

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	electric scooter
Test Model:	S40
Sample ID:	RW-C-202204-0163-1-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 42V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202204-0163-1	

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1. DTS Bandwidth

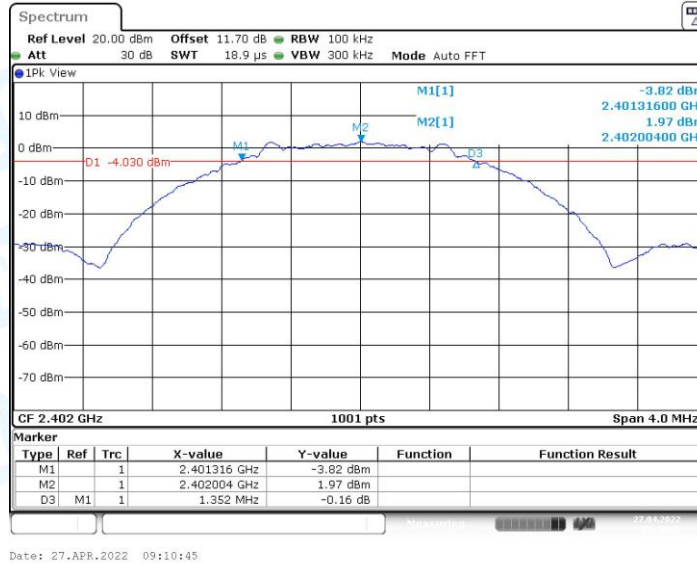
1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.67	2401.65	2402.32	0.5	PASS
		2440	0.66	2439.65	2440.31	0.5	PASS
		2480	0.66	2479.65	2480.31	0.5	PASS
BLE_2M	Ant1	2402	1.35	2401.32	2402.67	0.5	PASS
		2440	1.36	2439.29	2440.65	0.5	PASS
		2480	1.36	2479.30	2480.66	0.5	PASS

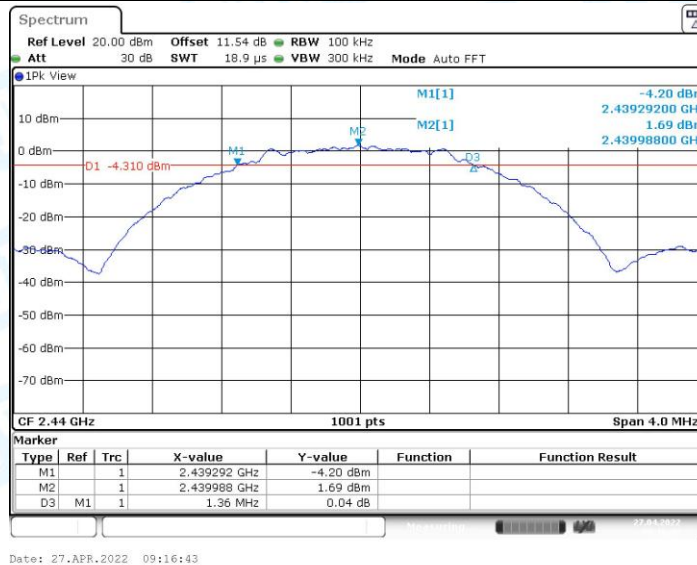
1.2. Test Graphs



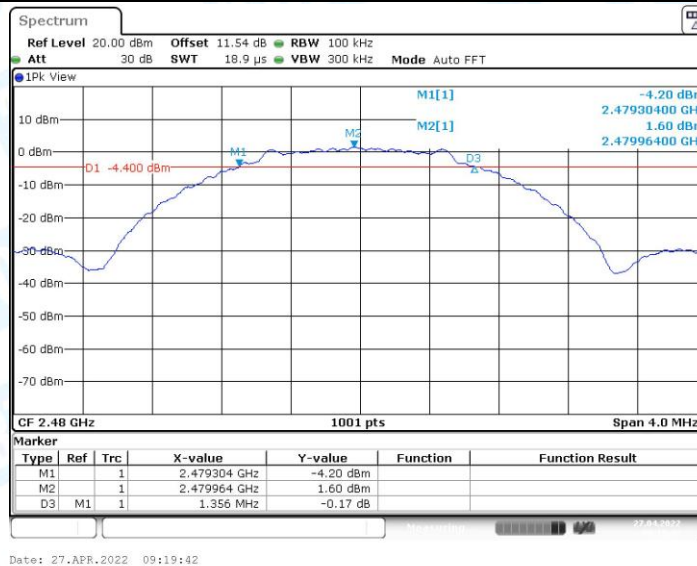
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



2. Occupied Channel Bandwidth

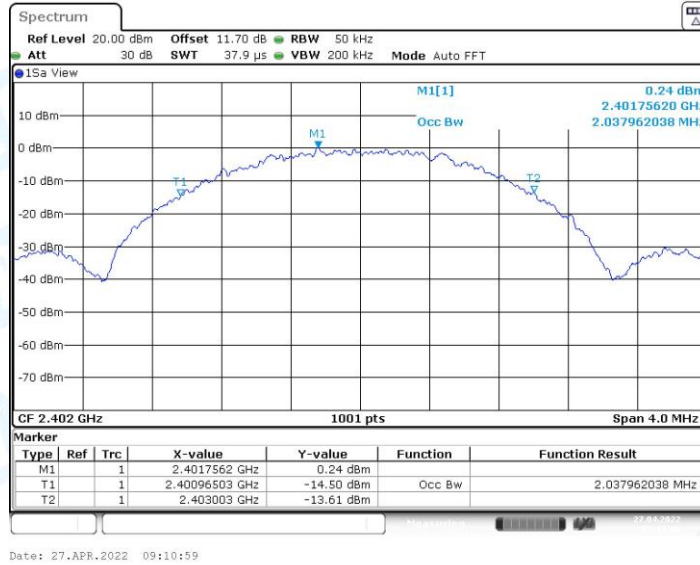
2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.015	2401.477	2402.492	---	---
		2440	1.023	2439.473	2440.496	---	---
		2480	1.031	2479.469	2480.500	---	---
BLE_2M	Ant1	2402	2.038	2400.965	2403.003	---	---
		2440	2.05	2438.957	2441.007	---	---
		2480	2.034	2478.973	2481.007	---	---

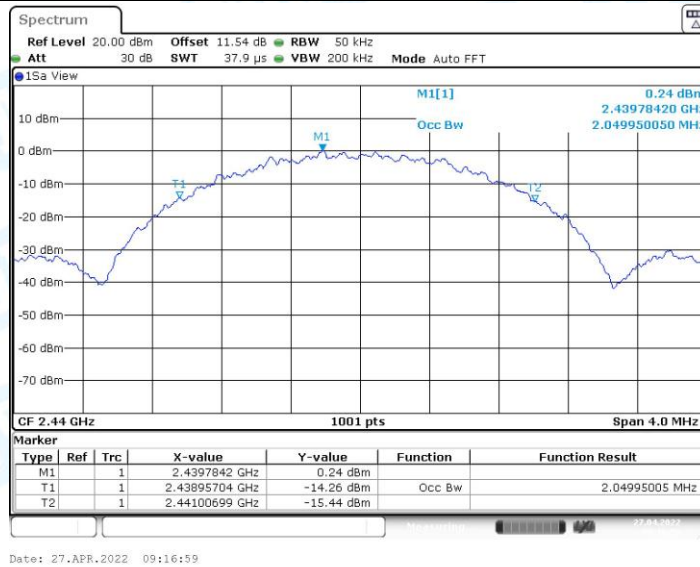
2.2. Test Graphs



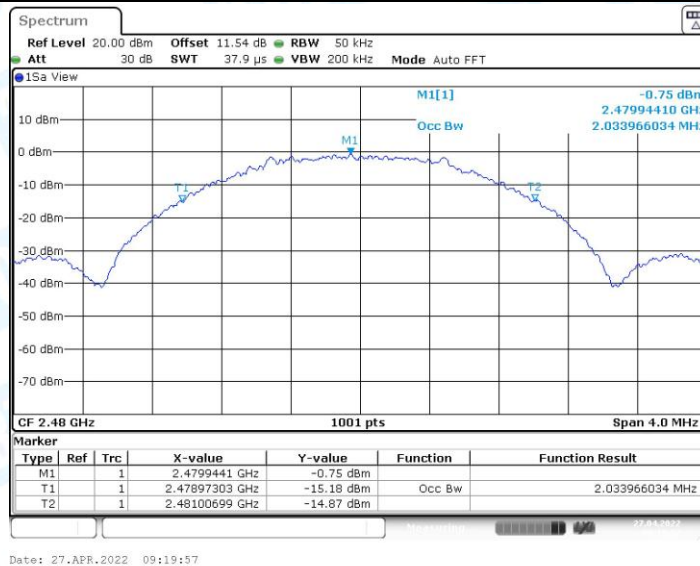
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

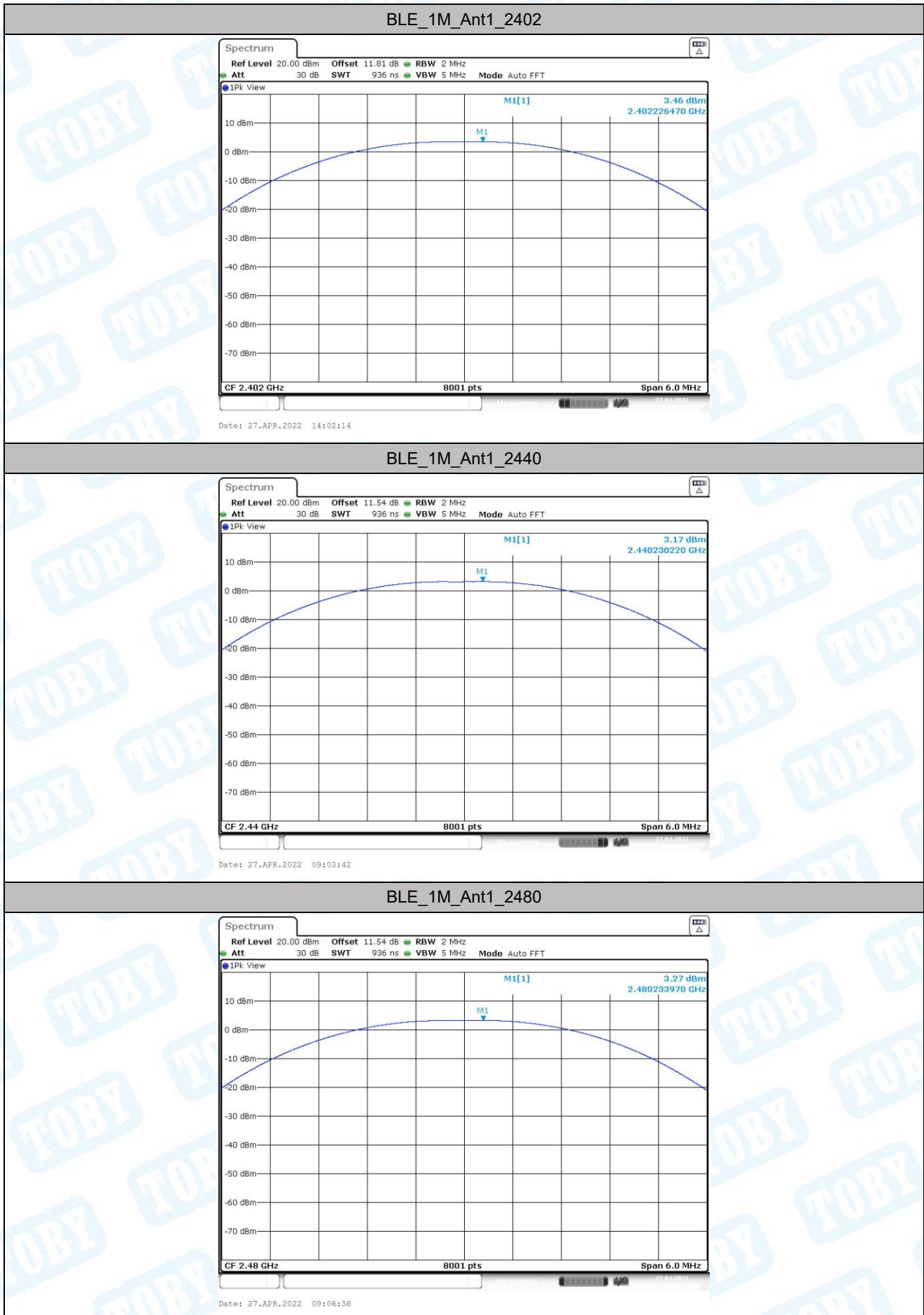


3. Maximum conducted output power

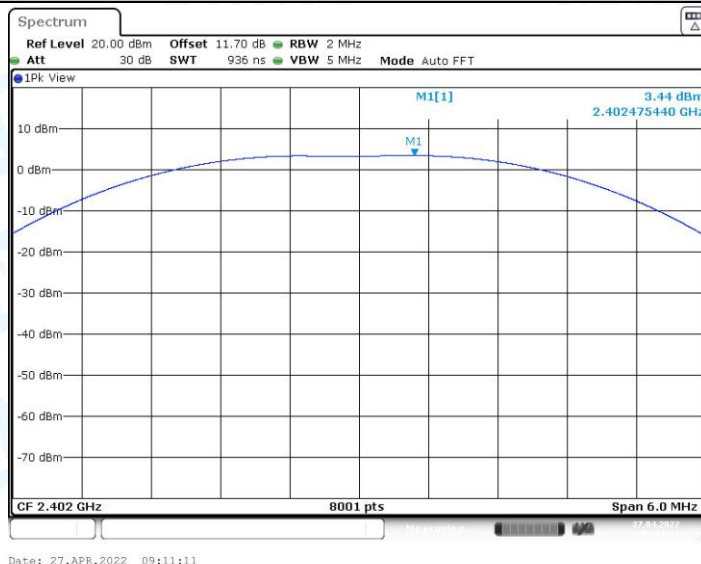
3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.46	≤30	PASS
		2440	3.17	≤30	PASS
		2480	3.27	≤30	PASS
BLE_2M	Ant1	2402	3.44	≤30	PASS
		2440	3.17	≤30	PASS
		2480	3.26	≤30	PASS

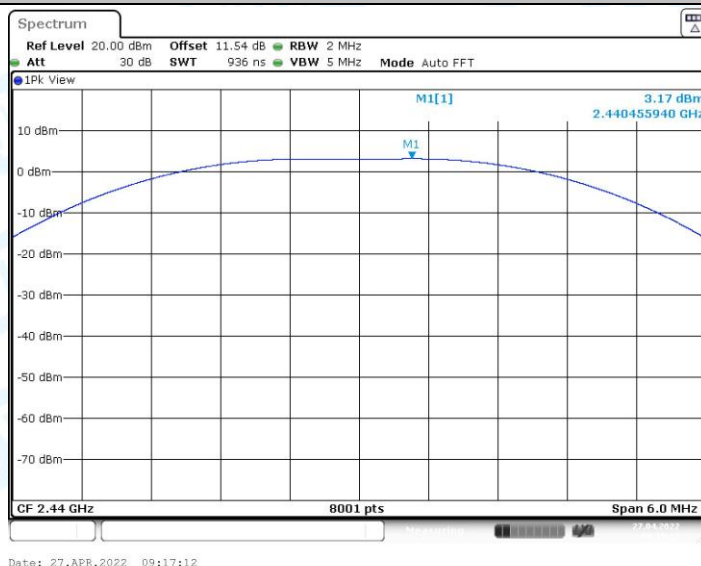
3.2. Test Graphs



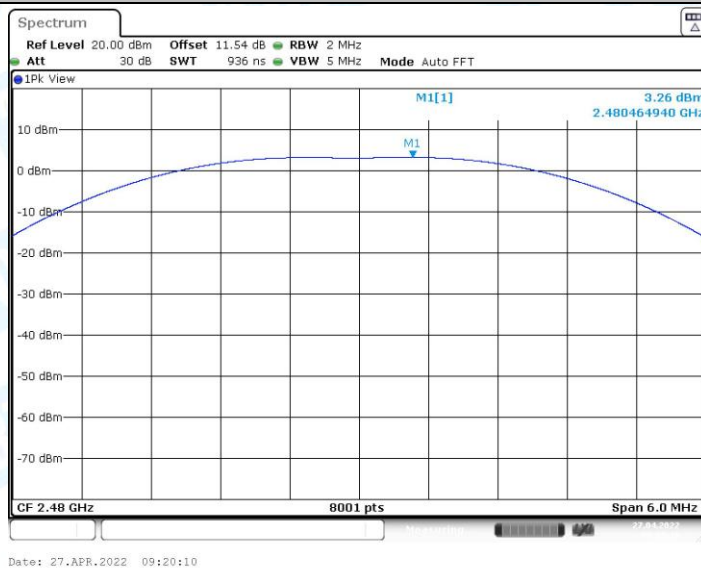
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

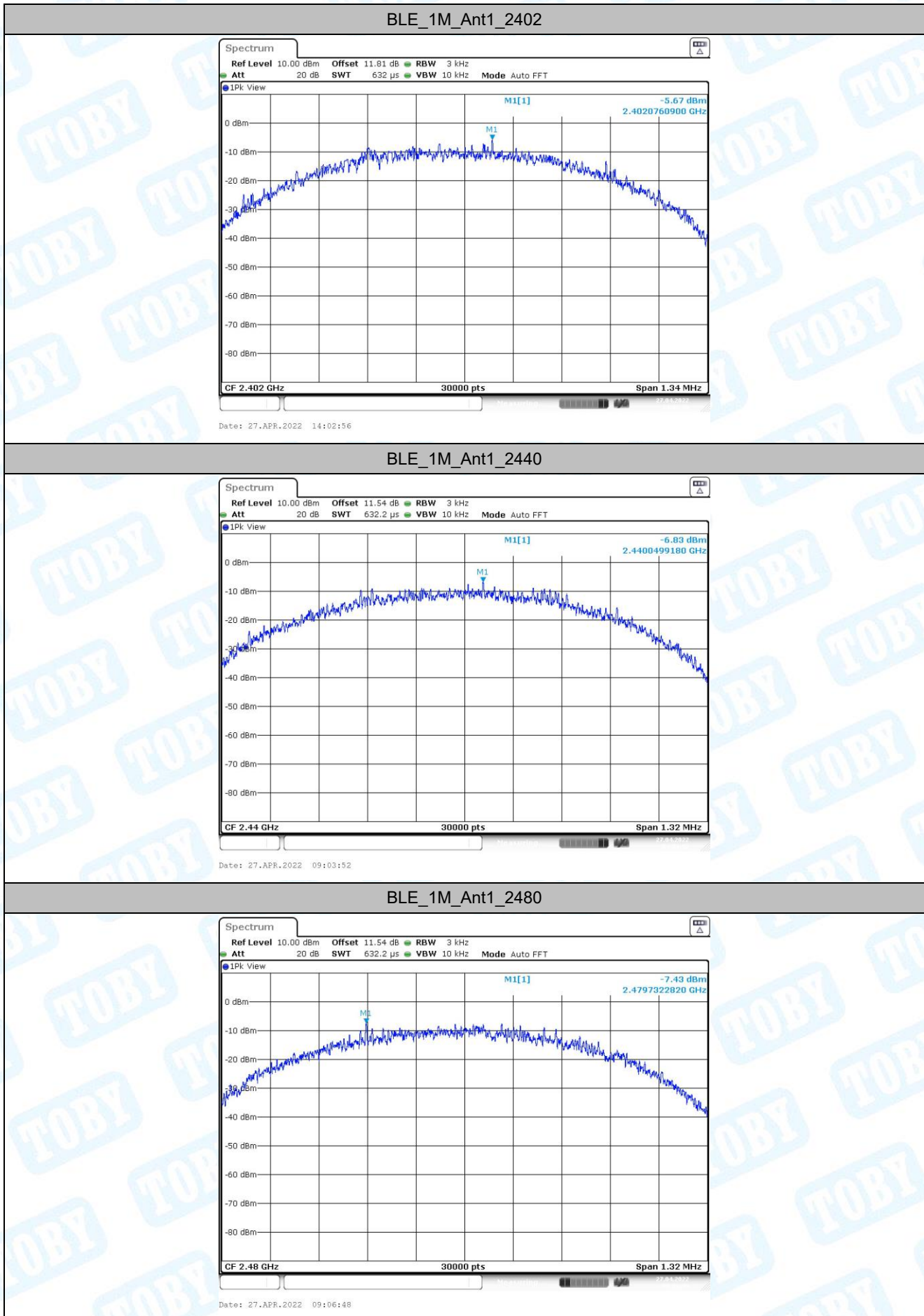


4. Maximum power spectral density

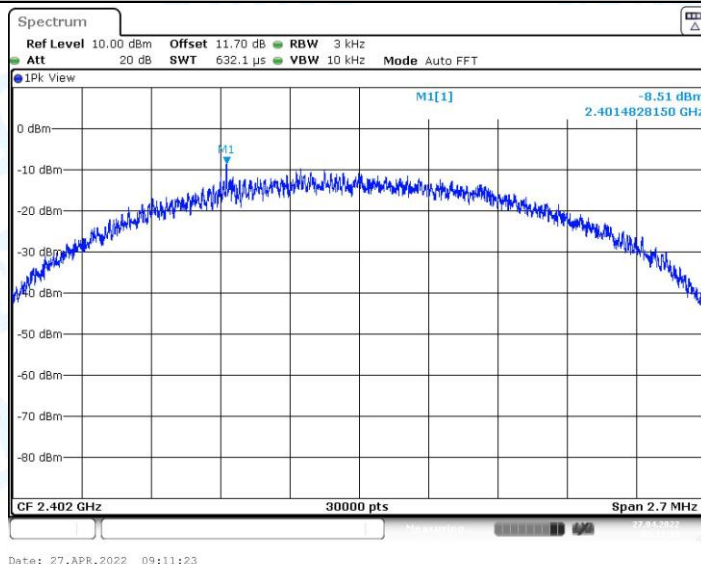
4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-5.67	≤8.00	PASS
		2440	-6.83	≤8.00	PASS
		2480	-7.43	≤8.00	PASS
BLE_2M	Ant1	2402	-8.51	≤8.00	PASS
		2440	-8.49	≤8.00	PASS
		2480	-9.71	≤8.00	PASS

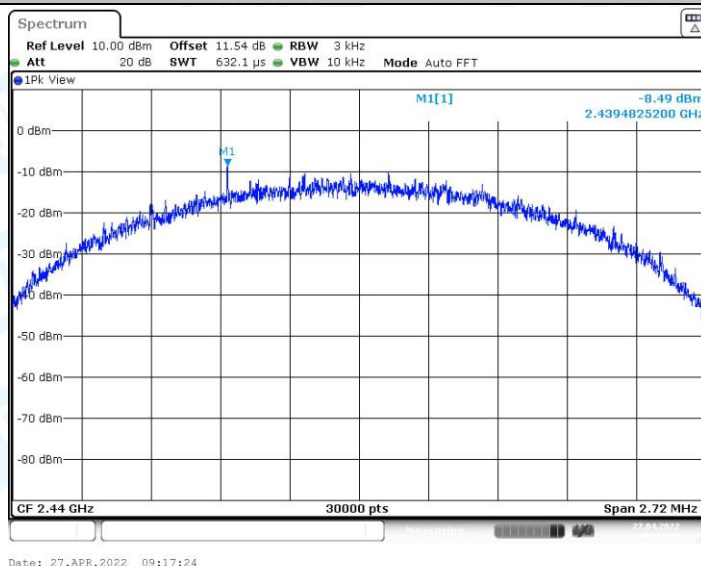
4.2. Test Graphs



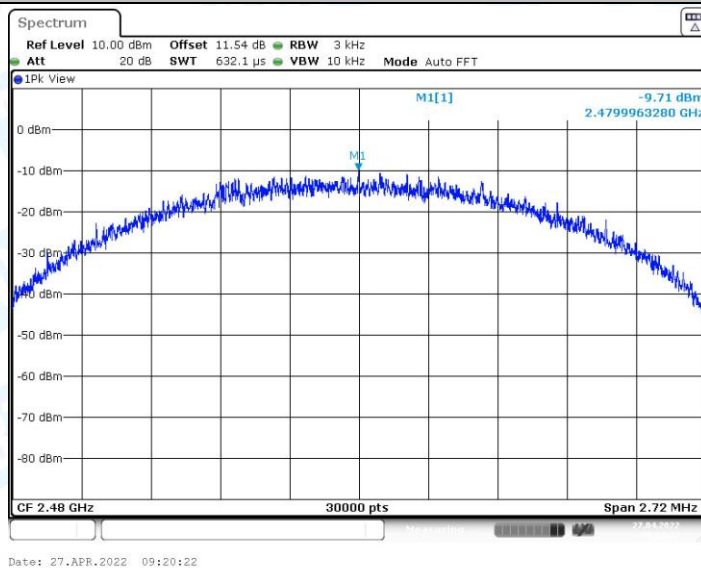
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

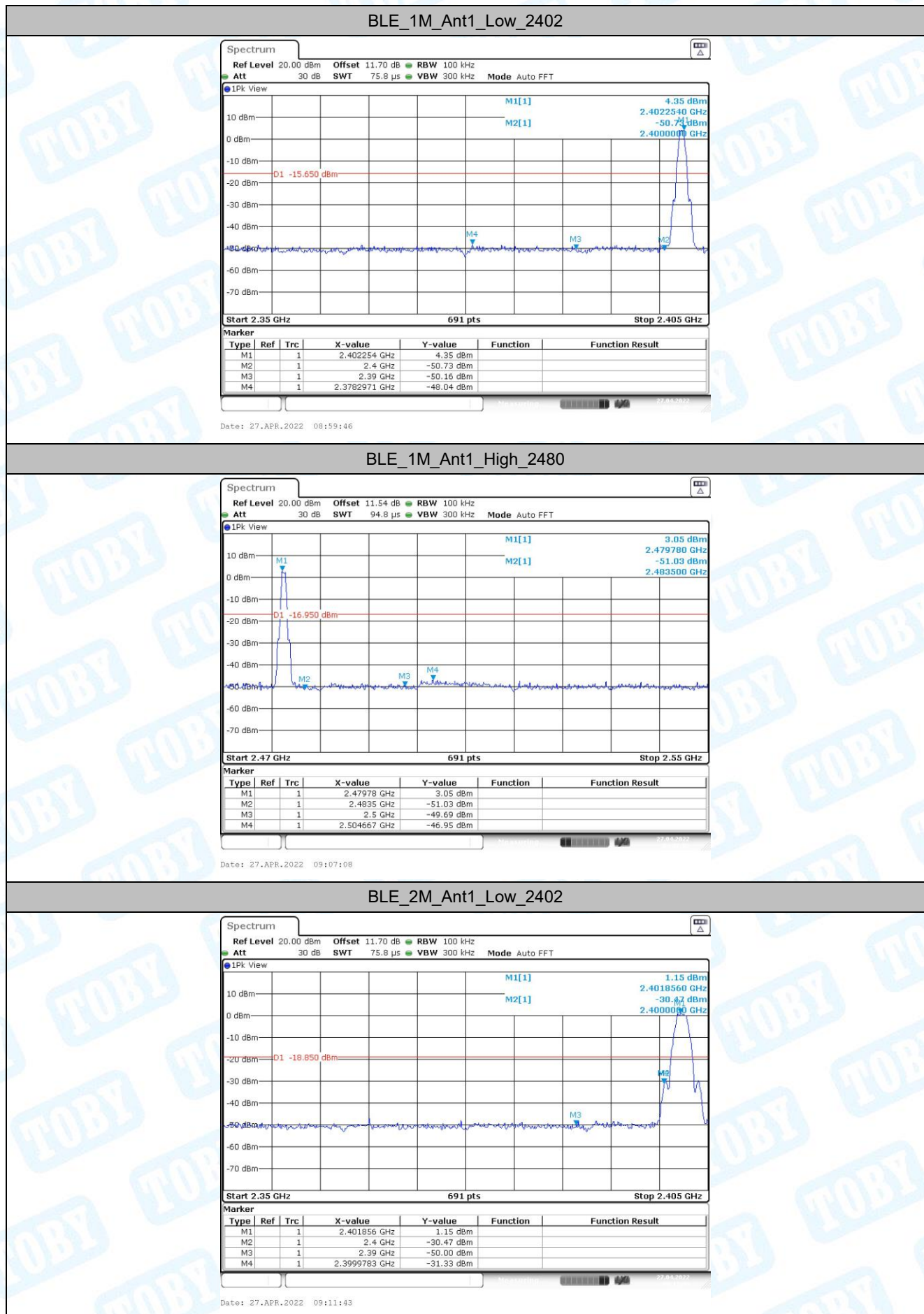


5. Band edge measurements

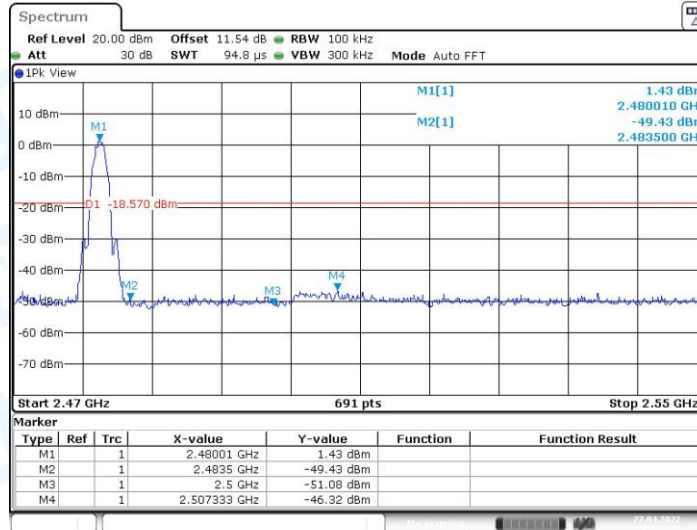
5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	4.35	-48.04	≤ -15.65	PASS
		High	2480	3.05	-46.95	≤ -16.95	PASS
BLE_2M	Ant1	Low	2402	1.15	-31.33	≤ -18.85	PASS
		High	2480	1.43	-46.32	≤ -18.57	PASS

5.2. Test Graphs



BLE_2M_Ant1_High_2480



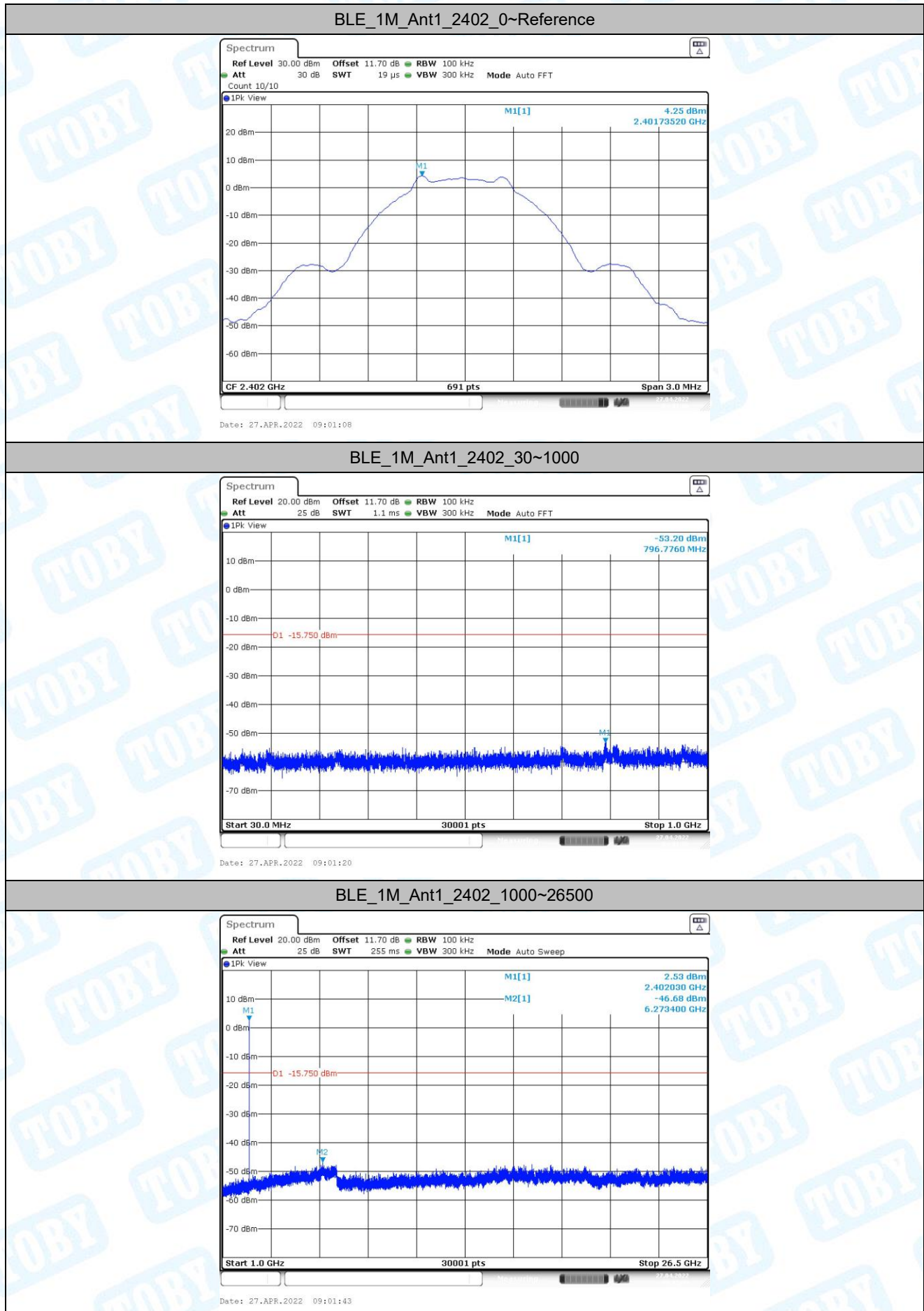
Date: 27.APR.2022 09:20:40

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	4.25	4.25	---	PASS
			30~1000	4.25	-53.2	≤ -15.75	PASS
			1000~26500	4.25	-46.68	≤ -15.75	PASS
		2440	Reference	2.79	2.79	---	PASS
			30~1000	2.79	-53.39	≤ -17.21	PASS
			1000~26500	2.79	-47.24	≤ -17.21	PASS
		2480	Reference	2.82	2.82	---	PASS
			30~1000	2.82	-52.7	≤ -17.18	PASS
			1000~26500	2.82	-46.74	≤ -17.18	PASS
BLE_2M	Ant1	2402	Reference	1.60	1.60	---	PASS
			30~1000	1.60	-52.71	≤ -18.4	PASS
			1000~26500	1.60	-46.85	≤ -18.4	PASS
		2440	Reference	0.96	0.96	---	PASS
			30~1000	0.96	-53.28	≤ -19.04	PASS
			1000~26500	0.96	-47.26	≤ -19.04	PASS
		2480	Reference	1.84	1.84	---	PASS
			30~1000	1.84	-52.93	≤ -18.16	PASS
			1000~26500	1.84	-47.19	≤ -18.16	PASS

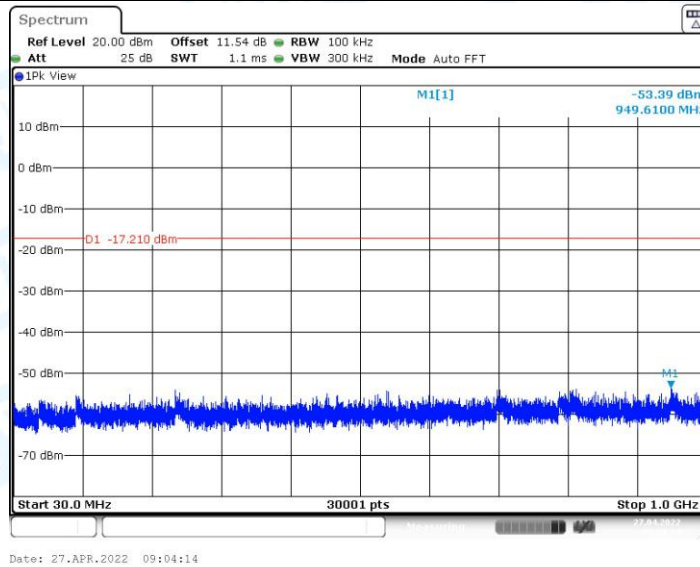
6.2. Test Graphs



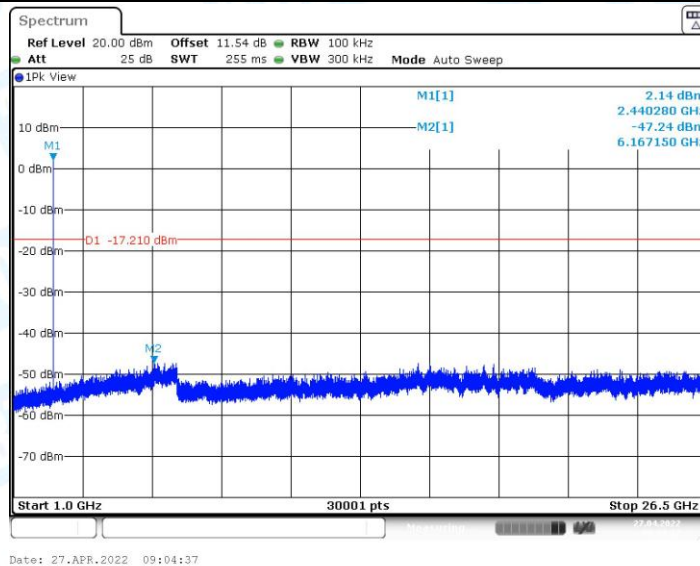
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



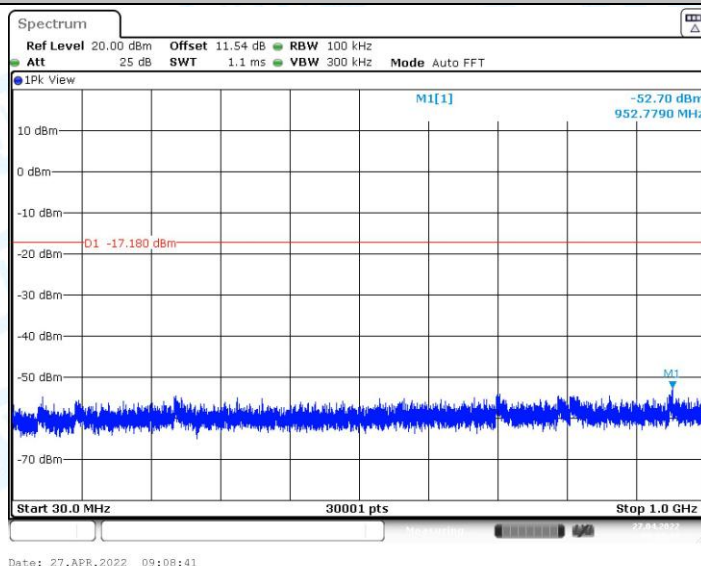
BLE_1M_Ant1_2440_1000~26500



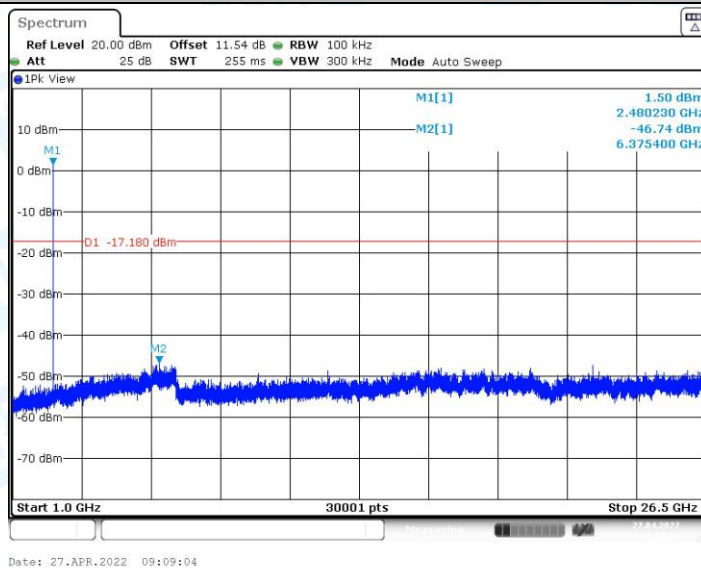
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



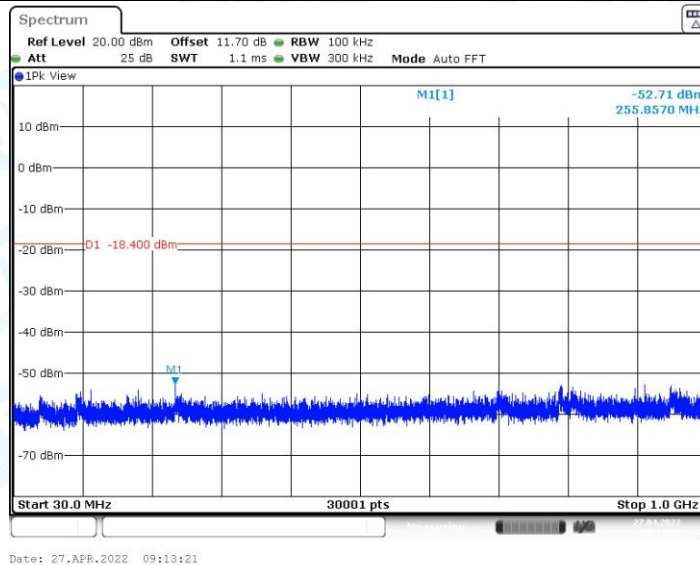
BLE_1M_Ant1_2480_1000~26500



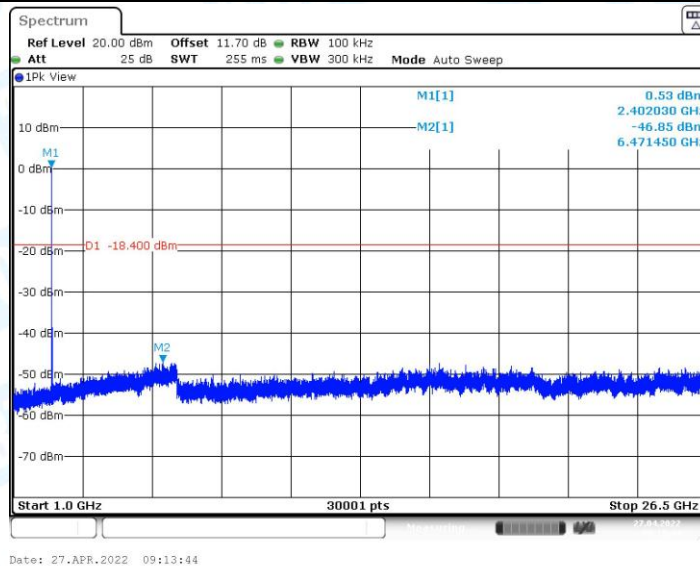
BLE_2M_Ant1_2402_0~Reference



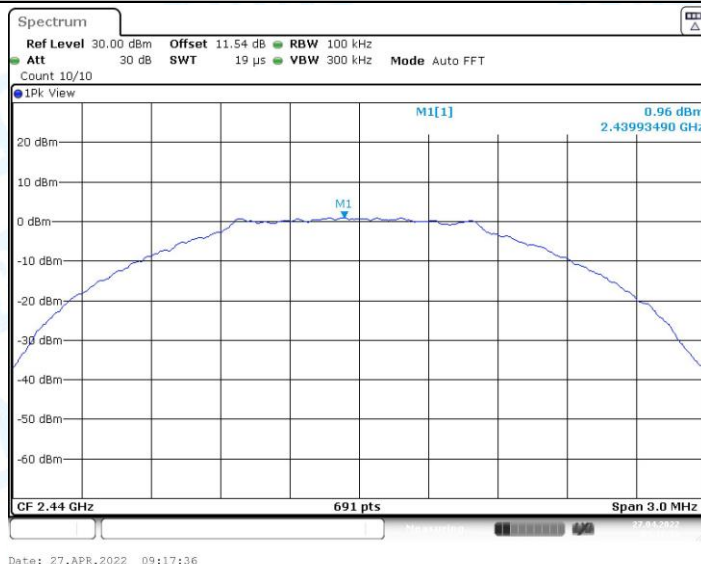
BLE_2M_Ant1_2402_30~1000



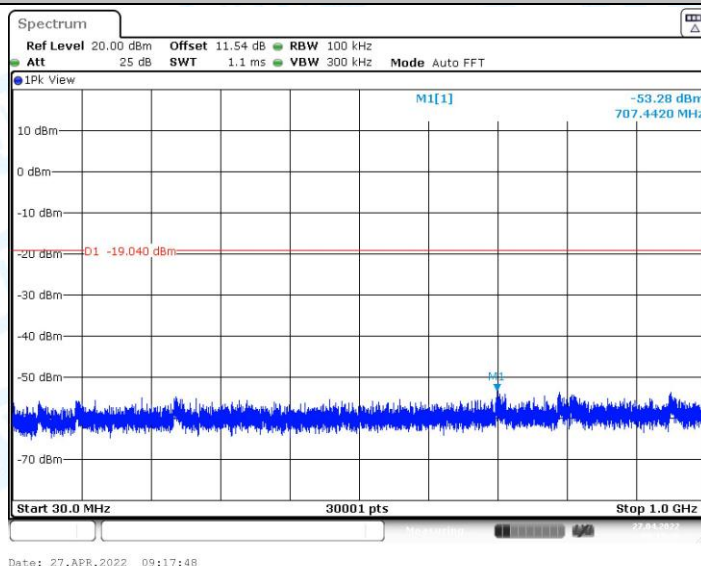
BLE_2M_Ant1_2402_1000~26500



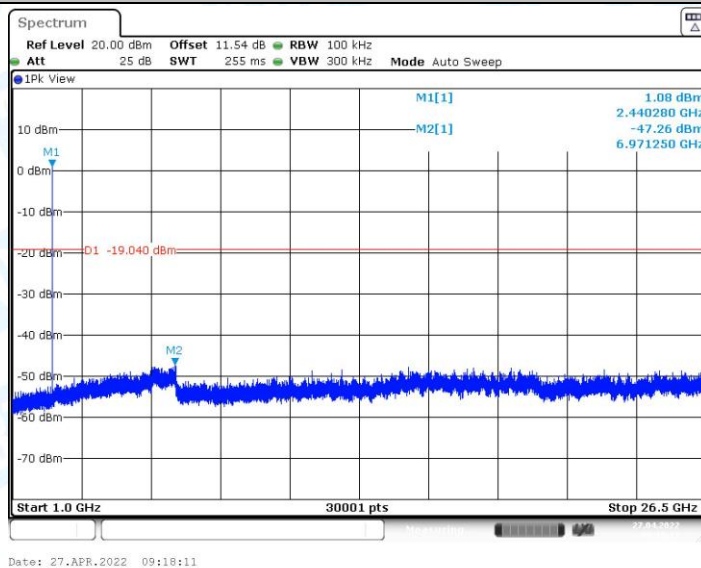
BLE_2M_Ant1_2440_0~Reference



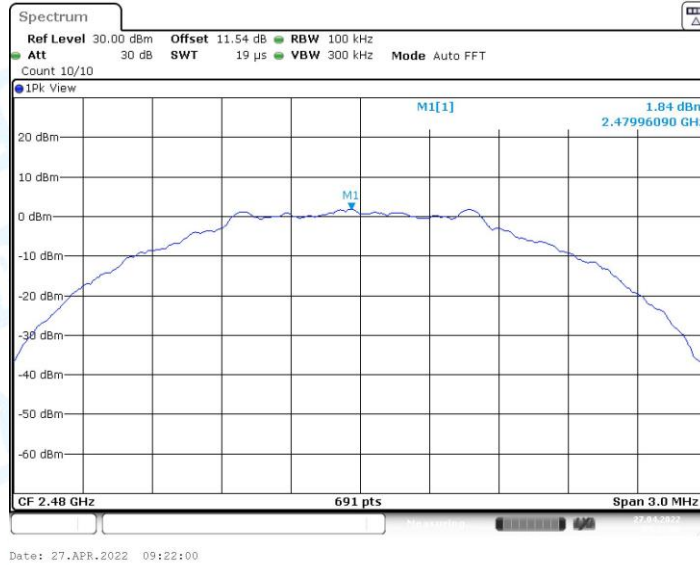
BLE_2M_Ant1_2440_30~1000



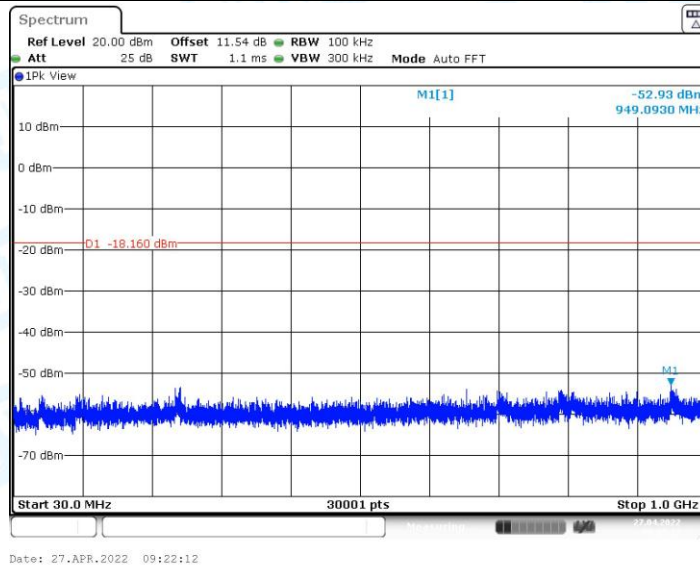
BLE_2M_Ant1_2440_1000~26500



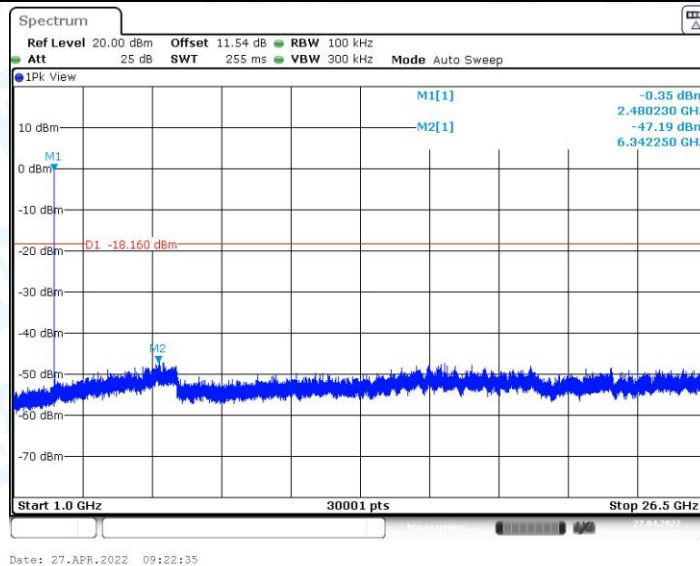
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

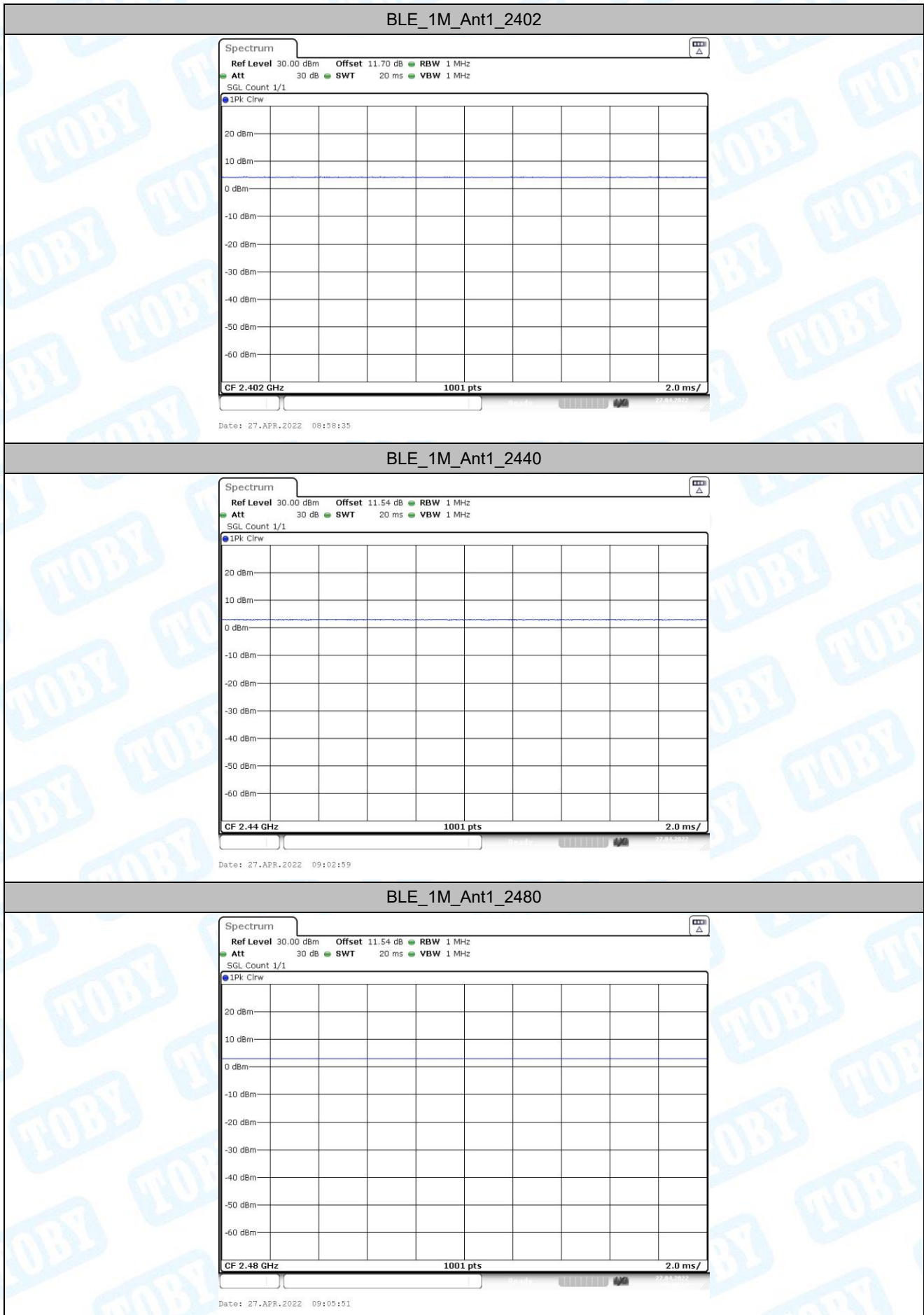


7. Duty Cycle

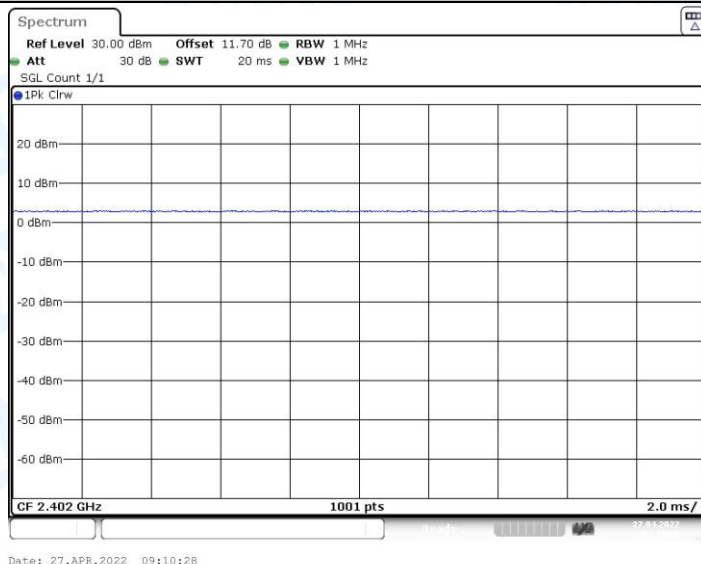
7.1. Test Result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [kHz]	Limit	Verdict
BLE_1M	Ant1	2402	0.00	0.00	100	0	---	---
		2440	0.00	0.00	100	0	---	---
		2480	0.00	0.00	100	0	---	---
BLE_2M	Ant1	2402	0.00	0.00	100	0	---	---
		2440	0.00	0.00	100	0	---	---
		2480	0.00	0.00	100	0	---	---

7.2. Test Graphs



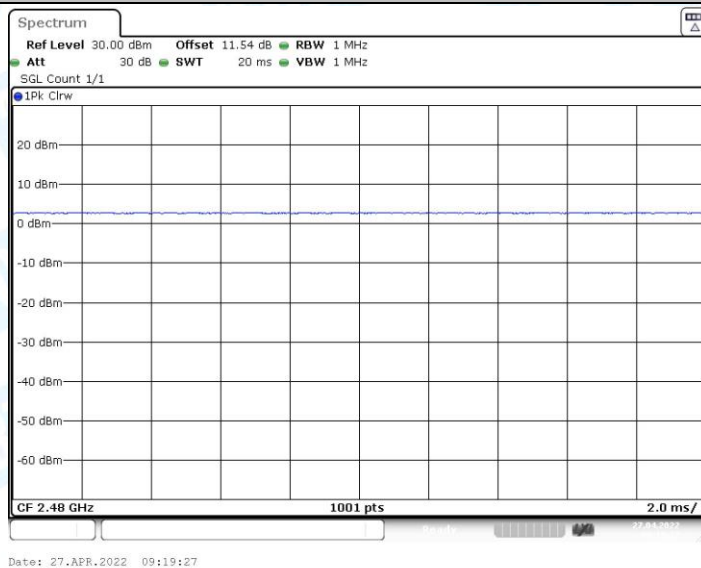
BLE_2M_Ant1_2402



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	-49.87	≤-41.20	PASS
				AV	2340.935	-47.52	≤-41.20	PASS
				AV	2390.000	-49.71	≤-41.20	PASS
				Peak	2310.000	-38.31	≤-21.20	PASS
				Peak	2342.609	-35.48	≤-21.20	PASS
				Peak	2390.000	-38.81	≤-21.20	PASS
		High	2480	AV	2483.500	-48.94	≤-41.20	PASS
				AV	2497.362	-48.73	≤-41.20	PASS
				AV	2500.000	-49.04	≤-41.20	PASS
				Peak	2483.500	-39.18	≤-21.20	PASS
				Peak	2495.043	-36.79	≤-21.20	PASS
				Peak	2500.000	-38.09	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-49.82	≤-41.20	PASS
				AV	2340.783	-47.47	≤-41.20	PASS
				AV	2390.000	-49.73	≤-41.20	PASS
				Peak	2310.000	-38.08	≤-21.20	PASS
				Peak	2346.413	-35.46	≤-21.20	PASS
				Peak	2390.000	-39.06	≤-21.20	PASS
		High	2480	AV	2483.500	-48.48	≤-41.20	PASS
				AV	2483.565	-48.63	≤-41.20	PASS
				AV	2500.000	-49.05	≤-41.20	PASS
				Peak	2483.500	-38.5	≤-21.20	PASS
				Peak	2498.986	-35.95	≤-21.20	PASS
				Peak	2500.000	-37.87	≤-21.20	PASS

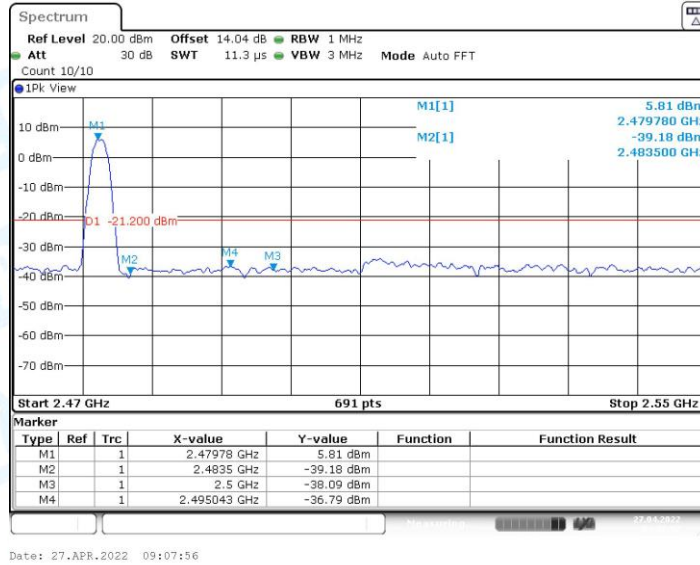
Note:

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.

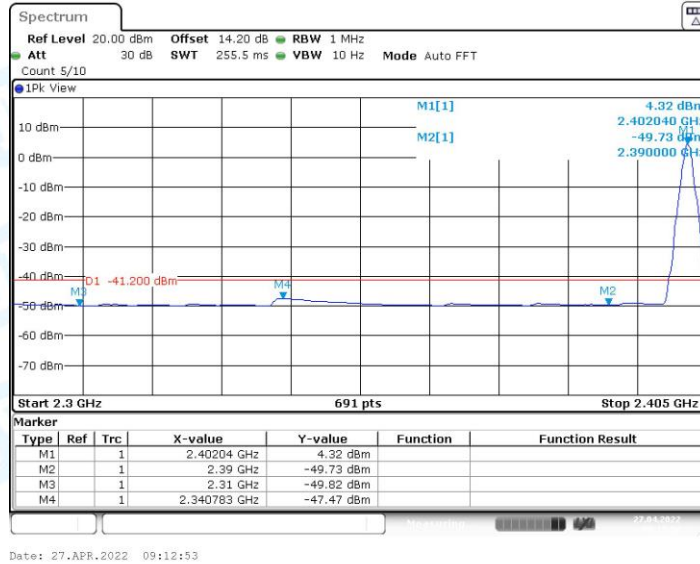
8.2.Test Graphs



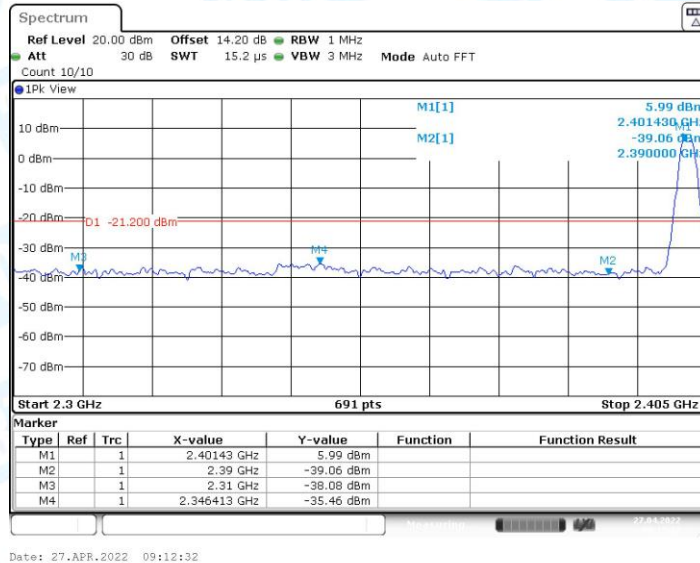
BLE_1M_Ant1_High_2480_Peak



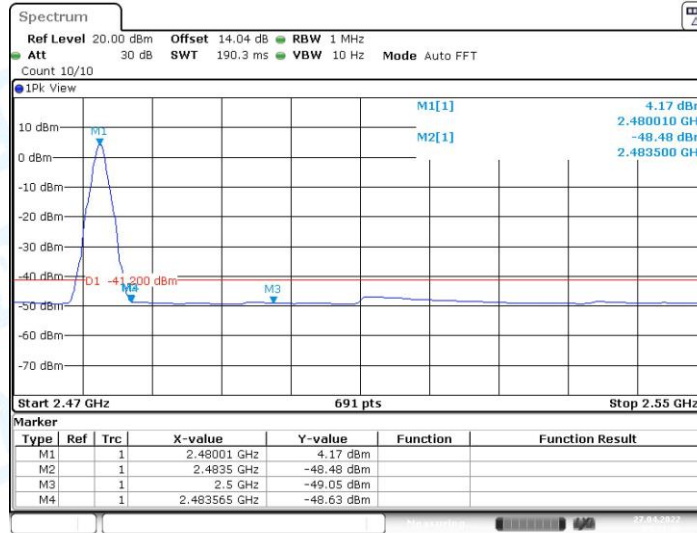
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak

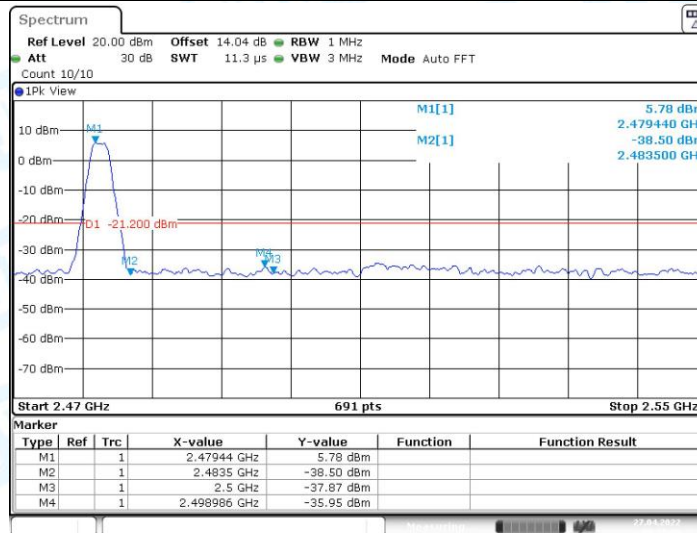


BLE_2M_Ant1_High_2480_AV



Date: 27.APR.2022 09:21:49

BLE_2M_Ant1_High_2480_Peak



Date: 27.APR.2022 09:21:29

-----End of the report-----