

# RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
<b>Product Name:</b>	Osprey Electronics
<b>Test Model:</b>	Hotspot G1
<b>Sample ID:</b>	RW-C-202204-0089-2-2#
Environmental Conditions	
<b>Temperature:</b>	23.8°C
<b>Relative Humidity:</b>	48%
<b>Test Voltage:</b>	DC 5V
<b>Test Engineer:</b>	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202204-0089-1.	

## Contents

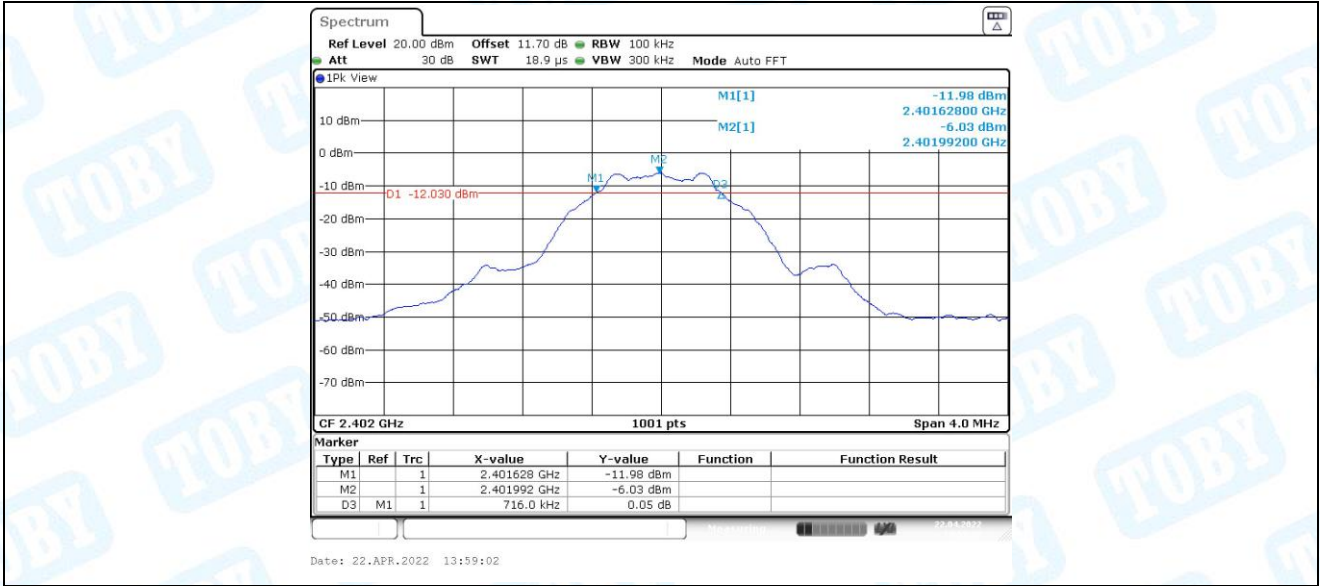
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## 1. DTS Bandwidth

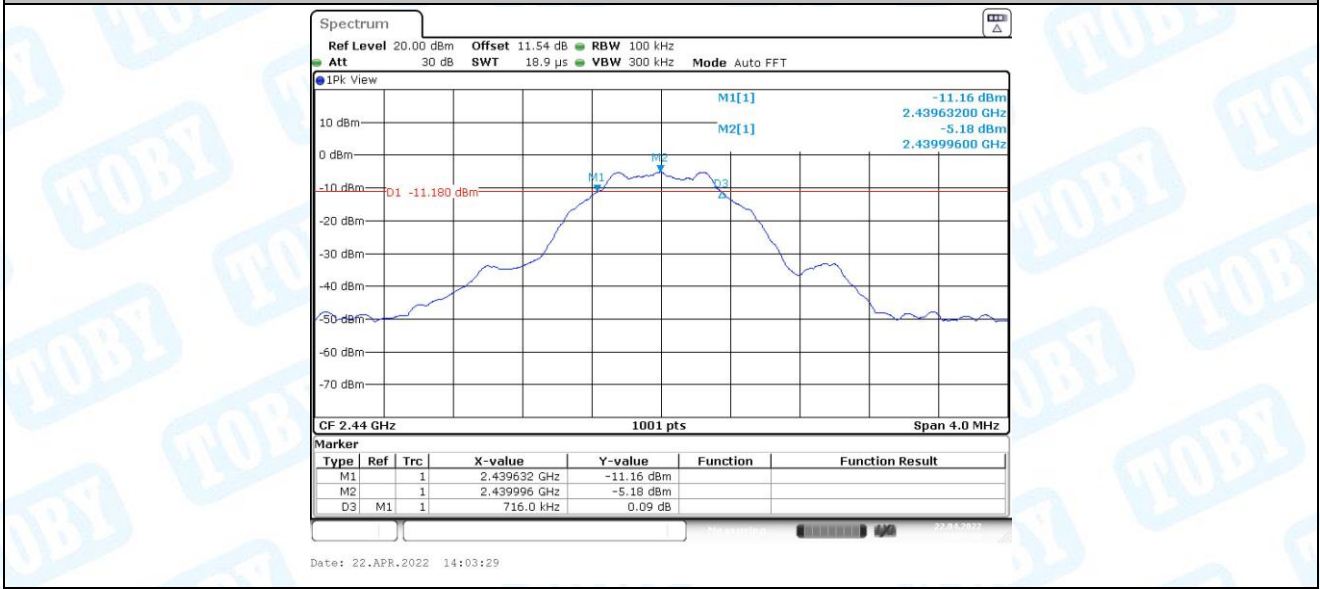
### 1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.72	2401.63	2402.34	0.5	PASS
		2440	0.72	2439.63	2440.35	0.5	PASS
		2480	0.71	2479.64	2480.35	0.5	PASS

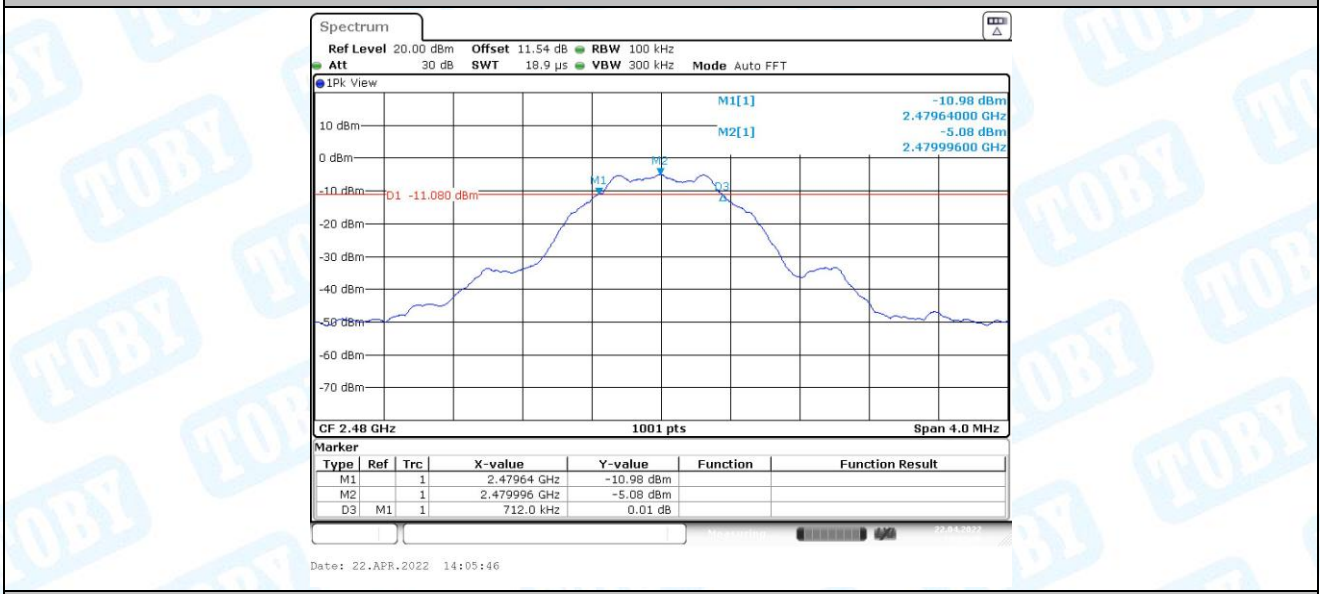
## 1.2. Test Graphs



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	1.063	2401.465	2402.527	---	---
		2440	1.063	2439.469	2440.531	---	---
		2480	1.067	2479.473	2480.539	---	---

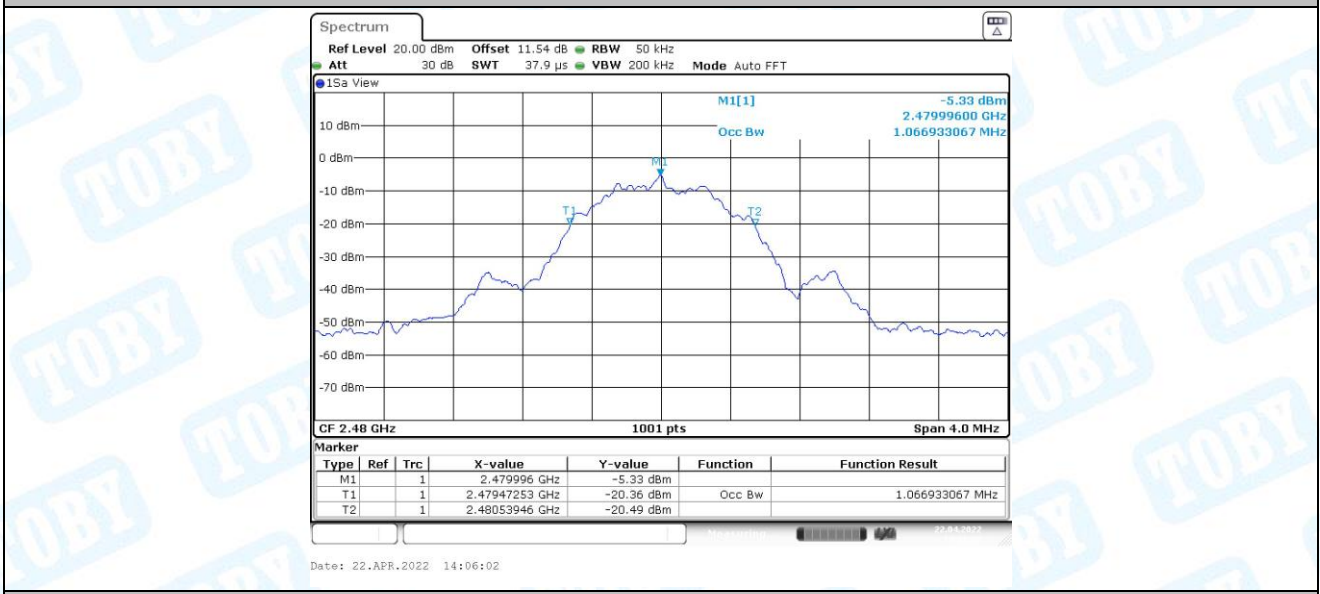
## 2.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



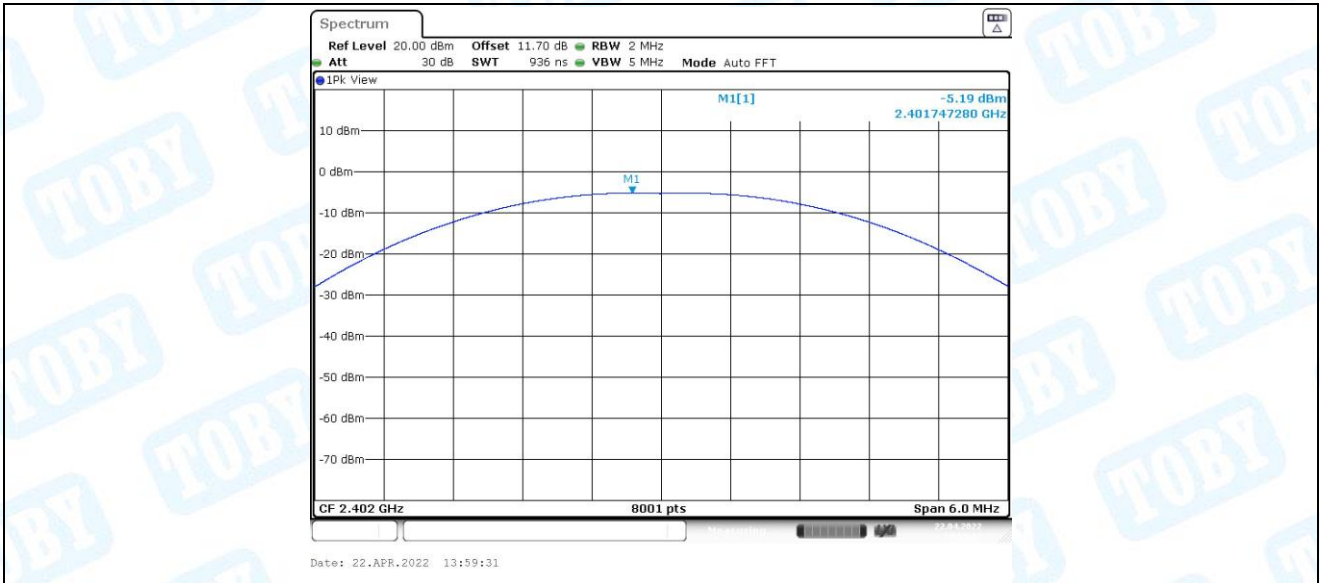
BLE\_1M\_Ant1\_2480

### 3. Maximum conducted output power

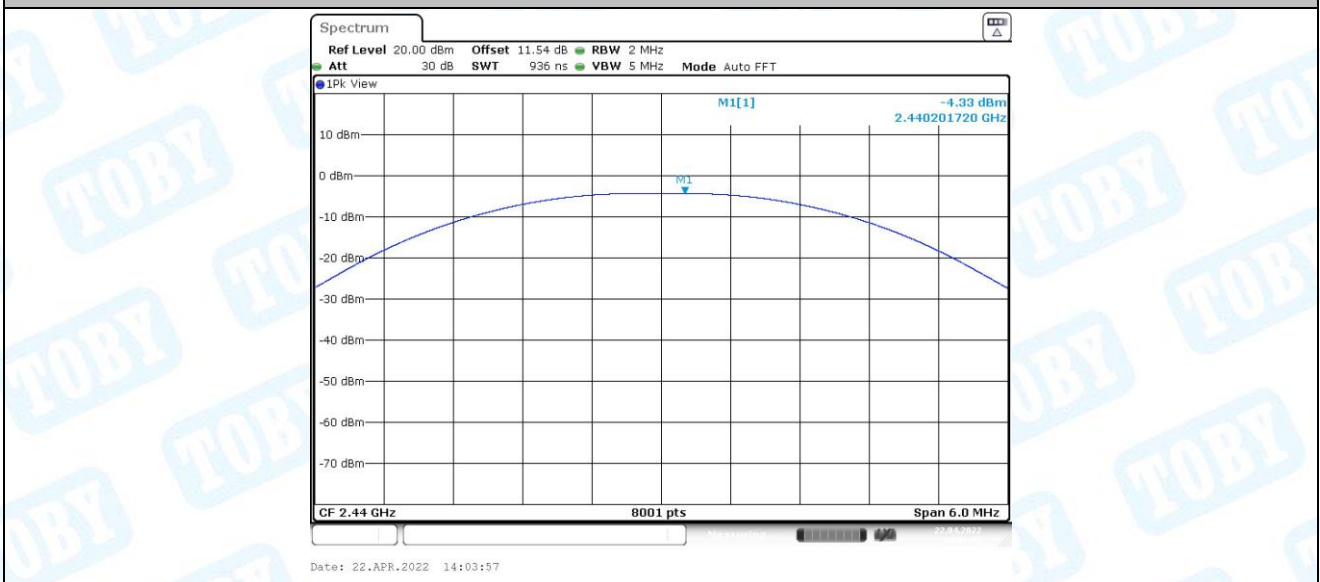
#### 3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-5.19	≤30	PASS
		2440	-4.33	≤30	PASS
		2480	-4.28	≤30	PASS

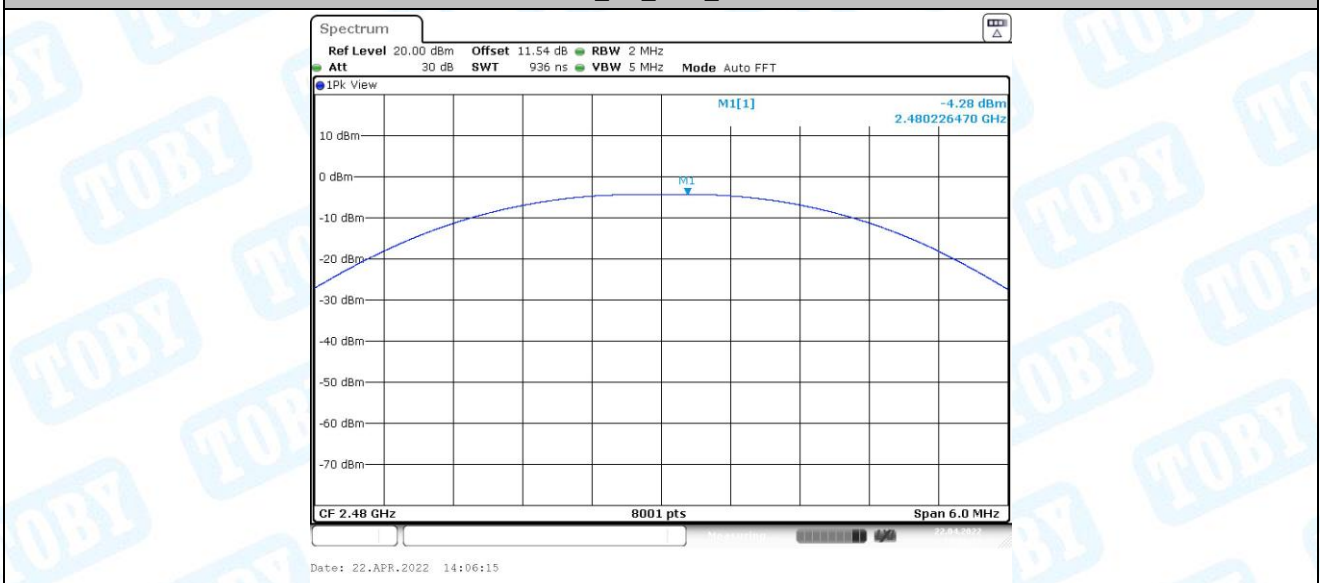
### 3.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

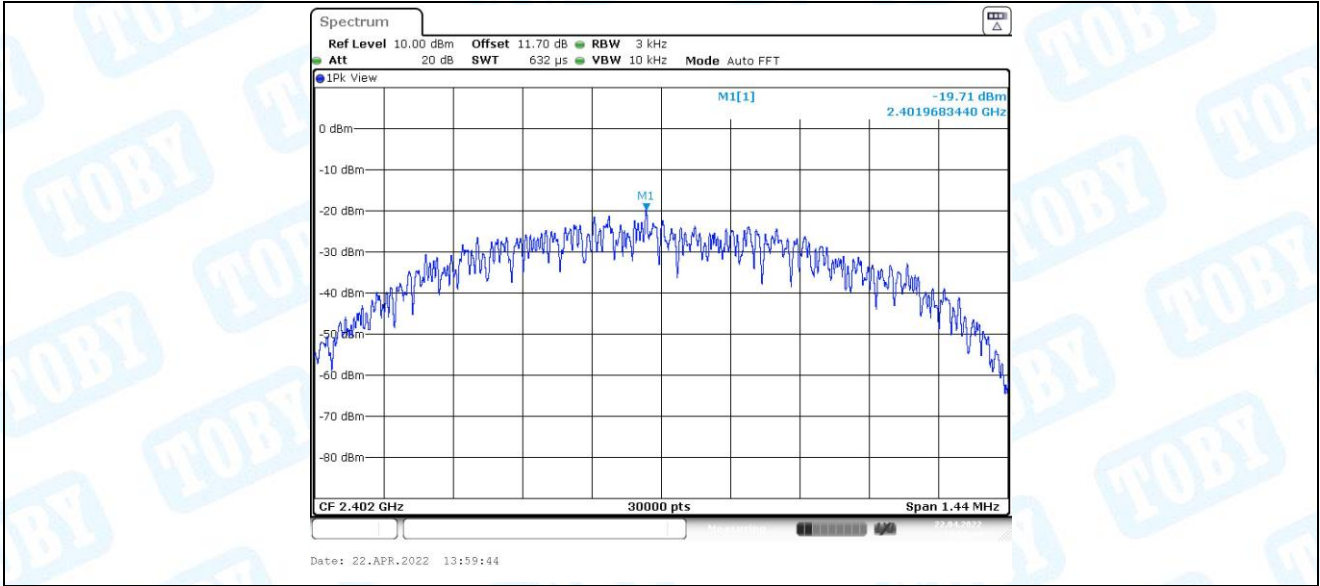


## 4. Maximum power spectral density

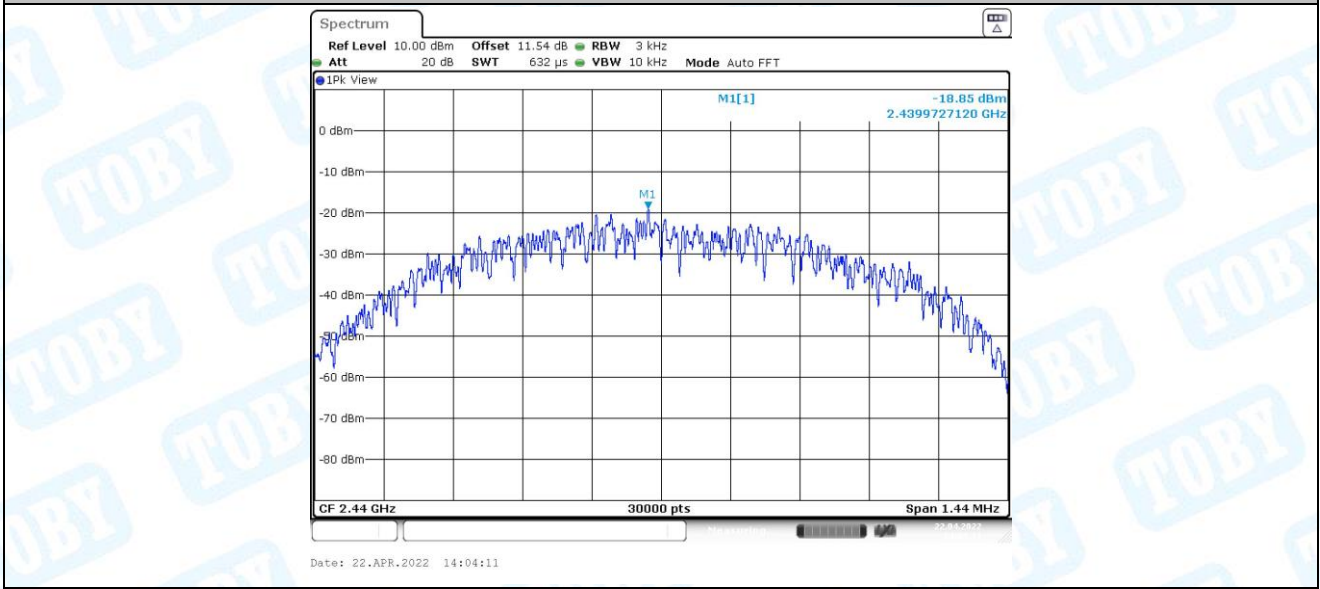
### 4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.71	≤8.00	PASS
		2440	-18.85	≤8.00	PASS
		2480	-18.69	≤8.00	PASS

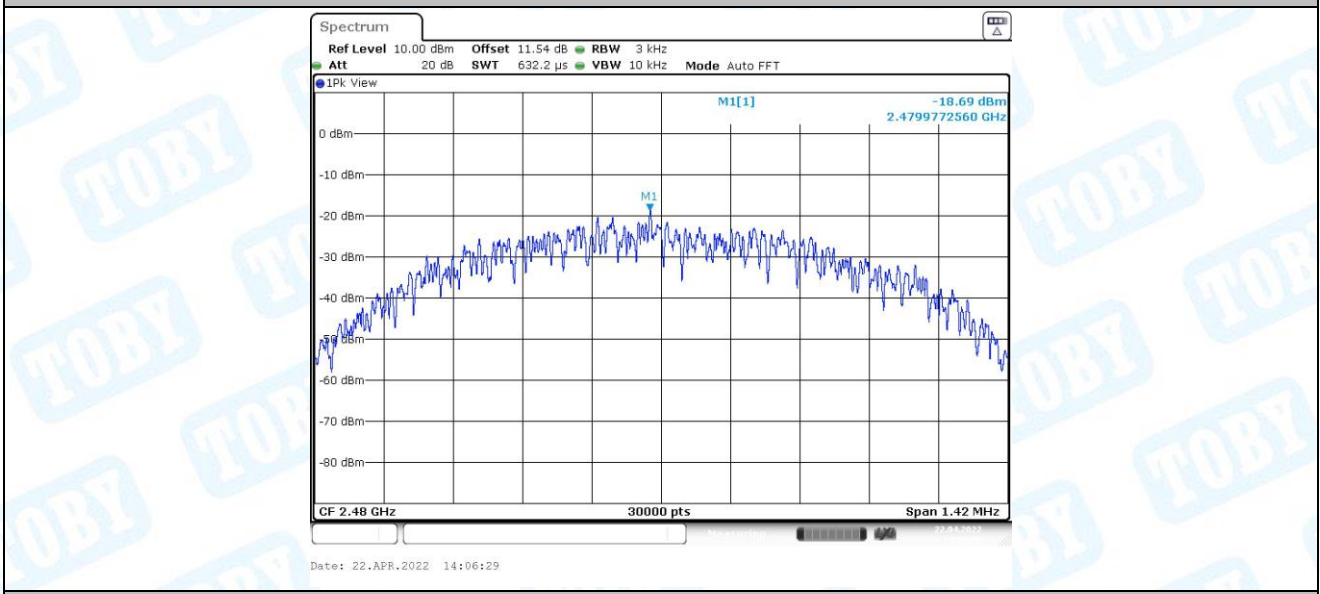
## 4.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



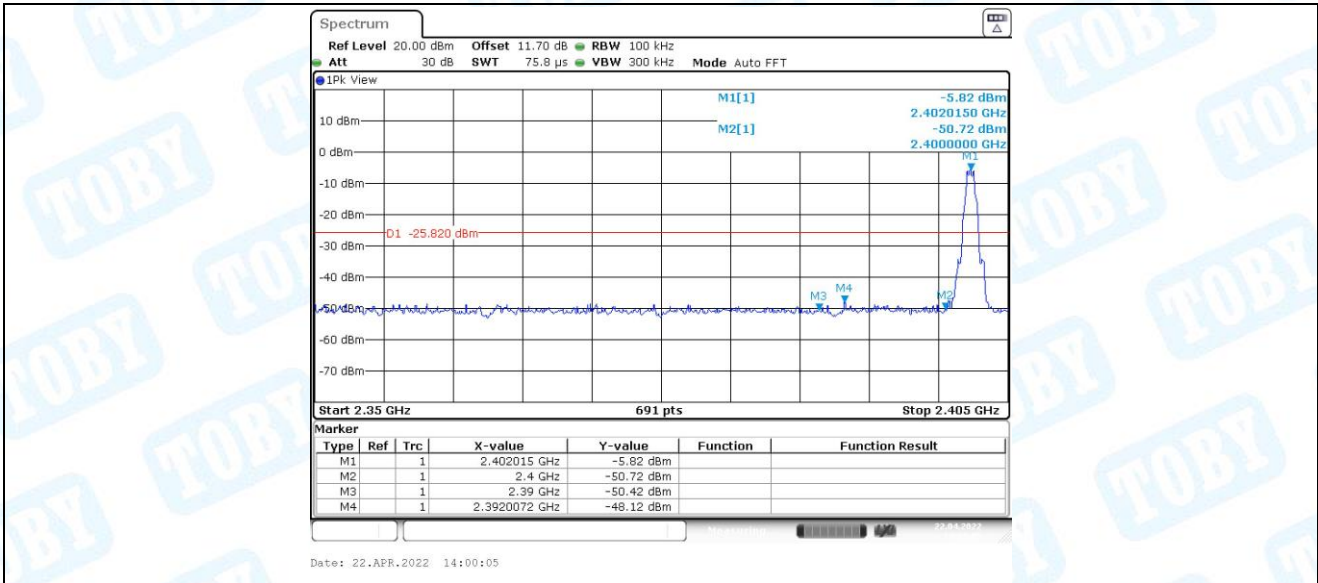
BLE\_1M\_Ant1\_2480

## 5. Band edge measurements

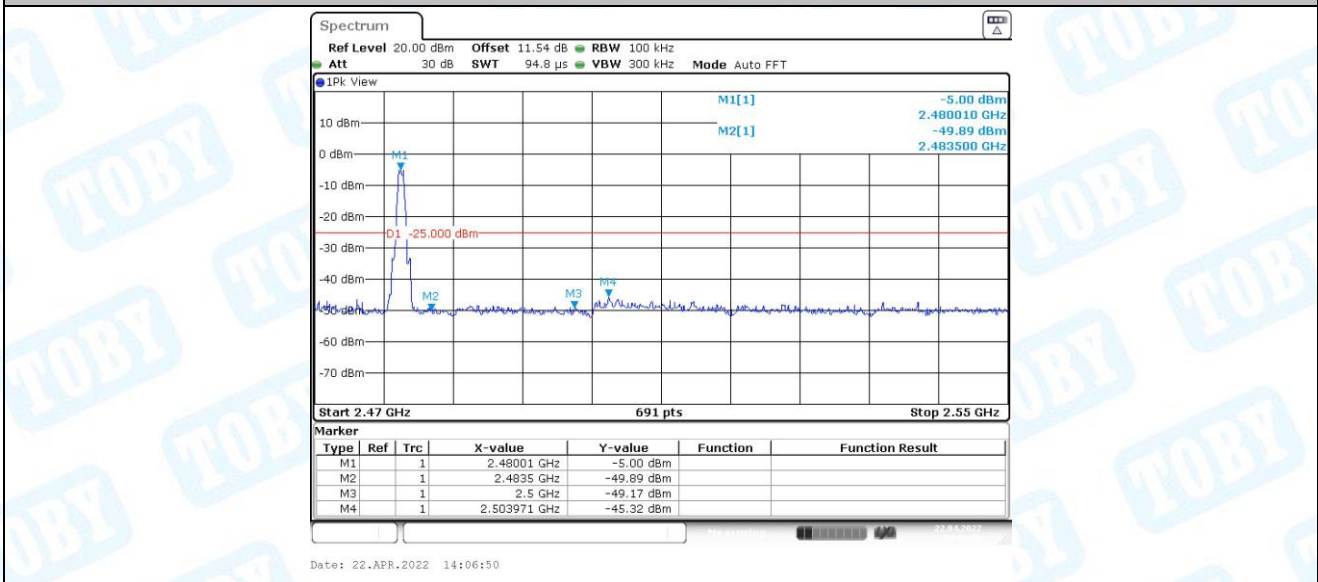
### 5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-5.82	-48.12	≤-25.82	PASS
		High	2480	-5.00	-45.32	≤-25	PASS

## 5.2. Test Graphs



BLE\_1M\_Ant1\_Low\_2402



BLE\_1M\_Ant1\_High\_2480

## 6. Conducted Spurious Emission

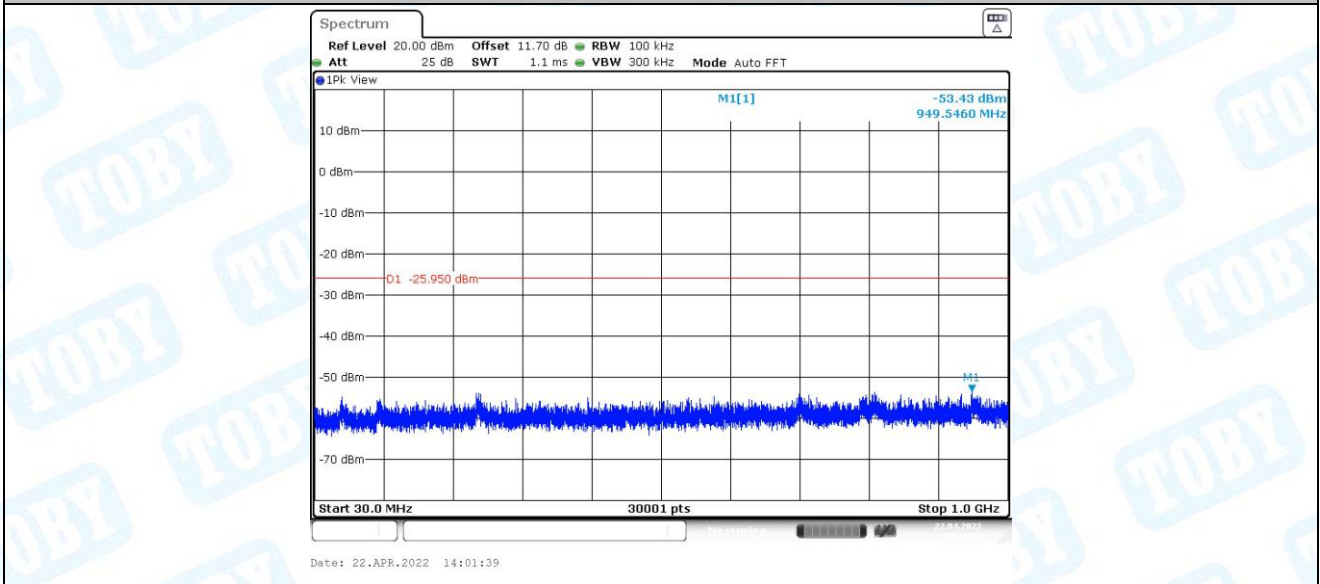
### 6.1. Test Result

Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-5.95	-5.95	---	PASS
			30~1000	-5.95	-53.43	≤-25.95	PASS
			1000~26500	-5.95	-47.03	≤-25.95	PASS
		2440	Reference	-5.18	-5.18	---	PASS
			30~1000	-5.18	-53.38	≤-25.18	PASS
			1000~26500	-5.18	-45.94	≤-25.18	PASS
		2480	Reference	-5.07	-5.07	---	PASS
			30~1000	-5.07	-52.92	≤-25.07	PASS
			1000~26500	-5.07	-47.16	≤-25.07	PASS

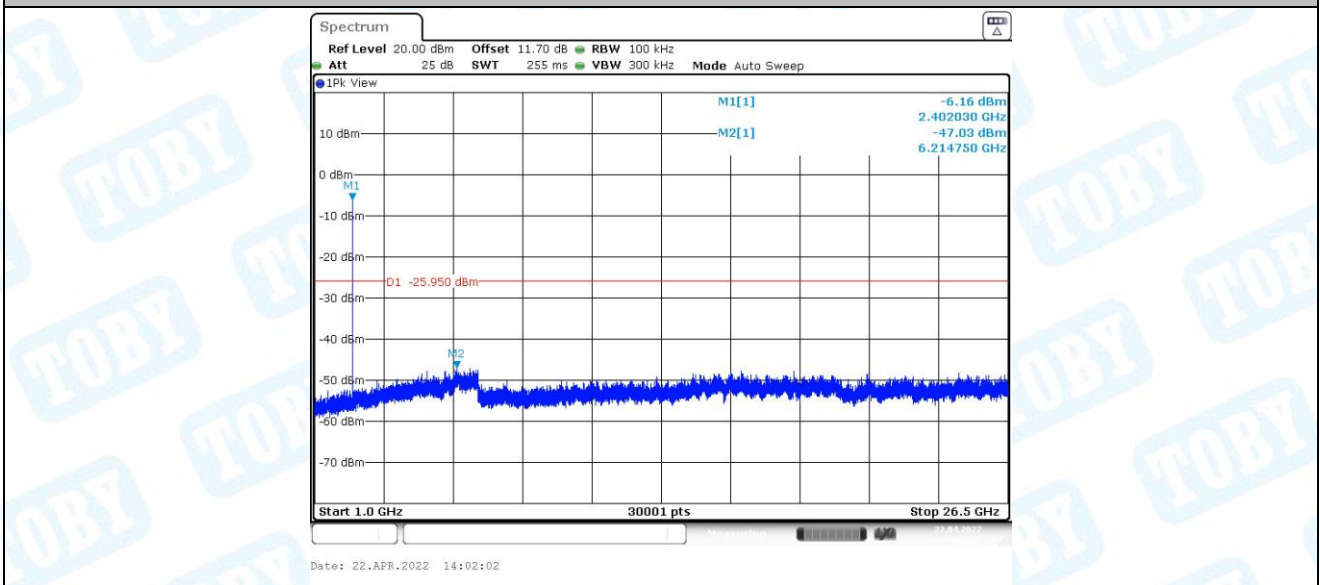
### 6.2. Test Graphs



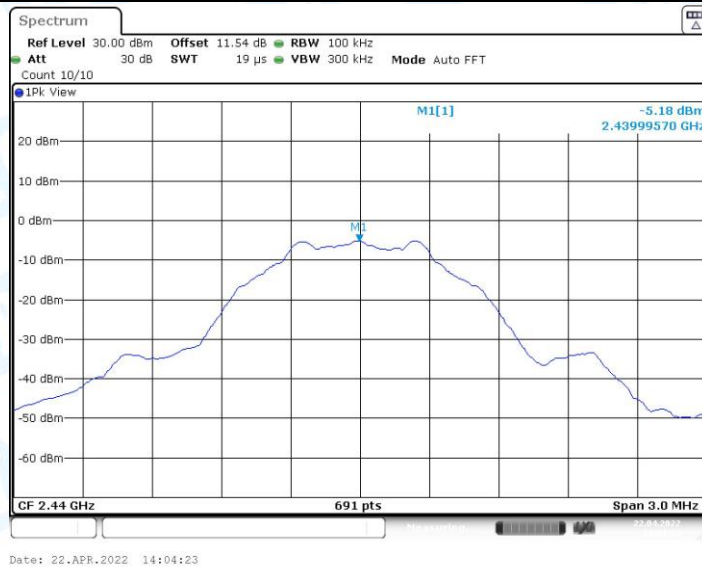
BLE\_1M\_Ant1\_2402\_0~Reference



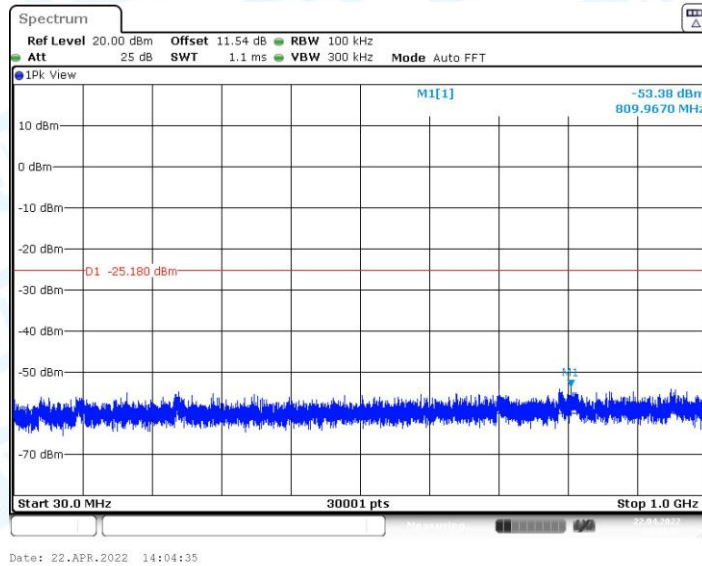
BLE\_1M\_Ant1\_2402\_30~1000



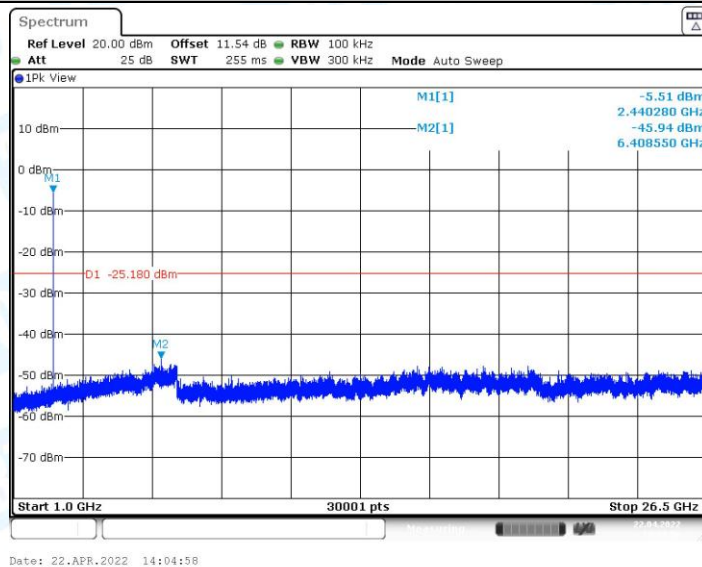
BLE\_1M\_Ant1\_2402\_1000~26500



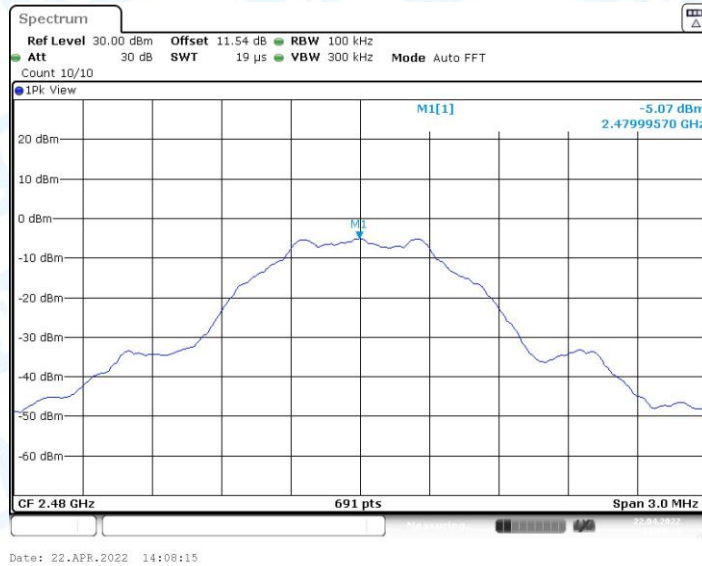
BLE\_1M\_Ant1\_2440\_0~Reference



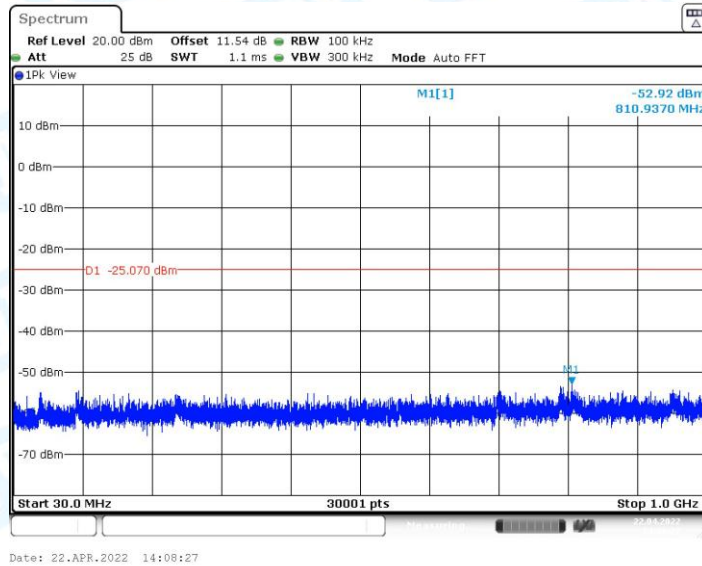
BLE\_1M\_Ant1\_2440\_30~1000



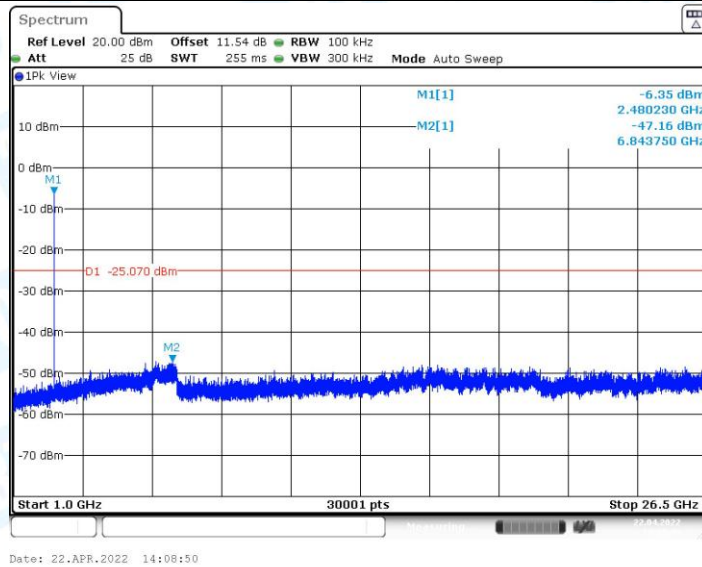
BLE\_1M\_Ant1\_2440\_1000~26500



BLE\_1M\_Ant1\_2480\_0~Reference



BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500

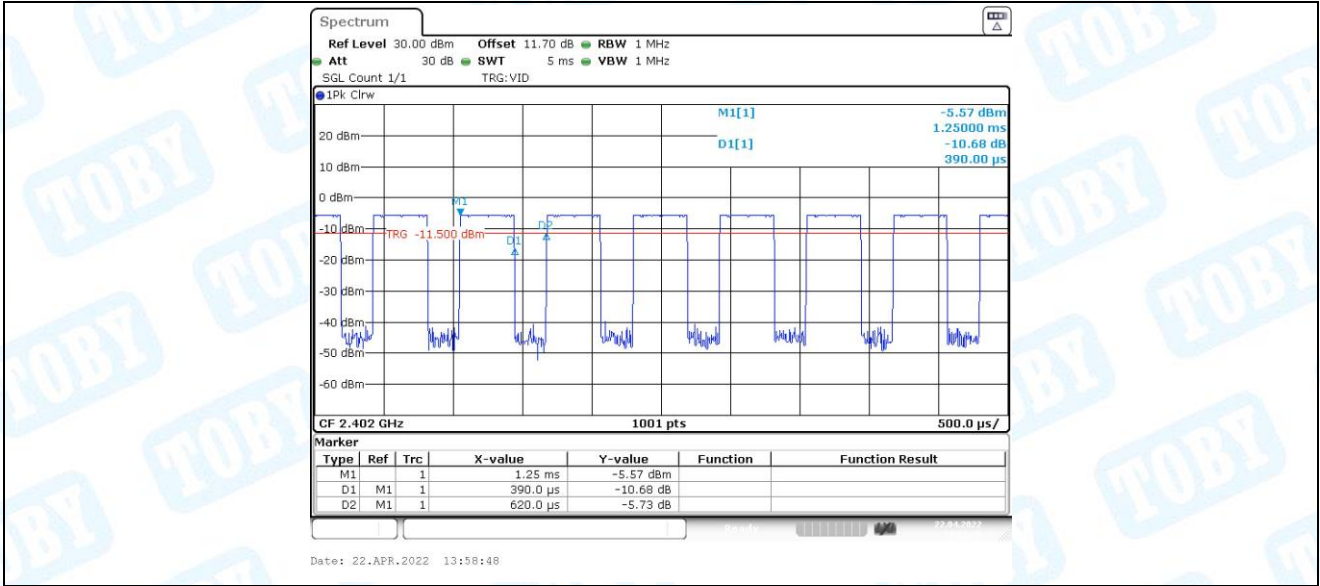


## 7. Duty Cycle

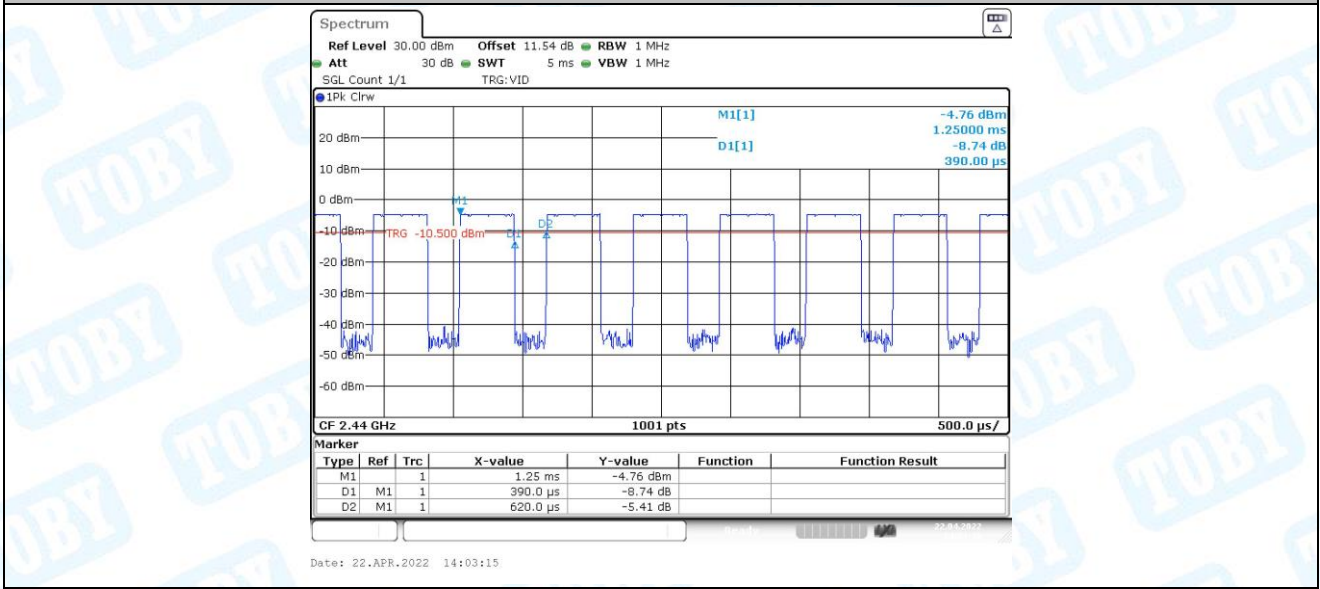
### 7.1. Test Result

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	2.56	---	---
		2440	0.39	0.62	62.90	2.56	---	---
		2480	0.39	0.62	62.90	2.56	---	---

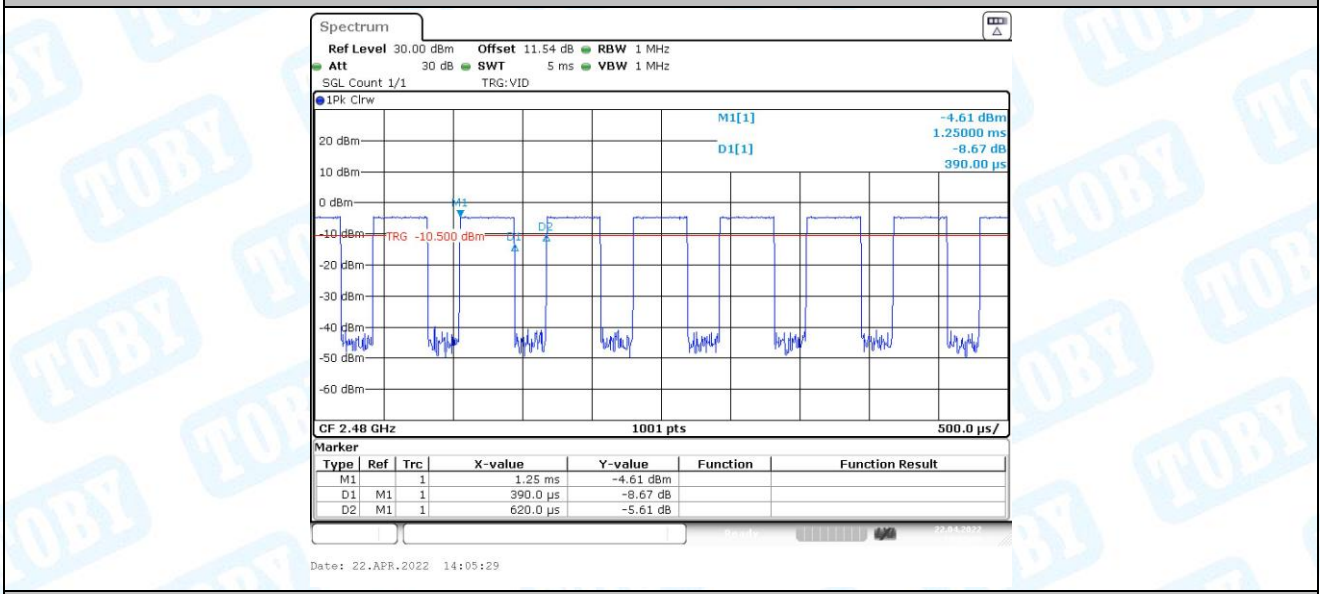
## 7.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

## 8. Emissions in Restricted Bands

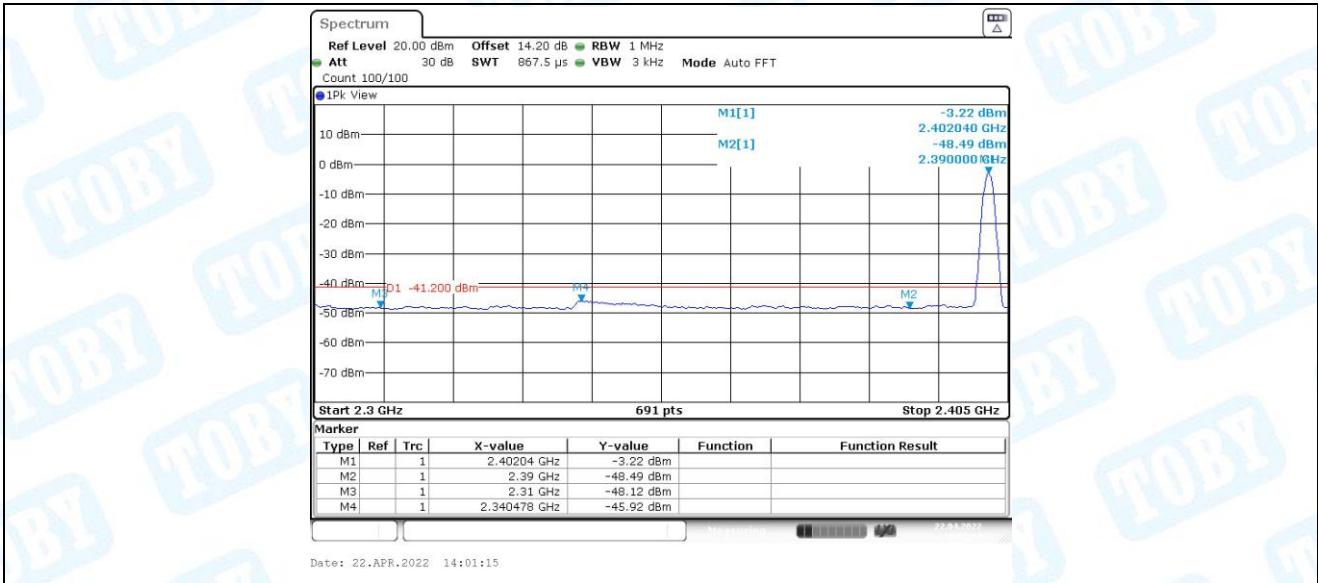
### 8.1. Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.12	≤-41.20	PASS
				AV	2340.478	-45.92	≤-41.20	PASS
				AV	2390.000	-48.49	≤-41.20	PASS
				Peak	2310.000	-38.63	≤-21.20	PASS
				Peak	2341.391	-35.4	≤-21.20	PASS
				Peak	2390.000	-38.08	≤-21.20	PASS
		High	2480	AV	2483.500	-47.92	≤-41.20	PASS
				AV	2498.406	-47.04	≤-41.20	PASS
				AV	2500.000	-47.56	≤-41.20	PASS
				Peak	2483.500	-39.84	≤-21.20	PASS
				Peak	2499.217	-36.55	≤-21.20	PASS
				Peak	2500.000	-38.05	≤-21.20	PASS

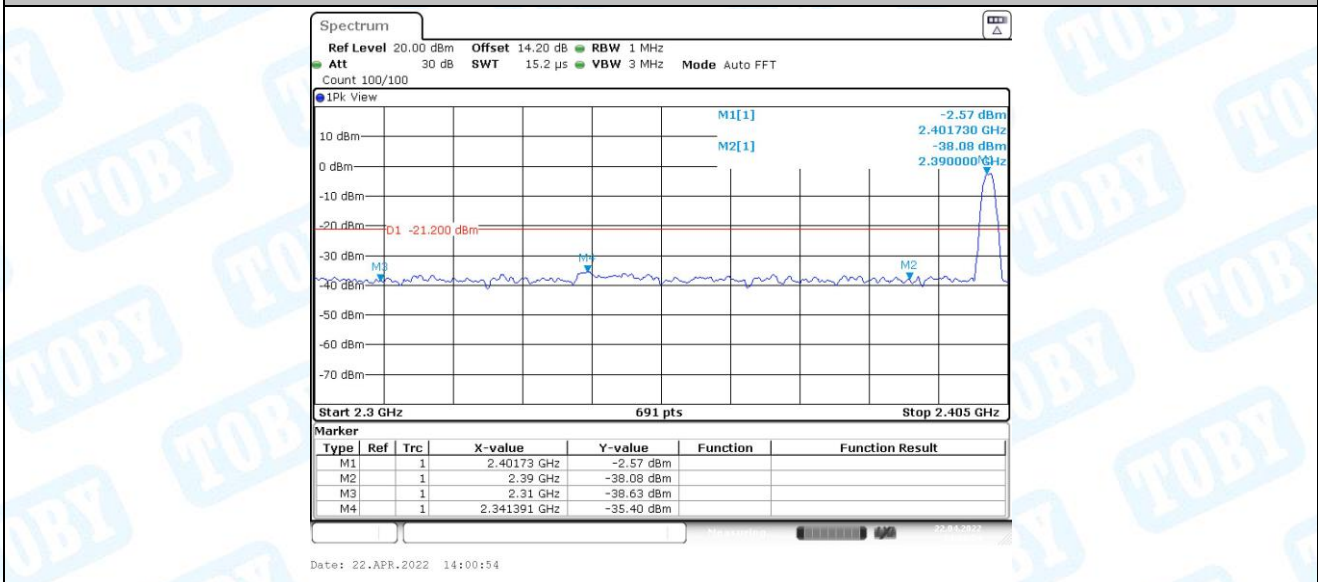
Note:

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.

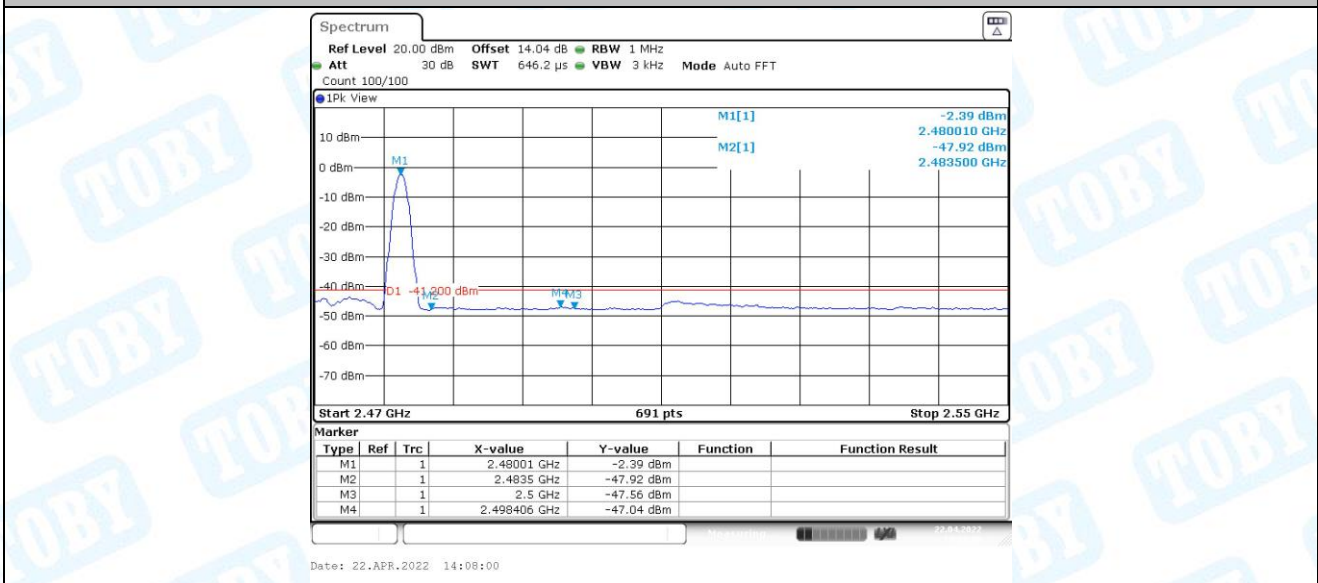
## 8.2. Test Graphs



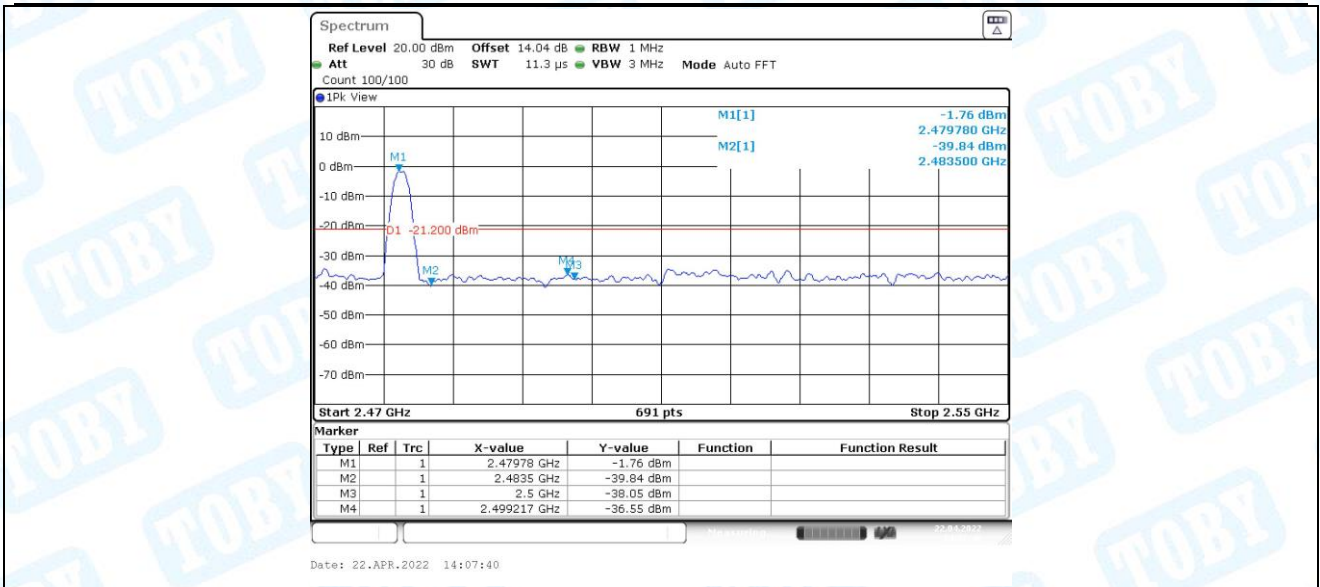
BLE\_1M\_Ant1\_Low\_2402\_AV



BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV



BLE\_1M\_Ant1\_High\_2480\_Peak

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