

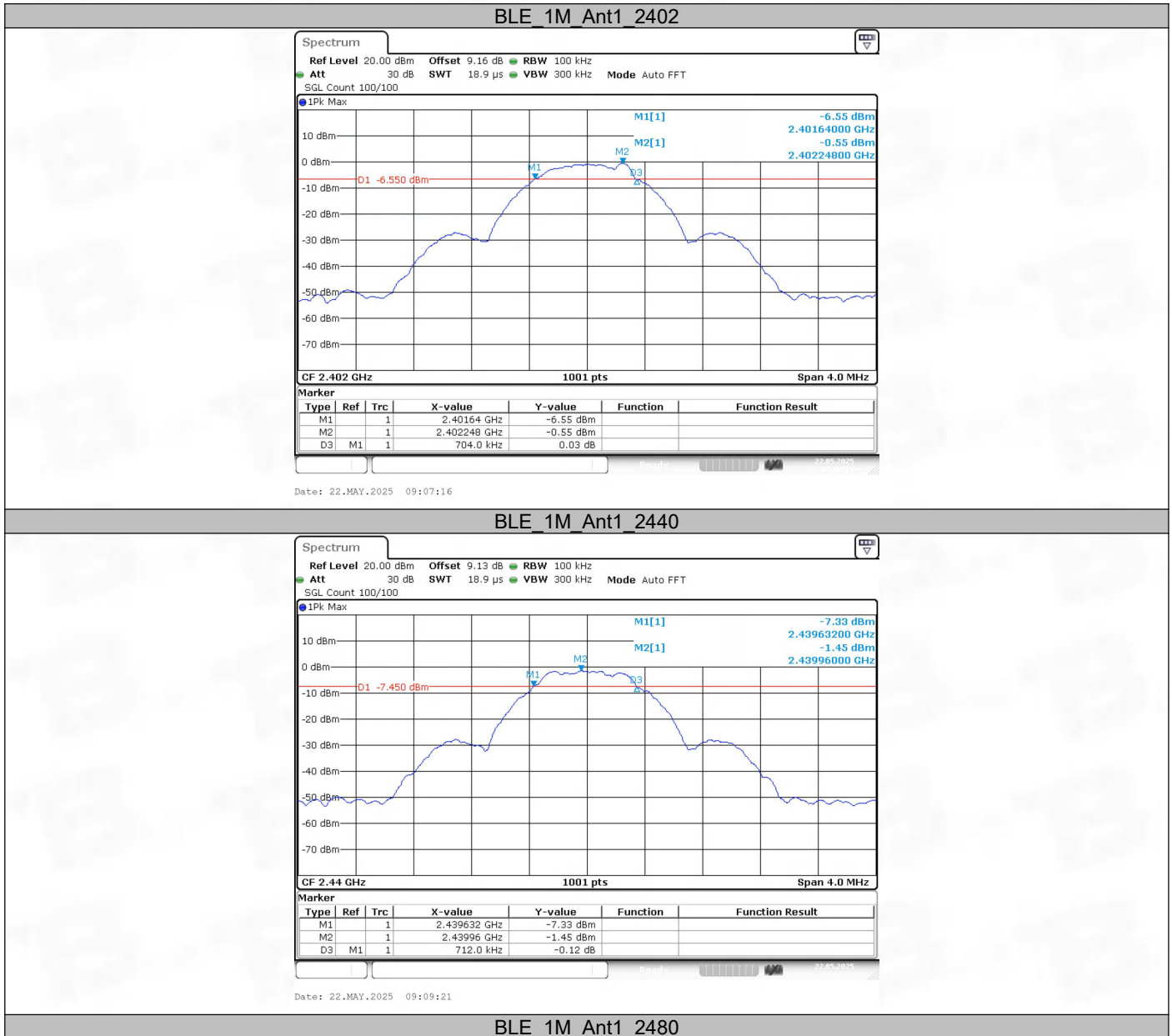
Appendix-BLE

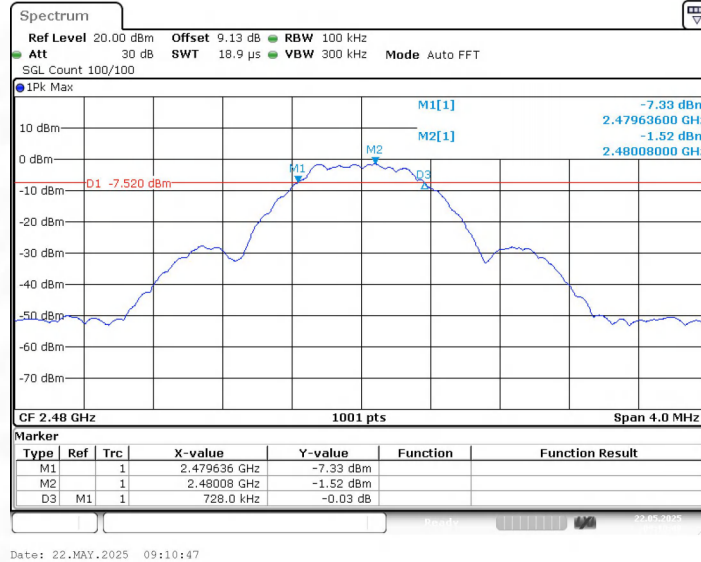
1.1 Appendix A: DTS Bandwidth

1.1.1 Test Result

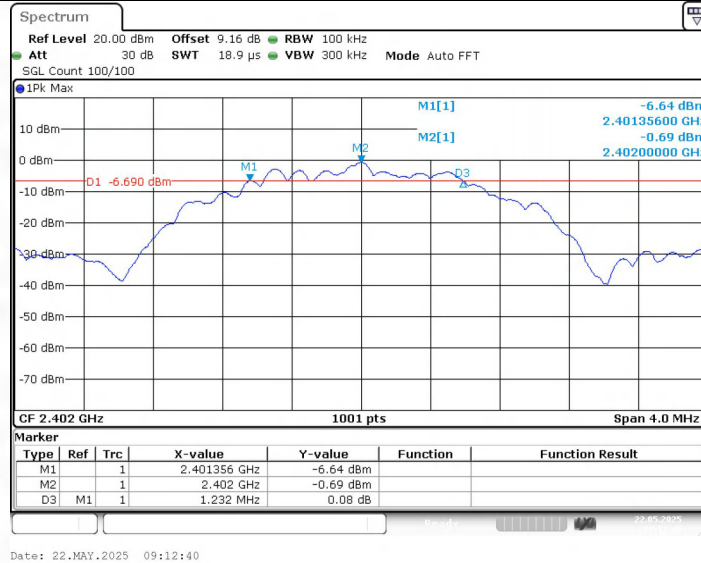
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.70	2401.64	2402.34	0.5	PASS
		2440	0.71	2439.63	2440.34	0.5	PASS
		2480	0.73	2479.64	2480.36	0.5	PASS
BLE_2M	Ant1	2402	1.23	2401.36	2402.59	0.5	PASS
		2440	1.12	2439.44	2440.56	0.5	PASS
		2480	1.14	2479.44	2480.58	0.5	PASS

1.1.2 Test Graphs

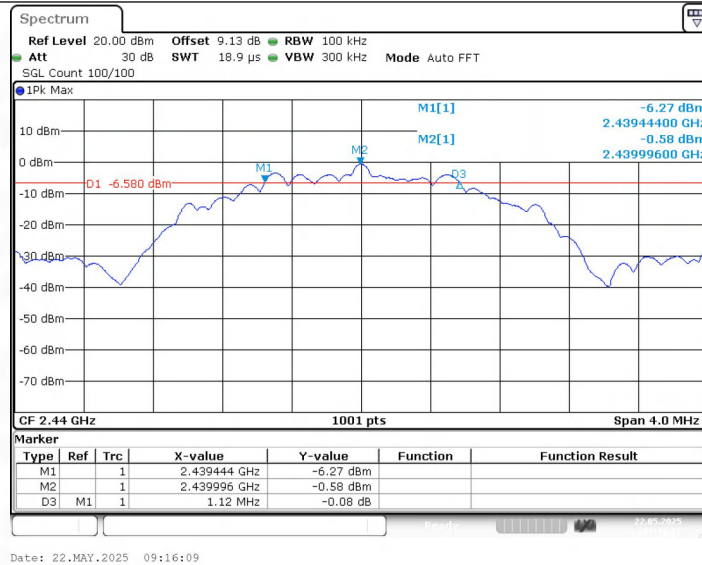




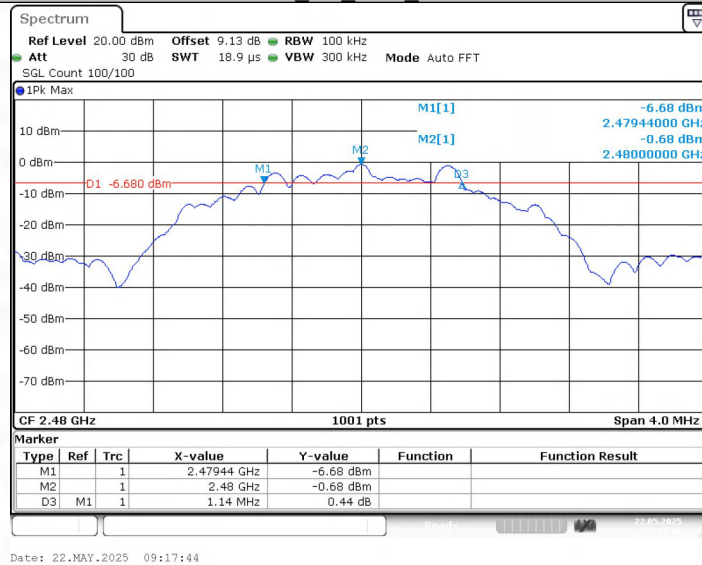
BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

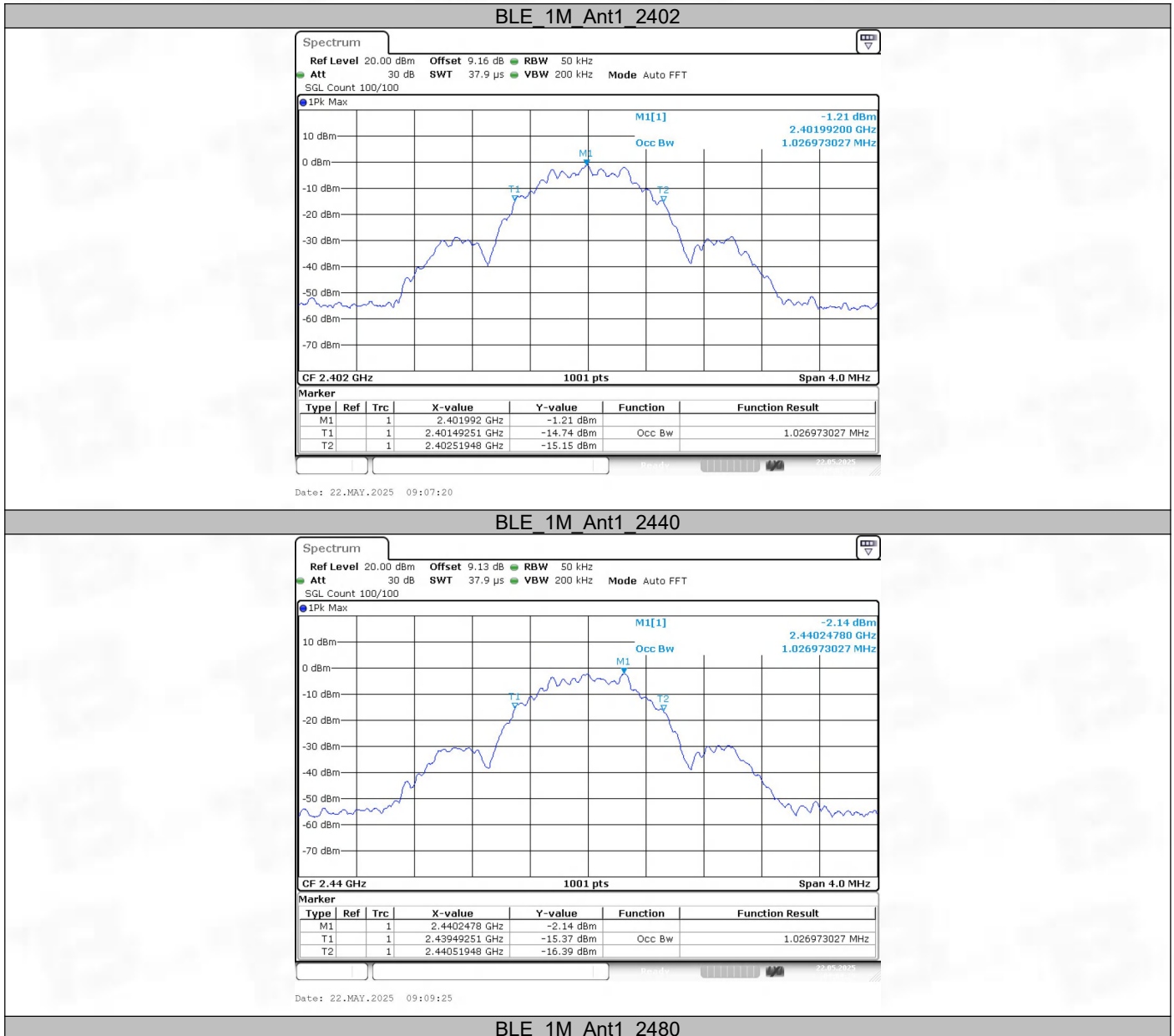


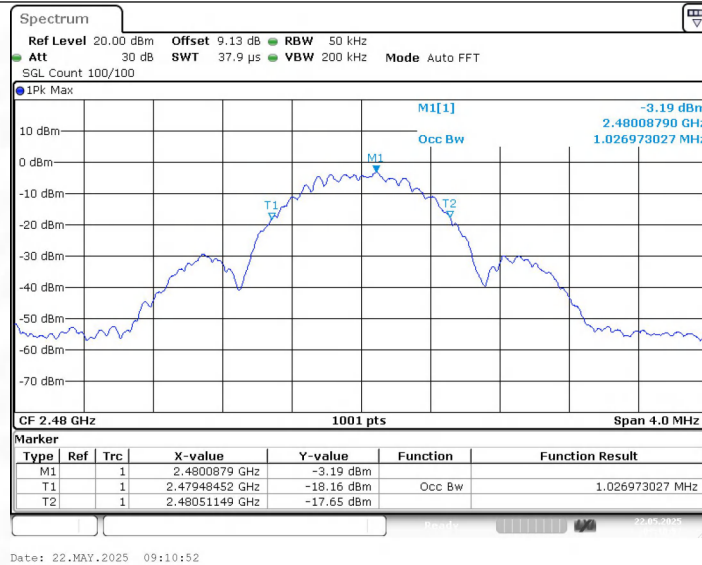
1.2 Appendix B: Occupied Channel Bandwidth

1.2.1 Test Result

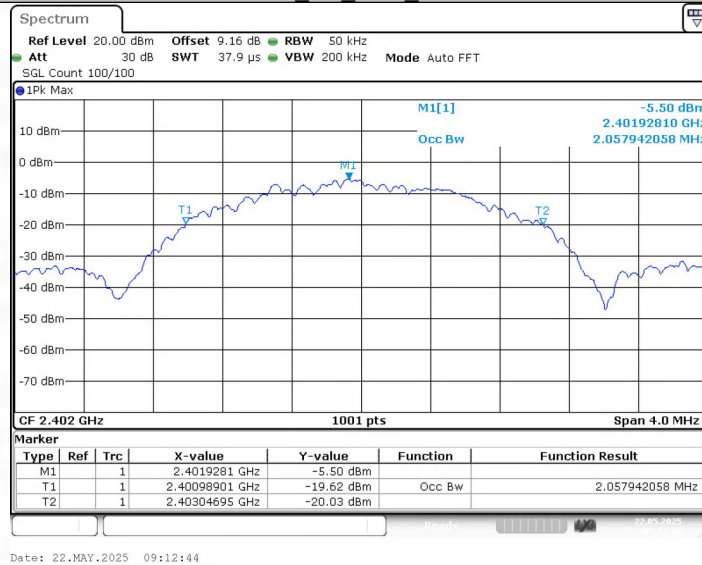
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0270	2401.4925	2402.5195	---	---
		2440	1.0270	2439.4925	2440.5195	---	---
		2480	1.0270	2479.4845	2480.5115	---	---
BLE_2M	Ant1	2402	2.0579	2400.9890	2403.0470	---	---
		2440	2.0579	2438.9810	2441.0390	---	---
		2480	2.0460	2478.9890	2481.0350	---	---

1.2.2 Test Graphs

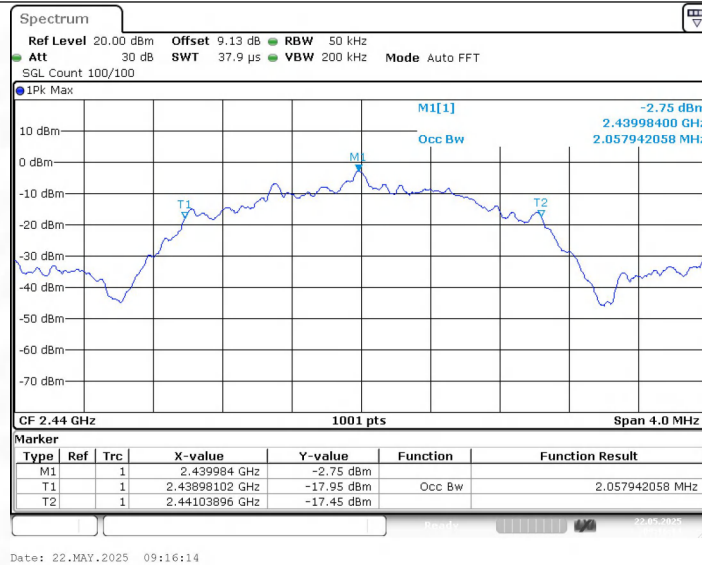




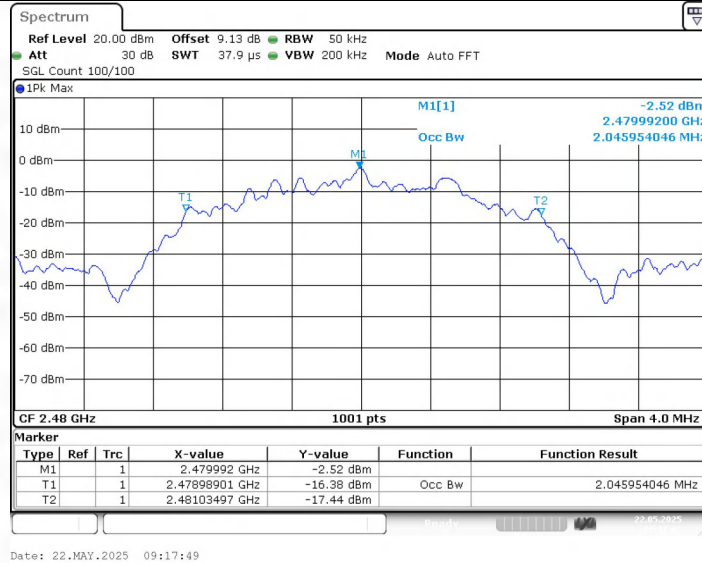
BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

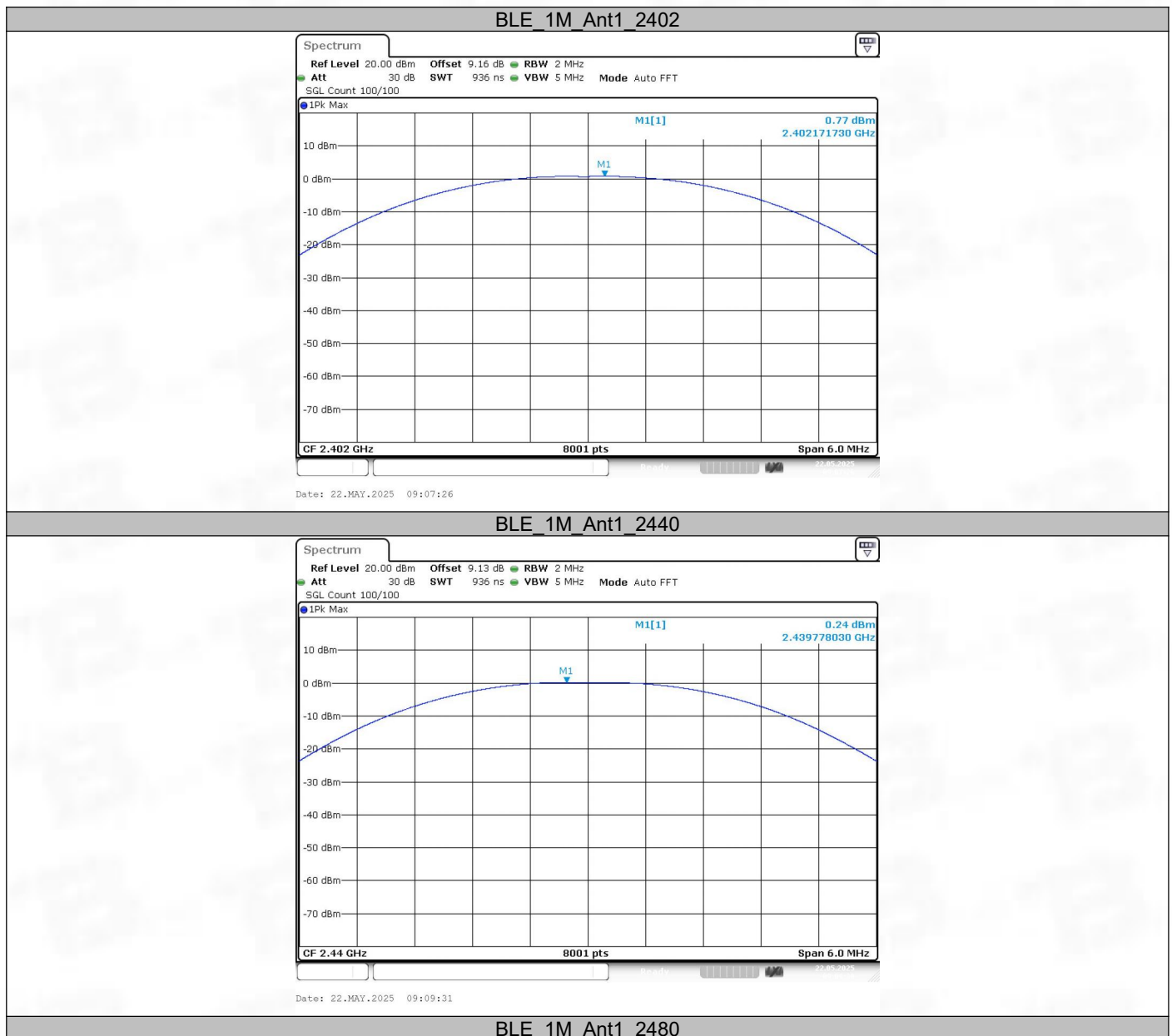


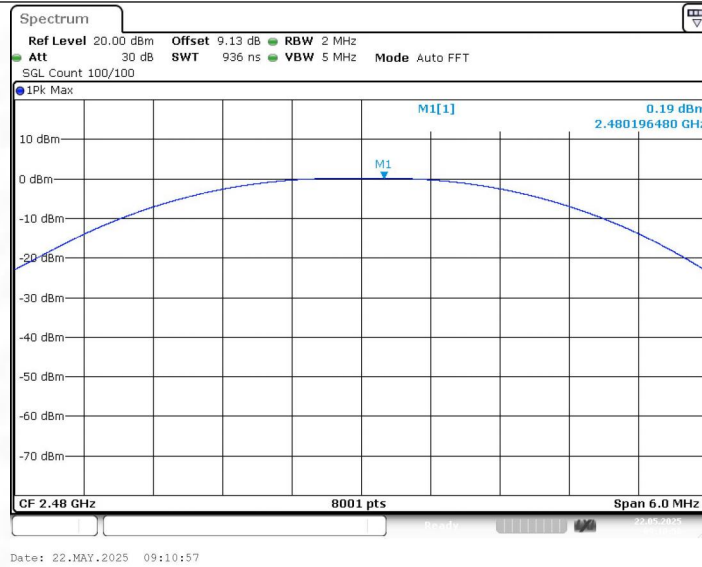
1.3 Appendix C: Maximum conducted output power

1.3.1 Test Result Peak

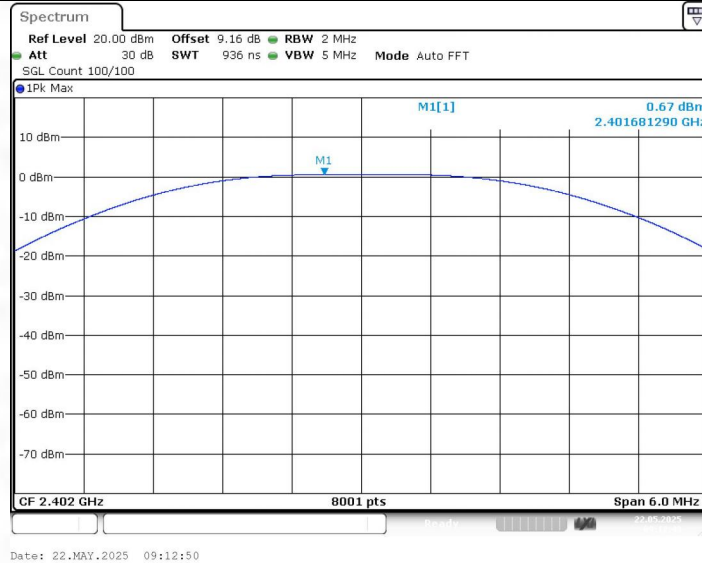
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.77	≤30	PASS
		2440	0.24	≤30	PASS
		2480	0.19	≤30	PASS
BLE_2M	Ant1	2402	0.67	≤30	PASS
		2440	0.15	≤30	PASS
		2480	0.11	≤30	PASS

1.3.2 Test Graphs Peak

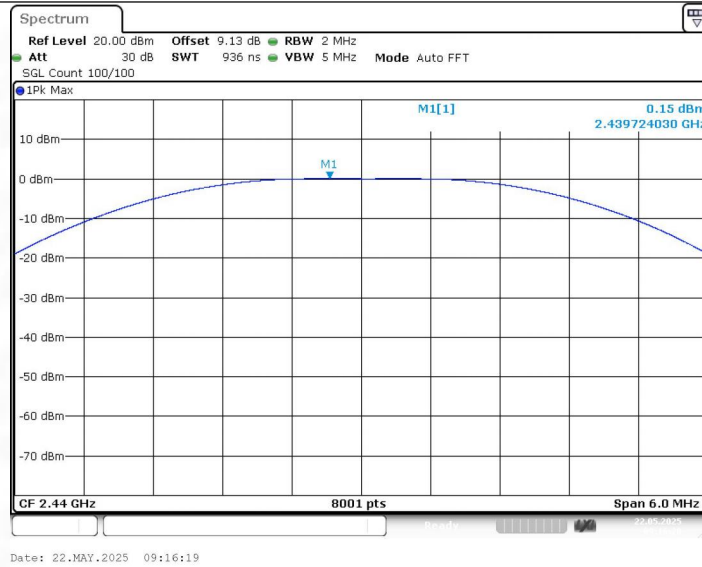




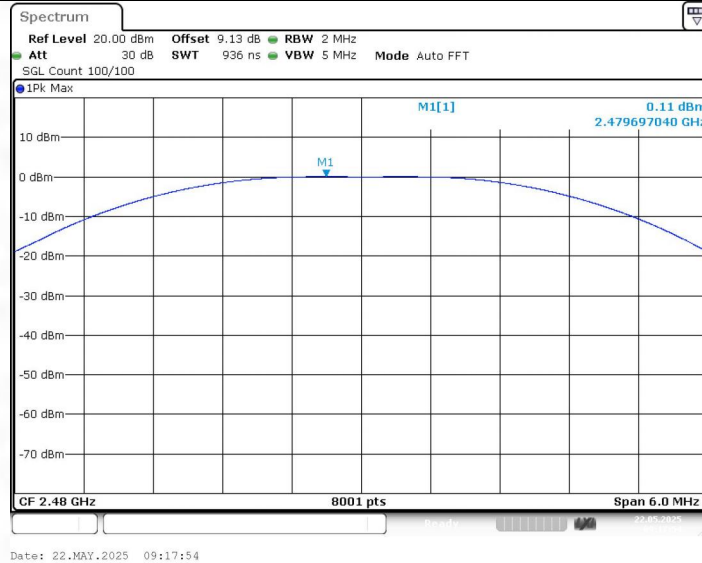
BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

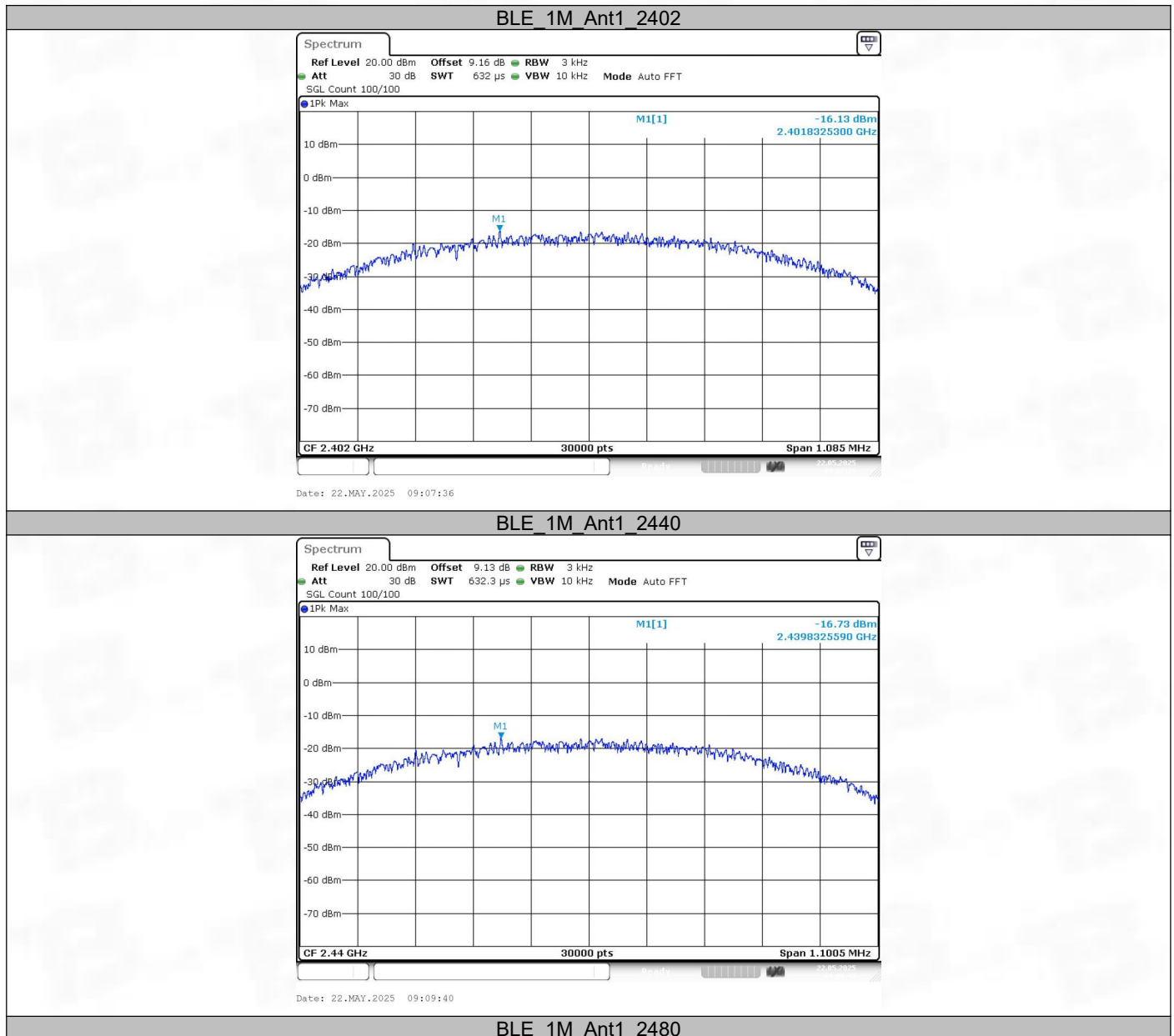


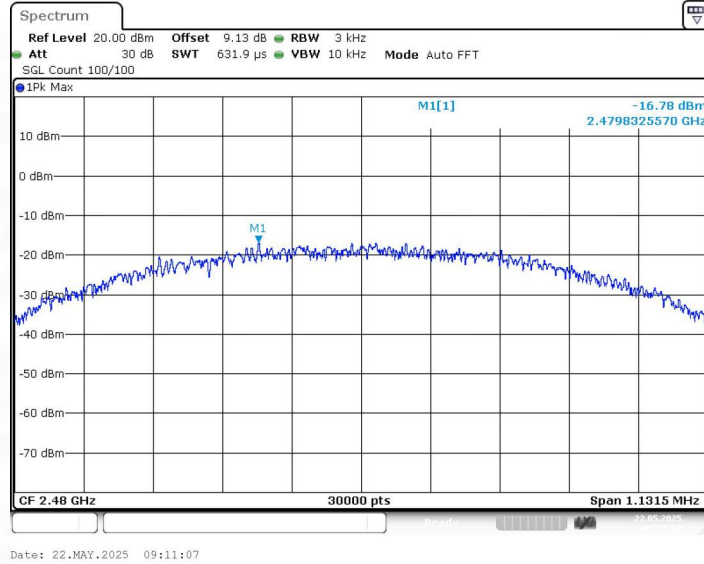
1.4 Appendix D: Maximum power spectral density

1.4.1 Test Result

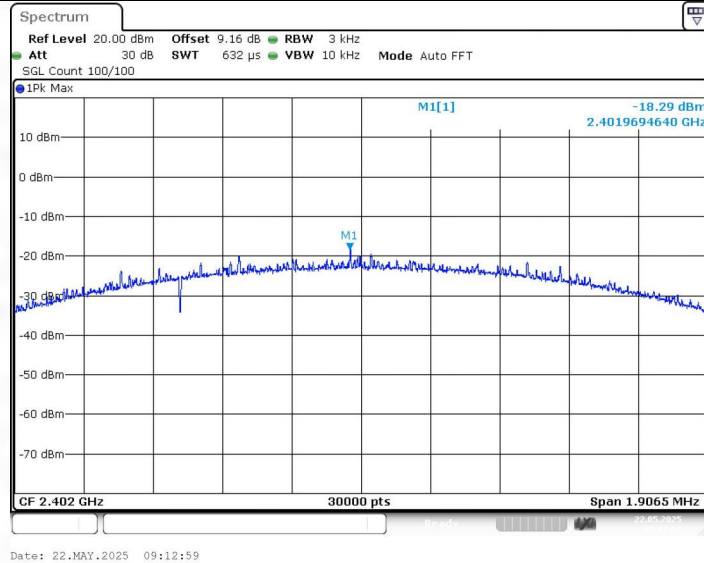
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.13	≤8.00	PASS
		2440	-16.73	≤8.00	PASS
		2480	-16.78	≤8.00	PASS
BLE_2M	Ant1	2402	-18.29	≤8.00	PASS
		2440	-18.79	≤8.00	PASS
		2480	-18.77	≤8.00	PASS

1.4.2 Test Graphs

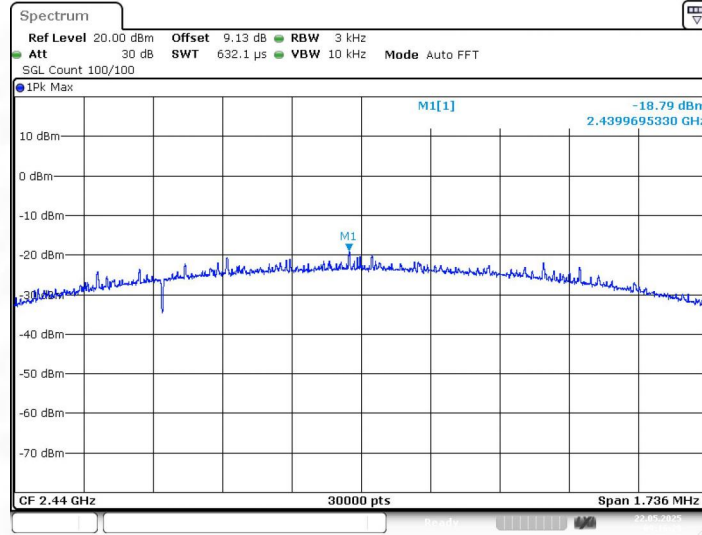




BLE 2M Ant1 2402

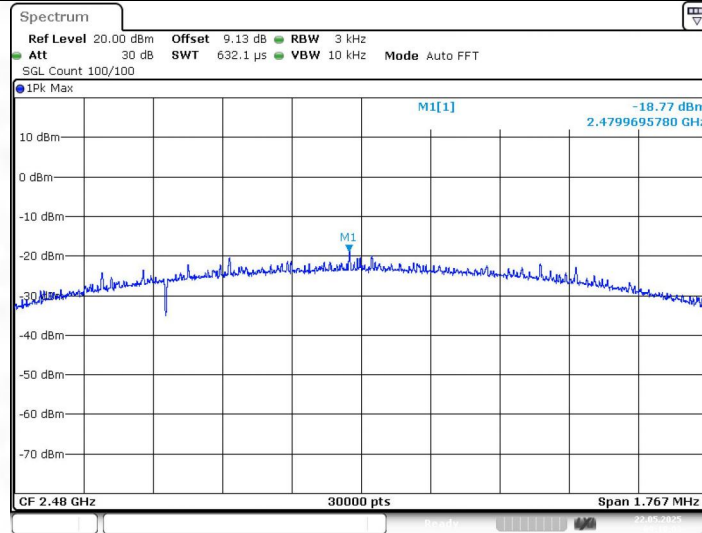


BLE 2M Ant1 2440



Date: 22.MAY.2025 09:16:29

BLE 2M Ant1 2480



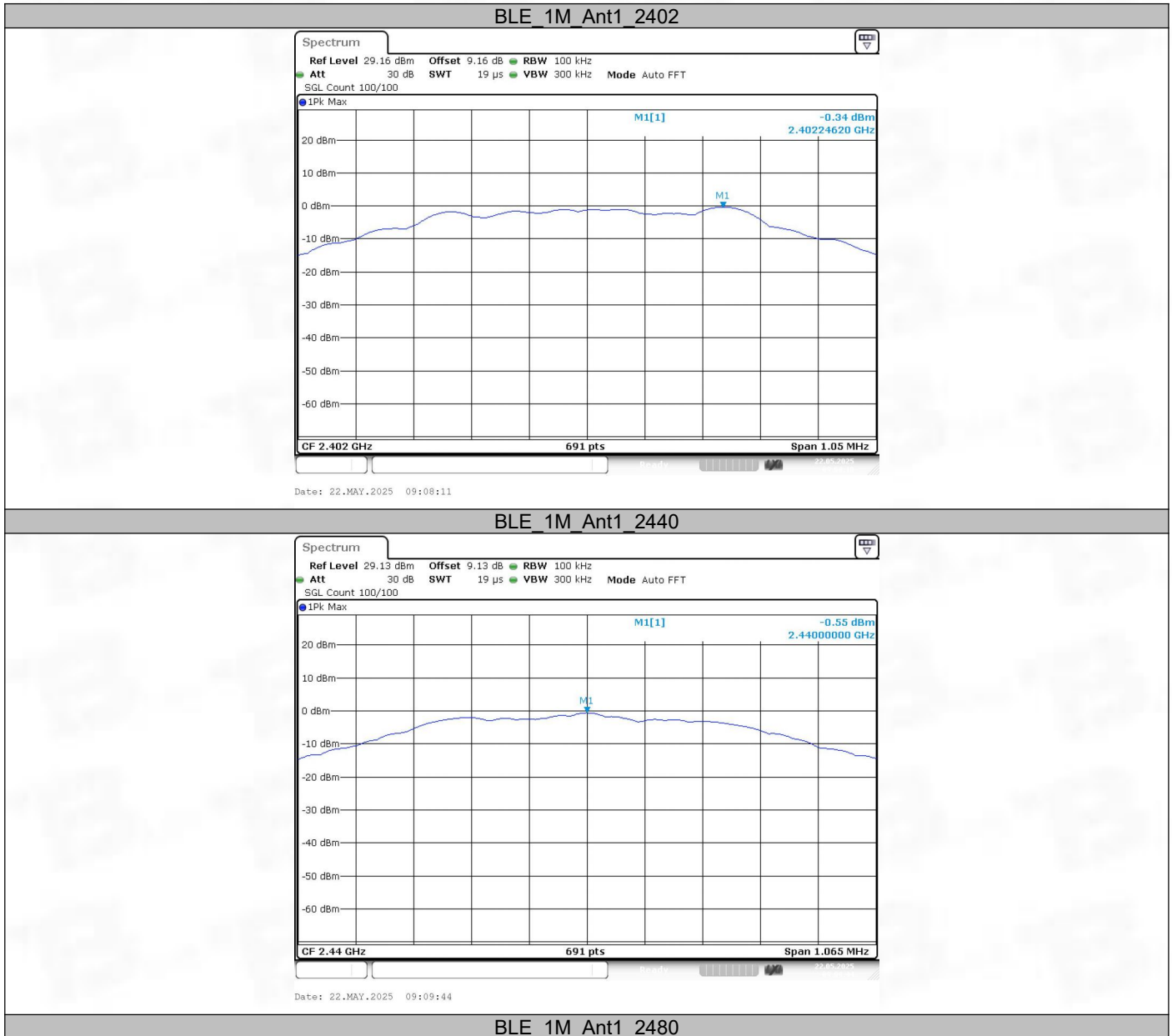
Date: 22.MAY.2025 09:18:04

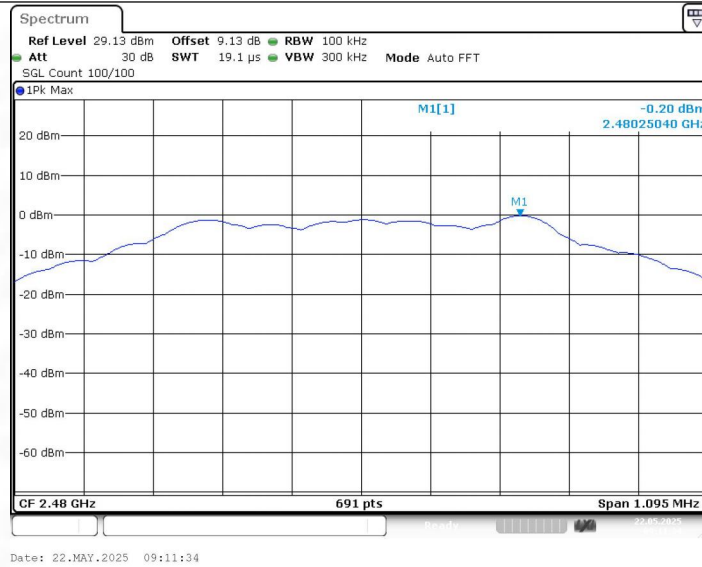
1.5 ppendix E: Reference level measurement

1.5.1 Test Result

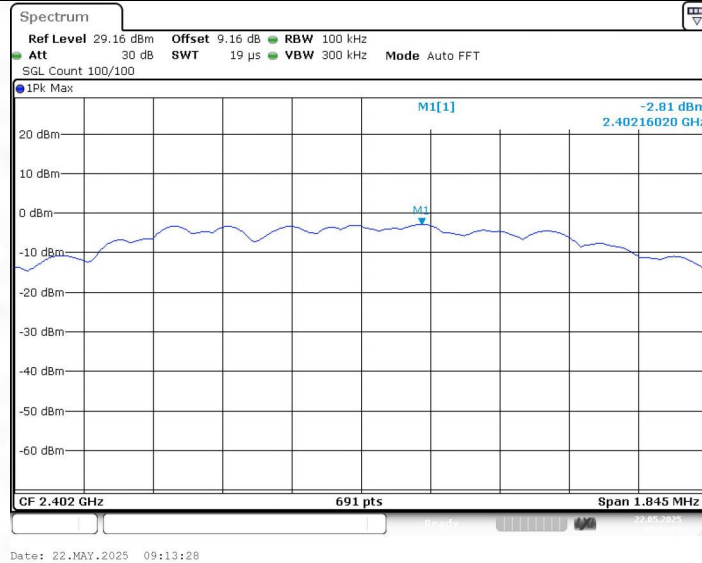
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2402.25	-0.34
		2440	2440.00	-0.55
		2480	2480.25	-0.20
BLE_2M	Ant1	2402	2402.16	-2.81
		2440	2439.92	-4.08
		2480	2480.49	-2.41

1.5.2 Test Graphs

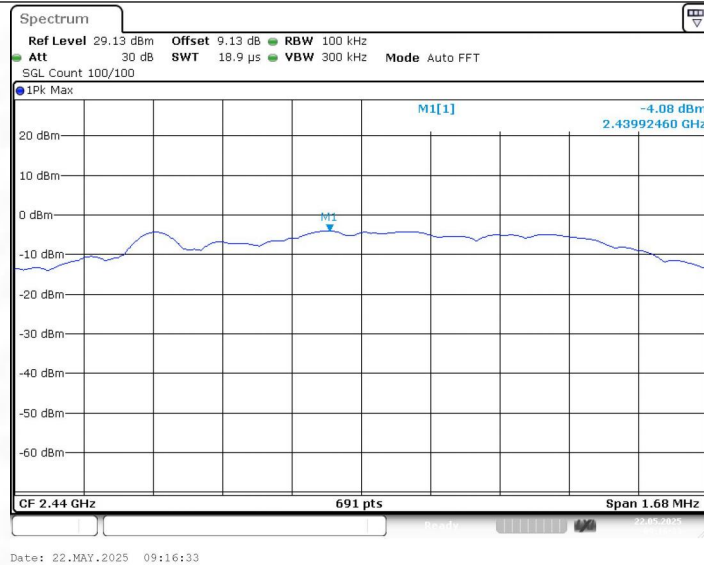




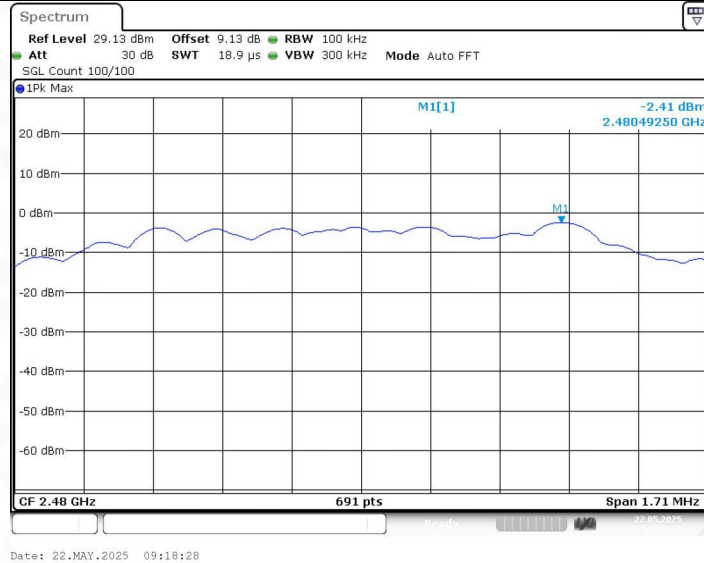
BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

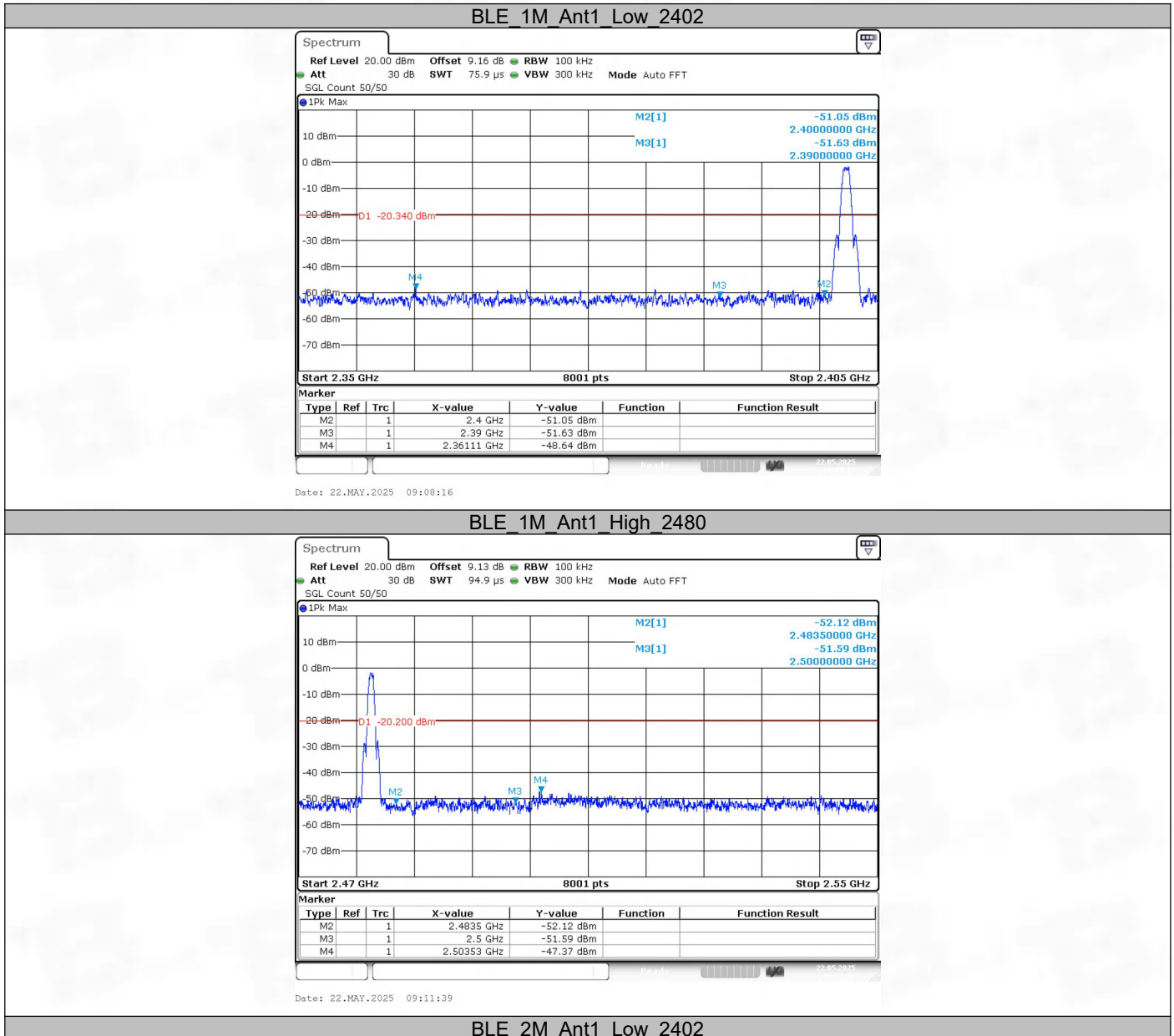


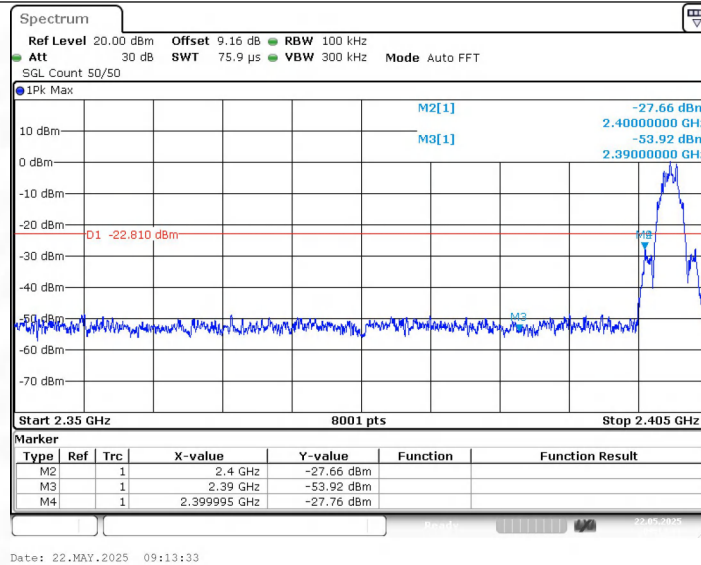
1.6 Appendix F: Band edge measurements

1.6.1 Test Result

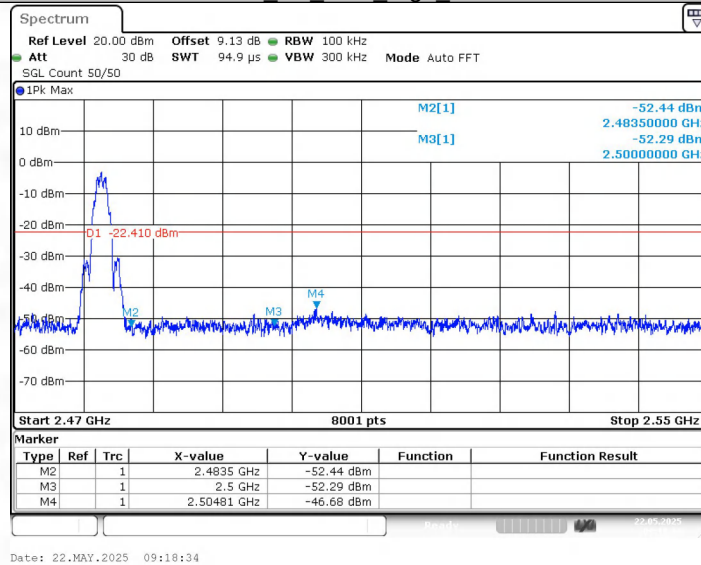
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.34	-48.64	≤ -20.34	PASS
		High	2480	-0.20	-47.37	≤ -20.2	PASS
BLE_2M	Ant1	Low	2402	-2.81	-27.76	≤ -22.81	PASS
		High	2480	-2.41	-46.68	≤ -22.41	PASS

1.6.2 Test Graphs





BLE 2M Ant1 High 2480

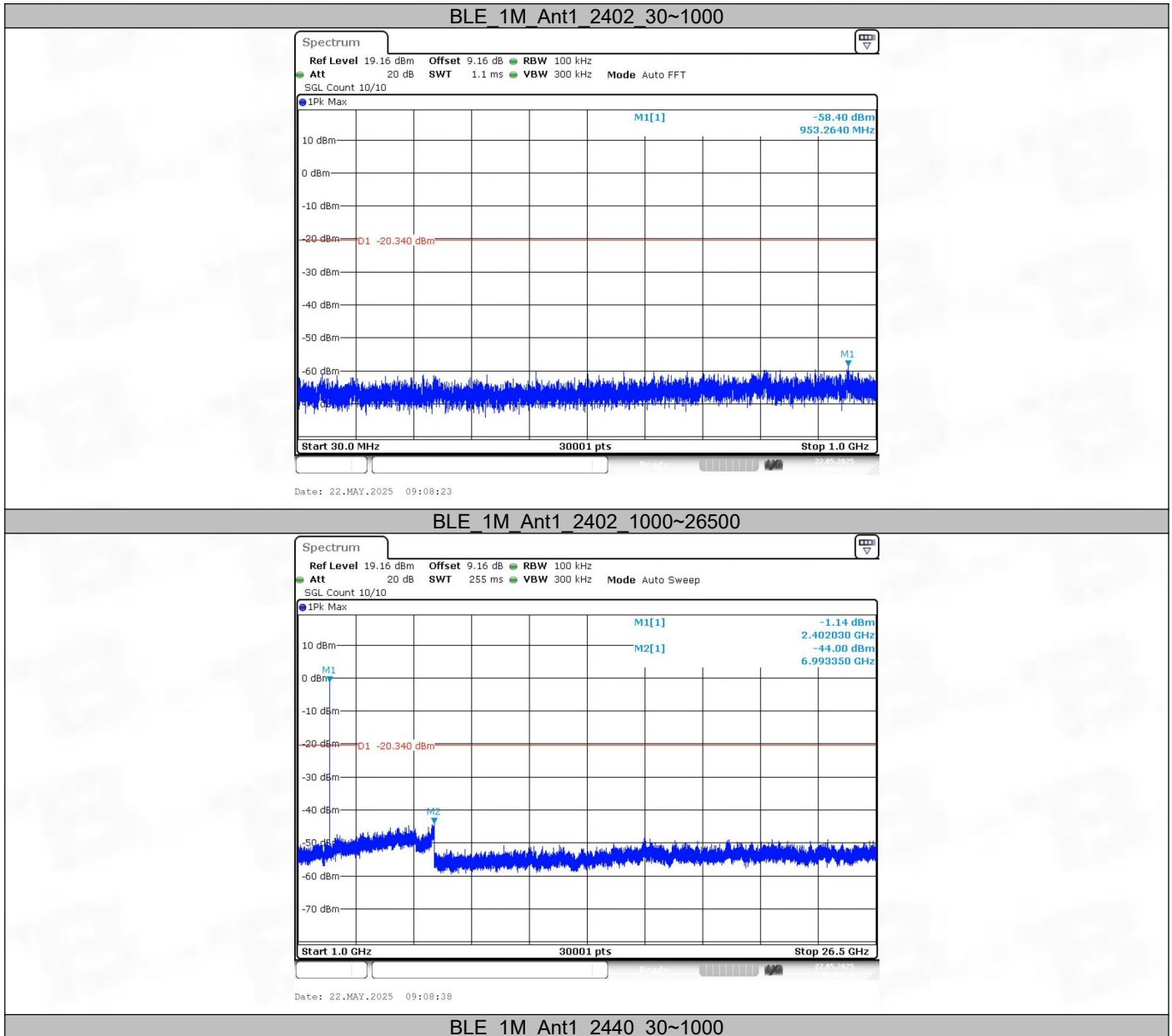


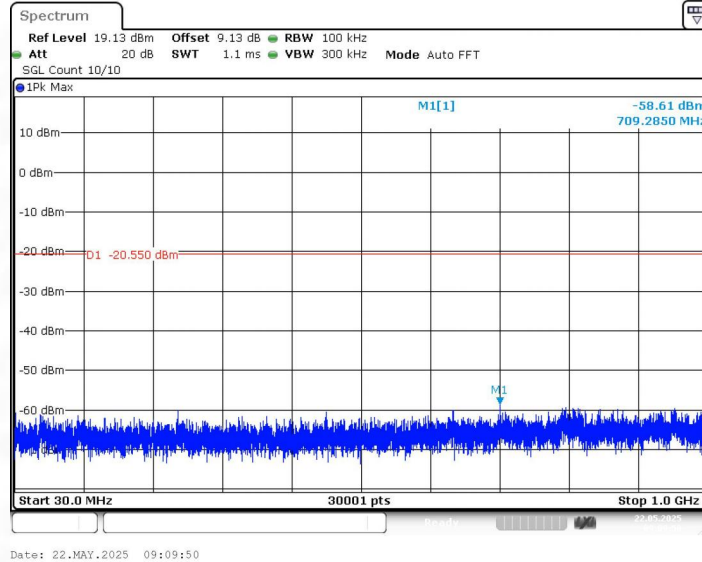
1.7 Appendix G: Conducted Spurious Emission

1.7.1 Test Result

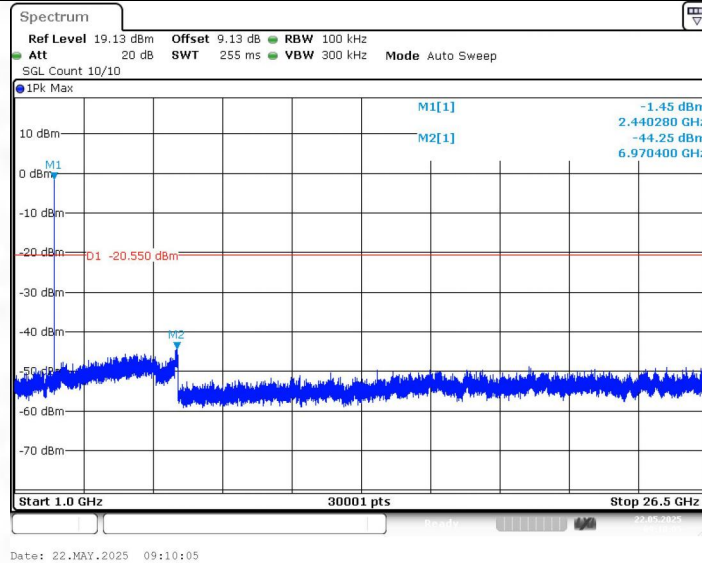
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	-0.34	-58.4	≤-20.34	PASS
			1000~26500	-0.34	-44	≤-20.34	PASS
		2440	30~1000	-0.55	-58.61	≤-20.55	PASS
			1000~26500	-0.55	-44.25	≤-20.55	PASS
		2480	30~1000	-0.20	-58.71	≤-20.2	PASS
			1000~26500	-0.20	-44.35	≤-20.2	PASS
BLE_2M	Ant1	2402	30~1000	-2.81	-57.59	≤-22.81	PASS
			1000~26500	-2.81	-43.27	≤-22.81	PASS
		2440	30~1000	-4.08	-58.86	≤-24.08	PASS
			1000~26500	-4.08	-43.4	≤-24.08	PASS
		2480	30~1000	-2.41	-58.45	≤-22.41	PASS
			1000~26500	-2.41	-44.54	≤-22.41	PASS

1.7.2 Test Graphs

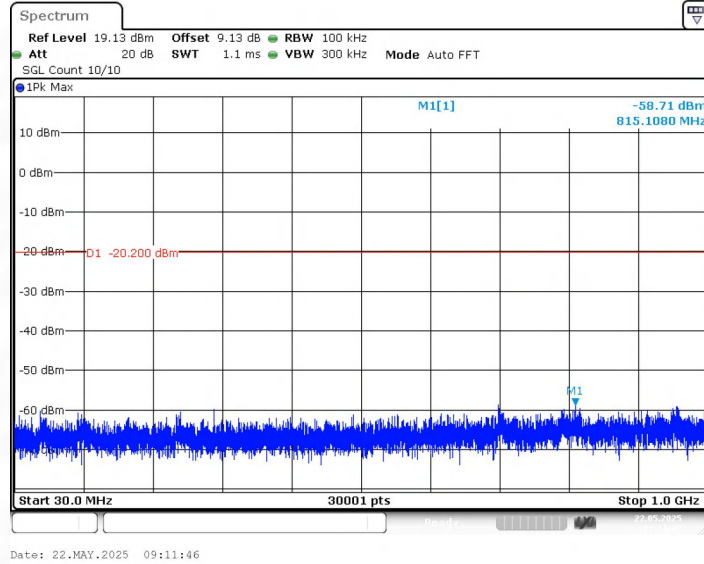




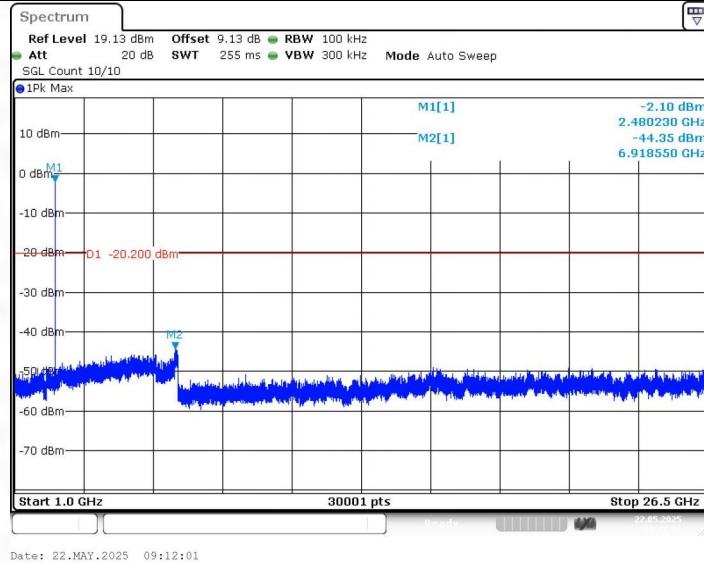
BLE 1M Ant1 2440 1000~26500



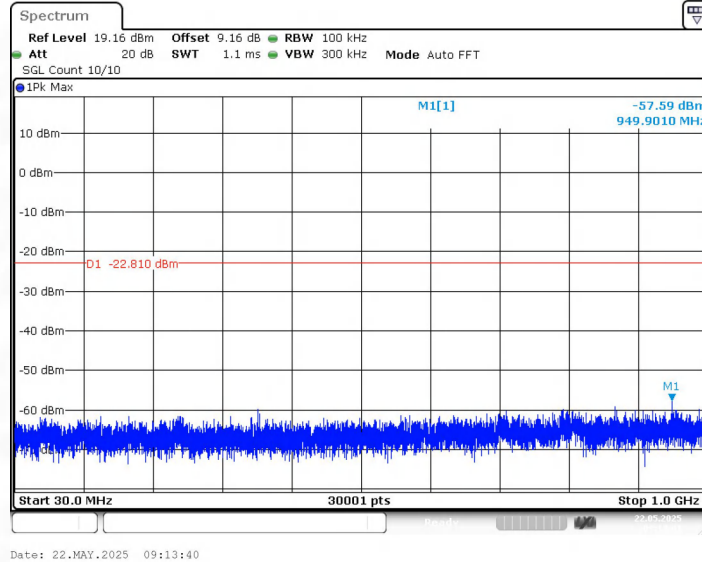
BLE 1M Ant1_2480 30~1000



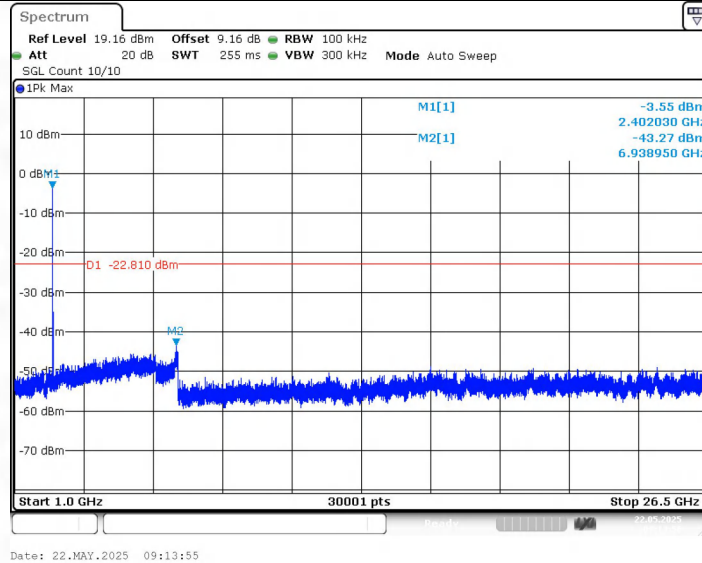
BLE 1M Ant1 2480 1000~26500



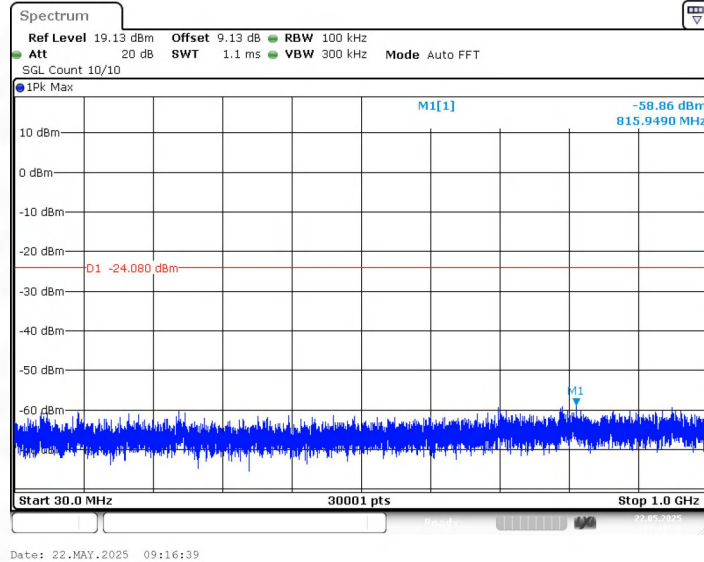
BLE 2M Ant1_2402 30~1000



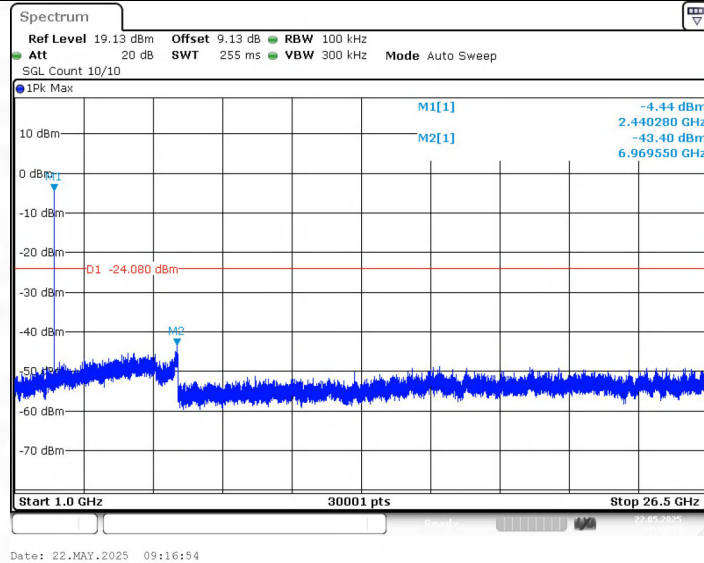
BLE 2M Ant1 2402 1000~26500



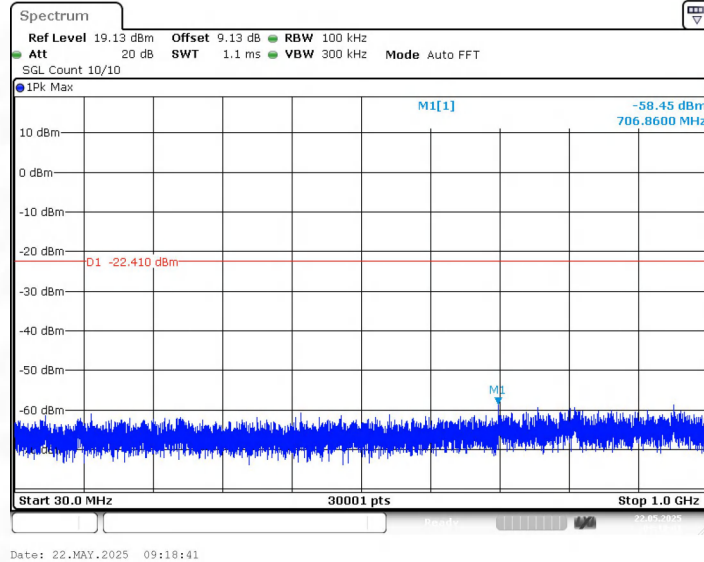
BLE 2M Ant1_2440 30~1000



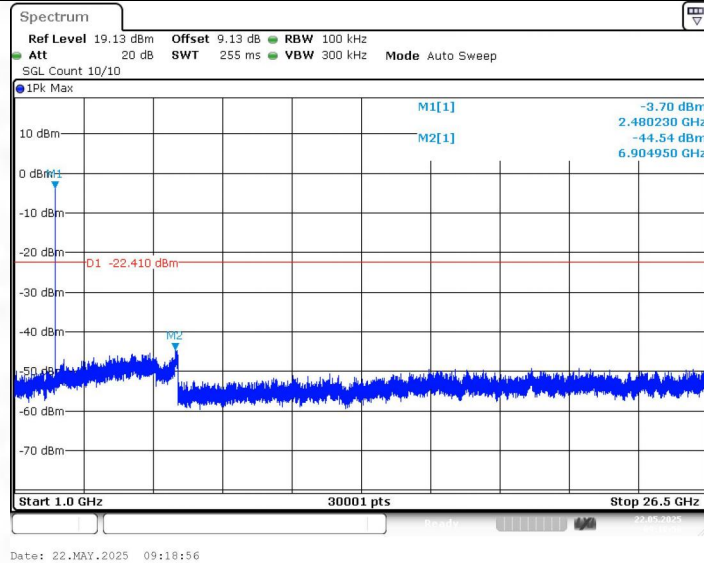
BLE 2M Ant1 2440 1000~26500



BLE 2M Ant1_2480 30~1000



BLE 2M Ant1 2480 1000~26500

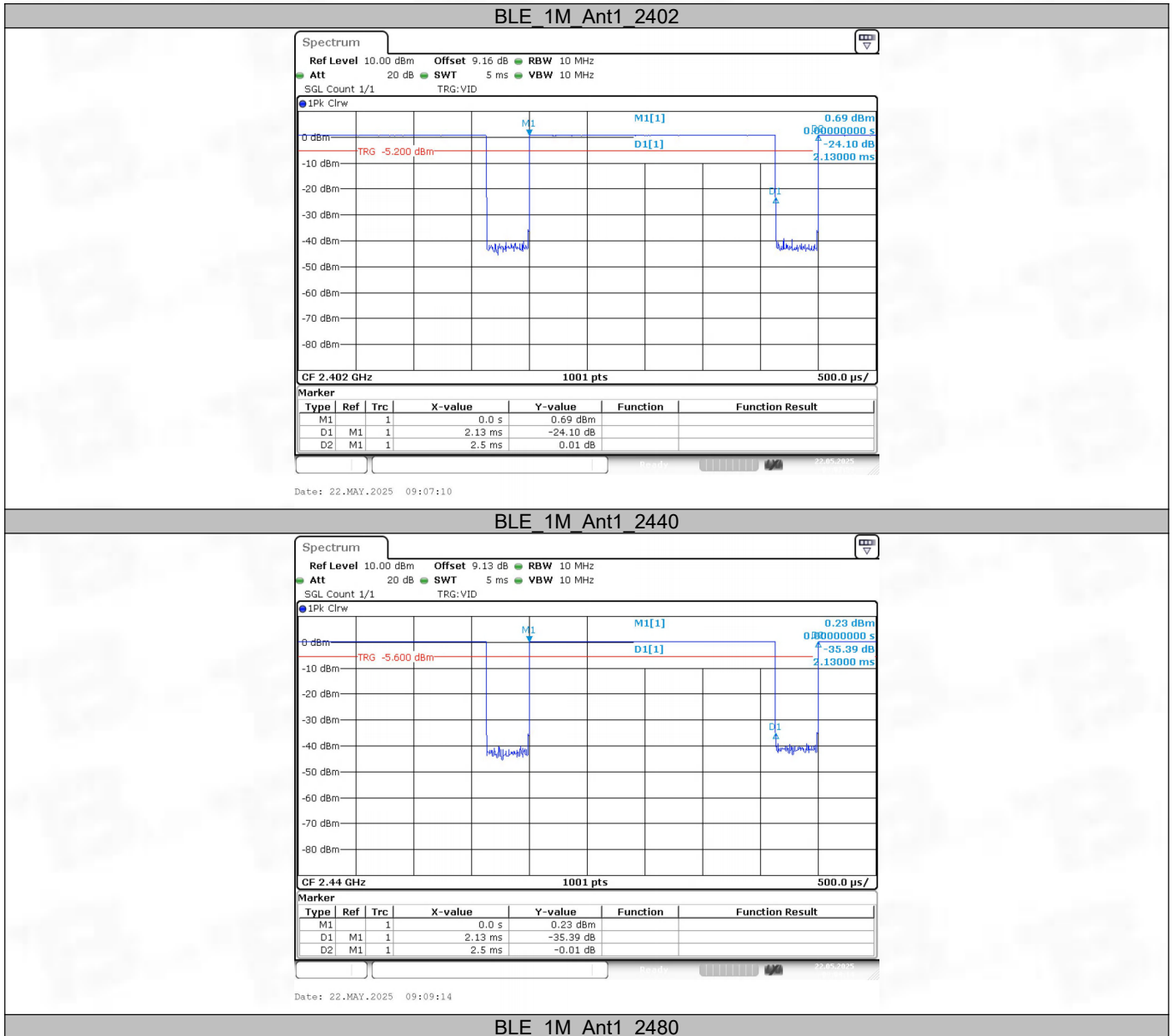


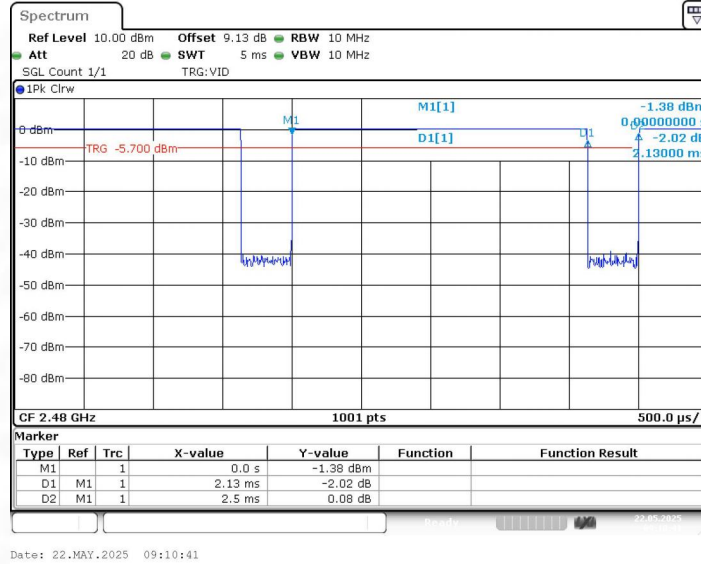
1.8 Appendix H: Duty Cycle

1.8.1 Test Result

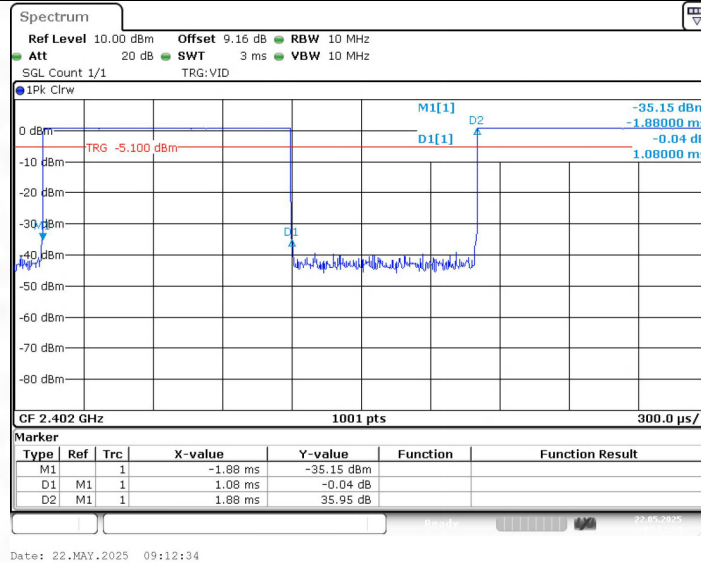
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	---	---
		2440	2.13	2.50	0.8520	85.20	0.70	---	---
		2480	2.13	2.50	0.8520	85.20	0.70	---	---
BLE_2M	Ant1	2402	1.08	1.88	0.5745	57.45	2.41	---	---
		2440	1.07	1.88	0.5691	56.91	2.45	---	---
		2480	1.08	1.88	0.5745	57.45	2.41	---	---

1.8.2 Test Graphs

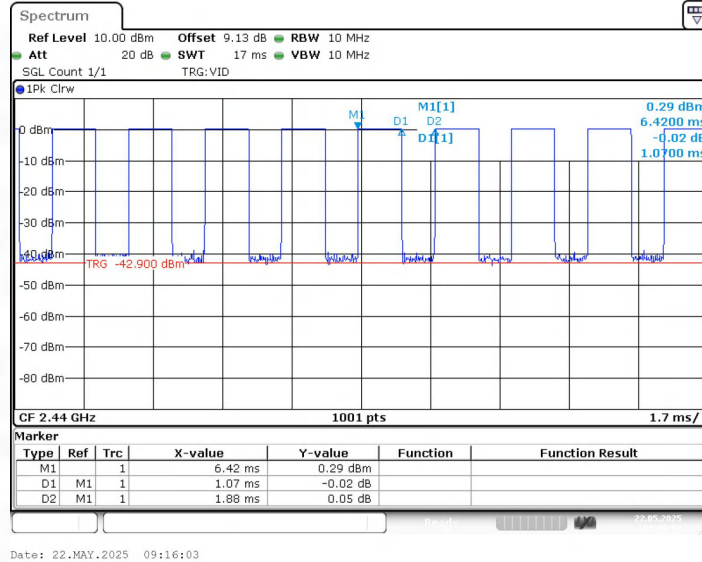




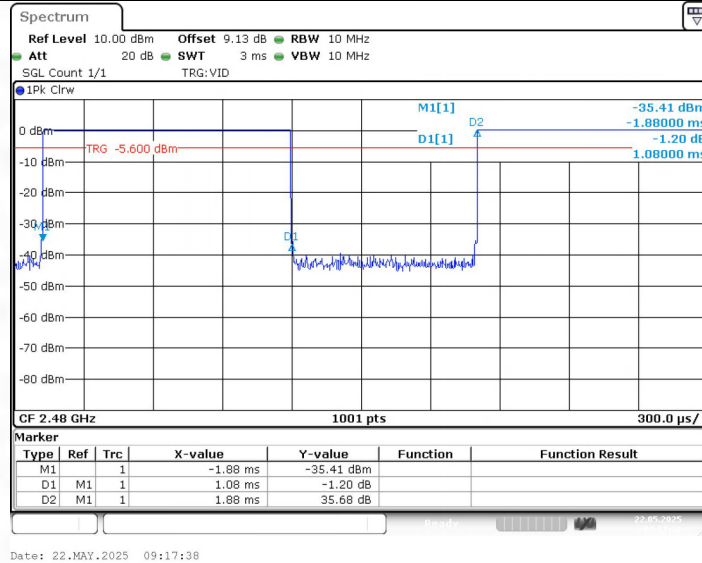
BLE 2M Ant1_2402



BLE 2M Ant1_2440



BLE 2M Ant1 2480



1.9 Appendix I: Emissions in Restricted Bands

1.9.1 Test Result

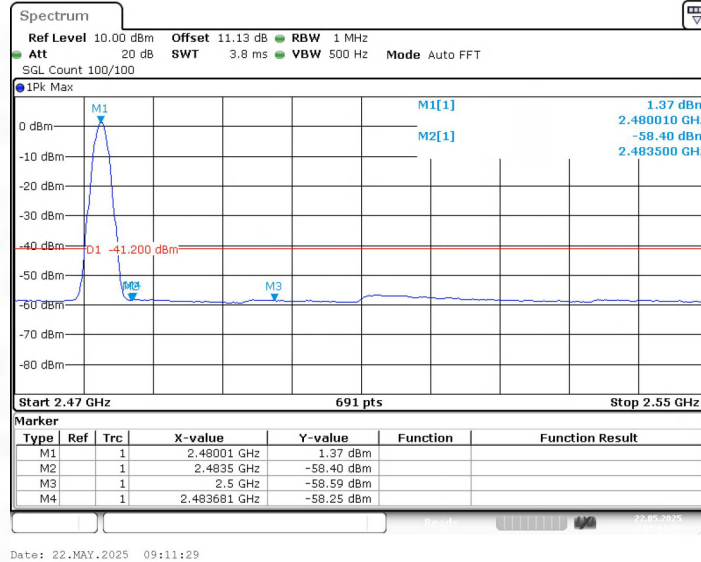
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-58.73	≤-41.20	36.47	≤54	PASS
				AV	2341.239	-56.88	≤-41.20	38.32	≤54	PASS
				AV	2390.000	-59.22	≤-41.20	35.98	≤54	PASS
				Peak	2310.000	-48.91	≤-21.20	46.29	≤74	PASS
				Peak	2326.783	-45.8	≤-21.20	49.40	≤74	PASS
				Peak	2390.000	-51.93	≤-21.20	43.27	≤74	PASS
		High	2480	AV	2483.500	-58.4	≤-41.20	36.80	≤54	PASS
				AV	2483.681	-58.25	≤-41.20	36.95	≤54	PASS
				AV	2500.000	-58.59	≤-41.20	36.61	≤54	PASS
				Peak	2483.500	-49.85	≤-21.20	45.35	≤74	PASS
				Peak	2488.087	-47.91	≤-21.20	47.29	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-58.77	≤-41.20	36.43	≤54	PASS
				AV	2340.783	-56.74	≤-41.20	38.46	≤54	PASS
				AV	2390.000	-58.95	≤-41.20	36.25	≤54	PASS
				Peak	2310.000	-49.67	≤-21.20	45.53	≤74	PASS
				Peak	2346.870	-46.97	≤-21.20	48.23	≤74	PASS
				Peak	2390.000	-50.42	≤-21.20	44.78	≤74	PASS
		High	2480	AV	2483.500	-54.34	≤-41.20	40.86	≤54	PASS
				AV	2483.565	-55.74	≤-41.20	39.46	≤54	PASS
				AV	2500.000	-58.31	≤-41.20	36.89	≤54	PASS
				Peak	2483.500	-47.98	≤-21.20	47.22	≤74	PASS
				Peak	2484.377	-45.27	≤-21.20	49.93	≤74	PASS
				Peak	2500.000	-48.28	≤-21.20	46.92	≤74	PASS

Note:

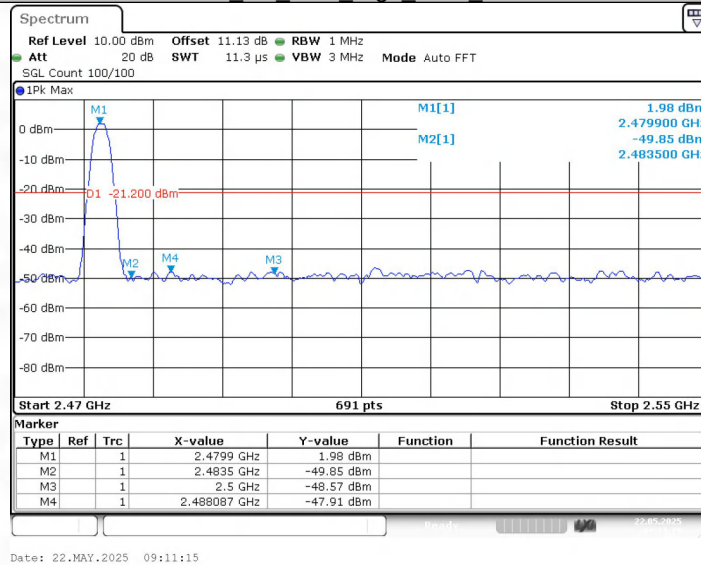
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

1.9.2 Test Graphs

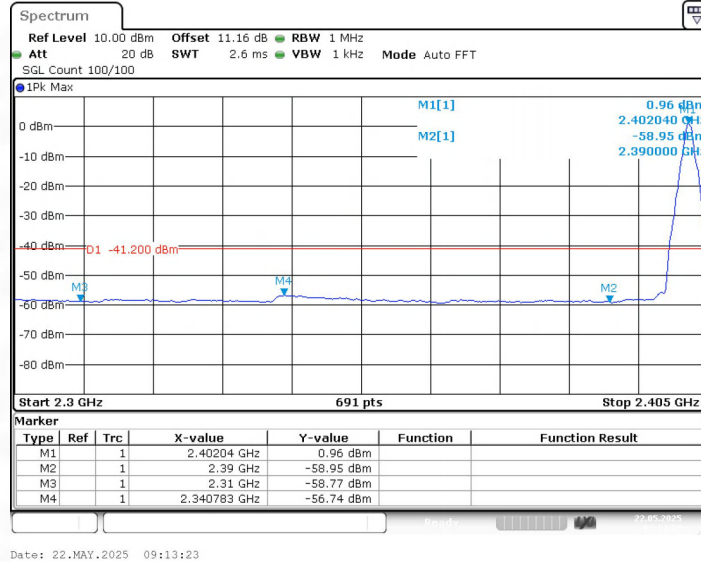




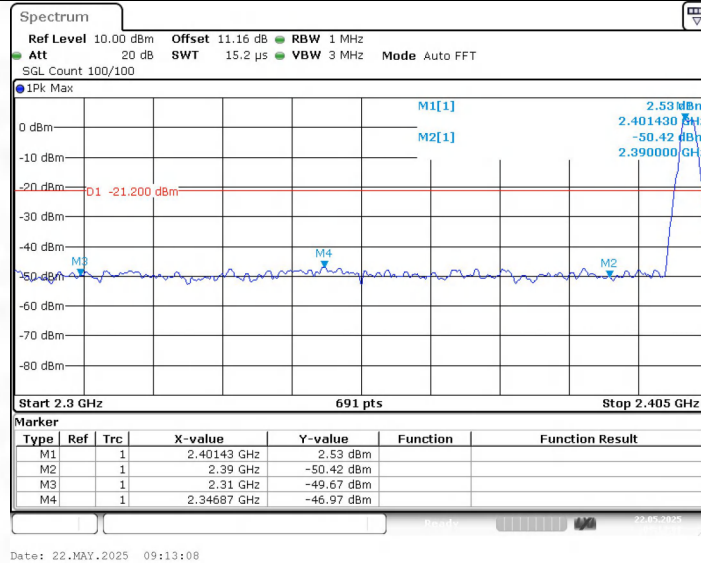
BLE 1M Ant1 High 2480 Peak



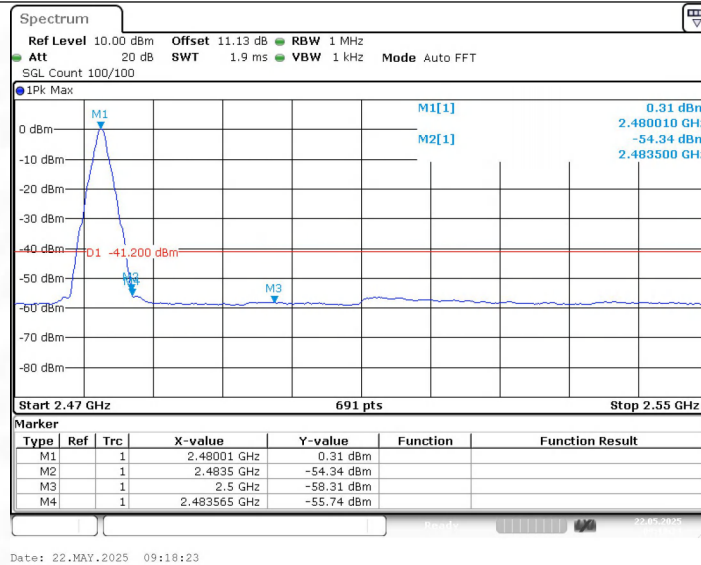
BLE 2M Ant1 Low 2402_AV



BLE 2M Ant1 Low 2402 Peak



BLE 2M Ant1_High_2480_AV



BLE 2M Ant1 High 2480 Peak

