RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	Portable Gaming Computer(Tablet computer)
Test Model:	AYANEO Pocket S
Sample ID:	HC-C-202402-0101-01-04-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 3.85V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202402-0101-31	

Contents

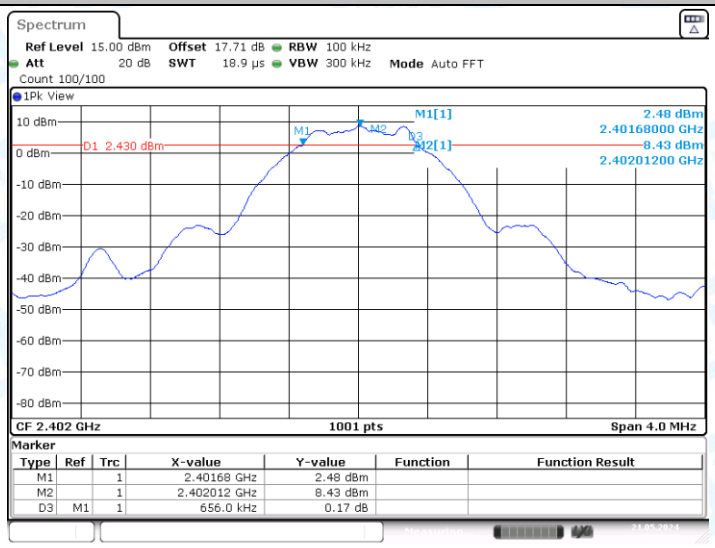
1. DTS Bandwidth

1.1.Test Result

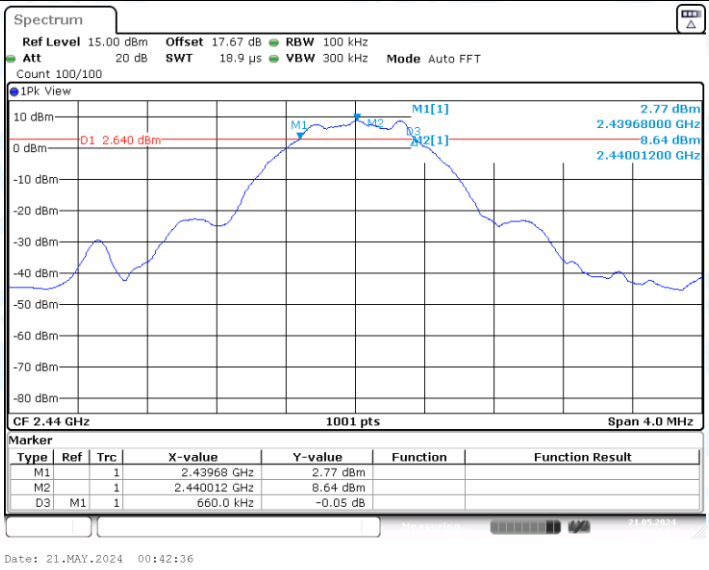
Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.66	2401.68	2402.34	0.5	PASS
		2440	0.66	2439.68	2440.34	0.5	PASS
		2480	0.66	2479.68	2480.34	0.5	PASS
BLE_2M	Ant1	2402	1.13	2401.46	2402.58	0.5	PASS
		2440	1.12	2439.46	2440.58	0.5	PASS
		2480	1.13	2479.46	2480.58	0.5	PASS

1.2.Test Graphs

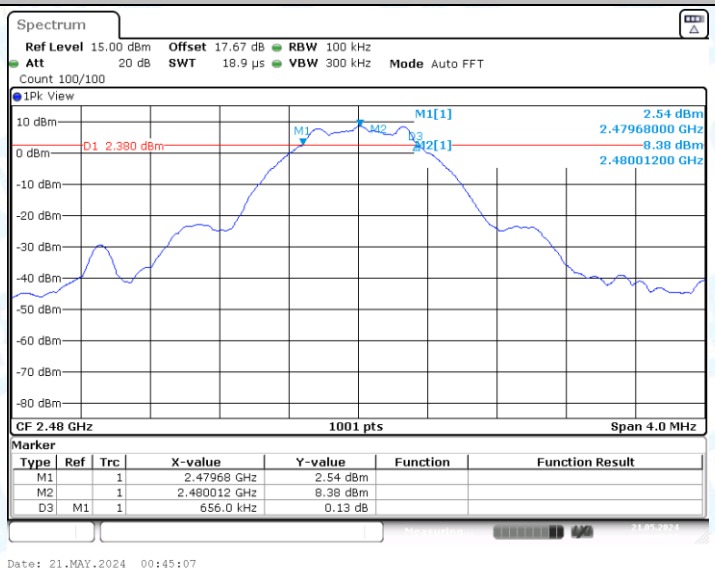
BLE_1M_Ant1_2402



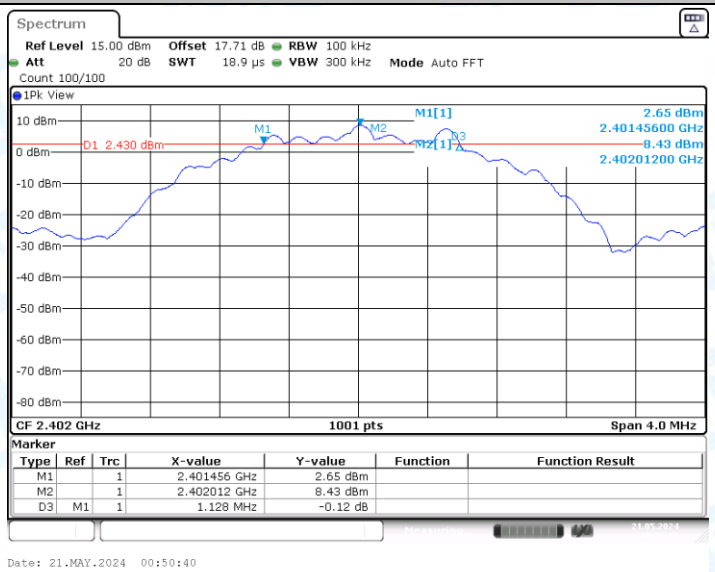
BLE_1M_Ant1_2440



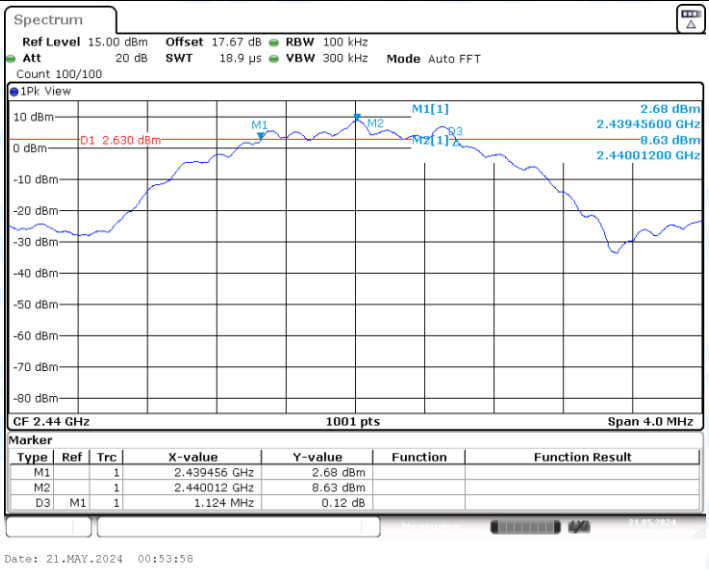
BLE_1M_Ant1_2480



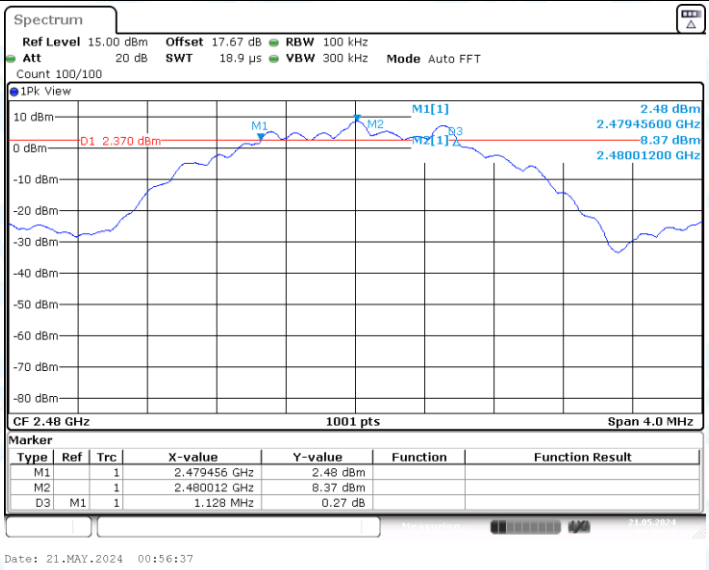
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



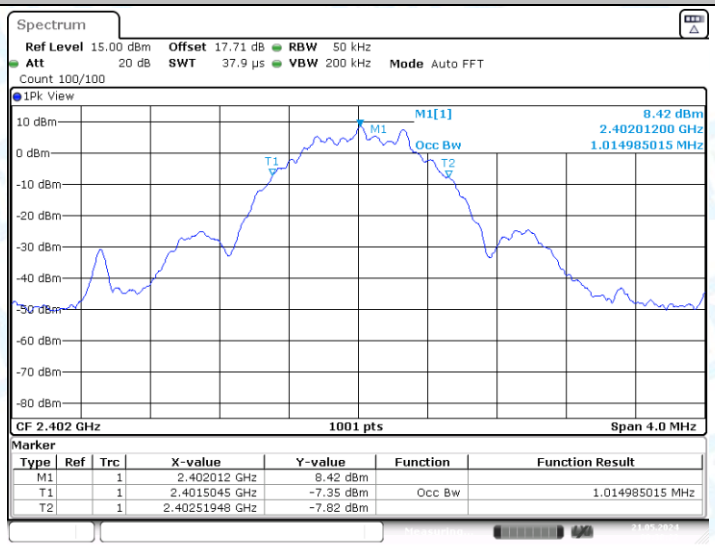
2. Occupied Channel Bandwidth

2.1.Test Result

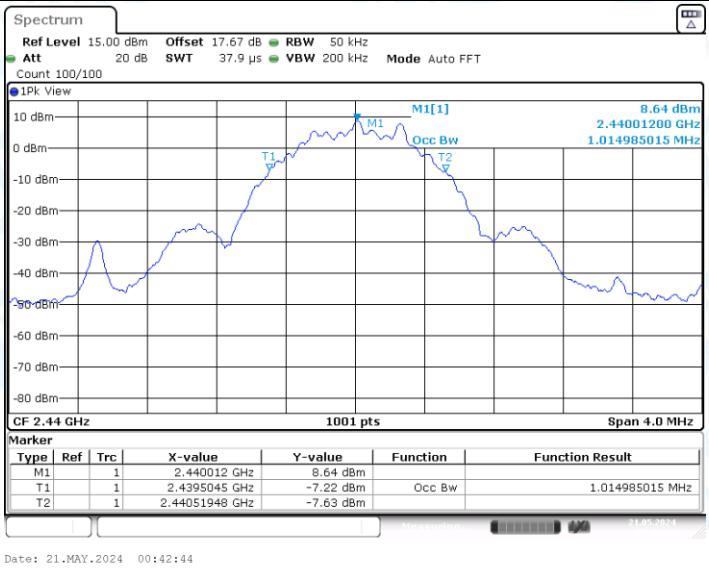
Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.015	2401.5045	2402.5195	---	---
		2440	1.015	2439.5045	2440.5195	---	---
		2480	1.023	2479.5005	2480.5235	---	---
BLE_2M	Ant1	2402	2.026	2401.0090	2403.0350	---	---
		2440	2.03	2439.0090	2441.0390	---	---
		2480	2.018	2479.0090	2481.0270	---	---

2.2.Test Graphs

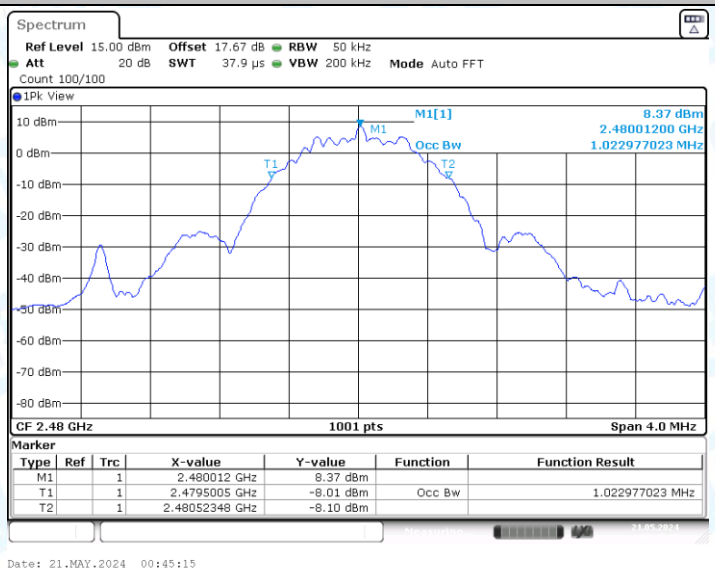
BLE_1M_Ant1_2402



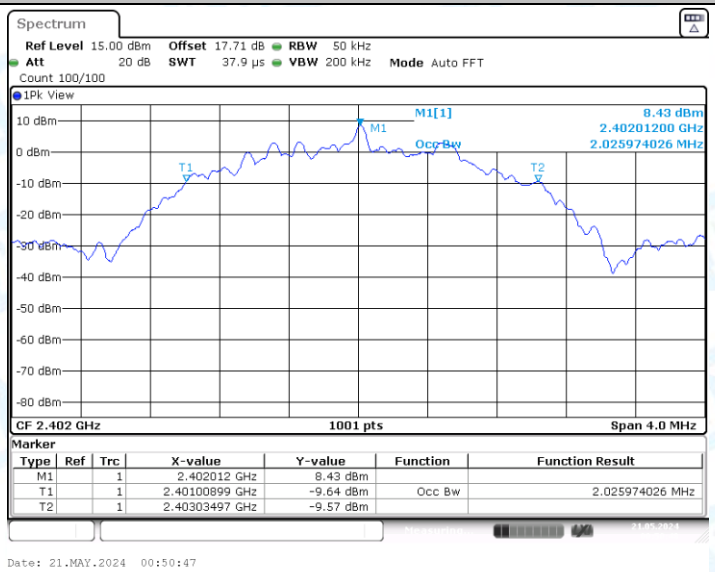
BLE_1M_Ant1_2440



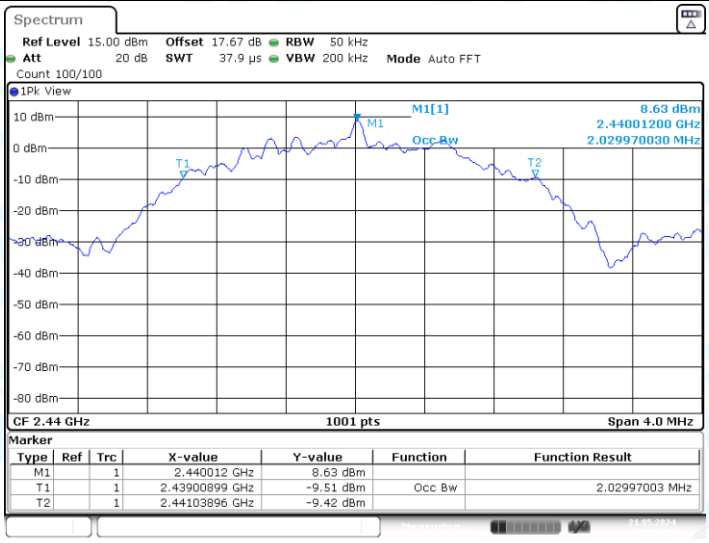
BLE_1M_Ant1_2480



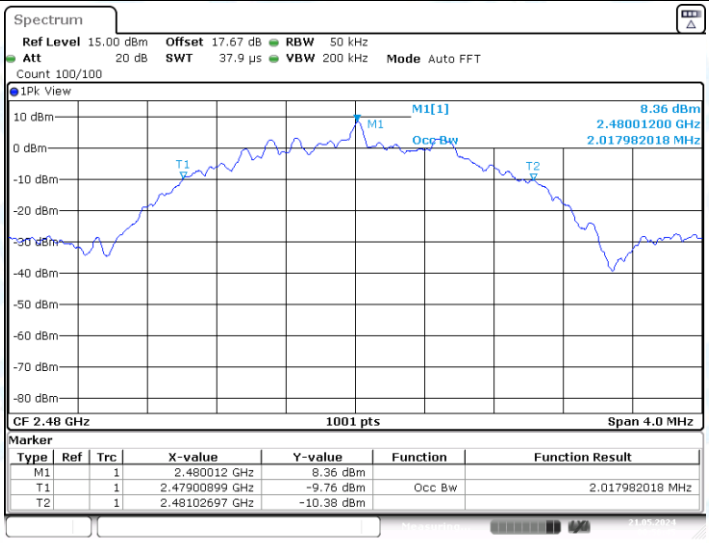
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



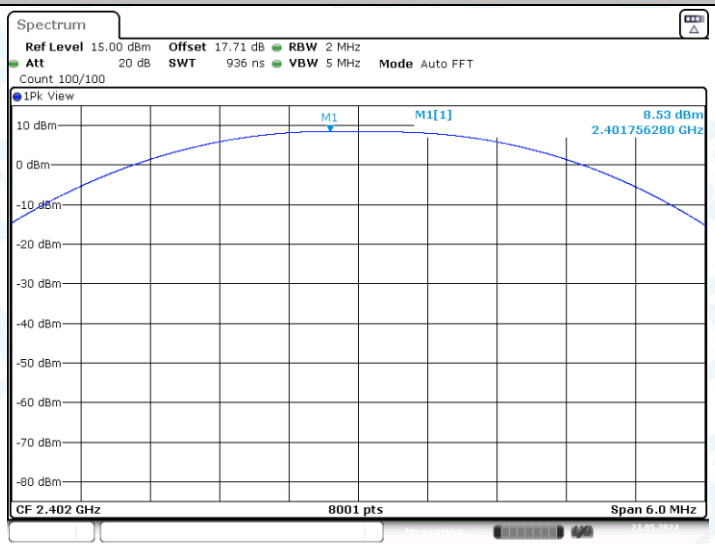
3. Maximum conducted output power

3.1.Test Result

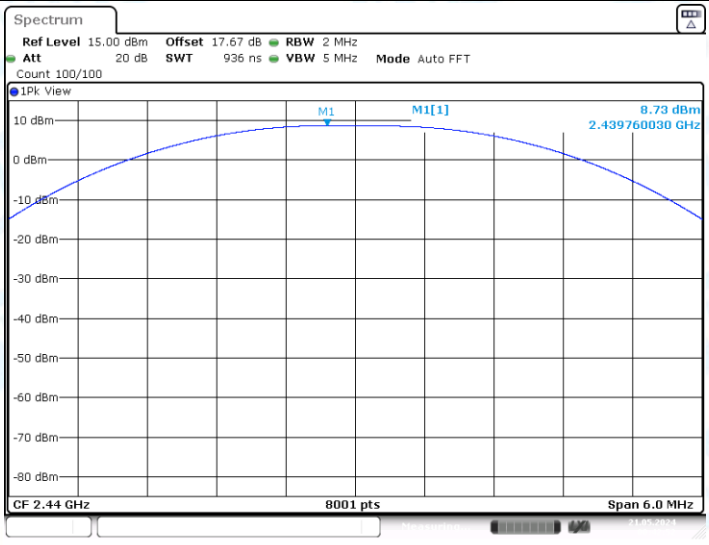
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	8.53	≤30	PASS
		2440	8.73	≤30	PASS
		2480	8.46	≤30	PASS
BLE_2M	Ant1	2402	8.60	≤30	PASS
		2440	8.78	≤30	PASS
		2480	8.48	≤30	PASS

3.2.Test Graphs

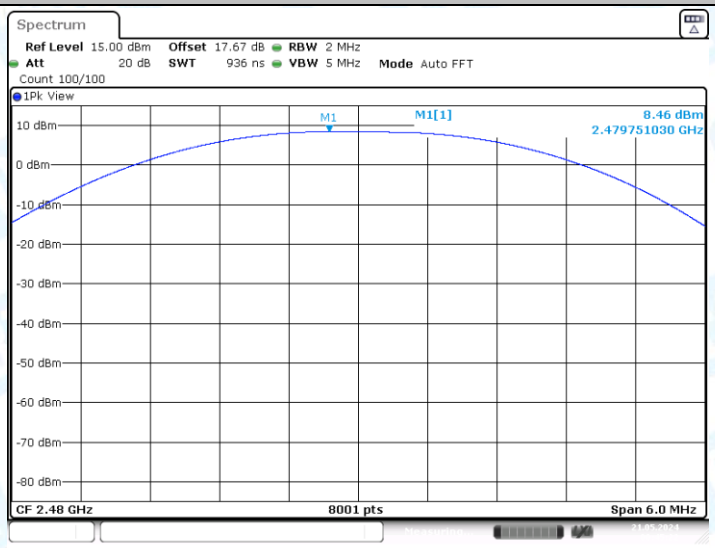
BLE_1M_Ant1_2402



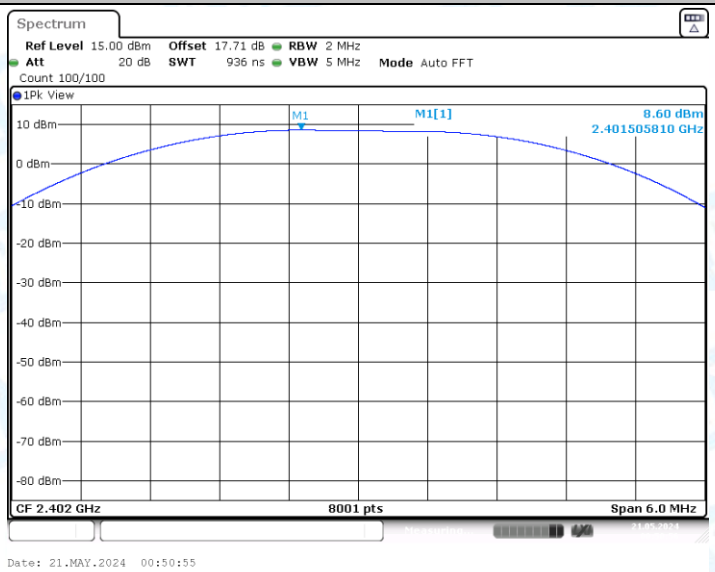
BLE_1M_Ant1_2440



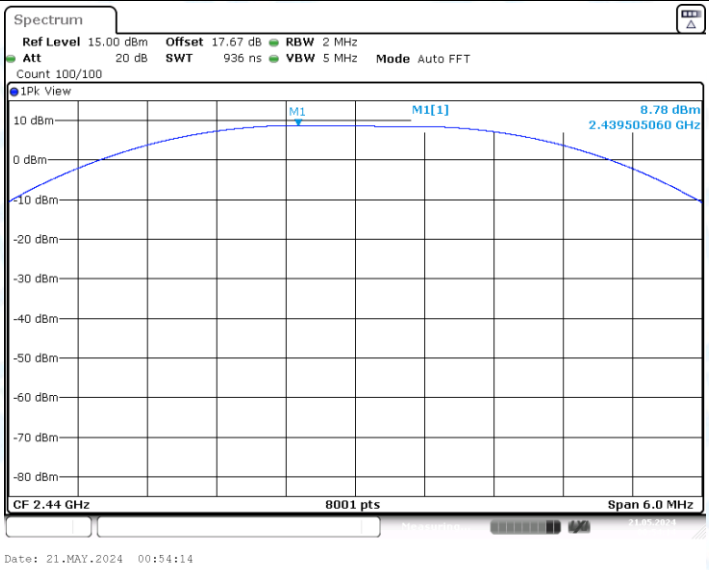
BLE_1M_Ant1_2480



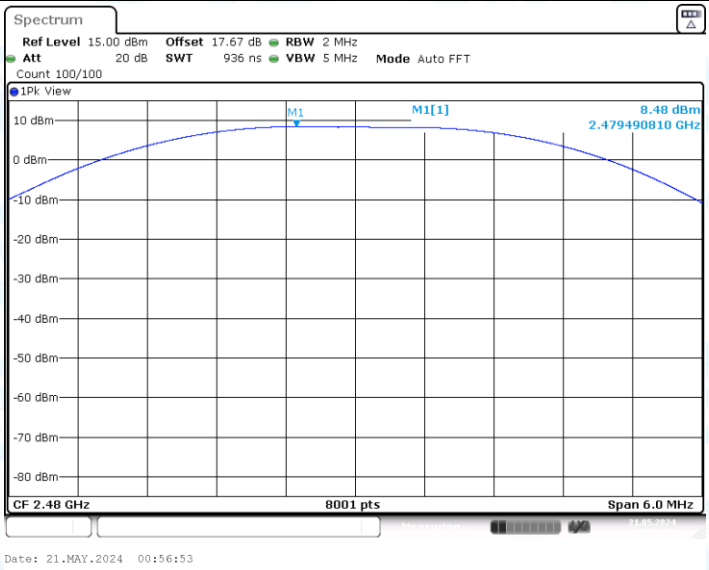
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



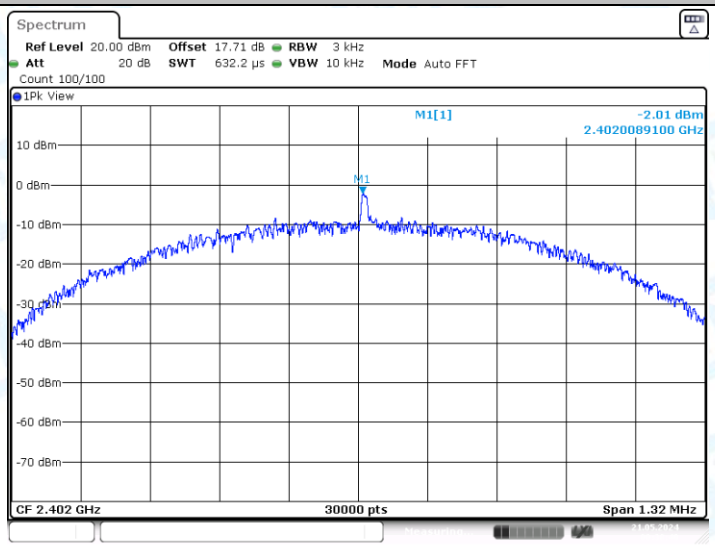
4. Maximum power spectral density

4.1.Test Result

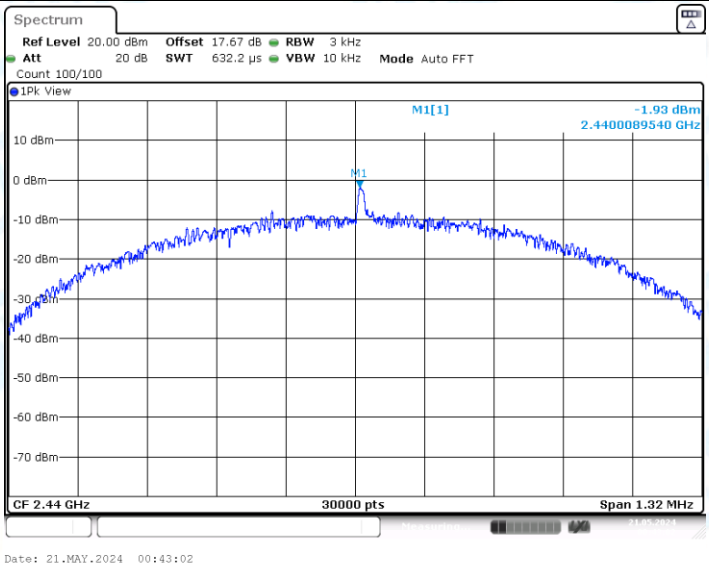
Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-2.01	≤8.00	PASS
		2440	-1.93	≤8.00	PASS
		2480	-2.96	≤8.00	PASS
BLE_2M	Ant1	2402	-2.73	≤8.00	PASS
		2440	-2.43	≤8.00	PASS
		2480	-2.84	≤8.00	PASS

4.2.Test Graphs

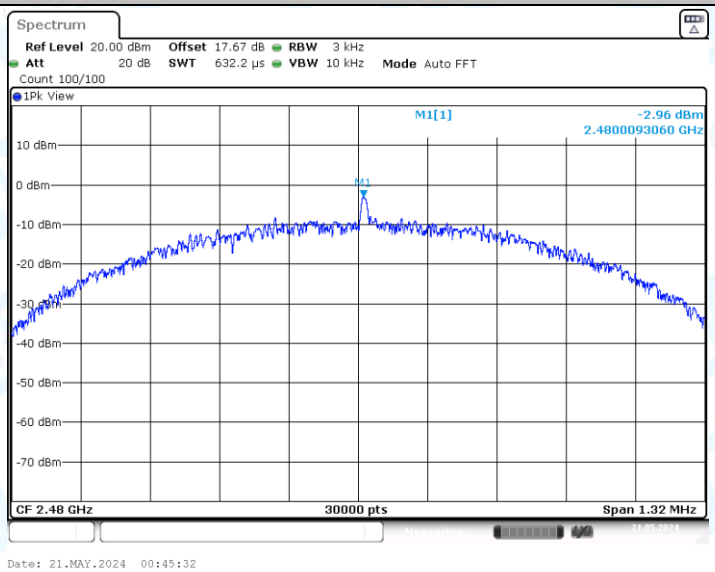
BLE_1M_Ant1_2402



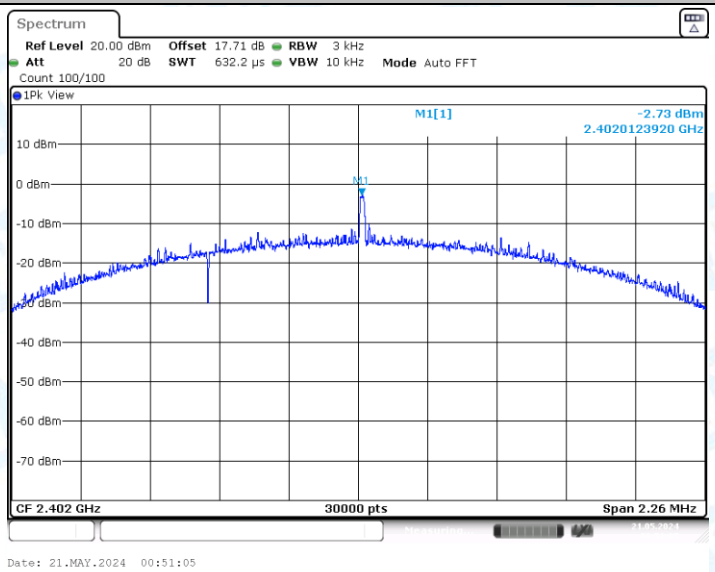
BLE_1M_Ant1_2440



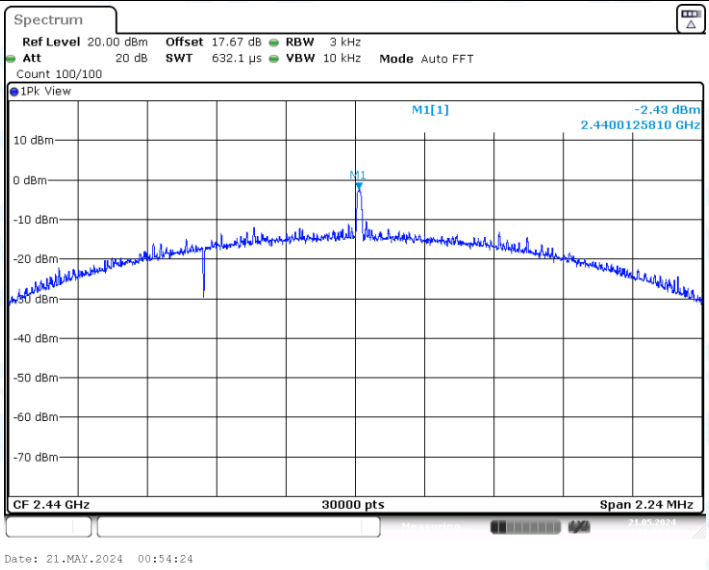
BLE_1M_Ant1_2480



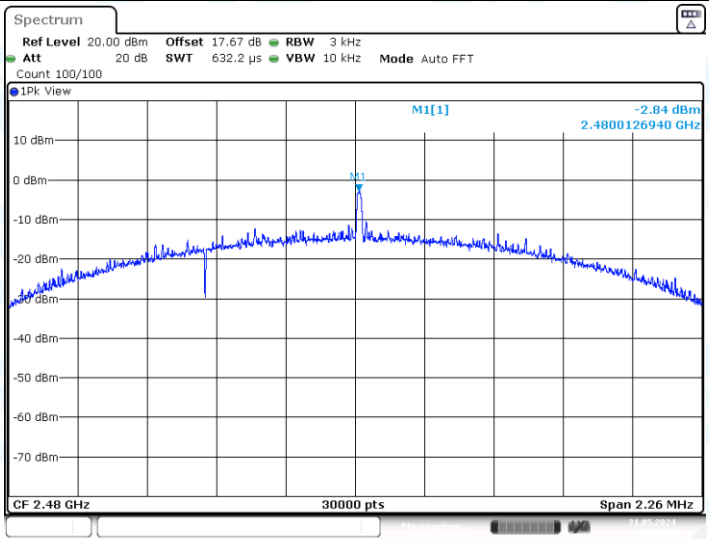
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



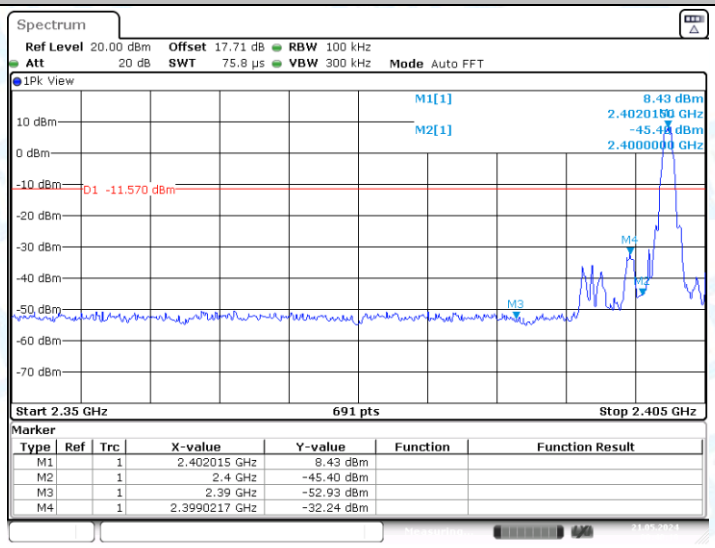
5. Band edge measurements

5.1.Test Result

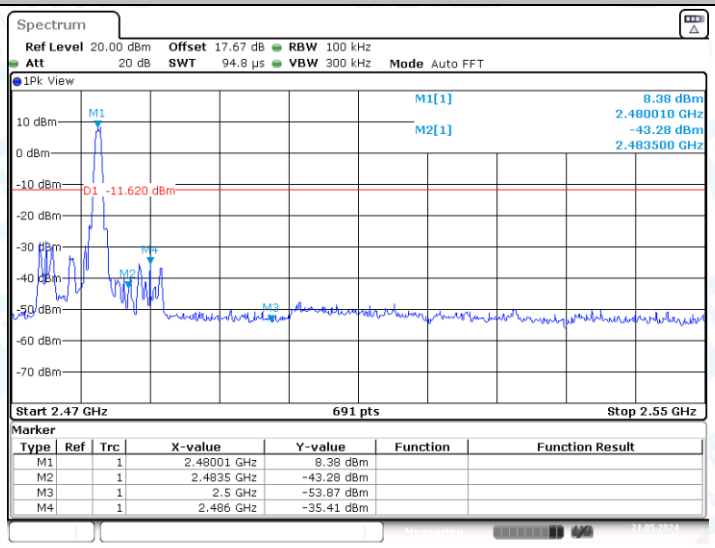
Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	8.43	-32.24	≤-11.57	PASS
		High	2480	8.38	-35.41	≤-11.62	PASS
BLE_2M	Ant1	Low	2402	8.42	-27.33	≤-11.58	PASS
		High	2480	8.37	-36.75	≤-11.63	PASS

5.2.Test Graphs

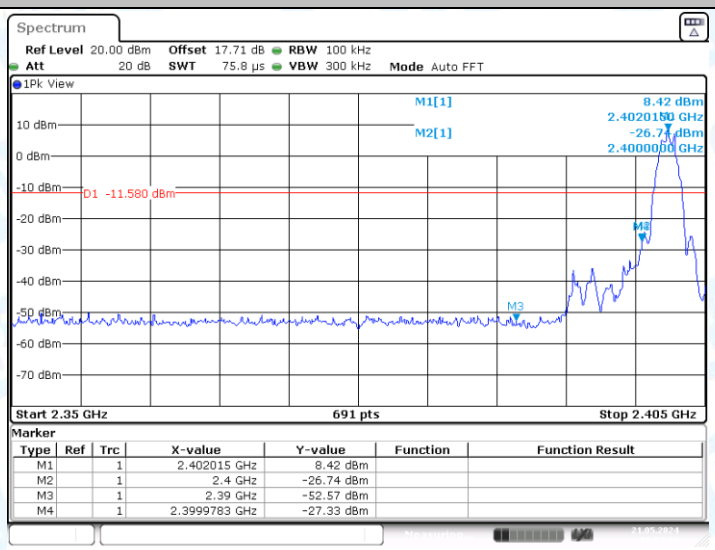
BLE_1M_Ant1_Low_2402



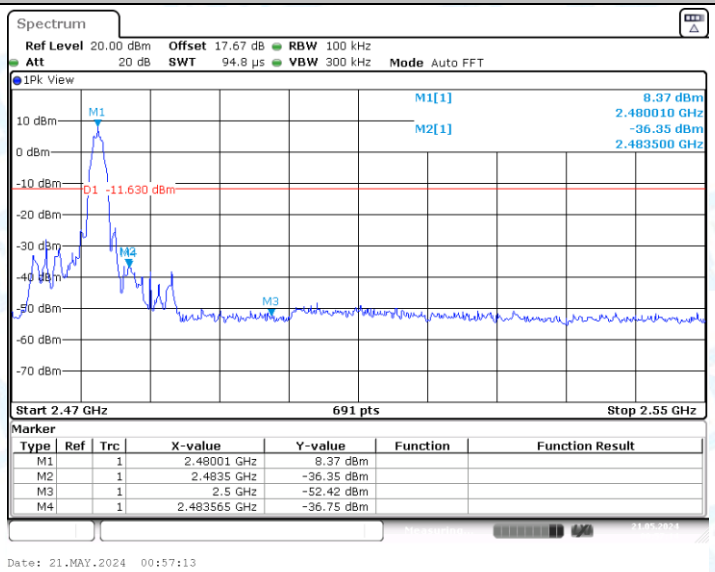
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480



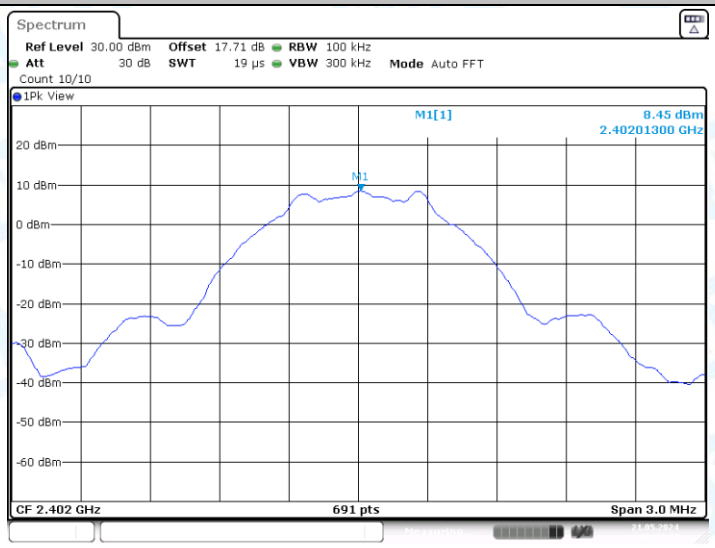
6. Conducted Spurious Emission

6.1.Test Result

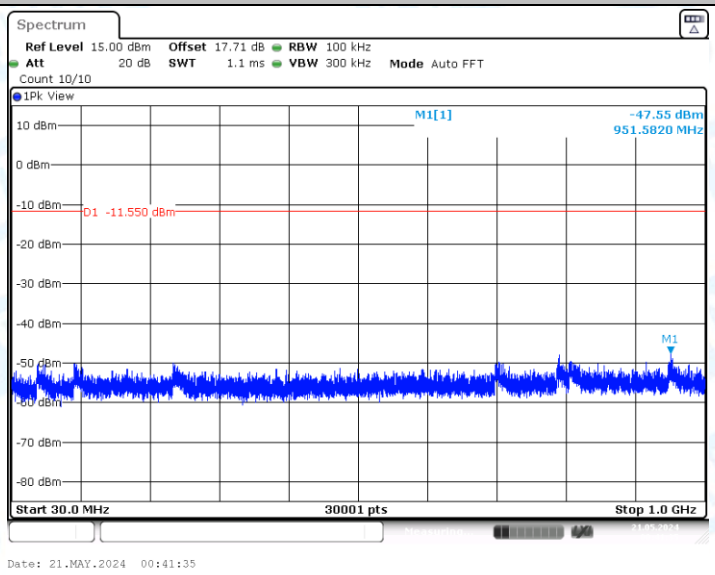
Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	8.45	8.45	---	PASS
			30~1000	8.45	-47.55	≤-11.55	PASS
			1000~26500	8.45	-38.56	≤-11.55	PASS
		2440	Reference	8.64	8.64	---	PASS
			30~1000	8.64	-47.86	≤-11.36	PASS
			1000~26500	8.64	-35.76	≤-11.36	PASS
		2480	Reference	8.44	8.44	---	PASS
			30~1000	8.44	-47.42	≤-11.56	PASS
			1000~26500	8.44	-36.66	≤-11.56	PASS
BLE_2M	Ant1	2402	Reference	8.45	8.45	---	PASS
			30~1000	8.45	-48.25	≤-11.55	PASS
			1000~26500	8.45	-35.41	≤-11.55	PASS
		2440	Reference	8.63	8.63	---	PASS
			30~1000	8.63	-48.06	≤-11.37	PASS
			1000~26500	8.63	-35.75	≤-11.37	PASS
		2480	Reference	8.32	8.32	---	PASS
			30~1000	8.32	-49.03	≤-11.68	PASS
			1000~26500	8.32	-37.92	≤-11.68	PASS

6.2.Test Graphs

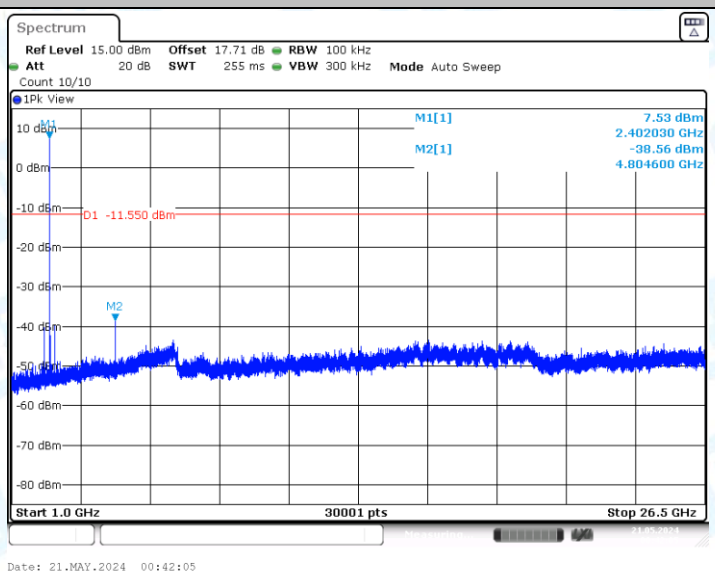
BLE_1M_Ant1_2402_0~Reference



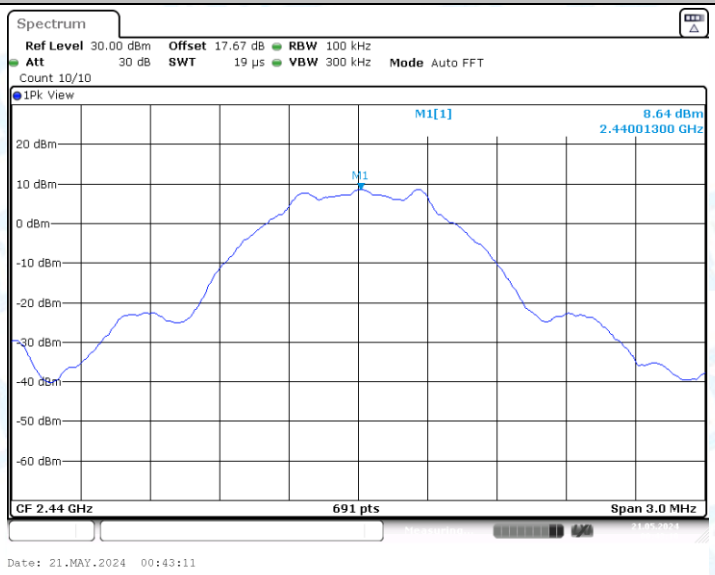
BLE_1M_Ant1_2402_30~1000



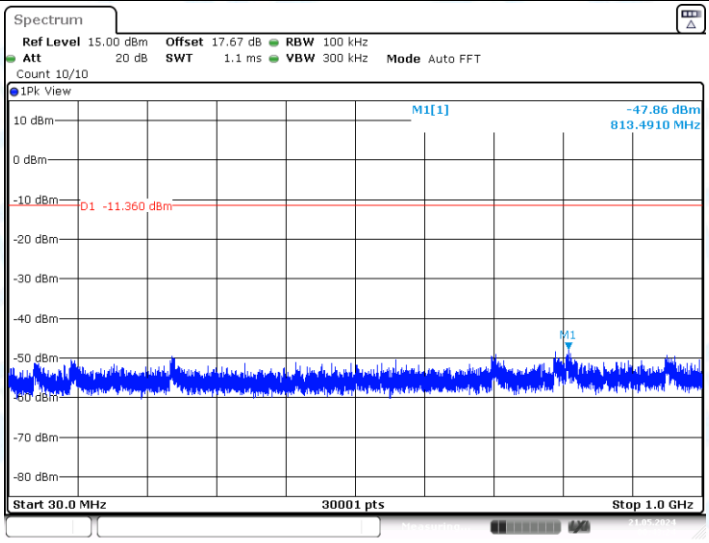
BLE_1M_Ant1_2402_1000~26500



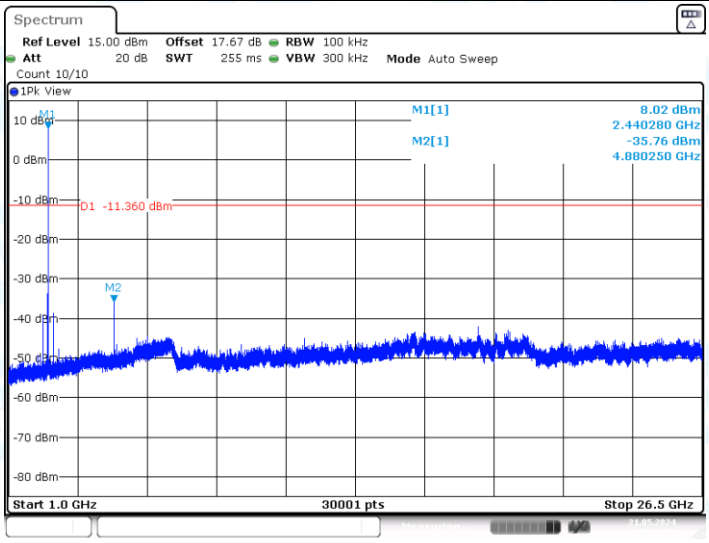
BLE_1M_Ant1_2440_0~Reference



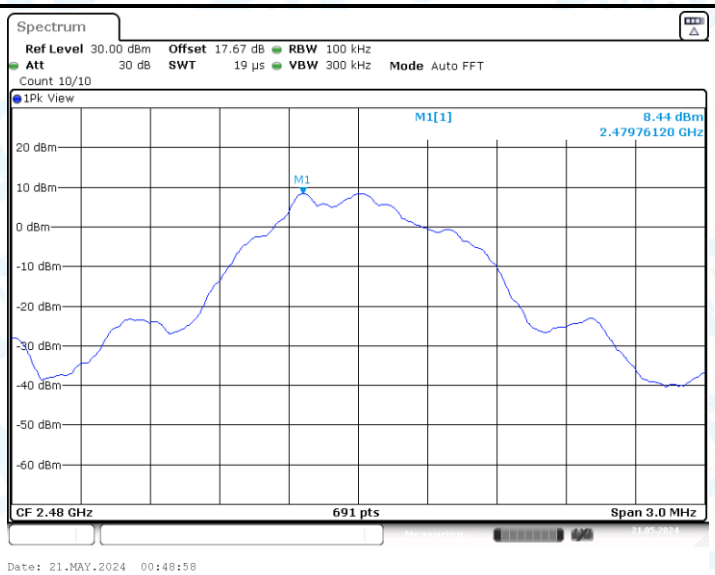
BLE_1M_Ant1_2440_30~1000



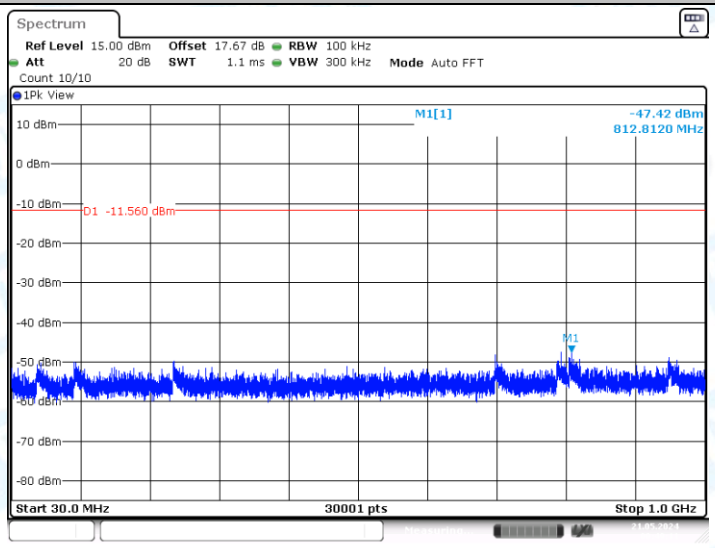
BLE_1M_Ant1_2440_1000~26500



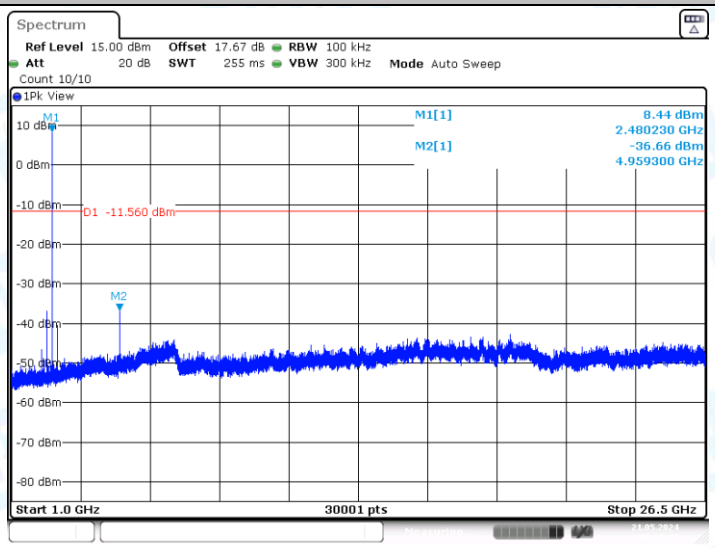
BLE_1M_Ant1_2480_0~Reference



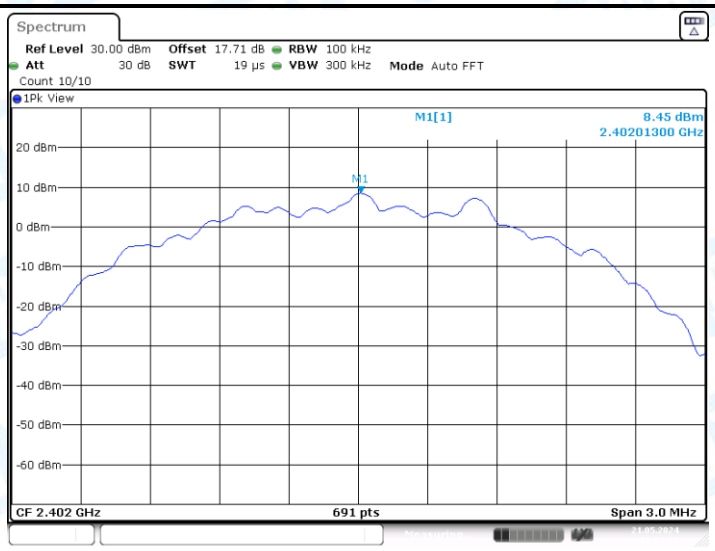
BLE_1M_Ant1_2480_30~1000



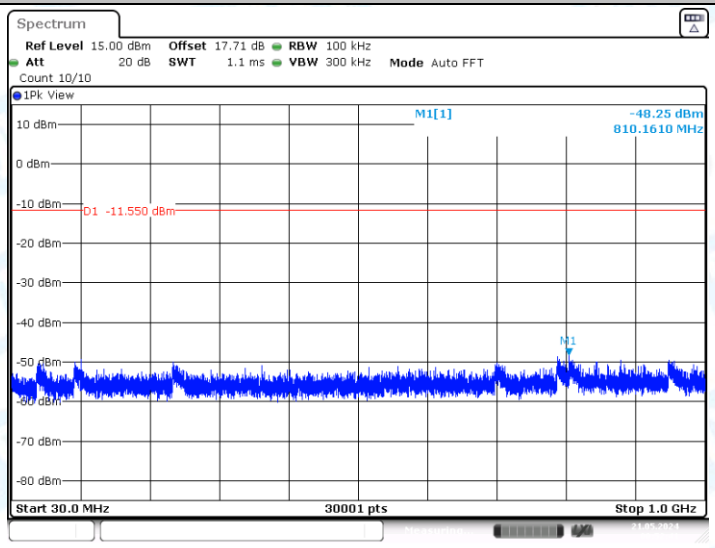
BLE_1M_Ant1_2480_1000~26500



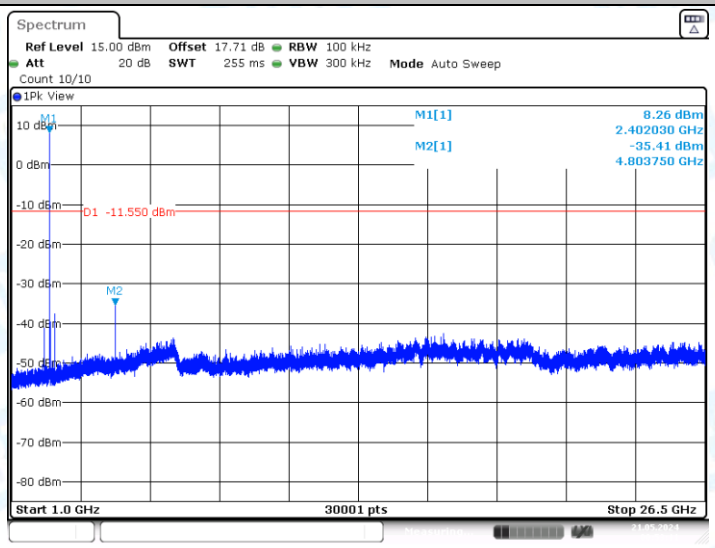
BLE_2M_Ant1_2402_0~Reference



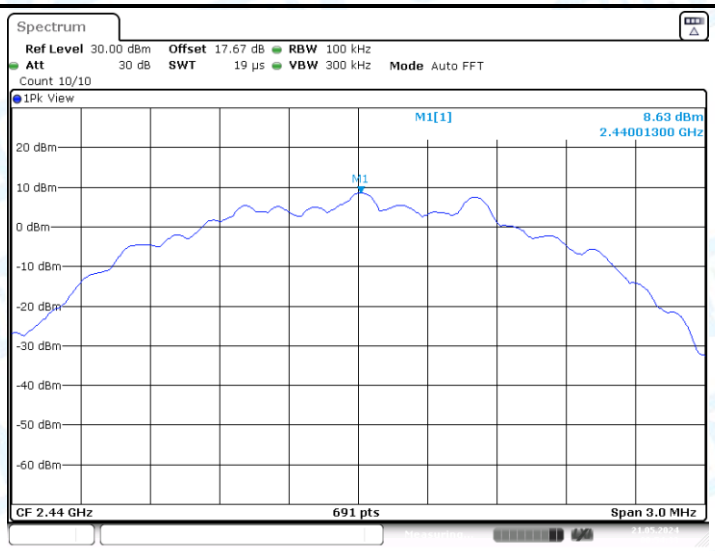
BLE_2M_Ant1_2402_30~1000



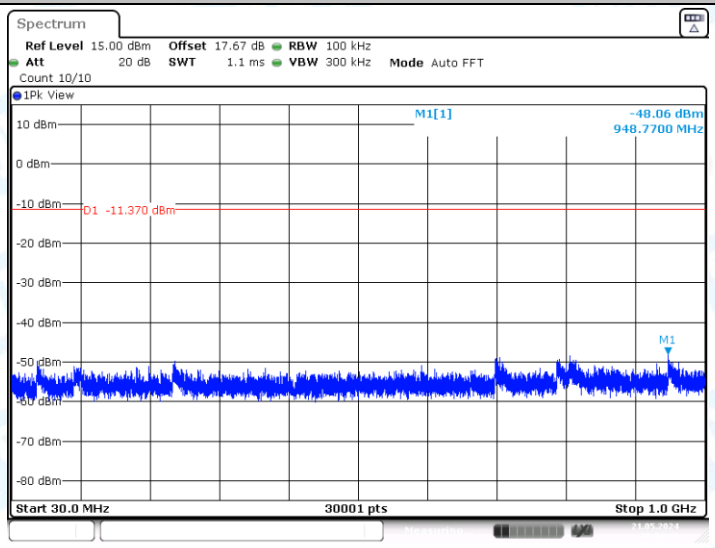
BLE_2M_Ant1_2402_1000~26500



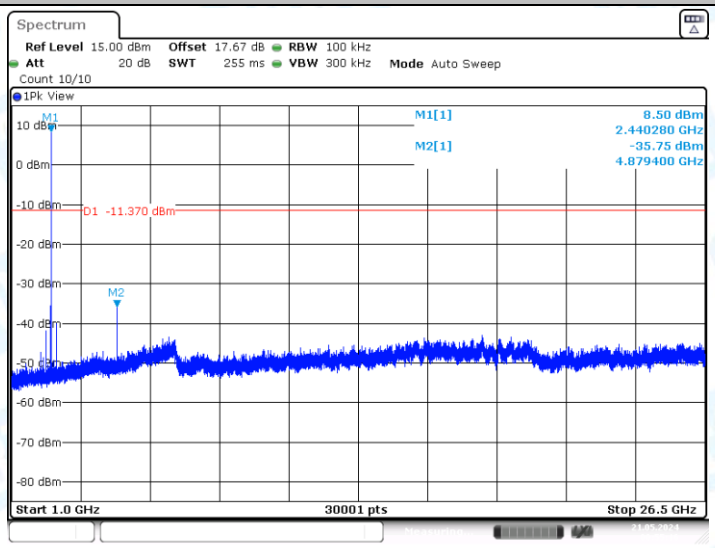
BLE_2M_Ant1_2440_0~Reference



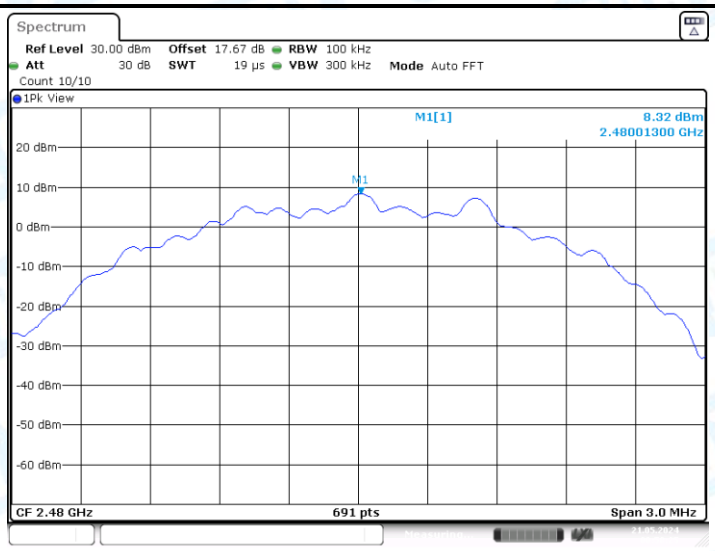
BLE_2M_Ant1_2440_30~1000



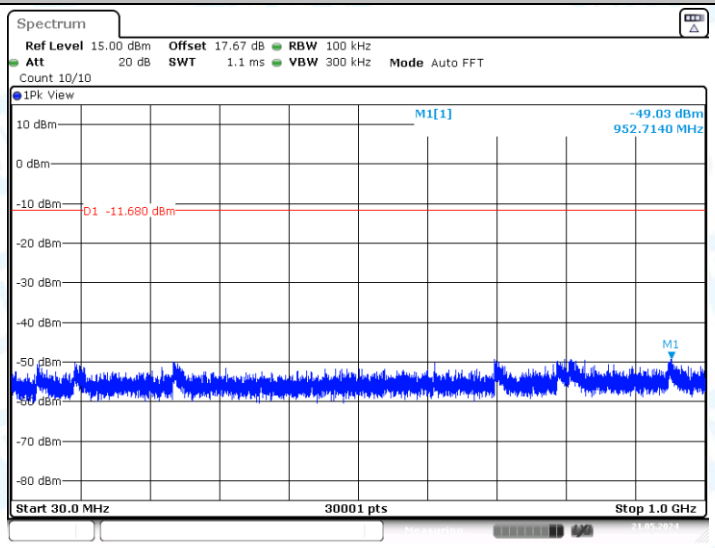
BLE_2M_Ant1_2440_1000~26500



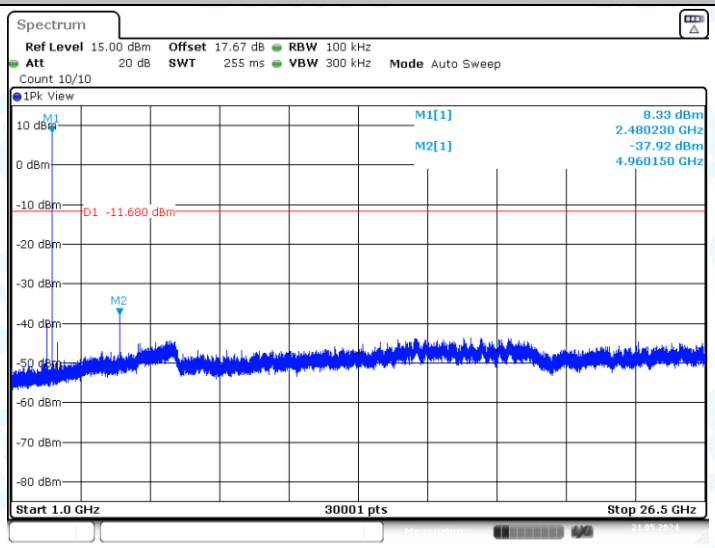
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



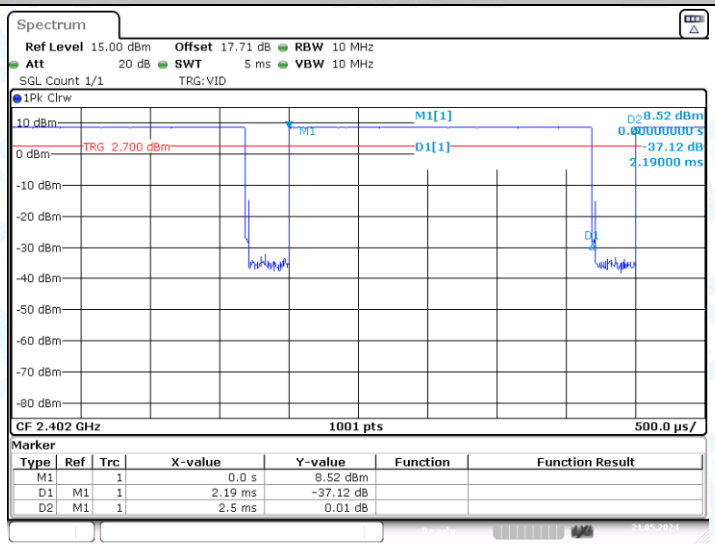
7. Duty Cycle

7.1.Test Result

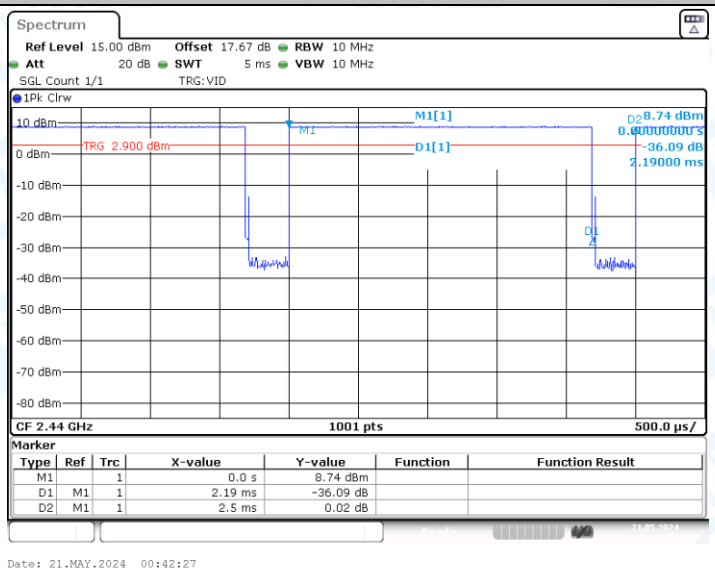
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE_1M	Ant1	2402	2.19	2.50	87.60	---	---
		2440	2.19	2.50	87.60	---	---
		2480	2.19	2.50	87.60	---	---
BLE_2M	Ant1	2402	1.13	2.50	45.20	---	---
		2440	1.13	2.50	45.20	---	---
		2480	1.13	2.50	45.20	---	---

7.2.Test Graphs

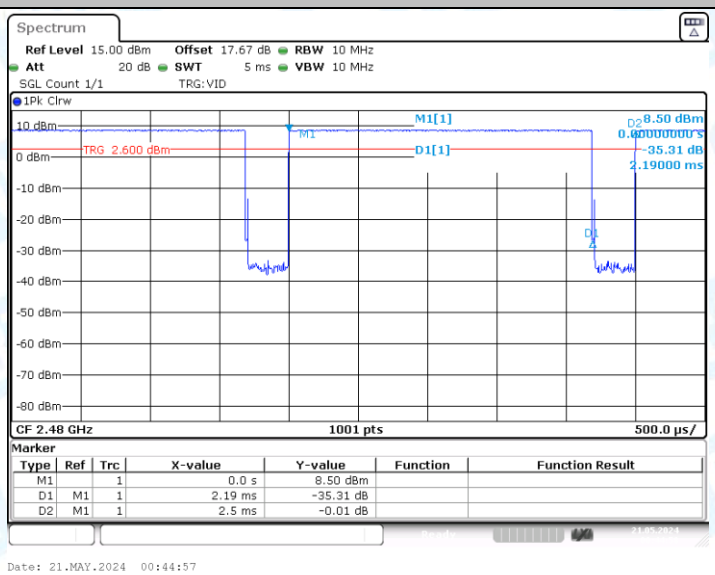
BLE_1M_Ant1_2402



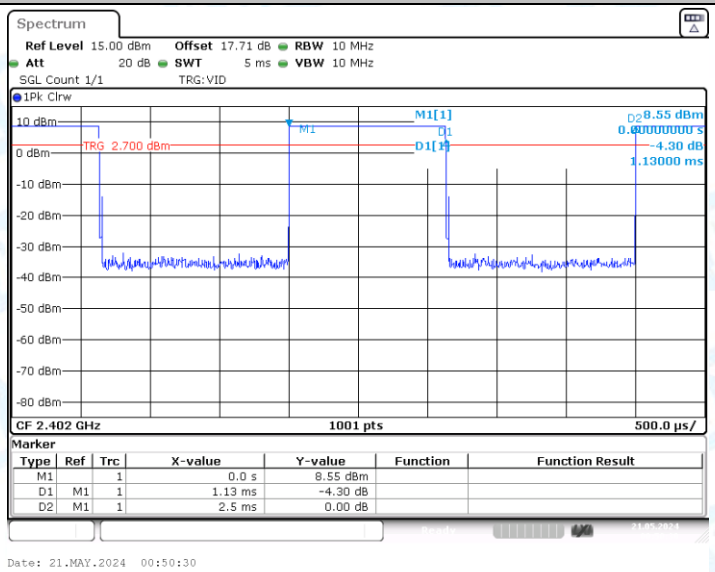
BLE_1M_Ant1_2440



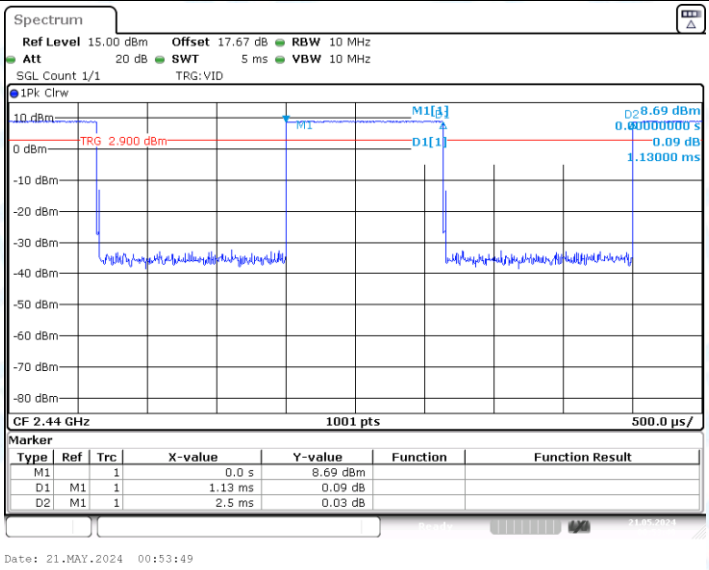
BLE_1M_Ant1_2480



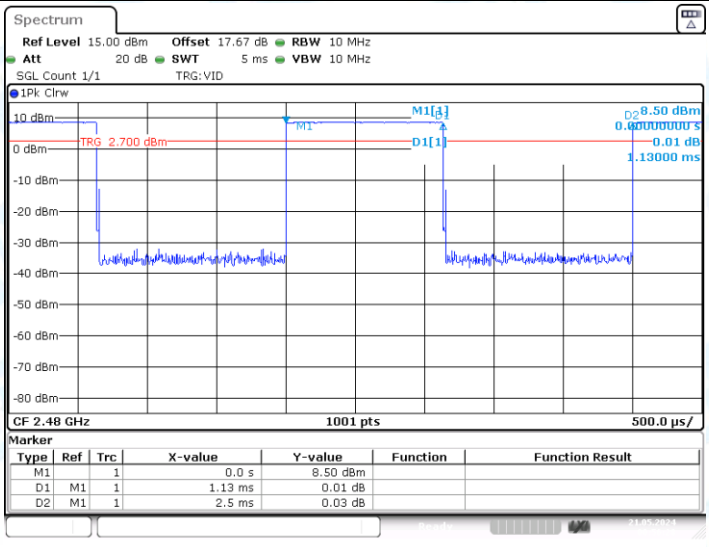
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



8. Emissions in Restricted Bands

8.1.Test Result

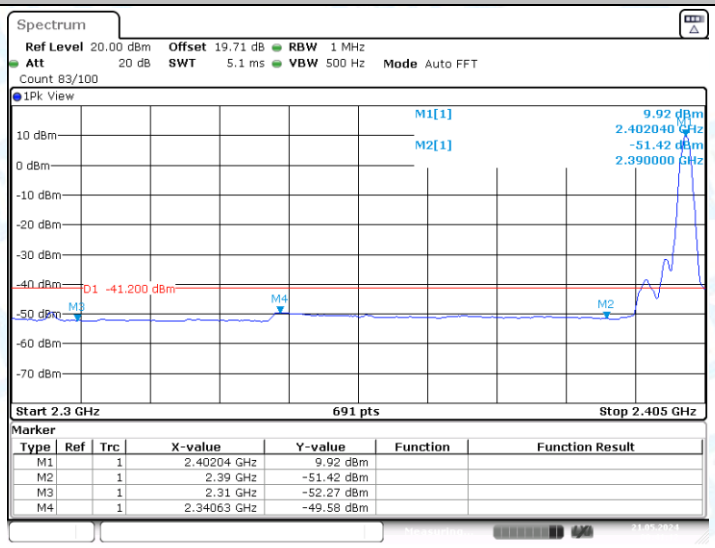
Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-52.27	≤-41.20	PASS
				AV	2340.630	-49.58	≤-41.20	PASS
				AV	2390.000	-51.42	≤-41.20	PASS
				Peak	2310.000	-41.02	≤-21.20	PASS
				Peak	2340.478	-37.38	≤-21.20	PASS
				Peak	2390.000	-40.61	≤-21.20	PASS
		High	2480	AV	2483.500	-49.26	≤-41.20	PASS
				AV	2485.652	-48.39	≤-41.20	PASS
				AV	2500.000	-51.66	≤-41.20	PASS
				Peak	2483.500	-35.56	≤-21.20	PASS
				Peak	2484.725	-29.97	≤-21.20	PASS
				Peak	2500.000	-40.18	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-52.1	≤-41.20	PASS
				AV	2341.239	-49.36	≤-41.20	PASS
				AV	2390.000	-51.44	≤-41.20	PASS
				Peak	2310.000	-41.11	≤-21.20	PASS
				Peak	2346.109	-37.55	≤-21.20	PASS
				Peak	2390.000	-39.45	≤-21.20	PASS
		High	2480	AV	2483.500	-47.08	≤-41.20	PASS
				AV	2485.536	-45.34	≤-41.20	PASS
				AV	2500.000	-51.18	≤-41.20	PASS
				Peak	2483.500	-34.76	≤-21.20	PASS
				Peak	2484.725	-29.39	≤-21.20	PASS
				Peak	2500.000	-40.39	≤-21.20	PASS

Note：

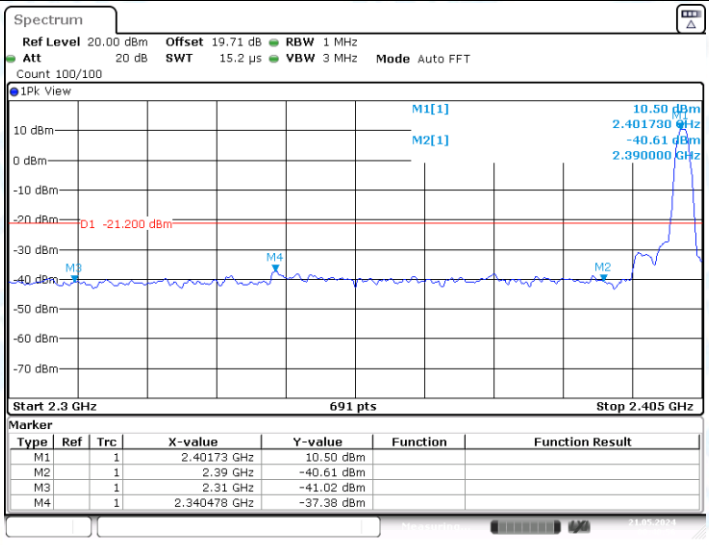
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

8.2.Test Graphs

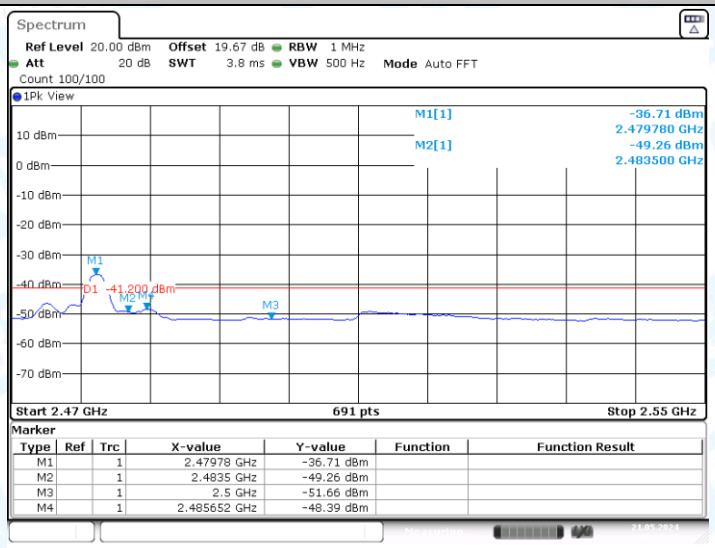
BLE_1M_Ant1_Low_2402_AV



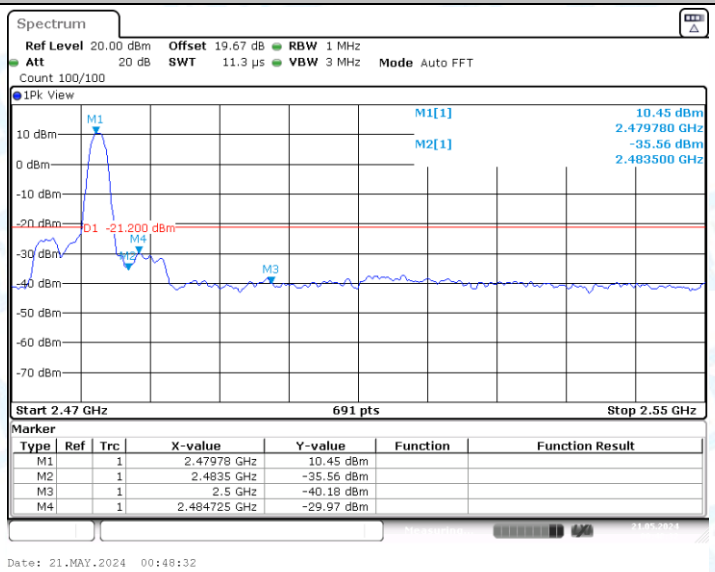
BLE_1M_Ant1_Low_2402_Peak



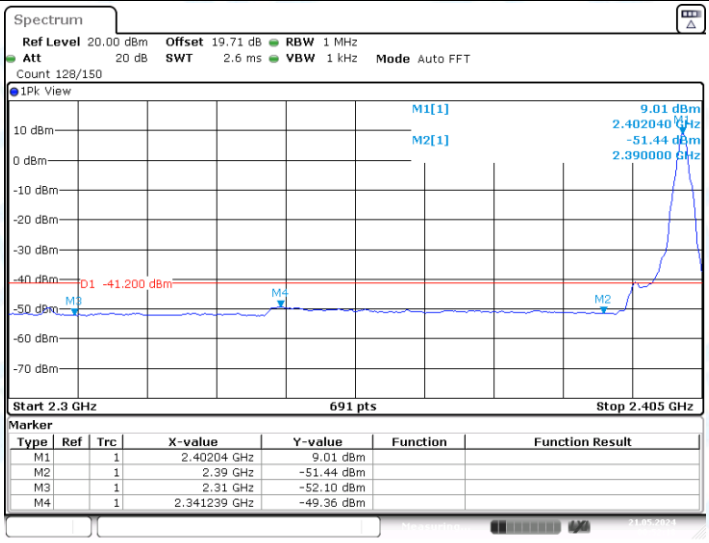
BLE_1M_Ant1_High_2480_AV



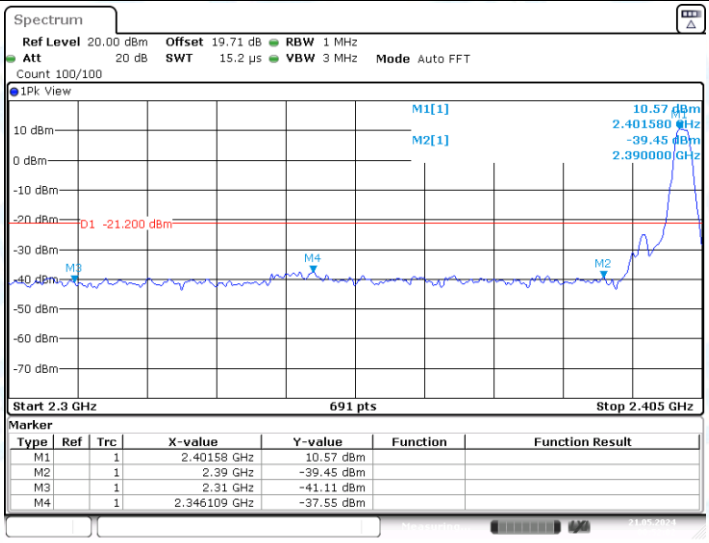
BLE_1M_Ant1_High_2480_Peak



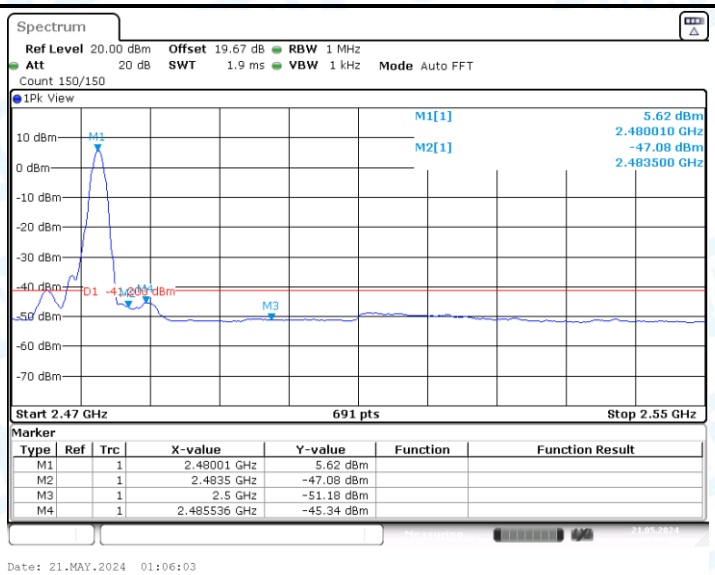
BLE_2M_Ant1_Low_2402_AV



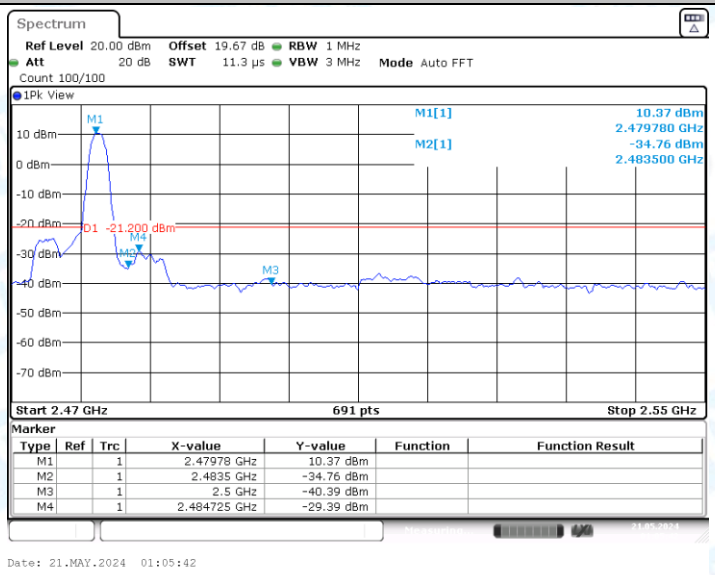
BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak



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