

# RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	AC Wireless Network Card
Test Model:	CF-813B
Sample ID:	20211223-01_03-02#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TB-FCC186039	

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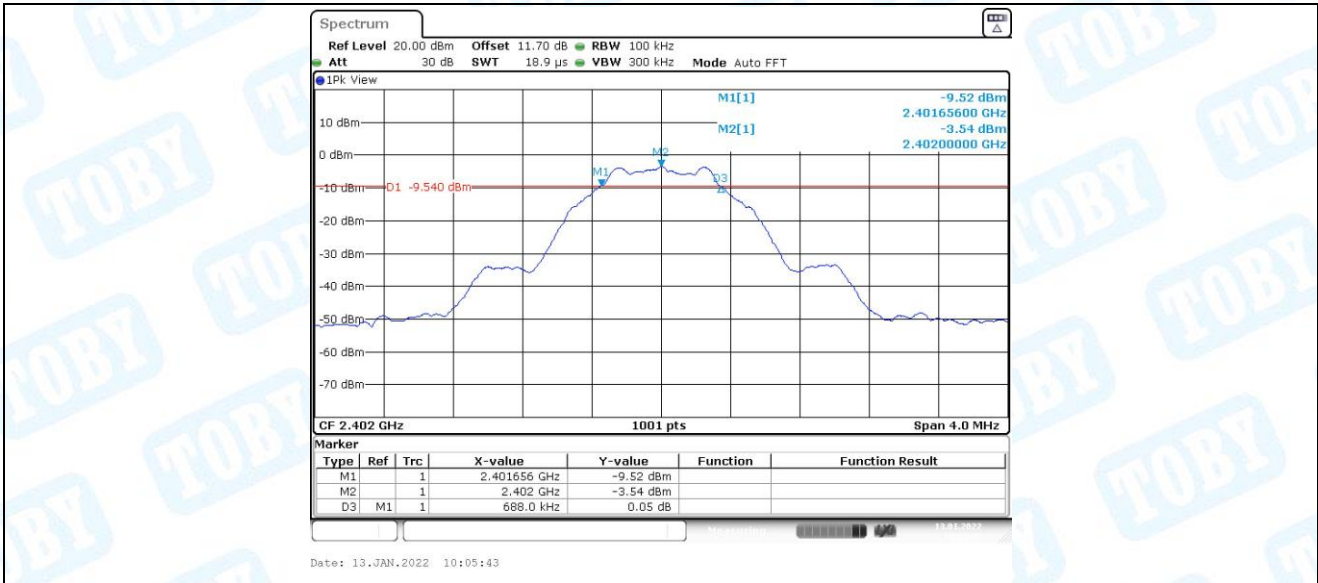


## 1. DTS Bandwidth

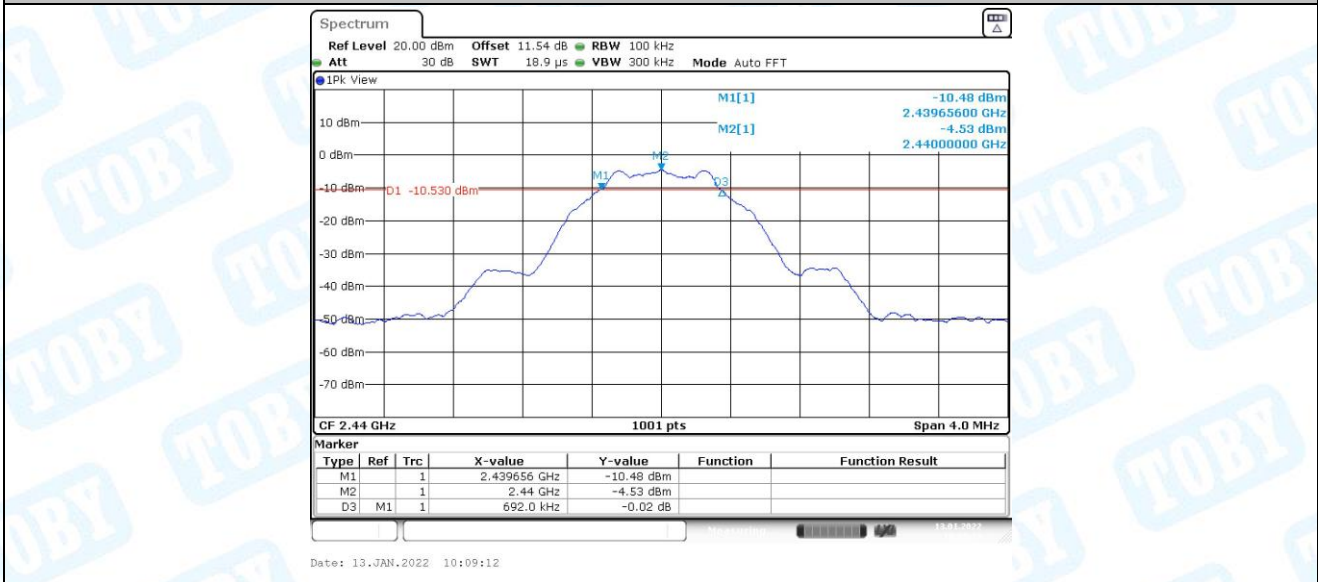
### 1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.69	2401.66	2402.34	0.5	PASS
		2440	0.69	2439.66	2440.35	0.5	PASS
		2480	0.69	2479.66	2480.35	0.5	PASS

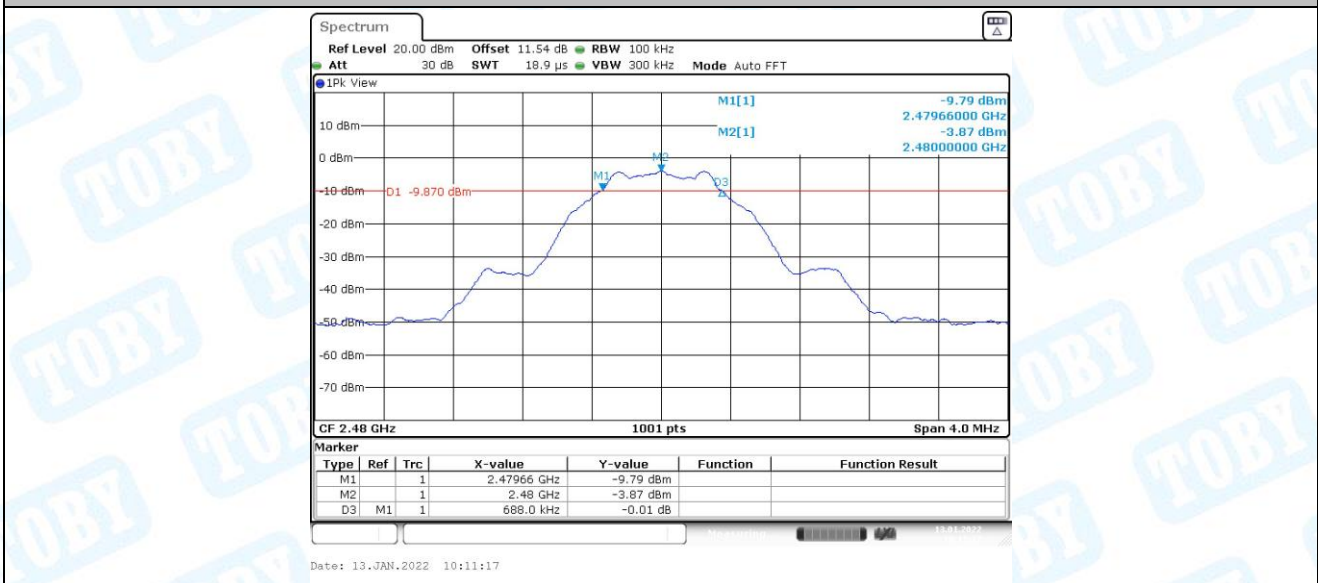
## 1.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

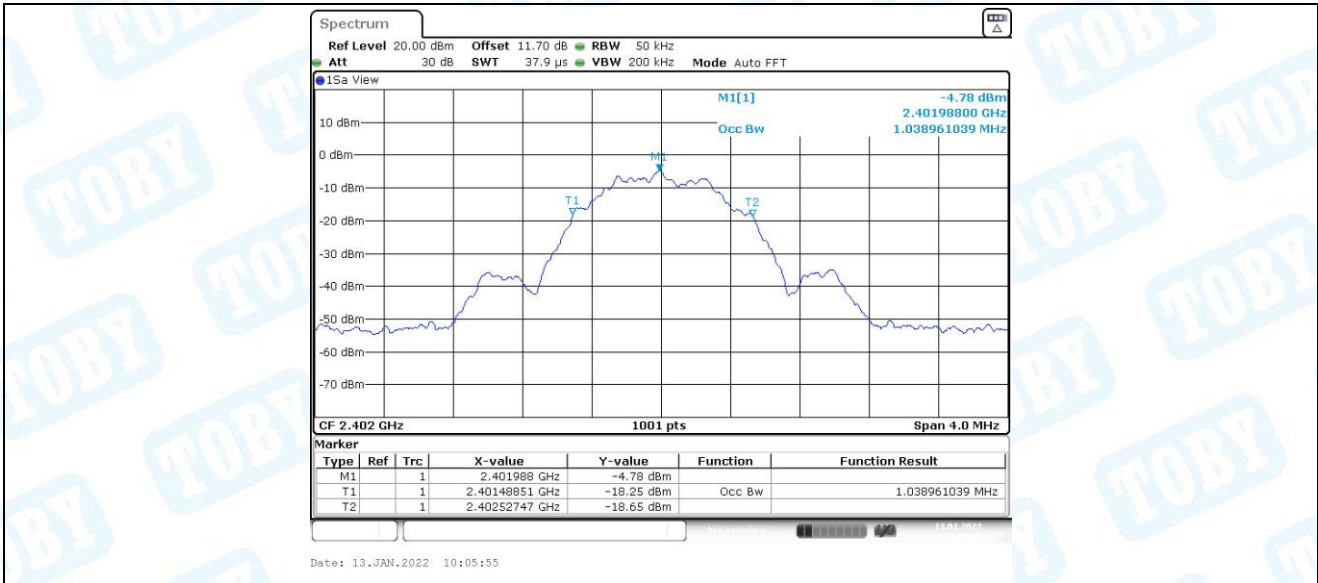


## 2. Occupied Channel Bandwidth

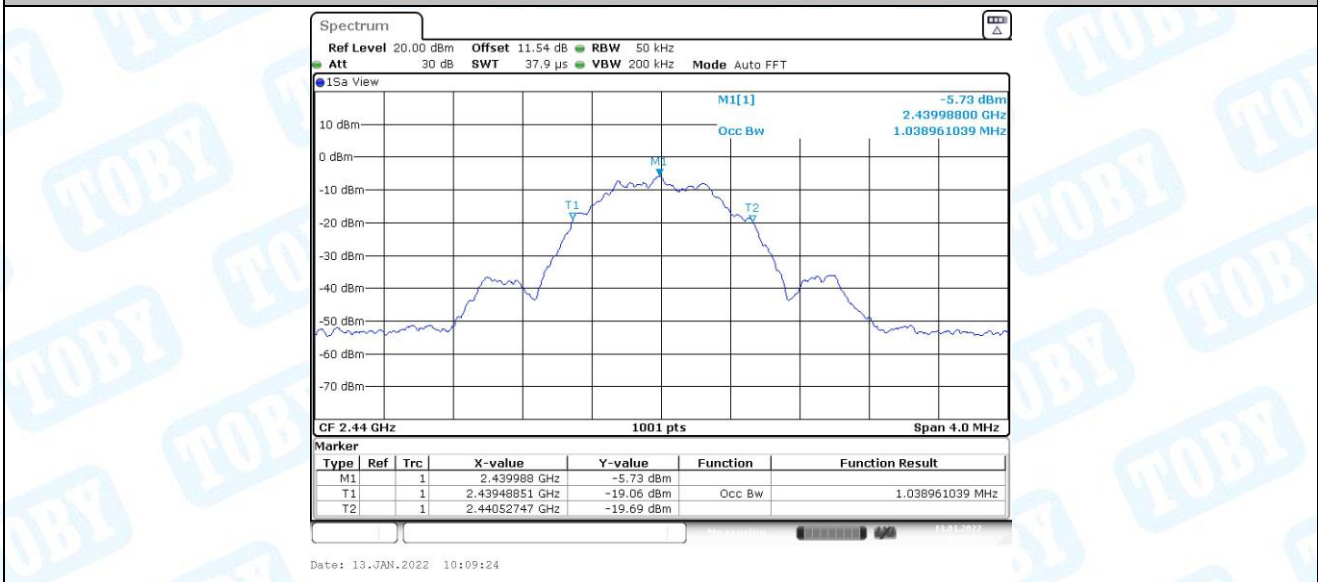
### 2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.039	2401.489	2402.527	---	---
		2440	1.039	2439.489	2440.527	---	---
		2480	1.039	2479.489	2480.527	---	---

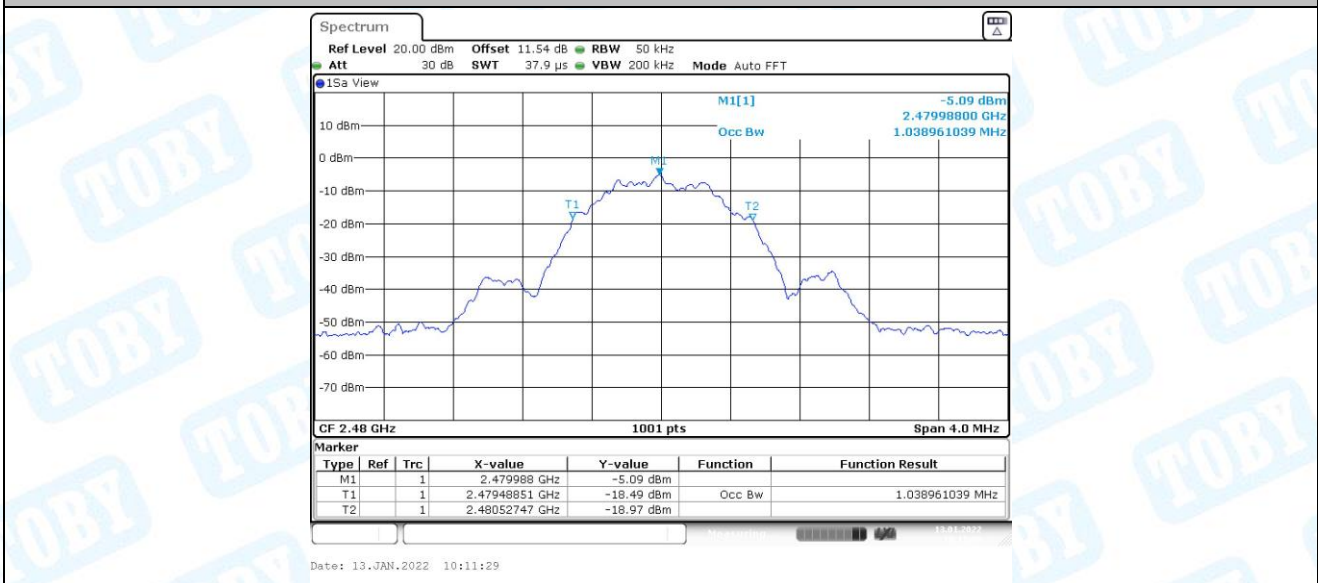
## 2.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

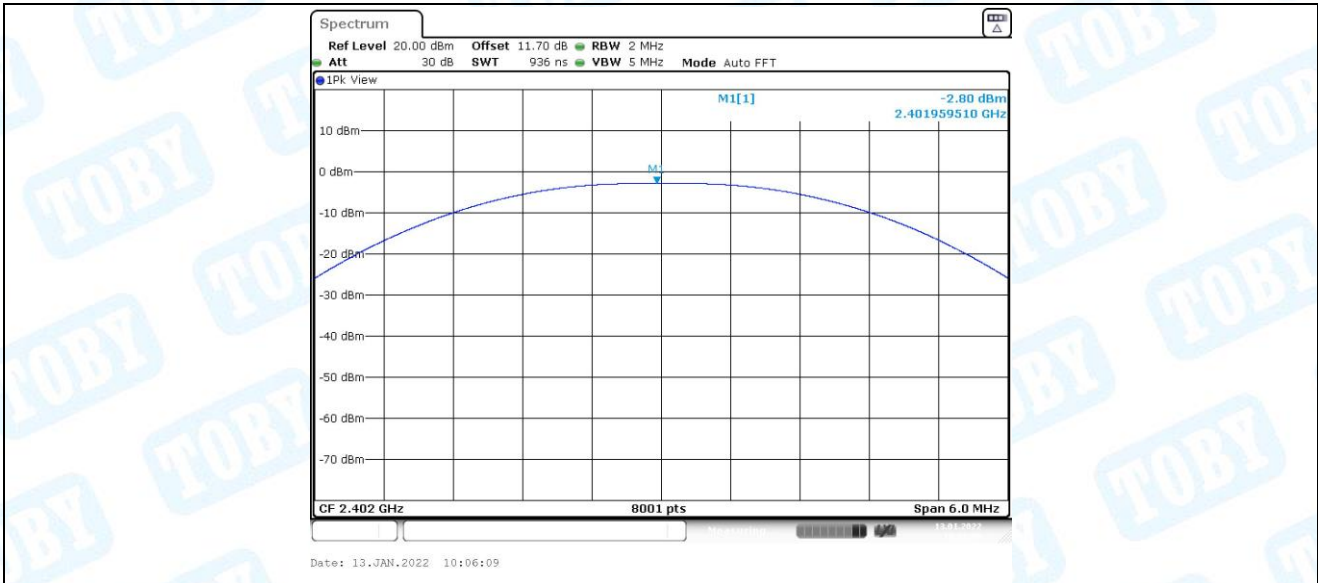


### 3. Maximum conducted output power

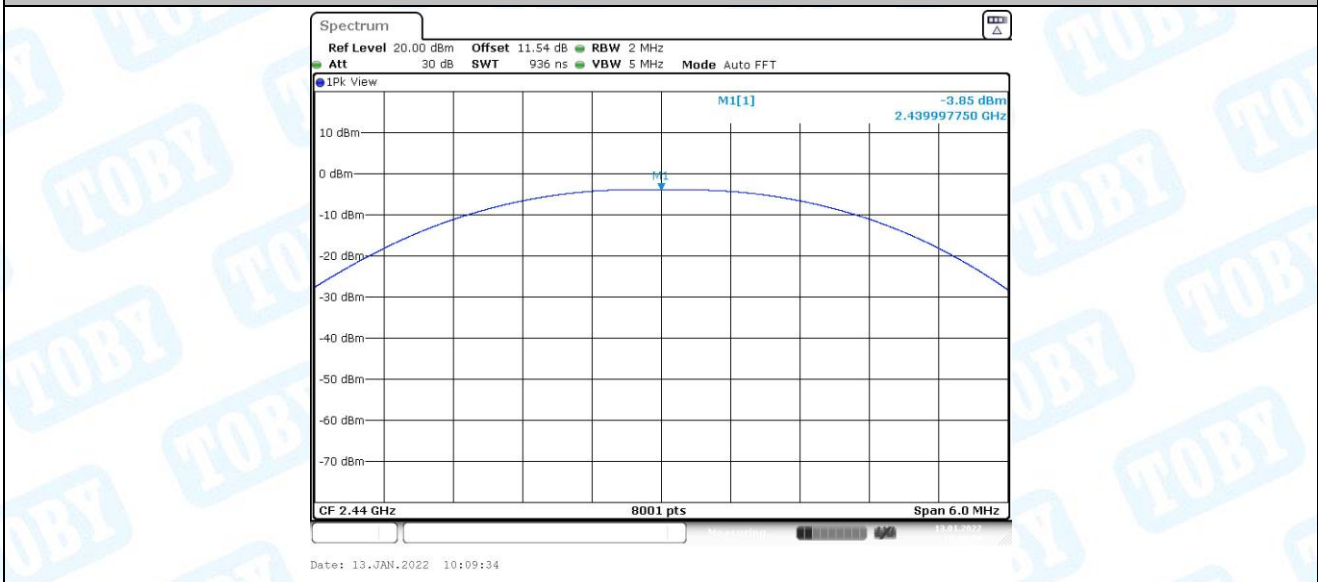
#### 3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.8	≤30	PASS
		2440	-3.85	≤30	PASS
		2480	-3.14	≤30	PASS

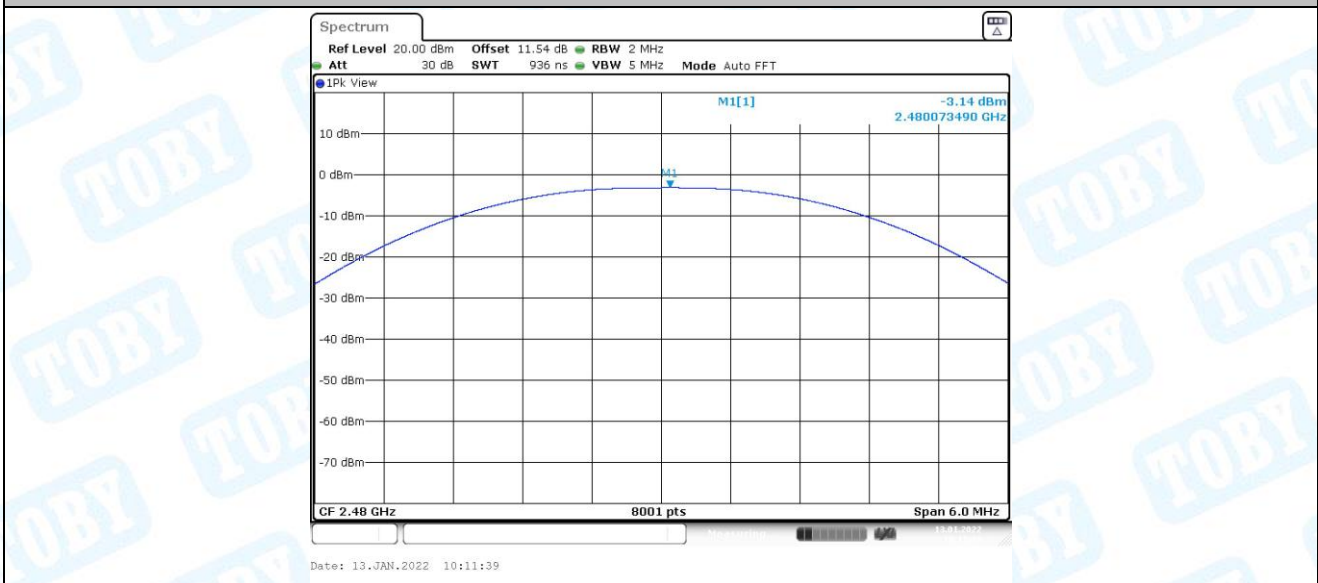
## 3.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

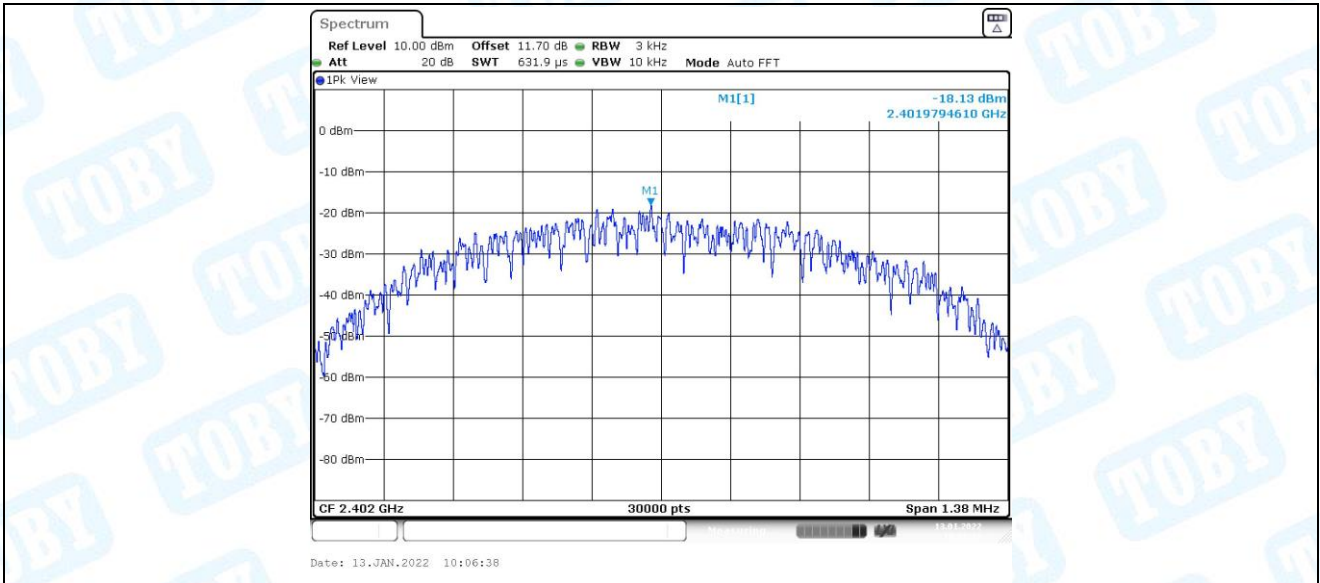


## 4. Maximum power spectral density

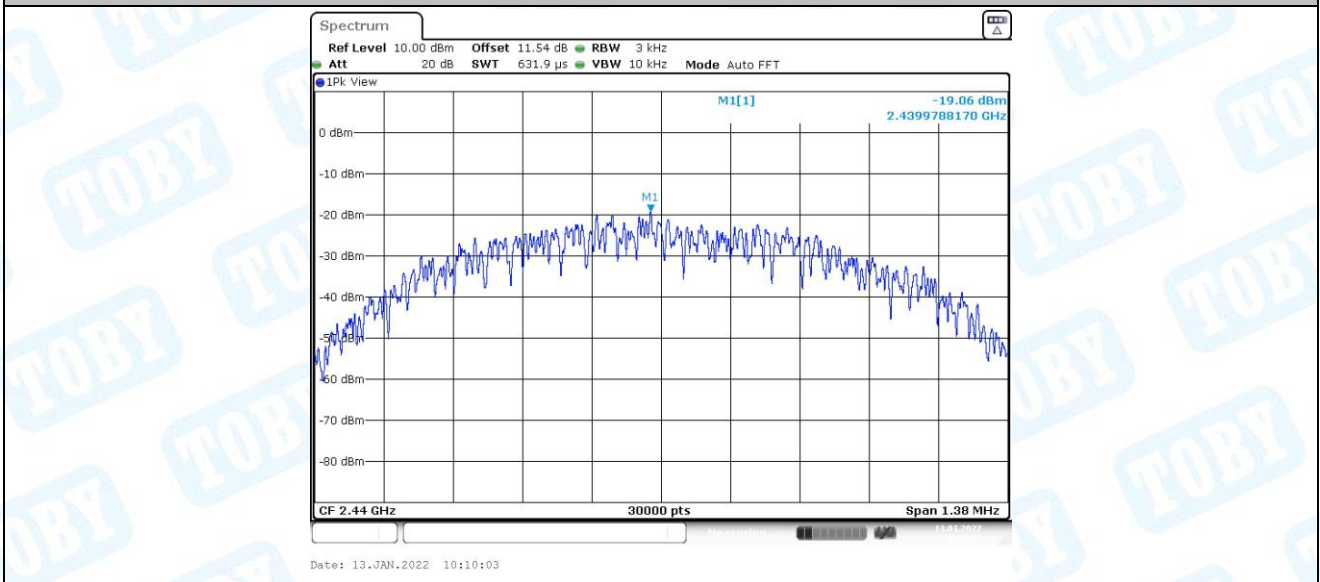
### 4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.13	≤8.00	PASS
		2440	-19.06	≤8.00	PASS
		2480	-18.41	≤8.00	PASS

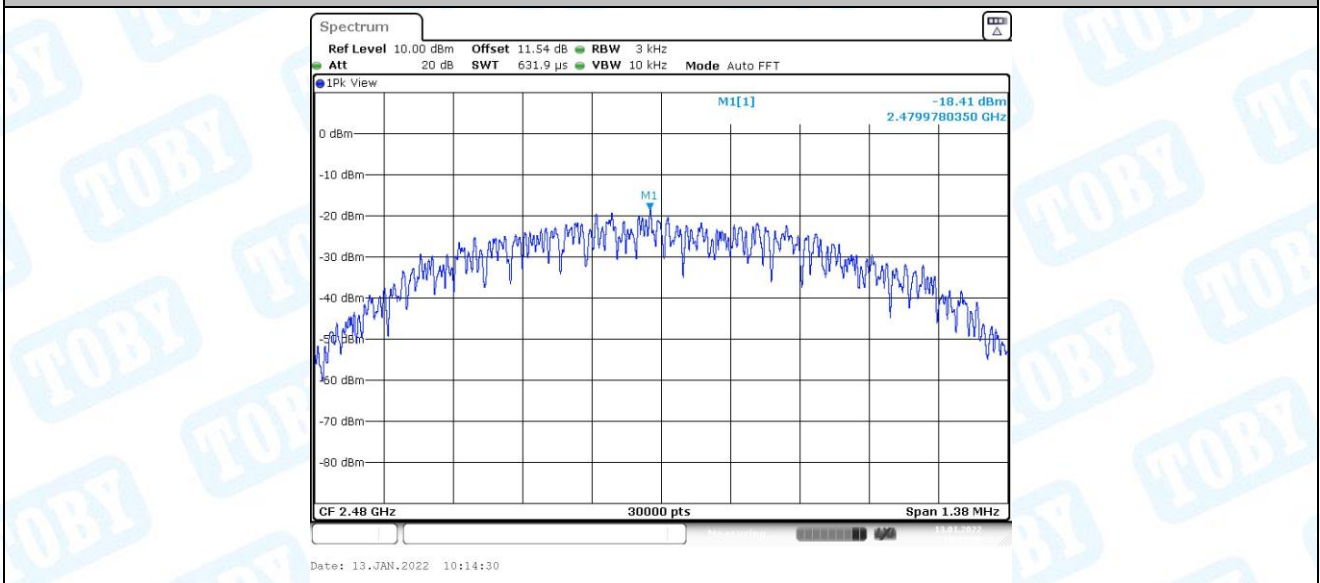
## 4.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

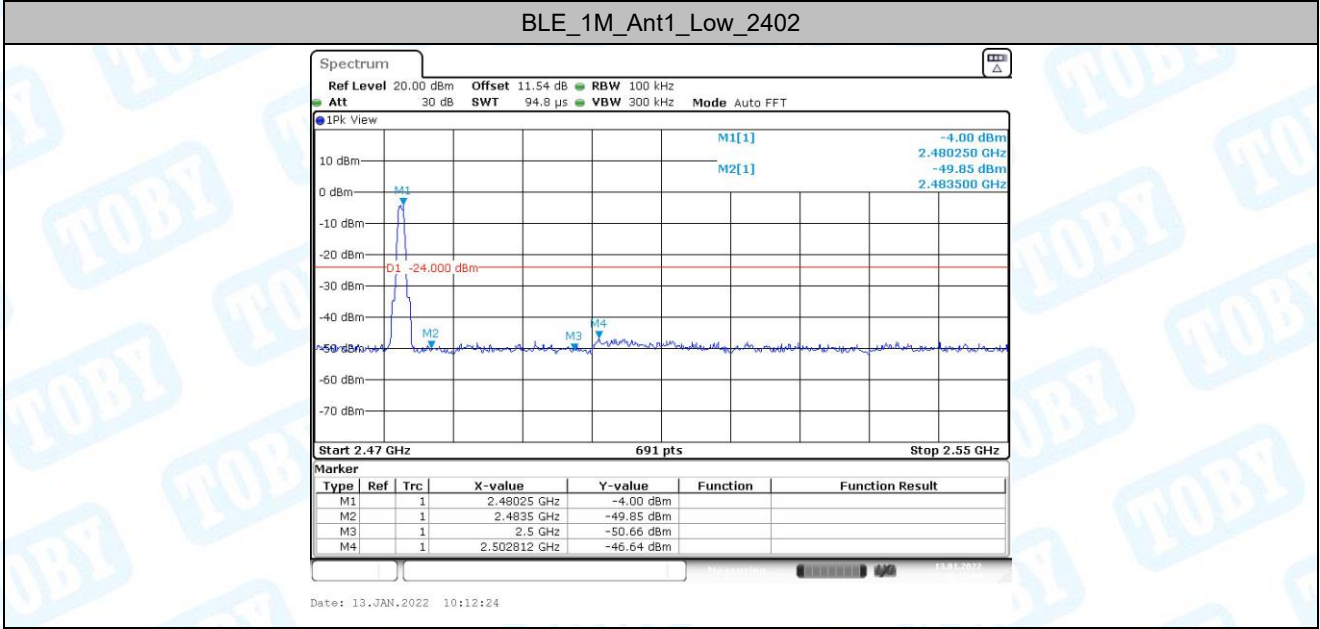
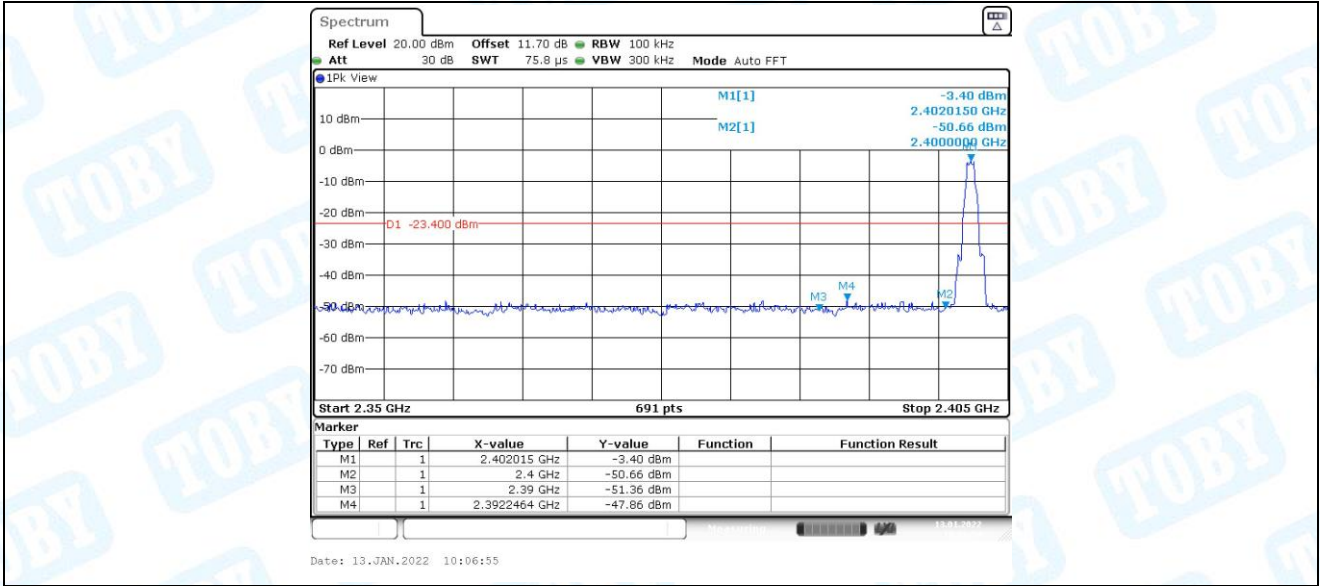


## 5. Band edge measurements

### 5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.40	-47.86	≤-23.4	PASS
		High	2480	-4.00	-46.64	≤-24	PASS

**5.2. Test Graphs**





## 6. Conducted Spurious Emission

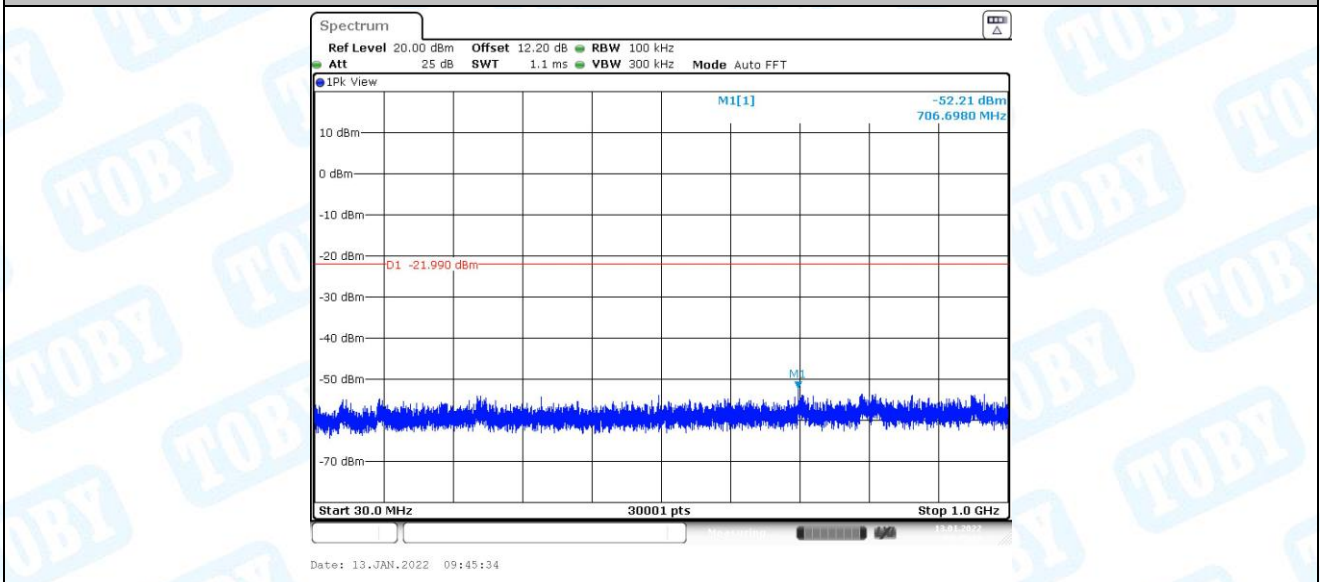
### 6.1. Test Result

Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.99	-1.99	---	PASS
			30~1000	-1.99	-52.21	≤-21.99	PASS
			1000~26500	-1.99	-45.89	≤-21.99	PASS
		2440	Reference	-2.14	-2.14	---	PASS
			30~1000	-2.14	-52.69	≤-22.14	PASS
			1000~26500	-2.14	-46.23	≤-22.14	PASS
		2480	Reference	-2.38	-2.38	---	PASS
			30~1000	-2.38	-53.47	≤-22.38	PASS
			1000~26500	-2.38	-46.3	≤-22.38	PASS

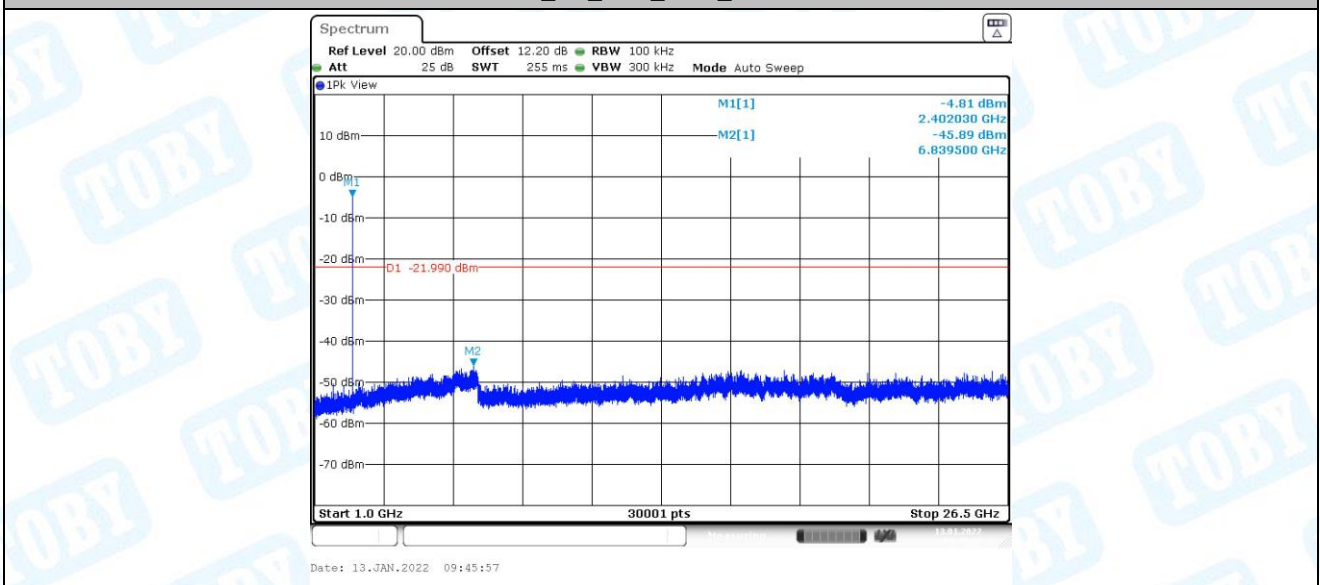
## 6.2. Test Graphs



BLE\_1M\_Ant1\_2402\_0~Reference



BLE\_1M\_Ant1\_2402\_30~1000

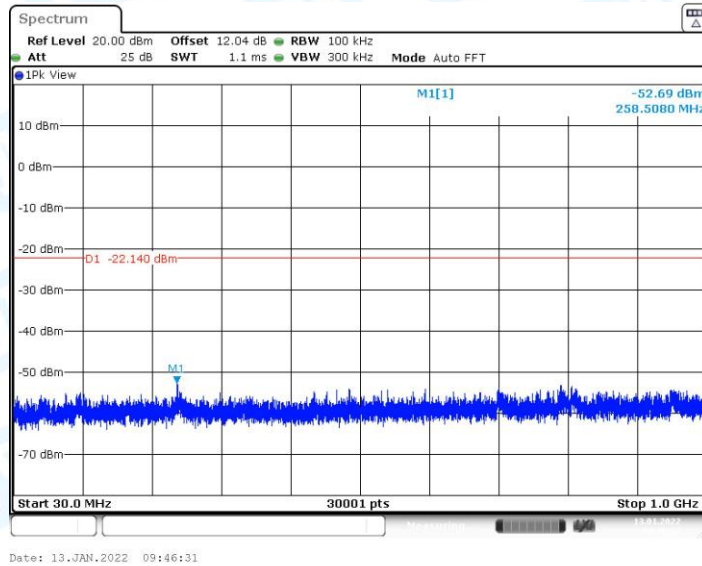


BLE\_1M\_Ant1\_2402\_1000~26500

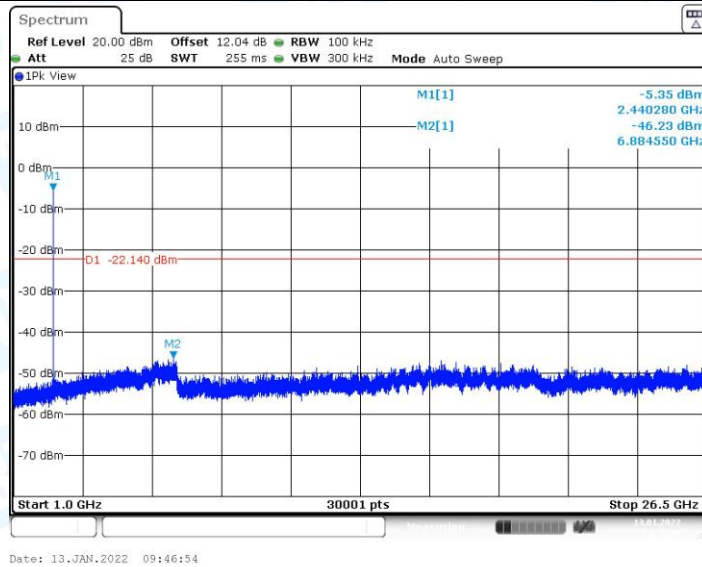




### BLE\_1M\_Ant1\_2440\_0~Reference



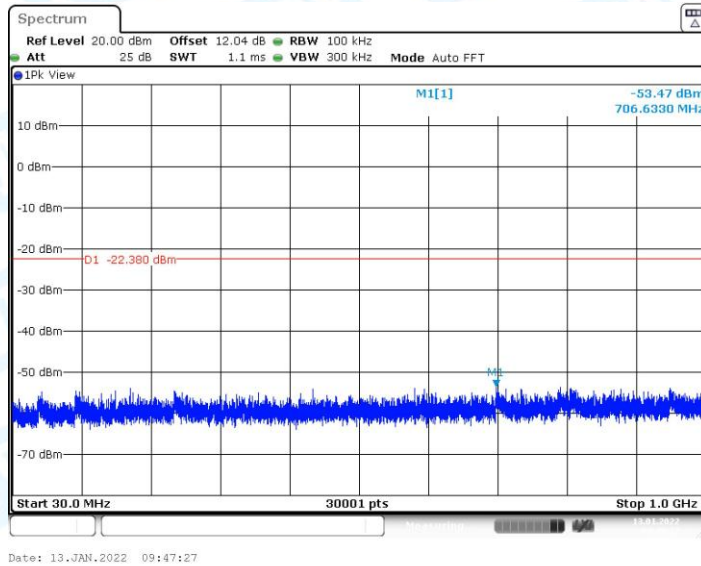
### BLE\_1M\_Ant1\_2440\_30~1000



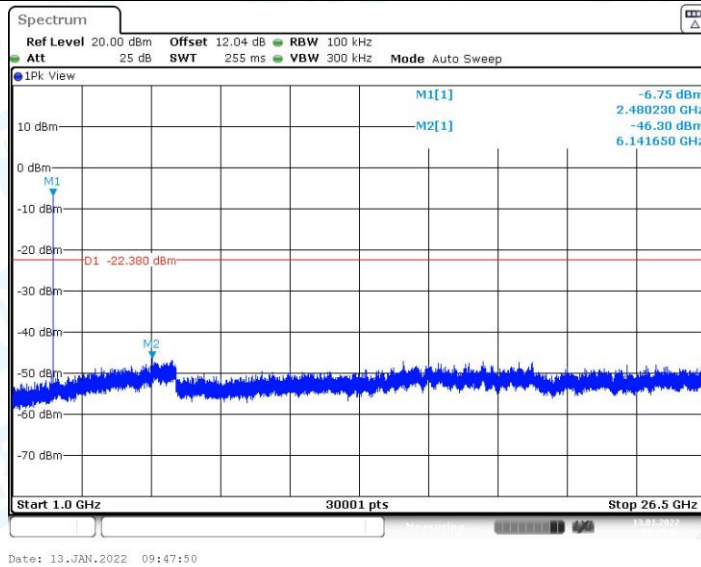
### BLE\_1M\_Ant1\_2440\_1000~26500



BLE\_1M\_Ant1\_2480\_0~Reference



BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500



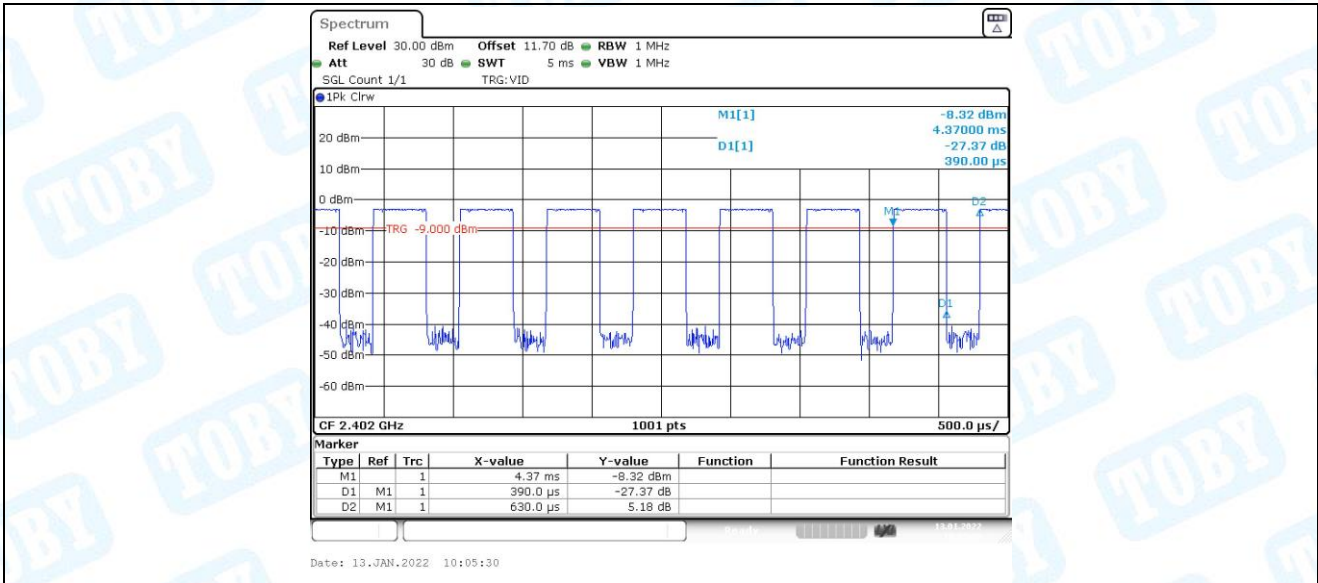
## 7. Duty Cycle

### 7.1. Test Result

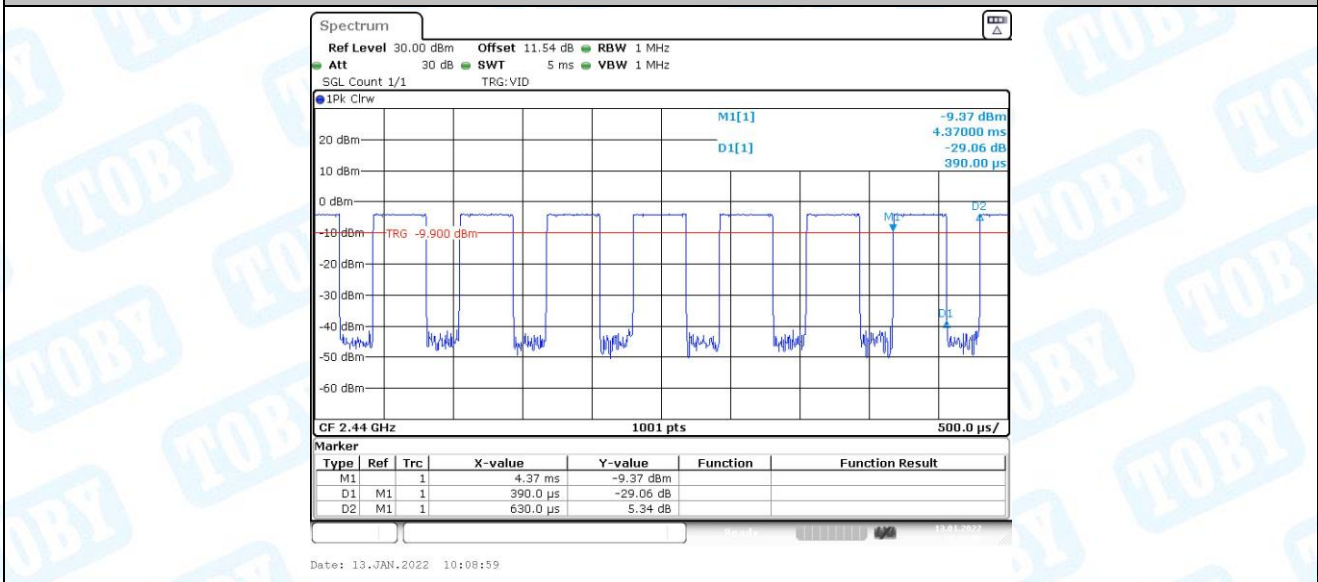
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [KHz]	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.63	61.90	2.56	---	PASS
		2440	0.39	0.63	61.90	2.56	---	PASS
		2480	0.39	0.63	61.90	2.56	---	PASS

Note: 1/T=1/ Transmission Duration

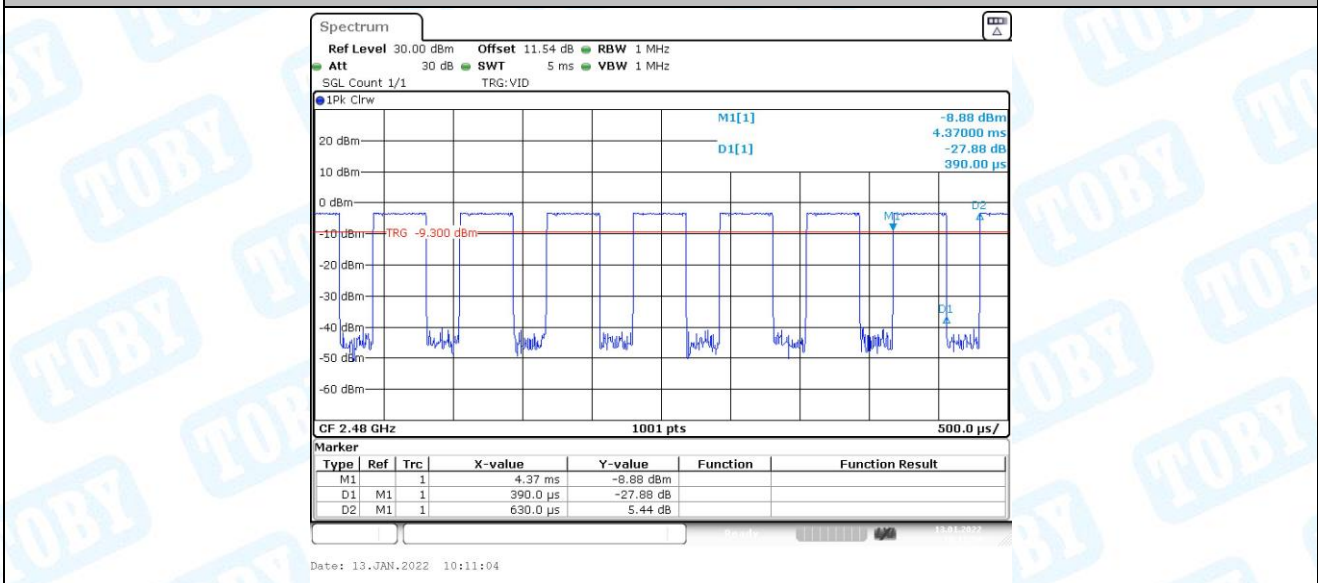
## 7.2. Test Graphs



BLE\_1M\_Ant1\_2402



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480



## 8. Emissions in Restricted Bands

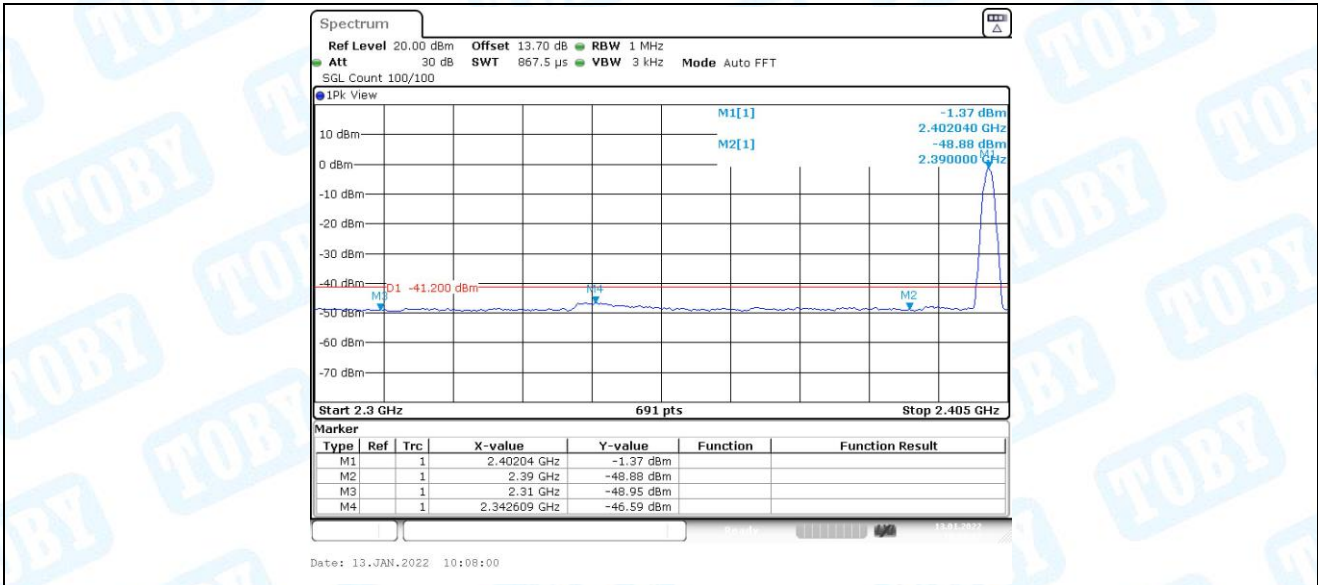
### 8.1. Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.95	≤-41.20	PASS
				AV	2342.609	-46.59	≤-41.20	PASS
				AV	2390.000	-48.88	≤-41.20	PASS
				Peak	2310.000	-40.93	≤-21.20	PASS
				Peak	2340.935	-36.09	≤-21.20	PASS
				Peak	2390.000	-39.73	≤-21.20	PASS
		High	2480	AV	2483.500	-48.53	≤-41.20	PASS
				AV	2485.768	-47.55	≤-41.20	PASS
				AV	2500.000	-48.39	≤-41.20	PASS
				Peak	2483.500	-41.02	≤-21.20	PASS
				Peak	2499.449	-38.24	≤-21.20	PASS
				Peak	2500.000	-40.32	≤-21.20	PASS

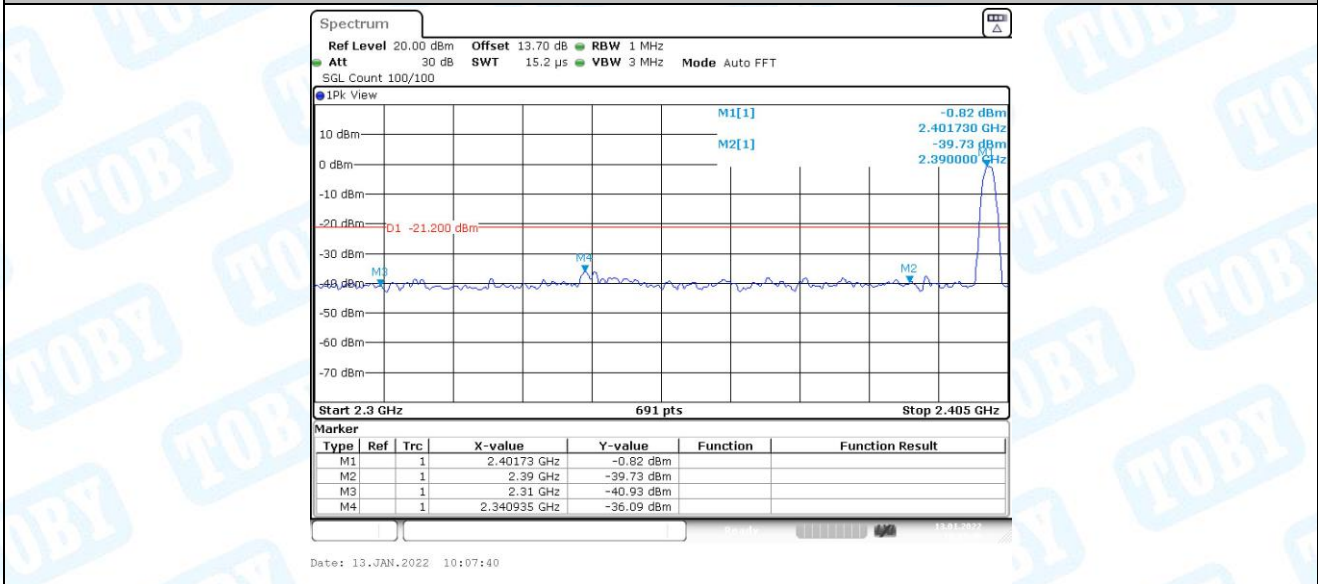
Note:

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.

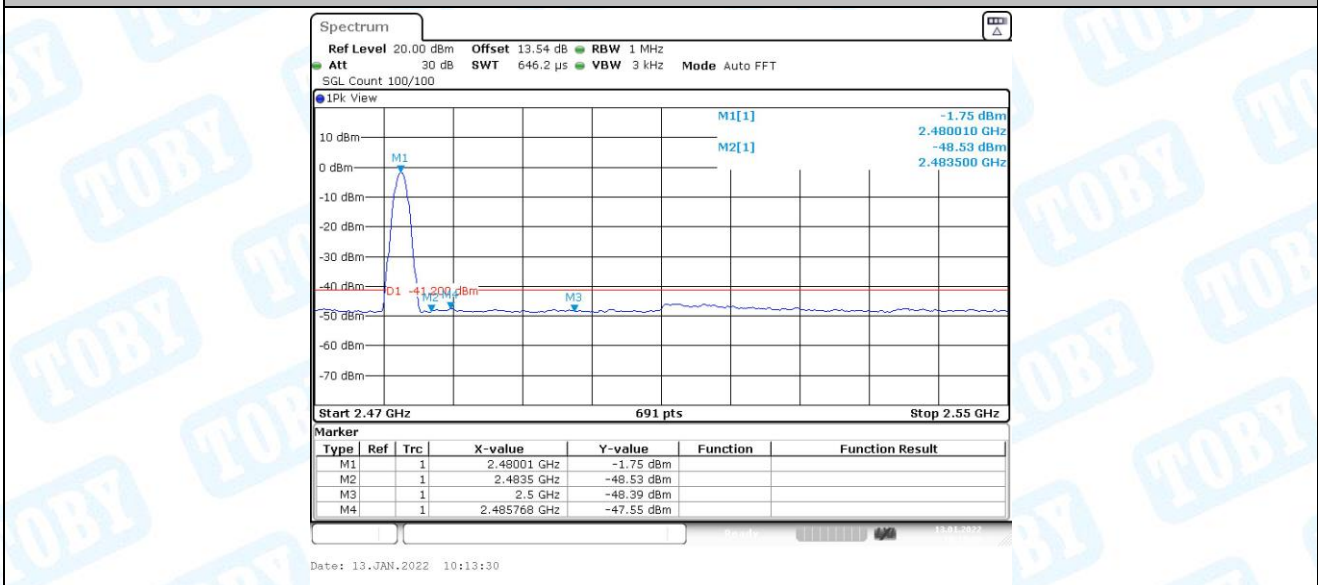
## 8.2. Test Graphs



BLE\_1M\_Ant1\_Low\_2402\_AV

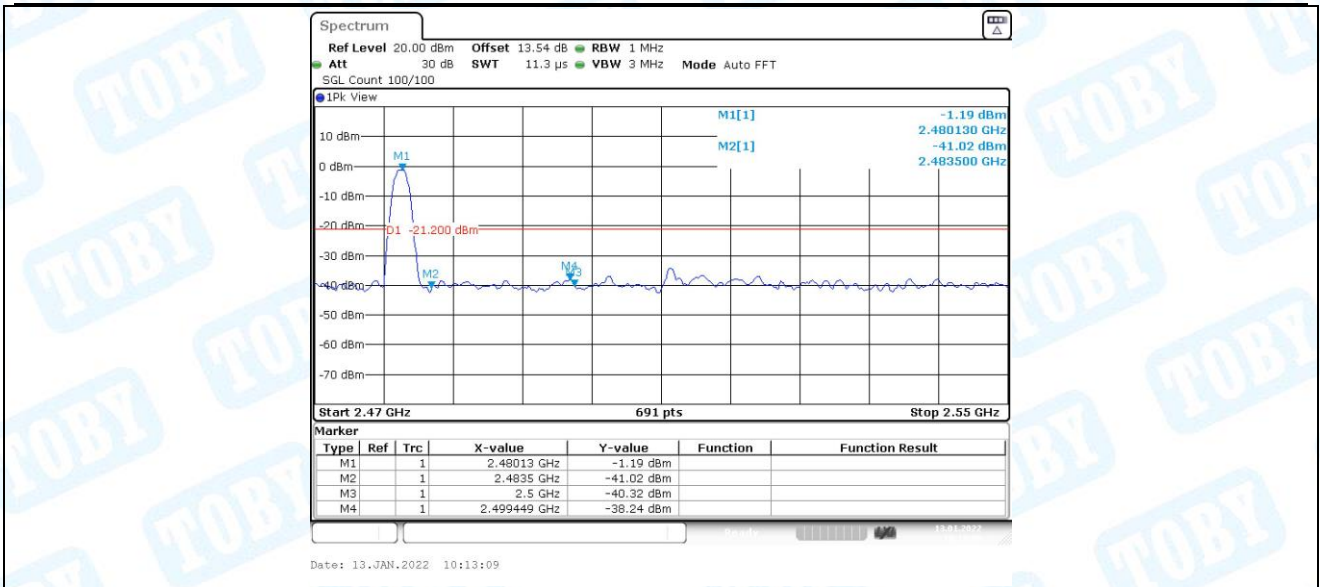


BLE\_1M\_Ant1\_Low\_2402\_Peak



BLE\_1M\_Ant1\_High\_2480\_AV





BLE\_1M\_Ant1\_High\_2480\_Peak

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