

RF Test Data for BLE (Conducted Measurements)

General Description of EUT	
EUT Name:	Portable Gaming Computer(Tablet computer)
Model:	AYANEO Pocket DMG
Sample ID:	HC-C-202410-0245-01-01-2#
Environmental Conditions	
Ambient Temperature:	24.5℃
Ambient Humidity:	47%RH
Test Power Supply:	DC 3.85V
Test Engineer:	Zkn.zhou
Note: For a more detailed features description, please refer to the report TBR-C-202410-0245-141	

Contents

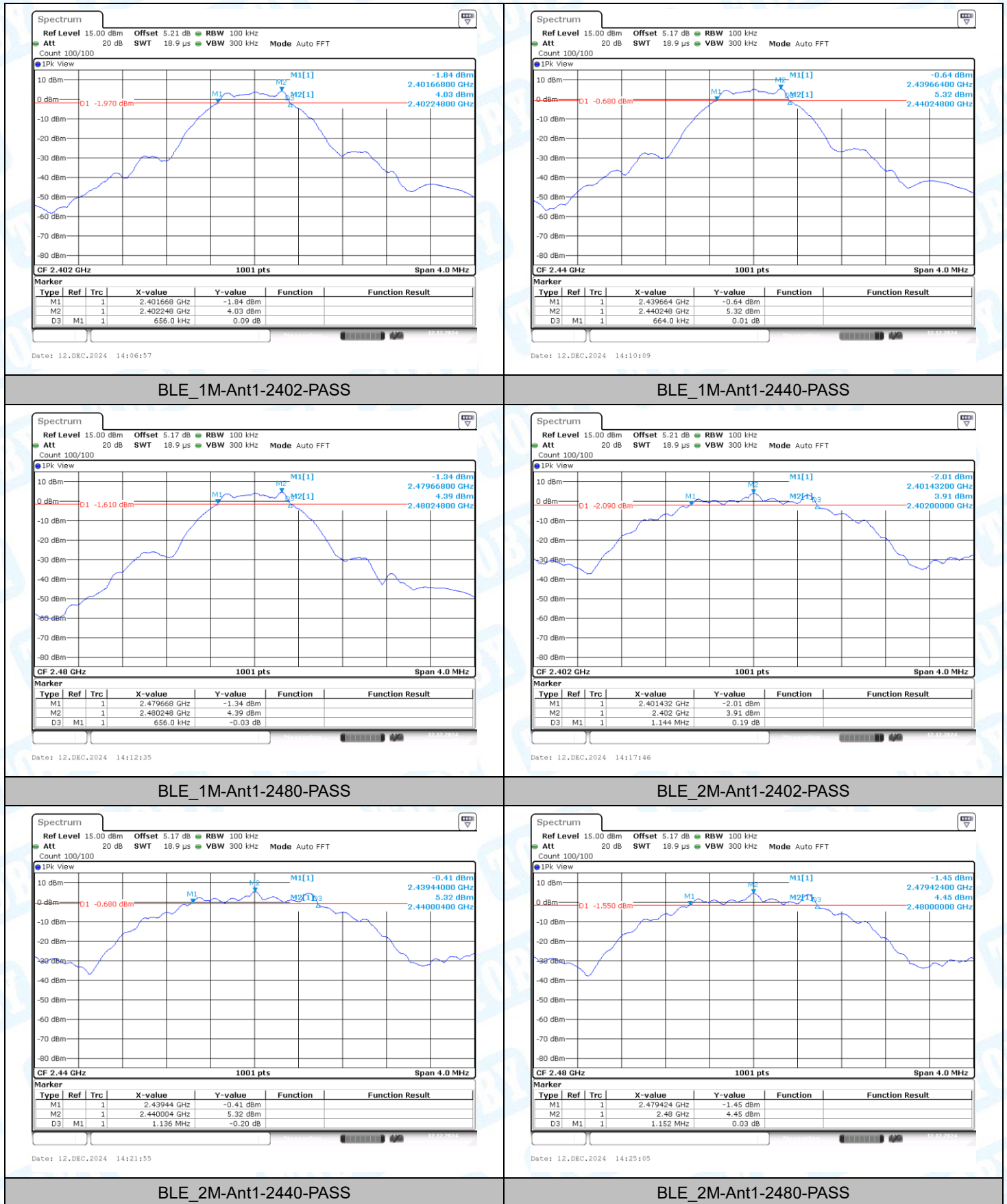
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1: DTS Bandwidth

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	2401.67	2402.32	0.5	PASS
BLE_1M	Ant1	2440	0.66	2439.66	2440.33	0.5	PASS
BLE_1M	Ant1	2480	0.66	2479.67	2480.32	0.5	PASS
BLE_2M	Ant1	2402	1.14	2401.43	2402.58	0.5	PASS
BLE_2M	Ant1	2440	1.14	2439.44	2440.58	0.5	PASS
BLE_2M	Ant1	2480	1.15	2479.42	2480.58	0.5	PASS

1.2 Test Graphs

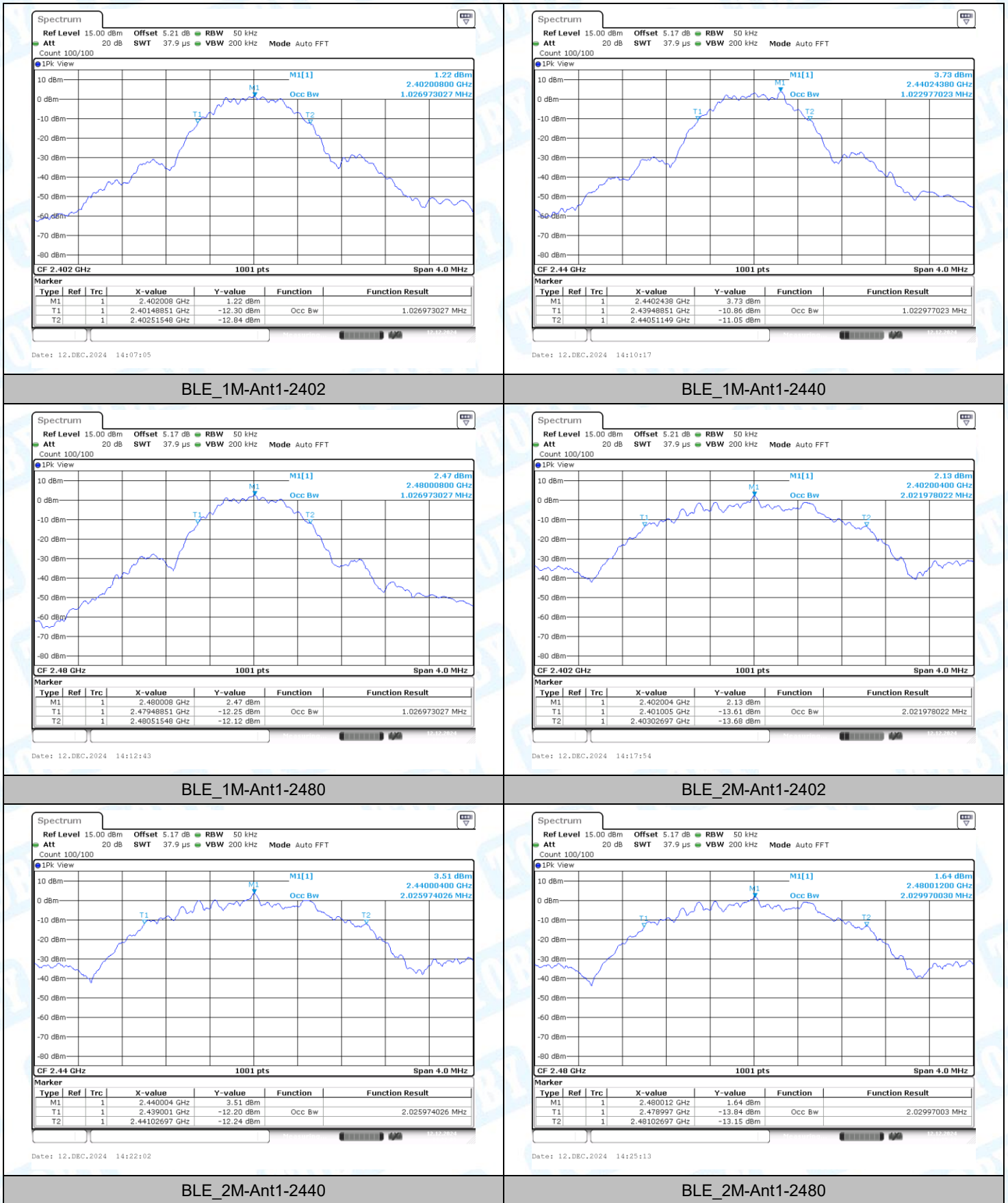


2: Occupied Channel Bandwidth

2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.027	2401.4885	2402.5155	---	---
BLE_1M	Ant1	2440	1.023	2439.4885	2440.5115	---	---
BLE_1M	Ant1	2480	1.027	2479.4885	2480.5155	---	---
BLE_2M	Ant1	2402	2.022	2401.0050	2403.0270	---	---
BLE_2M	Ant1	2440	2.026	2439.0010	2441.0270	---	---
BLE_2M	Ant1	2480	2.03	2478.9970	2481.0270	---	---

2.2 Test Graphs

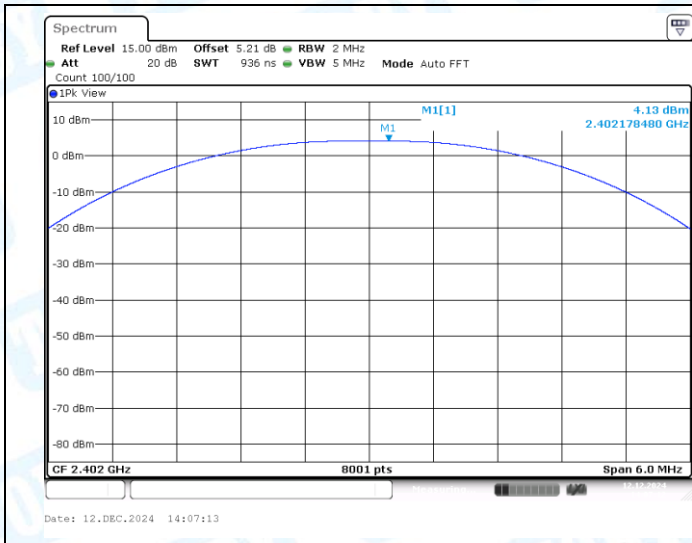


3: Maximum conducted peak output power

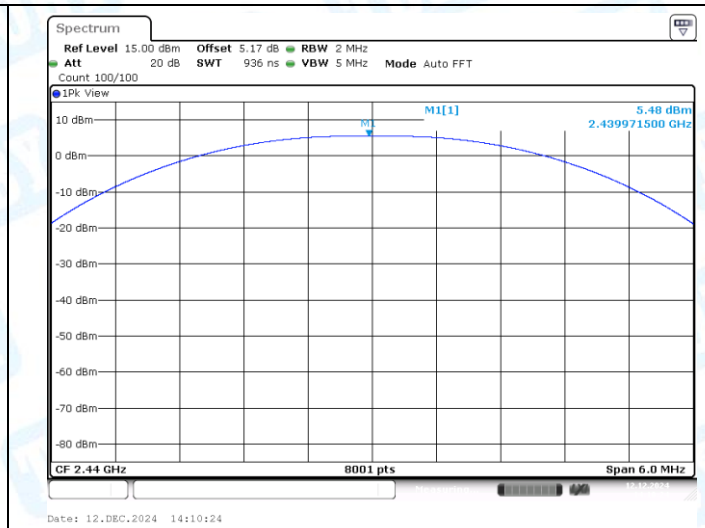
3.1 Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	4.13	≤30	PASS
BLE_1M	Ant1	2440	5.48	≤30	PASS
BLE_1M	Ant1	2480	4.50	≤30	PASS
BLE_2M	Ant1	2402	4.44	≤30	PASS
BLE_2M	Ant1	2440	5.70	≤30	PASS
BLE_2M	Ant1	2480	4.89	≤30	PASS

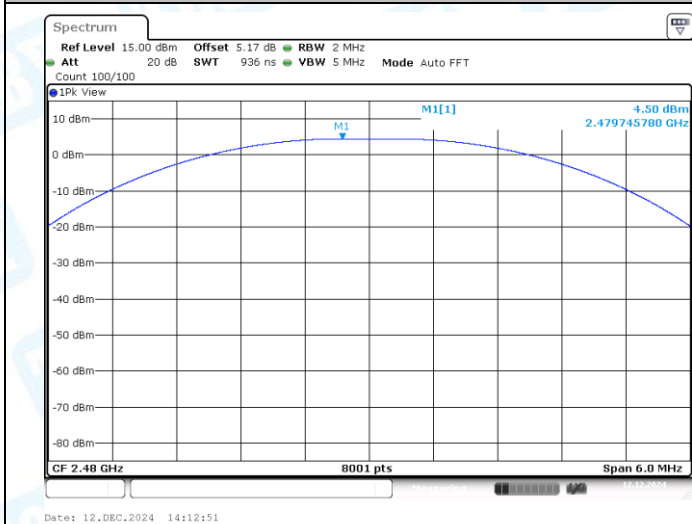
3.2 Test Graphs Peak



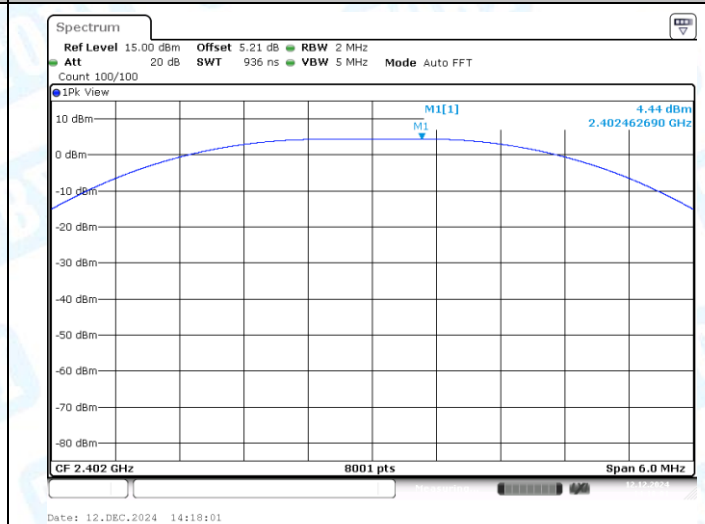
BLE_1M-Ant1-2402-PASS



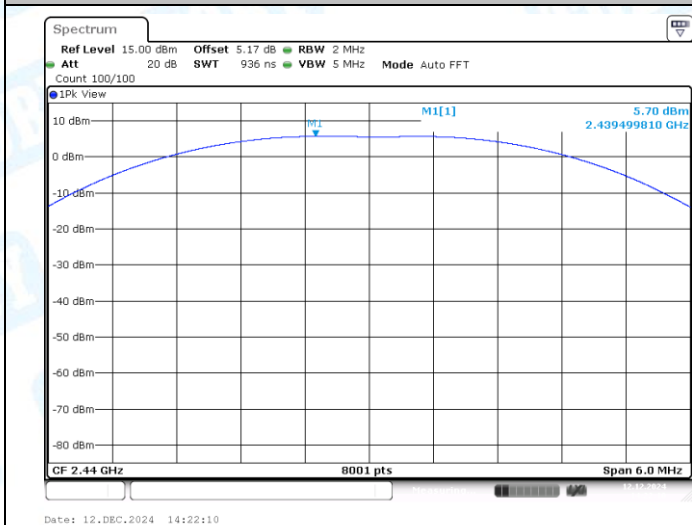
BLE_1M-Ant1-2440-PASS



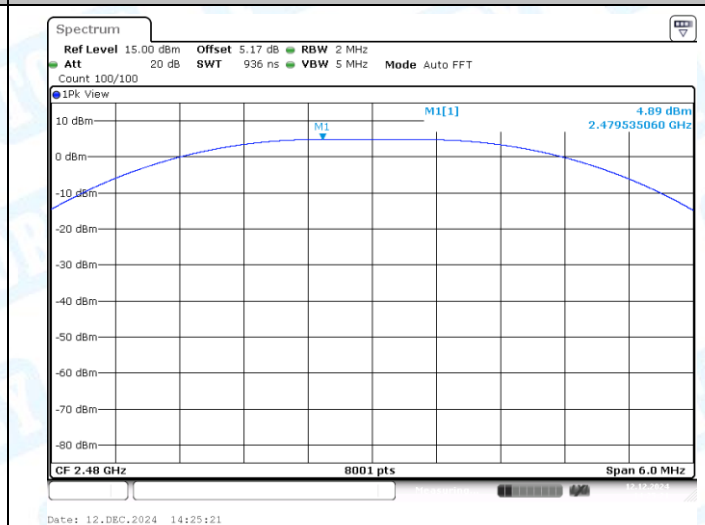
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



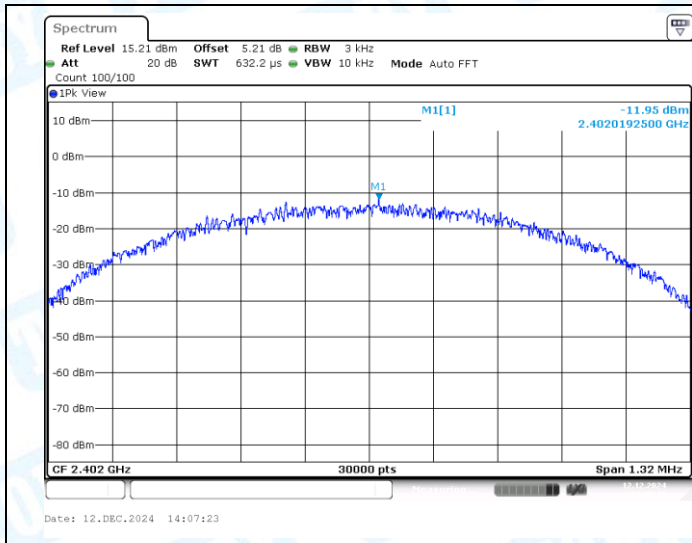
BLE_2M-Ant1-2480-PASS

4: Maximum power spectral density

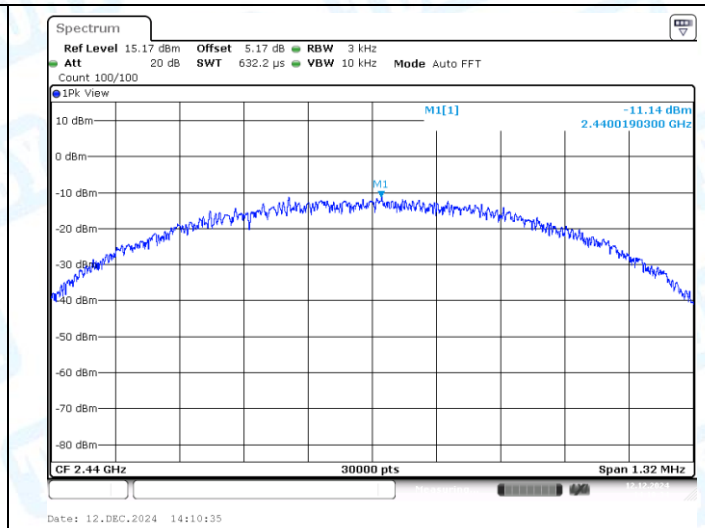
4.1 Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.95	≤8.00	PASS
BLE_1M	Ant1	2440	-11.14	≤8.00	PASS
BLE_1M	Ant1	2480	-11.56	≤8.00	PASS
BLE_2M	Ant1	2402	-14.85	≤8.00	PASS
BLE_2M	Ant1	2440	-13.54	≤8.00	PASS
BLE_2M	Ant1	2480	-14.40	≤8.00	PASS

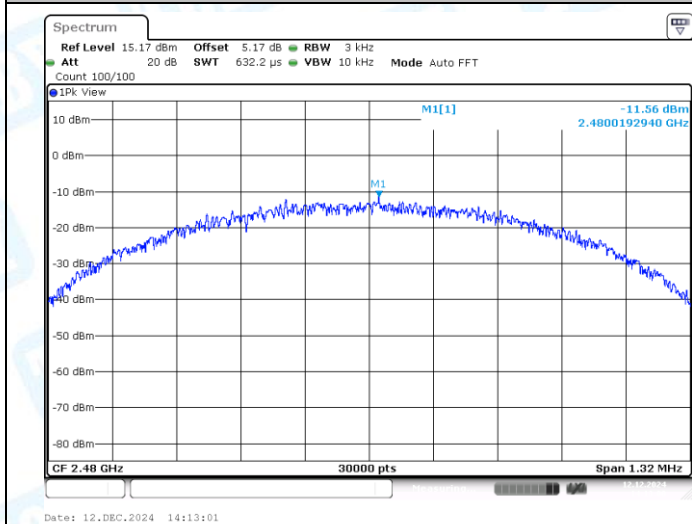
4.2 Test Graphs



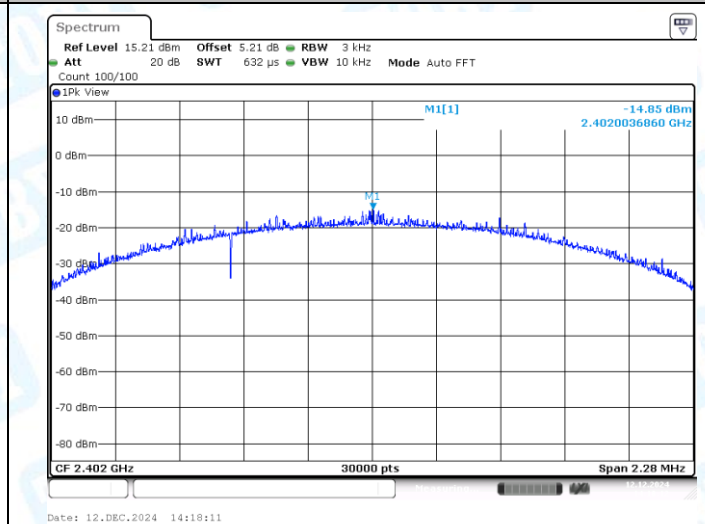
BLE_1M-Ant1-2402-PASS



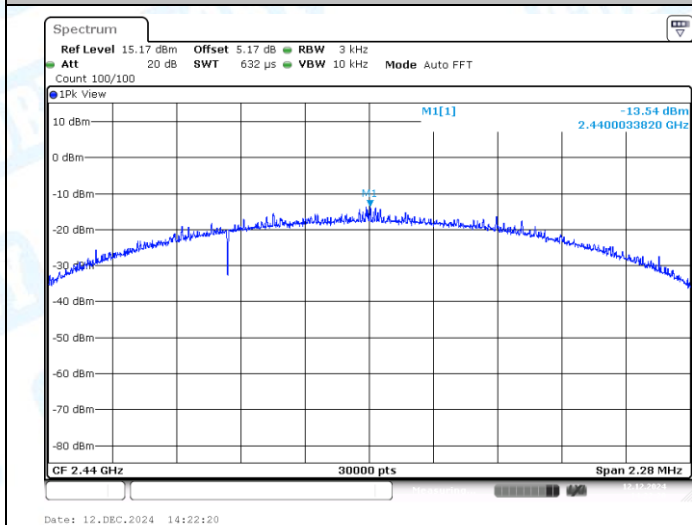
BLE_1M-Ant1-2440-PASS



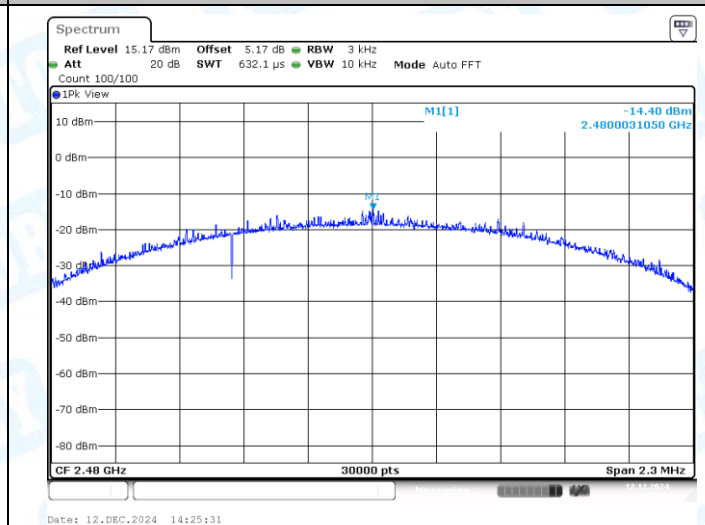
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



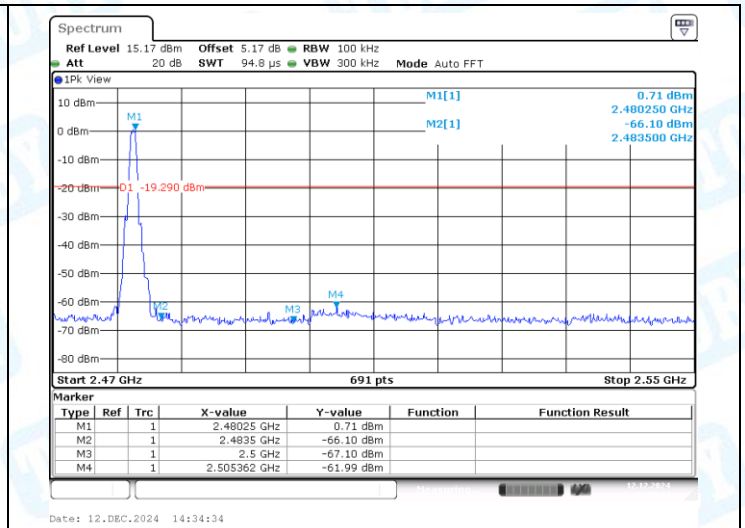
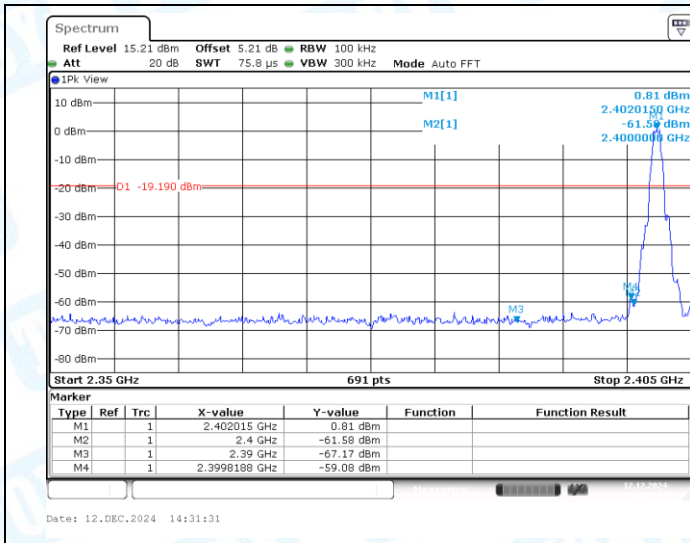
BLE_2M-Ant1-2480-PASS

5: Band edge measurements

5.1 Test Result

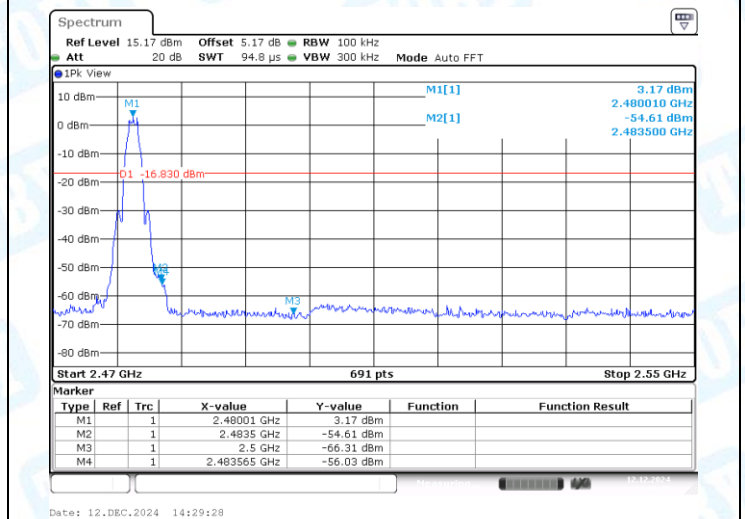
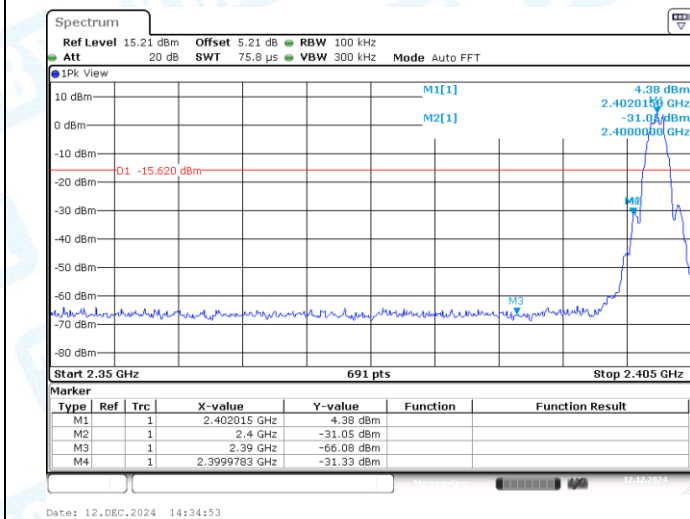
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.81	-59.08	≤-19.19	PASS
BLE_1M	Ant1	High	2480	0.71	-61.99	≤-19.29	PASS
BLE_2M	Ant1	Low	2402	4.38	-31.33	≤-15.62	PASS
BLE_2M	Ant1	High	2480	3.17	-56.03	≤-16.83	PASS

5.2 Test Graphs



BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS

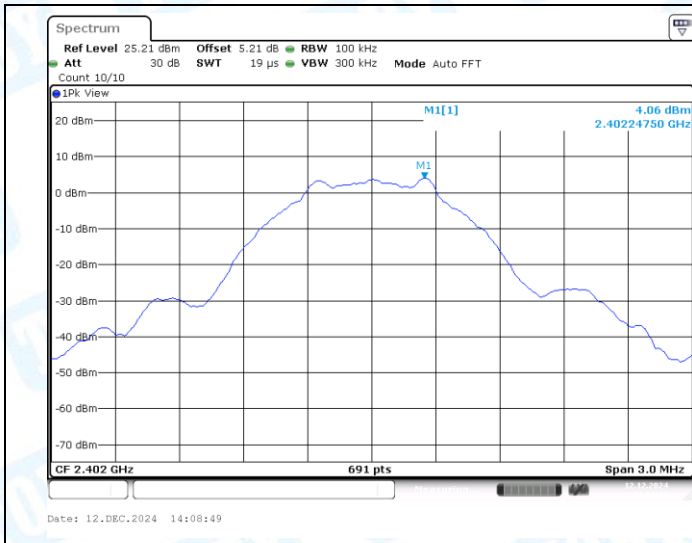
BLE_2M-Ant1-2480-PASS

6: Conducted Spurious Emission

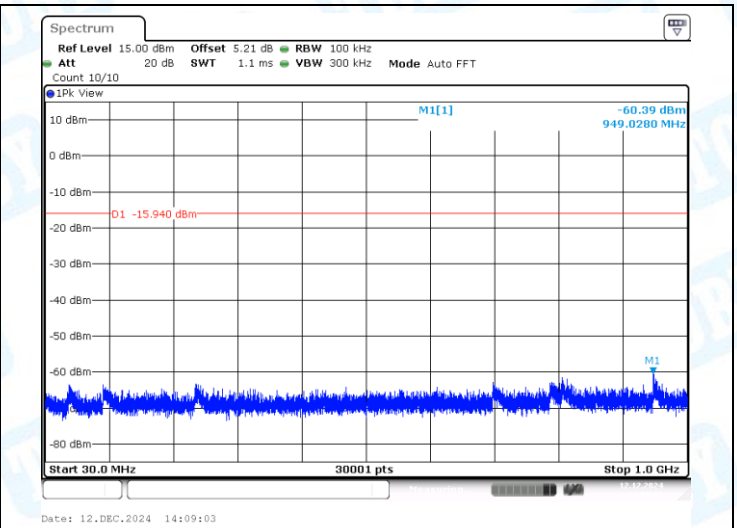
6.1 Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	4.06	4.06	---	PASS
BLE_1M	Ant1	2402	30~1000	4.06	-60.39	≤-15.94	PASS
BLE_1M	Ant1	2402	1000~26500	4.06	-55.68	≤-15.94	PASS
BLE_1M	Ant1	2440	0~Reference	5.37	5.37	---	PASS
BLE_1M	Ant1	2440	30~1000	5.37	-62.11	≤-14.63	PASS
BLE_1M	Ant1	2440	1000~26500	5.37	-55.87	≤-14.63	PASS
BLE_1M	Ant1	2480	0~Reference	4.38	4.38	---	PASS
BLE_1M	Ant1	2480	30~1000	4.38	-61.01	≤-15.62	PASS
BLE_1M	Ant1	2480	1000~26500	4.38	-55.11	≤-15.62	PASS
BLE_2M	Ant1	2402	0~Reference	4.26	4.26	---	PASS
BLE_2M	Ant1	2402	30~1000	4.26	-61.75	≤-15.74	PASS
BLE_2M	Ant1	2402	1000~26500	4.26	-55.67	≤-15.74	PASS
BLE_2M	Ant1	2440	0~Reference	5.36	5.36	---	PASS
BLE_2M	Ant1	2440	30~1000	5.36	-61.53	≤-14.64	PASS
BLE_2M	Ant1	2440	1000~26500	5.36	-55.67	≤-14.64	PASS
BLE_2M	Ant1	2480	0~Reference	4.39	4.39	---	PASS
BLE_2M	Ant1	2480	30~1000	4.39	-61.47	≤-15.61	PASS
BLE_2M	Ant1	2480	1000~26500	4.39	-55.98	≤-15.61	PASS

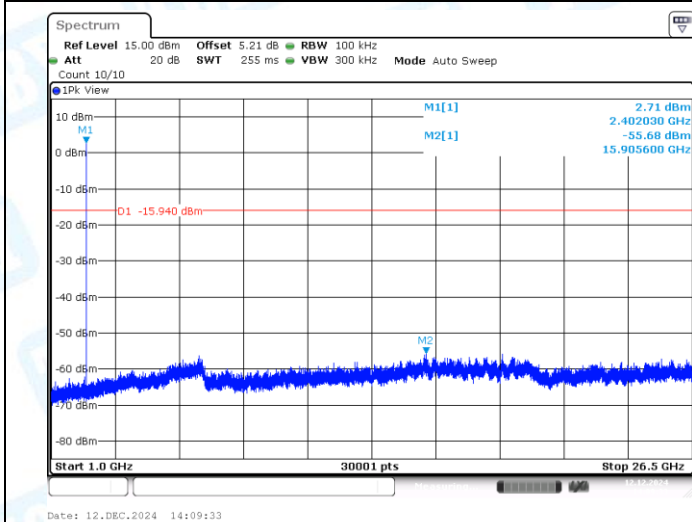
6.2 Test Graphs



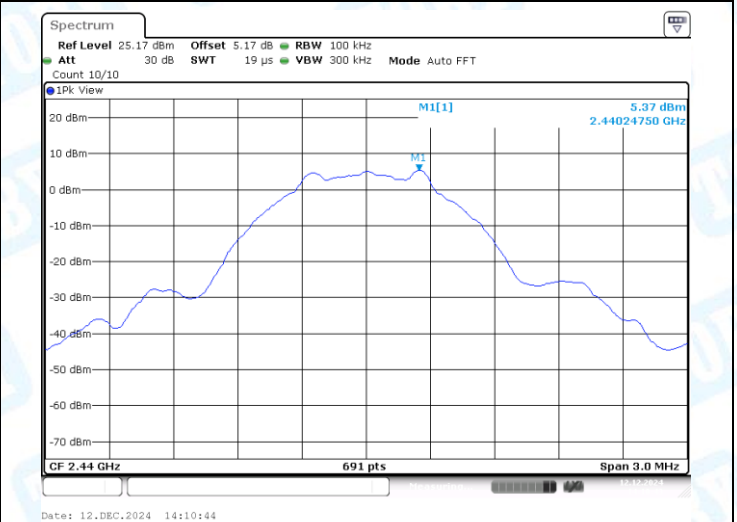
BLE_1M-Ant1-2402-0~Reference-PASS



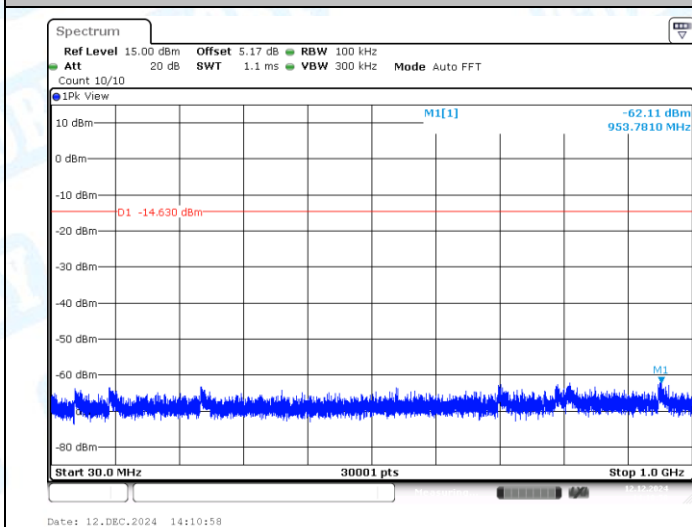
BLE_1M-Ant1-2402-30~1000-PASS



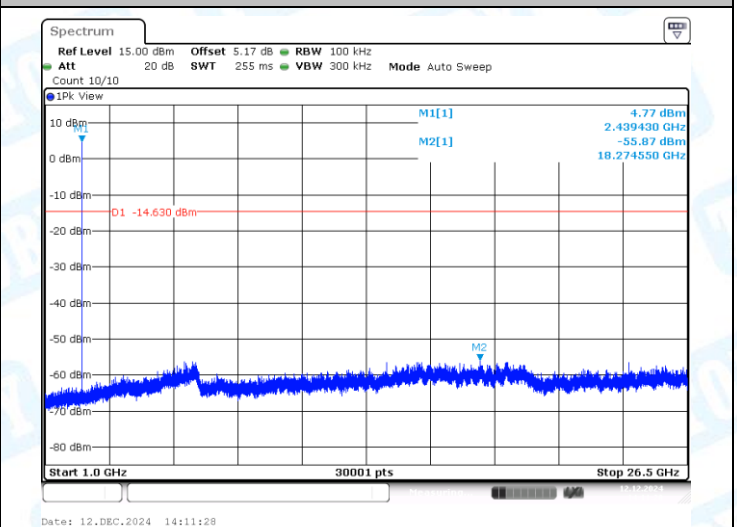
BLE_1M-Ant1-2402-1000~26500-PASS



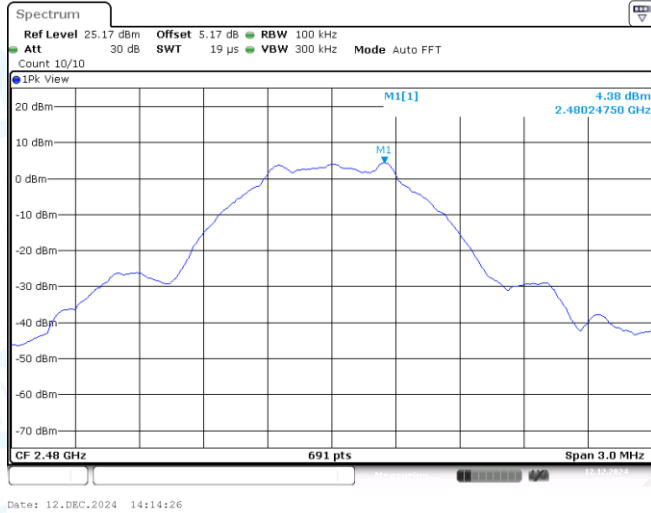
BLE_1M-Ant1-2440-0~Reference-PASS



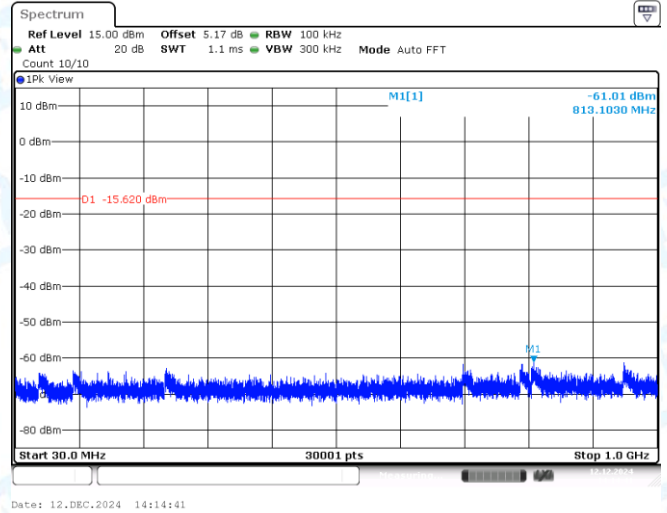
BLE_1M-Ant1-2440-30~1000-PASS



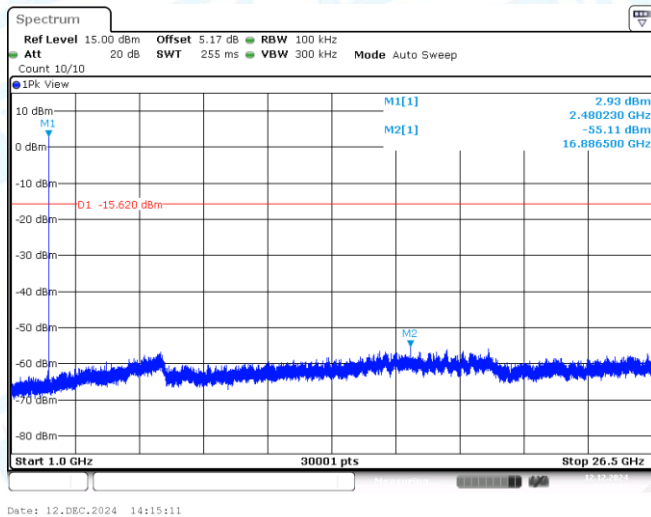
BLE_1M-Ant1-2440-1000~26500-PASS



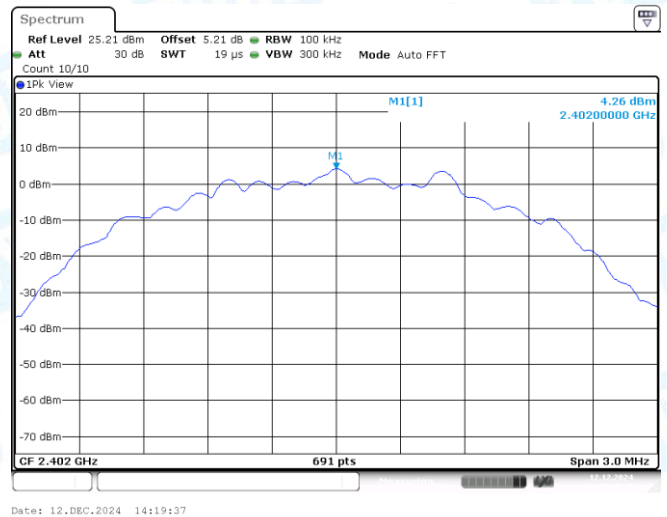
BLE_1M-Ant1-2480-0~Reference-PASS



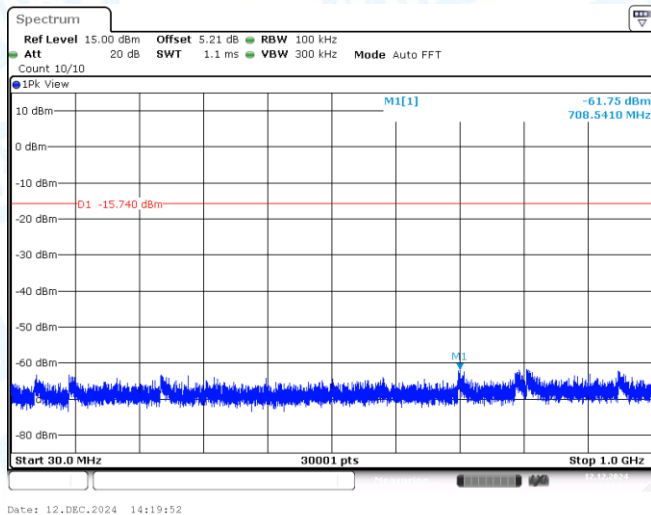
BLE_1M-Ant1-2480-30~1000-PASS



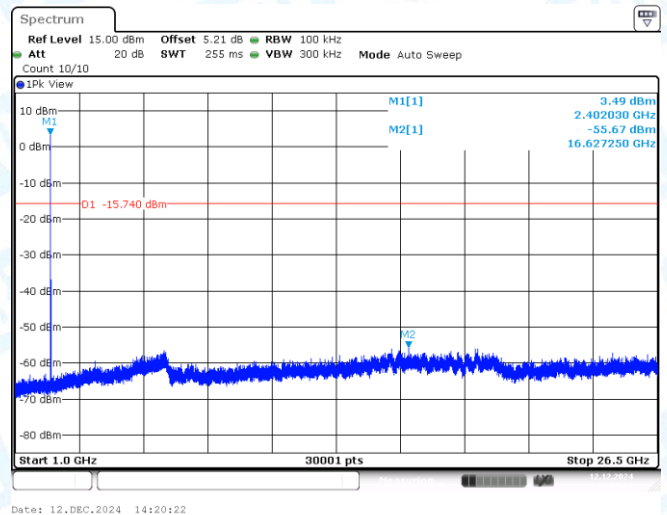
BLE_1M-Ant1-2480-1000~26500-PASS



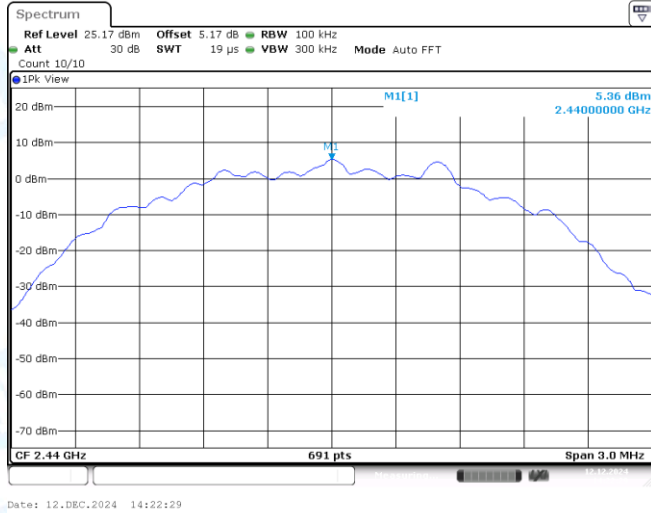
BLE_2M-Ant1-2402-0~Reference-PASS



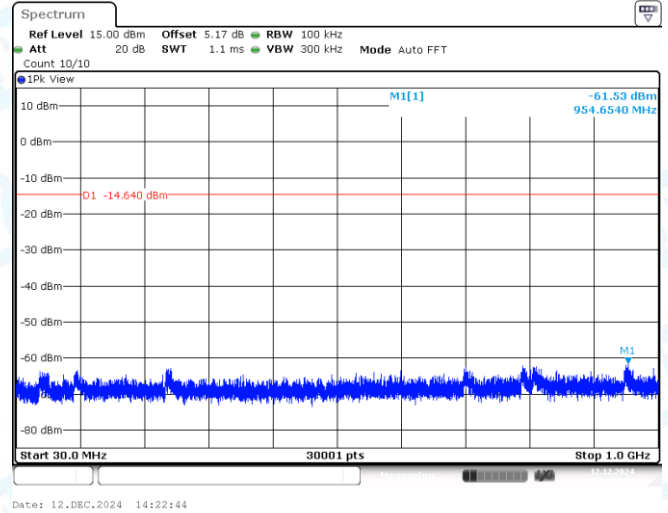
BLE_2M-Ant1-2402-30~1000-PASS



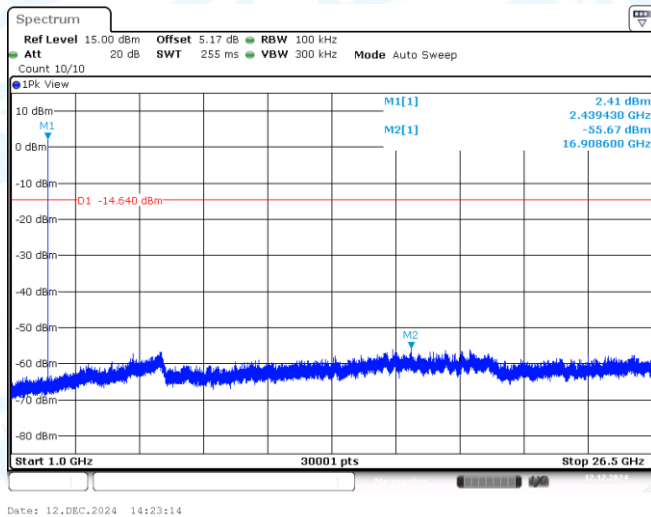
BLE_2M-Ant1-2402-1000~26500-PASS



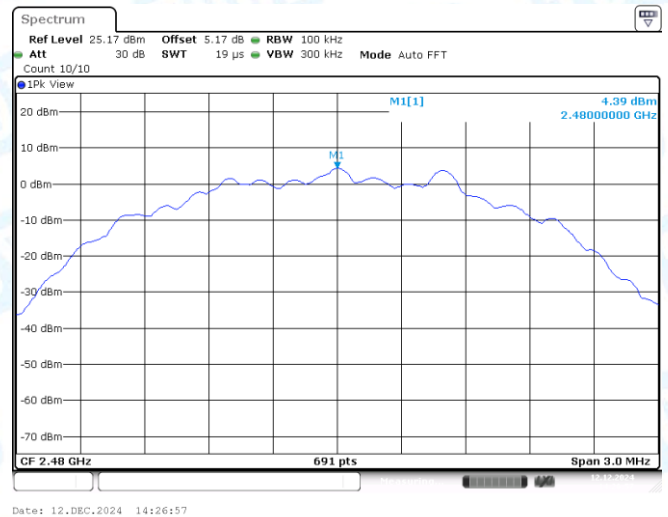
BLE_2M-Ant1-2440-0~Reference-PASS



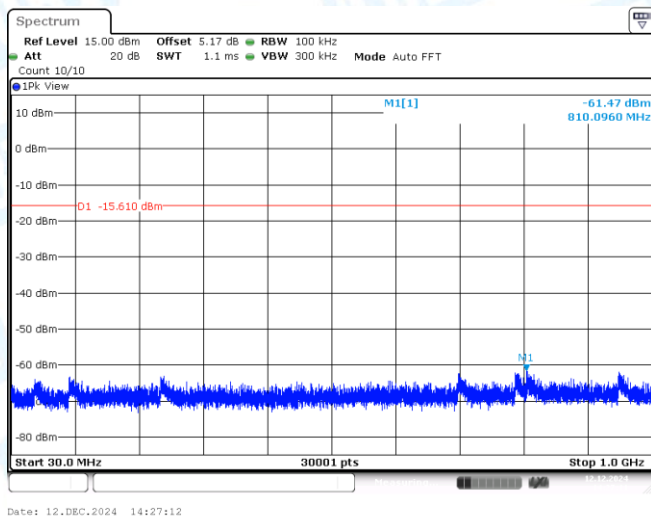
BLE_2M-Ant1-2440-30~1000-PASS



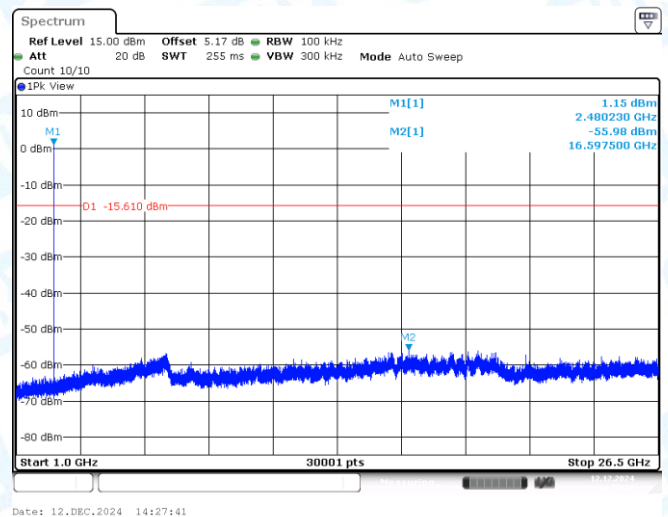
BLE_2M-Ant1-2440-1000~26500-PASS



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

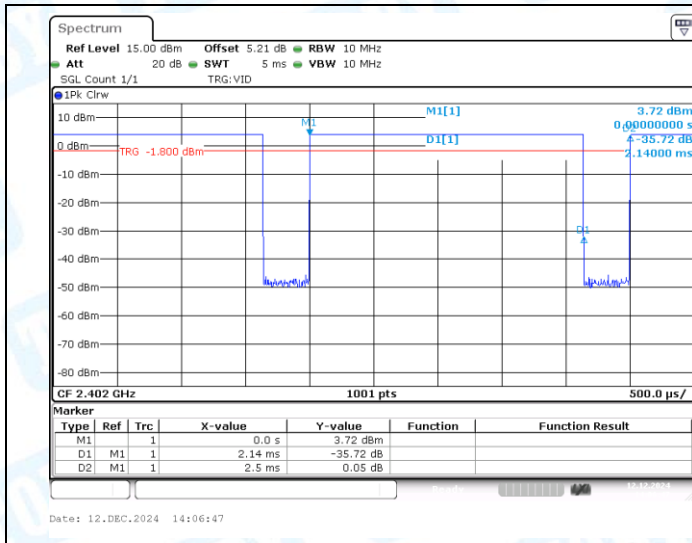
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
BLE_1M	Ant1	2402	2.14	2.50	85.60	0.68	0.47
BLE_1M	Ant1	2440	2.14	2.50	85.60	0.68	0.47
BLE_1M	Ant1	2480	2.14	2.50	85.60	0.68	0.47
BLE_2M	Ant1	2402	1.09	1.88	57.98	2.37	0.92
BLE_2M	Ant1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

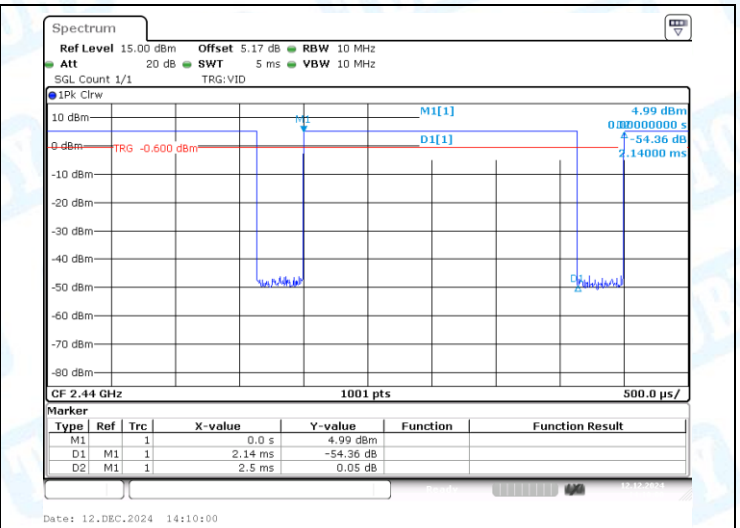
2, DC Factory=10*Log₁₀(1/Duty Cycle)

3, 1/T=1/ Transmission Duration

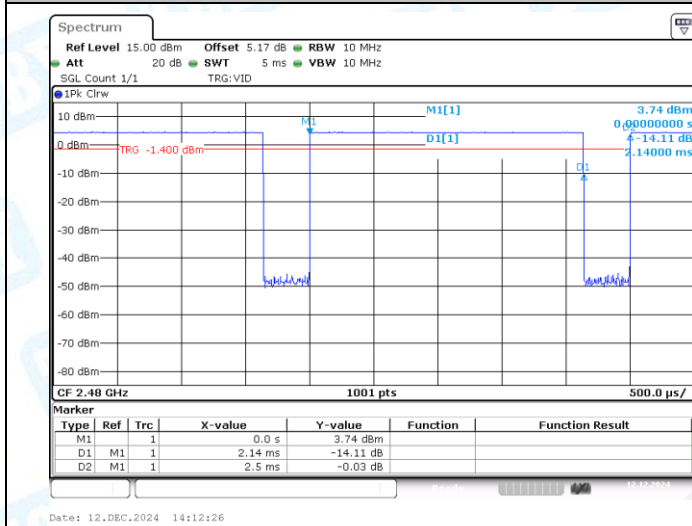
7.2 Test Graphs



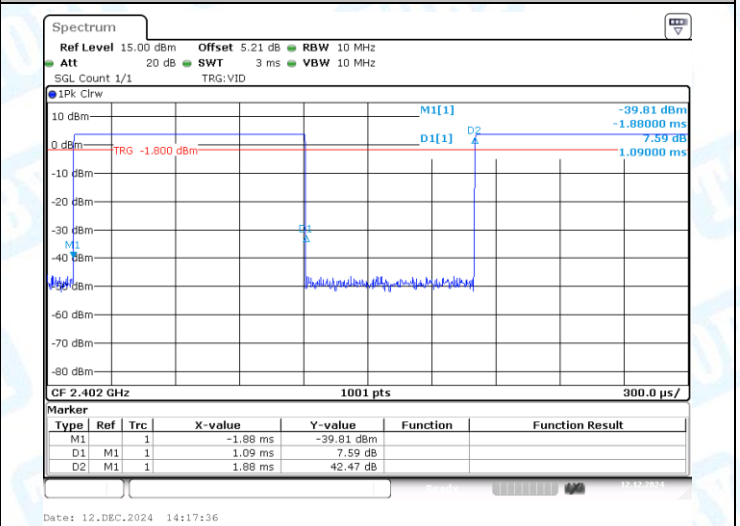
NTVN-BLE_1M-Ant1-2402



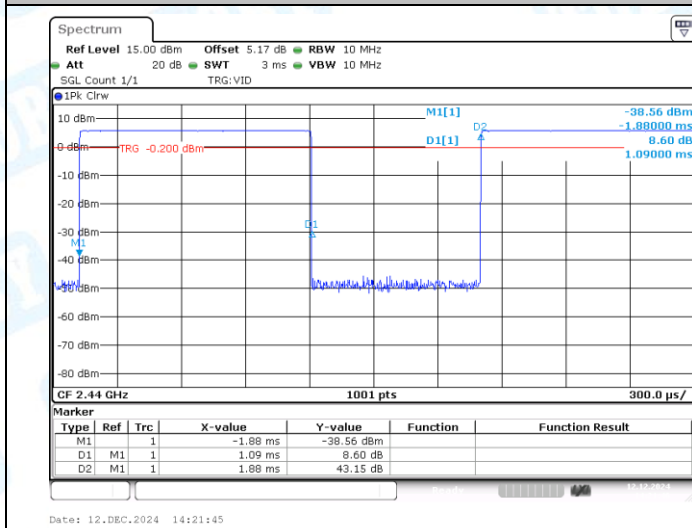
NTVN-BLE_1M-Ant1-2440



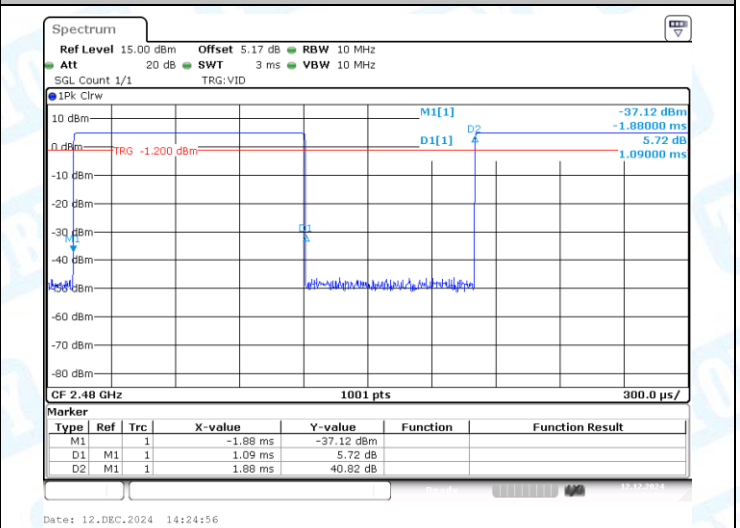
NTVN-BLE_1M-Ant1-2480



NTVN-BLE_2M-Ant1-2402



NTVN-BLE_2M-Ant1-2440



NTVN-BLE_2M-Ant1-2480

8: Emissions in Restricted Bands

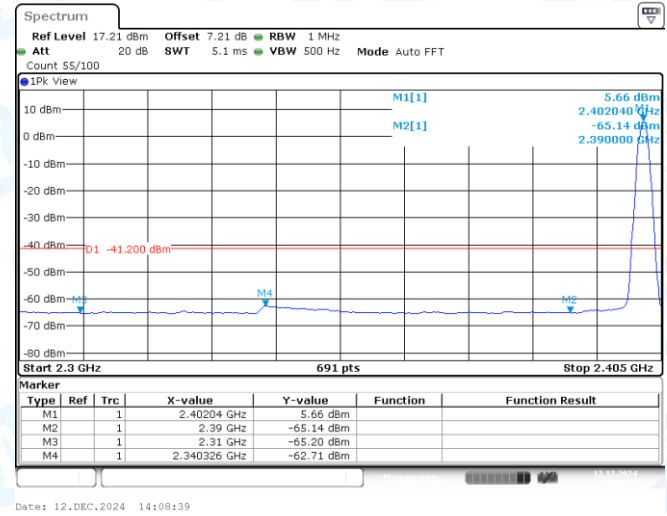
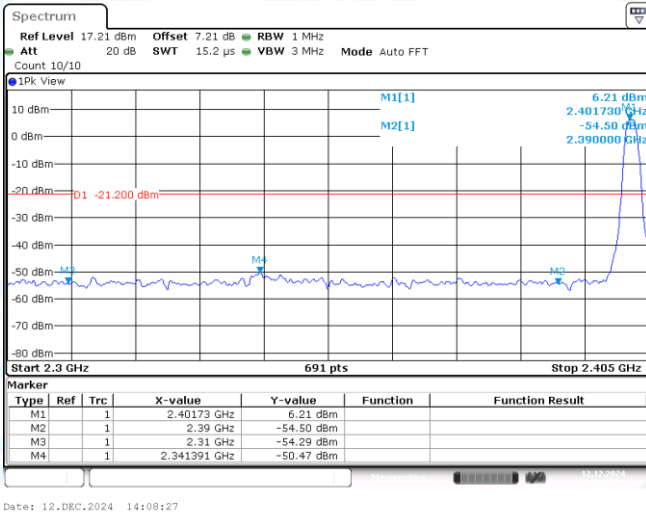
8.1 Test Result

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	-54.5	≤-21.20	40.70	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-54.29	≤-21.20	40.91	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2341.391	-50.47	≤-21.20	44.73	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-65.14	≤-41.20	30.06	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-65.2	≤-41.20	30.00	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2340.326	-62.71	≤-41.20	32.49	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-53.53	≤-21.20	41.67	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-52.75	≤-21.20	42.45	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2484.029	-49.48	≤-21.20	45.72	≤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	-64.88	≤-41.20	30.32	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2483.565	-63.33	≤-41.20	31.87	≤54	PASS
BLE_2M	Ant1	Low	2402	Peak	2390.000	-54.98	≤-21.20	40.22	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2310.000	-53.93	≤-21.20	41.27	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2342.000	-50.31	≤-21.20	44.89	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2390.000	-64.77	≤-41.20	30.43	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-64.77	≤-41.20	30.43	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2340.326	-62.14	≤-41.20	33.06	≤54	PASS
BLE_2M	Ant1	High	2480	Peak	2483.500	-38.81	≤-21.20	56.39	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2500.000	-53.57	≤-21.20	41.63	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2483.565	-38.95	≤-21.20	56.25	≤74	PASS
BLE_2M	Ant1	High	2480	AV	2483.500	-55.78	≤-41.20	39.42	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2500.000	-64.62	≤-41.20	30.58	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2483.565	-57.75	≤-41.20	37.45	≤54	PASS

Note:

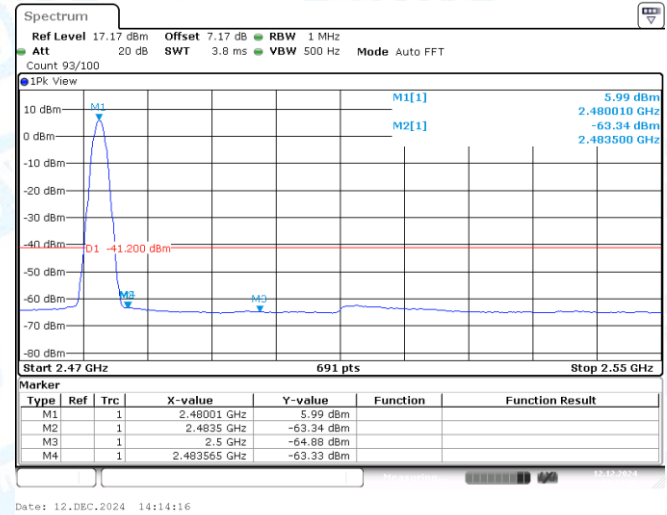
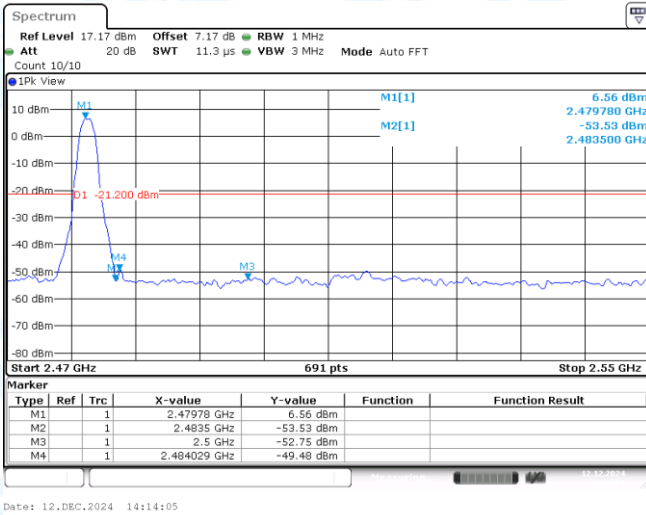
- The Antenna Gain is compensated in the graph.
- The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

8.2 Test Graphs



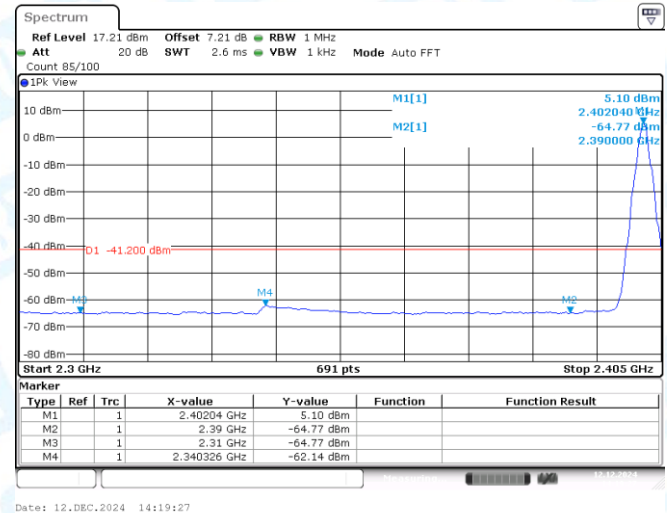
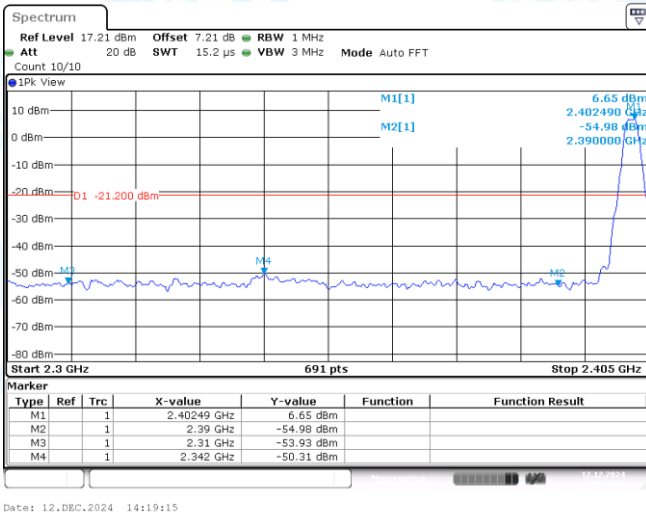
BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2402-PASS



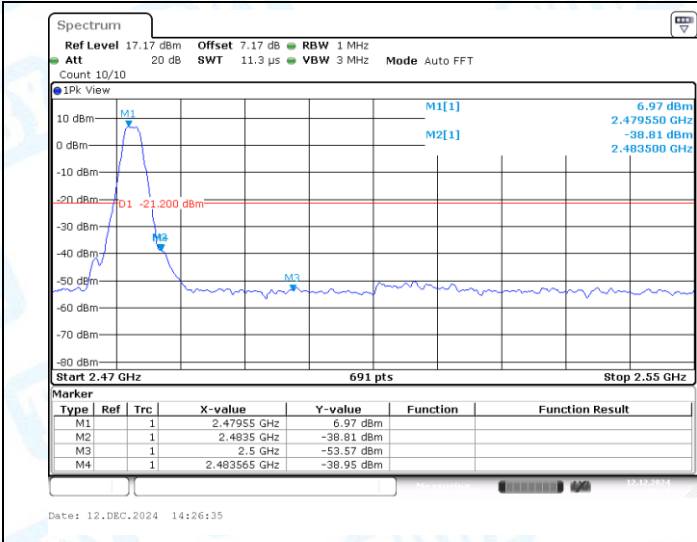
BLE_1M-Ant1-2480-PASS

BLE_1M-Ant1-2480-PASS

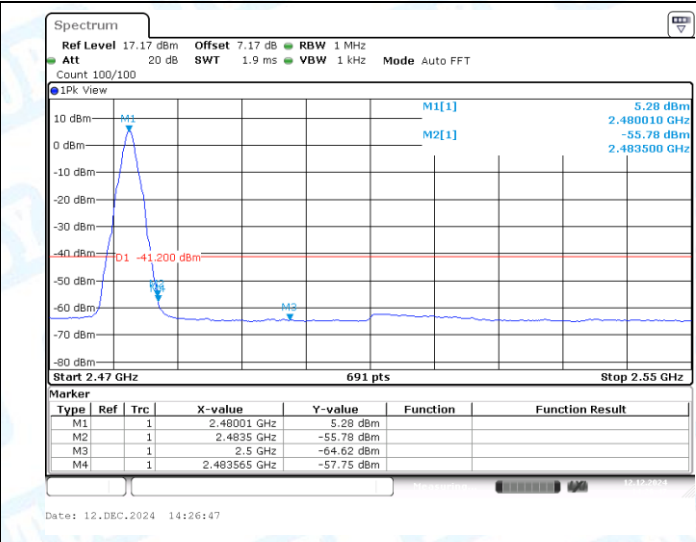


BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2480-PASS



BLE_2M-Ant1-2480-PASS

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