

## RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
<b>Product Name:</b>	Devicebook Hub
<b>Test Model:</b>	DH100
<b>Sample ID:</b>	TBBJ-20210818-13-2#
Environmental Conditions	
<b>Temperature:</b>	23.8°C
<b>Relative Humidity:</b>	48%
<b>Test Voltage:</b>	AC 120V/60Hz
<b>Test Engineer:</b>	Huang jian ping
Note: For a more detailed features description, please refer to the report TB-FCC186387	

## Contents

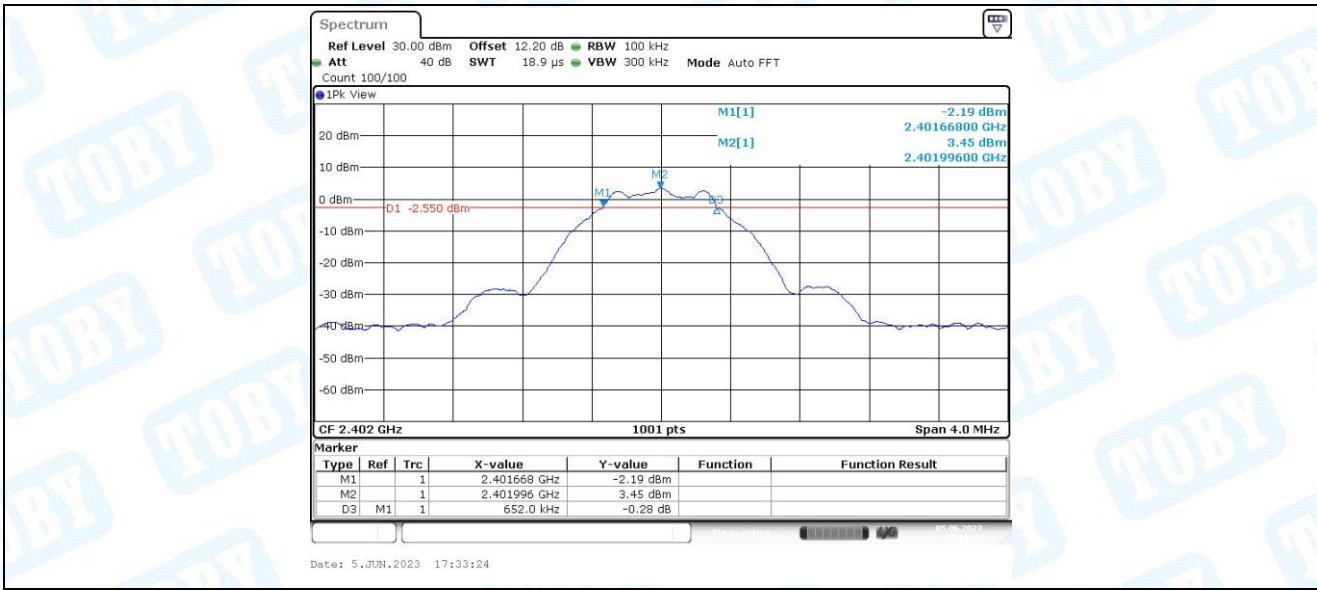
1. DTS Bandwidth.....	3
1.1. Test Result.....	3
1.2. Test Graphs.....	4
2. Occupied Channel Bandwidth.....	5
2.1. Test Result.....	5
2.2. Test Graphs.....	6
3. Maximum conducted output power.....	7
3.1. Test Result.....	7
3.2. Test Graphs.....	8
4. Maximum power spectral density.....	9
4.1. Test Result.....	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

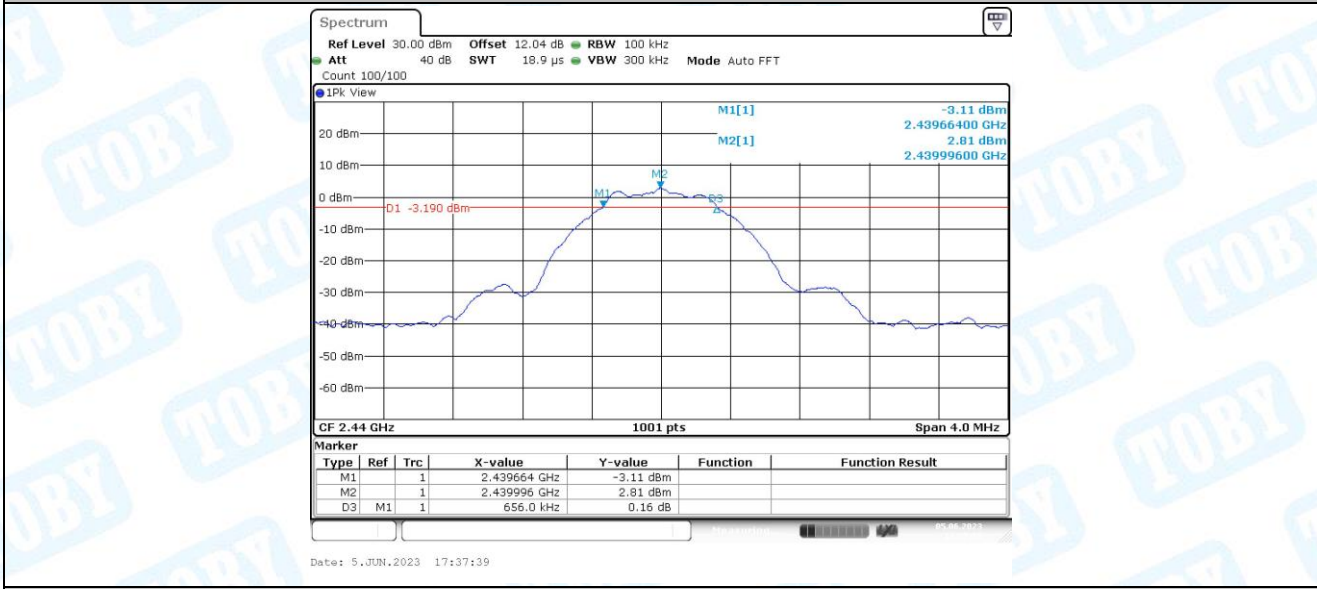
### 1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.65	2401.67	2402.32	0.5	PASS
		2440	0.66	2439.66	2440.32	0.5	PASS
		2480	0.65	2479.66	2480.32	0.5	PASS

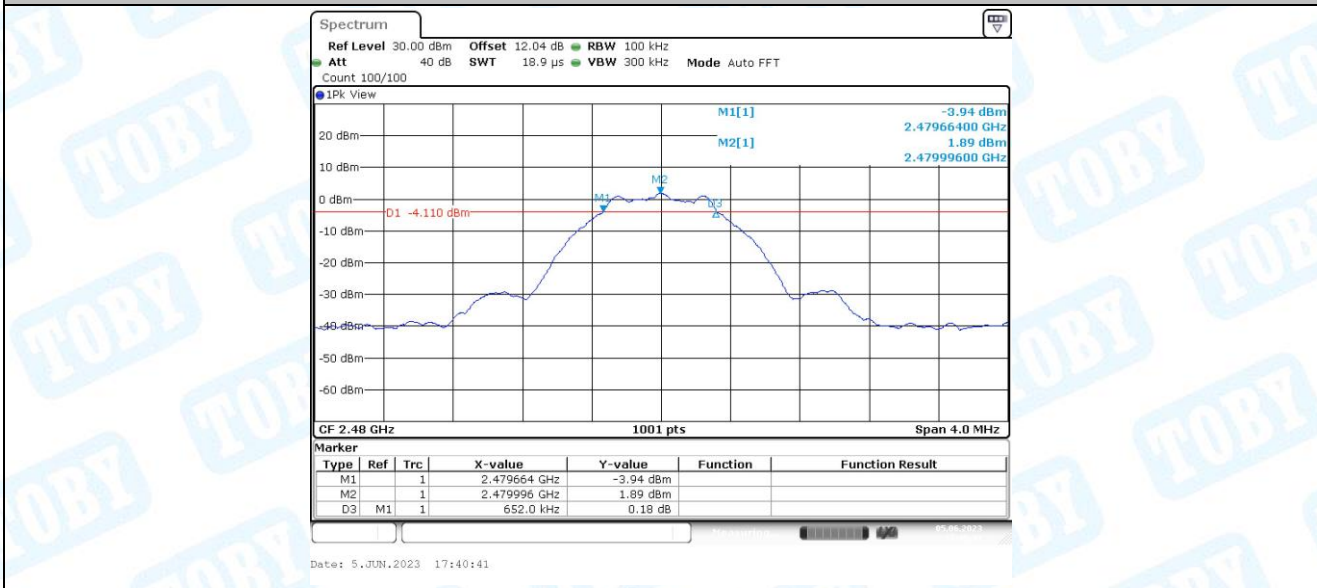
## 1.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



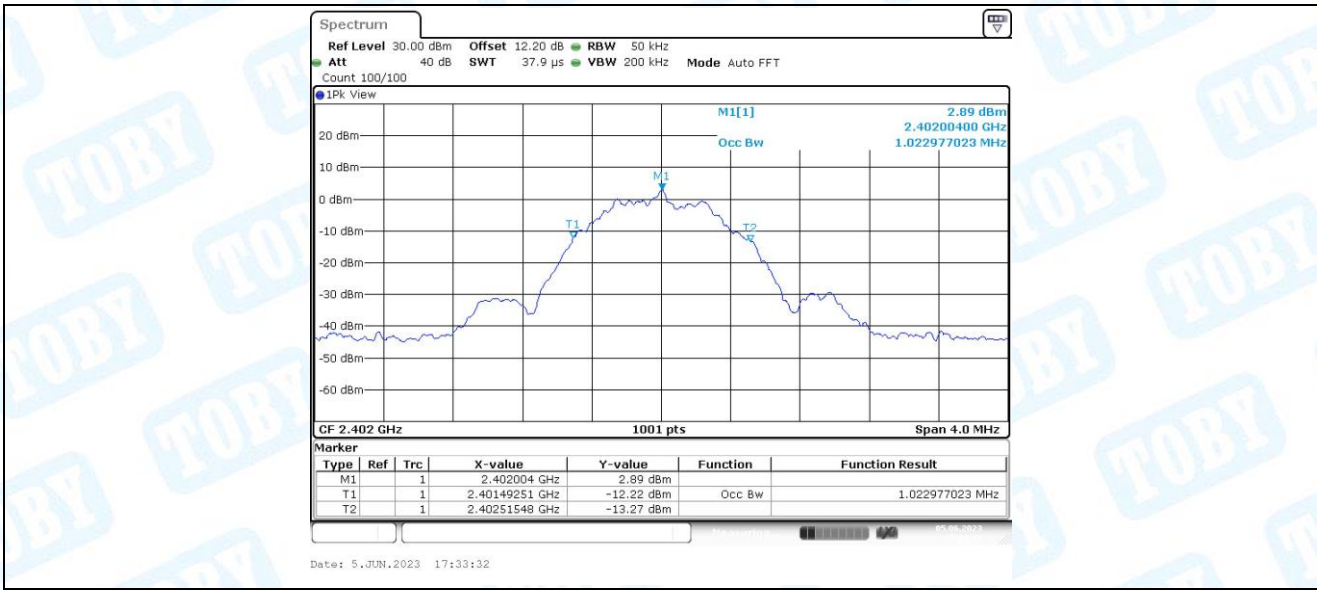
BLE\_1M\_Ant1\_2480

## 2. Occupied Channel Bandwidth

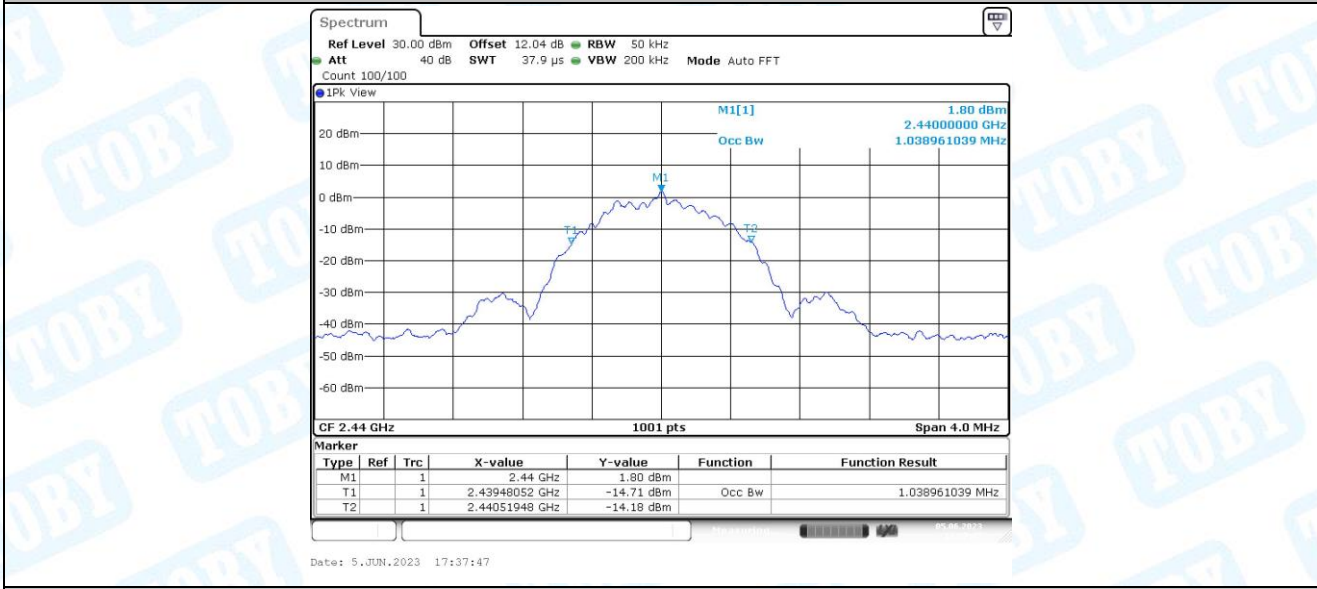
### 2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.023	2401.4925	2402.5155	---	---
		2440	1.039	2439.4805	2440.5195	---	---
		2480	1.035	2479.4845	2480.5195	---	---

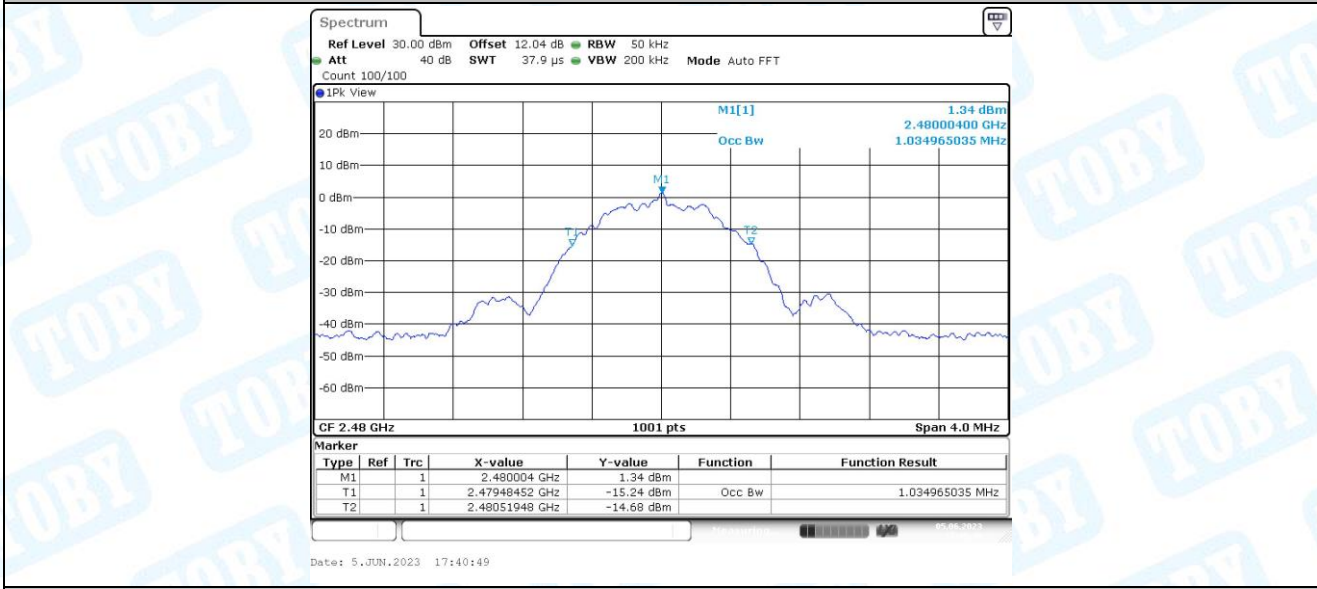
## 2.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



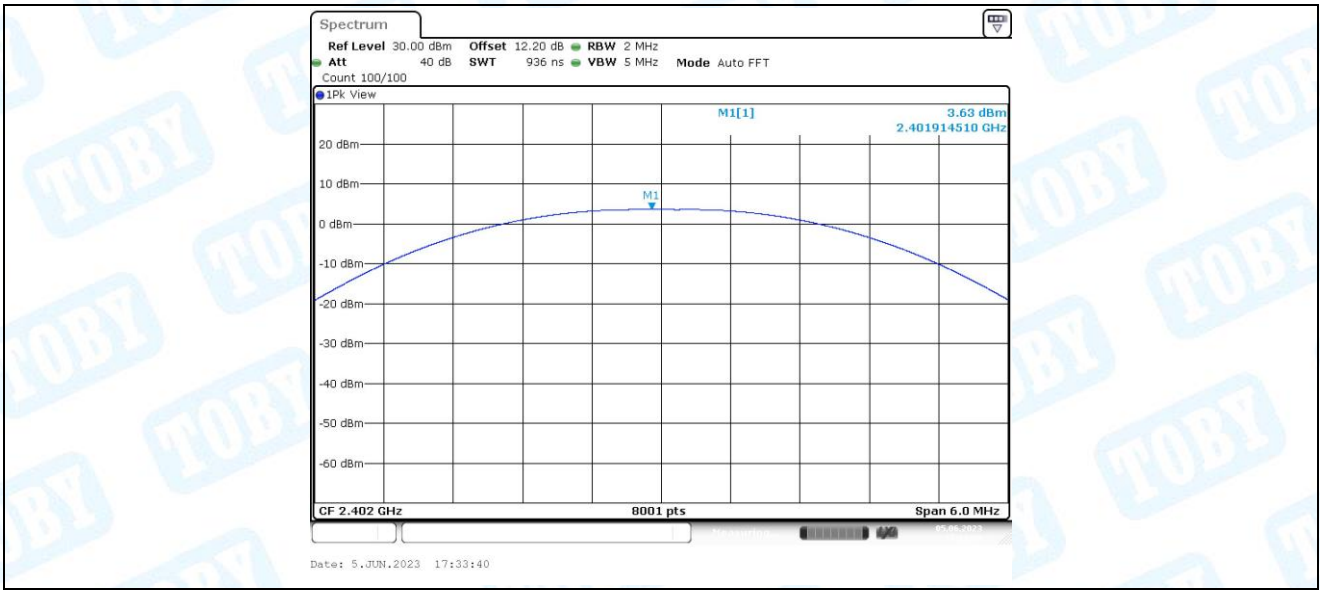
BLE\_1M\_Ant1\_2480

### 3. Maximum conducted output power

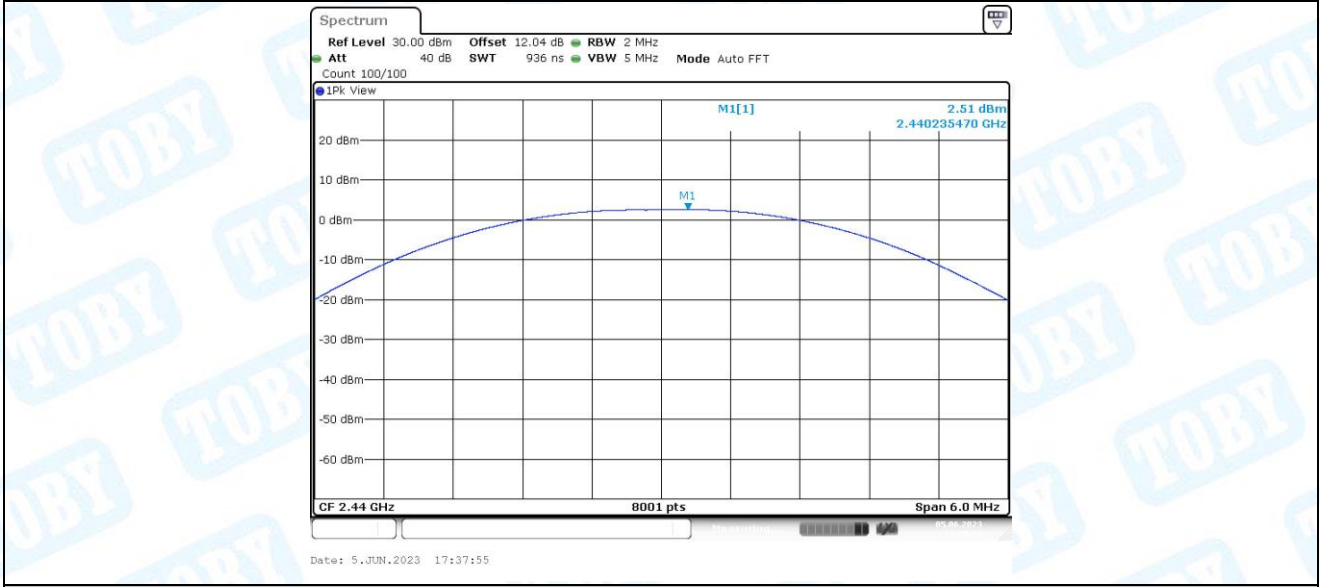
#### 3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.63	≤30	PASS
		2440	2.51	≤30	PASS
		2480	2.07	≤30	PASS

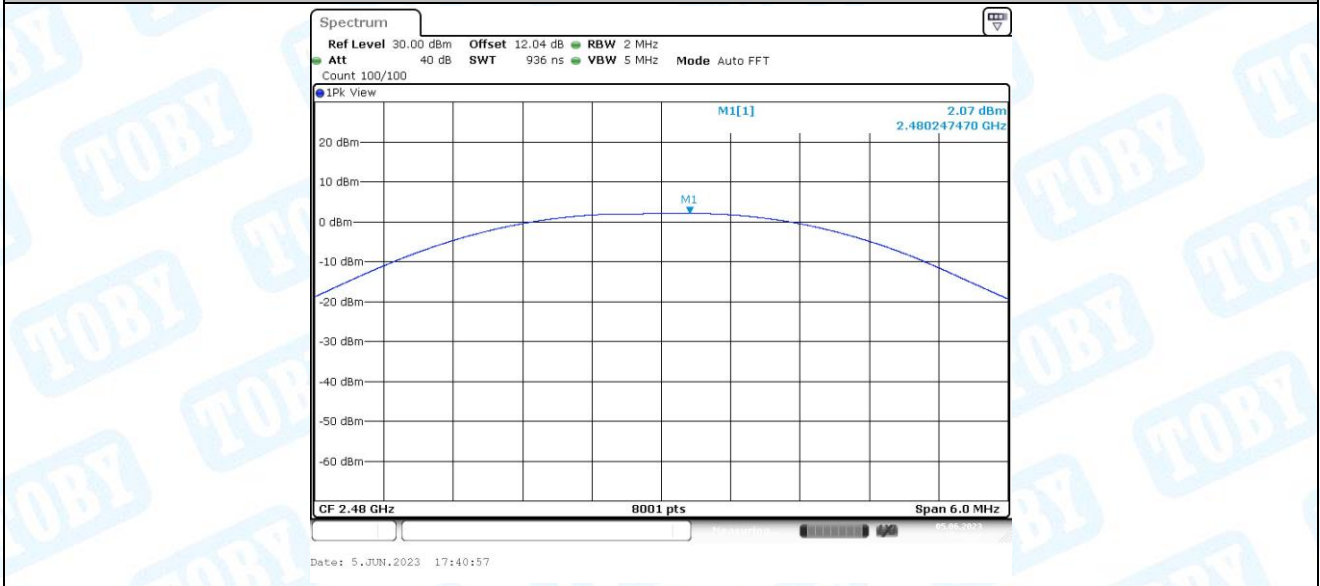
### 3.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

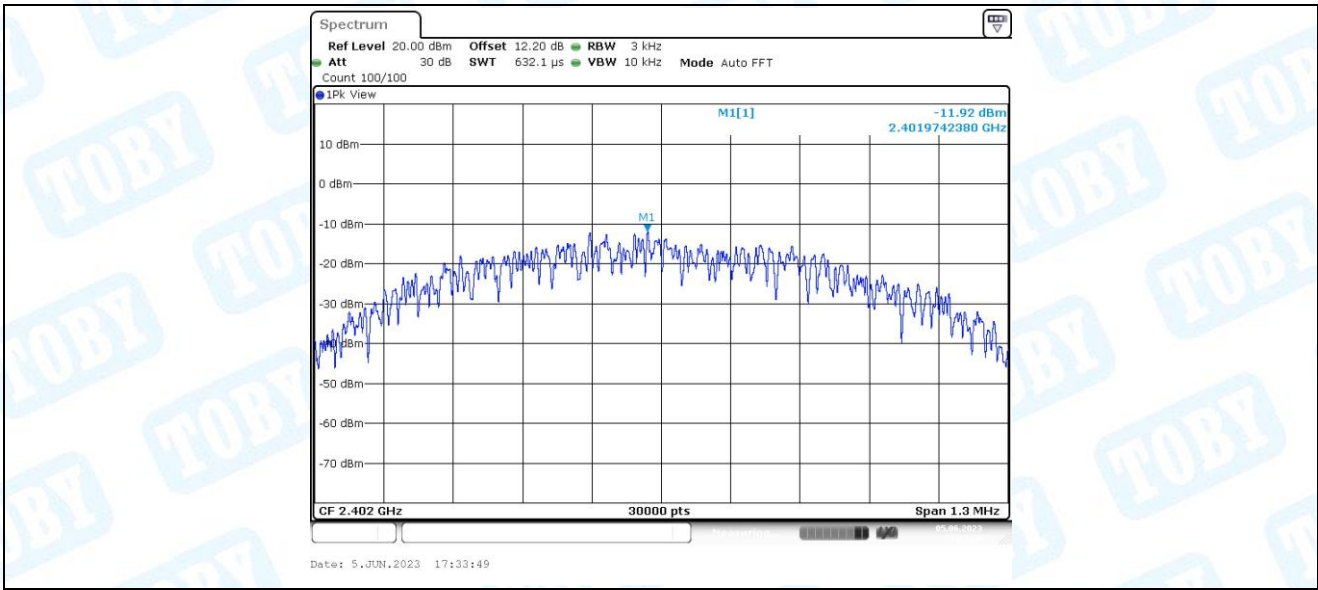


## 4. Maximum power spectral density

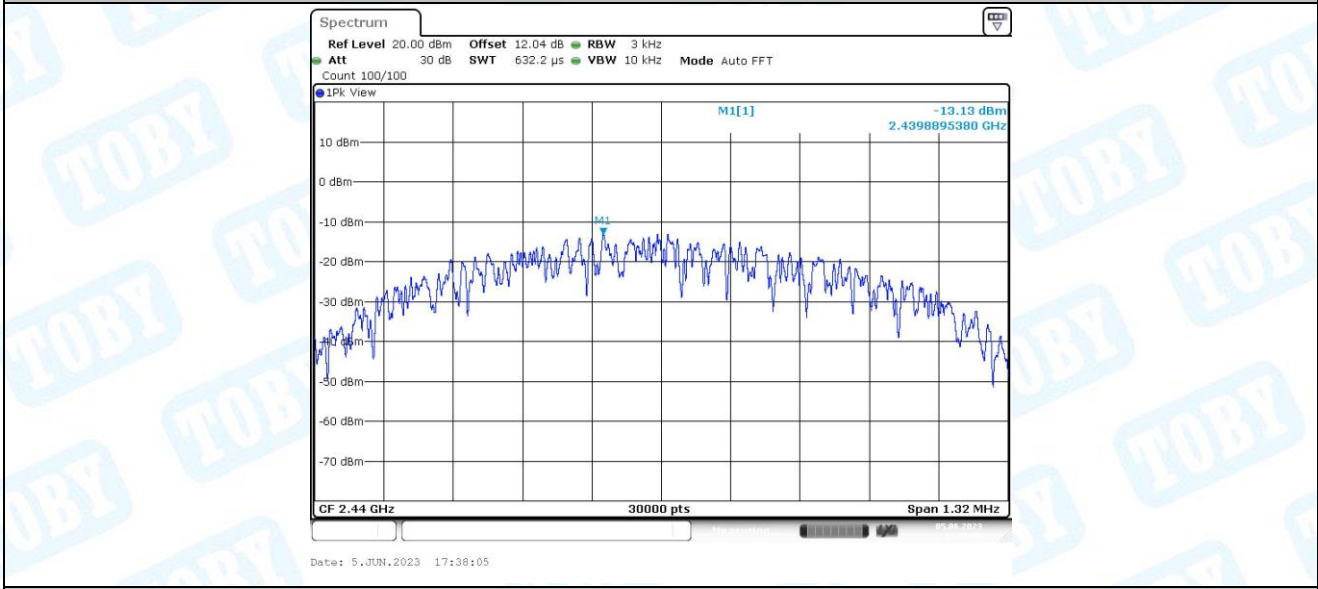
### 4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.92	≤8.00	PASS
		2440	-13.13	≤8.00	PASS
		2480	-14.09	≤8.00	PASS

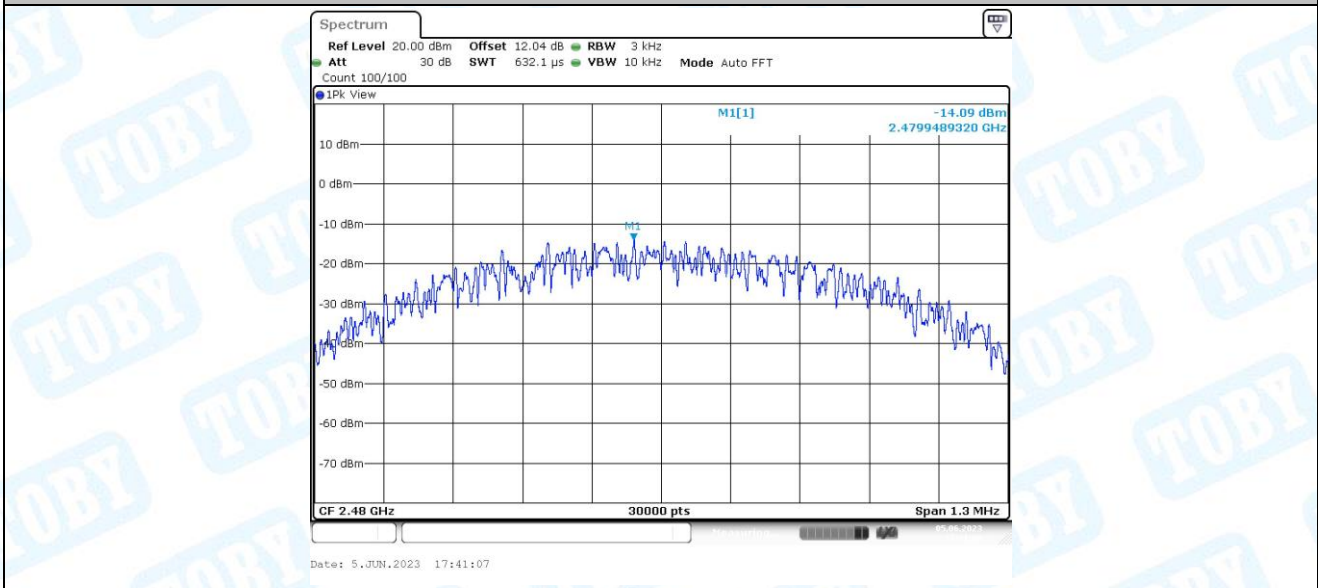
## 4.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



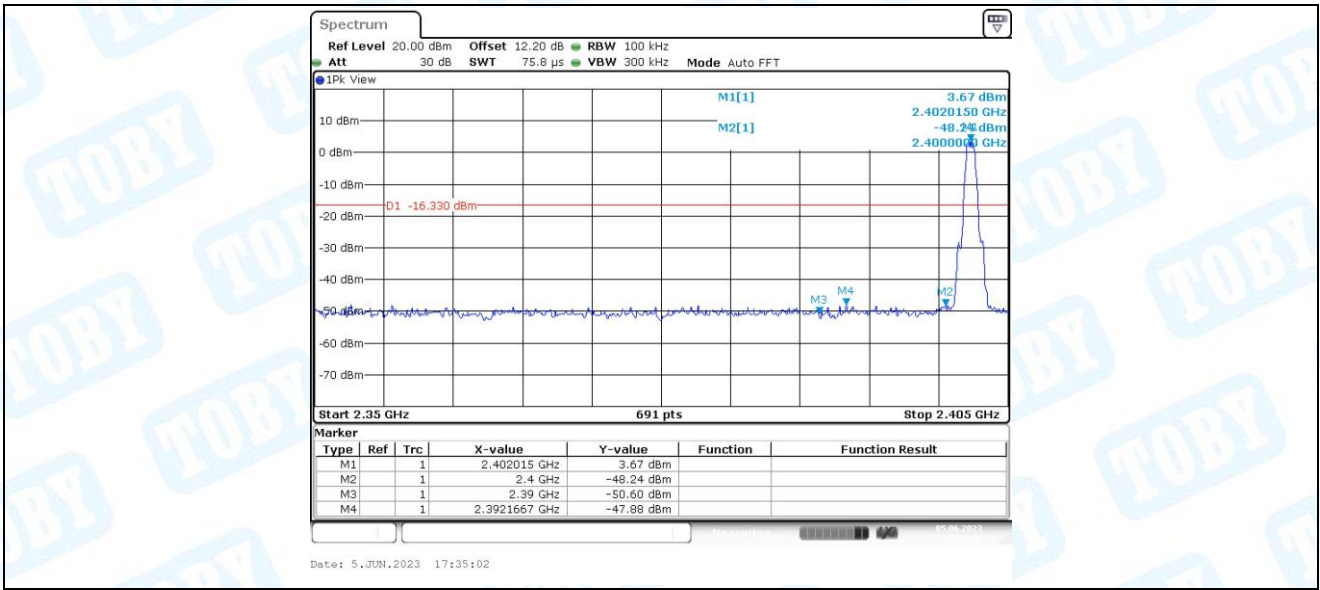
BLE\_1M\_Ant1\_2480

## 5. Band edge measurements

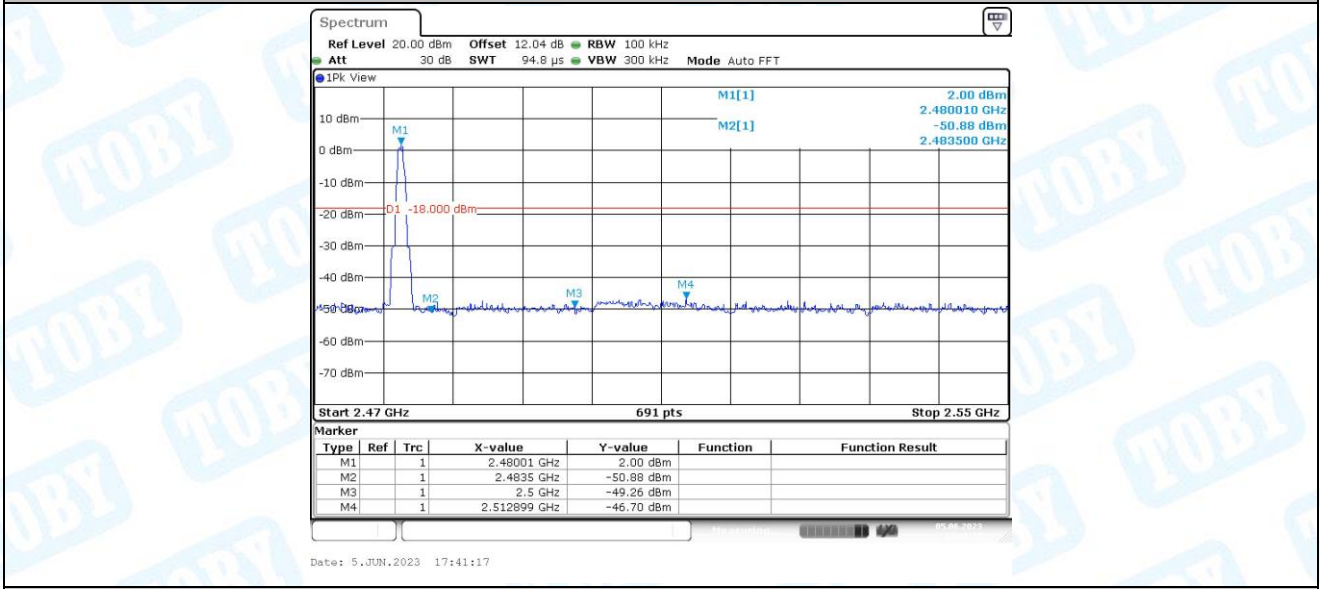
### 5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.67	-47.88	≤-16.33	PASS
		High	2480	2.00	-46.7	≤-18	PASS

## 5.2. Test Graphs



BLE\_1M\_Ant1\_Low\_2402



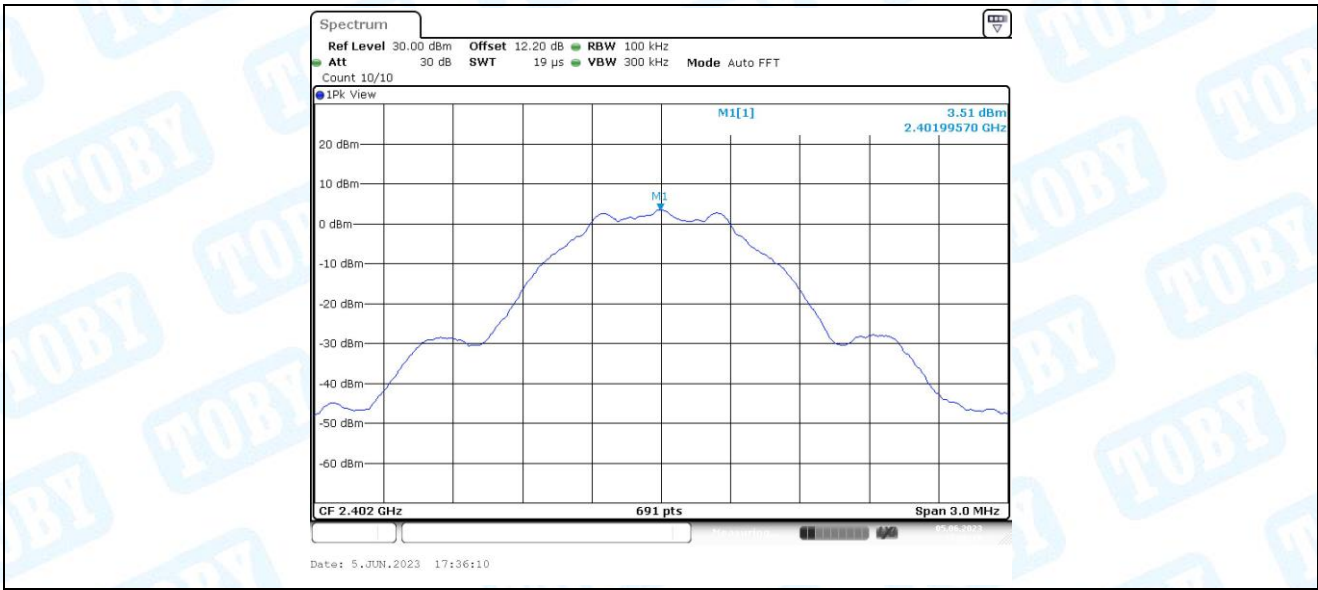
BLE\_1M\_Ant1\_High\_2480

## 6. Conducted Spurious Emission

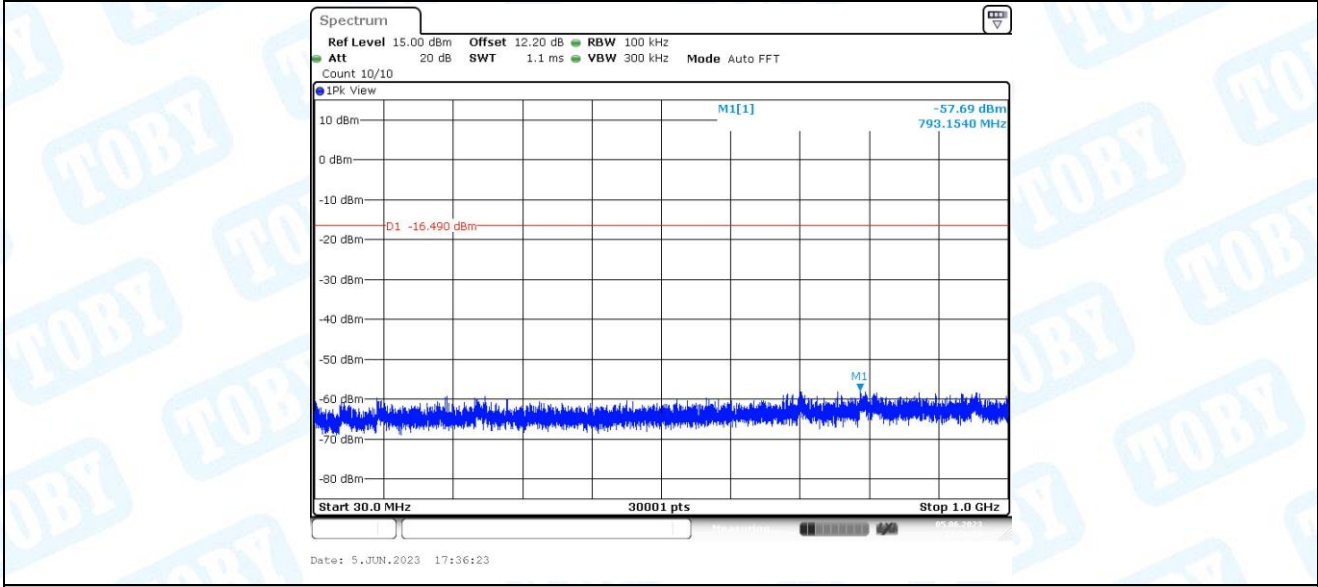
### 6.1. Test Result

Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	3.51	3.51	---	PASS
			30~1000	3.51	-57.69	≤-16.49	PASS
			1000~26500	3.51	-49.04	≤-16.49	PASS
		2440	Reference	2.36	2.36	---	PASS
			30~1000	2.36	-57.96	≤-17.64	PASS
			1000~26500	2.36	-48.37	≤-17.64	PASS
		2480	Reference	2.16	2.16	---	PASS
			30~1000	2.16	-57.7	≤-17.84	PASS
			1000~26500	2.16	-48.88	≤-17.84	PASS

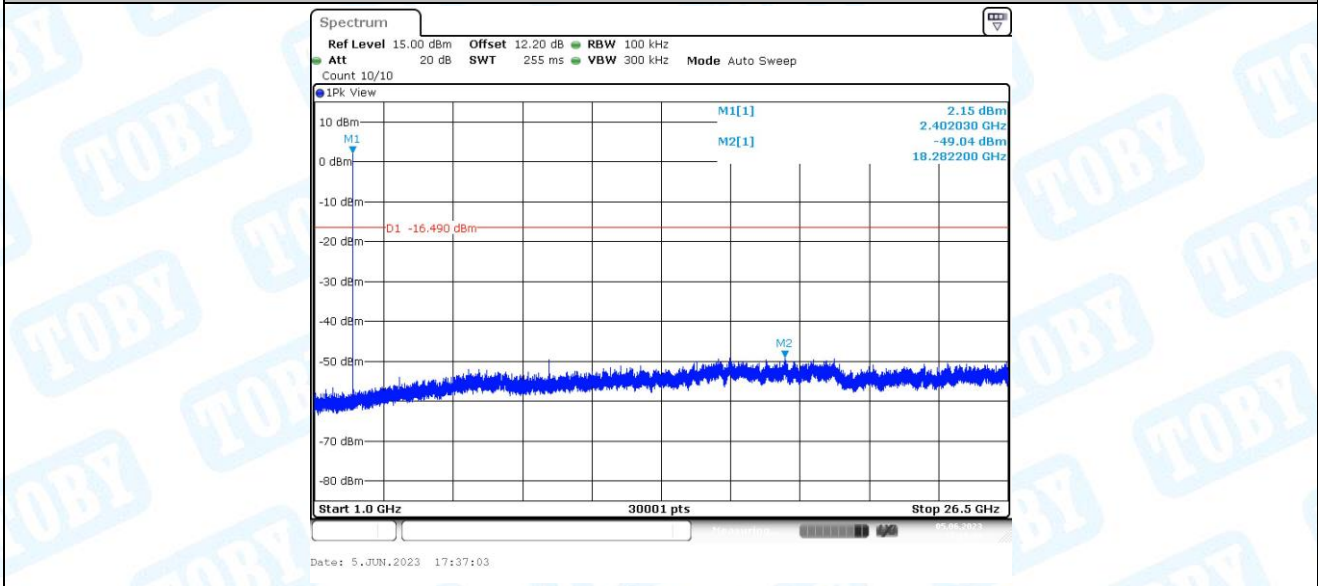
## 6.2. Test Graphs



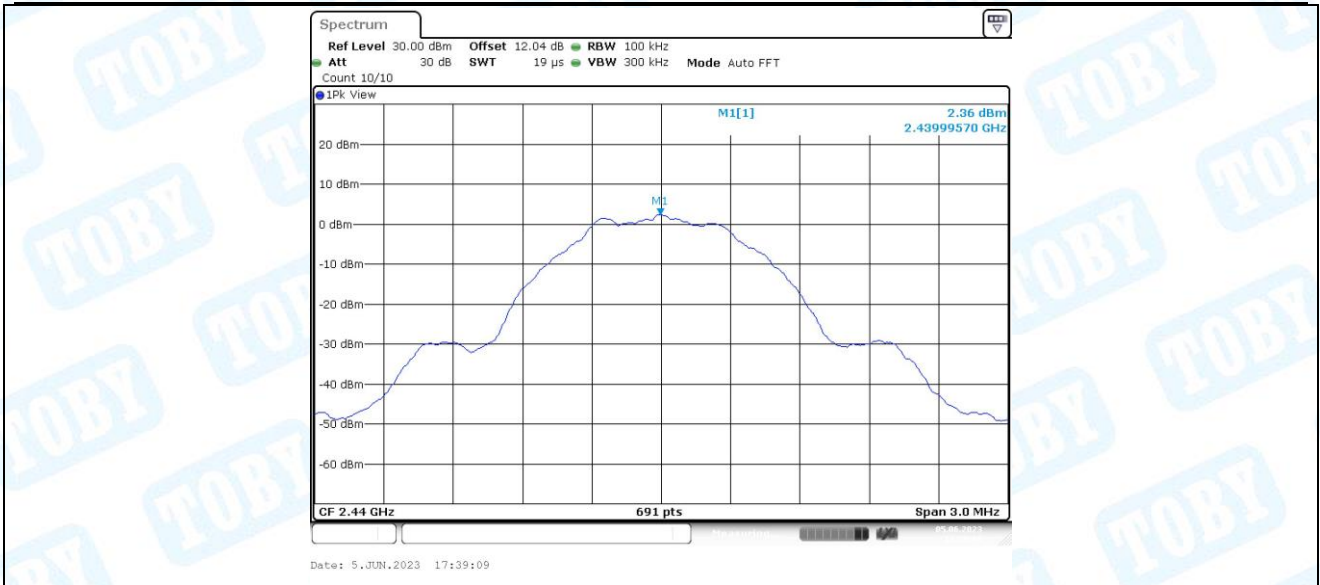
BLE\_1M\_Ant1\_2402\_0~Reference



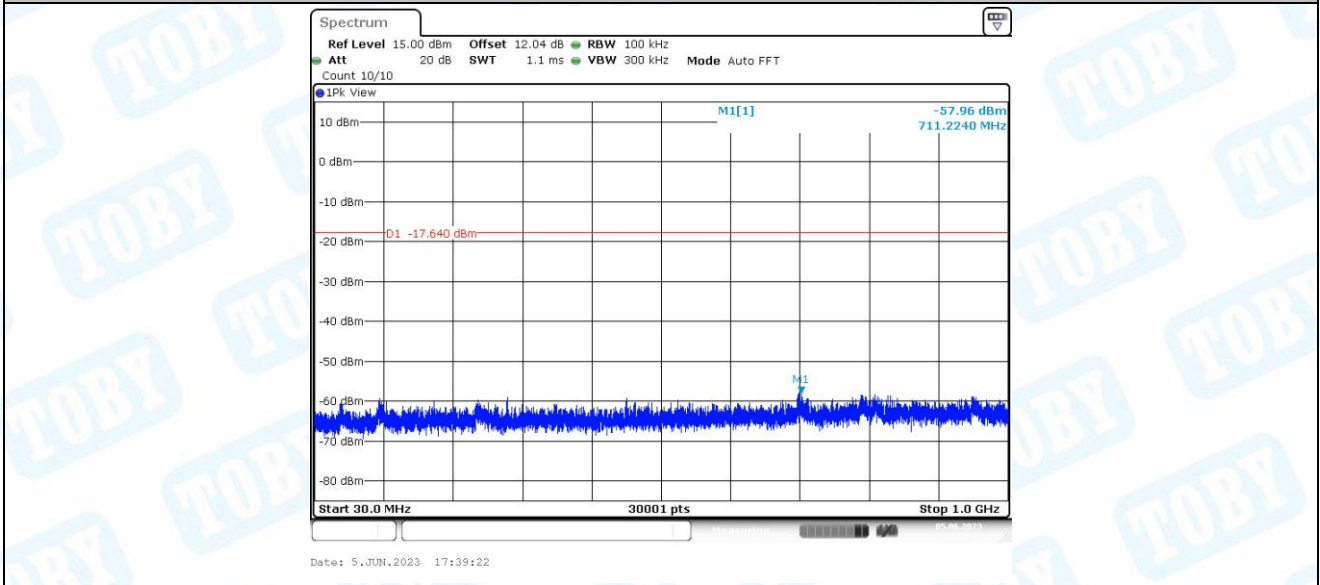
BLE\_1M\_Ant1\_2402\_30~1000



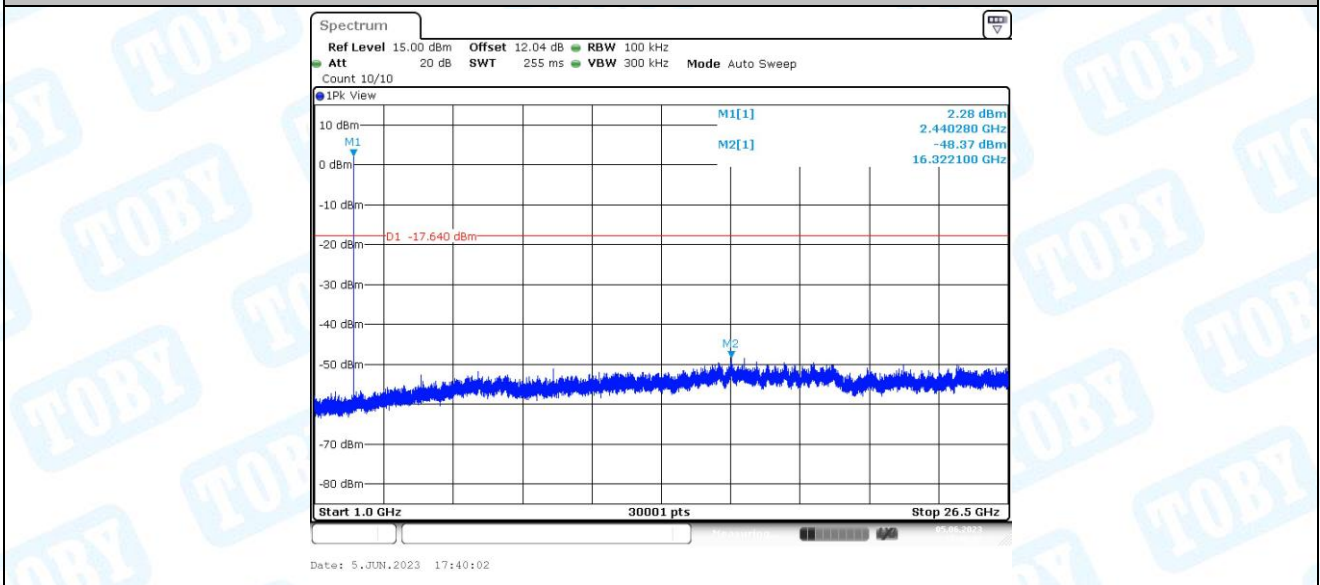
BLE\_1M\_Ant1\_2402\_1000~26500



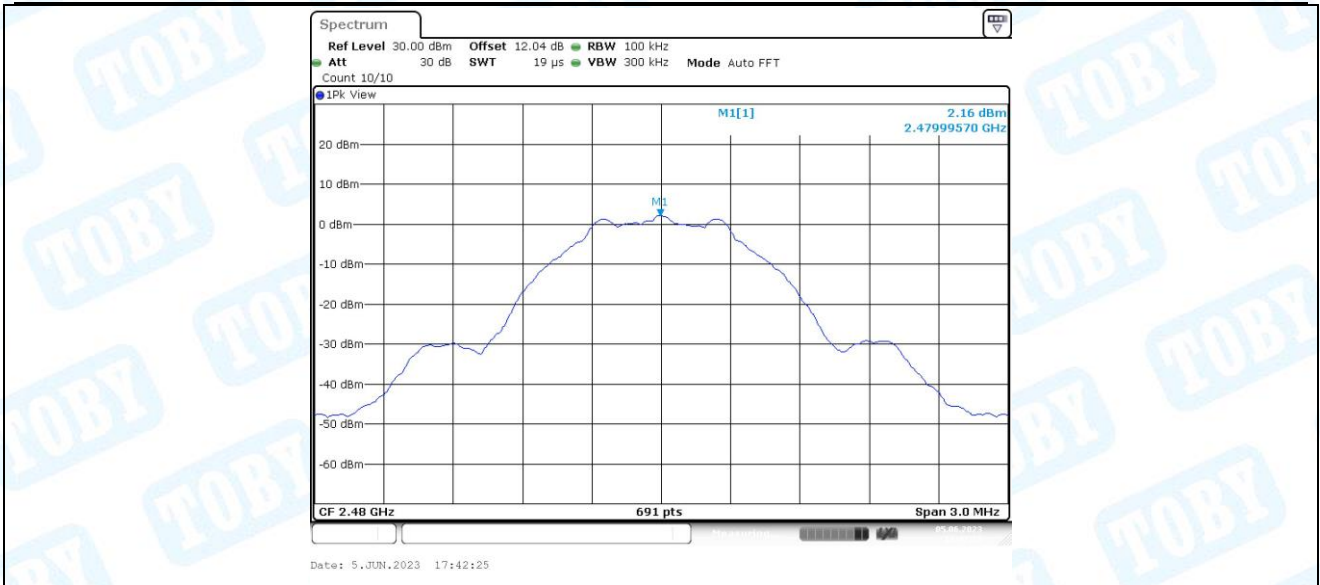
BLE\_1M\_Ant1\_2440\_0~Reference



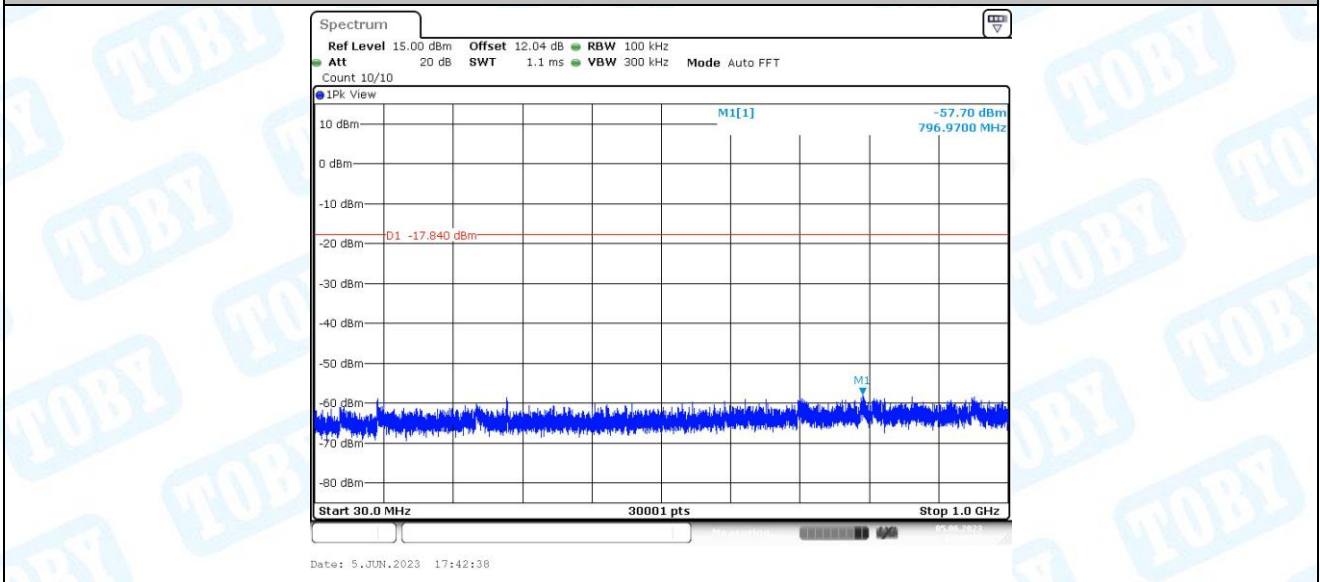
BLE\_1M\_Ant1\_2440\_30~1000



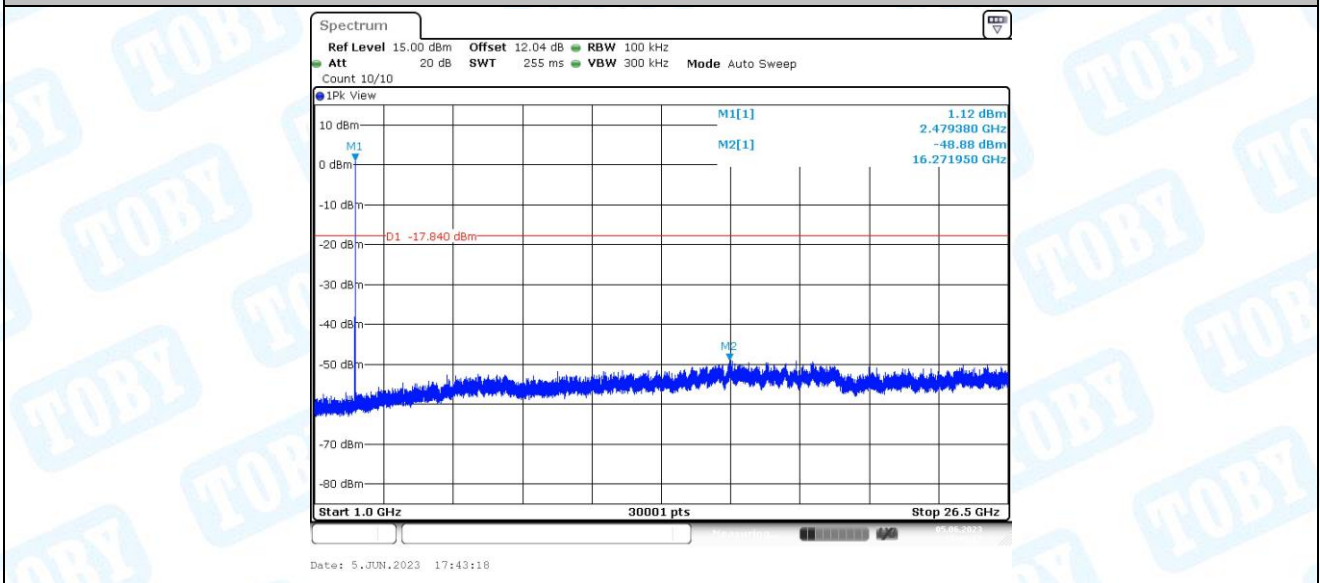
BLE\_1M\_Ant1\_2440\_1000~26500



BLE\_1M\_Ant1\_2480\_0~Reference



BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500

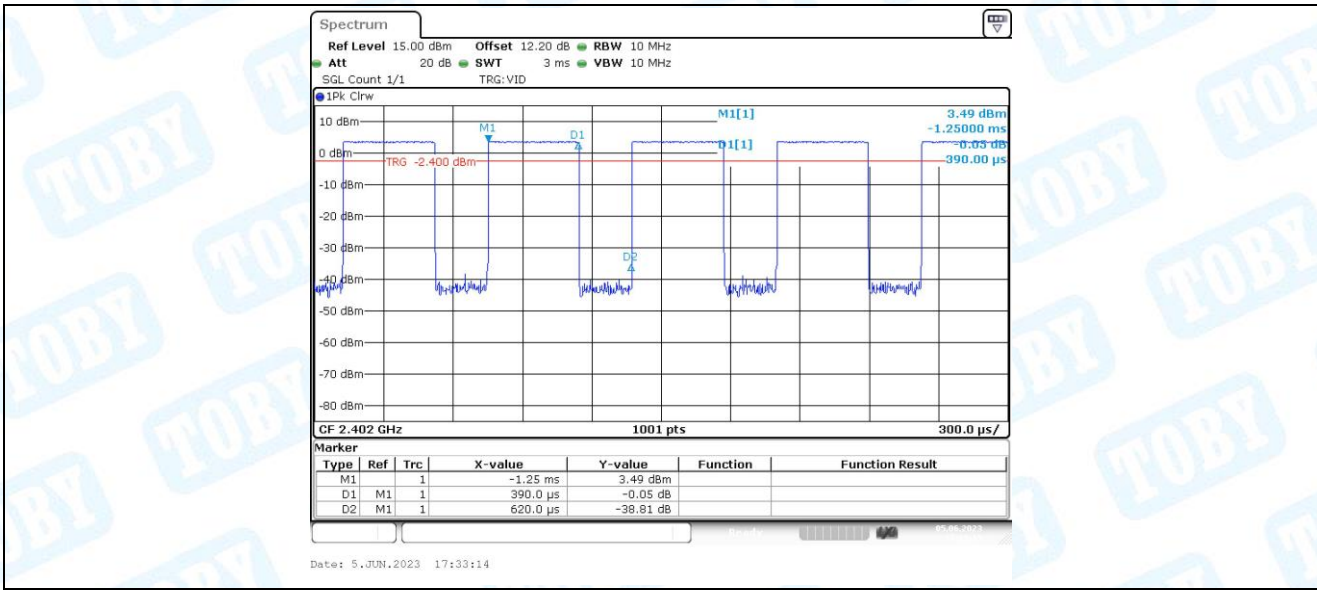


## 7. Duty Cycle

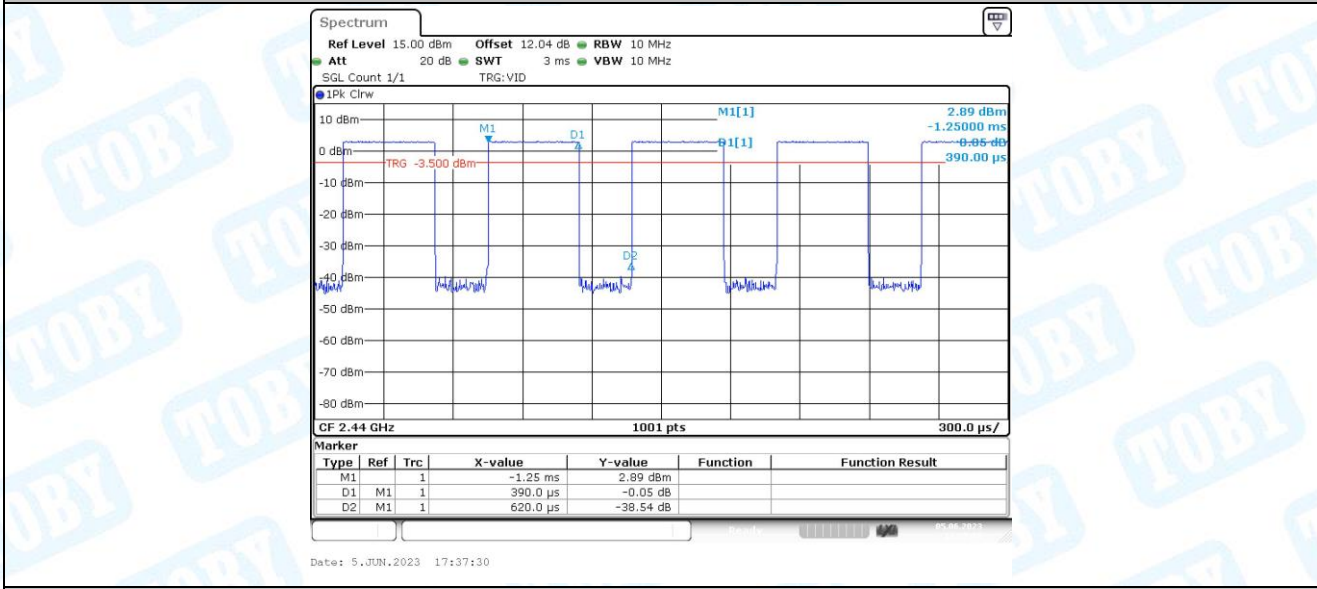
### 7.1. Test Result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [KHz]	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.62	62.90	2.564	---	---
		2440	0.39	0.62	62.90	2.564	---	---
		2480	0.39	0.62	62.90	2.564	---	---

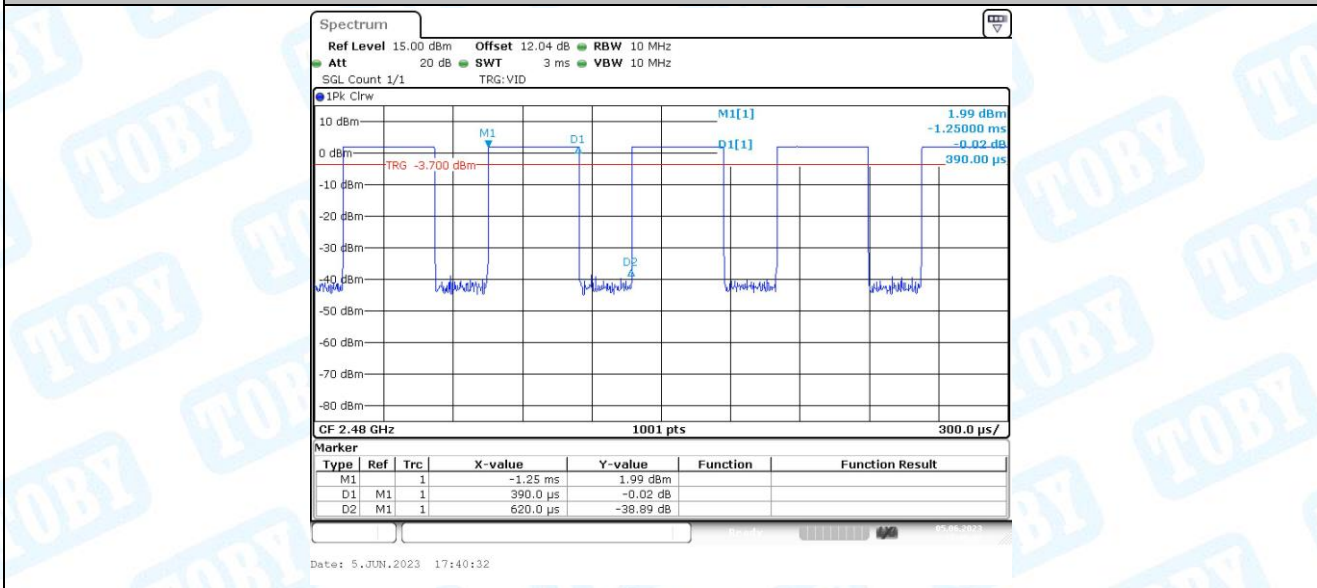
## 7.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

## 8. Emissions in Restricted Bands

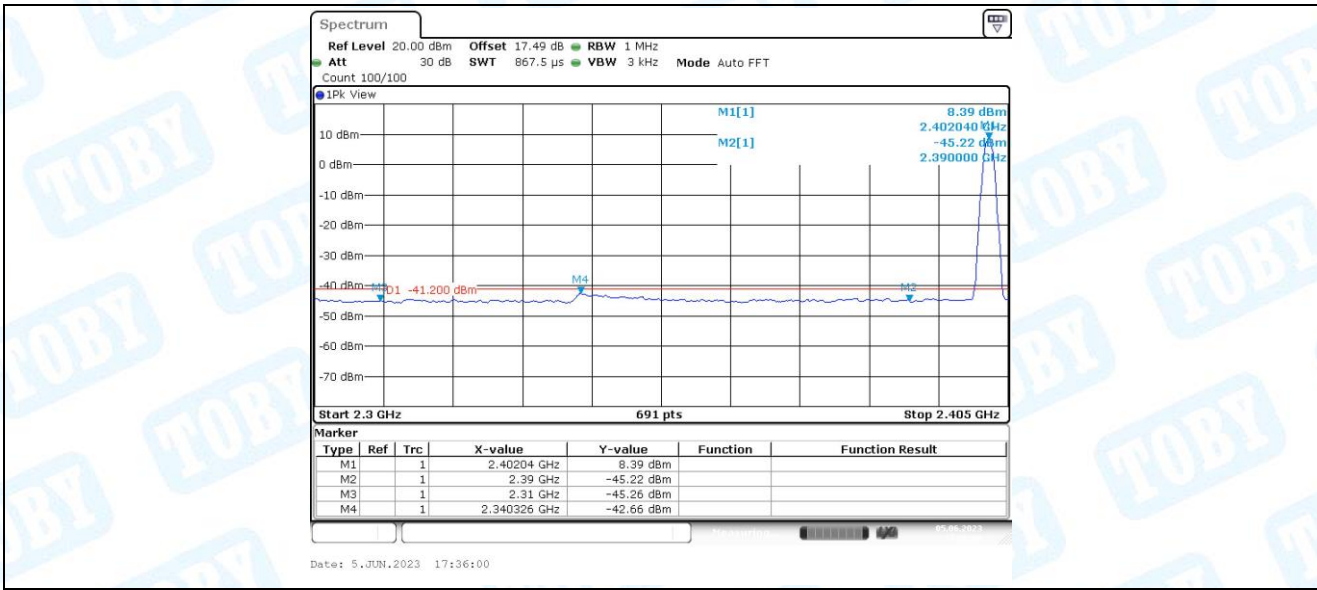
### 8.1. Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-45.26	≤-41.20	PASS
				AV	2340.326	-42.66	≤-41.20	PASS
				AV	2390.000	-45.22	≤-41.20	PASS
				Peak	2310.000	-34.92	≤-21.20	PASS
				Peak	2343.826	-32.02	≤-21.20	PASS
				Peak	2390.000	-35.55	≤-21.20	PASS
		High	2480	AV	2483.500	-44.5	≤-41.20	PASS
				AV	2497.594	-43.55	≤-41.20	PASS
				AV	2500.000	-44.36	≤-41.20	PASS
				Peak	2483.500	-35.09	≤-21.20	PASS
				Peak	2488.435	-32.03	≤-21.20	PASS
				Peak	2500.000	-34.38	≤-21.20	PASS

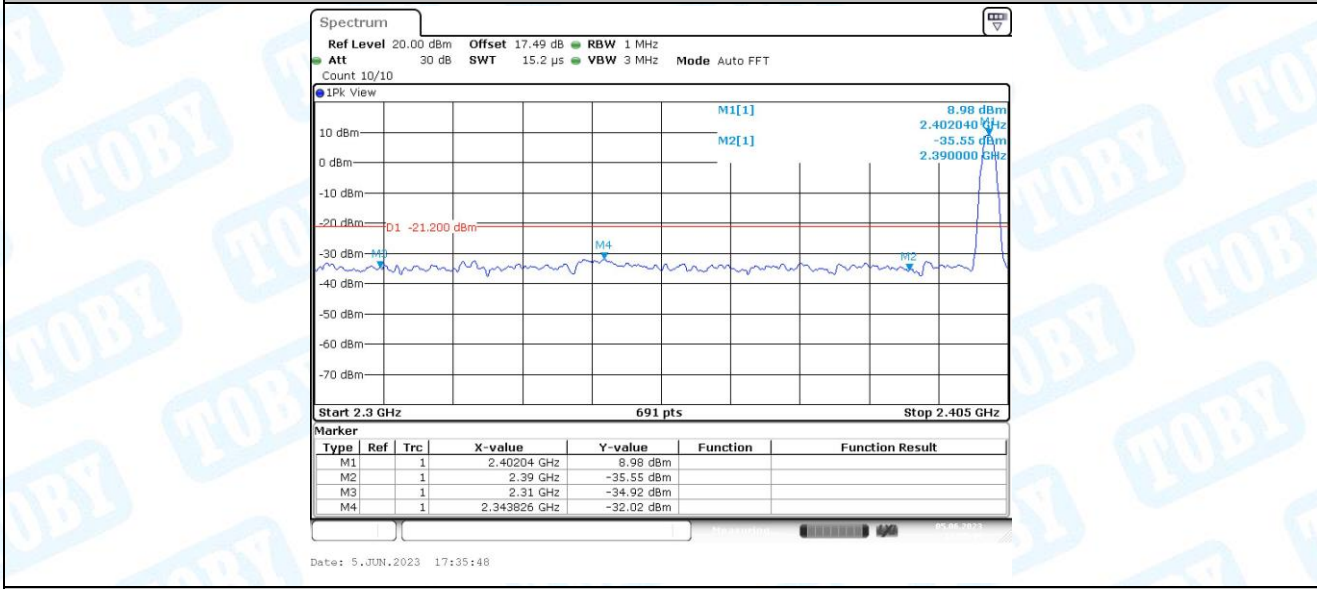
Note:

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.

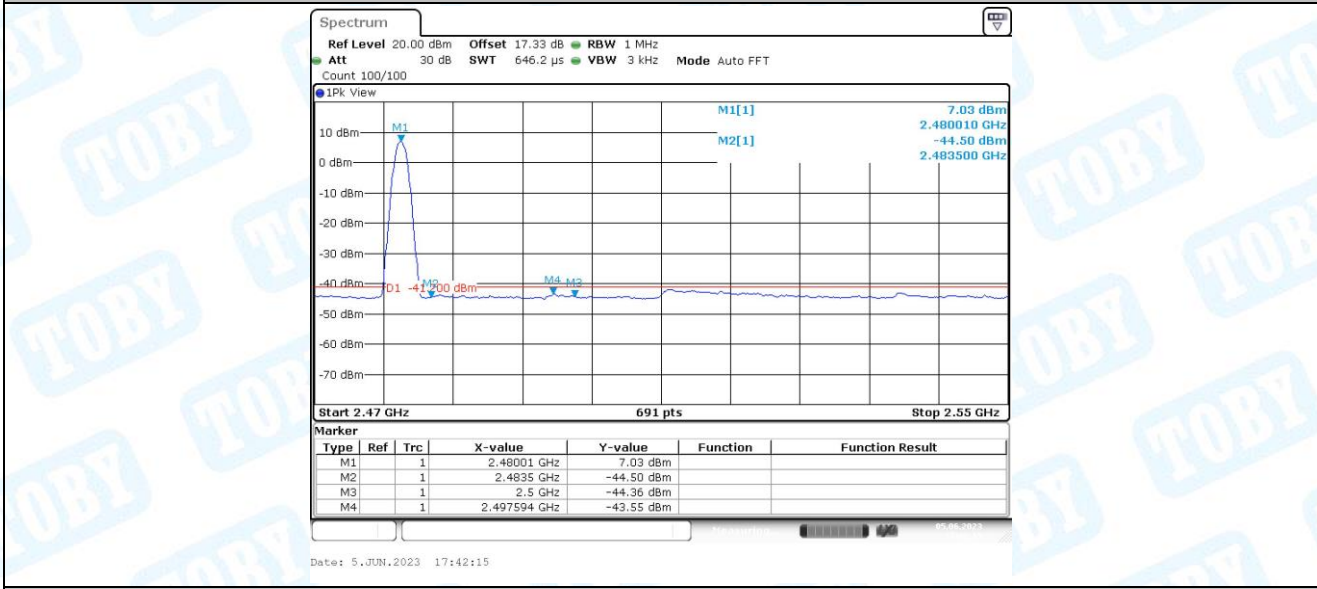
## 8.2. Test Graphs



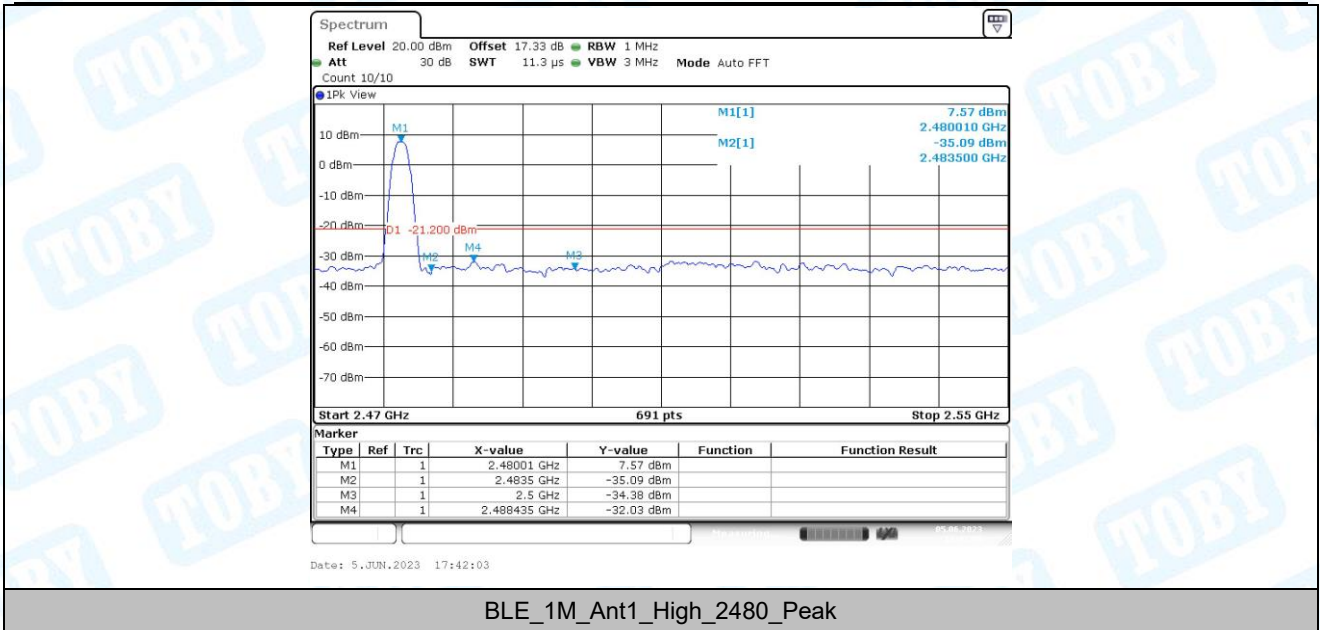
BLE\_1M\_Ant1\_Low\_2402\_AV



BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV



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