

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

General Description of EUT	
Product Name:	Averia Collar
Test Model:	AC01
Sample ID:	202203_0164-02
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TBR-C-202203-0164-61	

Contents

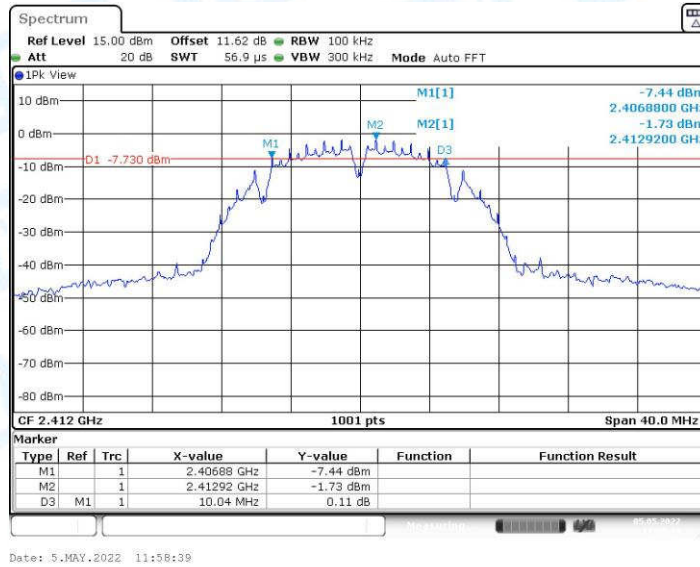
1. DTS Bandwidth.....	3
1.1. Test Result.....	3
1.2. Test Graphs.....	4
2. Occupied Channel Bandwidth.....	7
2.1. Test Result.....	7
2.2. Test Graphs.....	8
3. Maximum conducted output power.....	11
3.1. Test Result.....	11
4. Maximum power spectral density.....	12
4.1. Test Result.....	12
4.2. Test Graphs.....	13
5. Band edge measurements.....	16
5.1. Test Result.....	16
5.2. Test Graphs.....	17
6. Conducted Spurious Emission.....	19
6.1. Test Result.....	19
6.2. Test Graphs.....	20
7. Duty Cycle.....	29
7.1. Test Result.....	29
7.2. Test Graphs.....	30
8. Emissions in Restricted Bands.....	33
8.1. Test Result.....	33
8.2. Test Graphs.....	34

1. DTS Bandwidth

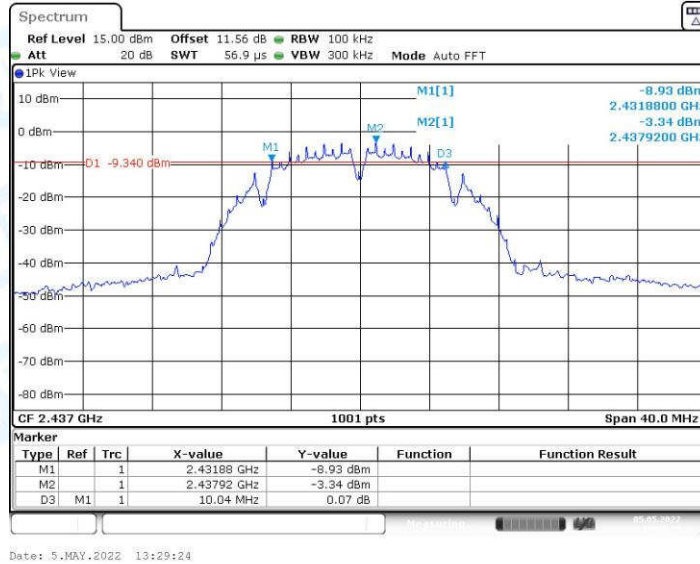
1.1. Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.04	2406.88	2416.92	0.5	PASS
		2437	10.04	2431.88	2441.92	0.5	PASS
		2462	10.04	2456.88	2466.92	0.5	PASS
11G	Ant1	2412	16.36	2403.72	2420.08	0.5	PASS
		2437	16.36	2428.72	2445.08	0.5	PASS
		2462	16.32	2453.76	2470.08	0.5	PASS
11N20SISO	Ant1	2412	17.60	2403.12	2420.72	0.5	PASS
		2437	17.60	2428.12	2445.72	0.5	PASS
		2462	17.60	2453.12	2470.72	0.5	PASS

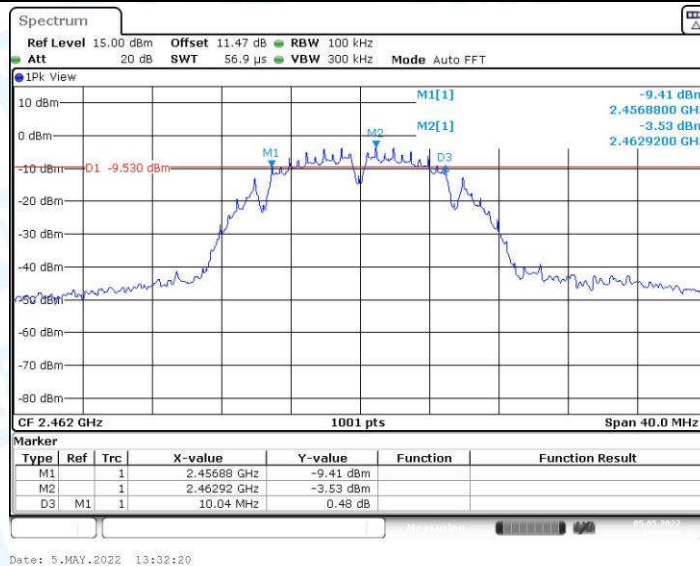
1.2. Test Graphs



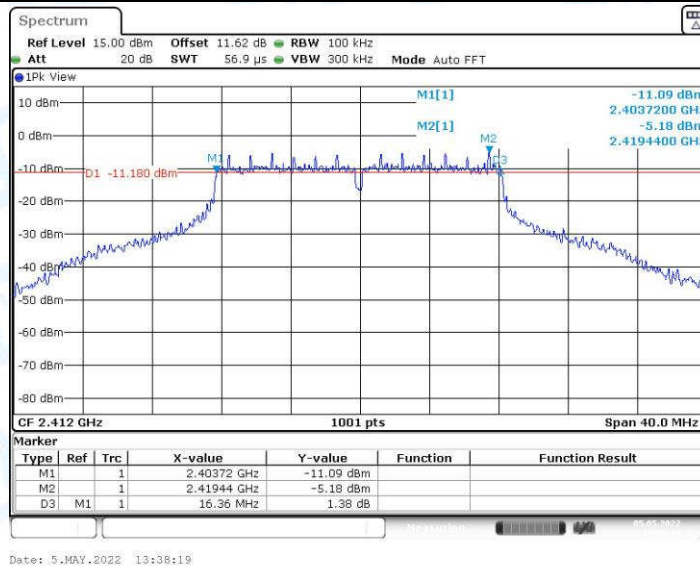
11B_Ant1_2412



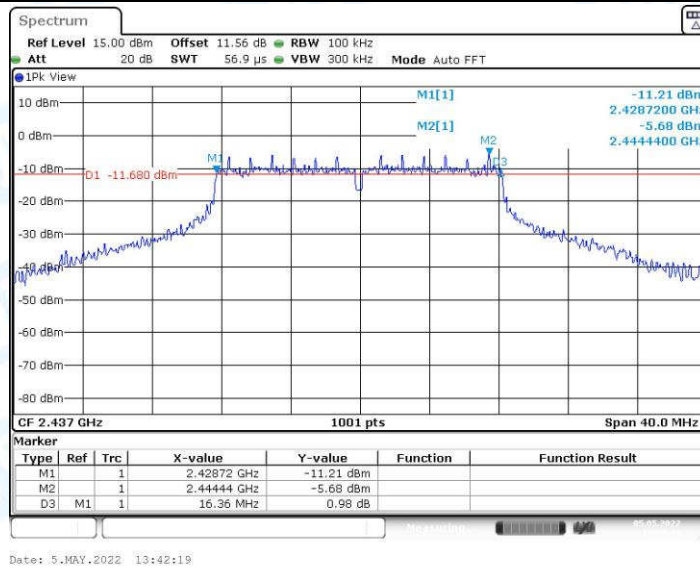
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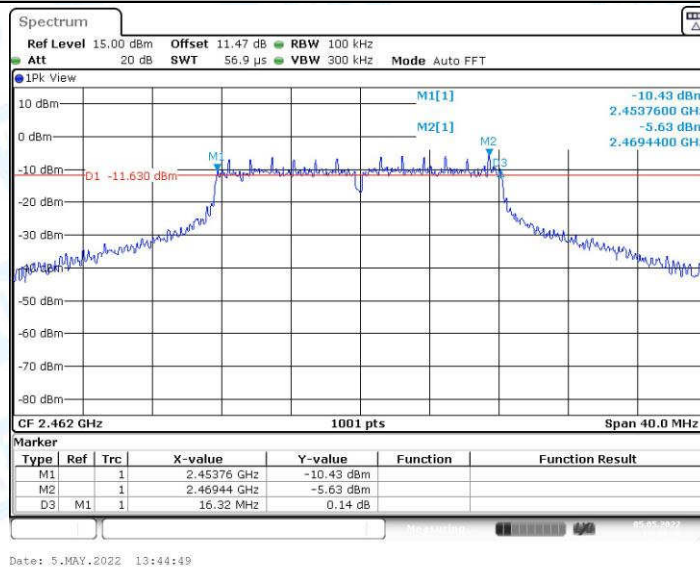
11B_Ant1_2462



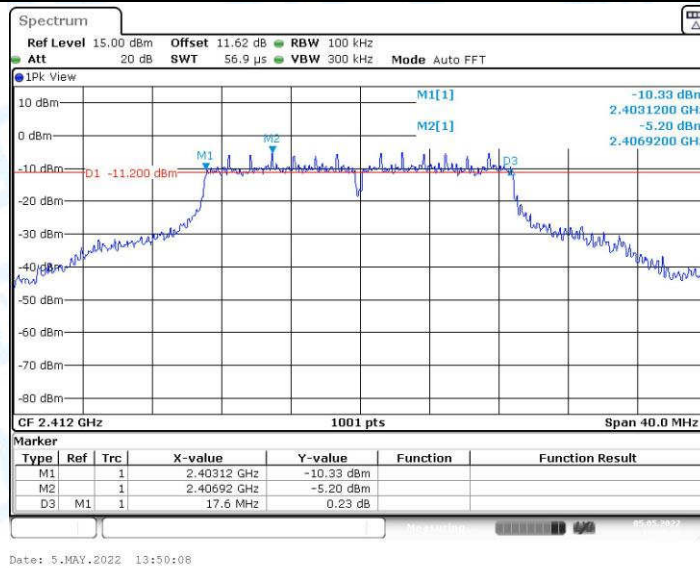
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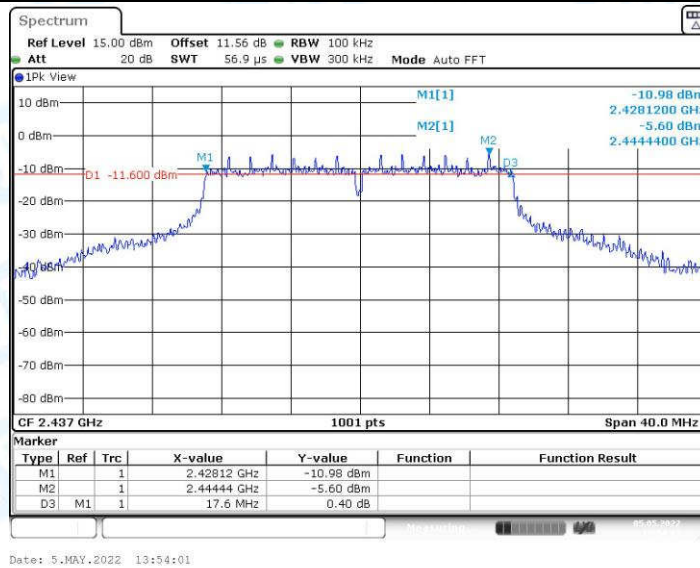
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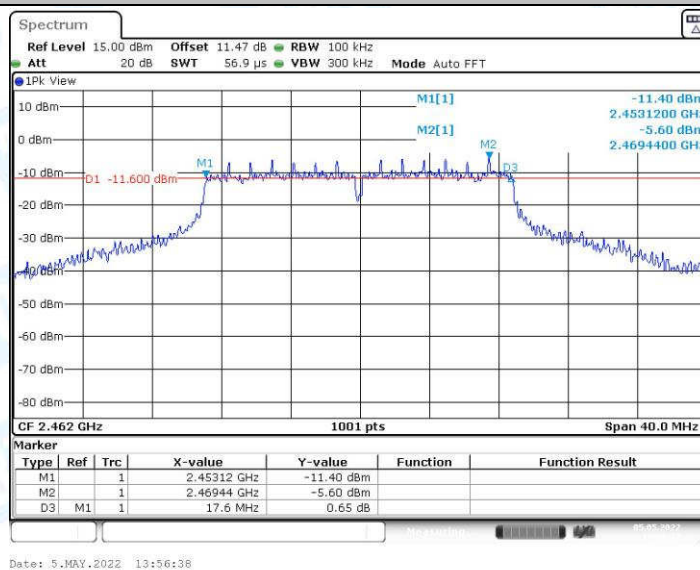
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



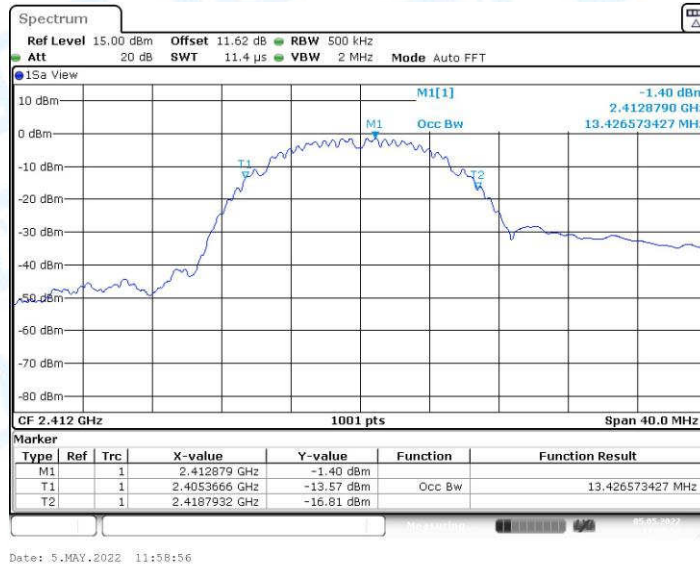
11N20SISO_Ant1_2462

2. Occupied Channel Bandwidth

2.1. Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.427	2405.367	2418.793	---	---
		2437	13.427	2430.087	2443.513	---	---
		2462	13.267	2455.407	2468.673	---	---
11G	Ant1	2412	20.18	2401.650	2421.830	---	---
		2437	19.98	2427.490	2447.470	---	---
		2462	19.66	2452.410	2472.070	---	---
11N20SISO	Ant1	2412	20.899	2401.411	2422.310	---	---
		2437	20.659	2426.730	2447.390	---	---
		2462	21.538	2451.291	2472.829	---	---

2.2. Test Graphs



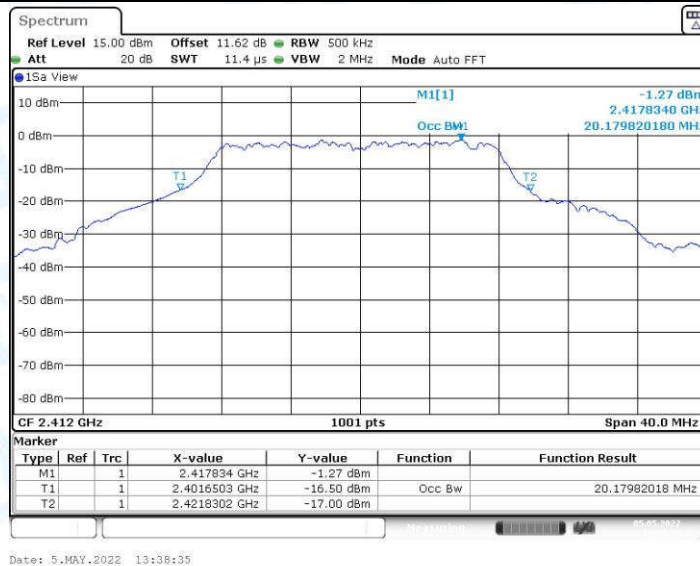
11B_Ant1_2412



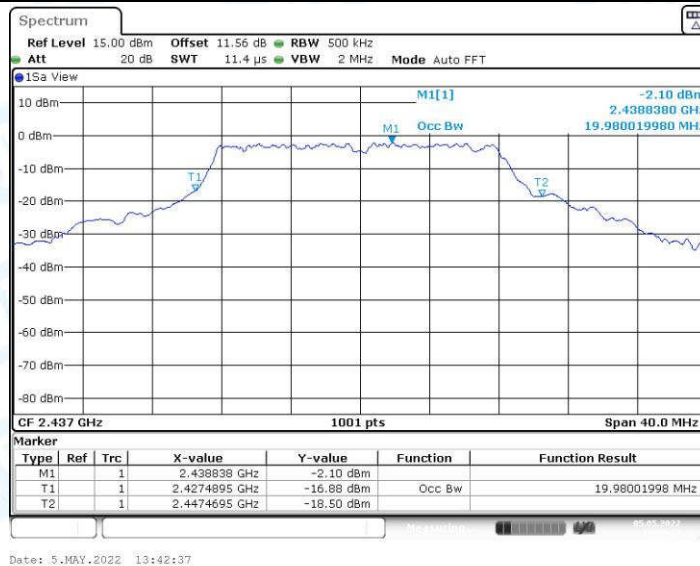
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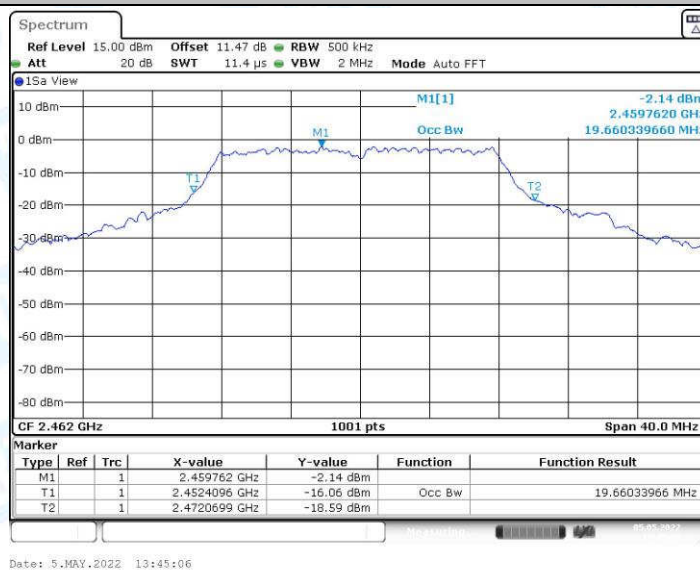
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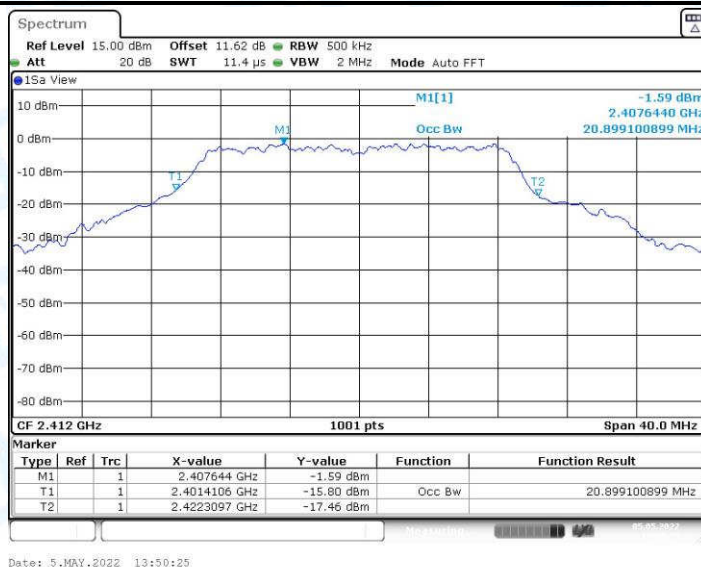
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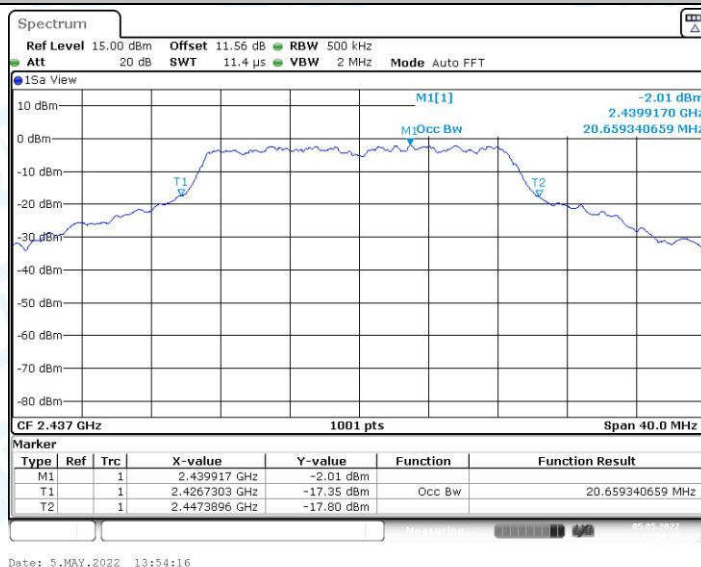
11G_Ant1_2437



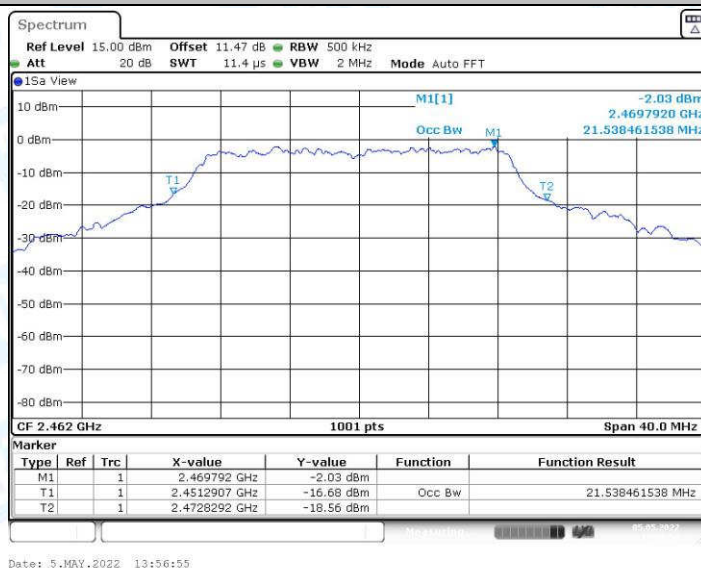
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

3. Maximum conducted output power

3.1. Test Result

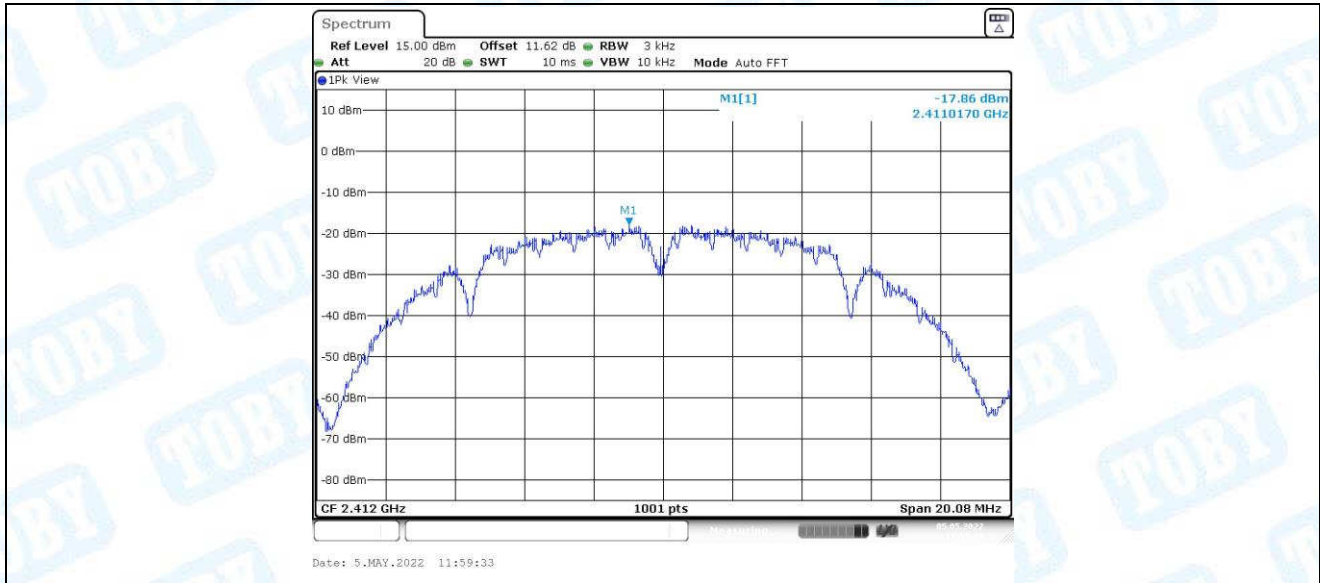
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	10.23	≤30.00	PASS
		2437	8.76	≤30.00	PASS
		2462	8.54	≤30.00	PASS
11G	Ant1	2412	14.00	≤30.00	PASS
		2437	13.53	≤30.00	PASS
		2462	13.30	≤30.00	PASS
11N20SISO	Ant1	2412	14.07	≤30.00	PASS
		2437	13.62	≤30.00	PASS
		2462	13.34	≤30.00	PASS

4. Maximum power spectral density

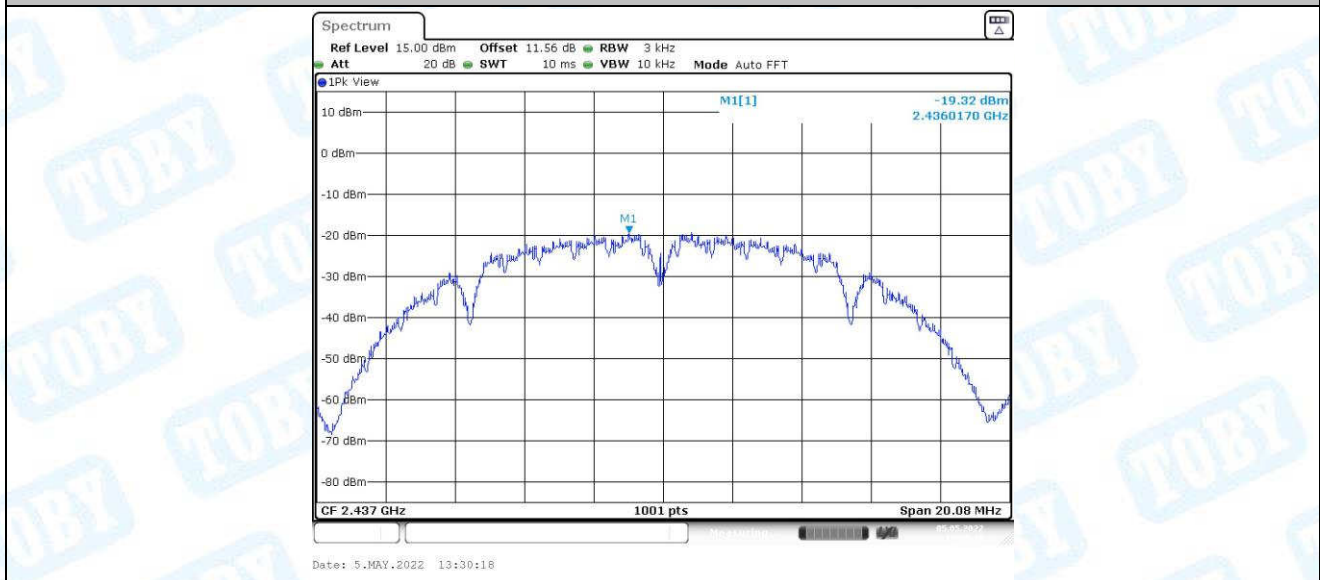
4.1. Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-17.86	≤8.00	PASS
		2437	-19.32	≤8.00	PASS
		2462	-19.56	≤8.00	PASS
11G	Ant1	2412	-19.24	≤8.00	PASS
		2437	-19.61	≤8.00	PASS
		2462	-19.82	≤8.00	PASS
11N20SISO	Ant1	2412	-20.25	≤8.00	PASS
		2437	-20.64	≤8.00	PASS
		2462	-21.11	≤8.00	PASS

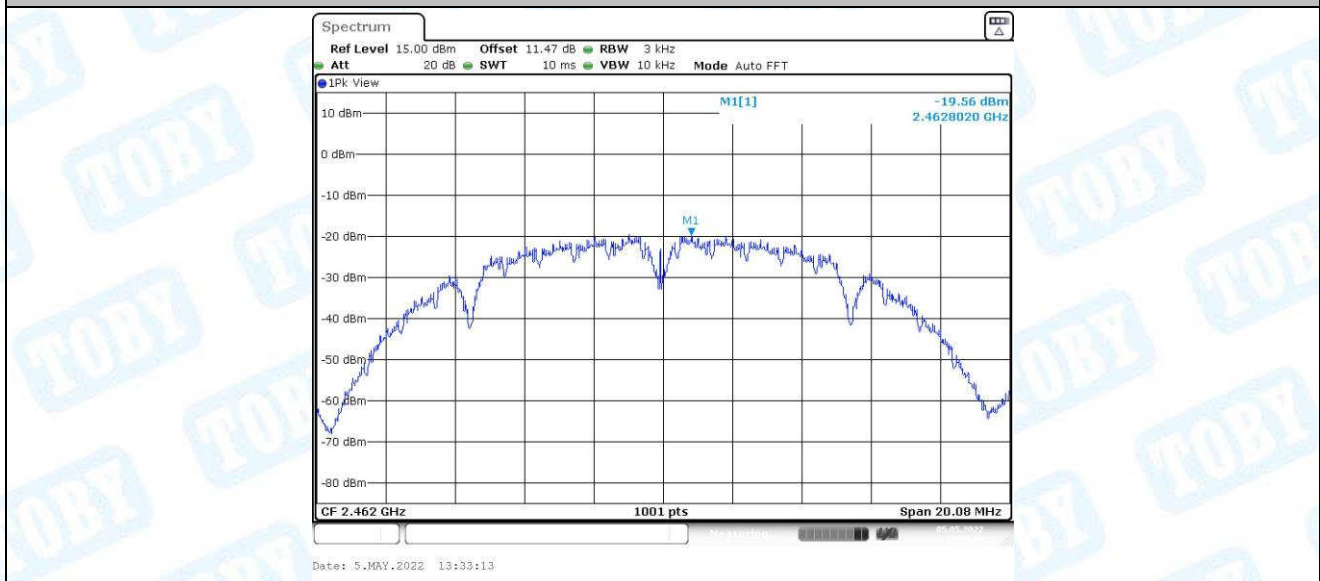
4.2. Test Graphs



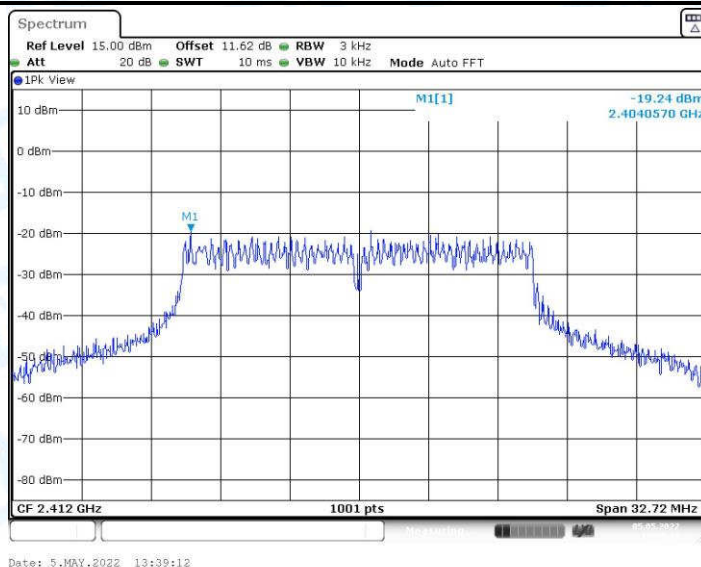
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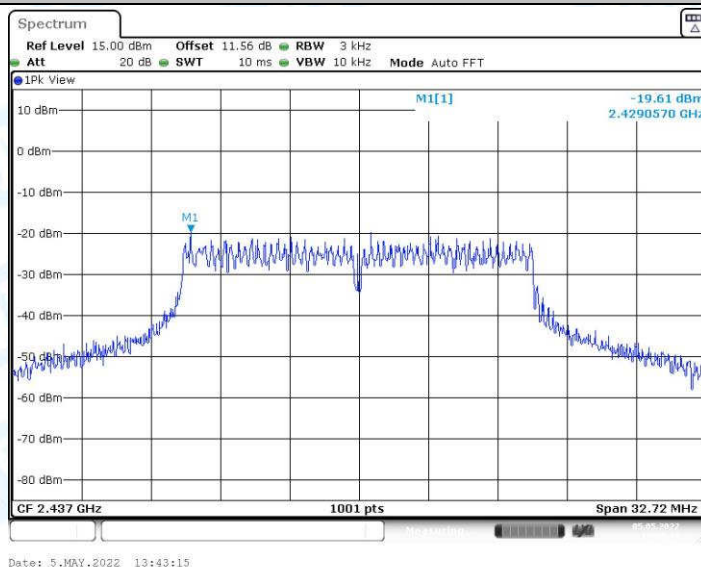
11B_Ant1_2437



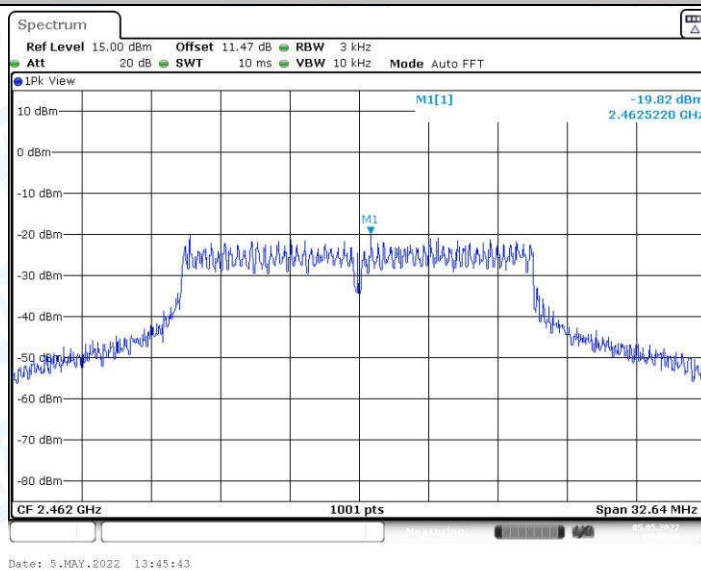
11B_Ant1_2462



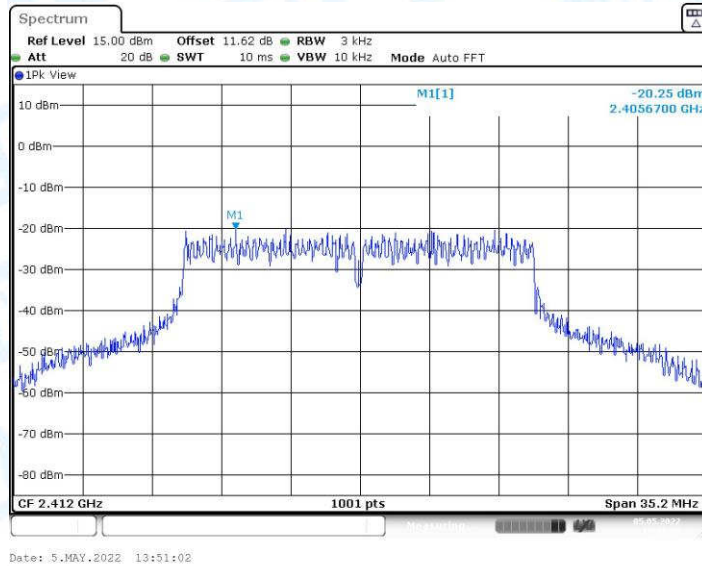
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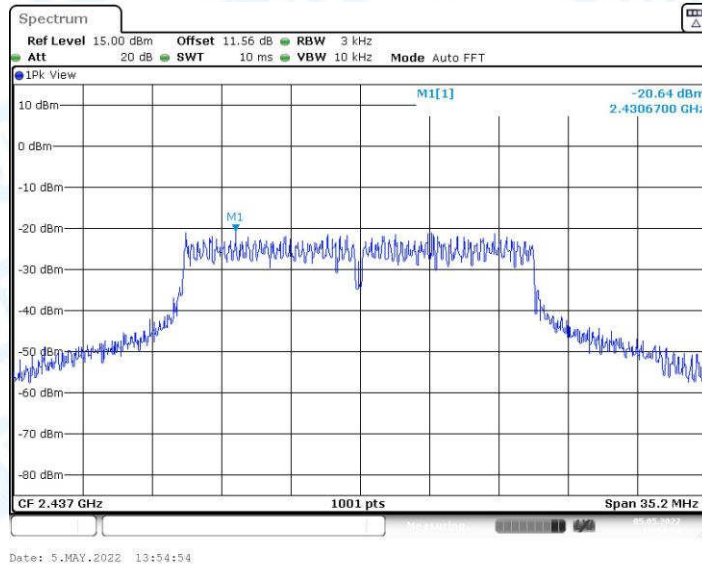
11G_Ant1_2437



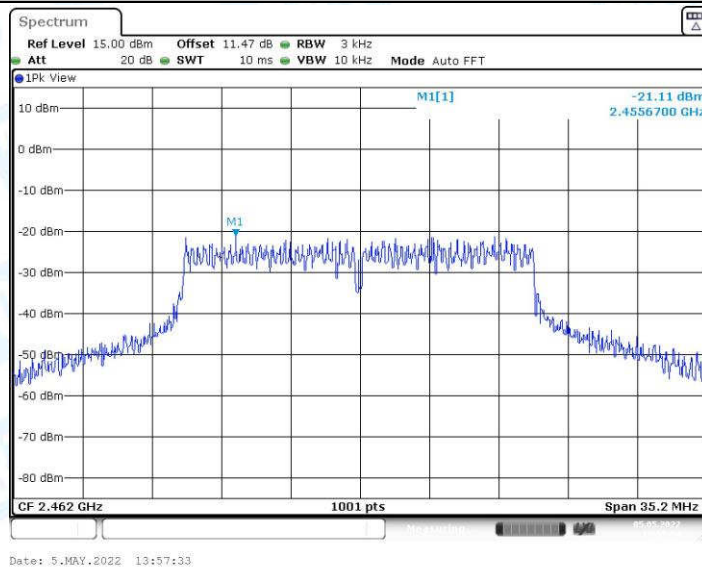
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



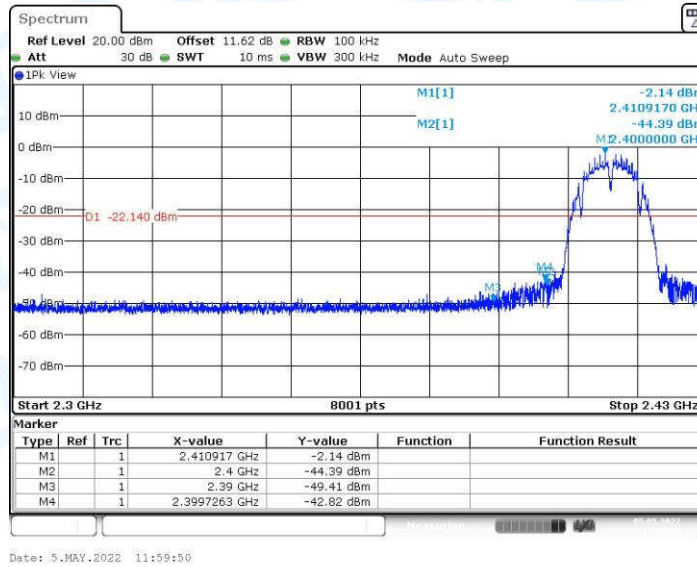
11N20SISO_Ant1_2462

5. Band edge measurements

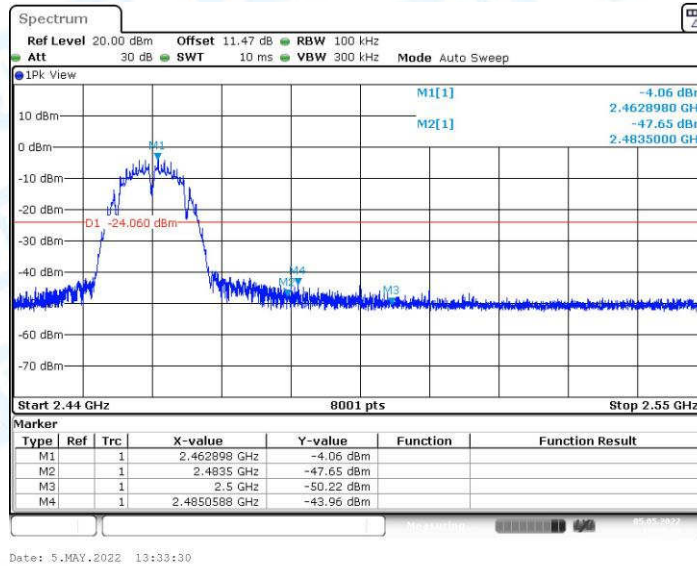
5.1. Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-2.14	-42.82	≤ -22.14	PASS
		High	2462	-4.06	-43.96	≤ -24.06	PASS
11G	Ant1	Low	2412	-5.42	-31.53	≤ -25.42	PASS
		High	2462	-5.89	-42.71	≤ -25.89	PASS
11N20SISO	Ant1	Low	2412	-5.27	-30.68	≤ -25.27	PASS
		High	2462	-5.85	-40.65	≤ -25.85	PASS

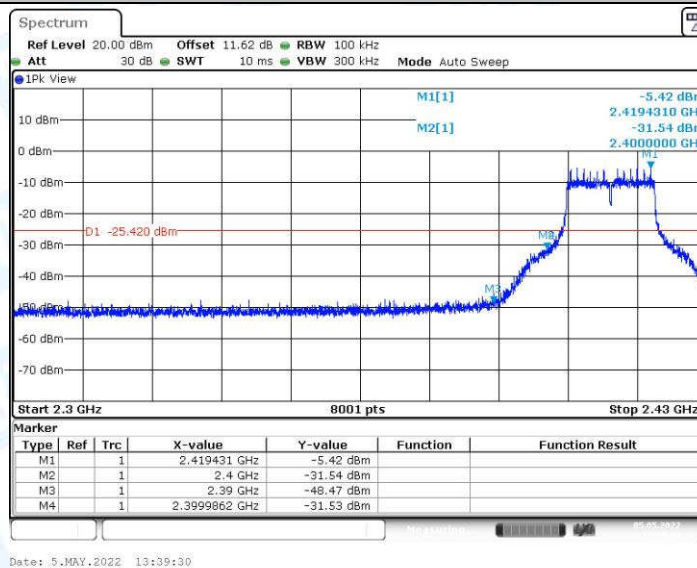
5.2. Test Graphs



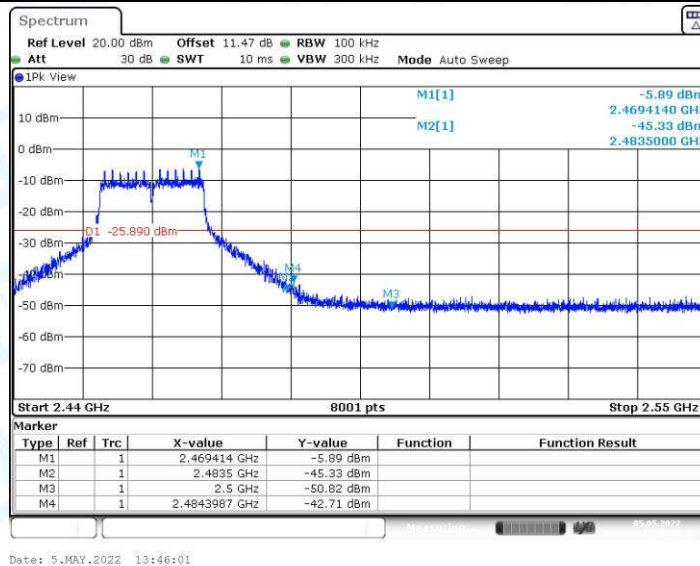
11B_Ant1_Low_2412



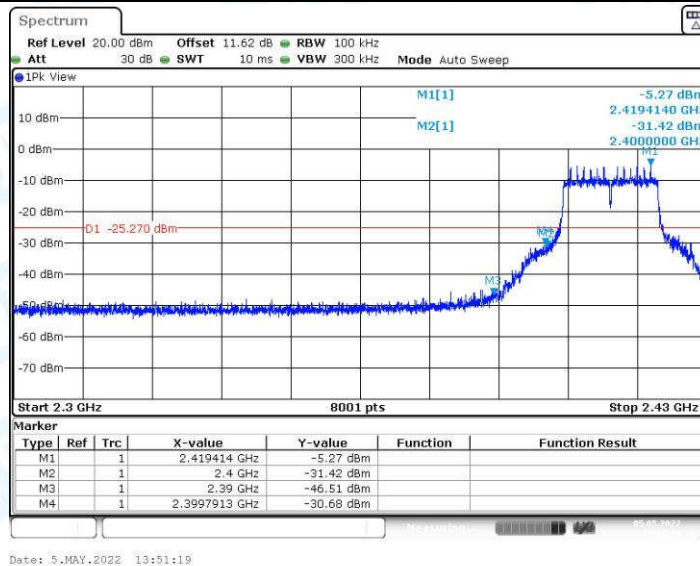
11B_Ant1_High_2462



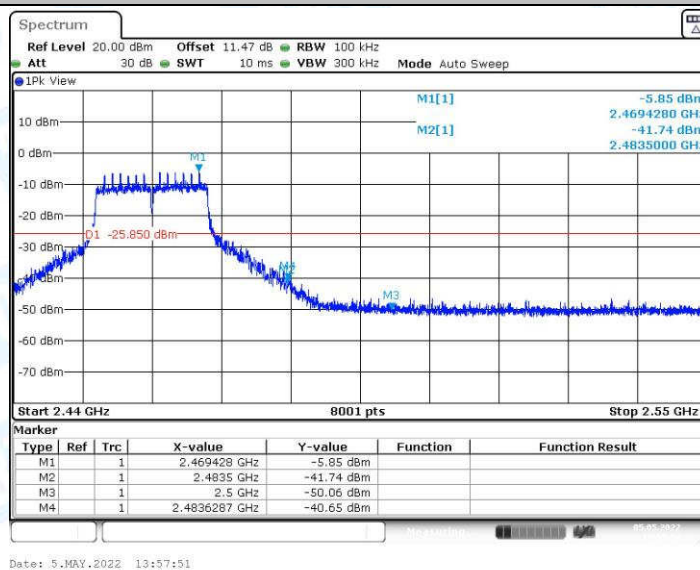
11G_Ant1_Low_2412



11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



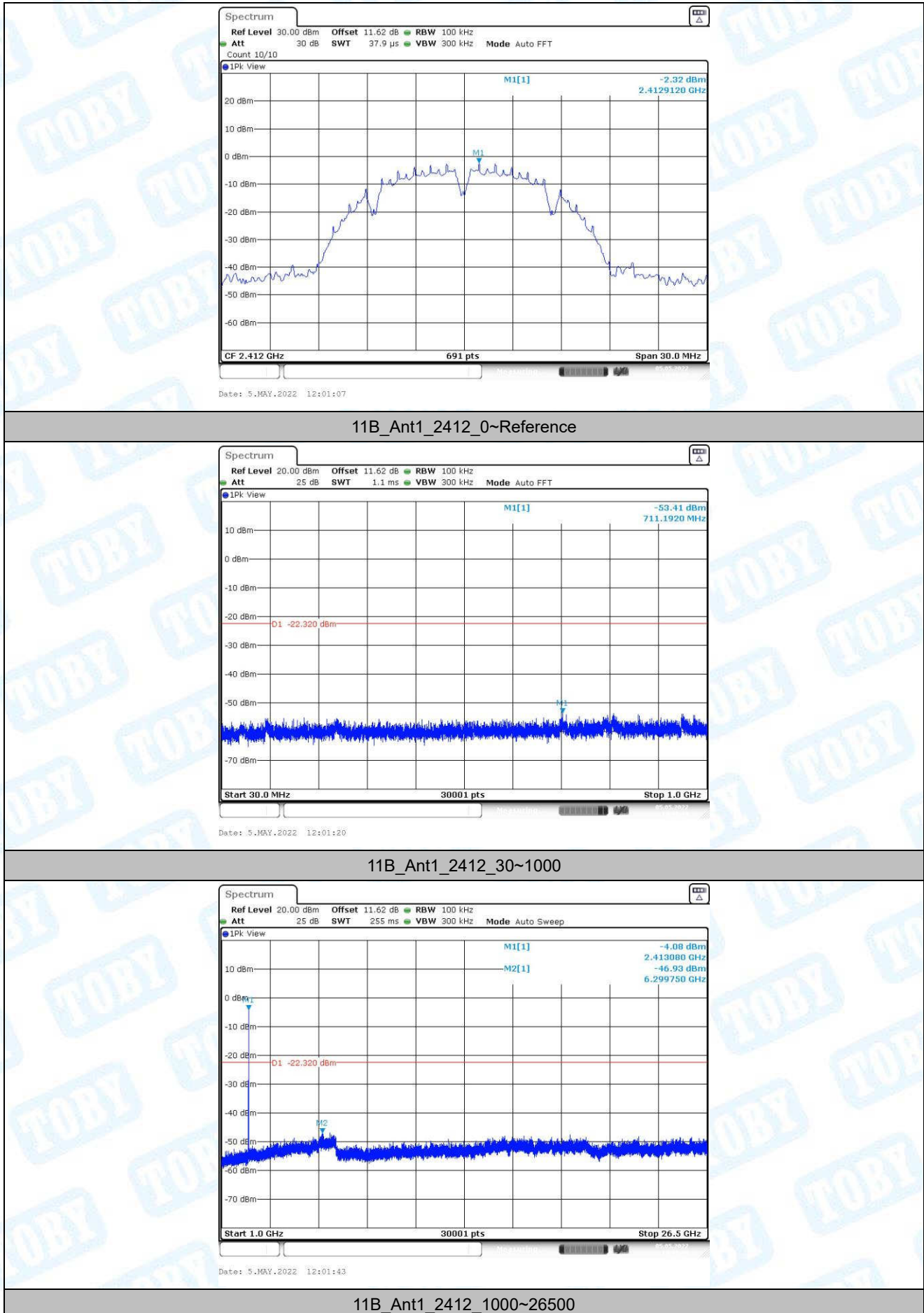
11N20SISO_Ant1_High_2462

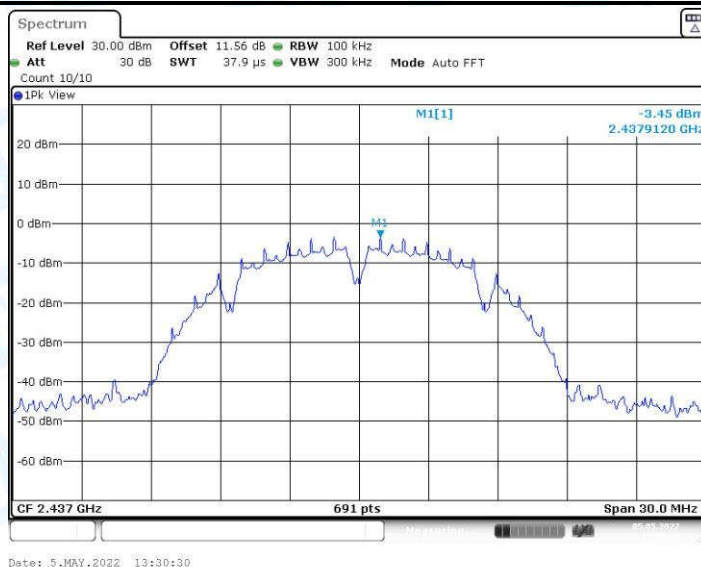
6. Conducted Spurious Emission

6.1. Test Result

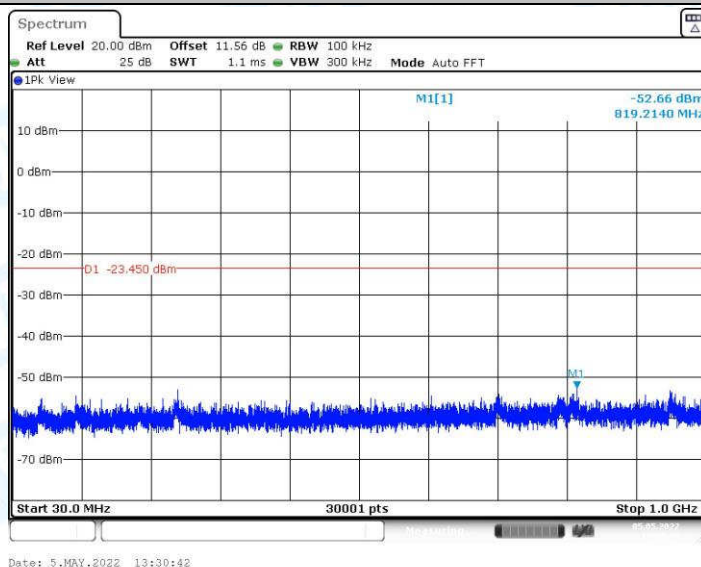
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-2.32	-2.32	---	PASS
			30~1000	-2.32	-53.41	≤-22.32	PASS
			1000~26500	-2.32	-46.93	≤-22.32	PASS
		2437	Reference	-3.45	-3.45	---	PASS
			30~1000	-3.45	-52.66	≤-23.45	PASS
			1000~26500	-3.45	-47.19	≤-23.45	PASS
		2462	Reference	-3.50	-3.50	---	PASS
			30~1000	-3.50	-53.67	≤-23.5	PASS
			1000~26500	-3.50	-47.07	≤-23.5	PASS
11G	Ant1	2412	Reference	-5.61	-5.61	---	PASS
			30~1000	-5.61	-52.96	≤-25.61	PASS
			1000~26500	-5.61	-47.35	≤-25.61	PASS
		2437	Reference	-5.85	-5.85	---	PASS
			30~1000	-5.85	-53.83	≤-25.85	PASS
			1000~26500	-5.85	-47.03	≤-25.85	PASS
		2462	Reference	-5.84	-5.84	---	PASS
			30~1000	-5.84	-53.78	≤-25.84	PASS
			1000~26500	-5.84	-46.82	≤-25.84	PASS
11N20SISO	Ant1	2412	Reference	-5.21	-5.21	---	PASS
			30~1000	-5.21	-53.94	≤-25.21	PASS
			1000~26500	-5.21	-47.71	≤-25.21	PASS
		2437	Reference	-5.73	-5.73	---	PASS
			30~1000	-5.73	-52.68	≤-25.73	PASS
			1000~26500	-5.73	-46.7	≤-25.73	PASS
		2462	Reference	-5.67	-5.67	---	PASS
			30~1000	-5.67	-53.71	≤-25.67	PASS
			1000~26500	-5.67	-46.72	≤-25.67	PASS

6.2. Test Graphs

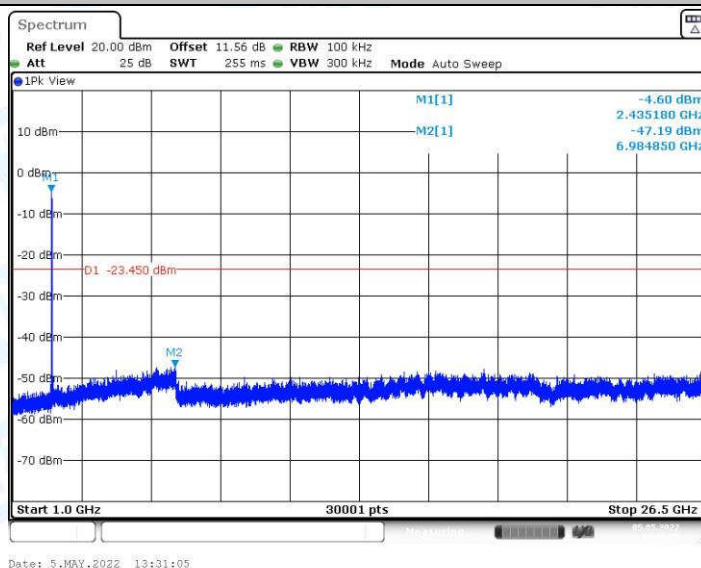




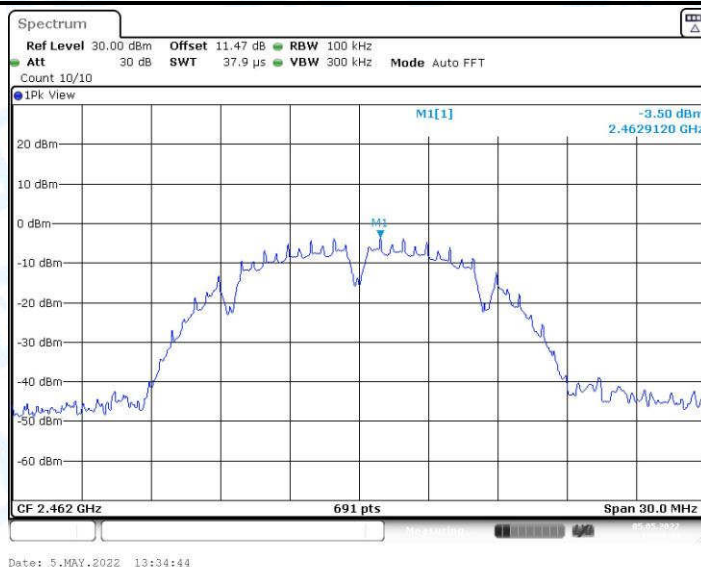
11B_Ant1_2437_0~Reference



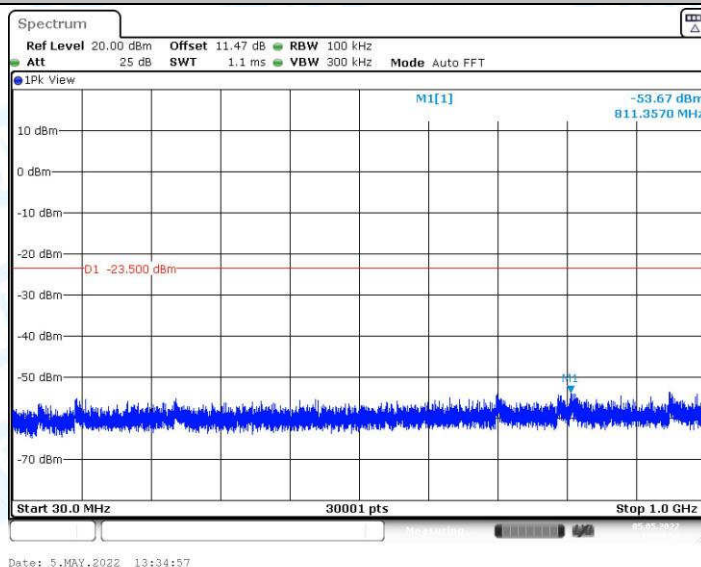
11B_Ant1_2437_30~1000



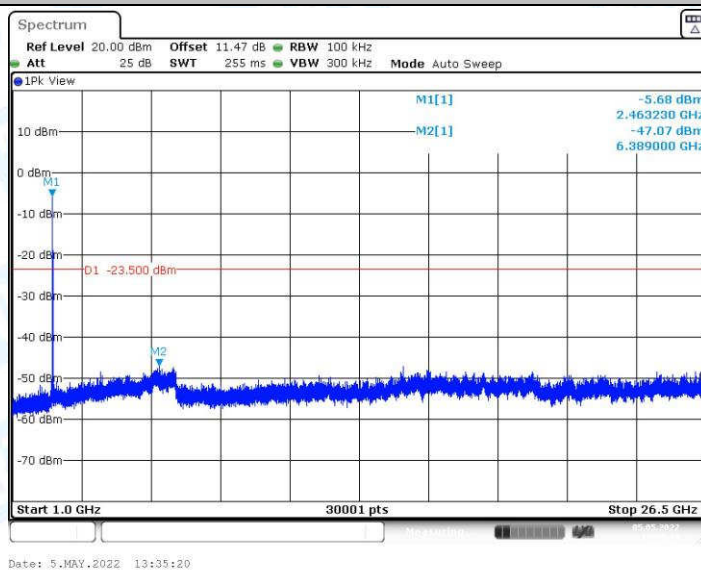
11B_Ant1_2437_1000~26500



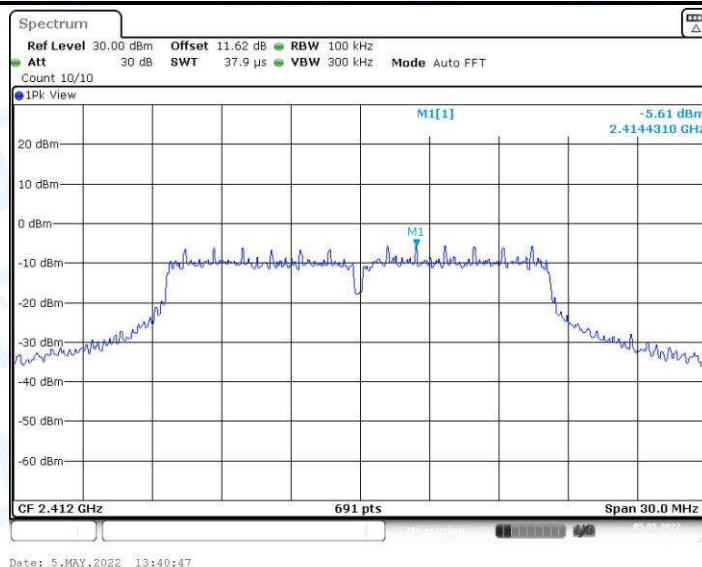
11B_Ant1_2462_0~Reference



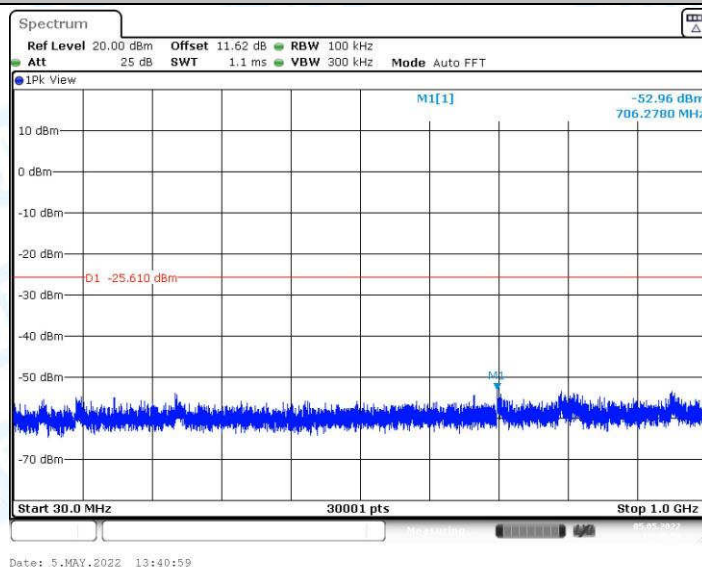
11B_Ant1_2462_30~1000



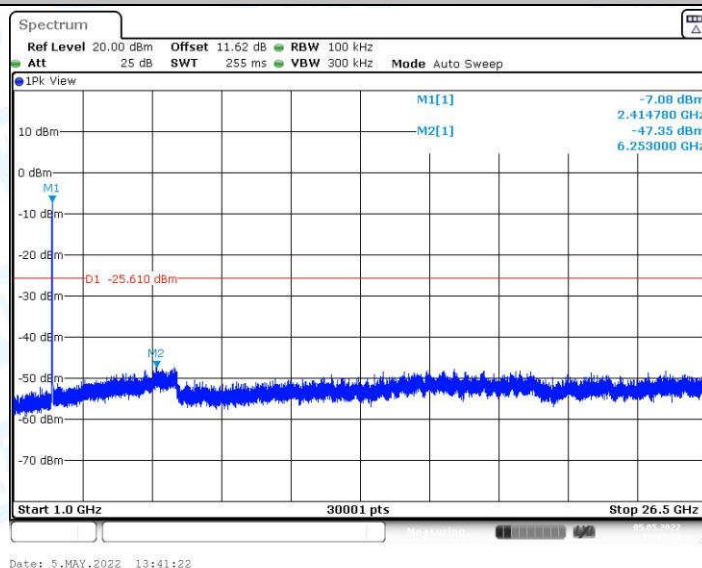
11B_Ant1_2462_1000~26500



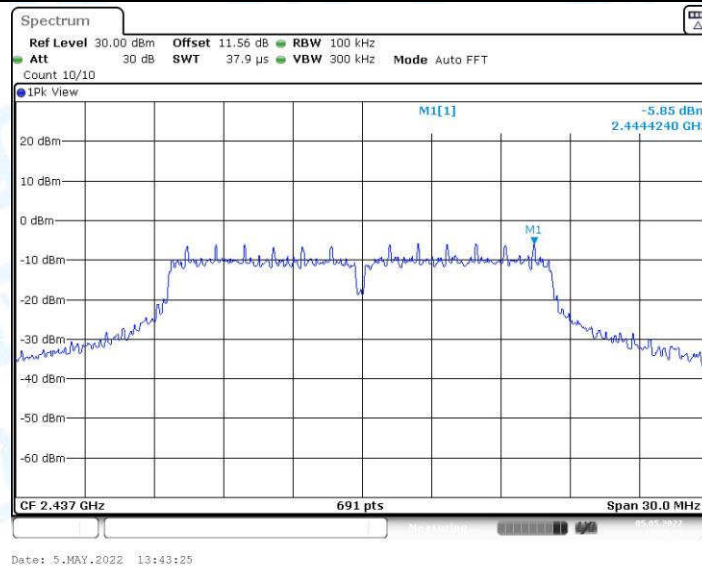
11G_Ant1_2412_0~Reference



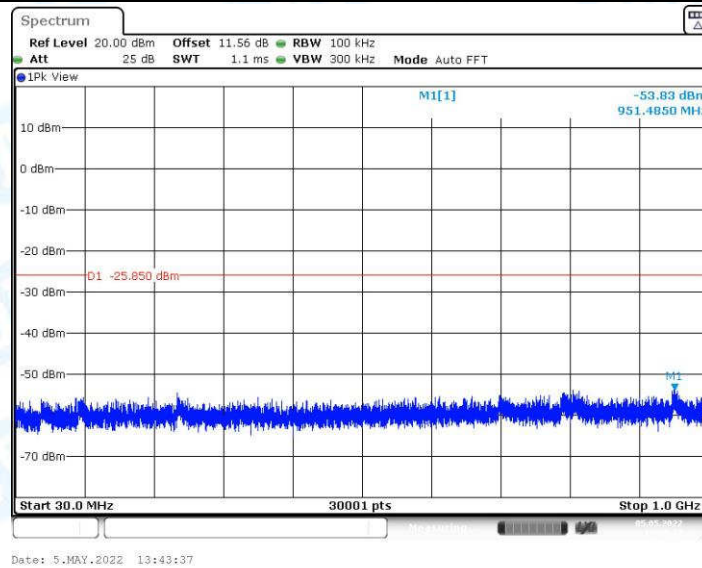
11G_Ant1_2412_30~1000



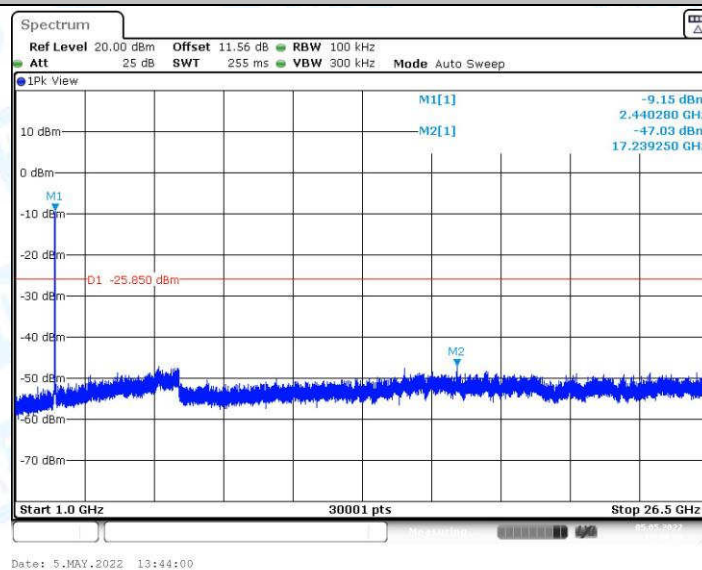
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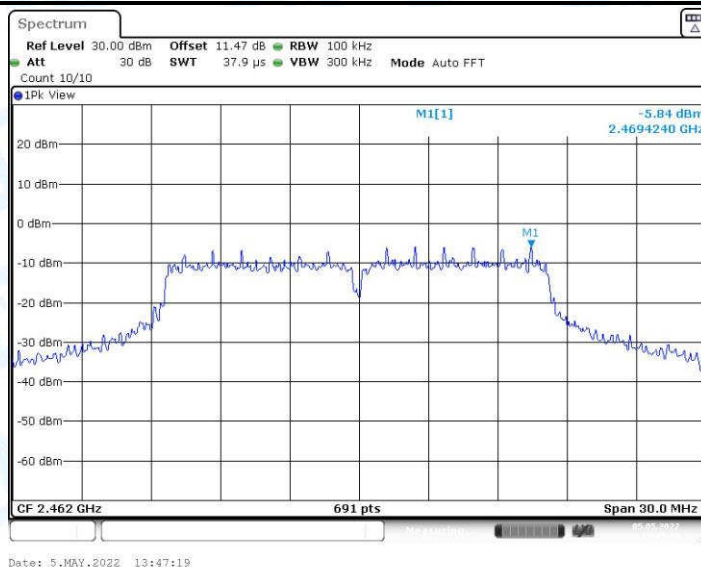
11G_Ant1_2437_0~Reference



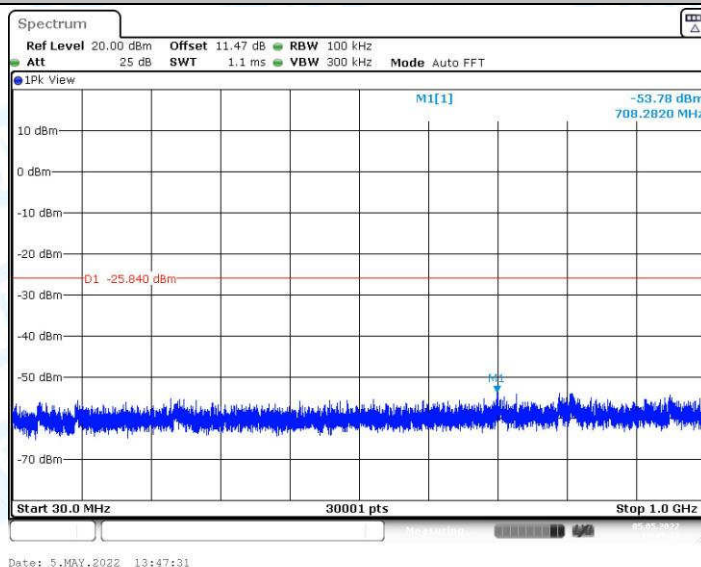
11G_Ant1_2437_30~1000



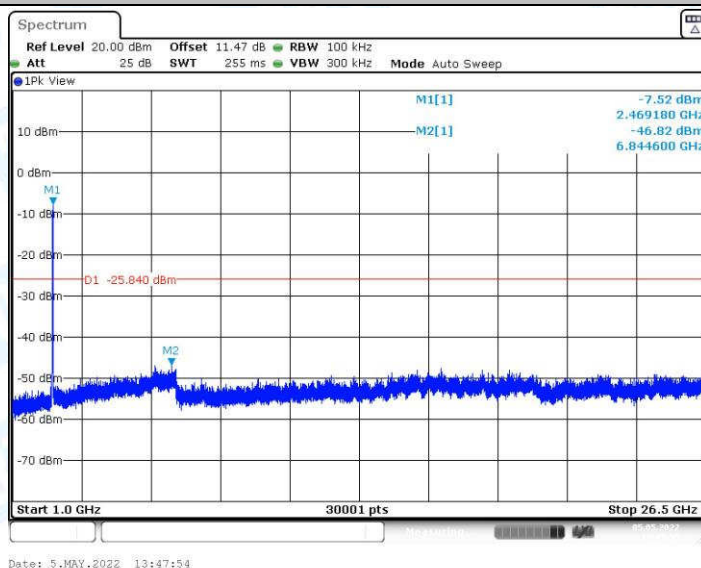
11G_Ant1_2437_1000~26500



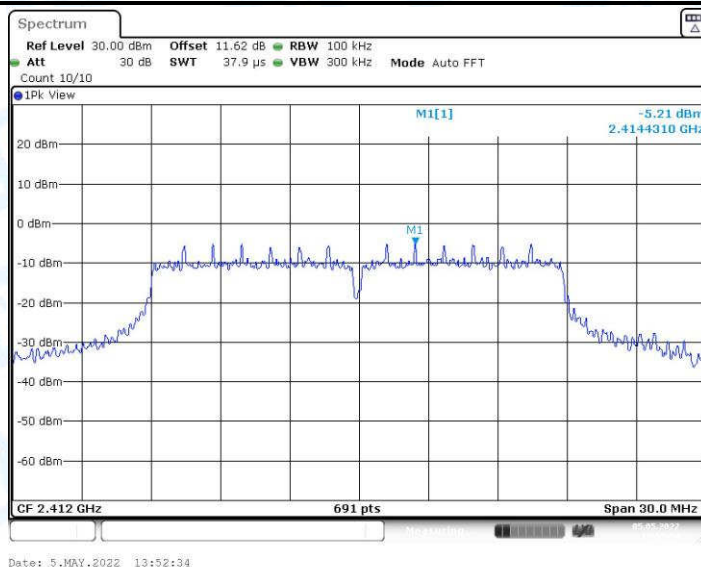
11G_Ant1_2462_0~Reference



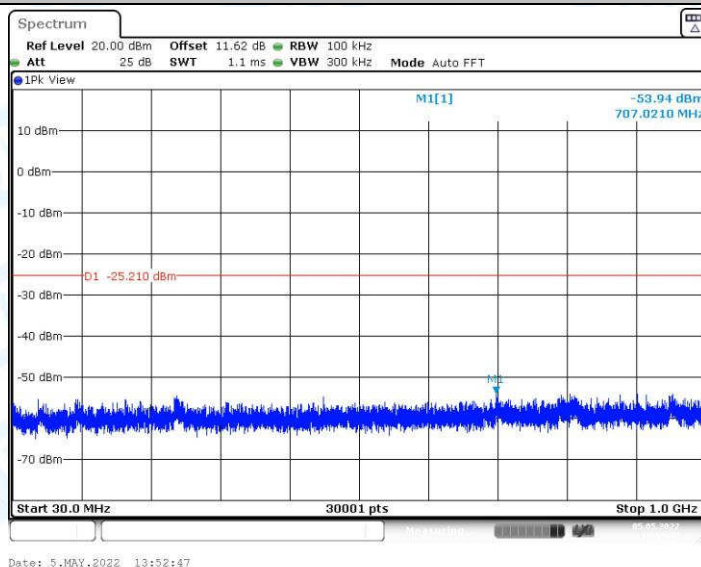
11G_Ant1_2462_30~1000



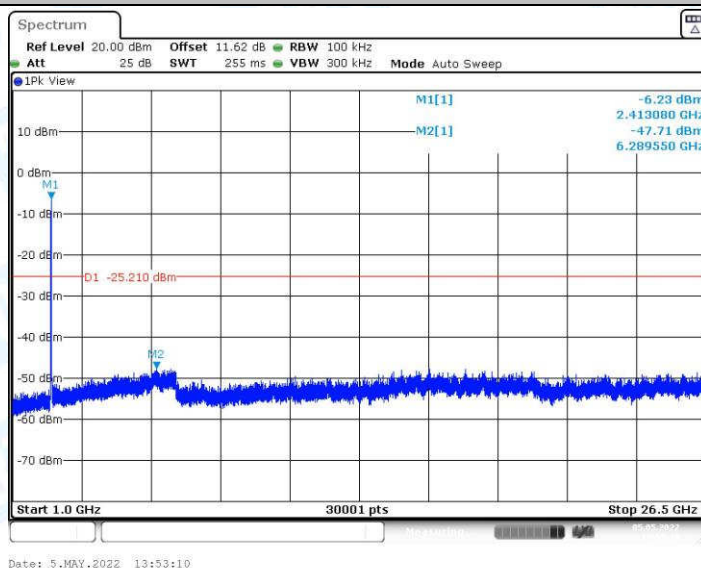
11G_Ant1_2462_1000~26500



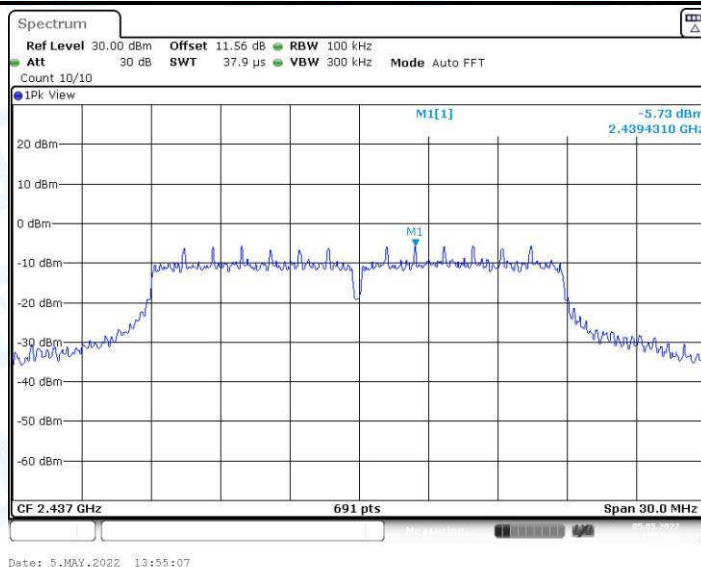
11N20SISO_Ant1_2412_0~Reference



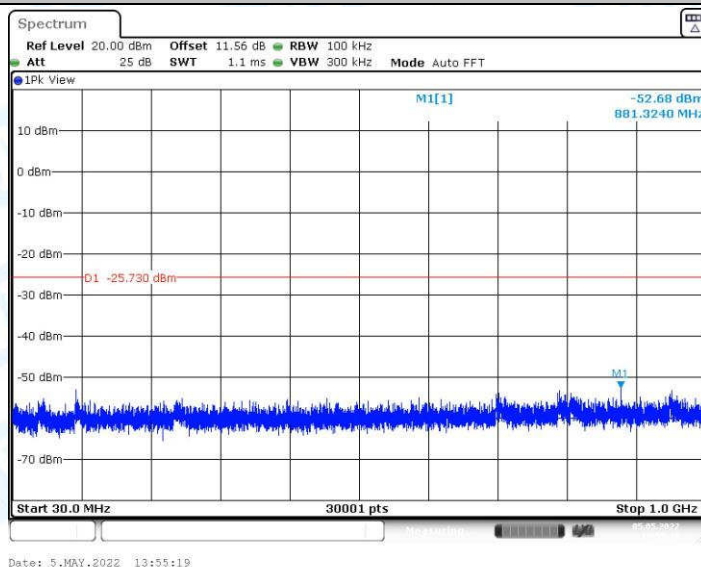
11N20SISO_Ant1_2412_30~1000



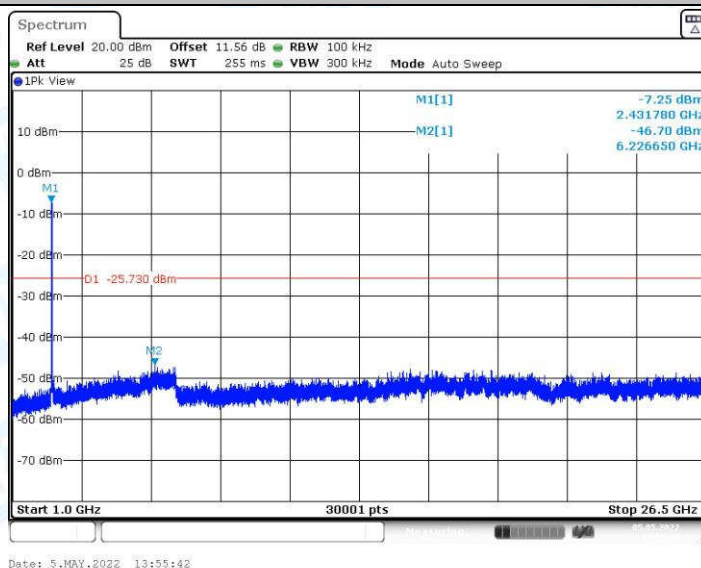
11N20SISO_Ant1_2412_1000~26500



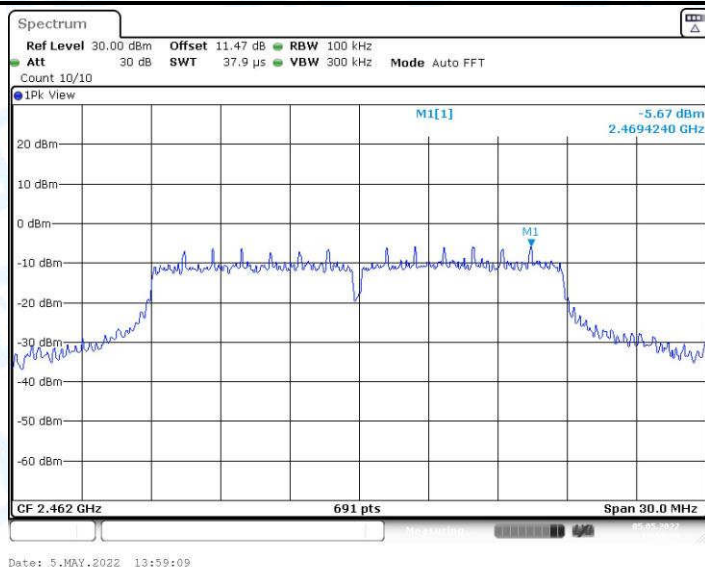
11N20SISO_Ant1_2437_0~Reference



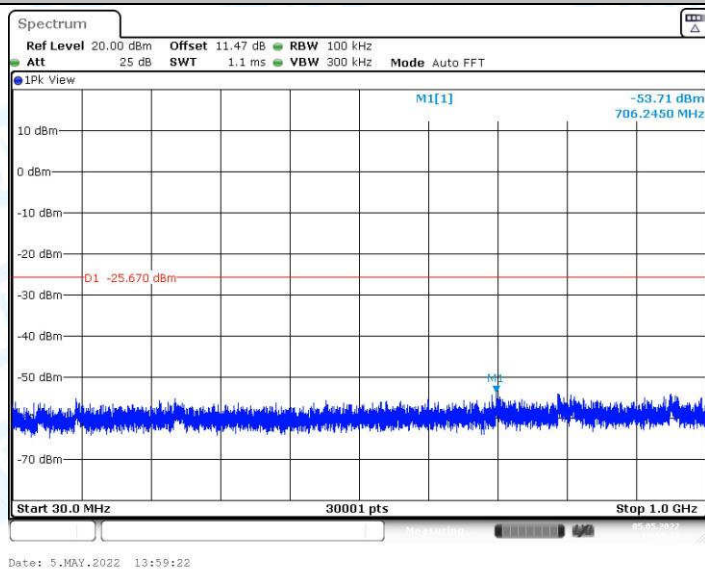
11N20SISO_Ant1_2437_30~1000



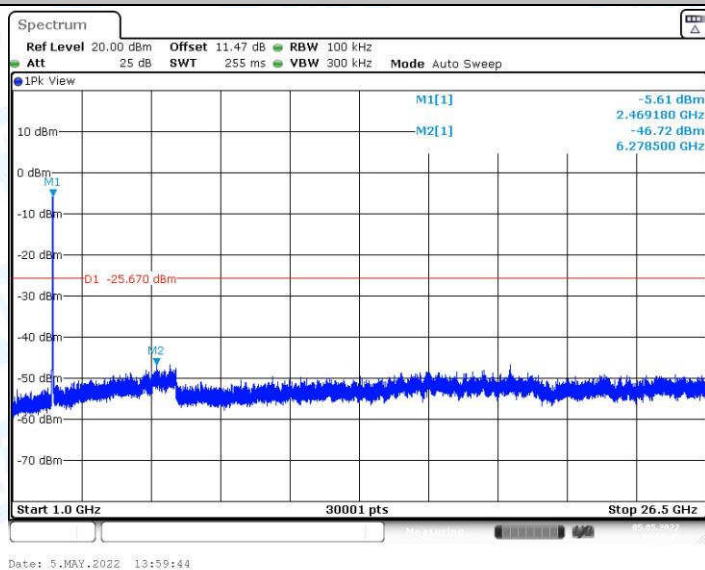
11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



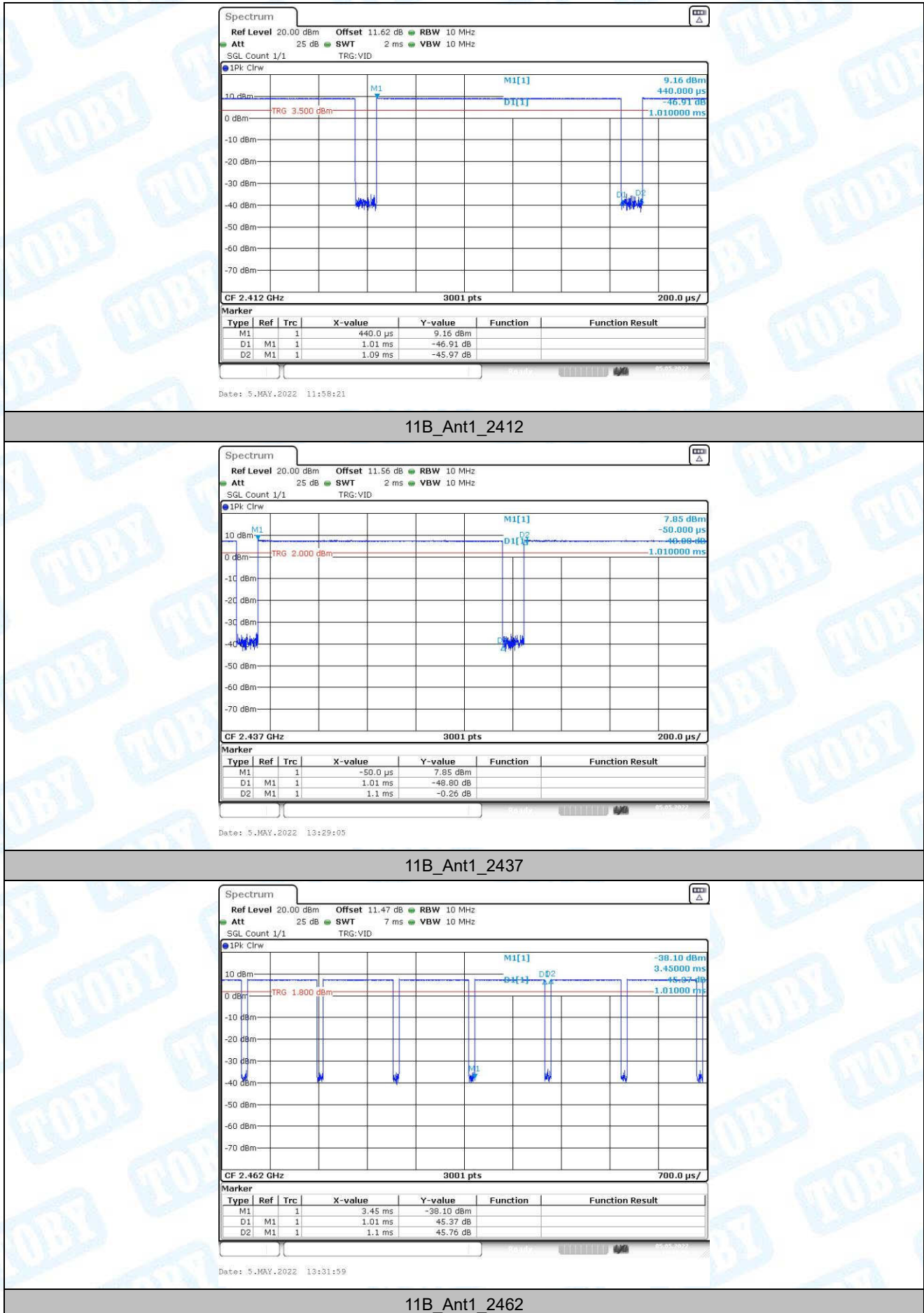
11N20SISO_Ant1_2462_1000~26500

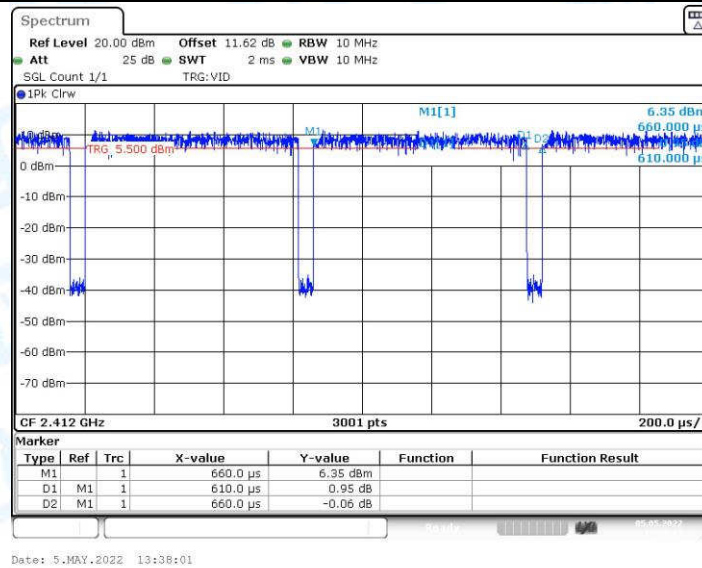
7. Duty Cycle

7.1. Test Result

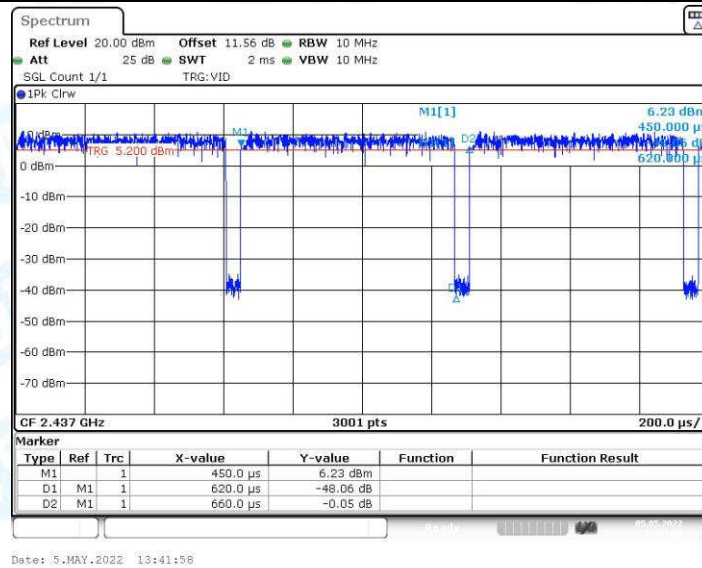
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	1.01	1.09	92.66	---	---
		2437	1.01	1.10	91.82	---	---
		2462	1.01	1.10	91.82	---	---
11G	Ant1	2412	0.61	0.66	92.42	---	---
		2437	0.62	0.66	93.94	---	---
		2462	0.62	0.66	93.94	---	---
11N20SISO	Ant1	2412	0.61	0.65	93.85	---	---
		2437	0.61	0.66	92.42	---	---
		2462	0.61	0.65	93.85	---	---

7.2. Test Graphs

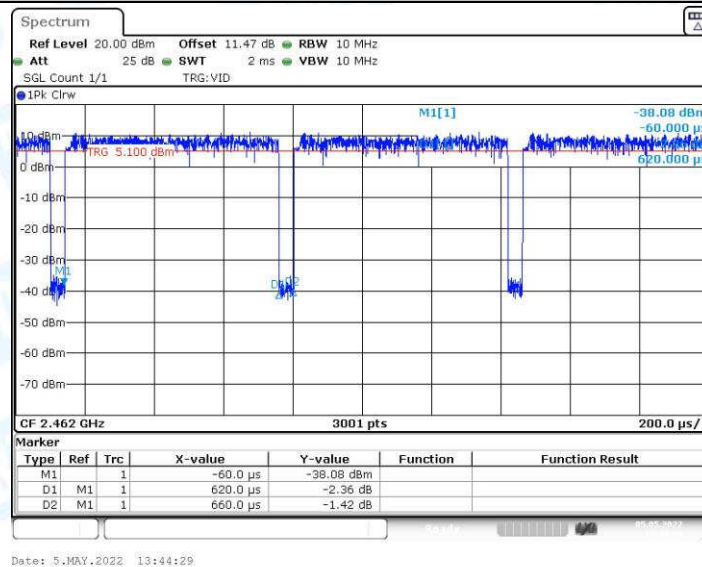




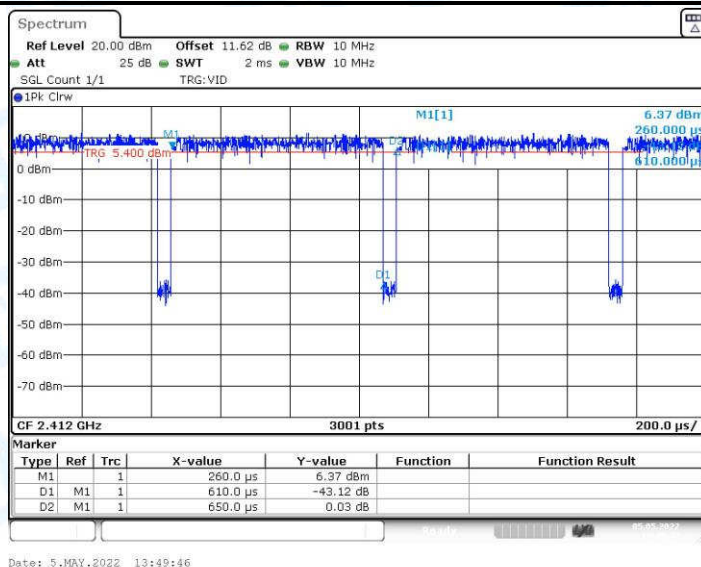
11G_Ant1_2412



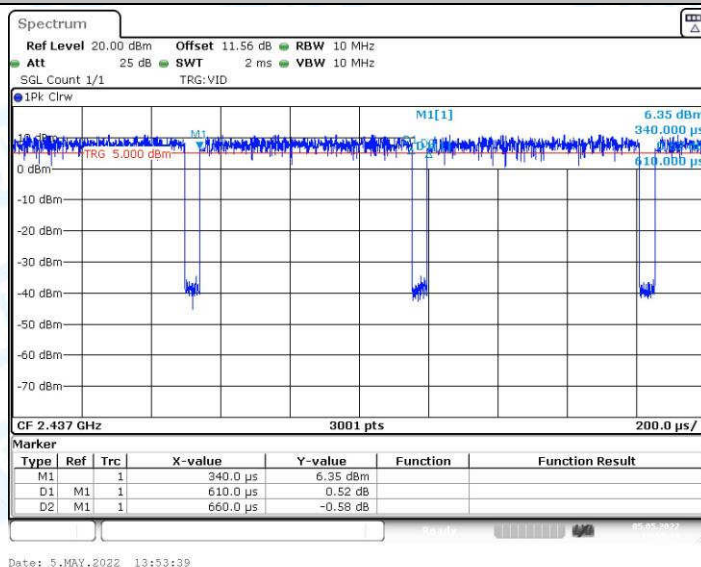
11G_Ant1_2437



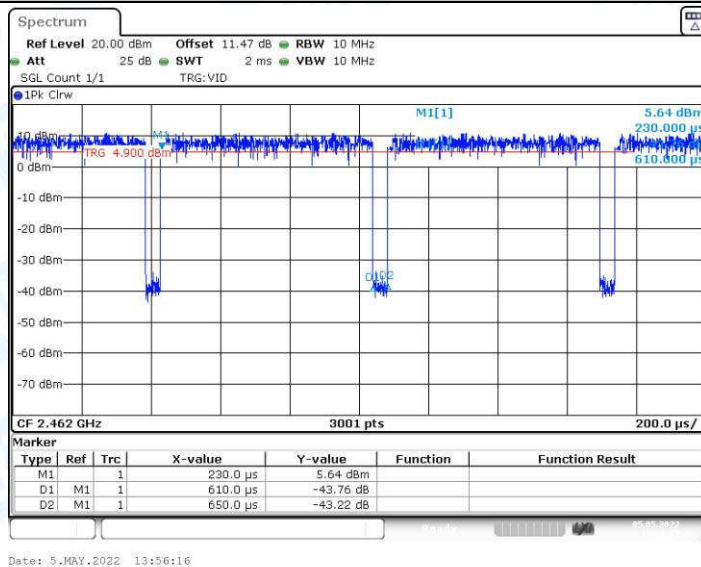
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

8. Emissions in Restricted Bands

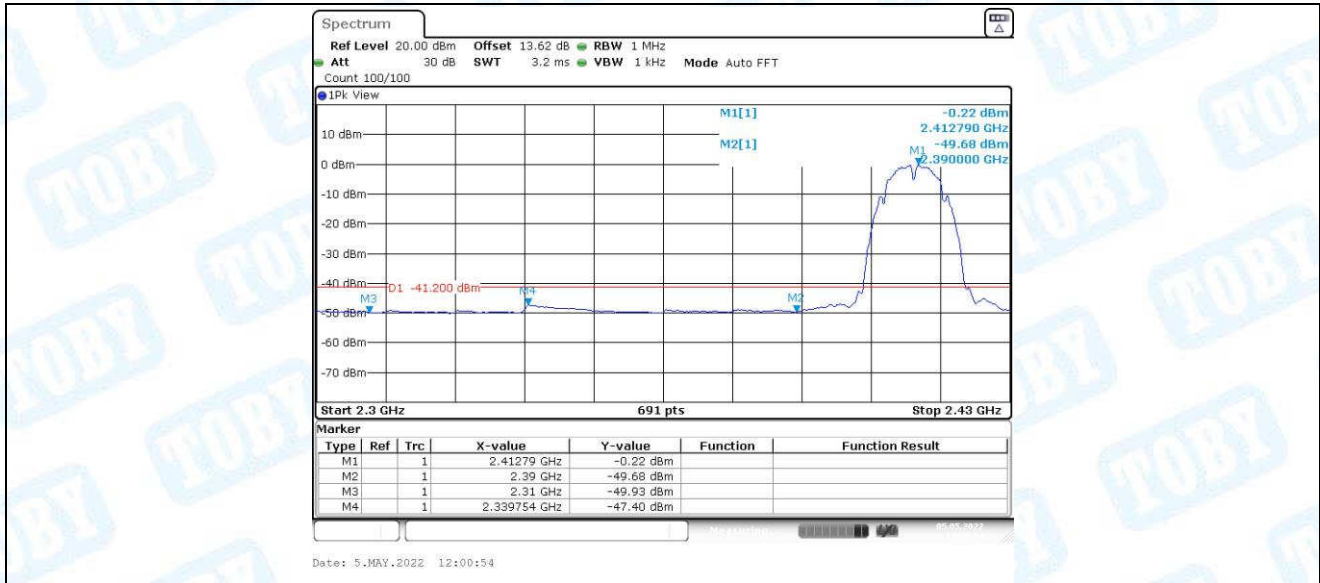
8.1. Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.93	≤-41.20	PASS
				AV	2339.754	-47.4	≤-41.20	PASS
				AV	2390.000	-49.68	≤-41.20	PASS
				Peak	2310.000	-37.64	≤-21.20	PASS
				Peak	2377.435	-32.8	≤-21.20	PASS
				Peak	2390.000	-39.46	≤-21.20	PASS
		High	2462	AV	2483.500	-48.48	≤-41.20	PASS
				AV	2495.638	-48.34	≤-41.20	PASS
				AV	2500.000	-49.08	≤-41.20	PASS
				Peak	2483.500	-31.34	≤-21.20	PASS
				Peak	2483.841	-31.26	≤-21.20	PASS
				Peak	2500.000	-36.9	≤-21.20	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.3	≤-41.20	PASS
				AV	2389.870	-46.6	≤-41.20	PASS
				AV	2390.000	-46.61	≤-41.20	PASS
				Peak	2310.000	-39.26	≤-21.20	PASS
				Peak	2389.870	-31.27	≤-21.20	PASS
				Peak	2390.000	-31.28	≤-21.20	PASS
		High	2462	AV	2483.500	-42.91	≤-41.20	PASS
				AV	2483.522	-42.91	≤-41.20	PASS
				AV	2500.000	-48.01	≤-41.20	PASS
				Peak	2483.500	-28.5	≤-21.20	PASS
				Peak	2484.478	-27.58	≤-21.20	PASS
				Peak	2500.000	-38.2	≤-21.20	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-49.3	≤-41.20	PASS
				AV	2389.870	-46.05	≤-41.20	PASS
				AV	2390.000	-46.11	≤-41.20	PASS
				Peak	2310.000	-39.05	≤-21.20	PASS
				Peak	2389.870	-32.15	≤-21.20	PASS
				Peak	2390.000	-32.08	≤-21.20	PASS
		High	2462	AV	2483.500	-42.09	≤-41.20	PASS
				AV	2483.522	-42.09	≤-41.20	PASS
				AV	2500.000	-48.3	≤-41.20	PASS
				Peak	2483.500	-26.42	≤-21.20	PASS
				Peak	2483.522	-26.42	≤-21.20	PASS
				Peak	2500.000	-37.26	≤-21.20	PASS

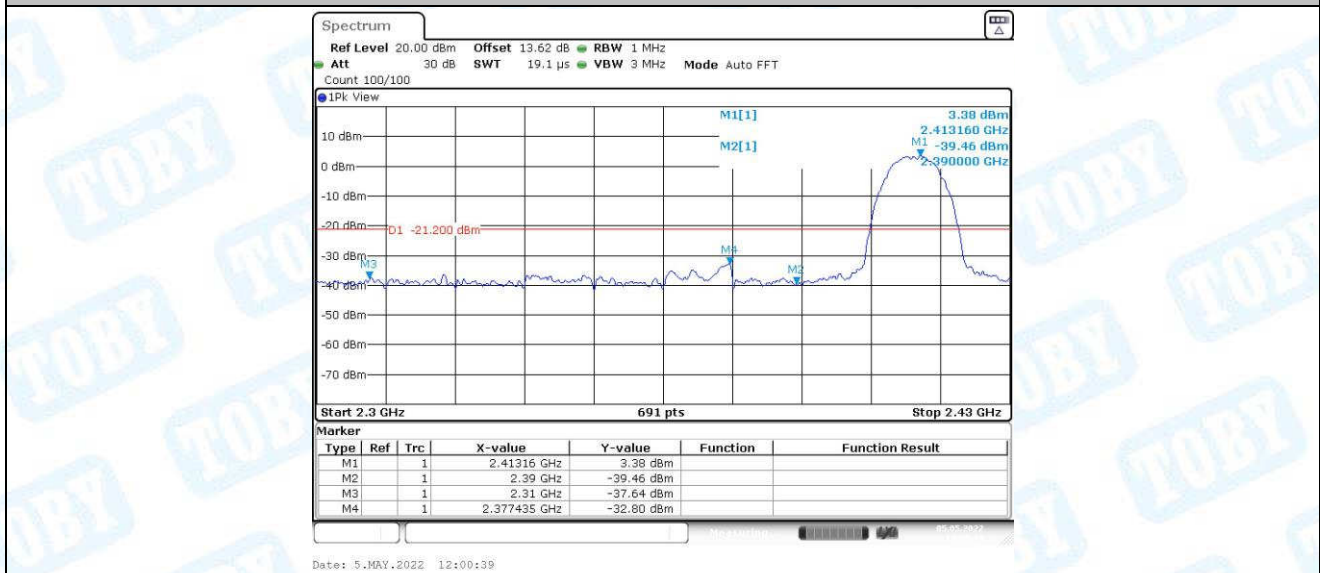
Note:

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.

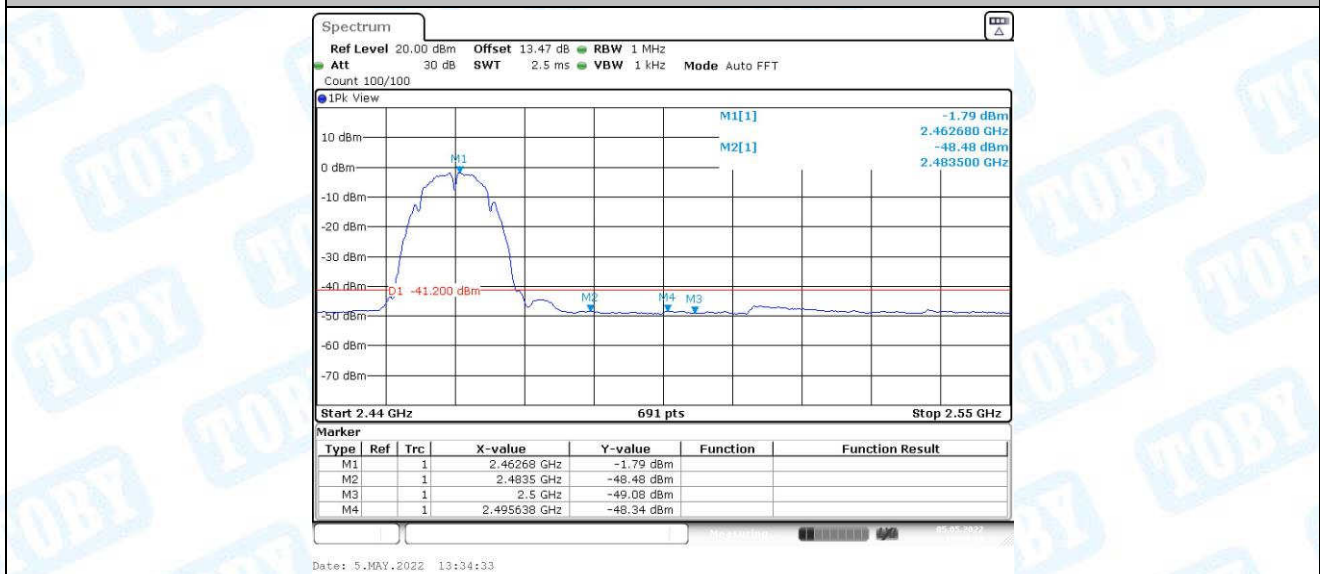
8.2.Test Graphs



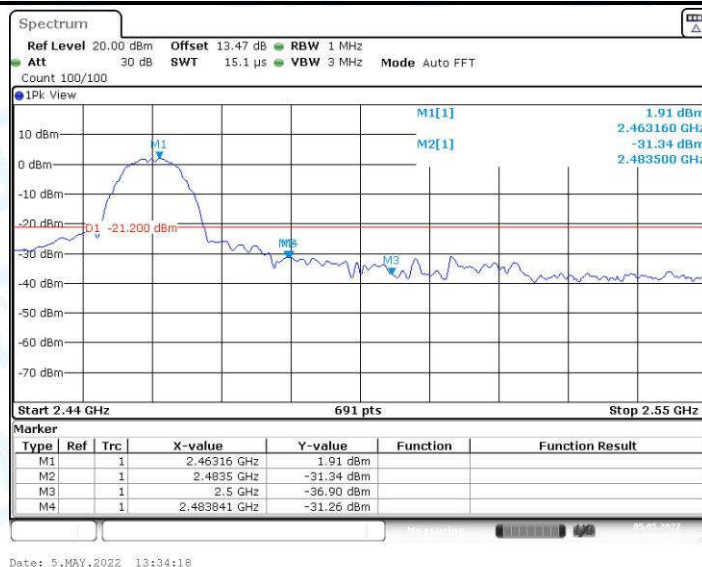
11B_Ant1_Low_2412_AV



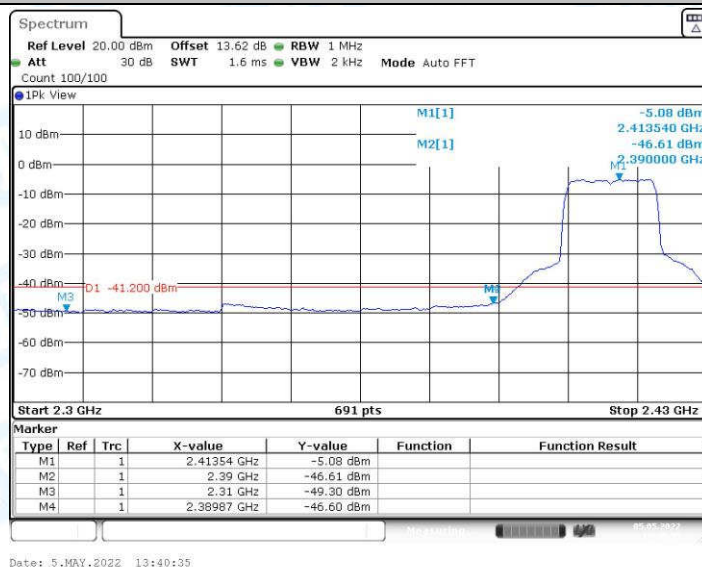
11B_Ant1_Low_2412_Peak



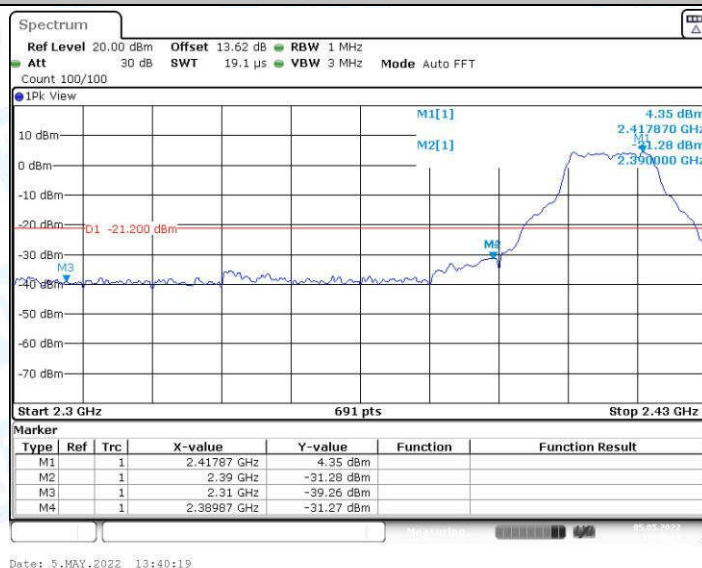
11B_Ant1_High_2462_AV



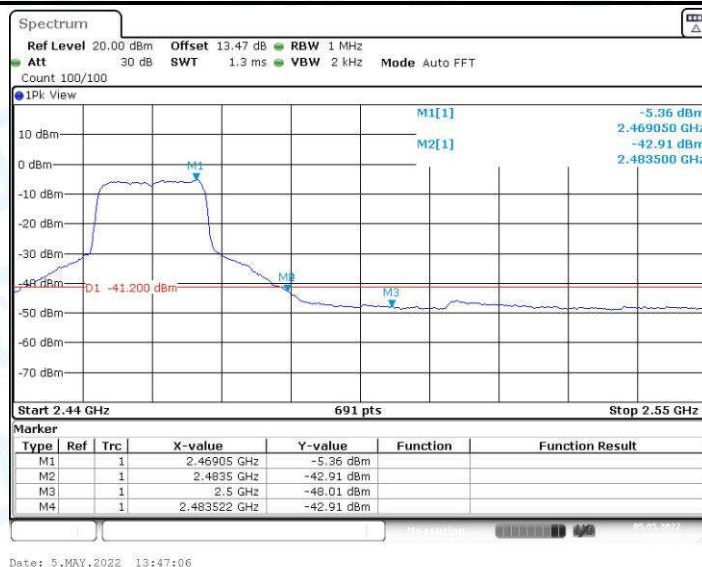
11B_Ant1_High_2462_Peak



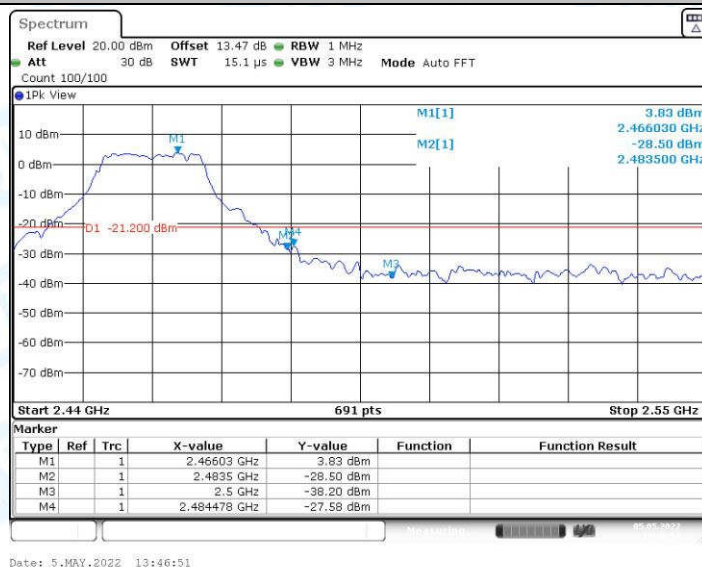
11G_Ant1_Low_2412_AV



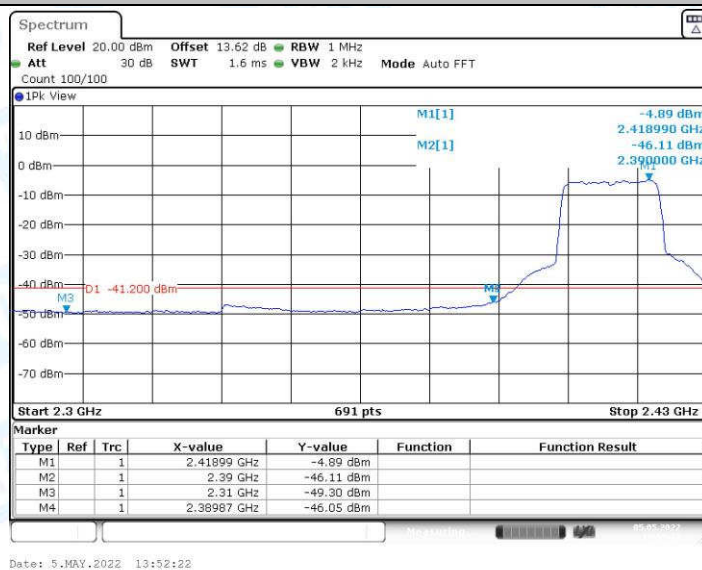
11G_Ant1_Low_2412_Peak



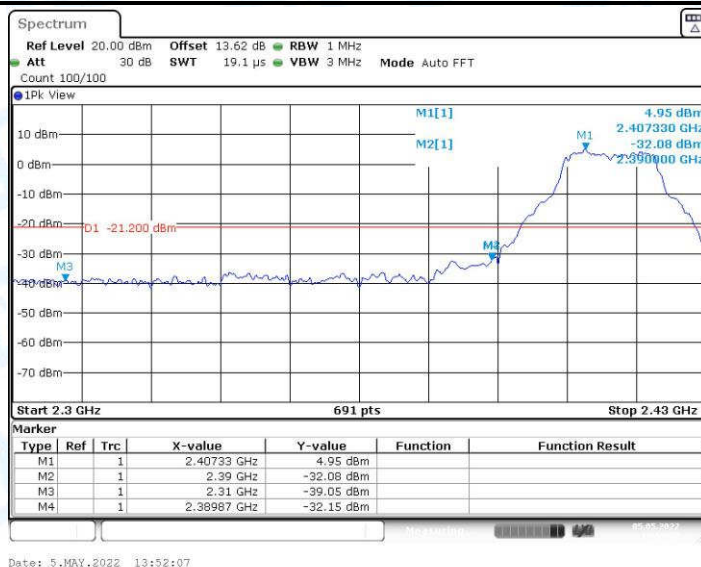
11G_Ant1_High_2462_AV



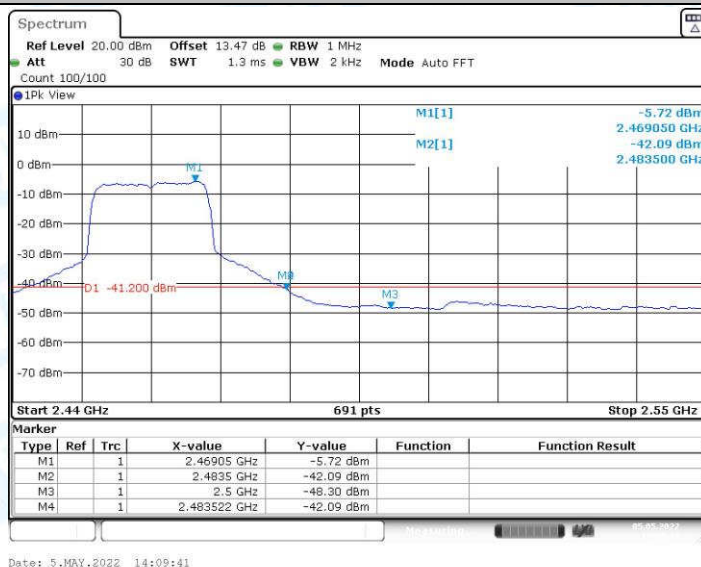
11G_Ant1_High_2462_Peak



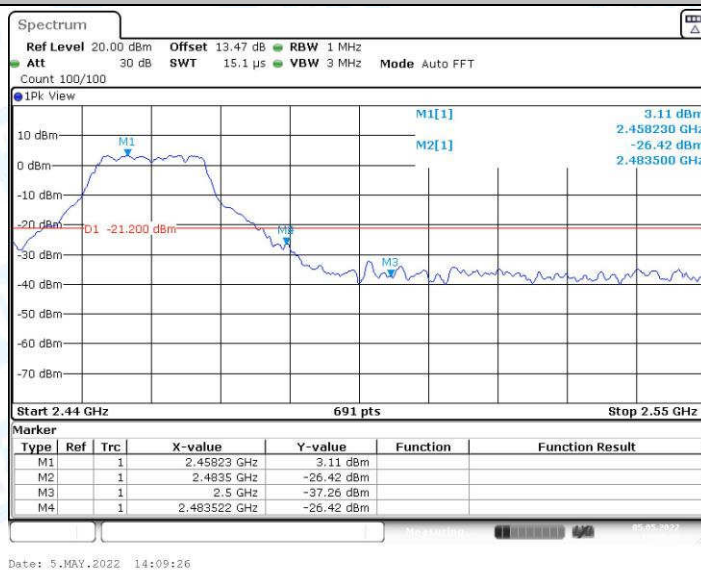
11N20SISO_Ant1_Low_2412_AV



11N20SISO_Ant1_Low_2412_Peak



11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak

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