RF Test Data for 2.4G Wi-Fi (Conducted Measurements)

General Description of EUT	
Product Name:	**LED SIGN**
Test Model:	**ASIN:B07B69SYKD**
Sample ID:	**202202-0063_01-02#**
Environmental Conditions	
Temperature:	**25℃**
Relative Humidity:	**55%**
Test Voltage:	**AC 110V**
Test Engineer:	**Huangjianping**
Note: For a more detailed features description, please refer to the report TBR-C-202202-0063-1	

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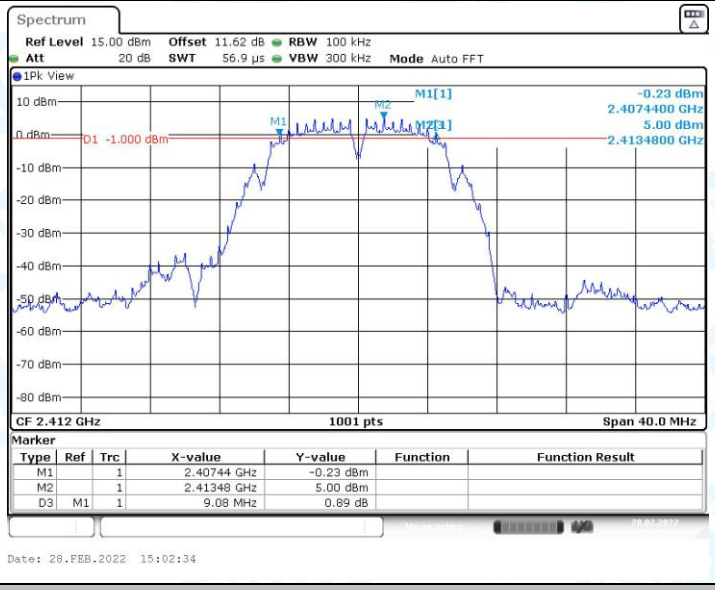
1. DTS Bandwidth

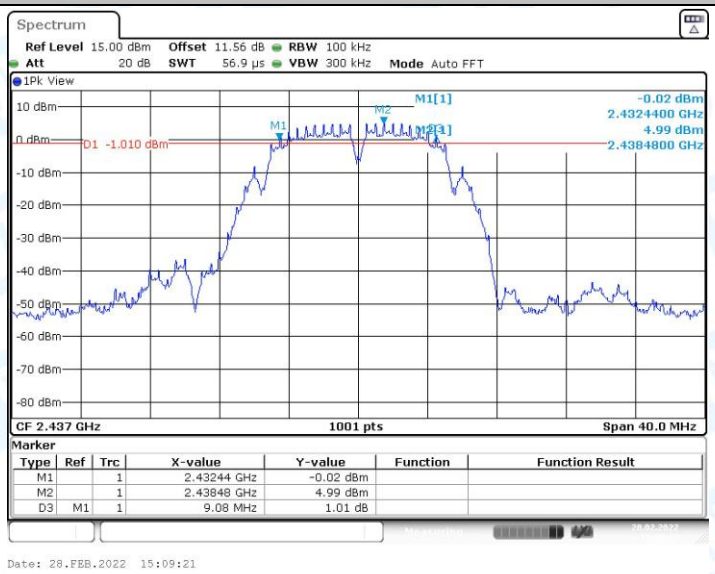
1.1.Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.08	2407.44	2416.52	0.5	PASS
		2437	9.08	2432.44	2441.52	0.5	PASS
		2462	9.08	2457.44	2466.52	0.5	PASS
11G	Ant1	2412	16.36	2403.80	2420.16	0.5	PASS
		2437	16.36	2428.80	2445.16	0.5	PASS
		2462	16.36	2453.80	2470.16	0.5	PASS
11N20SISO	Ant1	2412	17.60	2403.20	2420.80	0.5	PASS
		2437	17.60	2428.20	2445.80	0.5	PASS
		2462	17.60	2453.20	2470.80	0.5	PASS

1.2.Test Graphs



11B_Ant1_2412



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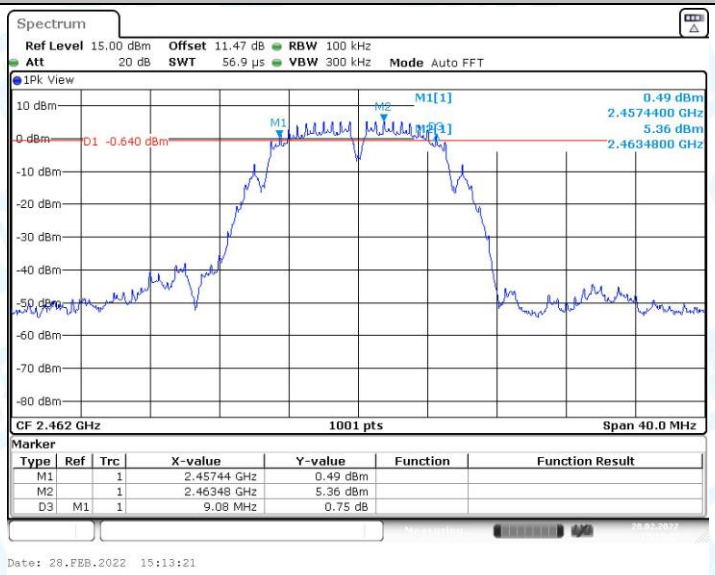
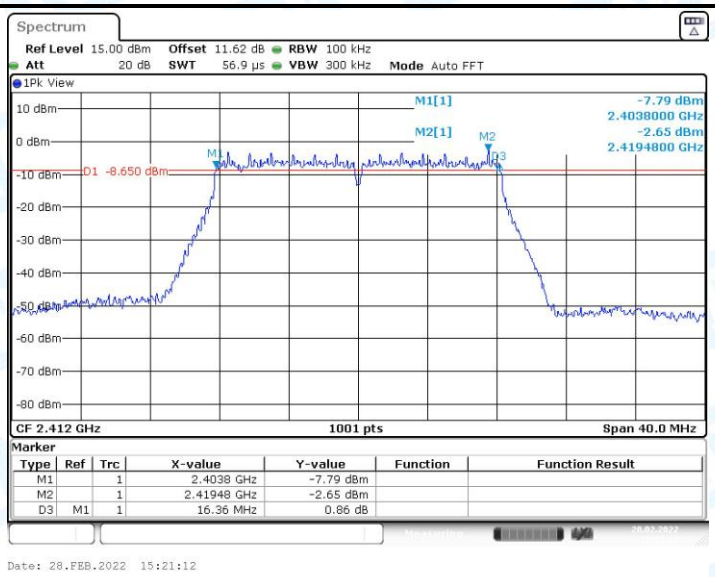


11B_Ant1_2462



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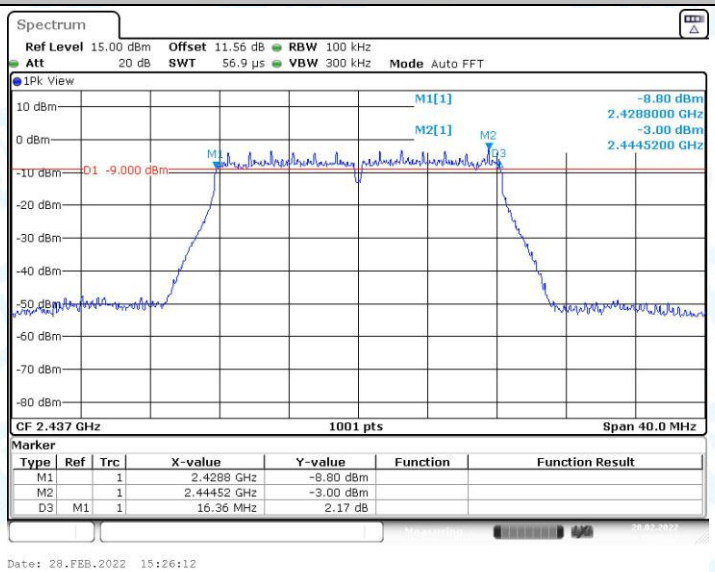

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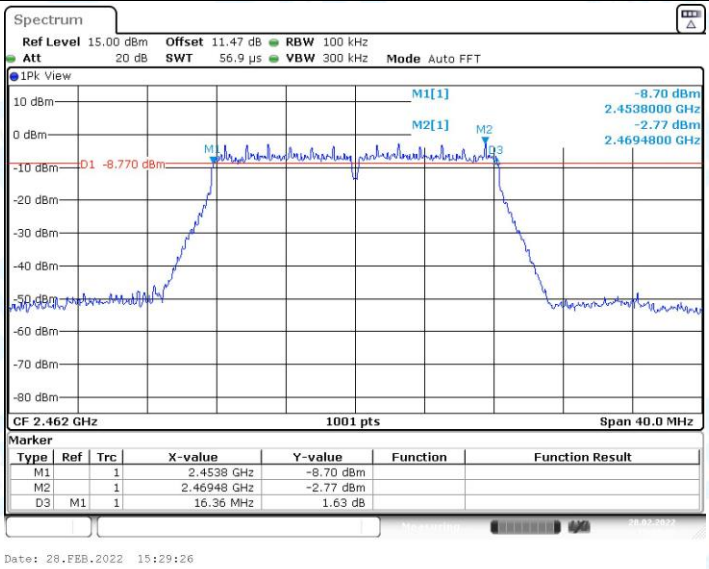

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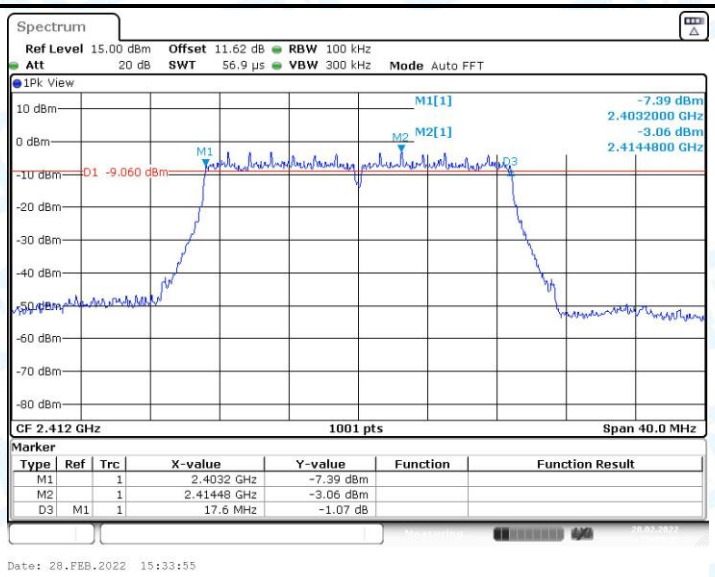
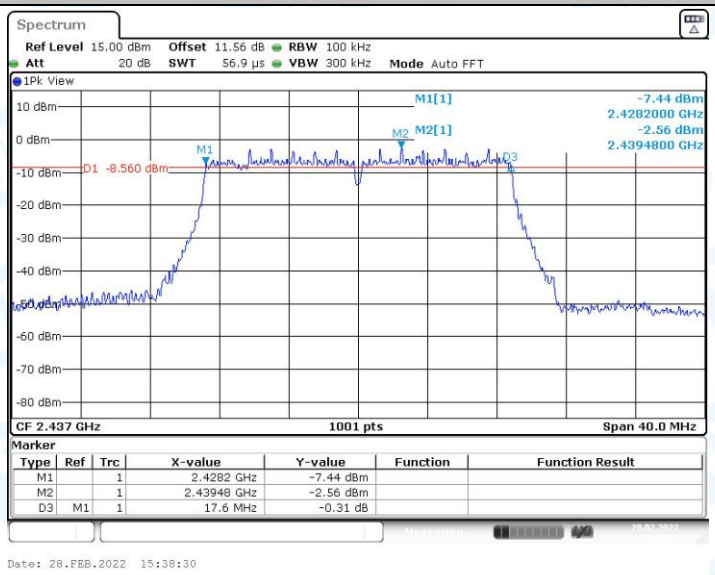


11N20SISO_Ant1_2412



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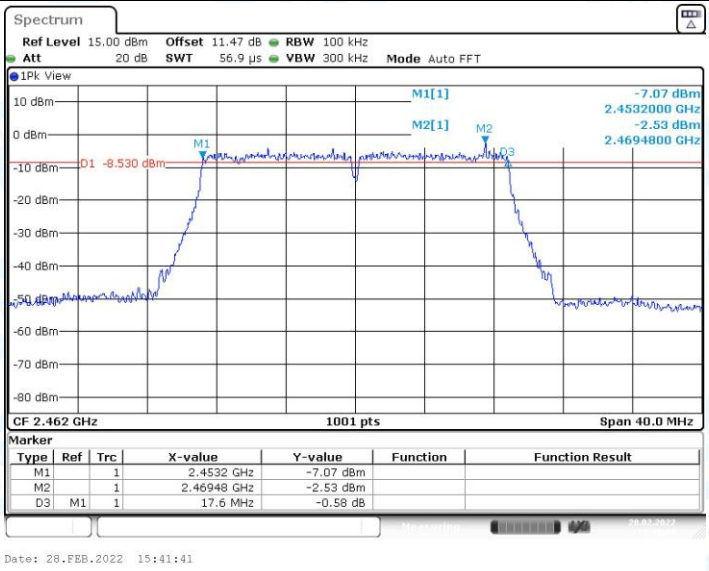


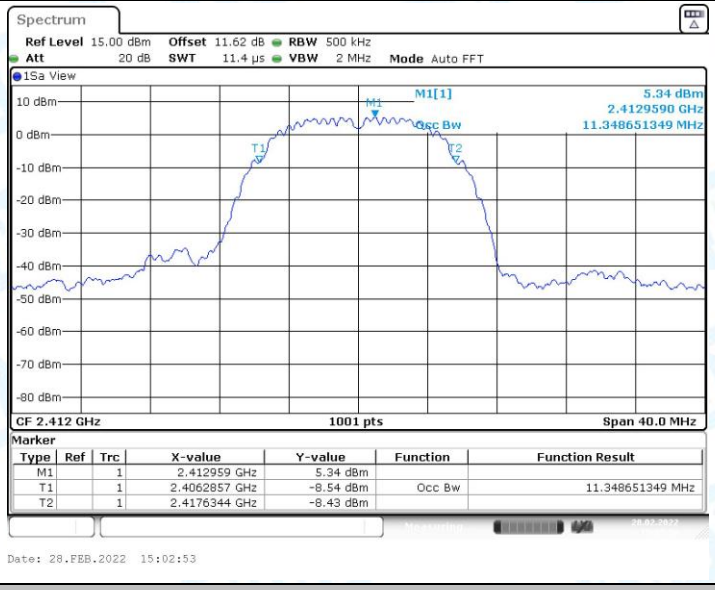
11N20SISO_Ant1_2462

2. Occupied Channel Bandwidth

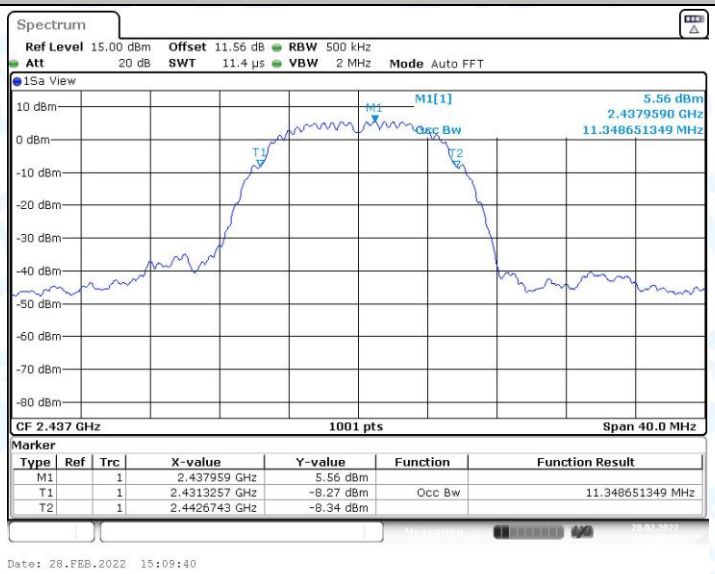
2.1.Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	11.349	2406.286	2417.634	---	---
		2437	11.349	2431.326	2442.674	---	---
		2462	11.309	2456.326	2467.634	---	---
11G	Ant1	2412	16.823	2403.568	2420.392	---	---
		2437	16.943	2428.449	2445.392	---	---
		2462	16.823	2453.568	2470.392	---	---
11N20SISO	Ant1	2412	17.902	2403.089	2420.991	---	---
		2437	17.862	2428.049	2445.911	---	---
		2462	17.822	2453.049	2470.871	---	---

2.2.Test Graphs



11B_Ant1_2412



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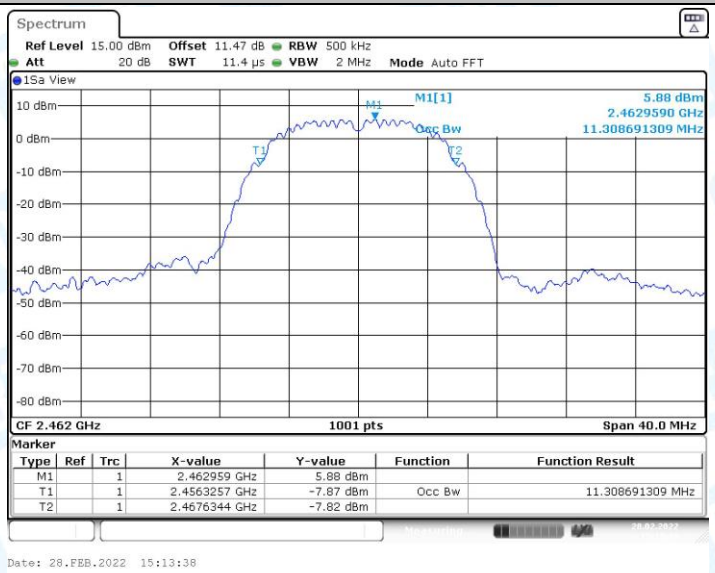

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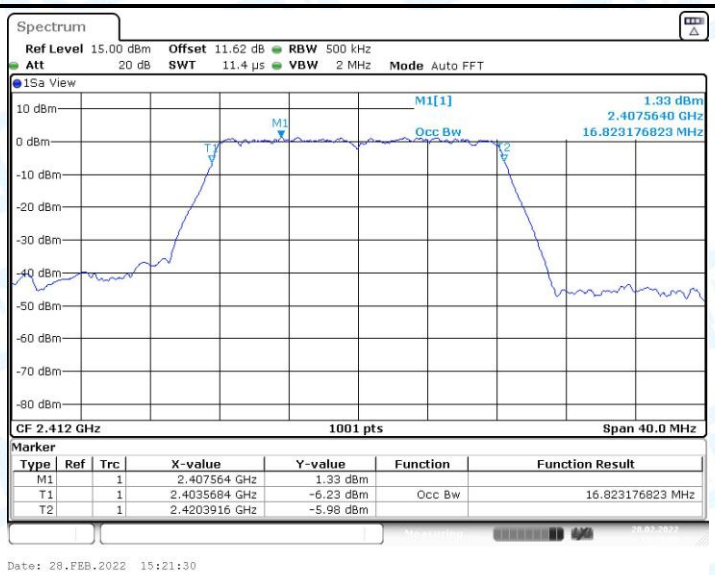

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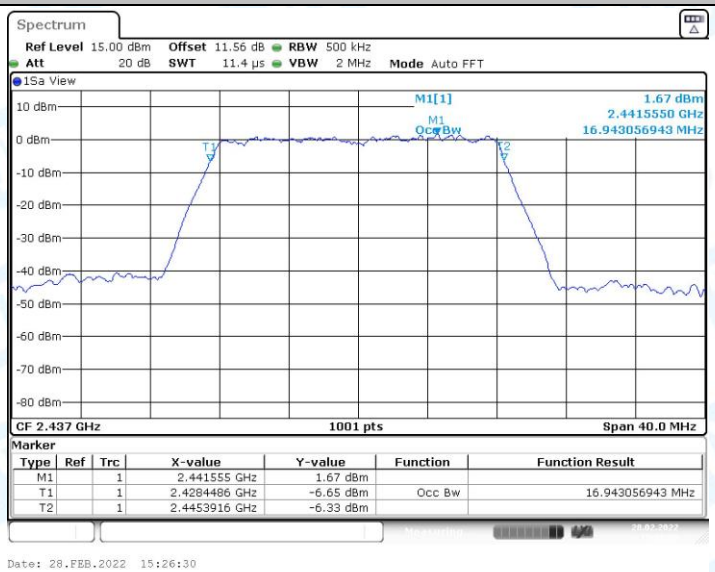
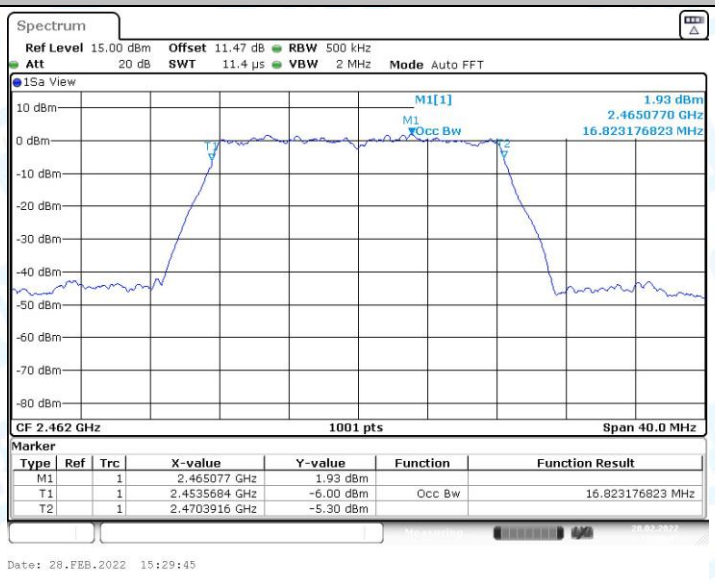
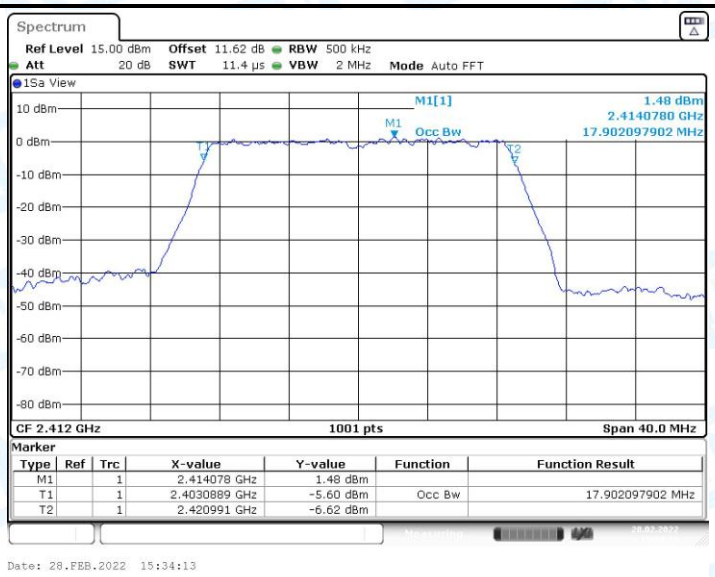


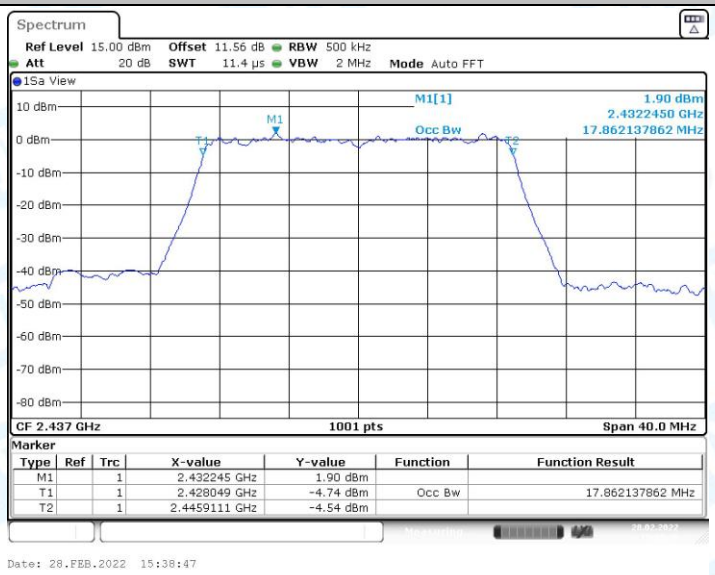
11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



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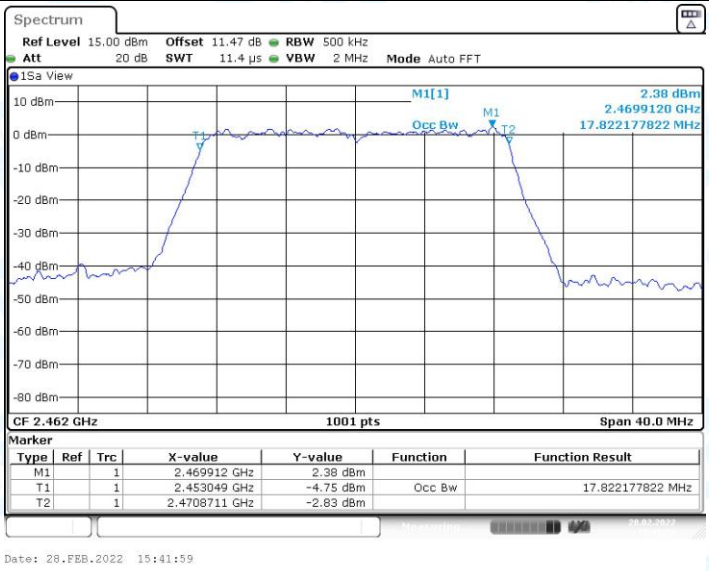


11N20SISO_Ant1_2462

3. Maximum conducted output power

3.1.Test Result

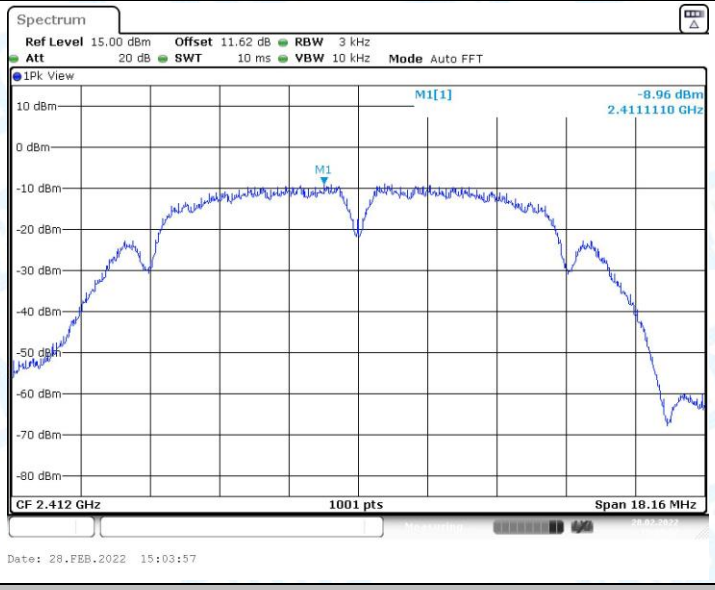
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	16.87	≤30.00	PASS
		2437	17.07	≤30.00	PASS
		2462	17.39	≤30.00	PASS
11G	Ant1	2412	16.88	≤30.00	PASS
		2437	16.67	≤30.00	PASS
		2462	16.94	≤30.00	PASS
11N20SISO	Ant1	2412	16.93	≤30.00	PASS
		2437	16.93	≤30.00	PASS
		2462	17.20	≤30.00	PASS

4. Maximum power spectral density

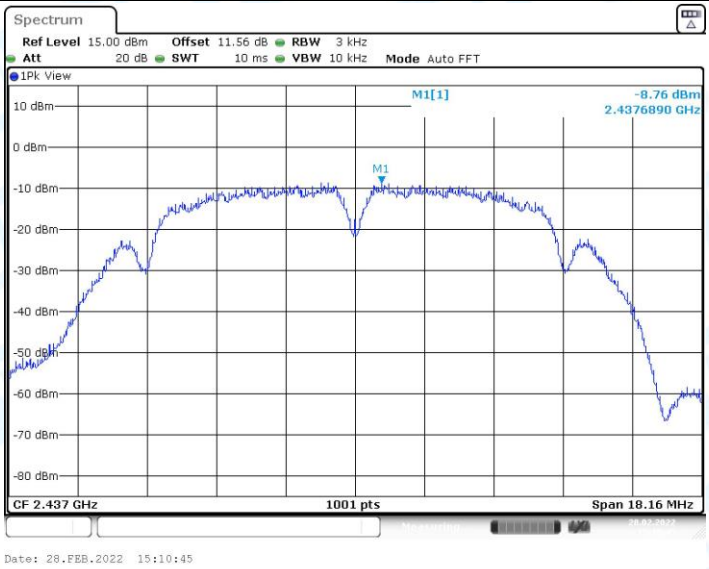
4.1.Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-8.96	≤8.00	PASS
		2437	-8.76	≤8.00	PASS
		2462	-8.54	≤8.00	PASS
11G	Ant1	2412	-14.56	≤8.00	PASS
		2437	-15.08	≤8.00	PASS
		2462	-15.26	≤8.00	PASS
11N20SISO	Ant1	2412	-15.38	≤8.00	PASS
		2437	-13.72	≤8.00	PASS
		2462	-14.58	≤8.00	PASS

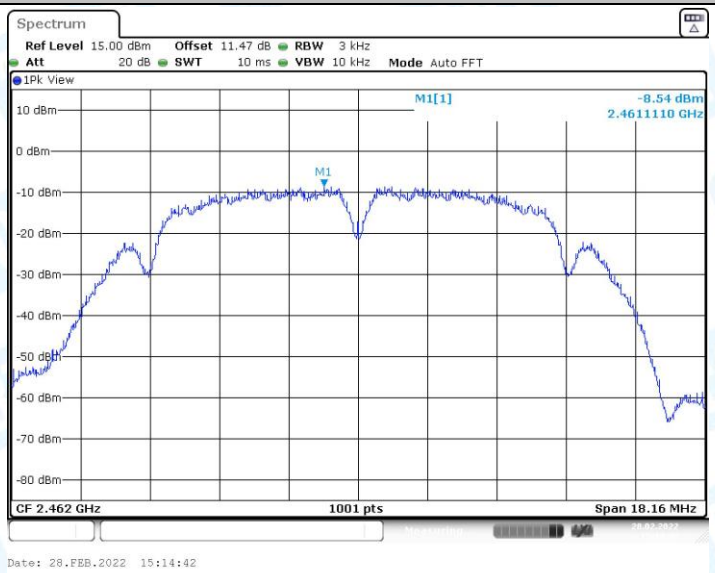
4.2.Test Graphs



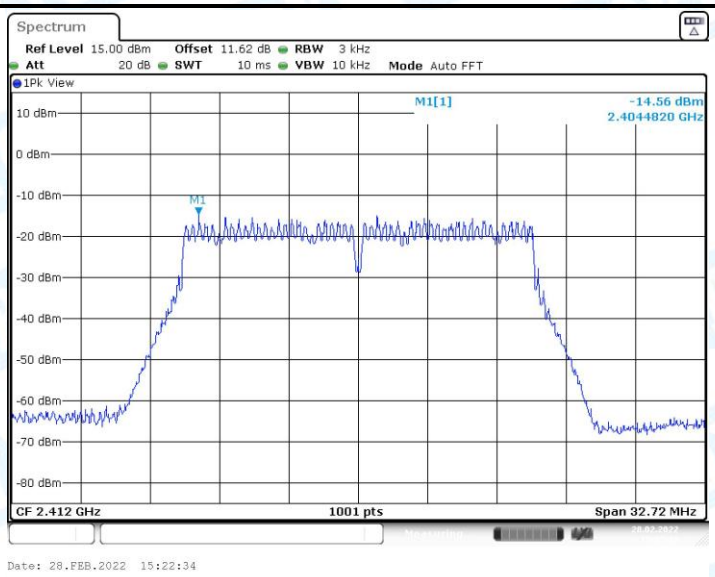
11B_Ant1_2412



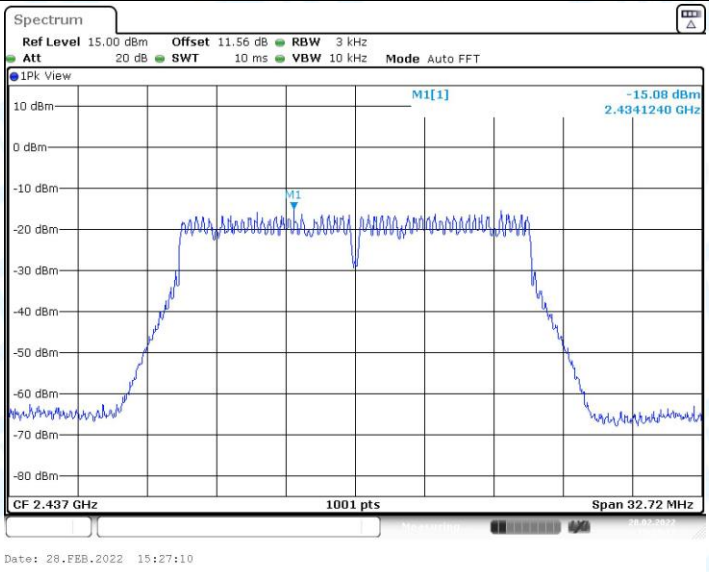
11B_Ant1_2437



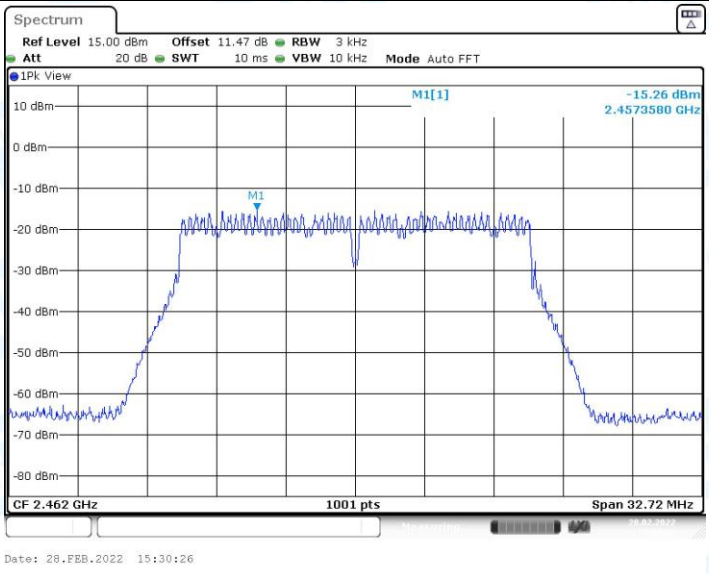
11B_Ant1_2462



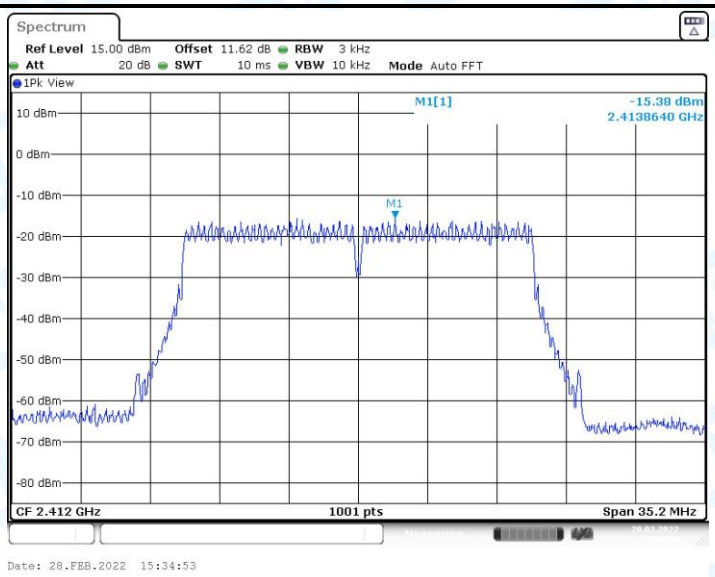
11G_Ant1_2412



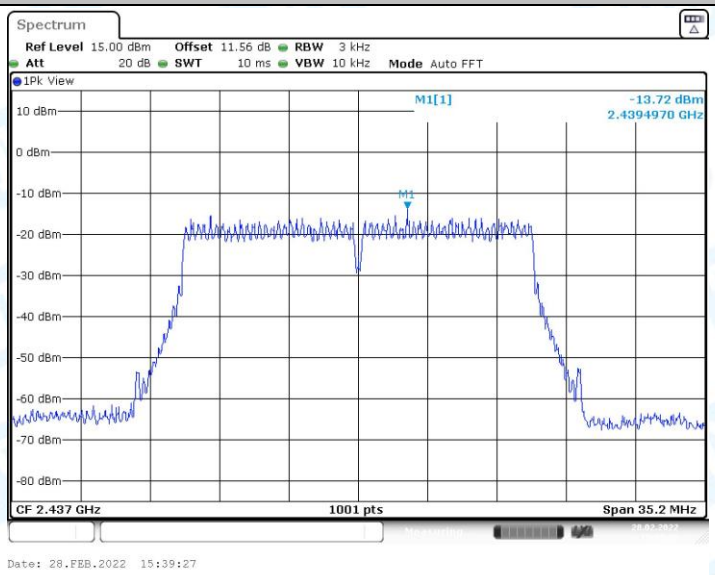
11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



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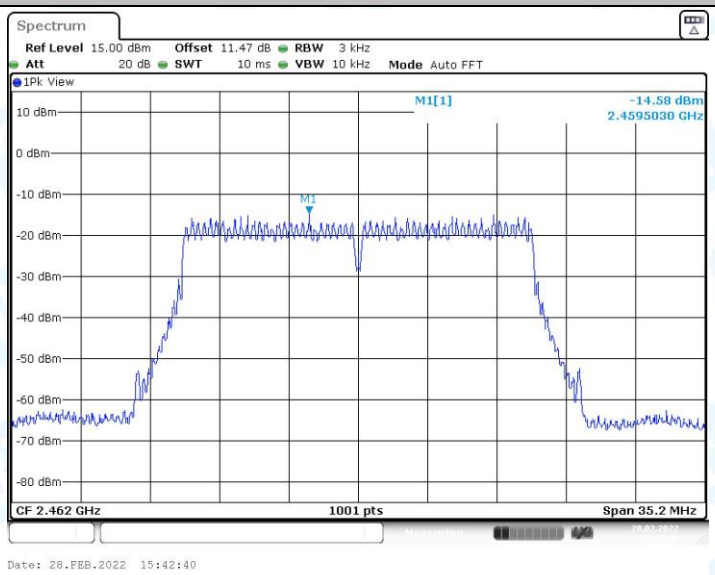


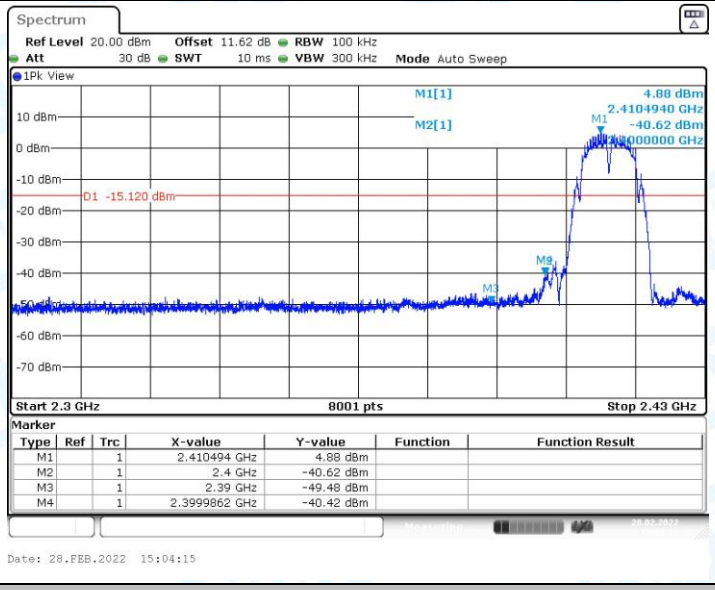
11N20SISO_Ant1_2462

5. Band edge measurements

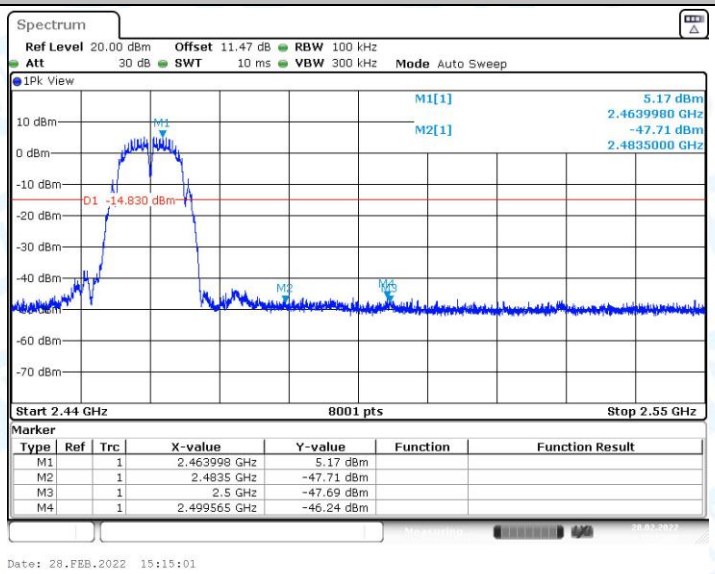
5.1.Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.88	-40.42	≤-15.12	PASS
		High	2462	5.17	-46.24	≤-14.83	PASS
11G	Ant1	Low	2412	-3.04	-43.86	≤-23.04	PASS
		High	2462	-2.89	-46.51	≤-22.89	PASS
11N20SISO	Ant1	Low	2412	-2.67	-44.27	≤-22.67	PASS
		High	2462	-2.29	-47.25	≤-22.29	PASS

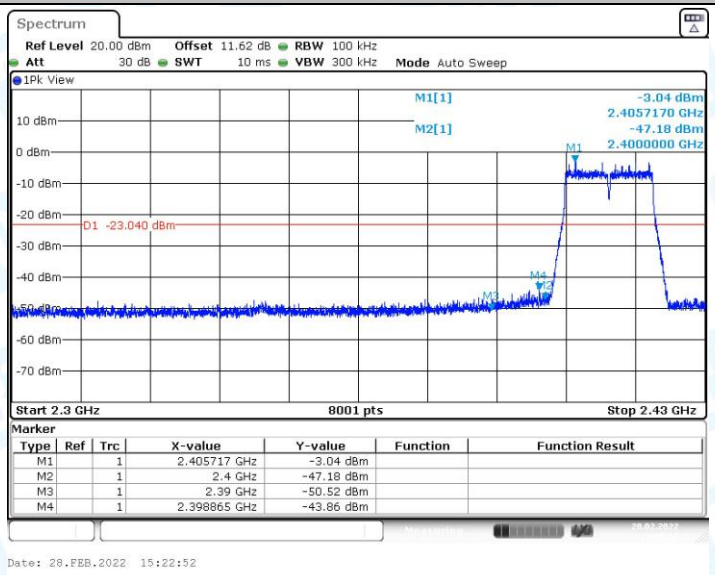
5.2.Test Graphs



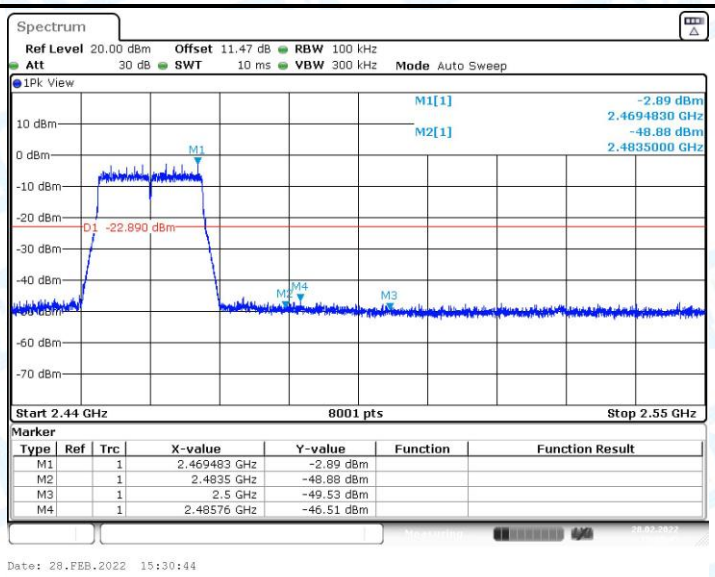
11B_Ant1_Low_2412



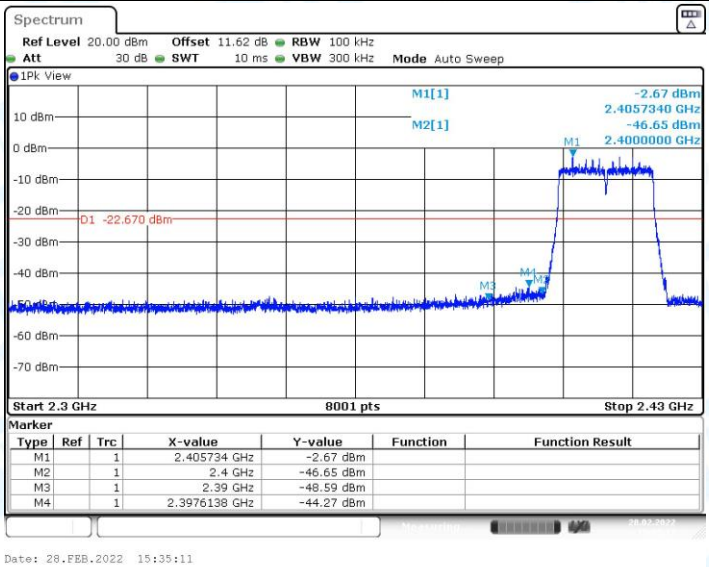
11B_Ant1_High_2462



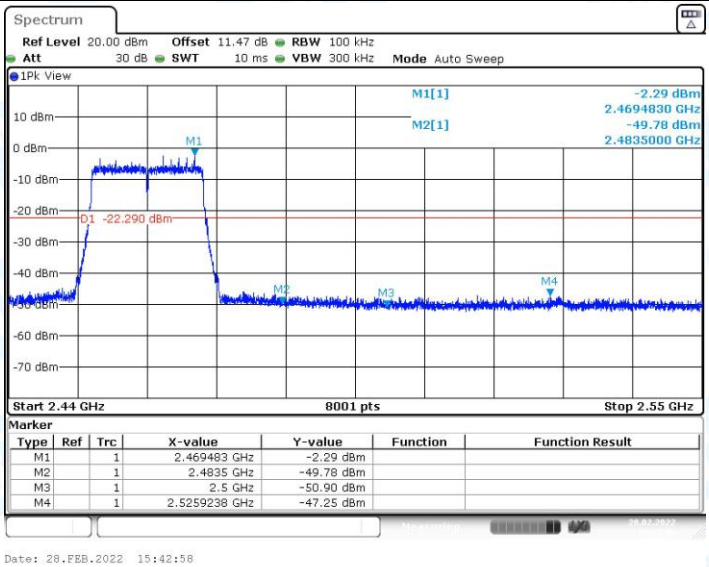
11G_Ant1_Low_2412



11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462

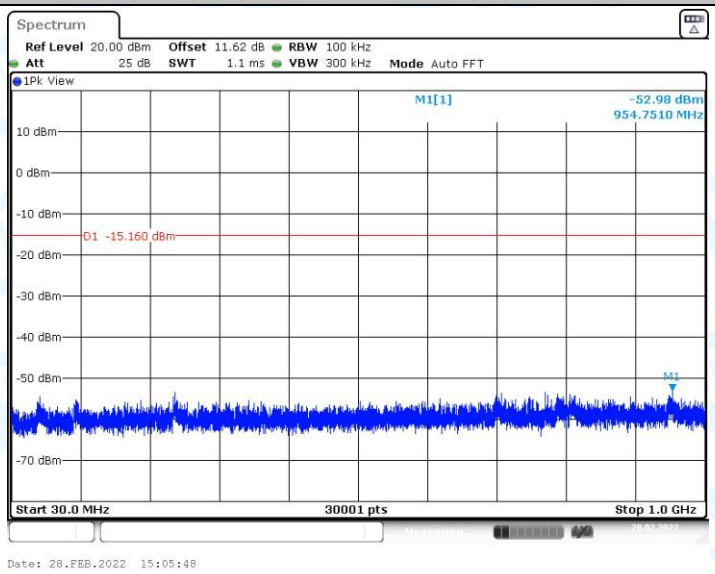
6. Conducted Spurious Emission

6.1.Test Result

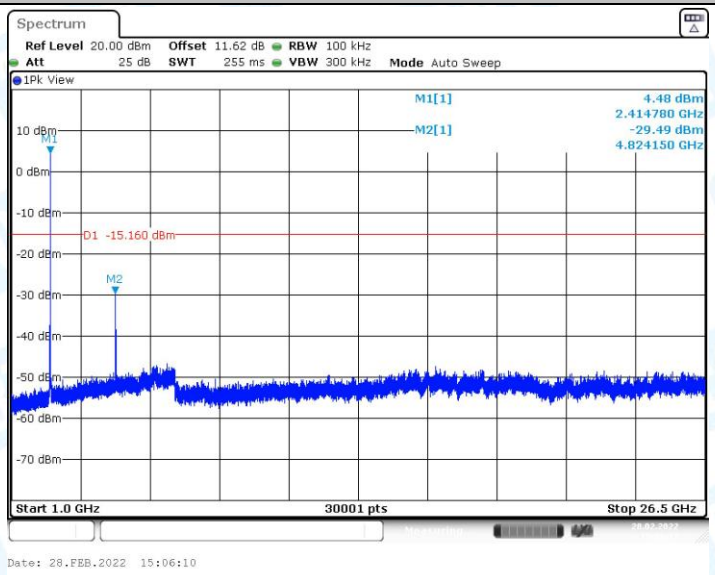
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	4.84	4.84	---	PASS
			30~1000	4.84	-52.98	≤-15.16	PASS
			1000~26500	4.84	-29.49	≤-15.16	PASS
		2437	Reference	5.16	5.16	---	PASS
			30~1000	5.16	-53.3	≤-14.84	PASS
			1000~26500	5.16	-28.34	≤-14.84	PASS
		2462	Reference	5.04	5.04	---	PASS
			30~1000	5.04	-53.32	≤-14.96	PASS
			1000~26500	5.04	-28.07	≤-14.96	PASS
11G	Ant1	2412	Reference	-2.63	-2.63	---	PASS
			30~1000	-2.63	-52.69	≤-22.63	PASS
			1000~26500	-2.63	-46.53	≤-22.63	PASS
		2437	Reference	-3.60	-3.60	---	PASS
			30~1000	-3.60	-53.19	≤-23.6	PASS
			1000~26500	-3.60	-45.96	≤-23.6	PASS
		2462	Reference	-2.59	-2.59	---	PASS
			30~1000	-2.59	-53.11	≤-22.59	PASS
			1000~26500	-2.59	-46	≤-22.59	PASS
11N20SISO	Ant1	2412	Reference	-2.69	-2.69	---	PASS
			30~1000	-2.69	-52.21	≤-22.69	PASS
			1000~26500	-2.69	-46.73	≤-22.69	PASS
		2437	Reference	-2.85	-2.85	---	PASS
			30~1000	-2.85	-53.32	≤-22.85	PASS
			1000~26500	-2.85	-46.43	≤-22.85	PASS
		2462	Reference	-2.15	-2.15	---	PASS
			30~1000	-2.15	-53.54	≤-22.15	PASS
			1000~26500	-2.15	-46.14	≤-22.15	PASS

6.2.Test Graphs

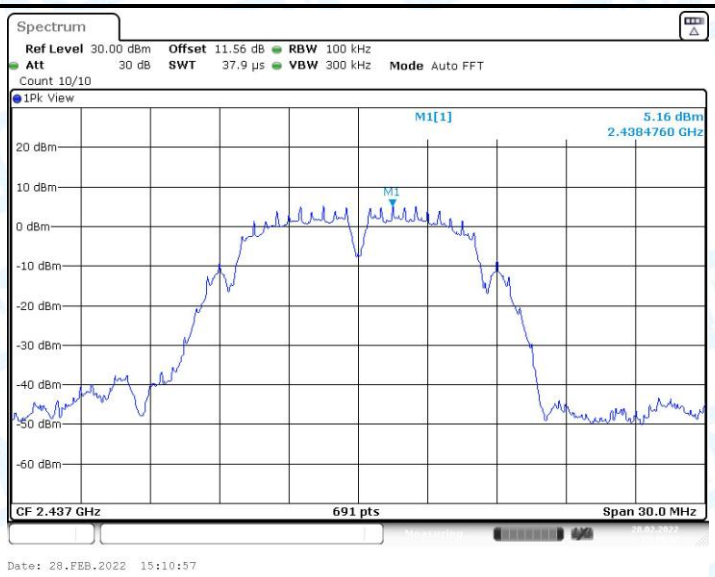
11B_Ant1_2412_0~Reference



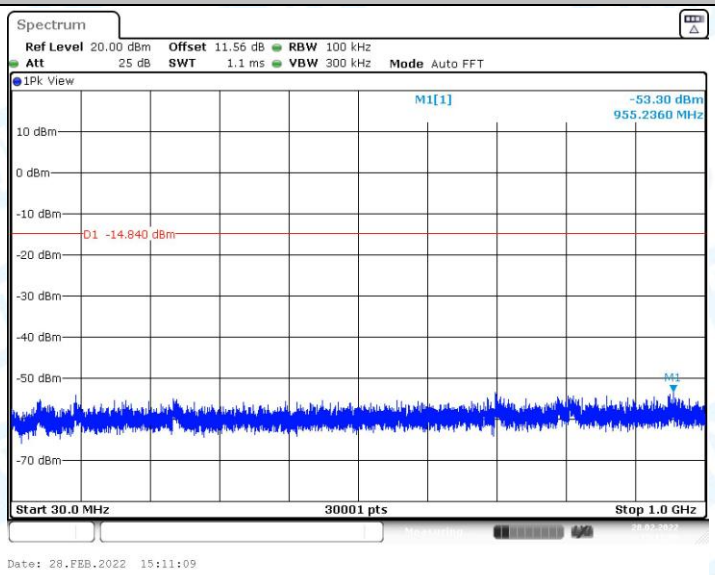
11B_Ant1_2412_30~1000



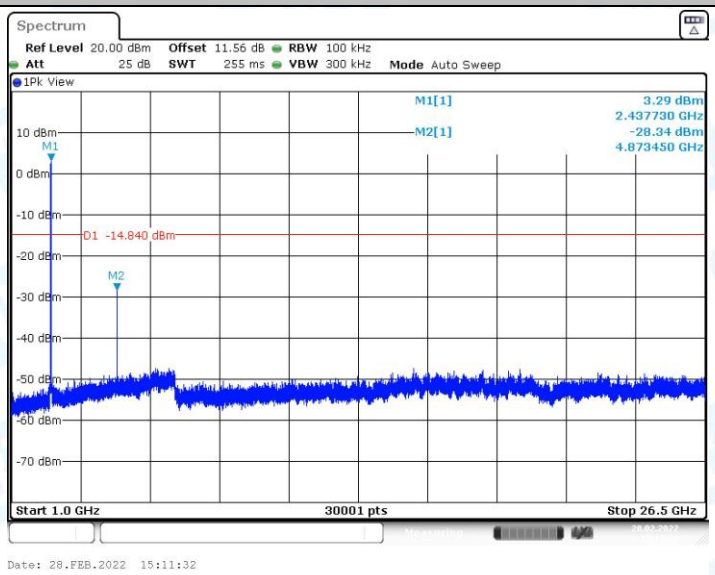
11B_Ant1_2412_1000~26500



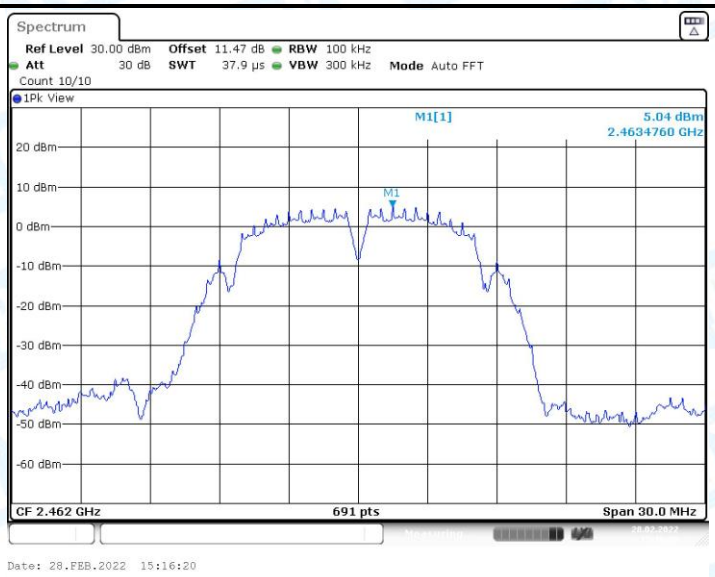
11B_Ant1_2437_0~Reference



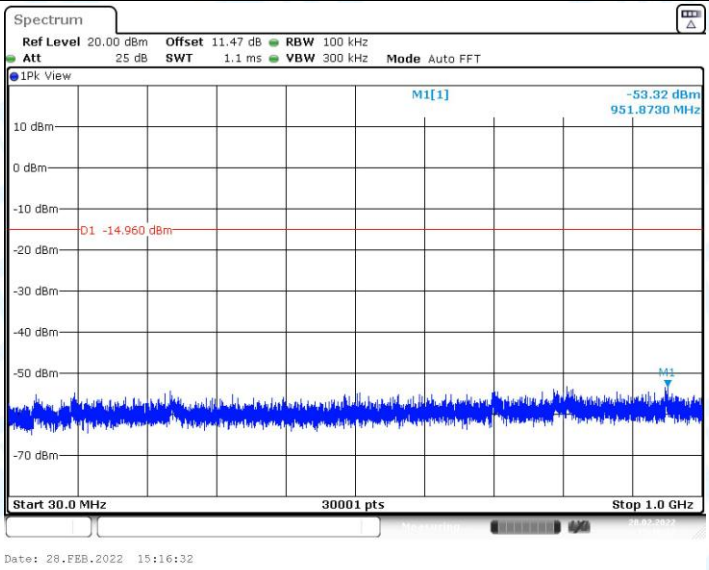
11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference



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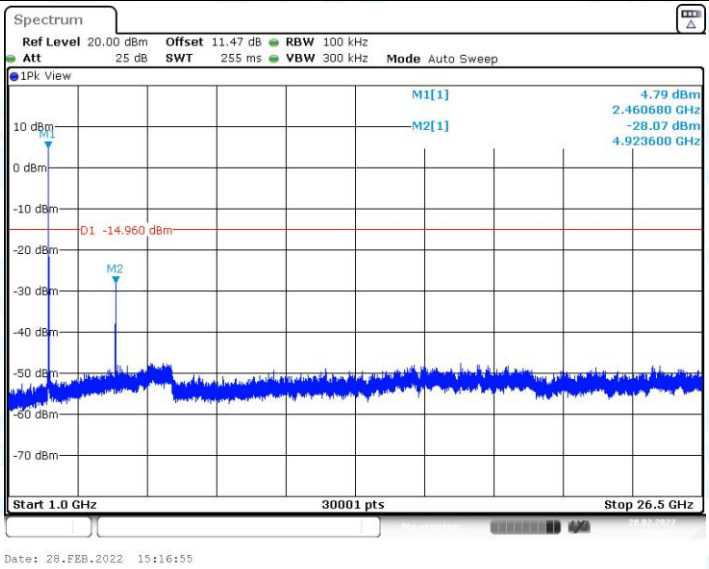

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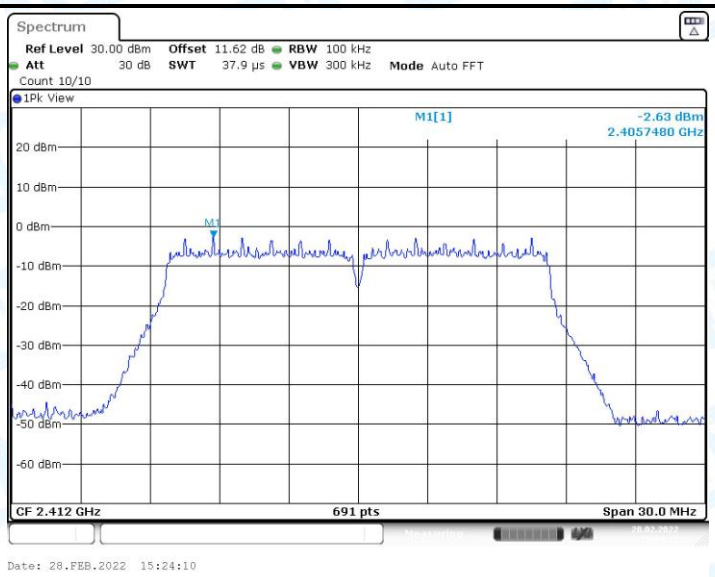
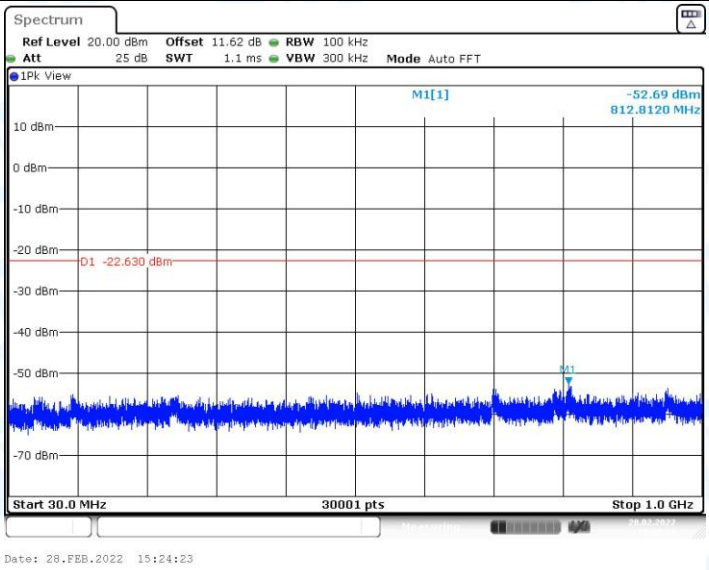


11G_Ant1_2412_0~Reference



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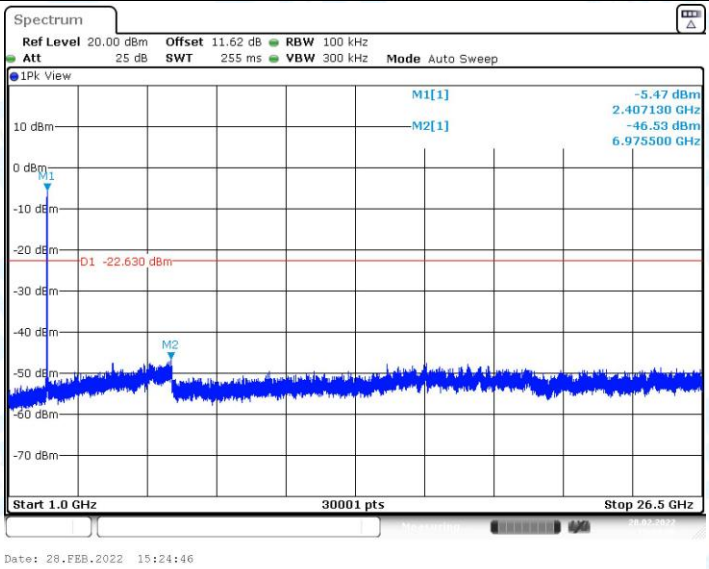

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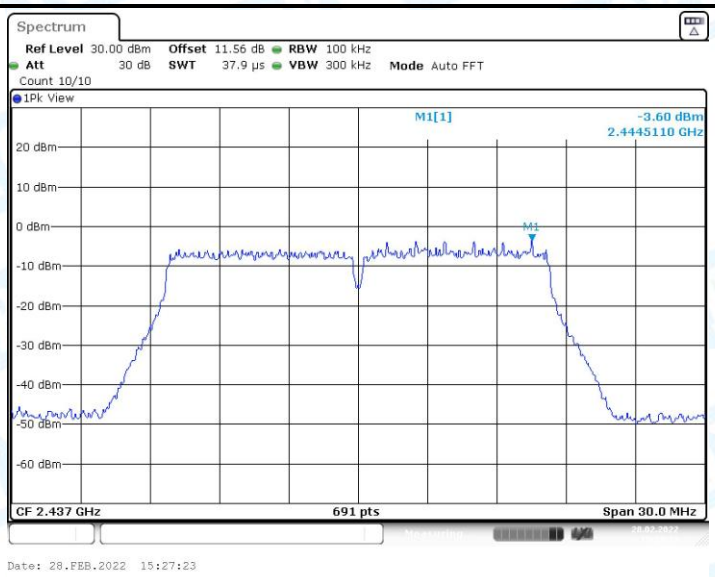

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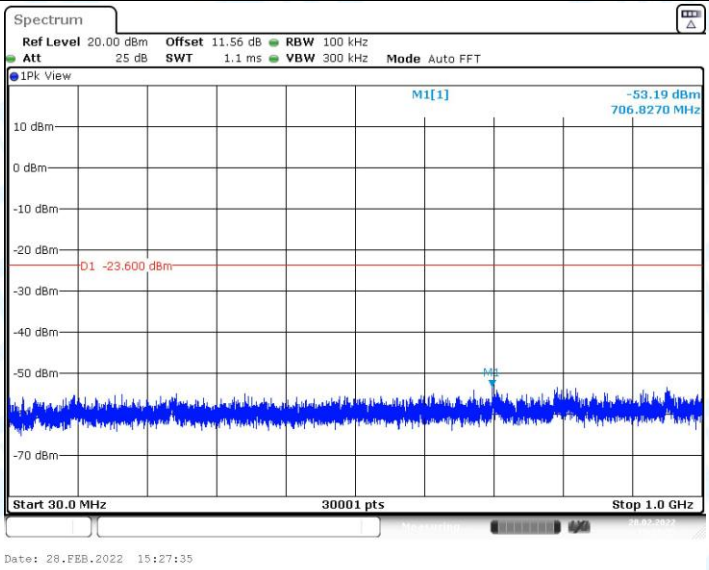

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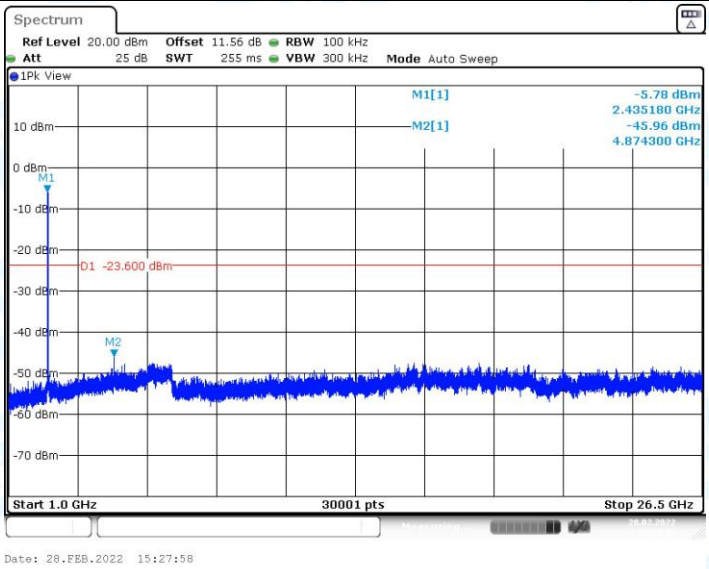

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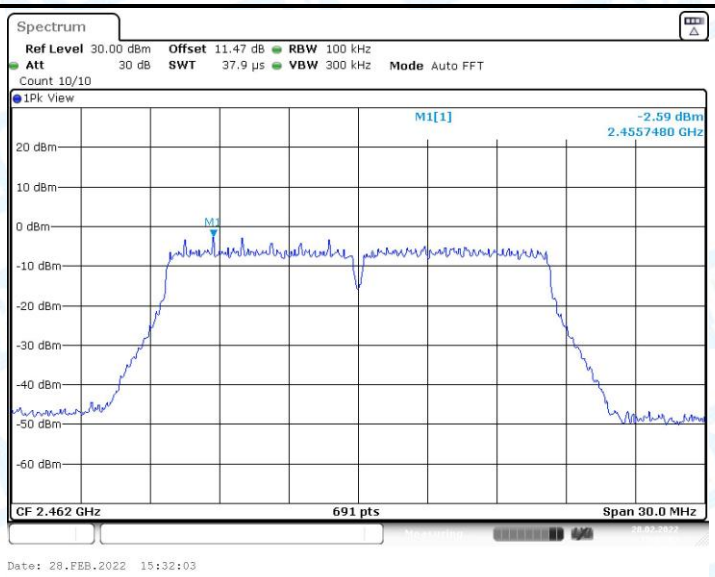

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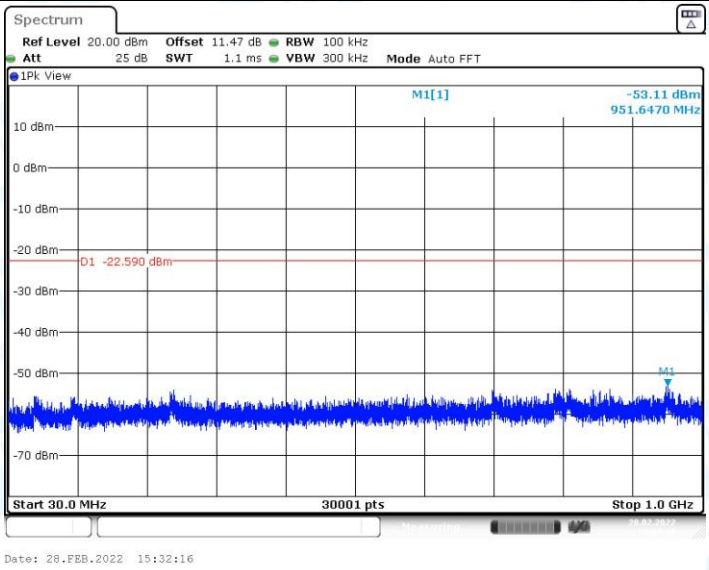

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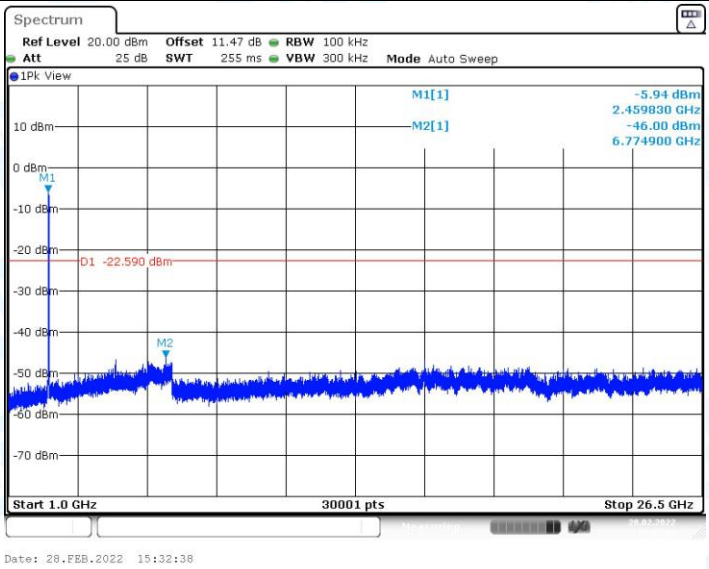
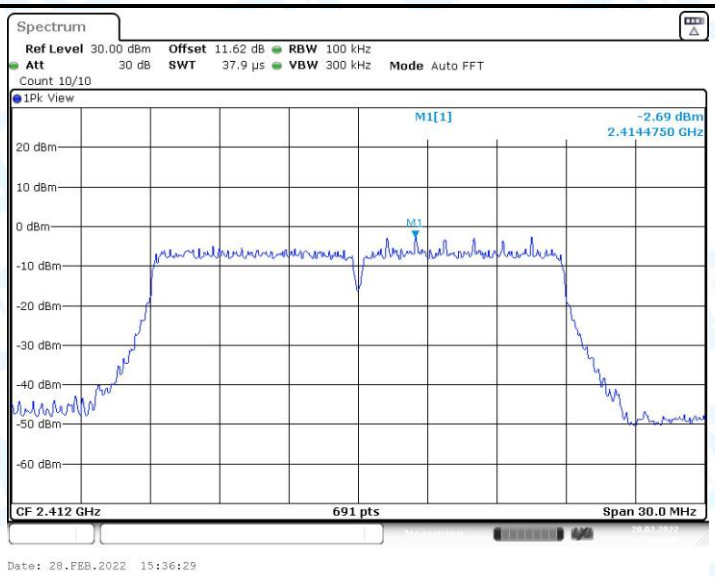
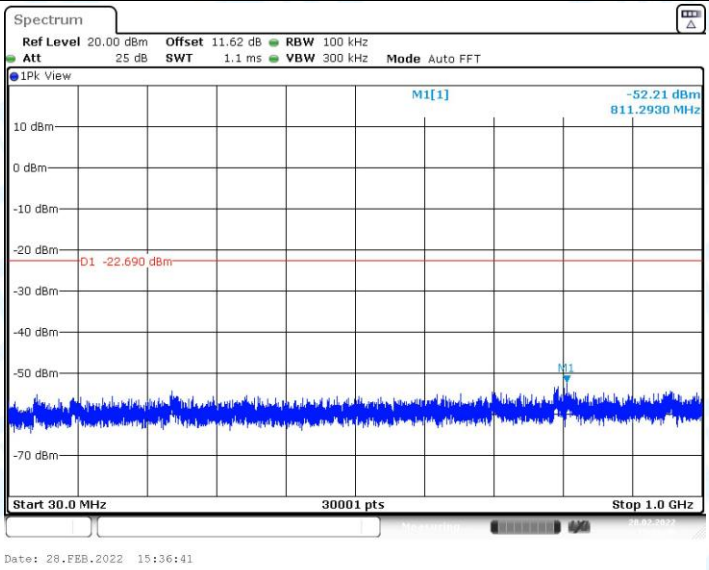


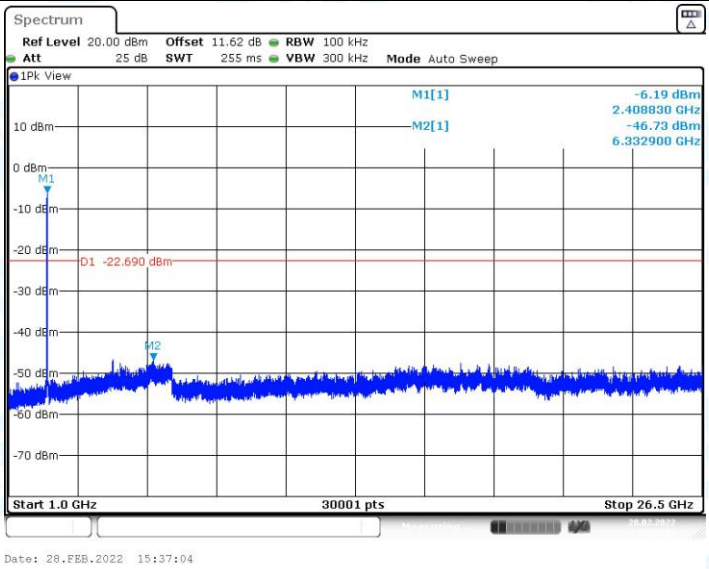
11G_Ant1_2462_1000~26500



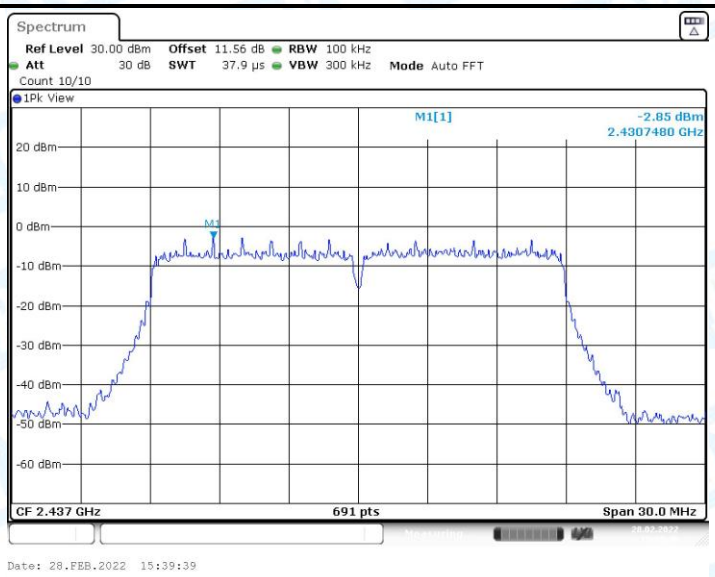
11N20SISO_Ant1_2412_0~Reference



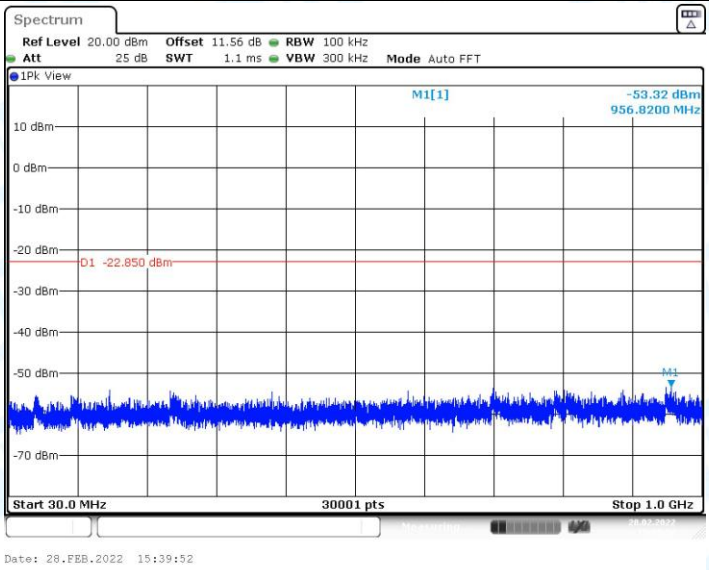
11N20SISO_Ant1_2412_30~1000



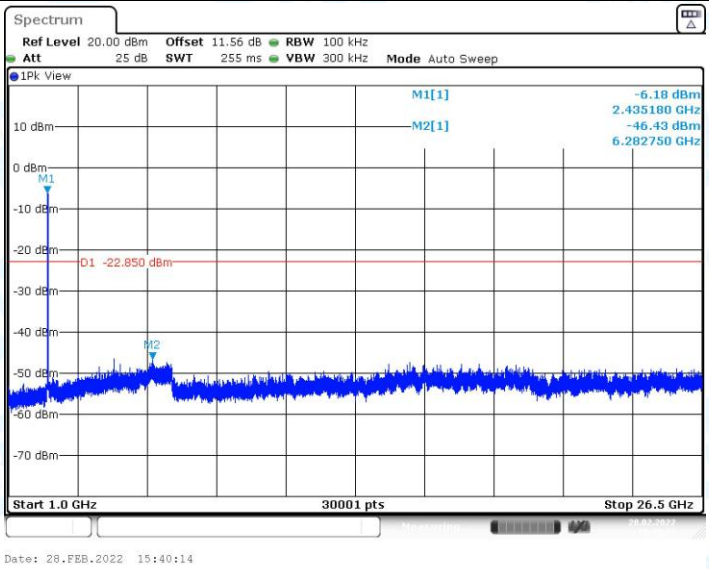
11N20SISO_Ant1_2412_1000~26500



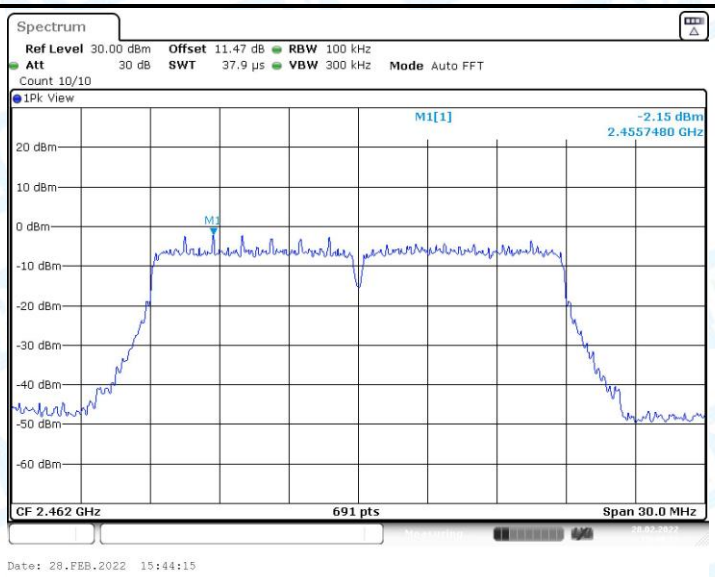
11N20SISO_Ant1_2437_0~Reference



11N20SISO_Ant1_2437_30~1000



11N20SISO_Ant1_2437_1000~26500



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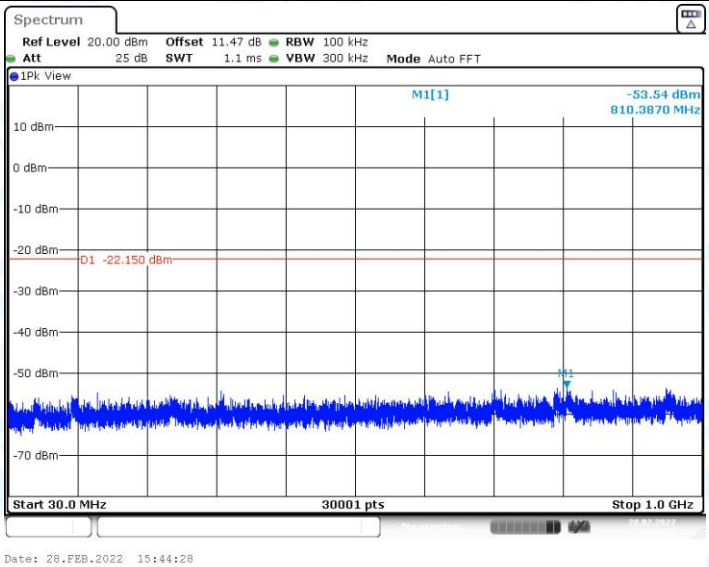
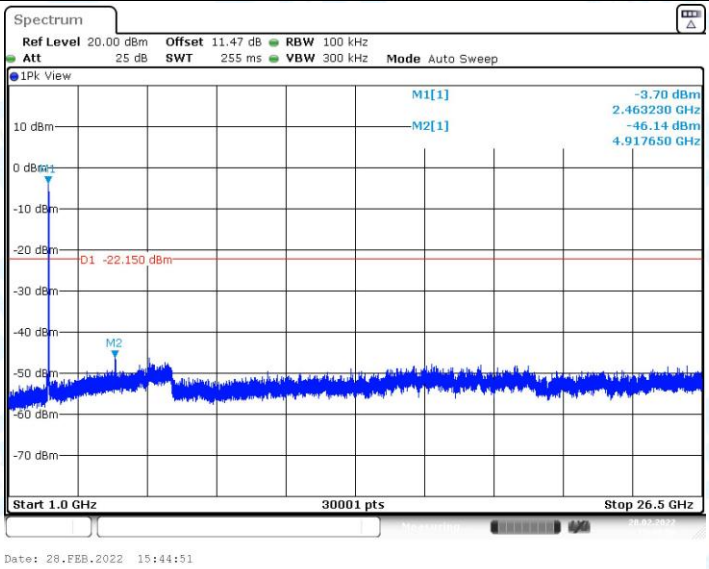


11N20SISO_Ant1_2462_30~1000



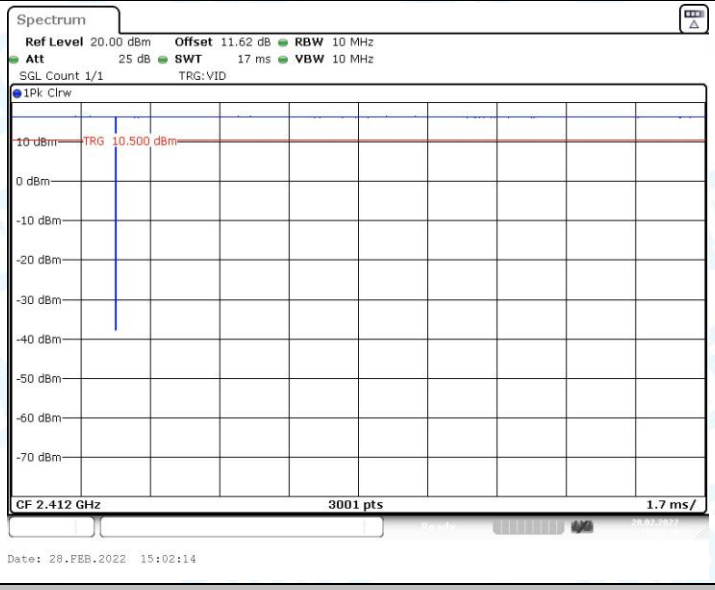
11N20SISO_Ant1_2462_1000~26500

7. Duty Cycle

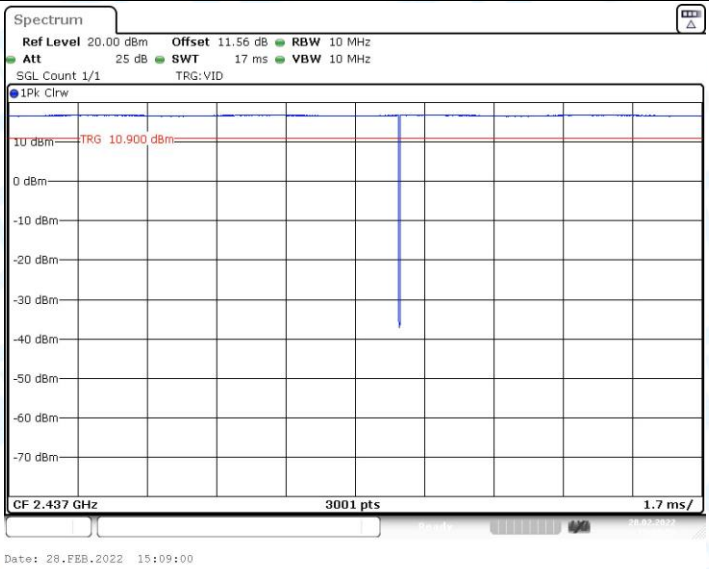
7.1.Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	2.00	2.00	100.00	---	---
		2437	2.00	2.00	100.00	---	---
		2462	12.00	12.00	100.00	---	---
11G	Ant1	2412	2.73	2.77	98.56	---	---
		2437	2.73	2.77	98.56	---	---
		2462	2.72	2.76	98.55	---	---
11N20SISO	Ant1	2412	2.54	2.58	98.45	---	---
		2437	2.53	2.57	98.44	---	---
		2462	2.53	2.57	98.44	---	---

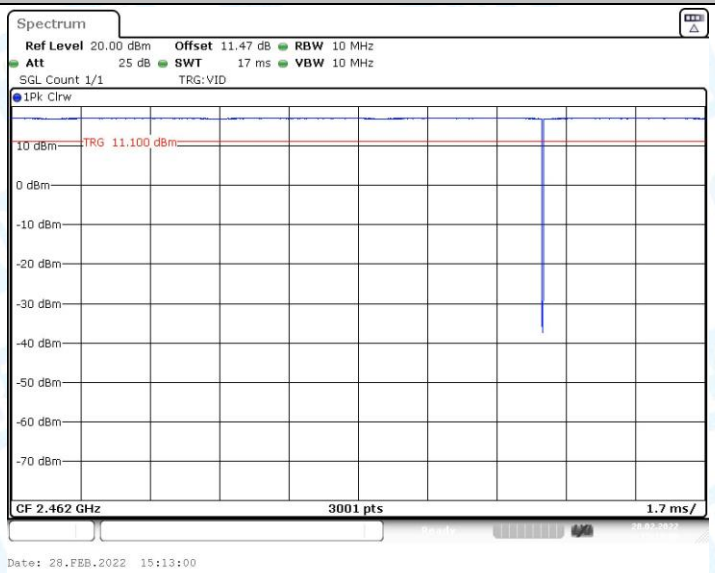
7.2.Test Graphs



11B_Ant1_2412



11B_Ant1_2437



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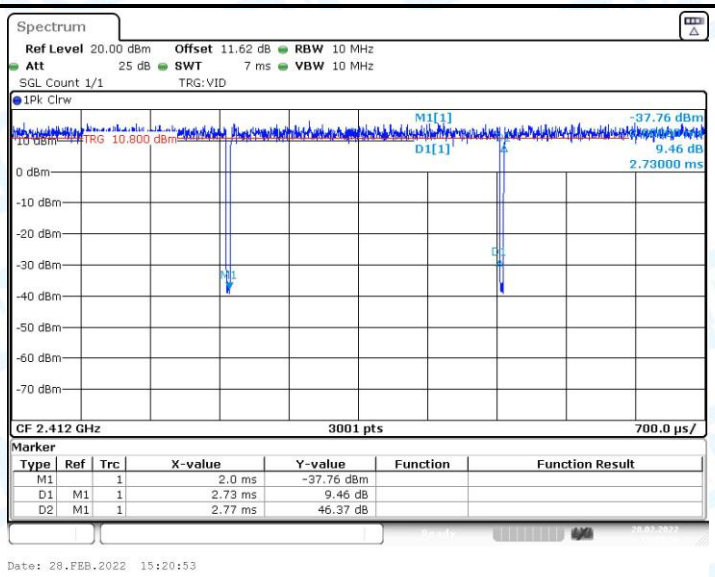
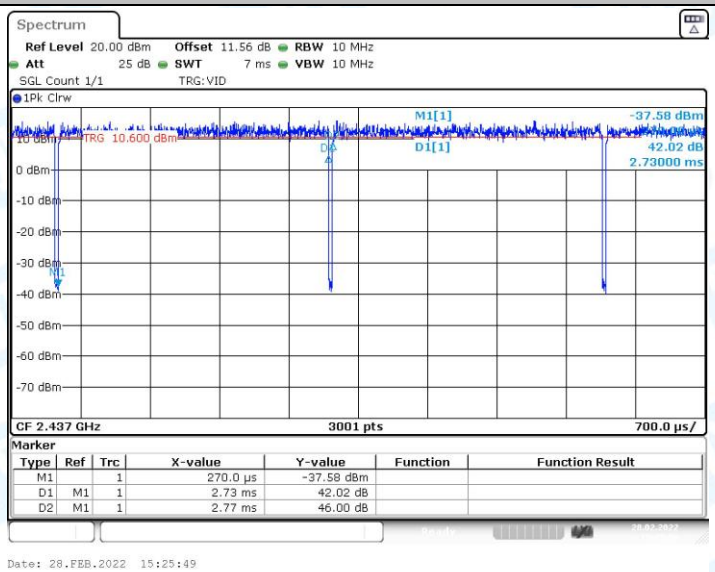
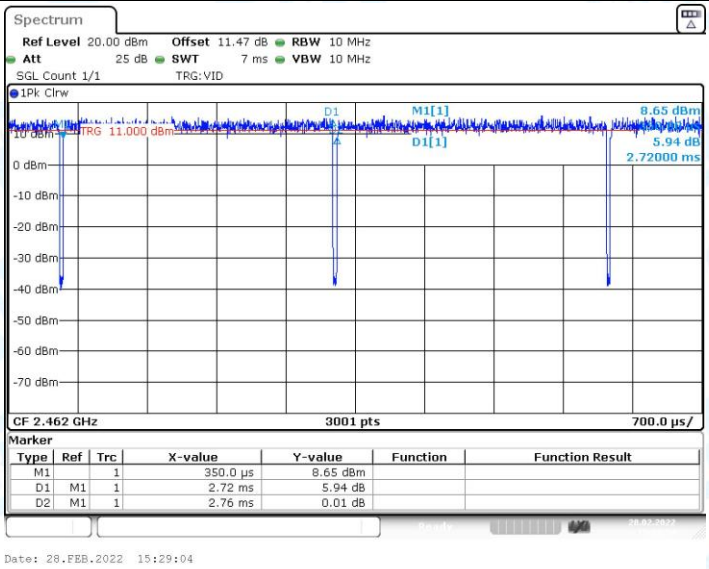


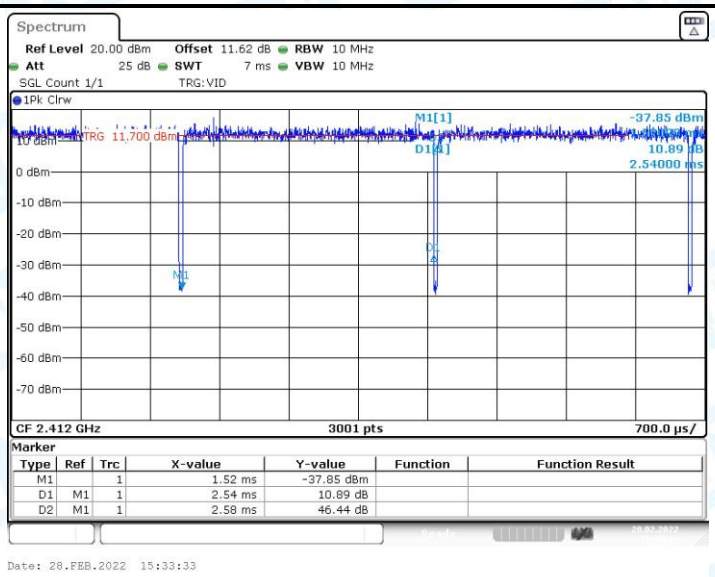
11G_Ant1_2412



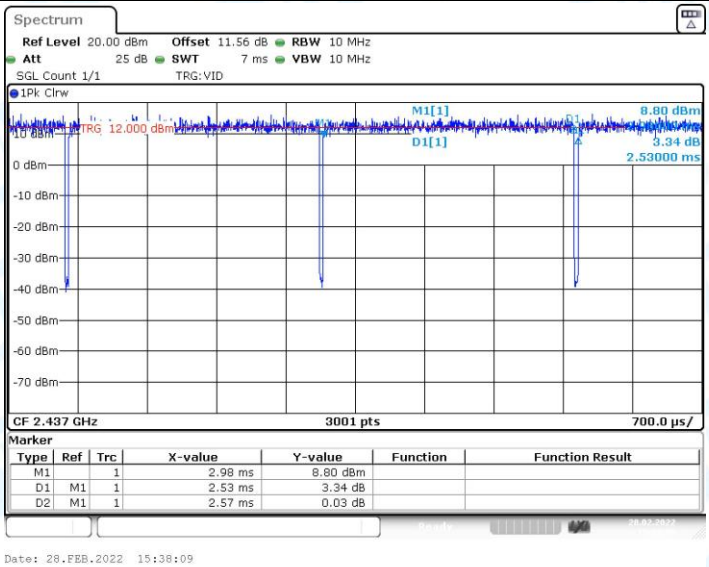
11G_Ant1_2437



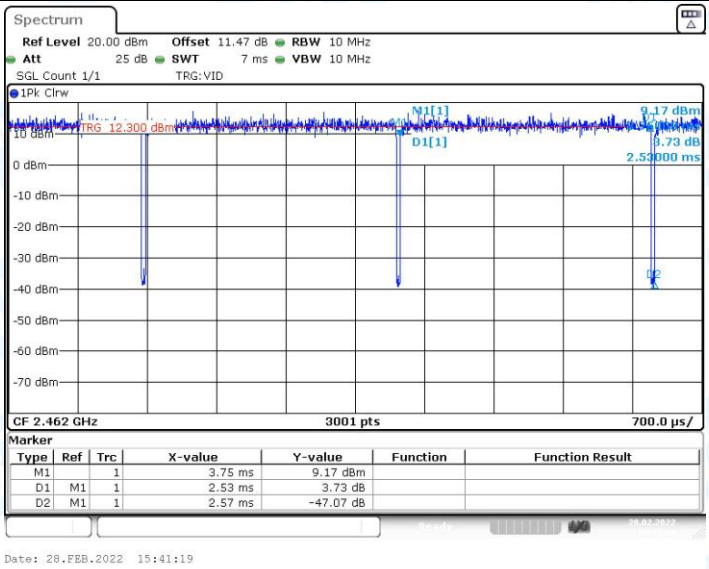
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

8. Emissions in Restricted Bands

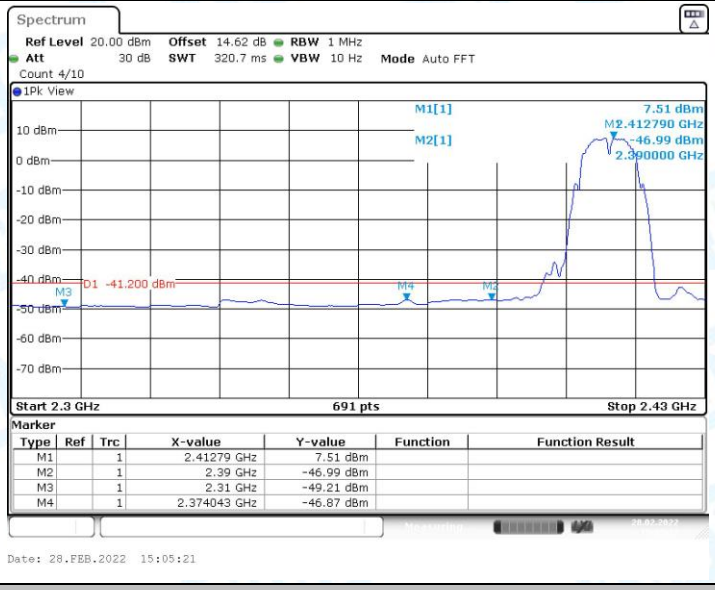
8.1.Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.21	≤-41.20	PASS
				AV	2374.043	-46.87	≤-41.20	PASS
				AV	2390.000	-46.99	≤-41.20	PASS
				Peak	2310.000	-37.8	≤-21.20	PASS
				Peak	2385.725	-33.54	≤-21.20	PASS
				Peak	2390.000	-34.18	≤-21.20	PASS
		High	2462	AV	2483.500	-46.54	≤-41.20	PASS
				AV	2490.696	-46.49	≤-41.20	PASS
				AV	2500.000	-46.65	≤-41.20	PASS
				Peak	2483.500	-34.55	≤-21.20	PASS
				Peak	2491.493	-34.16	≤-21.20	PASS
				Peak	2500.000	-35.4	≤-21.20	PASS
11G	Ant1	Low	2412	AV	2310.000	-48.67	≤-41.20	PASS
				AV	2346.725	-46.42	≤-41.20	PASS
				AV	2390.000	-47.23	≤-41.20	PASS
				Peak	2310.000	-38.29	≤-21.20	PASS
				Peak	2351.058	-34.23	≤-21.20	PASS
				Peak	2390.000	-36.67	≤-21.20	PASS
		High	2462	AV	2483.500	-46.47	≤-41.20	PASS
				AV	2484.638	-46.45	≤-41.20	PASS
				AV	2500.000	-47.77	≤-41.20	PASS
				Peak	2483.500	-36.77	≤-21.20	PASS
				Peak	2485.435	-32.99	≤-21.20	PASS
				Peak	2500.000	-37.14	≤-21.20	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-48.66	≤-41.20	PASS
				AV	2347.101	-46.38	≤-41.20	PASS
				AV	2390.000	-46.96	≤-41.20	PASS
				Peak	2310.000	-38.53	≤-21.20	PASS
				Peak	2388.739	-34.34	≤-21.20	PASS
				Peak	2390.000	-35.44	≤-21.20	PASS
		High	2462	AV	2483.500	-46.62	≤-41.20	PASS
				AV	2484.000	-46.47	≤-41.20	PASS
				AV	2500.000	-47.69	≤-41.20	PASS
				Peak	2483.500	-35.52	≤-21.20	PASS
				Peak	2488.942	-33.34	≤-21.20	PASS
				Peak	2500.000	-37.04	≤-21.20	PASS

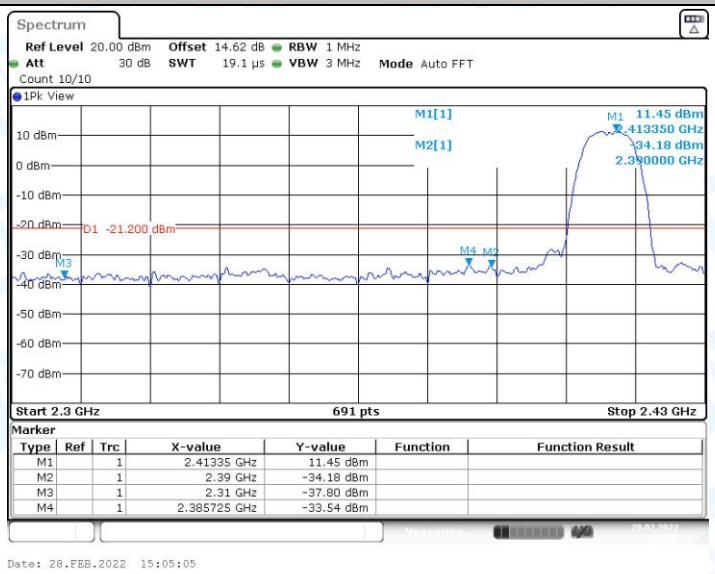
Note：

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.

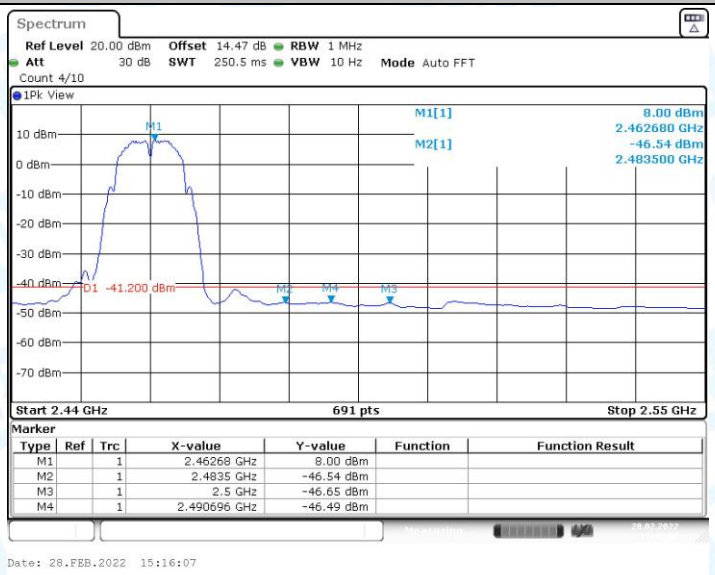
8.2.Test Graphs



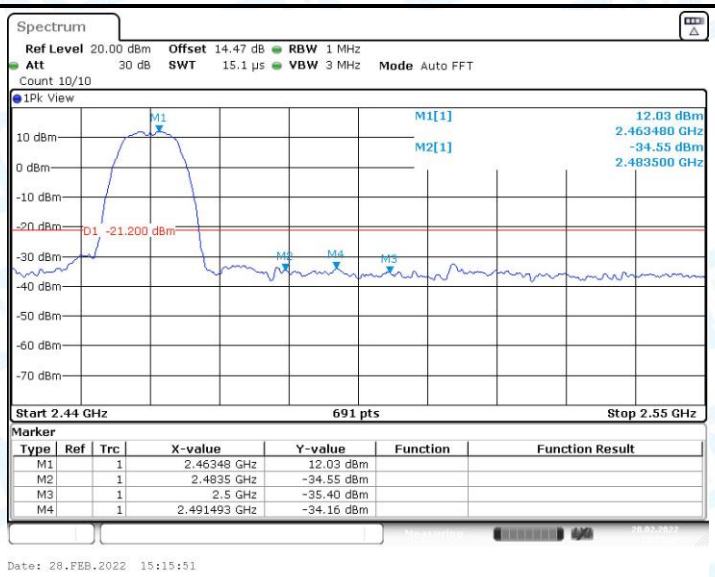
11B_Ant1_Low_2412_AV



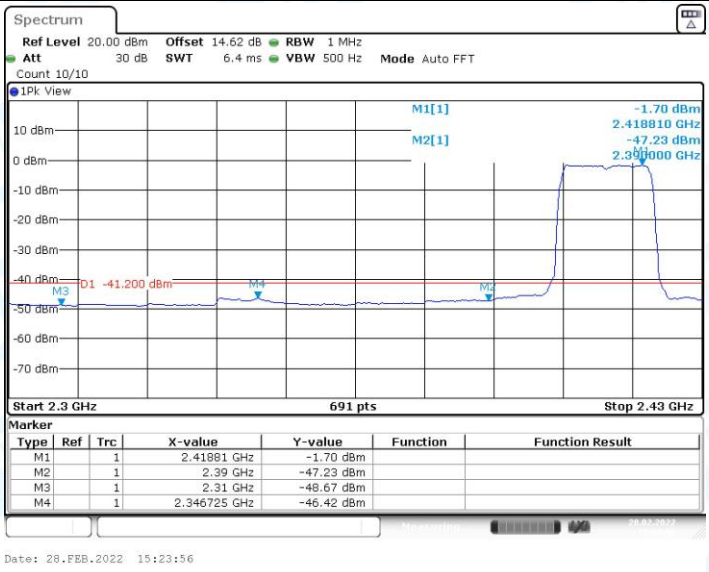
11B_Ant1_Low_2412_Peak



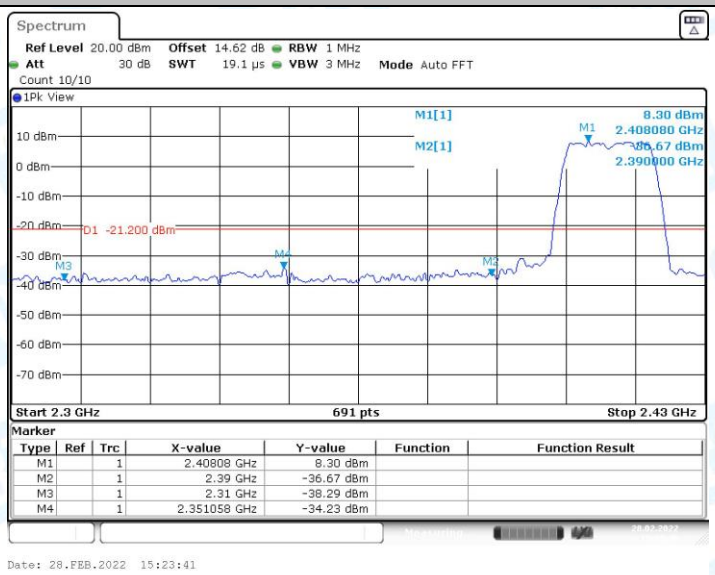
11B_Ant1_High_2462_AV



11B_Ant1_High_2462_Peak



11G_Ant1_Low_2412_AV



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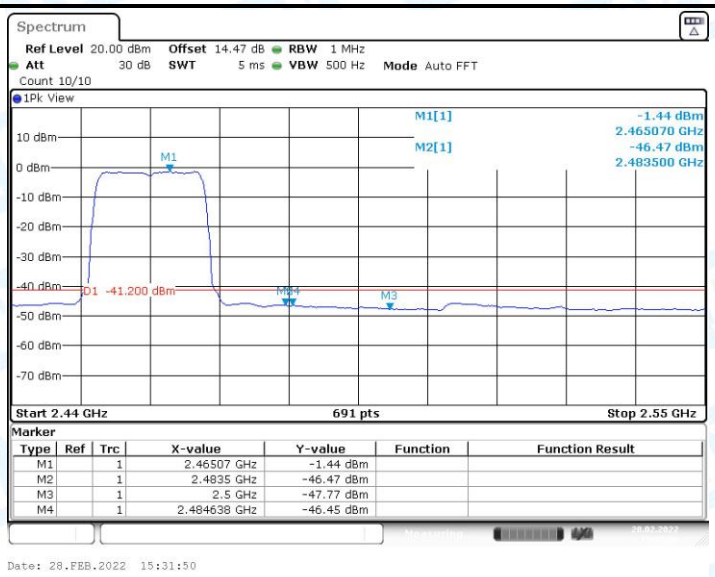

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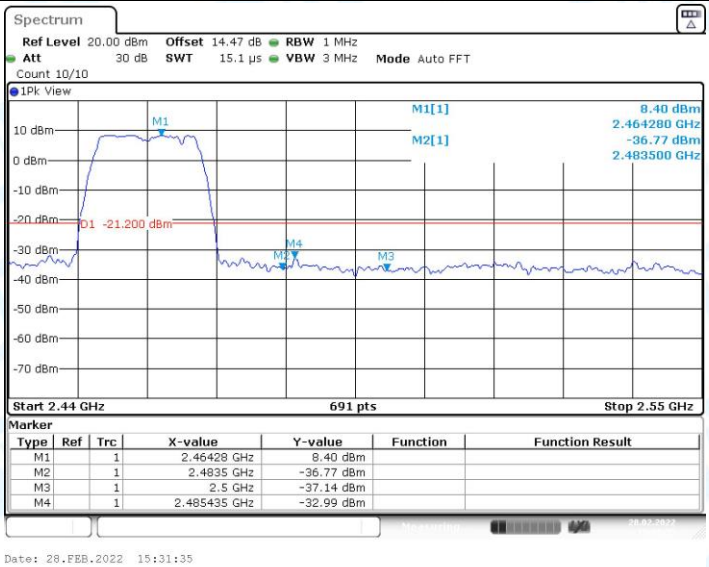

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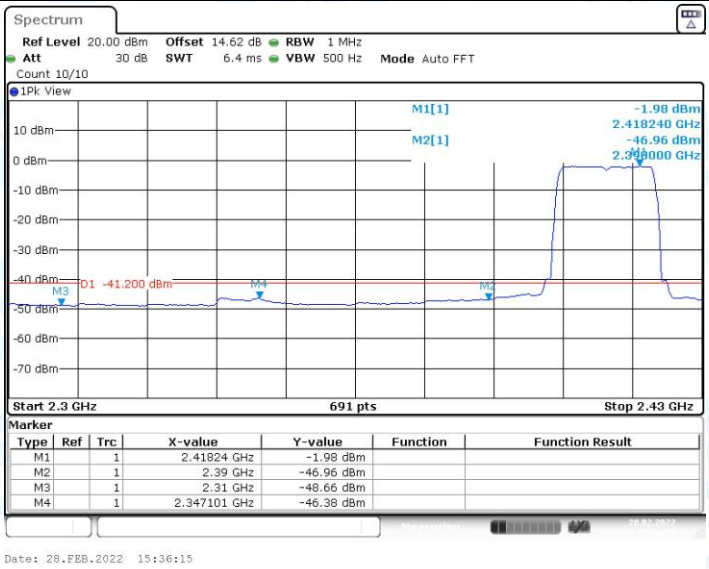

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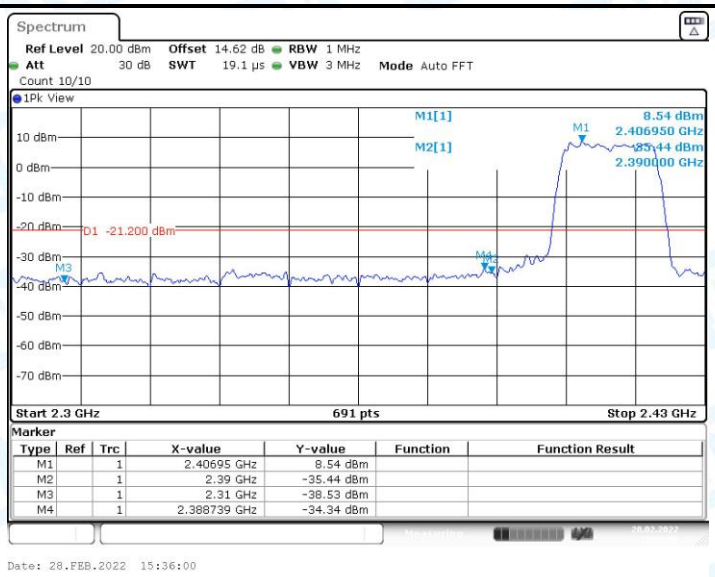

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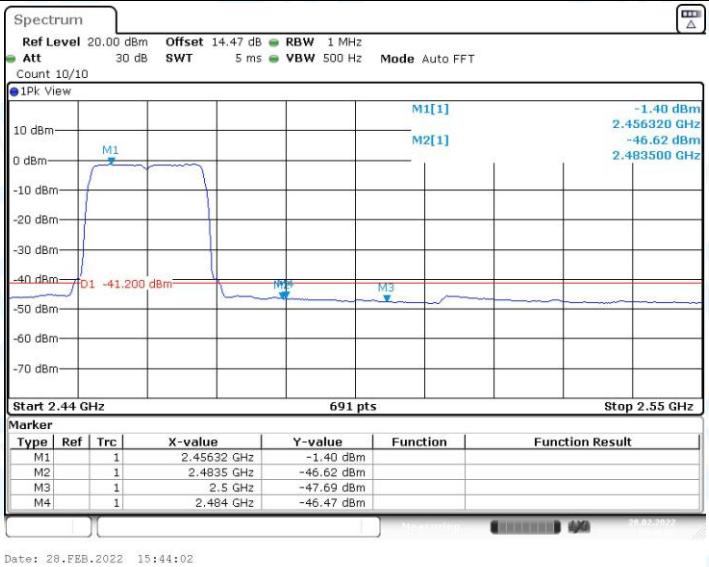

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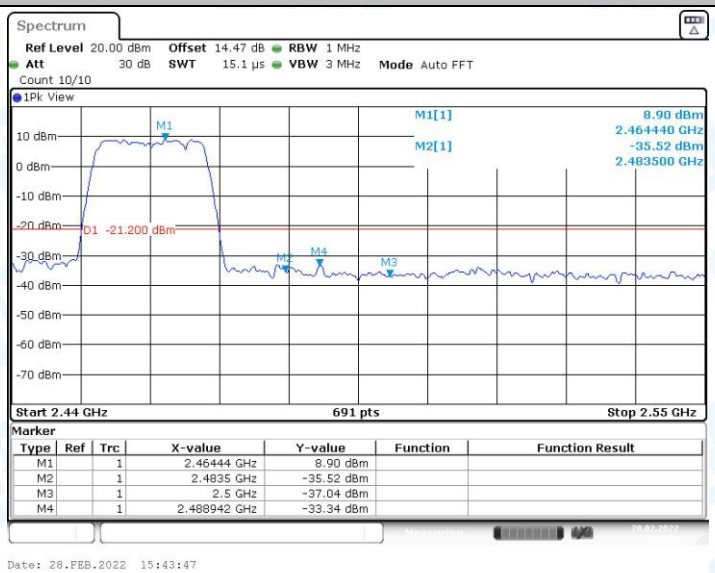

11N20SISO_Ant1_High_2462_Peak

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