

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	Wi-Fi Temperature & Humidity Sensor
Test Model:	TH16
Sample ID:	202203-0097-5-2#
Environmental Conditions	
Temperature:	24°C
Relative Humidity:	50%
Test Voltage:	DC 5V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report FCC TBR-C-202203-0097-7.	

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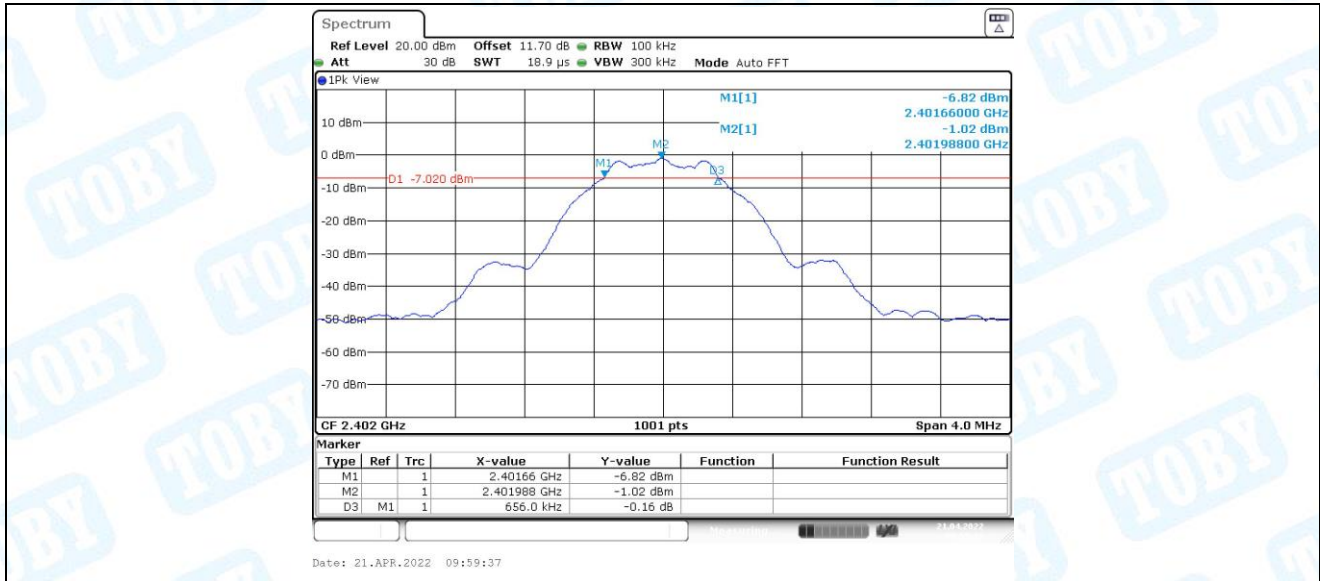
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1. DTS Bandwidth

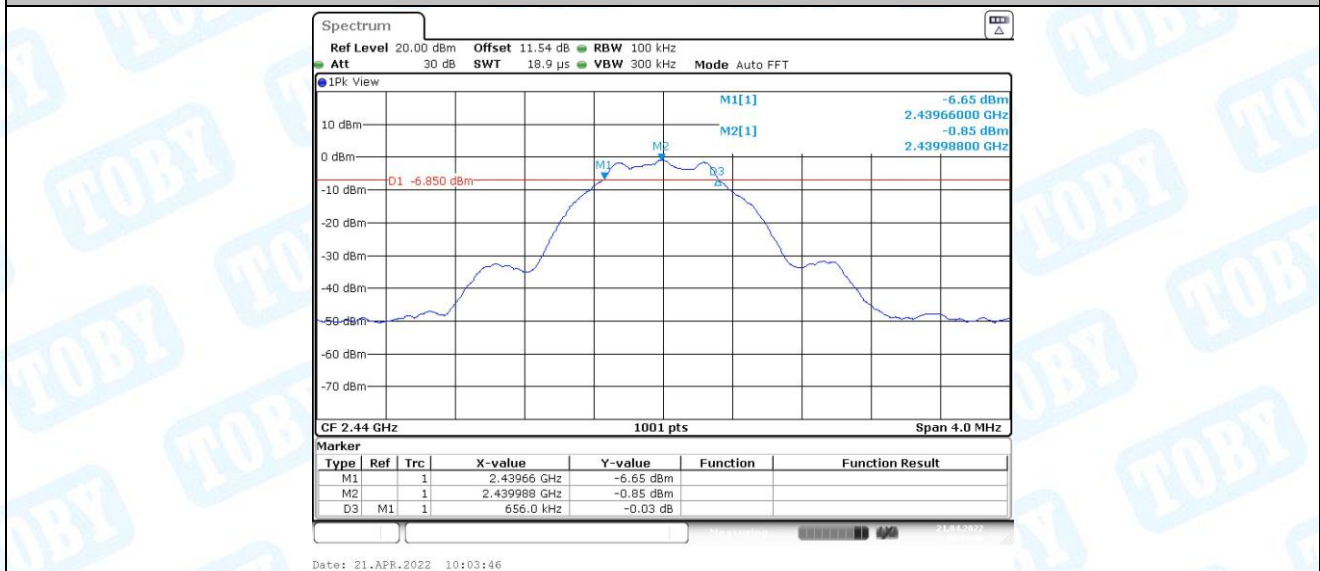
1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.66	2401.66	2402.32	0.5	PASS
		2440	0.66	2439.66	2440.32	0.5	PASS
		2480	0.65	2479.66	2480.31	0.5	PASS

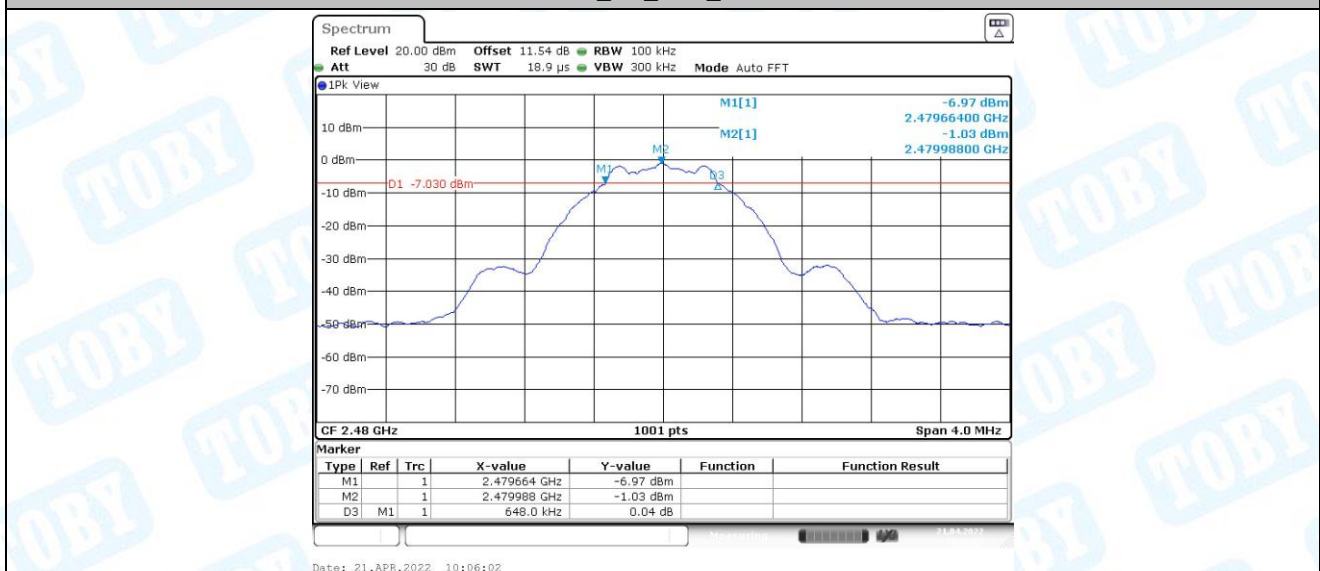
1.2. Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



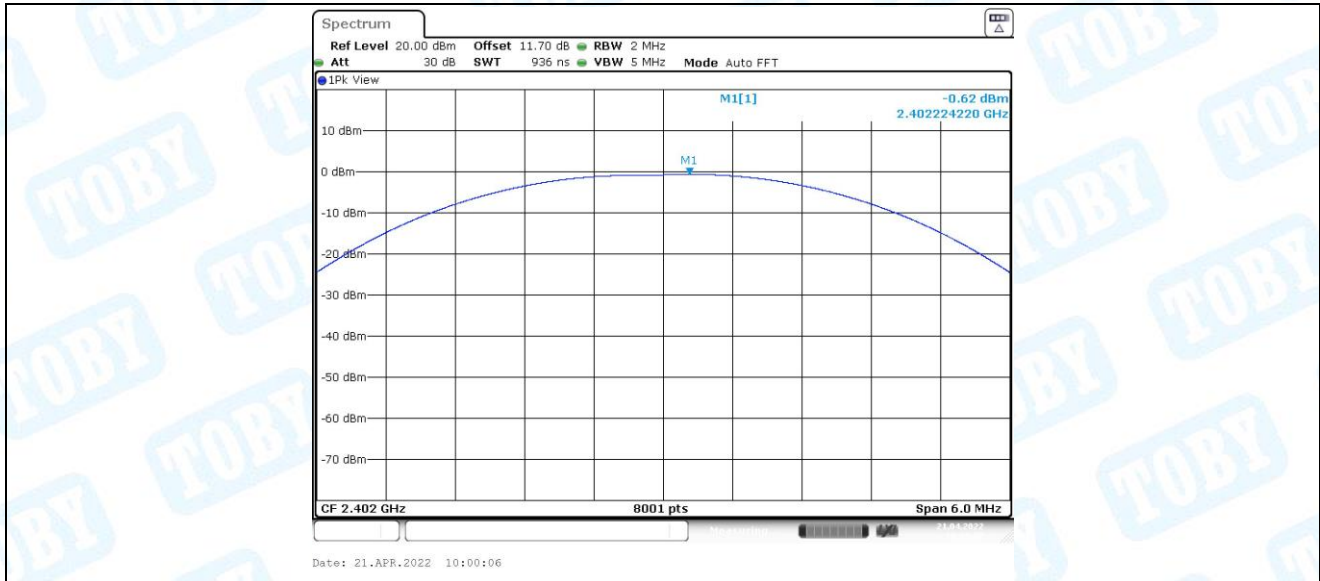
BLE_1M_Ant1_2480

3. Maximum conducted output power

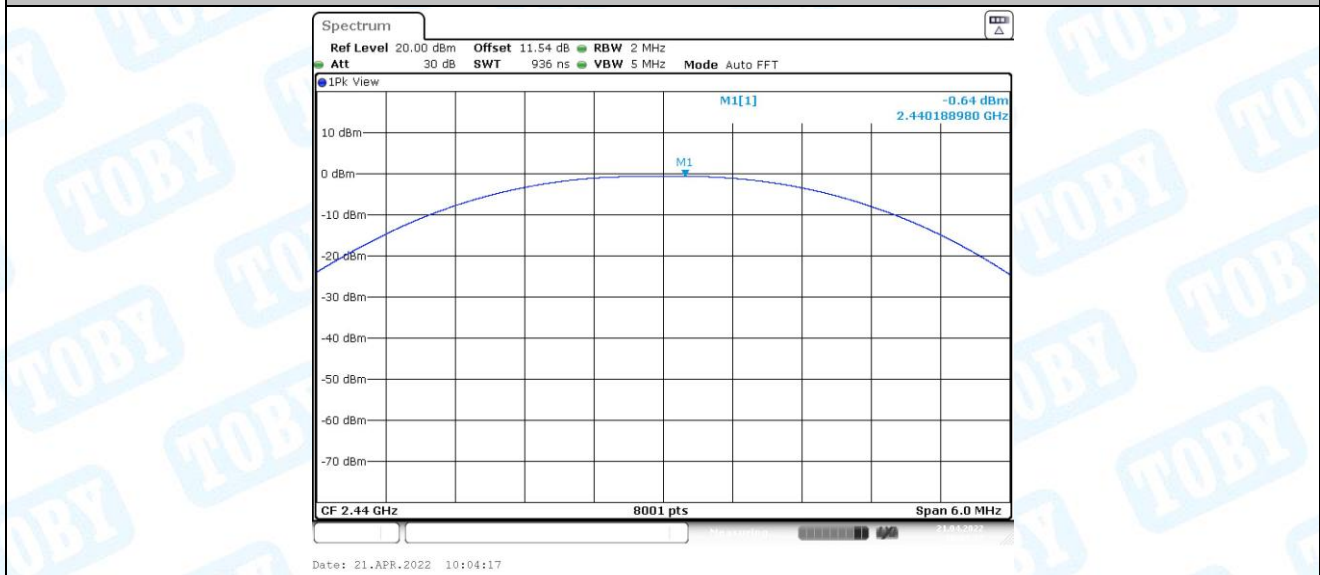
3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.62	≤30	PASS
		2440	-0.64	≤30	PASS
		2480	-0.84	≤30	PASS

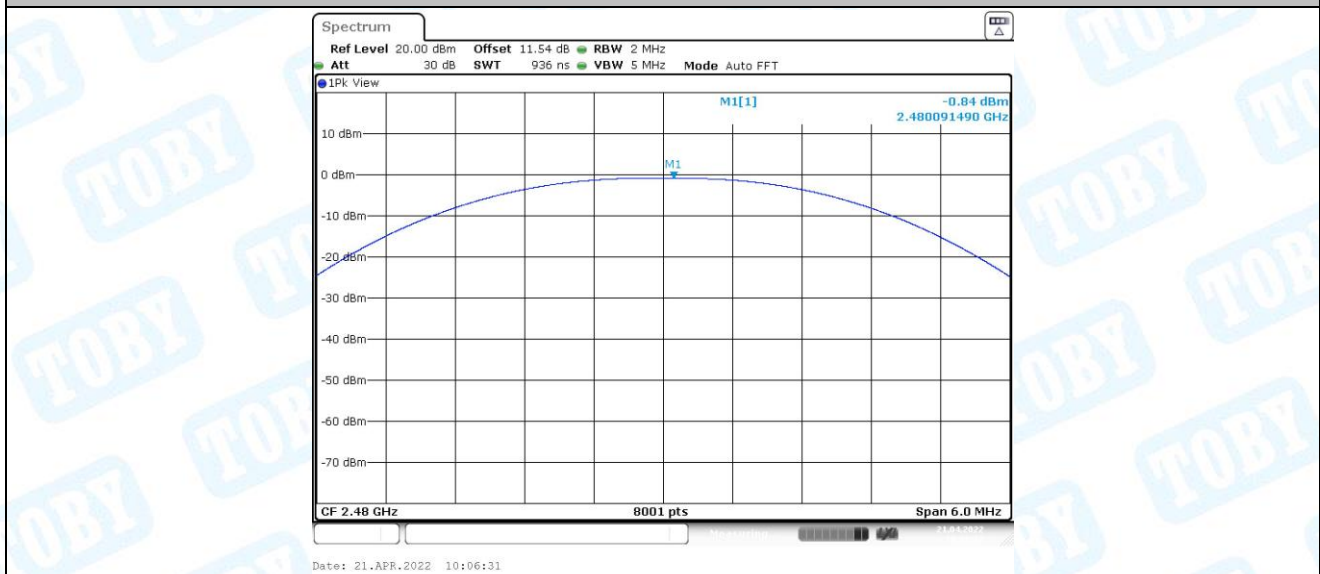
3.2. Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



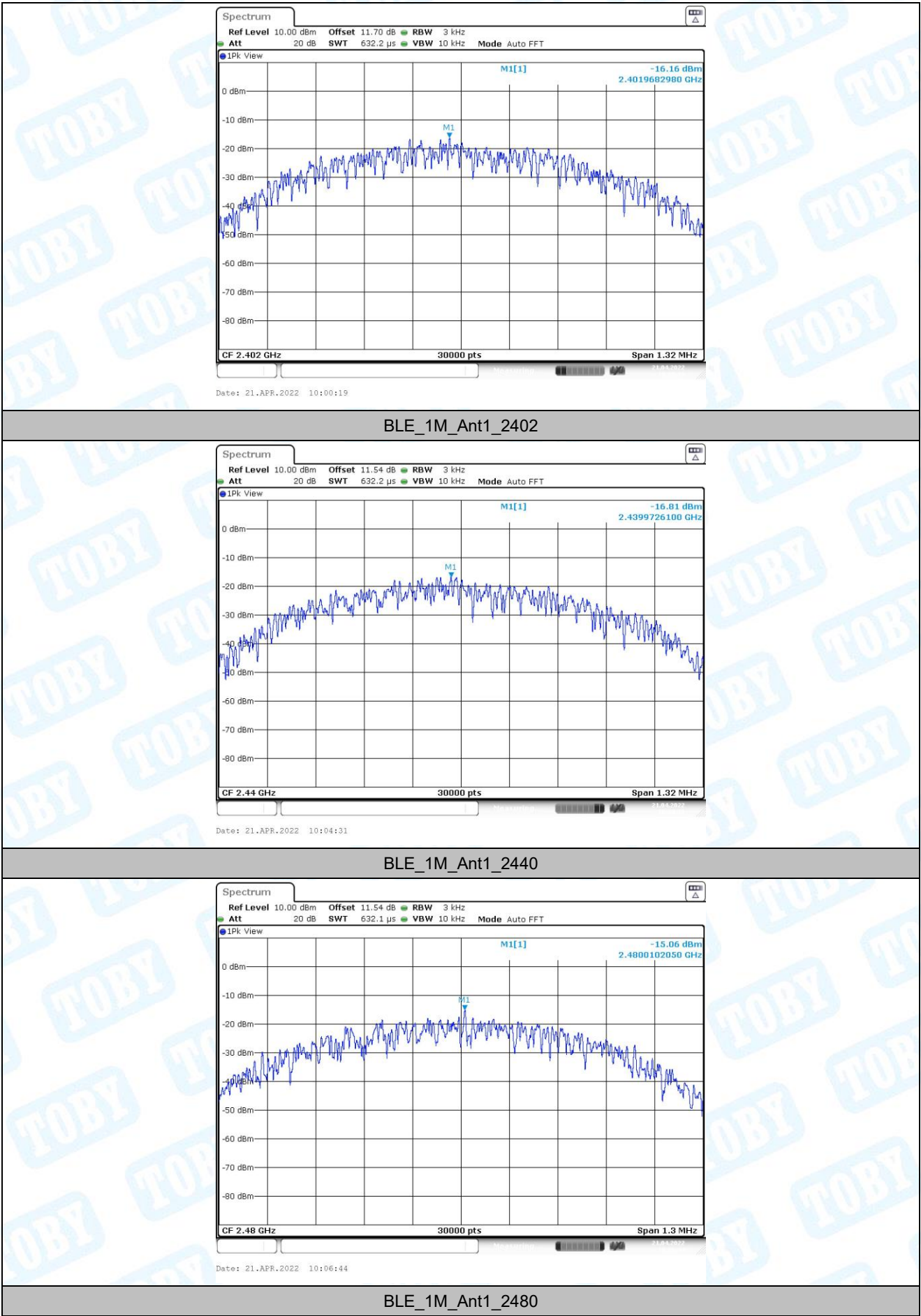
BLE_1M_Ant1_2480

4. Maximum power spectral density

4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.16	≤8.00	PASS
		2440	-16.81	≤8.00	PASS
		2480	-15.06	≤8.00	PASS

4.2. Test Graphs

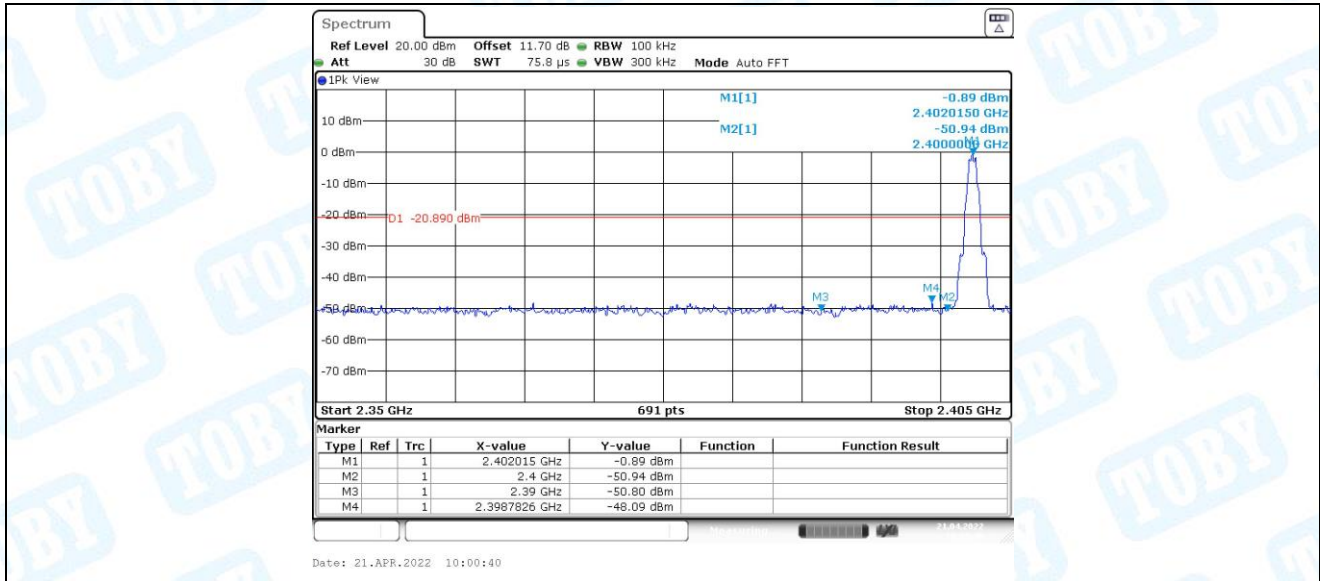


5. Band edge measurements

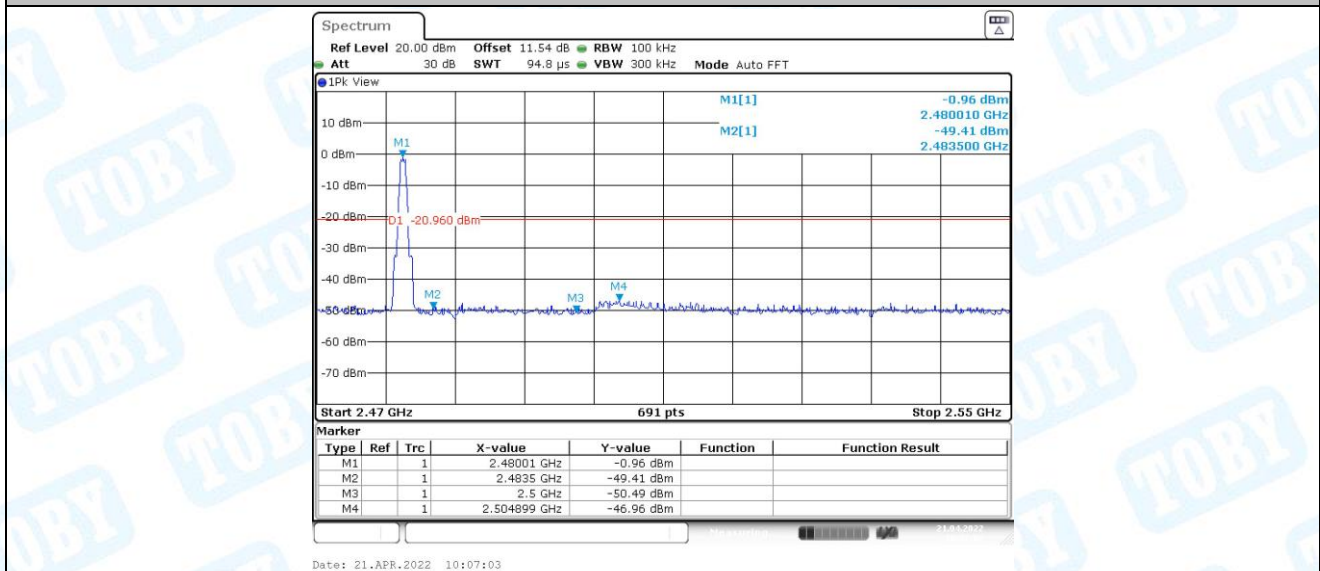
5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.89	-48.09	≤-20.89	PASS
		High	2480	-0.96	-46.96	≤-20.96	PASS

5.2. Test Graphs



BLE_1M_Ant1_Low_2402



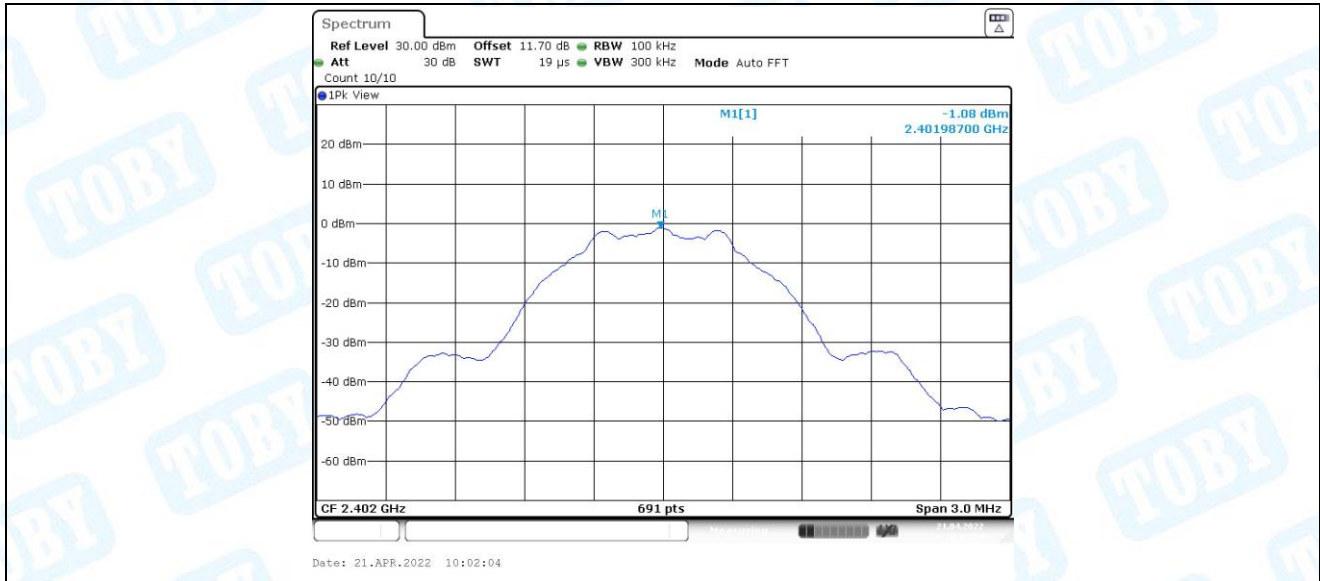
BLE_1M_Ant1_High_2480

6. Conducted Spurious Emission

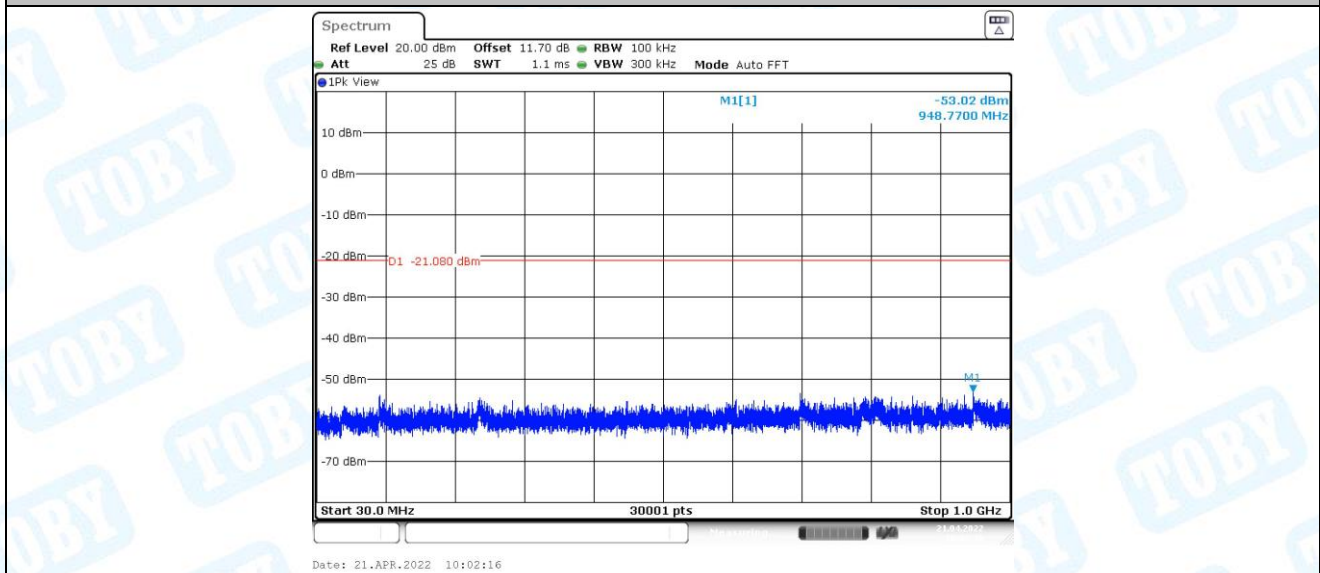
6.1. Test Result

Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.08	-1.08	---	PASS
			30~1000	-1.08	-53.02	≤-21.08	PASS
			1000~26500	-1.08	-46.46	≤-21.08	PASS
		2440	Reference	-0.92	-0.92	---	PASS
			30~1000	-0.92	-53	≤-20.92	PASS
			1000~26500	-0.92	-46.51	≤-20.92	PASS
		2480	Reference	-1.02	-1.02	---	PASS
			30~1000	-1.02	-53.6	≤-21.02	PASS
			1000~26500	-1.02	-46.98	≤-21.02	PASS

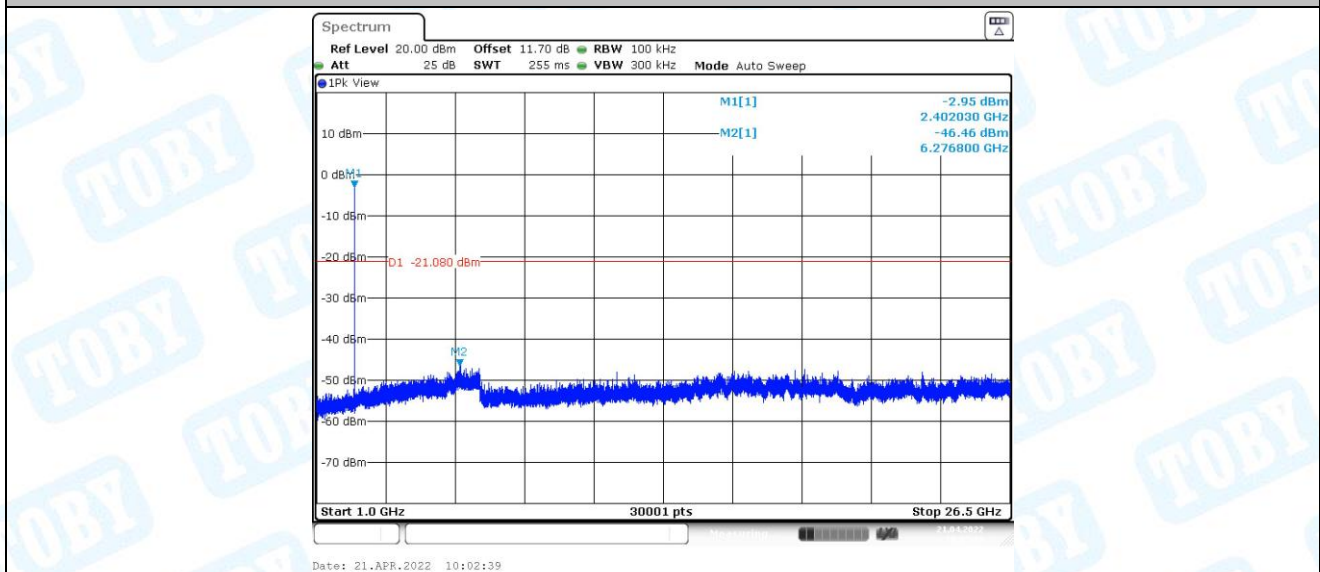
6.2. Test Graphs



BLE_1M_Ant1_2402_0~Reference



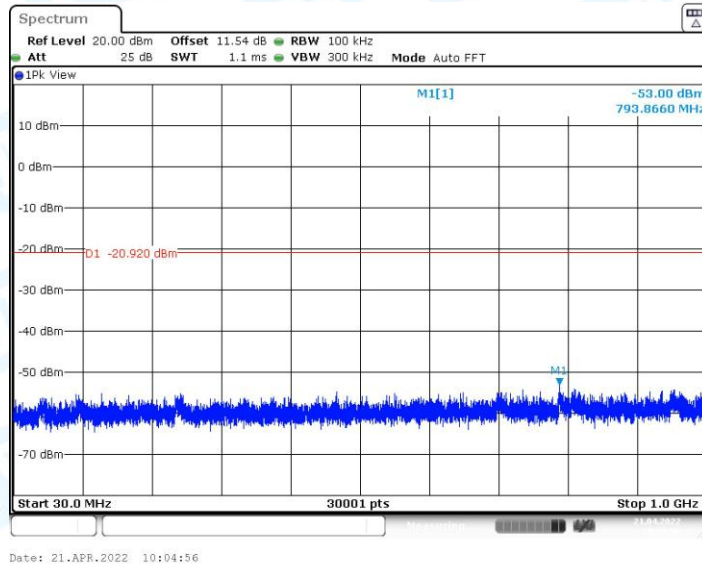
BLE_1M_Ant1_2402_30~1000



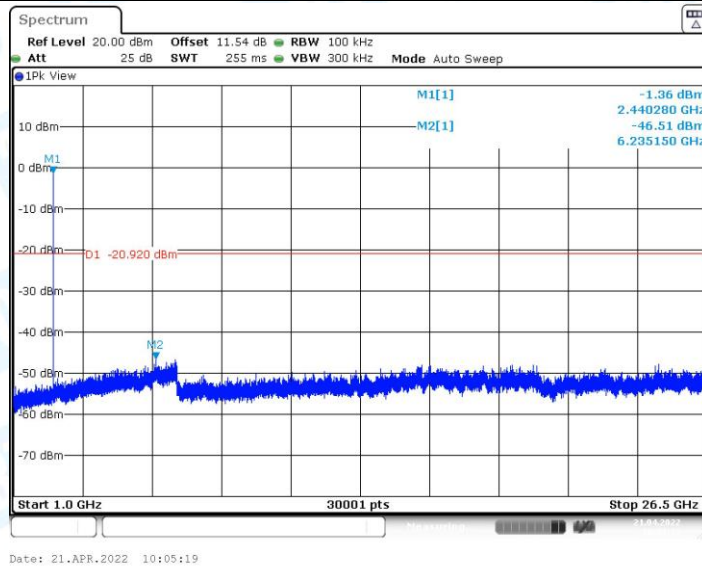
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference



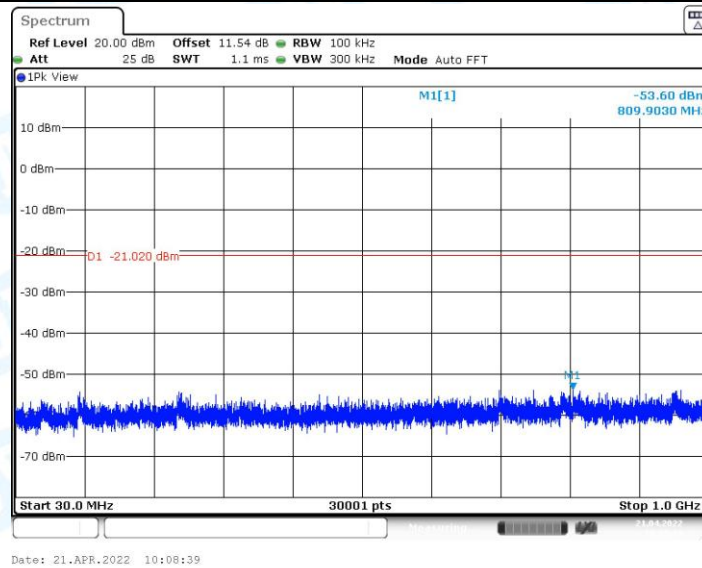
BLE_1M_Ant1_2440_30~1000



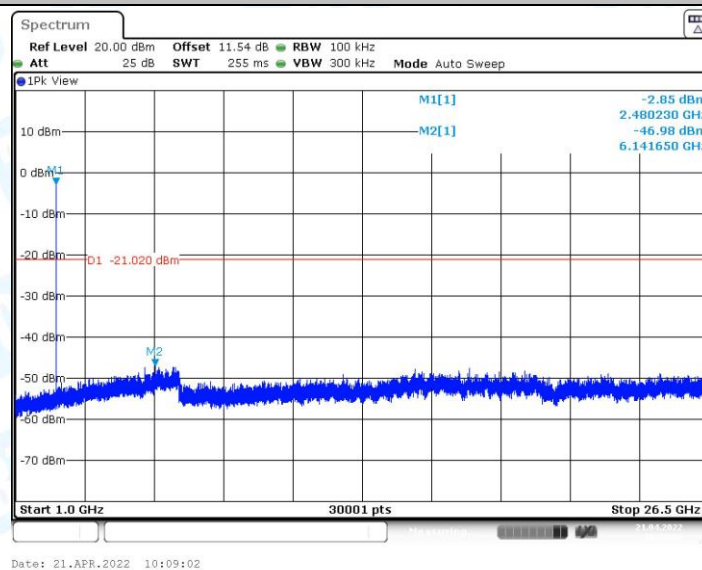
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

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	0.39	0.62	62.90	---	---
		2440	0.39	0.62	62.90	---	---
		2480	0.39	0.62	62.90	---	---

7.2. Test Graphs



8. Emissions in Restricted Bands

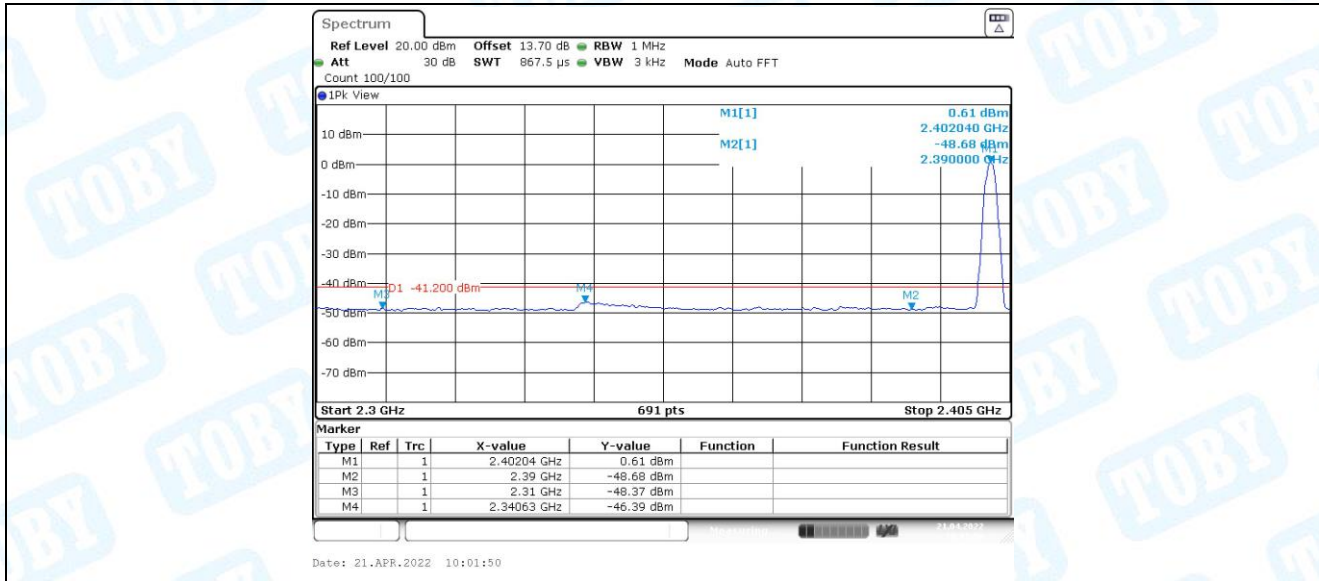
8.1. Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.37	≤-41.20	PASS
				AV	2340.630	-46.39	≤-41.20	PASS
				AV	2390.000	-48.68	≤-41.20	PASS
				Peak	2310.000	-38.45	≤-21.20	PASS
				Peak	2341.848	-35.28	≤-21.20	PASS
				Peak	2390.000	-37.32	≤-21.20	PASS
		High	2480	AV	2483.500	-48.38	≤-41.20	PASS
				AV	2497.130	-47.68	≤-41.20	PASS
				AV	2500.000	-48.08	≤-41.20	PASS
				Peak	2483.500	-38.92	≤-21.20	PASS
				Peak	2497.478	-36.73	≤-21.20	PASS
				Peak	2500.000	-37.34	≤-21.20	PASS

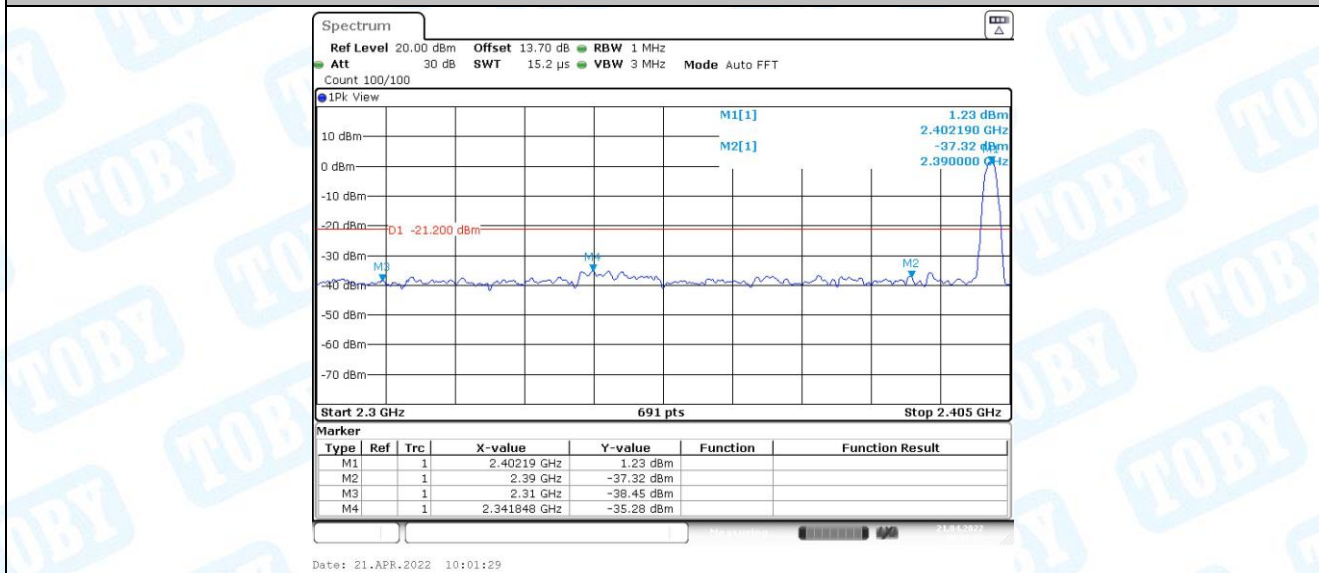
Note:

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.

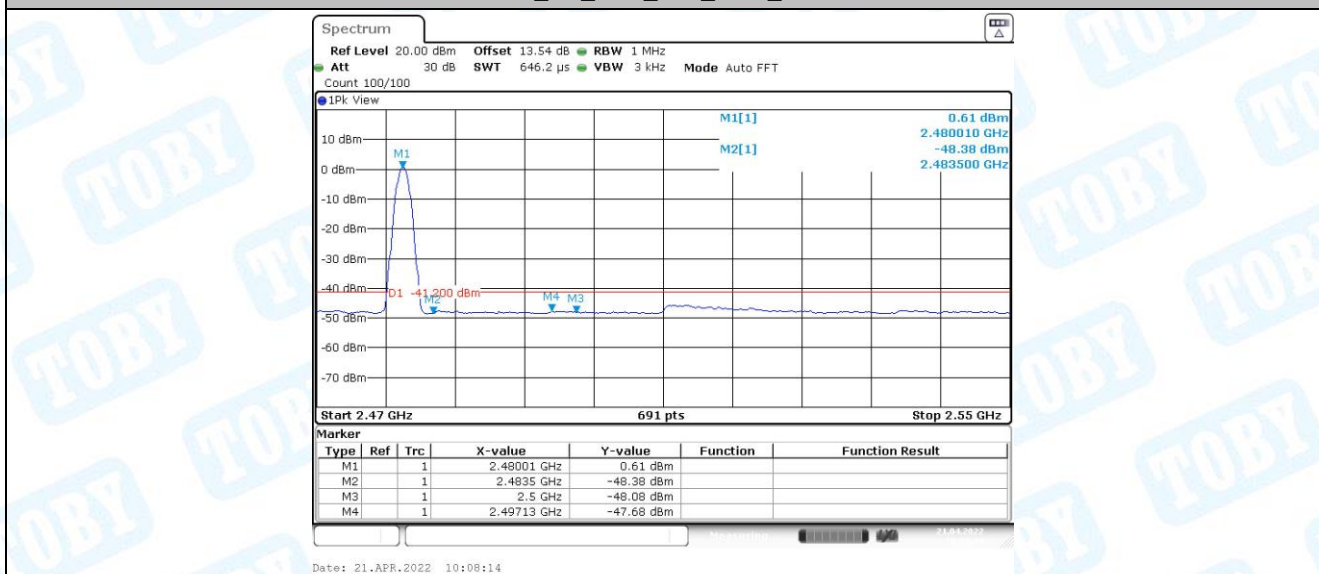
8.2. Test Graphs



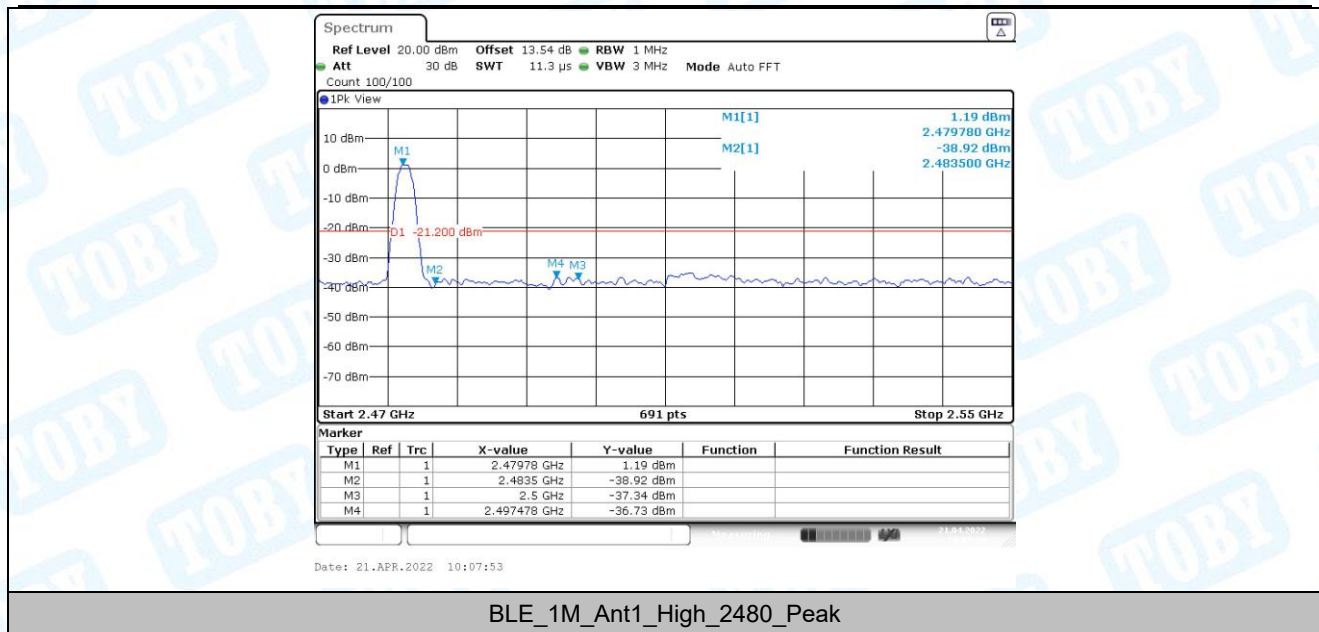
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



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