



11G-MIMO_Ant1_2437



11G-MIMO_Ant4_2437



11G-MIMO_Ant1_2462



11G-MIMO_Ant4_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant4_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant4_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant4_2462



11N40MIMO_Ant1_2422



11N40MIMO_Ant4_2422



11N40MIMO_Ant1_2437



11N40MIMO_Ant4_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant4_2452



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant4_2412



11AX20MIMO_Ant1_2437



11AX20MIMO_Ant4_2437



11AX20MIMO_Ant1_2462



11AX20MIMO_Ant4_2462



11AX40MIMO_Ant1_2422



11AX40MIMO_Ant4_2422



11AX40MIMO_Ant1_2437



11AX40MIMO_Ant4_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant4_2452



Occupied Channel Bandwidth

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-MIMO	Ant1	2412	11.153	2406.4259	2417.5789	---	---
	Ant4	2412	11.133	2406.4239	2417.5569	---	---
	Ant1	2437	11.916	2431.0684	2442.9844	---	---
	Ant4	2437	10.838	2431.6484	2442.4864	---	---
	Ant1	2462	10.889	2456.5676	2467.4566	---	---
	Ant4	2462	11.044	2456.4885	2467.5325	---	---
11G-MIMO	Ant1	2412	17.111	2403.4179	2420.5289	---	---
	Ant4	2412	17.421	2403.3237	2420.7447	---	---
	Ant1	2437	17.633	2428.1678	2445.8008	---	---
	Ant4	2437	17.864	2428.1126	2445.9766	---	---
	Ant1	2462	17.179	2453.4330	2470.6120	---	---
	Ant4	2462	17.404	2453.3802	2470.7842	---	---
11N20MIMO	Ant1	2412	18.020	2403.0084	2421.0284	---	---
	Ant4	2412	18.464	2402.7395	2421.2035	---	---
	Ant1	2437	18.281	2427.8543	2446.1353	---	---
	Ant4	2437	18.663	2427.6312	2446.2942	---	---
	Ant1	2462	18.081	2452.9911	2471.0721	---	---
	Ant4	2462	18.447	2452.7437	2471.1907	---	---
11N40MIMO	Ant1	2422	36.505	2403.7964	2440.3014	---	---
	Ant4	2422	36.785	2403.6411	2440.4261	---	---
	Ant1	2437	36.571	2418.7419	2455.3129	---	---
	Ant4	2437	36.789	2418.6720	2455.4610	---	---
	Ant1	2452	36.536	2433.7649	2470.3009	---	---
	Ant4	2452	36.719	2433.6966	2470.4156	---	---
11AX20MIMO	Ant1	2412	19.234	2402.4419	2421.6759	---	---
	Ant4	2412	19.184	2402.4256	2421.6096	---	---
	Ant1	2437	19.377	2427.4234	2446.8004	---	---
	Ant4	2437	19.334	2427.3967	2446.7307	---	---
	Ant1	2462	19.226	2452.4622	2471.6882	---	---
	Ant4	2462	19.193	2452.4341	2471.6271	---	---
11AX40MIMO	Ant1	2422	37.684	2403.1537	2440.8377	---	---
	Ant4	2422	37.687	2403.1724	2440.8594	---	---
	Ant1	2437	37.657	2418.2109	2455.8679	---	---
	Ant4	2437	37.630	2418.2272	2455.8572	---	---
	Ant1	2452	37.668	2433.1947	2470.8627	---	---
	Ant4	2452	37.650	2433.2250	2470.8750	---	---

11B-MIMO_Ant1_2412



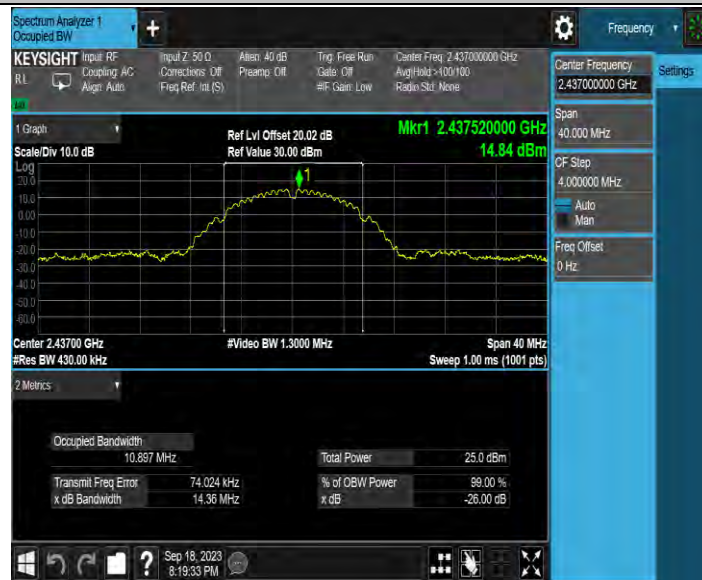
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11B-MIMO_Ant1_2437



11B-MIMO_Ant4_2437



11B-MIMO_Ant1_2462



11B-MIMO_Ant4_2462



11G-MIMO_Ant1_2412



11G-MIMO_Ant4_2412



11G-MIMO_Ant1_2437



11G-MIMO_Ant4_2437



11G-MIMO_Ant1_2462



11G-MIMO_Ant4_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant4_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant4_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant4_2462



11N40MIMO_Ant1_2422



11N40MIMO_Ant4_2422



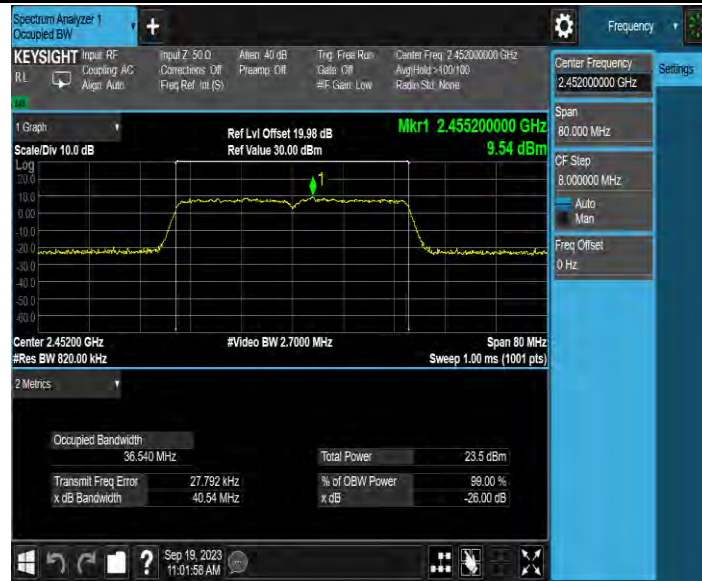
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11N40MIMO_Ant4_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant4_2452



11AX20MIMO_Ant1_2412



11AX20MIMO_Ant4_2412



11AX20MIMO_Ant1_2437



11AX20MIMO_Ant4_2437



11AX20MIMO_Ant1_2462



11AX20MIMO_Ant4_2462



11AX40MIMO_Ant1_2422



11AX40MIMO_Ant4_2422



11AX40MIMO_Ant1_2437



11AX40MIMO_Ant4_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant4_2452



3.5 Maximum conducted (Avg) output power

3.5.1 Limit

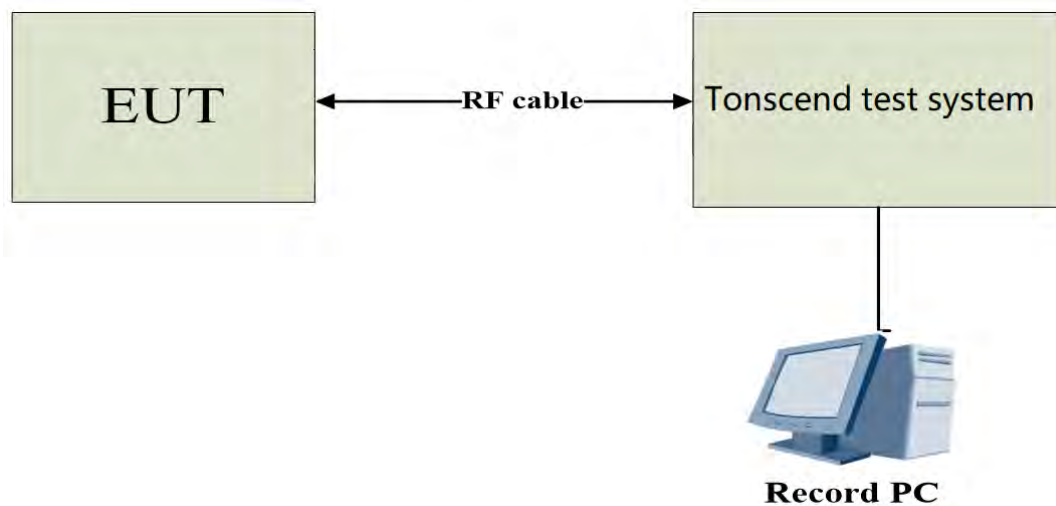
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

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 11.9.2.3.1 (for Avg power) of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

3.5.3 Test Setup



3.5.4 The Result

TestMode	Antenna	Frequency[MHz]	Conducted (Avg)Power[dBm]	Conducted Limit[dBm]	Verdict
11B-MIMO	Ant1	2412	18.69	≤30.00	PASS
	Ant4	2412	19.08	≤30.00	PASS
	total	2412	21.90	≤30.00	PASS
	Ant1	2437	21.55	≤30.00	PASS
	Ant4	2437	21.97	≤30.00	PASS
	total	2437	24.78	≤30.00	PASS
	Ant1	2462	19.51	≤30.00	PASS
	Ant4	2462	19.35	≤30.00	PASS
	total	2462	22.44	≤30.00	PASS
11G-MIMO	Ant1	2412	14.74	≤30.00	PASS
	Ant4	2412	15.52	≤30.00	PASS
	total	2412	18.16	≤30.00	PASS
	Ant1	2437	18.60	≤30.00	PASS
	Ant4	2437	19.56	≤30.00	PASS
	total	2437	22.12	≤30.00	PASS
	Ant1	2462	15.07	≤30.00	PASS
	Ant4	2462	15.91	≤30.00	PASS
	total	2462	18.52	≤30.00	PASS
11N20MIMO	Ant1	2412	15.00	≤30.00	PASS
	Ant4	2412	15.67	≤30.00	PASS
	total	2412	18.36	≤30.00	PASS
	Ant1	2437	18.79	≤30.00	PASS
	Ant4	2437	19.59	≤30.00	PASS
	total	2437	22.22	≤30.00	PASS
	Ant1	2462	15.06	≤30.00	PASS
	Ant4	2462	15.88	≤30.00	PASS
	total	2462	18.50	≤30.00	PASS
11N40MIMO	Ant1	2422	14.26	≤30.00	PASS
	Ant4	2422	15.05	≤30.00	PASS
	total	2422	17.68	≤30.00	PASS
	Ant1	2437	16.00	≤30.00	PASS
	Ant4	2437	16.81	≤30.00	PASS
	total	2437	19.43	≤30.00	PASS
	Ant1	2452	15.23	≤30.00	PASS
	Ant4	2452	16.17	≤30.00	PASS
	total	2452	18.74	≤30.00	PASS
11AX20MIMO	Ant1	2412	13.25	≤30.00	PASS

O	O	Ant4	2412	13.86	≤30.00	PASS
		total	2412	16.58	≤30.00	PASS
		Ant1	2437	18.75	≤30.00	PASS
		Ant4	2437	19.36	≤30.00	PASS
		total	2437	22.08	≤30.00	PASS
		Ant1	2462	13.26	≤30.00	PASS
		Ant4	2462	13.89	≤30.00	PASS
		total	2462	16.60	≤30.00	PASS
	11AX40MIM O	Ant1	2422	14.63	≤30.00	PASS
		Ant4	2422	15.40	≤30.00	PASS
		total	2422	18.04	≤30.00	PASS
		Ant1	2437	16.31	≤30.00	PASS
		Ant4	2437	16.98	≤30.00	PASS
		total	2437	19.67	≤30.00	PASS
		Ant1	2452	15.34	≤30.00	PASS
		Ant4	2452	16.27	≤30.00	PASS
		total	2452	18.84	≤30.00	PASS

Note: The results have compensated for the Duty Cycle Correction Factor

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

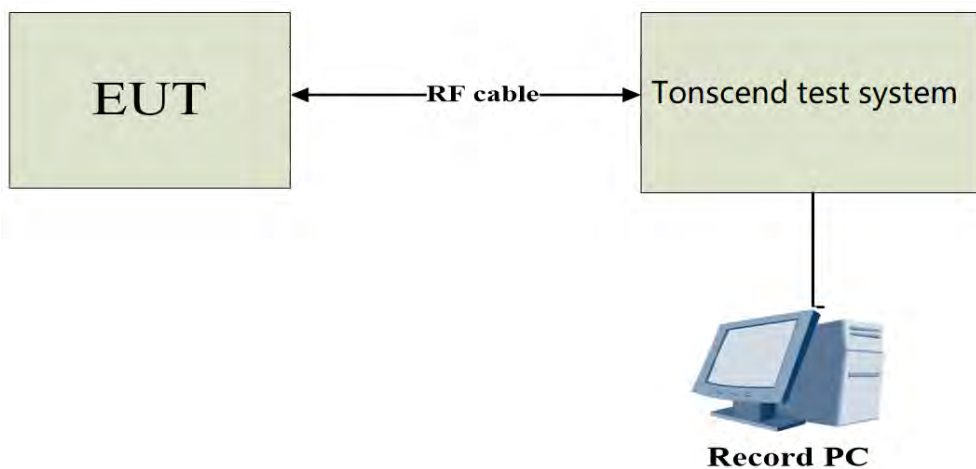
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ● : Test ○ : No Test	

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	Peak
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup



3.6.4 The Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B-MIMO	Ant1	2412	-6.89	≤8.00	PASS
	Ant4	2412	-2.76	≤8.00	PASS
	total	2412	-1.19	≤8.00	PASS
	Ant1	2437	-4.65	≤8.00	PASS
	Ant4	2437	0.91	≤8.00	PASS
	total	2437	1.98	≤8.00	PASS
	Ant1	2462	-5.30	≤8.00	PASS
	Ant4	2462	-1.78	≤8.00	PASS
	total	2462	-0.18	≤8.00	PASS
11G-MIMO	Ant1	2412	-9.74	≤8.00	PASS
	Ant4	2412	-9.20	≤8.00	PASS
	total	2412	-6.45	≤8.00	PASS
	Ant1	2437	-6.03	≤8.00	PASS
	Ant4	2437	-5.03	≤8.00	PASS
	total	2437	-2.49	≤8.00	PASS
	Ant1	2462	-9.26	≤8.00	PASS
	Ant4	2462	-8.36	≤8.00	PASS
	total	2462	-5.78	≤8.00	PASS
11N20MIMO	Ant1	2412	-10.39	≤8.00	PASS
	Ant4	2412	-10.34	≤8.00	PASS
	total	2412	-7.35	≤8.00	PASS
	Ant1	2437	-6.48	≤8.00	PASS
	Ant4	2437	-5.95	≤8.00	PASS
	total	2437	-3.20	≤8.00	PASS
	Ant1	2462	-9.72	≤8.00	PASS
	Ant4	2462	-9.37	≤8.00	PASS
	total	2462	-6.53	≤8.00	PASS
11N40MIMO	Ant1	2422	-14.47	≤8.00	PASS
	Ant4	2422	-13.28	≤8.00	PASS
	total	2422	-10.82	≤8.00	PASS
	Ant1	2437	-12.35	≤8.00	PASS
	Ant4	2437	-10.80	≤8.00	PASS
	total	2437	-8.50	≤8.00	PASS
	Ant1	2452	-13.30	≤8.00	PASS
	Ant4	2452	-11.93	≤8.00	PASS
	total	2452	-9.55	≤8.00	PASS
11AX20MIMO	Ant1	2412	-11.64	≤8.00	PASS
	Ant4	2412	-12.41	≤8.00	PASS
	total	2412	-9.00	≤8.00	PASS

	Ant1	2437	-6.38	≤8.00	PASS
	Ant4	2437	-5.08	≤8.00	PASS
	total	2437	-2.67	≤8.00	PASS
	Ant1	2462	-11.52	≤8.00	PASS
	Ant4	2462	-10.73	≤8.00	PASS
	total	2462	-8.10	≤8.00	PASS
11AX40MIMO	Ant1	2422	-14.30	≤8.00	PASS
	Ant4	2422	-13.27	≤8.00	PASS
	total	2422	-10.74	≤8.00	PASS
	Ant1	2437	-12.56	≤8.00	PASS
	Ant4	2437	-11.87	≤8.00	PASS
	total	2437	-9.19	≤8.00	PASS
	Ant1	2452	-13.49	≤8.00	PASS
	Ant4	2452	-12.70	≤8.00	PASS
	total	2452	-10.07	≤8.00	PASS

Note: The results have compensated for the Duty Cycle Correction Factor

11B-MIMO_Ant1_2412



11B-MIMO_Ant4_2412



11B-MIMO_Ant1_2437



11B-MIMO_Ant4_2437



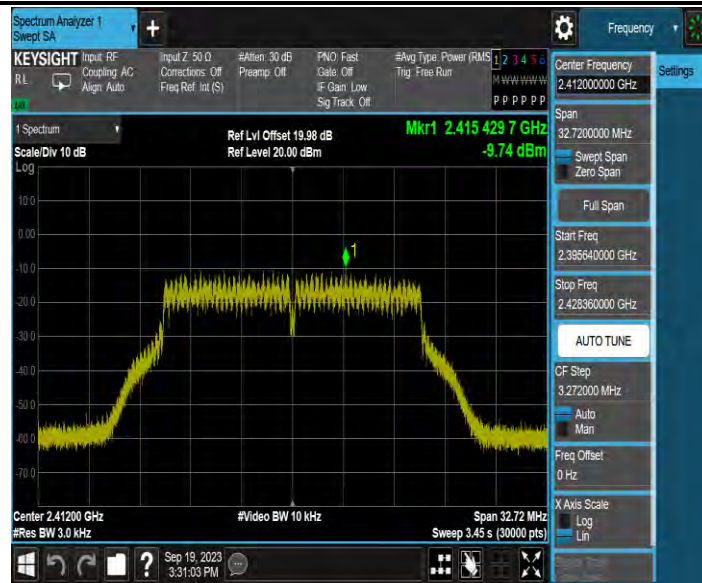
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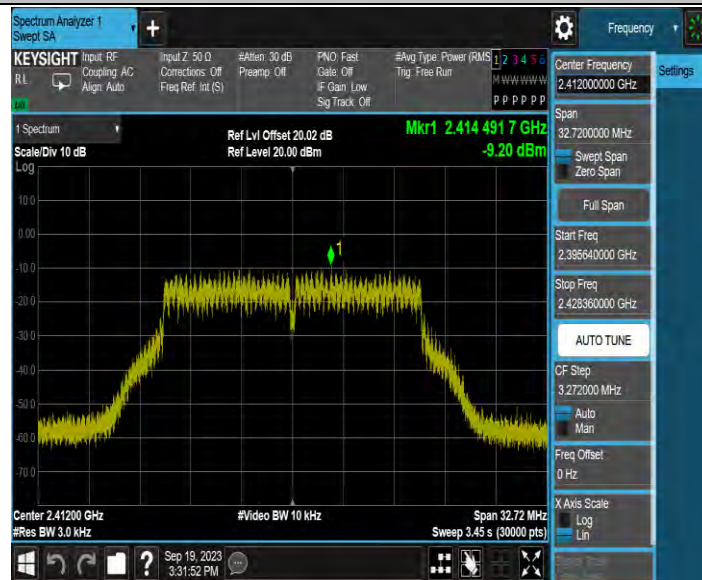
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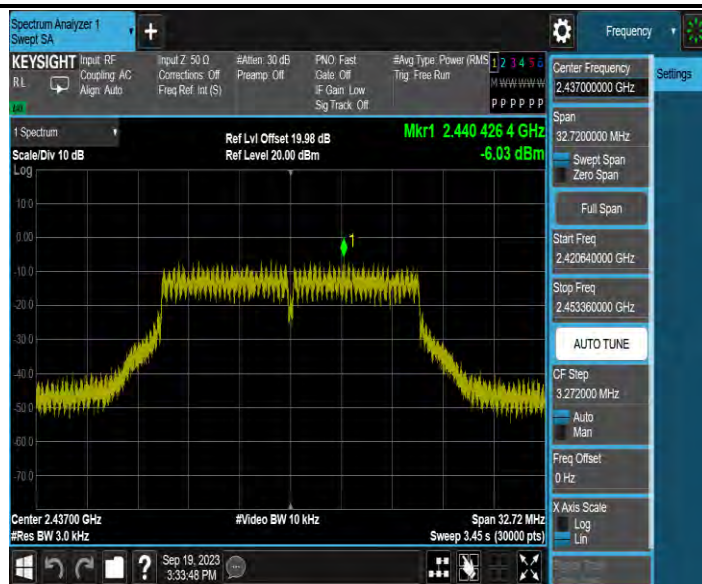
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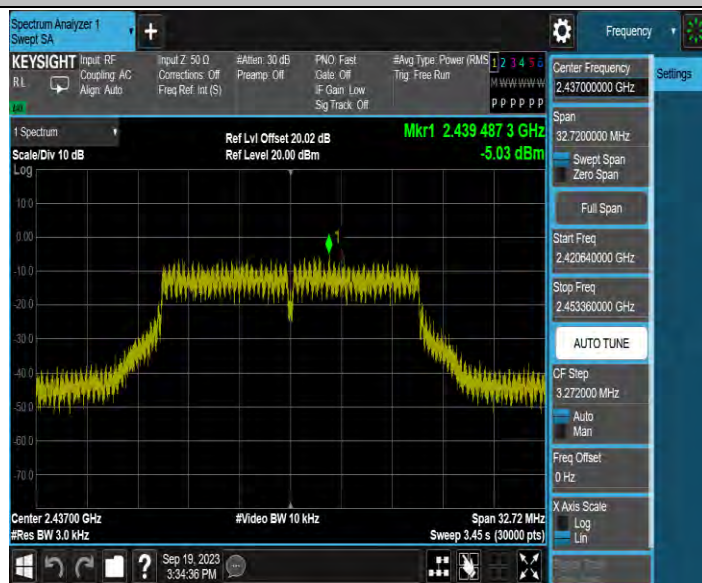
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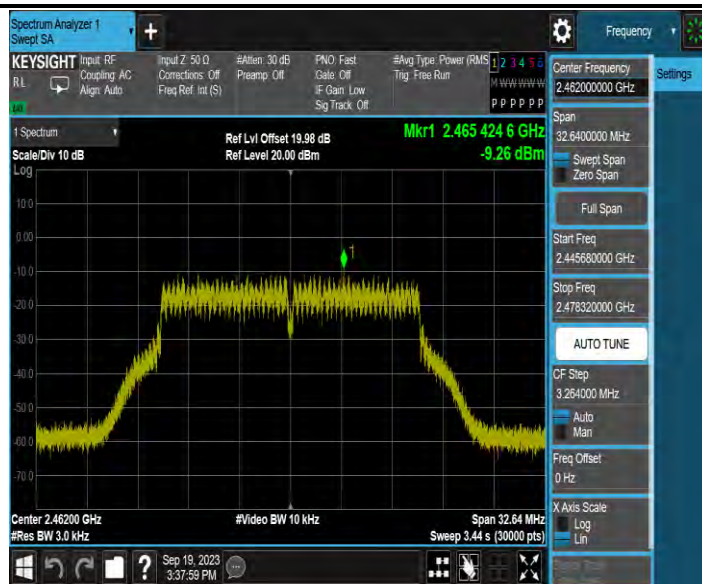
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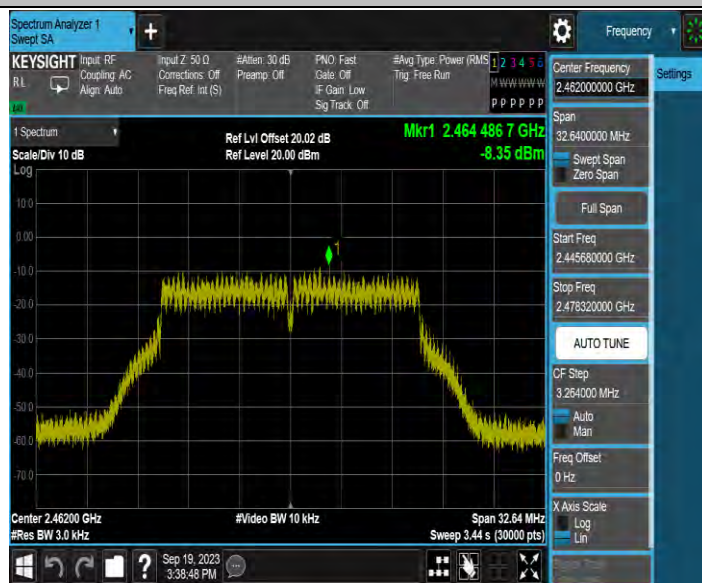
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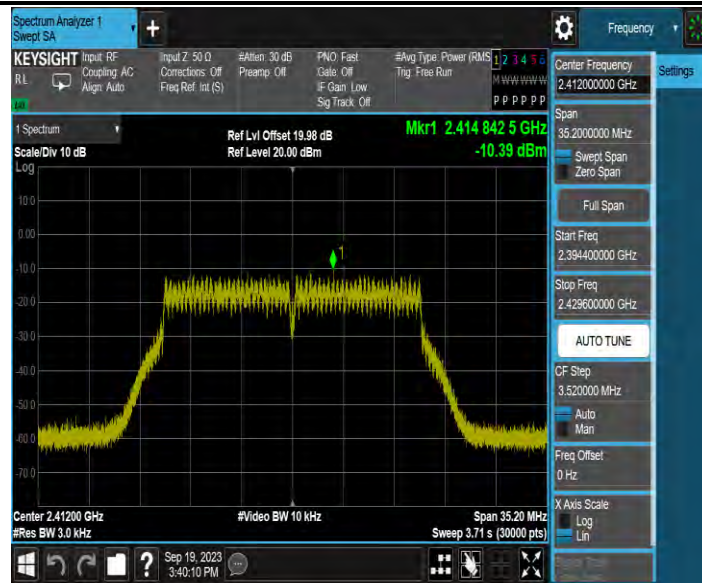
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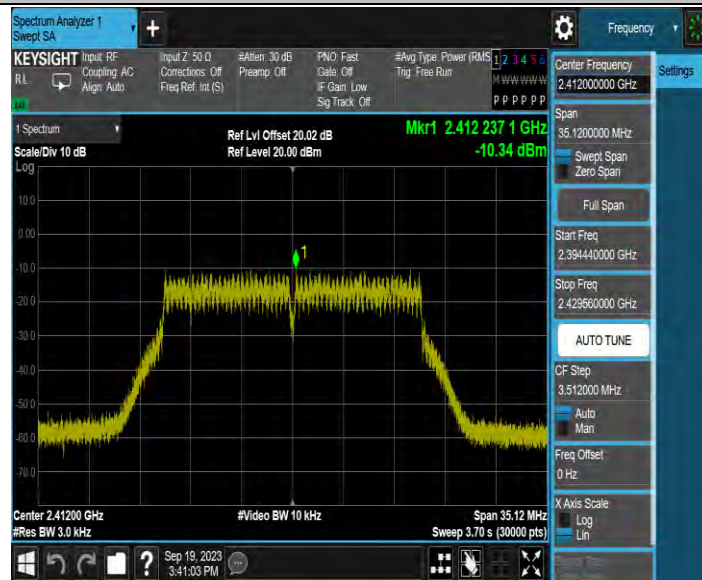
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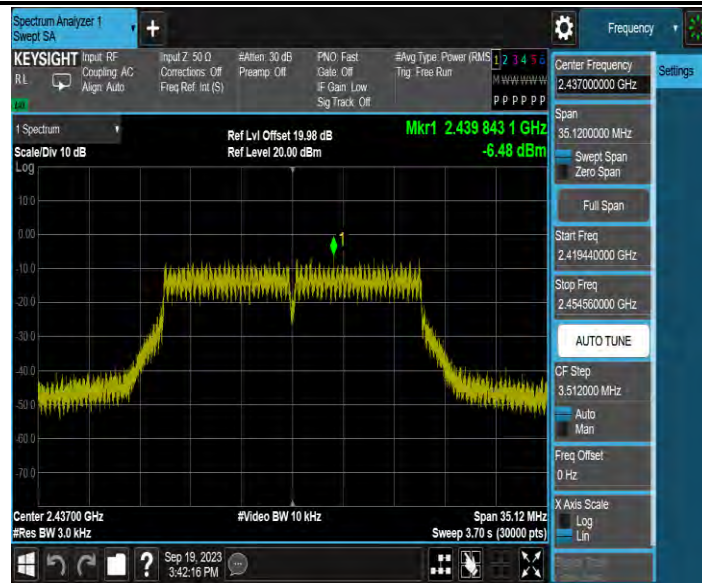
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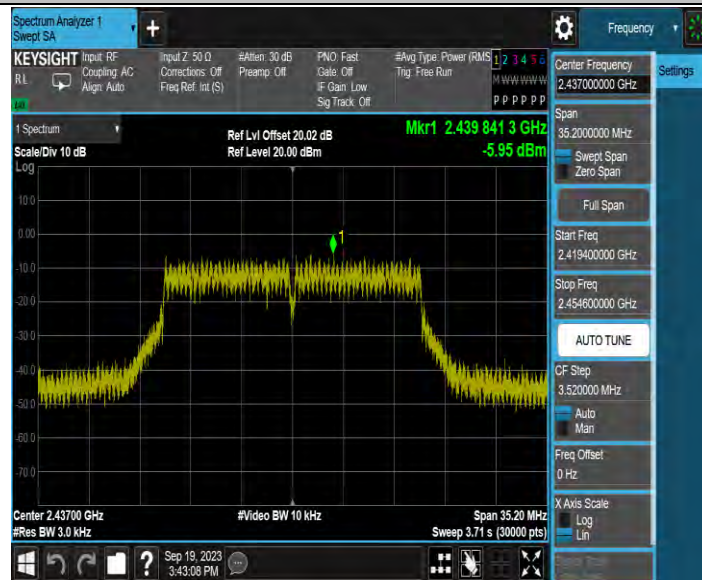
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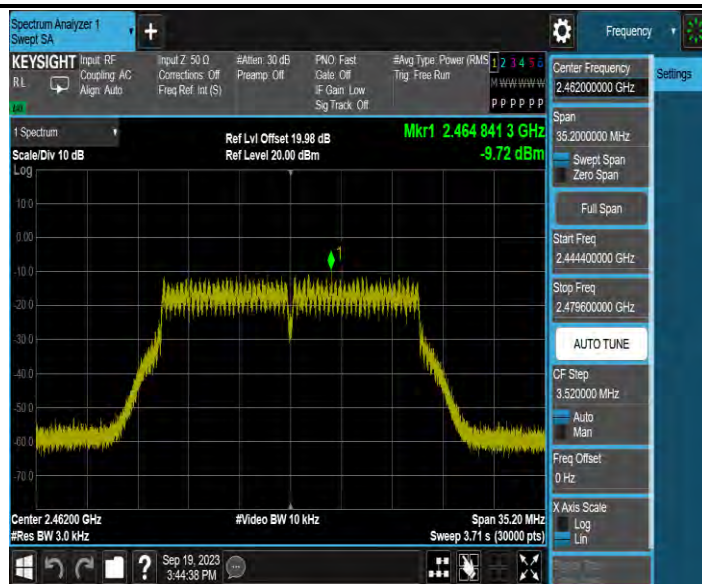
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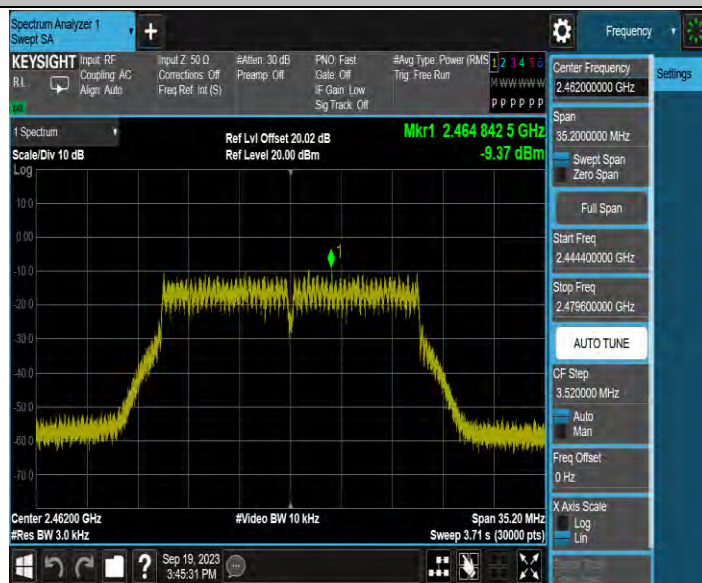
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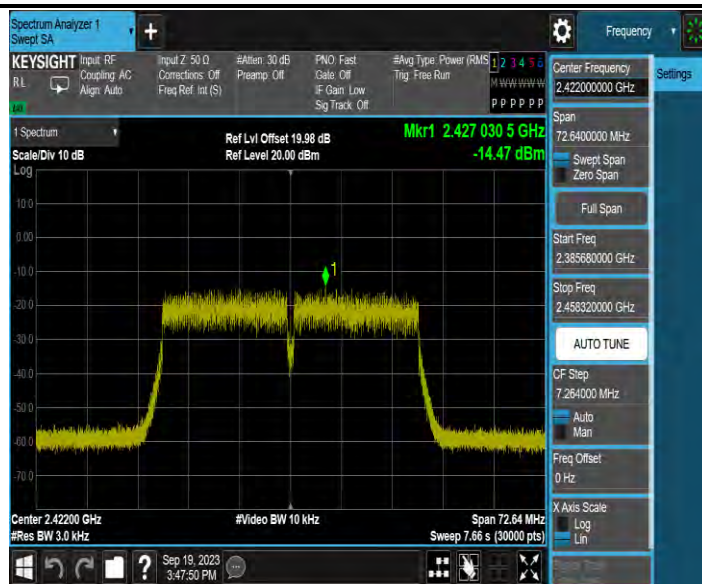
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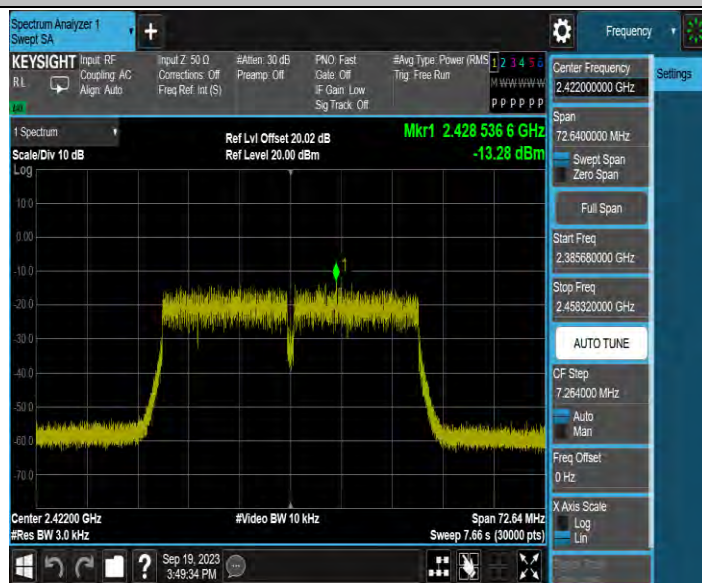
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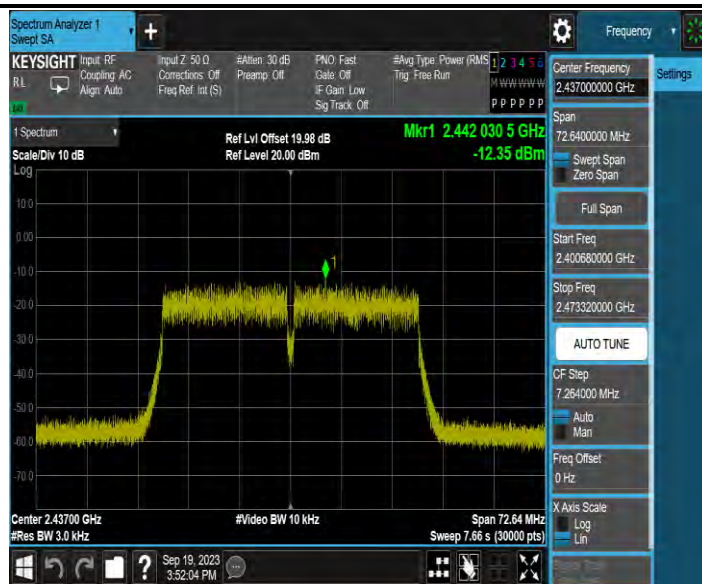
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11N40MIMO_Ant4_2422



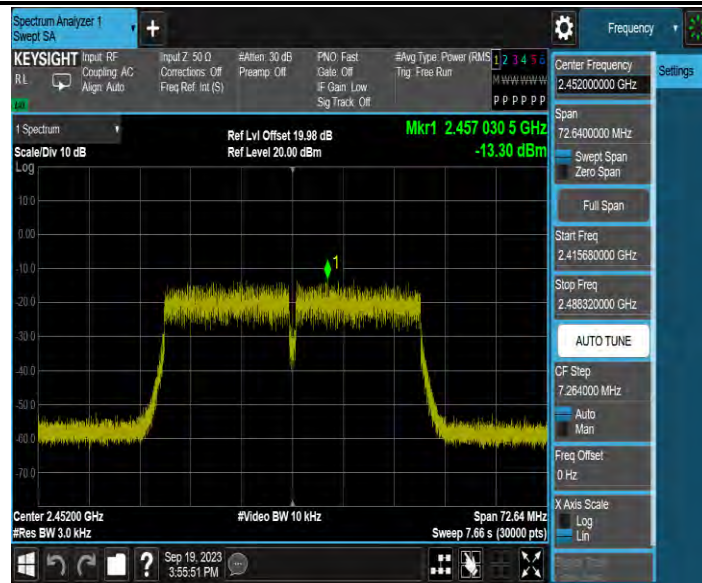
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11N40MIMO_Ant4_2437



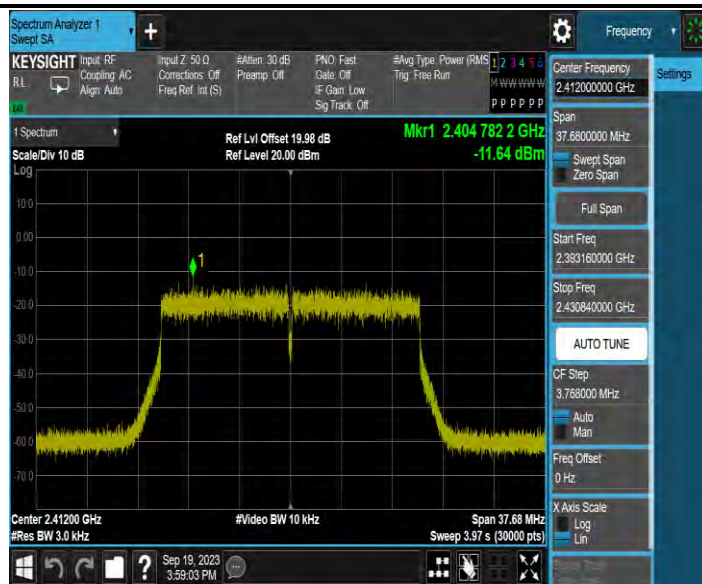
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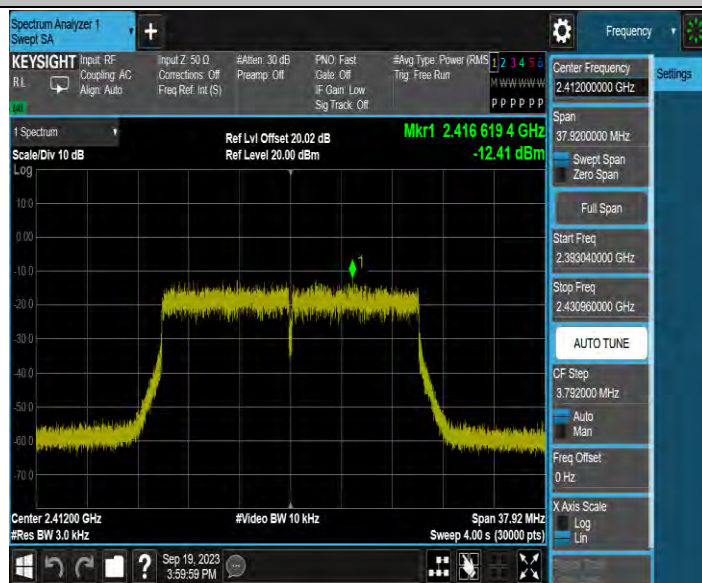
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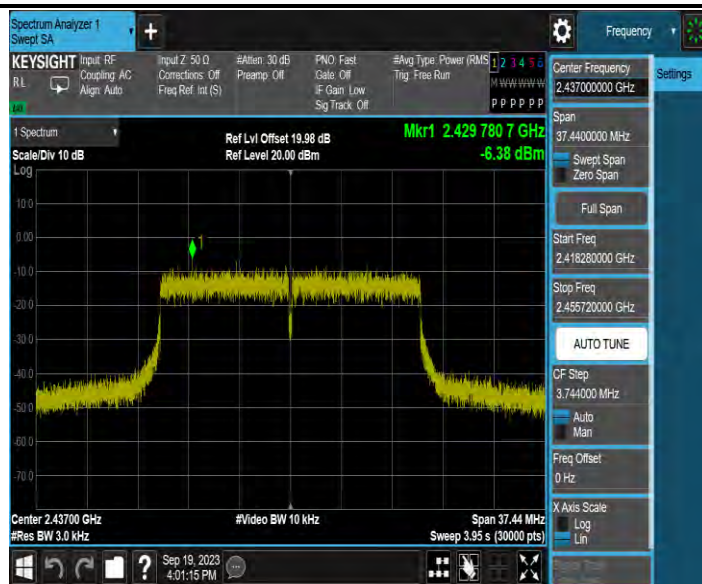
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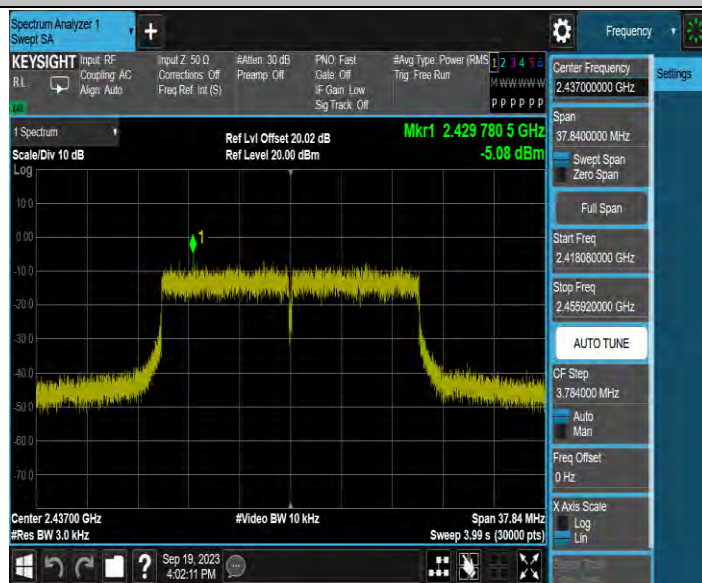
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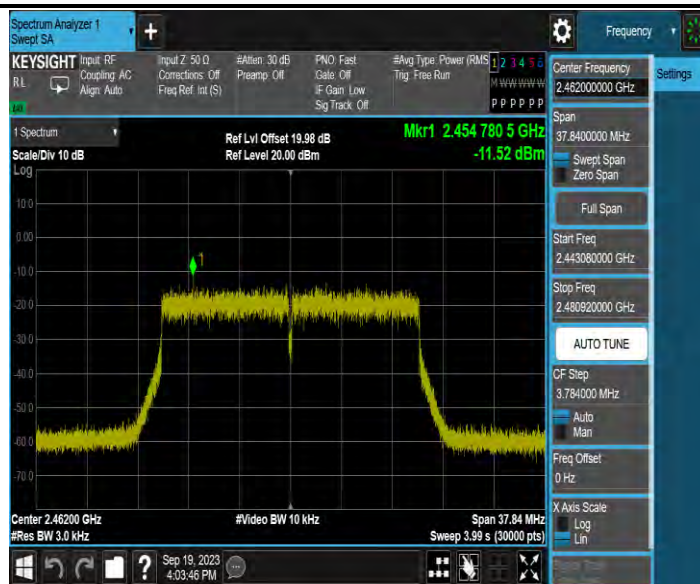
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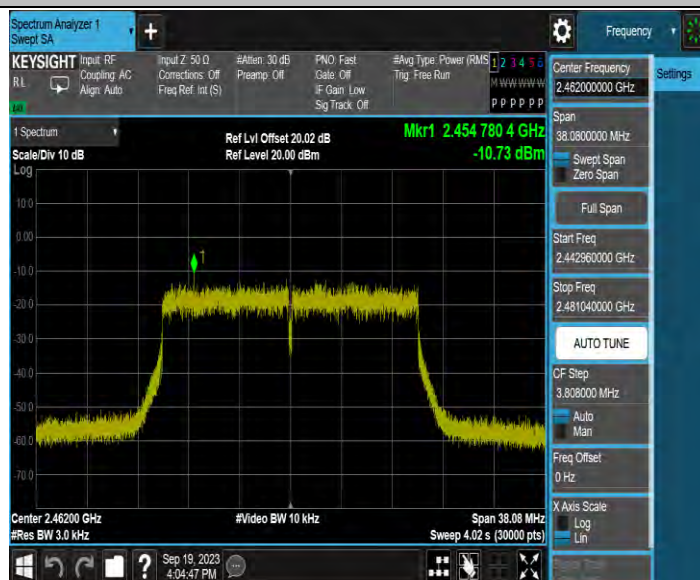
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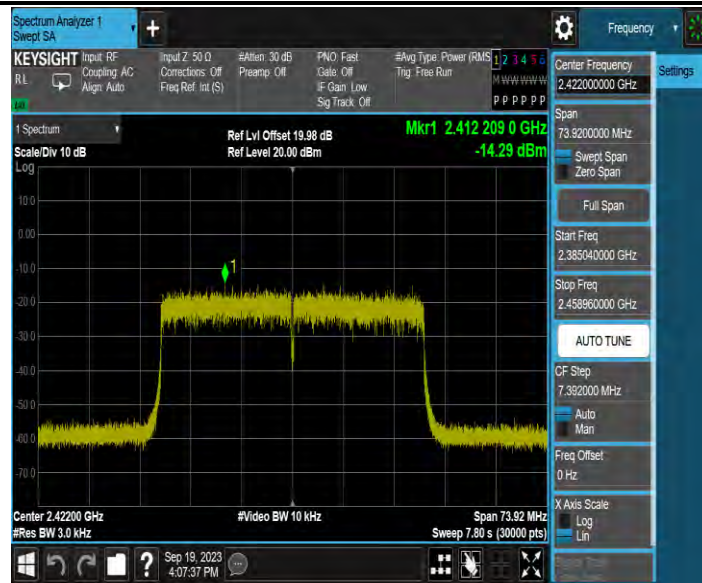
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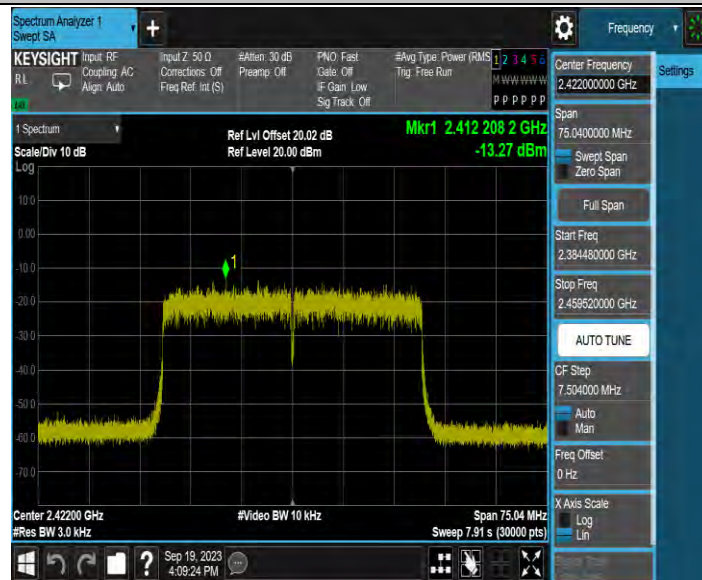
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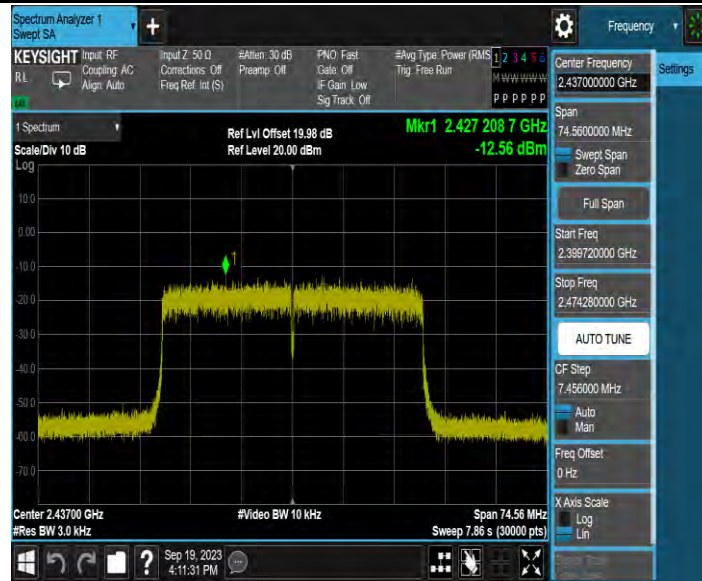
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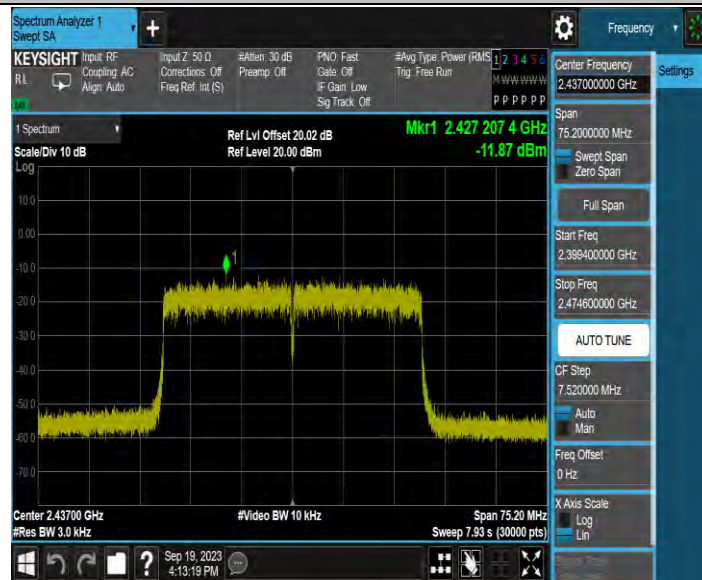
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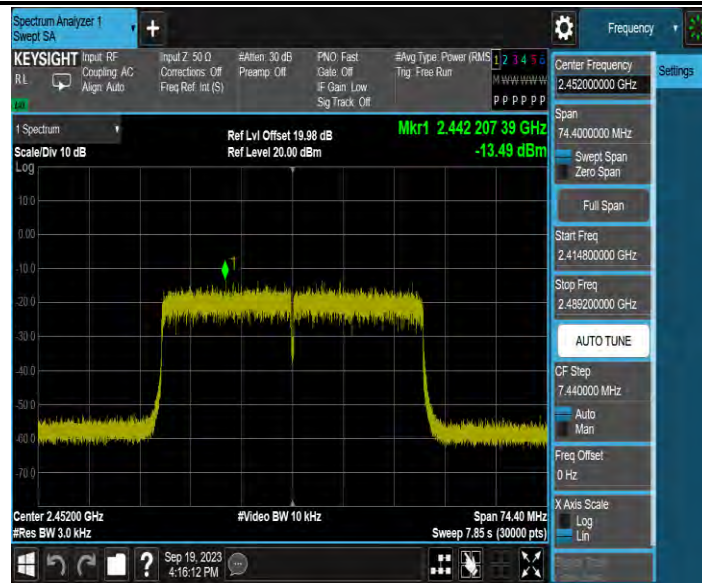
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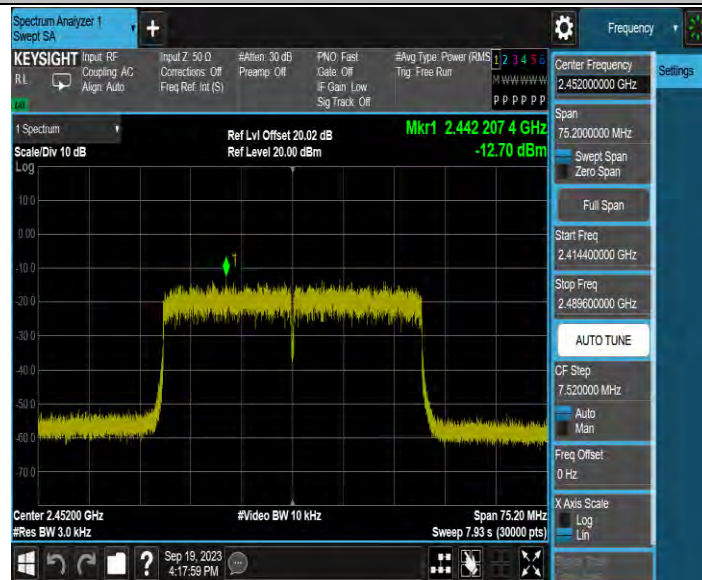
11AX40MIMO_Ant4_2437



11AX40MIMO_Ant1_2452



11AX40MIMO_Ant4_2452



Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technology Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technology Co., Ltd.

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Tel: 0755-26024411

Email: service@hy-lab.cn

End of Test Report