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

General Description of EUT	
EUT Name:	GPON Gateway
Model:	PG1830CR
Sample ID:	HC-C-202411-0277-01-01
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	23.9℃
Ambient Humidity:	47%RH
Test Power Supply:	DC 12V
Test Engineer:	Rick Chen
Note: For a more detailed features description, please refer to the report TBR-C-202411-0277-1.	

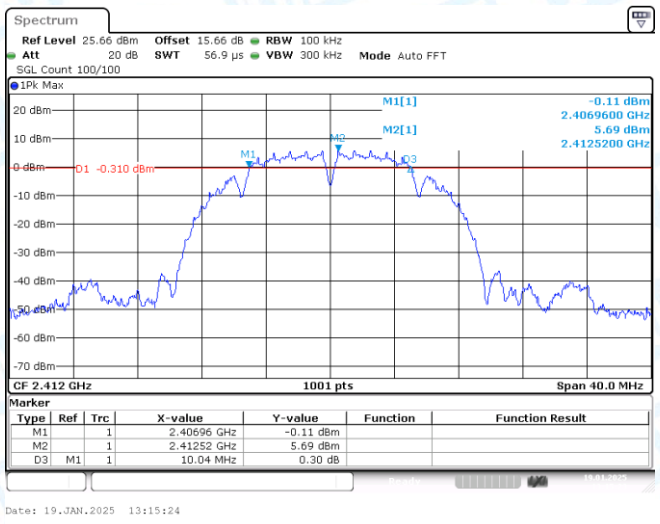
Contents

1: DTS Bandwidth

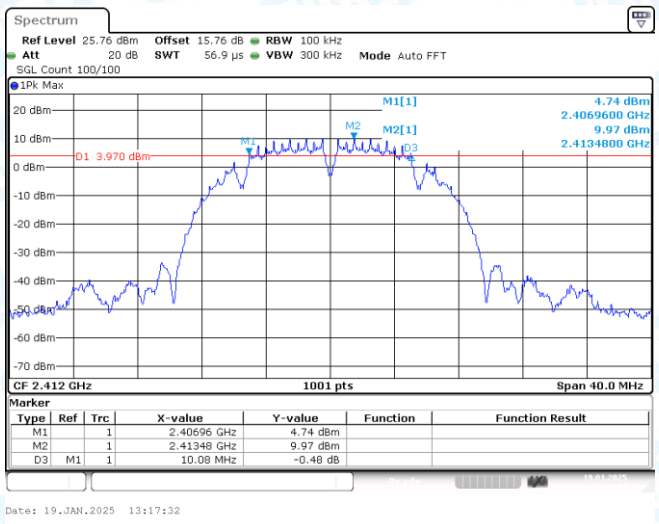
1.1Test Result

TestMode	Ant.	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	10.04	2406.96	2417.00	0.5	PASS
11B-CDD	Ant2	2412	10.08	2406.96	2417.04	0.5	PASS
11B-CDD	Ant1	2437	10.08	2431.96	2442.04	0.5	PASS
11B-CDD	Ant2	2437	10.08	2431.96	2442.04	0.5	PASS
11B-CDD	Ant1	2462	10.04	2456.96	2467.00	0.5	PASS
11B-CDD	Ant2	2462	10.08	2456.96	2467.04	0.5	PASS
11G-CDD	Ant1	2412	16.32	2403.84	2420.16	0.5	PASS
11G-CDD	Ant2	2412	16.32	2403.84	2420.16	0.5	PASS
11G-CDD	Ant1	2437	16.32	2428.84	2445.16	0.5	PASS
11G-CDD	Ant2	2437	16.32	2428.84	2445.16	0.5	PASS
11G-CDD	Ant1	2462	15.12	2454.44	2469.56	0.5	PASS
11G-CDD	Ant2	2462	15.88	2454.24	2470.12	0.5	PASS
11N20-CDD	Ant1	2412	14.96	2404.52	2419.48	0.5	PASS
11N20-CDD	Ant2	2412	16.80	2403.60	2420.40	0.5	PASS
11N20-CDD	Ant1	2437	13.84	2430.68	2444.52	0.5	PASS
11N20-CDD	Ant2	2437	16.56	2428.84	2445.40	0.5	PASS
11N20-CDD	Ant1	2462	15.40	2454.40	2469.80	0.5	PASS
11N20-CDD	Ant2	2462	14.44	2455.08	2469.52	0.5	PASS
11N40-CDD	Ant1	2422	35.04	2404.48	2439.52	0.5	PASS
11N40-CDD	Ant2	2422	32.56	2406.96	2439.52	0.5	PASS
11N40-CDD	Ant2	2437	31.36	2421.32	2452.68	0.5	PASS
11N40-CDD	Ant1	2437	27.84	2420.68	2448.52	0.5	PASS
11N40-CDD	Ant1	2452	35.04	2434.48	2469.52	0.5	PASS
11N40-CDD	Ant2	2452	35.12	2434.40	2469.52	0.5	PASS
11AX20-CDD	Ant1	2412	15.72	2404.24	2419.96	0.5	PASS
11AX20-CDD	Ant2	2412	15.08	2404.48	2419.56	0.5	PASS
11AX20-CDD	Ant1	2437	14.24	2430.68	2444.92	0.5	PASS
11AX20-CDD	Ant2	2437	17.16	2428.68	2445.84	0.5	PASS
11AX20-CDD	Ant1	2462	15.88	2454.44	2470.32	0.5	PASS
11AX20-CDD	Ant2	2462	16.36	2453.20	2469.56	0.5	PASS
11AX40-CDD	Ant1	2422	35.76	2404.48	2440.24	0.5	PASS
11AX40-CDD	Ant2	2422	35.04	2404.48	2439.52	0.5	PASS
11AX40-CDD	Ant1	2437	30.24	2424.36	2454.60	0.5	PASS
11AX40-CDD	Ant2	2437	32.56	2421.96	2454.52	0.5	PASS
11AX40-CDD	Ant1	2452	30.08	2436.96	2467.04	0.5	PASS
11AX40-CDD	Ant2	2452	35.04	2434.48	2469.52	0.5	PASS

1.2 Test Graphs



11B-CDD-Ant1-2412-PASS



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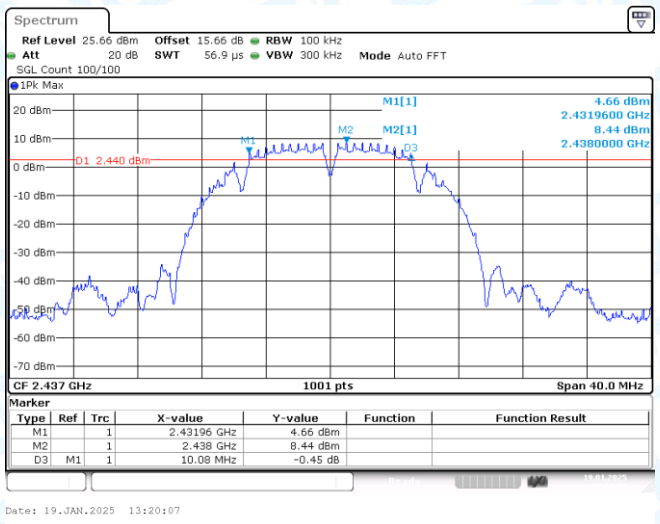

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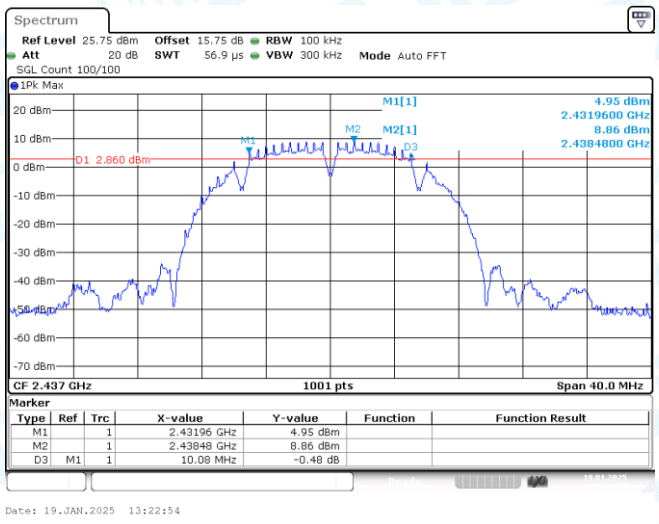

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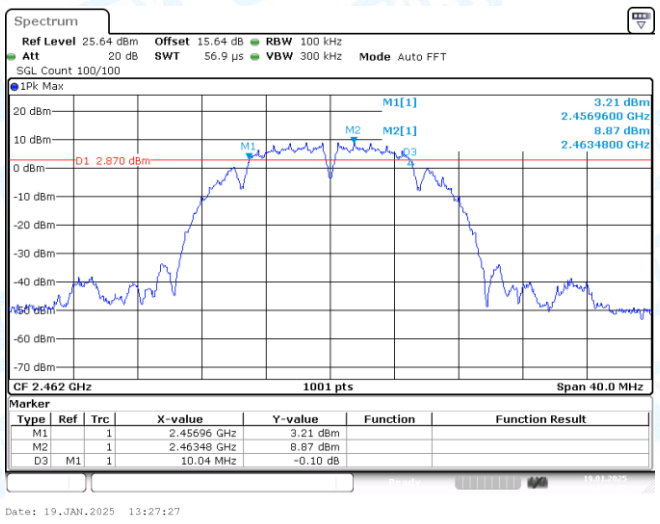

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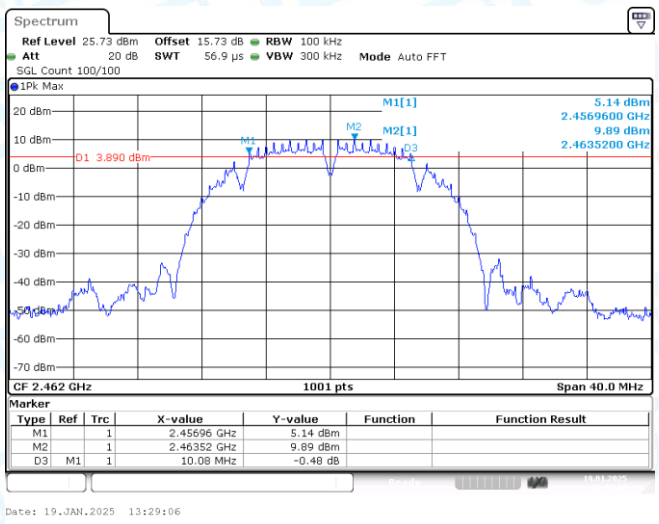

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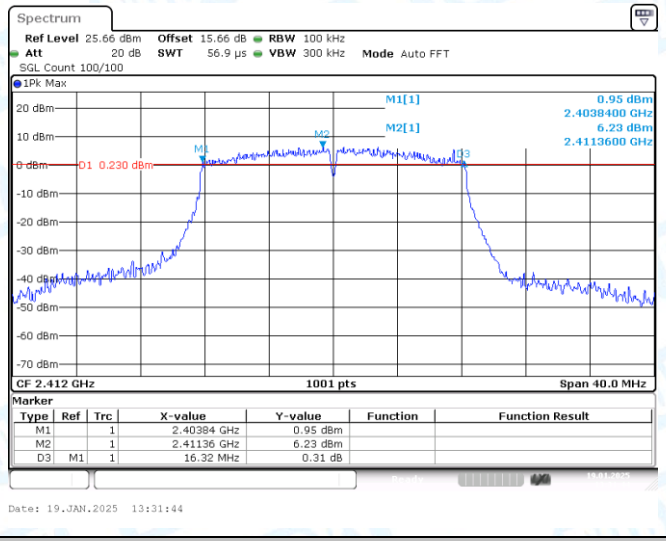

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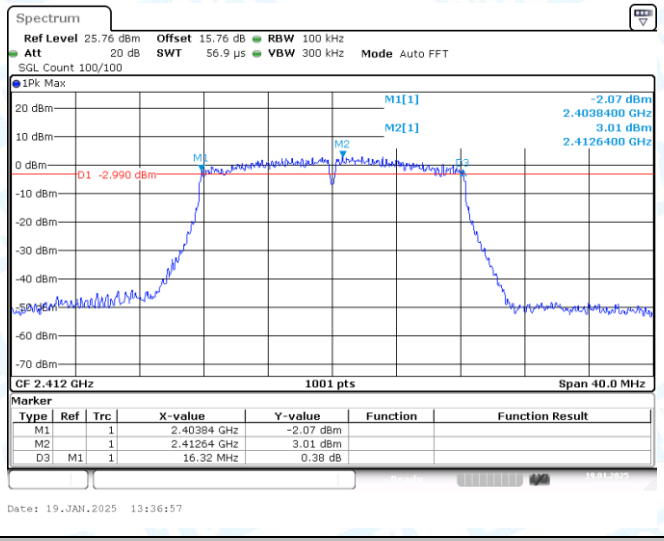

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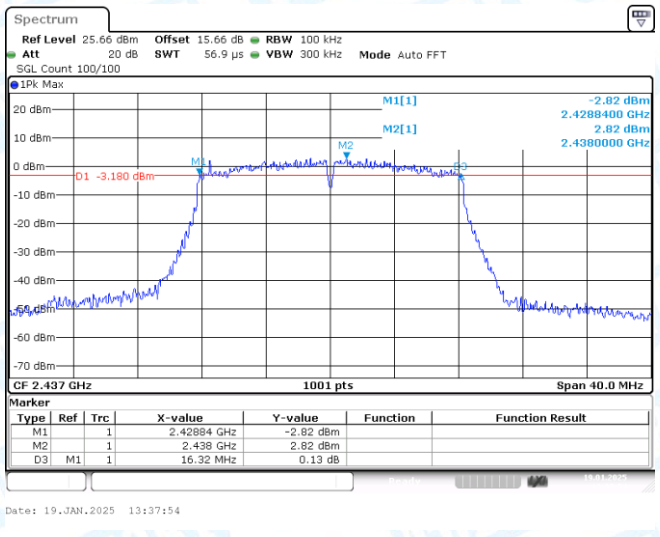

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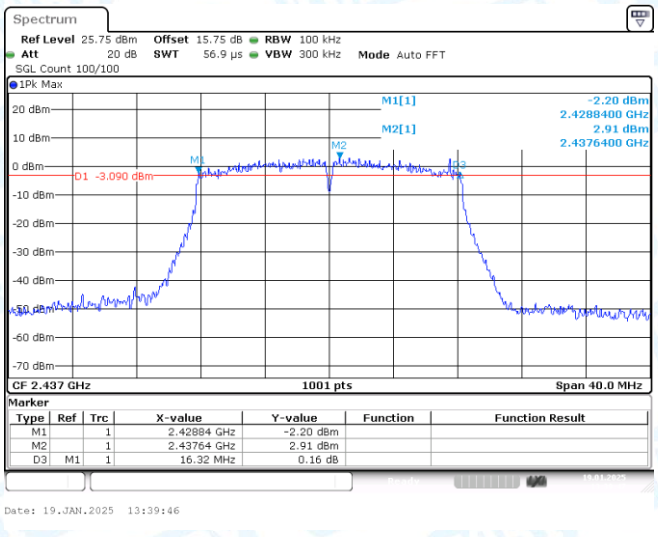

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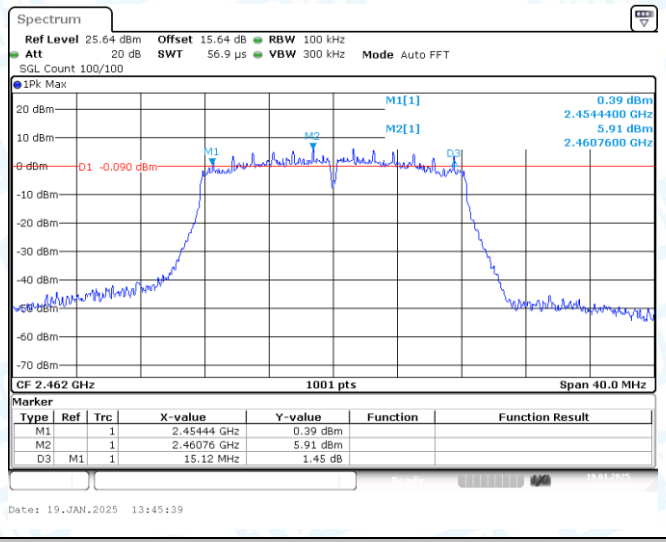

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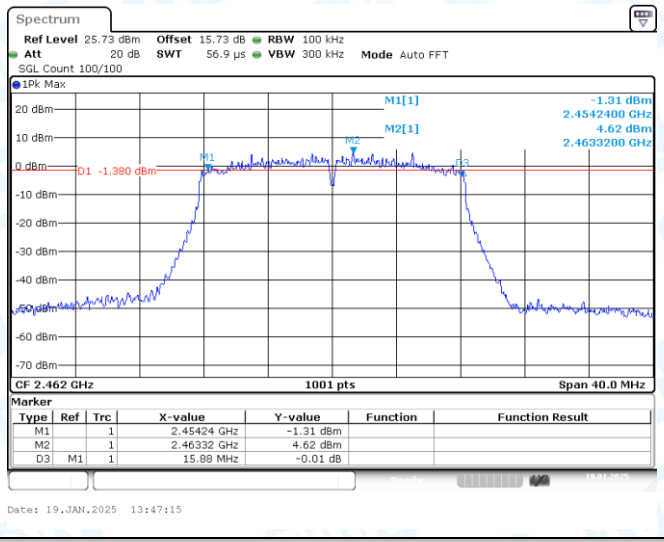

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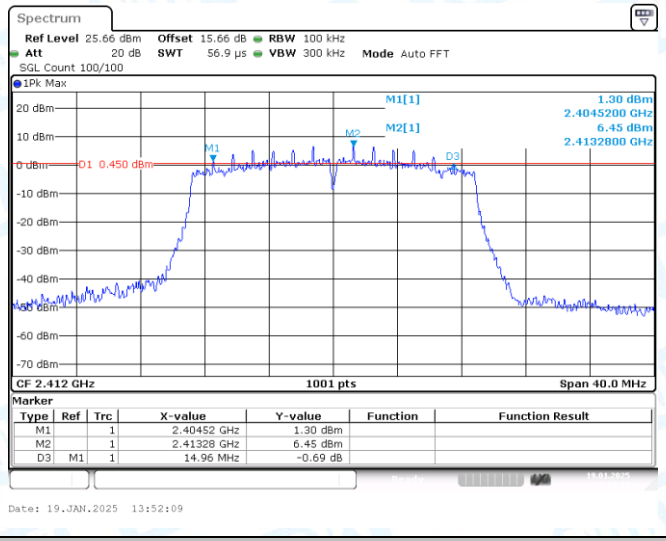

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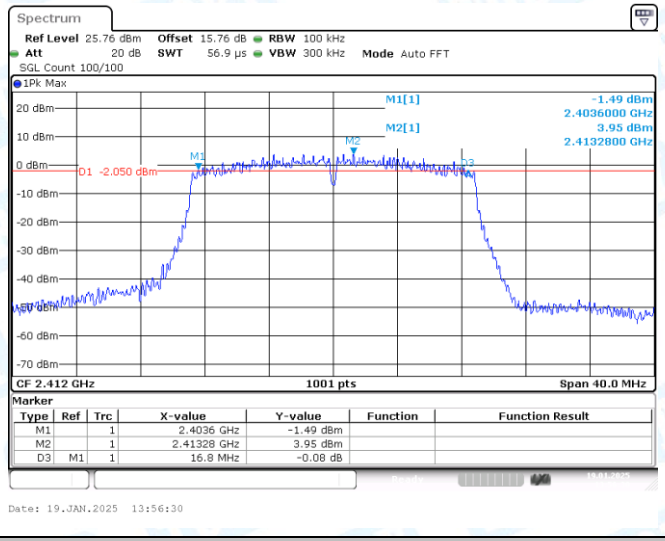

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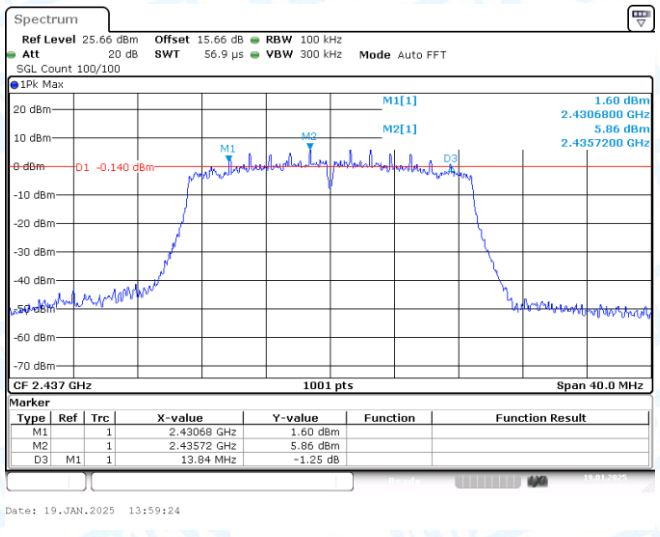

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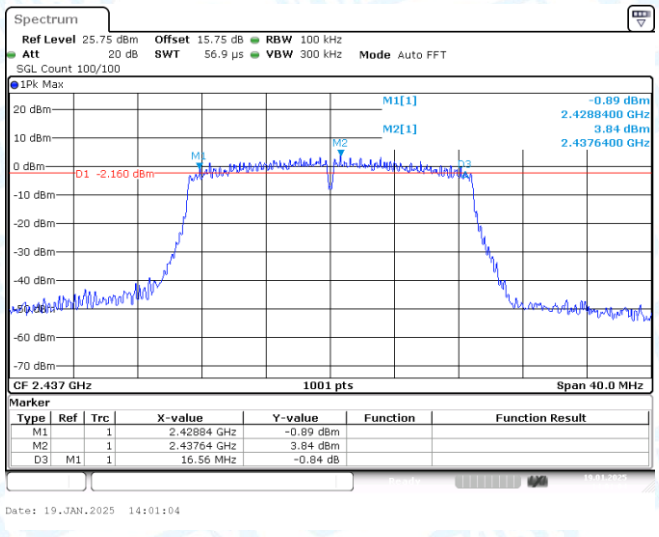

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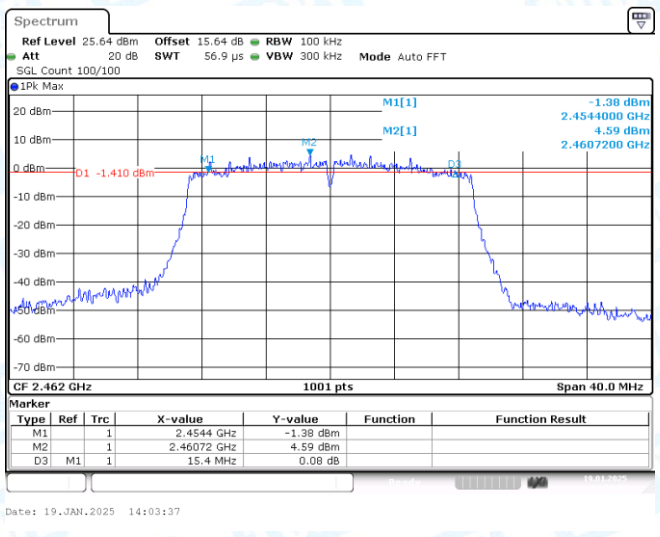

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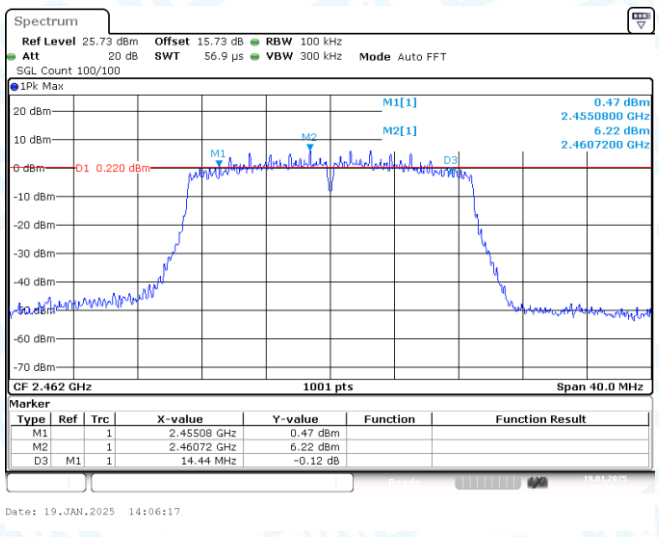

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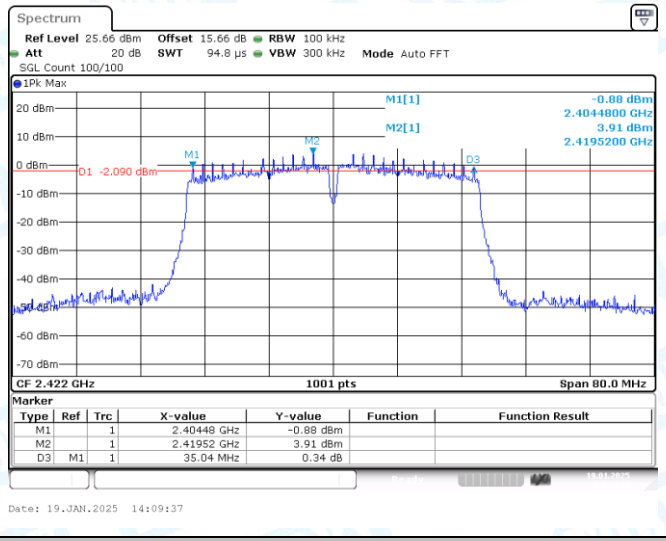

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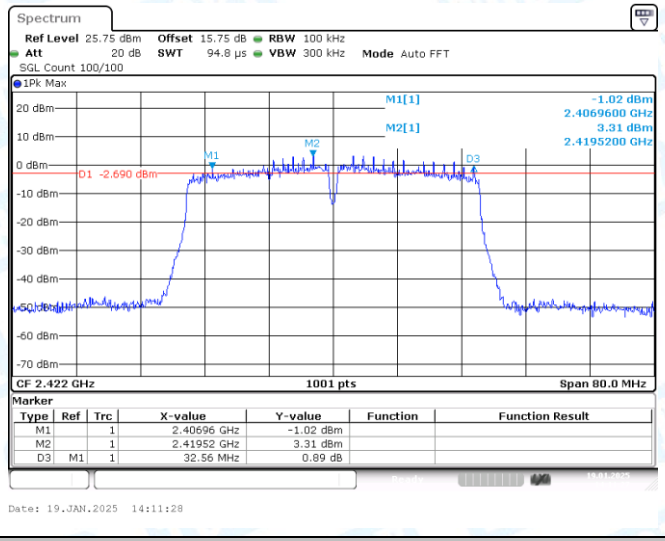

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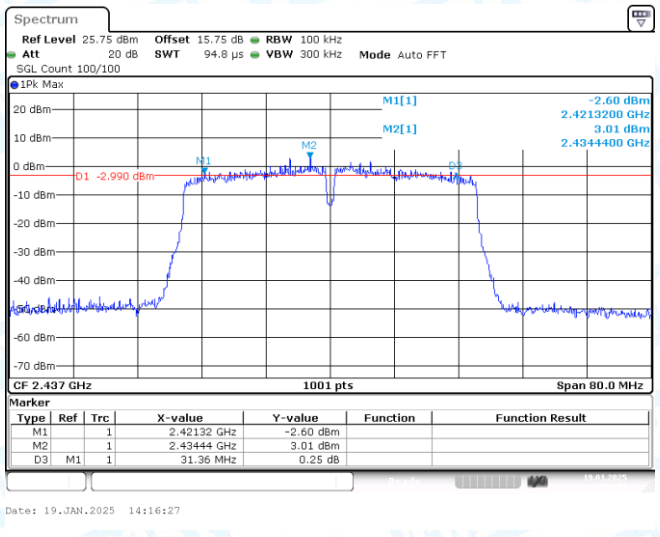

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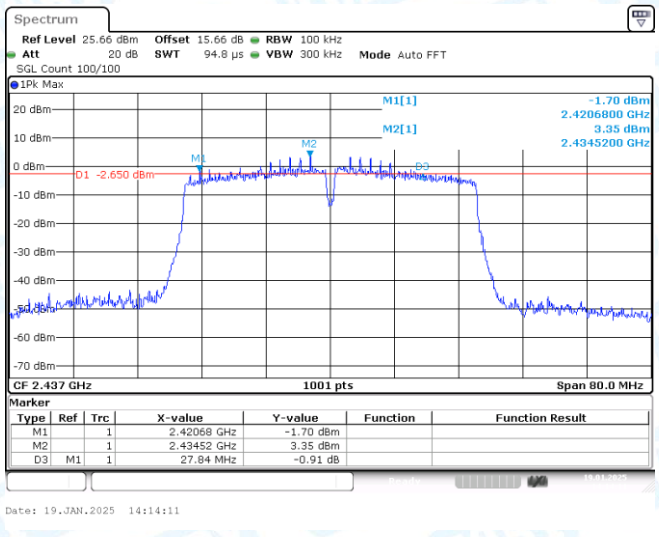
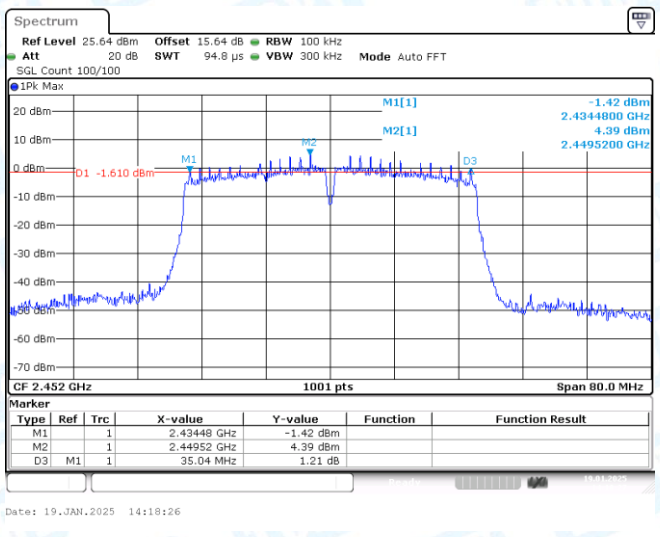
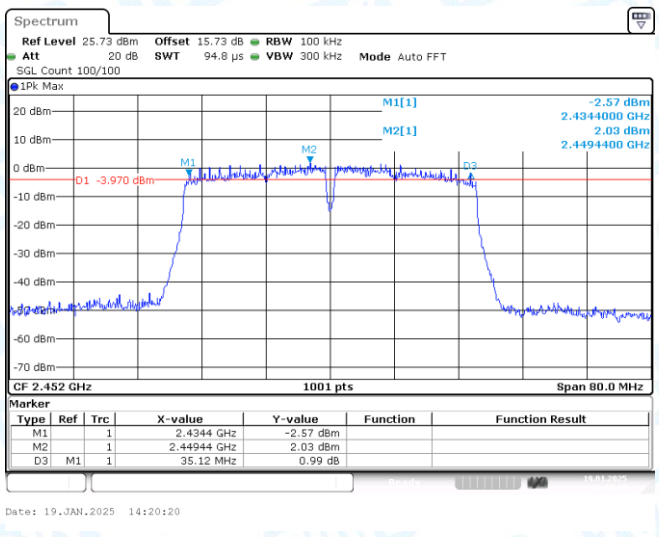


11N40-CDD-Ant1-2437-PASS



11N40-CDD-Ant1-2452-PASS



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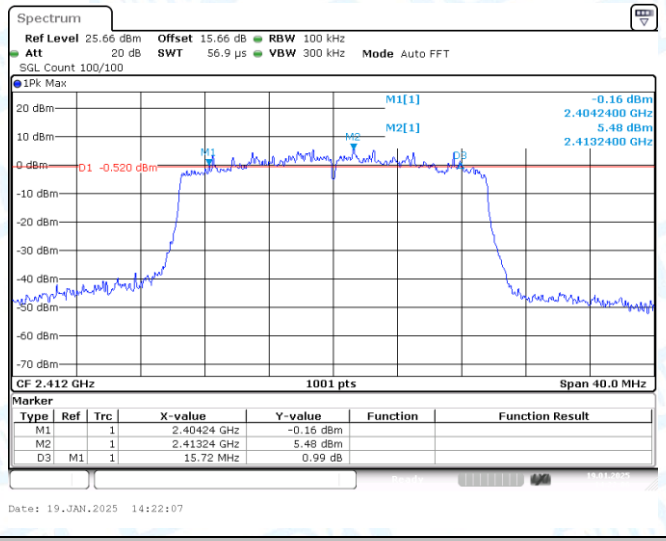
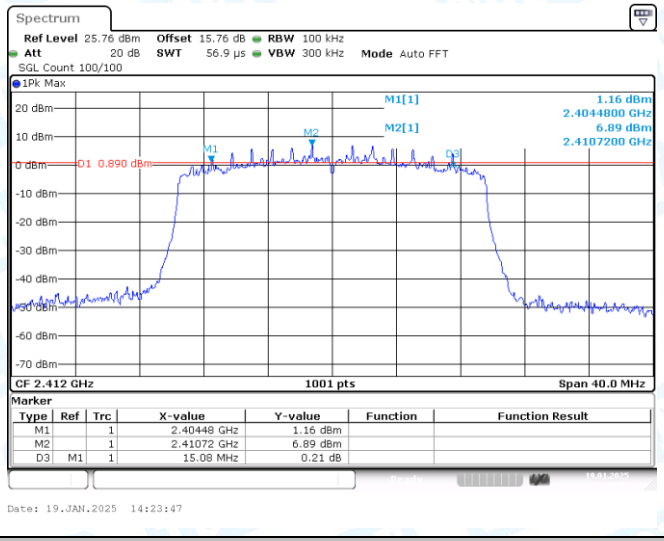
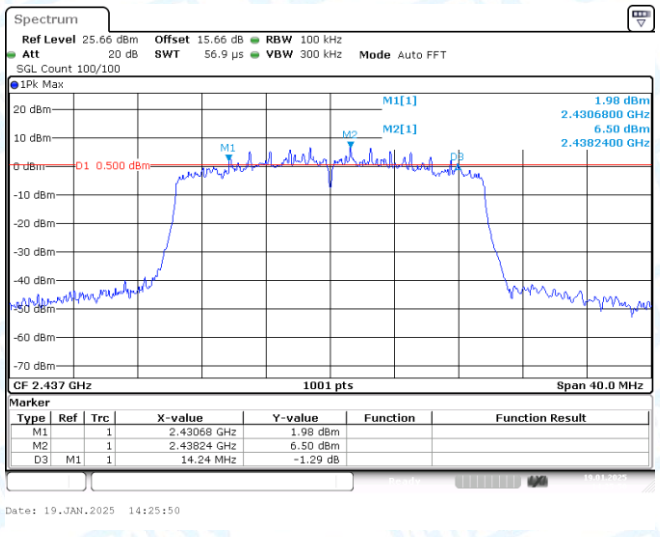


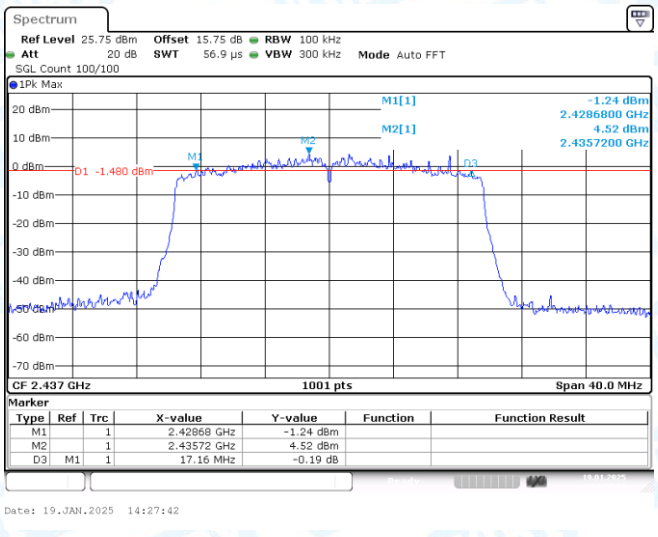
11AX20-CDD-Ant1-2412-PASS



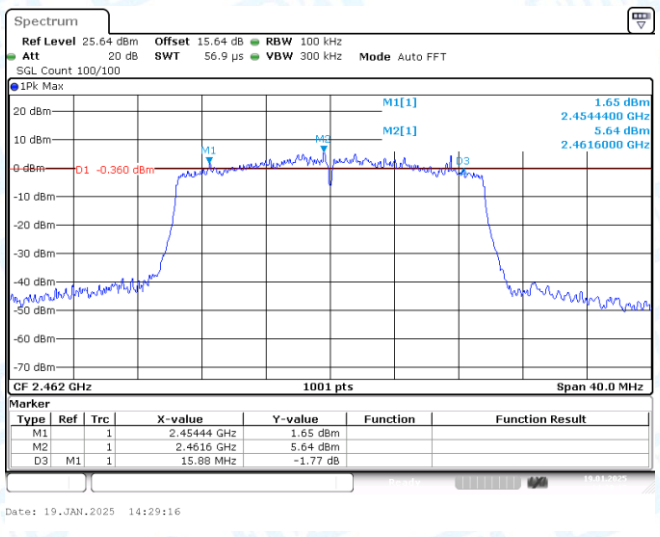
11AX20-CDD-Ant2-2412-PASS



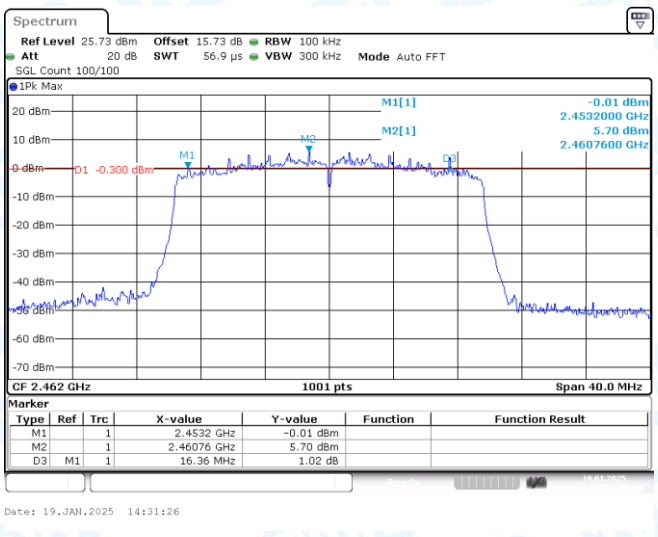
11AX20-CDD-Ant1-2437-PASS



11AX20-CDD-Ant2-2437-PASS



11AX20-CDD-Ant1-2462-PASS



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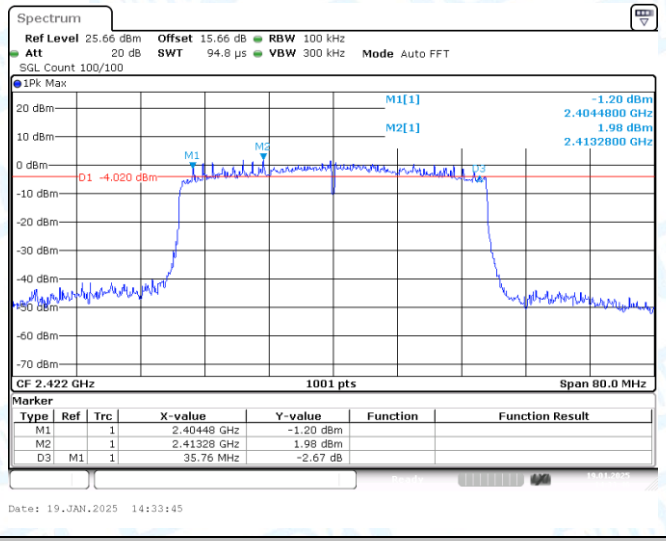

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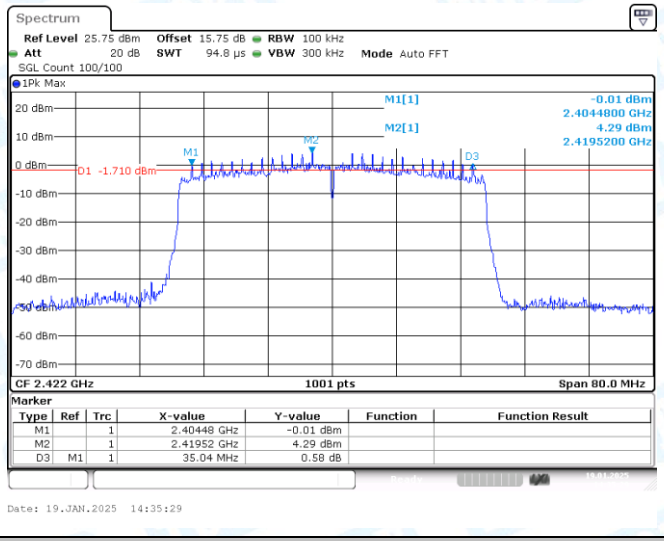

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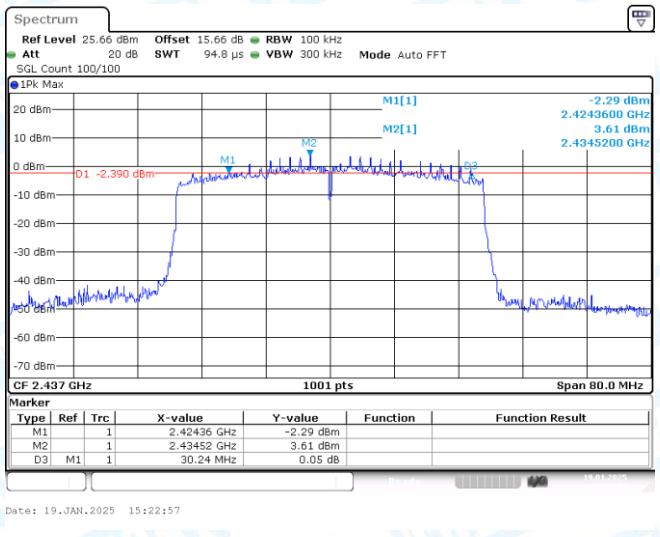

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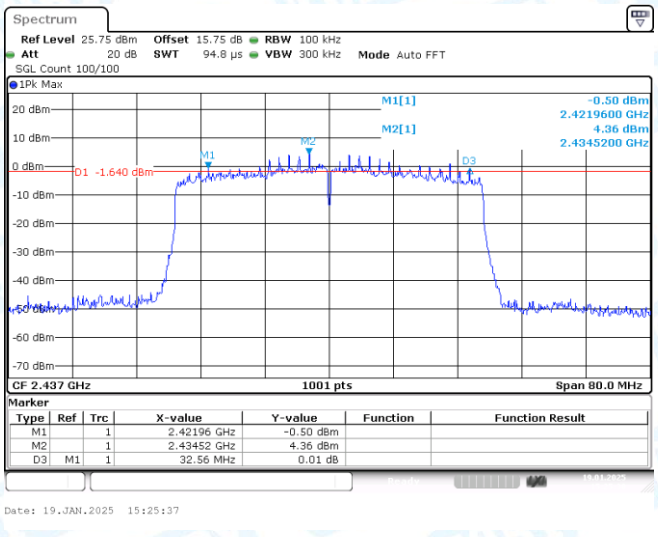

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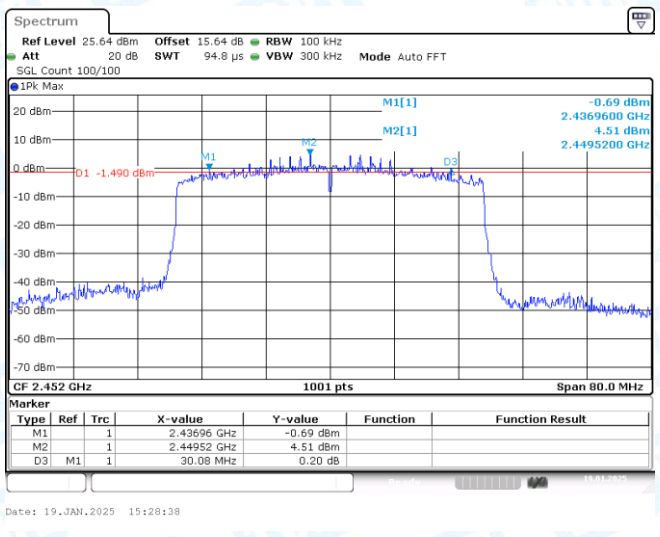

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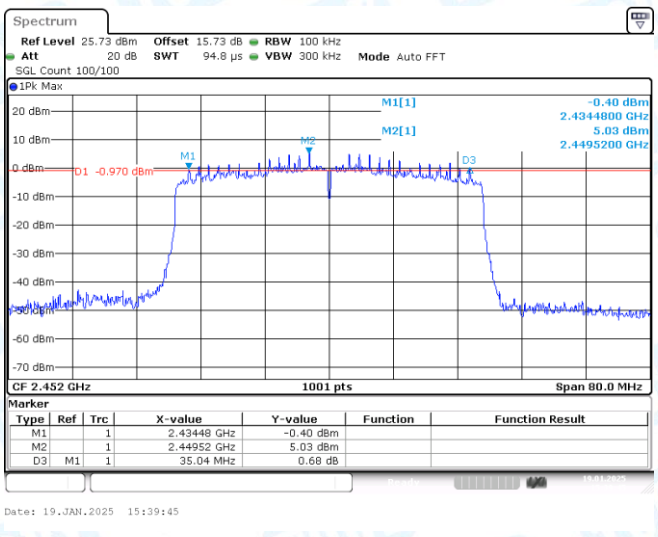

11AX40-CDD-Ant2-2452-PASS

2: Occupied Channel Bandwidth

2.1 Test Result

TestMode	Ant.	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-CDD	Ant1	2412	13.906	2405.0869	2418.9930	---	---
11B-CDD	Ant2	2412	13.906	2405.0470	2418.9530	---	---
11B-CDD	Ant1	2437	13.866	2430.0869	2443.9530	---	---
11B-CDD	Ant2	2437	13.906	2430.0470	2443.9530	---	---
11B-CDD	Ant1	2462	13.906	2455.0470	2468.9530	---	---
11B-CDD	Ant2	2462	13.906	2455.0470	2468.9530	---	---
11G-CDD	Ant1	2412	16.304	2403.8482	2420.1518	---	---
11G-CDD	Ant2	2412	16.264	2403.8881	2420.1518	---	---
11G-CDD	Ant1	2437	16.344	2428.8482	2445.1918	---	---
11G-CDD	Ant2	2437	16.344	2428.8082	2445.1518	---	---
11G-CDD	Ant1	2462	16.424	2453.7682	2470.1918	---	---
11G-CDD	Ant2	2462	16.184	2453.9281	2470.1119	---	---
11N20-CDD	Ant1	2412	17.423	2403.2887	2420.7113	---	---
11N20-CDD	Ant2	2412	17.423	2403.3287	2420.7512	---	---
11N20-CDD	Ant1	2437	17.502	2428.2488	2445.7512	---	---
11N20-CDD	Ant2	2437	17.343	2428.3287	2445.6713	---	---
11N20-CDD	Ant1	2462	17.383	2453.3287	2470.7113	---	---
11N20-CDD	Ant2	2462	17.423	2453.3287	2470.7512	---	---
11N40-CDD	Ant1	2422	35.964	2404.0180	2439.9820	---	---
11N40-CDD	Ant2	2422	35.804	2404.0979	2439.9021	---	---
11N40-CDD	Ant1	2437	35.884	2419.0180	2454.9021	---	---
11N40-CDD	Ant2	2437	35.804	2419.0979	2454.9021	---	---
11N40-CDD	Ant1	2452	35.884	2434.0180	2469.9021	---	---
11N40-CDD	Ant2	2452	35.884	2434.0180	2469.9021	---	---
11AX20-CDD	Ant1	2412	18.781	2402.6094	2421.3906	---	---
11AX20-CDD	Ant2	2412	18.821	2402.5694	2421.3906	---	---
11AX20-CDD	Ant1	2437	18.821	2427.5295	2446.3506	---	---
11AX20-CDD	Ant2	2437	18.781	2427.6094	2446.3906	---	---
11AX20-CDD	Ant1	2462	18.821	2452.5295	2471.3506	---	---
11AX20-CDD	Ant2	2462	18.821	2452.5694	2471.3906	---	---
11AX40-CDD	Ant1	2422	37.403	2403.2987	2440.7013	---	---
11AX40-CDD	Ant2	2422	37.403	2403.2987	2440.7013	---	---
11AX40-CDD	Ant1	2437	37.243	2418.4585	2455.7013	---	---
11AX40-CDD	Ant2	2437	37.562	2418.2188	2455.7812	---	---
11AX40-CDD	Ant1	2452	37.323	2433.2188	2470.5415	---	---
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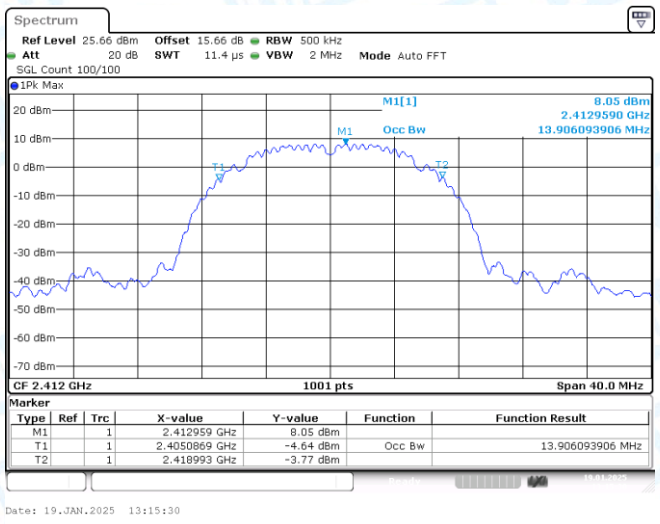
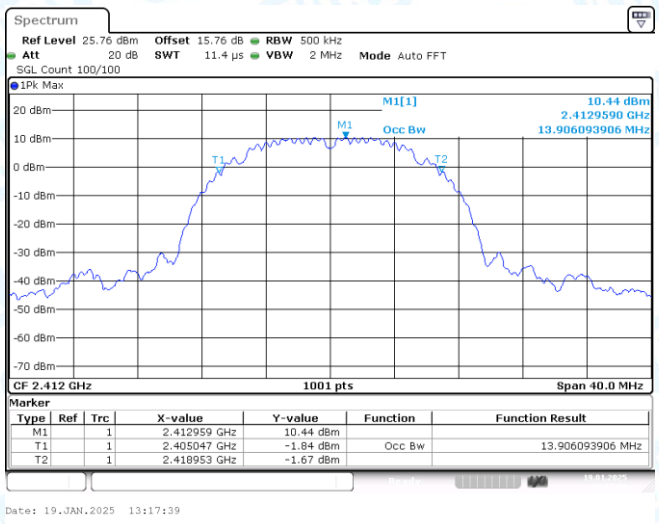
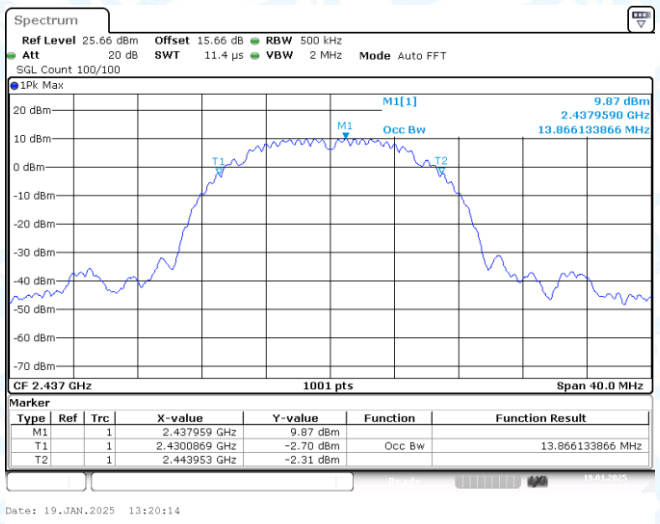
2.2 Test Graphs



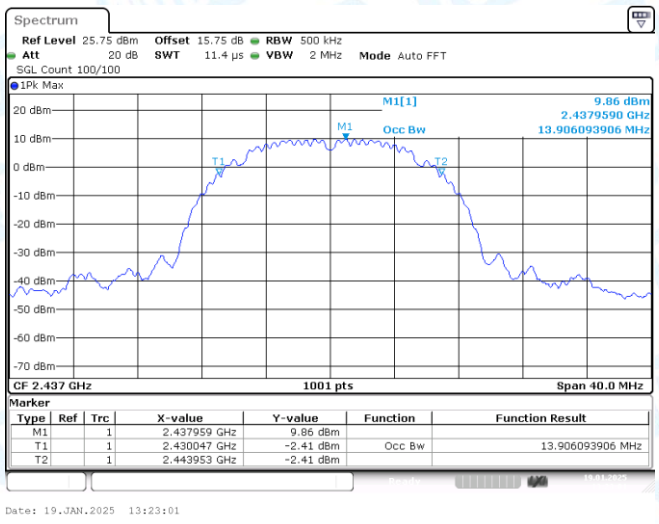
11B-CDD-Ant1-2412



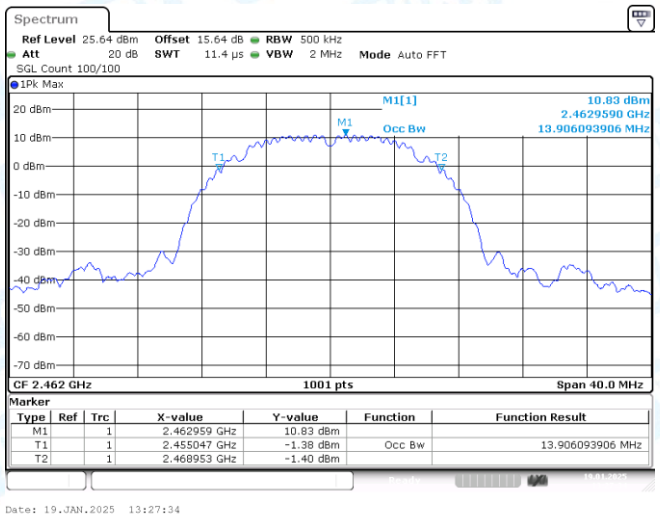
11B-CDD-Ant2-2412



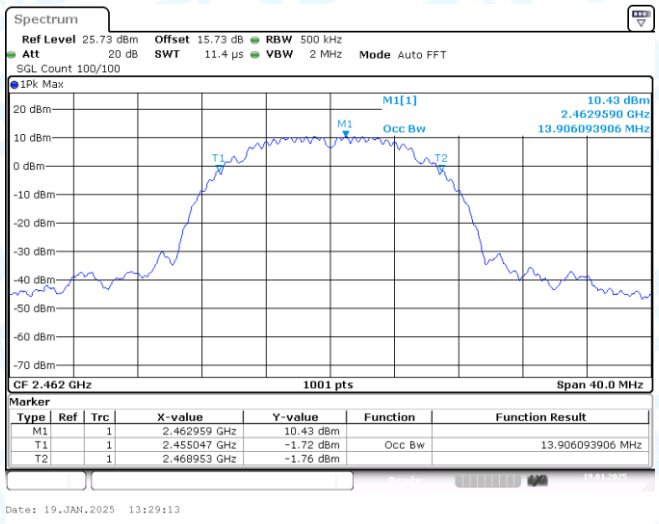
11B-CDD-Ant1-2437



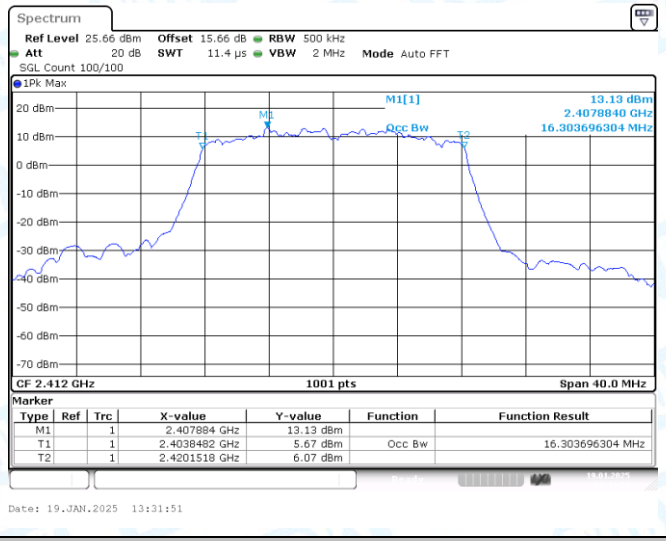
11B-CDD-Ant2-2437



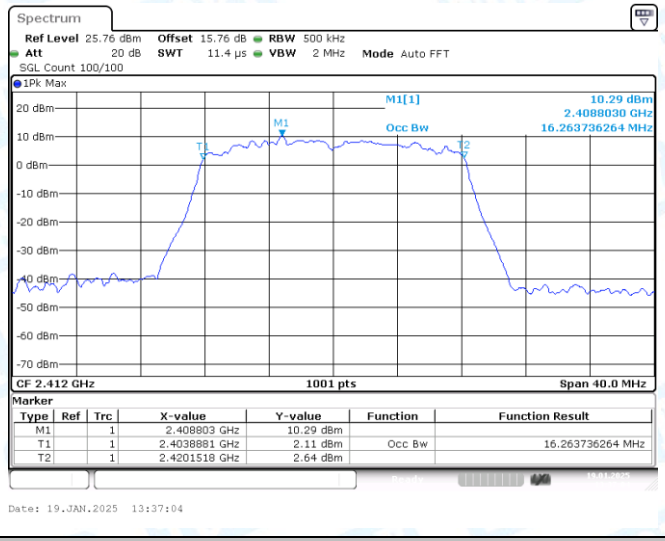
11B-CDD-Ant1-2462



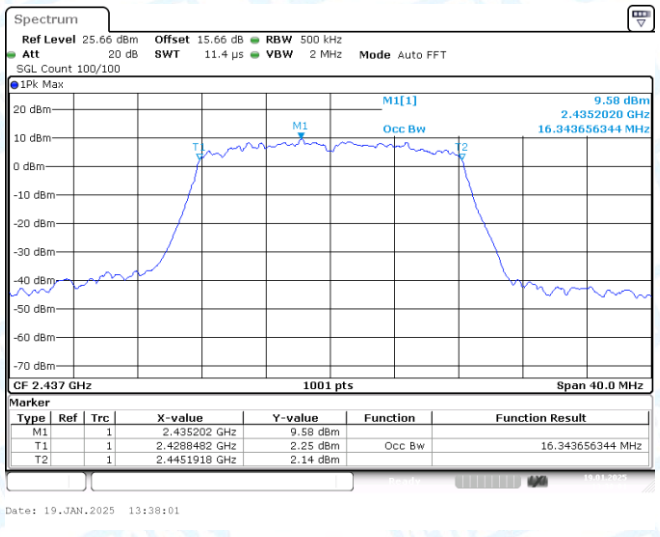
11B-CDD-Ant2-2462



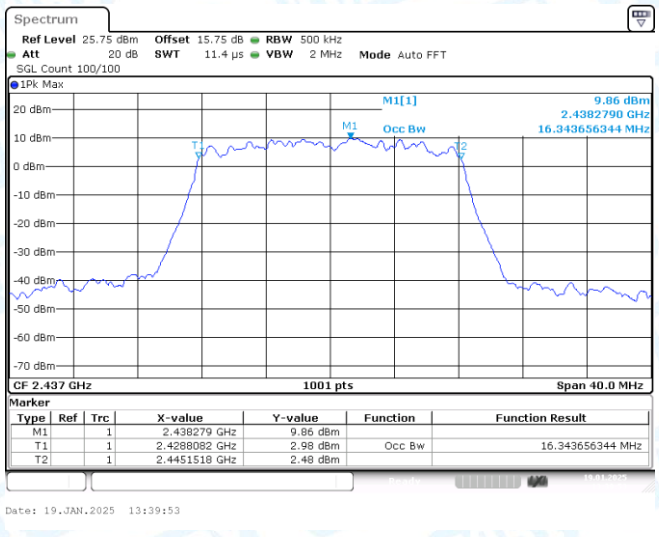
11G-CDD-Ant1-2412



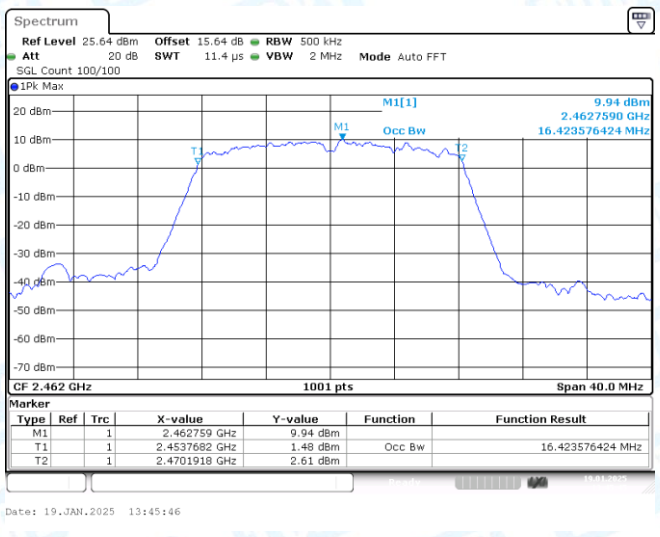
11G-CDD-Ant2-2412



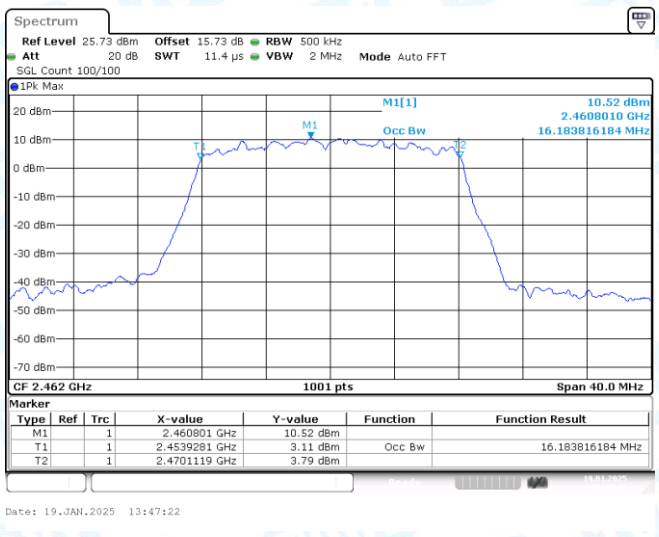
11G-CDD-Ant1-2437



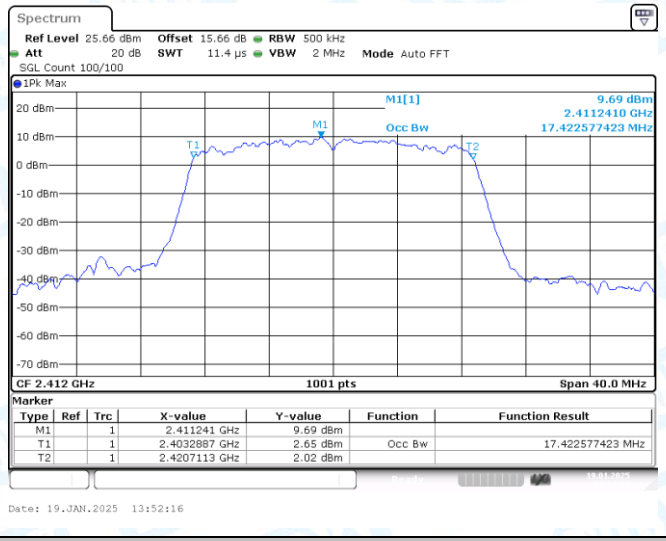
11G-CDD-Ant2-2437



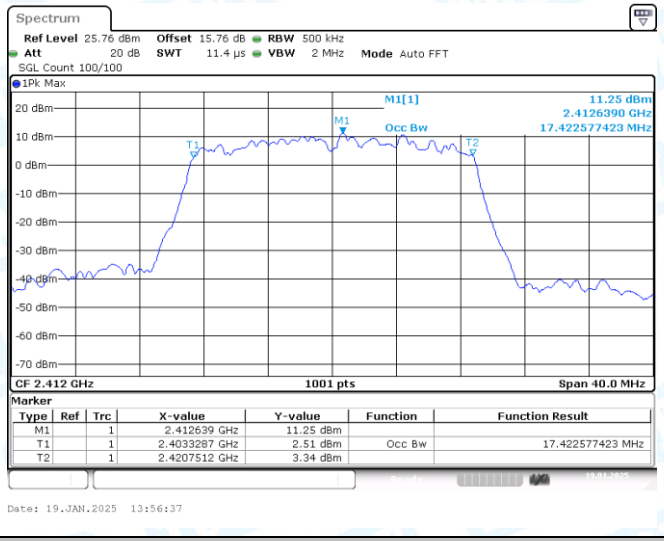
11G-CDD-Ant1-2462



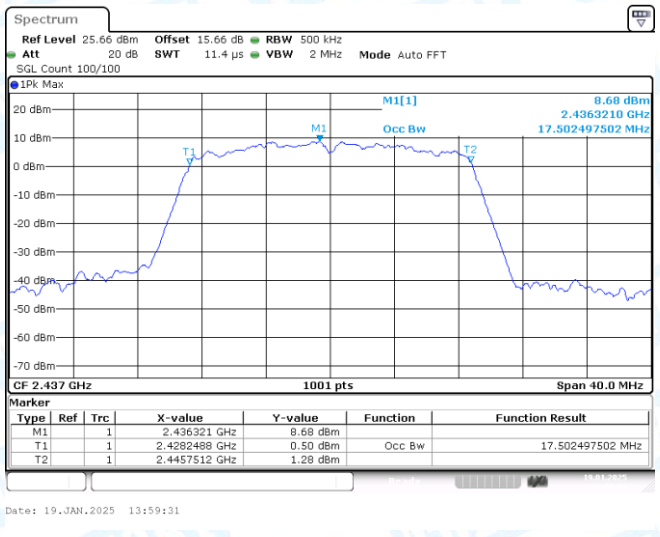
11G-CDD-Ant2-2462



11N20-CDD-Ant1-2412



11N20-CDD-Ant2-2412



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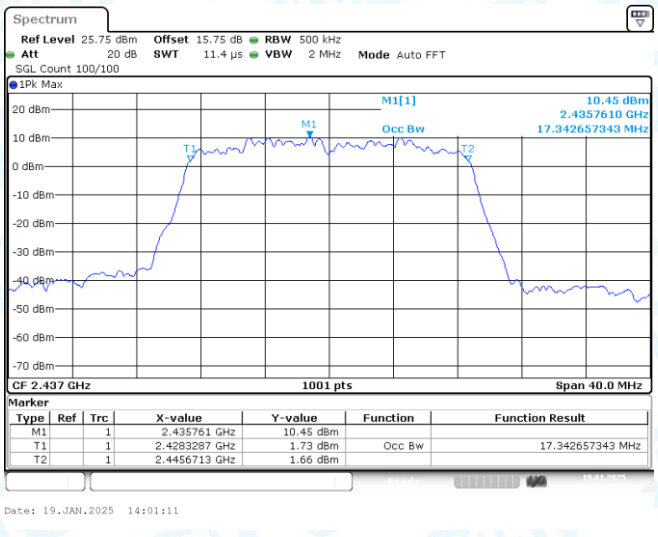
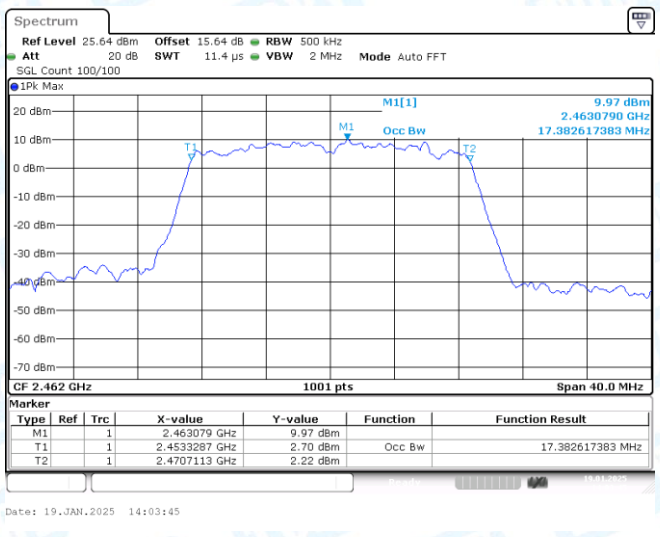
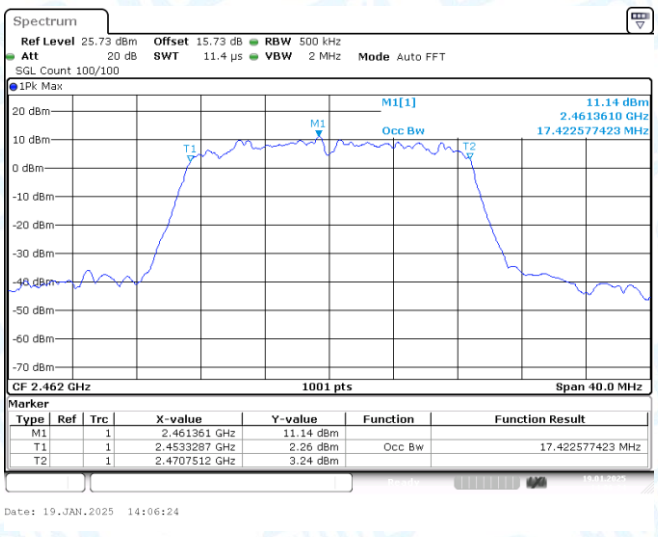


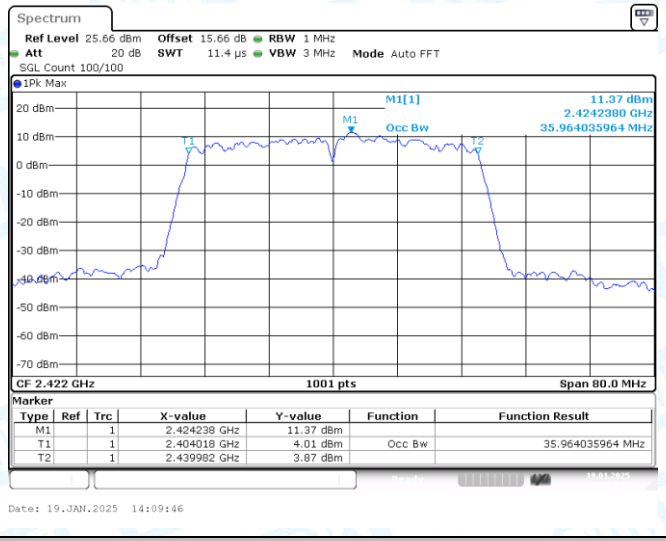
11N20-CDD-Ant2-2437



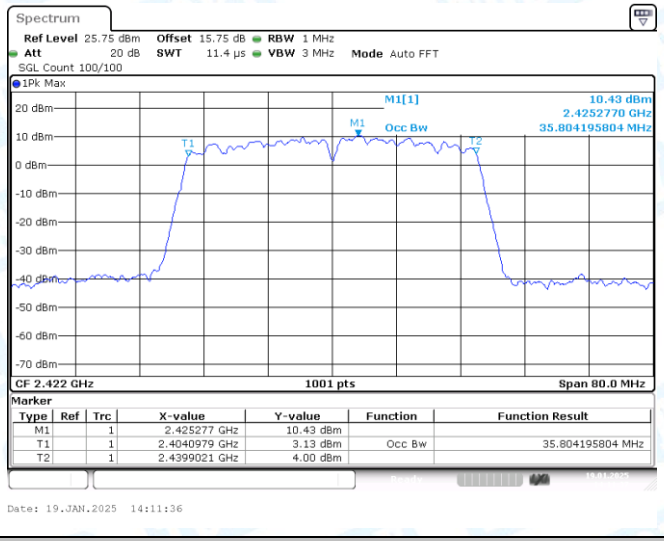
11N20-CDD-Ant1-2462



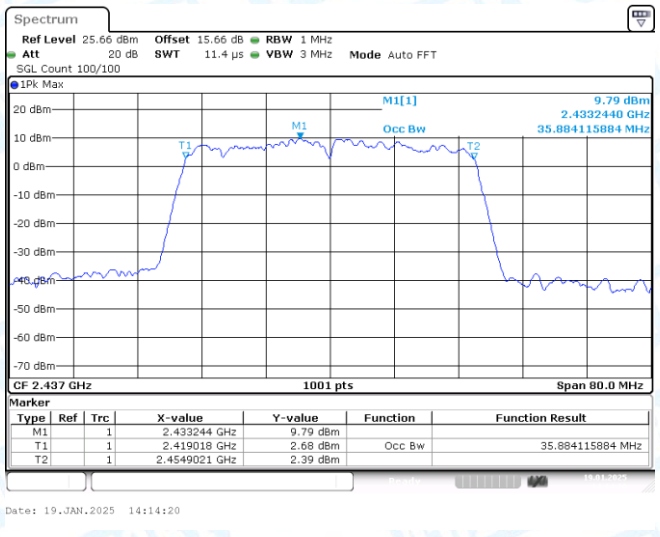
11N20-CDD-Ant2-2462



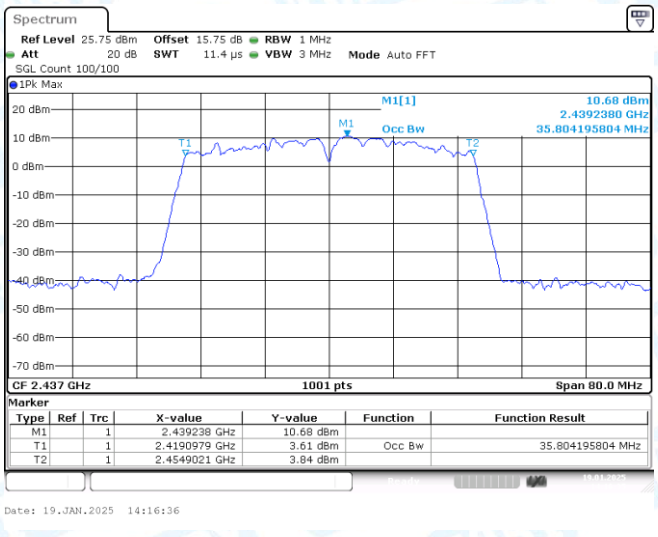
11N40-CDD-Ant1-2422



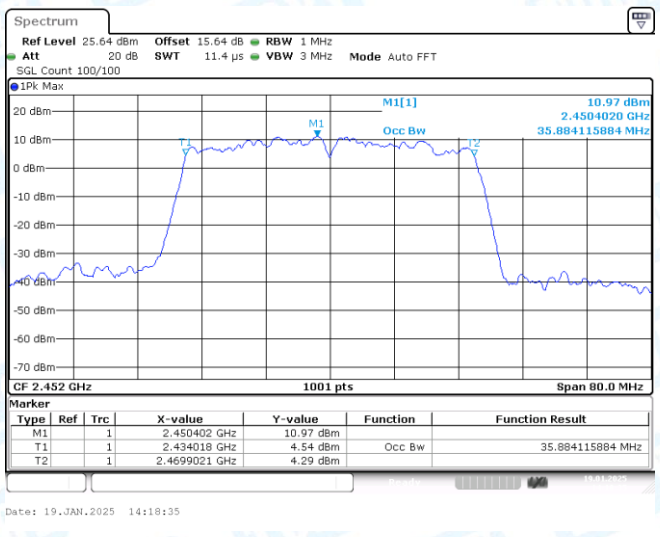
11N40-CDD-Ant2-2422



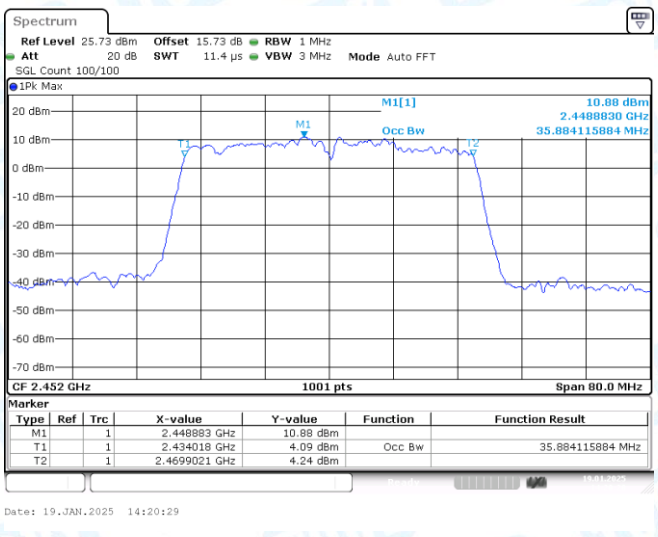
11N40-CDD-Ant1-2437



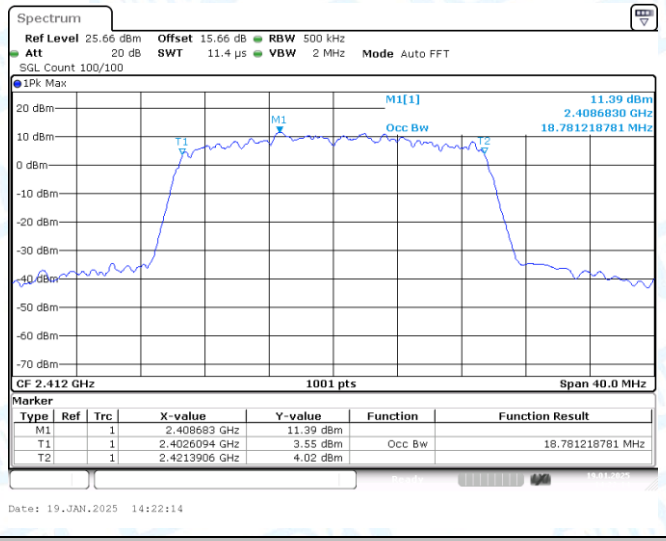
11N40-CDD-Ant2-2437



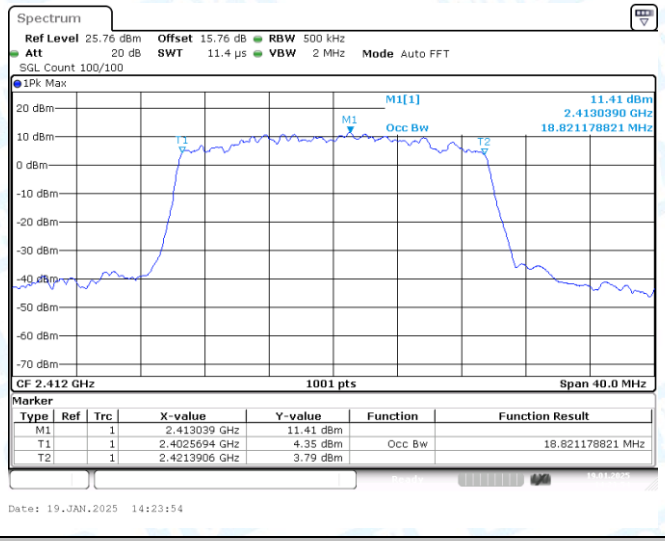
11N40-CDD-Ant1-2452



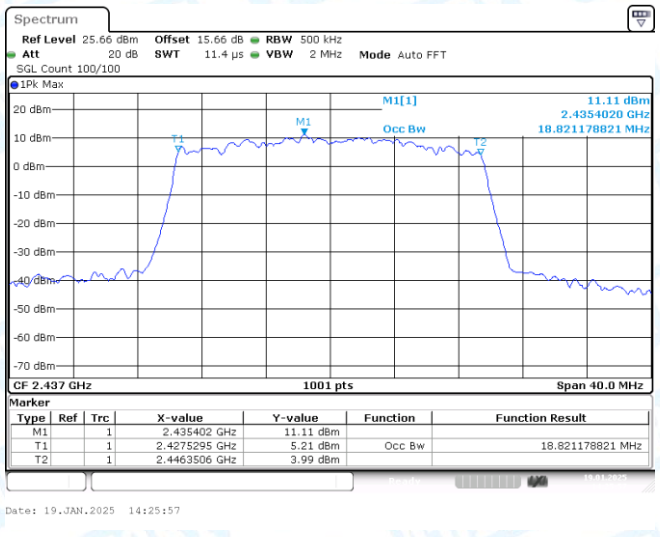
11N40-CDD-Ant2-2452



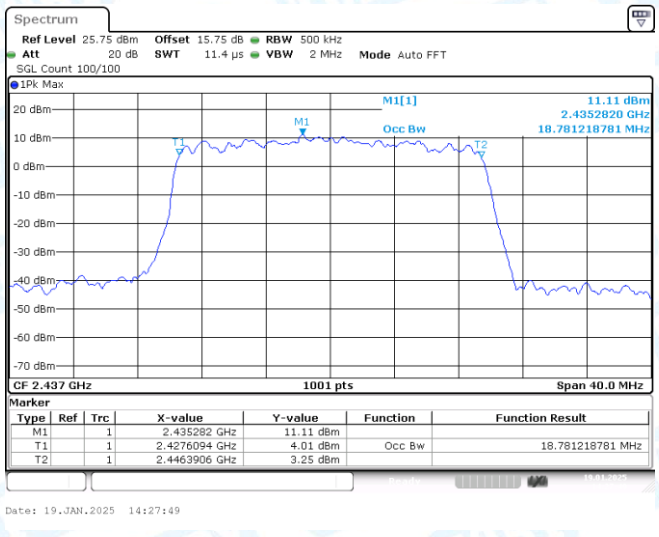
11AX20-CDD-Ant1-2412



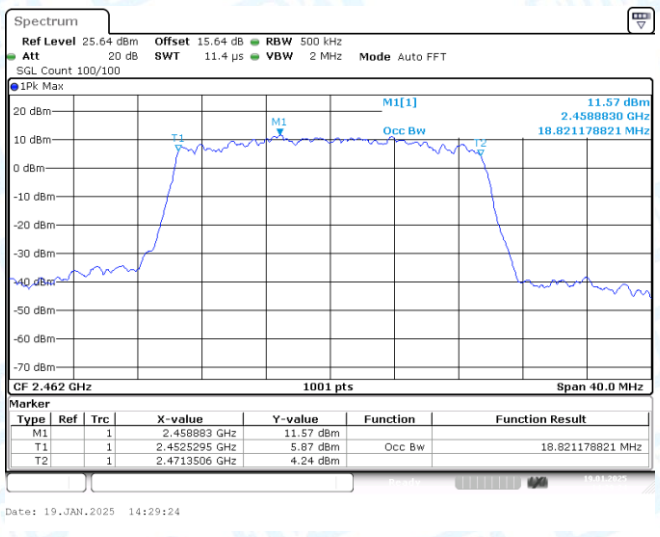
11AX20-CDD-Ant2-2412



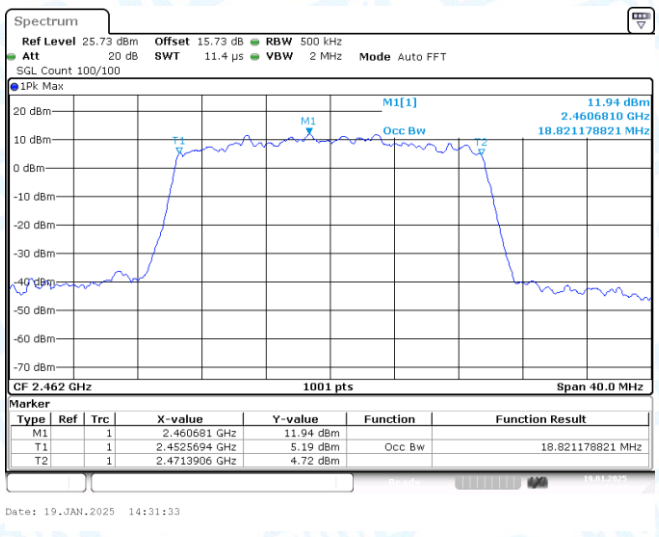
11AX20-CDD-Ant1-2437



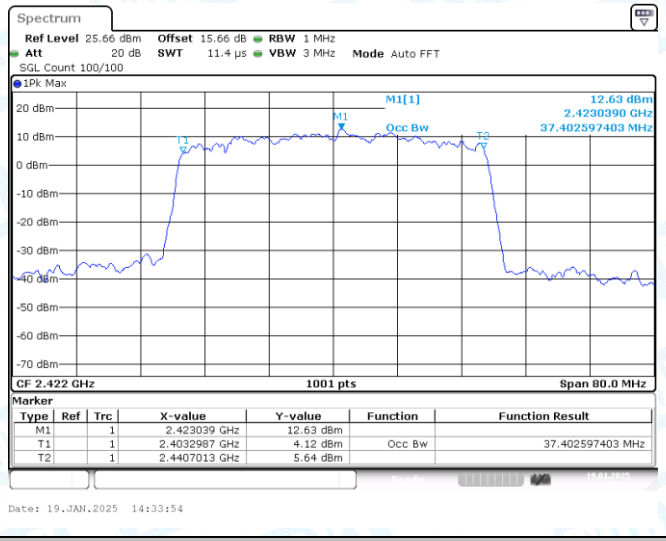
11AX20-CDD-Ant2-2437



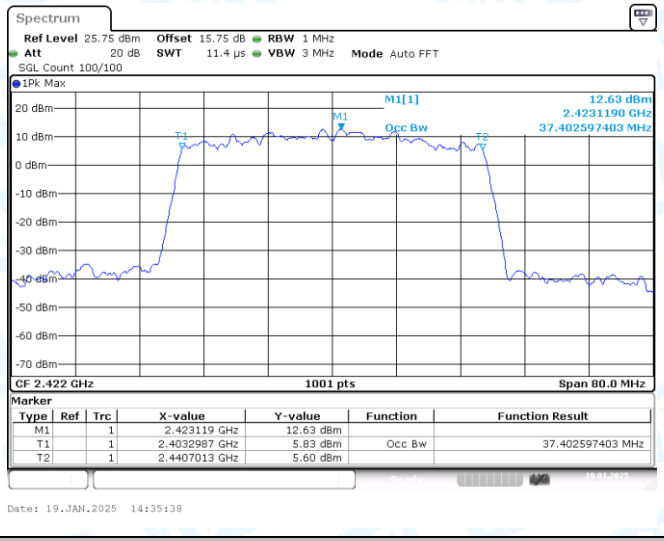
11AX20-CDD-Ant1-2462



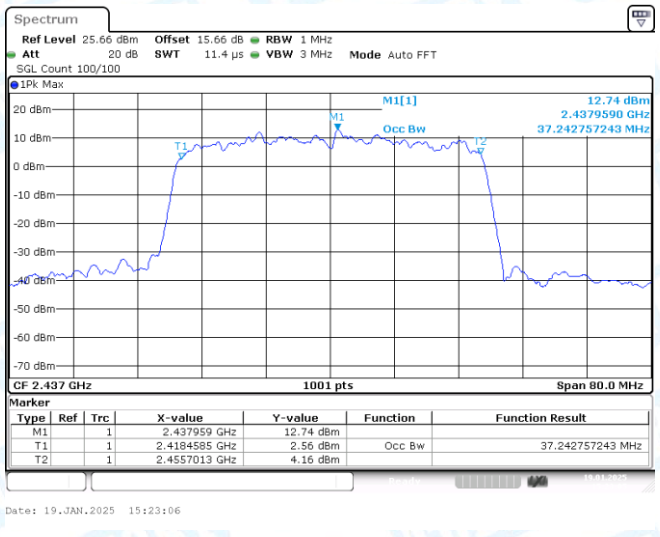
11AX20-CDD-Ant2-2462



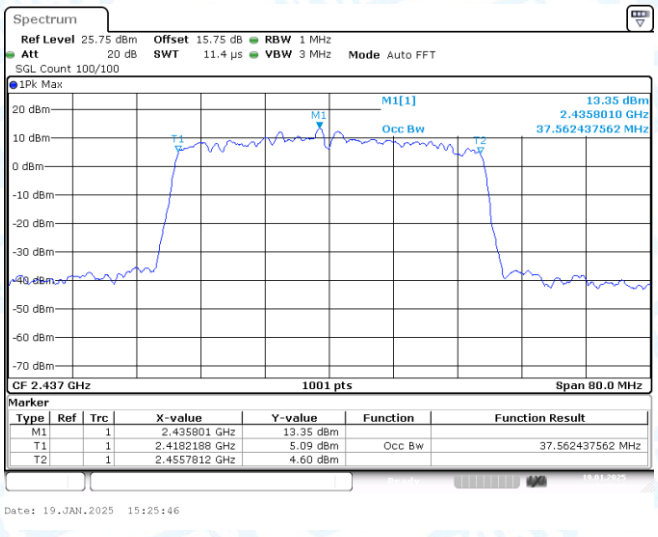
11AX40-CDD-Ant1-2422



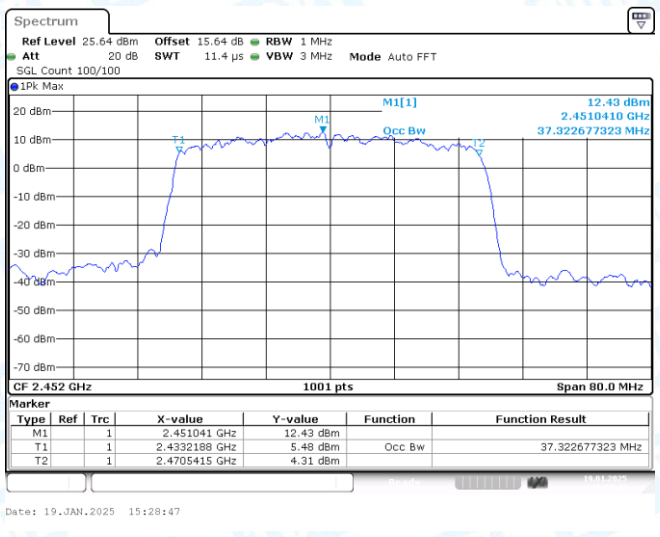
11AX40-CDD-Ant2-2422



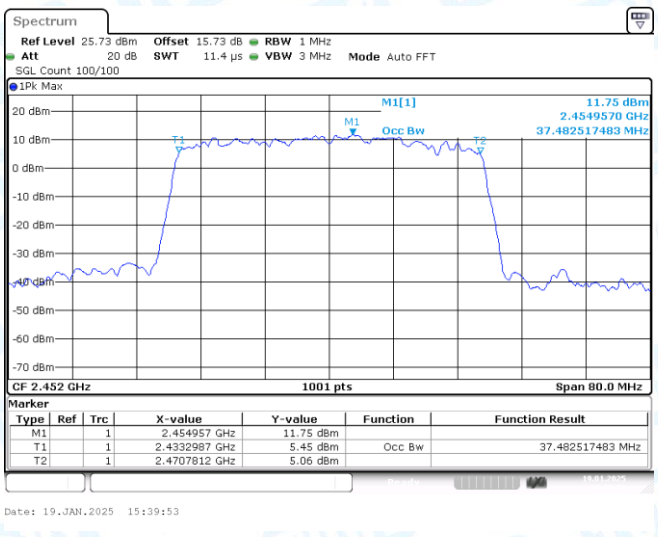
11AX40-CDD-Ant1-2437



11AX40-CDD-Ant2-2437



11AX40-CDD-Ant1-2452



11AX40-CDD-Ant2-2452

3: Maximum conducted output power

3.1 Test Result Average

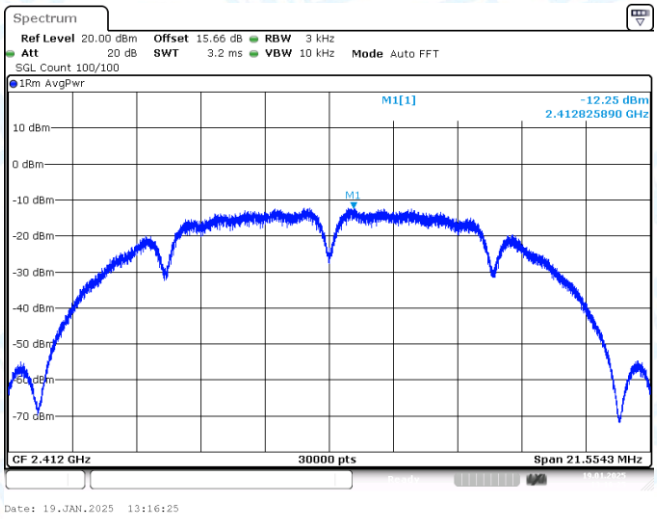
Test Mode	Ant.	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B-CDD	Ant1	2412	18.63	≤30.00	PASS
11B-CDD	Ant2	2412	18.47	≤30.00	PASS
11B-CDD	total	2412	21.56	≤30.00	PASS
11B-CDD	Ant1	2437	17.81	≤30.00	PASS
11B-CDD	Ant2	2437	18.00	≤30.00	PASS
11B-CDD	total	2437	20.92	≤30.00	PASS
11B-CDD	Ant1	2462	18.91	≤30.00	PASS
11B-CDD	Ant2	2462	18.60	≤30.00	PASS
11B-CDD	total	2462	21.77	≤30.00	PASS
11G-CDD	Ant1	2412	15.75	≤30.00	PASS
11G-CDD	Ant2	2412	15.82	≤30.00	PASS
11G-CDD	total	2412	18.80	≤30.00	PASS
11G-CDD	Ant1	2437	15.87	≤30.00	PASS
11G-CDD	Ant2	2437	15.94	≤30.00	PASS
11G-CDD	total	2437	18.92	≤30.00	PASS
11G-CDD	Ant1	2462	16.64	≤30.00	PASS
11G-CDD	Ant2	2462	16.71	≤30.00	PASS
11G-CDD	total	2462	19.69	≤30.00	PASS
11N20-CDD	Ant1	2412	16.30	≤30.00	PASS
11N20-CDD	Ant2	2412	16.20	≤30.00	PASS
11N20-CDD	total	2412	19.26	≤30.00	PASS
11N20-CDD	Ant1	2437	15.69	≤30.00	PASS
11N20-CDD	Ant2	2437	15.96	≤30.00	PASS
11N20-CDD	total	2437	18.84	≤30.00	PASS
11N20-CDD	Ant1	2462	16.51	≤30.00	PASS
11N20-CDD	Ant2	2462	16.67	≤30.00	PASS
11N20-CDD	total	2462	19.60	≤30.00	PASS
11N40-CDD	Ant1	2422	16.66	≤30.00	PASS
11N40-CDD	Ant2	2422	16.29	≤30.00	PASS
11N40-CDD	total	2422	19.49	≤30.00	PASS
11N40-CDD	Ant1	2437	16.05	≤30.00	PASS
11N40-CDD	Ant2	2437	16.17	≤30.00	PASS
11N40-CDD	total	2437	19.12	≤30.00	PASS
11N40-CDD	Ant1	2452	16.86	≤30.00	PASS
11N40-CDD	Ant2	2452	16.81	≤30.00	PASS
11N40-CDD	total	2452	19.85	≤30.00	PASS
11AX20-CDD	Ant1	2412	17.27	≤30.00	PASS
11AX20-CDD	Ant2	2412	17.02	≤30.00	PASS
11AX20-CDD	total	2412	20.16	≤30.00	PASS
11AX20-CDD	Ant1	2437	16.59	≤30.00	PASS
11AX20-CDD	Ant2	2437	16.74	≤30.00	PASS
11AX20-CDD	total	2437	19.68	≤30.00	PASS
11AX20-CDD	Ant1	2462	17.39	≤30.00	PASS
11AX20-CDD	Ant2	2462	17.55	≤30.00	PASS
11AX20-CDD	total	2462	20.48	≤30.00	PASS
11AX40-CDD	Ant1	2422	17.53	≤30.00	PASS
11AX40-CDD	Ant2	2422	17.48	≤30.00	PASS
11AX40-CDD	total	2422	20.52	≤30.00	PASS
11AX40-CDD	Ant1	2437	16.98	≤30.00	PASS
11AX40-CDD	Ant2	2437	17.09	≤30.00	PASS
11AX40-CDD	total	2437	20.05	≤30.00	PASS
11AX40-CDD	Ant1	2452	17.86	≤30.00	PASS
11AX40-CDD	Ant2	2452	17.96	≤30.00	PASS
11AX40-CDD	total	2452	20.92	≤30.00	PASS
Note: For CDD Mode, Directional gain = G_{ANT} + Array Gain, Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4; G_{ANT1}=3.78dBi; G_{ANT2}=4.08dBi **CDD Mode** use max. antenna Gain, So the Directional gain＜6dBi.					
The Duty Cycle Factor is compensated in the data.					

4: Maximum power spectral density

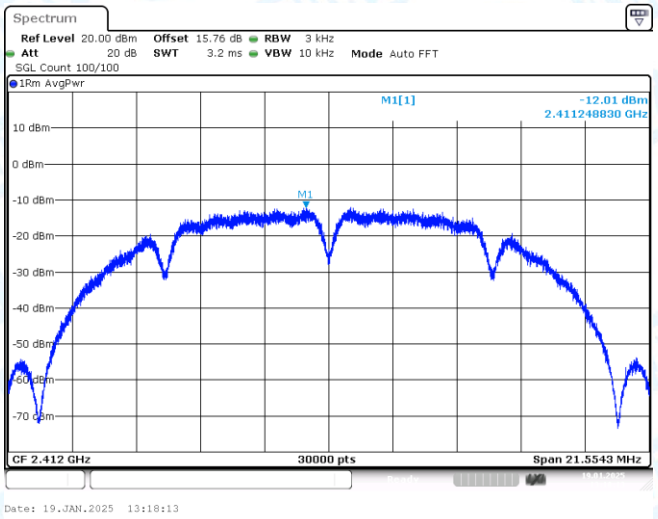
4.1 Test Result

TestMode	Ant.	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B-CDD	Ant1	2412	-12.20	≤8.00	PASS
11B-CDD	Ant2	2412	-11.95	≤8.00	PASS
11B-CDD	total	2412	-9.06	≤7.06	PASS
11B-CDD	Ant1	2437	-12.71	≤8.00	PASS
11B-CDD	Ant2	2437	-12.27	≤8.00	PASS
11B-CDD	total	2437	-9.47	≤7.06	PASS
11B-CDD	Ant1	2462	-11.69	≤8.00	PASS
11B-CDD	Ant2	2462	-12.09	≤8.00	PASS
11B-CDD	total	2462	-8.88	≤7.06	PASS
11G-CDD	Ant2	2412	-11.04	≤8.00	PASS
11G-CDD	total	2412	-8.05	≤8.00	PASS
11G-CDD	Ant1	2412	-13.97	≤7.06	PASS
11G-CDD	Ant1	2437	-14.25	≤8.00	PASS
11G-CDD	Ant2	2437	-14.91	≤8.00	PASS
11G-CDD	total	2437	-11.56	≤7.06	PASS
11G-CDD	Ant1	2462	-14.00	≤8.00	PASS
11G-CDD	Ant2	2462	-14.18	≤8.00	PASS
11G-CDD	total	2462	-11.08	≤7.06	PASS
11N20-CDD	Ant1	2412	-14.61	≤8.00	PASS
11N20-CDD	Ant2	2412	-14.13	≤8.00	PASS
11N20-CDD	total	2412	-11.35	≤7.06	PASS
11N20-CDD	Ant1	2437	-15.23	≤8.00	PASS
11N20-CDD	Ant2	2437	-14.28	≤8.00	PASS
11N20-CDD	total	2437	-11.72	≤7.06	PASS
11N20-CDD	Ant1	2462	-14.71	≤8.00	PASS
11N20-CDD	Ant2	2462	-14.66	≤8.00	PASS
11N20-CDD	total	2462	-11.67	≤7.06	PASS
11N40-CDD	Ant1	2422	-14.59	≤8.00	PASS
11N40-CDD	Ant2	2422	-15.60	≤8.00	PASS
11N40-CDD	total	2422	-12.06	≤7.06	PASS
11N40-CDD	Ant1	2437	-15.73	≤8.00	PASS
11N40-CDD	Ant2	2437	-15.65	≤8.00	PASS
11N40-CDD	total	2437	-12.68	≤7.06	PASS
11N40-CDD	Ant1	2452	-15.37	≤8.00	PASS
11N40-CDD	Ant2	2452	-15.24	≤8.00	PASS
11N40-CDD	total	2452	-12.29	≤7.06	PASS
11AX20-CDD	Ant1	2412	-12.83	≤8.00	PASS
11AX20-CDD	Ant2	2412	-12.17	≤8.00	PASS
11AX20-CDD	total	2412	-9.48	≤7.06	PASS
11AX20-CDD	Ant1	2437	-13.96	≤8.00	PASS
11AX20-CDD	Ant2	2437	-13.10	≤8.00	PASS
11AX20-CDD	total	2437	-10.50	≤7.06	PASS
11AX20-CDD	Ant1	2462	-13.07	≤8.00	PASS
11AX20-CDD	Ant2	2462	-13.29	≤8.00	PASS
11AX20-CDD	total	2462	-10.17	≤7.06	PASS
11AX40-CDD	Ant1	2422	-14.50	≤8.00	PASS
11AX40-CDD	Ant2	2422	-14.78	≤8.00	PASS
11AX40-CDD	total	2422	-11.63	≤7.06	PASS
11AX40-CDD	Ant1	2437	-14.61	≤8.00	PASS
11AX40-CDD	Ant2	2437	-13.64	≤8.00	PASS
11AX40-CDD	total	2437	-11.09	≤7.06	PASS
11AX40-CDD	Ant1	2452	-14.05	≤8.00	PASS
11AX40-CDD	Ant2	2452	-13.74	≤8.00	PASS
11AX40-CDD	total	2452	-10.88	≤7.06	PASS
Note：1.The Duty Cycle Factor is compensated in the graph.					
2. For CDD Mode, Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$)^2 / 2]=6.94dBi; G_{ANT1}=3.78dBi； G_{ANT2}=4.08dBi and the Directional gain＞6dBi, So the total PSD_{limit}=PSD_{limit}-(6.94-6)= PSD_{limit}-0.94					

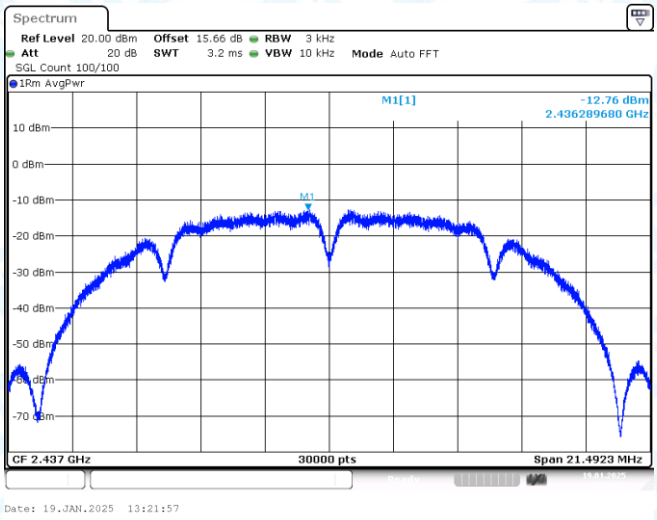
4.2 Test Graphs



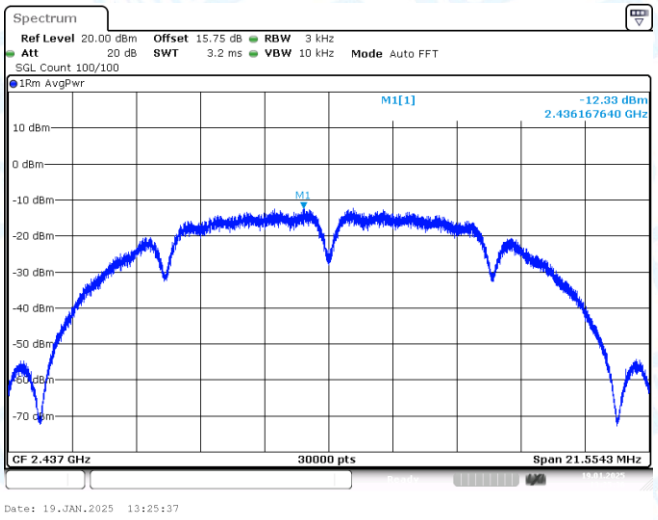
11B-CDD-Ant1-2412-PASS



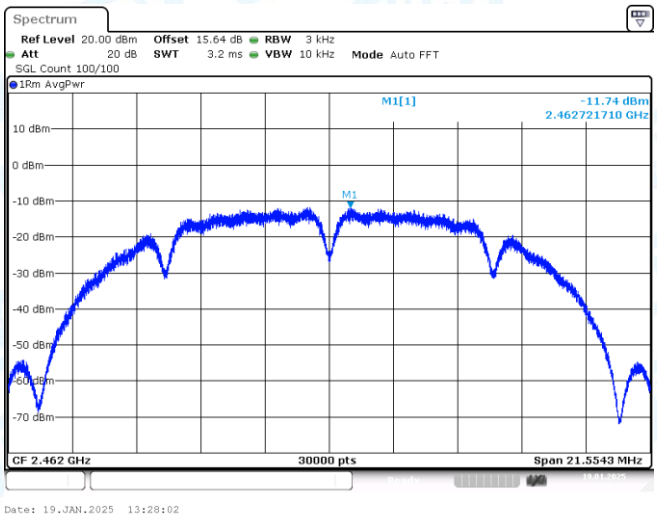
11B-CDD-Ant2-2412-PASS



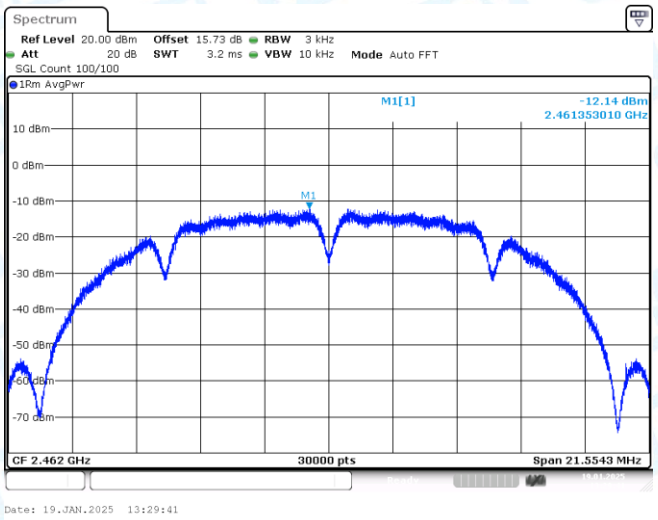
11B-CDD-Ant1-2437-PASS



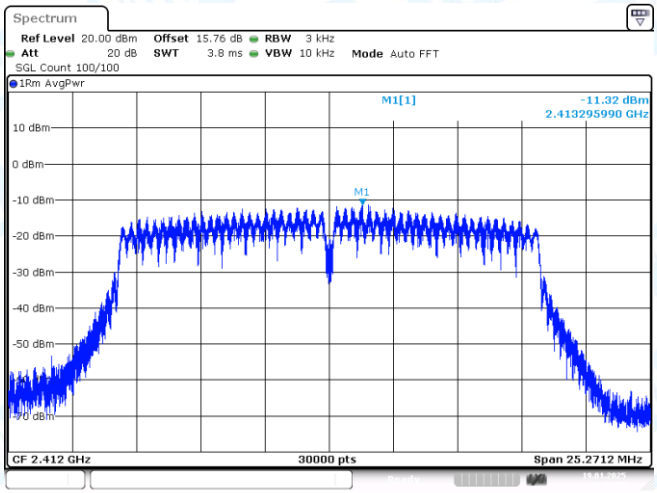
11B-CDD-Ant2-2437-PASS



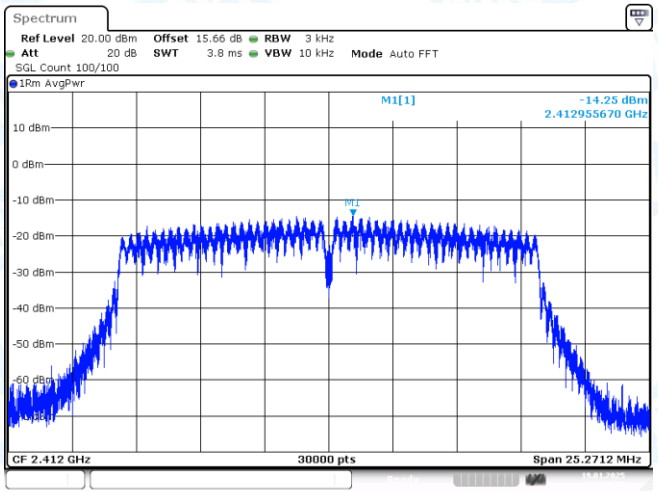
11B-CDD-Ant1-2462-PASS



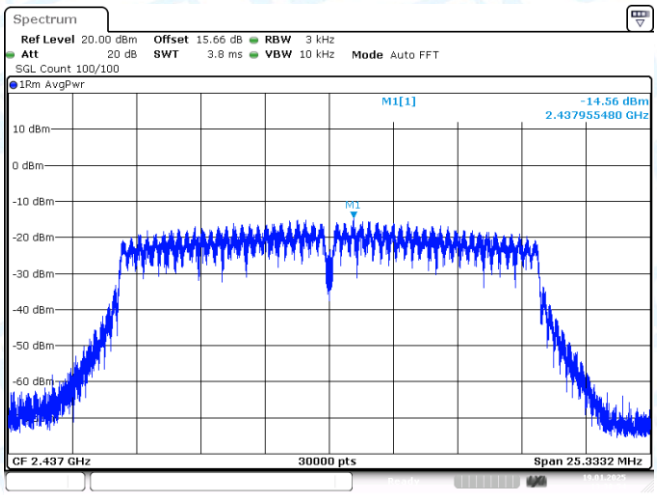
11B-CDD-Ant2-2462-PASS



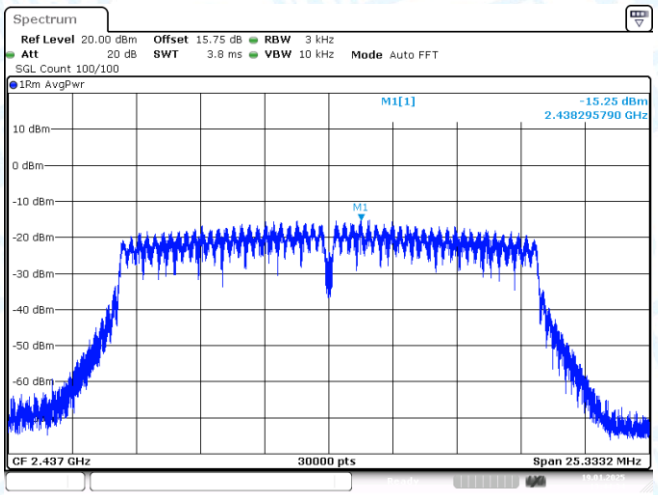
11G-CDD-Ant2-2412-PASS



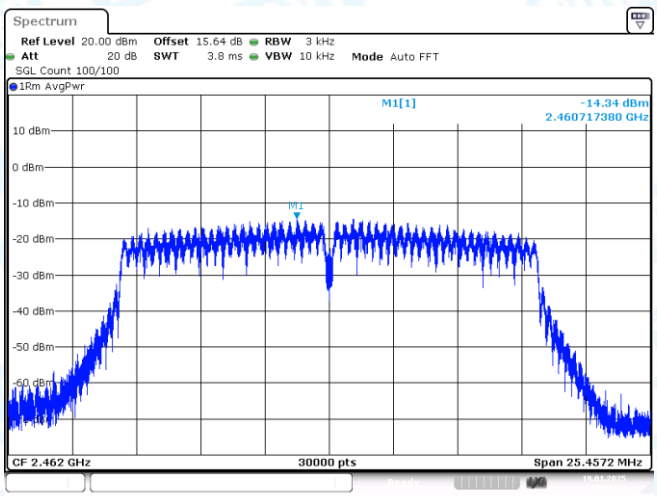
11G-CDD-Ant1-2412-PASS



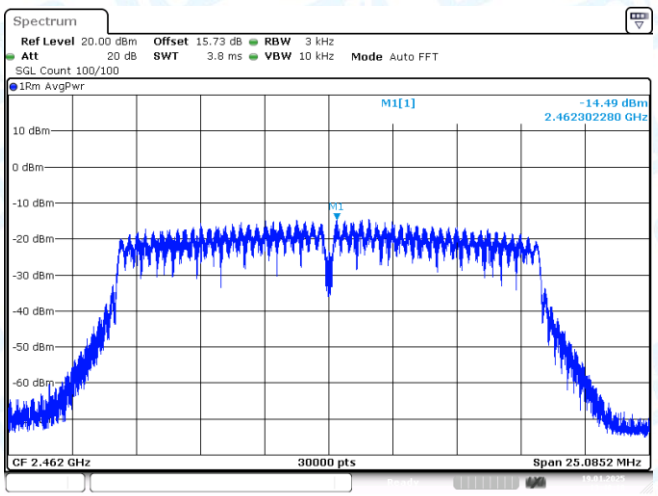
11G-CDD-Ant1-2437-PASS



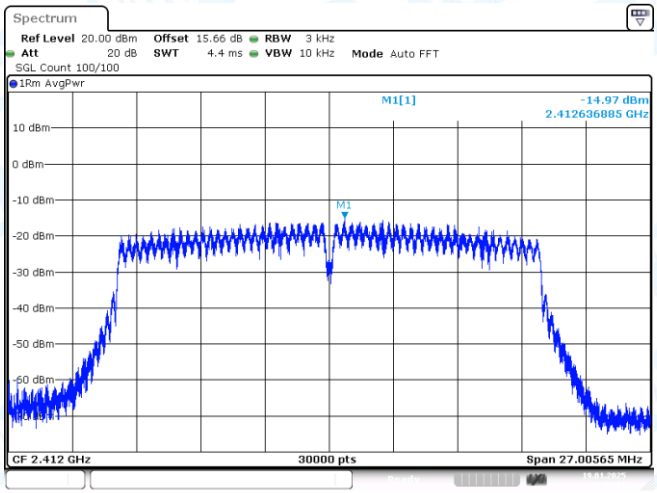
11G-CDD-Ant2-2437-PASS



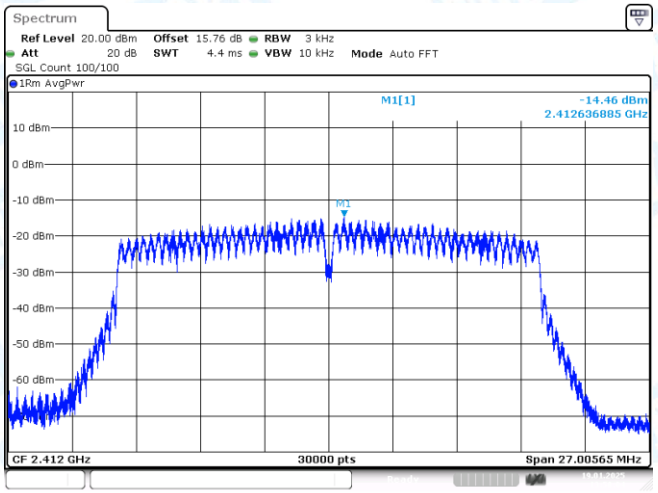
11G-CDD-Ant1-2462-PASS



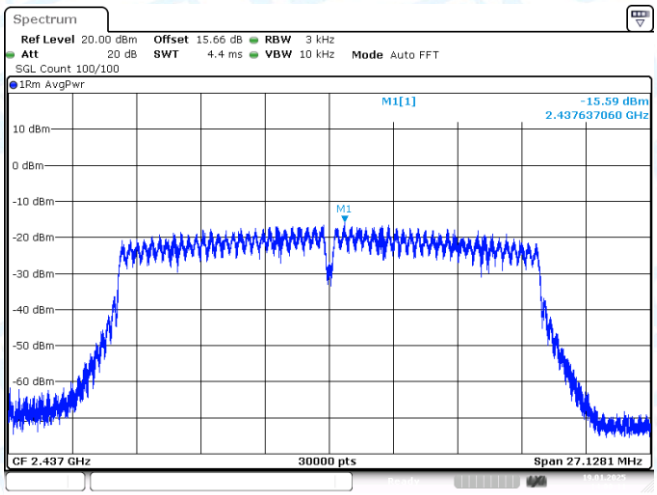
11G-CDD-Ant2-2462-PASS



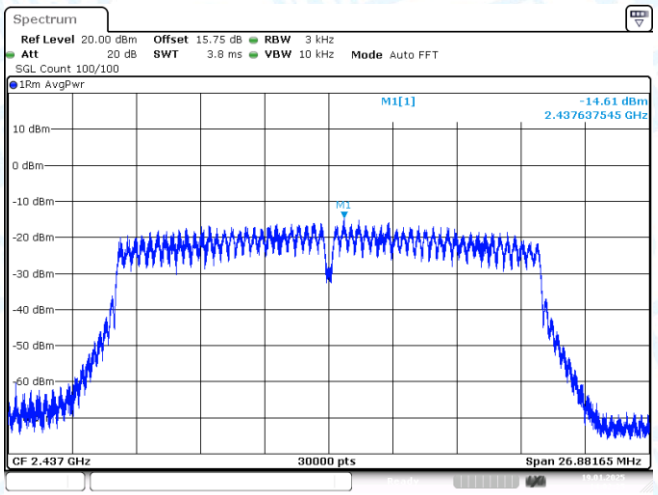
11N20-CDD-Ant1-2412-PASS



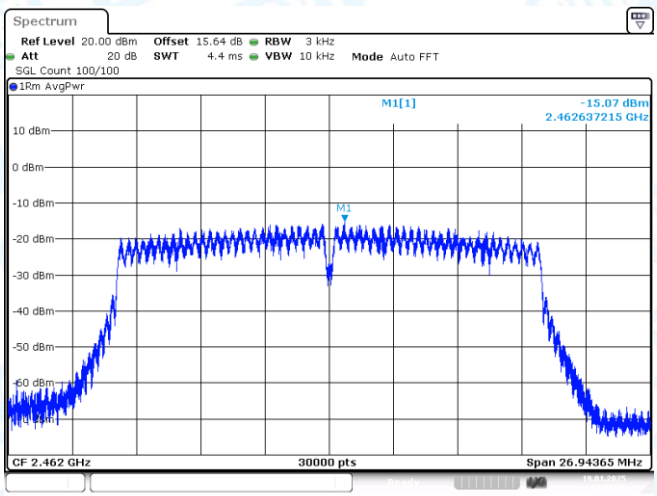
11N20-CDD-Ant2-2412-PASS



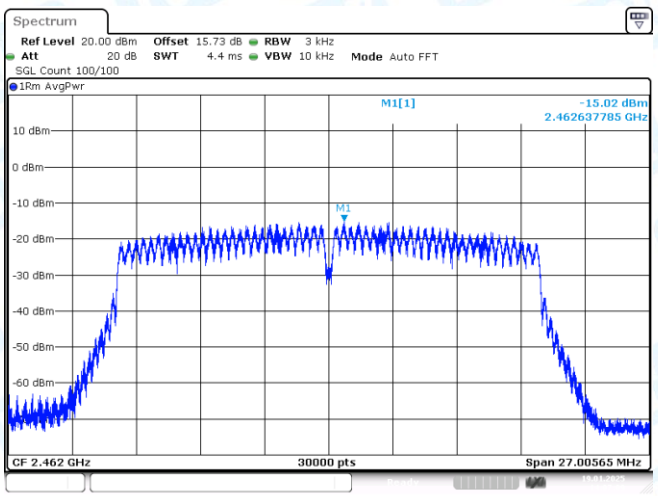
11N20-CDD-Ant1-2437-PASS



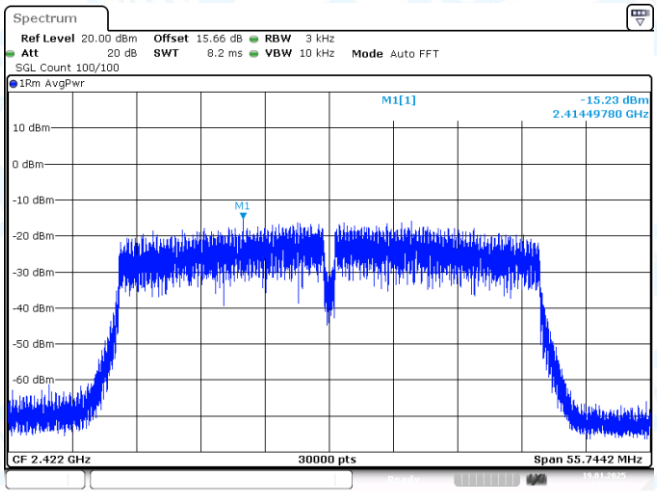
11N20-CDD-Ant2-2437-PASS



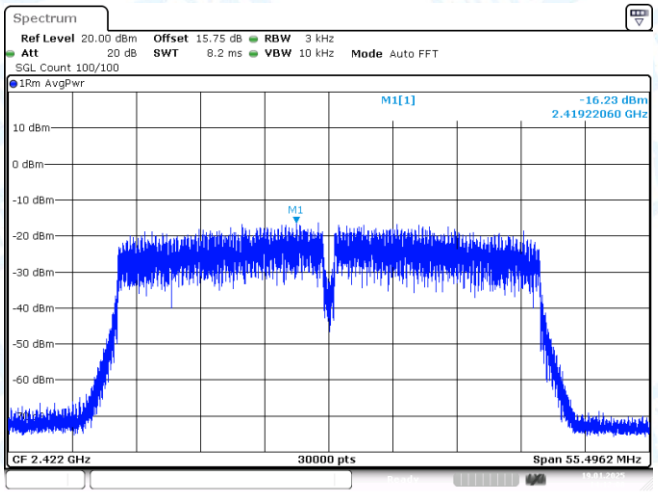
11N20-CDD-Ant1-2462-PASS



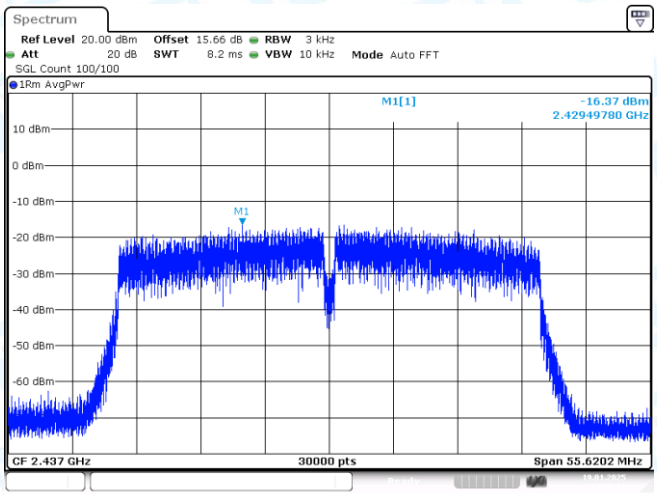
11N20-CDD-Ant2-2462-PASS



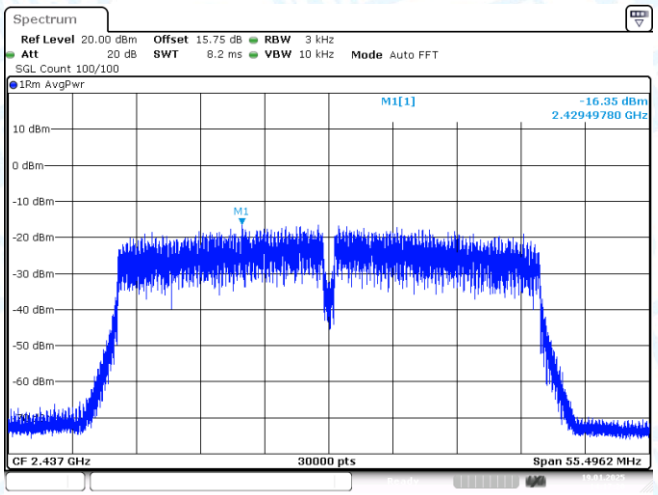
11N40-CDD-Ant1-2422-PASS



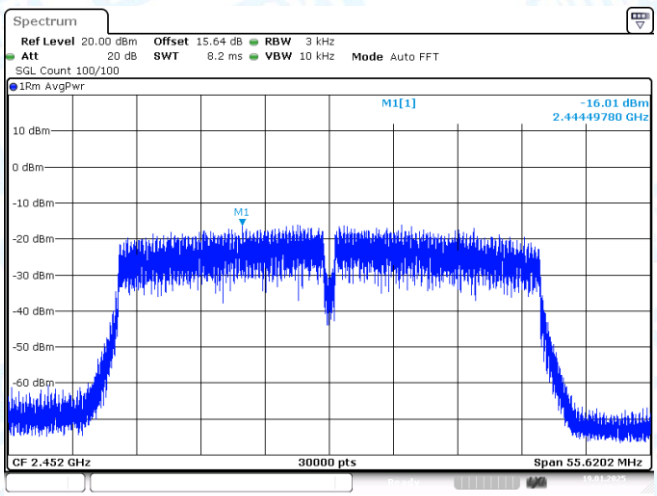
11N40-CDD-Ant2-2422-PASS



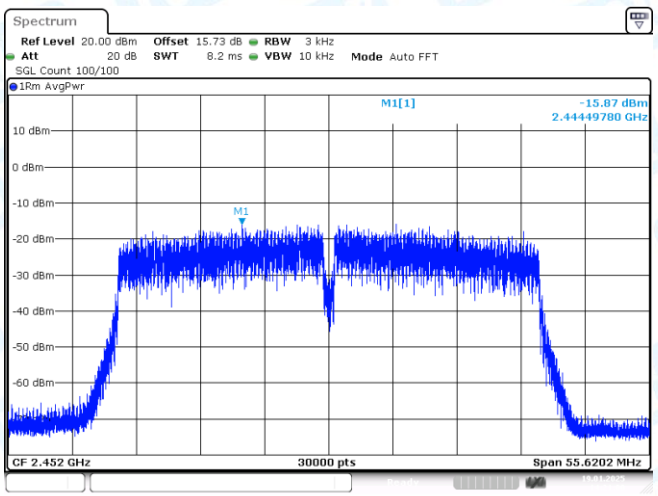
11N40-CDD-Ant1-2437-PASS



11N40-CDD-Ant2-2437-PASS



11N40-CDD-Ant1-2452-PASS



11N40-CDD-Ant2-2452-PASS