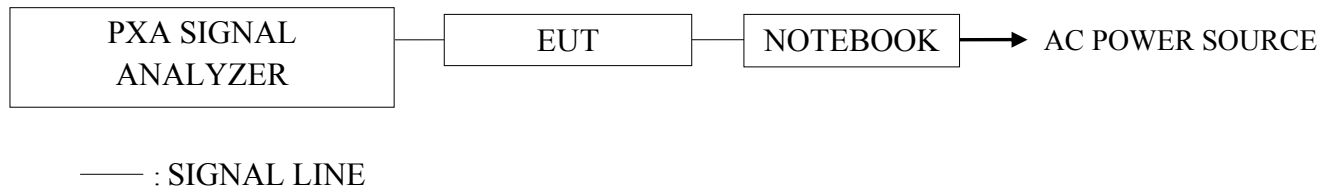


6. 6dB BANDWIDTH MEASUREMENT

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:

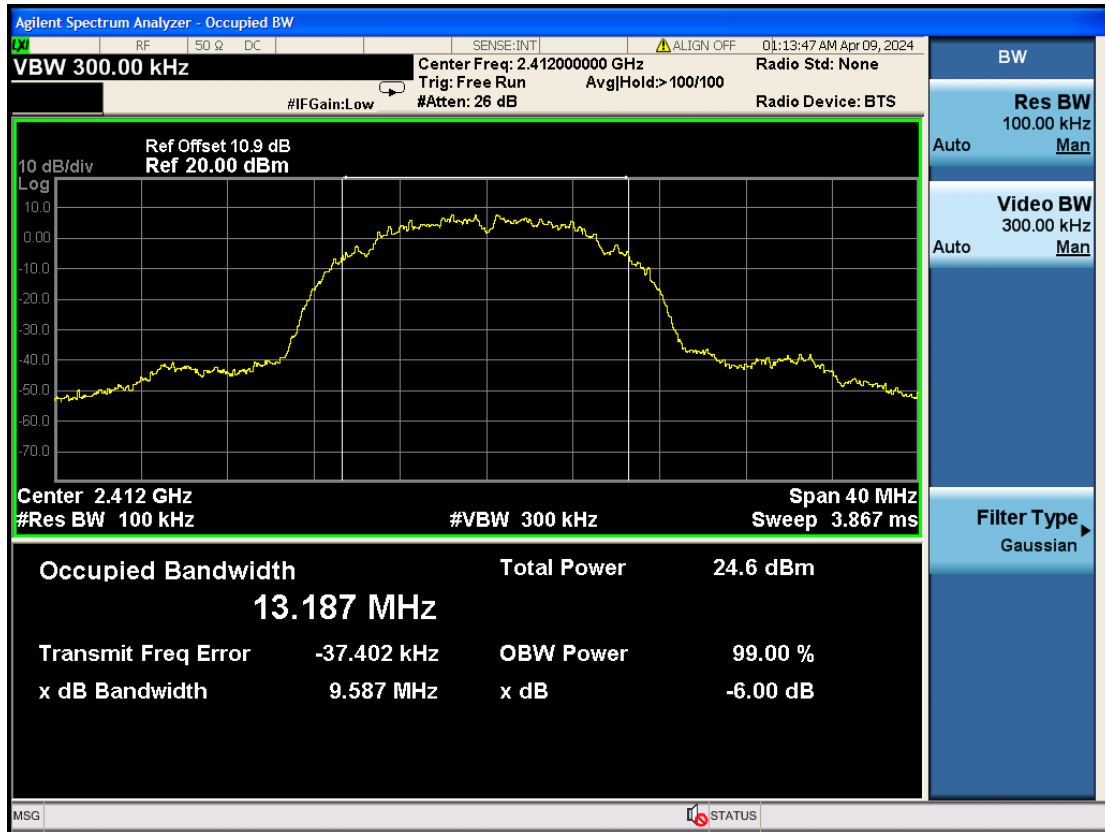
- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x dB to -6 dB to record the final bandwidth.

6.5. Test Results

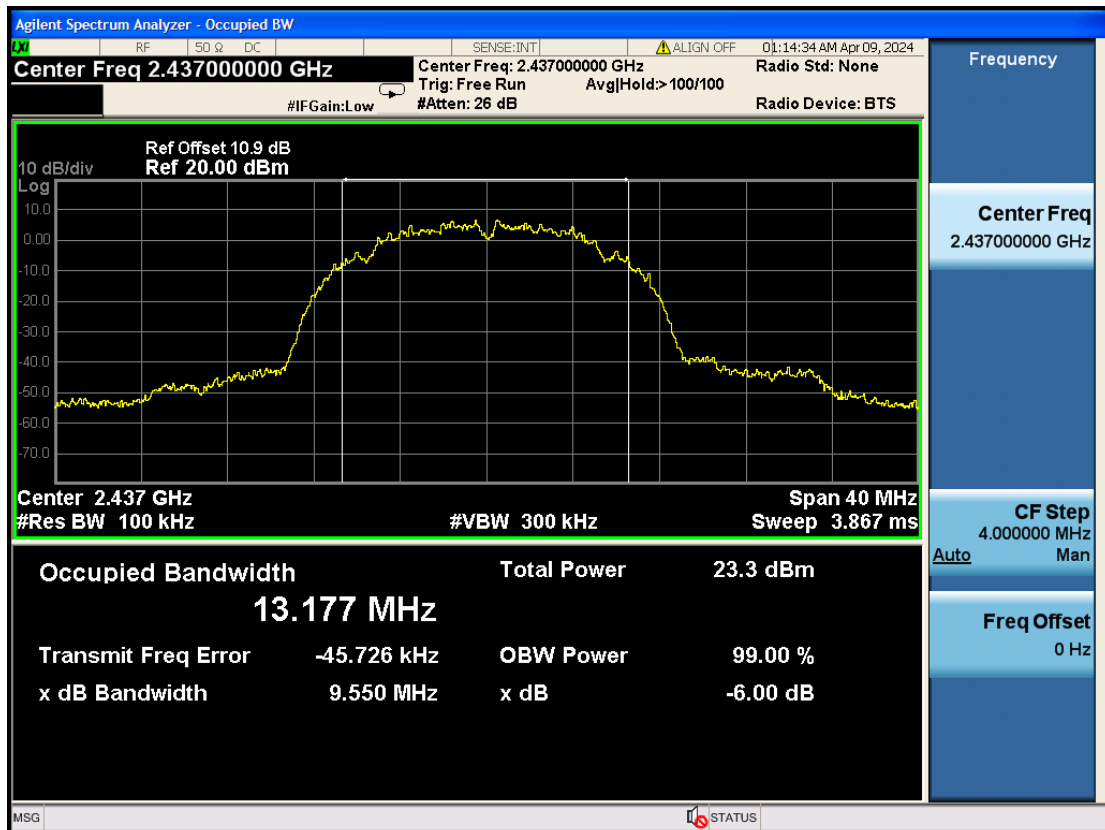
PASSED. All the test results are attached in next pages.

Item	Channel	Test Frequency (MHz)	6dB Bandwidth (MHz)
802.11b	1	2412	9.587
	6	2437	9.550
	11	2462	9.585
802.11g	1	2412	16.48
	6	2437	16.48
	11	2462	16.49
802.11nHT20	1	2412	17.13
	6	2437	17.09
	11	2462	17.12
802.11nHT40	3	2422	33.23
	6	2437	33.17
	9	2452	33.19

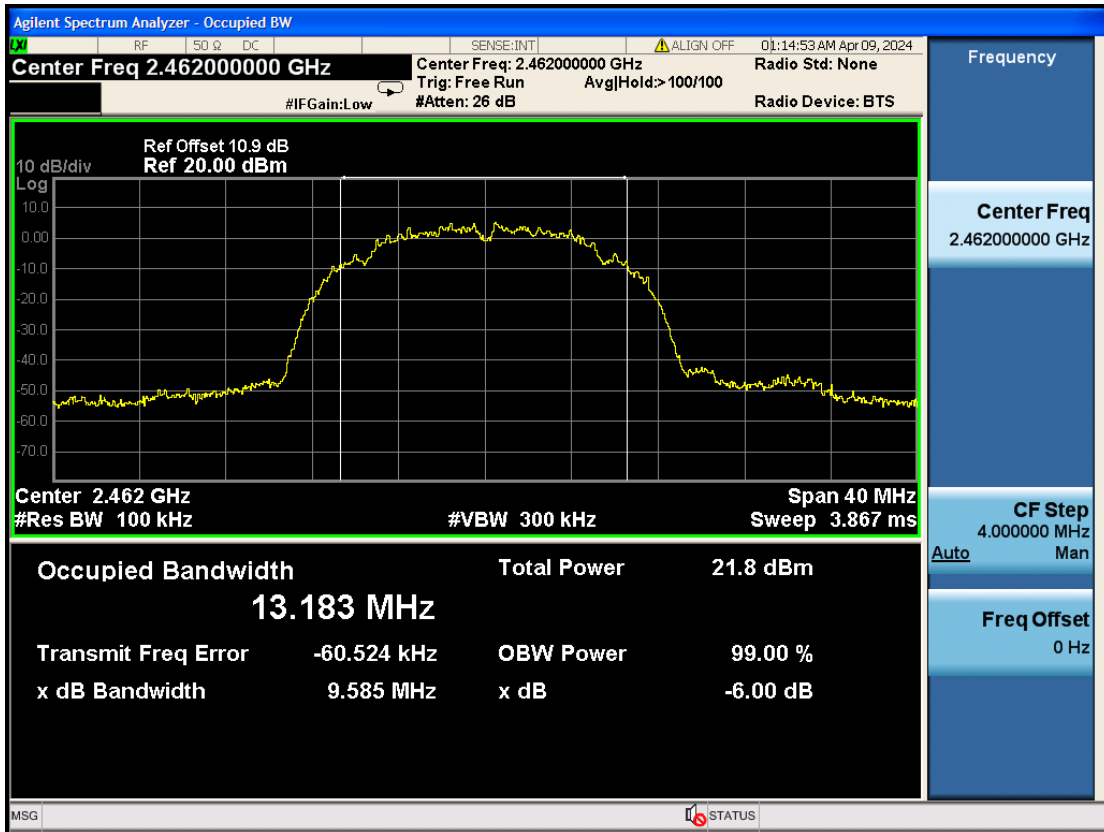
802.11b CH1



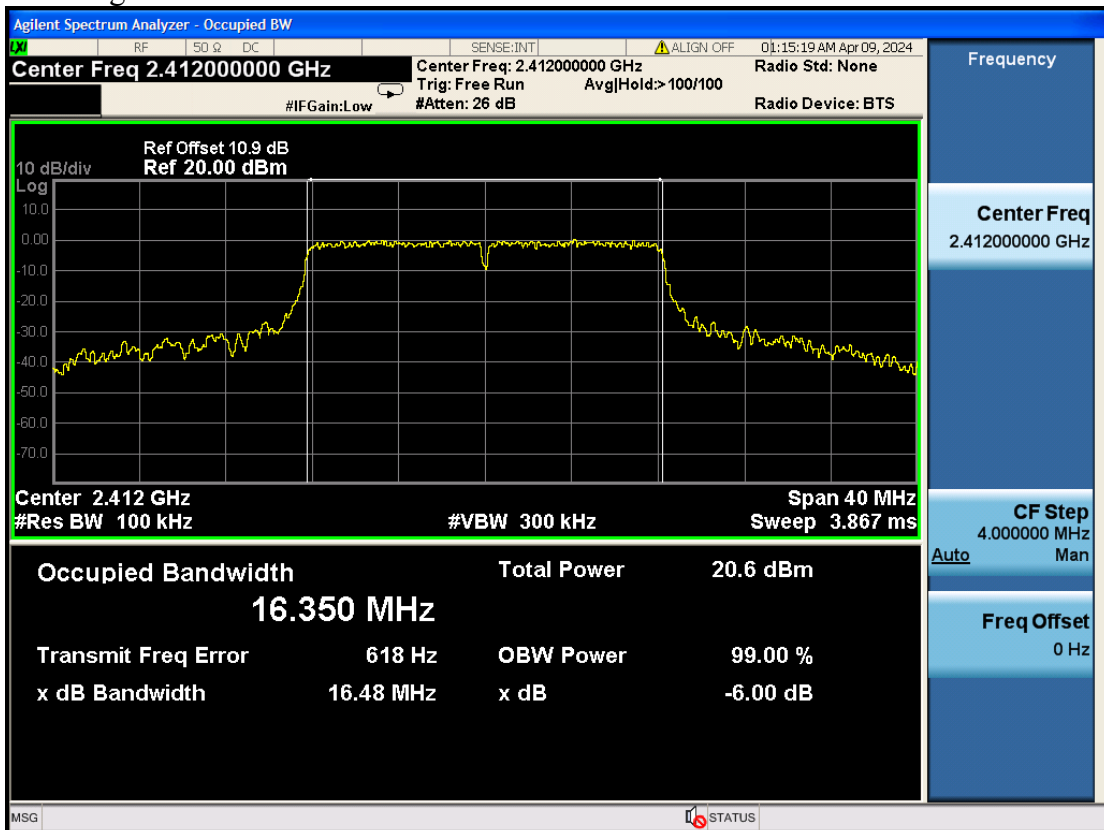
802.11b CH6



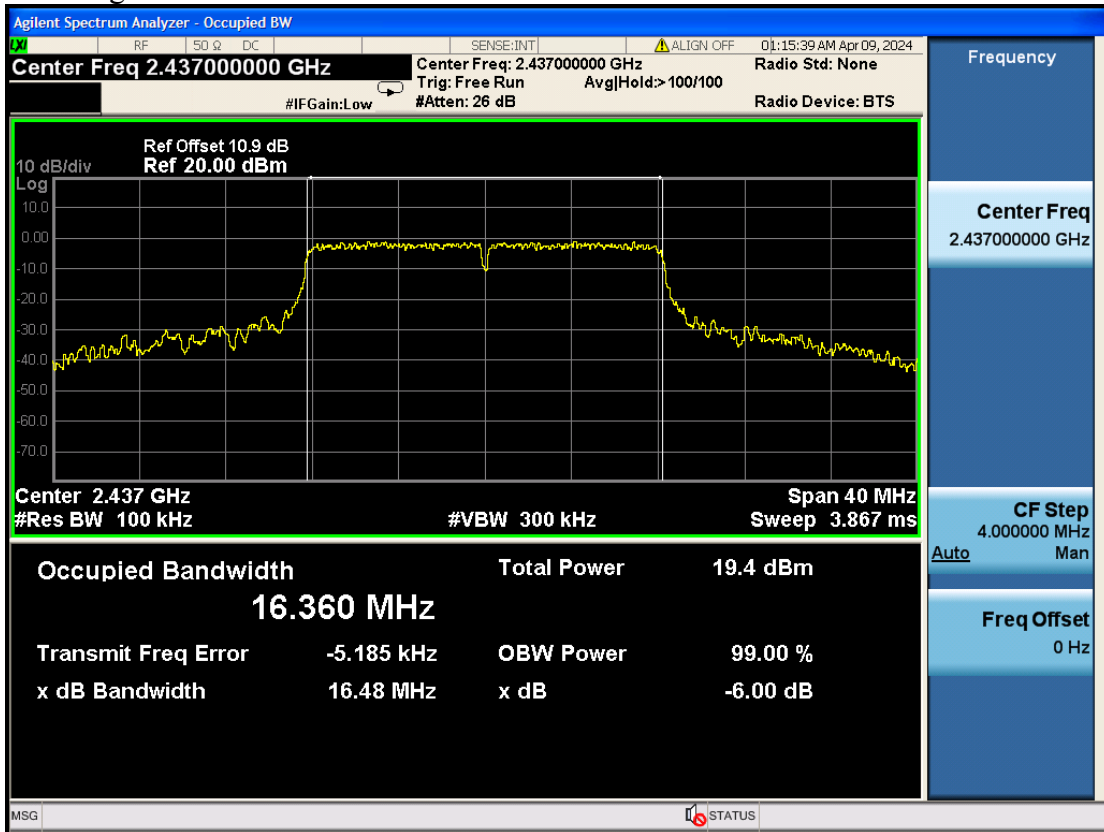
802.11b CH11



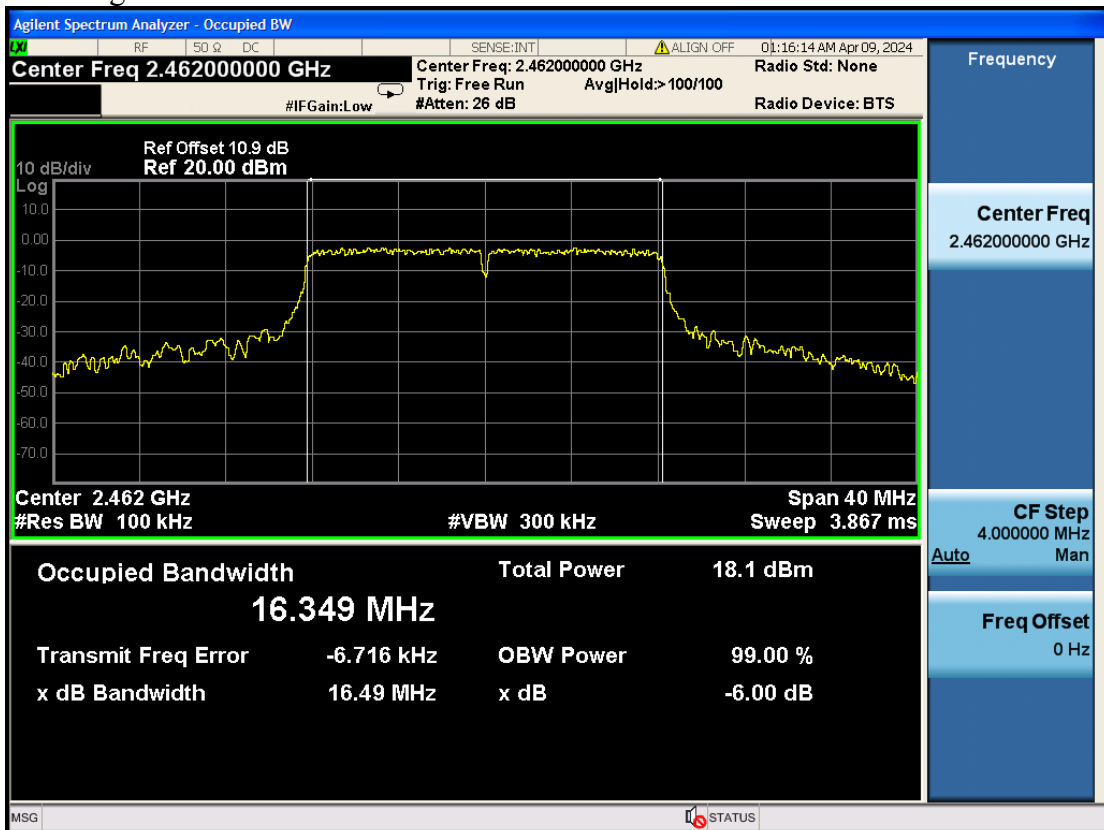
802.11g CH1



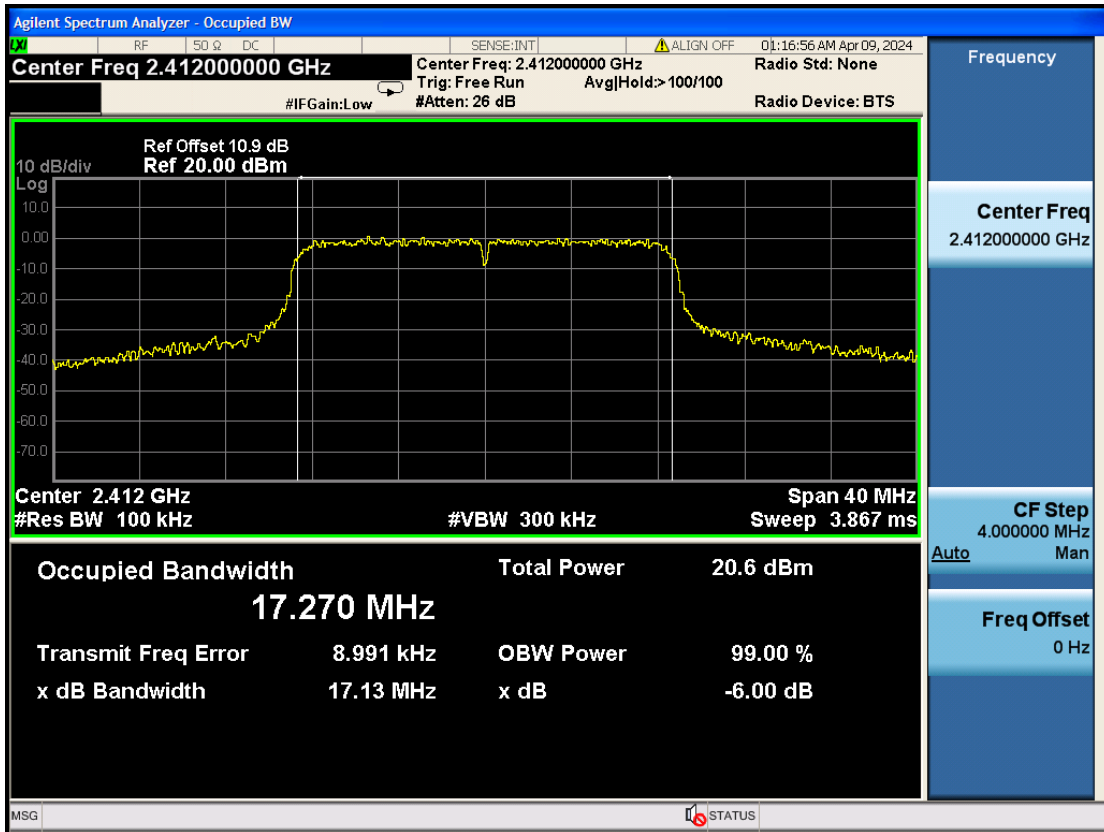
802.11g CH6



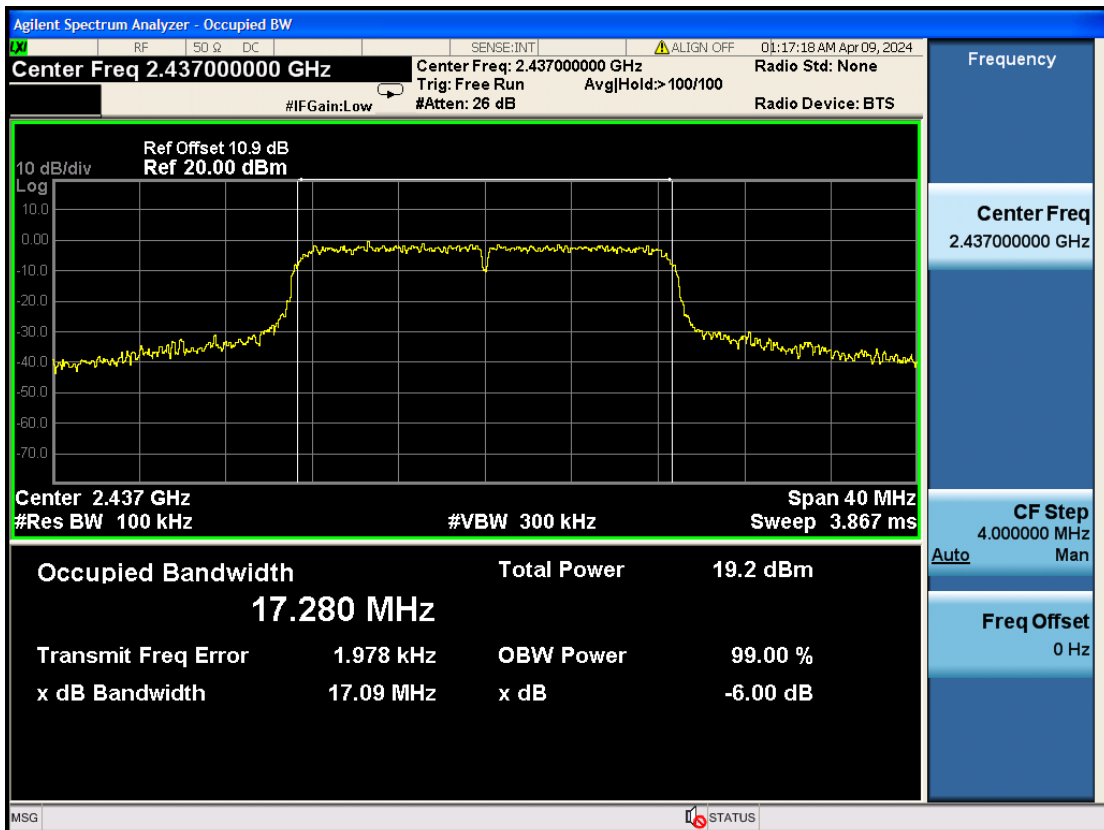
802.11g CH11



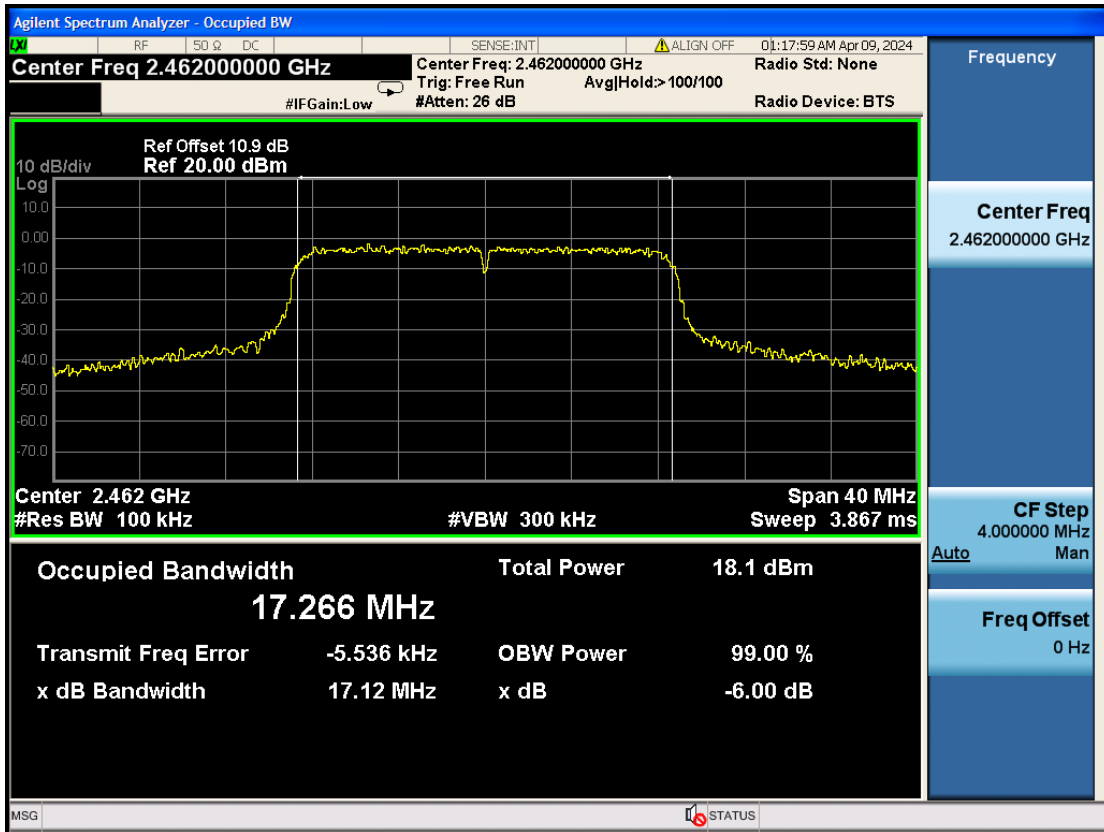
802.11nHT20 CH1



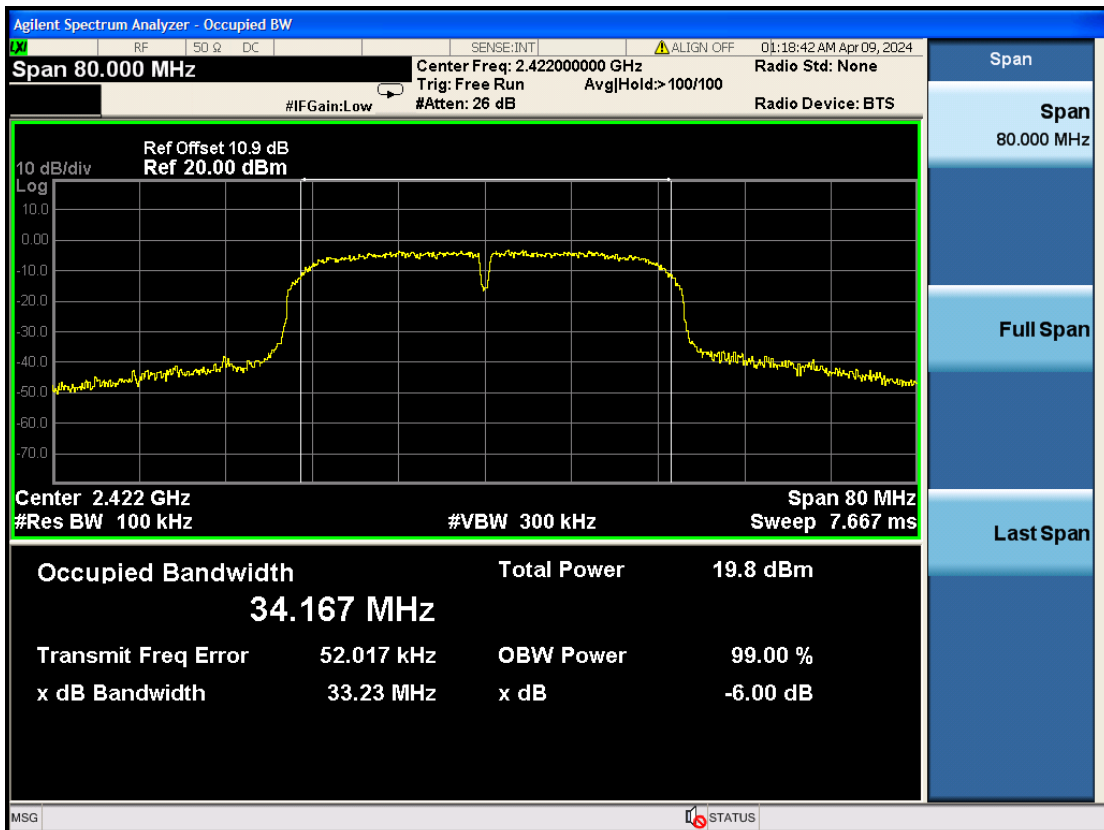
802.11nHT20 CH6



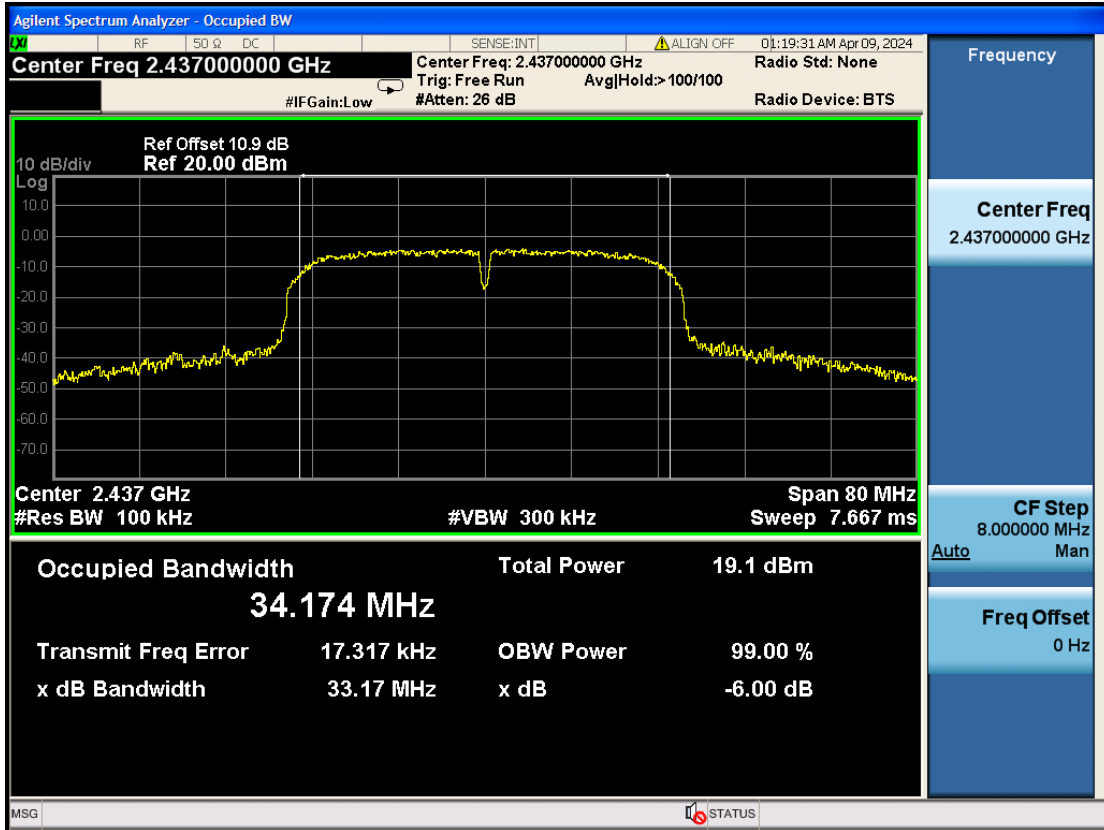
802.11nHT20 CH11



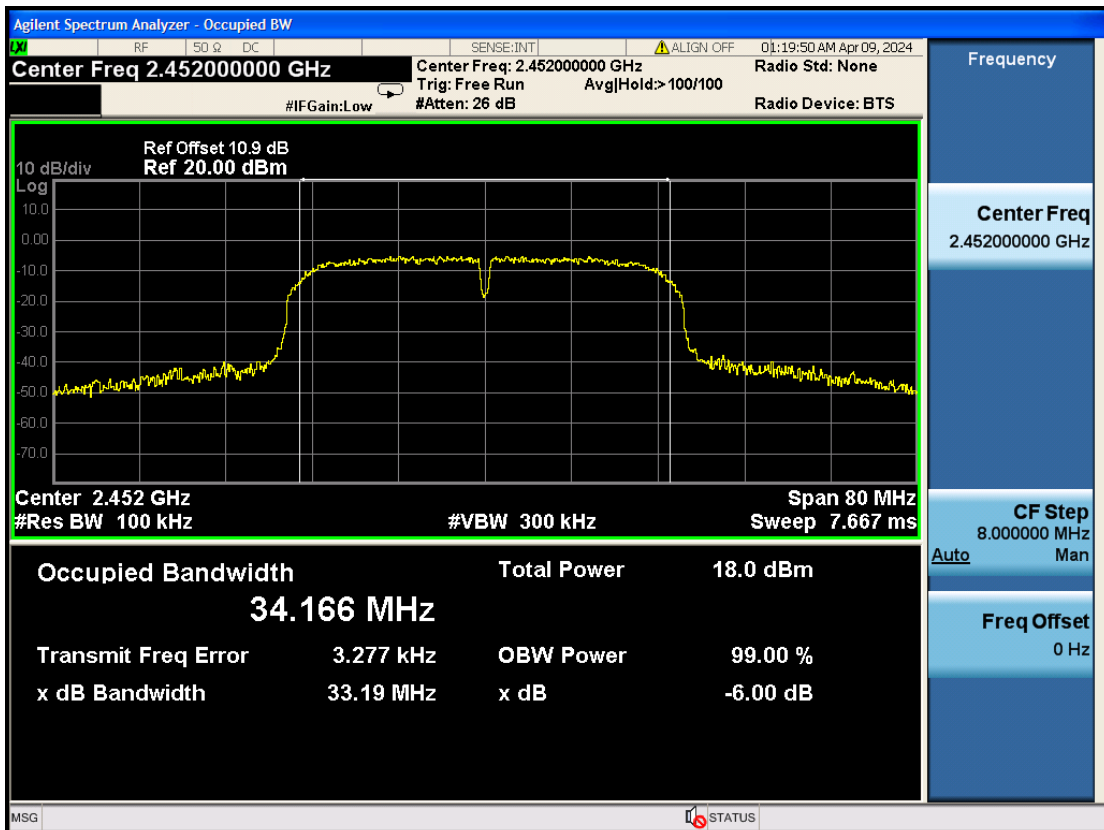
802.11nHT40 CH3



802.11nHT40 CH6



802.11nHT40 CH9

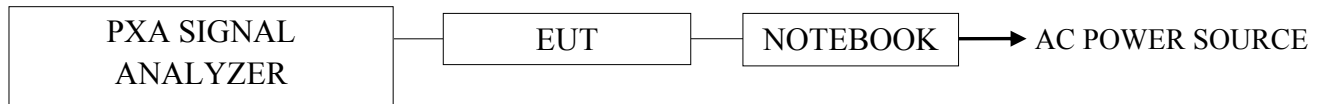


7. OUTPUT POWER MEASUREMENT

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)

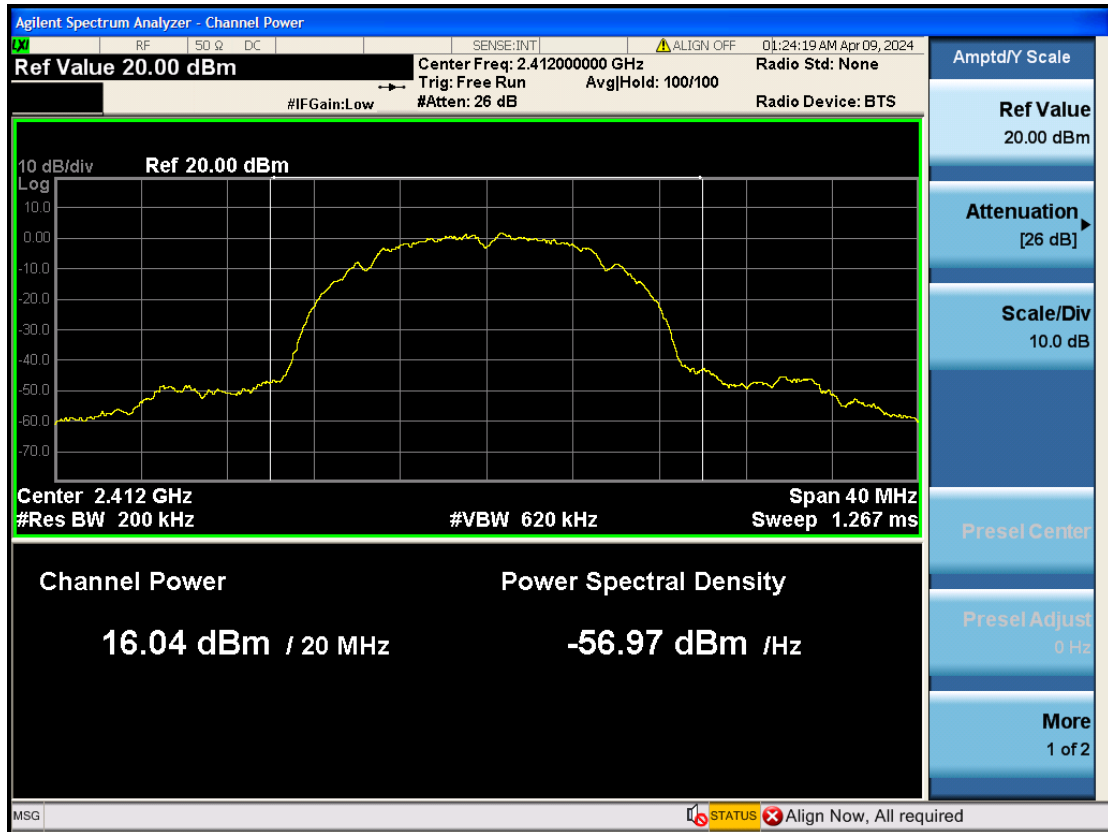
- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 -5% of OBW
- (3) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Compute power by integrating the spectrum across the OBW of the 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

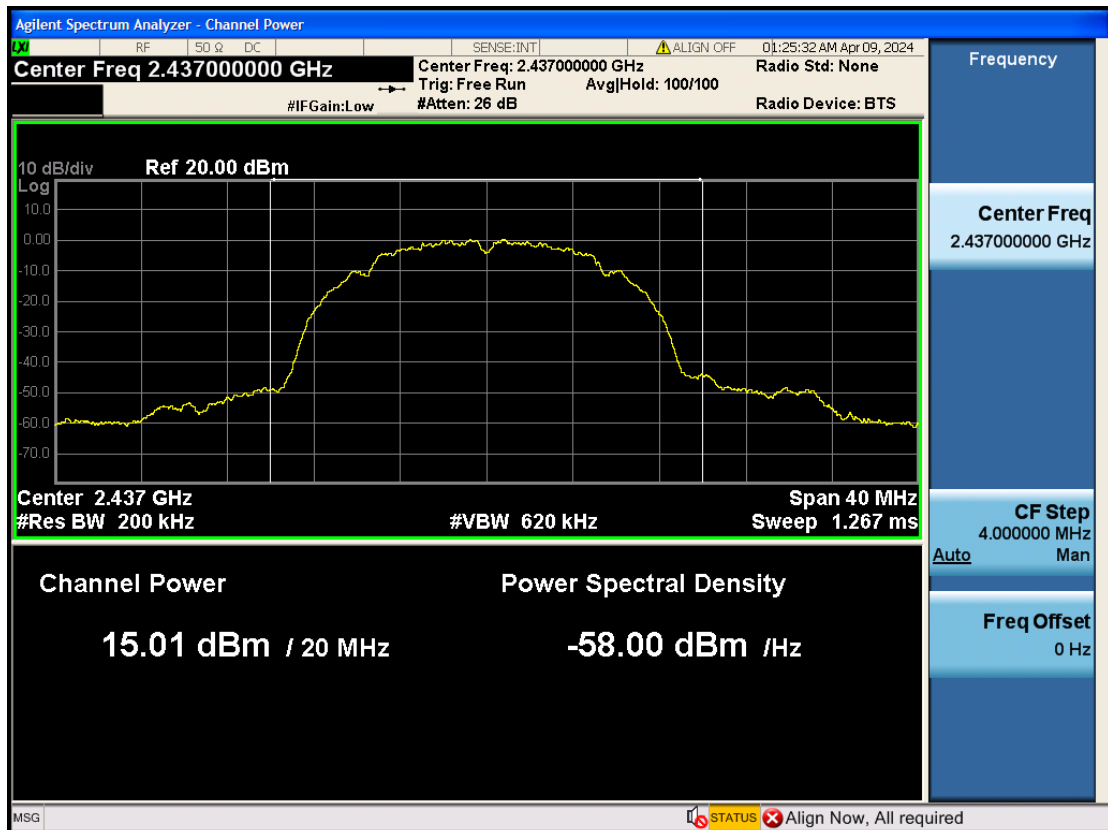
PASSED.

Mode	Frequency	Duty Cycle Factor	Reading (dBm)	Average Output Power(dBm)	Limit (dBm)
11b	2412	0	16.04	16.04	30
	2437		15.01	15.01	
	2462		13.50	13.50	
11g	2412	0	14.18	14.18	
	2437		13.08	13.08	
	2462		11.70	11.70	
11nHT20	2412	0	14.12	14.12	
	2437		13.02	13.02	
	2462		11.59	11.59	
11nHT40	2422	0	13.07	13.07	
	2437		12.30	12.30	
	2452		11.45	11.45	

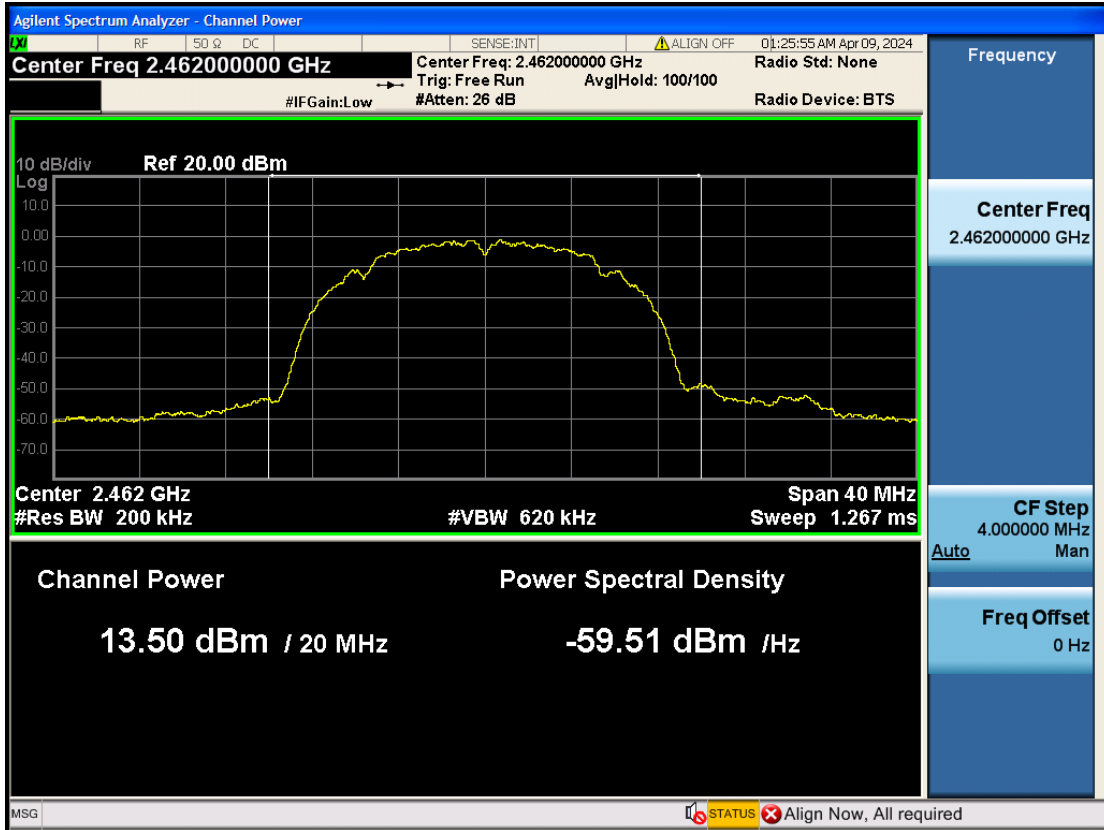
802.11b CH1



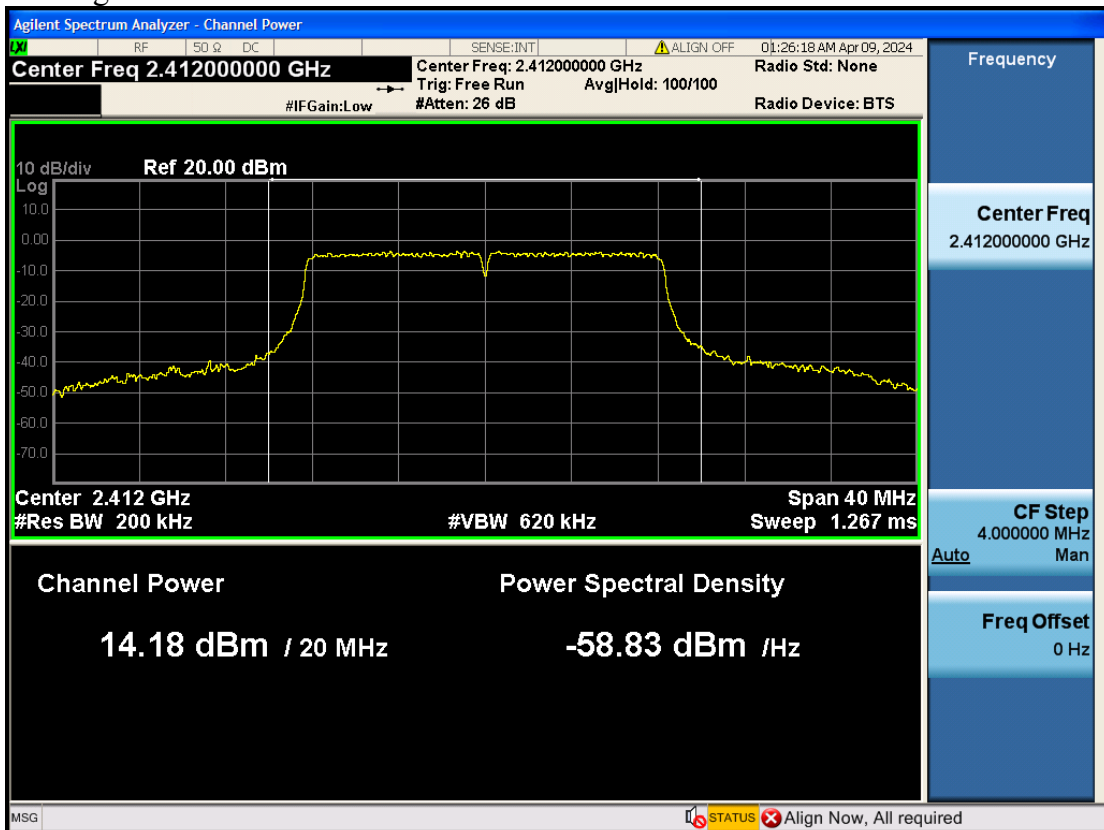
802.11b CH6



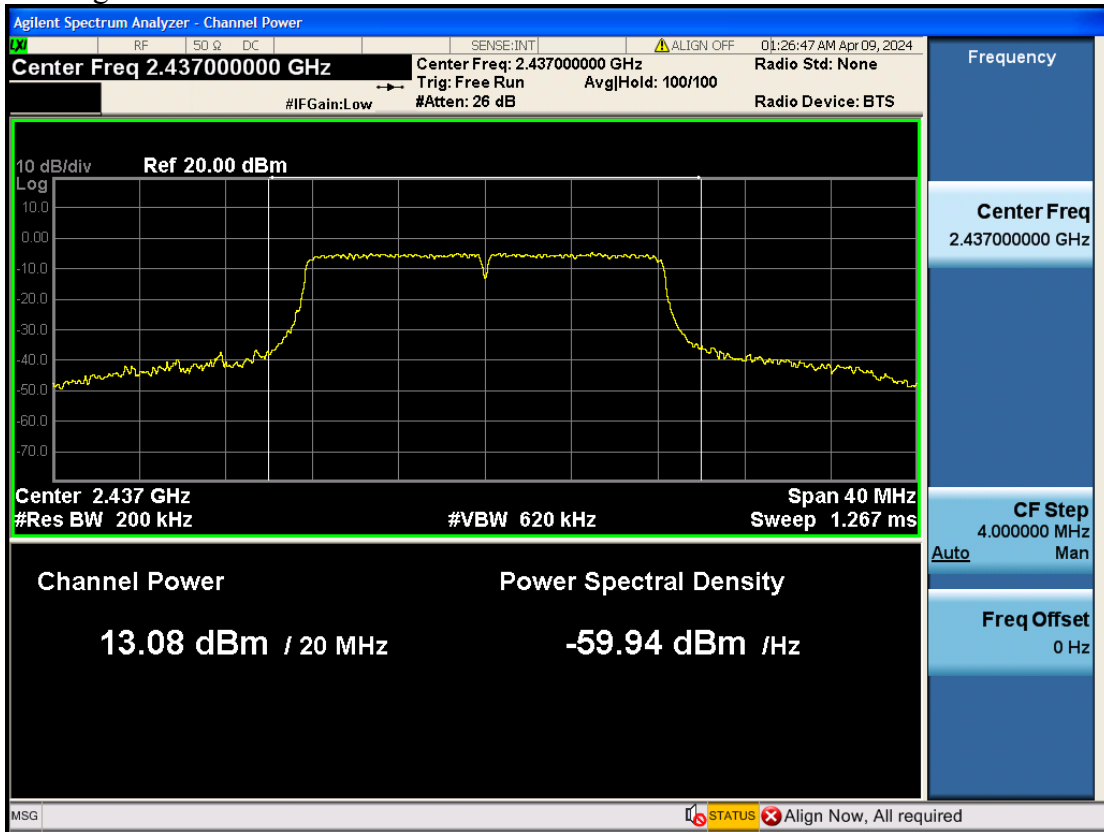
802.11b CH11



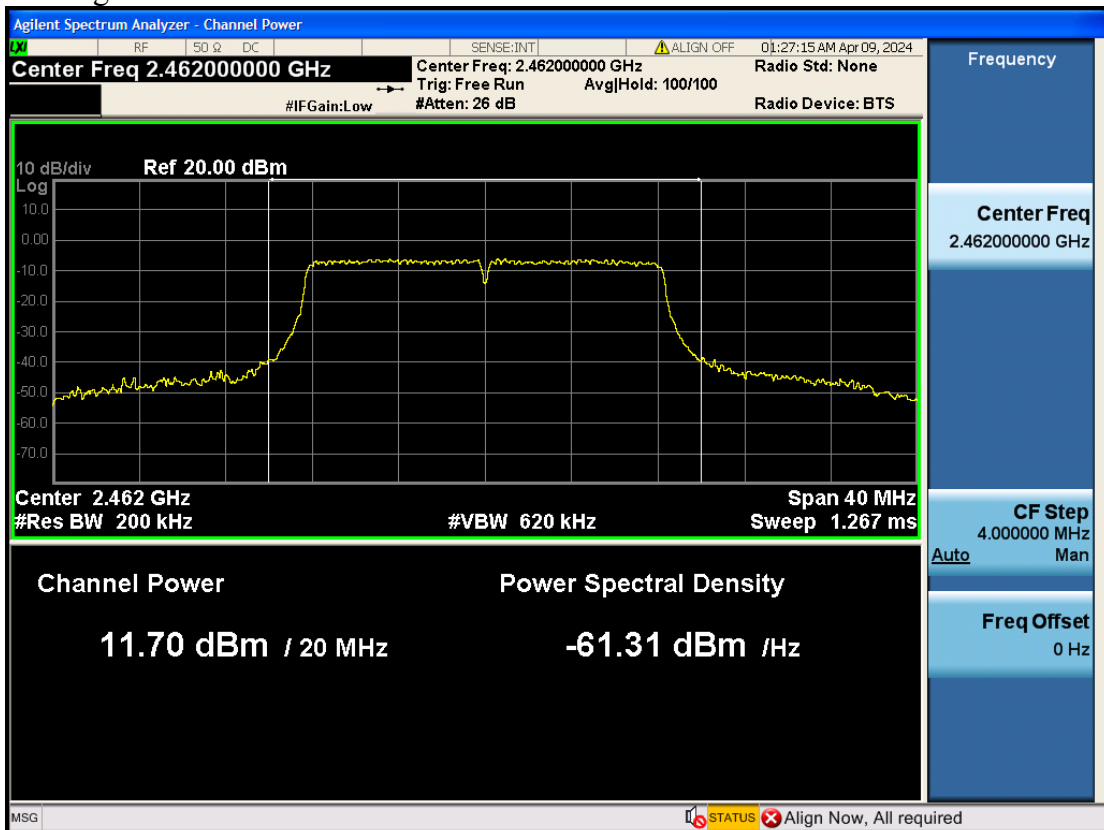
802.11g CH1



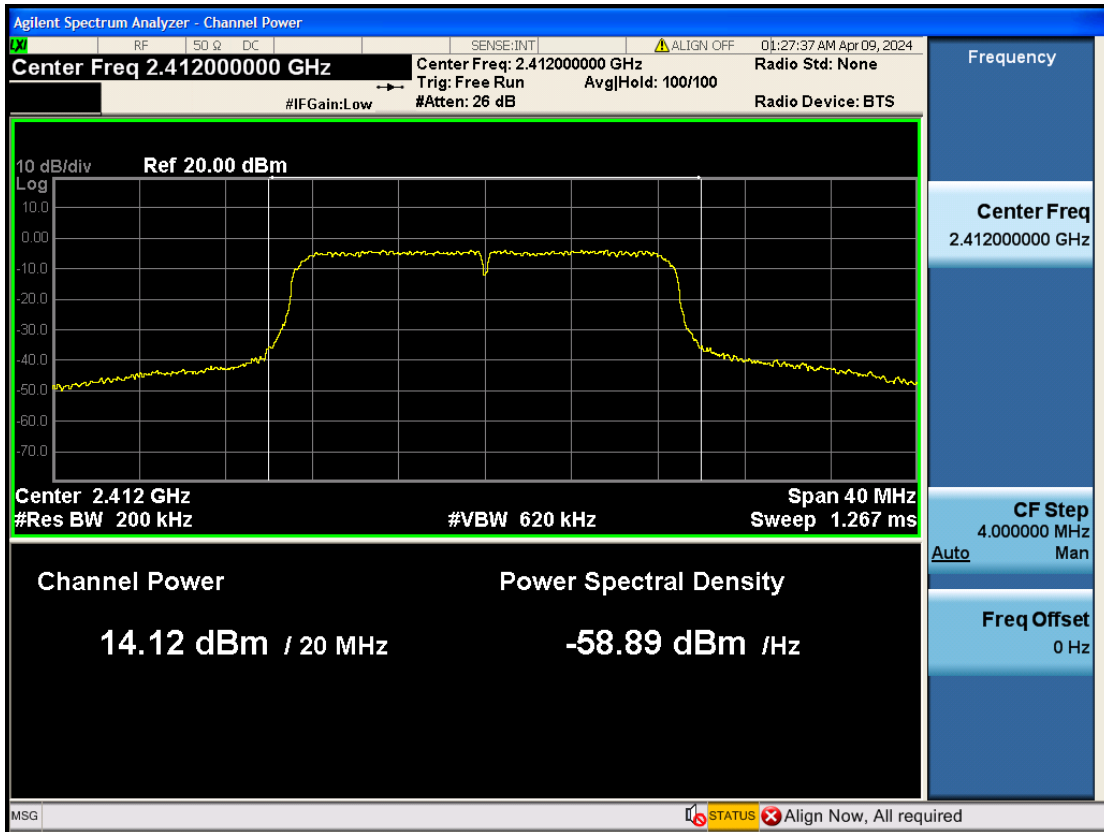
802.11g CH6



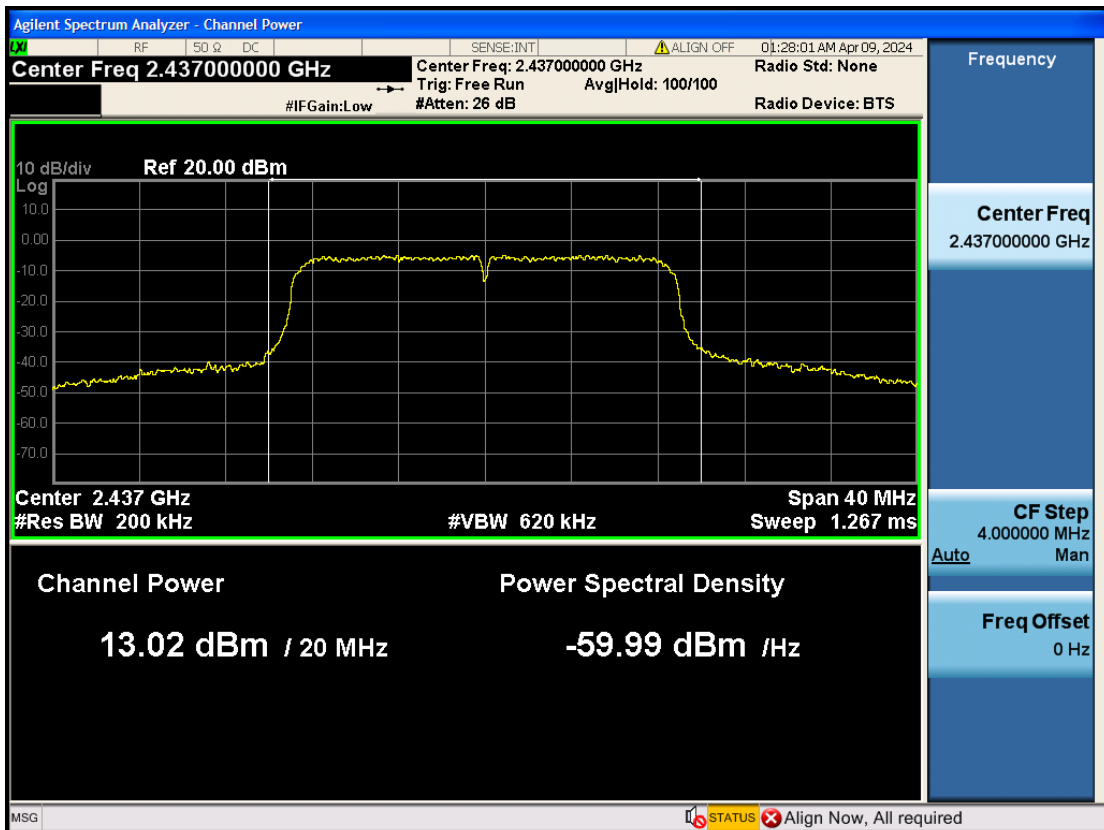
802.11g CH11



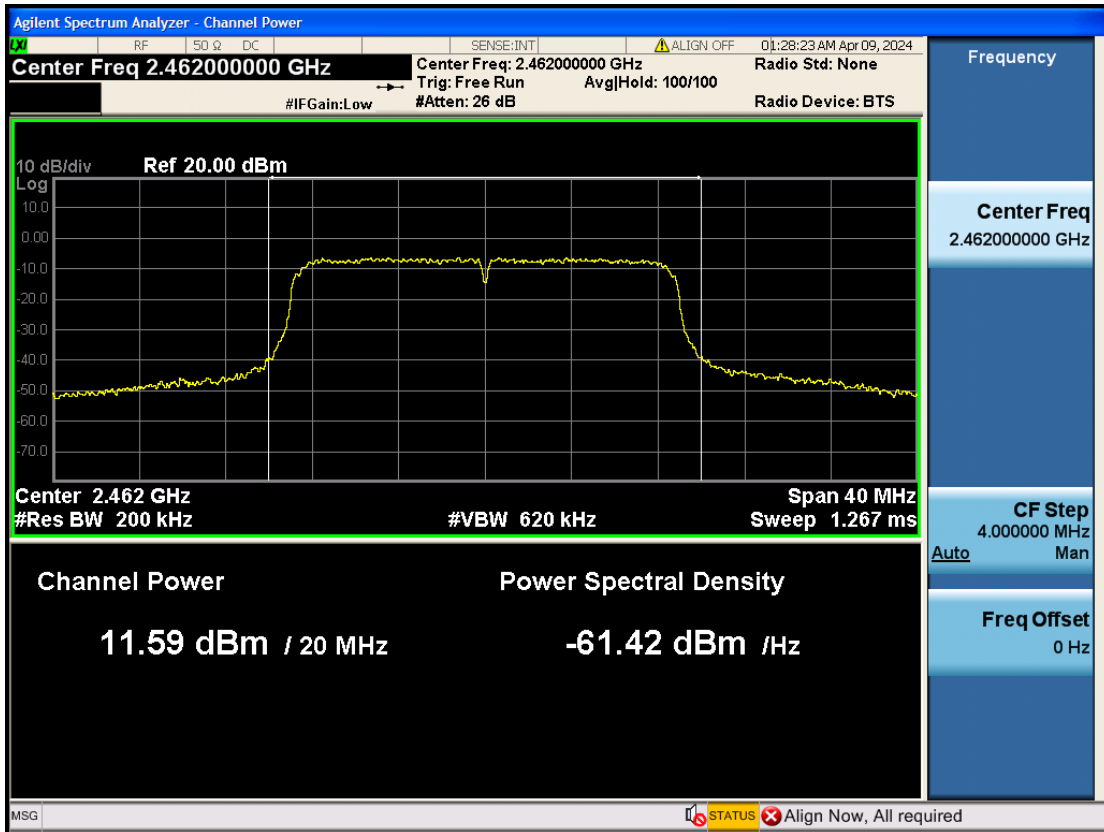
802.11nHT20 CH1



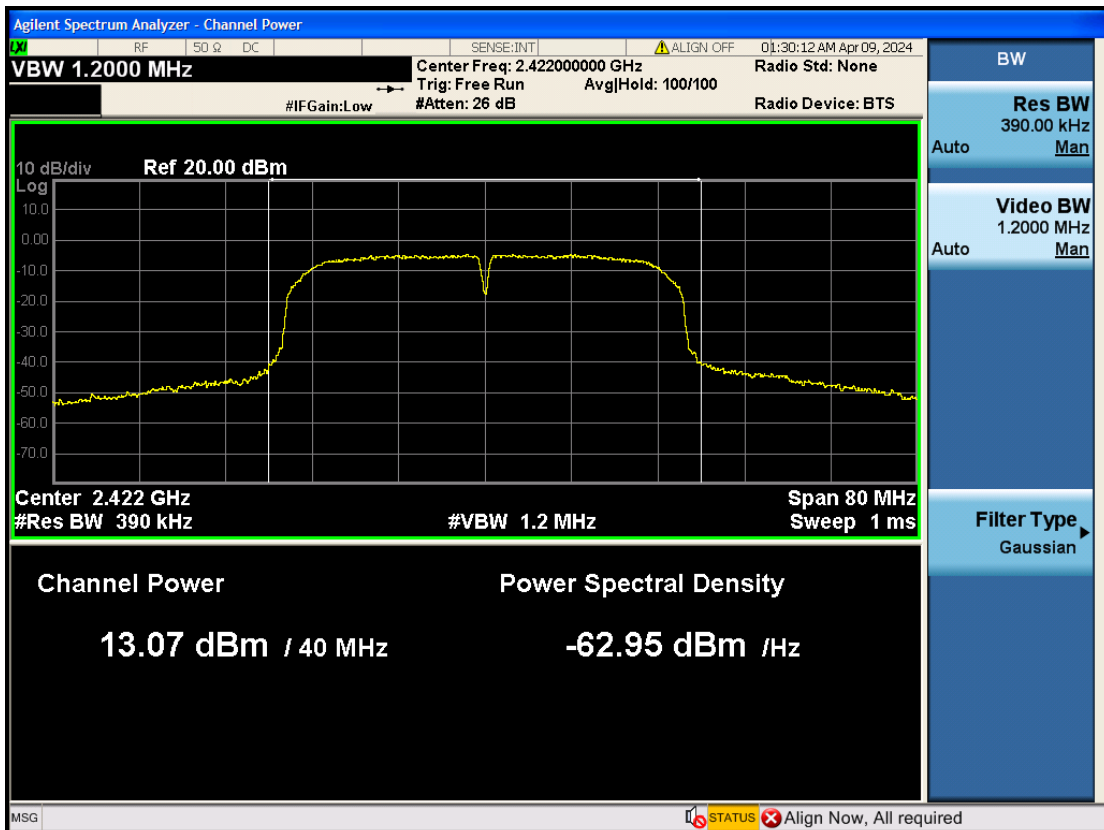
802.11nHT20 CH6



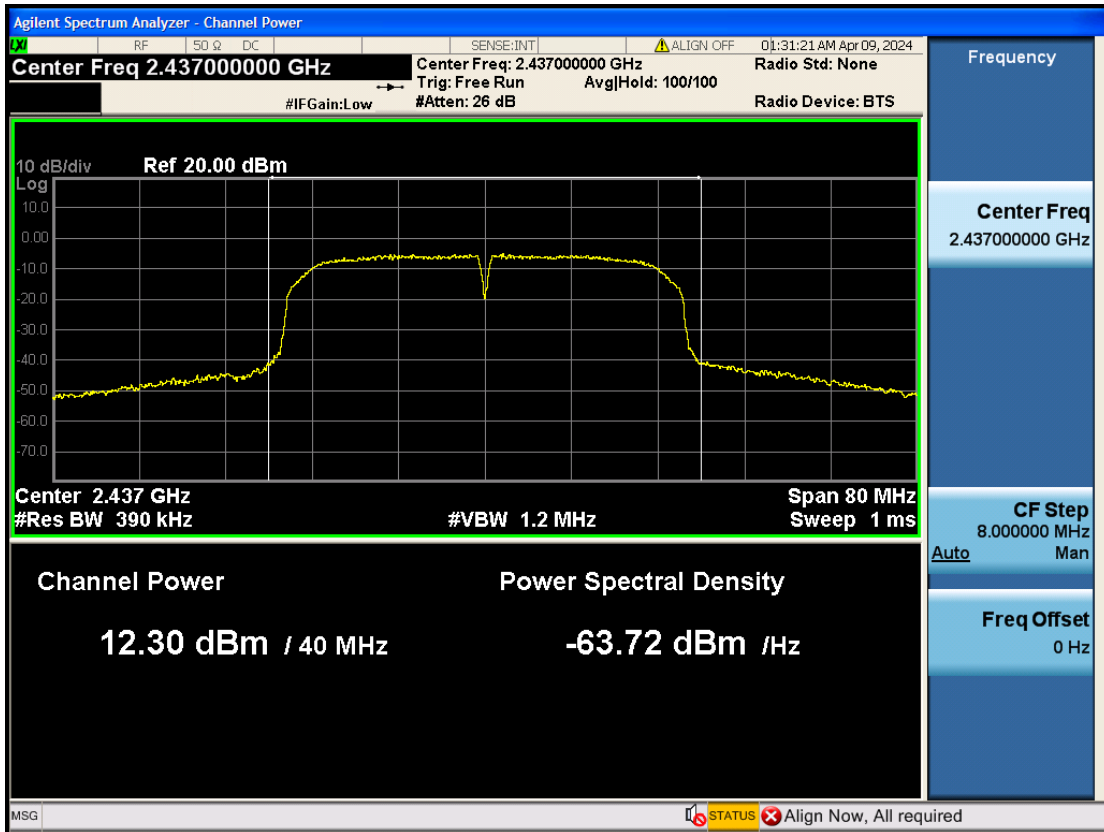
802.11nHT20 CH11



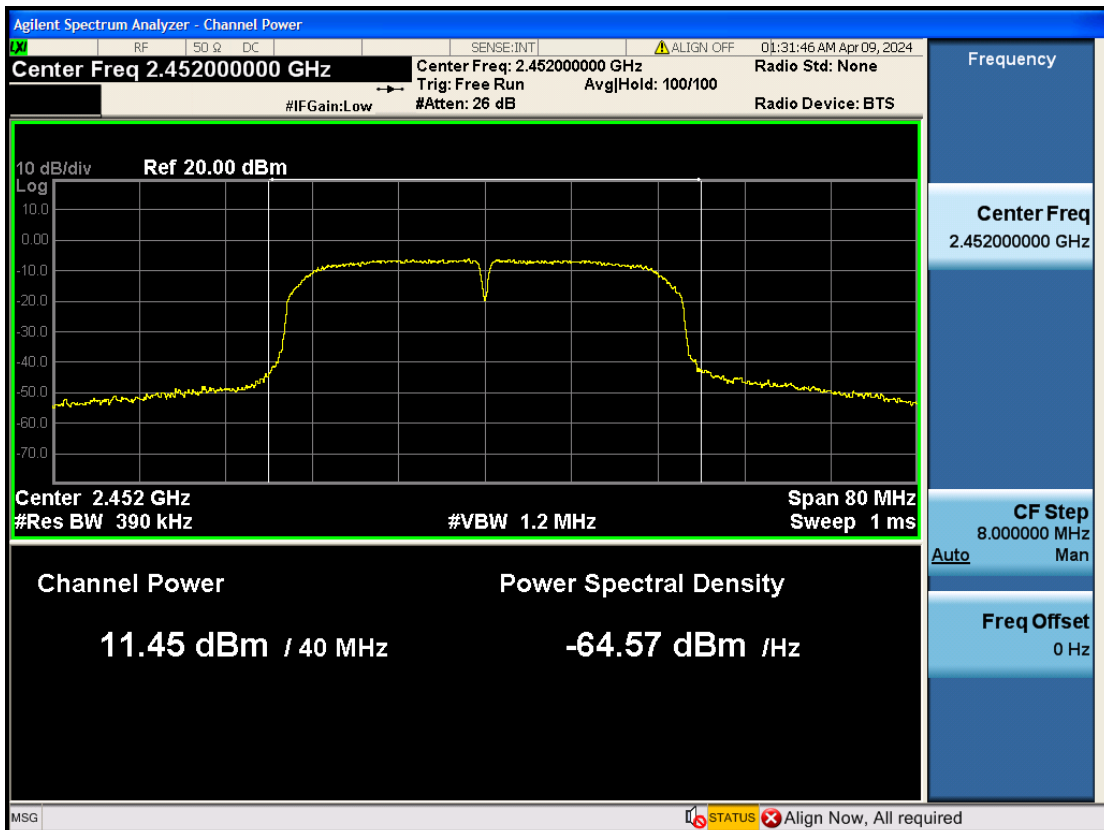
802.11nHT40 CH3



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

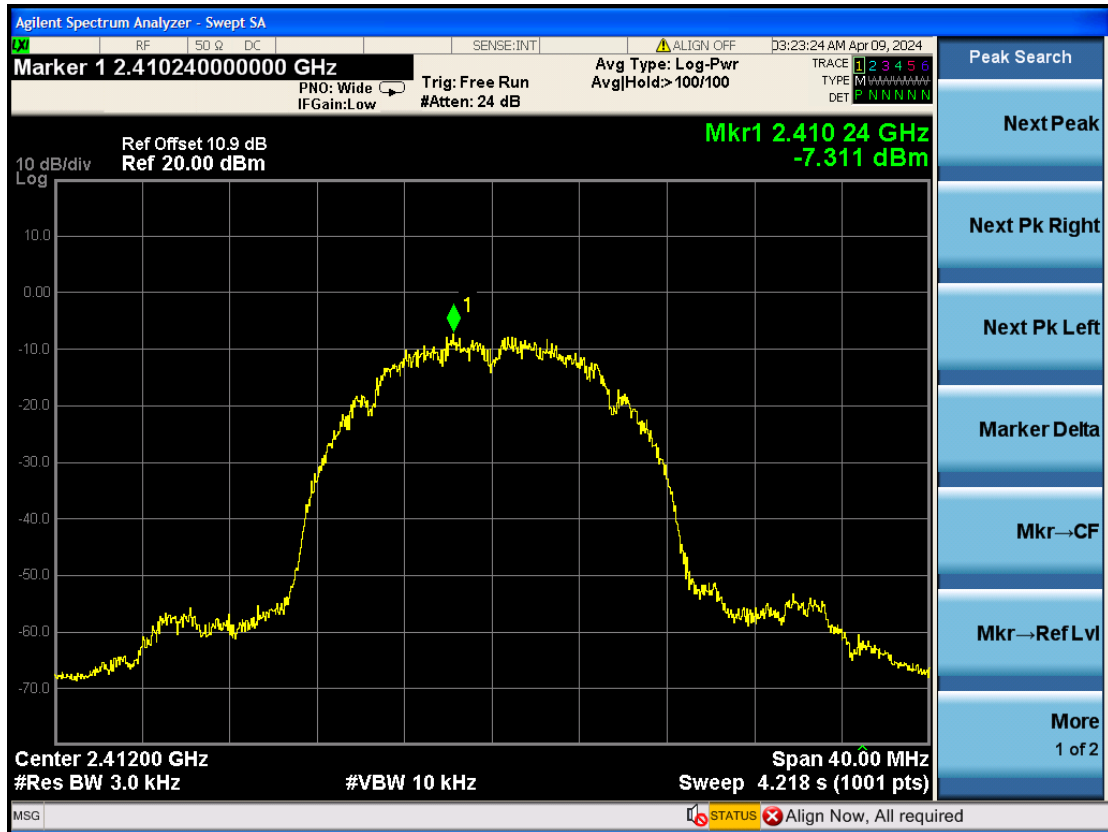
- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- (4) Set the VBW $\geq 3 \times \text{RBW}$.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) 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

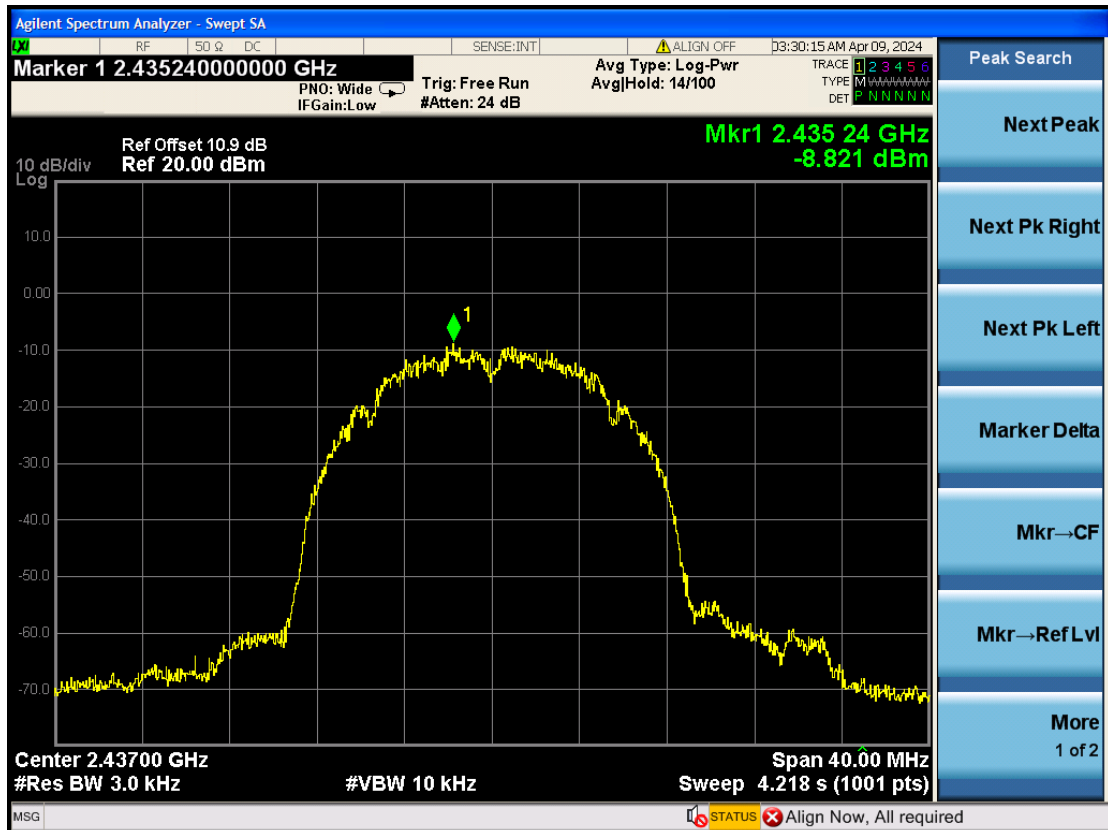
PASSED. All the test results are attached in next page.

Mode	Frequency	Duty Cycle Factor	Reading (dBm)	Result (dBm)	Limit (dBm/3kHz)
11b	2412	0	-7.311	-7.311	8
	2437		-8.821	-8.821	
	2462		-10.312	-10.312	
11g	2412	0	-14.385	-14.385	
	2437		-15.330	-15.330	
	2462		-16.908	-16.908	
11n-HT20	2412	0	-13.675	-13.675	
	2437		-15.200	-15.200	
	2462		-16.200	-16.200	
11n-HT40	2422	0	-15.202	-15.202	
	2437		-16.908	-16.908	
	2452		-17.482	-17.482	

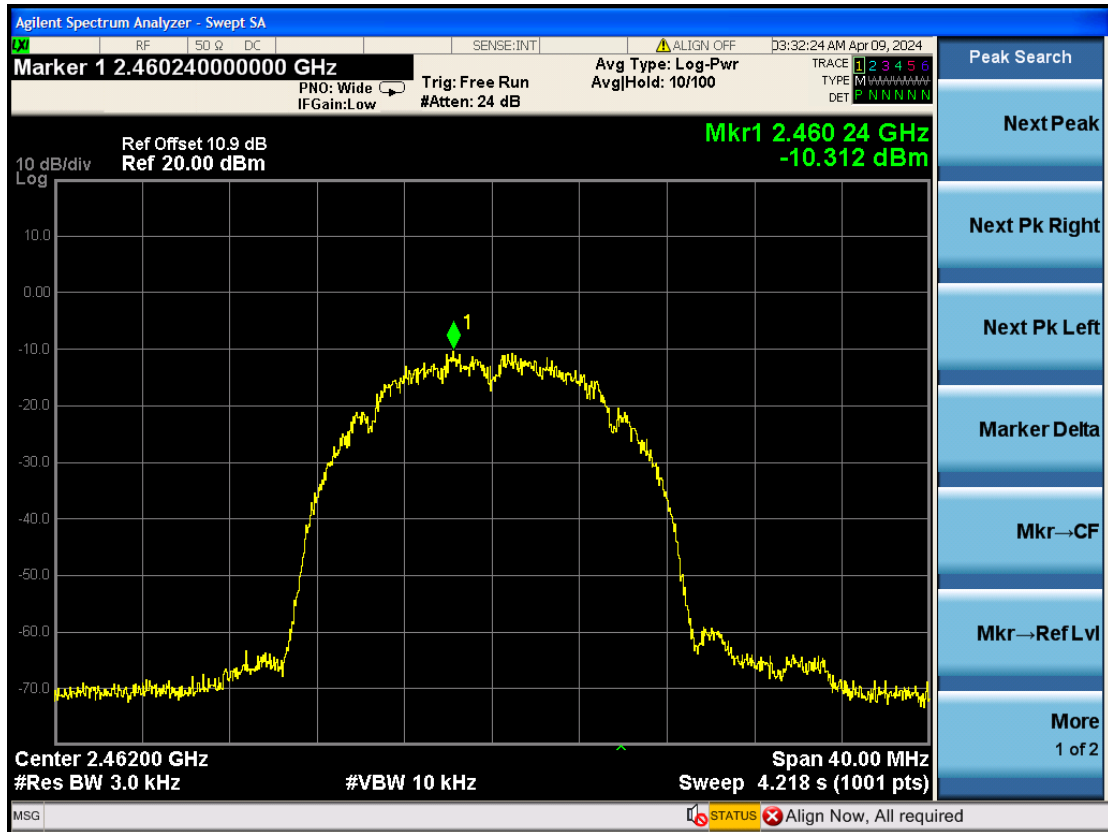
802.11b CH1



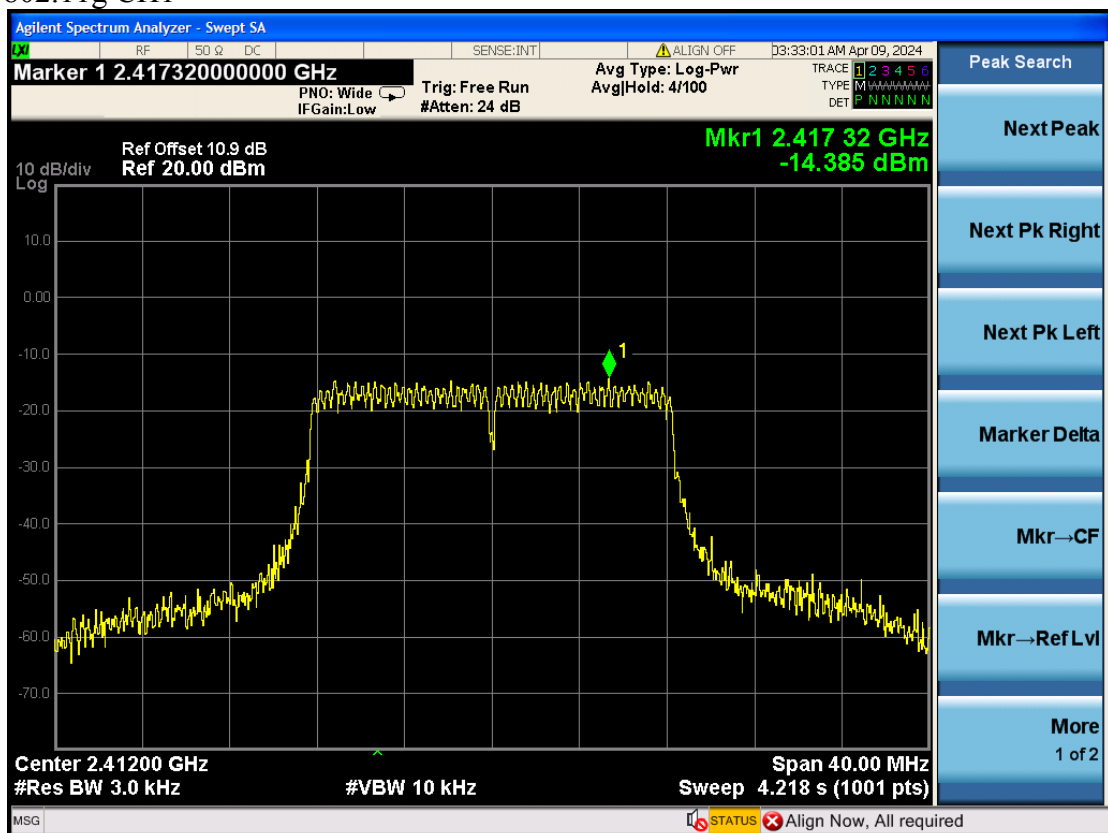
802.11b CH6



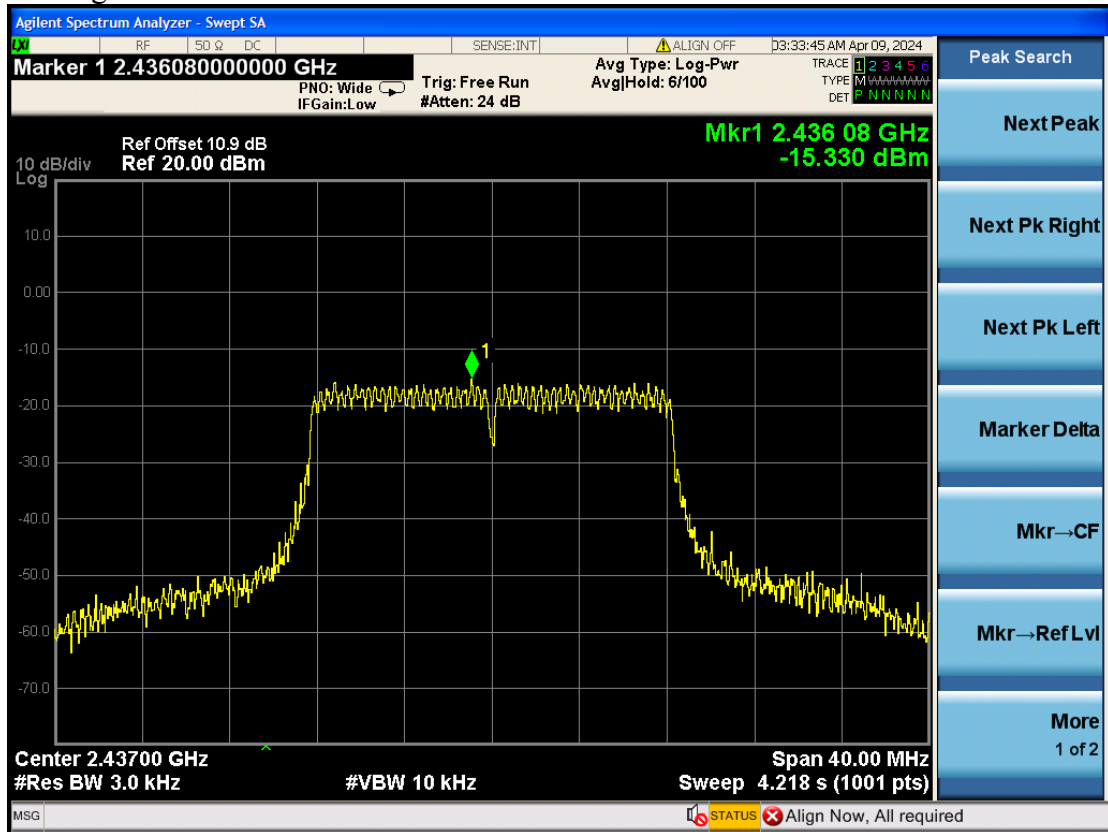
802.11b CH11



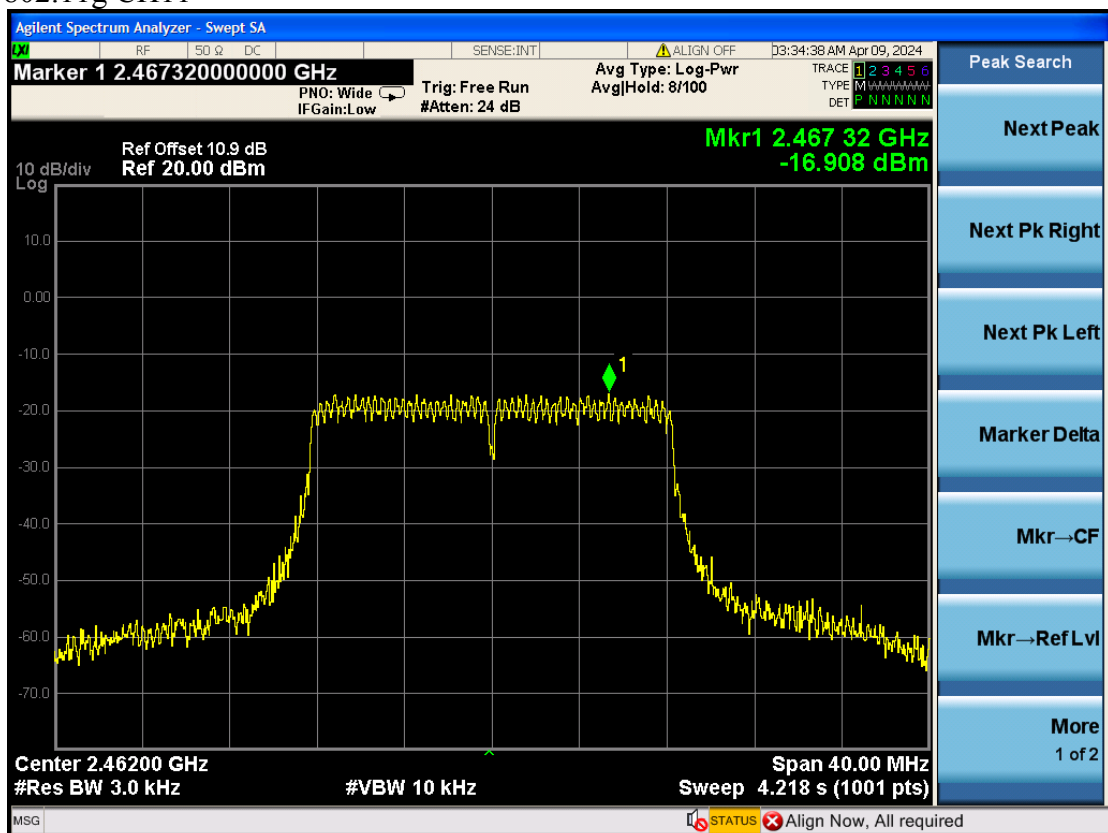
802.11g CH1



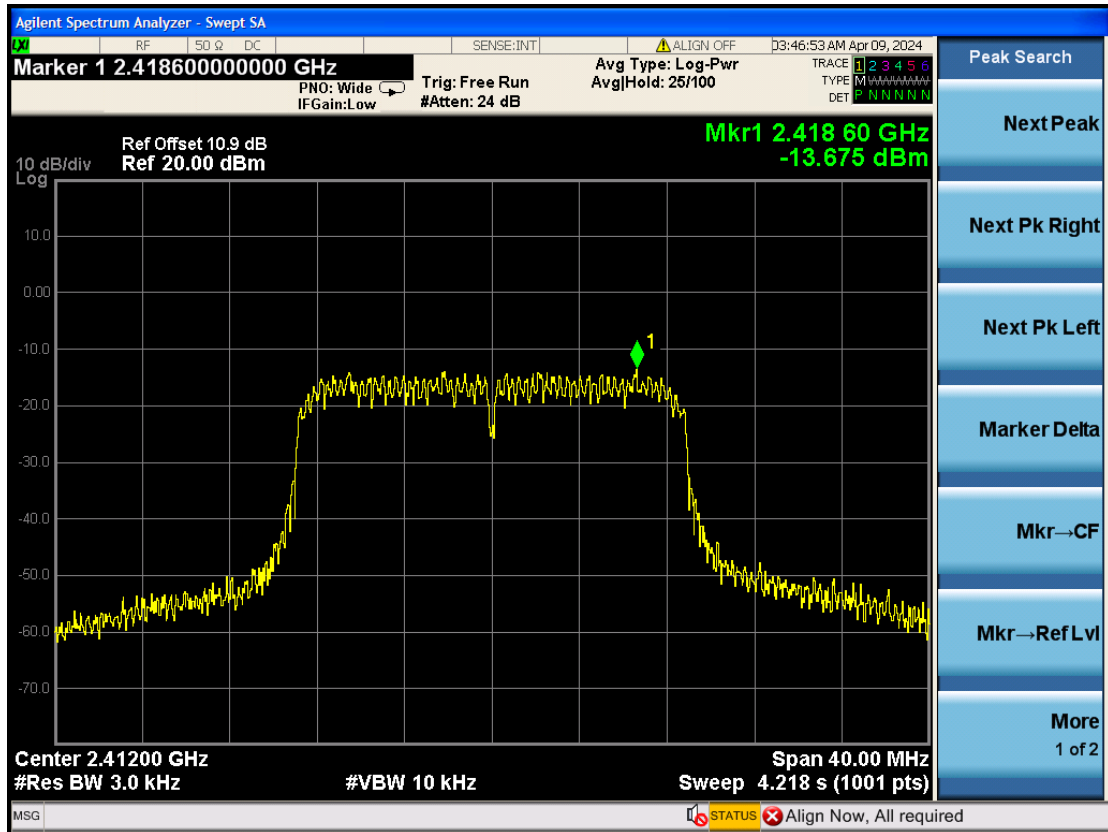
802.11g CH6



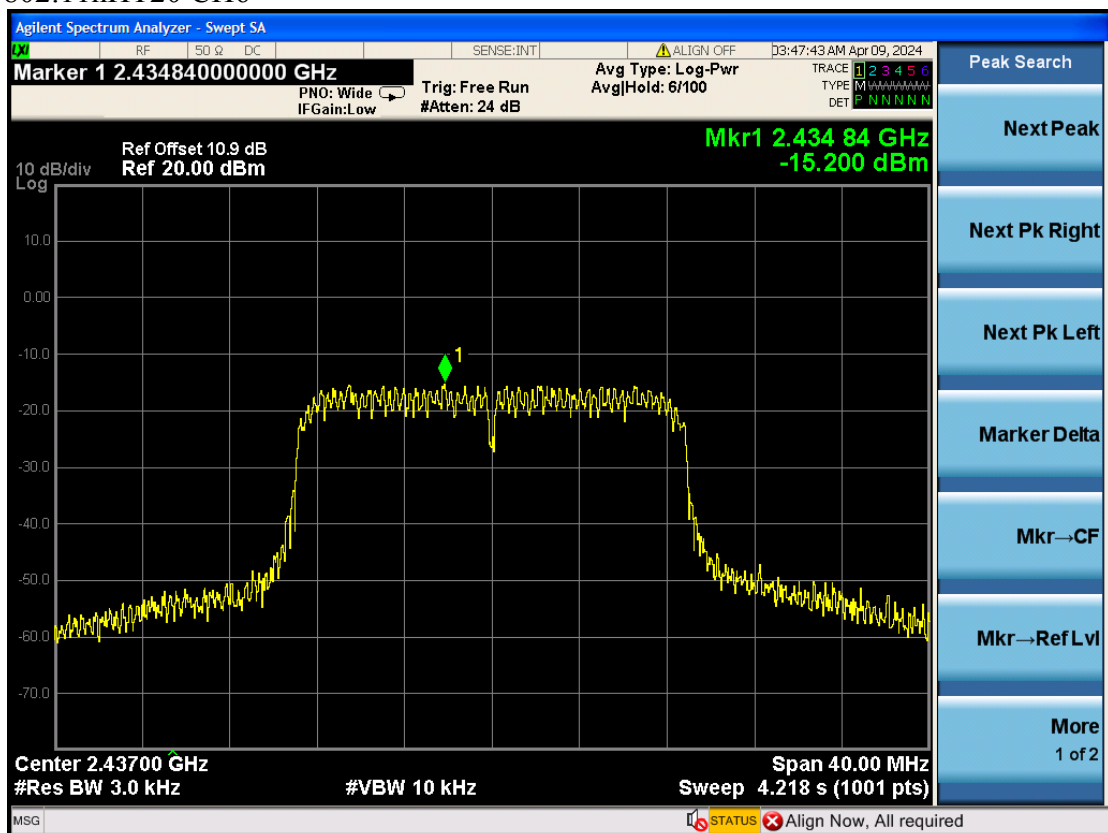
802.11g CH11



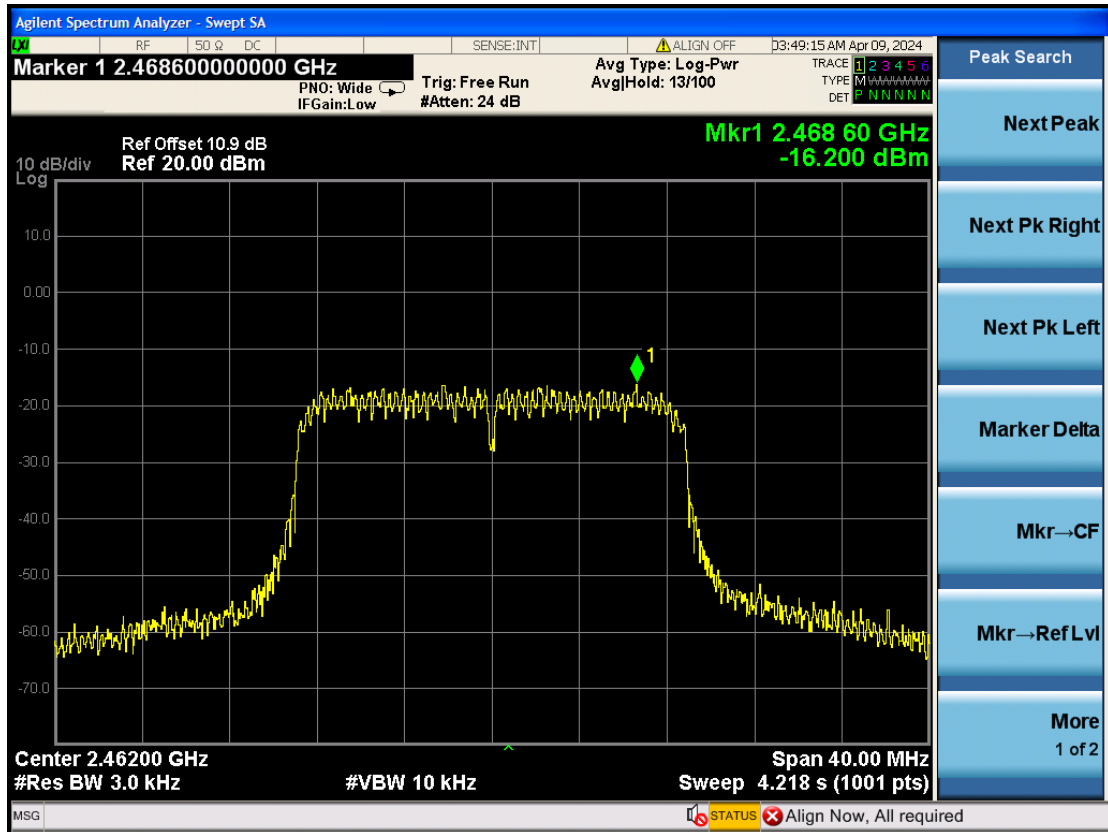
802.11nHT20 CH1



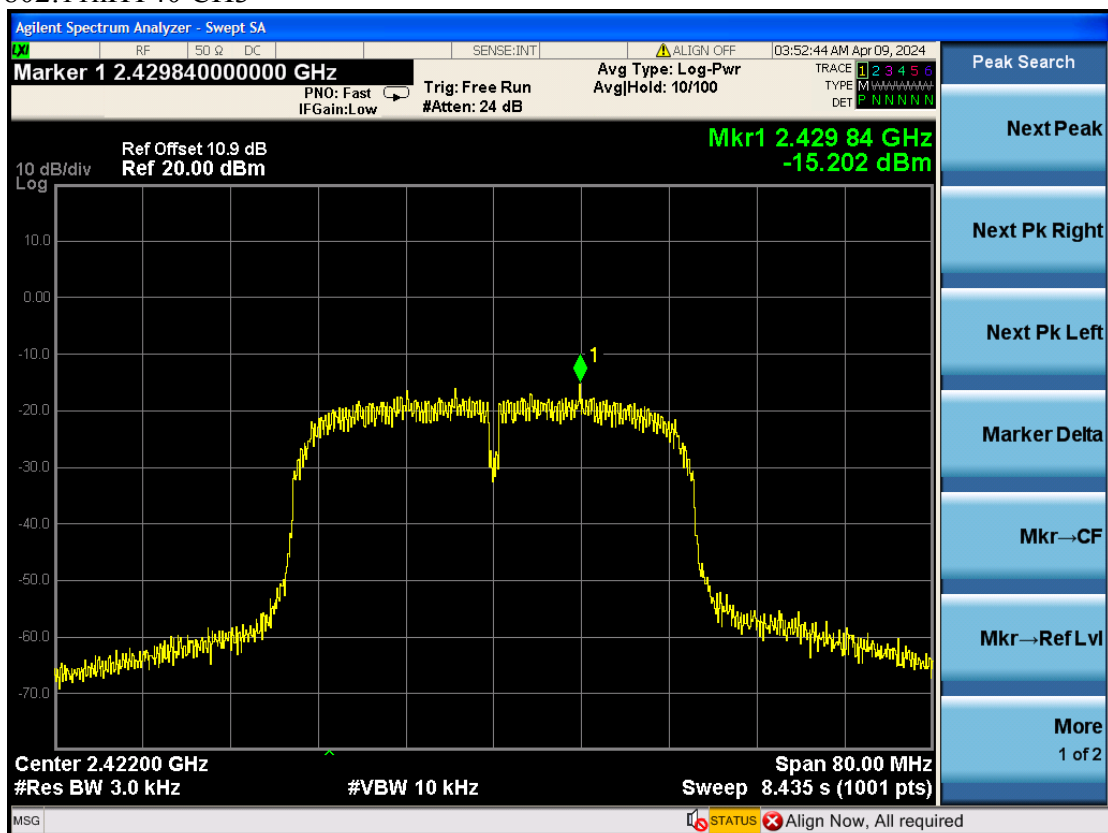
802.11nHT20 CH6



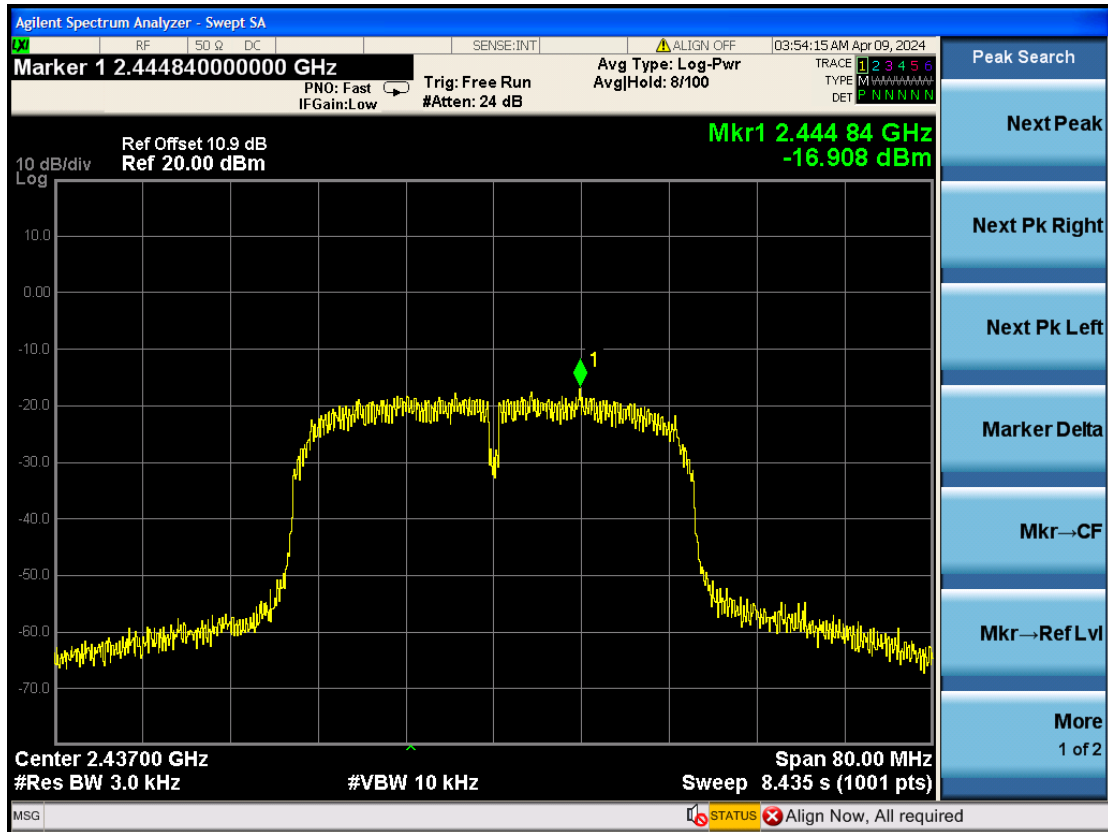
802.11nHT20 CH11



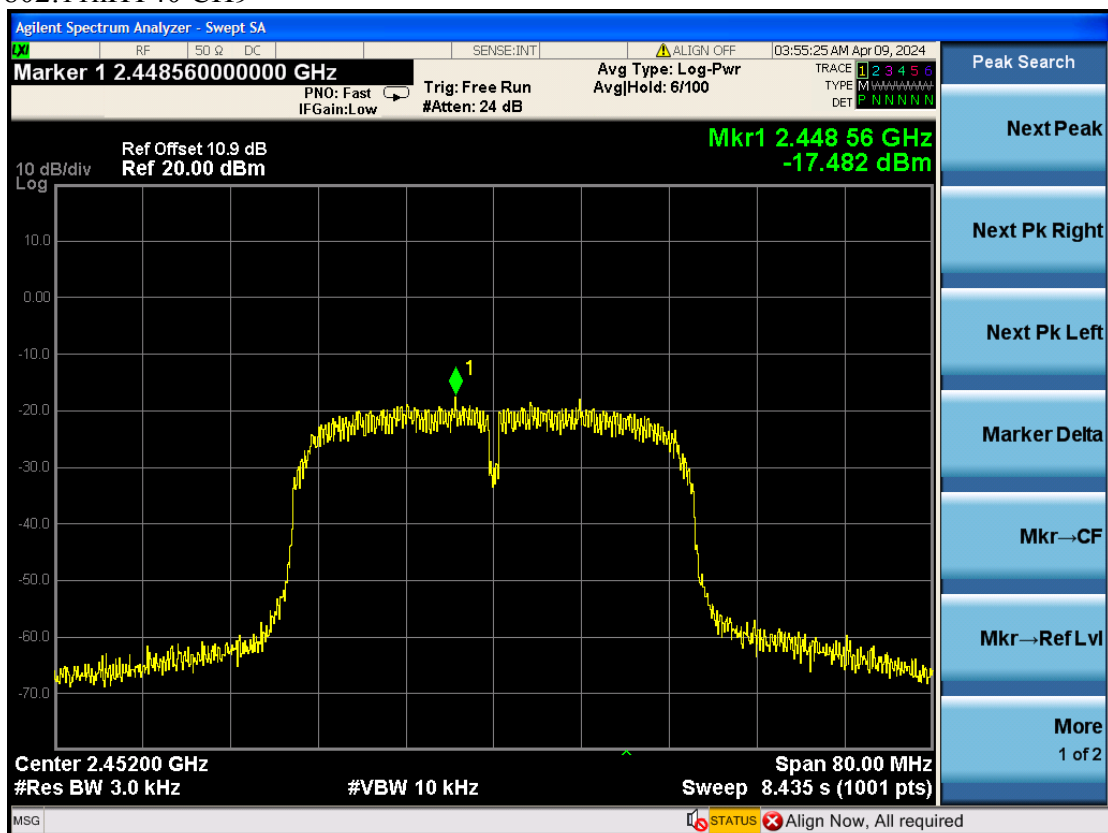
802.11nHT40 CH3



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.

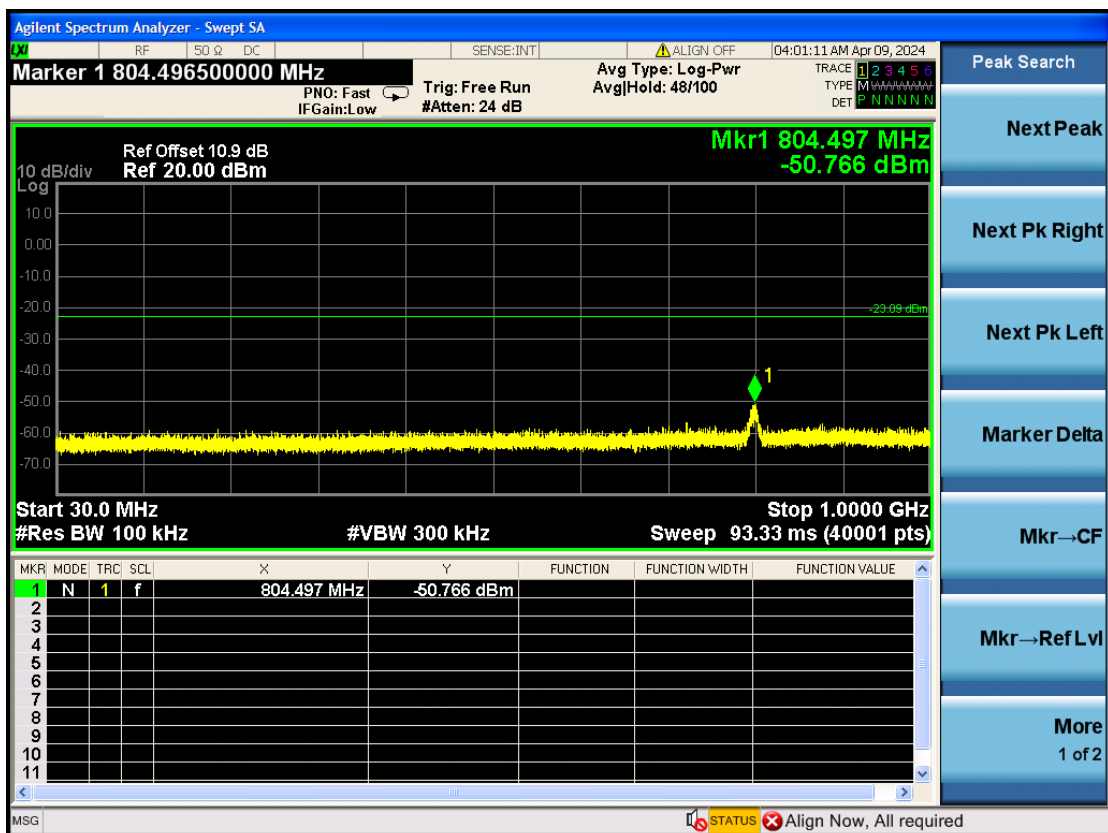
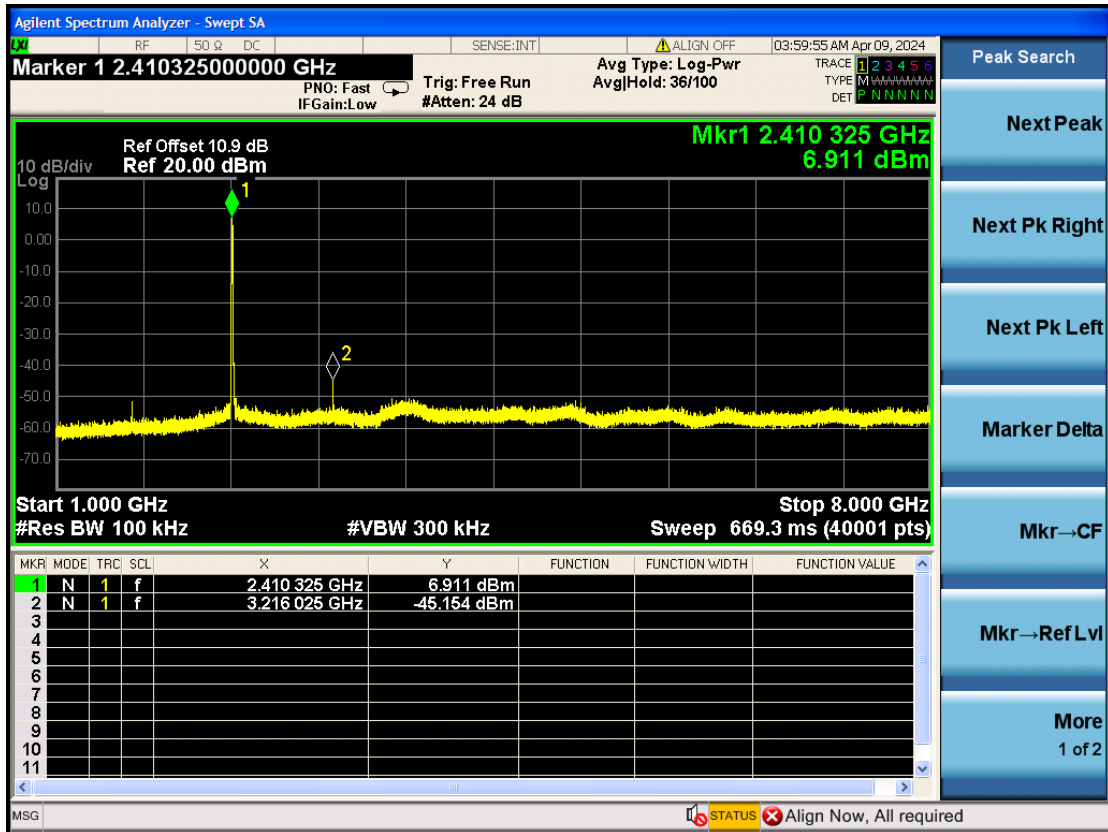
9.5. Test Results

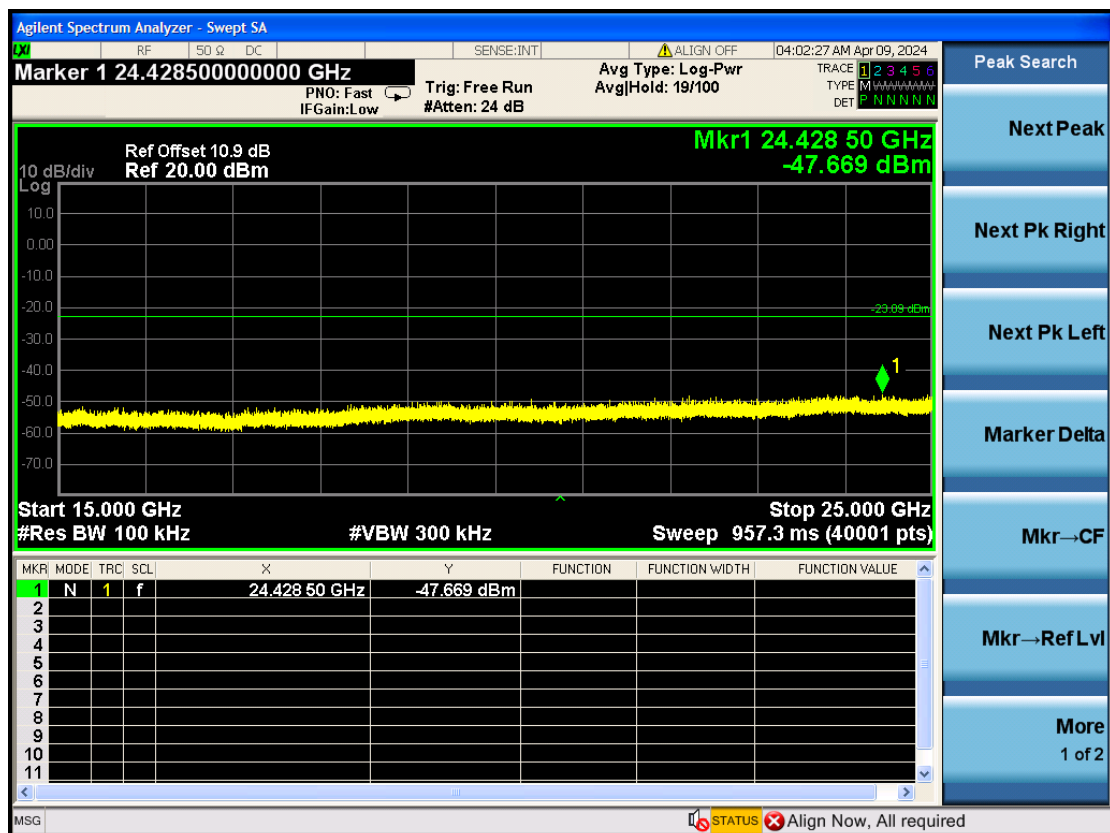
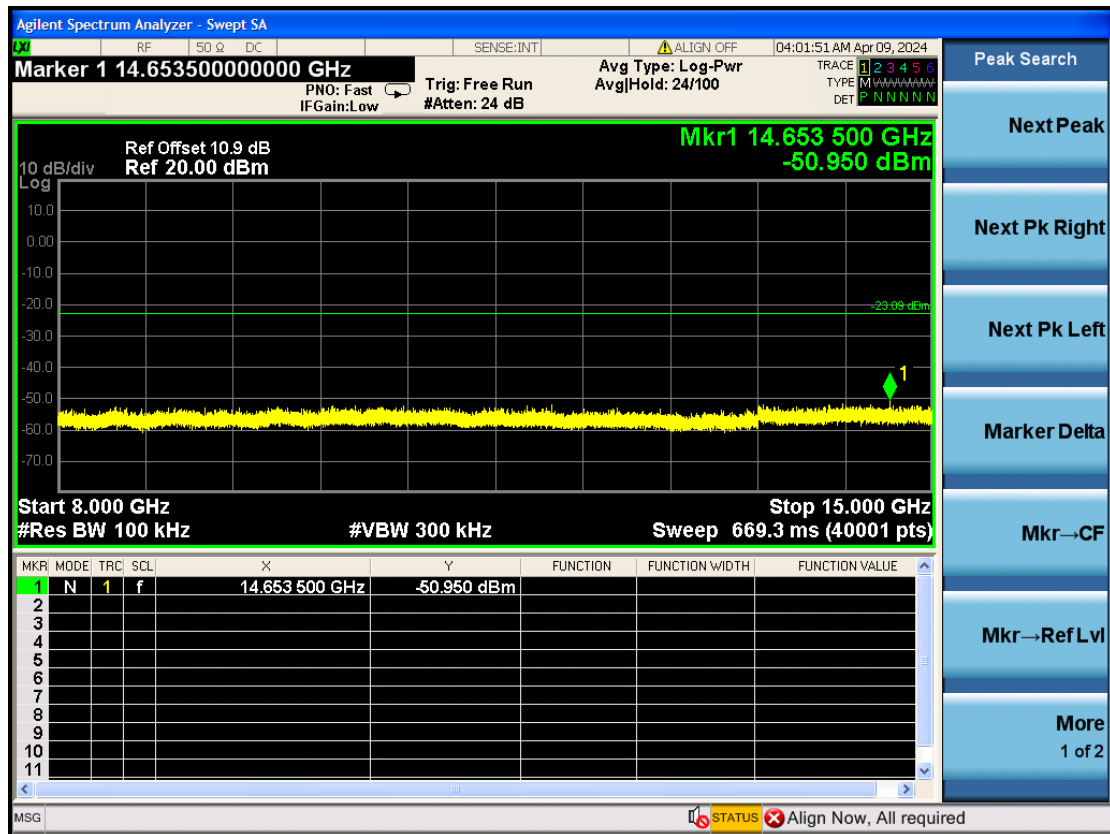
PASSED. All the test results are attached in next pages.

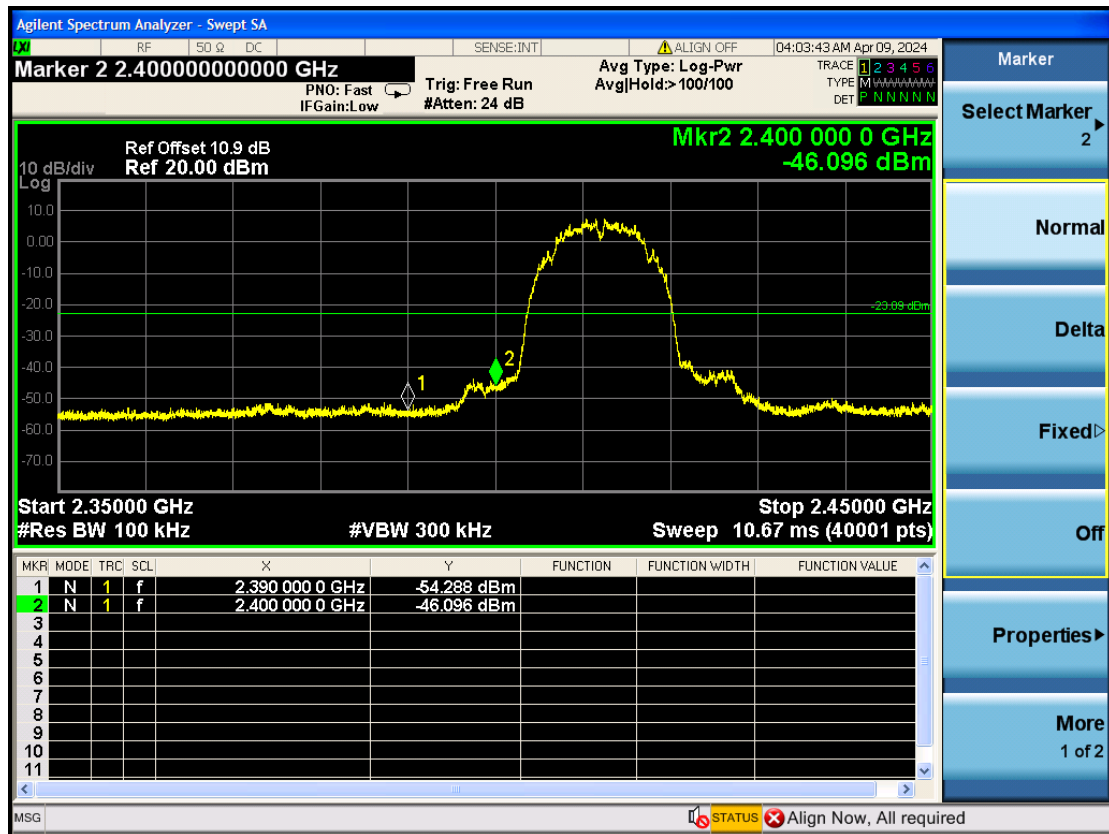
Item	Channel	Frequency (MHz)	Amplitude (dBm)
802.11b	1	2410.325	6.911
		3216.025	-45.154
		804.497	-50.766
		14653.5	-50.950
		24428.5	-47.669
		2390	-54.288
		2400	-46.096
	6	3249.275	-48.414
		2435.35	6.202
		810.365	-51.222
		14466.95	-51.295
		24496.75	-47.371
	11	2462.65	4.659
		3282.7	-48.603
		818.562	-52.808
		14208.475	-51.041
		24500	-47.119
		2483.5	-57.259
802.11g	1	2416.1	0.063
		3216.025	-44.923
		810.729	-54.255
		14397.125	-50.457
		23977.25	-47.502
		2390	-47.439
		2400	-32.880
	6	2441.125	-1.354
		3249.275	-47.670
		808.571	-54.191
		14555.85	-51.136
		24938.75	-47.271
	11	2457.4	-2.571
		3282.7	-47.534
		822.781	-53.371
		14452.6	-51.690
		24207.75	-47.560
		2483.5	-50.527
802.11n HT20	1	2411.375	-0.269
		3216.025	-45.426
		798.749	-53.977
		14213.9	-51.494
		23452.25	-48.346
		2390	-45.329
		2400	-37.180
	6	2432.375	-1.597
		3249.275	-47.612
		804.86	-53.572

		14222.125	-50.750
		24112.25	-46.302
	11	2456.7	-2.155
		3282.7	-47.589
		817.931	-54.486
		12803.575	-51.913
		24039.5	-47.667
		2483.5	-46.992
	802.11n HT40	2417.325	-3.965
		3229.325	-45.316
		815.870	-55.032
		14556.025	-51.788
		24056.5	-47.295
		2390	-49.309
		2400	-44.804
		2440.425	-4.557
		3249.275	-48.366
	3	819.386	-55.615
		10947.35	-51.845
		23708.25	-47.140
	6	2454.075	-5.427
		3269.4	-48.158
		812.014	-55.093
		14499.325	-50.513
		23821.5	-47.183
	9	2483.5	-46.001

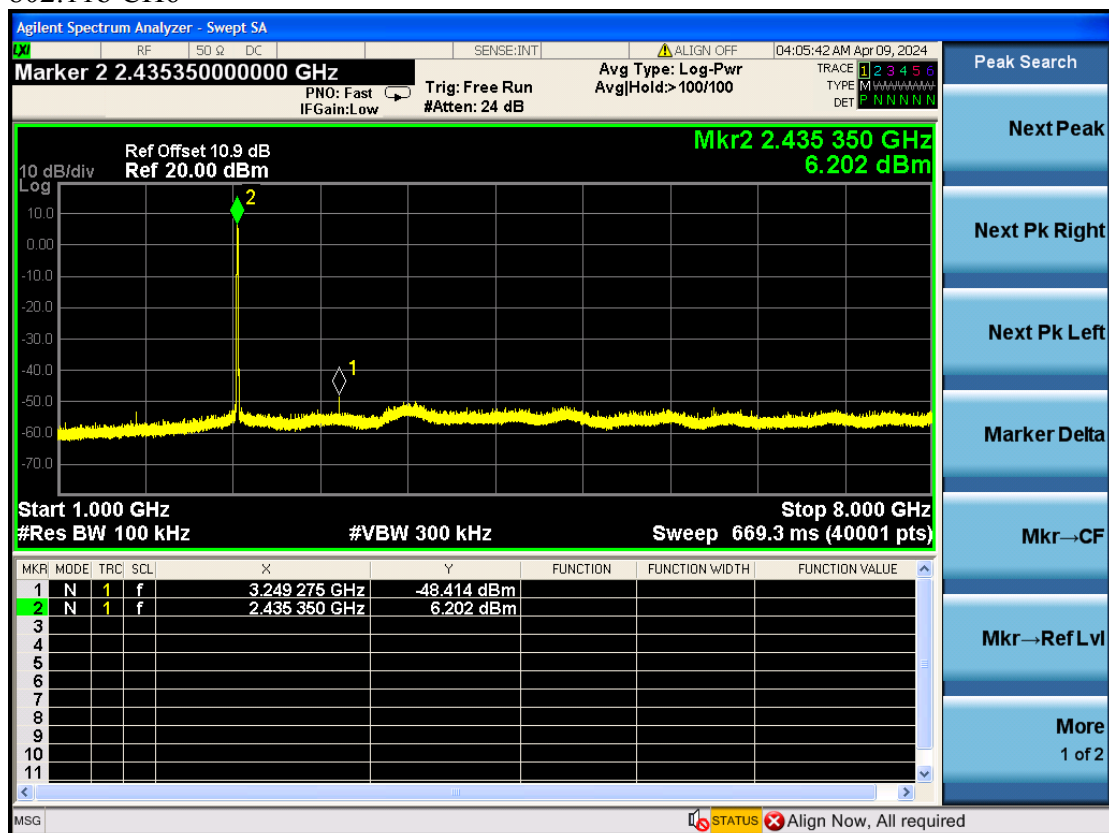
802.11b CH1

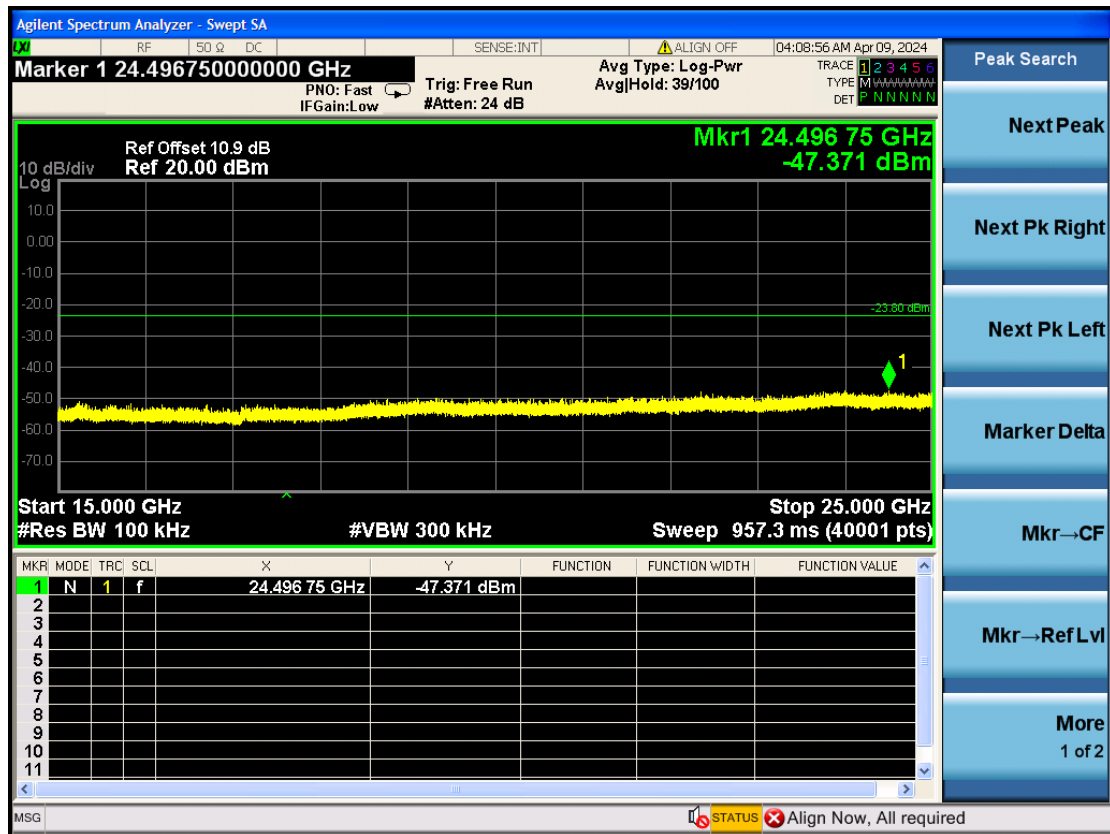




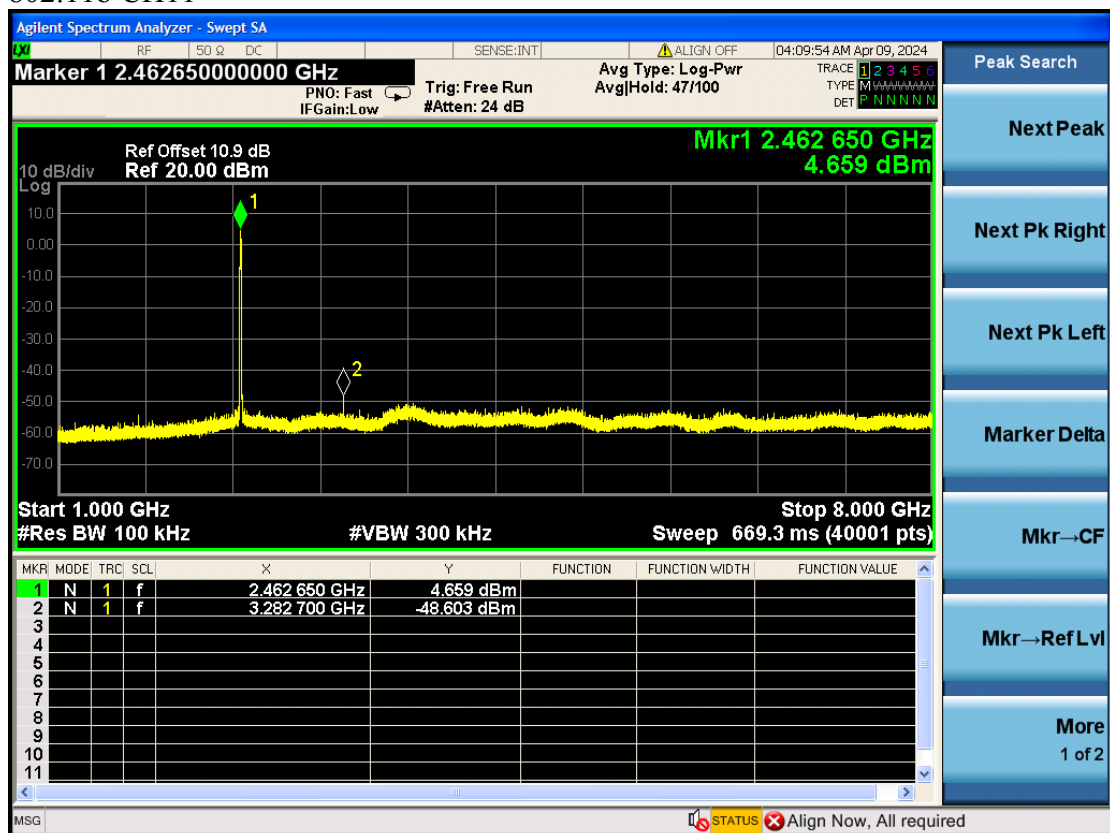


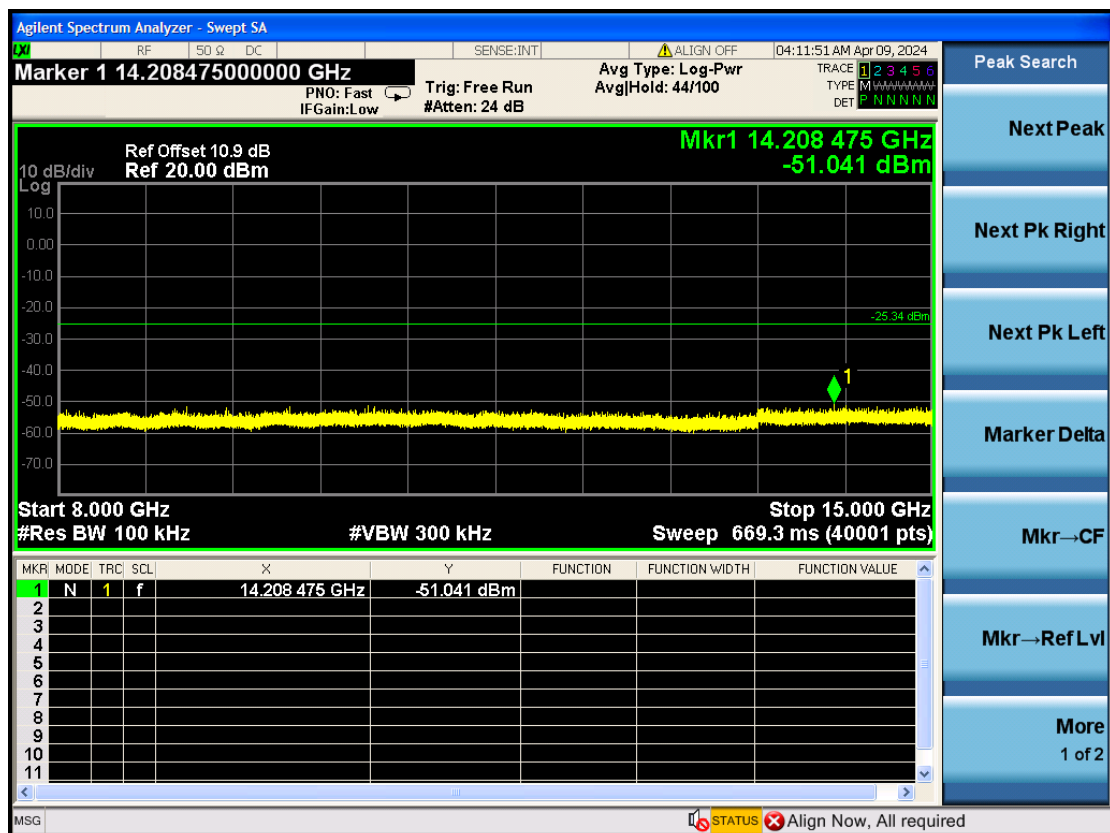
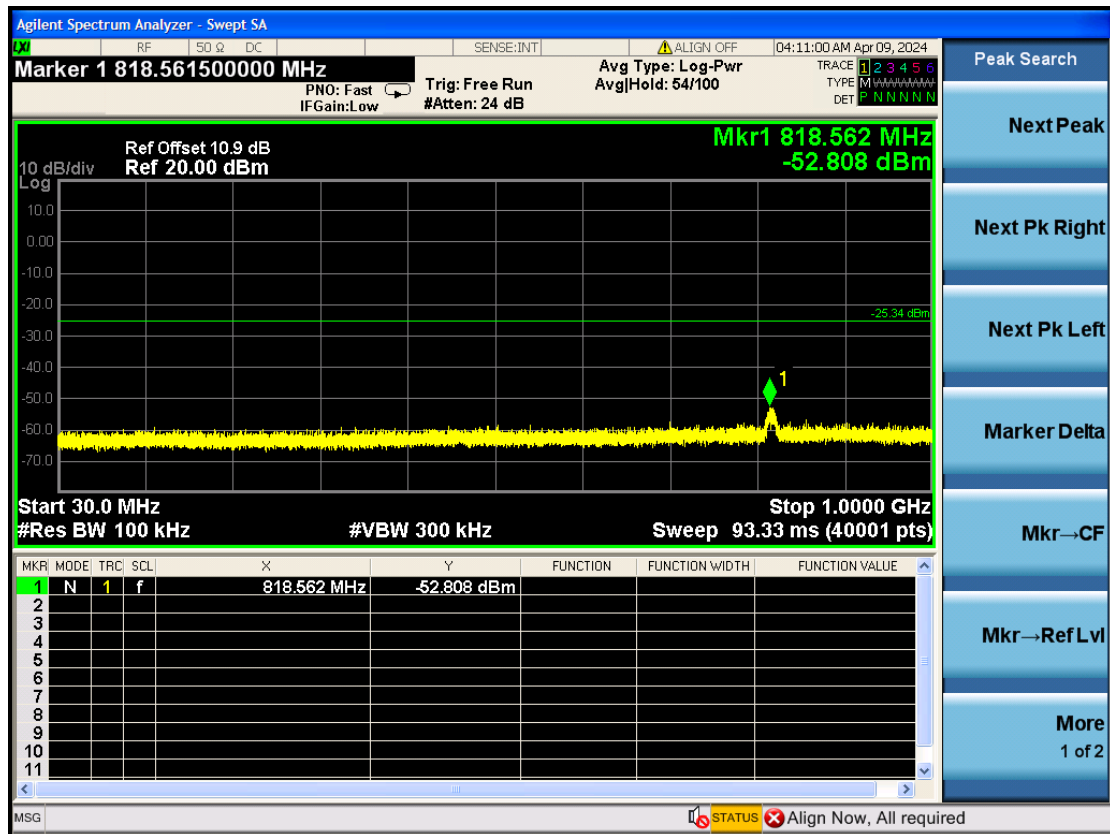
802.11b CH6

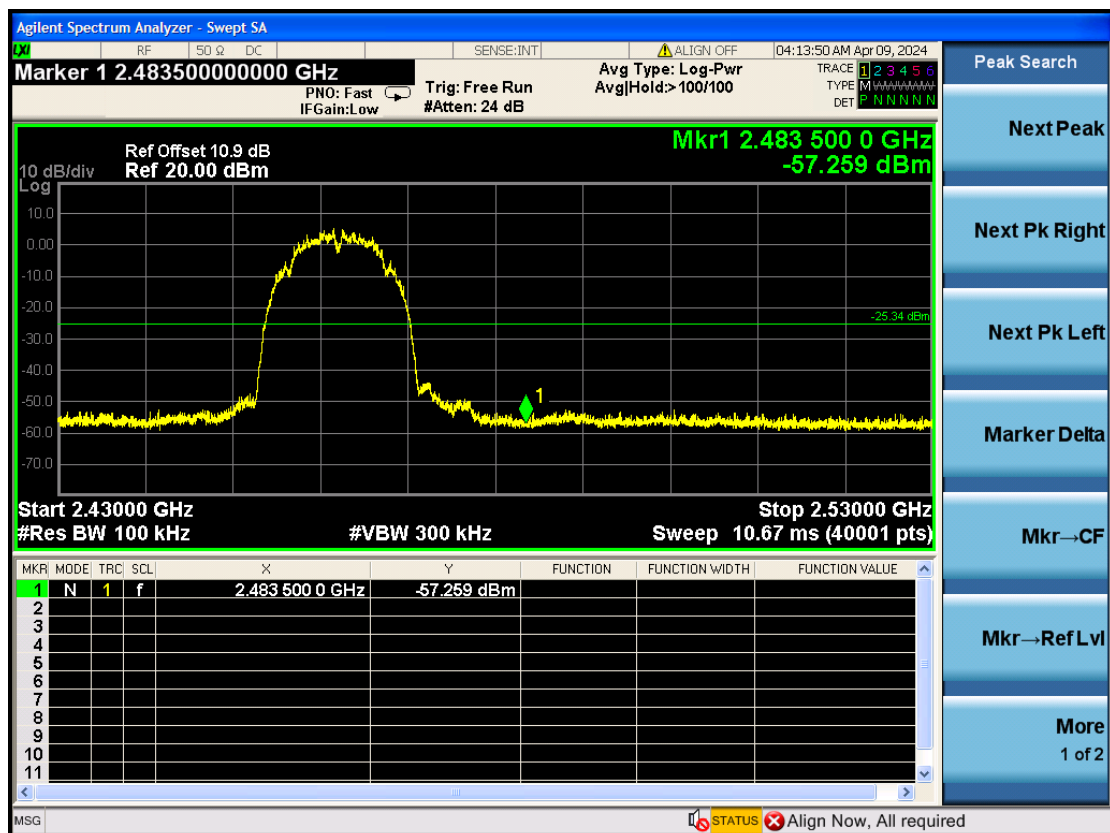
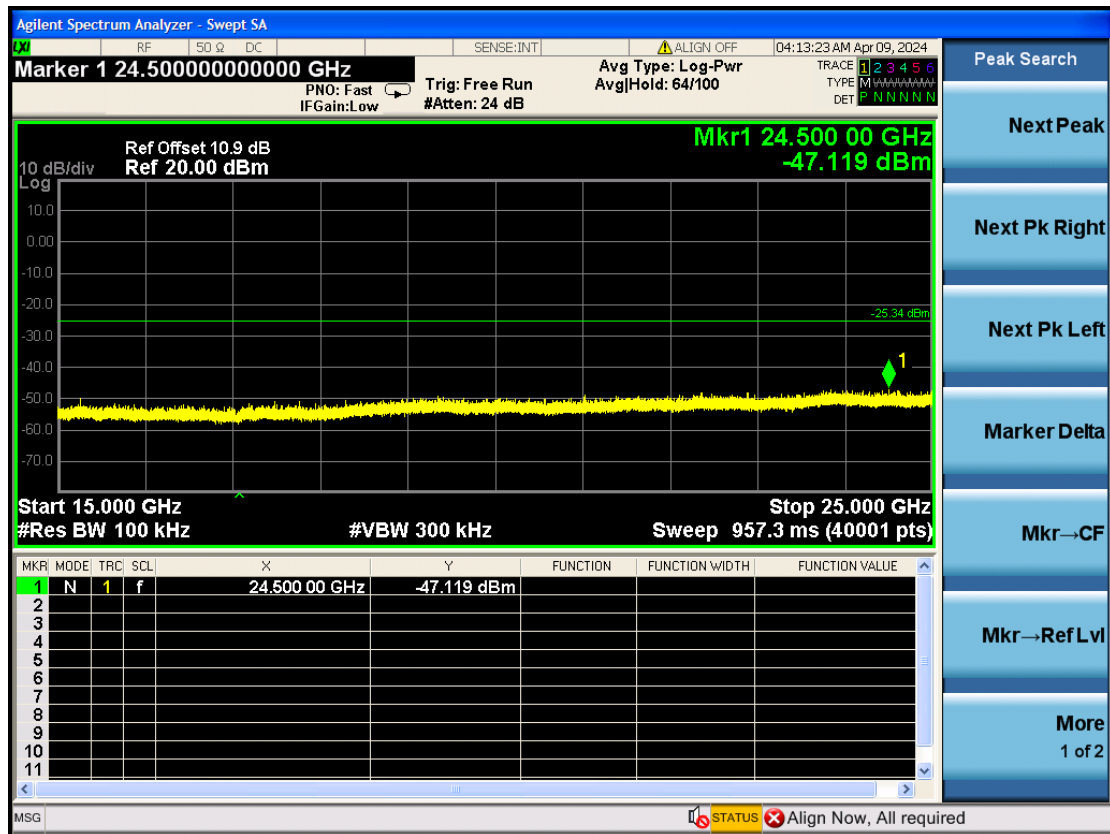




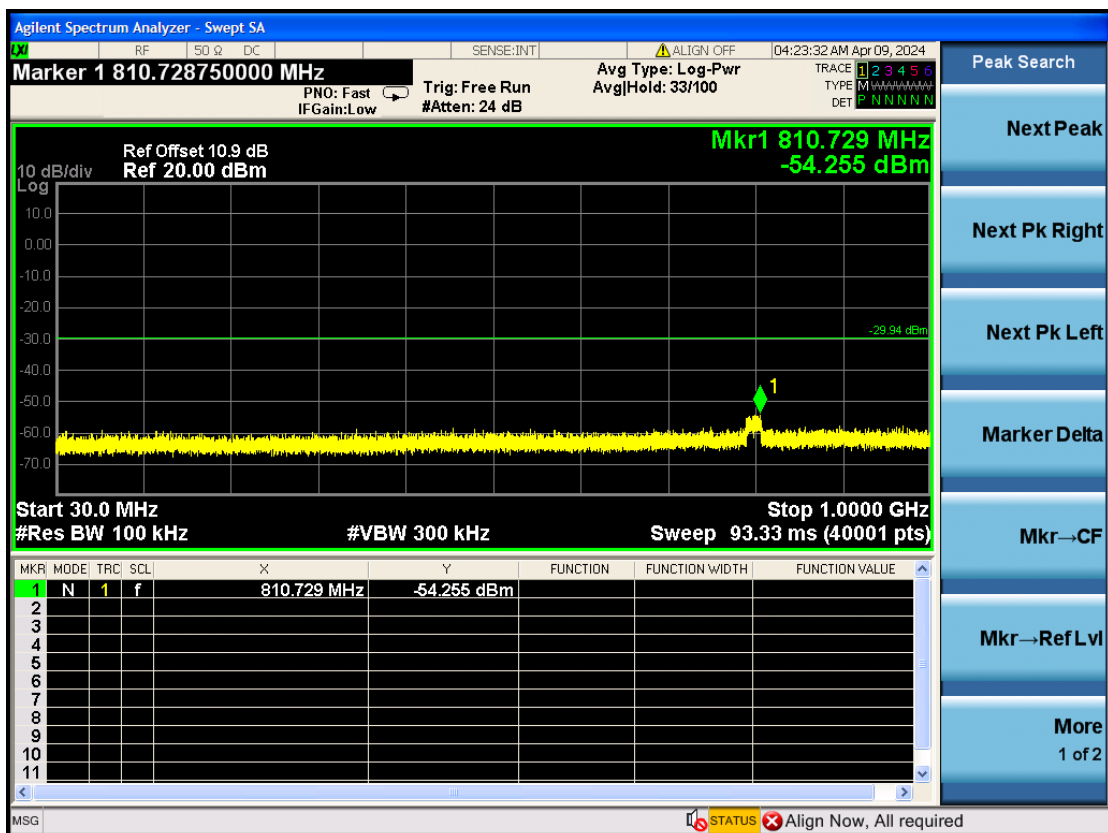
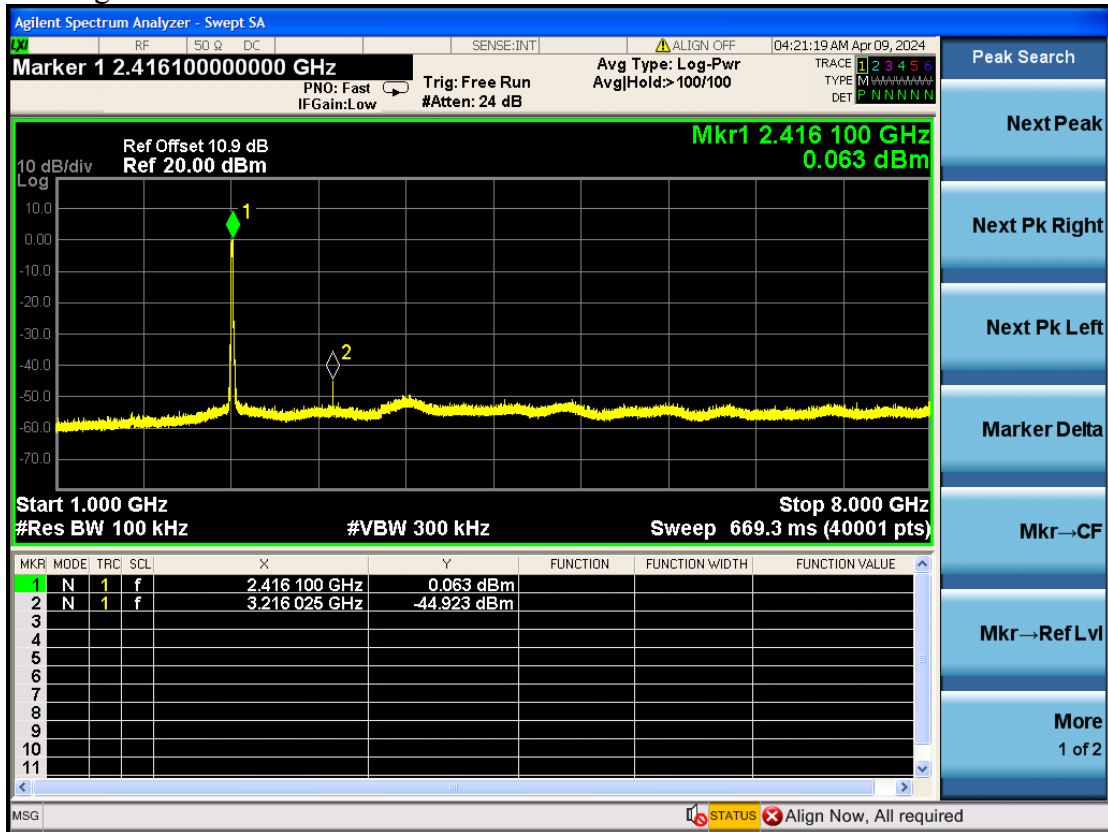
802.11b CH11

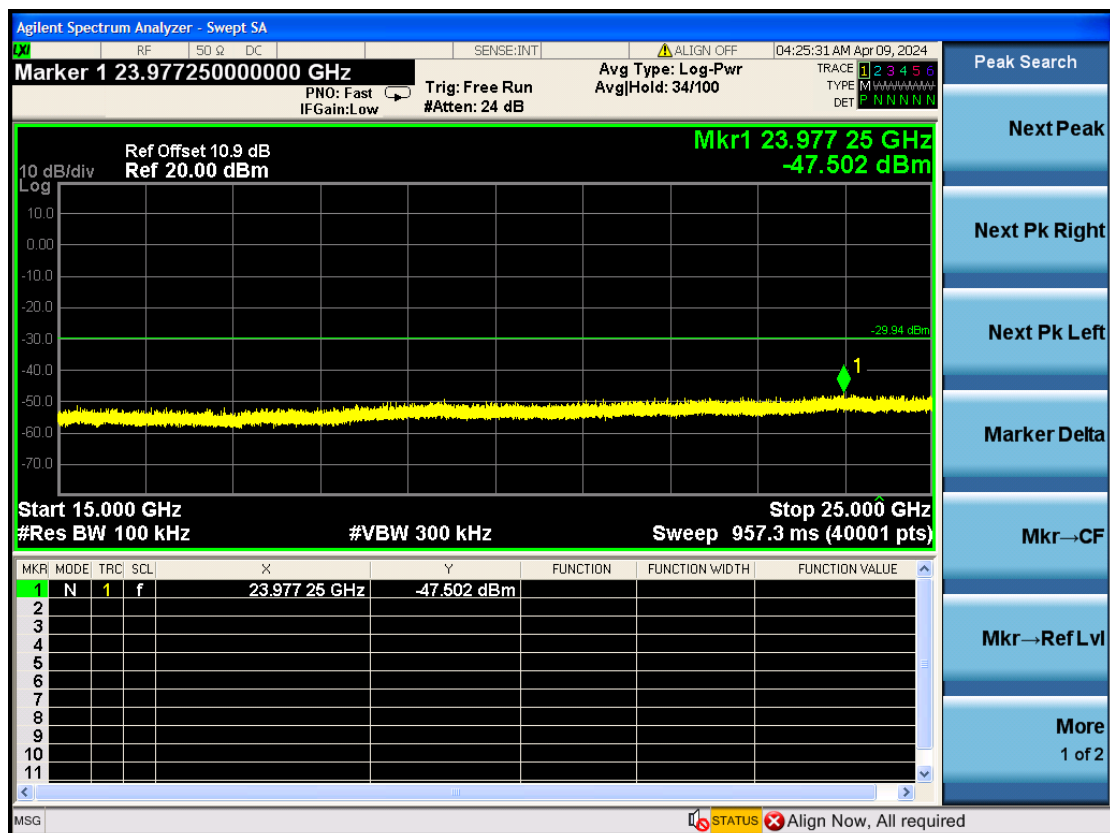
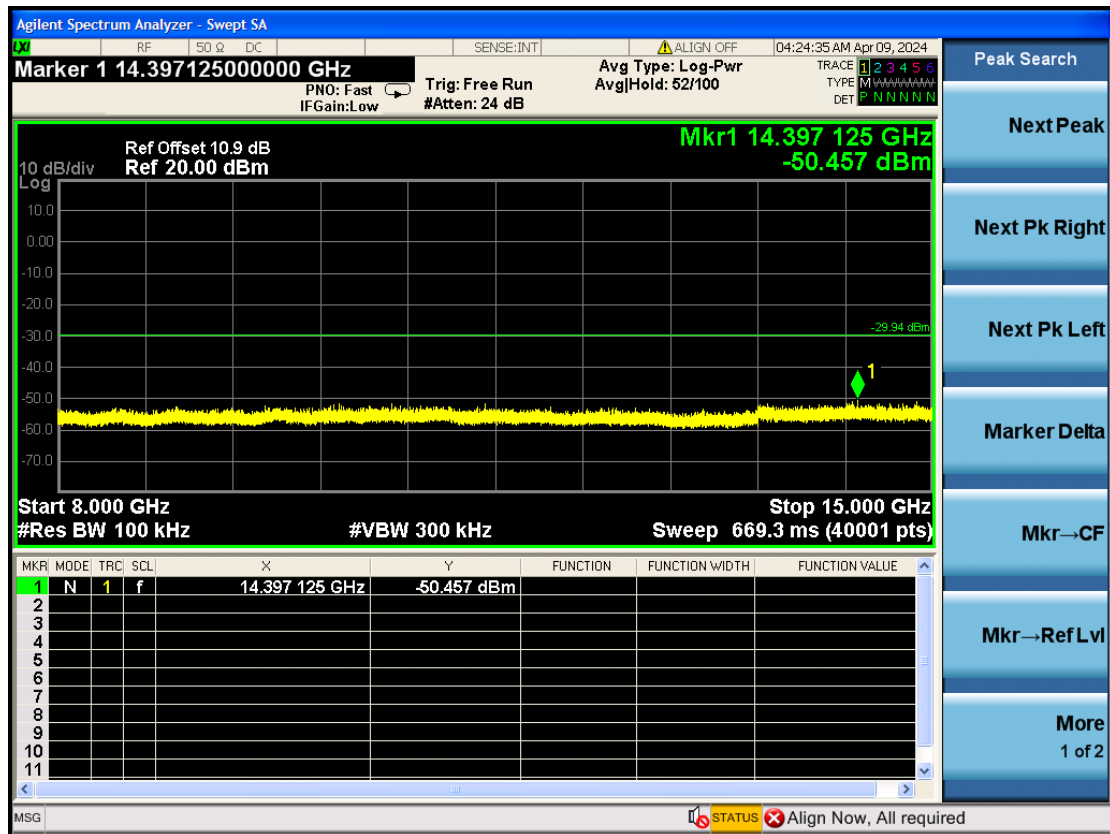


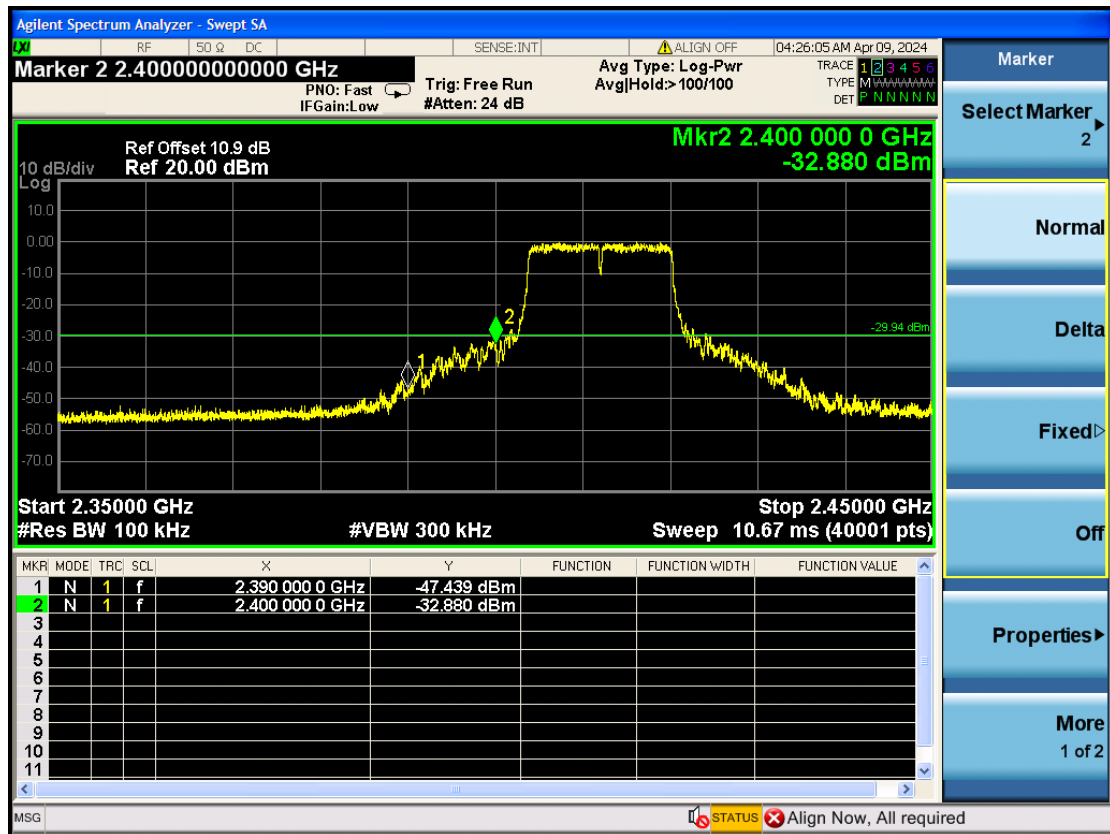




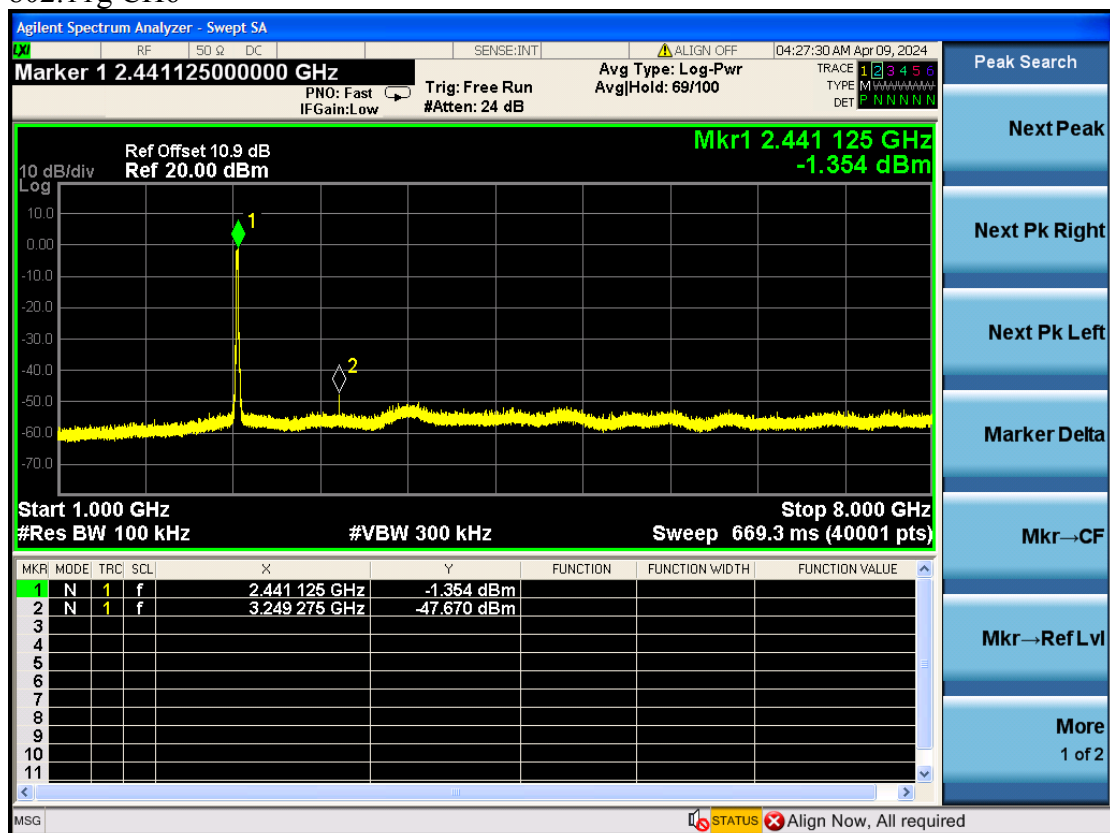
802.11g CH1

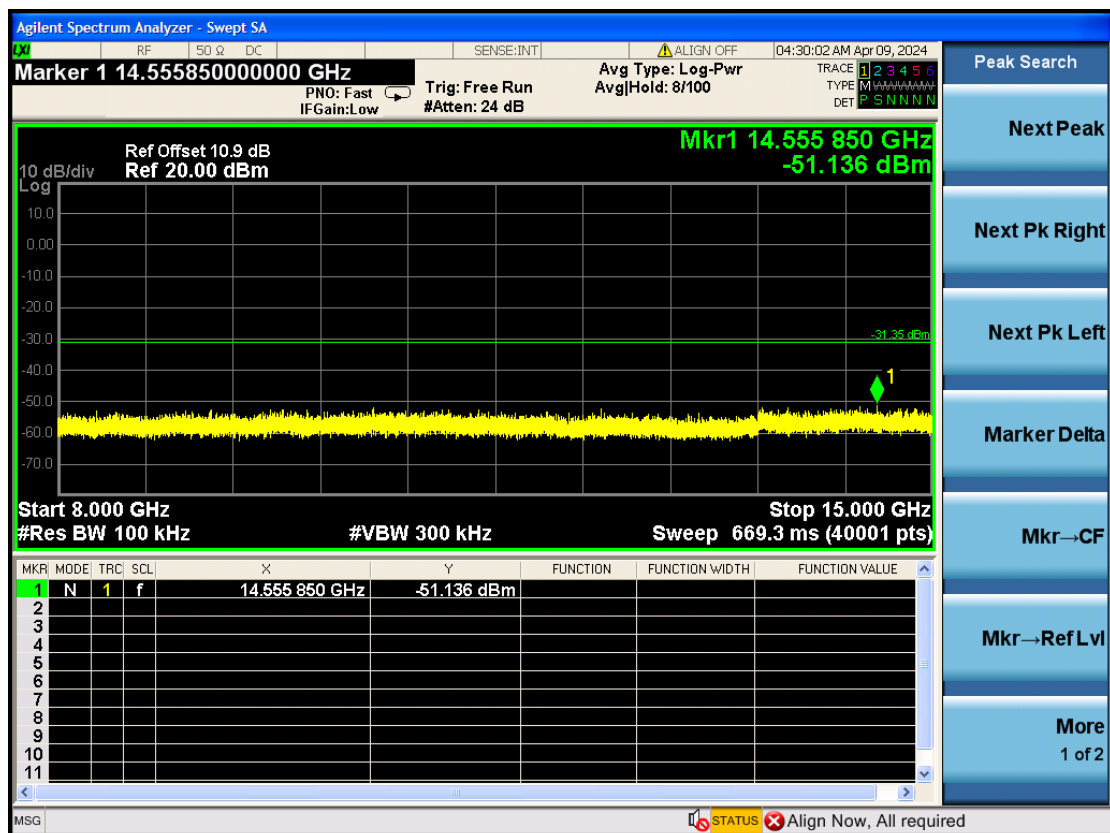
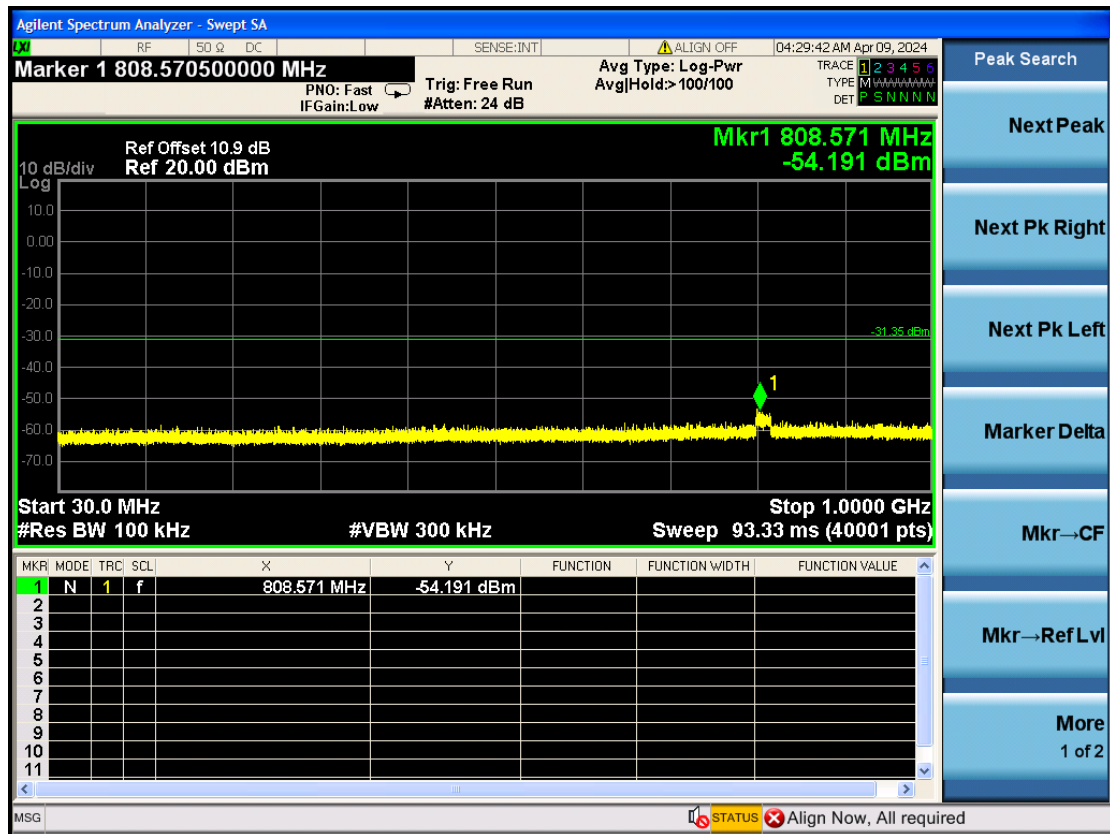


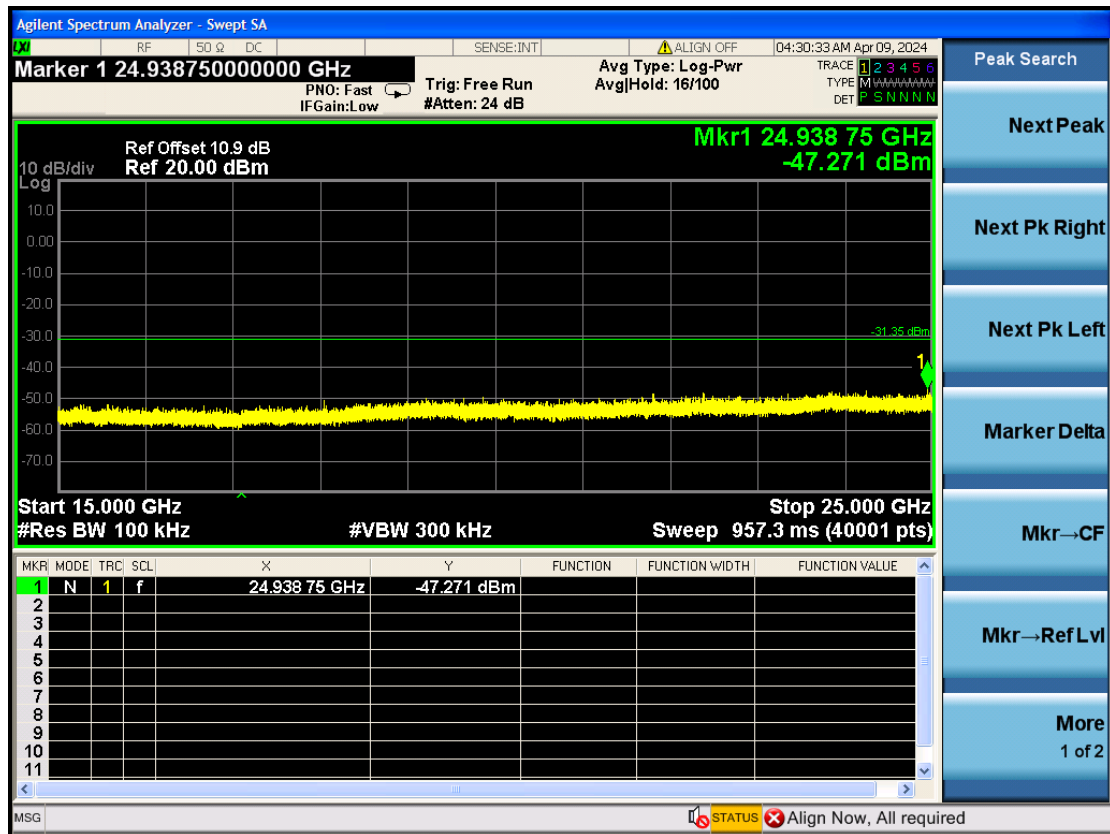




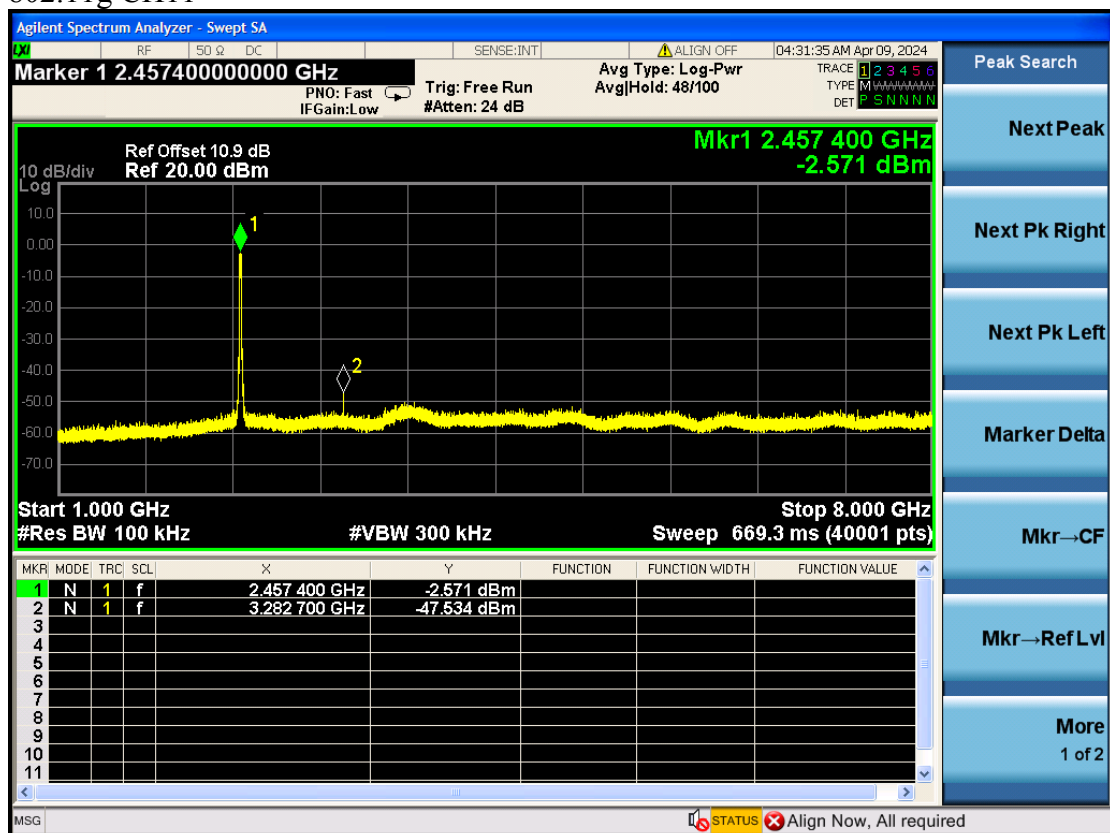
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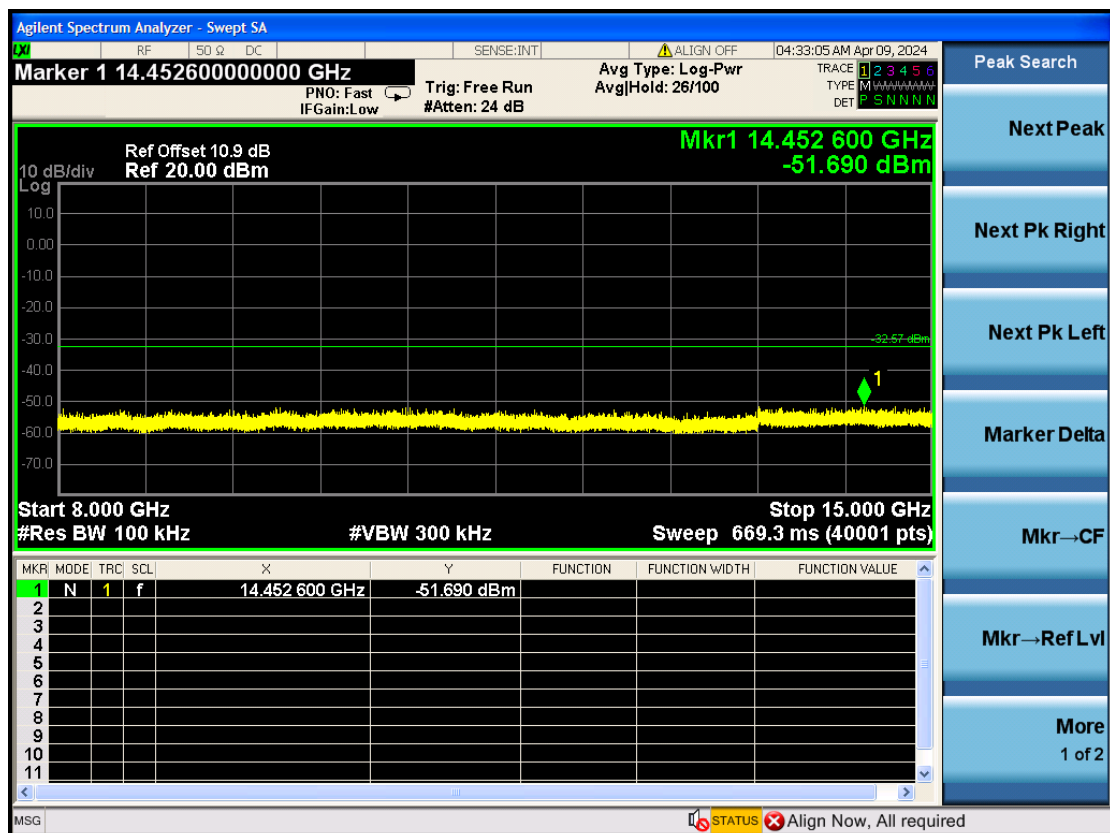
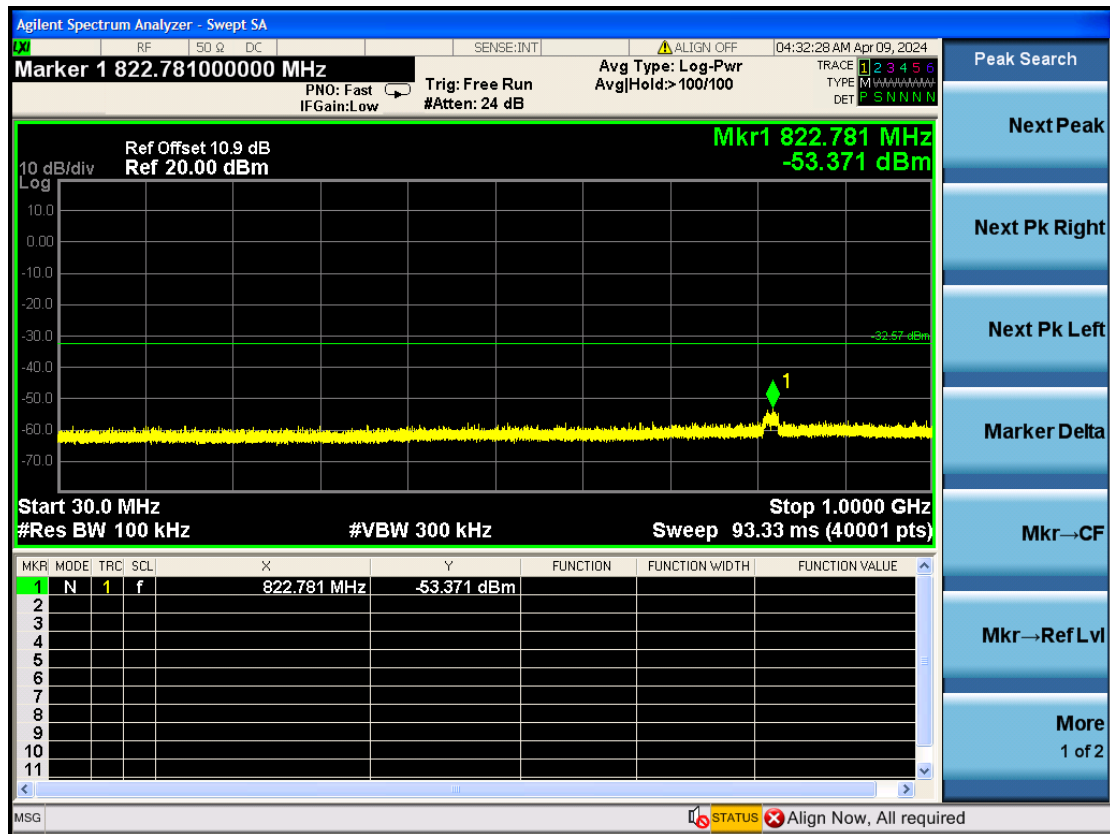


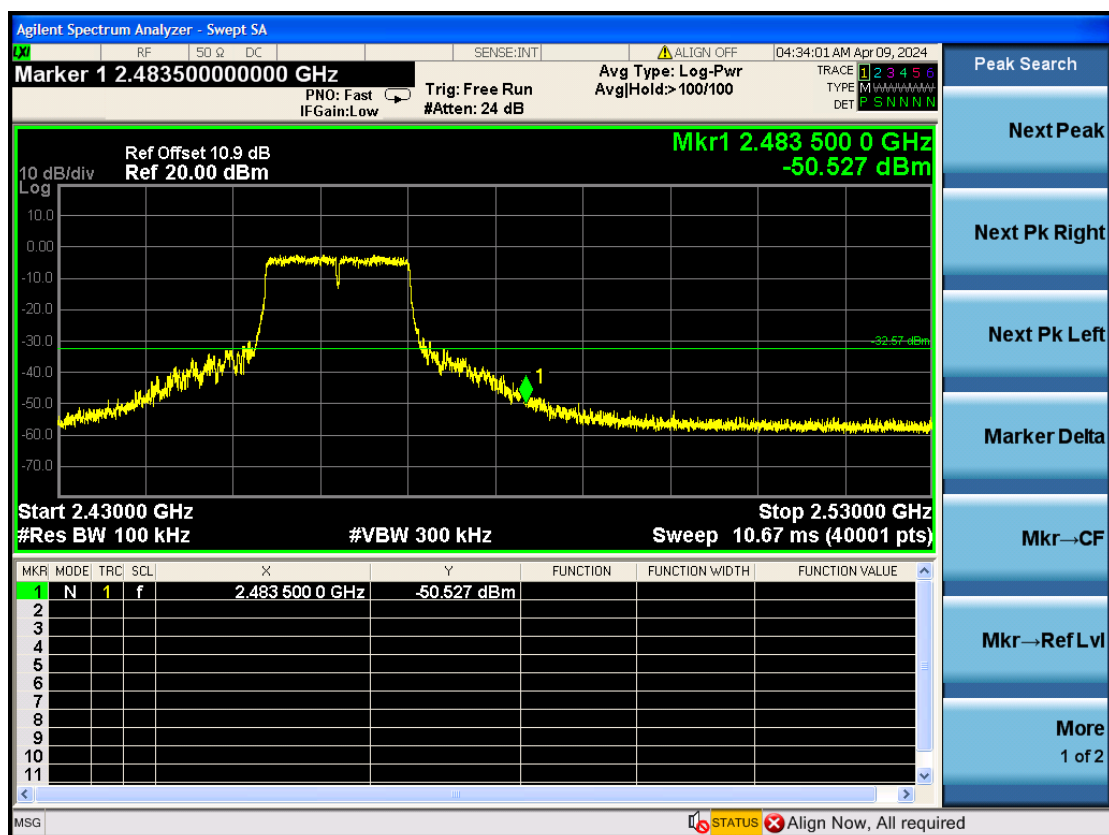
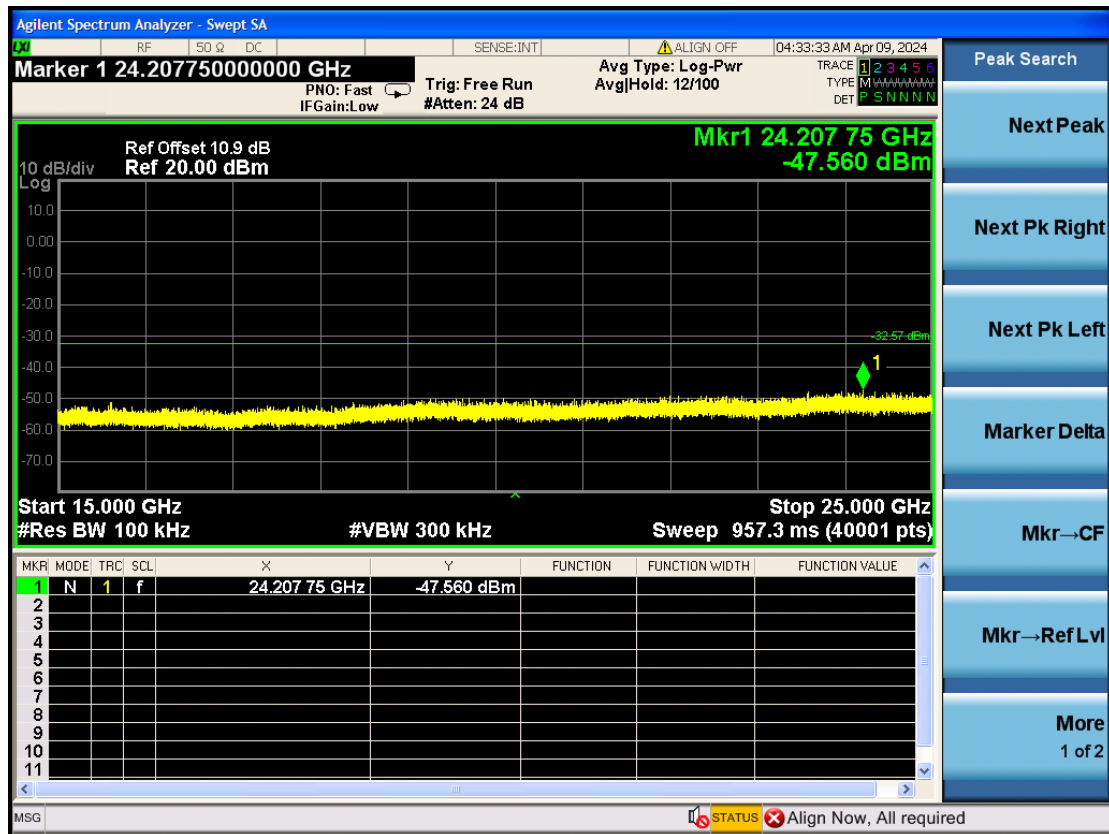




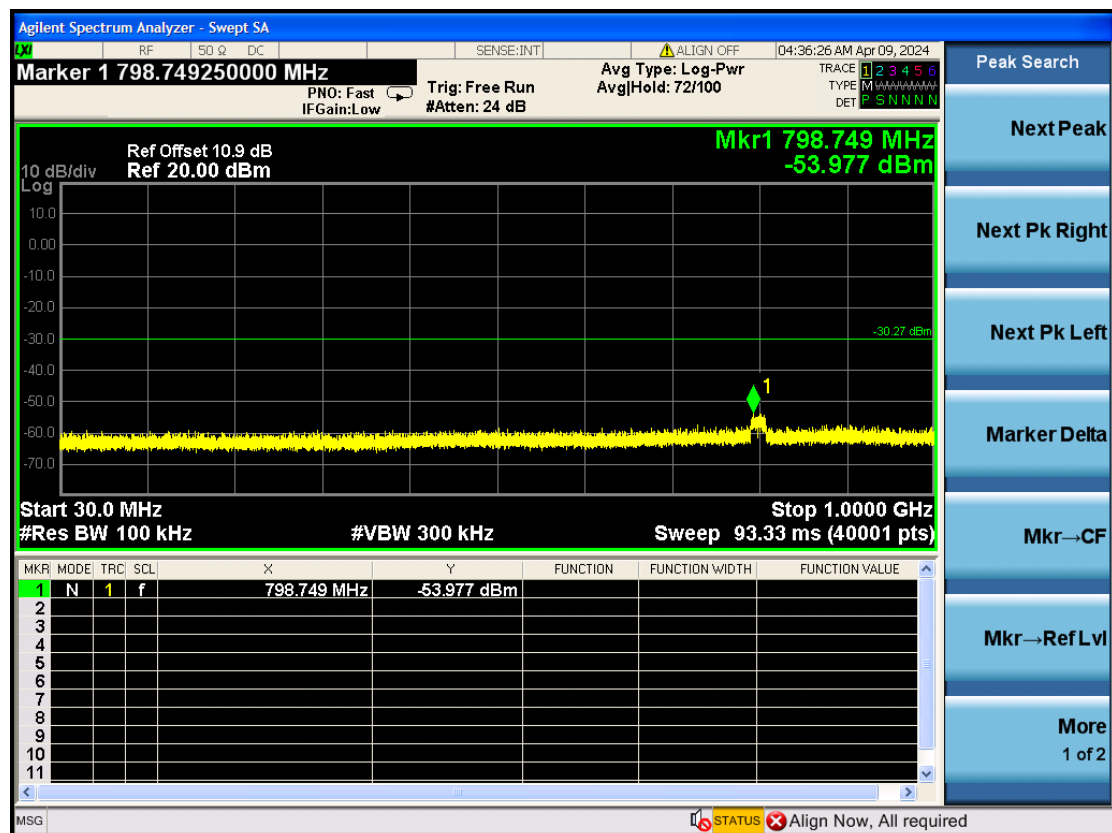
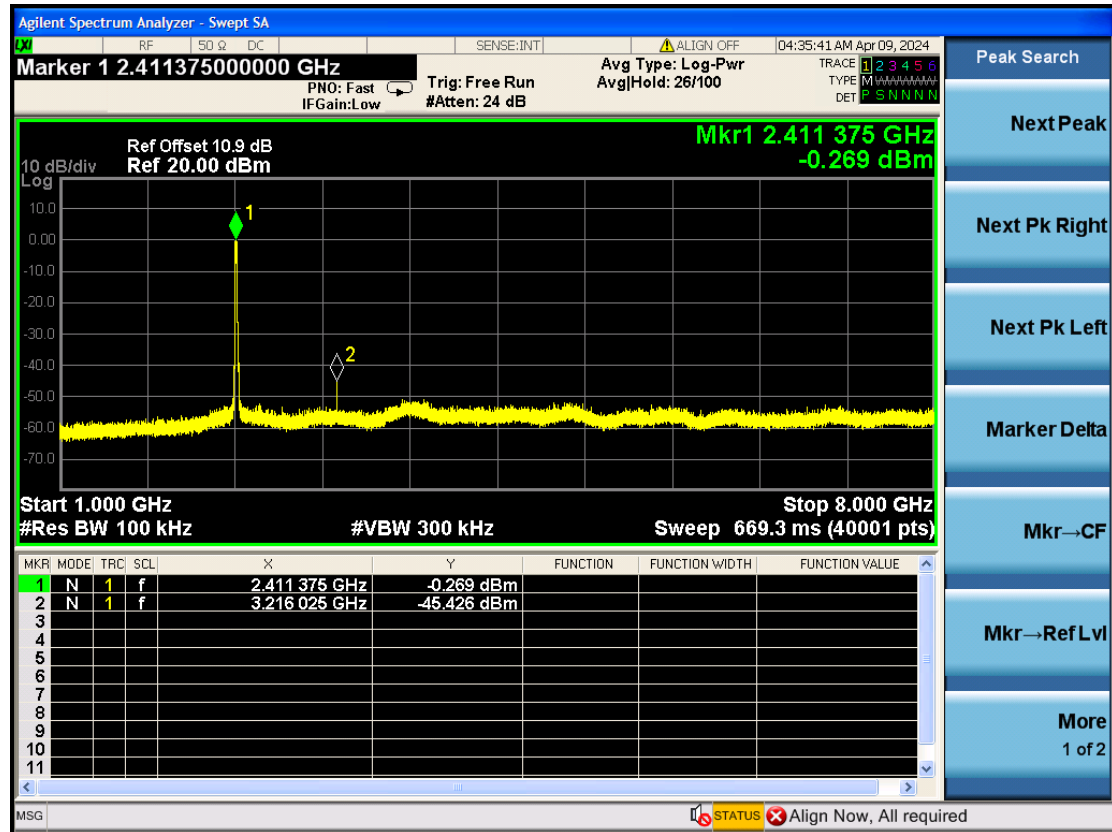
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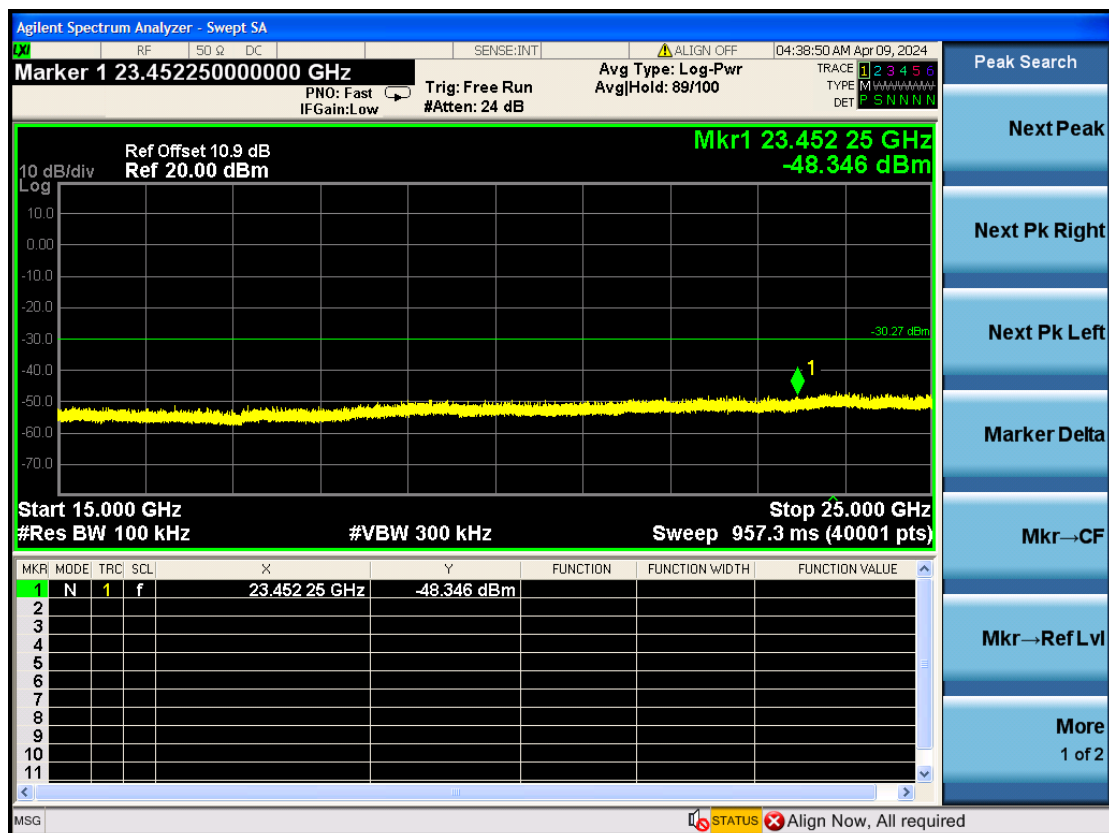
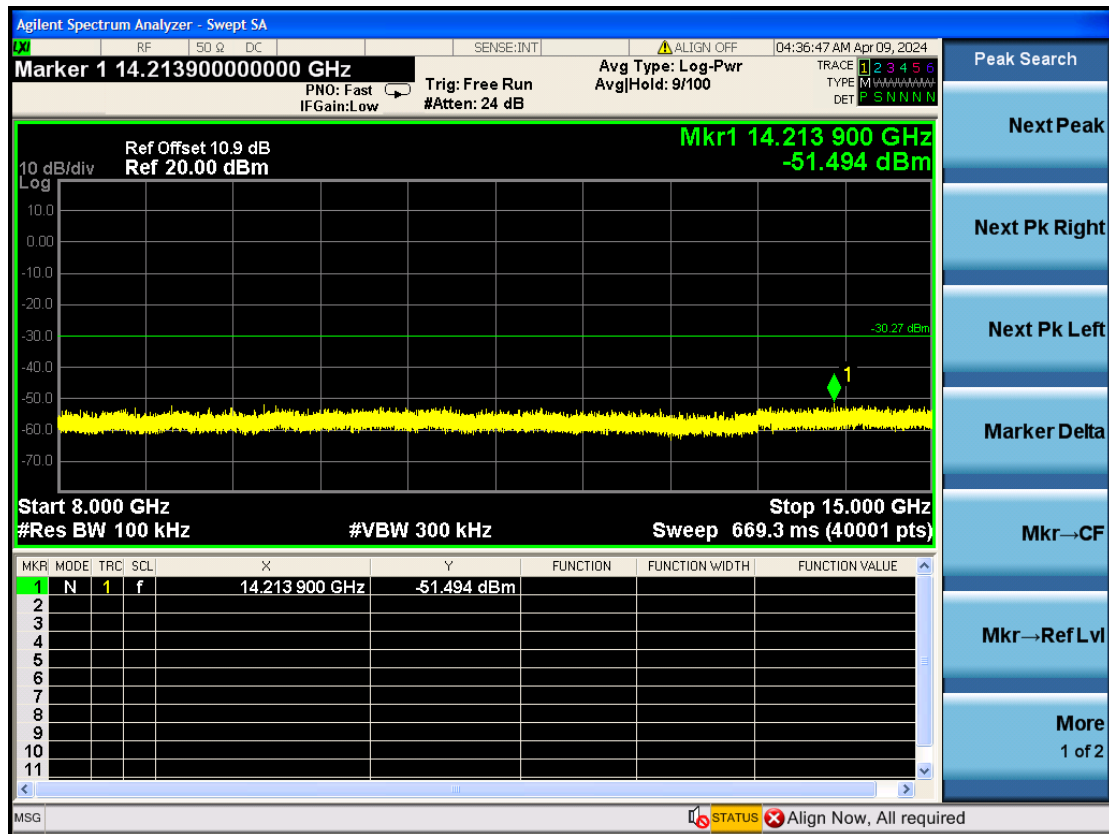


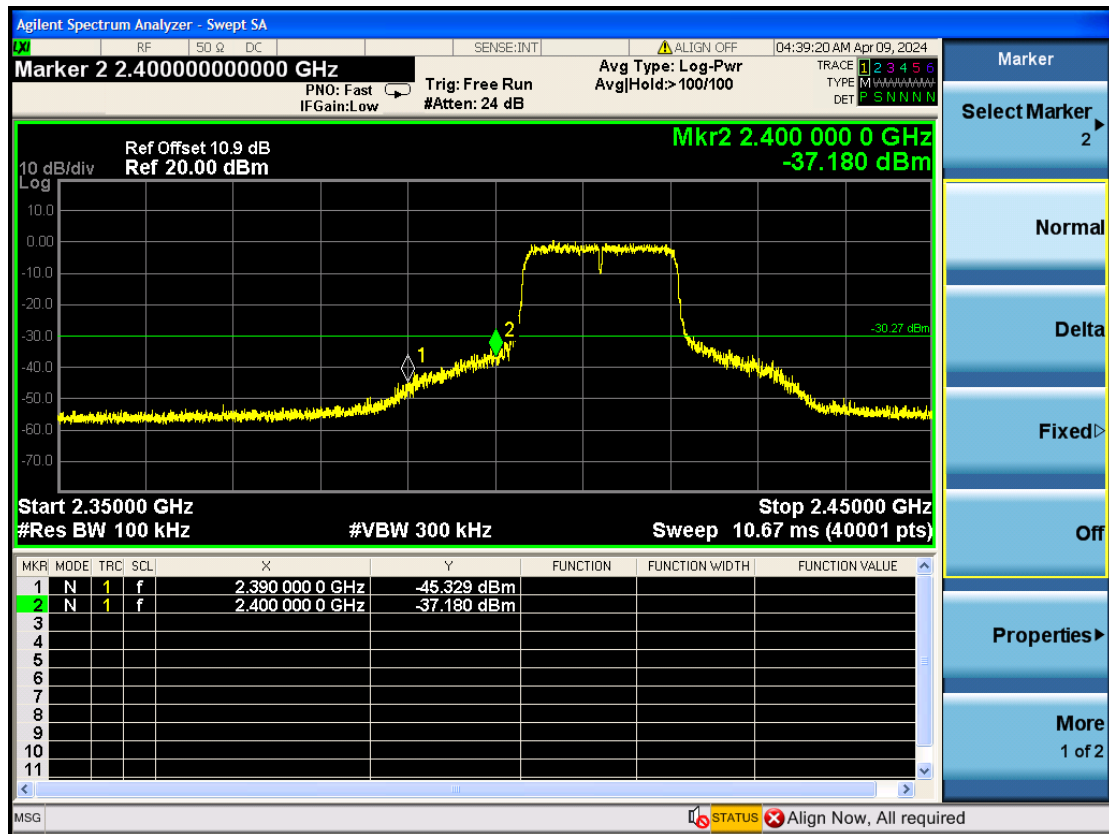




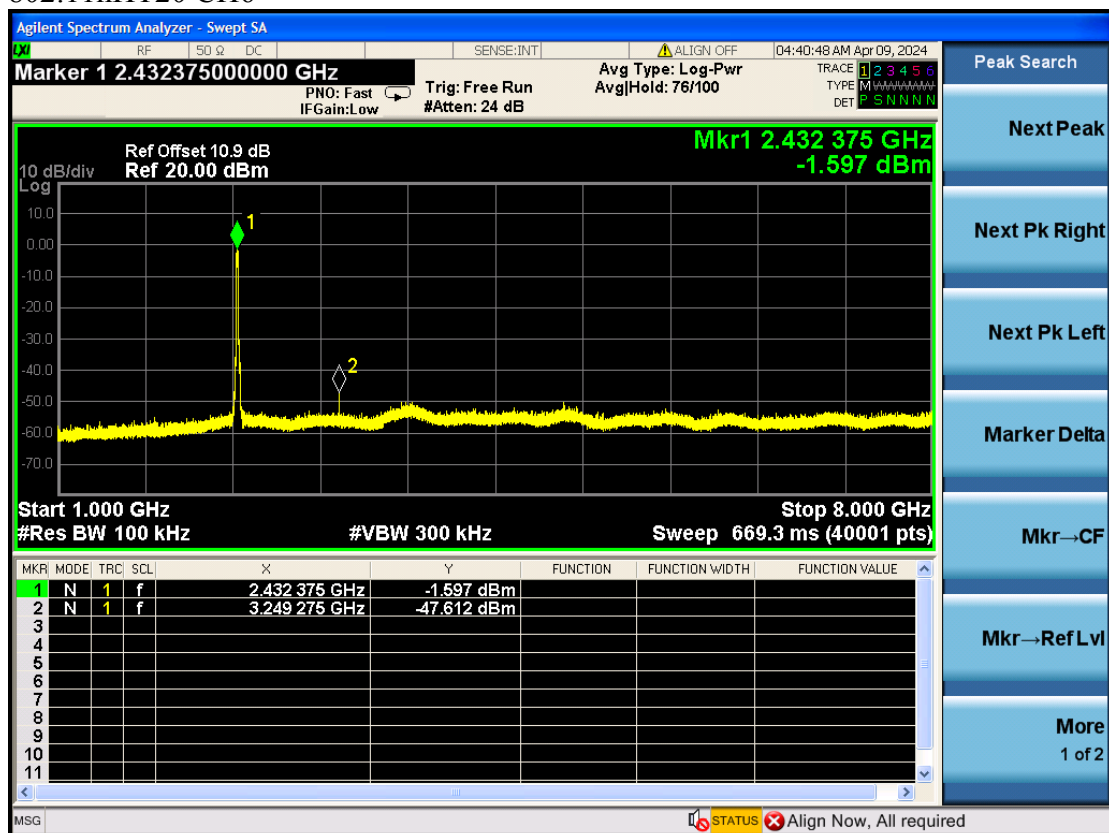
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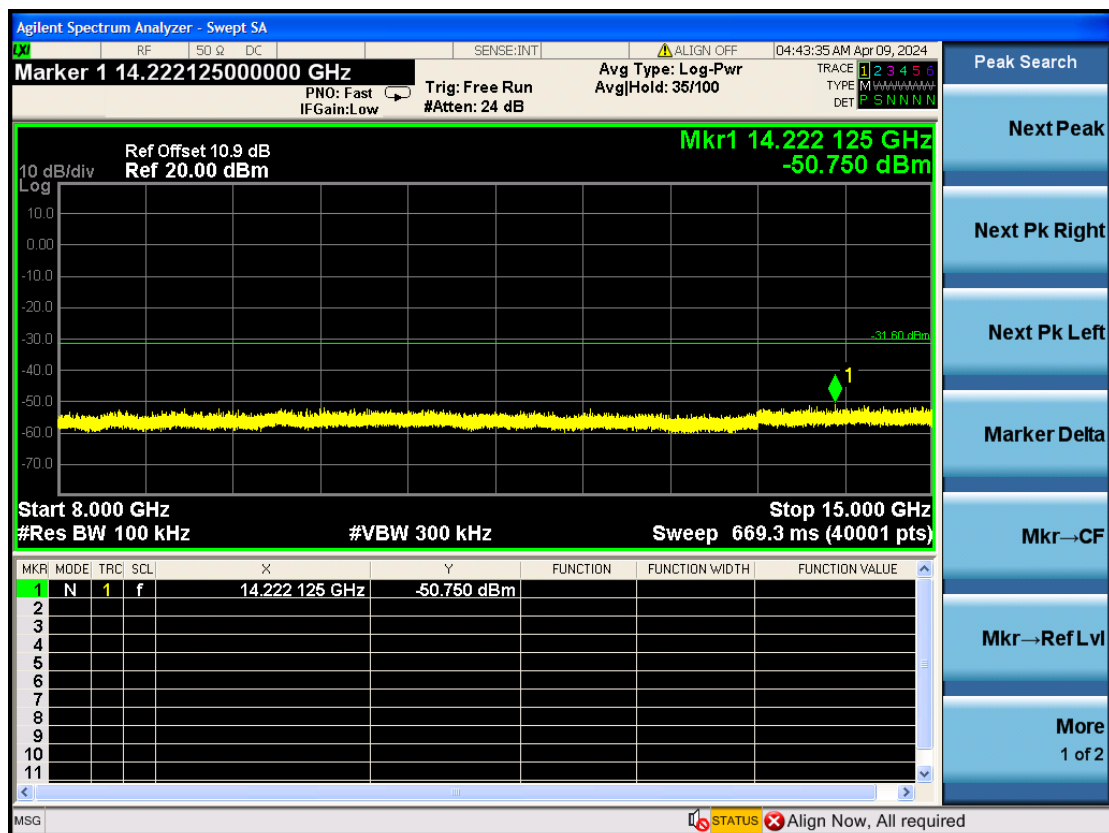
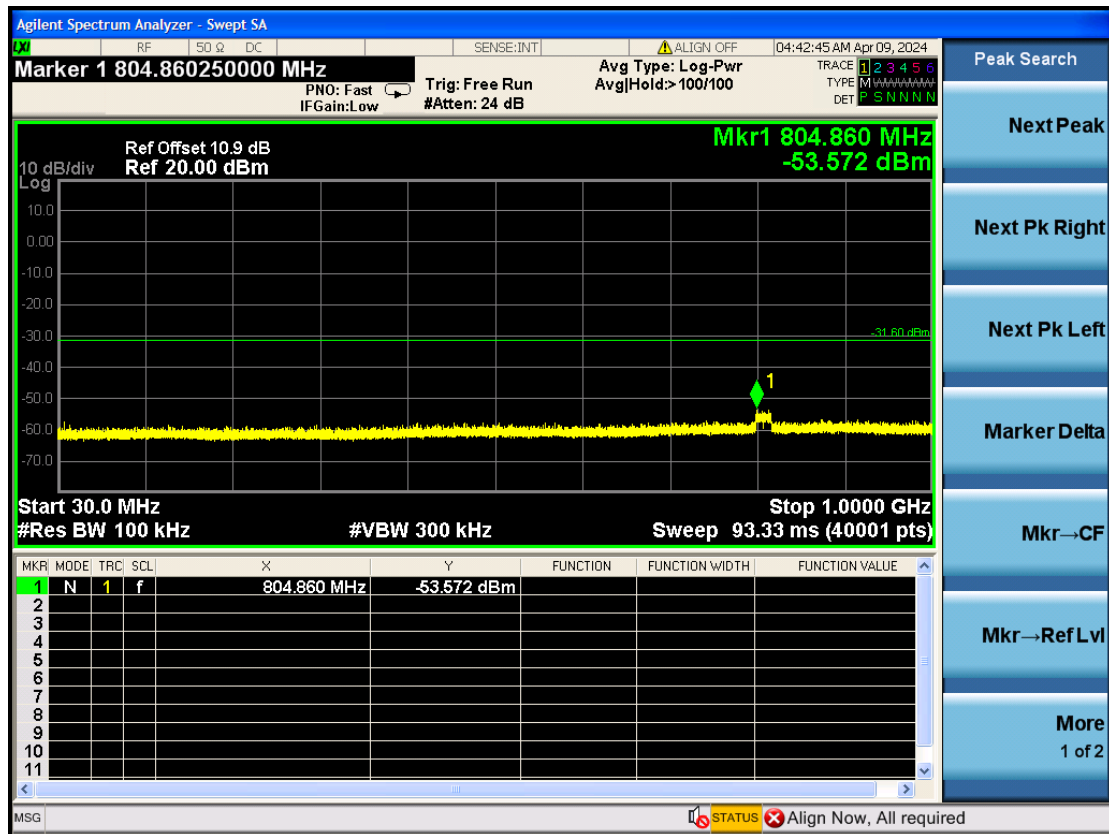


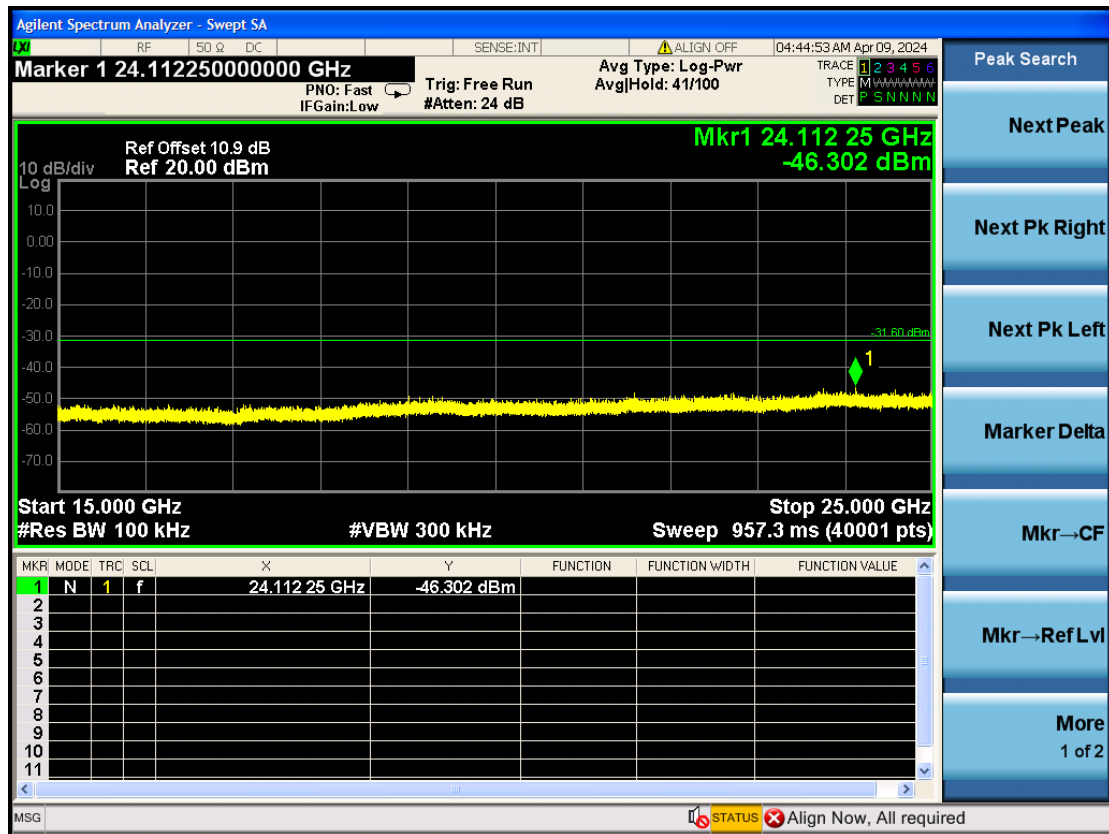




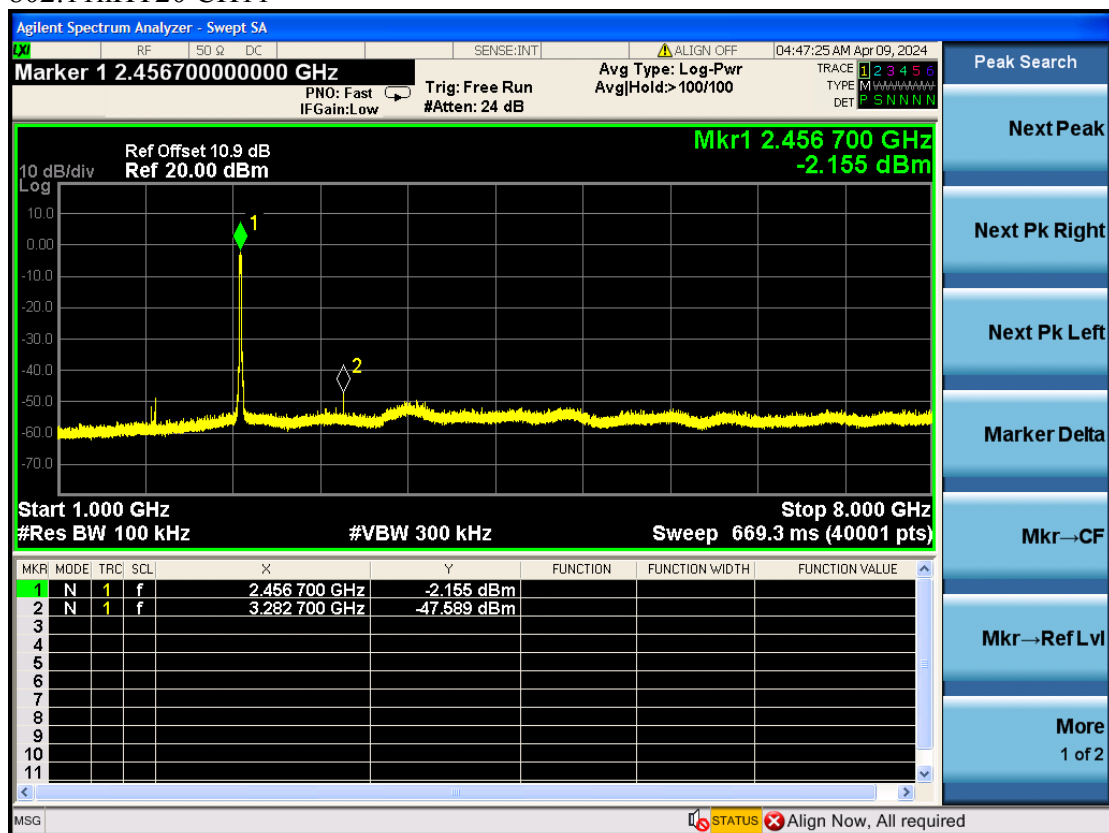
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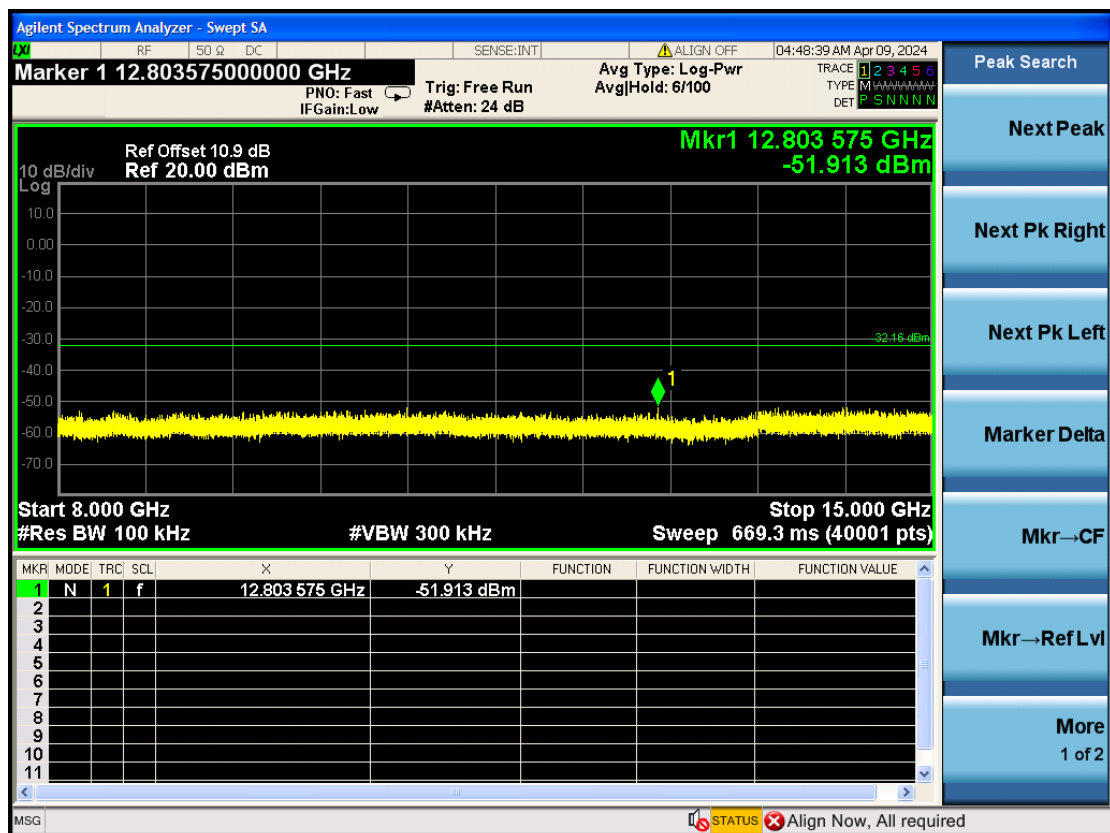
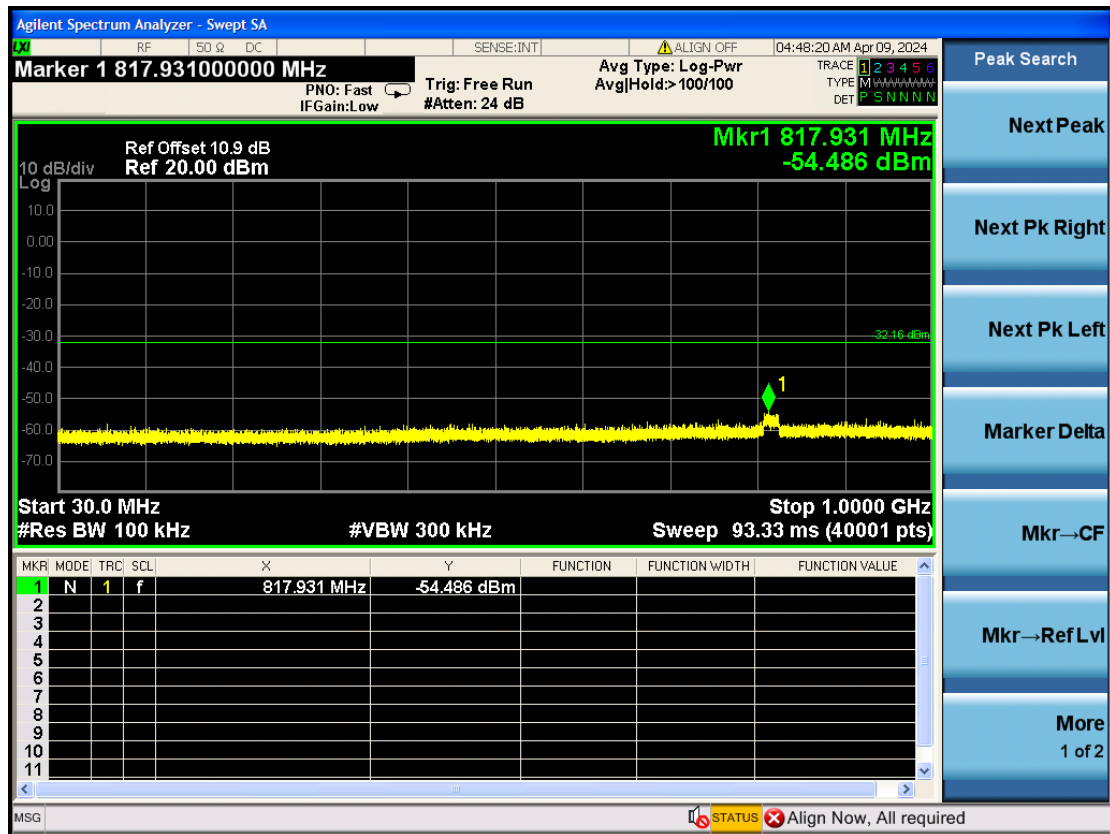


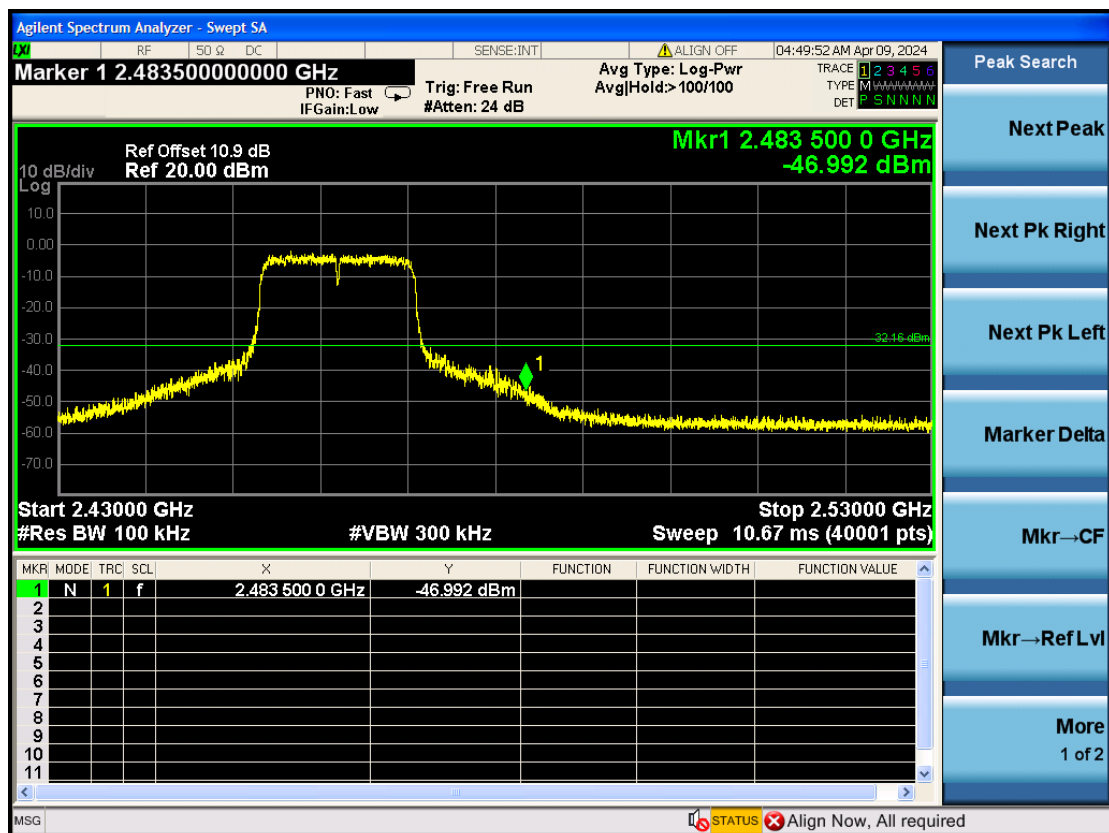
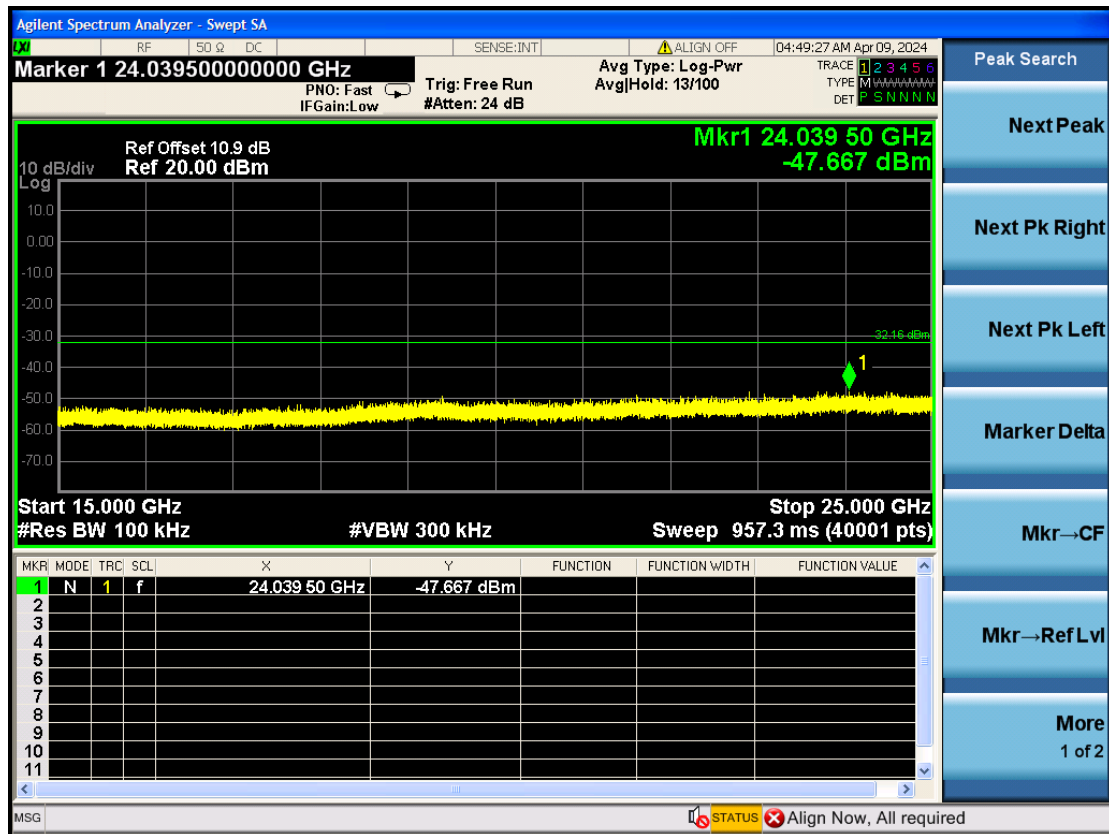




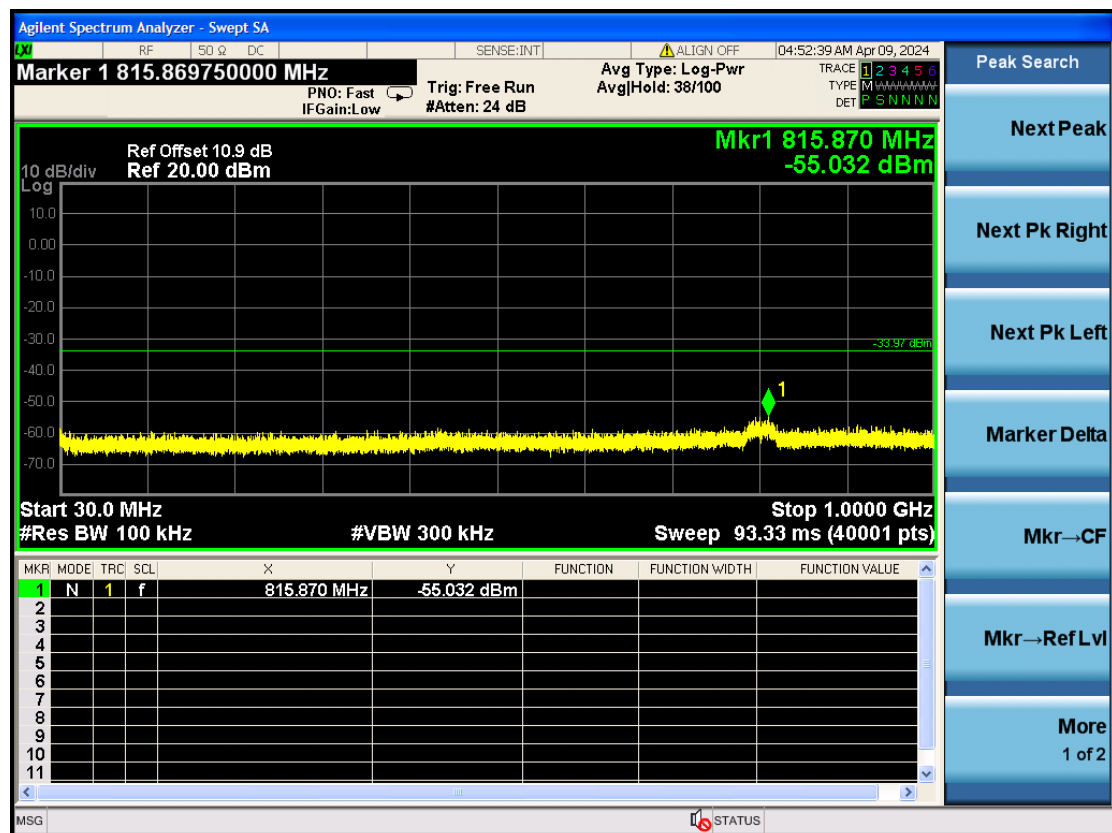
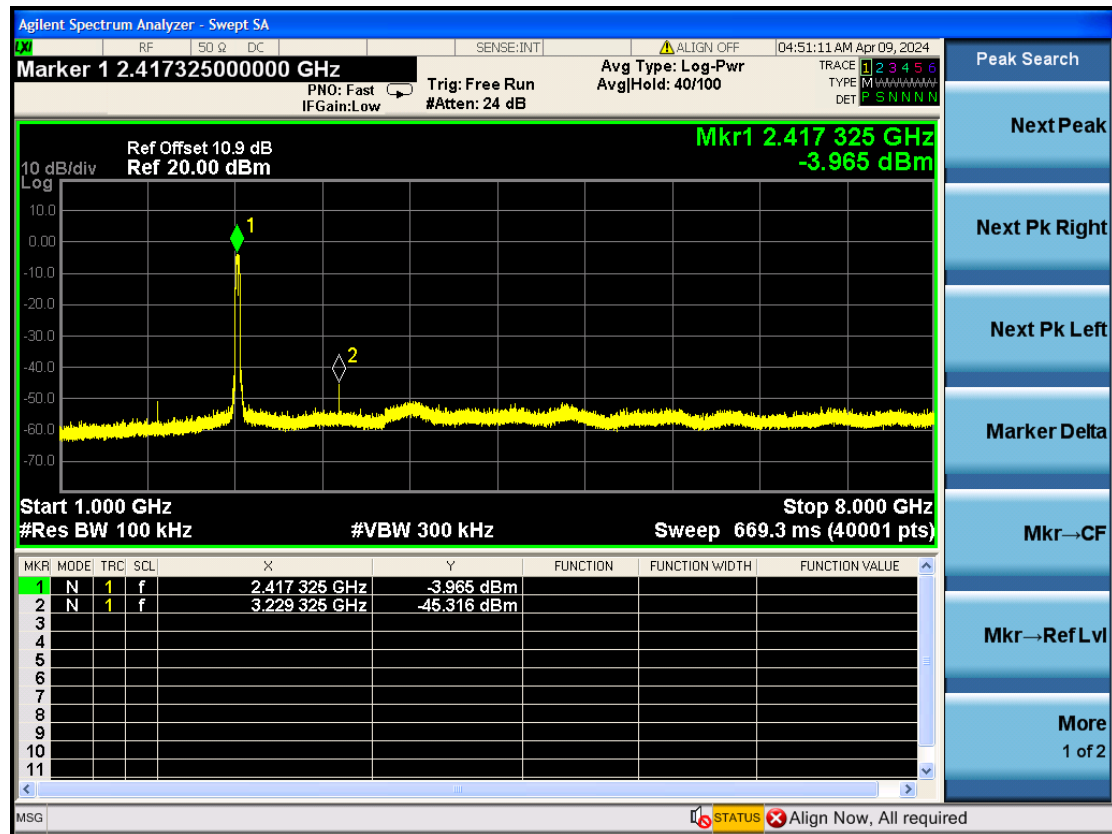
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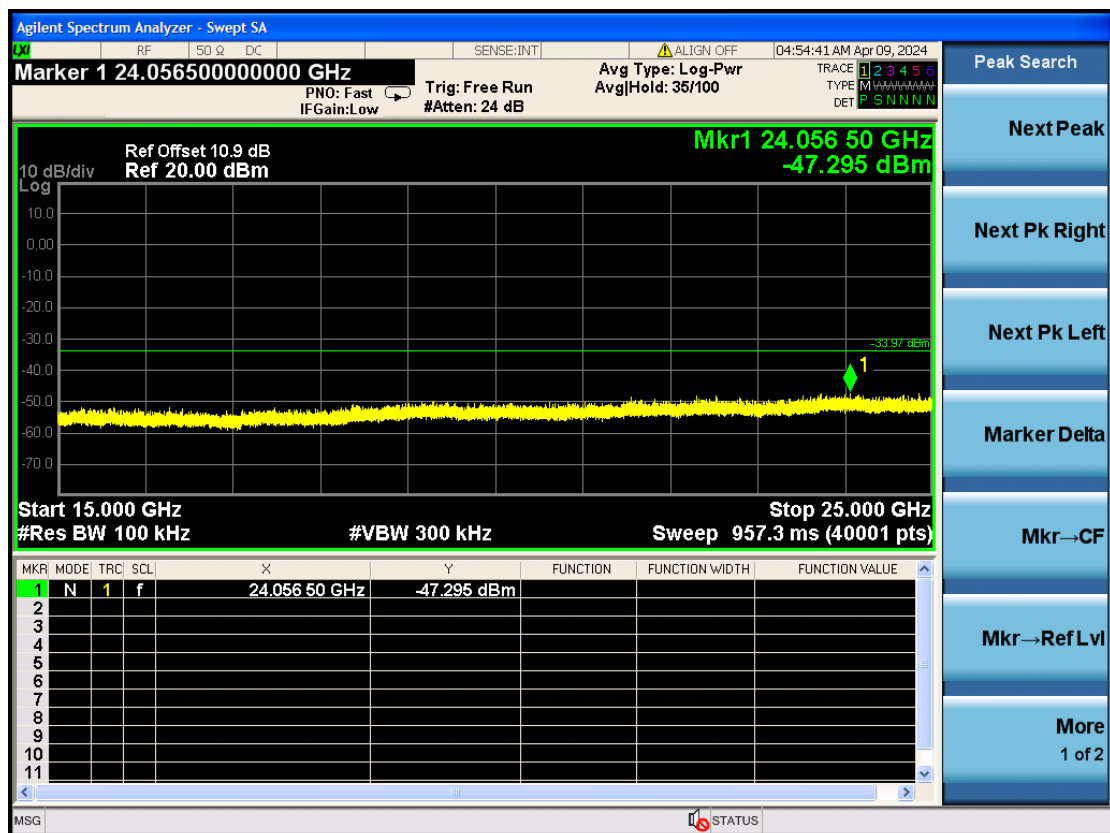
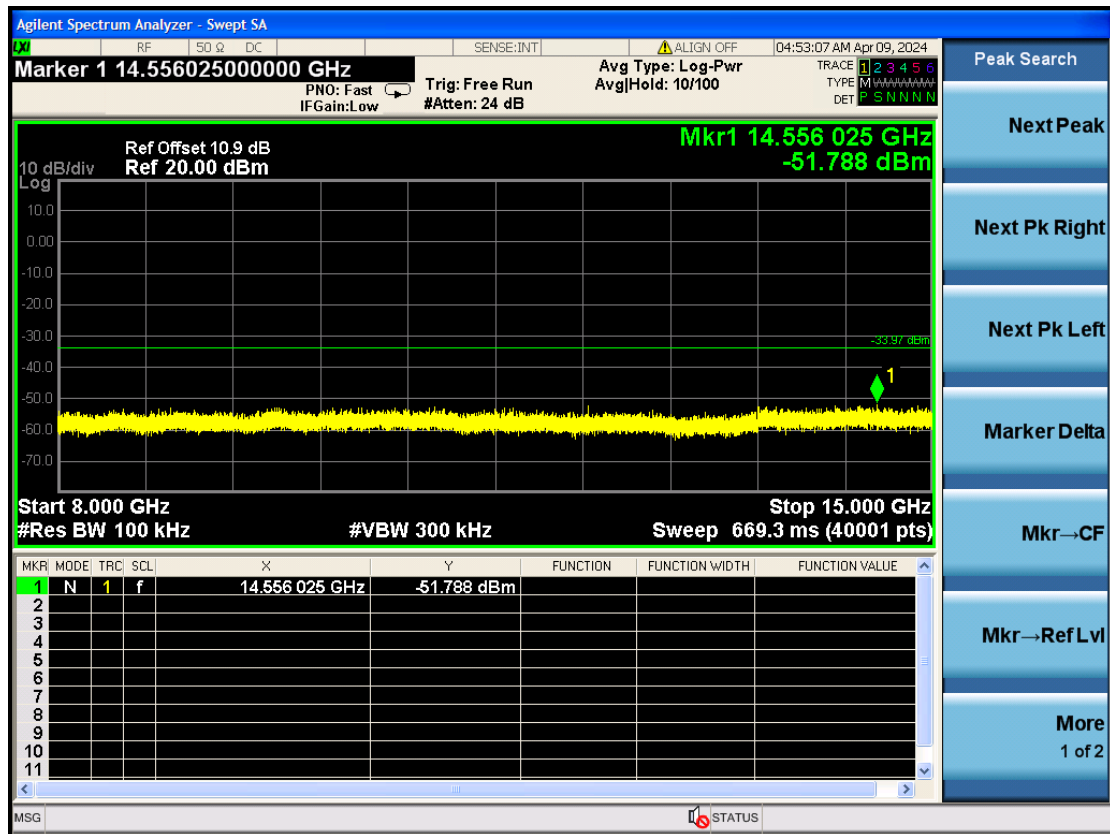


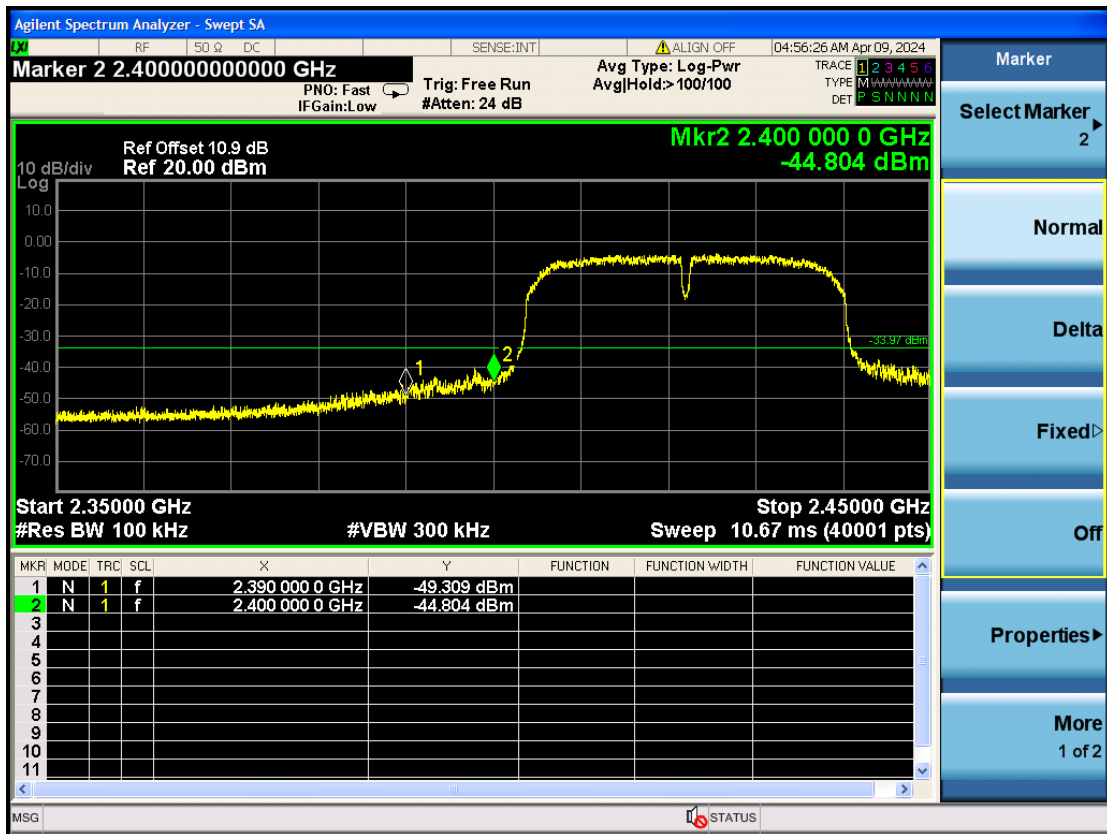




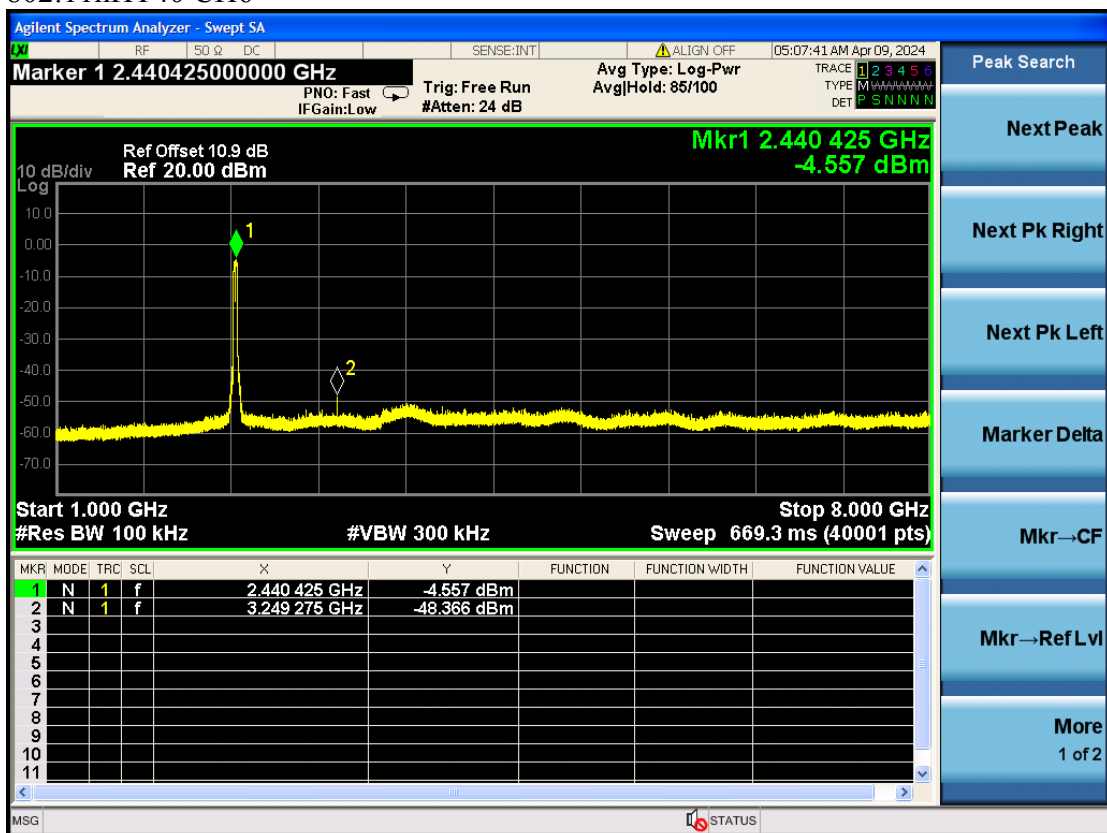
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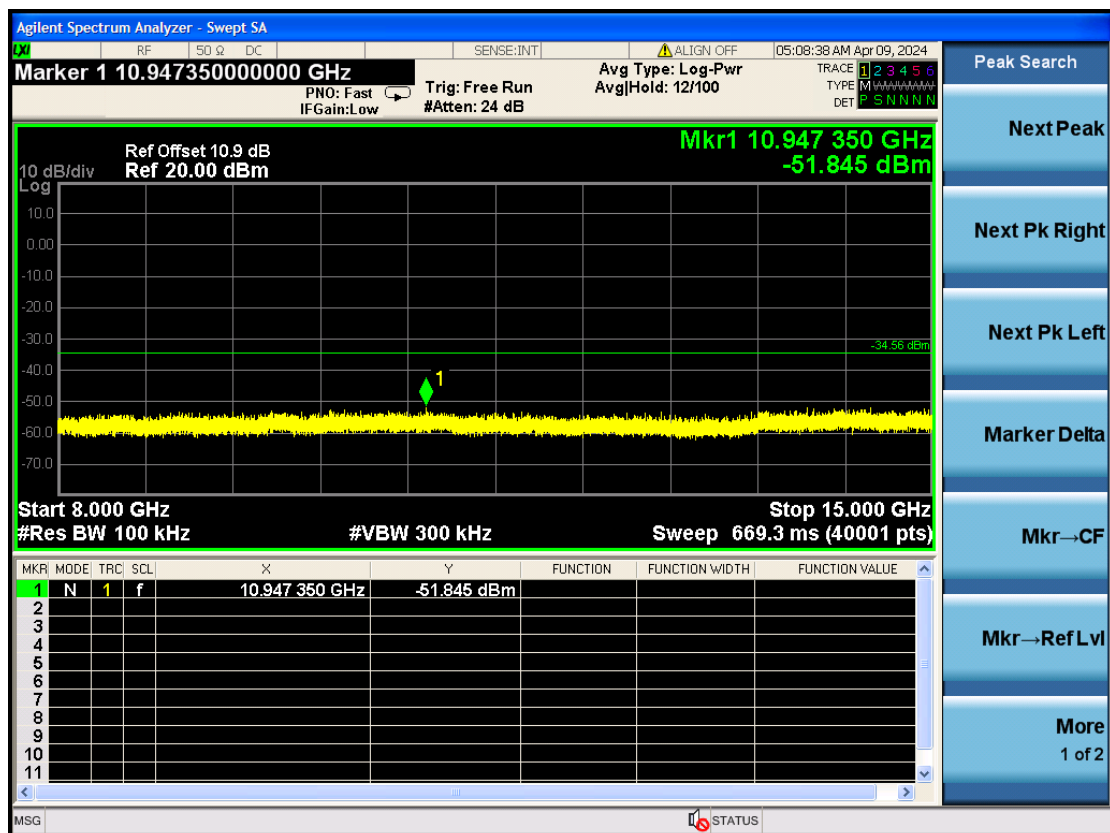
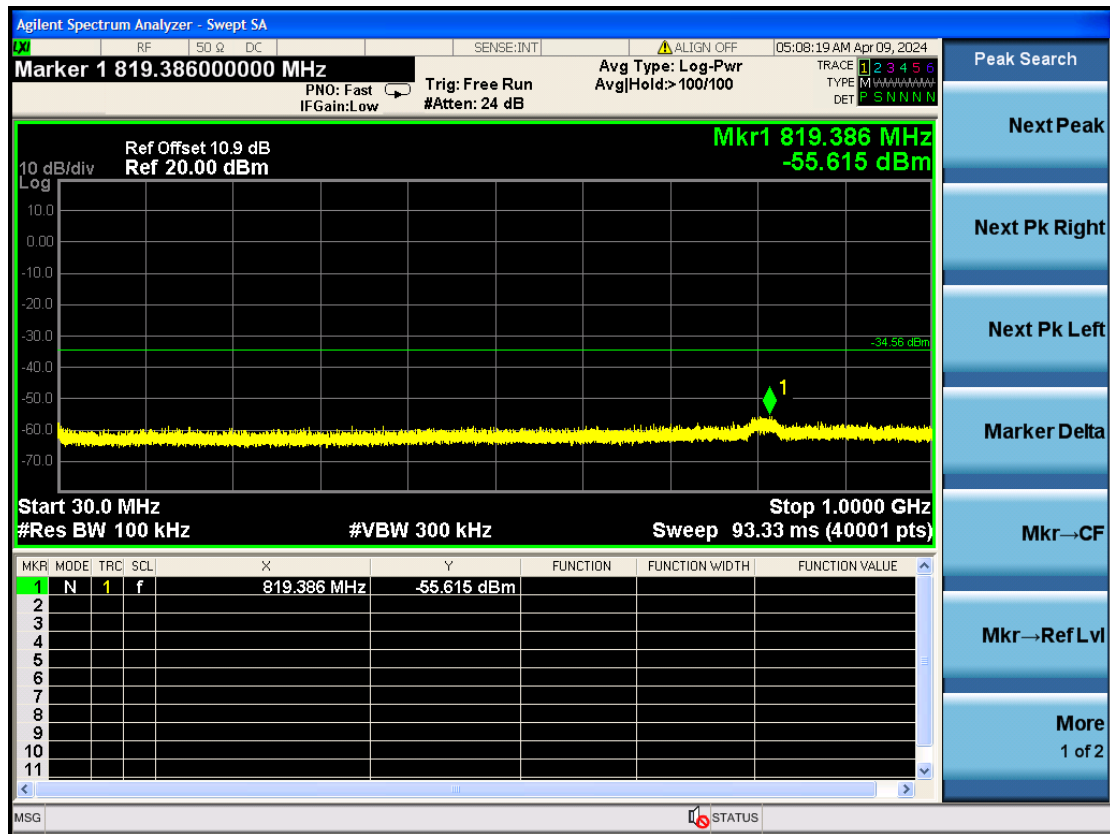


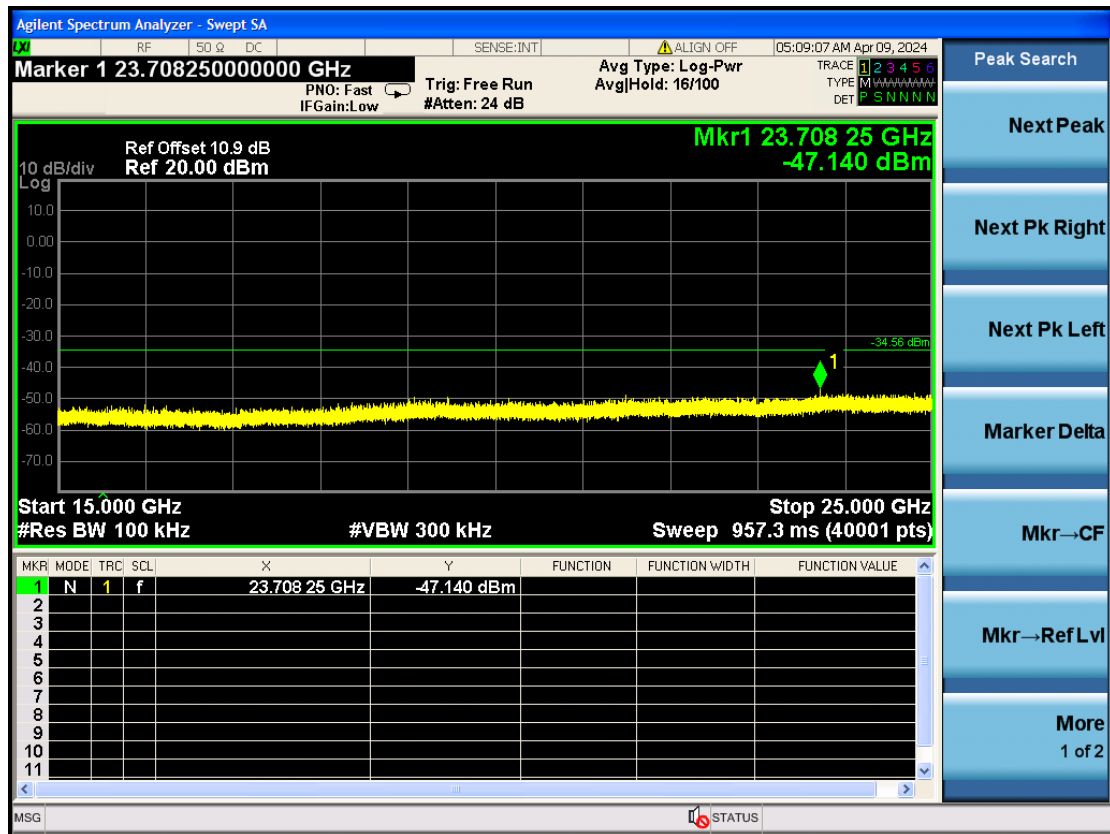




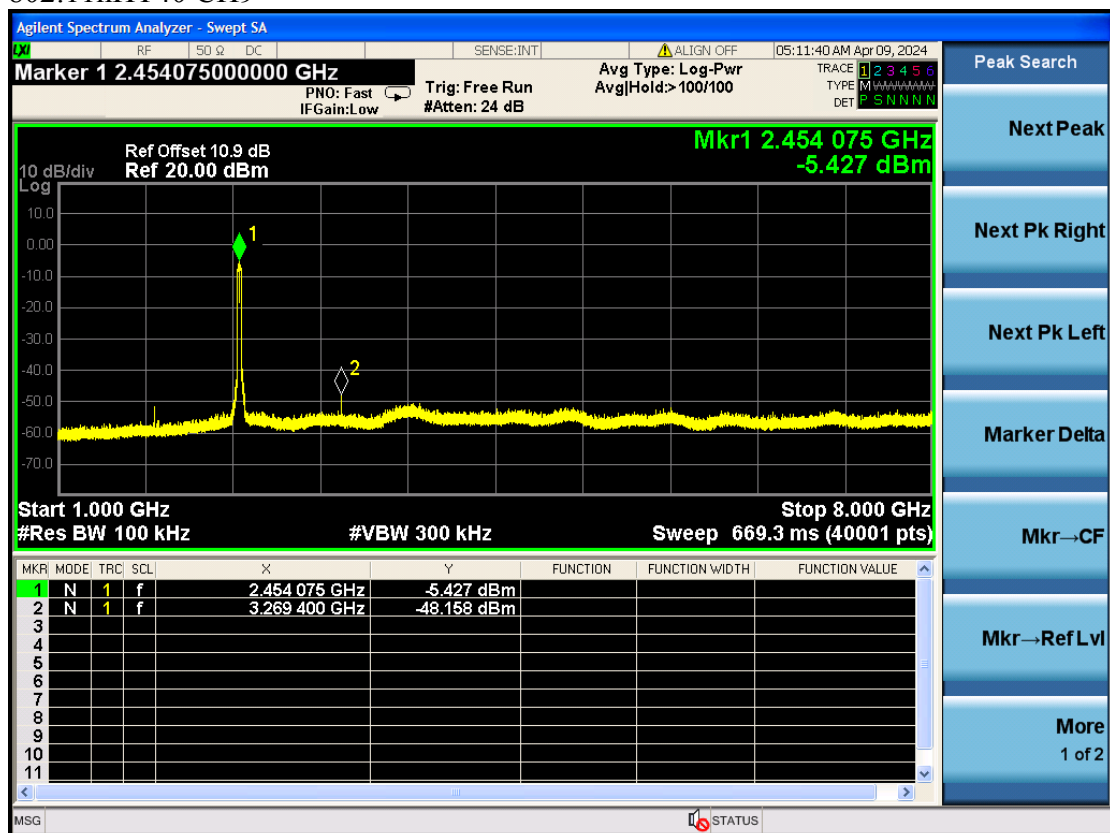
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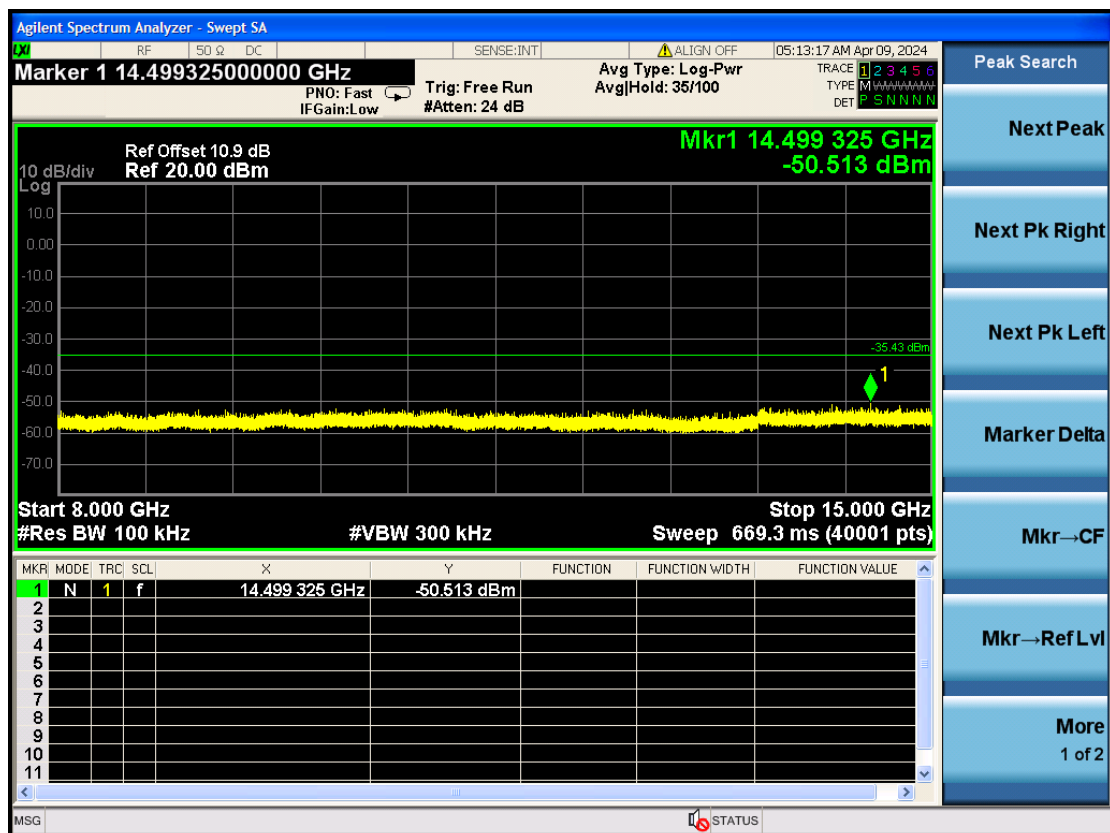
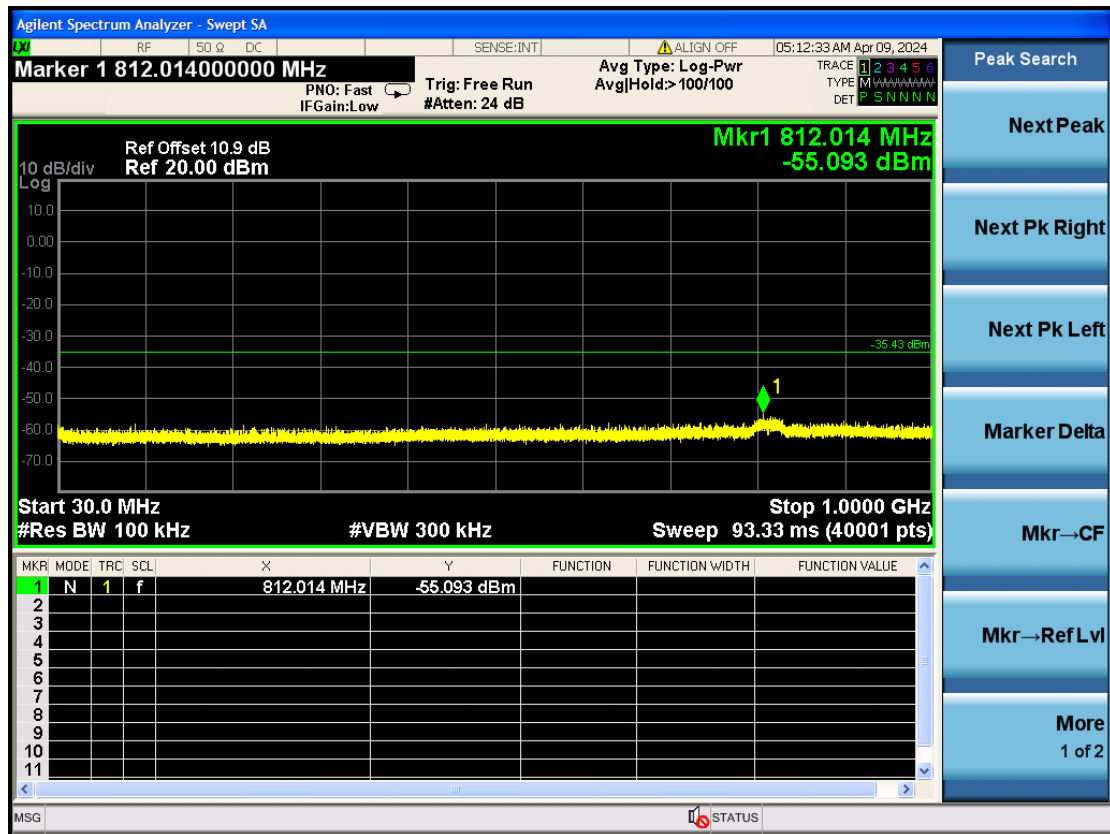


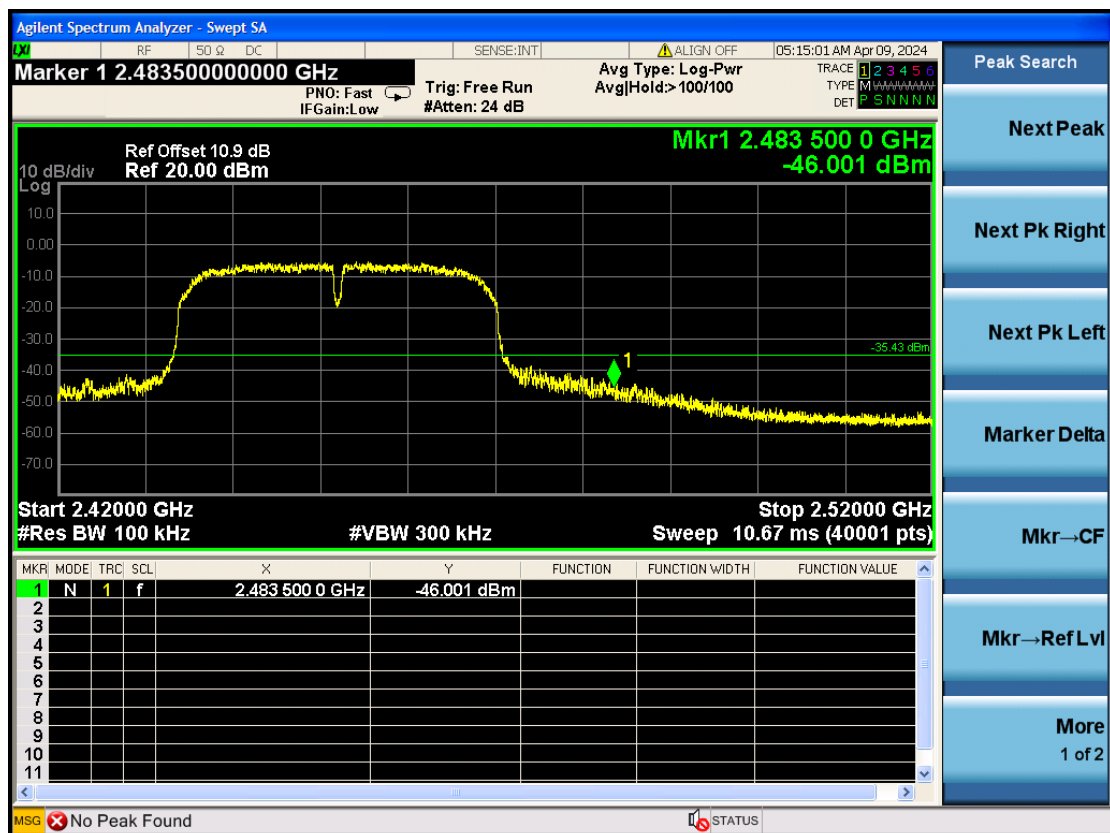
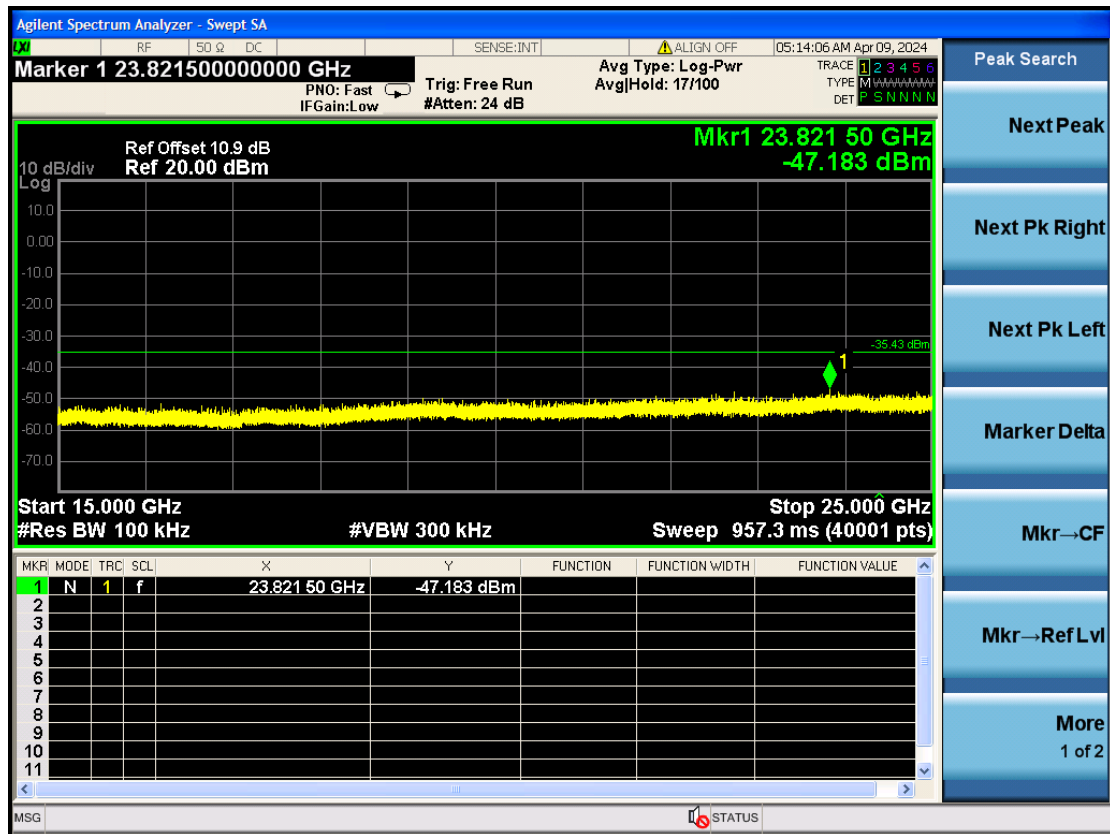




802.11nHT40 CH9







10.DEVIATION TO TEST SPECIFICATIONS

【NONE】

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