

RF TEST REPORT

Applicant	Panasonic Corporation of North America
FCC ID	ACJ-TNPA7911
Product	Wireless module
Brand	Panasonic
Model	P24VS_01
Report No.	R2306A0670-R4V2
Issue Date	October 13, 2023

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15E (2022)**. 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.	August 31, 2023
Rev.1	Update information.	September 15, 2023
Rev.2	Update information and description.	October 13, 2023
Note: This revised report (Report No.: R2306A0670-R4V2) supersedes and replaces the previously issued report (Report No.: R2306A0670-R4V1). 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	Antenna Requirement	15.203	PASS
2	99% OBW & Emission Bandwidth	15.407(a) C63.10 12.4	PASS
3	Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)	15.407(a)	PASS
4	Peak Power Spectral Density (E.I.R.P.)	15.407(a)	PASS
5	Frequency Stability	15.407(g)	PASS
6	In-Band Emission (Mask)	15.407(b)(7)	PASS
7	Contention-Based Protocol	15.407(d)(6)	PASS
8	Unwanted Emissions	15.407(b)	PASS
9	Conducted Emissions	15.207	NA
10	Operational restrictions for 6 GHz U-NII devices	15.407(d)	PASS
Date of Testing: July 6, 2023 ~ August 9, 2023 Date of Sample Received: June 12, 2023 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.
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2. General Description of Equipment Under Test

2.1. Applicant and Manufacturer Information

Applicant	Panasonic Corporation of North America
Applicant address	Two Riverfront Plaza, Newark, NJ 07102-5490, United States
Manufacturer	Panasonic Entertainment & Communication Co., Ltd.
Manufacturer address	1-10-12 Yagumo-higashi-machi, Moriguchi City, Osaka 570-0021, Japan

2.2. General Information

EUT Description			
Equipment Information	Low Power Indoor Client		
Model	P24VS_01		
Lab internal SN	R2306A0670/S04		
Hardware Version	1		
Software Version	1		
Power Supply	External power supply		
Antenna Type	Internal Antenna		
Antenna Connector	A permanently attached antenna (meet with the standard FCC Part 15.203 requirement)		
Antenna Gain	Band	Antenna 1	Antenna 2
	U-NII-5	-0.3 dBi	-0.1 dBi
	U-NII-6	1.6 dBi	1.9 dBi
	U-NII-7	2.2 dBi	2.7 dBi
	U-NII-8	0.8 dBi	1.2 dBi
Directional Gain	Band	For Power	For PSD
	U-NII-5	-0.1 dBi	2.91 dBi
	U-NII-6	1.9 dBi	4.91 dBi
	U-NII-7	2.7 dBi	5.71 dBi
	U-NII-8	1.2 dBi	4.21 dBi
Operating Frequency Range(s)	U-NII-5 (5925MHz-6425MHz) U-NII-6 (6425MHz-6525MHz) U-NII-7 (6525MHz-6875MHz) U-NII-8 (6875MHz-7125MHz)		
Modulation Type	802.11ax SU (HE20/ HE40/ HE80): OFDM 802.11ax TB (HE20/ HE40/ HE80): OFDMA		

Max. EIRP	10.45 dBm
Testing temperature range:	-20 ° C to 50° C
Operating temperature range:	0 ° C to 40° C
Operating voltage range:	4.5 V to 5.5 V
State DC voltage:	5V
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. 2. The EUT is connected to 5V DC power supply. And EUT is connected a computer was used to configure the DUT using the tool QA Tool_Dbg to transmit all different modes	

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 (2022) Unlicensed National Information Infrastructure Devices

ANSI C63.10-2013

Reference standard:

KDB 987594 D02 U-NII 6GHz EMC Measurement v01r01

KDB 987594 D04 UN6GHZ Pre-Approval Guidance Checklist v01

KDB 789033 D02 General U-NII 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.

The test software is used MT7921.

Worst-case data rates are shown as following table.

Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
802.11ax (HE20)	MCS0	MCS0	MCS0
802.11ax (HE40)	MCS0	MCS0	MCS0
802.11ax (HE80)	MCS0	MCS0	MCS0

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

Test Cases	Antenna 1	Antenna 2	MIMO
99% OBW & Emission Bandwidth	--	O	--
Maximum Equivalent Isotopically Radiated Power (E.I.R.P.)	O	O	O
Peak Power Spectral Density (E.I.R.P.)	O	O	O
Frequency Stability	--	O	--
In-Band Emission (Mask)	--	O	--
Contention-Based Protocol	--	--	O
Unwanted Emissions	--	--	O
Conducted Emissions	--	--	--
Note: "O": test all bands			

TB Mode

Test Cases	Antenna 1	Antenna 2	MIMO
99% OBW & Emission Bandwidth	--	--	--
Maximum Equivalent Isotopically Radiated Power (E.I.R.P.)	802.11ax HE20 26-Tone; 52-Tone; 106-Tone	802.11ax HE20 26-Tone; 52-Tone; 106-Tone	802.11ax HE20 26-Tone; 52-Tone; 106-Tone
Peak Power Spectral Density (E.I.R.P.)	802.11ax HE20 26-Tone; 52-Tone; 106-Tone	802.11ax HE20 26-Tone; 52-Tone; 106-Tone	802.11ax HE20 26-Tone; 52-Tone; 106-Tone
Frequency Stability	--	--	--
In-Band Emission (Mask)	--	--	--
Contention-Based Protocol	--	--	--
Unwanted Emissions	--	--	802.11ax HE20 26-Tone; 52-Tone; 106-Tone
Conducted Emissions	--	--	--
Note: "O": test all bands			

Wireless Technology and Frequency Range

Wireless Technology		Channel/ Frequency (MHz)	Channel/ Frequency (MHz)	Channel/ Frequency (MHz)
		Bandwidth 20 MHz	Bandwidth 40 MHz	Bandwidth 80 MHz
Wi-Fi	U-NII-5	1/5955	3/5965	7/5985
		5/5975		
		9/5995	11/6005	
		13/6015		
		17/6035	19/6045	23/6065
		21/6055		
		25/6075	27/6085	
		29/6095		
		33/6115	35/6125	39/6145
		37/6135		
		41/6155	43/6165	
		45/6175		
		49/6195	51/6205	55/6225
		53/6215		
		57/6235	59/6245	
		61/6255		
		65/6275	67/6285	71/6305
		69/6295		
		73/6315	75/6325	
		77/6335		
		81/6355	83/6365	87/6385
		85/6375		
		89/6395	91/6405	
		93/6415		
	U-NII-6	97/6435	99/6445	103/6465
		101/6455		
		105/6475	107/6485	
		109/6495		
		113/6515	115/6525	119/6545
	117/6535			
	121/6555	123/6565		
	125/6575			
	U-NII-7	129/6595	131/6605	135/6625
		133/6615		
		137/6635	139/6645	
		141/6655		

		145/6675	147/6685	151/6705
		149/6695		
		153/6715	155/6725	
		157/6735		
		161/6755	163/6765	167/6785
		165/6775		
		169/6795	171/6805	
		173/6815		
		177/6835	179/6845	183/6865
		181/6855		
	185/6875	187/6885		
	189/6895			
	U-NII-8	193/6915	195/6925	199/6945
		197/6935		
		201/6955	203/6965	
		205/6975		
		209/6995	211/7005	215/7025
		213/7015		
		217/7035	219/7045	
		221/7055		
		225/7075	227/7085	--
		229/7095		
		233/7115	--	

5. Test Case Results

5.1. 99% OBW & Emission Bandwidth

Ambient Condition

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

Method of Measurement

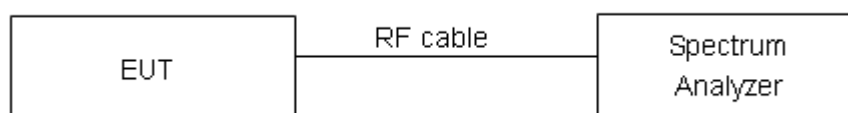
FOR 99% OCCUPIED BANDWIDTH

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

FOR 26dB BANDWIDTH

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Test Setup



Limits

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320MHz.

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-5**

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11ax HE20	1/5955	19.008	21.672	PASS
	49/6195	19.089	27.031	PASS
	93/6415	19.008	23.025	PASS
802.11ax HE40	3/5965	37.425	39.577	PASS
	51/6205	37.543	39.524	PASS
	91/6405	37.444	39.423	PASS
802.11ax HE80	7/5985	76.709	80.416	PASS
	55/6225	76.672	80.251	PASS
	87/6385	76.774	80.268	PASS

U-NII-6

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11ax HE20	97/6435	18.981	27.951	PASS
	105/6475	18.991	21.784	PASS
	113/6515	19.040	24.582	PASS
802.11ax HE40	99/6445	37.473	39.617	PASS
	107/6485	37.393	39.617	PASS
	115/6525	37.427	39.420	PASS
802.11ax HE80	103/6465	76.656	80.544	PASS
	119/6545	76.690	80.381	PASS

U-NII-7

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11ax HE20	117/6535	19.013	22.302	PASS
	153/6715	18.984	22.292	PASS
	181/6855	18.972	25.315	PASS
	185/6875	18.971	25.771	PASS
802.11ax HE40	123/6565	37.487	39.472	PASS
	155/6725	37.452	39.523	PASS
	179/6845	37.434	39.405	PASS
	187/6885	37.495	39.549	PASS
802.11ax HE80	135/6625	76.863	80.359	PASS
	151/6705	76.683	80.418	PASS
	167/6785	76.723	80.124	PASS
	183/6865	76.648	80.270	PASS

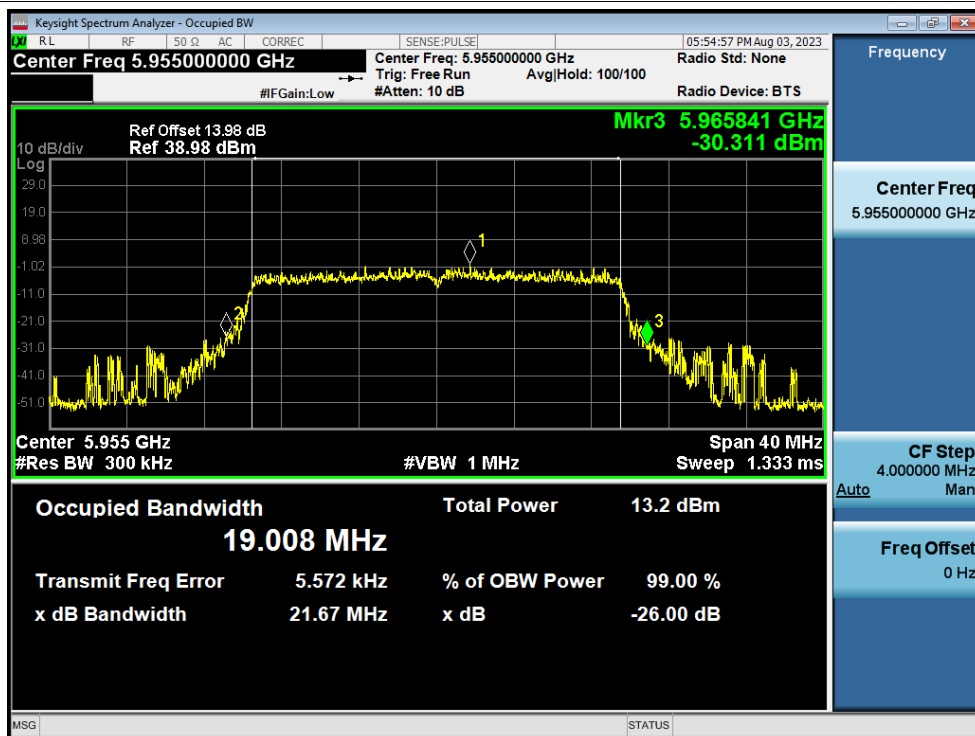
U-NII-8

Mode	Carrier frequency (MHz)	99% bandwidth (MHz)	Minimum 26 dB bandwidth (MHz)	Conclusion
802.11ax HE20	189/6895	19.005	23.033	PASS
	209/6995	19.017	24.786	PASS
	233/7115	19.011	22.527	PASS
802.11ax HE40	195/6925	37.433	39.537	PASS
	211/7005	37.483	39.432	PASS
	227/7085	37.519	39.648	PASS
802.11ax HE80	199/6945	76.685	80.251	PASS
	215/7025	76.766	80.283	PASS

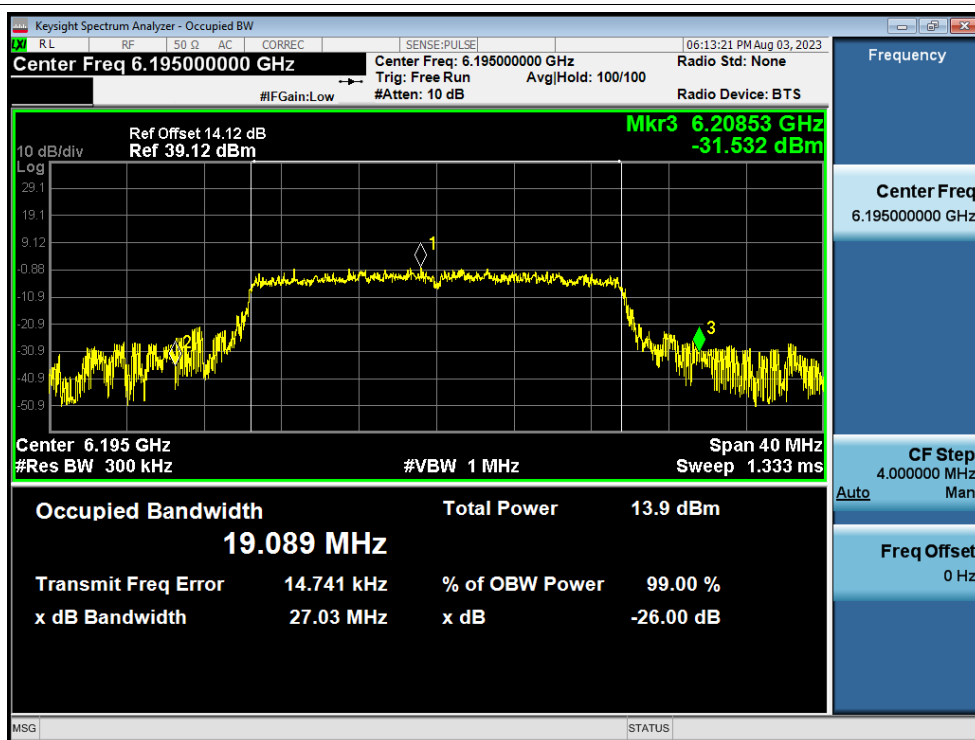
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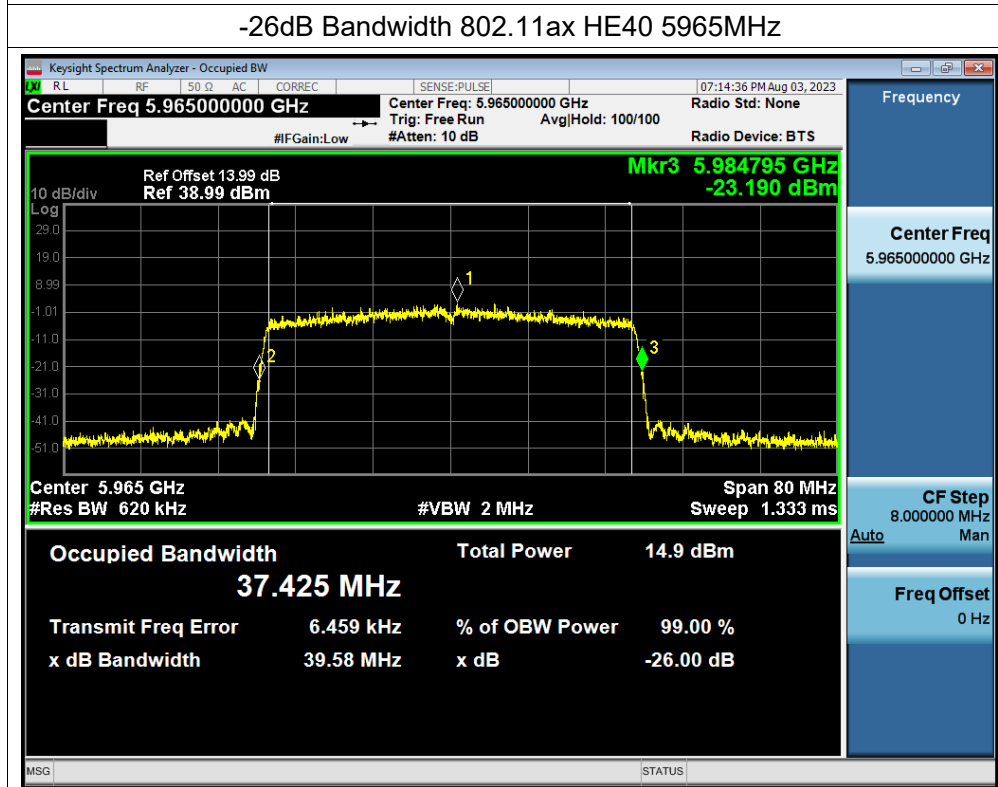
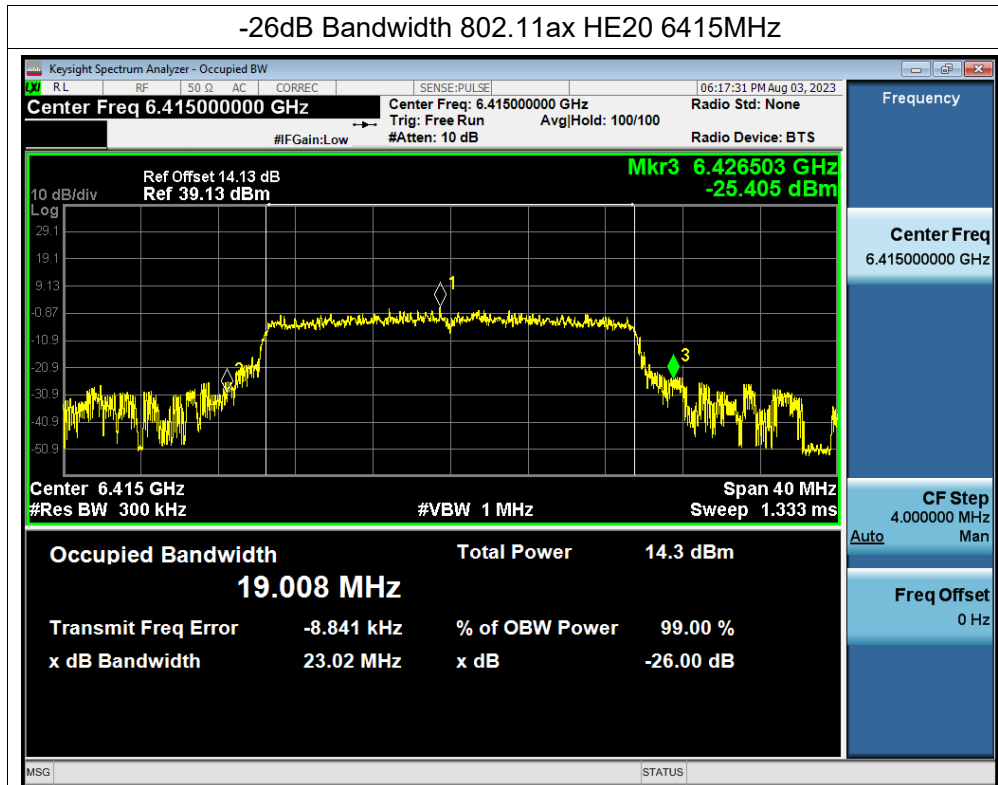
Test Graphs

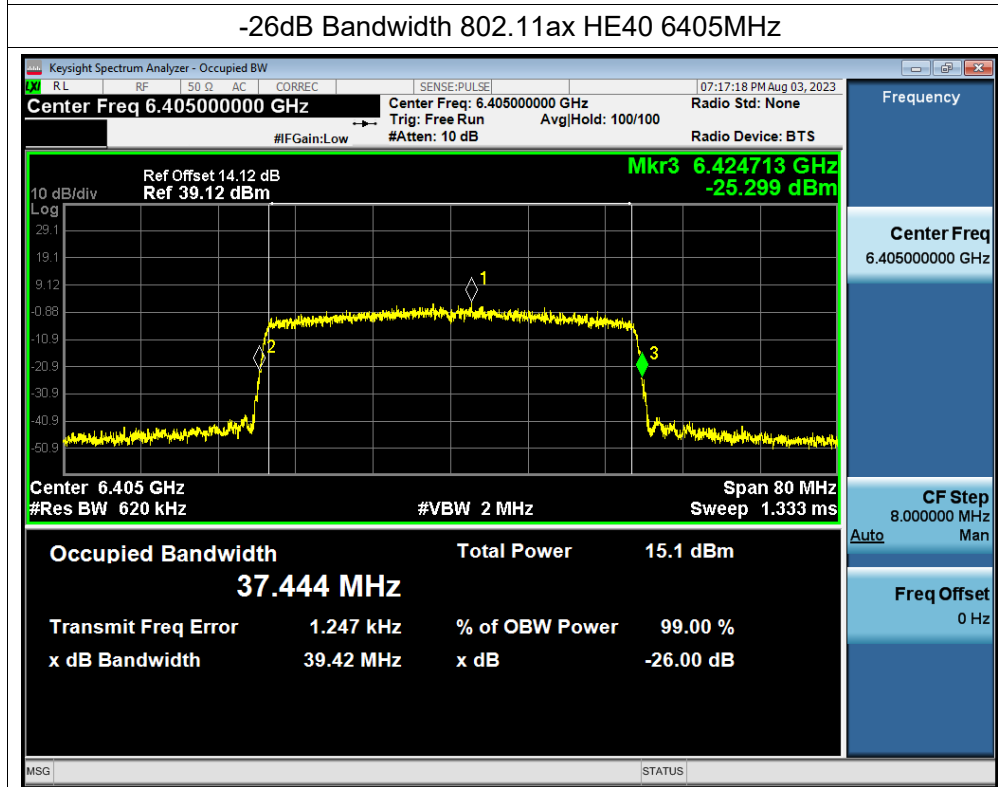
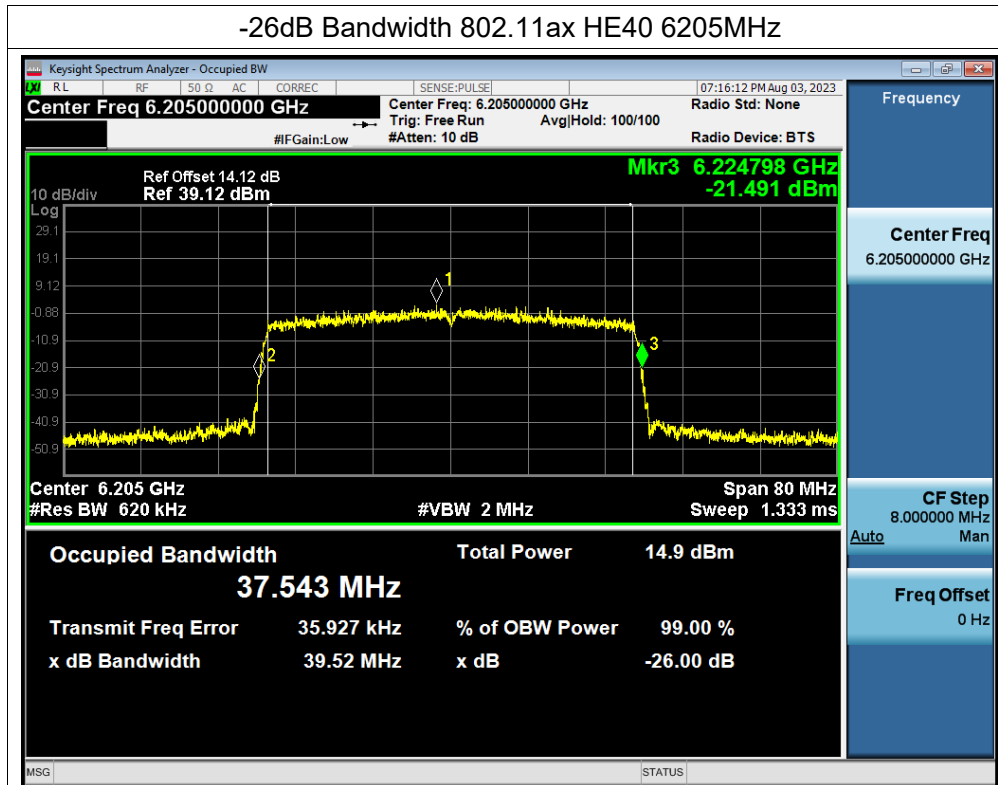
-26dB Bandwidth 802.11ax HE20 5955MHz

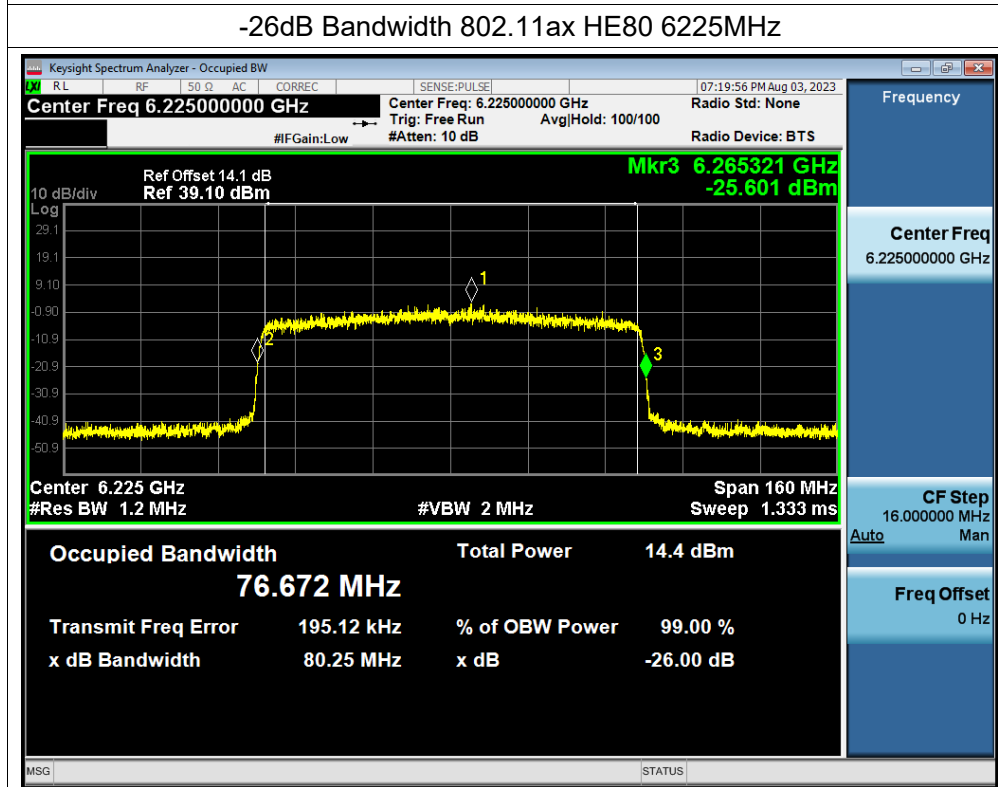
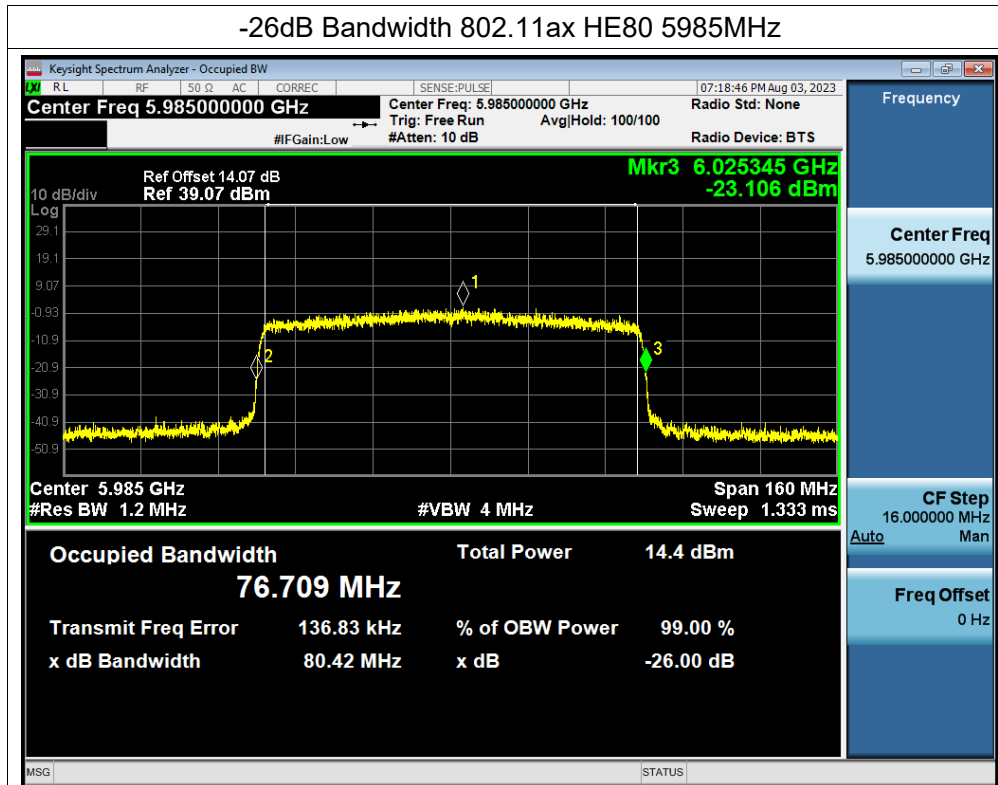


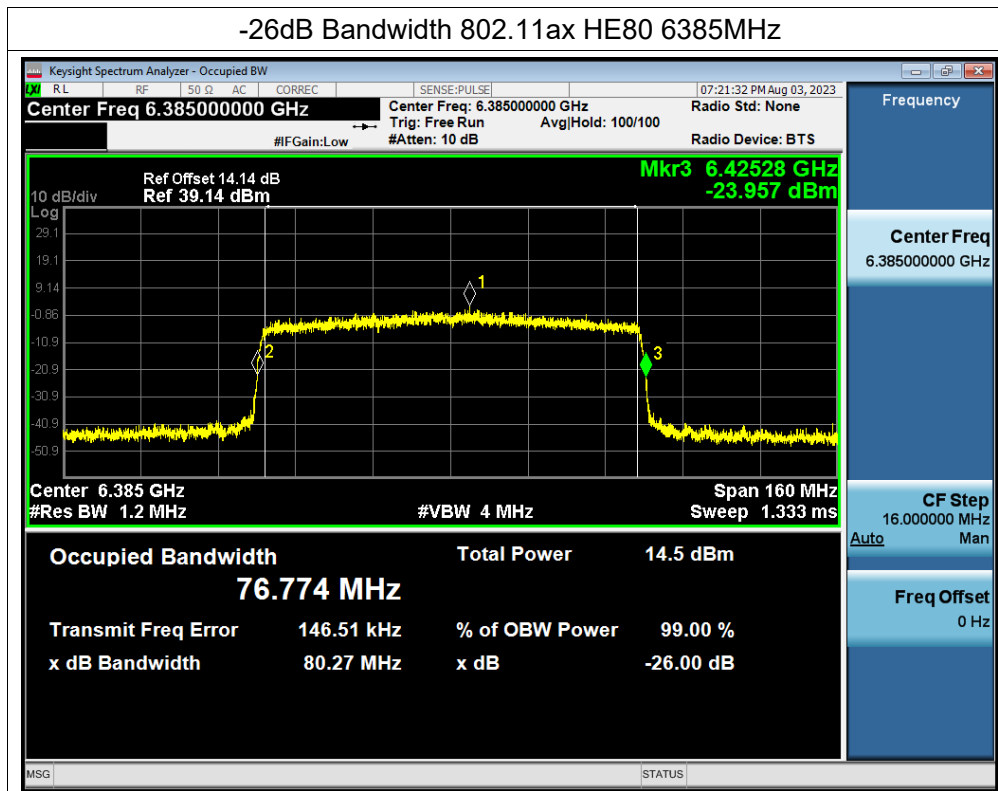
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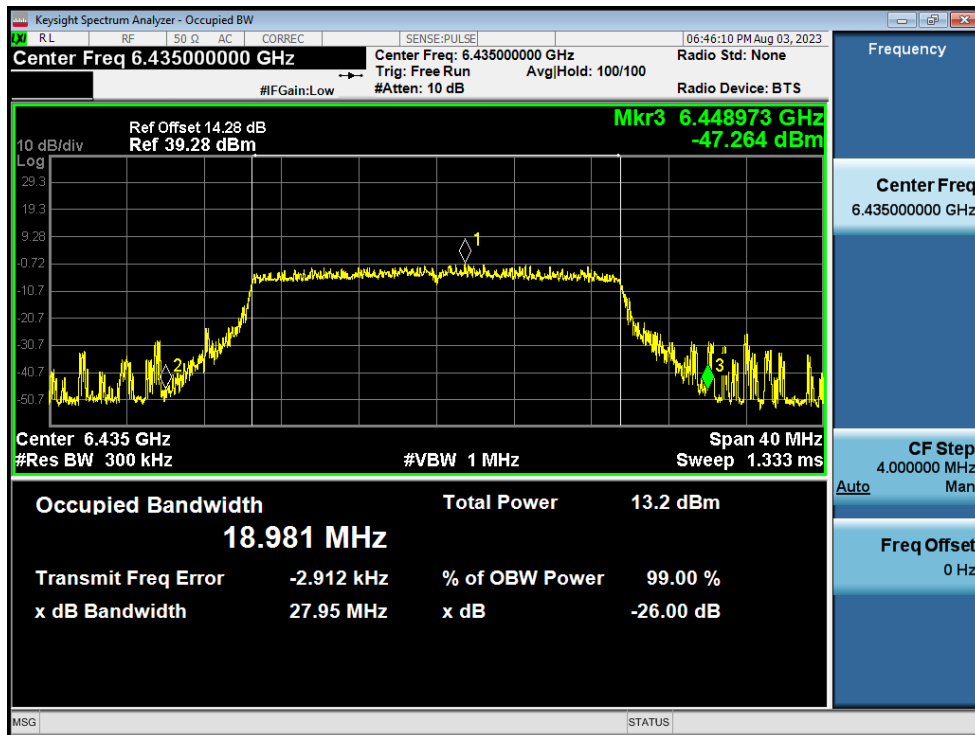




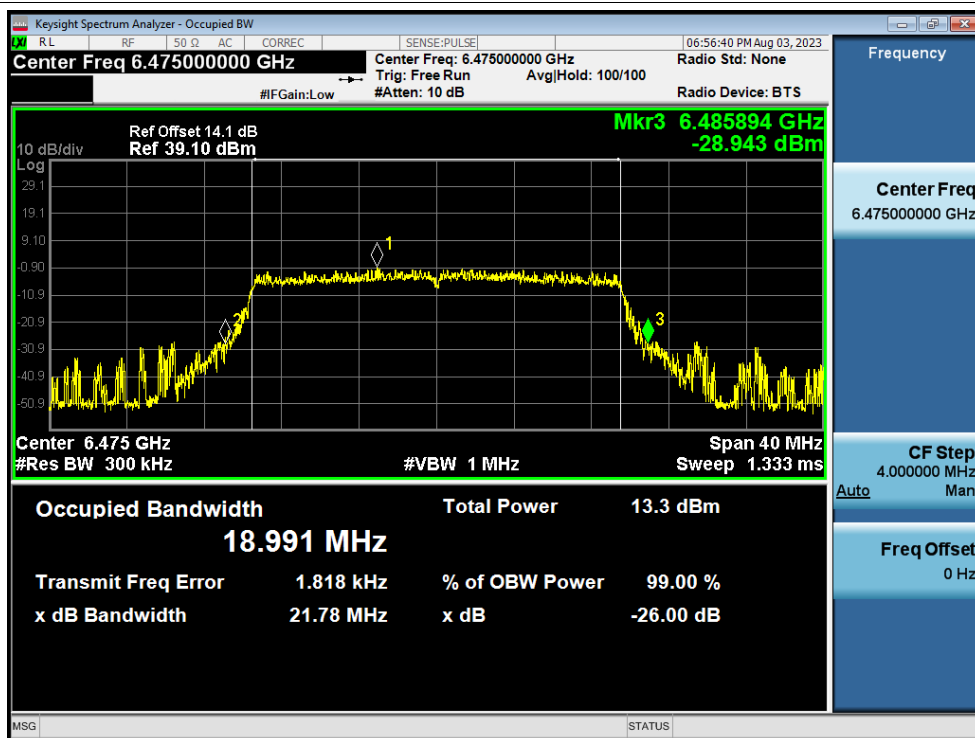
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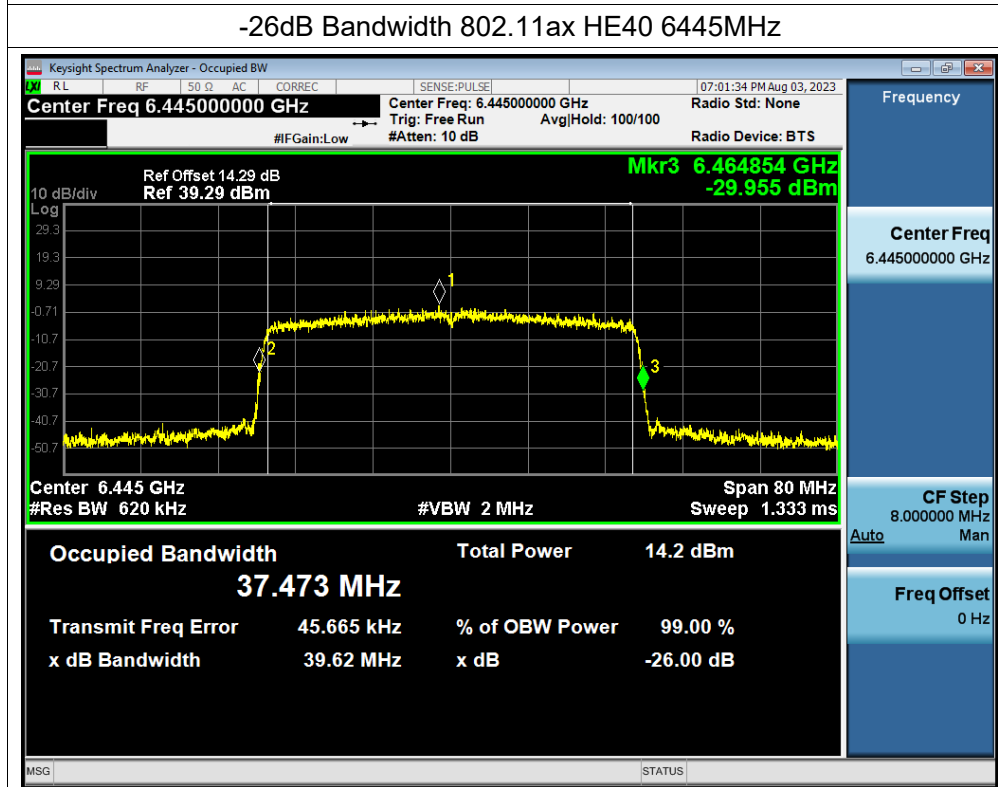
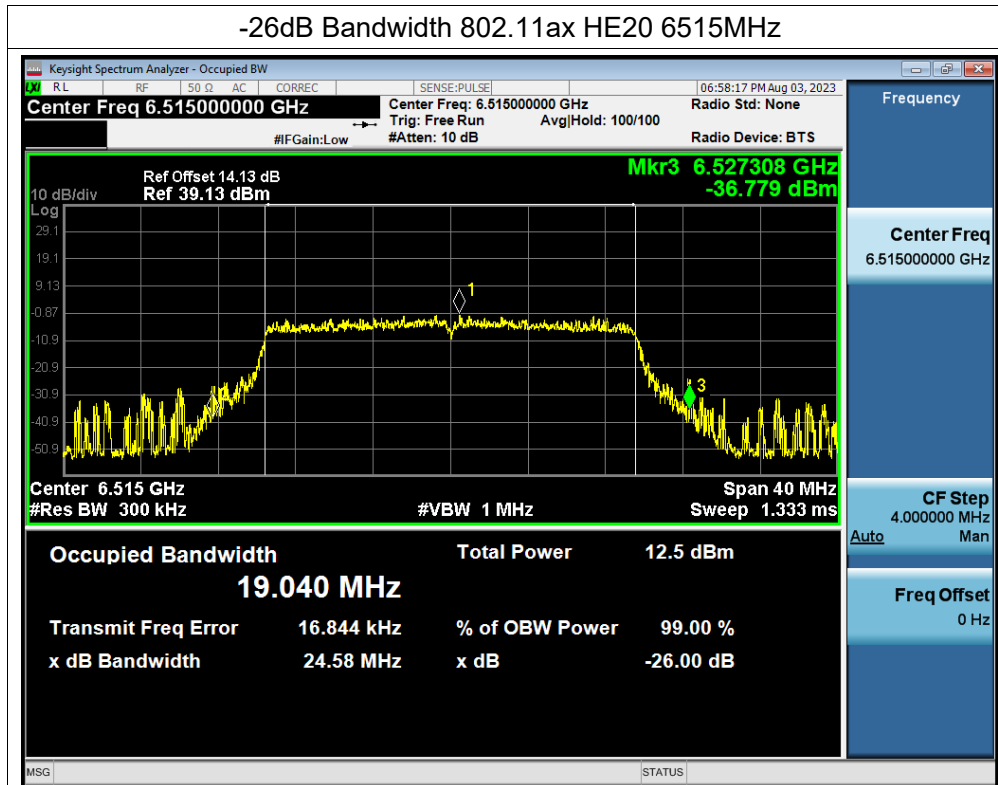
Test Graphs

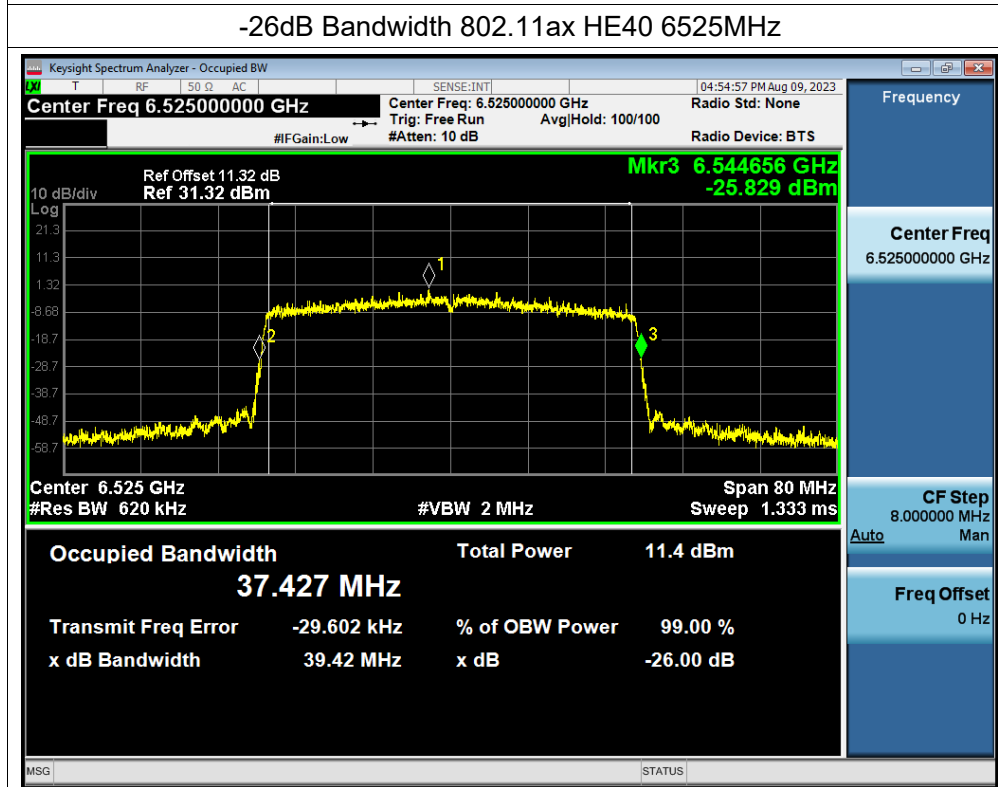
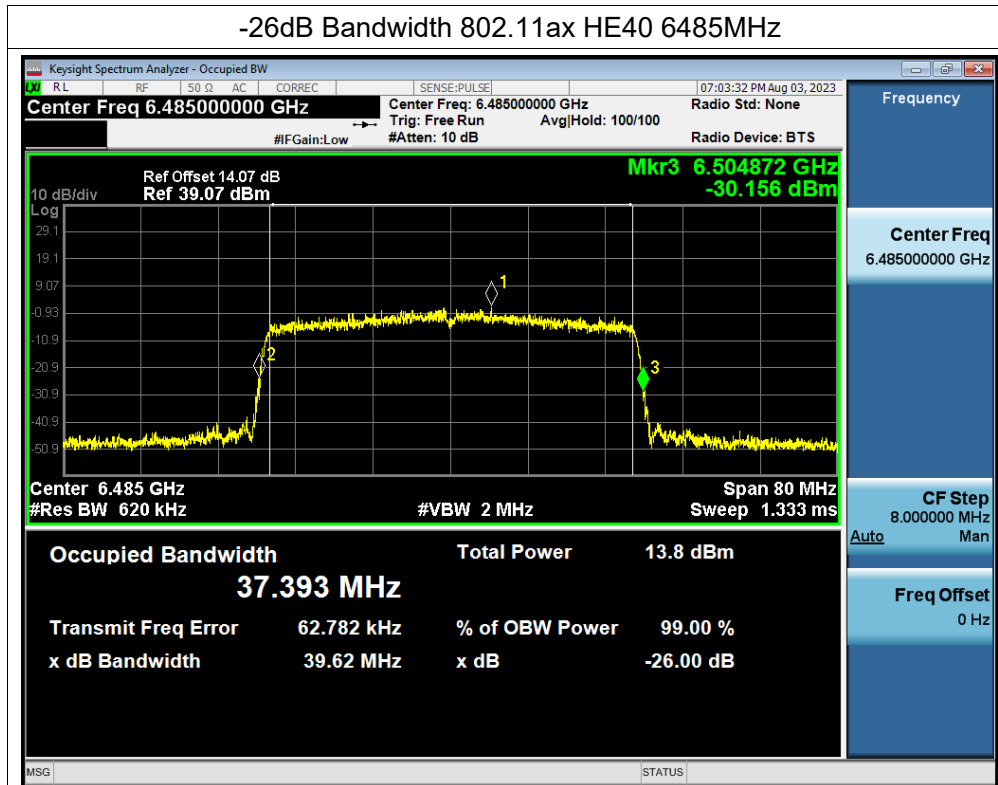
-26dB Bandwidth 802.11ax HE20 6435MHz

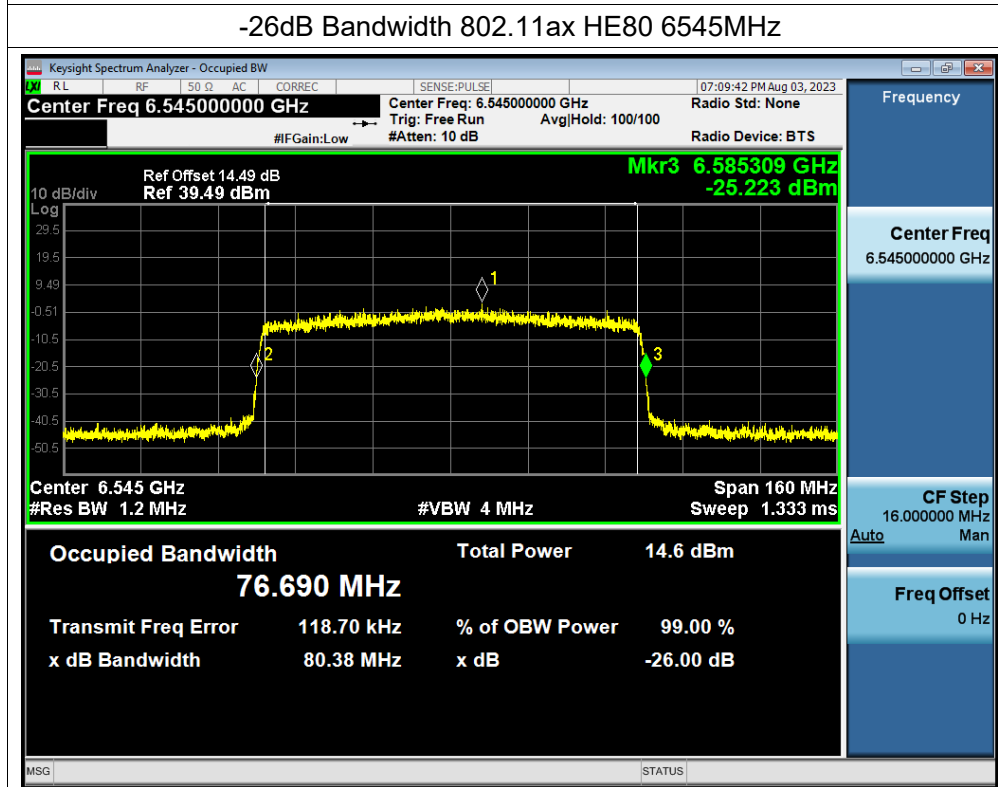
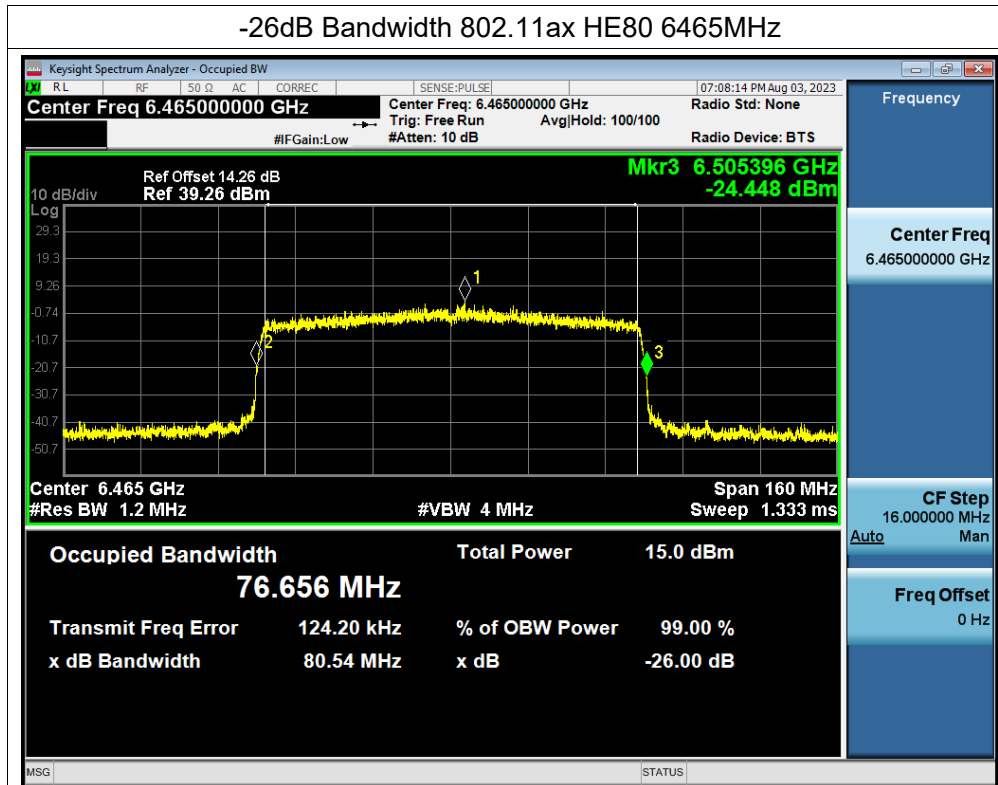


-26dB Bandwidth 802.11ax HE20 6475MHz





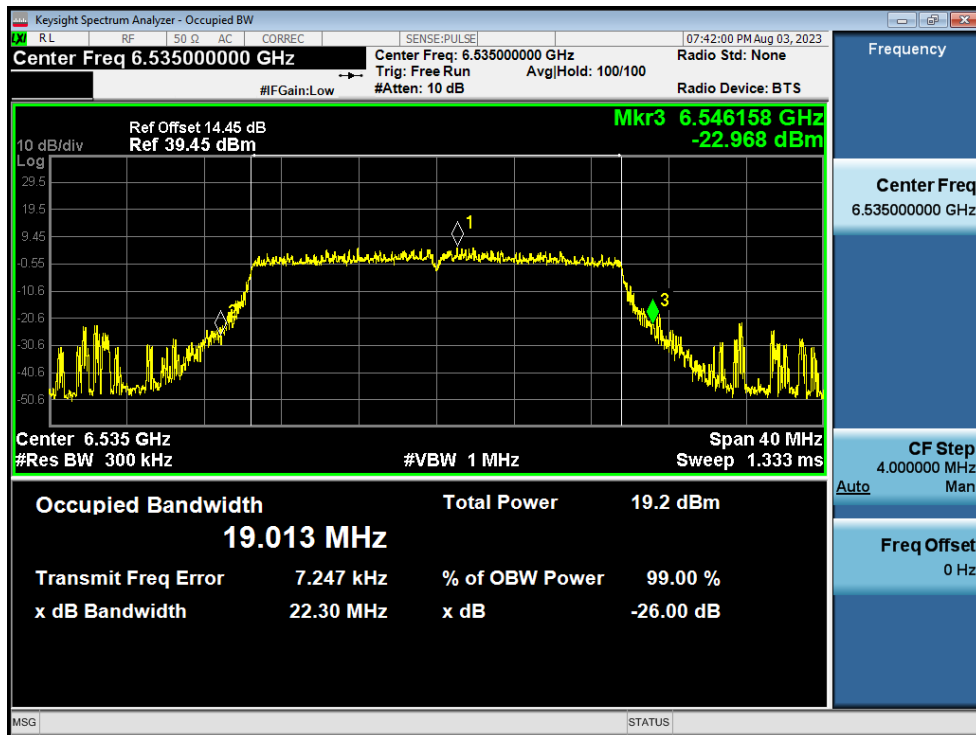




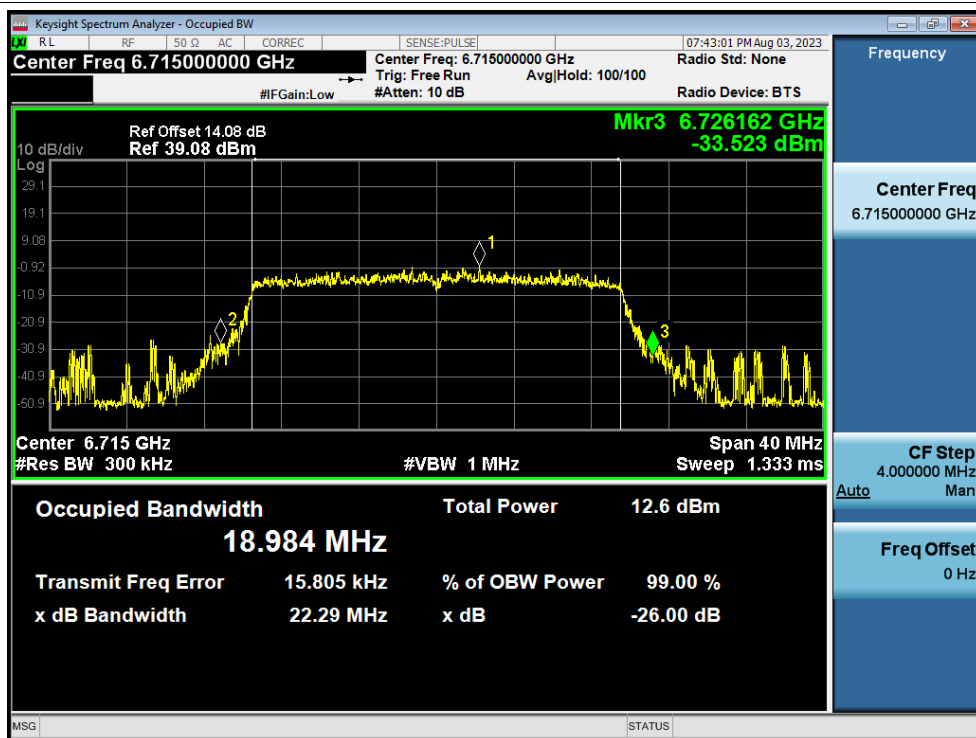
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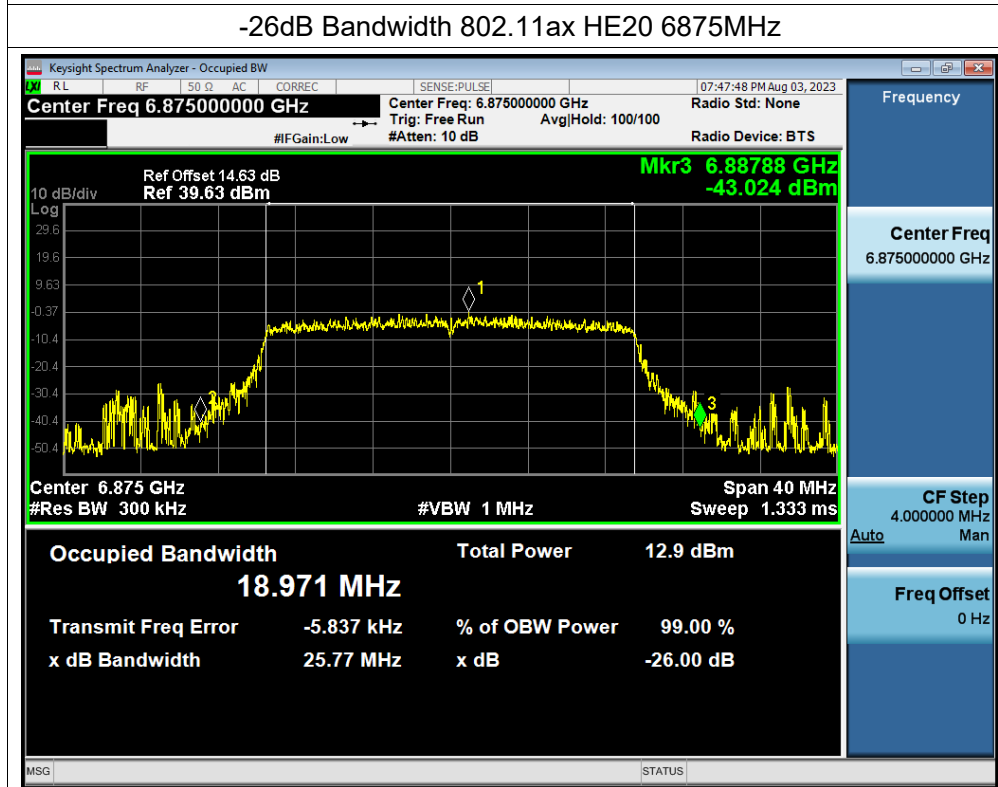
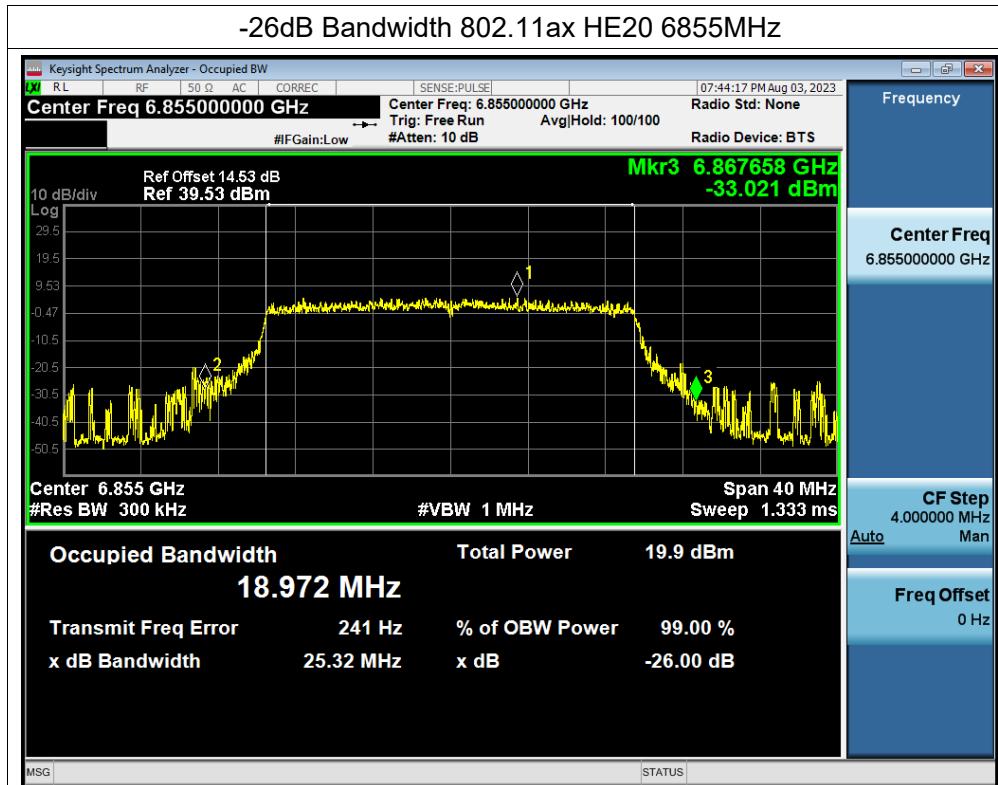
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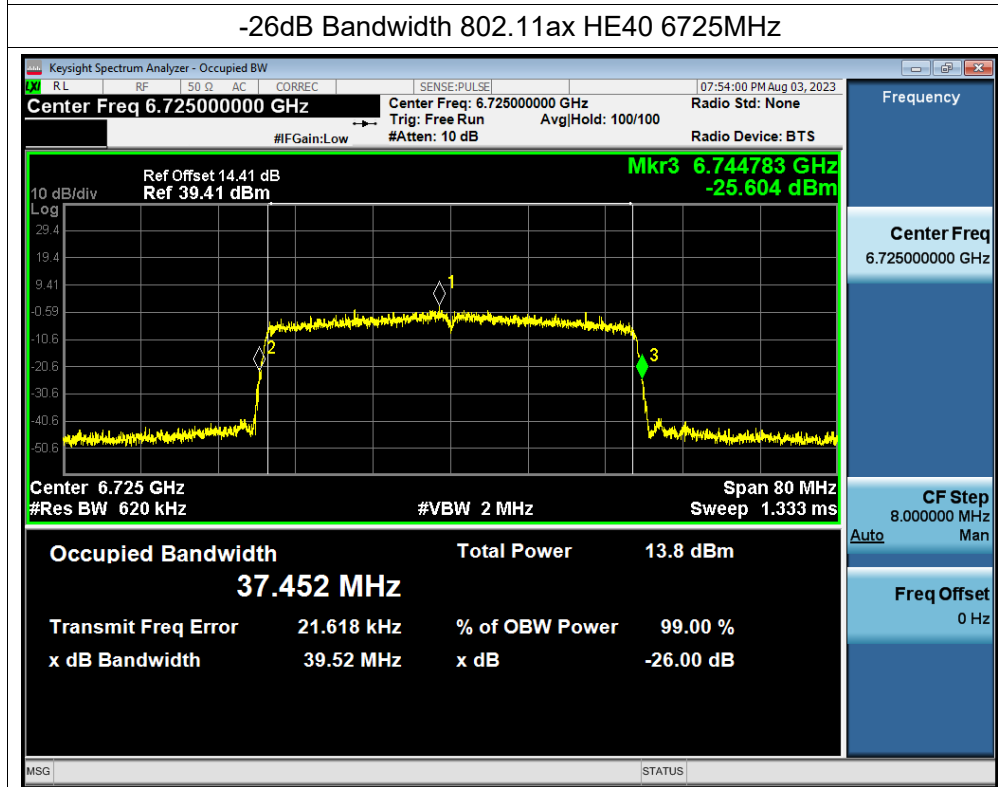
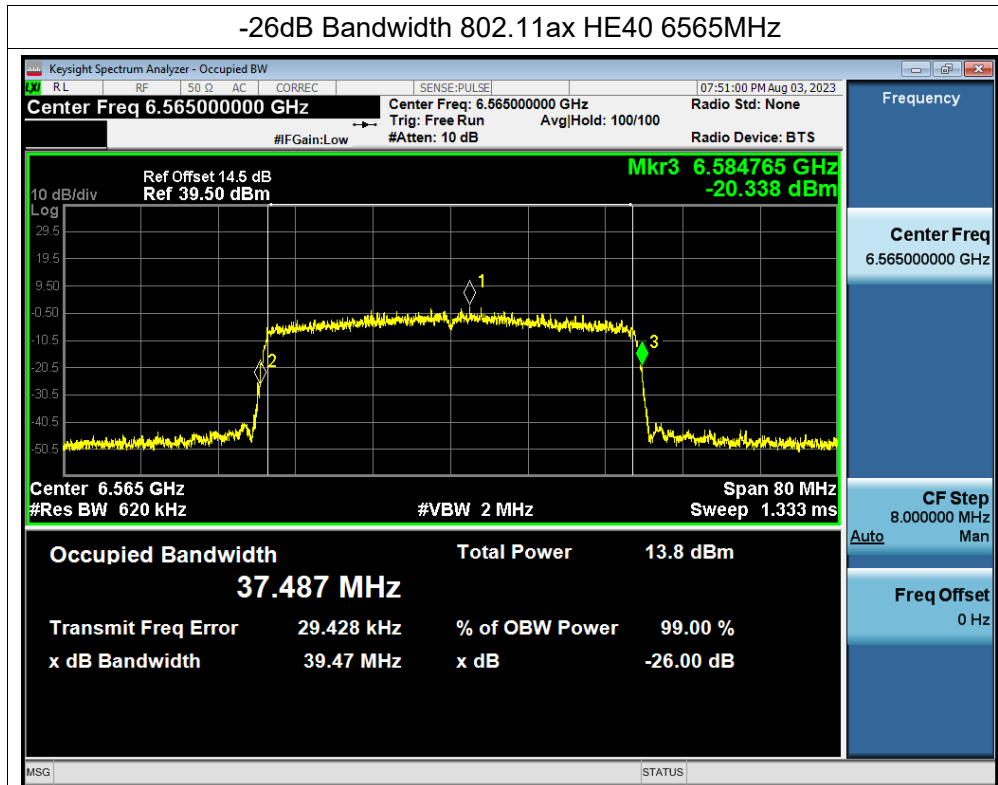
-26dB Bandwidth 802.11ax HE20 6535MHz

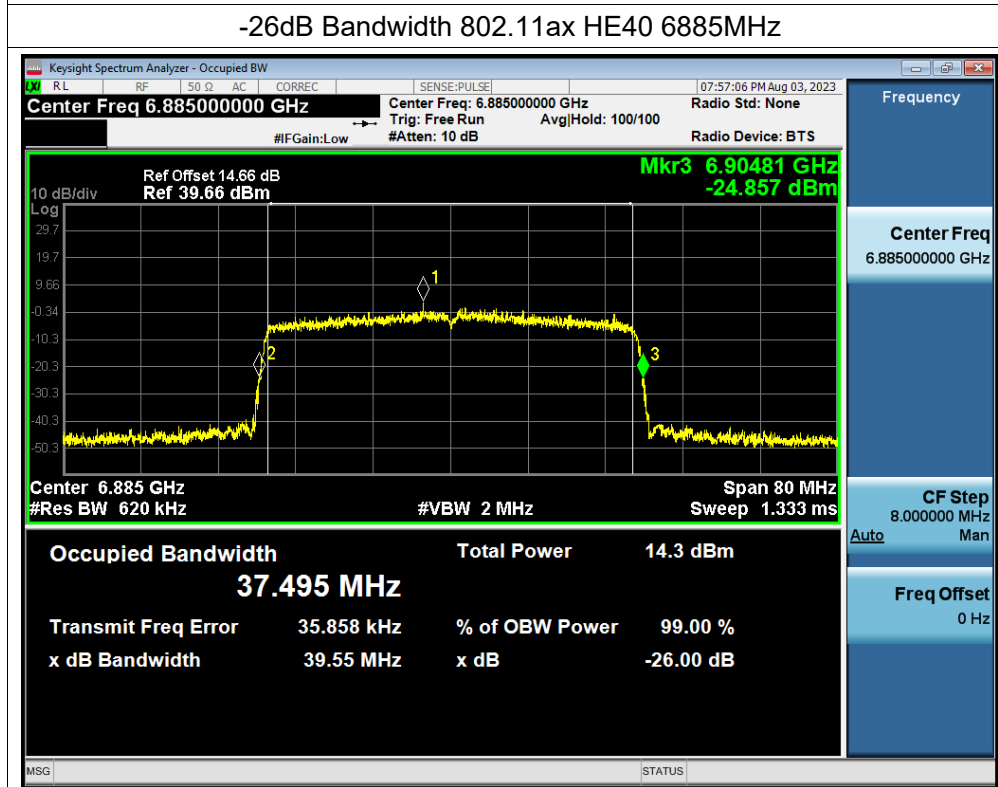
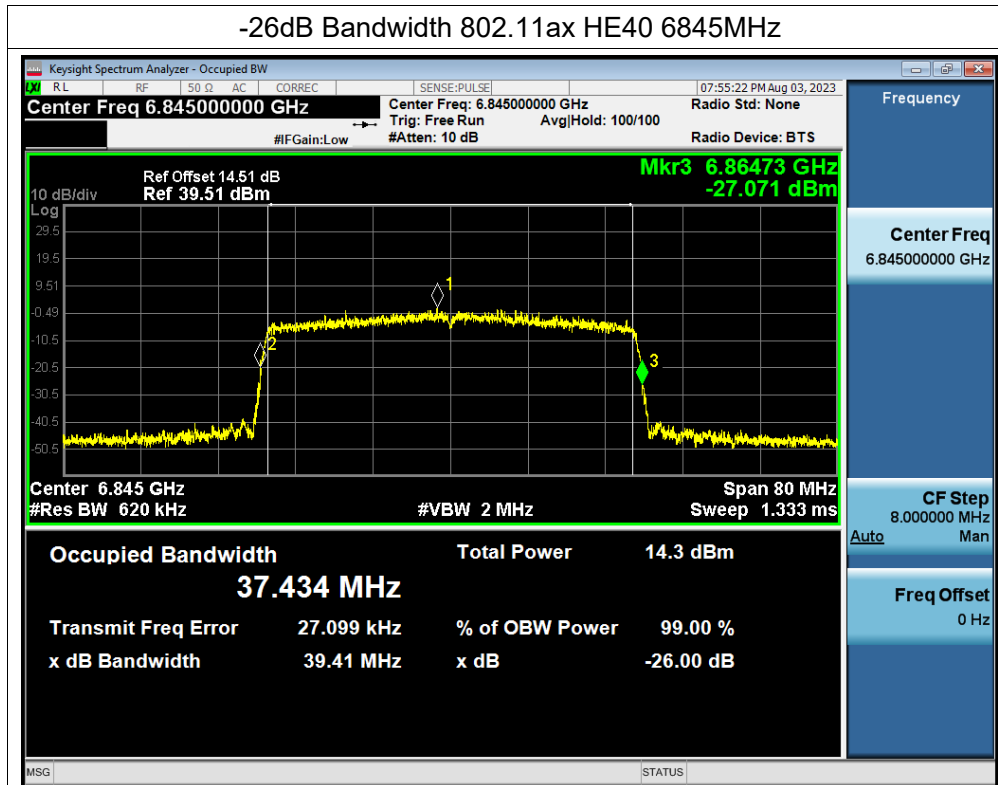


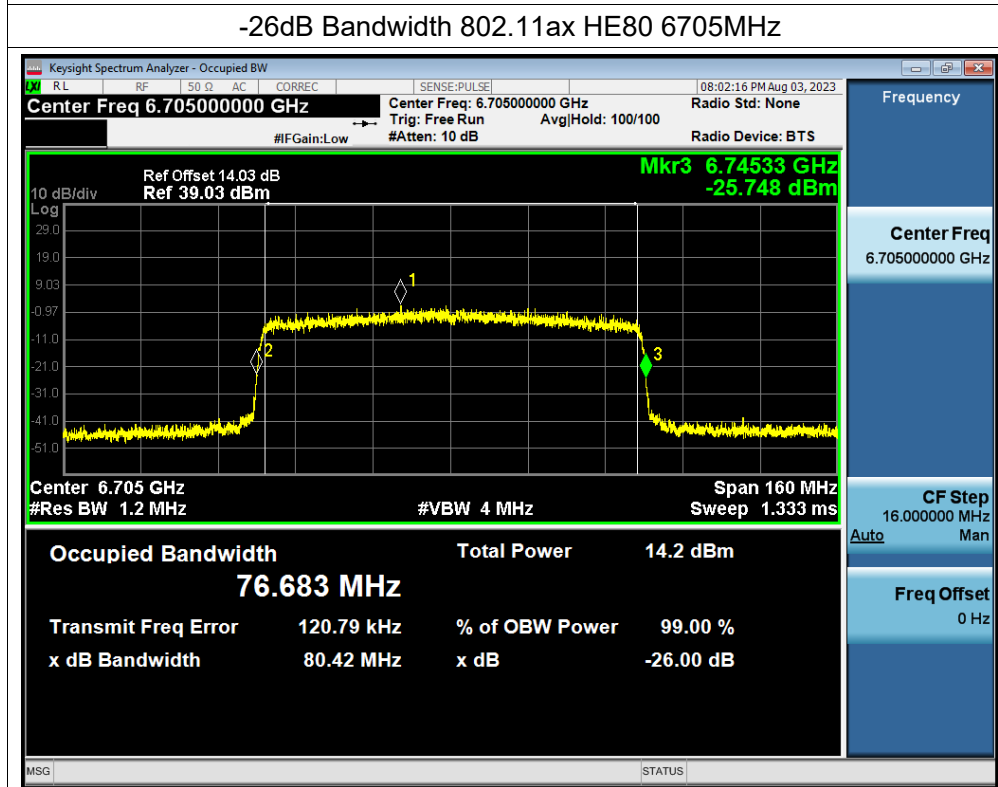
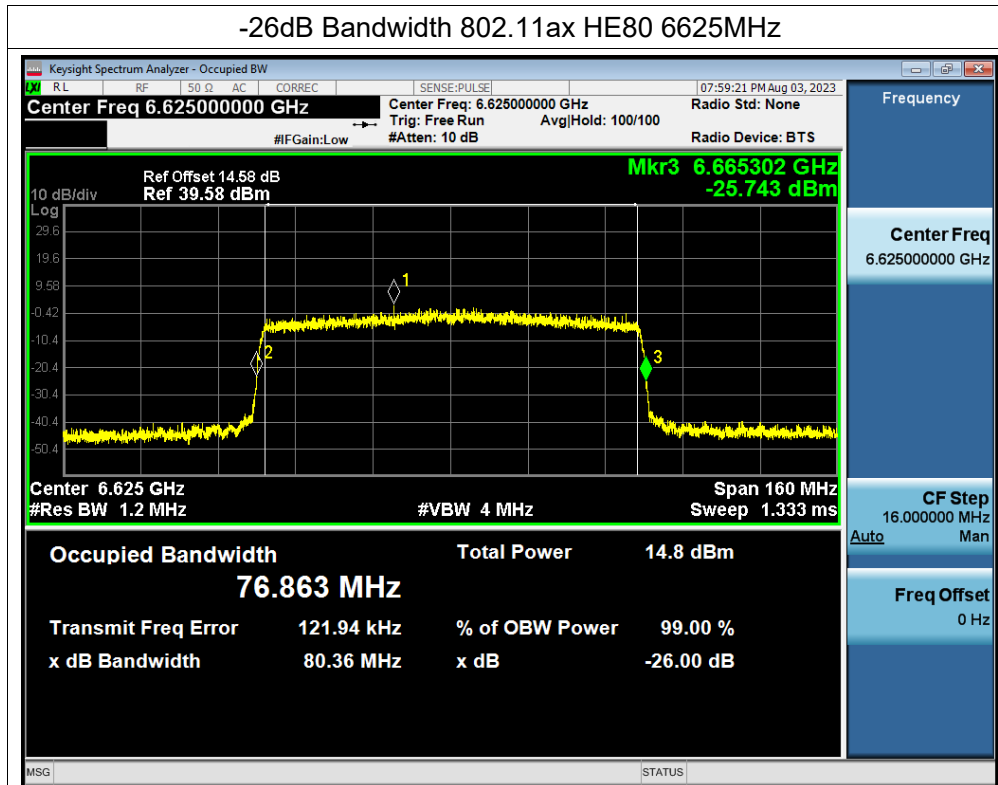
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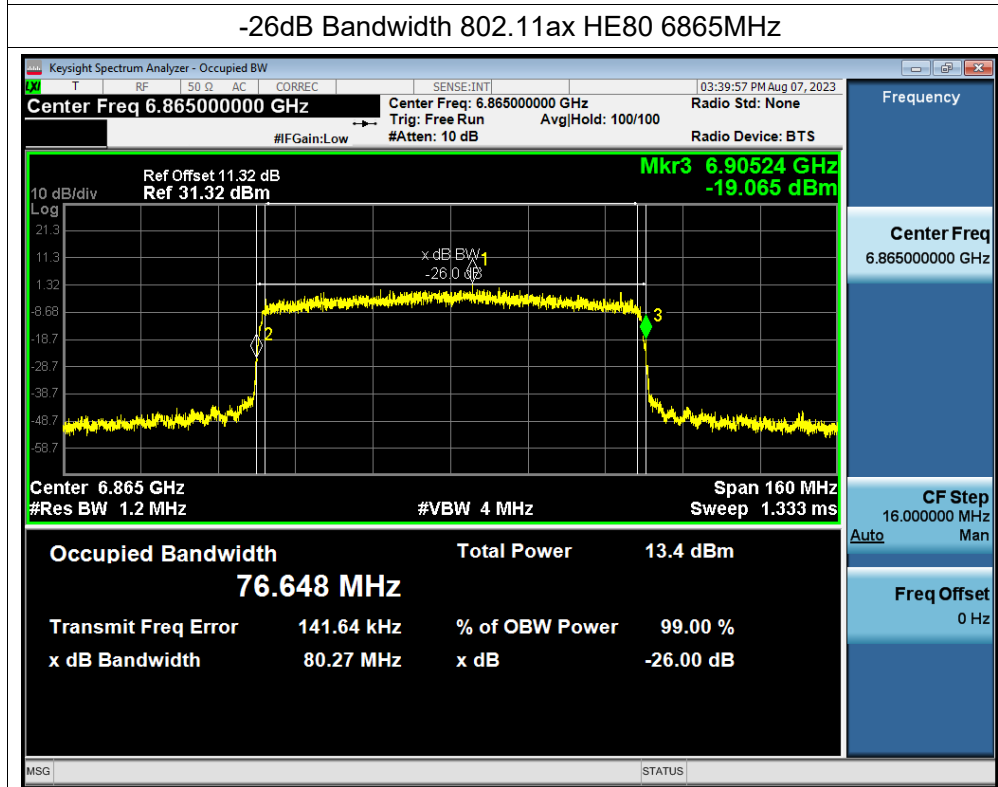
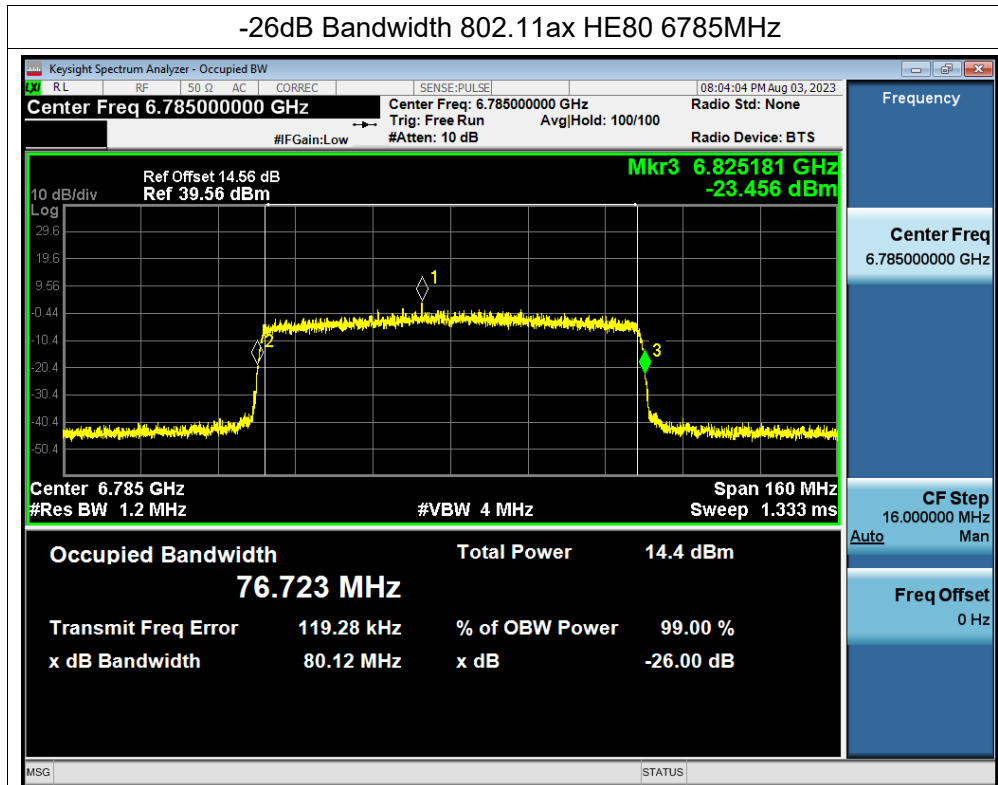








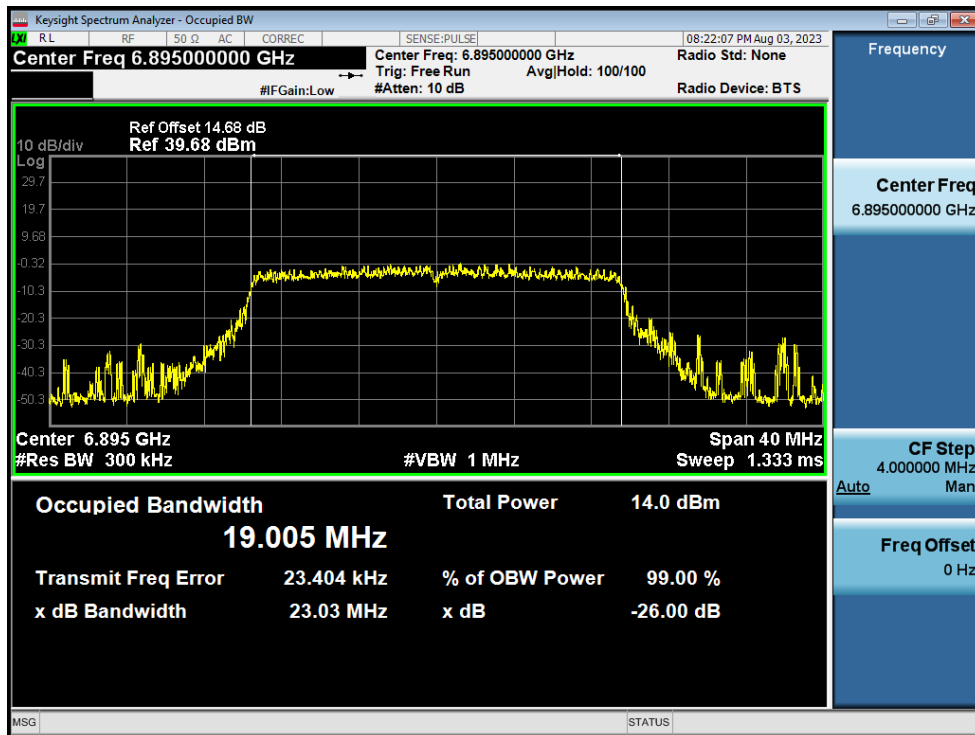




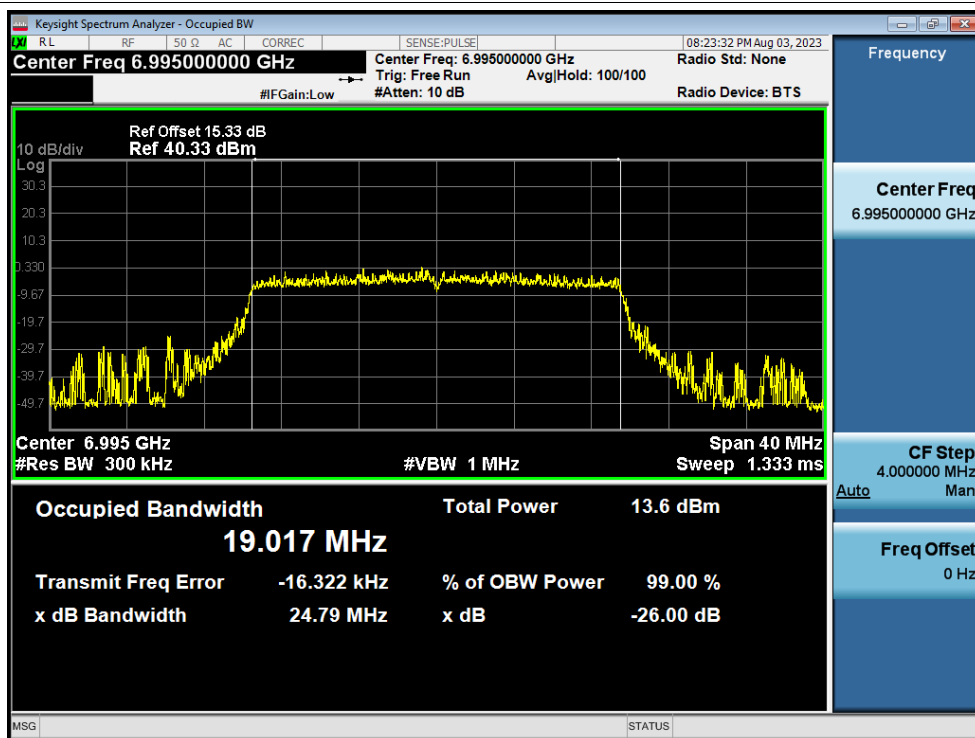
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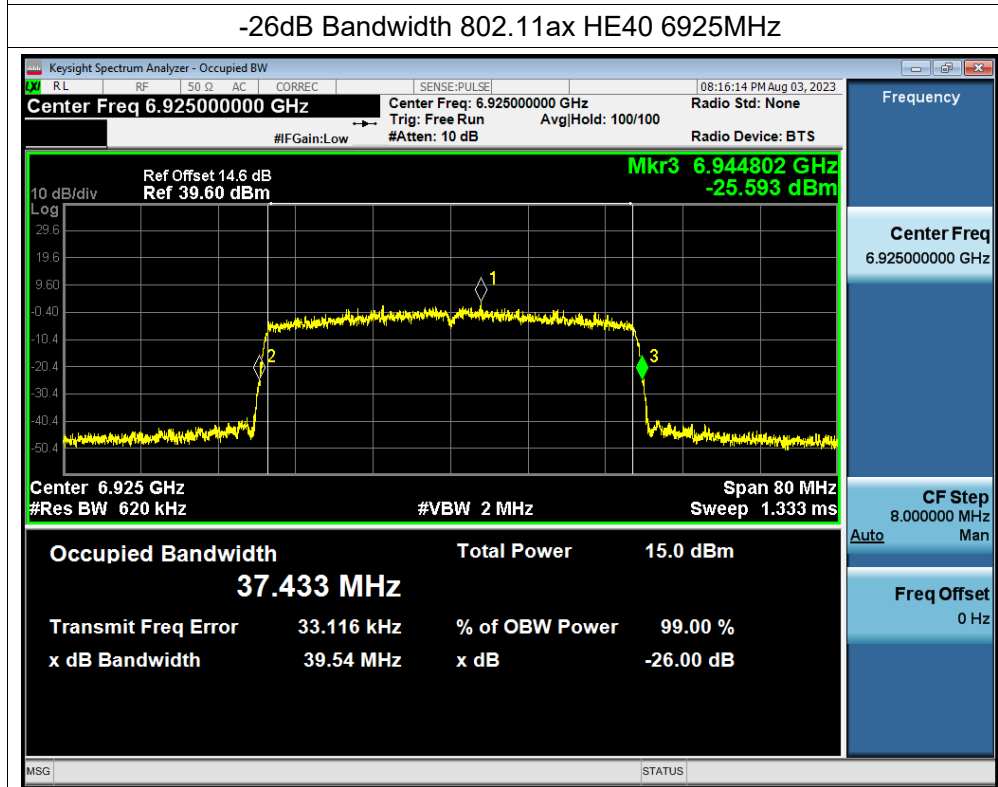
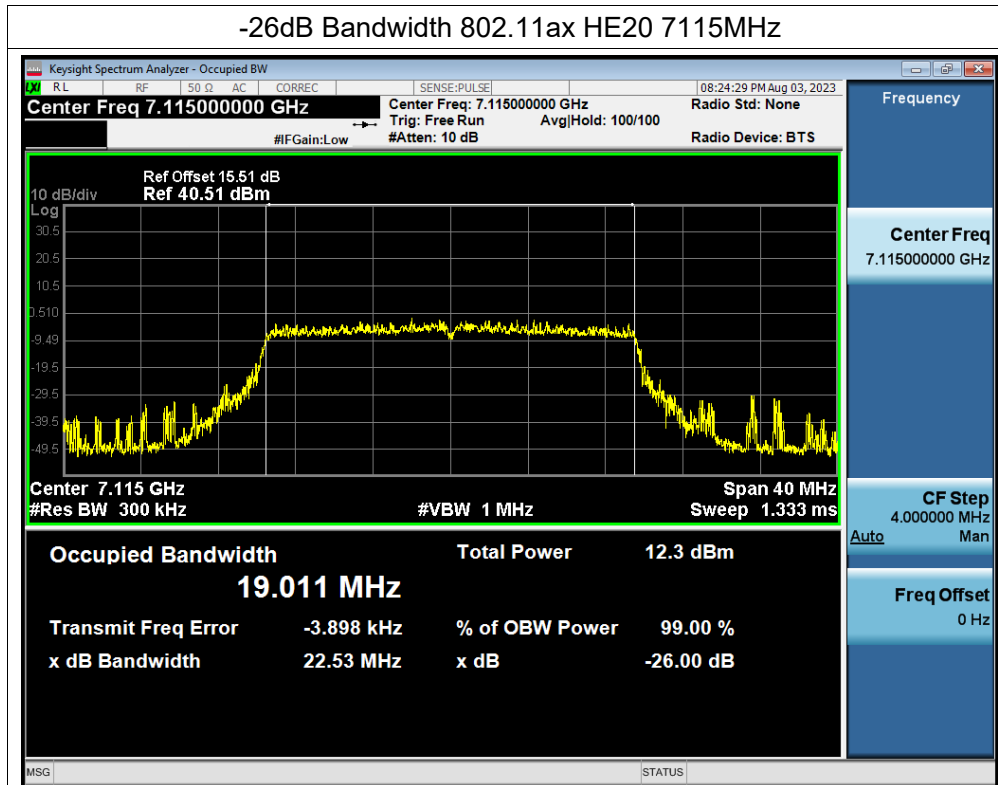
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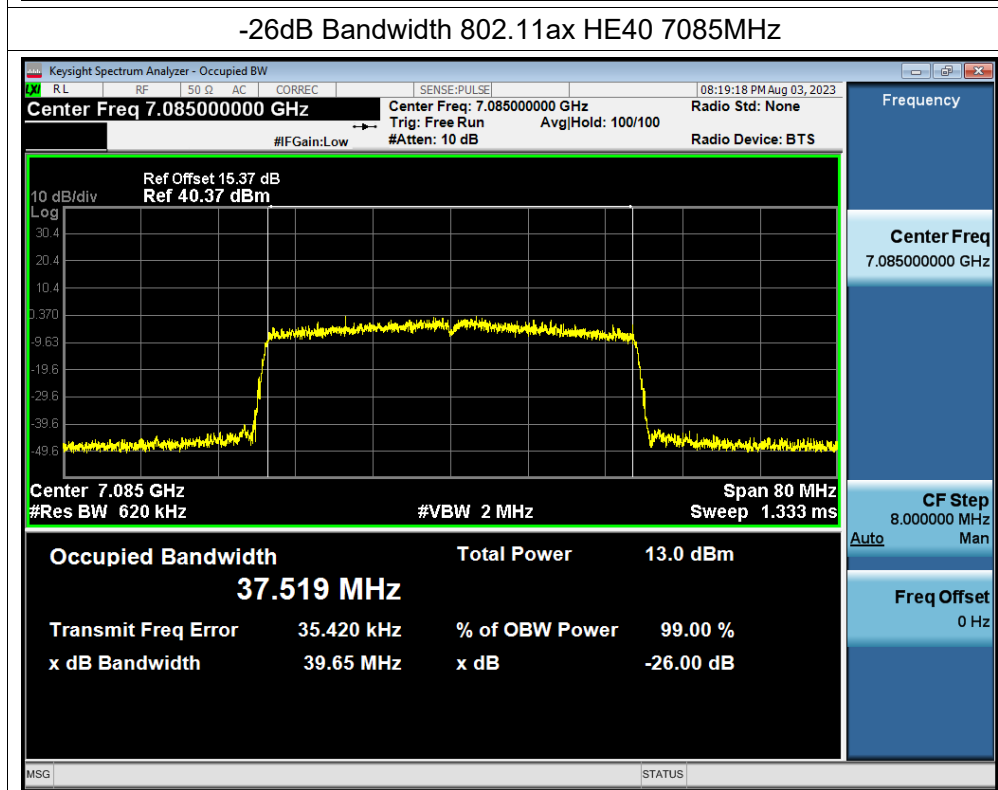
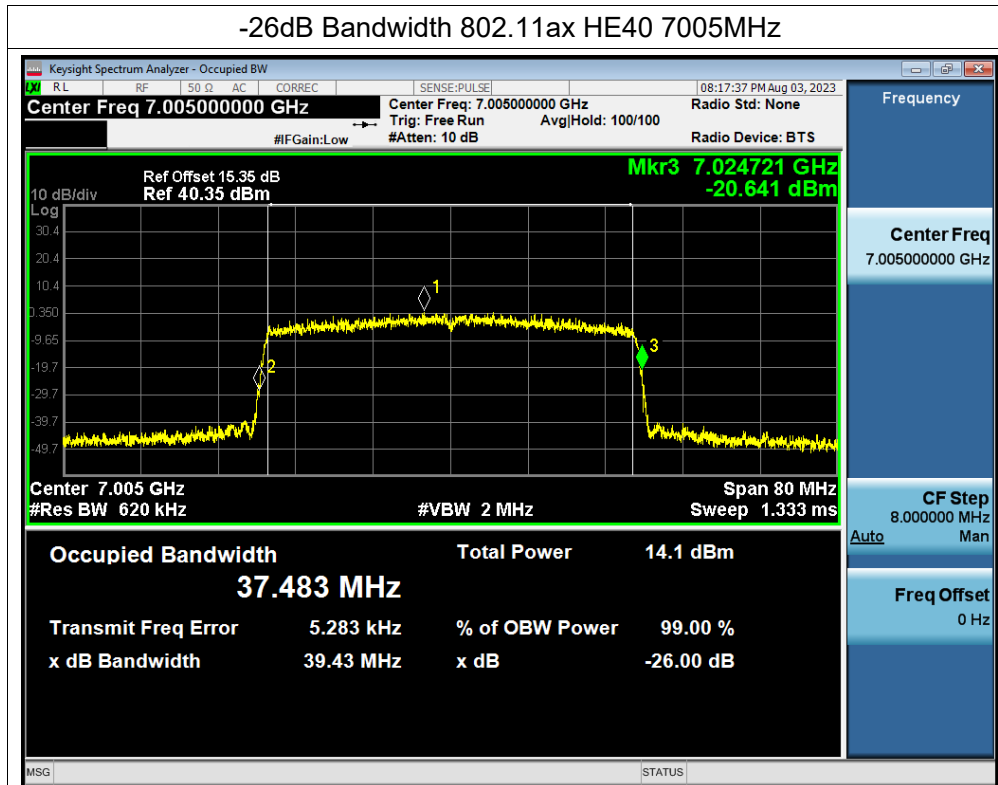
-26dB Bandwidth 802.11ax HE20 6895MHz

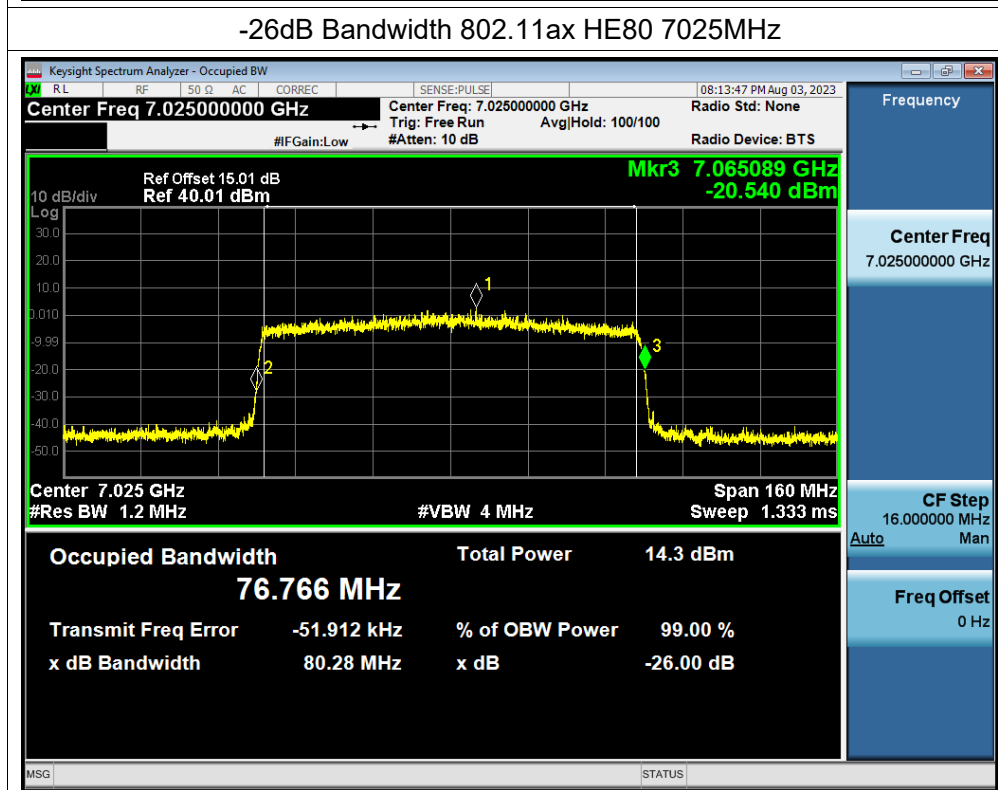
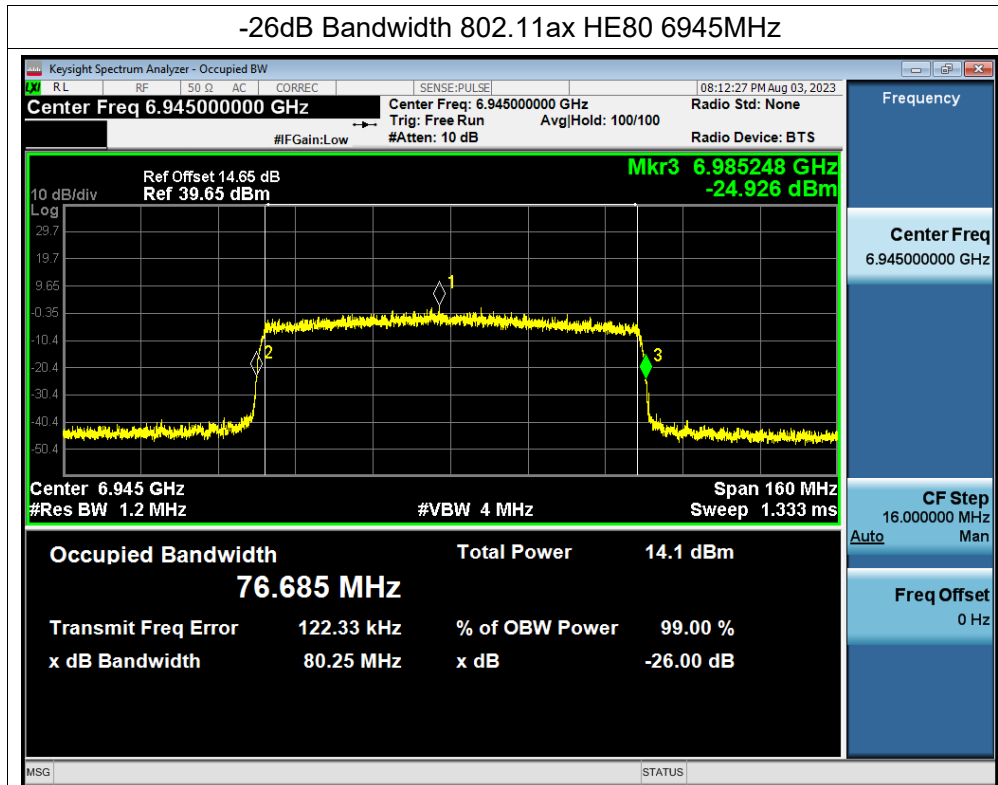


-26dB Bandwidth 802.11ax HE20 6995MHz









5.2. Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)

Ambient Condition

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

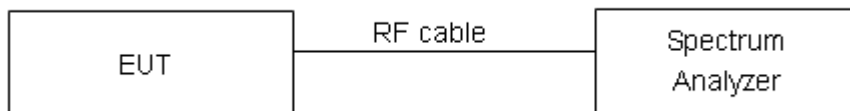
Methods of Measurement

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz
3. Set the VBW $\geq 3 \times$ RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Set trigger to free run (duty cycle ≥ 98 percent)
7. Detector = RMS.
8. Trace average at least 100 traces in power averaging mode
9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

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

Test Setup

For Power output Measurement



Limits

☒ For the 5.925 ~ 6.425 GHz band:

For standard power access point and fixed client device: e.i.r.p < 36 dBm , For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees not exceed 125 mW (21 dBm).

For indoor access point: e.i.r.p < 30 dBm.

For subordinate device control of an indoor access point: e.i.r.p < 30 dBm.

For client device control of a standard power access point: e.i.r.p < 30 dBm.

For client device control of an indoor access point: e.i.r.p < 24 dBm.

☒ For the 6.425 ~ 6.525 GHz band:

For indoor access point: e.i.r.p < 30 dBm.

For client device control of an indoor access point: e.i.r.p < 24 dBm.

☒ For the 6.525 ~ 6.875 GHz band:

For standard power access point and fixed client device: e.i.r.p < 36 dBm , For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees not exceed 125 mW (21 dBm).

For indoor access point: e.i.r.p < 30 dBm.

For subordinate device control of an indoor access point: e.i.r.p < 30 dBm.

For client device control of a standard power access point: e.i.r.p < 30 dBm.

For client device control of an indoor access point: e.i.r.p < 24 dBm.

☒ **For the 6.875 ~ 7.125 GHz band:**

For indoor access point: e.i.r.p < 30 dBm.

For client device control of an indoor access point: e.i.r.p < 24 dBm.

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)
802.11ax HE20	0.73	1.36
802.11ax HE40	0.46	3.33
802.11ax HE80	0.44	3.56
Note: when Duty cycle ≥ 0.98 , Duty cycle correction Factor not required.		

SISO Antenna 1 / SISO Antenna 2						
Mode	802.11ax HE20		802.11ax HE40		802.11ax HE80	
	Channel	Power Index	Channel	Power Index	Channel	Power Index
U-NII-5	CH1	7.00	CH3	7.00	CH7	7.00
	CH49	7.00	CH51	7.00	CH55	7.00
	CH93	7.00	CH91	7.00	CH87	7.00
U-NII-6	CH97	5.50	CH99	6.00	CH103	7.00
	CH105	5.50	CH107	6.00	CH119	7.00
	CH113	5.50	CH115	6.00	-	-
U-NII-7	CH117	5.00	CH115	6.00	CH119	7.00
	CH153	5.00	CH123	6.00	CH135	7.00
	CH181	5.00	CH155	6.00	CH151	7.00
	CH185	5.00	CH179	6.00	CH167	7.00
	-	-	CH187	6.00	CH183	7.00
U-NII-8	CH185	6.00	CH187	6.00	CH183	7.00
	CH189	6.00	CH195	6.00	CH199	7.00
	CH209	6.00	CH211	6.00	CH215	7.00
	CH233	6.00	CH227	6.00	-	-
MIMO Antenna 1 / MIMO Antenna 2						
Mode	802.11ax HE20		802.11ax HE40		802.11ax HE80	
	Channel	Power Index	Channel	Power Index	Channel	Power Index
U-NII-5	CH1	3.00	CH3	3.00	CH7	3.00
	CH49	3.00	CH51	3.00	CH55	3.00
	CH93	3.00	CH91	3.00	CH87	3.00
U-NII-6	CH97	0.00	CH99	0.00	CH103	2.00
	CH105	0.00	CH107	0.00	CH119	2.00
	CH113	0.00	CH115	0.00	-	-
U-NII-7	CH117	-1.00	CH115	0.00	CH119	3.00
	CH153	0.00	CH123	0.00	CH135	3.00
	CH181	-1.00	CH155	0.00	CH151	3.00
	CH185	0.00	CH179	0.00	CH167	3.00
	-	-	CH187	0.00	CH183	3.00
U-NII-8	CH185	3.00	CH187	0.00	CH183	4.00
	CH189	1.00	CH195	1.00	CH199	4.00
	CH209	1.00	CH211	1.00	CH215	4.00
	CH233	1.00	CH227	1.00	-	-

SISO Antenna 1
U-NII-5

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	1/5955	4.15	5.51	5.21	24.00	PASS
	49/6195	4.17	5.53	5.23	24.00	PASS
	93/6415	4.27	5.63	5.33	24.00	PASS
802.11ax HE40	3/5965	3.78	7.11	6.81	24.00	PASS
	51/6205	3.88	7.21	6.91	24.00	PASS
	91/6405	3.92	7.25	6.95	24.00	PASS
802.11ax HE80	7/5985	3.42	6.98	6.68	24.00	PASS
	55/6225	3.62	7.18	6.88	24.00	PASS
	87/6385	3.52	7.08	6.78	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

U-NII-6

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	97/6435	4.76	6.12	7.72	24.00	PASS
	105/6475	4.86	6.22	7.82	24.00	PASS
	113/6515	4.66	6.02	7.62	24.00	PASS
802.11ax HE40	99/6445	3.59	6.92	8.52	24.00	PASS
	107/6485	3.81	7.14	8.74	24.00	PASS
	115/6525	0.82	4.15	5.75	24.00	PASS
802.11ax HE80	103/6465	3.60	7.16	8.76	24.00	PASS
	119/6545	-3.68	-0.12	1.48	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

U-NII-7

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	117/6535	4.71	6.07	8.27	24.00	PASS
	153/6715	3.37	4.73	6.93	24.00	PASS
	181/6855	3.91	5.27	7.47	24.00	PASS
	185/6875	0.77	2.13	4.33	24.00	PASS
802.11ax HE40	115/6525	0.43	3.76	5.96	24.00	PASS
	123/6565	4.16	7.49	9.69	24.00	PASS
	155/6725	2.90	6.23	8.43	24.00	PASS
	179/6845	3.23	6.56	8.76	24.00	PASS
	187/6885	-3.81	-0.48	1.72	24.00	PASS
802.11ax HE80	119/6545	2.99	6.55	8.75	24.00	PASS
	135/6625	3.36	6.92	9.12	24.00	PASS
	151/6705	3.01	6.57	8.77	24.00	PASS
	167/6785	2.62	6.18	8.38	24.00	PASS
	183/6865	1.87	5.43	7.63	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

U-NII-8

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	185/6875	2.27	3.63	4.43	24.00	PASS
	189/6895	3.37	4.73	5.53	24.00	PASS
	209/6995	3.01	4.37	5.17	24.00	PASS
	233/7115	4.65	6.01	6.81	24.00	PASS
802.11ax HE40	187/6885	2.83	6.16	6.96	24.00	PASS
	195/6925	3.91	7.24	8.04	24.00	PASS
	211/7005	3.28	6.61	7.41	24.00	PASS
	227/7085	2.42	5.75	6.55	24.00	PASS
802.11ax HE80	183/6865	1.82	5.38	6.18	24.00	PASS
	199/6945	3.01	6.57	7.37	24.00	PASS
	215/7025	3.47	7.03	7.83	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

SISO Antenna 2

U-NII-5

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	1/5955	5.78	7.14	7.04	24.00	PASS
	49/6195	5.85	7.21	7.11	24.00	PASS
	93/6415	6.28	7.64	7.54	24.00	PASS
802.11ax HE40	3/5965	5.19	8.52	8.42	24.00	PASS
	51/6205	5.16	8.49	8.39	24.00	PASS
	91/6405	5.73	9.06	8.96	24.00	PASS
802.11ax HE80	7/5985	3.54	7.10	7.00	24.00	PASS
	55/6225	3.80	7.36	7.26	24.00	PASS
	87/6385	3.79	7.35	7.25	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

U-NII-6

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	97/6435	4.63	5.99	7.89	24.00	PASS
	105/6475	4.73	6.09	7.99	24.00	PASS
	113/6515	4.65	6.01	7.91	24.00	PASS
802.11ax HE40	99/6445	4.53	7.86	9.76	24.00	PASS
	107/6485	3.38	6.71	8.61	24.00	PASS
	115/6525	1.40	4.73	6.63	24.00	PASS
802.11ax HE80	103/6465	3.77	7.33	9.23	24.00	PASS
	119/6545	-3.59	-0.03	1.87	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

U-NII-7

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	117/6535	4.36	5.72	8.42	24.00	PASS
	153/6715	4.17	5.53	8.23	24.00	PASS
	181/6855	4.16	5.52	8.22	24.00	PASS
	185/6875	1.07	2.43	5.13	24.00	PASS
802.11ax HE40	115/6525	1.54	4.87	7.57	24.00	PASS
	123/6565	4.42	7.75	10.45	24.00	PASS
	155/6725	4.06	7.39	10.09	24.00	PASS
	179/6845	4.05	7.38	10.08	24.00	PASS
	187/6885	-2.94	0.39	3.09	24.00	PASS
802.11ax HE80	119/6545	2.84	6.40	9.10	24.00	PASS
	135/6625	3.54	7.10	9.80	24.00	PASS
	151/6705	3.52	7.08	9.78	24.00	PASS
	167/6785	3.21	6.77	9.47	24.00	PASS
	183/6865	1.88	5.44	8.14	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

U-NII-8

Test Mode	Channel/ Frequency (MHz)	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
802.11ax HE20	185/6875	1.95	3.31	4.51	24.00	PASS
	189/6895	5.17	6.53	7.73	24.00	PASS
	209/6995	4.65	6.01	7.21	24.00	PASS
	233/7115	4.41	5.77	6.97	24.00	PASS
802.11ax HE40	187/6885	4.31	7.64	8.84	24.00	PASS
	195/6925	3.80	7.13	8.33	24.00	PASS
	211/7005	3.65	6.98	8.18	24.00	PASS
	227/7085	3.50	6.83	8.03	24.00	PASS
802.11ax HE80	183/6865	2.08	5.64	6.84	24.00	PASS
	199/6945	3.26	6.82	8.02	24.00	PASS
	215/7025	3.04	6.60	7.80	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain						

MIMO

U-NII-5

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20	1/5955	-0.28	1.08	0.17	1.53	4.32	4.22	24.00	PASS
	49/6195	0.22	1.58	0.60	1.96	4.78	4.68	24.00	PASS
	93/6415	0.27	1.63	0.35	1.71	4.68	4.58	24.00	PASS
802.11ax HE40	3/5965	0.87	4.20	0.59	3.92	7.07	6.97	24.00	PASS
	51/6205	0.54	3.87	1.99	5.32	7.67	7.57	24.00	PASS
	91/6405	0.84	4.17	1.28	4.61	7.41	7.31	24.00	PASS
802.11ax HE80	7/5985	-0.75	2.58	-0.43	2.90	5.75	5.65	24.00	PASS
	55/6225	-0.48	2.85	0.05	3.38	6.13	6.03	24.00	PASS
	87/6385	-0.40	2.93	-0.04	3.29	6.12	6.02	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$.

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = -0.1 + 0 = -0.1 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

U-NII-6

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20	97/6435	-0.65	0.71	-0.82	0.54	3.64	5.54	24.00	PASS
	105/6475	-0.57	0.79	-0.94	0.42	3.62	5.52	24.00	PASS
	113/6515	-0.90	0.46	-0.93	0.43	3.46	5.36	24.00	PASS
802.11ax HE40	99/6445	-1.67	1.66	-1.72	1.61	4.65	6.55	24.00	PASS
	107/6485	-2.29	1.04	-1.71	1.62	4.35	6.25	24.00	PASS
	115/6525	-5.05	-1.72	-4.94	-1.61	1.35	3.25	24.00	PASS
802.11ax HE80	103/6465	-1.32	2.01	-1.32	2.01	5.02	6.92	24.00	PASS
	119/6545	-8.93	-5.60	-7.99	-4.66	-2.09	-0.19	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$.

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 1.9 + 0 = 1.9 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

U-NII-7

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20	117/6535	-1.34	0.02	-1.30	0.06	3.05	5.75	24.00	PASS
	153/6715	-1.66	-0.30	-0.91	0.45	3.10	5.80	24.00	PASS
	181/6855	-2.04	-0.68	-1.70	-0.34	2.50	5.20	24.00	PASS
	185/6875	-3.57	-2.21	-3.79	-2.43	0.69	3.39	24.00	PASS
802.11ax HE40	115/6525	-4.93	-1.60	-4.24	-0.91	1.77	4.47	24.00	PASS
	123/6565	-1.69	1.64	-1.01	2.32	5.00	7.70	24.00	PASS
	155/6725	-2.86	0.47	-1.52	1.81	4.20	6.90	24.00	PASS
	179/6845	-2.32	1.01	-1.75	1.58	4.31	7.01	24.00	PASS
	187/6885	-8.31	-4.98	-8.63	-5.30	-2.13	0.57	24.00	PASS
802.11ax HE80	119/6545	-0.80	2.53	-0.49	2.84	5.70	8.40	24.00	PASS
	135/6625	-0.47	2.86	-0.01	3.32	6.11	8.81	24.00	PASS
	151/6705	-1.22	2.11	-0.28	3.05	5.62	8.32	24.00	PASS
	167/6785	-1.52	1.81	-0.73	2.60	5.23	7.93	24.00	PASS
	183/6865	-1.89	1.44	-1.76	1.57	4.52	7.22	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$.

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{ANT\ MAX} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

So directional gain = $G_{ANT\ MAX} + \text{Array Gain} = 2.7 + 0 = 2.7 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

U-NII-8

Test Mode	Channel/ Frequency (MHz)	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
		Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20	185/6875	-3.43	-2.07	-3.05	-1.69	1.13	2.33	24.00	PASS
	189/6895	0.14	1.50	0.67	2.03	4.78	5.98	24.00	PASS
	209/6995	-0.14	1.22	0.17	1.53	4.39	5.59	24.00	PASS
	233/7115	-2.75	-1.39	-2.54	-1.18	1.73	2.93	24.00	PASS
802.11ax HE40	187/6885	-2.62	0.71	-1.77	1.56	4.17	5.37	24.00	PASS
	195/6925	-0.94	2.39	-0.96	2.37	5.39	6.59	24.00	PASS
	211/7005	-1.22	2.11	-0.86	2.47	5.30	6.50	24.00	PASS
	227/7085	-2.02	1.31	-1.23	2.10	4.73	5.93	24.00	PASS
802.11ax HE80	183/6865	-1.71	1.62	-0.92	2.41	5.04	6.24	24.00	PASS
	199/6945	0.19	3.52	0.61	3.94	6.75	7.95	24.00	PASS
	215/7025	0.11	3.44	0.47	3.80	6.63	7.83	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$.

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 1.2 + 0 = 1.2 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

TB Mode

Mode	Duty cycle	Duty cycle correction Factor (dB)
802.11ax HE20 26-Tone:RU Index 0	0.64	1.95
802.11ax HE20 26-Tone:RU Index 4	0.64	1.95
802.11ax HE20 26-Tone:RU Index 8	0.64	1.95
802.11ax HE20 52-Tone:RU Index 37	0.58	2.35
802.11ax HE20 52-Tone:RU Index 38	0.59	2.30
802.11ax HE20 52-Tone:RU Index 40	0.59	2.30
802.11ax HE20 106-Tone:RU Index 53	0.55	2.61
802.11ax HE20 106-Tone:RU Index 54	0.55	2.61

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

SISO Antenna 1						
Mode	802.11ax HE20 26-Tone		802.11ax HE20 52-Tone		802.11ax HE20 106-Tone	
	Channel	Power Index	Channel	Power Index	Channel	Power Index
U-NII-5	CH1	0	CH1	2	CH1	4
	CH49	0	CH49	2	CH49	4
	CH93	0	CH93	2	CH93	4
U-NII-6	CH97	-2	CH97	0	CH97	2
	CH105	-2	CH105	0	CH105	2
	CH113	-2	CH113	0	CH113	2
U-NII-7	CH117	-4	CH117	-2	CH117	1
	CH153	-4	CH153	-2	CH153	1
	CH181	-4	CH181	-2	CH181	1
	CH185	-4	CH185	-2	CH185	1
U-NII-8	CH185	-4	CH185	-2	CH185	1
	CH189	-2	CH189	1	CH189	3
	CH209	-2	CH209	1	CH209	3
	CH233	-2	CH233	1	CH233	3

SISO Antenna 2						
Mode	802.11ax HE20 26-Tone		802.11ax HE20 52-Tone		802.11ax HE20 106-Tone	
	Channel	Power Index	Channel	Power Index	Channel	Power Index
U-NII-5	CH1	0	CH1	2	CH1	4
	CH49	0	CH49	2	CH49	4
	CH93	0	CH93	2	CH93	4
U-NII-6	CH97	-2	CH97	0	CH97	2
	CH105	-2	CH105	0	CH105	2
	CH113	-2	CH113	0	CH113	2
U-NII-7	CH117	-4	CH117	-2	CH117	1
	CH153	-4	CH153	-2	CH153	1
	CH181	-4	CH181	-2	CH181	1
U-NII-8	CH185	-4	CH185	-2	CH185	1
	CH189	-3	CH189	0	CH189	2
	CH209	-3	CH209	0	CH209	2
	CH233	-3	CH233	0	CH233	2
MIMO Antenna 1 / MIMO Antenna 2						
Mode	802.11ax HE20 26-Tone		802.11ax HE20 52-Tone		802.11ax HE20 106-Tone	
	Channel	Power Index	Channel	Power Index	Channel	Power Index
U-NII-5	CH1	-6	CH1	-4	CH1	-2
	CH49	-6	CH49	-4	CH49	-2
	CH93	-7	CH93	-4	CH93	-2
U-NII-6	CH97	-6	CH97	-4	CH97	-2
	CH105	-6	CH105	-4	CH105	-2
	CH113	-6	CH113	-4	CH113	-2
U-NII-7	CH117	-9	CH117	-7	CH117	-5
	CH153	-9	CH153	-7	CH153	-5
	CH181	-9	CH181	-7	CH181	-5
U-NII-8	CH185	-9	CH185	-7	CH185	-5
	CH189	-9	CH189	-7	CH189	-5
	CH209	-9	CH209	-7	CH209	-5
	CH233	-9	CH233	-7	CH233	-3

SISO Antenna 1
U-NII-5

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	1/5955	0	-2.36	-0.41	-0.71	24.00	PASS
	49/6195	4	-1.45	0.50	0.20	24.00	PASS
	93/6415	8	-1.24	0.71	0.41	24.00	PASS
802.11ax HE20 52-Tone	1/5955	37	0.06	2.41	2.11	24.00	PASS
	49/6195	38	-0.04	2.26	1.96	24.00	PASS
	93/6415	40	0.26	2.56	2.26	24.00	PASS
802.11ax HE20 106-Tone	1/5955	53	1.41	4.02	3.72	24.00	PASS
	49/6195	53	2.07	4.68	4.38	24.00	PASS
	93/6415	54	2.31	4.92	4.62	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

U-NII-6

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	97/6435	0	-3.45	-1.50	0.10	24.00	PASS
	105/6475	4	-3.53	-1.58	0.02	24.00	PASS
	113/6515	8	-3.40	-1.45	0.15	24.00	PASS
802.11ax HE20 52-Tone	97/6435	37	-1.56	0.79	2.39	24.00	PASS
	105/6475	38	-2.33	-0.03	1.57	24.00	PASS
	113/6515	40	-1.97	0.33	1.93	24.00	PASS
802.11ax HE20 106-Tone	97/6435	53	0.16	2.77	4.37	24.00	PASS
	105/6475	53	0.19	2.80	4.40	24.00	PASS
	113/6515	54	-0.25	2.36	3.96	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

U-NII-7

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	117/6535	0	-5.09	-3.14	-0.94	24.00	PASS
	153/6715	4	-5.47	-3.52	-1.32	24.00	PASS
	181/6855	8	-5.08	-3.13	-0.93	24.00	PASS
802.11ax HE20 52-Tone	117/6535	37	-2.89	-0.54	1.66	24.00	PASS
	153/6715	38	-5.56	-3.26	-1.06	24.00	PASS
	181/6855	40	-5.25	-2.95	-0.75	24.00	PASS
802.11ax HE20 106-Tone	117/6535	53	-0.71	1.90	4.10	24.00	PASS
	153/6715	53	-1.91	0.70	2.90	24.00	PASS
	181/6855	54	-1.30	1.31	3.51	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

U-NII-8

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	185/6875	8	-5.46	-3.51	-2.71	24.00	PASS
	189/6895	0	-3.82	-1.87	-1.07	24.00	PASS
	209/6995	4	-3.77	-1.82	-1.02	24.00	PASS
	233/7115	8	-4.23	-2.28	-1.48	24.00	PASS
802.11ax HE20 52-Tone	185/6875	40	-4.51	-2.21	-1.41	24.00	PASS
	189/6895	37	-1.31	1.04	1.84	24.00	PASS
	209/6995	38	-1.78	0.52	1.32	24.00	PASS
	233/7115	40	-1.48	0.82	1.62	24.00	PASS
802.11ax HE20 106-Tone	185/6875	54	-1.62	0.99	1.79	24.00	PASS
	189/6895	53	1.10	3.71	4.51	24.00	PASS
	209/6995	53	0.48	3.09	3.89	24.00	PASS
	233/7115	54	-0.11	2.50	3.30	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

SISO Antenna 2
U-NII-5

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	1/5955	0	-1.45	0.50	0.40	24.00	PASS
	49/6195	4	-1.14	0.81	0.71	24.00	PASS
	93/6415	8	-1.22	0.73	0.63	24.00	PASS
802.11ax HE20 52-Tone	1/5955	37	-0.30	2.05	1.95	24.00	PASS
	49/6195	38	0.40	2.70	2.60	24.00	PASS
	93/6415	40	0.26	2.56	2.46	24.00	PASS
802.11ax HE20 106-Tone	1/5955	53	1.68	4.29	4.19	24.00	PASS
	49/6195	53	1.86	4.47	4.37	24.00	PASS
	93/6415	54	2.52	5.13	5.03	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

U-NII-6

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	97/6435	0	-3.64	-1.69	0.21	24.00	PASS
	105/6475	4	-3.11	-1.16	0.74	24.00	PASS
	113/6515	8	-3.71	-1.76	0.14	24.00	PASS
802.11ax HE20 52-Tone	97/6435	37	-2.01	0.34	2.24	24.00	PASS
	105/6475	38	-1.21	1.09	2.99	24.00	PASS
	113/6515	40	-1.69	0.61	2.51	24.00	PASS
802.11ax HE20 106-Tone	97/6435	53	0.05	2.66	4.56	24.00	PASS
	105/6475	53	-0.11	2.50	4.40	24.00	PASS
	113/6515	54	0.21	2.82	4.72	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

U-NII-7

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	117/6535	0	-5.17	-3.22	-0.52	24.00	PASS
	153/6715	4	-5.08	-3.13	-0.43	24.00	PASS
	181/6855	8	-4.82	-2.87	-0.17	24.00	PASS
802.11ax HE20 52-Tone	117/6535	37	-3.31	-0.96	1.74	24.00	PASS
	153/6715	38	-2.77	-0.47	2.23	24.00	PASS
	181/6855	40	-4.40	-2.10	0.60	24.00	PASS
802.11ax HE20 106-Tone	117/6535	53	-1.43	1.18	3.88	24.00	PASS
	153/6715	53	-0.96	1.65	4.35	24.00	PASS
	181/6855	54	-0.81	1.80	4.50	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

U-NII-8

Test Mode	Channel/ Frequency (MHz)	RU Index	Average Power Measured (dBm)	Average Power with duty factor (dBm)	EIRP (dBm)	Limit (dBm)	Conclusion
802.11ax HE20 26-Tone	185/6875	8	-4.95	-3.00	-1.80	24.00	PASS
	189/6895	0	-3.62	-1.67	-0.47	24.00	PASS
	209/6995	4	-4.34	-2.39	-1.19	24.00	PASS
	233/7115	8	-5.66	-3.71	-2.51	24.00	PASS
802.11ax HE20 52-Tone	185/6875	40	-3.32	-1.02	0.18	24.00	PASS
	189/6895	37	-0.83	1.52	2.72	24.00	PASS
	209/6995	38	-1.55	0.75	1.95	24.00	PASS
	233/7115	40	-3.34	-1.04	0.16	24.00	PASS
802.11ax HE20 106-Tone	185/6875	54	-1.24	1.37	2.57	24.00	PASS
	189/6895	53	0.23	2.84	4.04	24.00	PASS
	209/6995	53	-0.39	2.22	3.42	24.00	PASS
	233/7115	54	-0.75	1.86	3.06	24.00	PASS
Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor EIRP = Average Power with duty factor + Gain							

**MIMO
U-NII-5**

Test Mode	Channel/ Frequency (MHz)	RU Index	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
			Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20 26-Tone	1/5955	0	-7.21	-5.26	-7.65	-5.70	-2.46	-2.56	24.00	PASS
	49/6195	4	-7.03	-5.08	-7.39	-5.44	-2.25	-2.35	24.00	PASS
	93/6415	8	-8.26	-6.31	-8.07	-6.12	-3.20	-3.30	24.00	PASS
802.11ax HE20 52-Tone	1/5955	37	-6.11	-3.76	-7.22	-4.87	-1.27	-1.37	24.00	PASS
	49/6195	38	-5.02	-2.72	-5.06	-2.76	0.27	0.17	24.00	PASS
	93/6415	40	-5.16	-2.86	-5.21	-2.91	0.13	0.03	24.00	PASS
802.11ax HE20 106-Tone	1/5955	53	-4.19	-1.58	-3.74	-1.13	1.66	1.56	24.00	PASS
	49/6195	53	-3.88	-1.27	-3.47	-0.86	1.95	1.85	24.00	PASS
	93/6415	54	-4.30	-1.69	-4.14	-1.53	1.40	1.30	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$.

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = -0.1 + 0 = -0.1 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

U-NII-6

Test Mode	Channel/ Frequency (MHz)	RU Index	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
			Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20 26-Tone	97/6435	0	-6.39	-4.44	-7.43	-5.48	-1.92	-0.02	24.00	PASS
	105/6475	4	-6.98	-5.03	-7.61	-5.66	-2.32	-0.42	24.00	PASS
	113/6515	8	-7.22	-5.27	-7.13	-5.18	-2.21	-0.31	24.00	PASS
802.11ax HE20 52-Tone	97/6435	37	-4.61	-2.26	-5.61	-3.26	0.28	2.18	24.00	PASS
	105/6475	38	-5.37	-3.07	-5.80	-3.50	-0.27	1.63	24.00	PASS
	113/6515	40	-5.15	-2.85	-5.27	-2.97	0.10	2.00	24.00	PASS
802.11ax HE20 106-Tone	97/6435	53	-3.44	-0.83	-3.86	-1.25	1.98	3.88	24.00	PASS
	105/6475	53	-4.30	-1.69	-3.62	-1.01	1.67	3.57	24.00	PASS
	113/6515	54	-3.79	-1.18	-3.99	-1.38	1.73	3.63	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 1.9 + 0 = 1.9 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

U-NII-7

Test Mode	Channel/ Frequency (MHz)	RU Index	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
			Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20 26-Tone	117/6535	0	-9.75	-7.80	-9.84	-7.89	-4.83	-2.13	24.00	PASS
	153/6715	4	-10.79	-8.84	-10.19	1.95	2.30	5.00	24.00	PASS
	181/6855	8	-10.10	-8.15	-10.12	-8.17	-5.15	-2.45	24.00	PASS
802.11ax HE20 52-Tone	117/6535	37	-8.44	-6.09	-8.42	-6.07	-3.07	-0.37	24.00	PASS
	153/6715	38	-8.57	-6.27	-8.77	-6.47	-3.36	-0.66	24.00	PASS
	181/6855	40	-8.58	-6.28	-8.16	-5.86	-3.05	-0.35	24.00	PASS
802.11ax HE20 106-Tone	117/6535	53	-6.31	-3.70	-6.47	-3.86	-0.77	1.93	24.00	PASS
	153/6715	53	-7.13	-4.52	-6.97	-4.36	-1.43	1.27	24.00	PASS
	181/6855	54	-6.51	-3.90	-6.47	-3.86	-0.87	1.83	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 2.7 + 0 = 2.7 \text{ dBi} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

U-NII-8

Test Mode	Channel/ Frequency (MHz)	RU Index	MIMO Antenna 1		MIMO Antenna 2		Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Conclusion
			Average Power Measured (dBm)	Average Power with duty factor (dBm)	Average Power Measured (dBm)	Average Power with duty factor (dBm)				
802.11ax HE20 26-Tone	185/6875	8	-10.58	-8.63	-9.79	-7.84	-5.21	-4.01	24.00	PASS
	189/6895	0	-9.20	-7.25	-9.79	-7.84	-4.52	-3.32	24.00	PASS
	209/6995	4	-9.98	-8.03	-10.35	-8.40	-5.20	-4.00	24.00	PASS
	233/7115	8	-10.99	-9.04	-11.47	-9.52	-6.26	-5.06	24.00	PASS
802.11ax HE20 52-Tone	185/6875	40	-8.36	-6.06	-7.92	-5.62	-2.82	-1.62	24.00	PASS
	189/6895	37	-7.90	-5.55	-7.67	-5.32	-2.42	-1.22	24.00	PASS
	209/6995	38	-7.41	-5.11	-8.61	-6.31	-2.66	-1.46	24.00	PASS
	233/7115	40	-9.92	-7.62	-9.82	-7.52	-4.56	-3.36	24.00	PASS
802.11ax HE20 106-Tone	185/6875	54	-7.12	-4.51	-6.72	-4.11	-1.30	-0.10	24.00	PASS
	189/6895	53	-6.11	-3.50	-6.42	-3.81	-0.64	0.56	24.00	PASS
	209/6995	53	-6.20	-3.59	-6.91	-4.30	-0.92	0.28	24.00	PASS
	233/7115	54	-5.57	-2.96	-5.82	-3.21	-0.07	1.13	24.00	PASS

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

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

The Total Power = $10\log(10^{(\text{Power antenna 1 in dBm}/10)} + 10^{(\text{Power antenna 2 in dBm}/10)})$

EIRP = Total Power + Gain

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$,

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{\text{ANT}} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{\text{ANT}}/N_{\text{SS}})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{\text{ANT}} \geq 5$.

So directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 1.2 + 0 = 1.2 \text{ dB} < 6 \text{ dBi}$. So the EIRP limit is 24dBm.

5.3. Peak Power Spectral Density (E.I.R.P.)

Ambient Condition

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

Method of Measurement

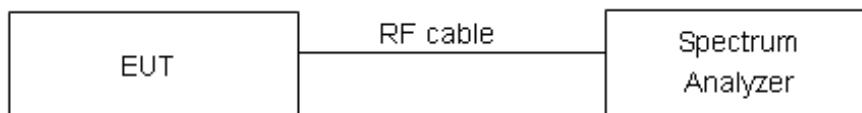
The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Using method SA-1

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW $\geq$ 3 MHz, Detector = RMS
3. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value

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

Test setup



Limits

☒ For the 5.925 ~ 6.425 GHz band:

For standard power access point and fixed client device: e.i.r.p PSD < 23 dBm/MHz.

For indoor access point: e.i.r.p PSD < 5 dBm/MHz.

For subordinate device control of an indoor access point: e.i.r.p PSD < 5 dBm/MHz.

For client device control of a standard power access point: e.i.r.p PSD < 17 dBm/MHz.

For client device control of an indoor access point: e.i.r.p PSD < -1 dBm/MHz.

☒ For the 6.425 ~ 6.525 GHz band:

For indoor access point: e.i.r.p PSD < 5 dBm/MHz.

For client device control of an indoor access point: e.i.r.p PSD < -1 dBm/MHz.

☒ For the 6.525 ~ 6.875 GHz band:

For standard power access point and fixed client device: e.i.r.p PSD < 23 dBm/MHz.

For indoor access point: e.i.r.p PSD < 5 dBm/MHz.

For subordinate device control of an indoor access point: e.i.r.p PSD < 5 dBm/MHz.

For client device control of a standard power access point: e.i.r.p PSD < 17 dBm/MHz.

For client device control of an indoor access point: e.i.r.p PSD < -1 dBm/MHz.

☒ For the 6.875 ~ 7.125 GHz band:

For indoor access point: e.i.r.p PSD < 5 dBm/MHz.

For client device control of an indoor access point: e.i.r.p PSD < -1 dBm/MHz.

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:
SISO Antenna 1
U-NII-5

Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	1/5955	-4.85	-3.49	-3.79	-1.00	PASS
	49/6195	-5.66	-4.30	-4.60	-1.00	PASS
	93/6415	-5.42	-4.06	-4.36	-1.00	PASS
802.11ax HE40	3/5965	-7.79	-4.46	-4.76	-1.00	PASS
	51/6205	-8.37	-5.04	-5.34	-1.00	PASS
	91/6405	-7.25	-3.92	-4.22	-1.00	PASS
802.11ax HE80	7/5985	-11.72	-8.16	-8.46	-1.00	PASS
	55/6225	-11.97	-8.41	-8.71	-1.00	PASS
	87/6385	-11.54	-7.98	-8.28	-1.00	PASS
Note: Power Spectral Density = Read Value + Duty cycle correction factor e.i.r.p PSD = Power Spectral Density + Gain						

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Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	97/6435	-5.45	-4.09	-2.49	-1.00	PASS
	105/6475	-5.67	-4.31	-2.71	-1.00	PASS
	113/6515	-5.76	-4.40	-2.80	-1.00	PASS
802.11ax HE40	99/6445	-8.00	-4.67	-3.07	-1.00	PASS
	107/6485	-7.52	-4.19	-2.59	-1.00	PASS
	115/6525	-9.31	-5.98	-4.38	-1.00	PASS
802.11ax HE80	103/6465	-11.50	-7.94	-6.34	-1.00	PASS
	119/6545	-14.84	-11.28	-9.68	-1.00	PASS
Note: Power Spectral Density = Read Value + Duty cycle correction factor e.i.r.p PSD = Power Spectral Density + Gain						

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Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	117/6535	-5.49	-4.13	-1.93	-1.00	PASS
	153/6715	-6.70	-5.34	-3.14	-1.00	PASS
	181/6855	-6.46	-5.10	-2.90	-1.00	PASS
	185/6875	-6.86	-5.50	-3.30	-1.00	PASS
802.11ax HE40	115/6525	-8.68	-5.35	-3.15	-1.00	PASS
	123/6565	-8.81	-5.48	-3.28	-1.00	PASS
	155/6725	-9.19	-5.86	-3.66	-1.00	PASS
	179/6845	-8.56	-5.23	-3.03	-1.00	PASS
	187/6885	-11.25	-7.92	-5.72	-1.00	PASS
802.11ax HE80	119/6545	-11.66	-8.10	-5.90	-1.00	PASS
	135/6625	-11.56	-8.00	-5.80	-1.00	PASS
	151/6705	-13.35	-9.79	-7.59	-1.00	PASS
	167/6785	-12.38	-8.82	-6.62	-1.00	PASS
	183/6865	-12.58	-9.02	-6.82	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

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Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	185/6875	-5.36	-4.00	-3.20	-1.00	PASS
	189/6895	-6.69	-5.33	-4.53	-1.00	PASS
	209/6995	-5.94	-4.58	-3.78	-1.00	PASS
	233/7115	-5.73	-4.37	-3.57	-1.00	PASS
802.11ax HE40	187/6885	-9.04	-5.71	-4.91	-1.00	PASS
	195/6925	-9.13	-5.80	-5.00	-1.00	PASS
	211/7005	-8.77	-5.44	-4.64	-1.00	PASS
	227/7085	-8.35	-5.02	-4.22	-1.00	PASS
802.11ax HE80	183/6865	-13.09	-9.53	-8.73	-1.00	PASS
	199/6945	-11.78	-8.22	-7.42	-1.00	PASS
	215/7025	-11.71	-8.15	-7.35	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

SISO Antenna 2
U-NII-5

Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	1/5955	-3.99	-2.63	-2.73	-1.00	PASS
	49/6195	-4.39	-3.03	-3.13	-1.00	PASS
	93/6415	-3.69	-2.33	-2.43	-1.00	PASS
802.11ax HE40	3/5965	-7.16	-3.83	-3.93	-1.00	PASS
	51/6205	-7.79	-4.46	-4.56	-1.00	PASS
	91/6405	-6.99	-3.66	-3.76	-1.00	PASS
802.11ax HE80	7/5985	-10.95	-7.39	-7.49	-1.00	PASS
	55/6225	-10.29	-6.73	-6.83	-1.00	PASS
	87/6385	-11.36	-7.80	-7.90	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-6

Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	97/6435	-5.83	-4.47	-2.57	-1.00	PASS
	105/6475	-5.18	-3.82	-1.92	-1.00	PASS
	113/6515	-5.86	-4.50	-2.60	-1.00	PASS
802.11ax HE40	99/6445	-8.15	-4.82	-2.92	-1.00	PASS
	107/6485	-8.54	-5.21	-3.31	-1.00	PASS
	115/6525	-7.34	-4.01	-2.11	-1.00	PASS
802.11ax HE80	103/6465	-10.93	-7.37	-5.47	-1.00	PASS
	119/6545	-13.82	-10.26	-8.36	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-7

Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	117/6535	-5.54	-4.18	-1.48	-1.00	PASS
	153/6715	-6.12	-4.76	-2.06	-1.00	PASS
	181/6855	-6.33	-4.97	-2.27	-1.00	PASS
	185/6875	-5.95	-4.59	-1.89	-1.00	PASS
802.11ax HE40	115/6525	-8.30	-4.97	-2.27	-1.00	PASS
	123/6565	-8.17	-4.84	-2.14	-1.00	PASS
	155/6725	-8.14	-4.81	-2.11	-1.00	PASS
	179/6845	-8.22	-4.89	-2.19	-1.00	PASS
	187/6885	-9.97	-6.64	-3.94	-1.00	PASS
802.11ax HE80	119/6545	-10.89	-7.33	-4.63	-1.00	PASS
	135/6625	-11.17	-7.61	-4.91	-1.00	PASS
	151/6705	-12.07	-8.51	-5.81	-1.00	PASS
	167/6785	-12.28	-8.72	-6.02	-1.00	PASS
	183/6865	-11.64	-8.08	-5.38	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-8

Mode	Channel/ Frequency (MHz)	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20	185/6875	-5.87	-4.51	-3.31	-1.00	PASS
	189/6895	-5.11	-3.75	-2.55	-1.00	PASS
	209/6995	-5.70	-4.34	-3.14	-1.00	PASS
	233/7115	-5.85	-4.49	-3.29	-1.00	PASS
802.11ax HE40	187/6885	-7.70	-4.37	-3.17	-1.00	PASS
	195/6925	-8.24	-4.91	-3.71	-1.00	PASS
	211/7005	-9.08	-5.75	-4.55	-1.00	PASS
	227/7085	-9.40	-6.07	-4.87	-1.00	PASS
802.11ax HE80	183/6865	-12.51	-8.95	-7.75	-1.00	PASS
	199/6945	-12.21	-8.65	-7.45	-1.00	PASS
	215/7025	-12.35	-8.79	-7.59	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

MIMO
U-NII-5

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		Antenna 1		Antenna 2		Total e.i.r.p PSD (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)			
802.11ax HE20	1/5955	-8.63	0.14	-7.96	0.16	-2.36	-1.00	PASS
	49/6195	-7.95	0.16	-7.55	0.18	-1.82	-1.00	PASS
	93/6415	-8.07	0.16	-7.89	0.16	-2.06	-1.00	PASS
802.11ax HE40	3/5965	-8.19	0.15	-7.68	0.17	-2.01	-1.00	PASS
	51/6205	-8.23	0.15	-7.07	0.20	-1.69	-1.00	PASS
	91/6405	-8.80	0.13	-8.00	0.16	-2.46	-1.00	PASS
802.11ax HE80	7/5985	-11.77	0.07	-11.93	0.06	-5.93	-1.00	PASS
	55/6225	-11.53	0.07	-11.16	0.08	-5.42	-1.00	PASS
	87/6385	-12.38	0.06	-11.64	0.07	-6.07	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain= $10\log(N_{\text{ant}}/N_{\text{ss}})$ dB,
so directional gain= $G_{\text{ANT MAX}} + \text{Array Gain} = -0.1 + 10\log(2/1) = 2.91 < 6$ dBi.

So the e.i.r.p PSD limit is -1.00 dBm.

U-NII-6

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		Antenna 1		Antenna 2		Total e.i.r.p PSD (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)			
802.11ax HE20	97/6435	-9.50	0.11	-10.19	0.10	-1.91	-1.00	PASS
	105/6475	-9.75	0.11	-9.86	0.10	-1.88	-1.00	PASS
	113/6515	-9.36	0.12	-9.97	0.10	-1.73	-1.00	PASS
802.11ax HE40	99/6445	-10.57	0.09	-10.31	0.09	-2.52	-1.00	PASS
	107/6485	-11.07	0.08	-11.01	0.08	-3.12	-1.00	PASS
	115/6525	-11.36	0.07	-11.67	0.07	-3.59	-1.00	PASS
802.11ax HE80	103/6465	-13.45	0.05	-12.23	0.06	-4.88	-1.00	PASS
	119/6545	-13.97	0.04	-14.63	0.03	-6.37	-1.00	PASS

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01

Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain = $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,

so directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 1.9 + 10\log(2/1) = 4.91 < 6 \text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

U-NII-7

Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		Antenna 1		Antenna 2		Total e.i.r.p PSD (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)			
802.11ax HE20	117/6535	-10.18	0.10	-9.78	0.11	-1.25	-1.00	PASS
	153/6715	-10.32	0.09	-9.99	0.10	-1.43	-1.00	PASS
	181/6855	-10.54	0.09	-10.43	0.09	-1.76	-1.00	PASS
	185/6875	-10.34	0.09	-9.61	0.11	-1.24	-1.00	PASS
802.11ax HE40	115/6525	-11.02	0.08	-10.95	0.08	-2.26	-1.00	PASS
	123/6565	-10.56	0.09	-9.79	0.10	-1.44	-1.00	PASS
	155/6725	-11.42	0.07	-10.62	0.09	-2.28	-1.00	PASS
	179/6845	-11.33	0.07	-11.00	0.08	-2.44	-1.00	PASS
	187/6885	-13.01	0.05	-11.79	0.07	-3.64	-1.00	PASS
802.11ax HE80	119/6545	-11.48	0.07	-11.16	0.08	-2.60	-1.00	PASS
	135/6625	-12.29	0.06	-11.92	0.06	-3.38	-1.00	PASS
	151/6705	-12.46	0.06	-11.59	0.07	-3.28	-1.00	PASS
	167/6785	-13.94	0.04	-11.24	0.08	-3.66	-1.00	PASS
	183/6865	-12.30	0.06	-11.82	0.07	-3.33	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain = $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,
so directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 2.70 + 10\log(2/1) = 5.71 < 6 \text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

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Mode	Channel/ Frequency (MHz)	Power Spectral Density					Limit (dBm /MHz)	Conclusion
		Antenna 1		Antenna 2		Total e.i.r.p PSD (dBm/MHz)		
		Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)			
802.11ax HE20	185/6875	-9.35	0.12	-8.43	0.14	-1.65	-1.00	PASS
	189/6895	-8.69	0.14	-8.64	0.14	-1.44	-1.00	PASS
	209/6995	-8.97	0.13	-8.67	0.14	-1.60	-1.00	PASS
	233/7115	-10.94	0.08	-11.13	0.08	-3.81	-1.00	PASS
802.11ax HE40	187/6885	-10.31	0.09	-9.41	0.11	-2.62	-1.00	PASS
	195/6925	-10.51	0.09	-9.94	0.10	-3.00	-1.00	PASS
	211/7005	-9.92	0.10	-9.83	0.10	-2.65	-1.00	PASS
	227/7085	-10.45	0.09	-10.36	0.09	-3.18	-1.00	PASS
802.11ax HE80	183/6865	-13.91	0.04	-12.17	0.06	-5.73	-1.00	PASS
	199/6945	-10.71	0.08	-11.27	0.07	-3.76	-1.00	PASS
	215/7025	-11.59	0.07	-10.61	0.09	-3.85	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain = $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,
so directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 1.20 + 10\log(2/1) = 4.21 < 6 \text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

TB Mode
Antenna 1
U-NII-5

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	1/5955	0	-3.60	-1.65	-1.95	-1.00	PASS
	49/6195	4	-4.42	-2.47	-2.77	-1.00	PASS
	93/6415	8	-3.53	-1.58	-1.88	-1.00	PASS
802.11ax HE20 52-Tone	1/5955	37	-4.90	-2.55	-2.85	-1.00	PASS
	49/6195	38	-4.31	-2.01	-2.31	-1.00	PASS
	93/6415	40	-4.52	-2.22	-2.52	-1.00	PASS
802.11ax HE20 106-Tone	1/5955	53	-5.96	-3.35	-3.65	-1.00	PASS
	49/6195	53	-5.59	-2.98	-3.28	-1.00	PASS
	93/6415	54	-5.32	-2.71	-3.01	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-6

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	97/6435	0	-5.37	-3.42	-1.82	-1.00	PASS
	105/6475	4	-5.94	-3.99	-2.39	-1.00	PASS
	113/6515	8	-5.91	-3.96	-2.36	-1.00	PASS
802.11ax HE20 52-Tone	97/6435	37	-6.43	-4.08	-2.48	-1.00	PASS
	105/6475	38	-6.53	-4.23	-2.63	-1.00	PASS
	113/6515	40	-6.97	-4.67	-3.07	-1.00	PASS
802.11ax HE20 106-Tone	97/6435	53	-7.73	-5.12	-3.52	-1.00	PASS
	105/6475	53	-7.18	-4.57	-2.97	-1.00	PASS
	113/6515	54	-7.35	-4.74	-3.14	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-7

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	117/6535	0	-6.34	-4.39	-2.19	-1.00	PASS
	153/6715	4	-8.47	-6.52	-4.32	-1.00	PASS
	181/6855	8	-6.89	-4.94	-2.74	-1.00	PASS
802.11ax HE20 52-Tone	117/6535	37	-8.02	-5.67	-3.47	-1.00	PASS
	153/6715	38	-10.37	-8.07	-5.87	-1.00	PASS
	181/6855	40	-9.40	-7.10	-4.90	-1.00	PASS
802.11ax HE20 106-Tone	117/6535	53	-7.65	-5.04	-2.84	-1.00	PASS
	153/6715	53	-9.14	-6.53	-4.33	-1.00	PASS
	181/6855	54	-8.47	-5.86	-3.66	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-8

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	185/6875	8	-7.01	-5.06	-4.26	-1.00	PASS
	189/6895	0	-4.88	-2.93	-2.13	-1.00	PASS
	209/6995	4	-6.83	-4.88	-4.08	-1.00	PASS
	233/7115	8	-6.86	-4.91	-4.11	-1.00	PASS
802.11ax HE20 52-Tone	185/6875	40	-9.09	-6.79	-5.99	-1.00	PASS
	189/6895	37	-5.09	-2.74	-1.94	-1.00	PASS
	209/6995	38	-5.98	-3.68	-2.88	-1.00	PASS
	233/7115	40	-6.55	-4.25	-3.45	-1.00	PASS
802.11ax HE20 106-Tone	185/6875	54	-8.66	-6.05	-5.25	-1.00	PASS
	189/6895	53	-6.72	-4.11	-3.31	-1.00	PASS
	209/6995	53	-6.81	-4.20	-3.40	-1.00	PASS
	233/7115	54	-6.74	-4.13	-3.33	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

Antenna 2
U-NII-5

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	1/5955	0	-3.99	-2.04	-2.14	-1.00	PASS
	49/6195	4	-4.12	-2.17	-2.27	-1.00	PASS
	93/6415	8	-3.23	-1.28	-1.38	-1.00	PASS
802.11ax HE20 52-Tone	1/5955	37	-4.83	-2.48	-2.58	-1.00	PASS
	49/6195	38	-5.09	-2.79	-2.89	-1.00	PASS
	93/6415	40	-4.11	-1.81	-1.91	-1.00	PASS
802.11ax HE20 106-Tone	1/5955	53	-5.39	-2.78	-2.88	-1.00	PASS
	49/6195	53	-5.21	-2.60	-2.70	-1.00	PASS
	93/6415	54	-5.54	-2.93	-3.03	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-6

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	97/6435	0	-5.75	-3.80	-1.90	-1.00	PASS
	105/6475	4	-6.22	-4.27	-2.37	-1.00	PASS
	113/6515	8	-5.43	-3.48	-1.58	-1.00	PASS
802.11ax HE20 52-Tone	97/6435	37	-6.39	-4.04	-2.14	-1.00	PASS
	105/6475	38	-6.30	-4.00	-2.10	-1.00	PASS
	113/6515	40	-6.78	-4.48	-2.58	-1.00	PASS
802.11ax HE20 106-Tone	97/6435	53	-7.63	-5.02	-3.12	-1.00	PASS
	105/6475	53	-7.74	-5.13	-3.23	-1.00	PASS
	113/6515	54	-7.06	-4.45	-2.55	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-7

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	117/6535	0	-7.01	-5.06	-2.36	-1.00	PASS
	153/6715	4	-8.66	-6.71	-4.01	-1.00	PASS
	181/6855	8	-6.93	-4.98	-2.28	-1.00	PASS
802.11ax HE20 52-Tone	117/6535	37	-7.61	-5.26	-2.56	-1.00	PASS
	153/6715	38	-7.81	-5.51	-2.81	-1.00	PASS
	181/6855	40	-8.19	-5.89	-3.19	-1.00	PASS
802.11ax HE20 106-Tone	117/6535	53	-7.88	-5.27	-2.57	-1.00	PASS
	153/6715	53	-8.37	-5.76	-3.06	-1.00	PASS
	181/6855	54	-8.05	-5.44	-2.74	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

U-NII-8

Mode	Channel/ Frequency (MHz)	RU Index	Read Value (dBm /MHz)	Power Spectral Density (dBm /MHz)	e.i.r.p PSD (dBm /MHz)	Limit (dBm /MHz)	Conclusion
802.11ax HE20 26-Tone	185/6875	8	-7.68	-5.73	-4.53	-1.00	PASS
	189/6895	0	-5.48	-3.53	-2.33	-1.00	PASS
	209/6995	4	-7.60	-5.65	-4.45	-1.00	PASS
	233/7115	8	-7.59	-5.64	-4.44	-1.00	PASS
802.11ax HE20 52-Tone	185/6875	40	-8.64	-6.34	-5.14	-1.00	PASS
	189/6895	37	-6.32	-3.97	-2.77	-1.00	PASS
	209/6995	38	-6.39	-4.09	-2.89	-1.00	PASS
	233/7115	40	-6.90	-4.60	-3.40	-1.00	PASS
802.11ax HE20 106-Tone	185/6875	54	-9.07	-6.46	-5.26	-1.00	PASS
	189/6895	53	-7.25	-4.64	-3.44	-1.00	PASS
	209/6995	53	-7.76	-5.15	-3.95	-1.00	PASS
	233/7115	54	-7.82	-5.21	-4.01	-1.00	PASS

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

e.i.r.p PSD = Power Spectral Density + Gain

MIMO
U-NII-5

Mode	Channel/ Frequency (MHz)	RU Index	Power Spectral Density					Total e.i.r.p PSD (dBm/MHz)	Limit (dBm /MHz)	Conclusion
			Antenna 1		Antenna 2		Total PSD (dBm /MHz)			
			Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)				
802.11ax HE20 26-Tone	1/5955	0	-9.60	-7.65	-10.14	-8.19	-4.90	-1.99	-1.00	PASS
	49/6195	4	-10.09	-8.14	-10.13	-8.18	-5.15	-2.24	-1.00	PASS
	93/6415	8	-9.45	-7.50	-10.42	-8.47	-4.95	-2.04	-1.00	PASS
802.11ax HE20 52-Tone	1/5955	37	-10.26	-7.91	-11.22	-8.87	-5.35	-2.44	-1.00	PASS
	49/6195	38	-9.99	-7.69	-9.81	-7.51	-4.59	-1.68	-1.00	PASS
	93/6415	40	-10.21	-7.91	-10.89	-8.59	-5.23	-2.32	-1.00	PASS
802.11ax HE20 106-Tone	1/5955	53	-11.79	-9.18	-11.41	-8.80	-5.98	-3.07	-1.00	PASS
	49/6195	53	-11.36	-8.75	-11.13	-8.52	-5.62	-2.71	-1.00	PASS
	93/6415	54	-10.97	-8.36	-11.27	-8.66	-5.50	-2.59	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01

Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain = $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,

so directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = -0.1 + 10\log(2/1) = 2.91 < 6 \text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

U-NII-6

Mode	Channel/ Frequency (MHz)	RU Index	Power Spectral Density					Total e.i.r.p PSD (dBm/MHz)	Limit (dBm /MHz)	Conclusion
			Antenna 1		Antenna 2		Total PSD (dBm /MHz)			
			Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)				
802.11ax HE20 26-Tone	97/6435	0	-11.53	-9.58	-12.50	-10.55	-7.03	-2.12	-1.00	PASS
	105/6475	4	-12.81	-10.86	-12.73	-10.78	-7.81	-2.90	-1.00	PASS
	113/6515	8	-11.85	-9.90	-12.62	-10.67	-7.26	-2.35	-1.00	PASS
802.11ax HE20 52-Tone	97/6435	37	-12.59	-10.24	-13.29	-10.94	-7.57	-2.66	-1.00	PASS
	105/6475	38	-13.65	-11.35	-14.14	-11.84	-8.58	-3.67	-1.00	PASS
	113/6515	40	-13.38	-11.08	-12.46	-10.16	-7.59	-2.68	-1.00	PASS
802.11ax HE20 106-Tone	97/6435	53	-13.57	-10.96	-14.57	-11.96	-8.42	-3.51	-1.00	PASS
	105/6475	53	-14.54	-11.93	-14.80	-12.19	-9.05	-4.14	-1.00	PASS
	113/6515	54	-14.38	-11.77	-14.21	-11.60	-8.67	-3.76	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm/10})} + 10^{(\text{PSD antenna2 in dBm/10})}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01

Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain= $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,

so directional gain= $G_{\text{ANT MAX}} + \text{Array Gain}=1.9+10\log(2/1)=4.91 < 6 \text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

U-NII-7

Mode	Channel/ Frequency (MHz)	RU Index	Power Spectral Density					Total e.i.r.p PSD (dBm/MHz)	Limit (dBm /MHz)	Conclusion
			Antenna 1		Antenna 2		Total PSD (dBm /MHz)			
			Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)				
802.11ax HE20	117/6535	0	-11.77	-9.82	-12.41	-10.46	-7.12	-1.41	-1.00	PASS
	153/6715	4	-13.63	-11.68	-13.06	-11.11	-8.38	-2.67	-1.00	PASS
	181/6855	8	-12.31	-10.36	-11.83	-9.88	-7.10	-1.39	-1.00	PASS
802.11ax HE40	117/6535	37	-12.98	-10.63	-13.02	-10.67	-7.64	-1.93	-1.00	PASS
	153/6715	38	-13.67	-11.37	-12.56	-10.26	-7.77	-2.06	-1.00	PASS
	181/6855	40	-13.20	-10.90	-12.74	-10.44	-7.65	-1.94	-1.00	PASS
802.11ax HE80	117/6535	53	-13.72	-11.11	-13.96	-11.35	-8.22	-2.51	-1.00	PASS
	153/6715	53	-14.15	-11.54	-13.94	-11.33	-8.42	-2.71	-1.00	PASS
	181/6855	54	-14.09	-11.48	-13.39	-10.78	-8.11	-2.40	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01

Multiple Transmitter Output v02r01 F)2)f)(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain = $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,

so directional gain = $G_{\text{ANT MAX}} + \text{Array Gain} = 2.70 + 10\log(2/1) = 5.71 < 6 \text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

U-NII-8

Mode	Channel/ Frequency (MHz)	RU Index	Power Spectral Density					Total e.i.r.p PSD (dBm/MHz)	Limit (dBm /MHz)	Conclusion
			Antenna 1		Antenna 2		Total PSD (dBm /MHz)			
			Read Value (dBm/MHz)	PSD (dBm /MHz)	Read Value (dBm/MHz)	PSD (dBm /MHz)				
802.11ax HE20	185/6875	0	-11.27	-9.32	-11.77	-9.82	-6.55	-2.34	-1.00	PASS
	189/6895	0	-11.28	-9.33	-11.48	-9.53	-6.42	-2.21	-1.00	PASS
	209/6995	4	-12.72	-10.77	-13.54	-11.59	-8.15	-3.94	-1.00	PASS
	233/7115	8	-12.74	-10.79	-13.51	-11.56	-8.15	-3.94	-1.00	PASS
802.11ax HE40	185/6875	37	-13.76	-11.46	-13.34	-11.04	-8.23	-4.02	-1.00	PASS
	189/6895	37	-11.5	-9.15	-12.81	-10.46	-6.75	-2.54	-1.00	PASS
	209/6995	38	-13.21	-10.91	-13.66	-11.36	-8.12	-3.91	-1.00	PASS
	233/7115	40	-13.76	-11.46	-14.01	-11.71	-8.57	-4.36	-1.00	PASS
802.11ax HE80	185/6875	53	-14.05	-11.44	-13.88	-11.27	-8.34	-4.13	-1.00	PASS
	189/6895	53	-13.17	-10.56	-13.56	-10.95	-7.74	-3.53	-1.00	PASS
	209/6995	53	-14.11	-11.50	-14.64	-12.03	-8.75	-4.54	-1.00	PASS
	233/7115	54	-13.13	-10.52	-13.26	-10.65	-7.57	-3.36	-1.00	PASS

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

Total e.i.r.p PSD = $10\log(10^{(\text{PSD antenna1 in dBm}/10)} + 10^{(\text{PSD antenna2 in dBm}/10)}) + \text{Gain}$

3. The manufacturer declared the transmitter output signals is CDD mode And Nss=1. According to KDB 662911 D01

Multiple Transmitter Output v02r01 F)2)f(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 = $G_{\text{ANT MAX}} + \text{Array Gain}$, For PSD measurements on all devices, Array Gain= $10\log(N_{\text{ant}}/N_{\text{ss}})\text{dB}$,

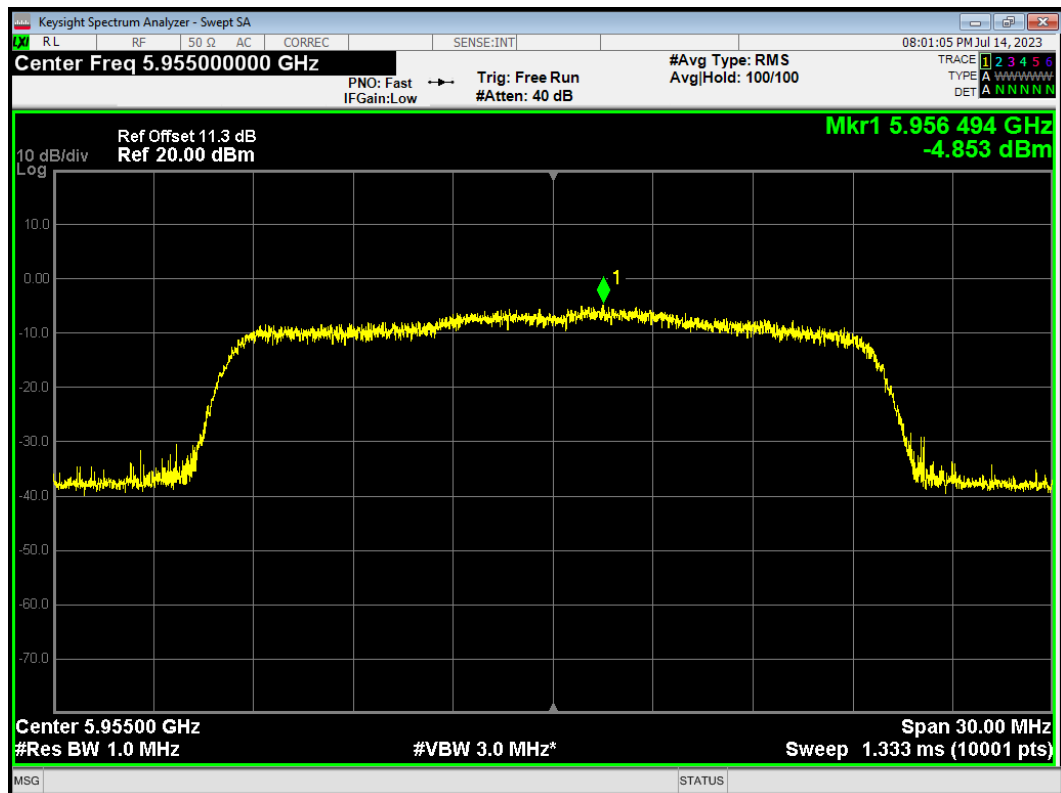
so directional gain= $G_{\text{ANT MAX}} + \text{Array Gain}=1.20+10\log(2/1)=4.21<6\text{ dBi}$.

So the e.i.r.p PSD limit is -1.00 dBm.

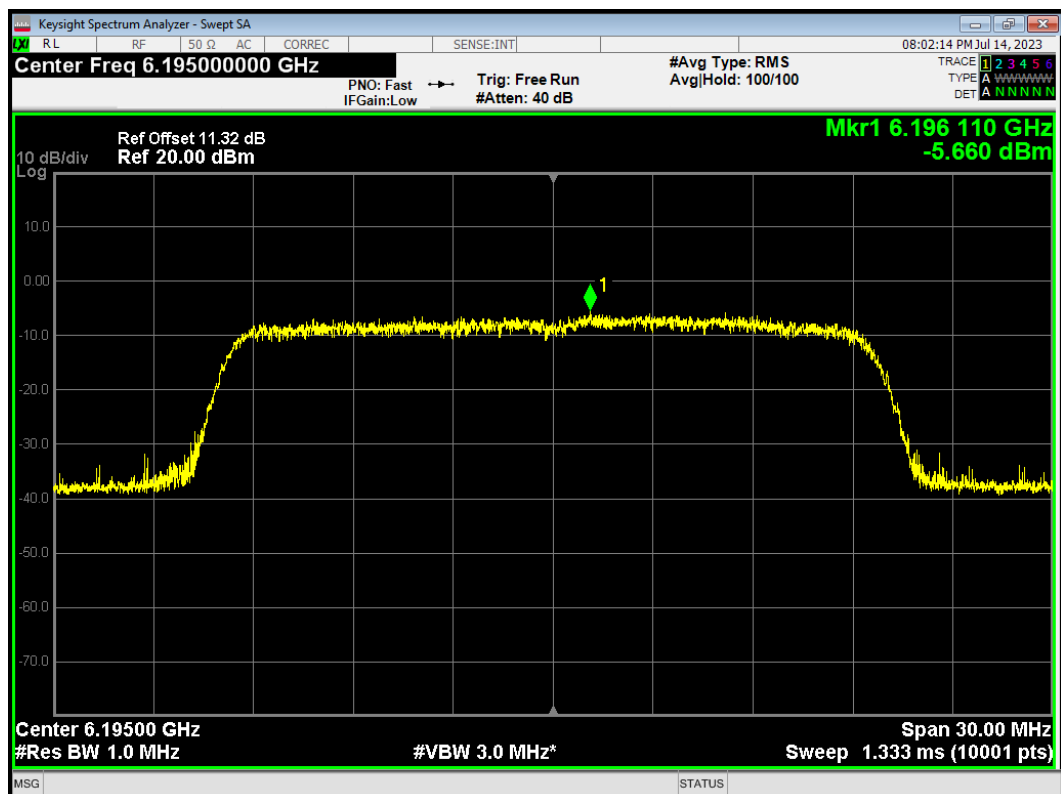
SISO Antenna 1

U-NII-5

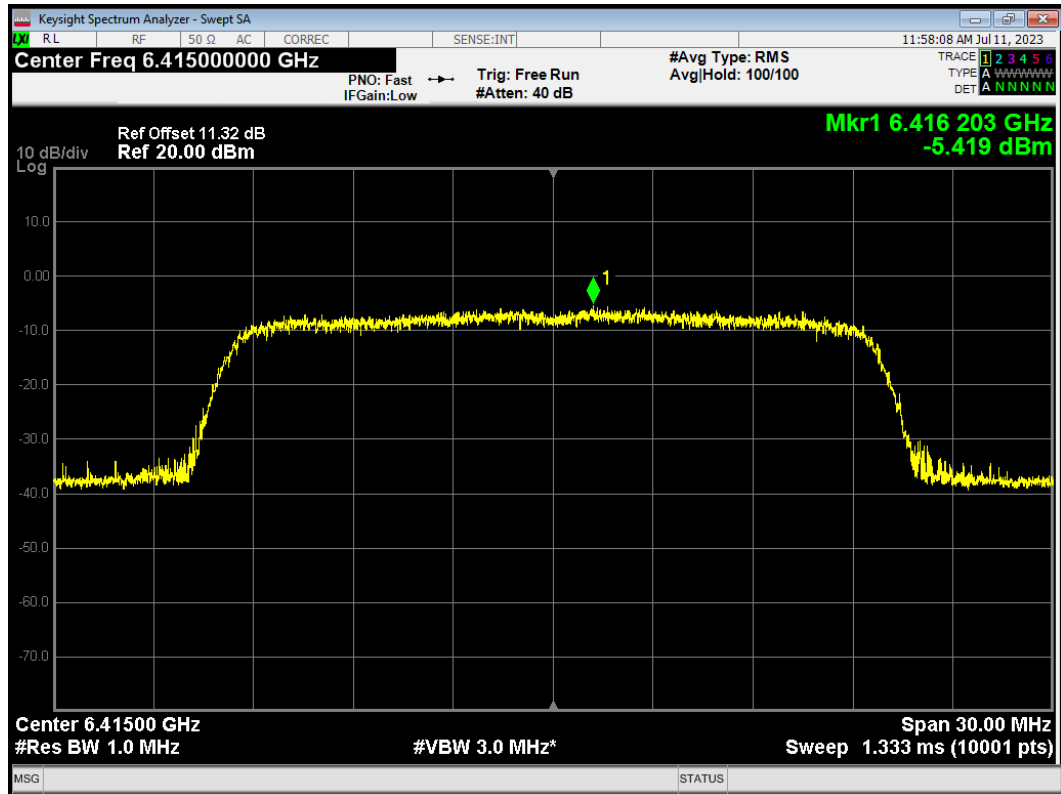
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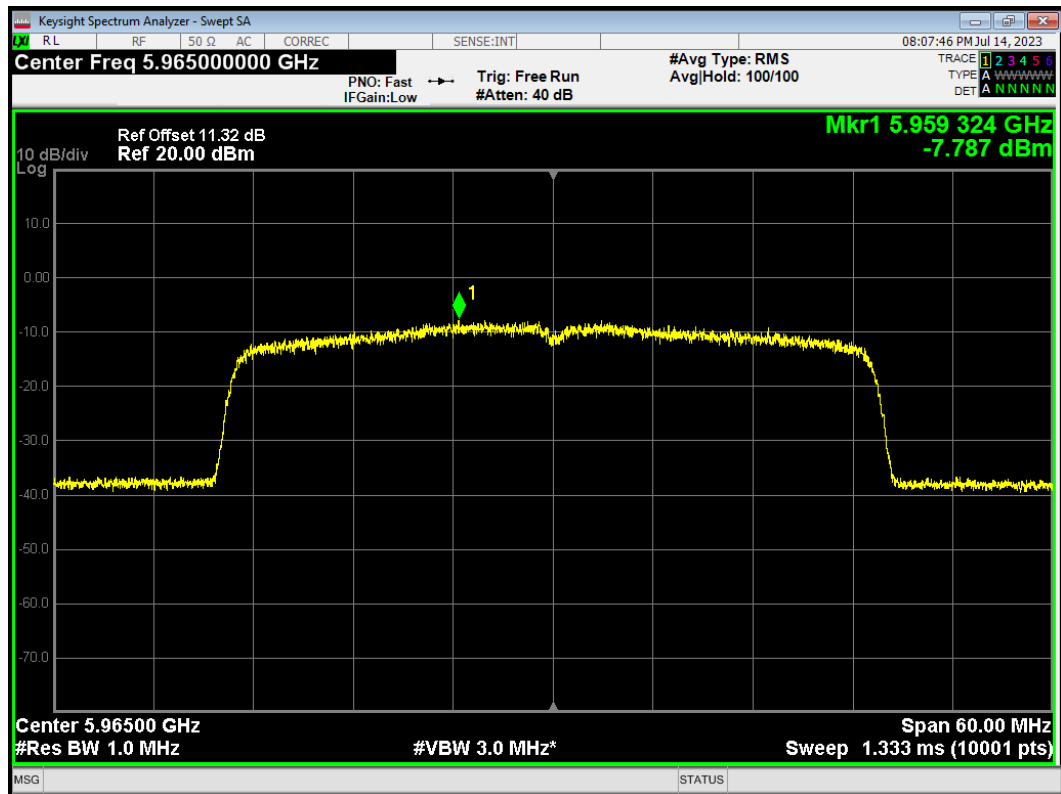
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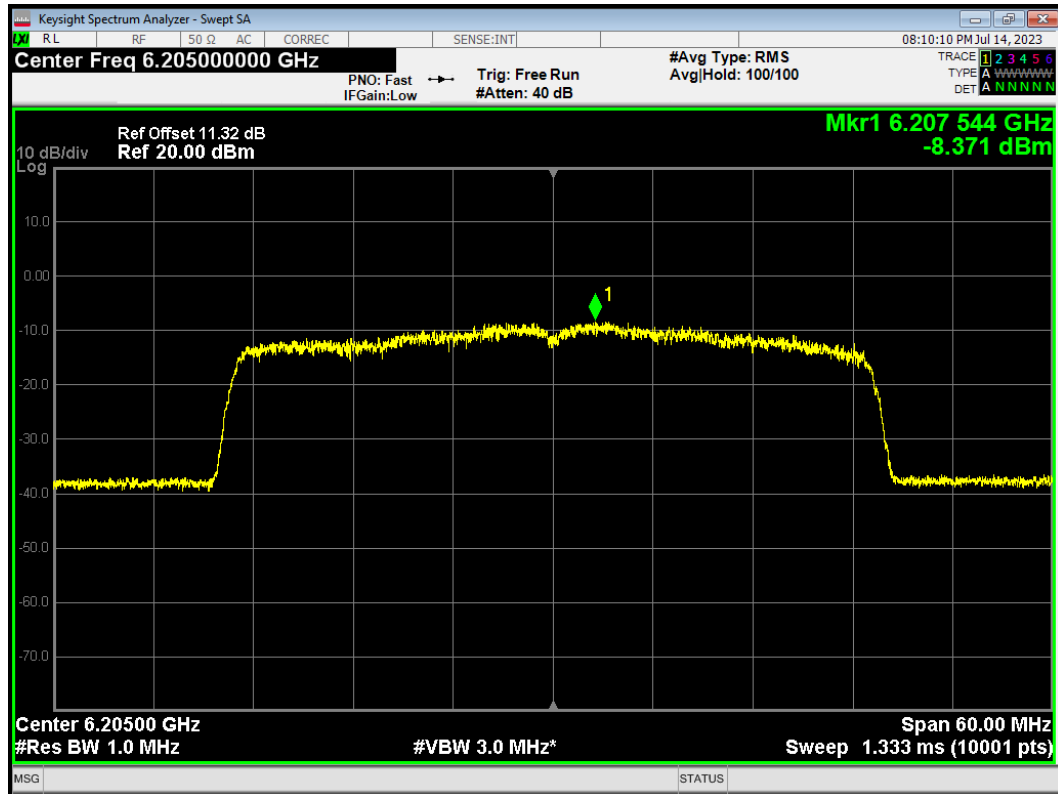
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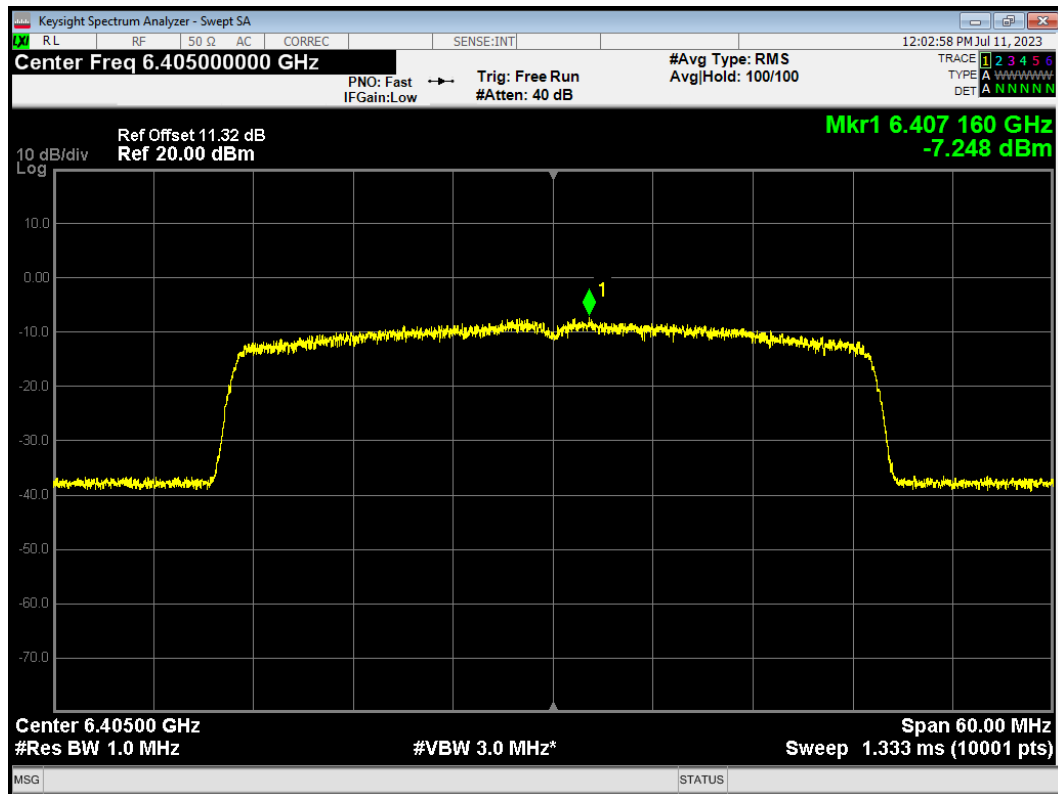
PSD 802.11ax HE40 5965MHz



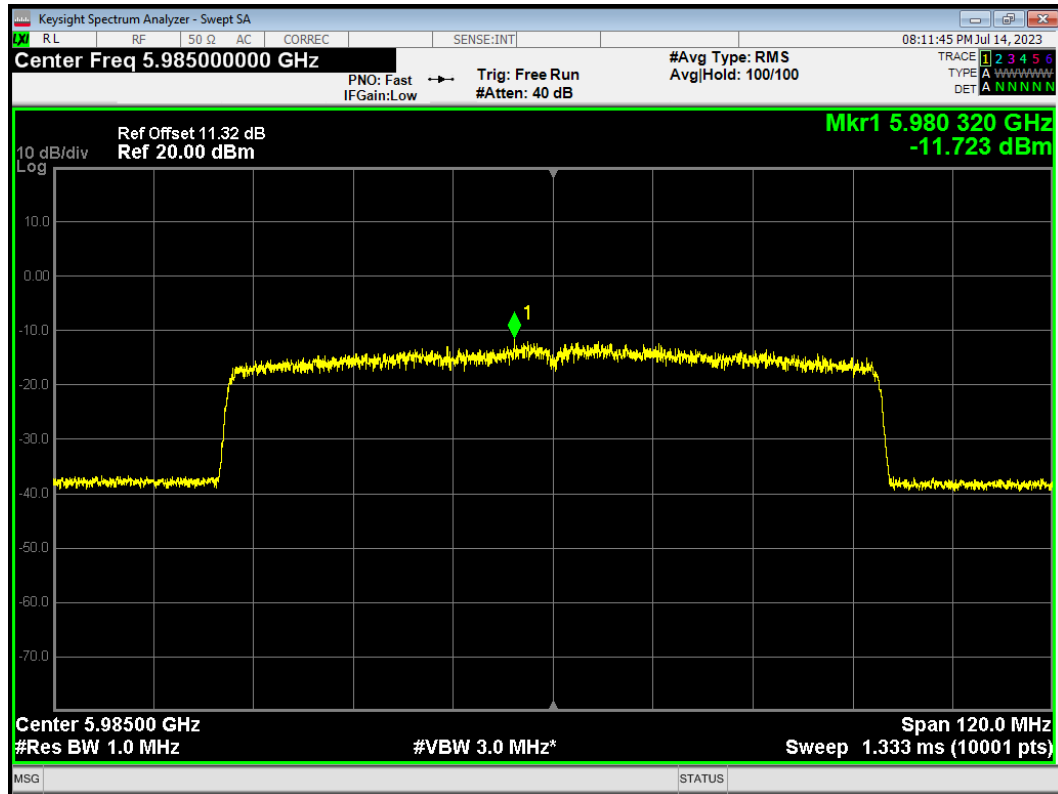
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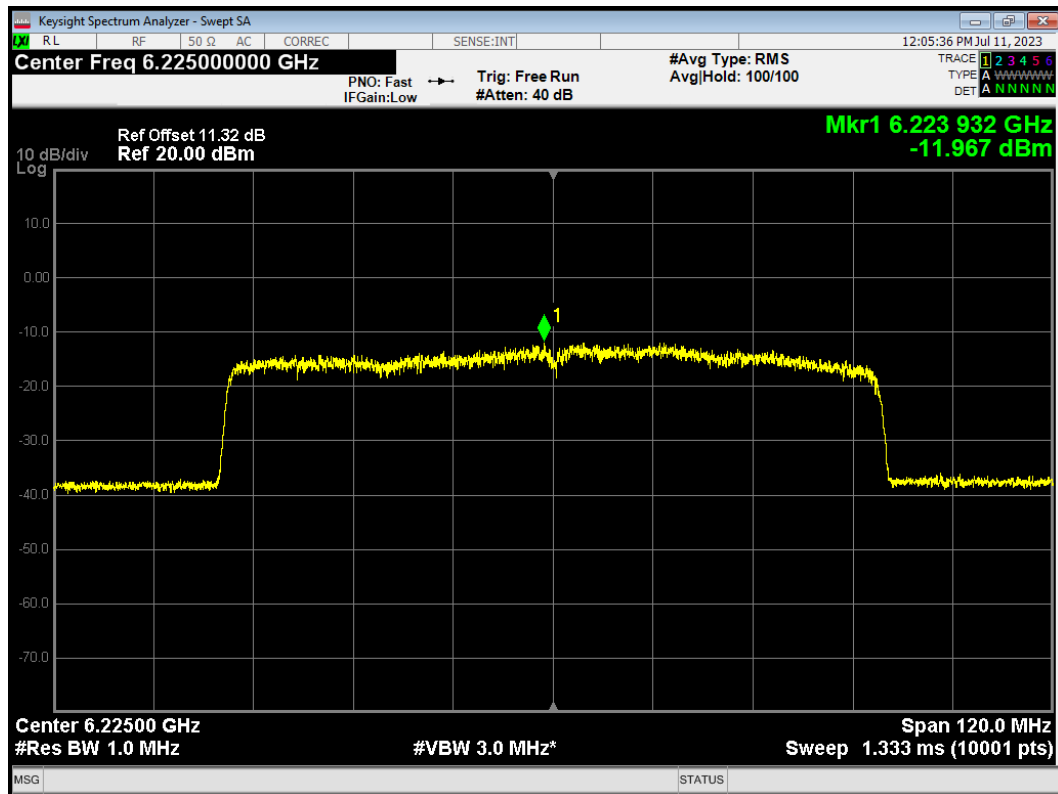
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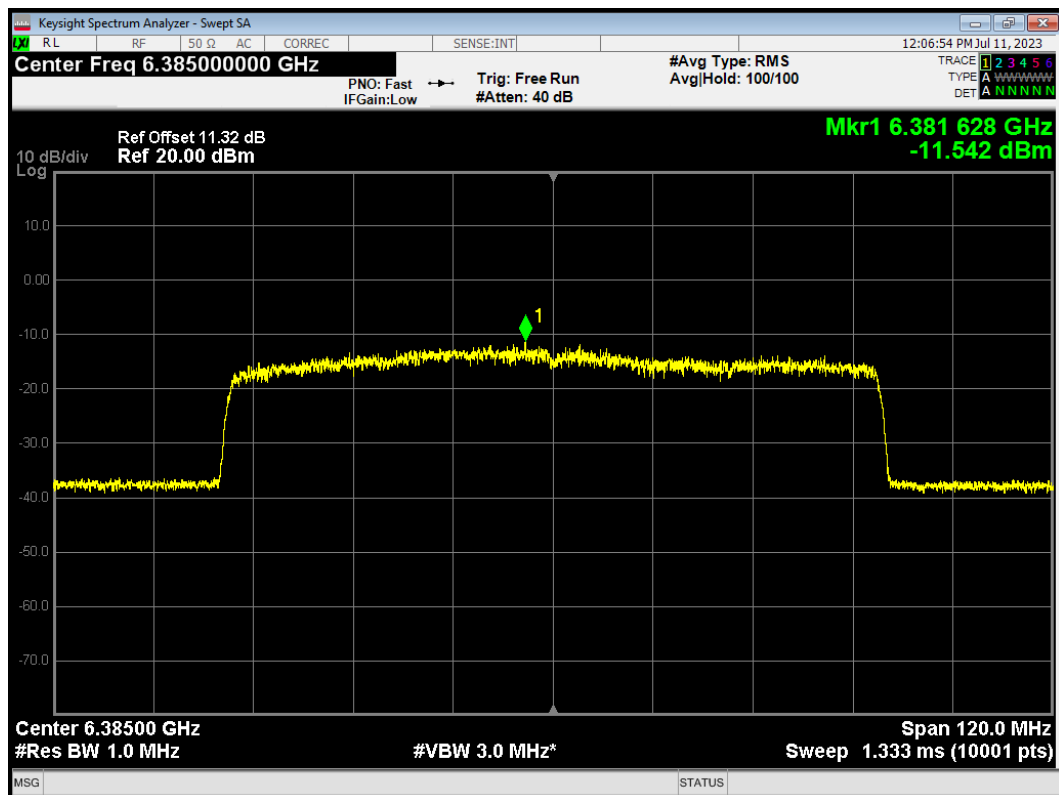
PSD 802.11ax HE80 5985MHz



PSD 802.11ax HE80 6225MHz

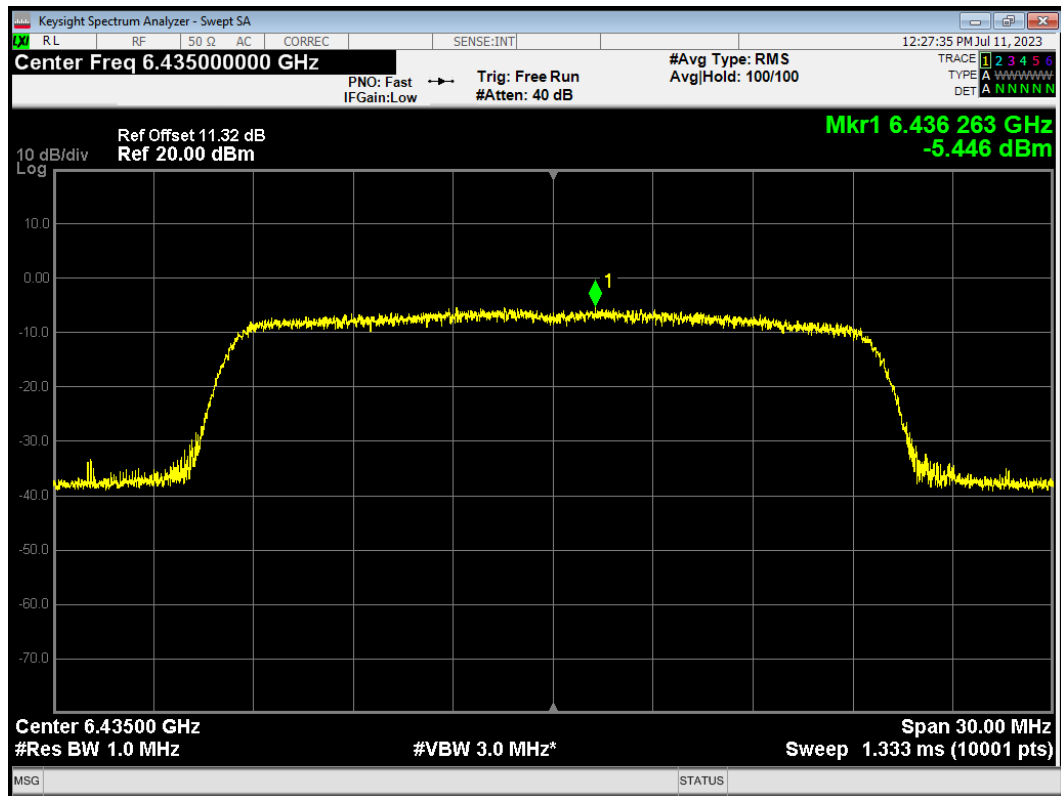


PSD 802.11ax HE80 6385MHz

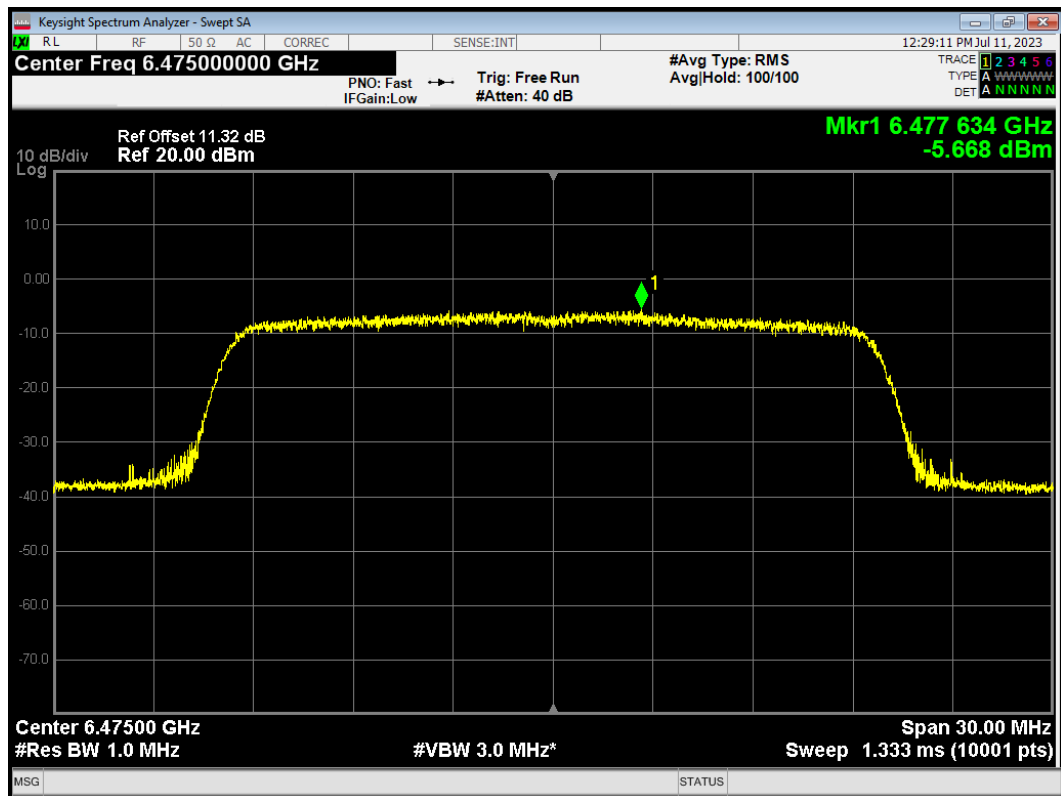


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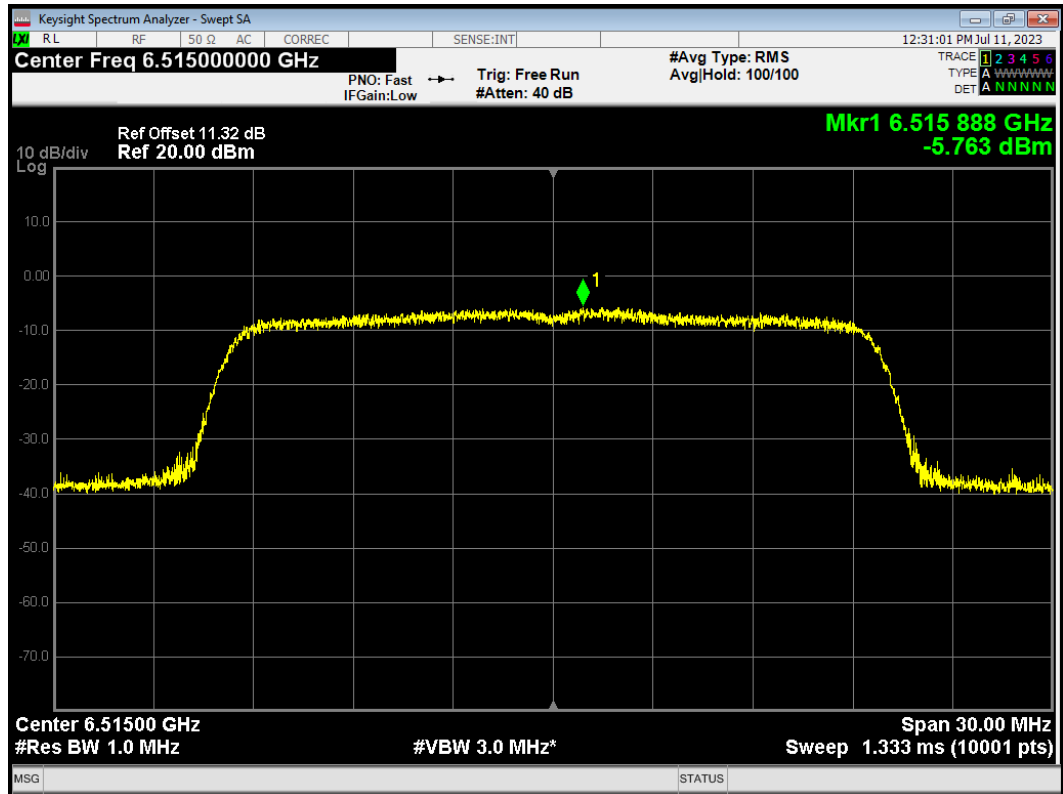
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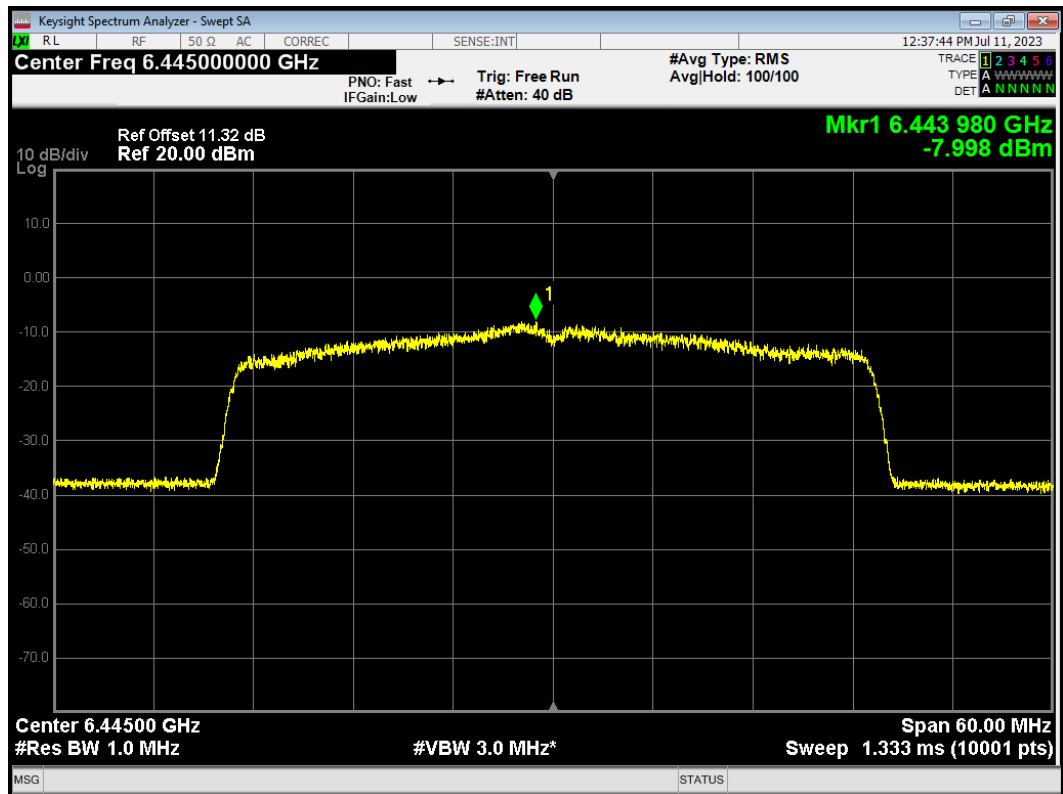
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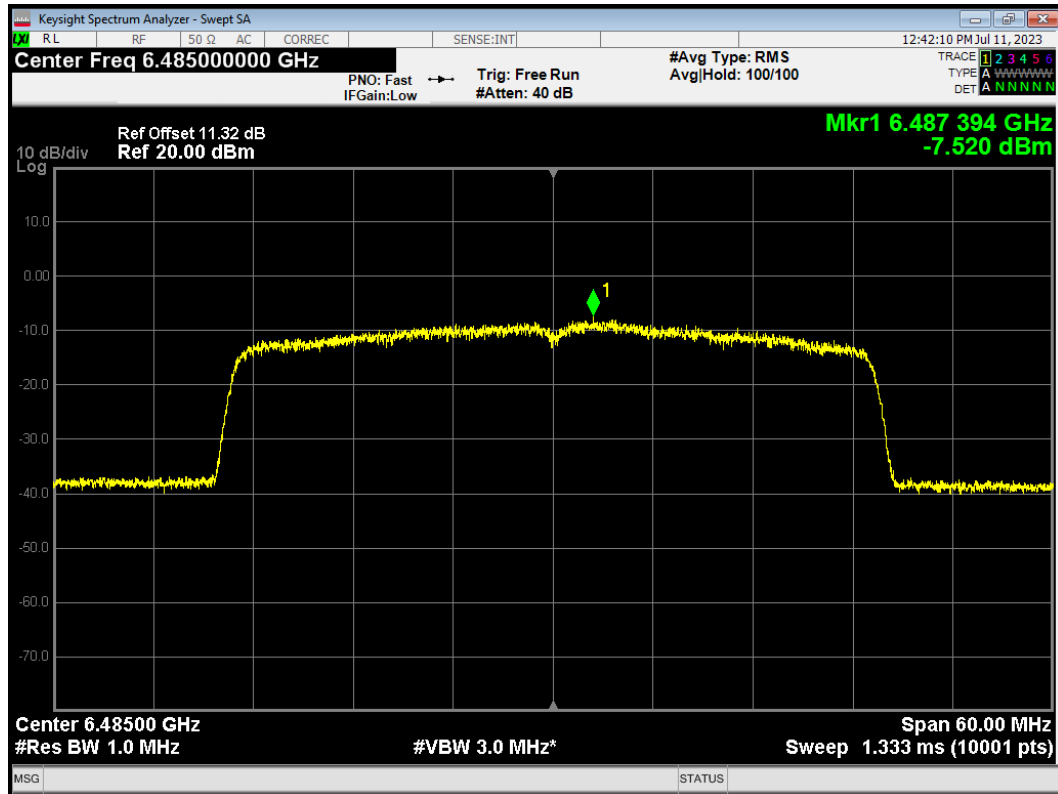
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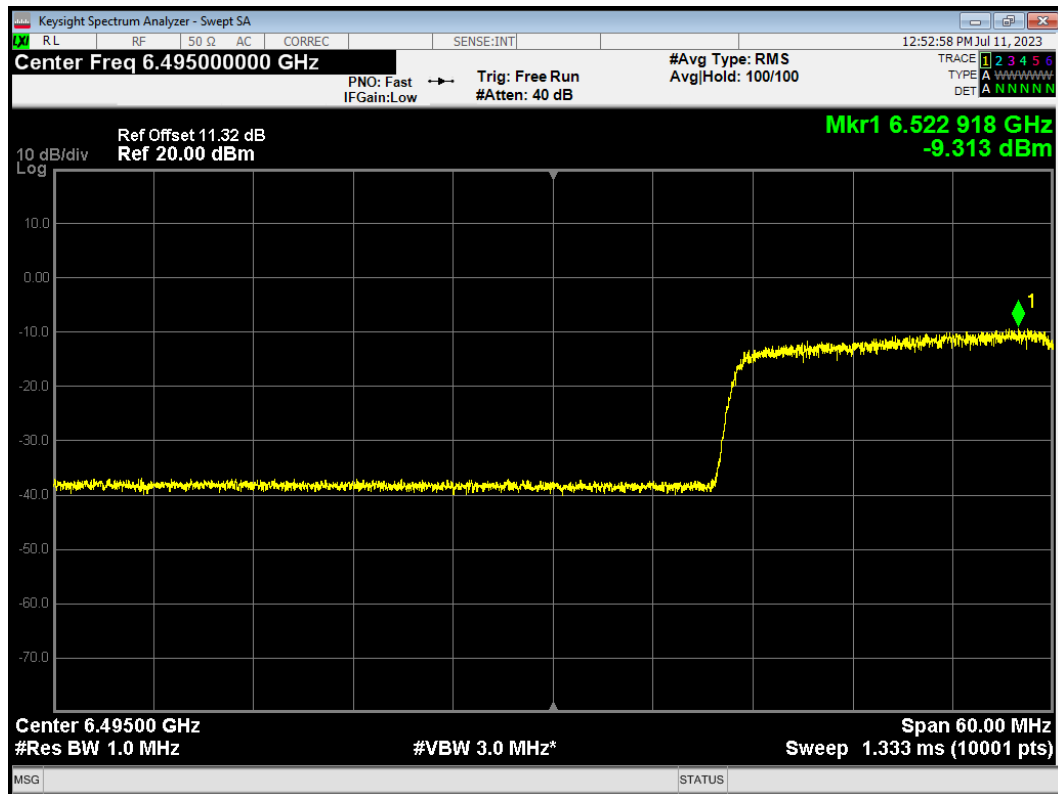
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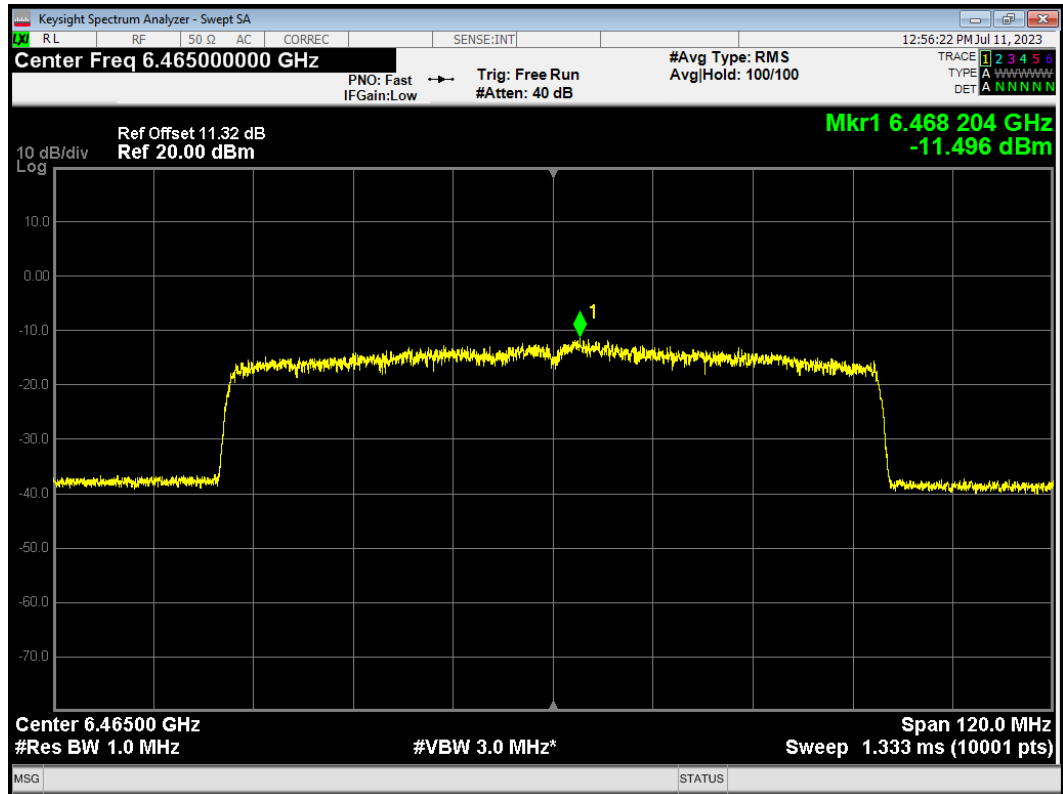
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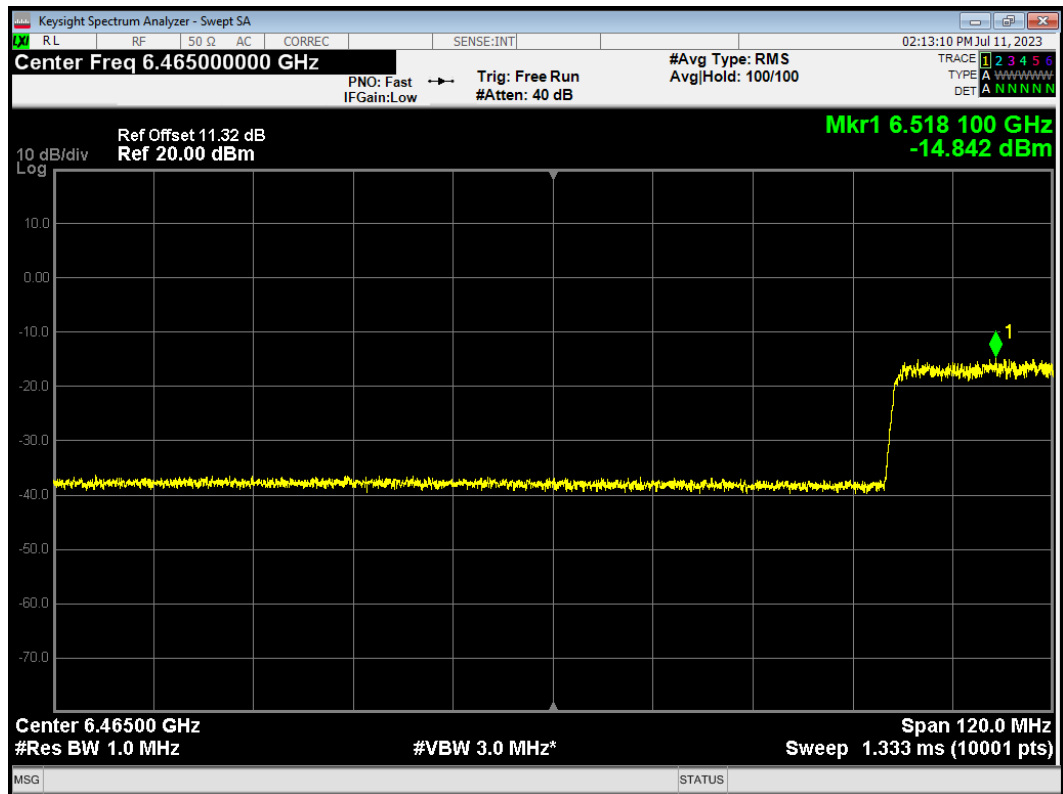
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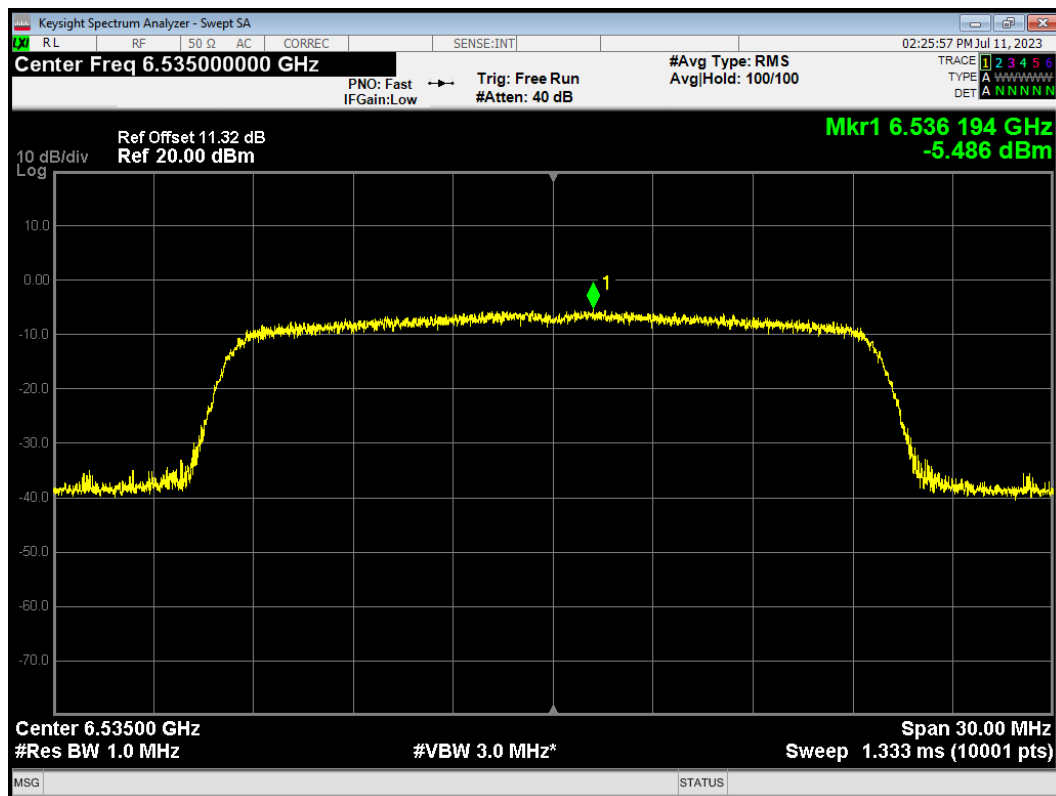


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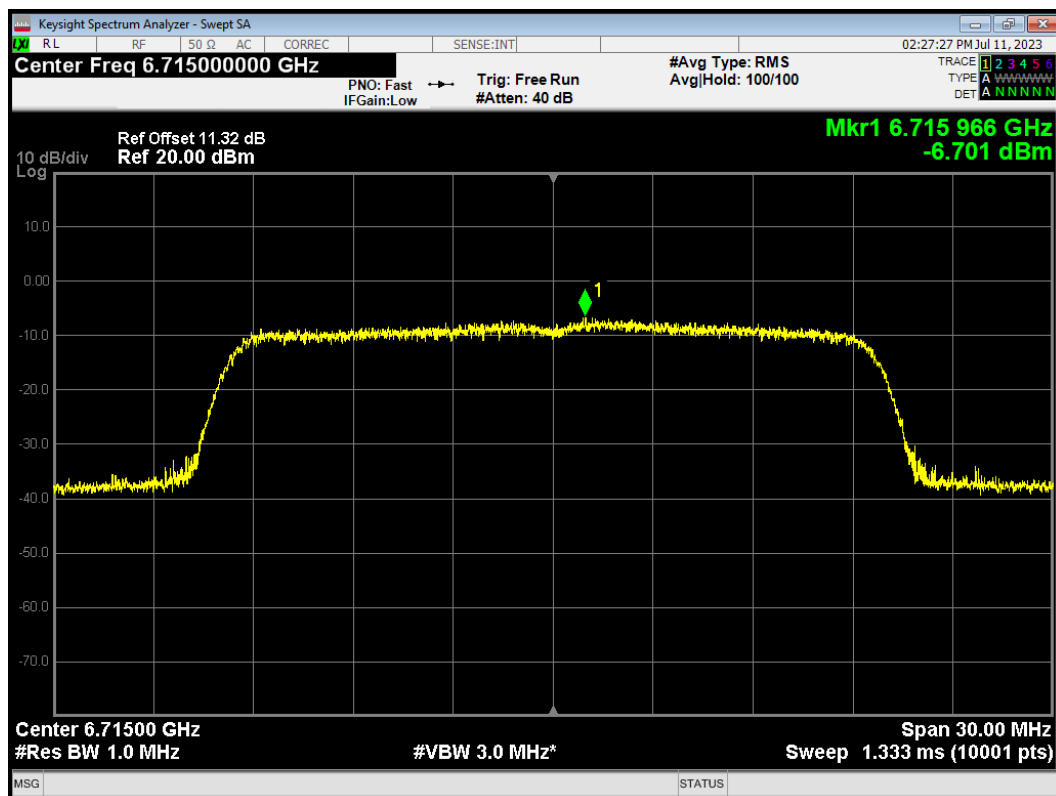


U-NII-7

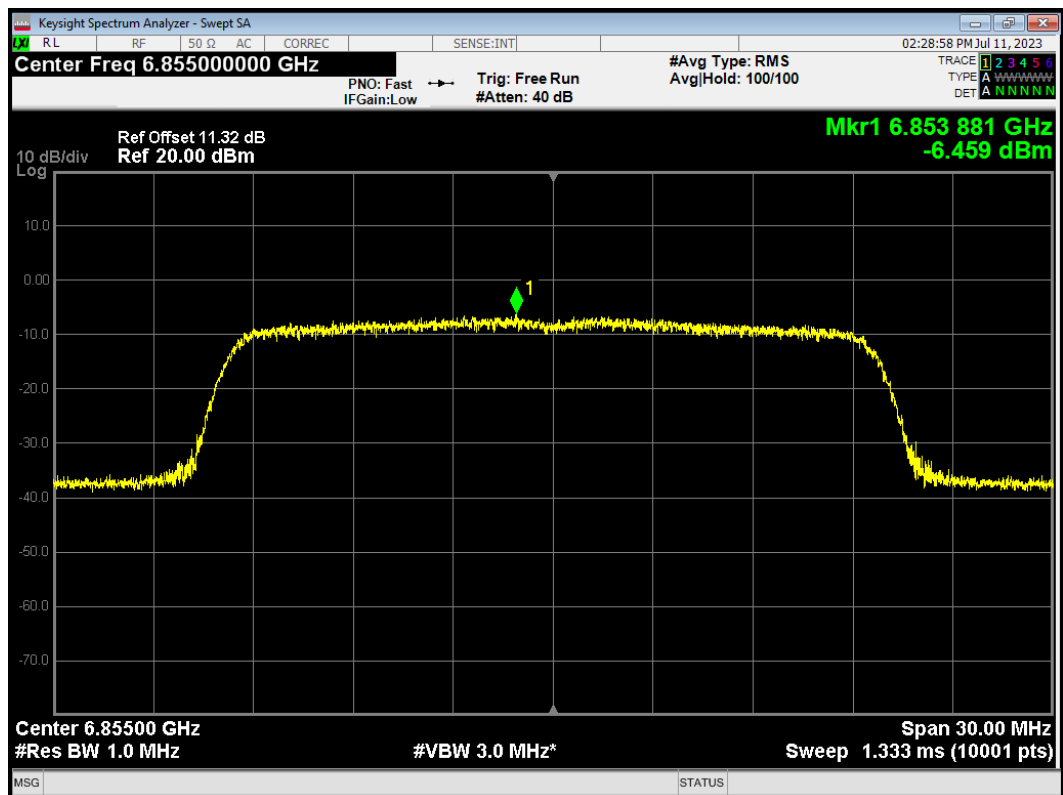
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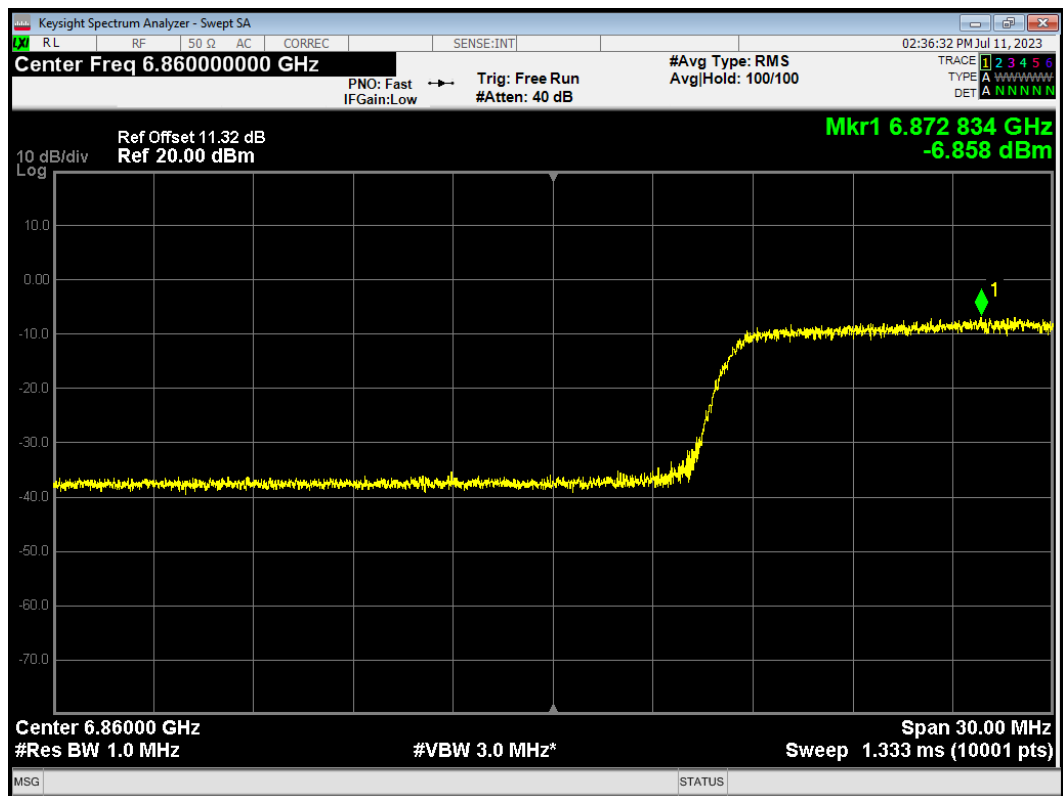
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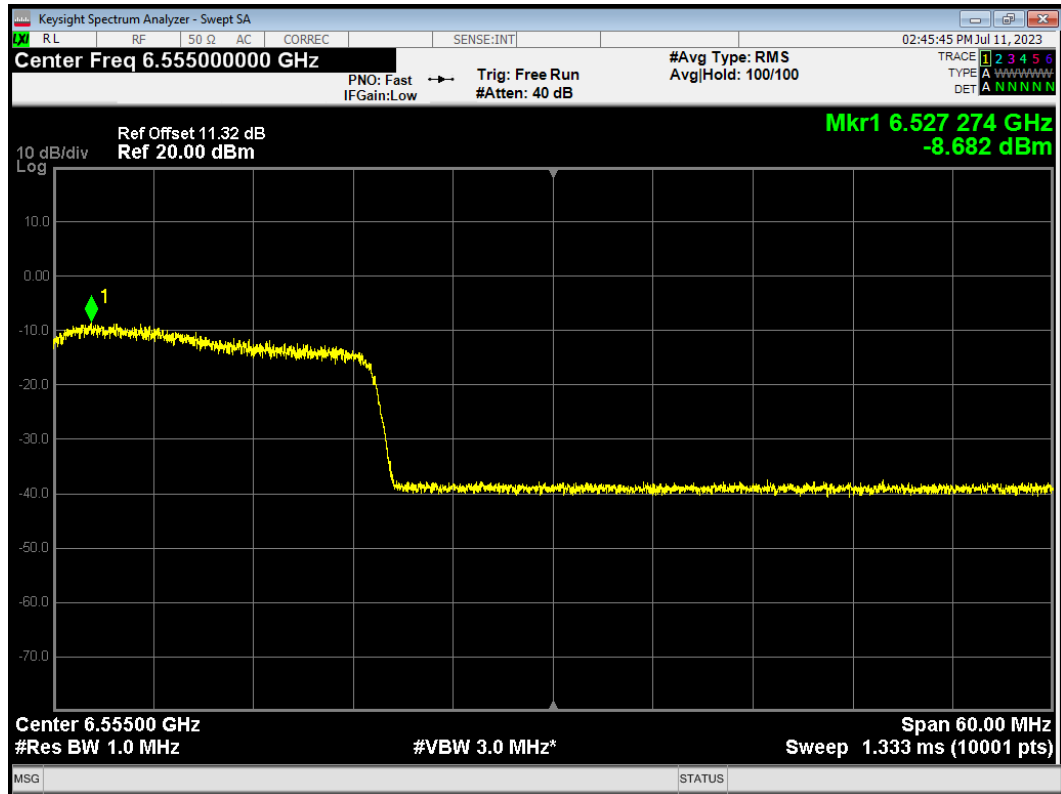
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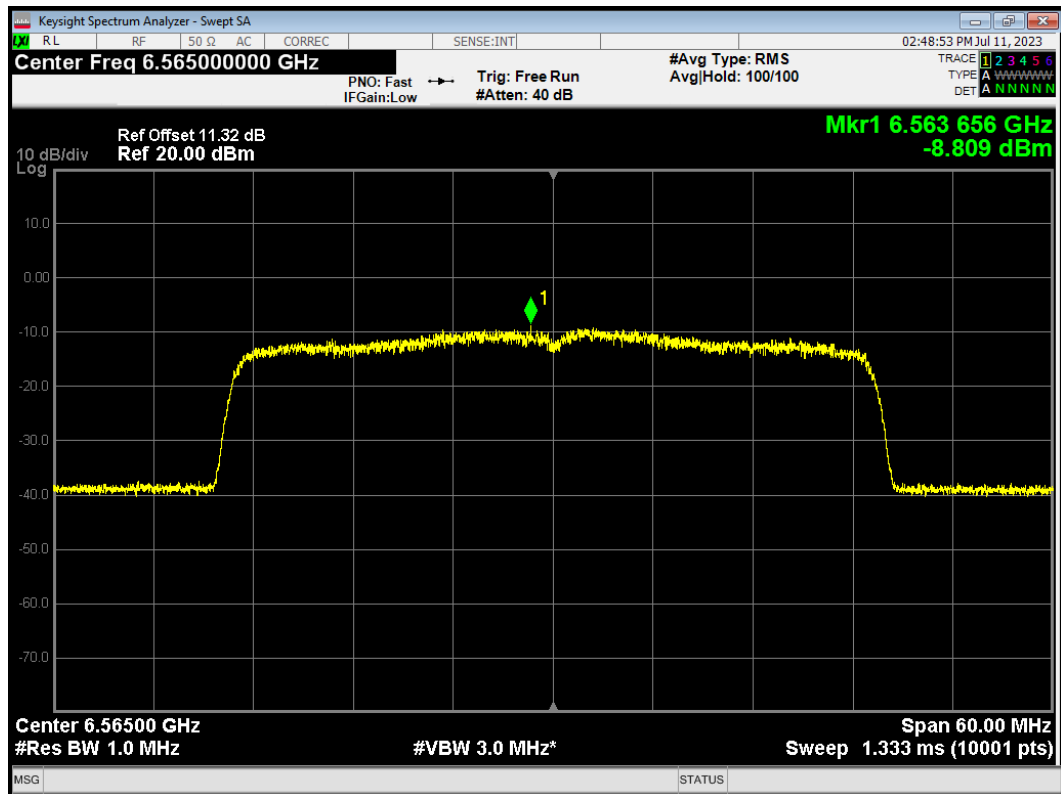
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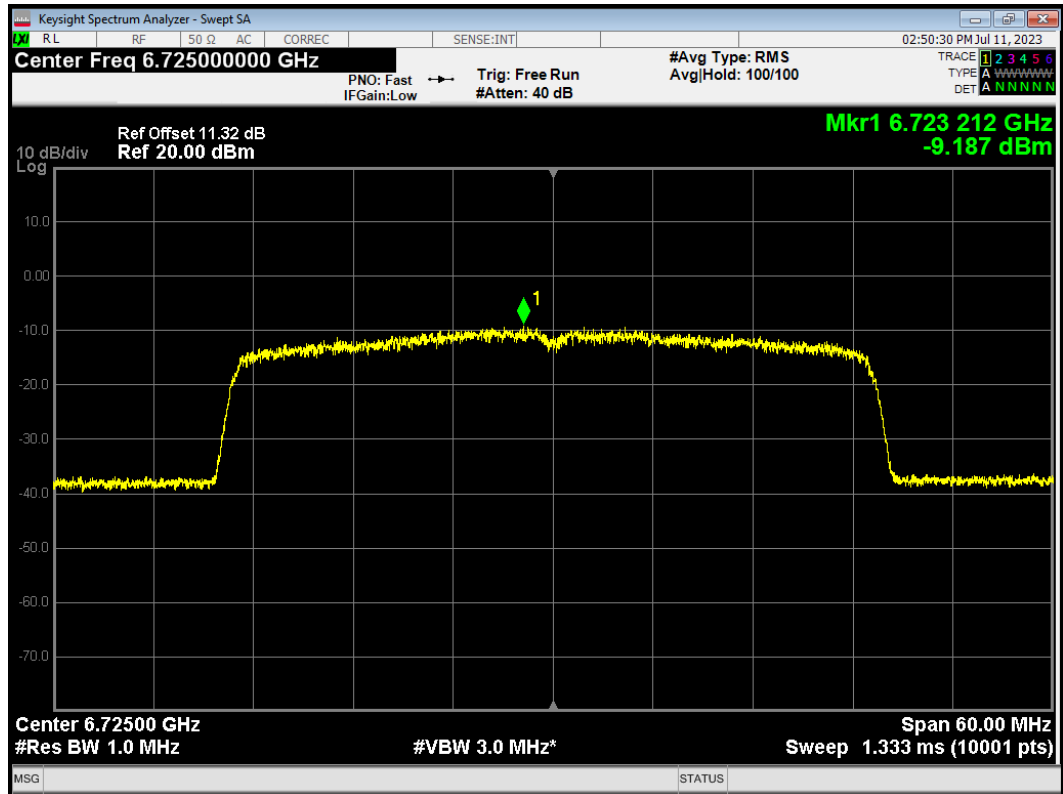
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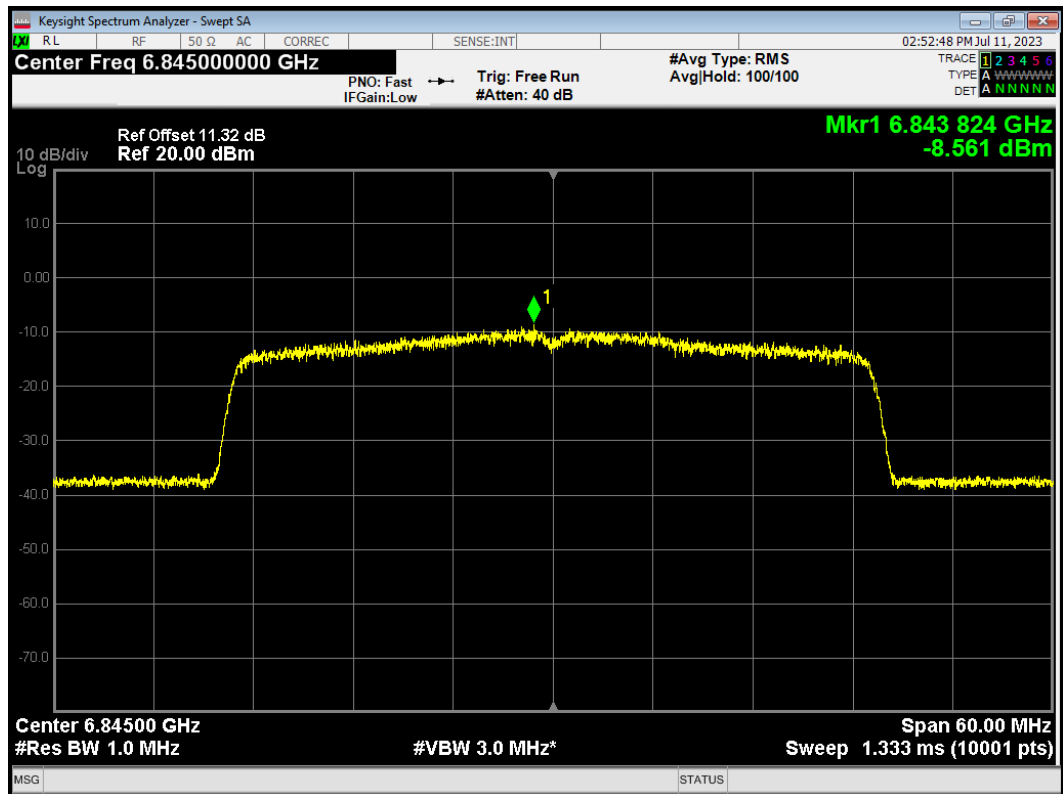
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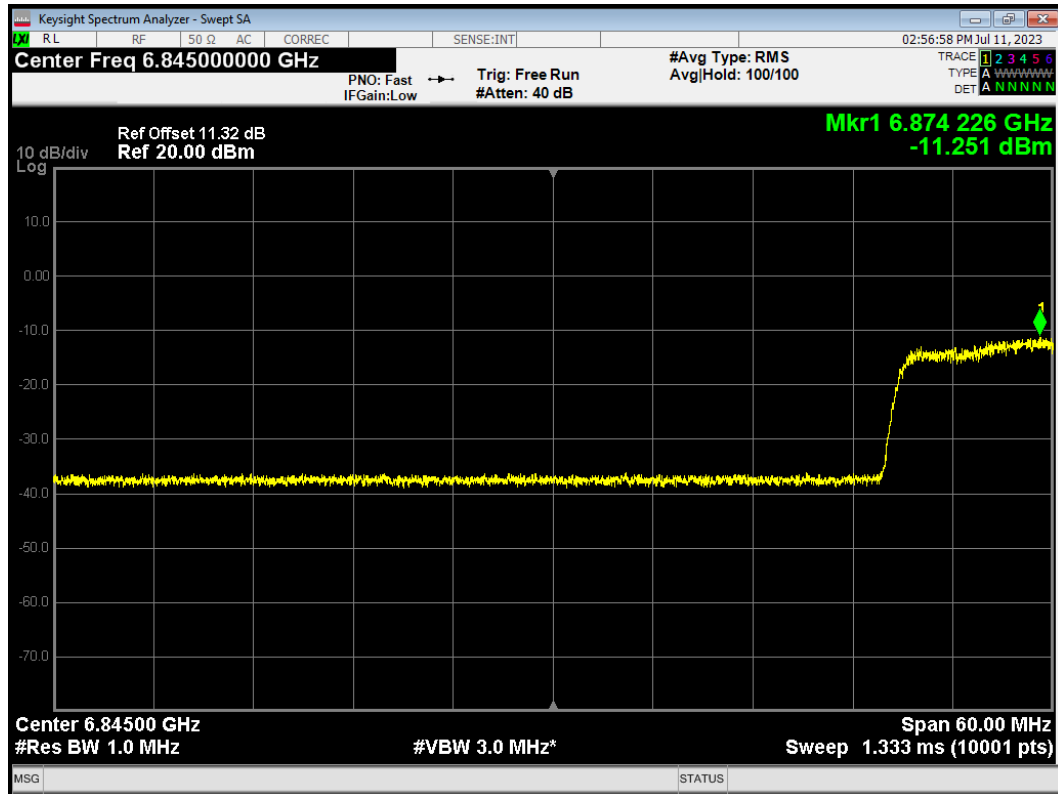
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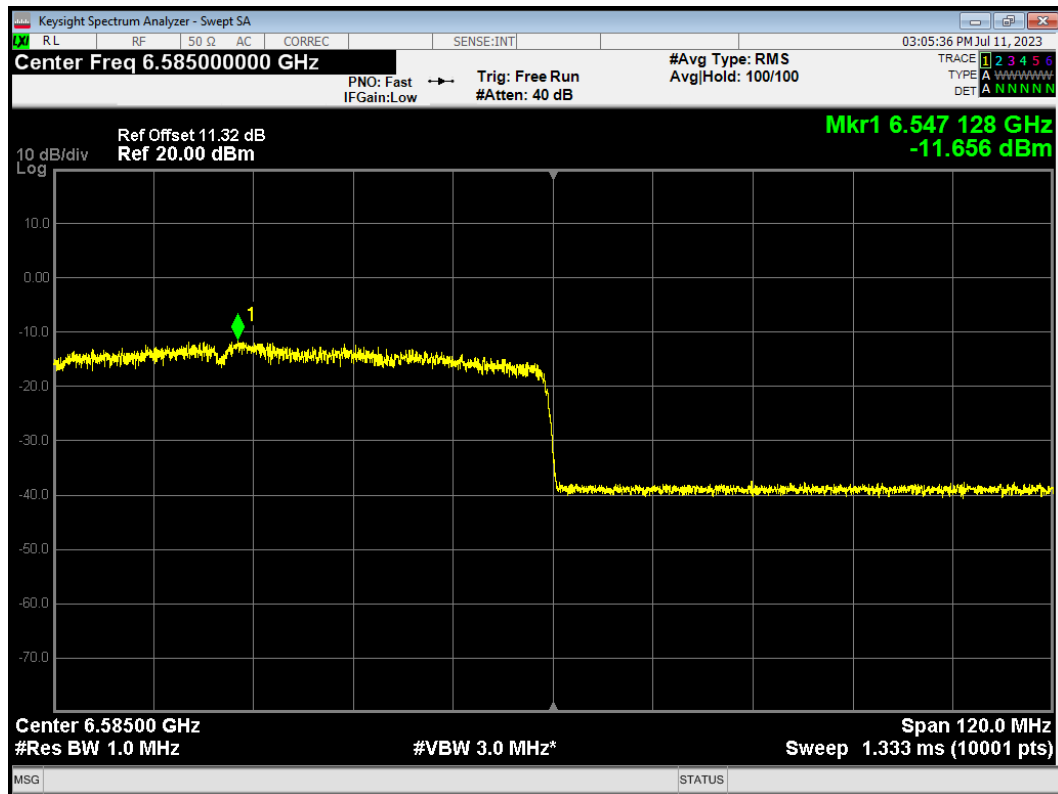
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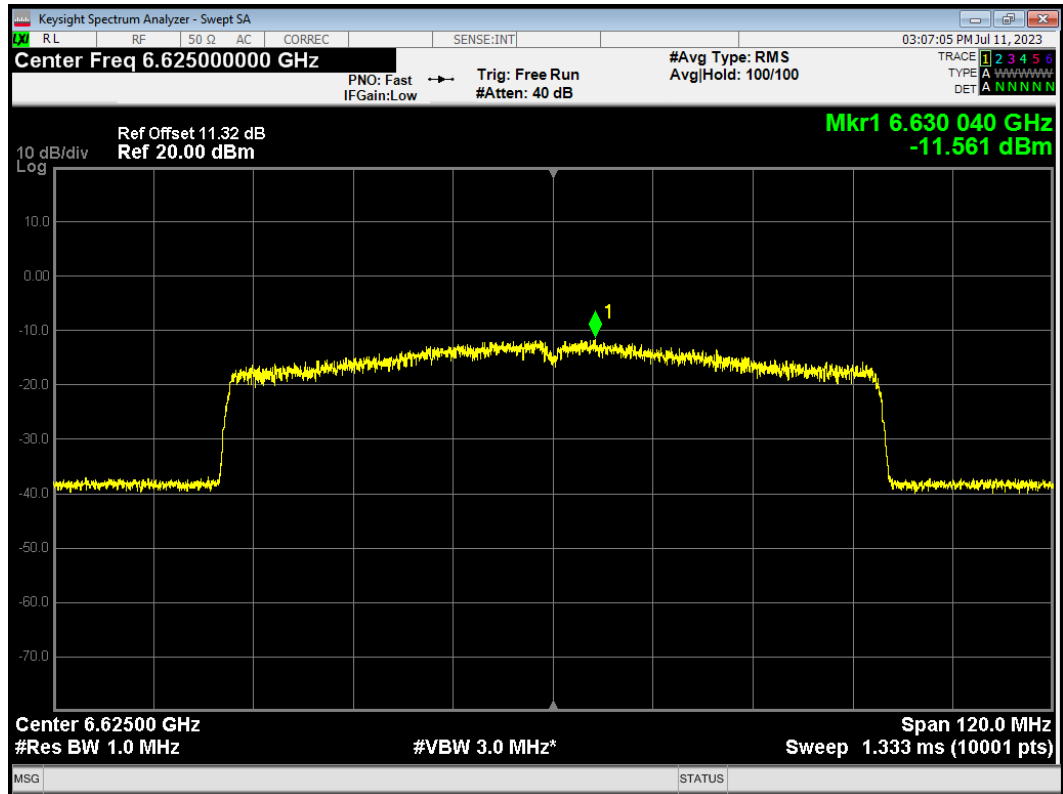
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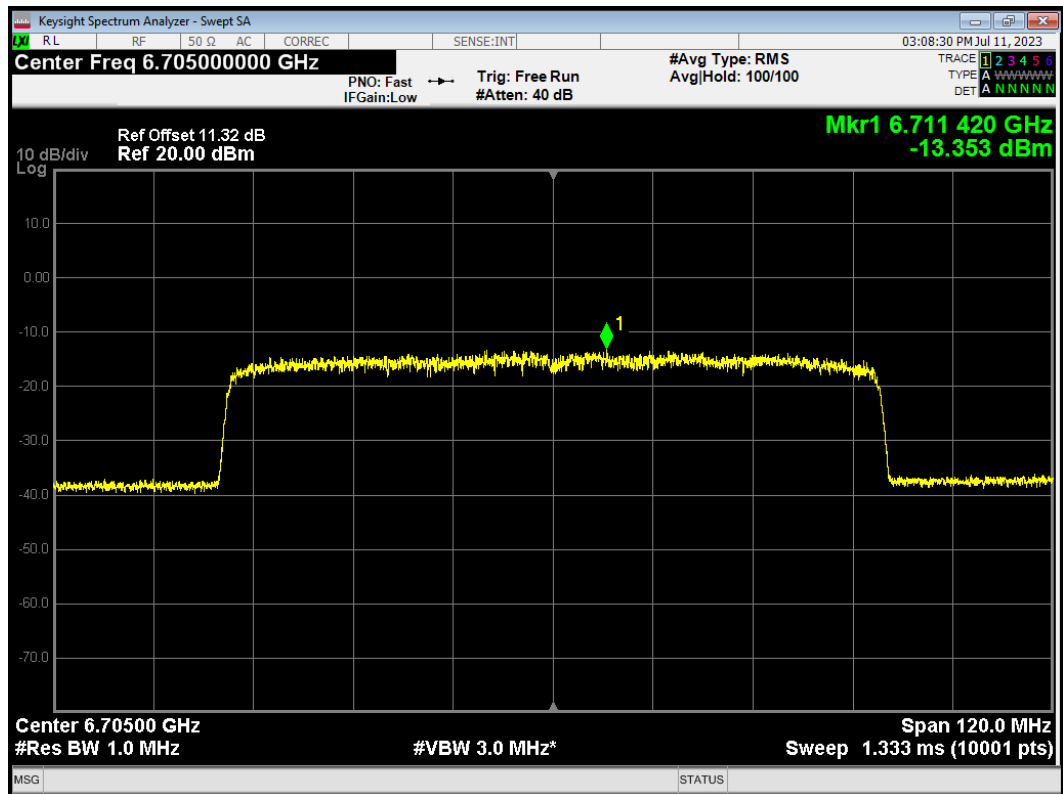
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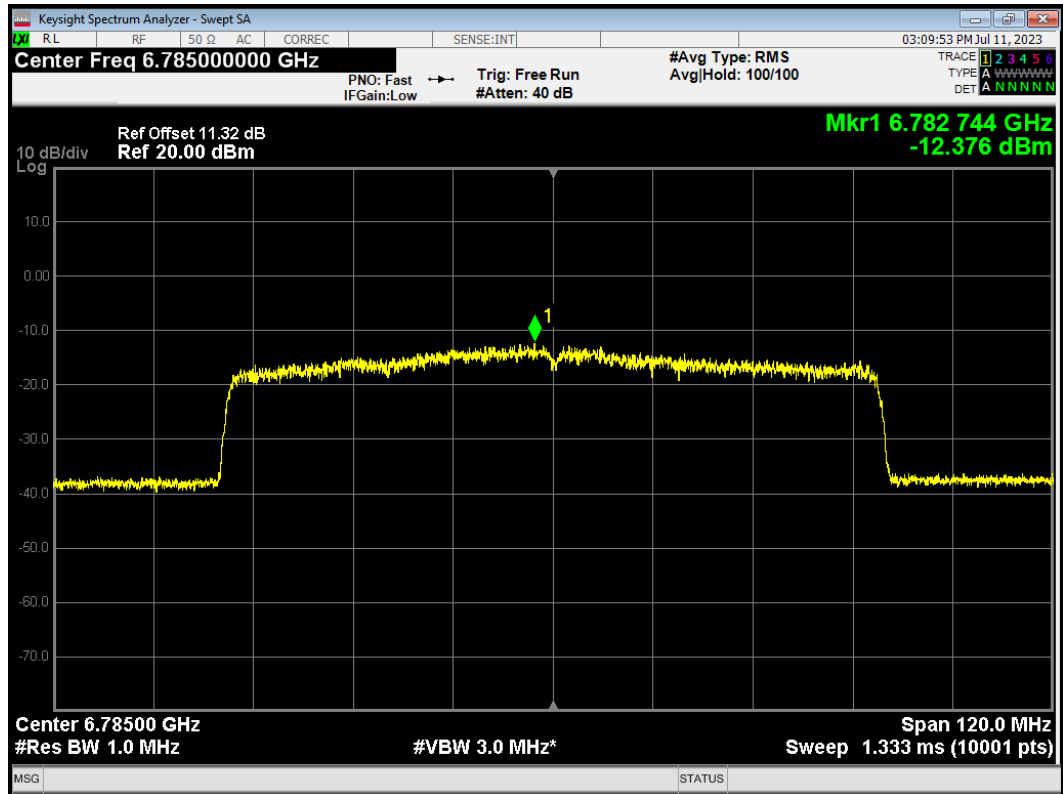
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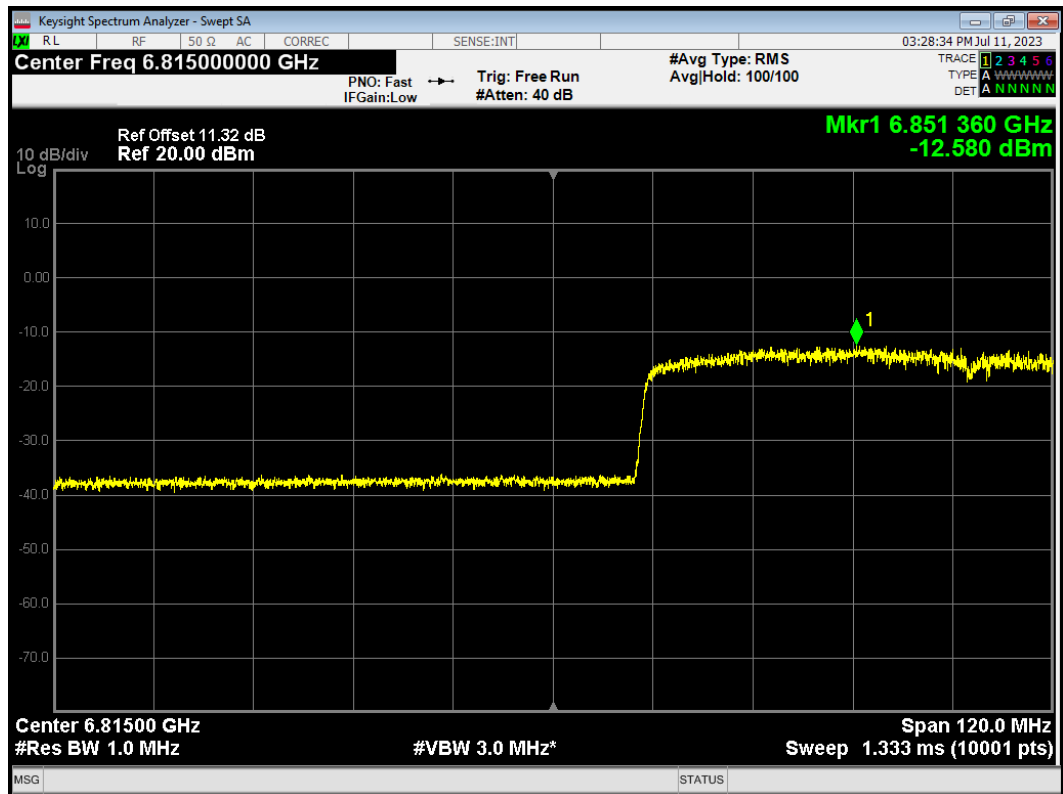
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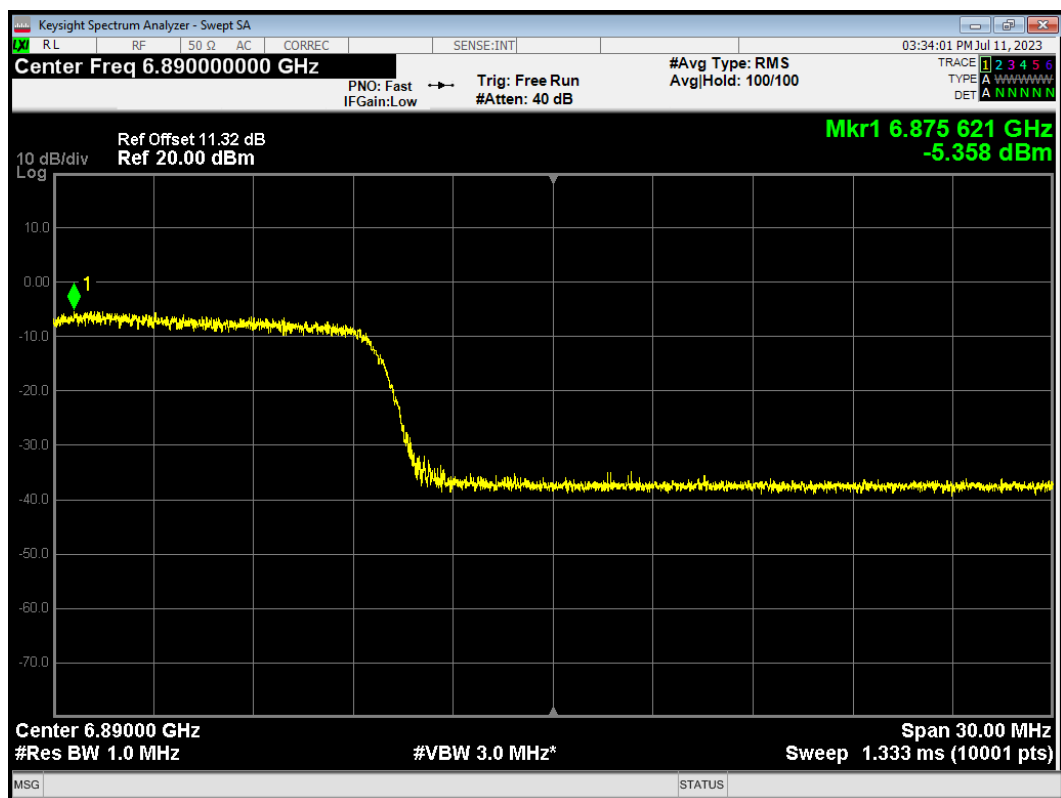


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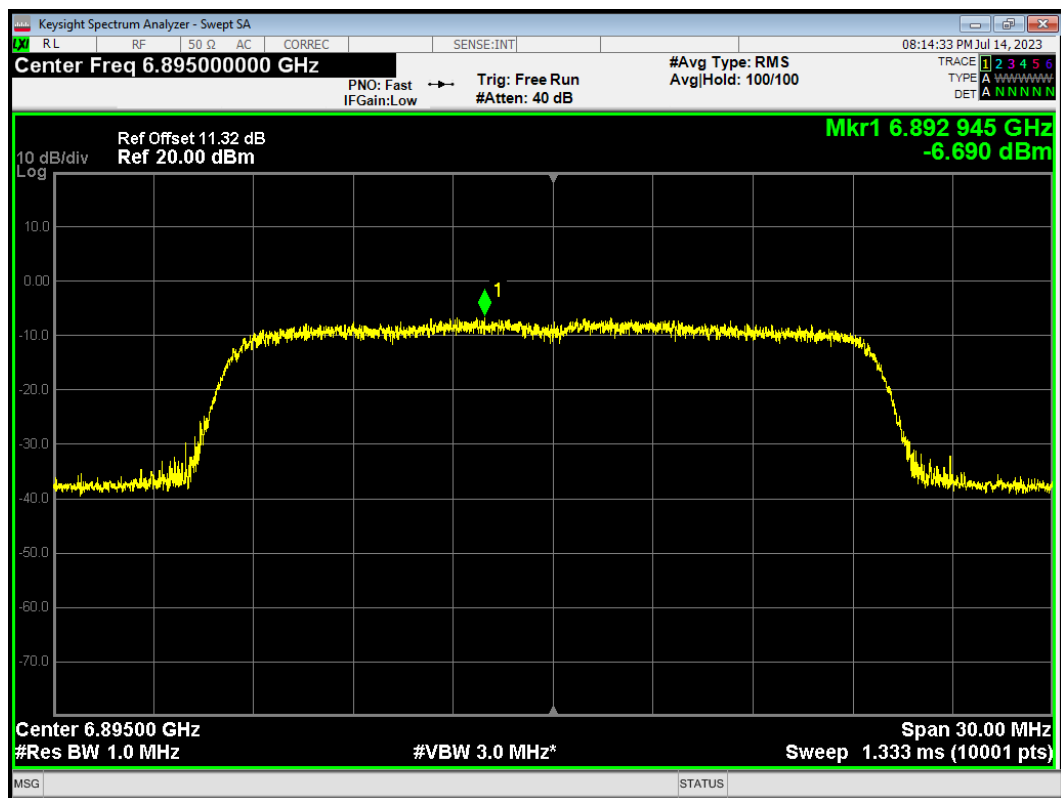


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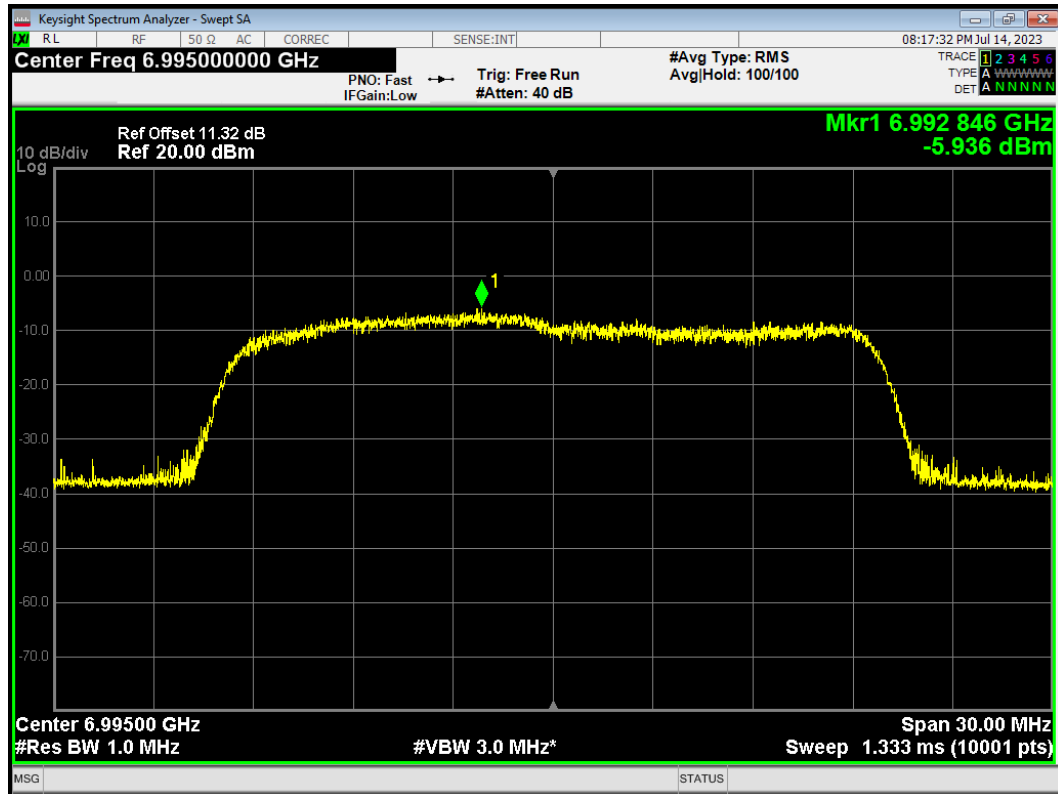
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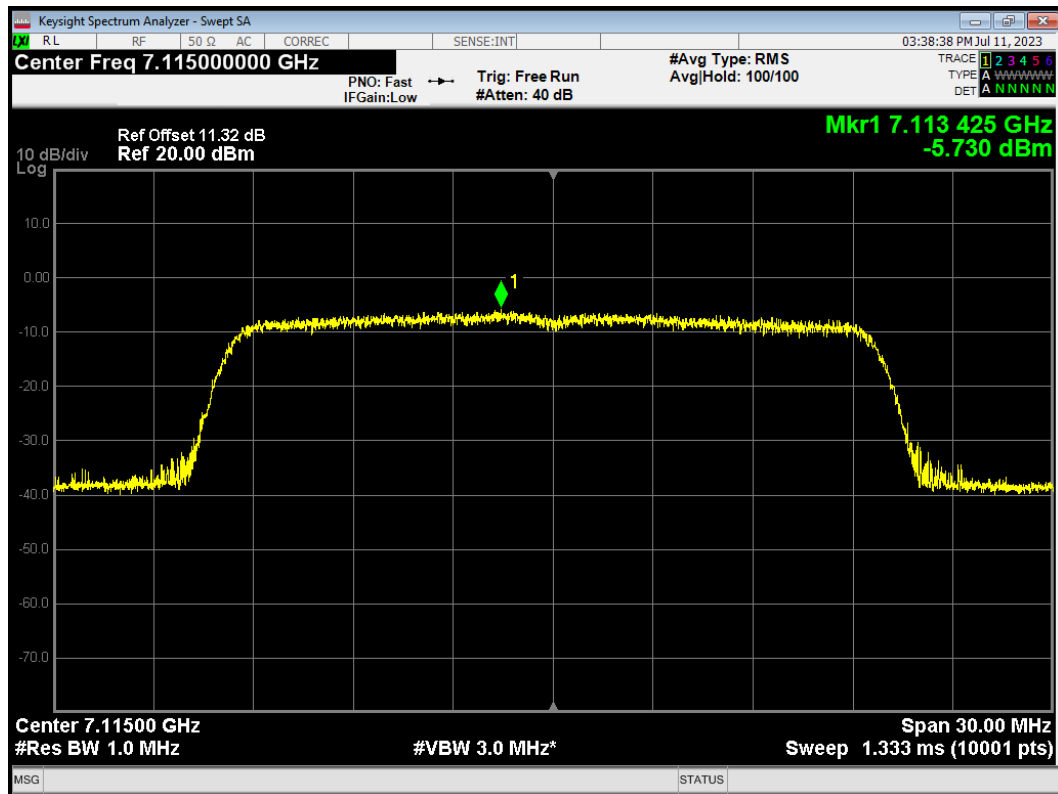
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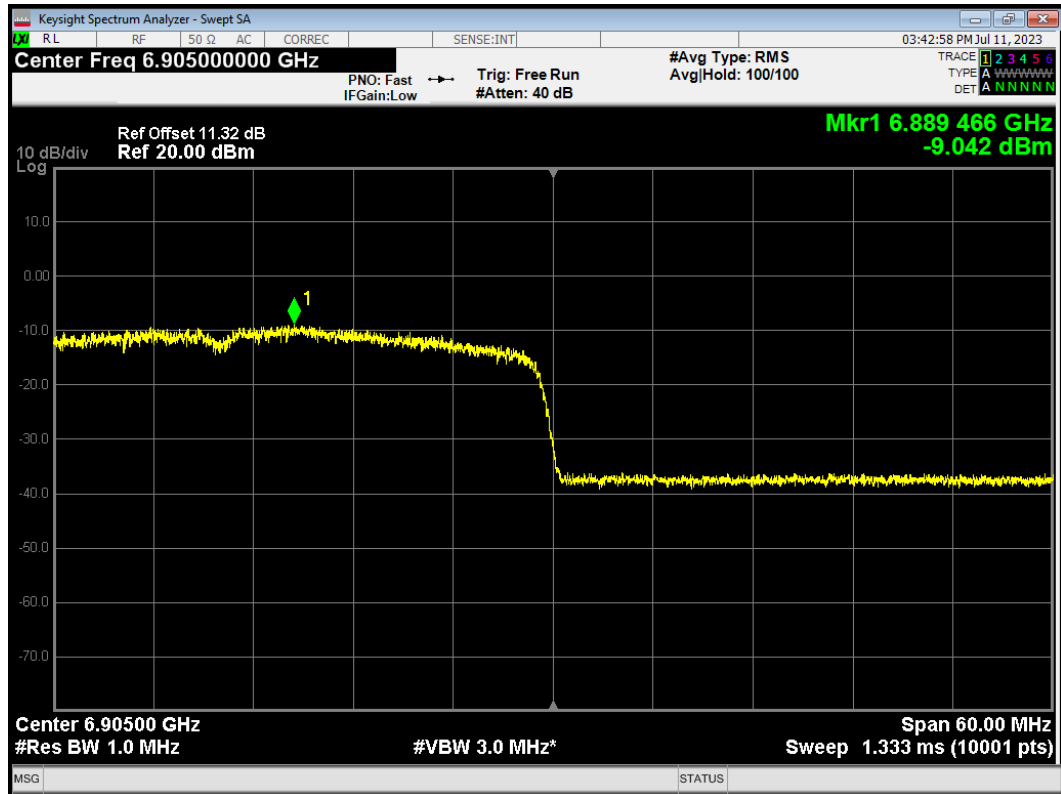
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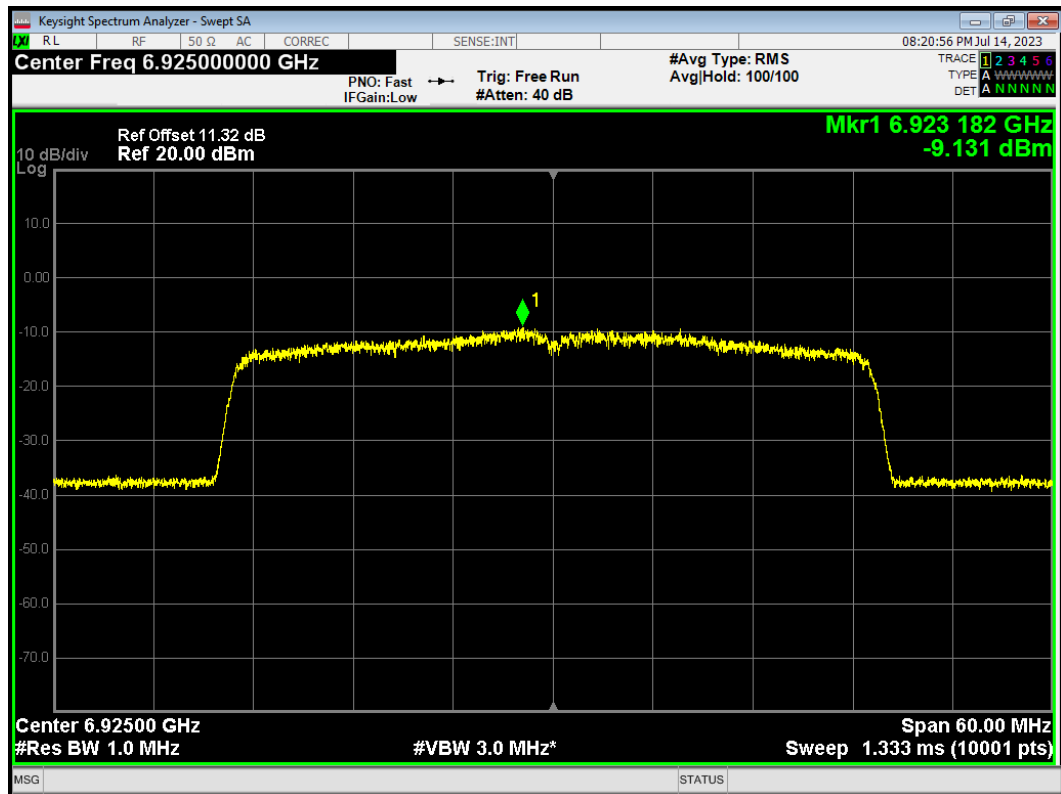
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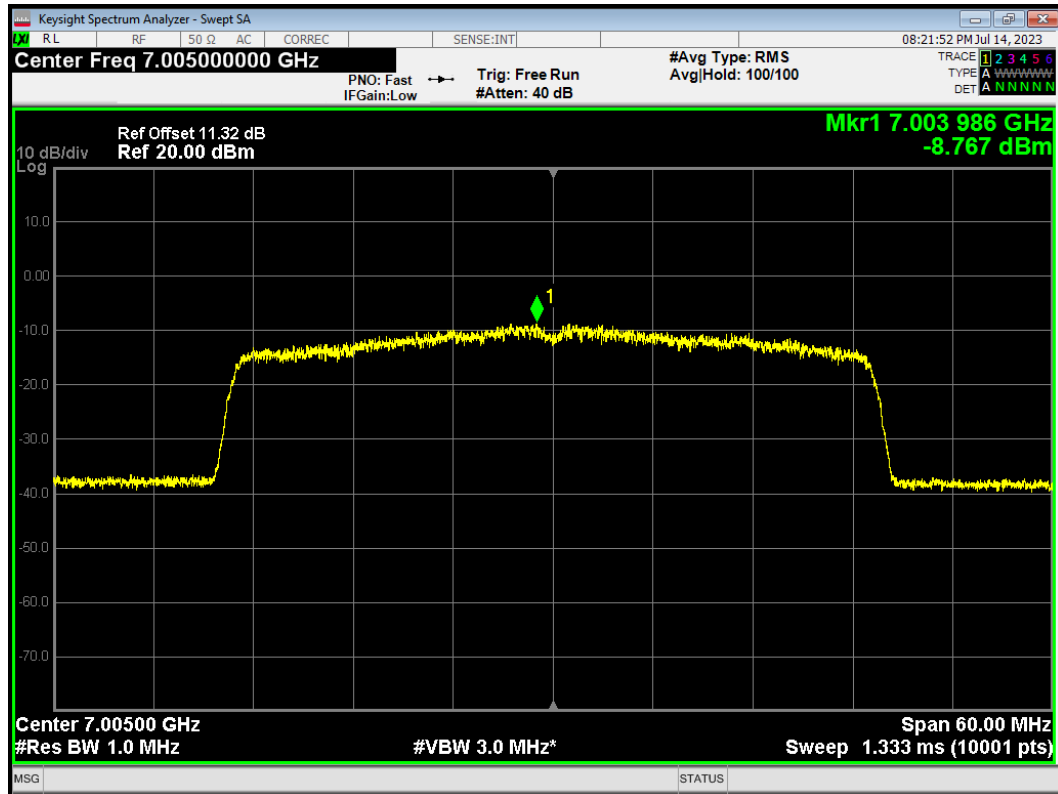
PSD 802.11ax HE40 6885MHz



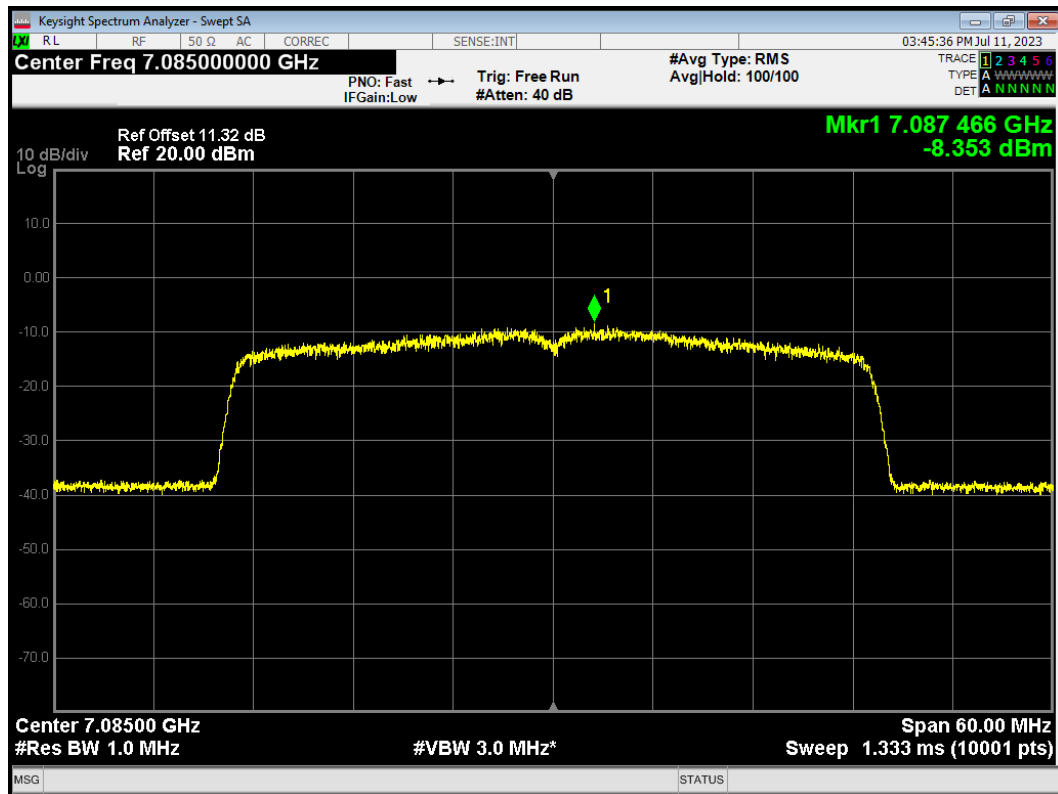
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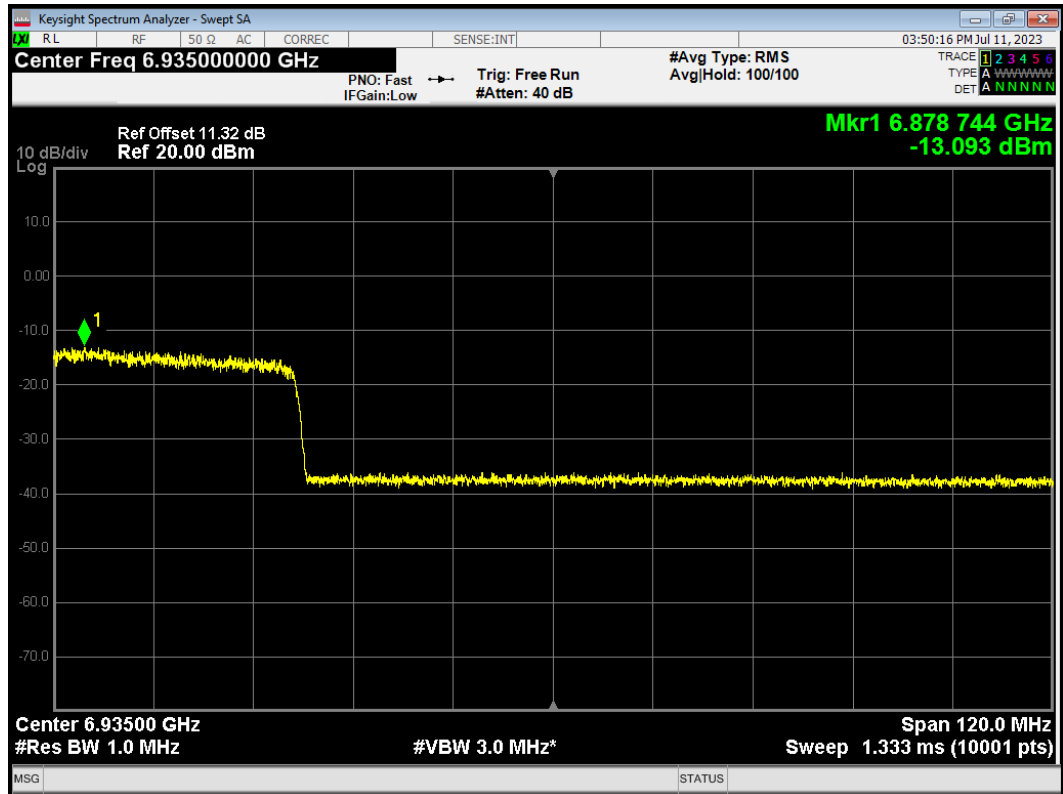
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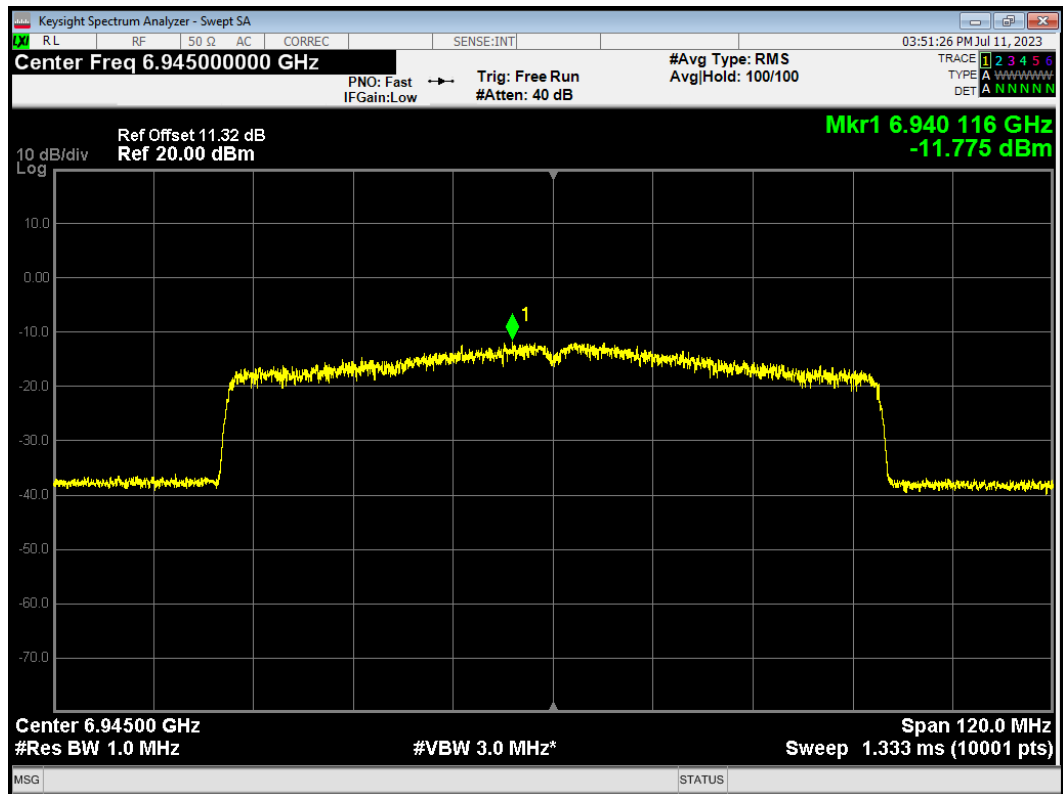
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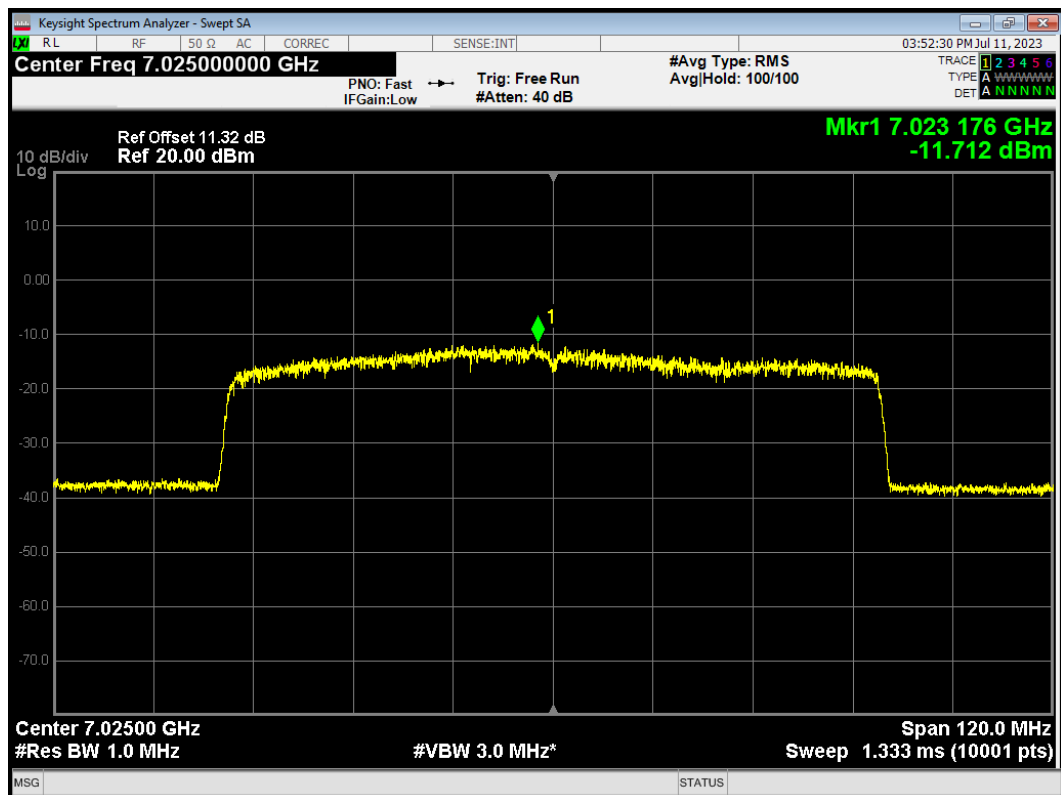
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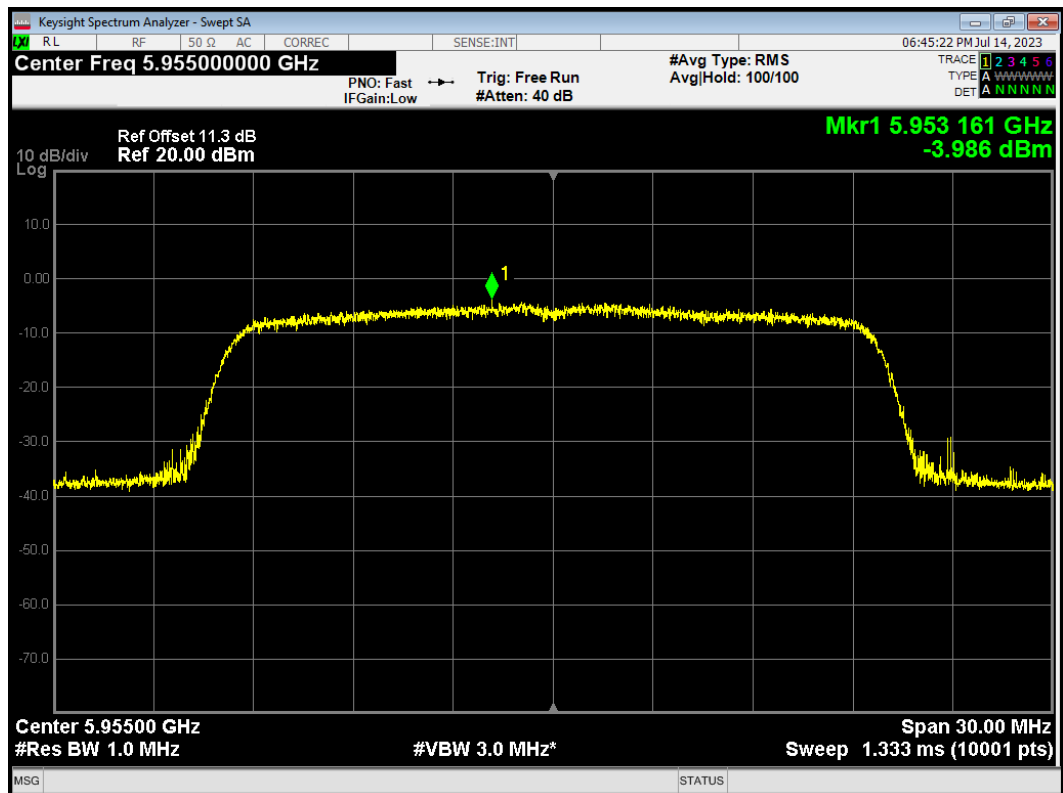
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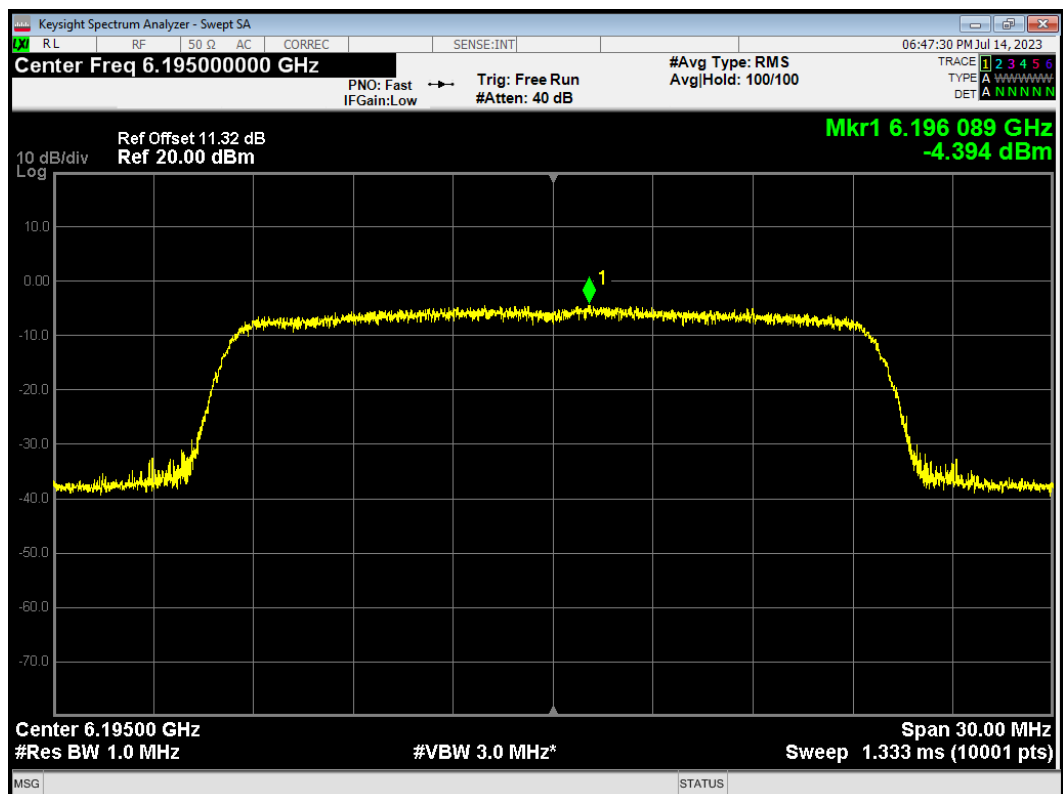
SISO Antenna 2

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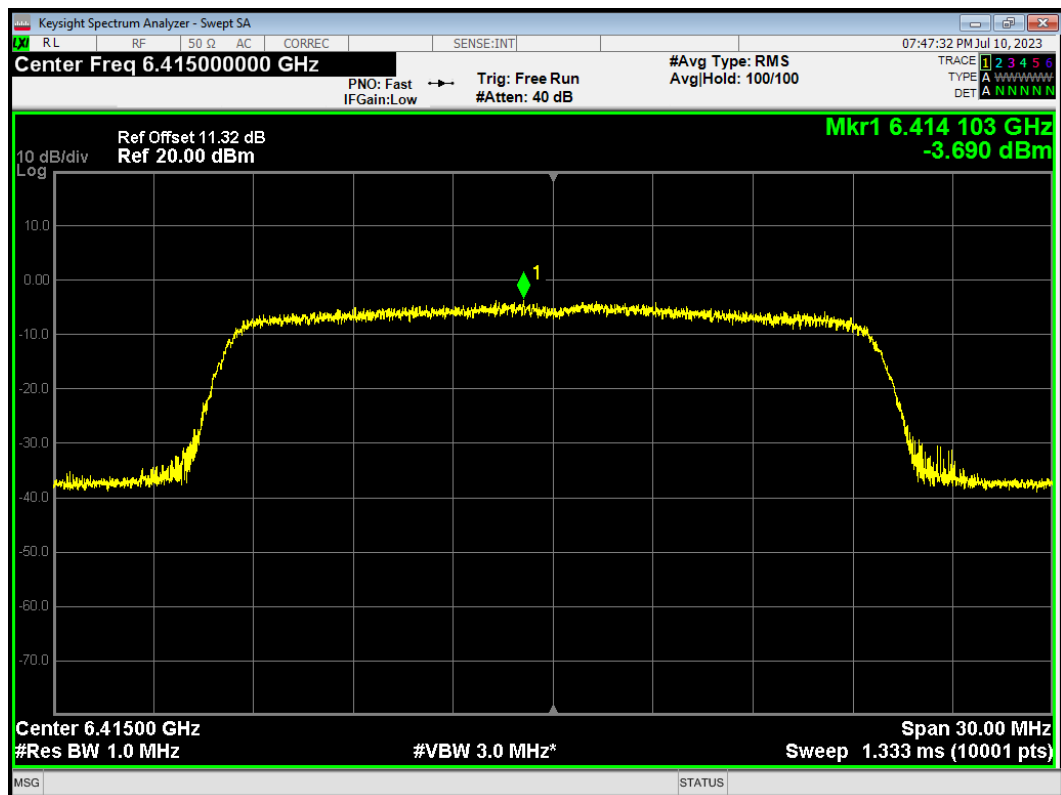
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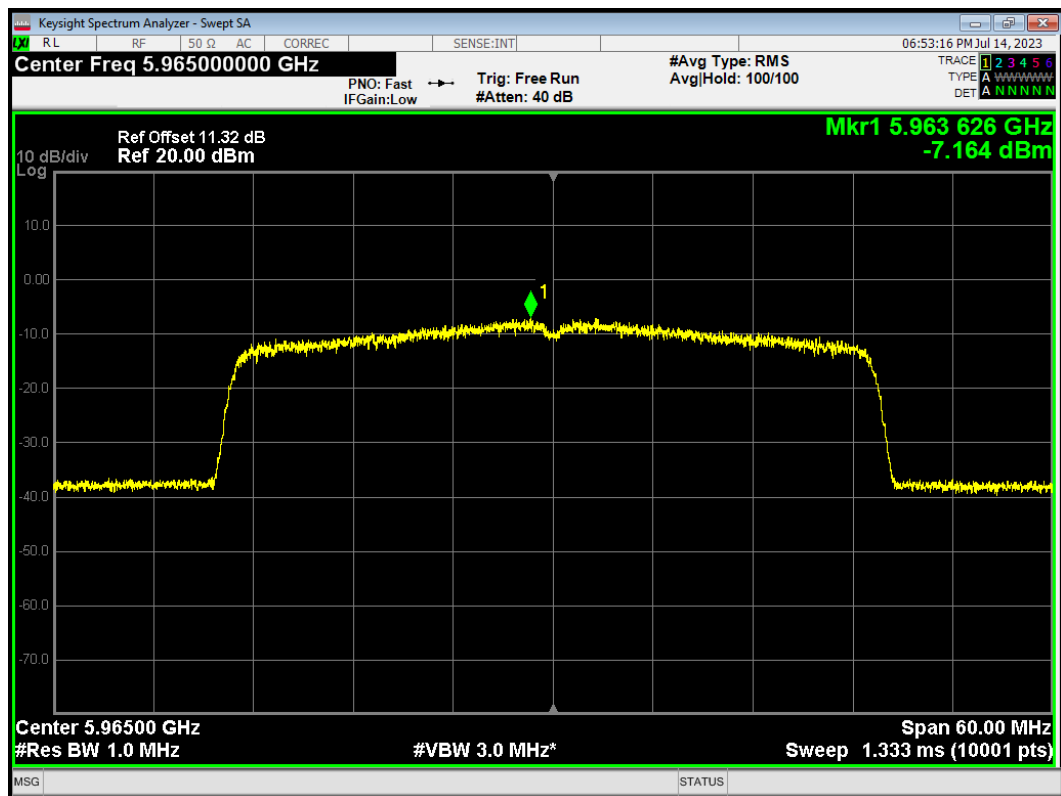
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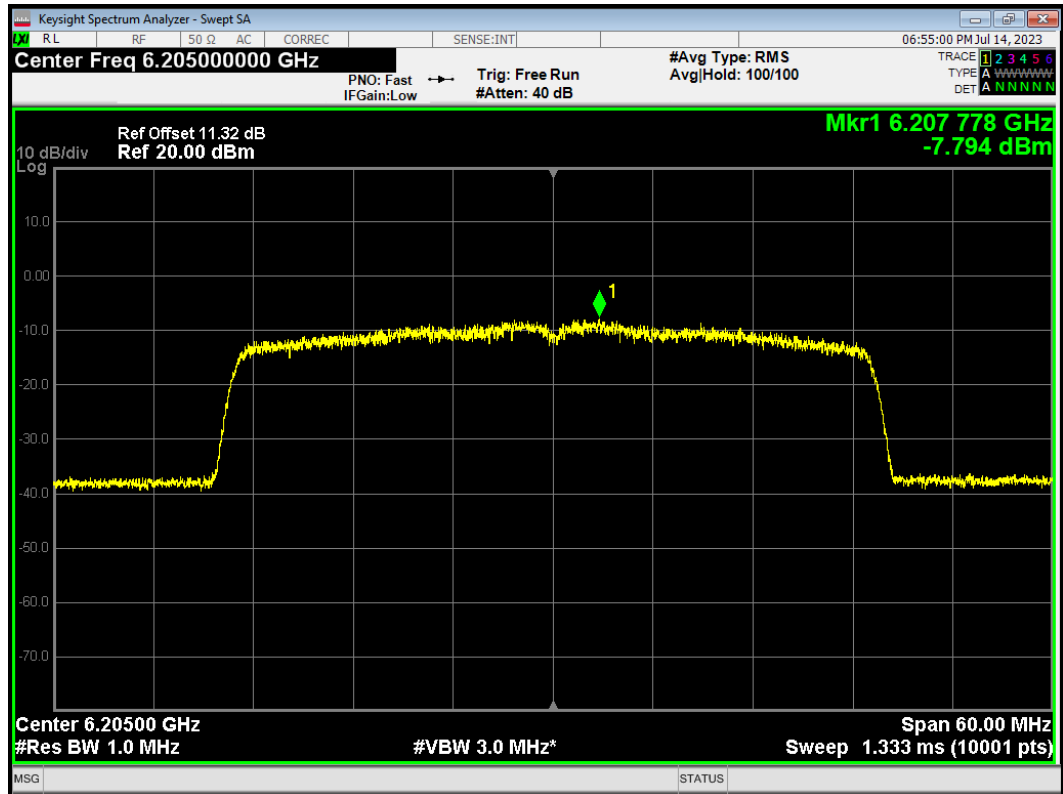
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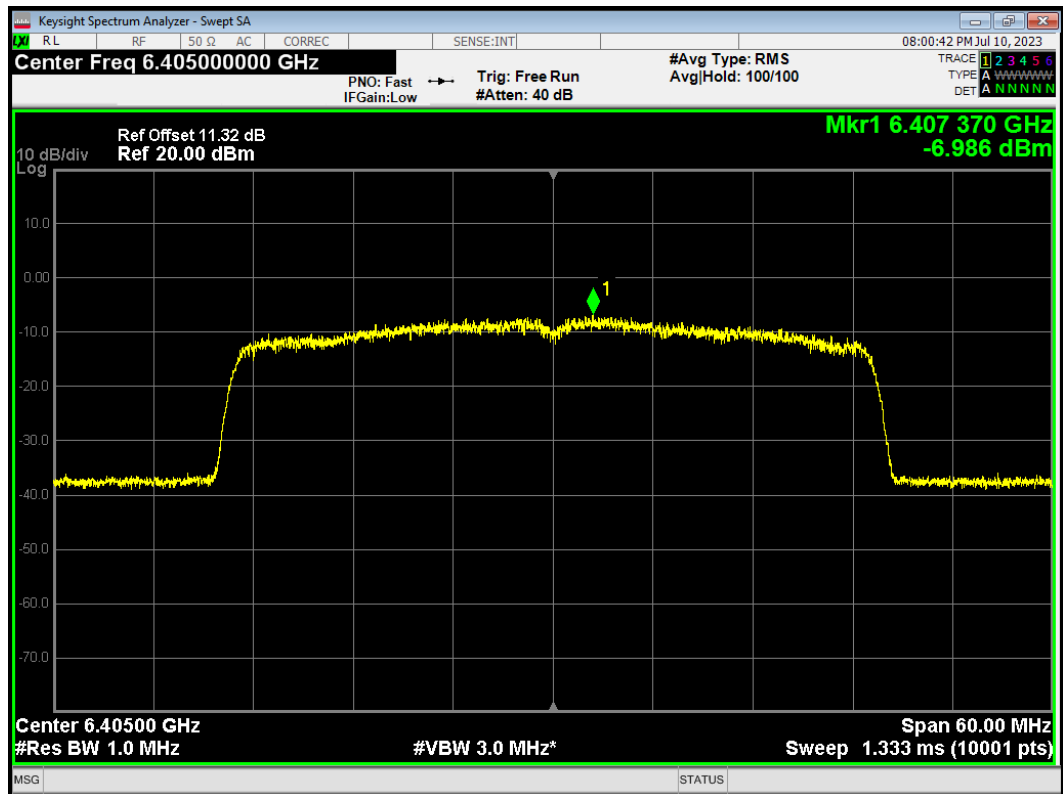
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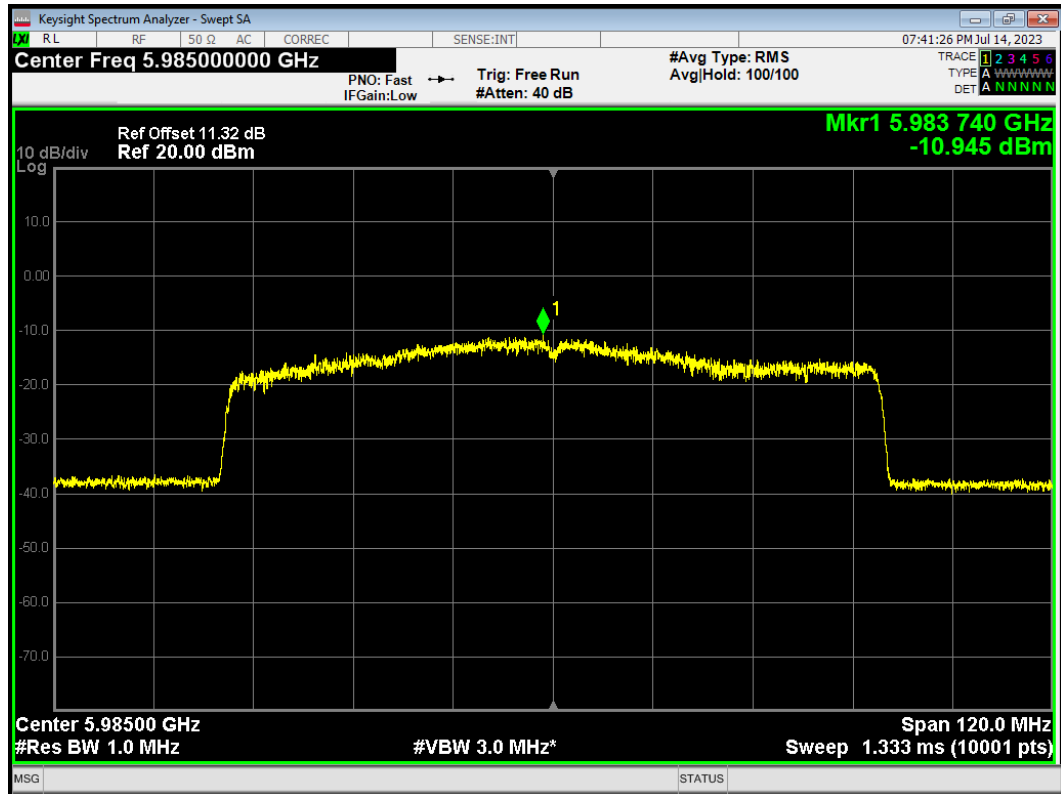
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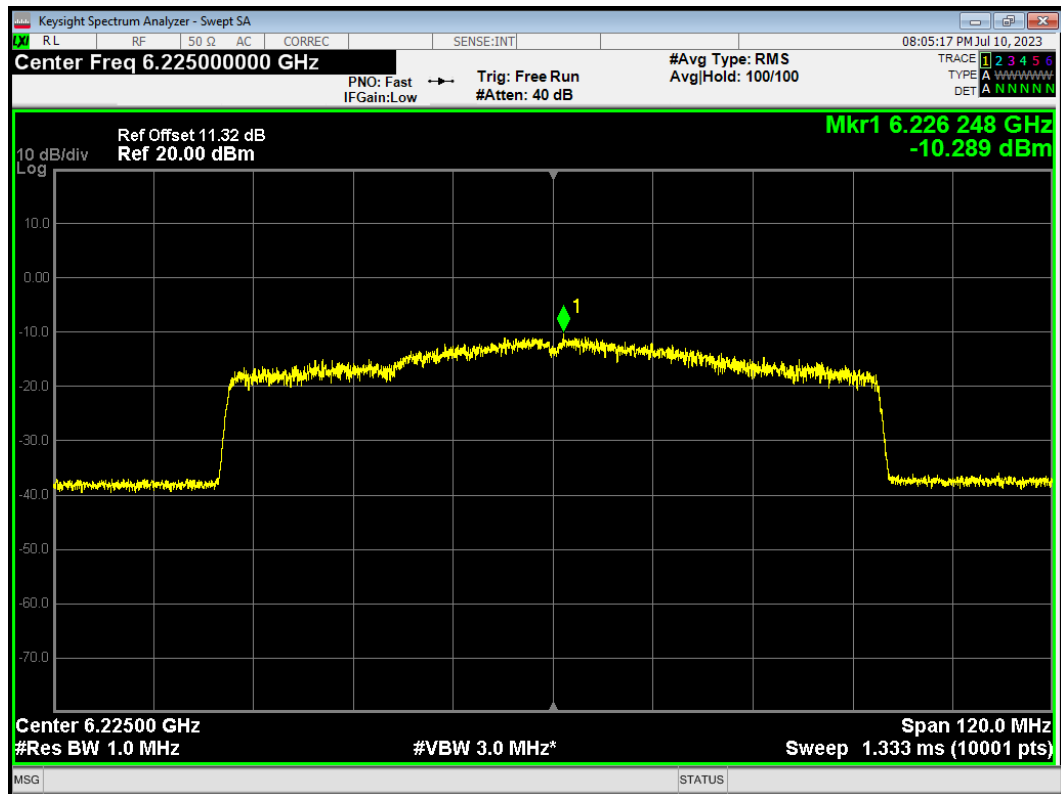
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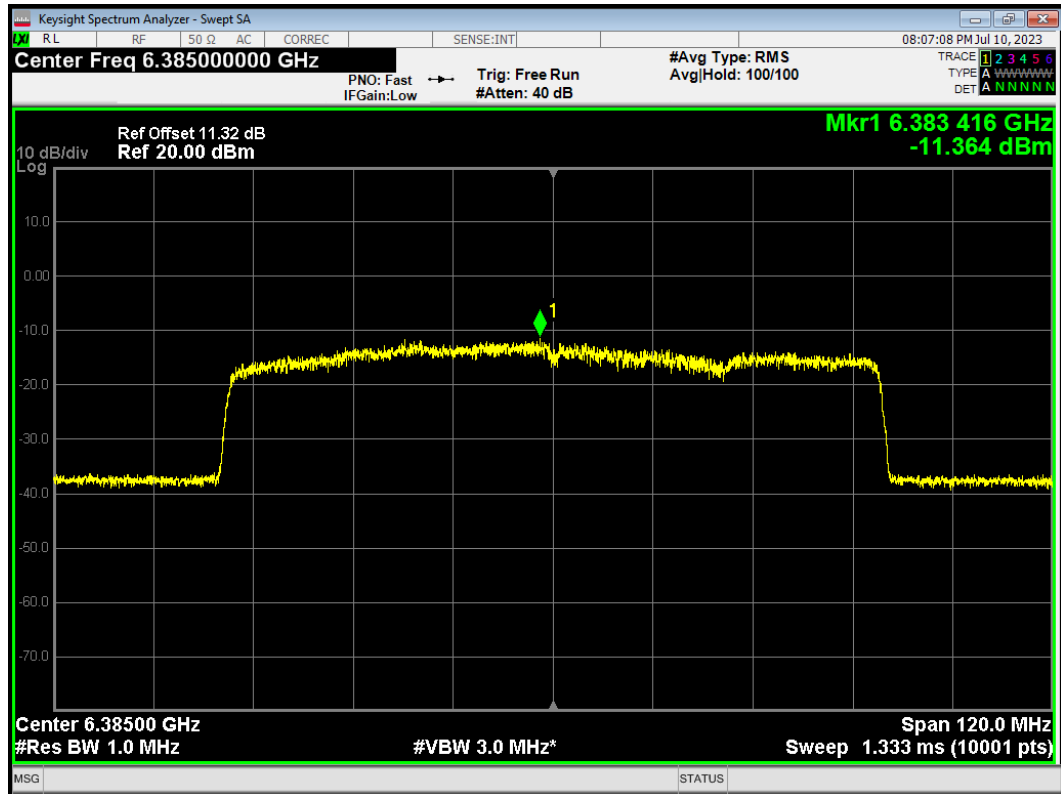
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PSD 802.11ax HE80 6225MHz

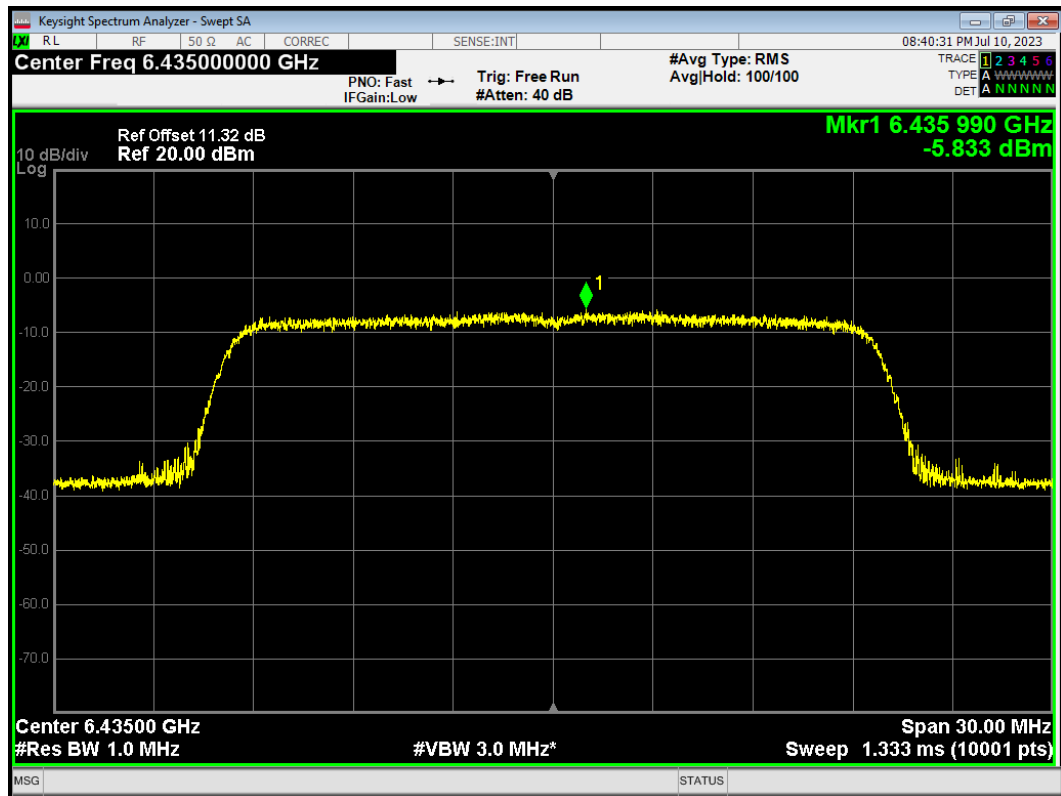


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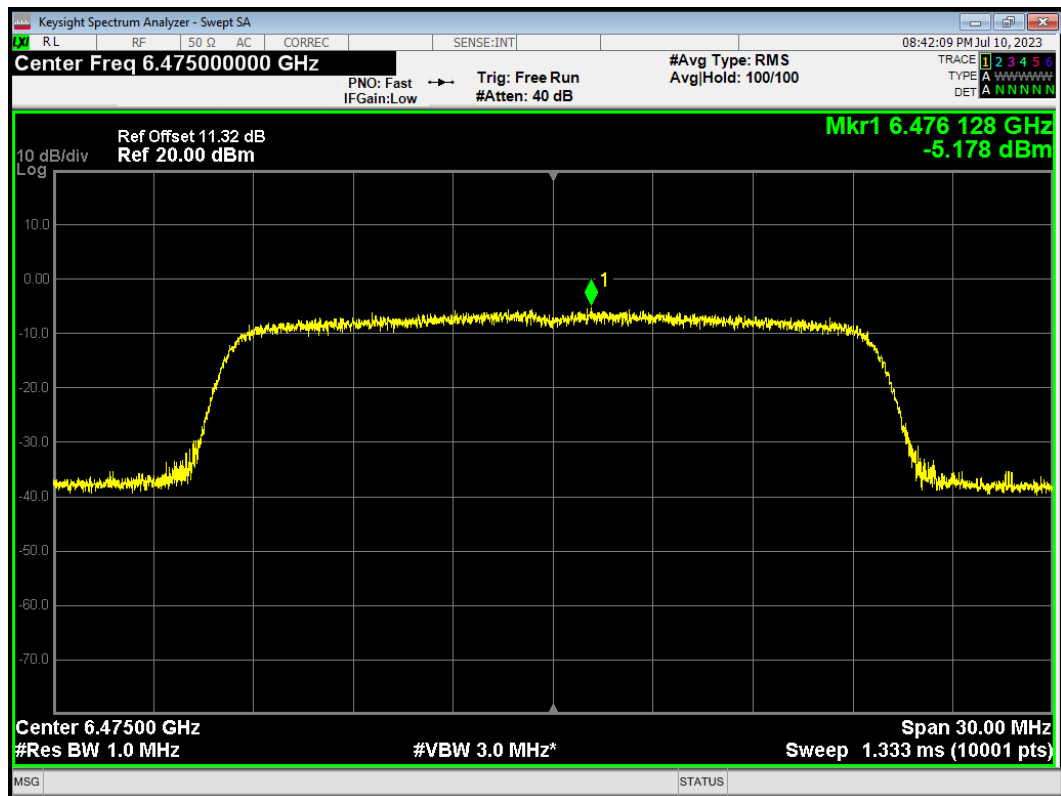


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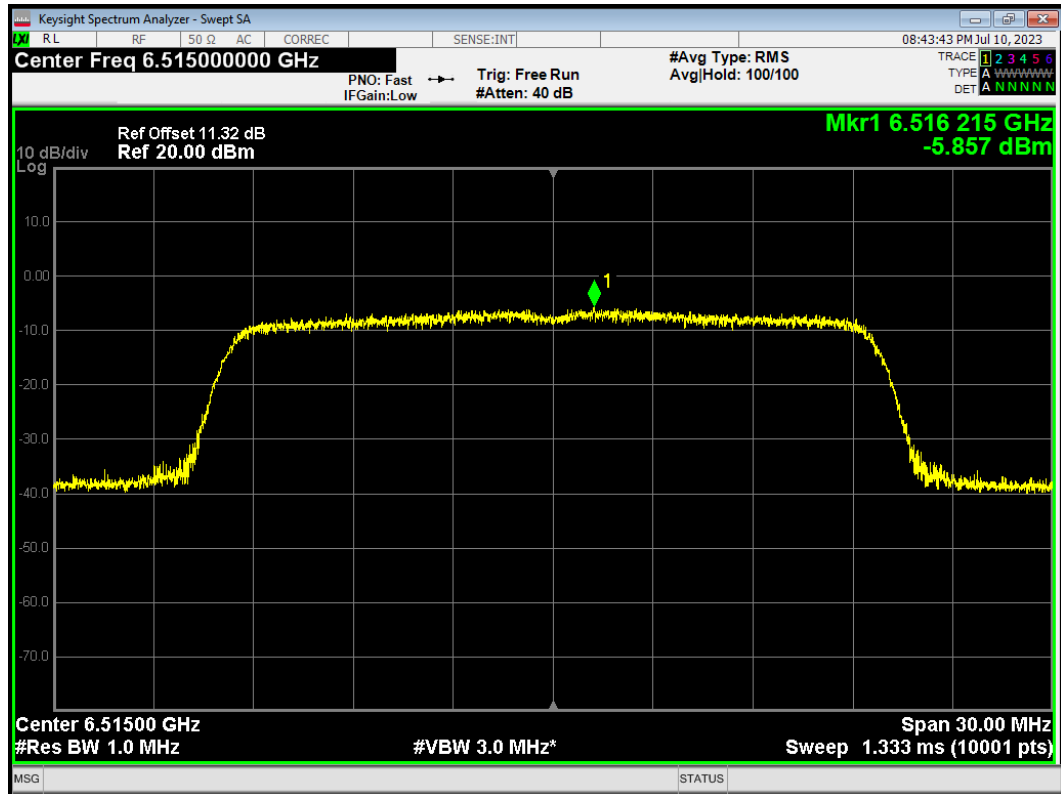
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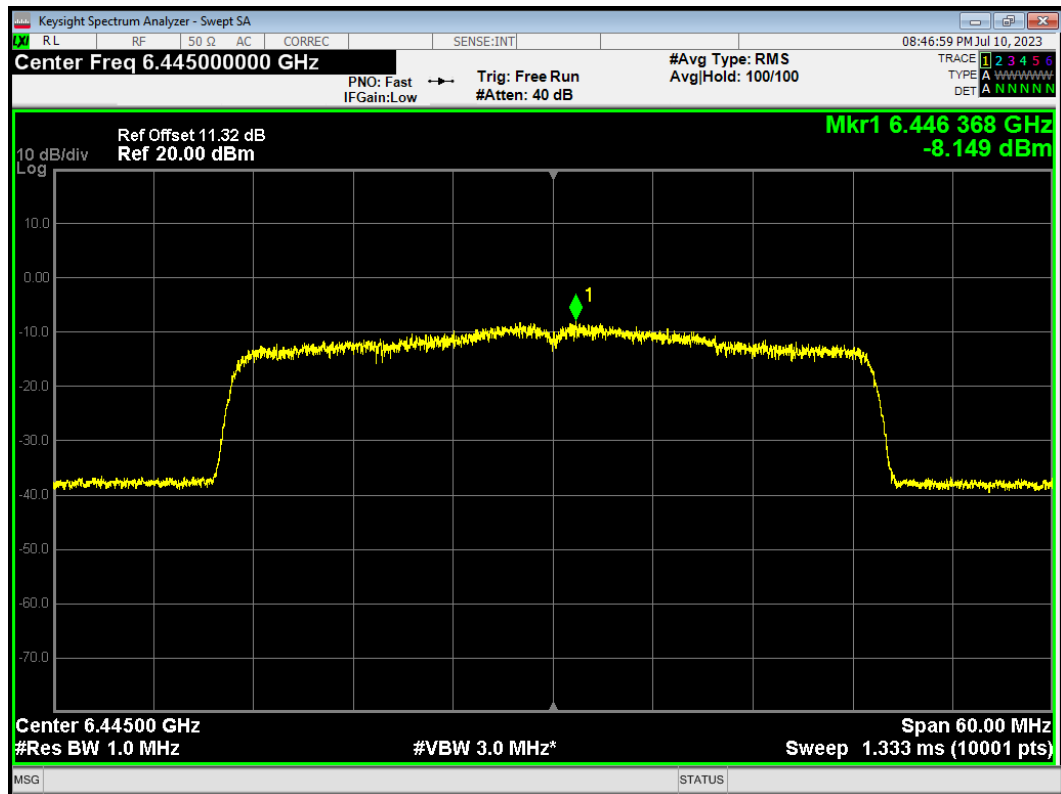
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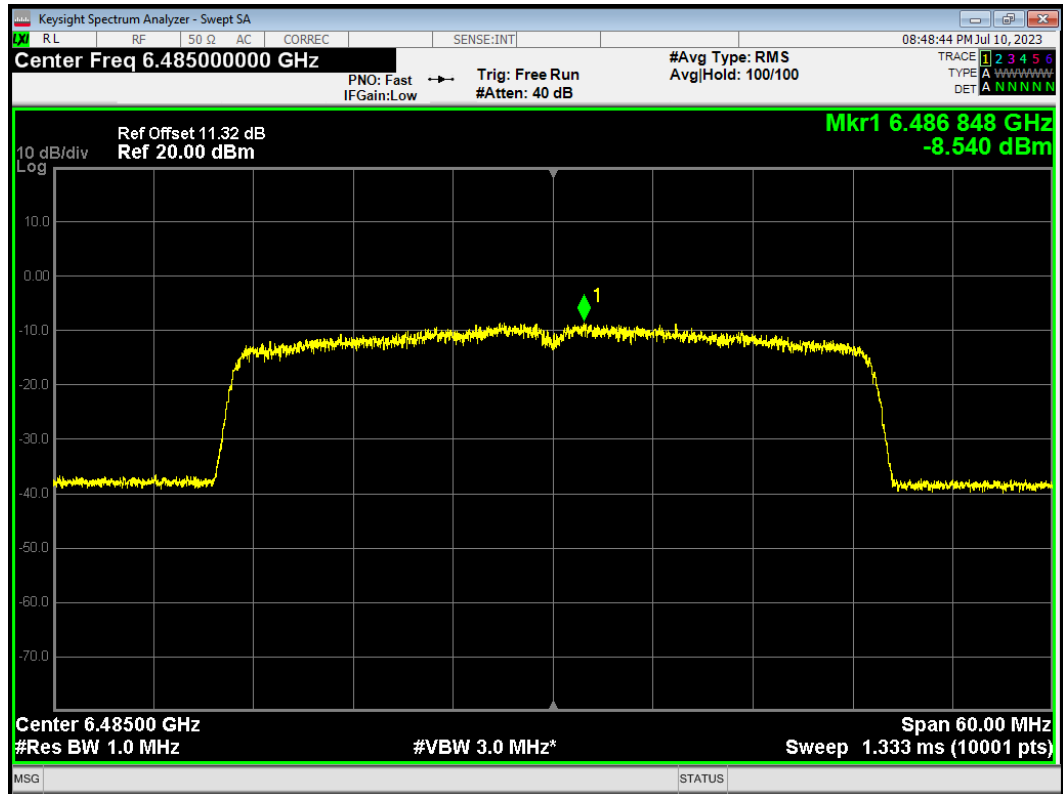
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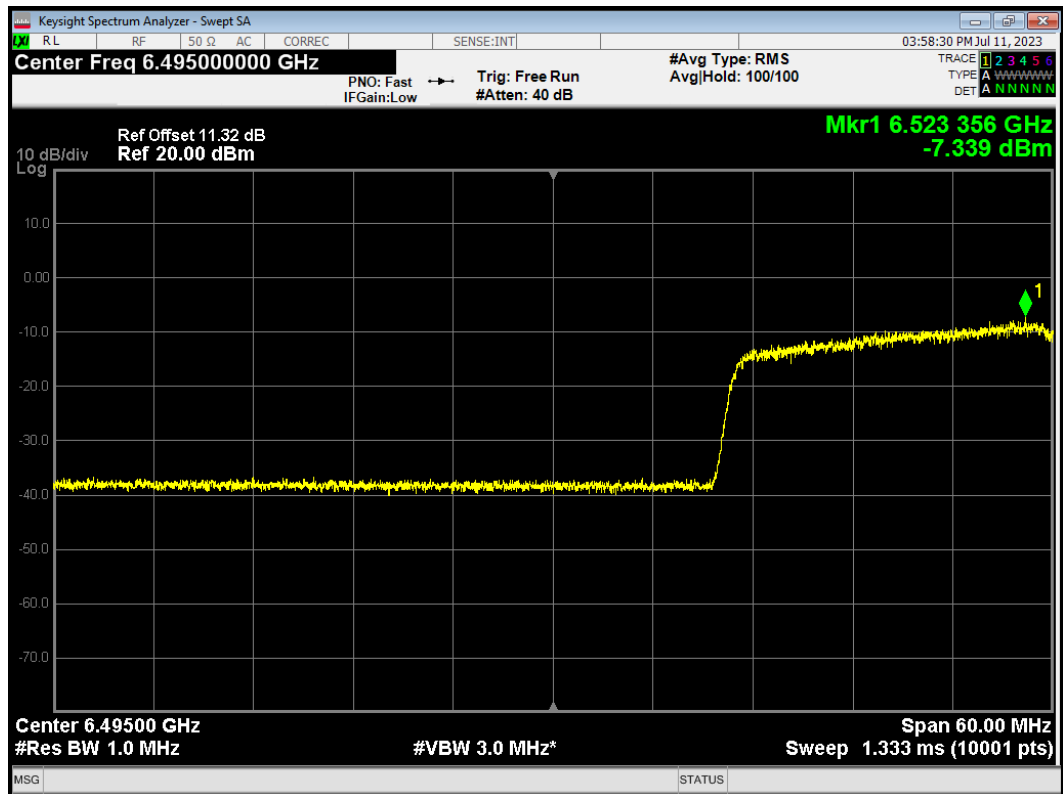
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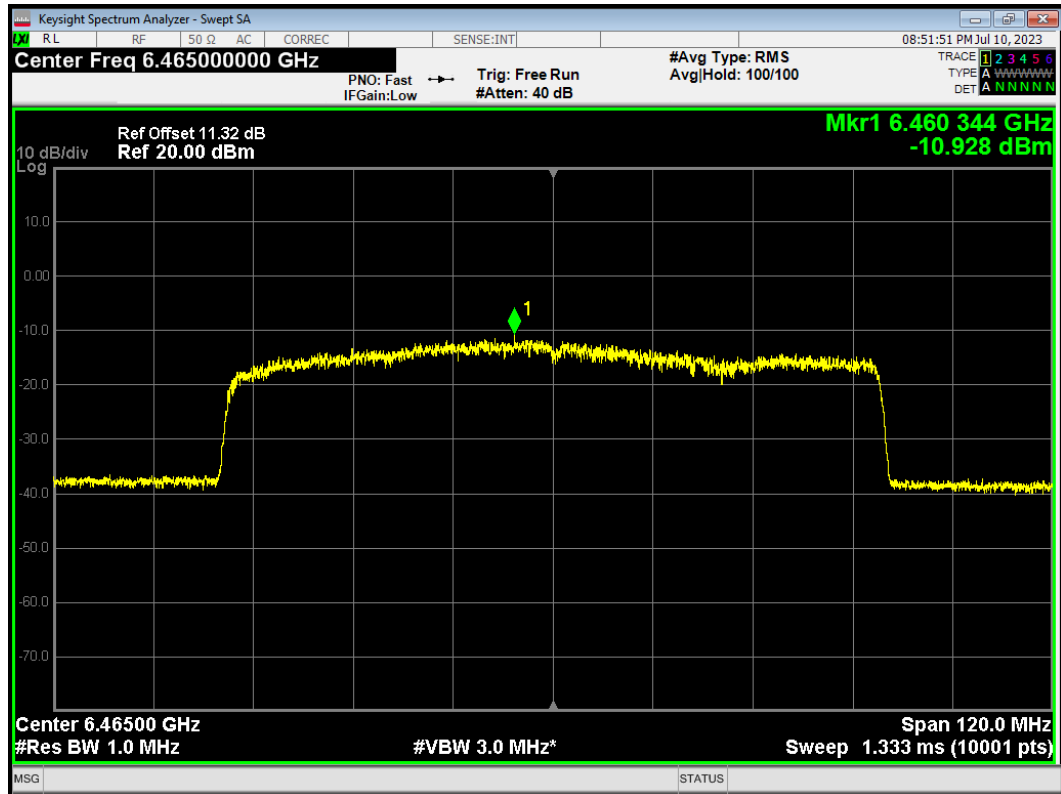
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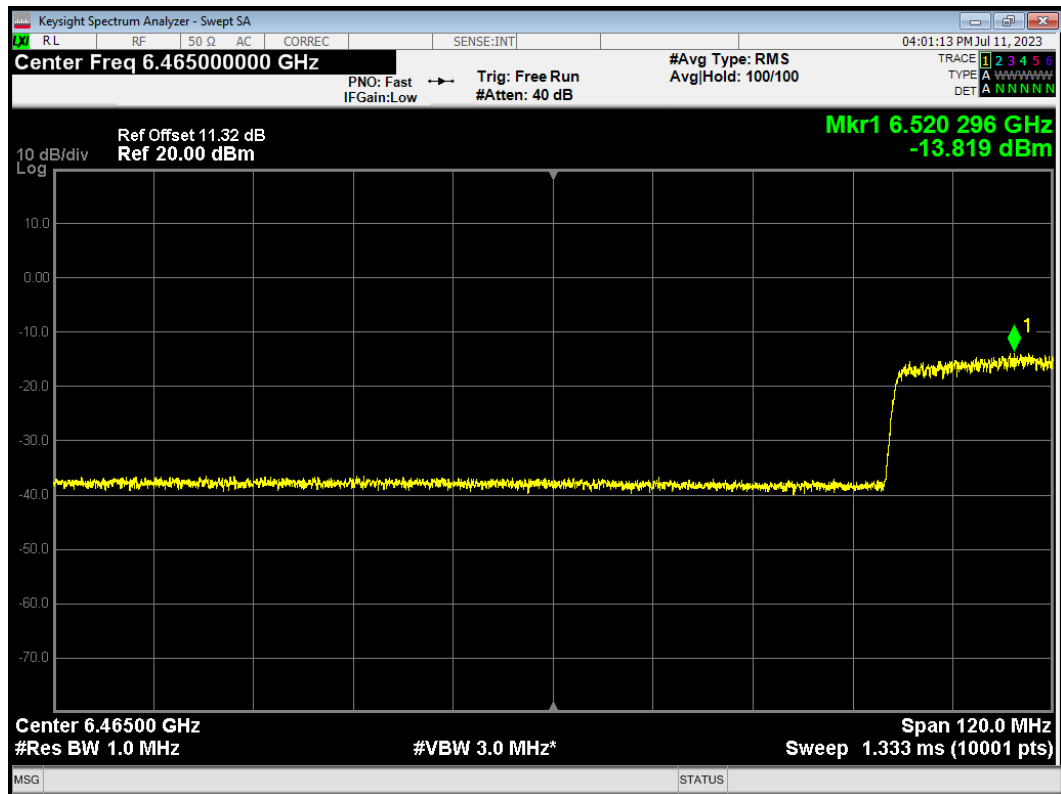
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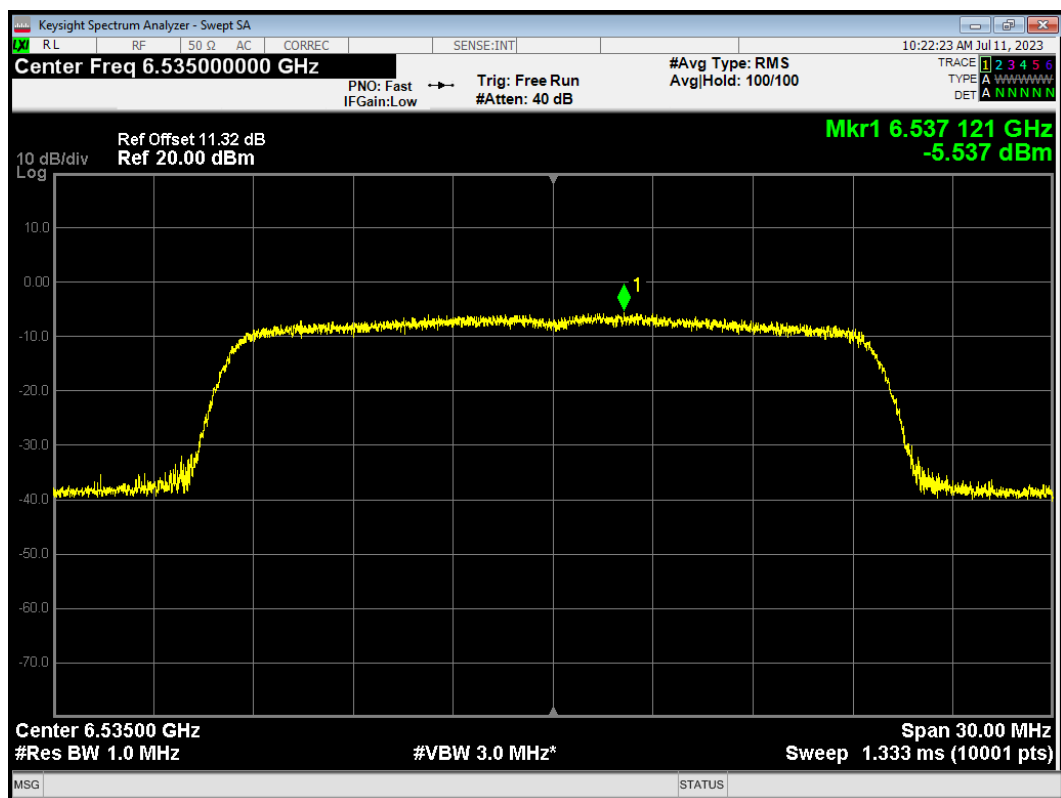


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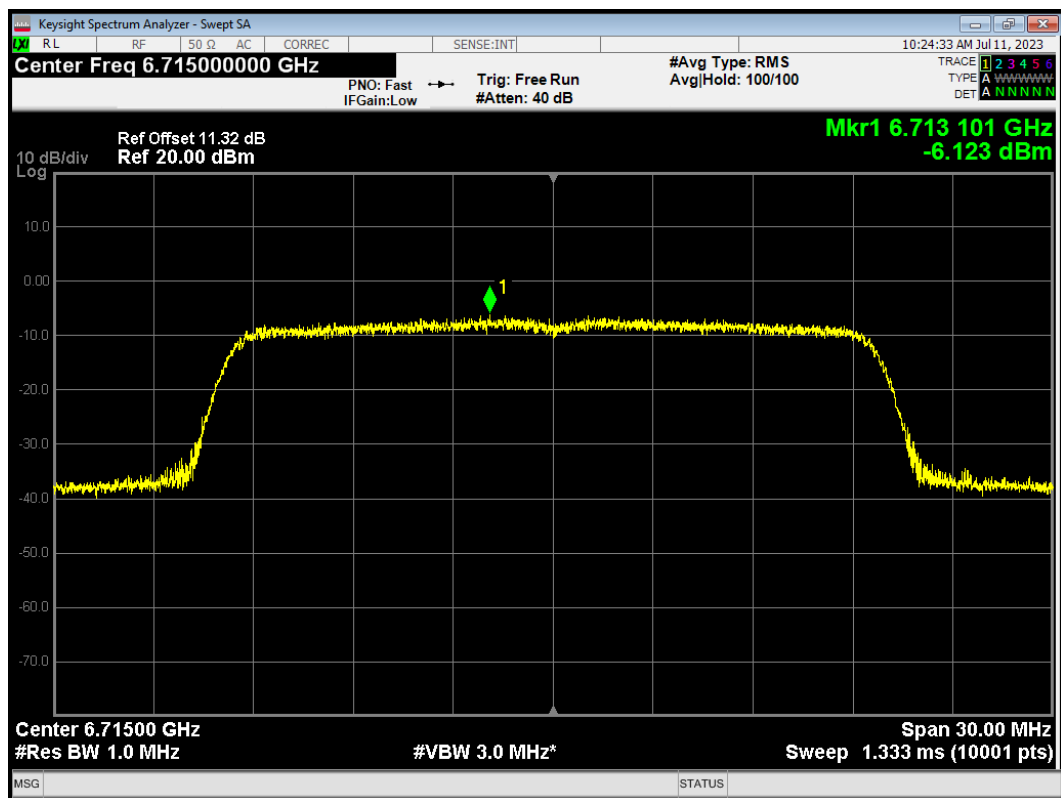


U-NII-7

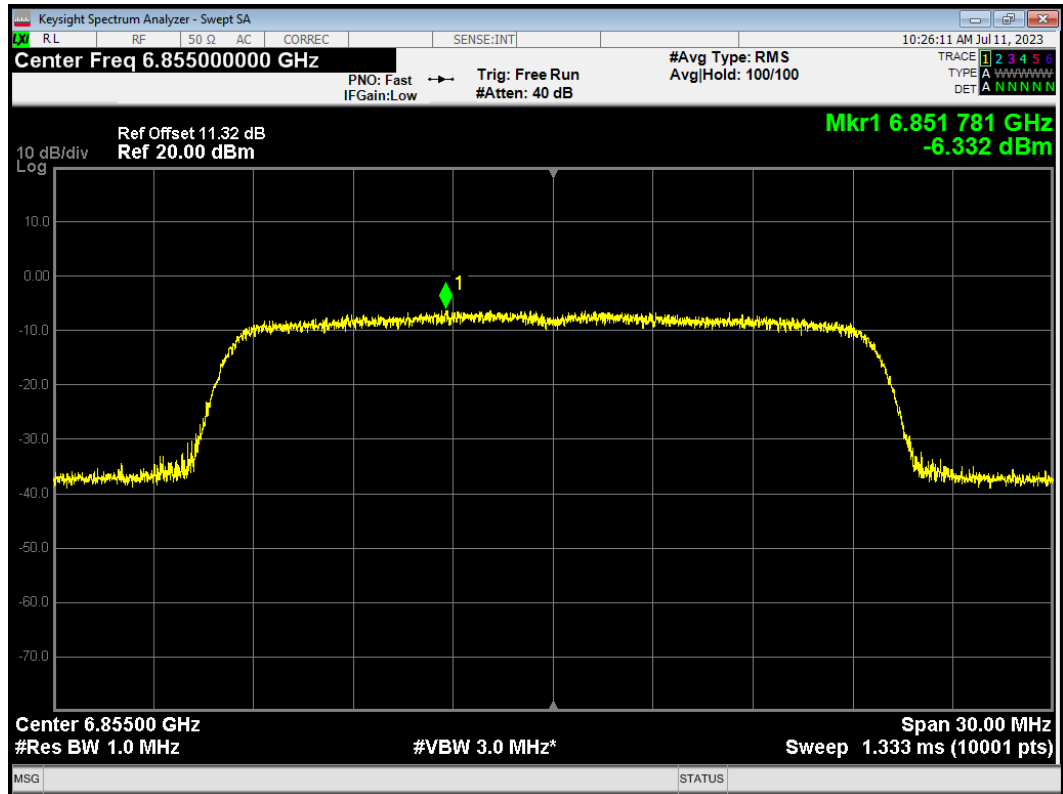
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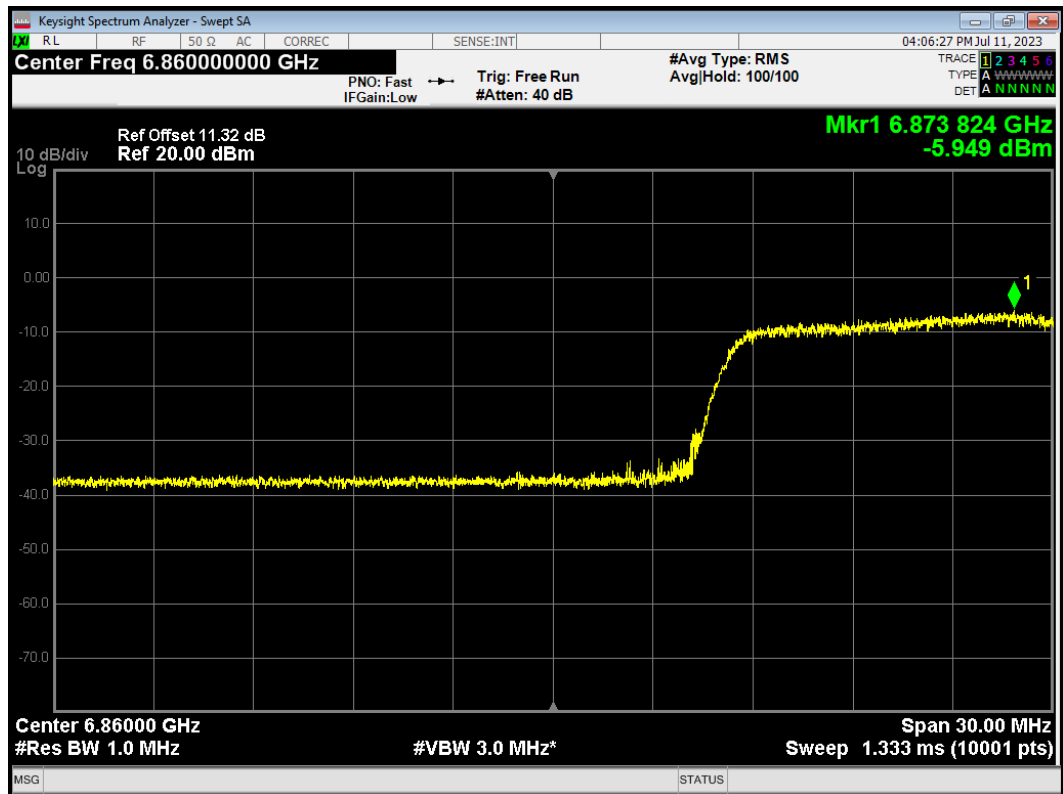
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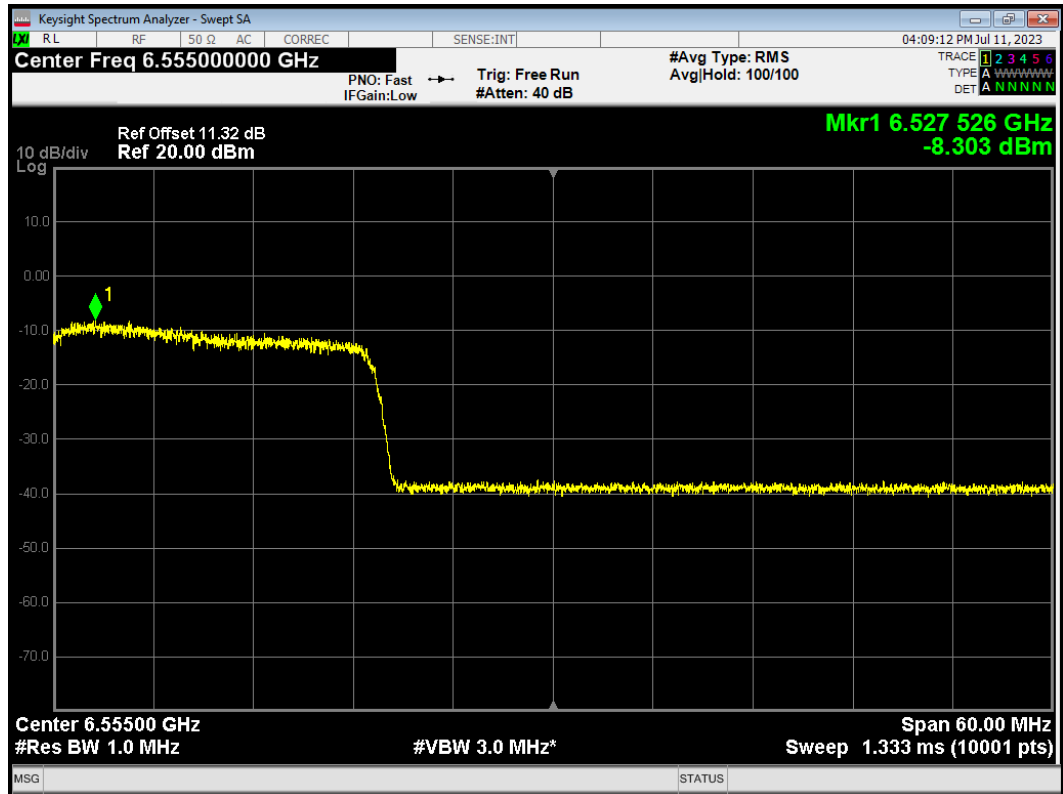
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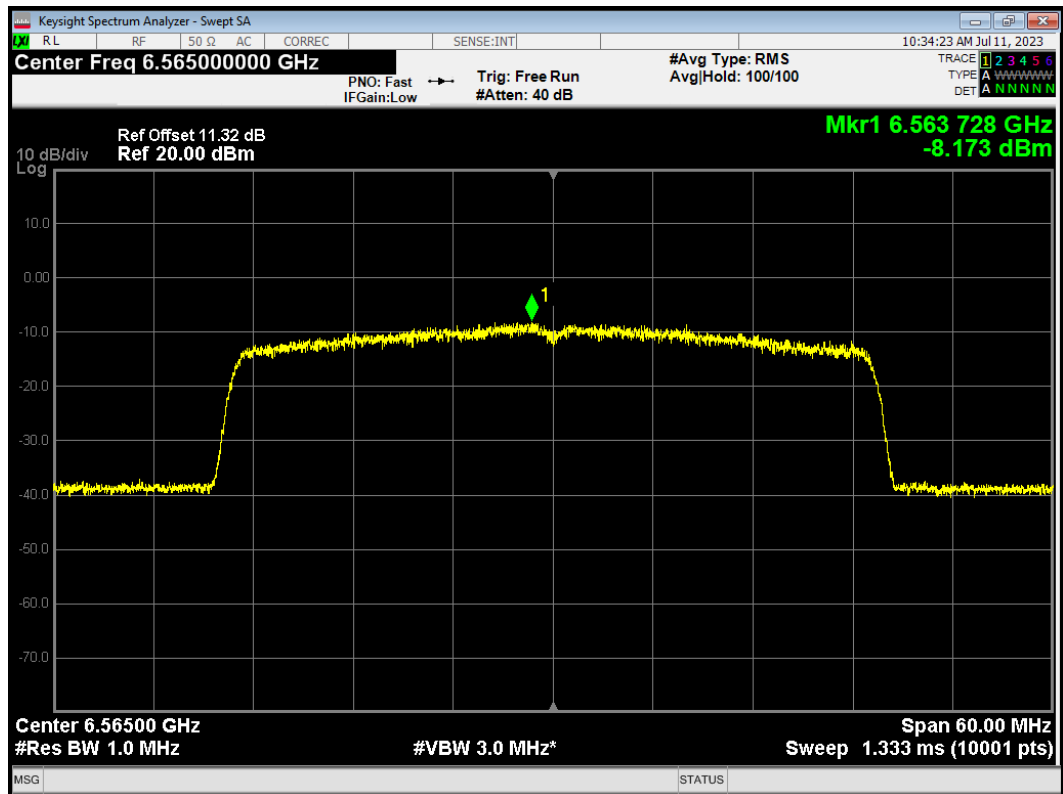
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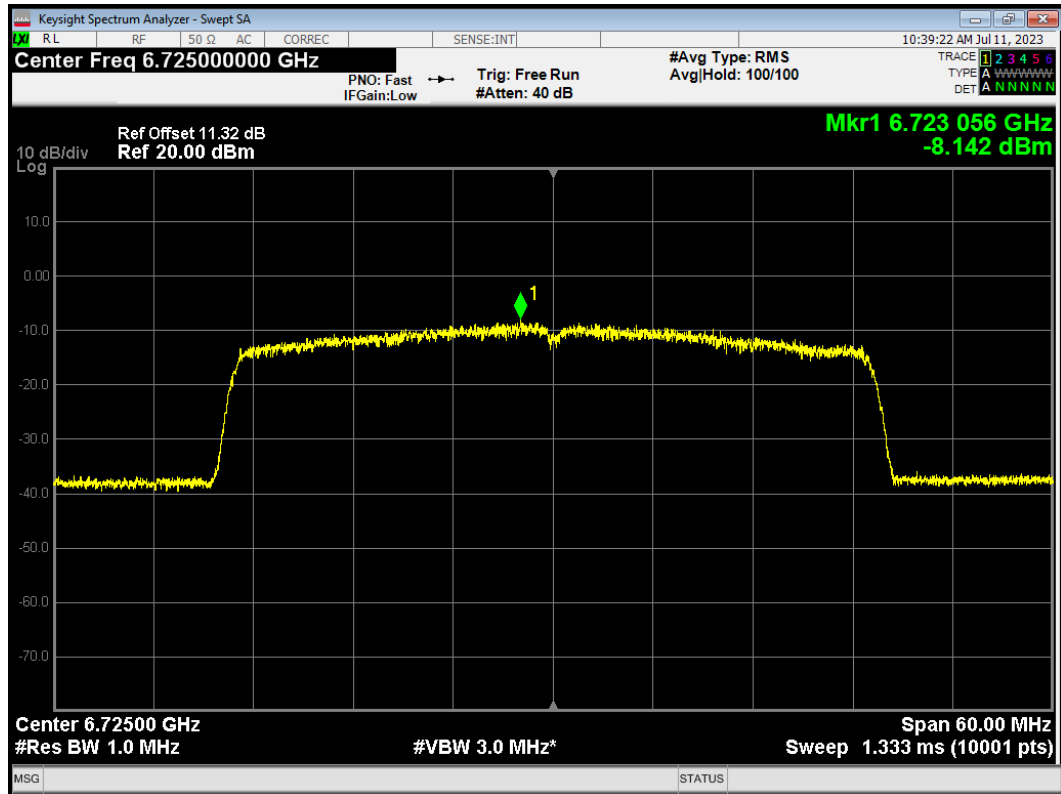
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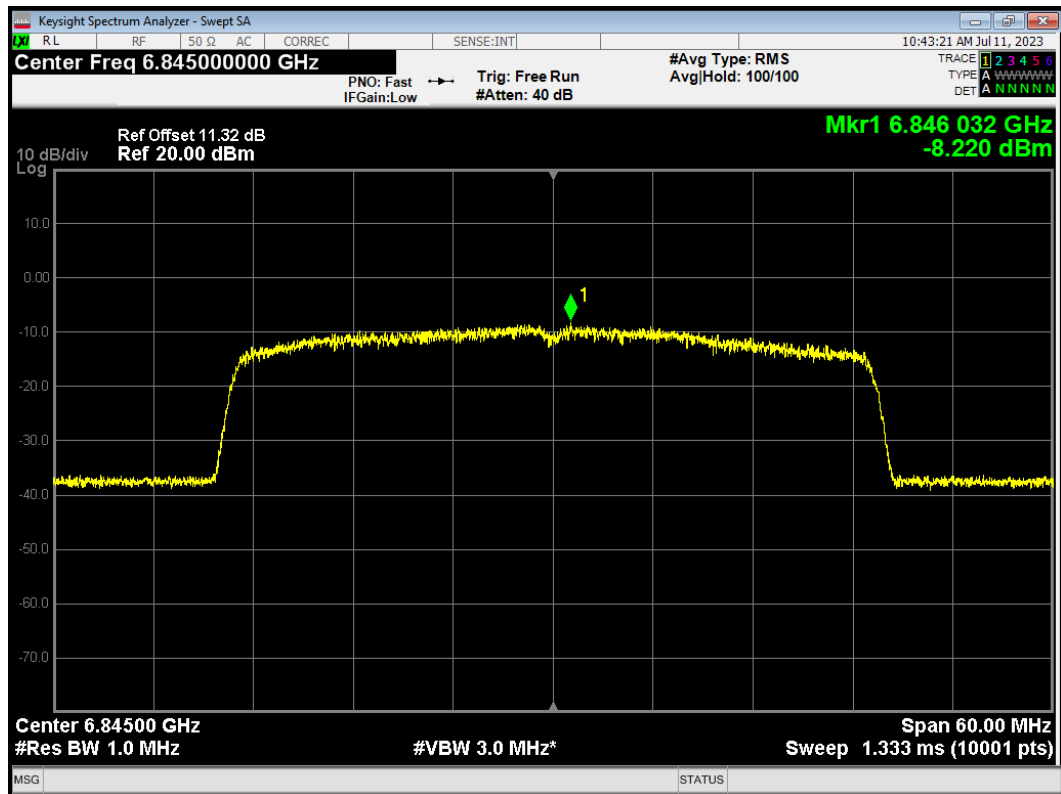
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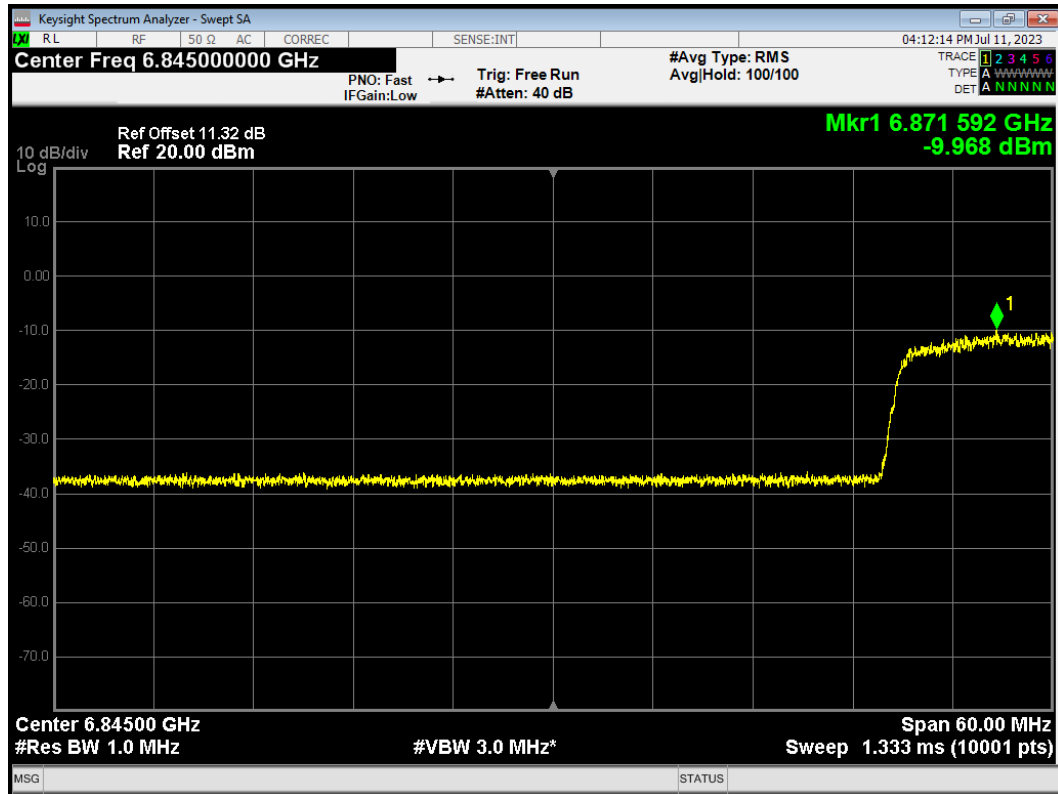
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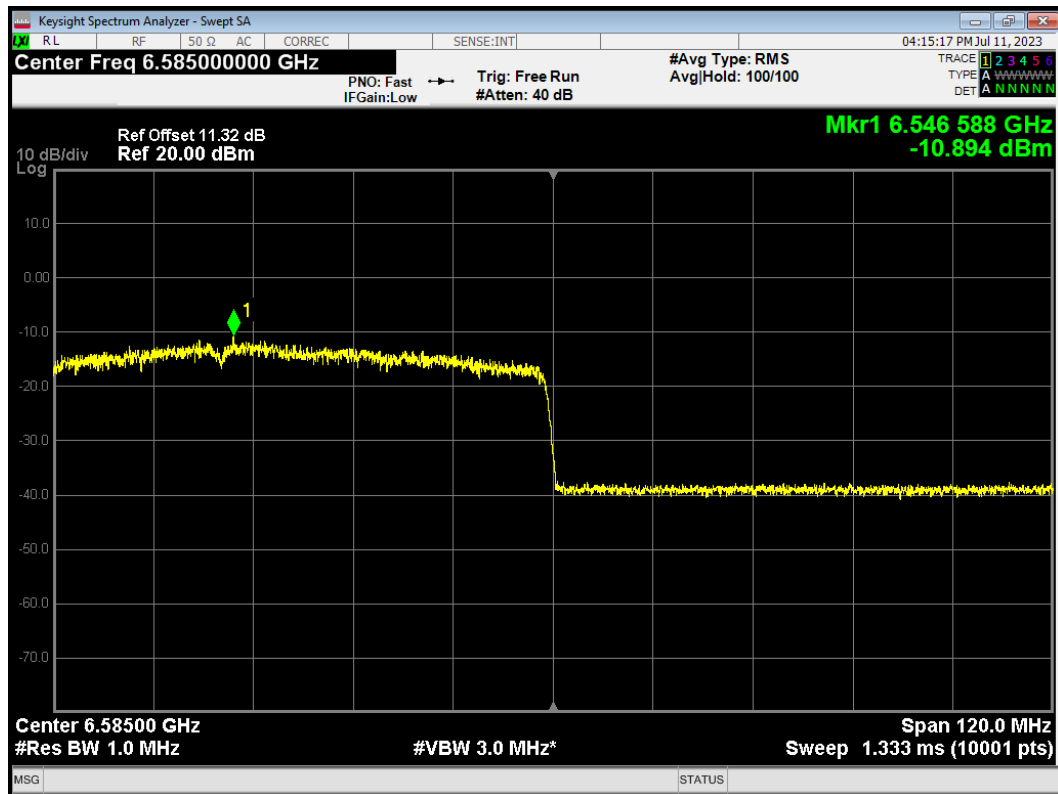
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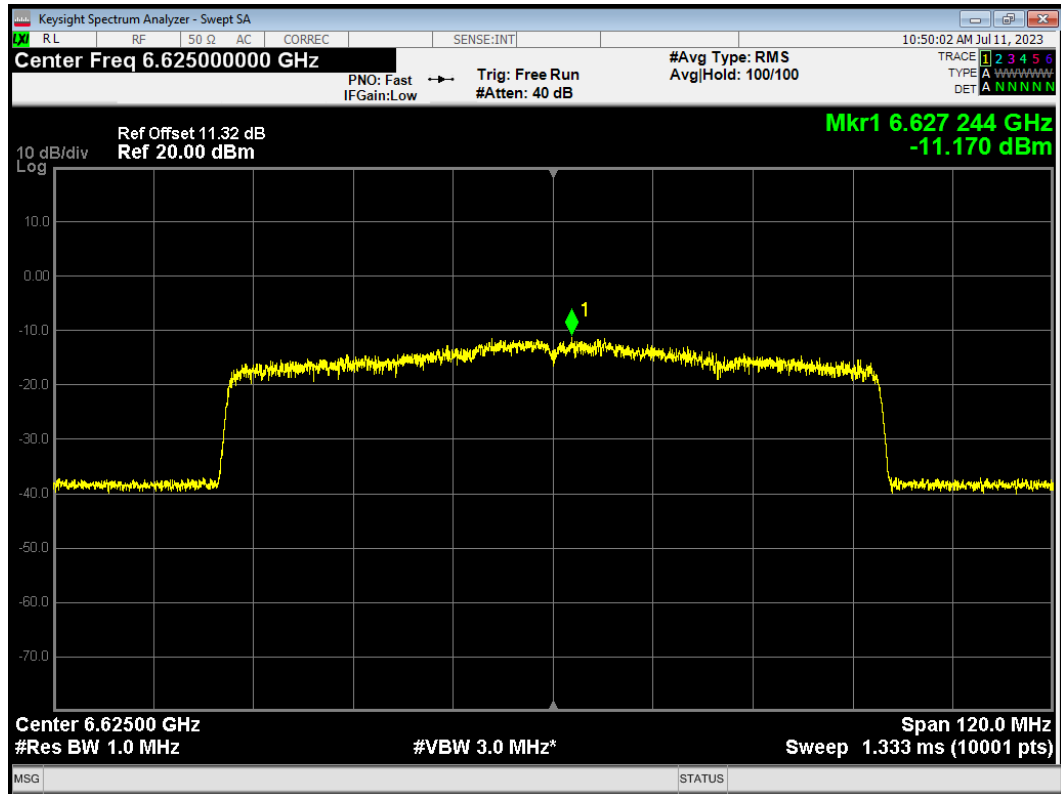
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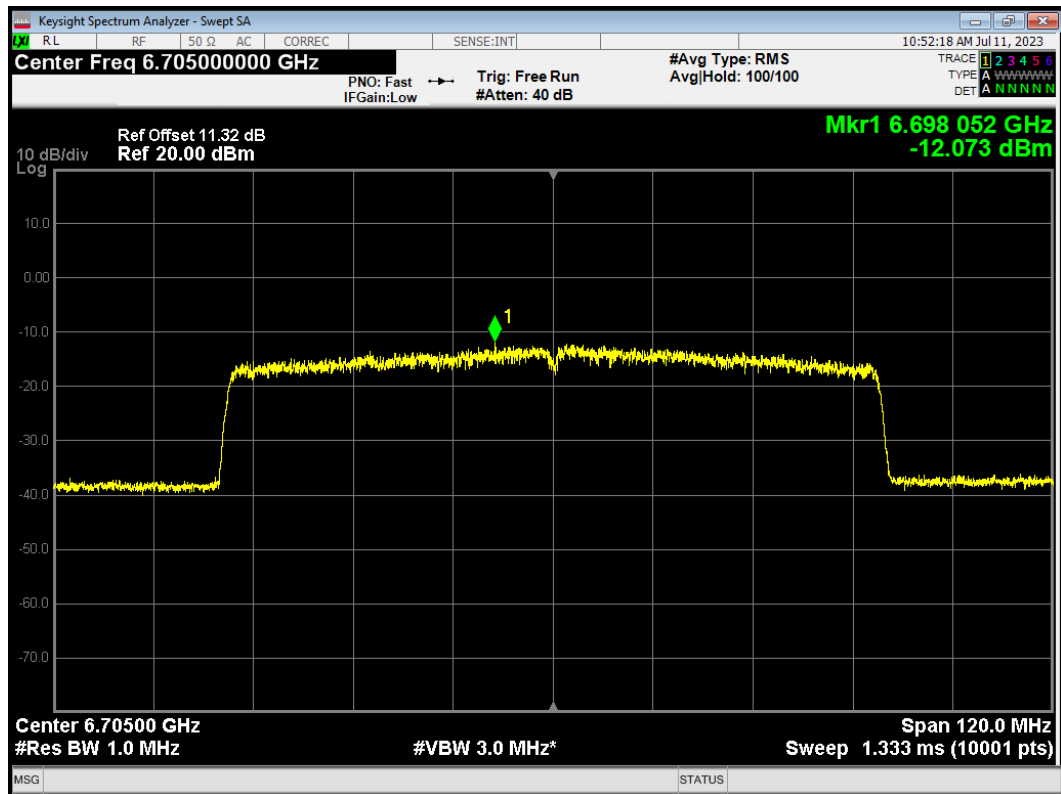
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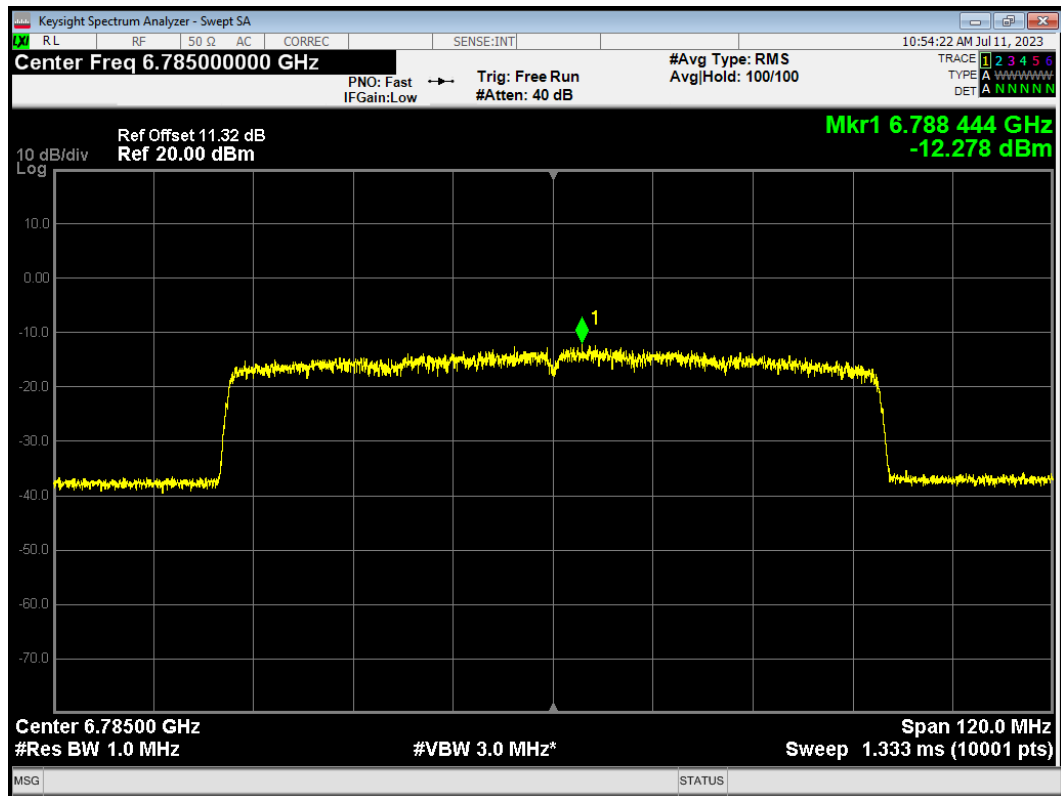
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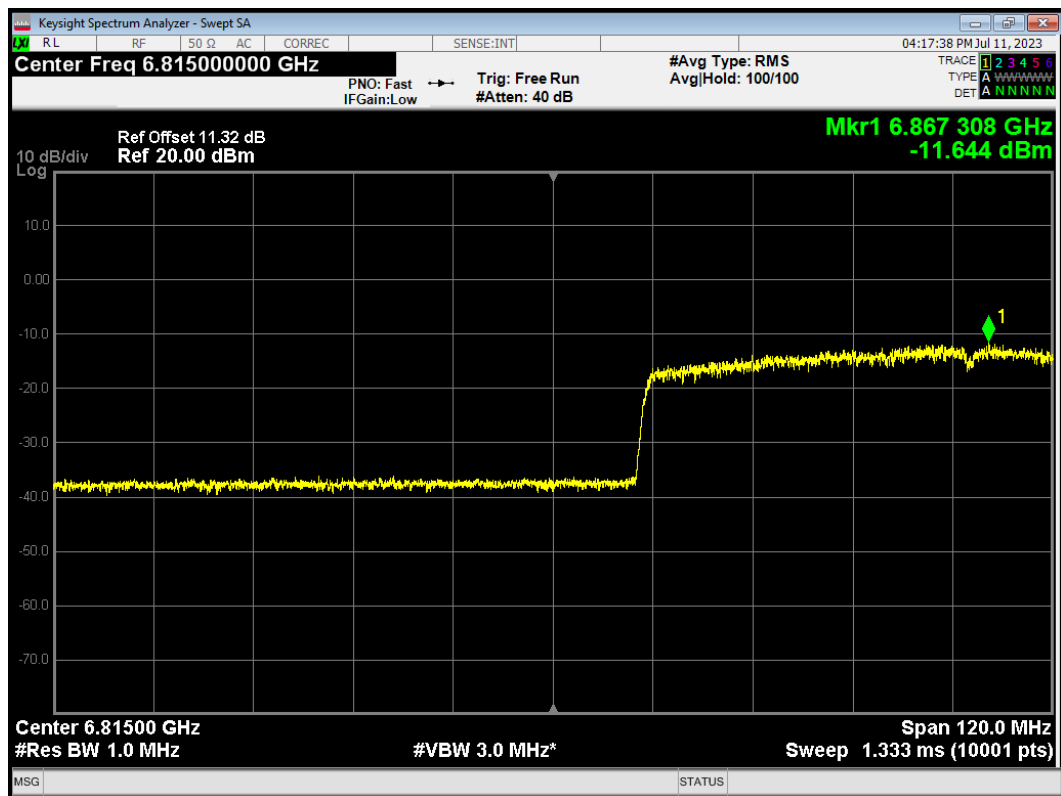
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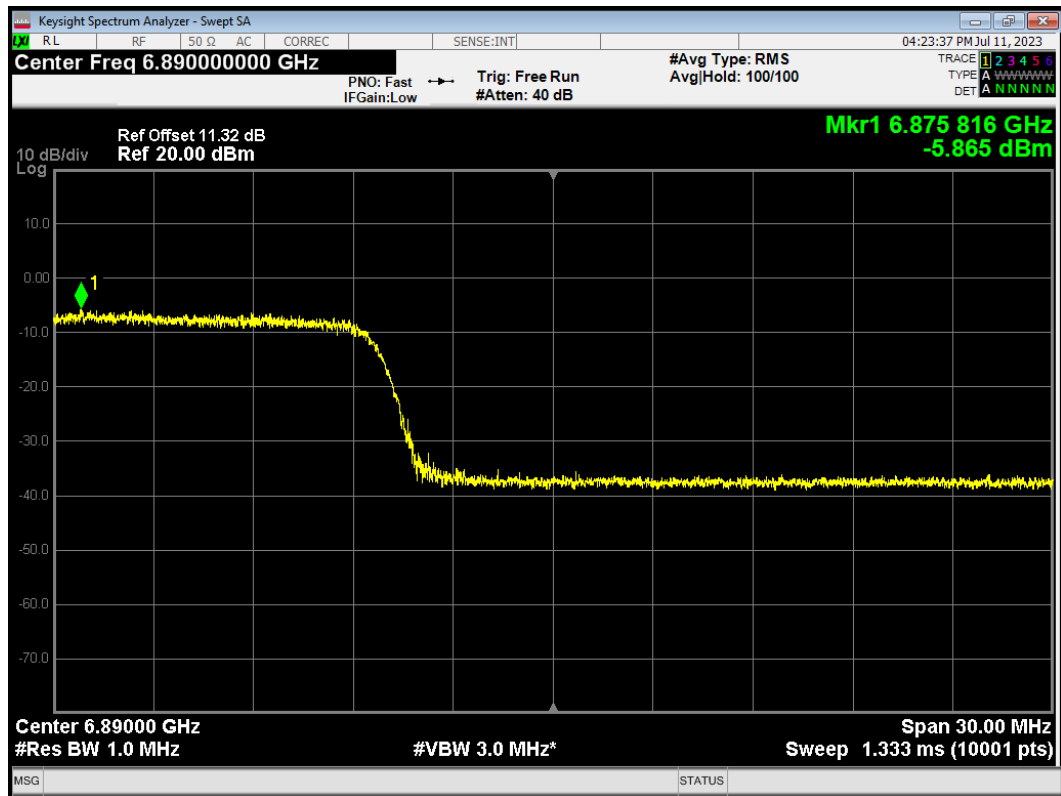


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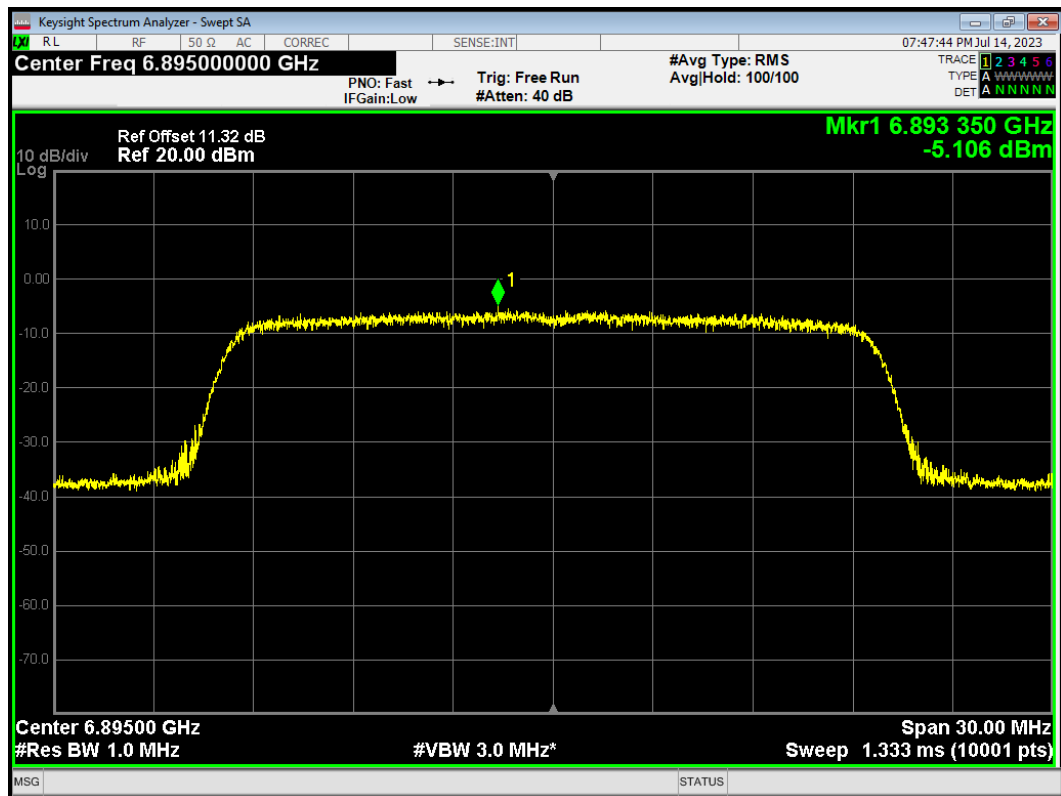


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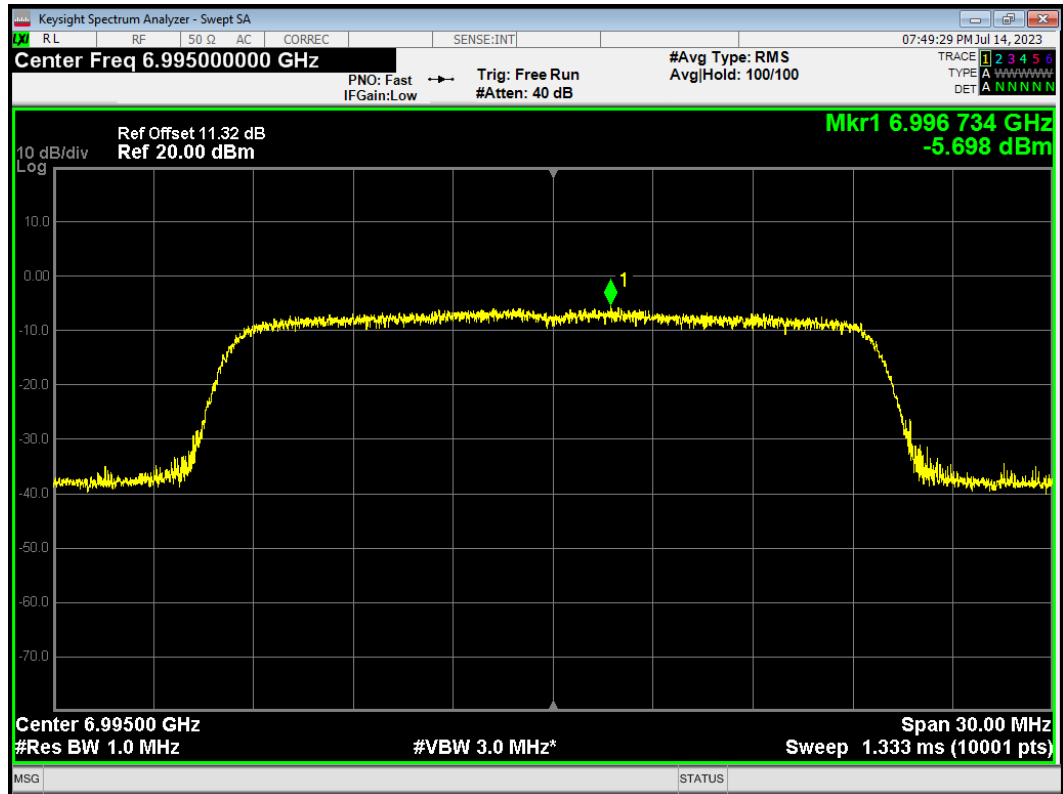
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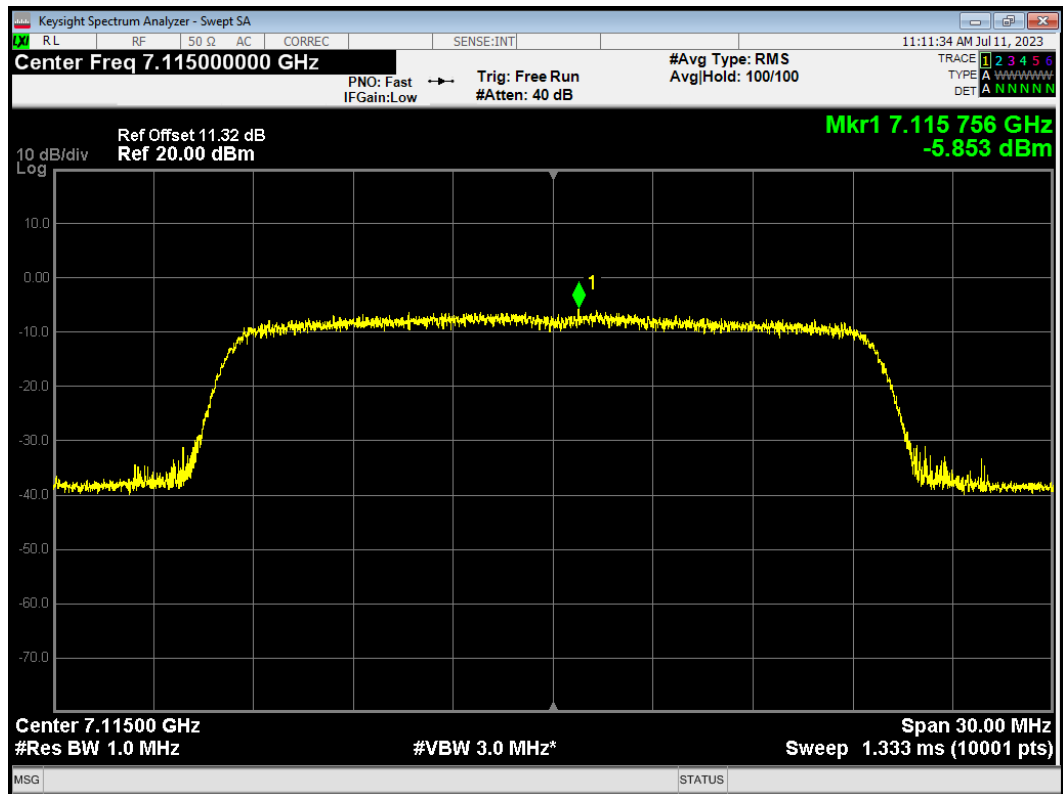
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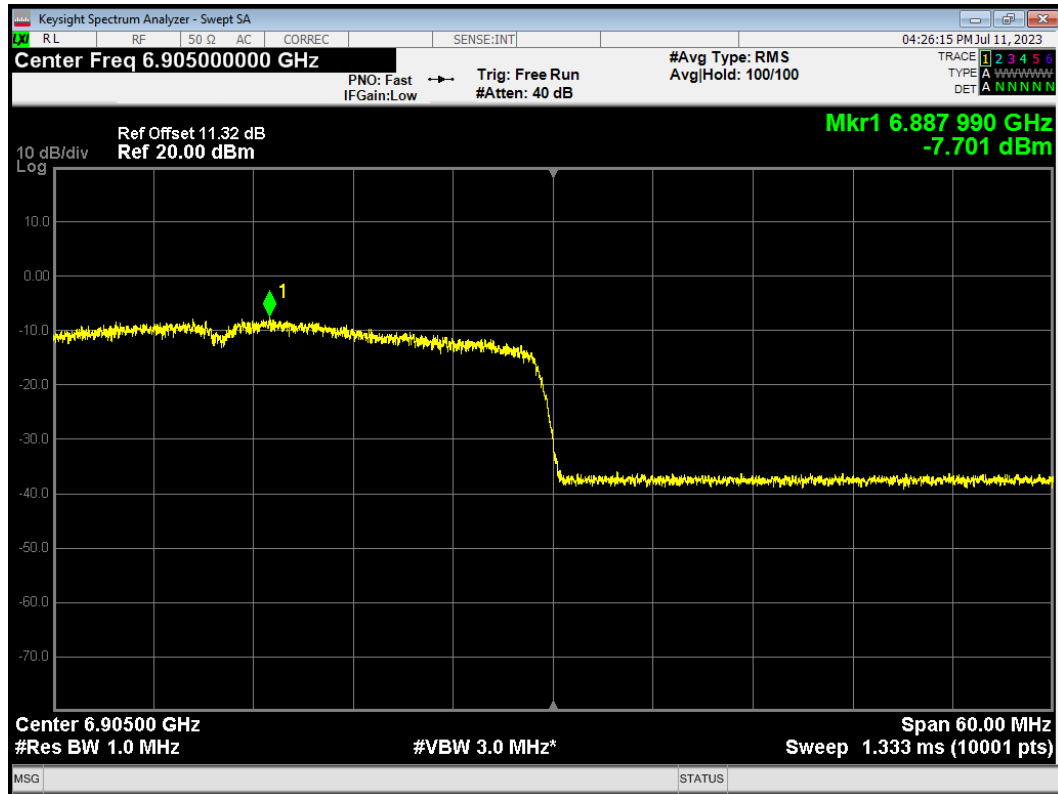
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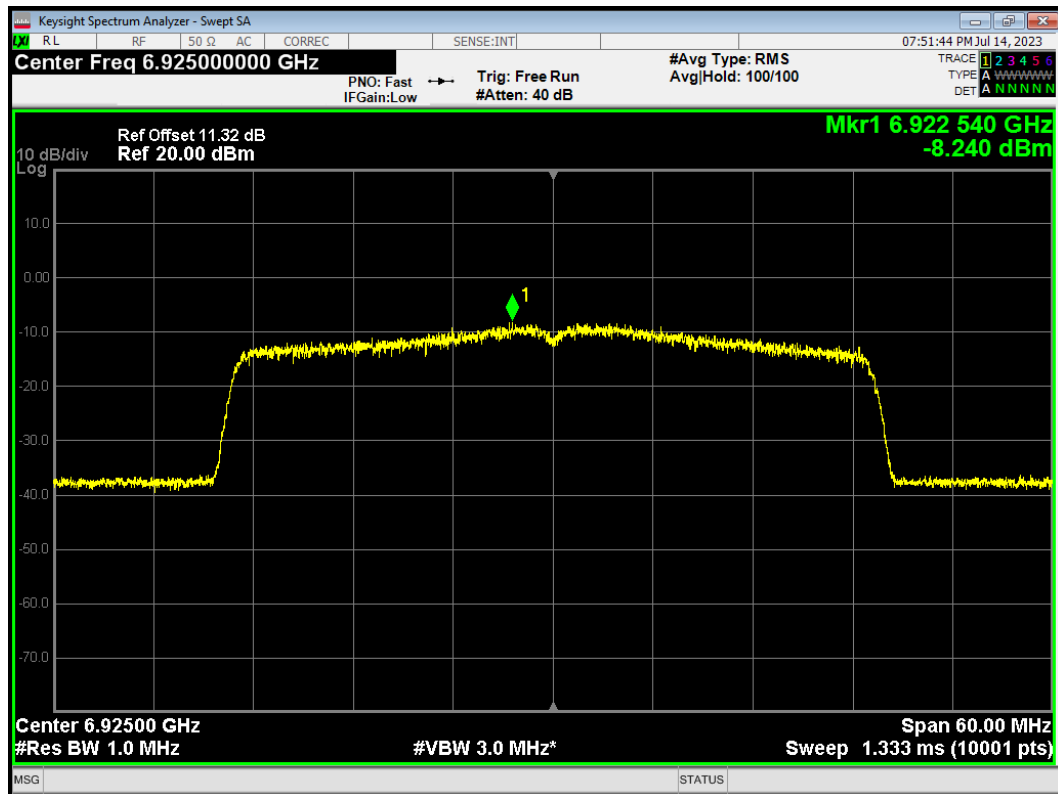
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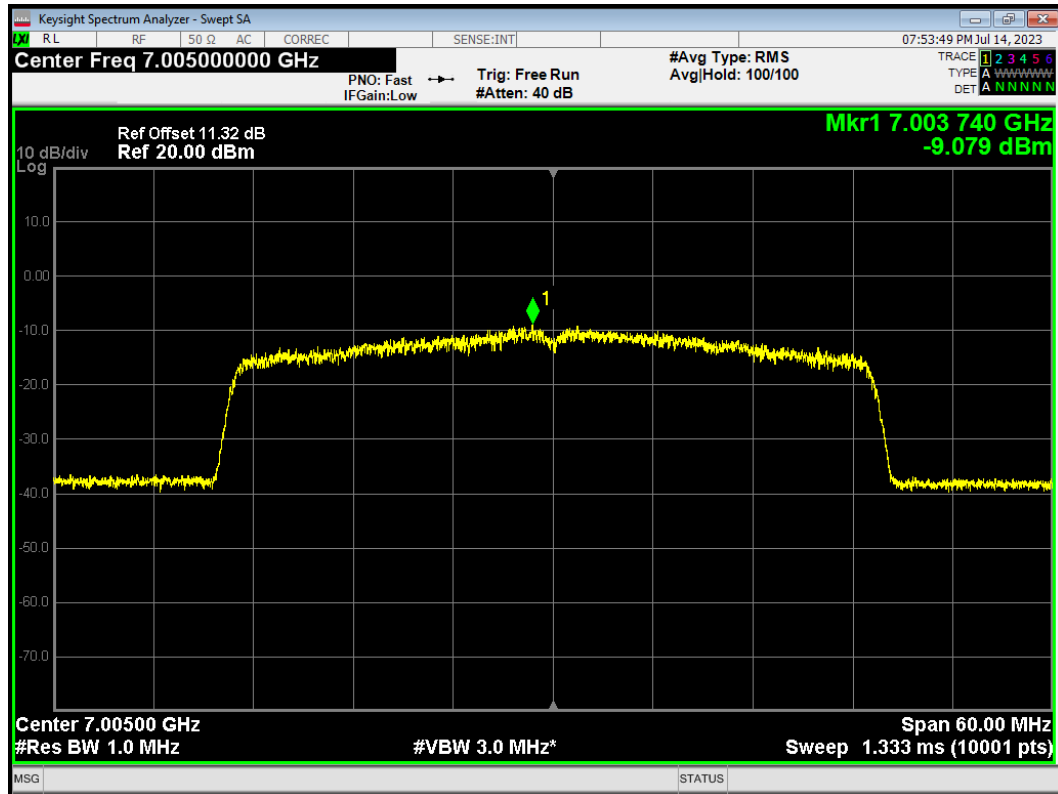
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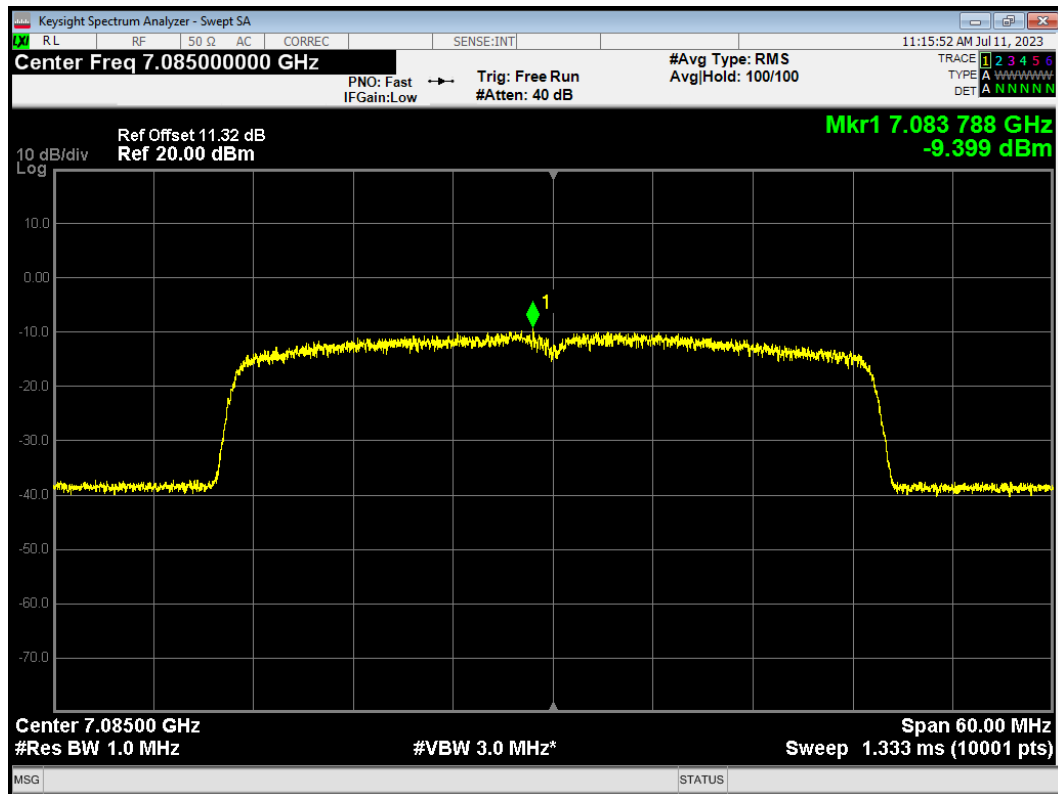
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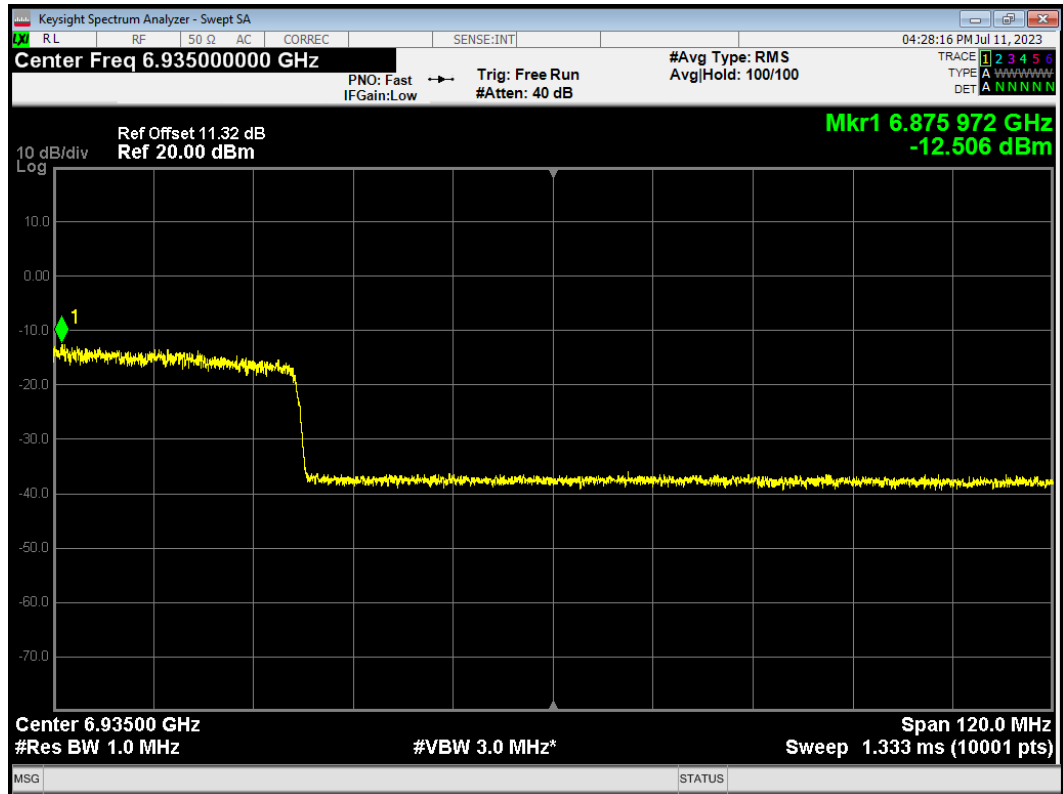
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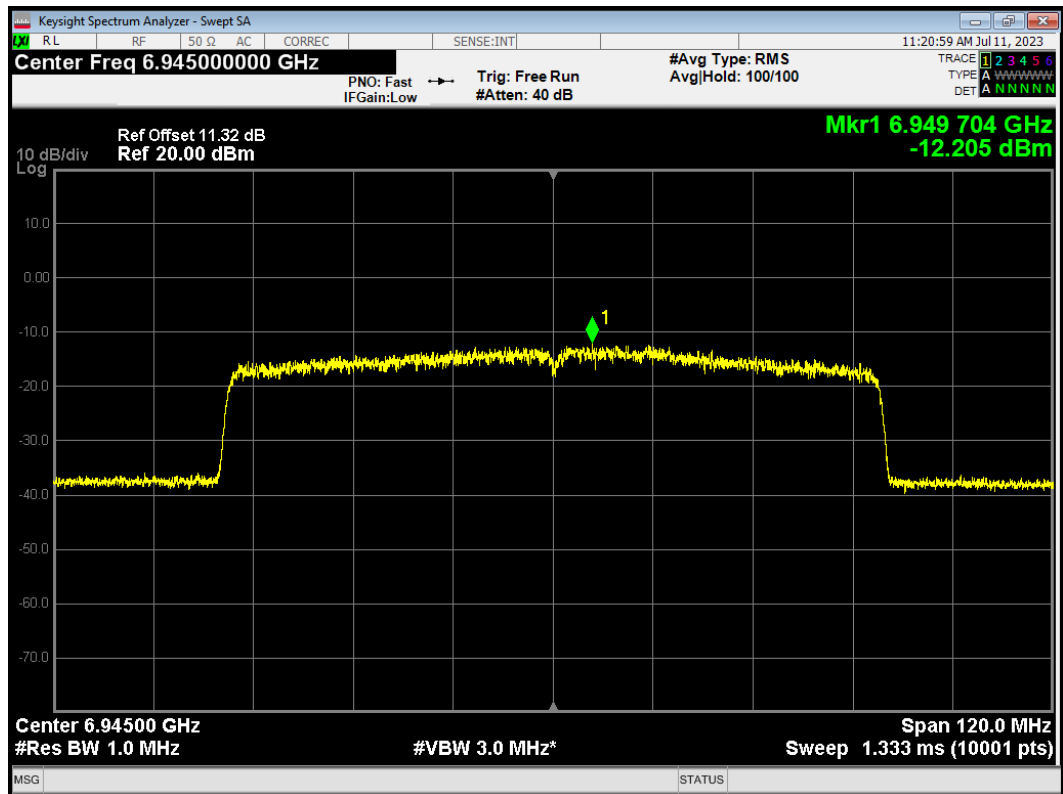
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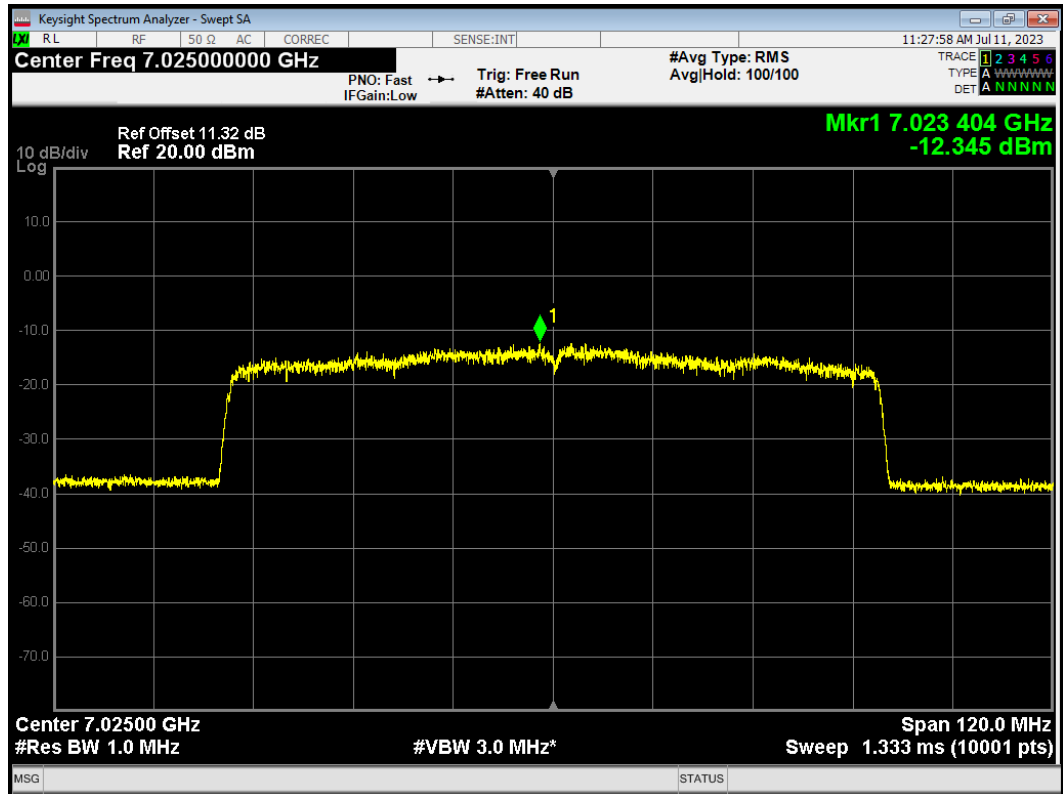
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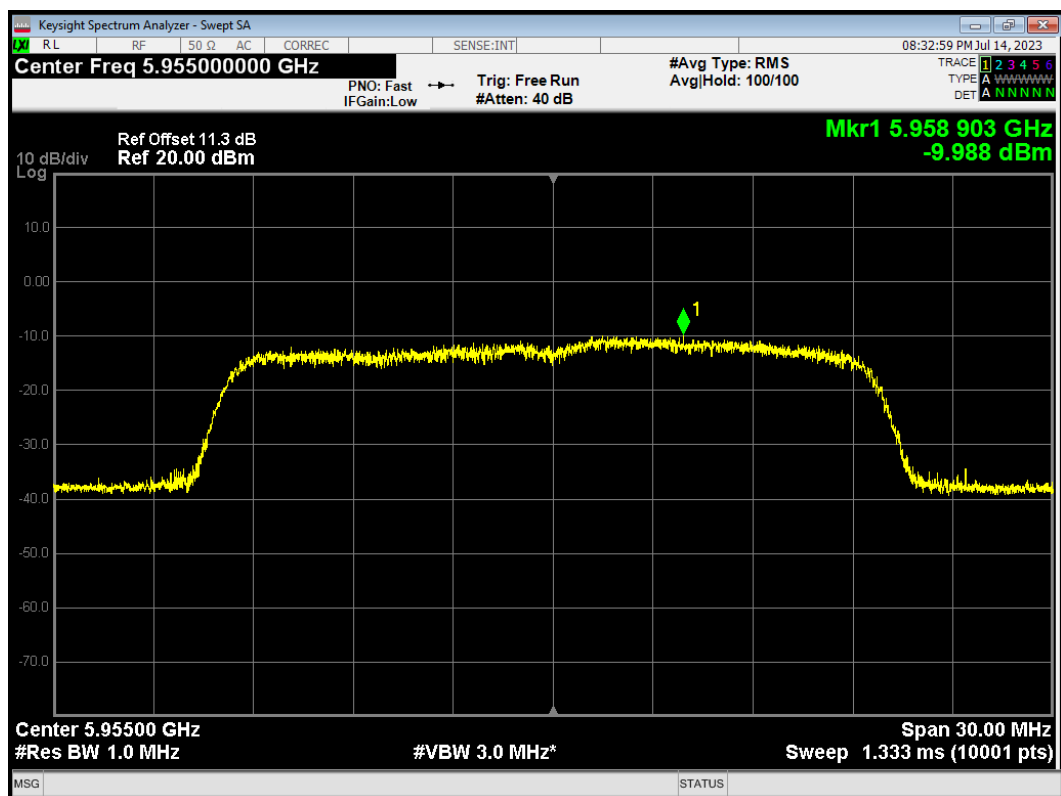


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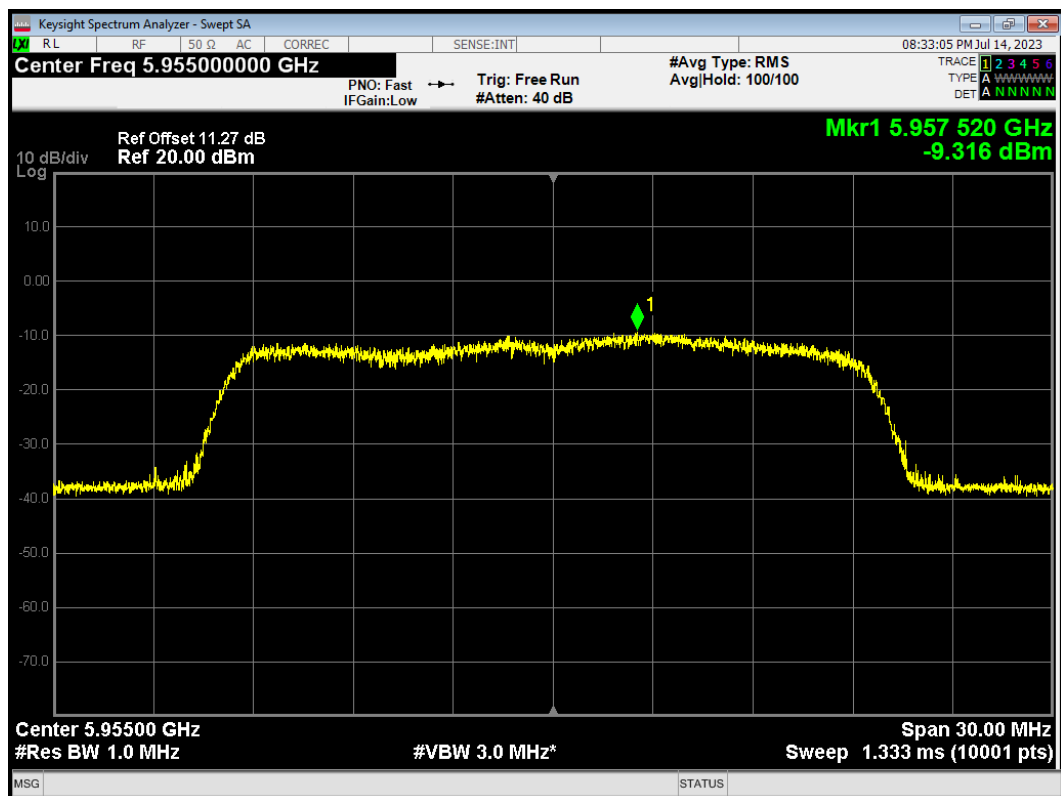


MIMO
U-NII-5

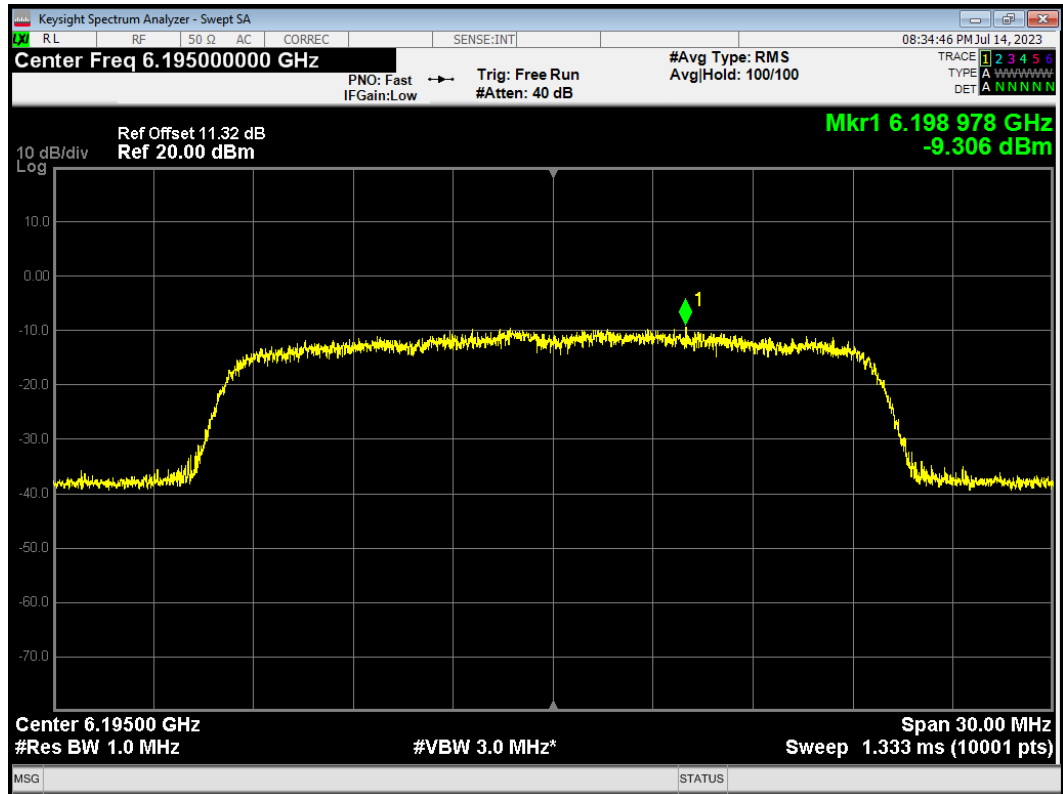
PSD 802.11ax HE20 5955MHz Antenna 1



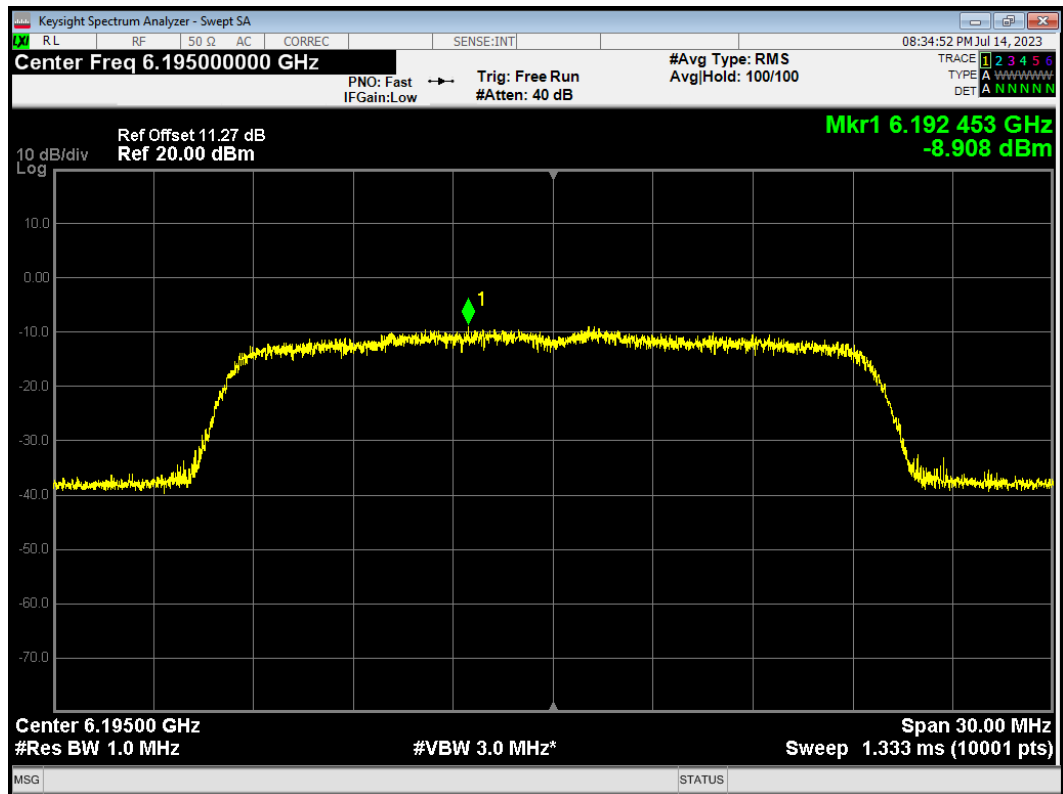
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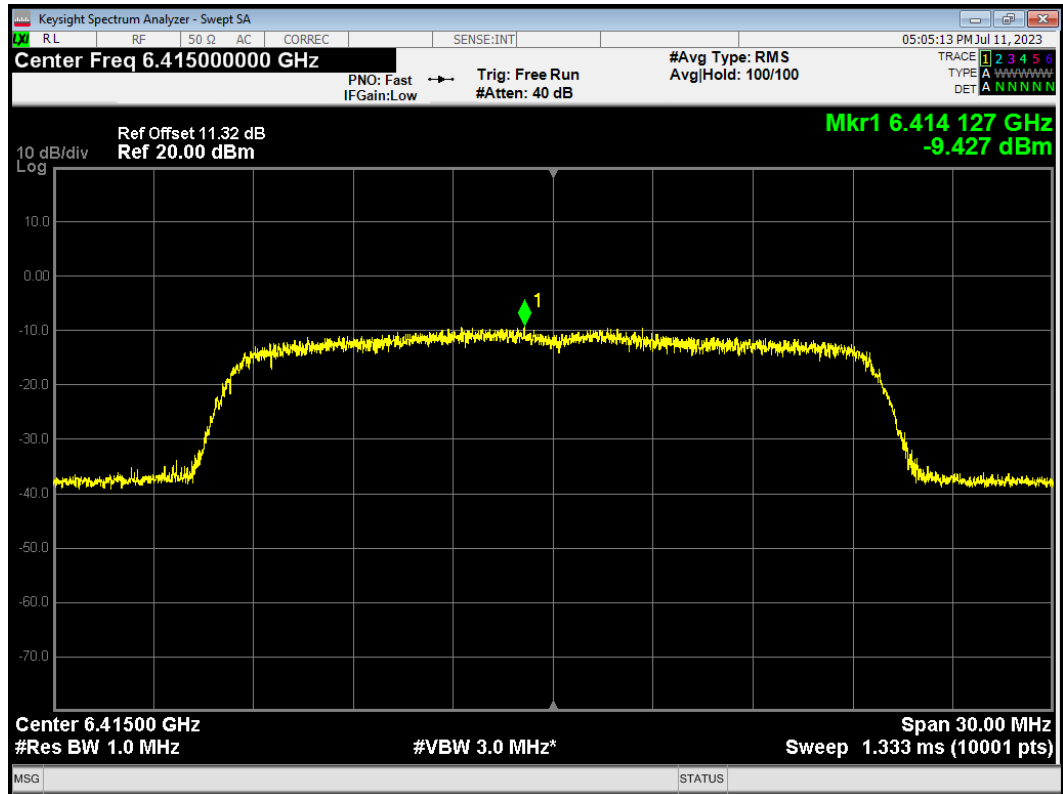
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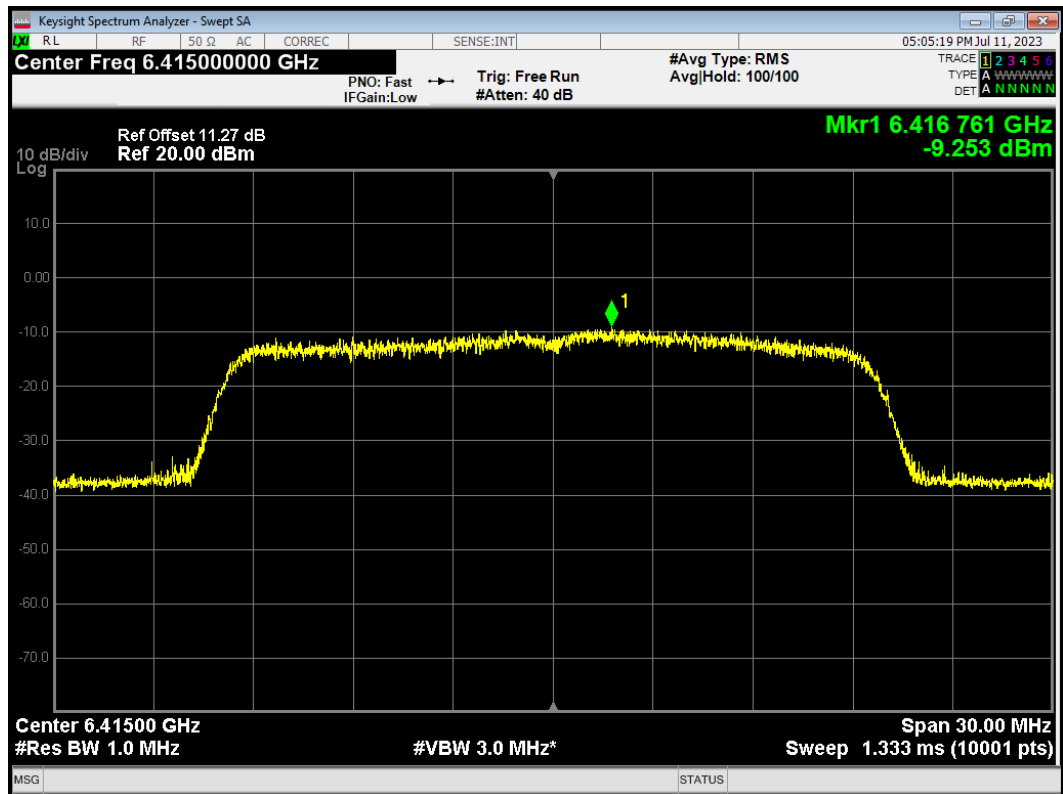
PSD 802.11ax HE20 6195MHz Antenna 2



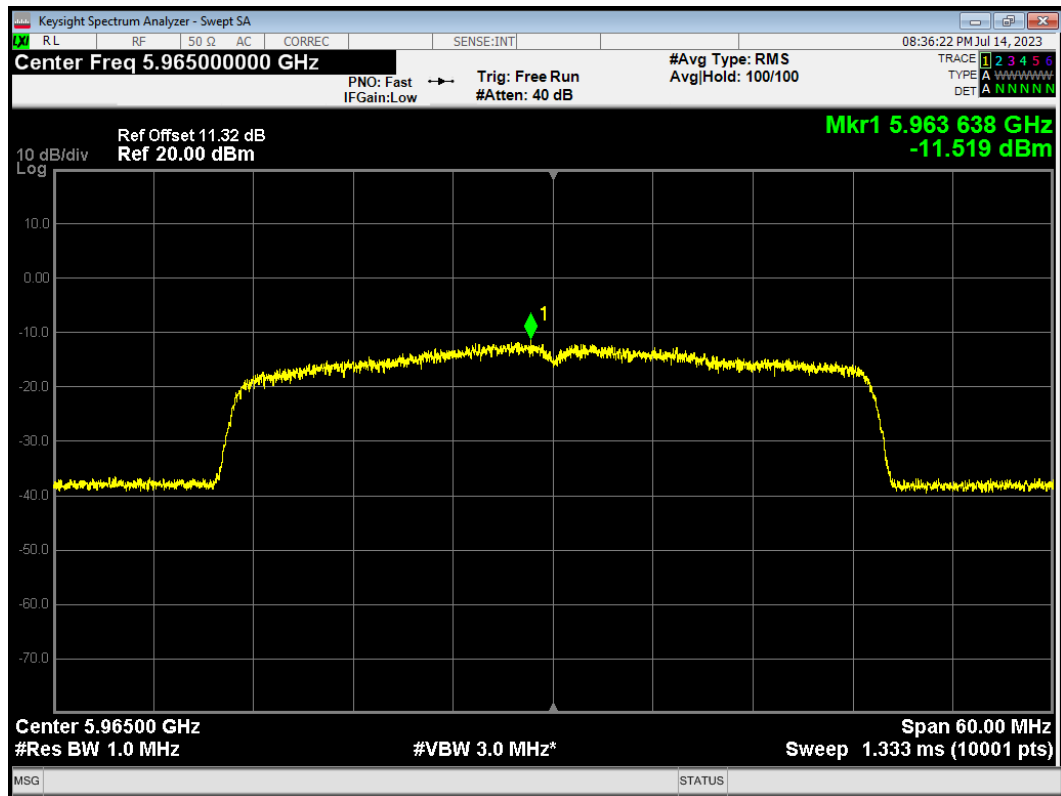
PSD 802.11ax HE20 6415MHz Antenna 1



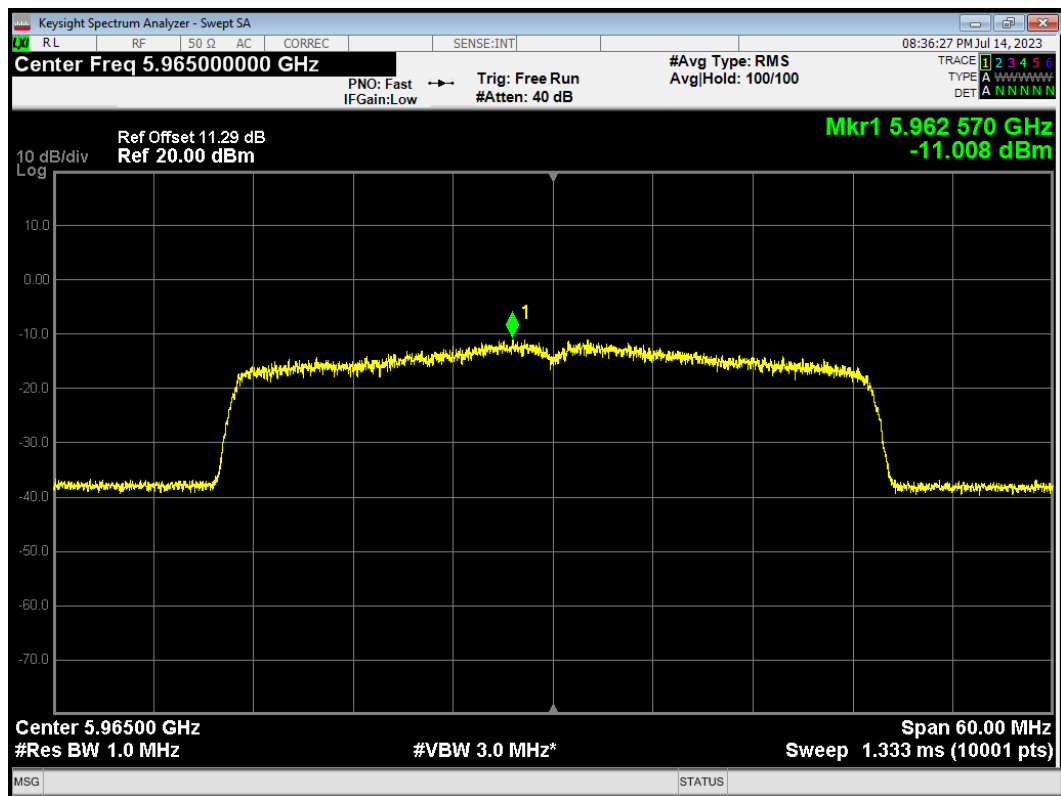
PSD 802.11ax HE20 6415MHz Antenna 2



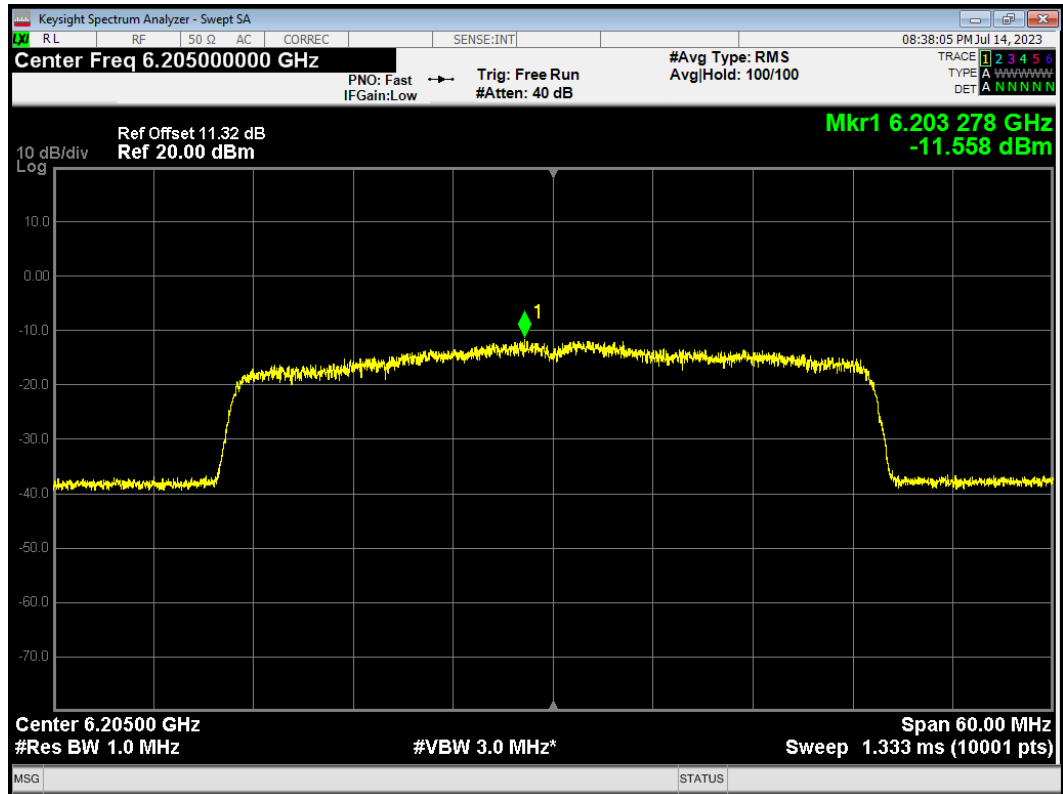
PSD 802.11ax HE40 5965MHz Antenna 1



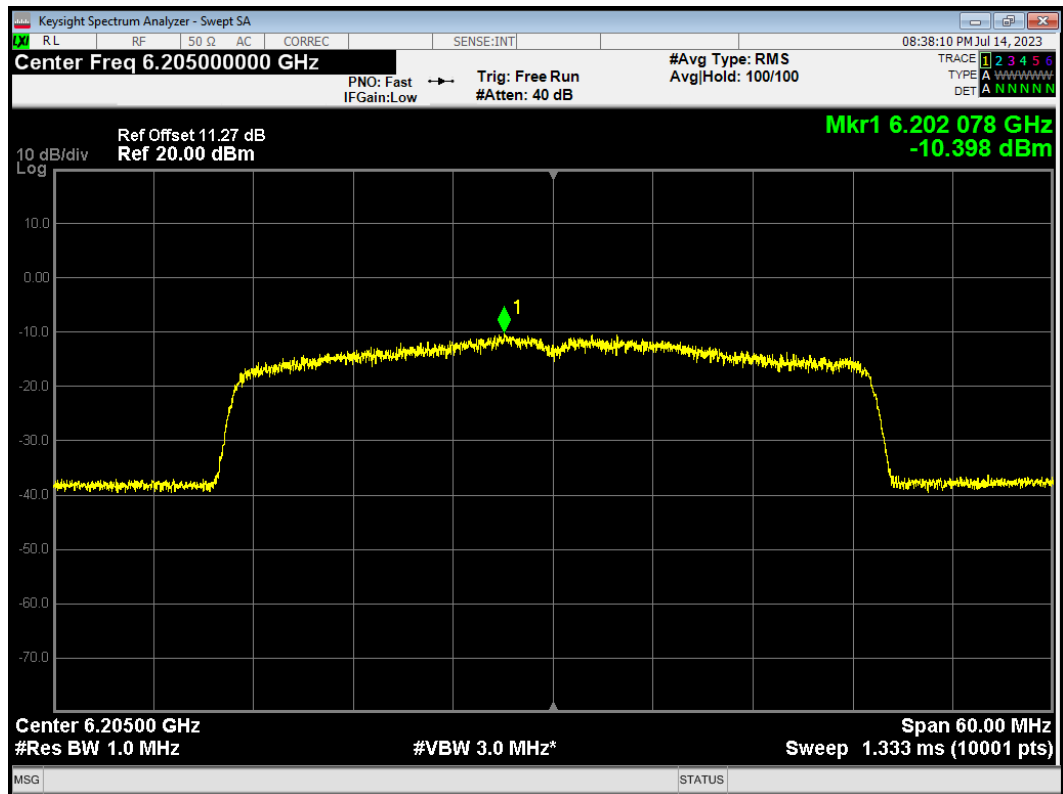
PSD 802.11ax HE40 5965MHz Antenna 2



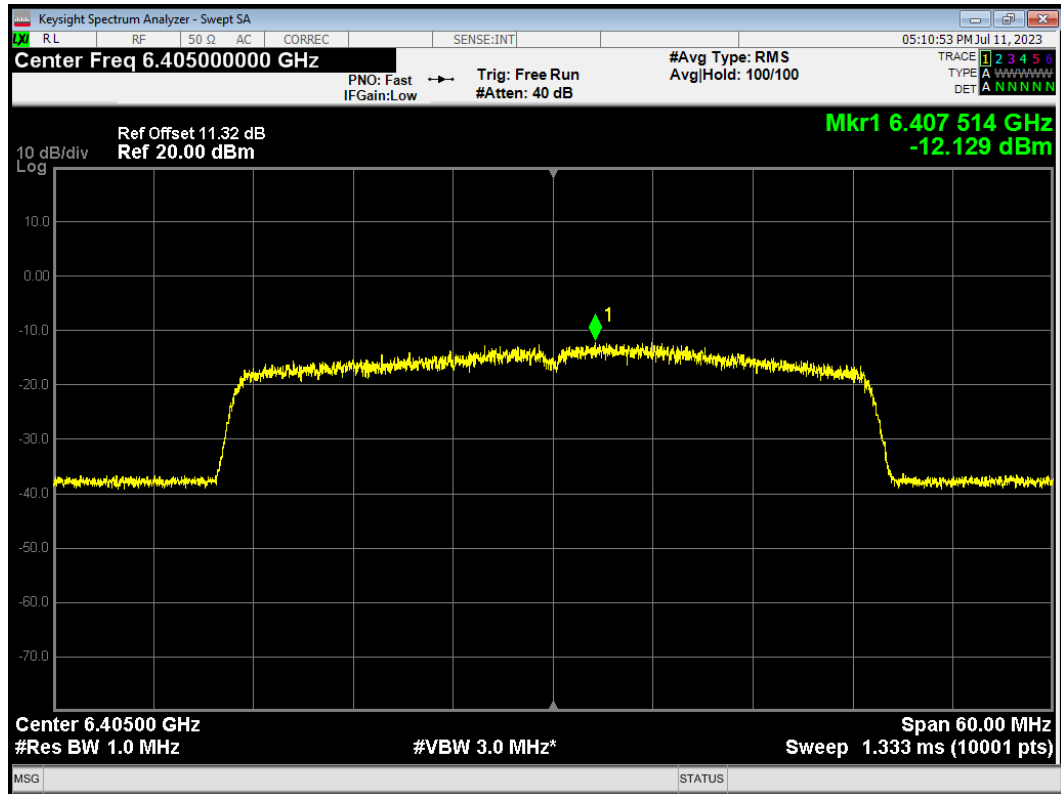
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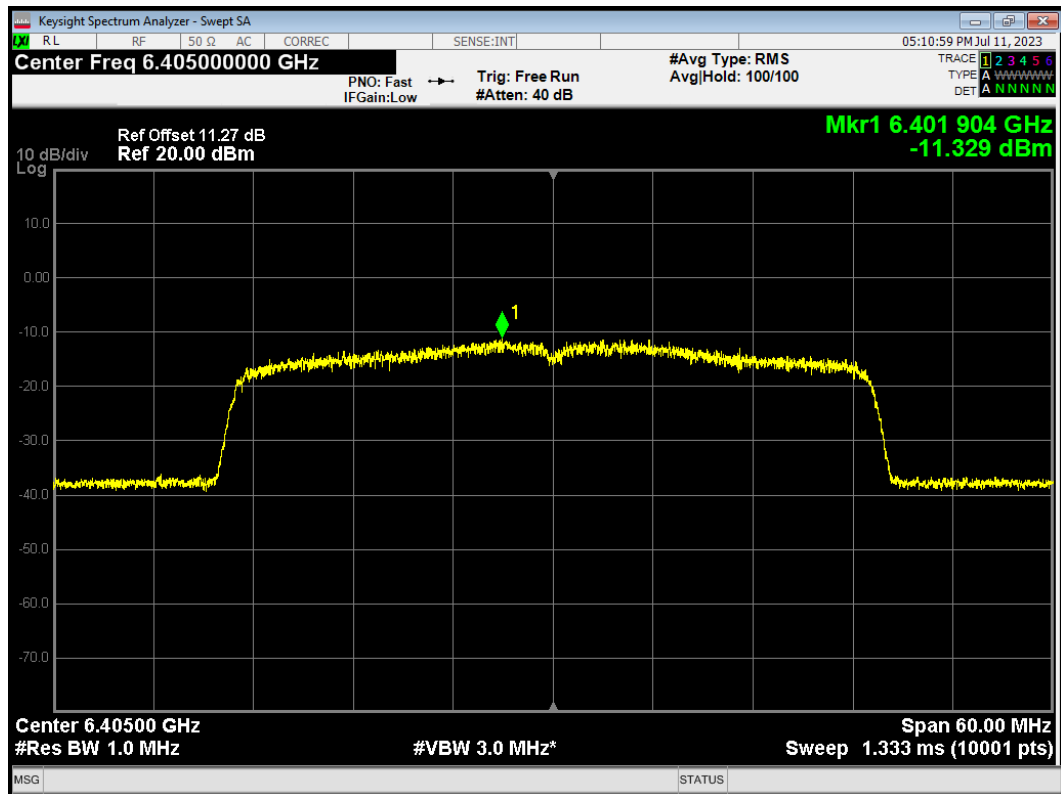
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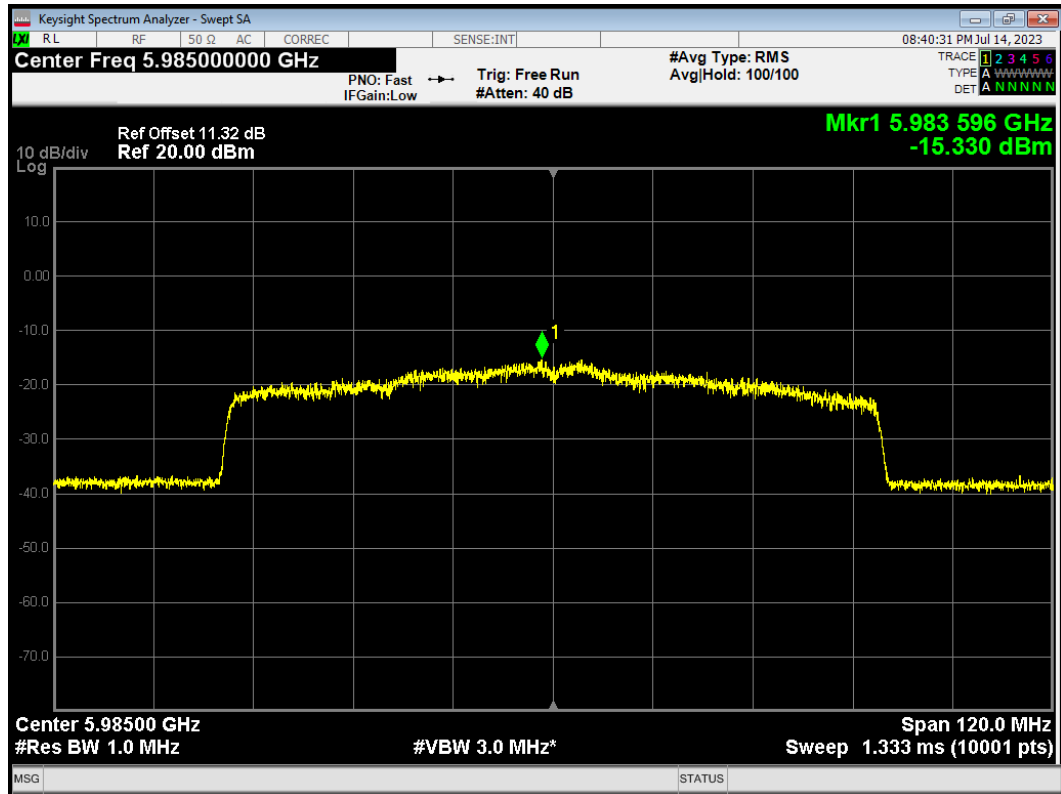
PSD 802.11ax HE40 6405MHz Antenna 1



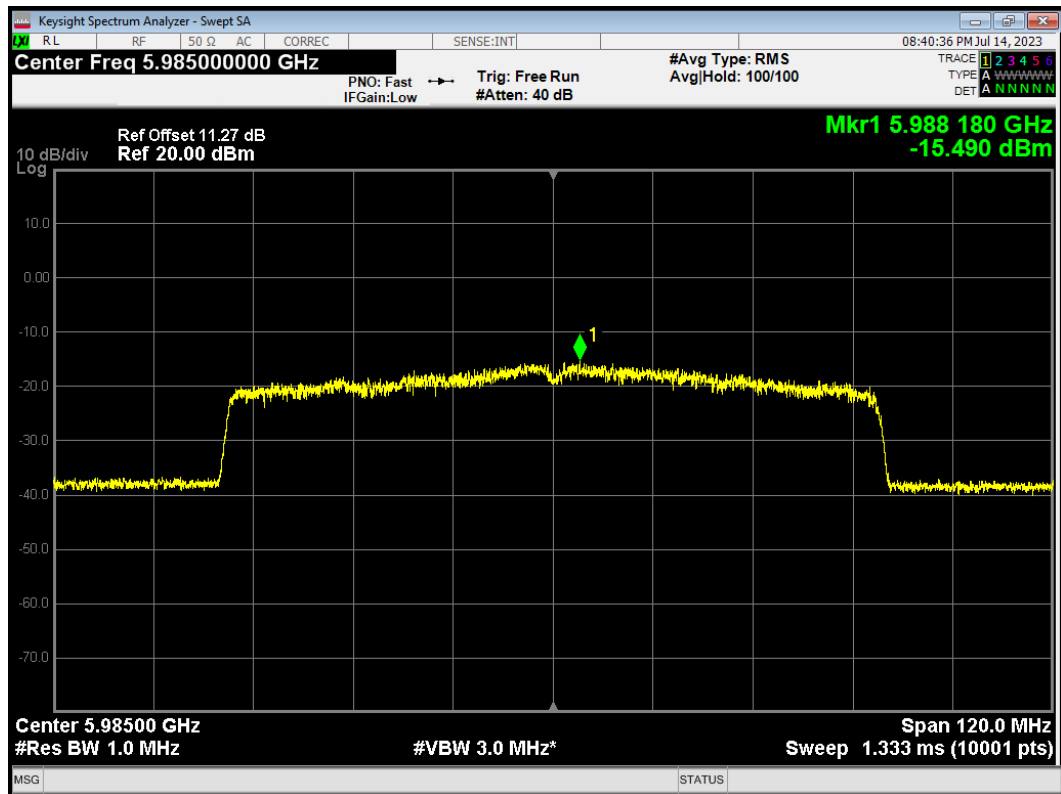
PSD 802.11ax HE40 6405MHz Antenna 2



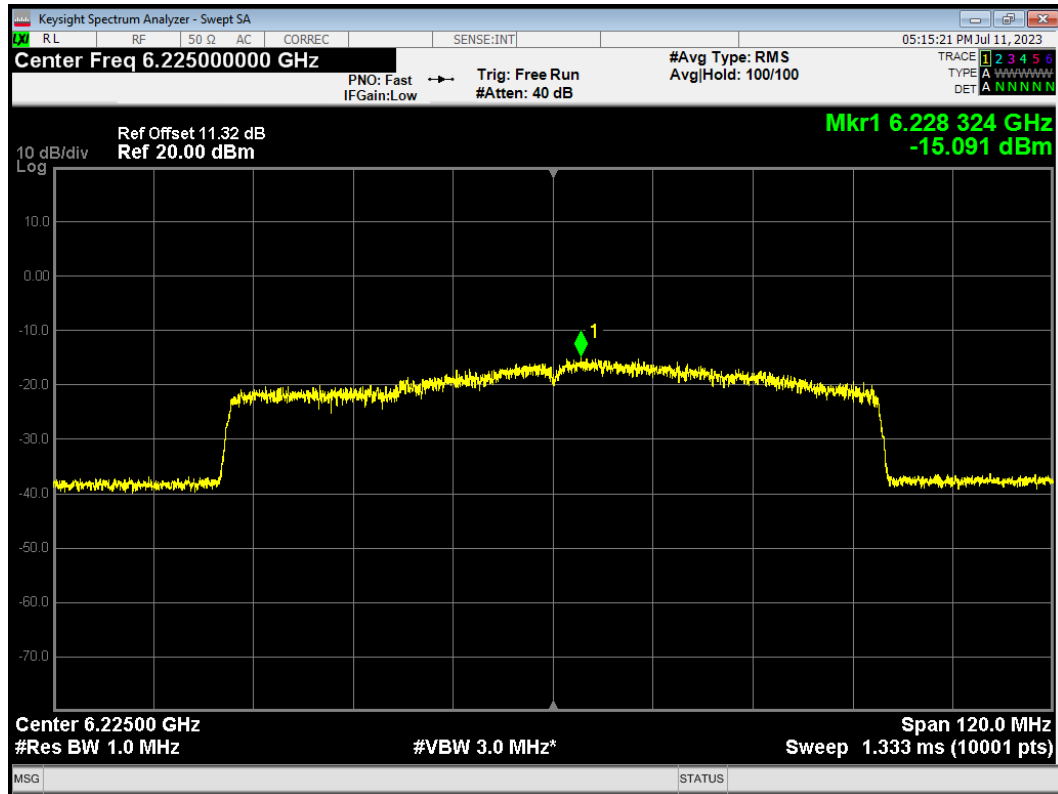
PSD 802.11ax HE80 5985MHz Antenna 1



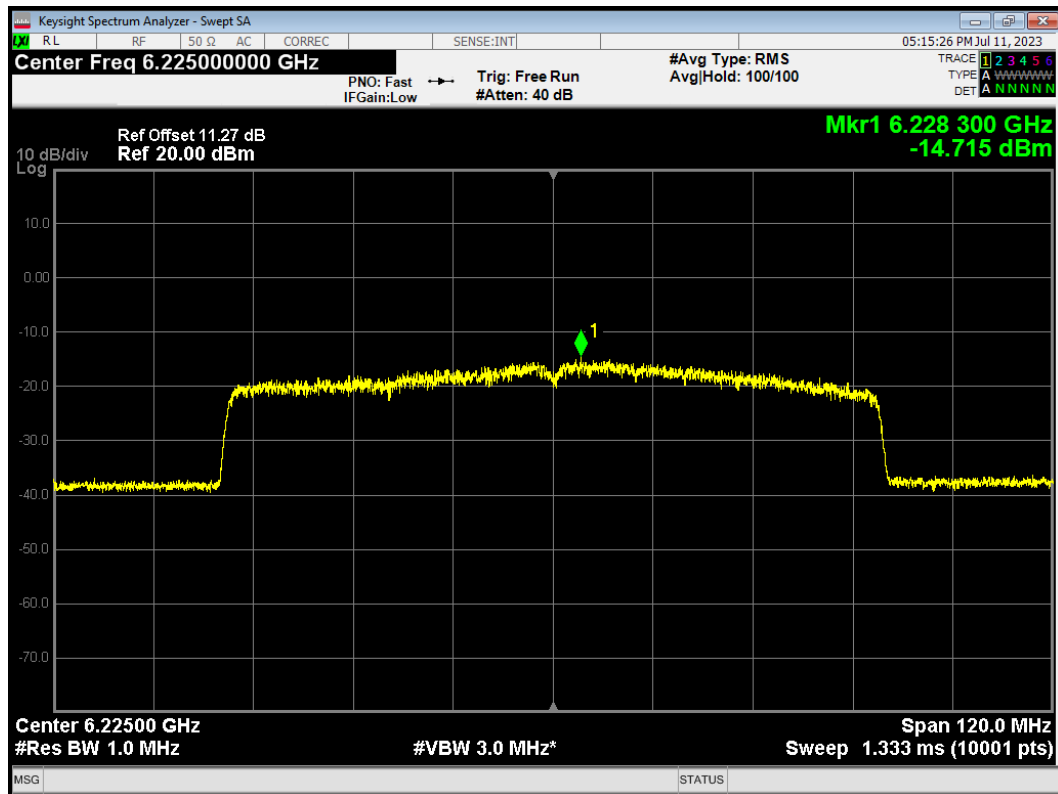
PSD 802.11ax HE80 5985MHz Antenna 2



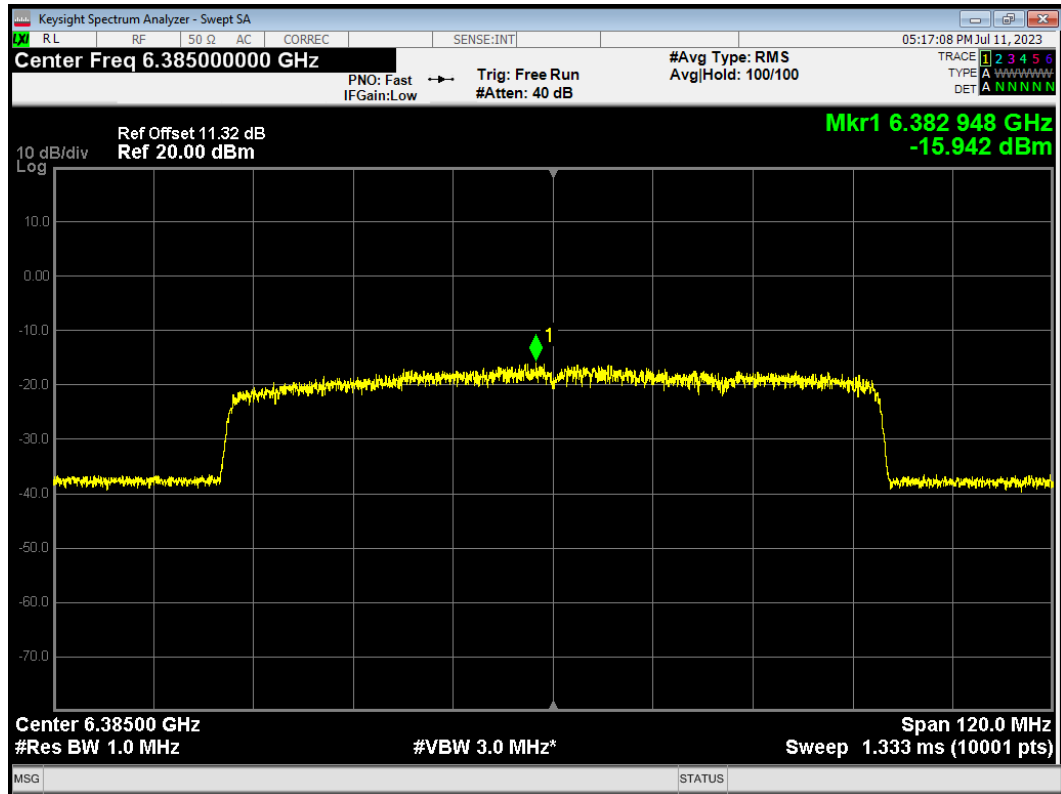
PSD 802.11ax HE80 6225MHz Antenna 1



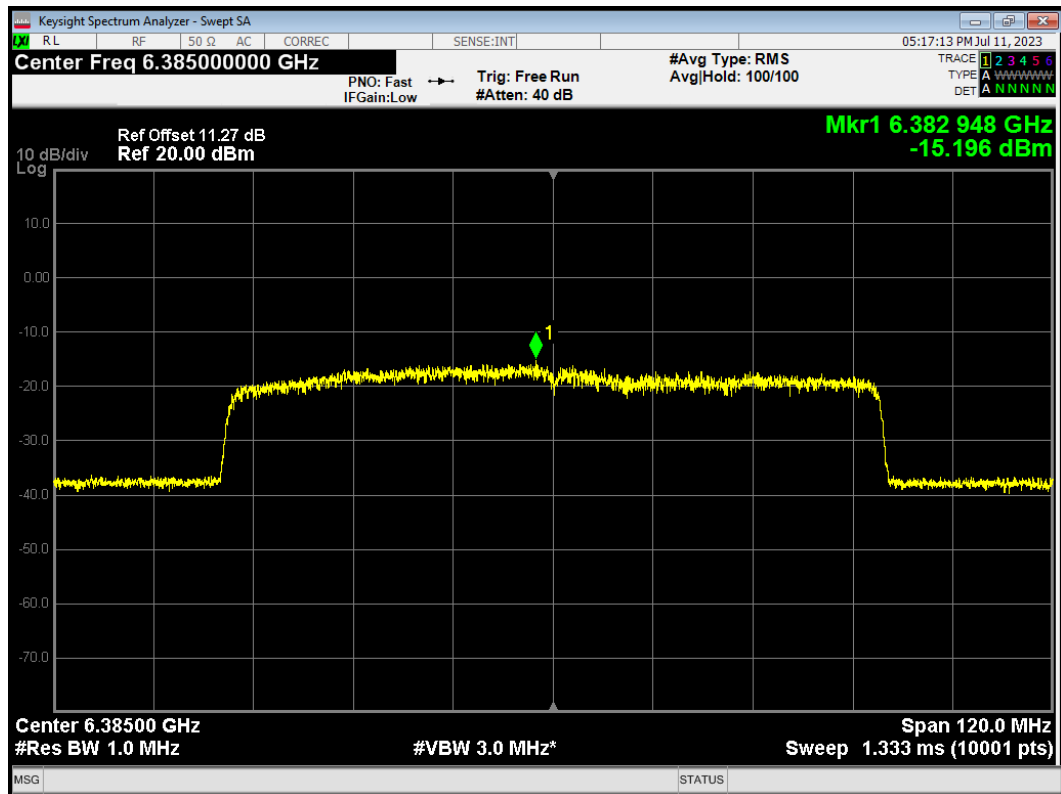
PSD 802.11ax HE80 6225MHz Antenna 2



PSD 802.11ax HE80 6385MHz Antenna 1

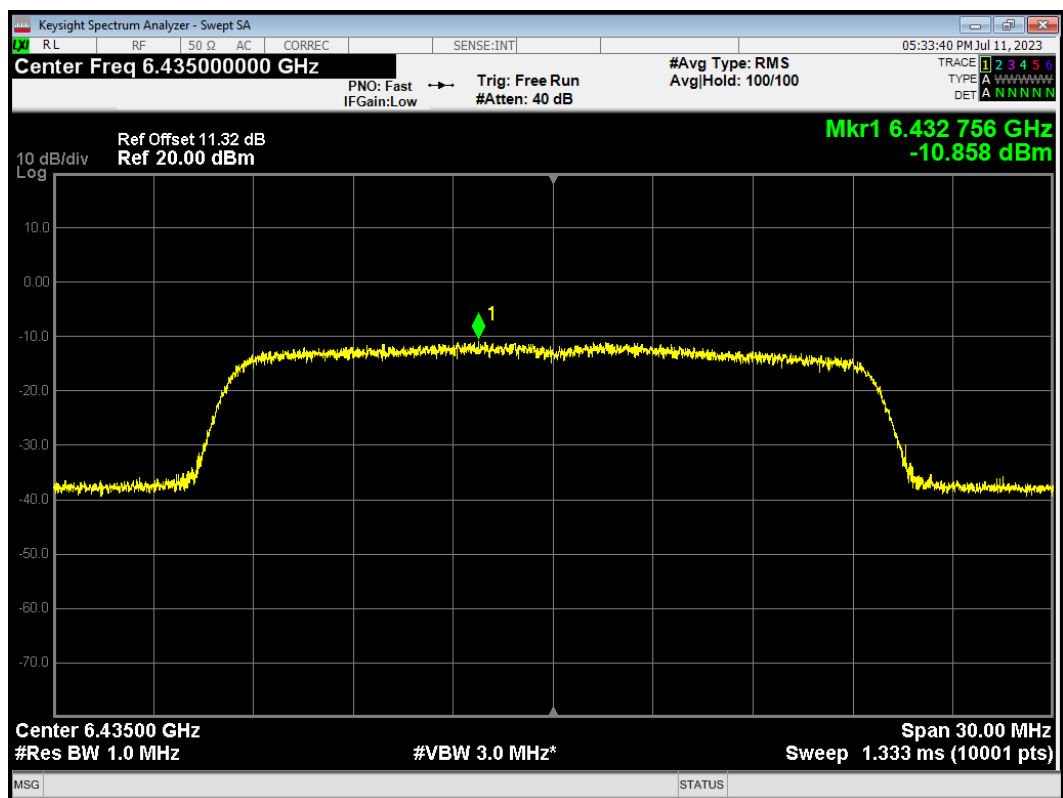


PSD 802.11ax HE80 6385MHz Antenna 2

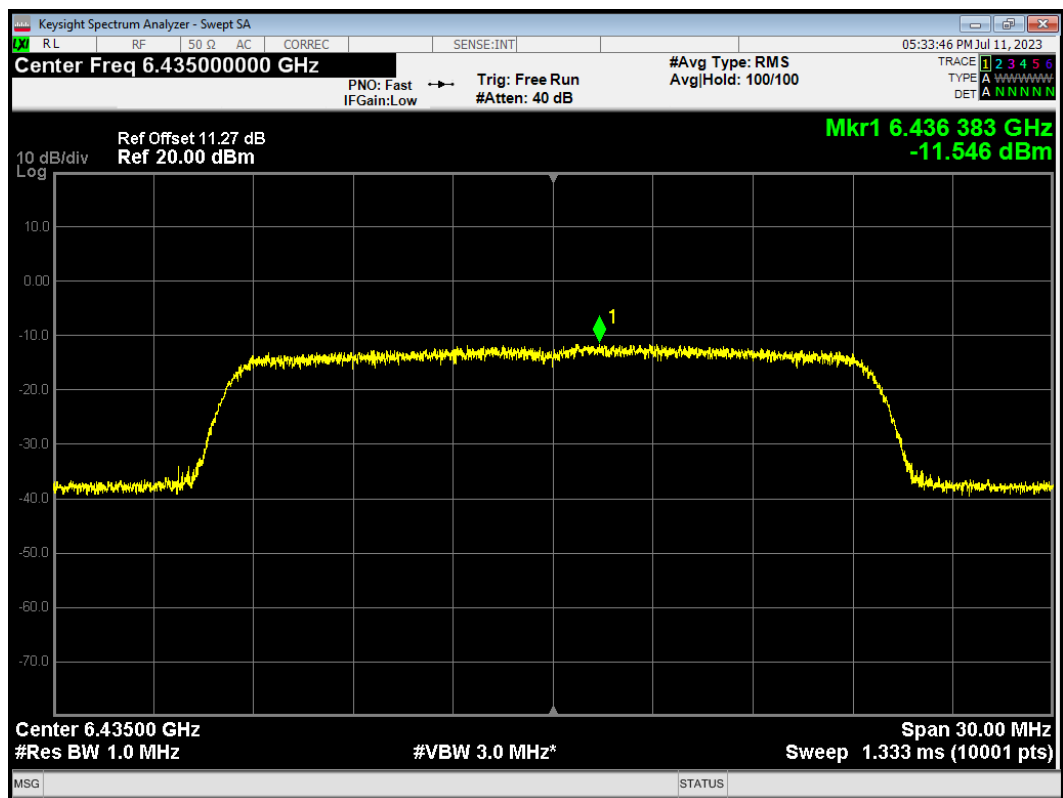


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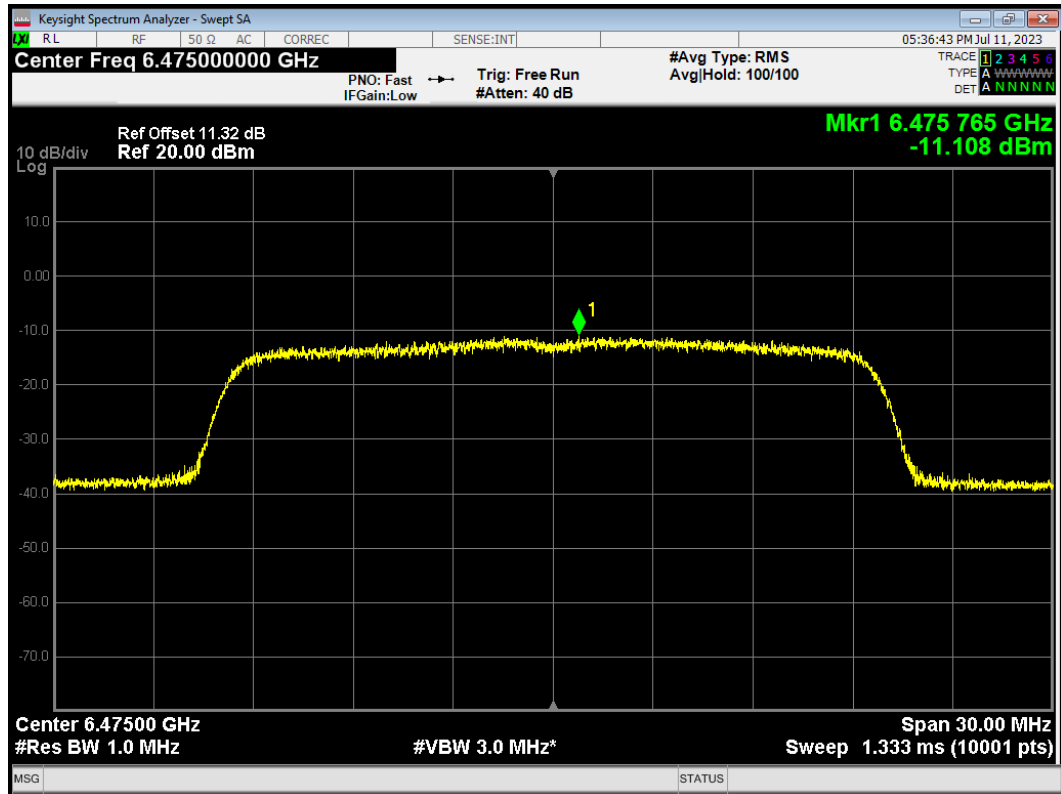
PSD 802.11ax HE20 6435MHz Antenna 1



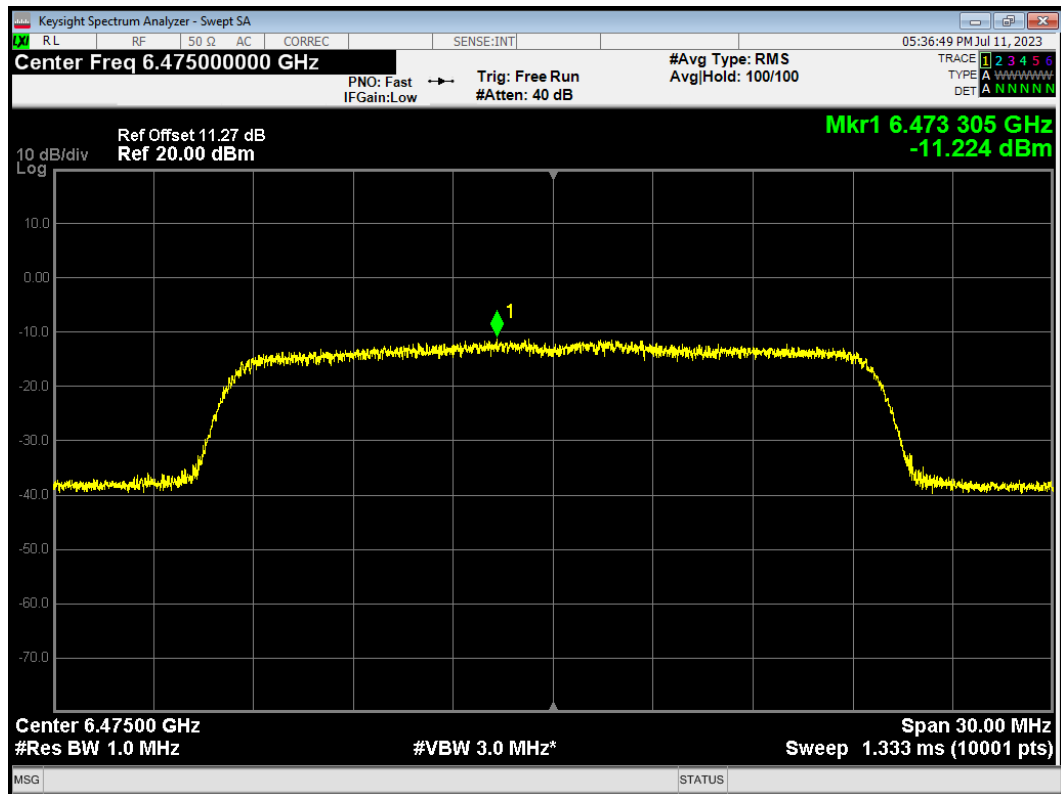
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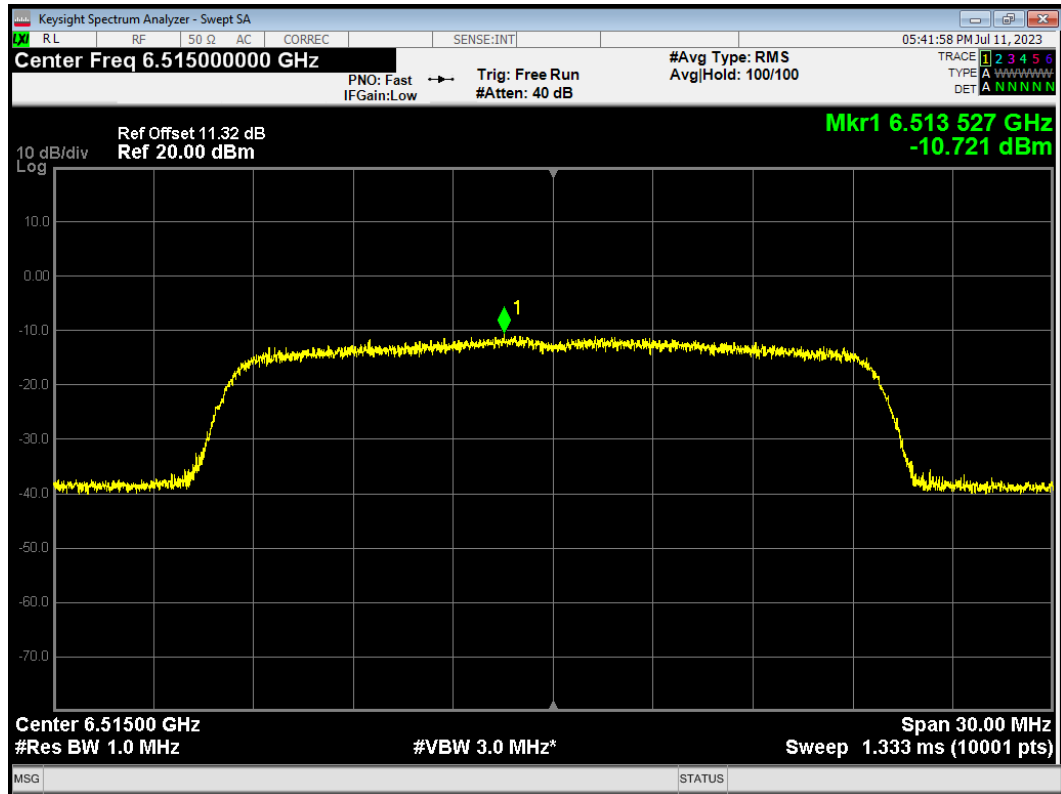
PSD 802.11ax HE20 6475MHz Antenna 1



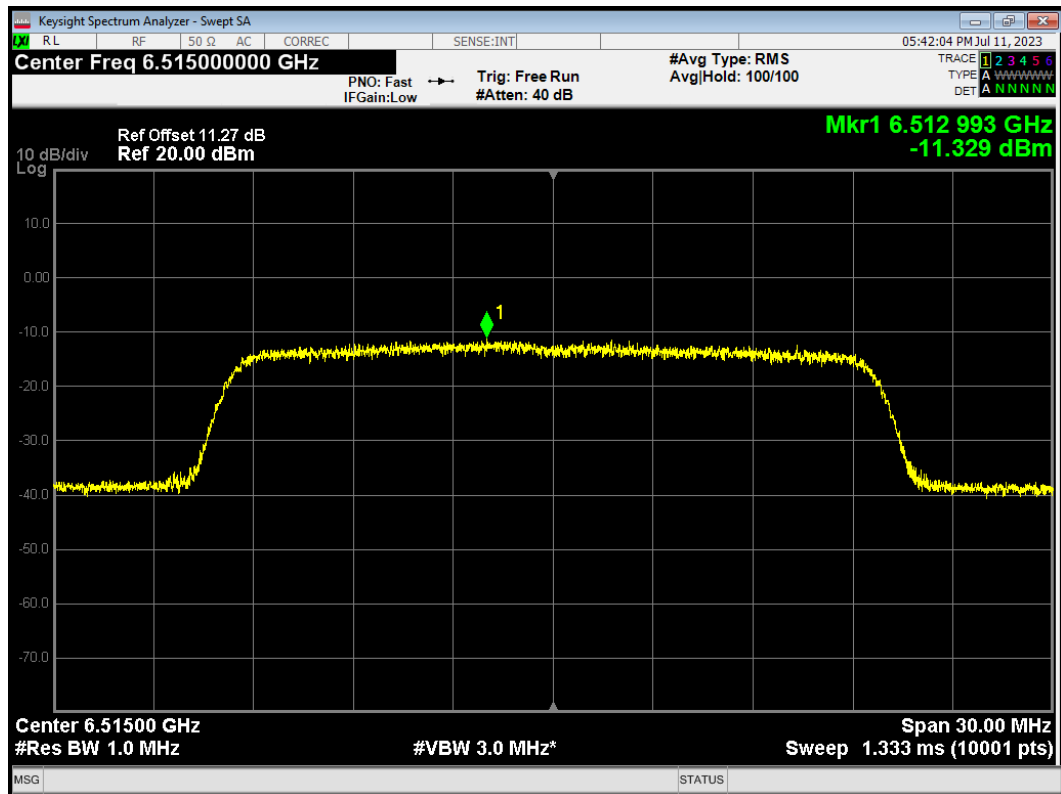
PSD 802.11ax HE20 6475MHz Antenna 2



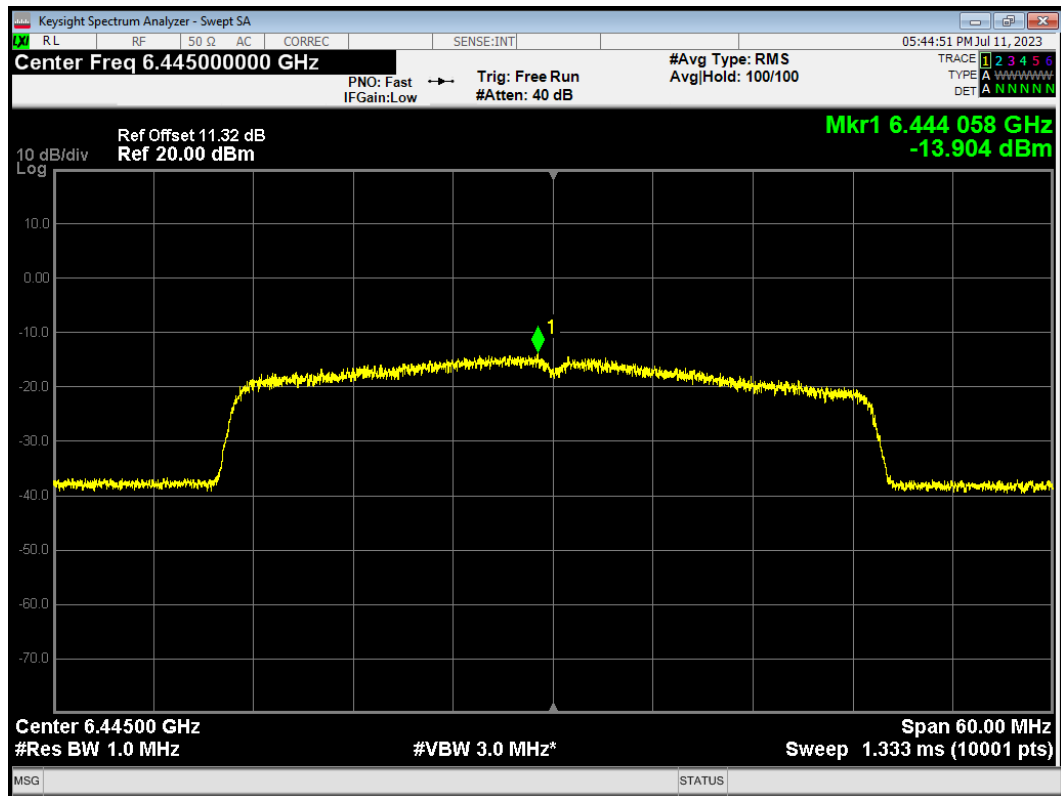
PSD 802.11ax HE20 6515MHz Antenna 1



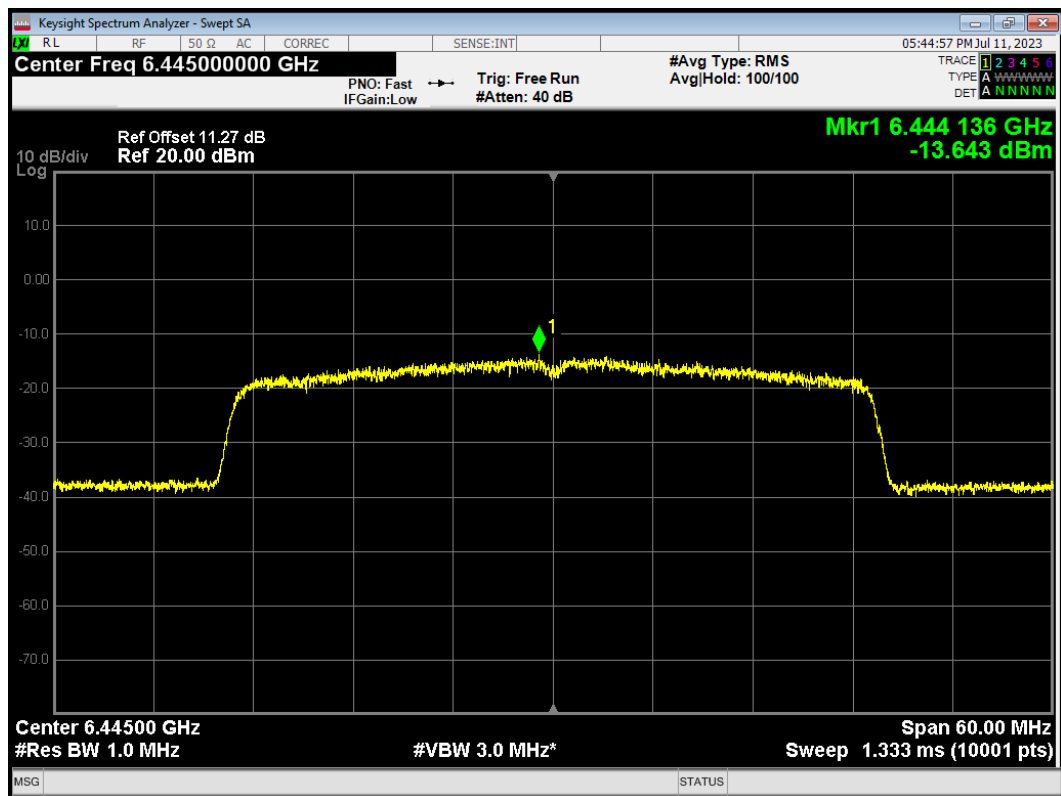
PSD 802.11ax HE20 6515MHz Antenna 2



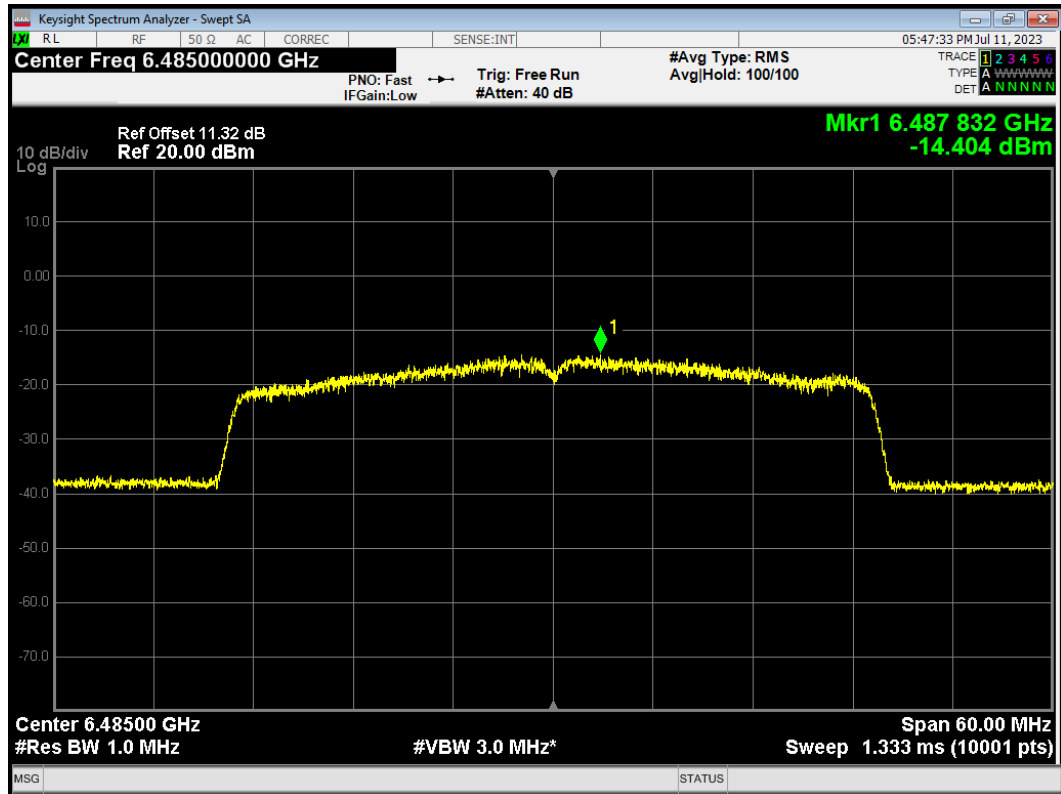
PSD 802.11ax HE40 6445MHz Antenna 1



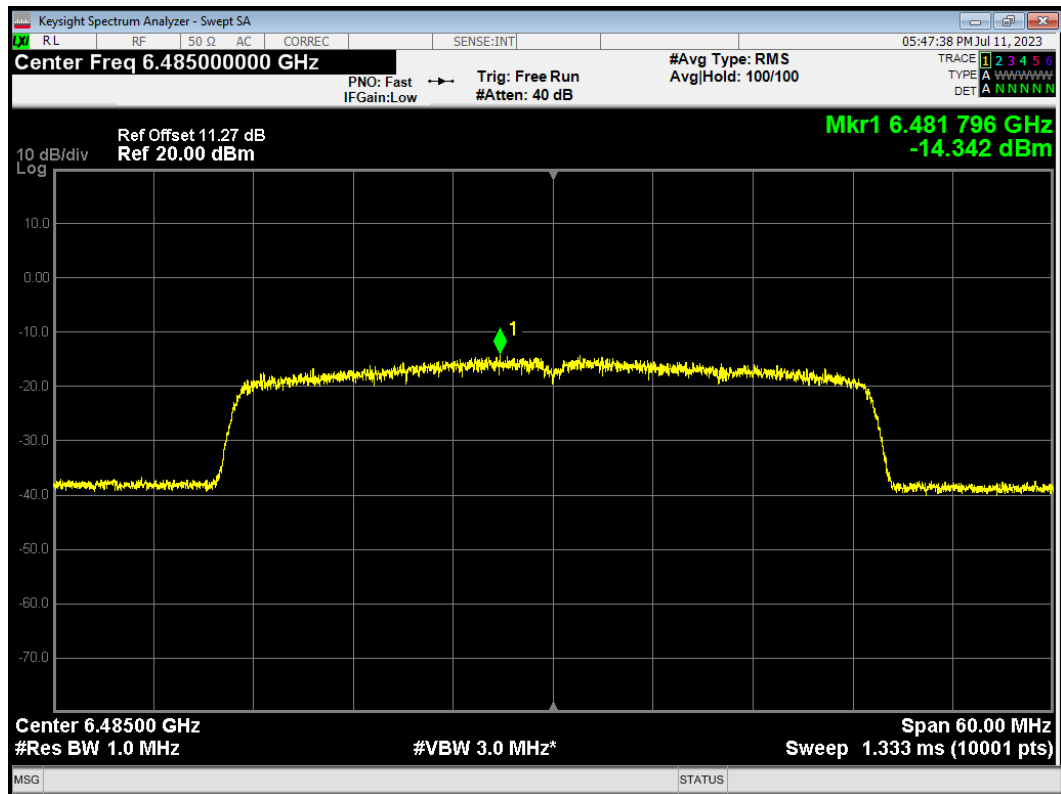
PSD 802.11ax HE40 6445MHz Antenna 2



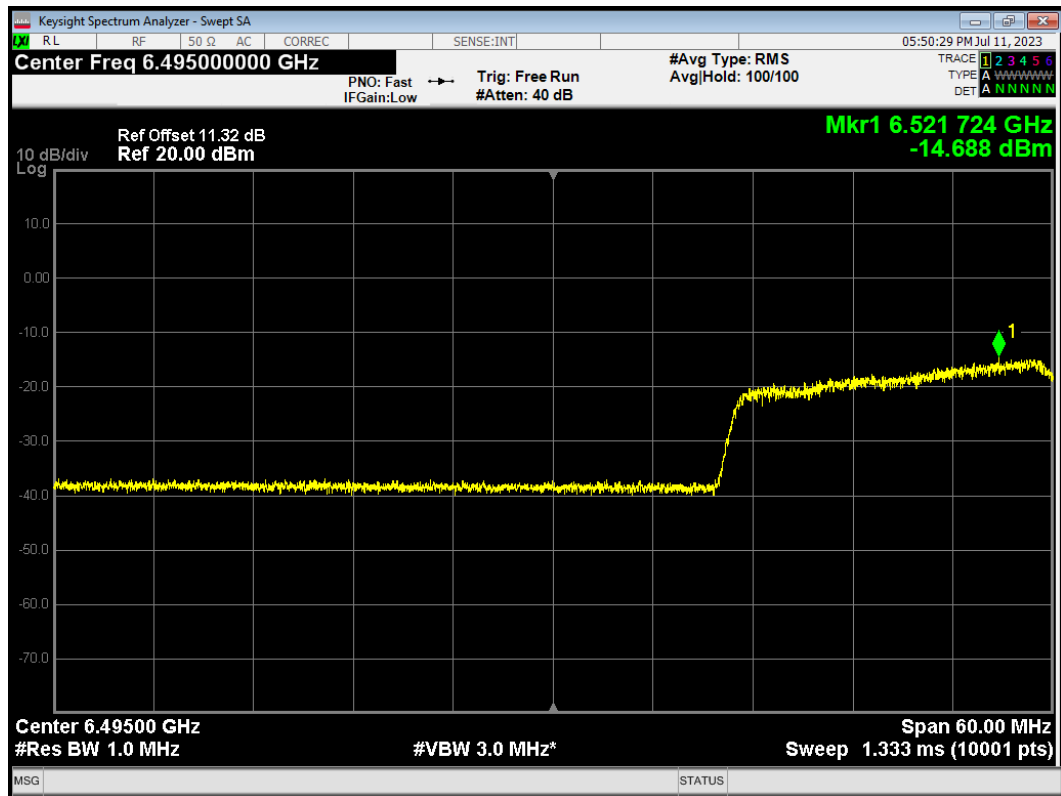
PSD 802.11ax HE40 6485MHz Antenna 1



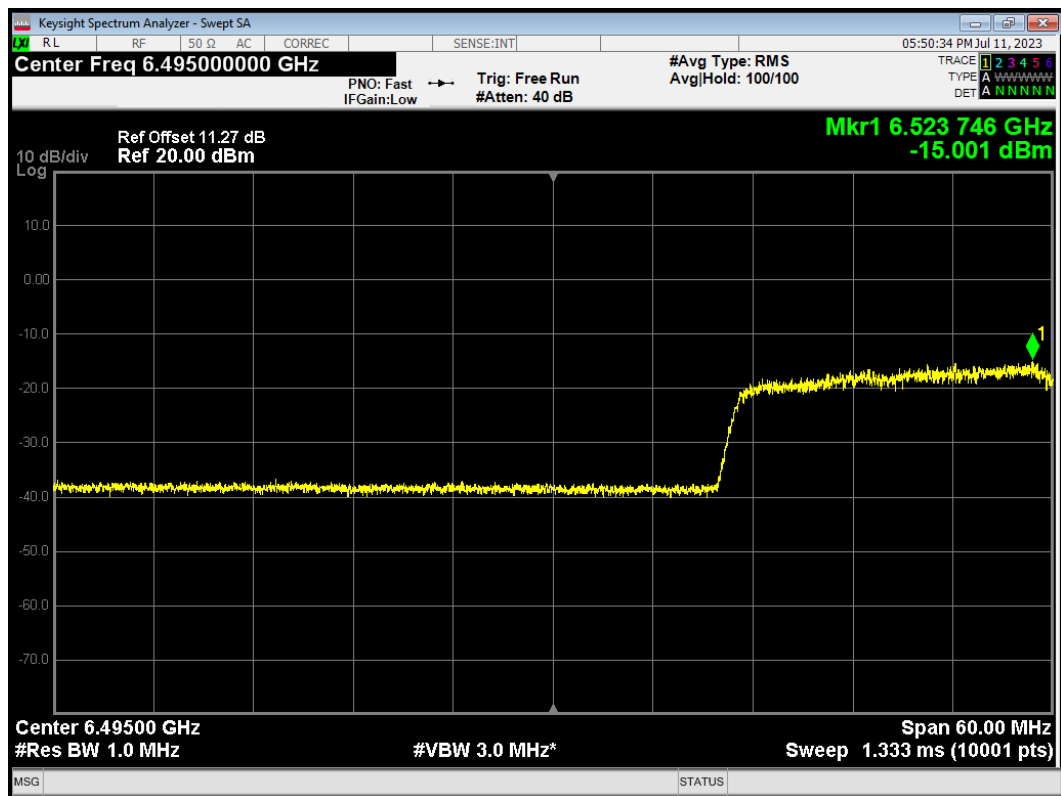
PSD 802.11ax HE40 6485MHz Antenna 2



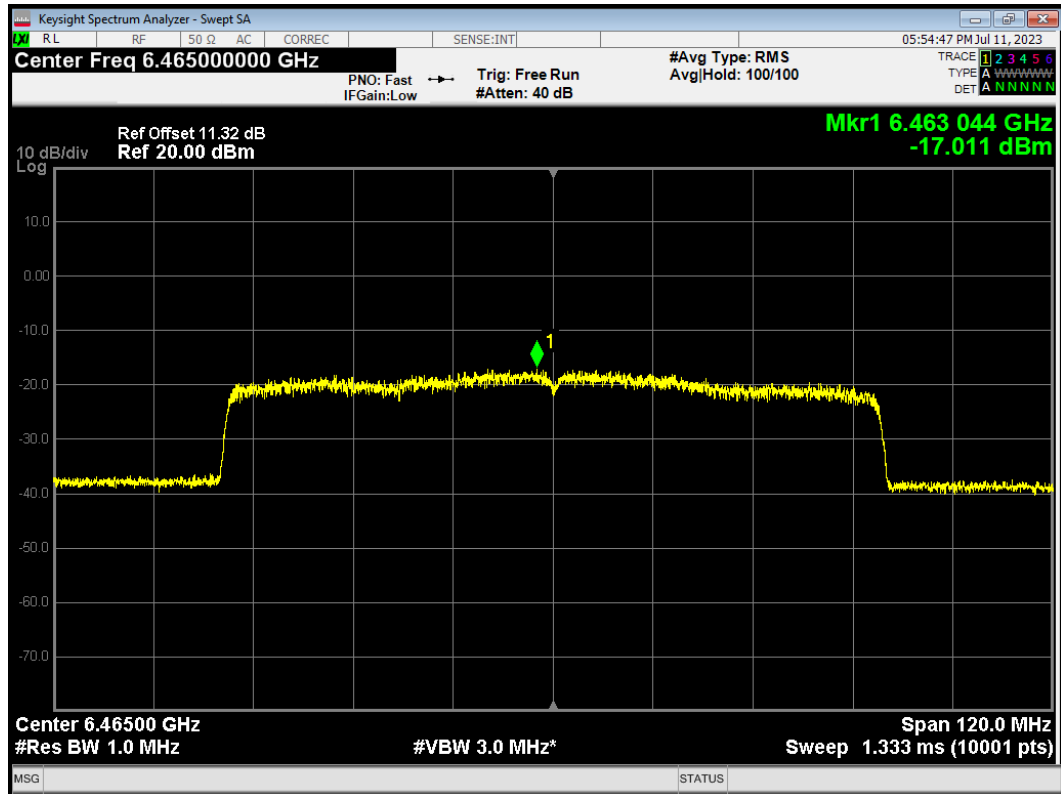
PSD 802.11ax HE40 6525MHz Antenna 1



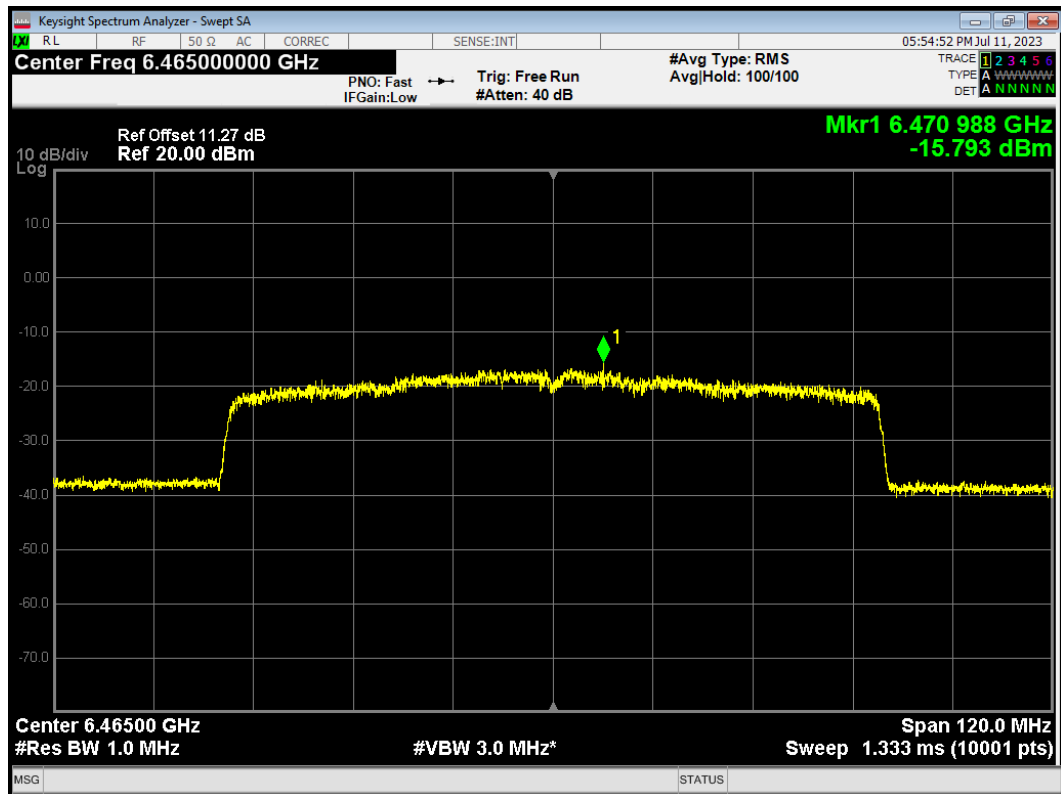
PSD 802.11ax HE40 6525MHz Antenna 2



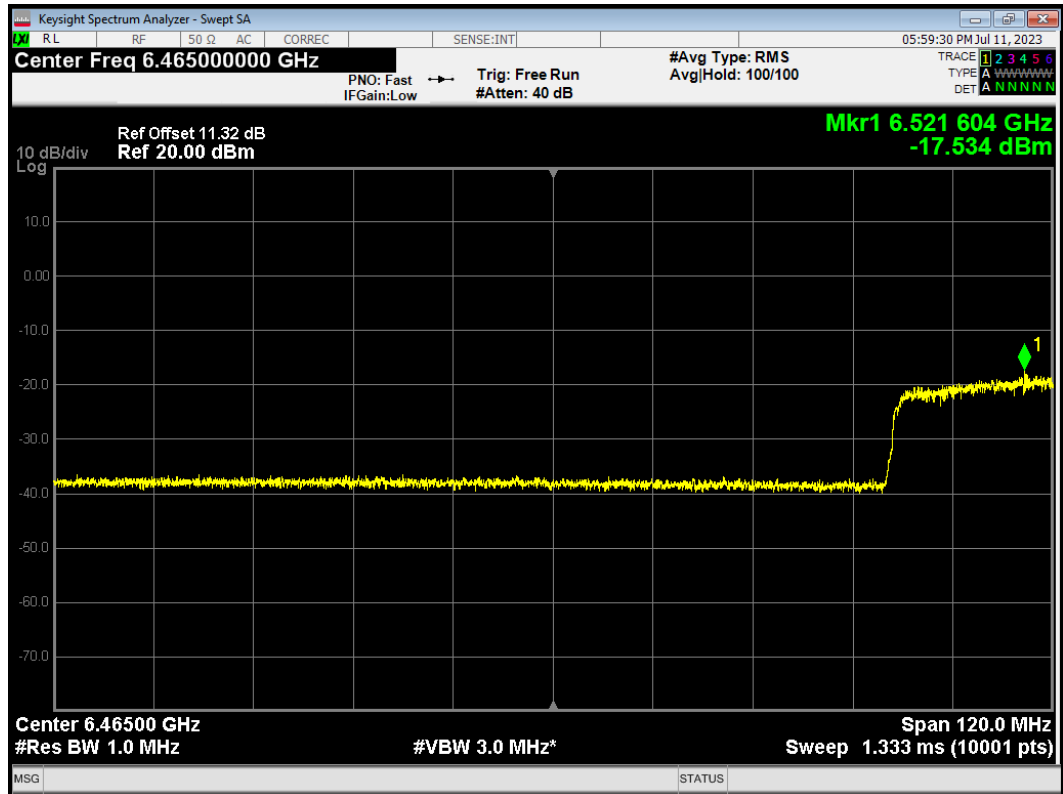
PSD 802.11ax HE80 6465MHz Antenna 1



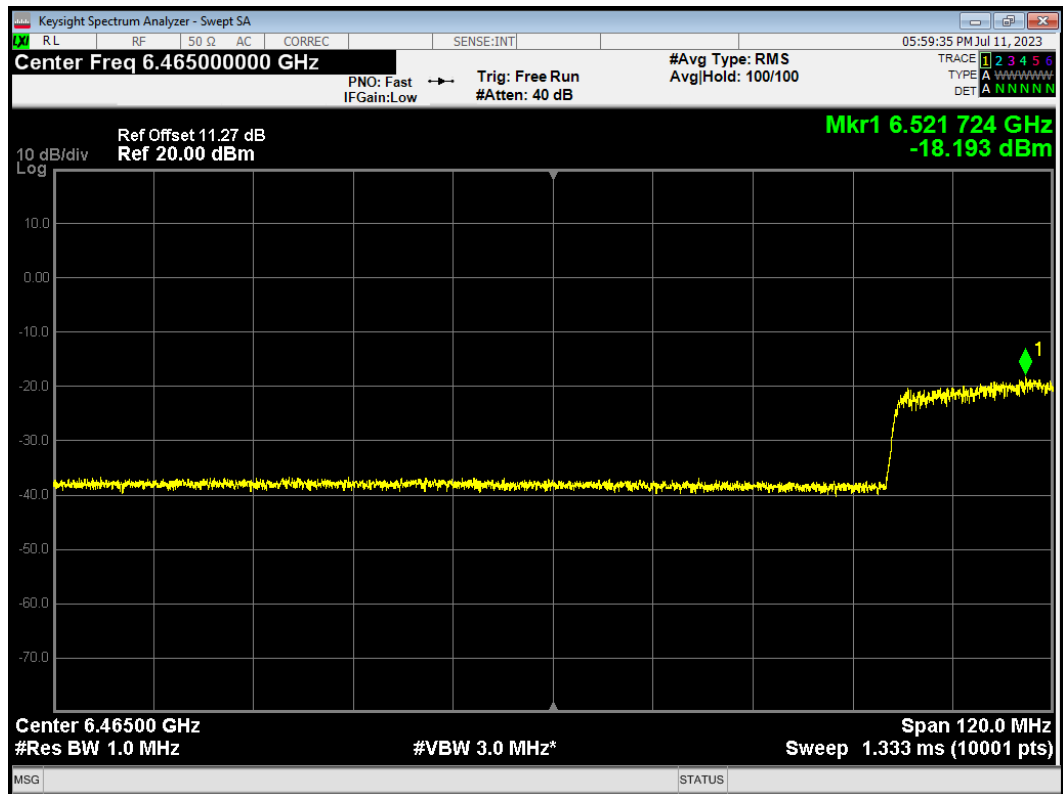
PSD 802.11ax HE80 6465MHz Antenna 2



PSD 802.11ax HE80 6545MHz Antenna 1

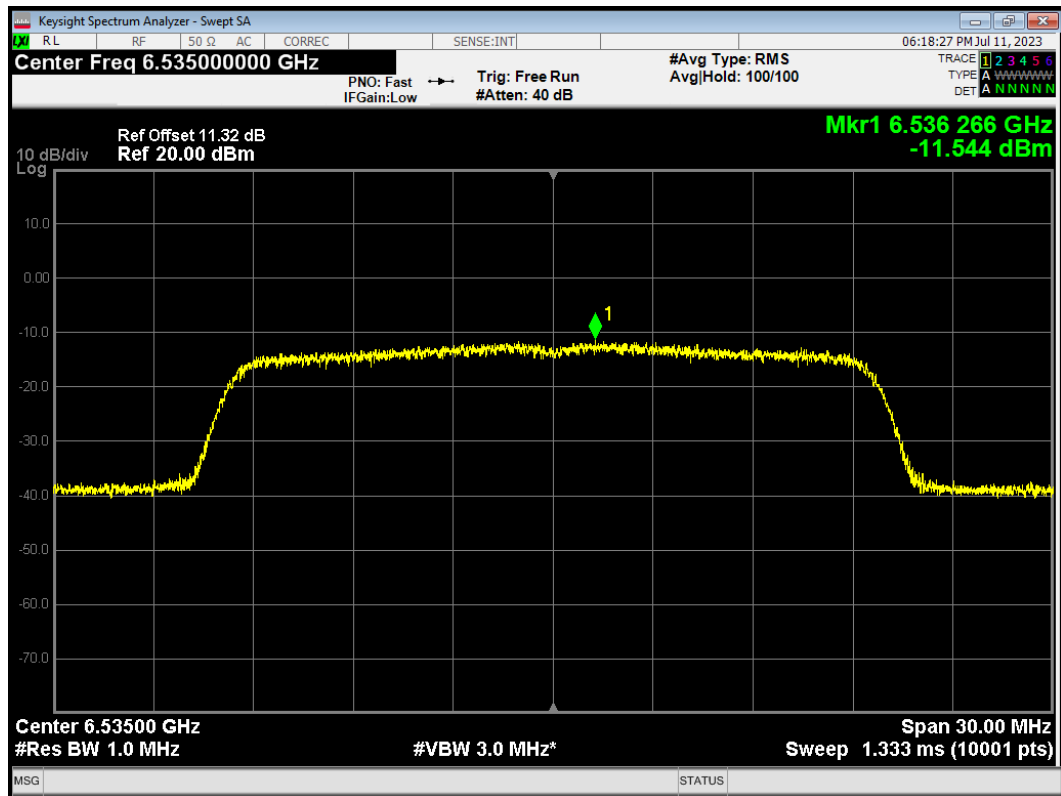


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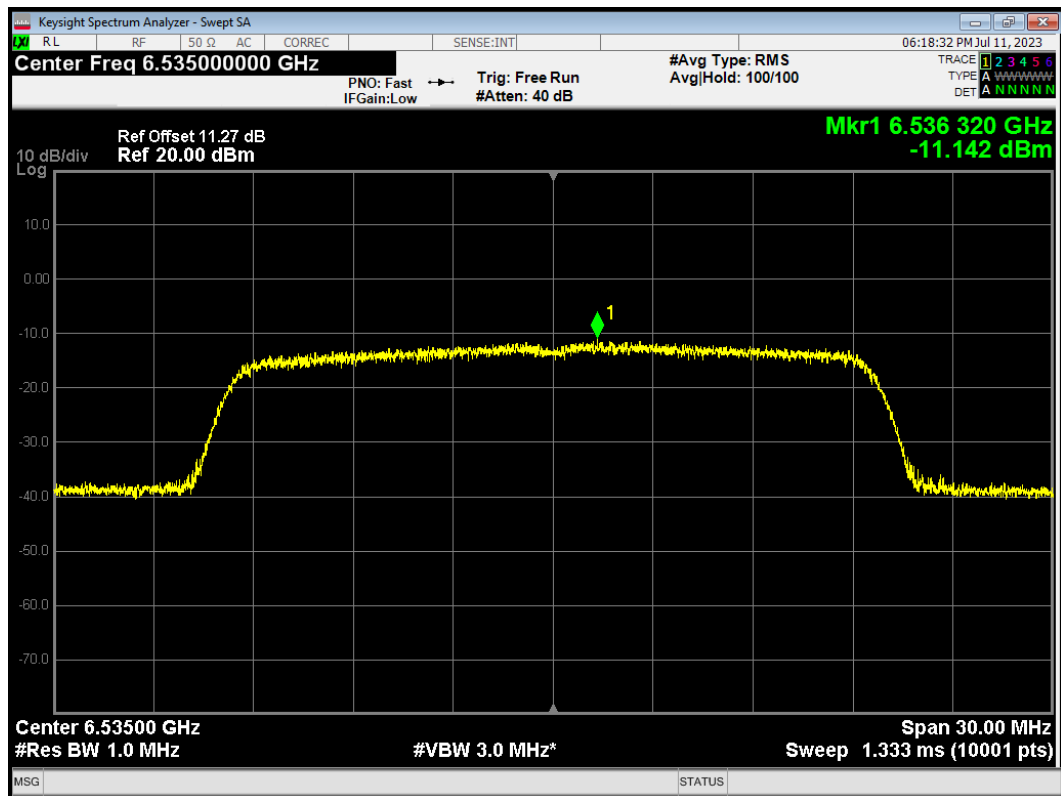


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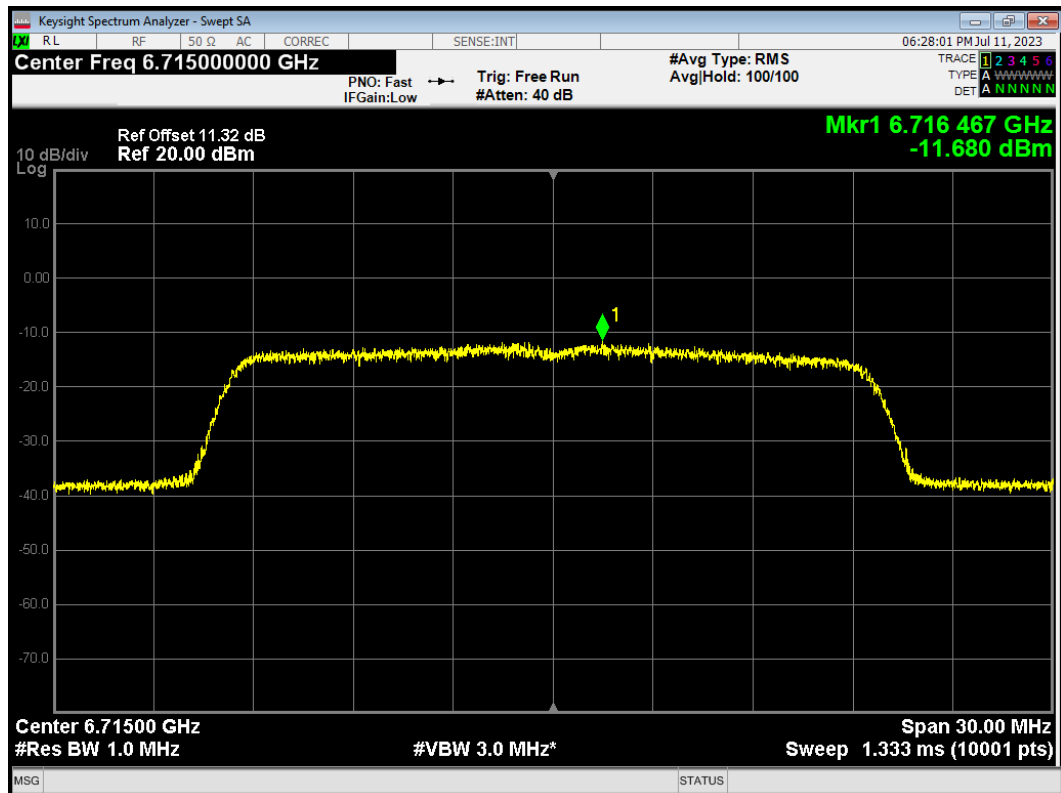
PSD 802.11ax HE20 6535MHz Antenna 1



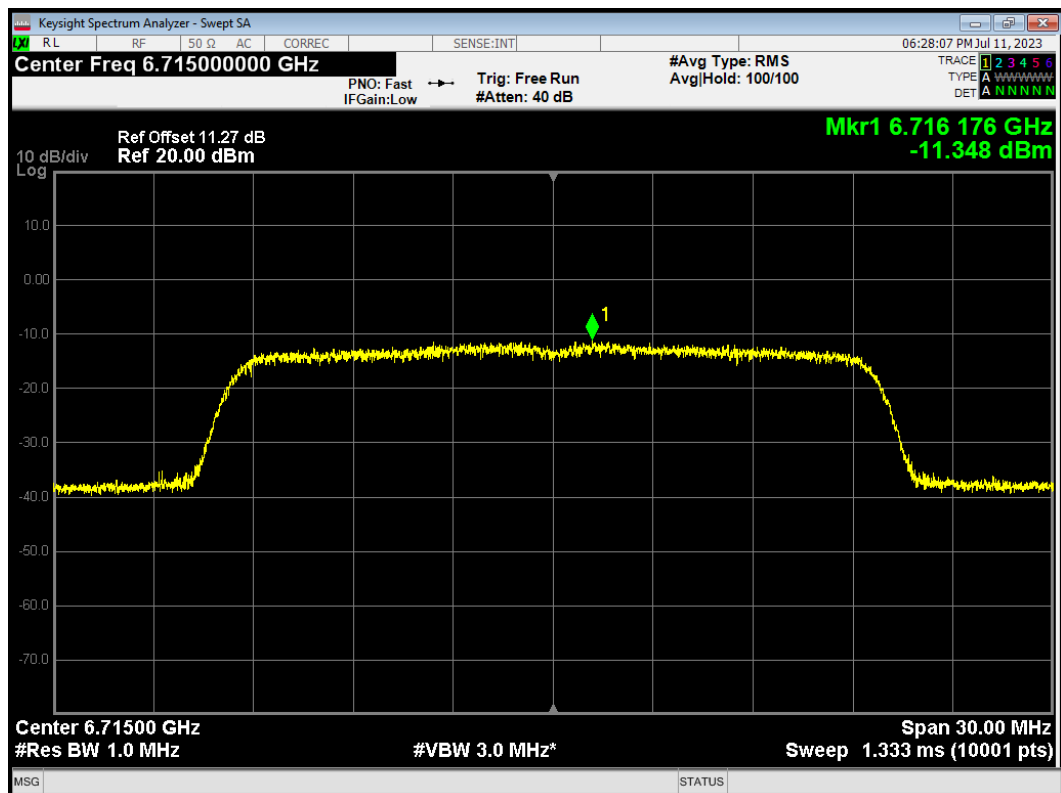
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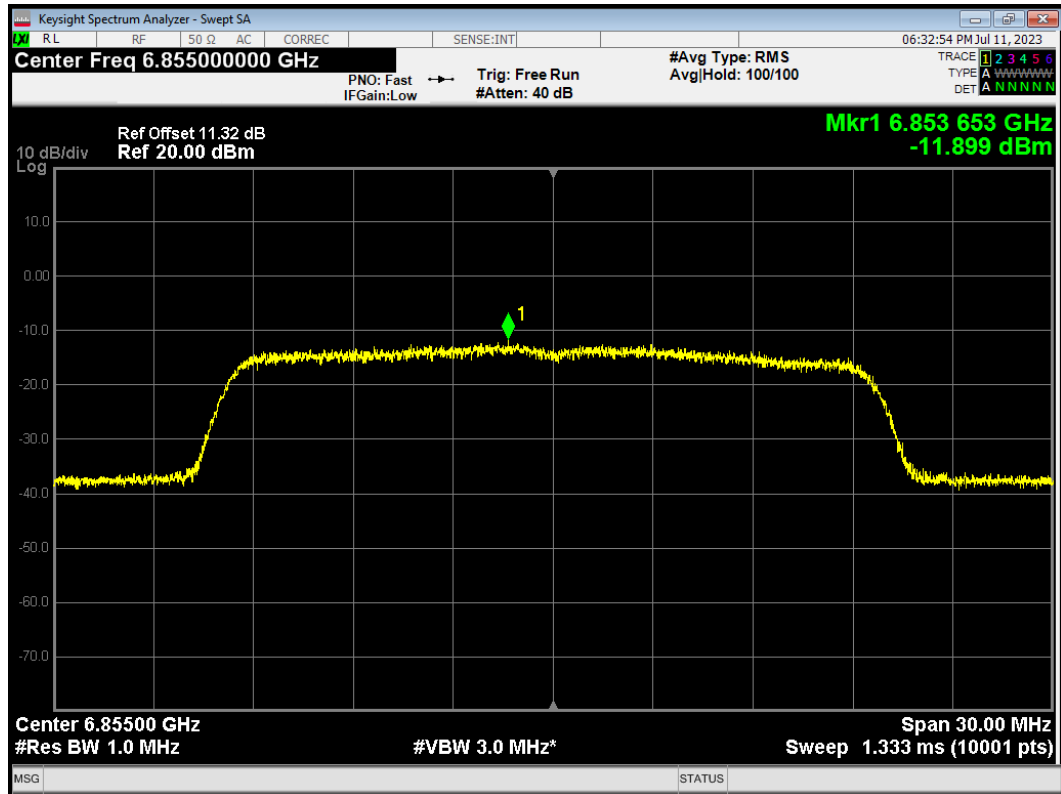
PSD 802.11ax HE20 6715MHz Antenna 1



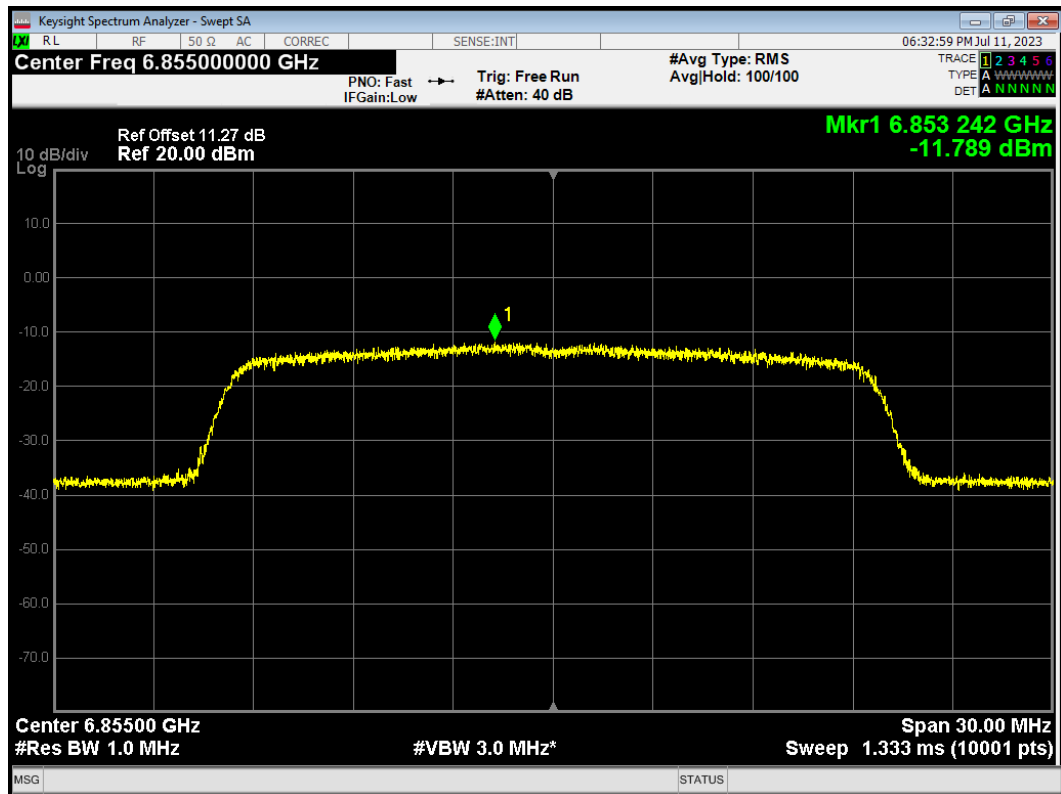
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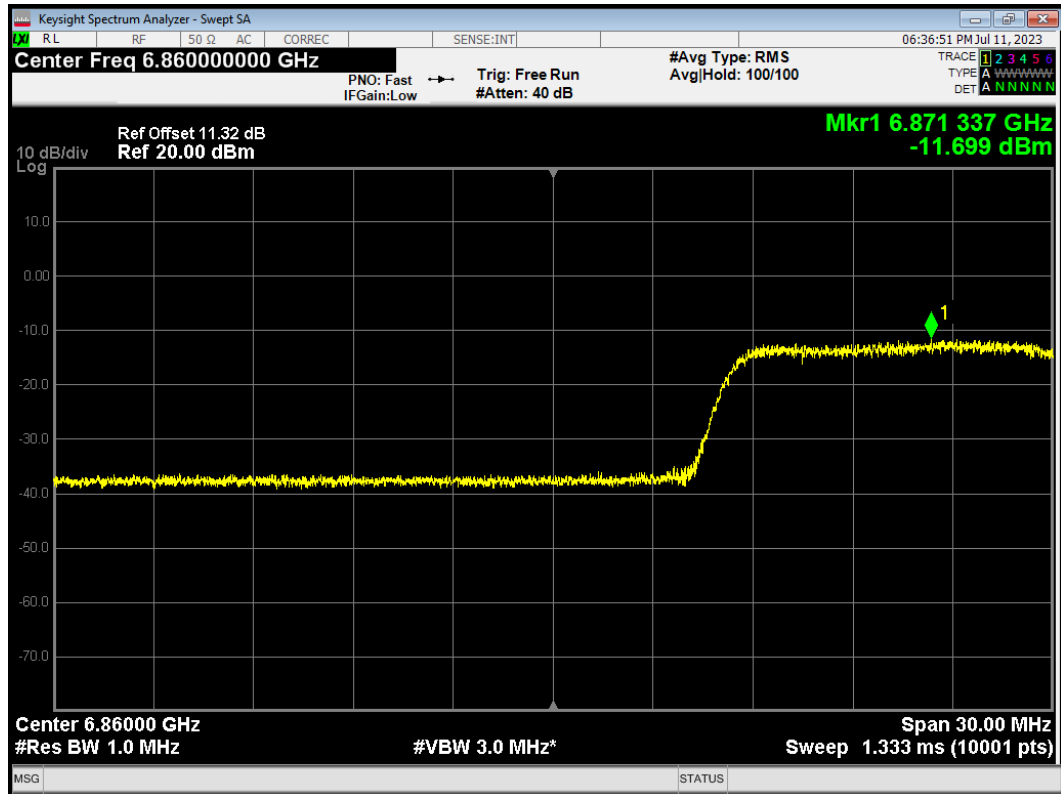
PSD 802.11ax HE20 6855MHz Antenna 1



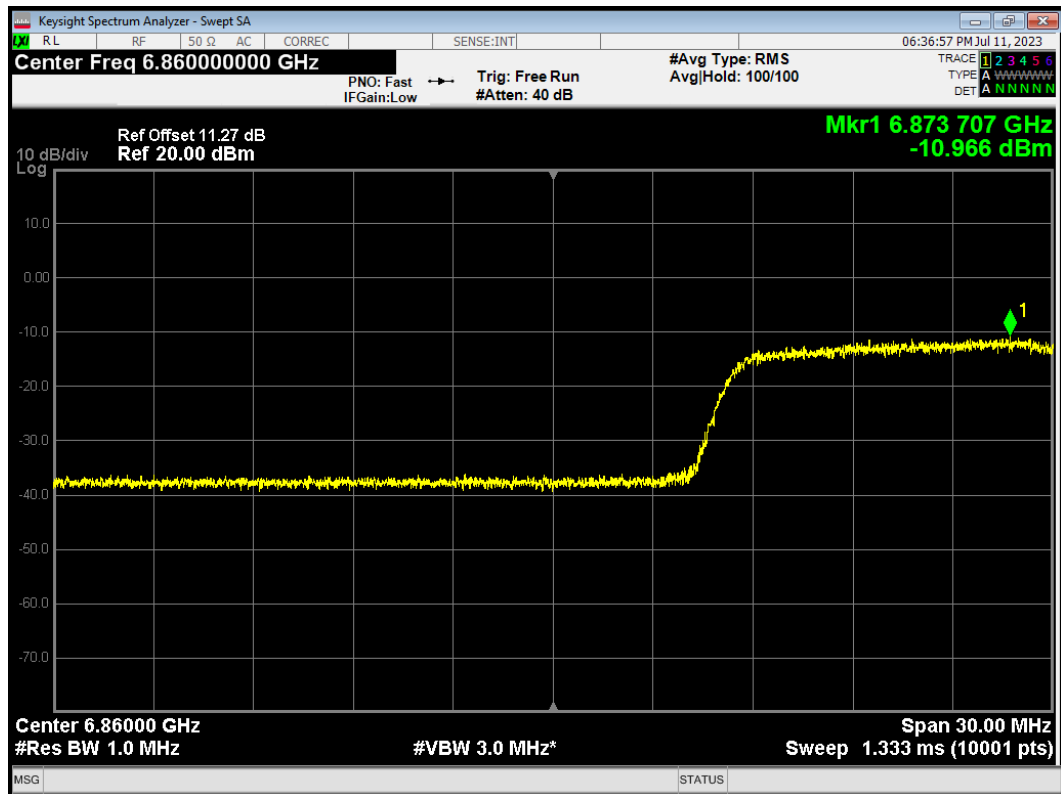
PSD 802.11ax HE20 6855MHz Antenna 2



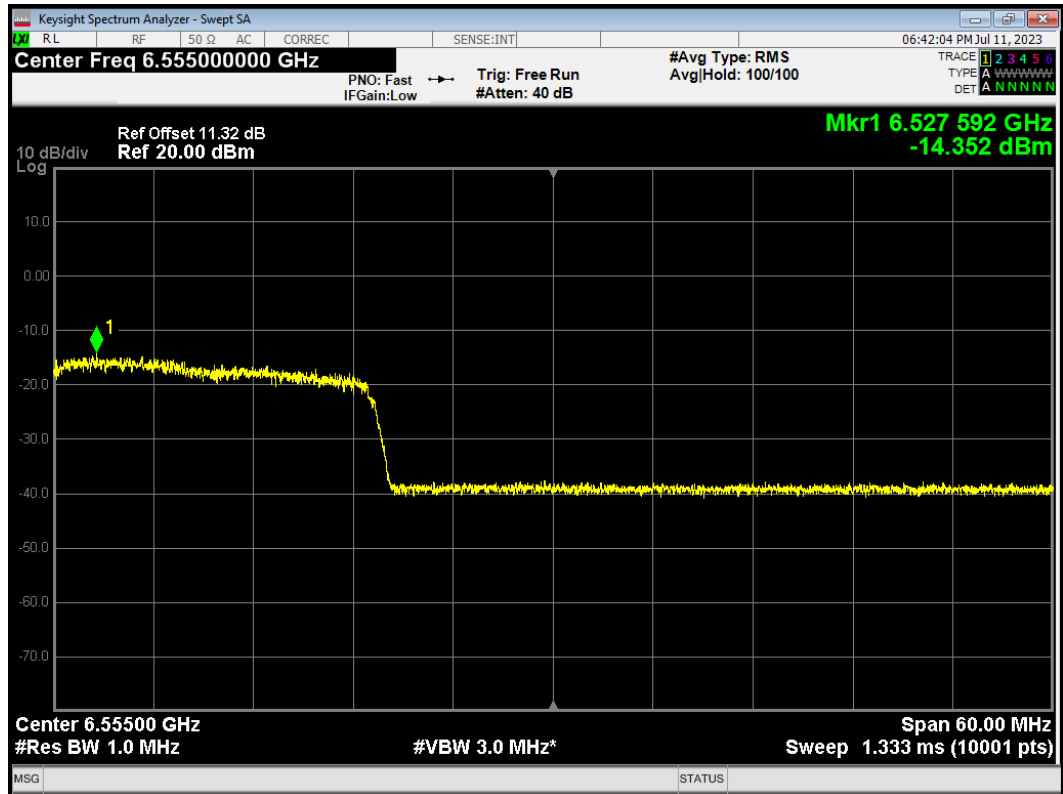
PSD 802.11ax HE20 6875MHz Antenna 1



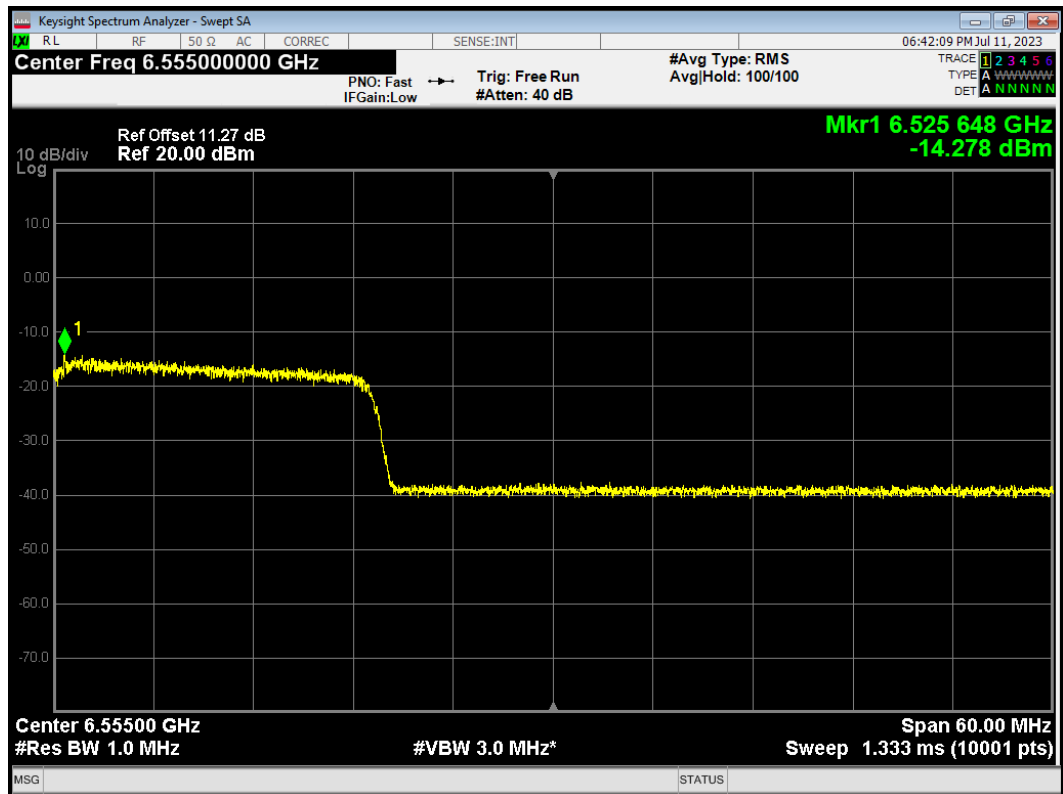
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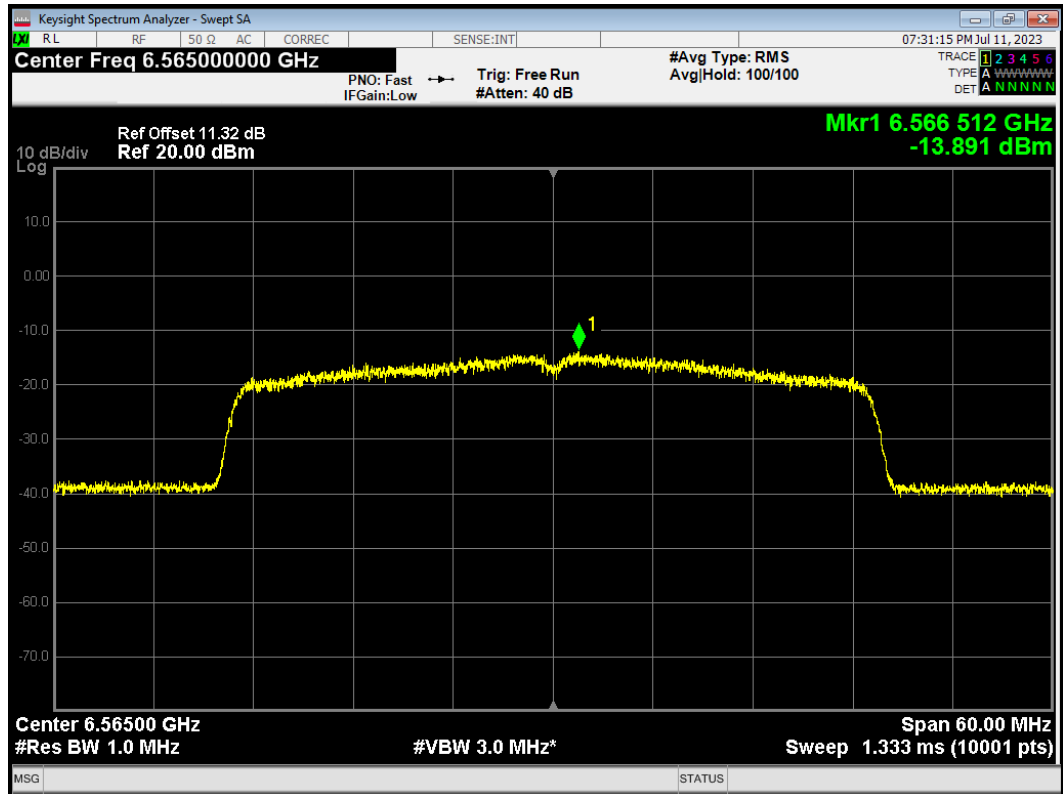
PSD 802.11ax HE40 6525MHz Antenna 1



PSD 802.11ax HE40 6525MHz Antenna 2



PSD 802.11ax HE40 6565MHz Antenna 1



PSD 802.11ax HE40 6565MHz Antenna 2

