

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	MINI projector
Test Model:	P10
Sample ID:	202204-0018_01-02#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	AC 120V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TBR-C-202204-0018-21	

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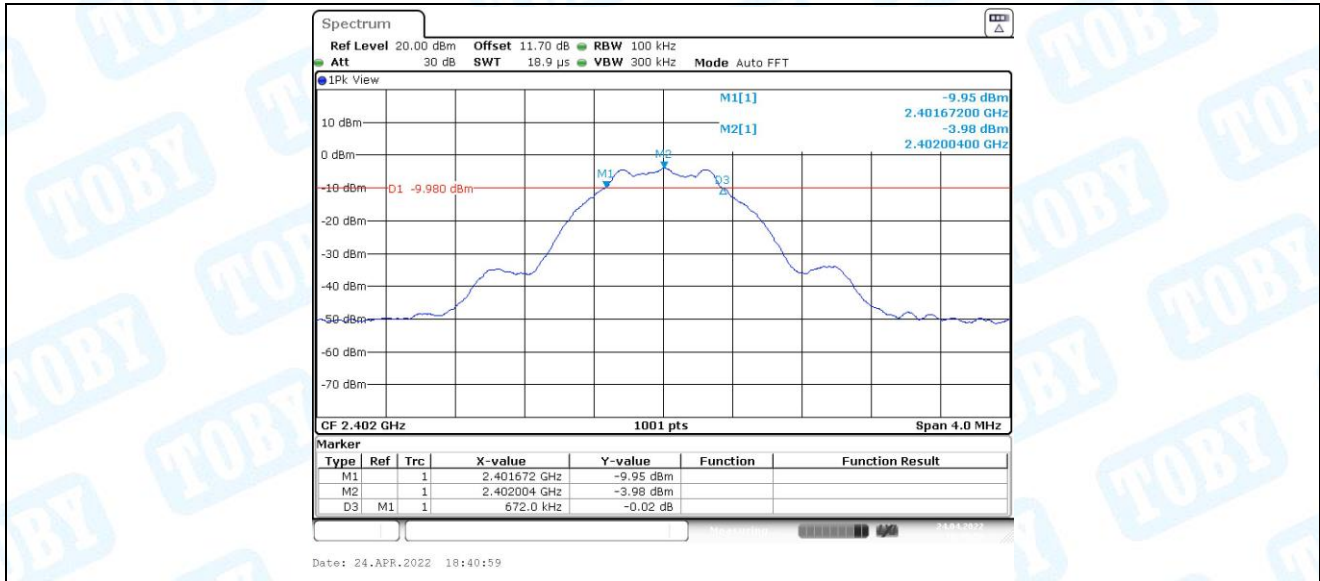
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1. DTS Bandwidth

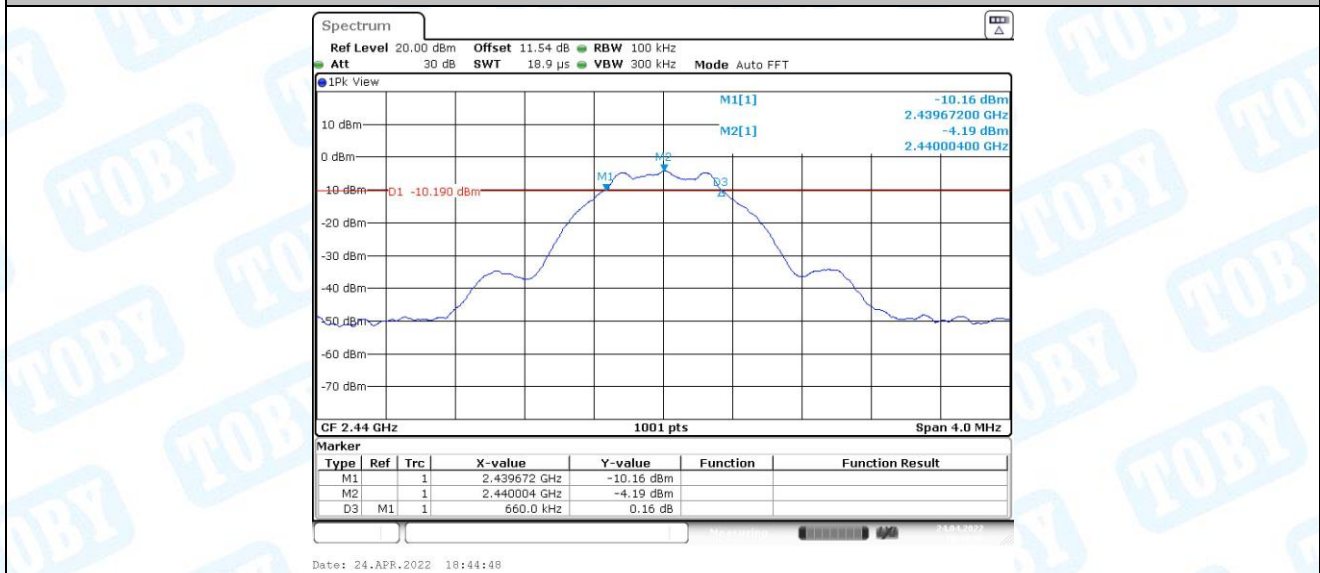
1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.67	2401.67	2402.34	0.5	PASS
		2440	0.66	2439.67	2440.33	0.5	PASS
		2480	0.66	2479.68	2480.34	0.5	PASS
BLE_2M	Ant1	2402	0.96	2401.45	2402.40	0.5	PASS
		2440	1.12	2439.45	2440.57	0.5	PASS
		2480	1.13	2479.44	2480.57	0.5	PASS

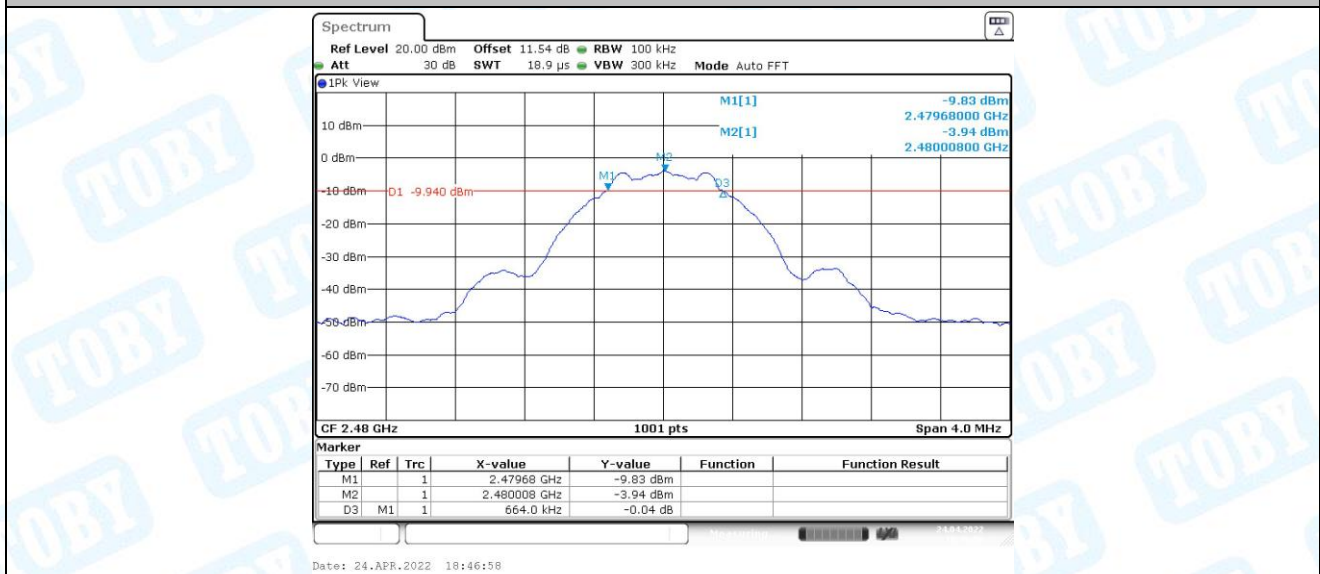
1.2. Test Graphs



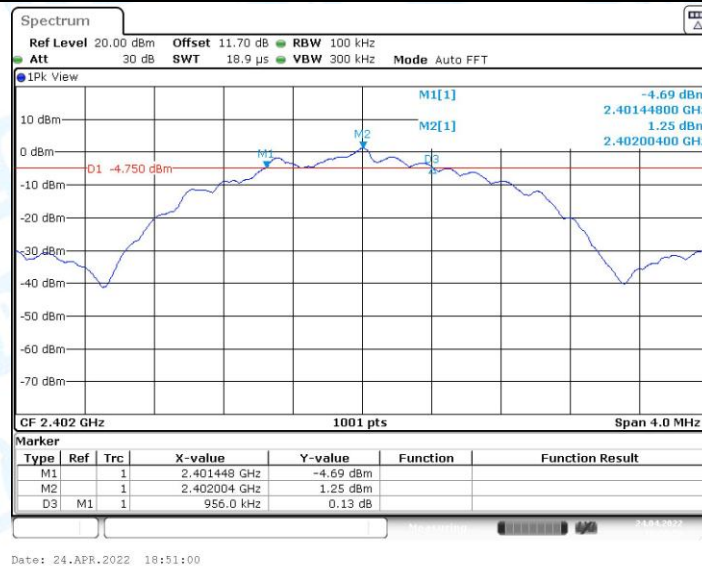
BLE_1M_Ant1_2402



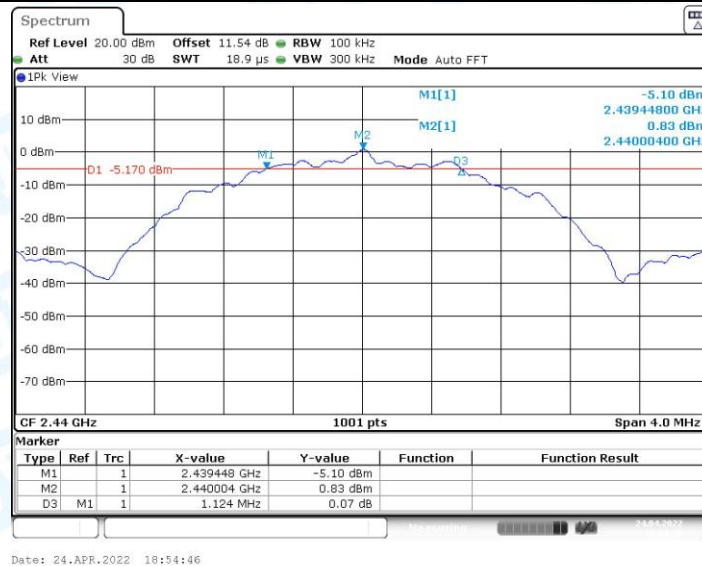
BLE_1M_Ant1_2440



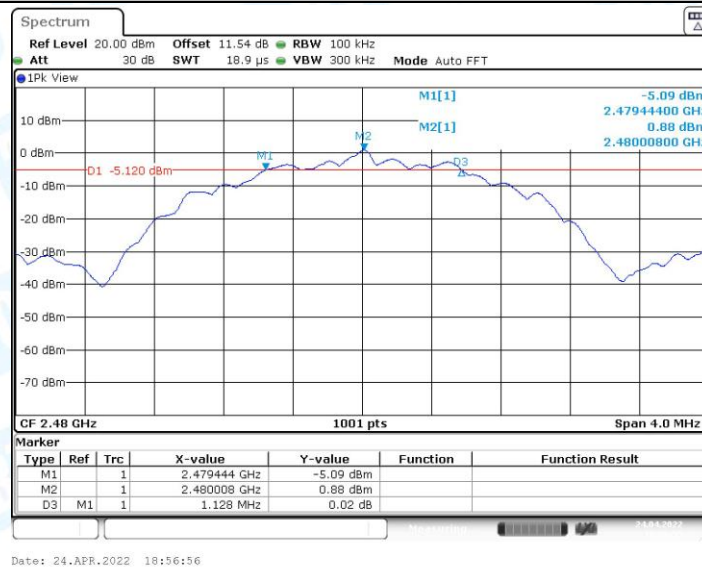
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



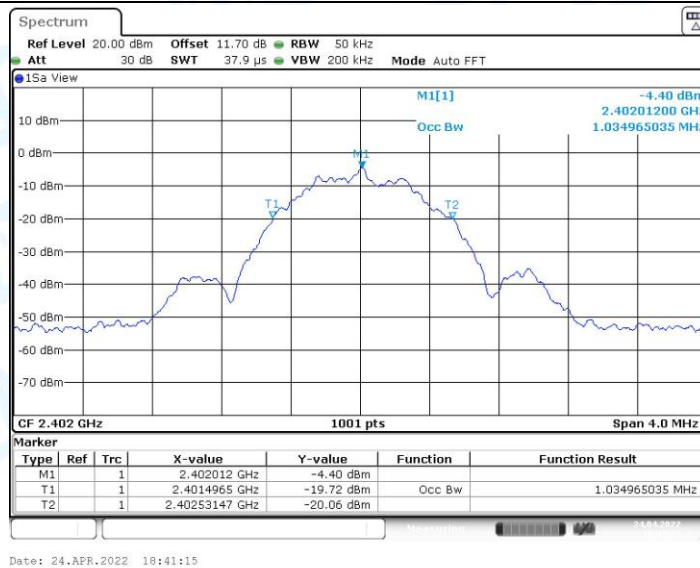
BLE_2M_Ant1_2480

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	1.035	2401.497	2402.531	---	---
		2440	1.039	2439.493	2440.531	---	---
		2480	1.047	2479.485	2480.531	---	---
BLE_2M	Ant1	2402	2.074	2400.985	2403.059	---	---
		2440	2.062	2438.989	2441.051	---	---
		2480	2.07	2478.985	2481.055	---	---

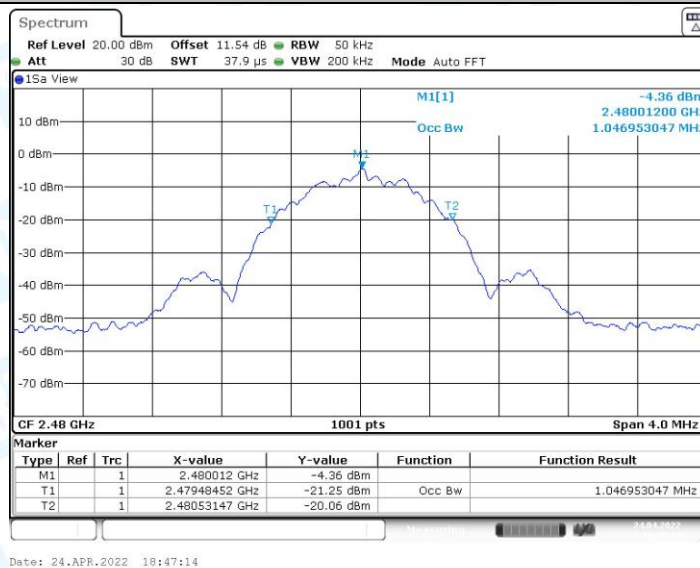
2.2. Test Graphs



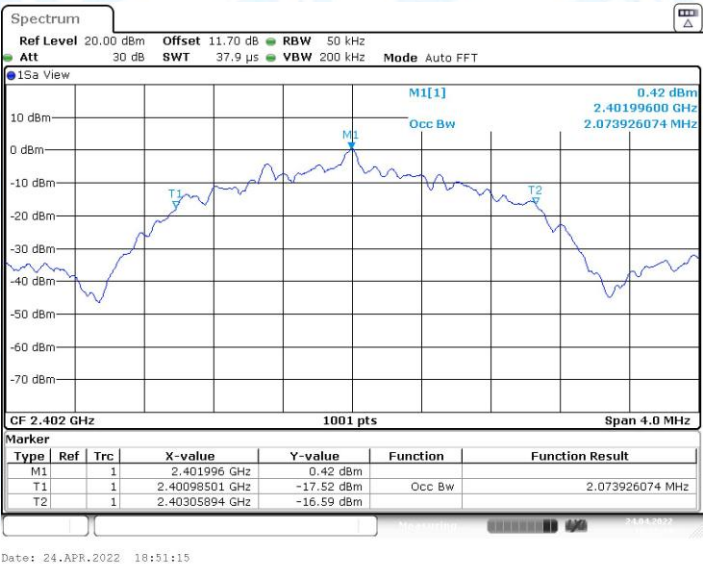
BLE_1M_Ant1_2402



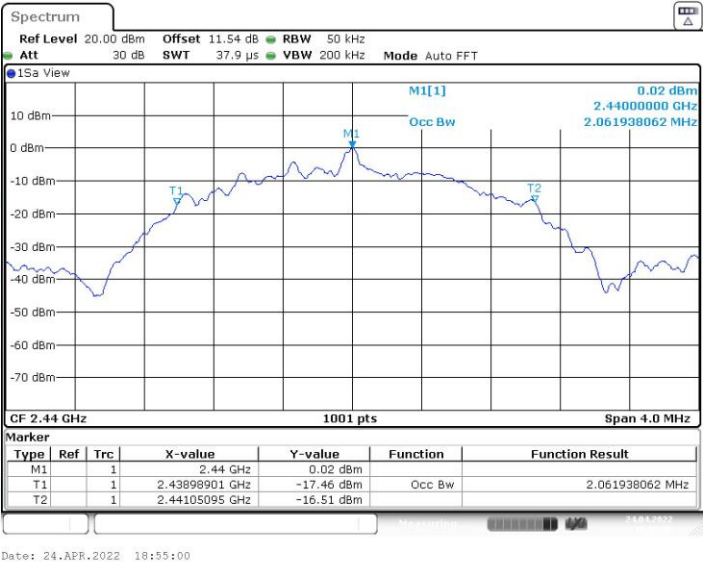
BLE_1M_Ant1_2440



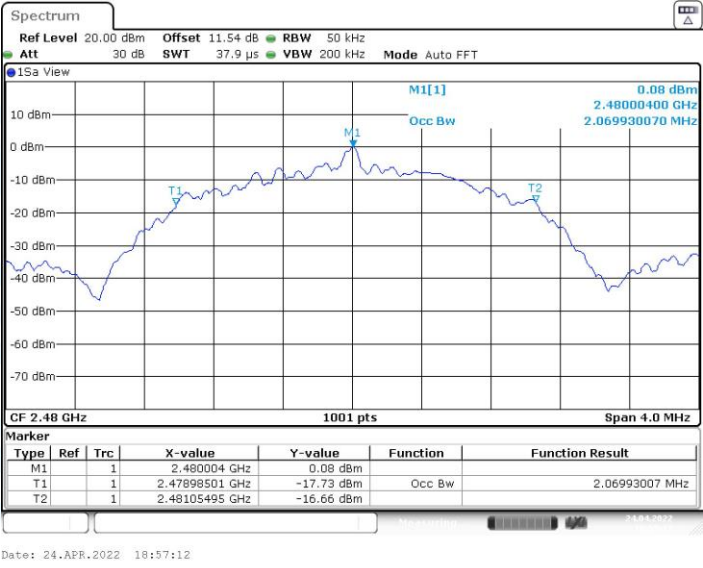
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



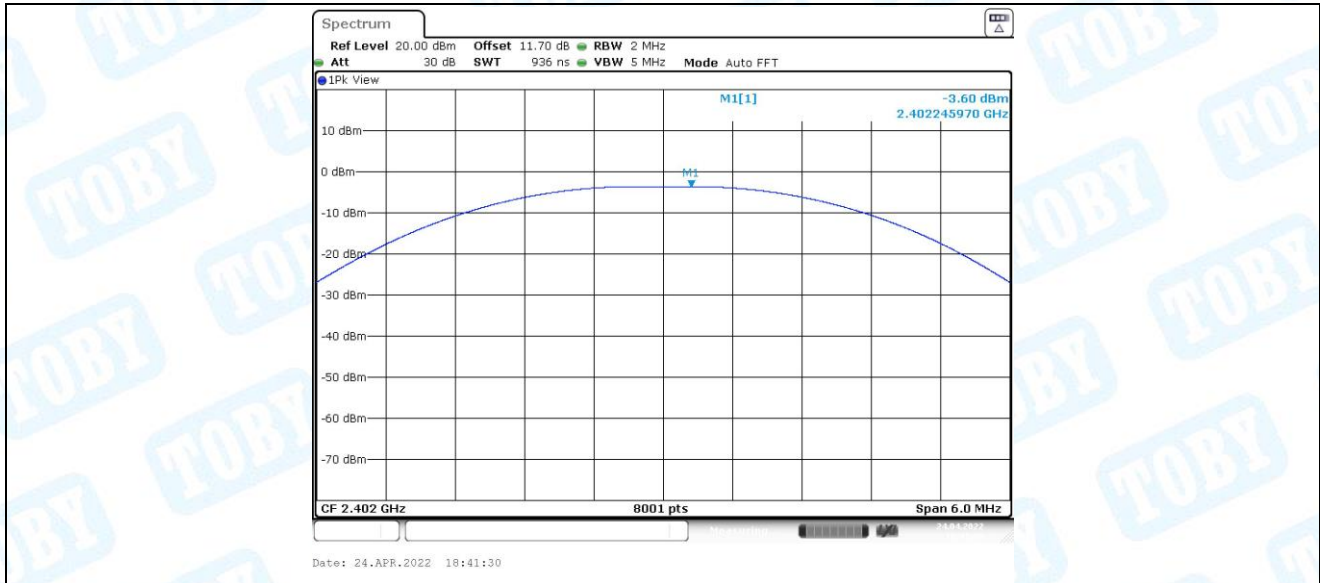
BLE_2M_Ant1_2480

3. Maximum conducted output power

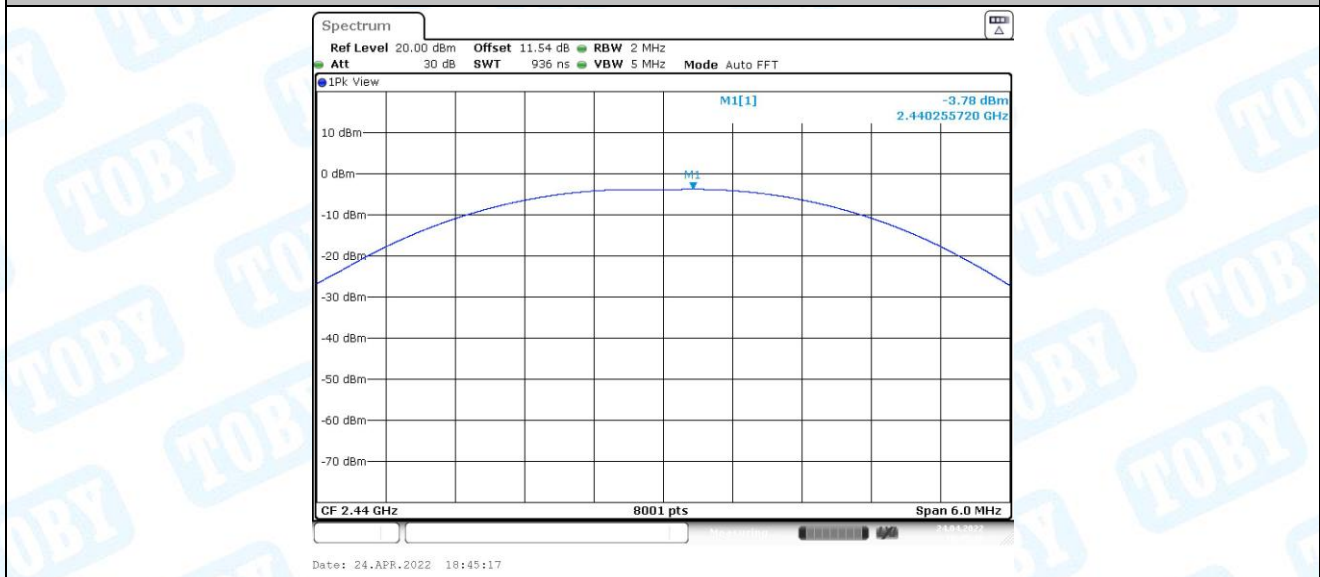
3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.6	≤30	PASS
		2440	-3.78	≤30	PASS
		2480	-3.55	≤30	PASS
BLE_2M	Ant1	2402	1.69	≤30	PASS
		2440	1.26	≤30	PASS
		2480	1.31	≤30	PASS

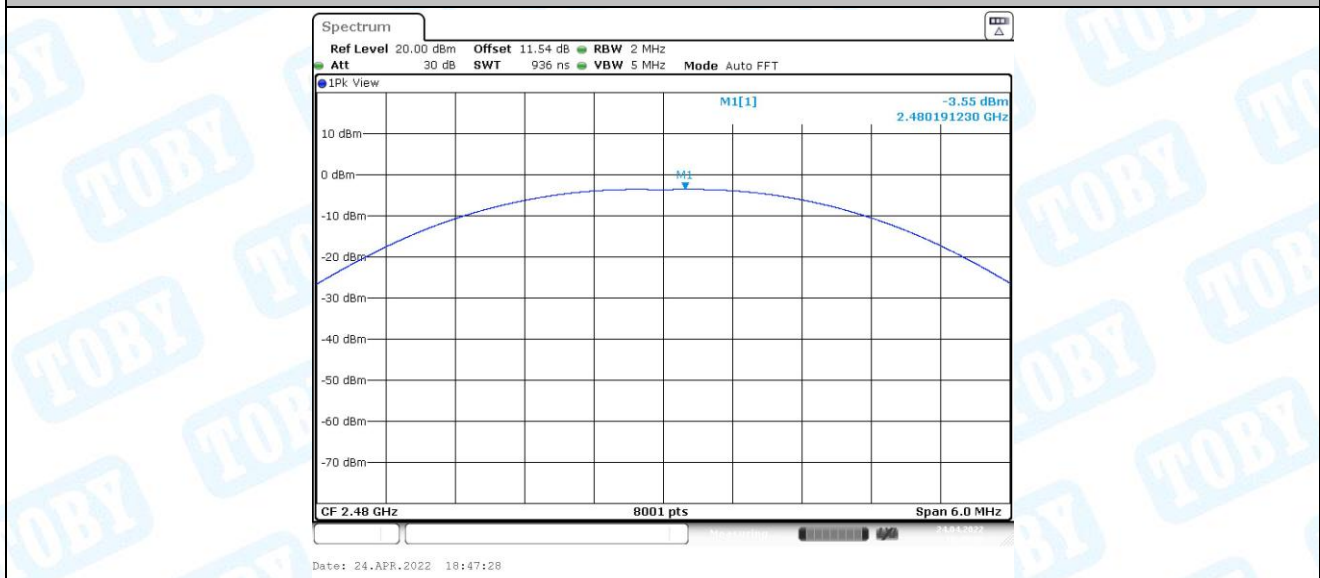
3.2. Test Graphs



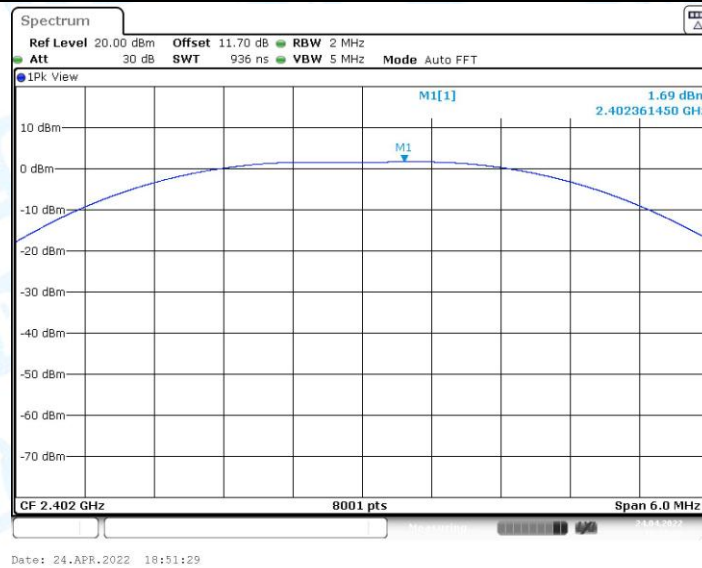
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



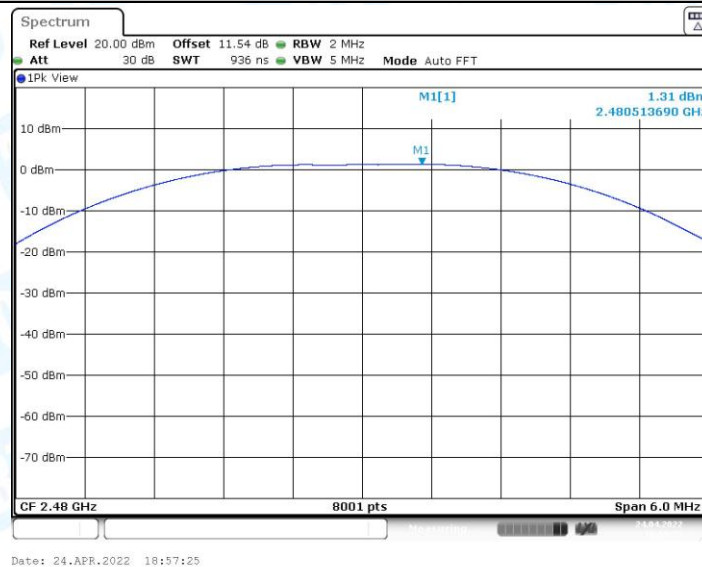
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



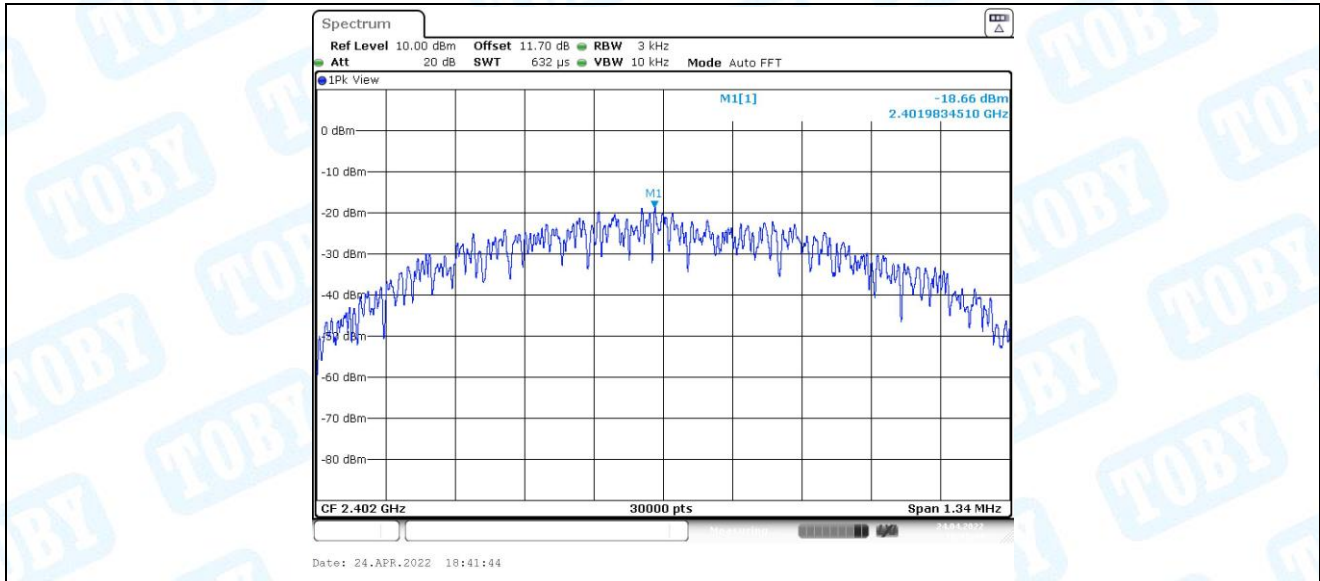
BLE_2M_Ant1_2480

4. Maximum power spectral density

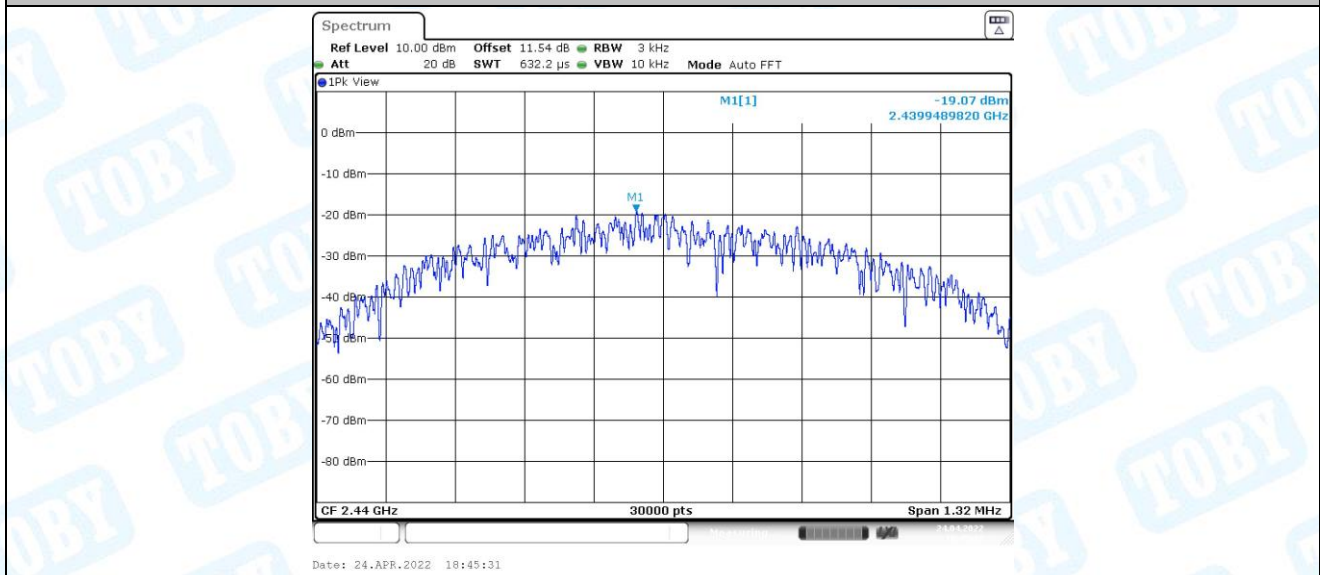
4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.66	≤8.00	PASS
		2440	-19.07	≤8.00	PASS
		2480	-19.21	≤8.00	PASS
BLE_2M	Ant1	2402	-15.38	≤8.00	PASS
		2440	-15.16	≤8.00	PASS
		2480	-16.15	≤8.00	PASS

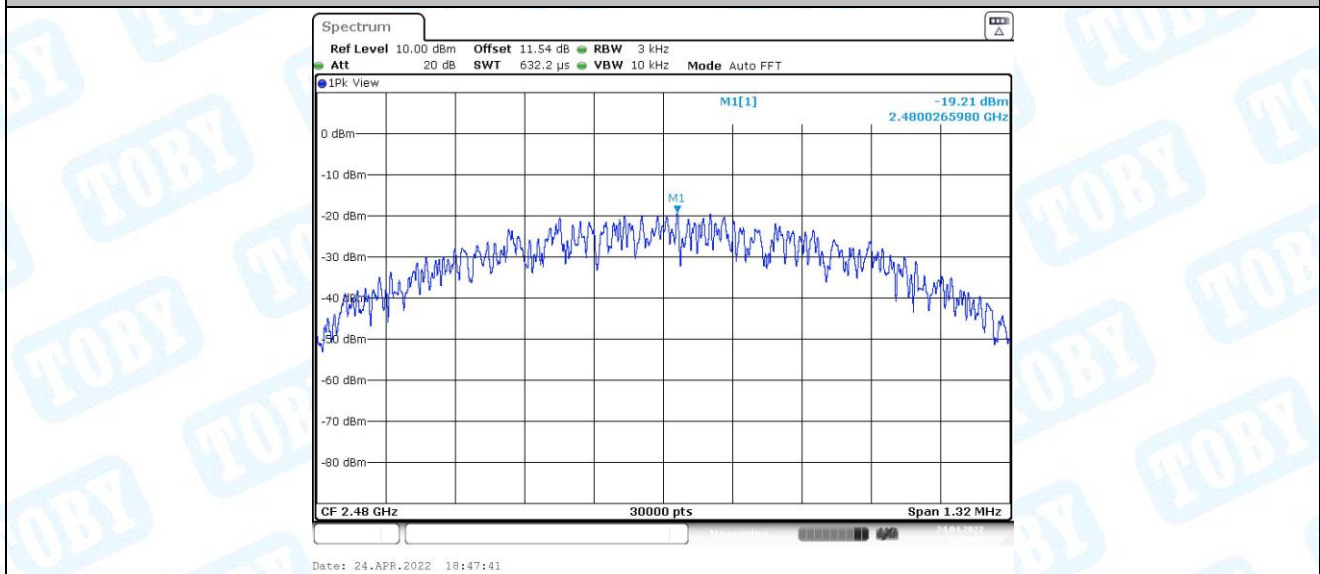
4.2. Test Graphs



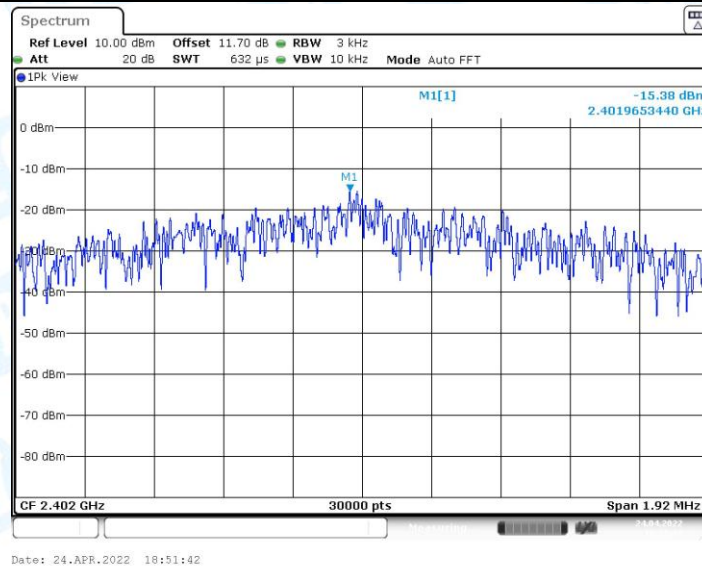
BLE_1M_Ant1_2402



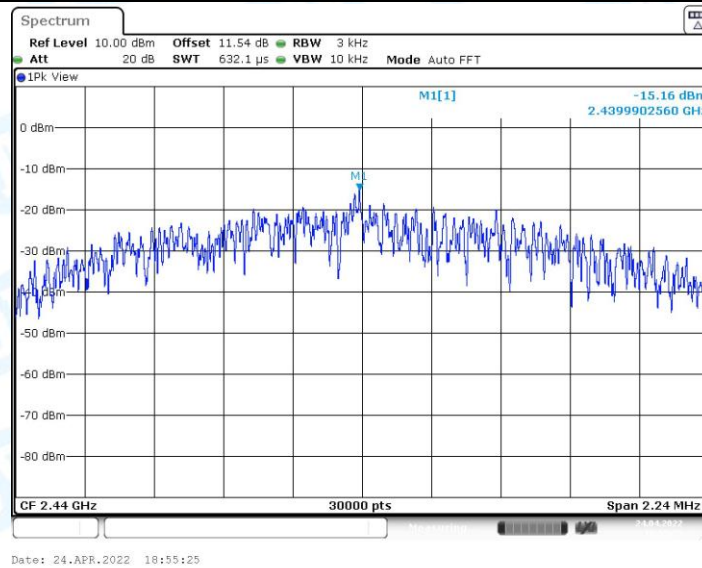
BLE_1M_Ant1_2440



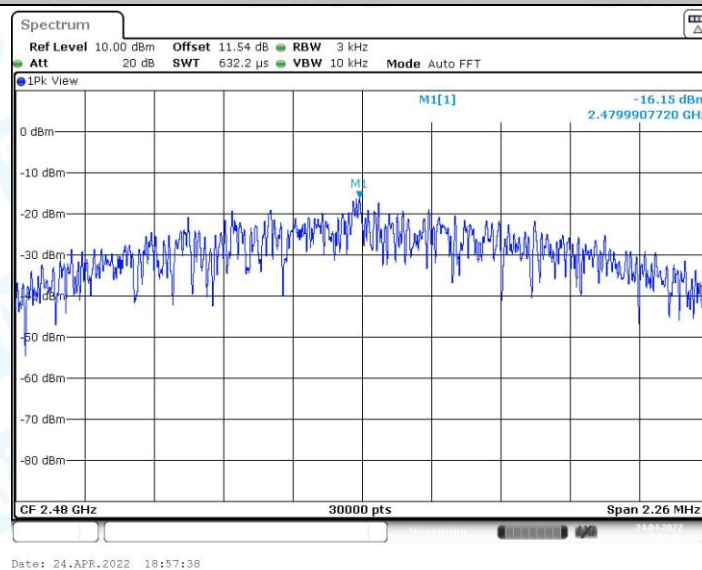
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



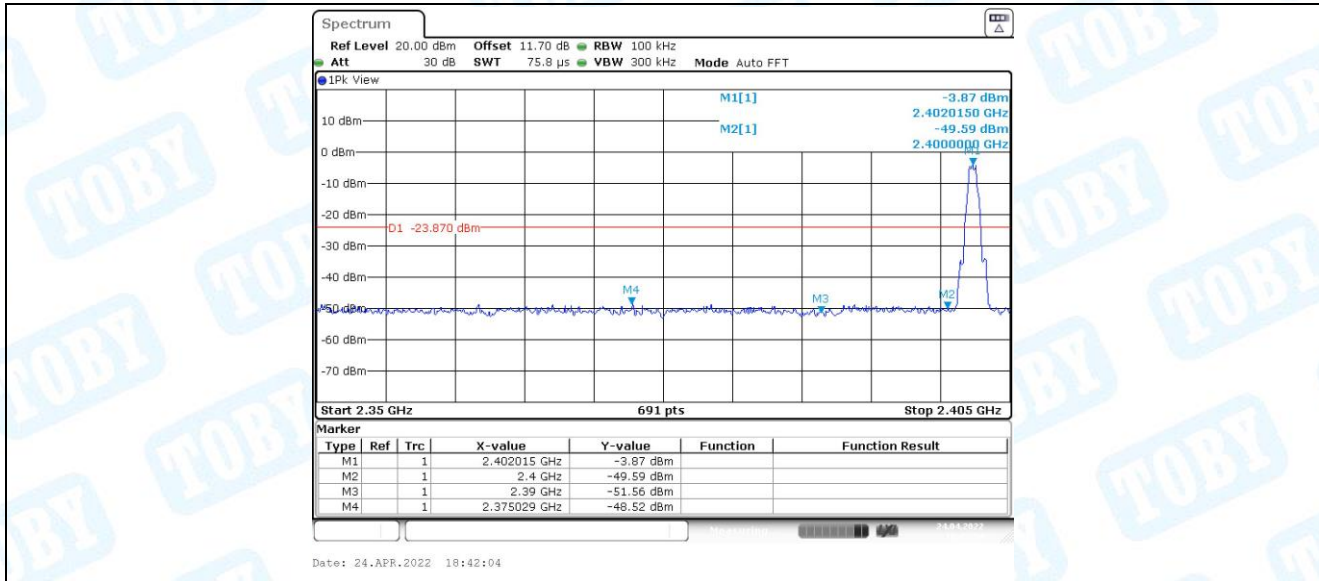
BLE_2M_Ant1_2480

5. Band edge measurements

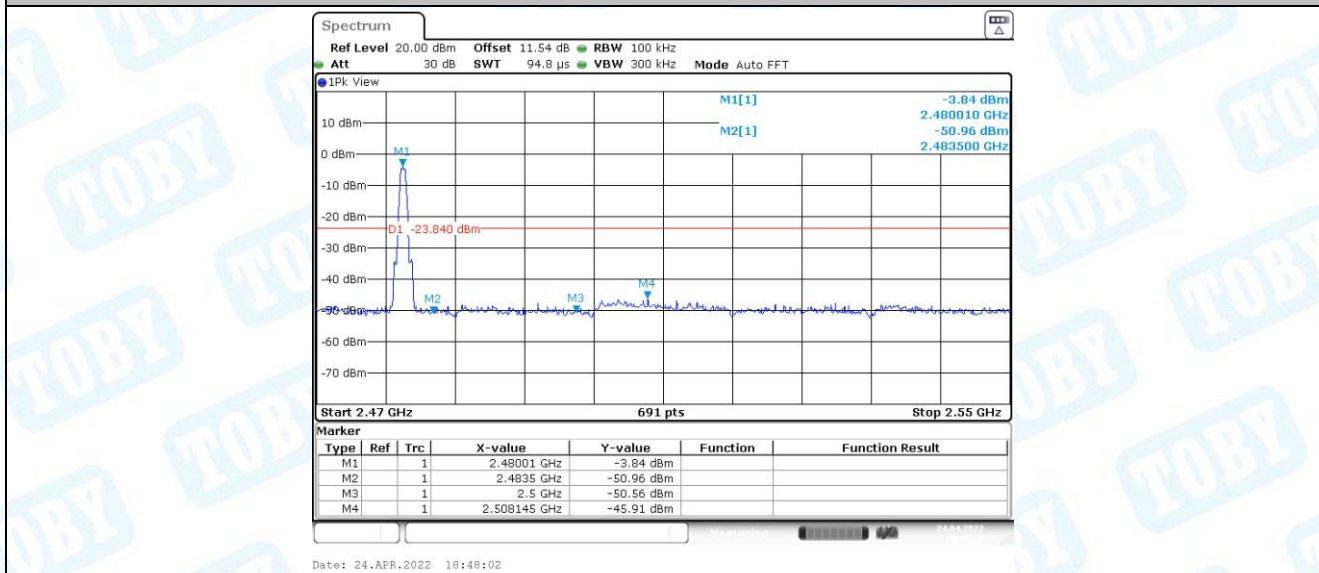
5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.87	-48.52	≤ -23.87	PASS
		High	2480	-3.84	-45.91	≤ -23.84	PASS
BLE_2M	Ant1	Low	2402	1.37	-30.5	≤ -18.63	PASS
		High	2480	0.95	-46.28	≤ -19.05	PASS

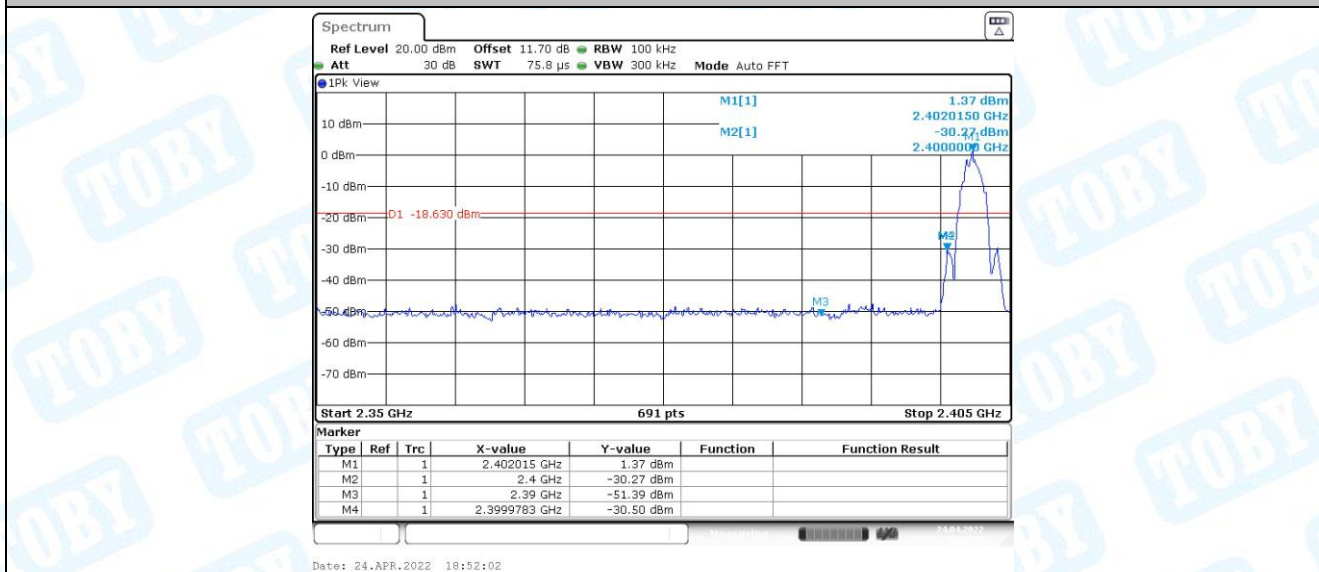
5.2. Test Graphs



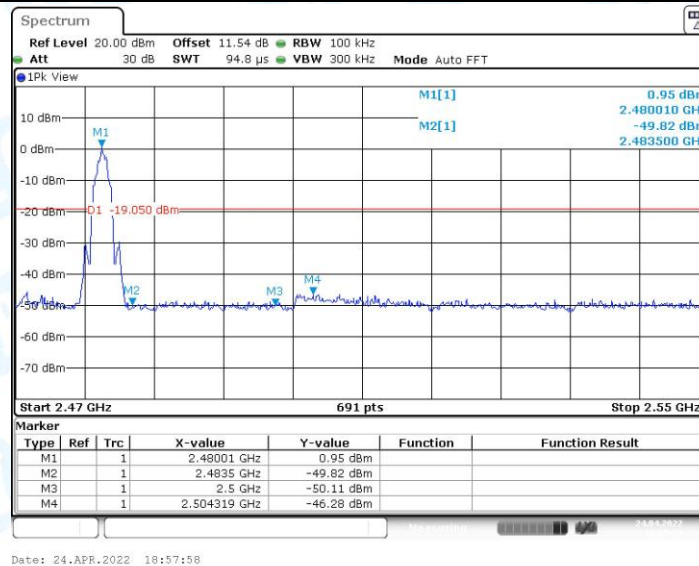
BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



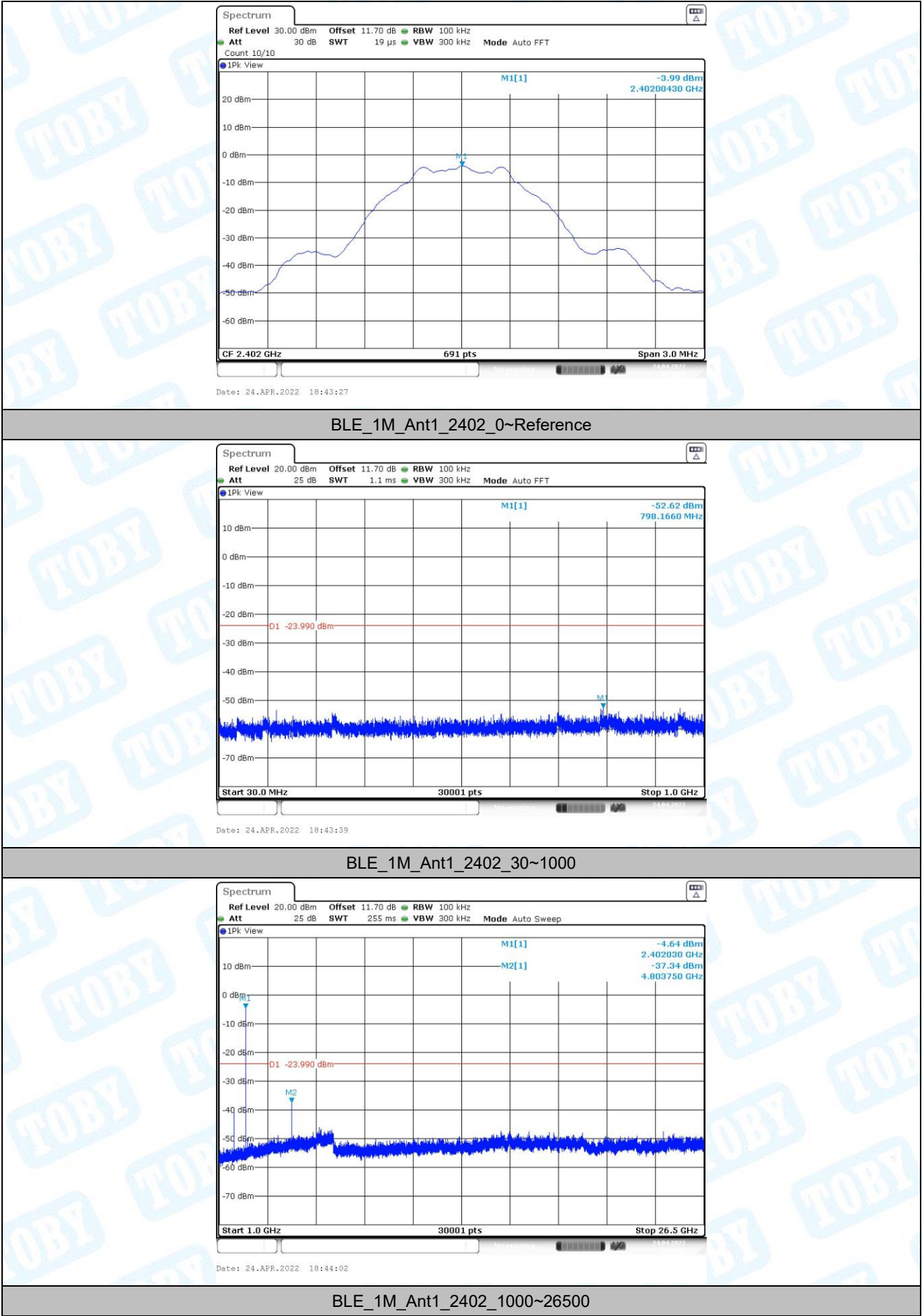
BLE_2M_Ant1_High_2480

6. Conducted Spurious Emission

6.1. Test Result

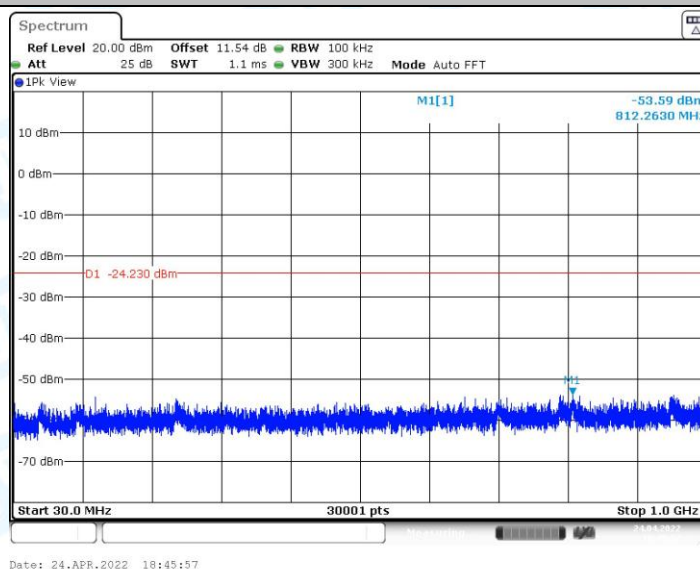
Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.99	-3.99	---	PASS
			30~1000	-3.99	-52.62	≤-23.99	PASS
			1000~26500	-3.99	-37.34	≤-23.99	PASS
		2440	Reference	-4.23	-4.23	---	PASS
			30~1000	-4.23	-53.59	≤-24.23	PASS
			1000~26500	-4.23	-36.96	≤-24.23	PASS
		2480	Reference	-3.98	-3.98	---	PASS
			30~1000	-3.98	-53.05	≤-23.98	PASS
			1000~26500	-3.98	-40.84	≤-23.98	PASS
BLE_2M	Ant1	2402	Reference	1.22	1.22	---	PASS
			30~1000	1.22	-53.69	≤-18.78	PASS
			1000~26500	1.22	-31.42	≤-18.78	PASS
		2440	Reference	0.83	0.83	---	PASS
			30~1000	0.83	-53.23	≤-19.17	PASS
			1000~26500	0.83	-33.28	≤-19.17	PASS
		2480	Reference	0.87	0.87	---	PASS
			30~1000	0.87	-52.97	≤-19.13	PASS
			1000~26500	0.87	-37.36	≤-19.13	PASS

6.2.Test Graphs

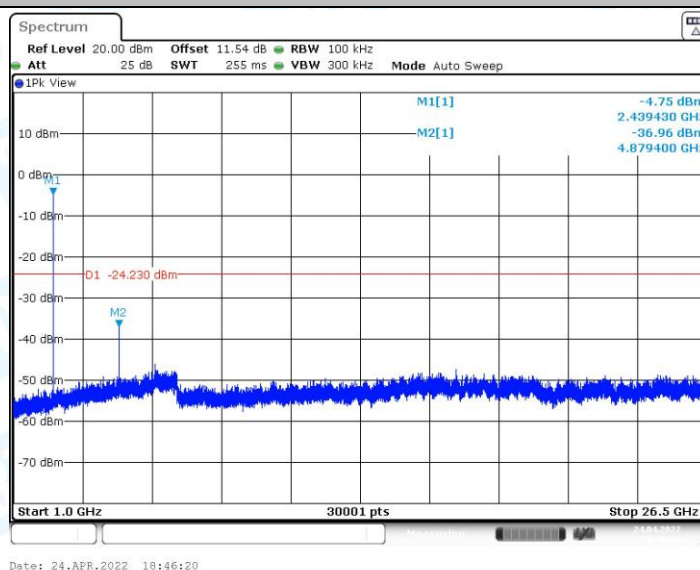




BLE_1M_Ant1_2440_0~Reference



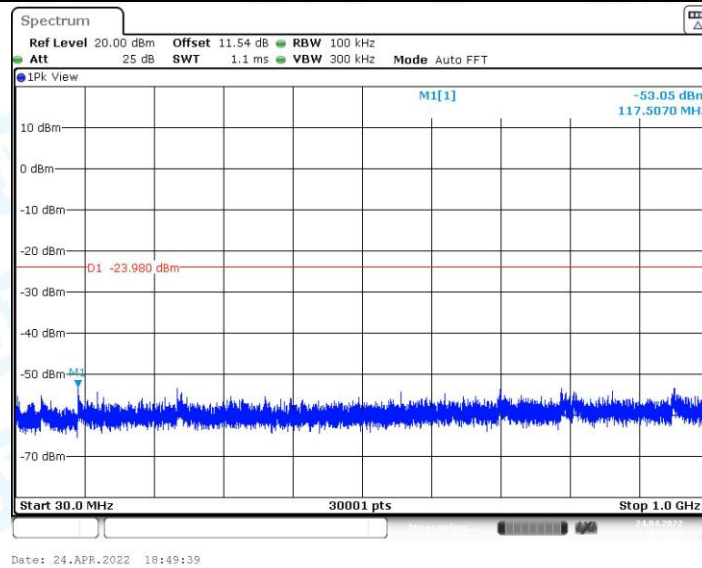
BLE_1M_Ant1_2440_30~1000



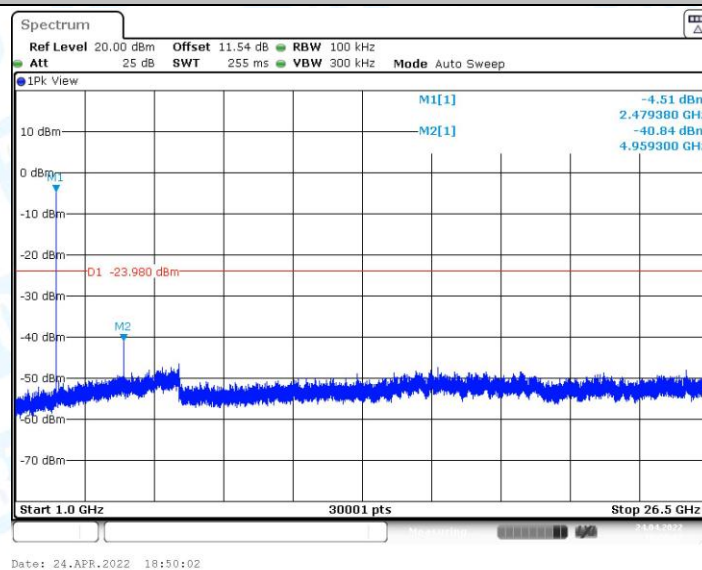
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



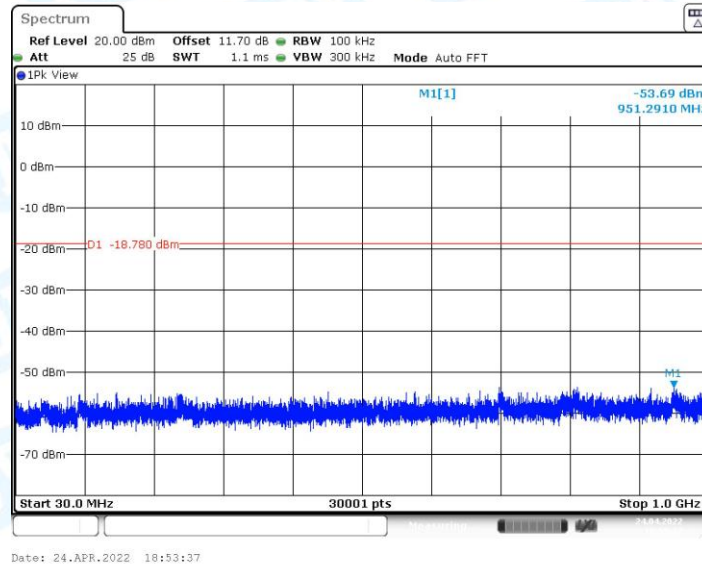
BLE_1M_Ant1_2480_30~1000



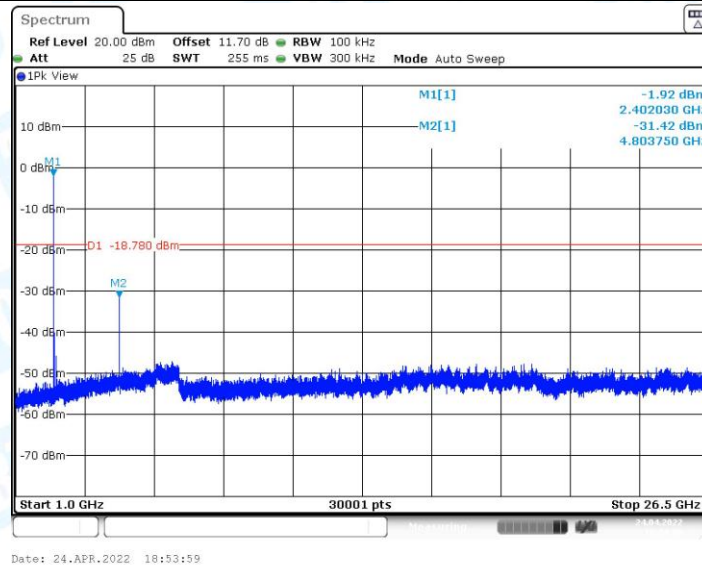
BLE_1M_Ant1_2480_1000~26500



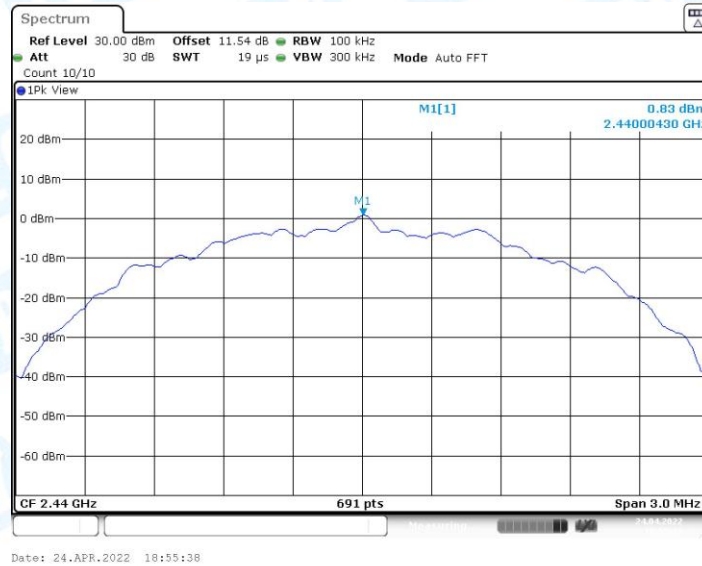
BLE_2M_Ant1_2402_0~Reference



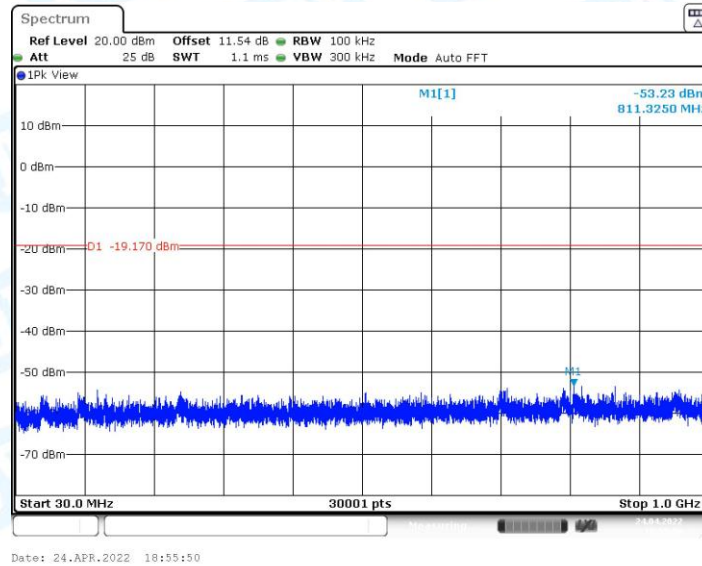
BLE_2M_Ant1_2402_30~1000



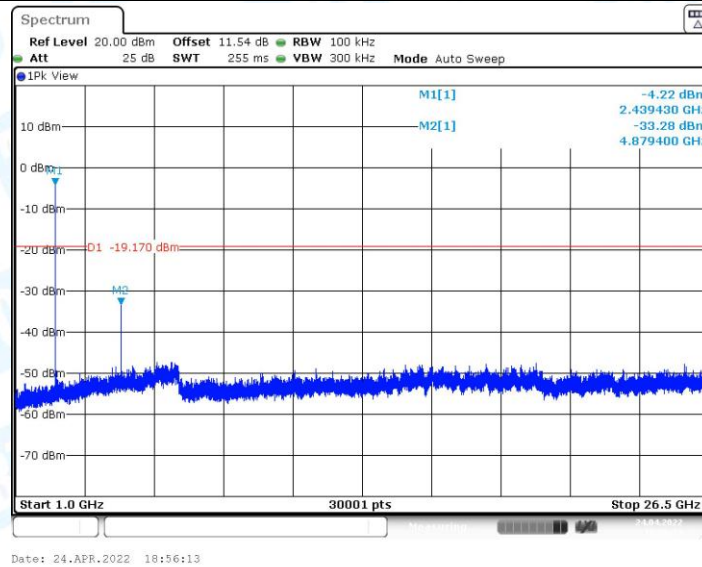
BLE_2M_Ant1_2402_1000~26500



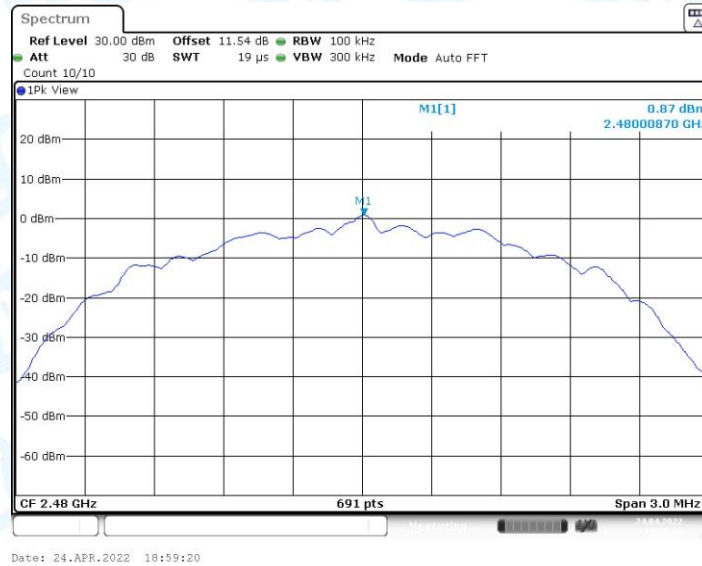
BLE_2M_Ant1_2440_0~Reference



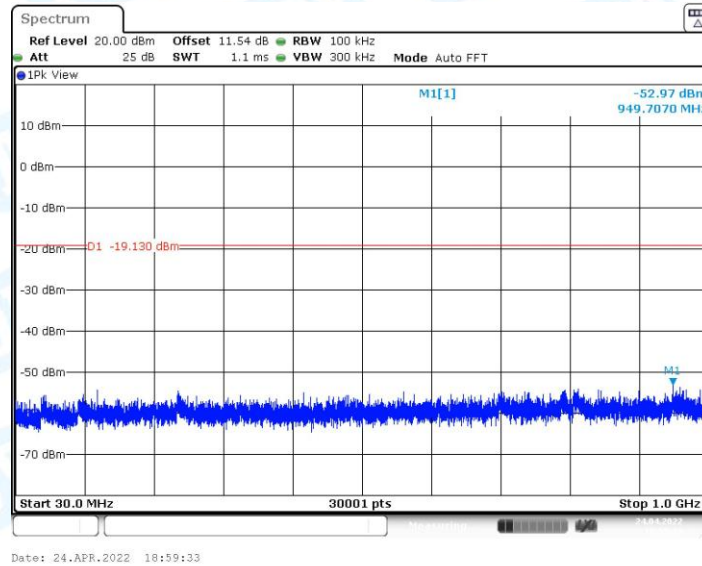
BLE_2M_Ant1_2440_30~1000



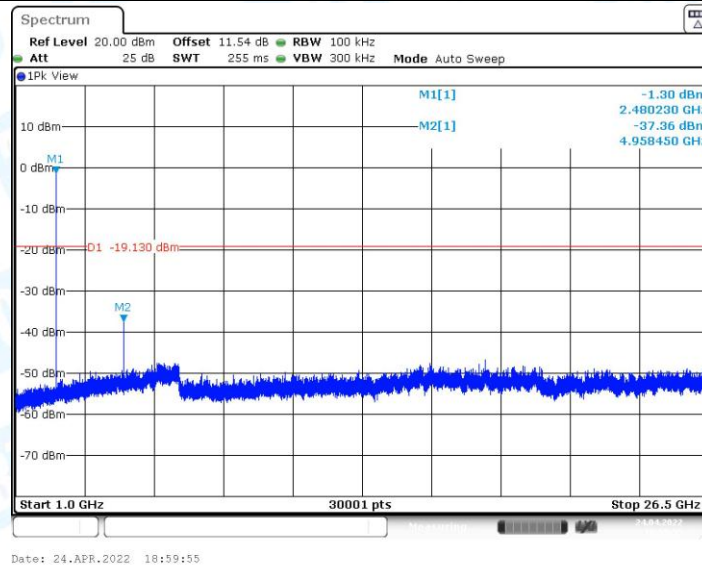
BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



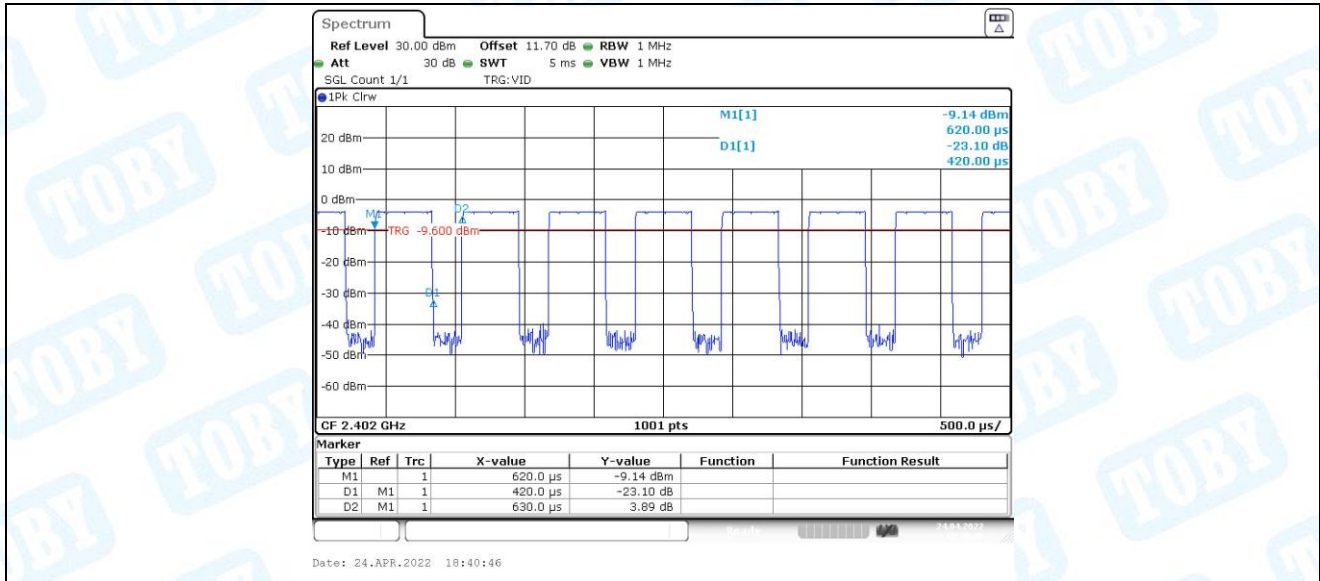
BLE_2M_Ant1_2480_1000~26500

7. Duty Cycle

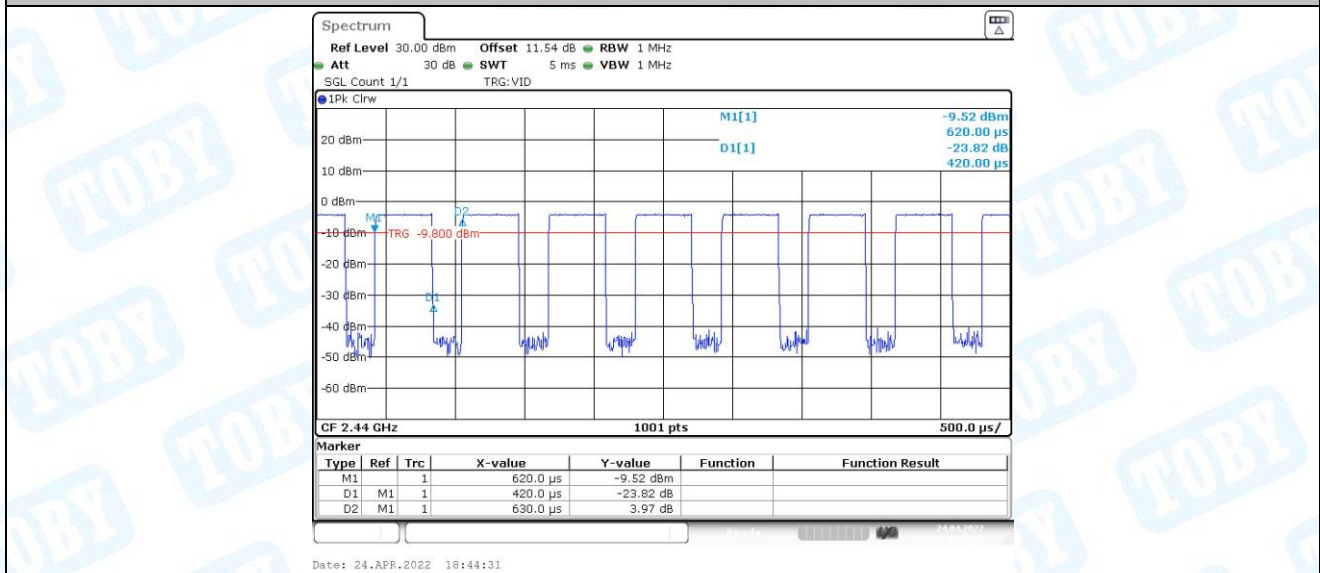
7.1. Test Result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE_1M	Ant1	2402	0.42	0.63	66.67	---	---
		2440	0.42	0.63	66.67	---	---
		2480	0.42	0.63	66.67	---	---
BLE_2M	Ant1	2402	0.24	0.63	38.10	---	---
		2440	0.23	0.62	37.10	---	---
		2480	0.24	0.62	38.71	---	---

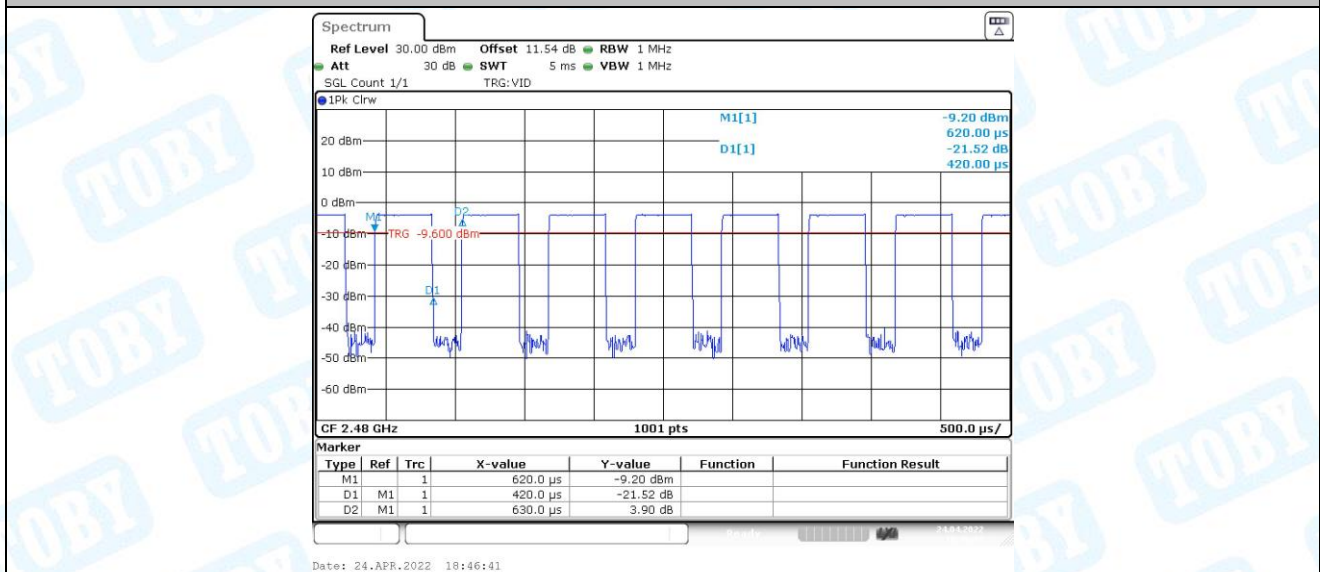
7.2.Test Graphs



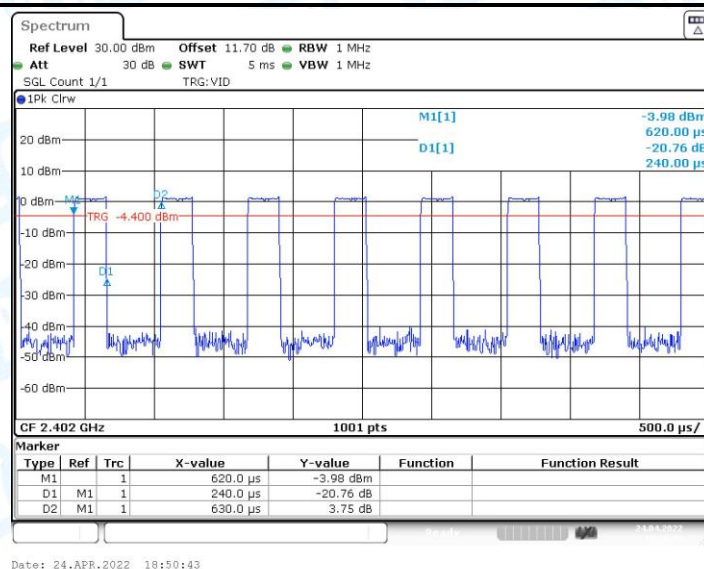
BLE_1M_Ant1_2402



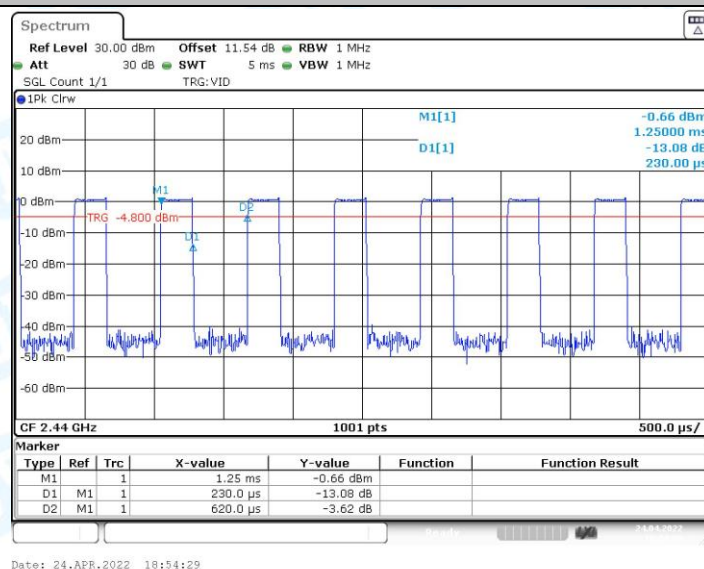
BLE_1M_Ant1_2440



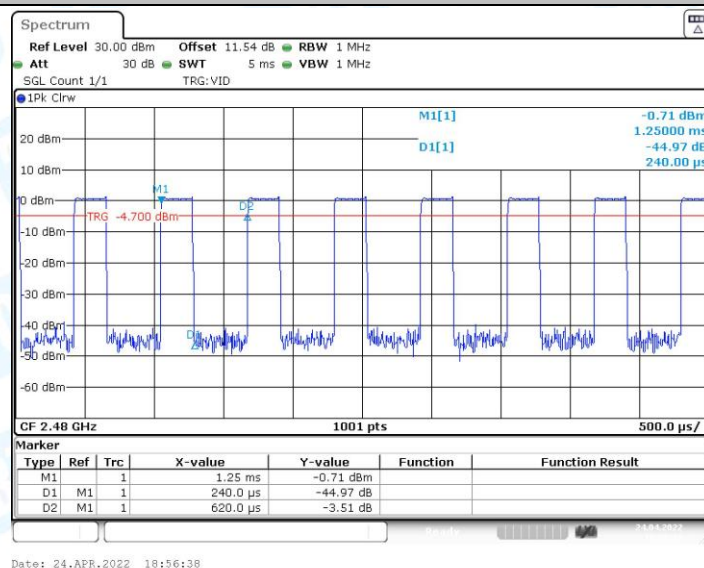
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480