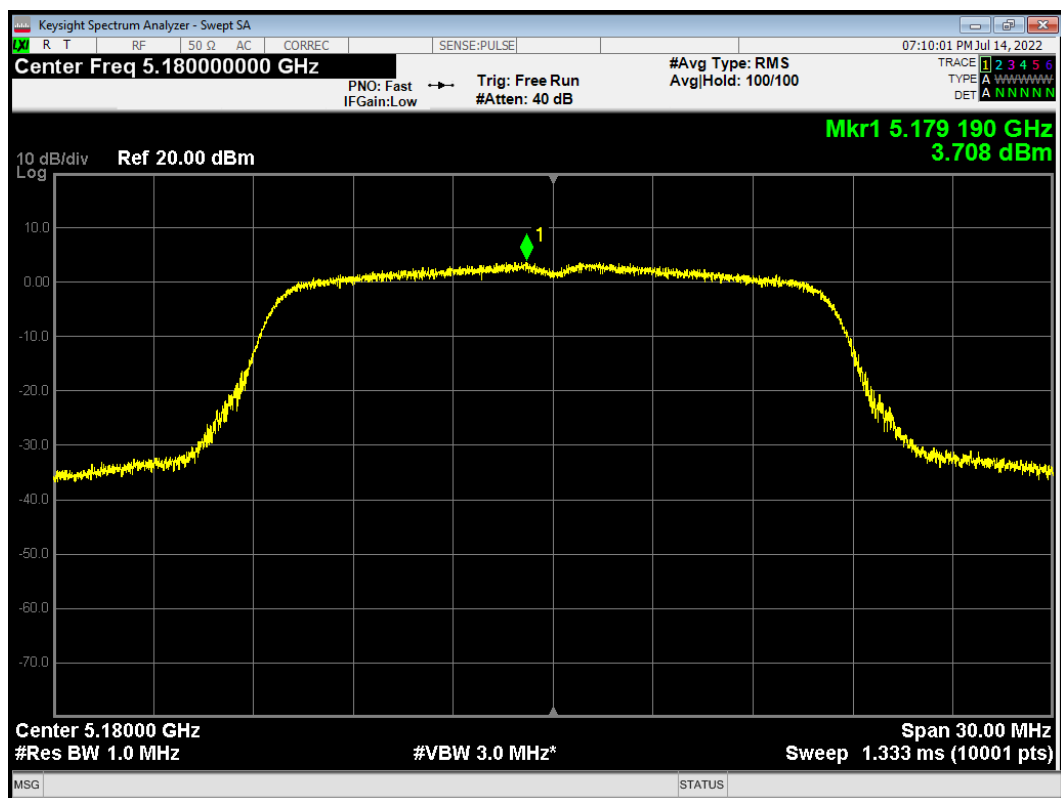
U-NII-3

Mode	Channel Number	Read Value (dBm/470kHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)	Conclusion
802.11a	144/5720	2.49	2.91	30.00	PASS
	149/5745	4.44	4.86	30.00	PASS
	153/5765	4.75	5.17	30.00	PASS
	157/5785	4.19	4.61	30.00	PASS
	165/5825	4.03	4.45	30.00	PASS
802.11n HT20	144/5720	2.40	2.83	30.00	PASS
	149/5745	4.18	4.61	30.00	PASS
	153/5765	4.10	4.53	30.00	PASS
	157/5785	3.85	4.28	30.00	PASS
	165/5825	3.89	4.32	30.00	PASS
802.11n HT40	142/5710	-3.74	-3.21	30.00	PASS
	151/5755	-0.12	0.41	30.00	PASS
	159/5795	0.14	0.67	30.00	PASS
802.11ac VHT20	144/5720	1.75	2.18	30.00	PASS
	149/5745	3.54	3.97	30.00	PASS
	153/5765	3.67	4.10	30.00	PASS
	157/5785	3.87	4.30	30.00	PASS
	165/5825	3.55	3.98	30.00	PASS
802.11ac VHT40	142/5710	-3.48	-2.89	30.00	PASS
	151/5755	0.14	0.73	30.00	PASS
	159/5795	-0.26	0.33	30.00	PASS
802.11ac VHT80	138/5690	-7.60	-6.70	30.00	PASS
	155/5775	-3.78	-2.88	30.00	PASS
Note: PSD=Read Value+Duty cycle correction factor +10*LOG(500/470) correction factor					

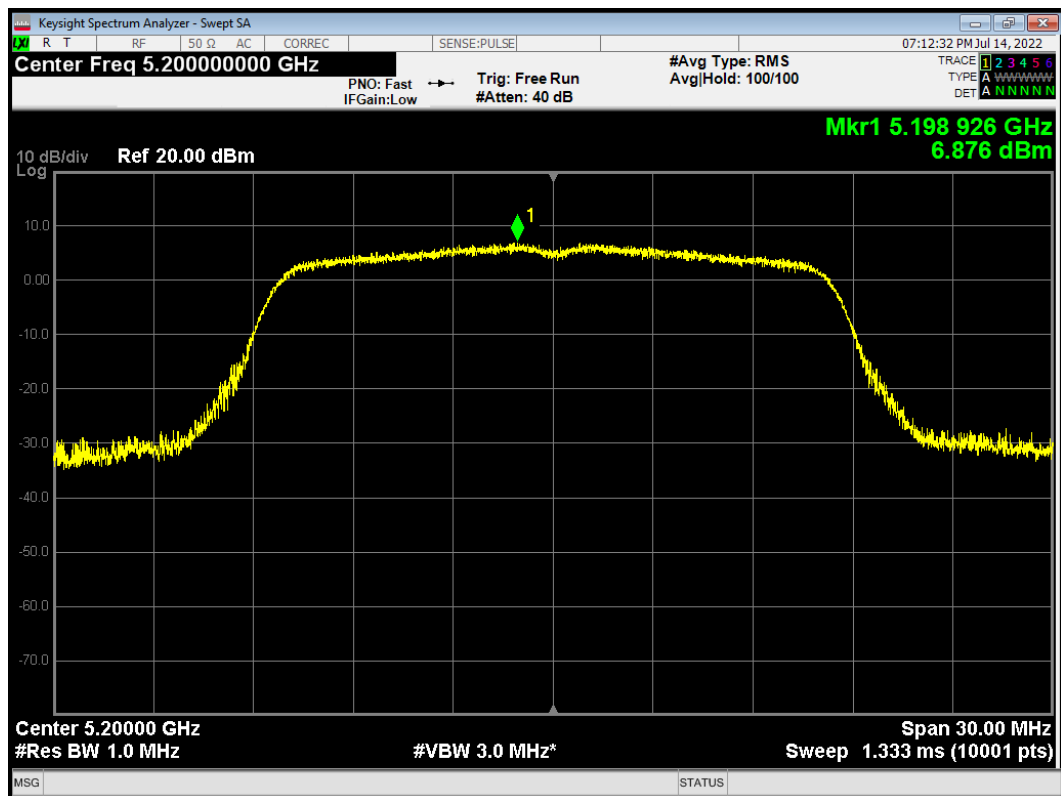


U-NII-1

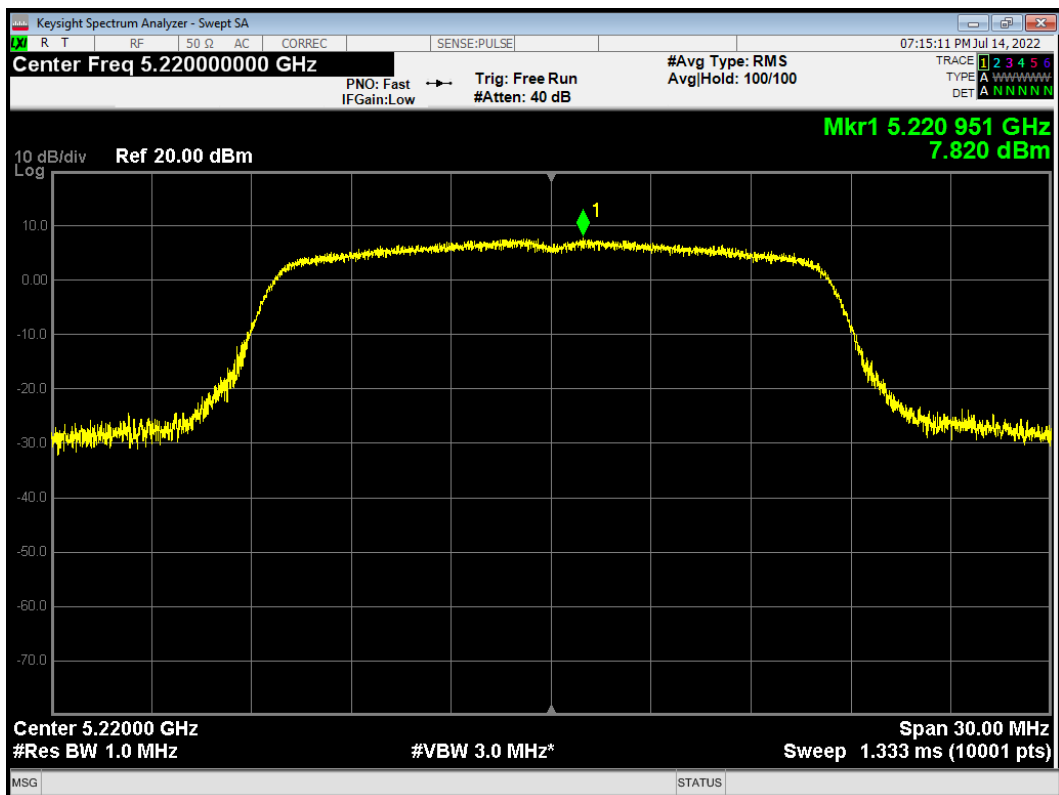
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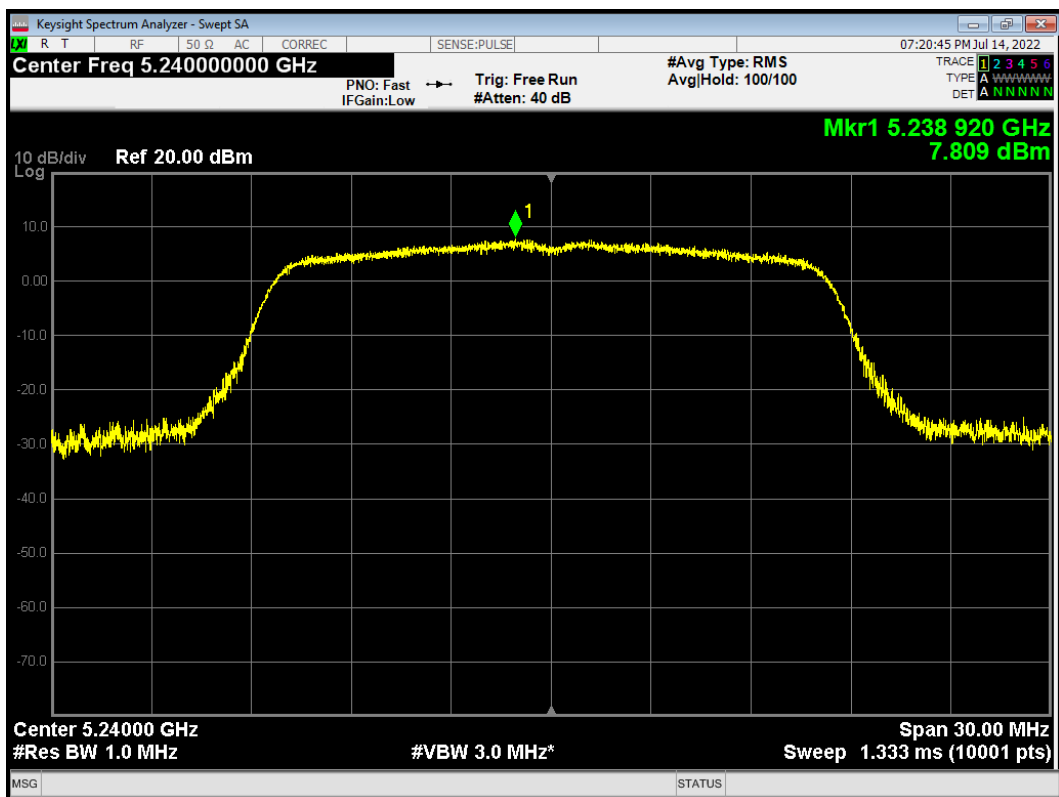
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PSD NVNT 802.11a 5220MHz

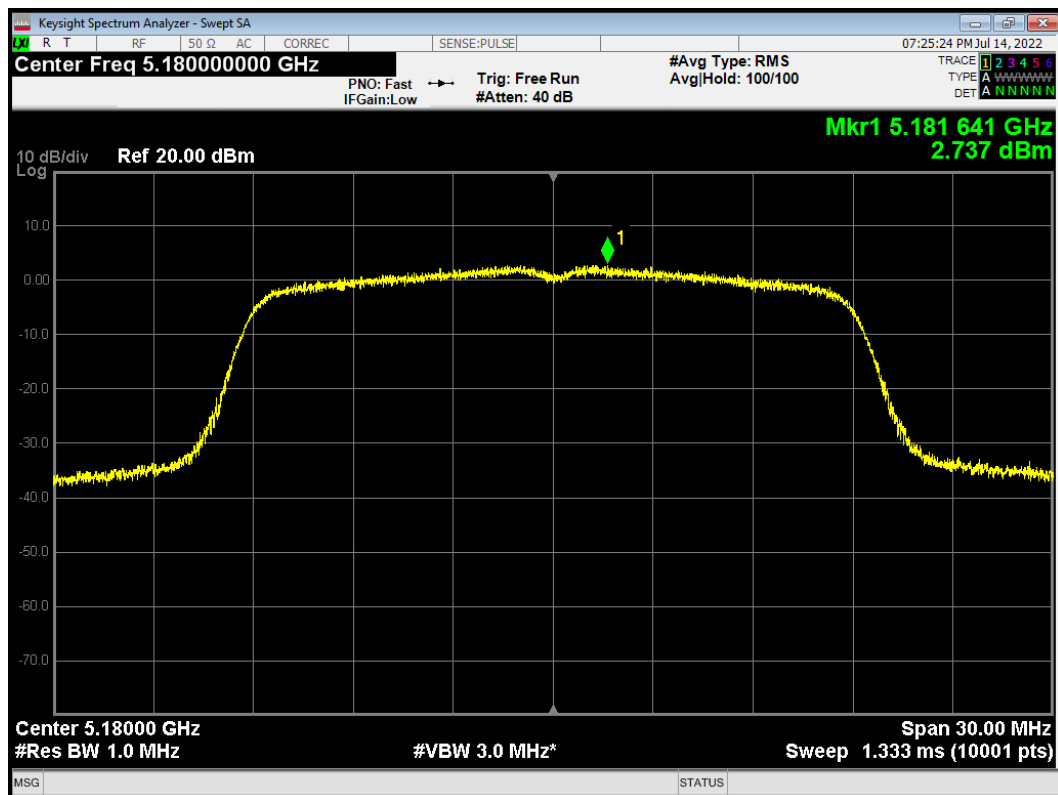


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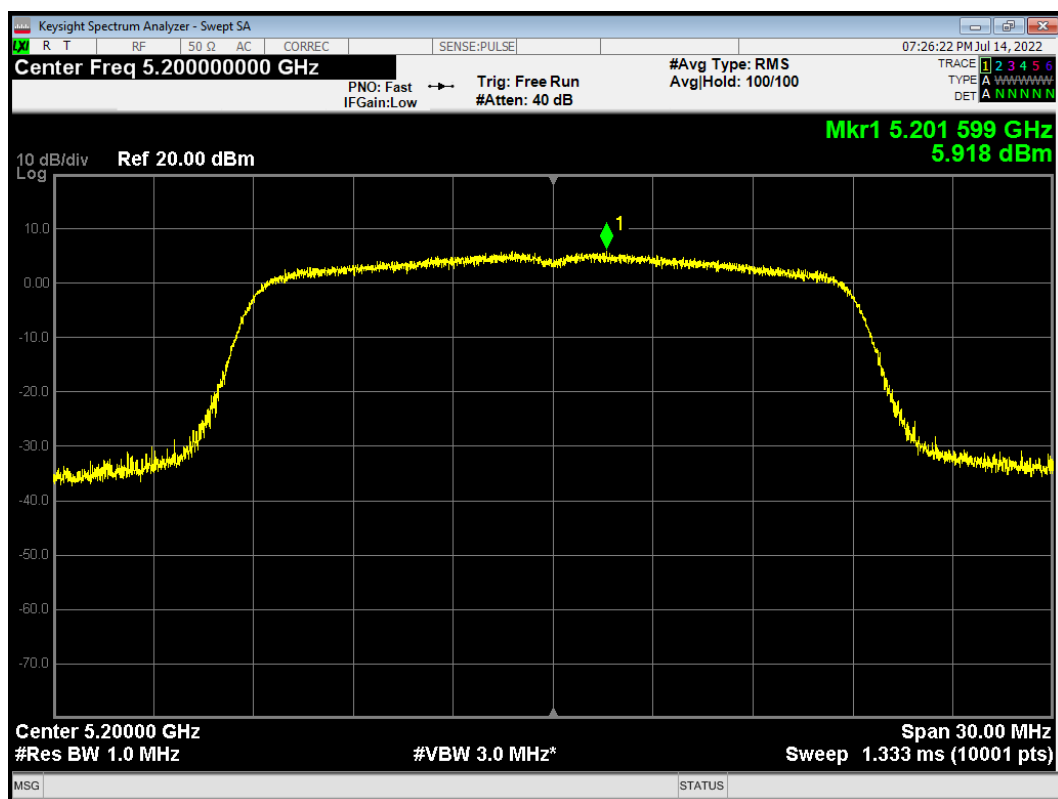




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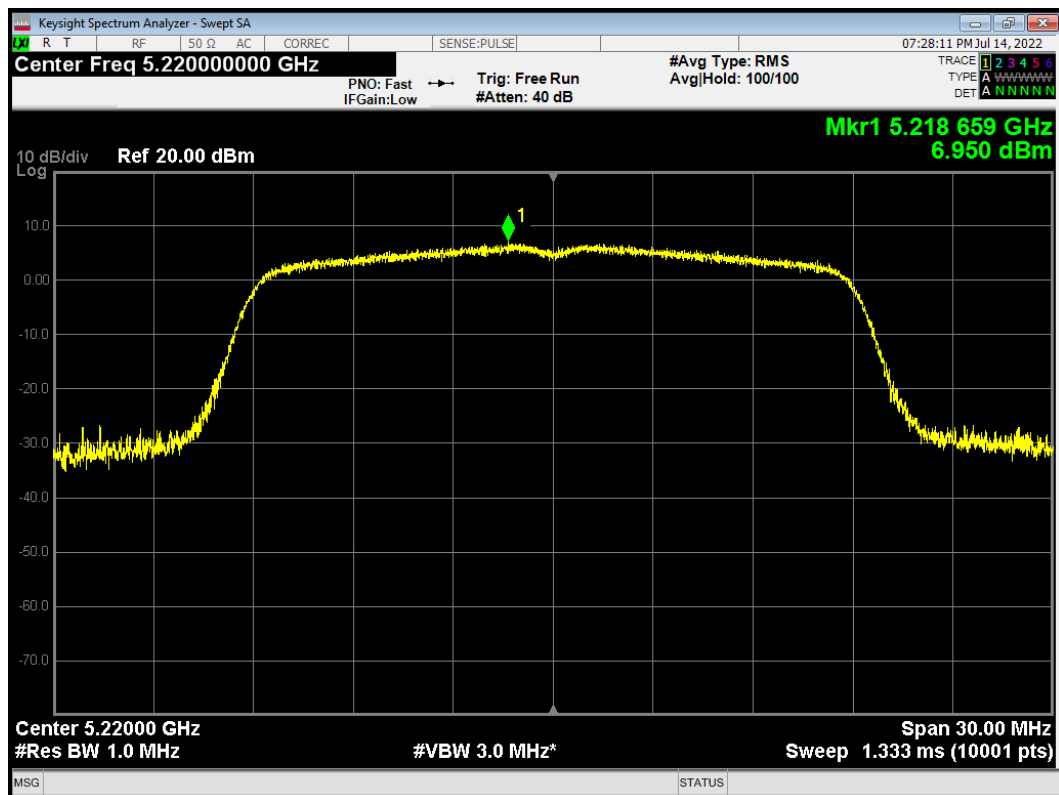


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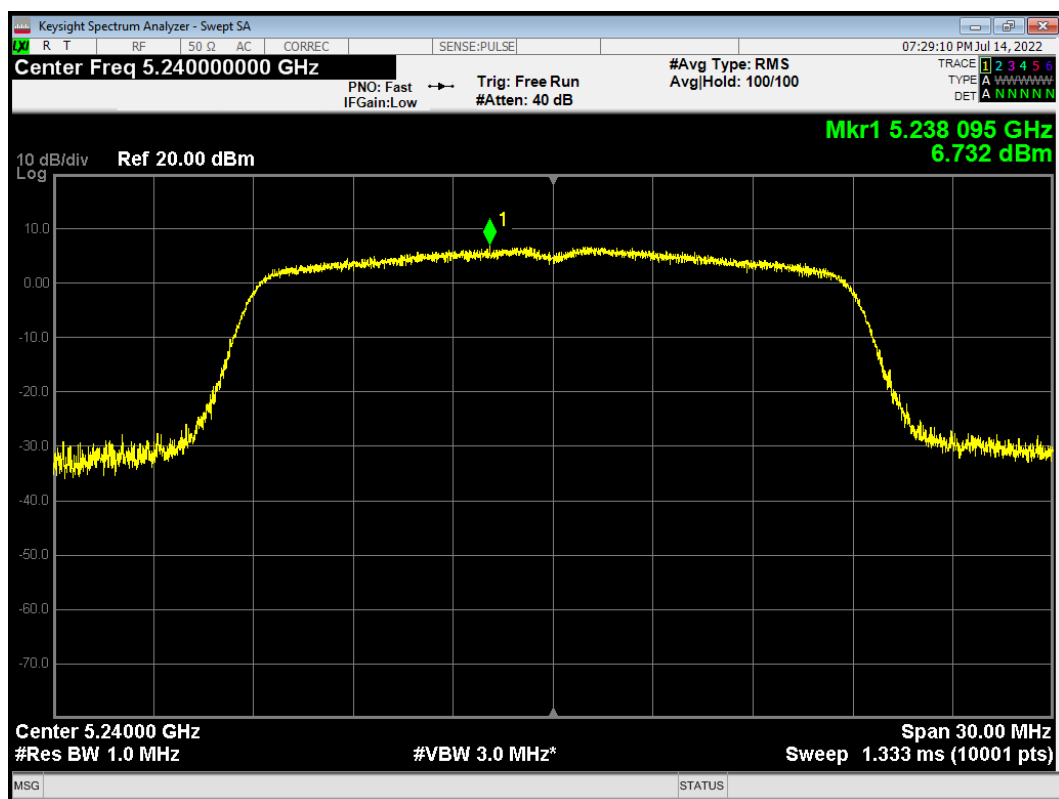




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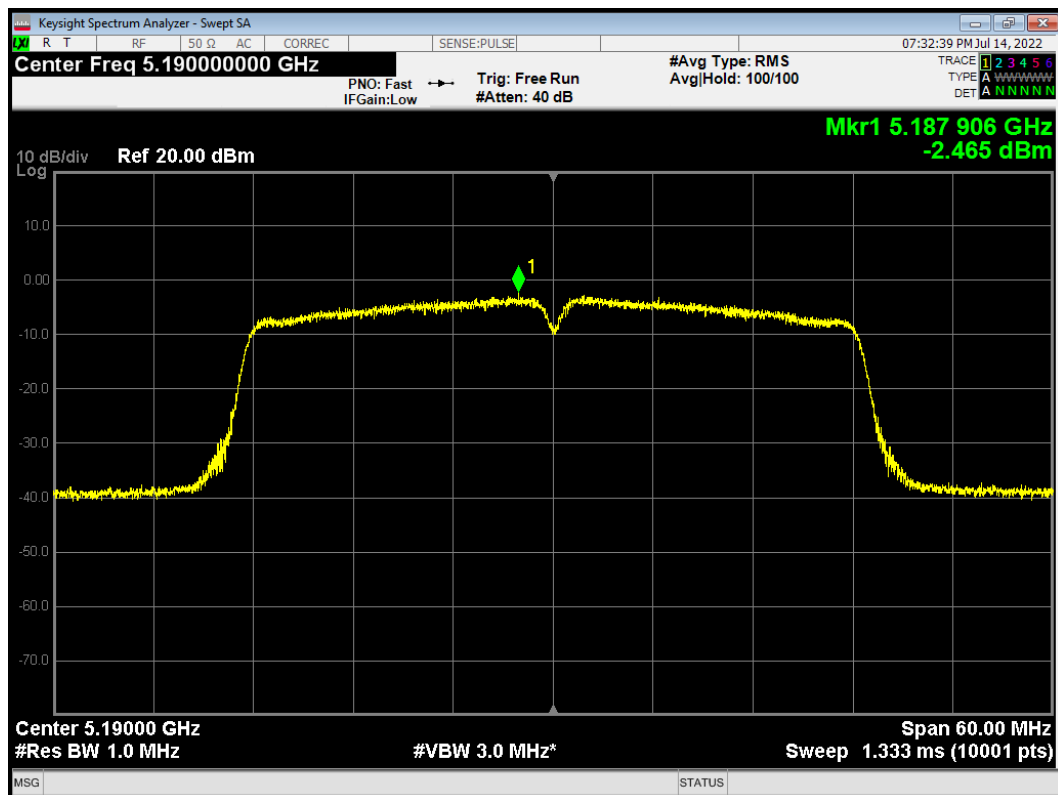


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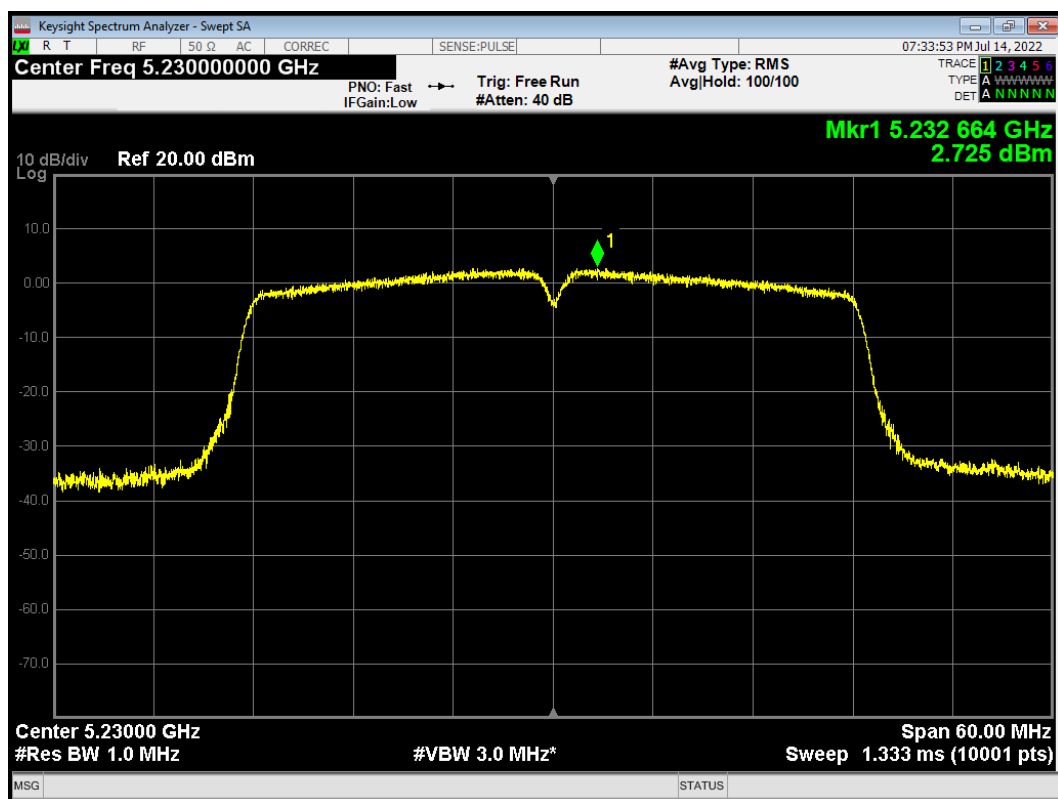




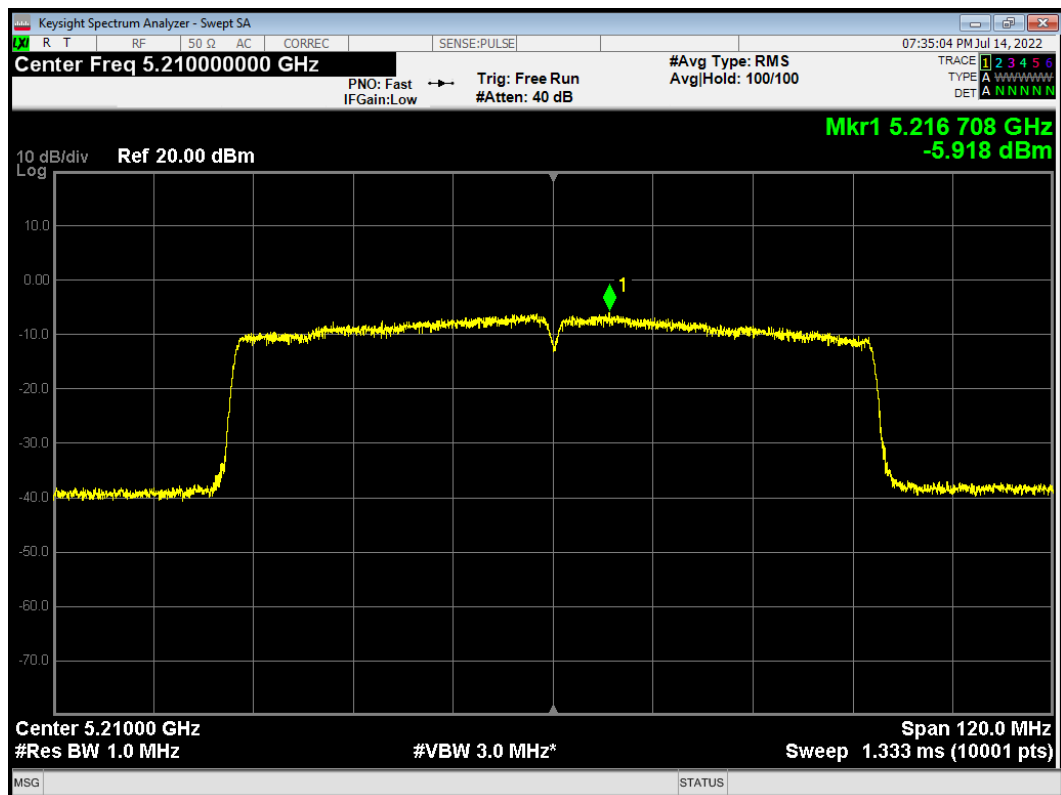
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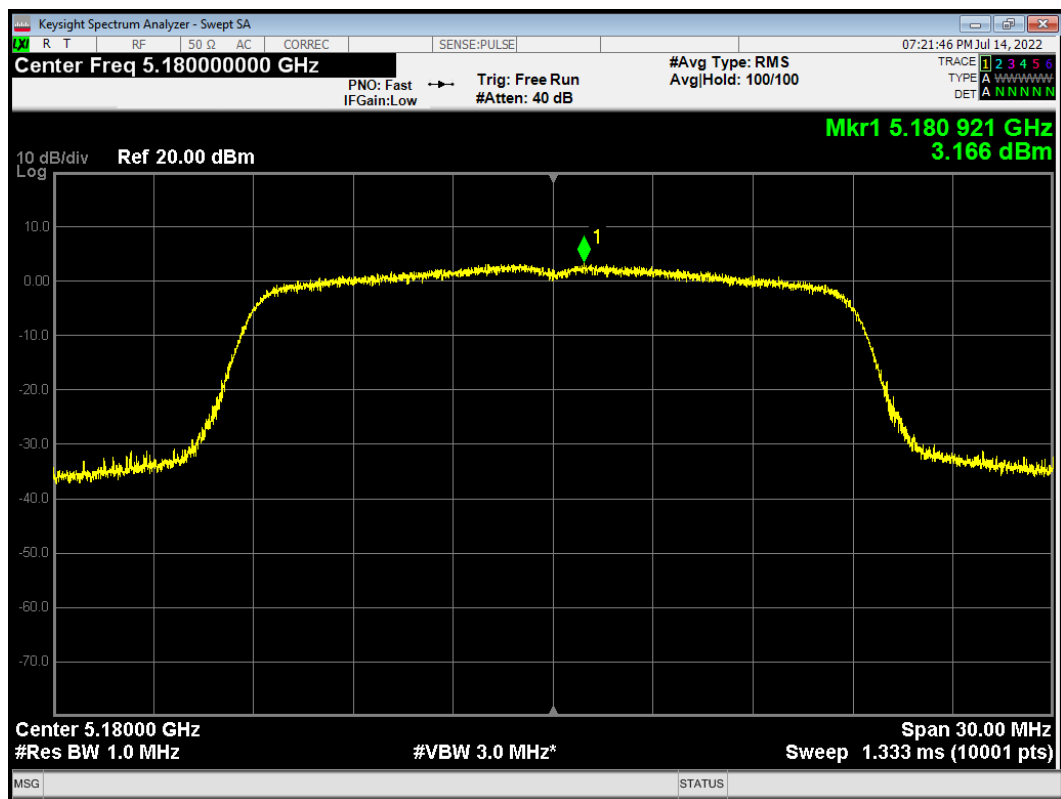
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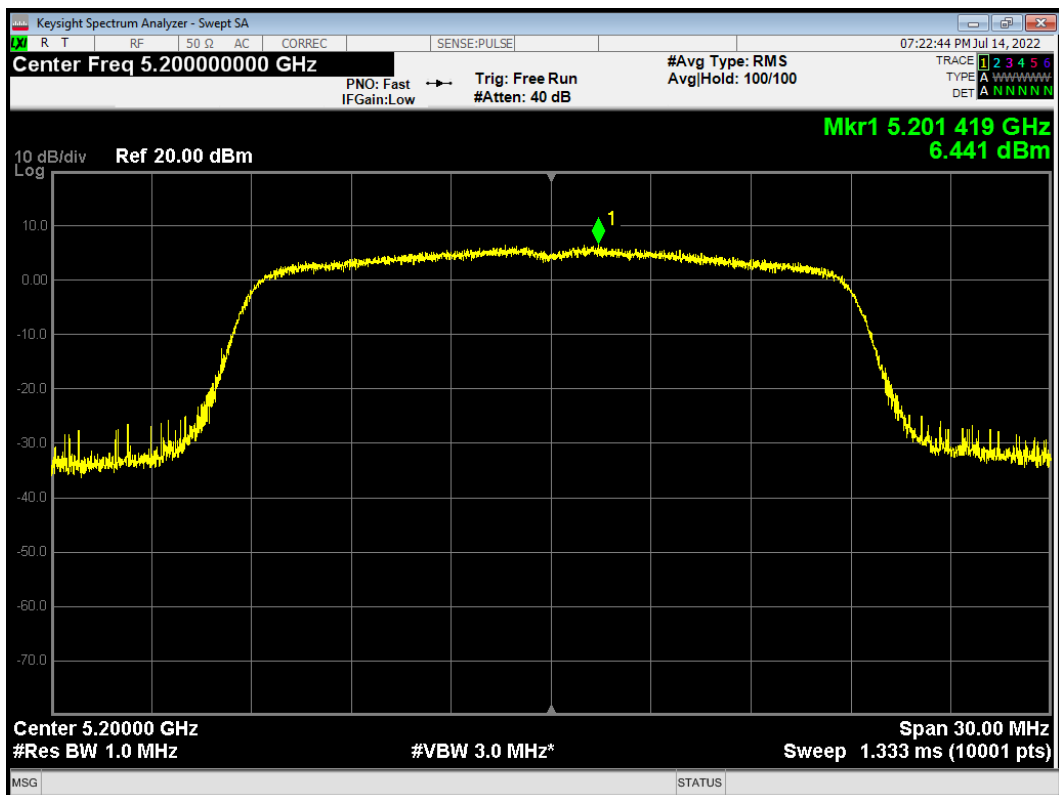
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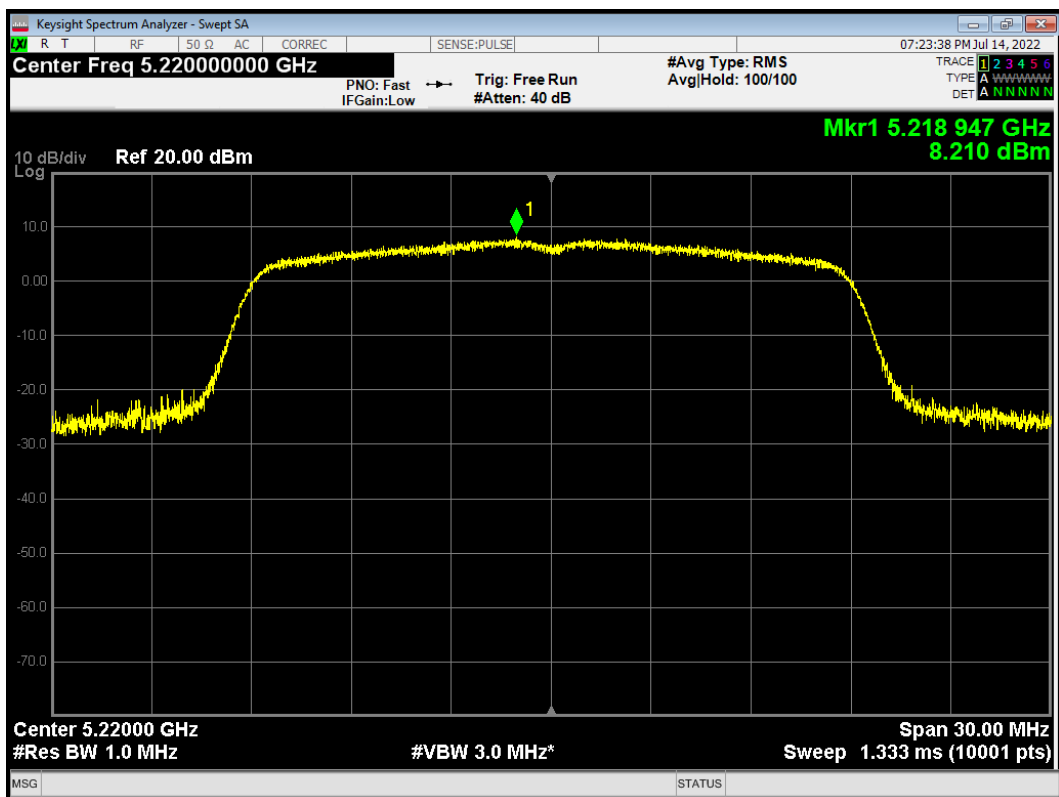
PSD NVNT 802.11n(HT20) 5180MHz



PSD NVNT 802.11n(HT20) 5200MHz

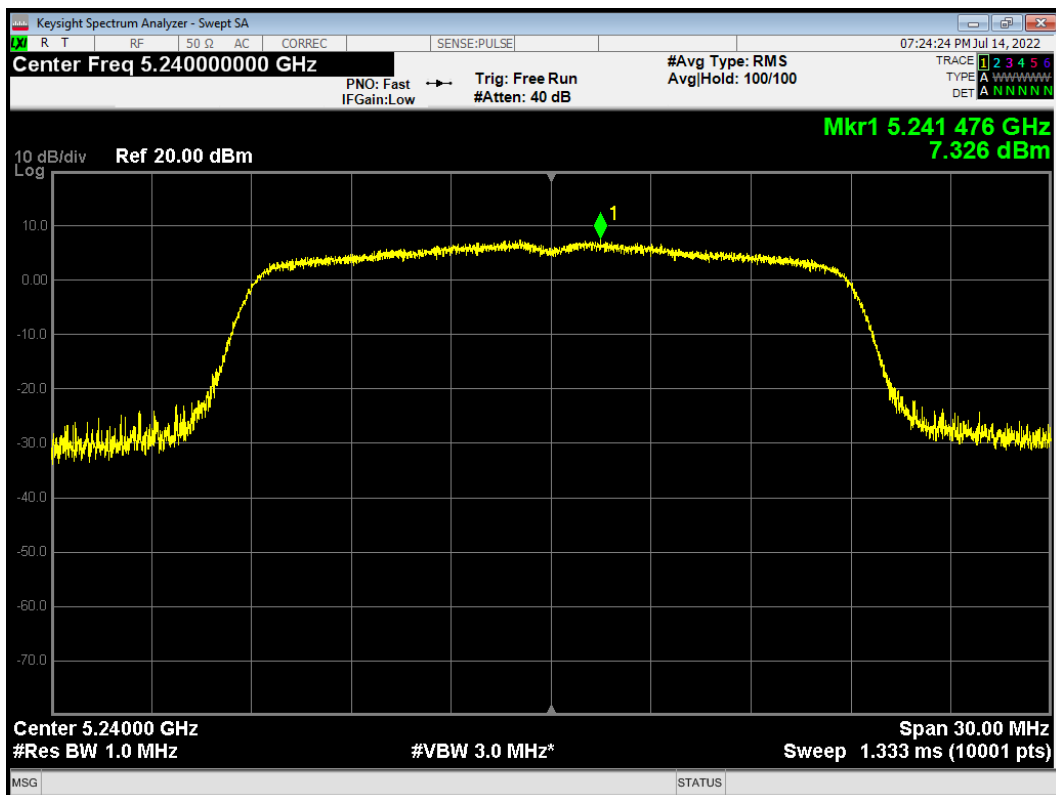


PSD NVNT 802.11n(HT20) 5220MHz

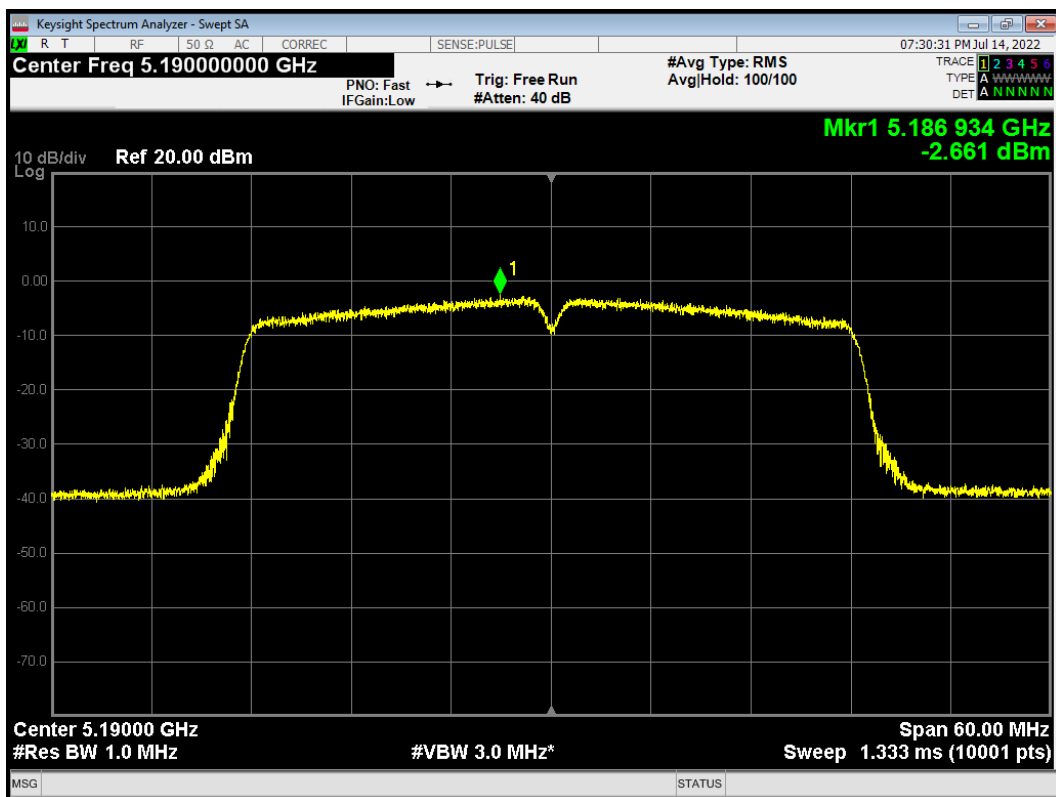




PSD NVNT 802.11n(HT20) 5240MHz

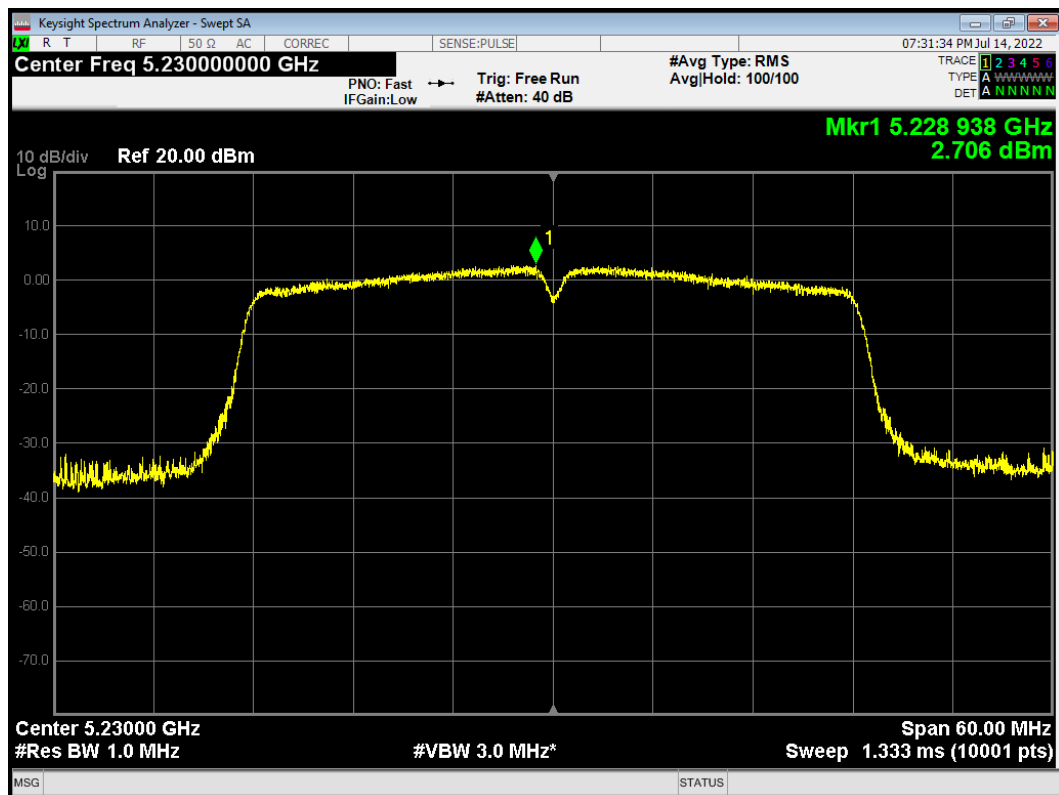


PSD NVNT 802.11n(HT40) 5190MHz





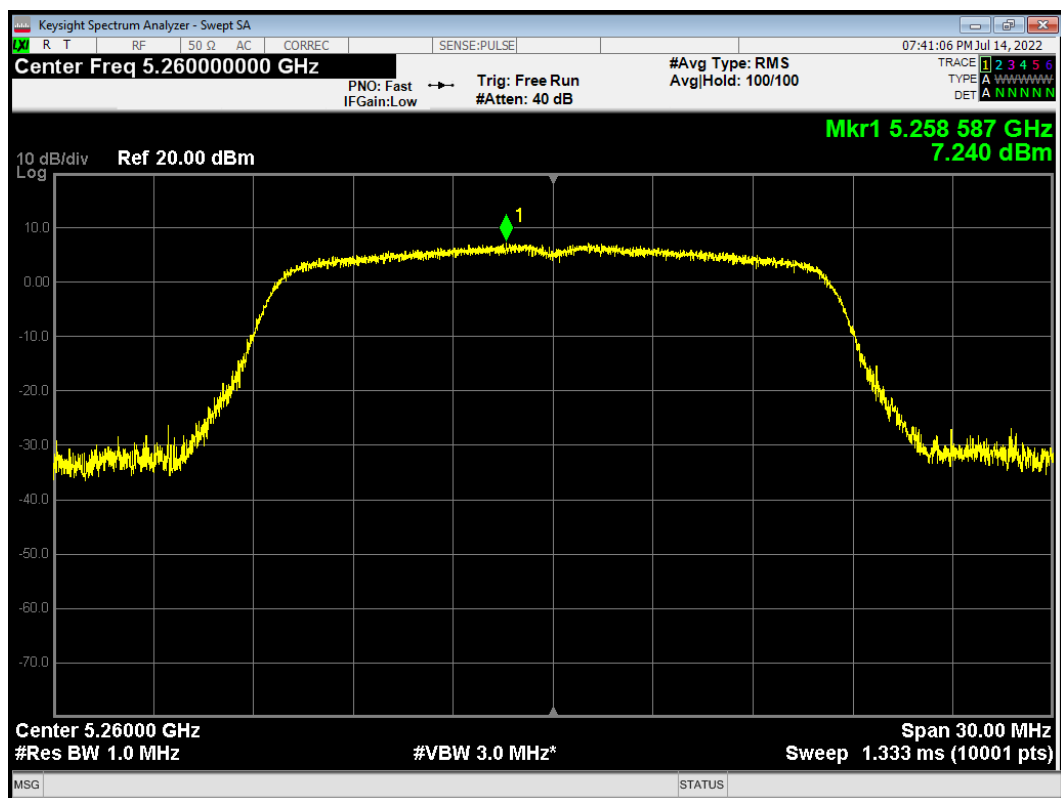
PSD NVNT 802.11n(HT40) 5230MHz



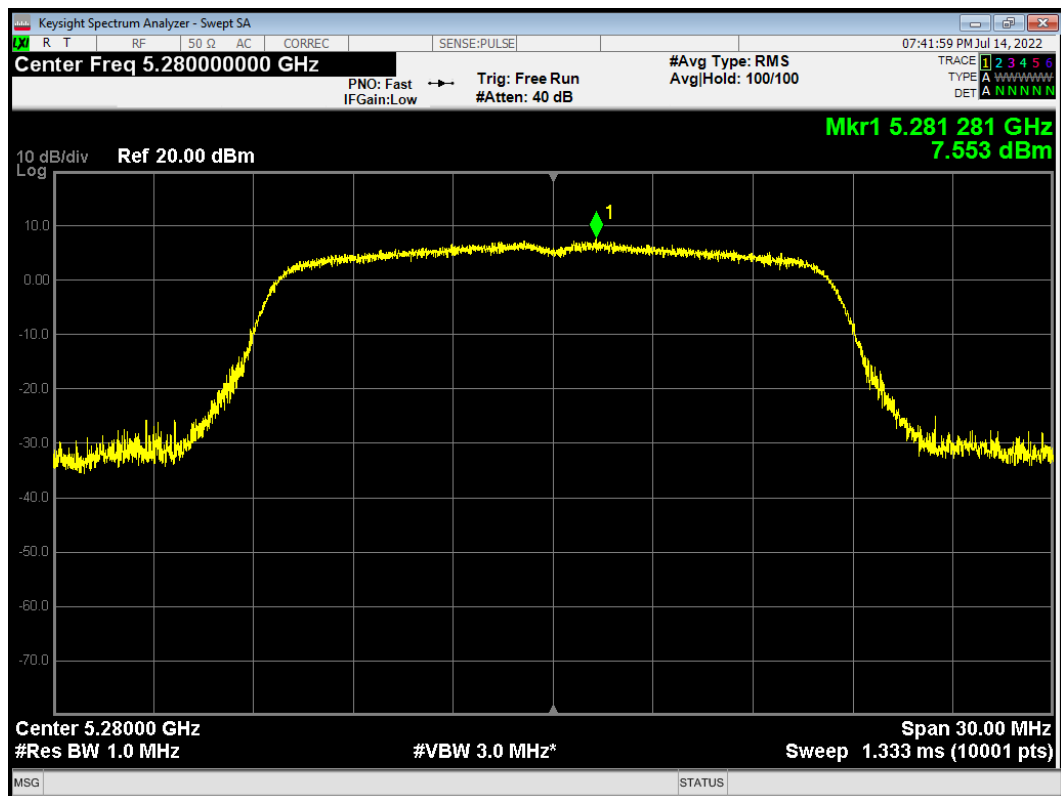


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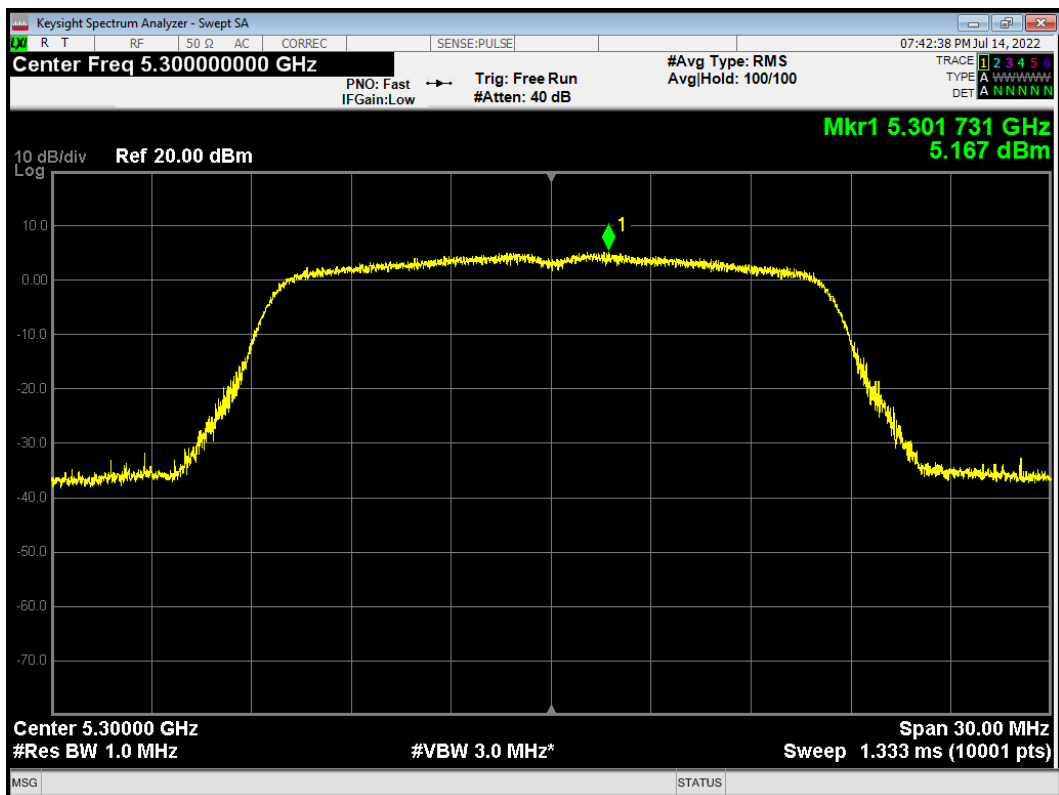
PSD NVNT 802.11a 5260MHz



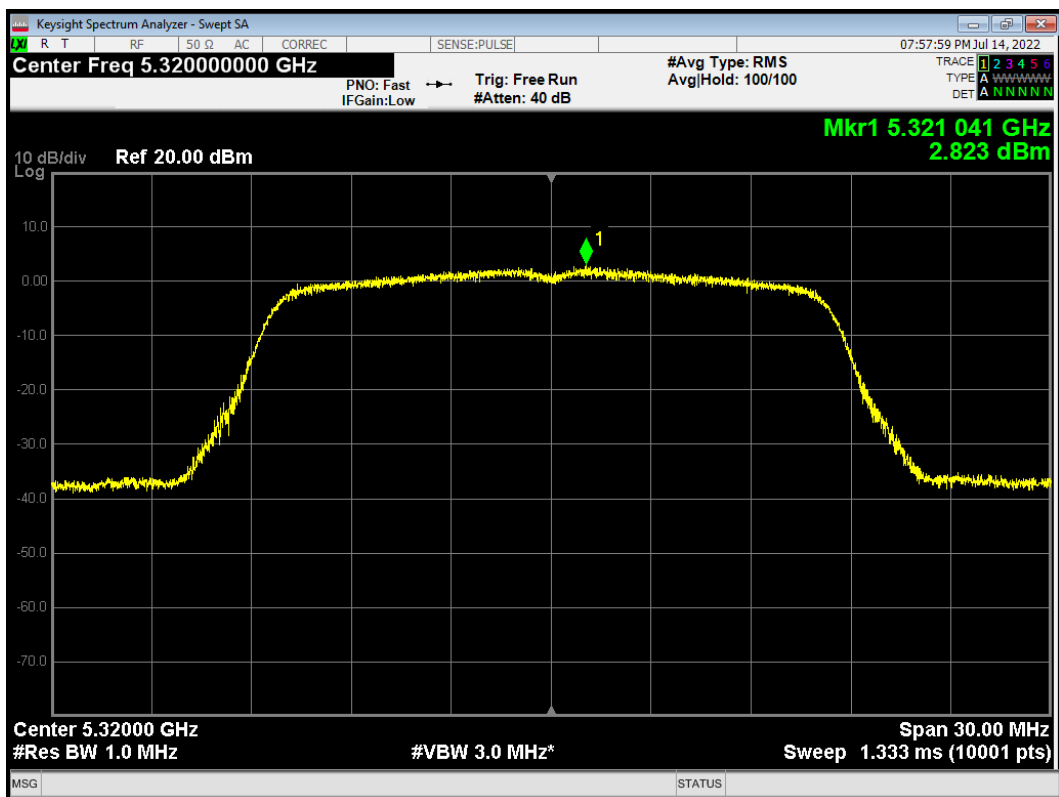
PSD NVNT 802.11a 5280MHz



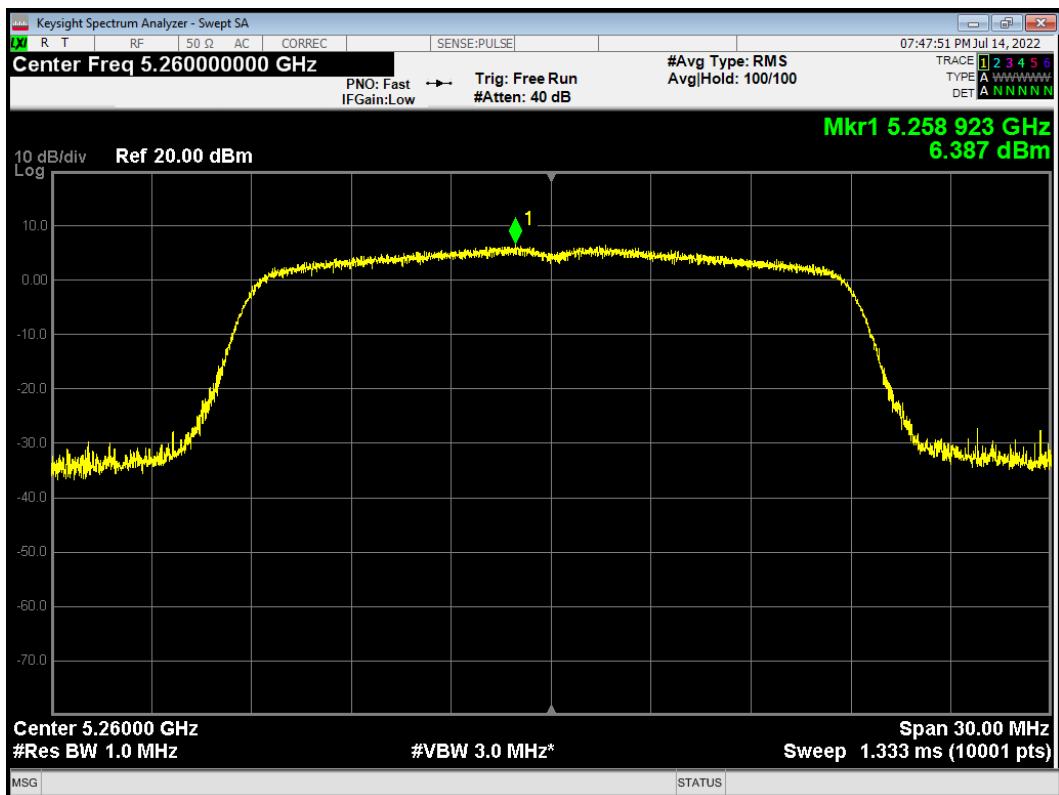
PSD NVNT 802.11a 5300MHz



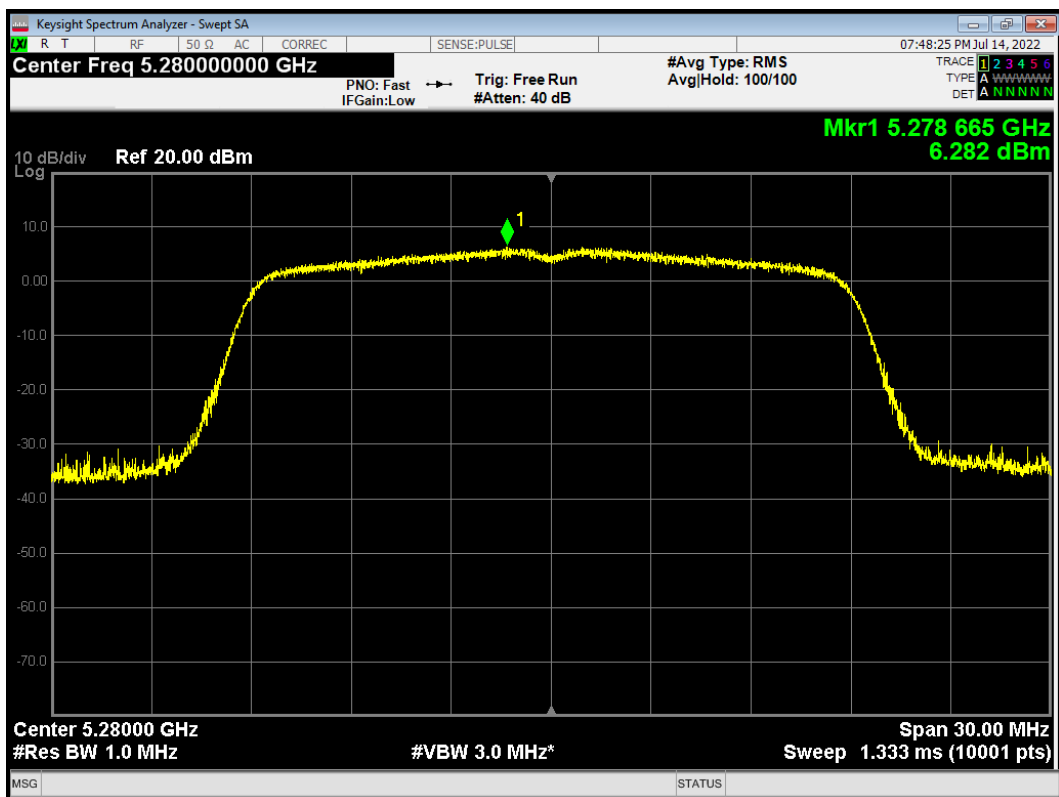
PSD NVNT 802.11a 5320MHz



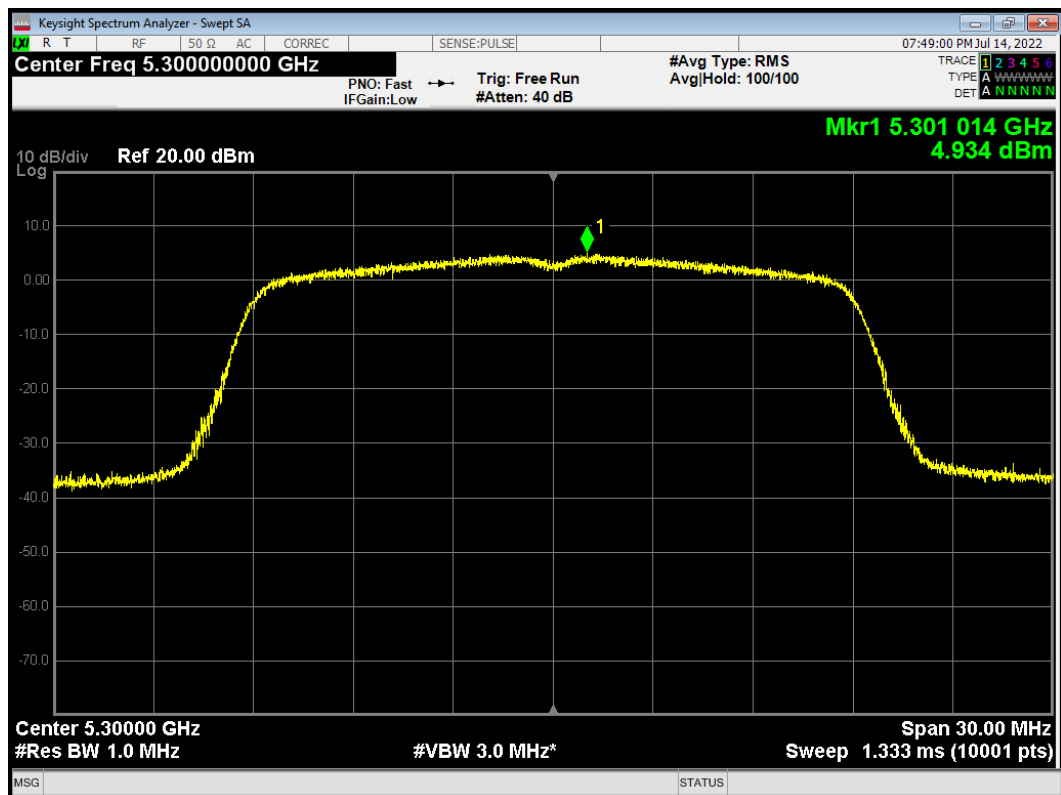
PSD NVNT 802.11ac(VHT20) 5260MHz



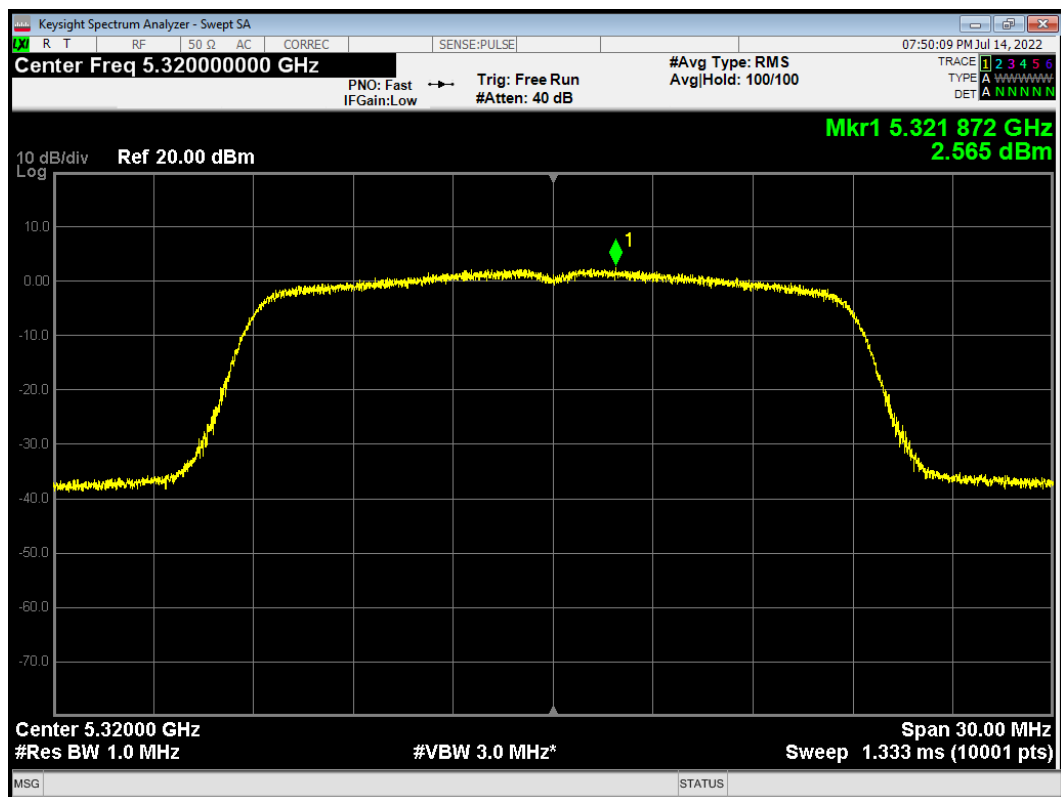
PSD NVNT 802.11ac(VHT20) 5280MHz



PSD NVNT 802.11ac(VHT20) 5300MHz

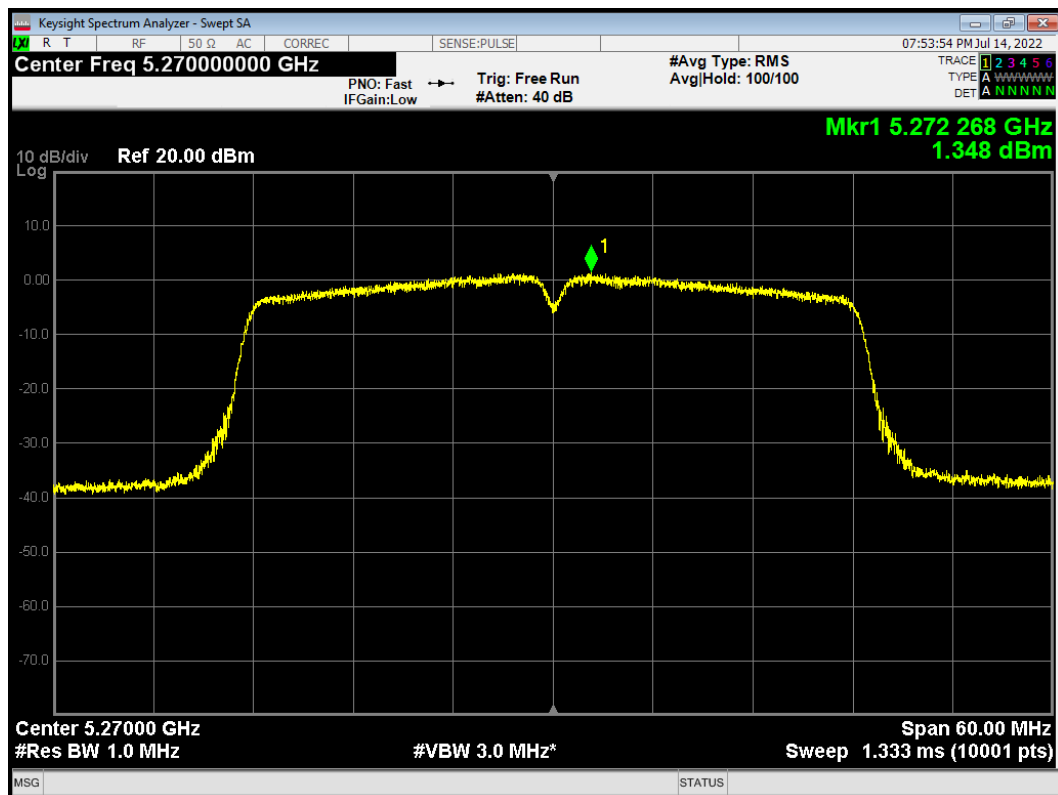


PSD NVNT 802.11ac(VHT20) 5320MHz

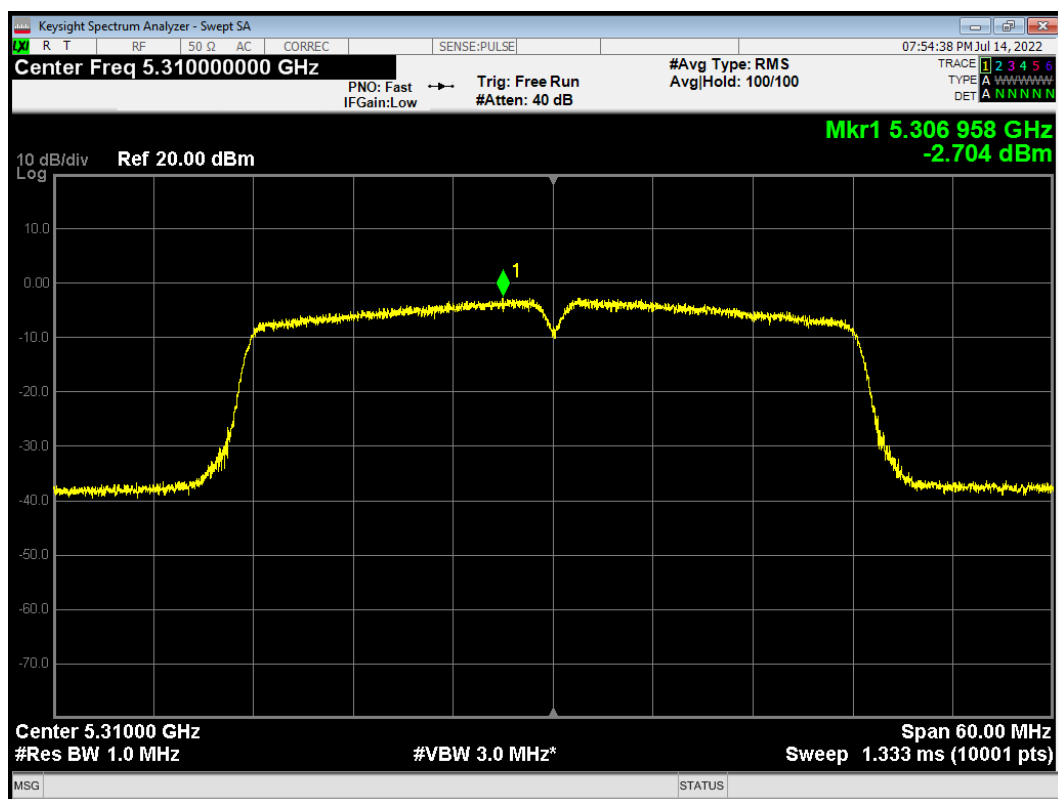




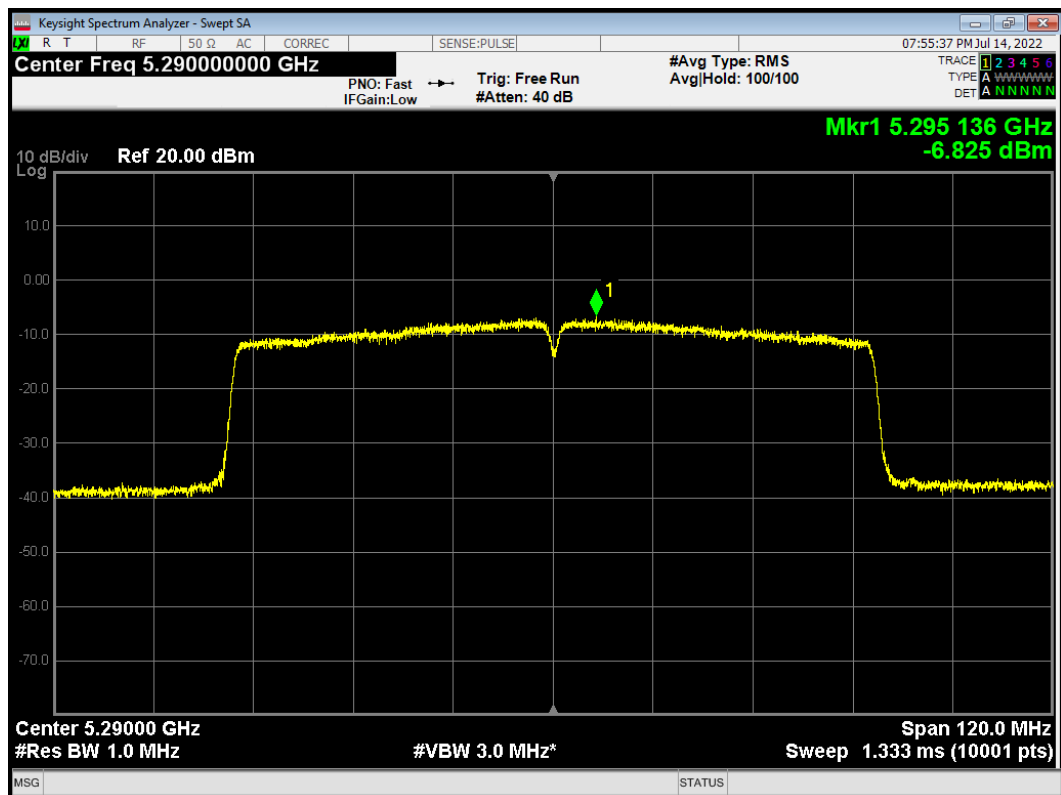
PSD NVNT 802.11ac(VHT40) 5270MHz



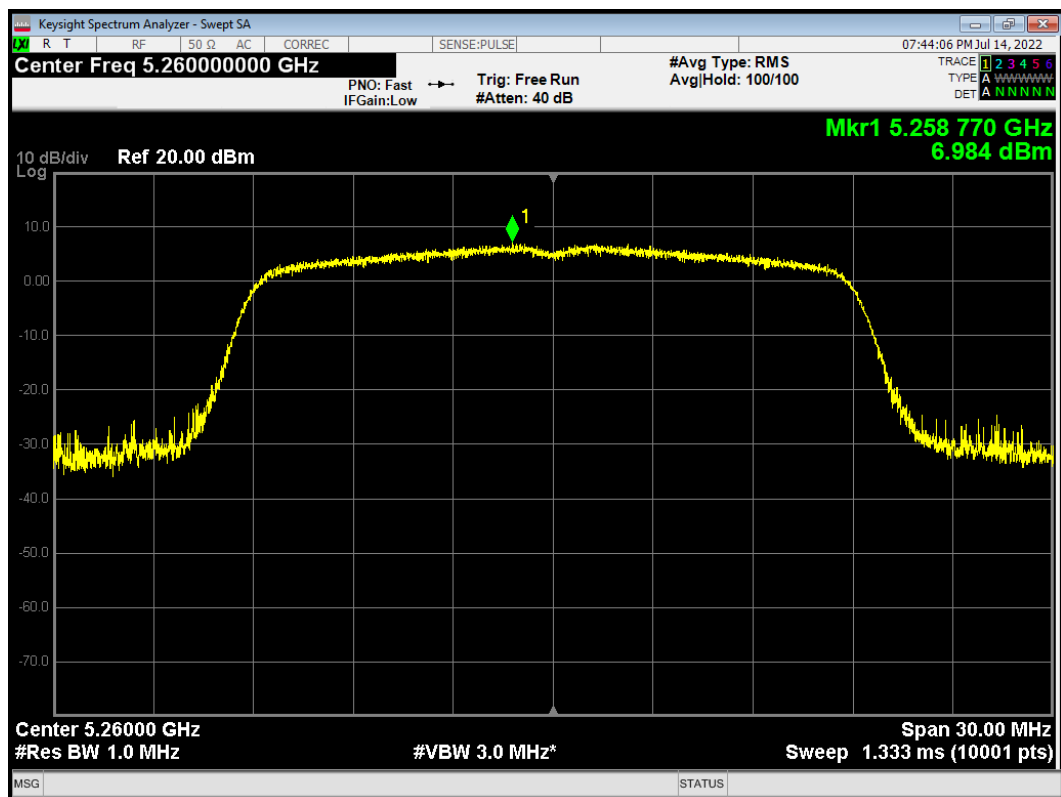
PSD NVNT 802.11ac(VHT40) 5310MHz



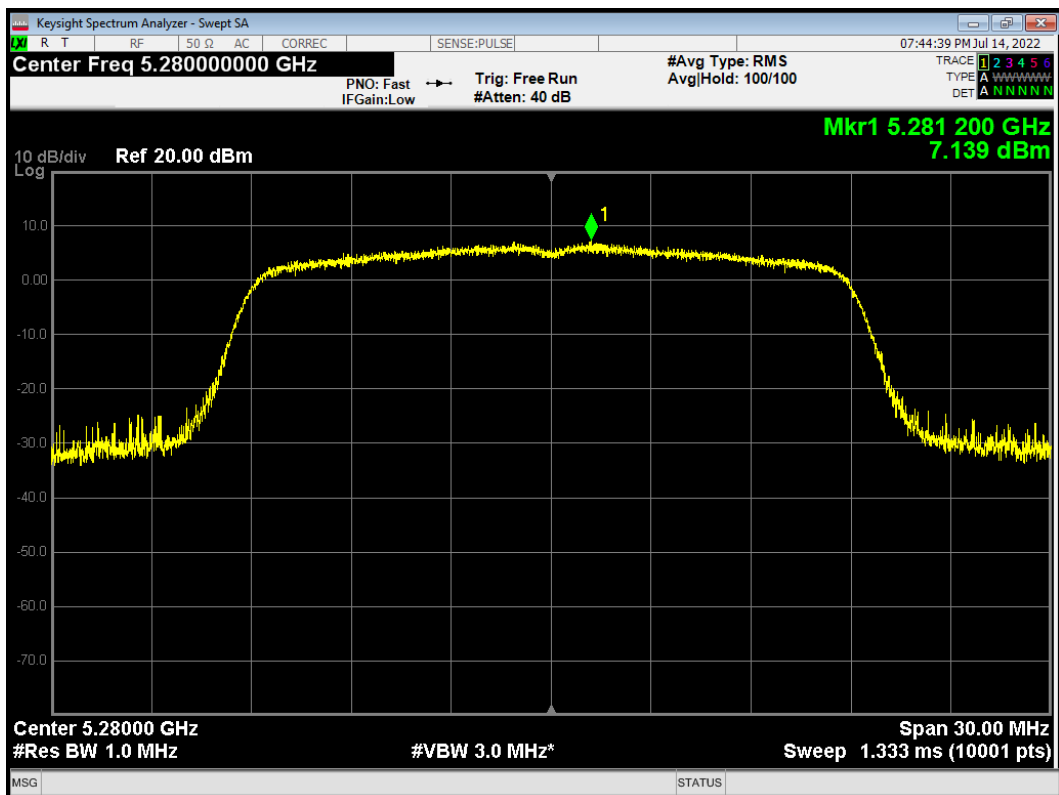
PSD NVNT 802.11ac(VHT80) 5290MHz



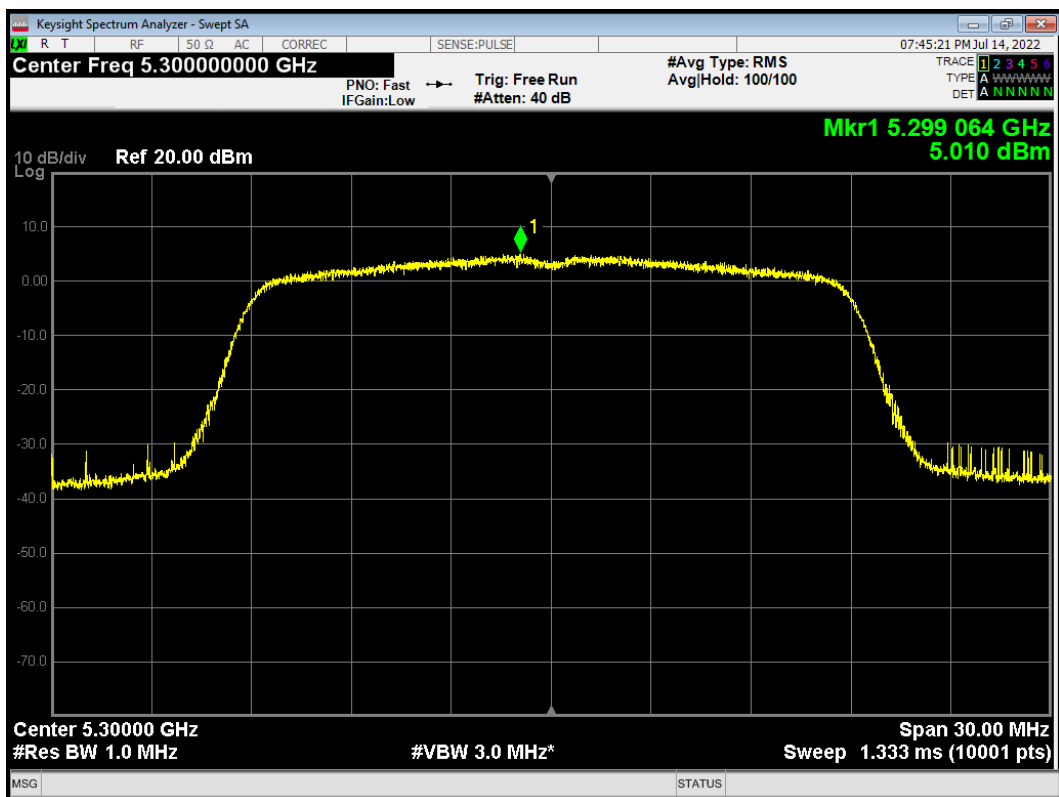
PSD NVNT 802.11n(HT20) 5260MHz



PSD NVNT 802.11n(HT20) 5280MHz

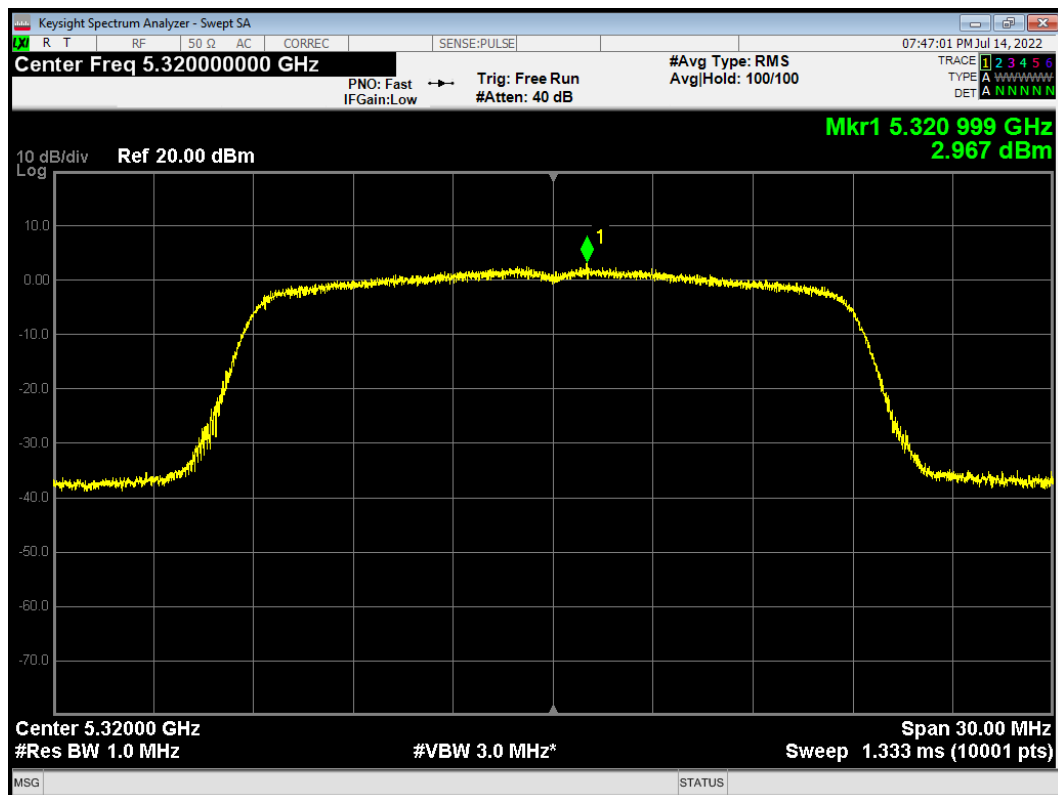


PSD NVNT 802.11n(HT20) 5300MHz

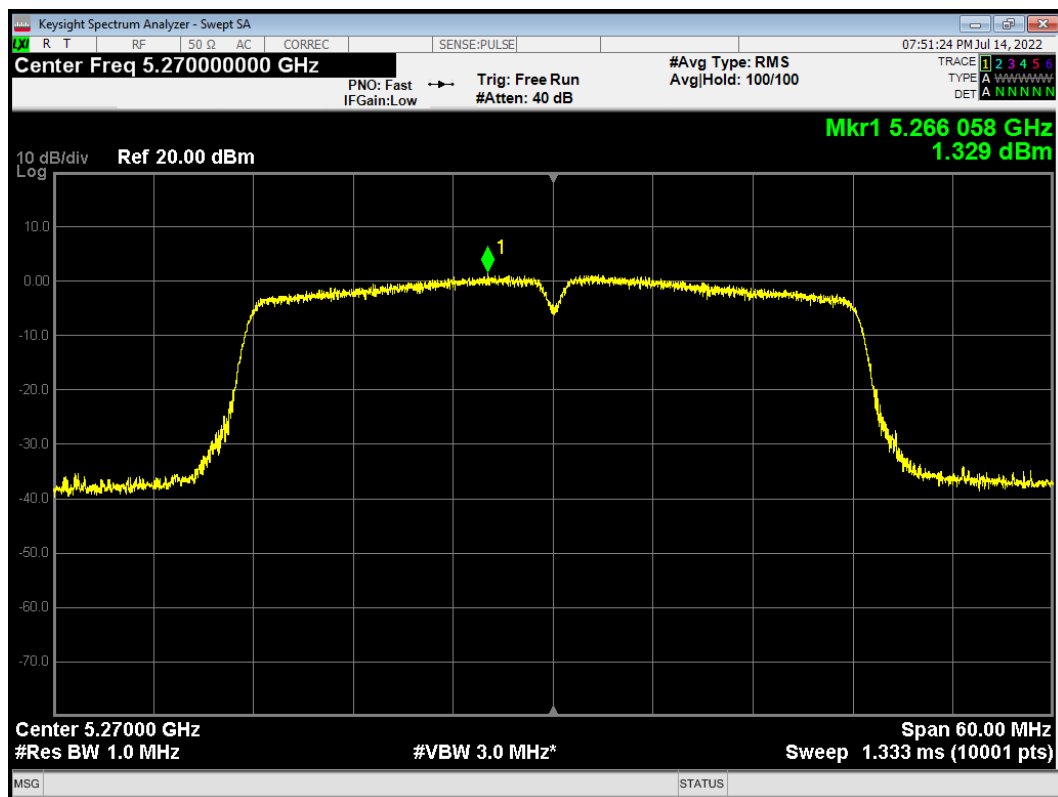




PSD NVNT 802.11n(HT20) 5320MHz

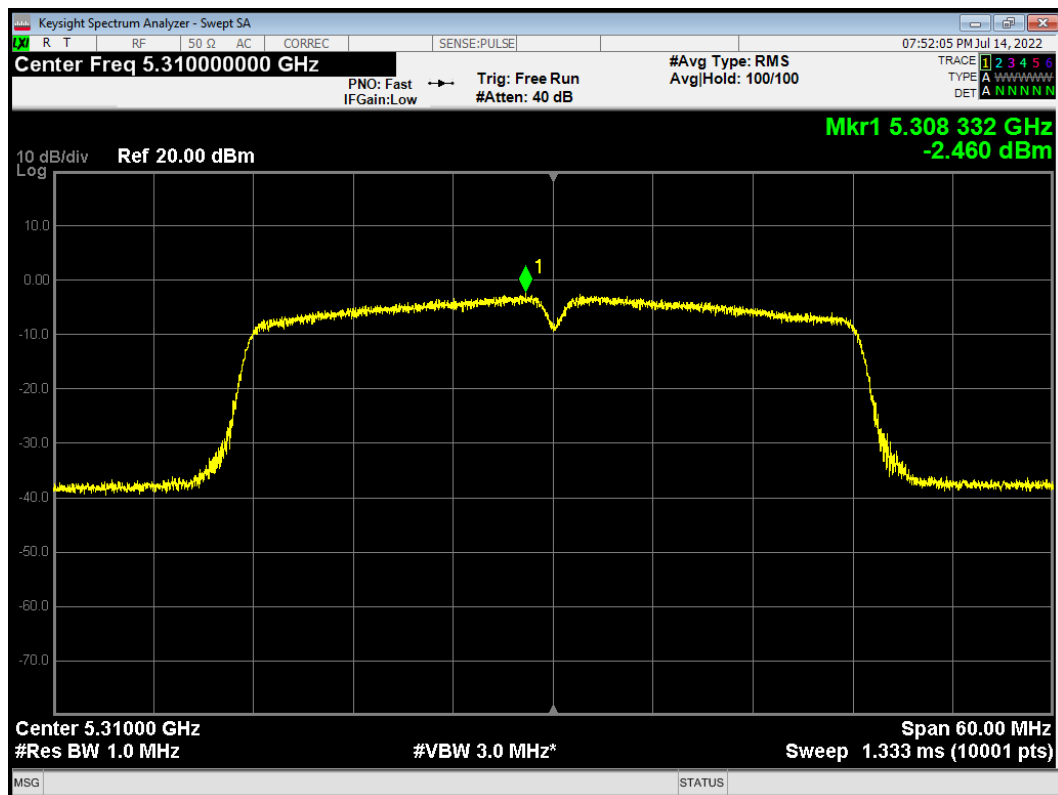


PSD NVNT 802.11n(HT40) 5270MHz





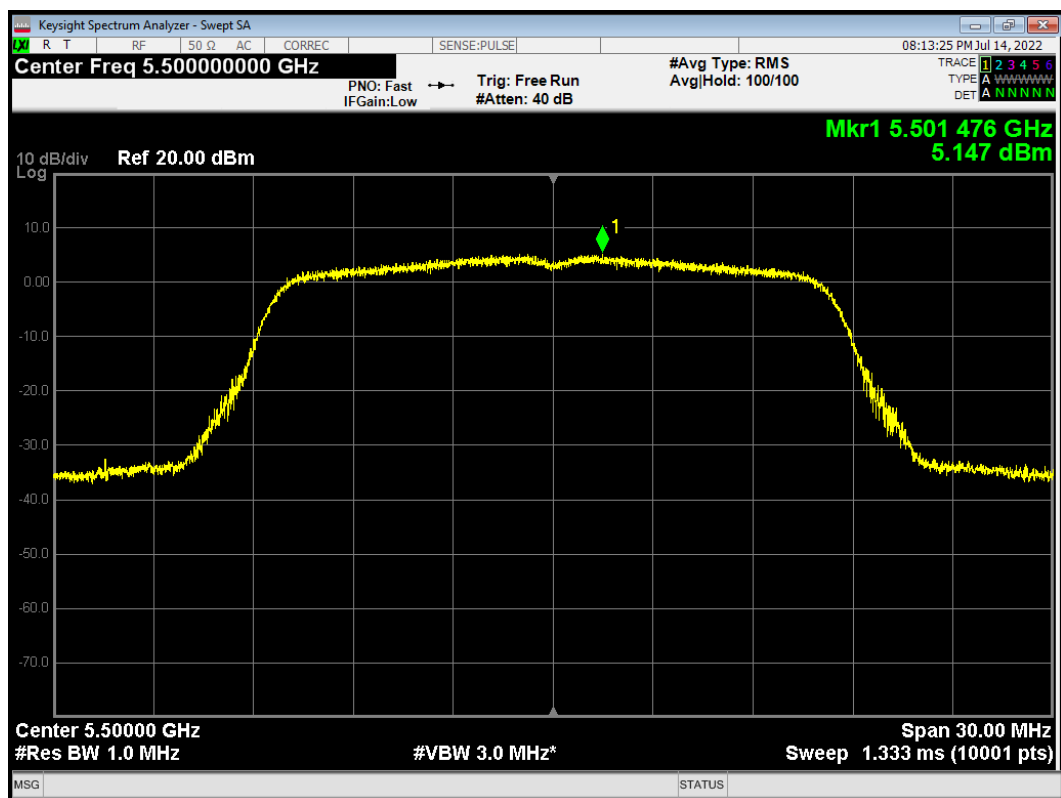
PSD NVNT 802.11n(HT40) 5310MHz



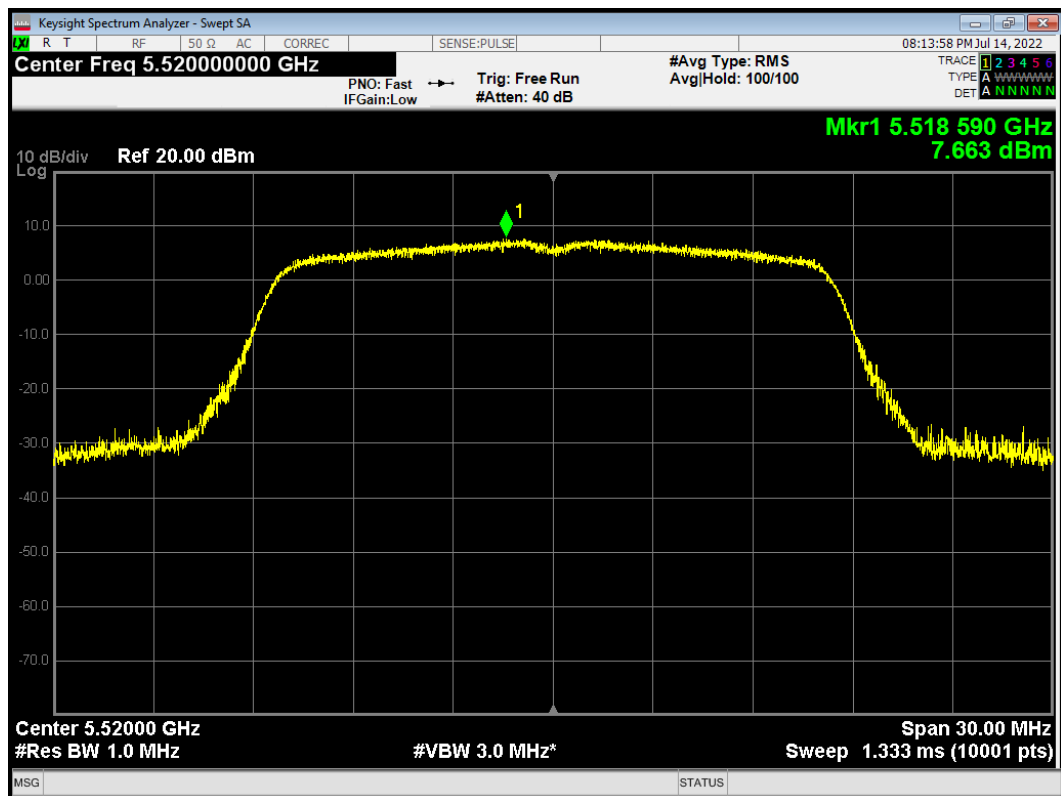


U-NII-2C:

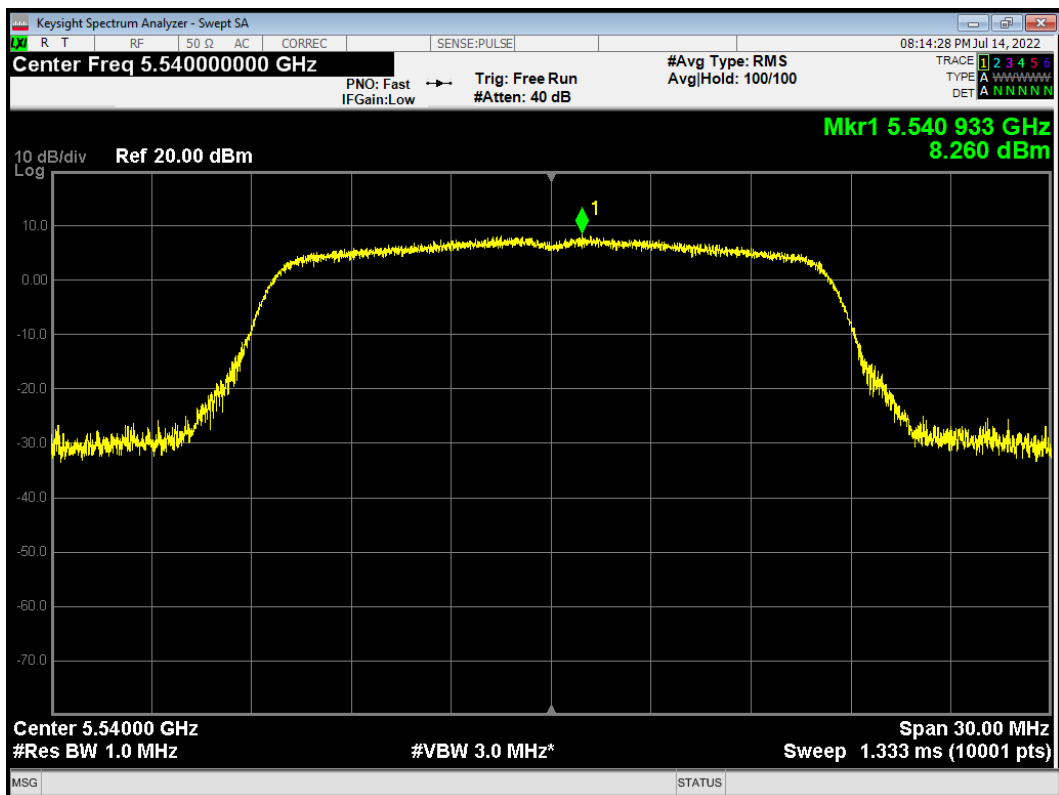
PSD NVNT 802.11a 5500MHz



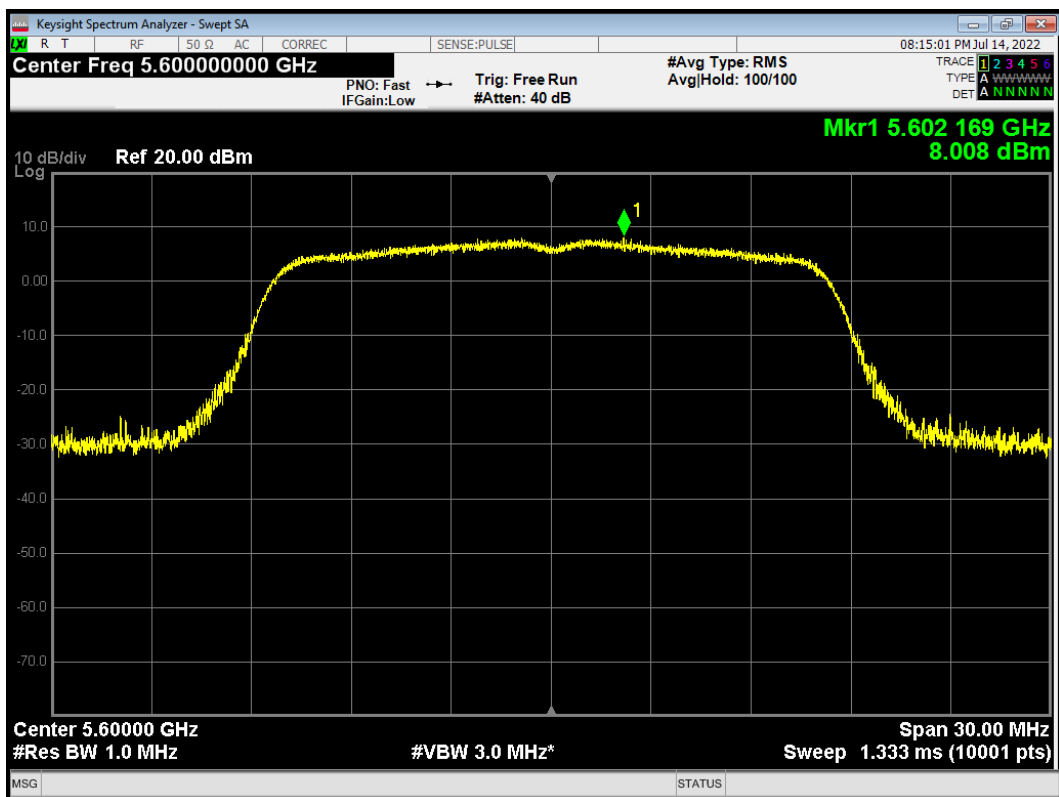
PSD NVNT 802.11a 5520MHz



PSD NVNT 802.11a 5540MHz

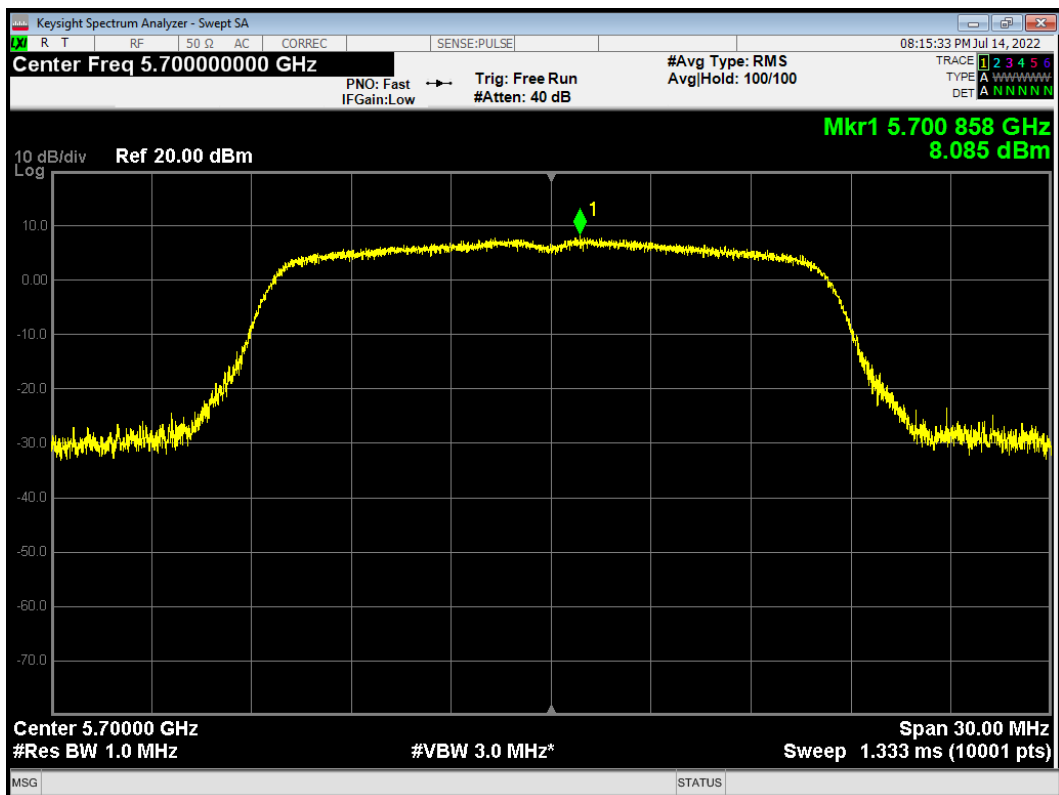


PSD NVNT 802.11a 5600MHz

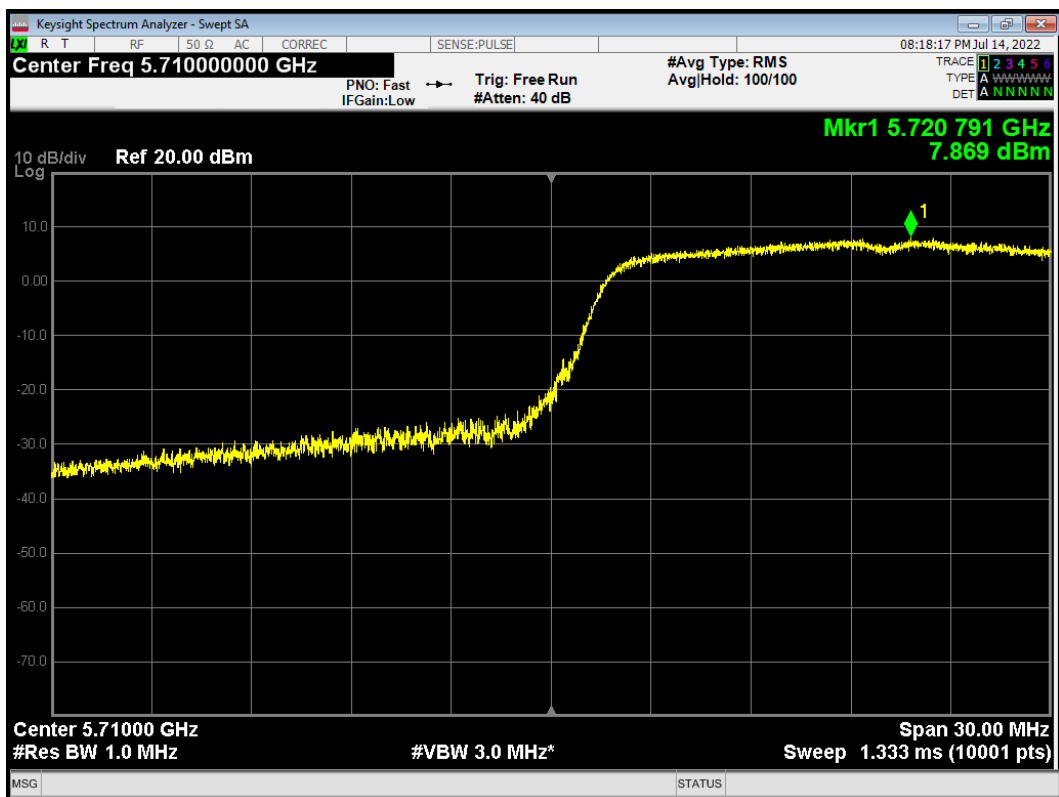




PSD NVNT 802.11a 5700MHz

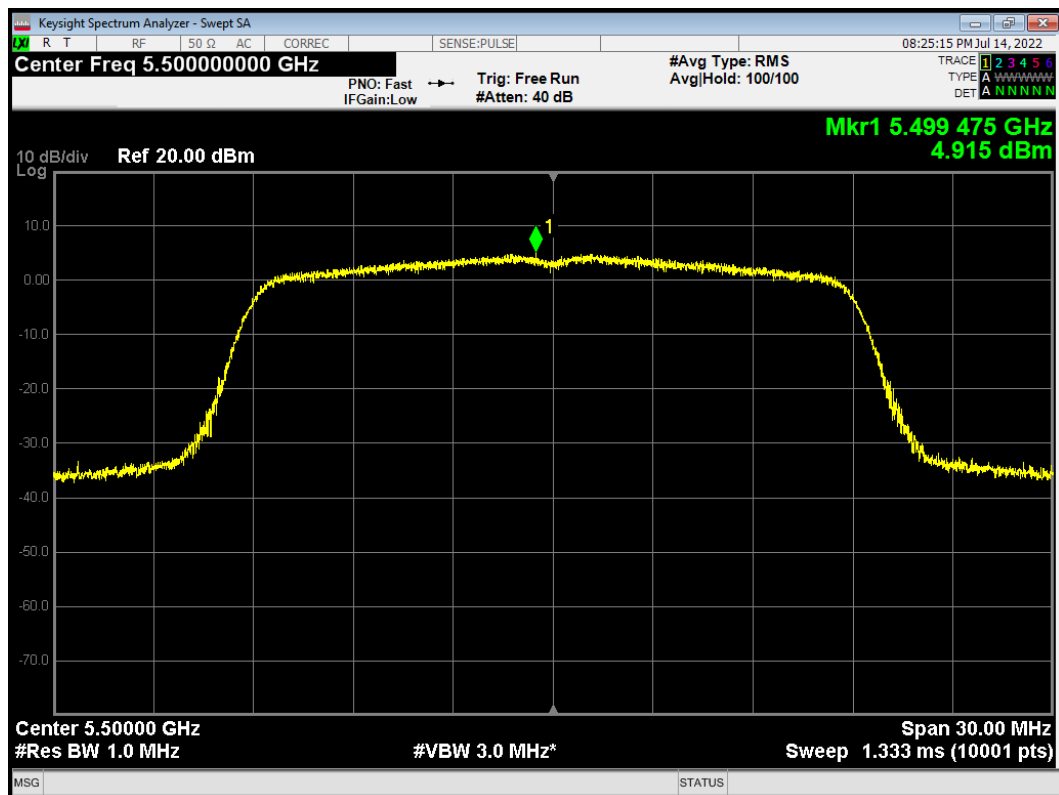


PSD NVNT 802.11a 5720MHz

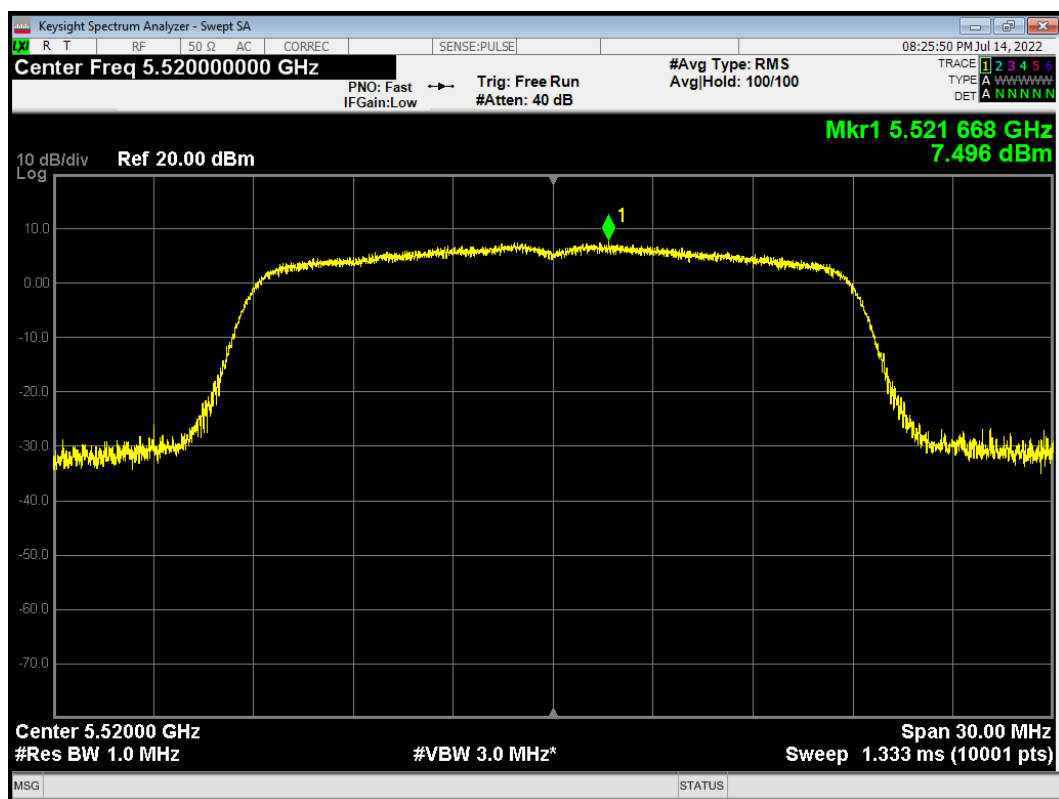




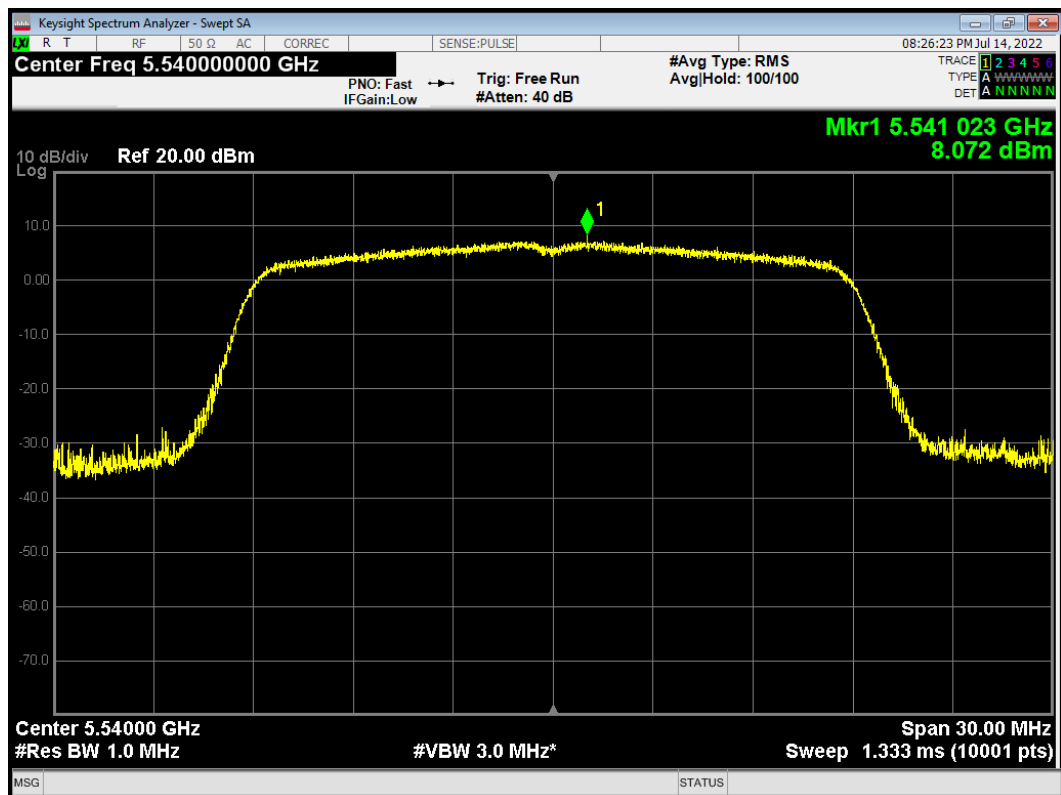
PSD NVNT 802.11ac(VHT20) 5500MHz



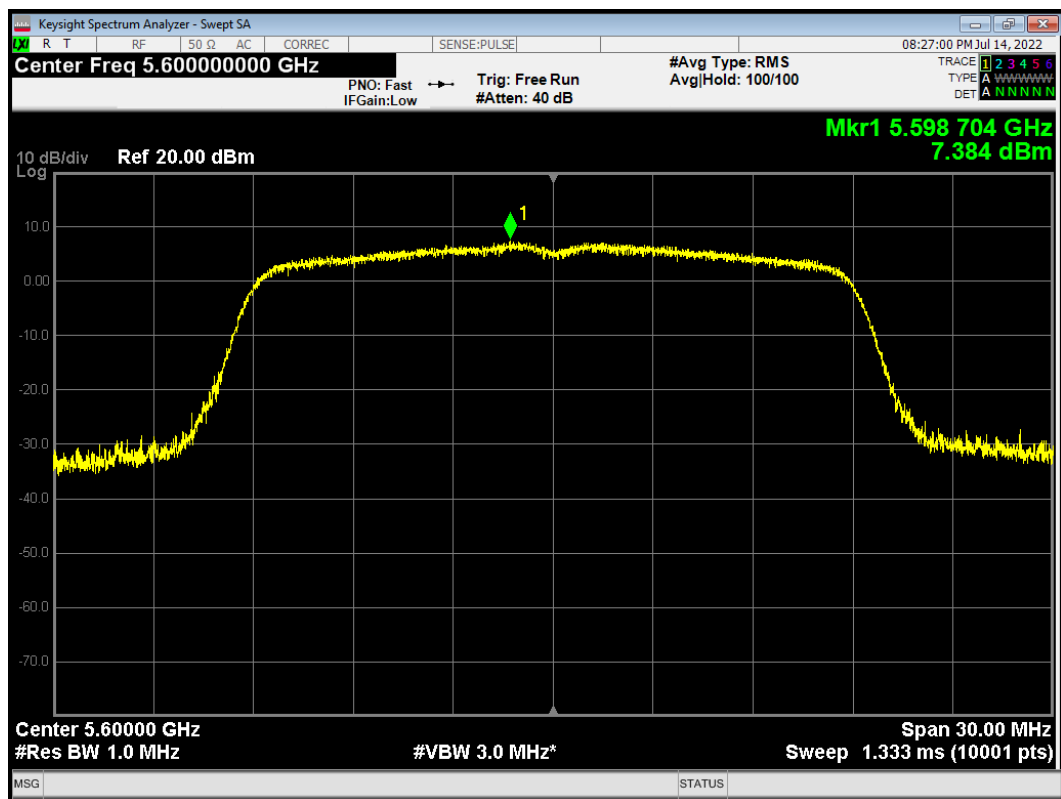
PSD NVNT 802.11ac(VHT20) 5520MHz



PSD NVNT 802.11ac(VHT20) 5540MHz

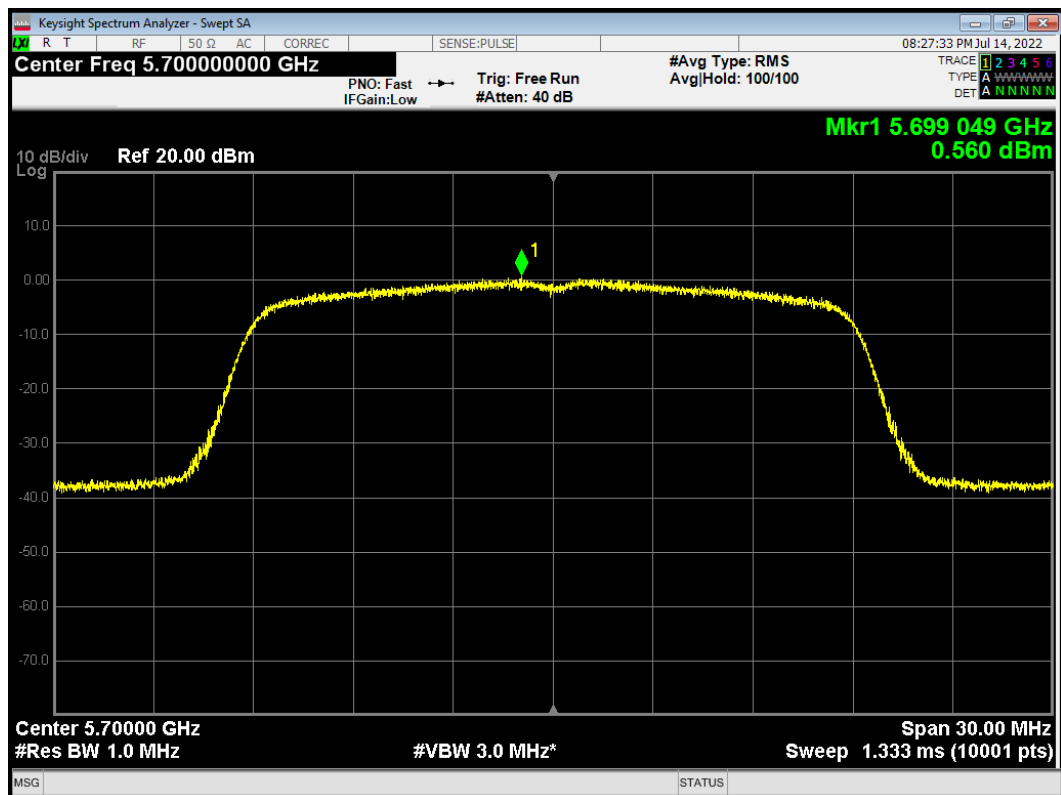


PSD NVNT 802.11ac(VHT20) 5600MHz

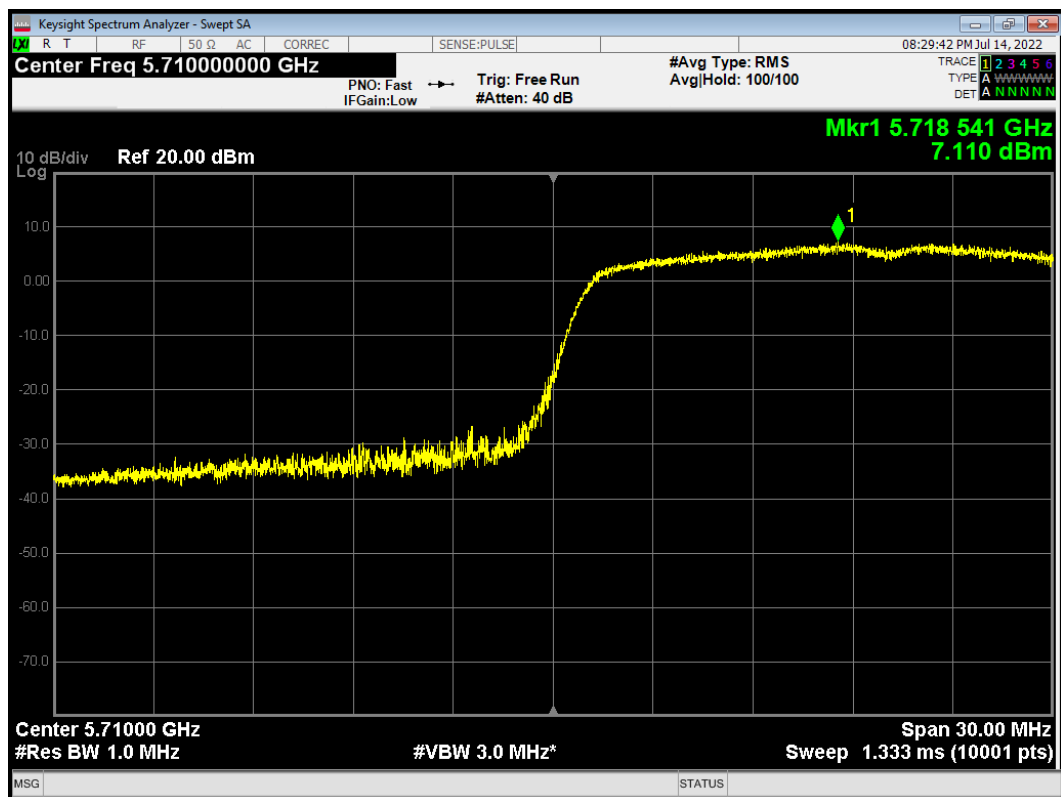




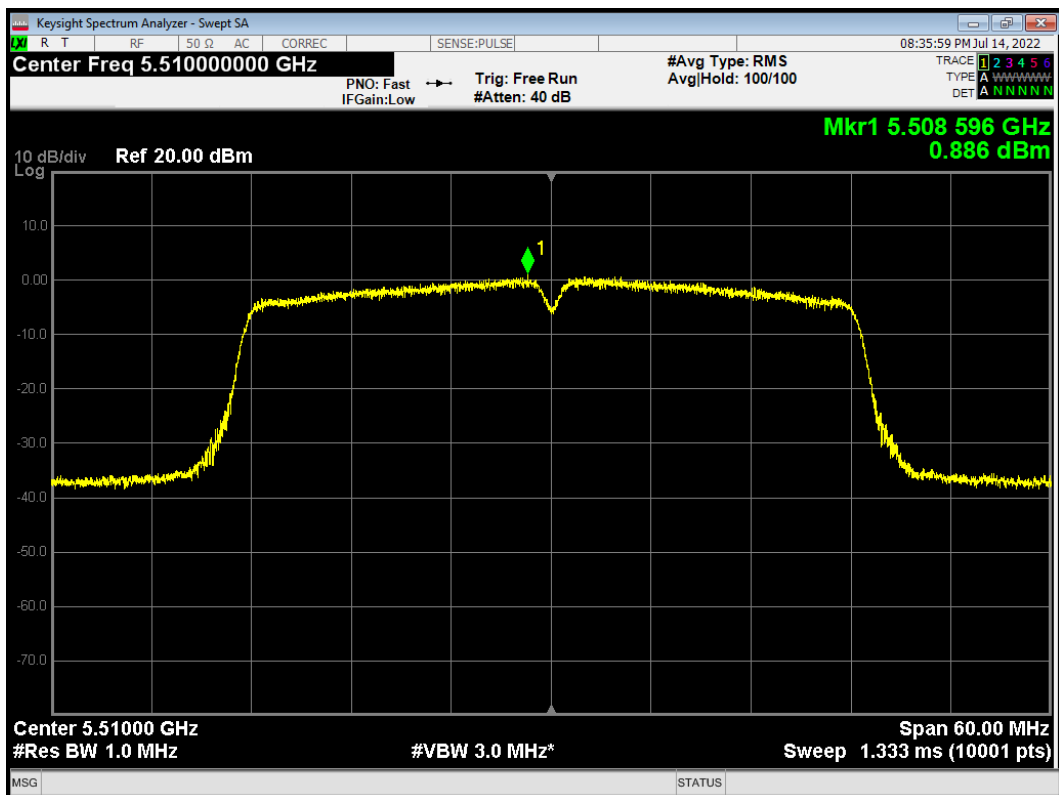
PSD NVNT 802.11ac(VHT20) 5700MHz



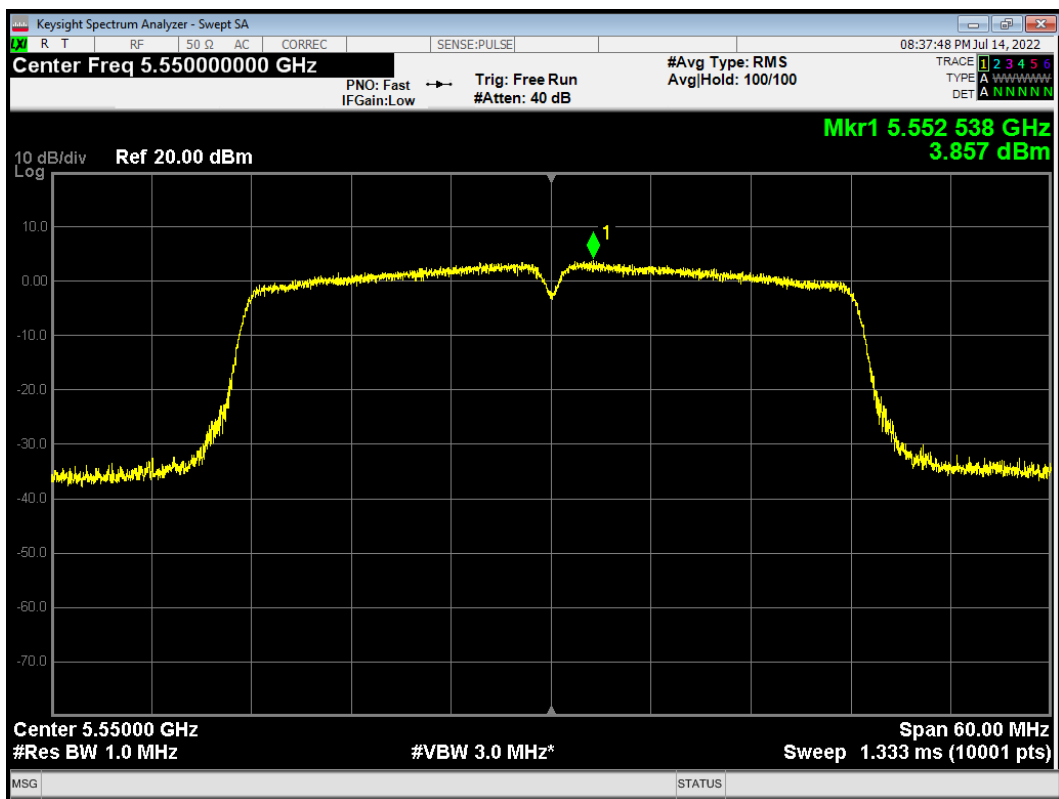
PSD NVNT 802.11ac(VHT20) 5720MHz



PSD NVNT 802.11ac(VHT40) 5510MHz

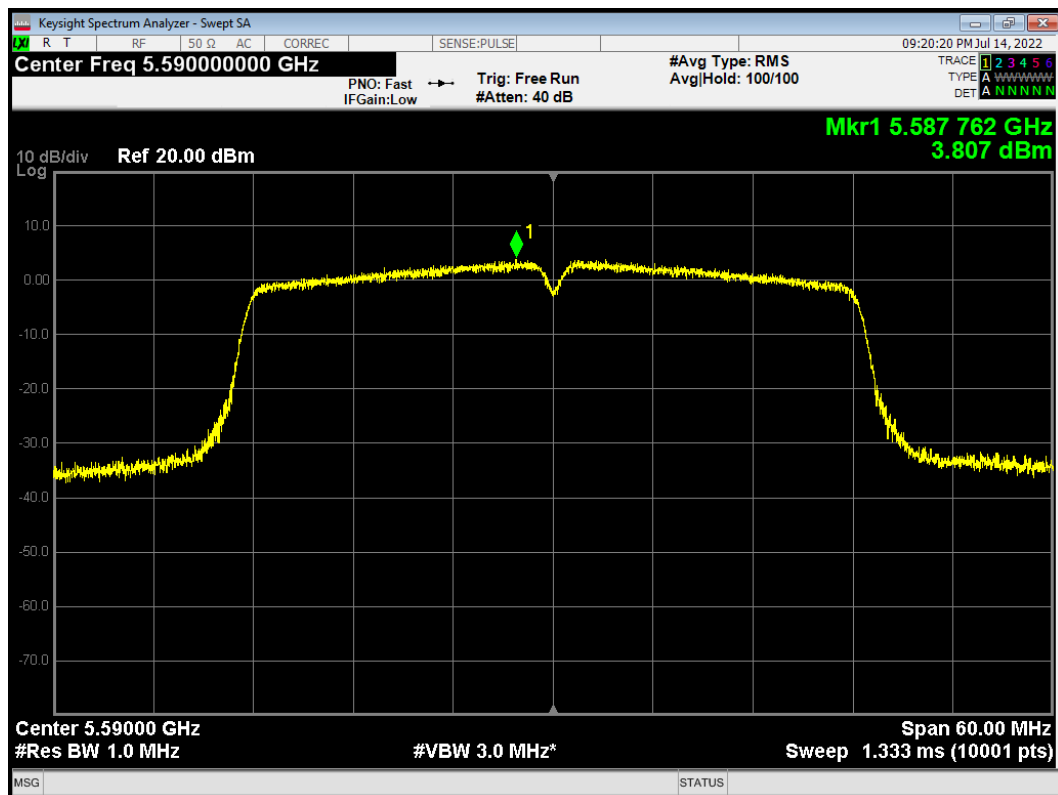


PSD NVNT 802.11ac(VHT40) 5550MHz

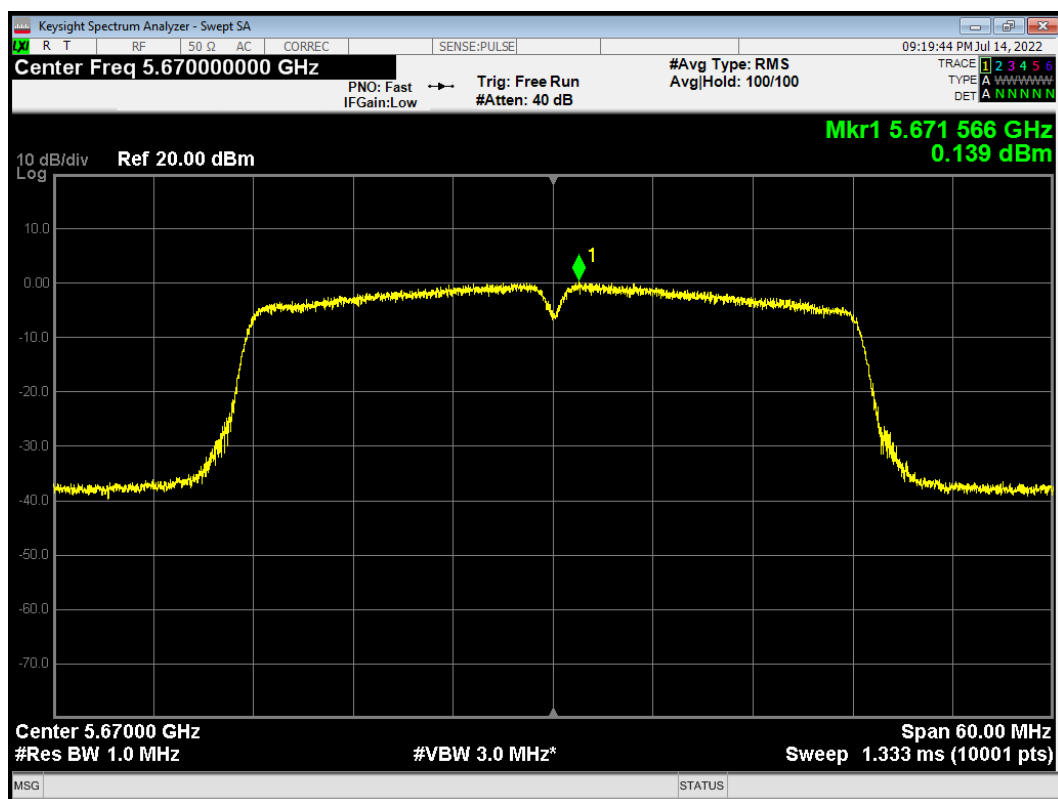




PSD NVNT 802.11ac(VHT40) 5590MHz

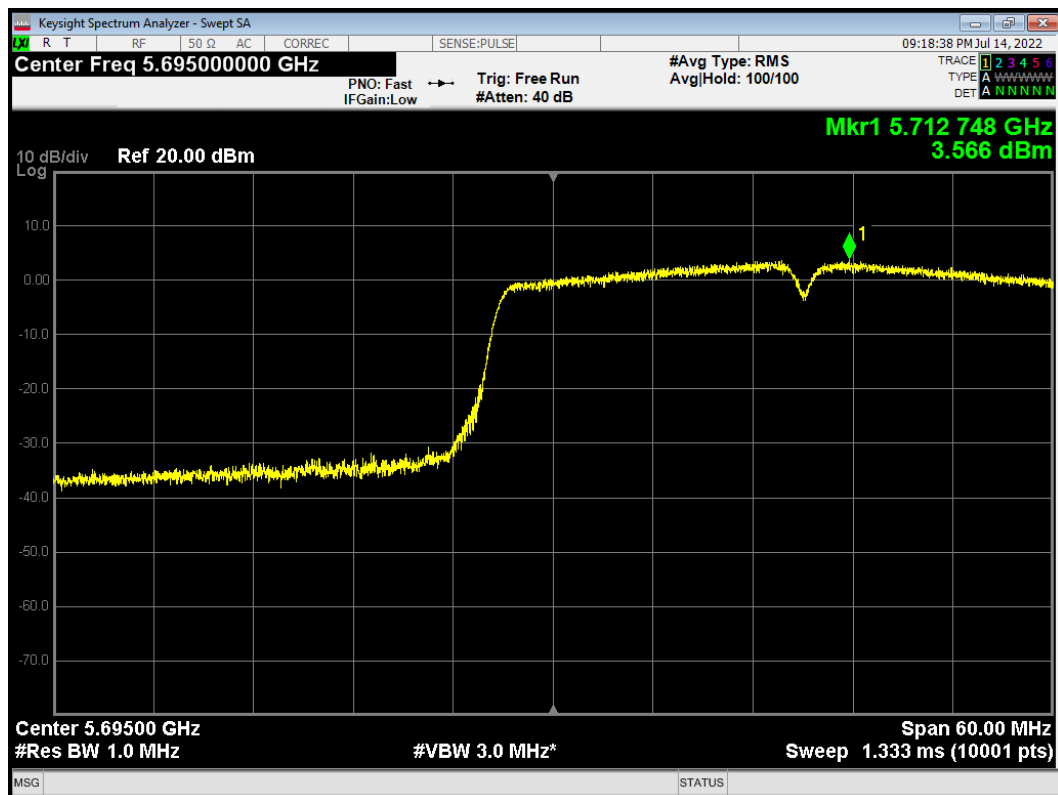


PSD NVNT 802.11ac(VHT40) 5670MHz

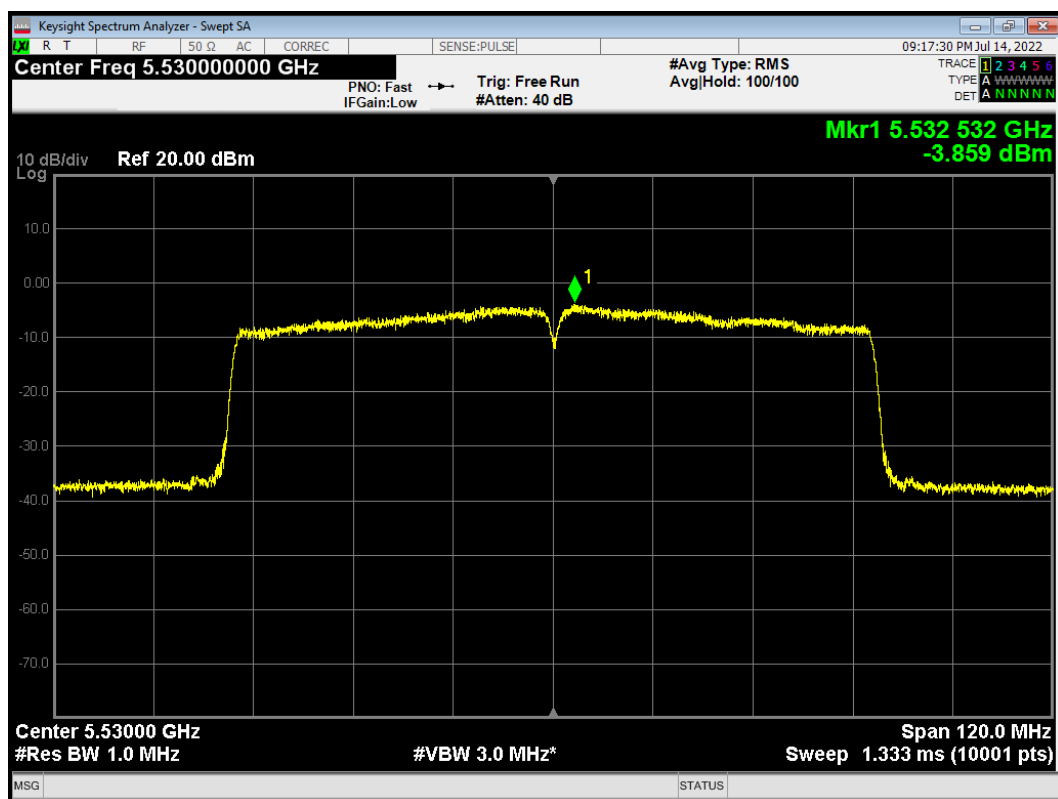




PSD NVNT 802.11ac(VHT40) 5710MHz

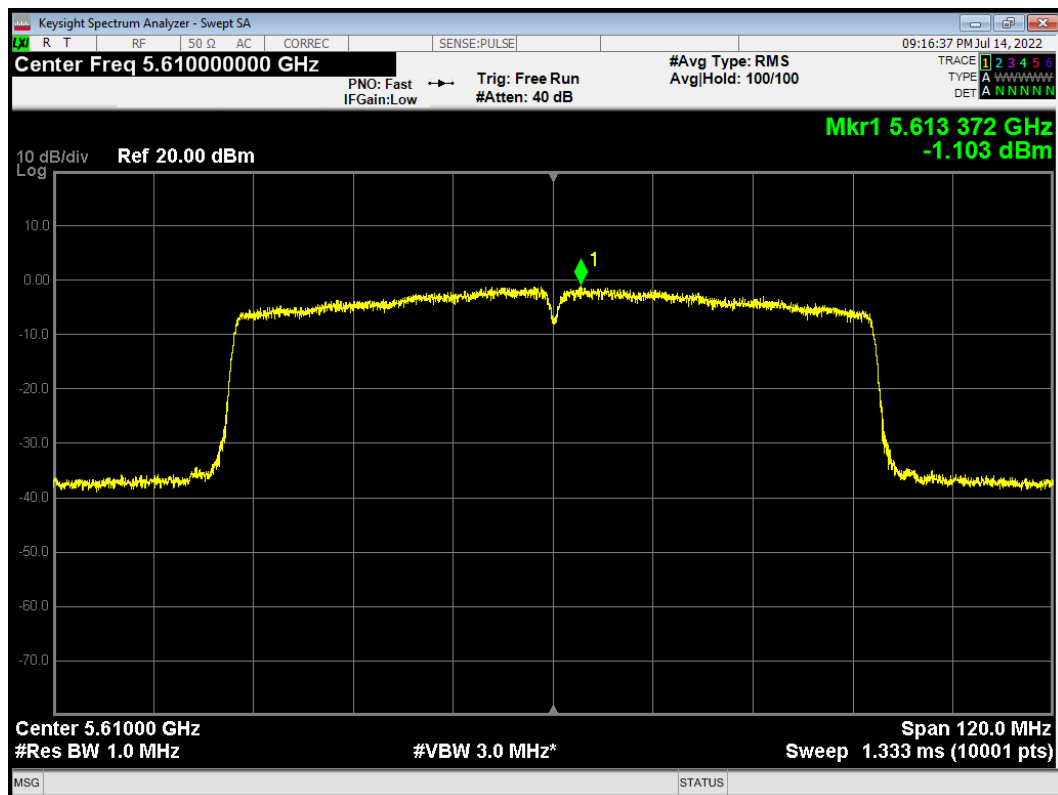


PSD NVNT 802.11ac(VHT80) 5530MHz

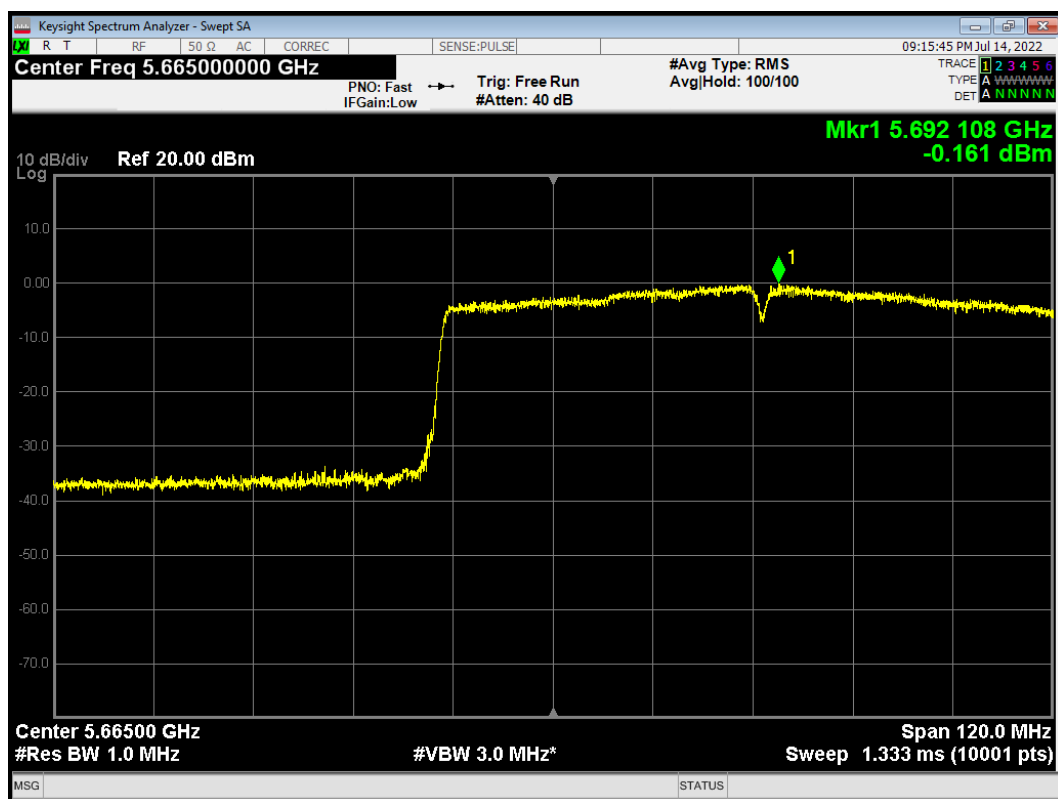




PSD NVNT 802.11ac(VHT80) 5610MHz

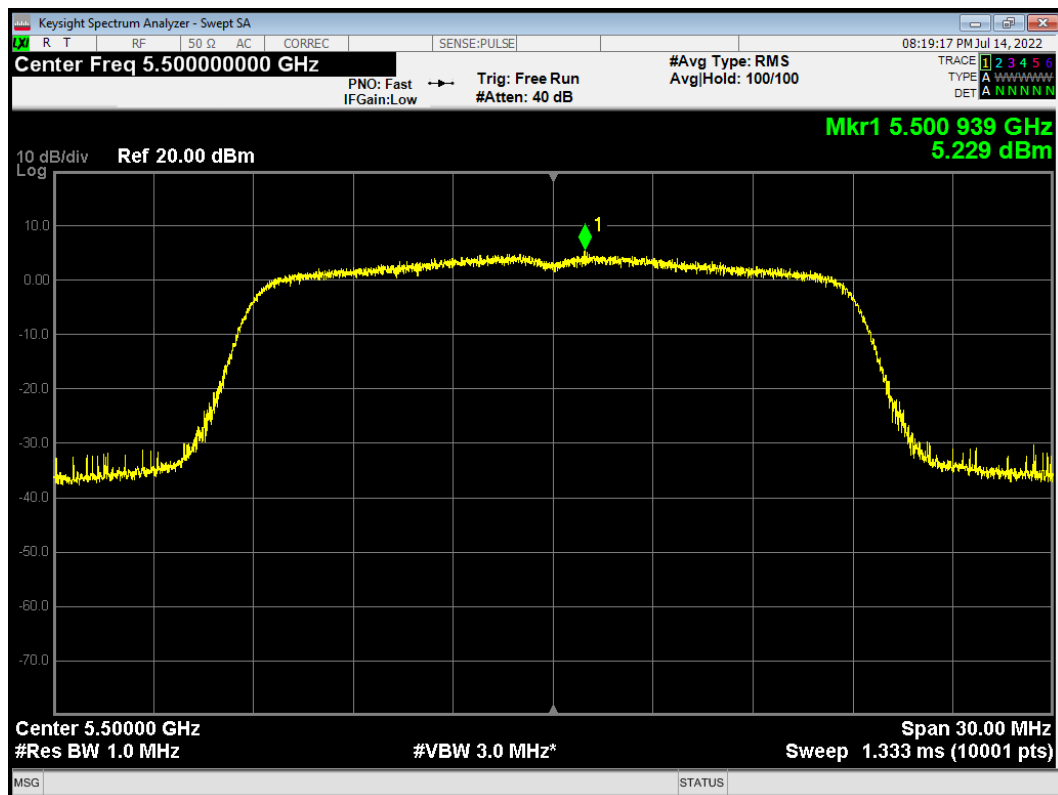


PSD NVNT 802.11ac(VHT80) 5690MHz

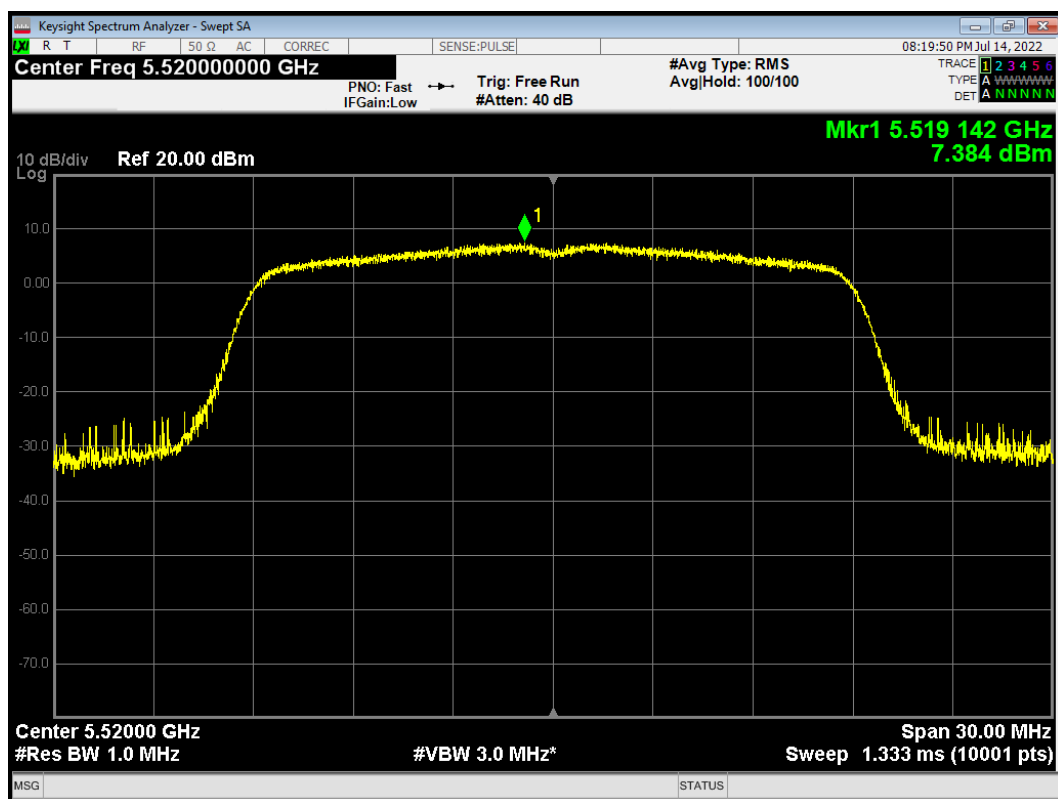




PSD NVNT 802.11n(HT20) 5500MHz

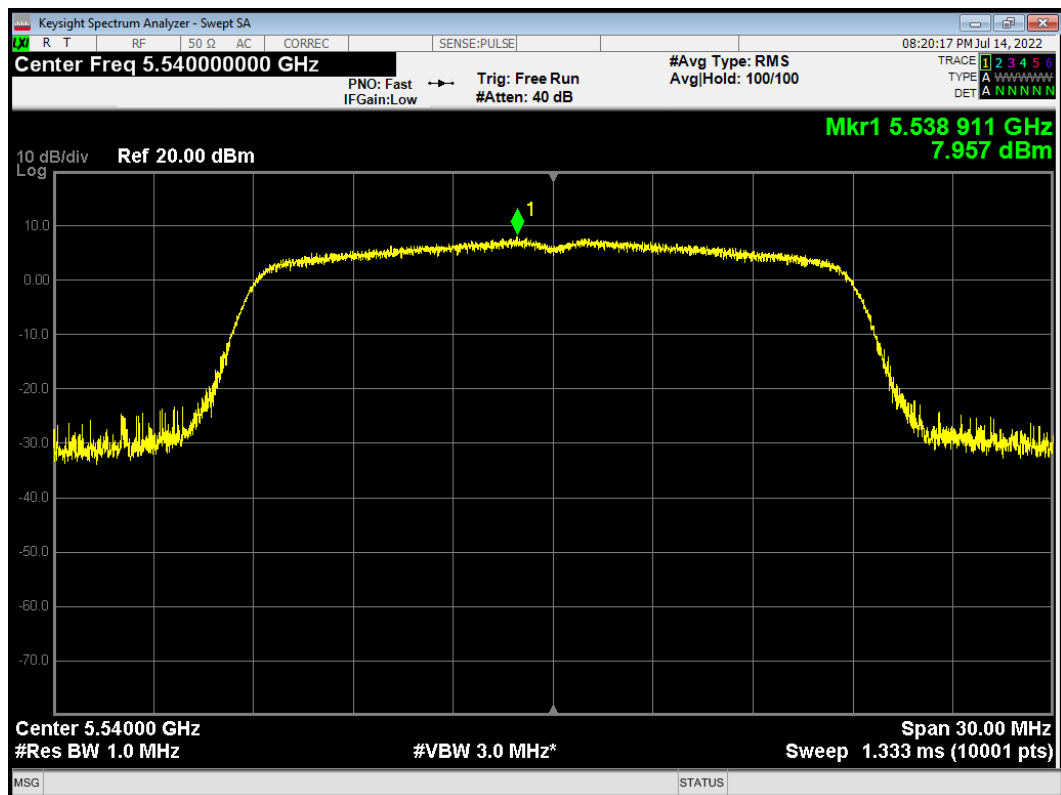


PSD NVNT 802.11n(HT20) 5520MHz

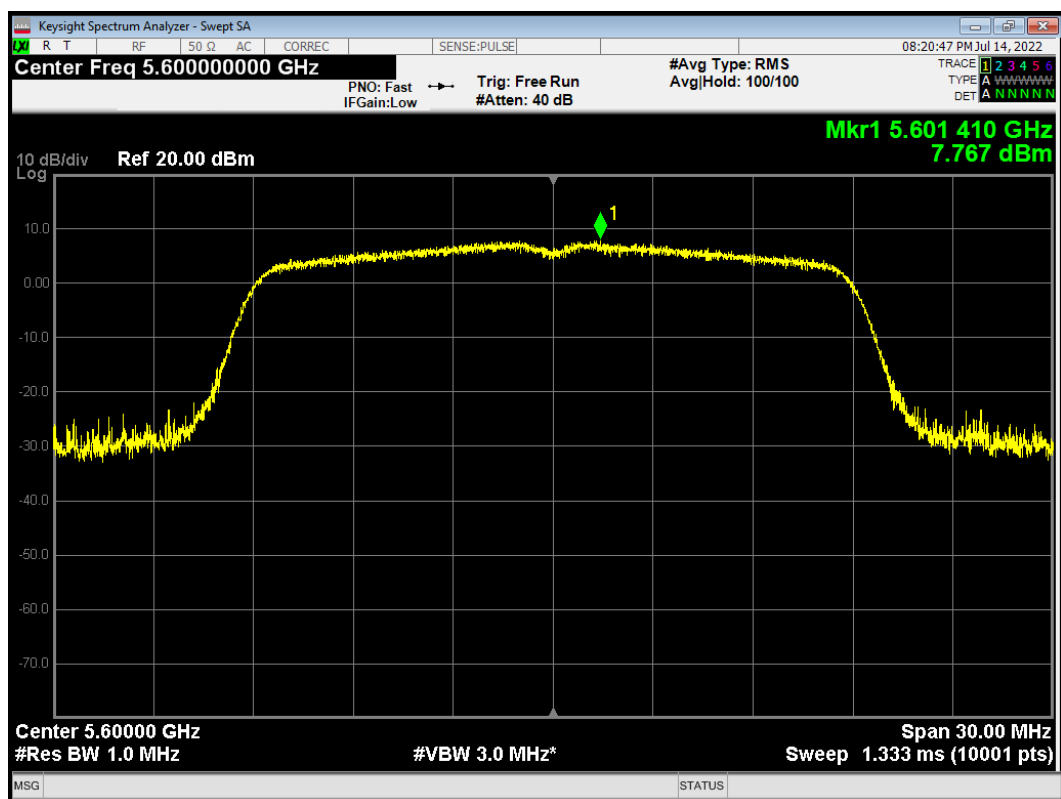




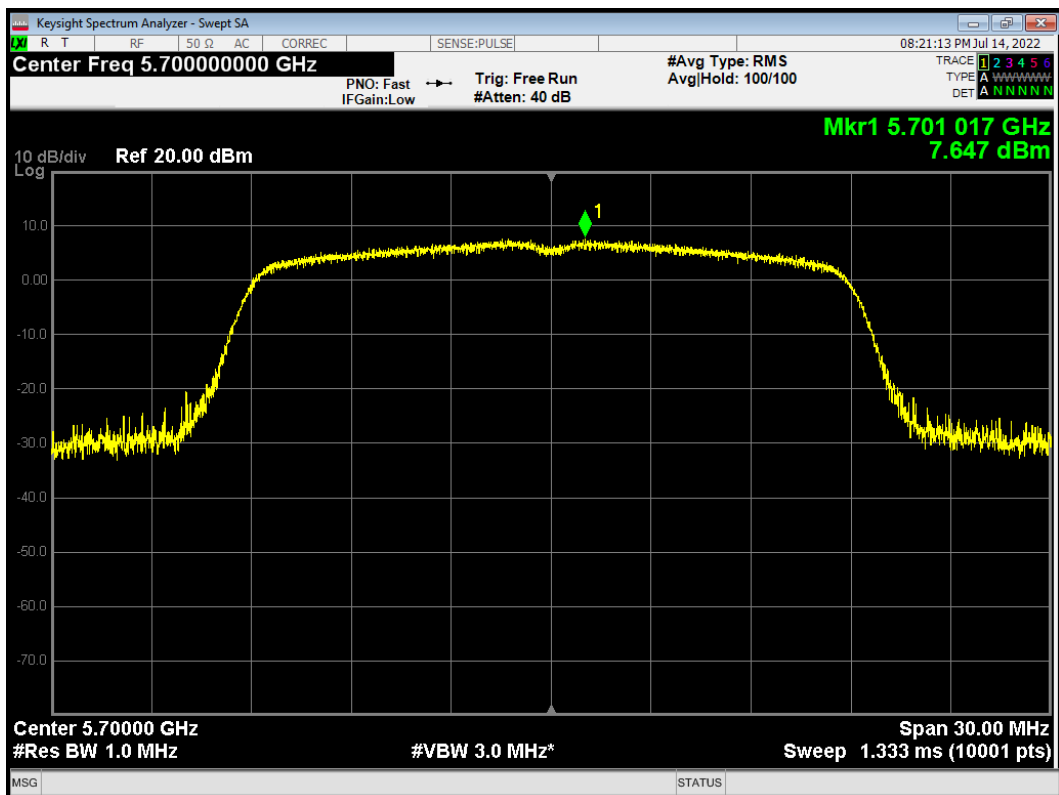
PSD NVNT 802.11n(HT20) 5540MHz



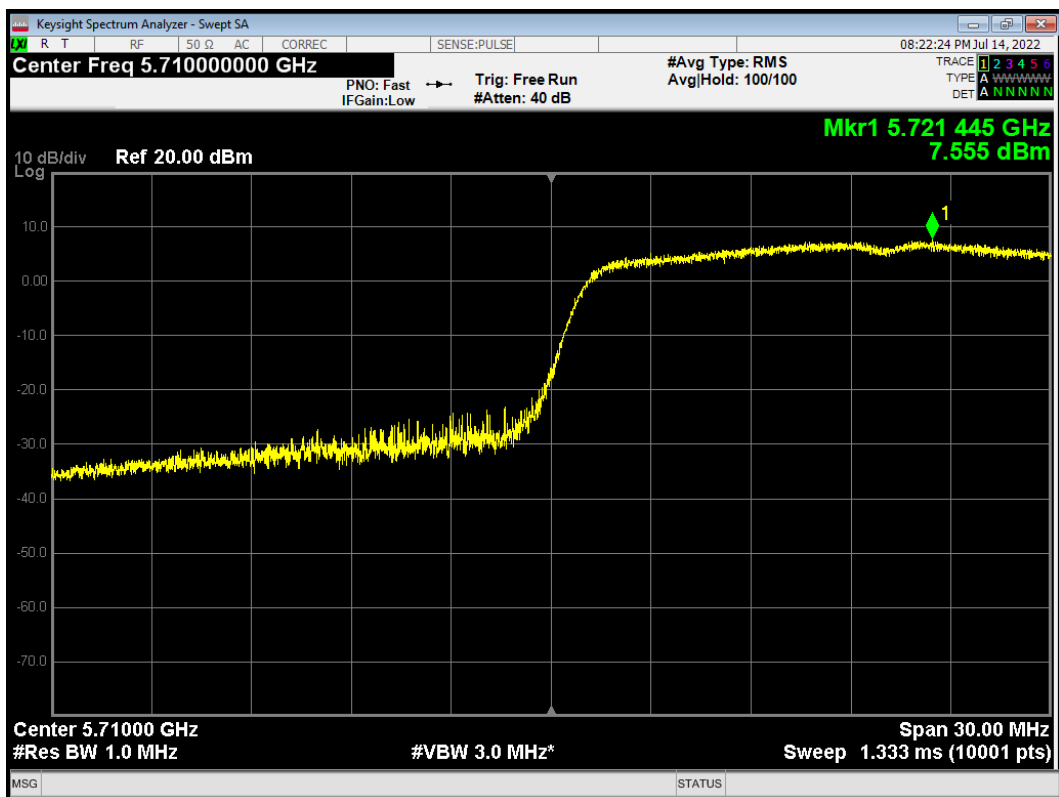
PSD NVNT 802.11n(HT20) 5600MHz



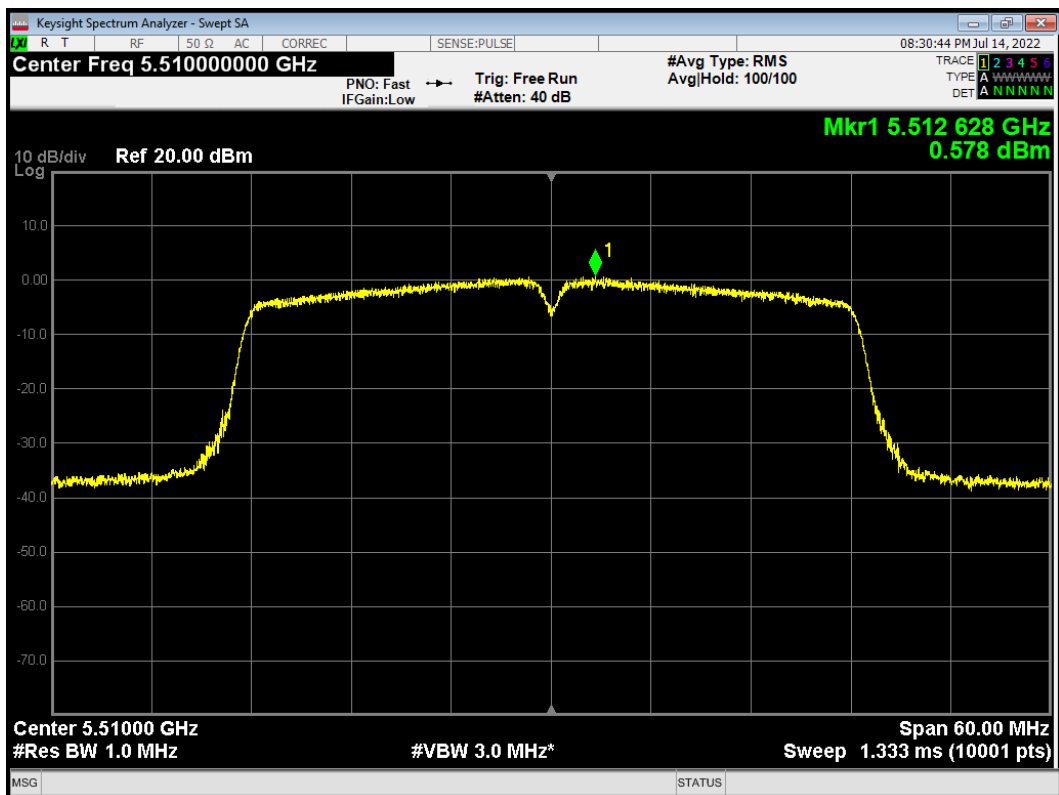
PSD NVNT 802.11n(HT20) 5700MHz



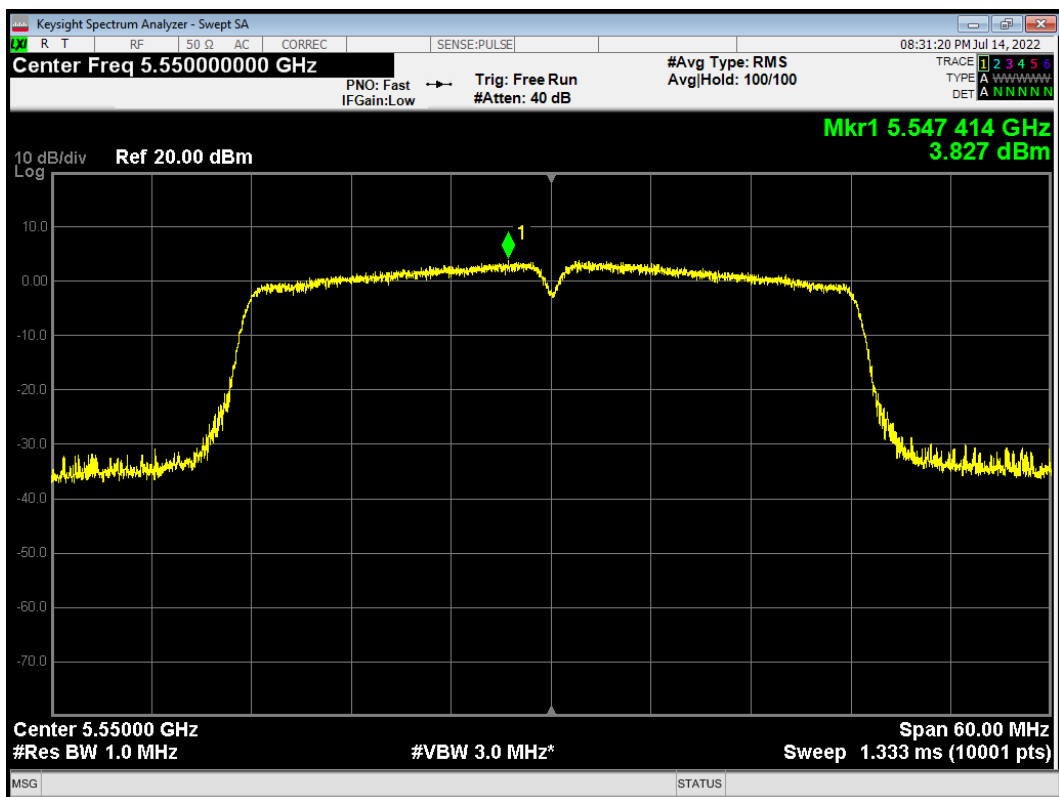
PSD NVNT 802.11n(HT20) 5720MHz



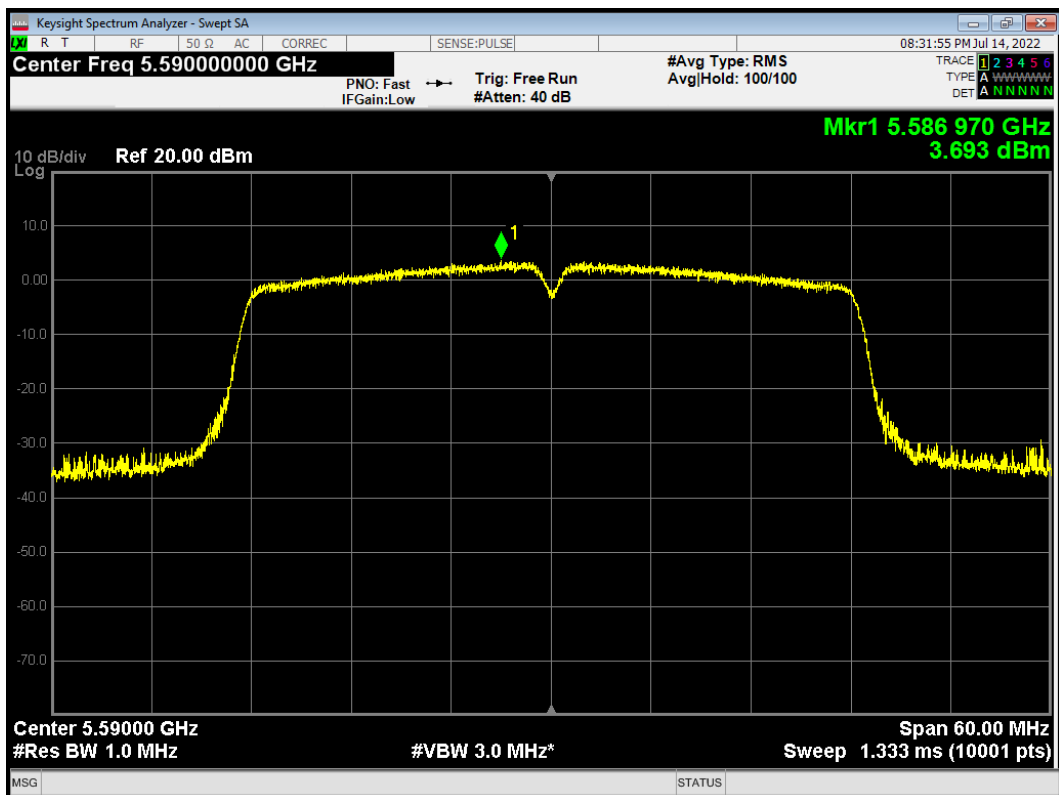
PSD NVNT 802.11n(HT40) 5510MHz



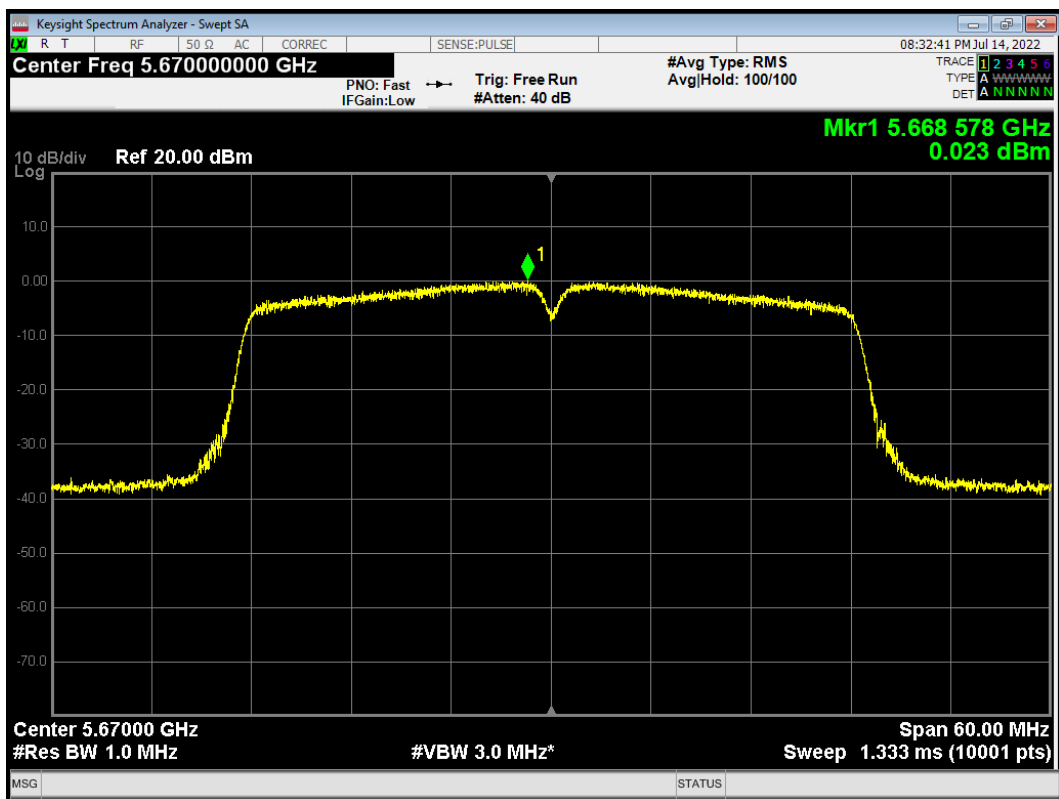
PSD NVNT 802.11n(HT40) 5550MHz



PSD NVNT 802.11n(HT40) 5590MHz

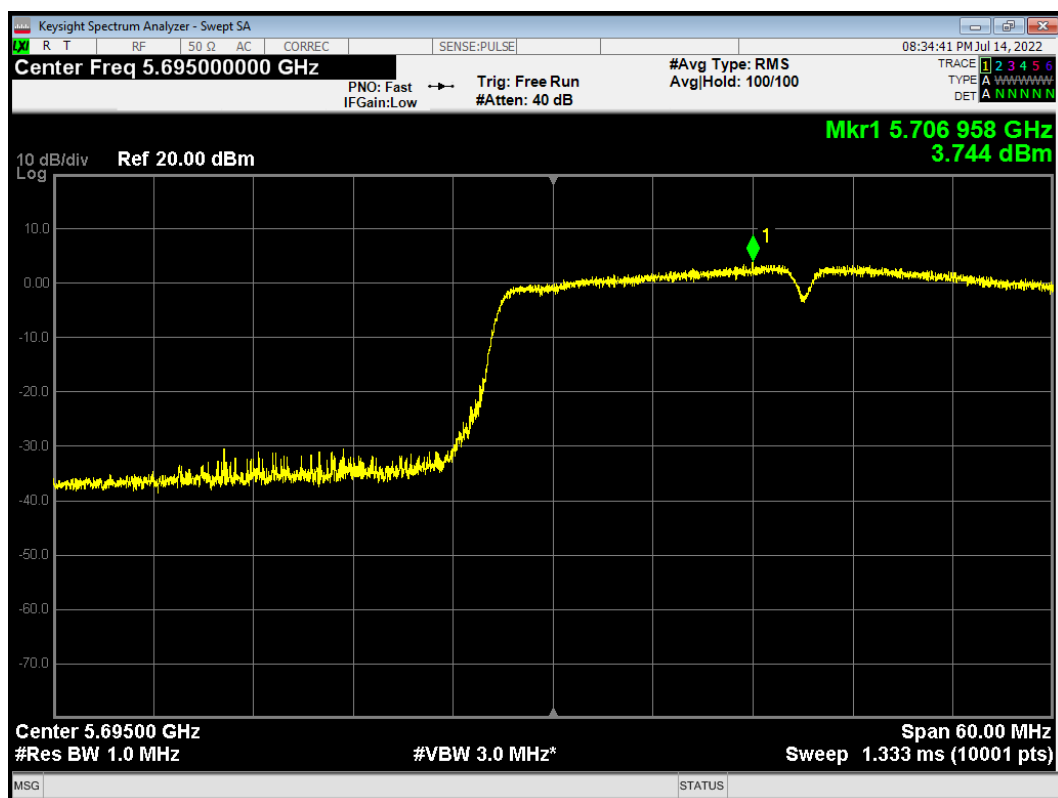


PSD NVNT 802.11n(HT40) 5670MHz





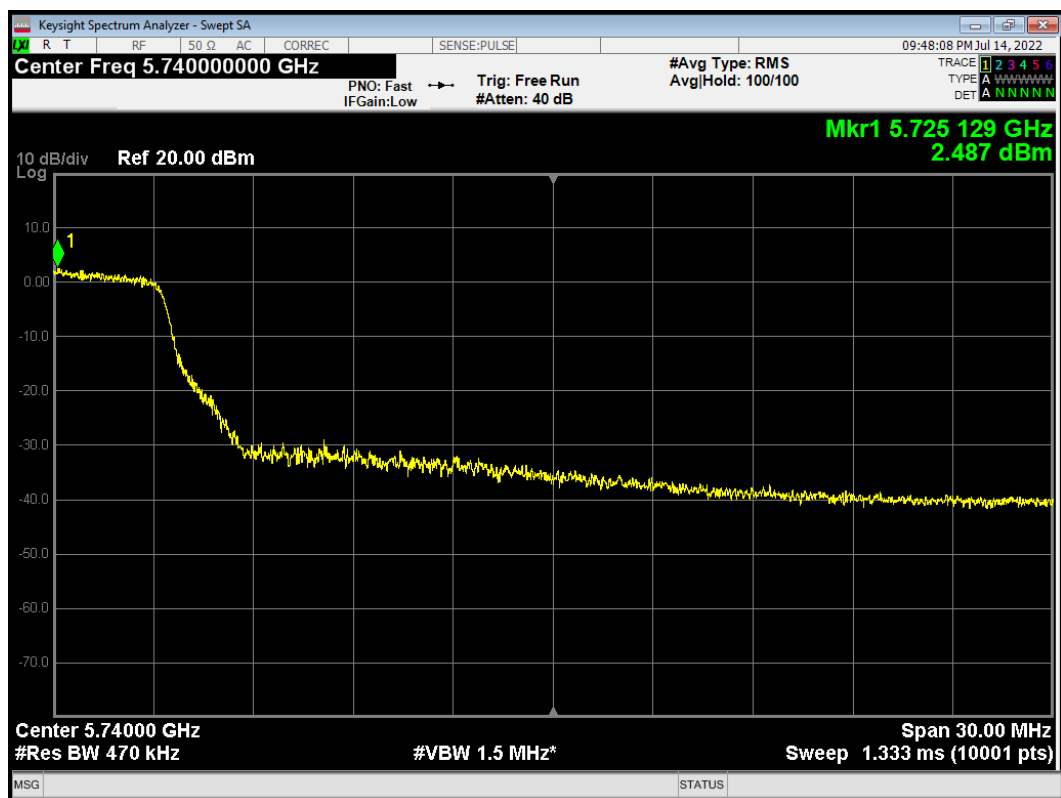
PSD NVNT 802.11n(HT40) 5710MHz



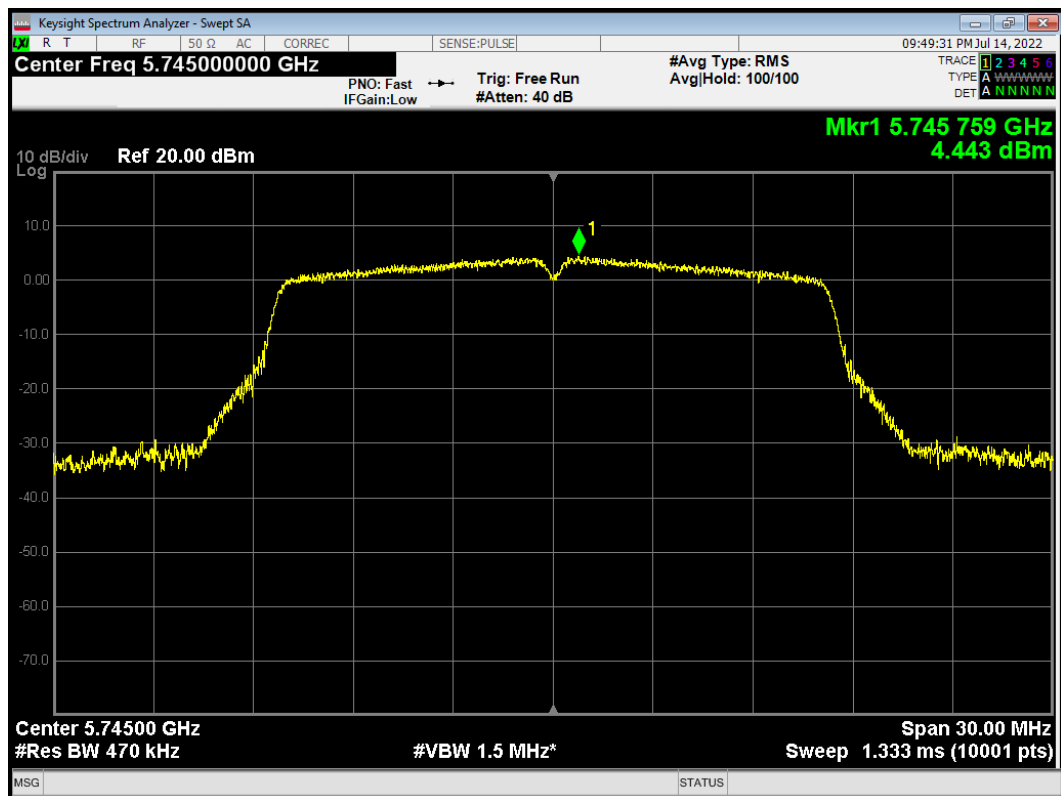


U-NII-3:

PSD NVNT 802.11a 5720MHz

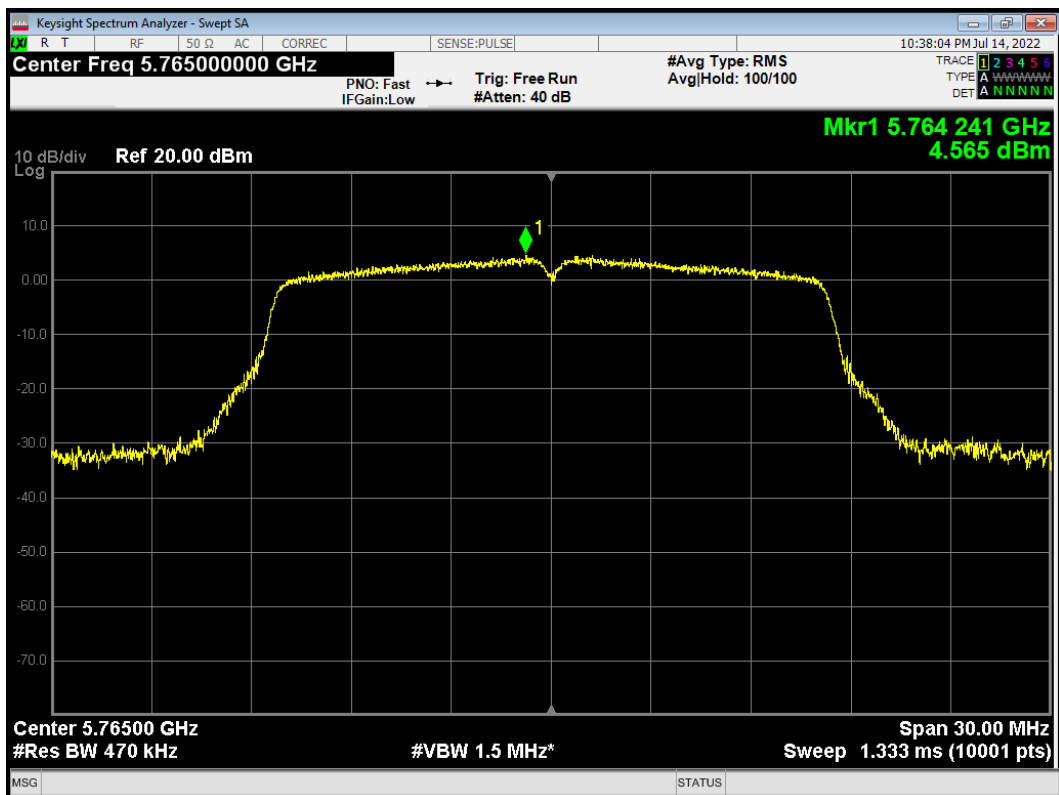


PSD NVNT 802.11a 5745MHz

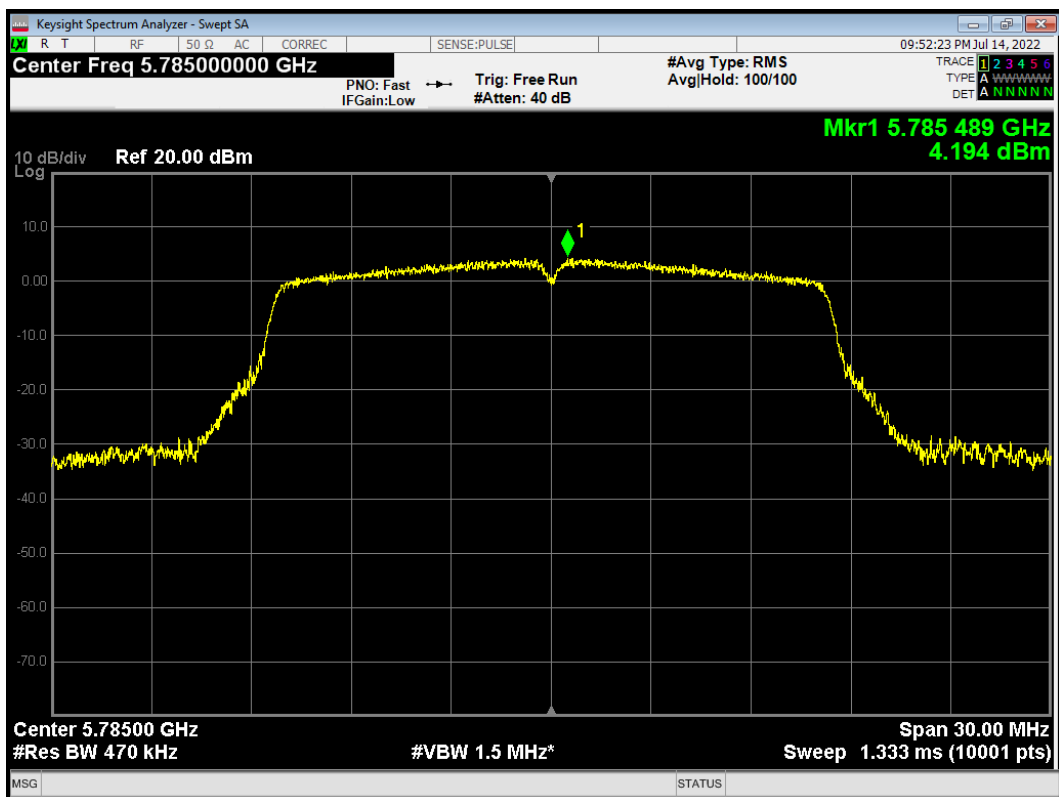




PSD NVNT 802.11a 5765MHz

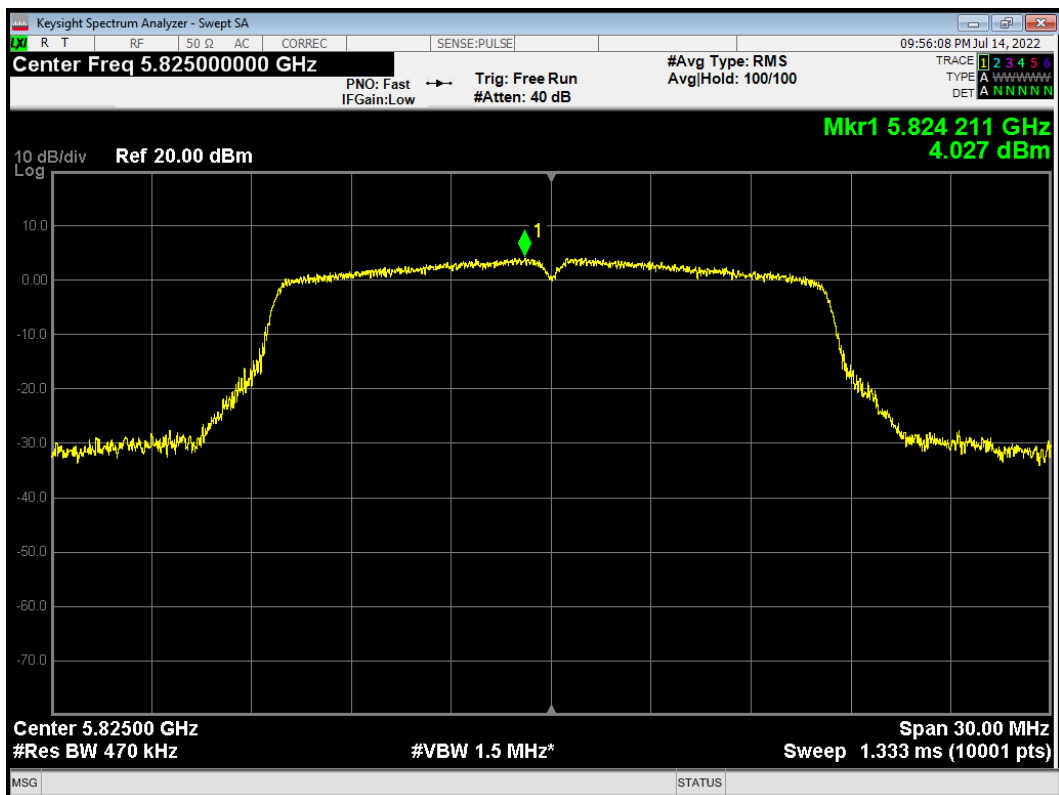


PSD NVNT 802.11a 5785MHz

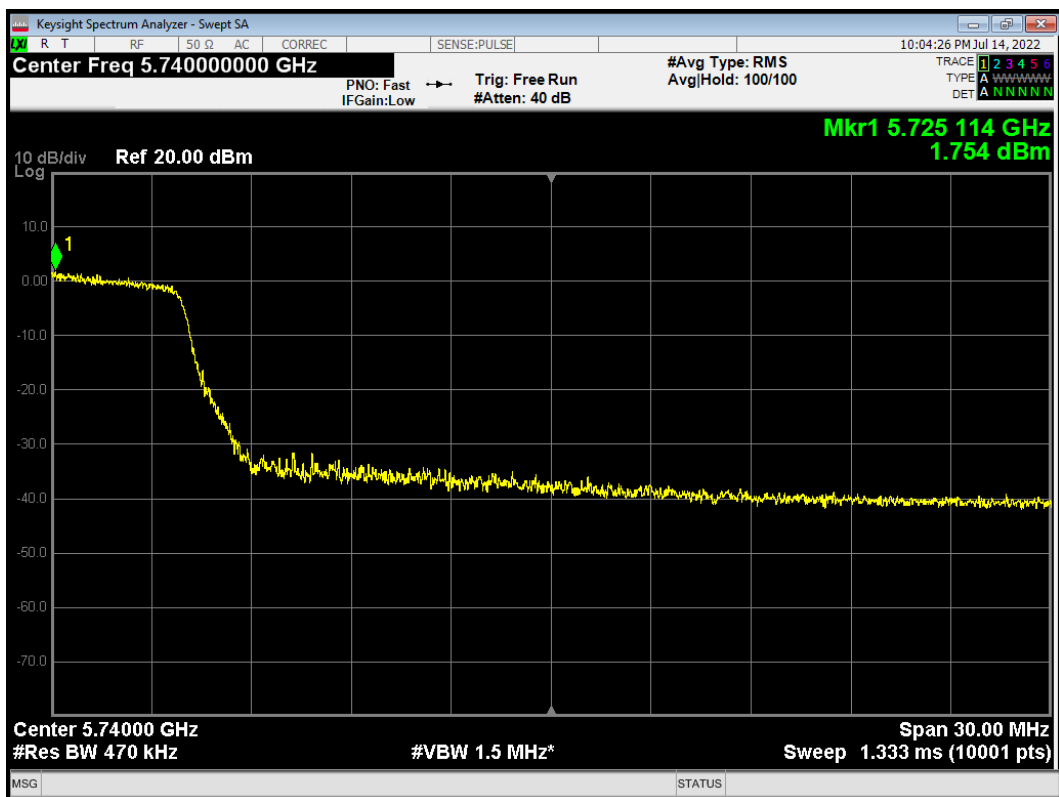




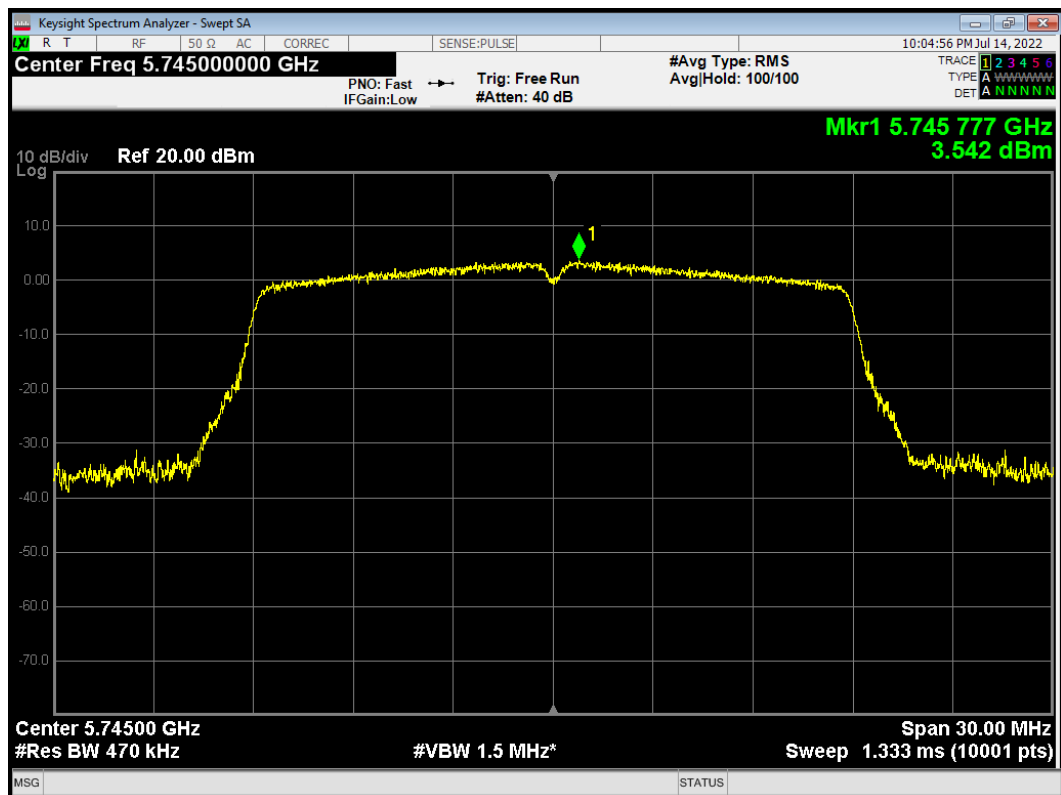
PSD NVNT 802.11a 5825MHz



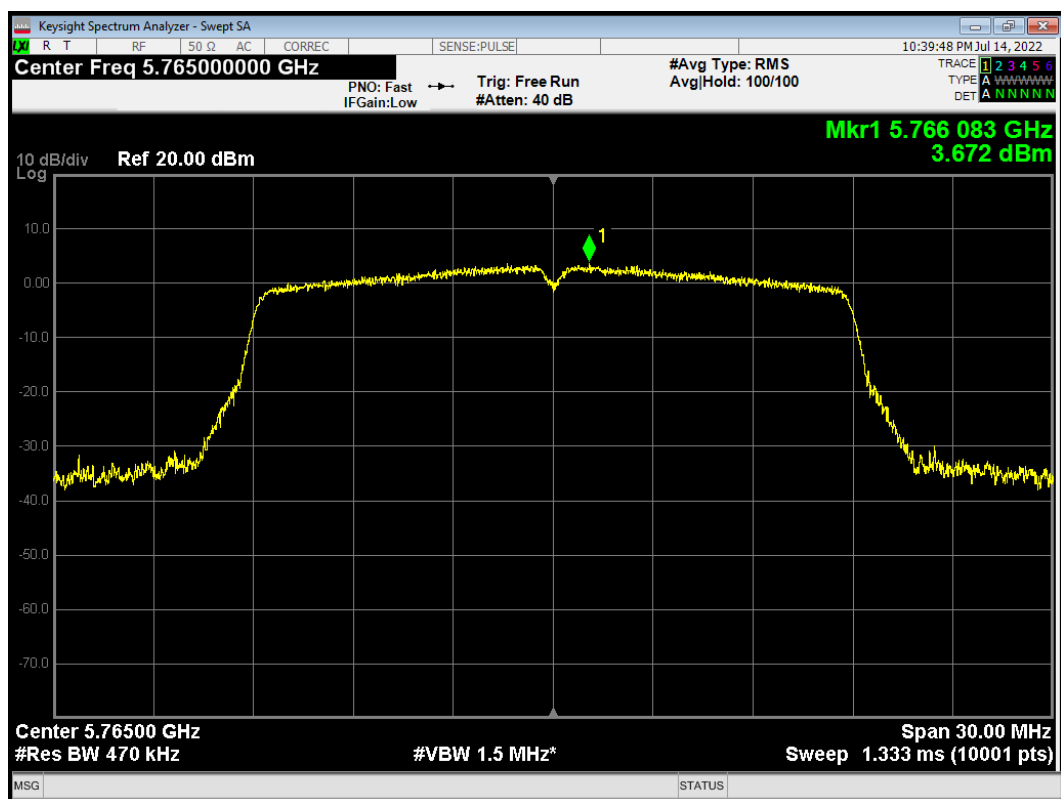
PSD NVNT 802.11ac(VHT20) 5720MHz



PSD NVNT 802.11ac(VHT20) 5745MHz

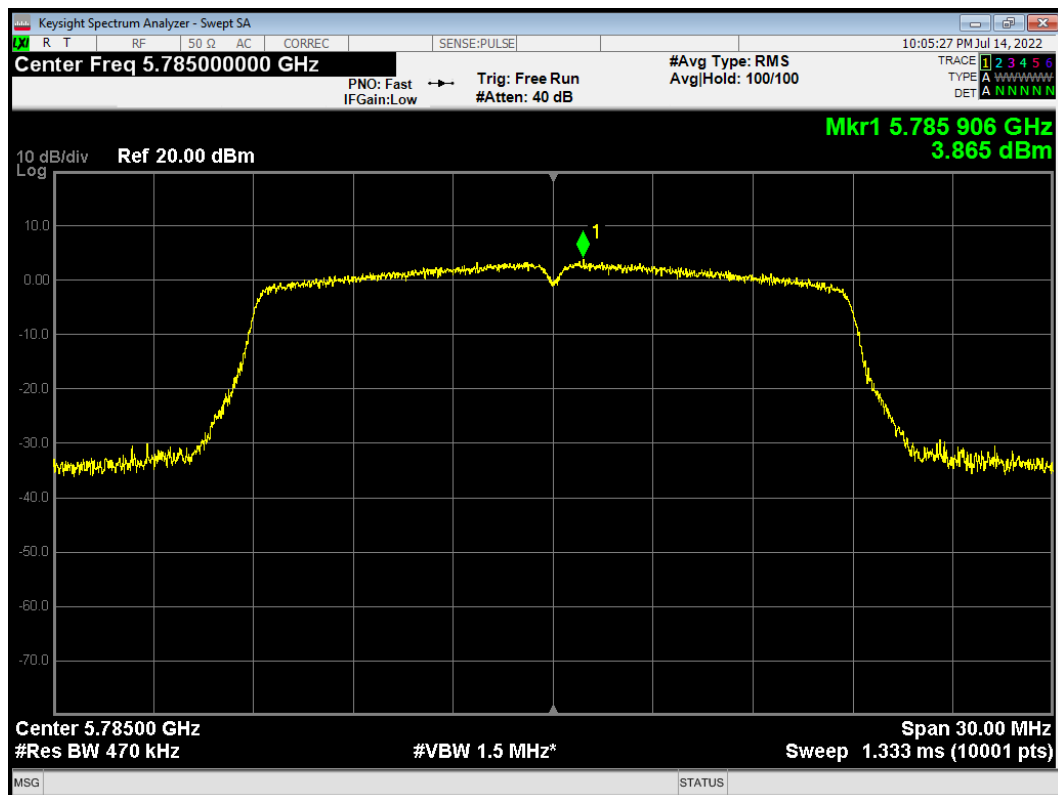


PSD NVNT 802.11ac(VHT20) 5765MHz

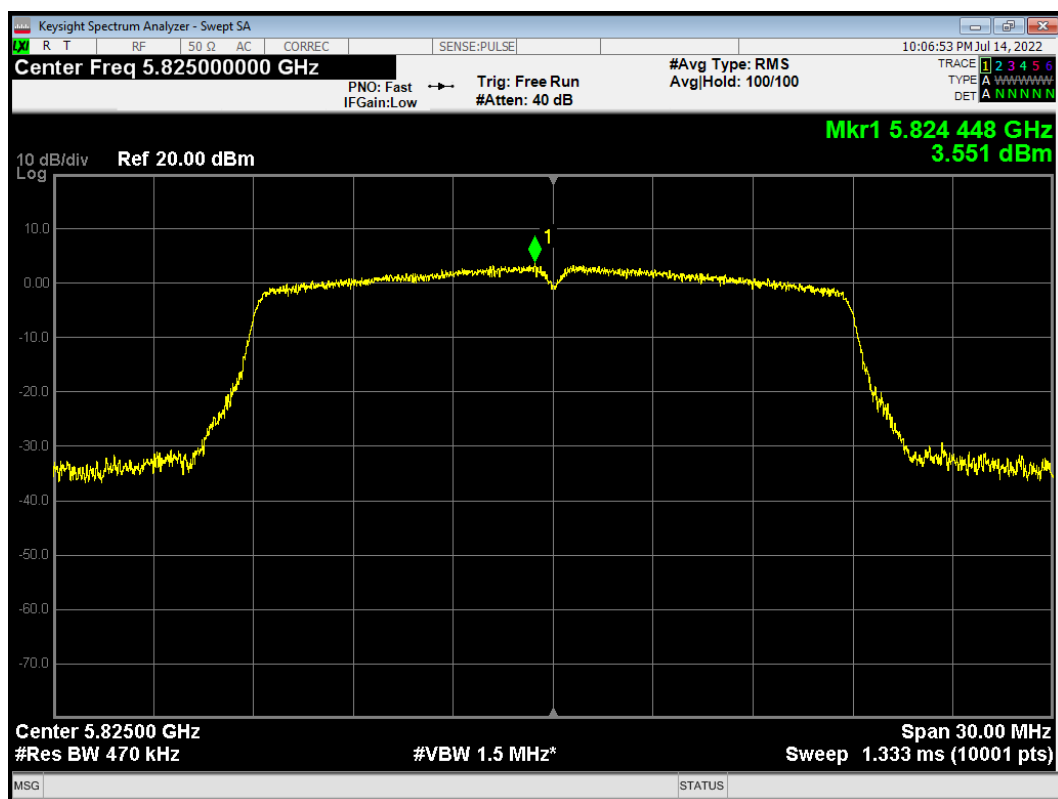




PSD NVNT 802.11ac(VHT20) 5785MHz

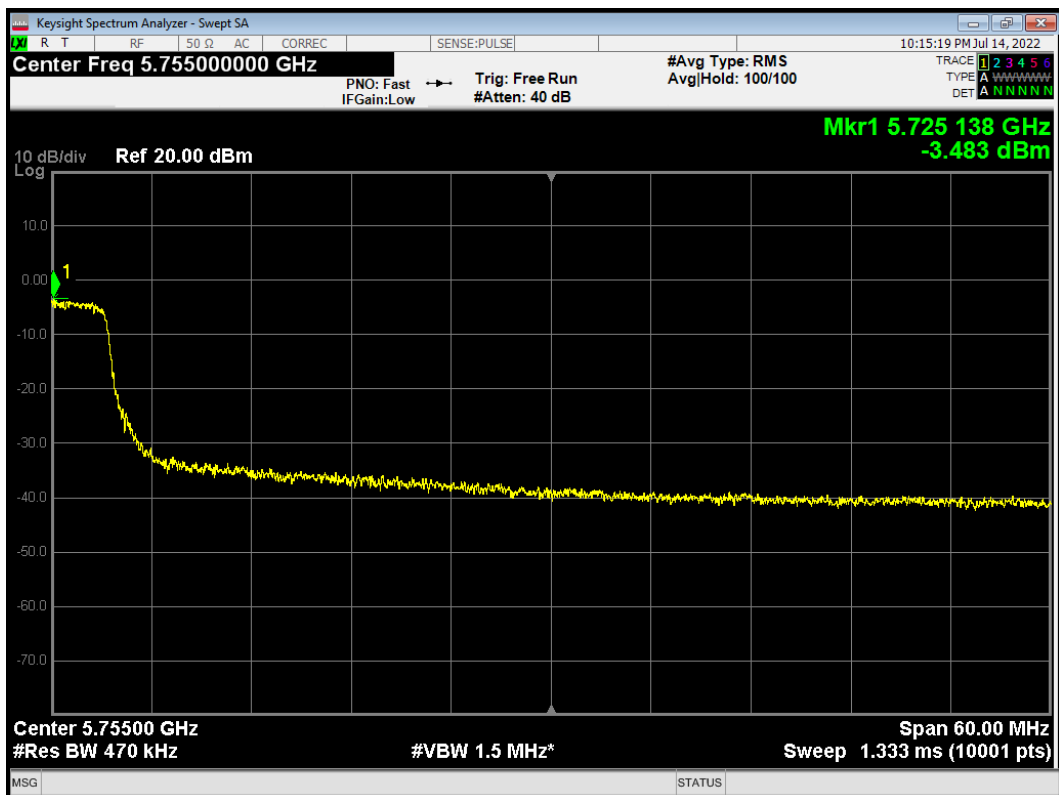


PSD NVNT 802.11ac(VHT20) 5825MHz

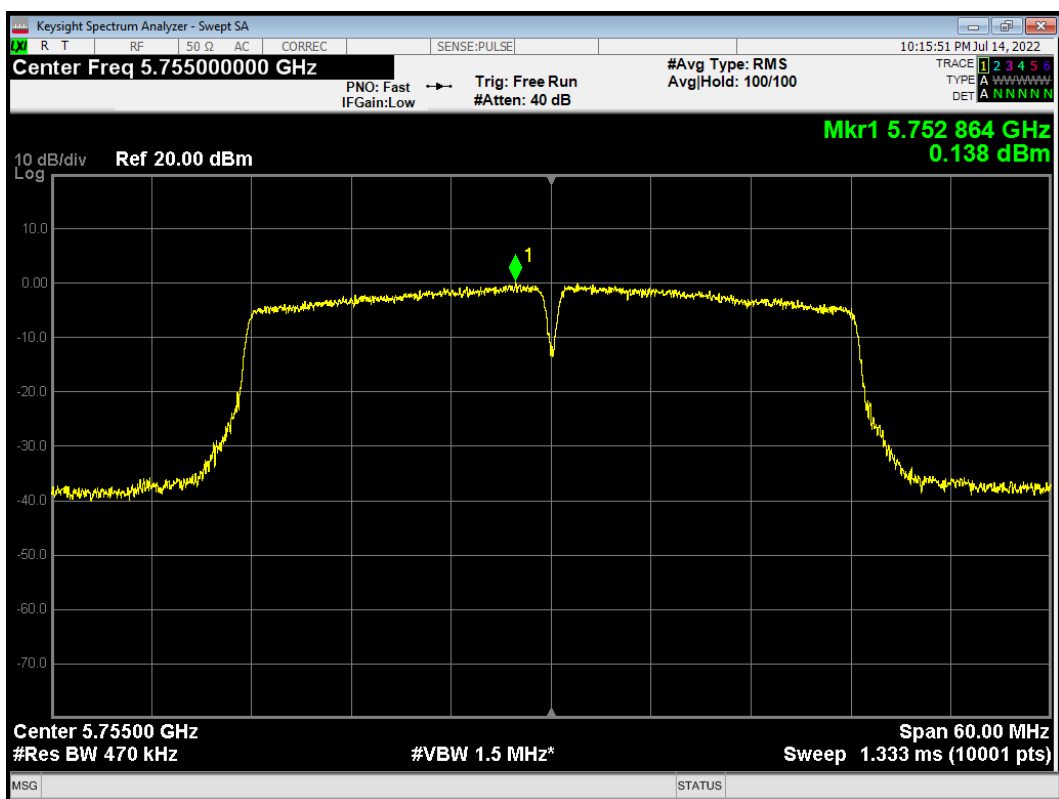




PSD NVNT 802.11ac(VHT40) 5710MHz

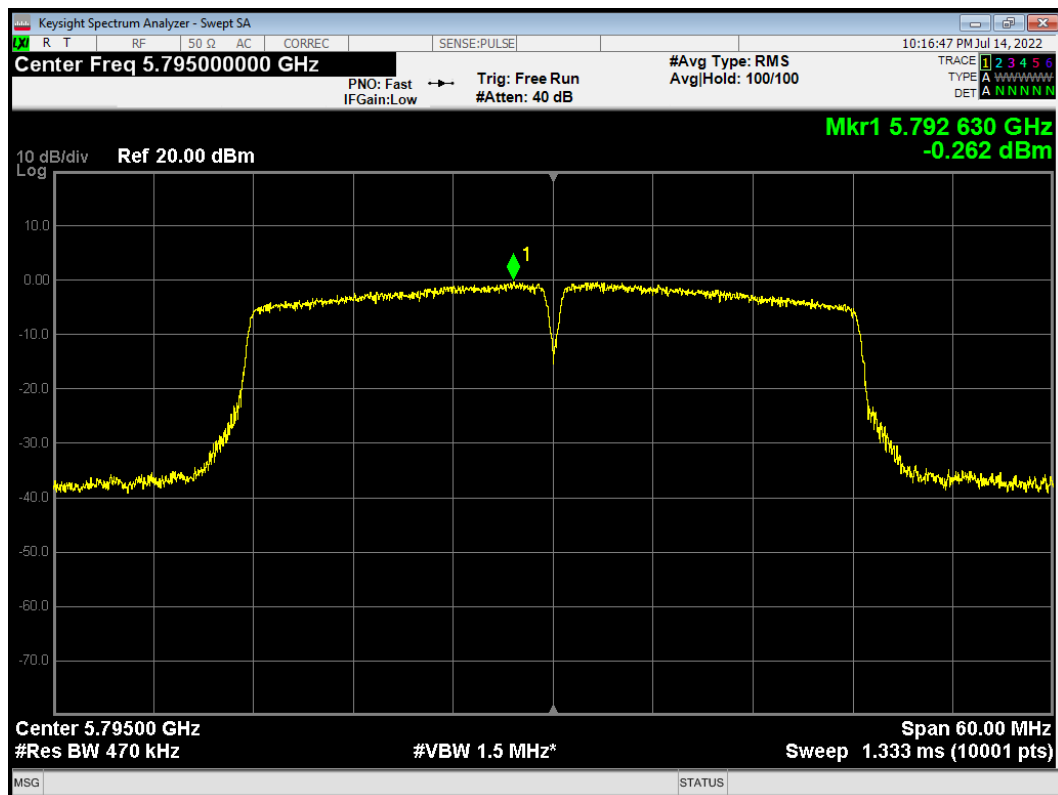


PSD NVNT 802.11ac(VHT40) 5755MHz

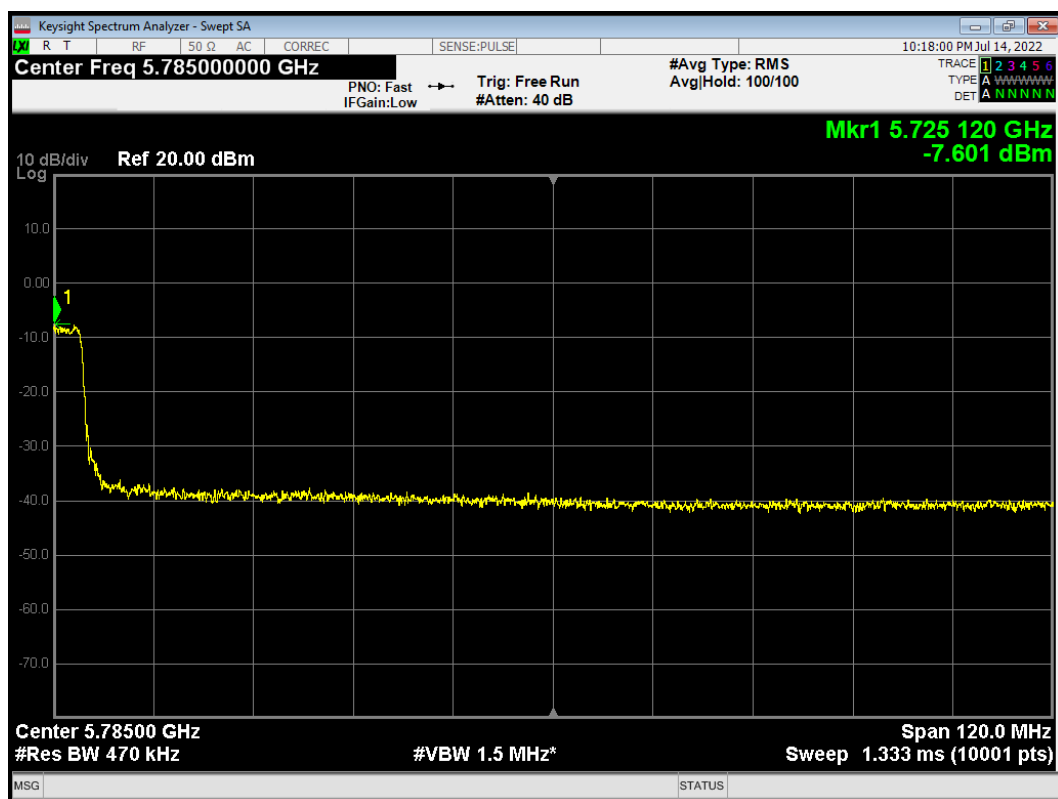




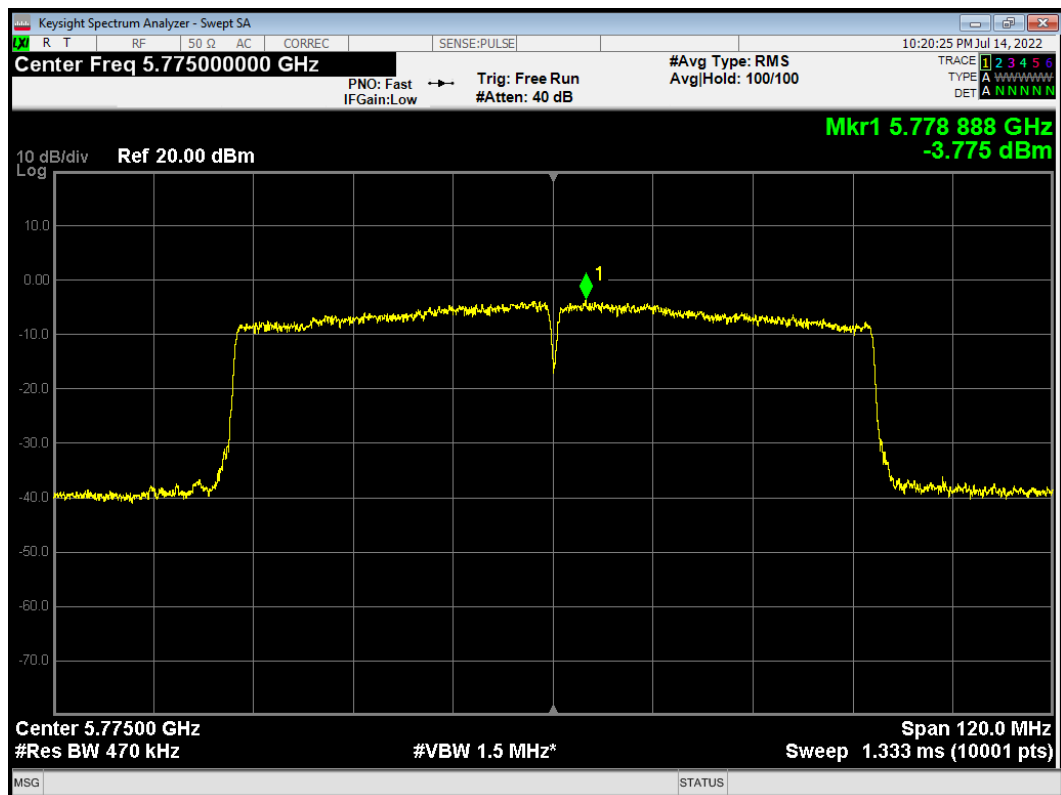
PSD NVNT 802.11ac(VHT40) 5795MHz



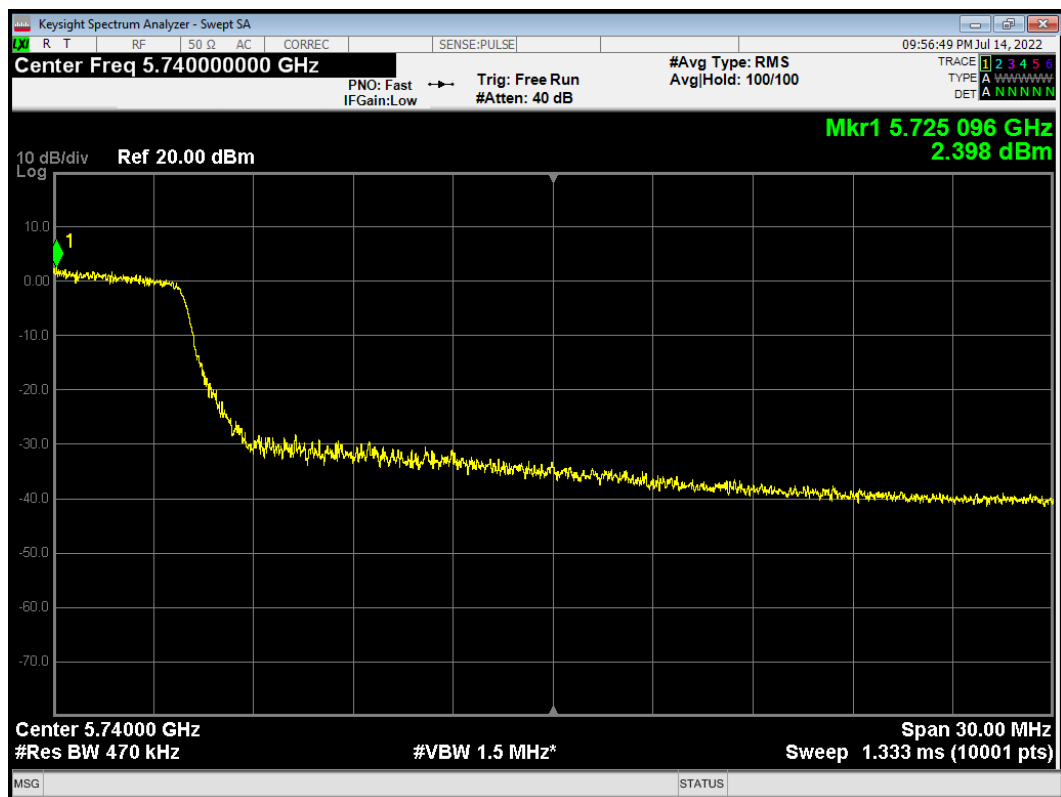
PSD NVNT 802.11ac(VHT80) 5690MHz



PSD NVNT 802.11ac(VHT80) 5775MHz

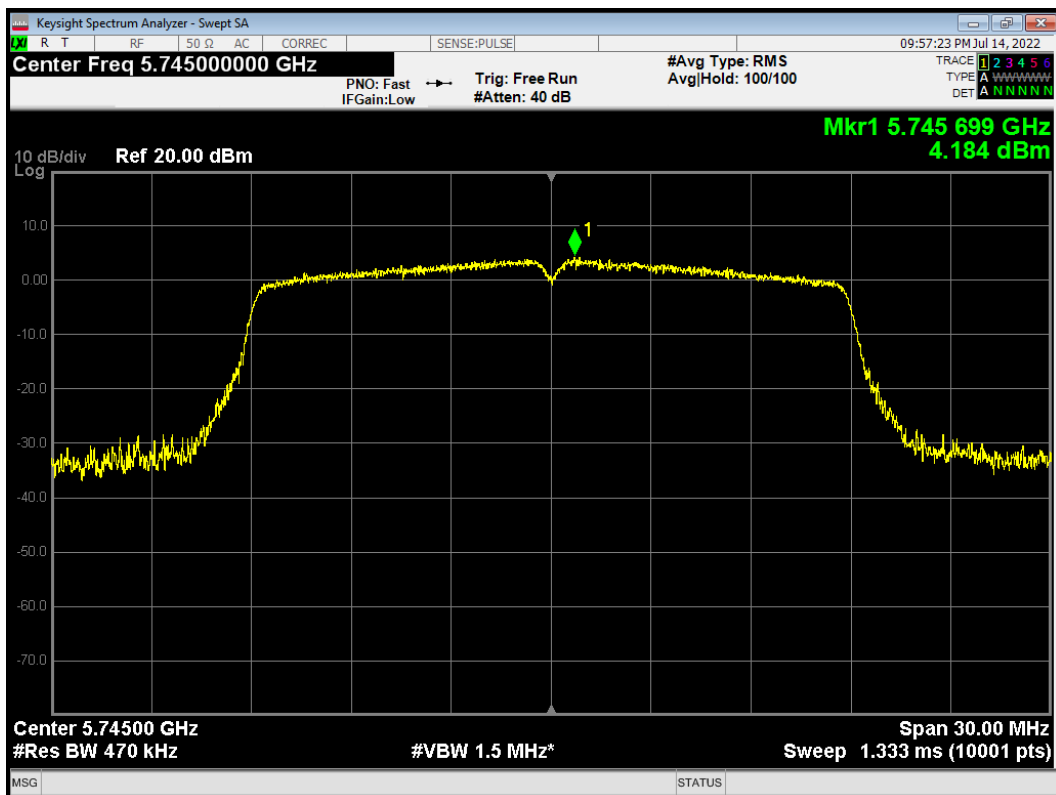


PSD NVNT 802.11n(HT20) 5720MHz

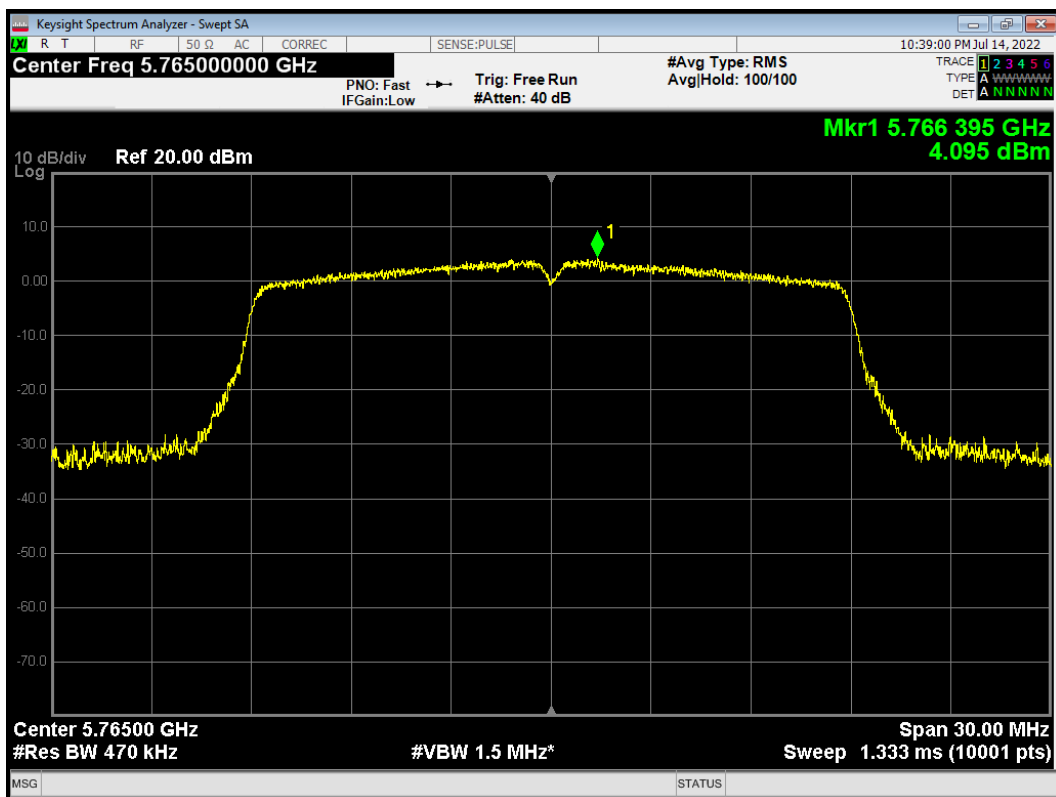




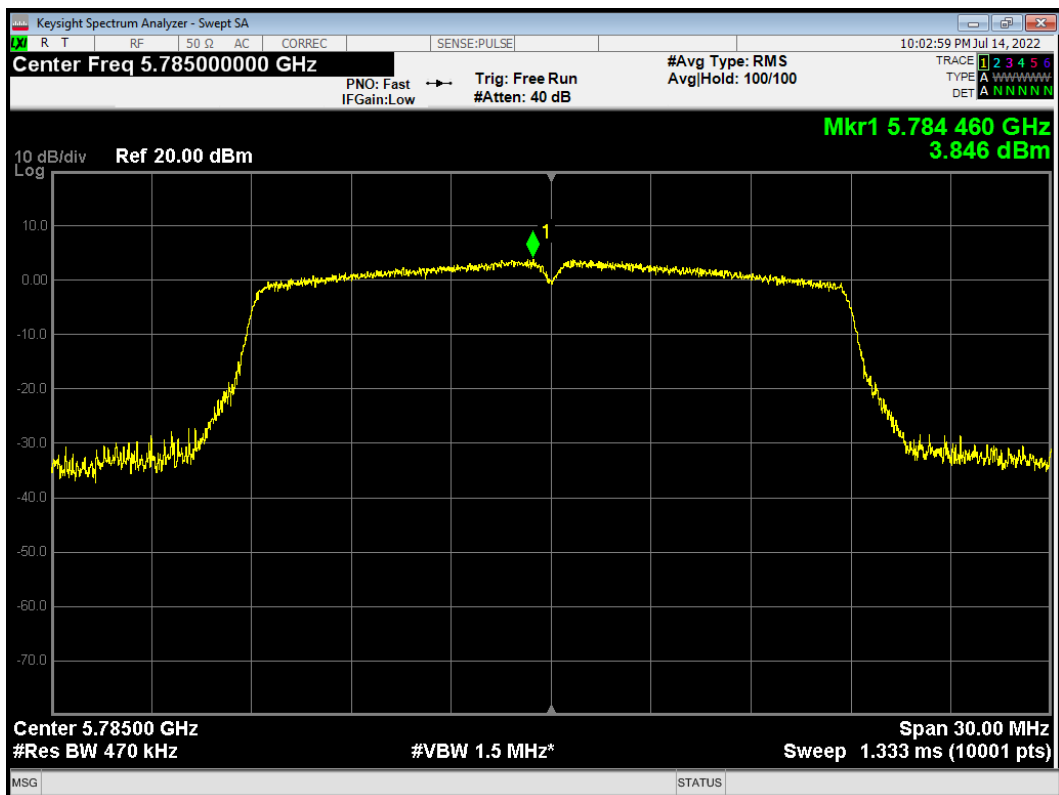
PSD NVNT 802.11n(HT20) 5745MHz



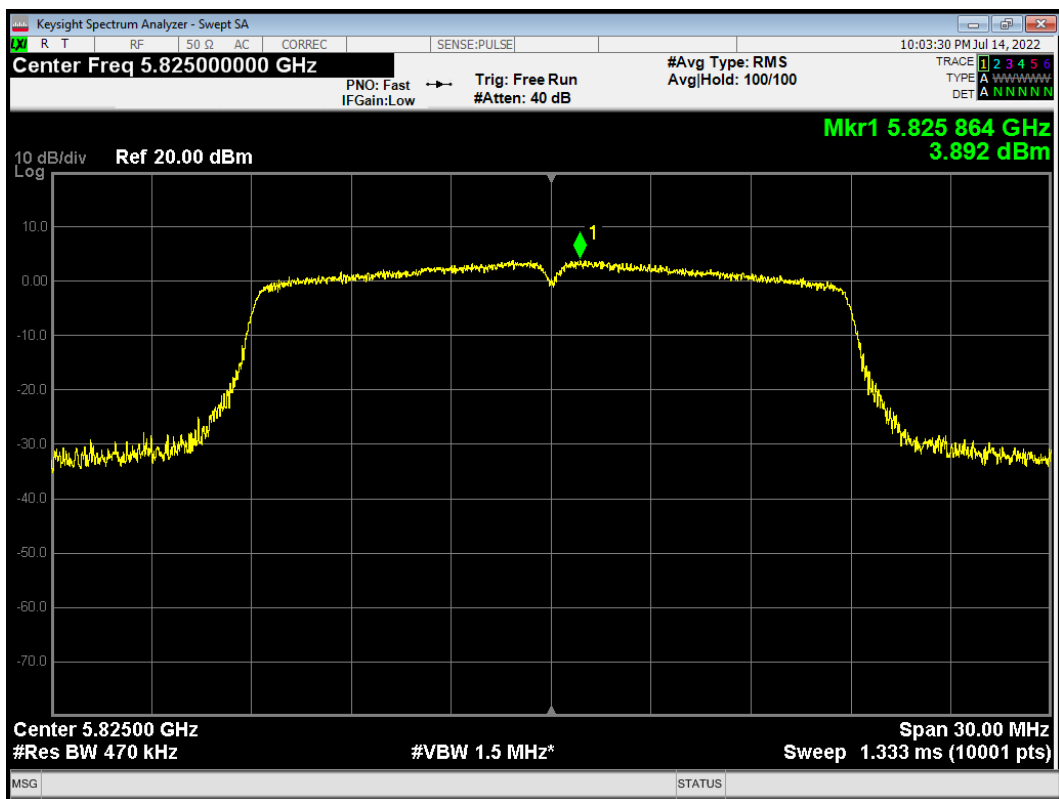
PSD NVNT 802.11n(HT20) 5765MHz



PSD NVNT 802.11n(HT20) 5785MHz

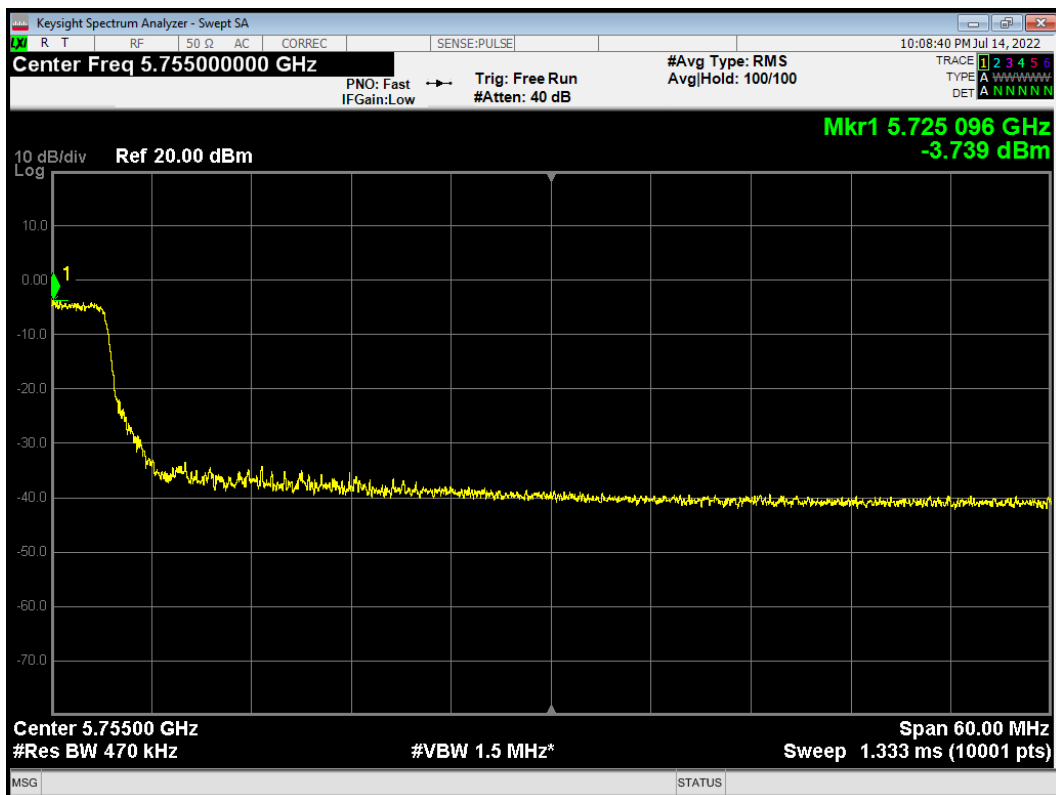


PSD NVNT 802.11n(HT20) 5825MHz

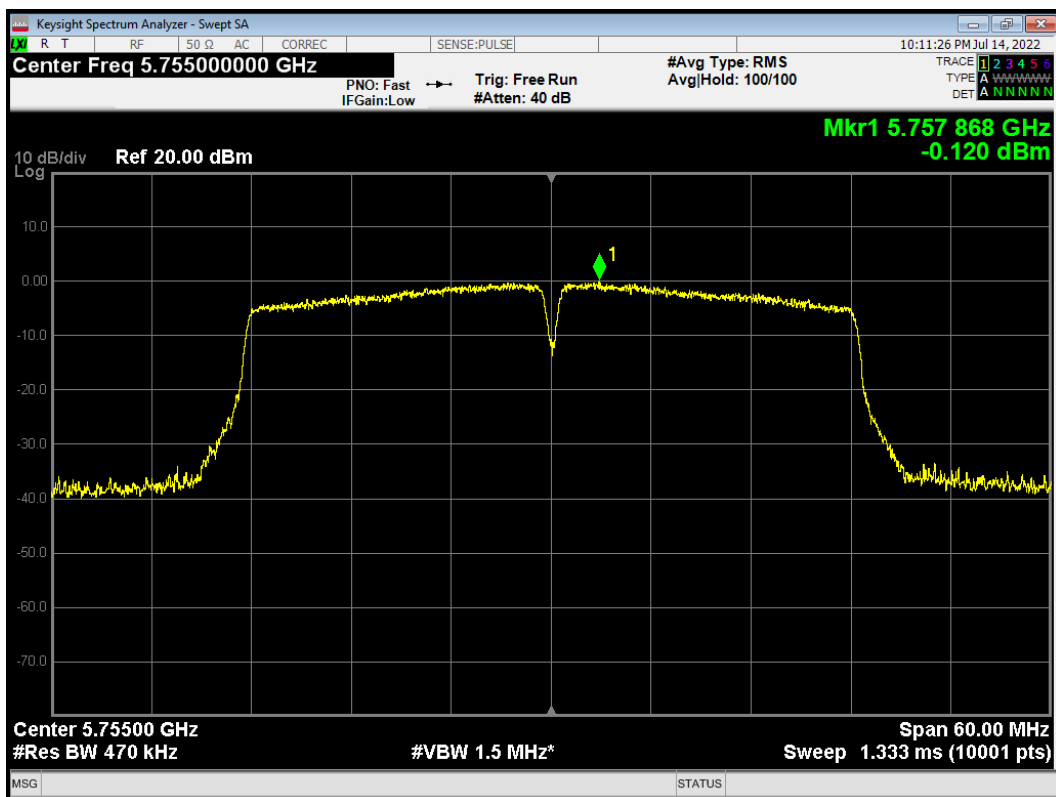




PSD NVNT 802.11n(HT40) 5710MHz



PSD NVNT 802.11n(HT40) 5755MHz





PSD NVNT 802.11n(HT40) 5795MHz

