

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	tablet computer
Test Model:	AYANEO 2021
Sample ID:	20210603-22-02
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	48%
Test Voltage:	DC 11.55V
Test Engineer:	He jing chang
Note: For a more detailed features description, please refer to the report TB-FCC183684	

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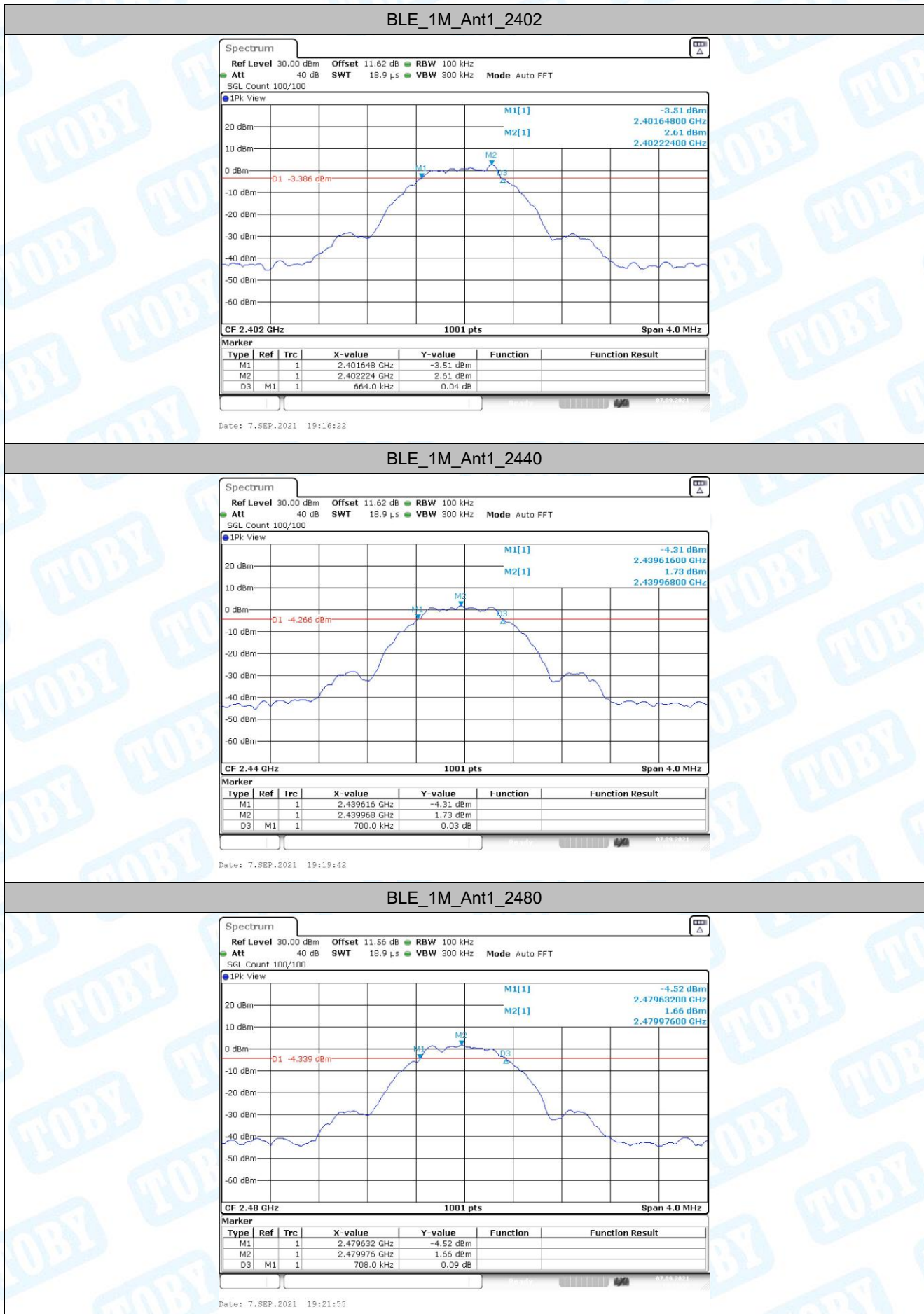
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1. DTS Bandwidth

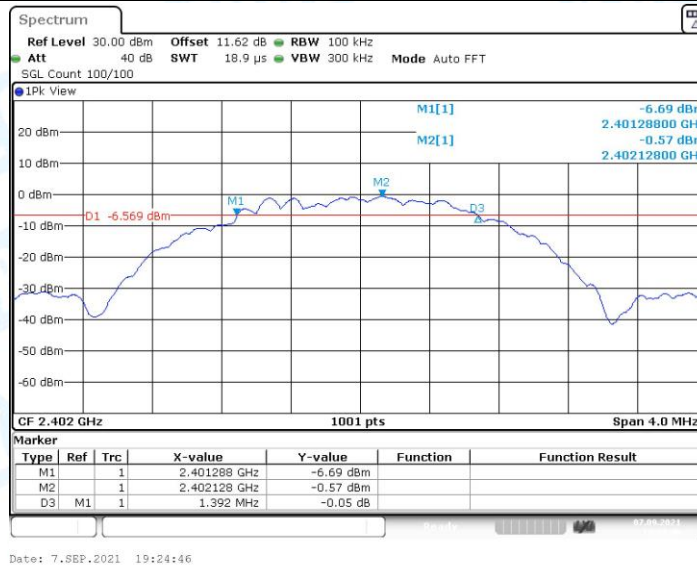
1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.648	2402.312	0.5	PASS
		2440	0.700	2439.616	2440.316	0.5	PASS
		2480	0.708	2479.632	2480.340	0.5	PASS
BLE_2M	Ant1	2402	1.392	2401.288	2402.680	0.5	PASS
		2440	1.368	2439.284	2440.652	0.5	PASS
		2480	1.104	2479.428	2480.532	0.5	PASS

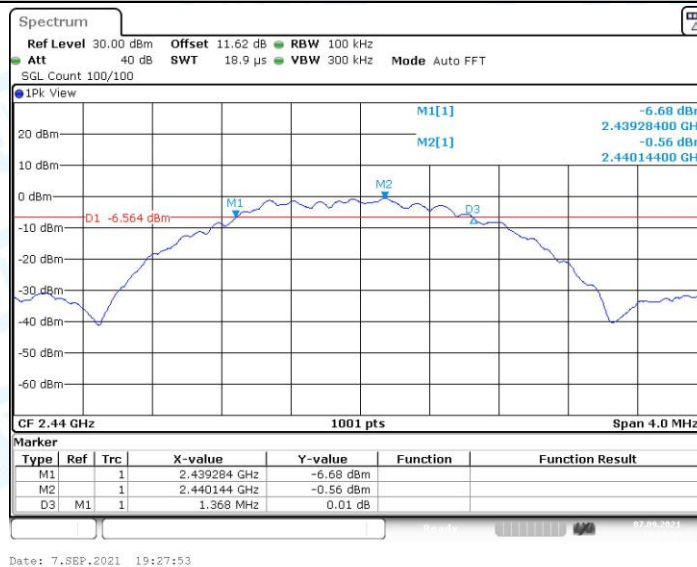
1.2. Test Graphs



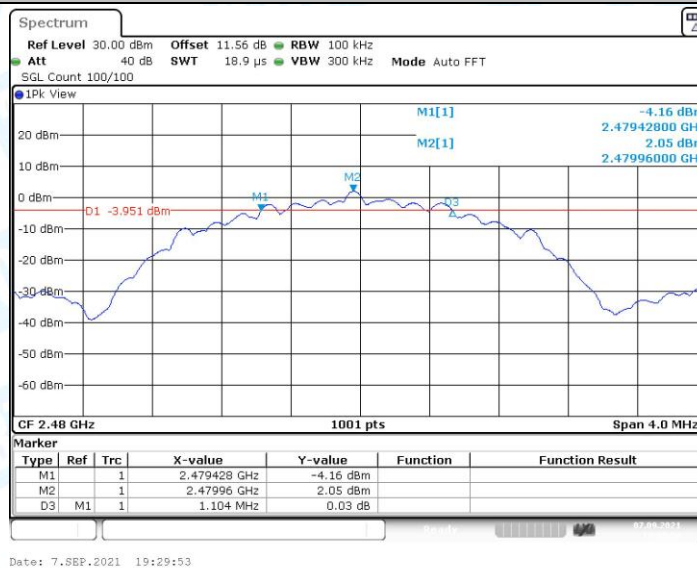
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

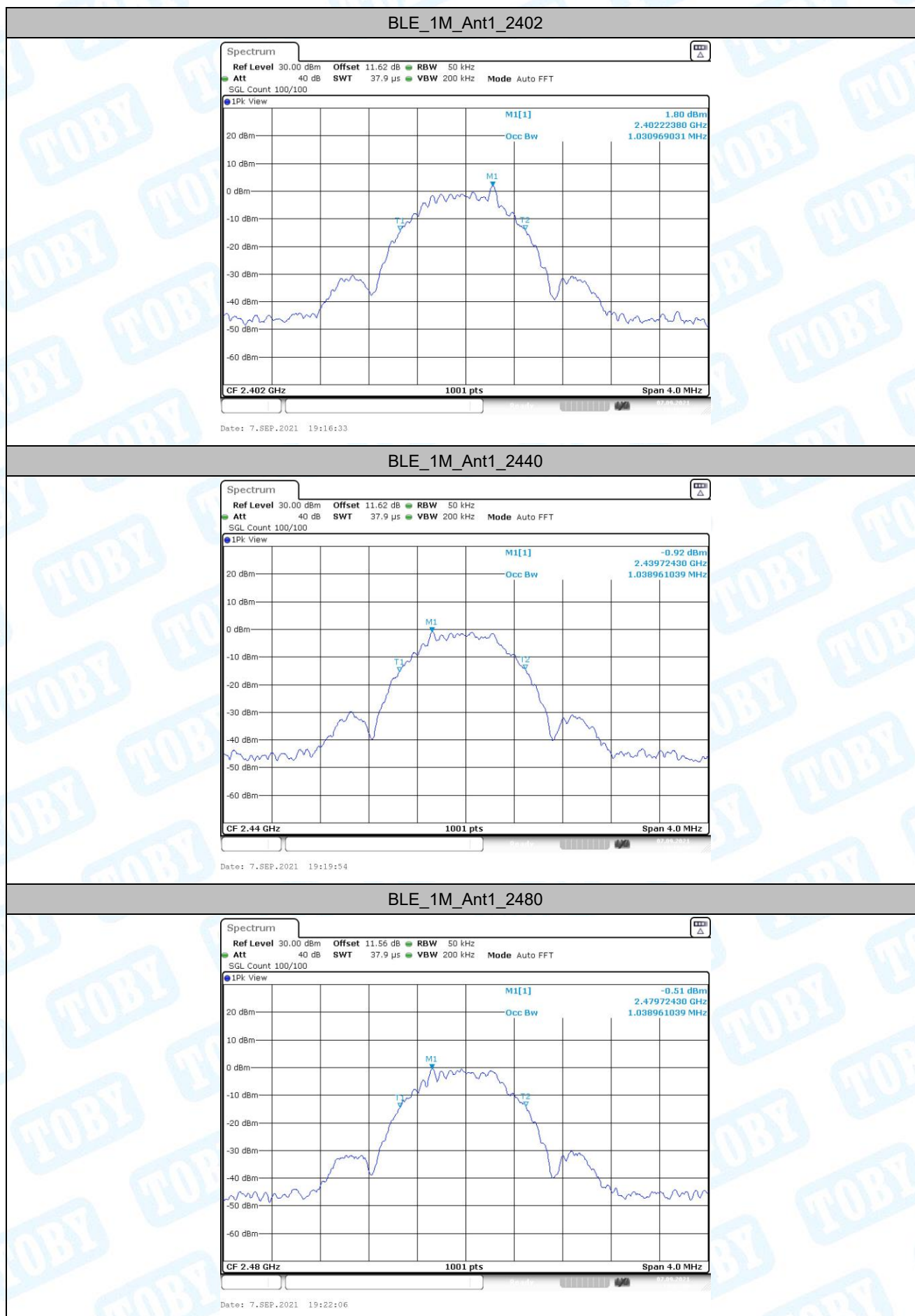


2. Occupied Channel Bandwidth

2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.031	2401.461	2402.492	---	PASS
		2440	1.039	2439.453	2440.492	---	PASS
		2480	1.039	2479.457	2480.496	---	PASS
BLE_2M	Ant1	2402	2.066	2400.957	2403.023	---	PASS
		2440	2.066	2438.957	2441.023	---	PASS
		2480	2.082	2478.945	2481.027	---	PASS

2.2. Test Graphs



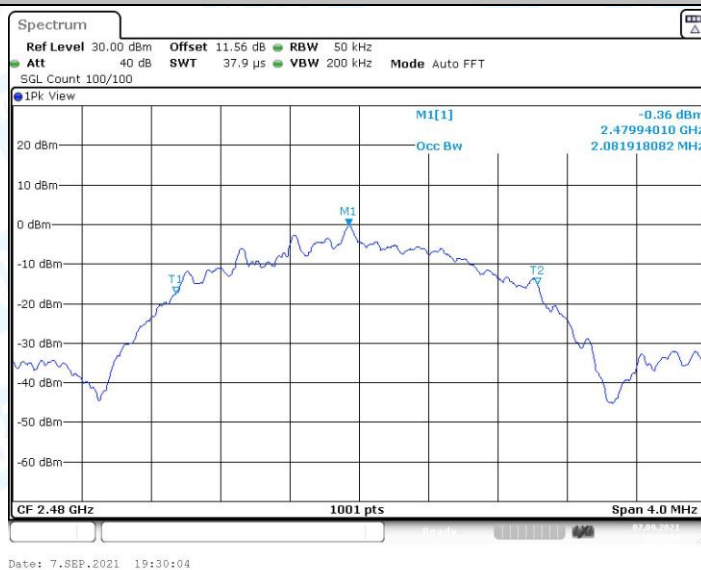
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

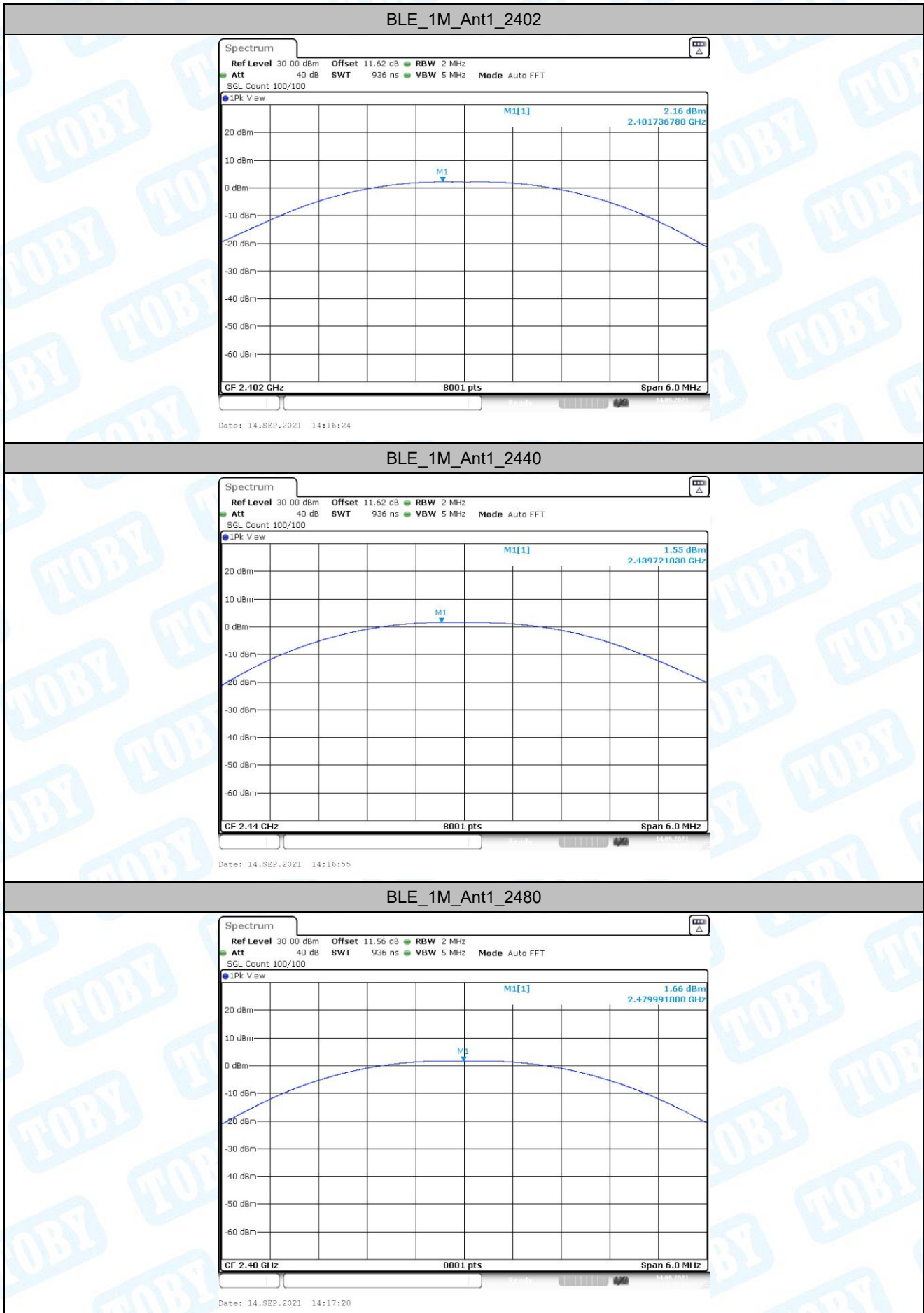


3. Maximum conducted output power

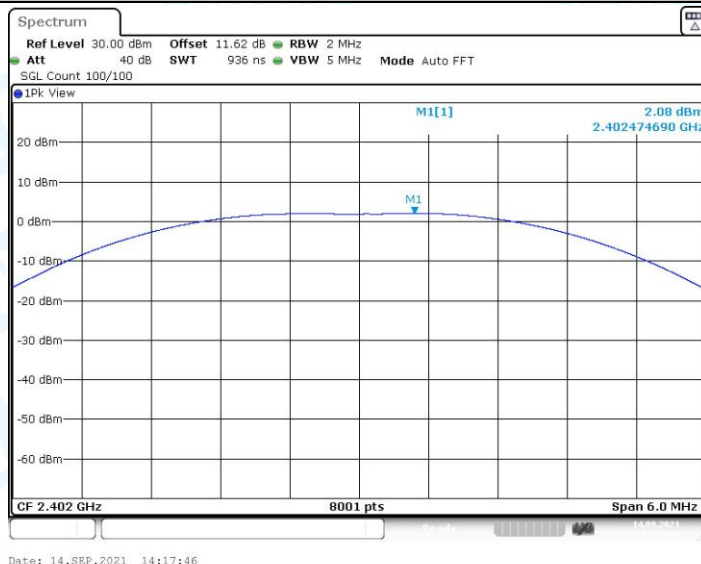
3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.16	≤30	PASS
		2440	1.55	≤30	PASS
		2480	1.66	≤30	PASS
BLE_2M	Ant1	2402	2.08	≤30	PASS
		2440	1.51	≤30	PASS
		2480	1.63	≤30	PASS

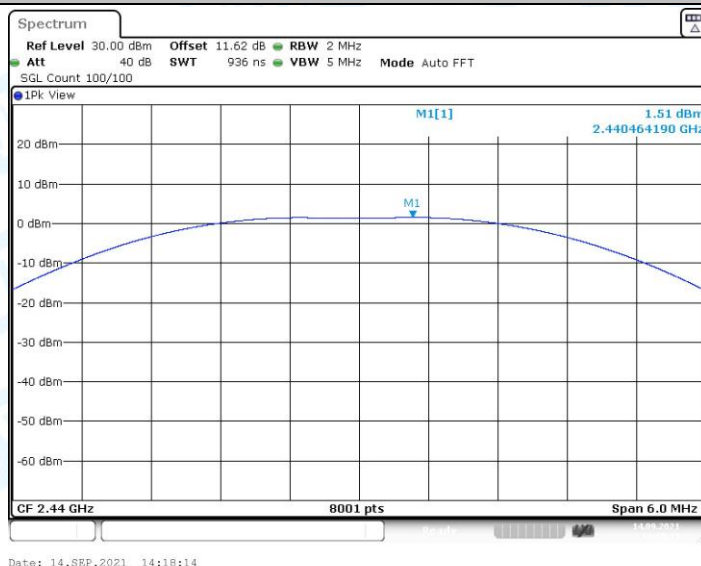
3.2. Test Graphs



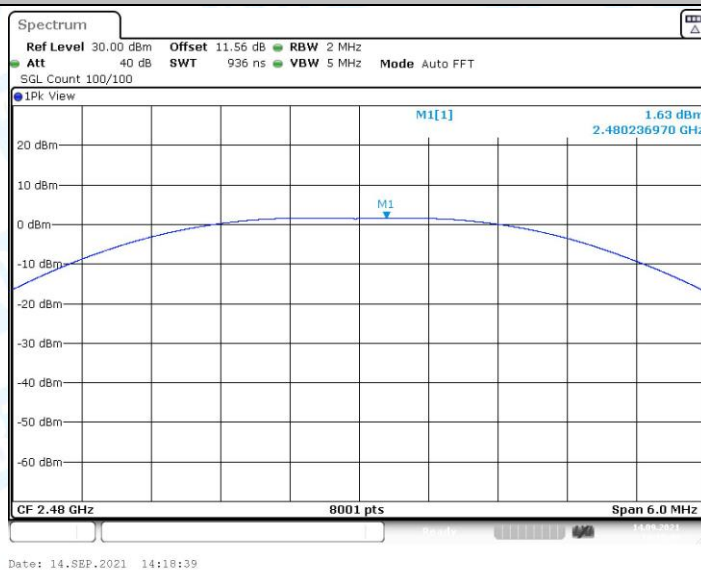
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

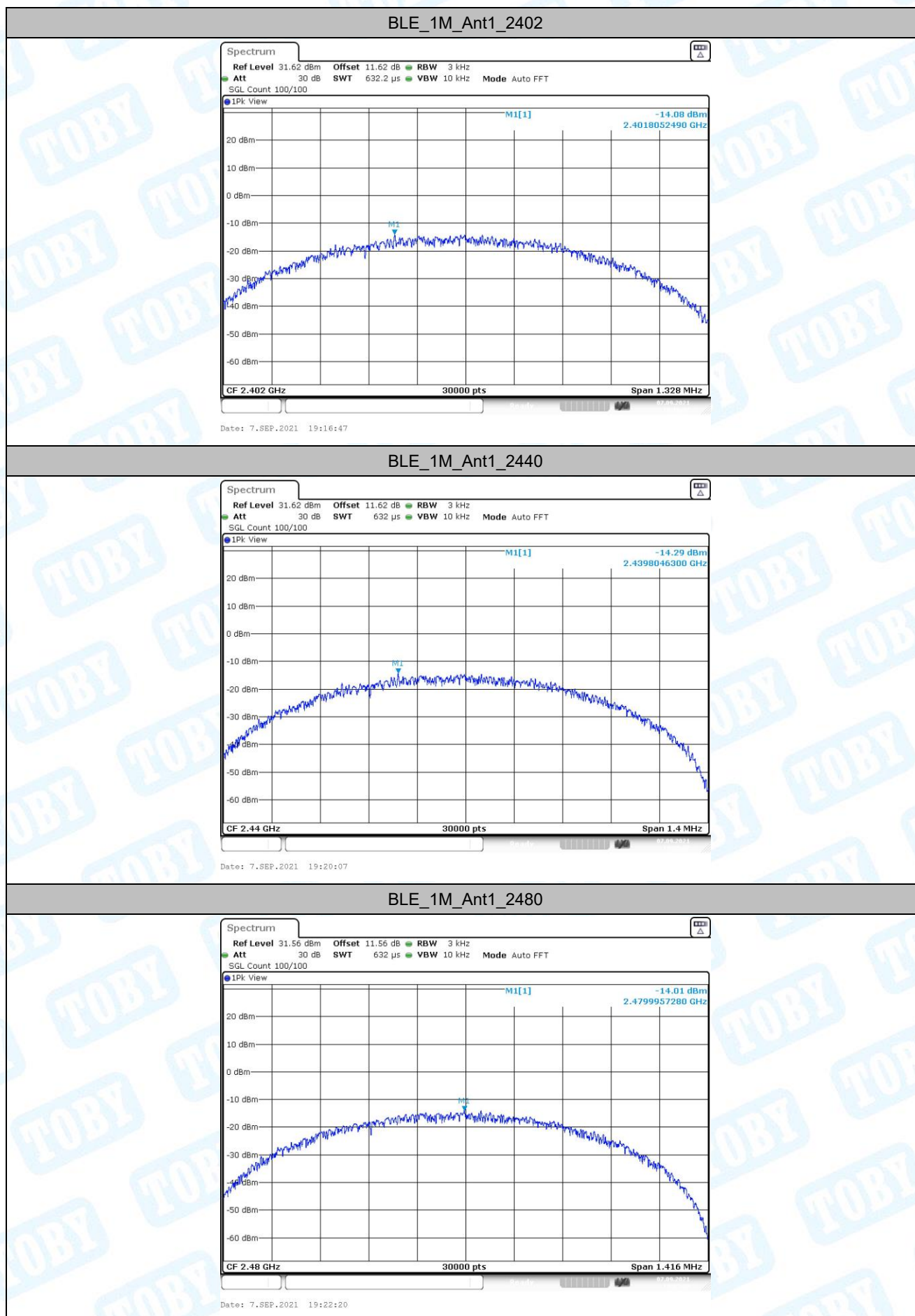


4. Maximum power spectral density

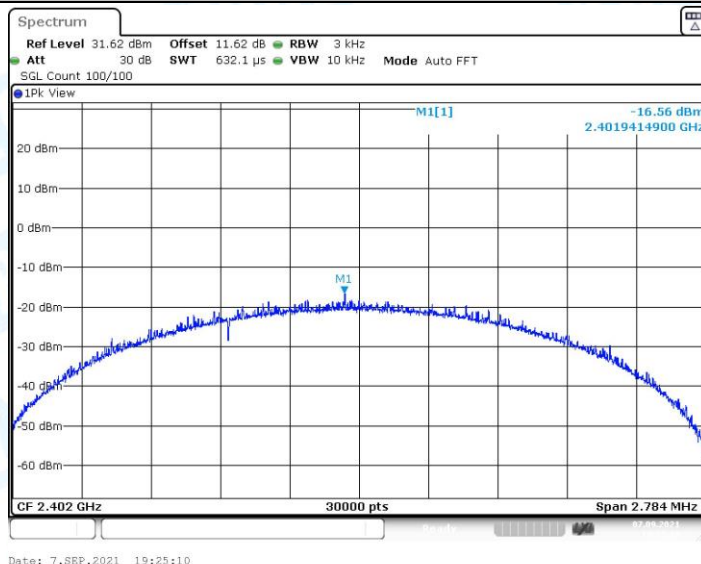
4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.08	≤8	PASS
		2440	-14.29	≤8	PASS
		2480	-14.01	≤8	PASS
BLE_2M	Ant1	2402	-16.56	≤8	PASS
		2440	-16.39	≤8	PASS
		2480	-15.85	≤8	PASS

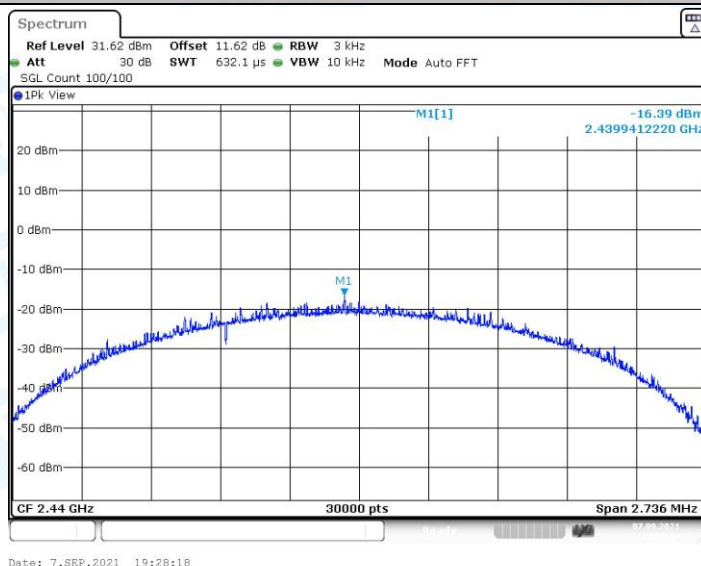
4.2. Test Graphs



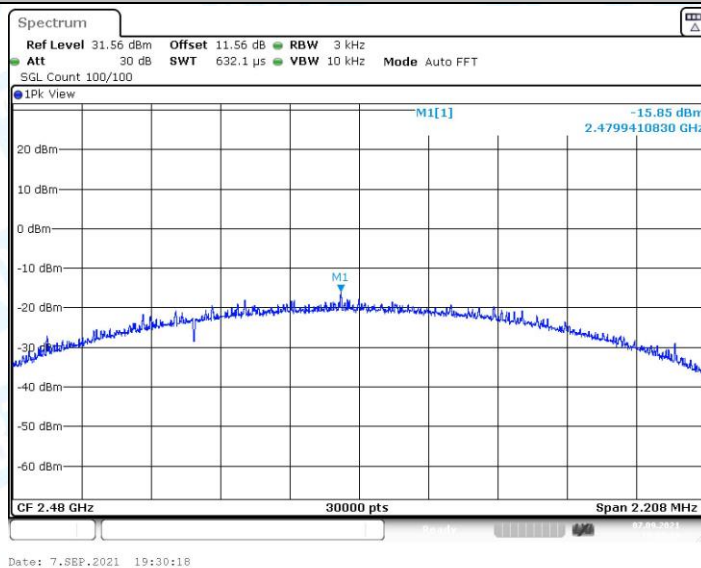
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

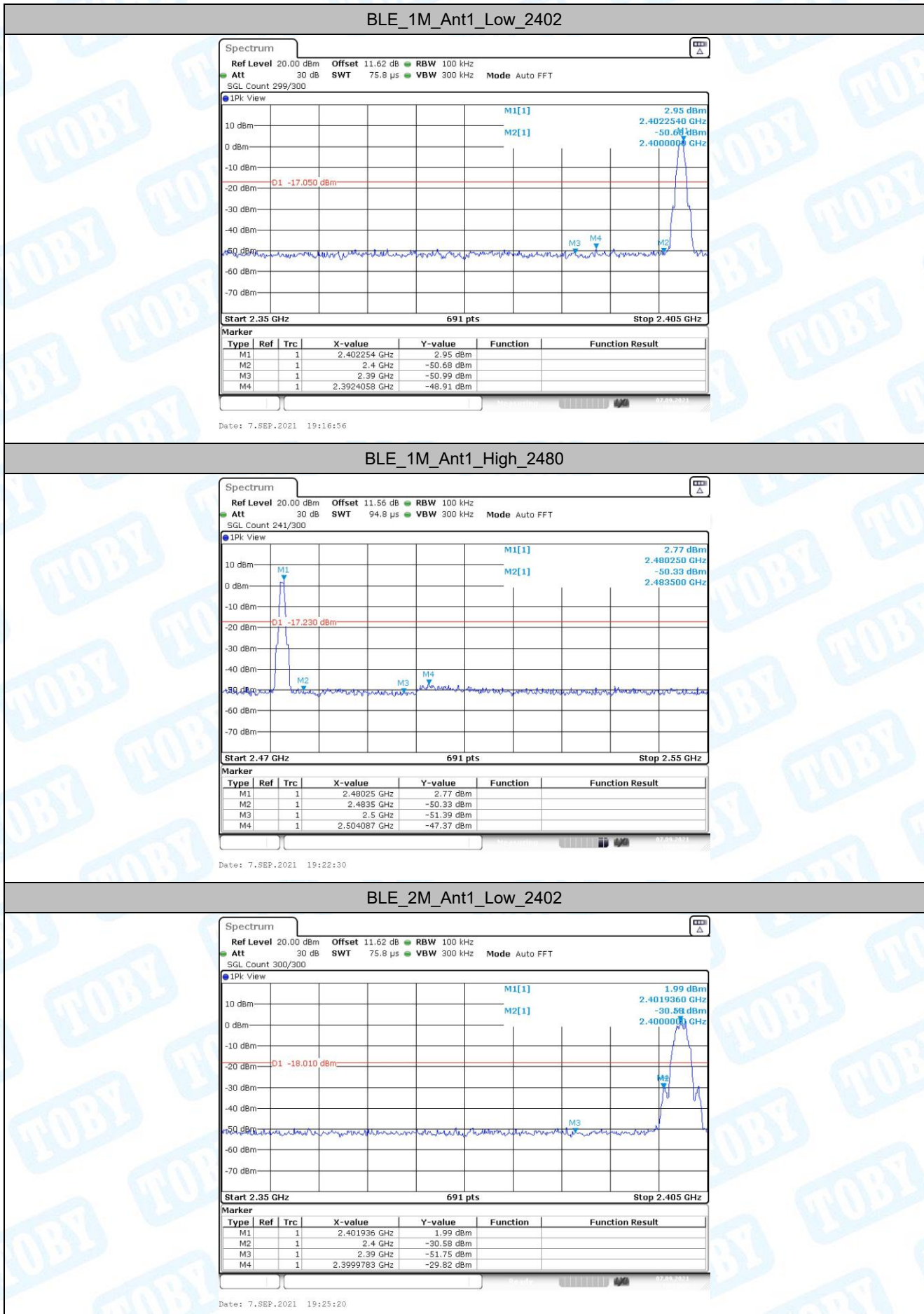


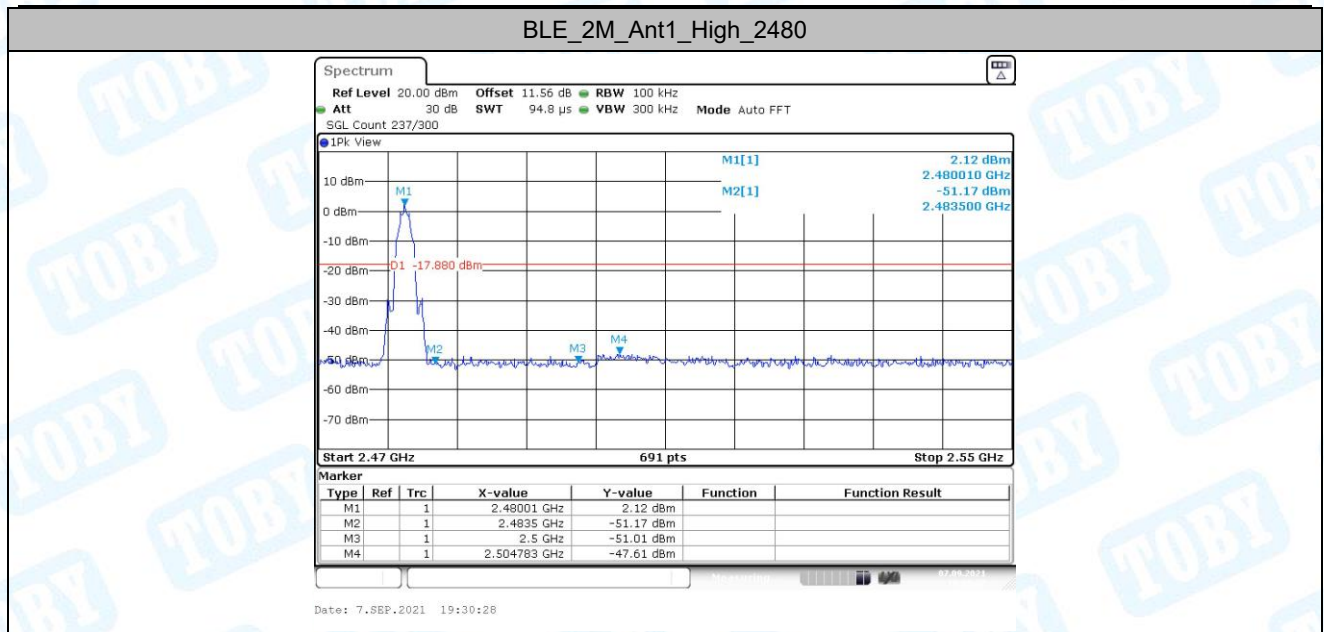
5. Band edge measurements

5.1. Test Result

Test Mode	Antenna	ChName	Channel	Ref.Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.95	-48.91	≤ -17.05	PASS
		High	2480	2.77	-47.37	≤ -17.23	PASS
BLE_2M	Ant1	Low	2402	1.99	-29.82	≤ -18.01	PASS
		High	2480	2.12	-47.61	≤ -17.88	PASS

5.2. Test Graphs



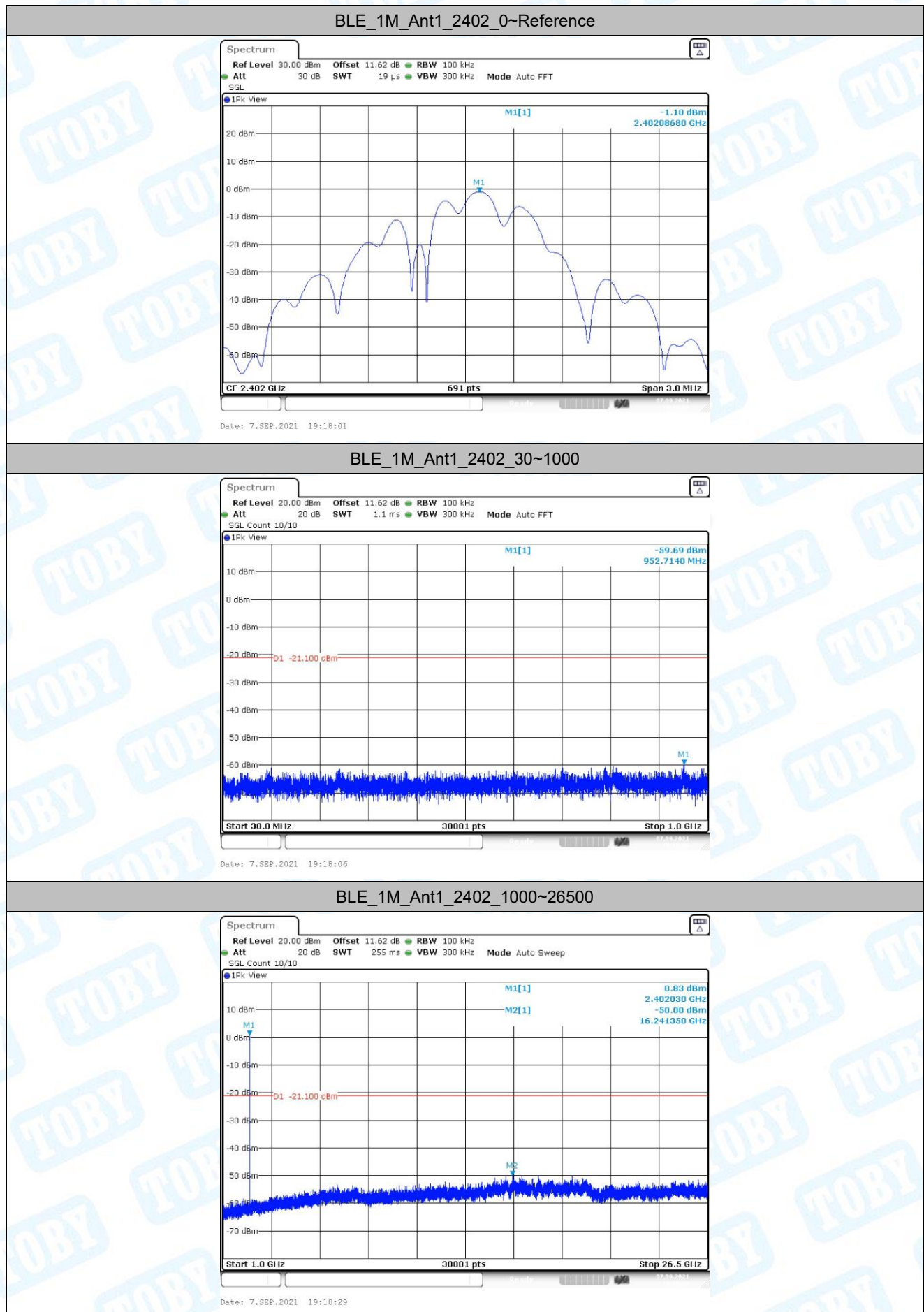


6. Conducted Spurious Emission

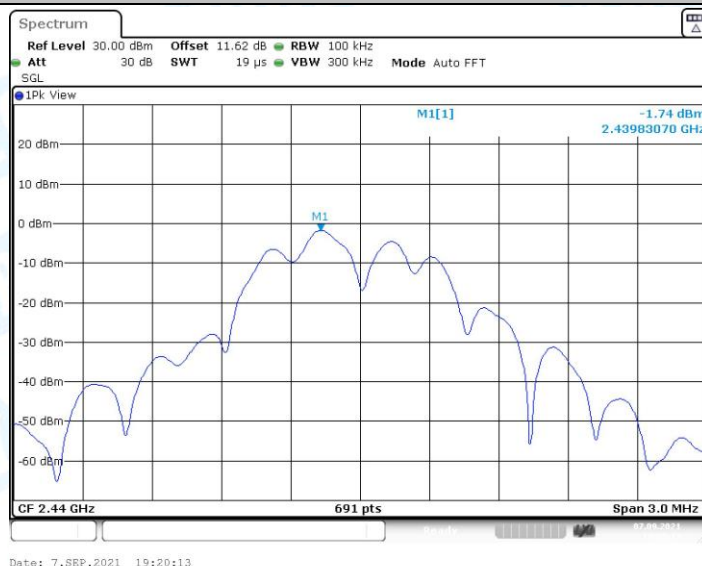
6.1. Test Result

Test Mode	Antenna	Channel	Freq. Range [MHz]	Ref. Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.10	-1.10	---	PASS
			30~1000	-1.10	-59.69	≤-21.1	PASS
			1000~26500	-1.10	-50	≤-21.1	PASS
		2440	Reference	-1.74	-1.74	---	PASS
			30~1000	-1.74	-59.67	≤-21.74	PASS
			1000~26500	-1.74	-50.55	≤-21.74	PASS
		2480	Reference	-0.77	-0.77	---	PASS
			30~1000	-0.77	-59.47	≤-20.77	PASS
			1000~26500	-0.77	-49.81	≤-20.77	PASS
BLE_2M	Ant1	2402	Reference	1.19	1.19	---	PASS
			30~1000	1.19	-59.42	≤-18.81	PASS
			1000~26500	1.19	-50.4	≤-18.81	PASS
		2440	Reference	0.60	0.60	---	PASS
			30~1000	0.60	-59.33	≤-19.4	PASS
			1000~26500	0.60	-49.64	≤-19.4	PASS
		2480	Reference	1.00	1.00	---	PASS
			30~1000	1.00	-59.29	≤-19	PASS
			1000~26500	1.00	-50.39	≤-19	PASS

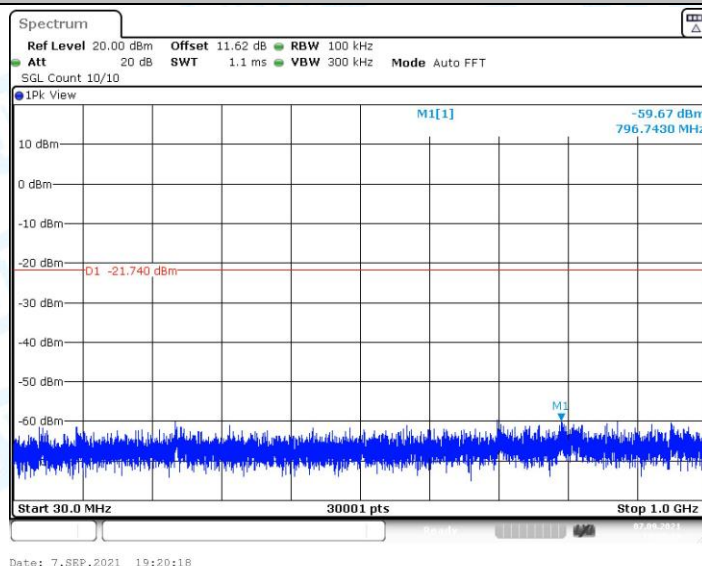
6.2. Test Graphs



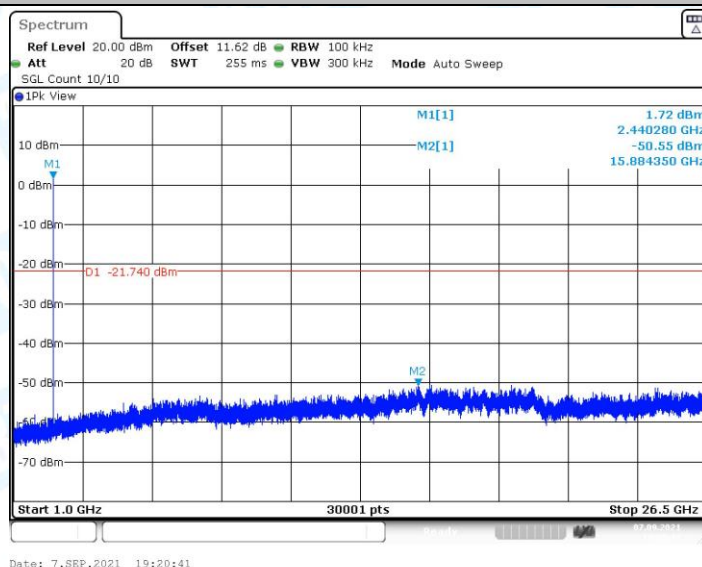
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



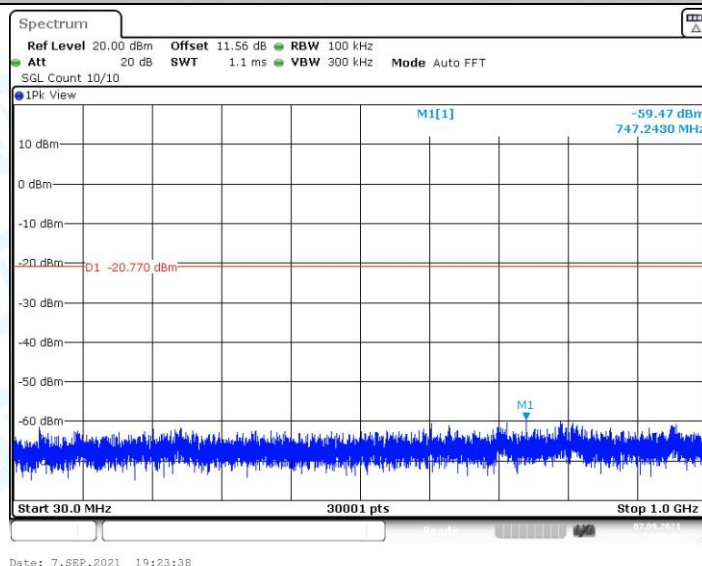
BLE_1M_Ant1_2440_1000~26500



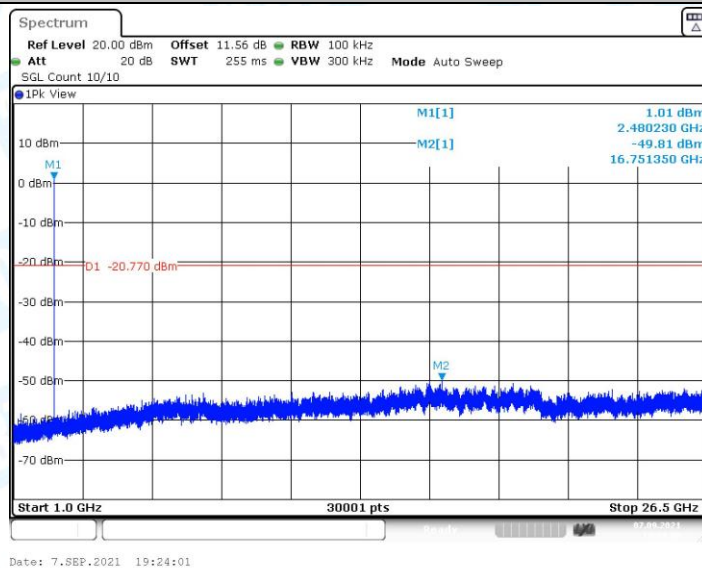
BLE_1M_Ant1_2480_0~Reference



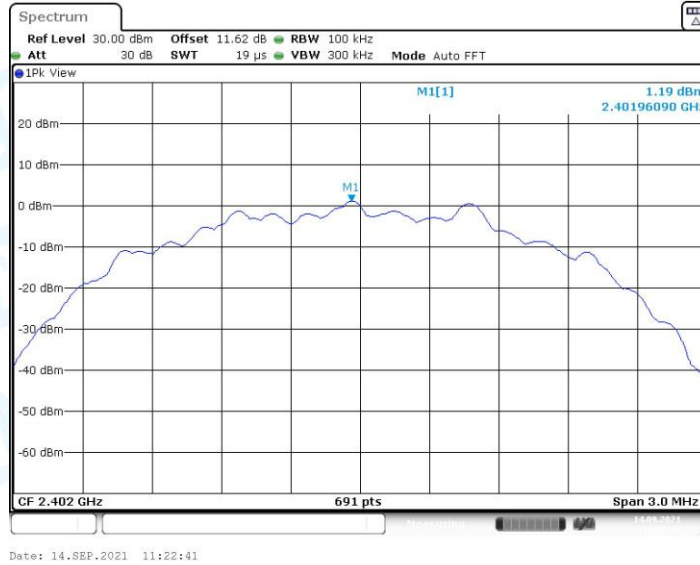
BLE_1M_Ant1_2480_30~1000



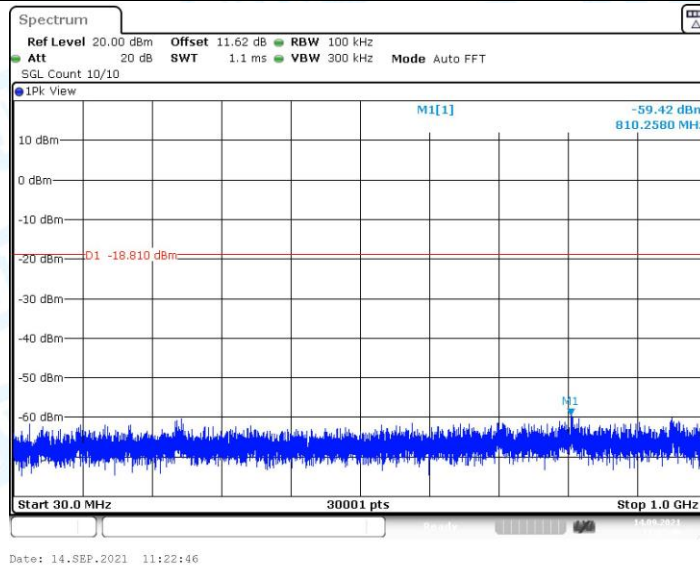
BLE_1M_Ant1_2480_1000~26500



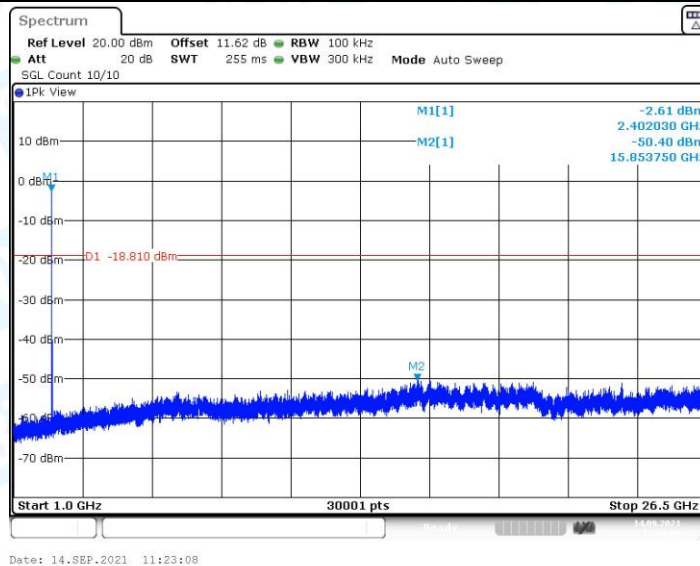
BLE_2M_Ant1_2402_0~Reference



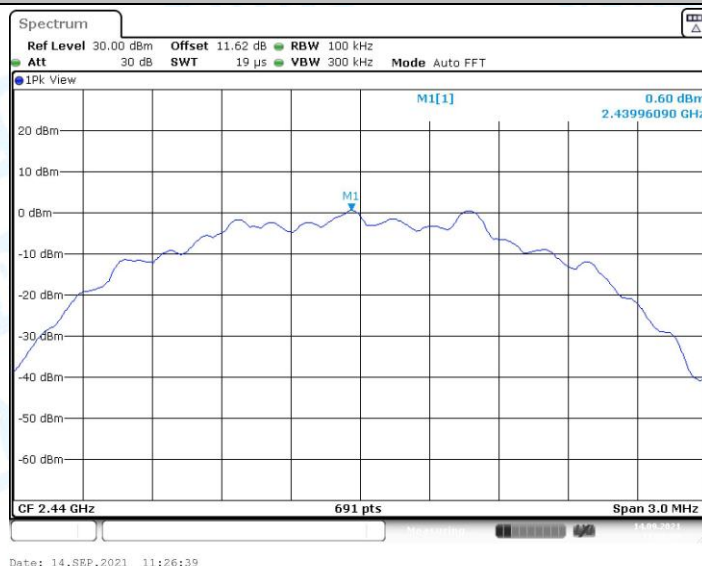
BLE_2M_Ant1_2402_30~1000



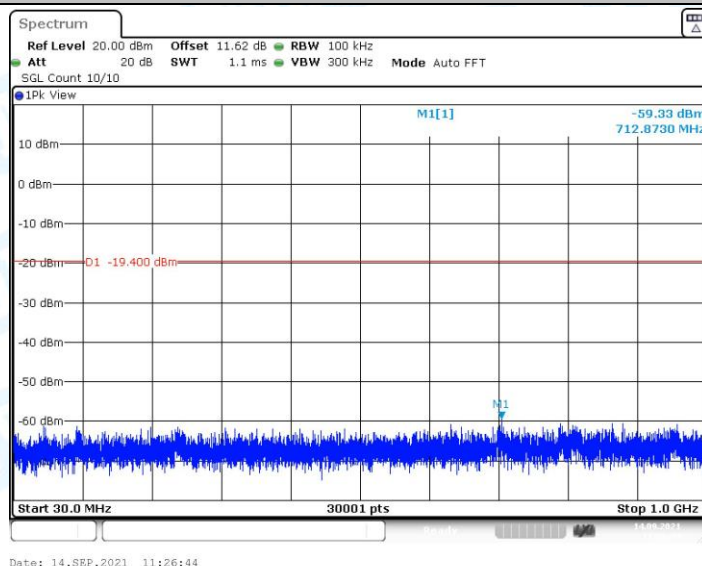
BLE_2M_Ant1_2402_1000~26500



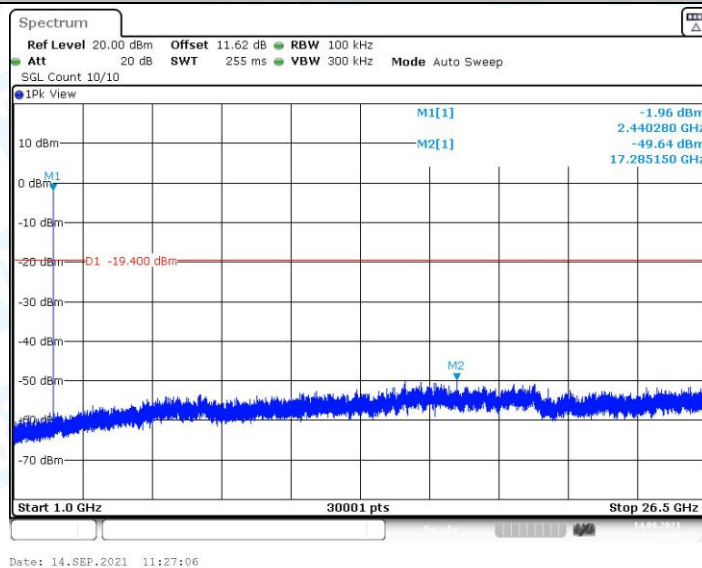
BLE_2M_Ant1_2440_0~Reference



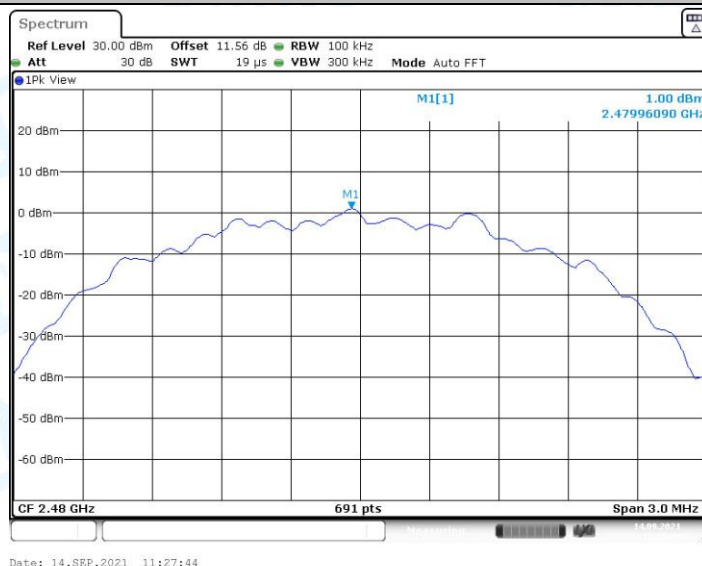
BLE_2M_Ant1_2440_30~1000



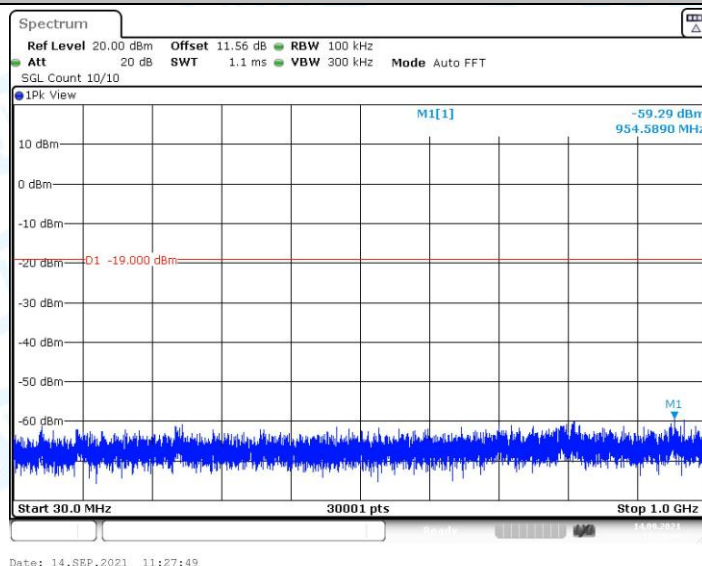
BLE_2M_Ant1_2440_1000~26500



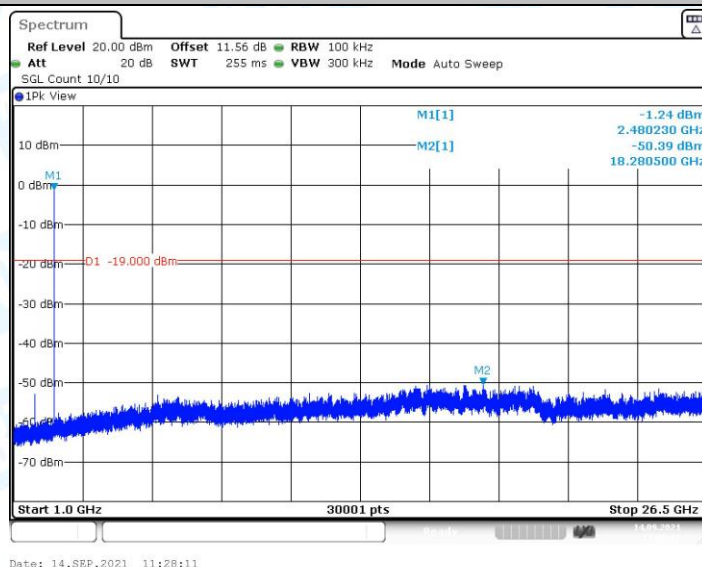
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

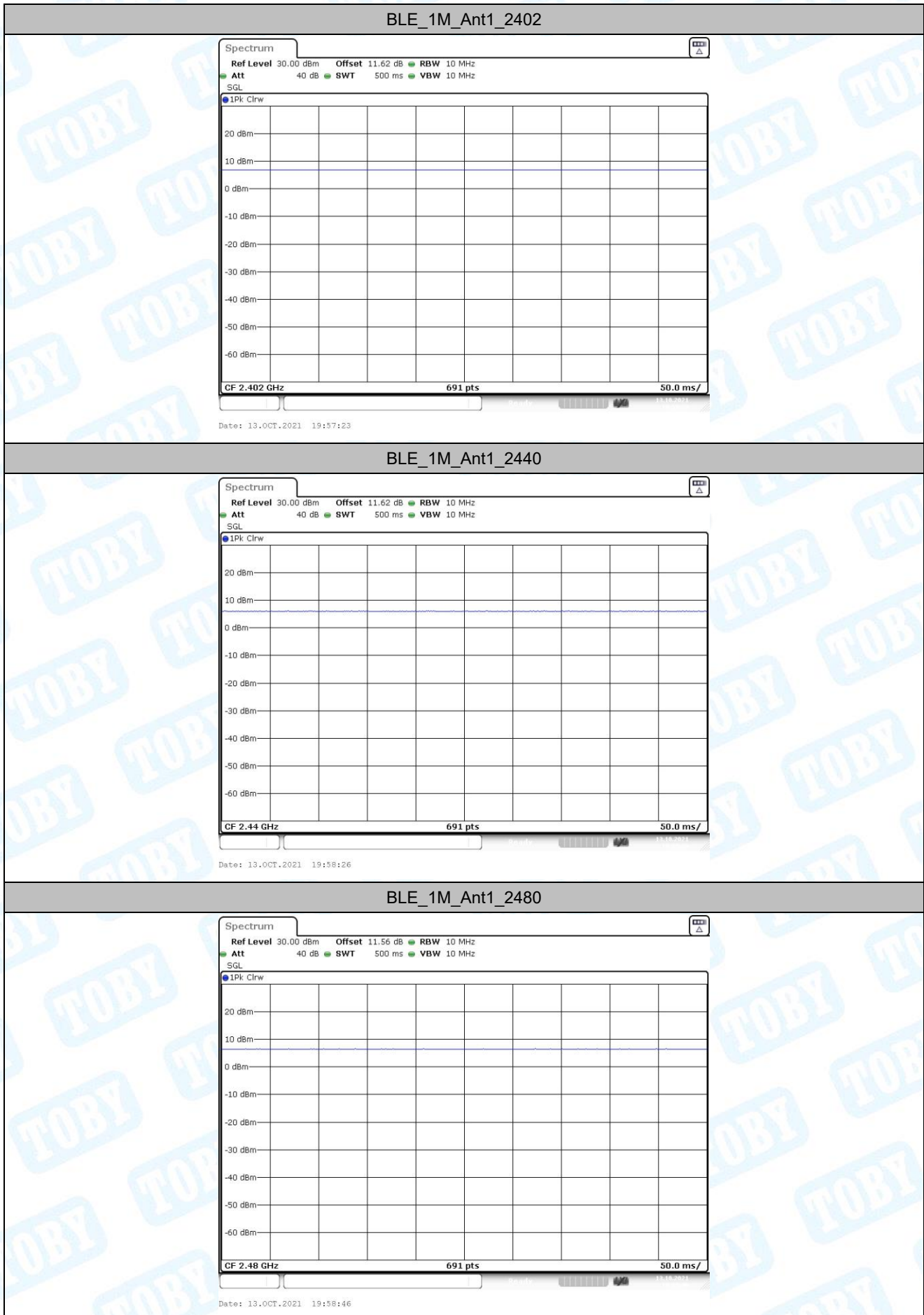


7. Duty Cycle

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	---	PASS
		2440	0.00	0.00	100	---	PASS
		2480	0.00	0.00	100	---	PASS
BLE_2M	Ant1	2402	0.00	0.00	100	---	PASS
		2440	0.00	0.00	100	---	PASS
		2480	0.00	0.00	100	---	PASS

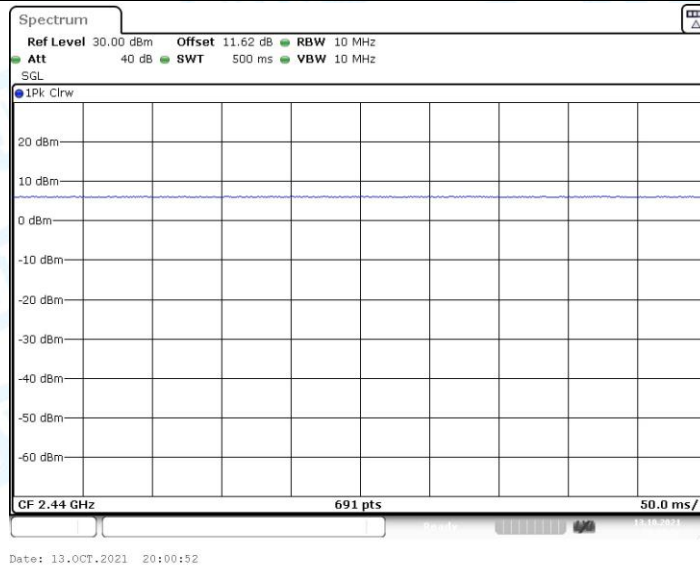
7.2.Test Graphs



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



8. Emissions in Restricted Bands

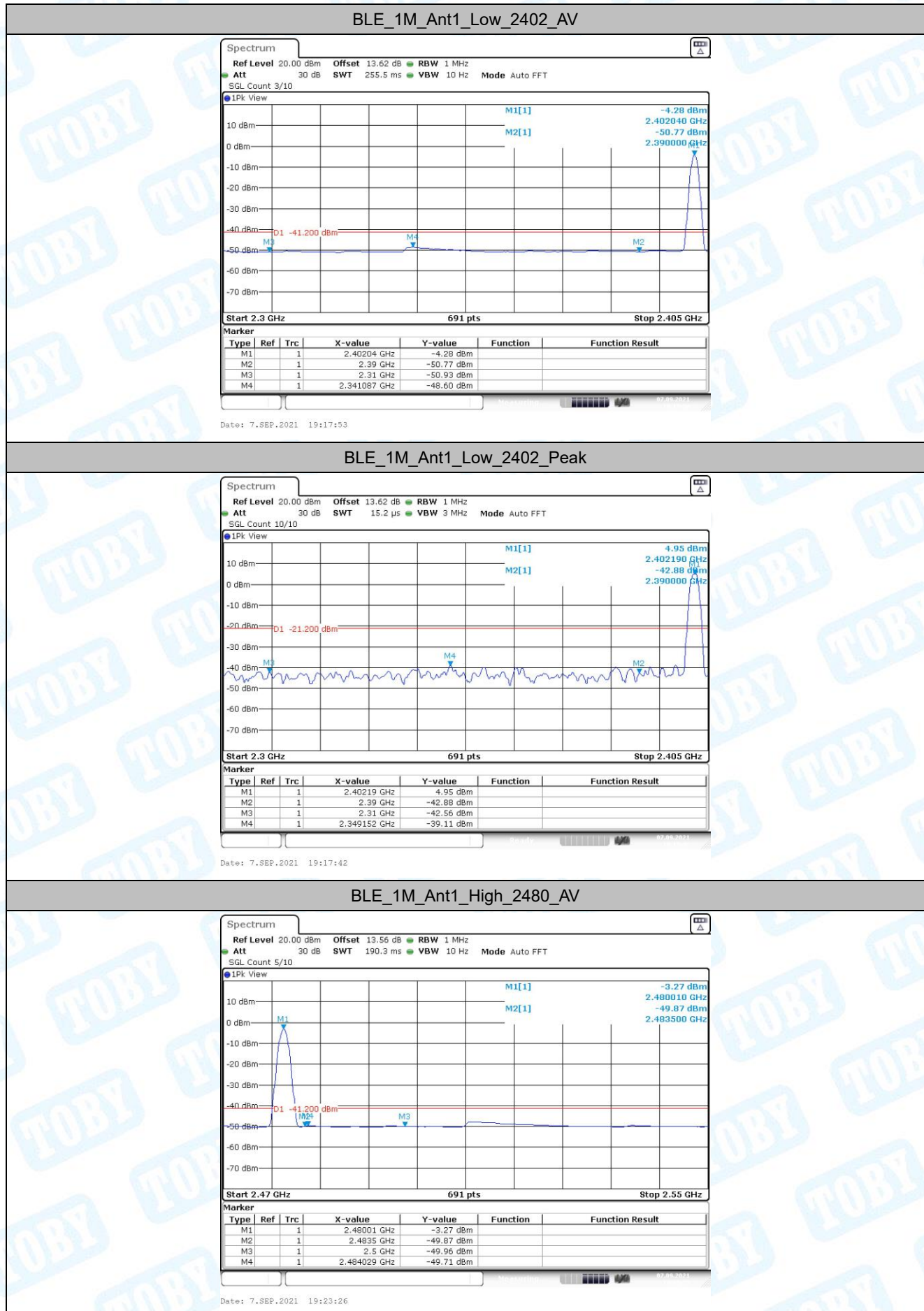
8.1. Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-50.93	≤-41.20	PASS
				AV	2341.087	-48.6	≤-41.20	PASS
				AV	2390.000	-50.77	≤-41.20	PASS
				Peak	2310.000	-42.56	≤-21.20	PASS
				Peak	2349.152	-39.11	≤-21.20	PASS
				Peak	2390.000	-42.88	≤-21.20	PASS
		High	2480	AV	2483.500	-49.87	≤-41.20	PASS
				AV	2484.029	-49.71	≤-41.20	PASS
				AV	2500.000	-49.96	≤-41.20	PASS
				Peak	2483.500	-43.85	≤-21.20	PASS
				Peak	2484.261	-40.52	≤-21.20	PASS
				Peak	2500.000	-42.38	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-50.92	≤-41.20	PASS
				AV	2341.087	-48.57	≤-41.20	PASS
				AV	2390.000	-50.77	≤-41.20	PASS
				Peak	2310.000	-46.22	≤-21.20	PASS
				Peak	2341.239	-40.15	≤-21.20	PASS
				Peak	2390.000	-44.5	≤-21.20	PASS
		High	2480	AV	2483.500	-49.57	≤-41.20	PASS
				AV	2483.565	-49.63	≤-41.20	PASS
				AV	2500.000	-50	≤-41.20	PASS
				Peak	2483.500	-44.23	≤-21.20	PASS
				Peak	2491.565	-39.49	≤-21.20	PASS
				Peak	2500.000	-41.81	≤-21.20	PASS

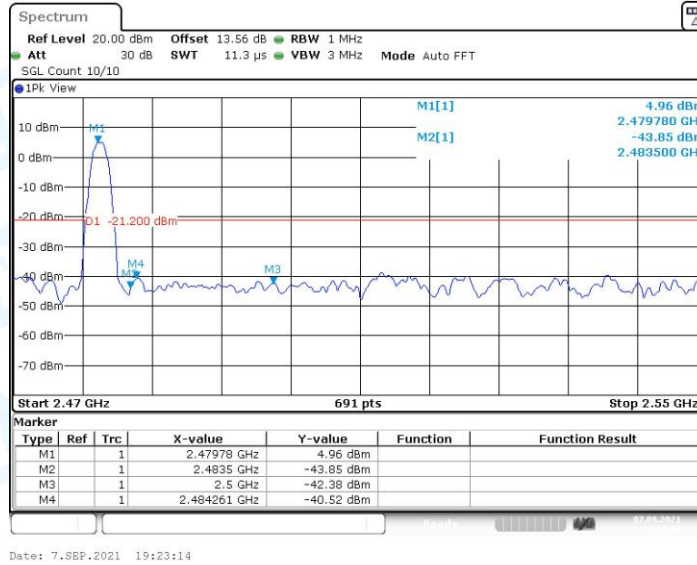
Note:

- The Antenna Gain is compensated in the graph.
- 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.

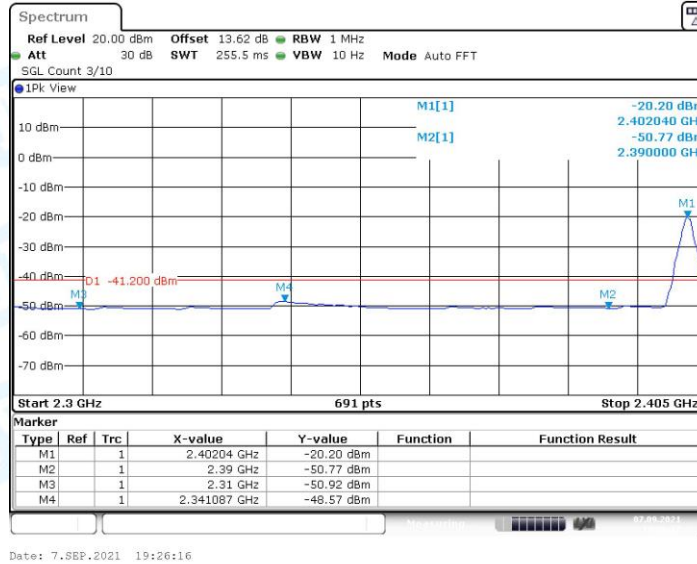
8.2. Test Graphs



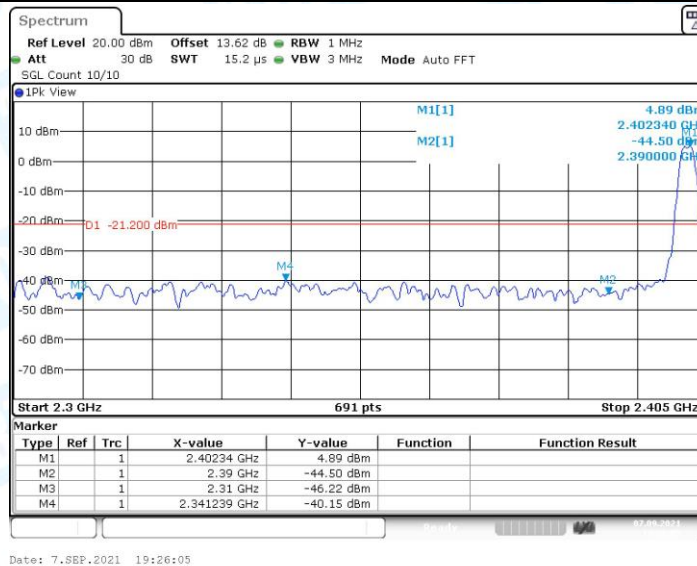
BLE_1M_Ant1_High_2480_Peak



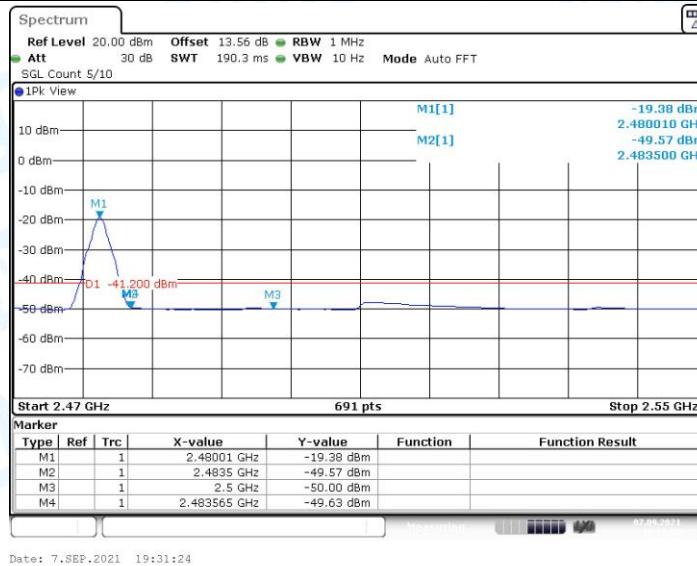
BLE_2M_Ant1_Low_2402_AV



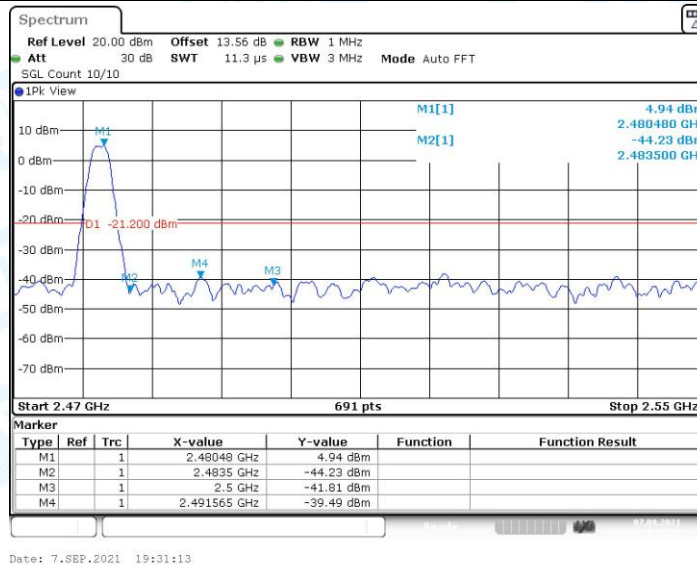
BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak



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