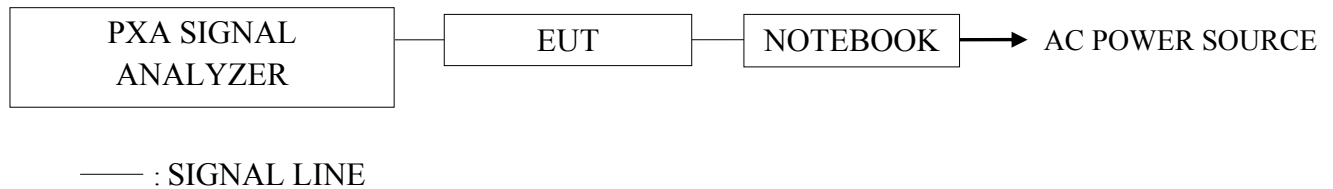


6. 6dB BANDWIDTH MEASUREMENT

6.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Period
1.	PXA signal analyzer	Agilent	N9030A	MY53120217	2024-03-24	1 Year

6.2. Block Diagram of Test Setup



6.3. Specification Limits

The minimum 6dB bandwidth shall be at least 500kHz.

6.4. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v05:

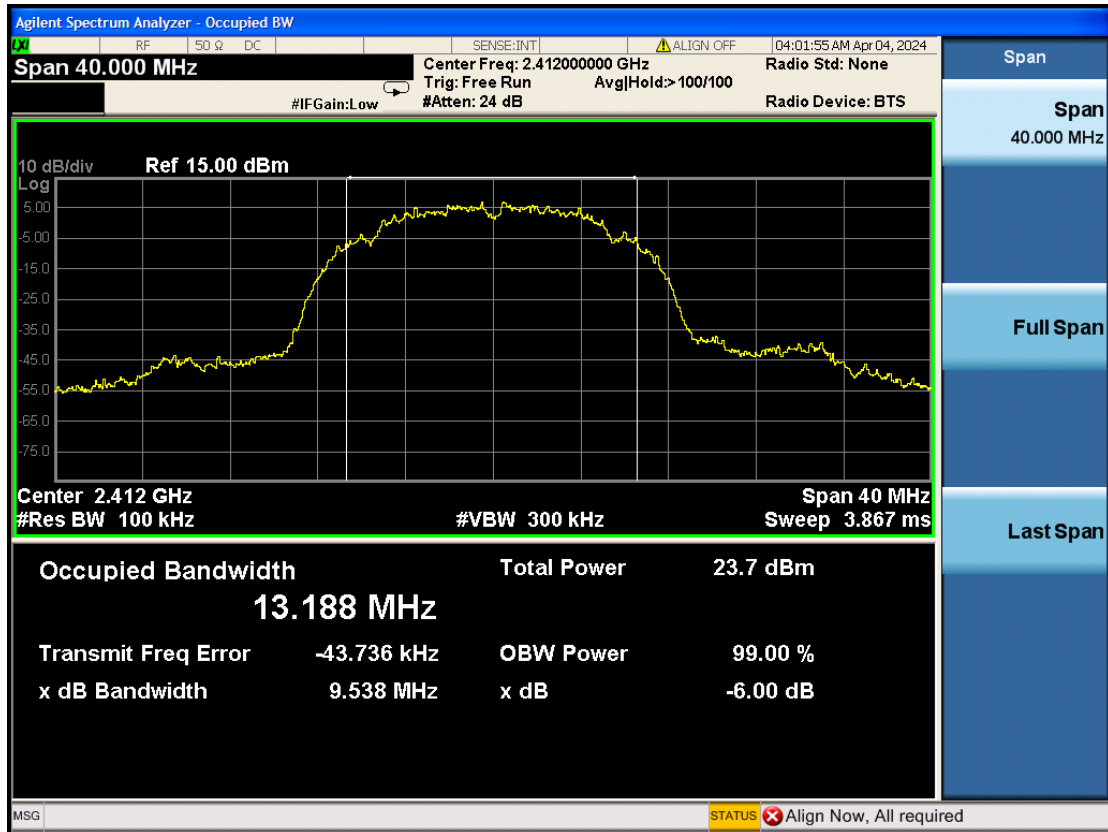
- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x dB to -6 dB to record the final bandwidth.

6.5. Test Results

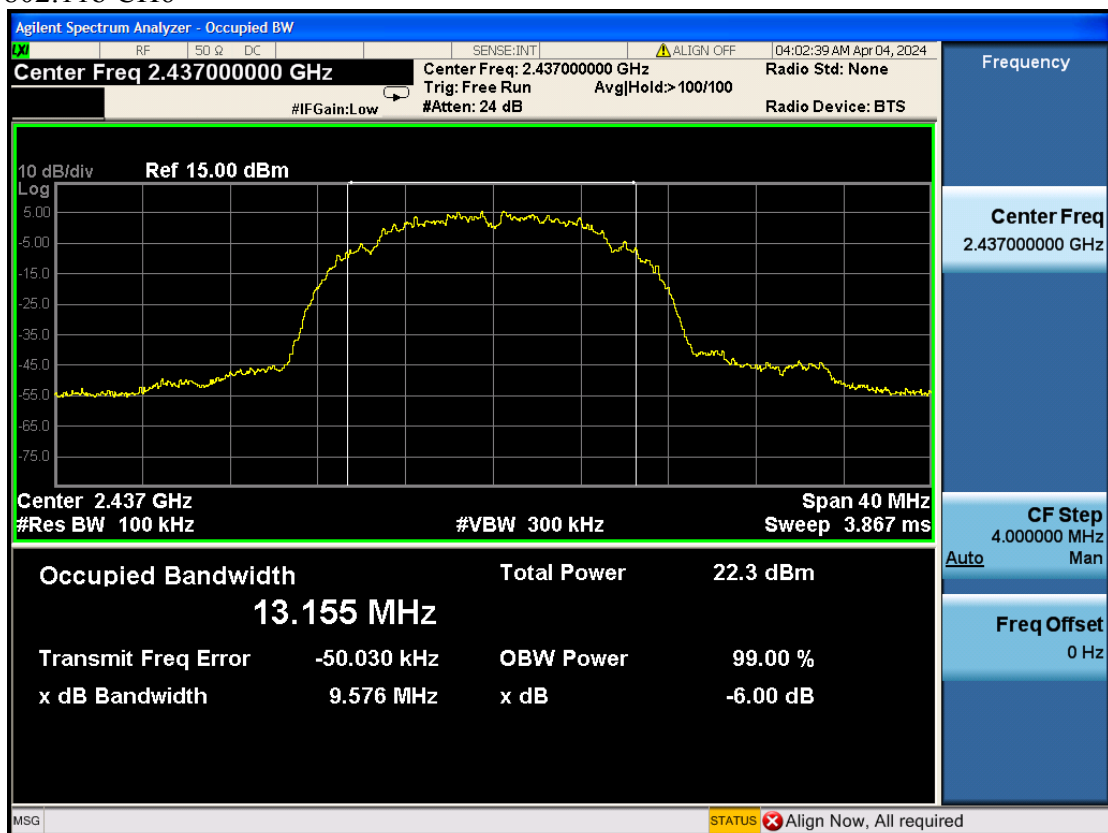
PASSED. All the test results are attached in next pages.

Item	Channel	Test Frequency (MHz)	6dB Bandwidth (MHz)
802.11b	1	2412	9.538
	6	2437	9.576
	11	2462	9.153
802.11g	1	2412	16.45
	6	2437	16.44
	11	2462	16.45
802.11nHT20	1	2412	16.90
	6	2437	16.91
	11	2462	16.96
802.11nHT40	3	2422	32.60
	6	2437	32.58
	9	2452	32.70

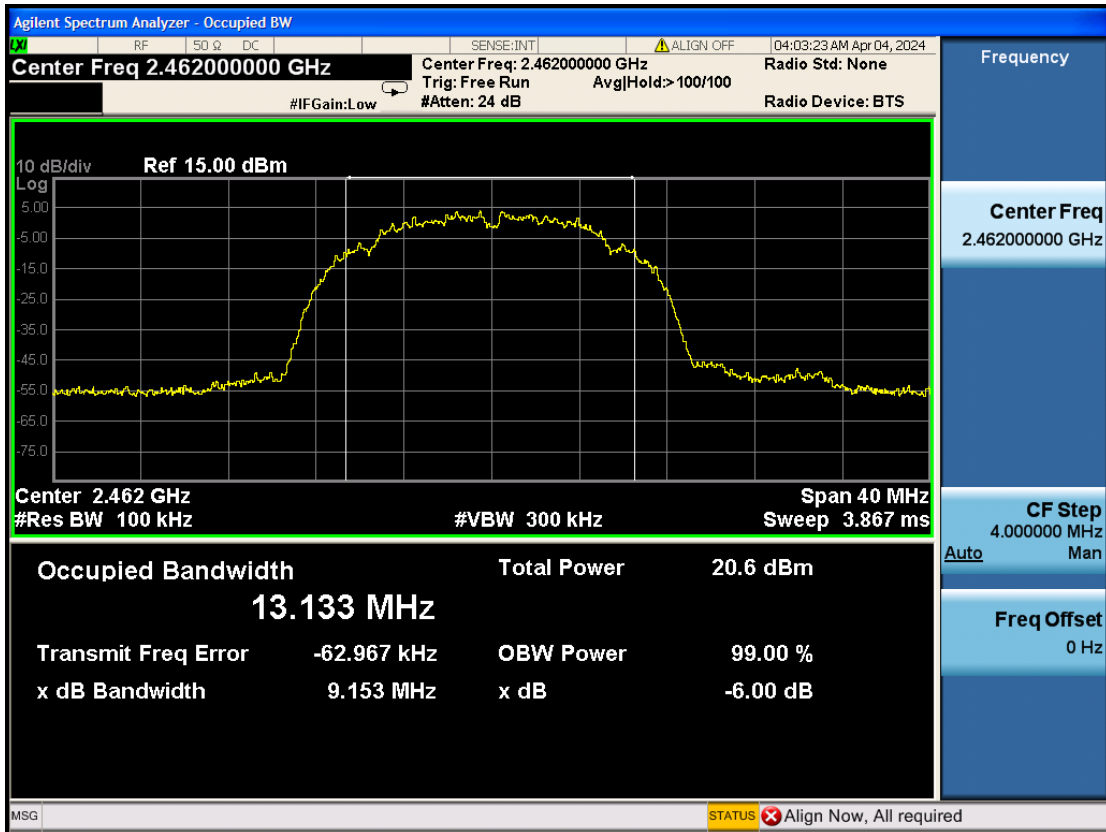
802.11b CH1



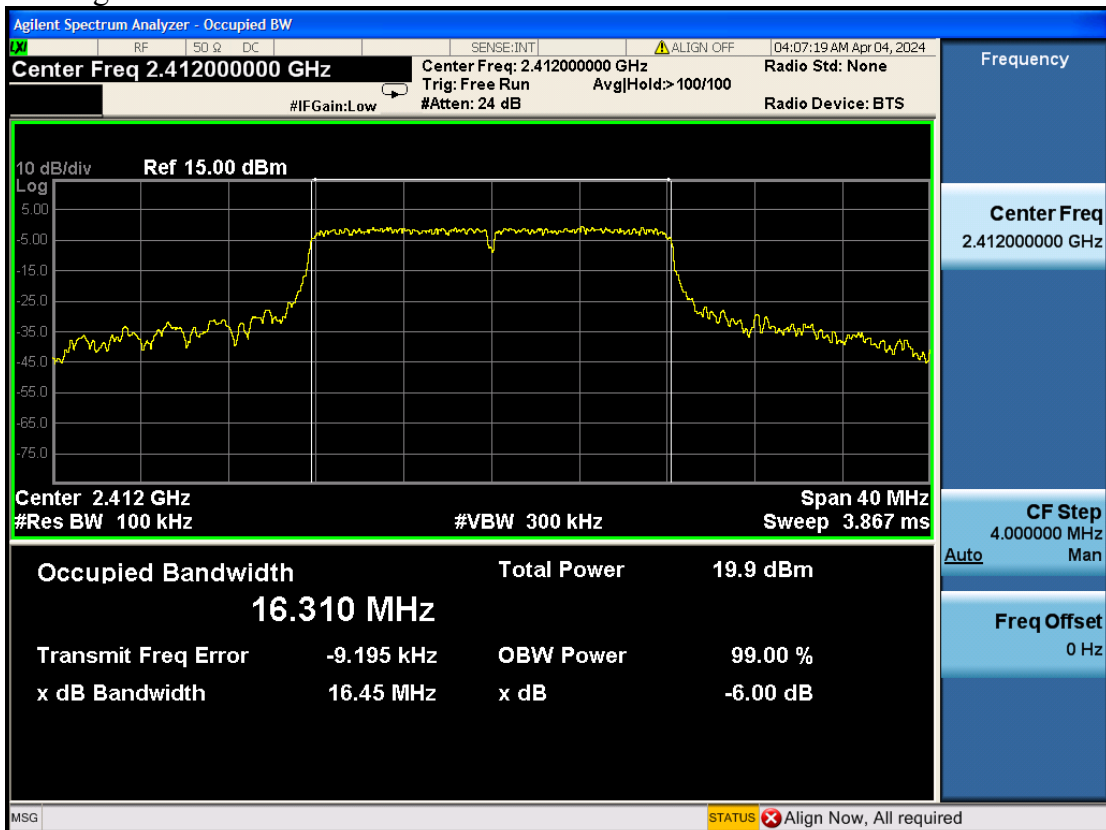
802.11b CH6



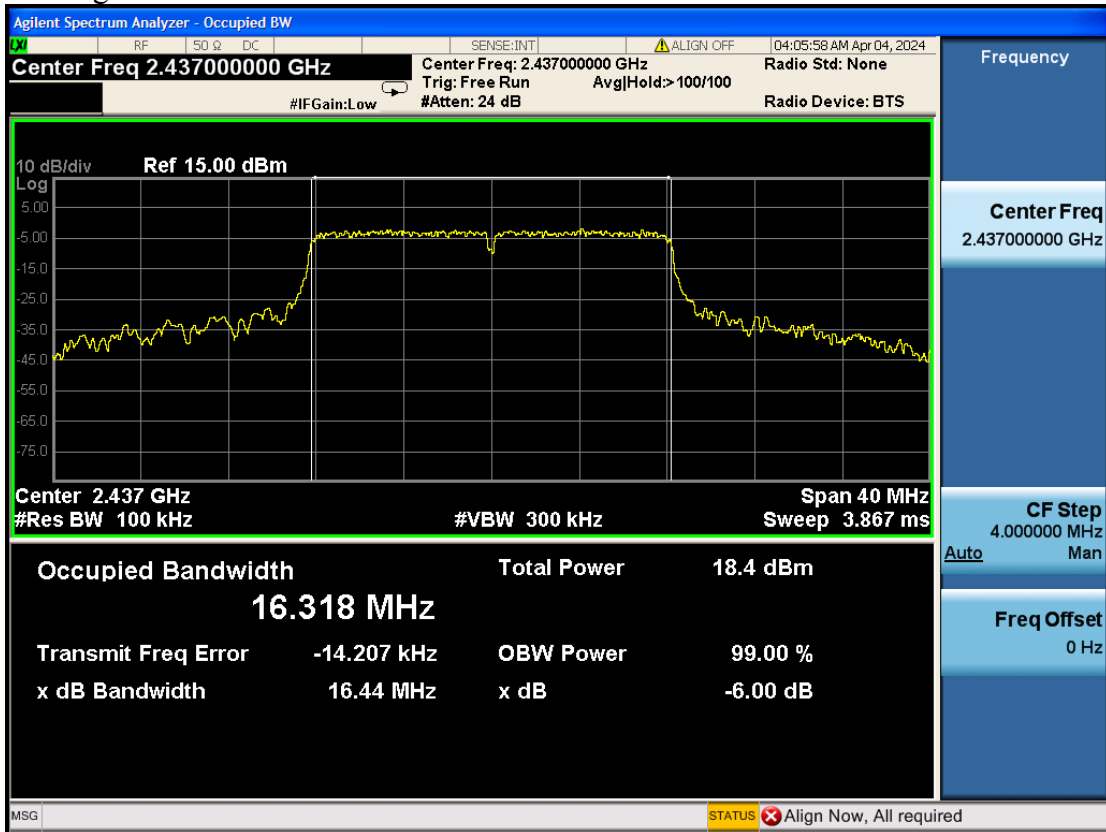
802.11b CH11



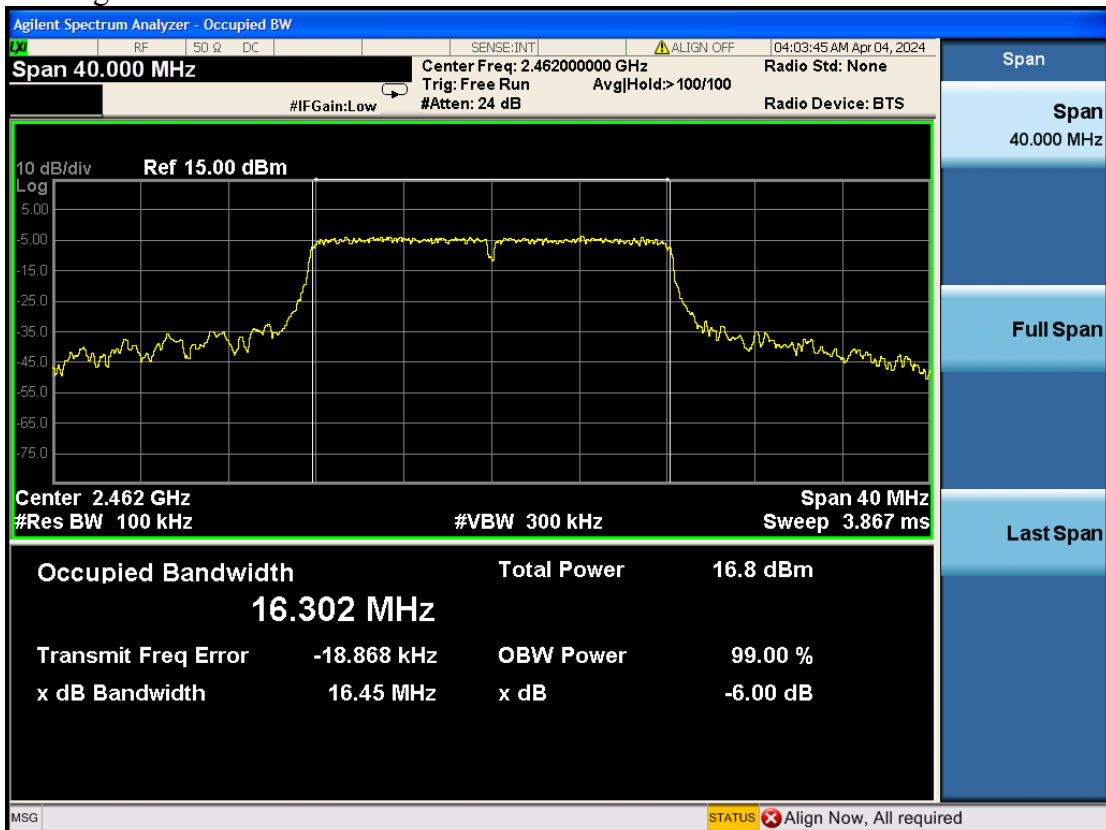
802.11g CH1



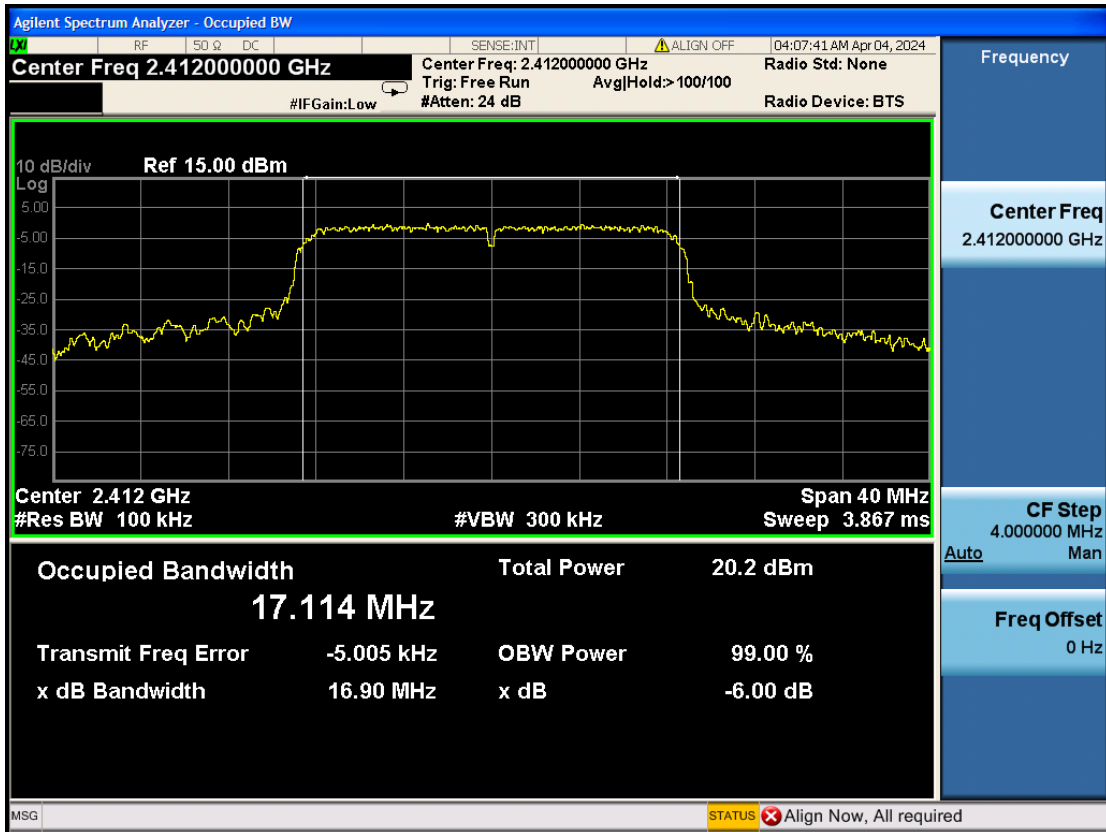
802.11g CH6



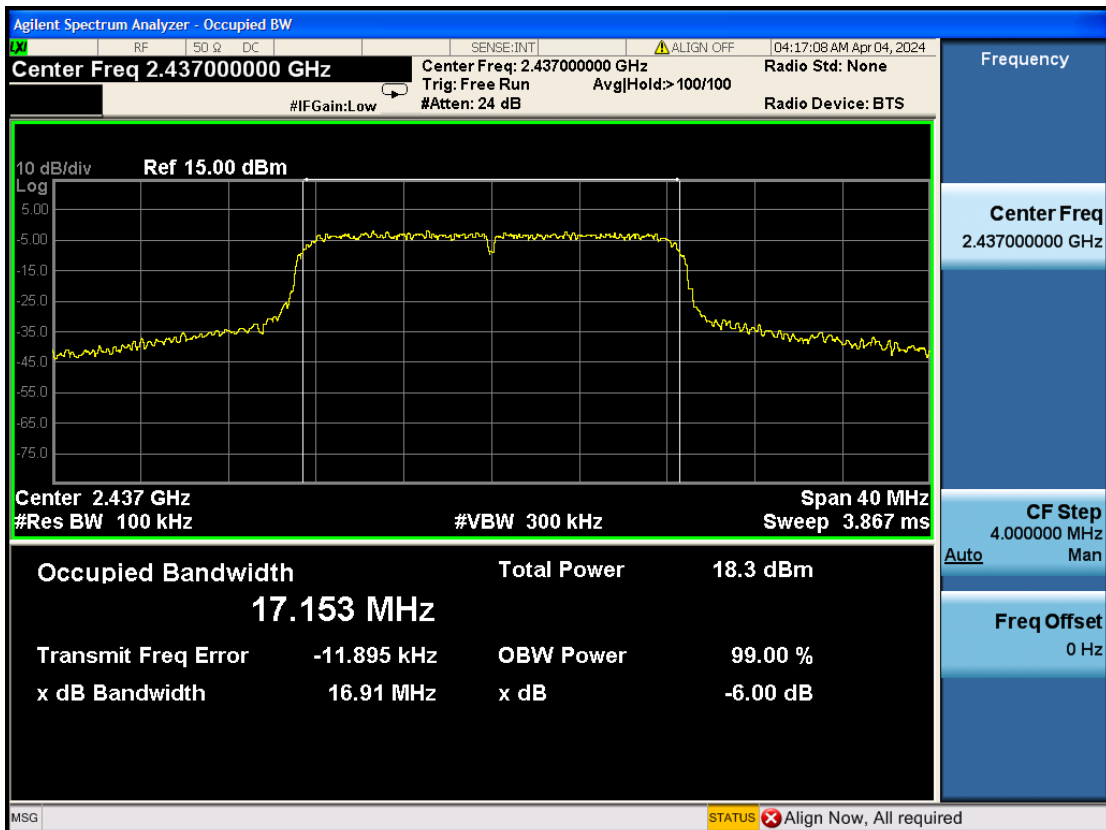
802.11g CH11



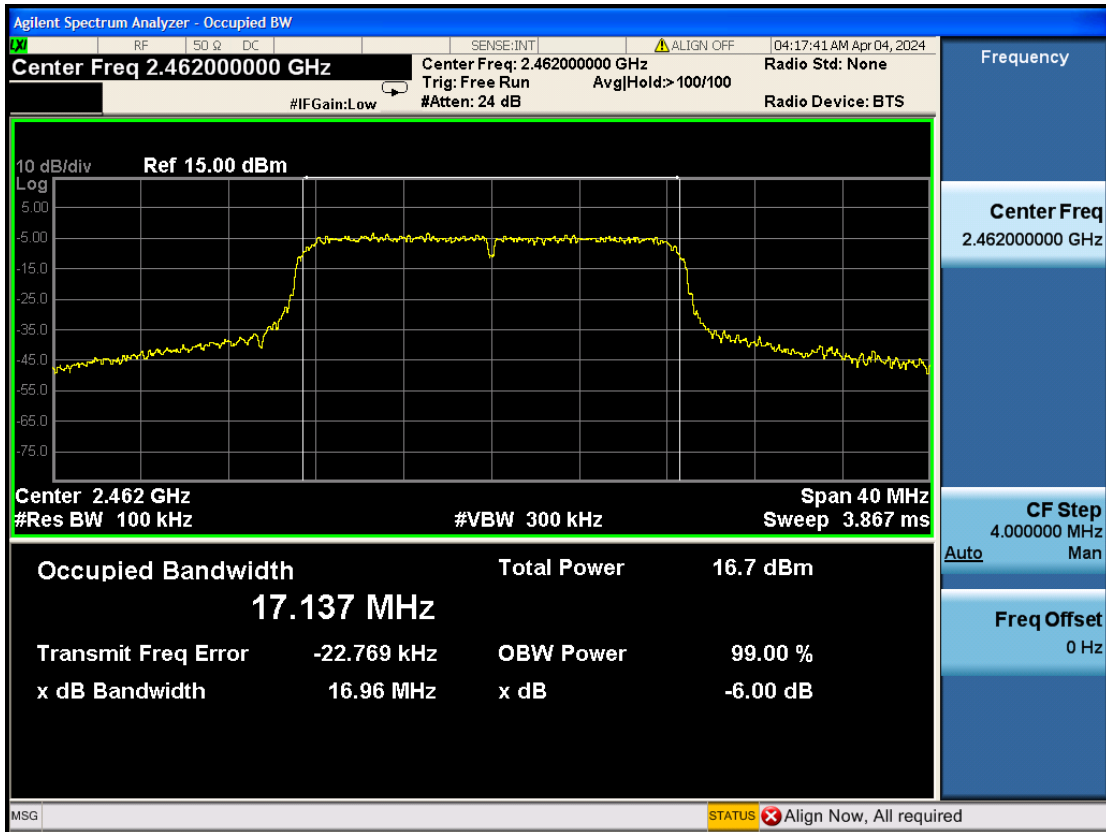
802.11nHT20 CH1



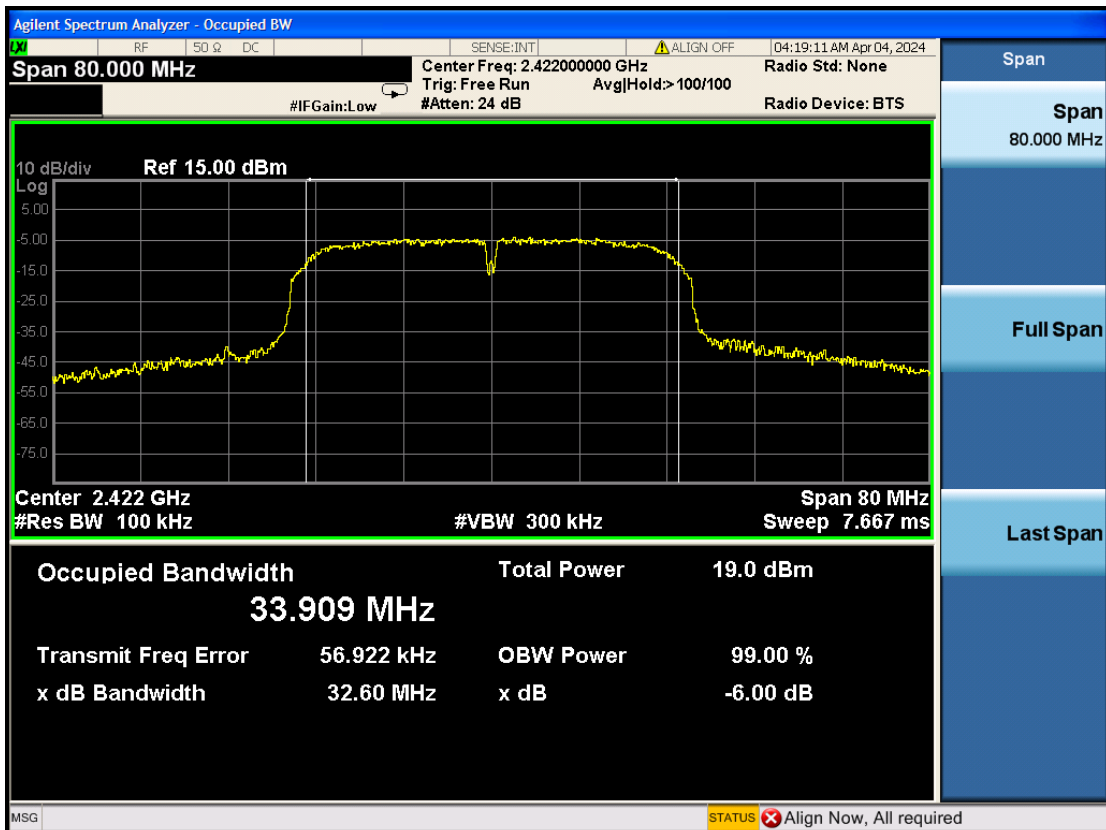
802.11nHT20 CH6



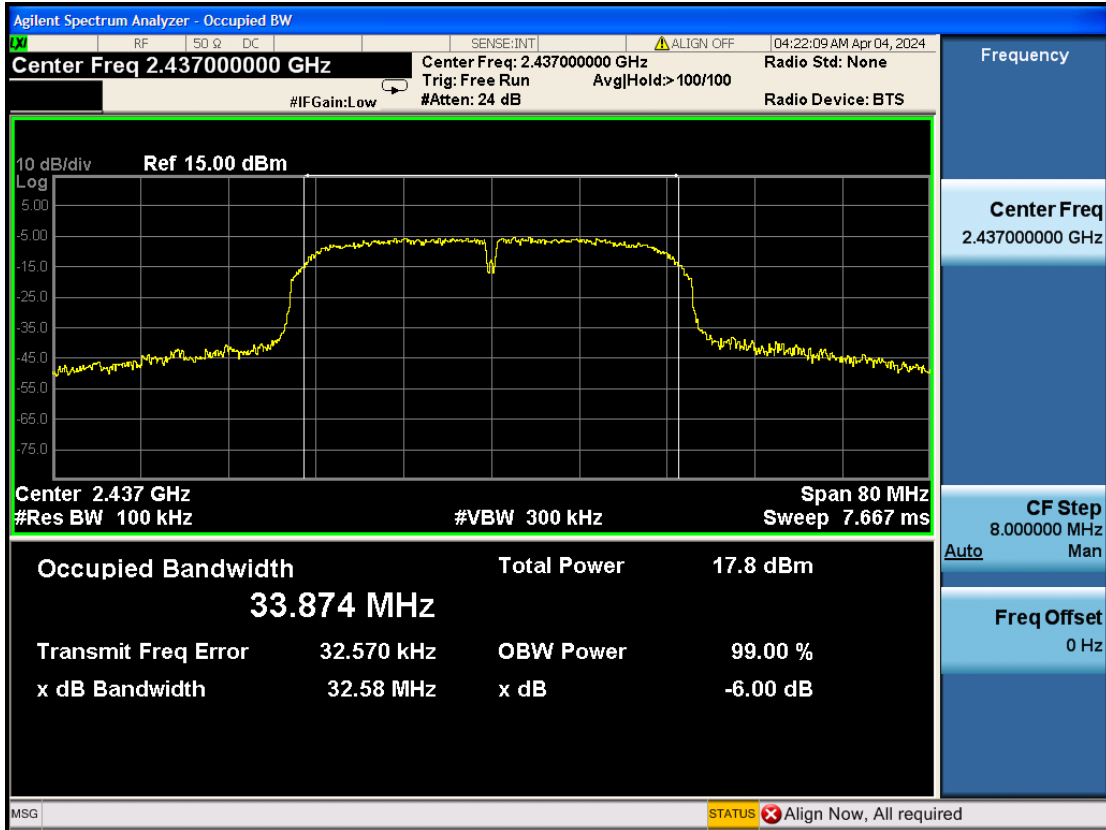
802.11nHT20 CH11



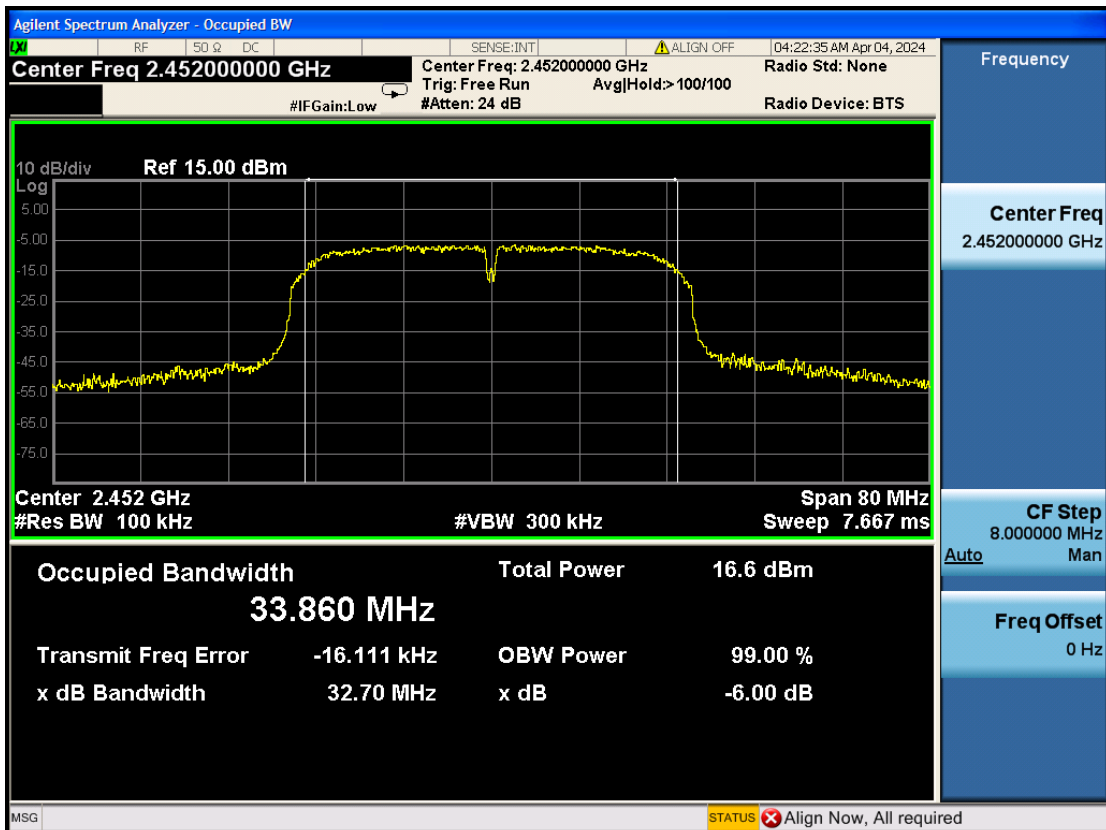
802.11nHT40 CH3



802.11nHT40 CH6



802.11nHT40 CH9

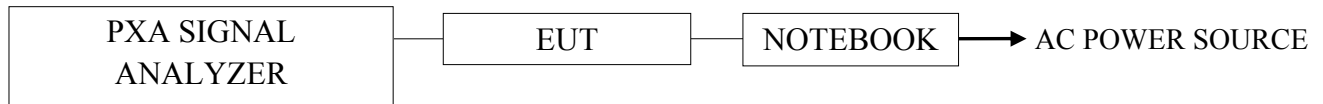


7. OUTPUT POWER MEASUREMENT

7.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Period
1.	PXA signal analyzer	Agilent	N9030A	MY53120217	2024-03-24	1 Year

7.2. Block Diagram of Test Setup



— : SIGNAL LINE

7.3. Specification Limits (§15.247(b)(3))

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5MHz is : 1Watt. (30dBm), and E.I.R.P.: 4Watt (36dBm)

7.4. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v05:

☐ Method AVGSA-2 (Spectrum channel power)

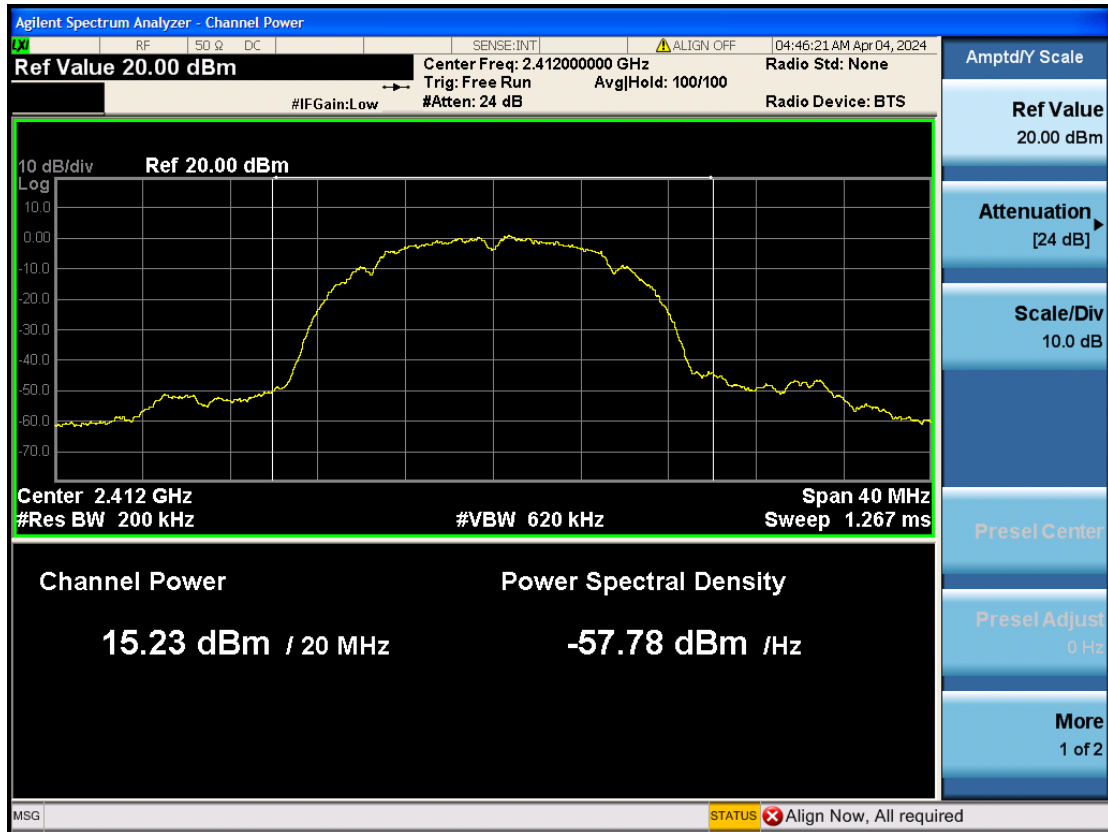
- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 -5% of OBW
- (3) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges.
- (8) Duty cycle factor is added when duty cycle presented in chapter3.5 is < 98%.

7.5. Test Results

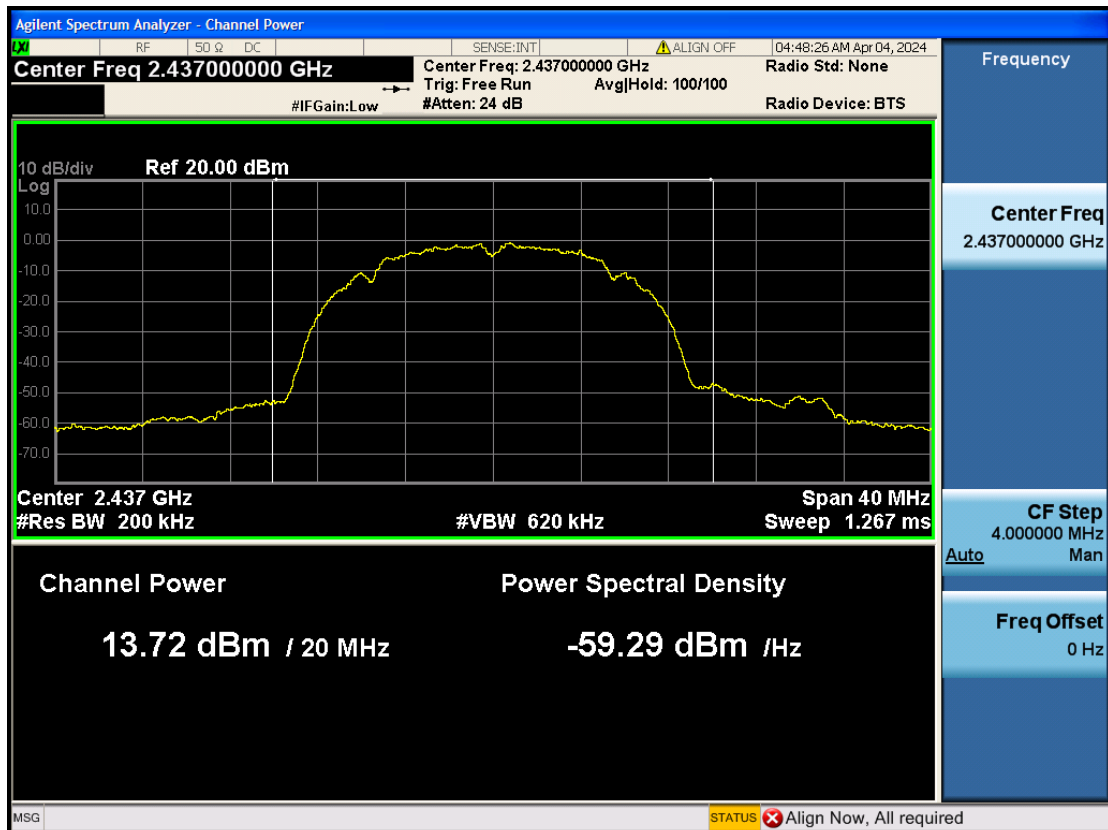
PASSED.

Mode	Frequency	Duty Cycle Factor	Reading (dBm)	Average Output Power(dBm)	Limit (dBm)
11b	2412	0	15.23	15.23	30
	2437		13.72	13.72	
	2462		12.28	12.28	
11g	2412	0	13.31	13.31	
	2437		11.67	11.67	
	2462		10.34	10.34	
11nHT20	2412	0	12.98	12.98	
	2437		11.14	11.14	
	2462		9.84	9.84	
11nHT40	2422	0	12.05	12.05	
	2437		10.77	10.77	
	2452		9.74	9.74	

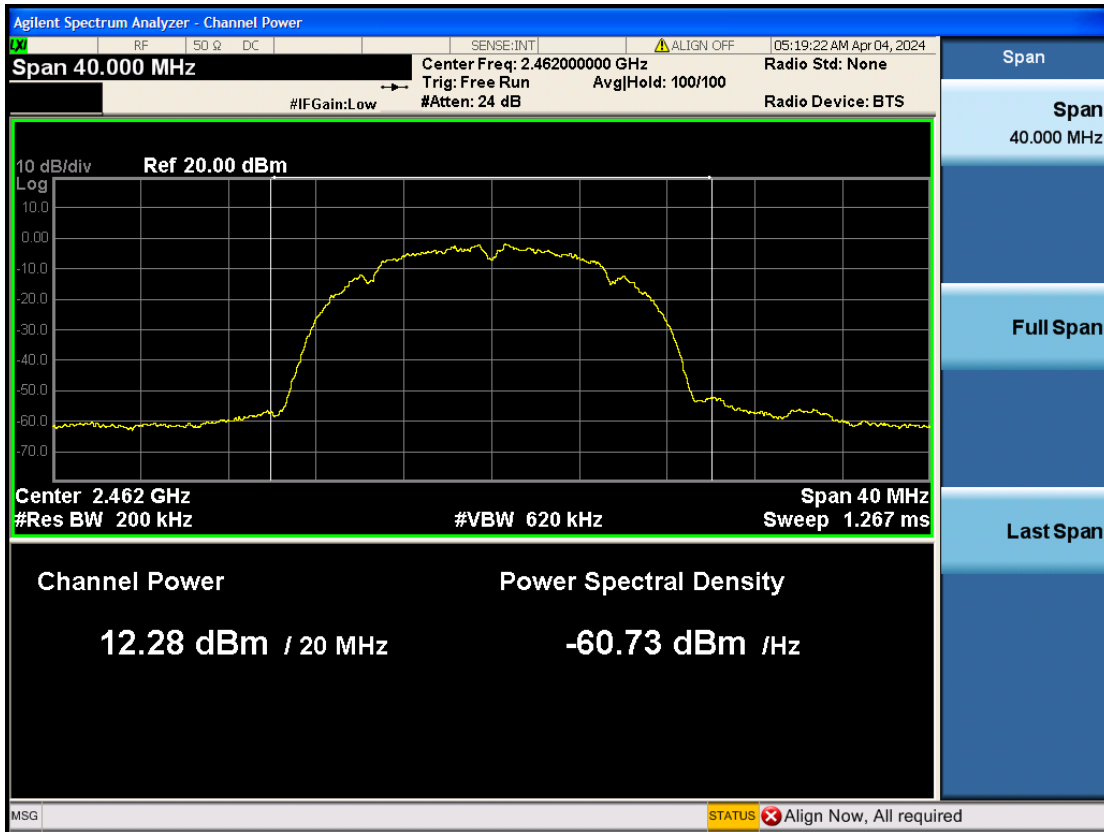
802.11b CH1



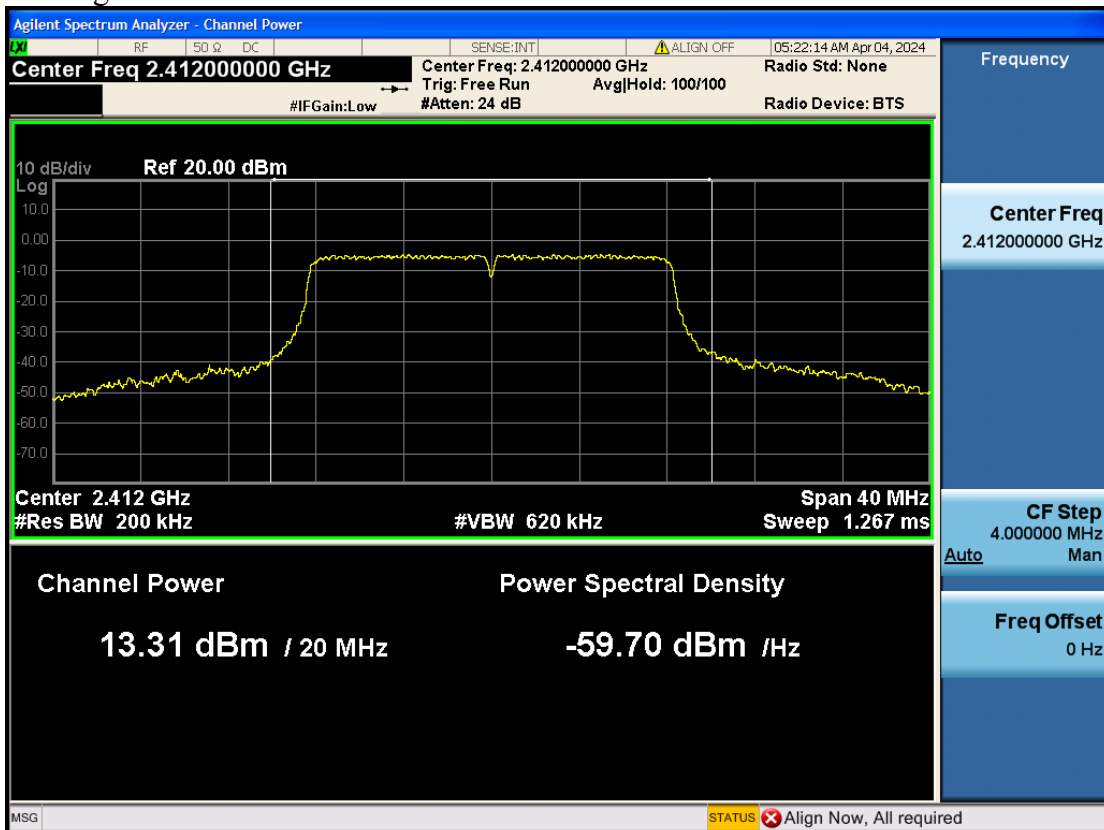
802.11b CH6



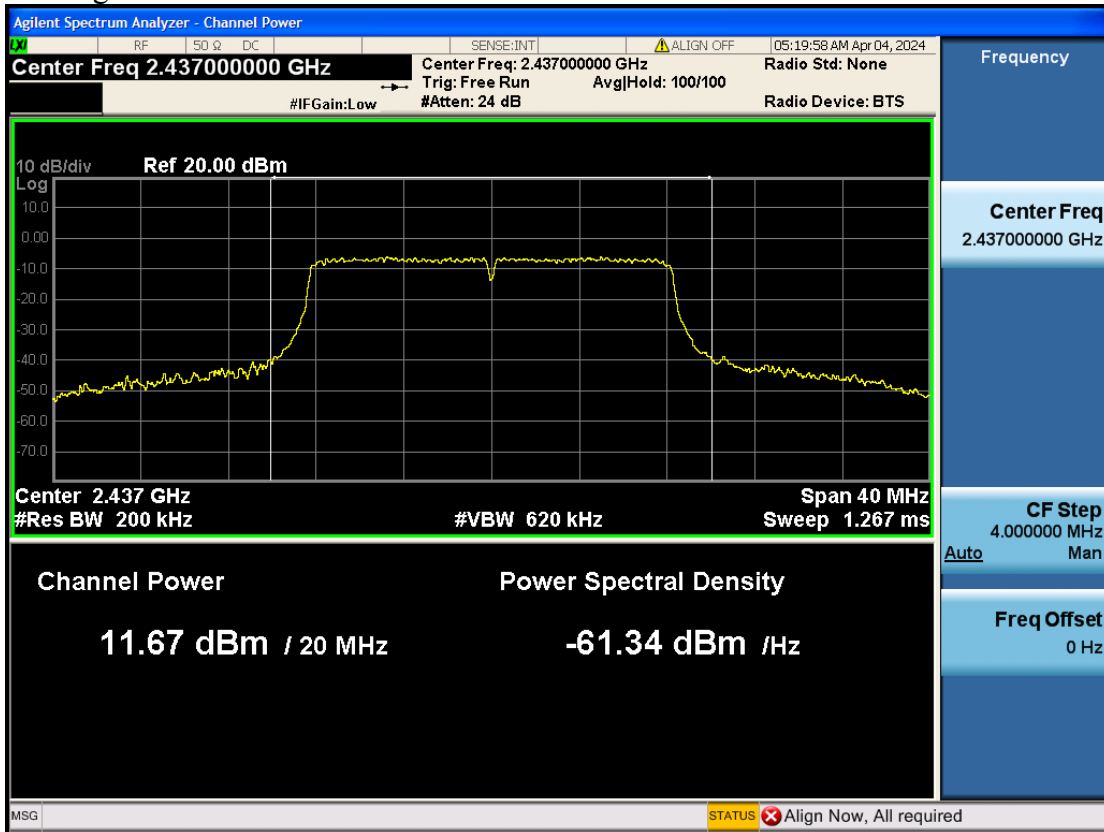
802.11b CH11



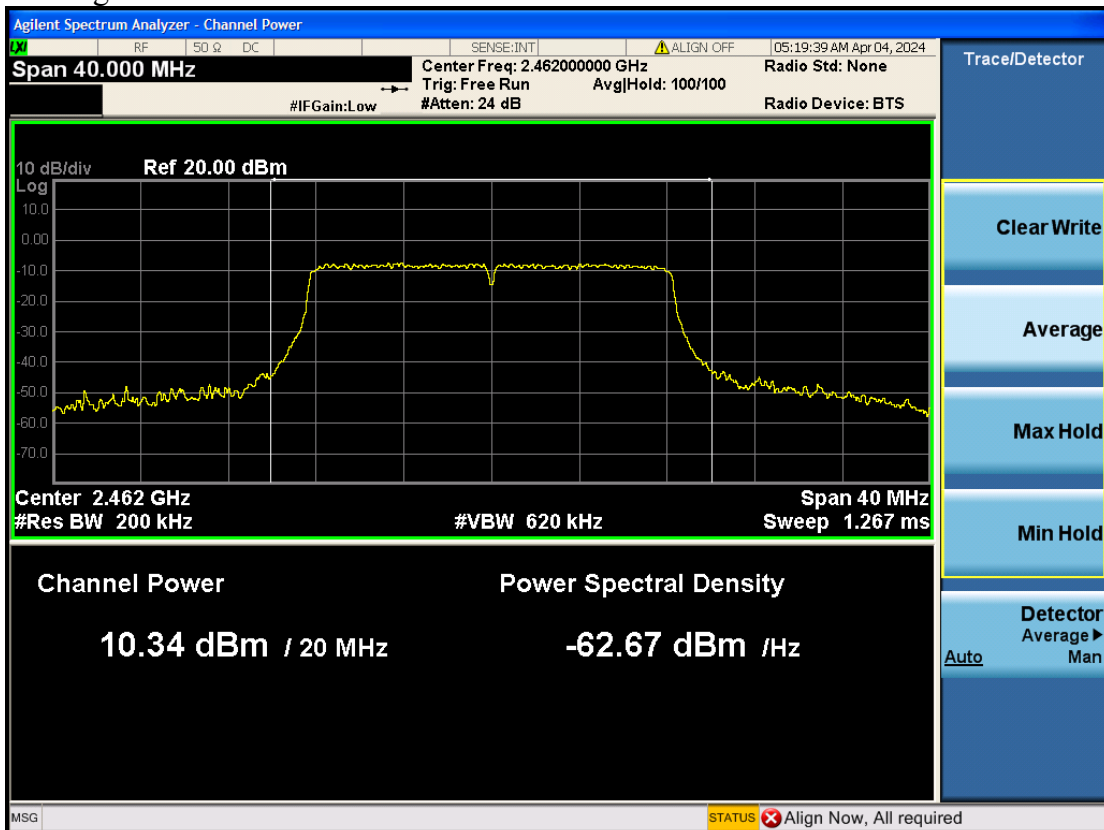
802.11g CH1



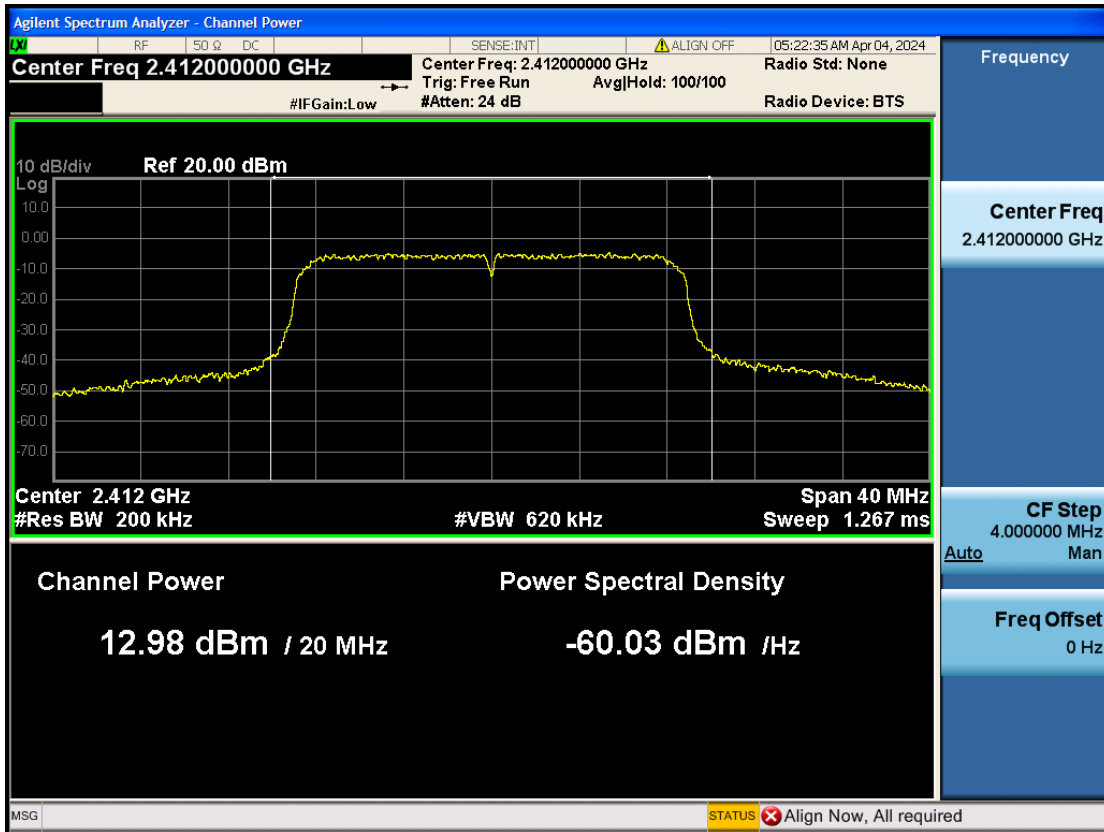
802.11g CH6



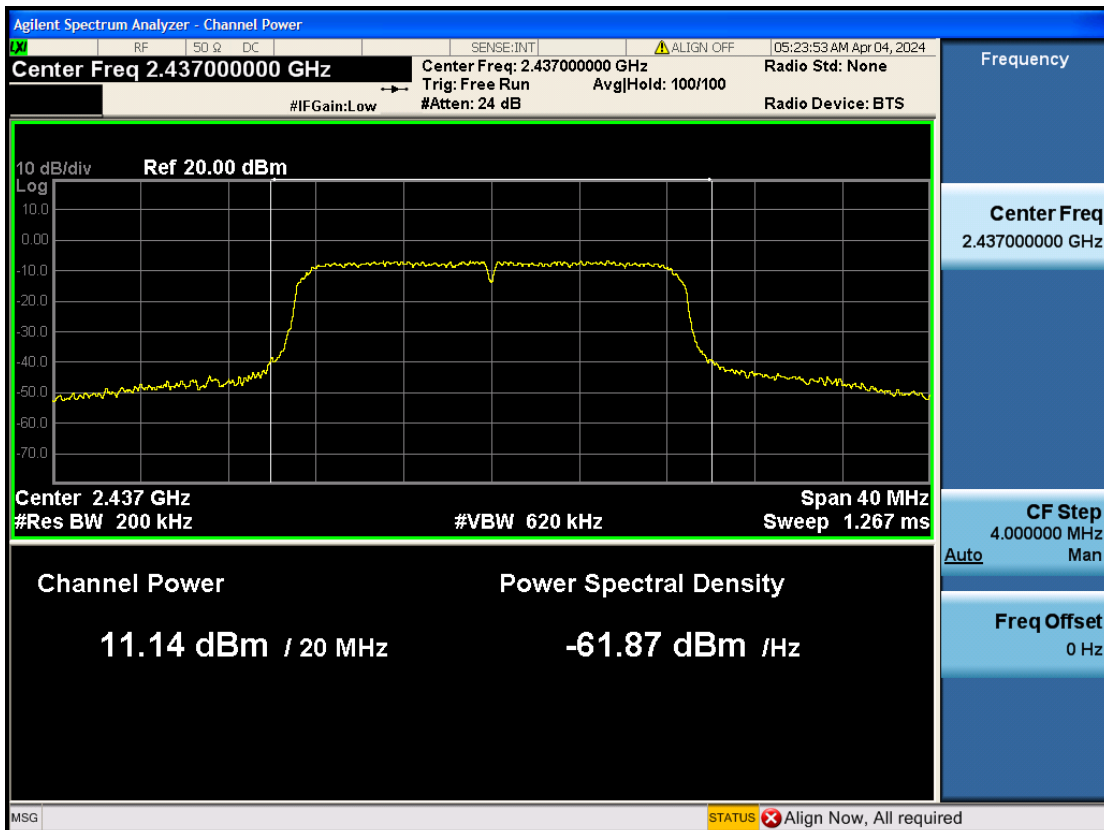
802.11g CH11



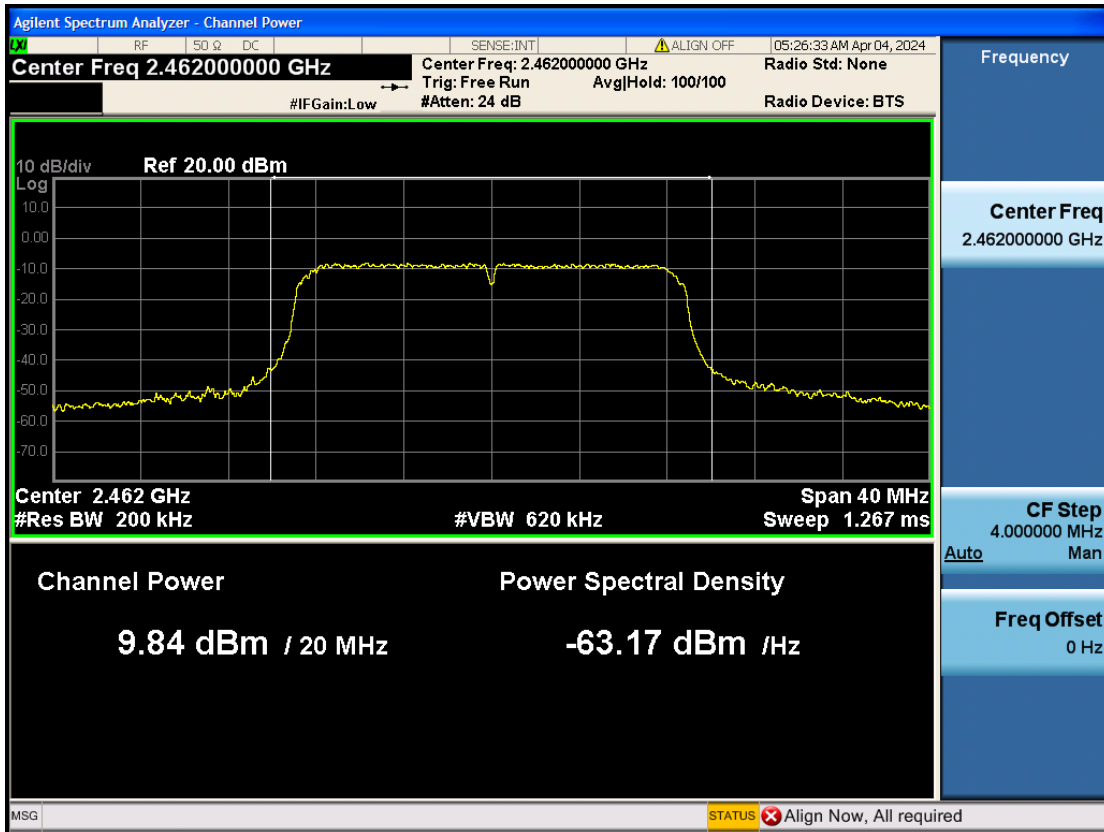
802.11nHT20 CH1



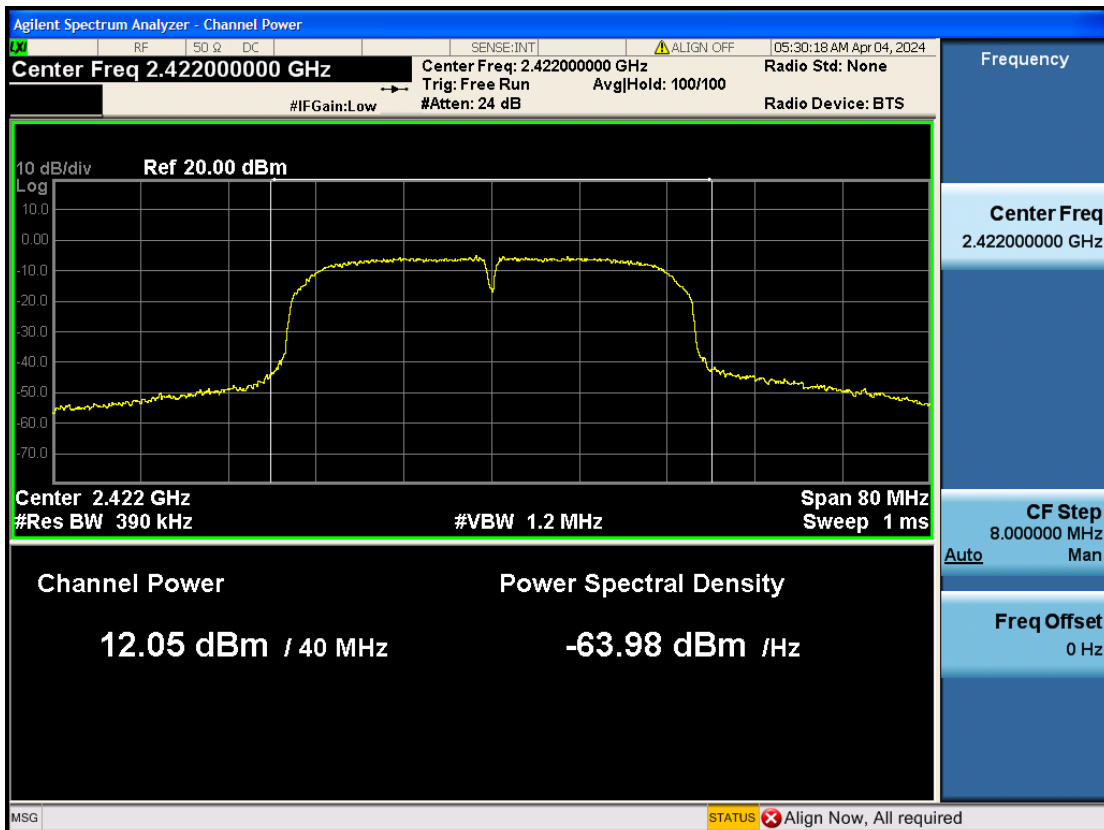
802.11nHT20 CH6



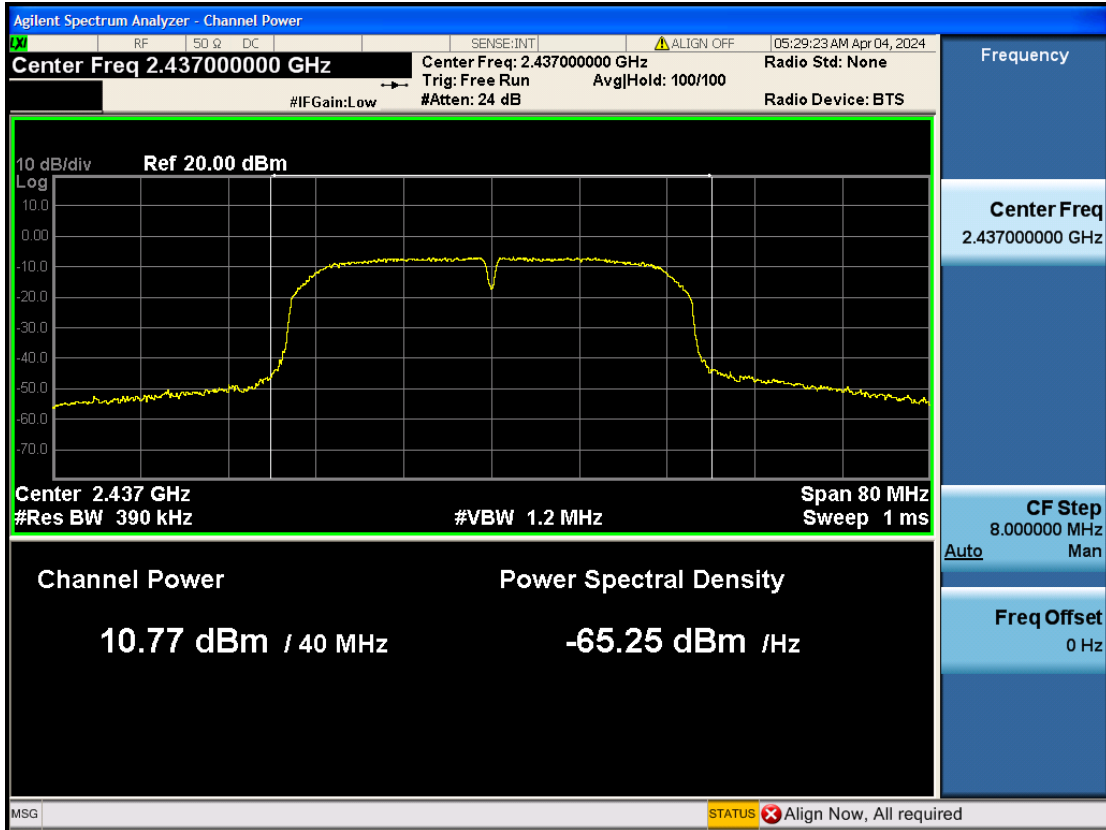
802.11nHT20 CH11



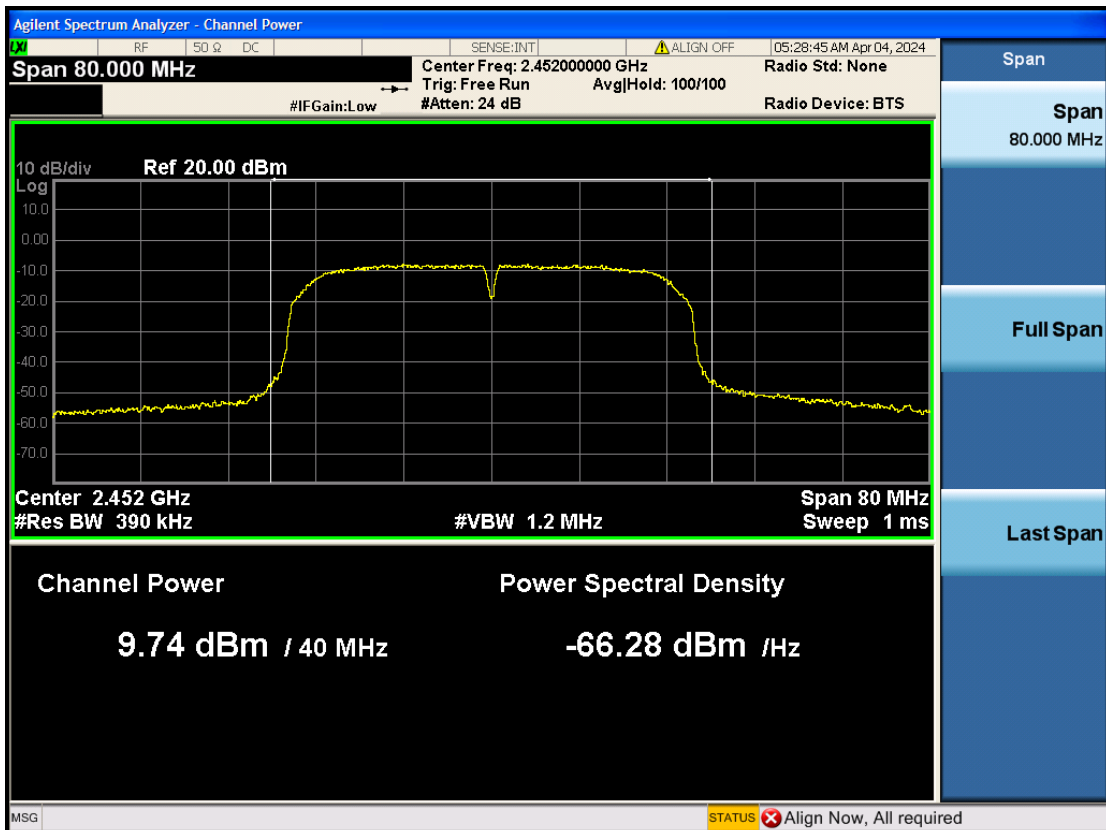
802.11nHT40 CH3



802.11nHT40 CH6



802.11nHT40 CH9



8. POWER SPECTRAL DENSITY MEASUREMENT

8.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Period
1.	PXA signal analyzer	Agilent	N9030A	MY53120217	2024-03-24	1 Year

8.2. Block Diagram of Test Setup

The same as section 6.2.

8.3. Specification Limits

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band.

8.4. Test Procedure

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- (4) Set the VBW $\geq 3 \times \text{RBW}$.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize.
- (9) Use the peak marker function to determine the maximum amplitude level.

8.5. Test Results

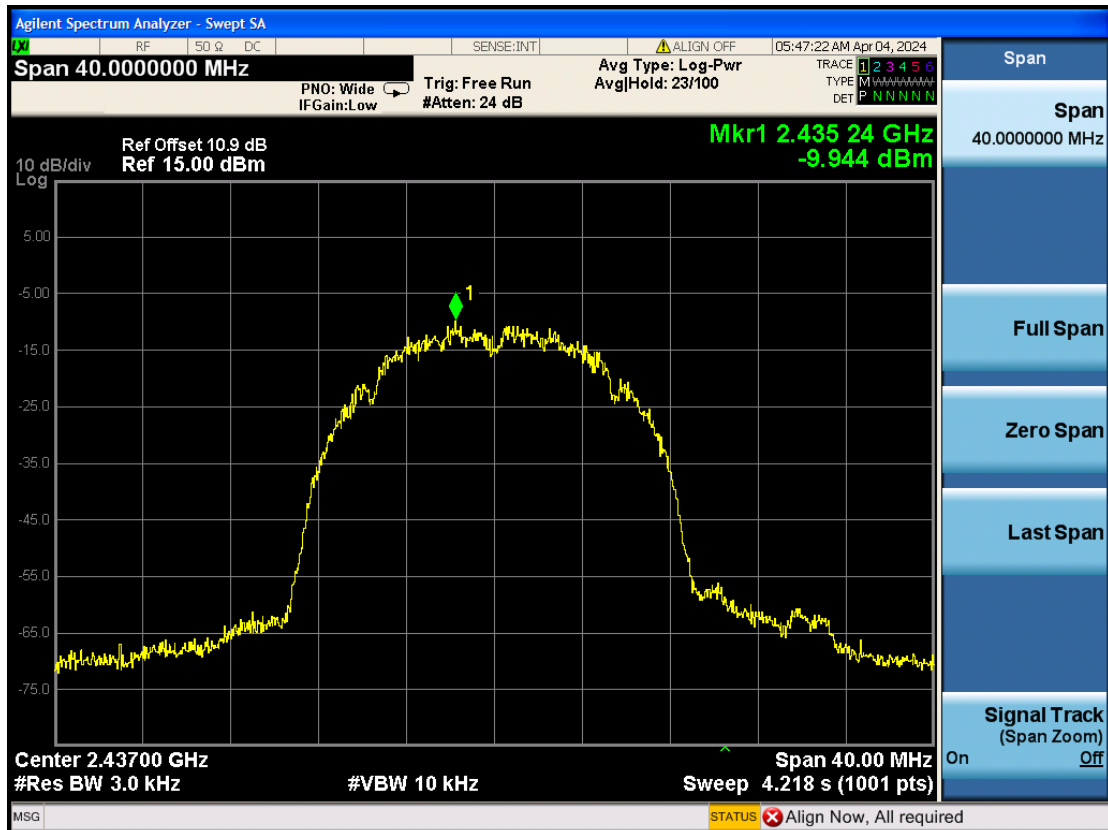
PASSED. All the test results are attached in next page.

Mode	Frequency	Duty Cycle Factor	Reading (dBm)	Result (dBm)	Limit (dBm/3kHz)
11b	2412	0	-8.347	-8.347	8
	2437		-9.944	-9.944	
	2462		-11.444	-11.444	
11g	2412	0	-14.935	-14.935	
	2437		-16.391	-16.391	
	2462		-18.096	-18.096	
11n-HT20	2412	0	-14.267	-14.267	
	2437		-16.485	-16.485	
	2462		-17.520	-17.520	
11n-HT40	2422	0	-16.888	-16.888	
	2437		-18.549	-18.549	
	2452		-18.441	-18.441	

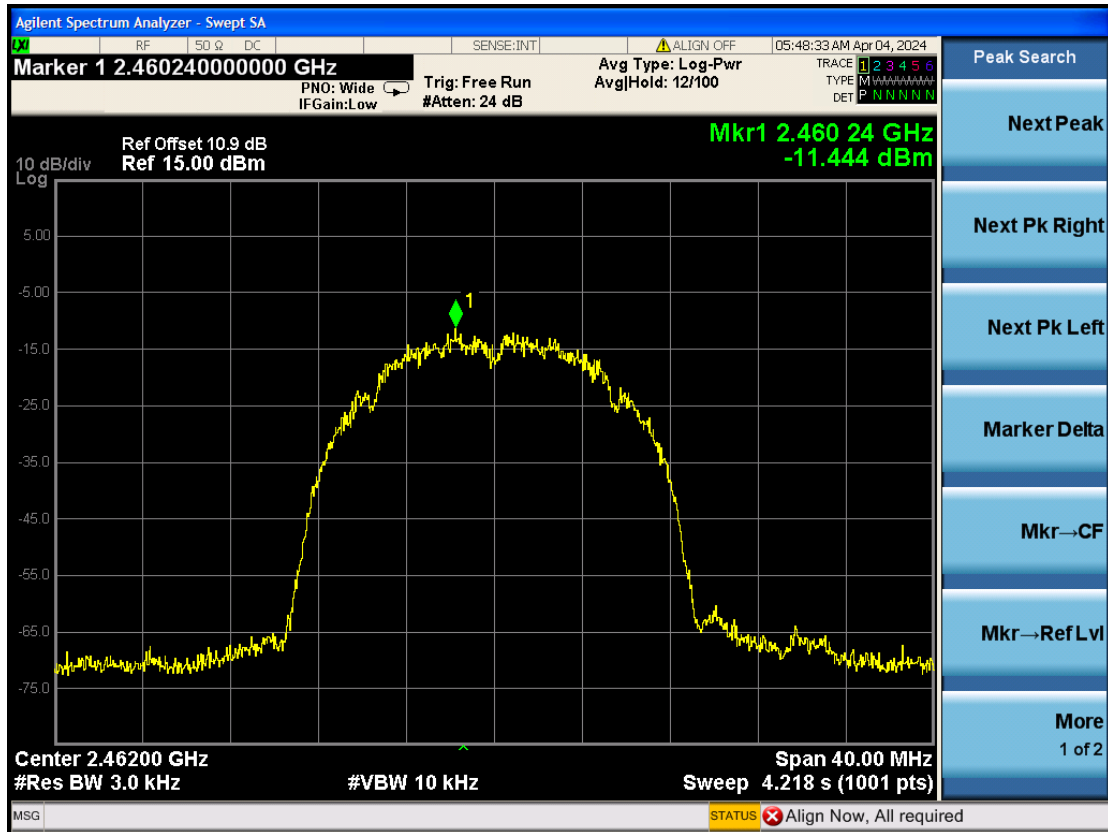
802.11b CH1



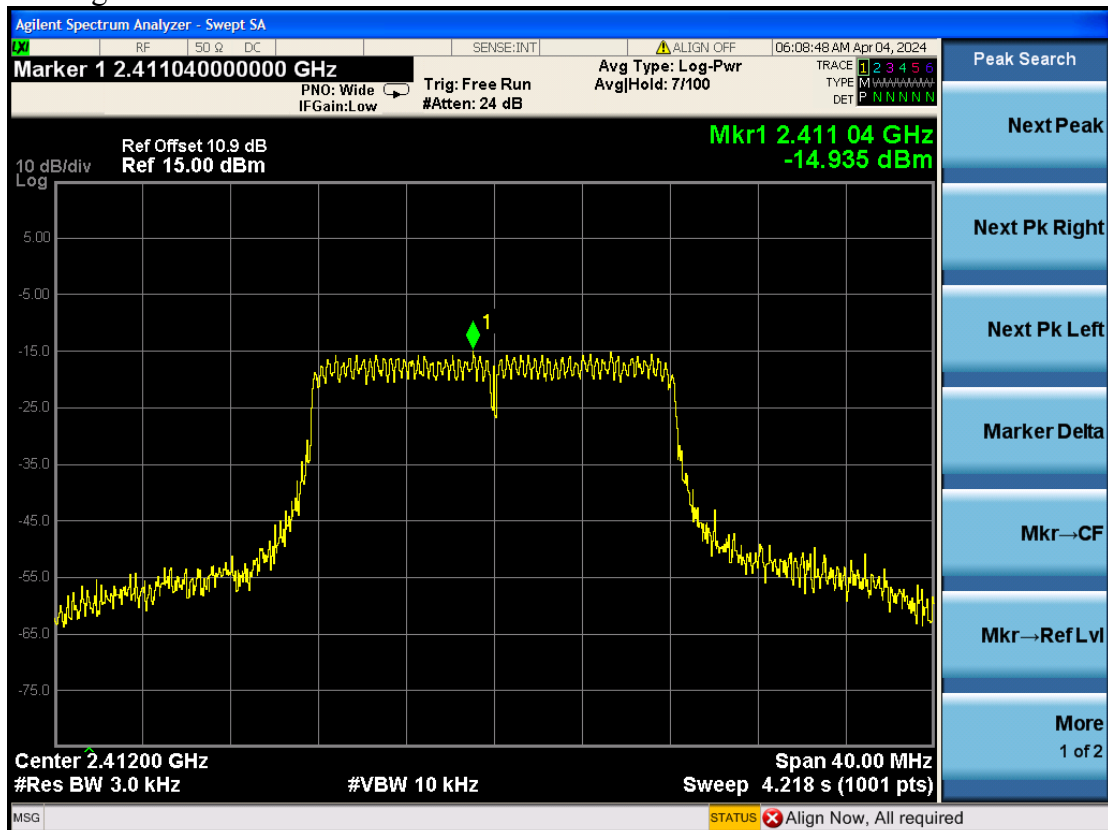
802.11b CH6



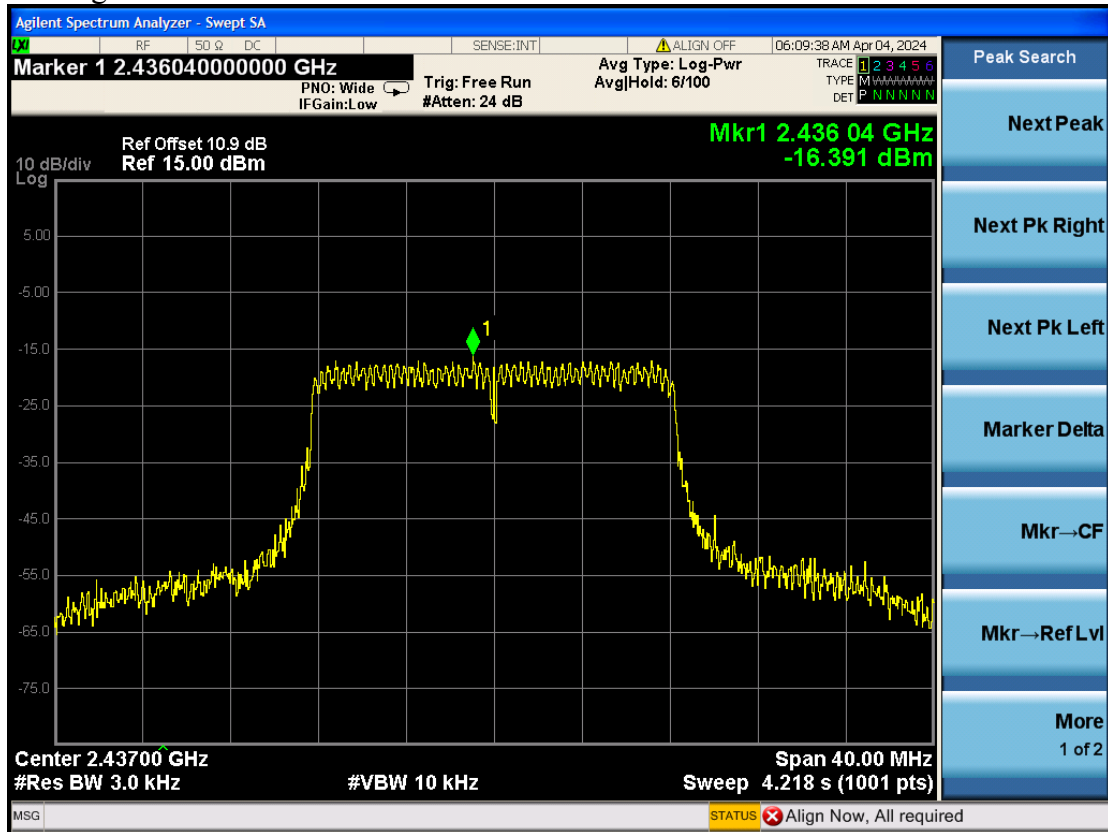
802.11b CH11



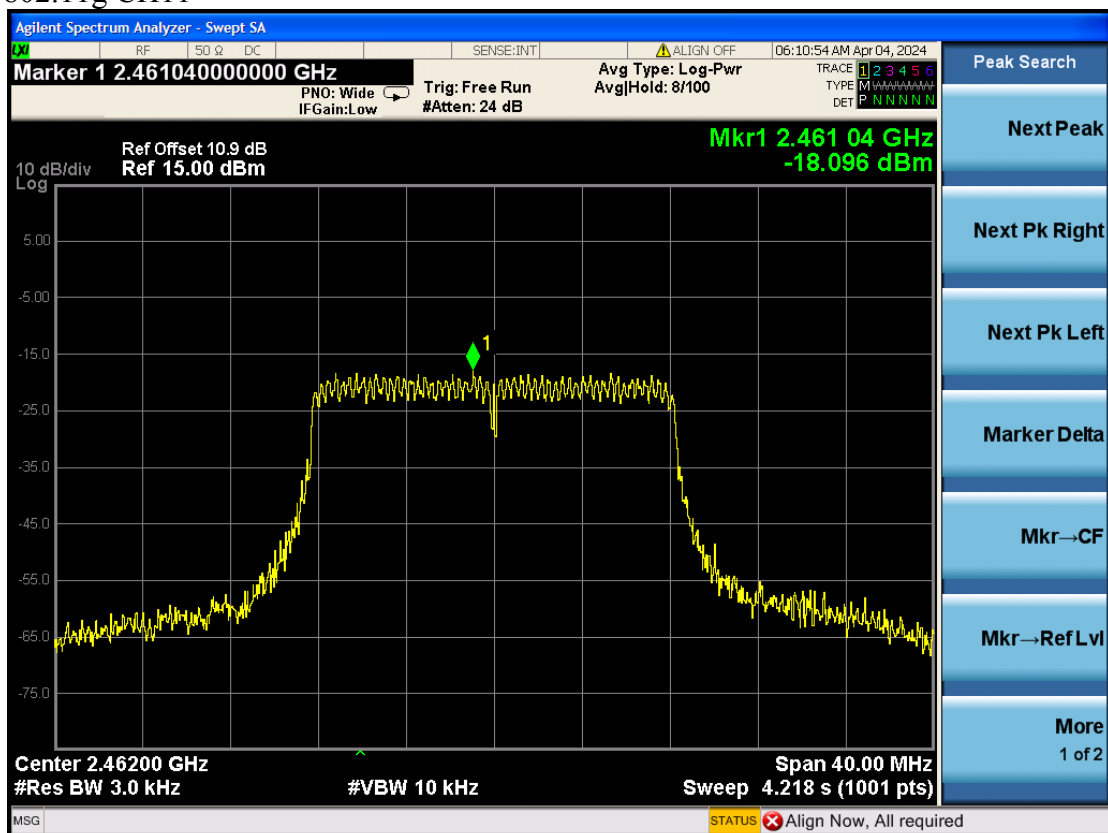
802.11g CH1



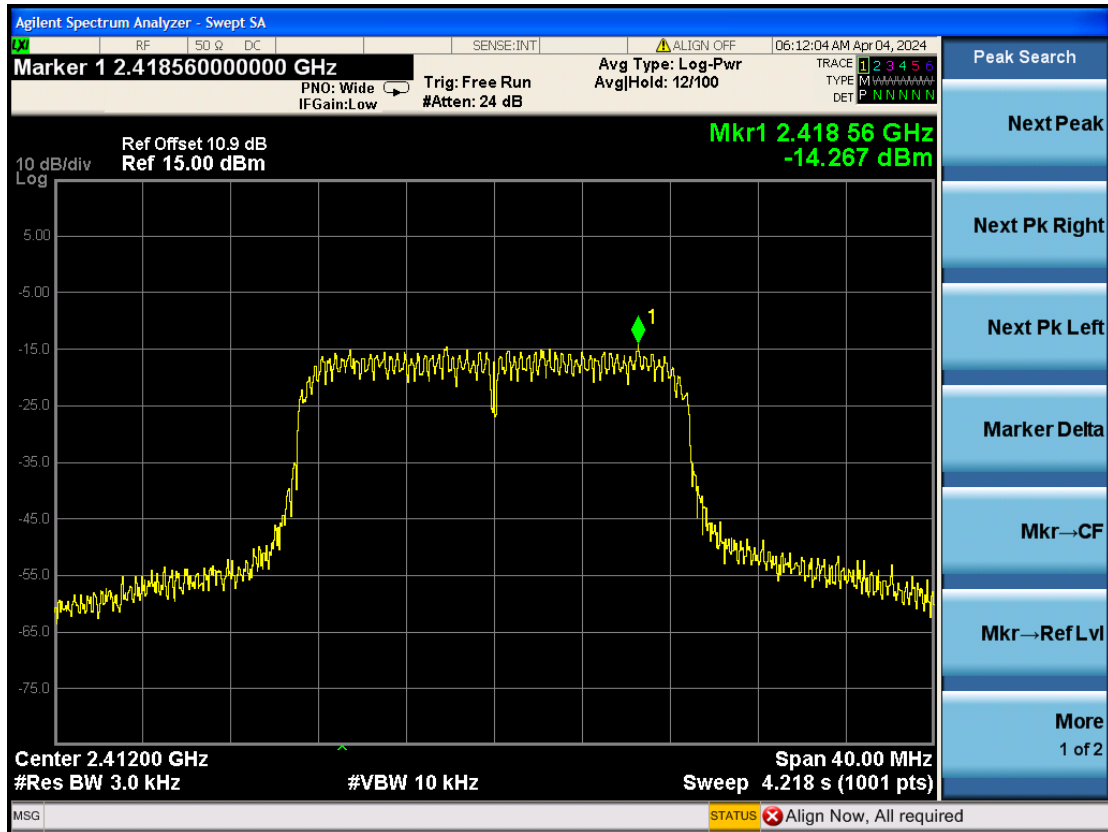
802.11g CH6



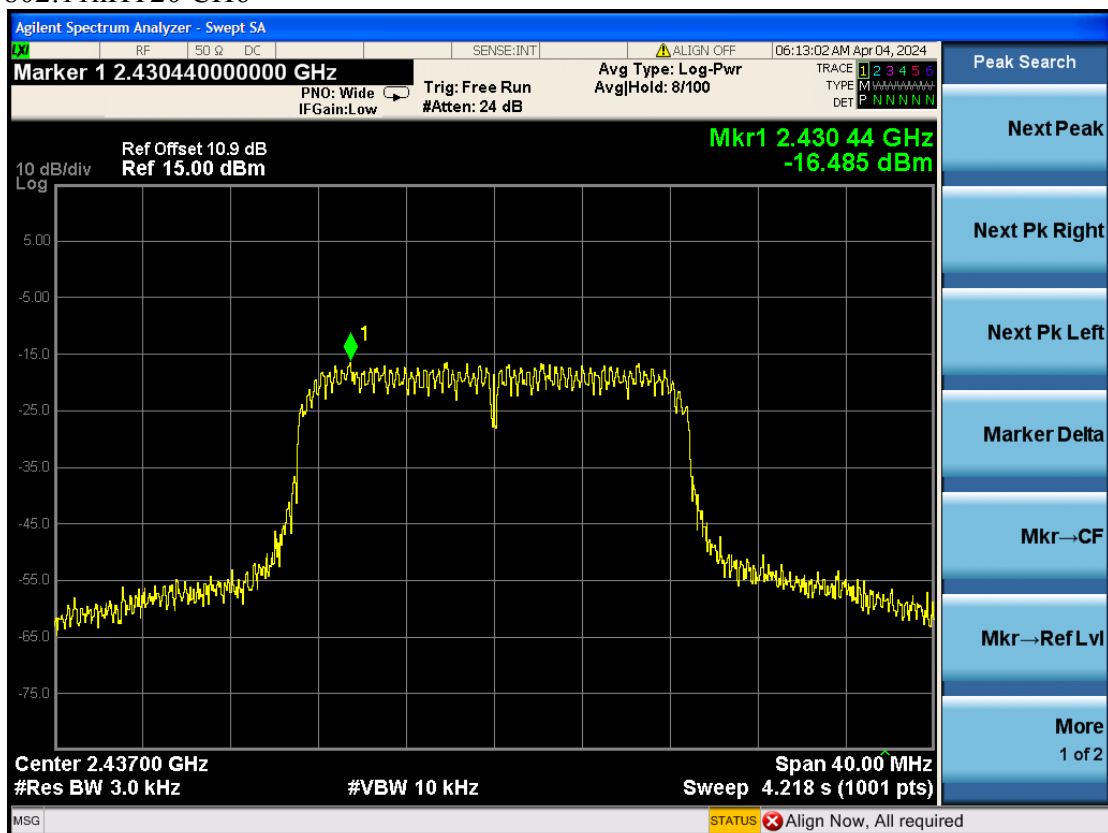
802.11g CH11



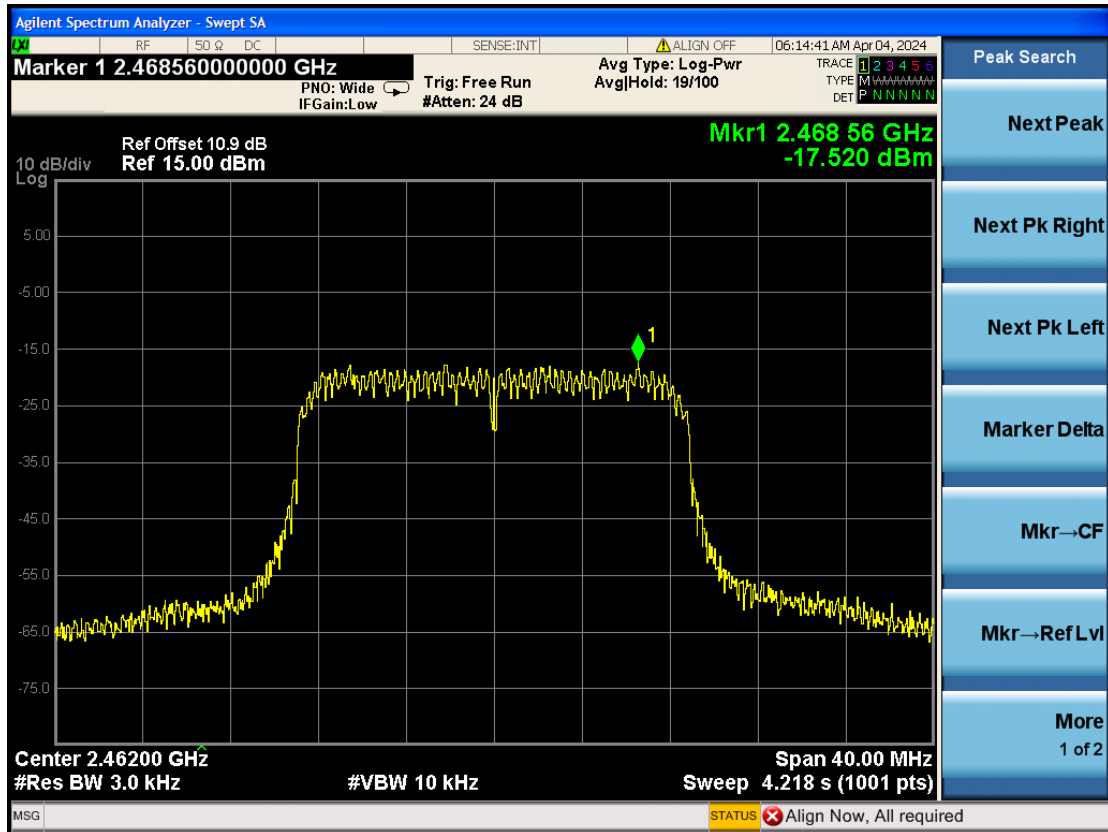
802.11nHT20 CH1



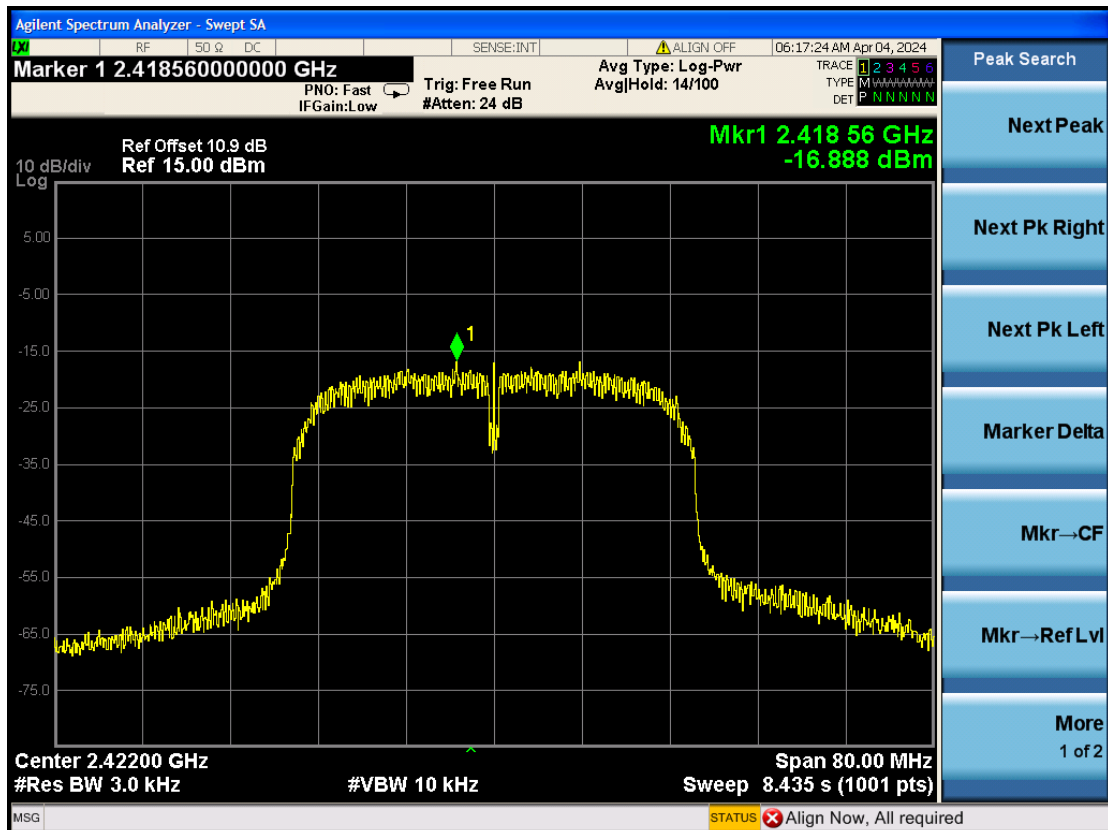
802.11nHT20 CH6



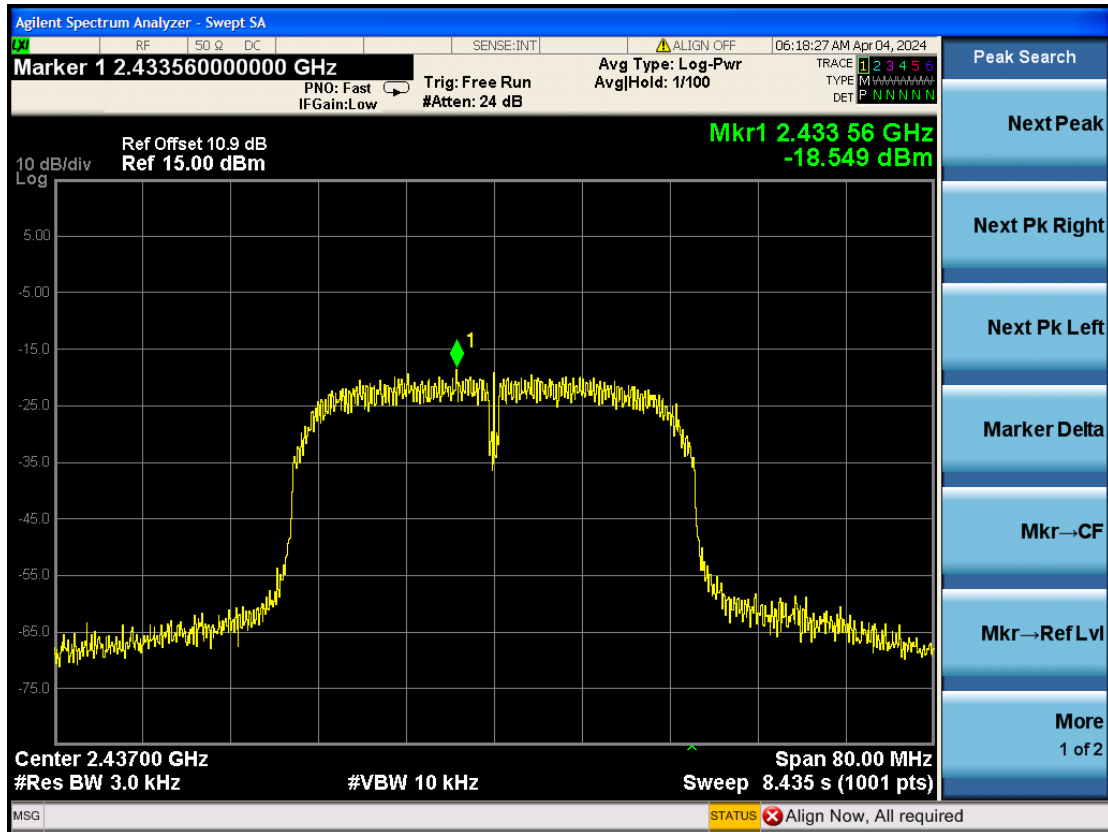
802.11nHT20 CH11



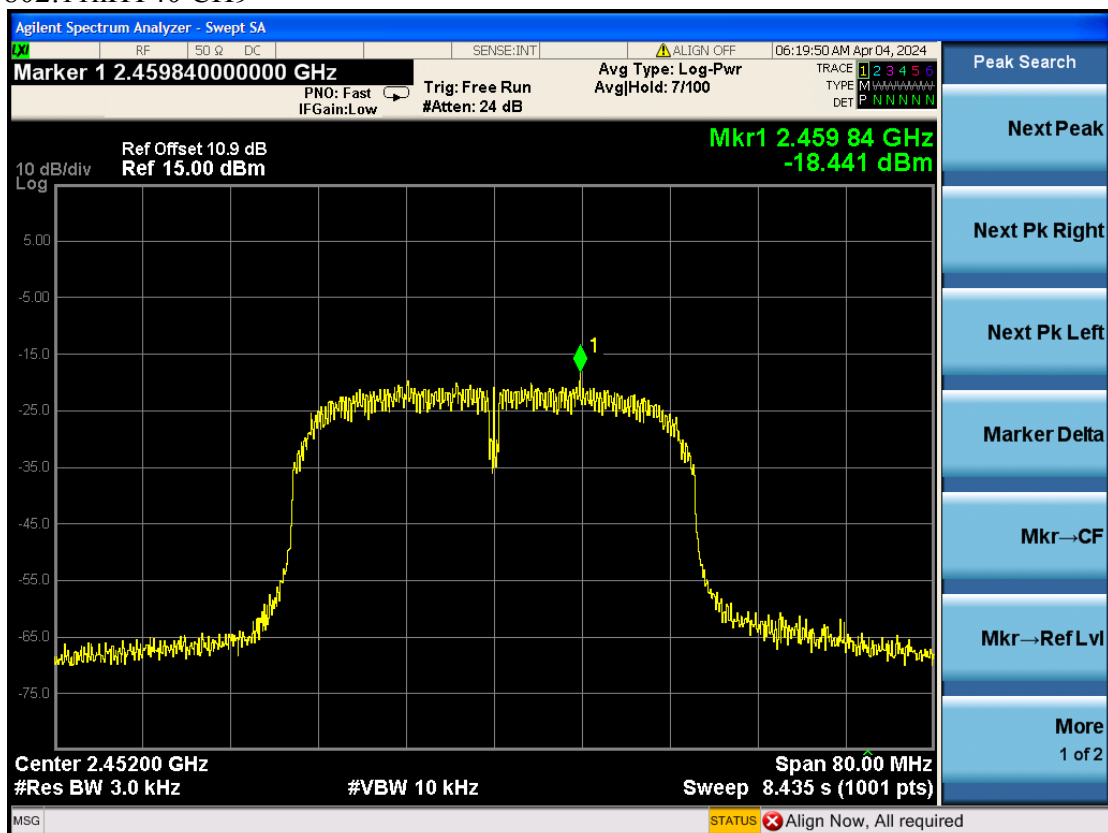
802.11nHT40 CH3



802.11nHT40 CH6



802.11nHT40 CH9



9. EMISSION LIMITATIONS MEASUREMENT

9.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Period
1.	PXA signal analyzer	Agilent	N9030A	MY53120217	2024-03-24	1 Year

9.2. Block Diagram of Test Setup

The same as section 6.2.

9.3. Specification Limits

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, that the required attenuation shall be 30 dB instead of 20 dB.

9.4. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v05r02:

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: 100 kHz.
- (4) Set the VBW $\geq 3 \times$ RBW.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize to find the max level.

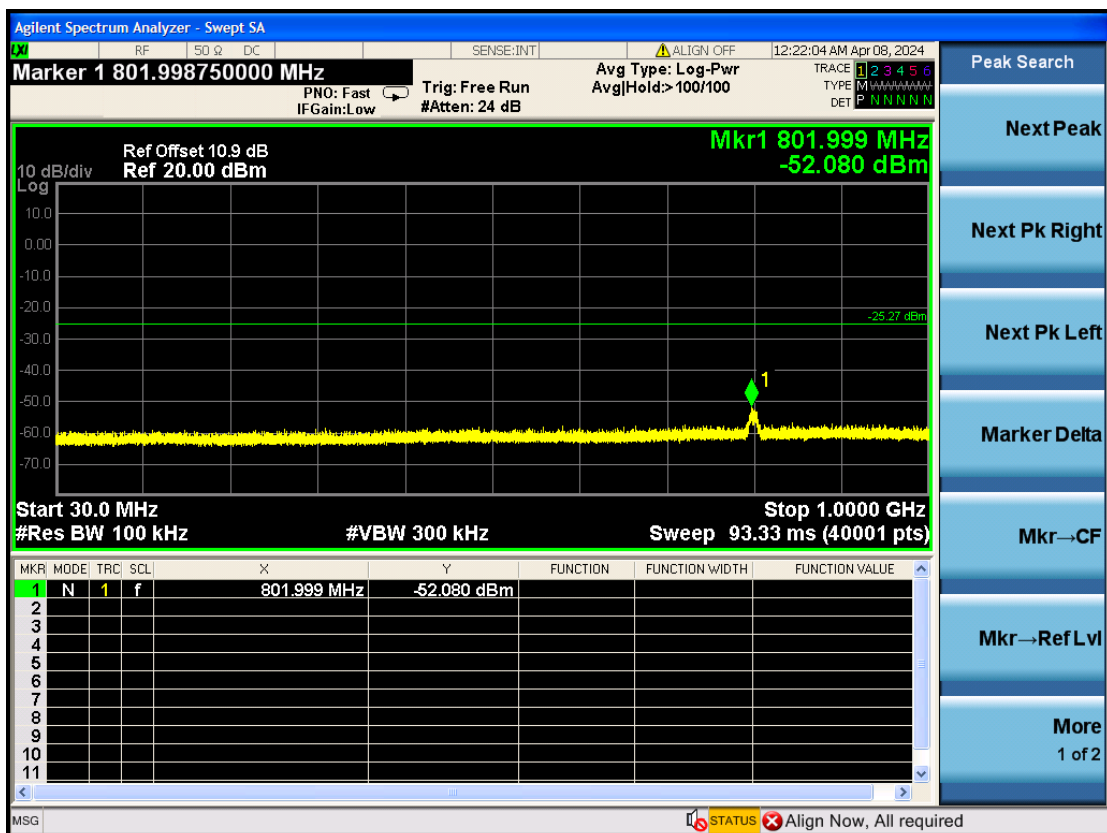
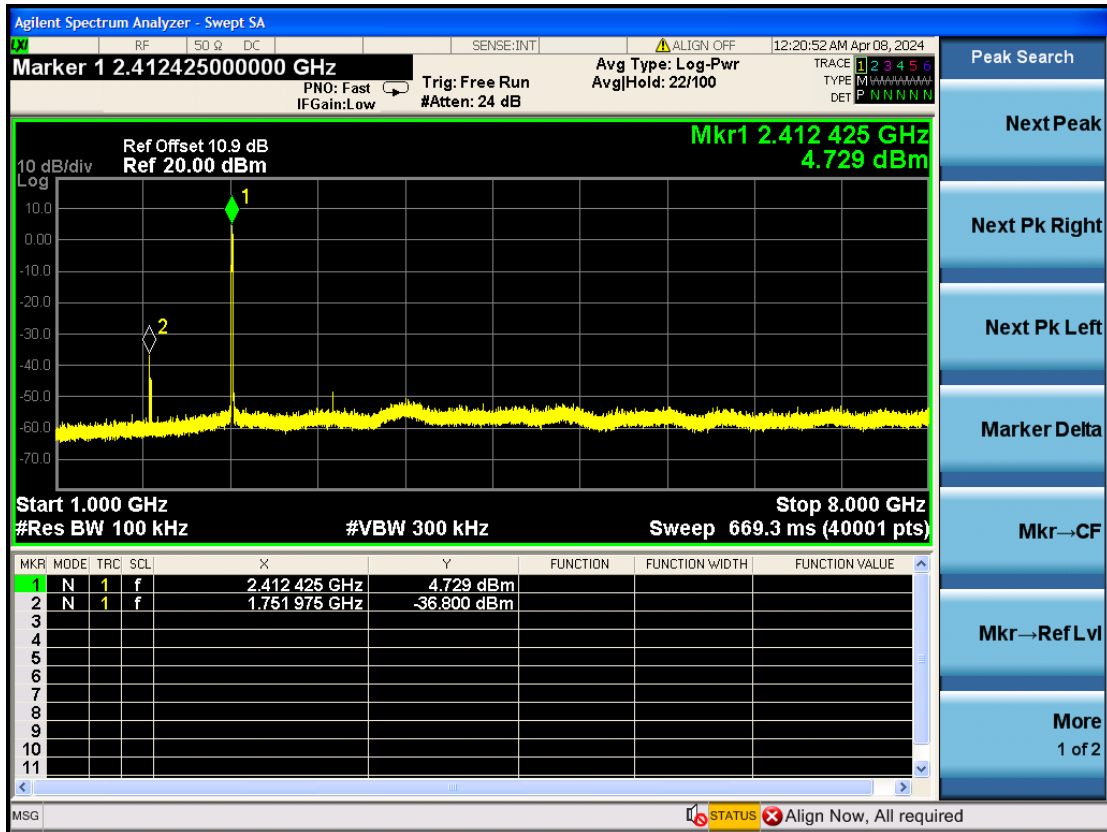
9.5. Test Results

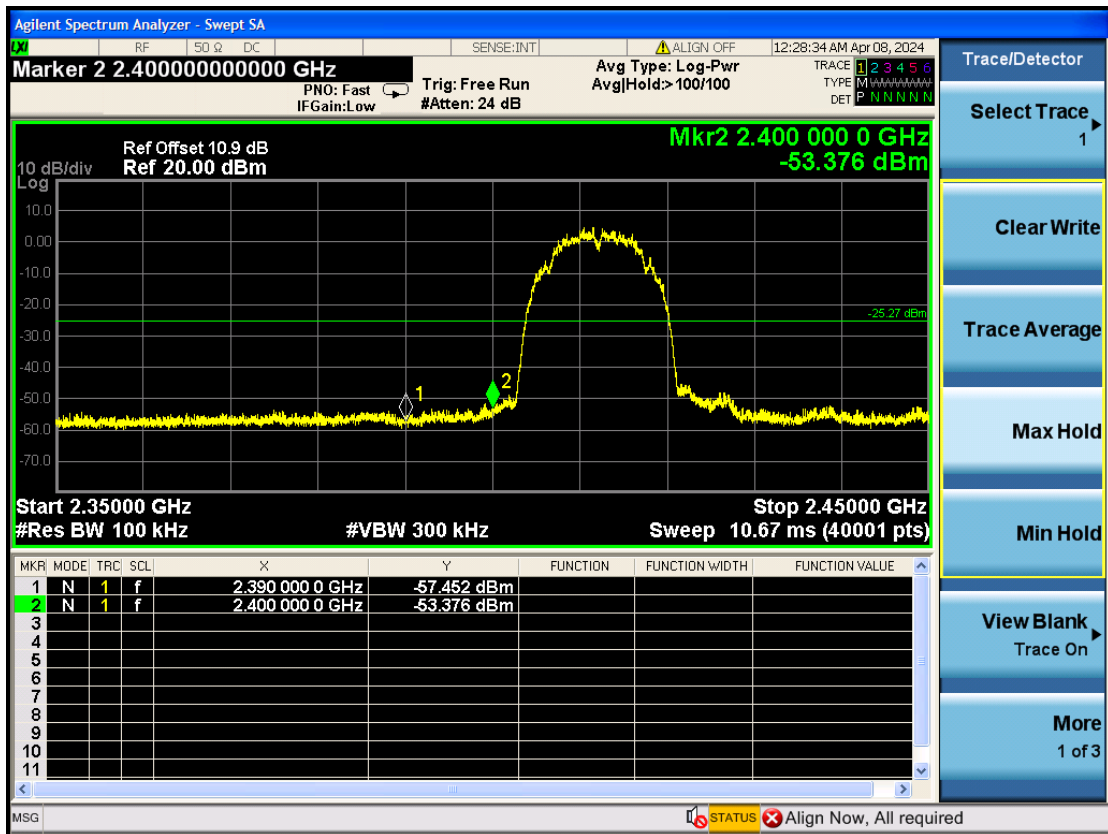
PASSED. All the test results are attached in next pages.

Item	Channel	Frequency (MHz)	Amplitude (dBm)
802.11b	1	2412.425	4.729
		1751.975	-36.800
		801.999	-52.080
		10415.525	-51.022
		24934.25	-46.929
		2390	-57.452
		2400	-53.376
	6	2436.575	8.213
		1624.575	-50.430
		810.68	-52.402
		14903.05	-50.022
		23838.25	-48.386
	11	2460.375	7.604
		1641.375	-50.449
		822.708	-52.264
		14343.925	-51.287
		23648.5	-48.117
		2483.5	-53.483
802.11g	1	2407.35	-3.755
		3216.025	-48.535
		807.916	-55.493
		14091.75	-51.377
		22025.75	-50.013
		2390	-51.521
		2400	-38.512
	6	1773.85	-43.379
		2443.925	2.210
		809.832	-52.875
		14403.25	-52.027
		24095	-48.017
	11	2459.325	1.082
		1765.975	-42.314
		814.657	-53.383
		14351.8	-51.146
		23859.5	-46.992
		2483.5	-38.435
802.11n HT20	1	2409.1	-3.228
		1766.15	-36.292
		807.746	-55.559
		14244.175	-51.389
		23752	-46.915
		2390	-51.788
		2400	-39.726
	6	1766.15	-42.763
		2431.675	2.595
		817.495	-53.610

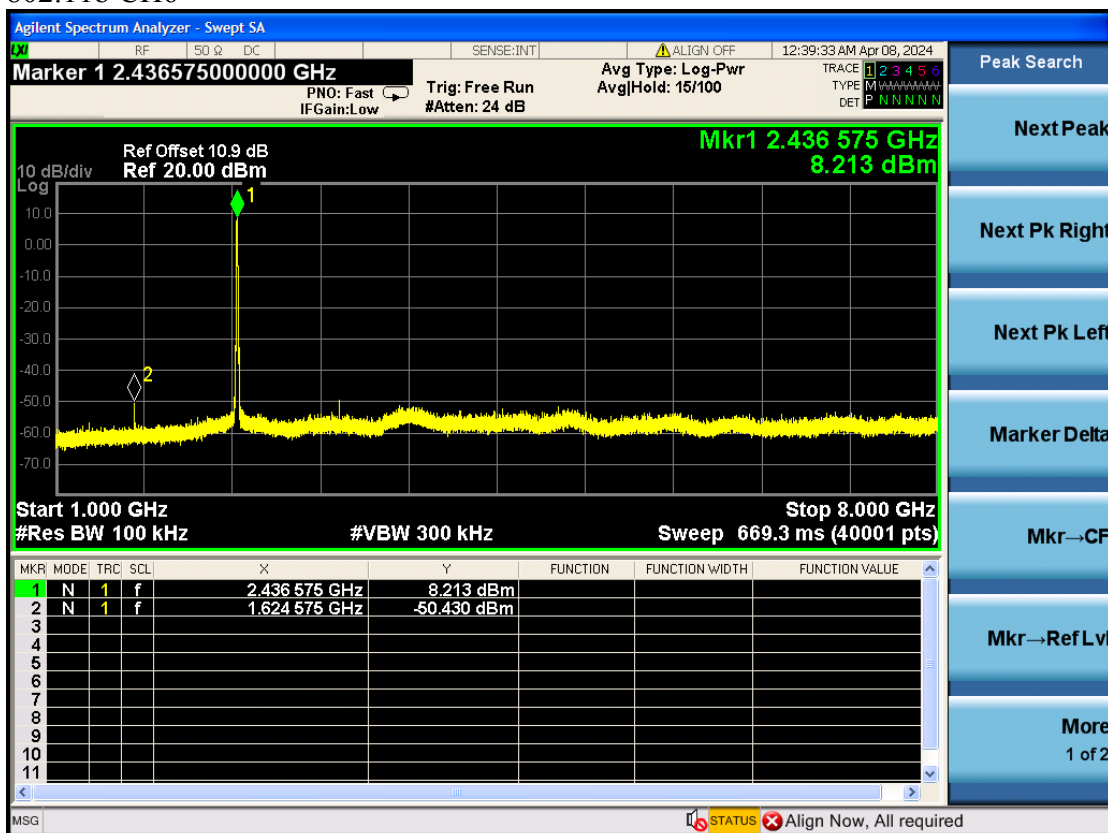
		14364.225	-50.930
		24158.5	-47.933
	11	2462.65	0.720
		3282.7	-49.947
		818.828	-54.075
		11054.8	-51.851
		23939.25	-48.360
		2483.5	-35.277
802.11n HT40	3	2419.775	-4.615
		3229.325	-46.907
		801.975	-54.760
		10432.85	-51.971
		24180.5	-47.890
		2390	-50.676
		2400	-46.521
	6	2432.9	-1.333
		3249.275	-48.831
		803.43	-54.802
		14375.5	-51.099
		23893.75	-47.815
	9	2455.475	-1.599
		1776.475	-32.700
		818.901	-55.276
		10680.125	-51.882
		24868.25	-48.334
		2483.5	-35.852

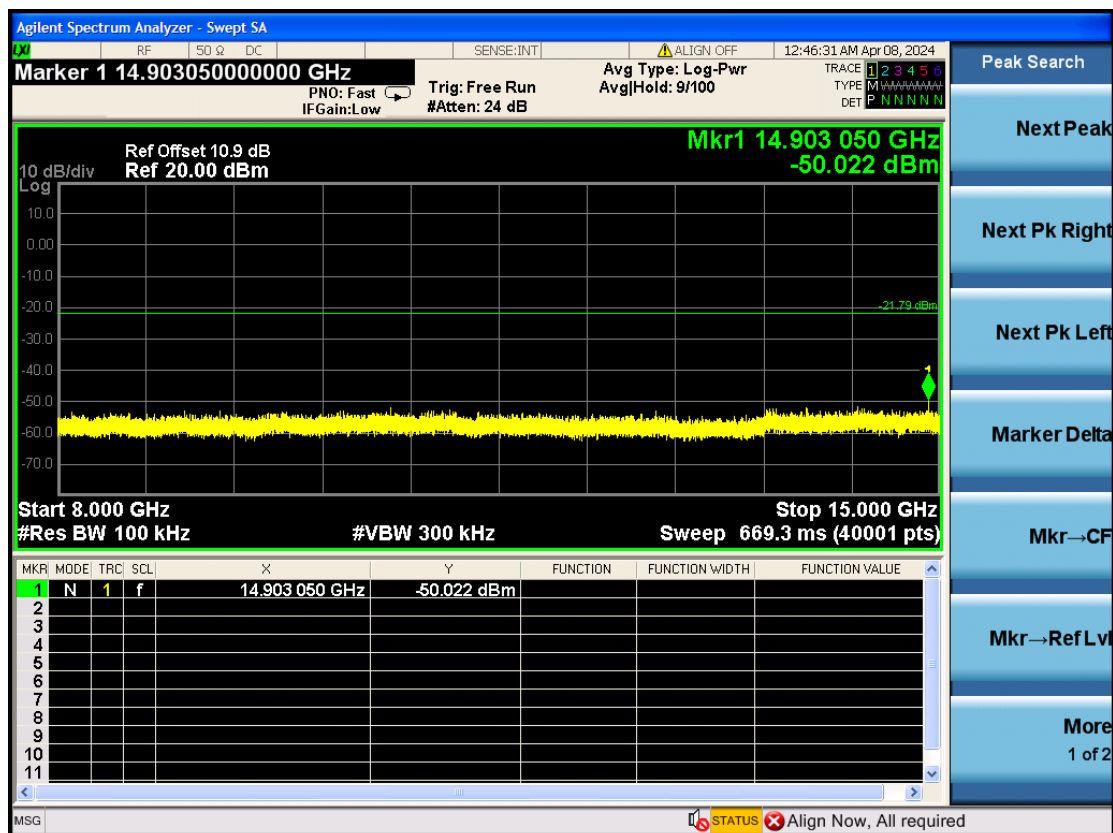
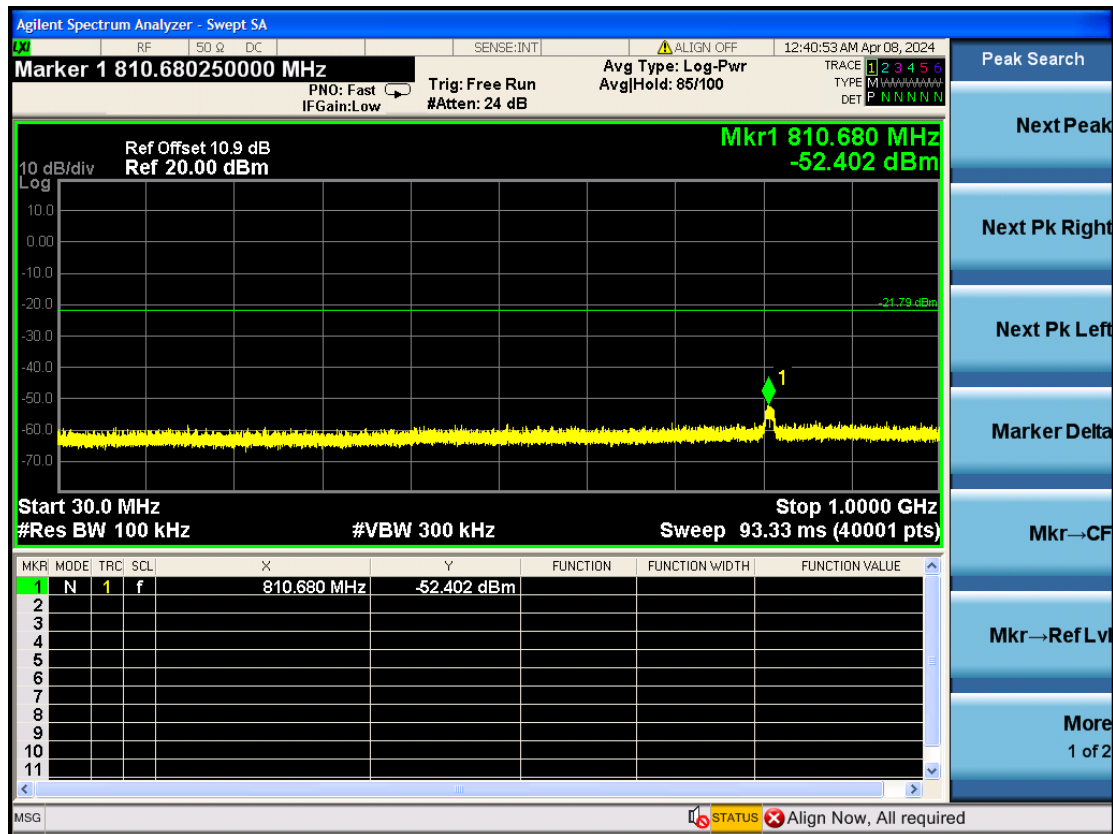
802.11b CH1

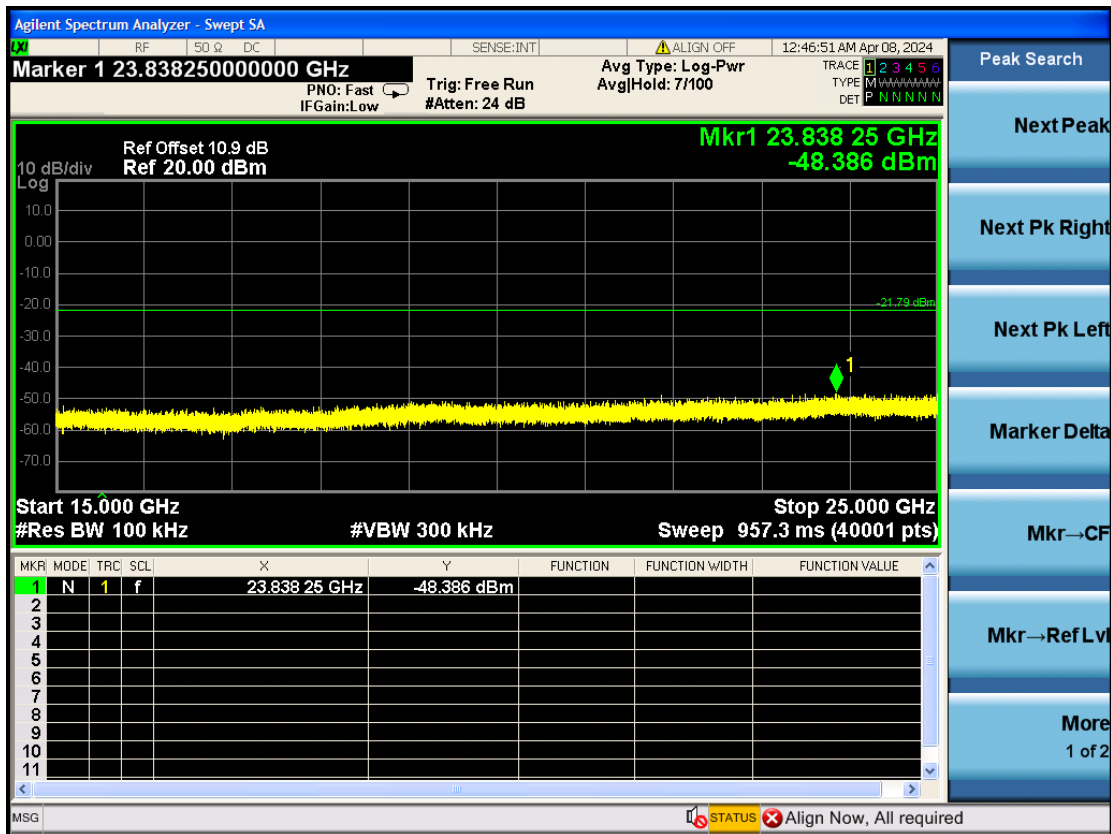




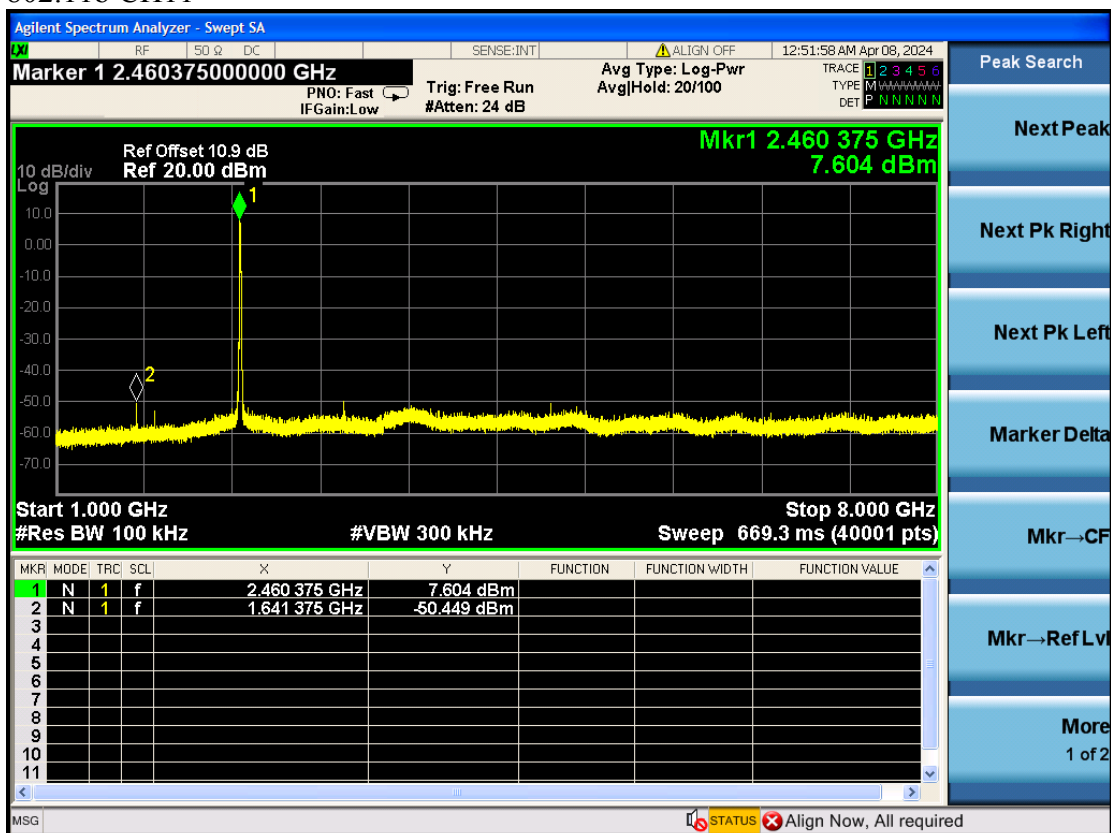
802.11b CH6

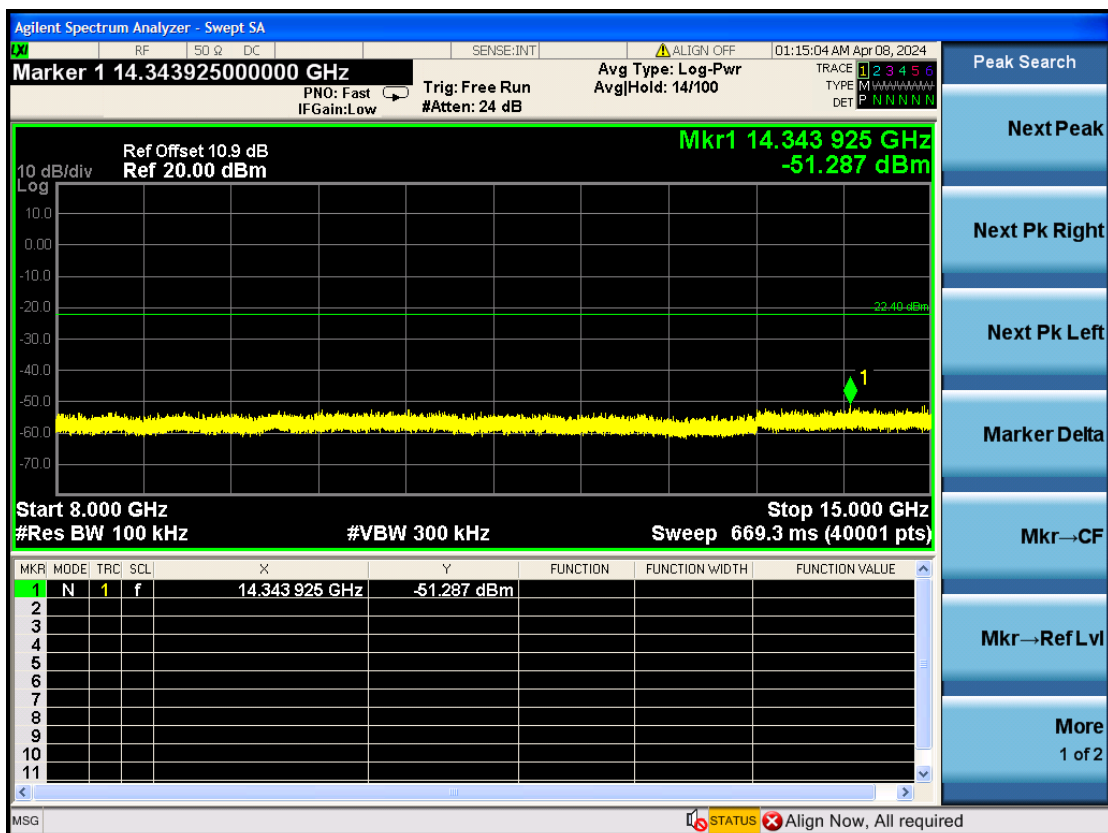
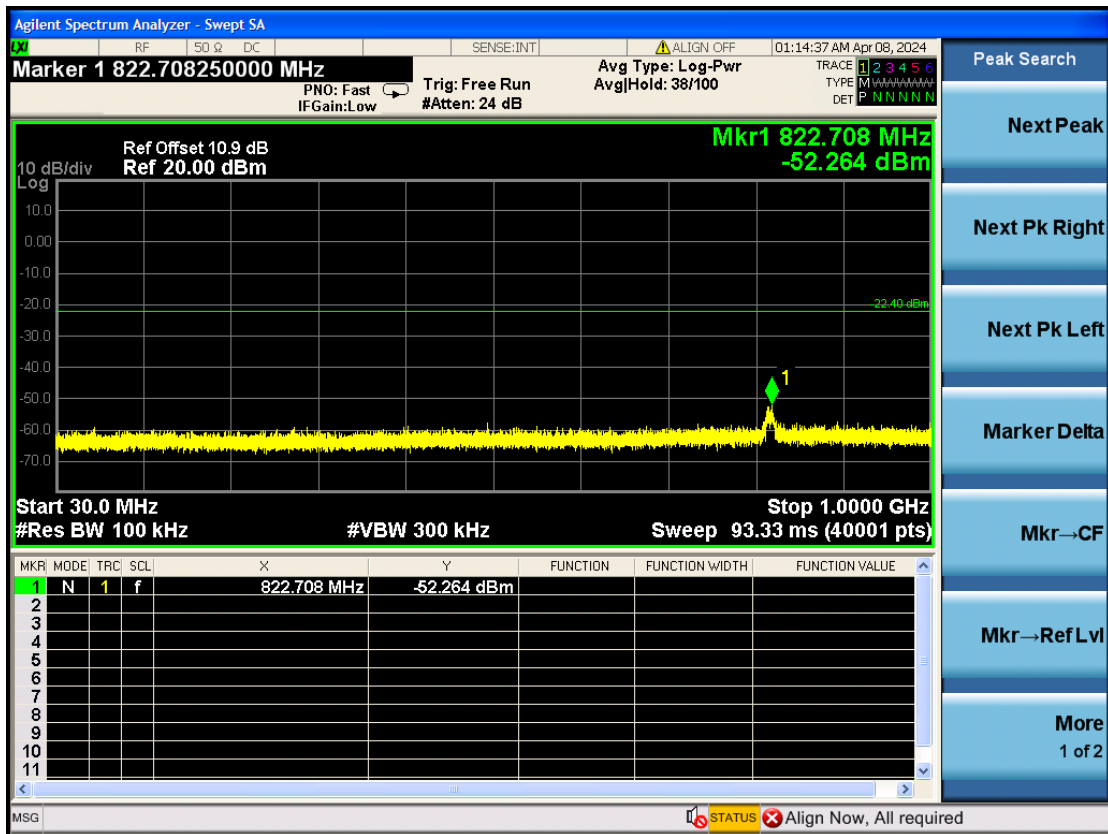


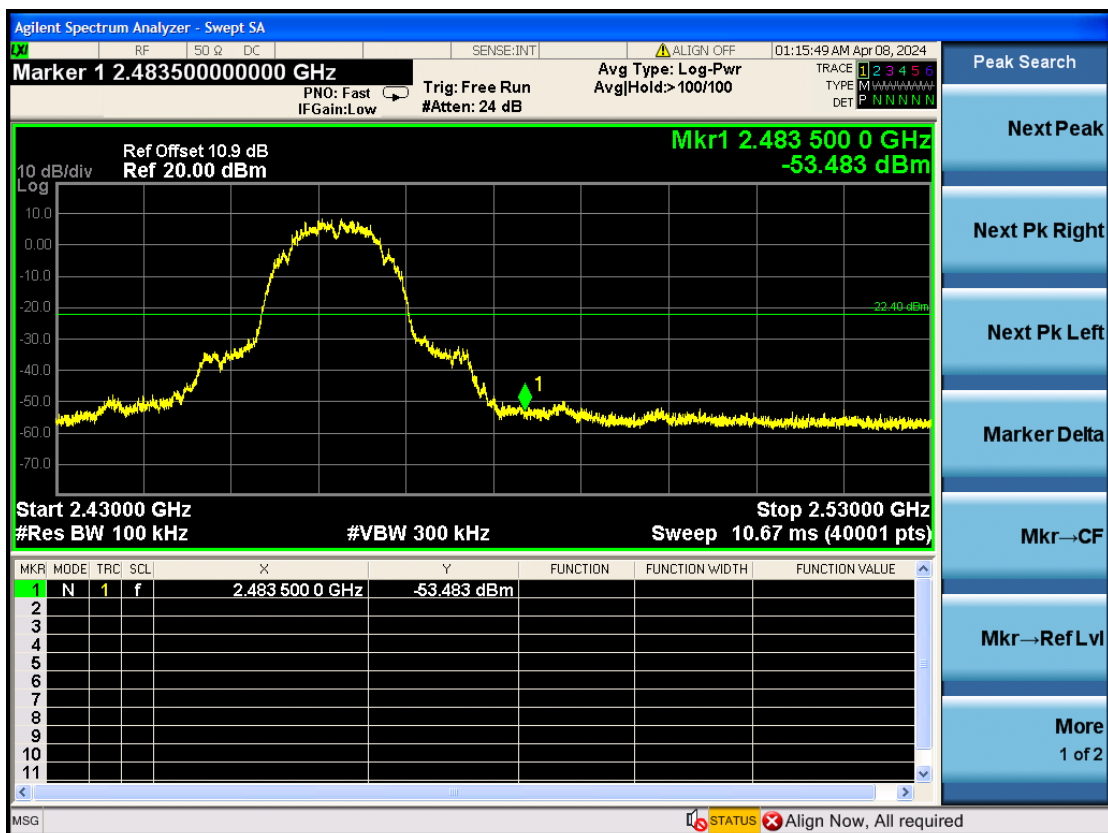
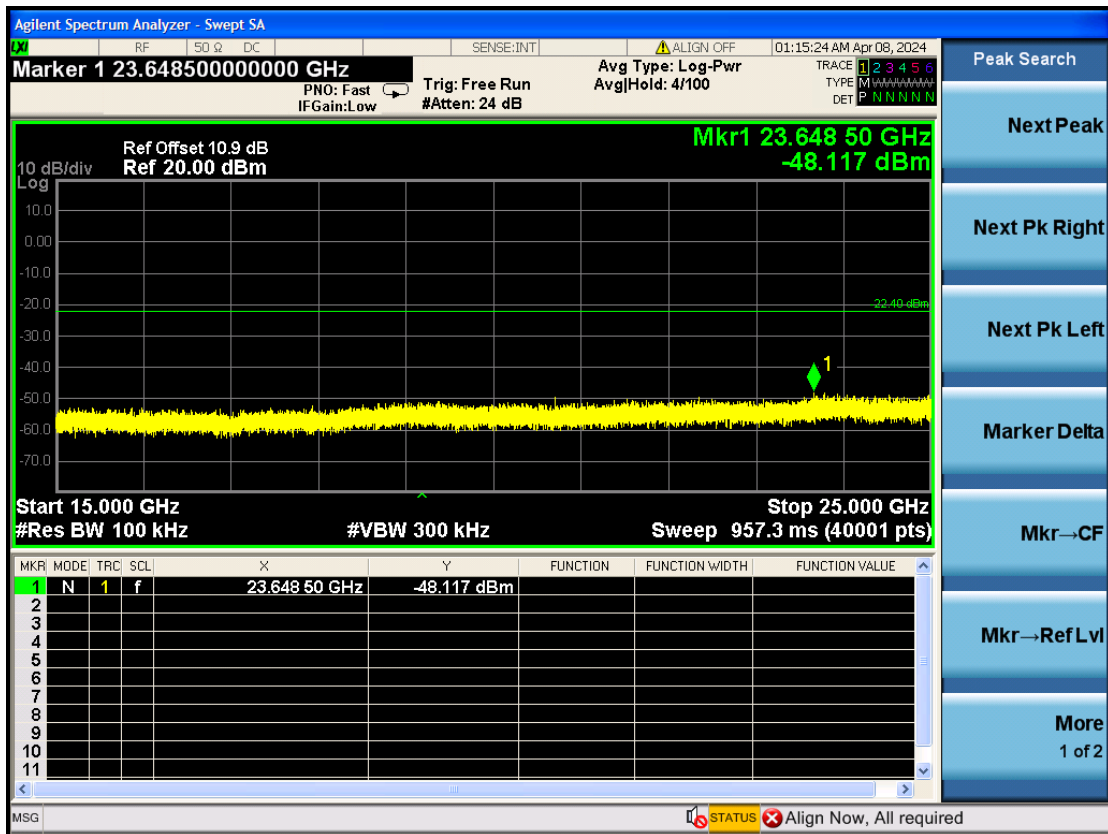




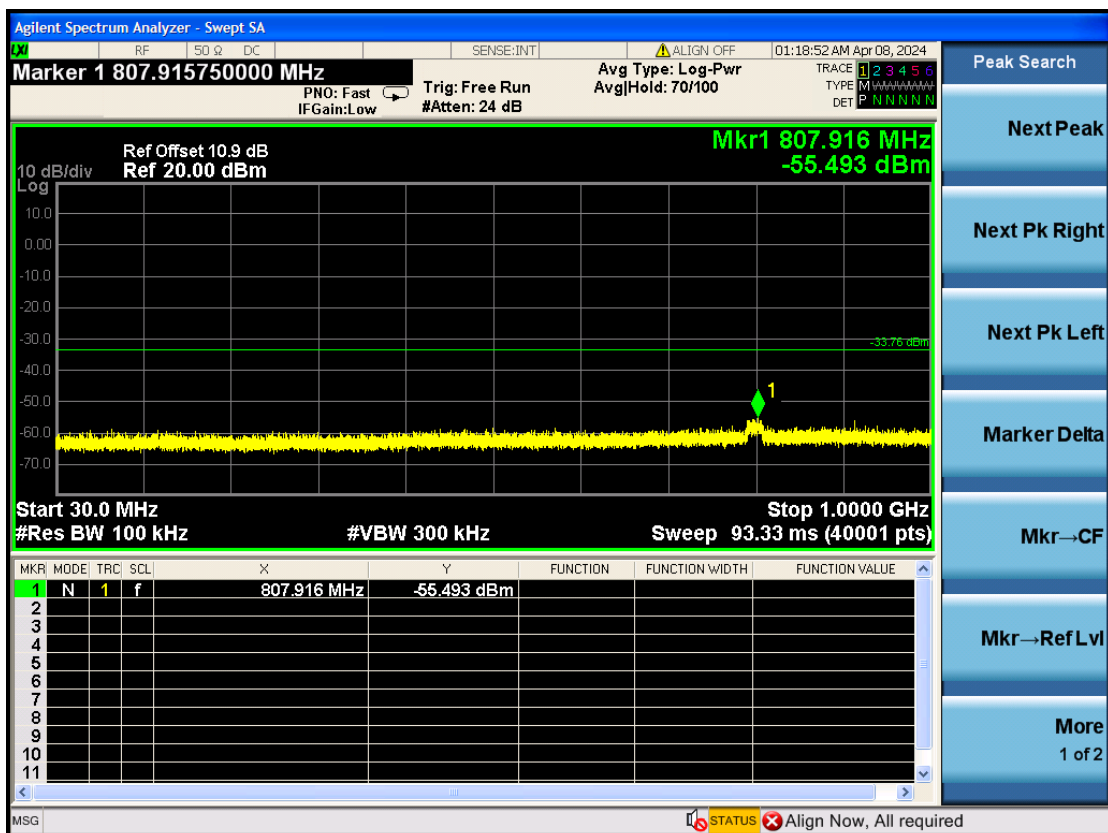
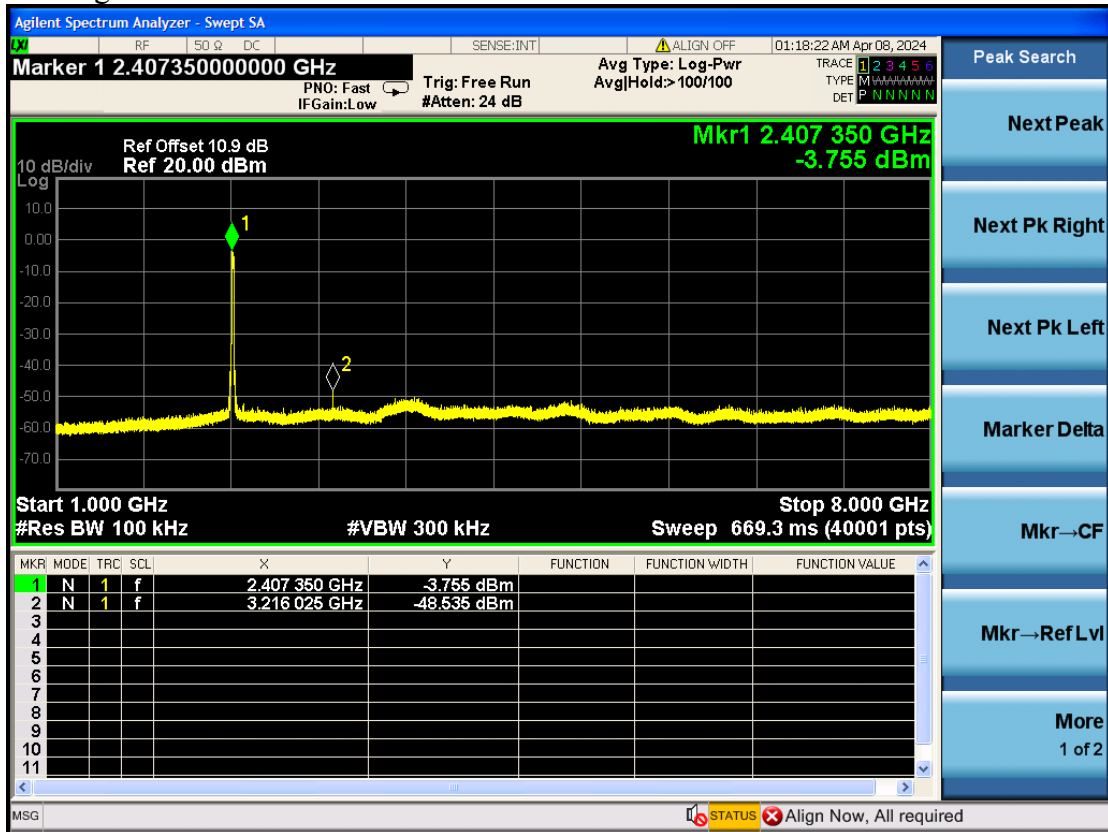
802.11b CH11

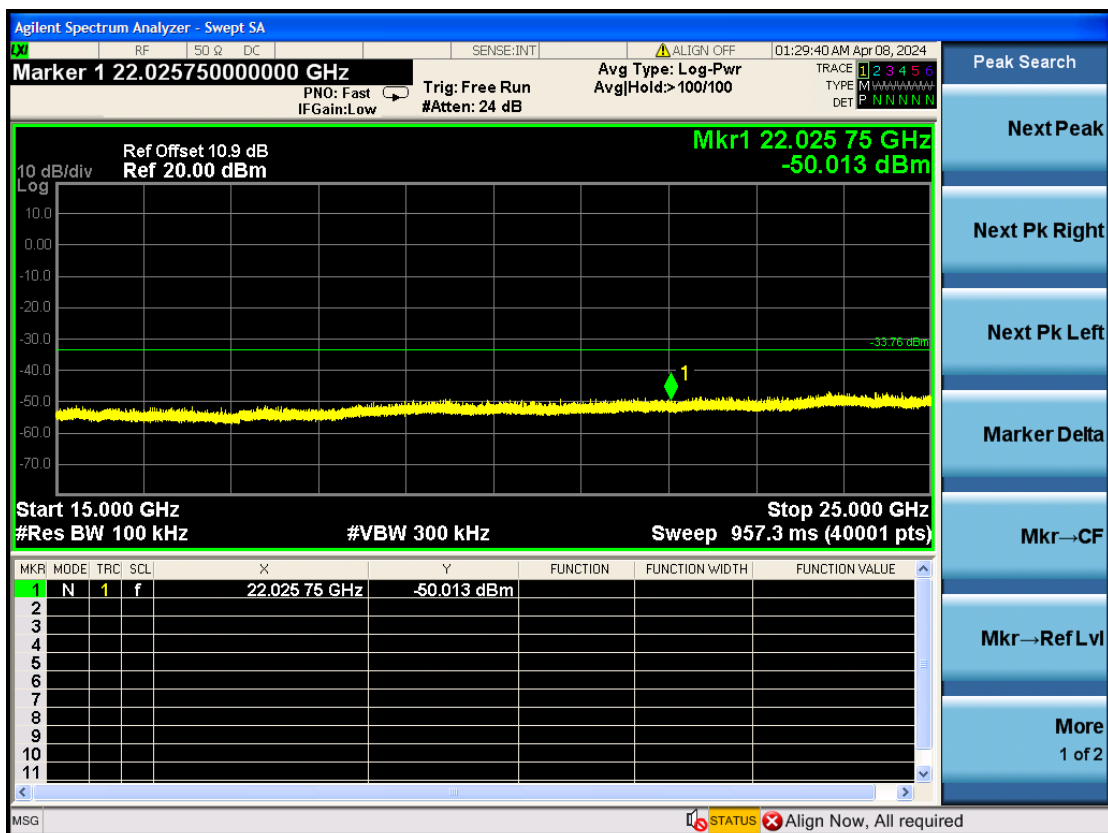
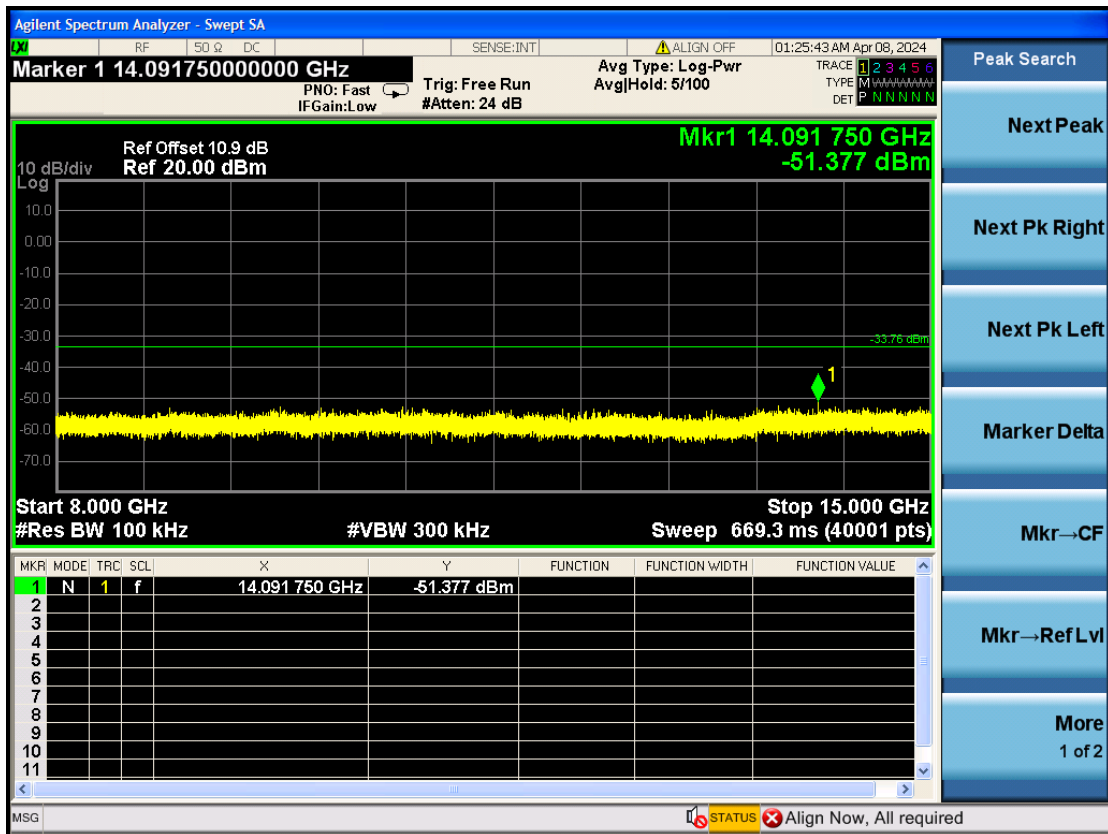


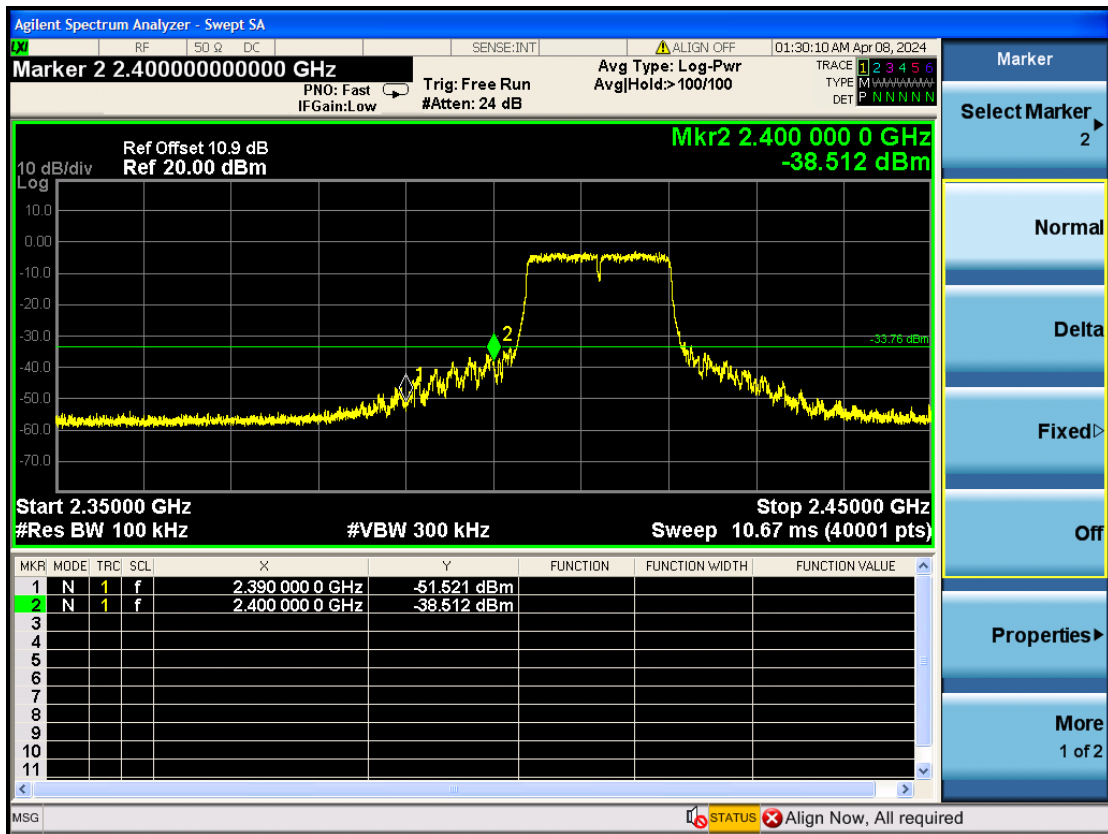




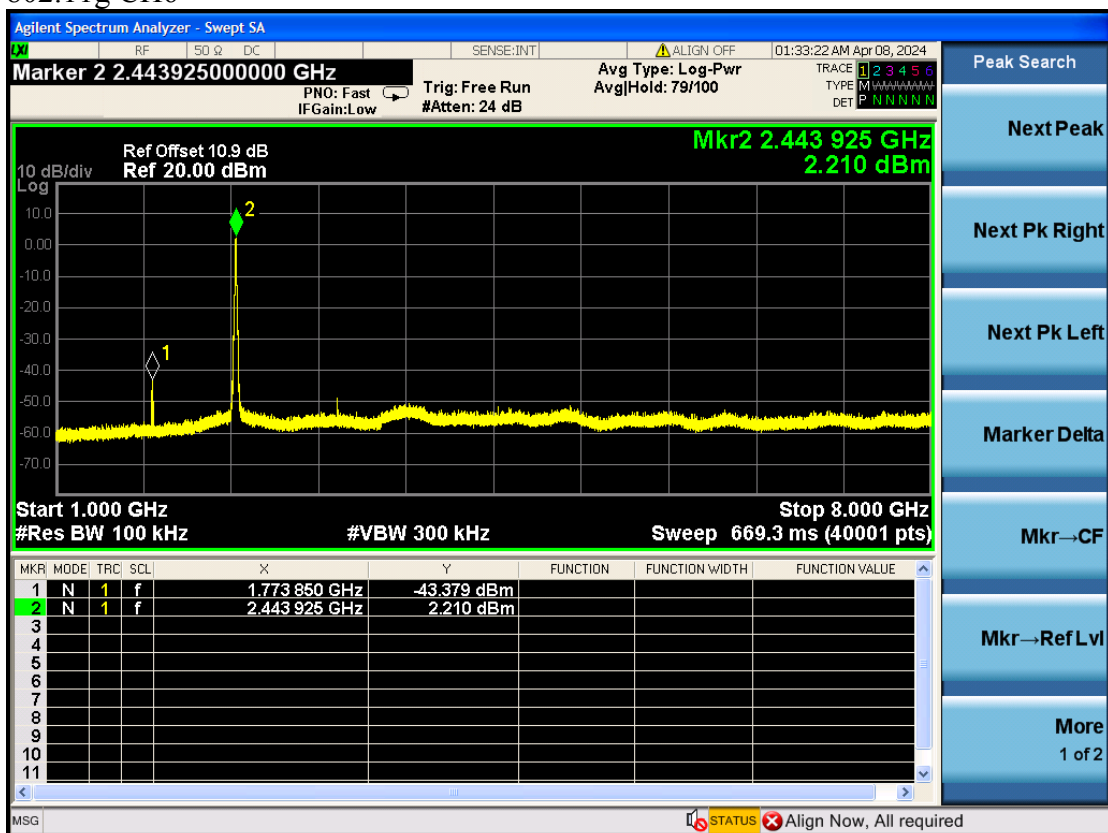
802.11g CH1

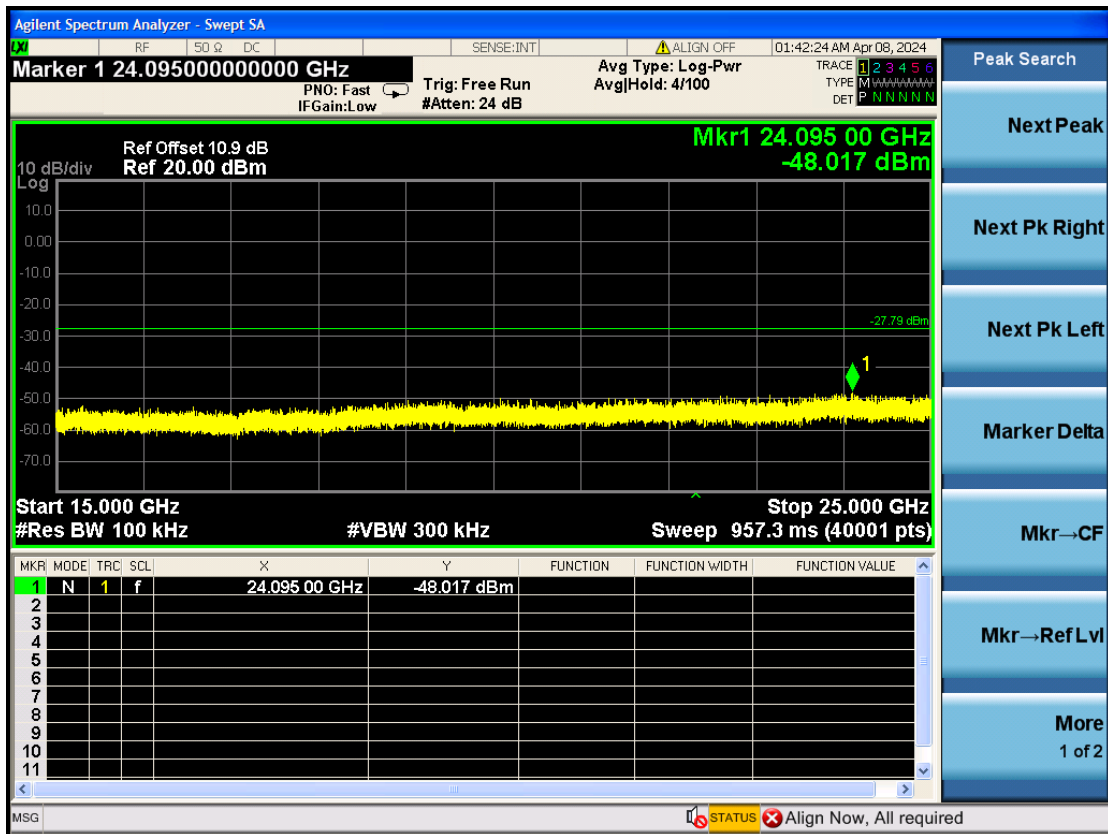




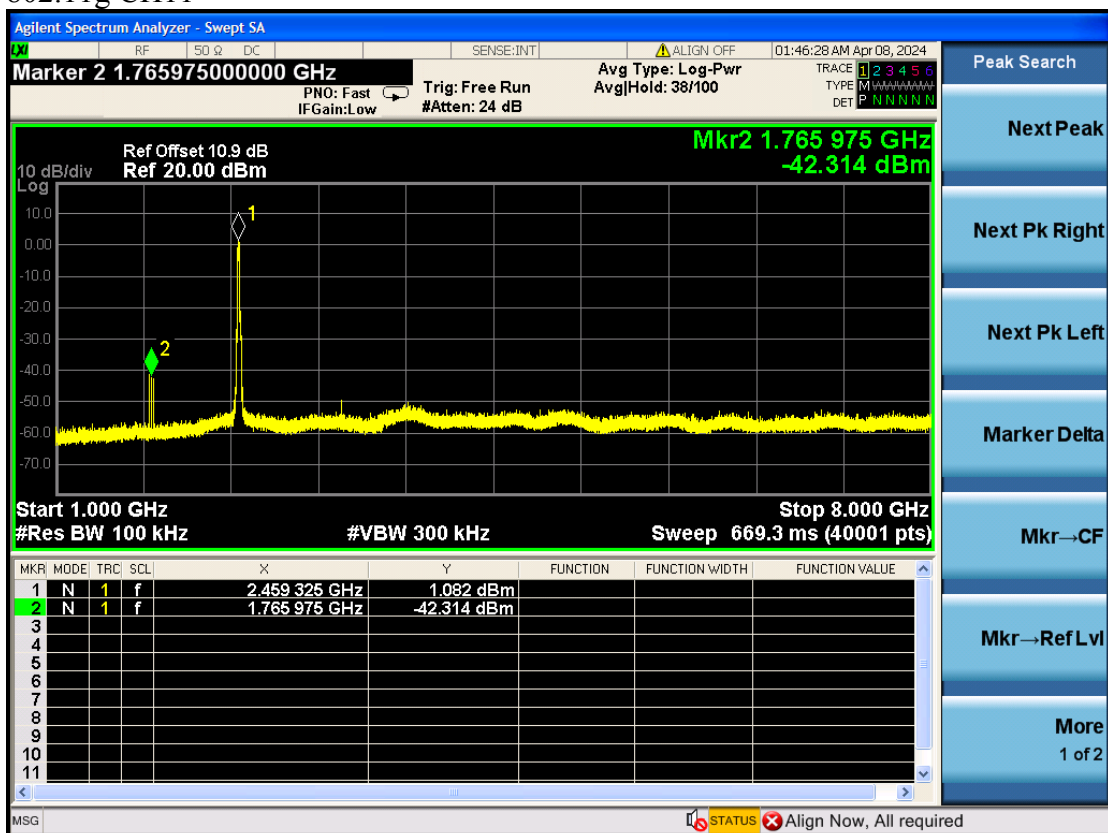


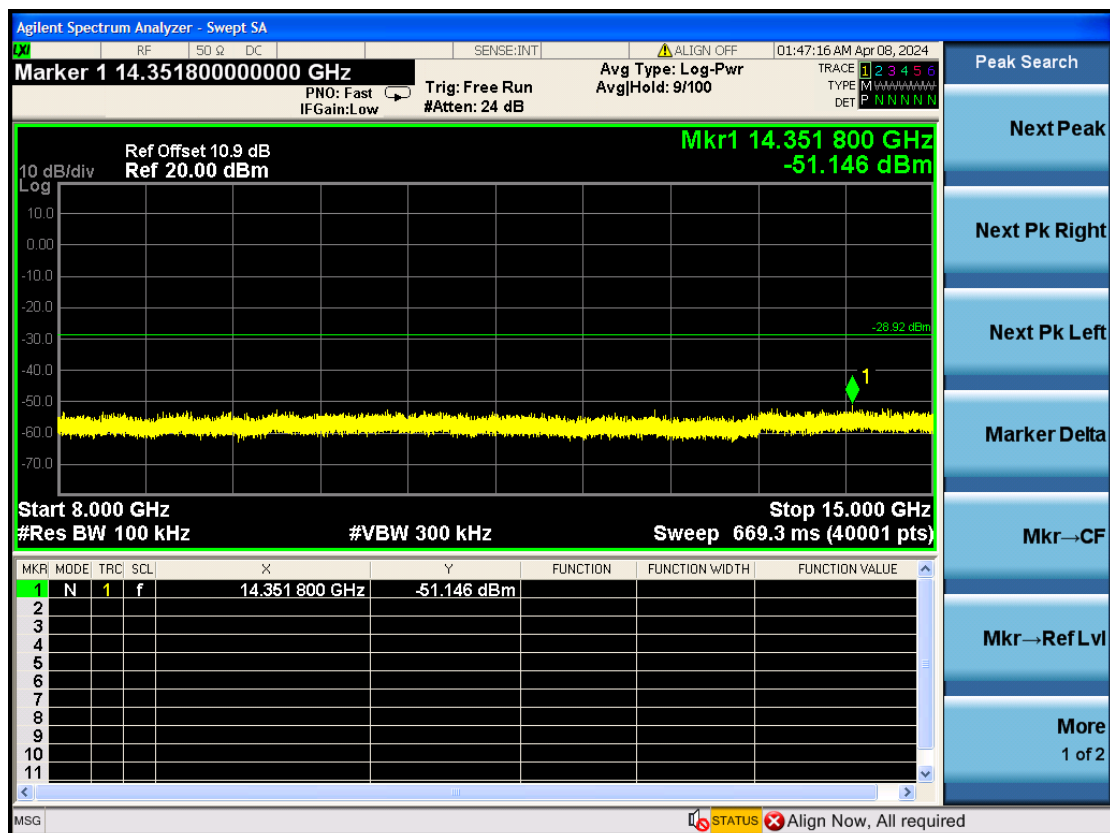
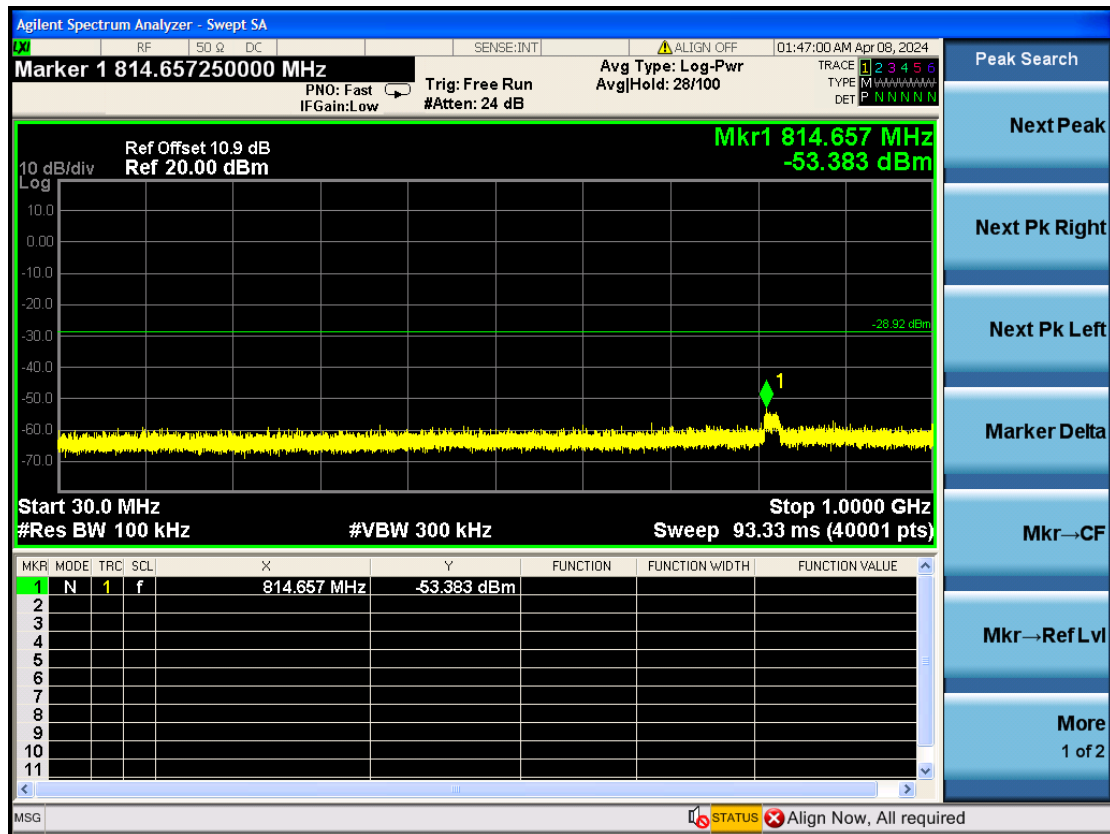
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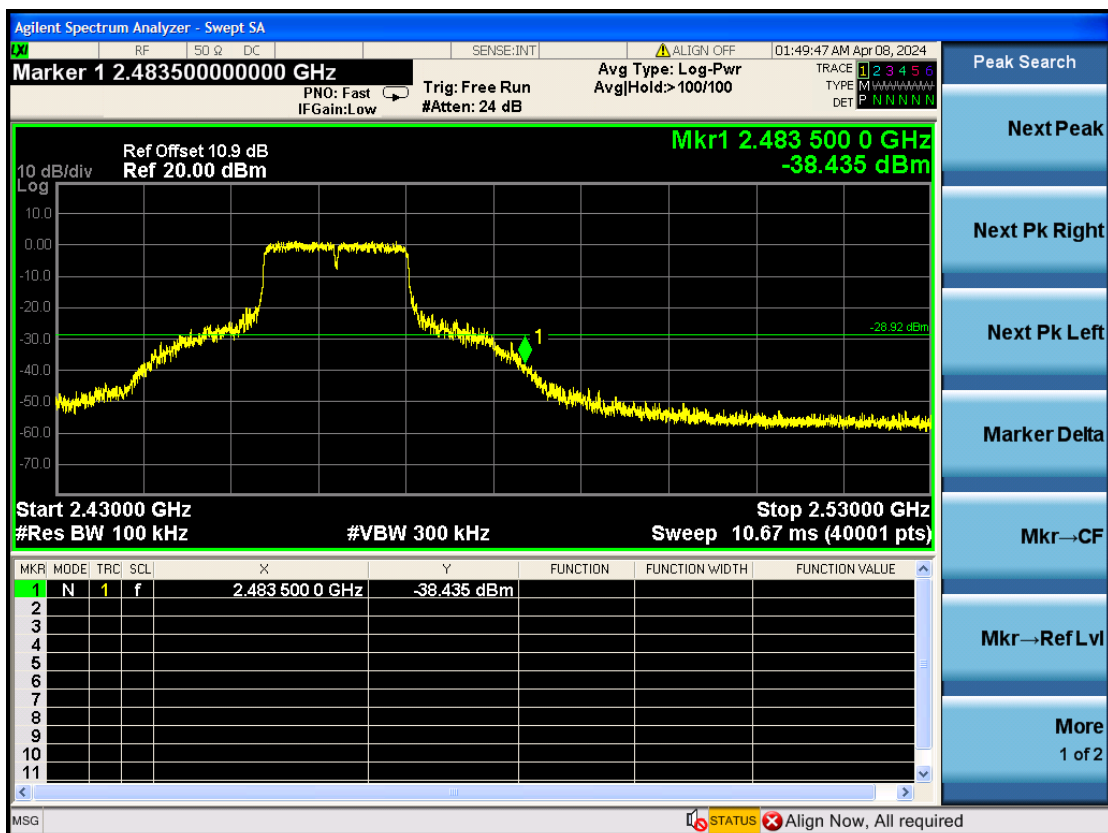
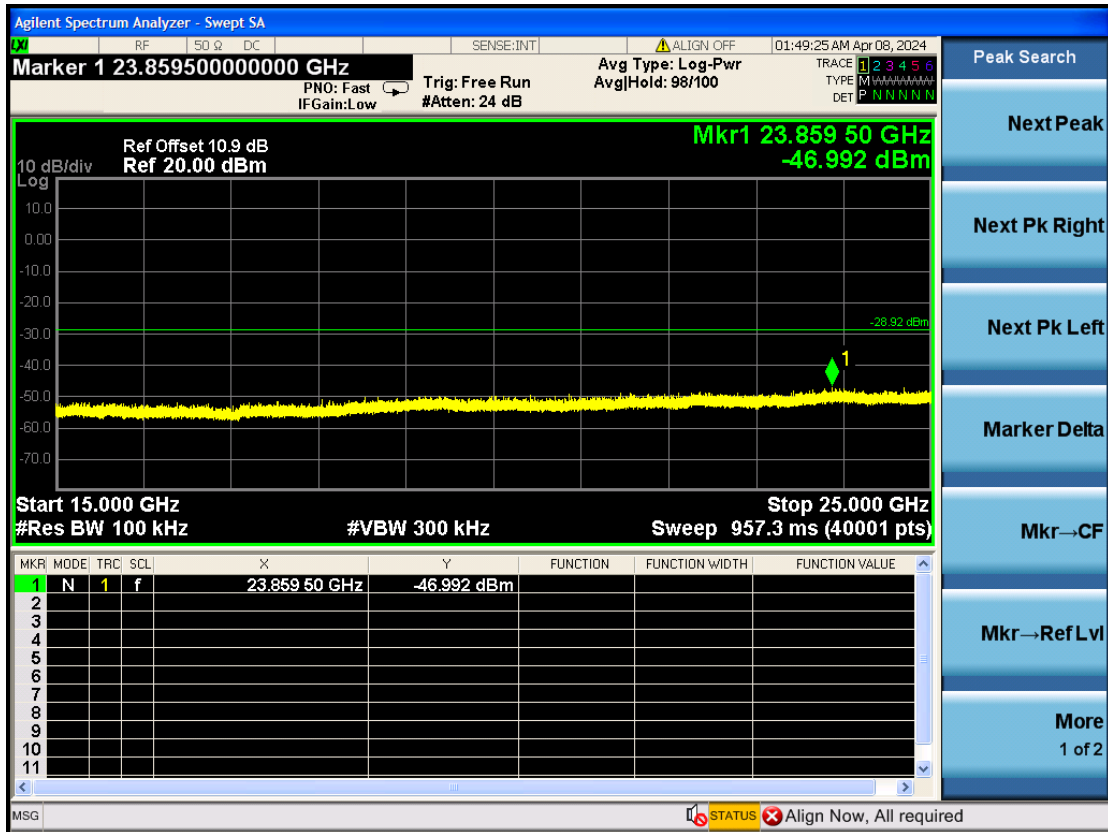




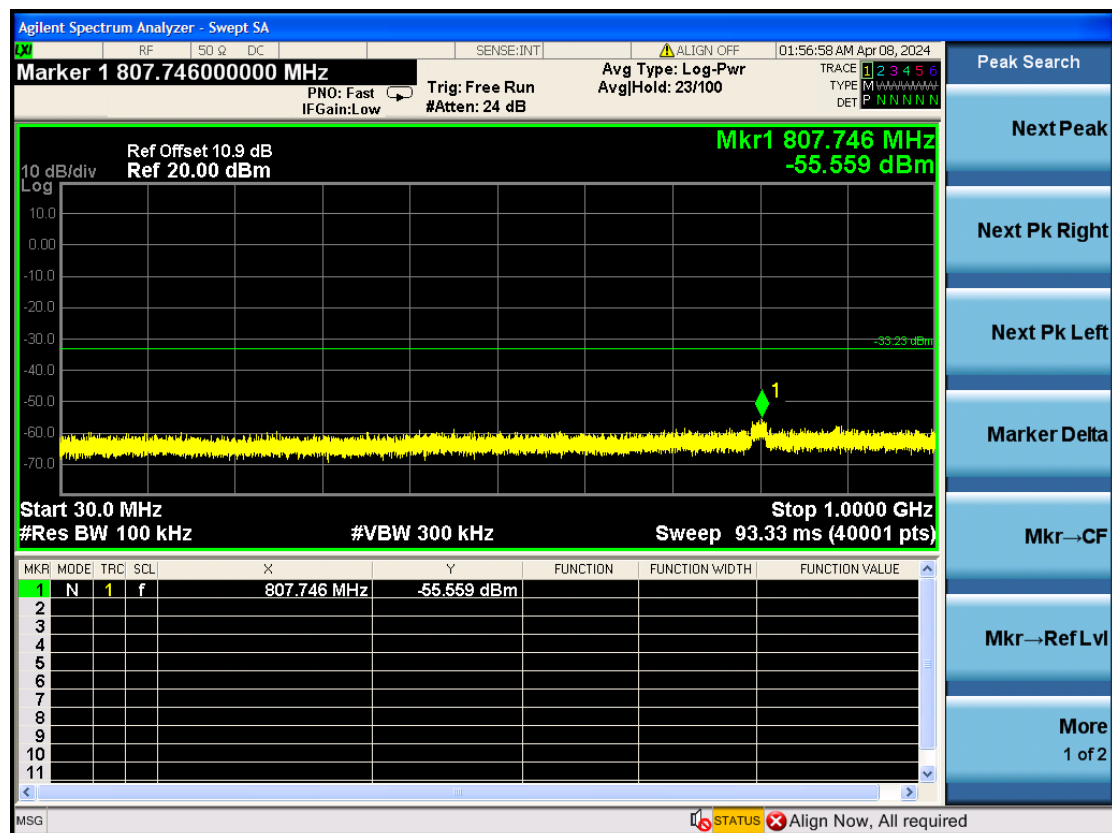
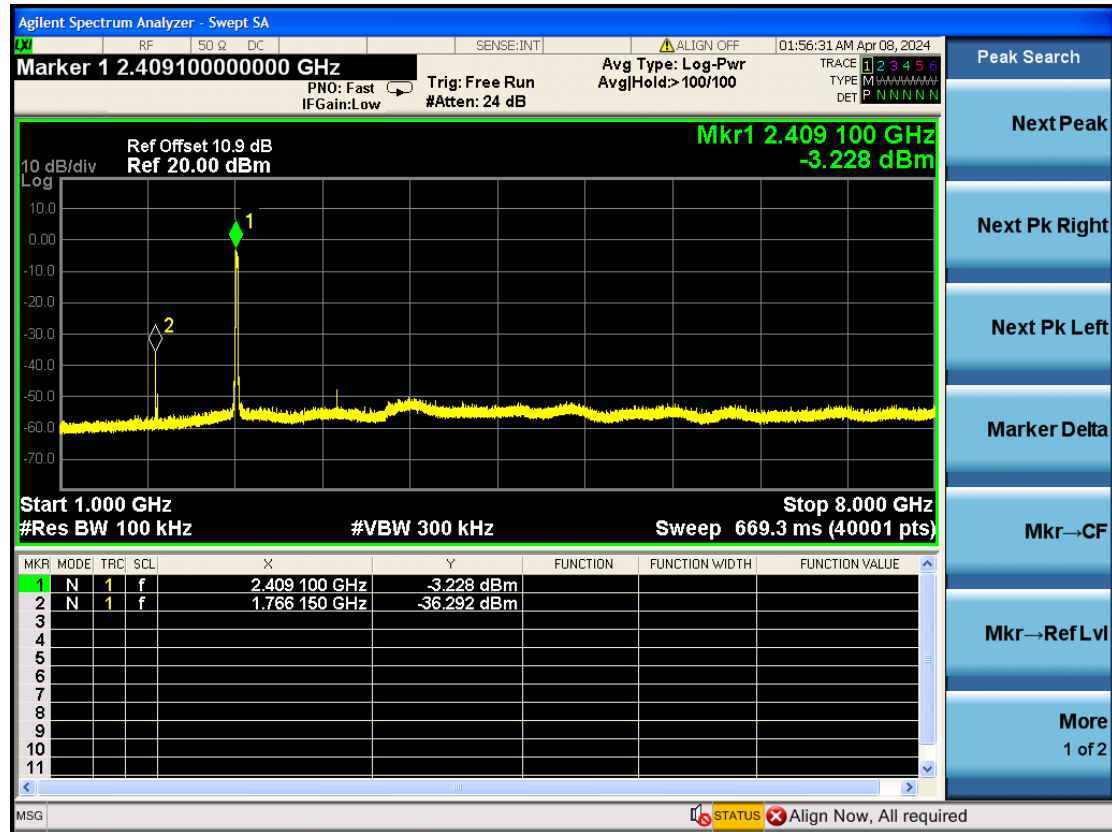
802.11g CH11

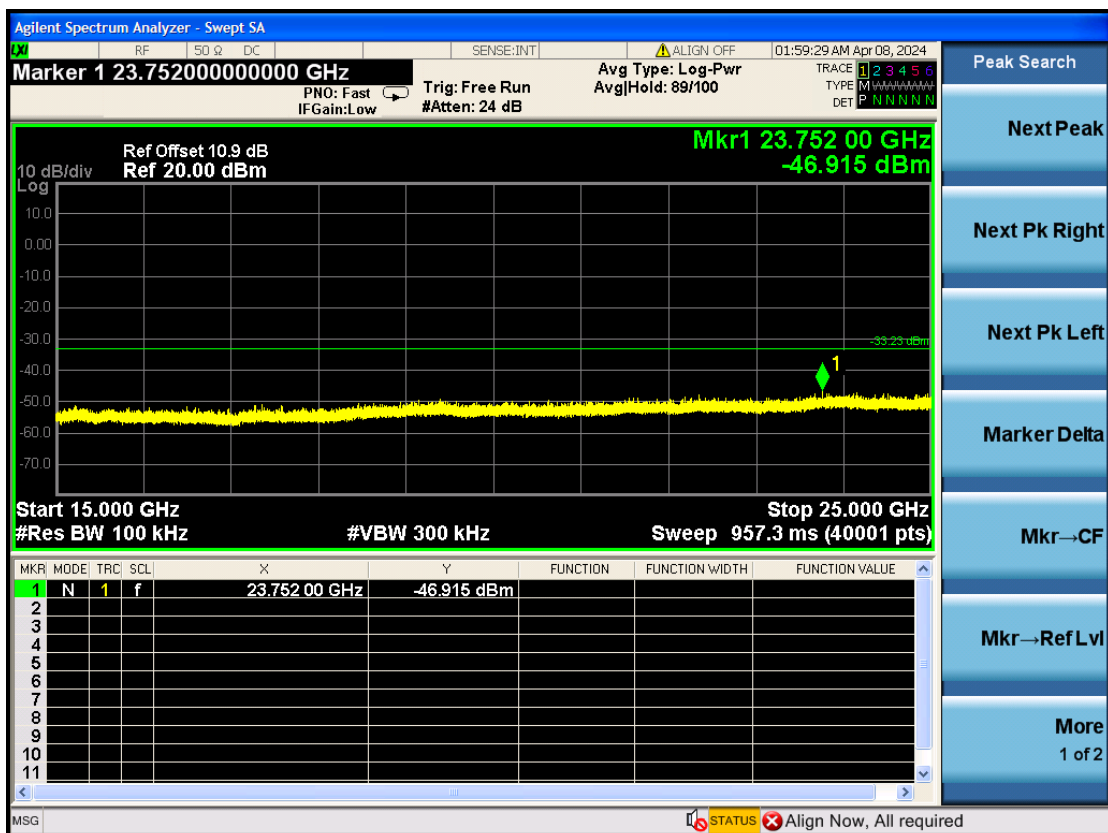
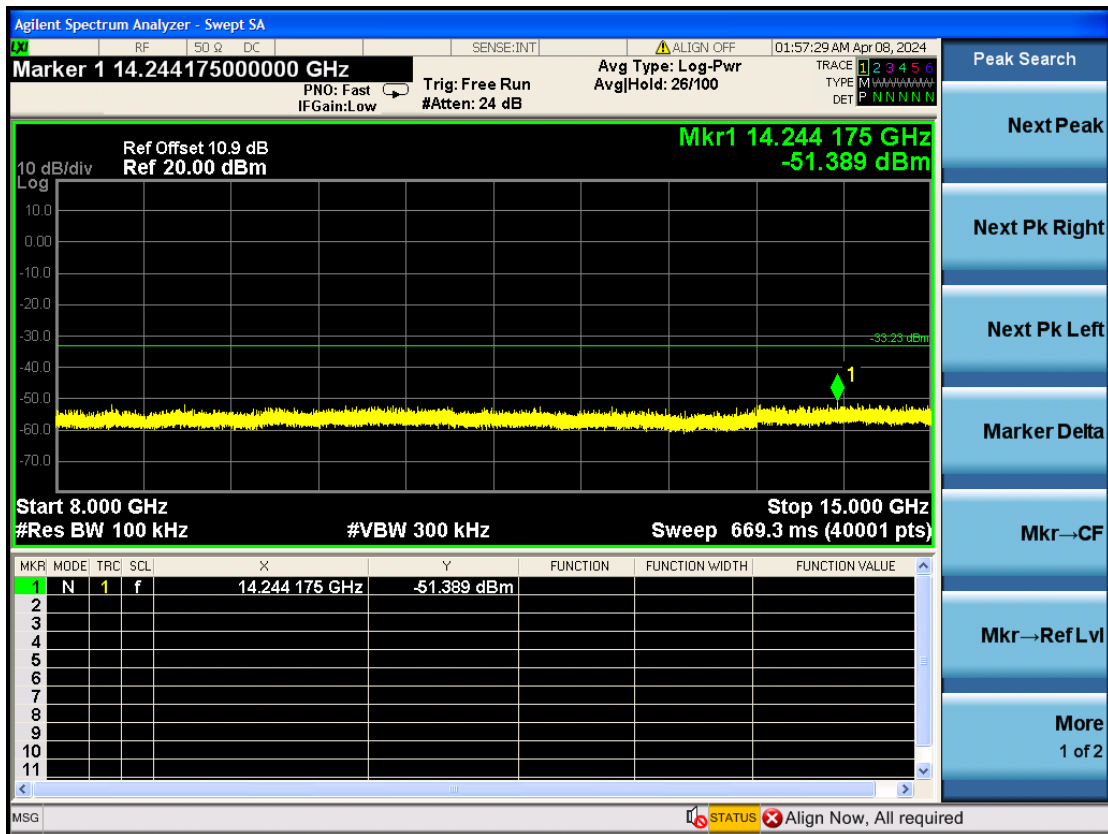


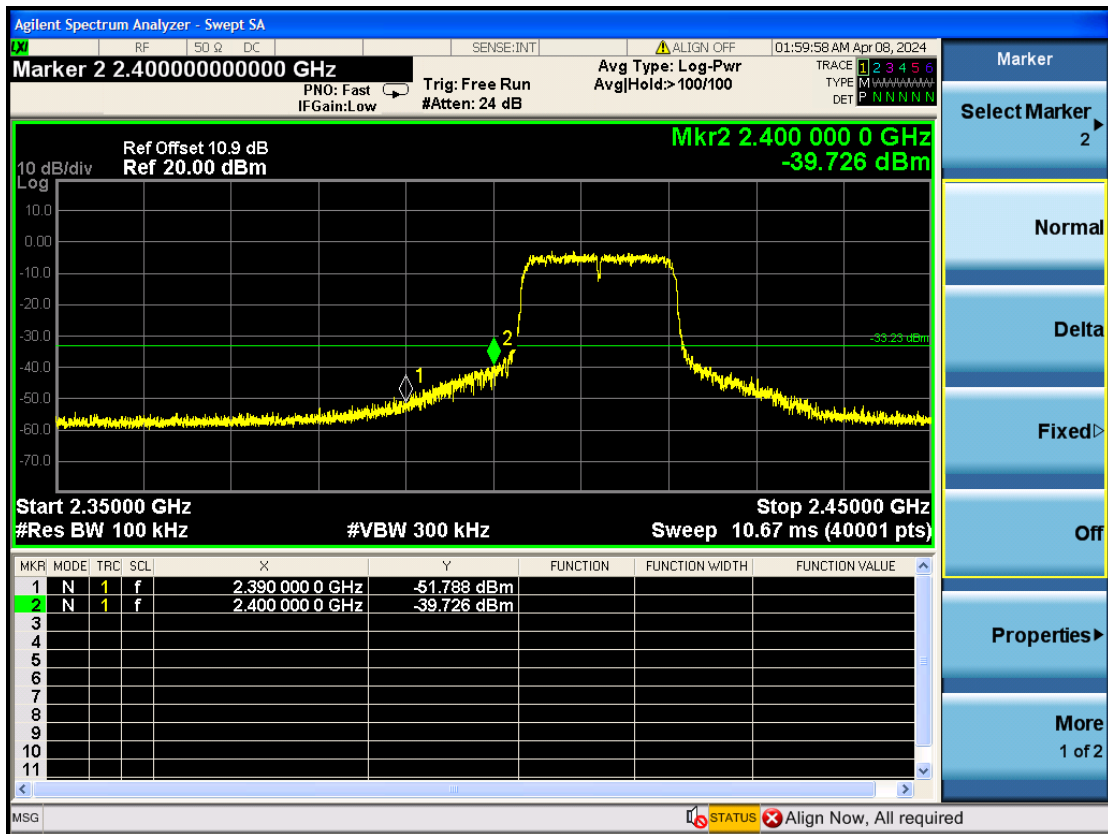




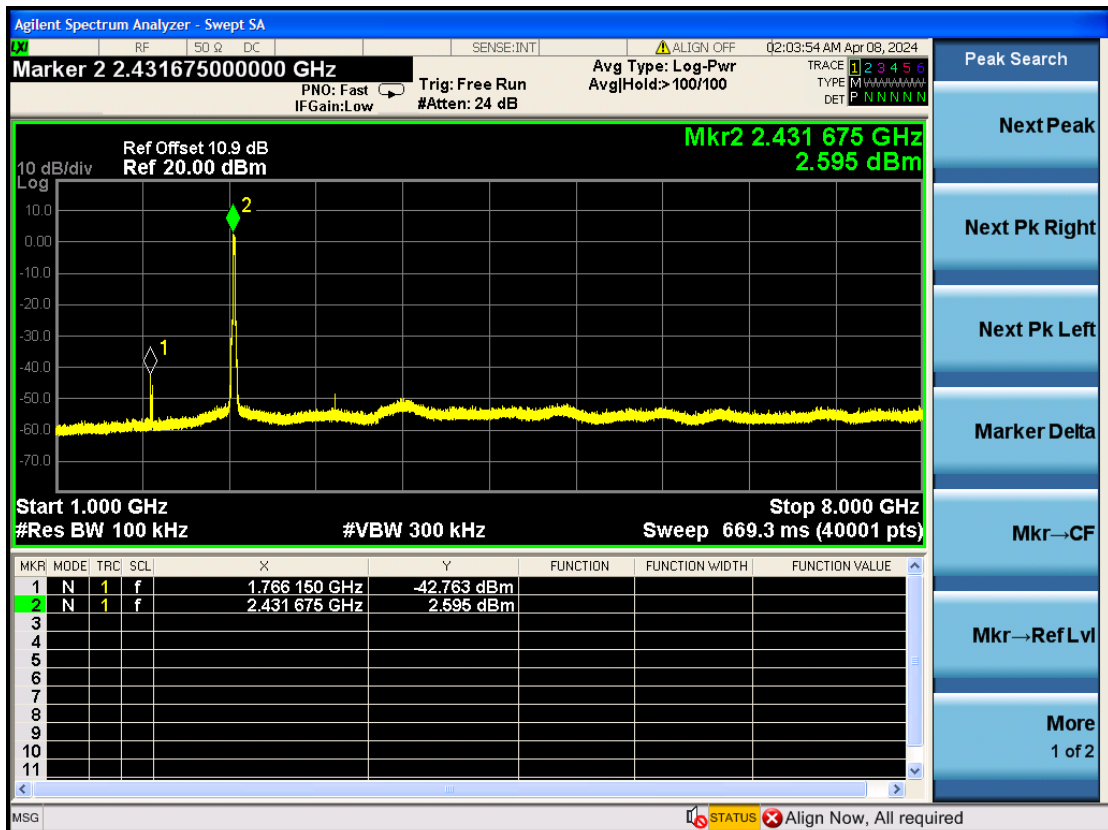
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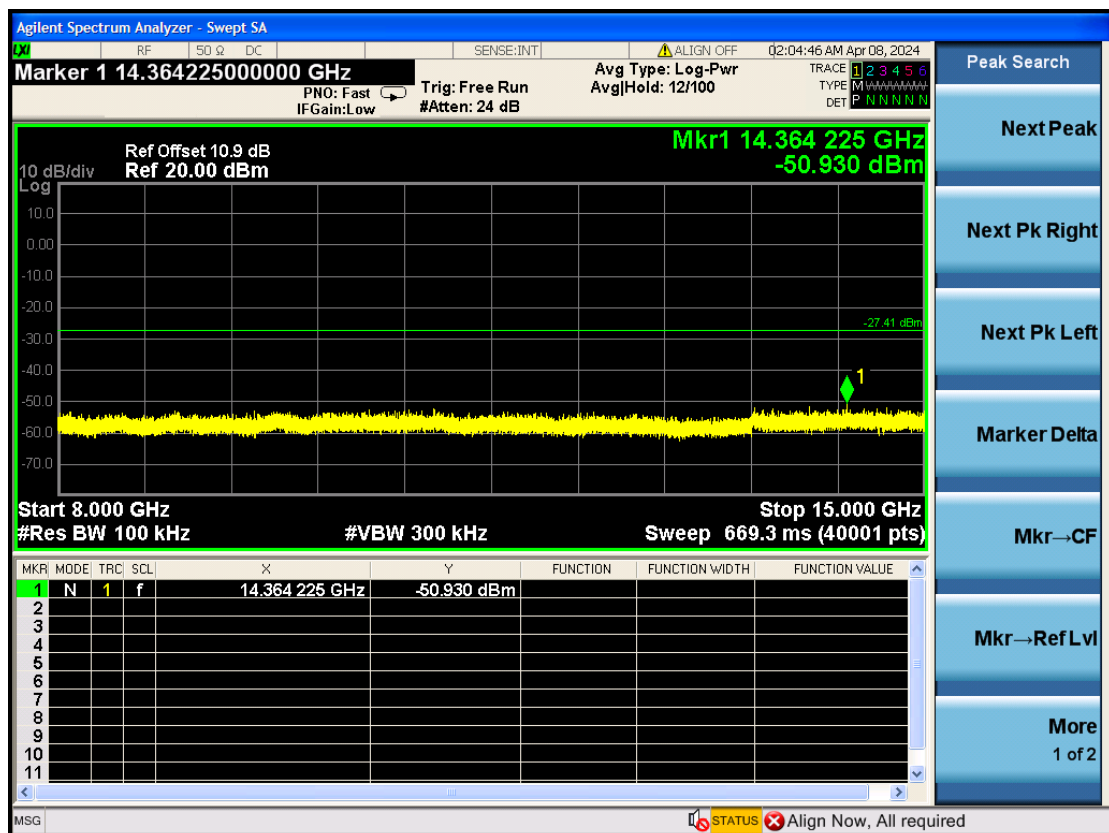
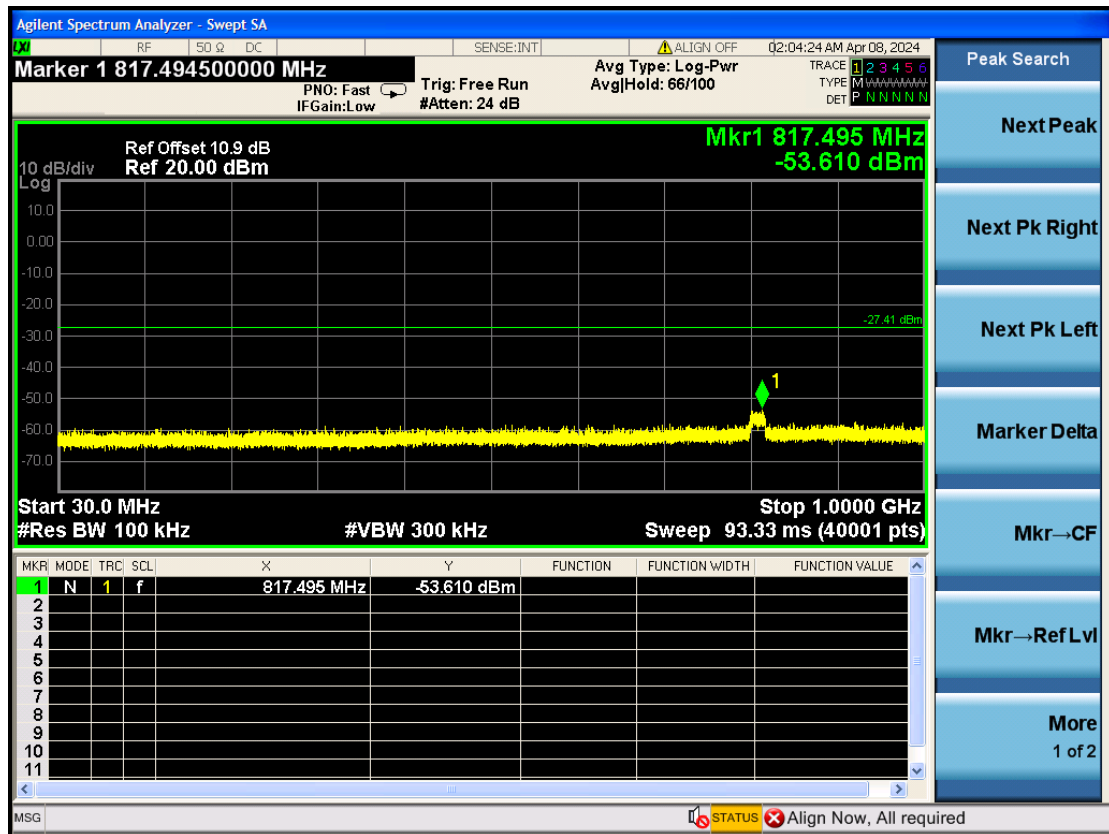


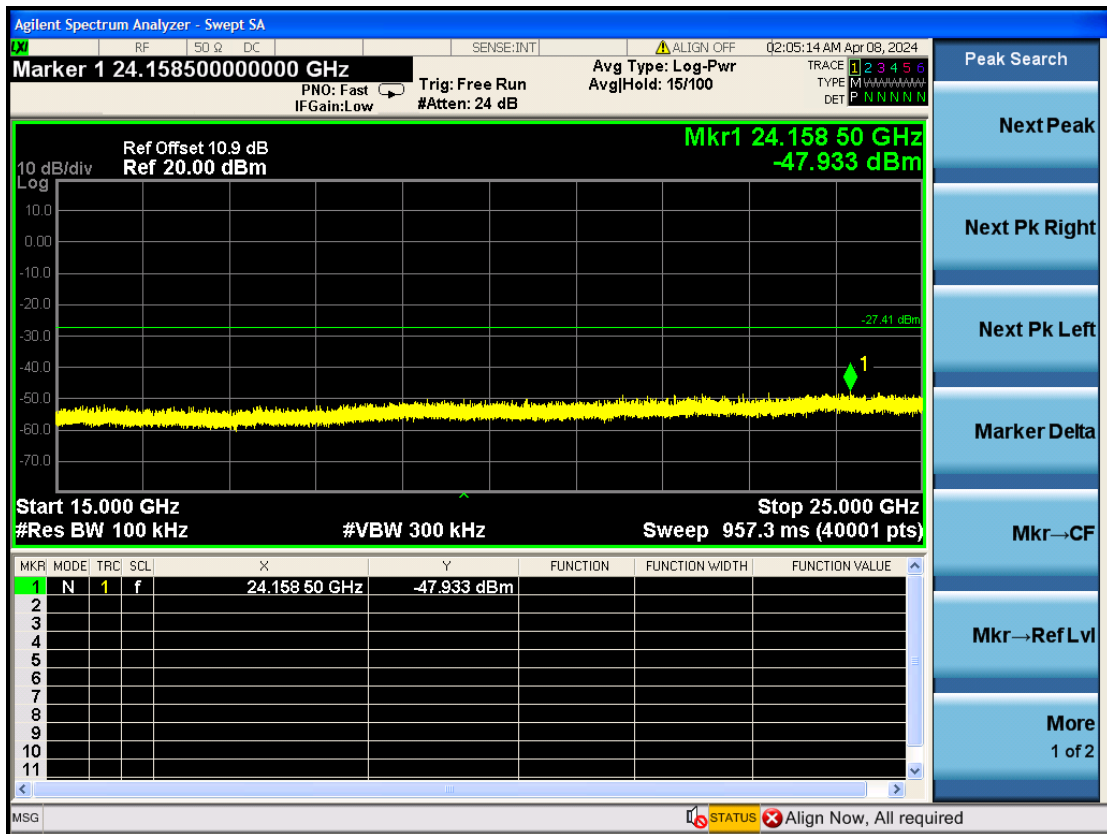




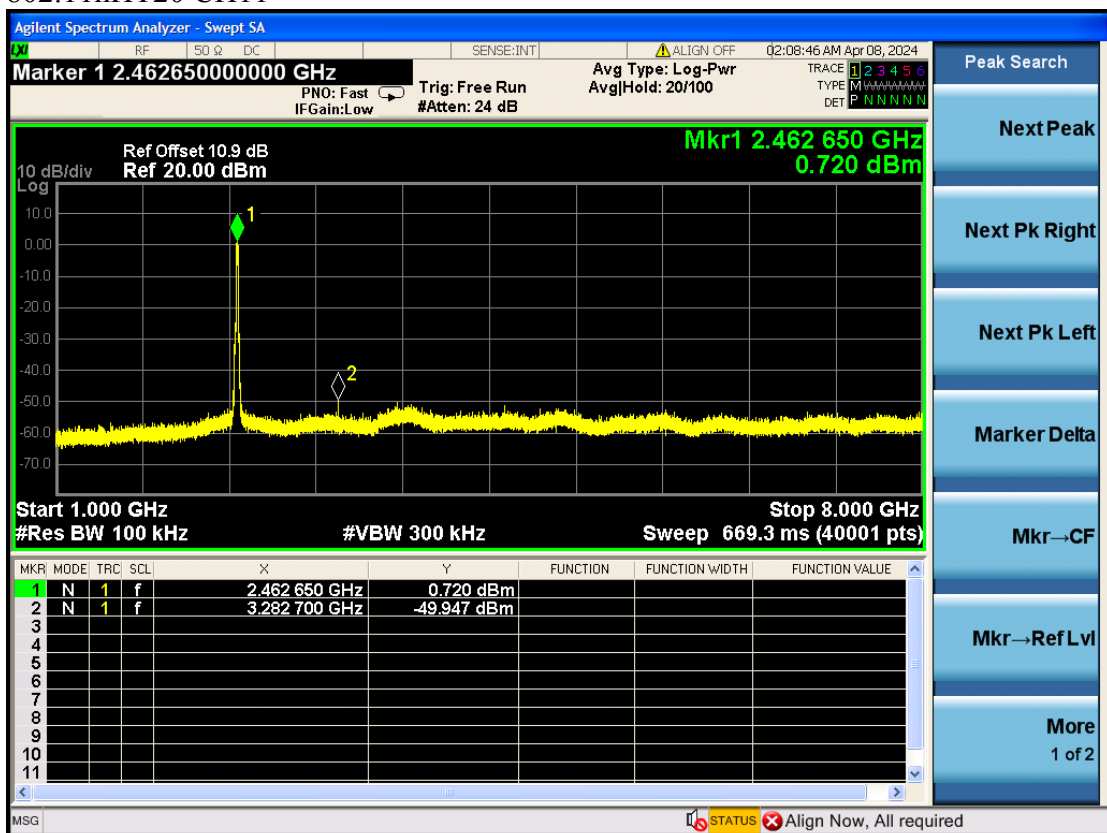
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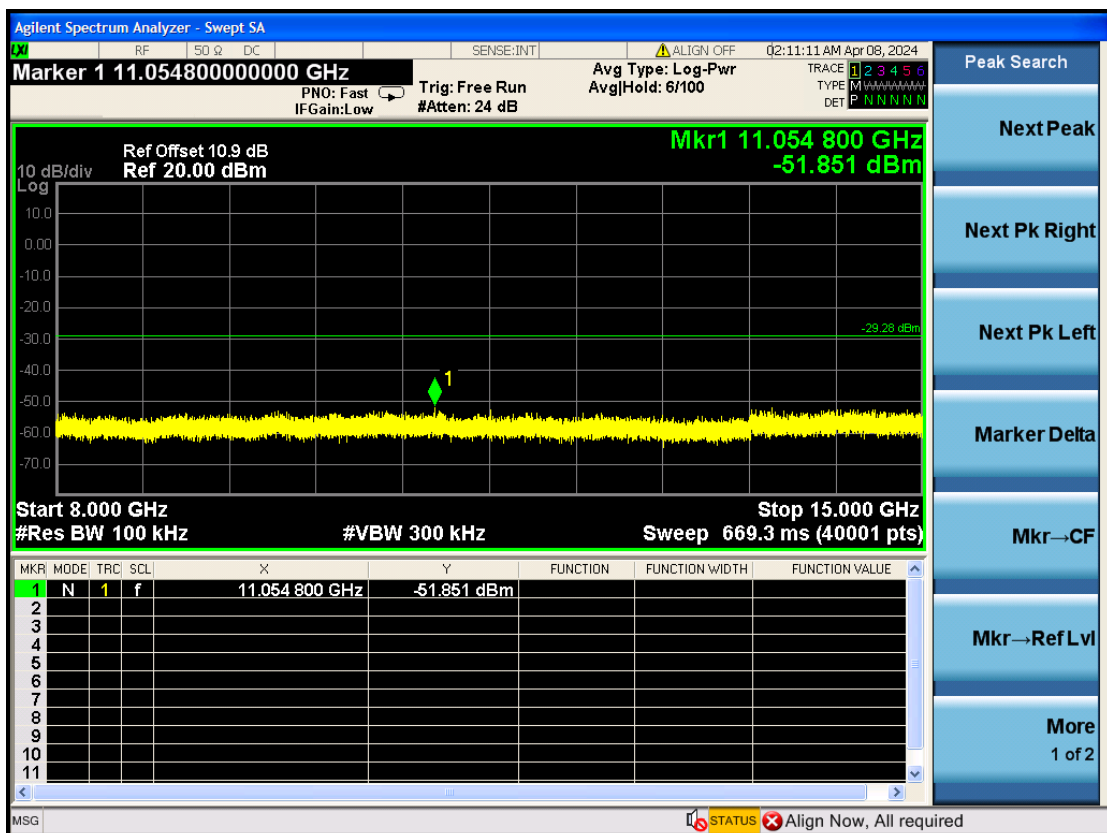
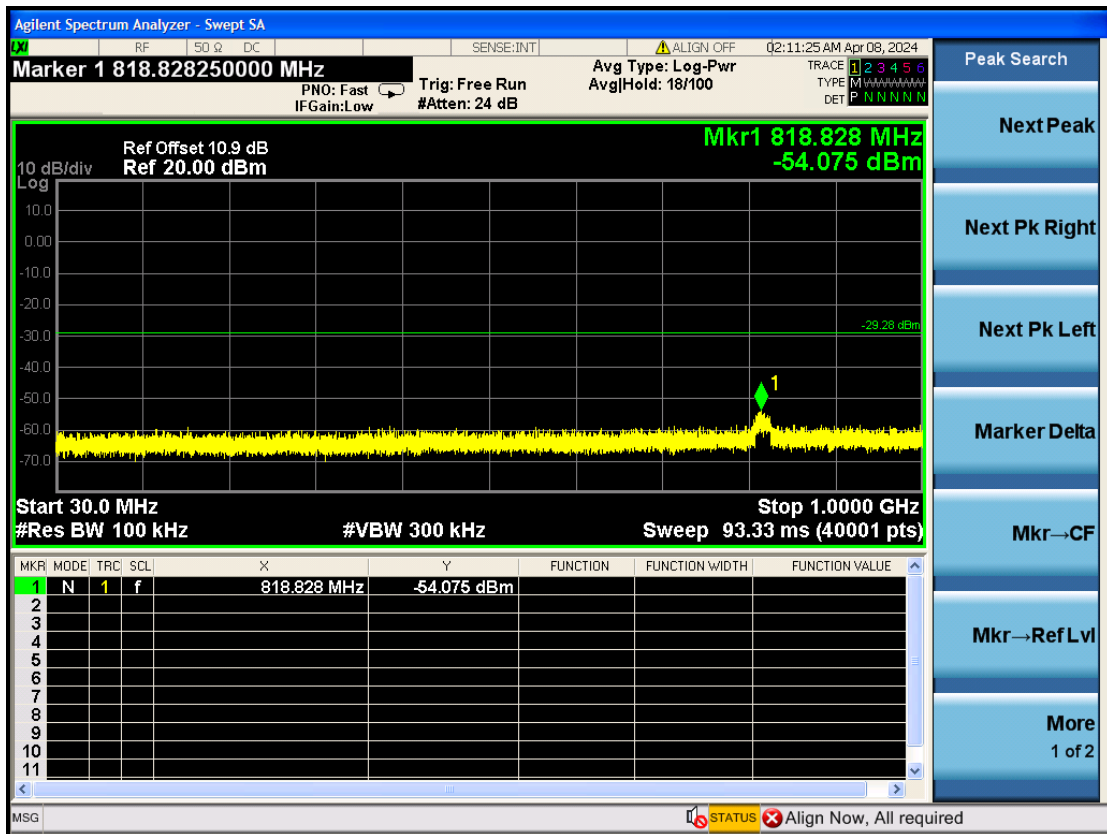


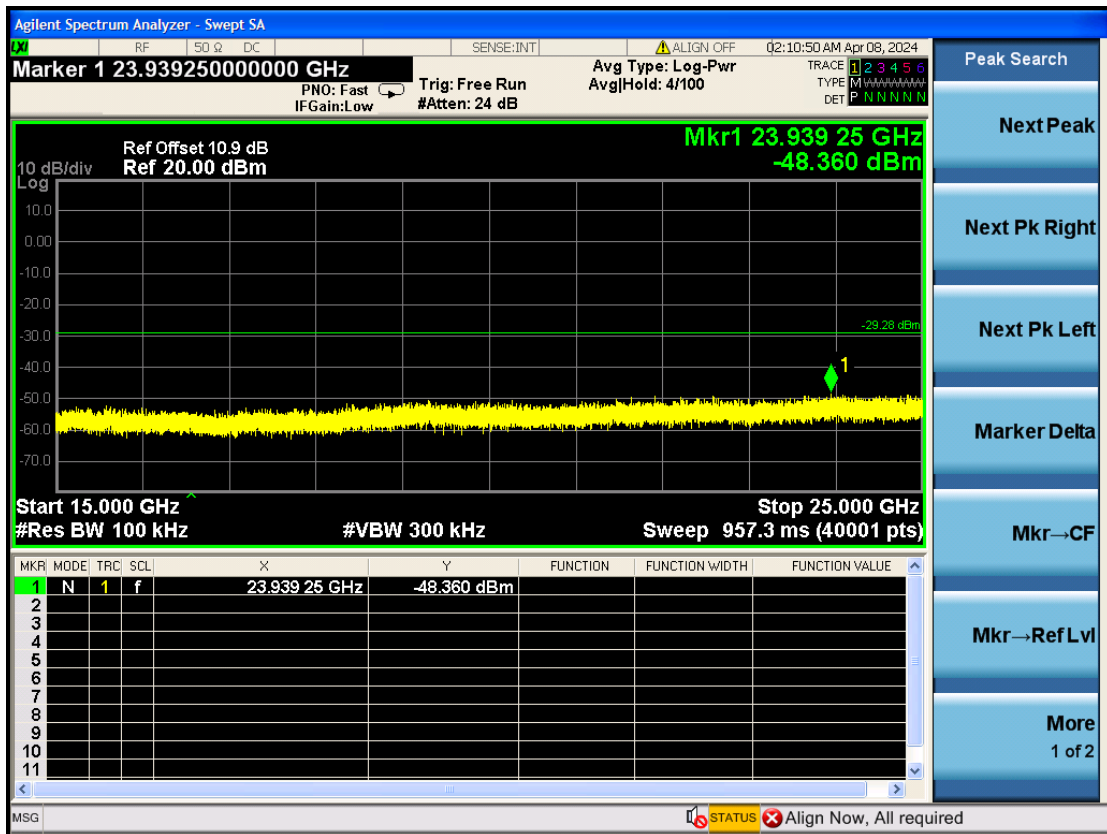




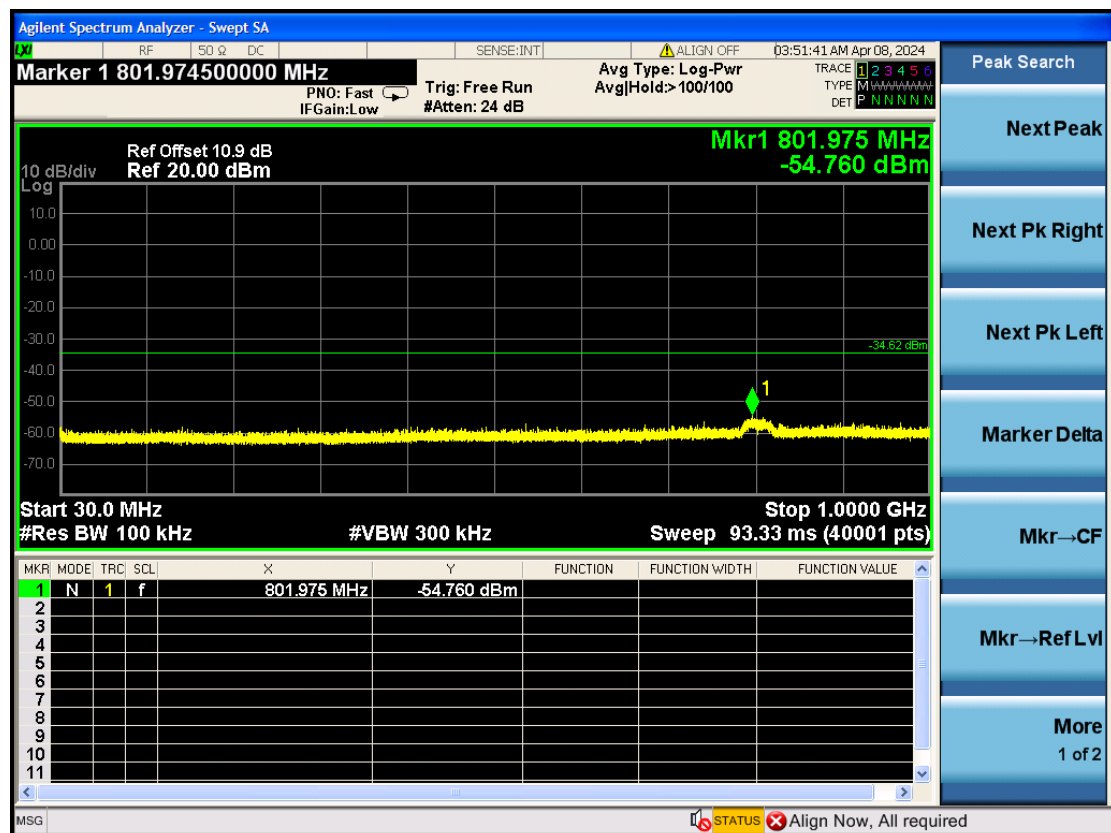
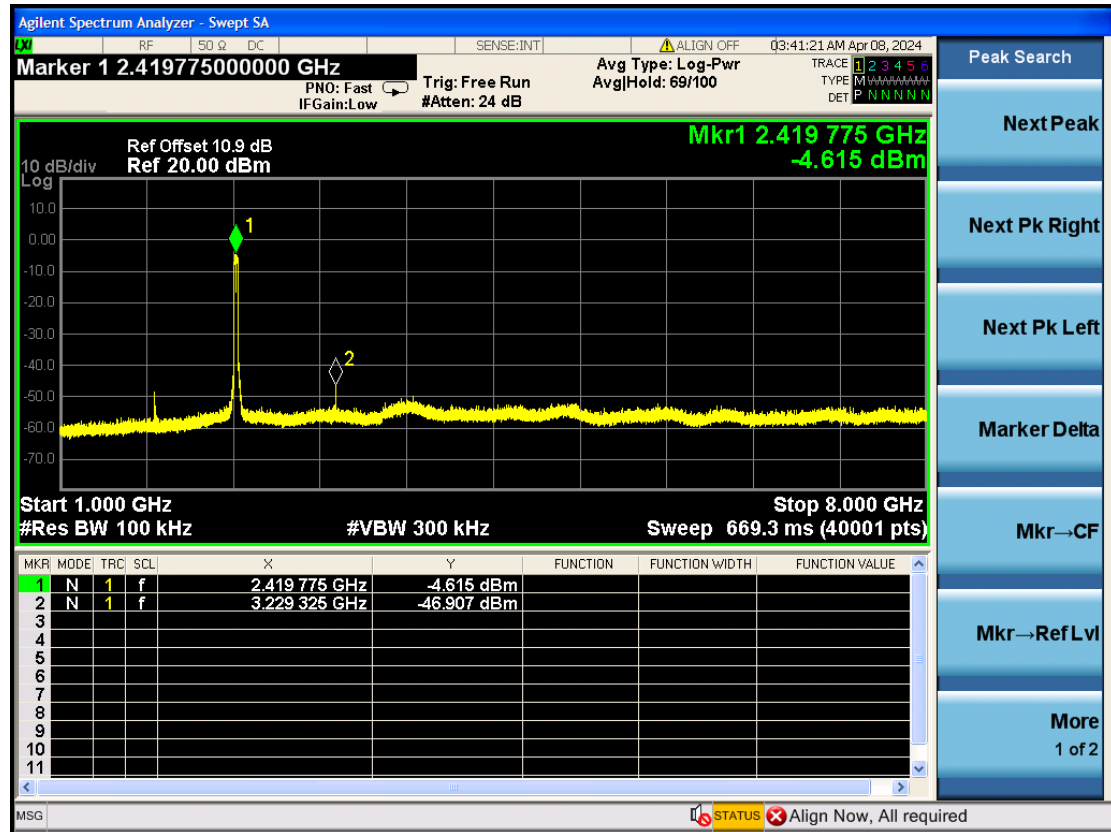
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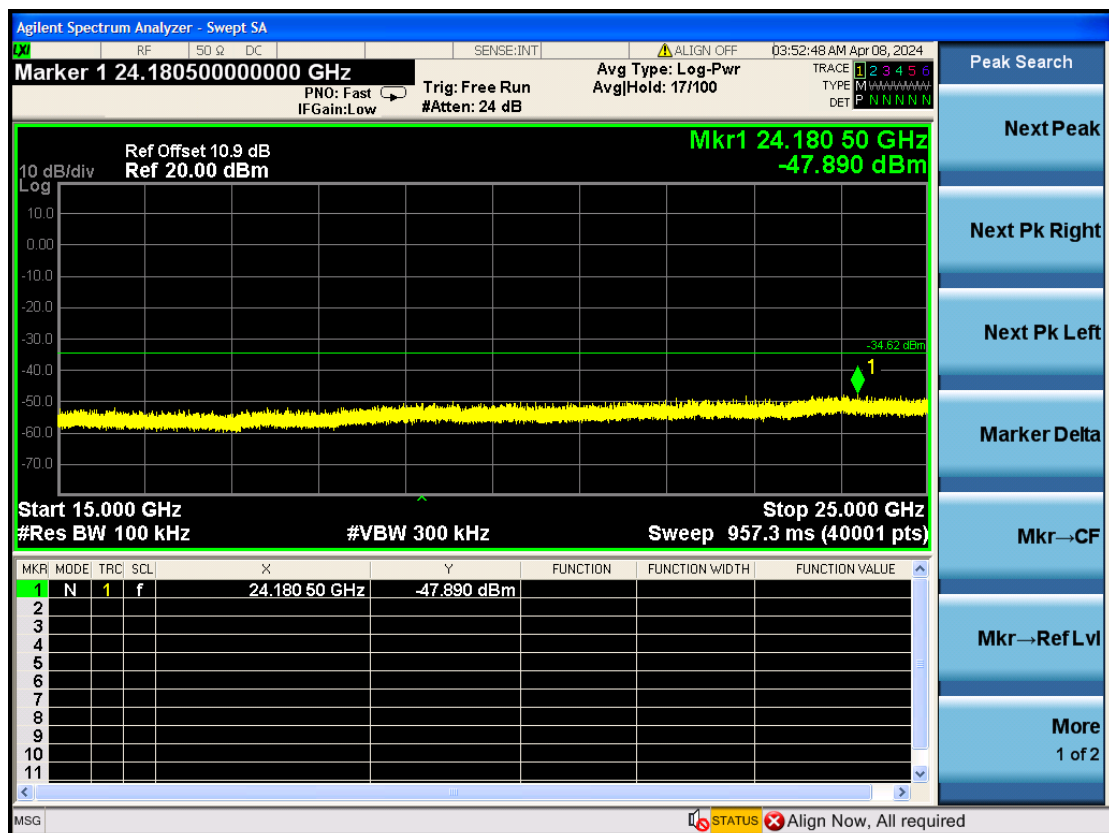
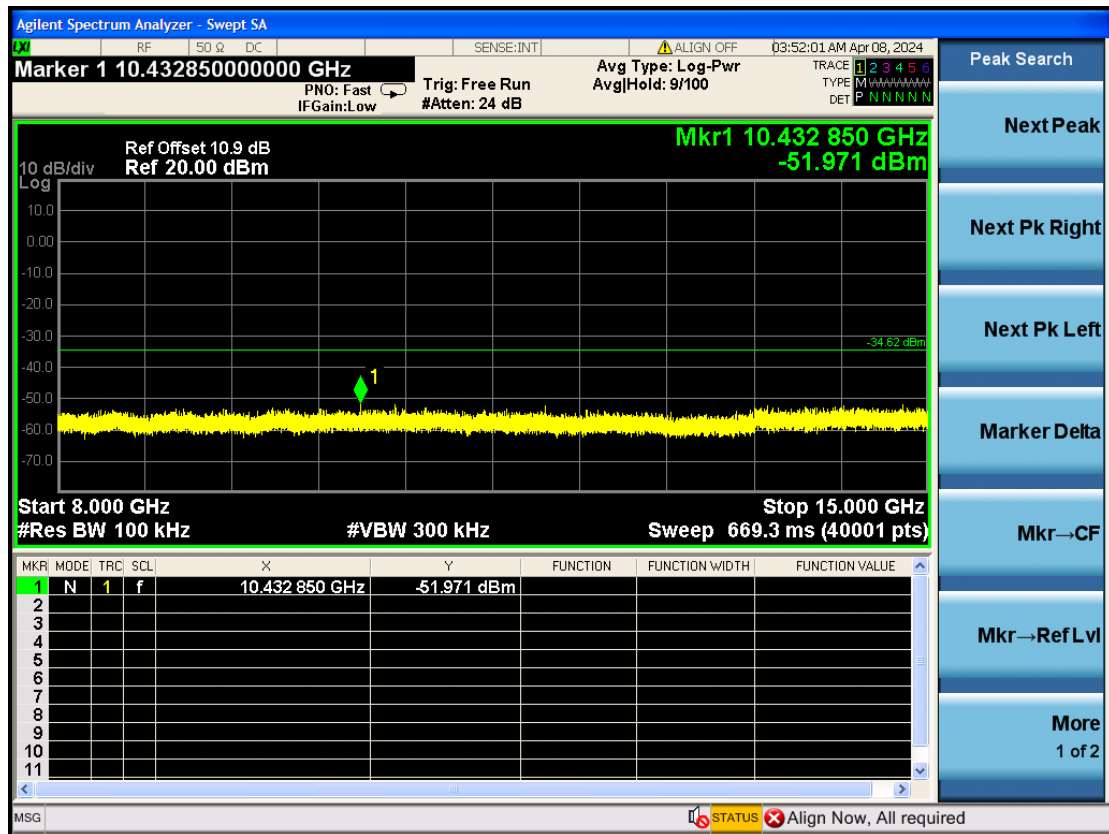


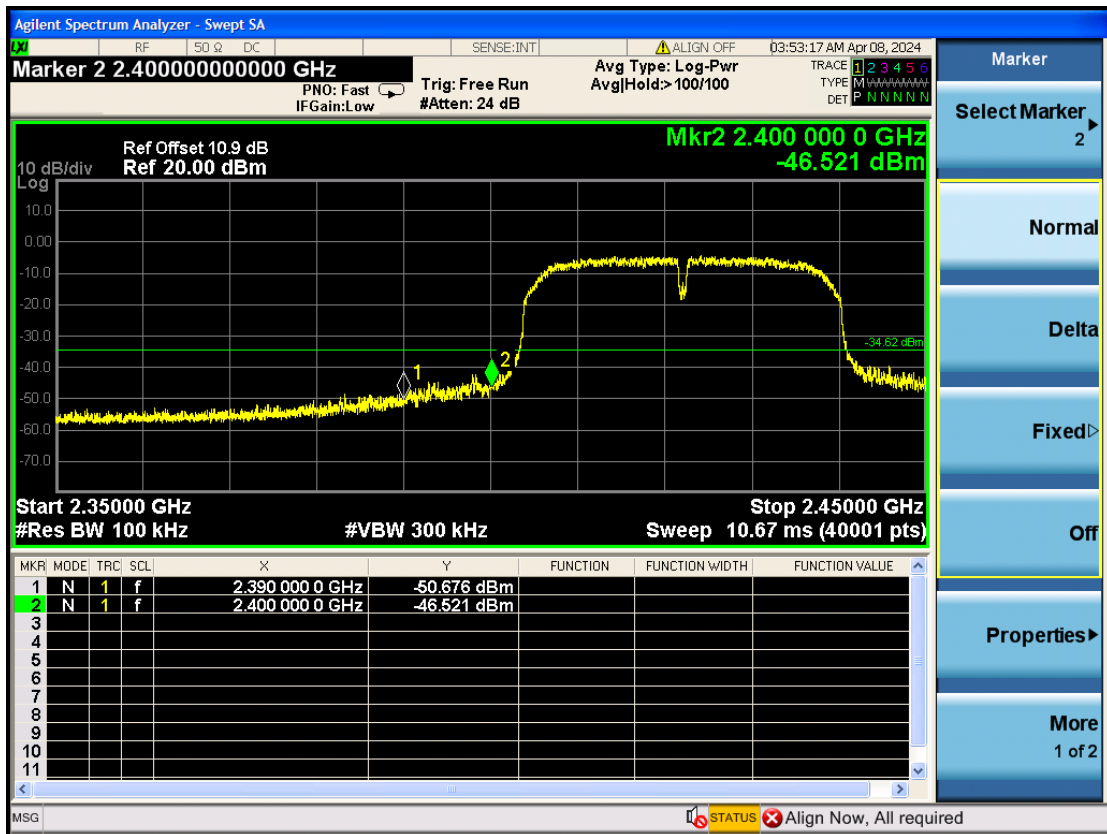




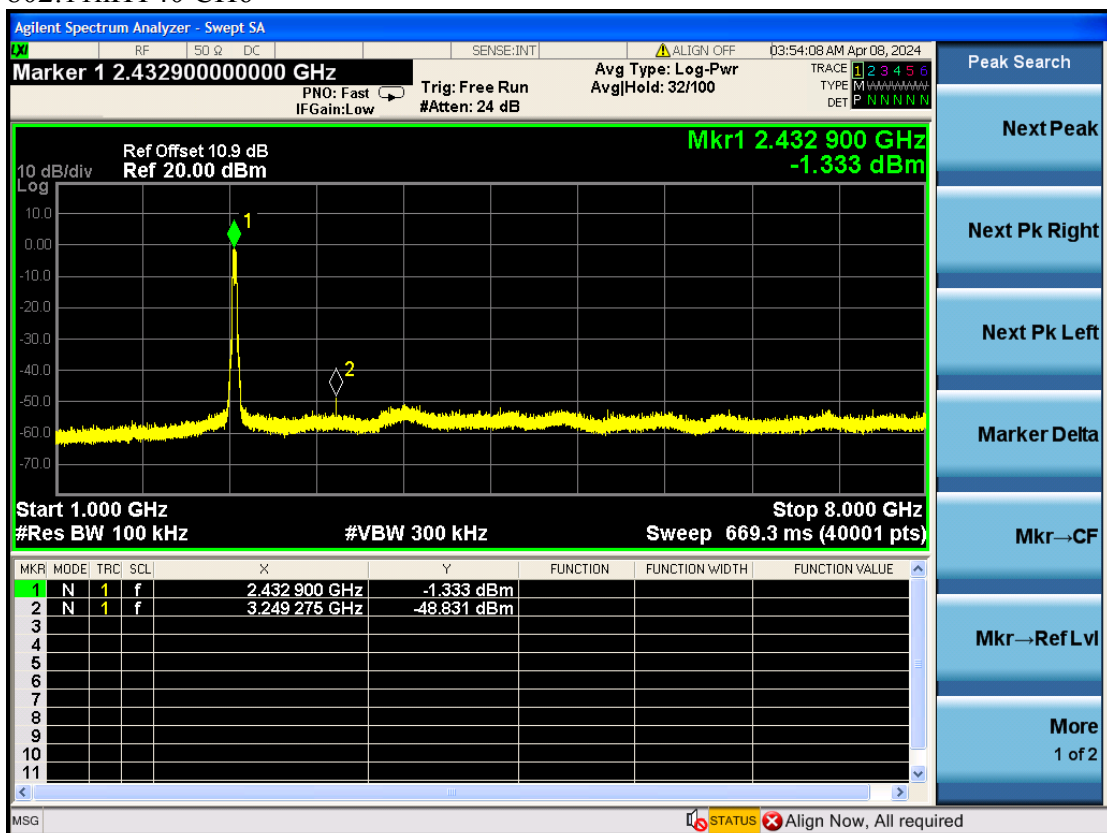
802.11nHT40 CH3

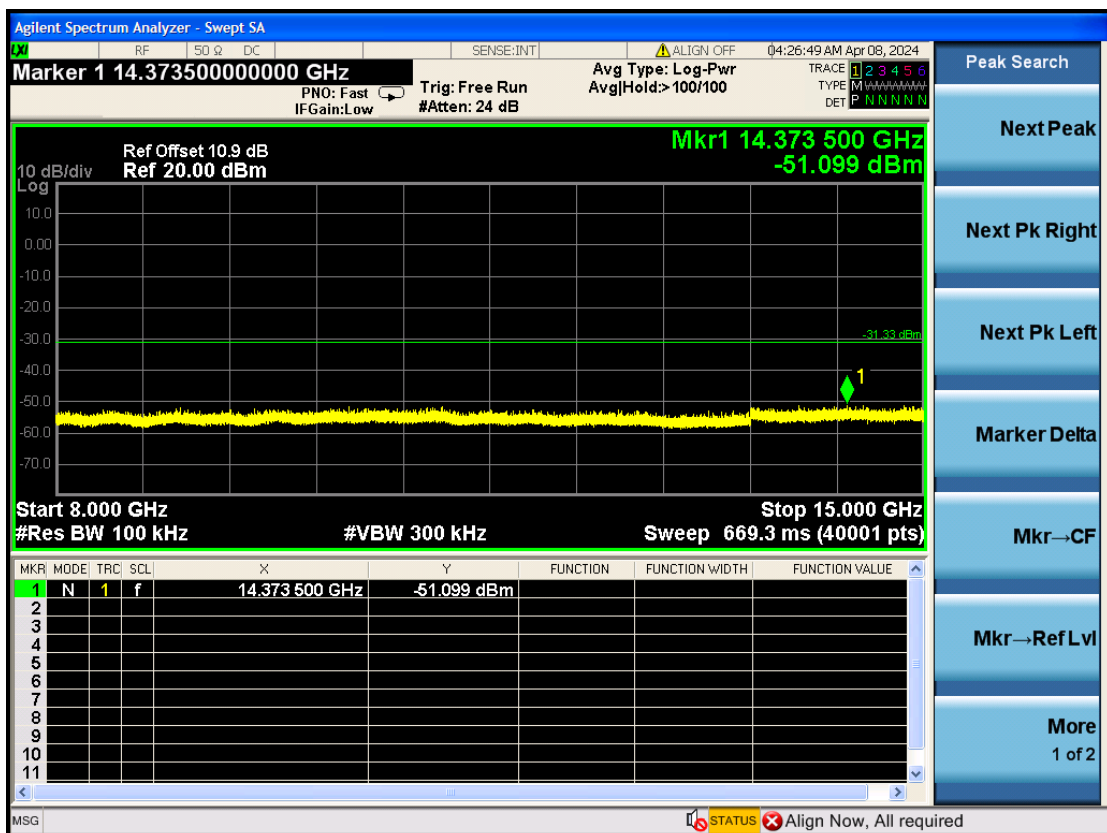
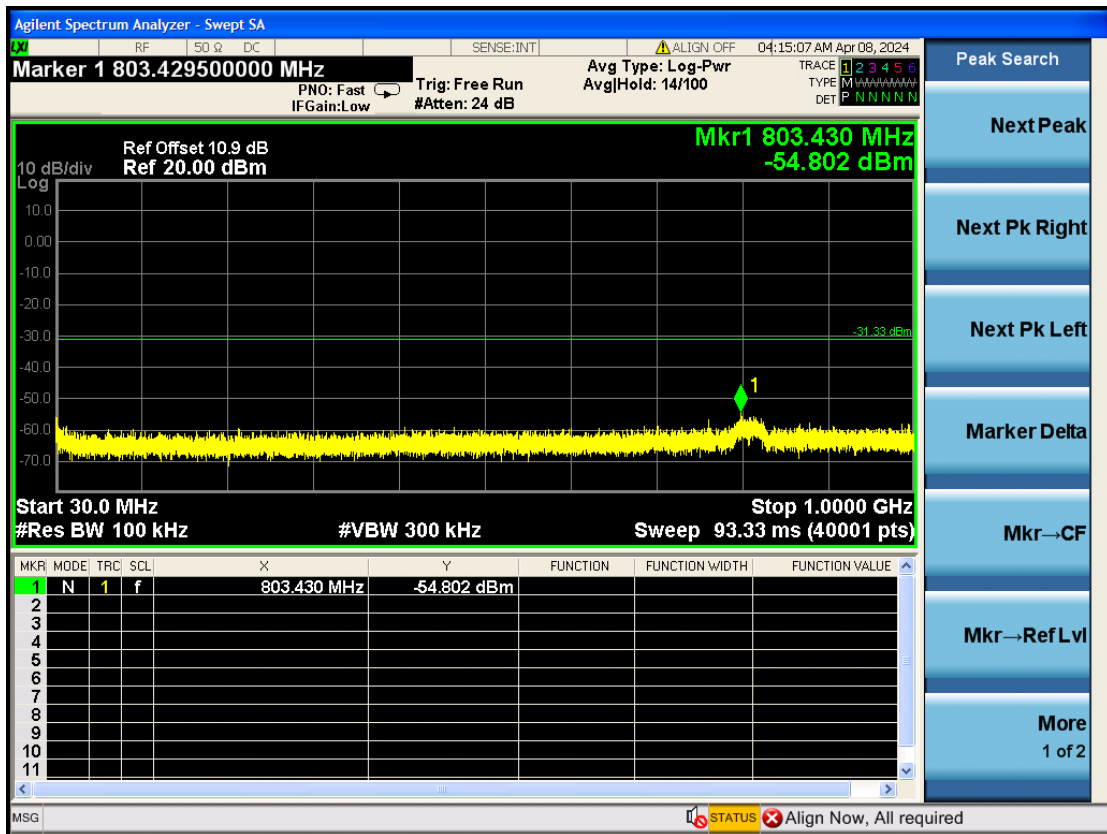


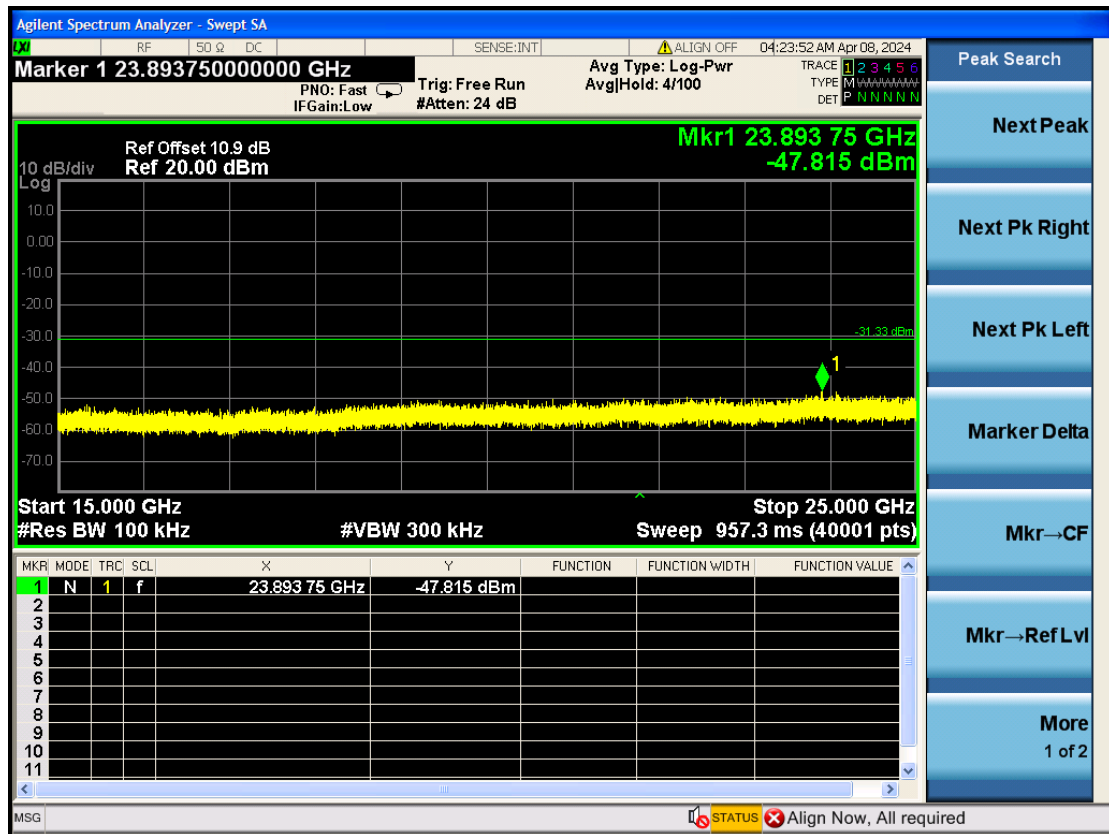




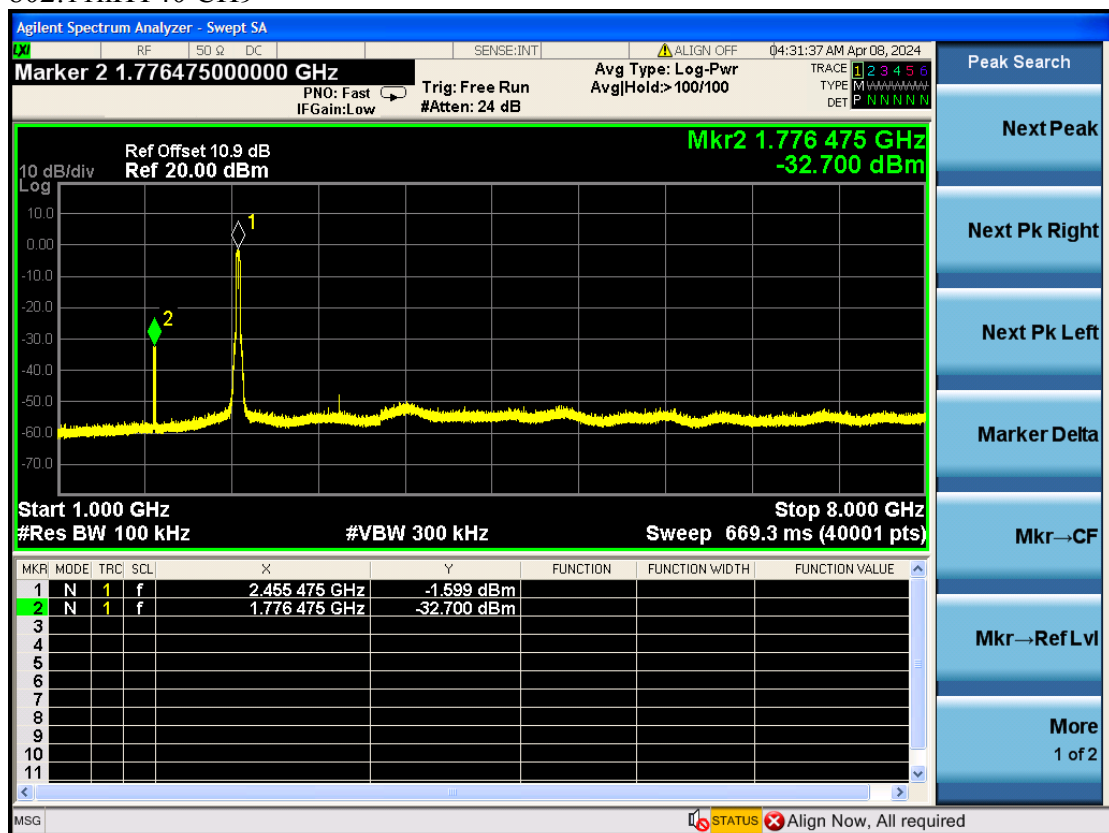
802.11nHT40 CH6

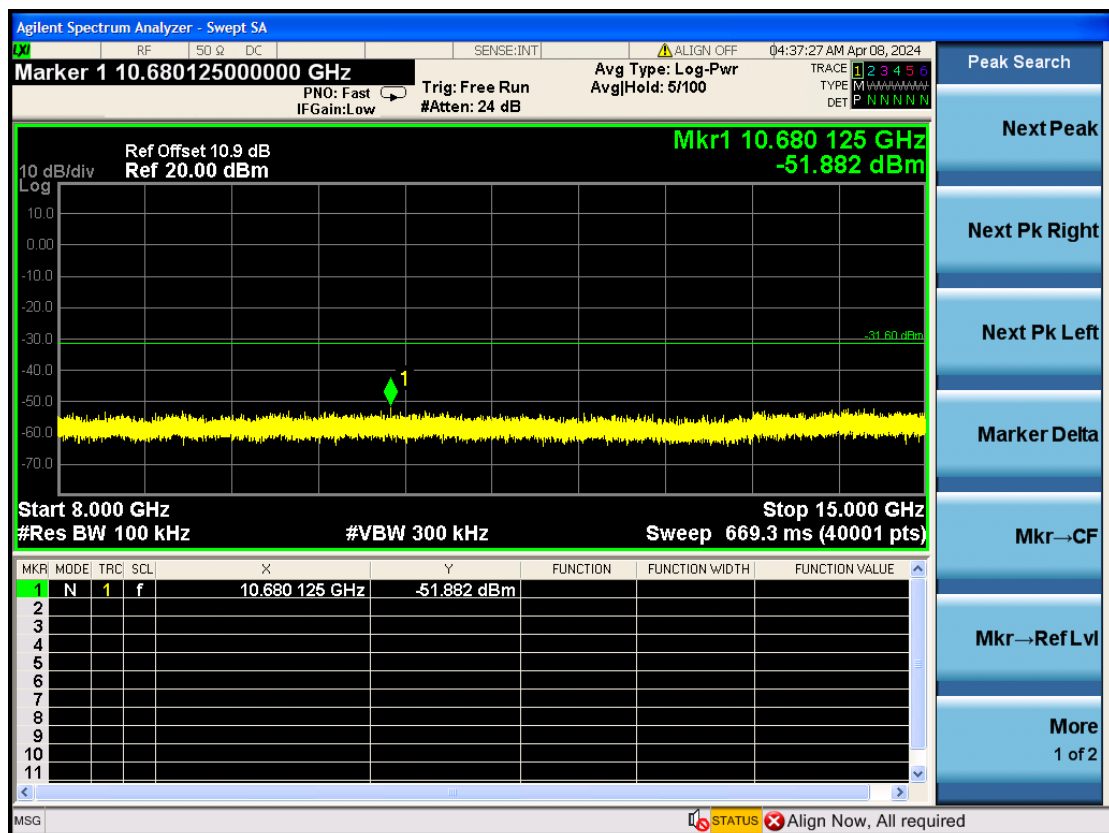
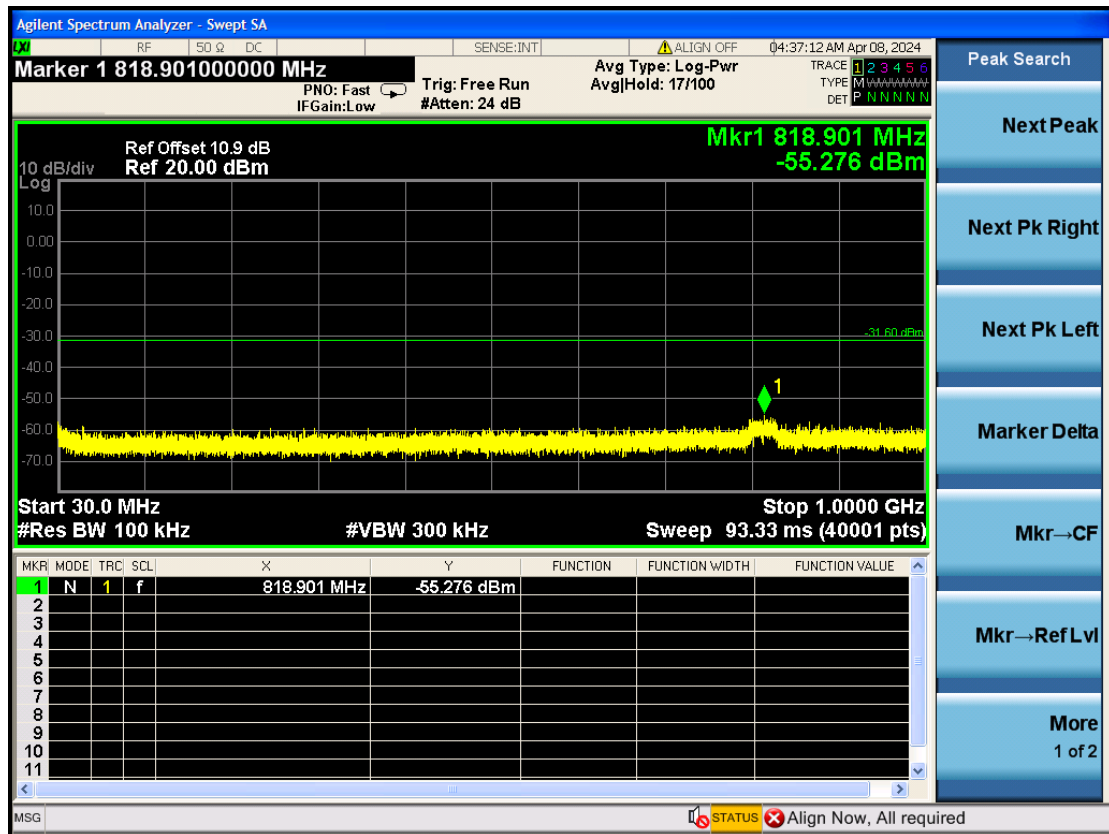


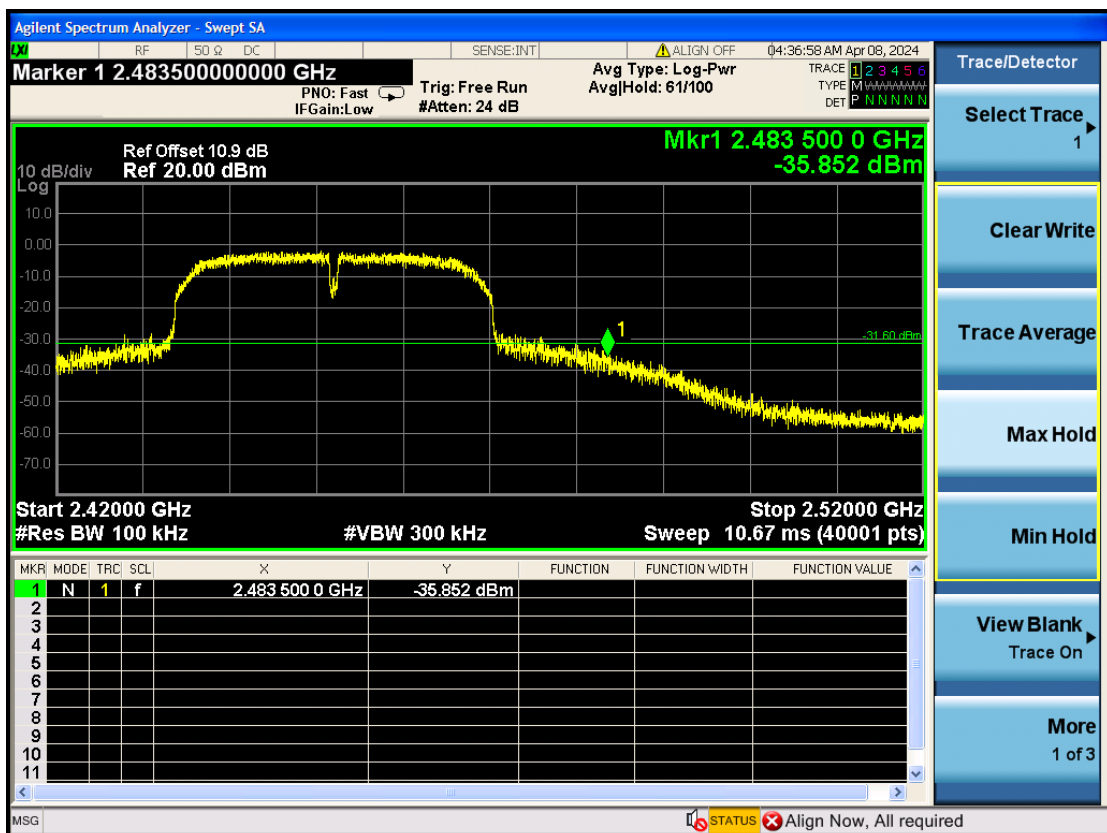
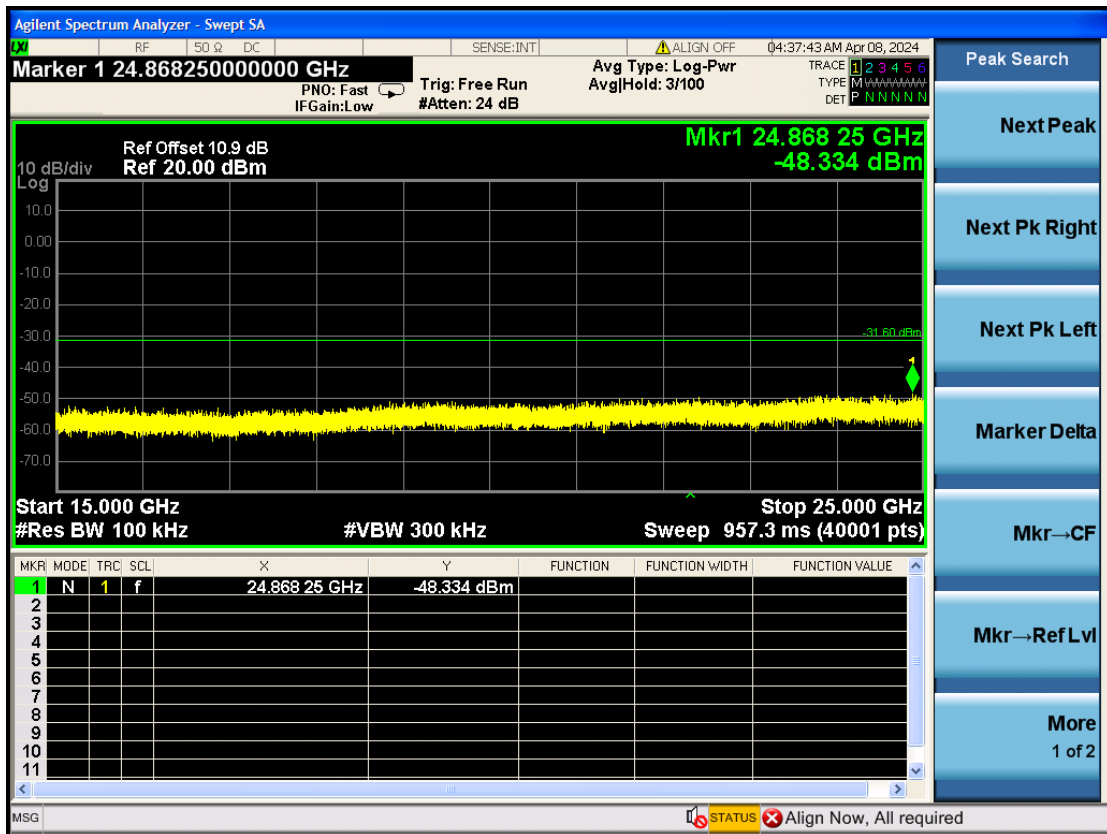




802.11nHT40 CH9







10.DEVIATION TO TEST SPECIFICATIONS

【NONE】

-----The End-----