RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	tablet computer
Test Model:	AYANEO KUN
Sample ID:	202307-0208-4-2#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 11.55V
Test Engineer:	Li Ying Jing
Note: For a more detailed features description, please refer to the report TBR-C-202307-0208-41 The report only show the worst case data.	

Contents

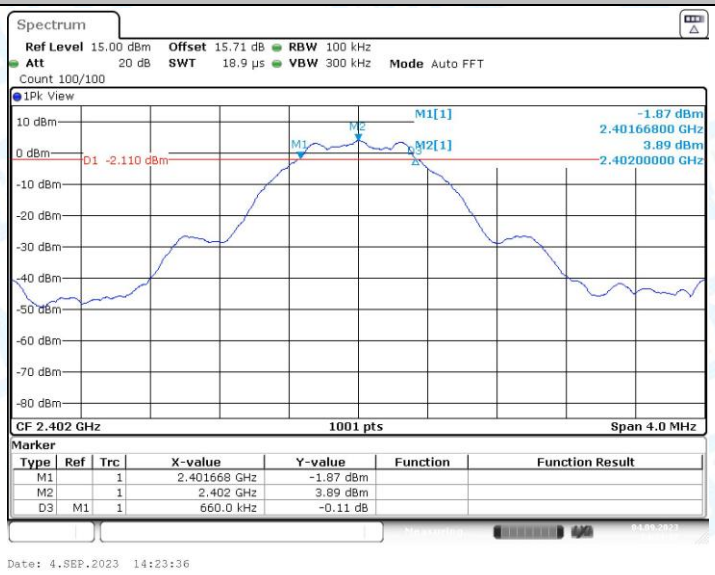
1. DTS Bandwidth

1.1.Test Result

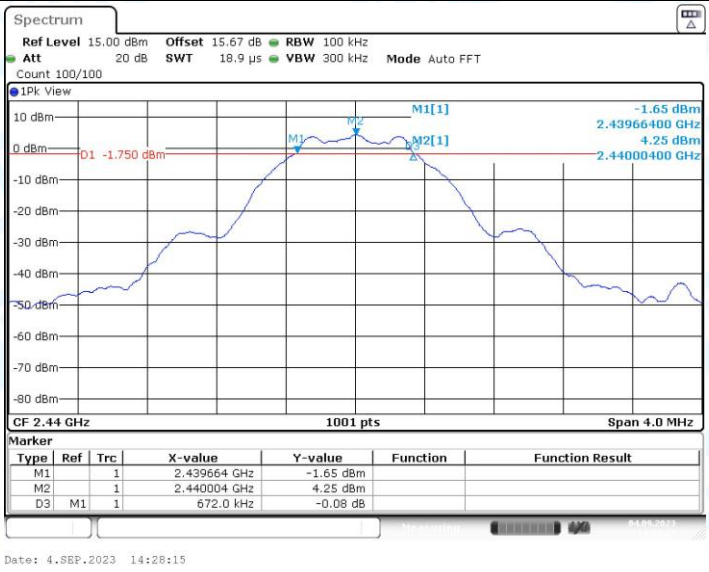
Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.66	2401.67	2402.33	0.5	PASS
		2440	0.67	2439.66	2440.34	0.5	PASS
		2480	0.69	2479.65	2480.34	0.5	PASS
BLE_2M	Ant1	2402	1.11	2401.45	2402.56	0.5	PASS
		2440	1.12	2439.45	2440.56	0.5	PASS
		2480	1.12	2479.44	2480.56	0.5	PASS

1.2.Test Graphs

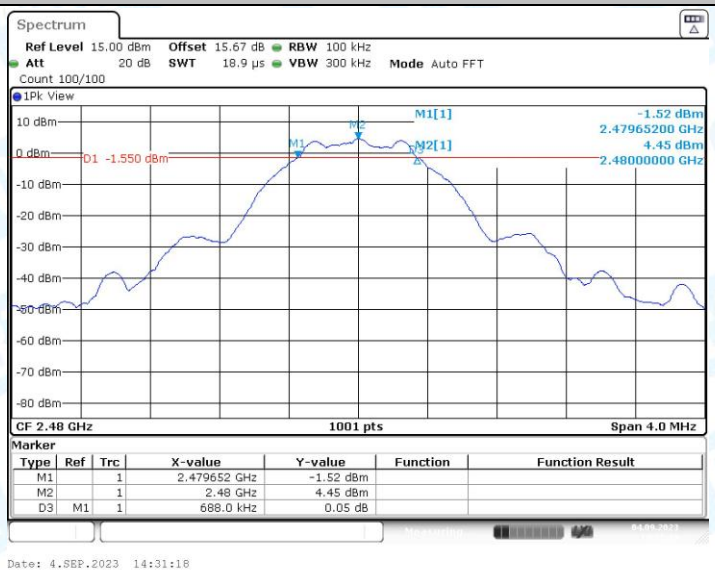
BLE_1M_Ant1_2402



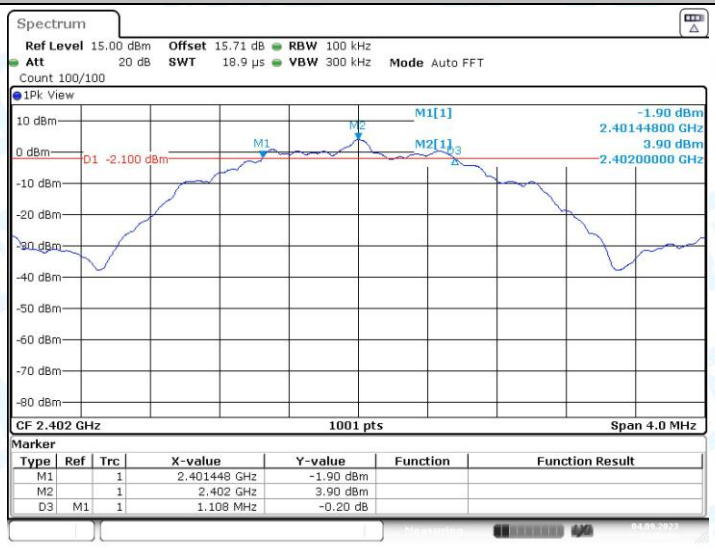
BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

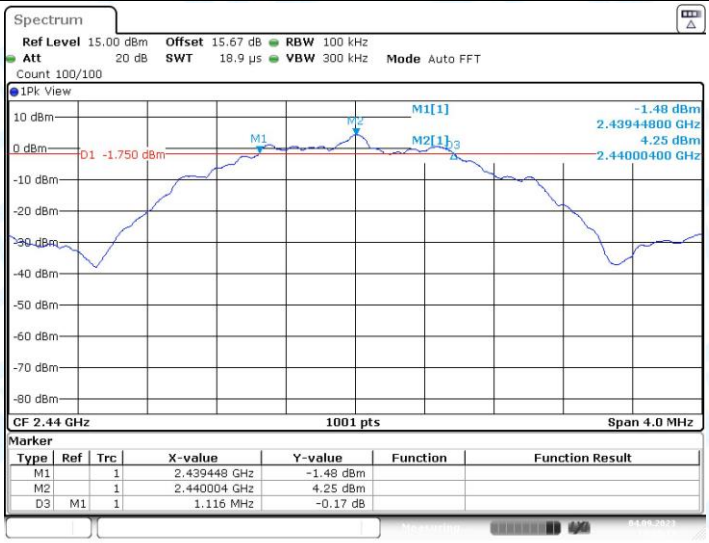


BLE_2M_Ant1_2402



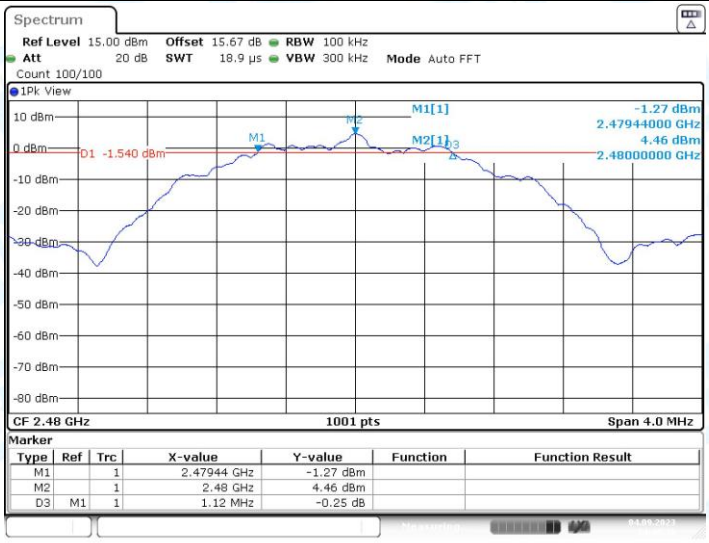
Date: 4.SEP.2023 14:35:08

BLE_2M_Ant1_2440



Date: 4.SEP.2023 14:38:12

BLE_2M_Ant1_2480



Date: 4.SEP.2023 14:40:16

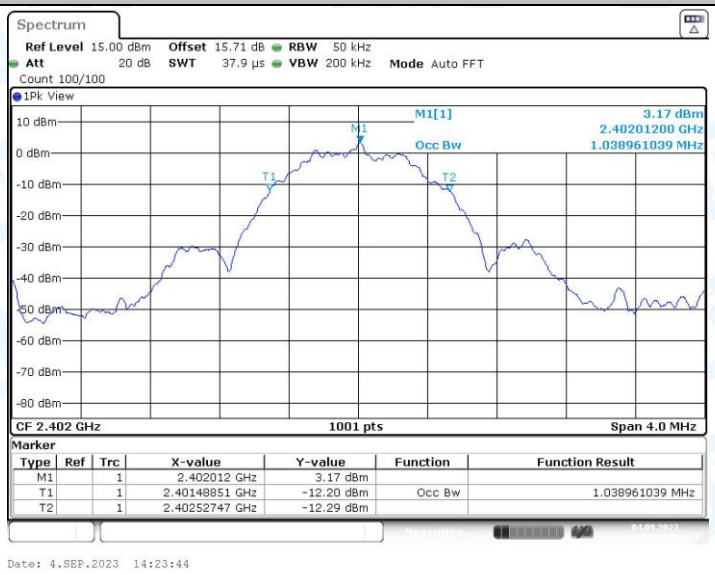
2. Occupied Channel Bandwidth

2.1.Test Result

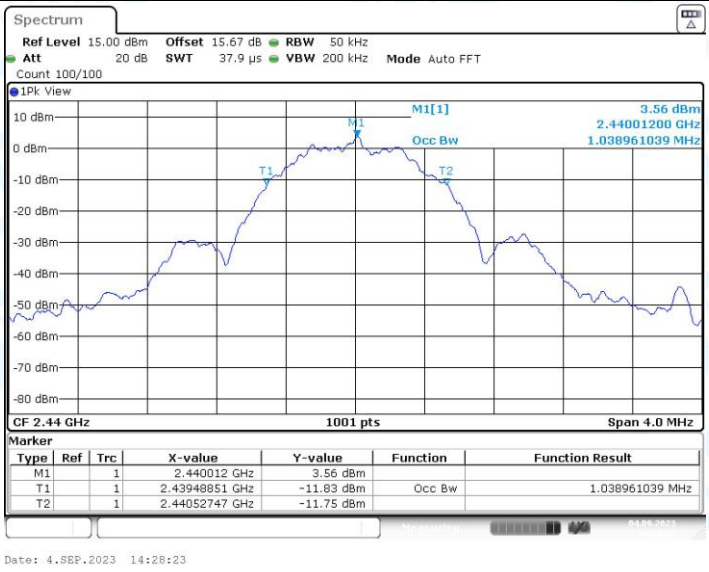
Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.039	2401.4885	2402.5275	---	---
		2440	1.039	2439.4885	2440.5275	---	---
		2480	1.039	2479.4885	2480.5275	---	---
BLE_2M	Ant1	2402	2.042	2401.0010	2403.0430	---	---
		2440	2.042	2439.0010	2441.0430	---	---
		2480	2.042	2478.9970	2481.0390	---	---

2.2.Test Graphs

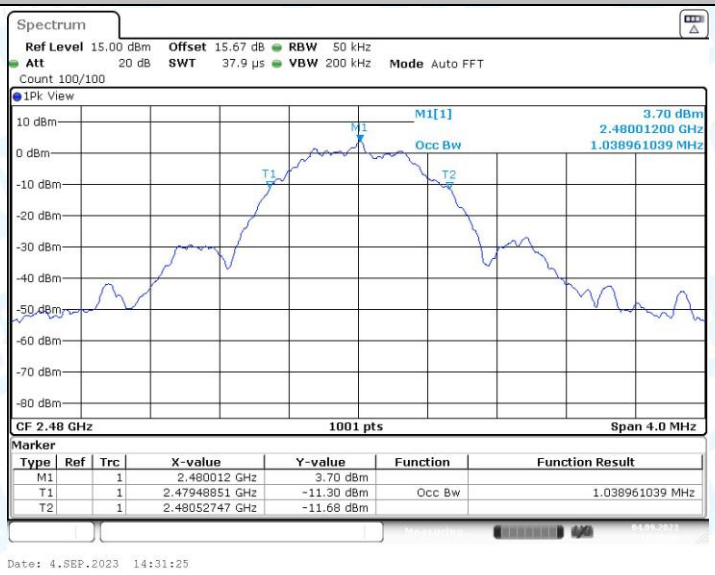
BLE_1M_Ant1_2402



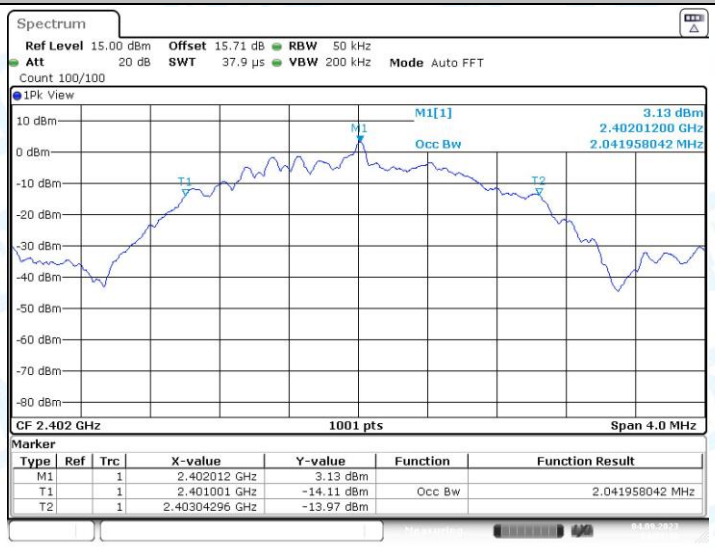
BLE_1M_Ant1_2440



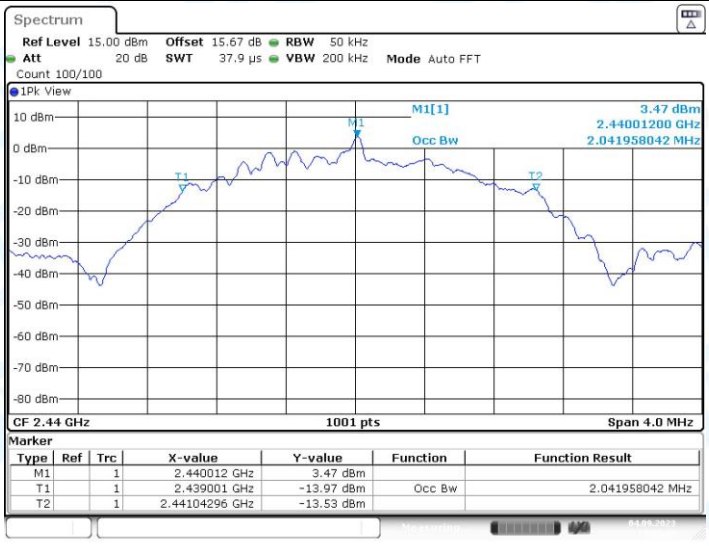
BLE_1M_Ant1_2480



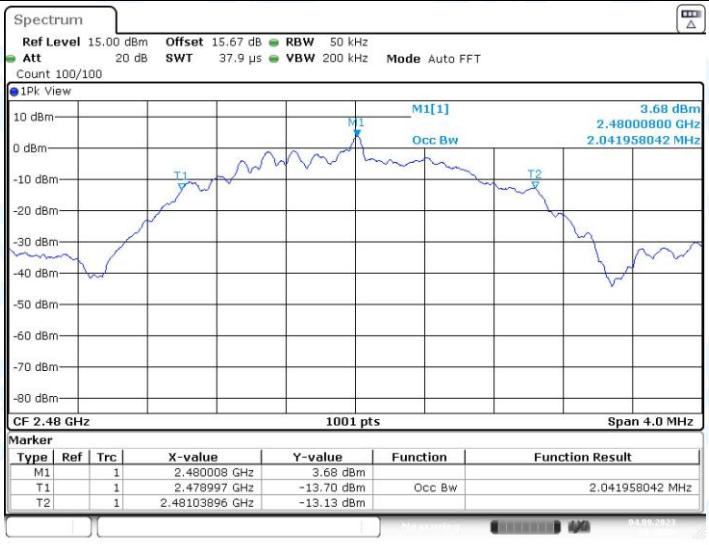
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



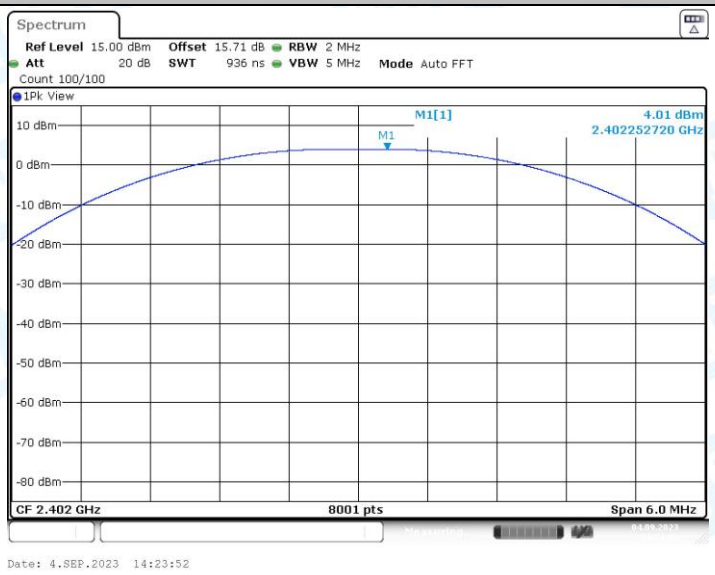
3. Maximum conducted output power

3.1.Test Result

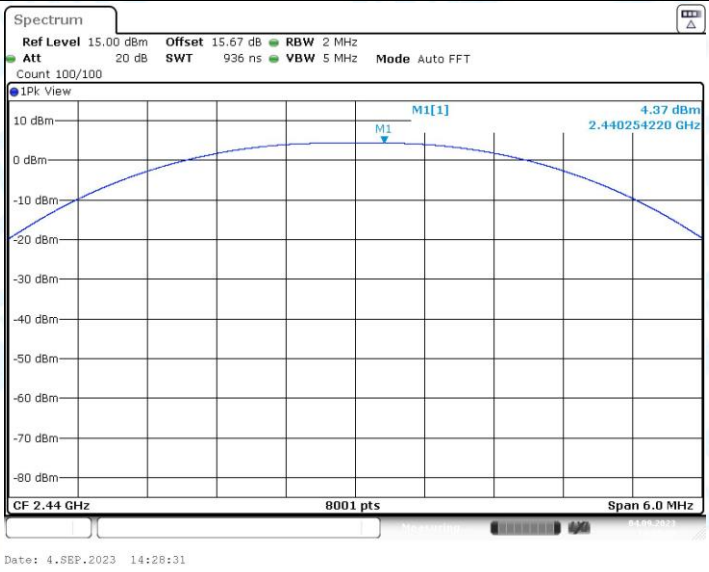
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	4.01	≤30	PASS
		2440	4.37	≤30	PASS
		2480	4.55	≤30	PASS
BLE_2M	Ant1	2402	4.04	≤30	PASS
		2440	4.40	≤30	PASS
		2480	4.55	≤30	PASS

3.2.Test Graphs

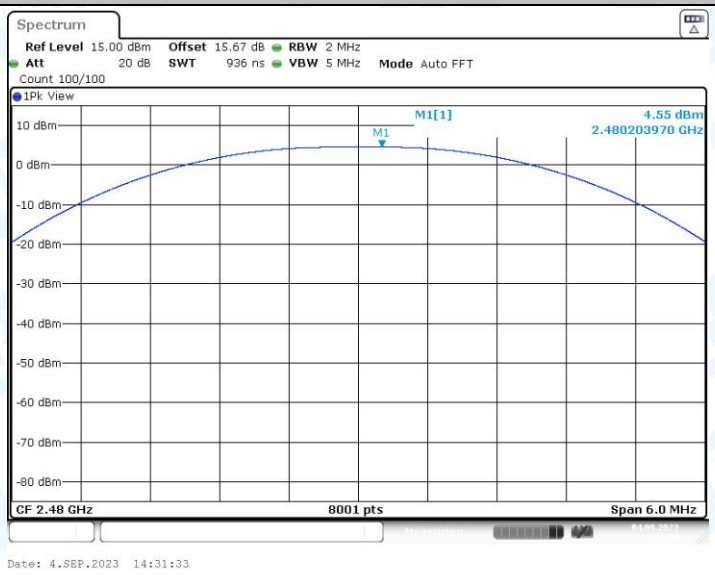
BLE_1M_Ant1_2402



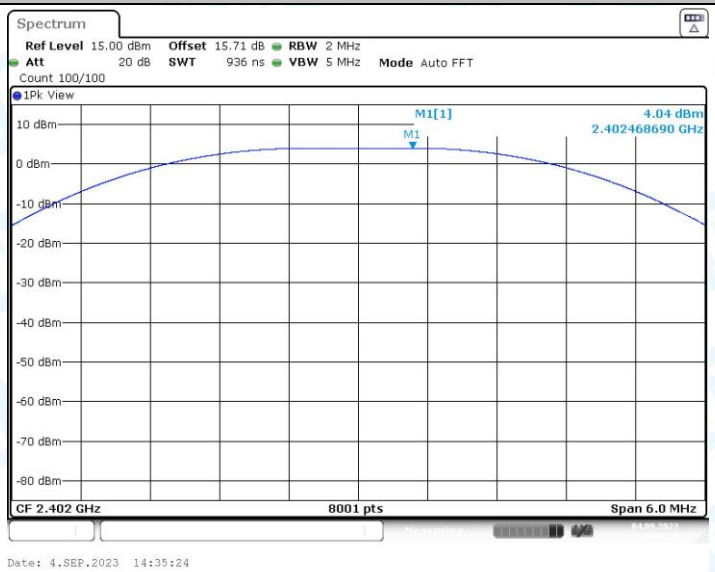
BLE_1M_Ant1_2440



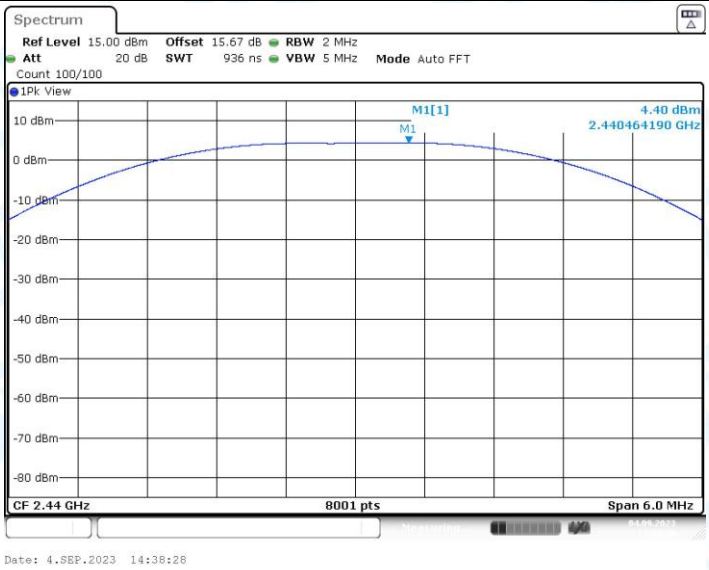
BLE_1M_Ant1_2480



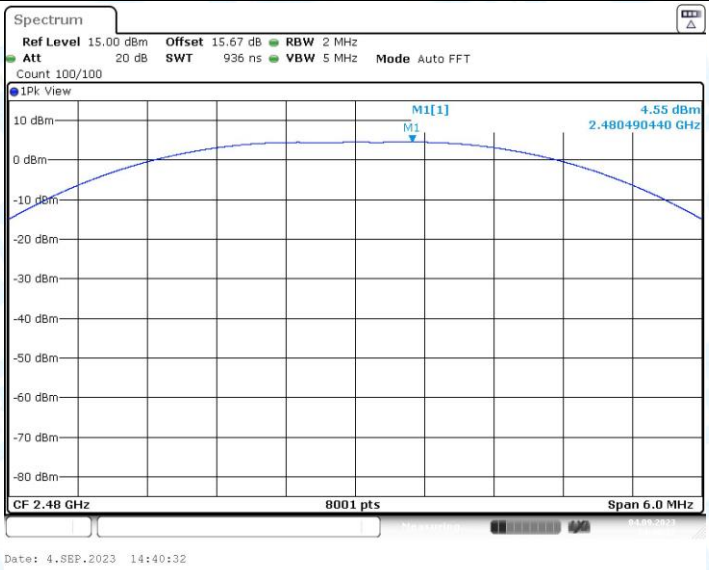
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



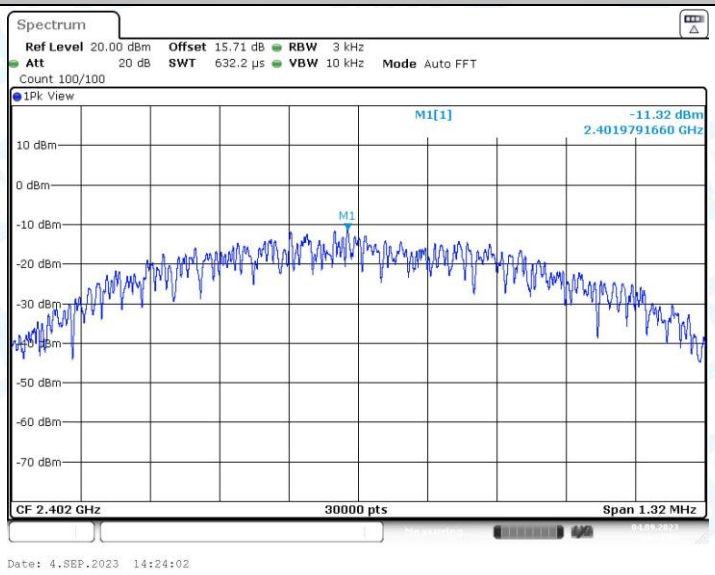
4. Maximum power spectral density

4.1.Test Result

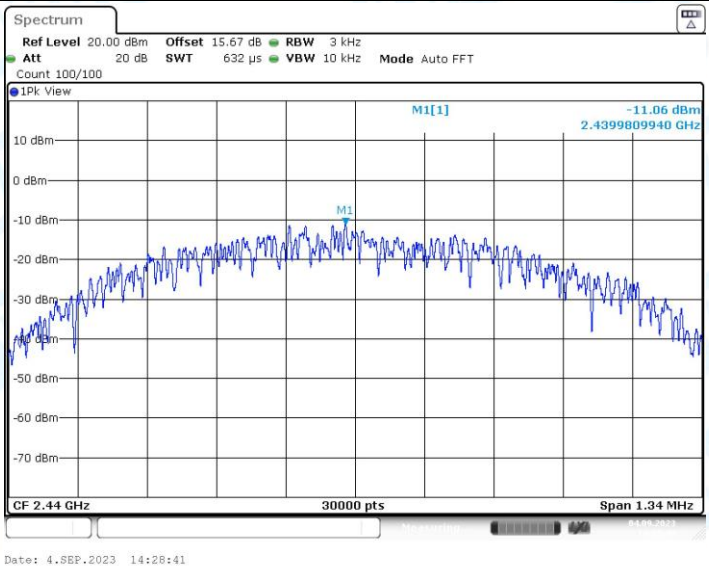
Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.32	≤8.00	PASS
		2440	-11.06	≤8.00	PASS
		2480	-11.28	≤8.00	PASS
BLE_2M	Ant1	2402	-14.02	≤8.00	PASS
		2440	-13.68	≤8.00	PASS
		2480	-13.17	≤8.00	PASS

4.2.Test Graphs

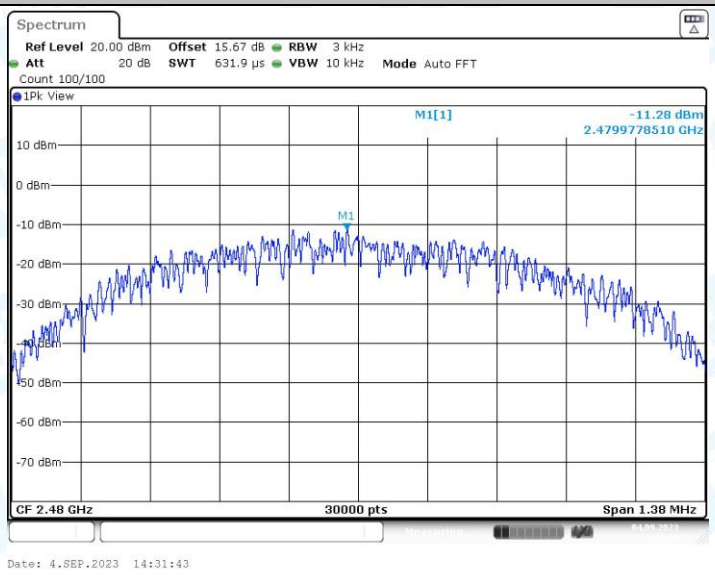
BLE_1M_Ant1_2402



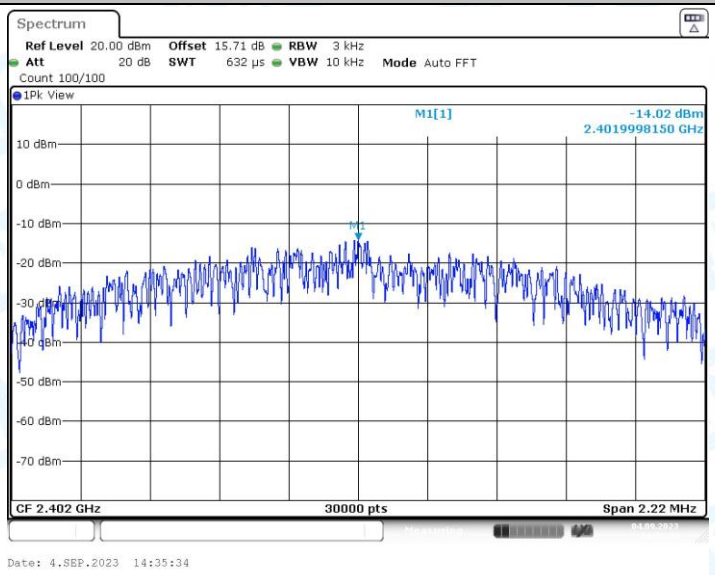
BLE_1M_Ant1_2440



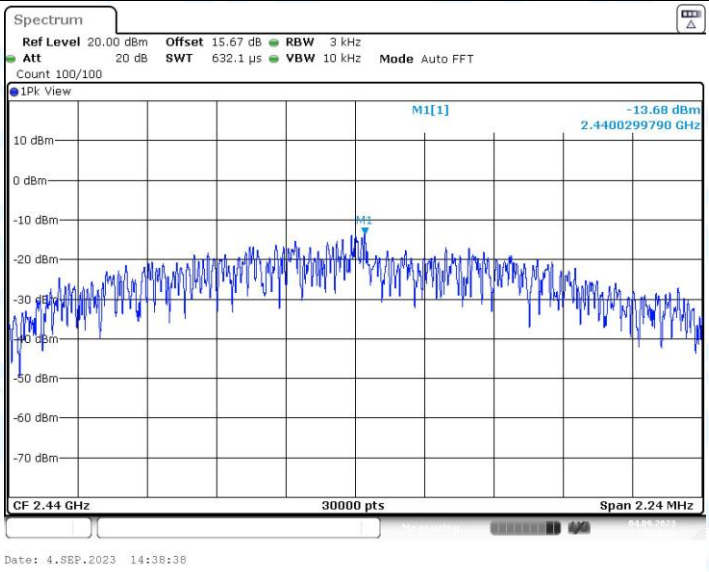
BLE_1M_Ant1_2480



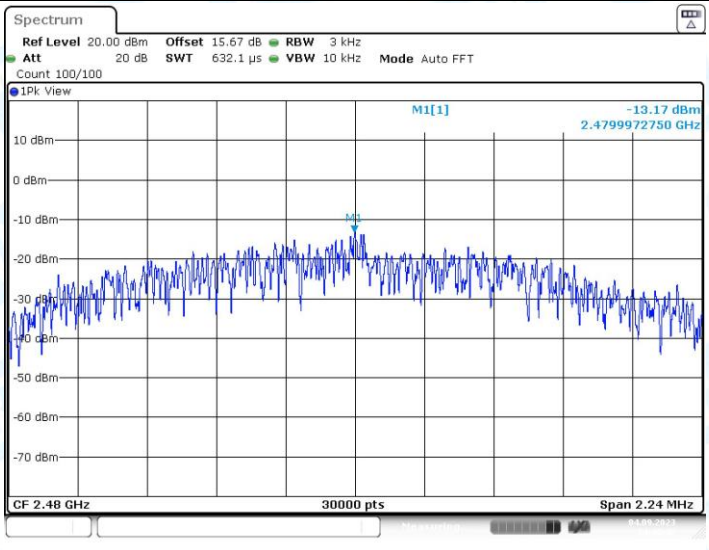
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



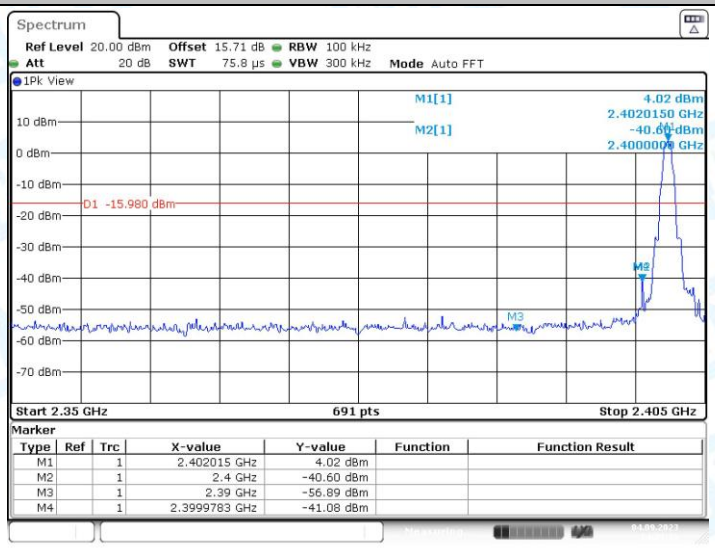
5. Band edge measurements

5.1.Test Result

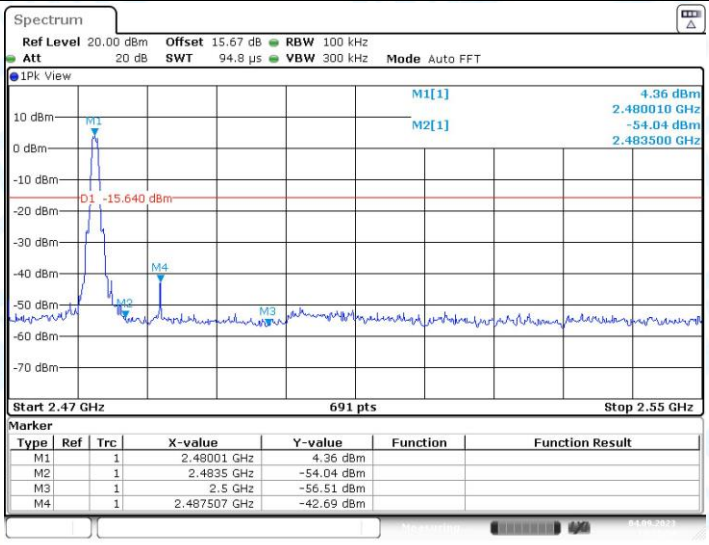
Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	4.02	-41.08	≤-15.98	PASS
		High	2480	4.36	-42.69	≤-15.64	PASS
BLE_2M	Ant1	Low	2402	4.03	-28.14	≤-15.97	PASS
		High	2480	4.51	-43.32	≤-15.49	PASS

5.2.Test Graphs

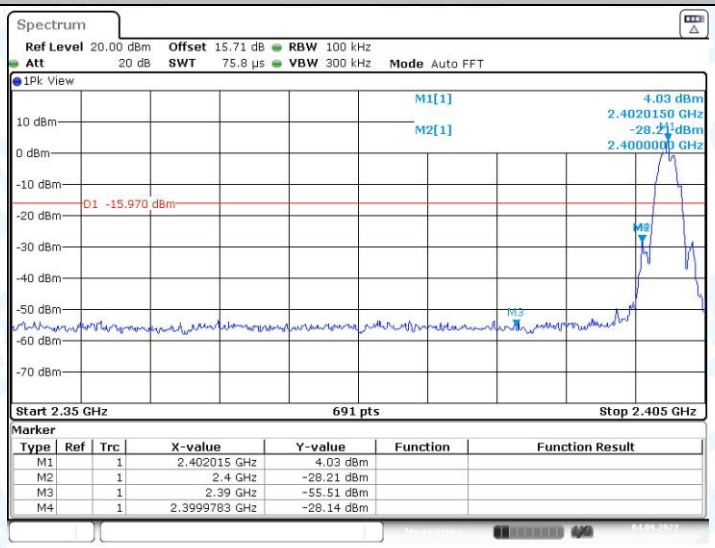
BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480

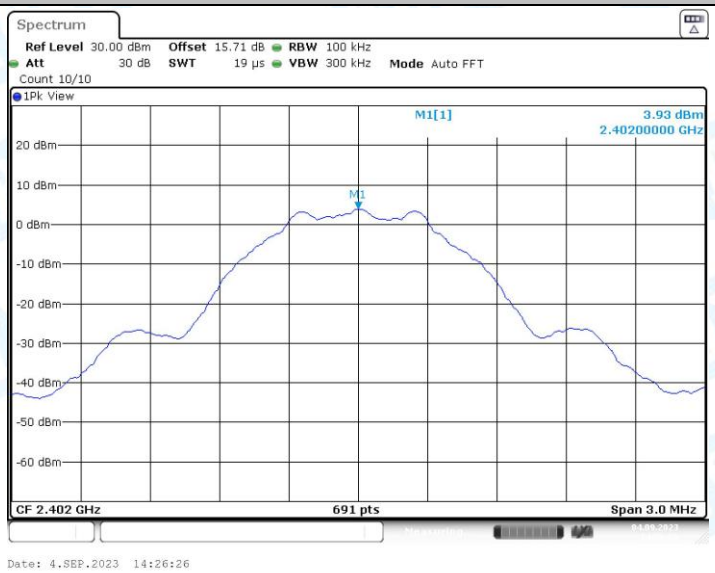
6. Conducted Spurious Emission

6.1.Test Result

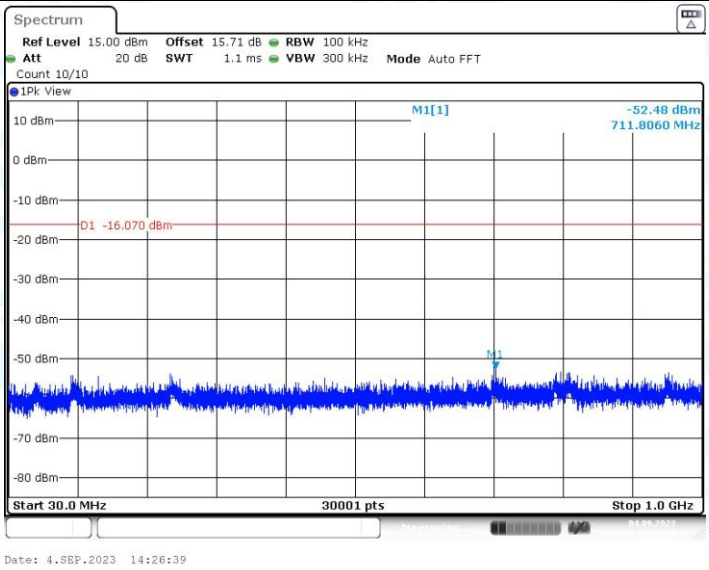
Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	3.93	3.93	---	PASS
			30~1000	3.93	-52.48	≤-16.07	PASS
			1000~26500	3.93	-43.36	≤-16.07	PASS
		2440	Reference	4.27	4.27	---	PASS
			30~1000	4.27	-53.35	≤-15.73	PASS
			1000~26500	4.27	-44.13	≤-15.73	PASS
		2480	Reference	4.43	4.43	---	PASS
			30~1000	4.43	-52.47	≤-15.57	PASS
			1000~26500	4.43	-44.19	≤-15.57	PASS
BLE_2M	Ant1	2402	Reference	3.94	3.94	---	PASS
			30~1000	3.94	-53.07	≤-16.06	PASS
			1000~26500	3.94	-44.19	≤-16.06	PASS
		2440	Reference	4.27	4.27	---	PASS
			30~1000	4.27	-53.01	≤-15.73	PASS
			1000~26500	4.27	-44.19	≤-15.73	PASS
		2480	Reference	4.43	4.43	---	PASS
			30~1000	4.43	-53.36	≤-15.57	PASS
			1000~26500	4.43	-43.92	≤-15.57	PASS

6.2.Test Graphs

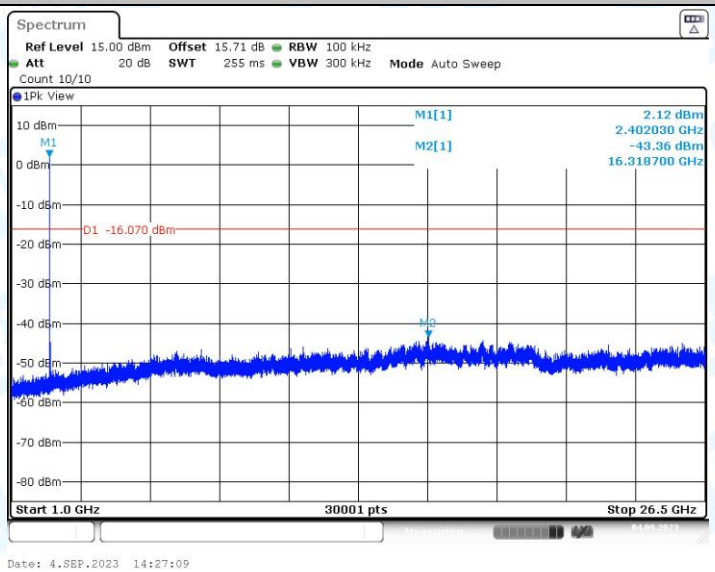
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000

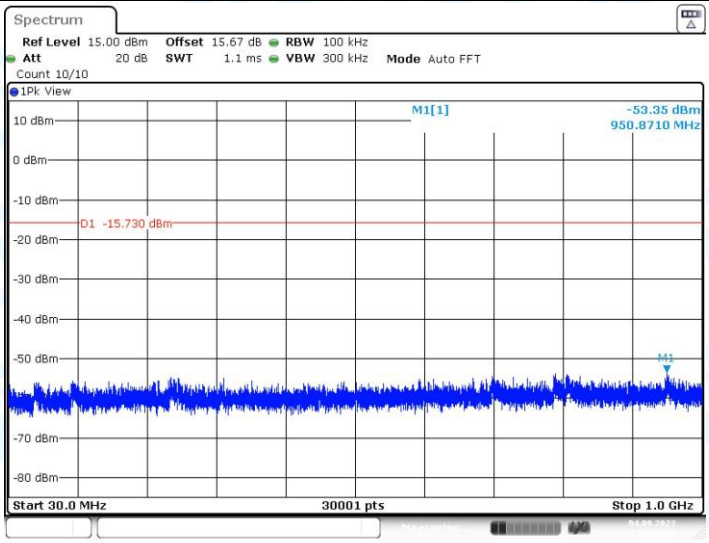


BLE_1M_Ant1_2402_1000~26500

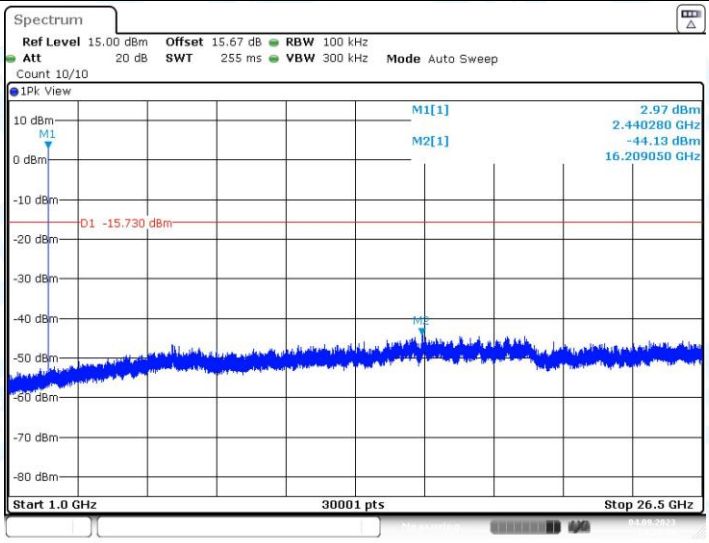


BLE_1M_Ant1_2440_0~Reference

BLE_1M_Ant1_2440_30~1000

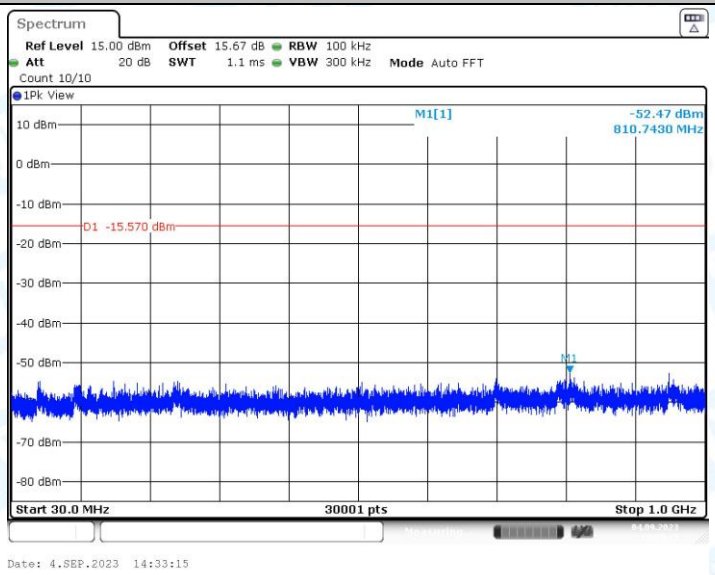


BLE_1M_Ant1_2440_1000~26500

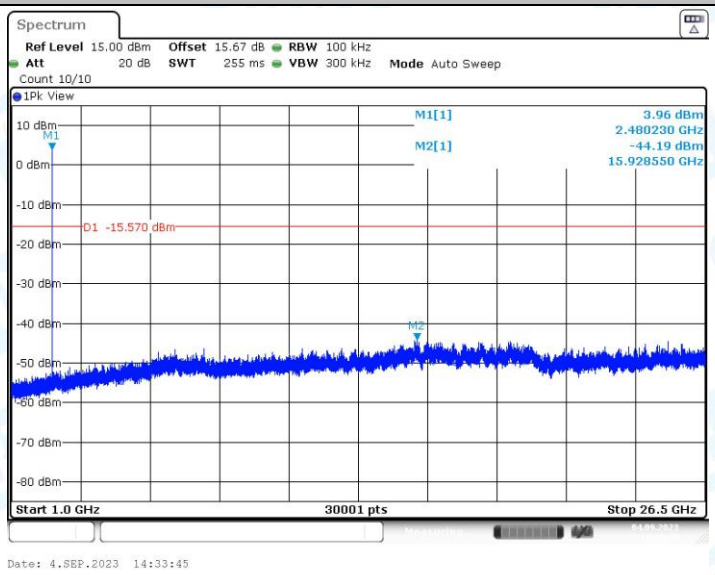


BLE_1M_Ant1_2480_0~Reference

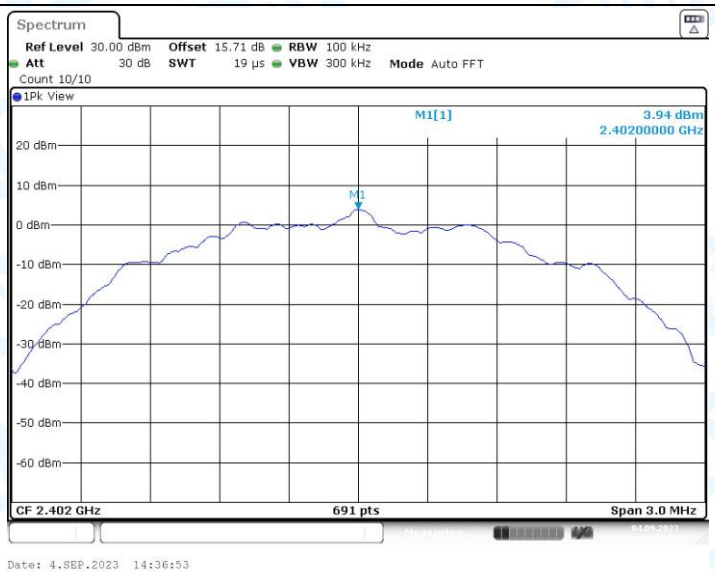
BLE_1M_Ant1_2480_30~1000



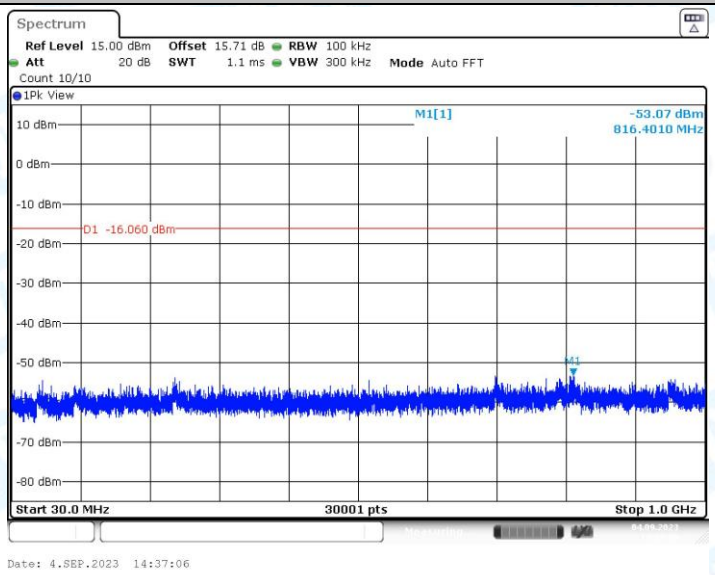
BLE_1M_Ant1_2480_1000~26500



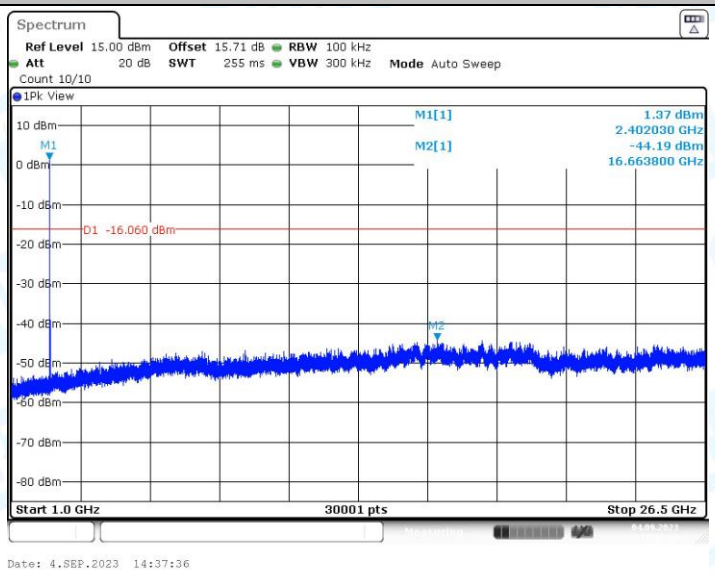
BLE_2M_Ant1_2402_0~Reference



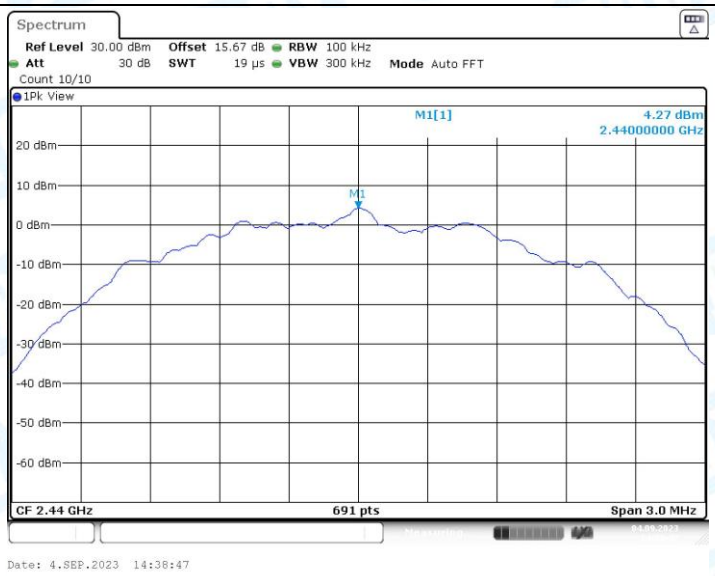
BLE_2M_Ant1_2402_30~1000



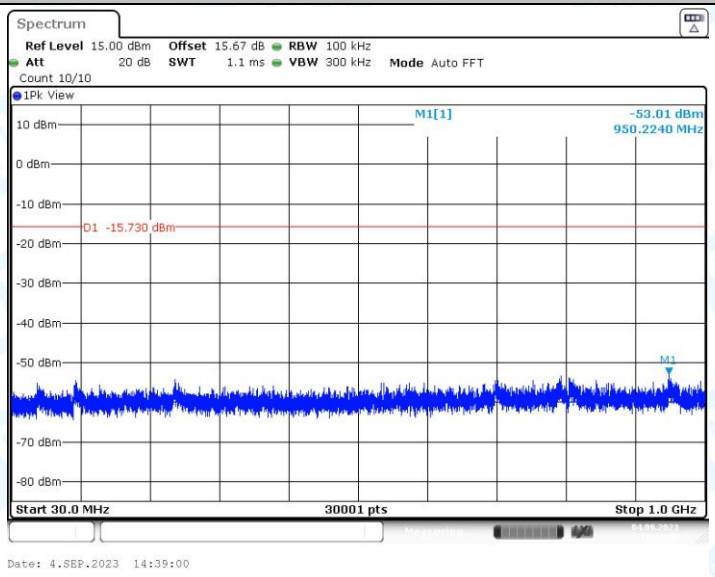
BLE_2M_Ant1_2402_1000~26500



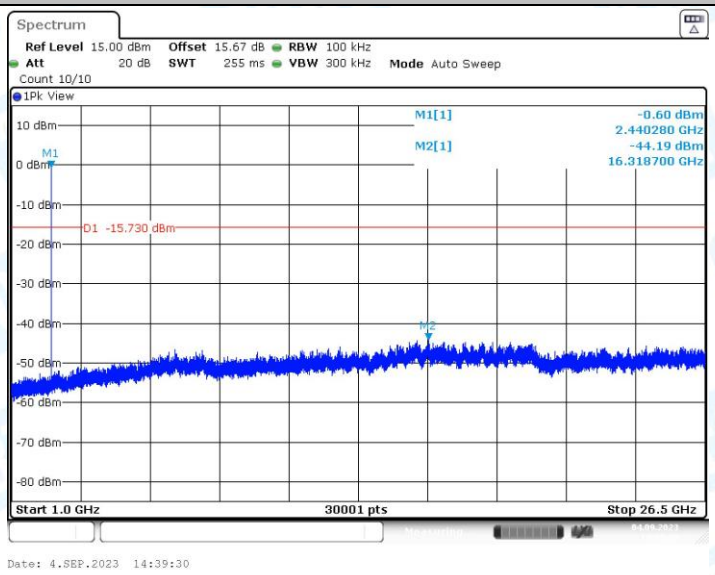
BLE_2M_Ant1_2440_0~Reference



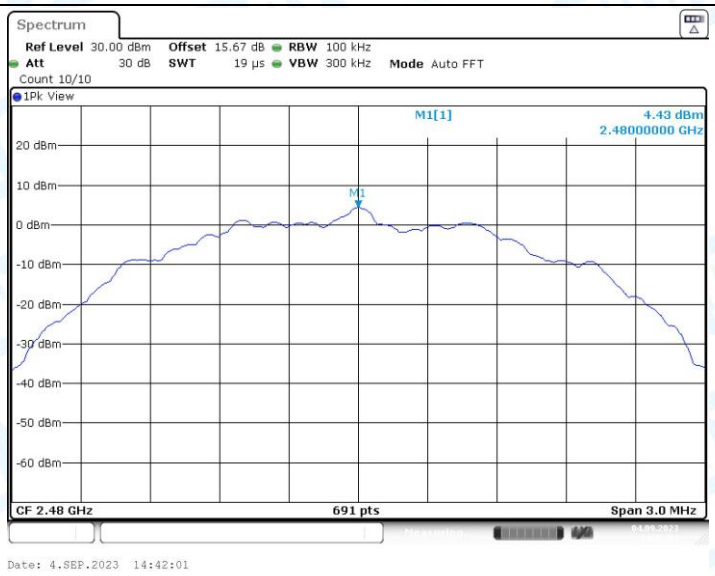
BLE_2M_Ant1_2440_30~1000



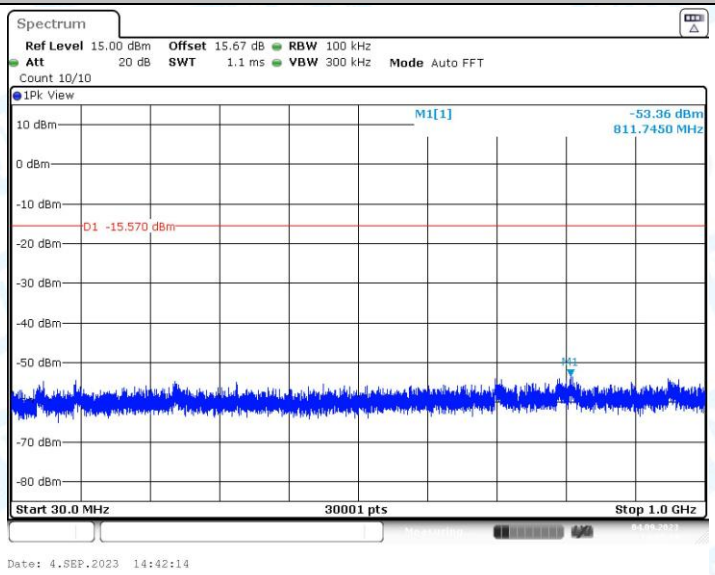
BLE_2M_Ant1_2440_1000~26500



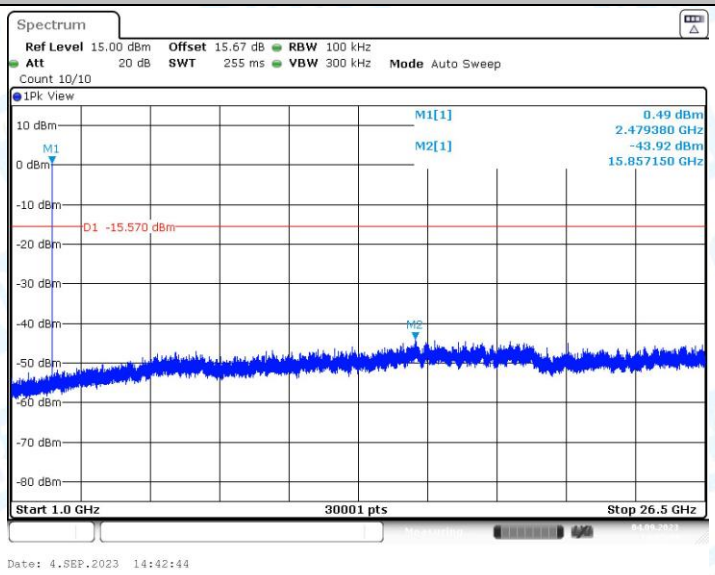
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



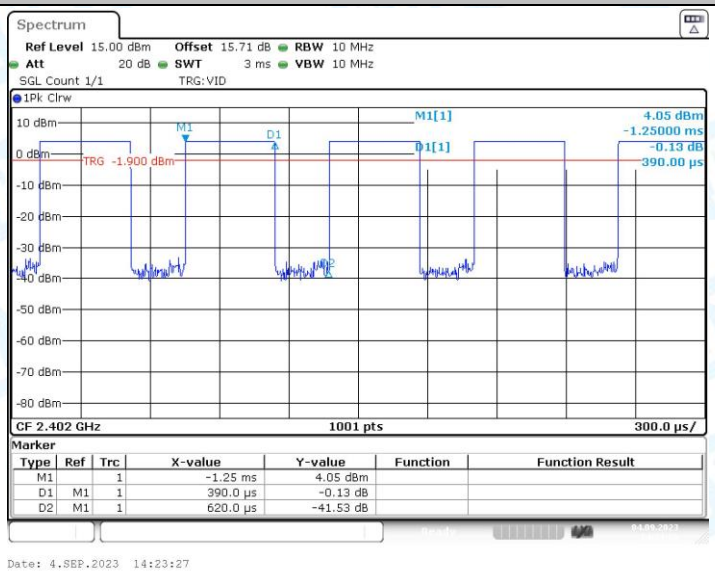
7. Duty Cycle

7.1.Test Result

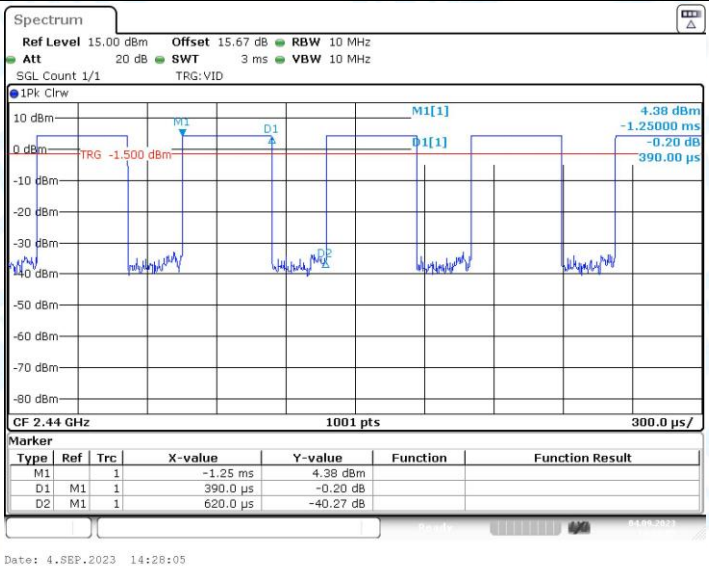
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [kHz]	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.62	62.90	2.564	---	---
		2440	0.39	0.62	62.90	2.564	---	---
		2480	0.39	0.62	62.90	2.564	---	---
BLE_2M	Ant1	2402	0.21	0.63	33.33	4.762	---	---
		2440	0.21	0.63	33.33	4.762	---	---
		2480	0.21	0.63	33.33	4.762	---	---

7.2.Test Graphs

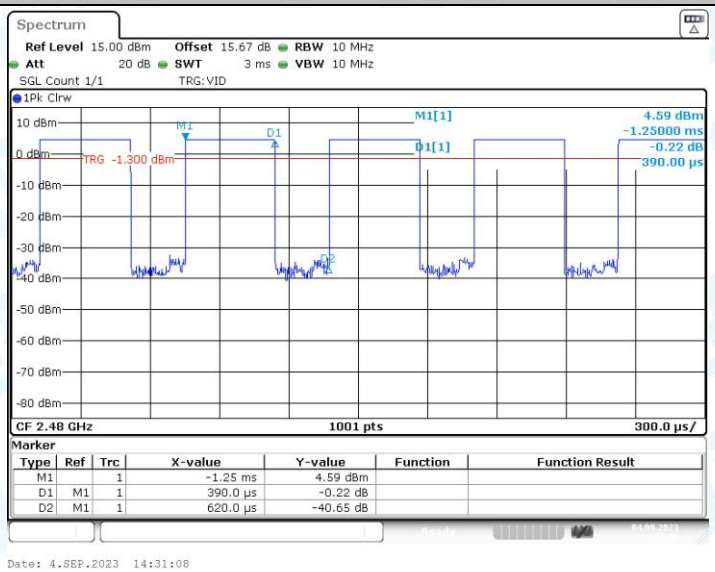
BLE_1M_Ant1_2402



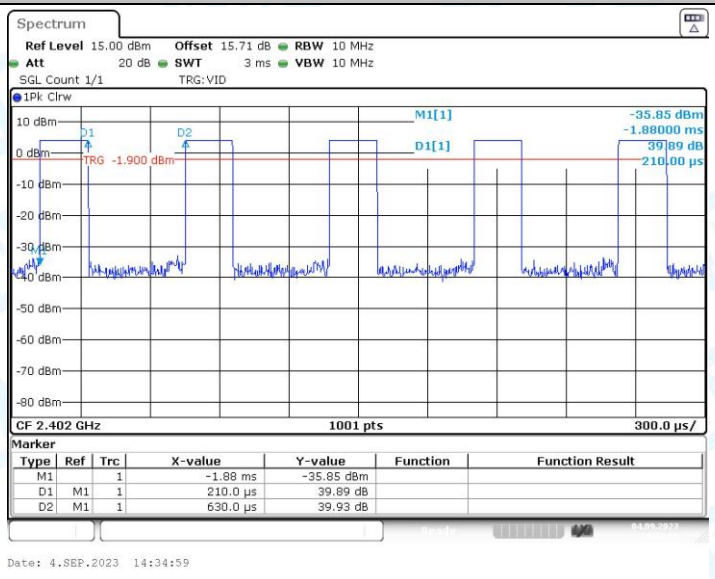
BLE_1M_Ant1_2440



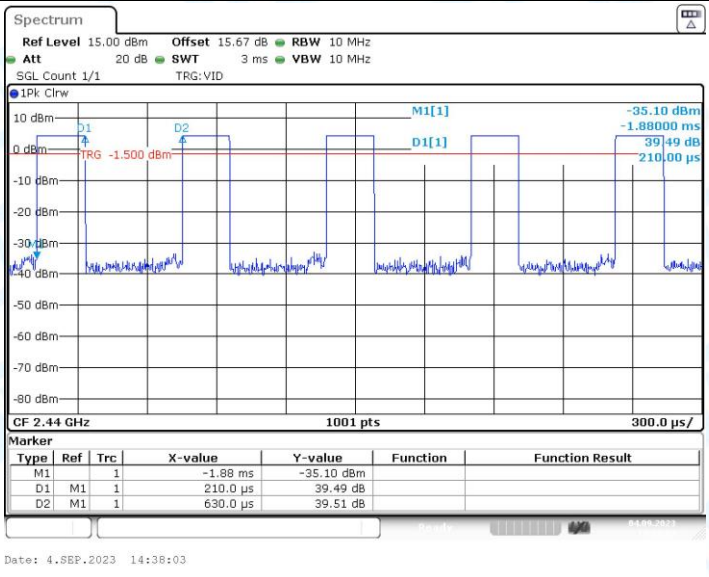
BLE_1M_Ant1_2480



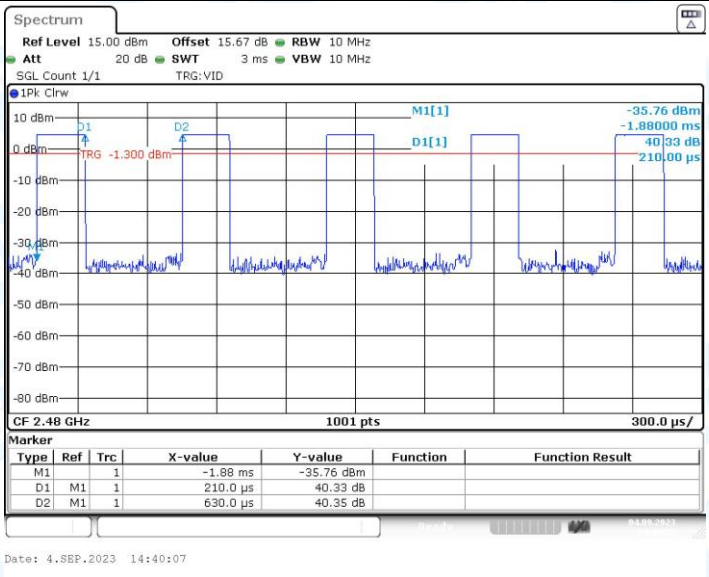
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



8. Emissions in Restricted Bands

8.1.Test Result

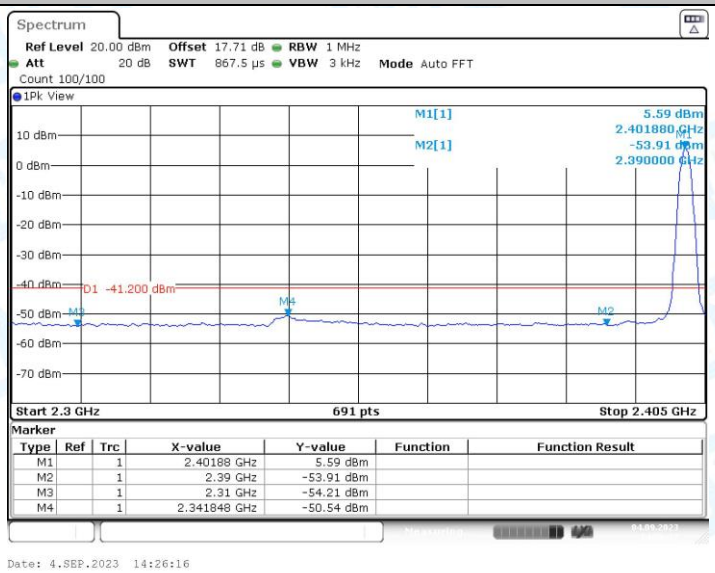
Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-54.21	≤-41.20	PASS
				AV	2341.848	-50.54	≤-41.20	PASS
				AV	2390.000	-53.91	≤-41.20	PASS
				Peak	2310.000	-44.98	≤-21.20	PASS
				Peak	2344.739	-39.67	≤-21.20	PASS
				Peak	2390.000	-43.24	≤-21.20	PASS
		High	2480	AV	2483.500	-51.69	≤-41.20	PASS
				AV	2487.623	-51.21	≤-41.20	PASS
				AV	2500.000	-52.4	≤-41.20	PASS
				Peak	2483.500	-42.67	≤-21.20	PASS
				Peak	2487.623	-38.11	≤-21.20	PASS
				Peak	2500.000	-42.79	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-53.36	≤-41.20	PASS
				AV	2342.304	-50.53	≤-41.20	PASS
				AV	2390.000	-53.18	≤-41.20	PASS
				Peak	2310.000	-43.45	≤-21.20	PASS
				Peak	2340.326	-40.1	≤-21.20	PASS
				Peak	2390.000	-41.5	≤-21.20	PASS
		High	2480	AV	2483.500	-49.26	≤-41.20	PASS
				AV	2483.565	-50.04	≤-41.20	PASS
				AV	2500.000	-52.03	≤-41.20	PASS
				Peak	2483.500	-39.33	≤-21.20	PASS
				Peak	2487.275	-37.58	≤-21.20	PASS
				Peak	2500.000	-42.39	≤-21.20	PASS

Note：

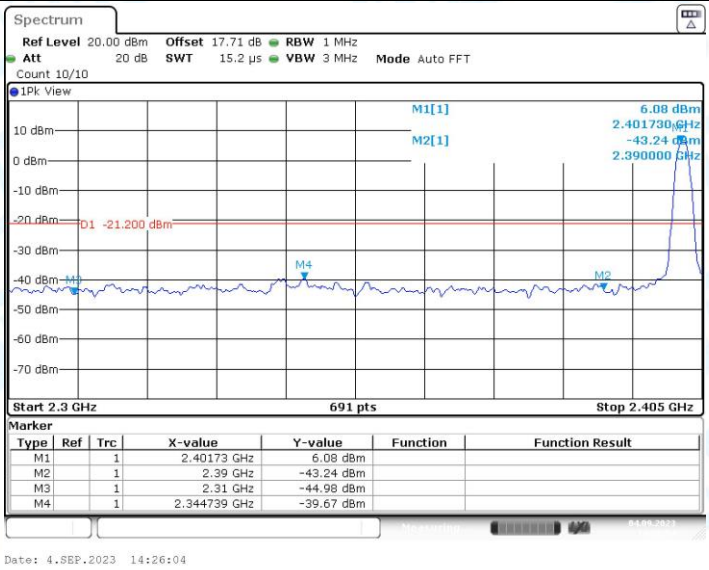
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

8.2.Test Graphs

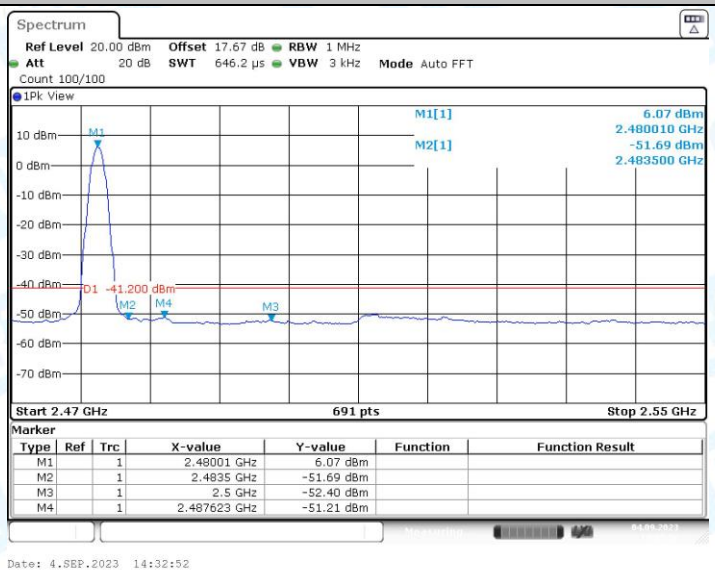
BLE_1M_Ant1_Low_2402_AV



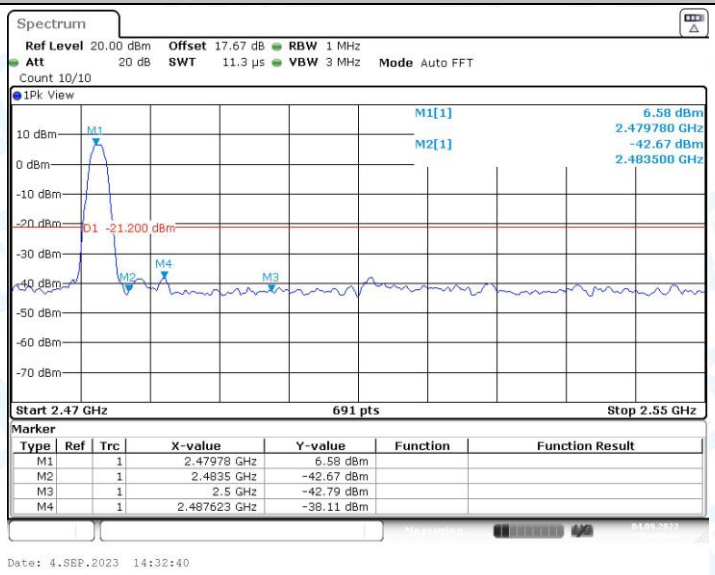
BLE_1M_Ant1_Low_2402_Peak



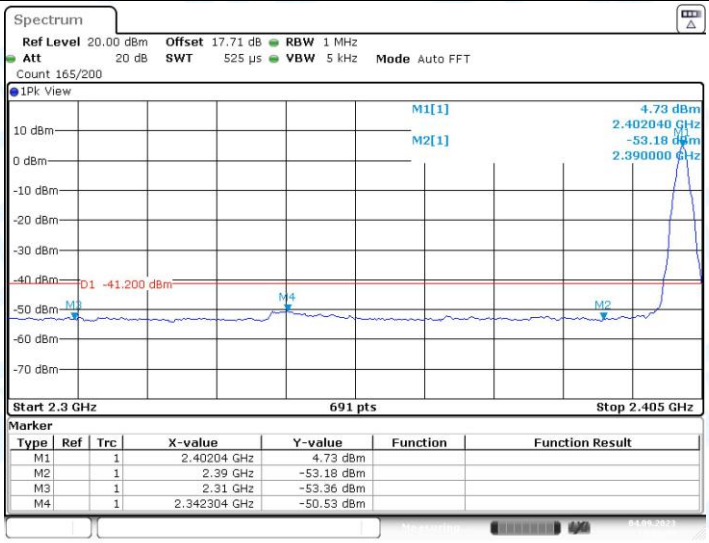
BLE_1M_Ant1_High_2480_AV



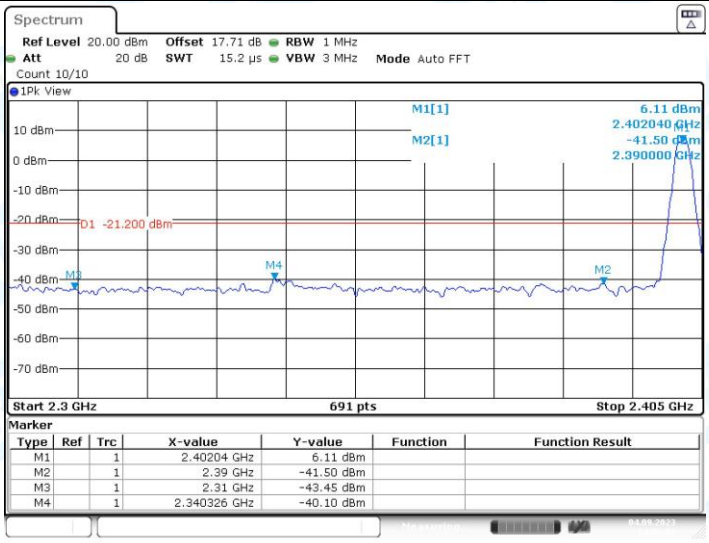
BLE_1M_Ant1_High_2480_Peak



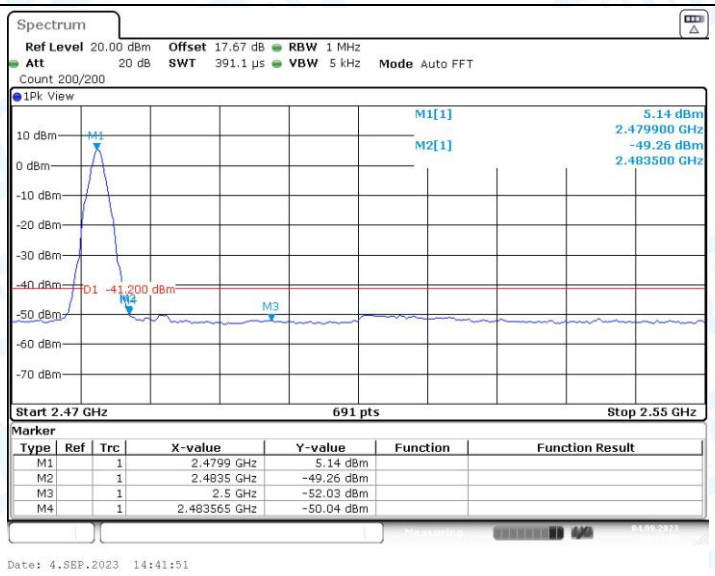
BLE_2M_Ant1_Low_2402_AV



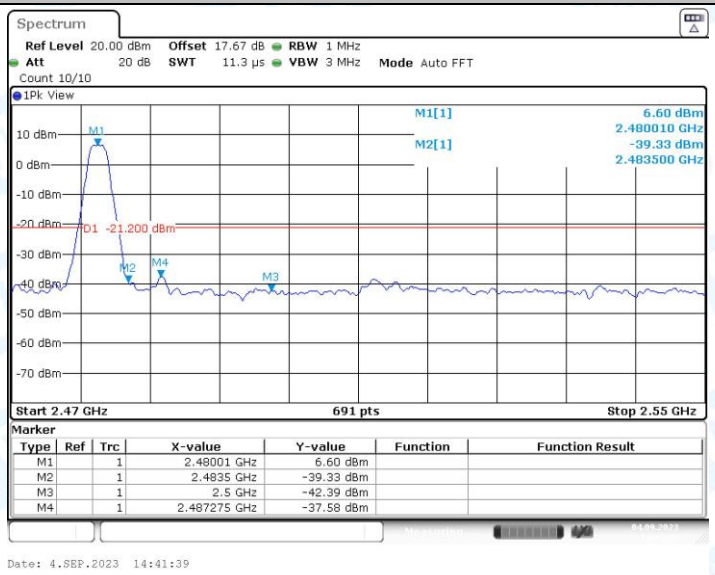
BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak



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