

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2BWUS-F1-ALARM

Company : Foshan Xinchuangdi Amusement Equipment Co., Ltd.

EUT : Pool Alarm Safety

Model Number : F1-Alarm

Report No. : CTA26060202002

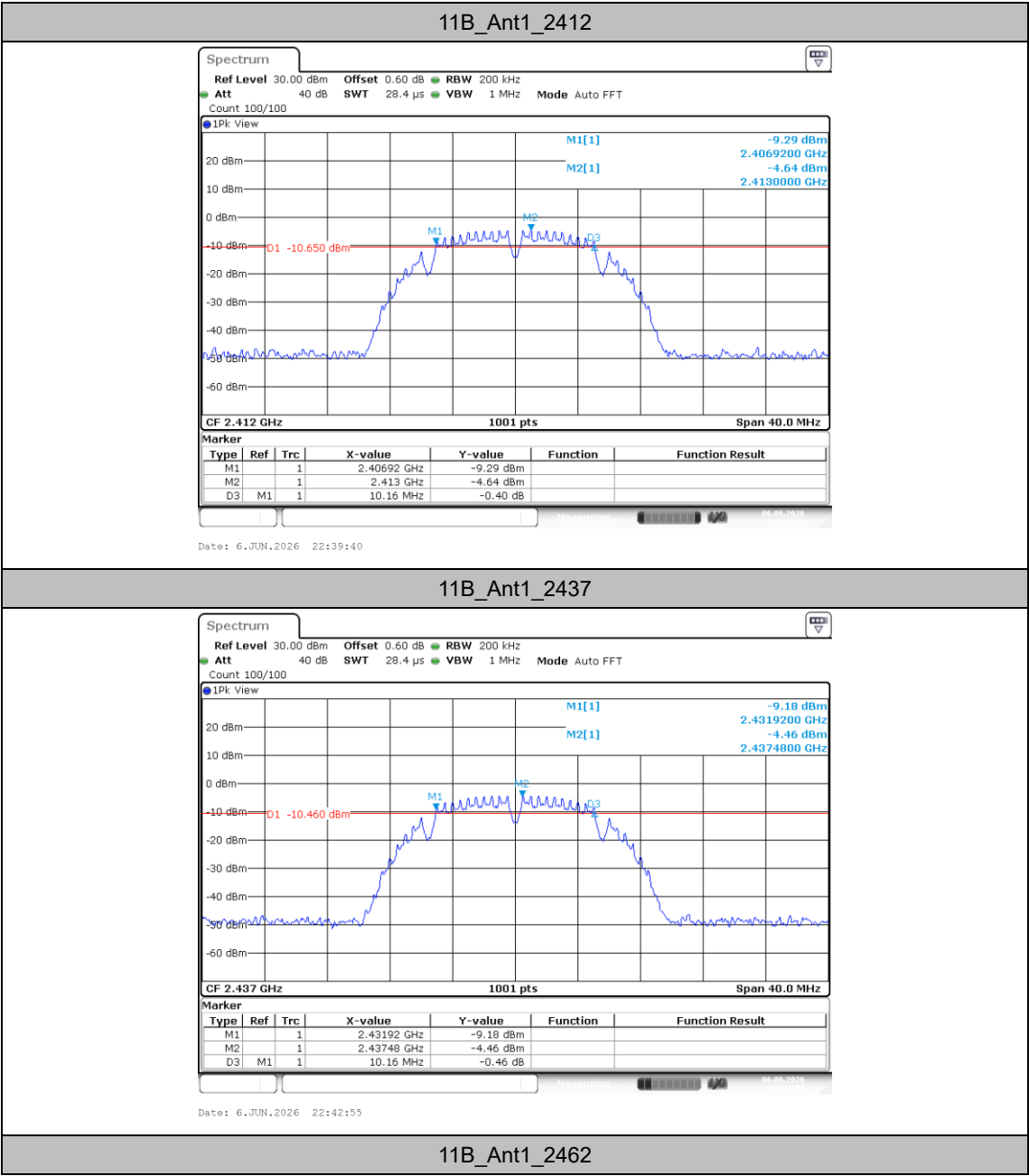
Reviewed By : Eric Wang

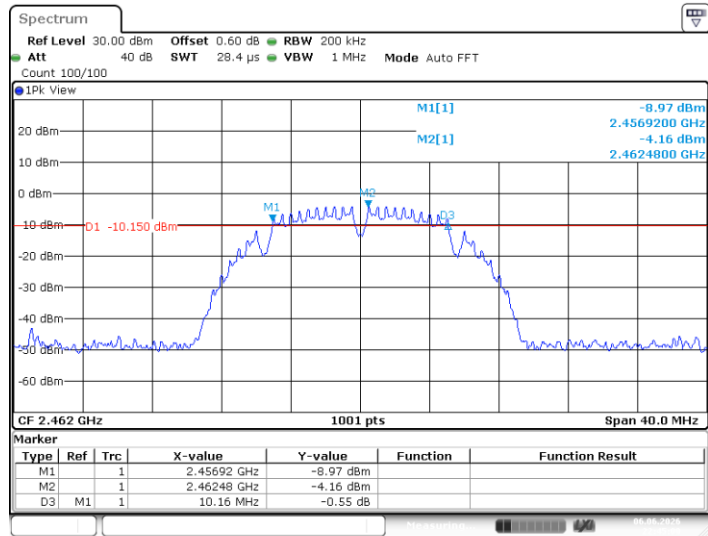
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.16	2406.92	2417.08	0.5	PASS
		2437	10.16	2431.92	2442.08	0.5	PASS
		2462	10.16	2456.92	2467.08	0.5	PASS
11G	Ant1	2412	15.92	2404.04	2419.96	0.5	PASS
		2437	15.92	2429.04	2444.96	0.5	PASS
		2462	15.56	2454.40	2469.96	0.5	PASS
11N20SISO	Ant1	2412	15.80	2404.00	2419.80	0.5	PASS
		2437	16.16	2429.40	2445.56	0.5	PASS
		2462	15.44	2454.16	2469.60	0.5	PASS

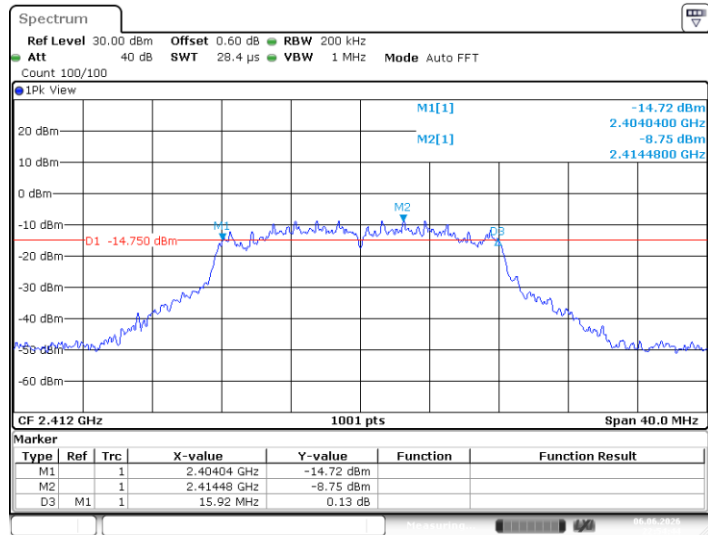
Test Graphs





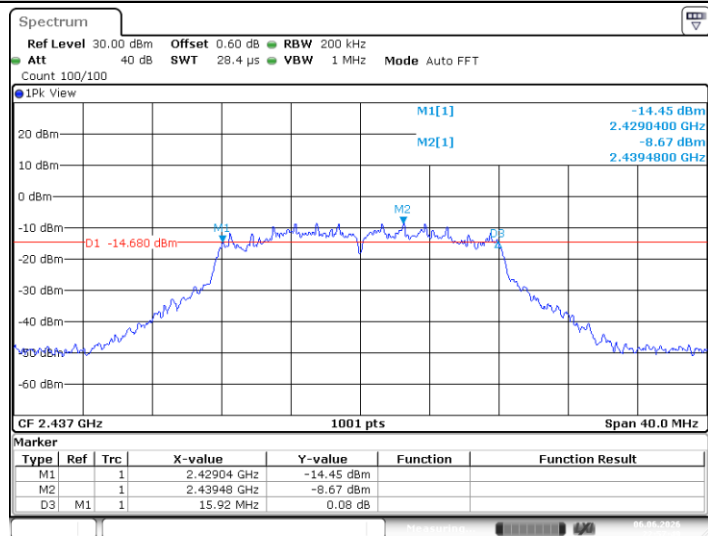
Date: 6.JUN.2026 22:45:00

11G_Ant1_2412



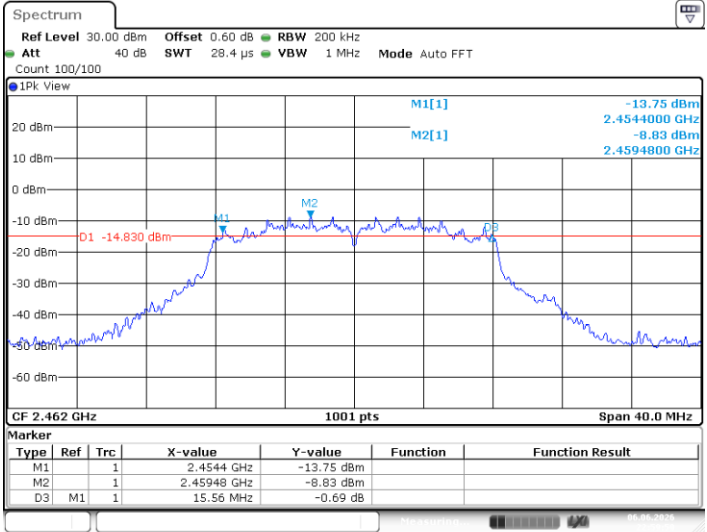
Date: 6.JUN.2026 22:54:44

11G_Ant1_2437



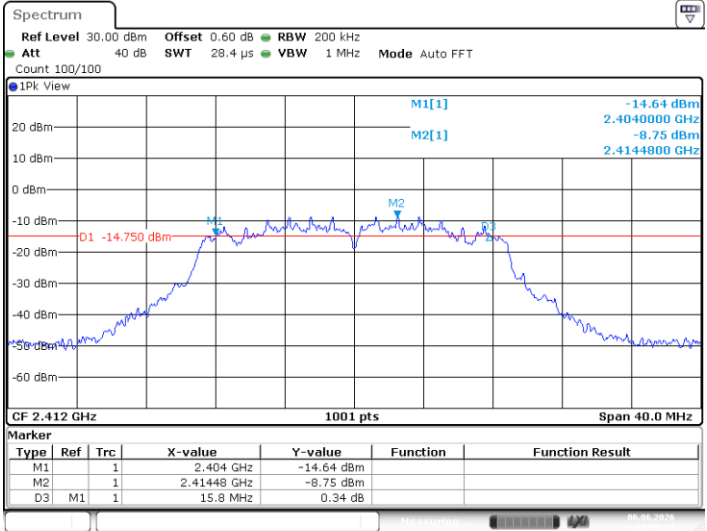
Date: 6.JUN.2026 22:57:49

11G_Ant1_2462



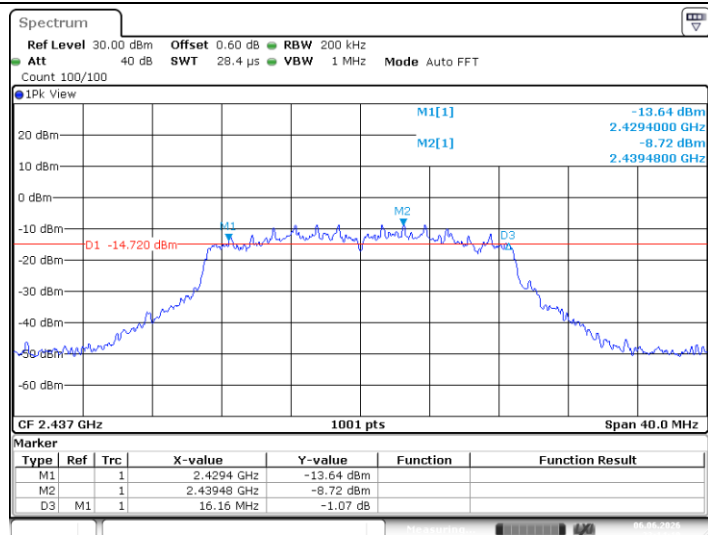
Date: 6.JUN.2026 22:59:50

11N20SISO_Ant1_2412



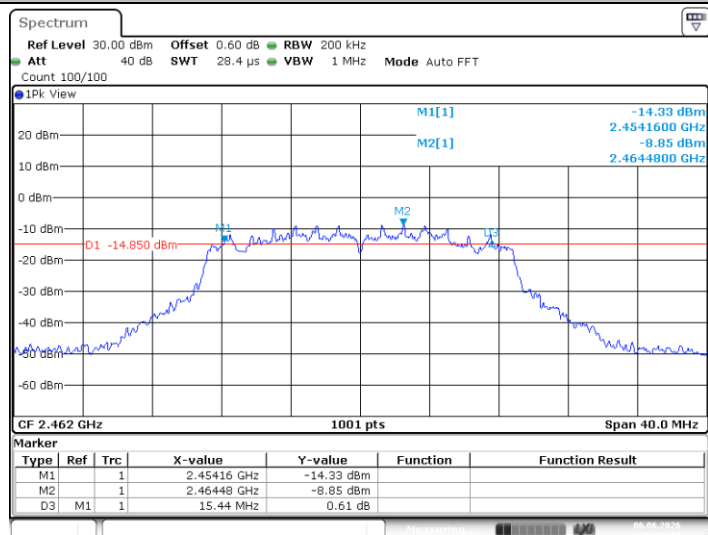
Date: 6.JUN.2026 23:08:34

11N20SISO_Ant1_2437



Date: 6.JUN.2026 23:14:10

11N20SISO_Ant1_2462



Date: 6.JUN.2026 23:17:27

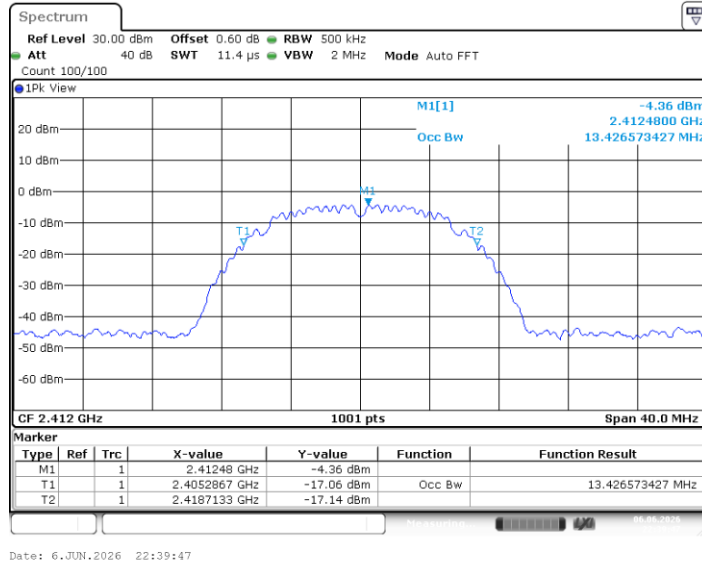
Appendix B: Occupied Channel Bandwidth

Test Result

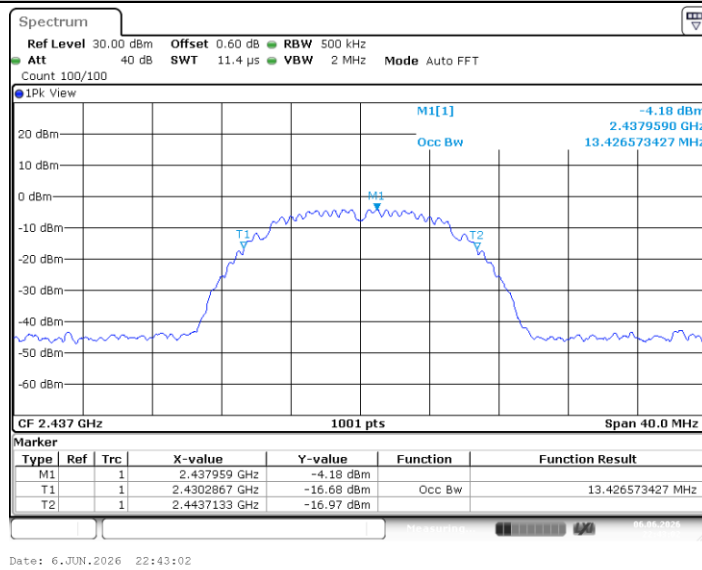
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.427	2405.2867	2418.7133	---	---
		2437	13.427	2430.2867	2443.7133	---	---
		2462	13.427	2455.2867	2468.7133	---	---
11G	Ant1	2412	16.863	2403.4885	2420.3516	---	---
		2437	16.943	2428.5684	2445.5115	---	---
		2462	16.783	2453.6484	2470.4316	---	---
11N20SISO	Ant1	2412	18.222	2402.8092	2421.0310	---	---
		2437	18.062	2427.9690	2446.0310	---	---
		2462	18.022	2453.0490	2471.0709	---	---

Test Graphs

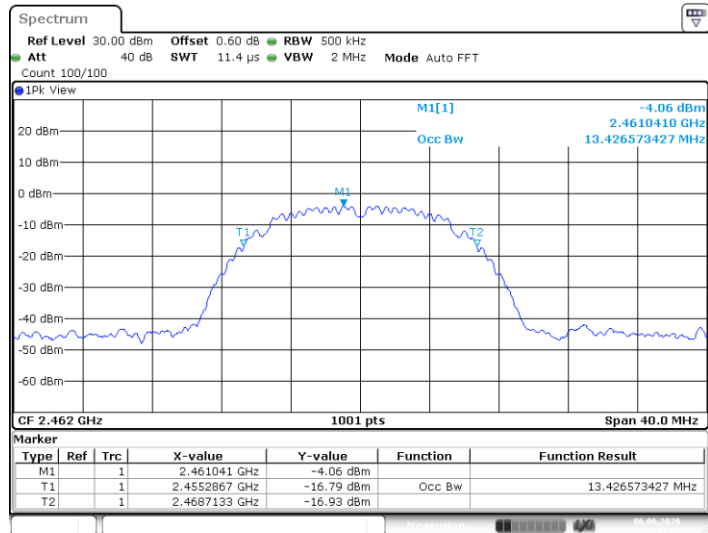
11B_Ant1_2412



11B_Ant1_2437

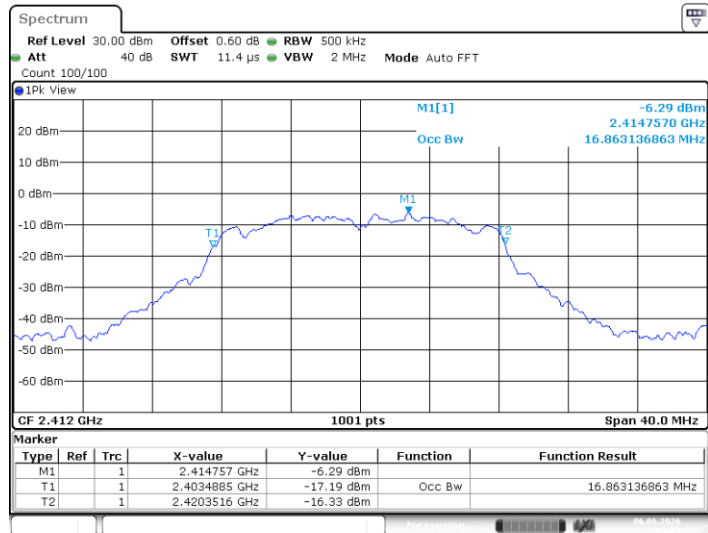


11B_Ant1_2462



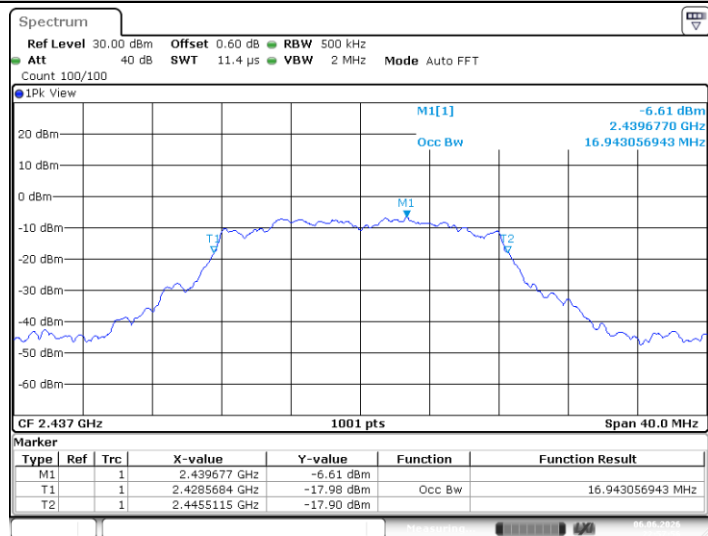
Date: 6.JUN.2026 22:45:07

11G_Ant1_2412



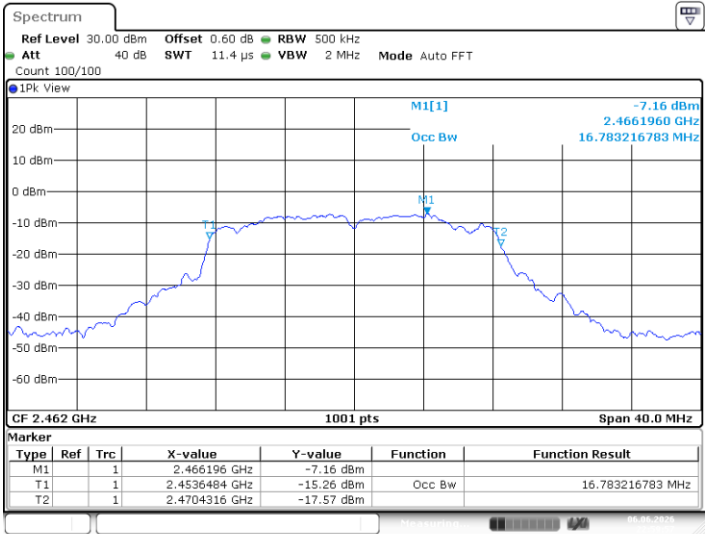
Date: 6.JUN.2026 22:54:51

11G_Ant1_2437



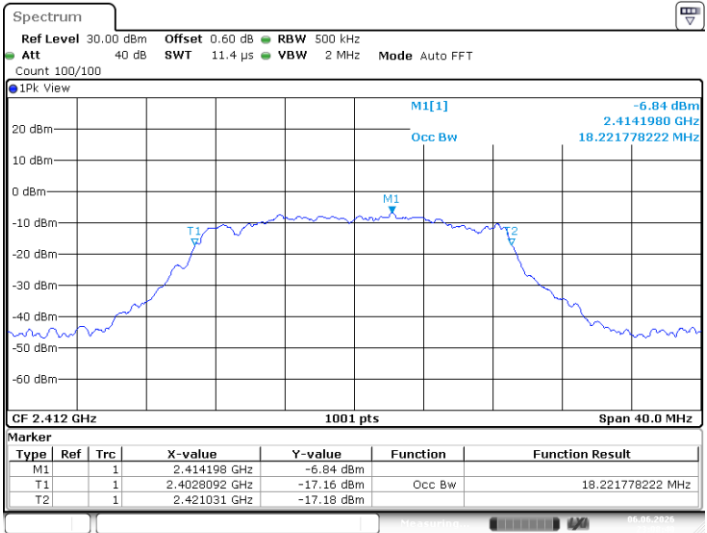
Date: 6.JUN.2026 22:57:56

11G_Ant1_2462



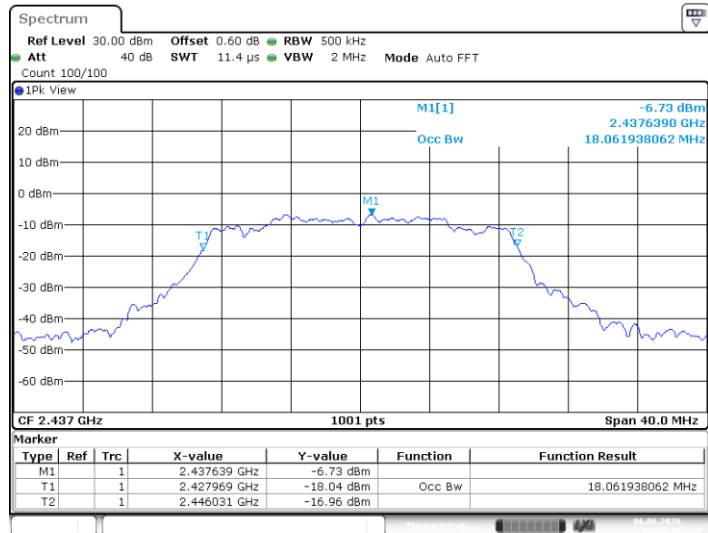
Date: 6.JUN.2026 22:59:57

11N20SISO_Ant1_2412



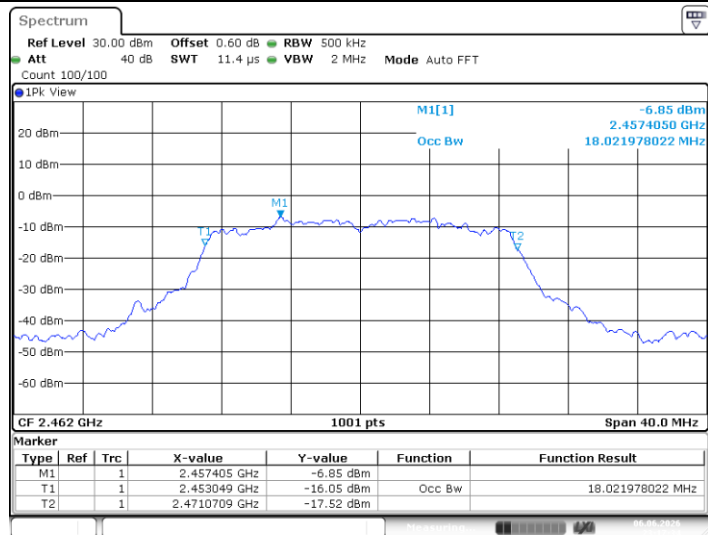
Date: 6.JUN.2026 23:08:40

11N20SISO_Ant1_2437



Date: 6.JUN.2026 23:14:17

11N20SISO_Ant1_2462



Date: 6.JUN.2026 23:17:34

Appendix C: Maximum conducted output power

Test Result

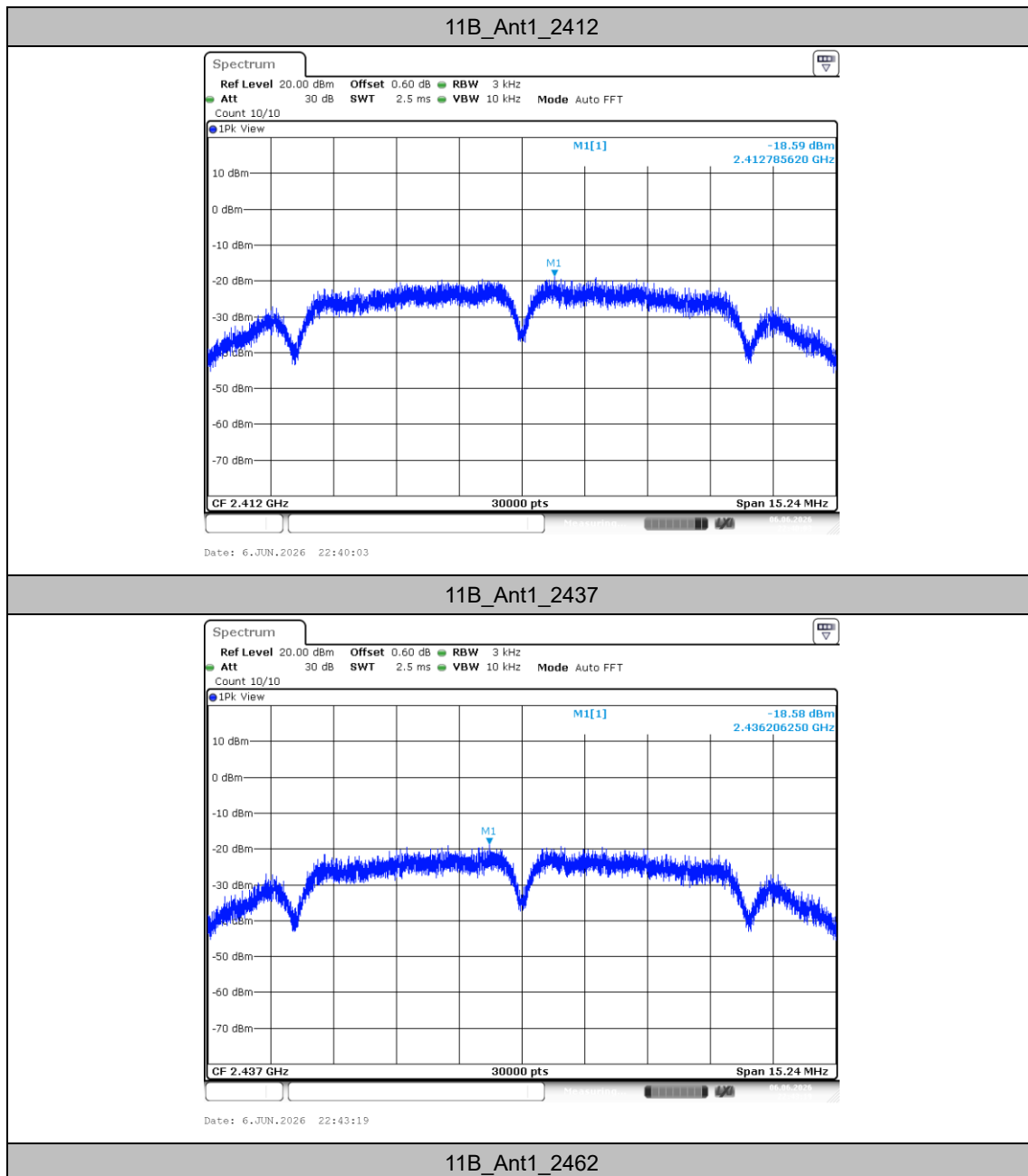
Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	7.32	≤30.00	PASS
		2437	7.50	≤30.00	PASS
		2462	7.61	≤30.00	PASS
11G	Ant1	2412	6.95	≤30.00	PASS
		2437	6.99	≤30.00	PASS
		2462	6.87	≤30.00	PASS
11N20SISO	Ant1	2412	6.67	≤30.00	PASS
		2437	6.73	≤30.00	PASS
		2462	6.53	≤30.00	PASS

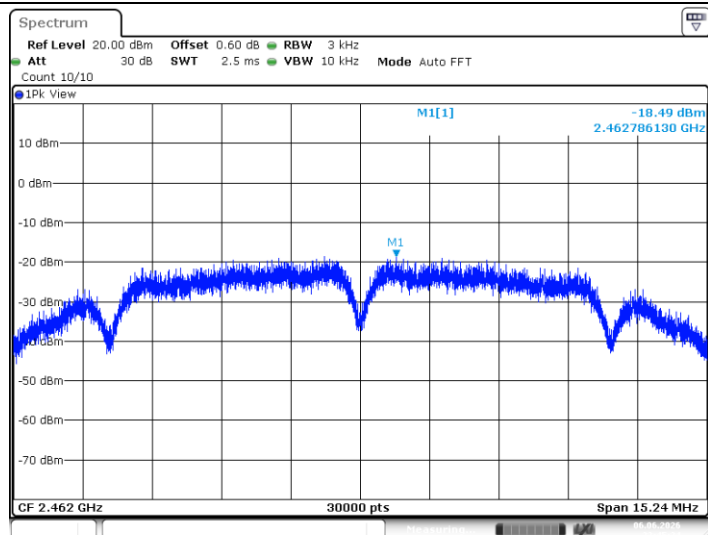
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-18.59	≤8.00	PASS
		2437	-18.58	≤8.00	PASS
		2462	-18.49	≤8.00	PASS
11G	Ant1	2412	-24.66	≤8.00	PASS
		2437	-24.89	≤8.00	PASS
		2462	-25.07	≤8.00	PASS
11N20SISO	Ant1	2412	-23.42	≤8.00	PASS
		2437	-24.54	≤8.00	PASS
		2462	-24.40	≤8.00	PASS

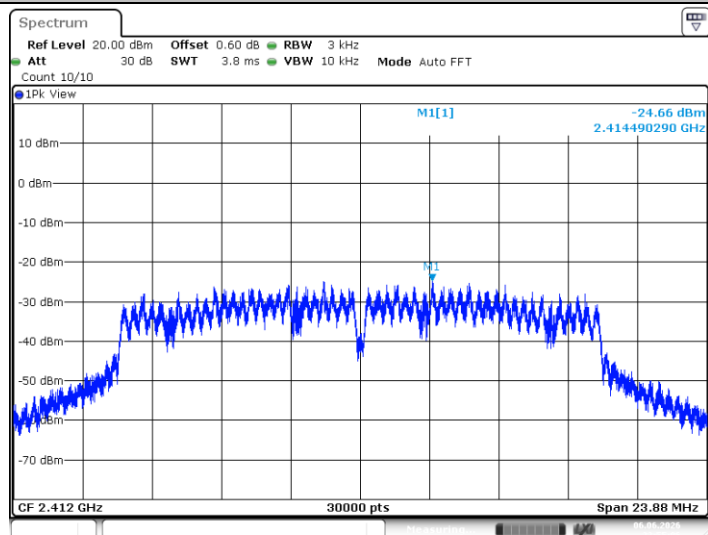
Test Graphs





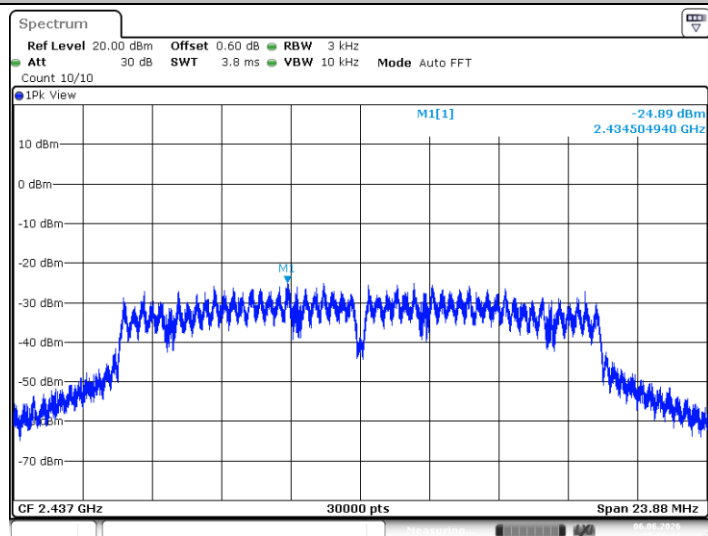
Date: 6.JUN.2026 22:45:24

11G_Ant1_2412



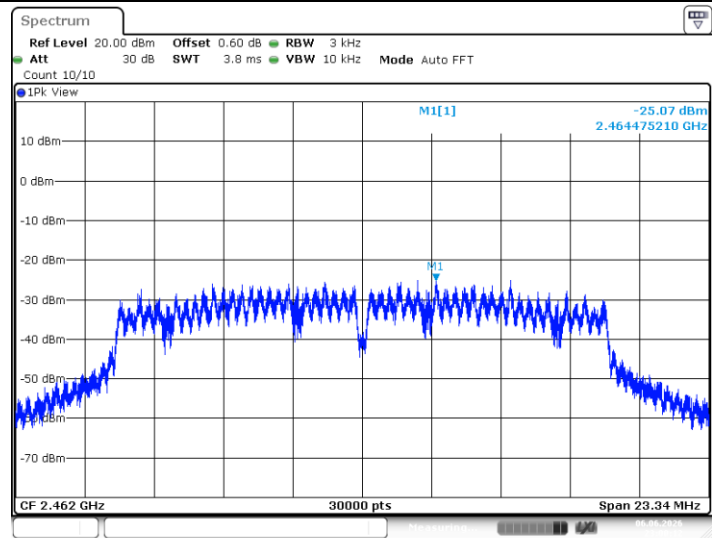
Date: 6.JUN.2026 22:55:06

11G_Ant1_2437



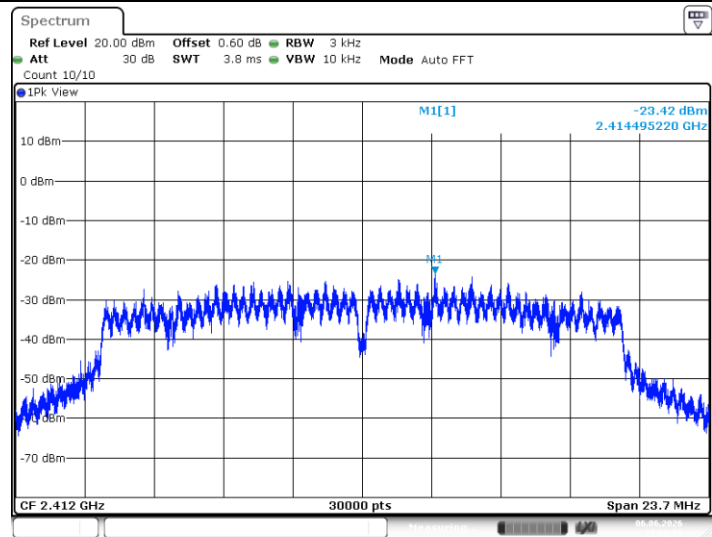
Date: 6.JUN.2026 22:58:11

11G_Ant1_2462



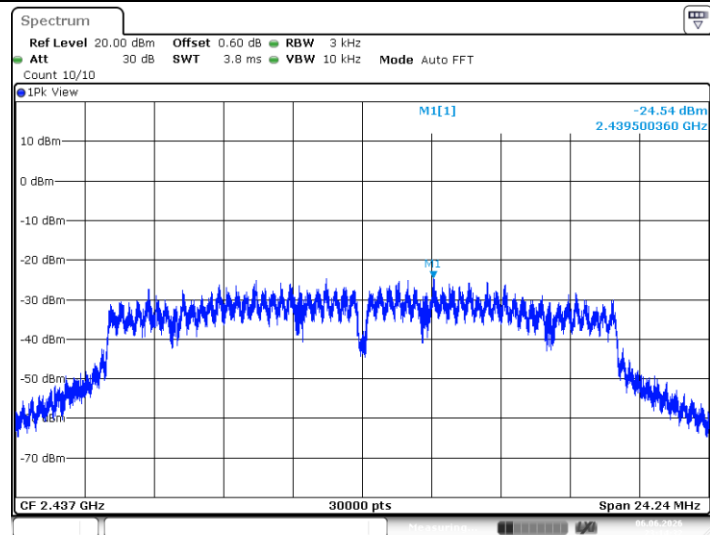
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11N20SISO_Ant1_2412



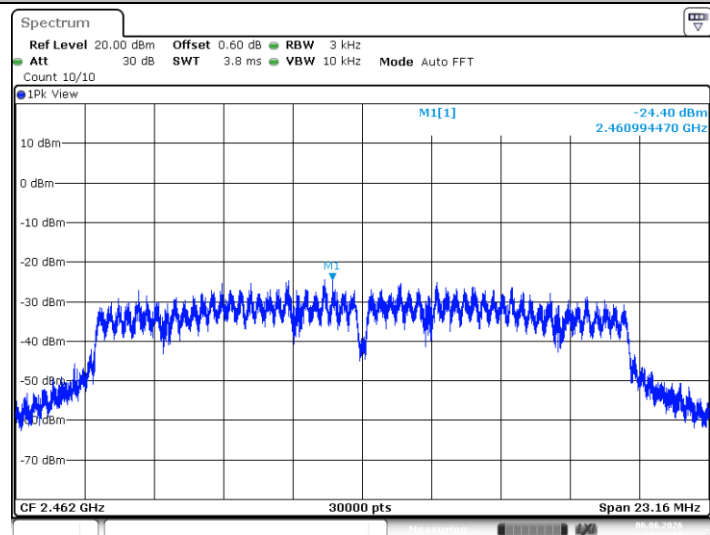
Date: 6.JUN.2026 23:08:56

11N20SISO_Ant1_2437



Date: 6.JUN.2026 23:14:32

11N20SISO_Ant1_2462



Date: 6.JUN.2026 23:17:50

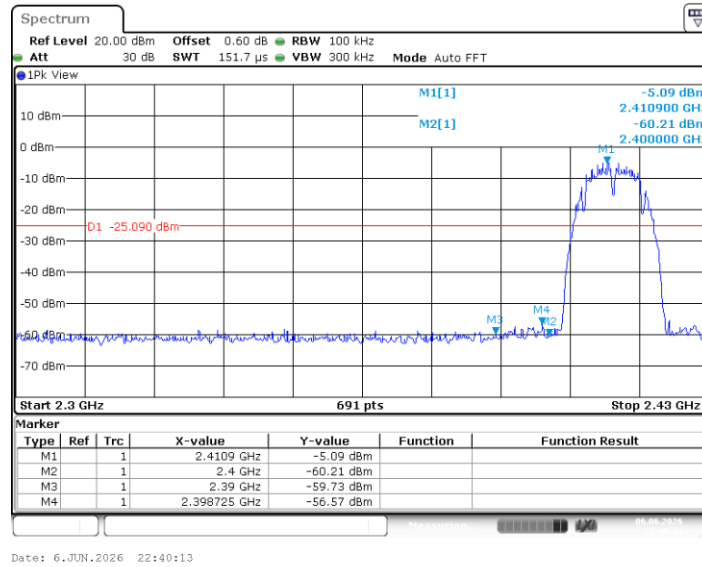
Appendix E: Band edge measurements

Test Result

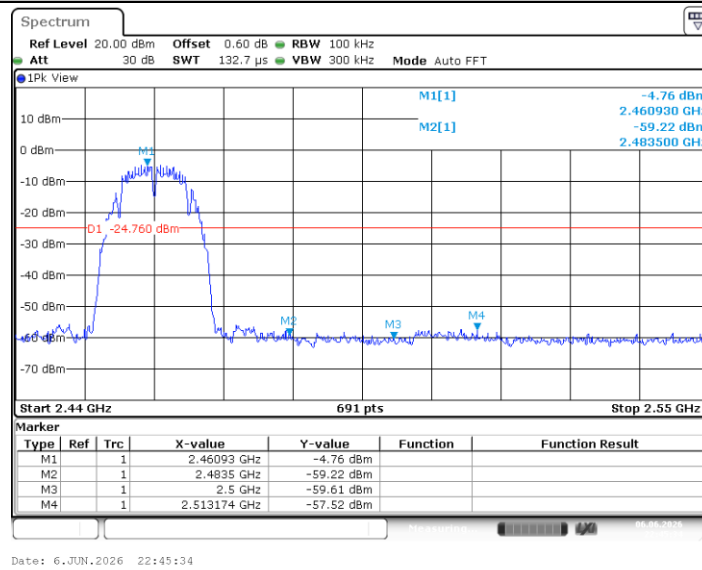
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-5.09	-56.57	≤-25.09	PASS
		High	2462	-4.76	-57.52	≤-24.76	PASS
11G	Ant1	Low	2412	-9.80	-41.74	≤-29.8	PASS
		High	2462	-9.75	-57.95	≤-29.75	PASS
11N20SISO	Ant1	Low	2412	-9.64	-40.9	≤-29.64	PASS
		High	2462	-9.80	-57.5	≤-29.8	PASS

Test Graphs

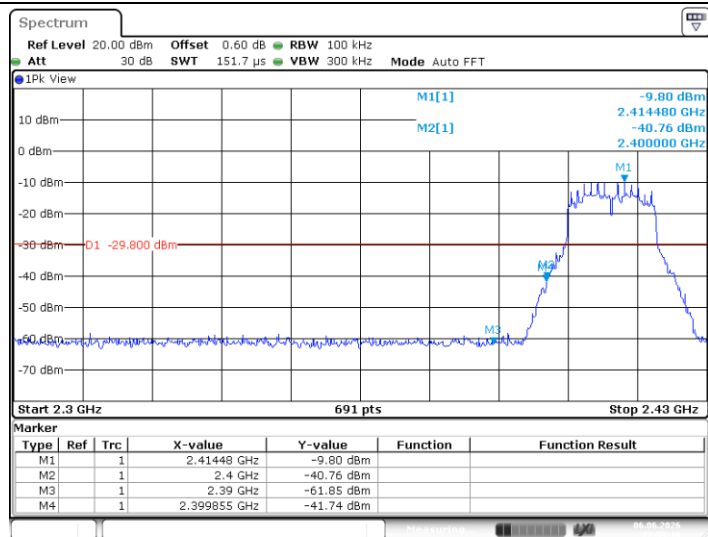
11B_Ant1_Low_2412



11B_Ant1_High_2462

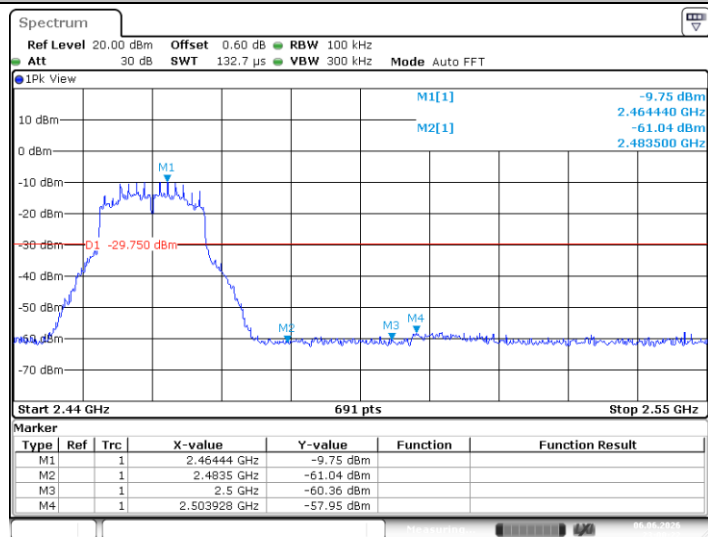


11G_Ant1_Low_2412



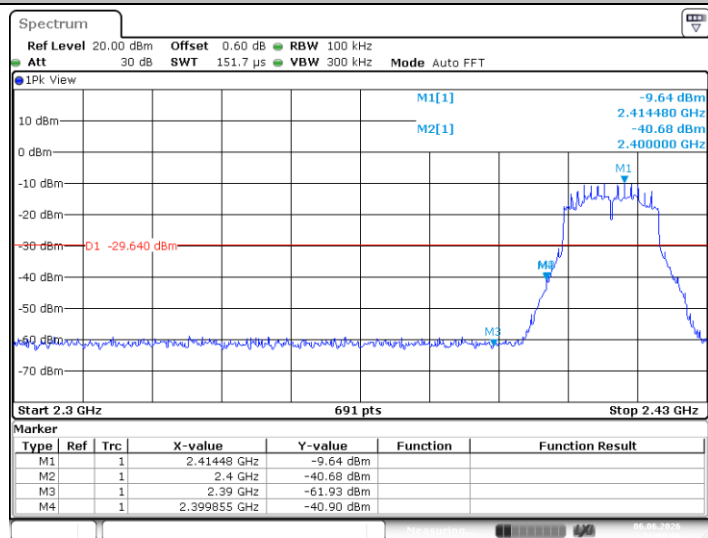
Date: 6.JUN.2026 22:55:16

11G_Ant1_High_2462



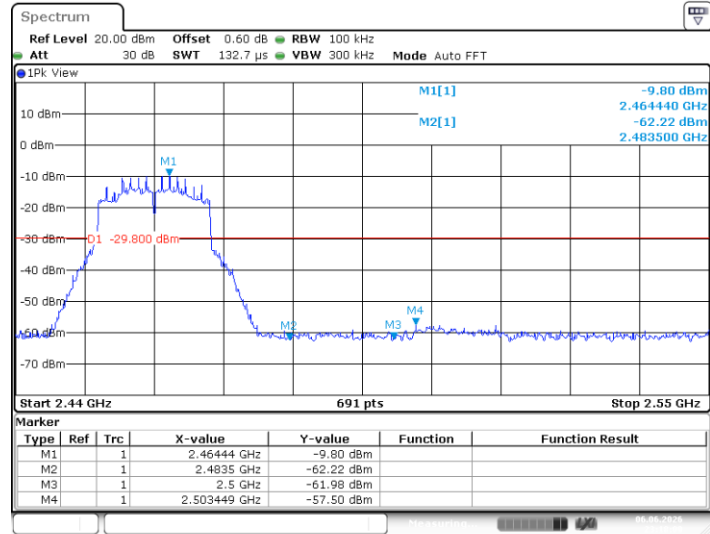
Date: 6.JUN.2026 23:00:22

11N20SISO_Ant1_Low_2412



Date: 6.JUN.2026 23:09:06

11N20SISO_Ant1_High_2462



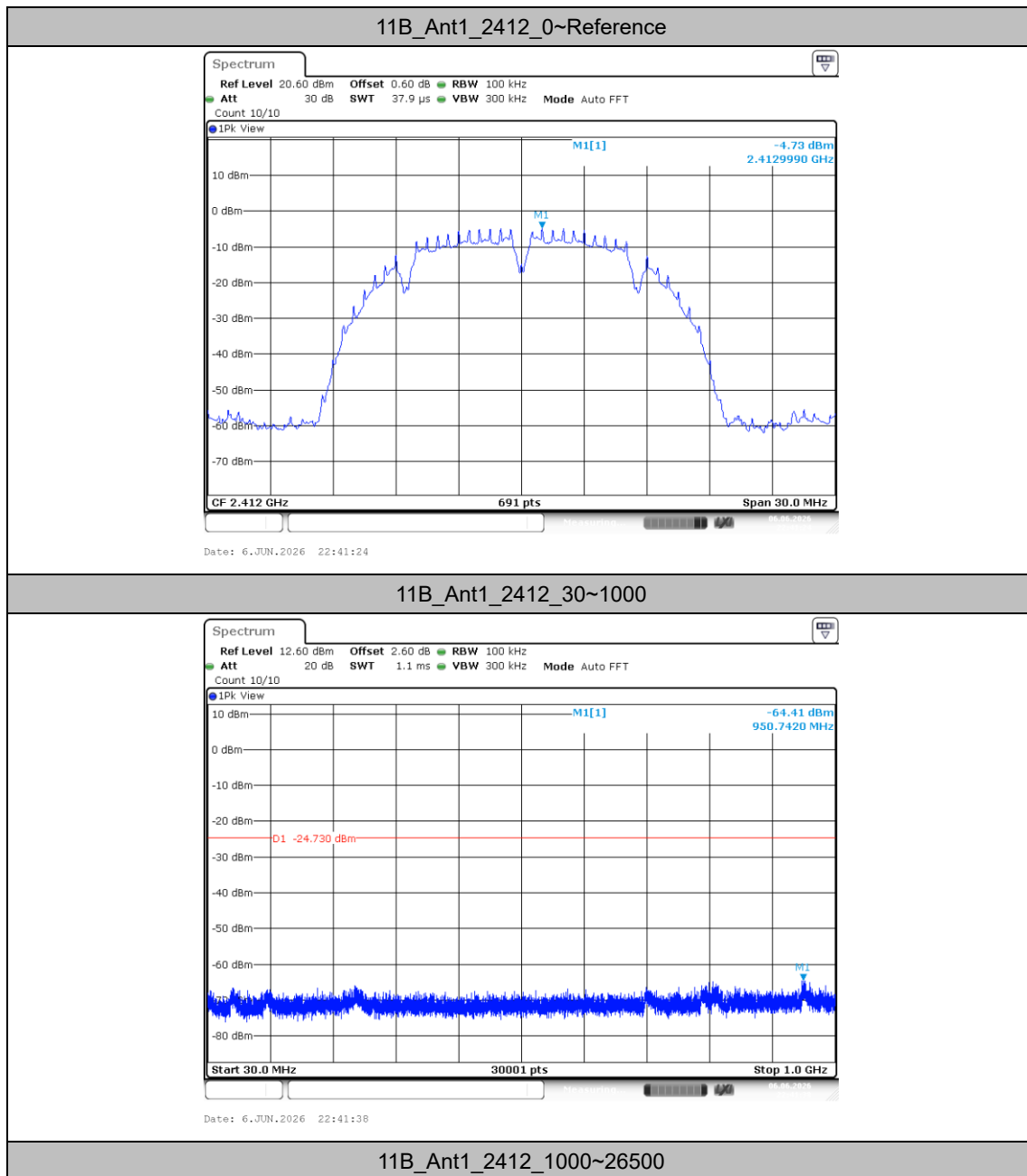
Date: 6.JUN.2026 23:18:00

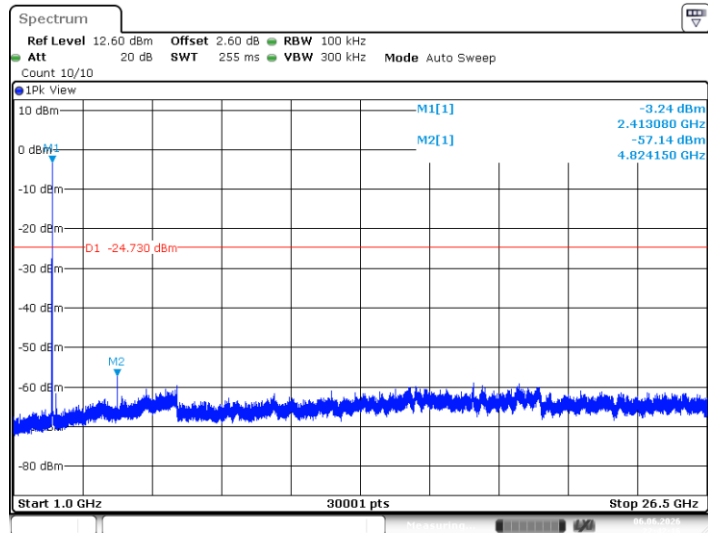
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-4.73	-4.73	---	PASS
			30~1000	-4.73	-64.41	≤-24.73	PASS
			1000~26500	-4.73	-57.14	≤-24.73	PASS
		2437	Reference	-4.72	-4.72	---	PASS
			30~1000	-4.72	-64.27	≤-24.72	PASS
			1000~26500	-4.72	-56.68	≤-24.72	PASS
		2462	Reference	-4.55	-4.55	---	PASS
			30~1000	-4.55	-64.05	≤-24.55	PASS
			1000~26500	-4.55	-56.37	≤-24.55	PASS
11G	Ant1	2412	Reference	-9.49	-9.49	---	PASS
			30~1000	-9.49	-64.9	≤-29.49	PASS
			1000~26500	-9.49	-59.38	≤-29.49	PASS
		2437	Reference	-9.48	-9.48	---	PASS
			30~1000	-9.48	-63.51	≤-29.48	PASS
			1000~26500	-9.48	-58.66	≤-29.48	PASS
		2462	Reference	-9.68	-9.68	---	PASS
			30~1000	-9.68	-64.36	≤-29.68	PASS
			1000~26500	-9.68	-58.83	≤-29.68	PASS
11N20SISO	Ant1	2412	Reference	-9.53	-9.53	---	PASS
			30~1000	-9.53	-62.28	≤-29.53	PASS
			1000~26500	-9.53	-59.01	≤-29.53	PASS
		2437	Reference	-9.49	-9.49	---	PASS
			30~1000	-9.49	-63.89	≤-29.49	PASS
			1000~26500	-9.49	-59.21	≤-29.49	PASS
		2462	Reference	-9.66	-9.66	---	PASS
			30~1000	-9.66	-63.49	≤-29.66	PASS
			1000~26500	-9.66	-58.94	≤-29.66	PASS

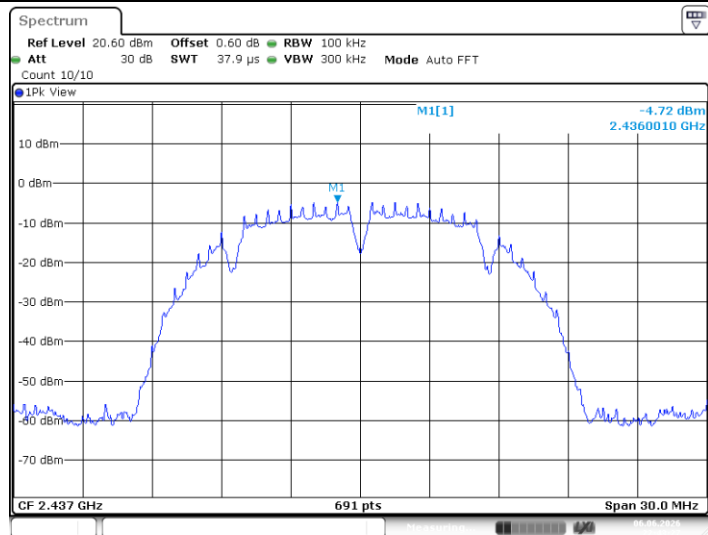
Test Graphs





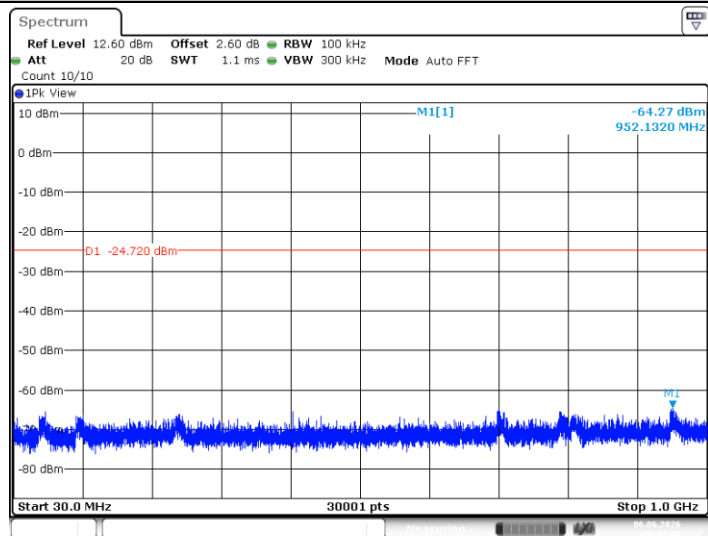
Date: 6.JUN.2026 22:42:16

11B_Ant1_2437_0~Reference



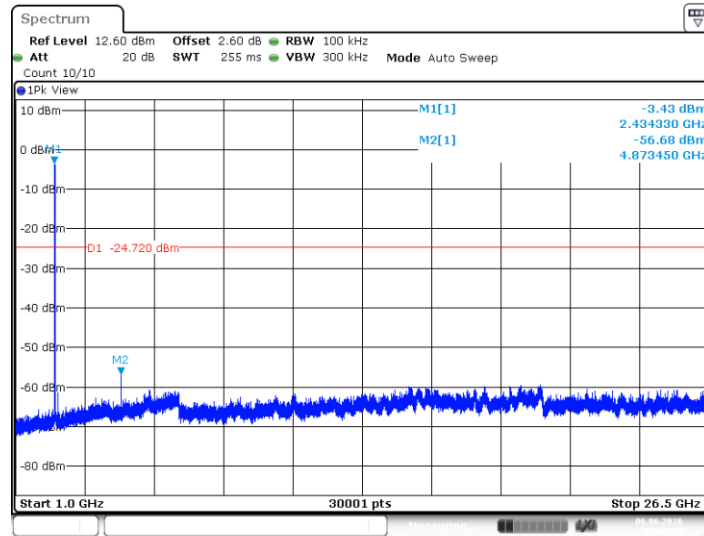
Date: 6.JUN.2026 22:43:27

11B_Ant1_2437_30~1000



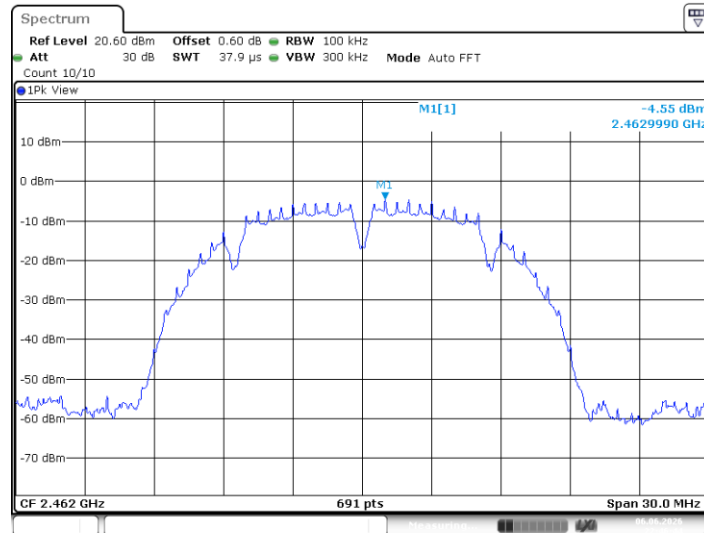
Date: 6.JUN.2026 22:43:42

11B_Ant1_2437_1000~26500



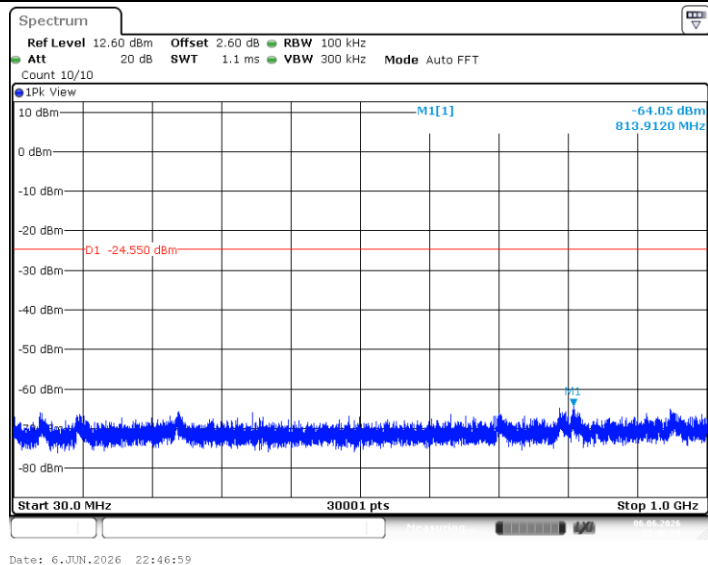
Date: 6.JUN.2026 22:44:19

11B_Ant1_2462_0~Reference

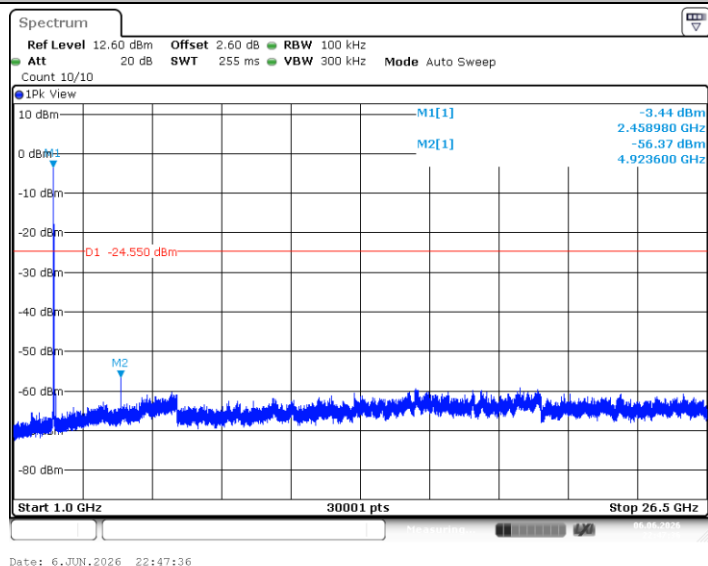


Date: 6.JUN.2026 22:46:44

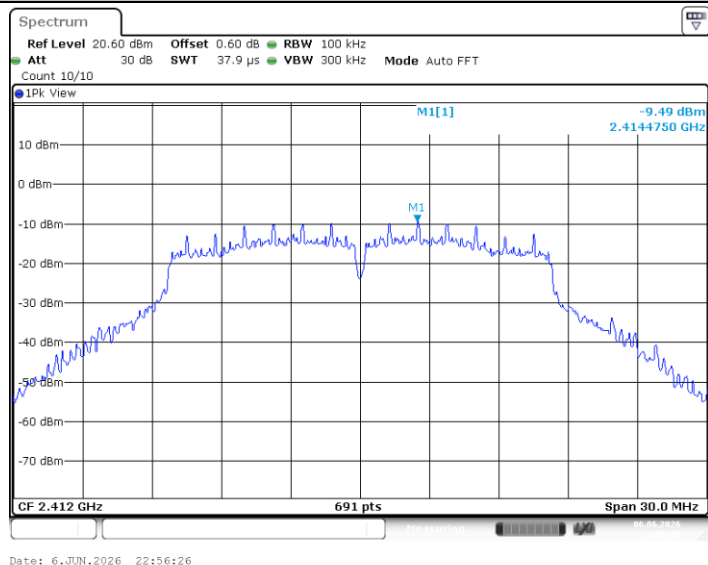
11B_Ant1_2462_30~1000



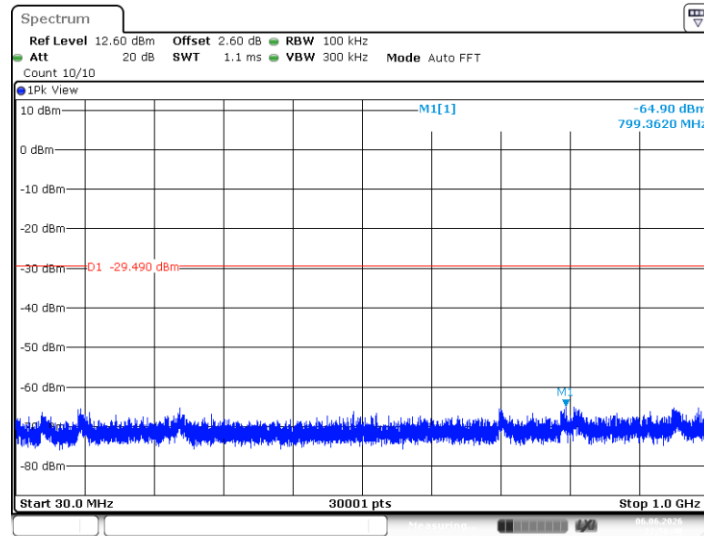
11B_Ant1_2462_1000~26500



11G_Ant1_2412_0~Reference

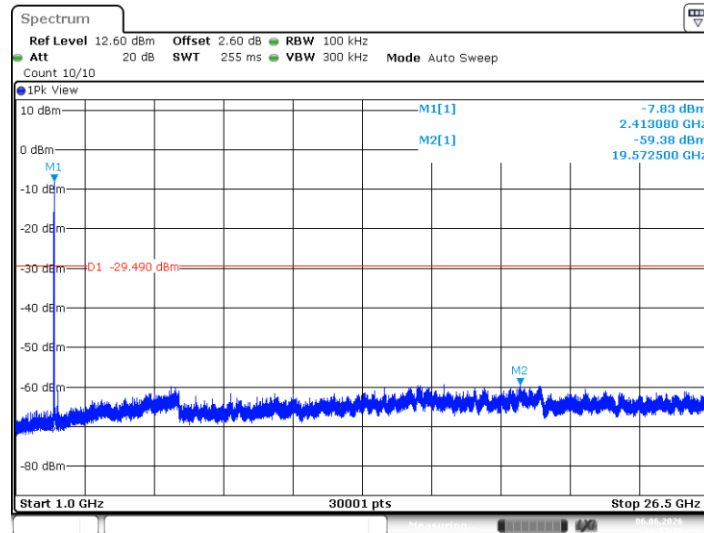


11G_Ant1_2412_30~1000



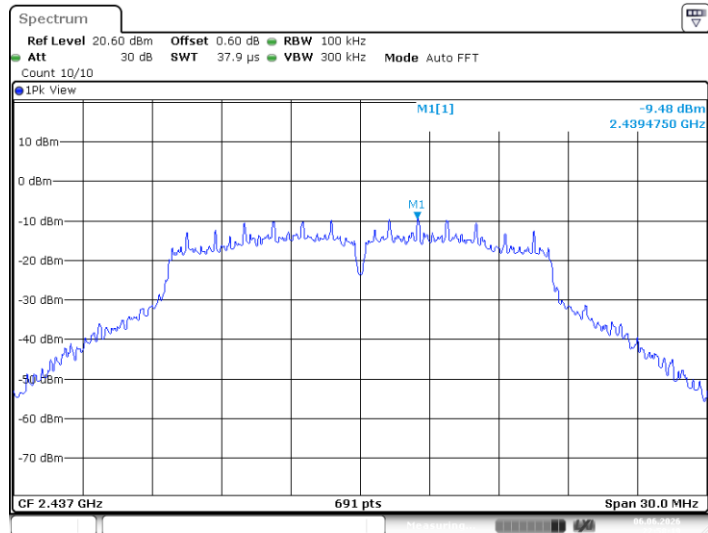
Date: 6.JUN.2026 22:56:40

11G_Ant1_2412_1000~26500



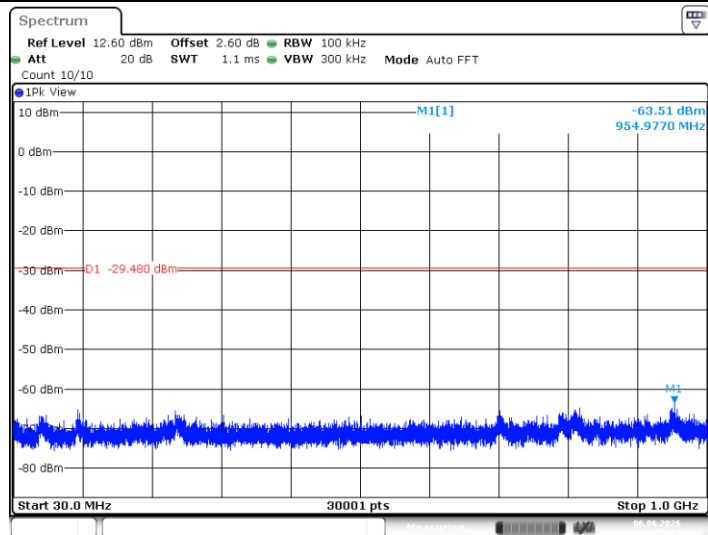
Date: 6.JUN.2026 22:57:17

11G_Ant1_2437_0~Reference



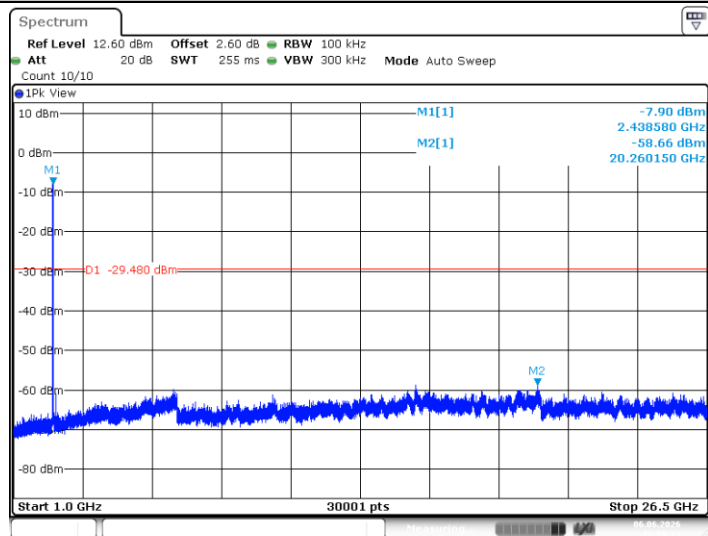
Date: 6.JUN.2026 22:58:19

11G_Ant1_2437_30~1000



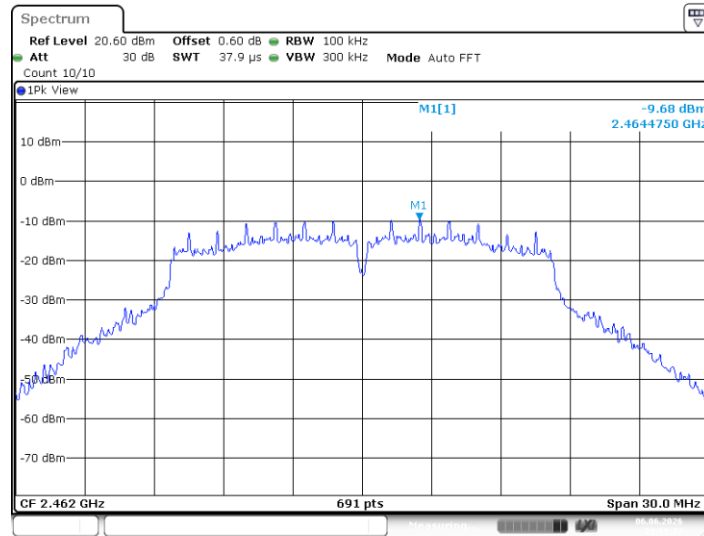
Date: 6.JUN.2026 22:58:34

11G_Ant1_2437_1000~26500



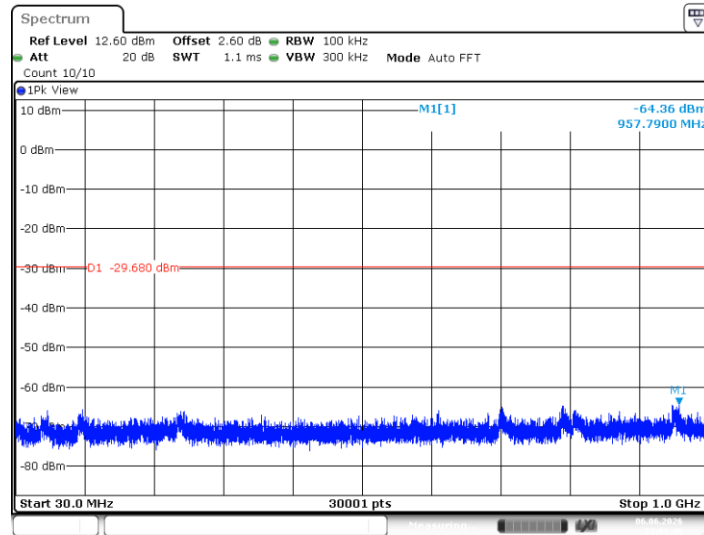
Date: 6.JUN.2026 22:59:11

11G_Ant1_2462_0~Reference



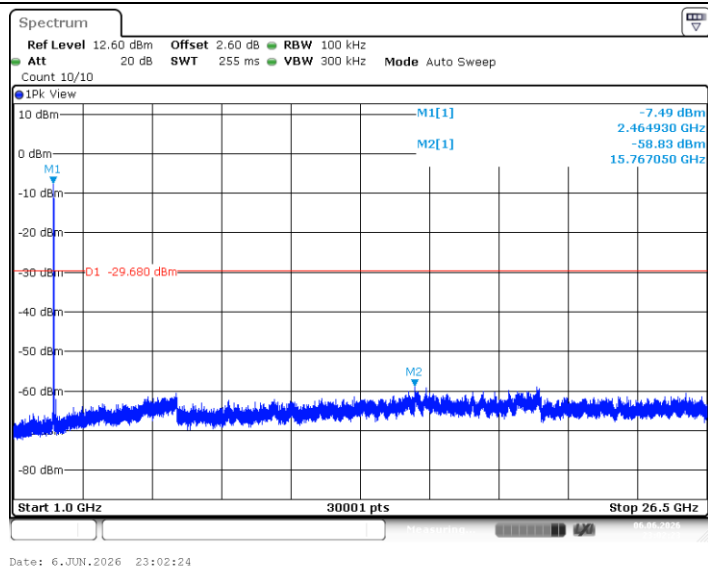
Date: 6.JUN.2026 23:01:32

11G_Ant1_2462_30~1000

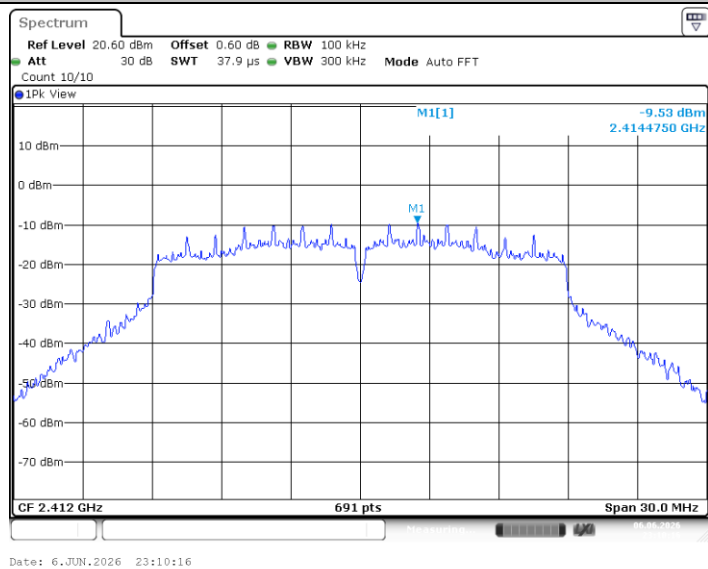


Date: 6.JUN.2026 23:01:46

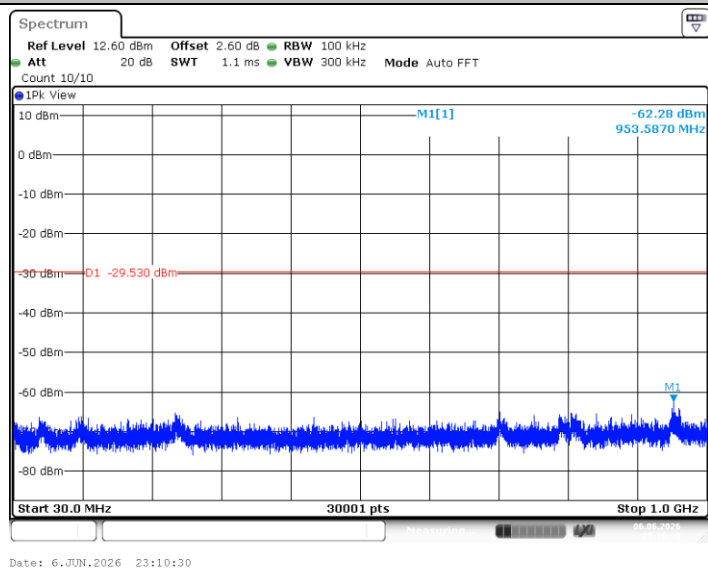
11G_Ant1_2462_1000~26500



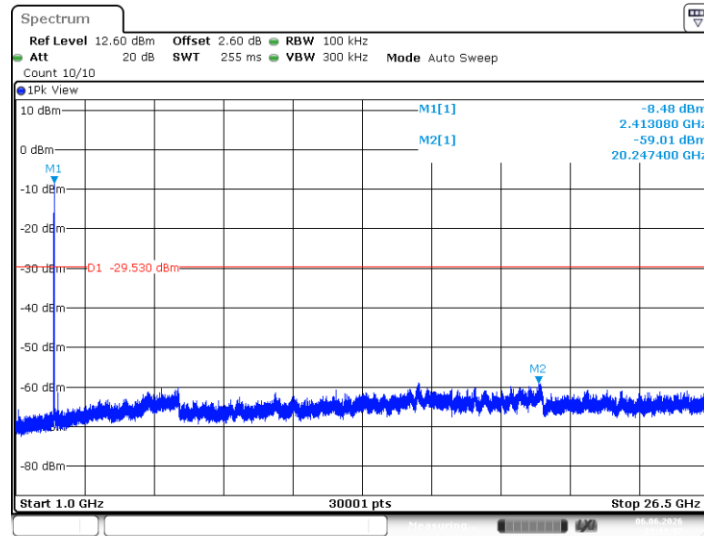
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000

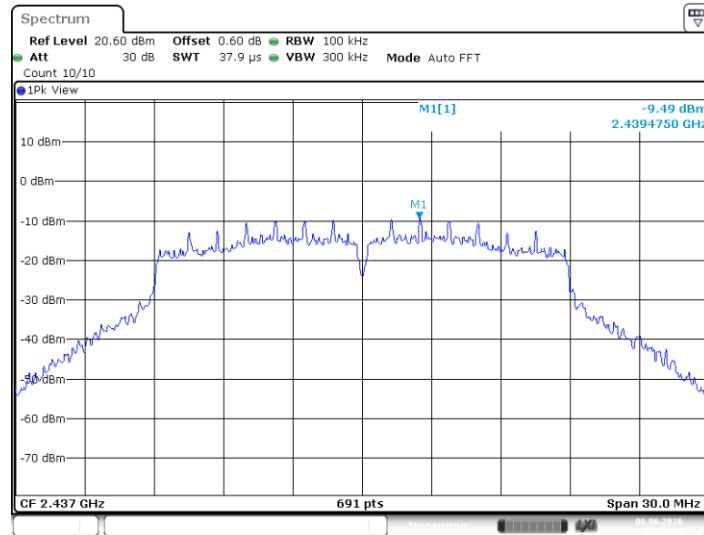


11N20SISO_Ant1_2412_1000~26500



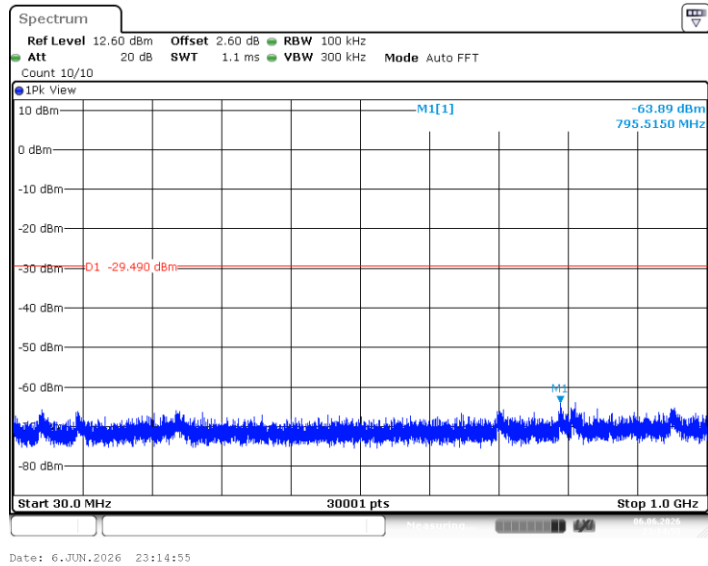
Date: 6.JUN.2026 23:11:07

11N20SISO_Ant1_2437_0~Reference

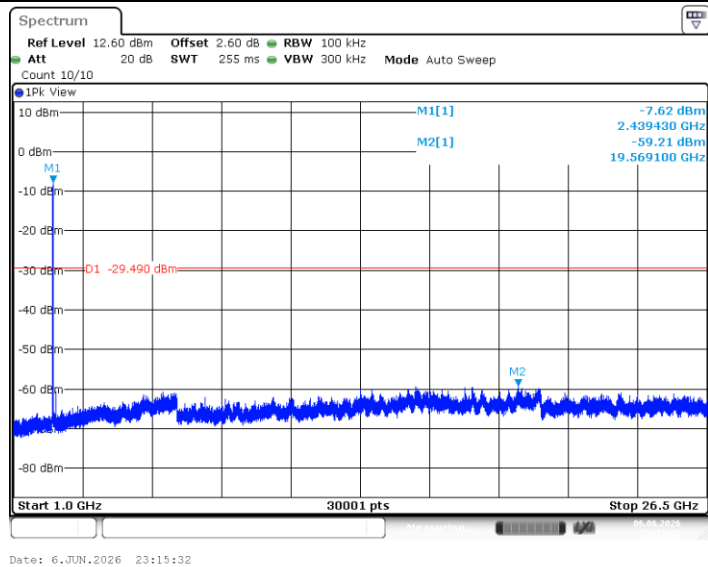


Date: 6.JUN.2026 23:14:41

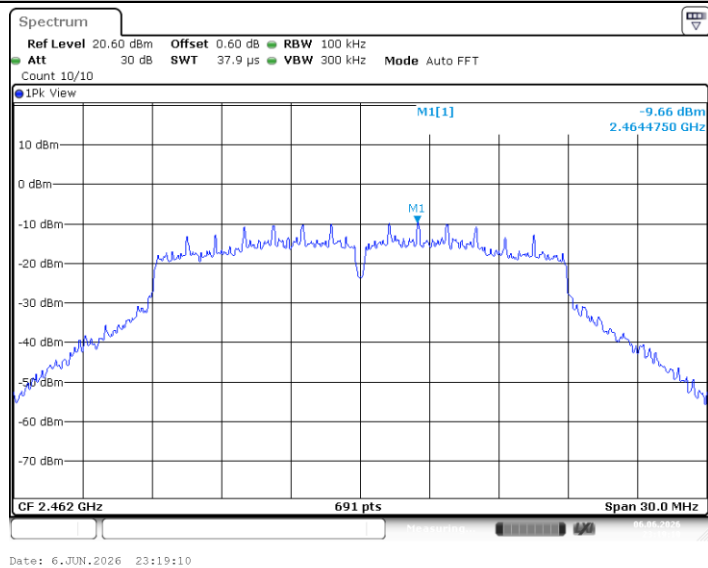
11N20SISO_Ant1_2437_30~1000



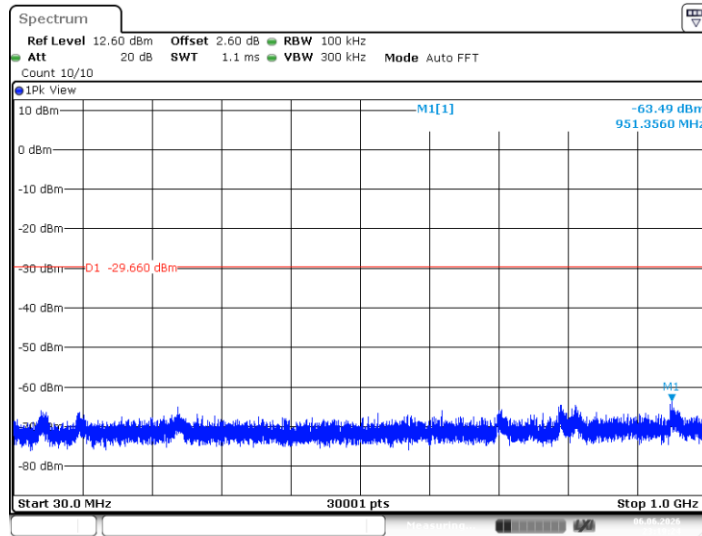
11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference

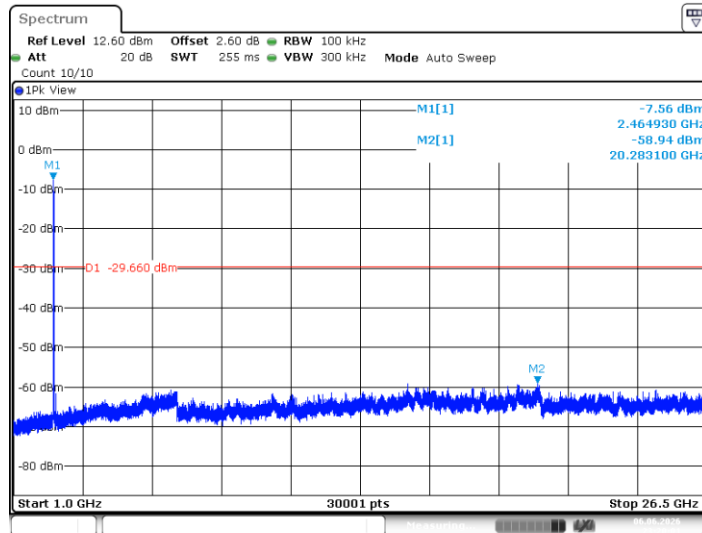


11N20SISO_Ant1_2462_30~1000



Date: 6.JUN.2026 23:19:24

11N20SISO_Ant1_2462_1000~26500



Date: 6.JUN.2026 23:20:02

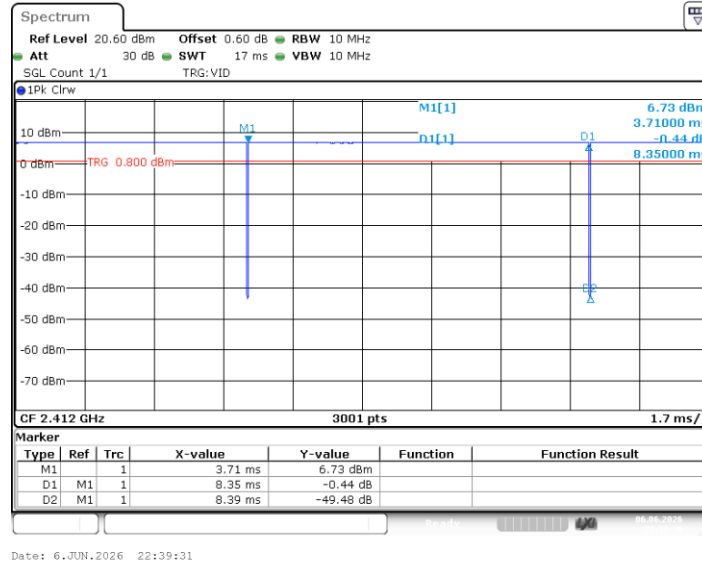
Appendix G: Duty Cycle

Test Result

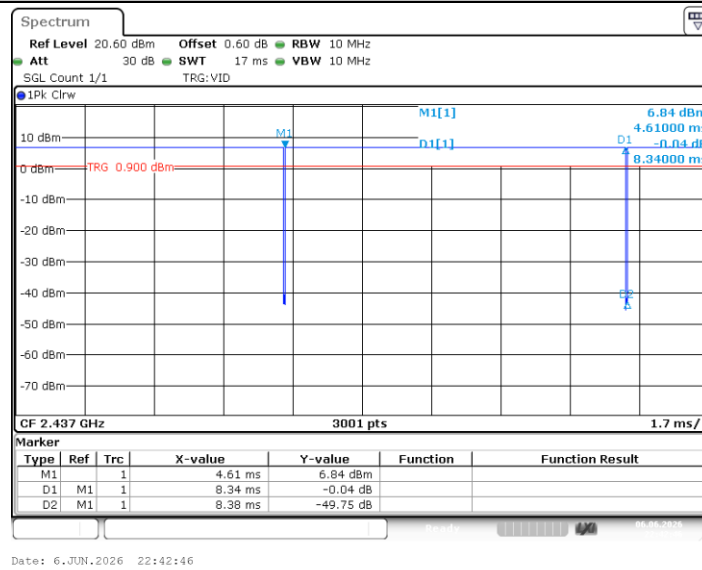
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor [dB]	T Factor [dB]
11B	Ant1	2412	8.35	8.39	99.52	0.02	0.12
		2437	8.34	8.38	99.52	0.02	0.12
		2462	8.35	8.39	99.52	0.02	0.12
11G	Ant1	2412	0.15	0.20	75.00	1.25	6.67
		2437	0.15	0.19	78.95	1.03	6.67
		2462	0.15	0.20	75.00	1.25	6.67
11N20SISO	Ant1	2412	0.17	0.22	77.27	1.12	5.88
		2437	0.17	0.22	77.27	1.12	5.88
		2462	0.18	0.23	78.26	1.06	5.56

Test Graphs

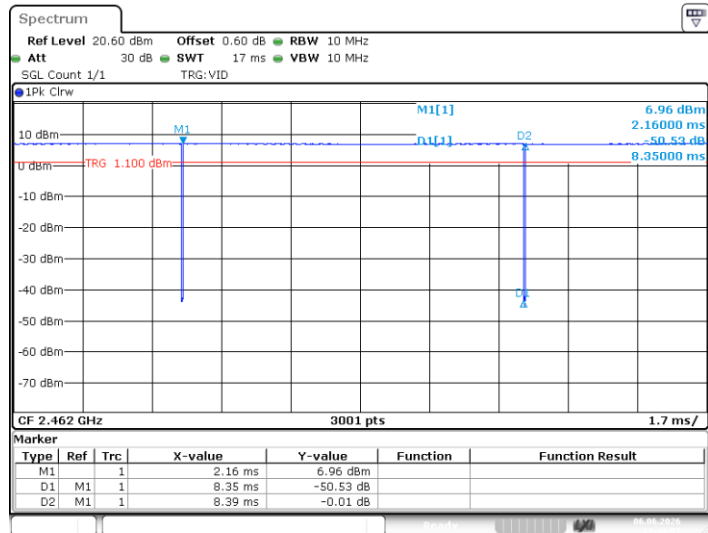
11B_Ant1_2412



11B_Ant1_2437

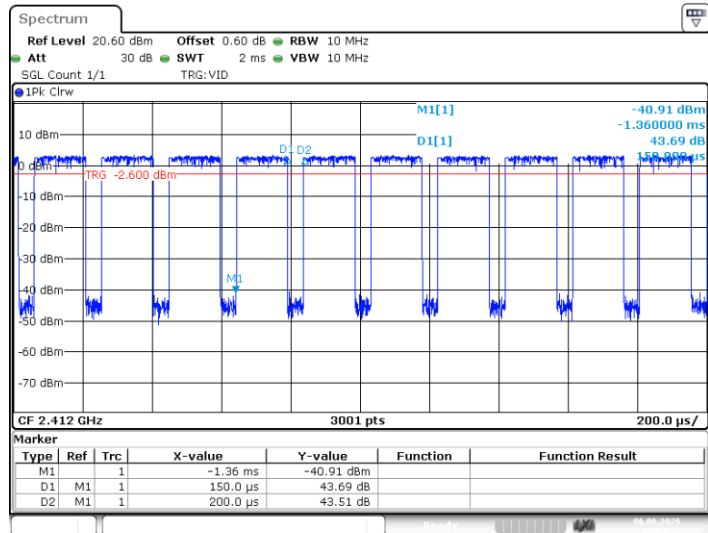


11B_Ant1_2462



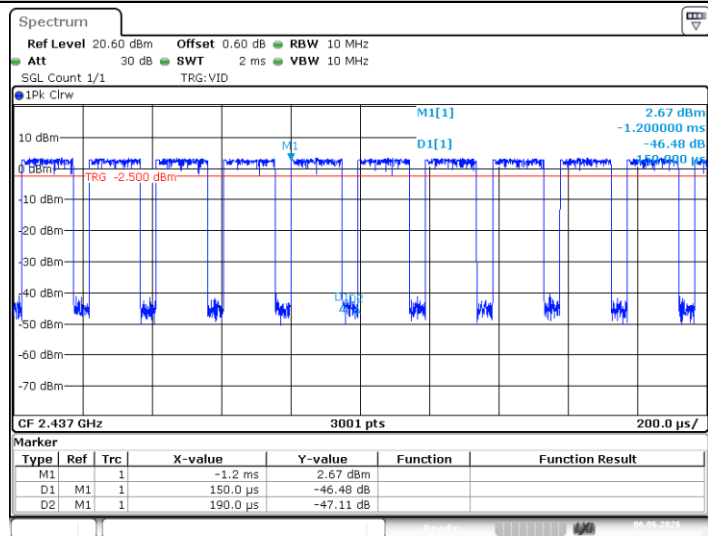
Date: 6.JUN.2026 22:44:51

11G_Ant1_2412



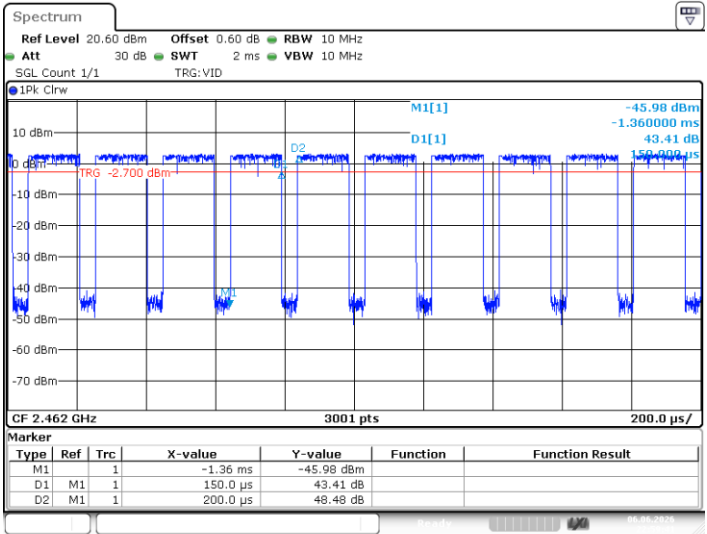
Date: 6.JUN.2026 22:54:36

11G_Ant1_2437



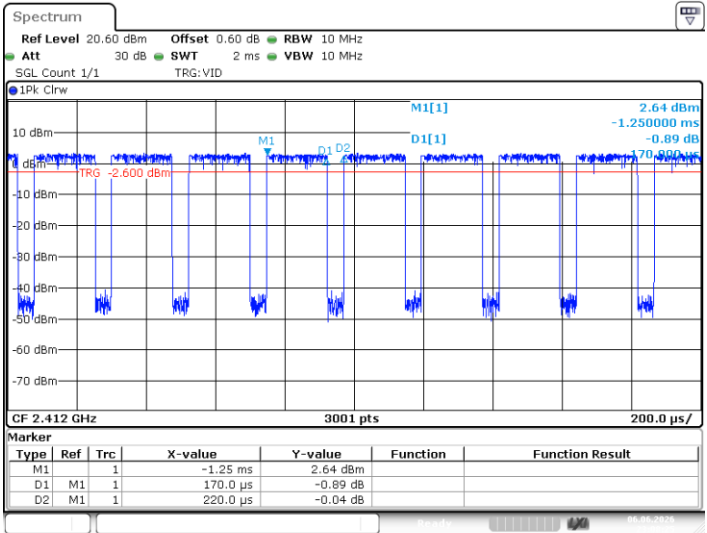
Date: 6.JUN.2026 22:57:40

11G_Ant1_2462



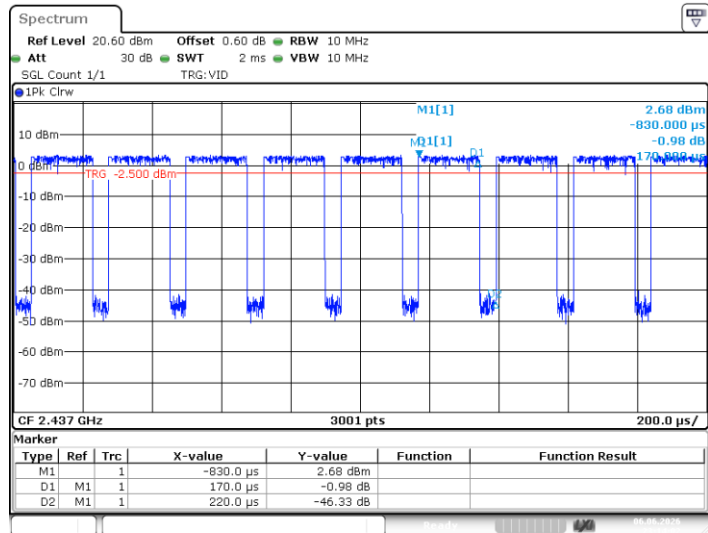
Date: 6.JUN.2026 22:59:41

11N20SISO_Ant1_2412



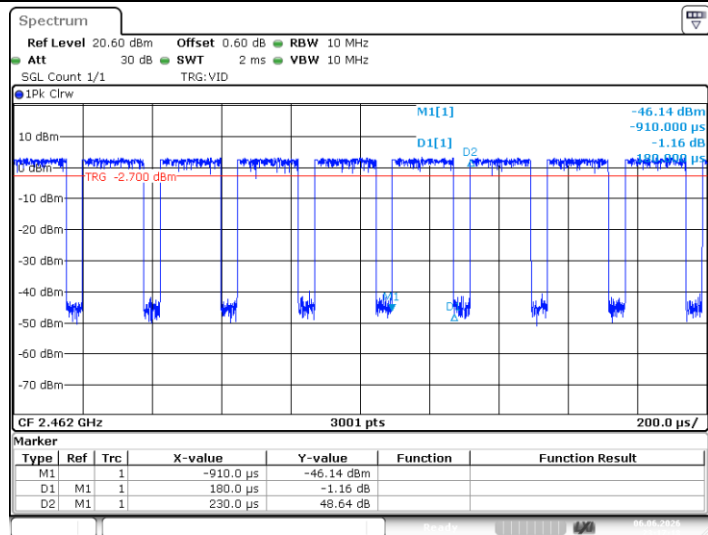
Date: 6.JUN.2026 23:08:25

11N20SISO_Ant1_2437



Date: 6.JUN.2026 23:14:01

11N20SISO_Ant1_2462



Date: 6.JUN.2026 23:17:19

Appendix H: Emissions in Restricted Bands

Test Result

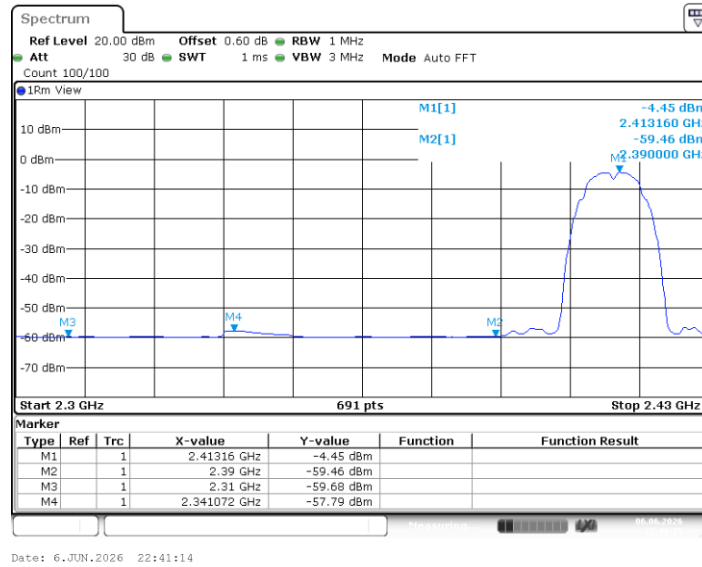
TestMod e	Antenn a	ChNam e	Frequen cy[MHz]	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-59.68	2.43	0.02	37.97	≤54	PASS
				AV	2341.072	-57.79	2.43	0.02	39.86	≤54	PASS
				AV	2390.000	-59.46	2.43	0.02	38.19	≤54	PASS
				Peak	2310.000	-48.88	2.43	0.00	48.75	≤74	PASS
				Peak	2342.768	-46.48	2.43	0.00	51.15	≤74	PASS
				Peak	2390.000	-48.68	2.43	0.00	48.95	≤74	PASS
		High	2462	AV	2483.500	-59.1	2.43	0.02	38.55	≤54	PASS
				AV	2484.159	-59.02	2.43	0.02	38.63	≤54	PASS
				AV	2500.000	-59.48	2.43	0.02	38.17	≤54	PASS
				Peak	2483.500	-48.64	2.43	0.00	48.99	≤74	PASS
				Peak	2491.493	-47.69	2.43	0.00	49.94	≤74	PASS
				Peak	2500.000	-48.21	2.43	0.00	49.42	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-59.7	2.43	1.25	39.18	≤54	PASS
				AV	2339.942	-57.78	2.43	1.25	41.1	≤54	PASS
				AV	2390.000	-59.67	2.43	1.25	39.21	≤54	PASS
				Peak	2310.000	-48.67	2.43	0.00	48.96	≤74	PASS
				Peak	2340.130	-46.39	2.43	0.00	51.24	≤74	PASS
				Peak	2390.000	-48.51	2.43	0.00	49.12	≤74	PASS
		High	2462	AV	2483.500	-59.32	2.43	1.25	39.56	≤54	PASS
				AV	2495.319	-59.27	2.43	1.25	39.61	≤54	PASS
				AV	2500.000	-59.57	2.43	1.25	39.31	≤54	PASS
				Peak	2483.500	-48.49	2.43	0.00	49.14	≤74	PASS
				Peak	2494.362	-47.33	2.43	0.00	50.3	≤74	PASS
				Peak	2500.000	-48.52	2.43	0.00	49.11	≤74	PASS
11N20Si SO	Ant1	Low	2412	AV	2310.000	-59.79	2.43	1.12	38.96	≤54	PASS
				AV	2339.565	-57.8	2.43	1.12	40.95	≤54	PASS
				AV	2390.000	-59.62	2.43	1.12	39.13	≤54	PASS
				Peak	2310.000	-48.7	2.43	0.00	48.93	≤74	PASS
				Peak	2341.638	-45.41	2.43	0.00	52.22	≤74	PASS
				Peak	2390.000	-49.28	2.43	0.00	48.35	≤74	PASS
		High	2462	AV	2483.500	-59.33	2.43	1.06	39.36	≤54	PASS
				AV	2496.594	-59.26	2.43	1.06	39.43	≤54	PASS
				AV	2500.000	-59.56	2.43	1.06	39.13	≤54	PASS
				Peak	2483.500	-48.44	2.43	0.00	49.19	≤74	PASS
				Peak	2495.797	-47.72	2.43	0.00	49.91	≤74	PASS
				Peak	2500.000	-48.57	2.43	0.00	49.06	≤74	PASS

Note:

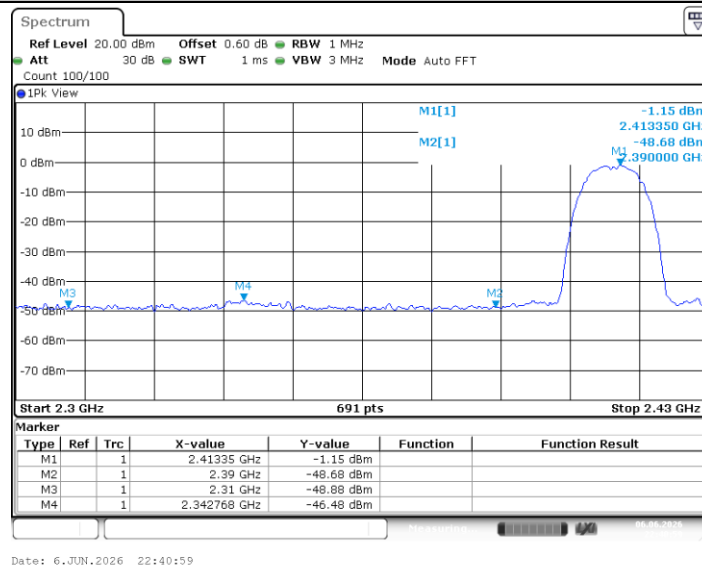
1. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

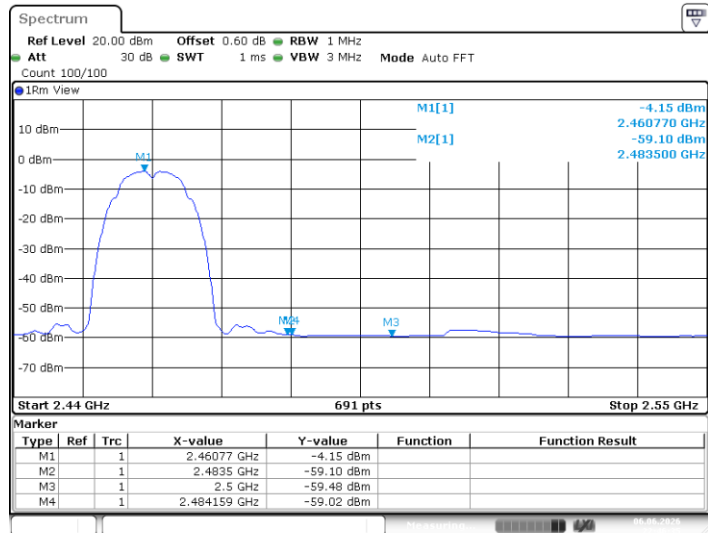
11B_Ant1_Low_2412_AV



11B_Ant1_Low_2412_Peak

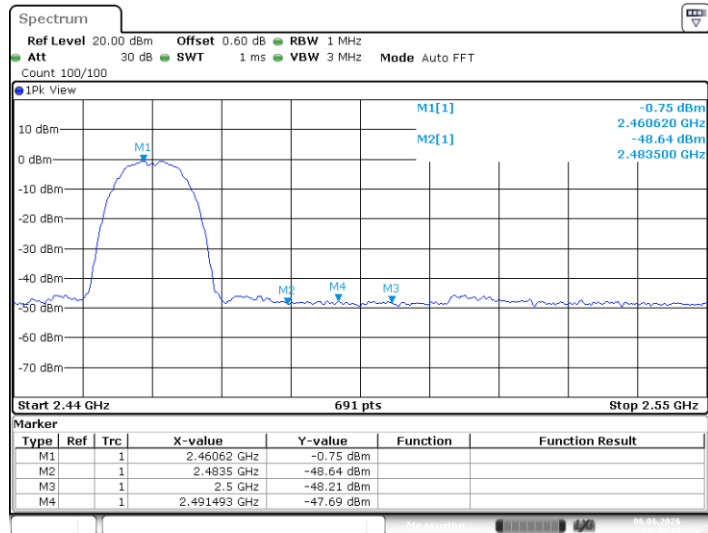


11B_Ant1_High_2462_AV



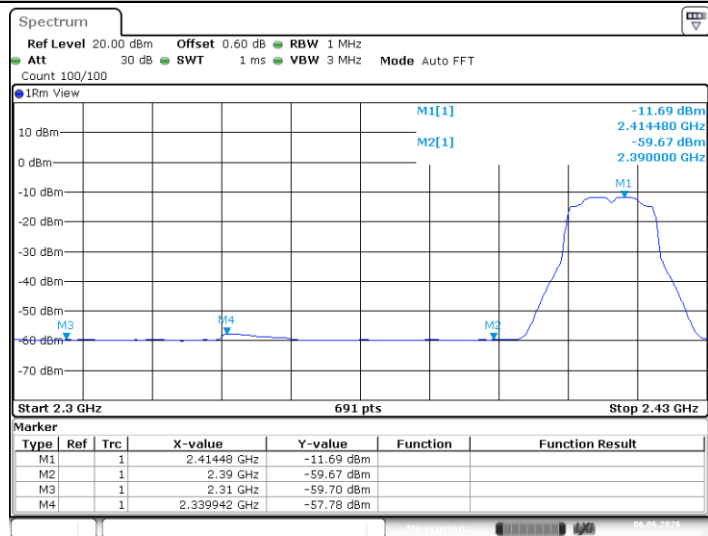
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11B_Ant1_High_2462_Peak



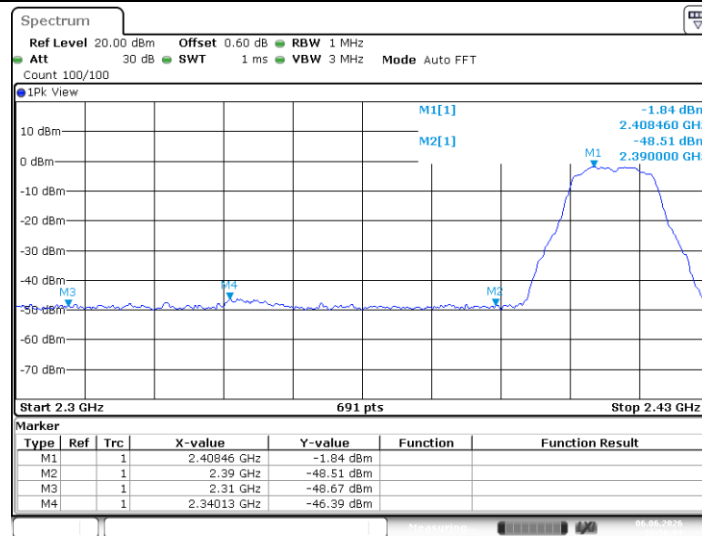
Date: 6.JUN.2026 22:46:19

11G_Ant1_Low_2412_AV



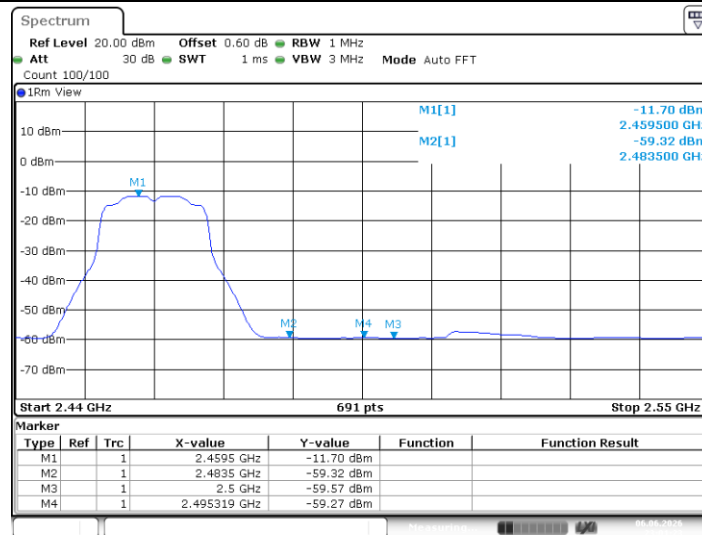
Date: 6.JUN.2026 22:56:16

11G_Ant1_Low_2412_Peak



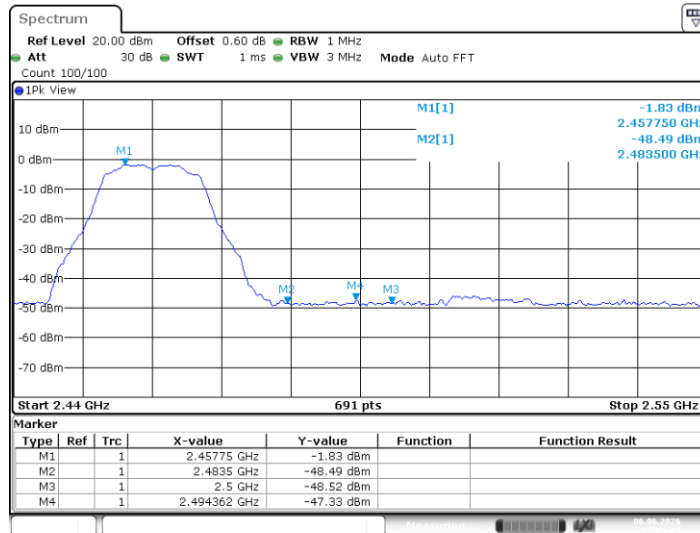
Date: 6.JUN.2026 22:56:01

11G_Ant1_High_2462_AV



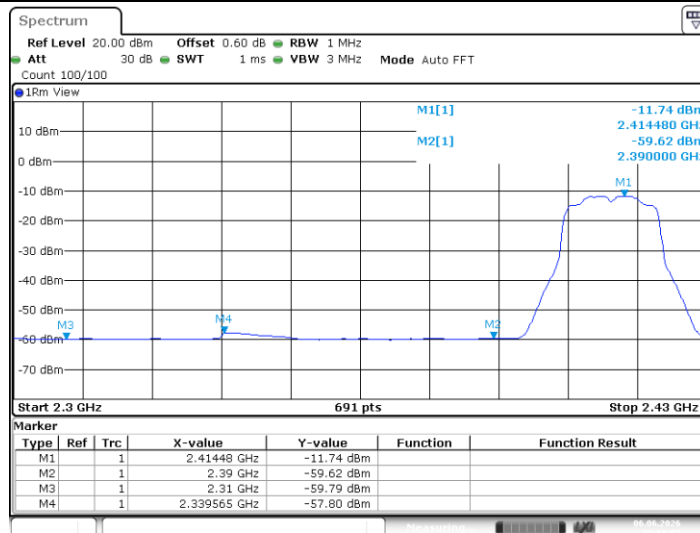
Date: 6.JUN.2026 23:01:22

11G_Ant1_High_2462_Peak



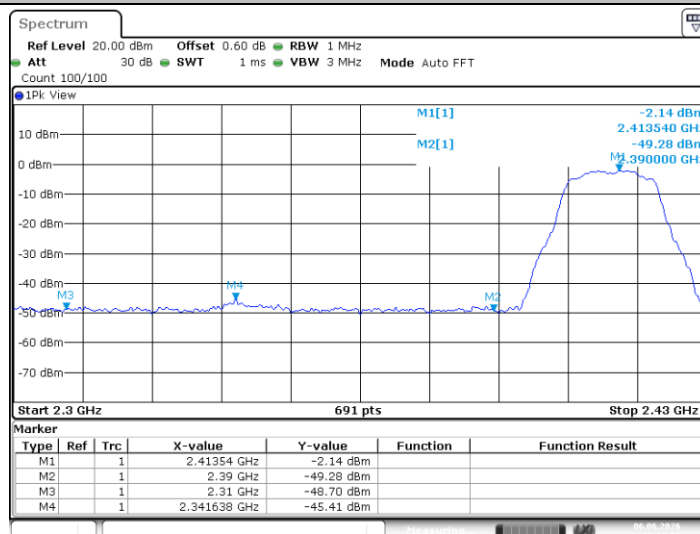
Date: 6.JUN.2026 23:01:07

11N20SISO_Ant1_Low_2412_AV



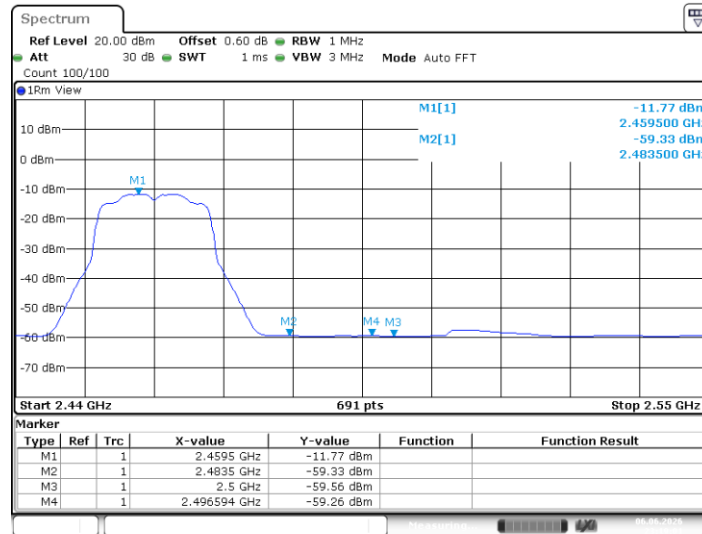
Date: 6.JUN.2026 23:10:06

11N20SISO_Ant1_Low_2412_Peak



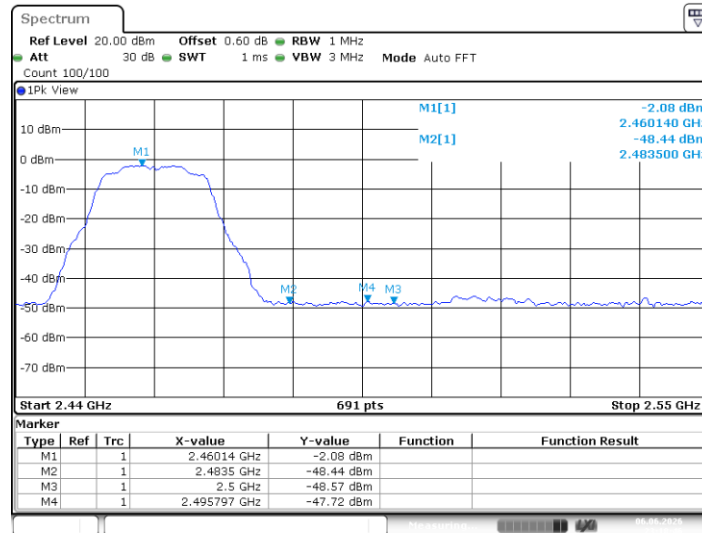
Date: 6.JUN.2026 23:09:51

11N20SISO_Ant1_High_2462_AV



Date: 6.JUN.2026 23:19:00

11N20SISO_Ant1_High_2462_Peak



Date: 6.JUN.2026 23:18:45