RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	Smart IR Remote with Temp & Humidity Sensor
Test Model:	S16
Sample ID:	202203-0097-4-2#
Environmental Conditions	
Temperature:	24℃
Relative Humidity:	50%
Test Voltage:	DC 5V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TBR-C-202203-0097-6.	

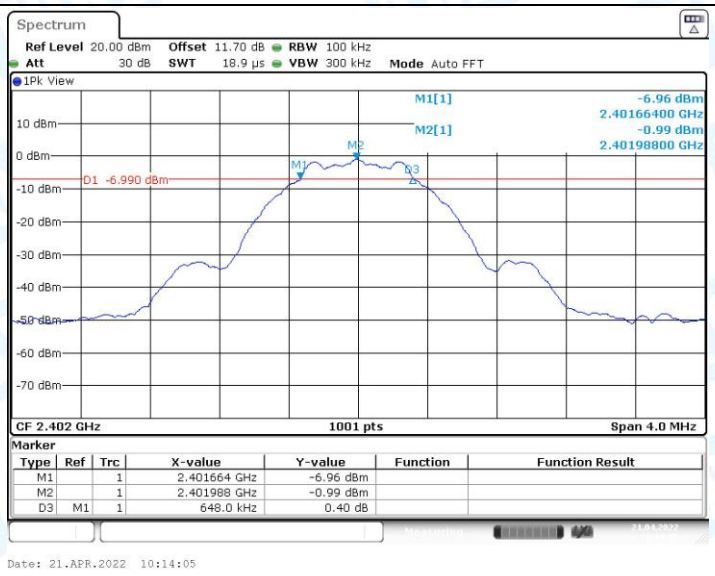
Contents

1. DTS Bandwidth

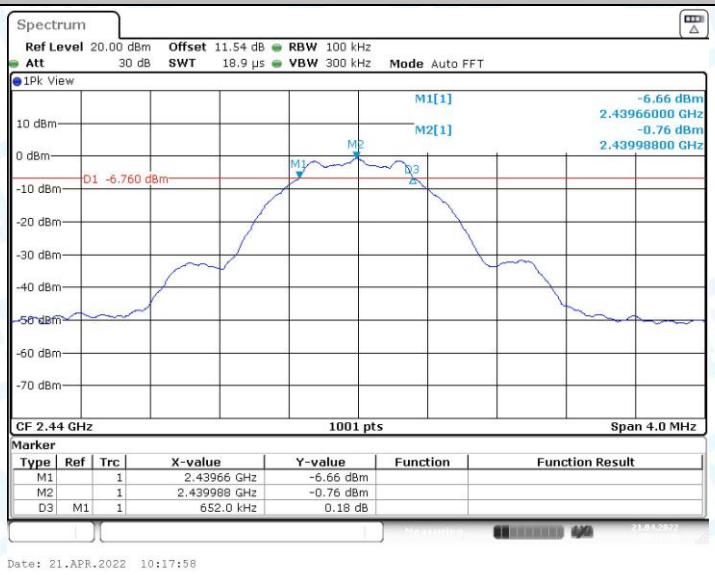
1.1.Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.65	2401.66	2402.31	0.5	PASS
		2440	0.65	2439.66	2440.31	0.5	PASS
		2480	0.65	2479.66	2480.32	0.5	PASS

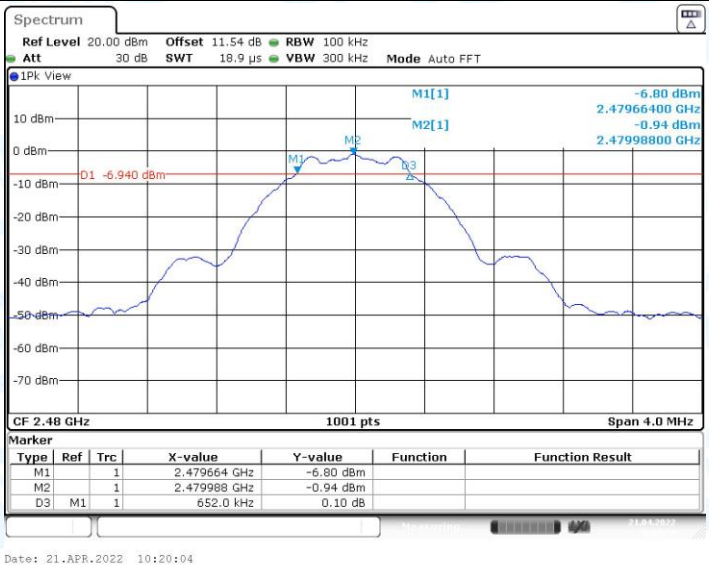
1.2.Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



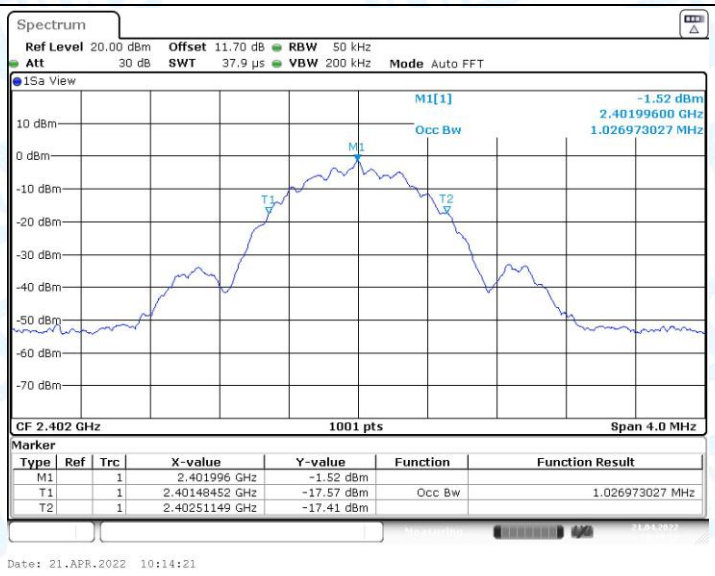
BLE_1M_Ant1_2480

2. Occupied Channel Bandwidth

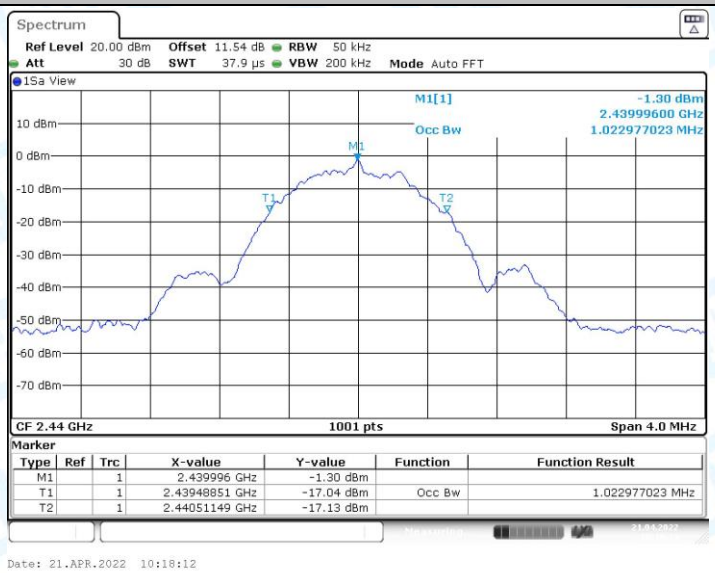
2.1.Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.027	2401.485	2402.511	---	---
		2440	1.023	2439.489	2440.511	---	---
		2480	1.023	2479.485	2480.507	---	---

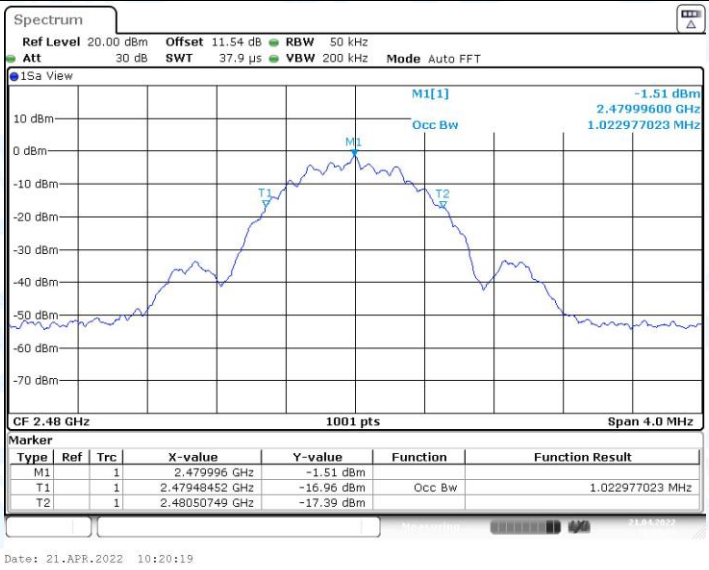
2.2.Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



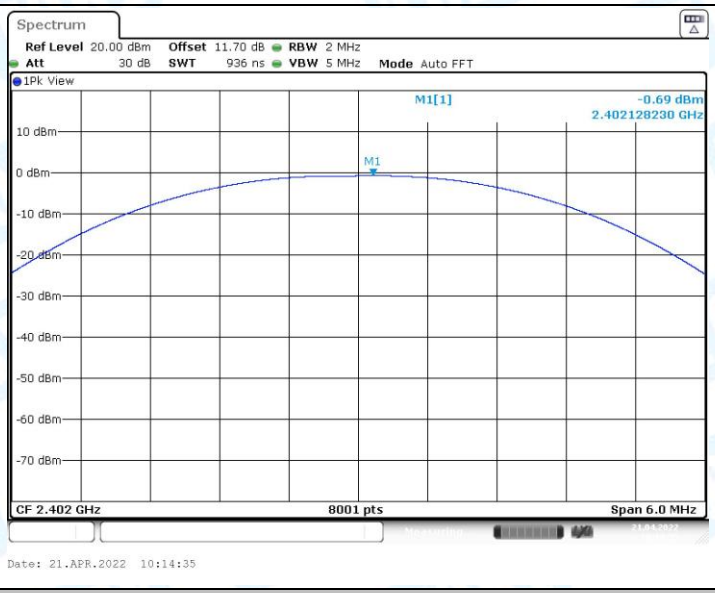
BLE_1M_Ant1_2480

3. Maximum conducted output power

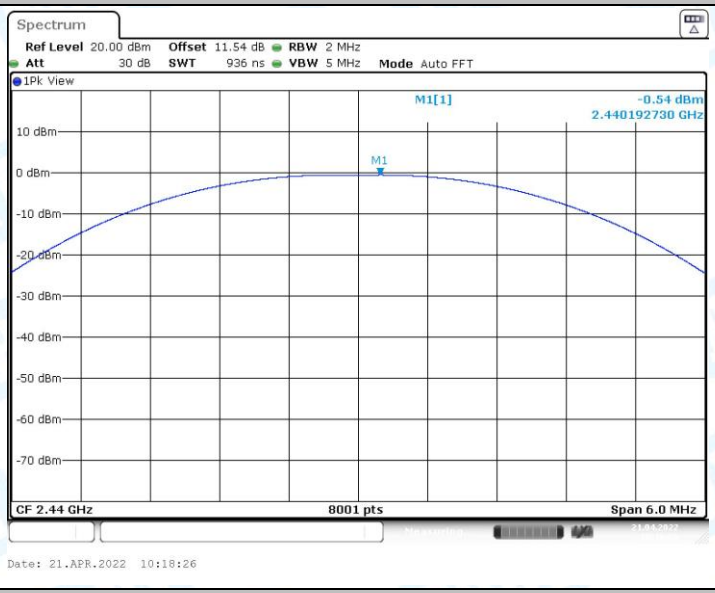
3.1.Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.69	≤30	PASS
		2440	-0.54	≤30	PASS
		2480	-0.77	≤30	PASS

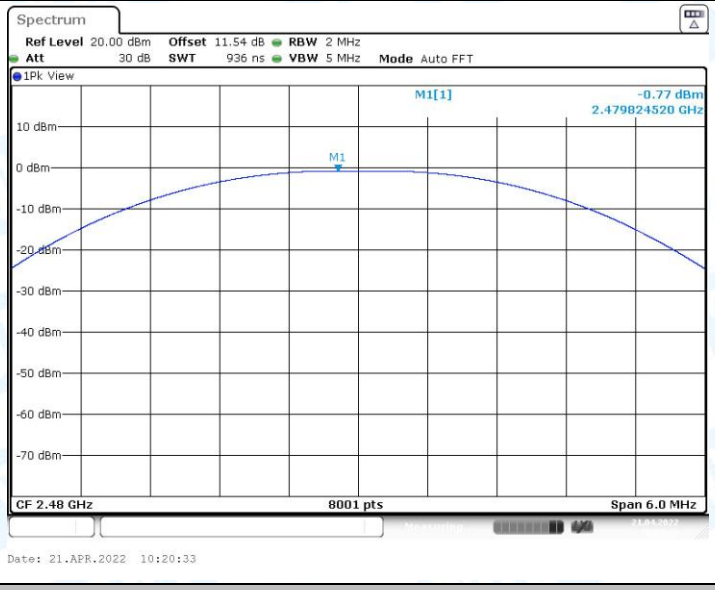
3.2.Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



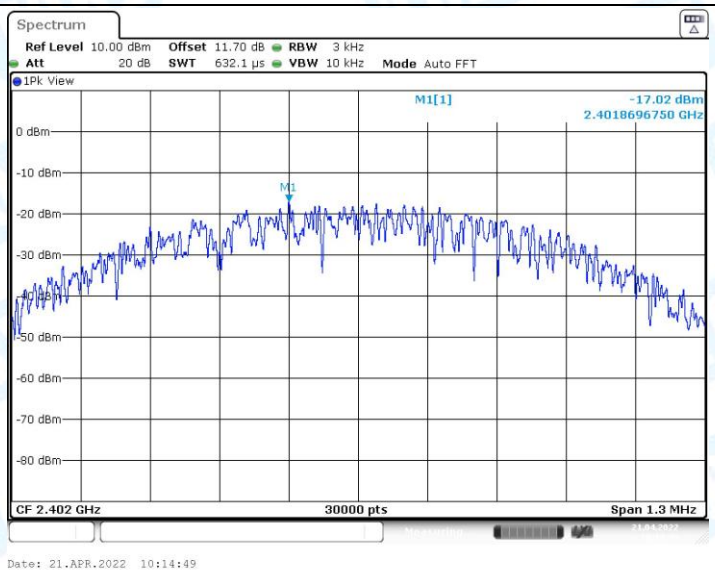
BLE_1M_Ant1_2480

4. Maximum power spectral density

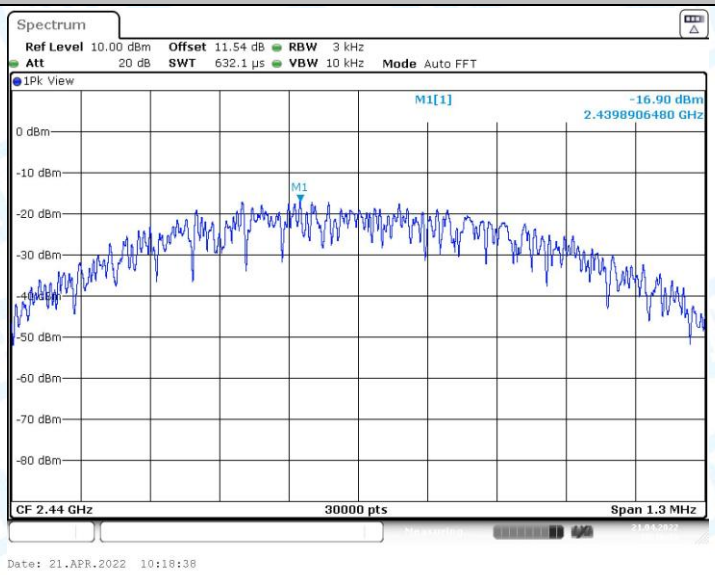
4.1.Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-17.02	≤8.00	PASS
		2440	-16.9	≤8.00	PASS
		2480	-14.92	≤8.00	PASS

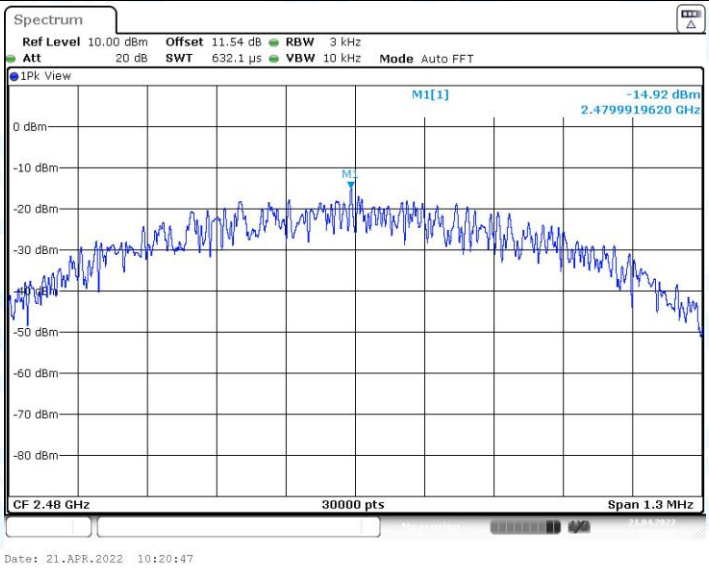
4.2.Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



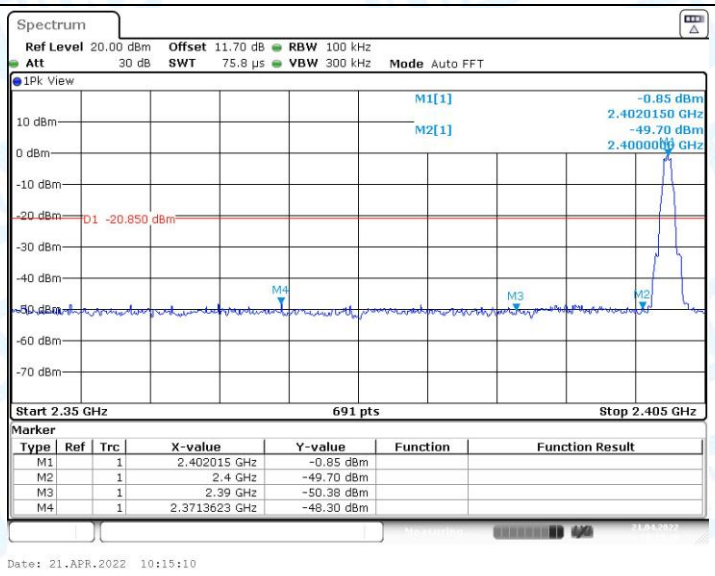
BLE_1M_Ant1_2480

5. Band edge measurements

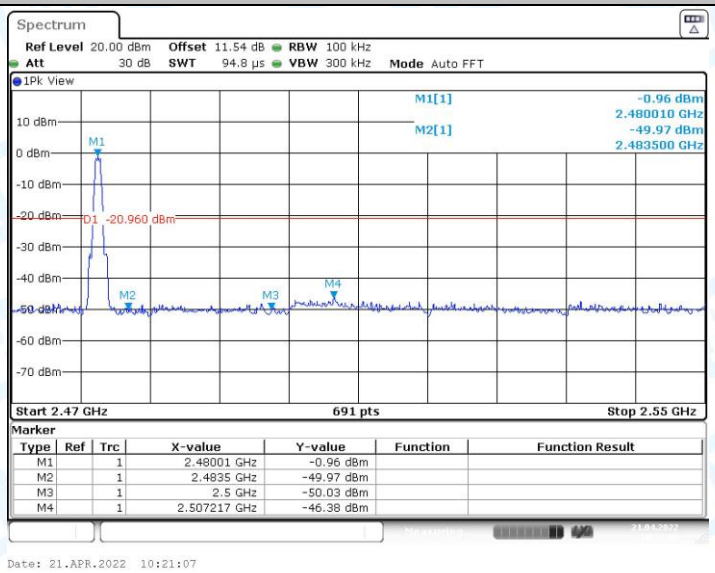
5.1.Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.85	-48.3	≤-20.85	PASS
		High	2480	-0.96	-46.38	≤-20.96	PASS

5.2.Test Graphs



BLE_1M_Ant1_Low_2402



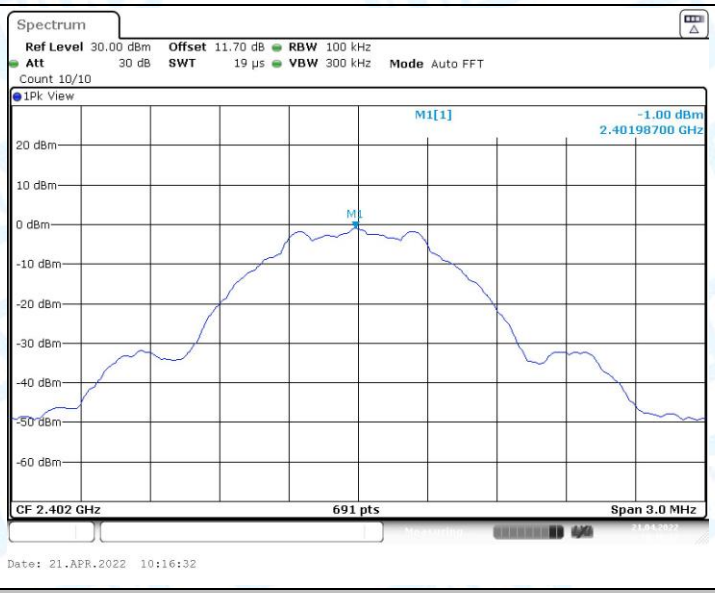
BLE_1M_Ant1_High_2480

6. Conducted Spurious Emission

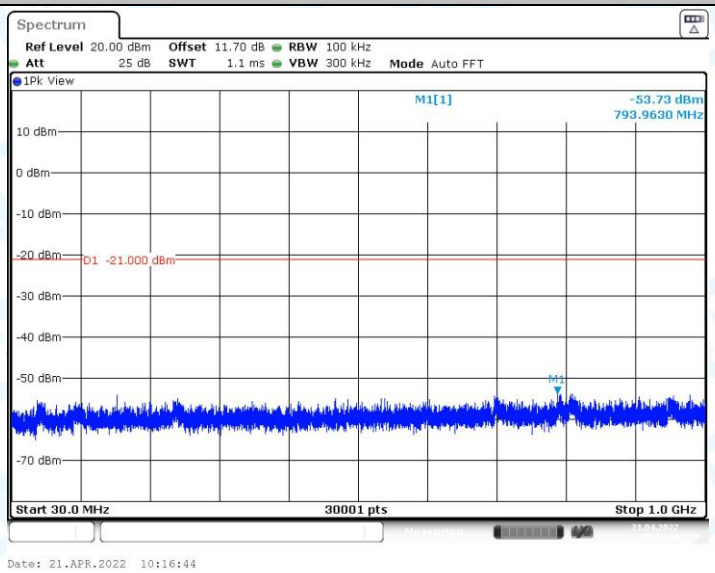
6.1.Test Result

Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.00	-1.00	---	PASS
			30~1000	-1.00	-53.73	≤-21	PASS
			1000~26500	-1.00	-47.01	≤-21	PASS
		2440	Reference	-0.79	-0.79	---	PASS
			30~1000	-0.79	-53.08	≤-20.79	PASS
			1000~26500	-0.79	-46.67	≤-20.79	PASS
		2480	Reference	-1.00	-1.00	---	PASS
			30~1000	-1.00	-53.26	≤-21	PASS
			1000~26500	-1.00	-46.47	≤-21	PASS

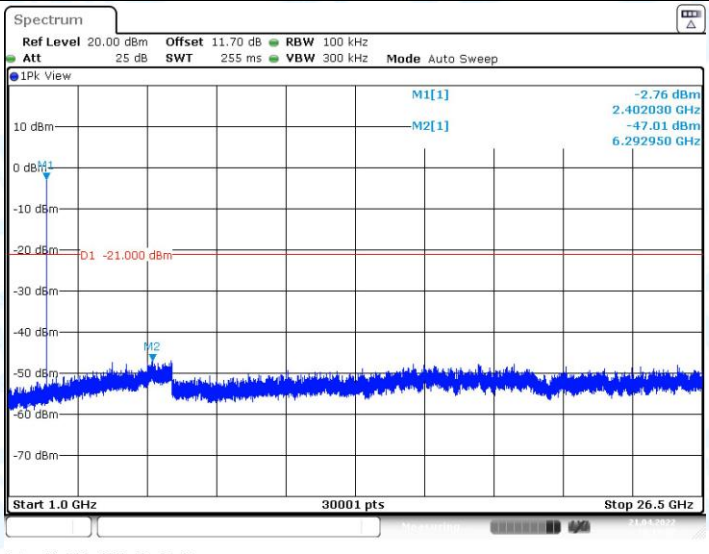
6.2.Test Graphs



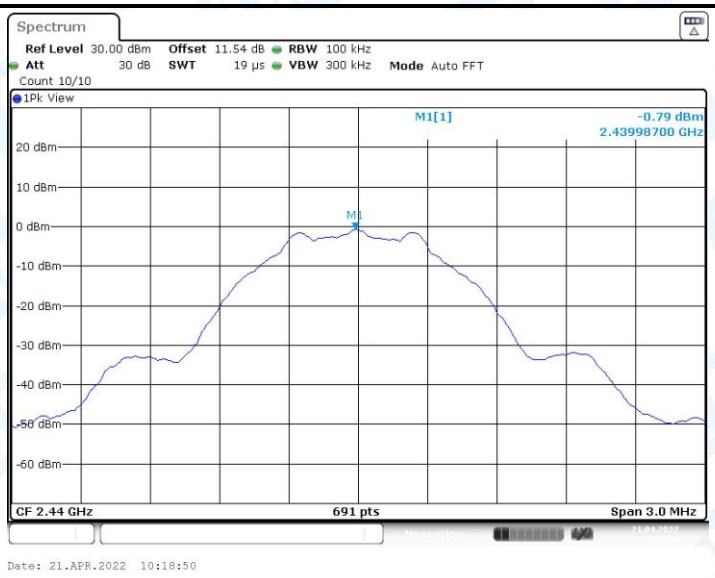
BLE_1M_Ant1_2402_0~Reference



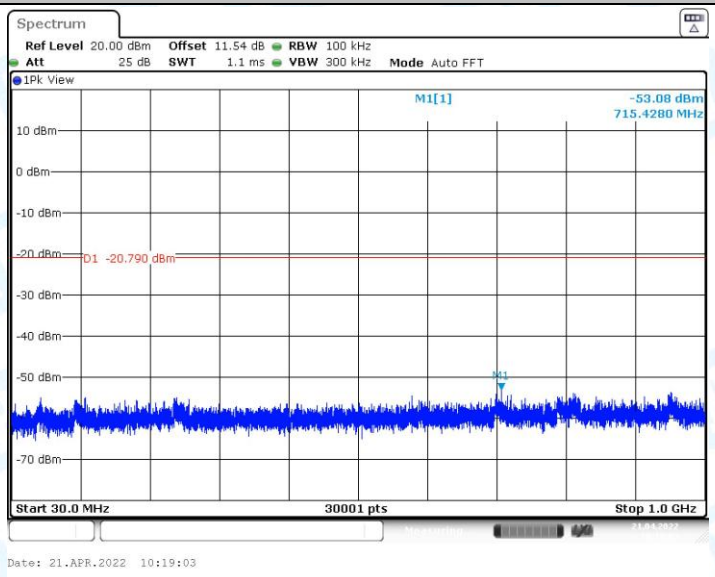
BLE_1M_Ant1_2402_30~1000



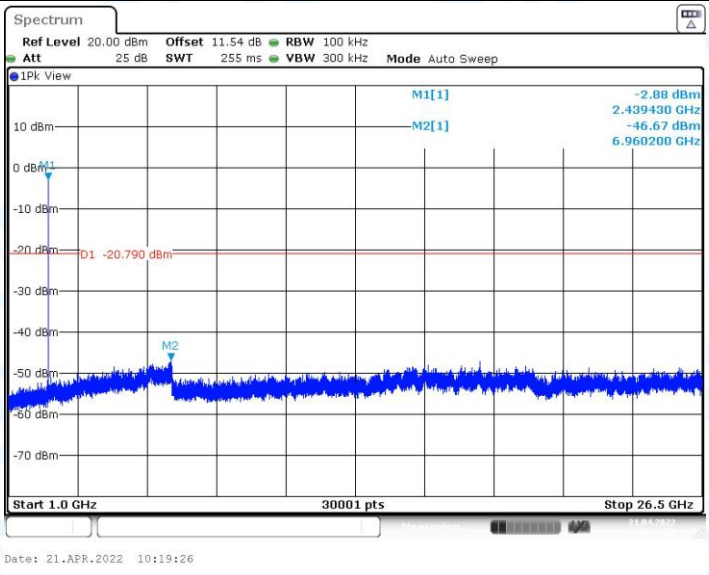
BLE_1M_Ant1_2402_1000~26500



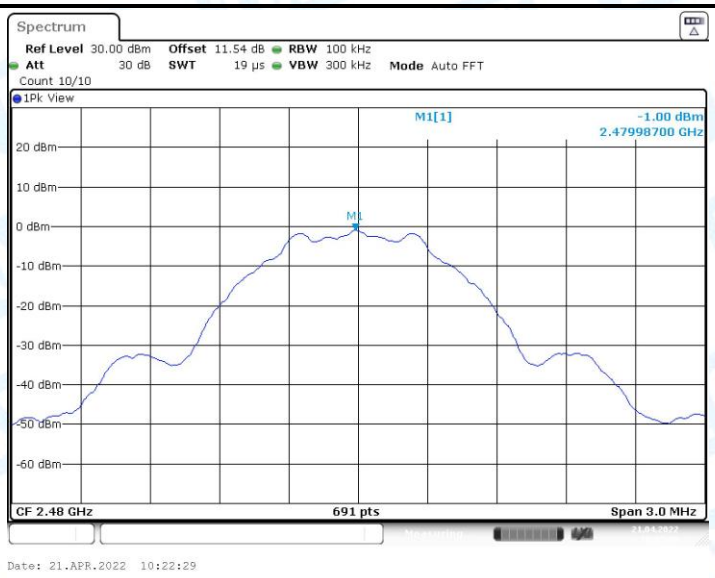
BLE_1M_Ant1_2440_0~Reference



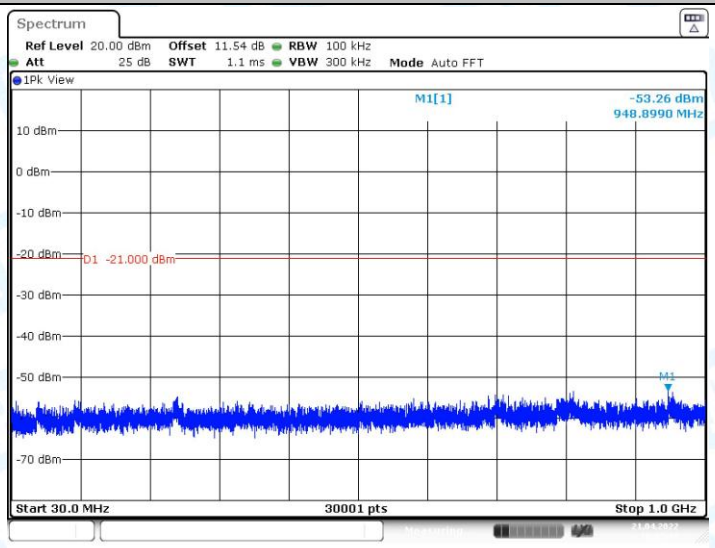
BLE_1M_Ant1_2440_30~1000



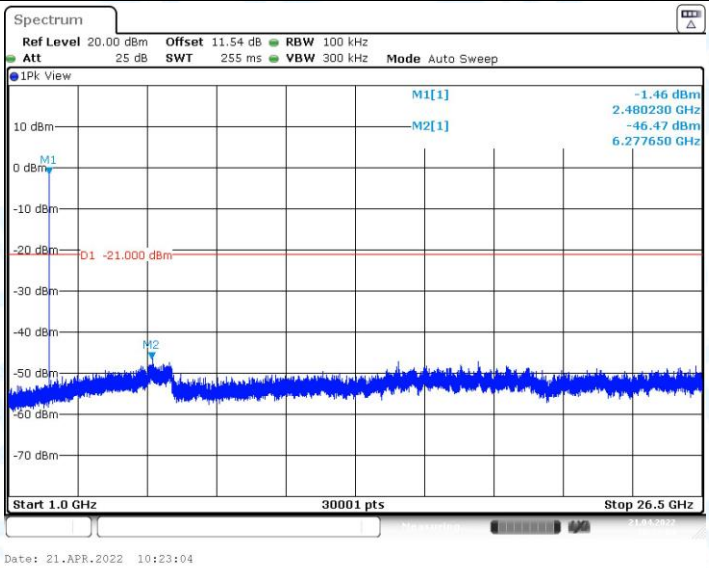
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



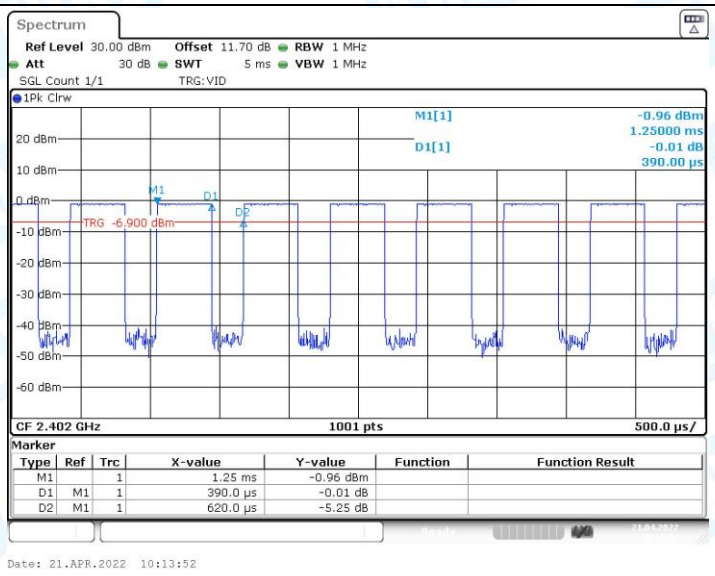
BLE_1M_Ant1_2480_1000~26500

7. Duty Cycle

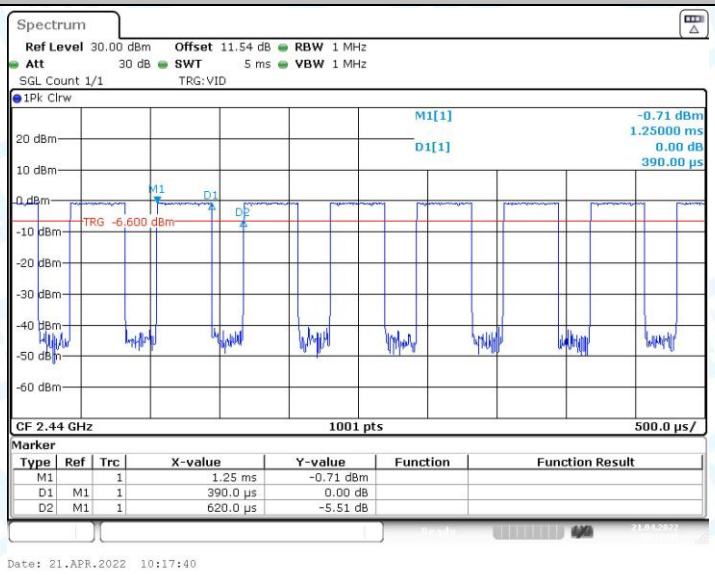
7.1.Test Result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T KHz	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	---

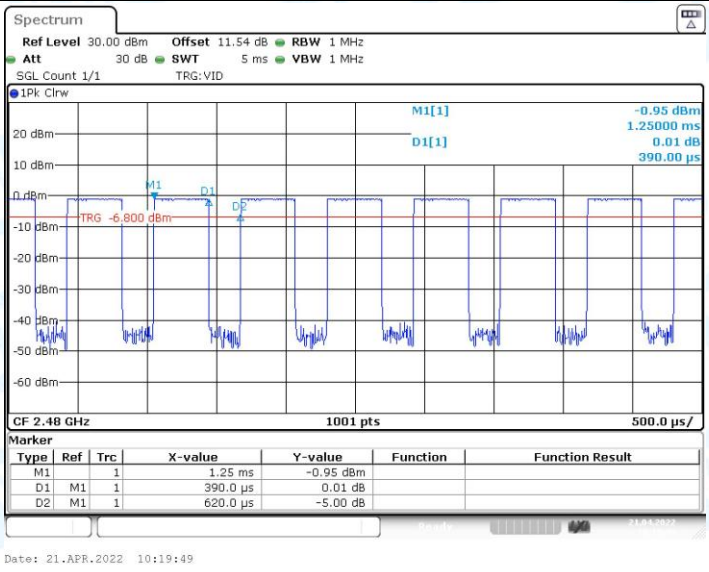
7.2.Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

8. Emissions in Restricted Bands

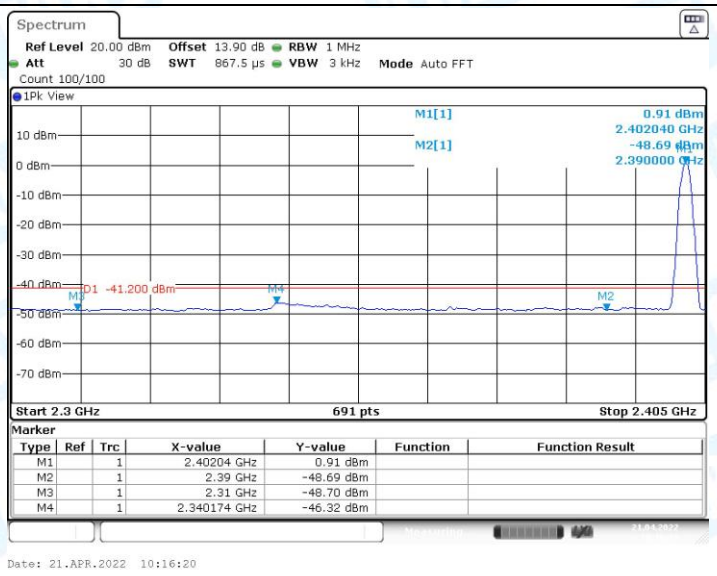
8.1.Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.7	≤-41.20	PASS
				AV	2340.174	-46.32	≤-41.20	PASS
				AV	2390.000	-48.69	≤-41.20	PASS
				Peak	2310.000	-38.74	≤-21.20	PASS
				Peak	2342.457	-35.24	≤-21.20	PASS
				Peak	2390.000	-38.76	≤-21.20	PASS
		High	2480	AV	2483.500	-48.17	≤-41.20	PASS
				AV	2497.942	-47.27	≤-41.20	PASS
				AV	2500.000	-47.85	≤-41.20	PASS
				Peak	2483.500	-40.51	≤-21.20	PASS
				Peak	2491.913	-36.57	≤-21.20	PASS
				Peak	2500.000	-38.17	≤-21.20	PASS

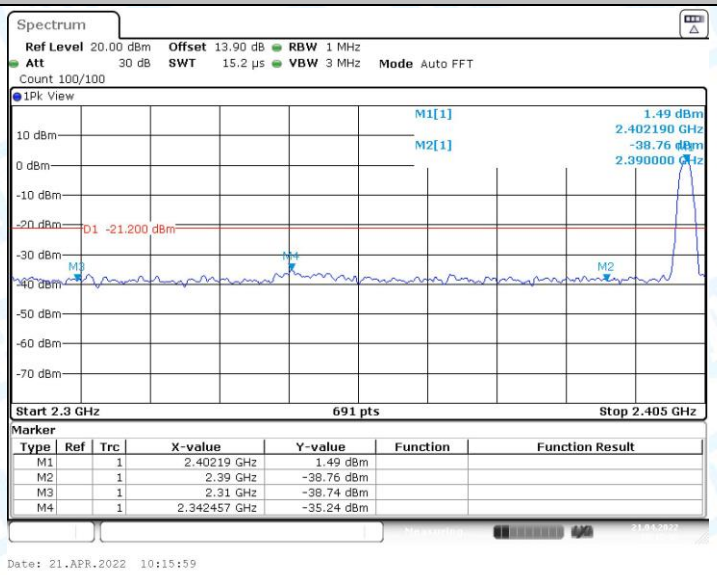
Note：

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.

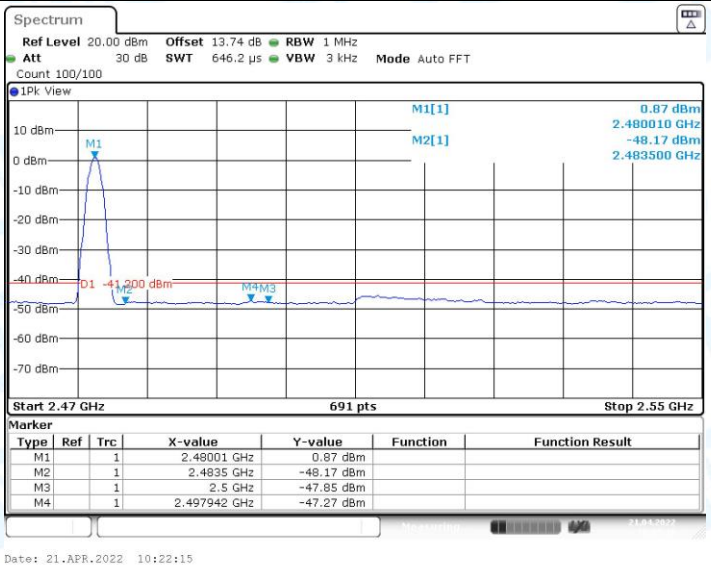
8.2.Test Graphs



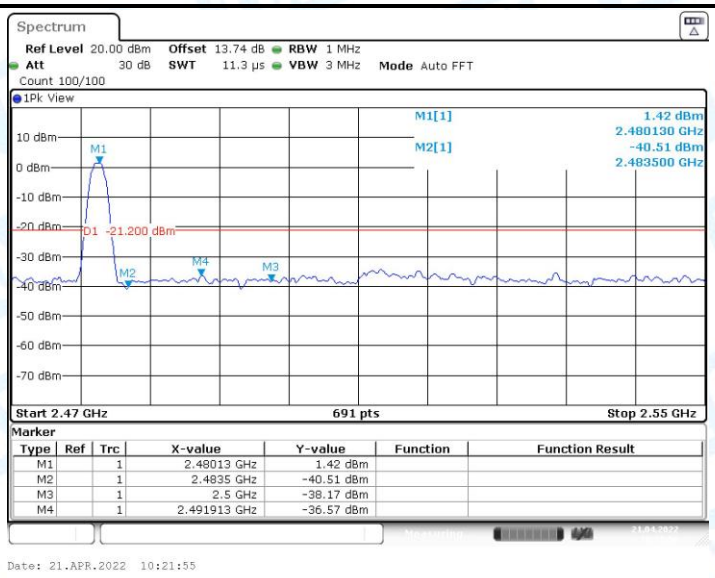
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

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