

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

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

## Contents

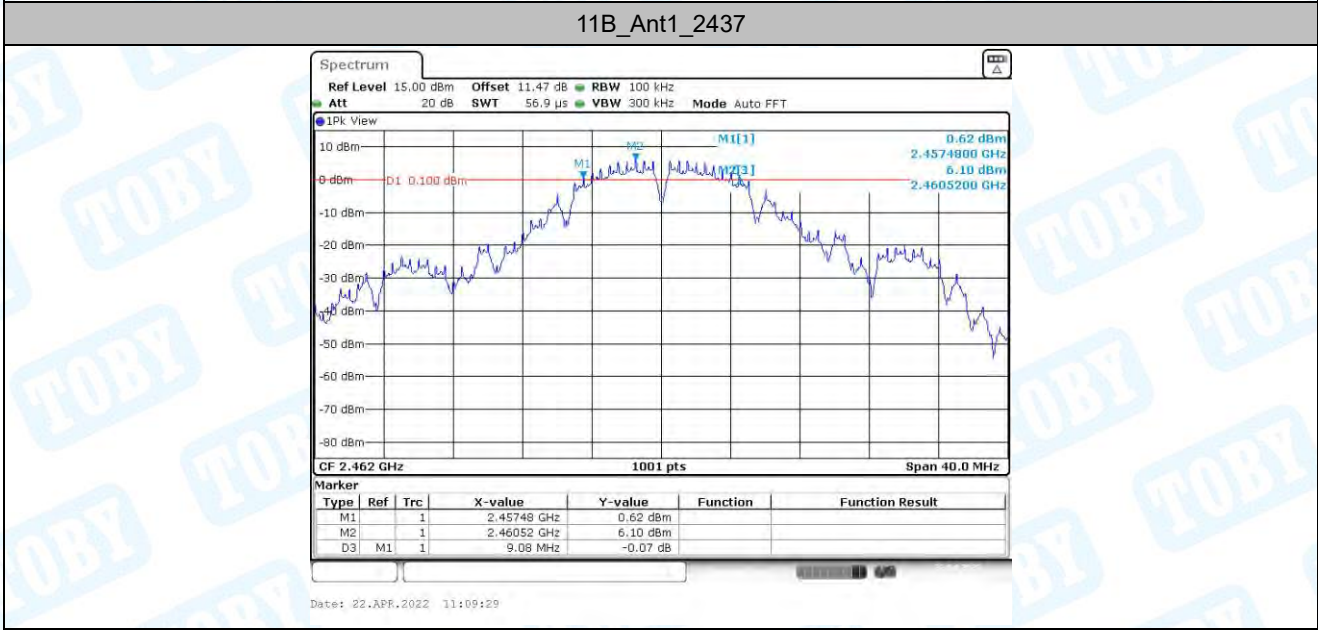
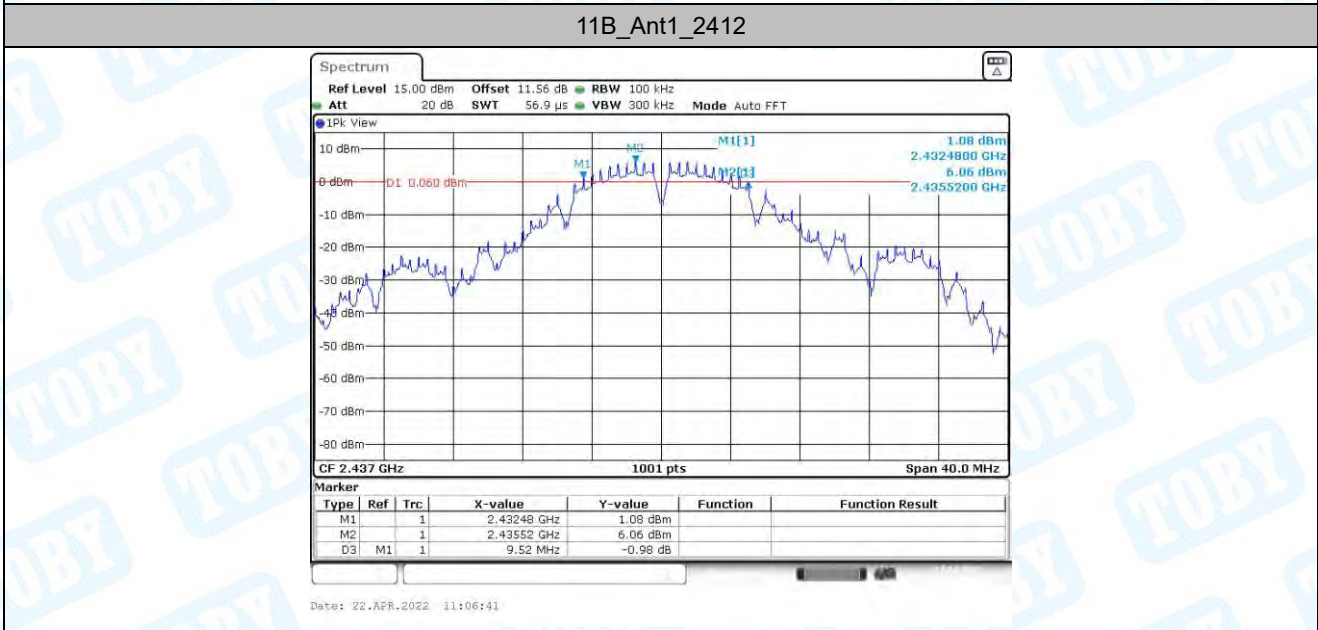
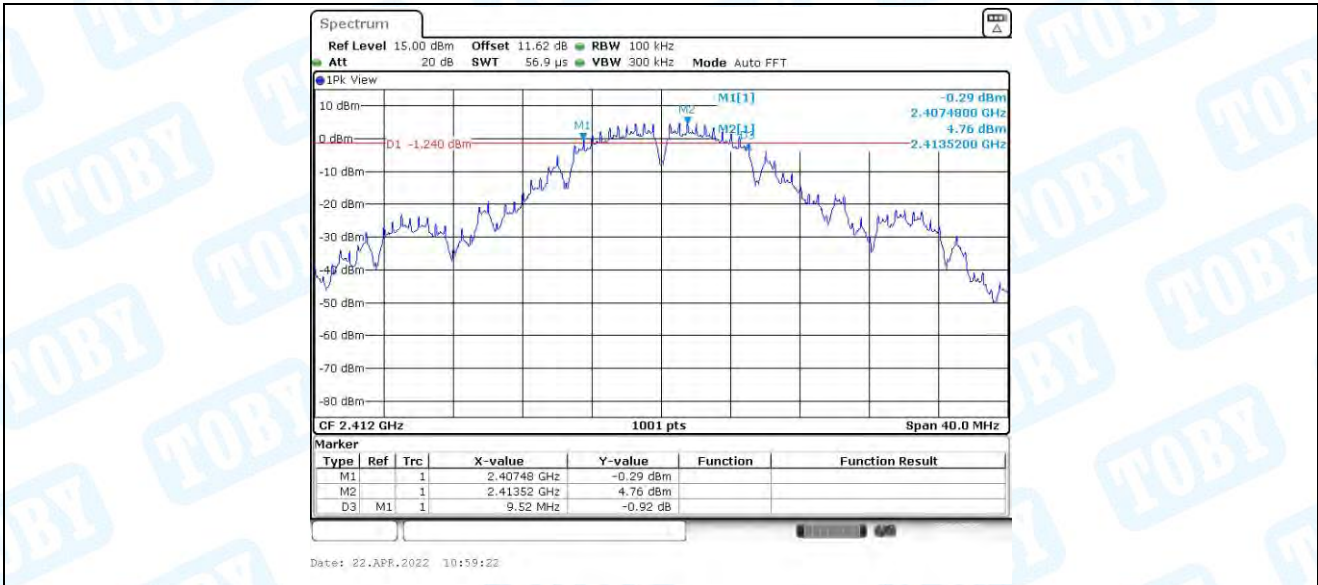
1. DTS Bandwidth.....	3
1.1. Test Result.....	3
1.2. Test Graphs.....	4
2. Occupied Channel Bandwidth.....	8
2.1. Test Result.....	8
2.2. Test Graphs.....	9
3. Maximum conducted output power.....	13
3.1. Test Result.....	13
4. Maximum power spectral density.....	14
4.1. Test Result.....	14
4.2. Test Graphs.....	15
5. Band edge measurements.....	19
5.1. Test Result.....	19
5.2. Test Graphs.....	20
6. Conducted Spurious Emission.....	23
6.1. Test Result.....	23
6.2. Test Graphs.....	24
7. Duty Cycle.....	36
7.1. Test Result.....	36
7.2. Test Graphs.....	37
8. Emissions in Restricted Bands.....	41
8.1. Test Result.....	41
8.2. Test Graphs.....	43

## 1. DTS Bandwidth

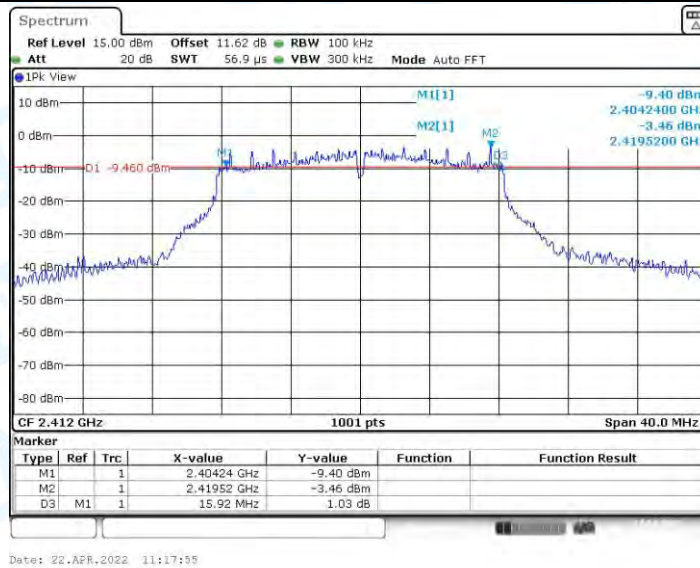
### 1.1. Test Result

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

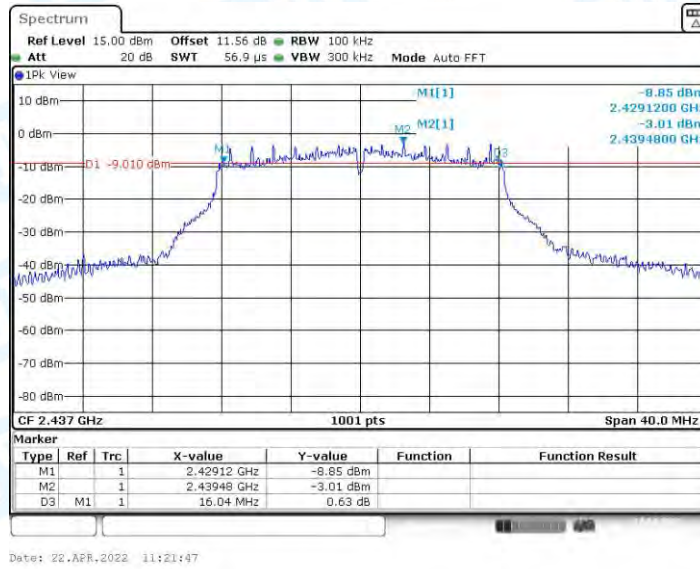
**1.2. Test Graphs**



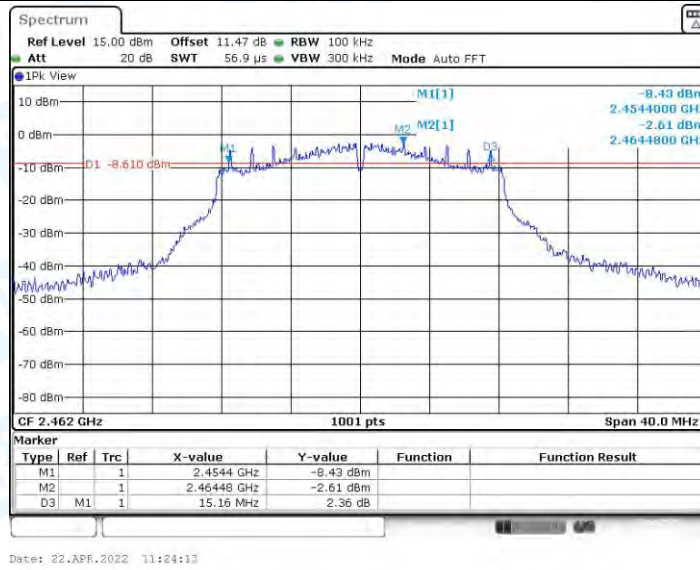
**11B\_Ant1\_2462**



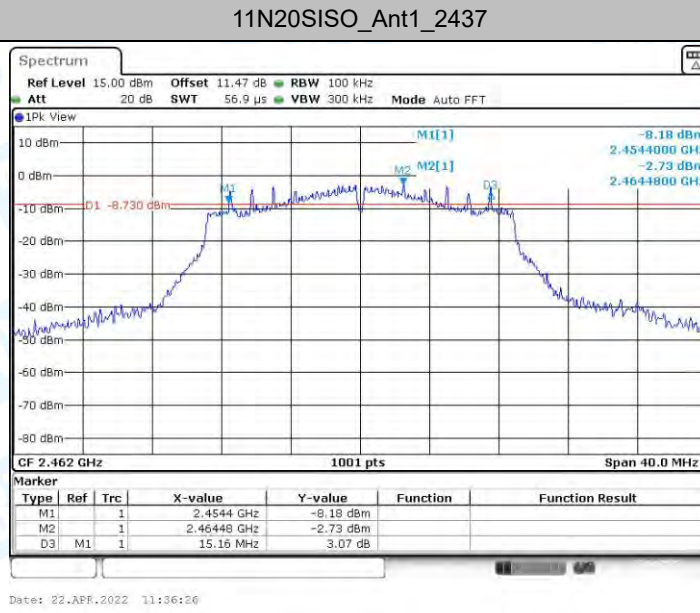
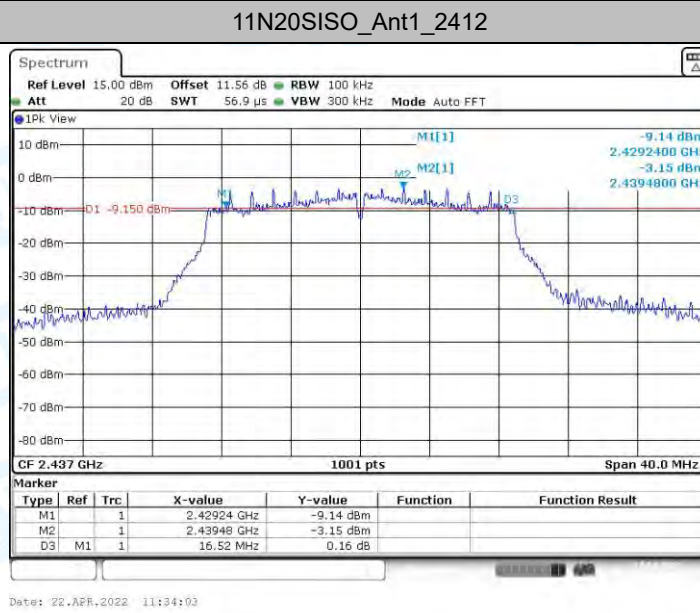
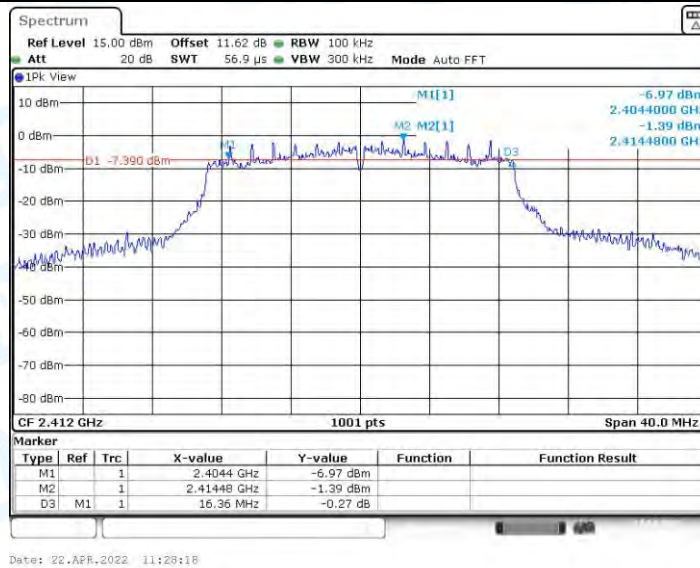
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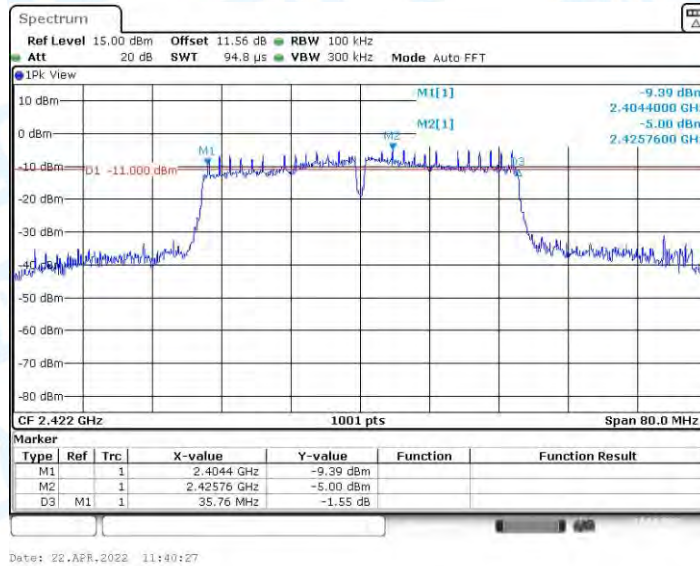


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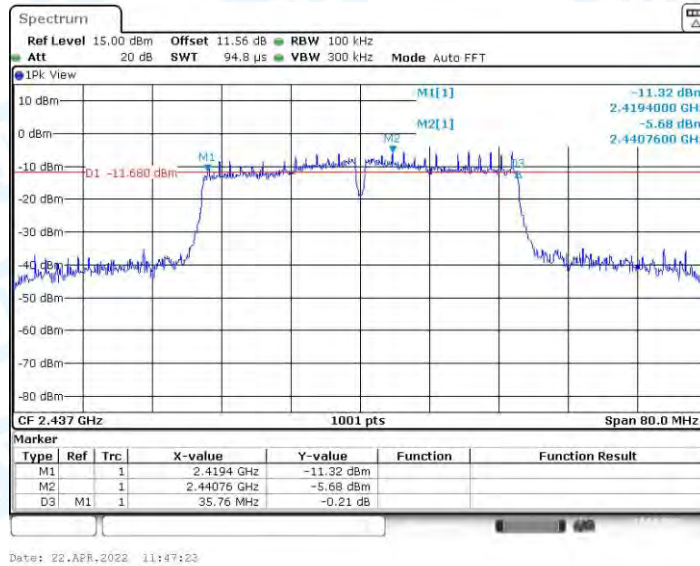


11G\_Ant1\_2462

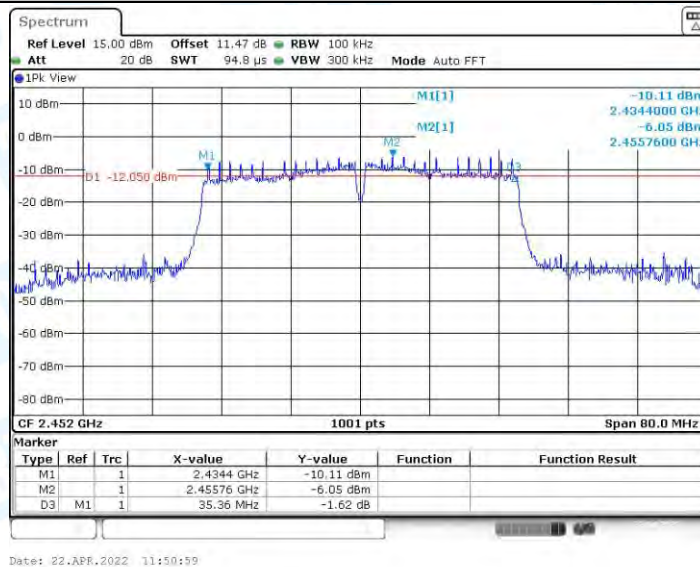




11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452

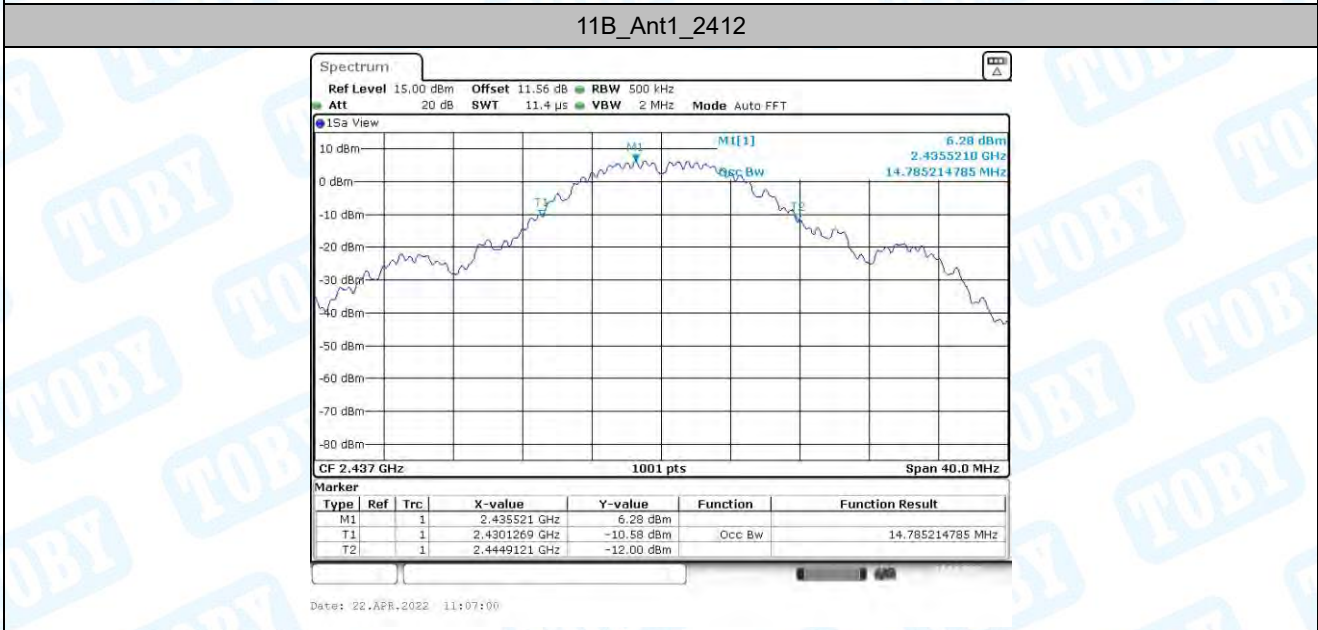
## 2. Occupied Channel Bandwidth

### 2.1. Test Result

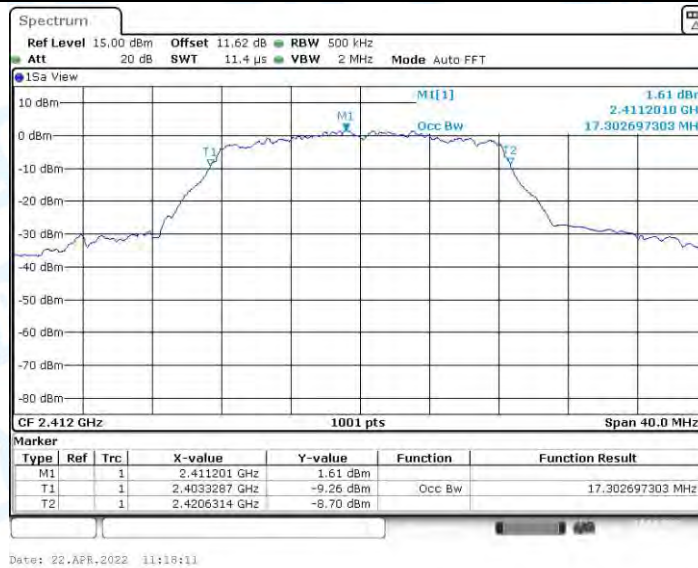
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.426	2405.207	2419.632	---	---
		2437	14.785	2430.127	2444.912	---	---
		2462	14.266	2455.367	2469.632	---	---
11G	Ant1	2412	17.303	2403.329	2420.631	---	---
		2437	17.862	2428.089	2445.951	---	---
		2462	16.943	2453.528	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	---	---



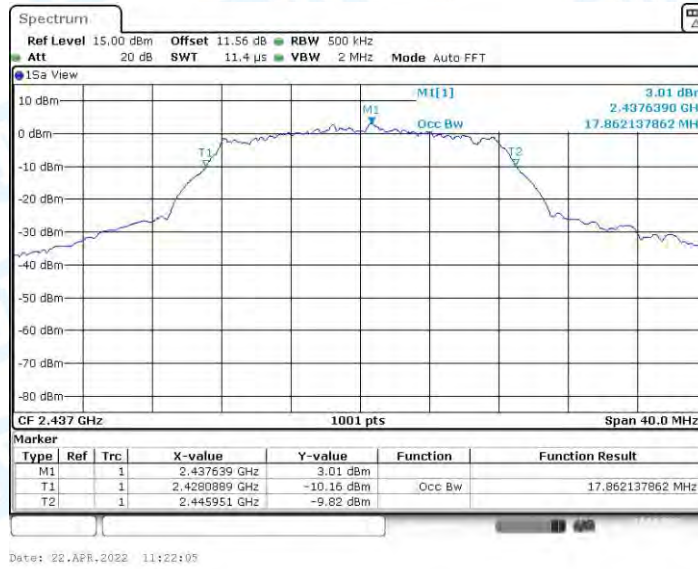
**2.2. Test Graphs**



**11B\_Ant1\_2462**



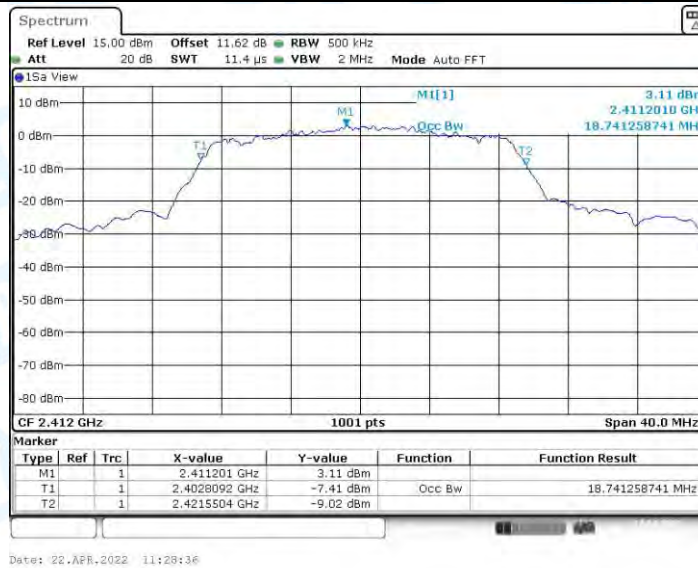
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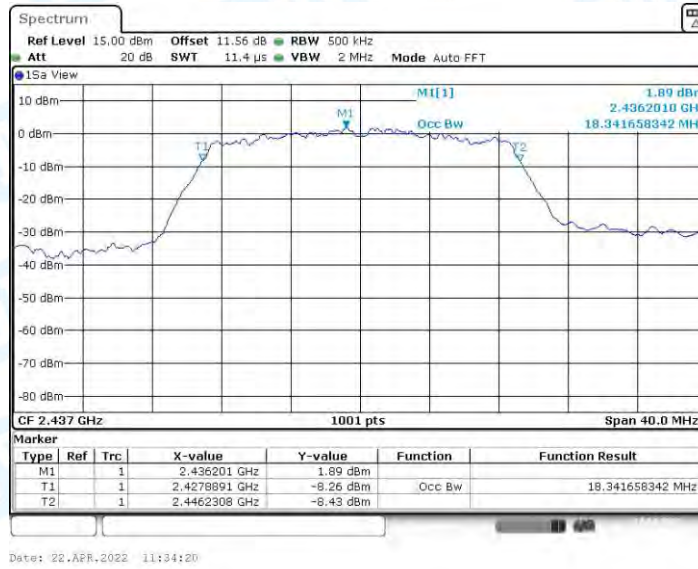
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11G\_Ant1\_2462



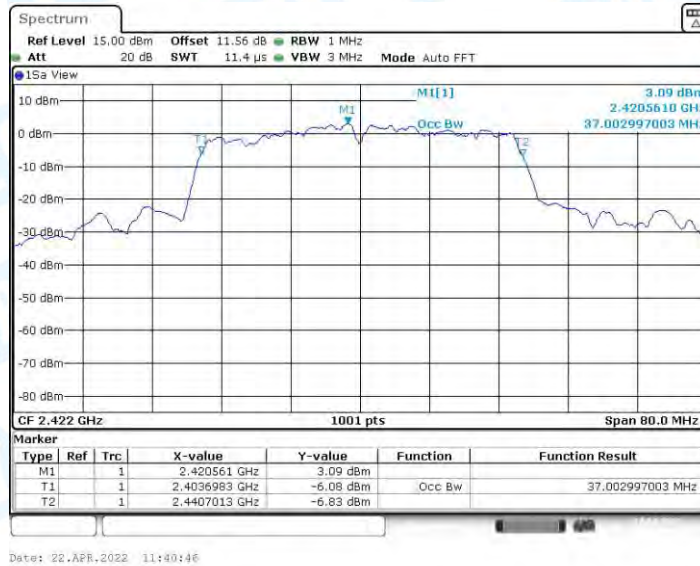
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11N20SISO\_Ant1\_2437



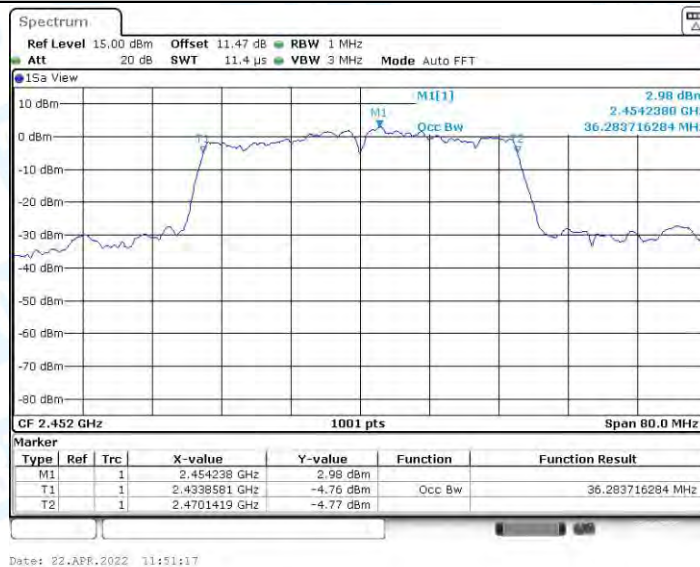
11N20SISO\_Ant1\_2462



11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452

### 3. Maximum conducted output power

#### 3.1. Test Result

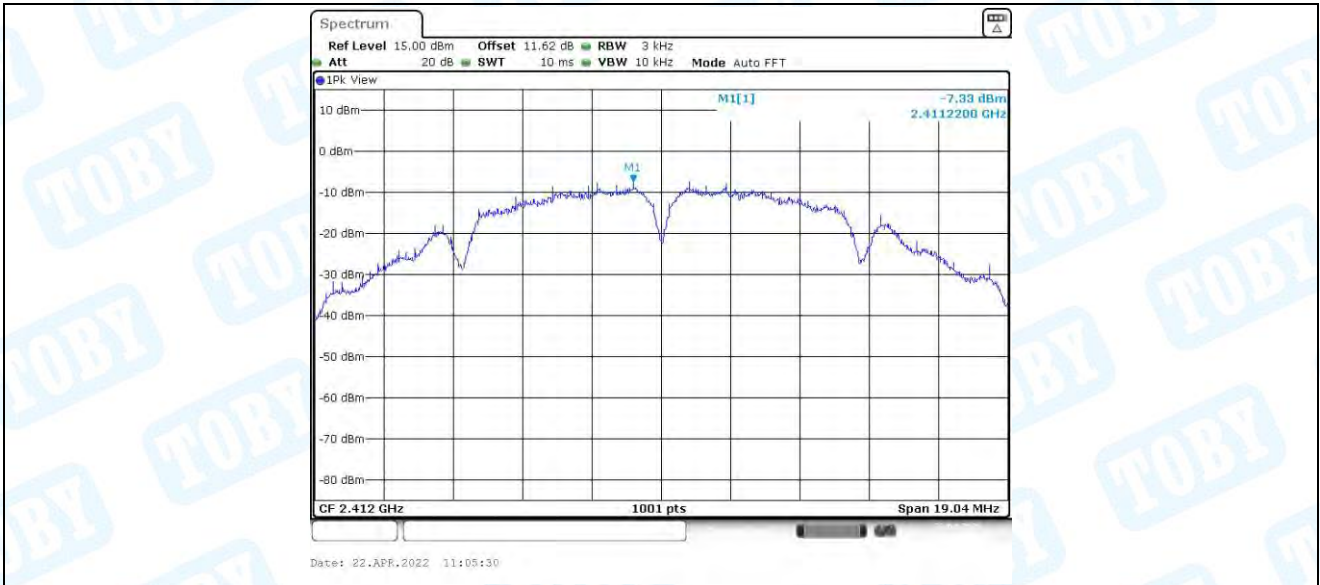
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	16.71	≤30.00	PASS
		2437	17.67	≤30.00	PASS
		2462	17.90	≤30.00	PASS
11G	Ant1	2412	16.15	≤30.00	PASS
		2437	16.61	≤30.00	PASS
		2462	16.92	≤30.00	PASS
11N20SISO	Ant1	2412	17.61	≤30.00	PASS
		2437	16.18	≤30.00	PASS
		2462	16.47	≤30.00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

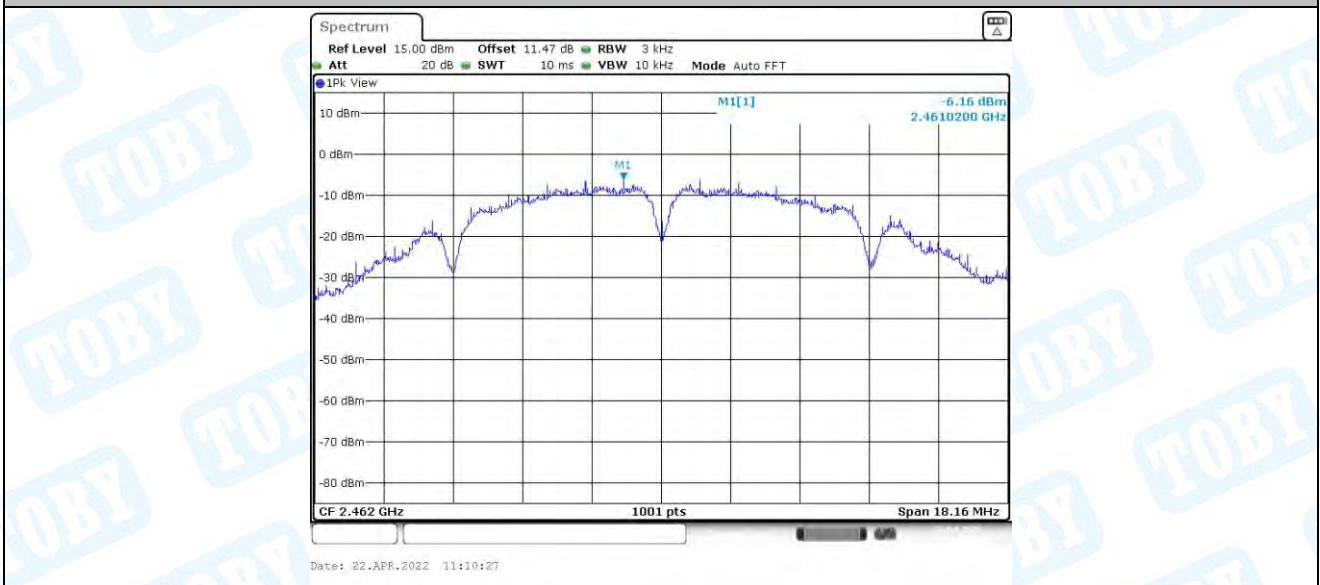
### 4.2. Test Graphs



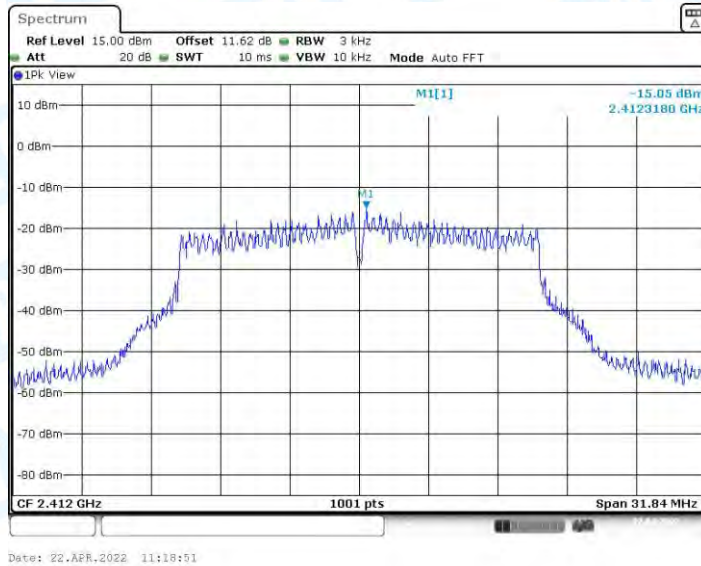
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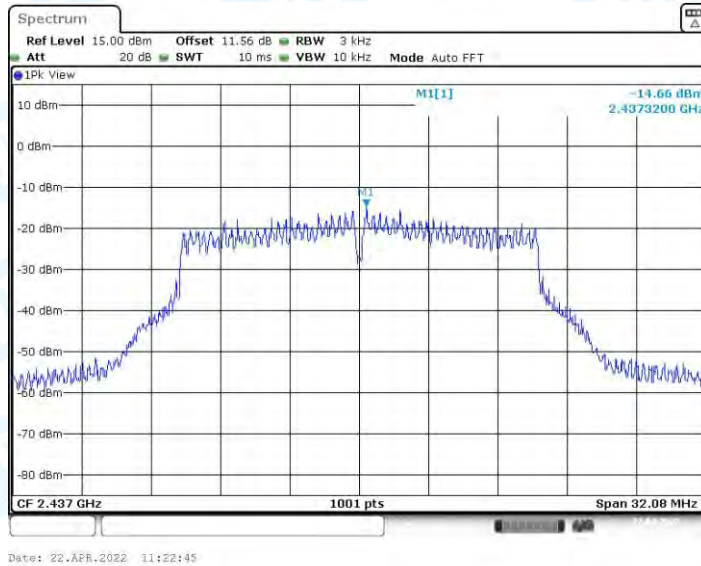
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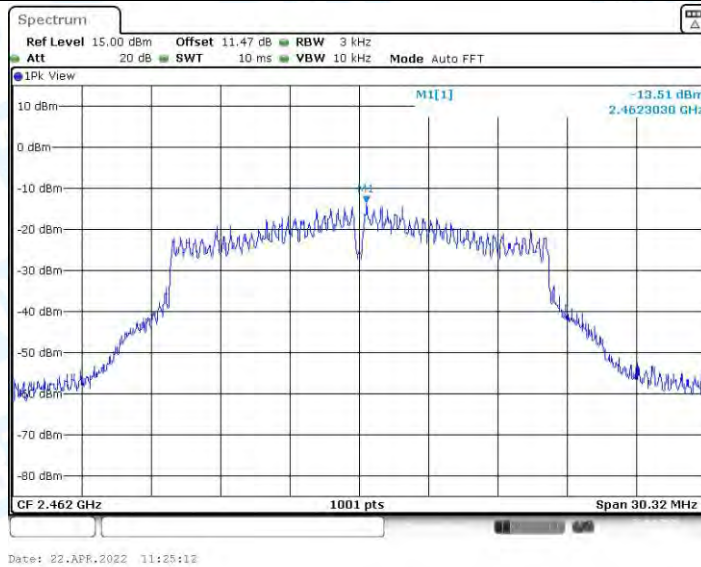
11B\_Ant1\_2462



11G\_Ant1\_2412

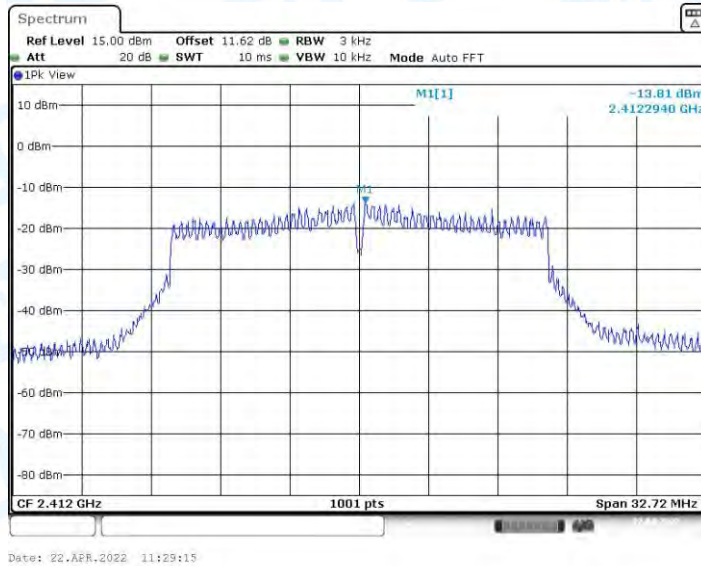


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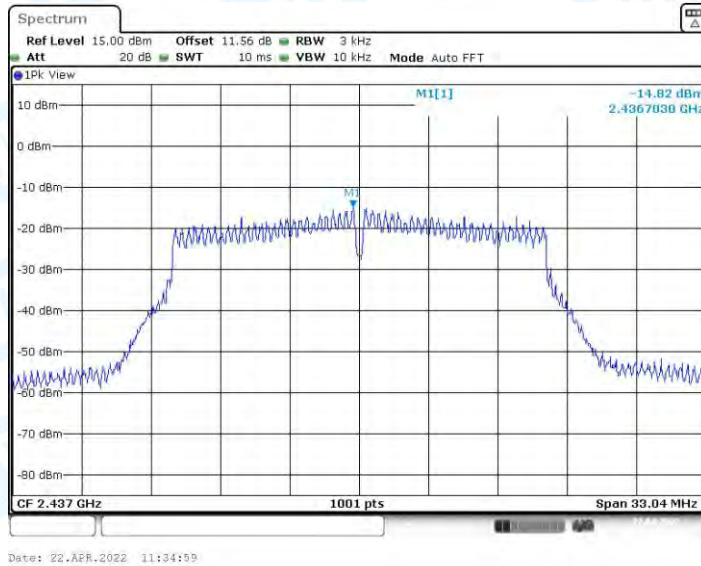


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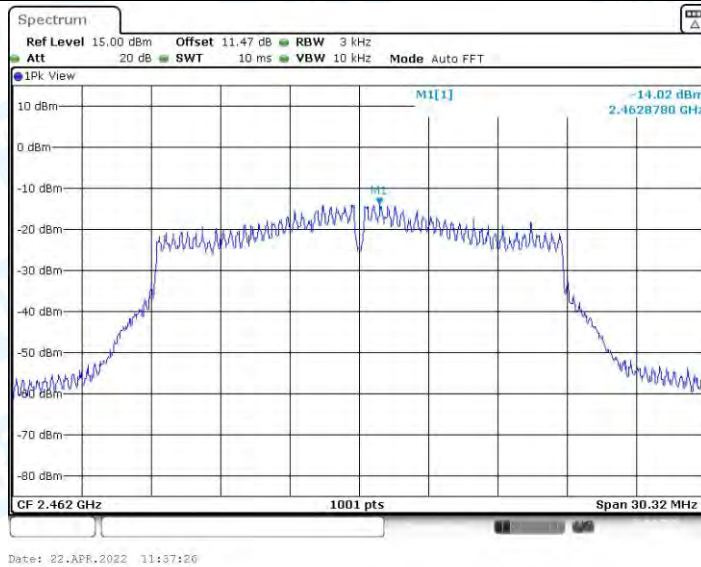




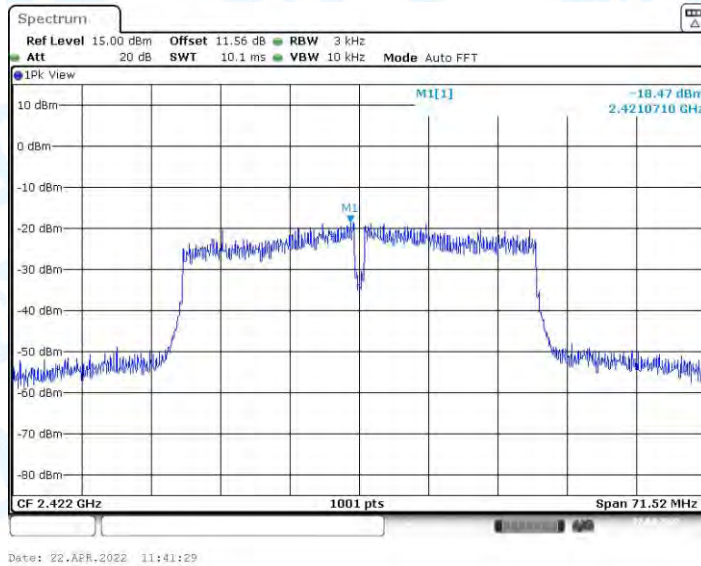
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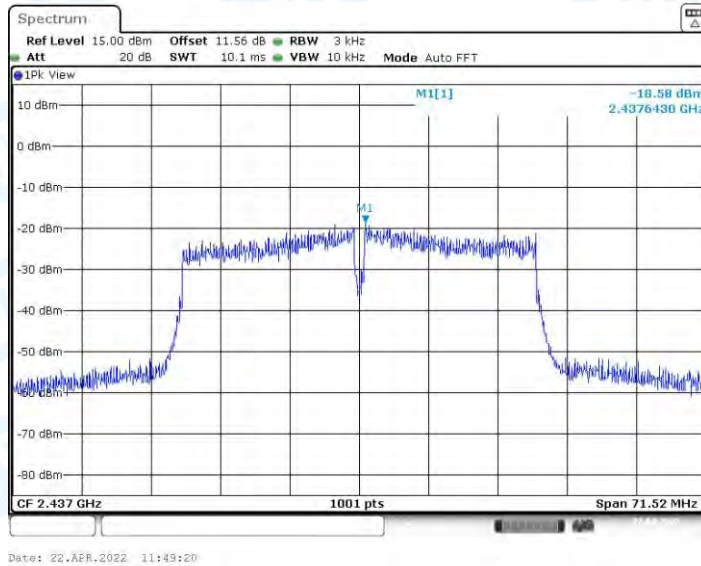
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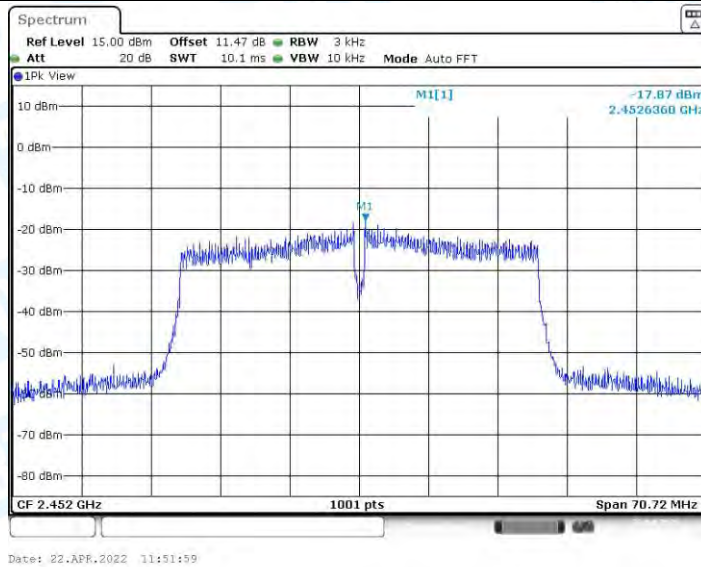
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11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



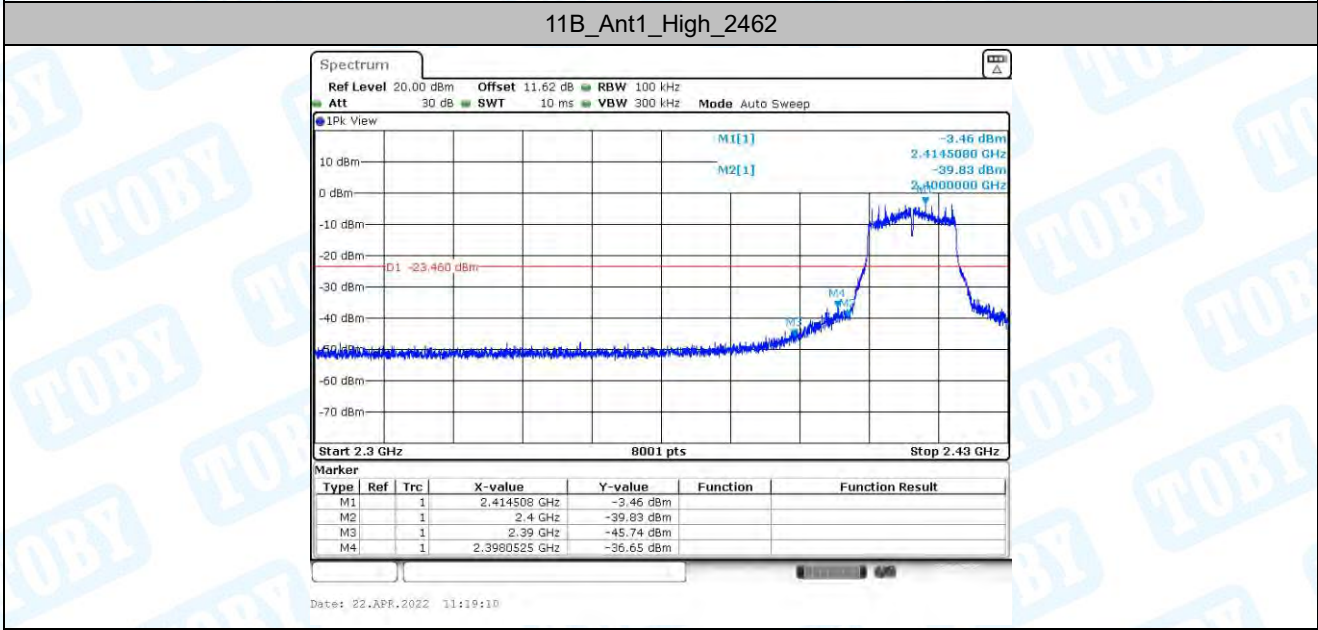
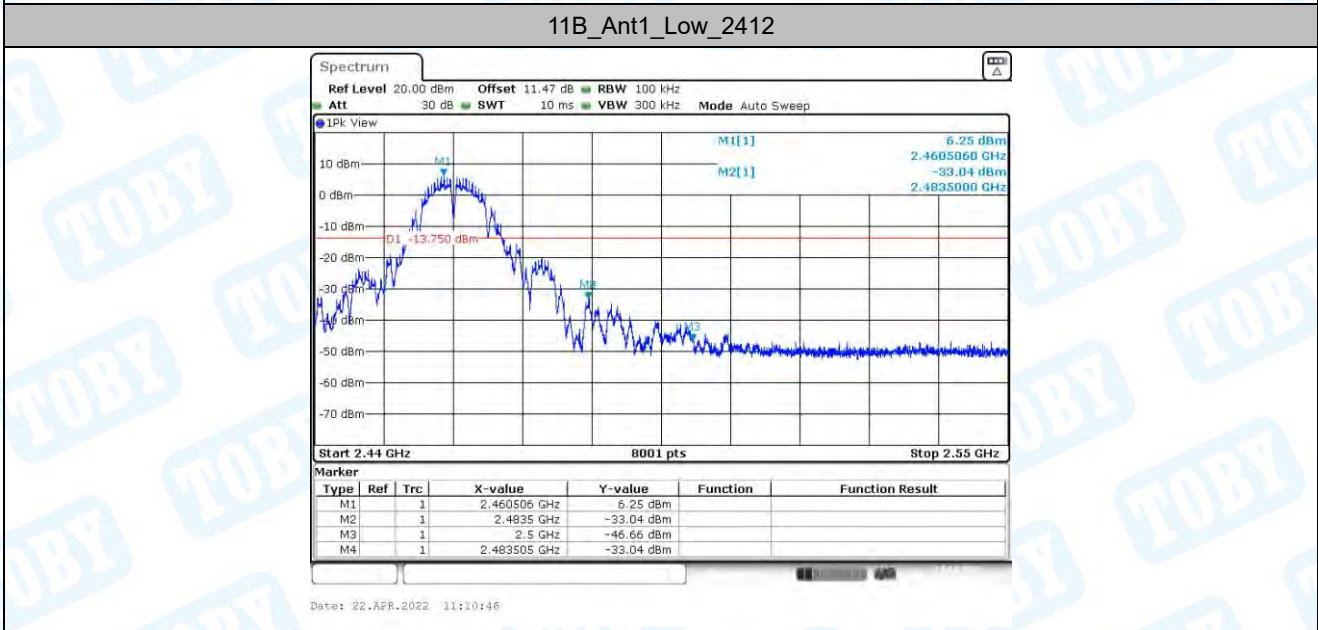
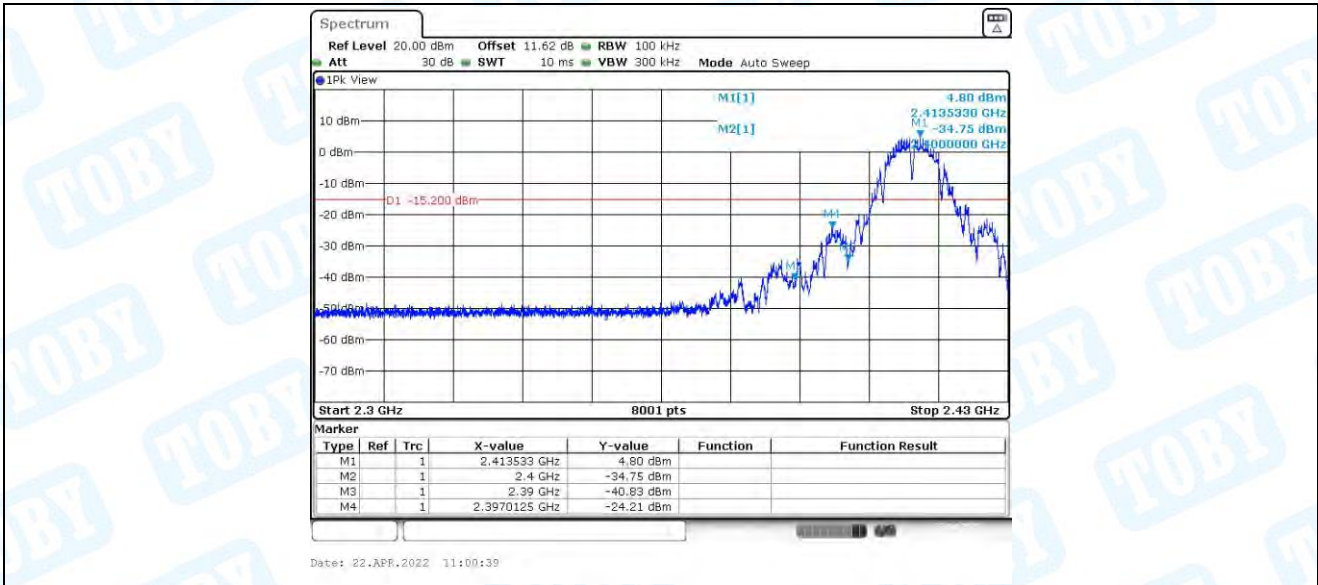
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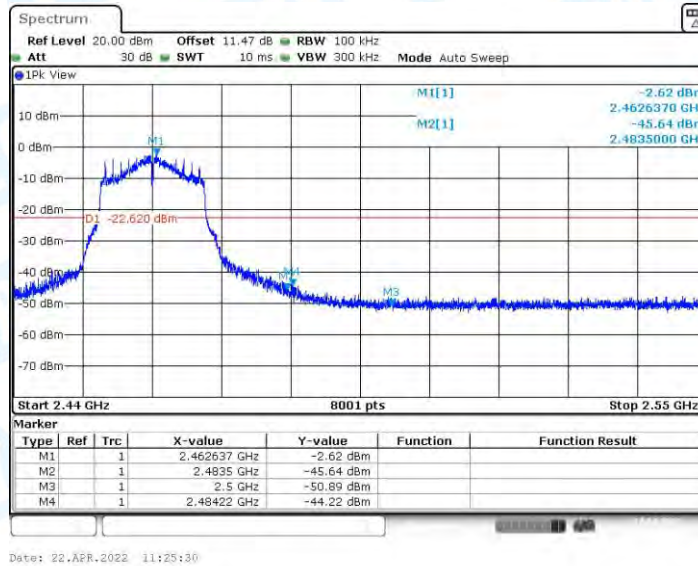
## 5. Band edge measurements

### 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

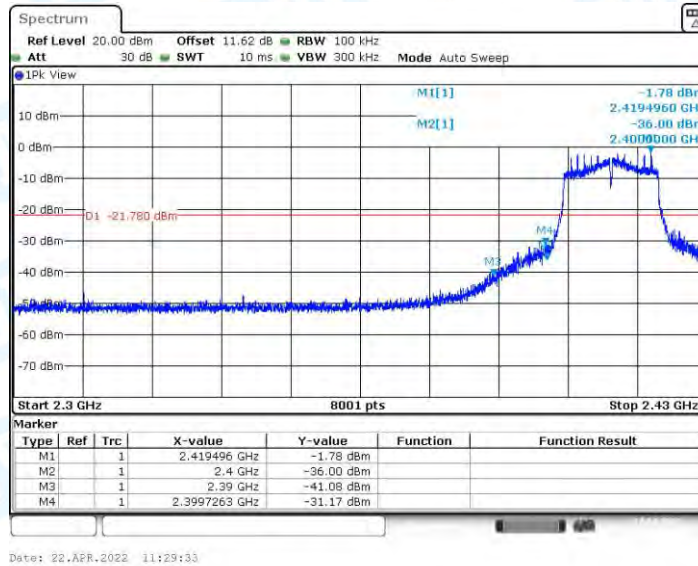
### 5.2. Test Graphs





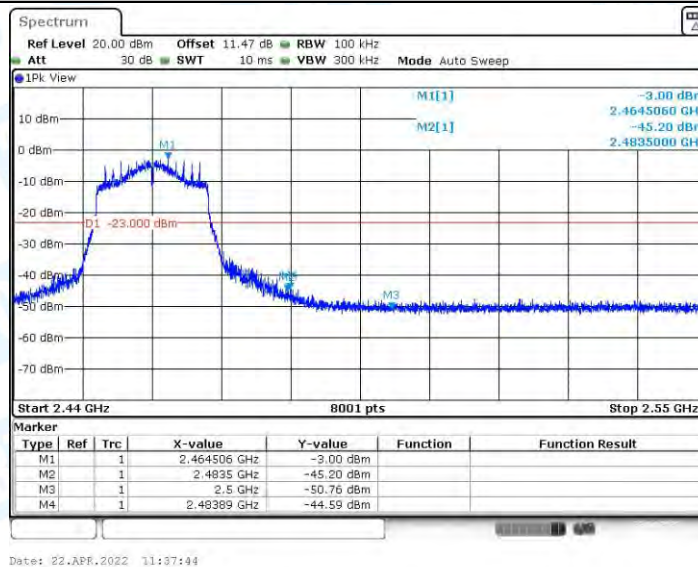
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11G\_Ant1\_High\_2462



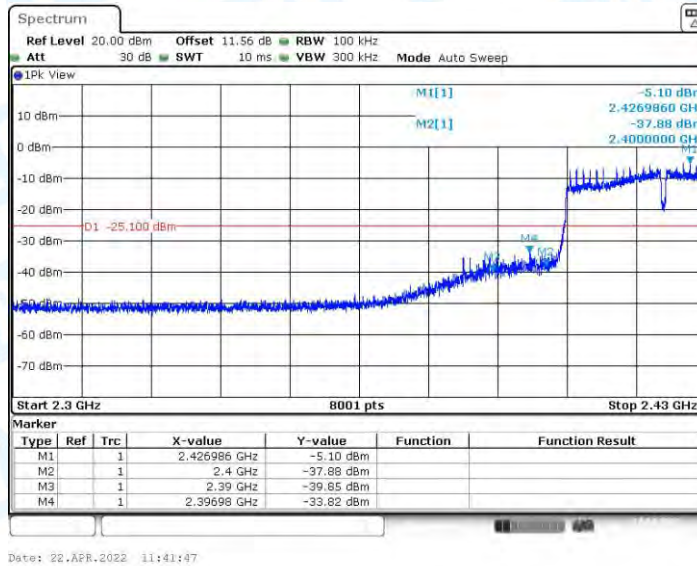
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11N20SISO\_Ant1\_Low\_2412

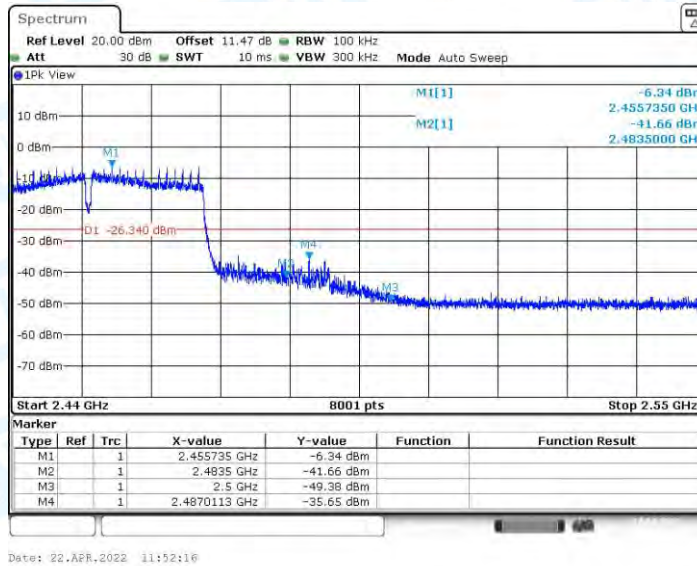


Date: 22.APR.2022 11:37:44

11N20SISO\_Ant1\_High\_2462



11N40SISO\_Ant1\_Low\_2422



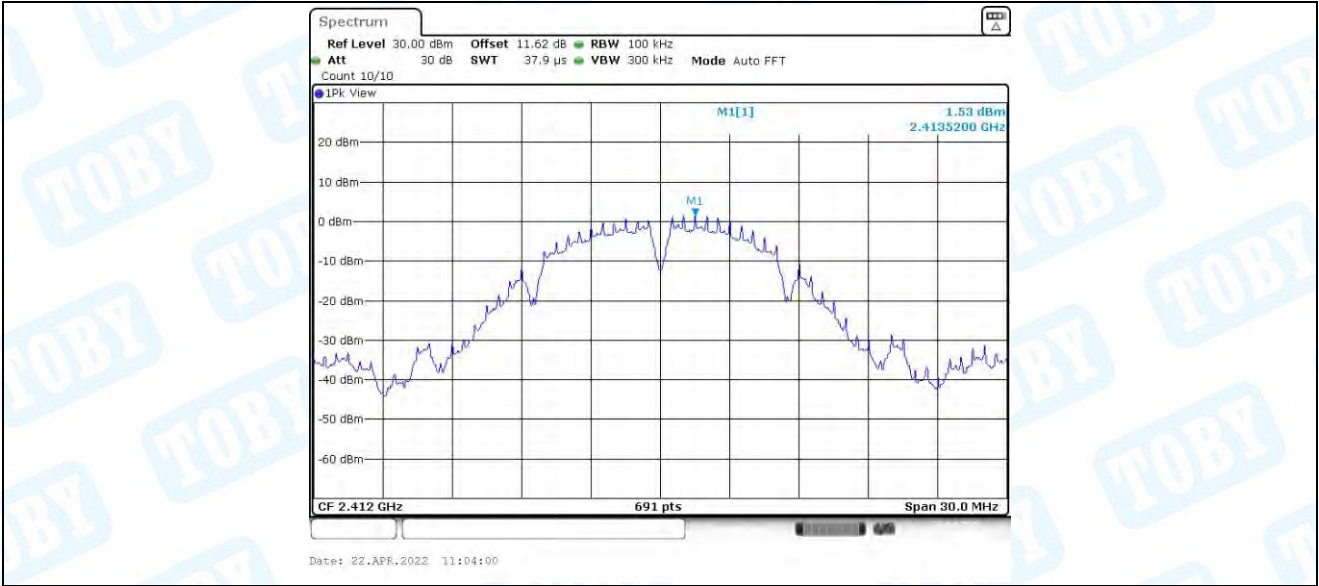
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## 6. Conducted Spurious Emission

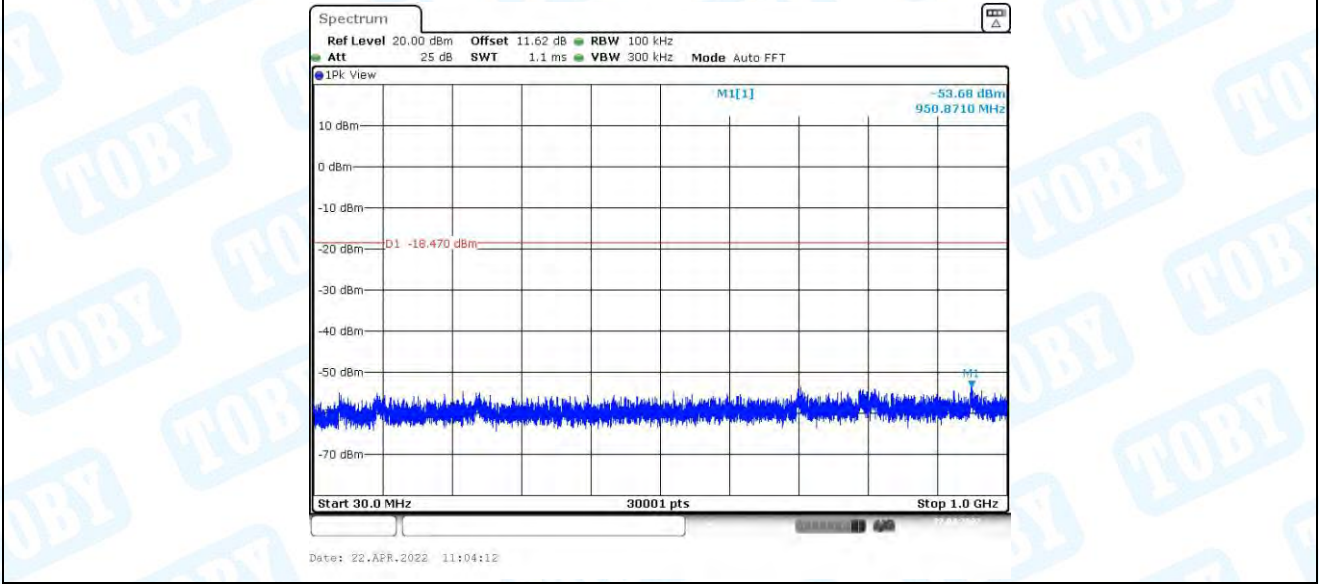
### 6.1. Test Result

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

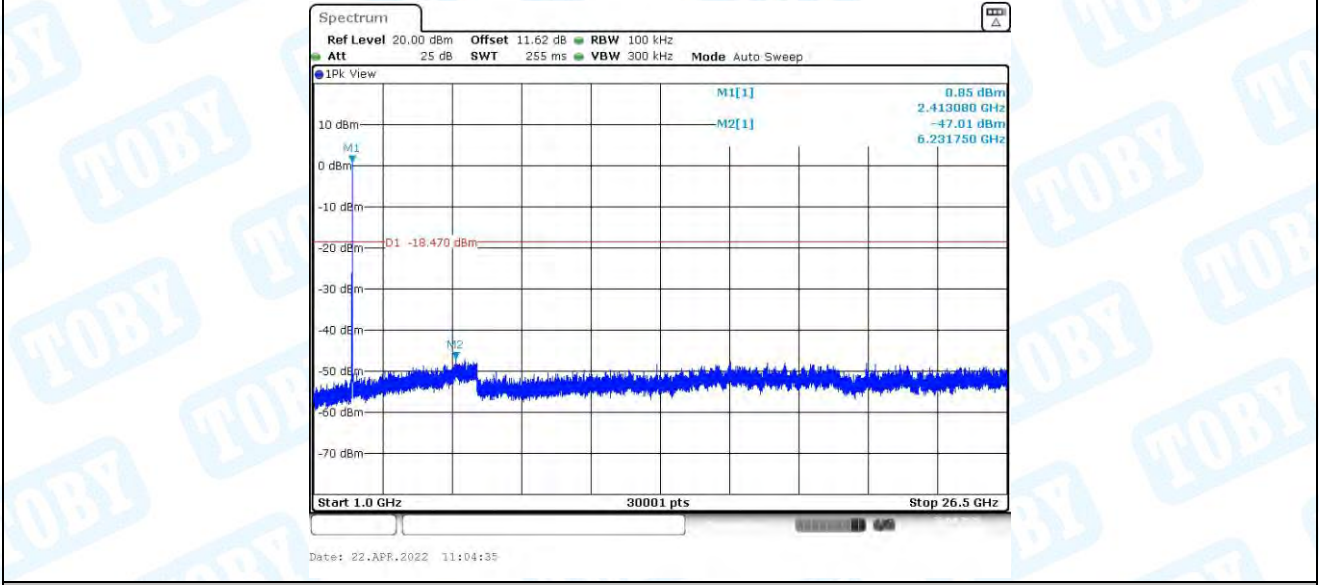
### 6.2. Test Graphs



11B\_Ant1\_2412\_0~Reference

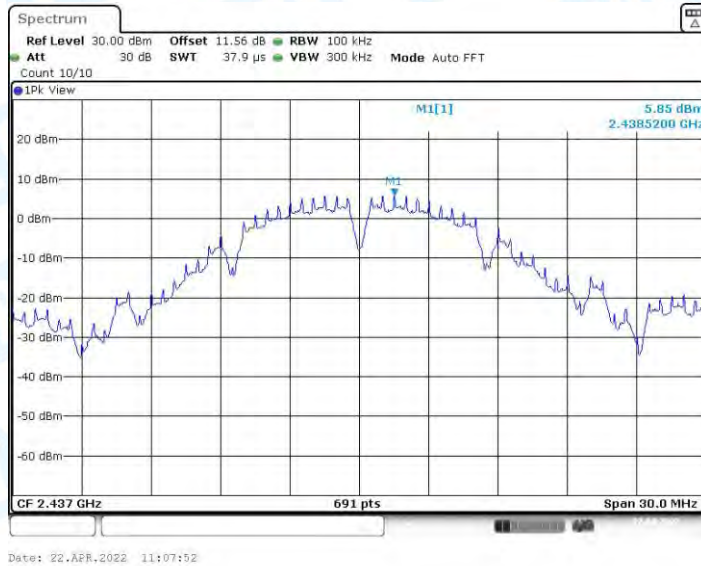


11B\_Ant1\_2412\_30~1000

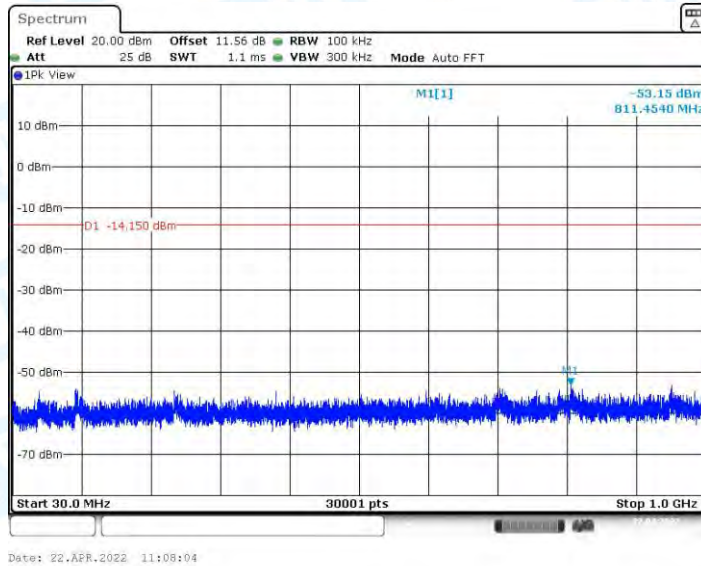


11B\_Ant1\_2412\_1000~26500

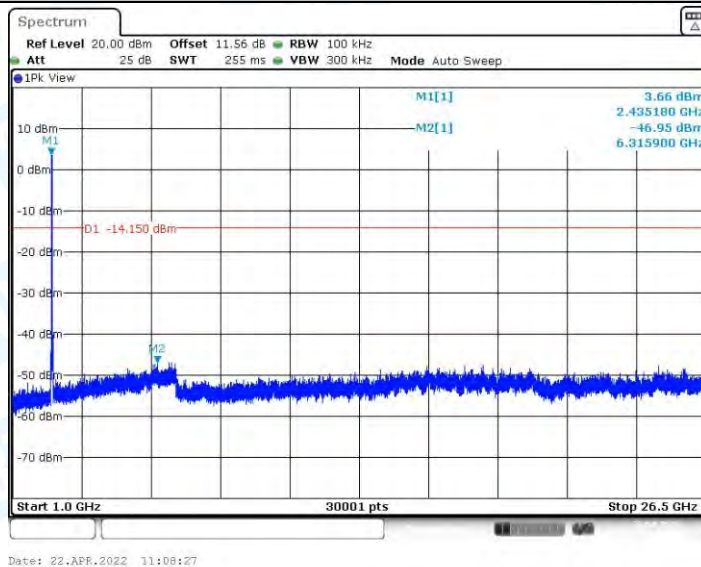




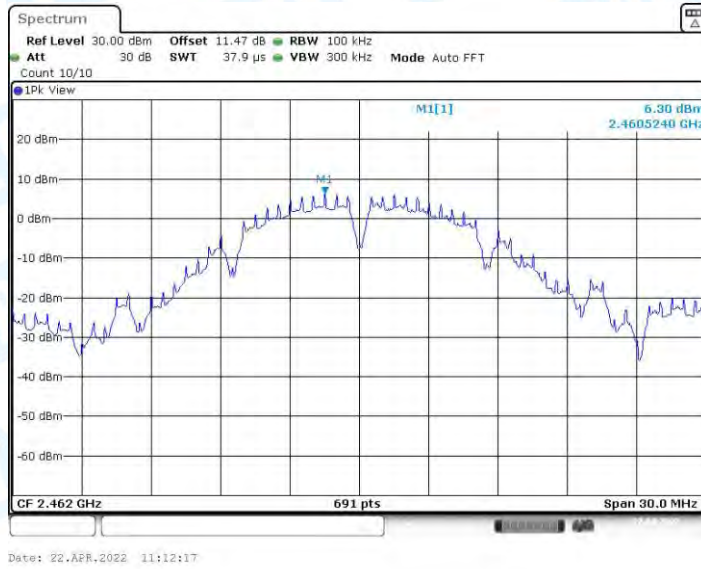
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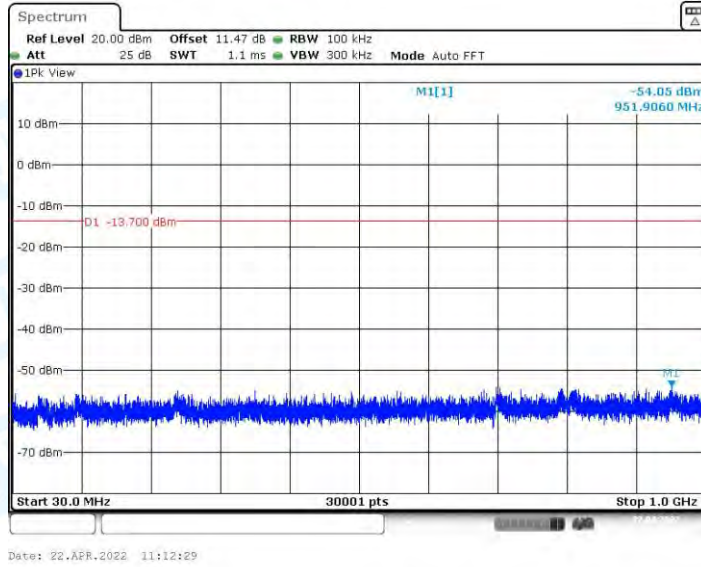
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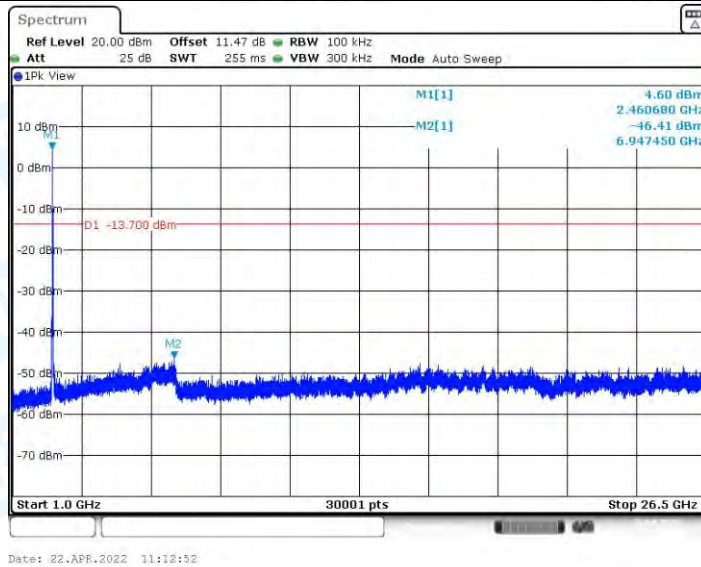
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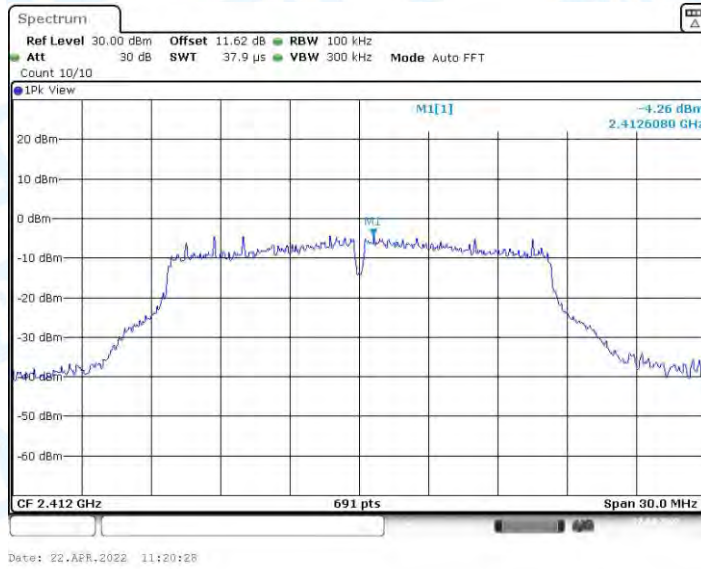
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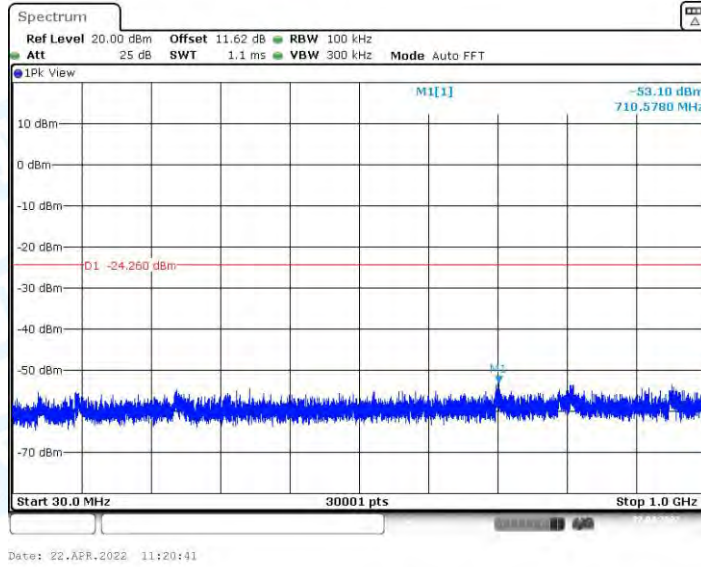
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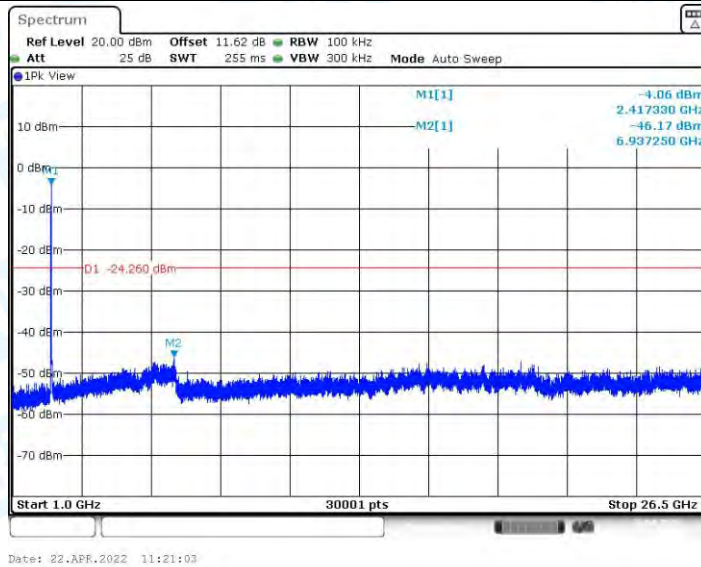
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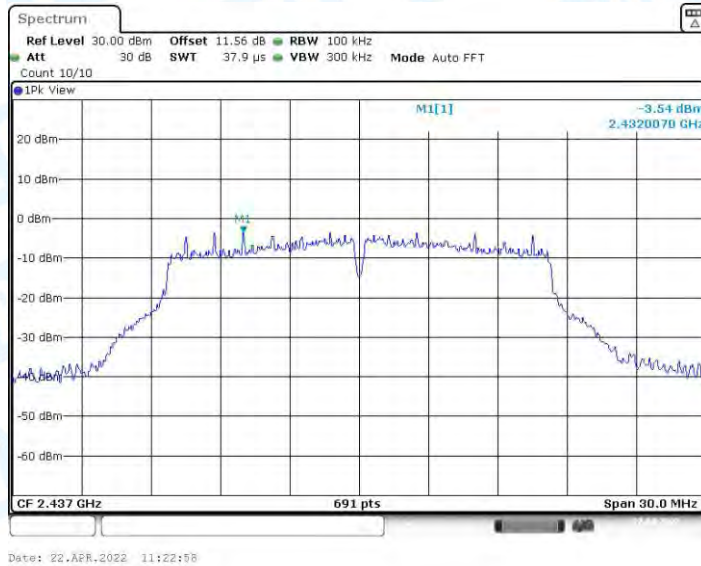
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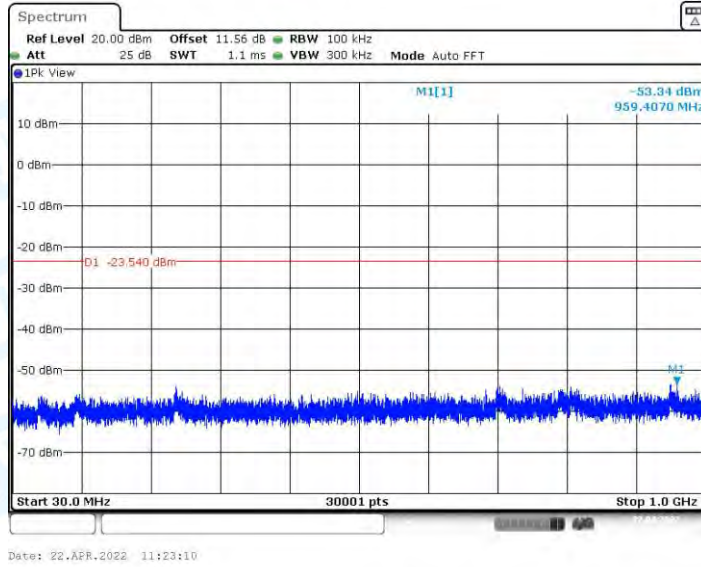
11G\_Ant1\_2412\_30~1000



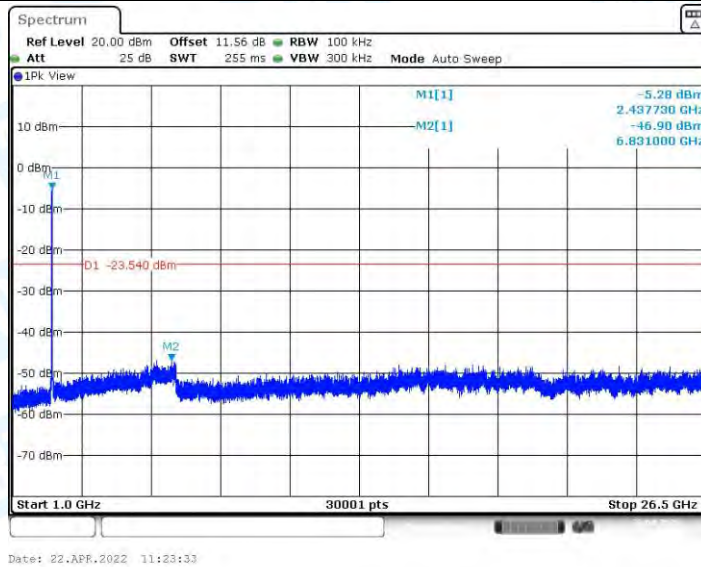
11G\_Ant1\_2412\_1000~26500



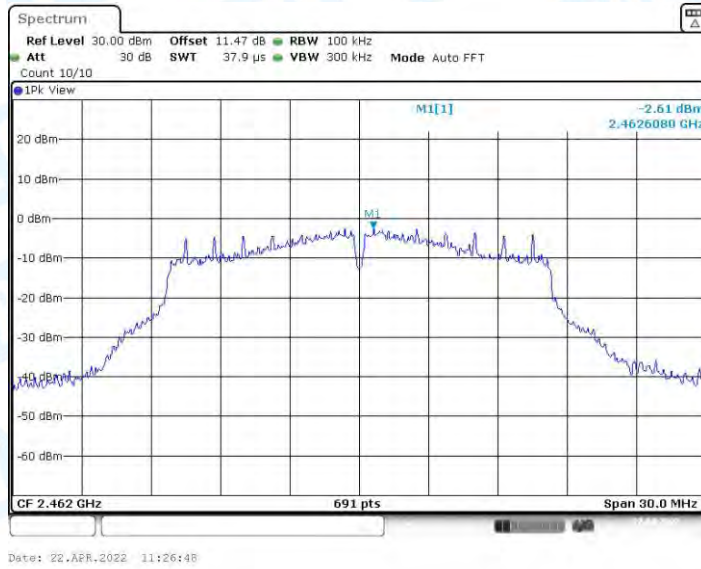
11G\_Ant1\_2437\_0~Reference



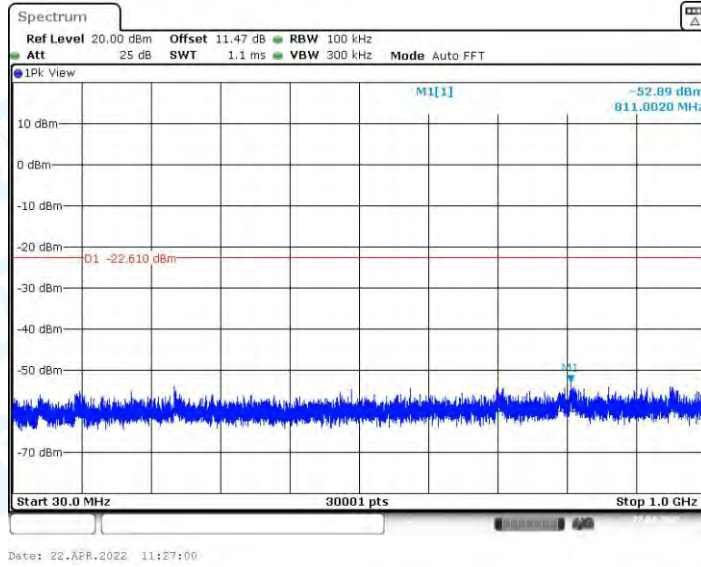
11G\_Ant1\_2437\_30~1000



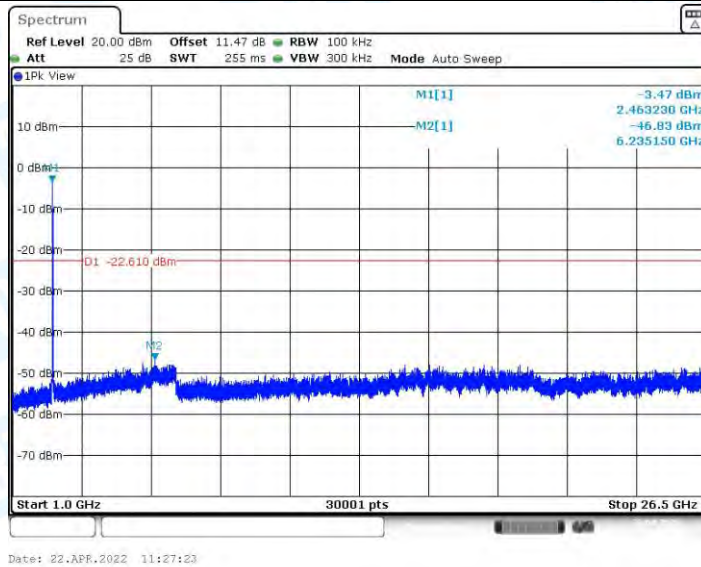
11G\_Ant1\_2437\_1000~26500



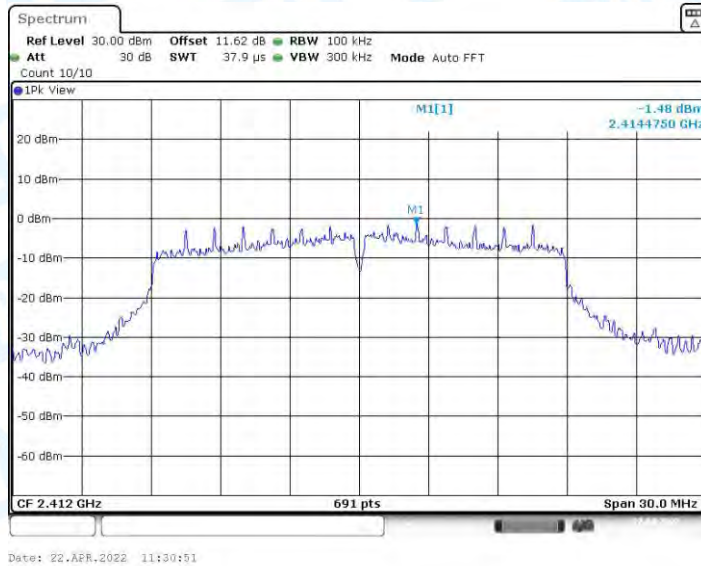
11G\_Ant1\_2462\_0~Reference



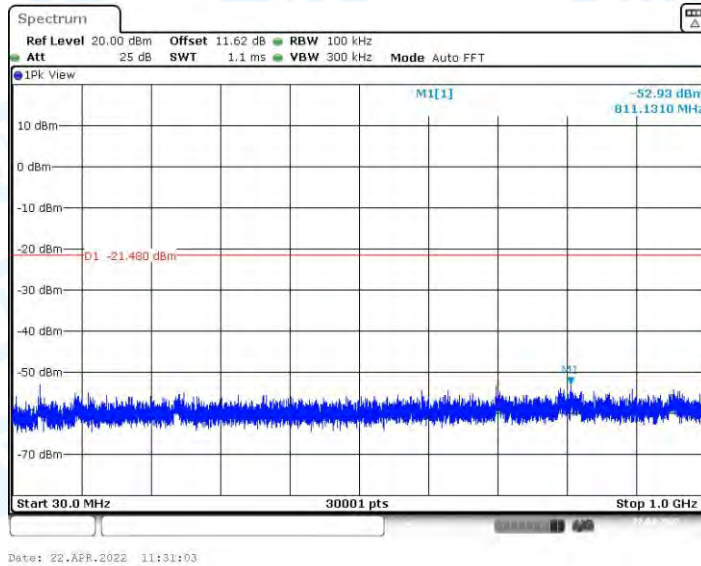
11G\_Ant1\_2462\_30~1000



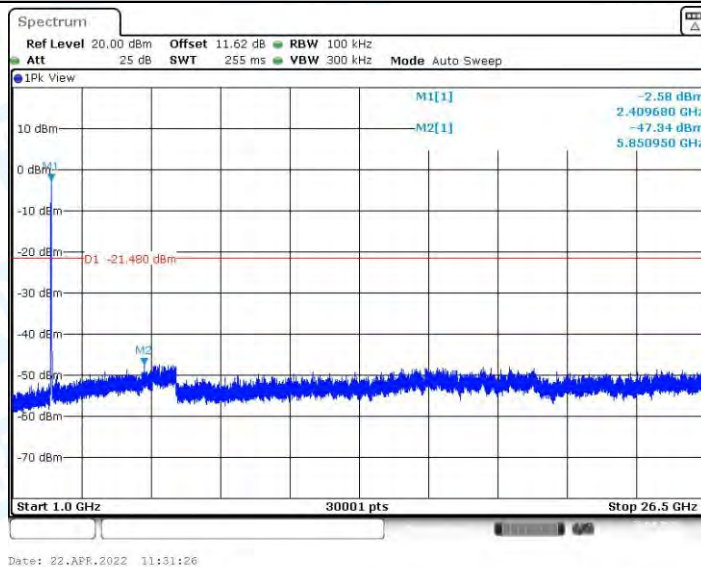
11G\_Ant1\_2462\_1000~26500



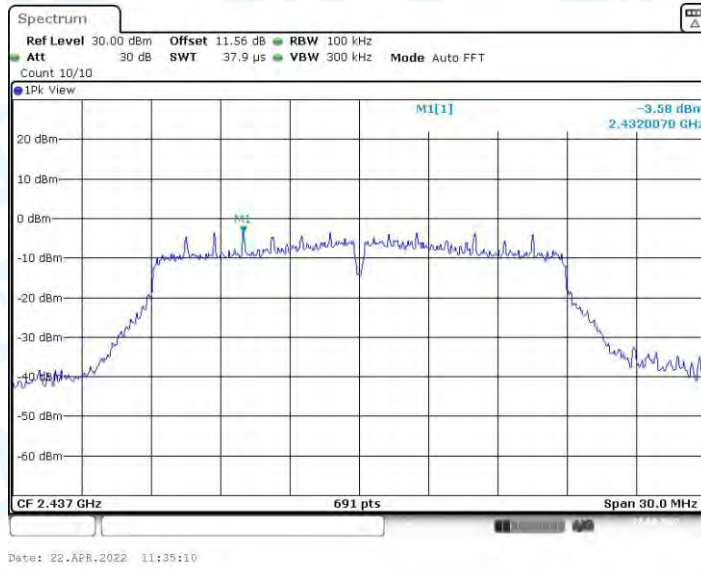
11N20SISO\_Ant1\_2412\_0~Reference



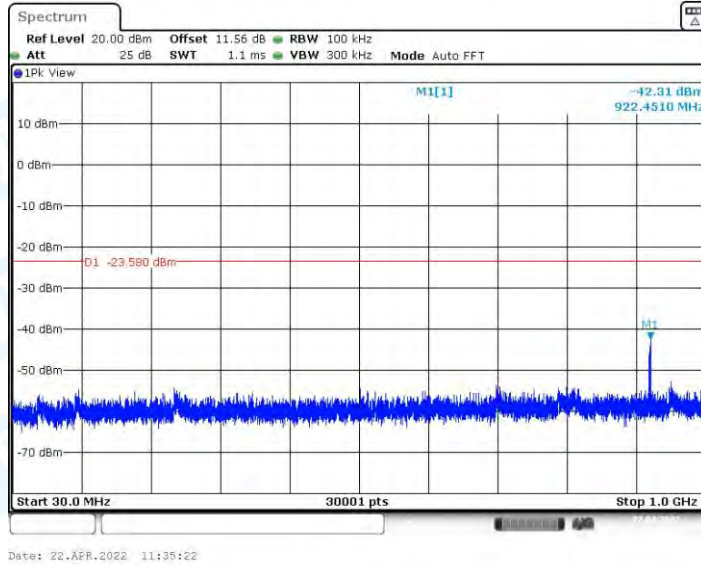
11N20SISO\_Ant1\_2412\_30~1000



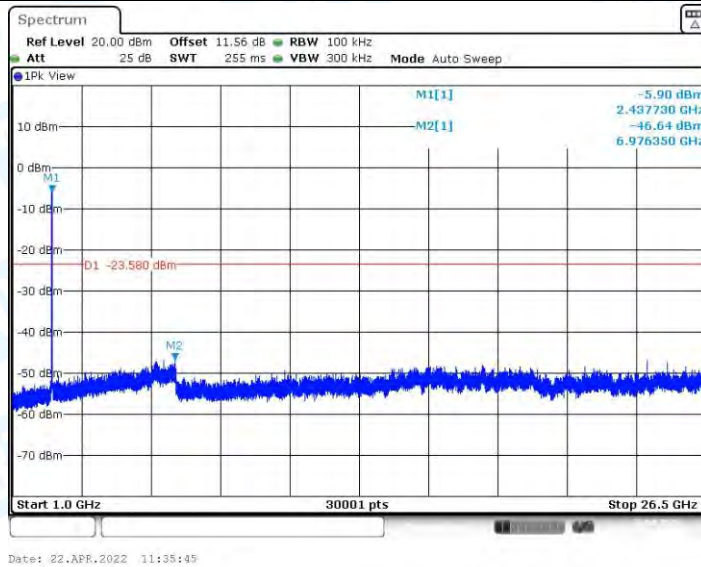
11N20SISO\_Ant1\_2412\_1000~26500



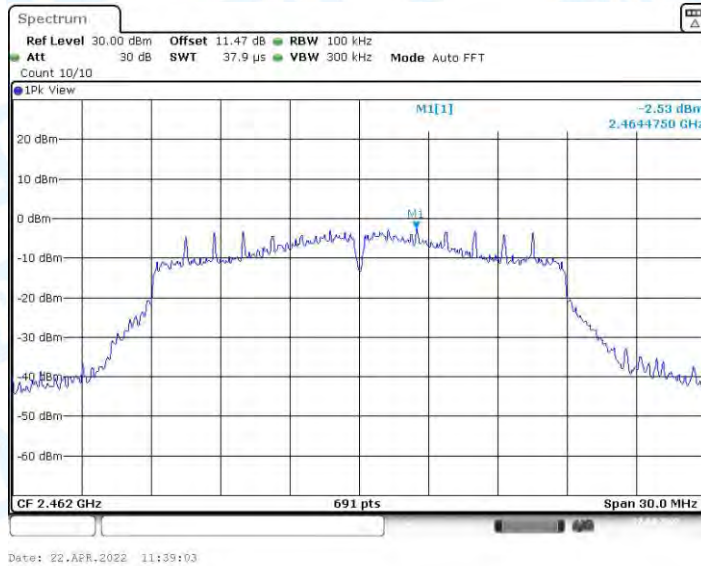
11N20SISO\_Ant1\_2437\_0~Reference



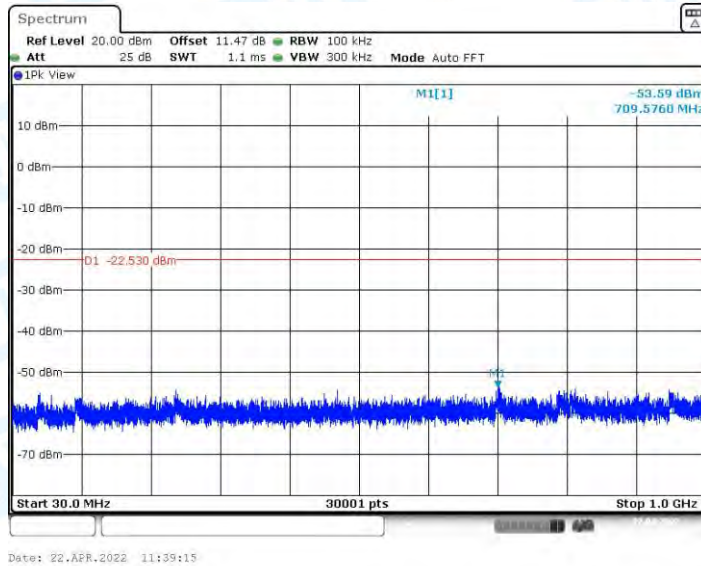
11N20SISO\_Ant1\_2437\_30~1000



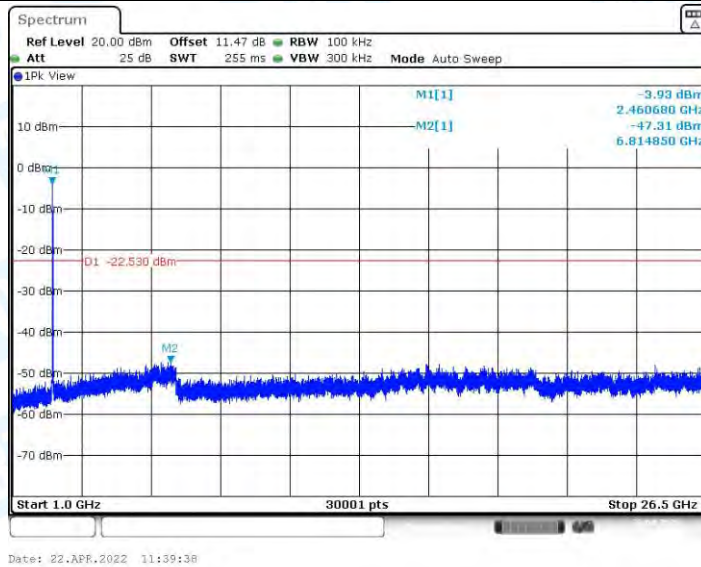
11N20SISO\_Ant1\_2437\_1000~26500



11N20SISO\_Ant1\_2462\_0~Reference

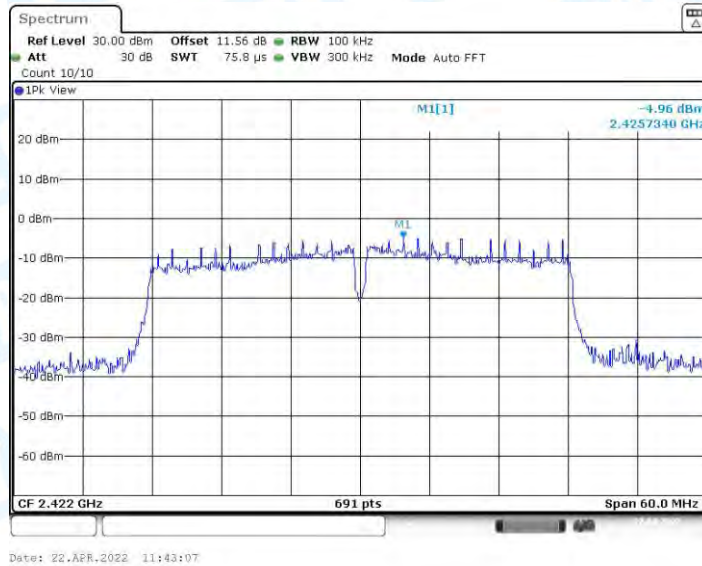


11N20SISO\_Ant1\_2462\_30~1000

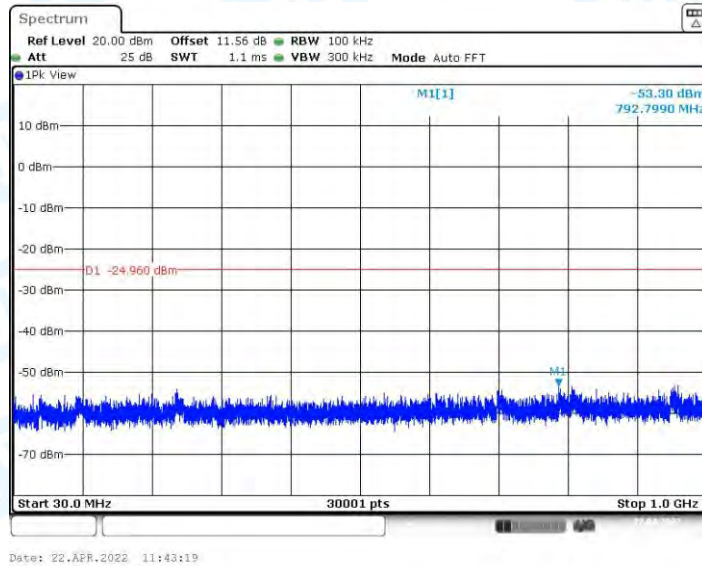


11N20SISO\_Ant1\_2462\_1000~26500

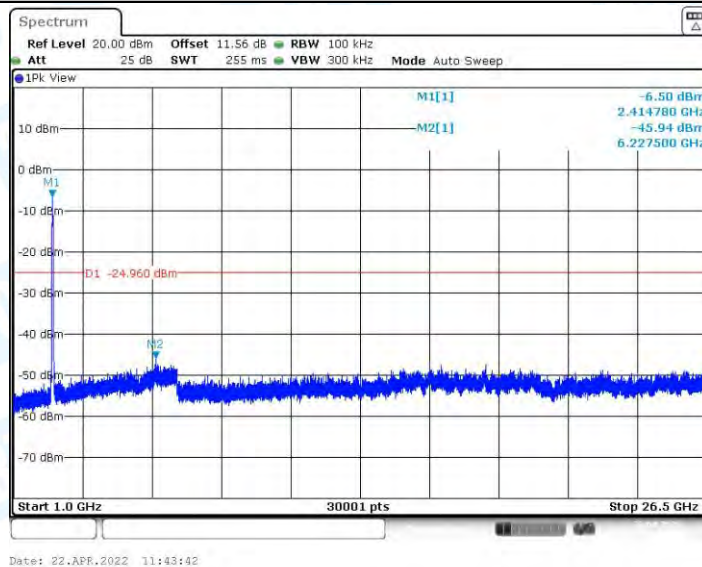




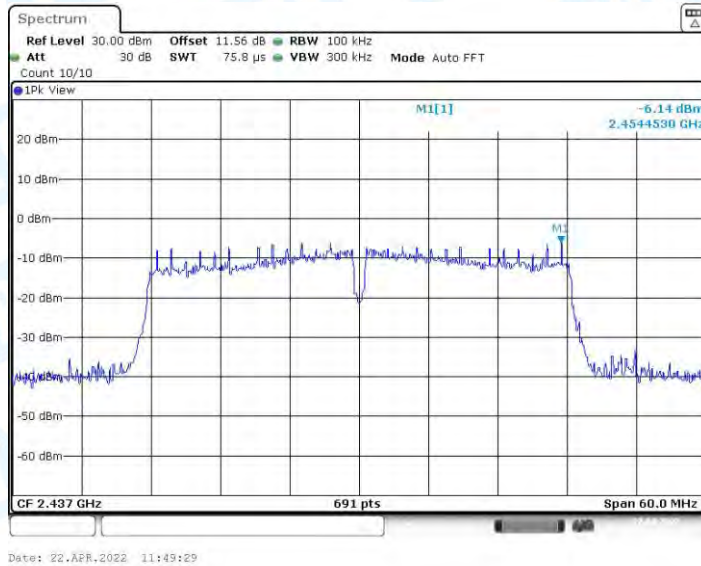
11N40SISO\_Ant1\_2422\_0~Reference



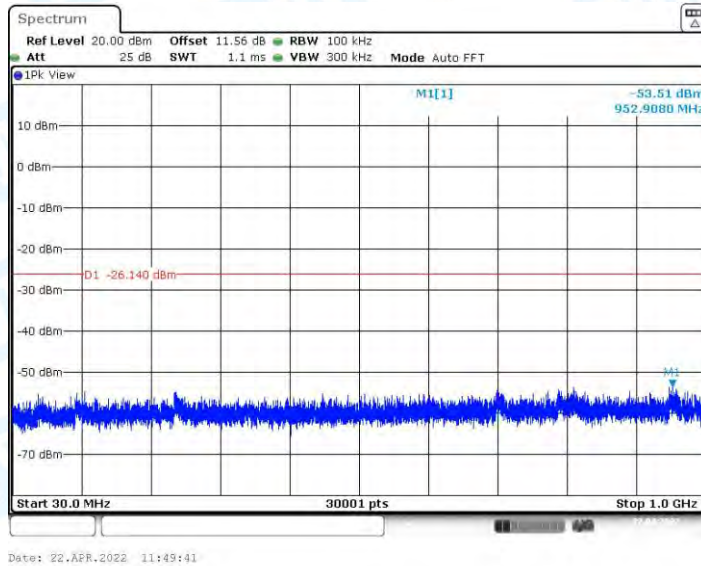
11N40SISO\_Ant1\_2422\_30~1000



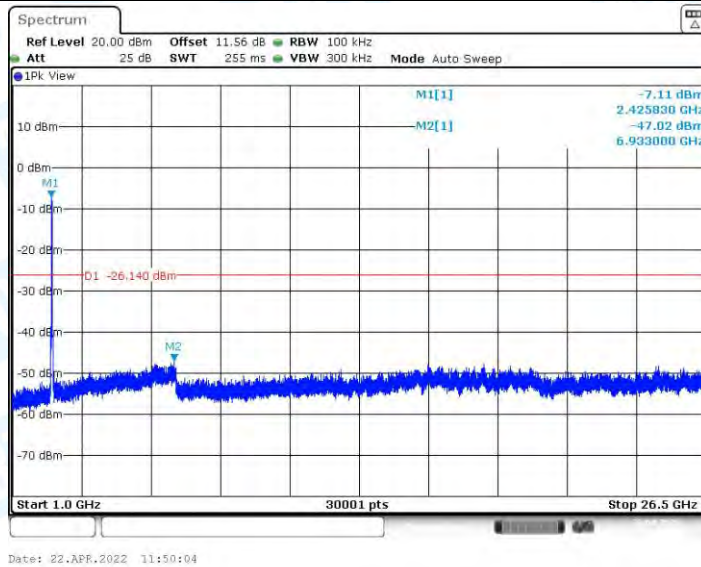
11N40SISO\_Ant1\_2422\_1000~26500



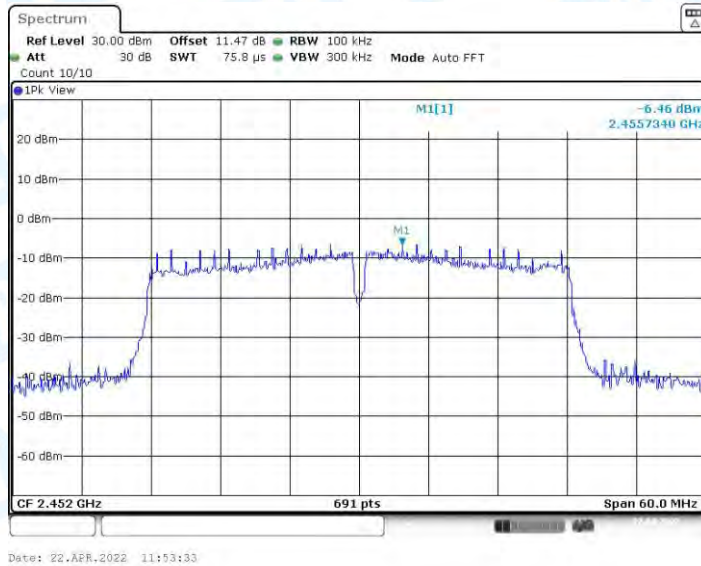
11N40SISO\_Ant1\_2437\_0~Reference



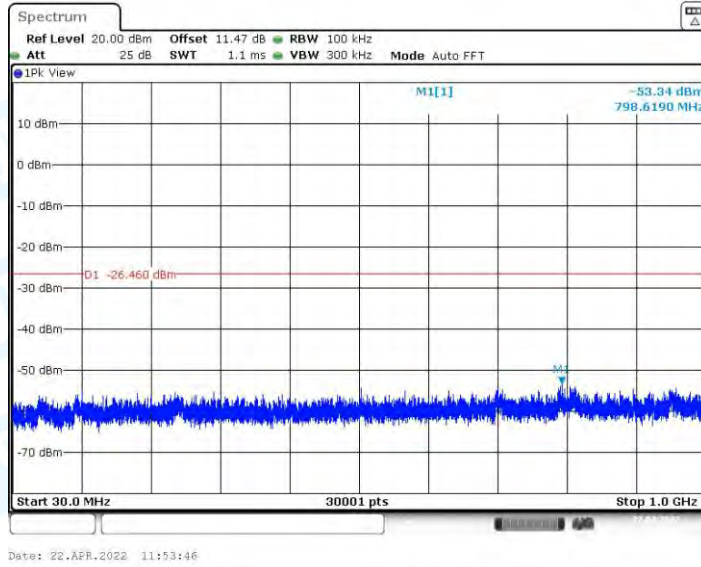
11N40SISO\_Ant1\_2437\_30~1000



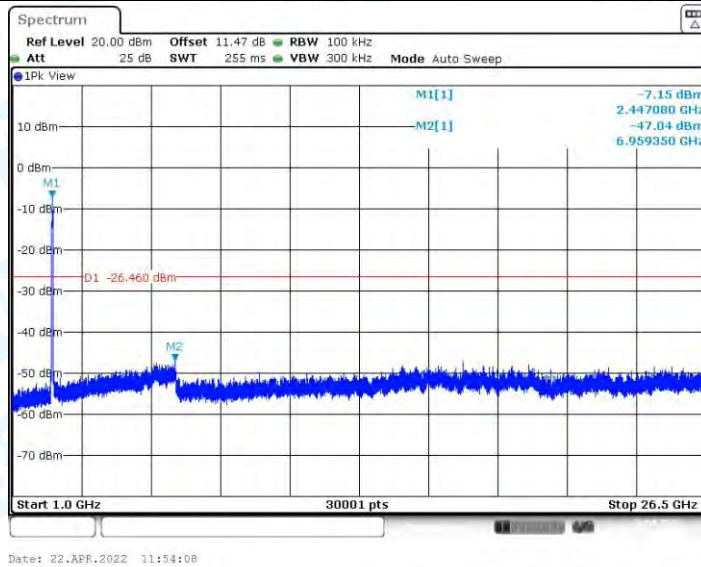
11N40SISO\_Ant1\_2437\_1000~26500



11N40SISO\_Ant1\_2452\_0~Reference



11N40SISO\_Ant1\_2452\_30~1000



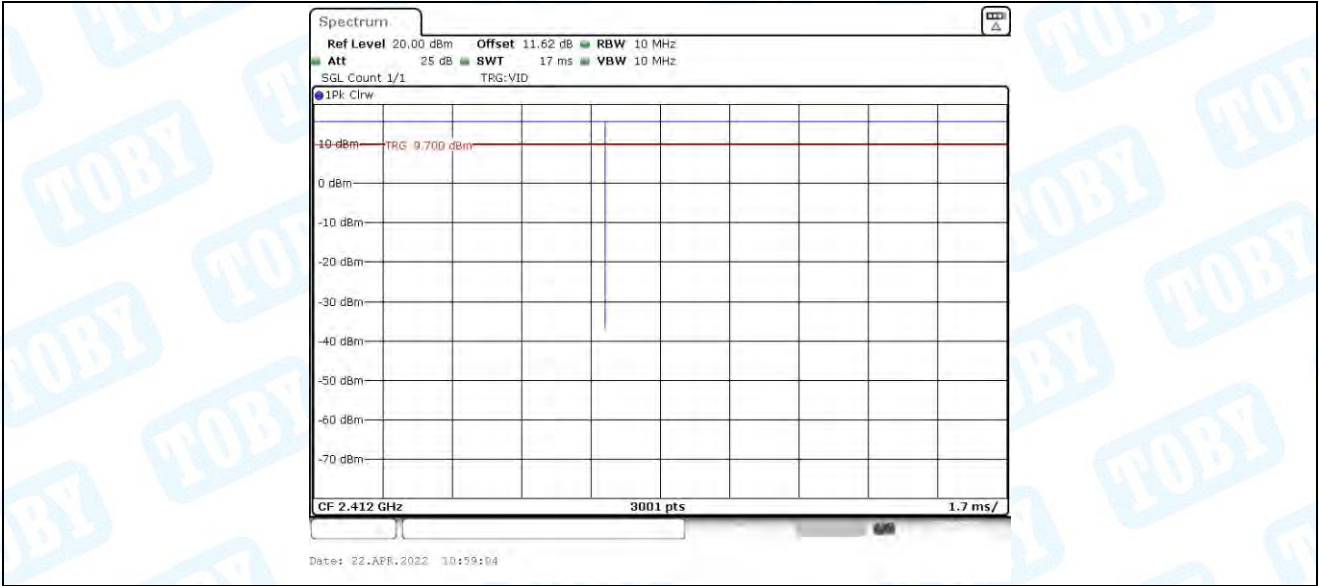
11N40SISO\_Ant1\_2452\_1000~26500

## 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	---	---

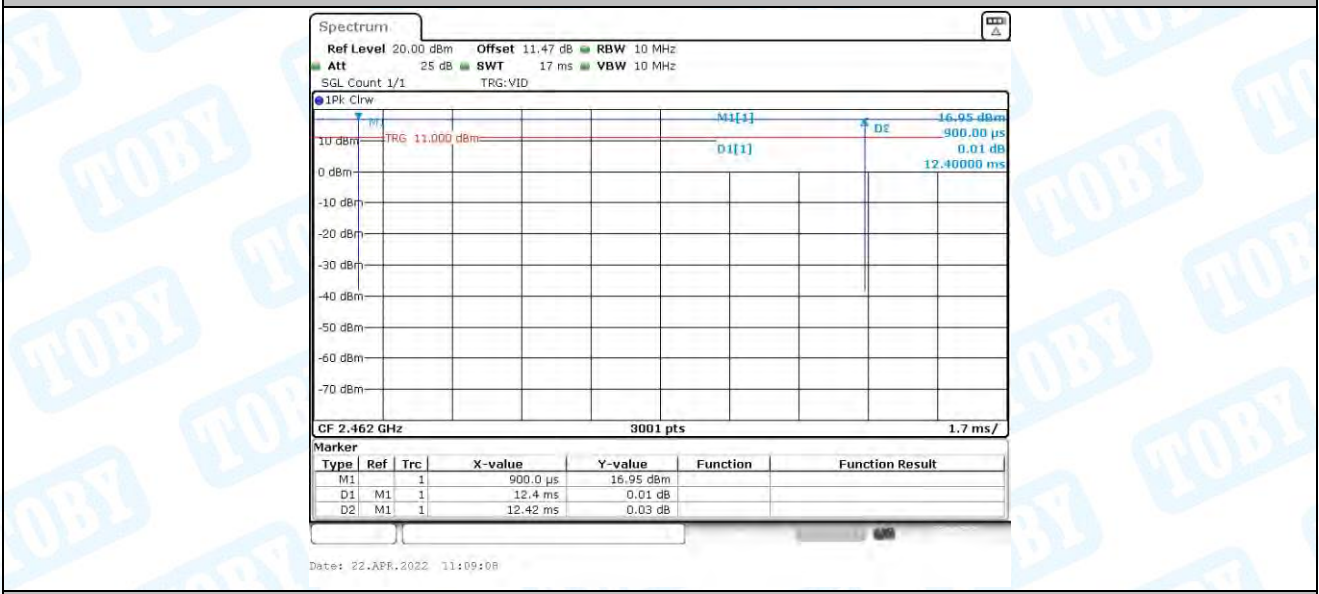
## 7.2. Test Graphs



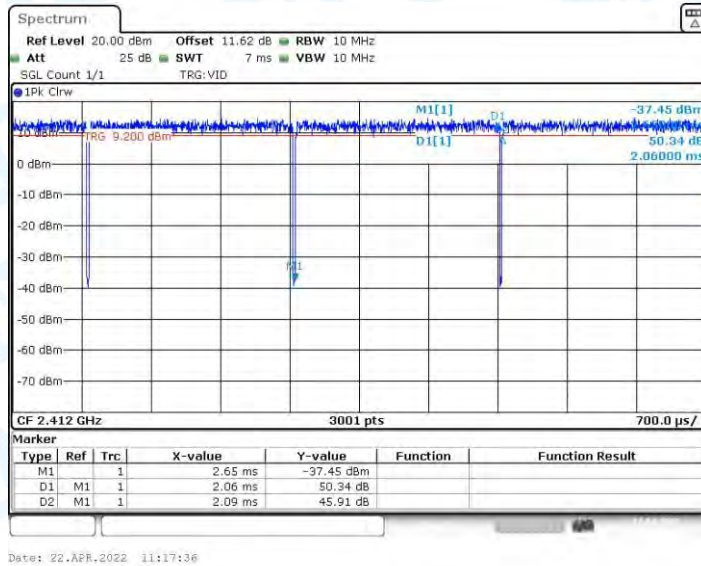
11B\_Ant1\_2412



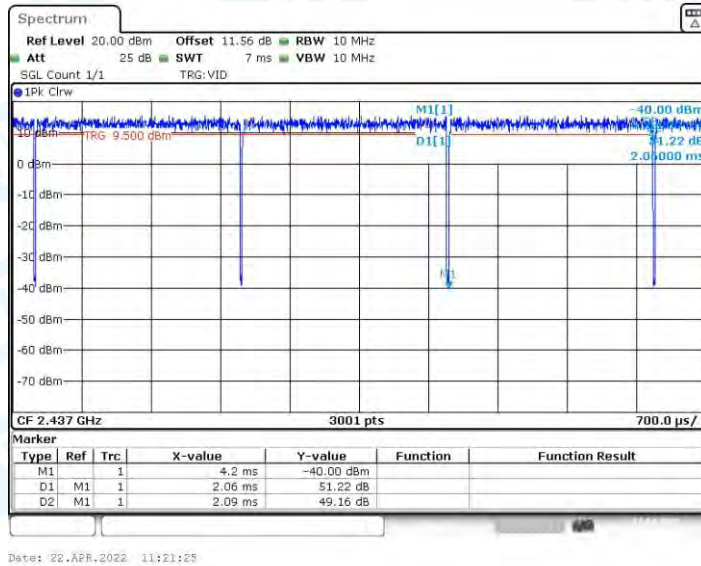
11B\_Ant1\_2437



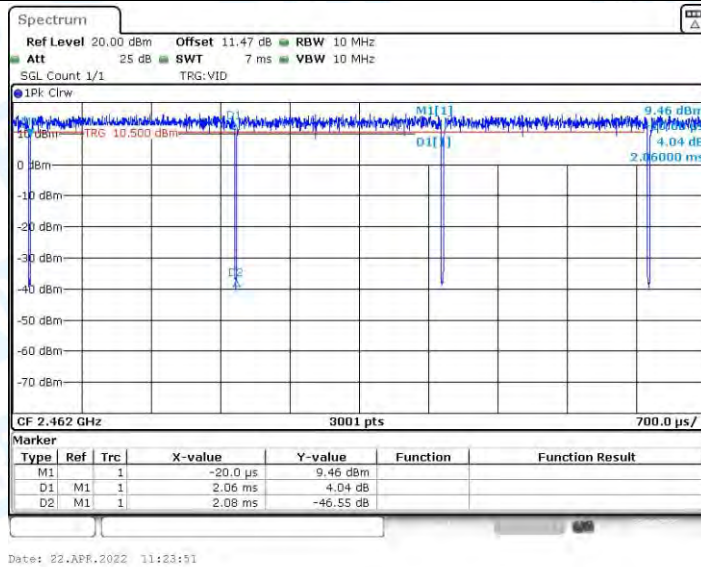
11B\_Ant1\_2462



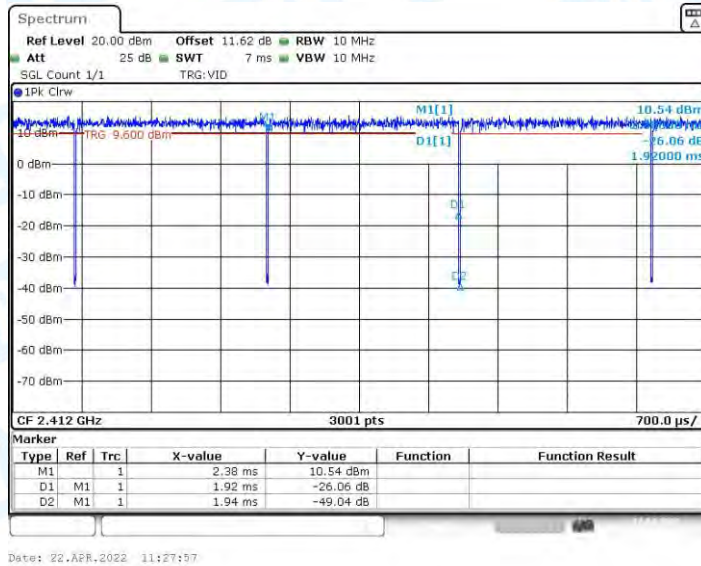
11G\_Ant1\_2412



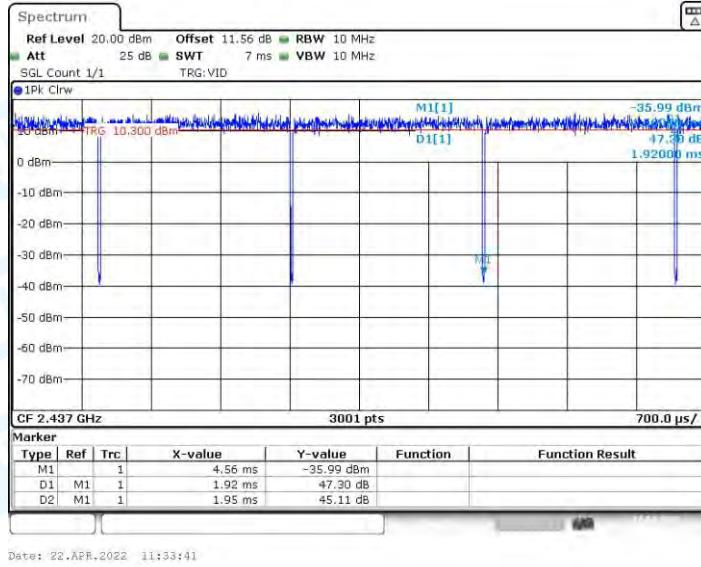
11G\_Ant1\_2437



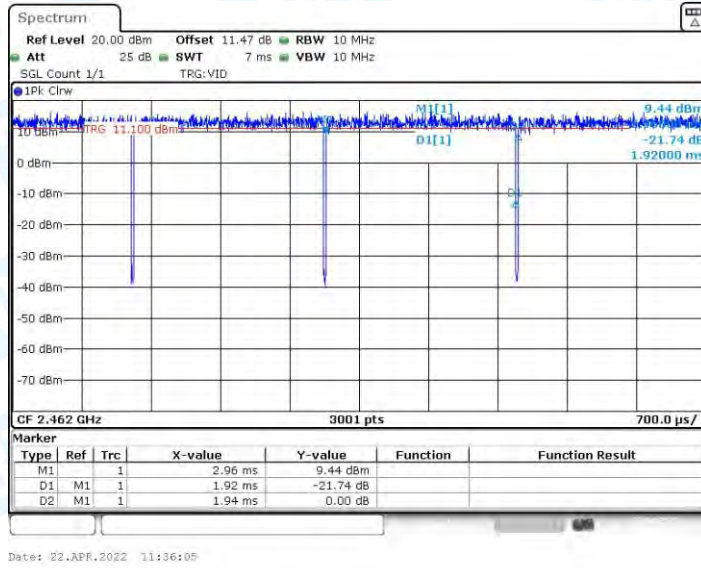
11G\_Ant1\_2462



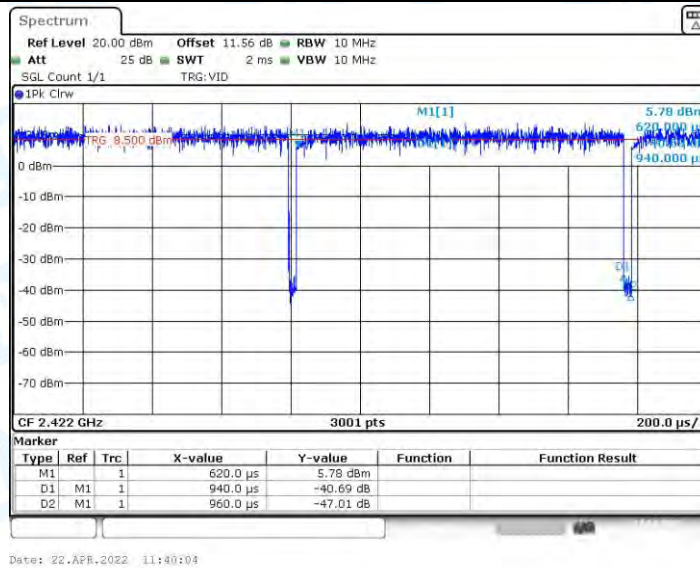
11N20SISO\_Ant1\_2412



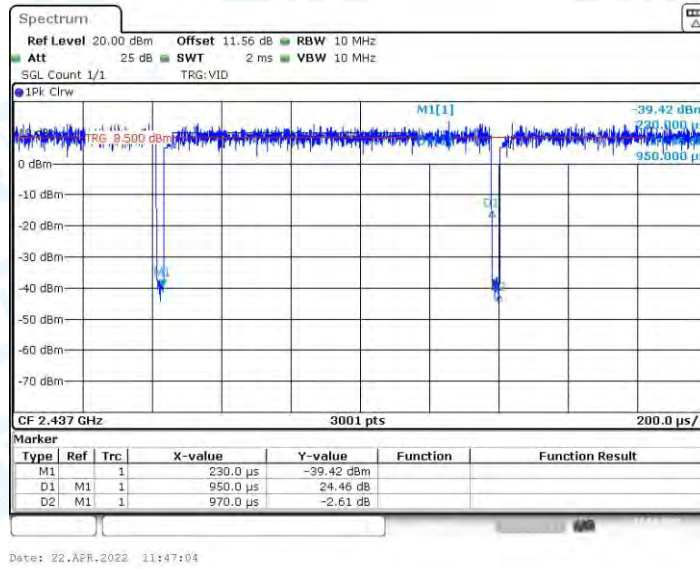
11N20SISO\_Ant1\_2437



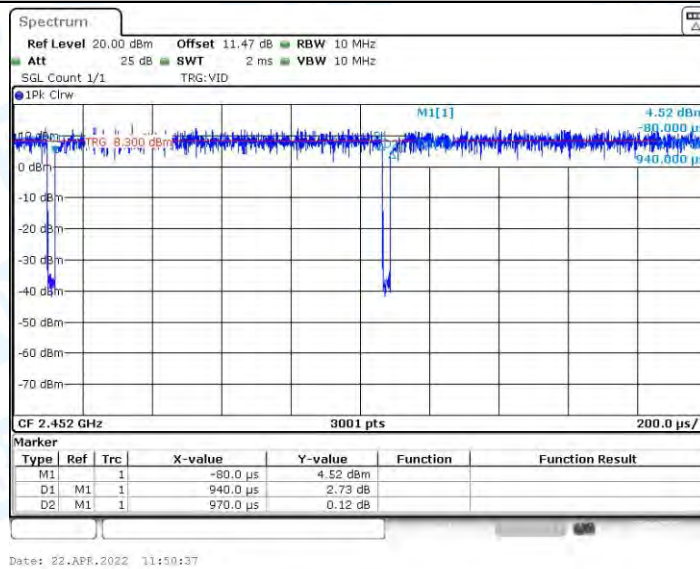
11N20SISO\_Ant1\_2462



11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452



## 8. Emissions in Restricted Bands

### 8.1. Test Result

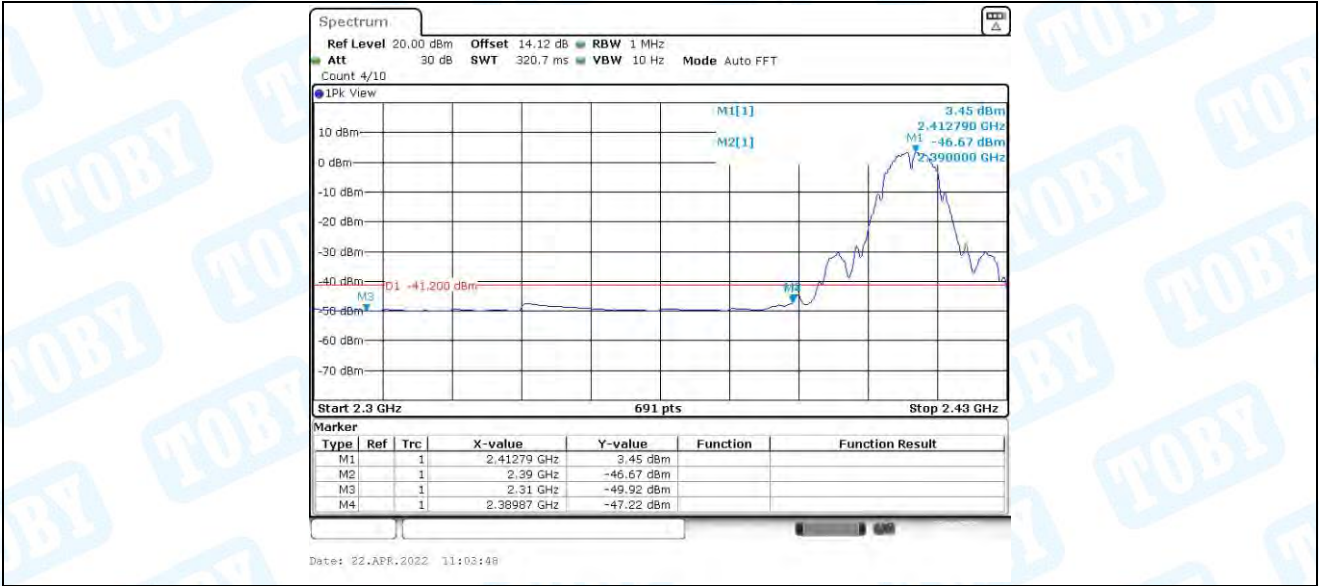
TestMode	Antenna	ChName	Channel	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.92	≤-41.20	PASS
				AV	2389.870	-47.22	≤-41.20	PASS
				AV	2390.000	-46.67	≤-41.20	PASS
				Peak	2310.000	-38.05	≤-21.20	PASS
				Peak	2340.130	-35.69	≤-21.20	PASS
				Peak	2390.000	-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

			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
	High	2452	Peak	2483.500	-33.16	≤-21.20	PASS
			Peak	2487.188	-30.57	≤-21.20	PASS
			Peak	2500.000	-37.48	≤-21.20	PASS

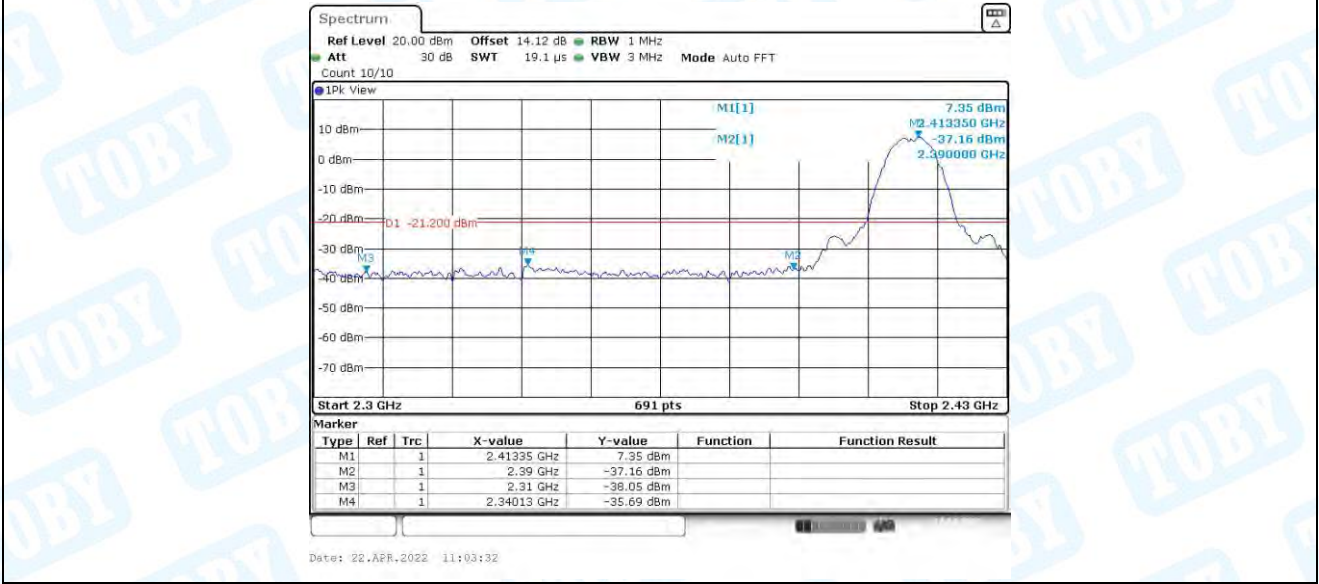
Note:

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.

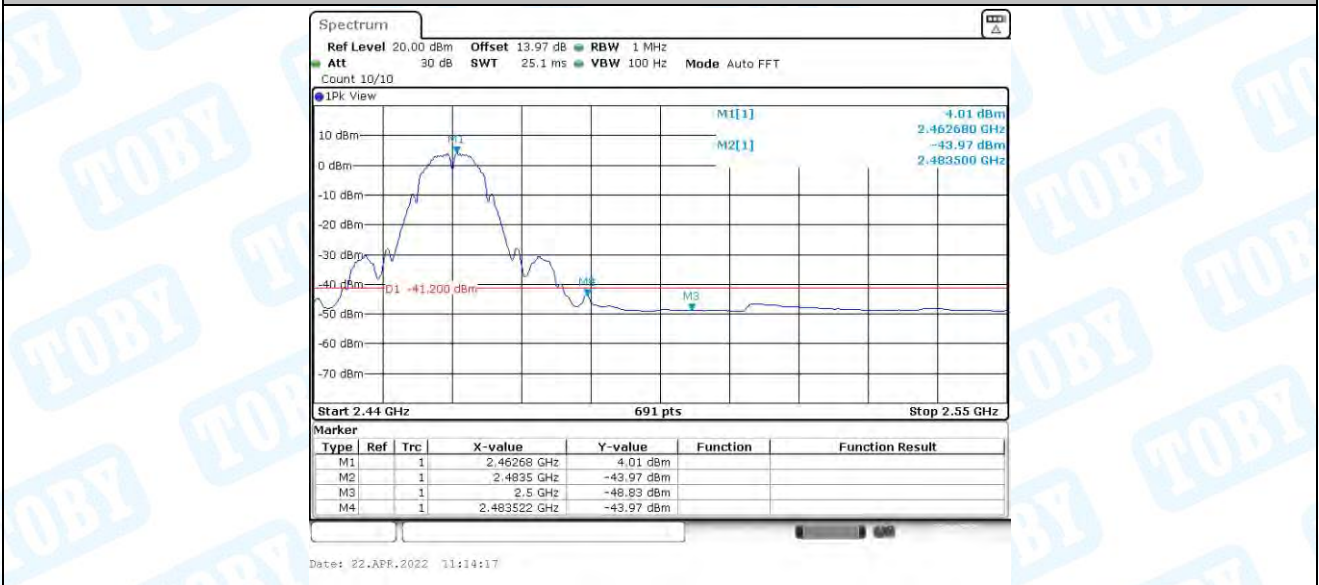
**8.2. Test Graphs**



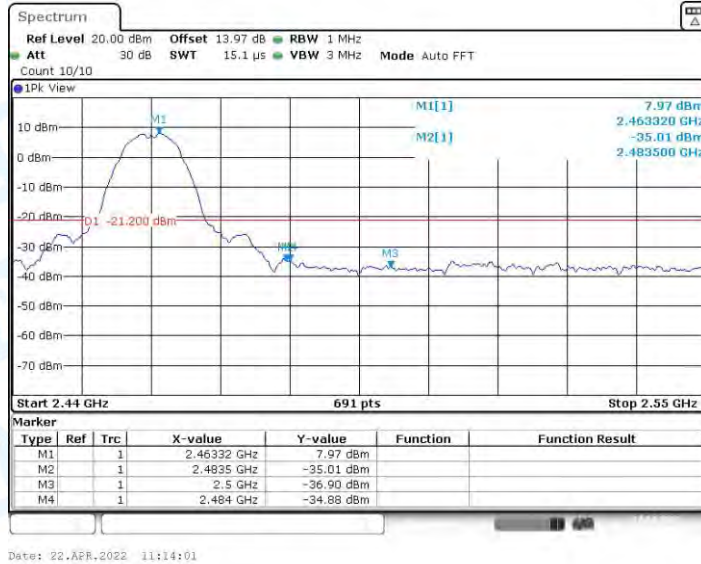
11B\_Ant1\_Low\_2412\_AV



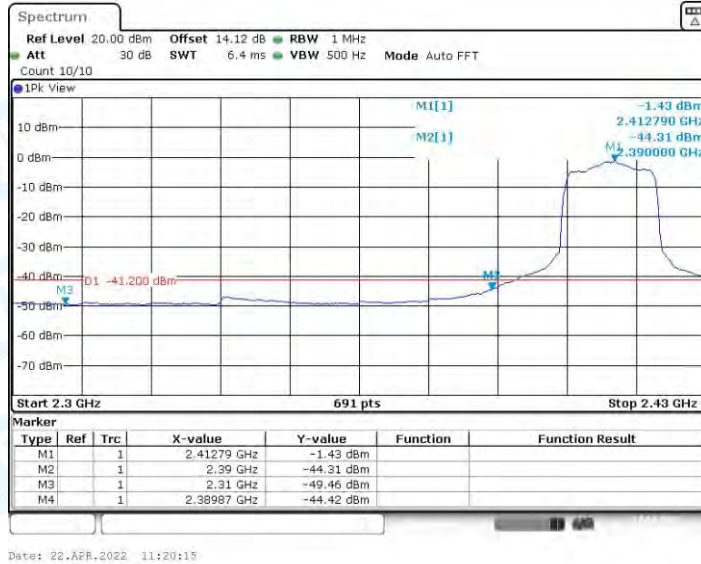
11B\_Ant1\_Low\_2412\_Peak



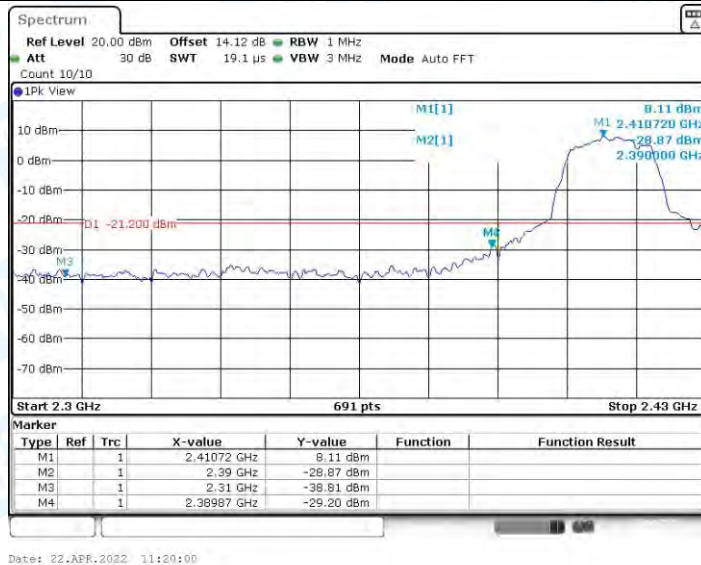
11B\_Ant1\_High\_2462\_AV



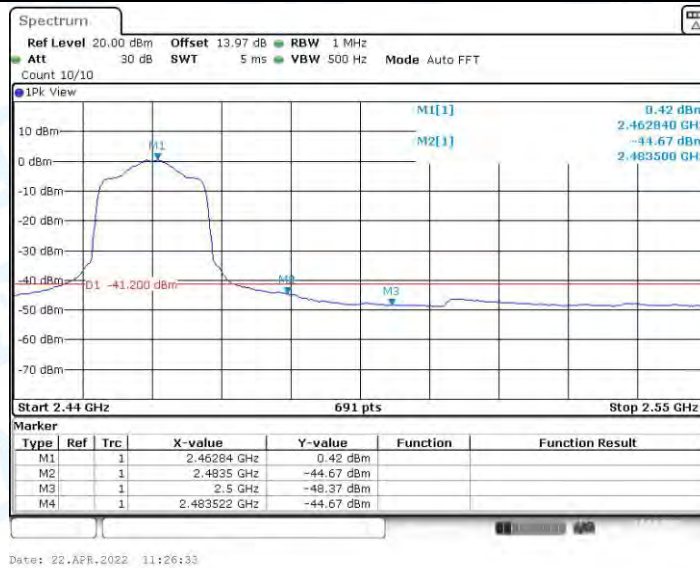
**11B\_Ant1\_High\_2462\_Peak**



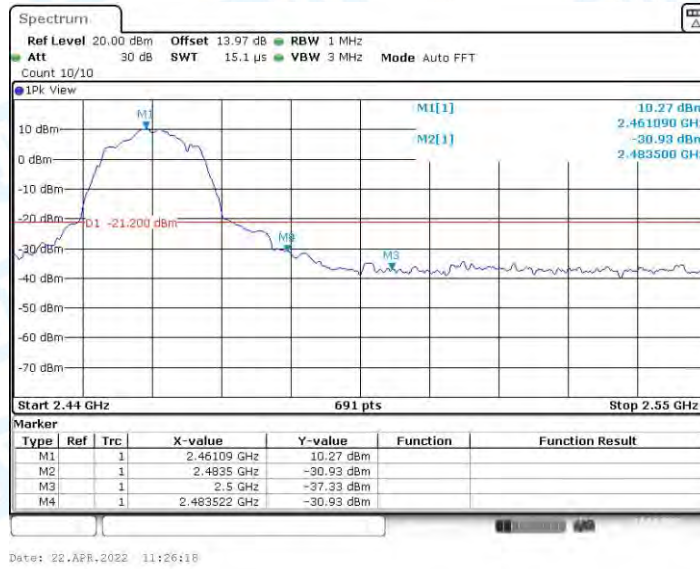
**11G\_Ant1\_Low\_2412\_AV**



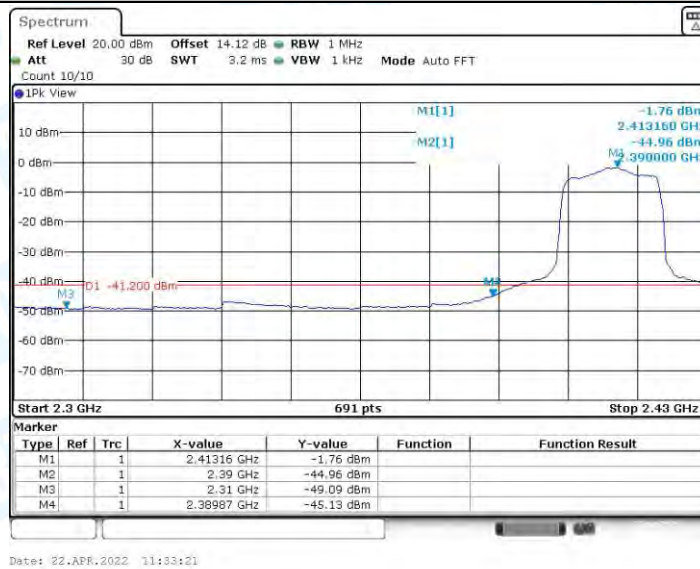
**11G\_Ant1\_Low\_2412\_Peak**



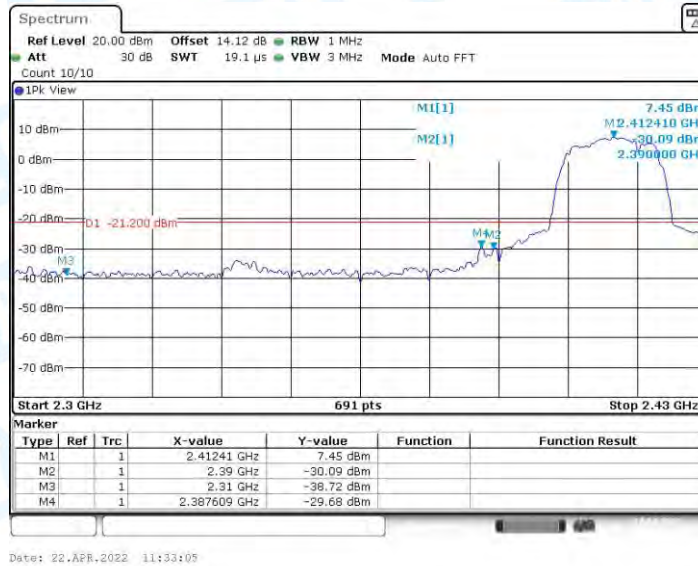
11G\_Ant1\_High\_2462\_AV



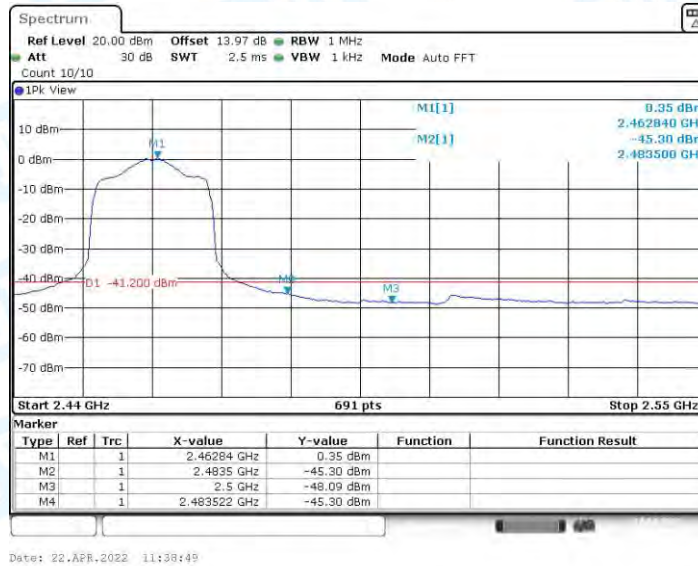
11G\_Ant1\_High\_2462\_Peak



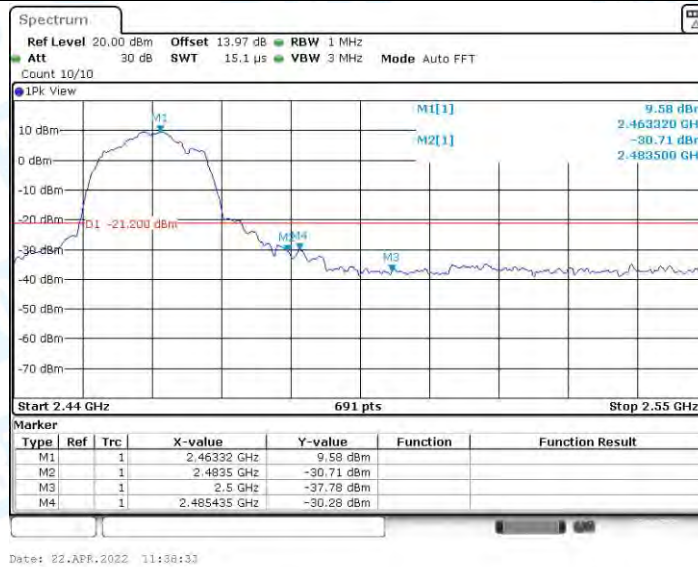
11N20SISO\_Ant1\_Low\_2412\_AV



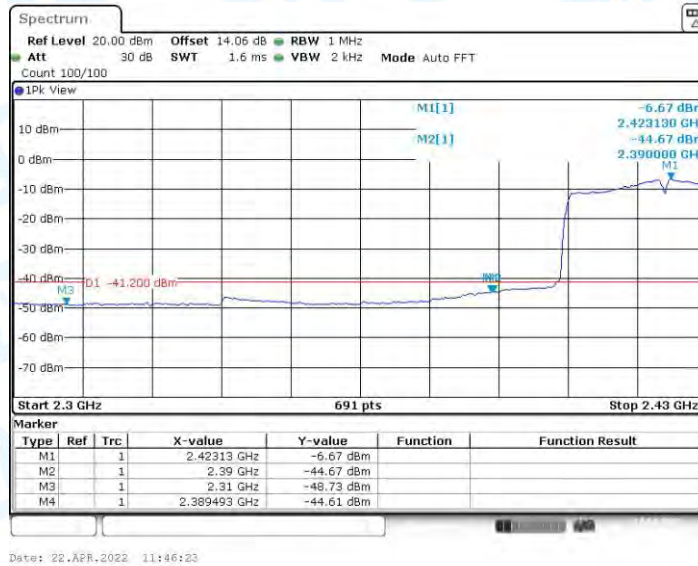
11N20SISO\_Ant1\_Low\_2412\_Peak



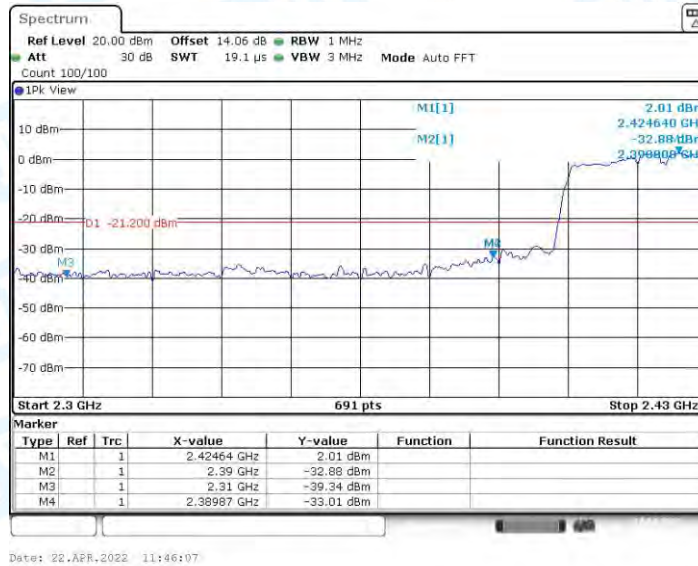
11N20SISO\_Ant1\_High\_2462\_AV



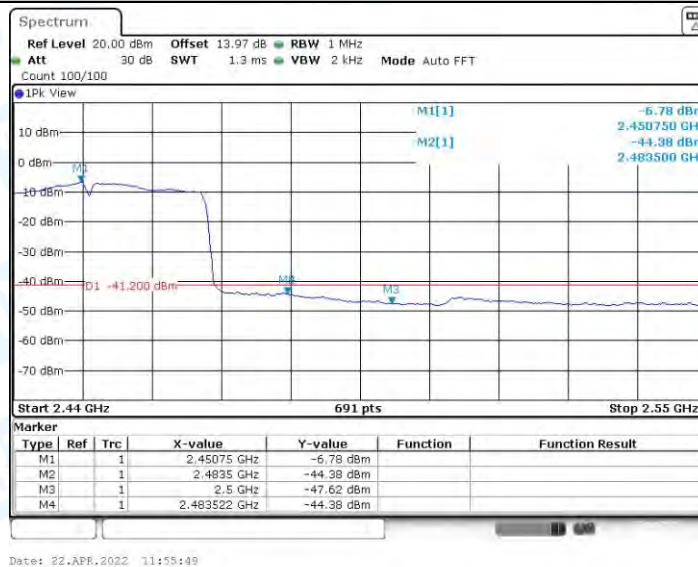
11N20SISO\_Ant1\_High\_2462\_Peak



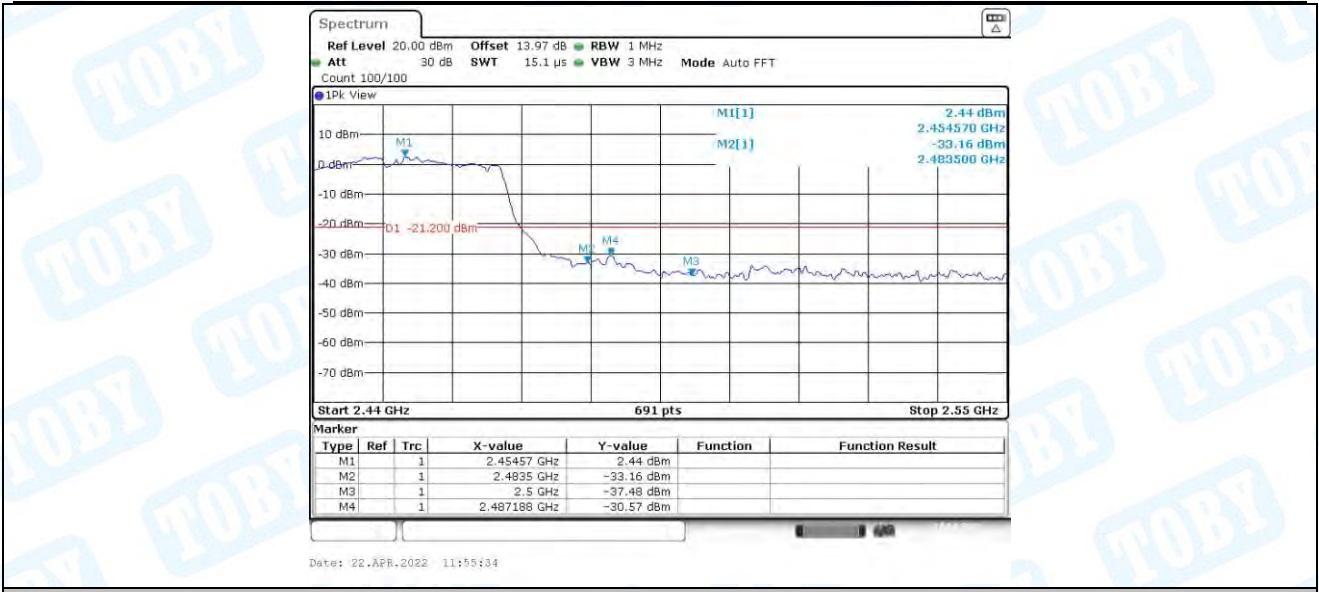
11N40SISO\_Ant1\_Low\_2422\_AV



11N40SISO\_Ant1\_Low\_2422\_Peak



11N40SISO\_Ant1\_High\_2452\_AV



11N40SISO\_Ant1\_High\_2452\_Peak

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