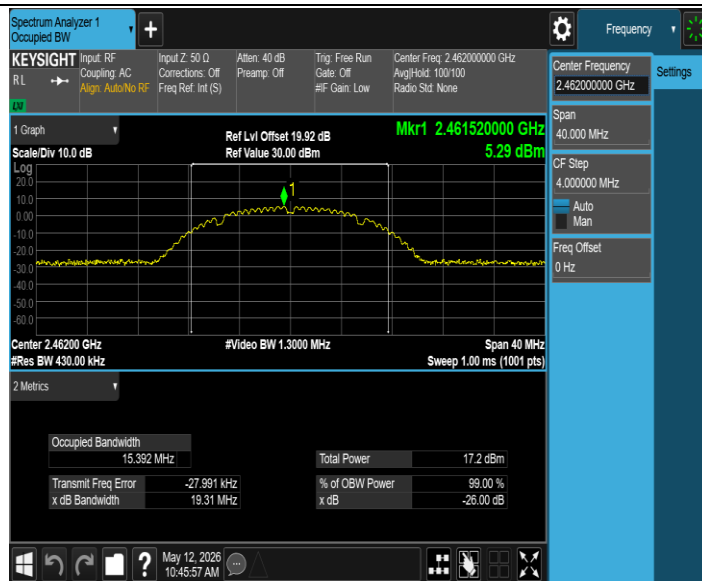
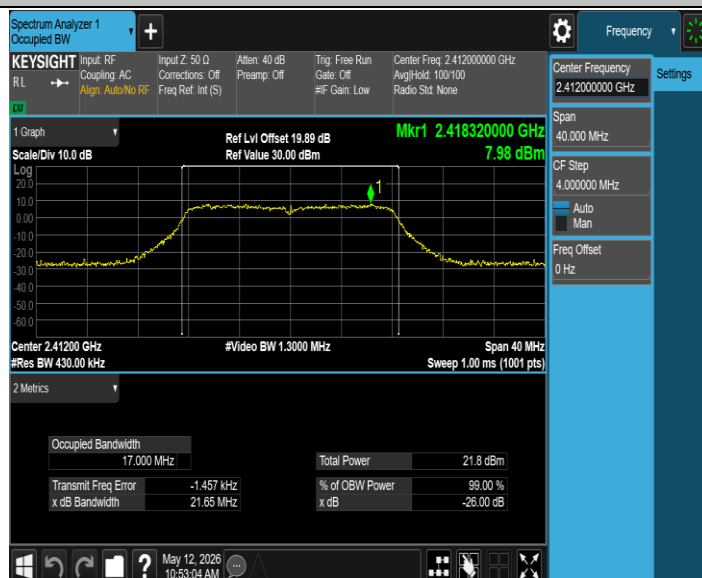
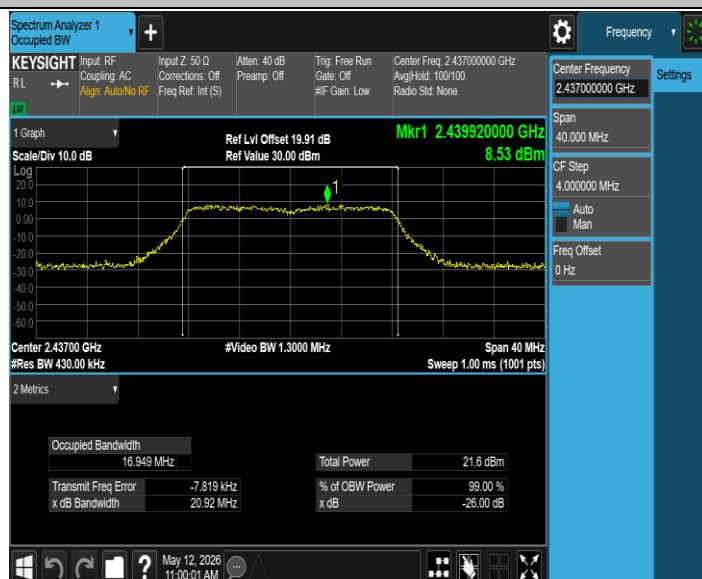




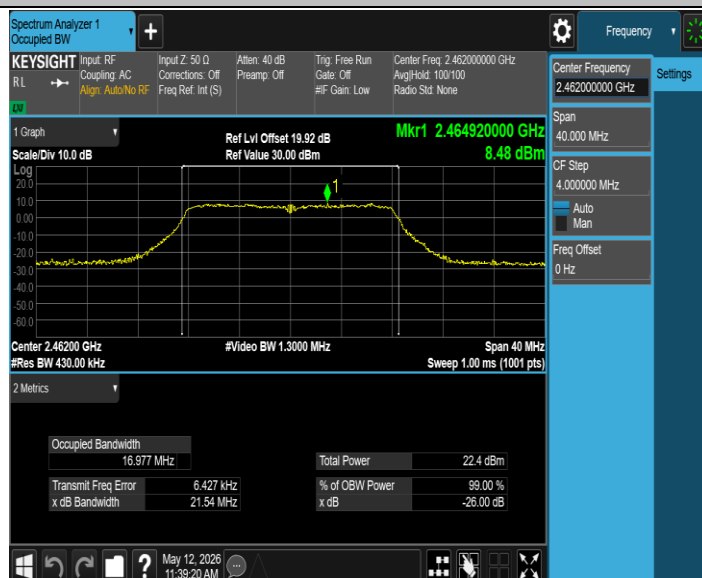
11G_Ant3_2412



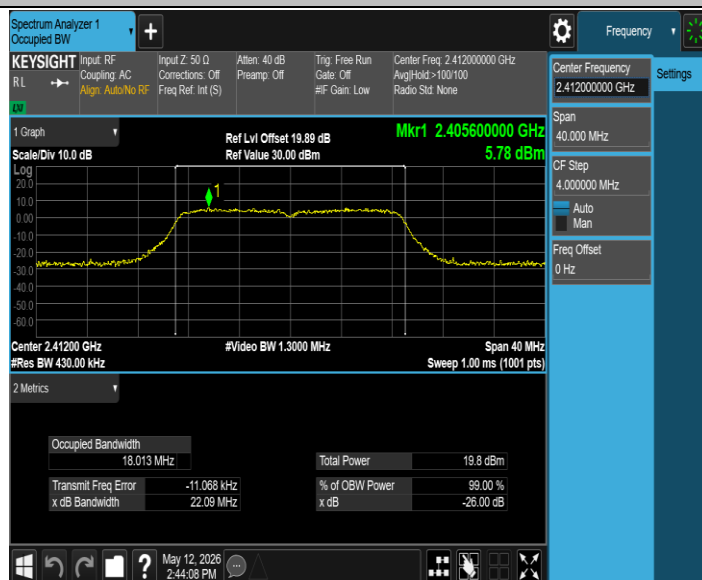
11G_Ant3_2437



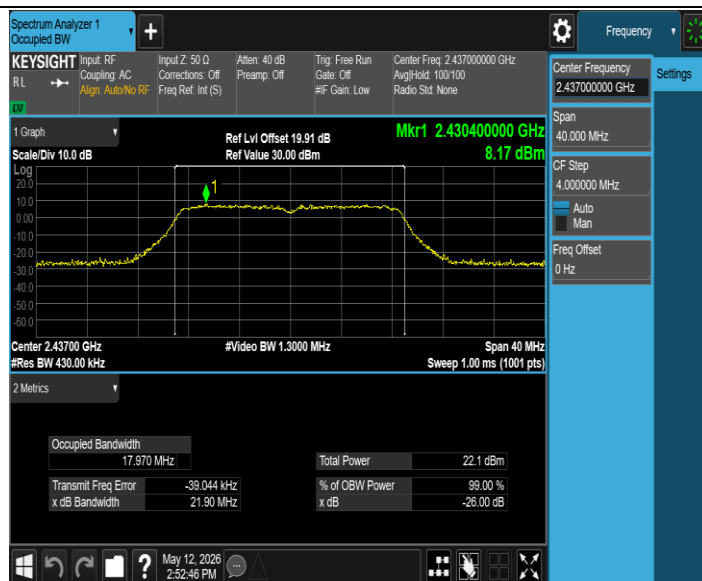
11G_Ant3_2462



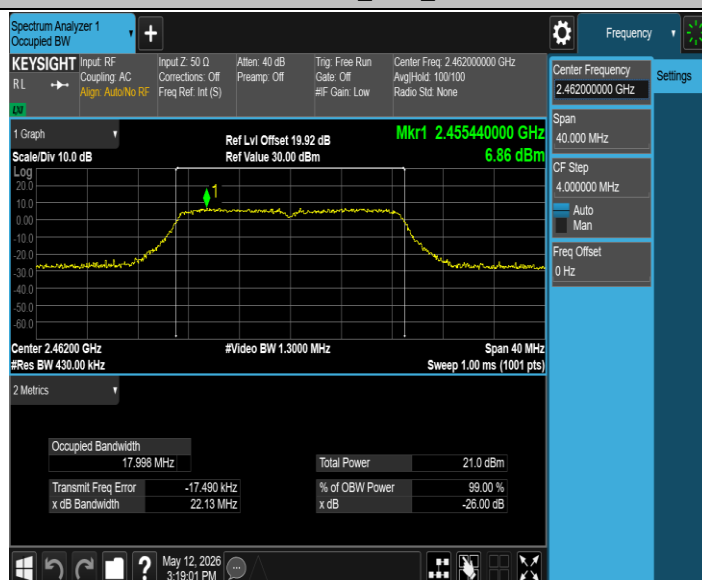
11N20SISO_Ant3_2412



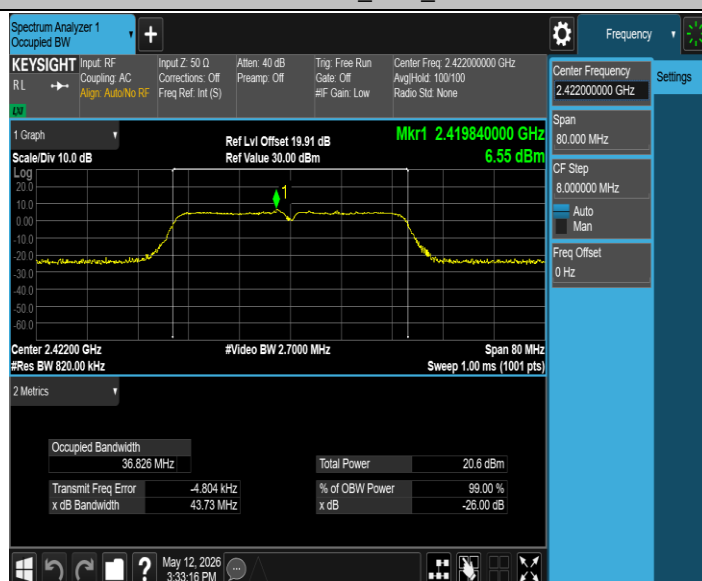
11N20SISO_Ant3_2437



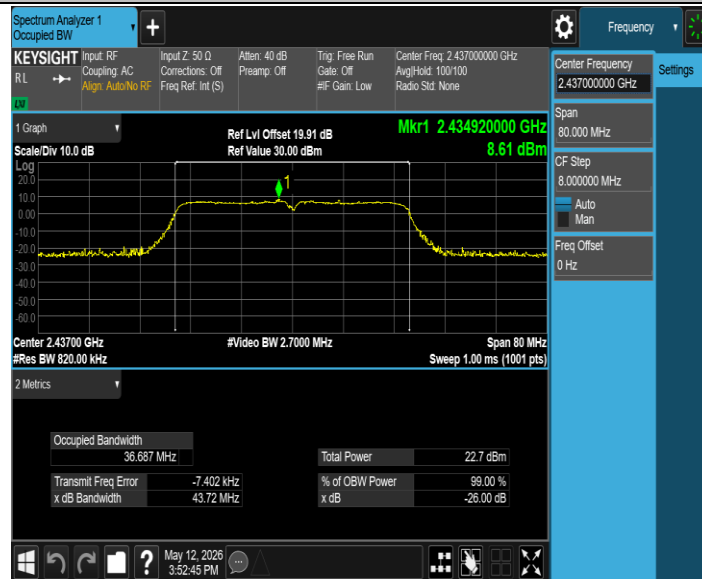
11N20SISO_Ant3_2462



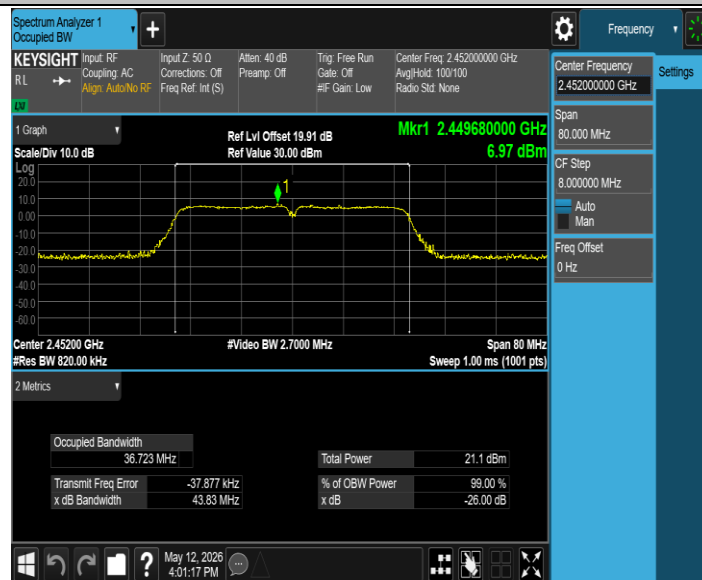
11N40SISO_Ant3_2422



11N40SISO_Ant3_2437



11N40SISO_Ant3_2452



3.5 Maximum conducted output power

3.5.1 Limit

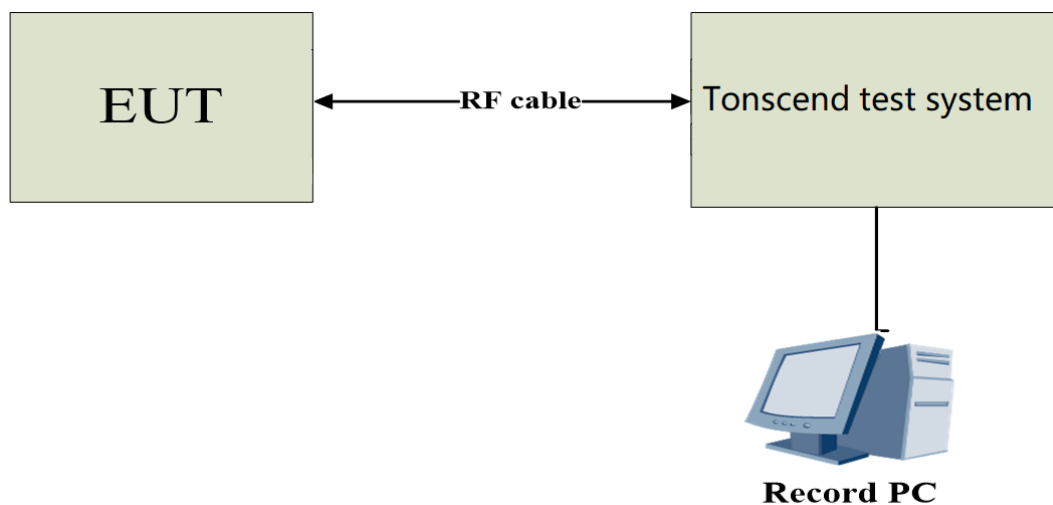
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

3.5.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

- The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.2.3 (for average power) of ANSI C63.10-2020+Cor. 1-2023.

3.5.3 Test Setup



3.5.4 Table of Parameters of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

For Power setting value

WiFi 7 Chip (QCC2027PB):

Test Software Version	Configured using CMD commands		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	15	15	15
IEEE 802.11g	15	15	15
IEEE 802.11n(20)	15	15	15
IEEE 802.11ax(20)	15	15	15
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(40)	15	15	15
IEEE 802.11ax(40)	15	15	15

Note: Both antennas use the same power setting value.

WiFi 5 Chip (RTL8811CU):

Test Software Version	MP Tool Version 0.0003.08.20190211		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	31	32	32
IEEE 802.11g	45	46	67
IEEE 802.11n(20)	41	46	45
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(40)	41	46	43

3.5.5 The Result

WiFi 7 Chip (QCC2027PB):

TestMode	Antenna	Frequency[MHz]	Average Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	14.57	≤30.00	PASS
	Ant2	2412	15.51	≤30.00	PASS
	Ant1	2437	15.02	≤30.00	PASS
	Ant2	2437	16.14	≤30.00	PASS
	Ant1	2462	15.28	≤30.00	PASS
	Ant2	2462	16.29	≤30.00	PASS
11G	Ant1	2412	14.72	≤30.00	PASS
	Ant2	2412	15.49	≤30.00	PASS
	Ant1	2437	15.34	≤30.00	PASS
	Ant2	2437	16.15	≤30.00	PASS
	Ant1	2462	15.56	≤30.00	PASS
	Ant2	2462	16.41	≤30.00	PASS
11N20MIMO	Ant1	2412	15.51	≤30.00	PASS
	Ant2	2412	15.92	≤30.00	PASS
	total	2412	18.73	≤30.00	PASS
	Ant1	2437	16.28	≤30.00	PASS
	Ant2	2437	16.42	≤30.00	PASS
	total	2437	19.36	≤30.00	PASS
	Ant1	2462	16.32	≤30.00	PASS
	Ant2	2462	16.56	≤30.00	PASS
	total	2462	19.45	≤30.00	PASS
11N40MIMO	Ant1	2422	15.82	≤30.00	PASS
	Ant2	2422	15.95	≤30.00	PASS
	total	2422	18.90	≤30.00	PASS
	Ant1	2437	15.91	≤30.00	PASS
	Ant2	2437	16.17	≤30.00	PASS
	total	2437	19.05	≤30.00	PASS
	Ant1	2452	16.13	≤30.00	PASS
	Ant2	2452	16.31	≤30.00	PASS
	total	2452	19.23	≤30.00	PASS
11AX20MIMO	Ant1	2412	15.62	≤30.00	PASS
	Ant2	2412	15.96	≤30.00	PASS
	total	2412	18.80	≤30.00	PASS
	Ant1	2437	16.26	≤30.00	PASS
	Ant2	2437	16.52	≤30.00	PASS
	total	2437	19.40	≤30.00	PASS
	Ant1	2462	16.48	≤30.00	PASS
	Ant2	2462	16.80	≤30.00	PASS

	total	2462	19.65	≤30.00	PASS
11AX40MIMO	Ant1	2422	15.56	≤30.00	PASS
	Ant2	2422	15.74	≤30.00	PASS
	total	2422	18.66	≤30.00	PASS
	Ant1	2437	15.97	≤30.00	PASS
	Ant2	2437	16.24	≤30.00	PASS
	total	2437	19.12	≤30.00	PASS
	Ant1	2452	16.14	≤30.00	PASS
	Ant2	2452	16.22	≤30.00	PASS
	total	2452	19.19	≤30.00	PASS
11BE20MIMO	Ant1	2412	15.74	≤30.00	PASS
	Ant2	2412	16.07	≤30.00	PASS
	total	2412	18.92	≤30.00	PASS
	Ant1	2437	16.37	≤30.00	PASS
	Ant2	2437	16.62	≤30.00	PASS
	total	2437	19.51	≤30.00	PASS
	Ant1	2462	16.41	≤30.00	PASS
	Ant2	2462	16.73	≤30.00	PASS
	total	2462	19.58	≤30.00	PASS
11BE40MIMO	Ant1	2422	15.57	≤30.00	PASS
	Ant2	2422	15.73	≤30.00	PASS
	total	2422	18.66	≤30.00	PASS
	Ant1	2437	15.98	≤30.00	PASS
	Ant2	2437	16.12	≤30.00	PASS
	total	2437	19.06	≤30.00	PASS
	Ant1	2452	16.02	≤30.00	PASS
	Ant2	2452	16.09	≤30.00	PASS
	total	2452	19.07	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

WiFi 5 Chip (RTL8811CU):

TestMode	Antenna	Frequency[MHz]	Average Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant3	2412	14.03	≤30.00	PASS
		2437	14.41	≤30.00	PASS
		2462	14.15	≤30.00	PASS
11G	Ant3	2412	15.11	≤30.00	PASS
		2437	15.55	≤30.00	PASS
		2462	15.58	≤30.00	PASS
11N20SISO	Ant3	2412	13.08	≤30.00	PASS
		2437	15.44	≤30.00	PASS
		2462	14.61	≤30.00	PASS
11N40SISO	Ant3	2422	13.36	≤30.00	PASS
		2437	15.40	≤30.00	PASS
		2452	13.91	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmitting.

3.6.2 Test Procedure

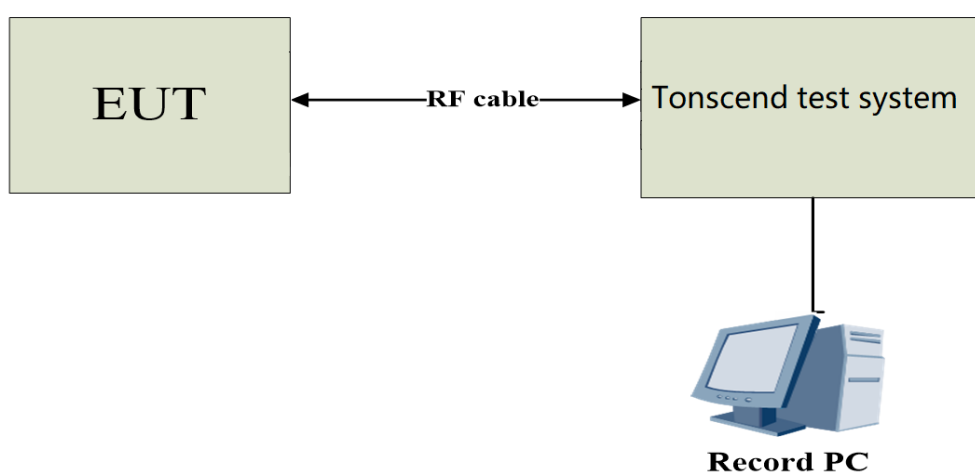
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ● : Test ○ : No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	>1.5 times the DTS bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	Average
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup



3.6.4 The Result

WiFi 7 Chip (QCC2027PB):

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-13.77	≤8.00	PASS
	Ant2	2412	-12.80	≤8.00	PASS
	Ant1	2437	-13.39	≤8.00	PASS
	Ant2	2437	-12.16	≤8.00	PASS
	Ant1	2462	-12.93	≤8.00	PASS
	Ant2	2462	-12.00	≤8.00	PASS
11G	Ant1	2412	-17.41	≤8.00	PASS
	Ant2	2412	-16.62	≤8.00	PASS
	Ant1	2437	-16.83	≤8.00	PASS
	Ant2	2437	-16.03	≤8.00	PASS
	Ant1	2462	-16.98	≤8.00	PASS
	Ant2	2462	-16.03	≤8.00	PASS
11N20MIMO	Ant1	2412	-17.54	≤8.00	PASS
	Ant2	2412	-17.12	≤8.00	PASS
	total	2412	-14.31	≤8.00	PASS
	Ant1	2437	-17.20	≤8.00	PASS
	Ant2	2437	-16.57	≤8.00	PASS
	total	2437	-13.86	≤8.00	PASS
	Ant1	2462	-16.47	≤8.00	PASS
	Ant2	2462	-16.26	≤8.00	PASS
	total	2462	-13.35	≤8.00	PASS
11N40MIMO	Ant1	2422	-19.76	≤8.00	PASS
	Ant2	2422	-19.94	≤8.00	PASS
	total	2422	-16.84	≤8.00	PASS
	Ant1	2437	-20.18	≤8.00	PASS
	Ant2	2437	-20.24	≤8.00	PASS
	total	2437	-17.20	≤8.00	PASS
	Ant1	2452	-19.89	≤8.00	PASS
	Ant2	2452	-19.98	≤8.00	PASS
	total	2452	-16.92	≤8.00	PASS
11AX20MIMO	Ant1	2412	-18.42	≤8.00	PASS
	Ant2	2412	-18.40	≤8.00	PASS
	total	2412	-15.40	≤8.00	PASS
	Ant1	2437	-17.32	≤8.00	PASS
	Ant2	2437	-17.76	≤8.00	PASS
	total	2437	-14.52	≤8.00	PASS
	Ant1	2462	-17.99	≤8.00	PASS
	Ant2	2462	-16.46	≤8.00	PASS
	total	2462	-14.15	≤8.00	PASS

11AX40MIMO	Ant1	2422	-21.94	≤8.00	PASS
	Ant2	2422	-21.72	≤8.00	PASS
	total	2422	-18.82	≤8.00	PASS
	Ant1	2437	-21.35	≤8.00	PASS
	Ant2	2437	-20.82	≤8.00	PASS
	total	2437	-18.07	≤8.00	PASS
	Ant1	2452	-21.69	≤8.00	PASS
	Ant2	2452	-21.56	≤8.00	PASS
	total	2452	-18.61	≤8.00	PASS
11BE20MIMO	Ant1	2412	-17.97	≤8.00	PASS
	Ant2	2412	-17.97	≤8.00	PASS
	total	2412	-14.96	≤8.00	PASS
	Ant1	2437	-17.41	≤8.00	PASS
	Ant2	2437	-16.87	≤8.00	PASS
	total	2437	-14.12	≤8.00	PASS
	Ant1	2462	-16.44	≤8.00	PASS
	Ant2	2462	-17.01	≤8.00	PASS
	total	2462	-13.71	≤8.00	PASS
11BE40MIMO	Ant1	2422	-21.46	≤8.00	PASS
	Ant2	2422	-21.14	≤8.00	PASS
	total	2422	-18.29	≤8.00	PASS
	Ant1	2437	-20.93	≤8.00	PASS
	Ant2	2437	-20.43	≤8.00	PASS
	total	2437	-17.66	≤8.00	PASS
	Ant1	2452	-20.74	≤8.00	PASS
	Ant2	2452	-20.59	≤8.00	PASS
	total	2452	-17.65	≤8.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

WiFi 5 Chip (RTL8811CU):

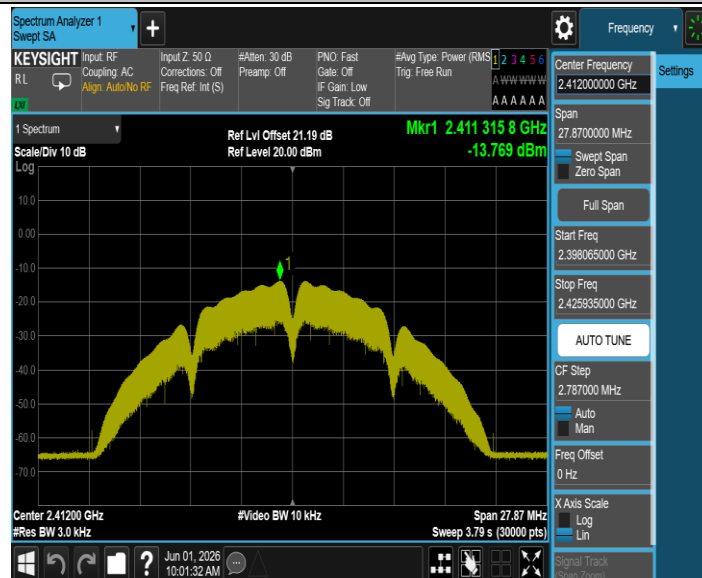
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant3	2412	-16.60	≤8.00	PASS
		2437	-16.51	≤8.00	PASS
		2462	-15.98	≤8.00	PASS
11G	Ant3	2412	-15.93	≤8.00	PASS
		2437	-15.38	≤8.00	PASS
		2462	-15.56	≤8.00	PASS
11N20SISO	Ant3	2412	-17.50	≤8.00	PASS
		2437	-15.00	≤8.00	PASS
		2462	-16.18	≤8.00	PASS
11N40SISO	Ant3	2422	-19.09	≤8.00	PASS
		2437	-17.25	≤8.00	PASS
		2452	-18.60	≤8.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

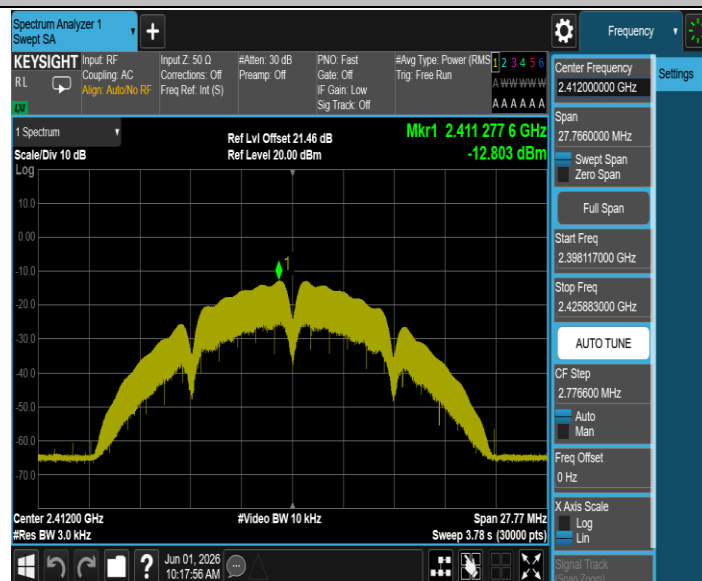
Test Graphs

WiFi 7 Chip (QCC2027PB):

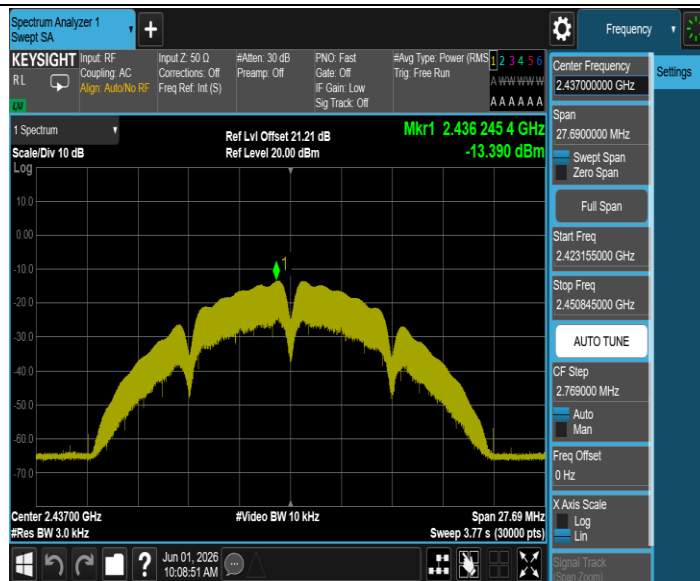
11B_Ant1_2412



11B_Ant2_2412



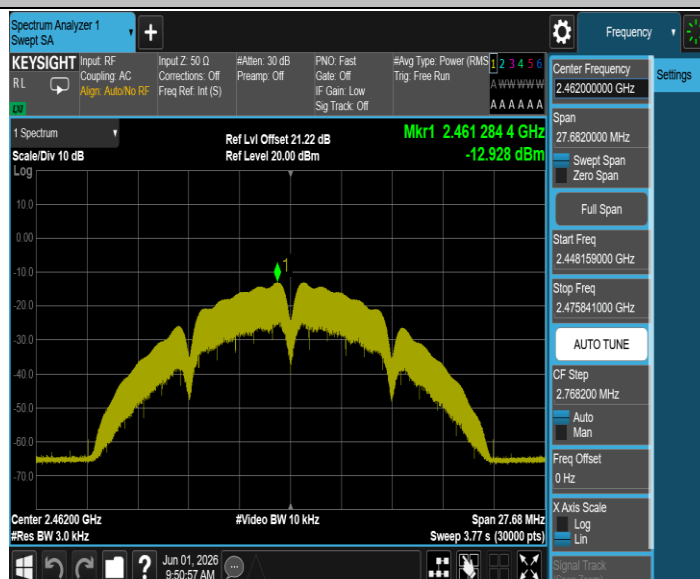
11B_Ant1_2437



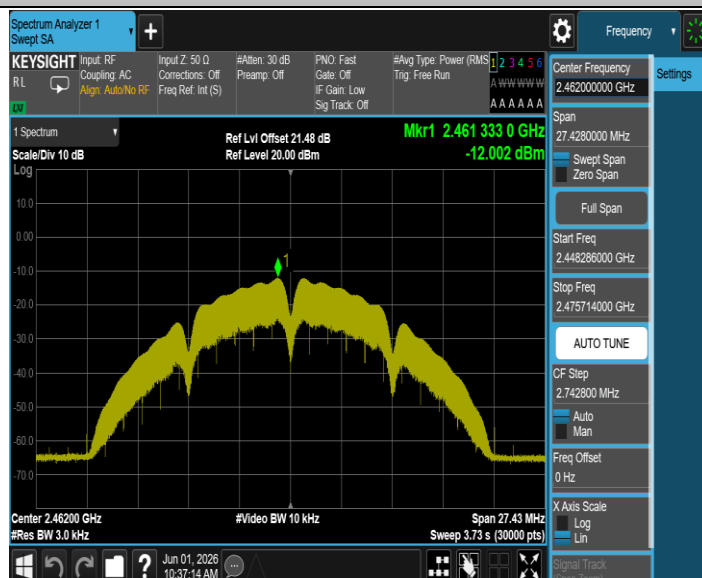
11B_Ant2_2437



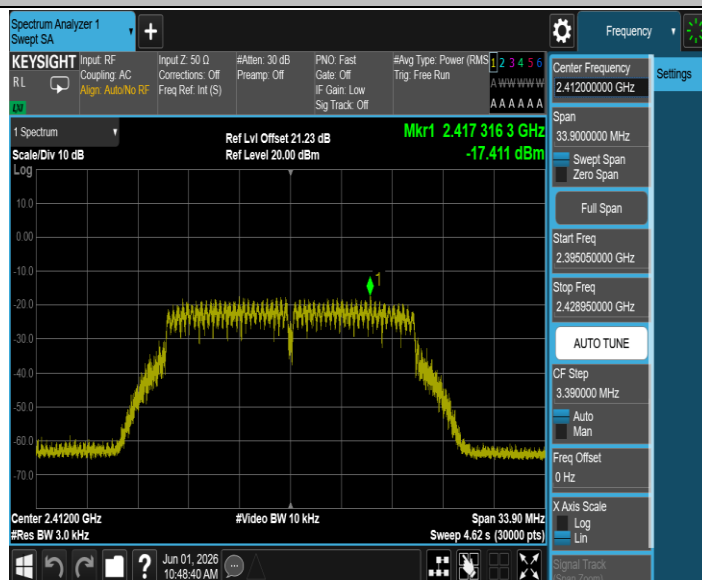
11B_Ant1_2462



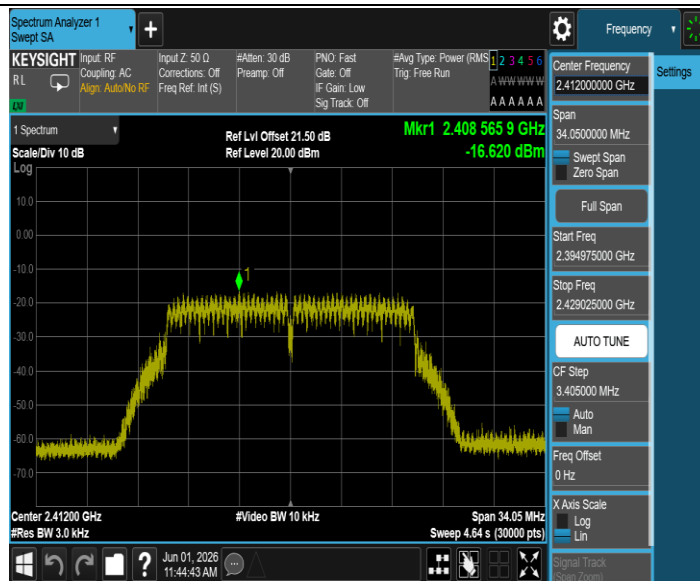
11B_Ant2_2462



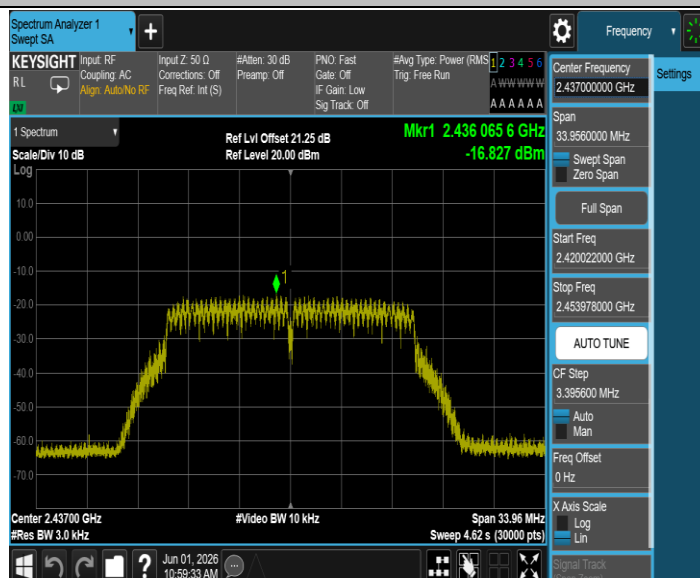
11G_Ant1_2412



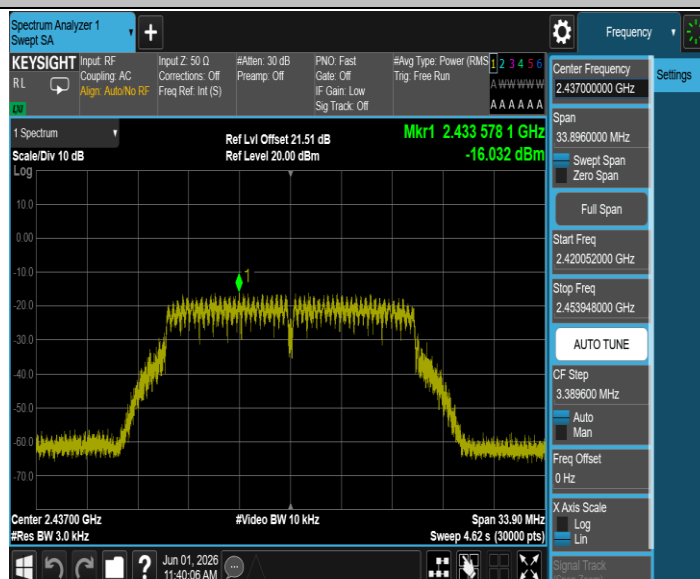
11G_Ant2_2412



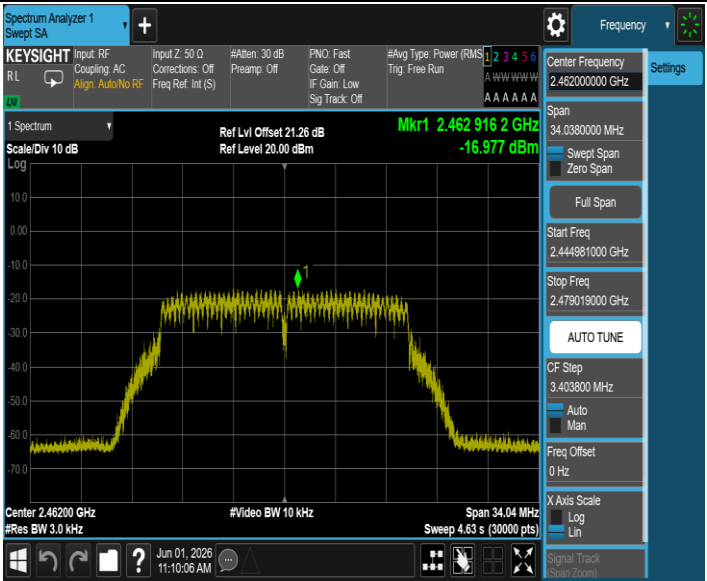
11G_Ant1_2437



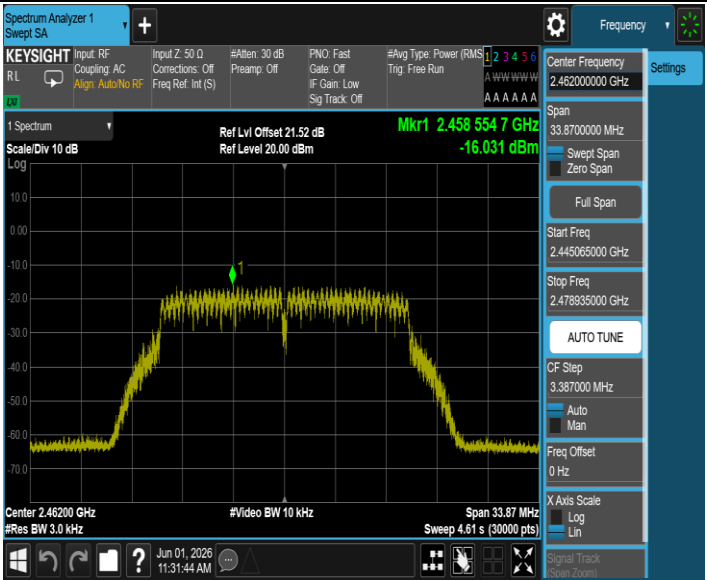
11G_Ant2_2437



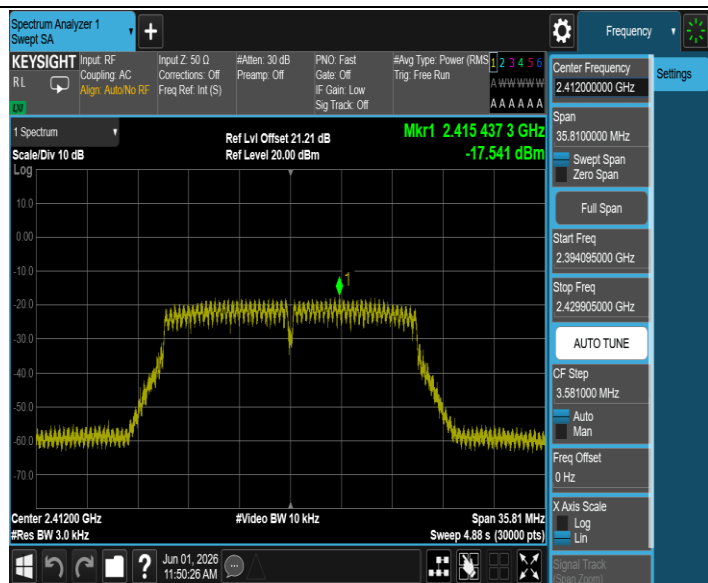
11G_Ant1_2462



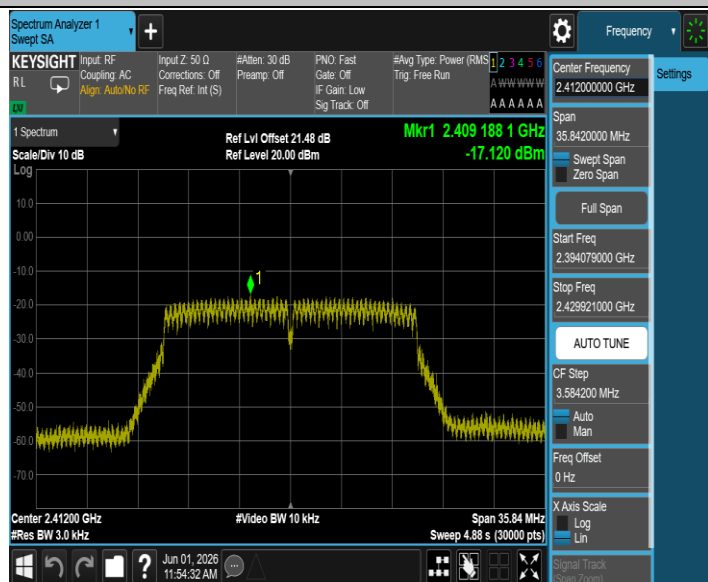
11G_Ant2_2462



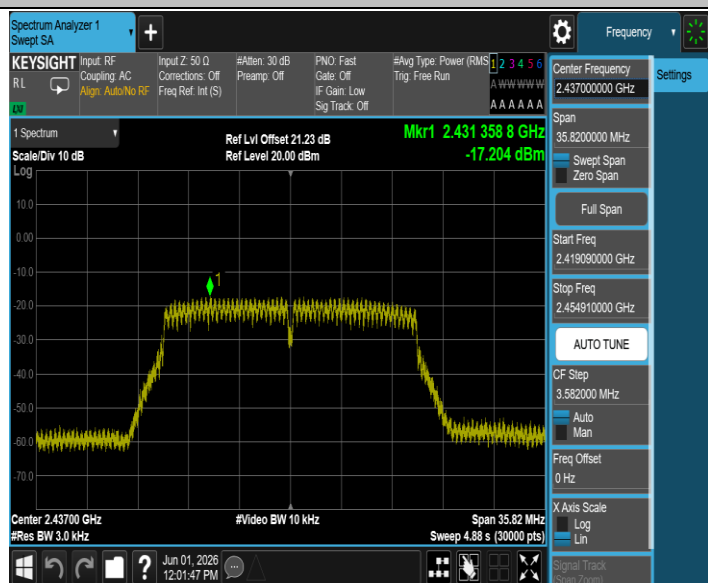
11N20MIMO_Ant1_2412



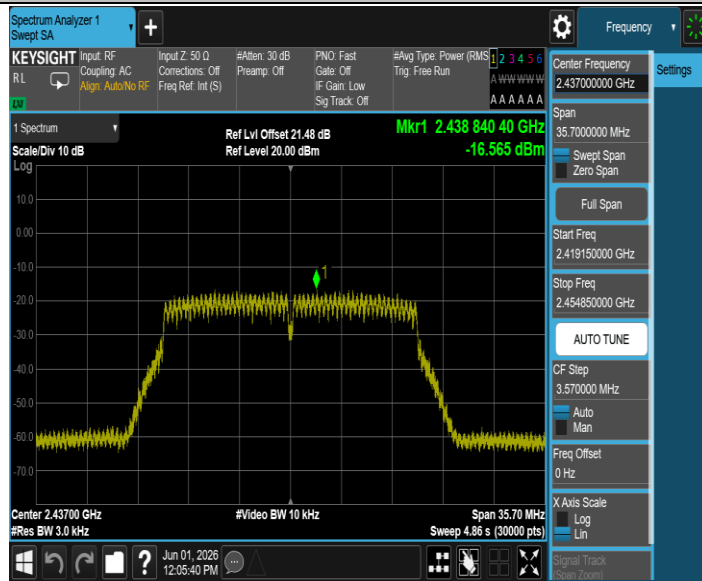
11N20MIMO_Ant2_2412



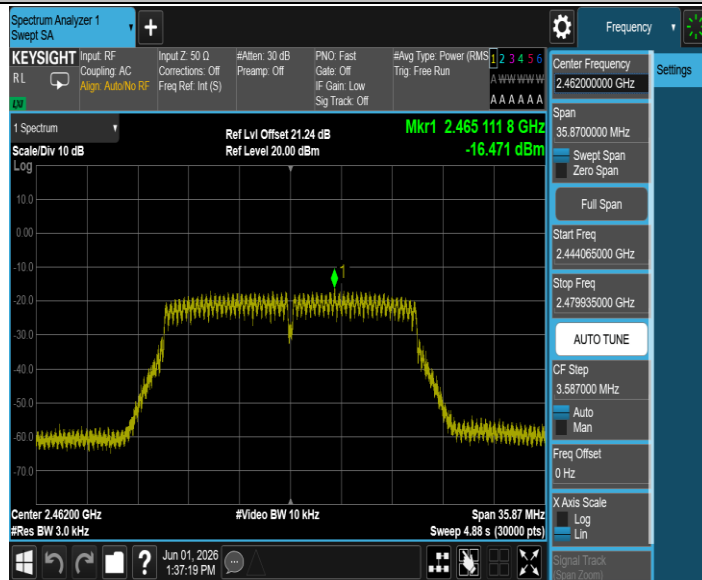
11N20MIMO_Ant1_2437



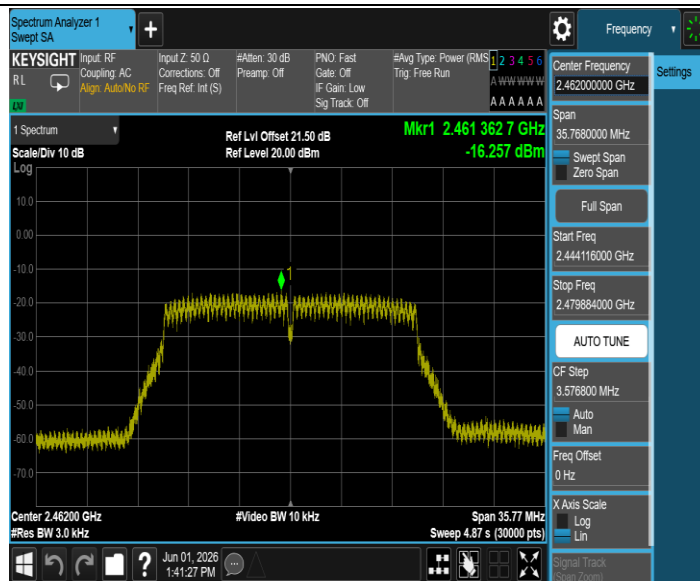
11N20MIMO_Ant2_2437



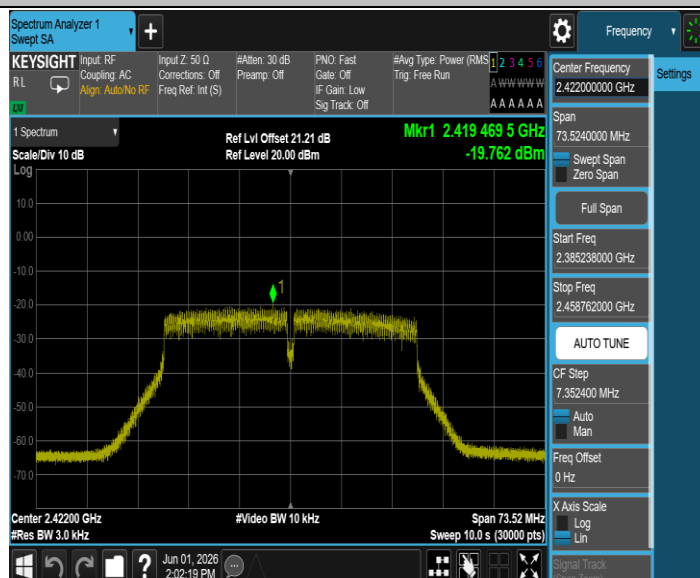
11N20MIMO_Ant1_2462



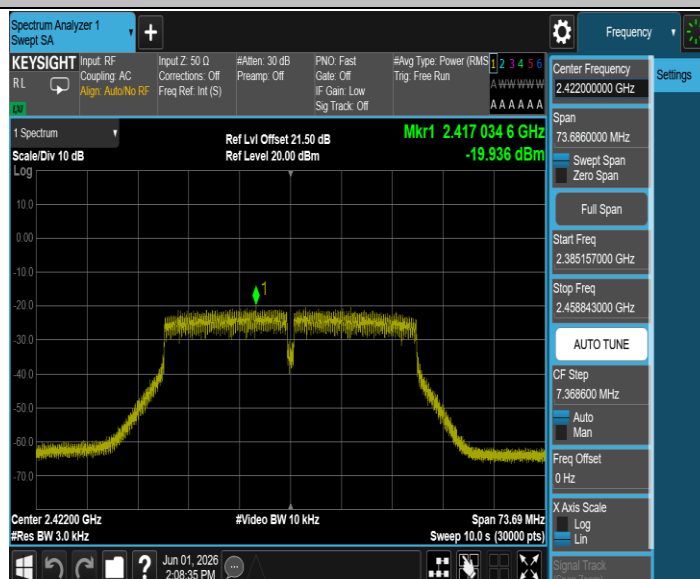
11N20MIMO_Ant2_2462



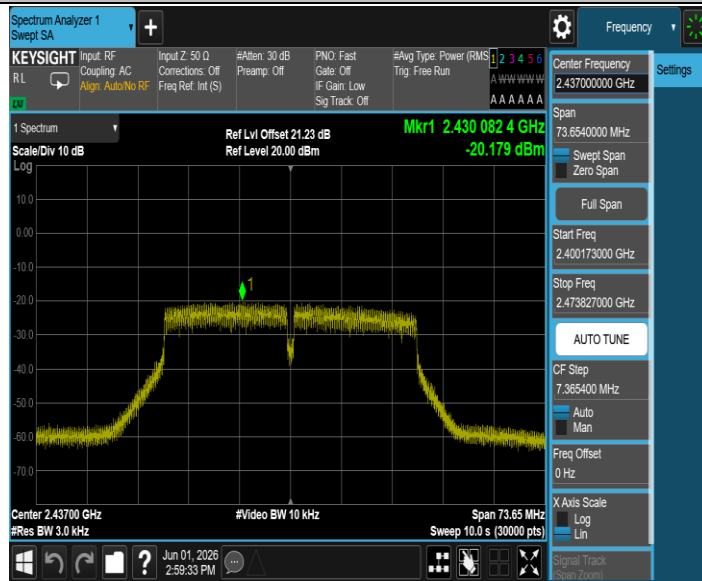
11N40MIMO_Ant1_2422



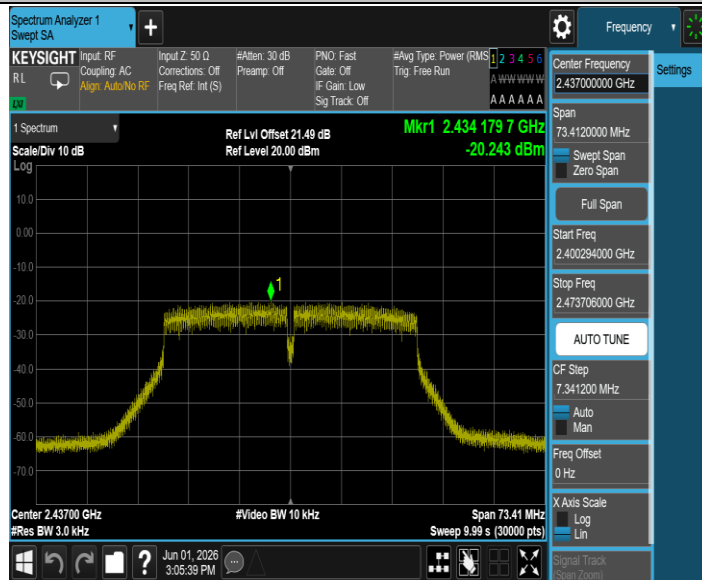
11N40MIMO_Ant2_2422



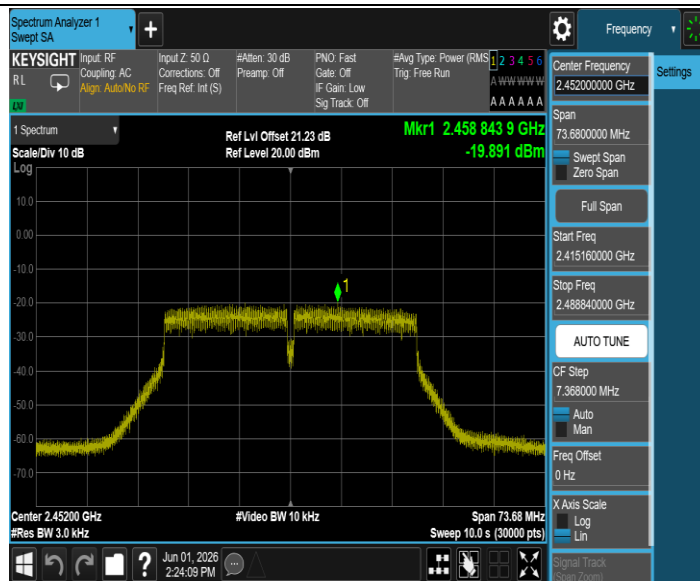
11N40MIMO_Ant1_2437



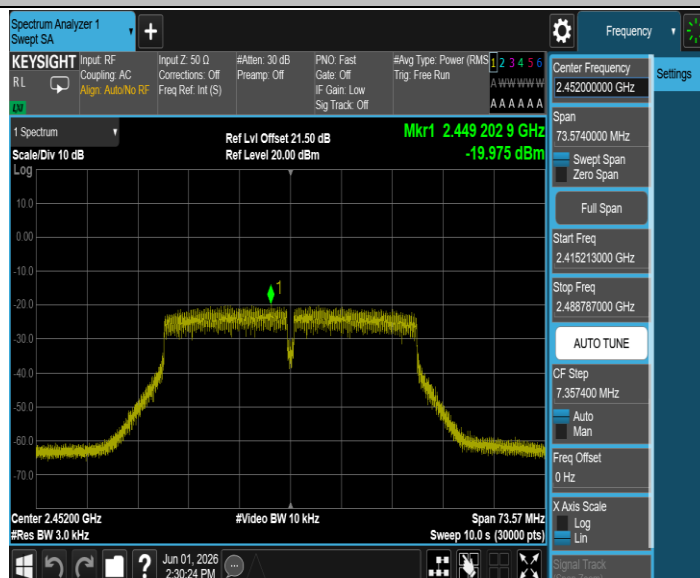
11N40MIMO_Ant2_2437



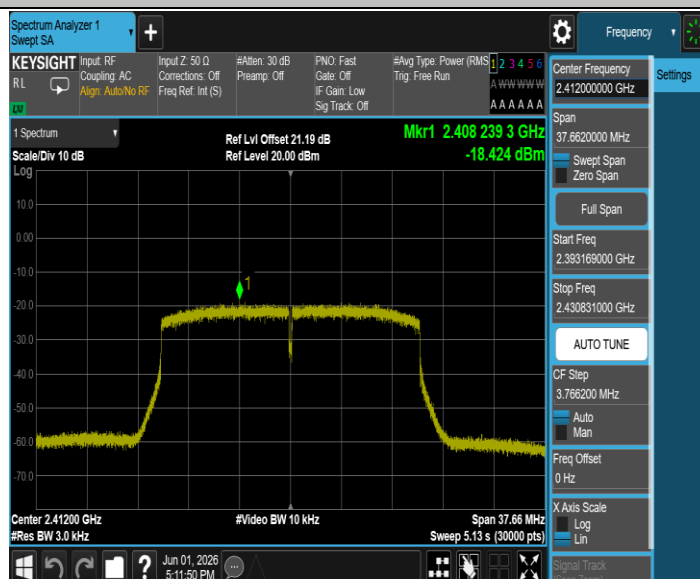
11N40MIMO_Ant1_2452



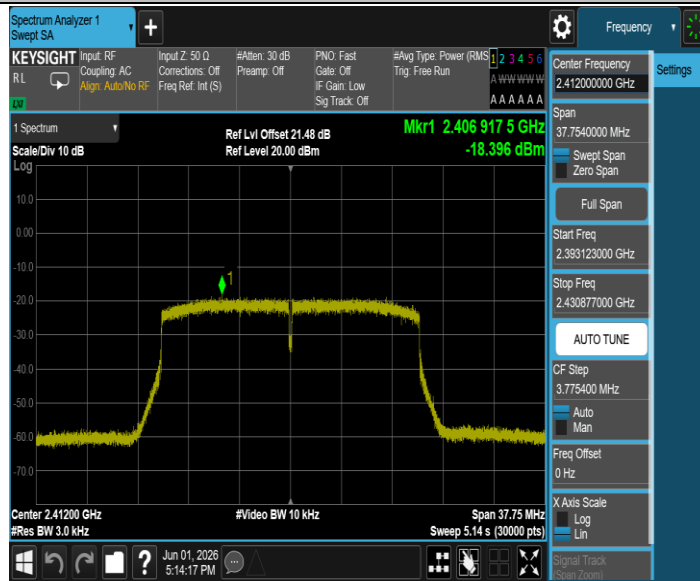
11N40MIMO_Ant2_2452



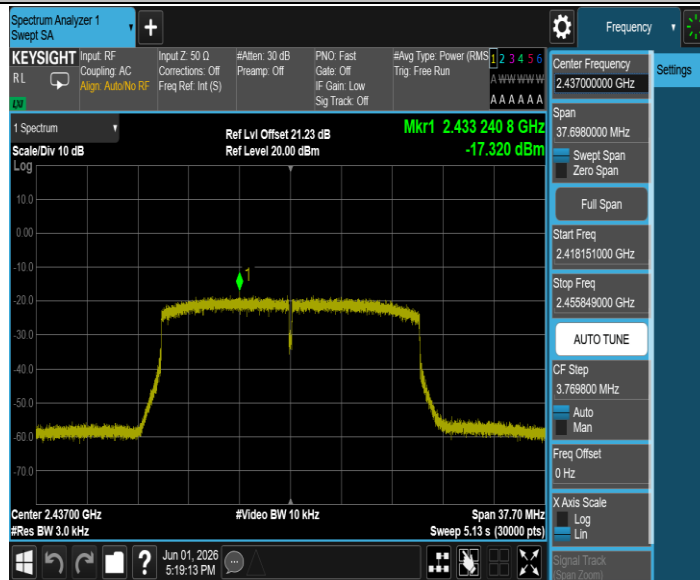
11AX20MIMO_Ant1_2412



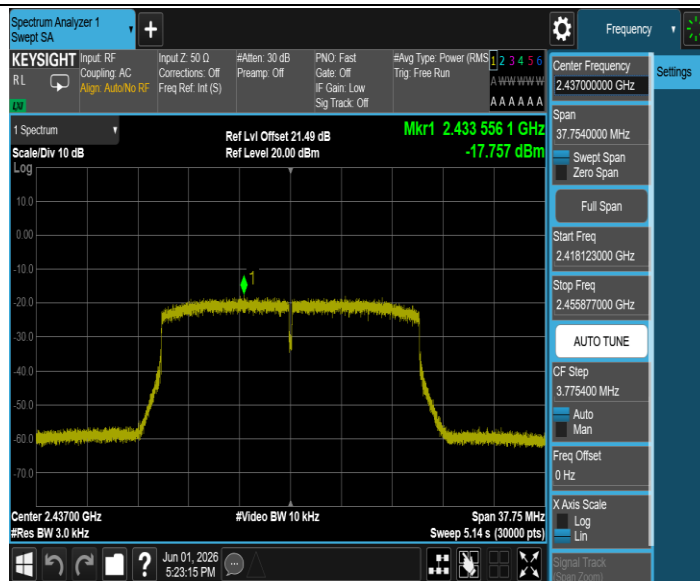
11AX20MIMO_Ant2_2412



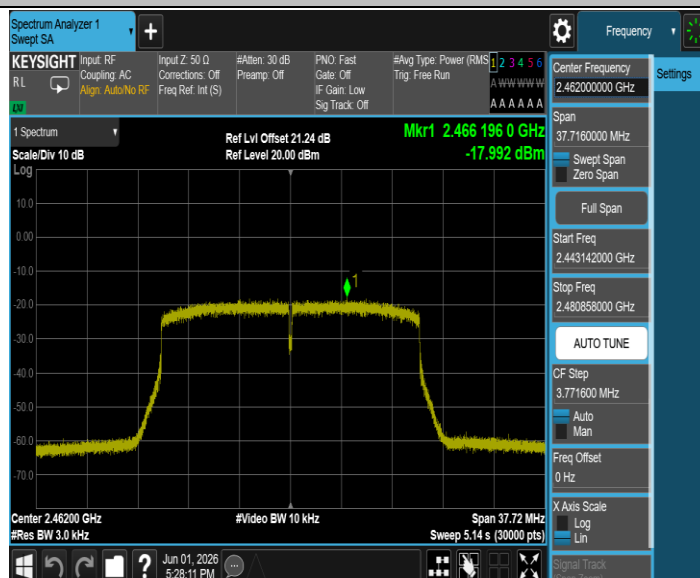
11AX20MIMO_Ant1_2437



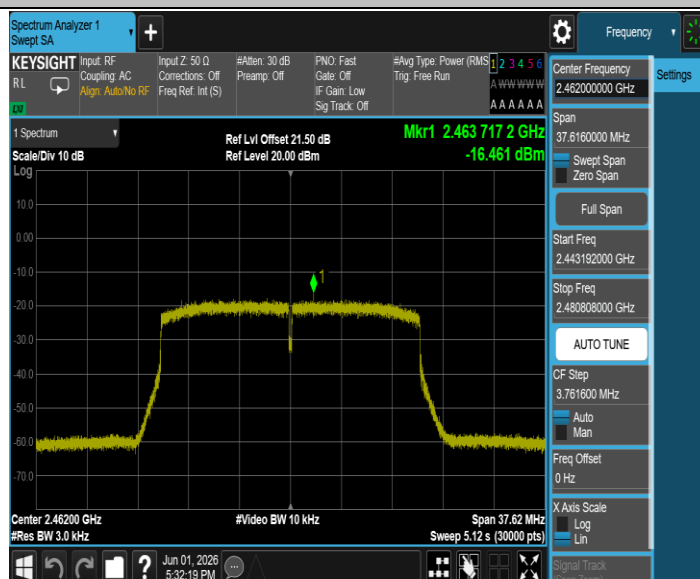
11AX20MIMO_Ant2_2437



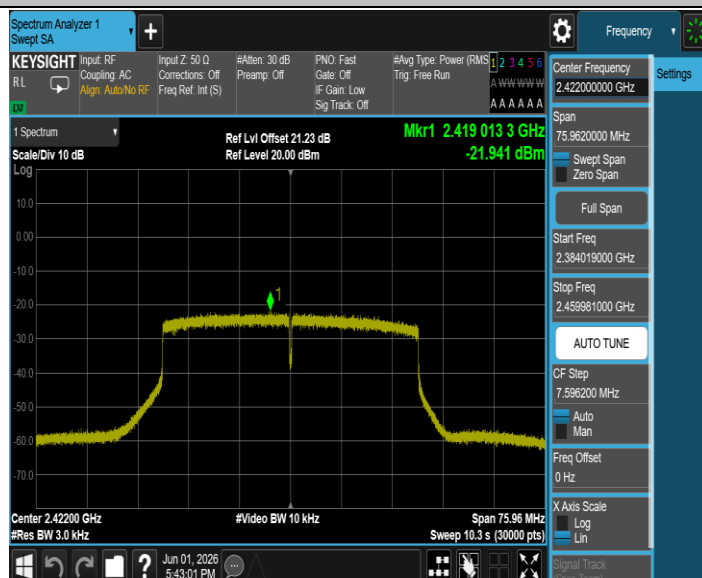
11AX20MIMO_Ant1_2462



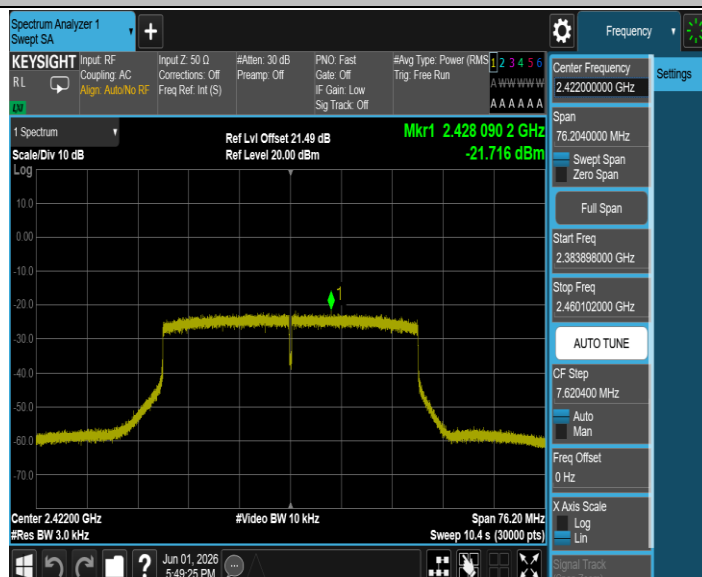
11AX20MIMO_Ant2_2462



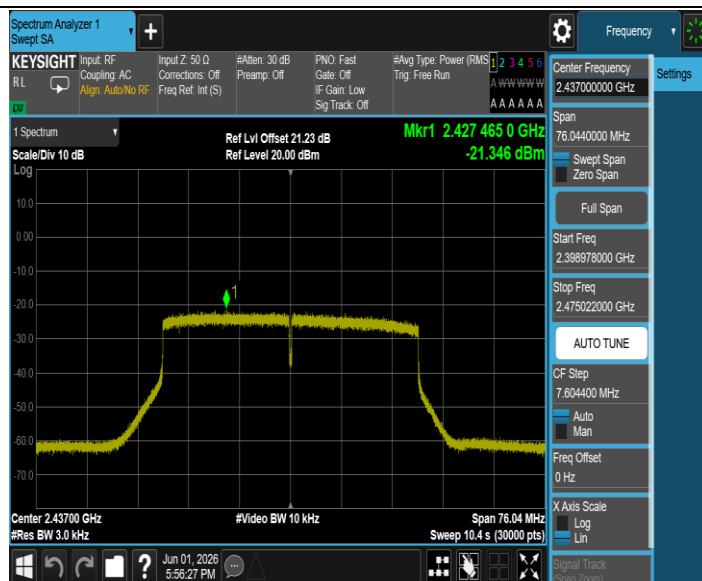
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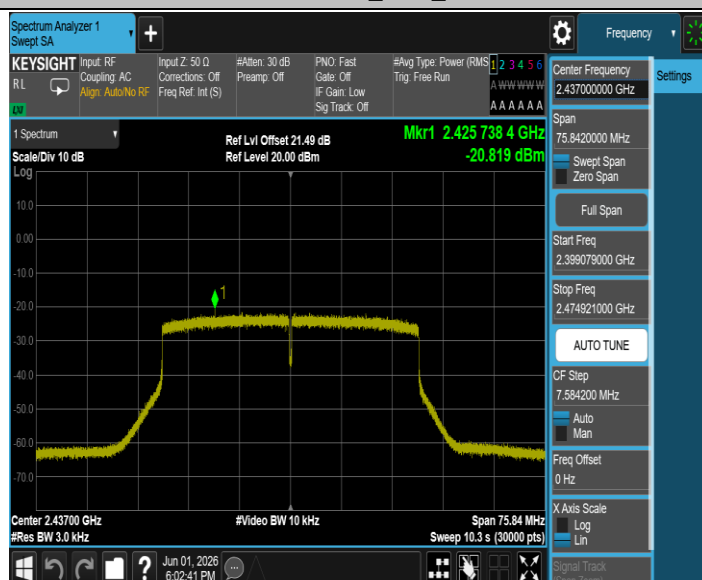
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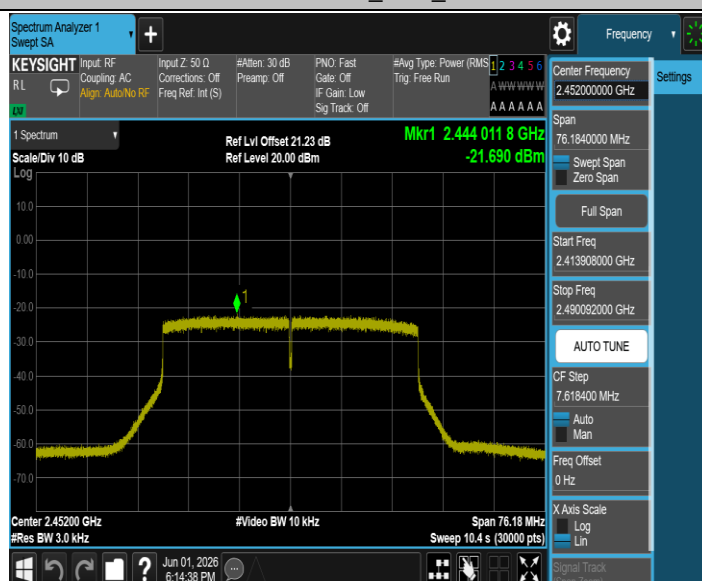
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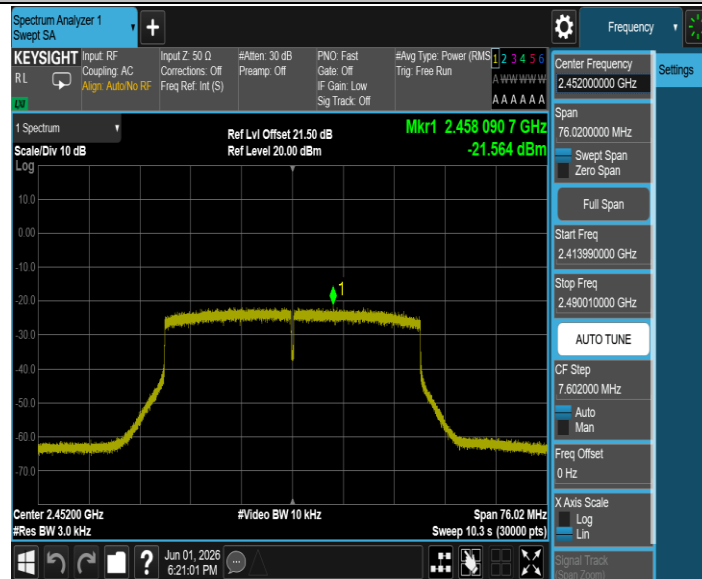
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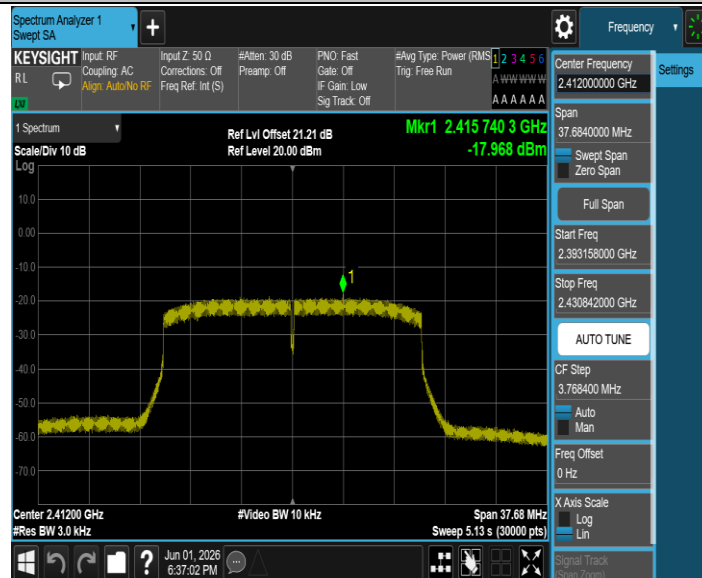
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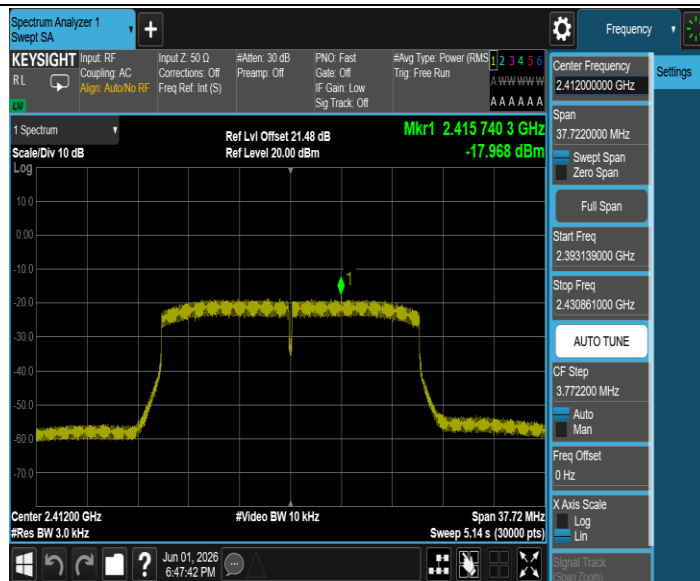
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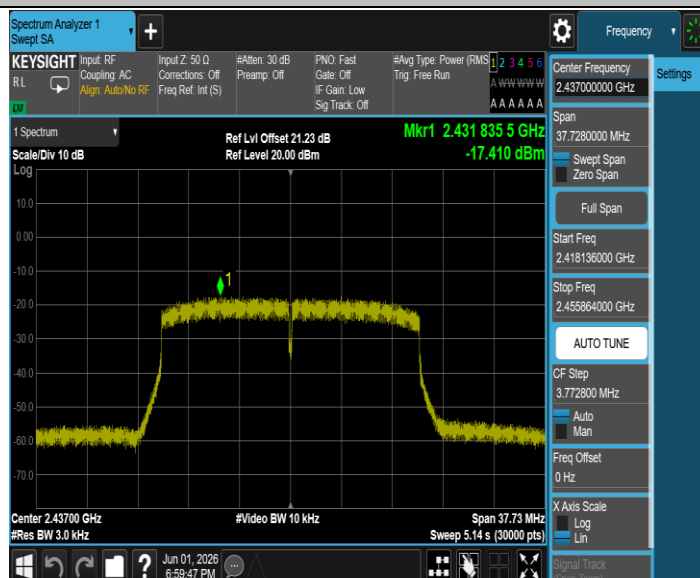
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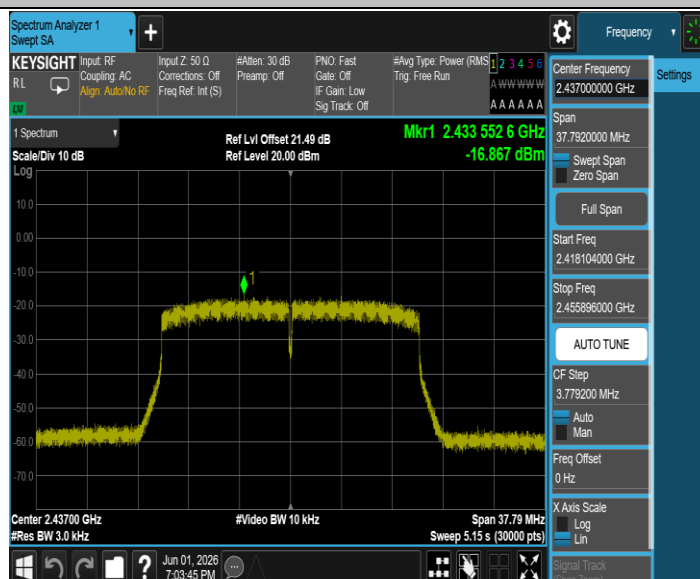
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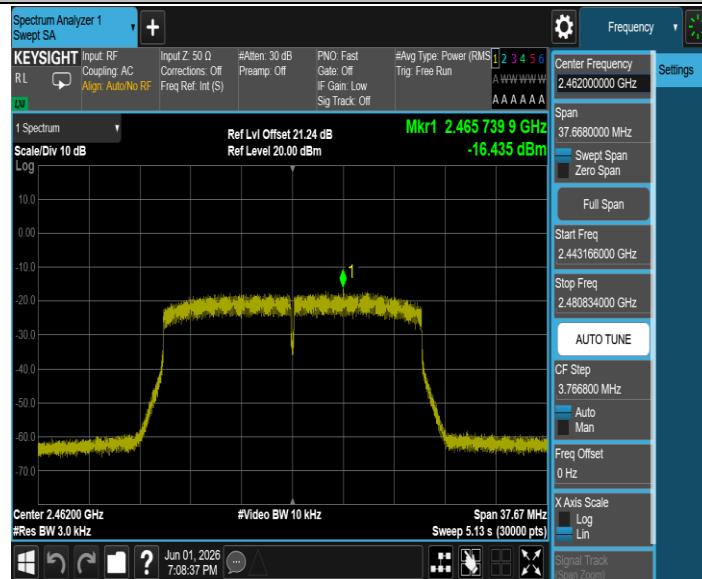
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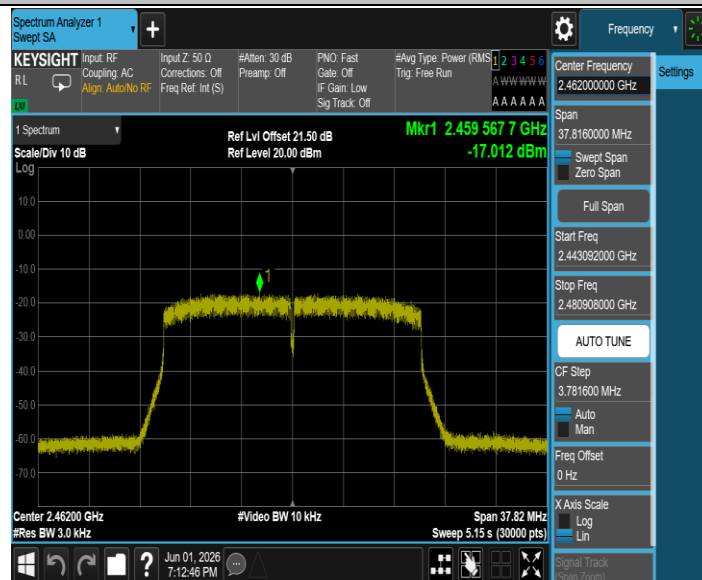
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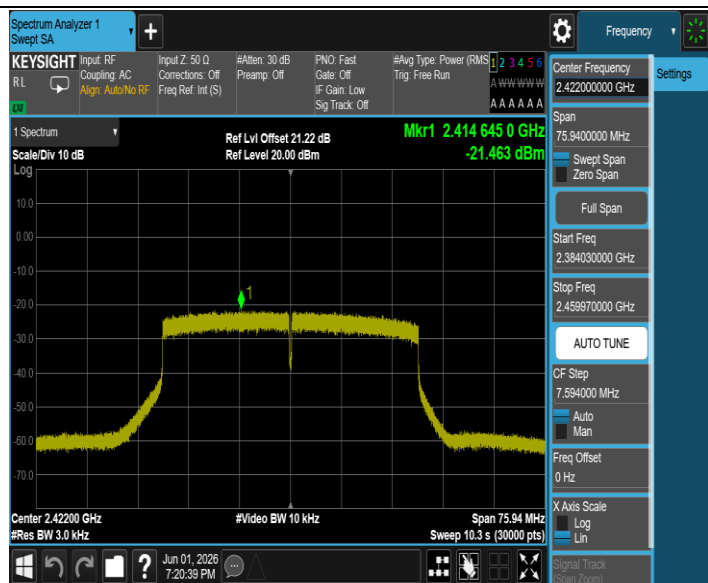
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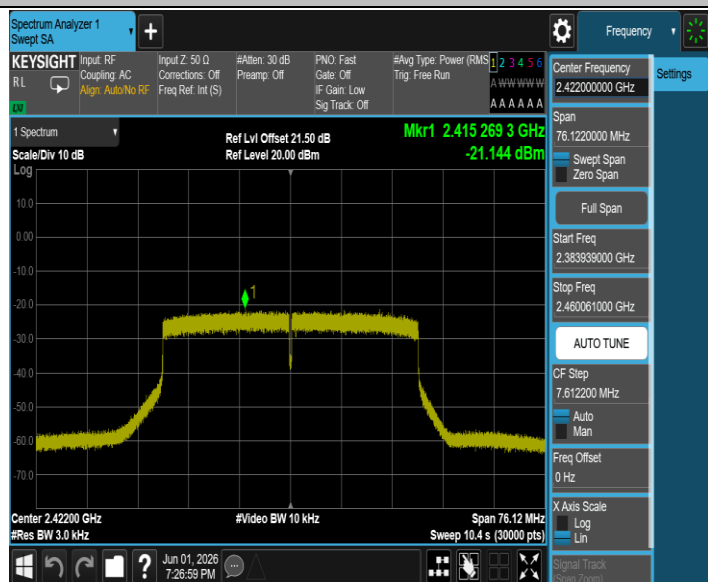
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11BE40MIMO_Ant1_2422



11BE40MIMO_Ant2_2422



11BE40MIMO_Ant1_2437

