

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2BYGQ-R1

Company : Shenzhen Yingrui Technology Co., Ltd.

EUT : Smart Digital Calendar

Model Number : R1

Report No. : CTA26090500101

Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

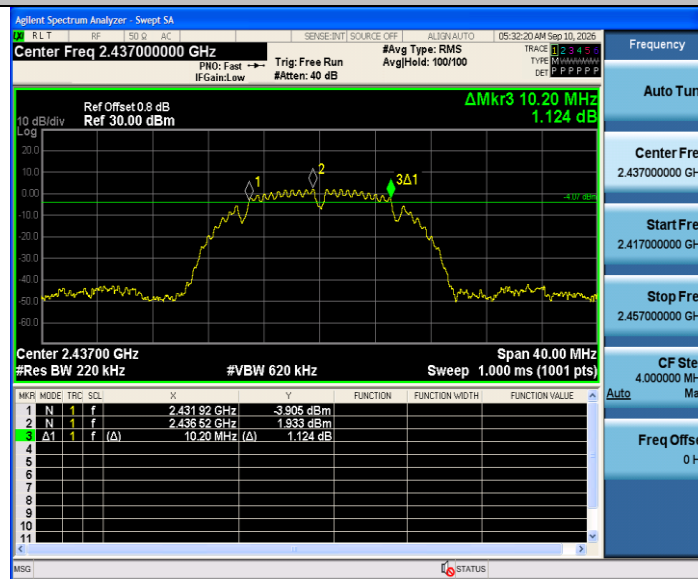
Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.200	2406.920	2417.120	0.5	PASS
		2437	10.200	2431.920	2442.120	0.5	PASS
		2462	10.240	2456.920	2467.160	0.5	PASS
11G	Ant1	2412	15.680	2404.320	2420.000	0.5	PASS
		2437	15.800	2429.040	2444.840	0.5	PASS
		2462	16.080	2454.040	2470.120	0.5	PASS
11N20SISO	Ant1	2412	16.760	2403.680	2420.440	0.5	PASS
		2437	17.120	2428.440	2445.560	0.5	PASS
		2462	17.080	2453.400	2470.480	0.5	PASS
11N40SISO	Ant1	2422	35.680	2404.320	2440.000	0.5	PASS
		2437	35.760	2419.400	2455.160	0.5	PASS
		2452	34.880	2435.200	2470.080	0.5	PASS

Test Graphs

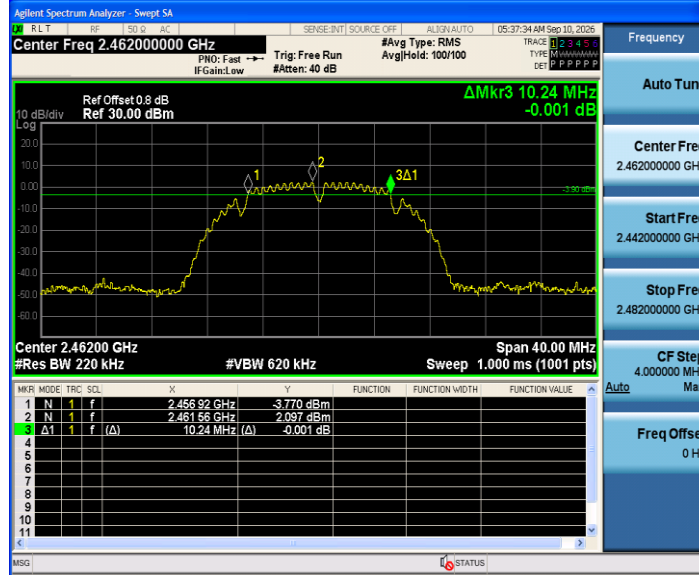
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



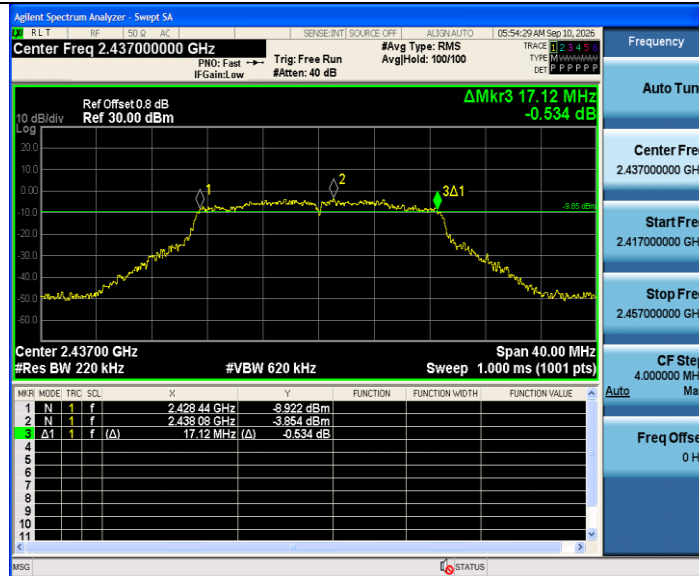
11G_Ant1_2462



11N20SISO_Ant1_2412



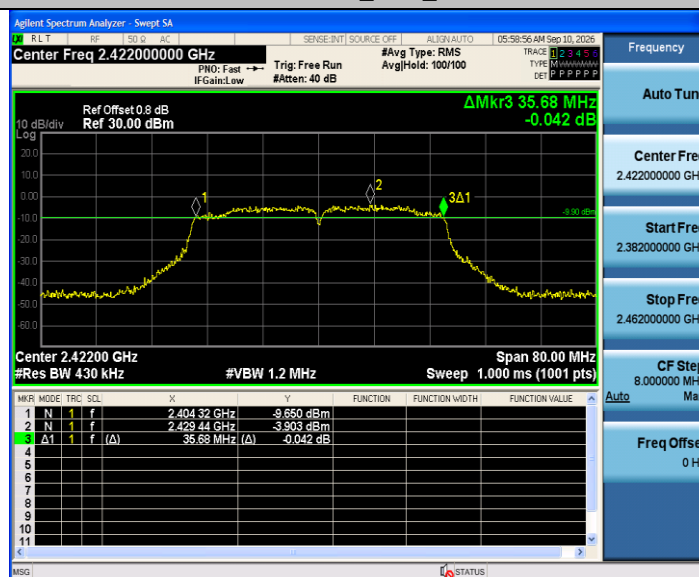
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



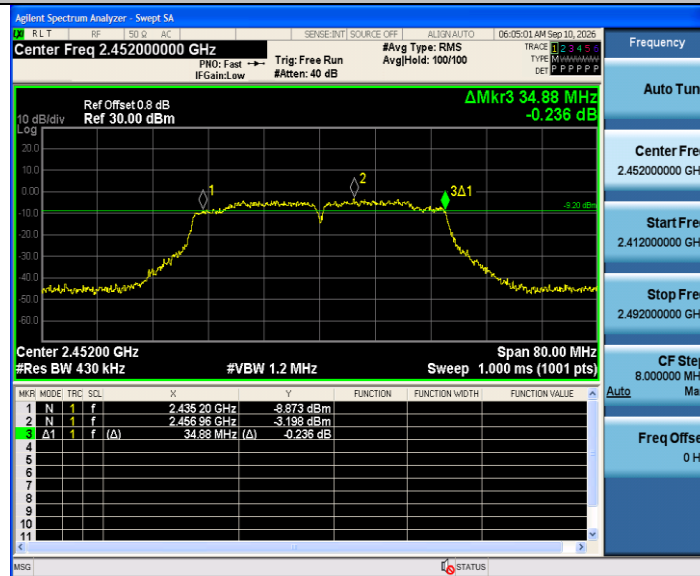
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



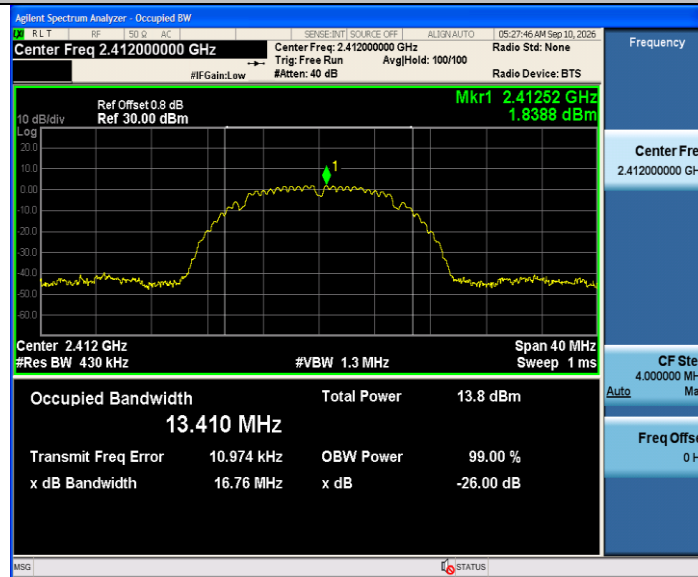
Appendix B: Occupied Channel Bandwidth

Test Result

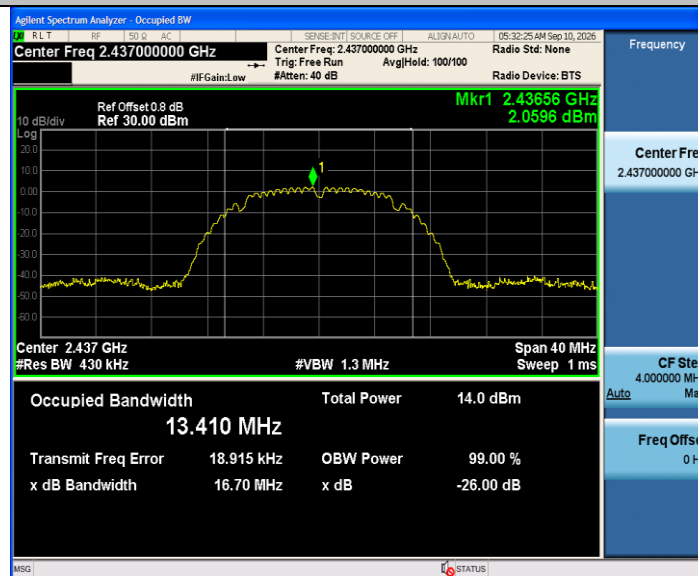
Test Mode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.410	2405.3060	2418.7160	---	---
		2437	13.410	2430.3139	2443.7239	---	---
		2462	13.413	2455.3182	2468.7312	---	---
11G	Ant1	2412	16.900	2403.5721	2420.4721	---	---
		2437	16.898	2428.5878	2445.4858	---	---
		2462	16.792	2453.6841	2470.4761	---	---
11N20SISO	Ant1	2412	17.978	2403.0453	2421.0233	---	---
		2437	17.908	2428.0869	2445.9949	---	---
		2462	17.894	2453.1051	2470.9991	---	---
11N40SISO	Ant1	2422	36.056	2404.1252	2440.1812	---	---
		2437	36.039	2419.1200	2455.1590	---	---
		2452	36.064	2434.0818	2470.1458	---	---

Test Graphs

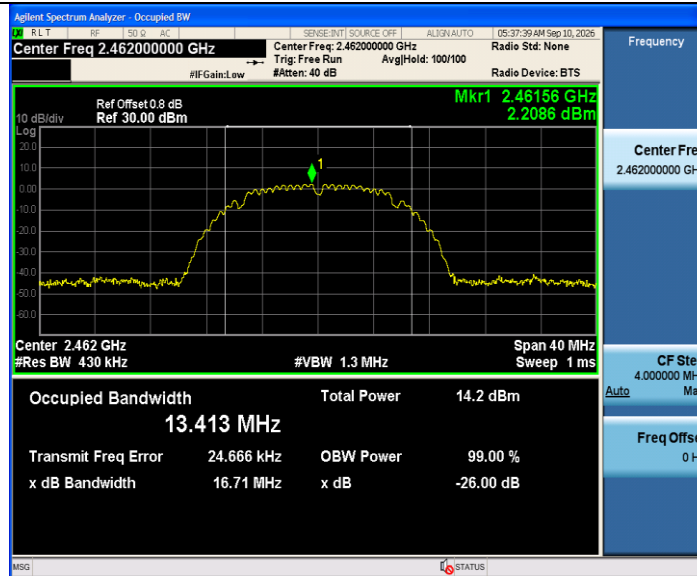
11B_Ant1_2412



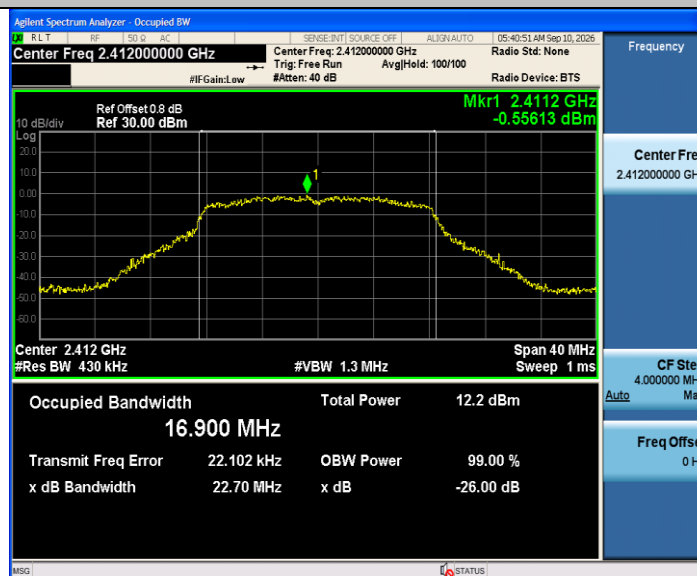
11B_Ant1_2437



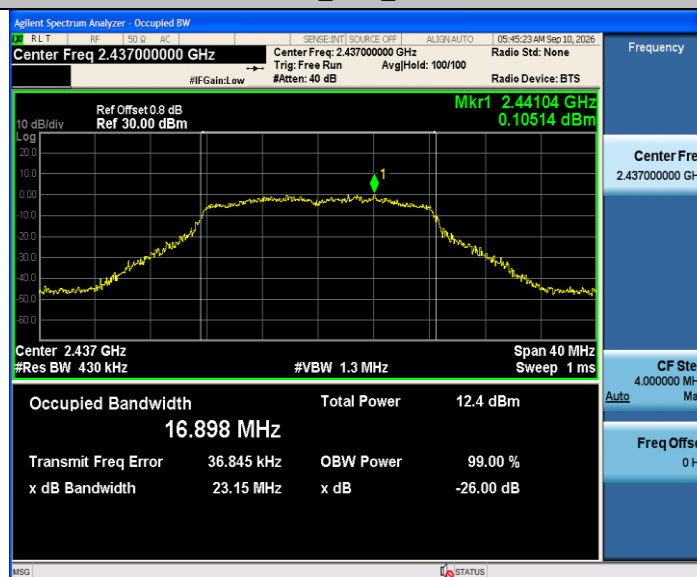
11B_Ant1_2462



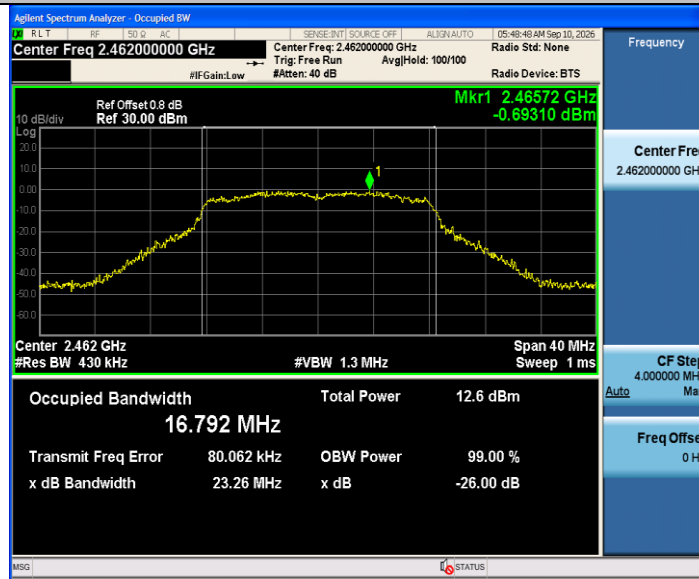
11G_Ant1_2412



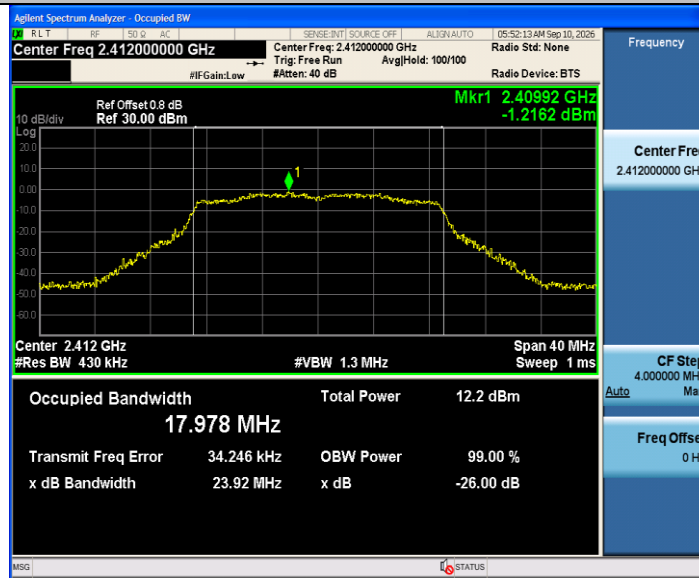
11G_Ant1_2437



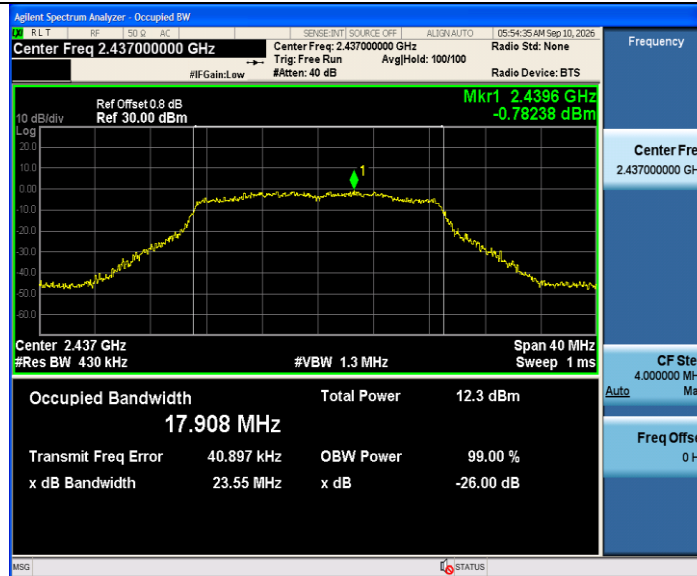
11G_Ant1_2462



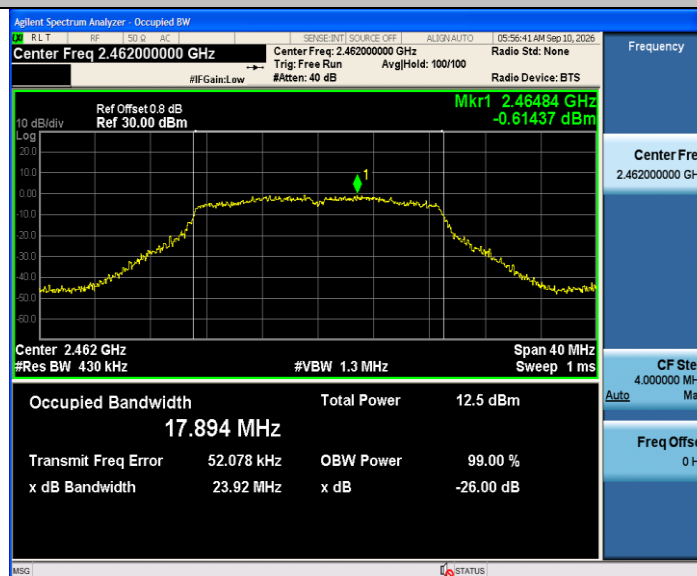
11N20SISO_Ant1_2412



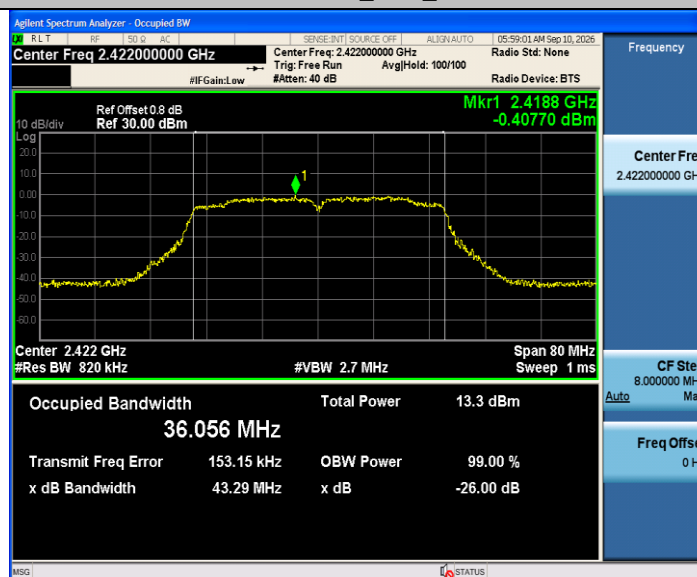
11N20SISO_Ant1_2437



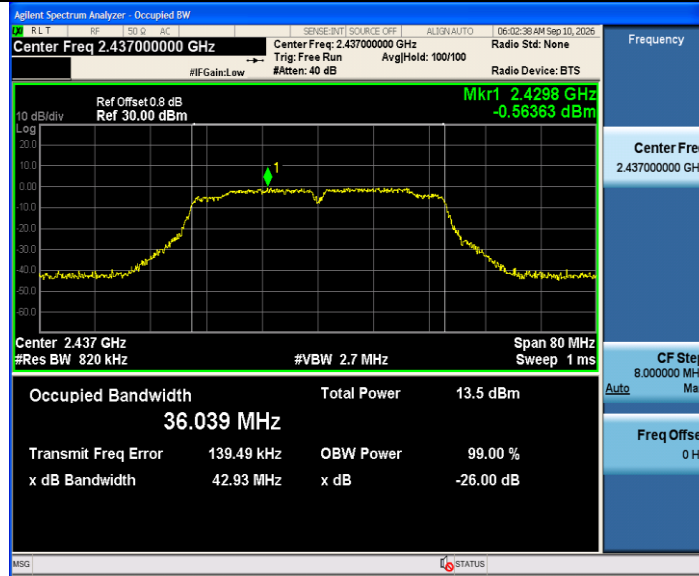
11N20SISO_Ant1_2462



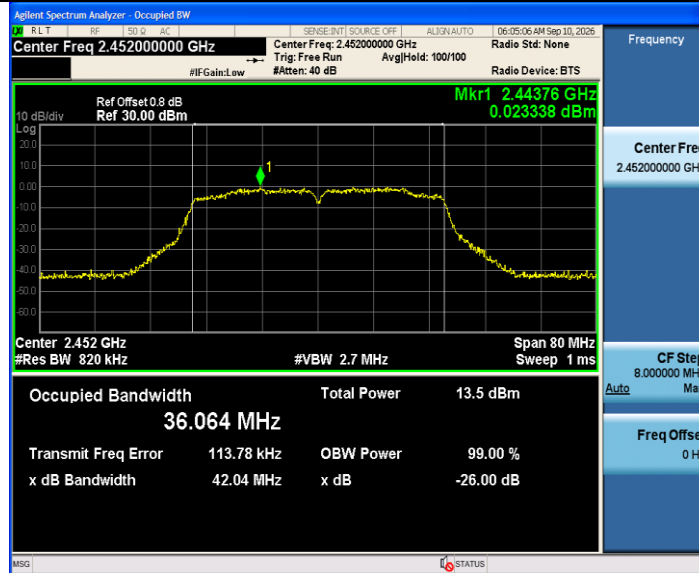
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.48	≤30.00	PASS
		2437	13.70	≤30.00	PASS
		2462	13.85	≤30.00	PASS
11G	Ant1	2412	13.07	≤30.00	PASS
		2437	13.26	≤30.00	PASS
		2462	13.44	≤30.00	PASS
11N20SISO	Ant1	2412	13.04	≤30.00	PASS
		2437	13.13	≤30.00	PASS
		2462	13.38	≤30.00	PASS
11N40SISO	Ant1	2422	13.46	≤30.00	PASS
		2437	13.60	≤30.00	PASS
		2452	13.62	≤30.00	PASS

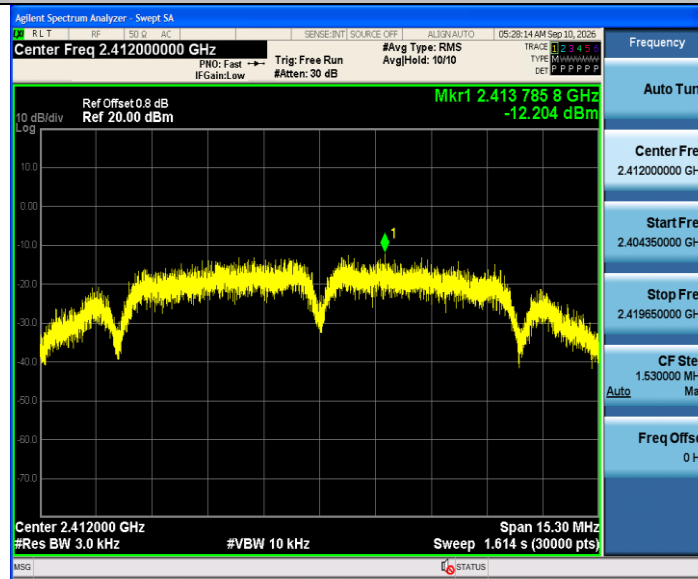
Appendix D: Maximum power spectral density

Test Result

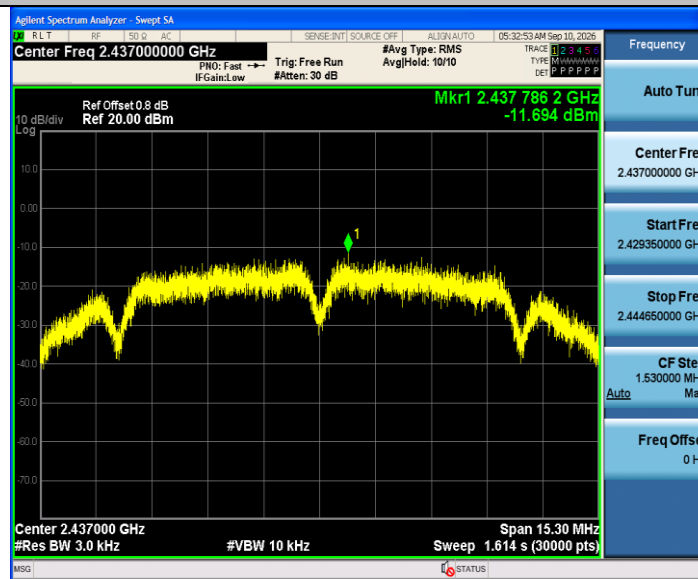
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-12.20	≤8.00	PASS
		2437	-11.69	≤8.00	PASS
		2462	-11.36	≤8.00	PASS
11G	Ant1	2412	-18.30	≤8.00	PASS
		2437	-17.83	≤8.00	PASS
		2462	-16.10	≤8.00	PASS
11N20SISO	Ant1	2412	-18.76	≤8.00	PASS
		2437	-18.32	≤8.00	PASS
		2462	-18.07	≤8.00	PASS
11N40SISO	Ant1	2422	-20.43	≤8.00	PASS
		2437	-20.65	≤8.00	PASS
		2452	-18.75	≤8.00	PASS

Test Graphs

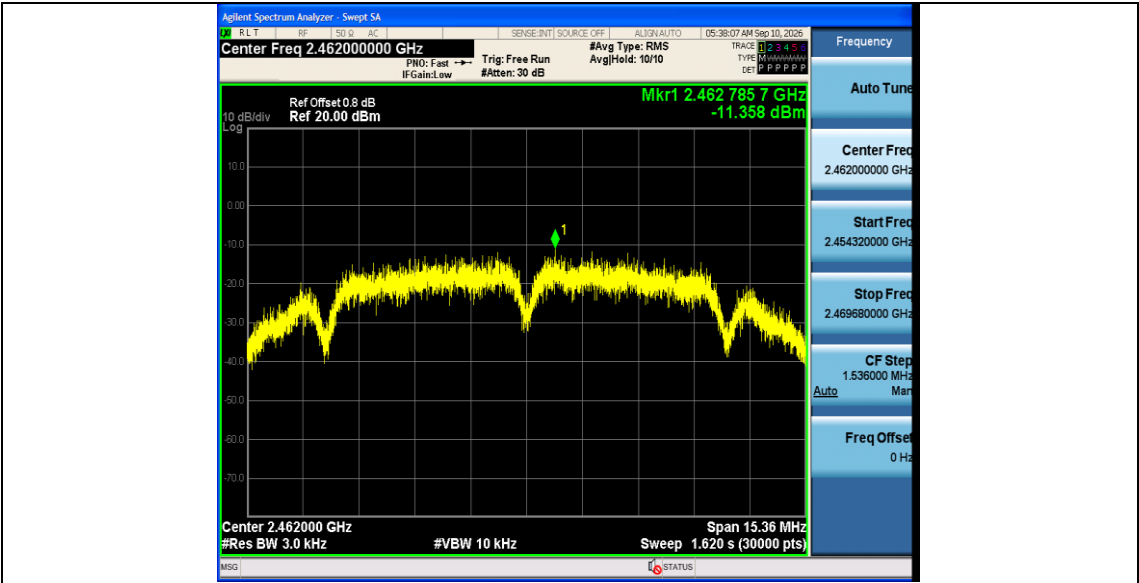
11B_Ant1_2412



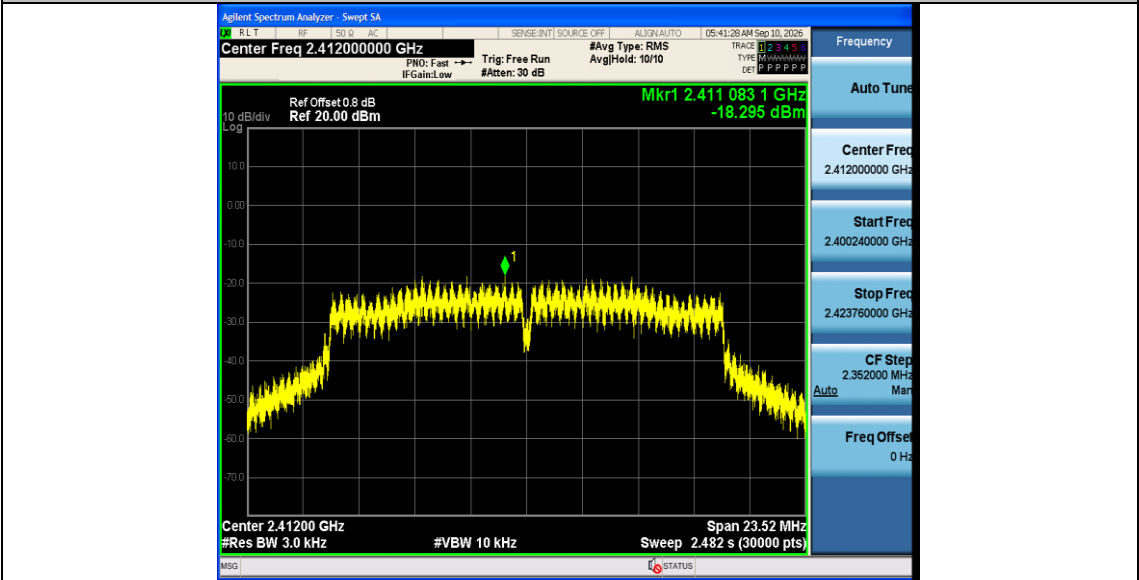
11B_Ant1_2437



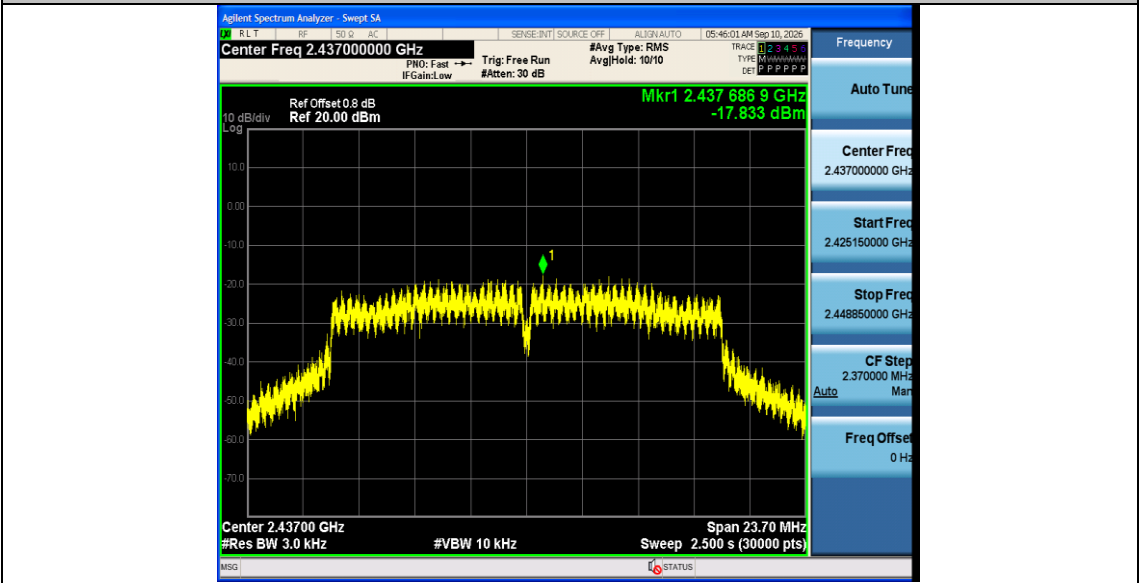
11B_Ant1_2462



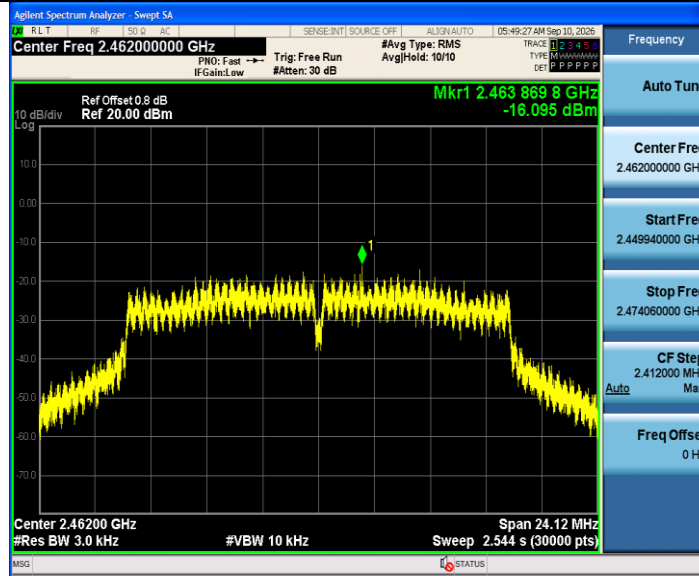
11G_Ant1_2412



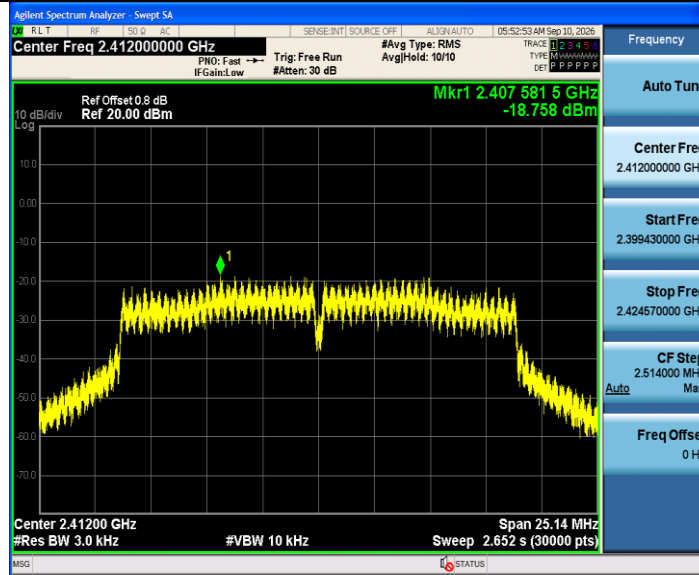
11G_Ant1_2437



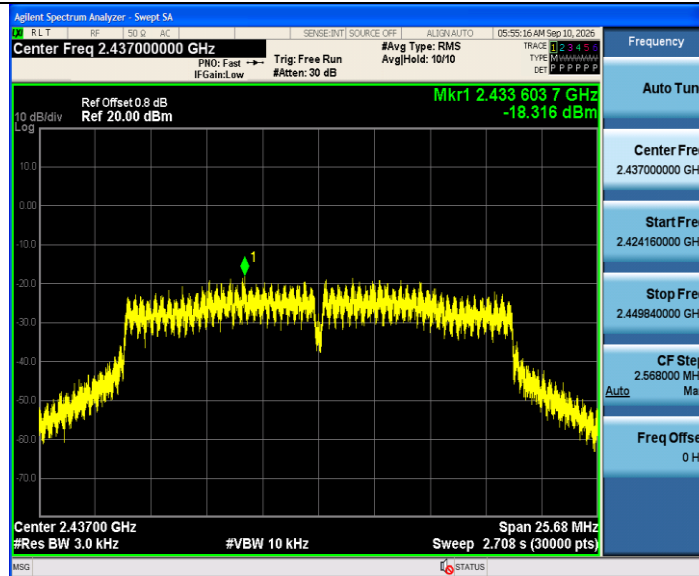
11G_Ant1_2462



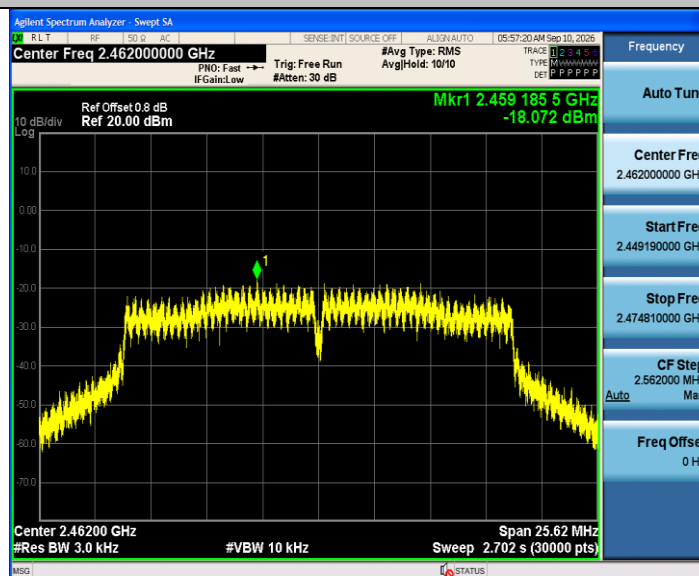
11N20SISO_Ant1_2412



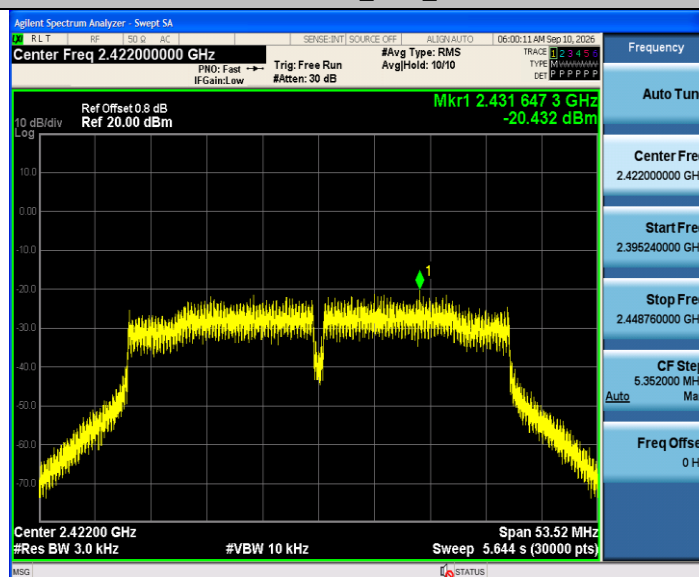
11N20SISO_Ant1_2437



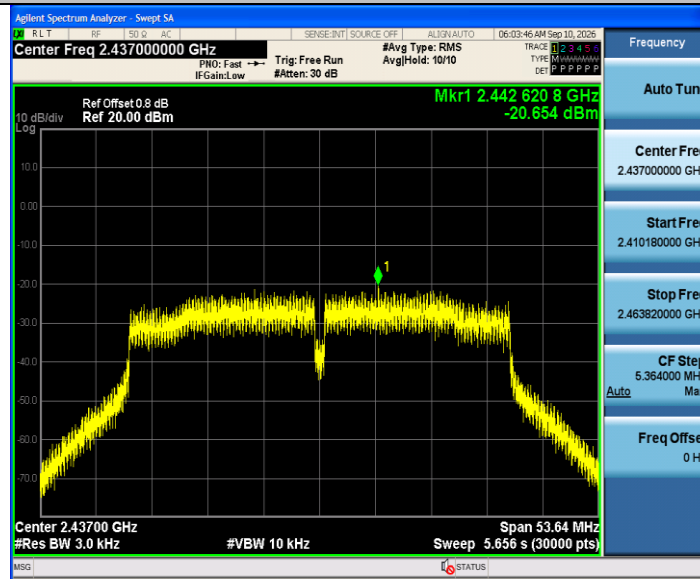
11N20SISO_Ant1_2462



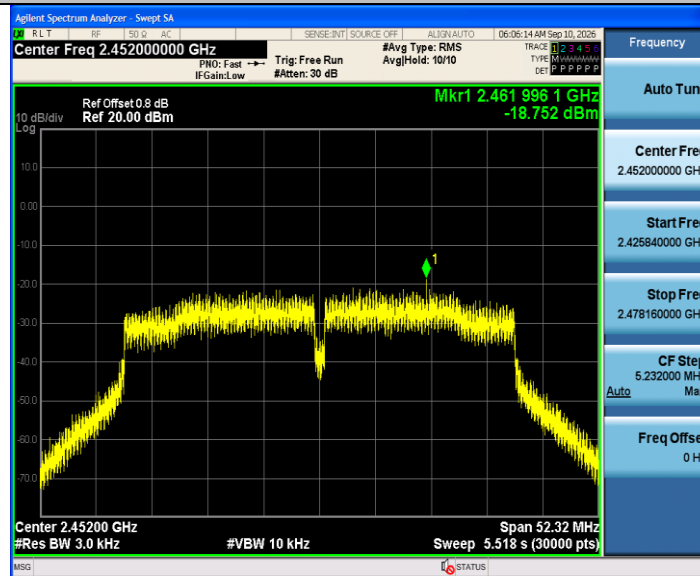
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



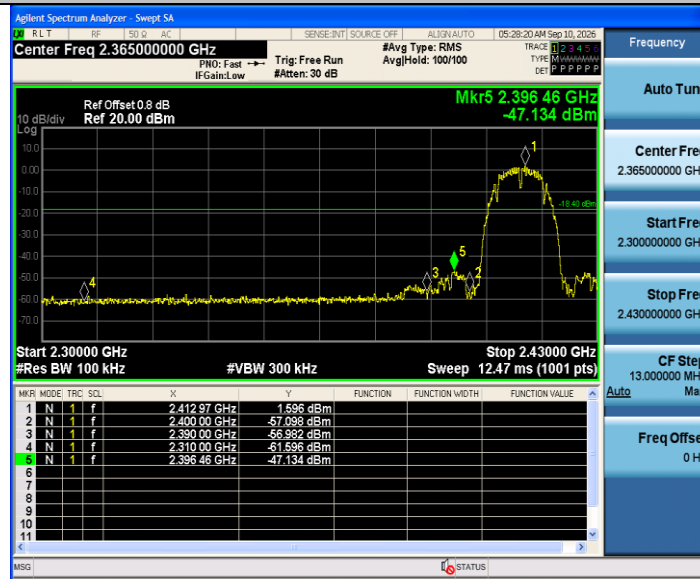
Appendix E: Band edge measurements

Test Result

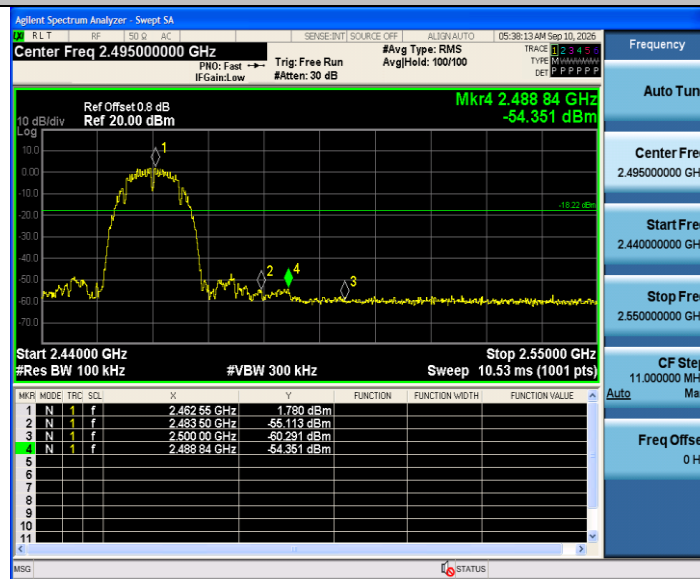
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	1.60	-47.13	≤-18.4	PASS
		High	2462	1.78	-54.35	≤-18.22	PASS
11G	Ant1	Low	2412	-4.44	-34.35	≤-24.44	PASS
		High	2462	-4.78	-57.9	≤-24.78	PASS
11N20SISO	Ant1	Low	2412	-4.73	-34.65	≤-24.73	PASS
		High	2462	-5.48	-57.65	≤-25.48	PASS
11N40SISO	Ant1	Low	2422	-7.91	-34.91	≤-27.91	PASS
		High	2452	-7.14	-56.65	≤-27.14	PASS

Test Graphs

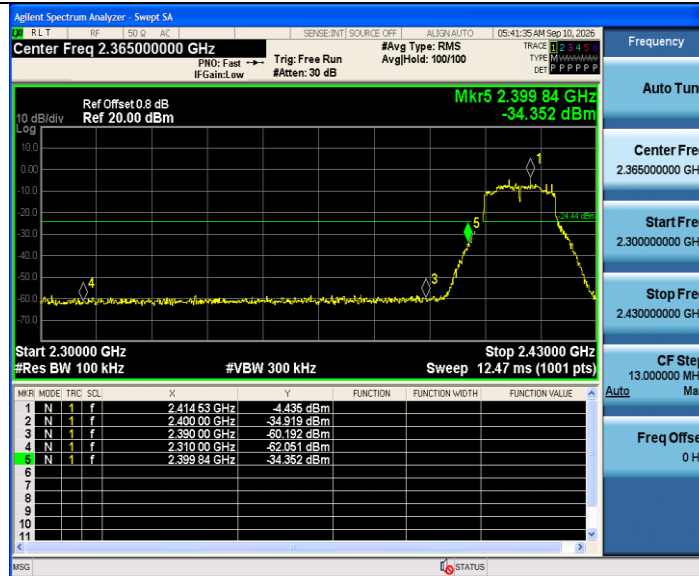
11B_Ant1_Low_2412



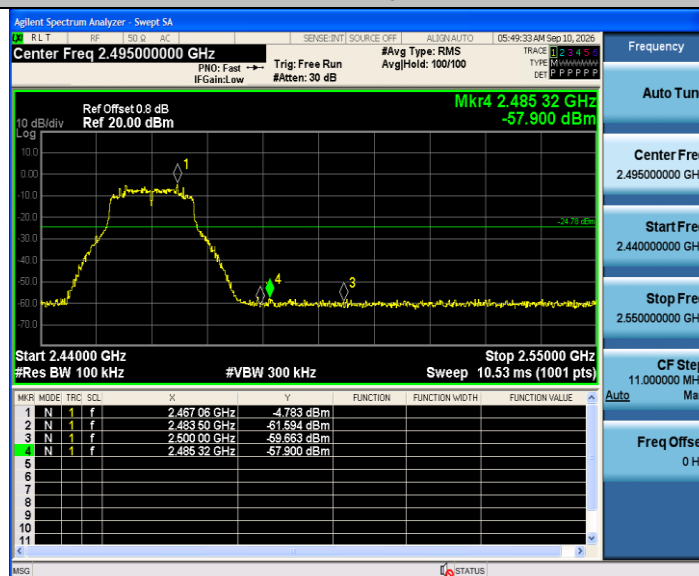
11B_Ant1_High_2462



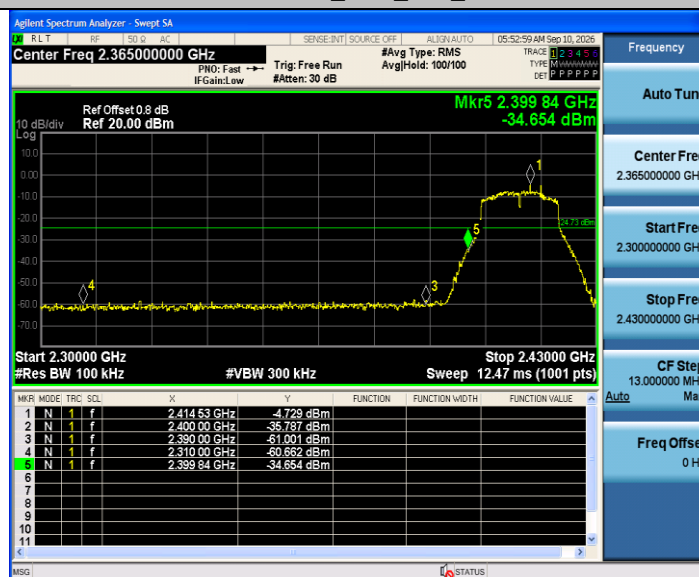
11G_Ant1_Low_2412



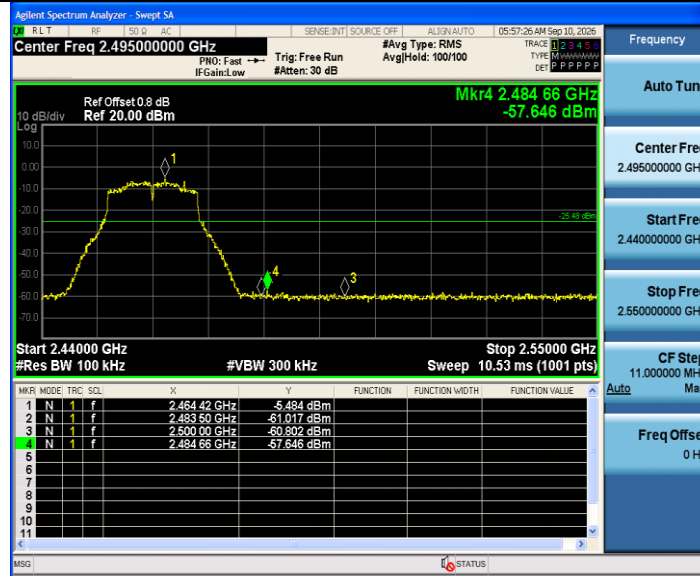
11G_Ant1_High_2462



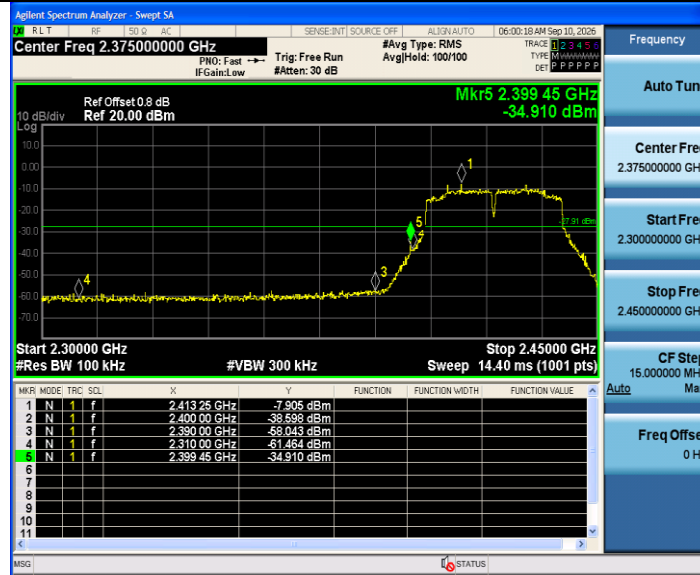
11N20SISO_Ant1_Low_2412



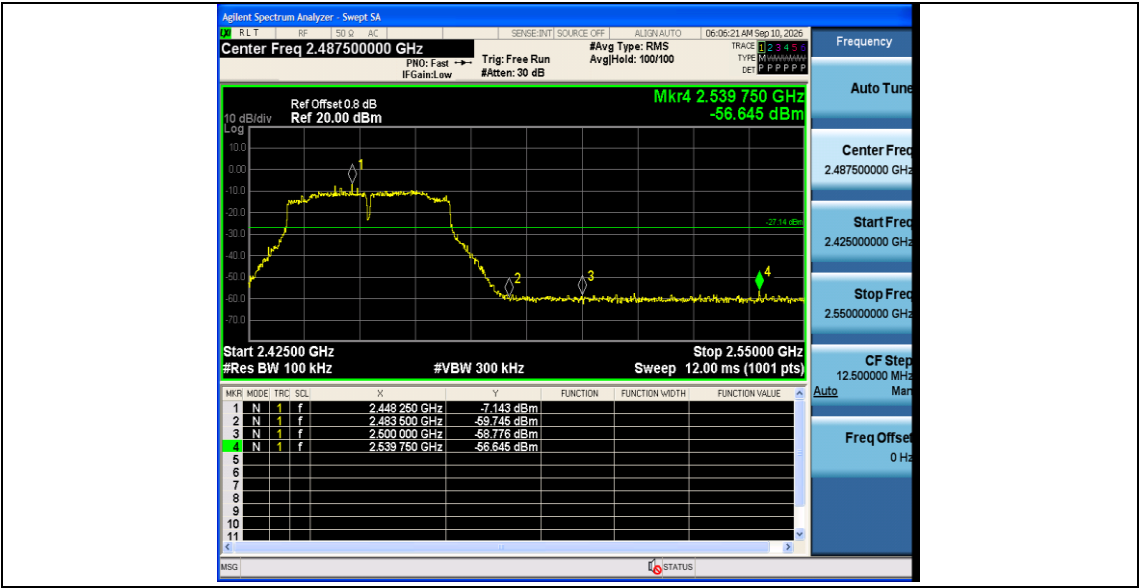
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



Appendix F: Conducted Spurious Emission

Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	0.28	0.28	---	PASS
			30~1000	0.28	-67.75	≤-19.72	PASS
			1000~26500	0.28	-46.6	≤-19.72	PASS
		2437	Reference	0.60	0.60	---	PASS
			30~1000	0.60	-67.47	≤-19.4	PASS
			1000~26500	0.60	-46.53	≤-19.4	PASS
		2462	Reference	1.96	1.96	---	PASS
			30~1000	1.96	-67.85	≤-18.04	PASS
			1000~26500	1.96	-46.14	≤-18.04	PASS
11G	Ant1	2412	Reference	-4.84	-4.84	---	PASS
			30~1000	-4.84	-68.14	≤-24.84	PASS
			1000~26500	-4.84	-45.55	≤-24.84	PASS
		2437	Reference	-7.68	-7.68	---	PASS
			30~1000	-7.68	-67.34	≤-27.68	PASS
			1000~26500	-7.68	-46.18	≤-27.68	PASS
		2462	Reference	-6.83	-6.83	---	PASS
			30~1000	-6.83	-67.93	≤-26.83	PASS
			1000~26500	-6.83	-45.93	≤-26.83	PASS
11N20SISO	Ant1	2412	Reference	-6.11	-6.11	---	PASS
			30~1000	-6.11	-67.89	≤-26.11	PASS
			1000~26500	-6.11	-45.77	≤-26.11	PASS
		2437	Reference	-6.55	-6.55	---	PASS
			30~1000	-6.55	-67.78	≤-26.55	PASS
			1000~26500	-6.55	-46.07	≤-26.55	PASS
		2462	Reference	-6.01	-6.01	---	PASS
			30~1000	-6.01	-67.43	≤-26.01	PASS
			1000~26500	-6.01	-45.92	≤-26.01	PASS
11N40SISO	Ant1	2422	Reference	-7.50	-7.50	---	PASS
			30~1000	-7.50	-67.61	≤-27.5	PASS
			1000~26500	-7.50	-46.23	≤-27.5	PASS
		2437	Reference	-9.96	-9.96	---	PASS
			30~1000	-9.96	-68.22	≤-29.96	PASS
			1000~26500	-9.96	-46	≤-29.96	PASS
		2452	Reference	-10.08	-10.08	---	PASS
			30~1000	-10.08	-67.01	≤-30.08	PASS
			1000~26500	-10.08	-45.77	≤-30.08	PASS

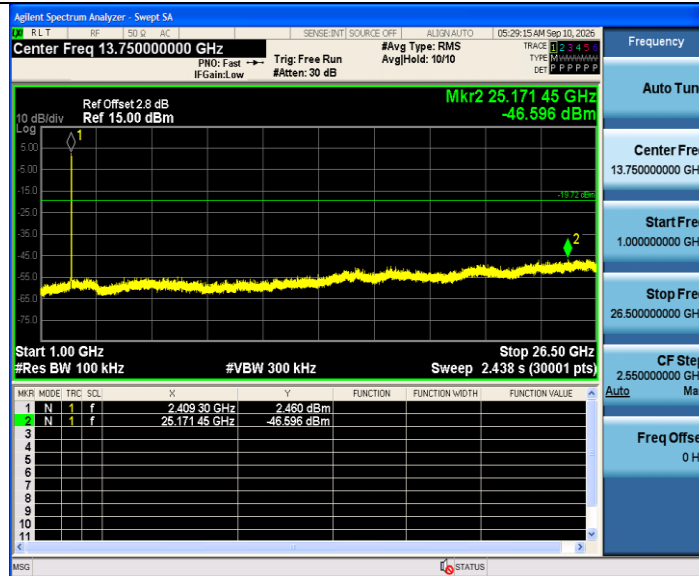
The figure consists of two screenshots of an Agilent Spectrum Analyzer interface, showing frequency spectra for two different antenna configurations.

Top Screenshot: 11B_Ant1_2412_0~Reference

- Center Freq:** 2.41200000 GHz
- Ref Offset:** 0.8 dB
- Ref:** 20.80 dBm
- Mkr1:** 2.409 00 GHz, 0.280 dBm
- Span:** 30.00 MHz
- Res BW:** 100 kHz
- #VBW:** 300 kHz
- Sweep:** 2.933 ms (1001 pts)

Bottom Screenshot: 11B_Ant1_2412_30~1000

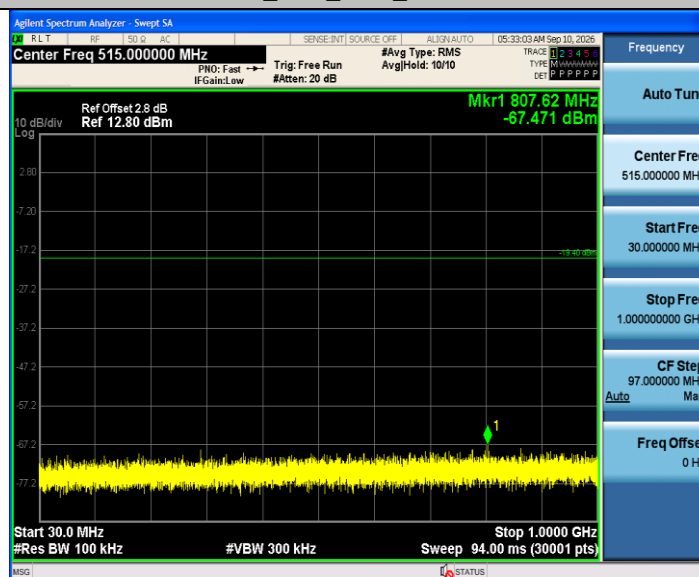
- Center Freq:** 515.000000 MHz
- Ref Offset:** 2.8 dB
- Ref:** 12.80 dBm
- Mkr1:** 924.34 MHz, -67.752 dBm
- Span:** 30.0 MHz
- Res BW:** 100 kHz
- #VBW:** 300 kHz
- Sweep:** 94.00 ms (30001 pts)



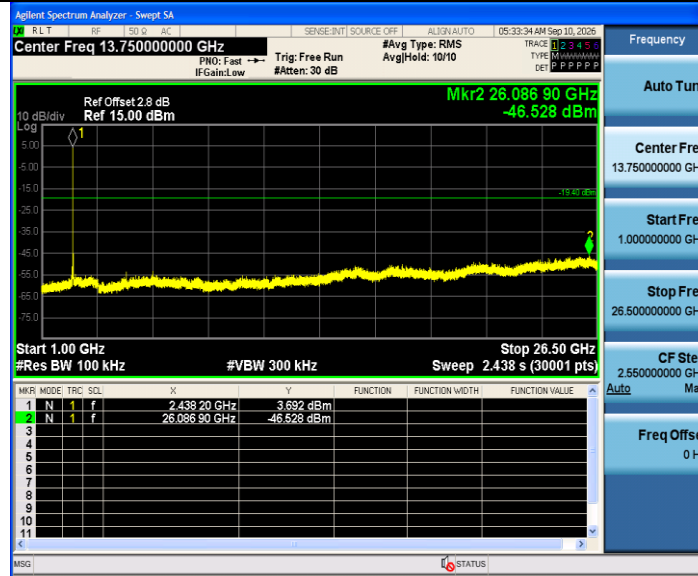
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



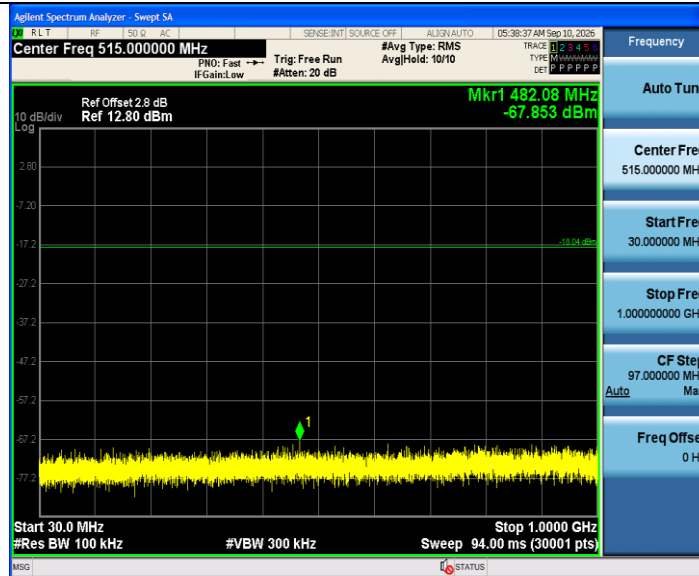
11B_Ant1_2437_1000~26500



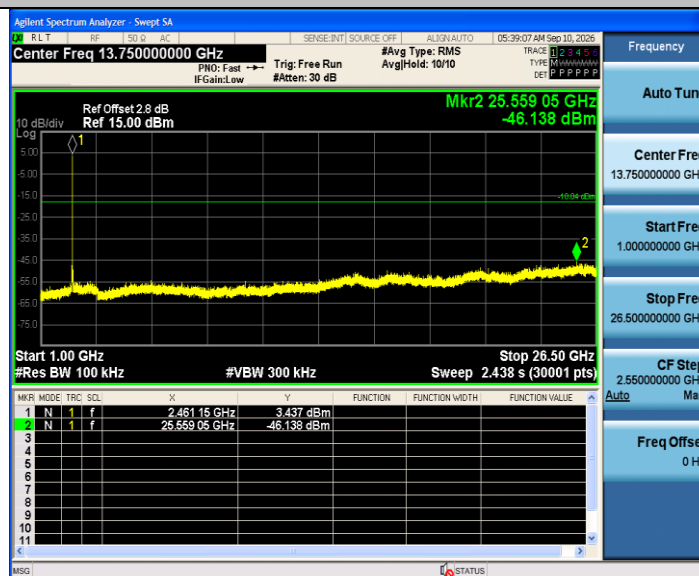
11B_Ant1_2462_0~Reference



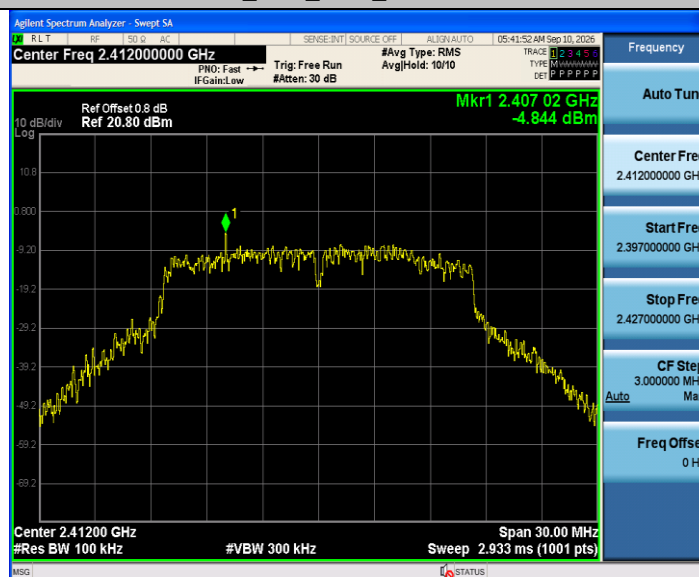
11B_Ant1_2462_30~1000



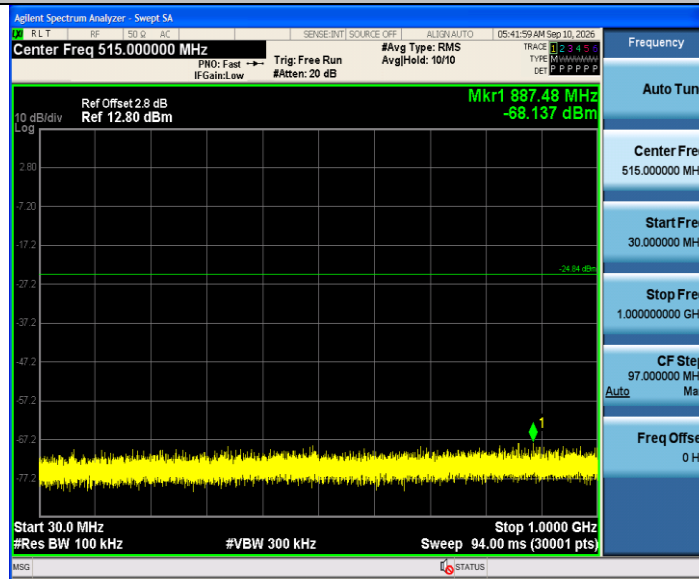
11B_Ant1_2462_1000~26500



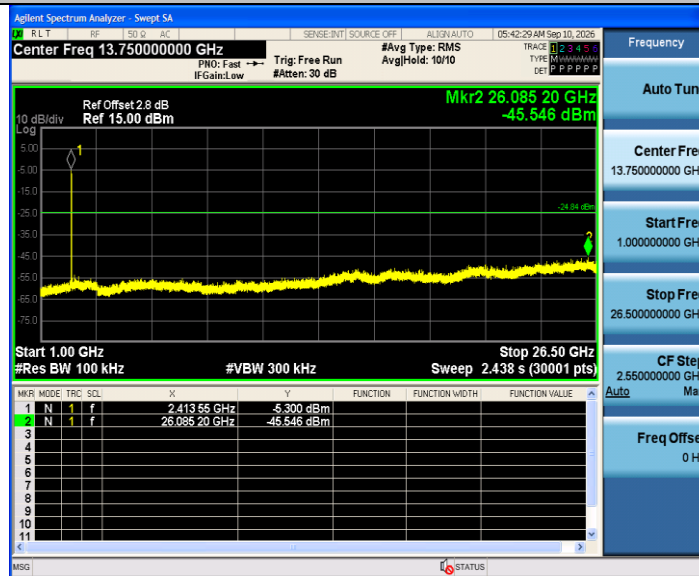
11G_Ant1_2412_0~Reference



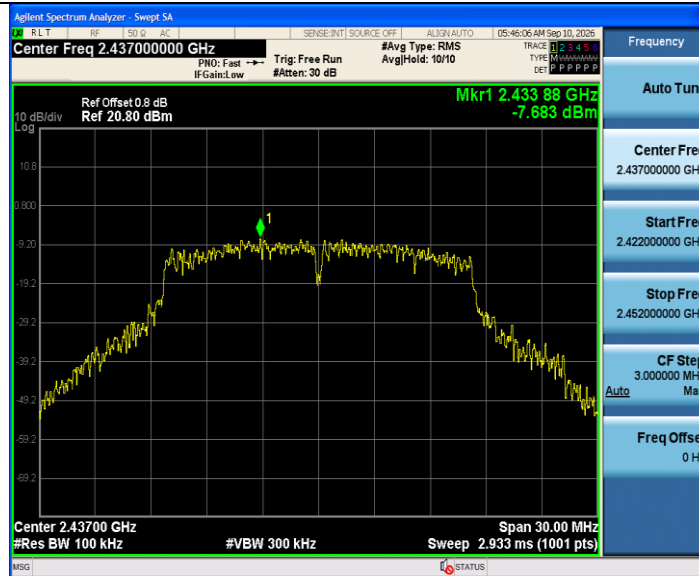
11G_Ant1_2412_30~1000



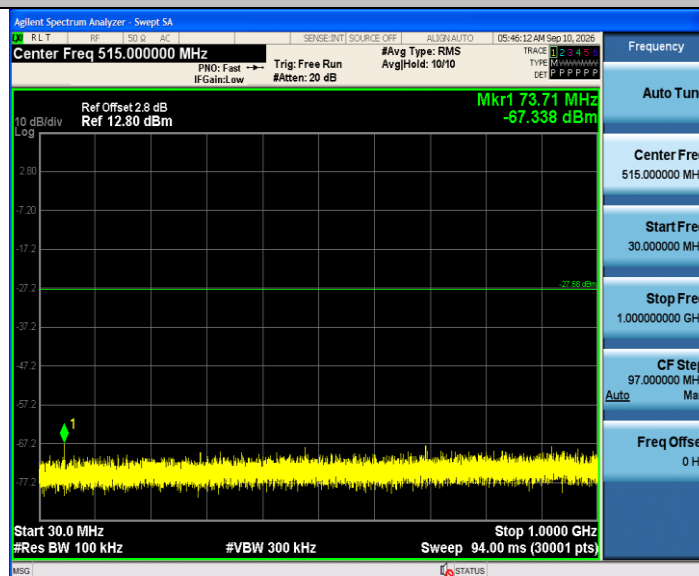
11G_Ant1_2412_1000~26500



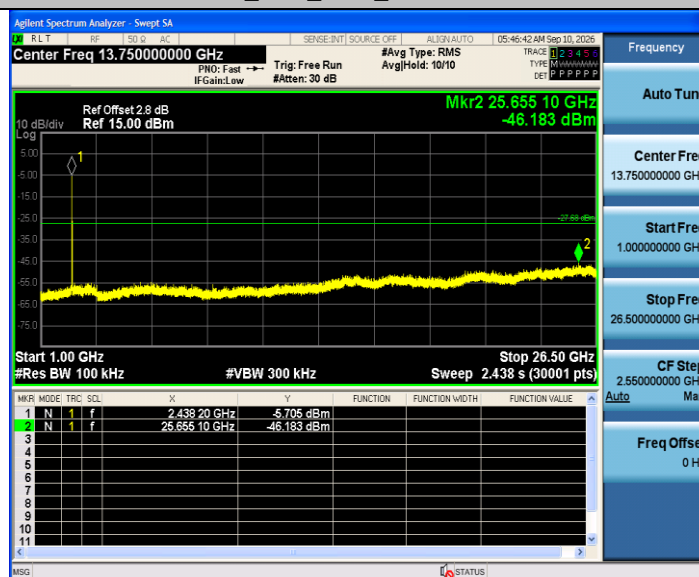
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



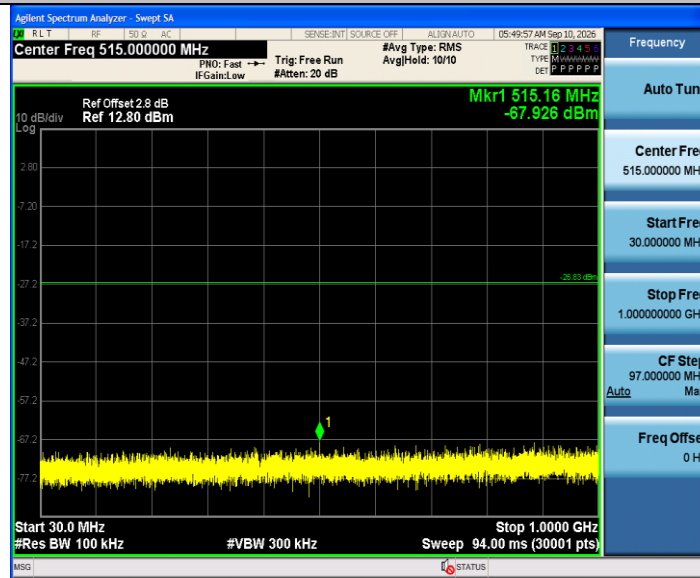
11G_Ant1_2437_1000~26500



11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500