

RF Test Data for BLE (Conducted Measurements)

General Description of EUT	
EUT Name:	Portable Gaming Computer(Tablet computer)
Model:	AYANEO Pocket EVO
Sample ID:	HC-C-202411-0249-01-03-2#
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	24.8℃
Ambient Humidity:	48%RH
Test Power Supply:	DC 3.87V
Test Engineer:	ZKN. ZHOU
Note: For a more detailed features description, please refer to the report TBR-C-202411-0249-71	

Contents

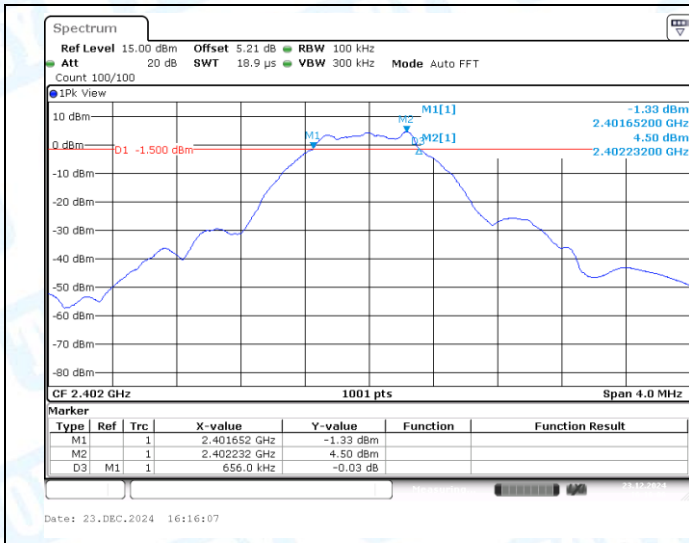
1: DTS Bandwidth	3
1.1 Test Result.....	3
1.2 Test Graphs	4
2: Occupied Channel Bandwidth	5
2.1 Test Result.....	5
2.2 Test Graphs	6
3: Maximum conducted peak output power	7
3.1 Test Result Peak.....	7
3.2 Test Graphs Peak.....	8
4: Maximum power spectral density	9
4.1 Test Result.....	9
4.2 Test Graphs	10
5: Band edge measurements.....	11
5.1 Test Result.....	11
5.2 Test Graphs	12
6: Conducted Spurious Emission	13
6.1 Test Result.....	13
6.2 Test Graphs	14
7: Duty Cycle	17
7.1 Test Result.....	17
7.2 Test Graphs	18
8: Emissions in Restricted Bands	19
8.1 Test Result.....	19
8.2 Test Graphs	20

1: DTS Bandwidth

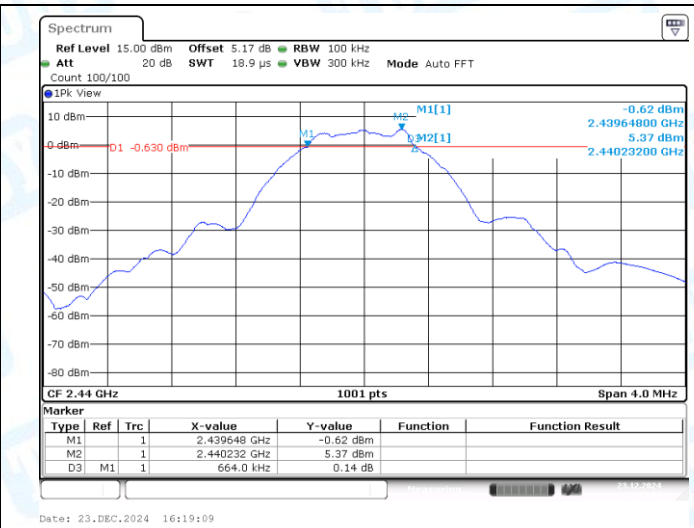
1.1 Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.66	2401.65	2402.31	0.5	PASS
BLE_1M	Ant1	2440	0.66	2439.65	2440.31	0.5	PASS
BLE_1M	Ant1	2480	0.66	2479.65	2480.31	0.5	PASS
BLE_2M	Ant1	2402	1.14	2401.42	2402.56	0.5	PASS
BLE_2M	Ant1	2440	1.14	2439.42	2440.56	0.5	PASS
BLE_2M	Ant1	2480	1.15	2479.41	2480.56	0.5	PASS

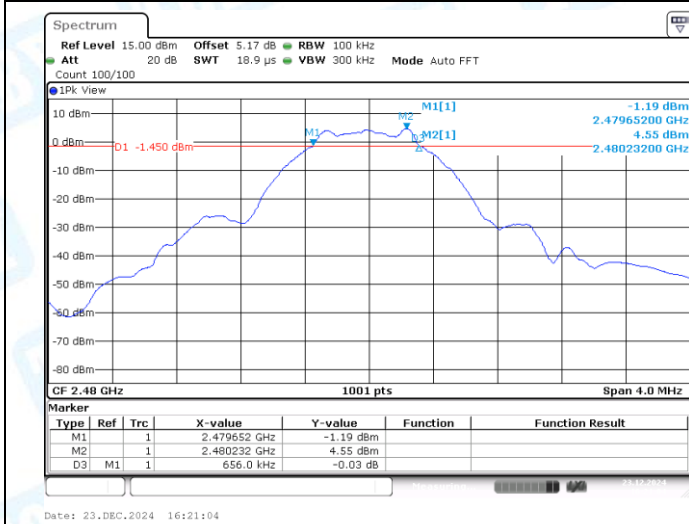
1.2 Test Graphs



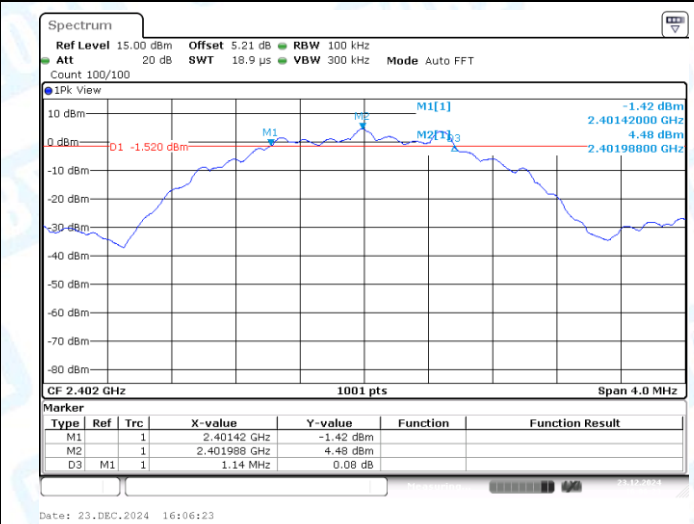
BLE_1M-Ant1-2402-PASS



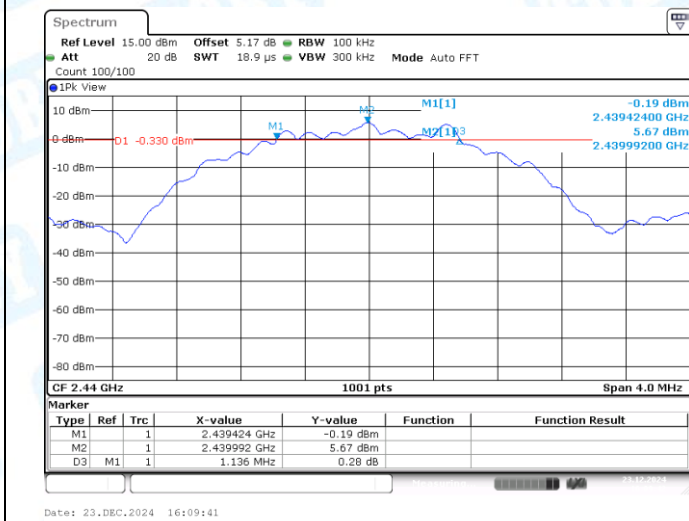
BLE_1M-Ant1-2440-PASS



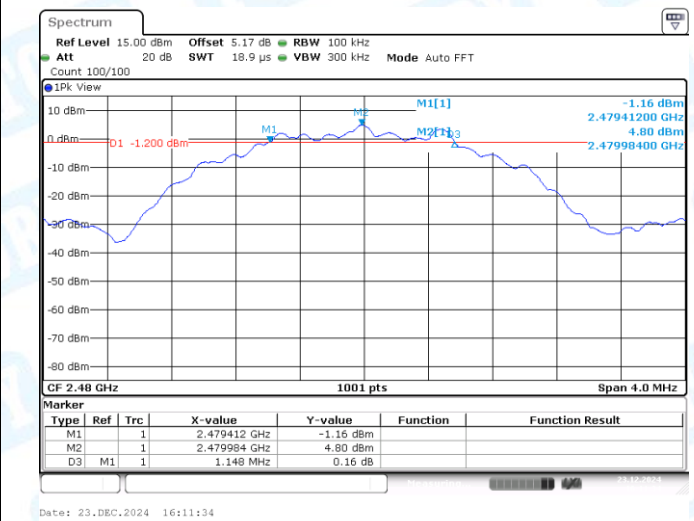
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



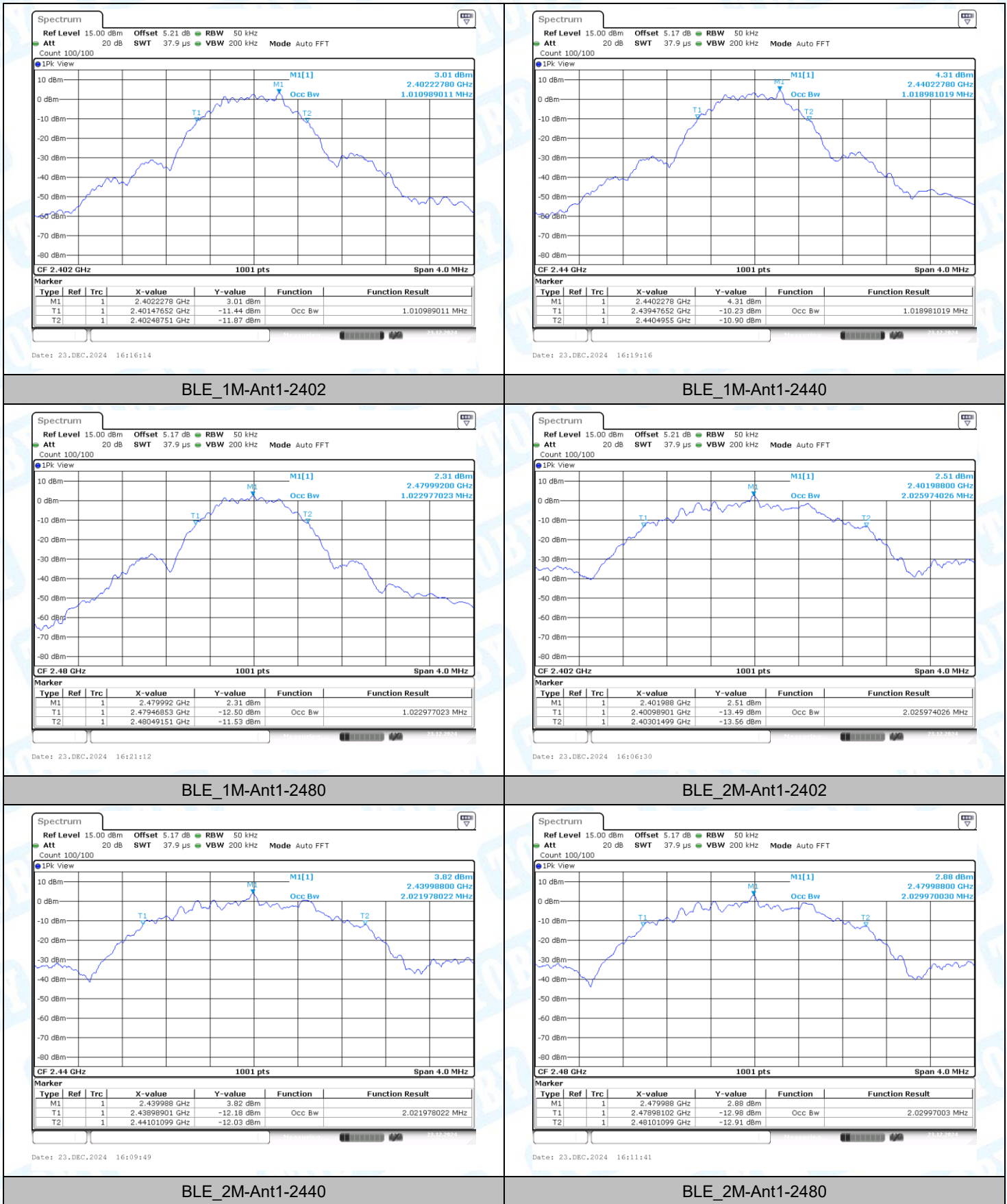
BLE_2M-Ant1-2480-PASS

2: Occupied Channel Bandwidth

2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.011	2401.4765	2402.4875	---	---
BLE_1M	Ant1	2440	1.019	2439.4765	2440.4955	---	---
BLE_1M	Ant1	2480	1.023	2479.4685	2480.4915	---	---
BLE_2M	Ant1	2402	2.026	2400.9890	2403.0150	---	---
BLE_2M	Ant1	2440	2.022	2438.9890	2441.0110	---	---
BLE_2M	Ant1	2480	2.03	2478.9810	2481.0110	---	---

2.2 Test Graphs

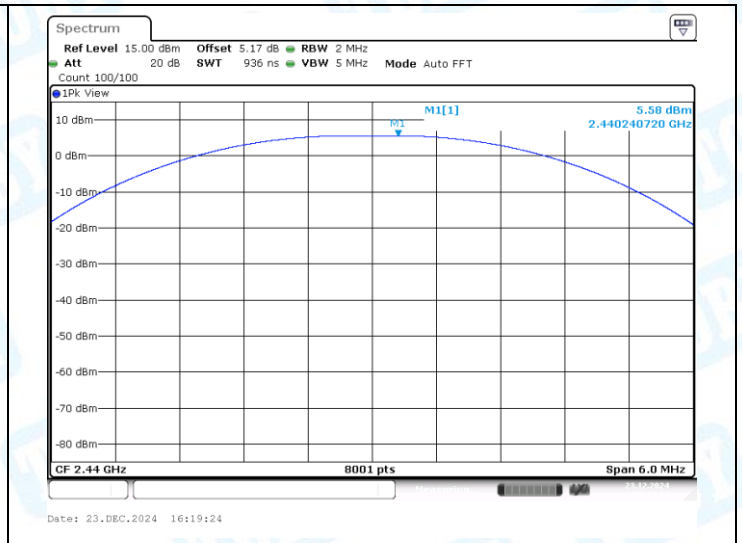
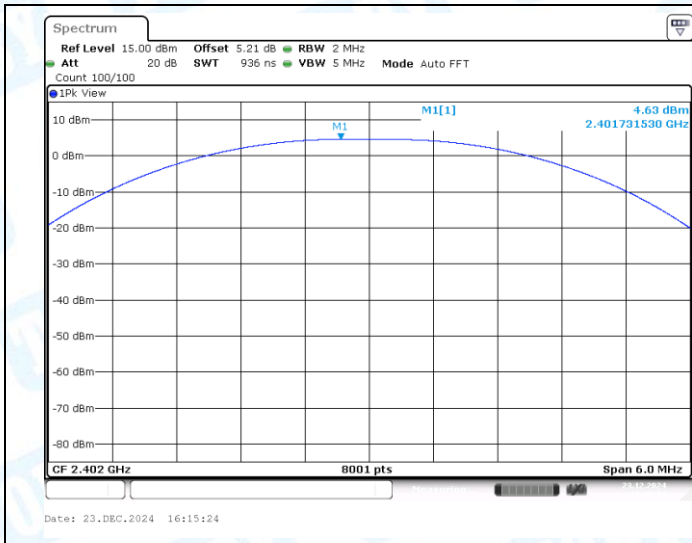


3: Maximum conducted peak output power

3.1 Test Result Peak

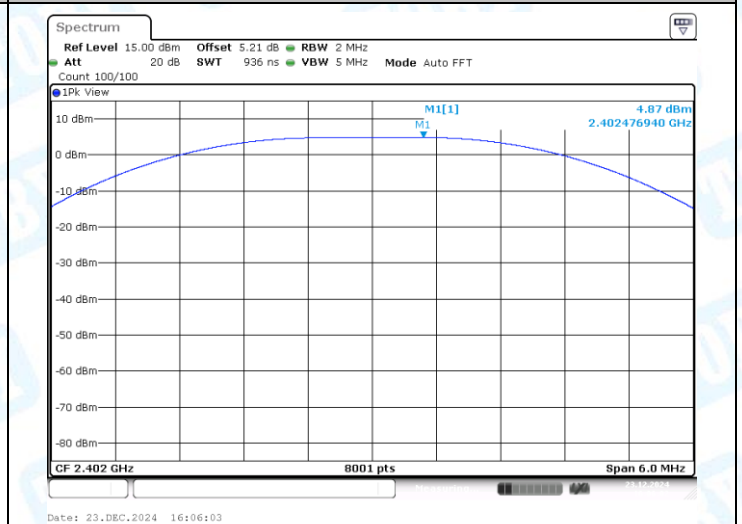
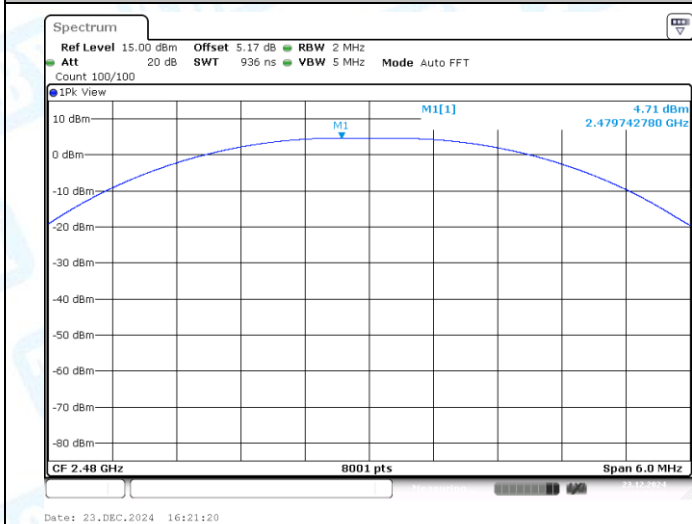
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	4.63	≤30	PASS
BLE_1M	Ant1	2440	5.58	≤30	PASS
BLE_1M	Ant1	2480	4.71	≤30	PASS
BLE_2M	Ant1	2402	4.87	≤30	PASS
BLE_2M	Ant1	2440	6.12	≤30	PASS
BLE_2M	Ant1	2480	5.27	≤30	PASS

3.2 Test Graphs Peak



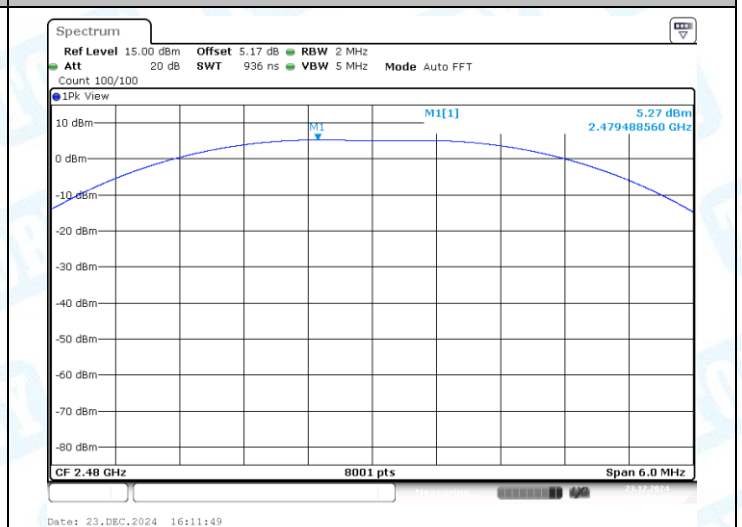
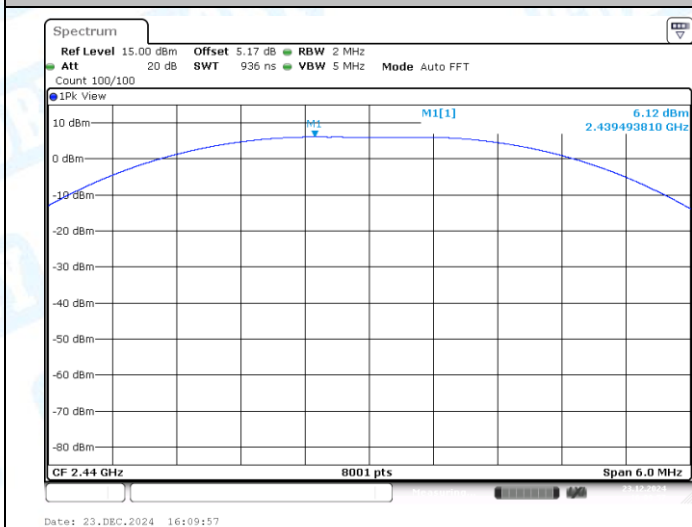
BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2440-PASS



BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS

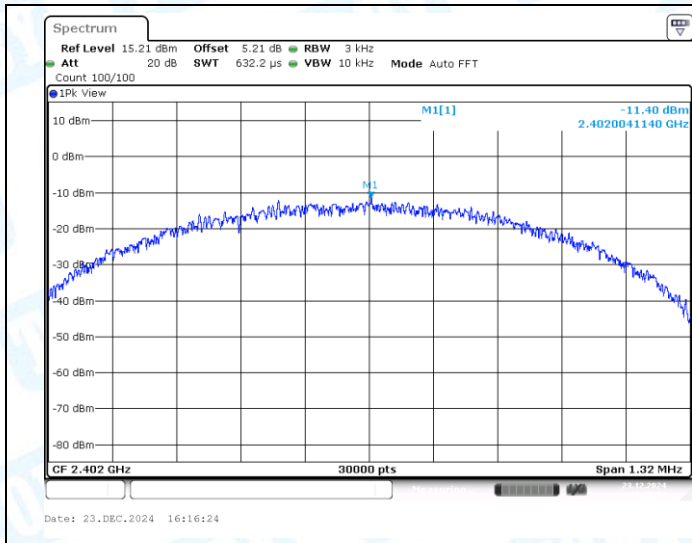
BLE_2M-Ant1-2480-PASS

4: Maximum power spectral density

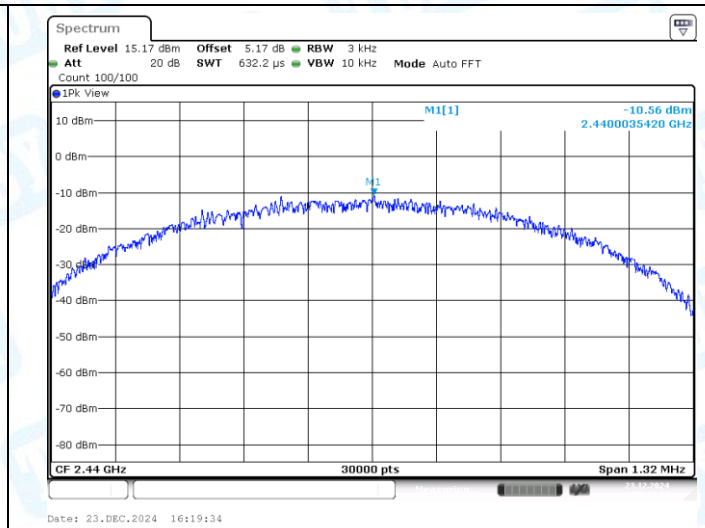
4.1 Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.40	≤8.00	PASS
BLE_1M	Ant1	2440	-10.56	≤8.00	PASS
BLE_1M	Ant1	2480	-11.45	≤8.00	PASS
BLE_2M	Ant1	2402	-14.43	≤8.00	PASS
BLE_2M	Ant1	2440	-13.23	≤8.00	PASS
BLE_2M	Ant1	2480	-14.07	≤8.00	PASS

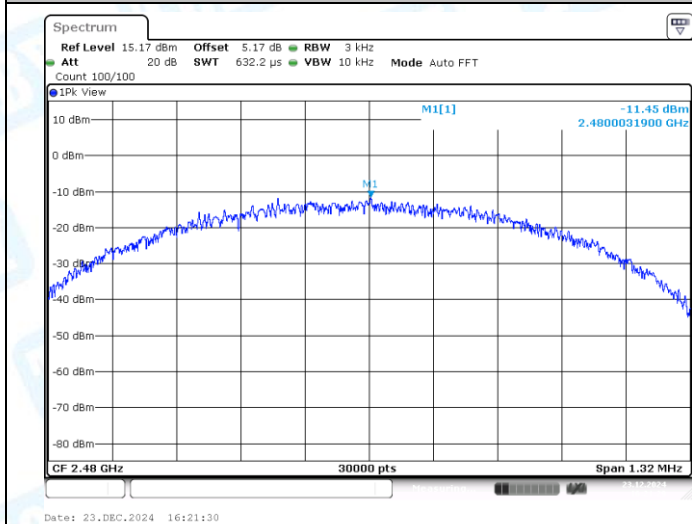
4.2 Test Graphs



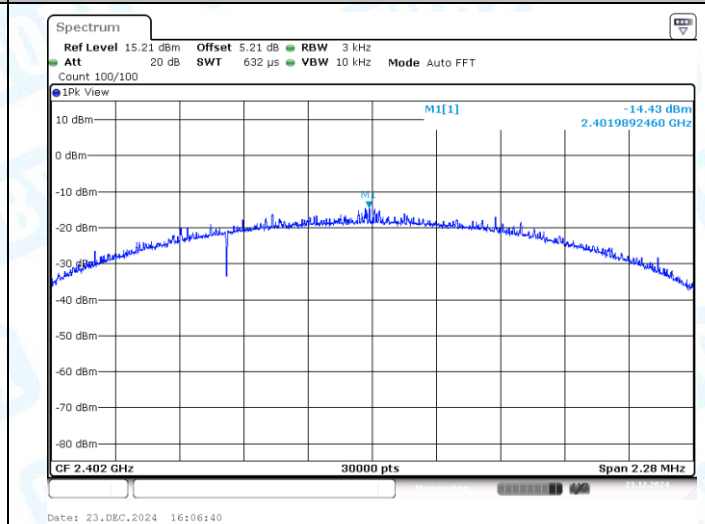
BLE_1M-Ant1-2402-PASS



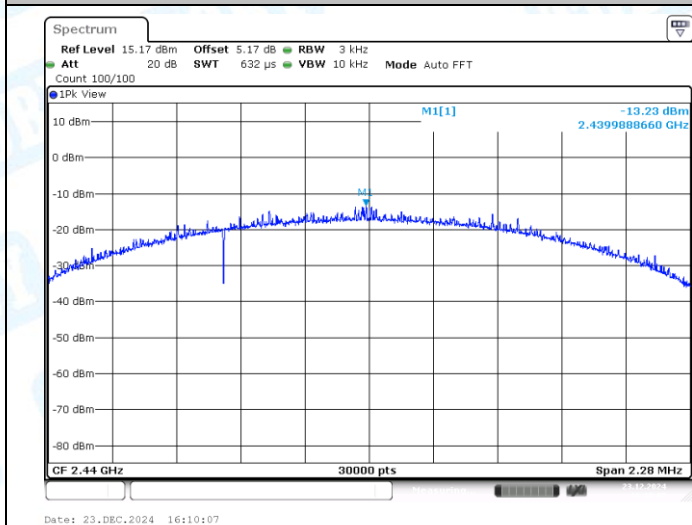
BLE_1M-Ant1-2440-PASS



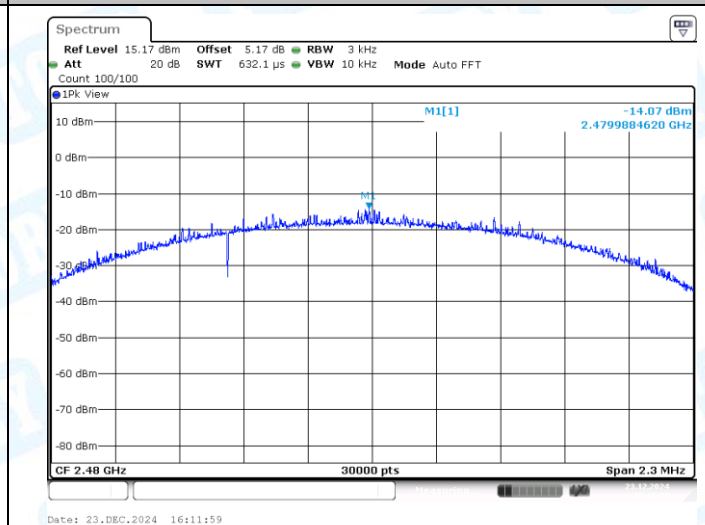
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



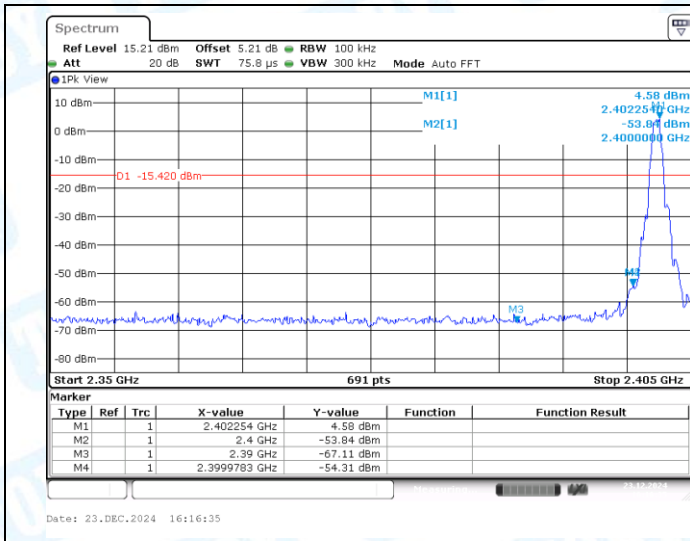
BLE_2M-Ant1-2480-PASS

5: Band edge measurements

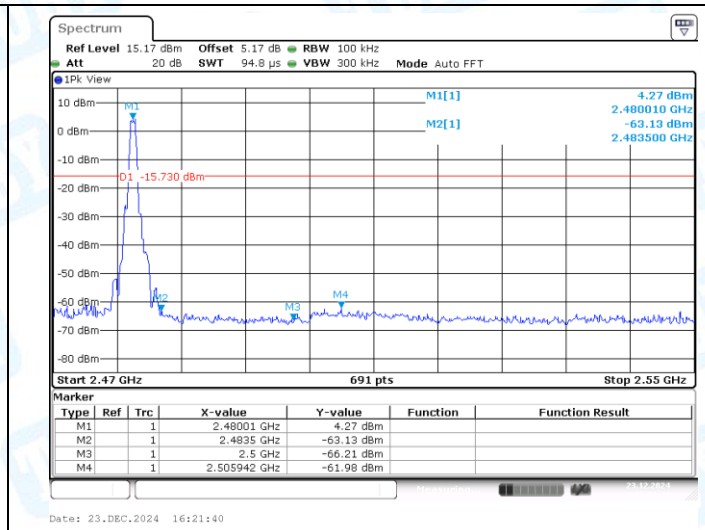
5.1 Test Result

Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	4.58	-54.31	≤-15.42	PASS
BLE_1M	Ant1	High	2480	4.27	-61.98	≤-15.73	PASS
BLE_2M	Ant1	Low	2402	4.58	-29.38	≤-15.42	PASS
BLE_2M	Ant1	High	2480	4.34	-53.27	≤-15.66	PASS

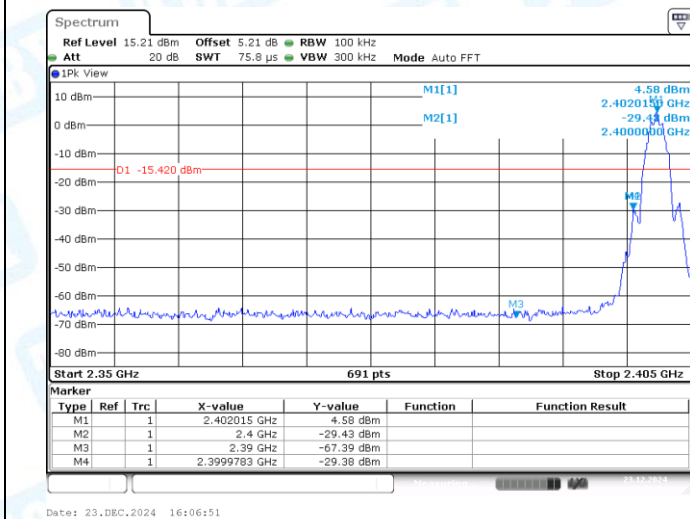
5.2 Test Graphs



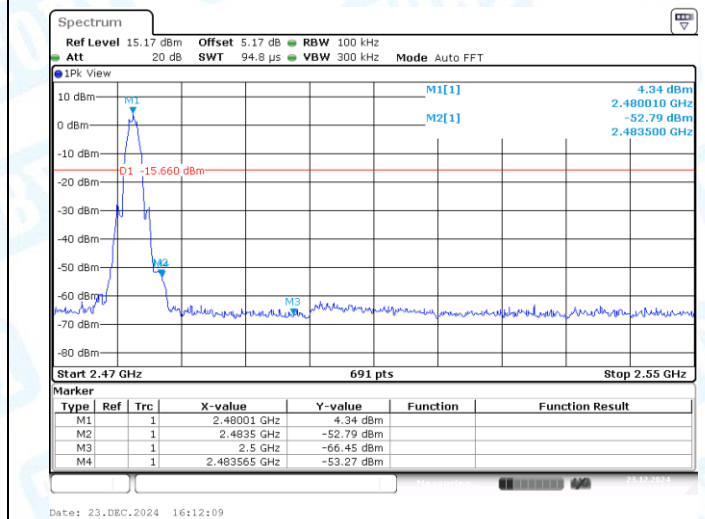
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



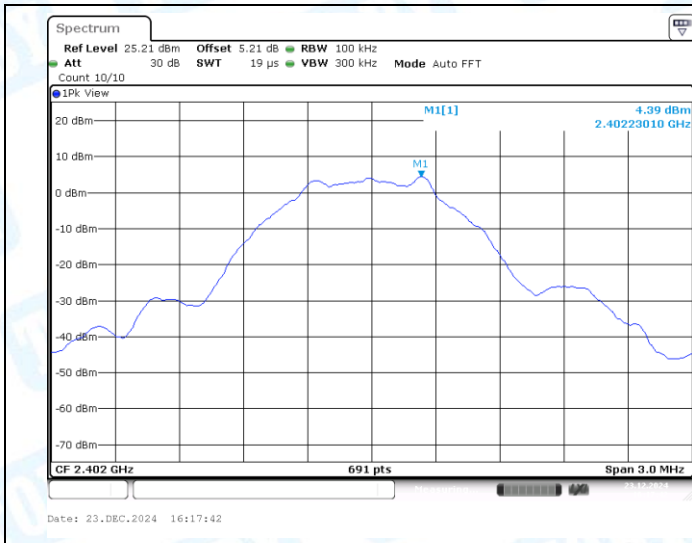
BLE_2M-Ant1-2480-PASS

6: Conducted Spurious Emission

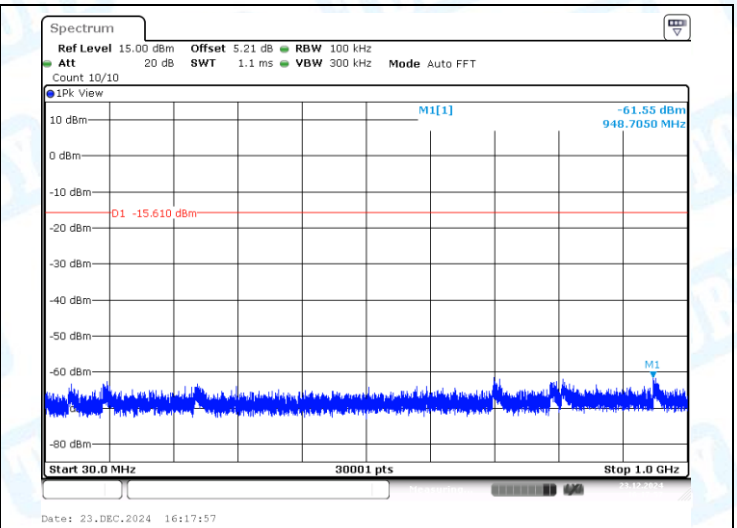
6.1 Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	4.39	4.39	---	PASS
BLE_1M	Ant1	2402	30~1000	4.39	-61.55	≤-15.61	PASS
BLE_1M	Ant1	2402	1000~26500	4.39	-56.02	≤-15.61	PASS
BLE_1M	Ant1	2440	0~Reference	5.47	5.47	---	PASS
BLE_1M	Ant1	2440	30~1000	5.47	-60.14	≤-14.53	PASS
BLE_1M	Ant1	2440	1000~26500	5.47	-56.08	≤-14.53	PASS
BLE_1M	Ant1	2480	0~Reference	4.52	4.52	---	PASS
BLE_1M	Ant1	2480	30~1000	4.52	-59.95	≤-15.48	PASS
BLE_1M	Ant1	2480	1000~26500	4.52	-55.38	≤-15.48	PASS
BLE_2M	Ant1	2402	0~Reference	4.52	4.52	---	PASS
BLE_2M	Ant1	2402	30~1000	4.52	-62.19	≤-15.48	PASS
BLE_2M	Ant1	2402	1000~26500	4.52	-55.6	≤-15.48	PASS
BLE_2M	Ant1	2440	0~Reference	5.69	5.69	---	PASS
BLE_2M	Ant1	2440	30~1000	5.69	-61.51	≤-14.31	PASS
BLE_2M	Ant1	2440	1000~26500	5.69	-55.55	≤-14.31	PASS
BLE_2M	Ant1	2480	0~Reference	4.75	4.75	---	PASS
BLE_2M	Ant1	2480	30~1000	4.75	-61.47	≤-15.25	PASS
BLE_2M	Ant1	2480	1000~26500	4.75	-55.78	≤-15.25	PASS

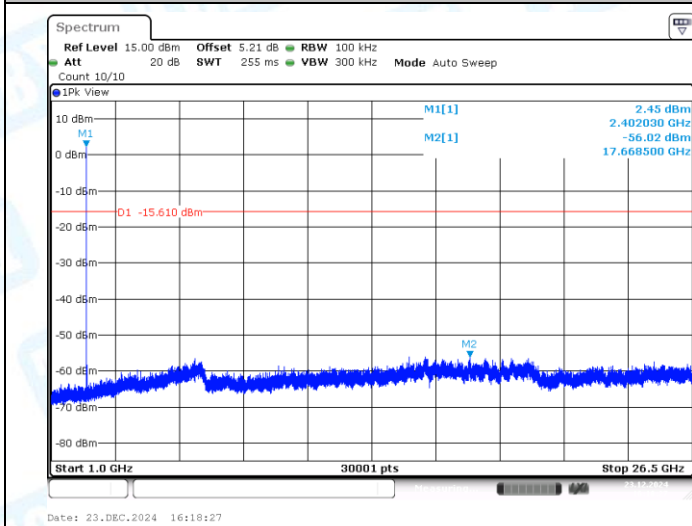
6.2 Test Graphs



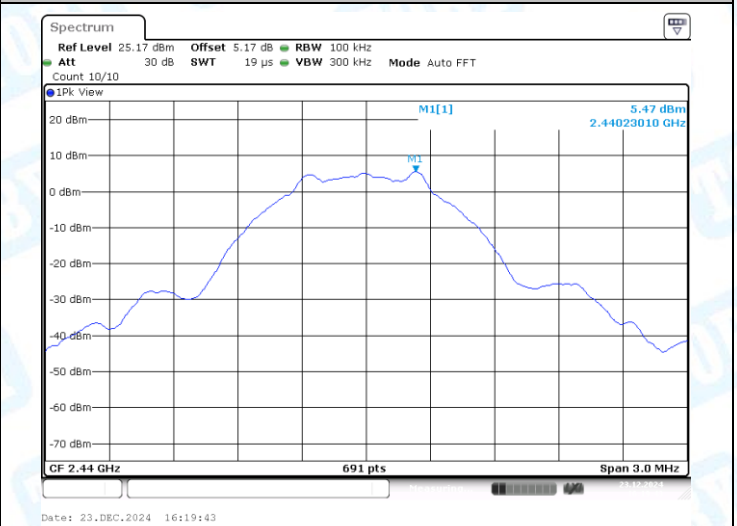
BLE_1M-Ant1-2402-0~Reference-PASS



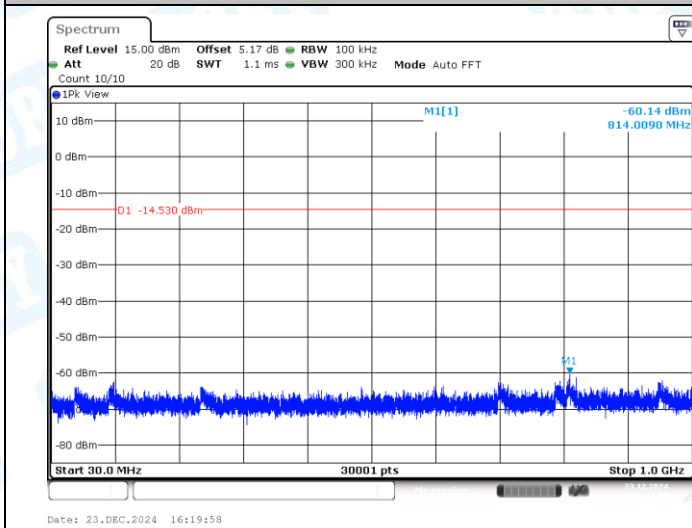
BLE_1M-Ant1-2402-30~1000-PASS



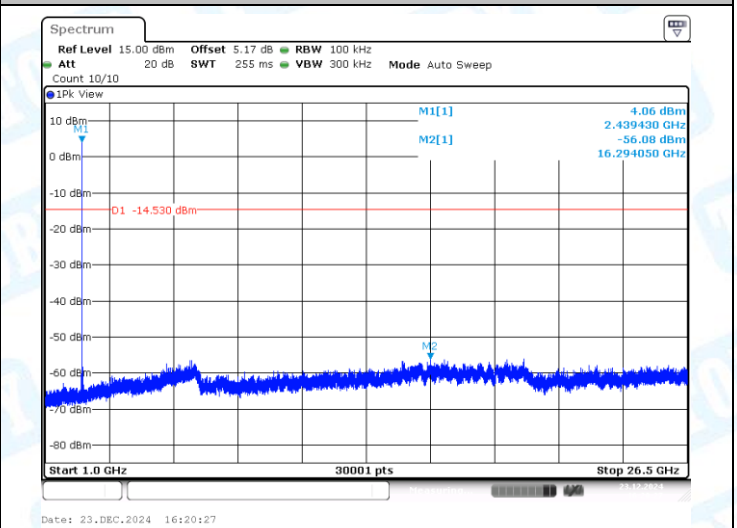
BLE_1M-Ant1-2402-1000~26500-PASS



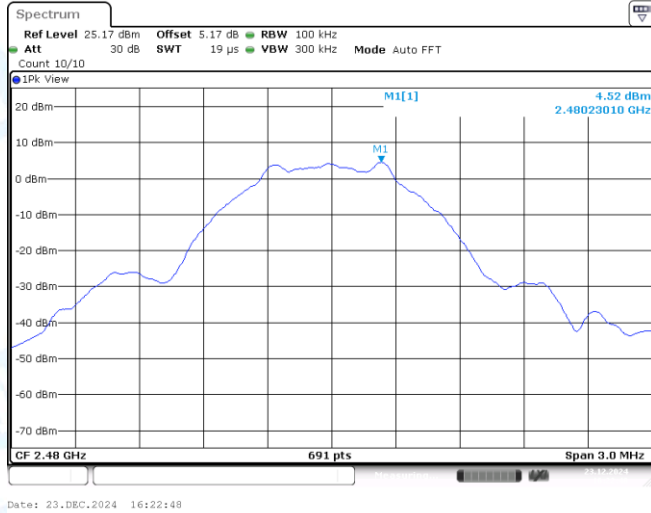
BLE_1M-Ant1-2440-0~Reference-PASS



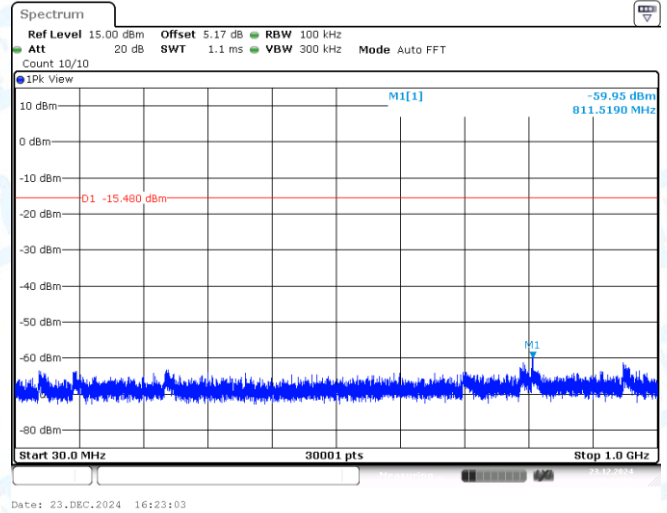
BLE_1M-Ant1-2440-30~1000-PASS



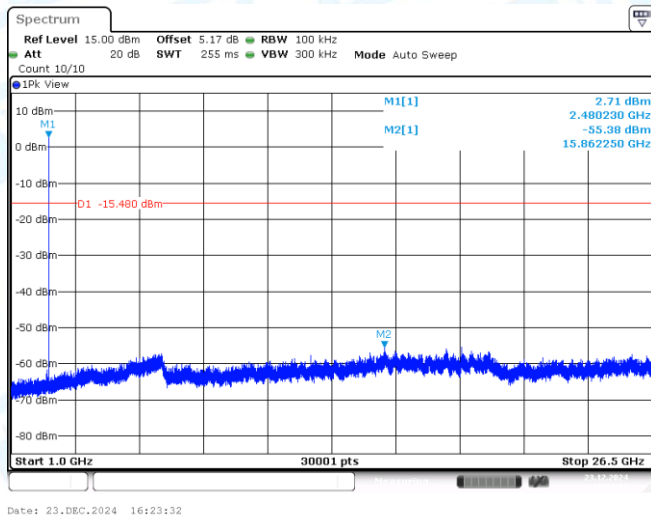
BLE_1M-Ant1-2440-1000~26500-PASS



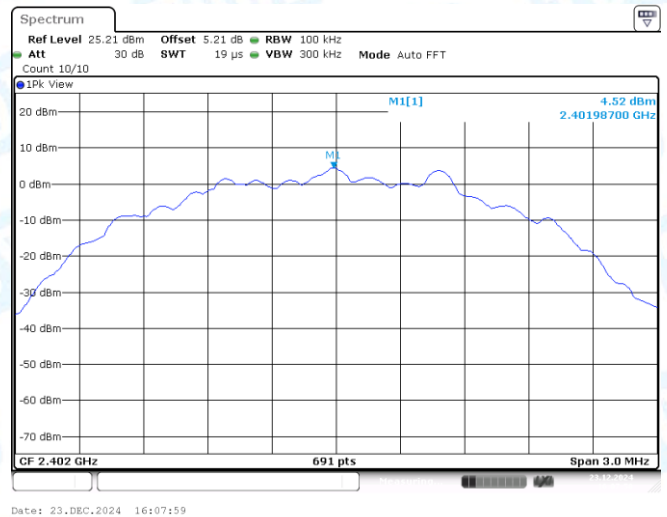
BLE_1M-Ant1-2480-0~Reference-PASS



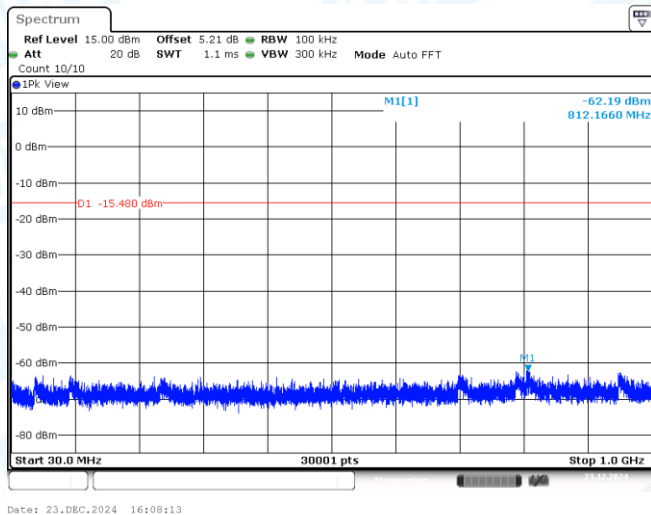
BLE_1M-Ant1-2480-30~1000-PASS



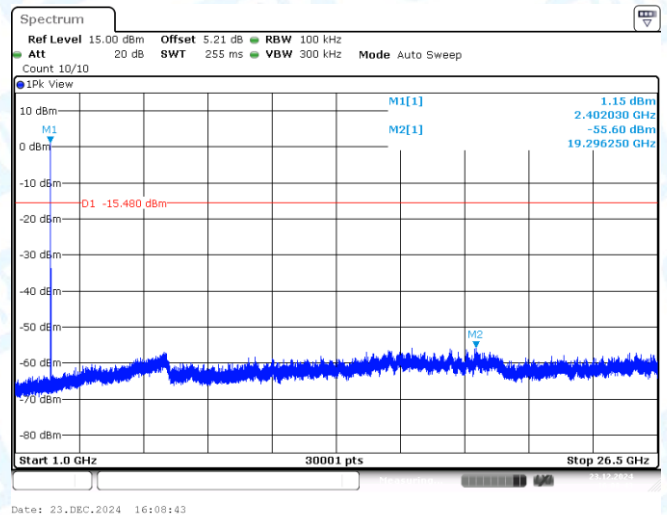
BLE_1M-Ant1-2480-1000~26500-PASS



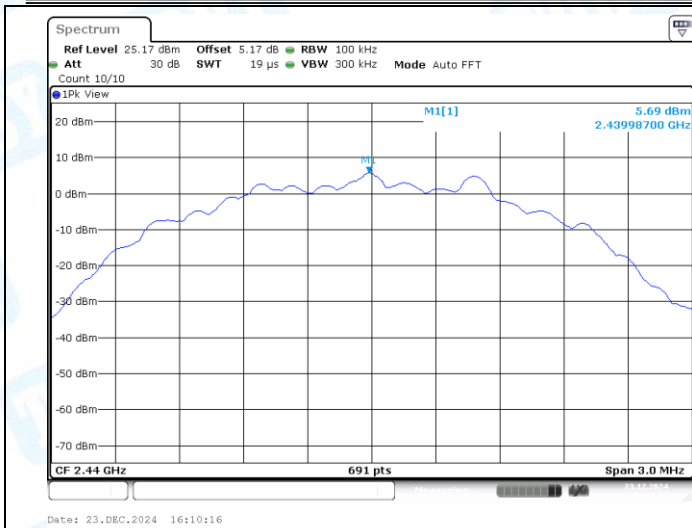
BLE_2M-Ant1-2402-0~Reference-PASS



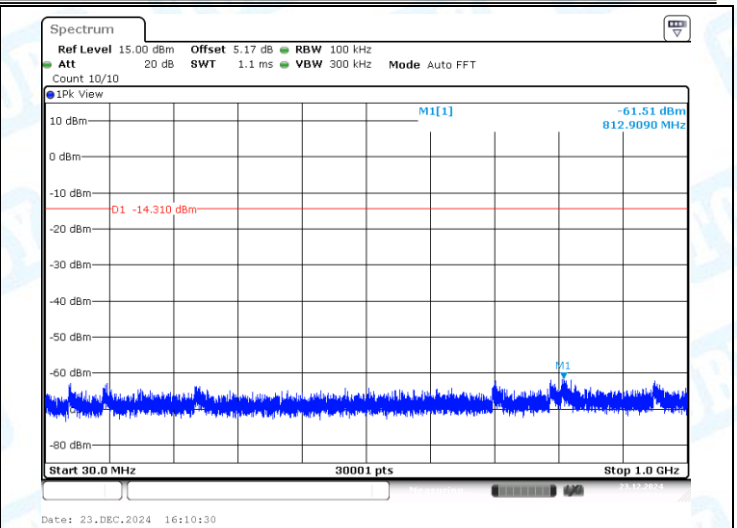
BLE_2M-Ant1-2402-30~1000-PASS



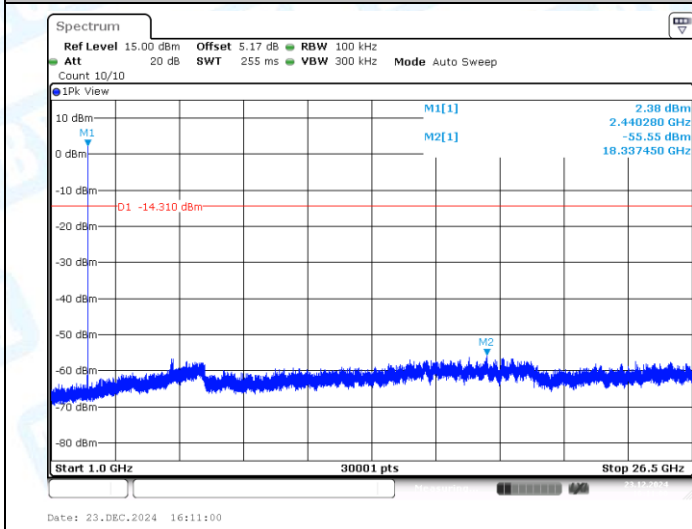
BLE_2M-Ant1-2402-1000~26500-PASS



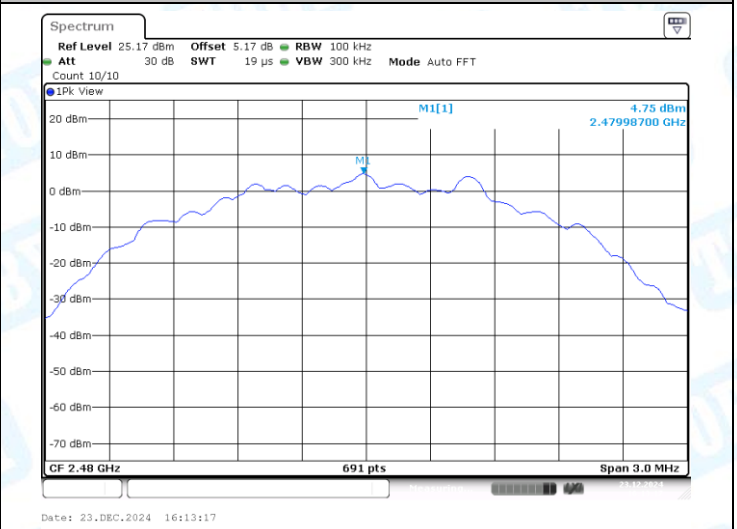
BLE_2M-Ant1-2440-0~Reference-PASS



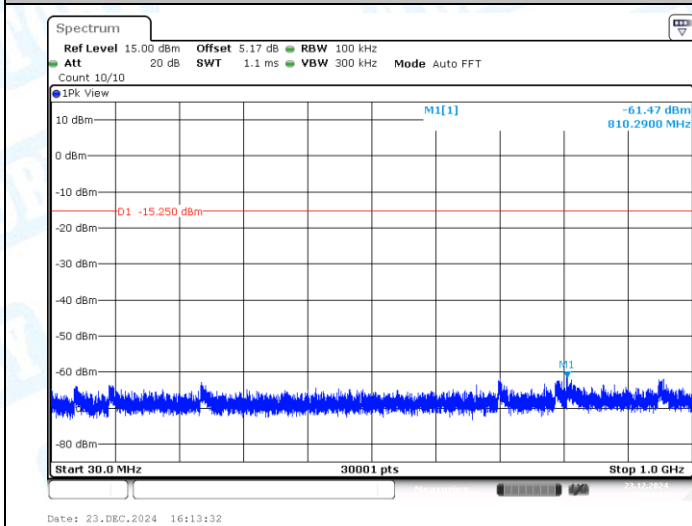
BLE_2M-Ant1-2440-30~1000-PASS



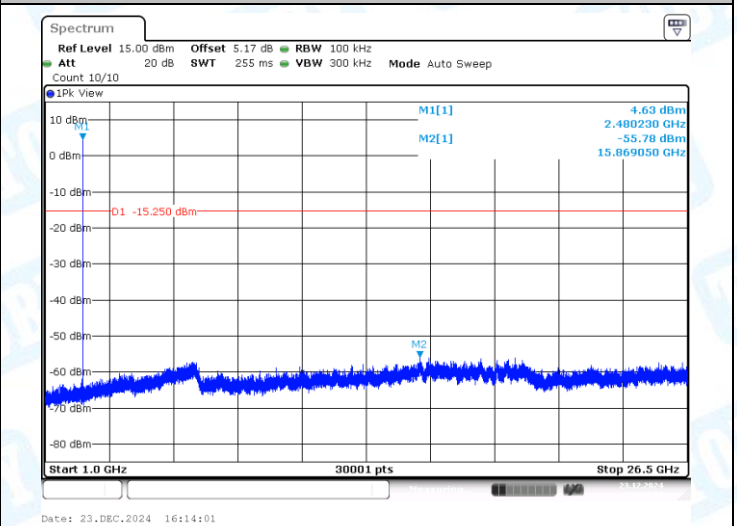
BLE_2M-Ant1-2440-1000~26500-PASS



BLE_2M-Ant1-2480-0~Reference-PASS



BLE_2M-Ant1-2480-30~1000-PASS



BLE_2M-Ant1-2480-1000~26500-PASS

7: Duty Cycle

7.1 Test Result

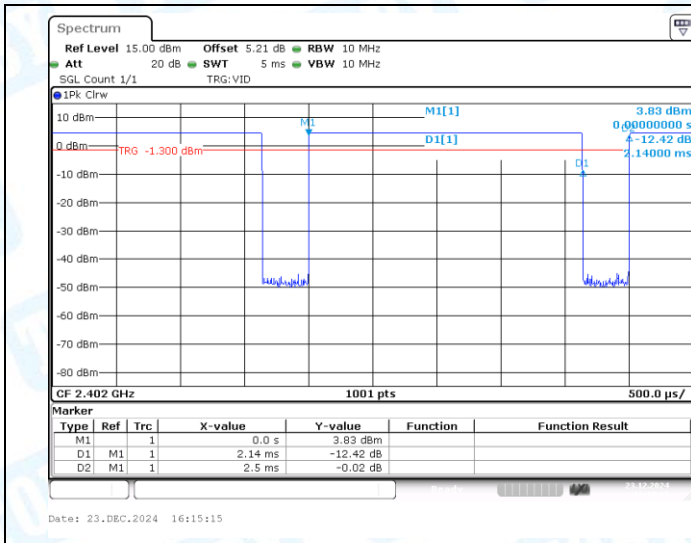
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
BLE_1M	Ant1	2402	2.14	2.50	85.60	0.68	0.47
BLE_1M	Ant1	2440	2.14	2.50	85.60	0.68	0.47
BLE_1M	Ant1	2480	2.14	2.50	85.60	0.68	0.47
BLE_2M	Ant1	2402	1.09	1.88	57.98	2.37	0.92
BLE_2M	Ant1	2440	1.09	1.88	57.98	2.37	0.92
BLE_2M	Ant1	2480	1.09	1.88	57.98	2.37	0.92

Note: 1, Duty Cycle= Transmission Duration/ Transmission Period

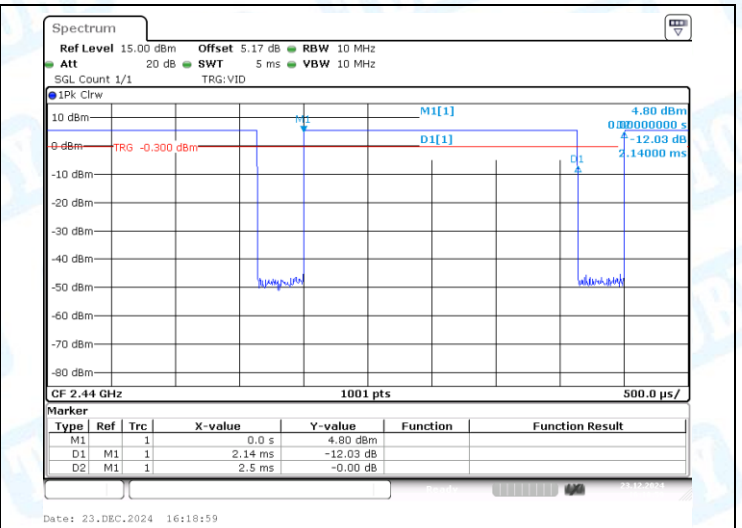
2, DC Factory=10*Log₁₀(1/Duty Cycle)

3, 1/T=1/ Transmission Duration

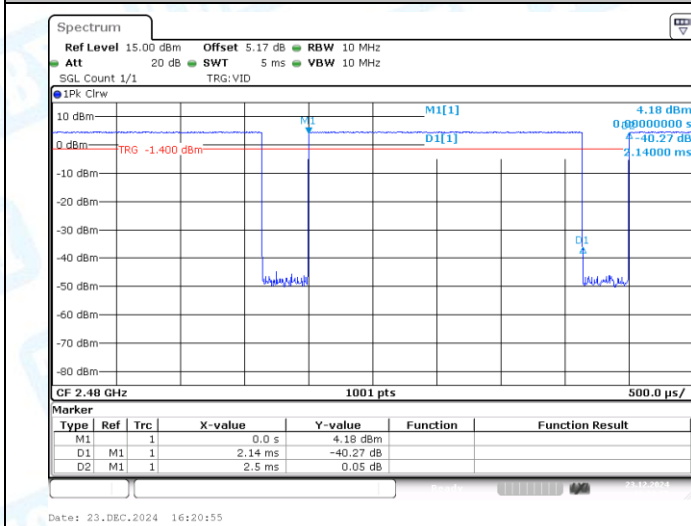
7.2 Test Graphs



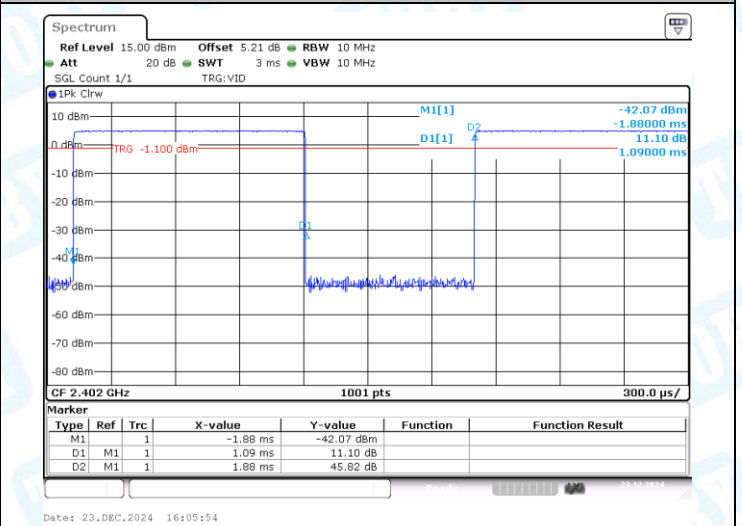
NTVN-BLE_1M-Ant1-2402



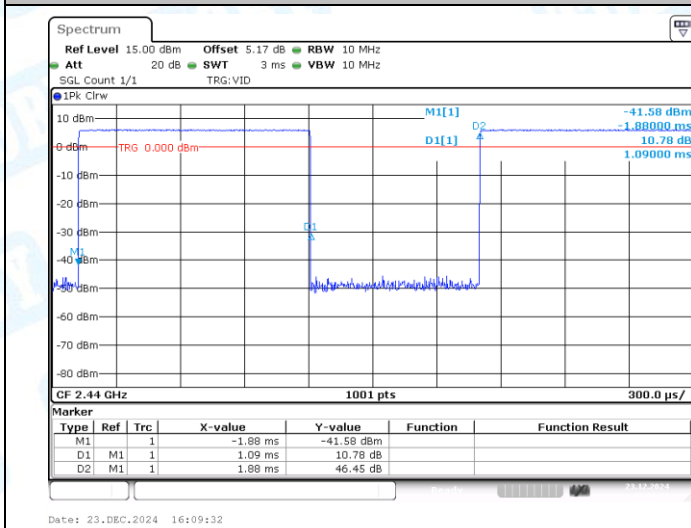
NTVN-BLE_1M-Ant1-2440



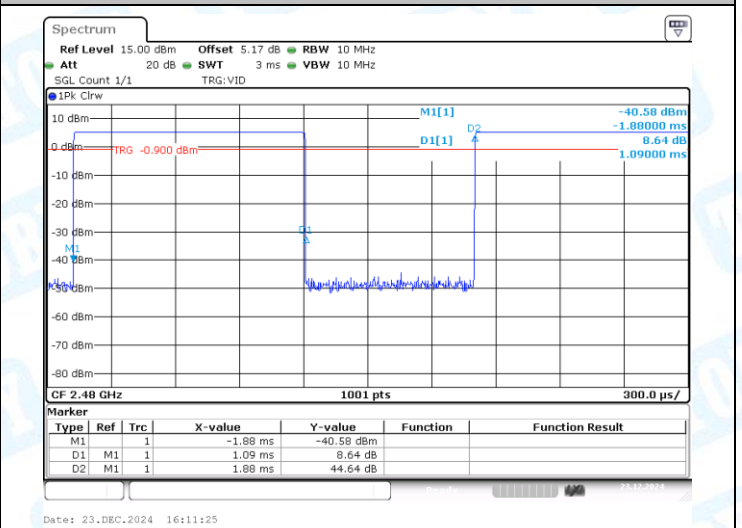
NTVN-BLE_1M-Ant1-2480



NTVN-BLE_2M-Ant1-2402



NTVN-BLE_2M-Ant1-2440



NTVN-BLE_2M-Ant1-2480

8: Emissions in Restricted Bands

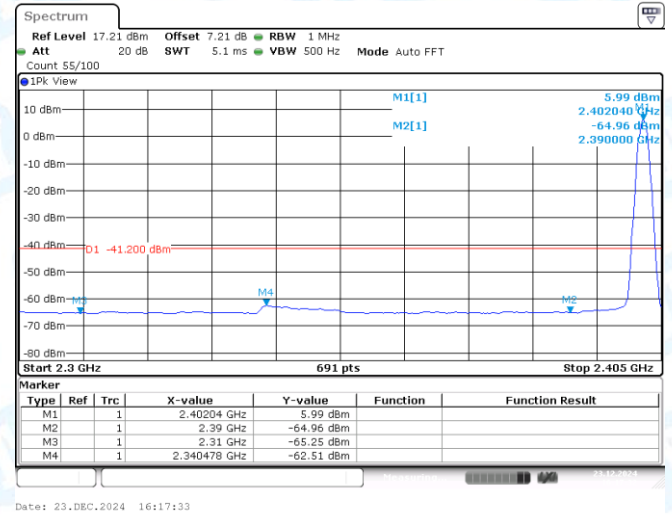
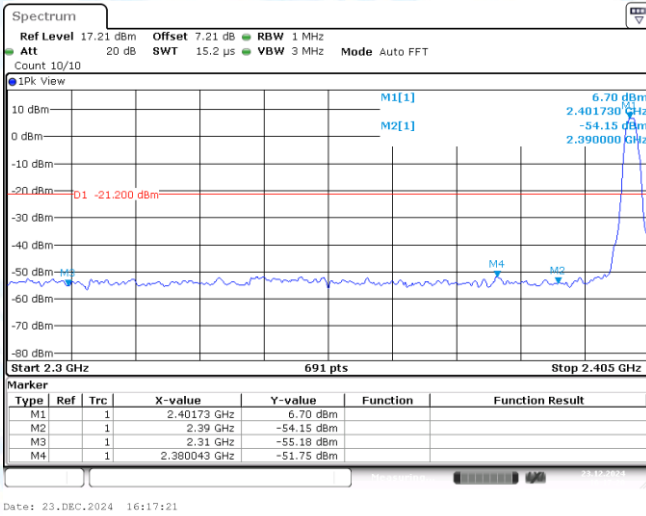
8.1 Test Result

Test Mode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	Peak	2390.000	-54.15	≤-21.20	41.05	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-55.18	≤-21.20	40.02	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2380.043	-51.75	≤-21.20	43.45	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-64.96	≤-41.20	30.24	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-65.25	≤-41.20	29.95	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2340.478	-62.51	≤-41.20	32.69	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-46.34	≤-21.20	48.86	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-53.69	≤-21.20	41.51	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2483.797	-45	≤-21.20	50.20	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-63.34	≤-41.20	31.86	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-64.8	≤-41.20	30.40	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2483.797	-63.38	≤-41.20	31.82	≤54	PASS
BLE_2M	Ant1	Low	2402	Peak	2390.000	-54.02	≤-21.20	41.18	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2310.000	-53.54	≤-21.20	41.66	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2344.587	-50.47	≤-21.20	44.73	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2390.000	-64.84	≤-41.20	30.36	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-64.89	≤-41.20	30.31	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2341.391	-62.26	≤-41.20	32.94	≤54	PASS
BLE_2M	Ant1	High	2480	Peak	2483.500	-36.78	≤-21.20	58.42	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2500.000	-54.21	≤-21.20	40.99	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2483.681	-35.27	≤-21.20	59.93	≤74	PASS
BLE_2M	Ant1	High	2480	AV	2483.500	-55.67	≤-41.20	39.53	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2500.000	-64.72	≤-41.20	30.48	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2483.565	-57.61	≤-41.20	37.59	≤54	PASS

Note:

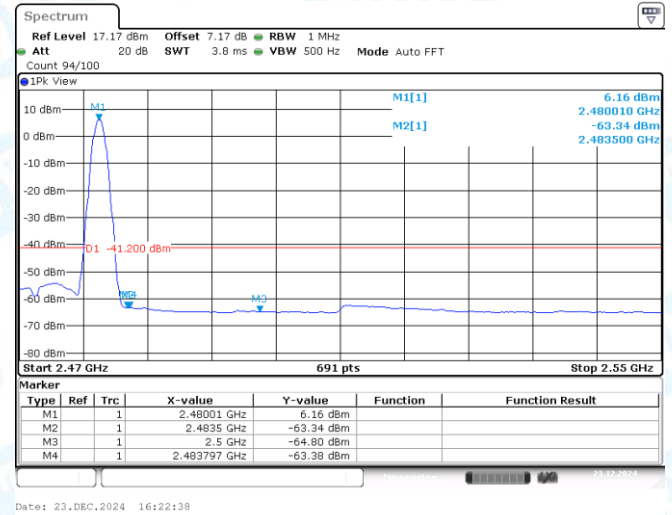
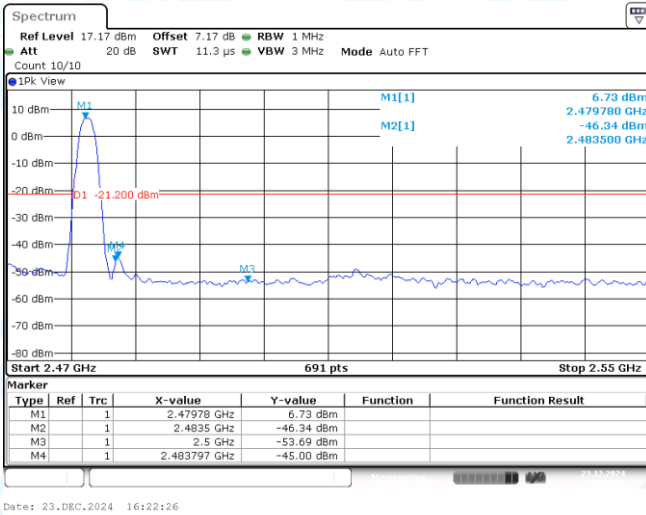
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

8.2 Test Graphs



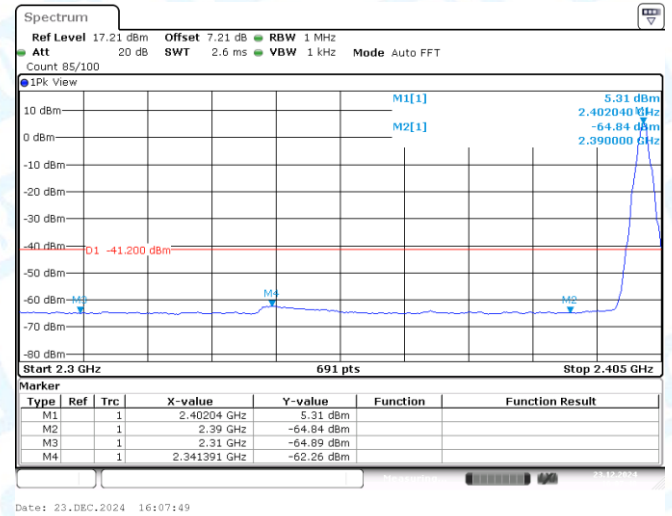
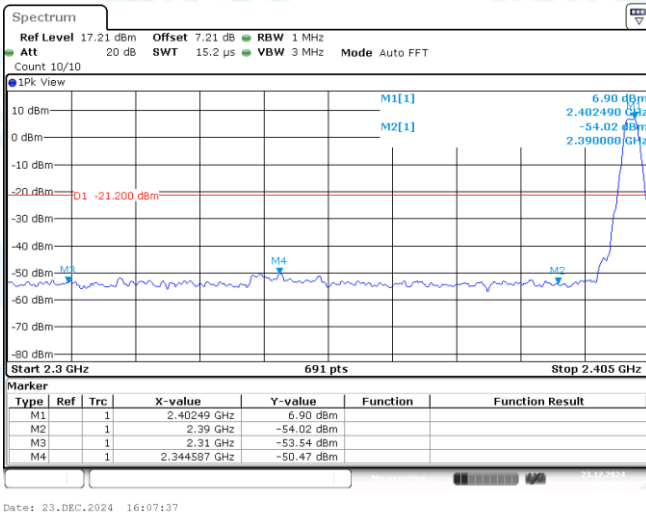
BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2402-PASS



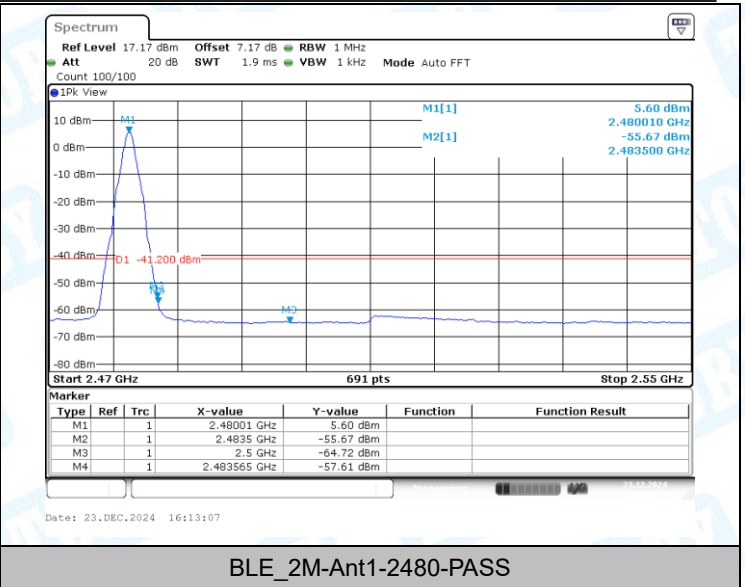
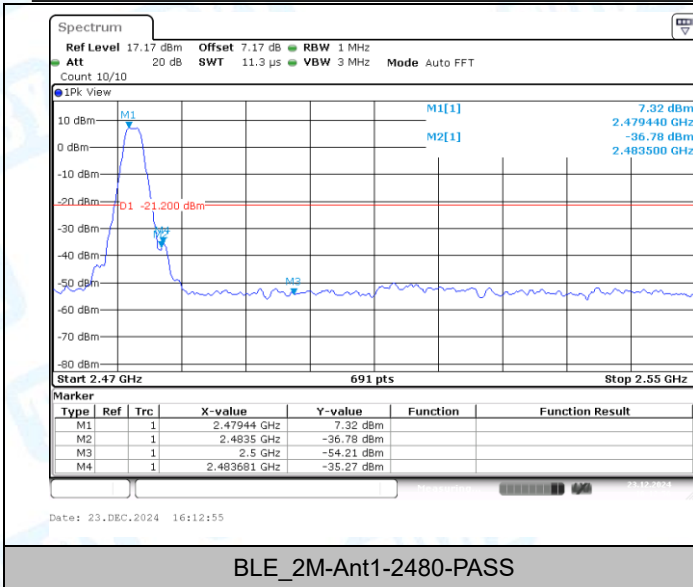
BLE_1M-Ant1-2480-PASS

BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2402-PASS



-----END OF THE REPORT-----