

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : **2BQU2-NERDQX**

Company : **Shenzhen Qunlian Intelligent Manufacturing Technology Co., Ltd**

EUT : **Lottery machine**

Model Number : **NerdQX**

Report No. : **CTA26042203001**

Reviewed By : **Eric Wang**

Appendix A: DTS Bandwidth

Test Result

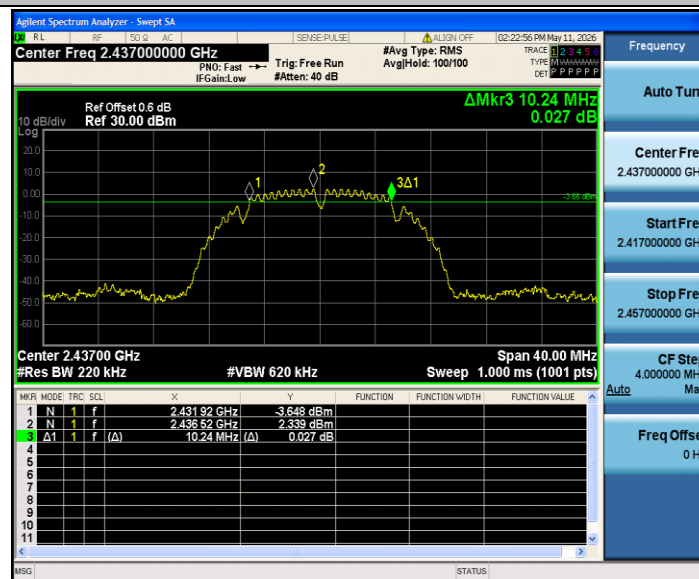
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.200	2406.920	2417.120	0.5	PASS
		2437	10.240	2431.920	2442.160	0.5	PASS
		2462	10.200	2456.920	2467.120	0.5	PASS
11G	Ant1	2412	15.800	2404.200	2420.000	0.5	PASS
		2437	15.240	2429.400	2444.640	0.5	PASS
		2462	15.840	2454.040	2469.880	0.5	PASS
11N20SISO	Ant1	2412	16.480	2404.120	2420.600	0.5	PASS
		2437	15.880	2429.280	2445.160	0.5	PASS
		2462	16.360	2454.080	2470.440	0.5	PASS

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



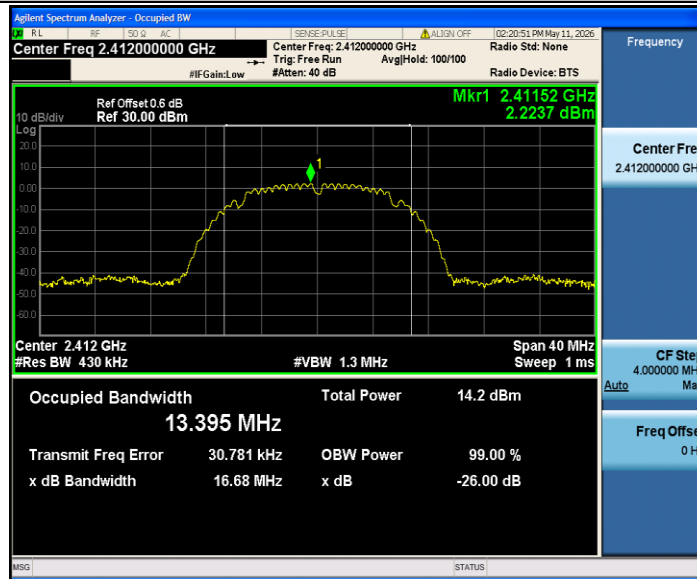
Appendix B: Occupied Channel Bandwidth

Test Result

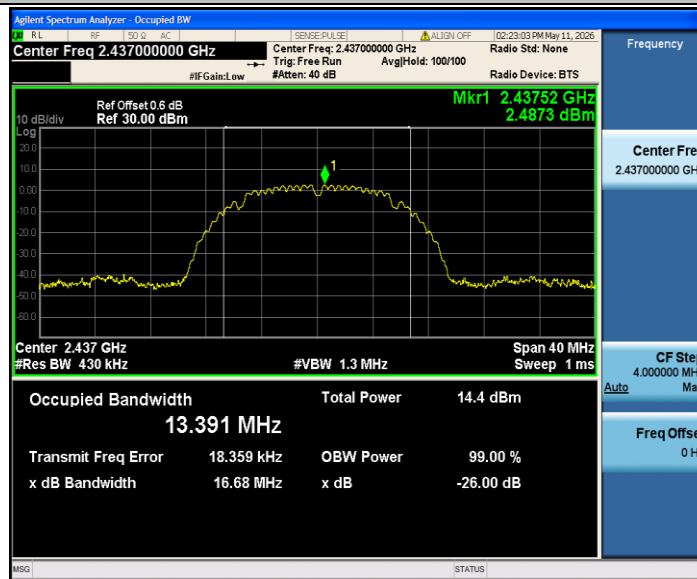
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.395	2405.3333	2418.7283	---	---
		2437	13.391	2430.3229	2443.7139	---	---
		2462	13.418	2455.3061	2468.7241	---	---
11G	Ant1	2412	16.874	2403.6150	2420.4890	---	---
		2437	16.824	2428.6109	2445.4349	---	---
		2462	16.821	2453.6574	2470.4784	---	---
11N20SISO	Ant1	2412	17.991	2403.0839	2421.0749	---	---
		2437	17.889	2428.0662	2445.9552	---	---
		2462	17.912	2453.0504	2470.9624	---	---

Test Graphs

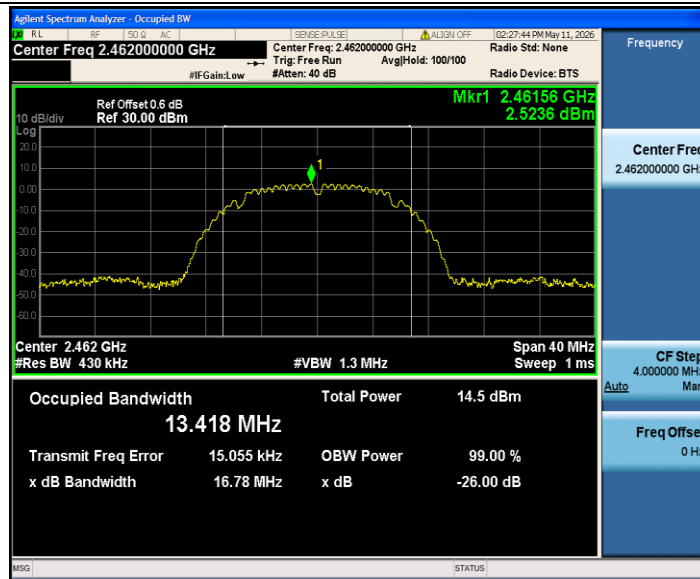
11B_Ant1_2412



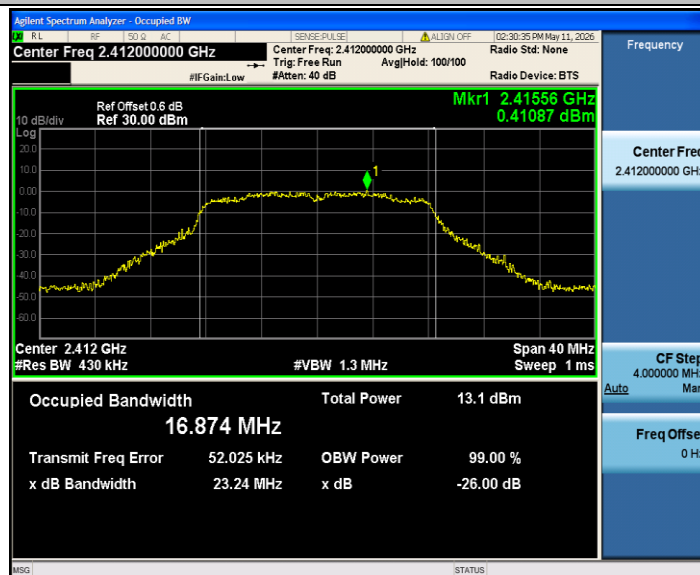
11B_Ant1_2437



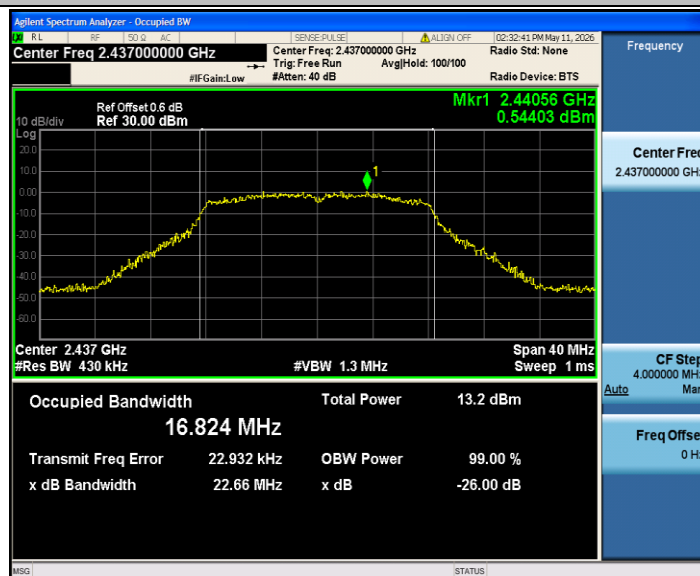
11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



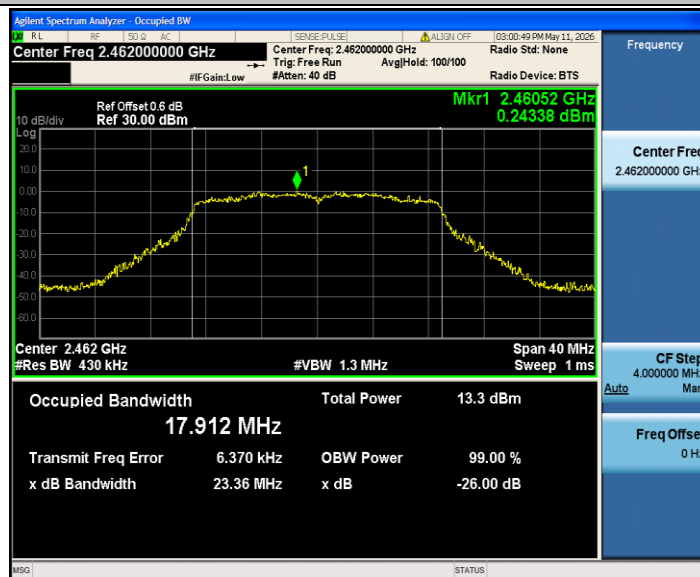
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency[M Hz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.86	≤30.00	PASS
		2437	14.05	≤30.00	PASS
		2462	14.17	≤30.00	PASS
11G	Ant1	2412	13.94	≤30.00	PASS
		2437	13.99	≤30.00	PASS
		2462	14.30	≤30.00	PASS
11N20SISO	Ant1	2412	13.69	≤30.00	PASS
		2437	13.88	≤30.00	PASS
		2462	14.14	≤30.00	PASS

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-12.19	≤8.00	PASS
		2437	-12.06	≤8.00	PASS
		2462	-11.24	≤8.00	PASS
11G	Ant1	2412	-18.38	≤8.00	PASS
		2437	-16.55	≤8.00	PASS
		2462	-17.89	≤8.00	PASS
11N20SISO	Ant1	2412	-18.09	≤8.00	PASS
		2437	-16.97	≤8.00	PASS
		2462	-17.50	≤8.00	PASS

Test Graphs

11B_Ant1_2412



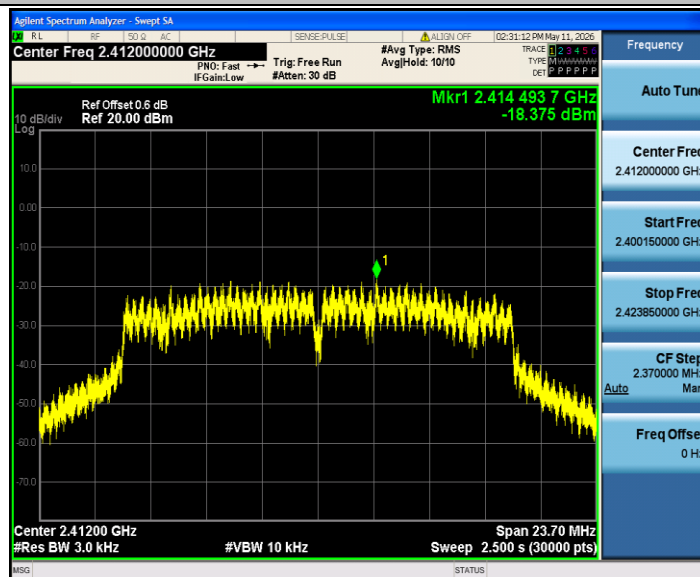
11B_Ant1_2437



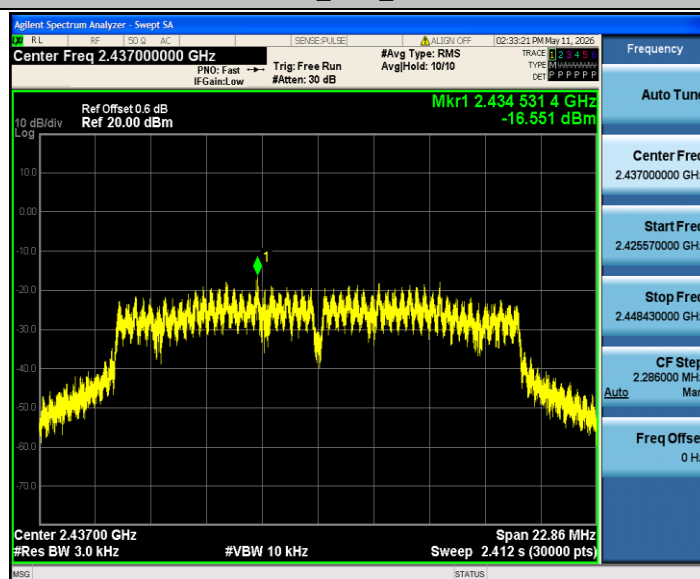
11B_Ant1_2462



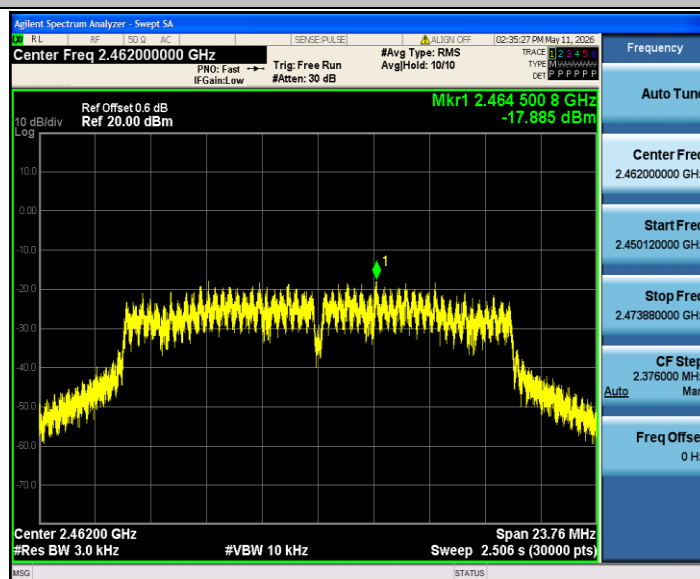
11G_Ant1_2412



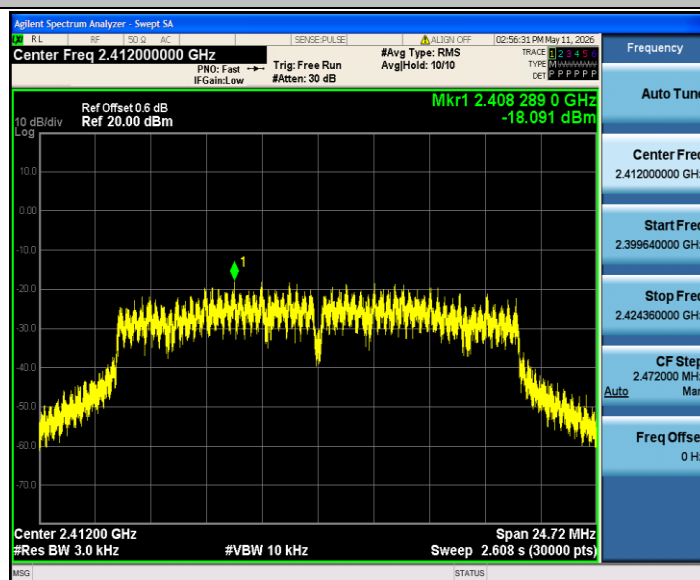
11G_Ant1_2437



11G_Ant1_2462



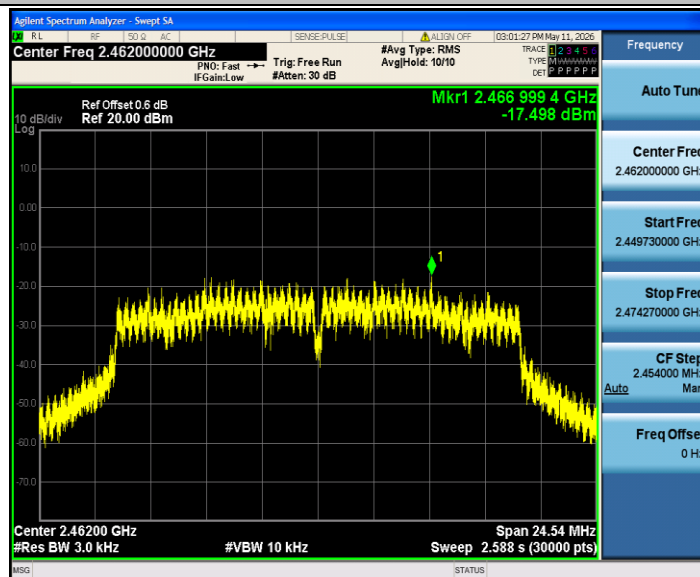
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



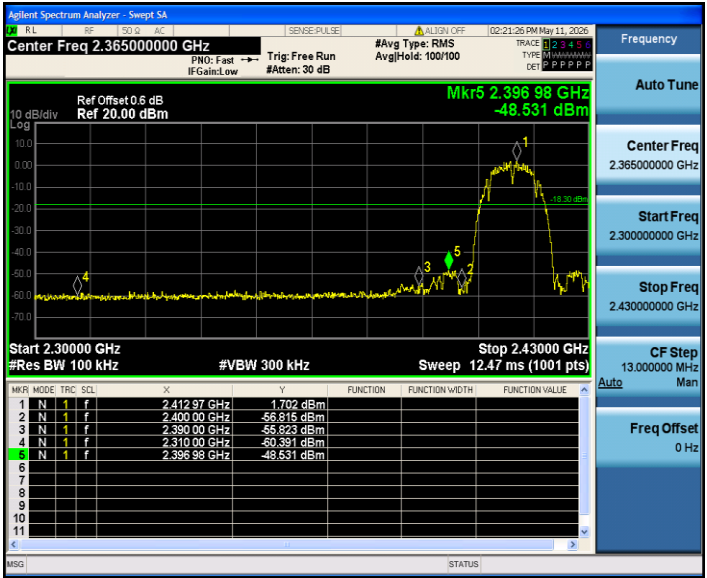
Appendix E: Band edge measurements

Test Result

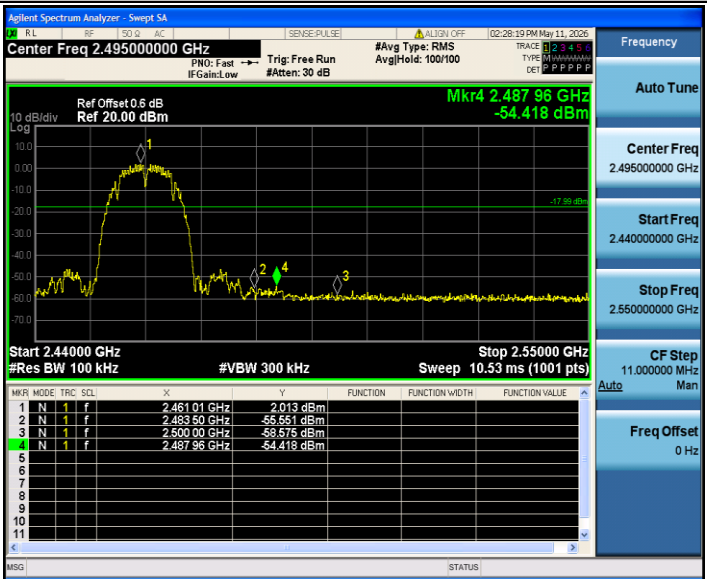
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	1.70	-48.53	≤-18.3	PASS
		High	2462	2.01	-54.42	≤-17.99	PASS
11G	Ant1	Low	2412	-2.53	-33.73	≤-22.53	PASS
		High	2462	-2.14	-57.09	≤-22.14	PASS
11N20SISO	Ant1	Low	2412	-2.61	-33.61	≤-22.61	PASS
		High	2462	-2.24	-57.48	≤-22.24	PASS

Test Graphs

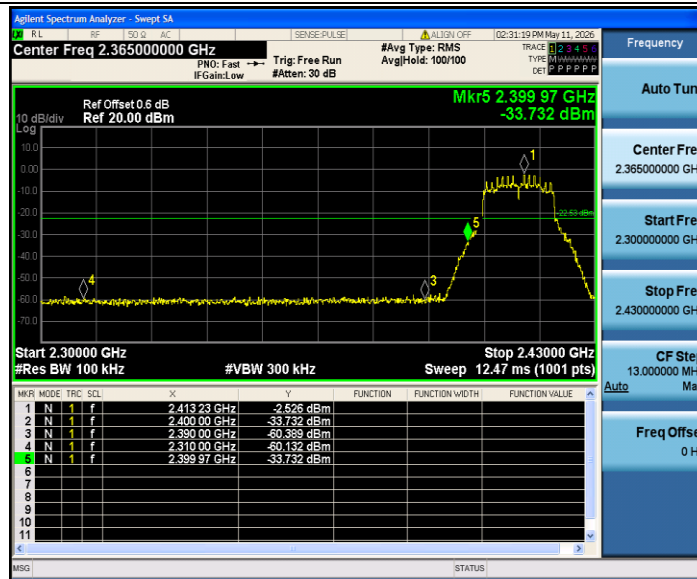
11B_Ant1_Low_2412



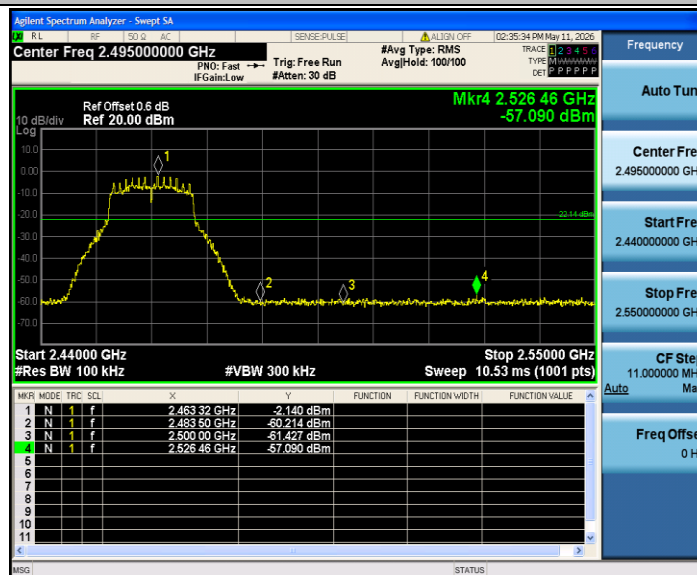
11B_Ant1_High_2462



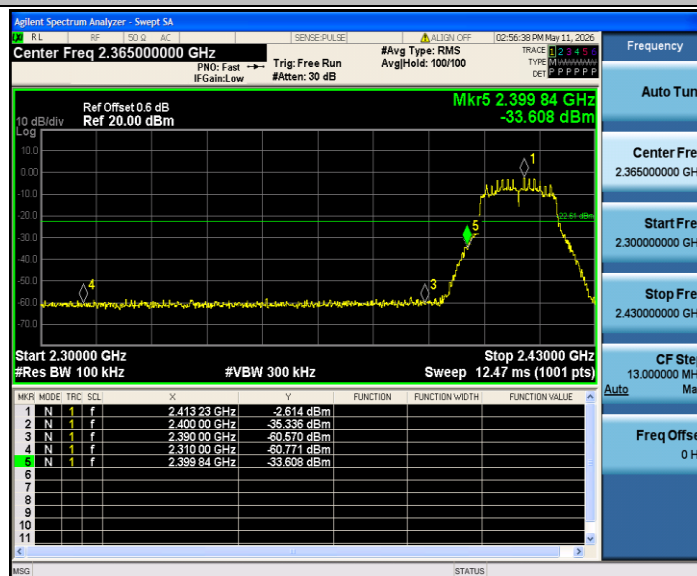
11G_Ant1_Low_2412



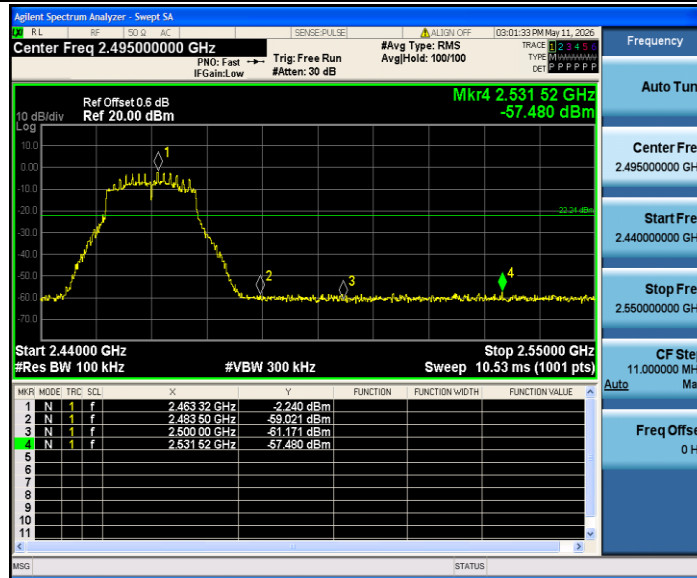
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



Appendix F: Conducted Spurious Emission

Test Result

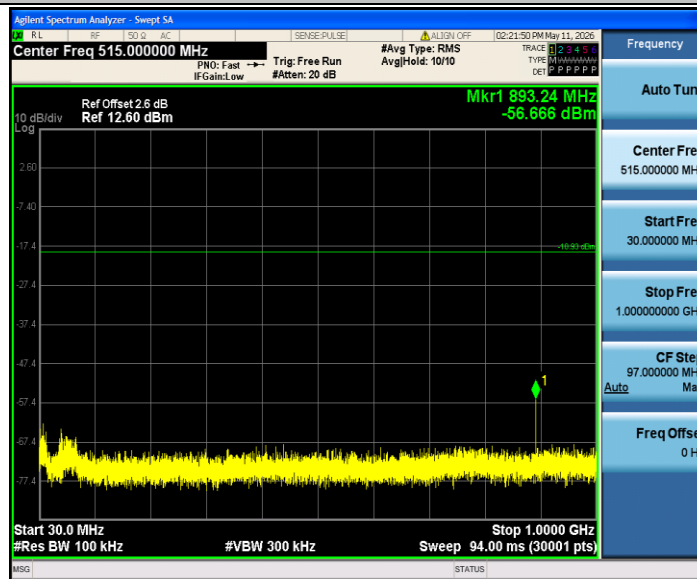
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.07	1.07	---	PASS
			30~1000	1.07	-56.67	≤-18.93	PASS
			1000~26500	1.07	-54.85	≤-18.93	PASS
		2437	Reference	2.20	2.20	---	PASS
			30~1000	2.20	-67.83	≤-17.8	PASS
			1000~26500	2.20	-55.82	≤-17.8	PASS
		2462	Reference	1.28	1.28	---	PASS
			30~1000	1.28	-67.89	≤-18.72	PASS
			1000~26500	1.28	-54.52	≤-18.72	PASS
11G	Ant1	2412	Reference	-2.46	-2.46	---	PASS
			30~1000	-2.46	-67.66	≤-22.46	PASS
			1000~26500	-2.46	-55.49	≤-22.46	PASS
		2437	Reference	-3.53	-3.53	---	PASS
			30~1000	-3.53	-67.73	≤-23.53	PASS
			1000~26500	-3.53	-54.5	≤-23.53	PASS
		2462	Reference	-2.87	-2.87	---	PASS
			30~1000	-2.87	-67.02	≤-22.87	PASS
			1000~26500	-2.87	-55.71	≤-22.87	PASS
11N20SISO	Ant1	2412	Reference	-2.51	-2.51	---	PASS
			30~1000	-2.51	-67.97	≤-22.51	PASS
			1000~26500	-2.51	-54.87	≤-22.51	PASS
		2437	Reference	-2.57	-2.57	---	PASS
			30~1000	-2.57	-68.16	≤-22.57	PASS
			1000~26500	-2.57	-55.84	≤-22.57	PASS
		2462	Reference	-2.85	-2.85	---	PASS
			30~1000	-2.85	-67.96	≤-22.85	PASS
			1000~26500	-2.85	-55.67	≤-22.85	PASS

Test Graphs

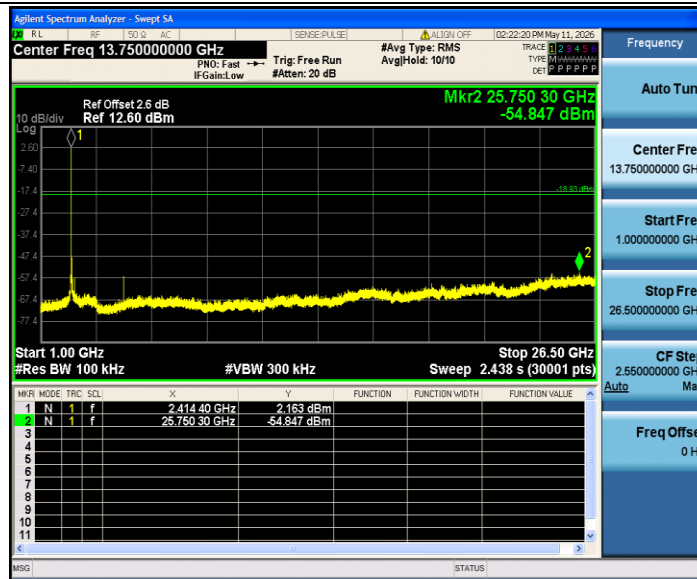
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



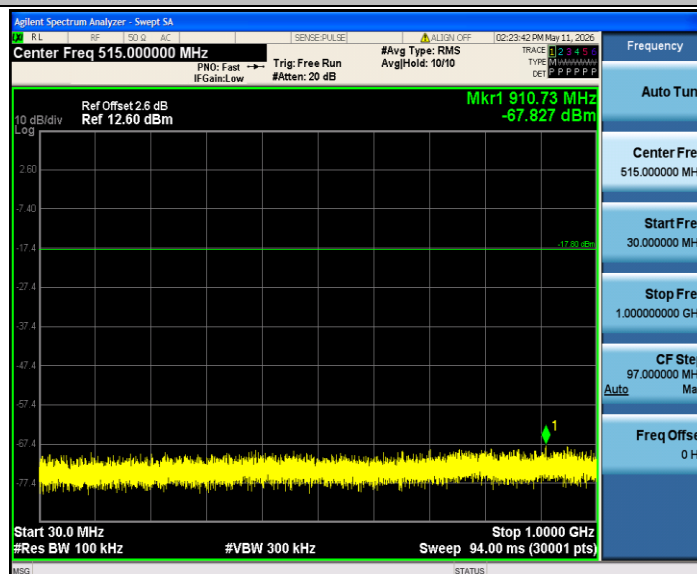
11B_Ant1_2412_1000~26500



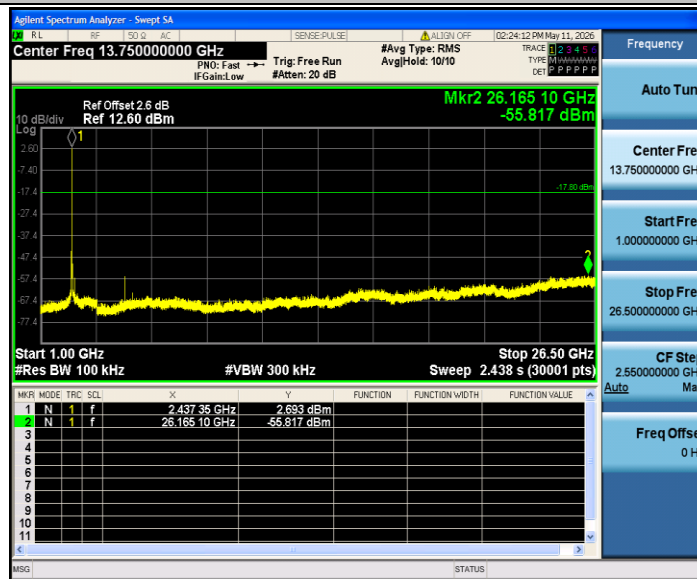
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



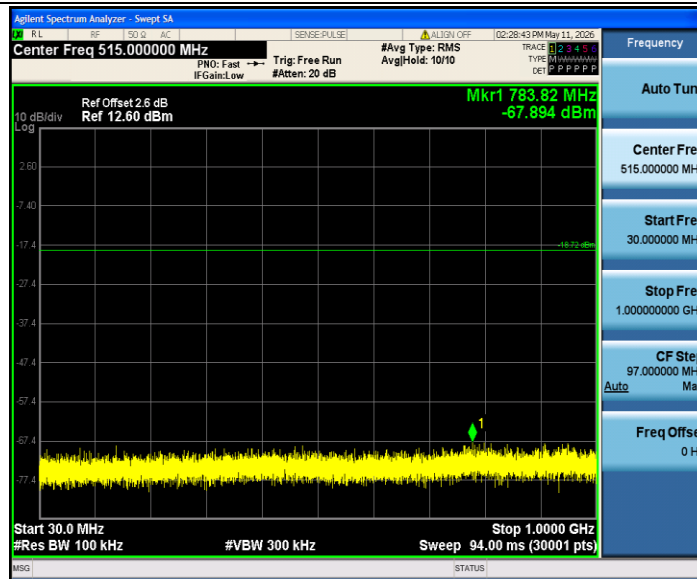
11B_Ant1_2437_1000~26500



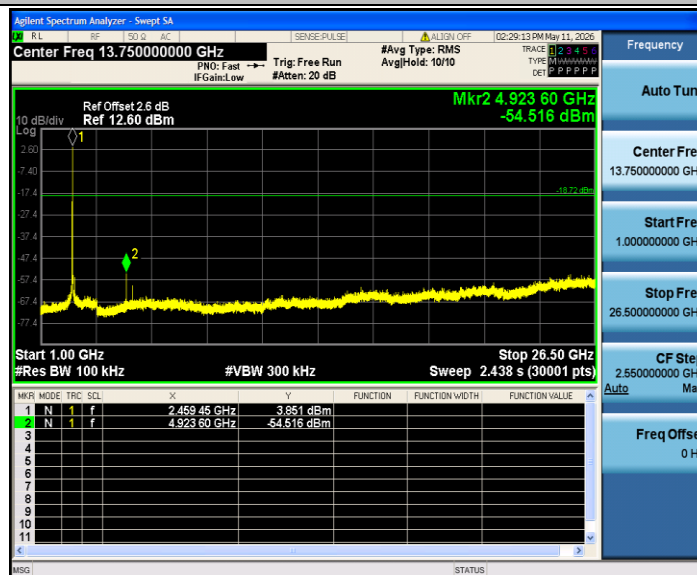
11B_Ant1_2462_0~Reference



11B_Ant1_2462_30~1000



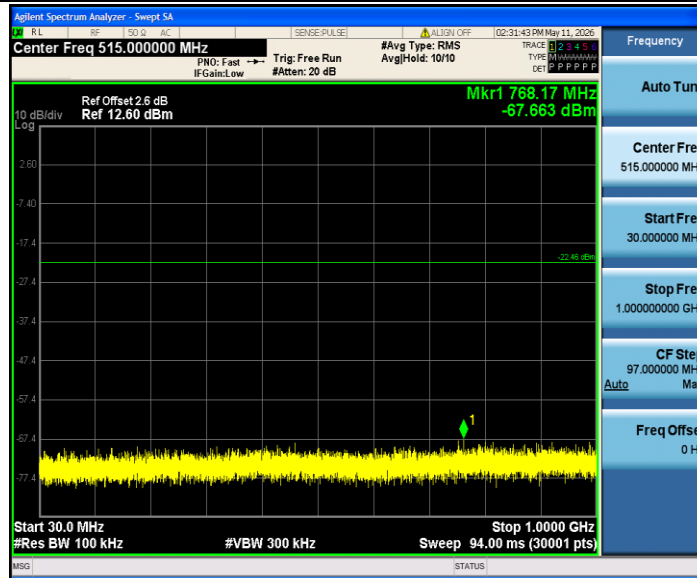
11B_Ant1_2462_1000~26500



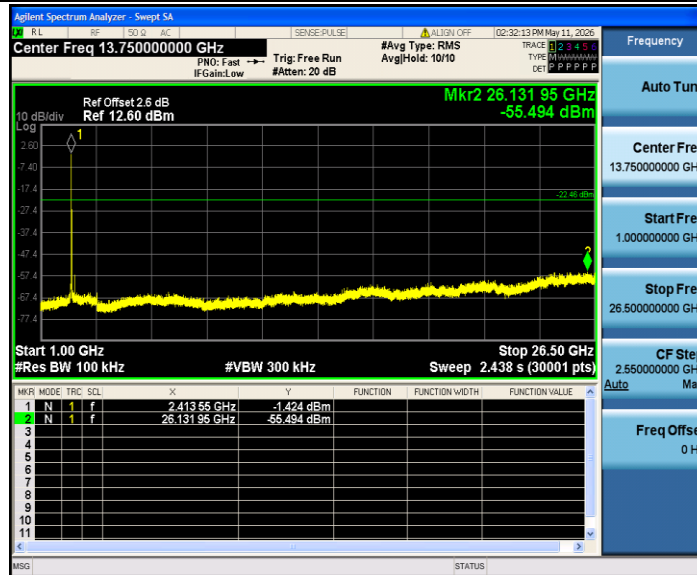
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



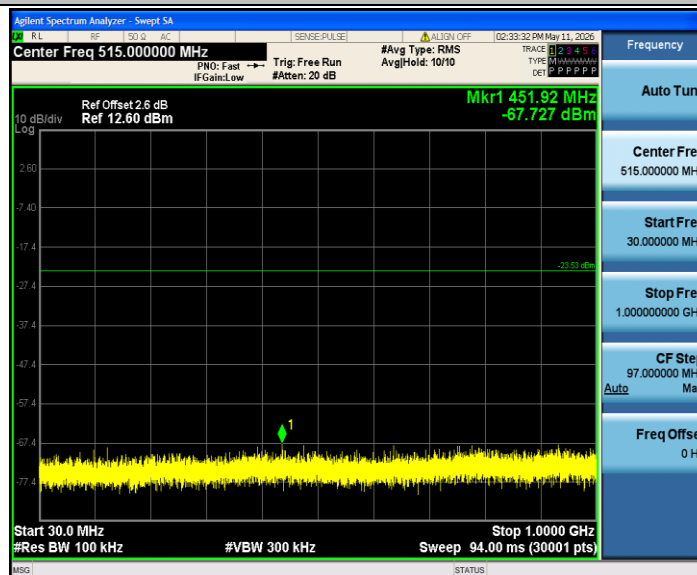
11G_Ant1_2412_1000~26500



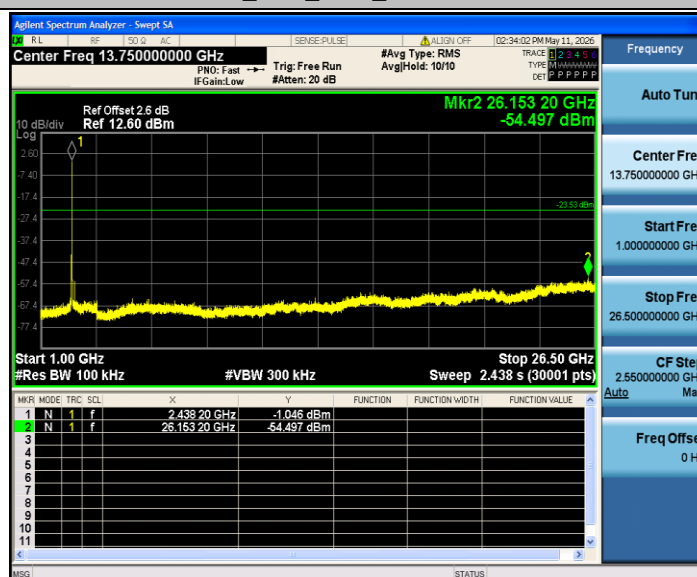
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



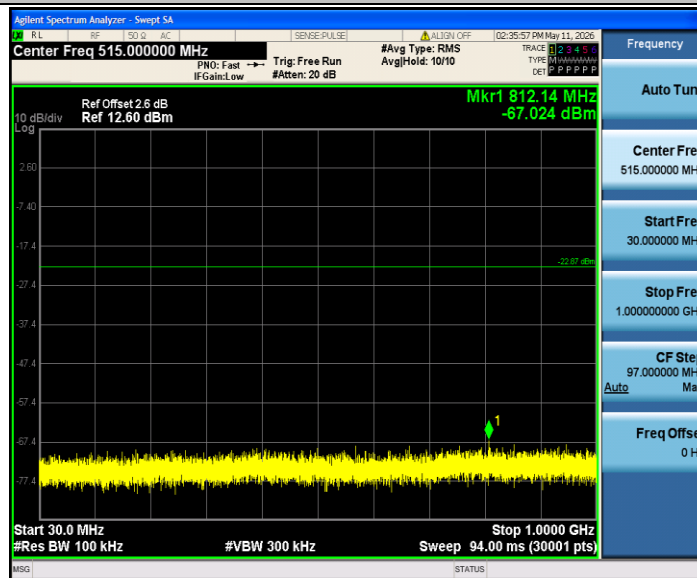
11G_Ant1_2437_1000~26500



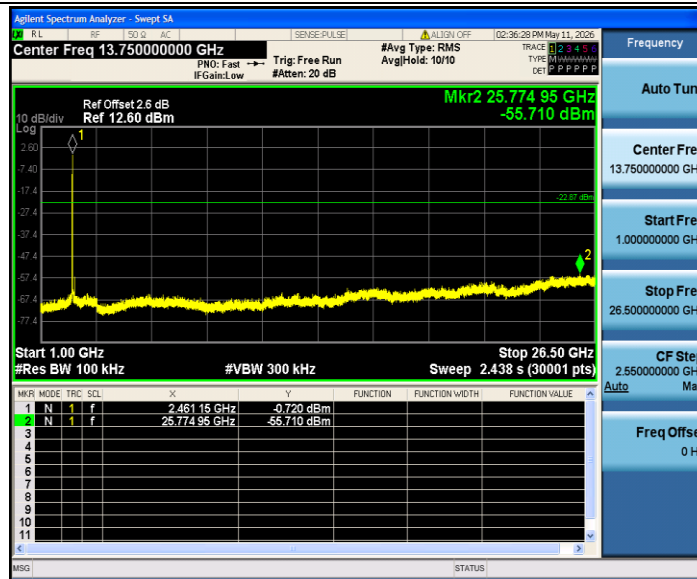
11G_Ant1_2462_0~Reference



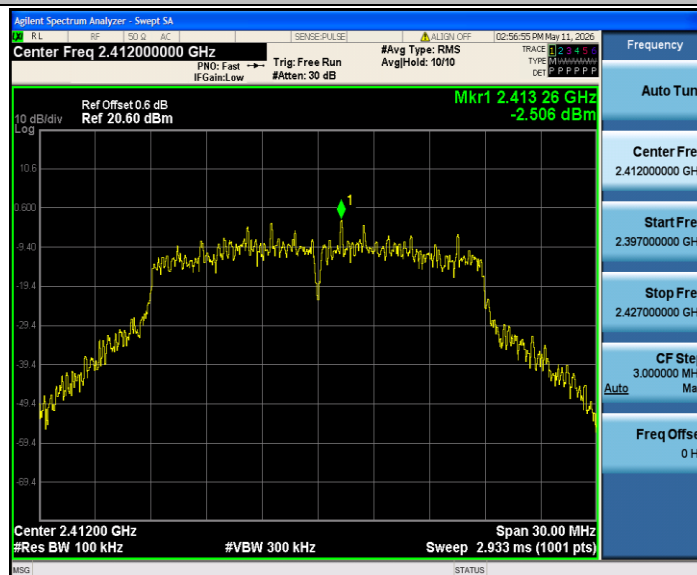
11G_Ant1_2462_30~1000



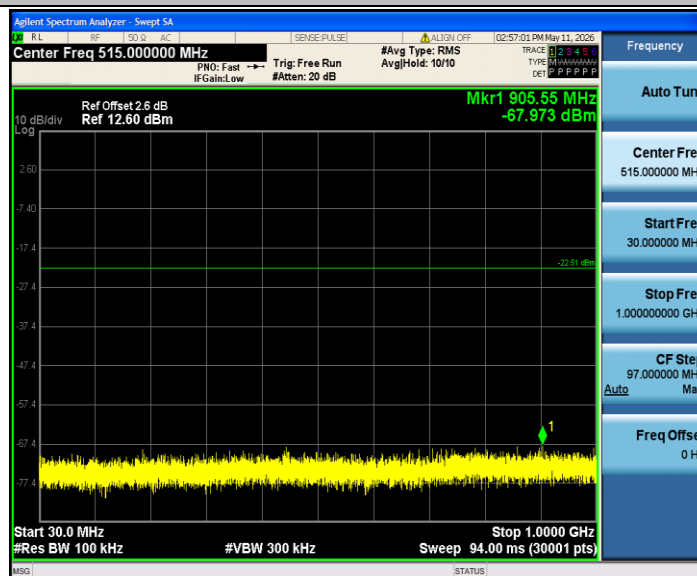
11G_Ant1_2462_1000~26500



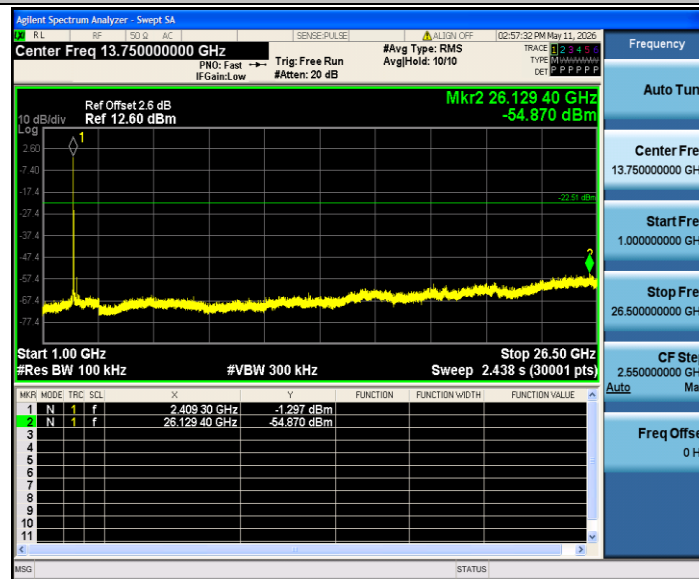
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



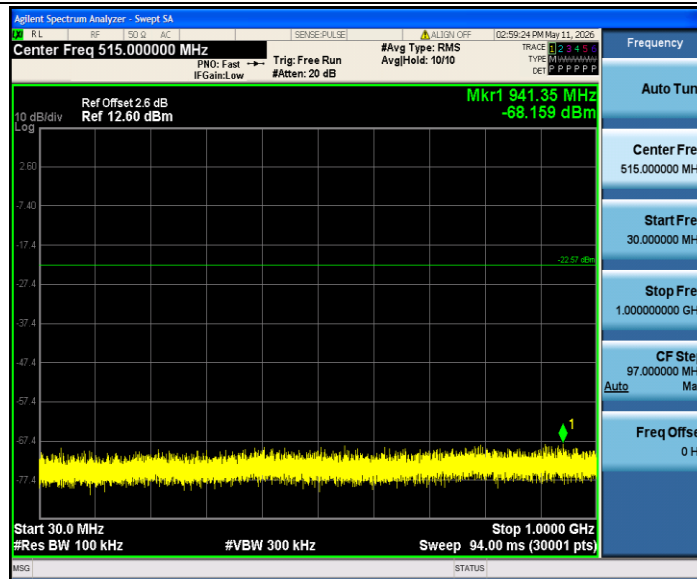
11N20SISO_Ant1_2412_1000~26500



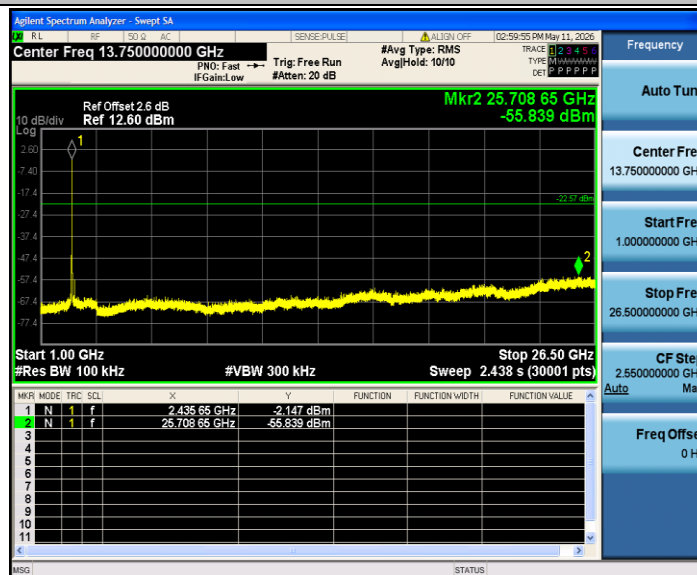
11N20SISO_Ant1_2437_0~Reference



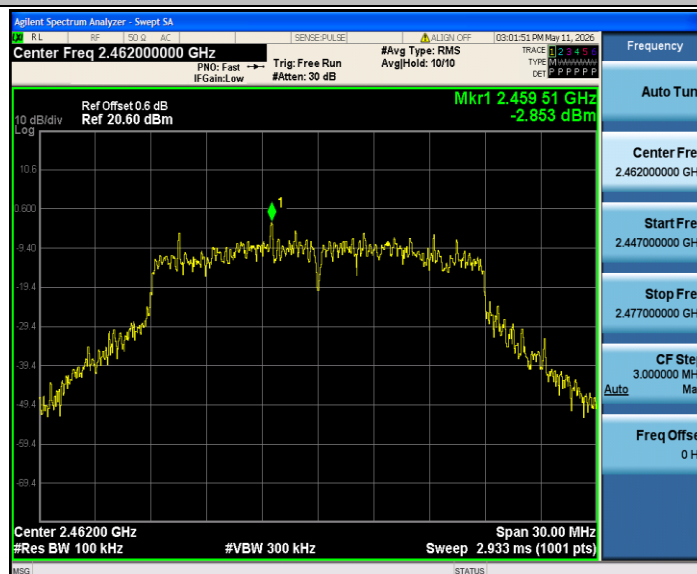
11N20SISO_Ant1_2437_30~1000



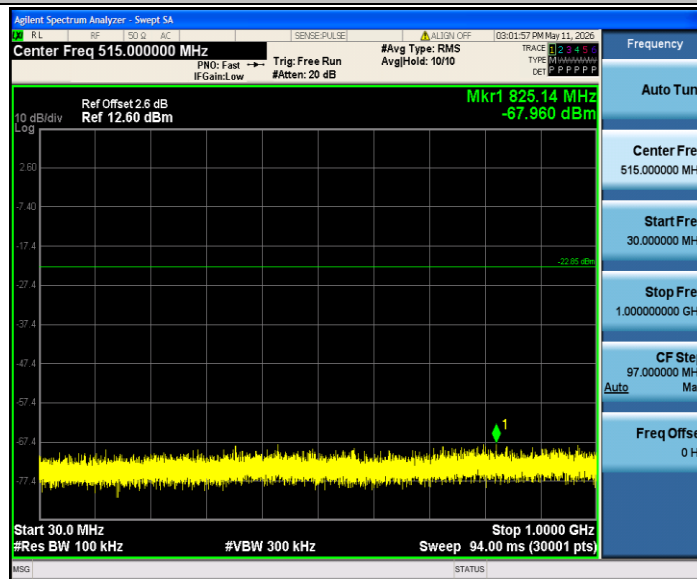
11N20SISO_Ant1_2437_1000~26500



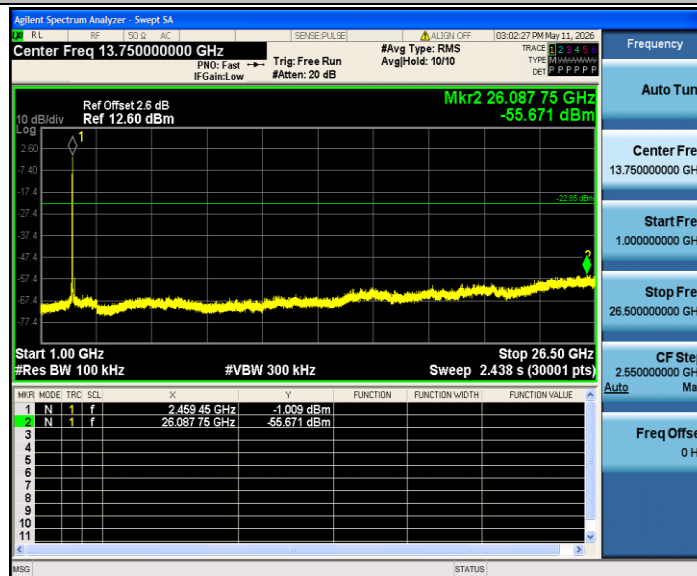
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500



Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor [dB]	T Factor [dB]
11B	Ant1	2412	8.36	8.40	99.52	0.02	0.12
		2437	8.35	8.40	99.40	0.03	0.12
		2462	8.35	8.39	99.52	0.02	0.12
11G	Ant1	2412	0.15	0.20	75.00	1.25	6.67
		2437	0.14	0.19	73.68	1.33	7.14
		2462	0.14	0.19	73.68	1.33	7.14
11N20SISO	Ant1	2412	0.17	0.22	77.27	1.12	5.88
		2437	0.18	0.22	81.82	0.87	5.56
		2462	0.18	0.23	78.26	1.06	5.56