

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

General Description of EUT	
Product Name:	Projector
Test Model:	H1
Sample ID:	20211018-05-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 10.8V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TB-RF184573	

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

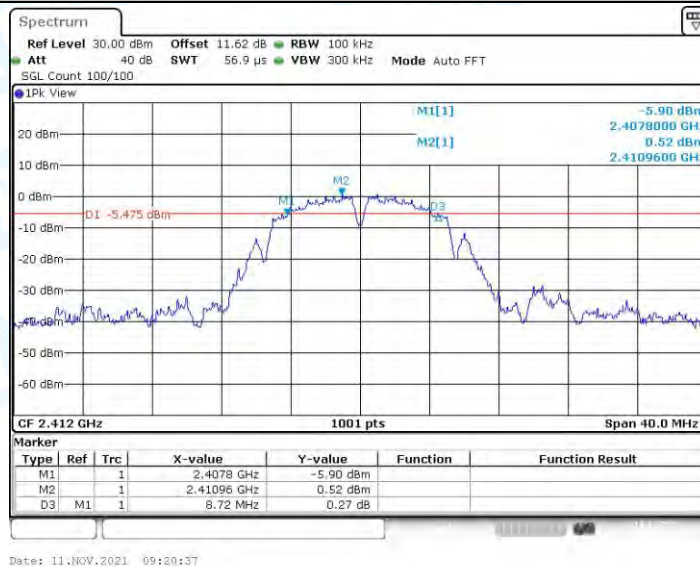
1. DTS Bandwidth

1.1. Test Result

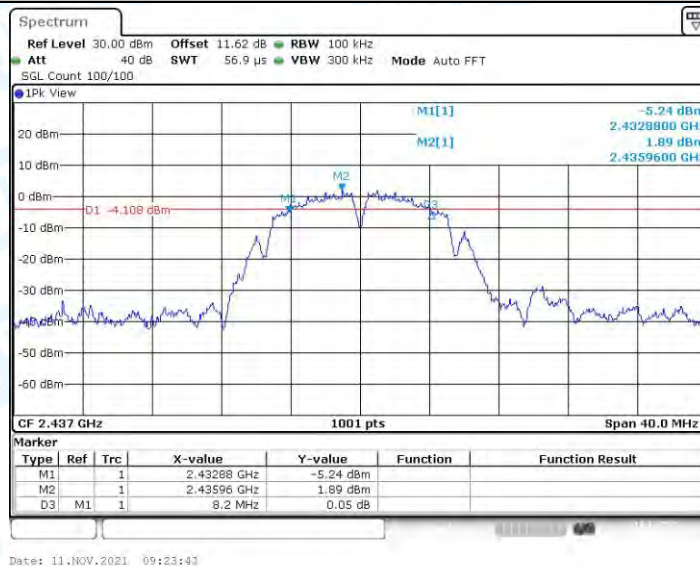
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.720	2407.800	2416.520	0.5	PASS
		2437	8.200	2432.880	2441.080	0.5	PASS
		2462	9.160	2457.400	2466.560	0.5	PASS
11G	Ant1	2412	16.560	2403.720	2420.280	0.5	PASS
		2437	16.440	2428.760	2445.200	0.5	PASS
		2462	16.440	2453.760	2470.200	0.5	PASS
11N20MIMO	Ant1	2412	17.720	2403.120	2420.840	0.5	PASS
	Ant2	2412	17.640	2403.160	2420.800	0.5	PASS
	Ant1	2437	17.680	2428.160	2445.840	0.5	PASS
	Ant2	2437	17.680	2428.160	2445.840	0.5	PASS
	Ant1	2462	17.680	2453.160	2470.840	0.5	PASS
	Ant2	2462	17.800	2453.120	2470.920	0.5	PASS

1.2. Test Graphs

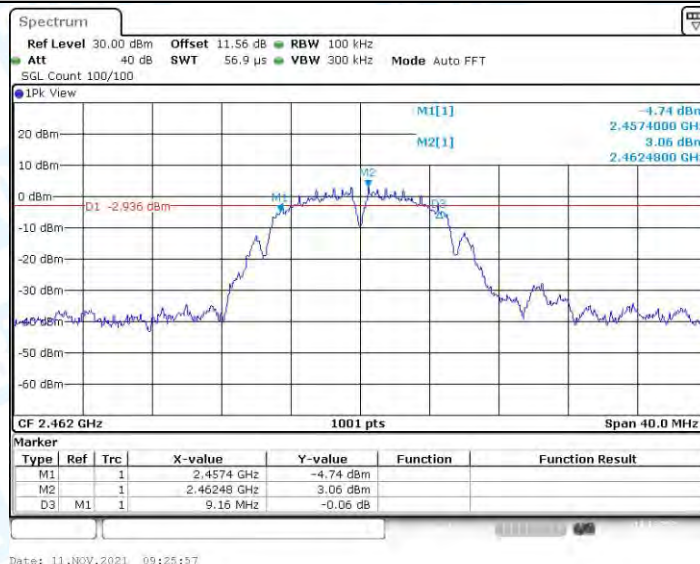
11B_Ant1_2412



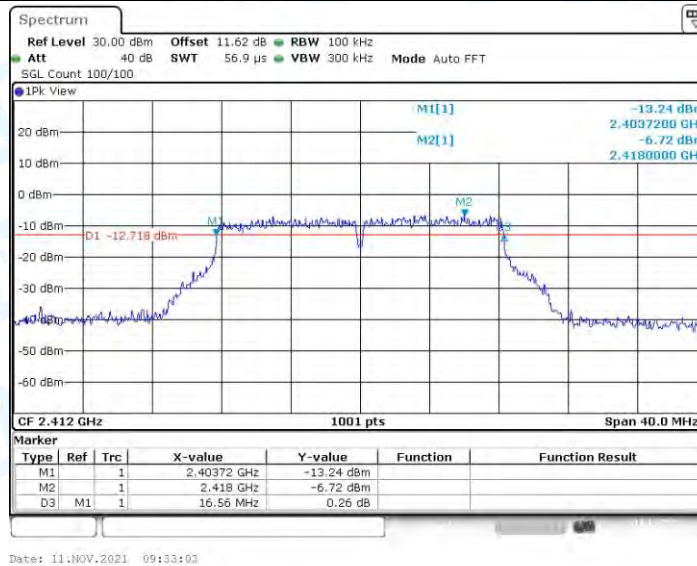
11B_Ant1_2437



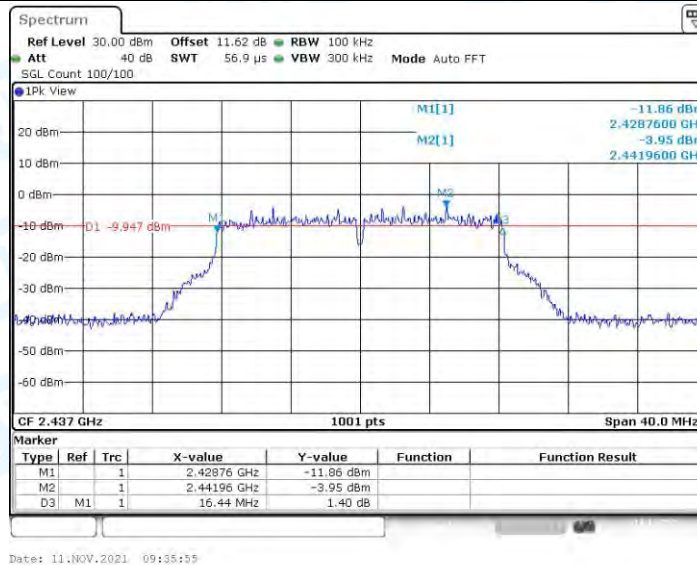
11B_Ant1_2462



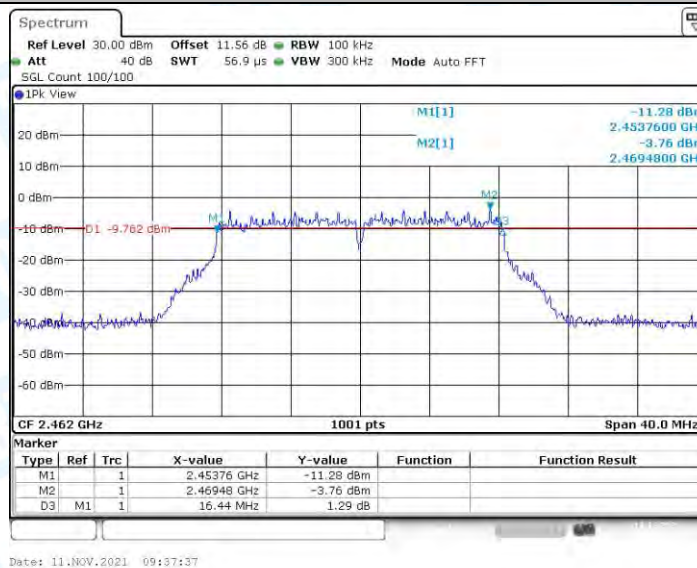
11G_Ant1_2412



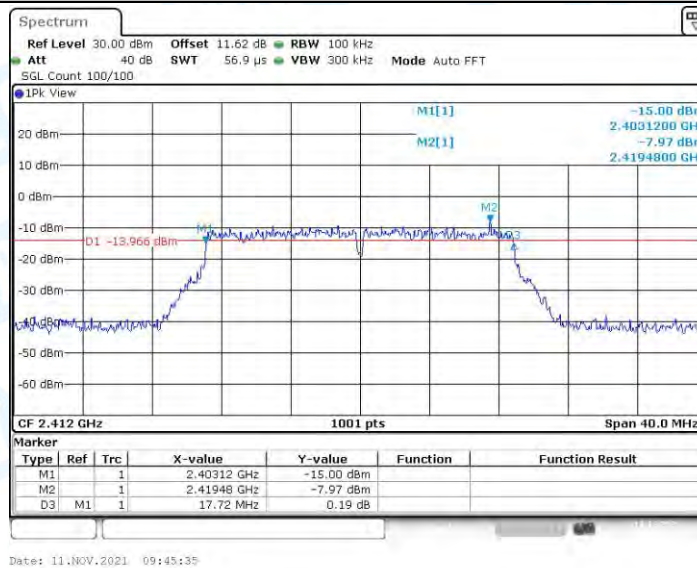
11G_Ant1_2437



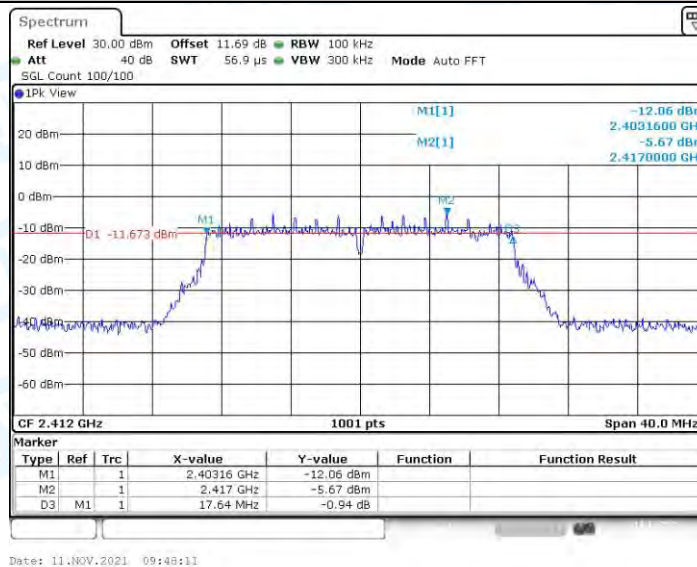
11G_Ant1_2462



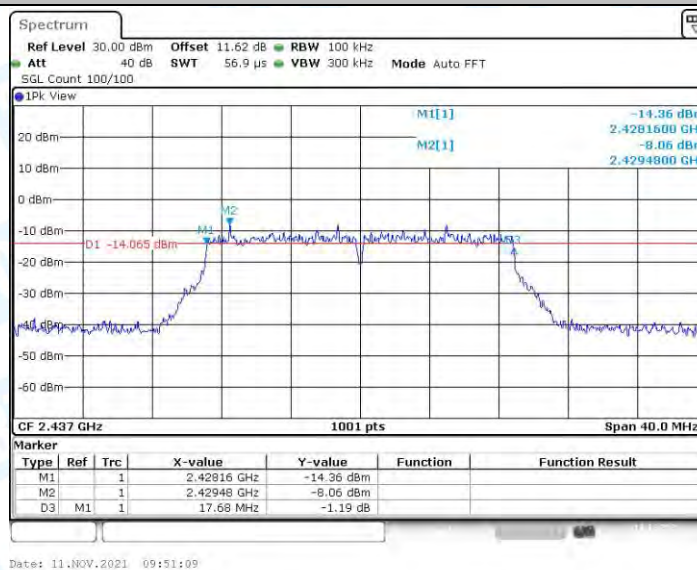
11N20MIMO_Ant1_2412



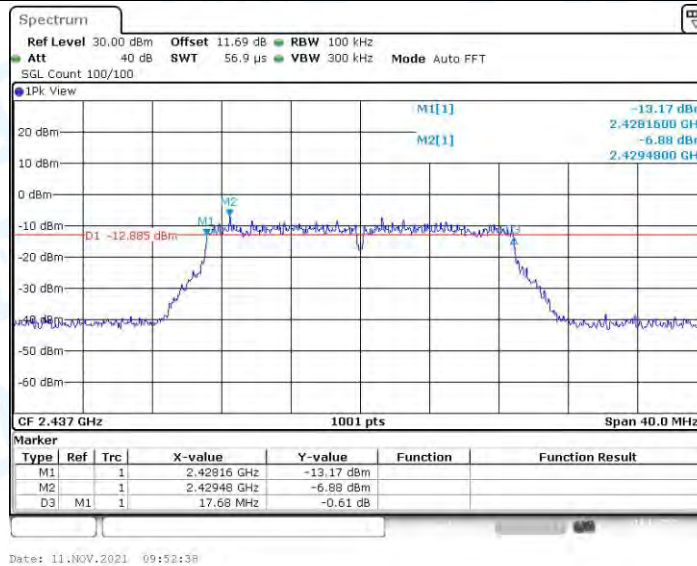
11N20MIMO_Ant2_2412



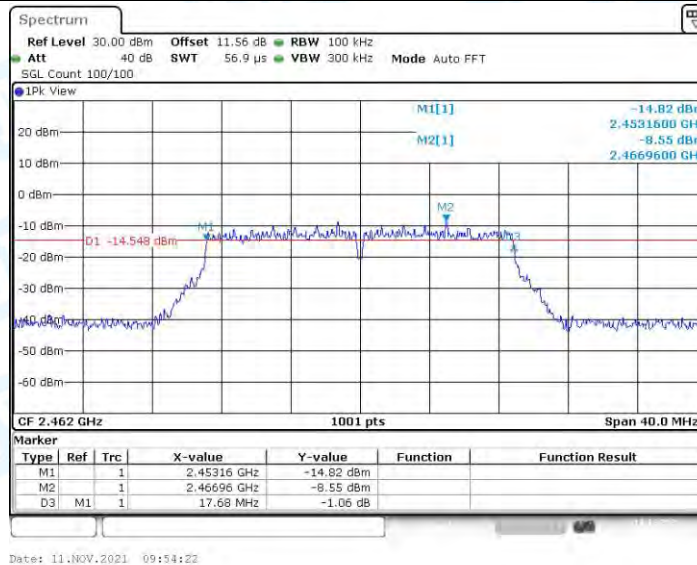
11N20MIMO_Ant1_2437



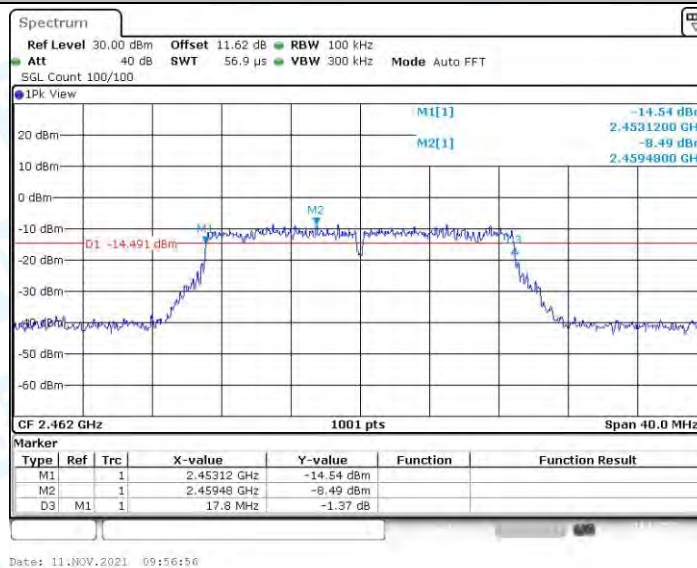
11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



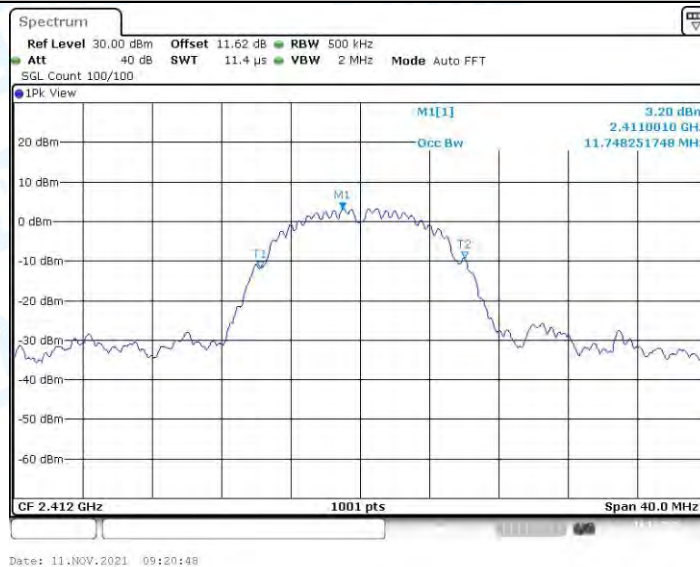
2. Occupied Channel Bandwidth

2.1. Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	11.748	2406.246	2417.994	---	PASS
		2437	11.628	2431.326	2442.954	---	PASS
		2462	11.668	2456.286	2467.954	---	PASS
11G	Ant1	2412	18.022	2403.089	2421.111	---	PASS
		2437	17.303	2428.489	2445.791	---	PASS
		2462	17.343	2453.209	2470.551	---	PASS
11N20MIMO	Ant1	2412	18.422	2402.689	2421.111	---	PASS
	Ant2	2412	18.382	2402.609	2420.991	---	PASS
	Ant1	2437	18.741	2427.529	2446.271	---	PASS
	Ant2	2437	18.302	2427.849	2446.151	---	PASS
	Ant1	2462	18.422	2452.849	2471.271	---	PASS
	Ant2	2462	18.302	2452.809	2471.111	---	PASS

2.2. Test Graphs

11B_Ant1_2412



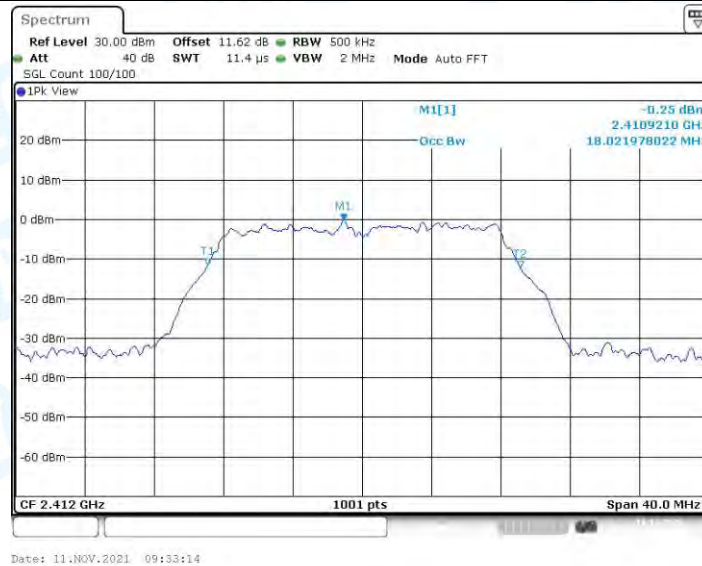
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



3. Maximum conducted output power

3.1. Test Result

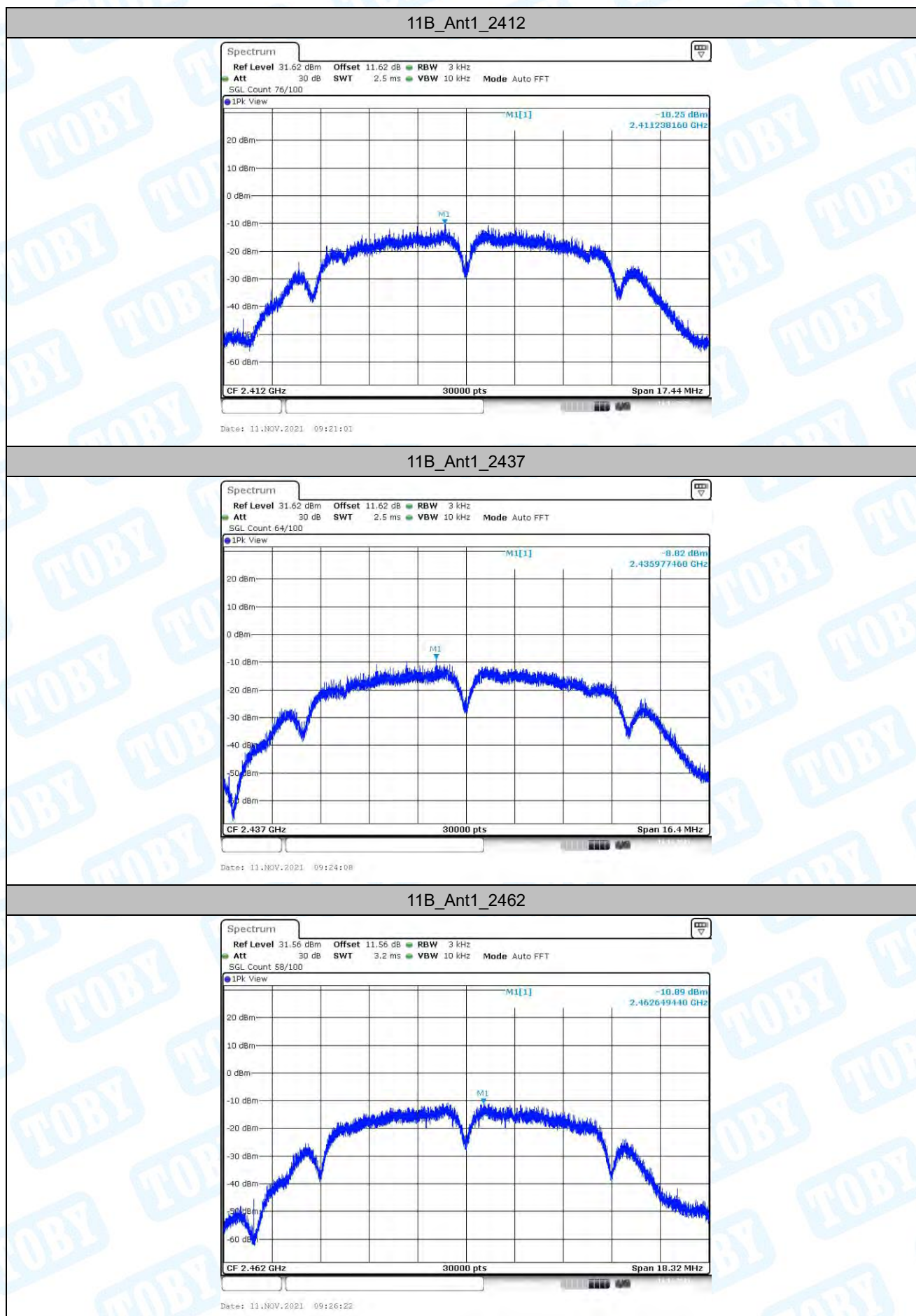
TestMode	Antenna	Channel	Power [dBm]	Limit [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	14.33	≤30	16.33	≤36	PASS
		2437	15.01	≤30	17.01	≤36	PASS
		2462	15.51	≤30	17.51	≤36	PASS
11G	Ant1	2412	14.37	≤30	16.37	≤36	PASS
		2437	15.13	≤30	17.13	≤36	PASS
		2462	15.67	≤30	17.67	≤36	PASS
11N20MIMO	Ant1	2412	11.76	≤30	13.76	≤36	PASS
	Ant2	2412	12.70	≤30	14.70	≤36	PASS
	total	2412	15.3	≤30	17.3	≤36	PASS
	Ant1	2437	11.11	≤30	13.11	≤36	PASS
	Ant2	2437	12.65	≤30	14.65	≤36	PASS
	total	2437	15.0	≤30	17.0	≤36	PASS
	Ant1	2462	11.13	≤30	13.13	≤36	PASS
	Ant2	2462	12.42	≤30	14.42	≤36	PASS
	total	2462	14.8	≤30	16.8	≤36	PASS

4. Maximum power spectral density

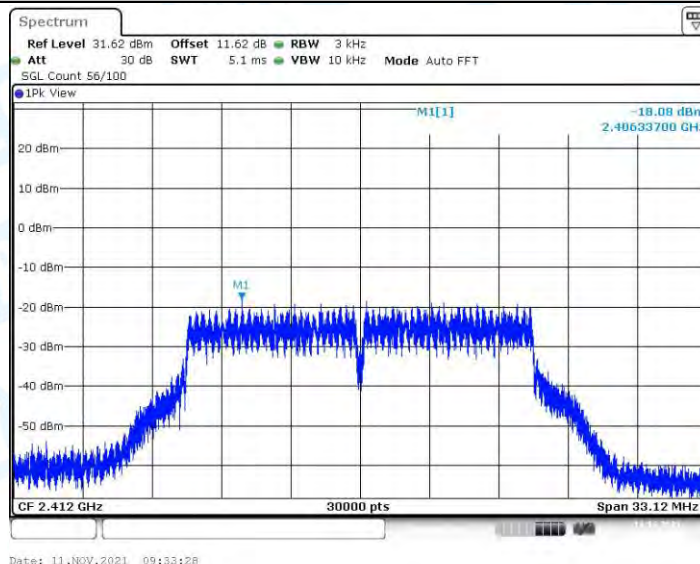
4.1. Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.25	≤8	PASS
		2437	-8.82	≤8	PASS
		2462	-10.89	≤8	PASS
11G	Ant1	2412	-18.08	≤8	PASS
		2437	-17.33	≤8	PASS
		2462	-16.79	≤8	PASS
11N20MIMO	Ant1	2412	-20.43	≤8	PASS
	Ant2	2412	-20.34	≤8	PASS
	total	2412	-17.37	≤8	PASS
	Ant1	2437	-21.02	≤8	PASS
	Ant2	2437	-19.11	≤8	PASS
	total	2437	-16.95	≤8	PASS
	Ant1	2462	-20.14	≤8	PASS
	Ant2	2462	-20.8	≤8	PASS
	total	2462	-17.45	≤8	PASS

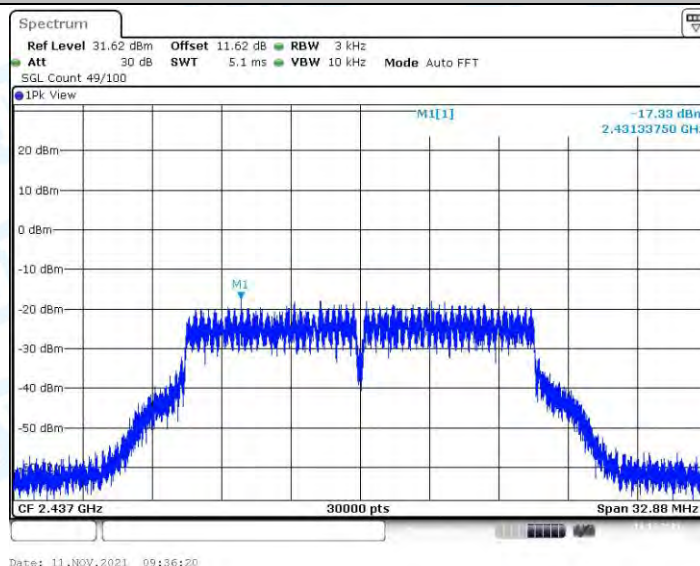
4.2. Test Graphs



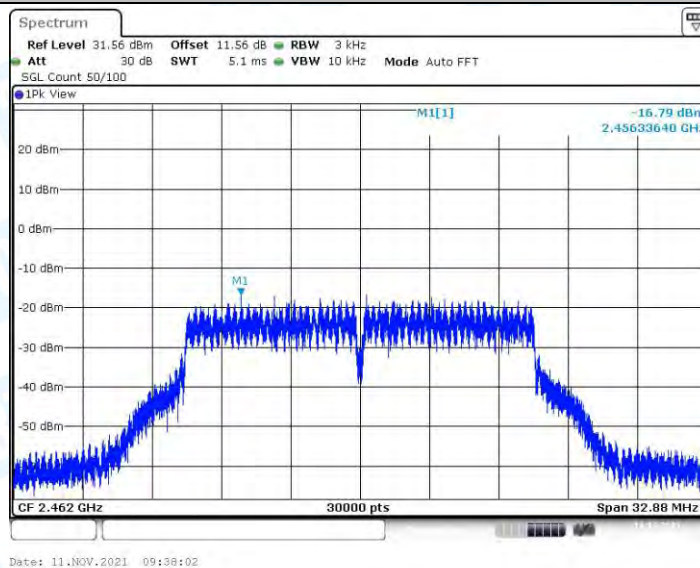
11G_Ant1_2412



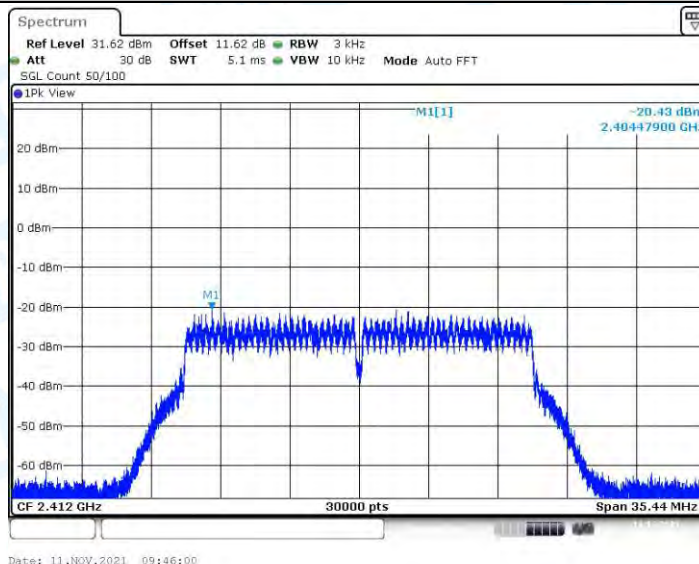
11G_Ant1_2437



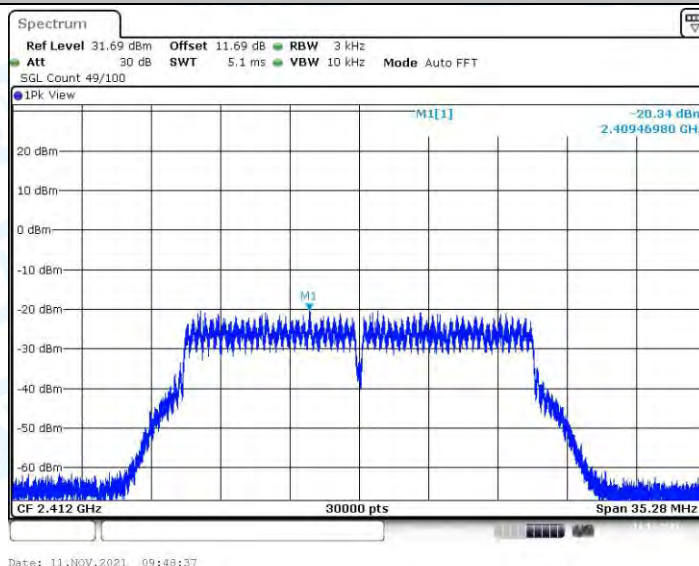
11G_Ant1_2462



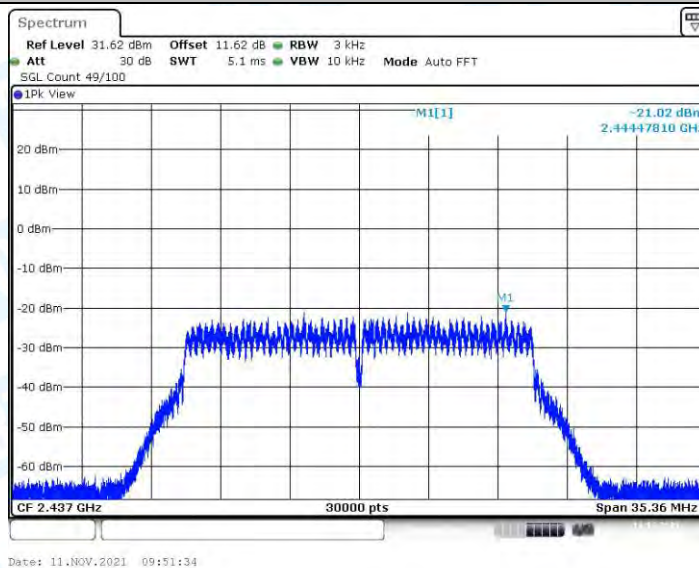
11N20MIMO_Ant1_2412



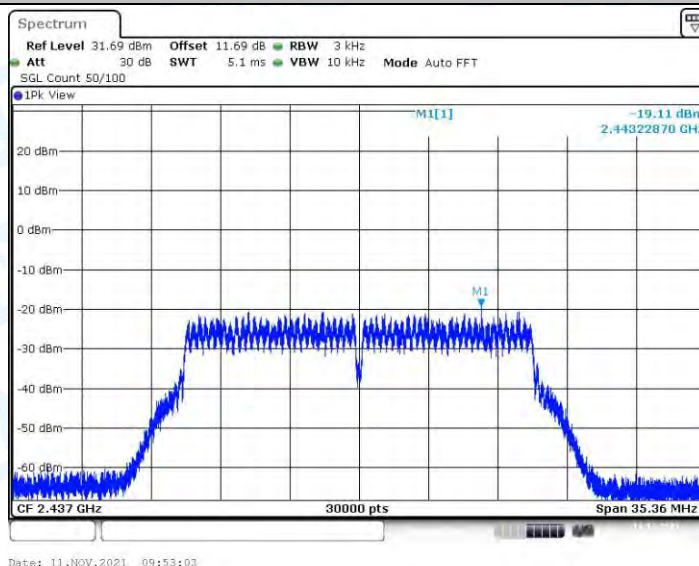
11N20MIMO_Ant2_2412



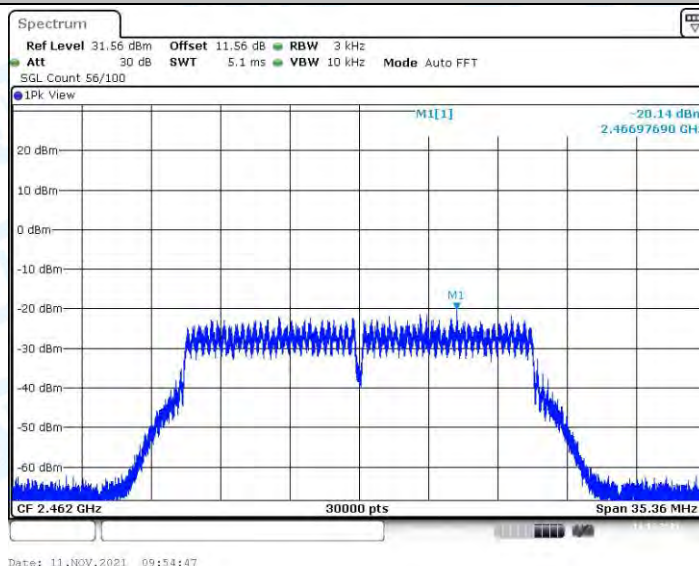
11N20MIMO_Ant1_2437



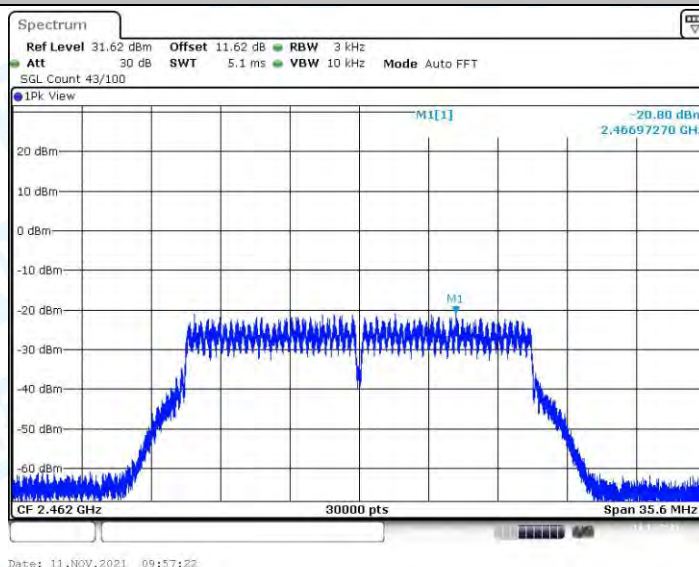
11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



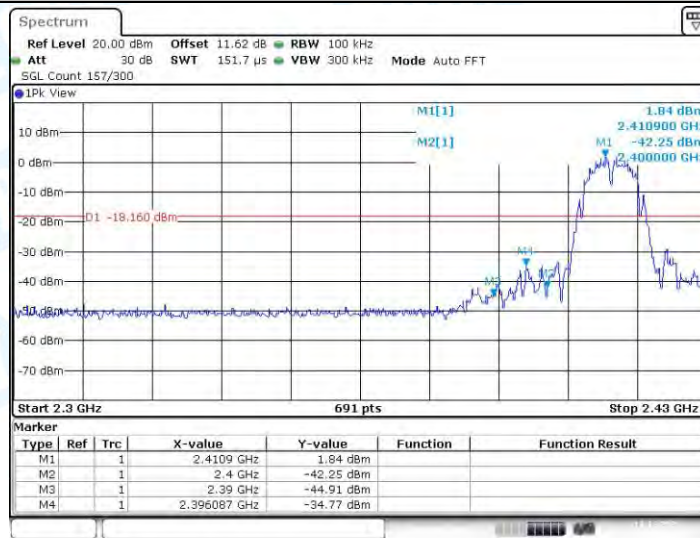
5. Band edge measurements

5.1. Test Result

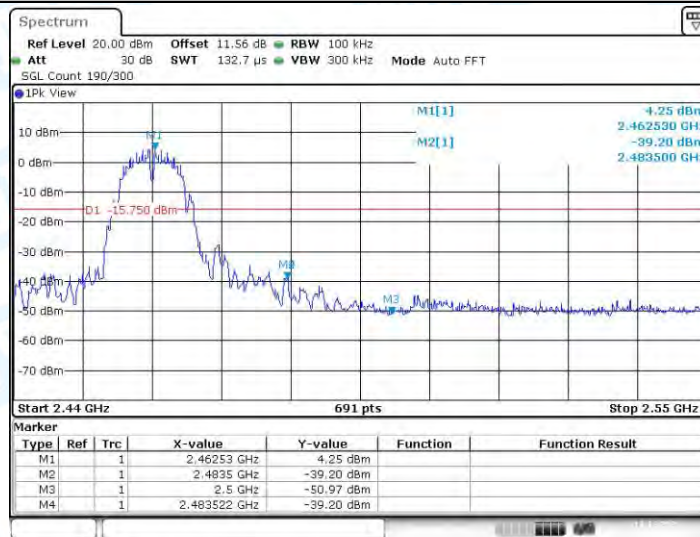
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	1.84	-34.77	≤-18.16	PASS
		High	2462	4.25	-39.2	≤-15.75	PASS
11G	Ant1	Low	2412	-3.57	-36.74	≤-23.57	PASS
		High	2462	-5.23	-44.37	≤-25.23	PASS
11N20MIMO	Ant1	Low	2412	-8.35	-46.87	≤-28.35	PASS
	Ant2	Low	2412	-6.66	-45.29	≤-26.66	PASS
	Ant1	High	2462	-9.28	-46.46	≤-29.28	PASS
	Ant2	High	2462	-8.29	-45.92	≤-28.29	PASS

5.2. Test Graphs

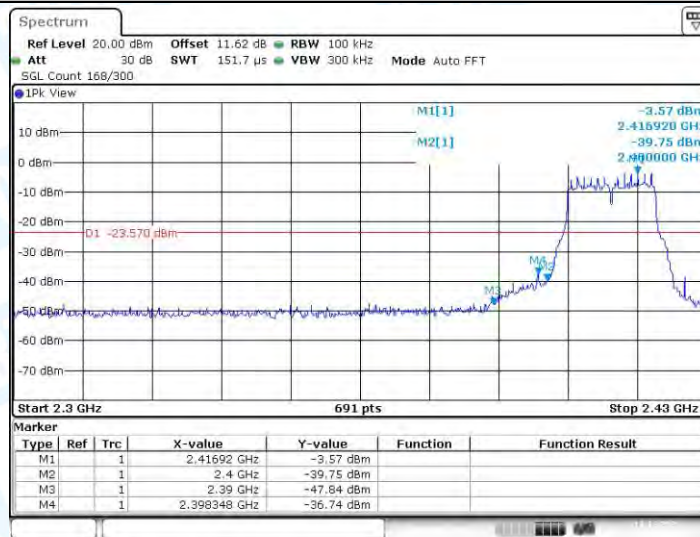
11B_Ant1_Low_2412



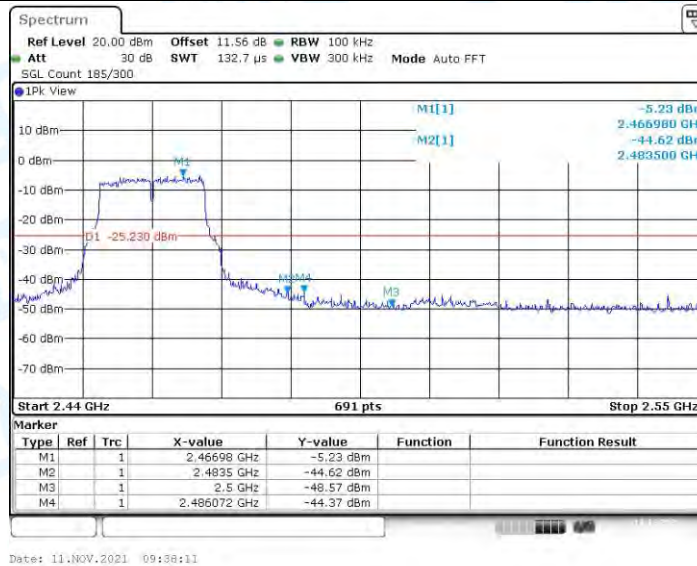
11B_Ant1_High_2462



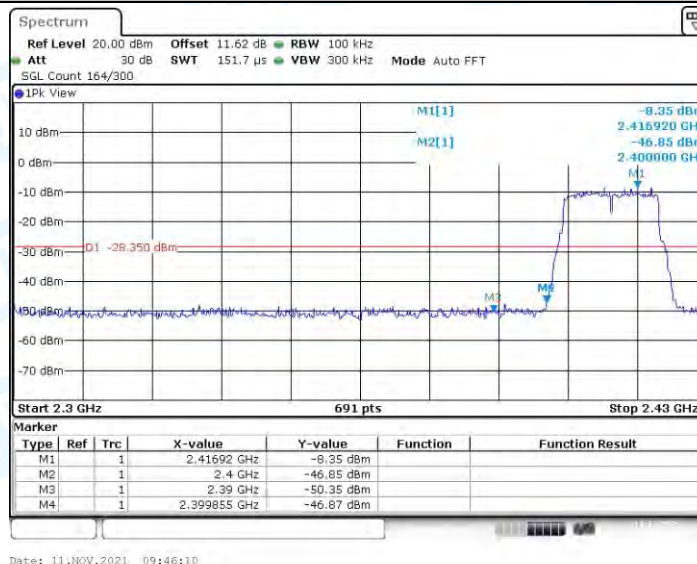
11G_Ant1_Low_2412



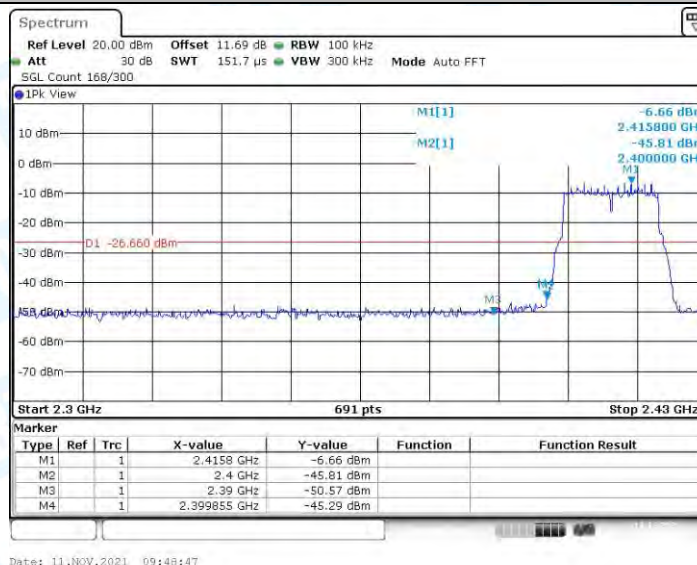
11G_Ant1_High_2462



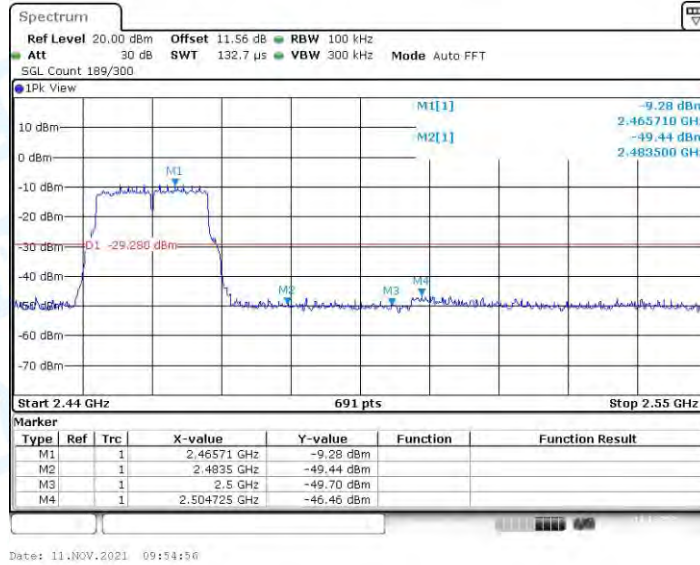
11N20MIMO_Ant1_Low_2412



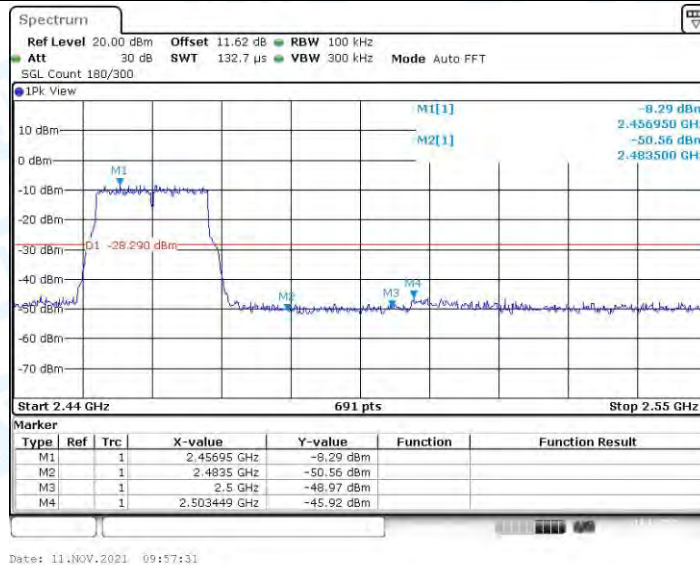
11N20MIMO_Ant2_Low_2412



11N20MIMO_Ant1_High_2462



11N20MIMO_Ant2_High_2462

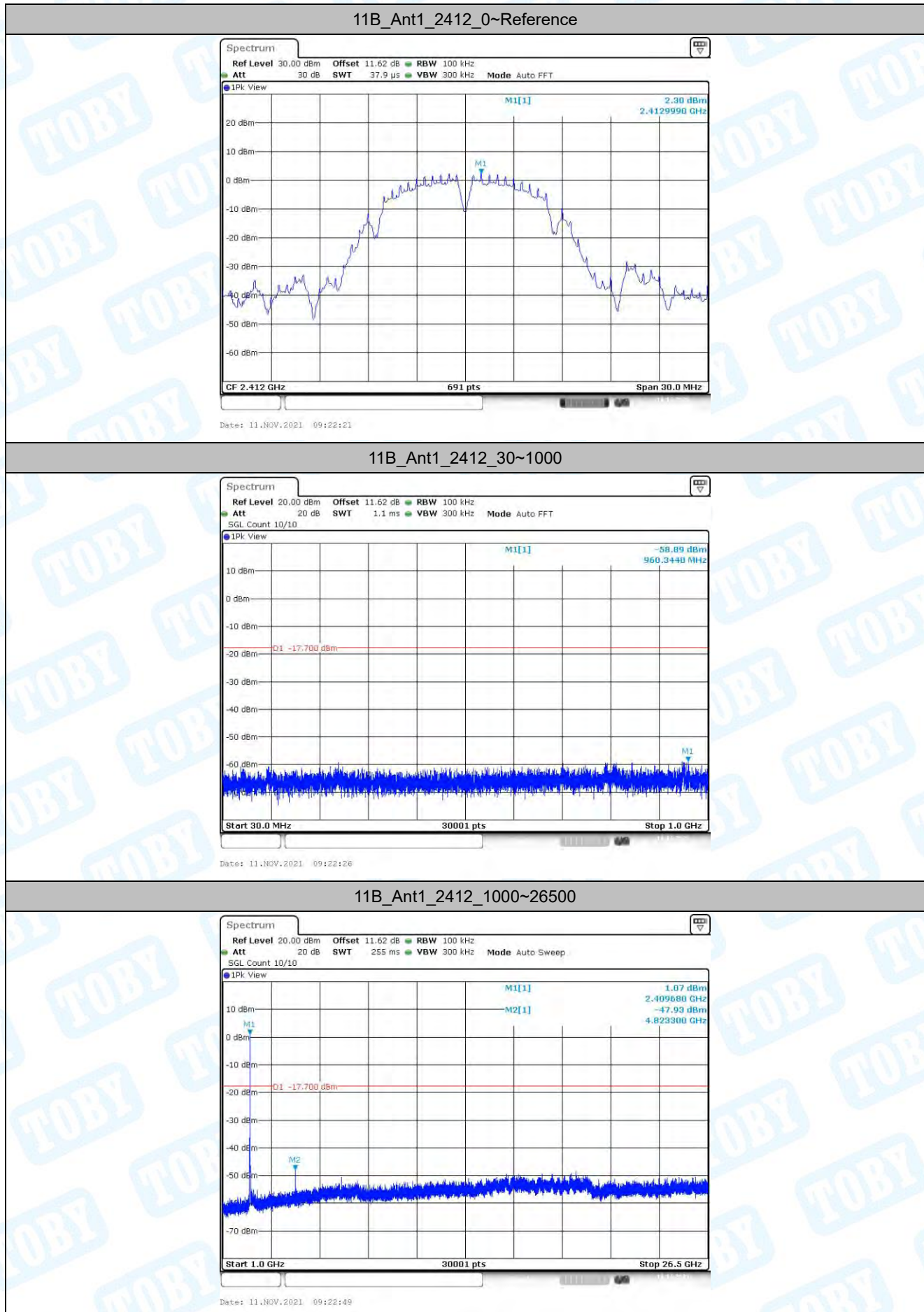


6. Conducted Spurious Emission

6.1. Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.30	2.30	---	PASS
			30~1000	2.30	-58.89	≤ -17.7	PASS
			1000~26500	2.30	-47.93	≤ -17.7	PASS
		2437	Reference	3.57	3.57	---	PASS
			30~1000	3.57	-58.91	≤ -16.43	PASS
			1000~26500	3.57	-48.93	≤ -16.43	PASS
		2462	Reference	3.68	3.68	---	PASS
			30~1000	3.68	-58.21	≤ -16.32	PASS
			1000~26500	3.68	-49.14	≤ -16.32	PASS
11G	Ant1	2412	Reference	-8.75	-8.75	---	PASS
			30~1000	-8.75	-58.85	≤ -28.75	PASS
			1000~26500	-8.75	-49.66	≤ -28.75	PASS
		2437	Reference	-7.48	-7.48	---	PASS
			30~1000	-7.48	-58.08	≤ -27.48	PASS
			1000~26500	-7.48	-48.95	≤ -27.48	PASS
		2462	Reference	-4.47	-4.47	---	PASS
			30~1000	-4.47	-58.8	≤ -24.47	PASS
			1000~26500	-4.47	-48.65	≤ -24.47	PASS
11N20MIMO	Ant1	2412	Reference	-10.62	-10.62	---	PASS
			30~1000	-10.62	-58.32	≤ -30.62	PASS
			1000~26500	-10.62	-49.16	≤ -30.62	PASS
	Ant2	2412	Reference	-10.01	-10.01	---	PASS
			30~1000	-10.01	-57.76	≤ -30.01	PASS
			1000~26500	-10.01	-48.86	≤ -30.01	PASS
	Ant1	2437	Reference	-12.30	-12.30	---	PASS
			30~1000	-12.30	-58.34	≤ -32.3	PASS
			1000~26500	-12.30	-48.59	≤ -32.3	PASS
	Ant2	2437	Reference	-9.80	-9.80	---	PASS
			30~1000	-9.80	-58.87	≤ -29.8	PASS
			1000~26500	-9.80	-49.03	≤ -29.8	PASS
	Ant1	2462	Reference	-11.21	-11.21	---	PASS
			30~1000	-11.21	-58.15	≤ -31.21	PASS
			1000~26500	-11.21	-49.18	≤ -31.21	PASS
	Ant2	2462	Reference	-10.26	-10.26	---	PASS
			30~1000	-10.26	-58.34	≤ -30.26	PASS
			1000~26500	-10.26	-49.19	≤ -30.26	PASS

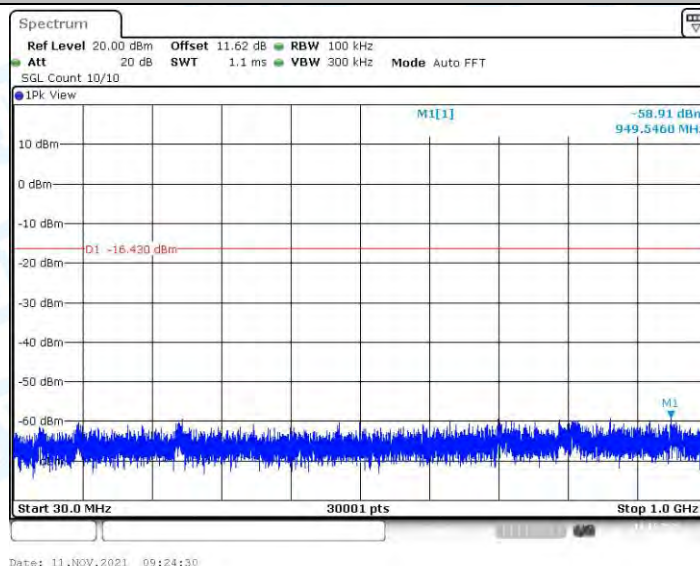
6.2. Test Graphs



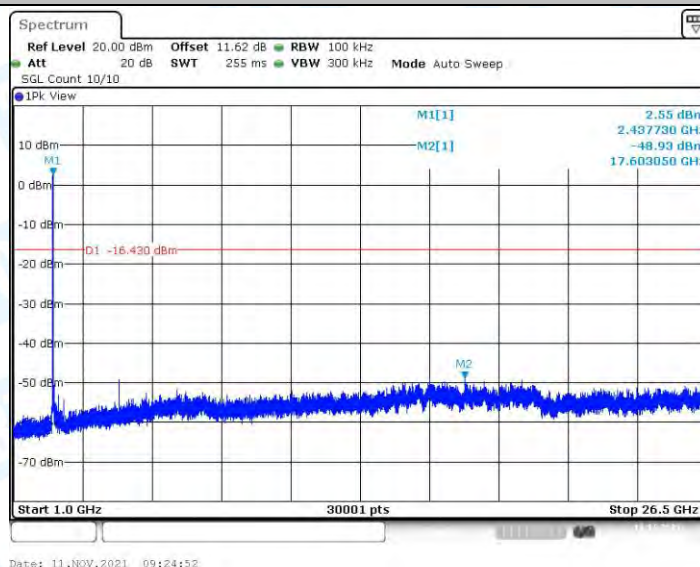
11B_Ant1_2437_0~Reference



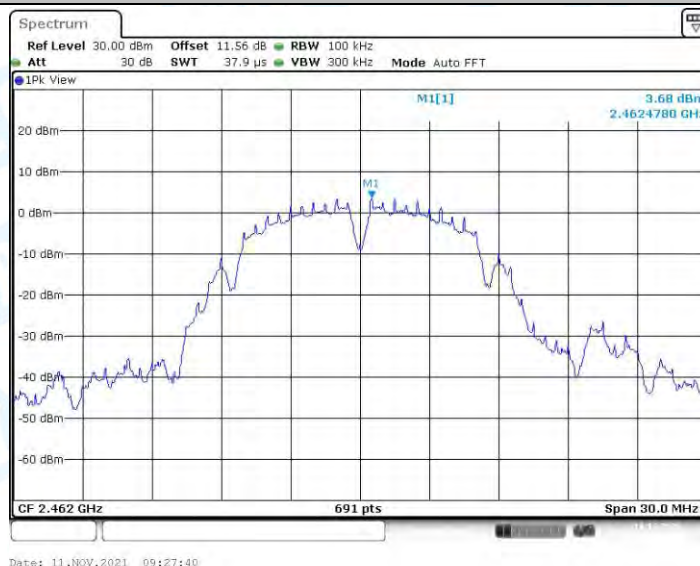
11B_Ant1_2437_30~1000



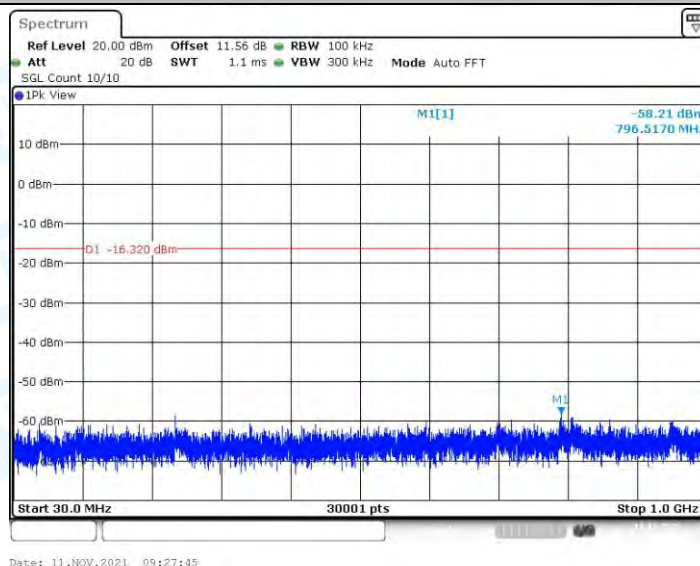
11B_Ant1_2437_1000~26500



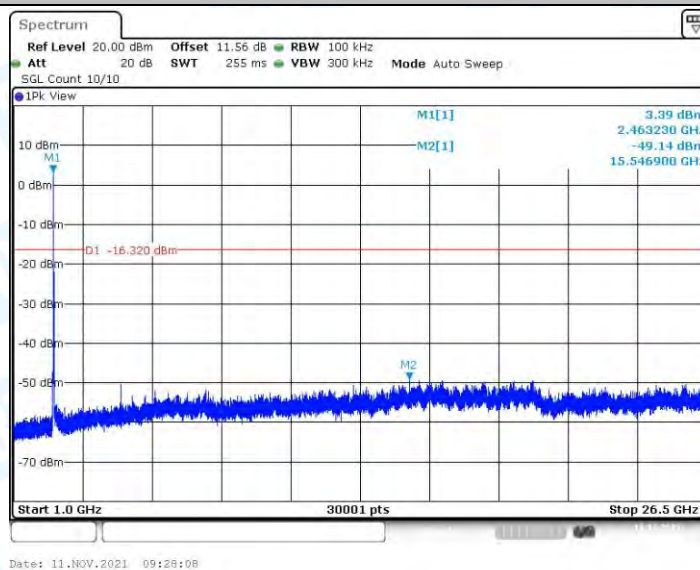
11B_Ant1_2462_0~Reference



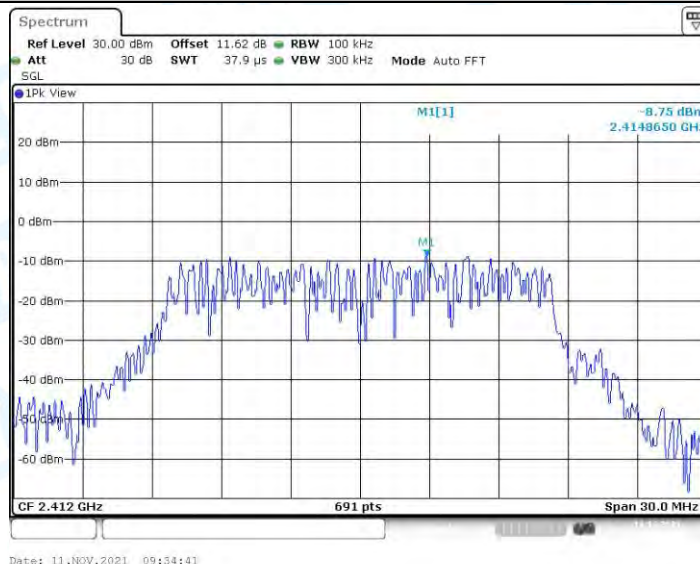
11B_Ant1_2462_30~1000



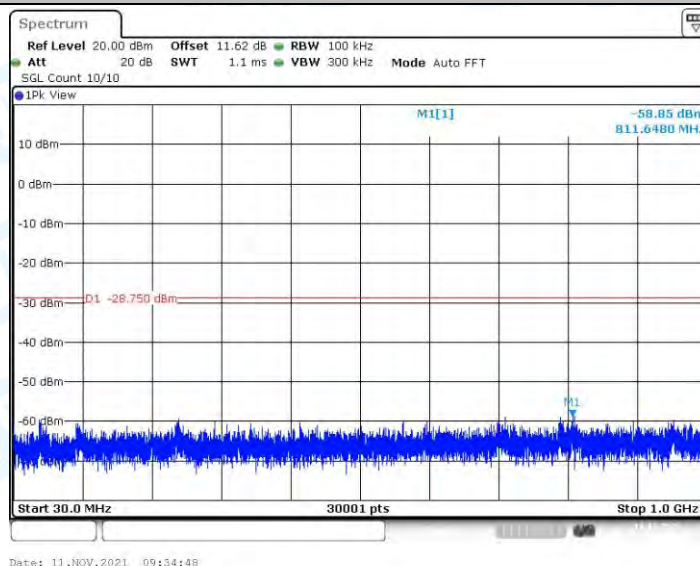
11B_Ant1_2462_1000~26500



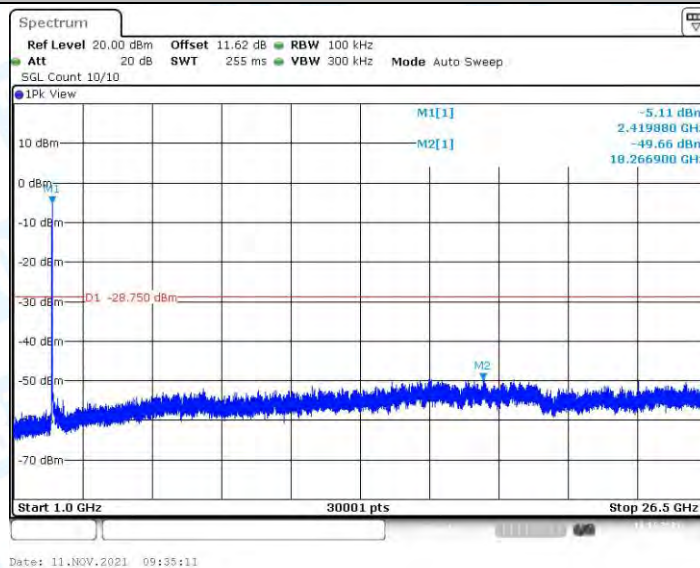
11G Ant1 2412 0~Reference



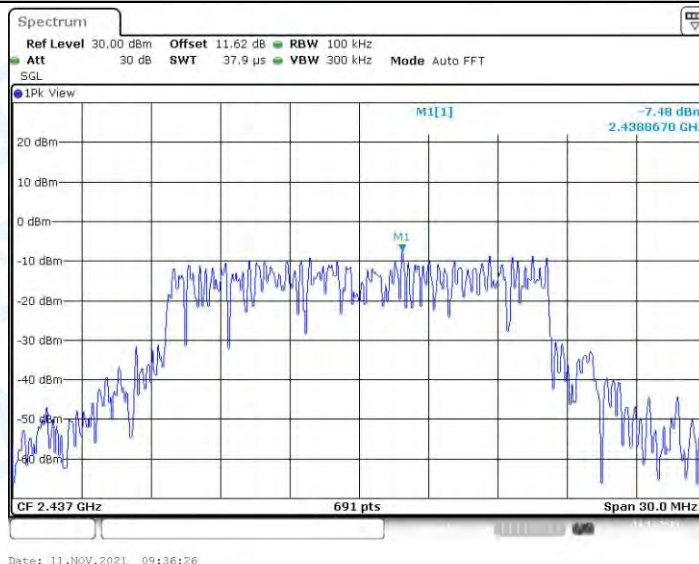
11G Ant1 2412 30~1000



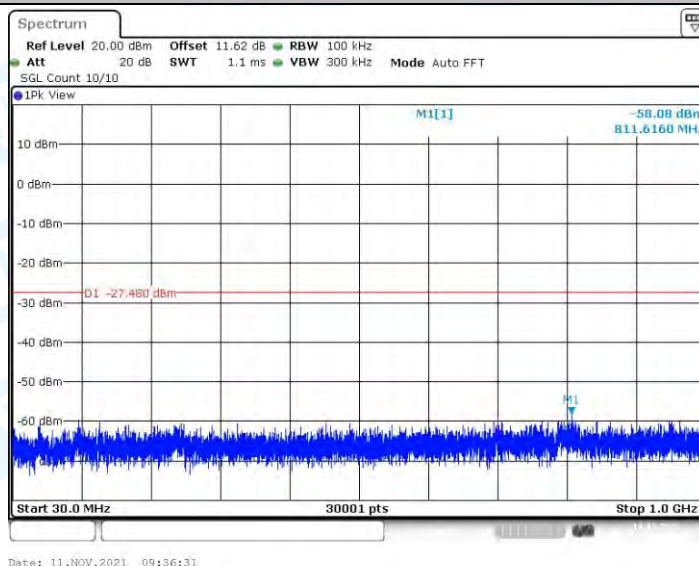
11G Ant1 2412 1000~26500



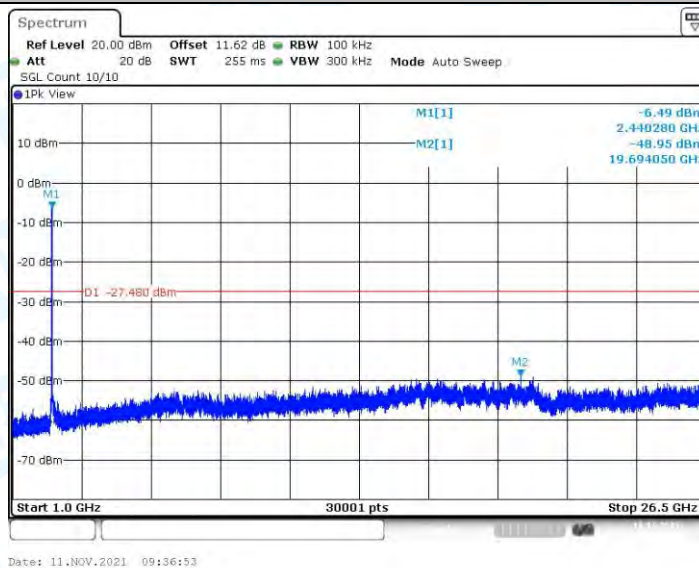
11G_Ant1_2437_0~Reference



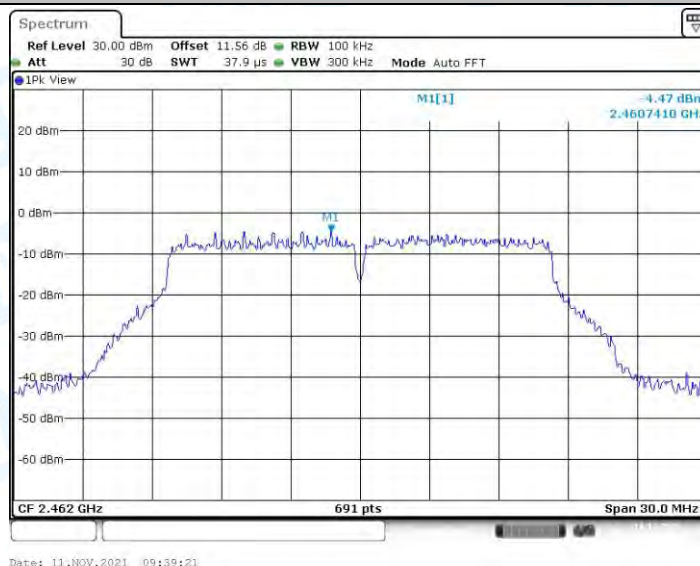
11G_Ant1_2437_30~1000



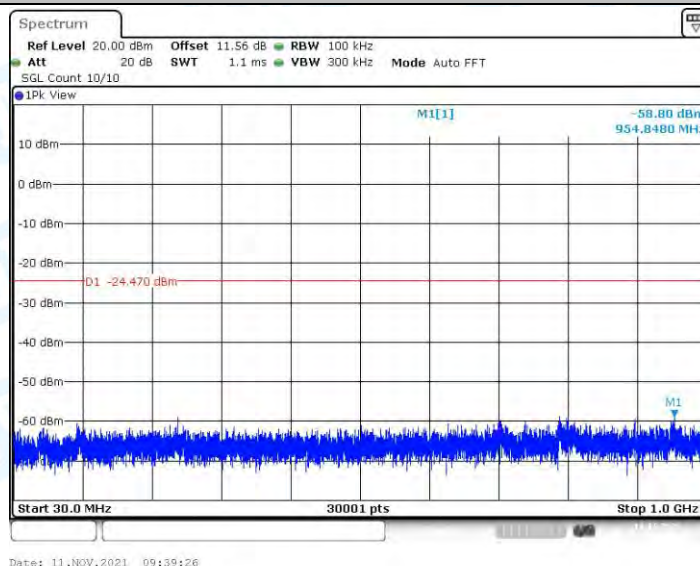
11G_Ant1_2437_1000~26500



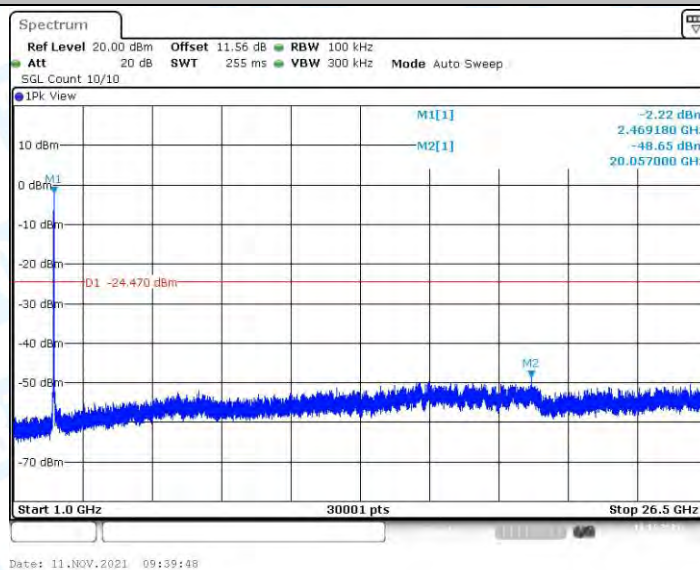
11G_Ant1_2462_0~Reference



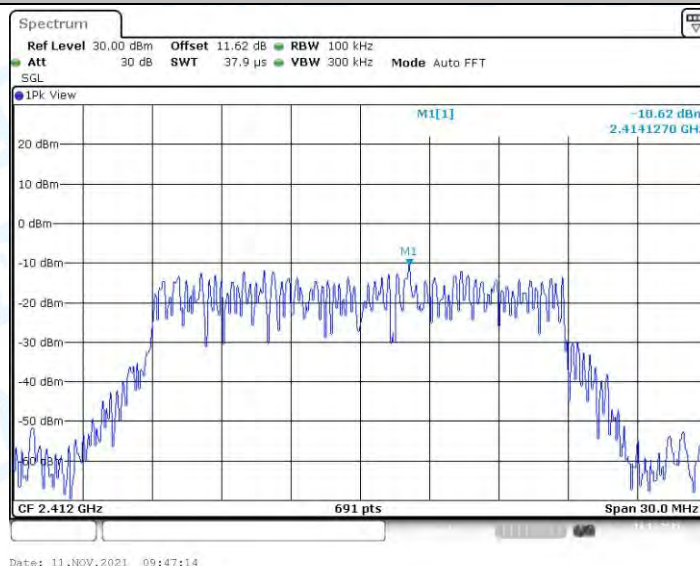
11G_Ant1_2462_30~1000



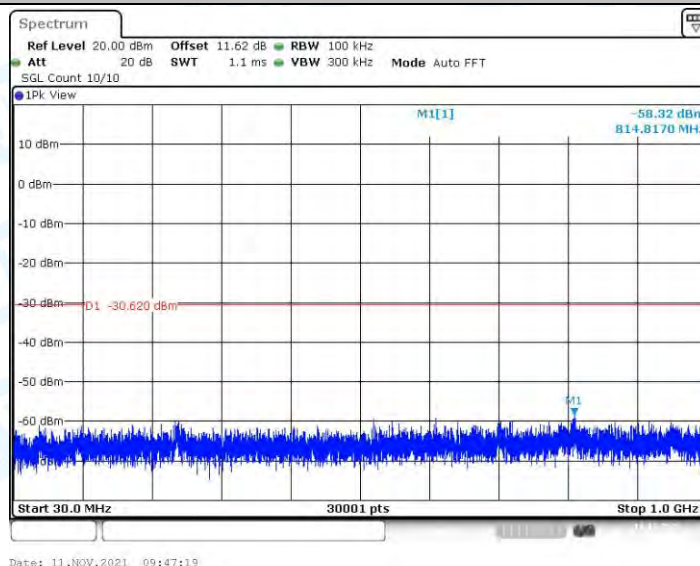
11G_Ant1_2462_1000~26500



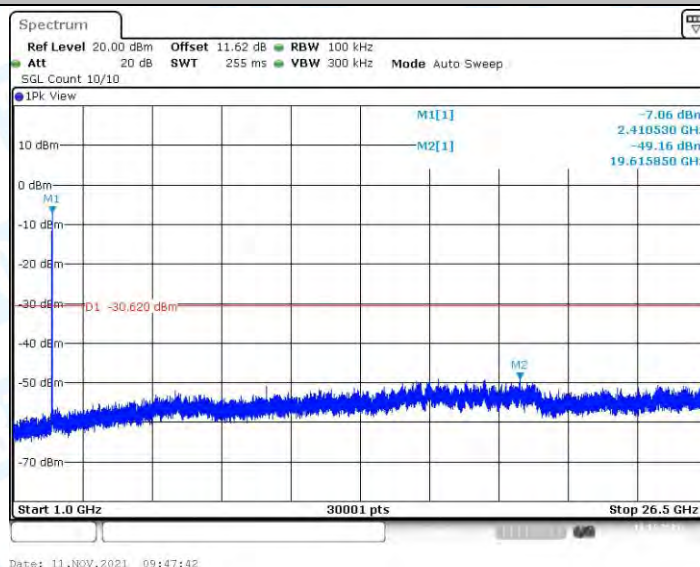
11N20MIMO_Ant1_2412_0~Reference



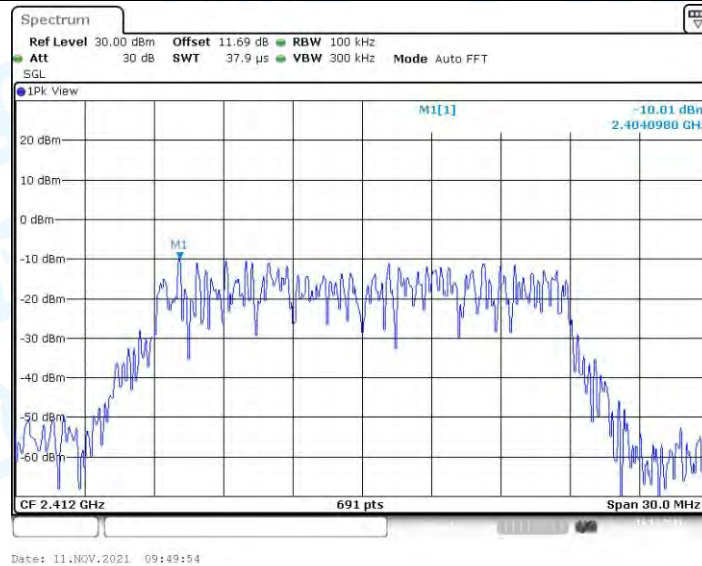
11N20MIMO_Ant1_2412_30~1000



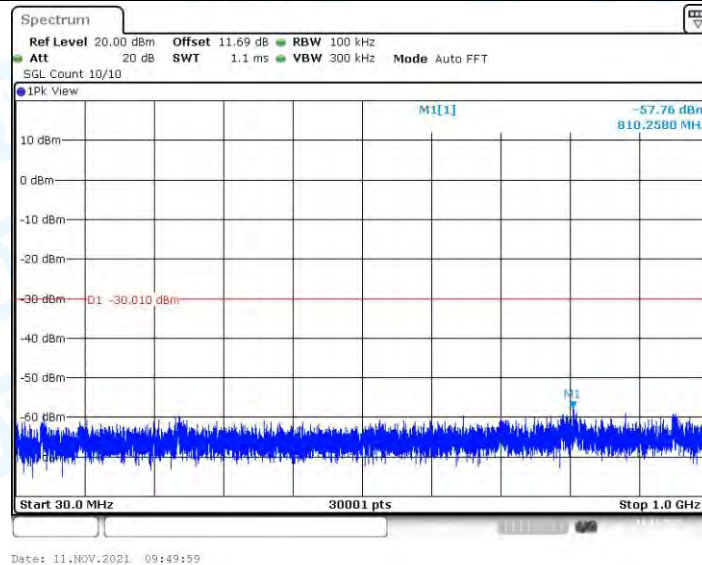
11N20MIMO_Ant1_2412_1000~26500



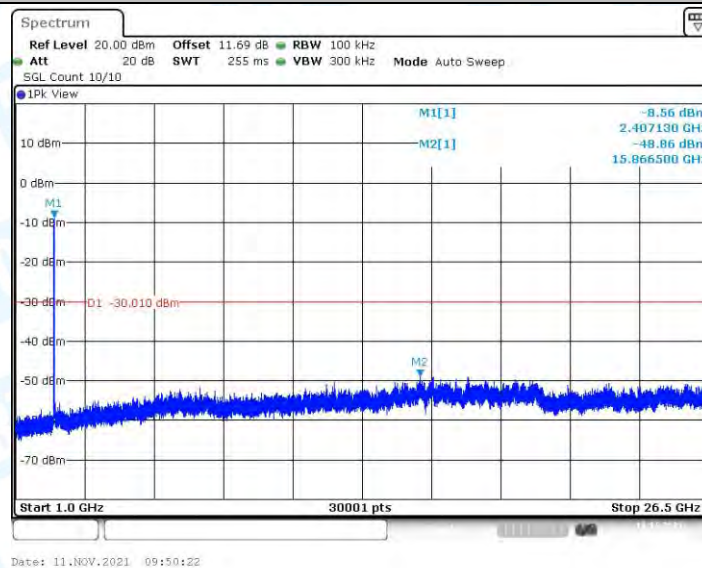
11N20MIMO_Ant2_2412_0~Reference



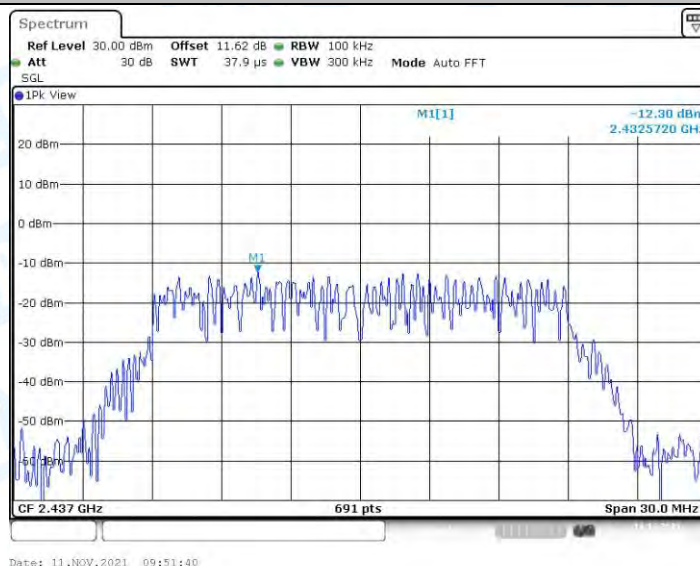
11N20MIMO_Ant2_2412_30~1000



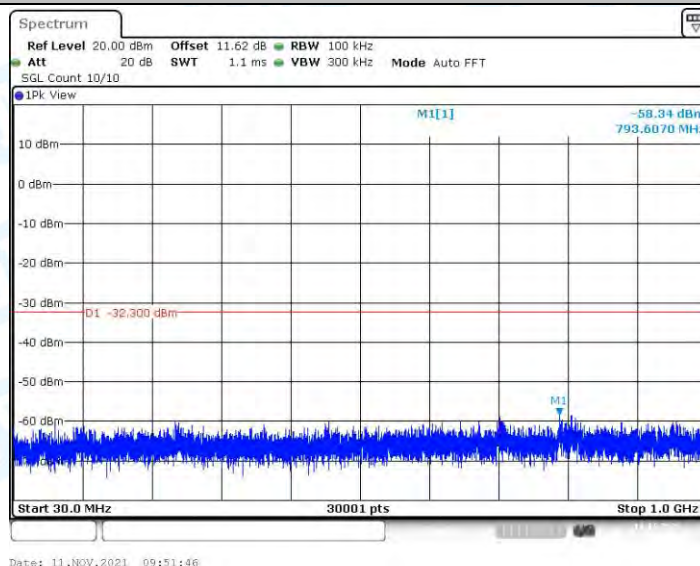
11N20MIMO_Ant2_2412_1000~26500



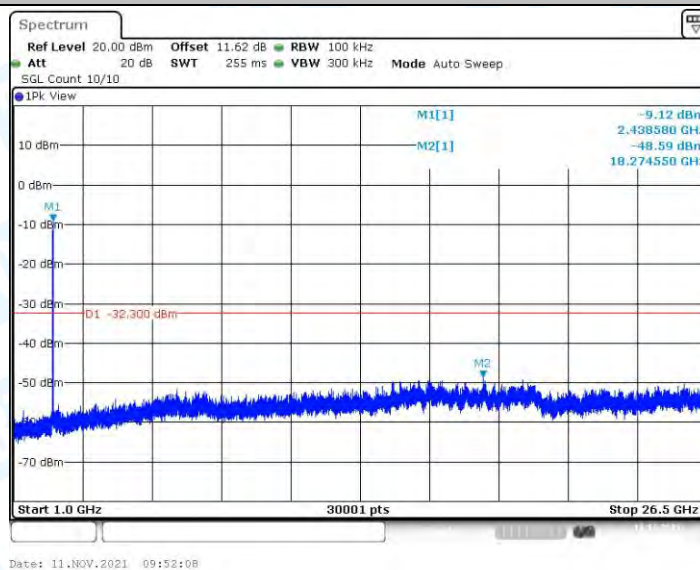
11N20MIMO_Ant1_2437_0~Reference



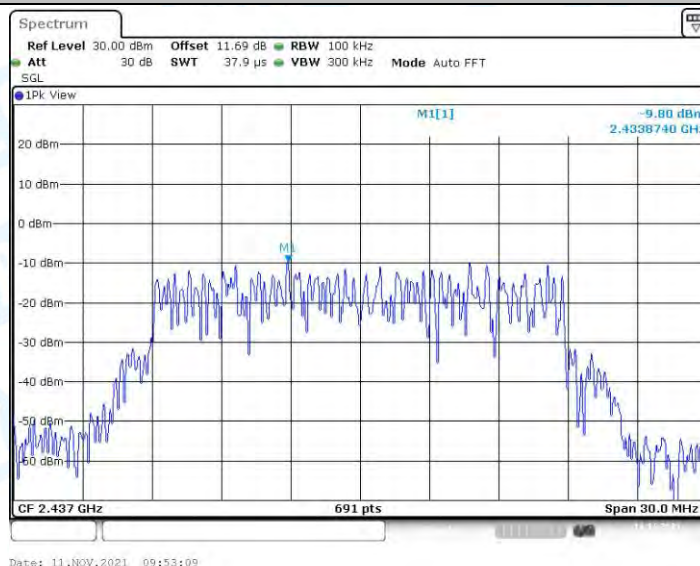
11N20MIMO_Ant1_2437_30~1000



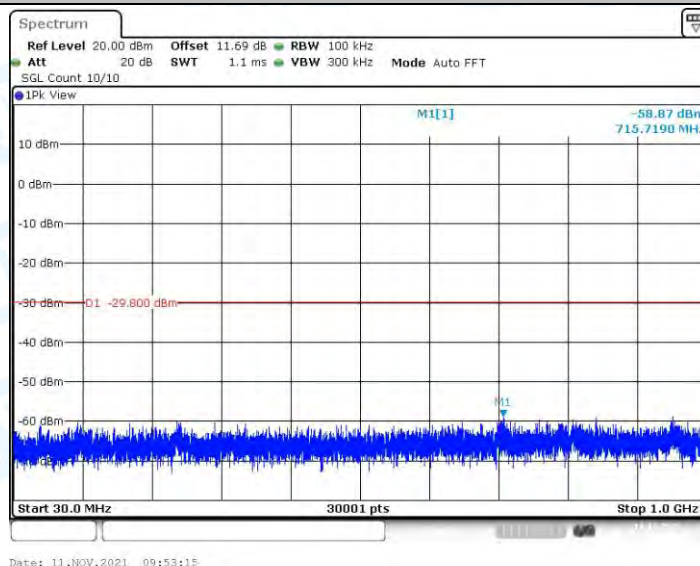
11N20MIMO_Ant1_2437_1000~26500



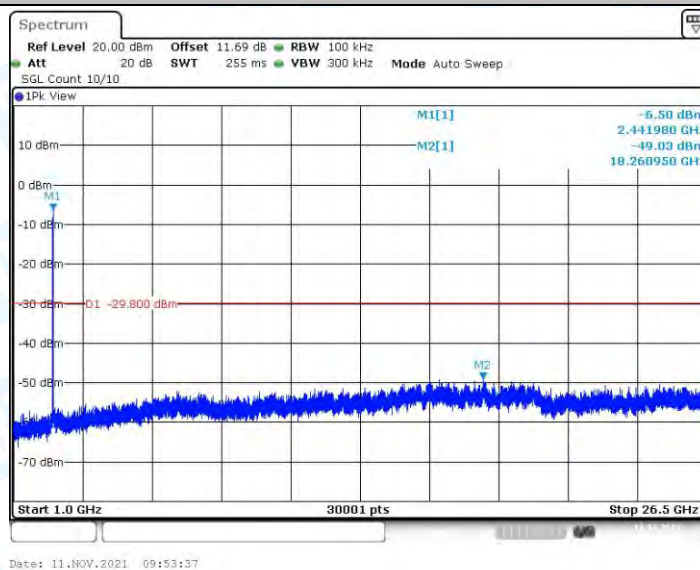
11N20MIMO_Ant2_2437_0~Reference



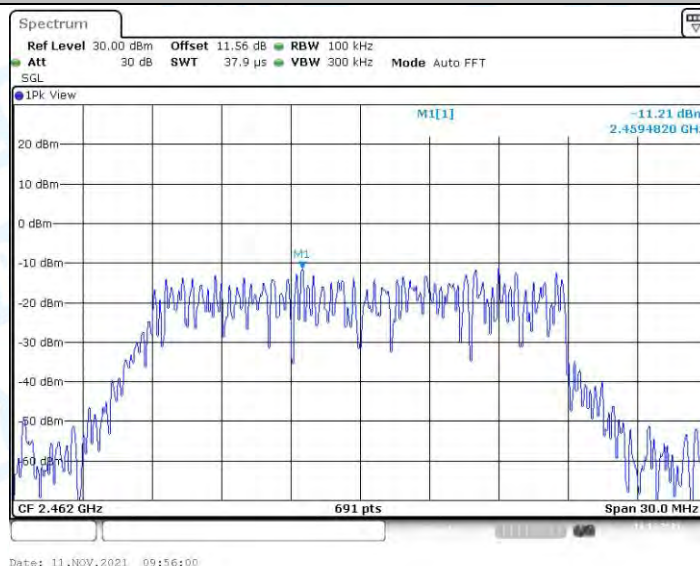
11N20MIMO_Ant2_2437_30~1000



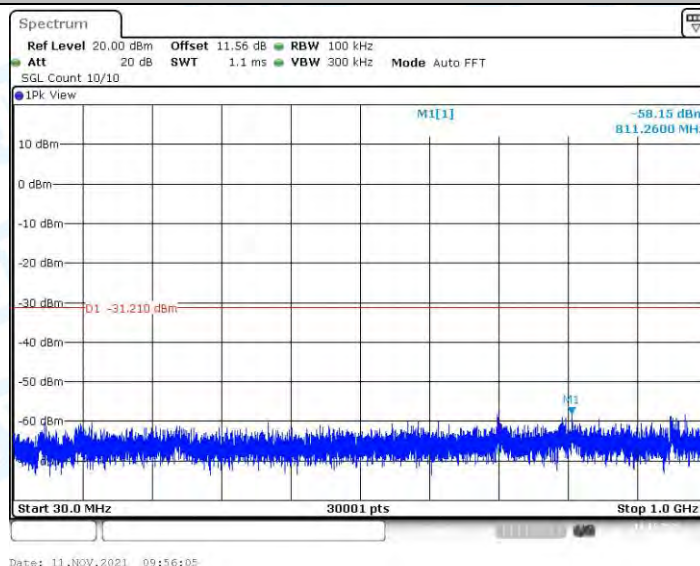
11N20MIMO_Ant2_2437_1000~26500



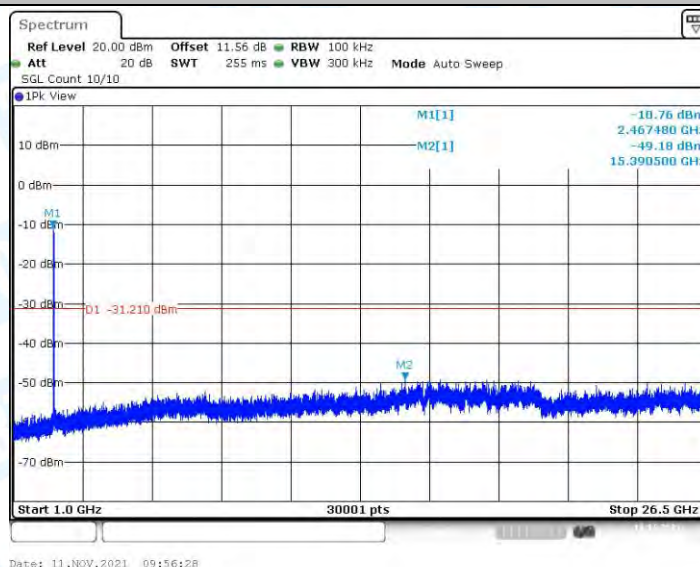
11N20MIMO_Ant1_2462_0~Reference



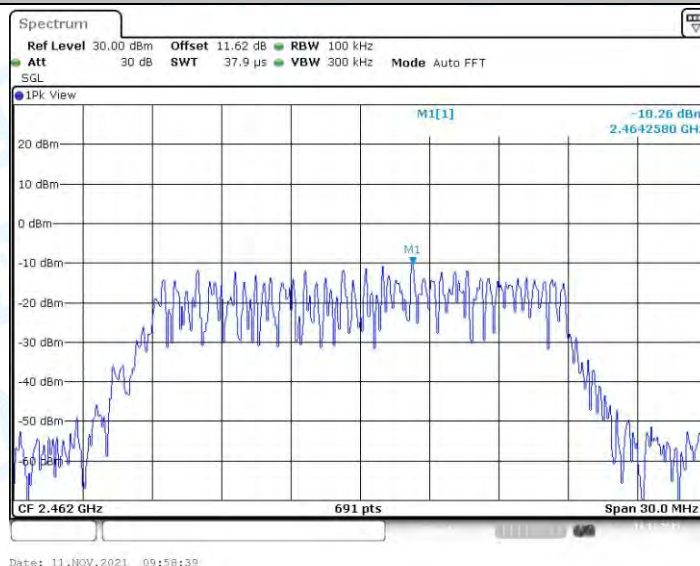
11N20MIMO_Ant1_2462_30~1000



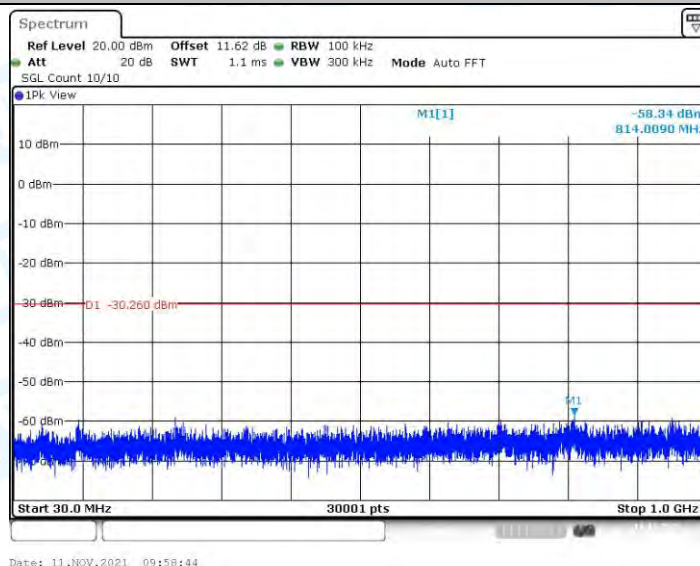
11N20MIMO_Ant1_2462_1000~26500



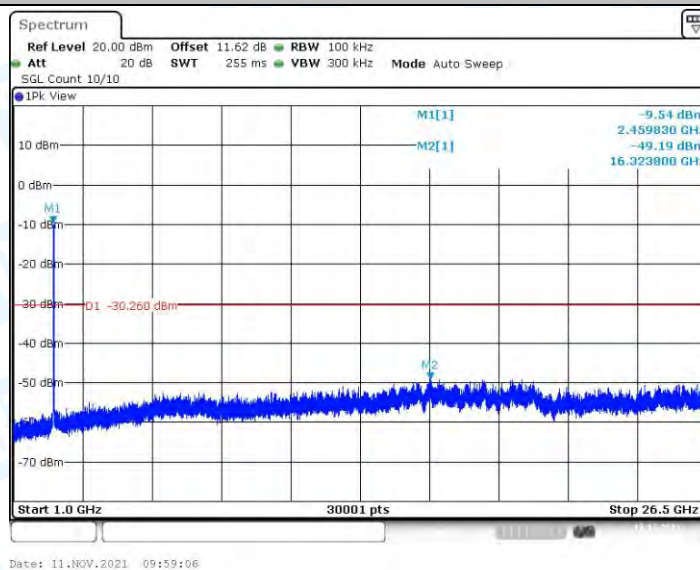
11N20MIMO_Ant2_2462_0~Reference



11N20MIMO_Ant2_2462_30~1000



11N20MIMO_Ant2_2462_1000~26500

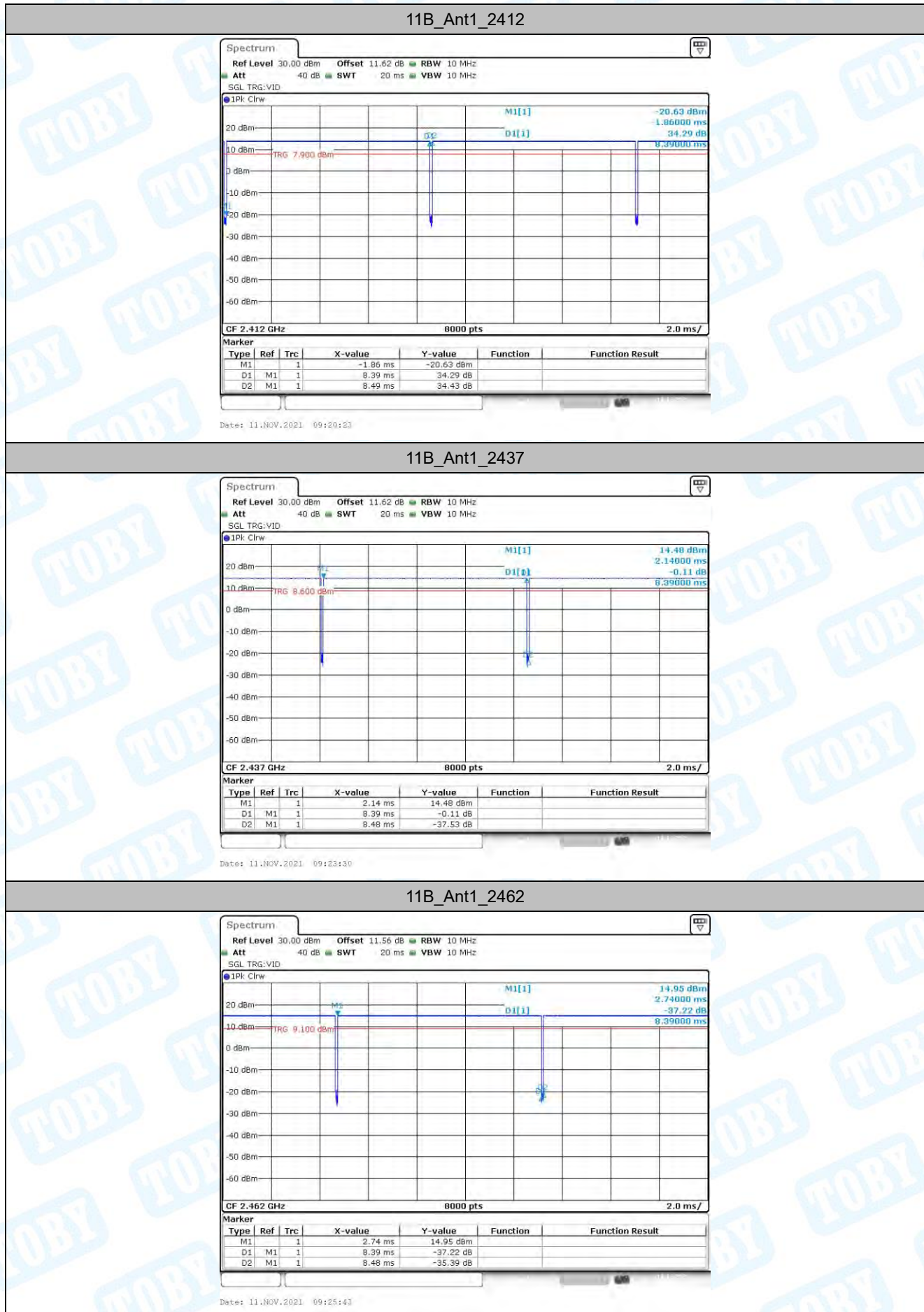


7. Duty Cycle

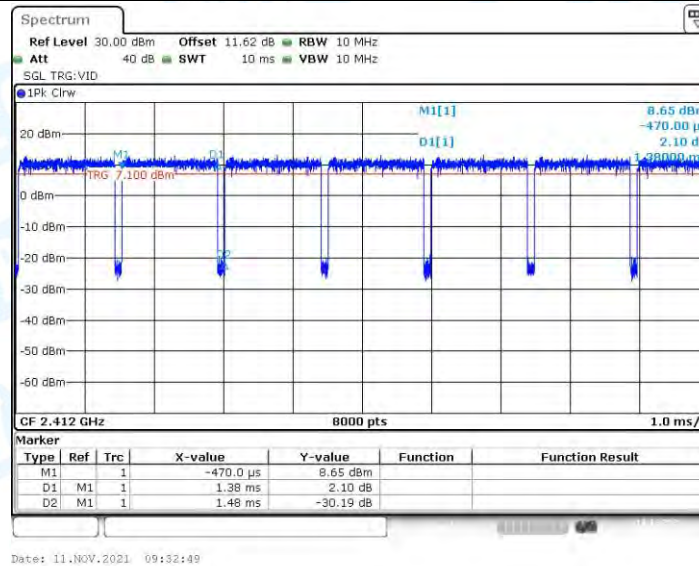
7.1. Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T [KHz]	Limit	Verdict
11B	Ant1	2412	8.39	8.49	98.82	0.119	---	PASS
		2437	8.39	8.48	98.94	0.119	---	PASS
		2462	8.39	8.48	98.94	0.119	---	PASS
11G	Ant1	2412	1.38	1.48	93.24	0.725	---	PASS
		2437	1.38	1.48	93.24	0.725	---	PASS
		2462	1.39	1.49	93.29	0.719	---	PASS
11N20MIMO	Ant1	2412	1.30	1.40	92.86	0.769	---	PASS
	Ant2	2412	1.30	1.40	92.86	0.769	---	PASS
	Ant1	2437	1.30	1.40	92.86	0.769	---	PASS
	Ant2	2437	1.30	1.40	92.86	0.769	---	PASS
	Ant1	2462	1.30	1.40	92.86	0.769	---	PASS
	Ant2	2462	1.30	1.40	92.86	0.769	---	PASS

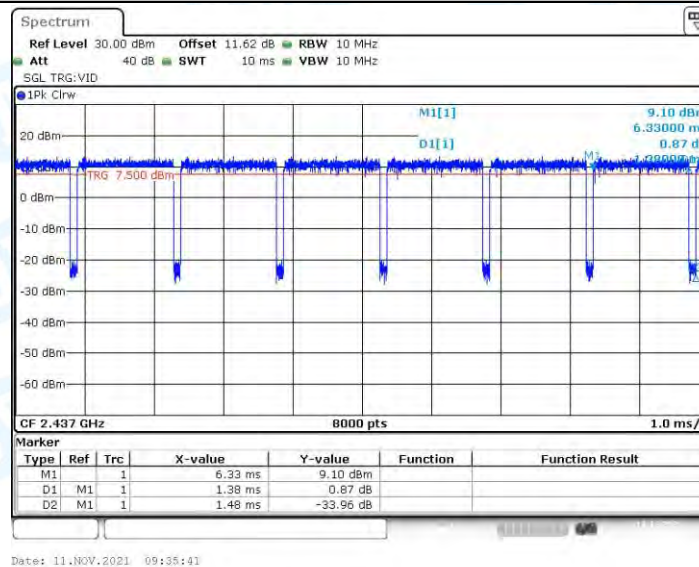
7.2. Test Graphs



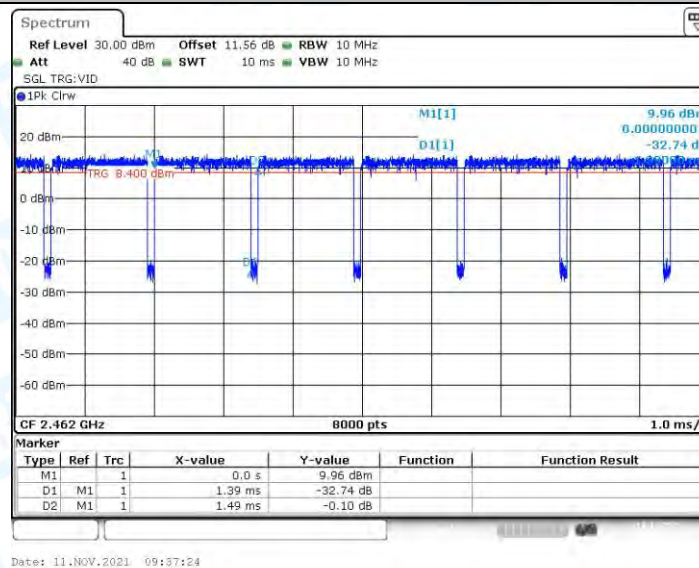
11G_Ant1_2412



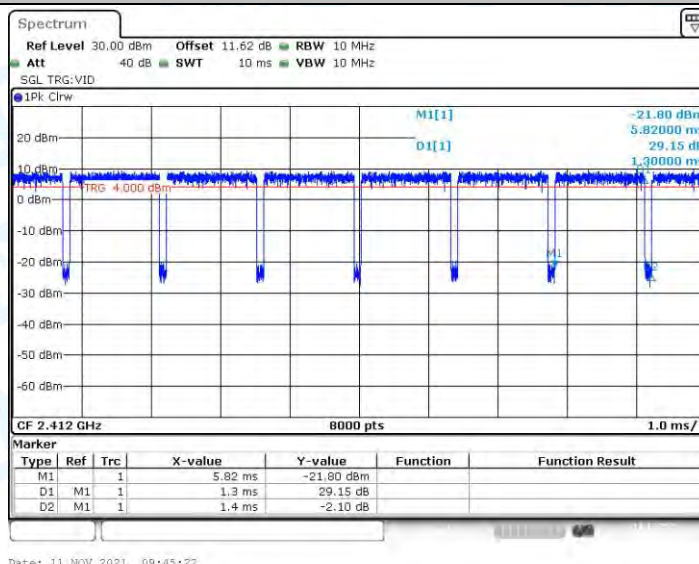
11G_Ant1_2437



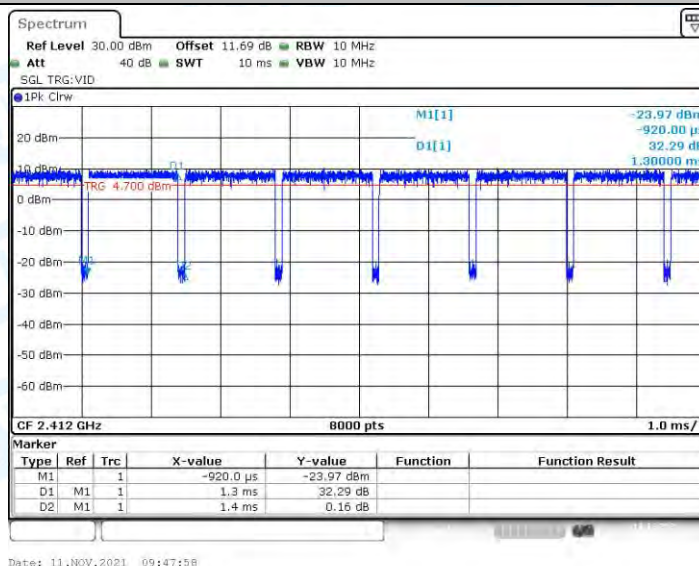
11G_Ant1_2462



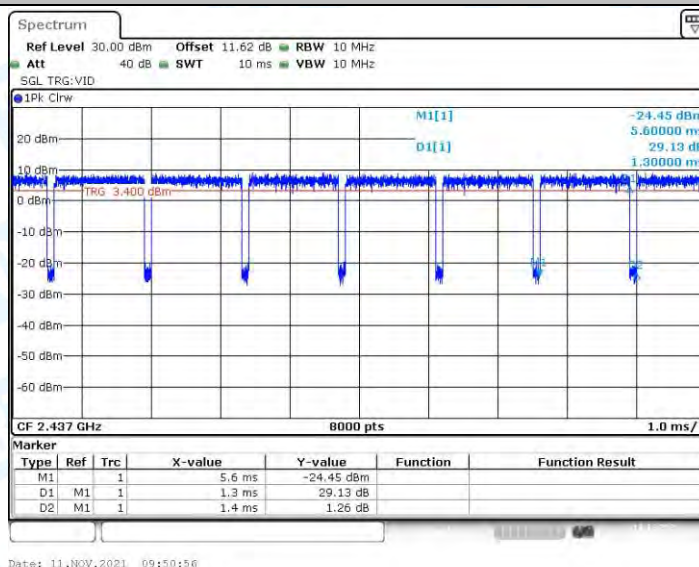
11N20MIMO_Ant1_2412



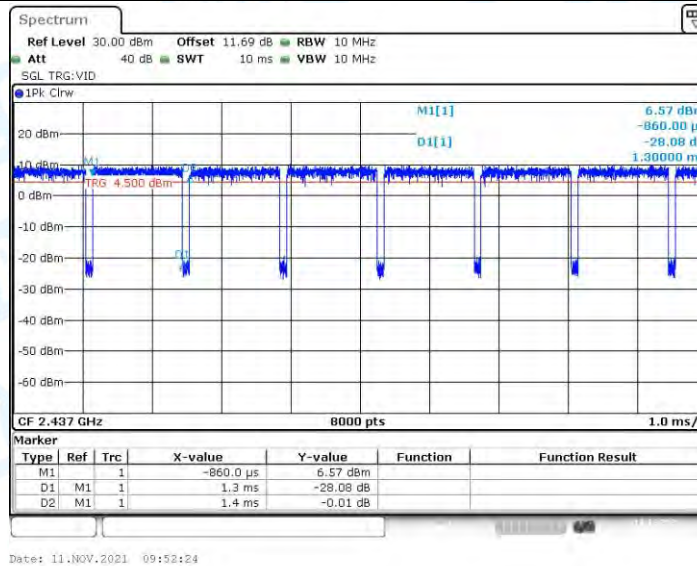
11N20MIMO_Ant2_2412



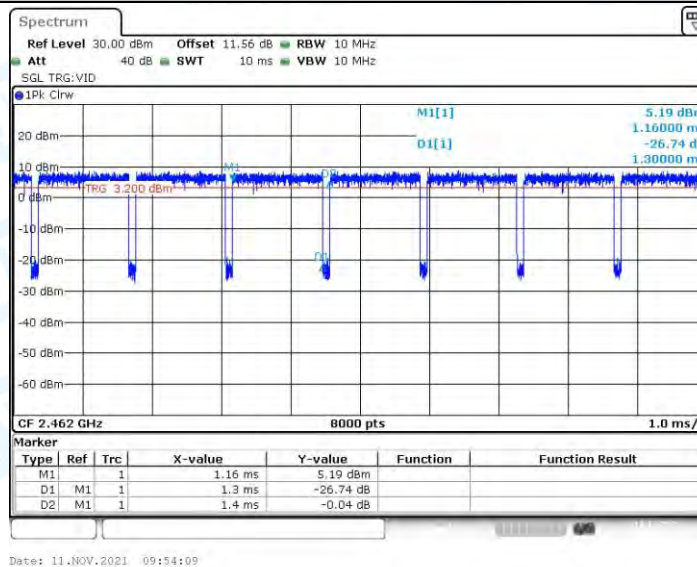
11N20MIMO_Ant1_2437



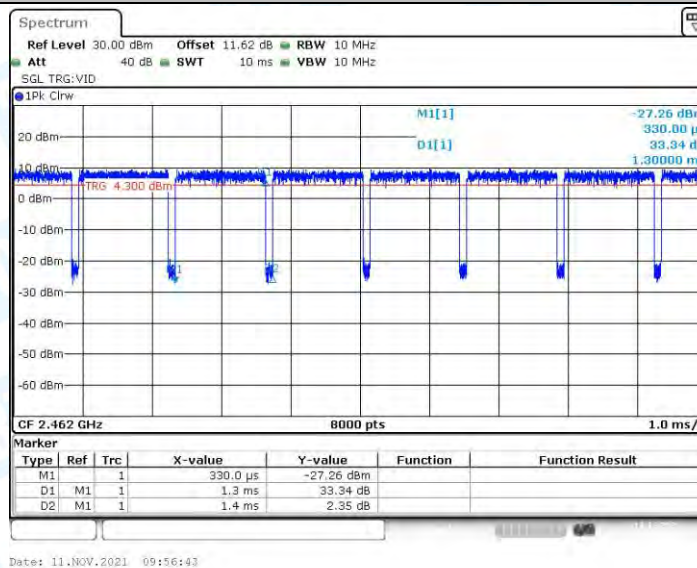
11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_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	-49.74	≤-41.20	PASS
				AV	2387.232	-41.8	≤-41.20	PASS
				AV	2390.000	-42.1	≤-41.20	PASS
				Peak	2310.000	-42.77	≤-21.20	PASS
				Peak	2386.855	-35.28	≤-21.20	PASS
				Peak	2390.000	-35.86	≤-21.20	PASS
		High	2462	AV	2483.500	-47.64	≤-41.20	PASS
				AV	2483.522	-47.64	≤-41.20	PASS
				AV	2500.000	-48.64	≤-41.20	PASS
				Peak	2483.500	-41.9	≤-21.20	PASS
				Peak	2496.275	-37.1	≤-21.20	PASS
				Peak	2500.000	-38.99	≤-21.20	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.37	≤-41.20	PASS
				AV	2389.870	-45.71	≤-41.20	PASS
				AV	2390.000	-45.77	≤-41.20	PASS
				Peak	2310.000	-41.92	≤-21.20	PASS
				Peak	2383.464	-36.43	≤-21.20	PASS
				Peak	2390.000	-35.74	≤-21.20	PASS
		High	2462	AV	2483.500	-43.99	≤-41.20	PASS
				AV	2483.841	-43.76	≤-41.20	PASS
				AV	2500.000	-46.76	≤-41.20	PASS
				Peak	2483.500	-35.44	≤-21.20	PASS
				Peak	2488.623	-33.71	≤-21.20	PASS
				Peak	2500.000	-37.92	≤-21.20	PASS
11N20MIM O	Ant1	Low	2412	AV	2310.000	-49.32	≤-41.20	PASS
				AV	2339.942	-46.55	≤-41.20	PASS
				AV	2390.000	-48.86	≤-41.20	PASS
				Peak	2310.000	-39.98	≤-21.20	PASS
				Peak	2319.029	-35.79	≤-21.20	PASS
				Peak	2390.000	-40.64	≤-21.20	PASS
	Ant2	Low	2412	AV	2310.000	-49.03	≤-41.20	PASS
				AV	2340.130	-46.79	≤-41.20	PASS
				AV	2390.000	-48.2	≤-41.20	PASS
				Peak	2310.000	-38.03	≤-21.20	PASS
				Peak	2340.319	-36.86	≤-21.20	PASS
				Peak	2390.000	-40.07	≤-21.20	PASS
	total	Low	2412	AV	2310.000	-46.16	≤-41.20	PASS
				AV	2340.130	-43.66	≤-41.20	PASS
				AV	2390.000	-45.51	≤-41.20	PASS
				Peak	2310.000	-35.89	≤-21.20	PASS
				Peak	2340.319	-33.28	≤-21.20	PASS

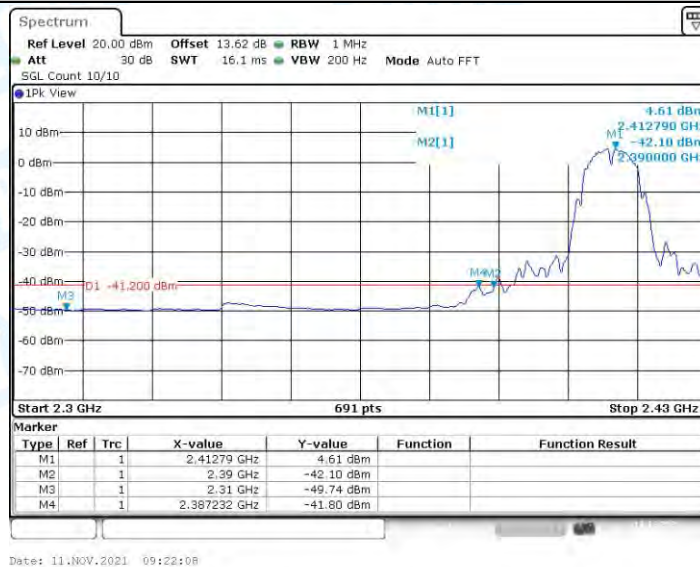
	Ant1	High	2462	Peak	2390.000	-37.34	≤ -21.20	PASS
				AV	2483.500	-47.73	≤ -41.20	PASS
				AV	2483.681	-47.63	≤ -41.20	PASS
				AV	2500.000	-48.17	≤ -41.20	PASS
				Peak	2483.500	-39.4	≤ -21.20	PASS
				Peak	2498.348	-36.52	≤ -21.20	PASS
				Peak	2500.000	-40.33	≤ -21.20	PASS
	Ant2	High	2462	AV	2483.500	-47.68	≤ -41.20	PASS
				AV	2495.638	-47.47	≤ -41.20	PASS
				AV	2500.000	-48.12	≤ -41.20	PASS
				Peak	2483.500	-37.28	≤ -21.20	PASS
				Peak	2483.681	-37.19	≤ -21.20	PASS
				Peak	2500.000	-37.91	≤ -21.20	PASS
	total	High	2462	AV	2483.500	-44.69	≤ -41.20	PASS
				AV	2495.638	-44.54	≤ -41.20	PASS
				AV	2500.000	-45.13	≤ -41.20	PASS
				Peak	2483.500	-35.20	≤ -21.20	PASS
				Peak	2483.681	-33.83	≤ -21.20	PASS
				Peak	2500.000	-35.94	≤ -21.20	PASS

Note:

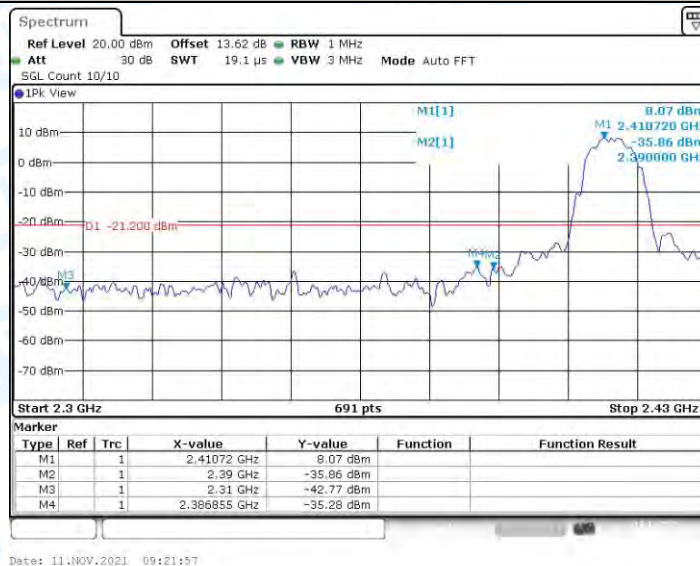
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a) or RSS-Gen 8.10. The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

8.2. Test Graphs

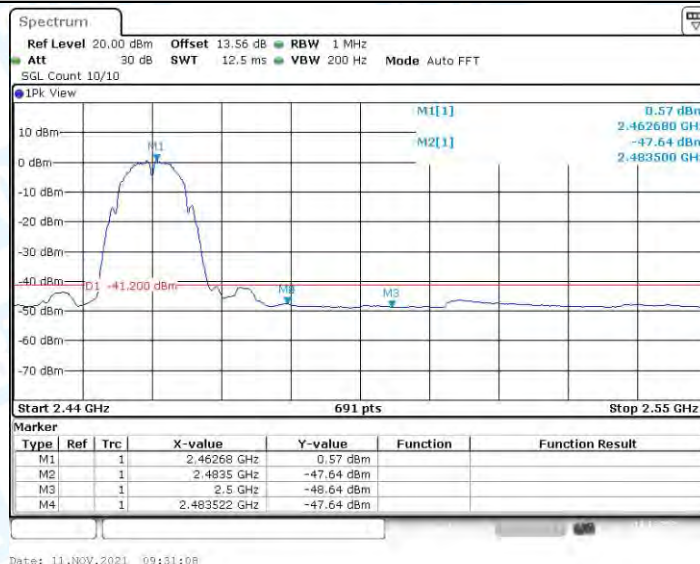
11B_Ant1_Low_2412_AV



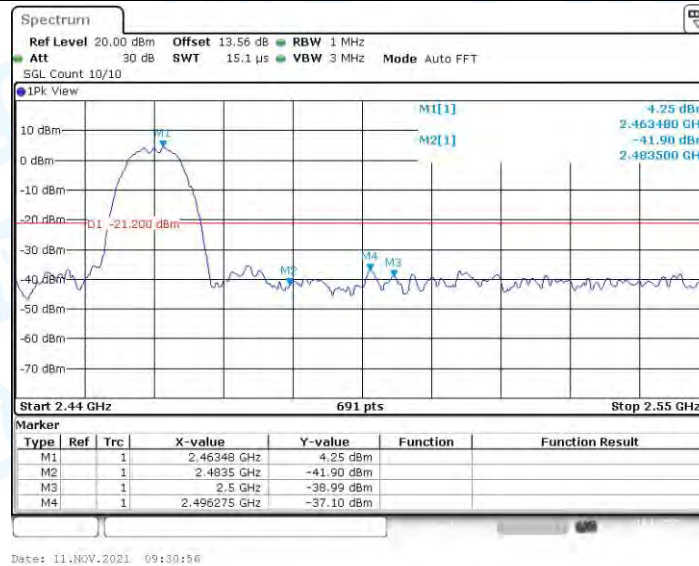
11B_Ant1_Low_2412_Peak



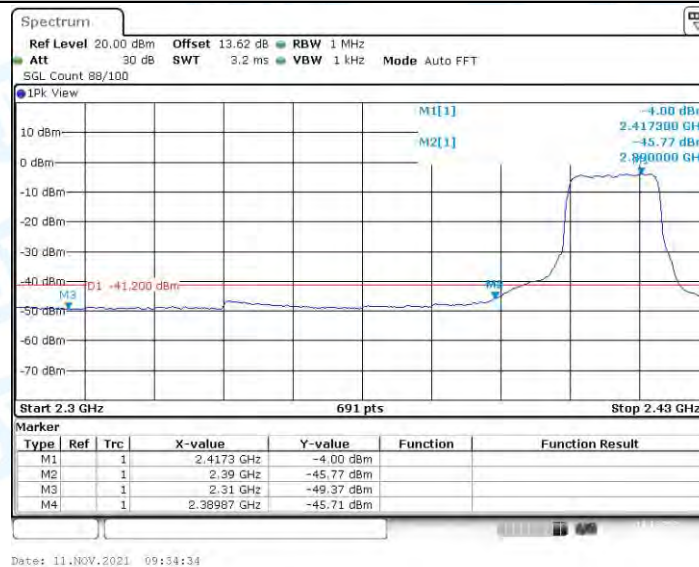
11B_Ant1_High_2462_AV



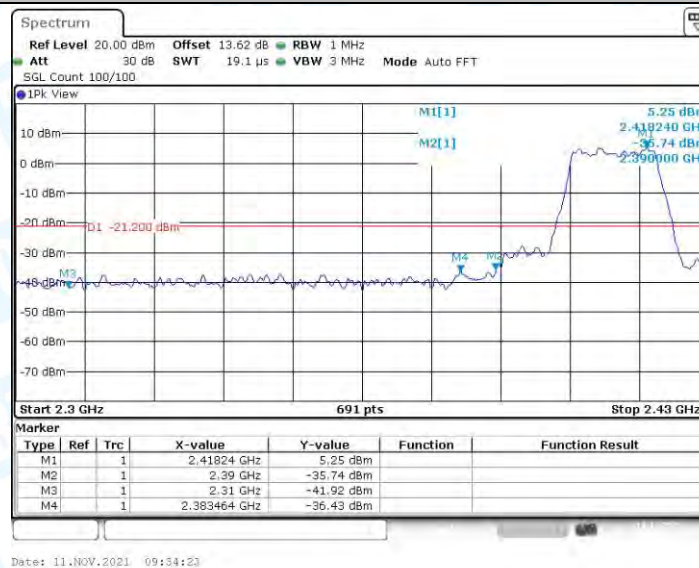
11B_Ant1_High_2462_Peak



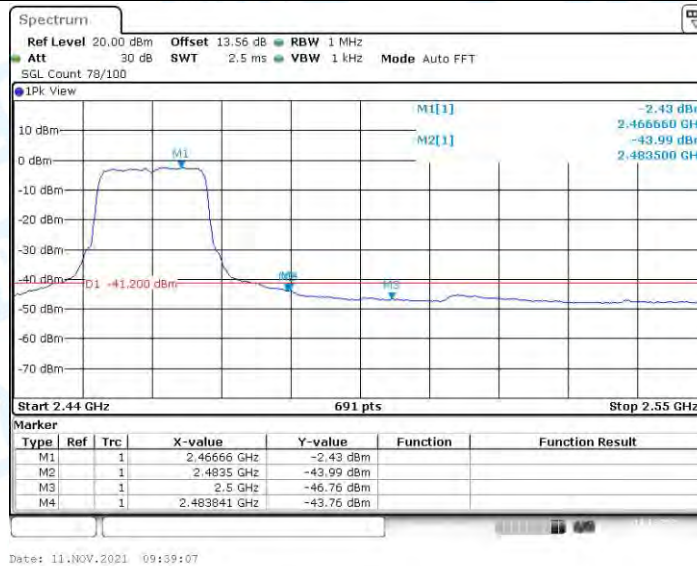
11G_Ant1_Low_2412_AV



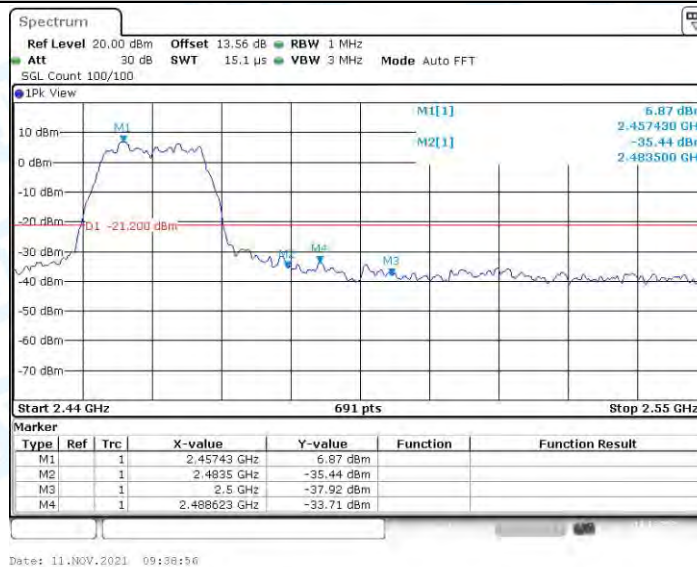
11G_Ant1_Low_2412_Peak



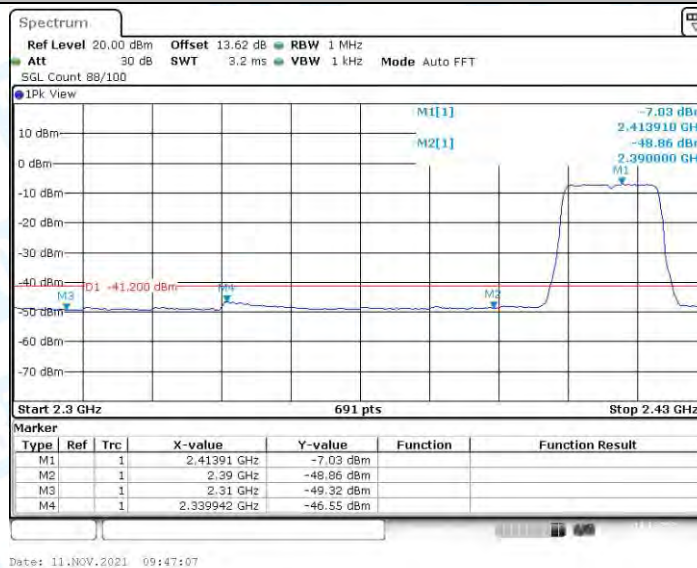
11G_Ant1_High_2462_AV



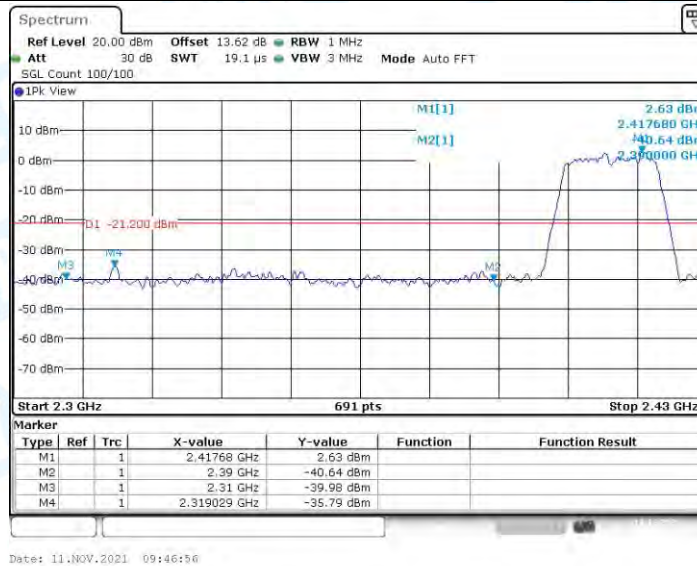
11G_Ant1_High_2462_Peak



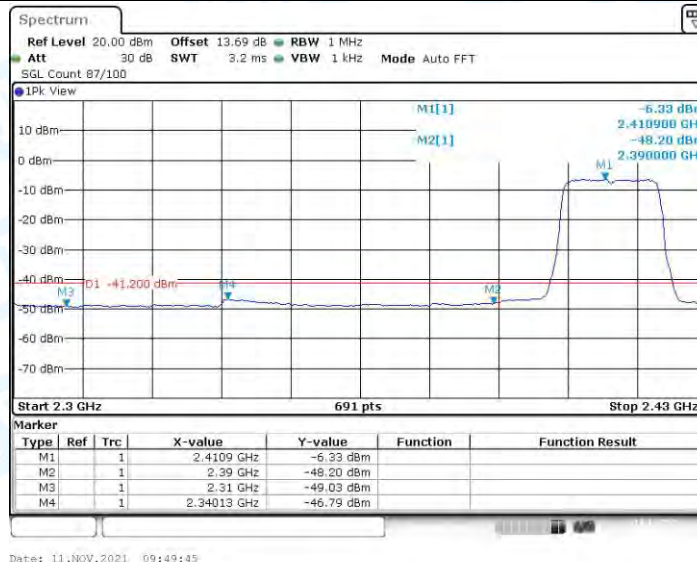
11N20MIMO_Ant1_Low_2412_AV



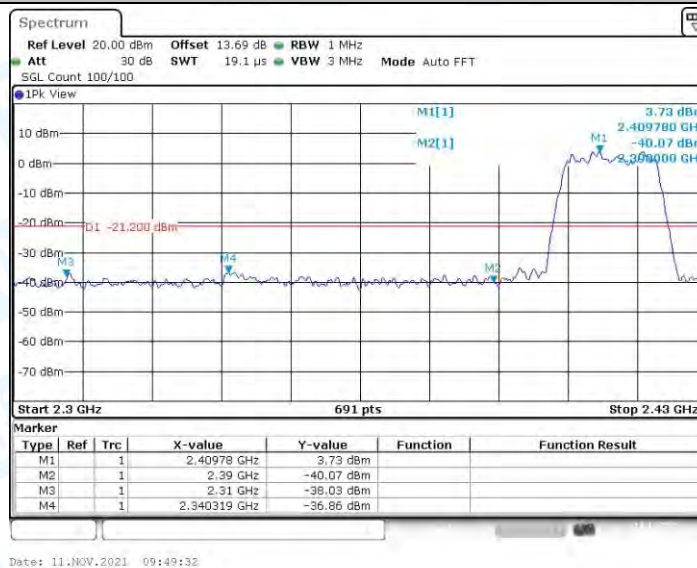
11N20MIMO_Ant1_Low_2412_Peak



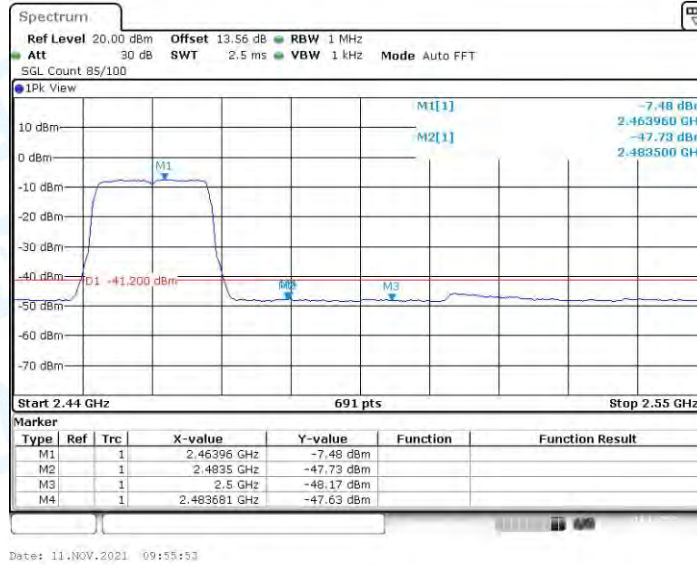
11N20MIMO_Ant2_Low_2412_AV



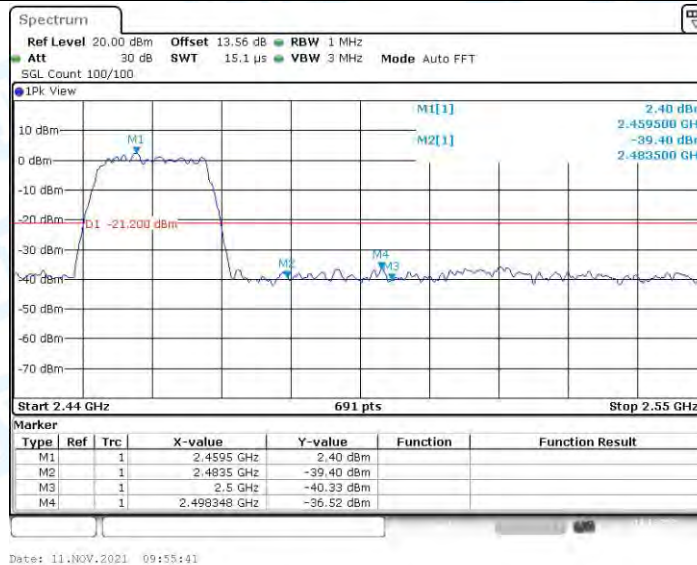
11N20MIMO_Ant2_Low_2412_Peak



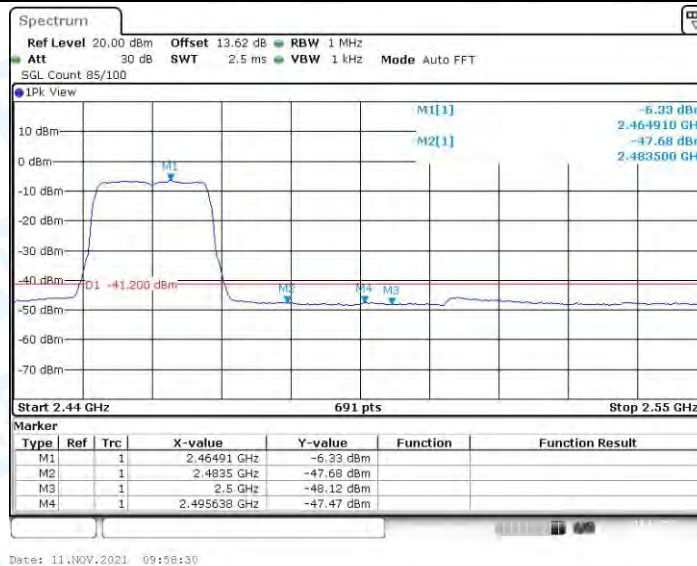
11N20MIMO_Ant1_High_2462_AV

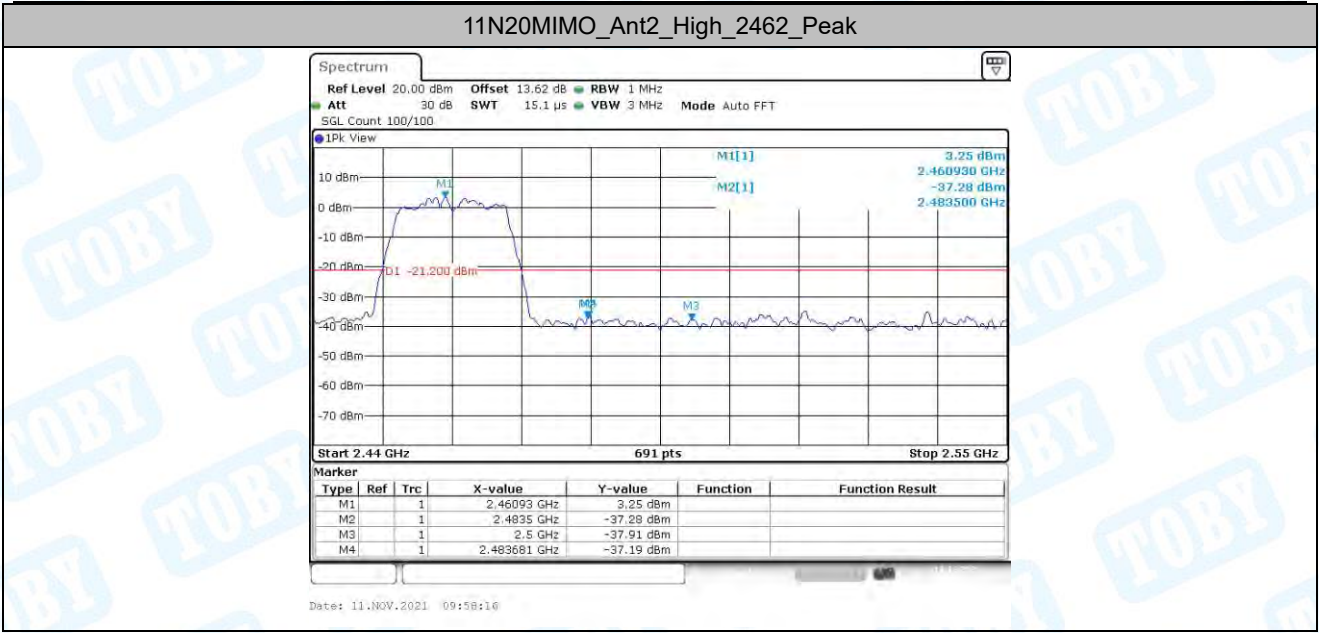


11N20MIMO_Ant1_High_2462_Peak



11N20MIMO_Ant2_High_2462_AV





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