

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	iTronCAM
Test Model:	iTronCAM
Sample ID:	RW-C-202209-0147-4-2#
Environmental Conditions	
Temperature:	23.8°C
Relative Humidity:	48%
Test Voltage:	DC 3.7V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202209-0147-8	

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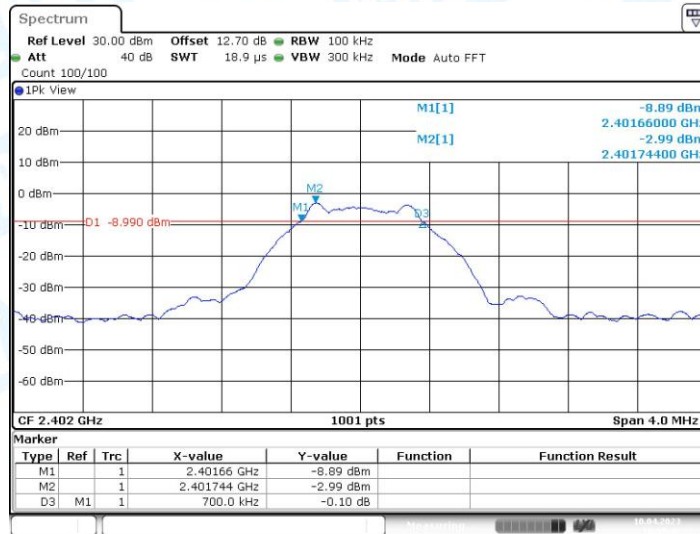
1. DTS Bandwidth

1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.70	2401.66	2402.36	0.5	PASS
		2440	0.70	2439.66	2440.36	0.5	PASS
		2480	0.69	2479.66	2480.35	0.5	PASS

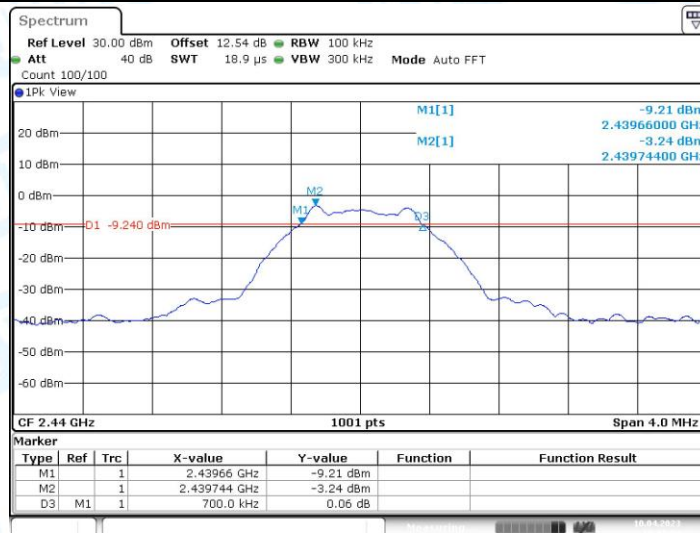
1.2. Test Graphs

BLE_1M_Ant1_2402



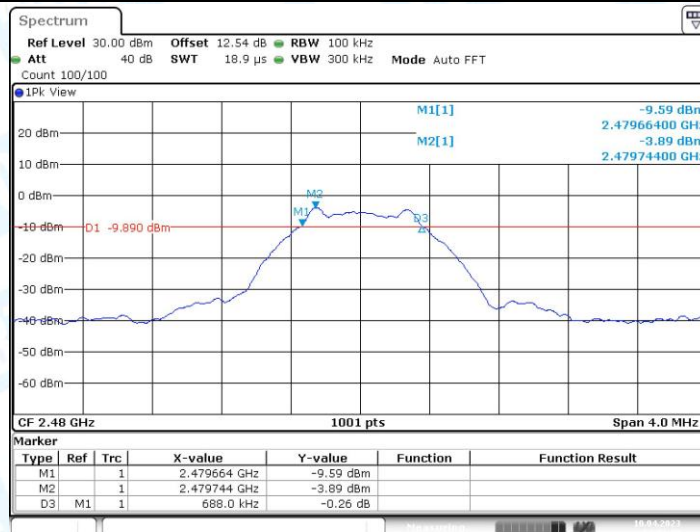
Date: 10.APR.2023 18:57:42

BLE_1M_Ant1_2440



Date: 10.APR.2023 19:01:53

BLE_1M_Ant1_2480



Date: 10.APR.2023 19:03:58

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	1.031	2401.5005	2402.5315	---	---
		2440	1.035	2439.4965	2440.5315	---	---
		2480	1.039	2479.4965	2480.5355	---	---

2.2. Test Graphs

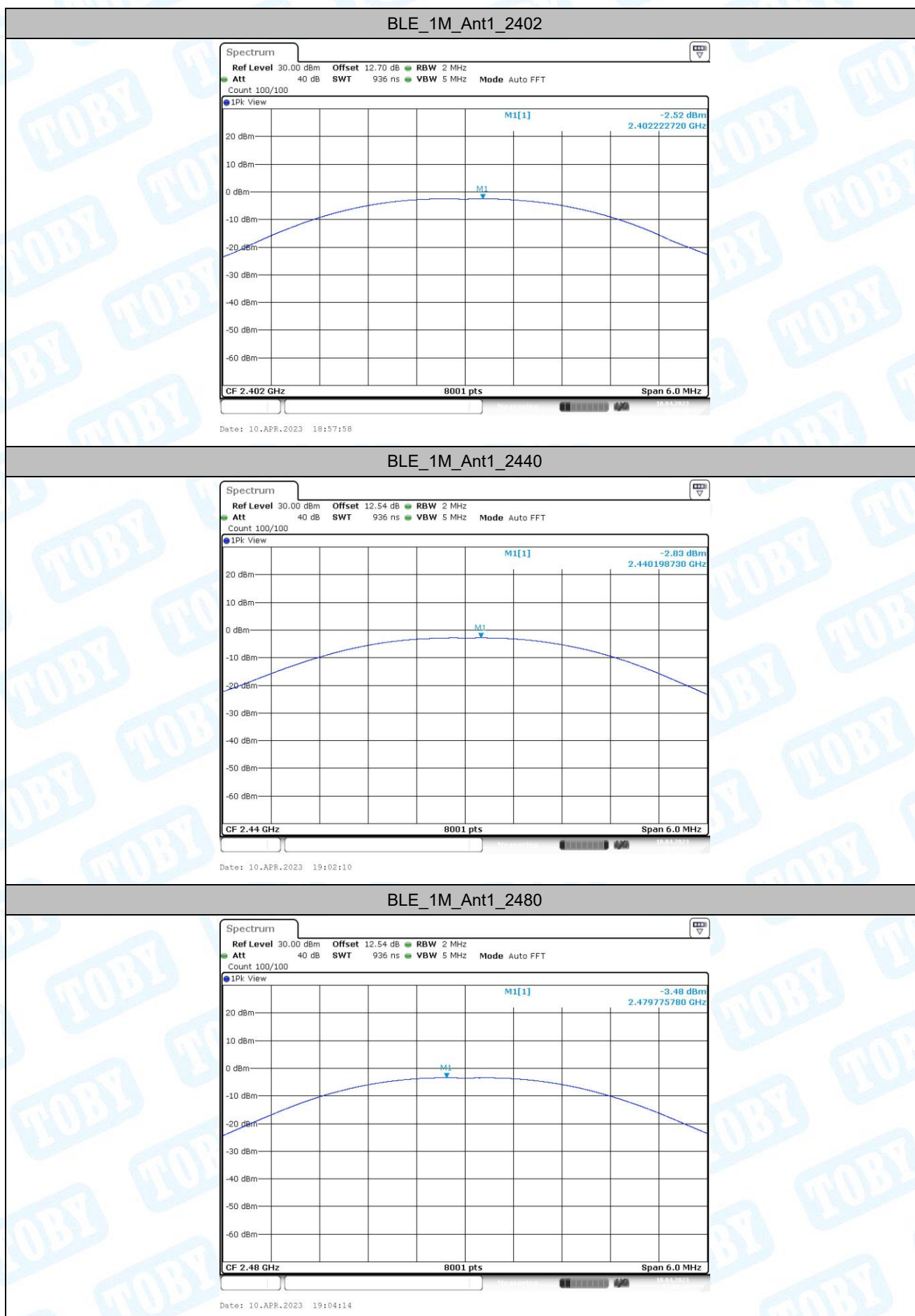


3. Maximum conducted output power

3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.52	≤30	PASS
		2440	-2.83	≤30	PASS
		2480	-3.48	≤30	PASS

3.2. Test Graphs

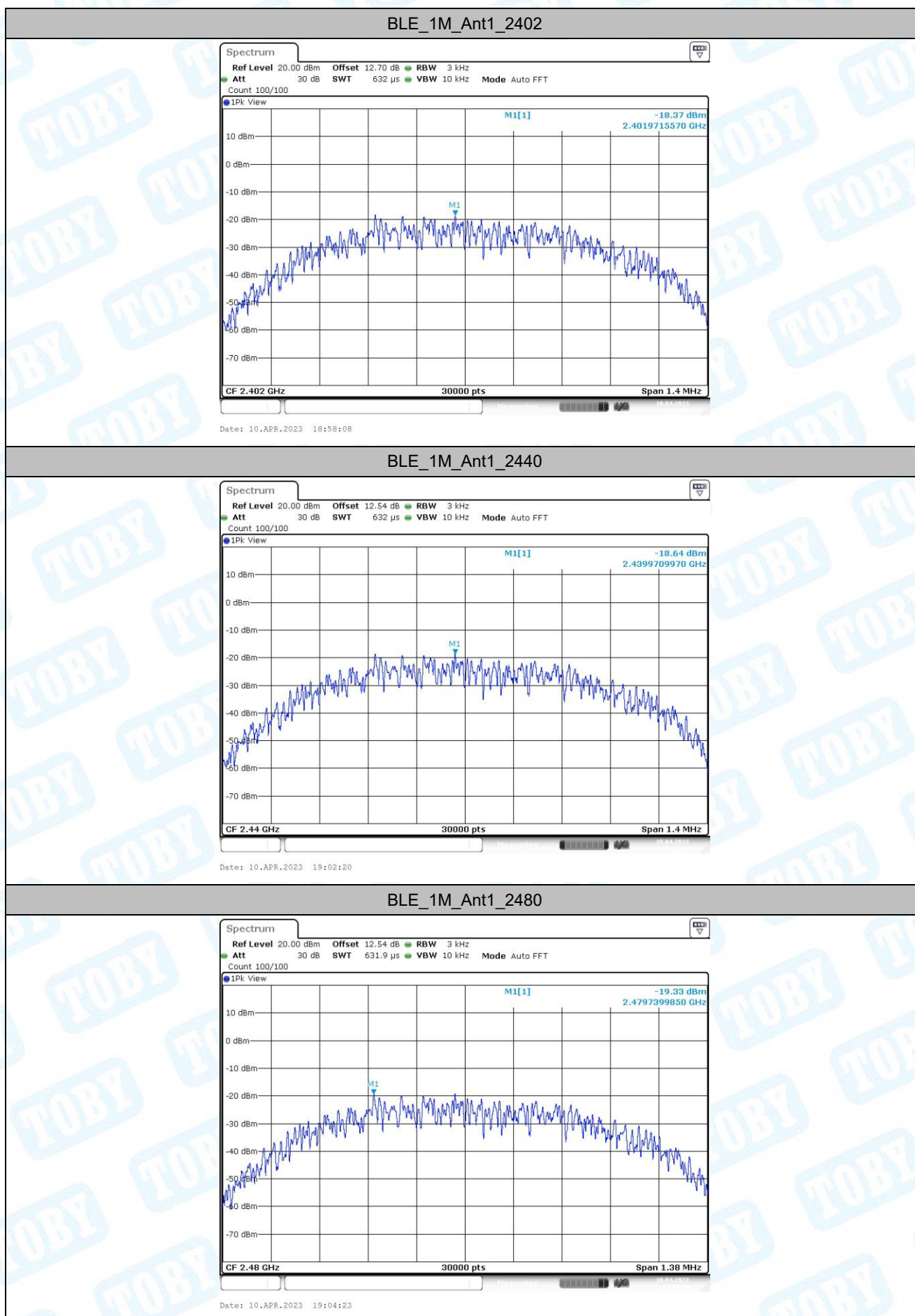


4. Maximum power spectral density

4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.37	≤8.00	PASS
		2440	-18.64	≤8.00	PASS
		2480	-19.33	≤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	-2.80	-47	≤-22.8	PASS
		High	2480	-3.79	-45.21	≤-23.79	PASS

5.2. Test Graphs



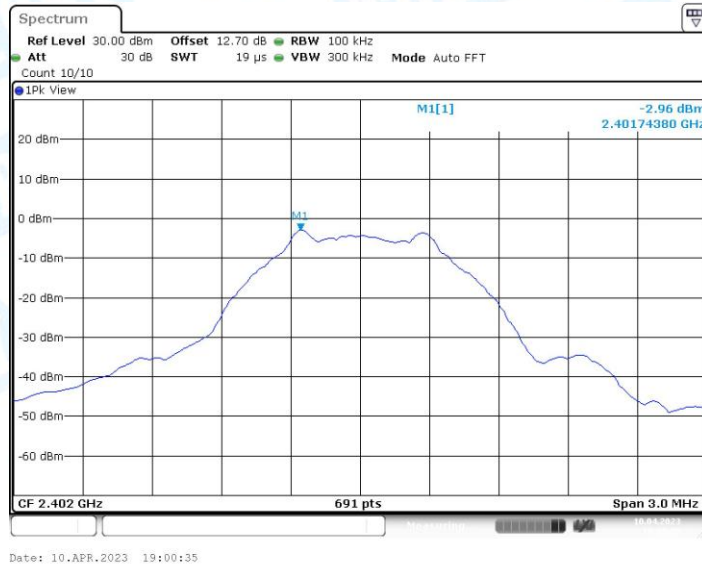
6. Conducted Spurious Emission

6.1. Test Result

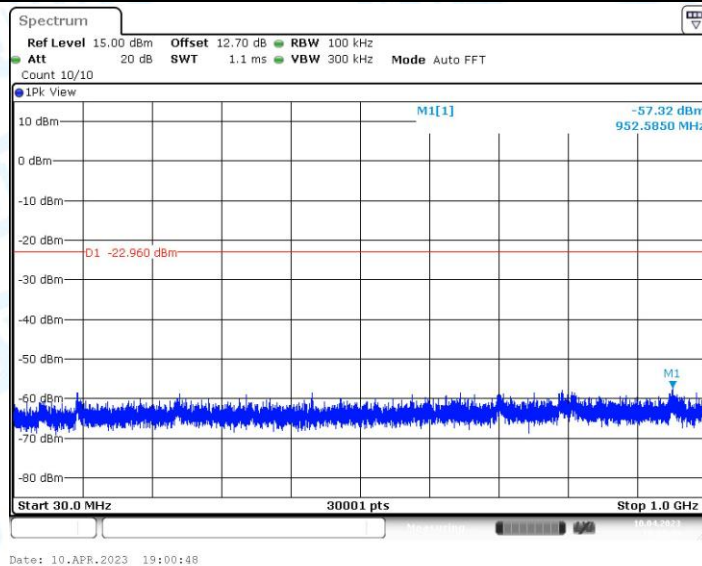
Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-2.96	-2.96	---	PASS
			30~1000	-2.96	-57.32	≤-22.96	PASS
			1000~26500	-2.96	-44.78	≤-22.96	PASS
		2440	Reference	-3.22	-3.22	---	PASS
			30~1000	-3.22	-57.93	≤-23.22	PASS
			1000~26500	-3.22	-42.35	≤-23.22	PASS
		2480	Reference	-3.79	-3.79	---	PASS
			30~1000	-3.79	-57.98	≤-23.79	PASS
			1000~26500	-3.79	-47.2	≤-23.79	PASS

6.2. Test Graphs

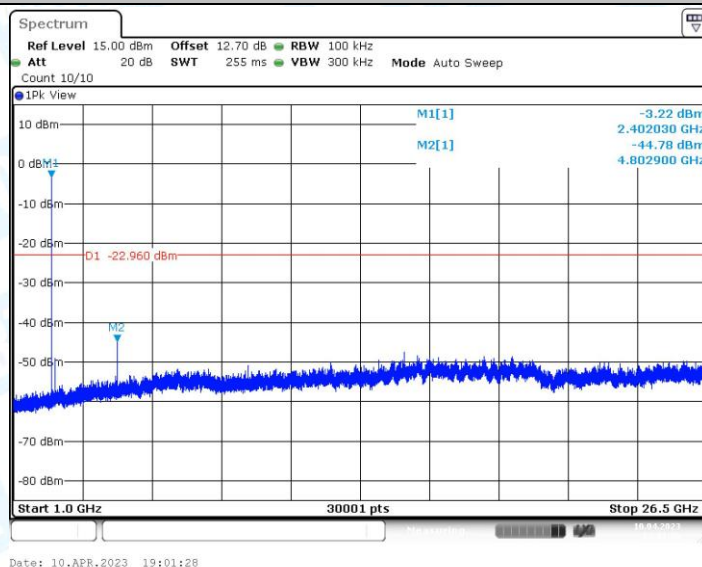
BLE_1M_Ant1_2402_0~Reference



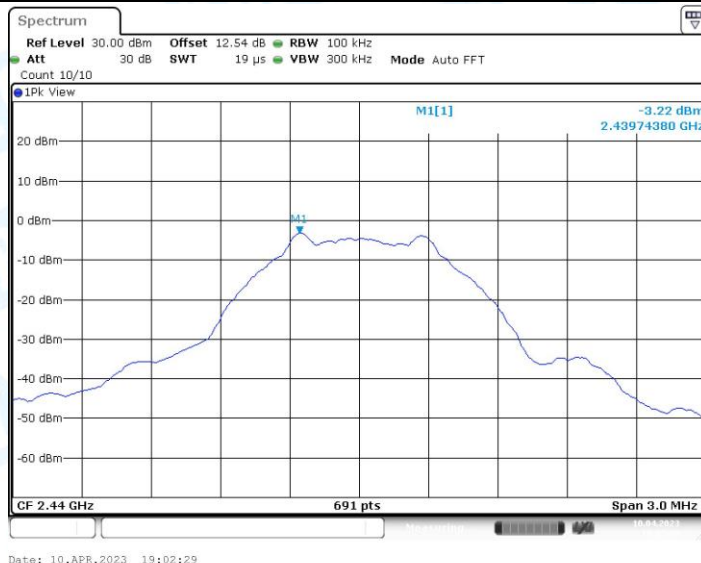
BLE_1M_Ant1_2402_30~1000



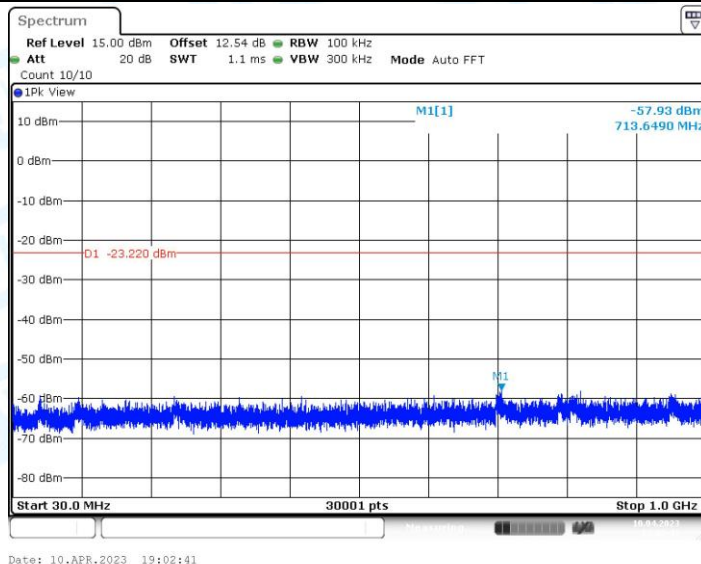
BLE_1M_Ant1_2402_1000~26500



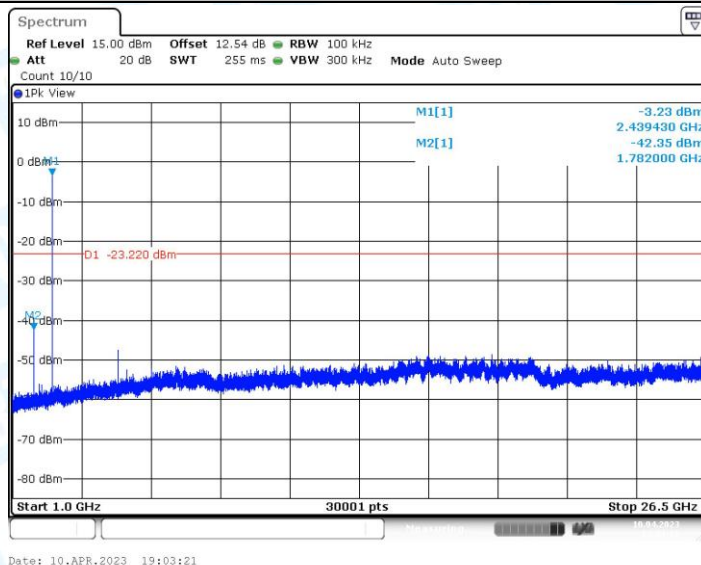
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



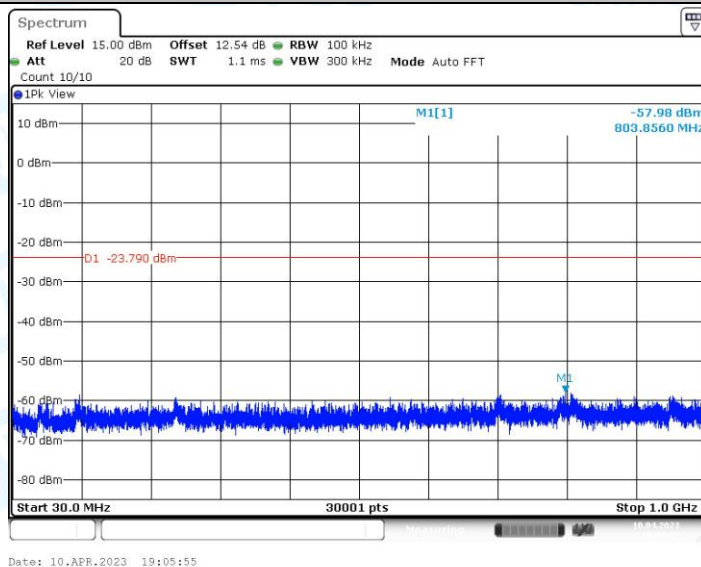
BLE_1M_Ant1_2440_1000~26500



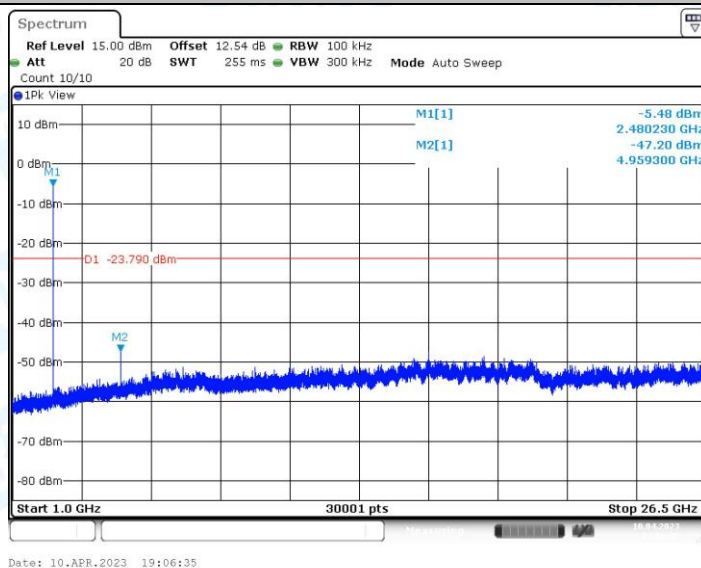
BLE_1M_Ant1_2480_0~Reference



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	0.40	0.63	63.49	2.5	---	---
		2440	0.40	0.63	63.49	2.5	---	---
		2480	0.40	0.63	63.49	2.5	---	---

7.2. Test Graphs



8. Emissions in Restricted Bands

8.1. Test Result

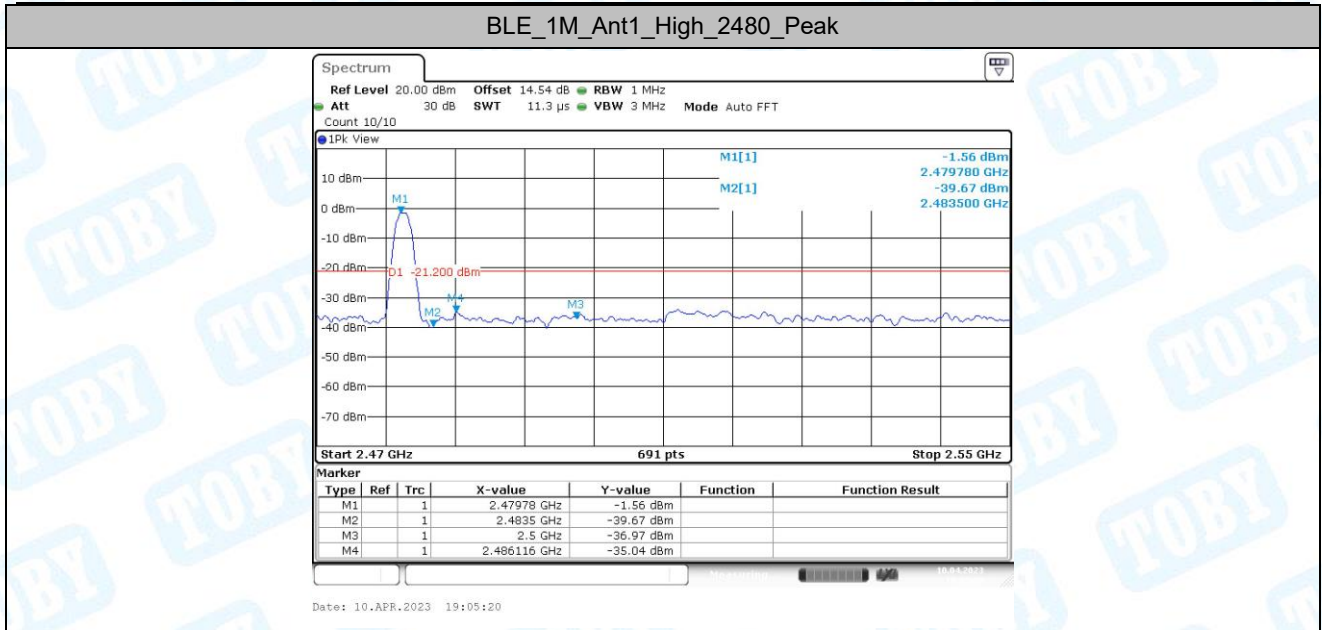
Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.04	≤-41.20	PASS
				AV	2340.630	-45.62	≤-41.20	PASS
				AV	2390.000	-47.76	≤-41.20	PASS
				Peak	2310.000	-38.12	≤-21.20	PASS
				Peak	2341.087	-34.88	≤-21.20	PASS
				Peak	2390.000	-38.36	≤-21.20	PASS
		High	2480	AV	2483.500	-47.34	≤-41.20	PASS
				AV	2499.797	-46.68	≤-41.20	PASS
				AV	2500.000	-46.88	≤-41.20	PASS
				Peak	2483.500	-39.67	≤-21.20	PASS
				Peak	2486.116	-35.04	≤-21.20	PASS
				Peak	2500.000	-36.97	≤-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





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