

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

General Description of EUT	
Product Name:	Osprey Electronics
Test Model:	Hotspot G1
Sample ID:	RW-C-202204-0089-2-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202204-0089-11.	

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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
11B	Ant1	2412	9.52	2407.48	2417.00	0.5	PASS
		2437	9.52	2432.48	2442.00	0.5	PASS
		2462	9.08	2457.48	2466.56	0.5	PASS
11G	Ant1	2412	15.92	2404.24	2420.16	0.5	PASS
		2437	16.04	2429.12	2445.16	0.5	PASS
		2462	15.16	2454.40	2469.56	0.5	PASS
11N20SISO	Ant1	2412	16.36	2404.40	2420.76	0.5	PASS
		2437	16.52	2429.24	2445.76	0.5	PASS
		2462	15.16	2454.40	2469.56	0.5	PASS
11N40SISO	Ant1	2422	35.76	2404.40	2440.16	0.5	PASS
		2437	35.76	2419.40	2455.16	0.5	PASS
		2452	35.36	2434.40	2469.76	0.5	PASS

1.2. Test Graphs



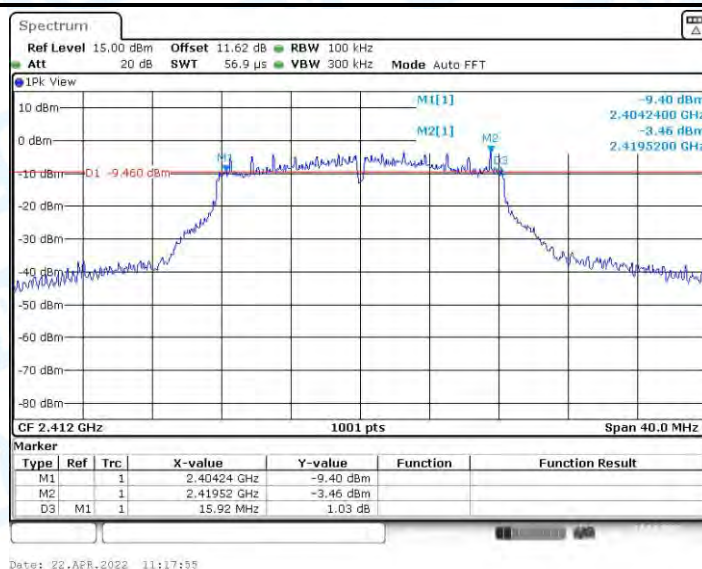
11B_Ant1_2412



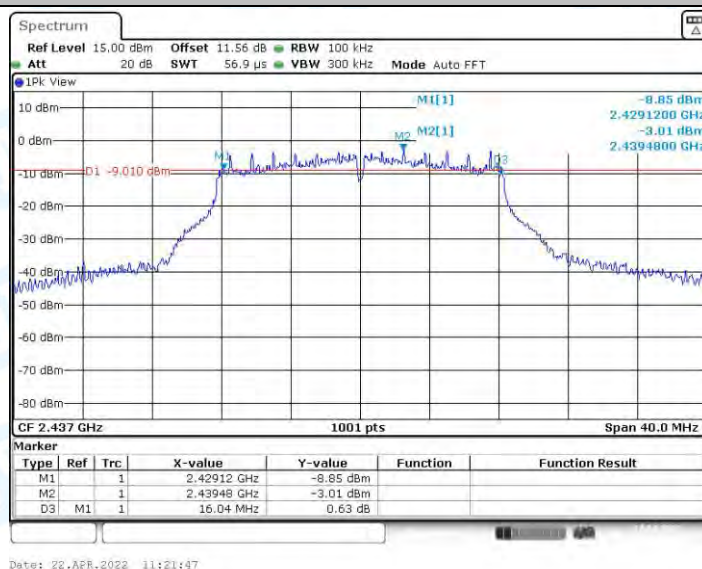
11B_Ant1_2437



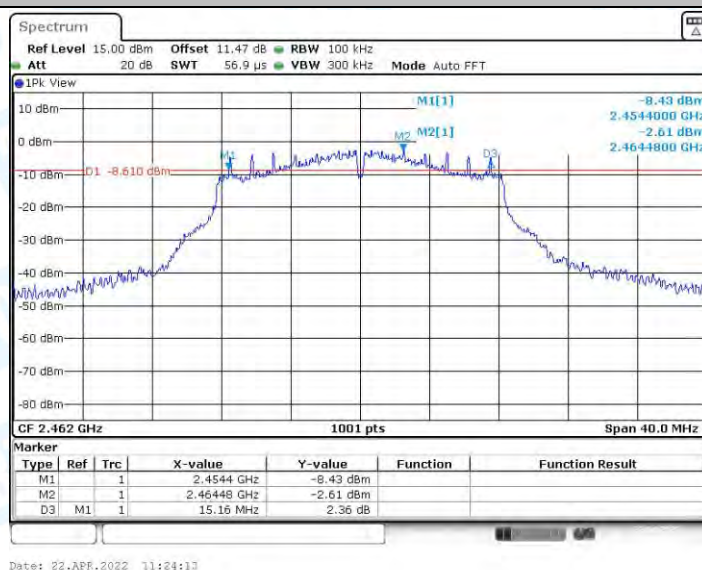
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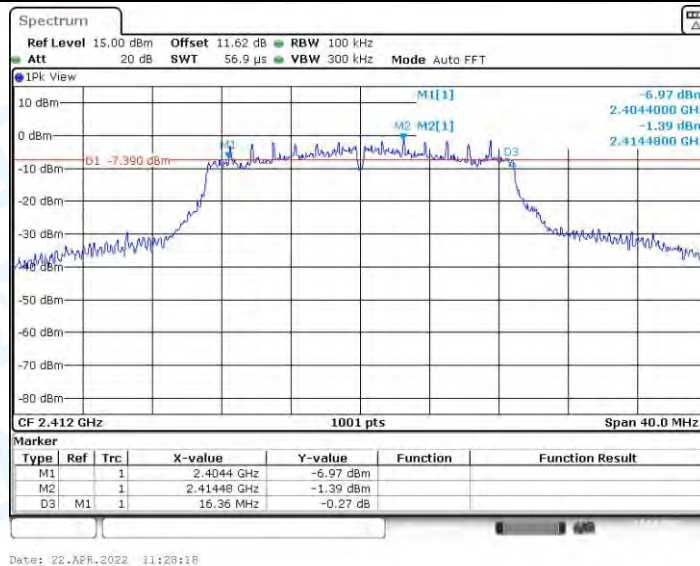
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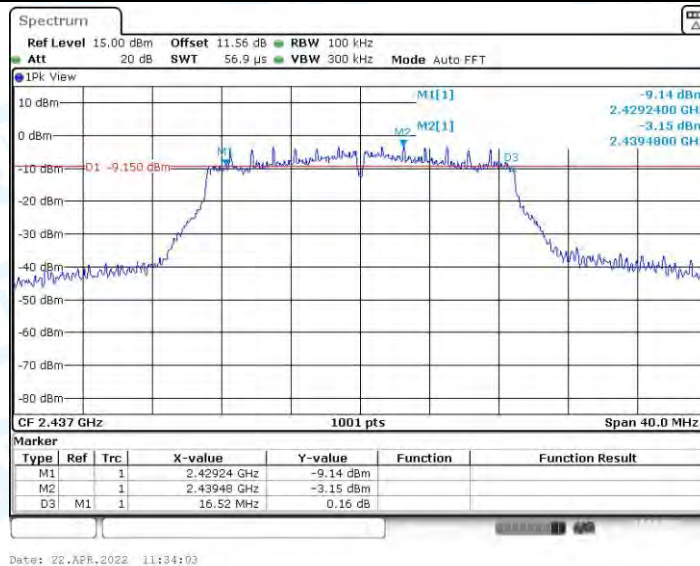
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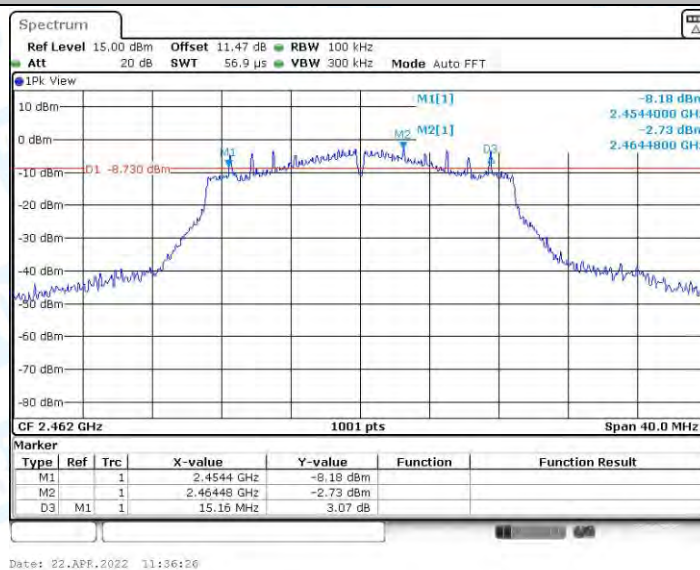
11G_Ant1_2462



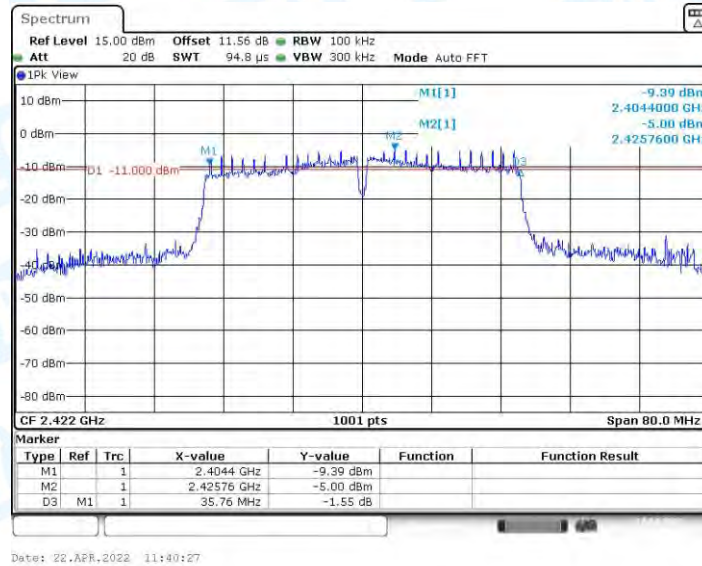
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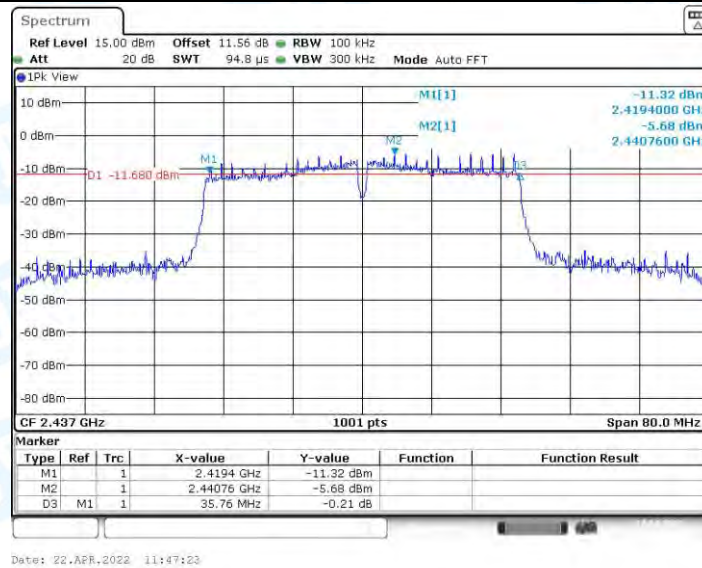
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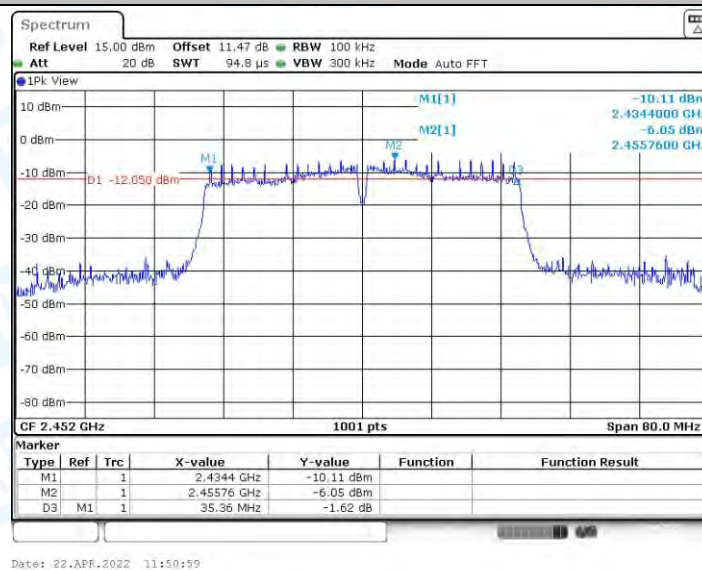
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

2. Occupied Channel Bandwidth

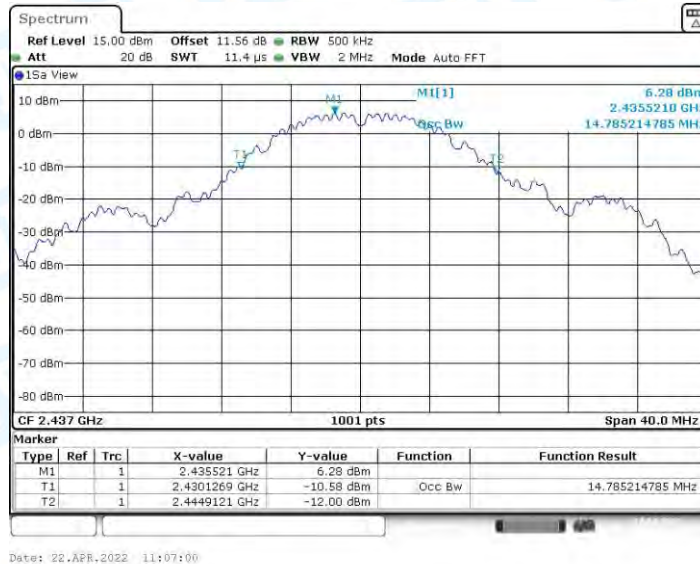
2.1. Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.426	2405.207	2419.632	---	---
		2437	14.785	2430.127	2444.912	---	---
		2462	14.266	2455.367	2469.632	---	---
11G	Ant1	2412	17.303	2403.329	2420.631	---	---
		2437	17.862	2428.089	2445.951	---	---
		2462	16.943	2453.528	2470.472	---	---
11N20SISO	Ant1	2412	18.741	2402.809	2421.550	---	---
		2437	18.342	2427.889	2446.231	---	---
		2462	17.702	2453.169	2470.871	---	---
11N40SISO	Ant1	2422	37.003	2403.698	2440.701	---	---
		2437	36.603	2418.778	2455.382	---	---
		2452	36.284	2433.858	2470.142	---	---

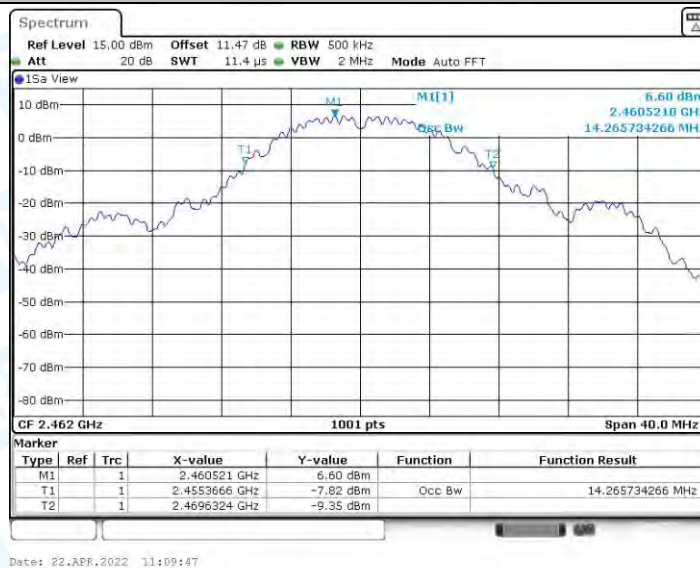
2.2. Test Graphs



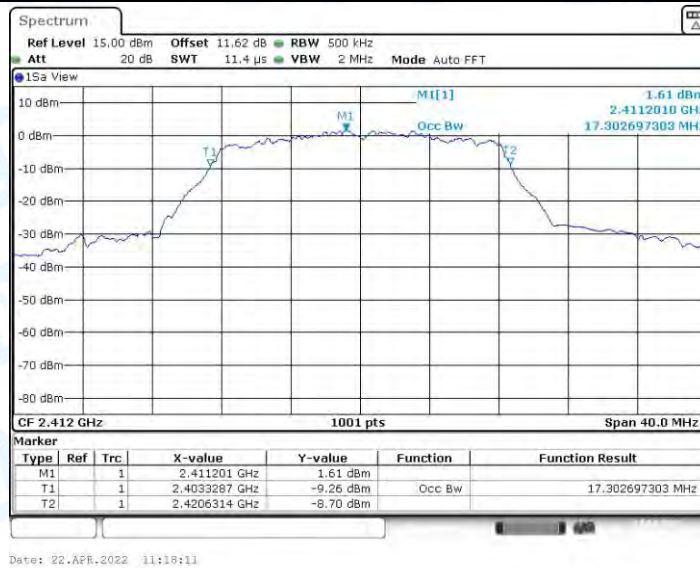
11B_Ant1_2412



11B_Ant1_2437



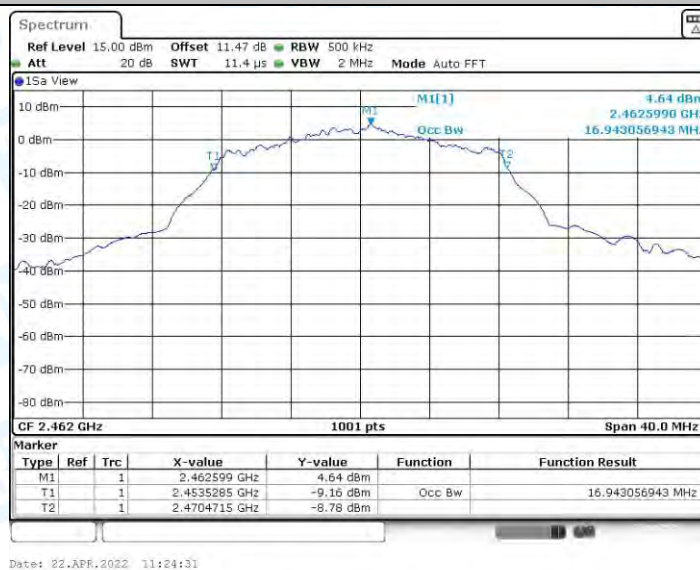
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



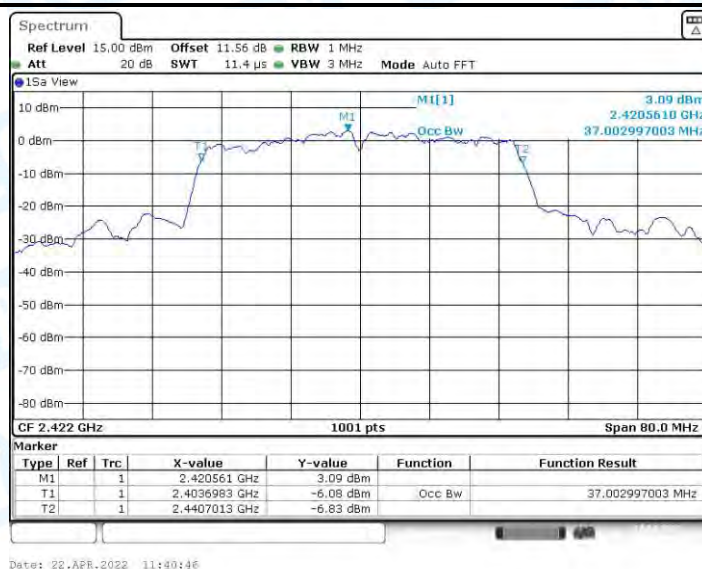
11N20SISO_Ant1_2412



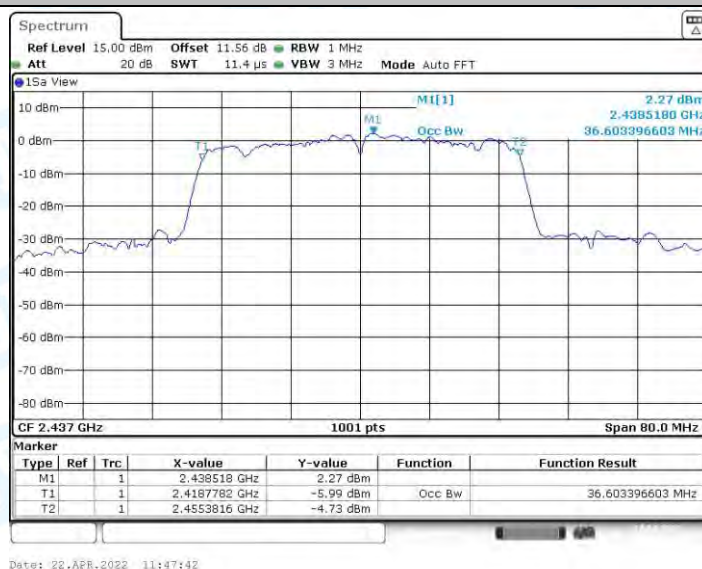
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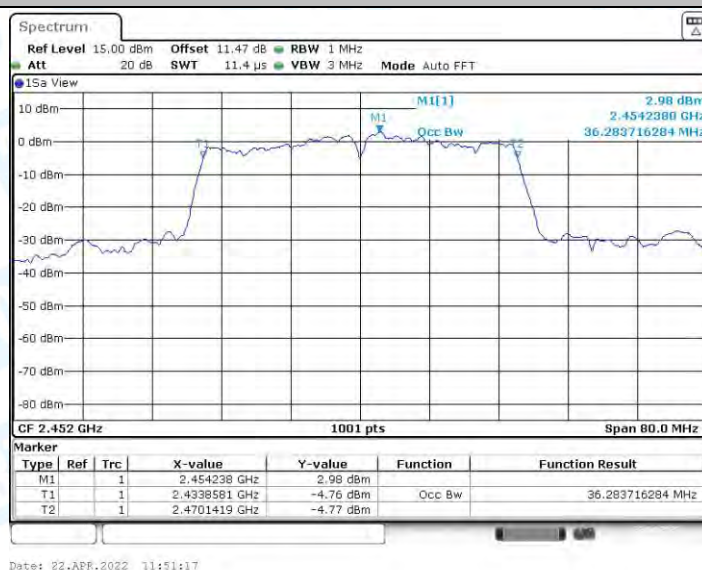
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

3. Maximum conducted output power

3.1. Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	16.71	≤30.00	PASS
		2437	17.67	≤30.00	PASS
		2462	17.90	≤30.00	PASS
11G	Ant1	2412	16.15	≤30.00	PASS
		2437	16.61	≤30.00	PASS
		2462	16.92	≤30.00	PASS
11N20SISO	Ant1	2412	17.61	≤30.00	PASS
		2437	16.18	≤30.00	PASS
		2462	16.47	≤30.00	PASS
11N40SISO	Ant1	2422	16.89	≤30.00	PASS
		2437	16.28	≤30.00	PASS
		2452	15.86	≤30.00	PASS

4. Maximum power spectral density

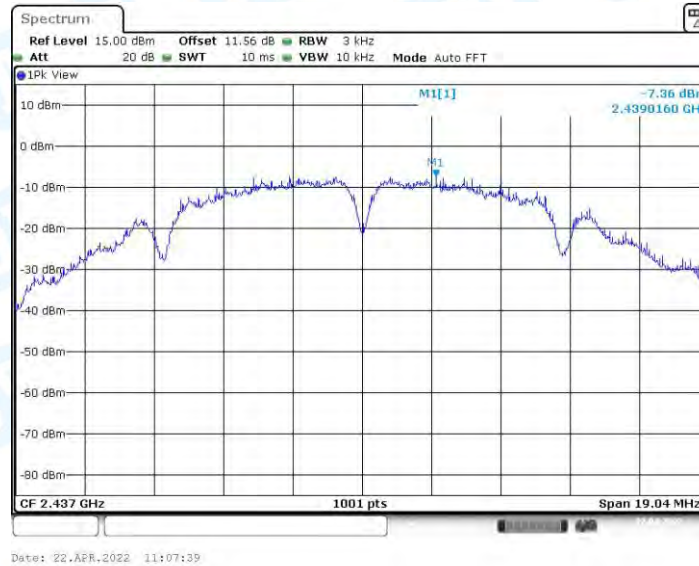
4.1. Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-7.33	≤8.00	PASS
		2437	-7.36	≤8.00	PASS
		2462	-6.16	≤8.00	PASS
11G	Ant1	2412	-15.05	≤8.00	PASS
		2437	-14.66	≤8.00	PASS
		2462	-13.51	≤8.00	PASS
11N20SISO	Ant1	2412	-13.81	≤8.00	PASS
		2437	-14.82	≤8.00	PASS
		2462	-14.02	≤8.00	PASS
11N40SISO	Ant1	2422	-18.47	≤8.00	PASS
		2437	-18.58	≤8.00	PASS
		2452	-17.87	≤8.00	PASS

4.2. Test Graphs



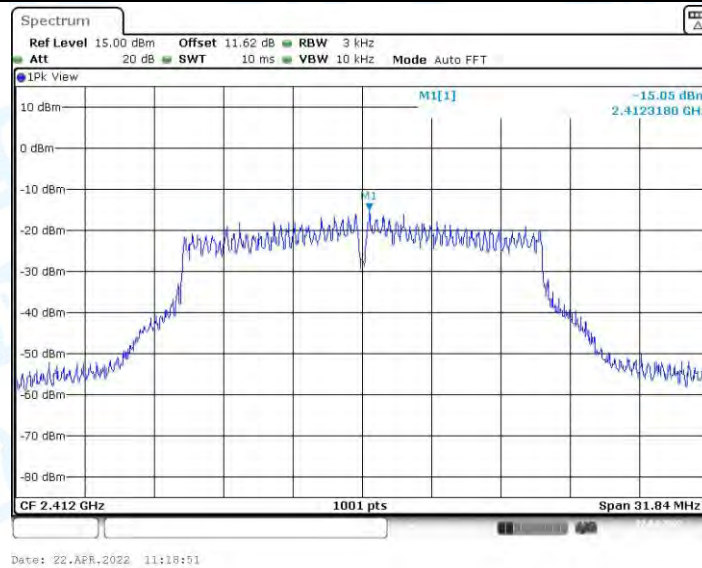
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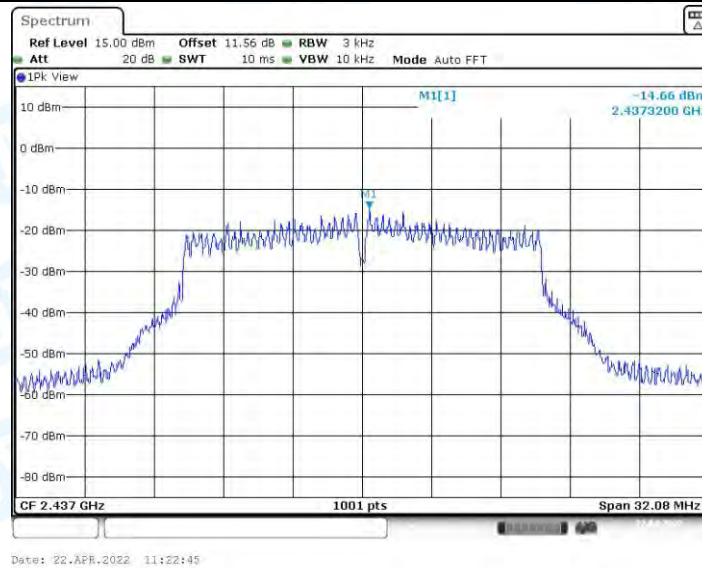
11B_Ant1_2437



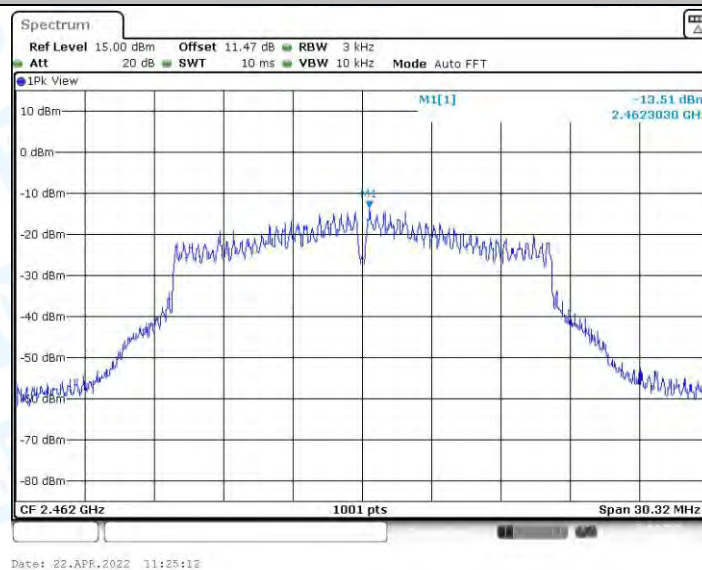
11B_Ant1_2462



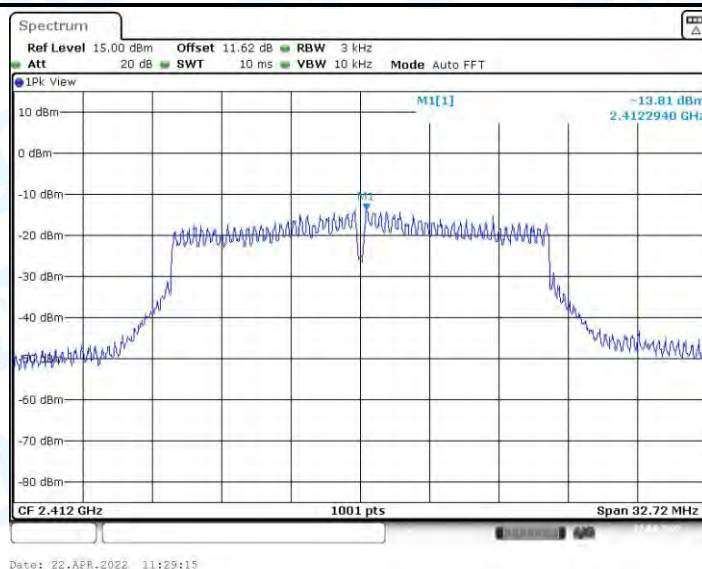
11G_Ant1_2412



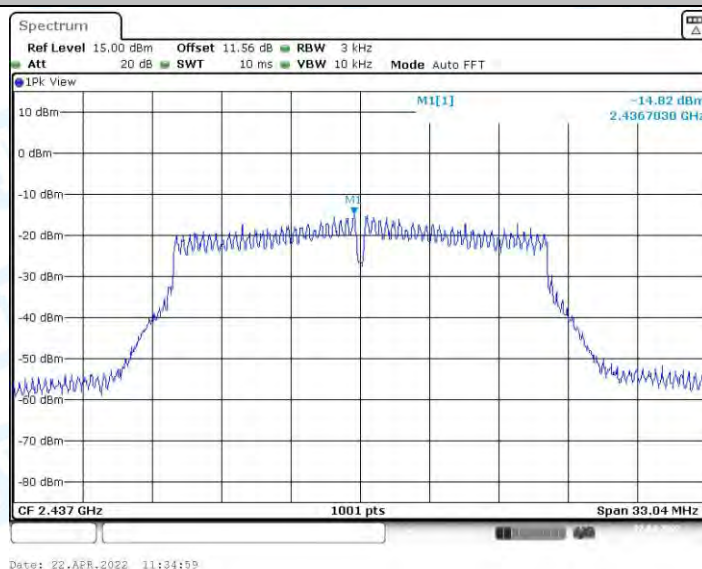
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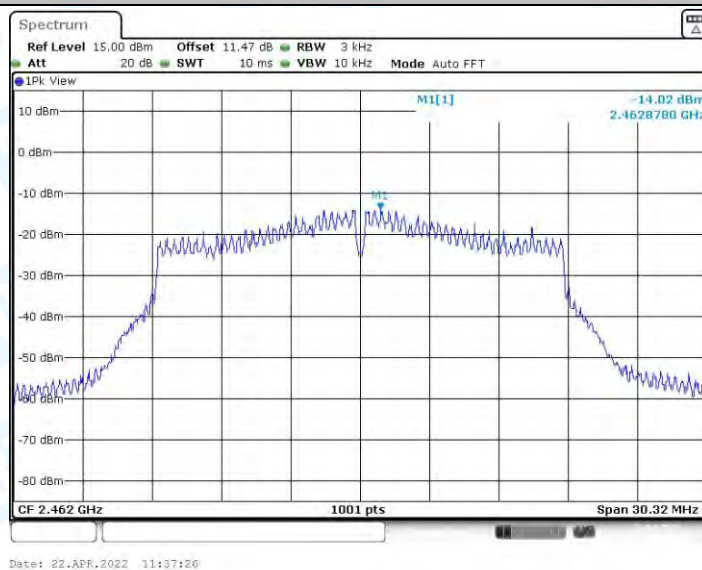
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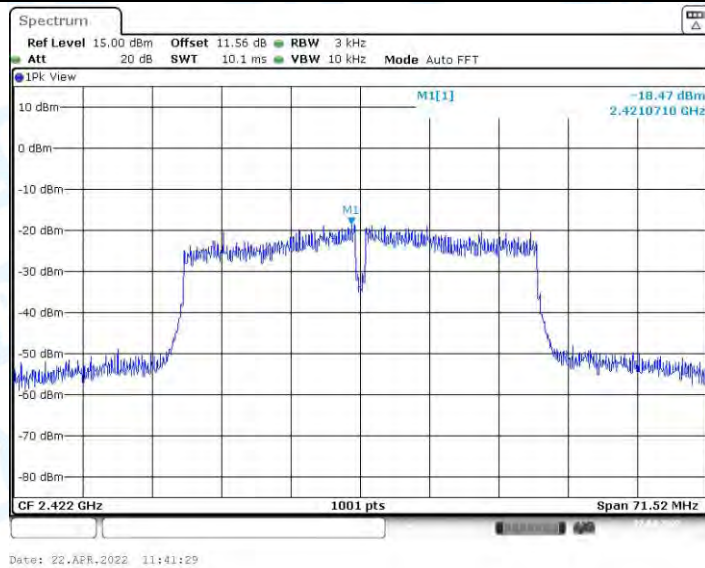
11N20SISO_Ant1_2412



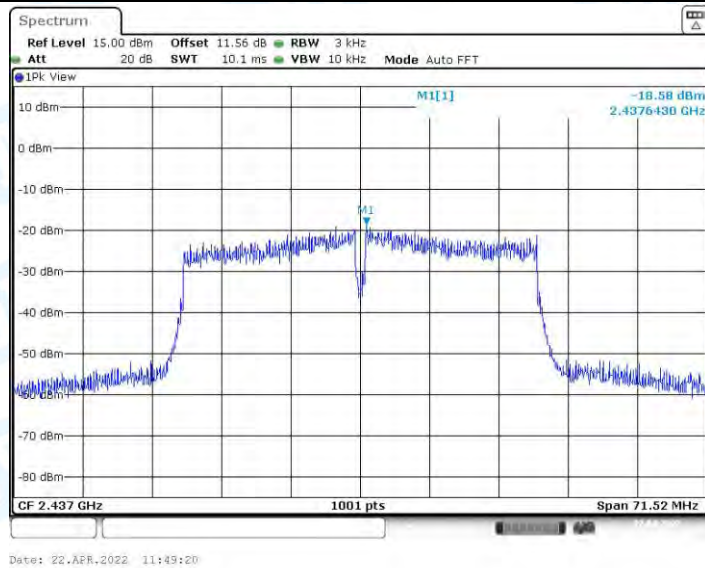
11N20SISO_Ant1_2437



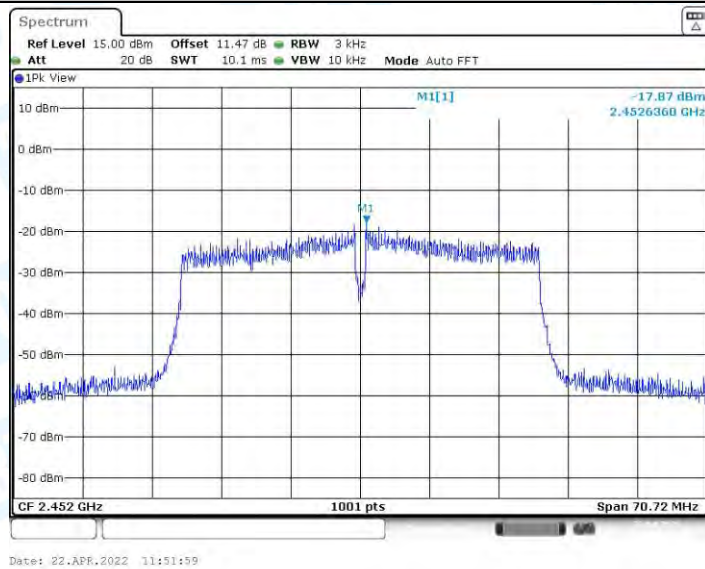
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



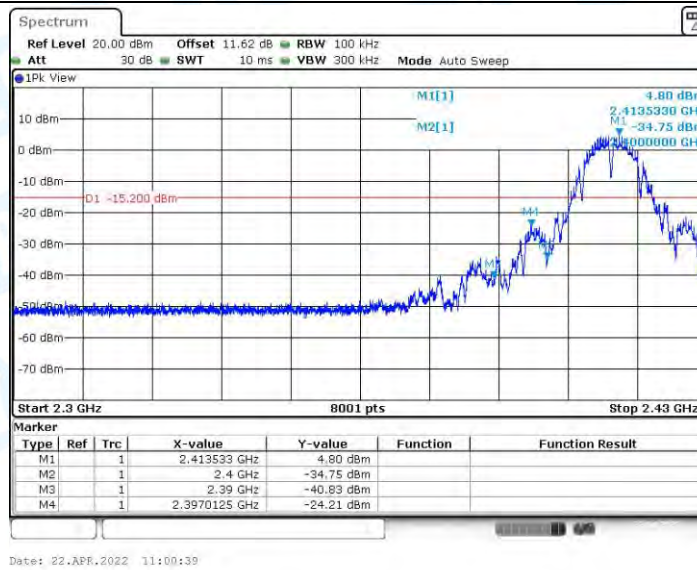
11N40SISO_Ant1_2452

5. Band edge measurements

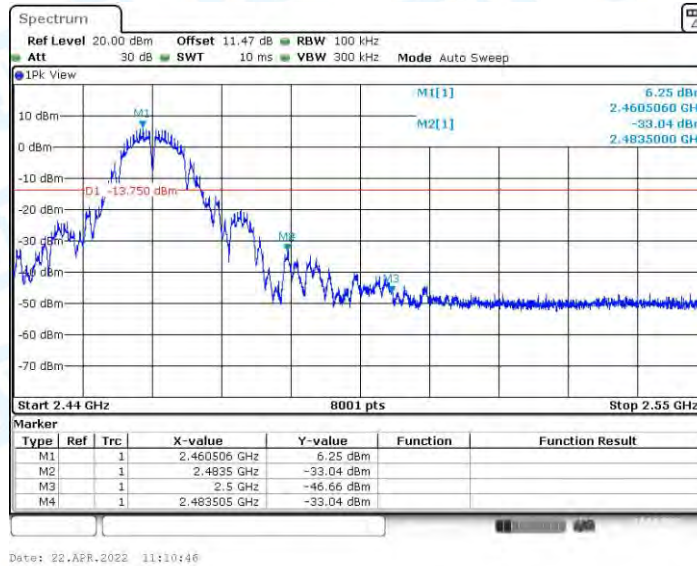
5.1. Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.80	-24.21	≤ -15.2	PASS
		High	2462	6.25	-33.04	≤ -13.75	PASS
11G	Ant1	Low	2412	-3.46	-36.65	≤ -23.46	PASS
		High	2462	-2.62	-44.22	≤ -22.62	PASS
11N20SISO	Ant1	Low	2412	-1.78	-31.17	≤ -21.78	PASS
		High	2462	-3.00	-44.59	≤ -23	PASS
11N40SISO	Ant1	Low	2422	-5.10	-33.82	≤ -25.1	PASS
		High	2452	-6.34	-35.65	≤ -26.34	PASS

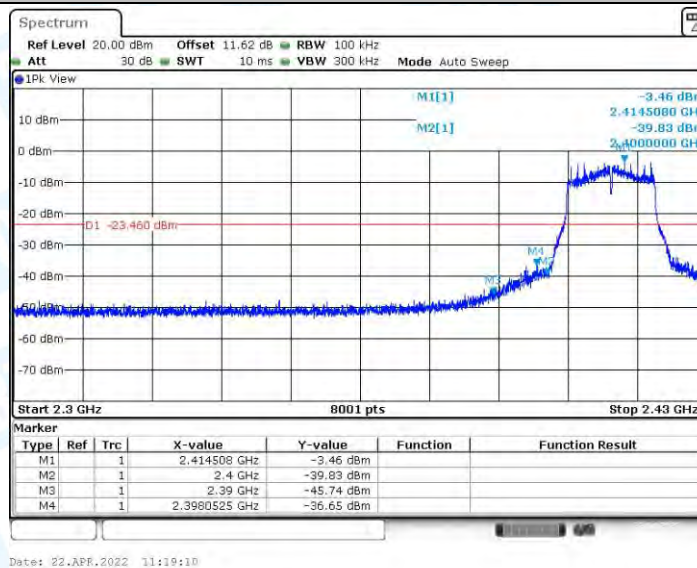
5.2. Test Graphs



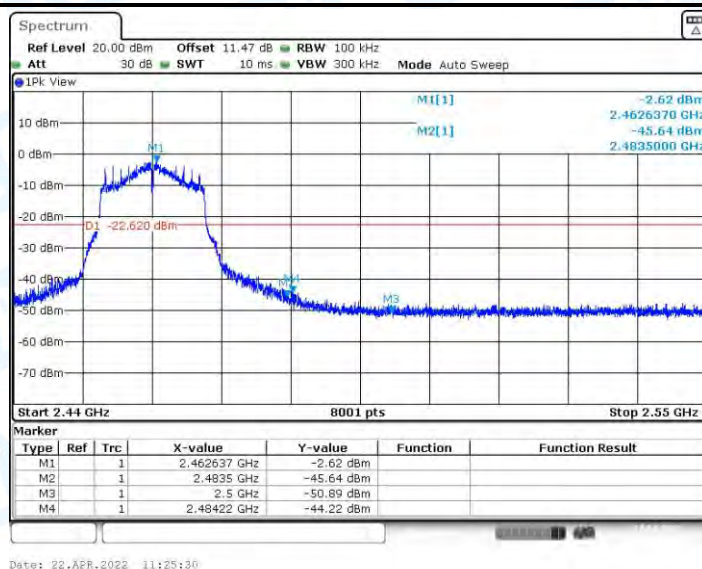
11B_Ant1_Low_2412



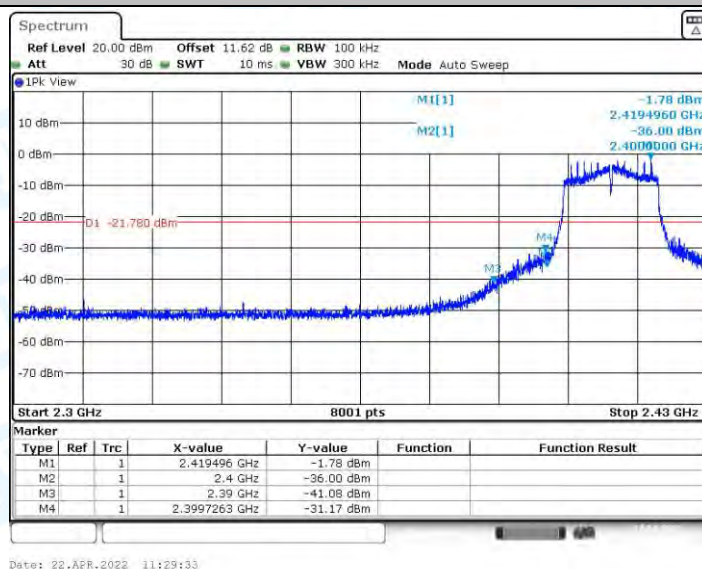
11B_Ant1_High_2462



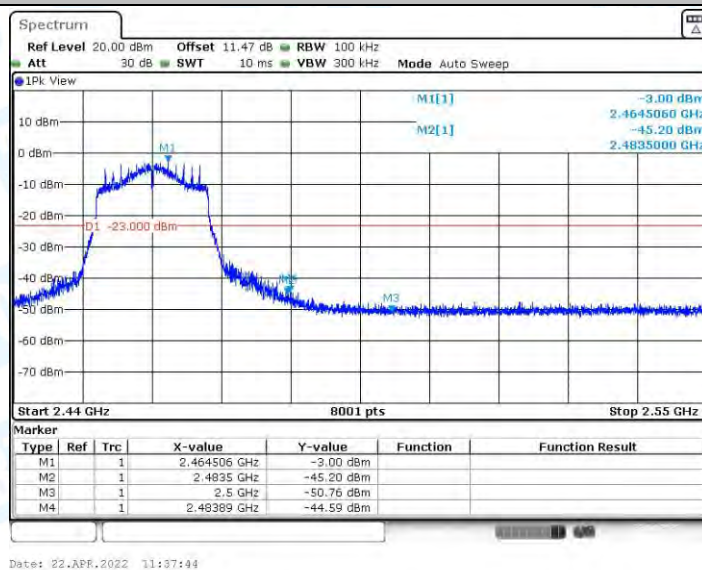
11G_Ant1_Low_2412



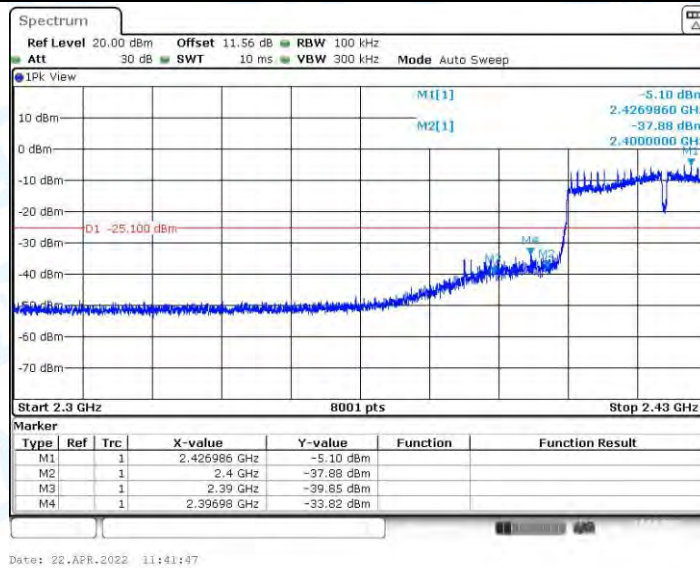
11G_Ant1_High_2462



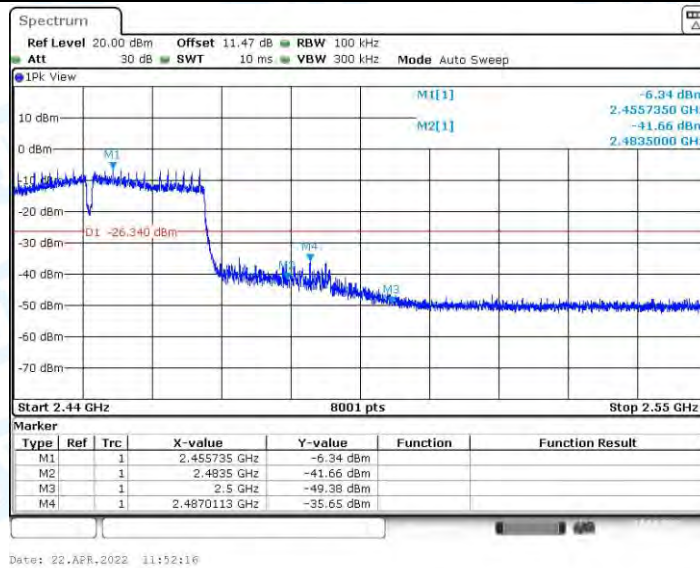
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



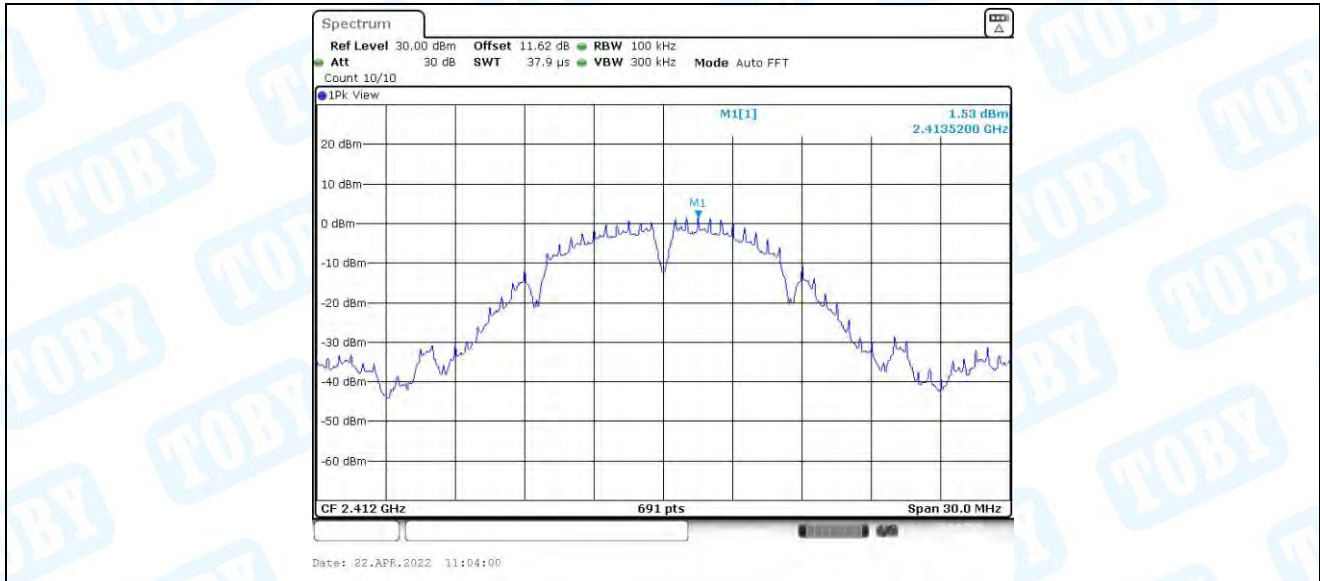
11N40SISO_Ant1_High_2452

6. Conducted Spurious Emission

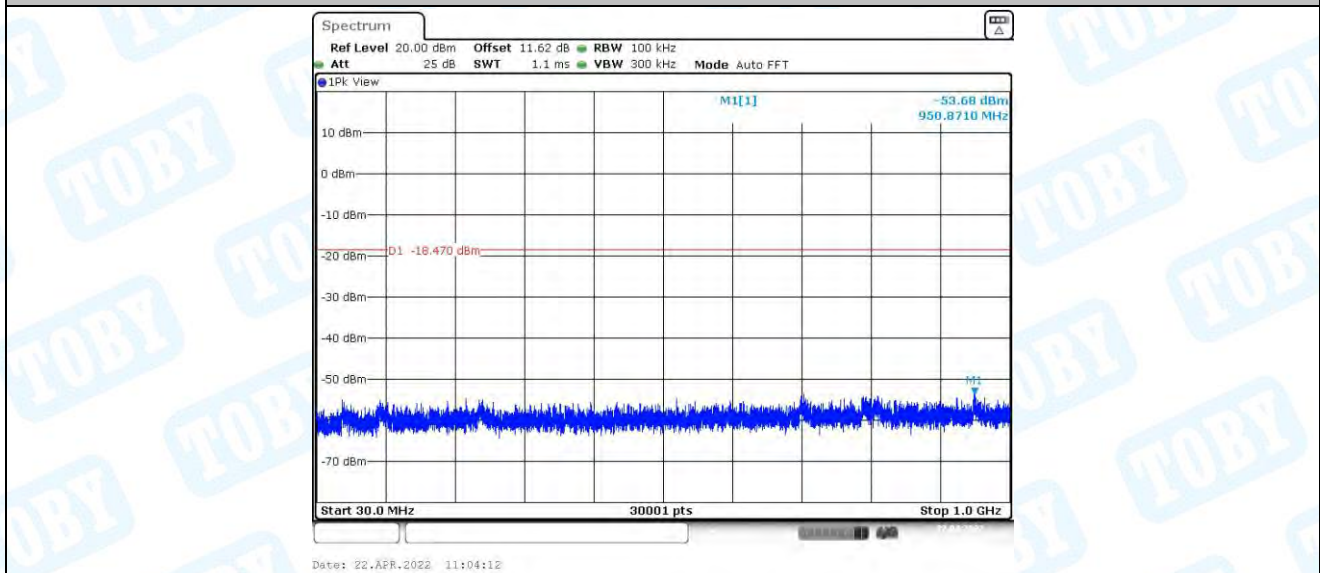
6.1. Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.53	1.53	---	PASS
			30~1000	1.53	-53.68	≤-18.47	PASS
			1000~26500	1.53	-47.01	≤-18.47	PASS
		2437	Reference	5.85	5.85	---	PASS
			30~1000	5.85	-53.15	≤-14.15	PASS
			1000~26500	5.85	-46.95	≤-14.15	PASS
		2462	Reference	6.30	6.30	---	PASS
			30~1000	6.30	-54.05	≤-13.7	PASS
			1000~26500	6.30	-46.41	≤-13.7	PASS
11G	Ant1	2412	Reference	-4.26	-4.26	---	PASS
			30~1000	-4.26	-53.1	≤-24.26	PASS
			1000~26500	-4.26	-46.17	≤-24.26	PASS
		2437	Reference	-3.54	-3.54	---	PASS
			30~1000	-3.54	-53.34	≤-23.54	PASS
			1000~26500	-3.54	-46.9	≤-23.54	PASS
		2462	Reference	-2.61	-2.61	---	PASS
			30~1000	-2.61	-52.89	≤-22.61	PASS
			1000~26500	-2.61	-46.83	≤-22.61	PASS
11N20SISO	Ant1	2412	Reference	-1.48	-1.48	---	PASS
			30~1000	-1.48	-52.93	≤-21.48	PASS
			1000~26500	-1.48	-47.34	≤-21.48	PASS
		2437	Reference	-3.58	-3.58	---	PASS
			30~1000	-3.58	-42.31	≤-23.58	PASS
			1000~26500	-3.58	-46.64	≤-23.58	PASS
		2462	Reference	-2.53	-2.53	---	PASS
			30~1000	-2.53	-53.59	≤-22.53	PASS
			1000~26500	-2.53	-47.31	≤-22.53	PASS
11N40SISO	Ant1	2422	Reference	-4.96	-4.96	---	PASS
			30~1000	-4.96	-53.3	≤-24.96	PASS
			1000~26500	-4.96	-45.94	≤-24.96	PASS
		2437	Reference	-6.14	-6.14	---	PASS
			30~1000	-6.14	-53.51	≤-26.14	PASS
			1000~26500	-6.14	-47.02	≤-26.14	PASS
		2452	Reference	-6.46	-6.46	---	PASS
			30~1000	-6.46	-53.34	≤-26.46	PASS
			1000~26500	-6.46	-47.04	≤-26.46	PASS

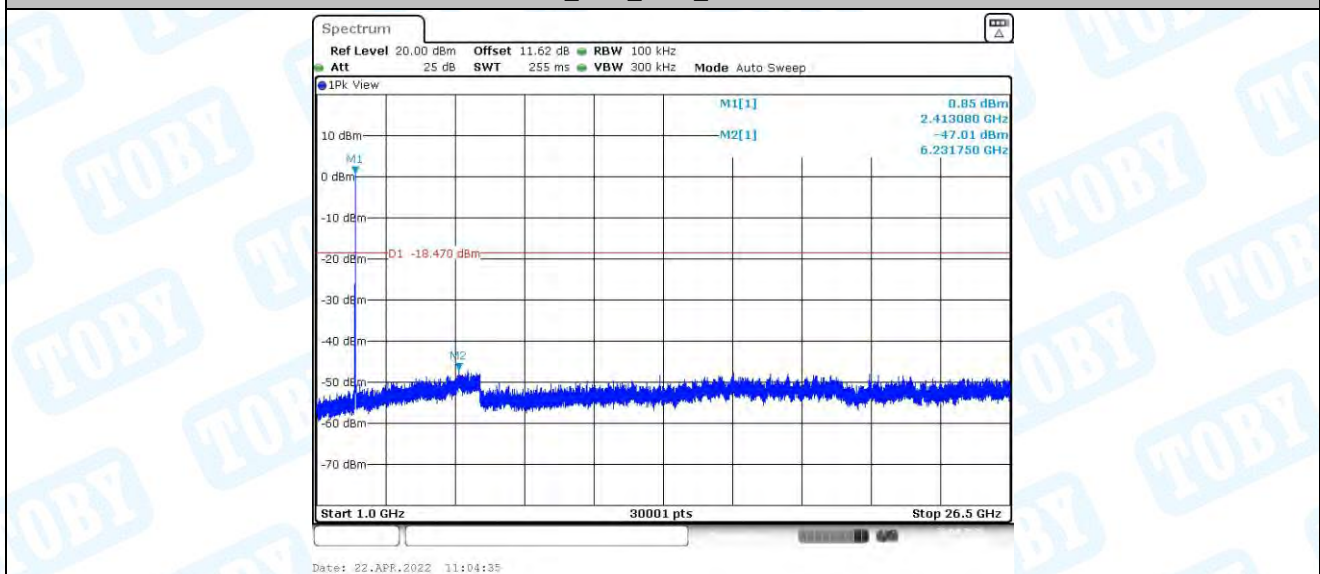
6.2. Test Graphs



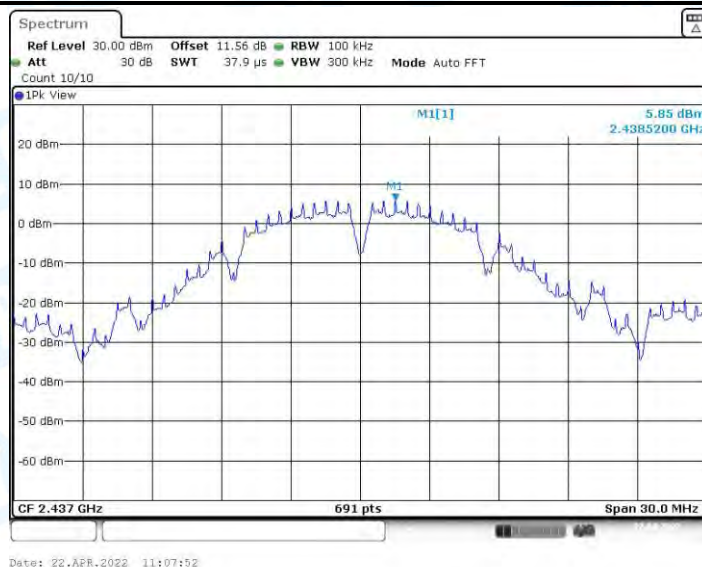
11B_Ant1_2412_0~Reference



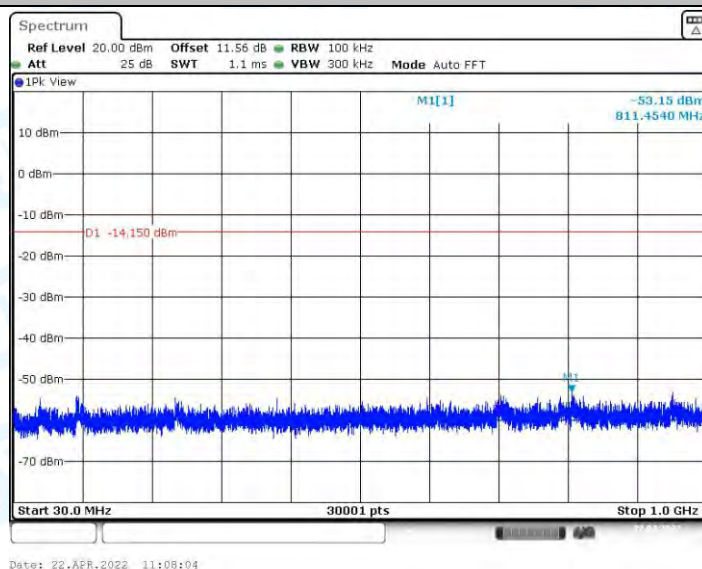
11B_Ant1_2412_30~1000



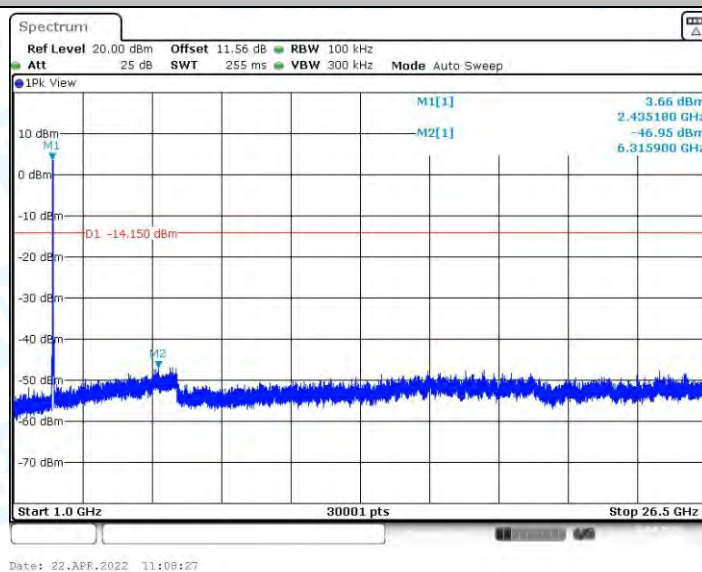
11B_Ant1_2412_1000~26500



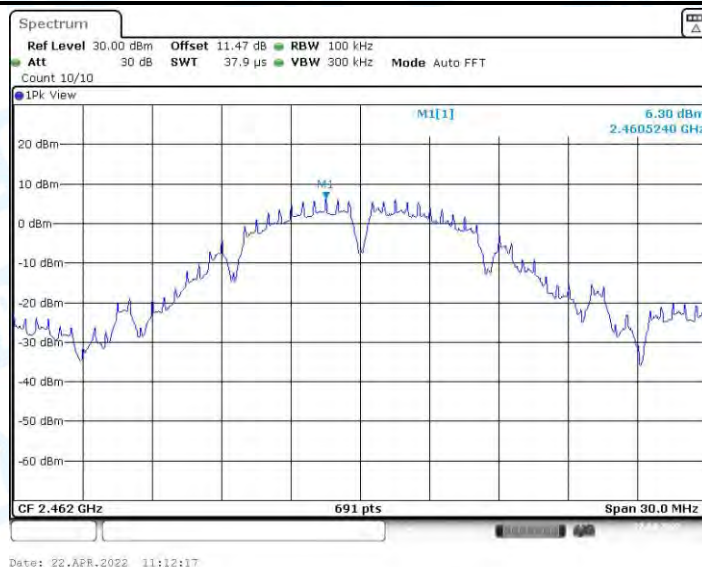
11B_Ant1_2437_0~Reference



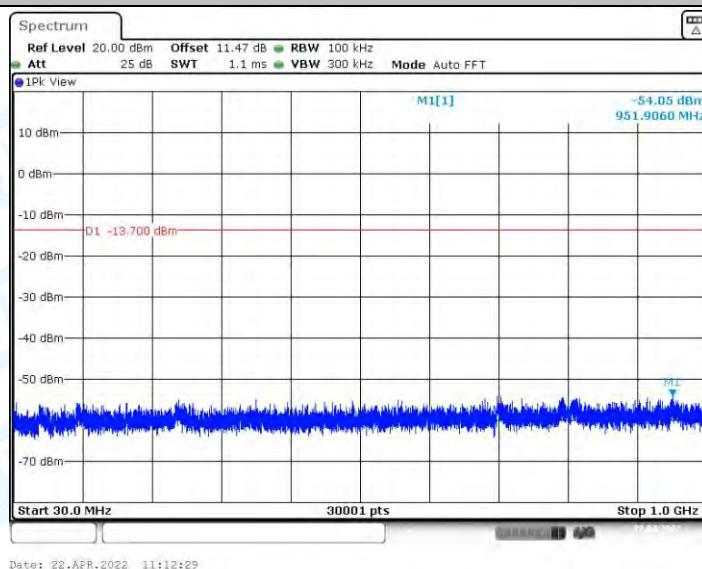
11B_Ant1_2437_30~1000



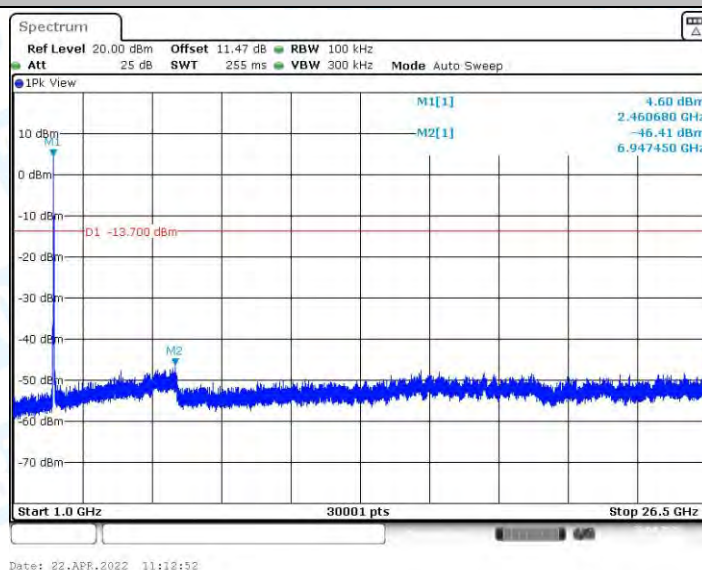
11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference



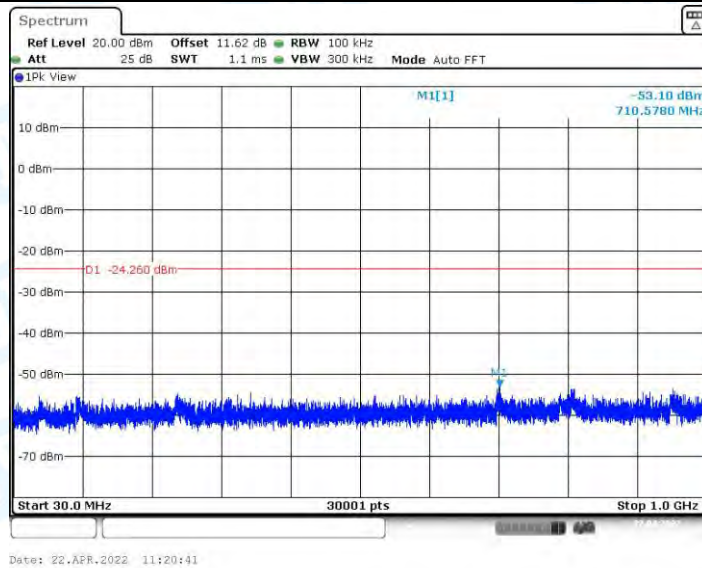
11B_Ant1_2462_30~1000



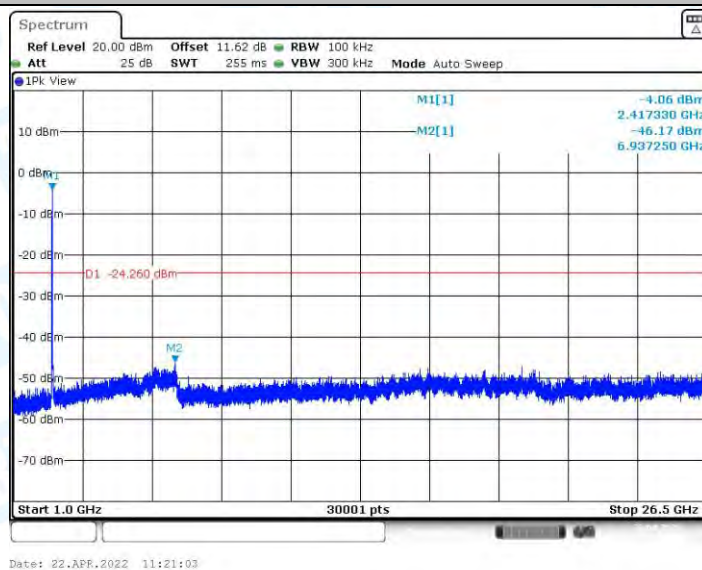
11B_Ant1_2462_1000~26500



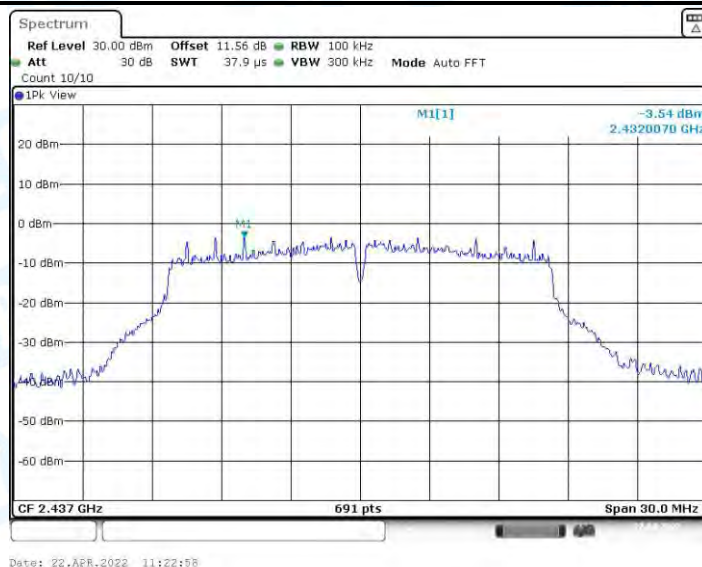
11G_Ant1_2412_0~Reference



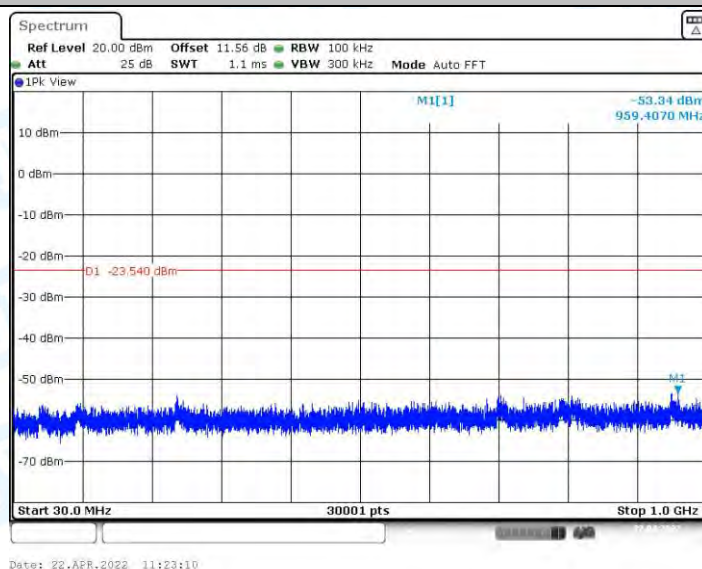
11G_Ant1_2412_30~1000



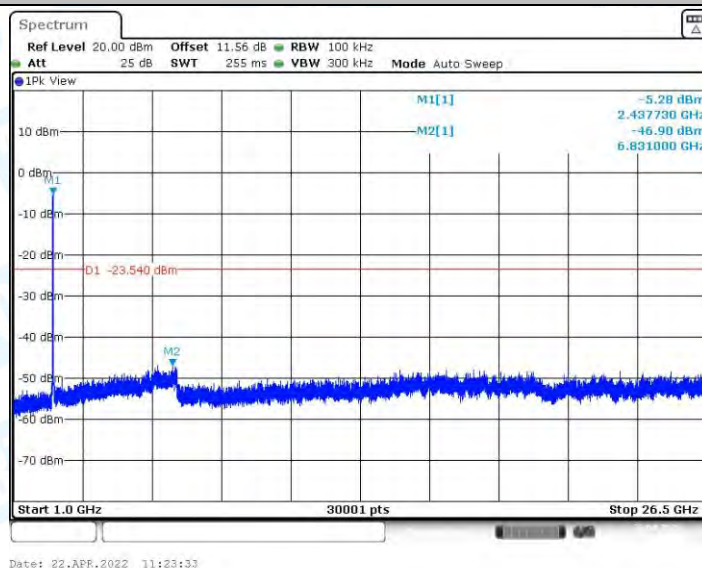
11G_Ant1_2412_1000~26500



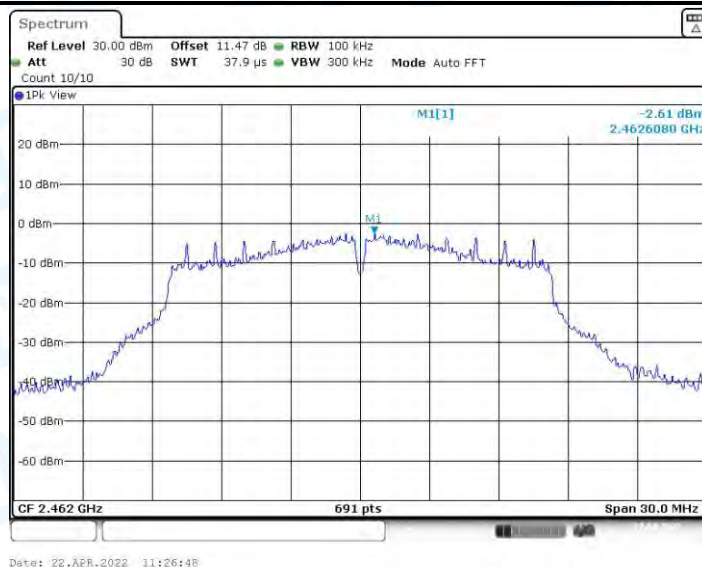
11G_Ant1_2437_0~Reference



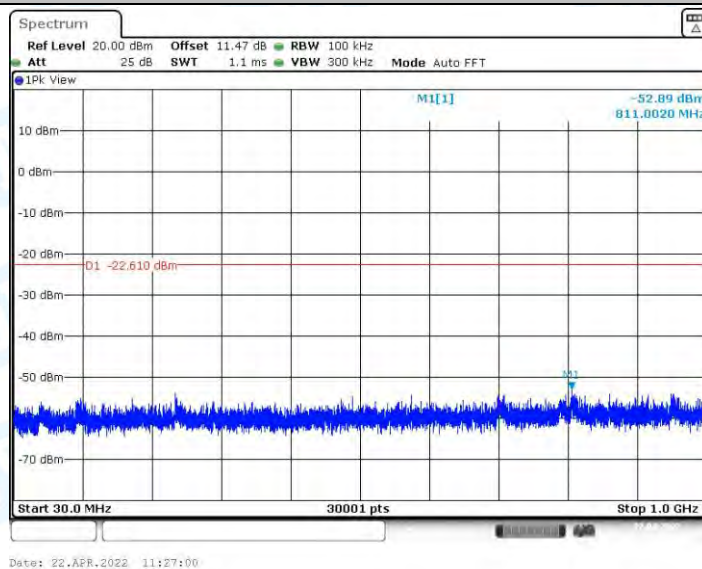
11G_Ant1_2437_30~1000



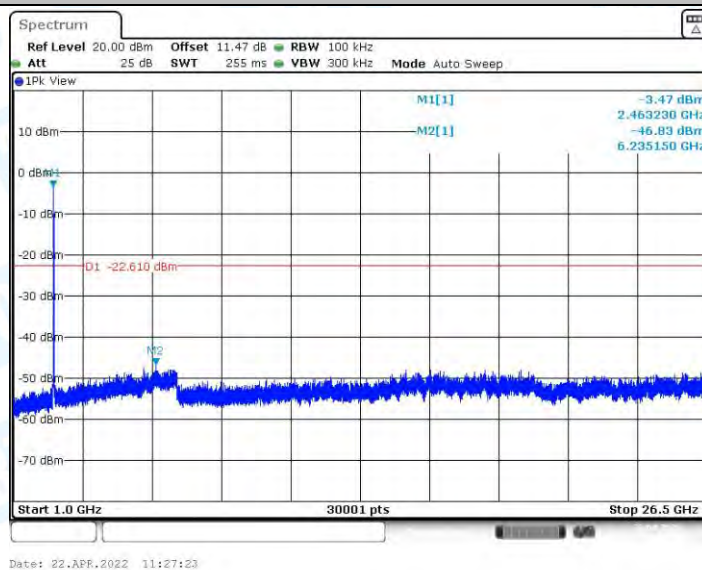
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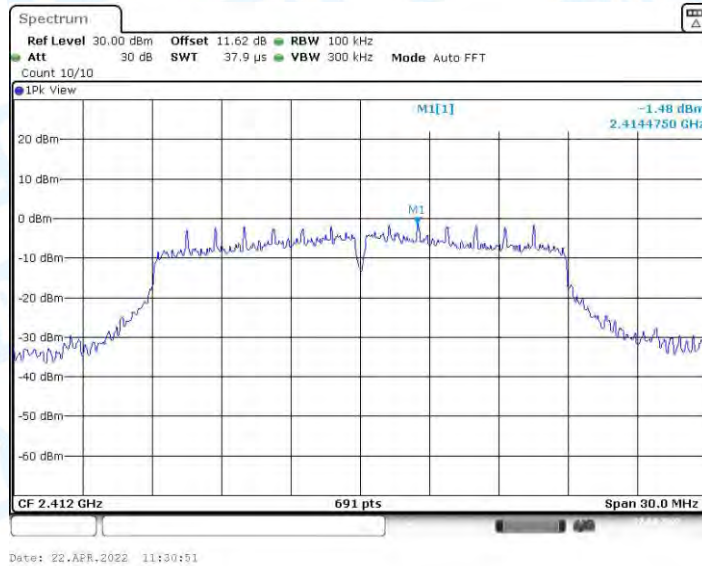
11G_Ant1_2462_0~Reference



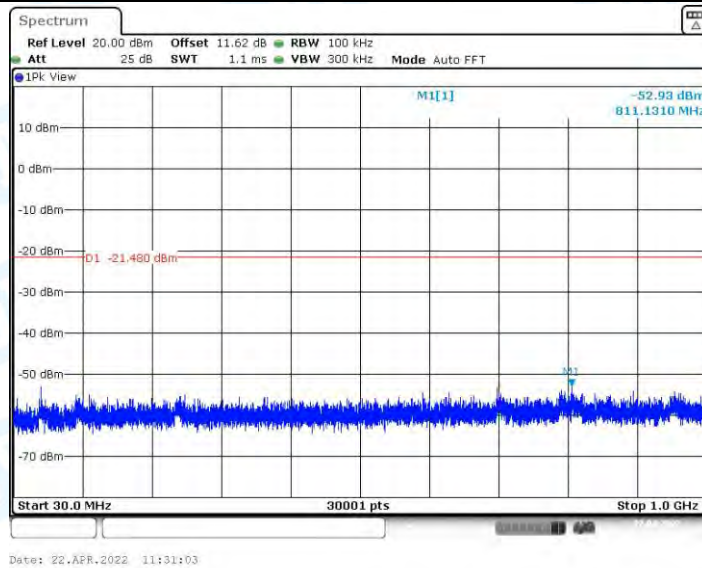
11G_Ant1_2462_30~1000



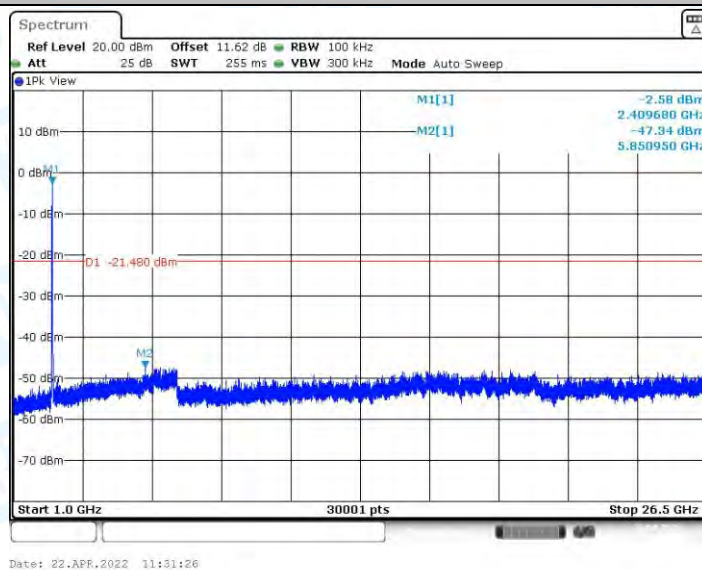
11G_Ant1_2462_1000~26500



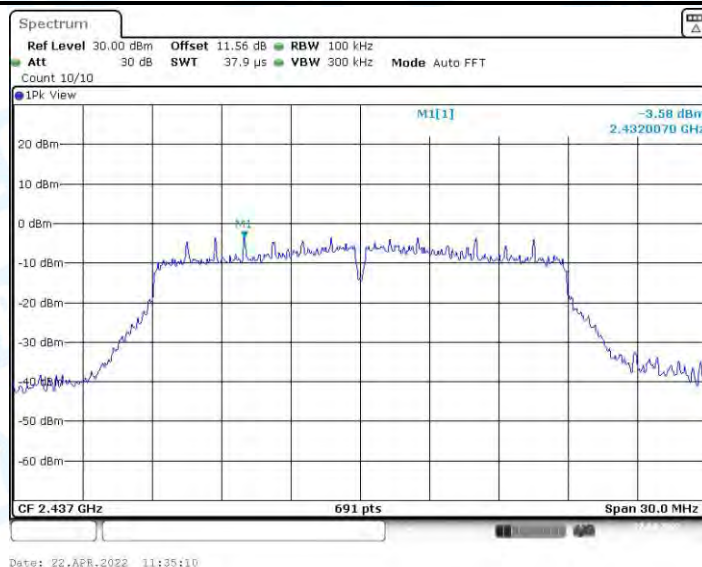
11N20SISO_Ant1_2412_0~Reference



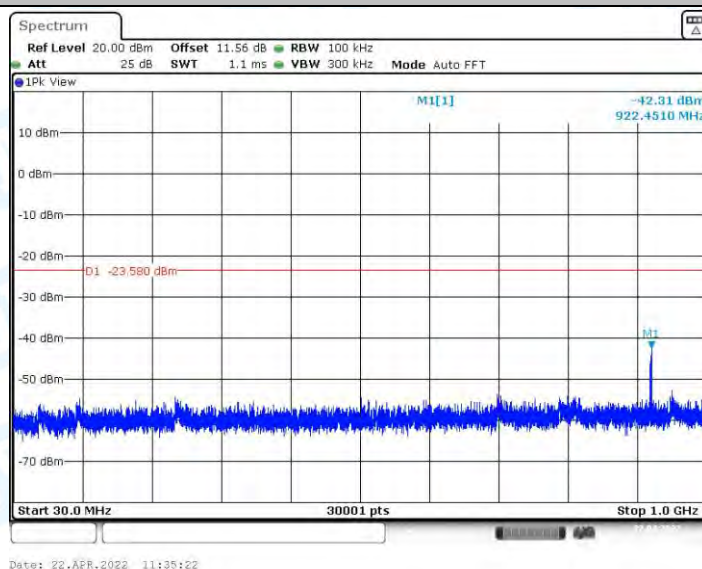
11N20SISO_Ant1_2412_30~1000



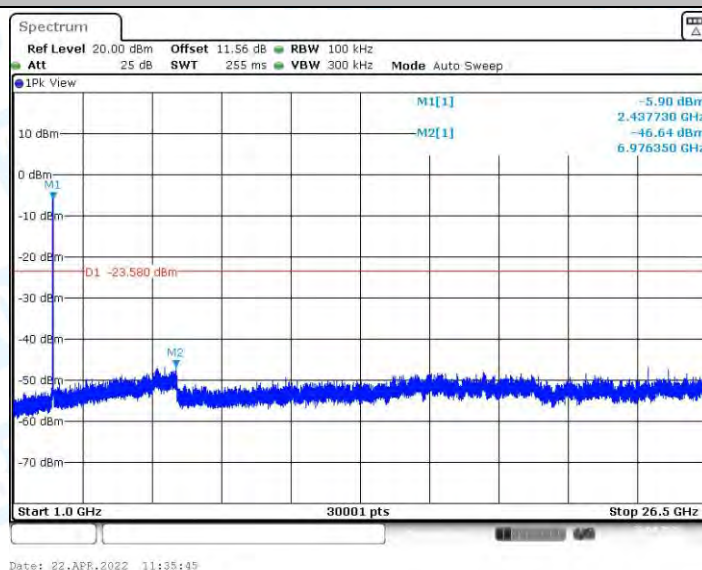
11N20SISO_Ant1_2412_1000~26500



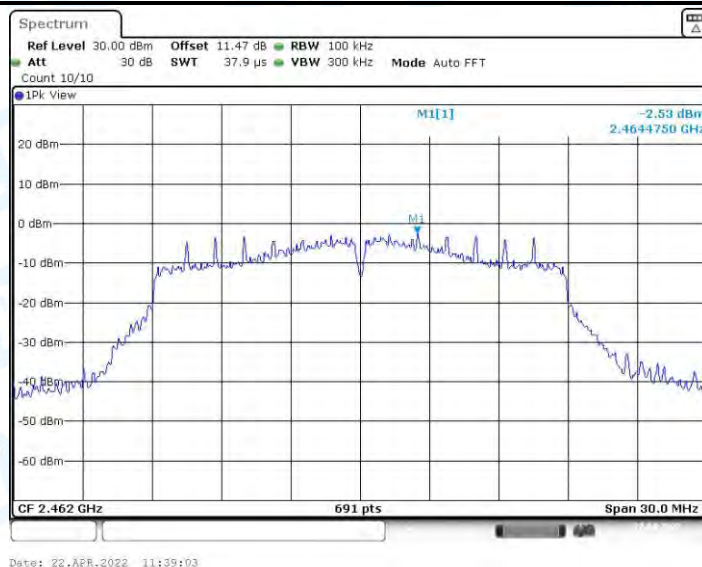
11N20SISO_Ant1_2437_0~Reference



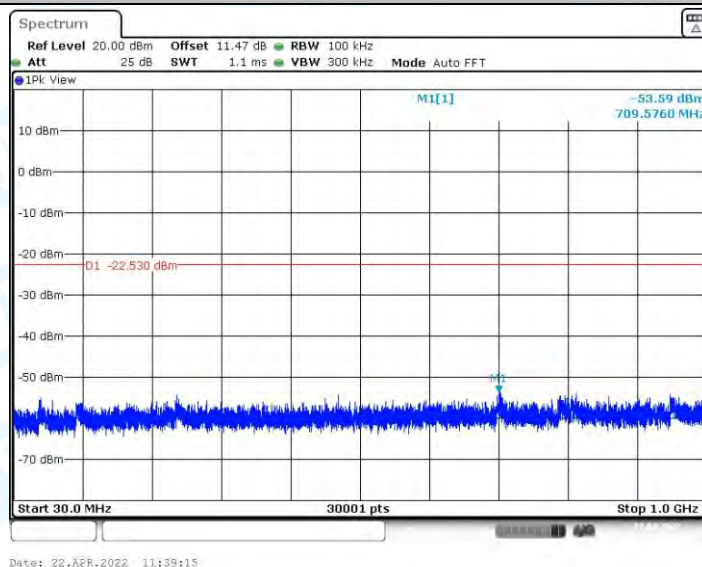
11N20SISO_Ant1_2437_30~1000



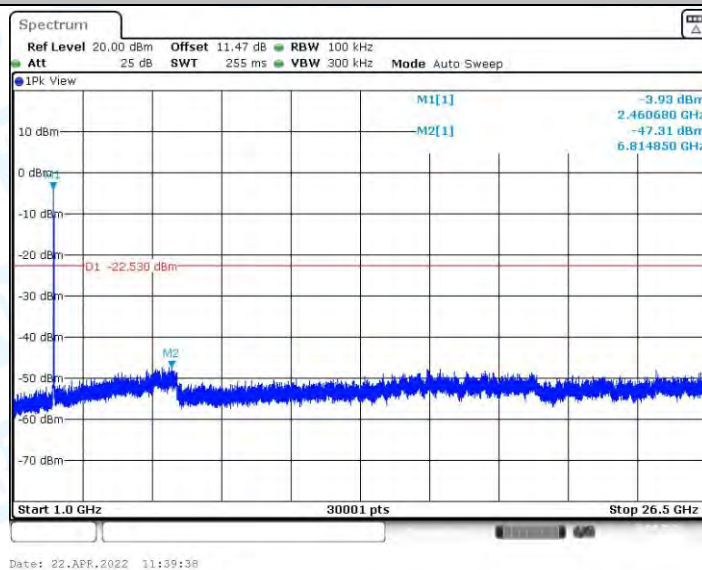
11N20SISO_Ant1_2437_1000~26500



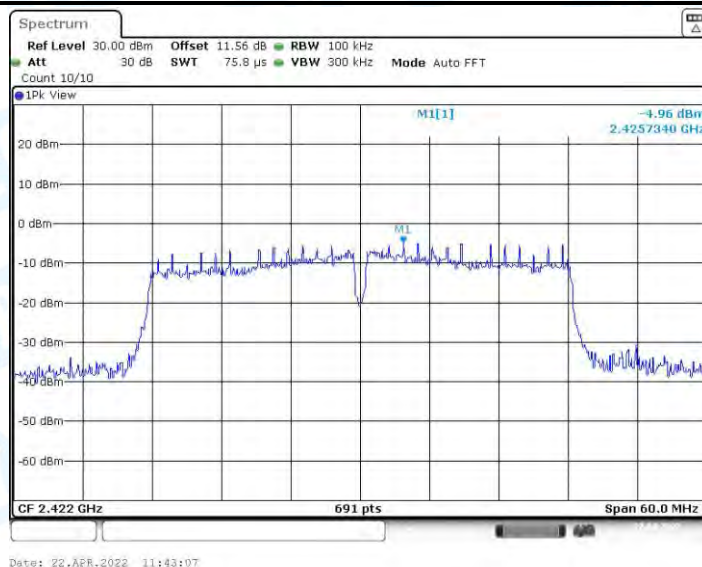
11N20SISO_Ant1_2462_0~Reference



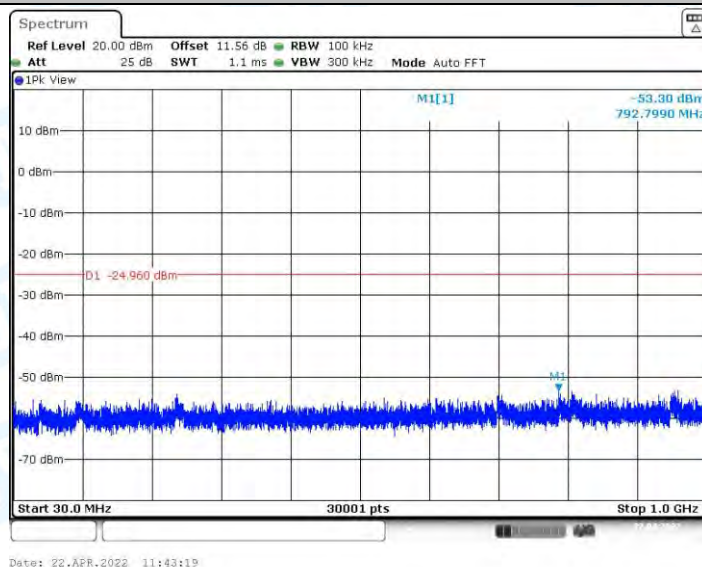
11N20SISO_Ant1_2462_30~1000



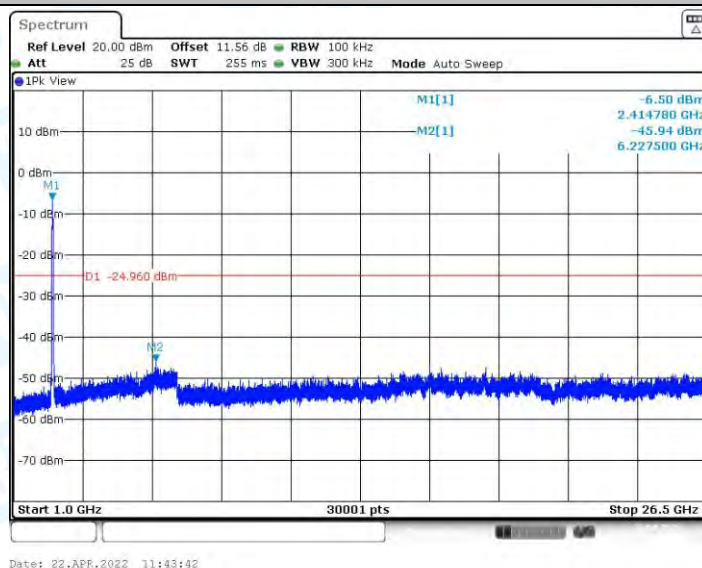
11N20SISO_Ant1_2462_1000~26500



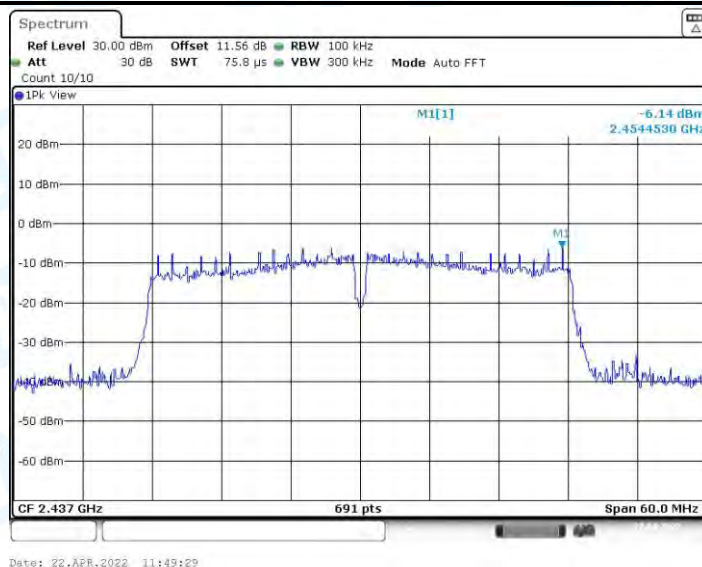
11N40SISO_Ant1_2422_0~Reference



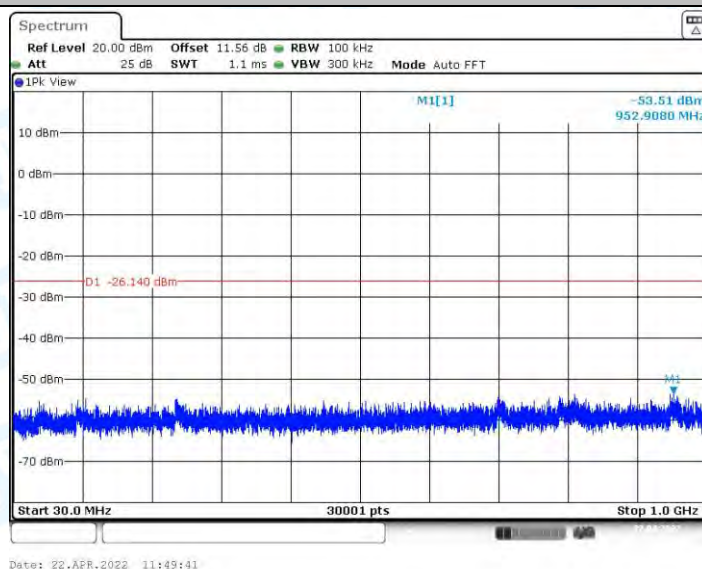
11N40SISO_Ant1_2422_30~1000



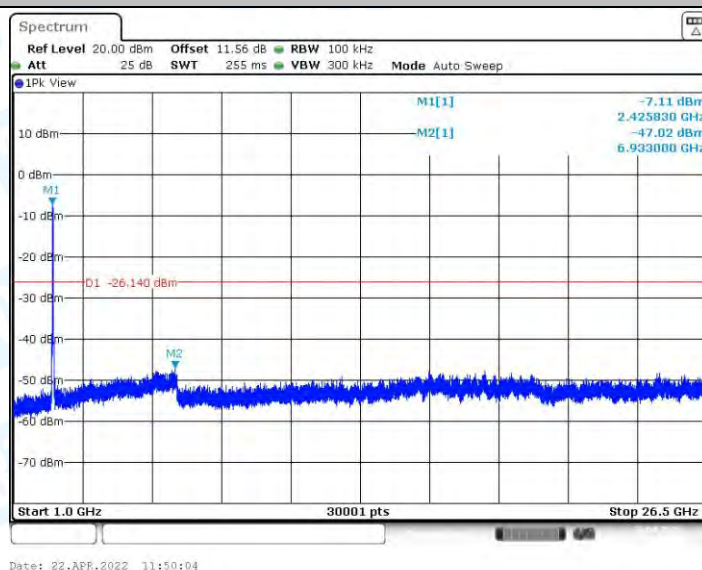
11N40SISO_Ant1_2422_1000~26500



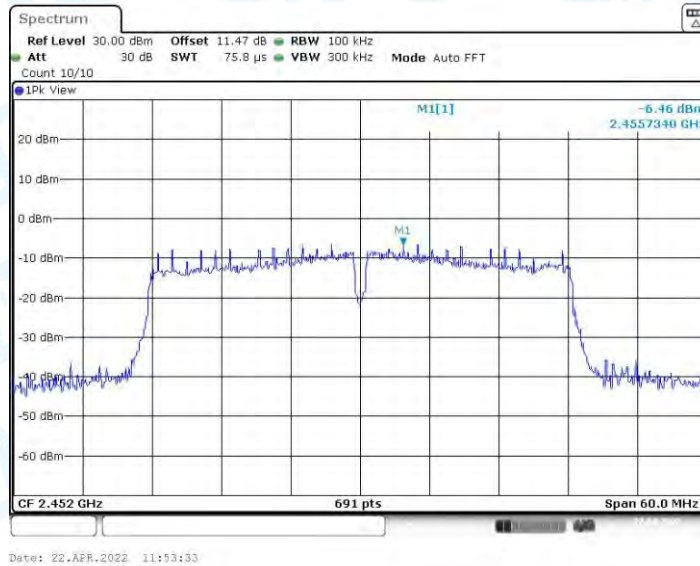
11N40SISO_Ant1_2437_0~Reference



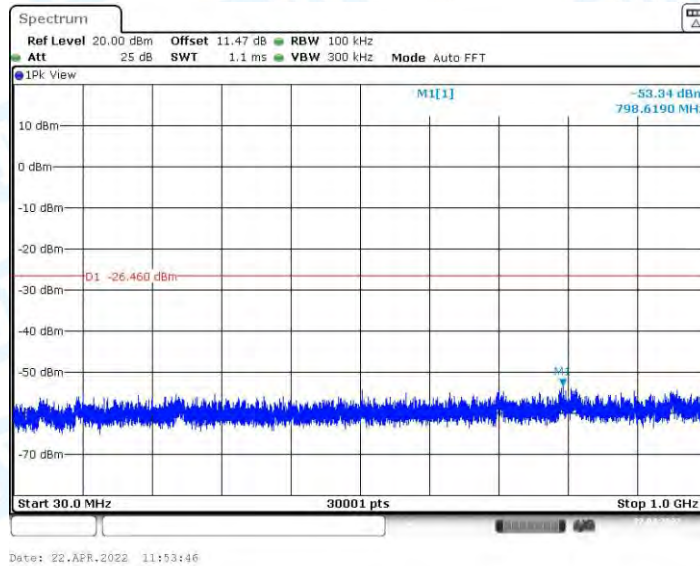
11N40SISO_Ant1_2437_30~1000



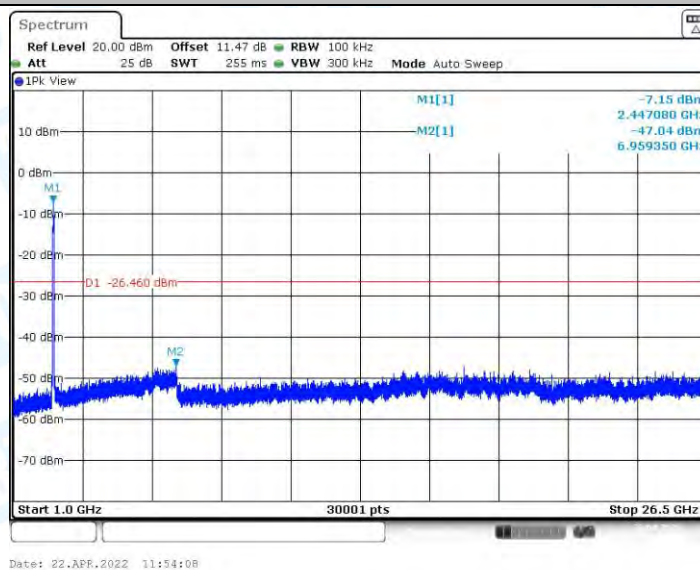
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



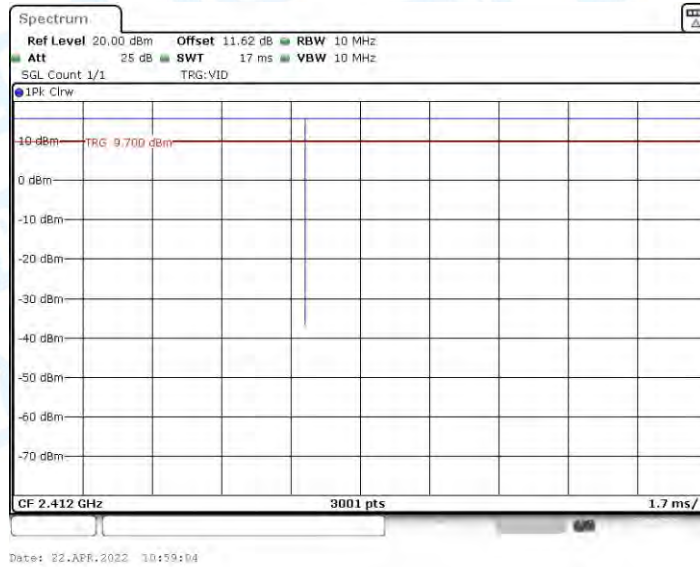
11N40SISO_Ant1_2452_1000~26500

7. Duty Cycle

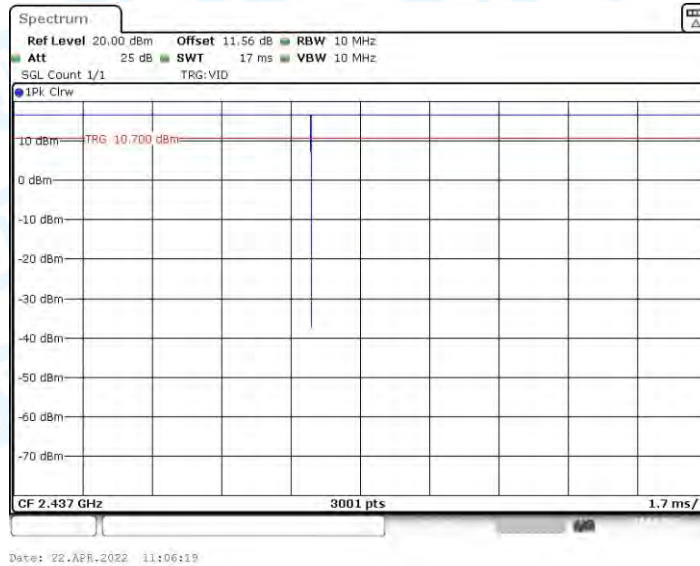
7.1. Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [kHz]	Limit	Verdict
11B	Ant1	2412	7.00	7.00	100.00	0.14	---	---
		2437	2.00	2.00	100.00	0.50	---	---
		2462	12.40	12.42	99.84	0.08	---	---
11G	Ant1	2412	2.06	2.09	98.56	0.48	---	---
		2437	2.06	2.09	98.56	0.48	---	---
		2462	2.06	2.08	99.04	0.48	---	---
11N20SISO	Ant1	2412	1.92	1.94	98.97	0.52	---	---
		2437	1.92	1.95	98.46	0.52	---	---
		2462	1.92	1.94	98.97	0.52	---	---
11N40SISO	Ant1	2422	0.94	0.96	97.92	1.06	---	---
		2437	0.95	0.97	97.94	1.05	---	---
		2452	0.94	0.97	96.91	1.06	---	---

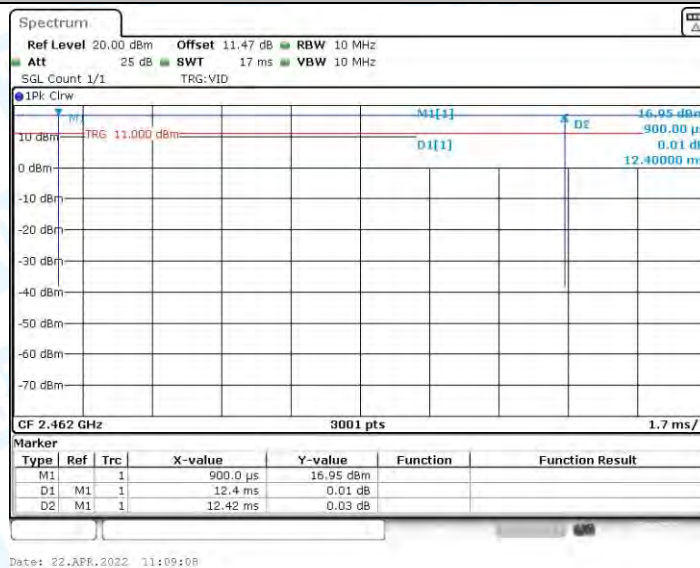
7.2. Test Graphs



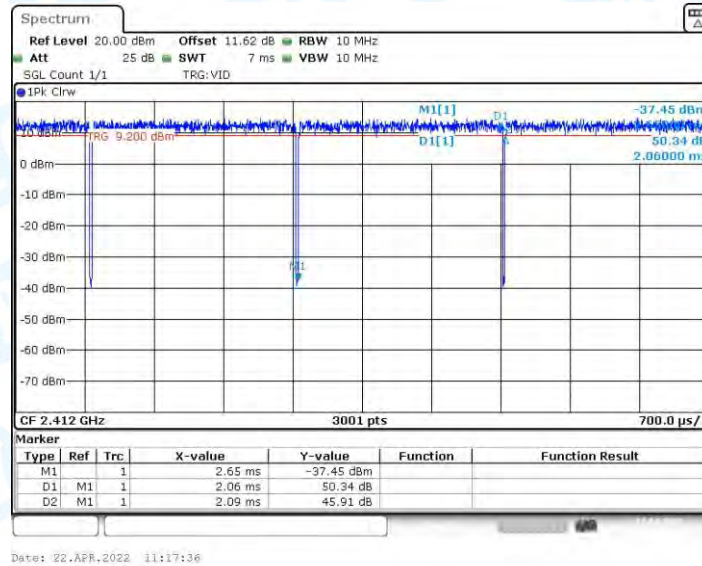
11B_Ant1_2412



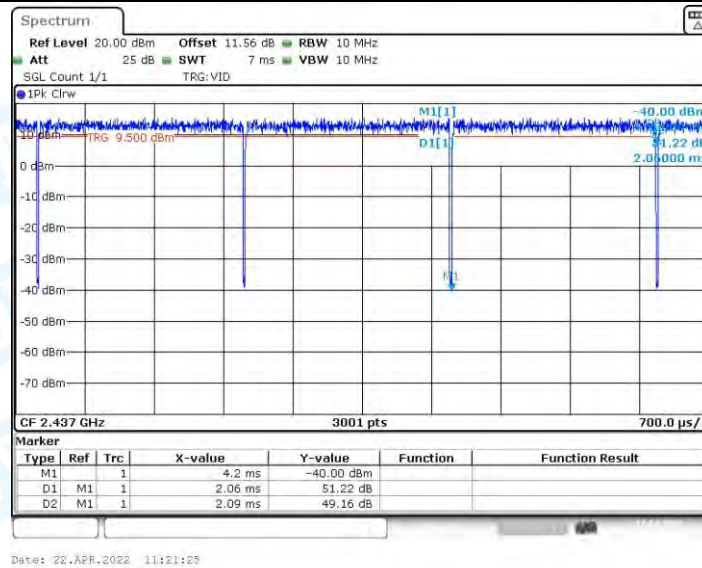
11B_Ant1_2437



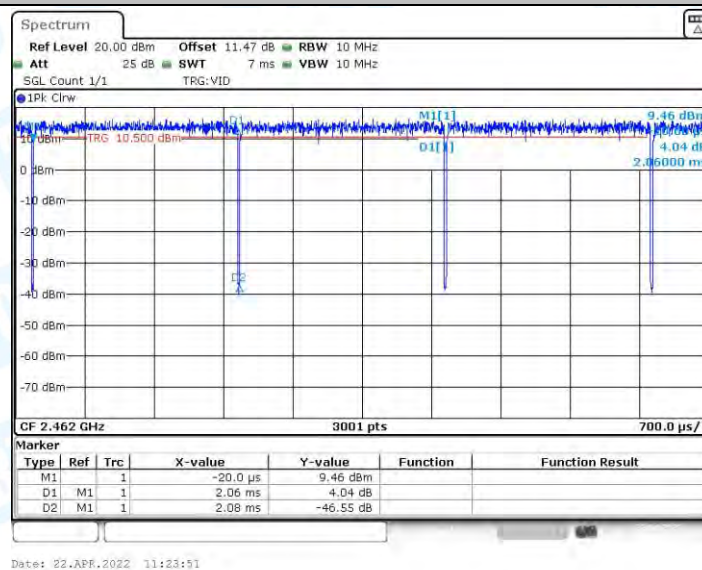
11B_Ant1_2462



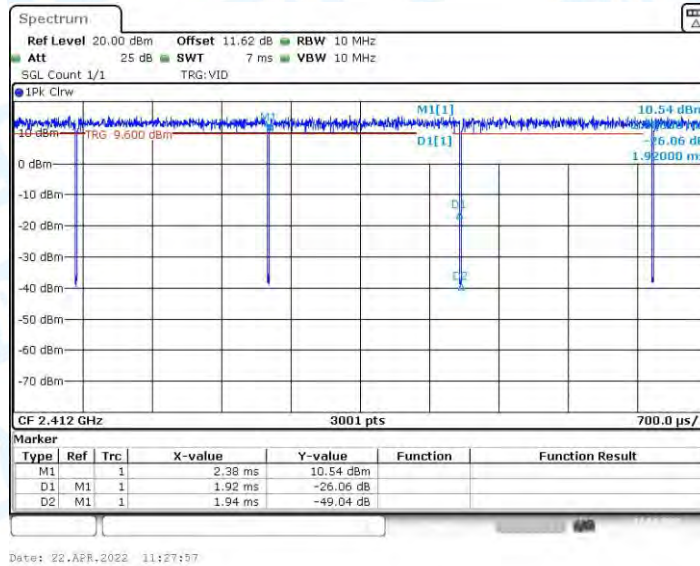
11G_Ant1_2412



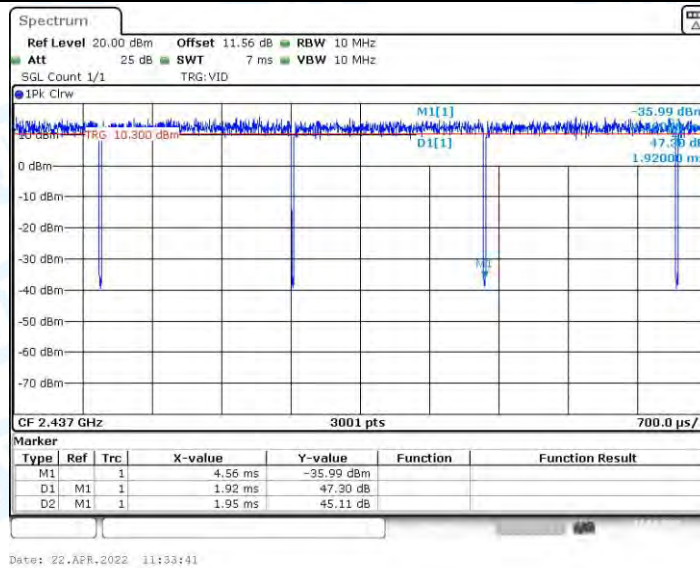
11G_Ant1_2437



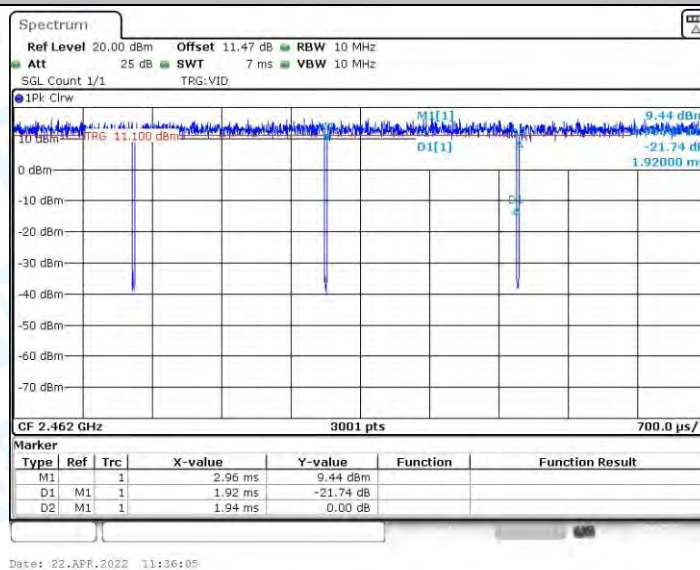
11G_Ant1_2462



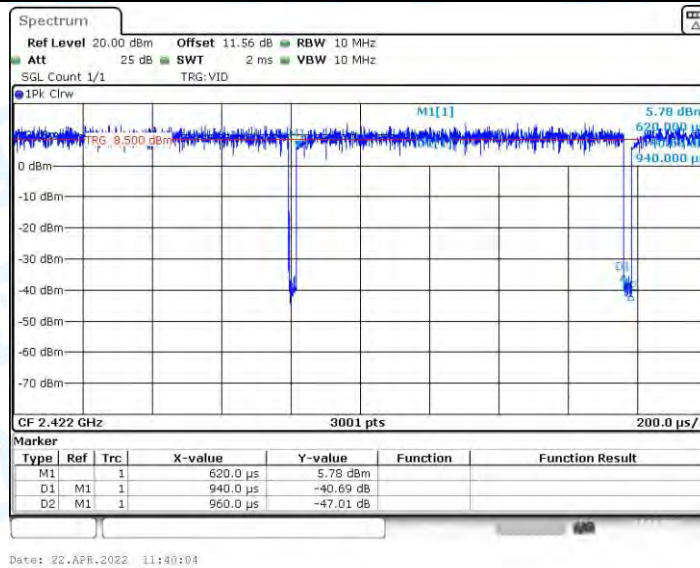
11N20SISO_Ant1_2412



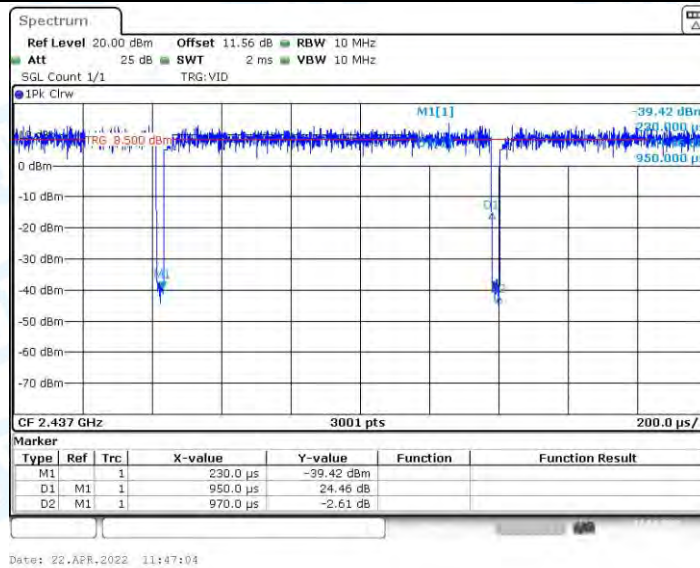
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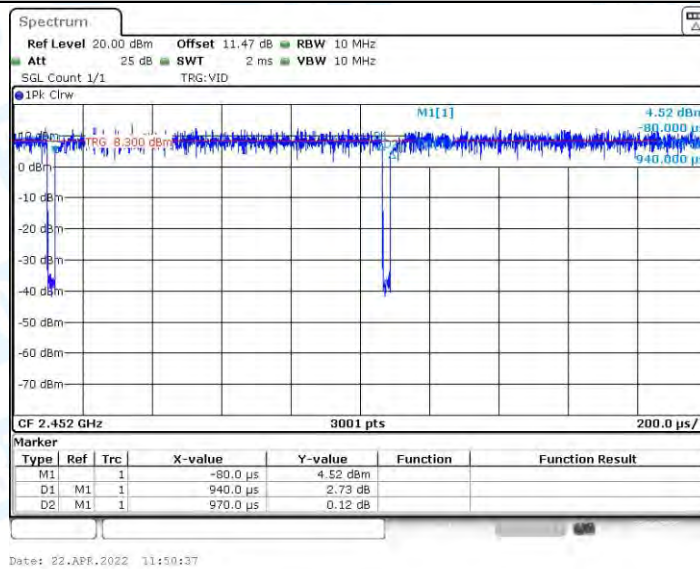
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

8. Emissions in Restricted Bands

8.1. Test Result

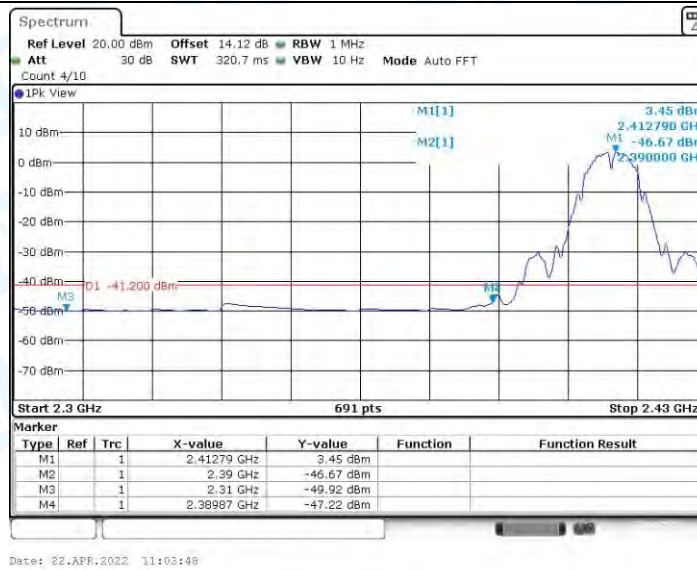
TestMode	Antenna	ChName	Channel	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.92	≤-41.20	PASS
				AV	2389.870	-47.22	≤-41.20	PASS
				AV	2390.000	-46.67	≤-41.20	PASS
				Peak	2310.000	-38.05	≤-21.20	PASS
				Peak	2340.130	-35.69	≤-21.20	PASS
				Peak	2390.000	-37.16	≤-21.20	PASS
		High	2462	AV	2483.500	-43.97	≤-41.20	PASS
				AV	2483.522	-43.97	≤-41.20	PASS
				AV	2500.000	-48.83	≤-41.20	PASS
				Peak	2483.500	-35.01	≤-21.20	PASS
				Peak	2484.000	-34.88	≤-21.20	PASS
				Peak	2500.000	-36.9	≤-21.20	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.46	≤-41.20	PASS
				AV	2389.870	-44.42	≤-41.20	PASS
				AV	2390.000	-44.31	≤-41.20	PASS
				Peak	2310.000	-38.81	≤-21.20	PASS
				Peak	2389.870	-29.2	≤-21.20	PASS
				Peak	2390.000	-28.87	≤-21.20	PASS
		High	2462	AV	2483.500	-44.67	≤-41.20	PASS
				AV	2483.522	-44.67	≤-41.20	PASS
				AV	2500.000	-48.37	≤-41.20	PASS
				Peak	2483.500	-30.93	≤-21.20	PASS
				Peak	2483.522	-30.93	≤-21.20	PASS
				Peak	2500.000	-37.33	≤-21.20	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-49.09	≤-41.20	PASS
				AV	2389.870	-45.13	≤-41.20	PASS
				AV	2390.000	-44.96	≤-41.20	PASS
				Peak	2310.000	-38.72	≤-21.20	PASS
				Peak	2387.609	-29.68	≤-21.20	PASS
				Peak	2390.000	-30.09	≤-21.20	PASS
		High	2462	AV	2483.500	-45.3	≤-41.20	PASS
				AV	2483.522	-45.3	≤-41.20	PASS
				AV	2500.000	-48.09	≤-41.20	PASS
				Peak	2483.500	-30.71	≤-21.20	PASS
				Peak	2485.435	-30.28	≤-21.20	PASS
				Peak	2500.000	-37.78	≤-21.20	PASS
11N40SISO	Ant1	Low	2422	AV	2310.000	-48.73	≤-41.20	PASS
				AV	2389.493	-44.61	≤-41.20	PASS
				AV	2390.000	-44.67	≤-41.20	PASS
				Peak	2310.000	-39.34	≤-21.20	PASS
				Peak	2389.870	-33.01	≤-21.20	PASS

		High	2452	Peak	2390.000	-32.88	≤ -21.20	PASS
				AV	2483.500	-44.38	≤ -41.20	PASS
				AV	2483.522	-44.38	≤ -41.20	PASS
				AV	2500.000	-47.62	≤ -41.20	PASS
				Peak	2483.500	-33.16	≤ -21.20	PASS
				Peak	2487.188	-30.57	≤ -21.20	PASS
				Peak	2500.000	-37.48	≤ -21.20	PASS

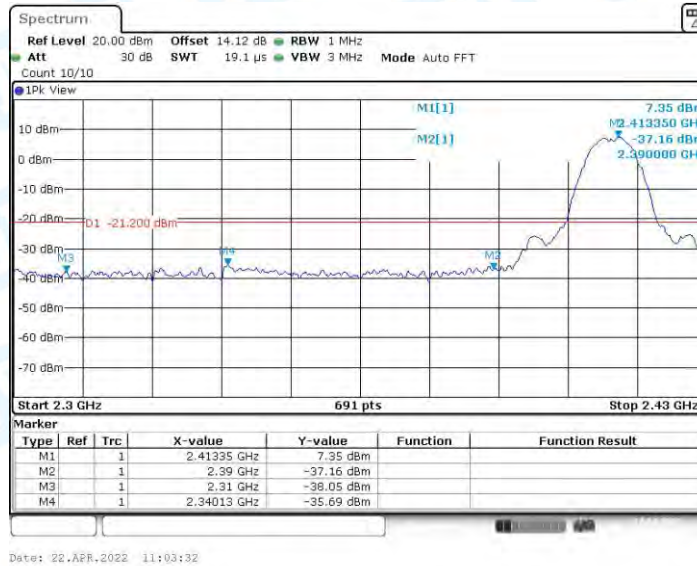
Note:

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.

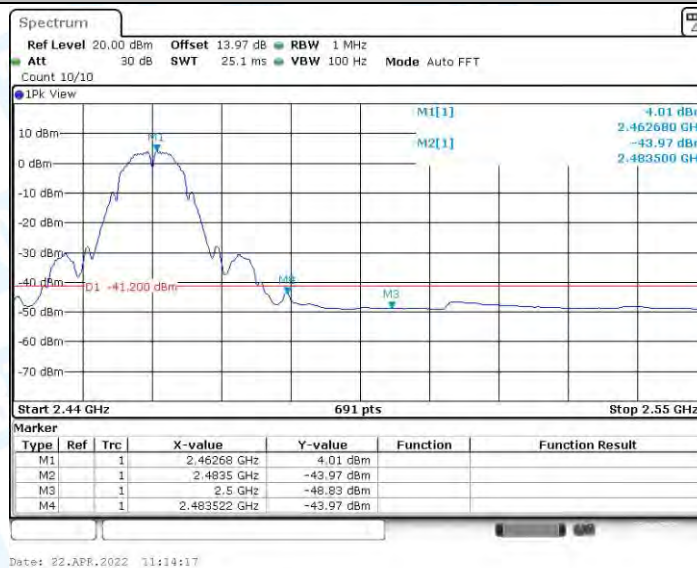
8.2. Test Graphs



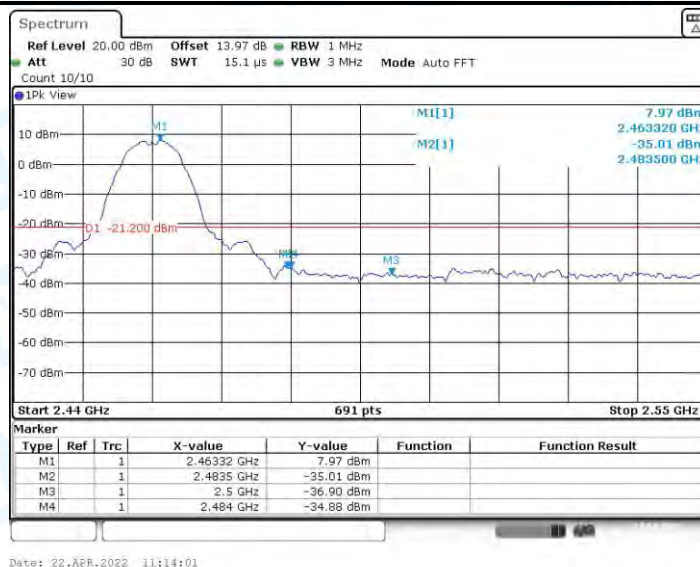
11B_Ant1_Low_2412_AV



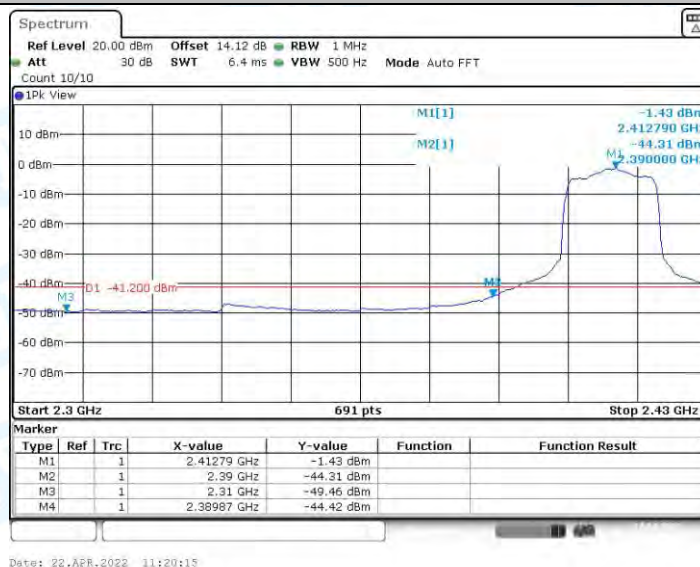
11B_Ant1_Low_2412_Peak



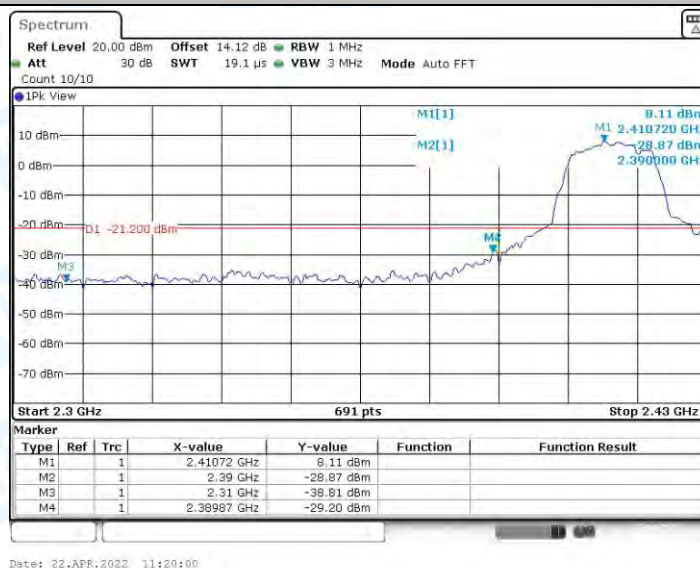
11B_Ant1_High_2462_AV



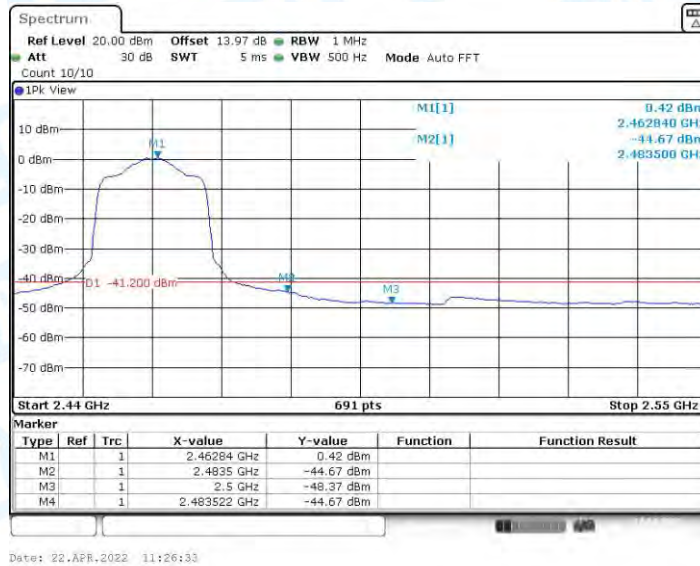
11B_Ant1_High_2462_Peak



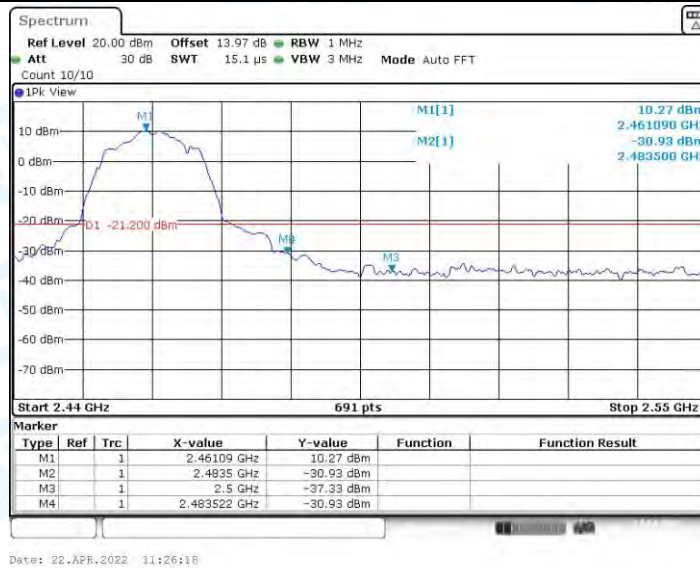
11G_Ant1_Low_2412_AV



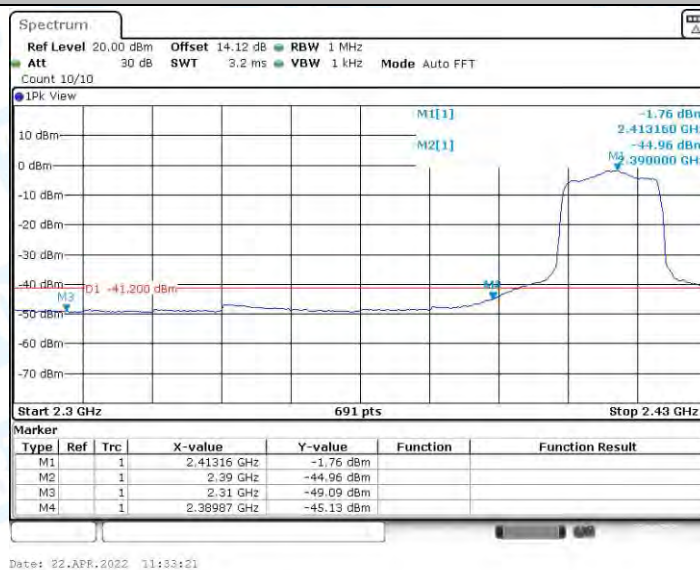
11G_Ant1_Low_2412_Peak



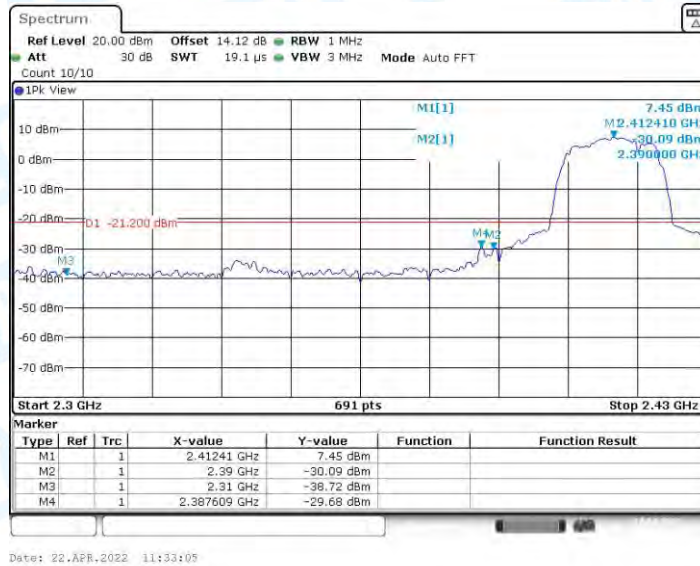
11G_Ant1_High_2462_AV



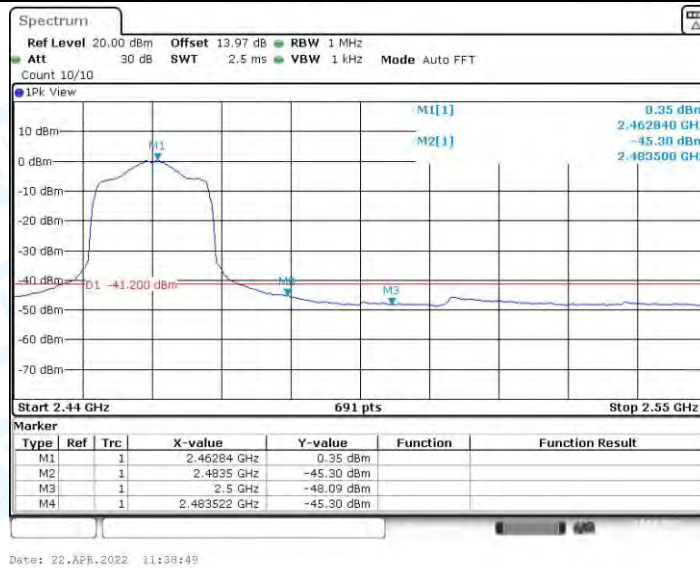
11G_Ant1_High_2462_Peak



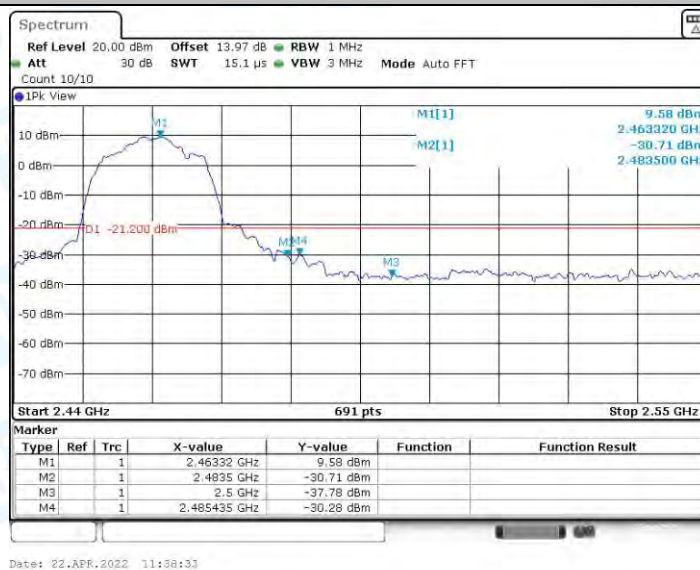
11N20SISO_Ant1_Low_2412_AV



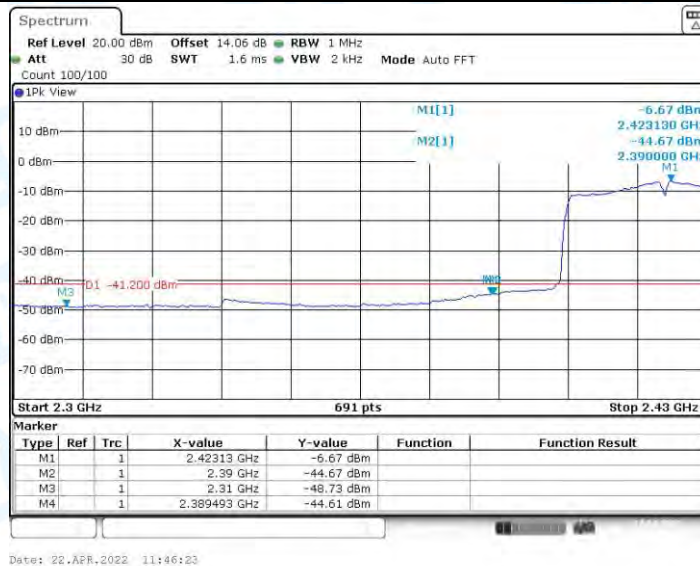
11N20SISO_Ant1_Low_2412_Peak



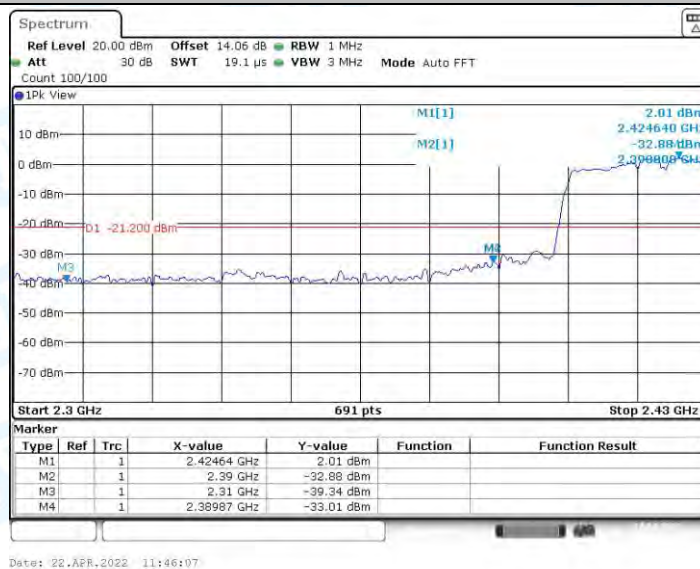
11N20SISO_Ant1_High_2462_AV



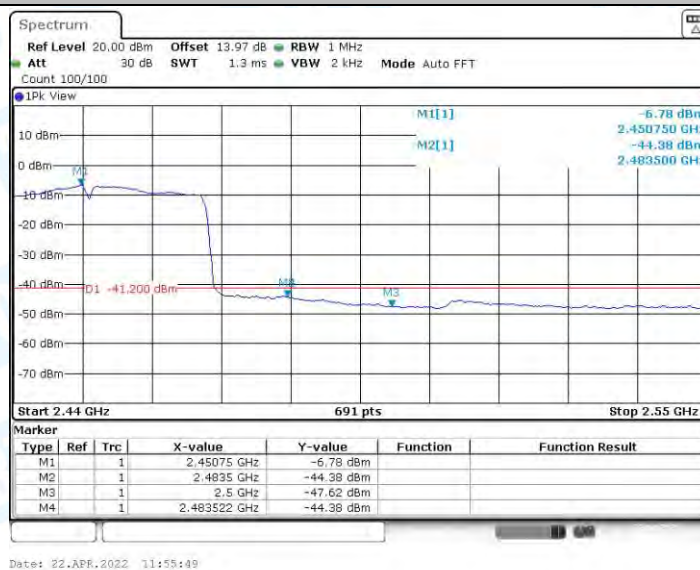
11N20SISO_Ant1_High_2462_Peak



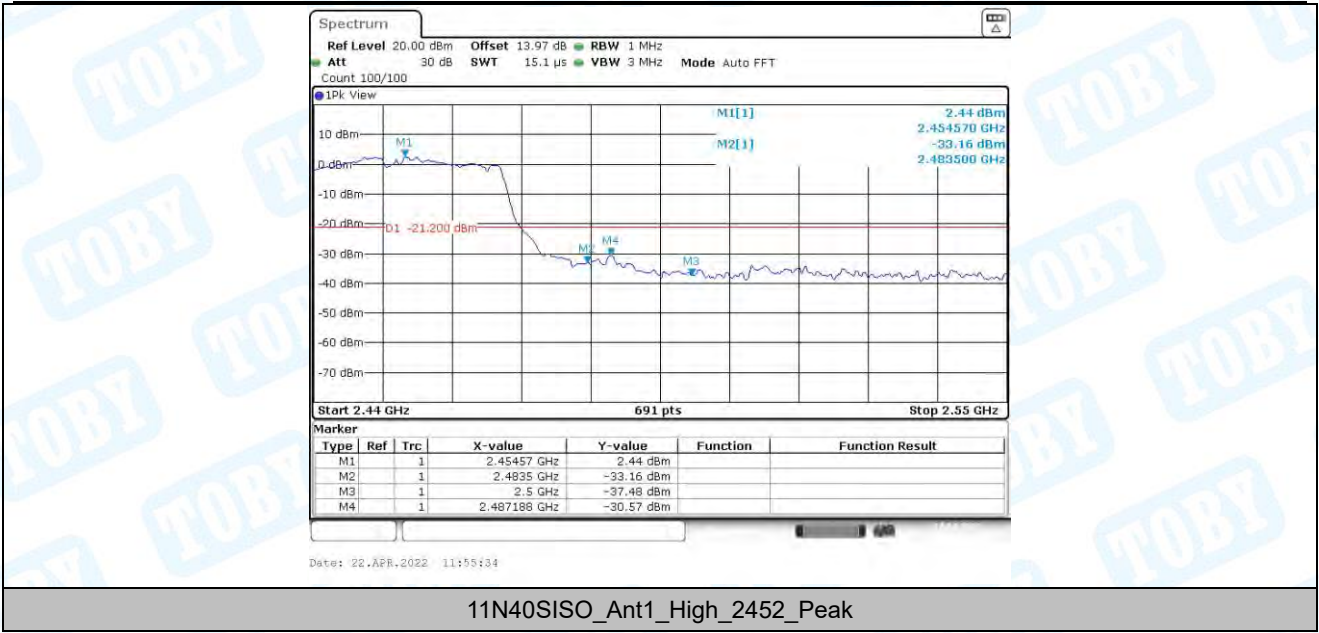
11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV



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