

RF Test Data for 2.4G Wi-Fi (Conducted Measurements)

General Description of EUT	
Product Name:	WIFI6 AX
Test Model:	AX02
Sample ID:	HC-C-202405-0242-01-01-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 12V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202405-0242-14	

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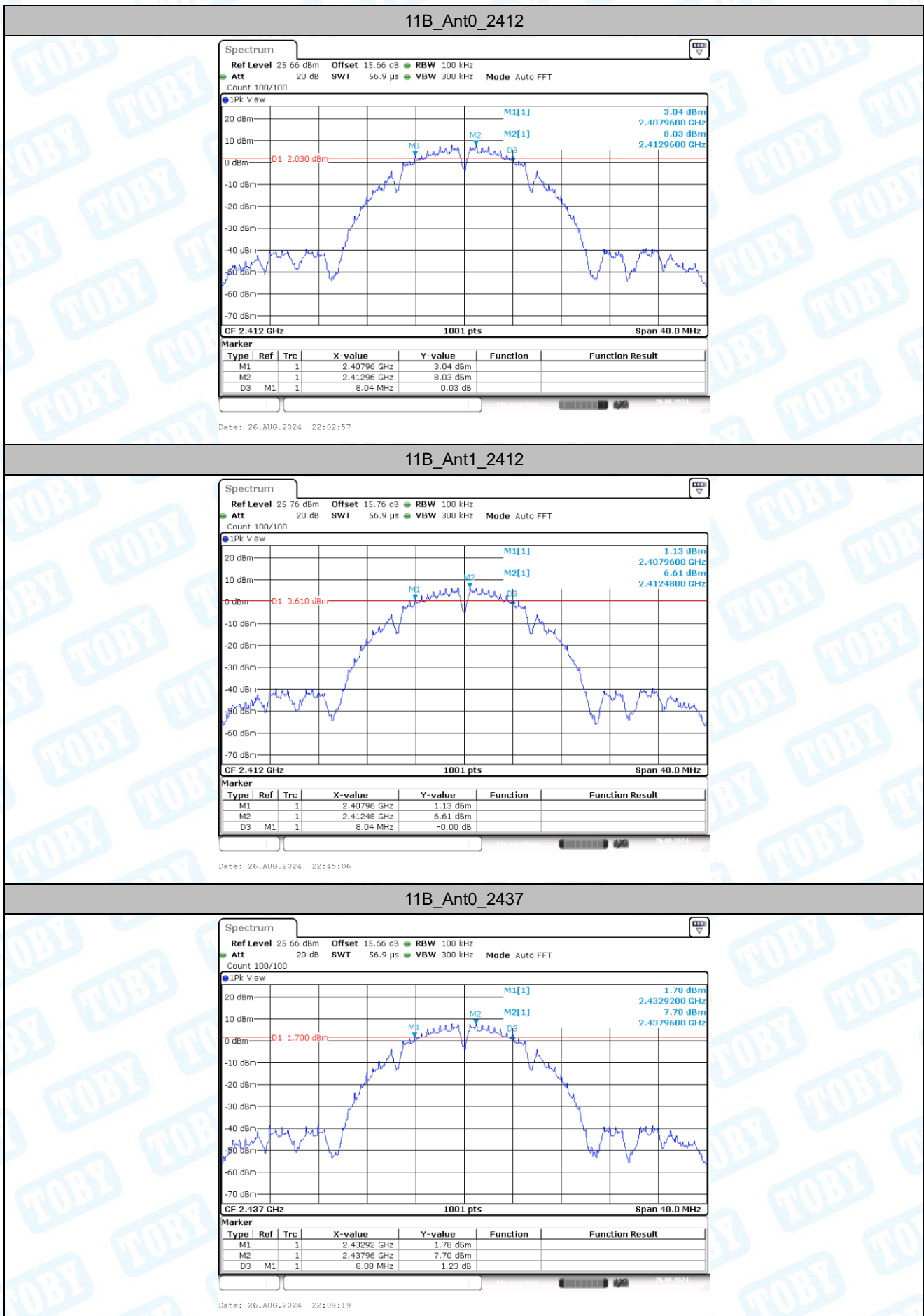
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1. DTS Bandwidth

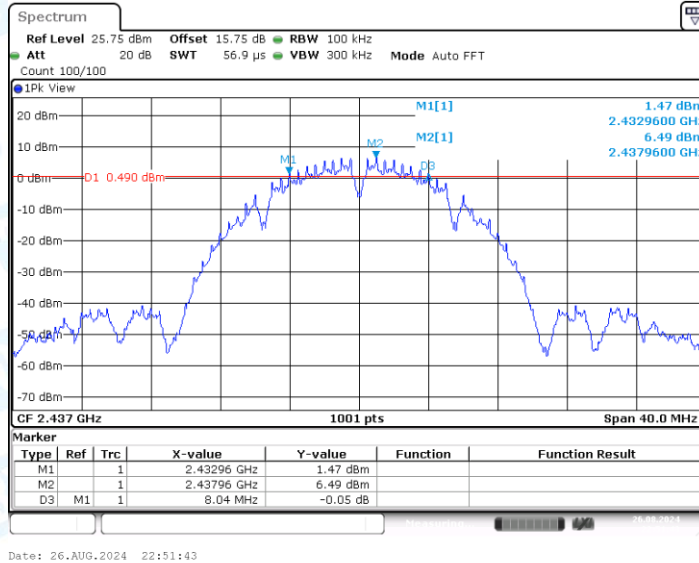
1.1. Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant0	2412	8.04	2407.96	2416.00	0.5	PASS
	Ant1	2412	8.04	2407.96	2416.00	0.5	PASS
	Ant0	2437	8.08	2432.92	2441.00	0.5	PASS
	Ant1	2437	8.04	2432.96	2441.00	0.5	PASS
	Ant0	2462	8.04	2457.96	2466.00	0.5	PASS
	Ant1	2462	8.52	2457.48	2466.00	0.5	PASS
11G	Ant0	2412	16.36	2403.80	2420.16	0.5	PASS
	Ant1	2412	13.80	2405.68	2419.48	0.5	PASS
	Ant0	2437	15.12	2429.44	2444.56	0.5	PASS
	Ant1	2437	13.84	2429.44	2443.28	0.5	PASS
	Ant0	2462	16.28	2453.84	2470.12	0.5	PASS
	Ant1	2462	12.64	2455.64	2468.28	0.5	PASS
11N20MIMO	Ant0	2412	15.08	2404.44	2419.52	0.5	PASS
	Ant1	2412	17.56	2403.20	2420.76	0.5	PASS
	Ant0	2437	15.16	2429.40	2444.56	0.5	PASS
	Ant1	2437	17.56	2428.20	2445.76	0.5	PASS
	Ant0	2462	13.88	2455.64	2469.52	0.5	PASS
	Ant1	2462	17.56	2453.20	2470.76	0.5	PASS
11N40MIMO	Ant0	2422	35.04	2404.48	2439.52	0.5	PASS
	Ant1	2422	35.12	2404.40	2439.52	0.5	PASS
	Ant0	2437	35.04	2419.48	2454.52	0.5	PASS
	Ant1	2437	35.12	2419.40	2454.52	0.5	PASS
	Ant0	2452	29.44	2434.40	2463.84	0.5	PASS
	Ant1	2452	31.28	2438.24	2469.52	0.5	PASS
11AX20MIMO	Ant0	2412	19.04	2402.48	2421.52	0.5	PASS
	Ant1	2412	18.52	2402.64	2421.16	0.5	PASS
	Ant0	2437	17.36	2428.40	2445.76	0.5	PASS
	Ant1	2437	16.36	2429.12	2445.48	0.5	PASS
	Ant0	2462	18.68	2452.60	2471.28	0.5	PASS
	Ant1	2462	16.76	2454.28	2471.04	0.5	PASS
11AX40MIMO	Ant0	2422	36.08	2403.44	2439.52	0.5	PASS
	Ant1	2422	35.12	2404.40	2439.52	0.5	PASS
	Ant0	2437	35.28	2419.24	2454.52	0.5	PASS
	Ant1	2437	38.08	2417.96	2456.04	0.5	PASS
	Ant0	2452	35.12	2434.40	2469.52	0.5	PASS
	Ant1	2452	35.04	2434.48	2469.52	0.5	PASS

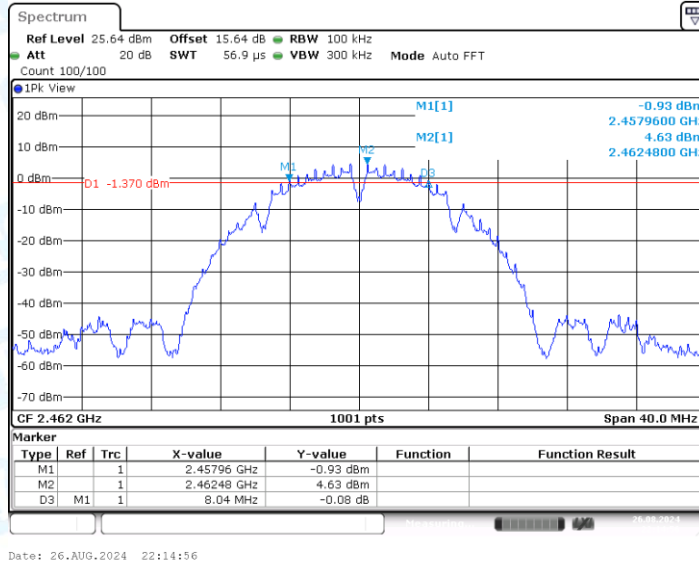
1.2. Test Graphs



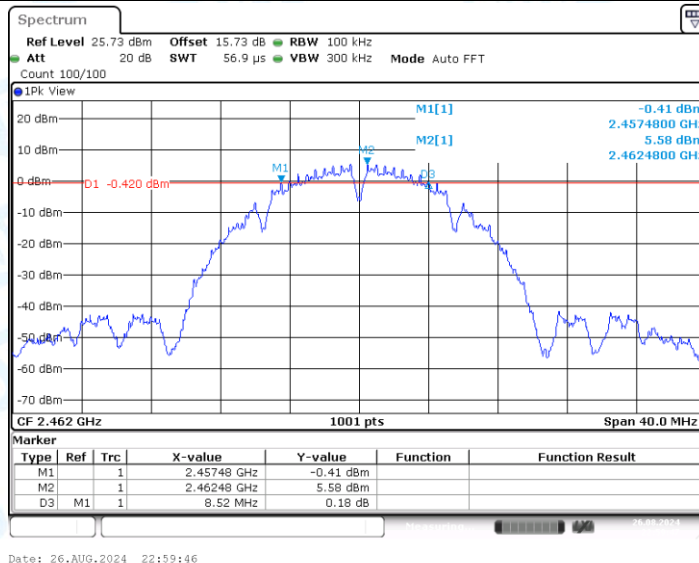
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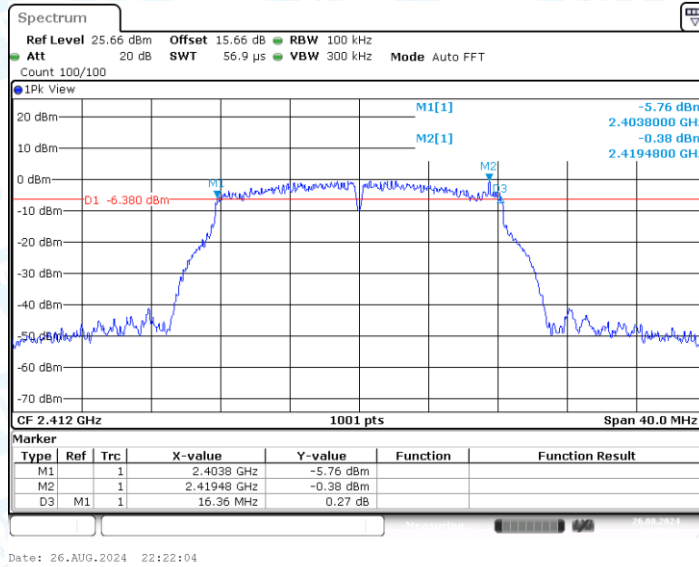
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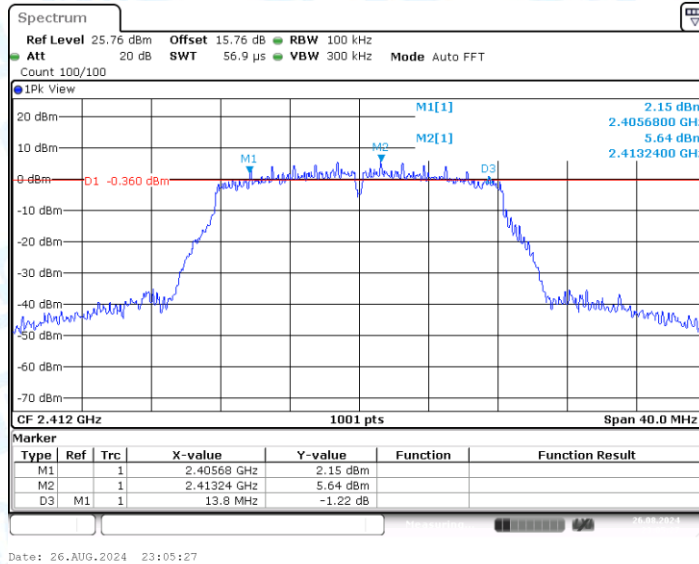
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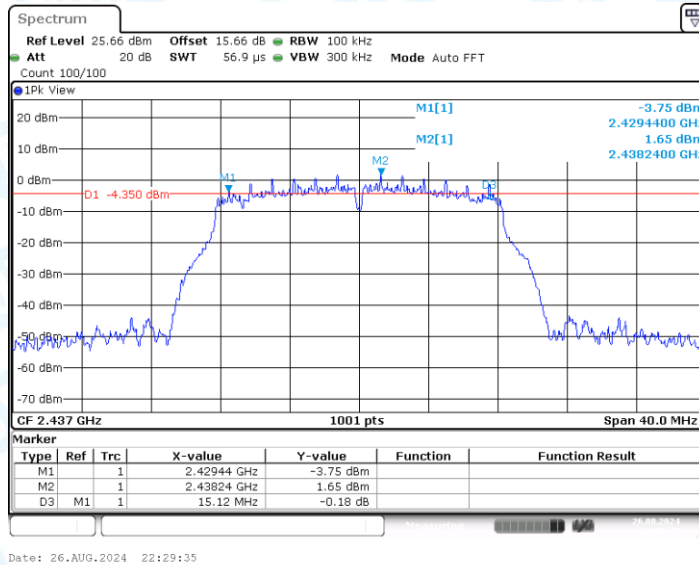
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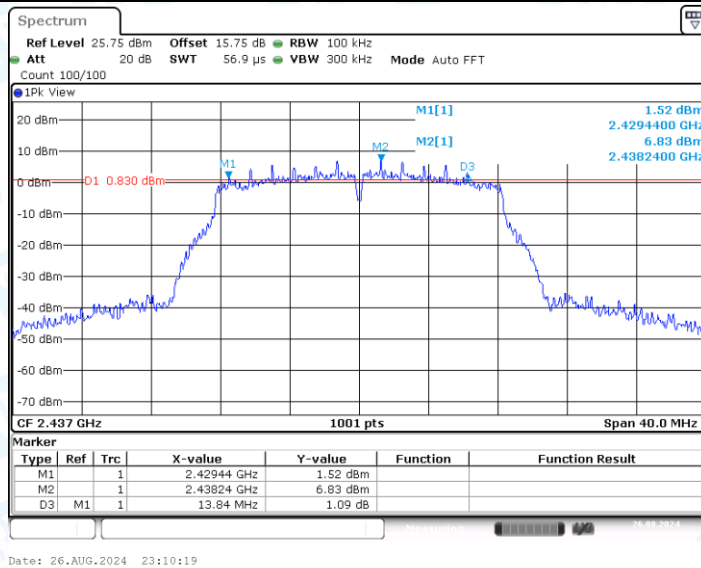
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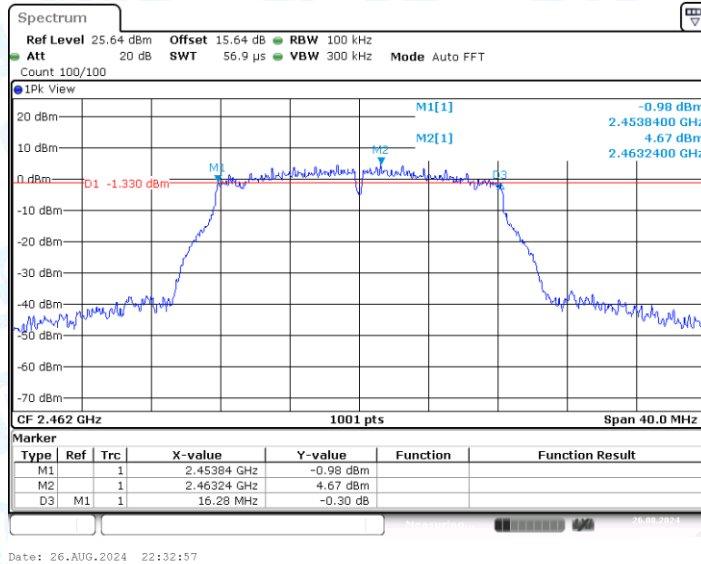
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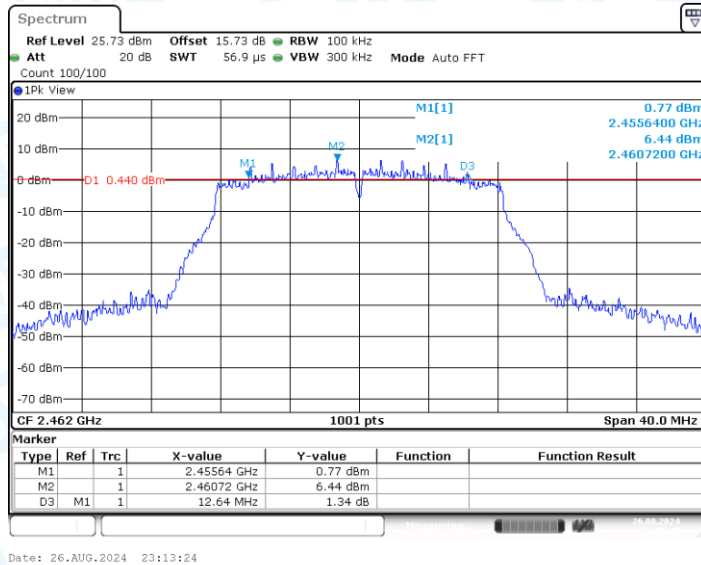
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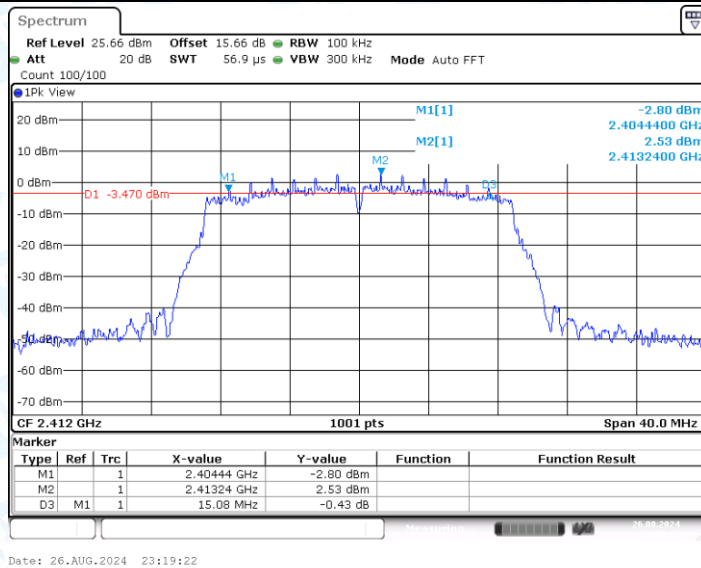
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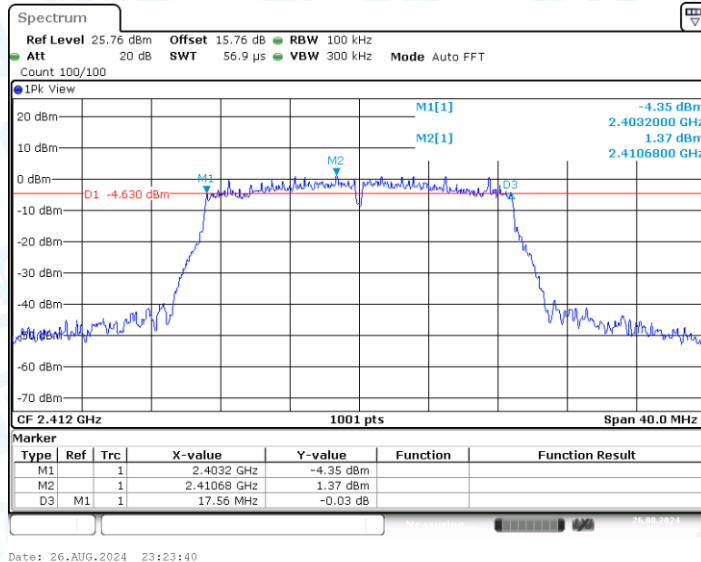
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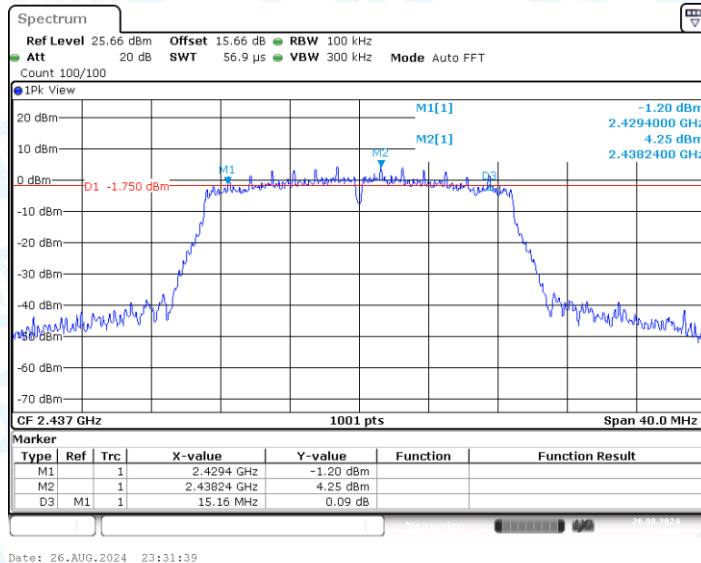
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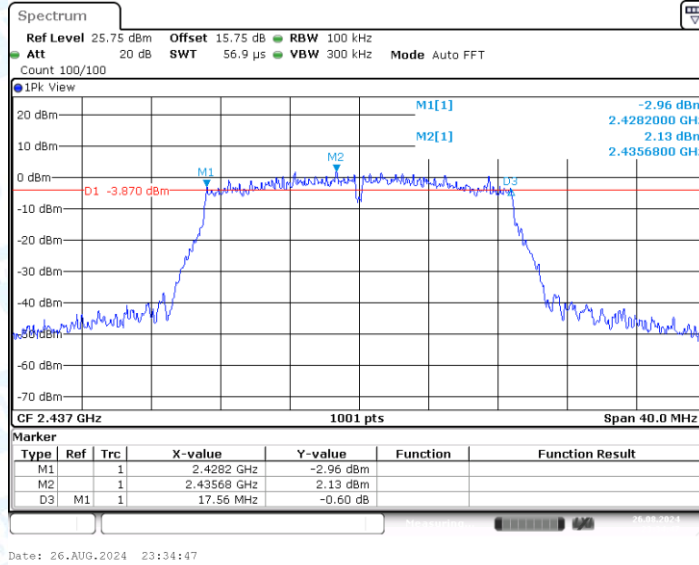
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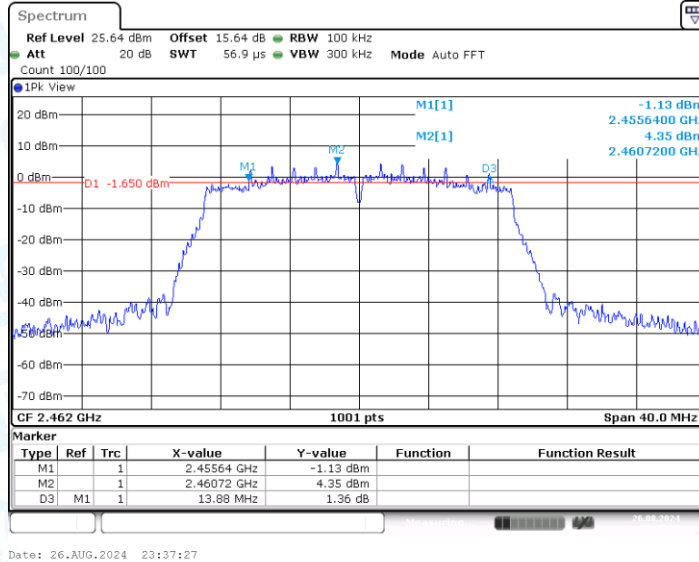
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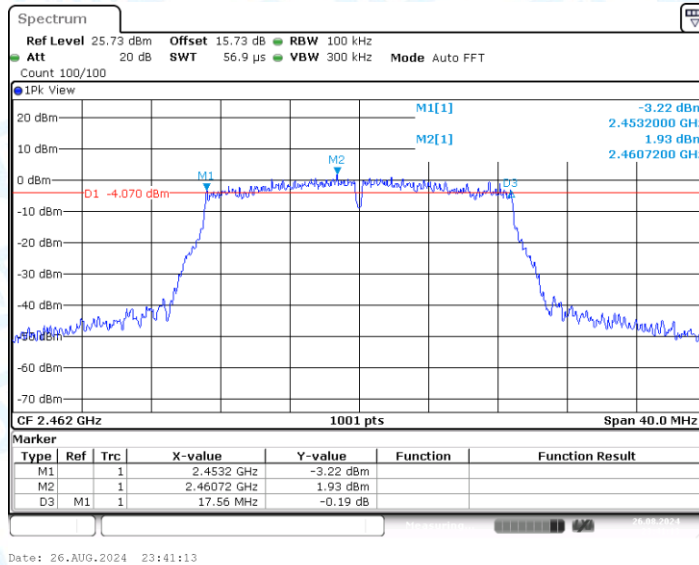
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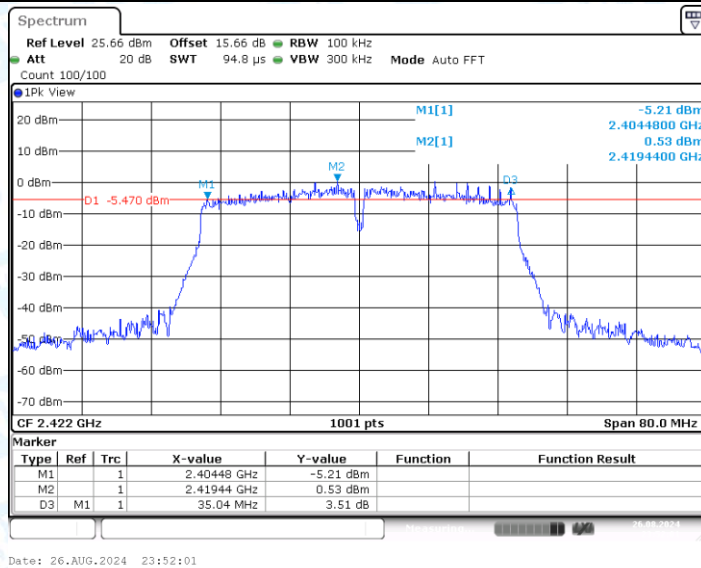
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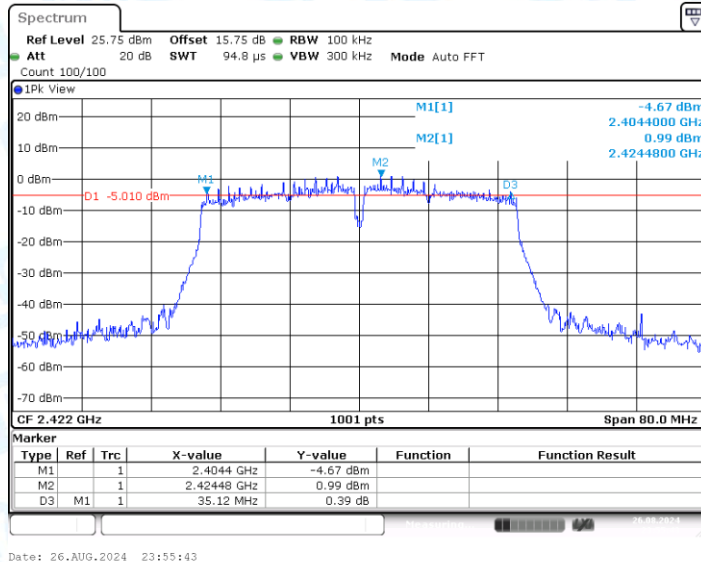
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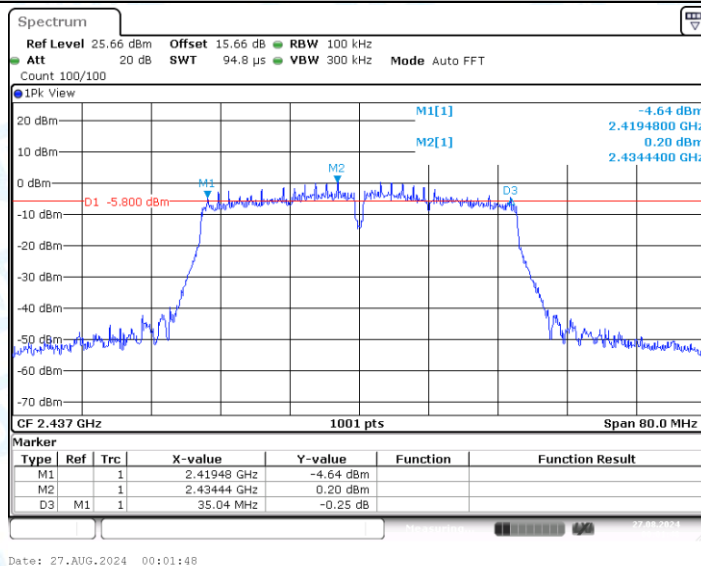
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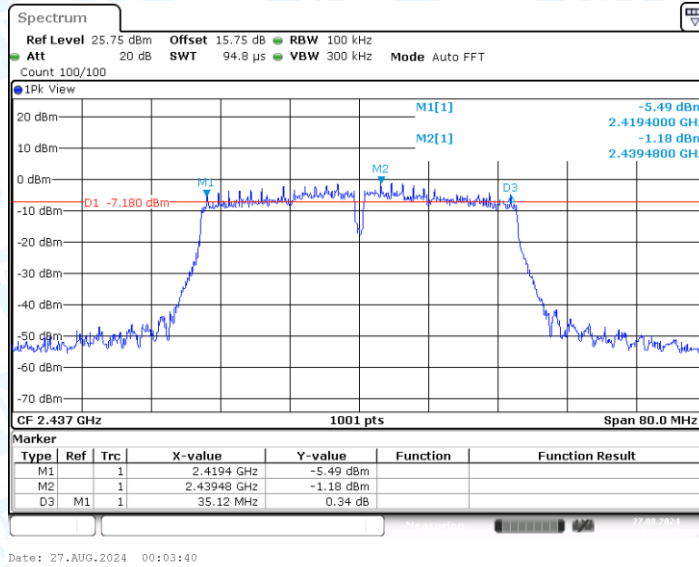
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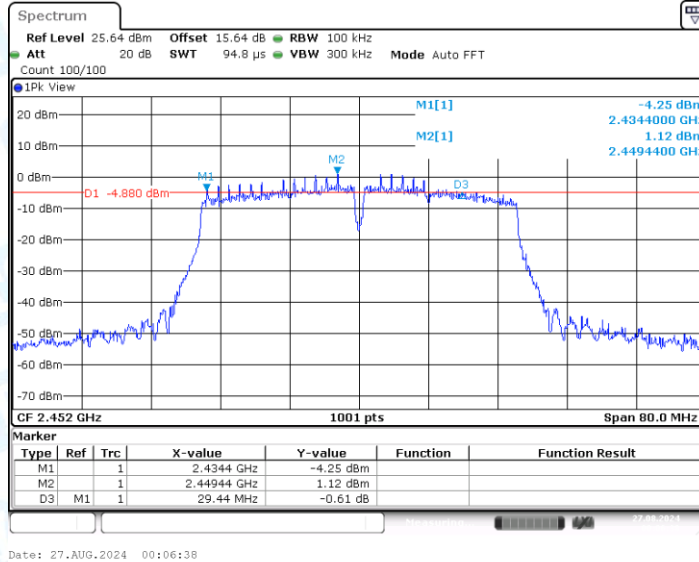
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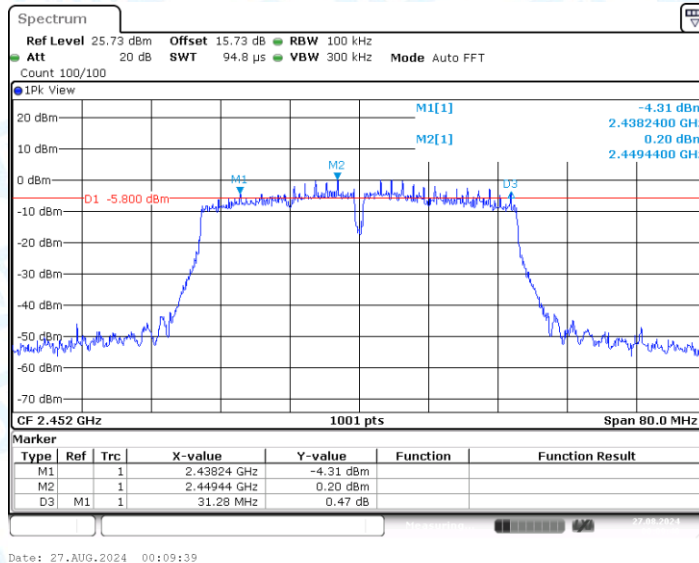
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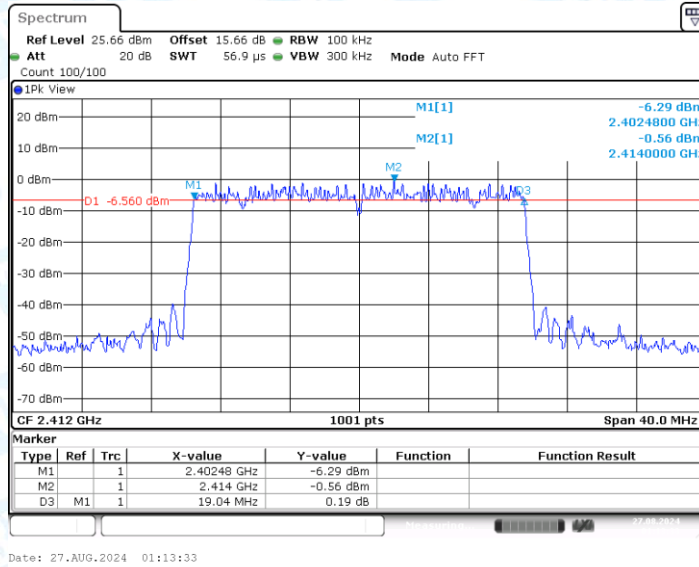
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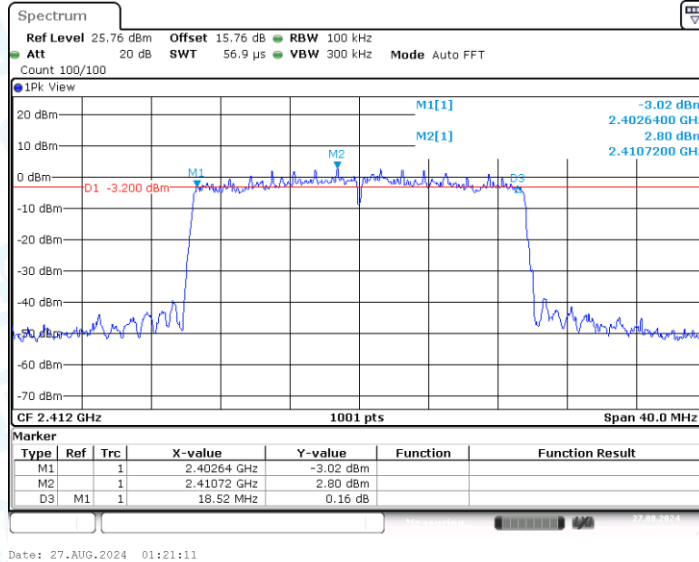
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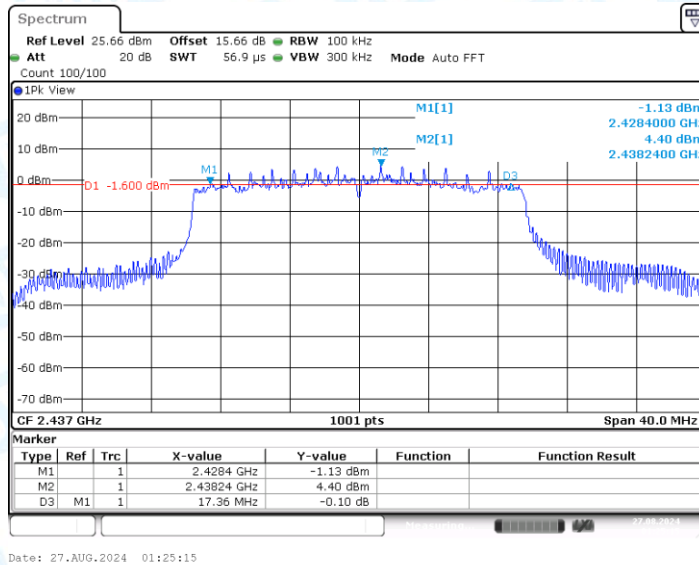
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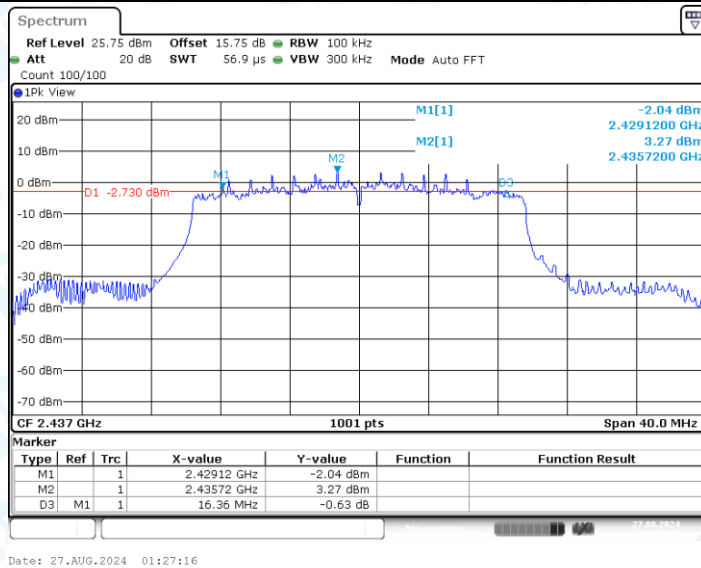
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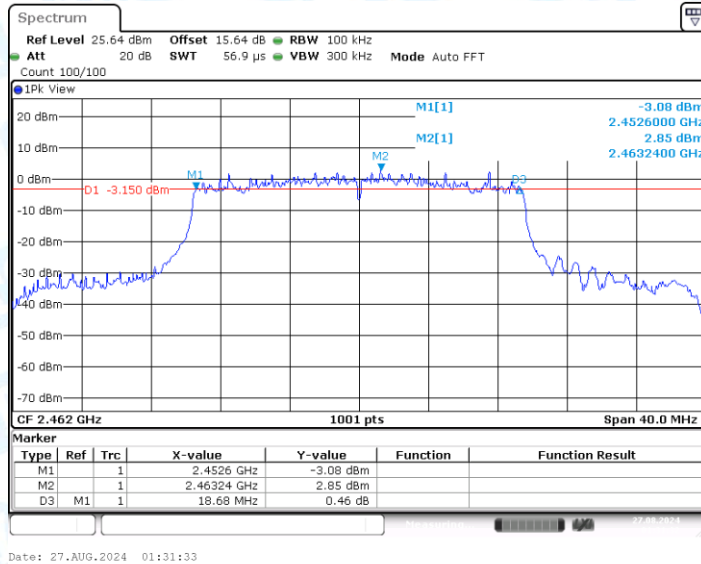
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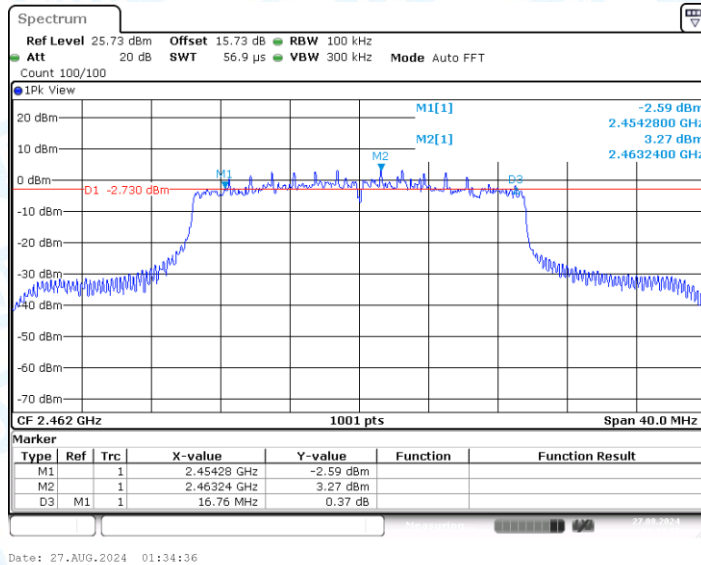
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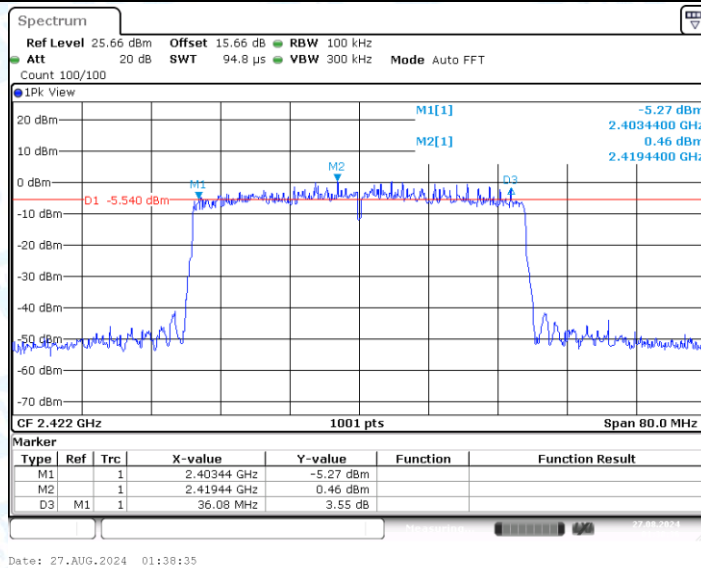
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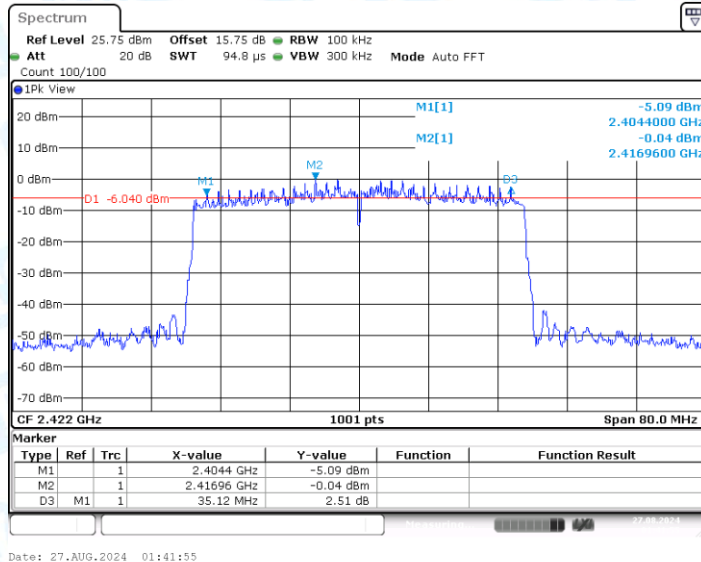
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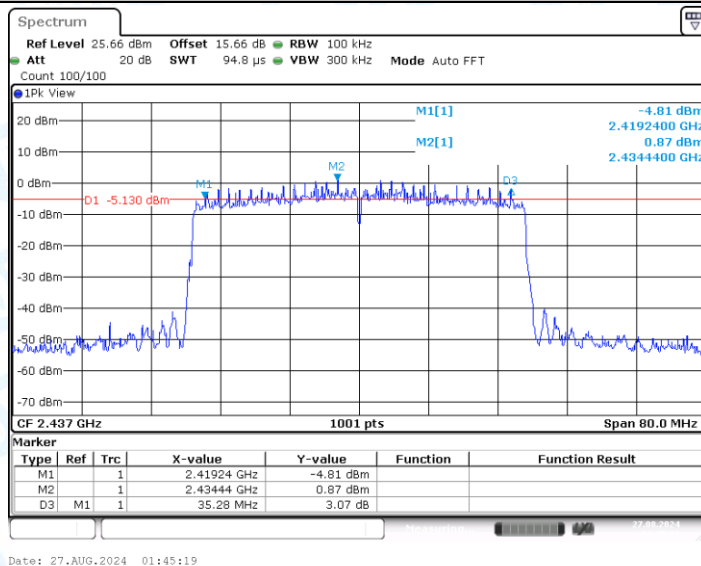
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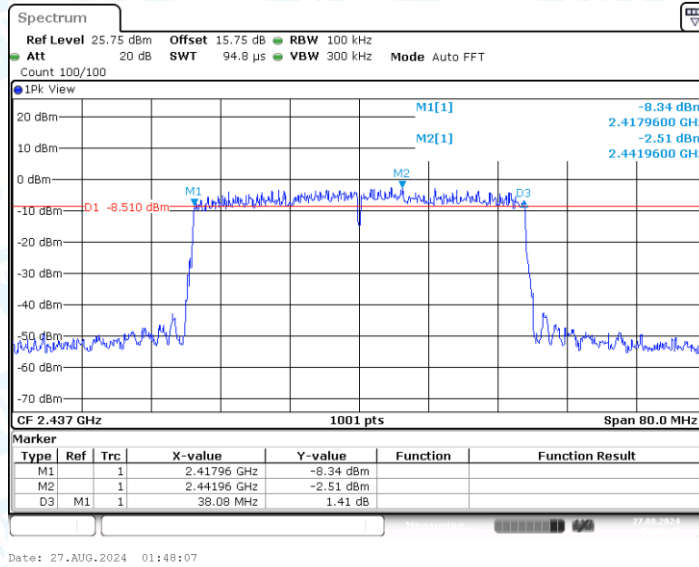
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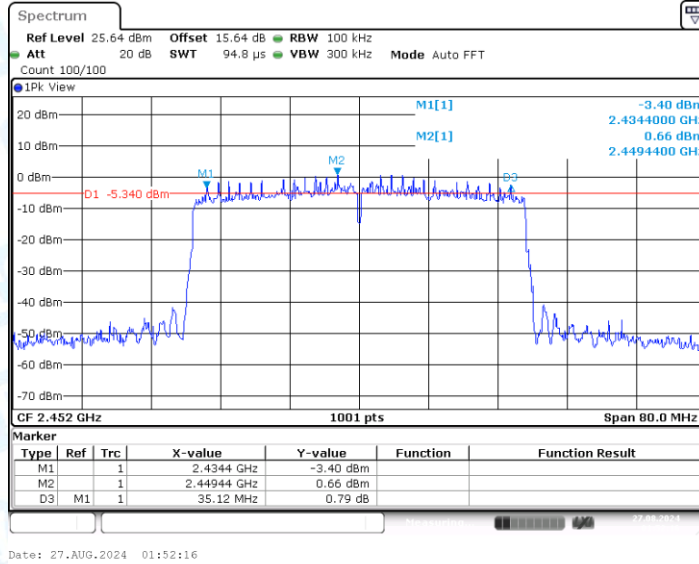
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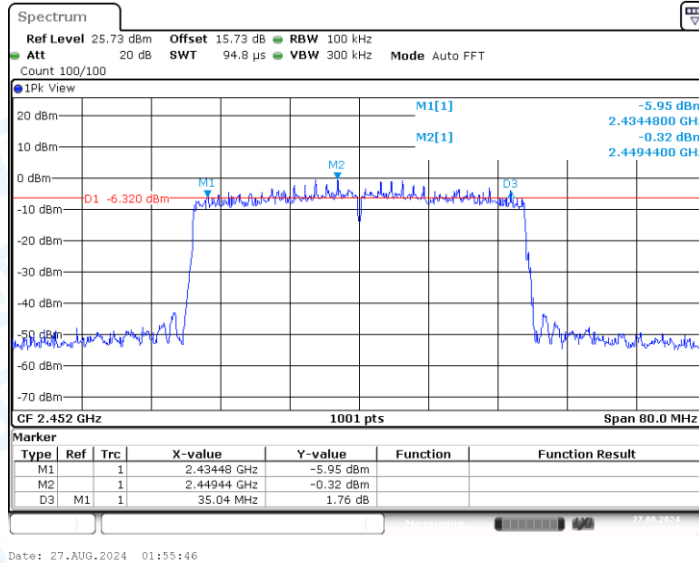
11AX40MIMO_Ant1_2437



11AX40MIMO_Ant0_2452



11AX40MIMO_Ant1_2452



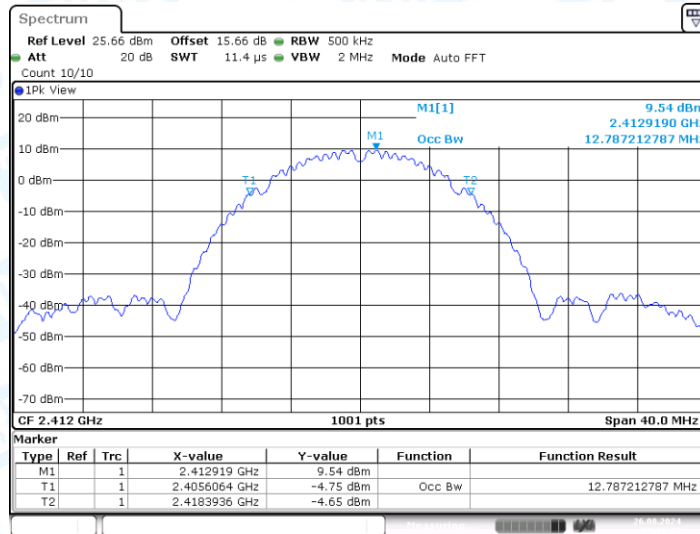
2. Occupied Channel Bandwidth

2.1. Test Result

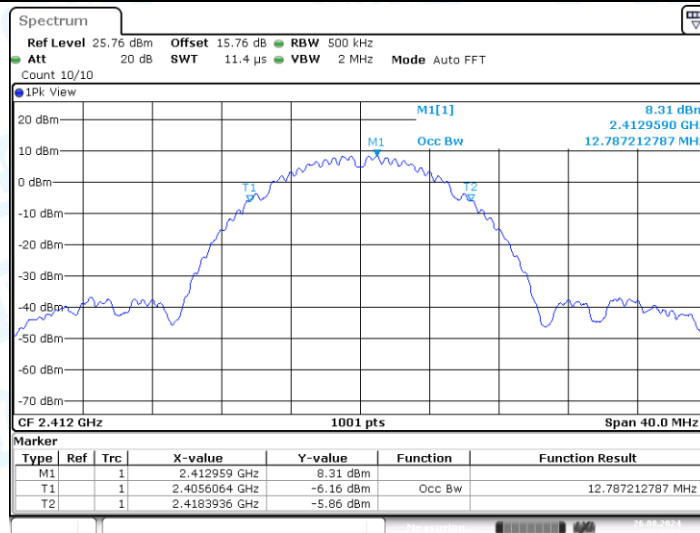
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant0	2412	12.787	2405.6064	2418.3936	---	---
	Ant1	2412	12.787	2405.6064	2418.3936	---	---
	Ant0	2437	12.707	2430.6464	2443.3536	---	---
	Ant1	2437	12.787	2430.6064	2443.3936	---	---
	Ant0	2462	12.787	2455.5664	2468.3536	---	---
	Ant1	2462	12.827	2455.5664	2468.3936	---	---
11G	Ant0	2412	16.663	2403.7283	2420.3916	---	---
	Ant1	2412	17.263	2403.2887	2420.5514	---	---
	Ant0	2437	16.983	2428.5684	2445.5514	---	---
	Ant1	2437	16.943	2428.5285	2445.4715	---	---
	Ant0	2462	16.703	2453.4885	2470.1918	---	---
	Ant1	2462	16.743	2453.5285	2470.2717	---	---
11N20MIMO	Ant0	2412	17.862	2403.0889	2420.9510	---	---
	Ant1	2412	17.742	2403.0889	2420.8312	---	---
	Ant0	2437	17.662	2428.1289	2445.7912	---	---
	Ant1	2437	17.702	2428.1289	2445.8312	---	---
	Ant0	2462	17.942	2453.0090	2470.9510	---	---
	Ant1	2462	17.582	2453.1688	2470.7512	---	---
11N40MIMO	Ant0	2422	35.804	2404.0979	2439.9021	---	---
	Ant1	2422	35.964	2403.9381	2439.9021	---	---
	Ant0	2437	35.964	2418.9381	2454.9021	---	---
	Ant1	2437	35.884	2419.0180	2454.9021	---	---
	Ant0	2452	36.124	2433.8581	2469.9820	---	---
	Ant1	2452	35.884	2434.0979	2469.9820	---	---
11AX20MIMO	Ant0	2412	19.101	2402.4496	2421.5504	---	---
	Ant1	2412	18.901	2402.4895	2421.3906	---	---
	Ant0	2437	19.141	2427.4096	2446.5504	---	---
	Ant1	2437	19.061	2427.5295	2446.5904	---	---
	Ant0	2462	19.141	2452.3696	2471.5105	---	---
	Ant1	2462	19.221	2452.2897	2471.5105	---	---
11AX40MIMO	Ant0	2422	37.802	2402.9790	2440.7812	---	---
	Ant1	2422	37.802	2403.1389	2440.9411	---	---
	Ant0	2437	37.722	2418.1389	2455.8611	---	---
	Ant1	2437	37.722	2418.1389	2455.8611	---	---
	Ant0	2452	37.722	2433.1389	2470.8611	---	---
	Ant1	2452	37.562	2433.1389	2470.7013	---	---

2.2. Test Graphs

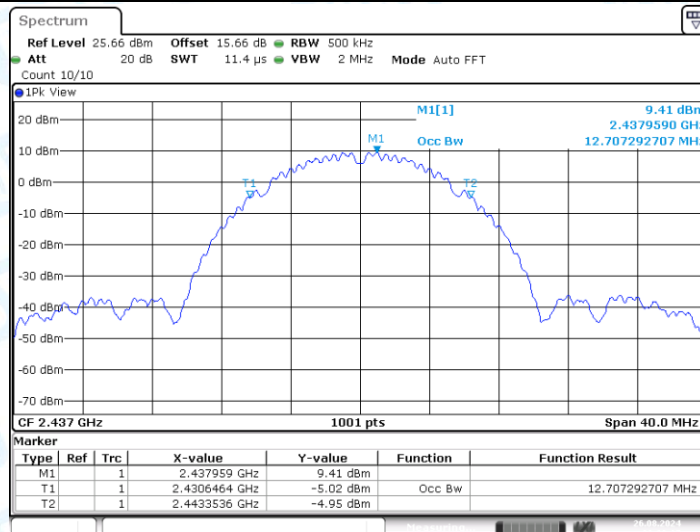
11B_Ant0_2412



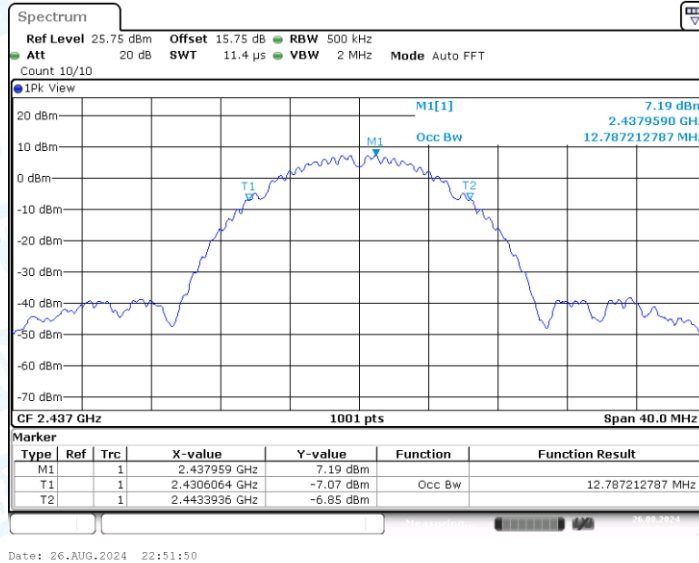
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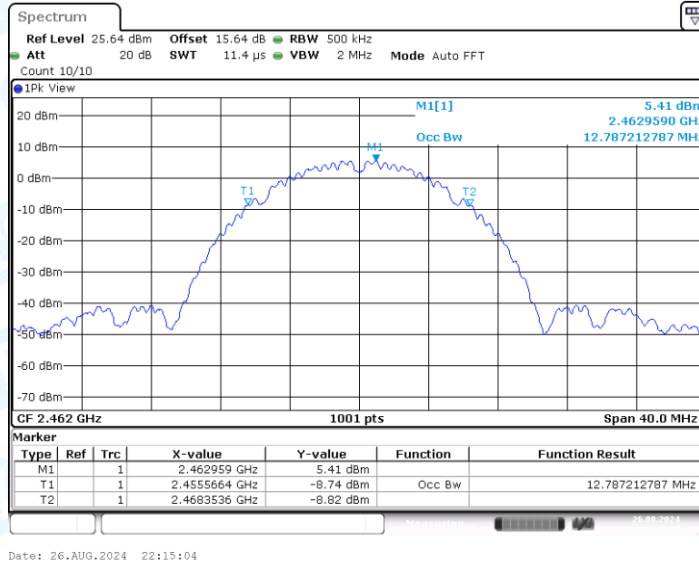
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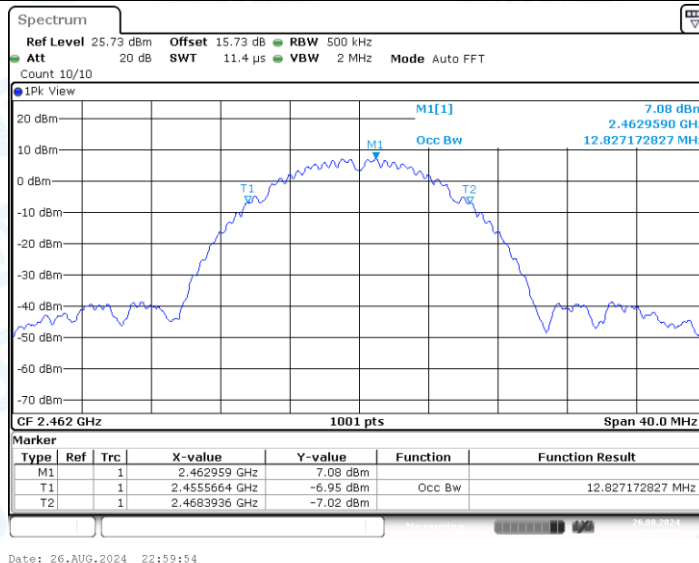
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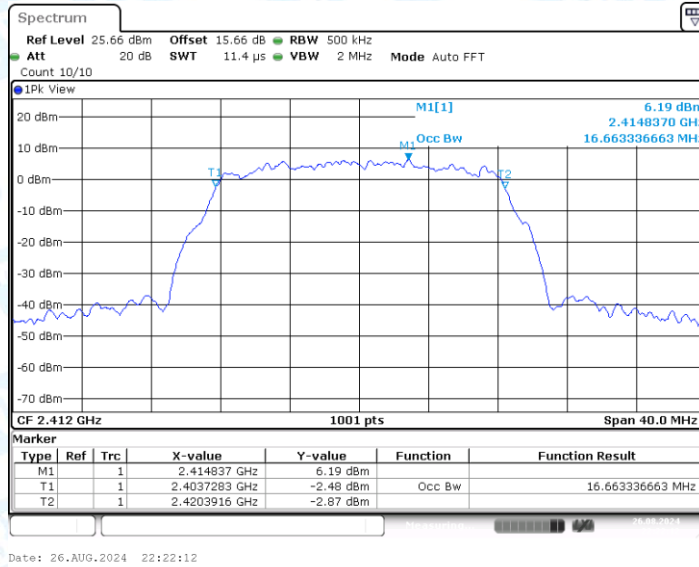
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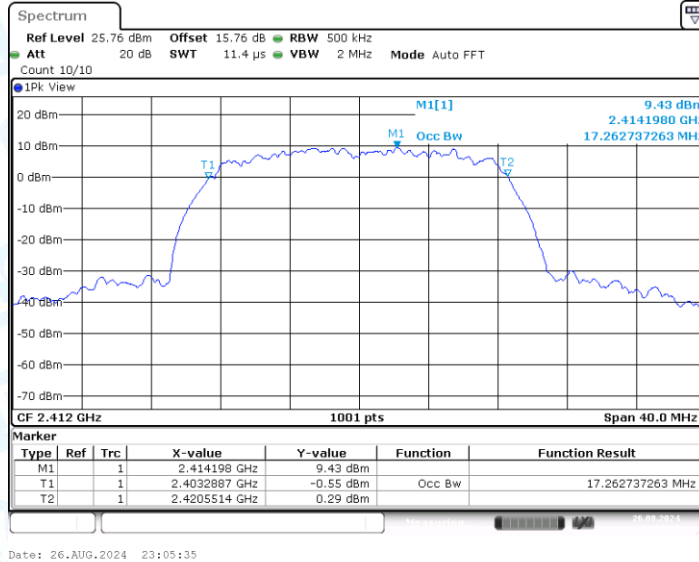
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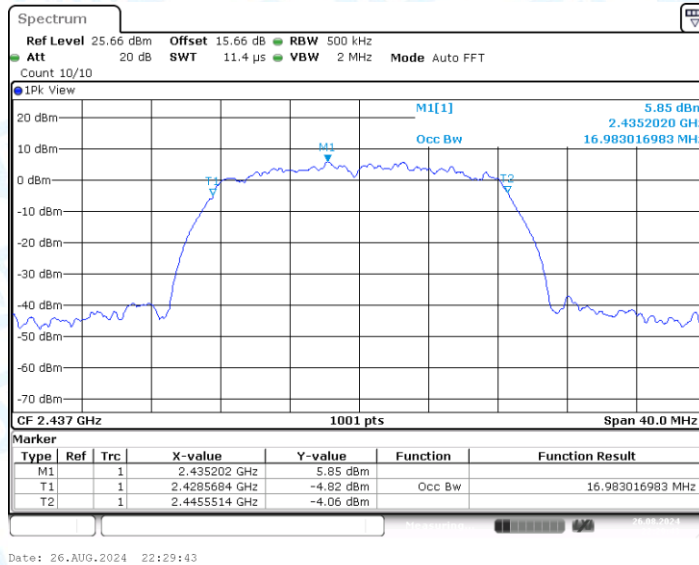
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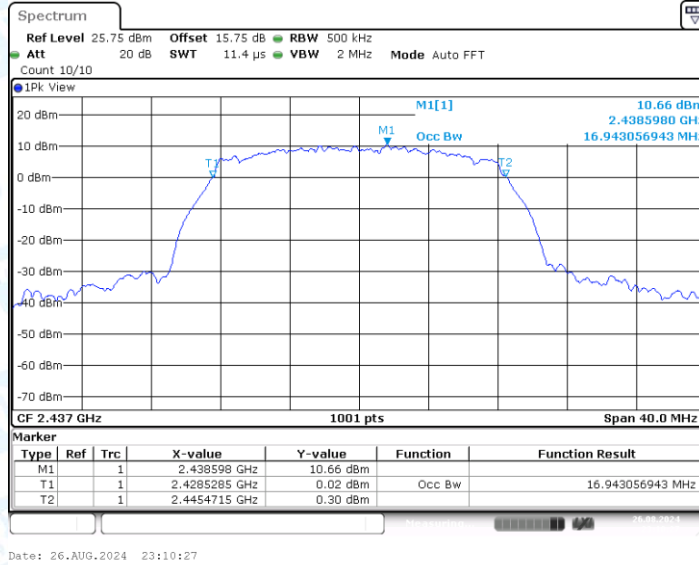
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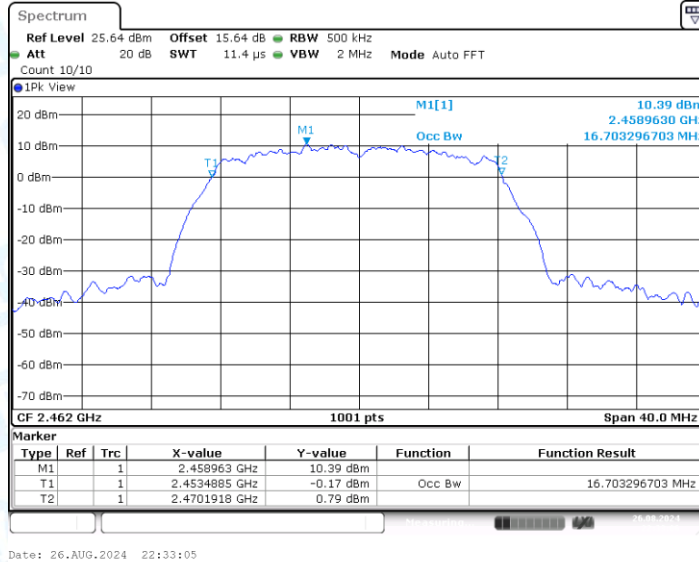
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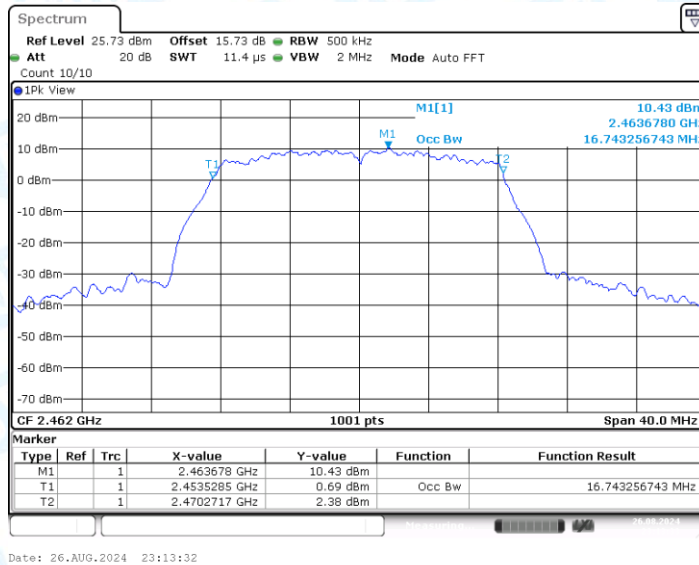
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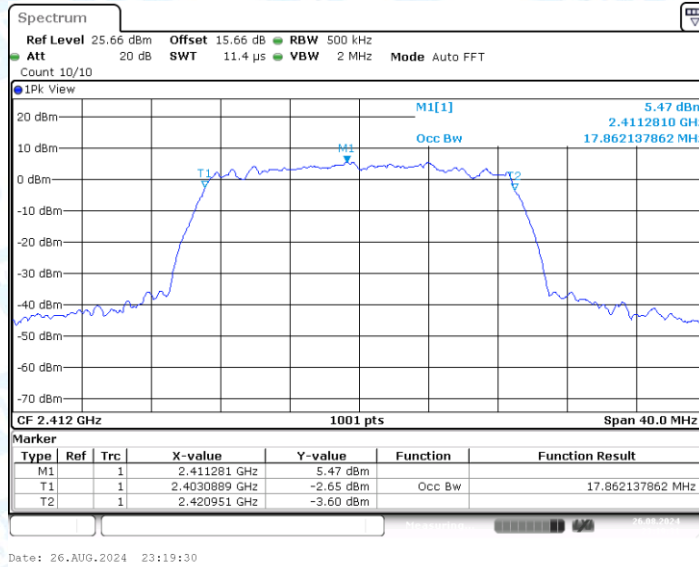
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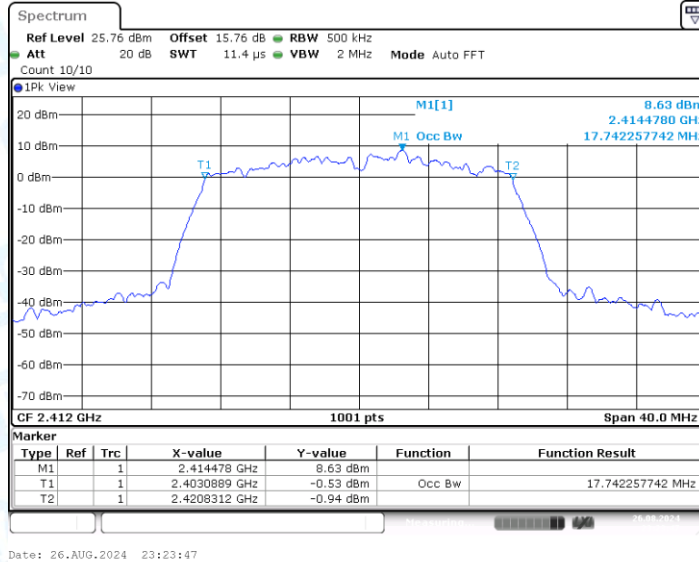
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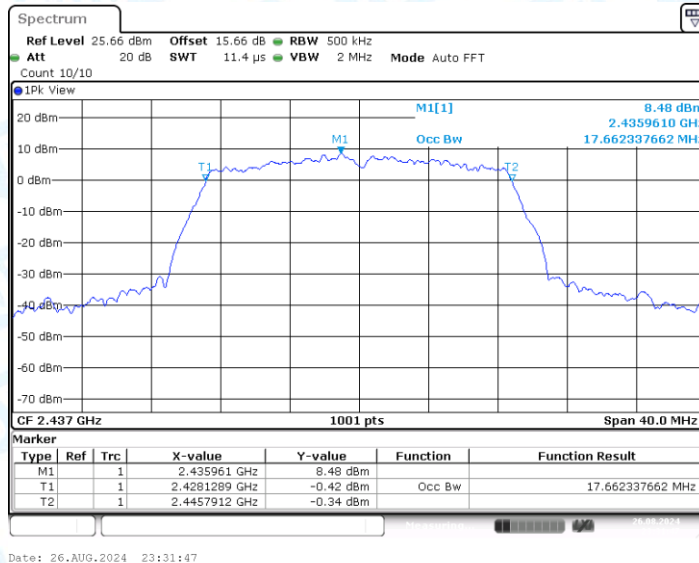
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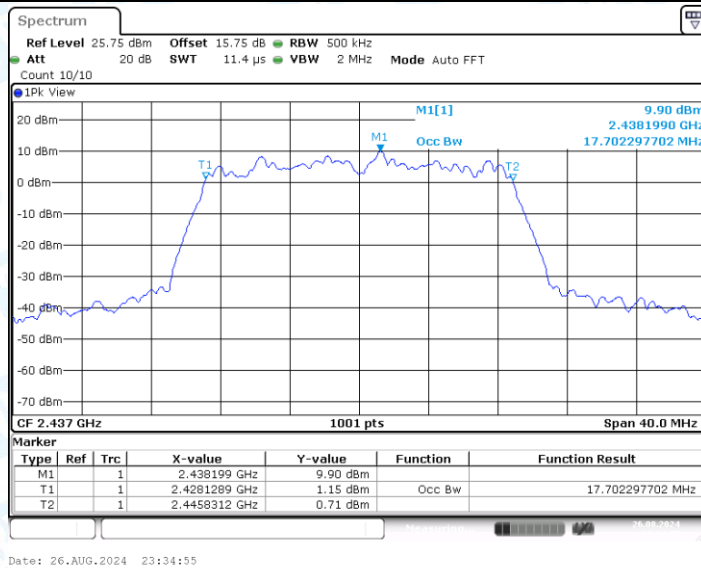
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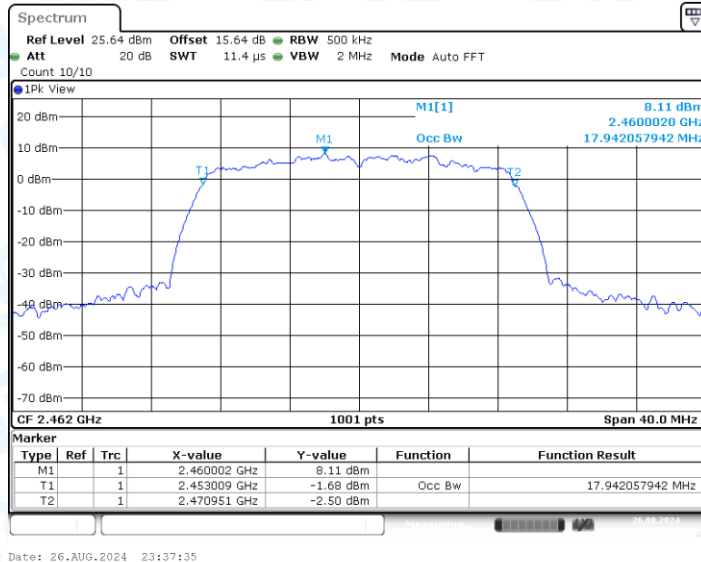
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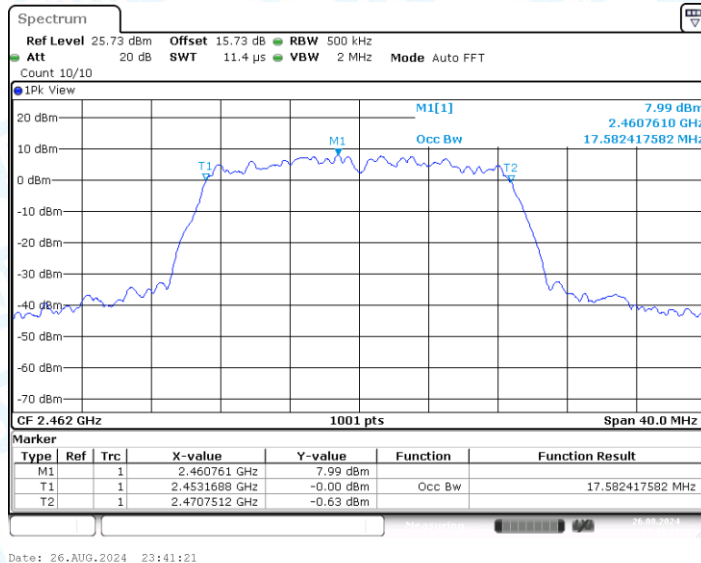
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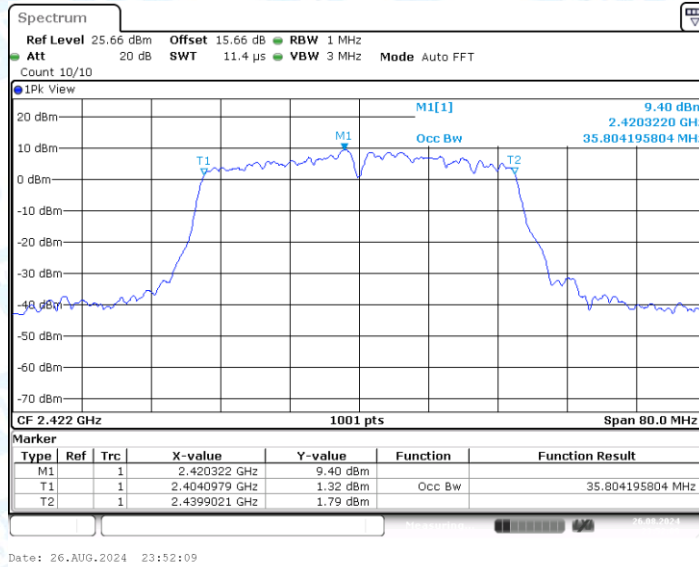
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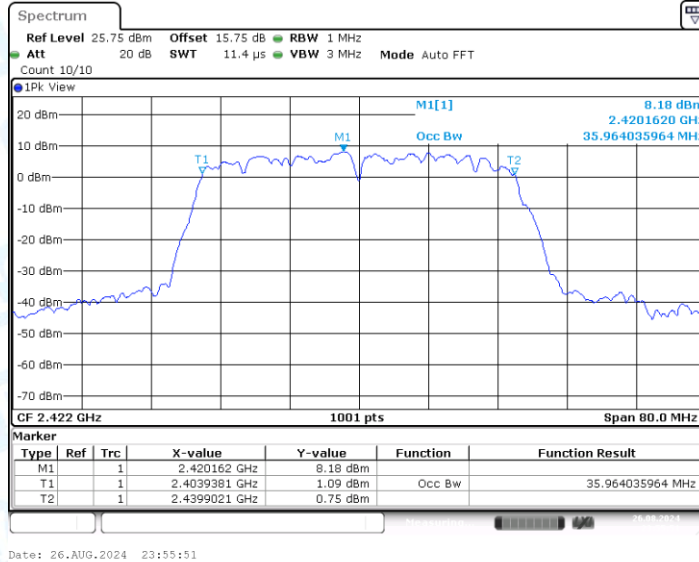
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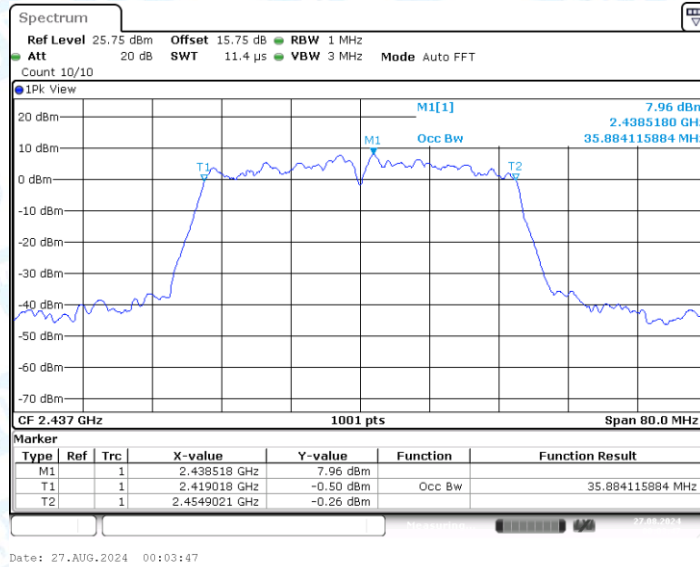
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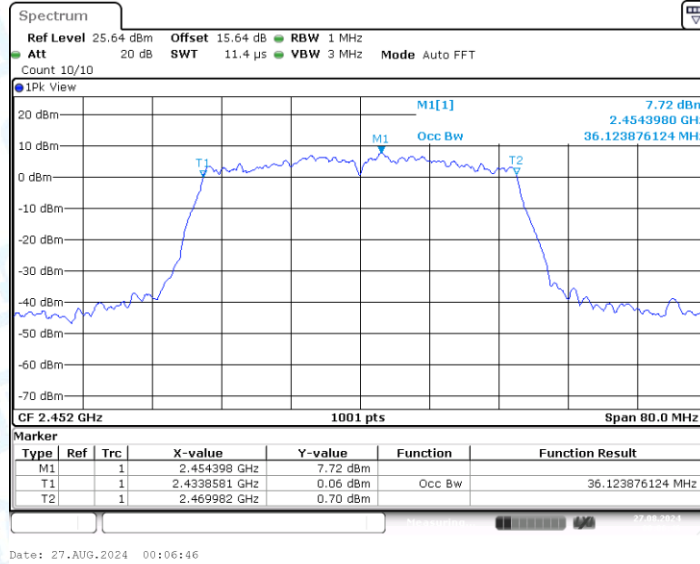
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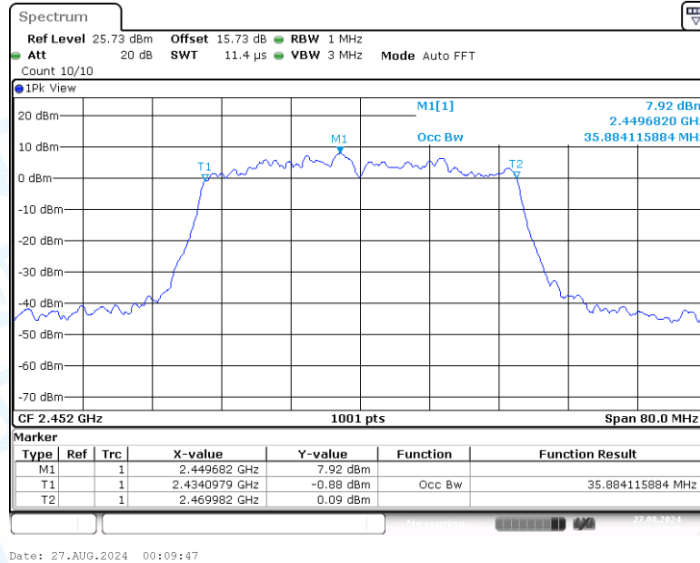
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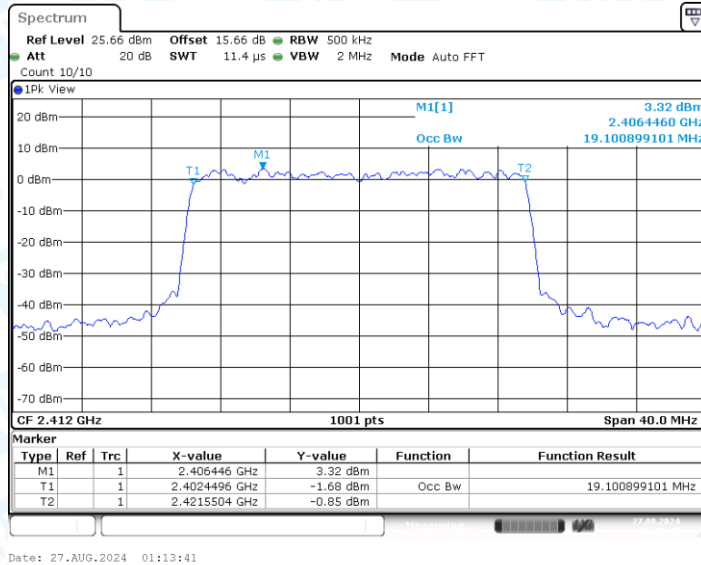
11N40MIMO_Ant0_2452



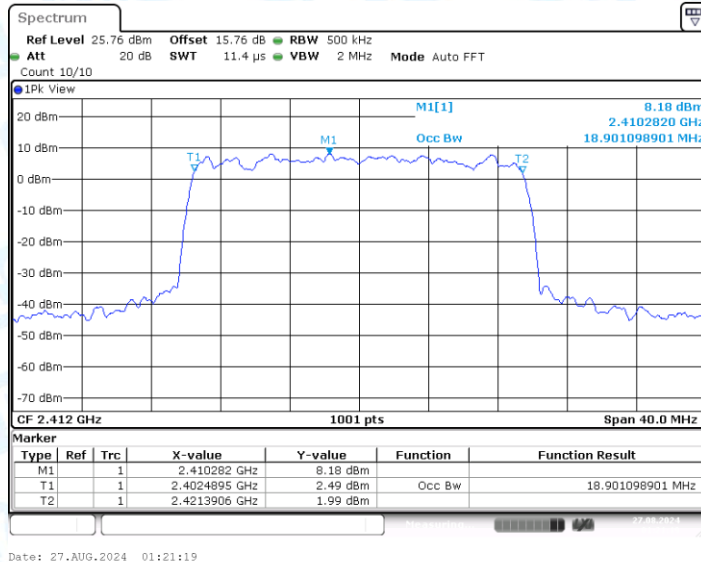
11N40MIMO_Ant1_2452



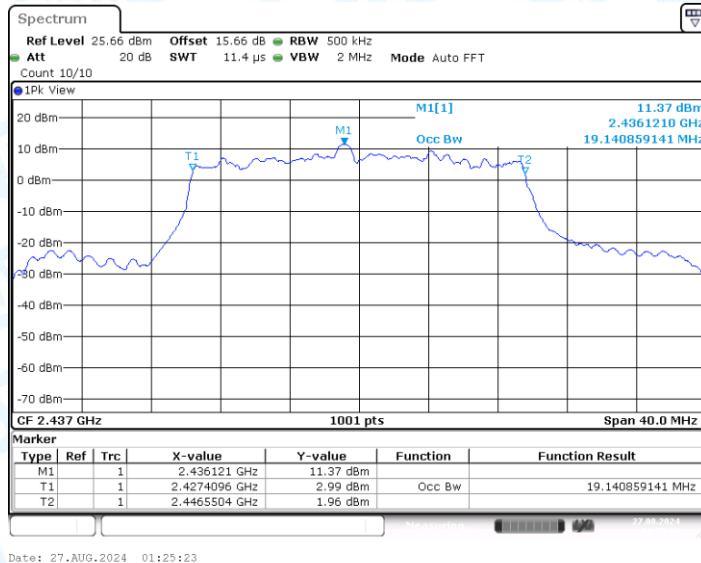
11AX20MIMO_Ant0_2412



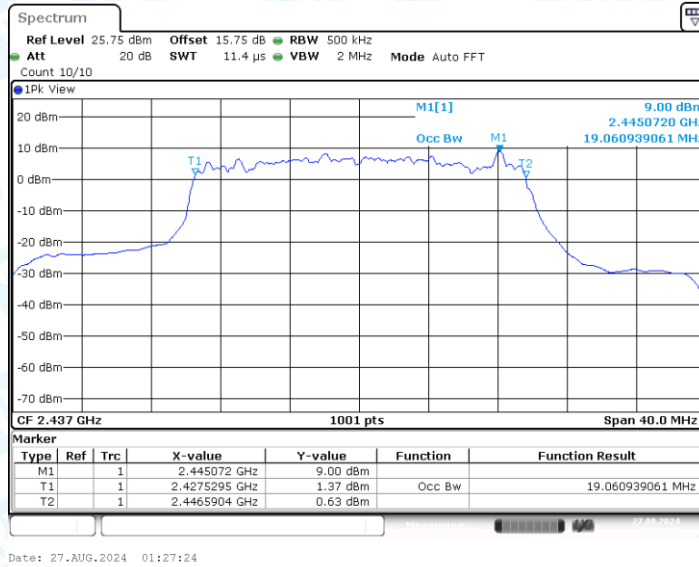
11AX20MIMO_Ant1_2412



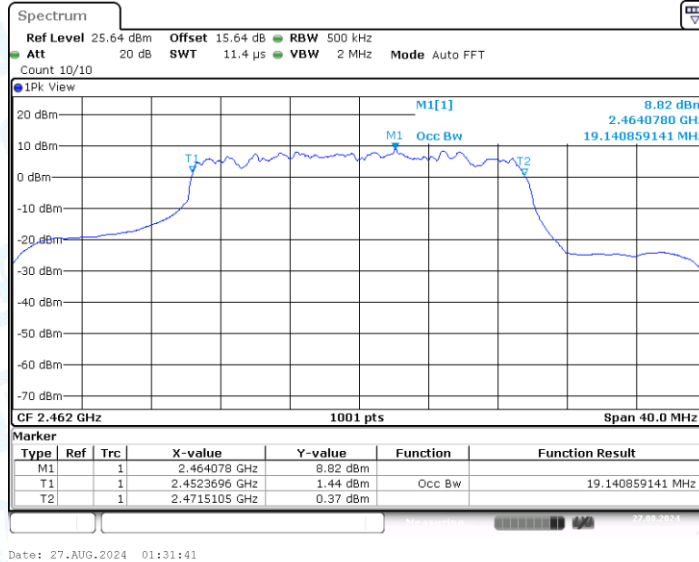
11AX20MIMO_Ant0_2437



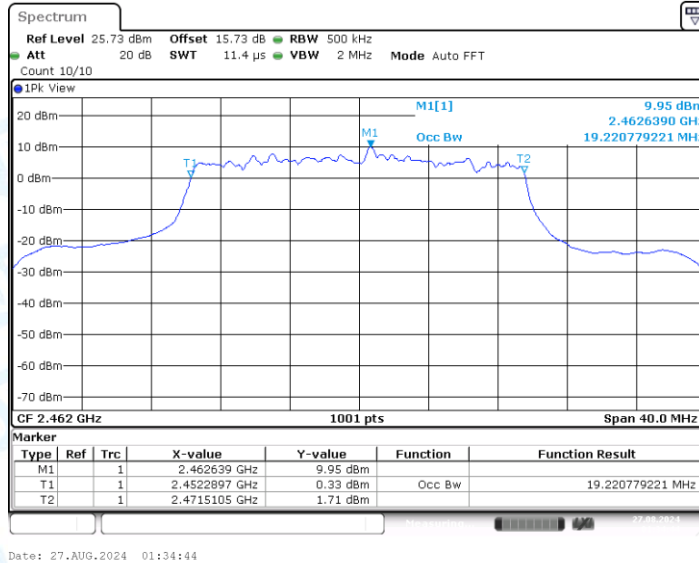
11AX20MIMO_Ant1_2437



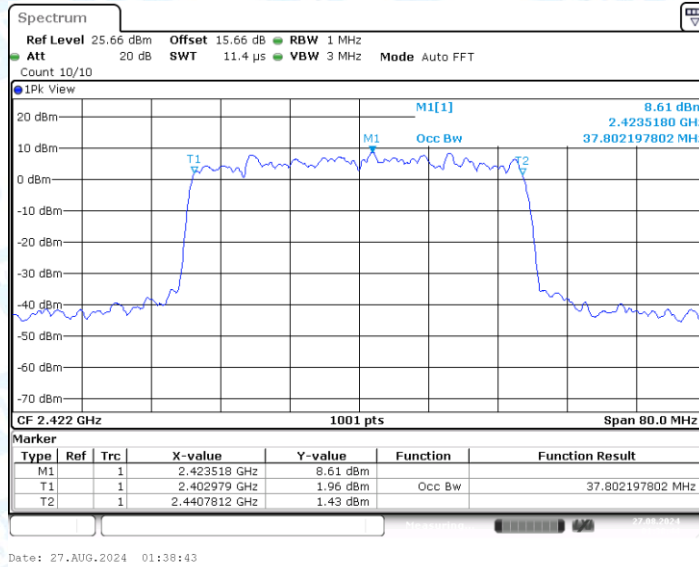
11AX20MIMO_Ant0_2462



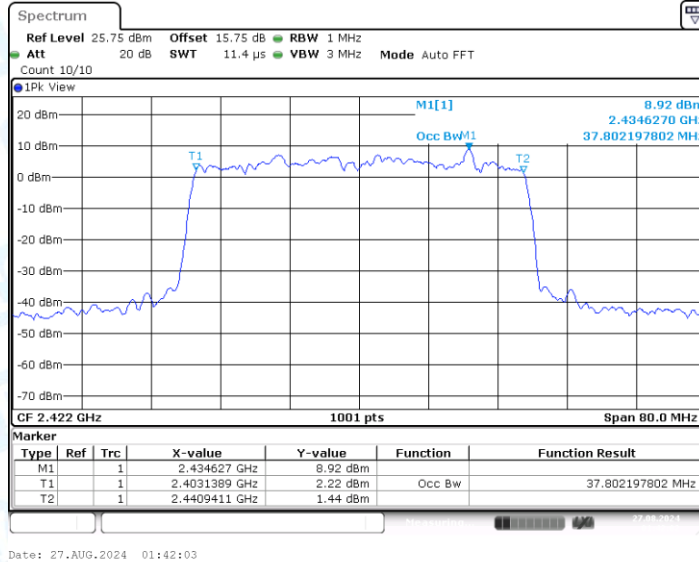
11AX20MIMO_Ant1_2462



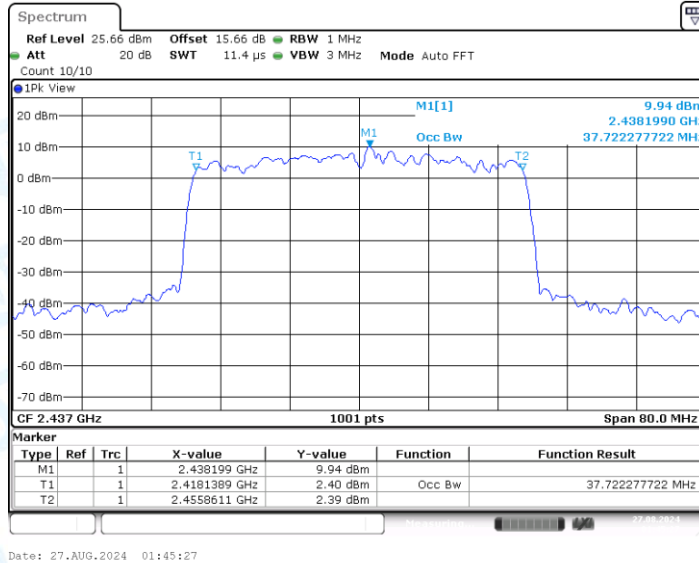
11AX40MIMO_Ant0_2422



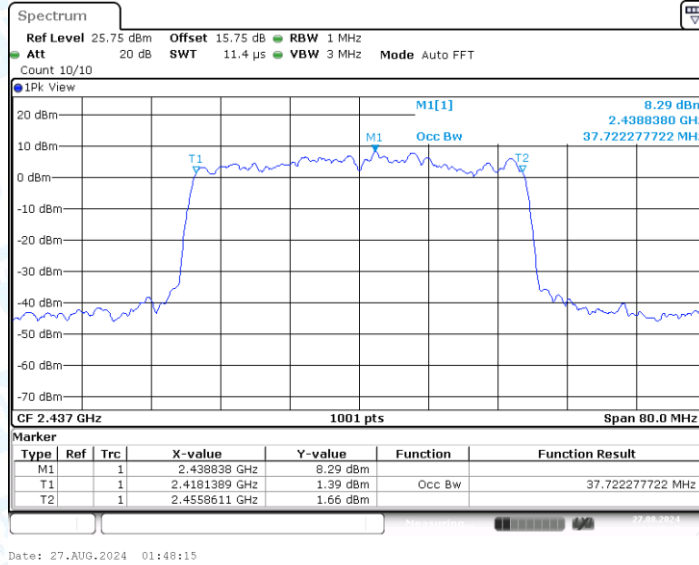
11AX40MIMO_Ant1_2422



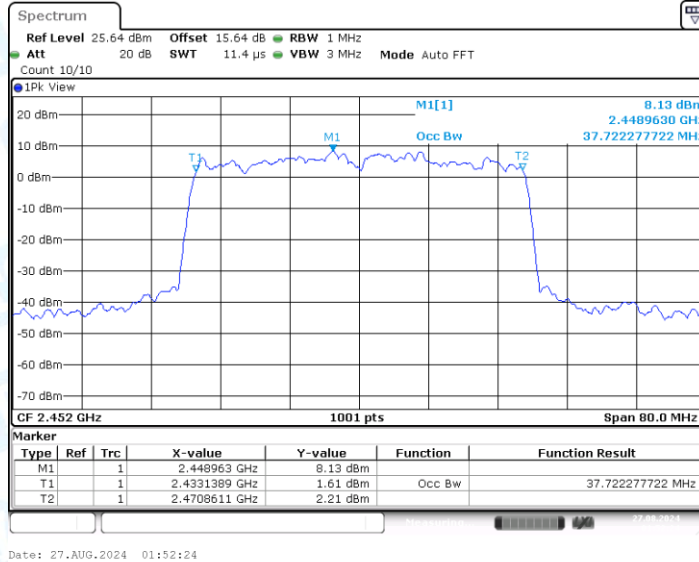
11AX40MIMO_Ant0_2437



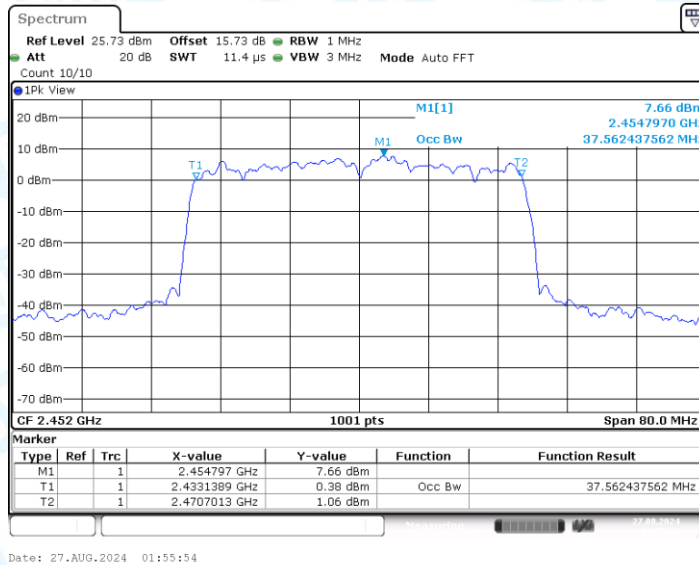
11AX40MIMO_Ant1_2437



11AX40MIMO_Ant0_2452



11AX40MIMO_Ant1_2452



3. Maximum conducted output power

3.1. Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant0	2412	21.00	≤30.00	PASS
	Ant1	2412	19.05	≤30.00	PASS
	Ant0	2437	22.12	≤30.00	PASS
	Ant1	2437	18.48	≤30.00	PASS
	Ant0	2462	19.27	≤30.00	PASS
	Ant1	2462	18.51	≤30.00	PASS
11G	Ant0	2412	16.24	≤30.00	PASS
	Ant1	2412	16.62	≤30.00	PASS
	Ant0	2437	16.28	≤30.00	PASS
	Ant1	2437	16.34	≤30.00	PASS
	Ant0	2462	17.31	≤30.00	PASS
	Ant1	2462	16.51	≤30.00	PASS
11N20MIMO	Ant0	2412	14.37	≤30.00	PASS
	Ant1	2412	13.04	≤30.00	PASS
	total	2412	16.77	≤29.12	PASS
	Ant0	2437	14.46	≤30.00	PASS
	Ant1	2437	13.25	≤30.00	PASS
	total	2437	16.91	≤29.12	PASS
	Ant0	2462	14.32	≤30.00	PASS
	Ant1	2462	13.44	≤30.00	PASS
	total	2462	16.91	≤29.12	PASS
11N40MIMO	Ant0	2422	13.36	≤30.00	PASS
	Ant1	2422	13.07	≤30.00	PASS
	total	2422	16.23	≤29.12	PASS
	Ant0	2437	13.46	≤30.00	PASS
	Ant1	2437	12.62	≤30.00	PASS
	total	2437	16.07	≤29.12	PASS
	Ant0	2452	12.74	≤30.00	PASS
	Ant1	2452	11.95	≤30.00	PASS
	total	2452	15.37	≤29.12	PASS
11AX20MIMO	Ant0	2412	12.53	≤30.00	PASS
	Ant1	2412	13.39	≤30.00	PASS
	total	2412	15.99	≤29.12	PASS
	Ant0	2437	14.70	≤30.00	PASS
	Ant1	2437	13.33	≤30.00	PASS
	total	2437	17.08	≤29.12	PASS
	Ant0	2462	14.13	≤30.00	PASS
	Ant1	2462	13.97	≤30.00	PASS
	total	2462	17.06	≤29.12	PASS
11AX40MIMO	Ant0	2422	14.03	≤30.00	PASS

	Ant1	2422	13.62	≤30.00	PASS
	total	2422	16.84	≤29.12	PASS
	Ant0	2437	13.31	≤30.00	PASS
	Ant1	2437	12.35	≤30.00	PASS
	total	2437	15.87	≤29.12	PASS
	Ant0	2452	14.09	≤30.00	PASS
	Ant1	2452	13.28	≤30.00	PASS
	total	2452	16.71	≤29.12	PASS
Note: The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving. When ANT.0 and ANT. 1 transmitting simultaneously, and the Directional Gain=6.88dBi>6dBi. (Ant.0: 3.87dBi; Ant.1: 3.87dBi) So $P_{out} = P_{limit} - (G_{Tx} - 6) = (30.00 - 0.88) \text{dBm} = 29.12 \text{dBm}$					
Directional Gain=ANT. Gain+10*LOG(NANT)					
The Duty Cycle Factor is compensated in the graph.					

4. Maximum power spectral density

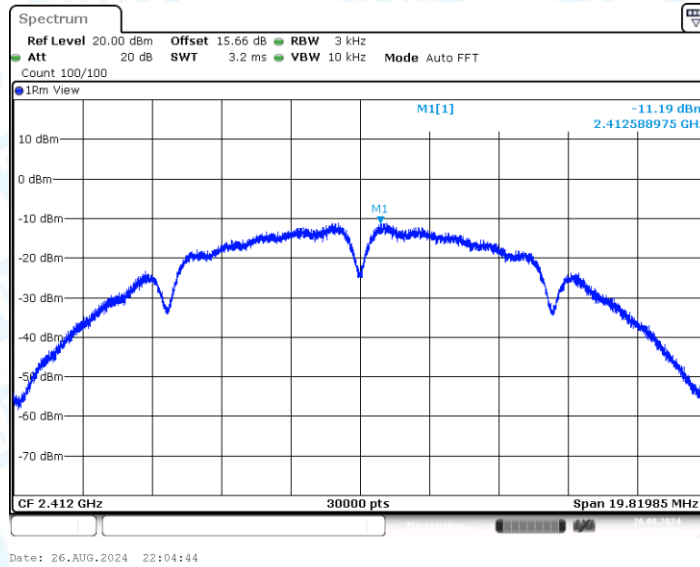
4.1. Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant0	2412	-8.34	≤8.00	PASS
	Ant1	2412	-10.44	≤8.00	PASS
	Ant0	2437	-7.53	≤8.00	PASS
	Ant1	2437	-10.93	≤8.00	PASS
	Ant0	2462	-10.02	≤8.00	PASS
	Ant1	2462	-10.89	≤8.00	PASS
11G	Ant0	2412	-17.05	≤8.00	PASS
	Ant1	2412	-16.29	≤8.00	PASS
	Ant0	2437	-16.85	≤8.00	PASS
	Ant1	2437	-16.06	≤8.00	PASS
	Ant0	2462	-16.33	≤8.00	PASS
	Ant1	2462	-17.04	≤8.00	PASS
11N20MIMO	Ant0	2412	-17.75	≤8.00	PASS
	Ant1	2412	-19.30	≤8.00	PASS
	total	2412	-15.45	≤7.12	PASS
	Ant0	2437	-18.60	≤8.00	PASS
	Ant1	2437	-18.90	≤8.00	PASS
	total	2437	-15.74	≤7.12	PASS
	Ant0	2462	-18.06	≤8.00	PASS
	Ant1	2462	-18.95	≤8.00	PASS
	total	2462	-15.47	≤7.12	PASS
11N40MIMO	Ant0	2422	-20.24	≤8.00	PASS
	Ant1	2422	-20.72	≤8.00	PASS
	total	2422	-17.46	≤7.12	PASS
	Ant0	2437	-20.38	≤8.00	PASS
	Ant1	2437	-21.46	≤8.00	PASS
	total	2437	-17.88	≤7.12	PASS
	Ant0	2452	-21.25	≤8.00	PASS
	Ant1	2452	-21.66	≤8.00	PASS
	total	2452	-18.44	≤7.12	PASS
11AX20MIMO	Ant0	2412	-16.07	≤8.00	PASS
	Ant1	2412	-17.77	≤8.00	PASS
	total	2412	-13.83	≤7.12	PASS
	Ant0	2437	-18.01	≤8.00	PASS
	Ant1	2437	-20.13	≤8.00	PASS
	total	2437	-15.93	≤7.12	PASS
	Ant0	2462	-19.02	≤8.00	PASS
	Ant1	2462	-18.53	≤8.00	PASS
	total	2462	-15.76	≤7.12	PASS
11AX40MIMO	Ant0	2422	-19.12	≤8.00	PASS

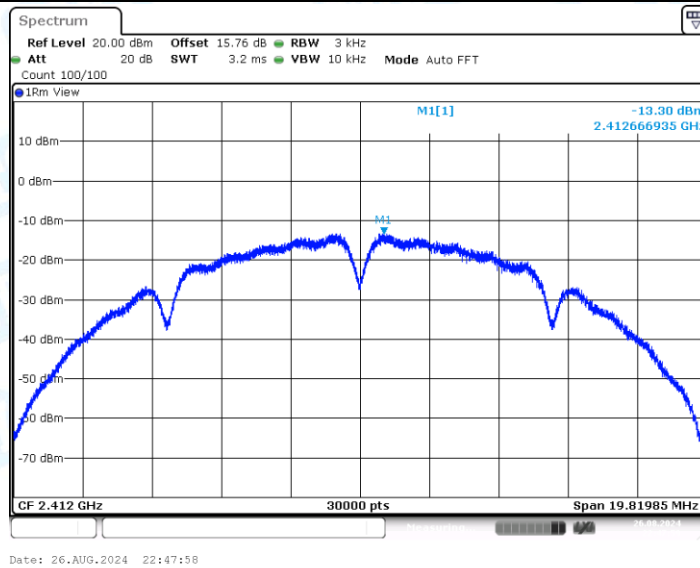
	Ant1	2422	-20.98	≤8.00	PASS
	total	2422	-16.94	≤7.12	PASS
	Ant0	2437	-20.09	≤8.00	PASS
	Ant1	2437	-21.21	≤8.00	PASS
	total	2437	-17.60	≤7.12	PASS
	Ant0	2452	-19.30	≤8.00	PASS
	Ant1	2452	-20.77	≤8.00	PASS
	total	2452	-16.96	≤7.12	PASS
Note: The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving. When ANT.0 and ANT. 1 transmitting simultaneously, and the Directional Gain=6.88dBi > 6dBi. (Ant.0: 3.87dBi; Ant.1: 3.87dBi) So $PSD_{out} = PSD_{limit} - (G_{TX} - 6) = (8 - 0.88) dBm = 7.12 dBm$					
Directional Gain=ANT. Gain+10*LOG(NANT)					
The Duty Cycle Factor is compensated in the graph.					

4.2. Test Graphs

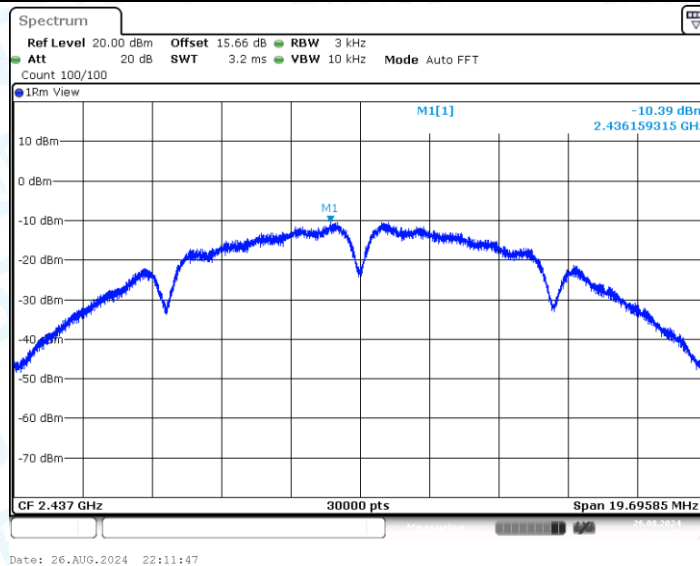
11B_Ant0_2412

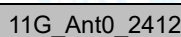
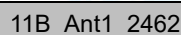
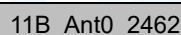


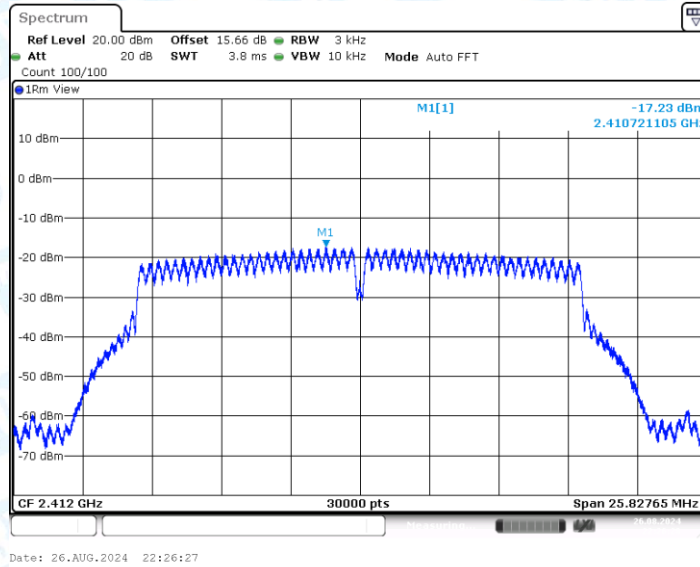
11B_Ant1_2412



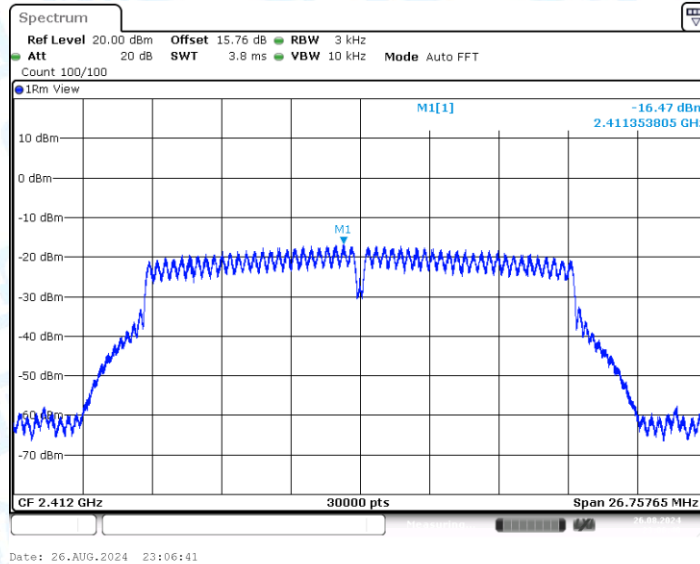
11B_Ant0_2437



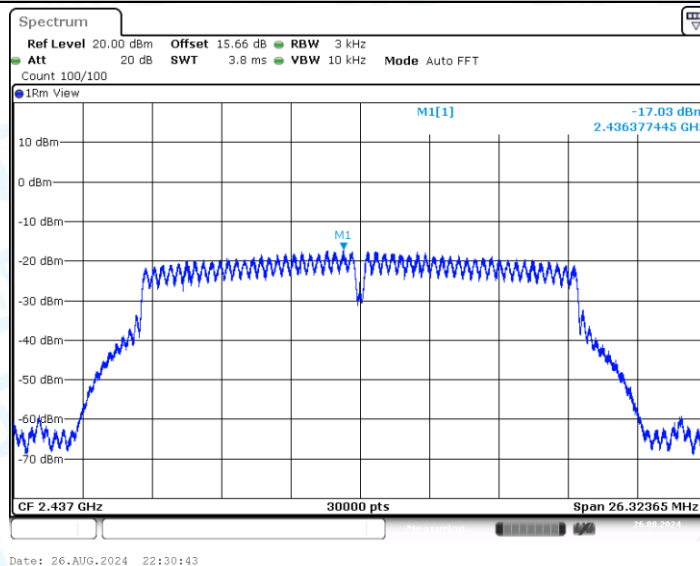




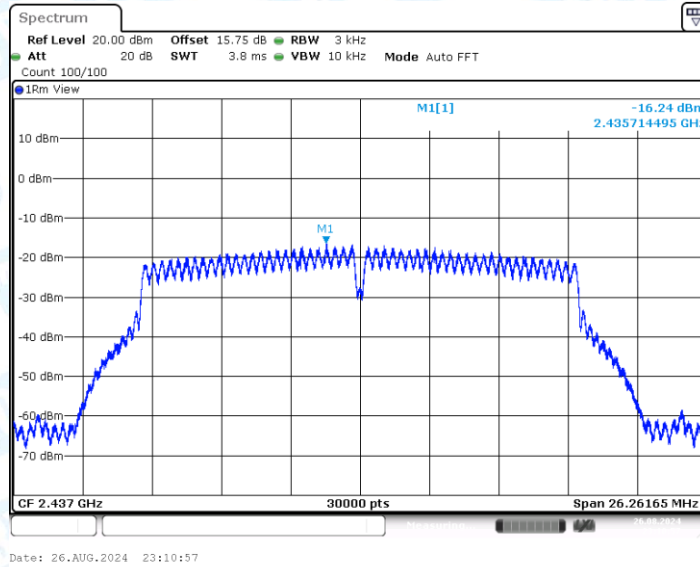
11G_Ant1_2412



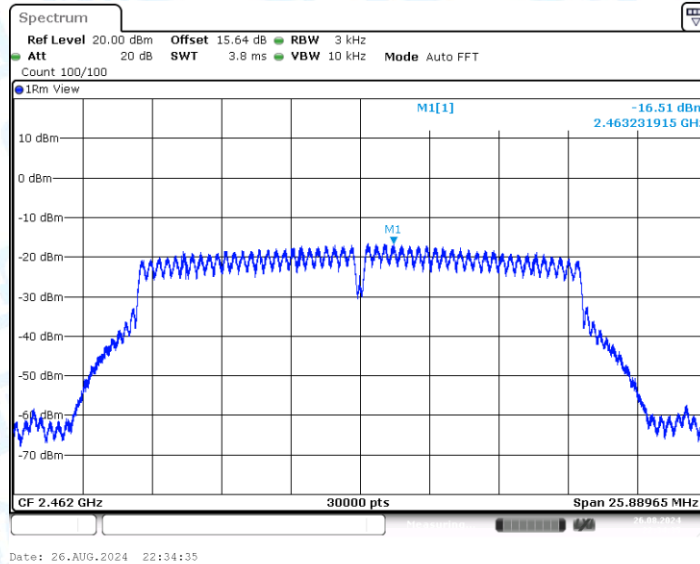
11G_Ant0_2437



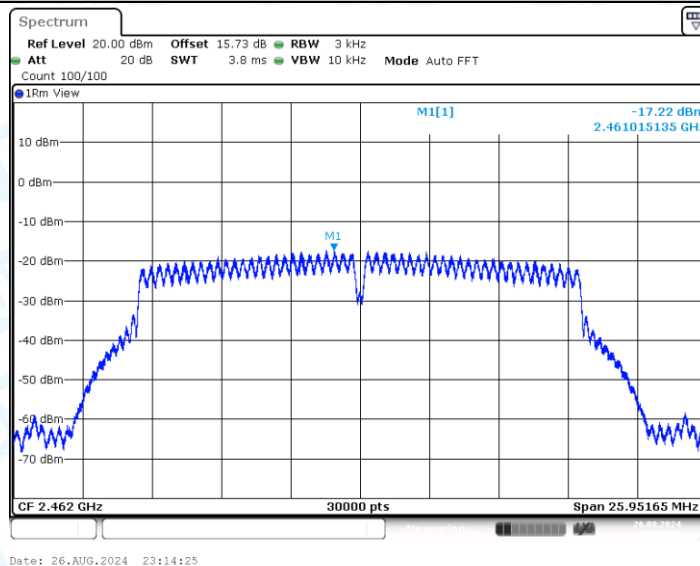
11G_Ant1_2437



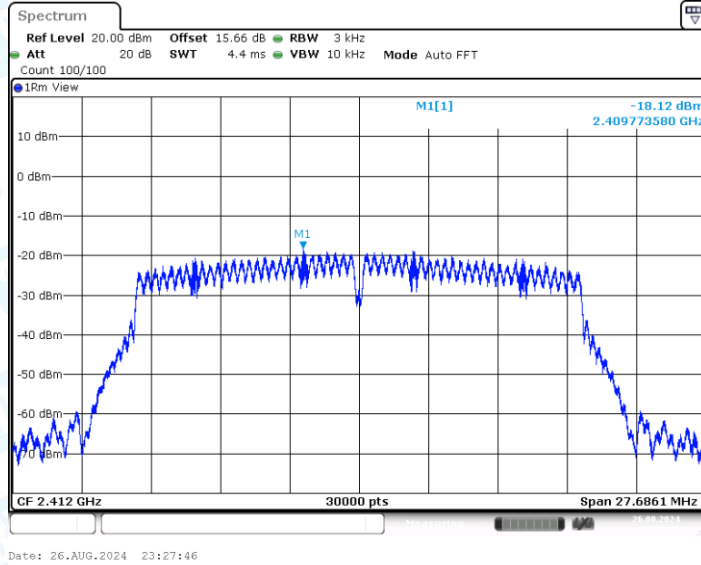
11G_Ant0_2462



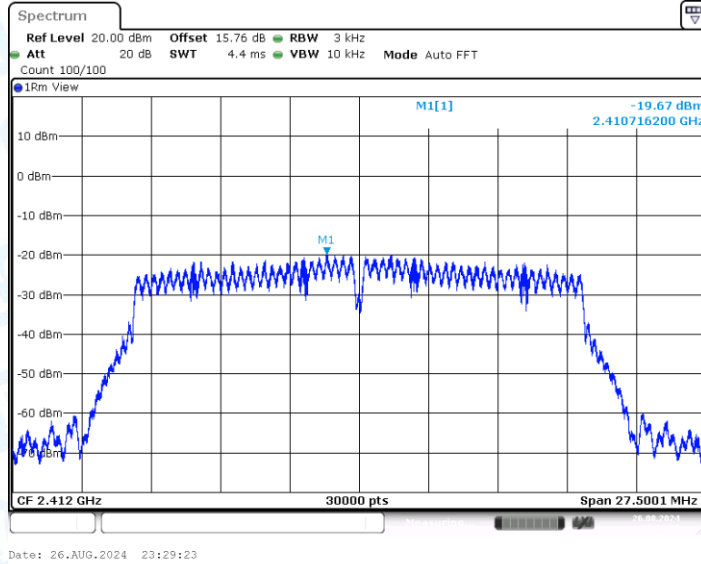
11G_Ant1_2462



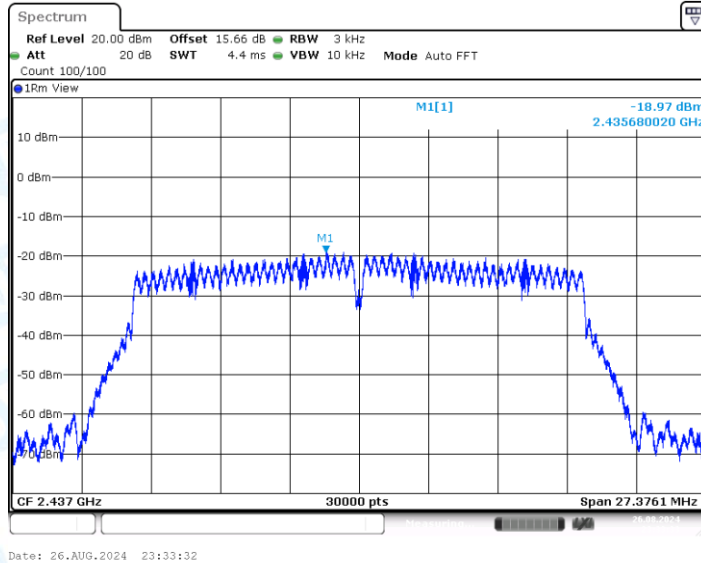
11N20MIMO_Ant0_2412



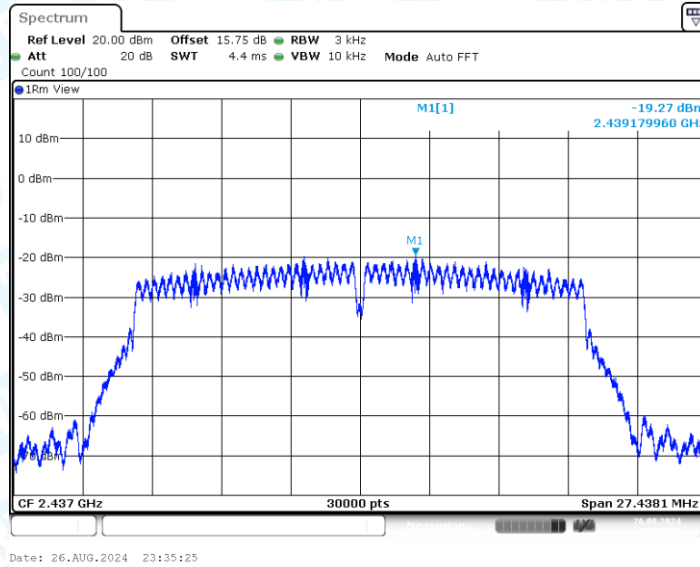
11N20MIMO_Ant1_2412



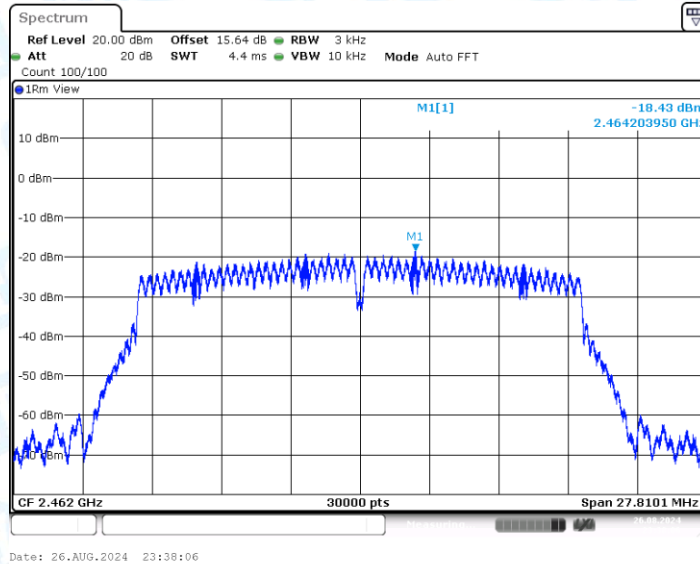
11N20MIMO_Ant0_2437



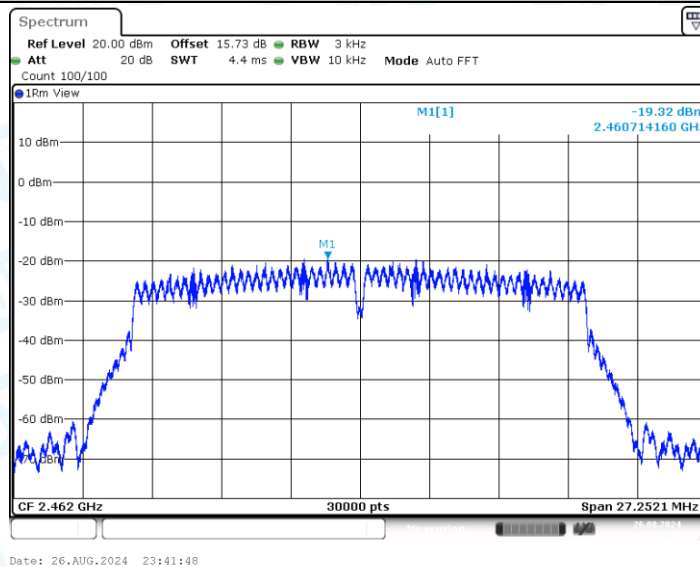
11N20MIMO_Ant1_2437



11N20MIMO_Ant0_2462



11N20MIMO_Ant1_2462



11N40MIMO_Ant0_2422