

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	Smart POS Payment Terminal
Test Model:	CS50
Sample ID:	20211111-01_01-02#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 7.6V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TB-FCC185236	

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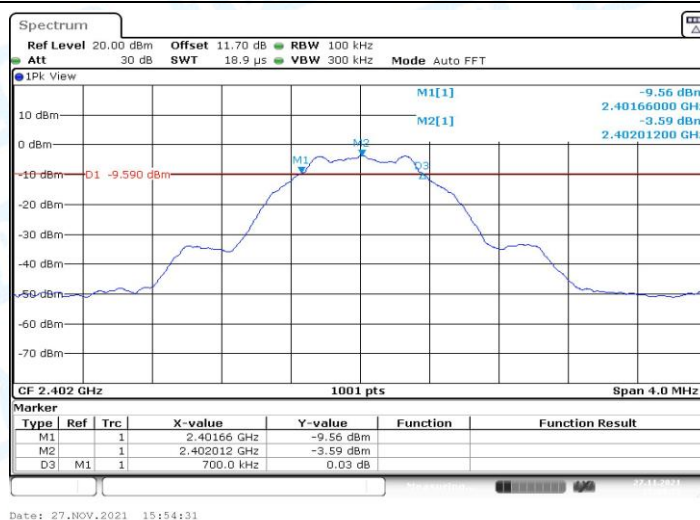
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1. DTS Bandwidth

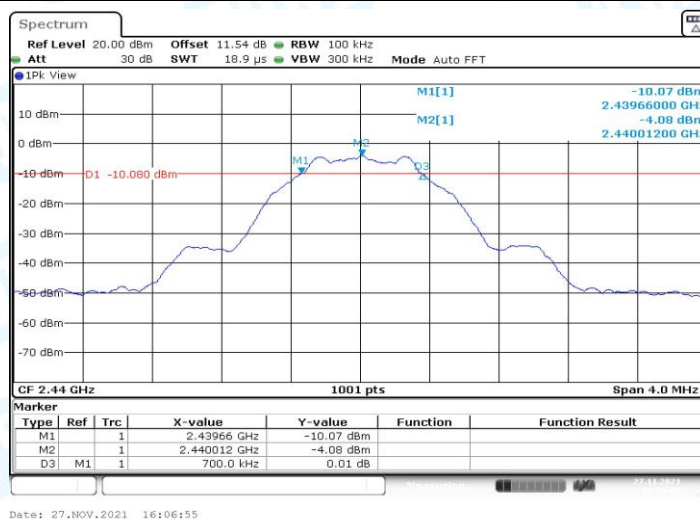
1.1. Test Result

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	2479.67	2480.36	0.5	PASS

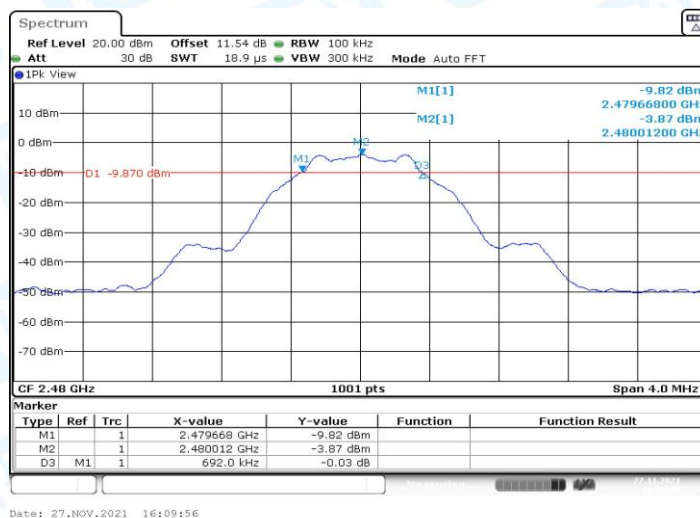
1.2. Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



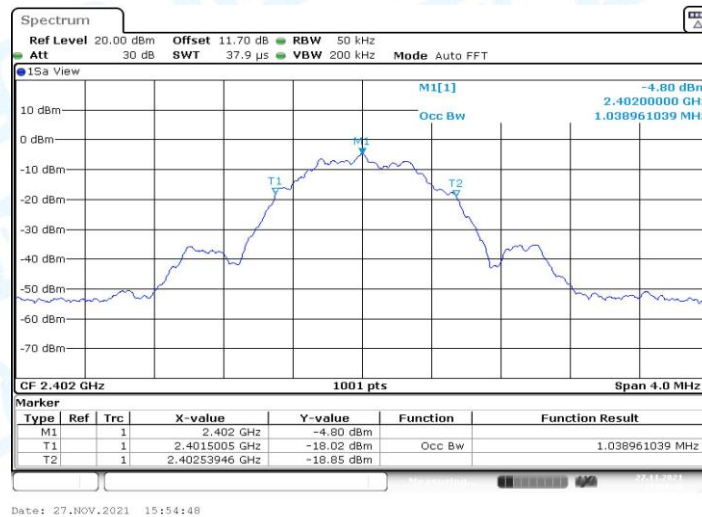
BLE_1M_Ant1_2480

2. Occupied Channel Bandwidth

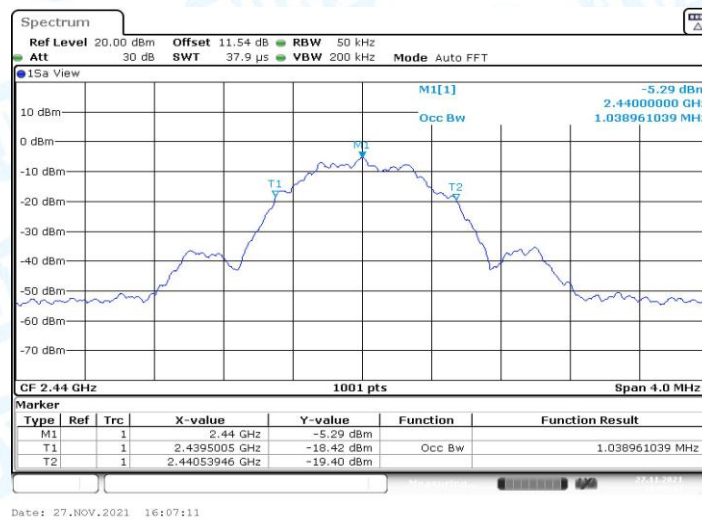
2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.039	2401.500	2402.539	---	---
		2440	1.039	2439.500	2440.539	---	---
		2480	1.039	2479.500	2480.539	---	---

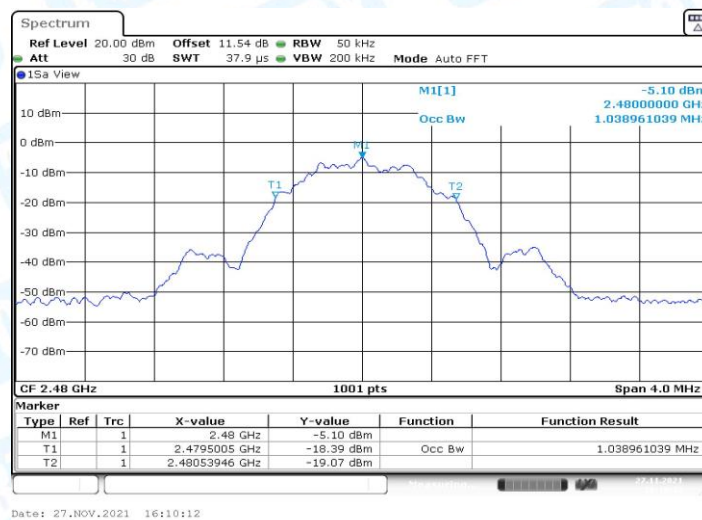
2.2. Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

3. Maximum conducted output power

3.1. Test Result

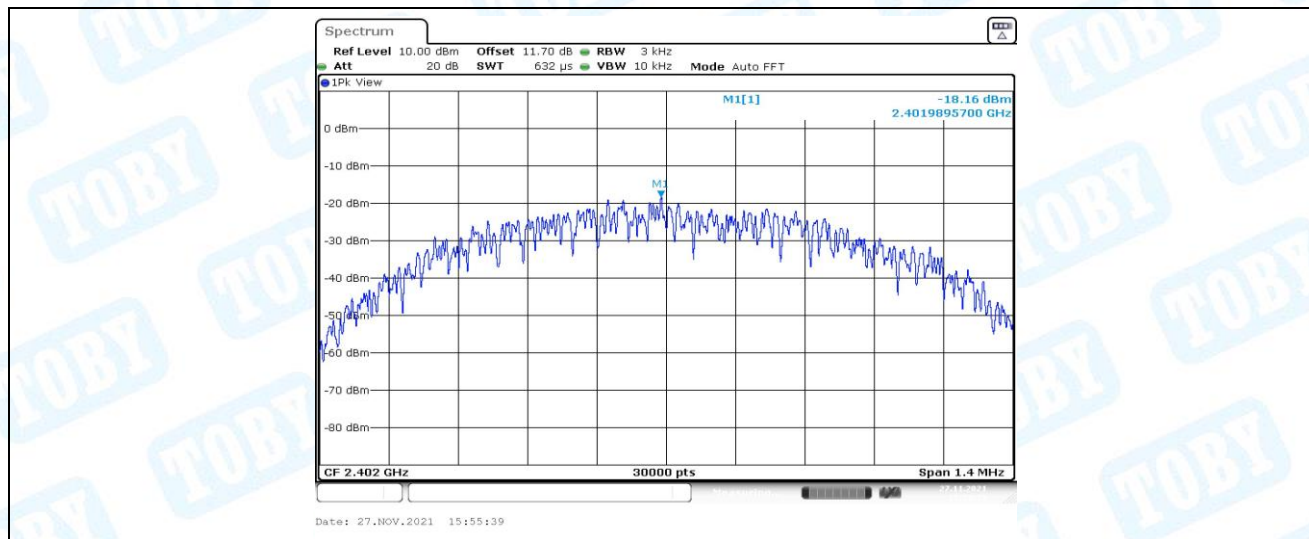
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.04	≤30	PASS
		2440	-3.11	≤30	PASS
		2480	-2.55	≤30	PASS

4. Maximum power spectral density

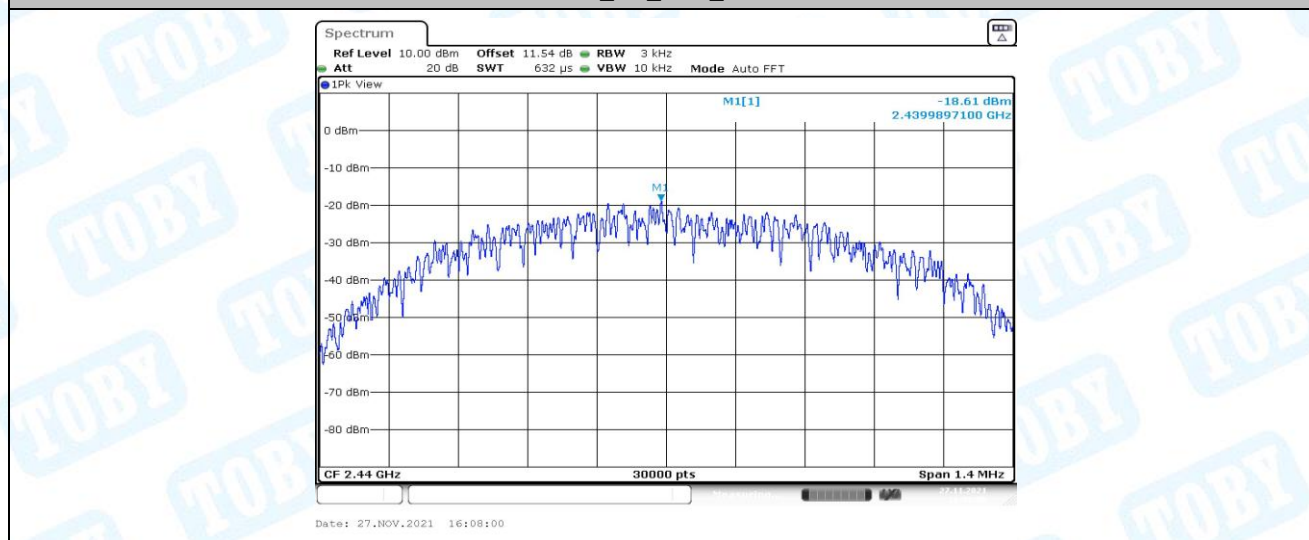
4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.16	≤8.00	PASS
		2440	-18.61	≤8.00	PASS
		2480	-18.41	≤8.00	PASS

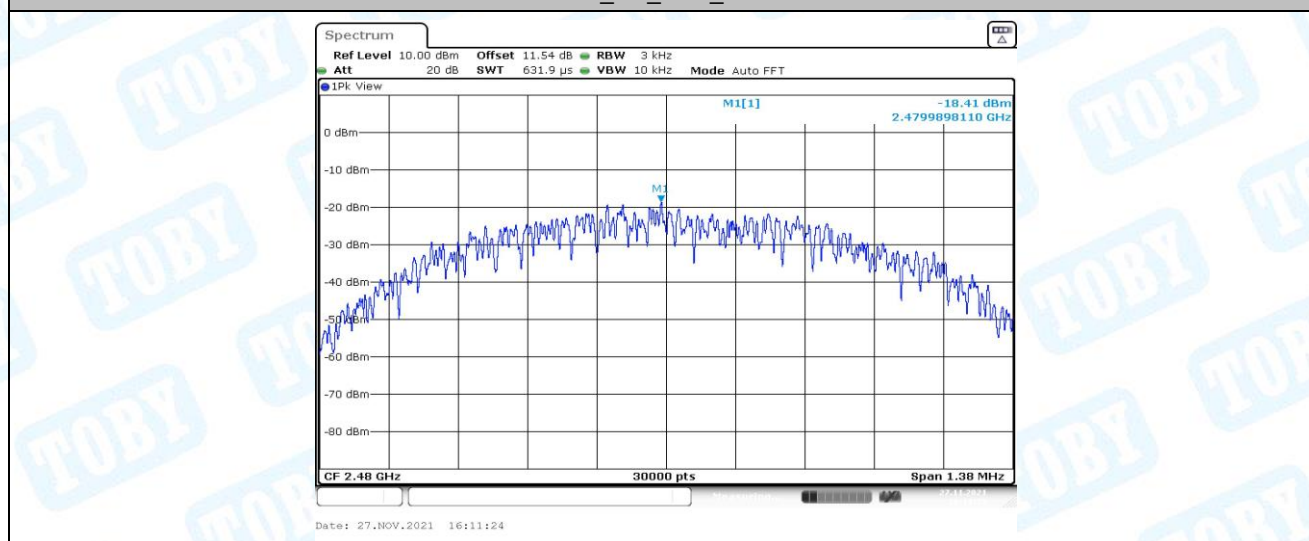
4.2. Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



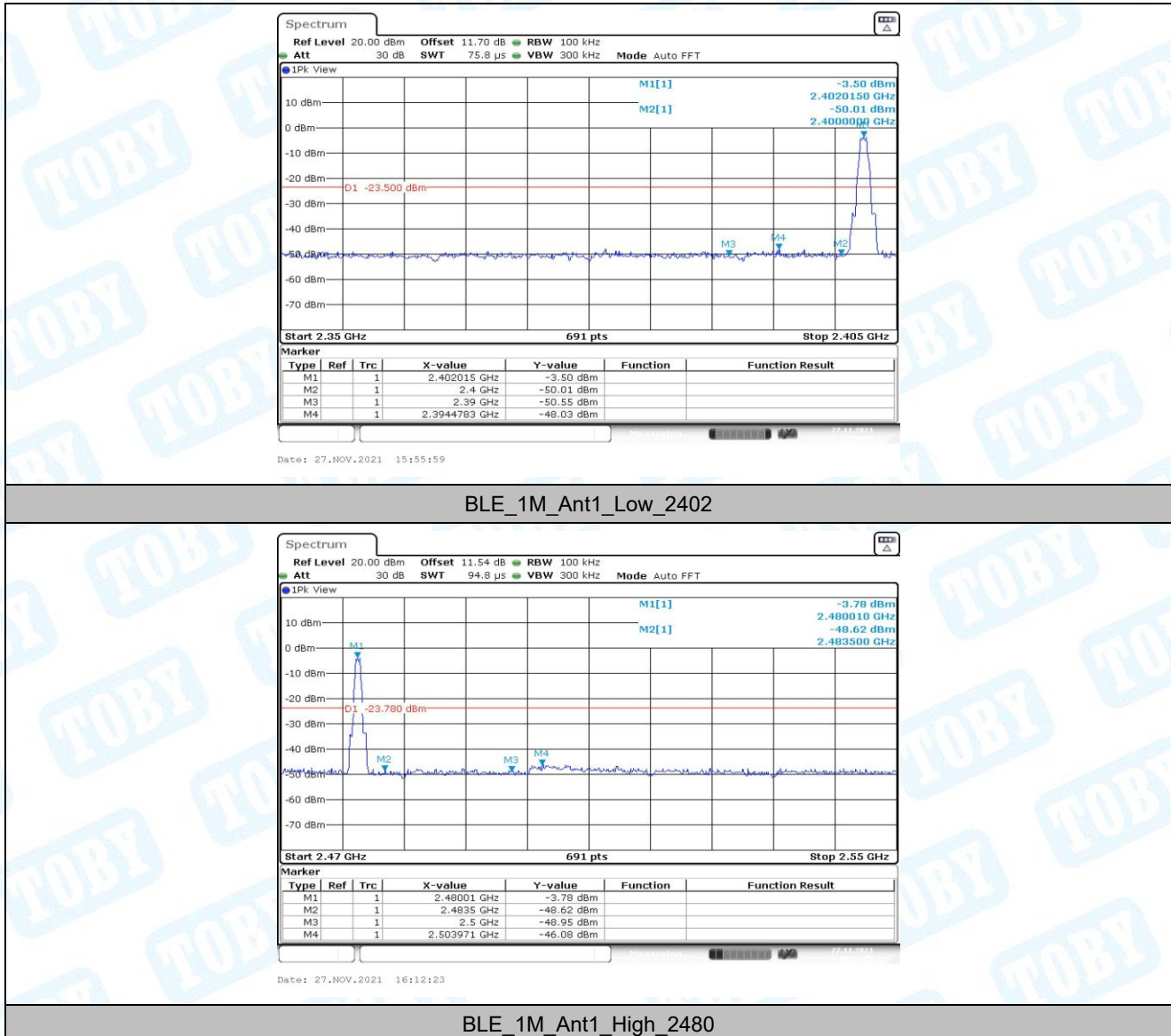
BLE_1M_Ant1_2480

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	-3.50	-48.03	≤-23.5	PASS
		High	2480	-3.78	-46.08	≤-23.78	PASS

5.2.Test Graphs

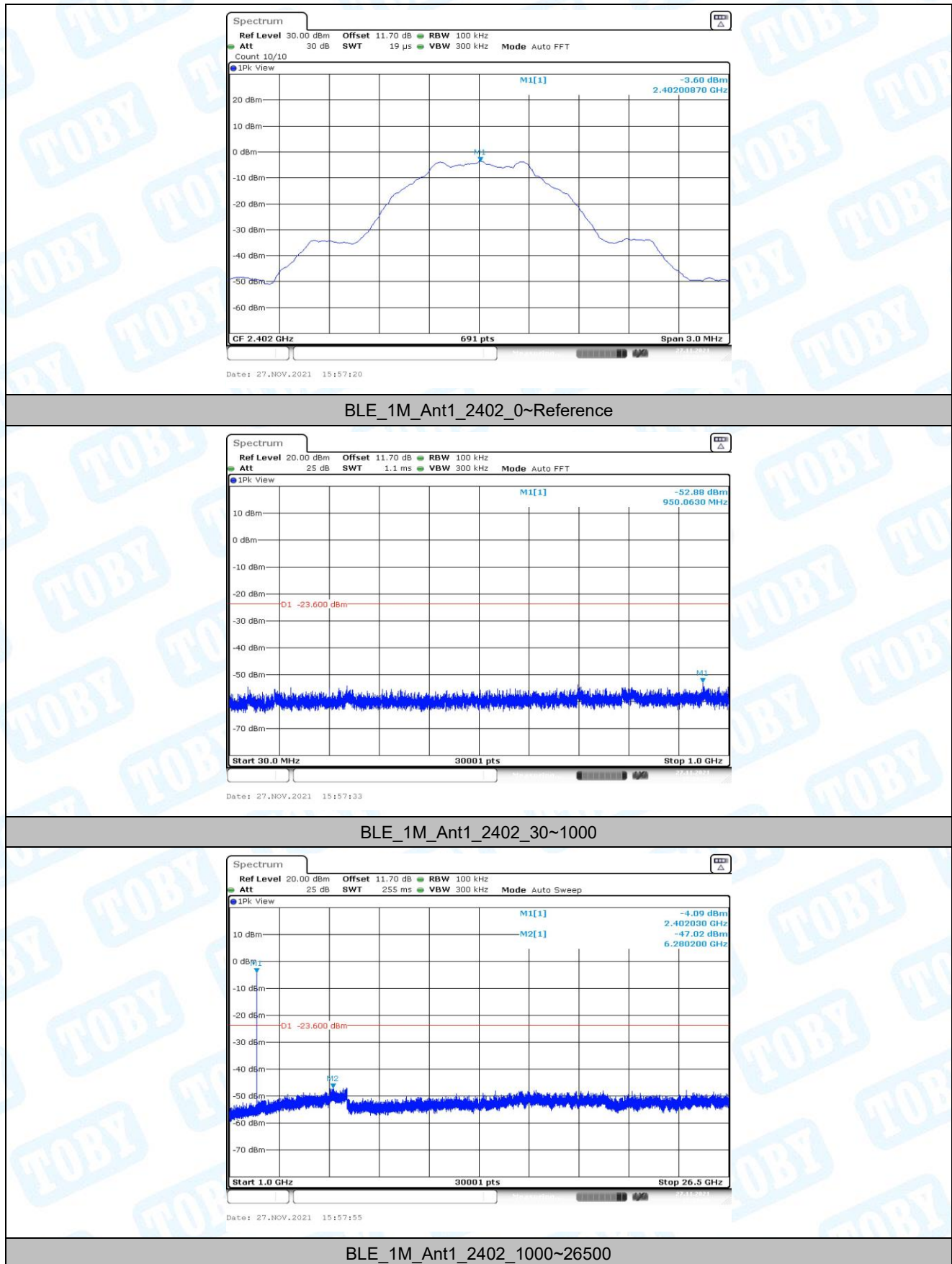


6. Conducted Spurious Emission

6.1. Test Result

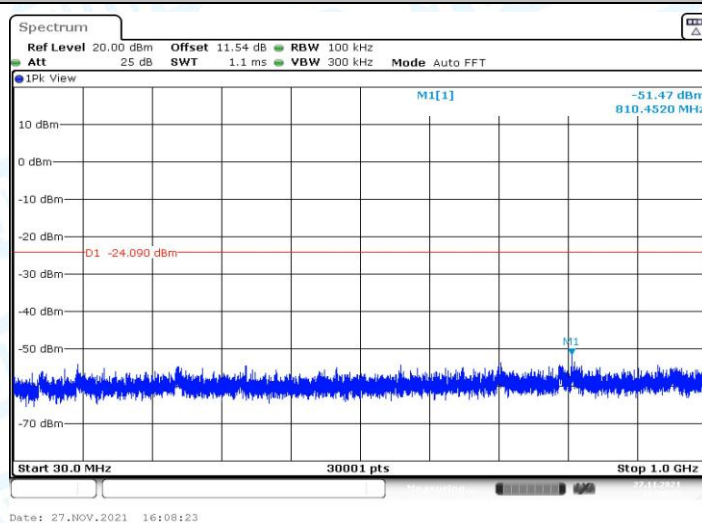
Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.60	-3.60	---	PASS
			30~1000	-3.60	-52.88	≤-23.6	PASS
			1000~26500	-3.60	-47.02	≤-23.6	PASS
		2440	Reference	-4.09	-4.09	---	PASS
			30~1000	-4.09	-51.47	≤-24.09	PASS
			1000~26500	-4.09	-46.88	≤-24.09	PASS
		2480	Reference	-3.92	-3.92	---	PASS
			30~1000	-3.92	-53.32	≤-23.92	PASS
			1000~26500	-3.92	-46.7	≤-23.92	PASS

6.2. Test Graphs

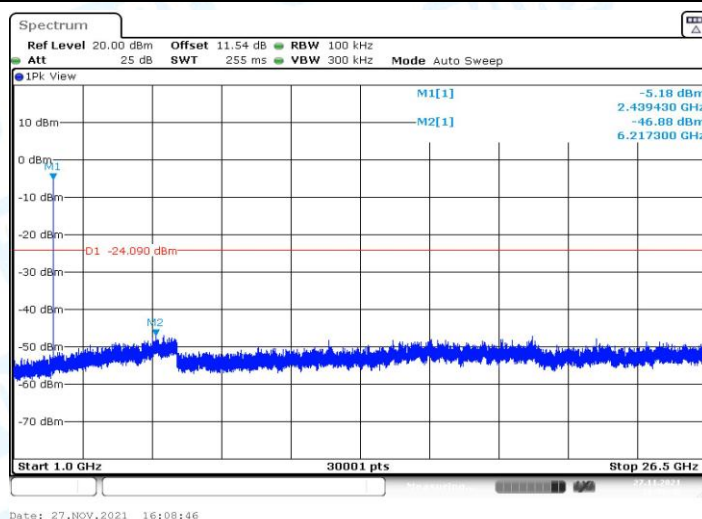




BLE_1M_Ant1_2440_0~Reference



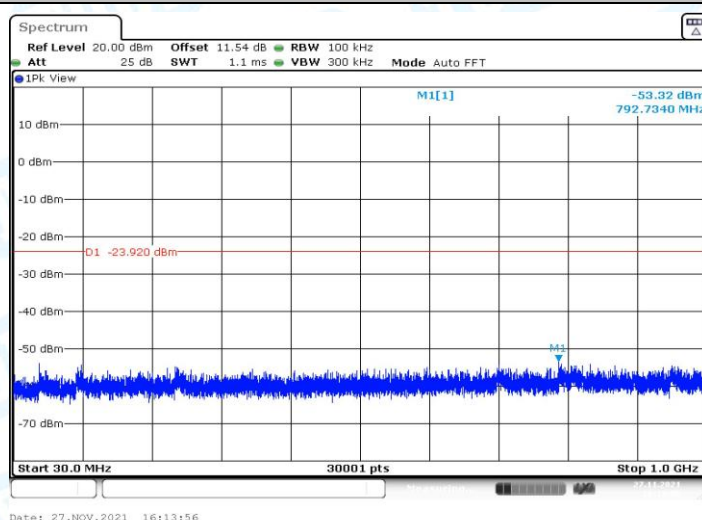
BLE_1M_Ant1_2440_30~1000



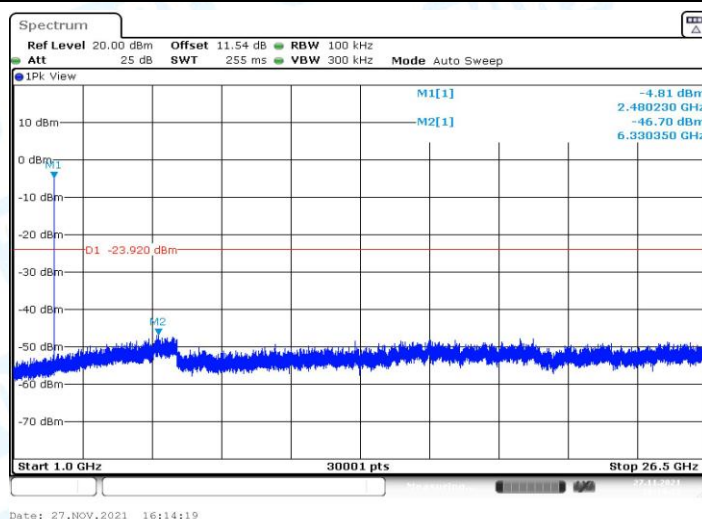
BLE_1M_Ant1_2440_1000~26500



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 [%]	Limit	Verdict
BLE_1M	Ant1	2402	0.00	0.00	100	---	---
		2440	0.00	0.00	100	---	---
		2480	0.00	0.00	100	---	---

7.2. Test Graphs



BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

8. Emissions in Restricted Bands

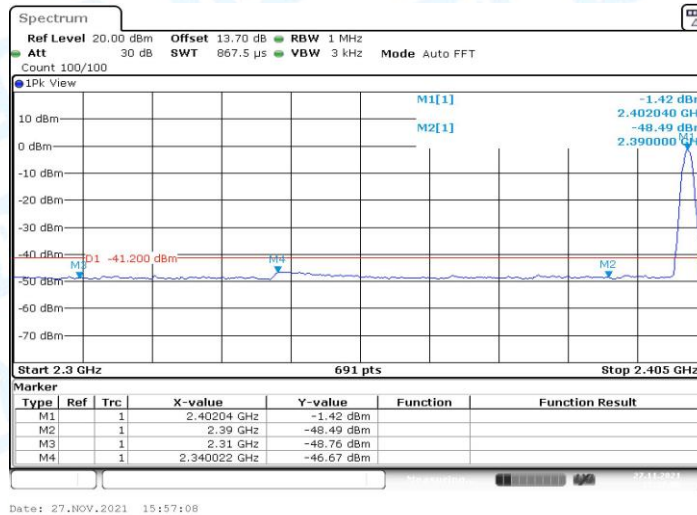
8.1. Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.76	≤-41.20	PASS
				AV	2340.022	-46.67	≤-41.20	PASS
				AV	2390.000	-48.49	≤-41.20	PASS
				Peak	2310.000	-36.91	≤-21.20	PASS
				Peak	2340.630	-35.13	≤-21.20	PASS
				Peak	2390.000	-39.7	≤-21.20	PASS
		High	2480	AV	2483.500	-48.04	≤-41.20	PASS
				AV	2497.942	-47.43	≤-41.20	PASS
				AV	2500.000	-47.68	≤-41.20	PASS
				Peak	2483.500	-40.02	≤-21.20	PASS
				Peak	2490.290	-36.45	≤-21.20	PASS
				Peak	2500.000	-38.17	≤-21.20	PASS

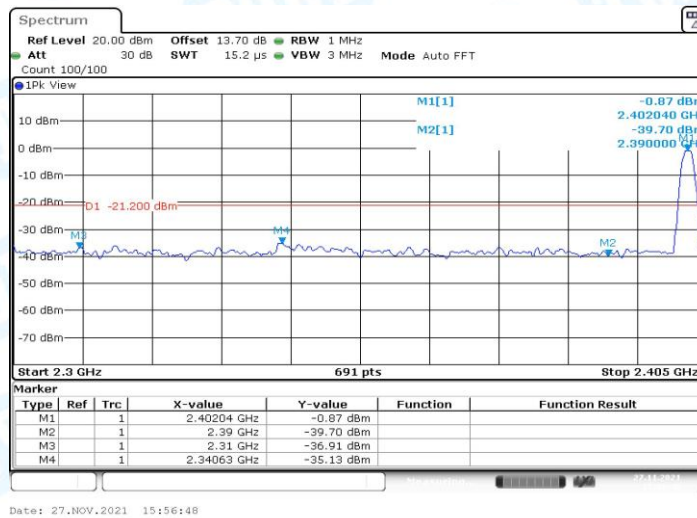
Note:

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.

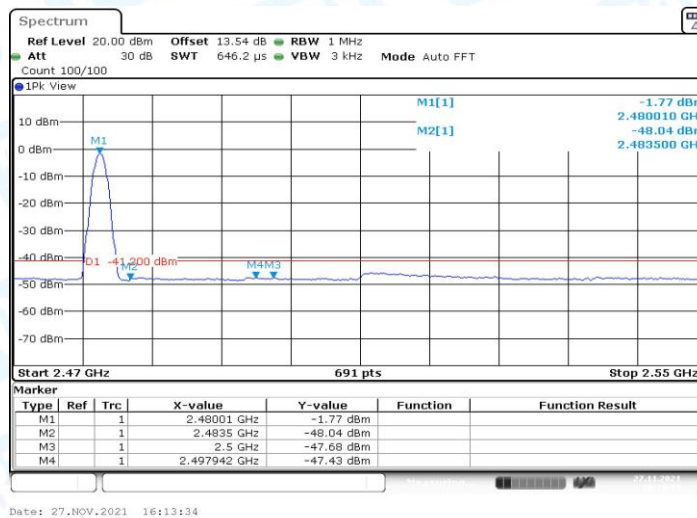
8.2.Test Graphs



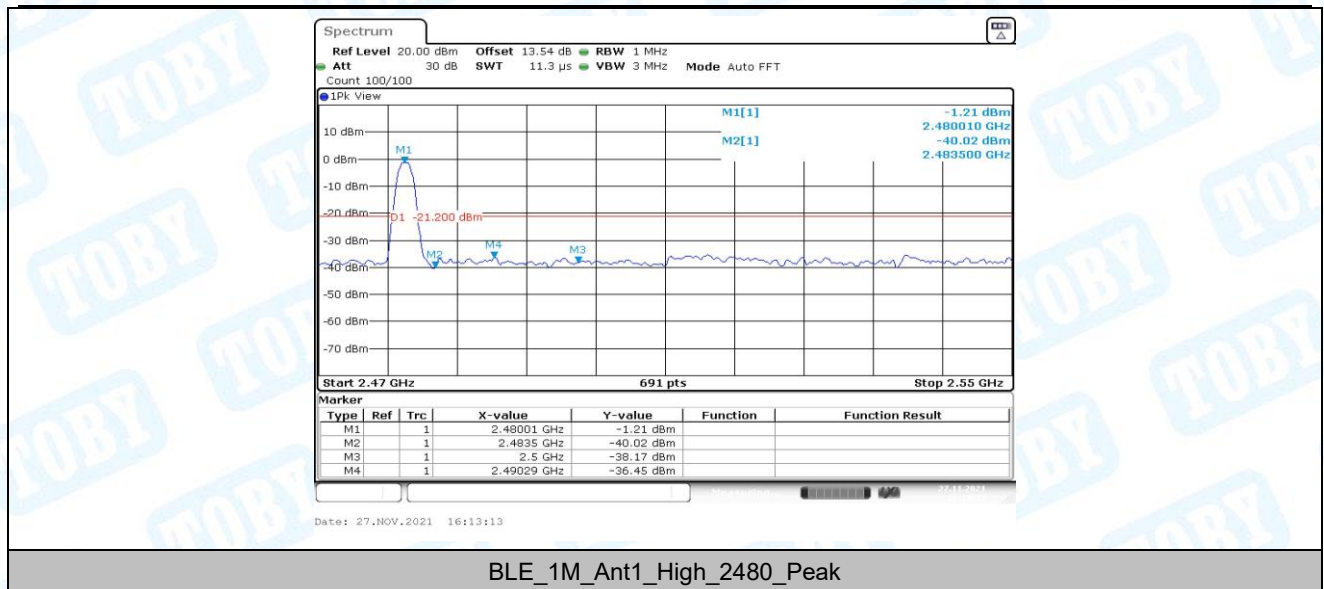
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



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