

Appendix Test Data for WLAN(2.4G) (Conducted Measurement)

Product Name: Intelligent wake up light

Trade Mark: zerain,SPYONG

Test Model: XJD-AS10s

FCC ID: 2BCQR-XJD-AS10

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

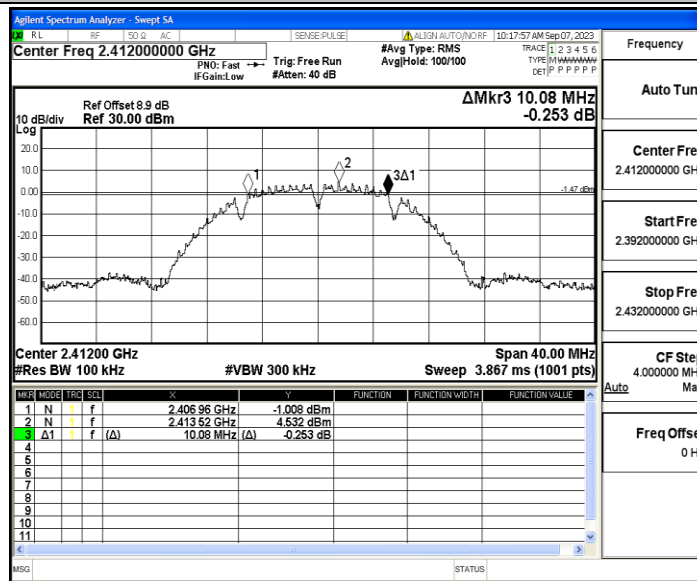
Appendix A: DTS Bandwidth

Test Result

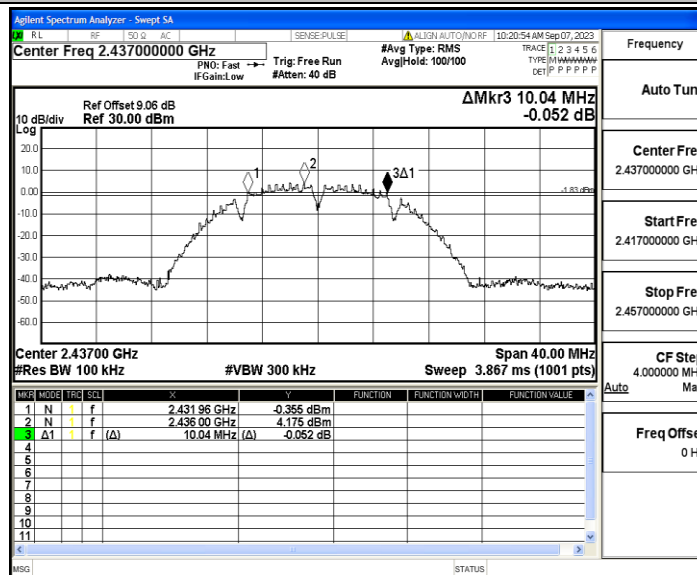
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	10.040	2431.960	2442.000	0.5	PASS
		2462	9.600	2457.440	2467.040	0.5	PASS
11G	Ant1	2412	16.040	2404.120	2420.160	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	15.400	2454.480	2469.880	0.5	PASS
11N20SISO	Ant1	2412	16.240	2404.240	2420.480	0.5	PASS
		2437	16.400	2428.760	2445.160	0.5	PASS
		2462	15.720	2454.240	2469.960	0.5	PASS

Test Graphs

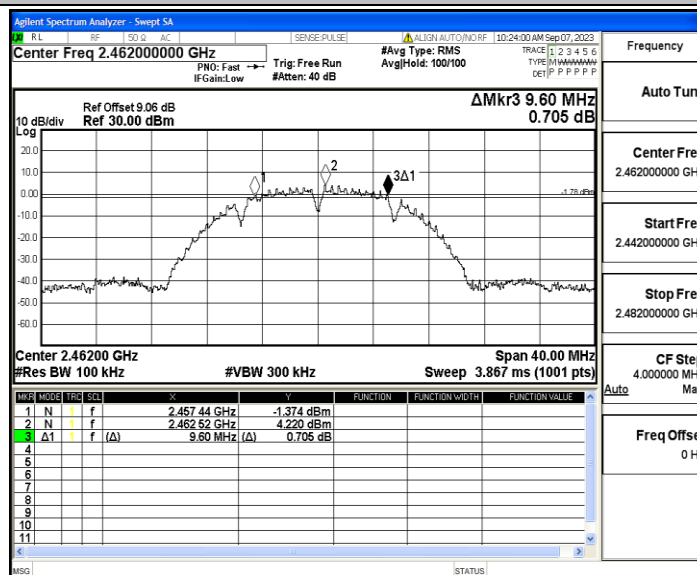
11B_Ant1_2412



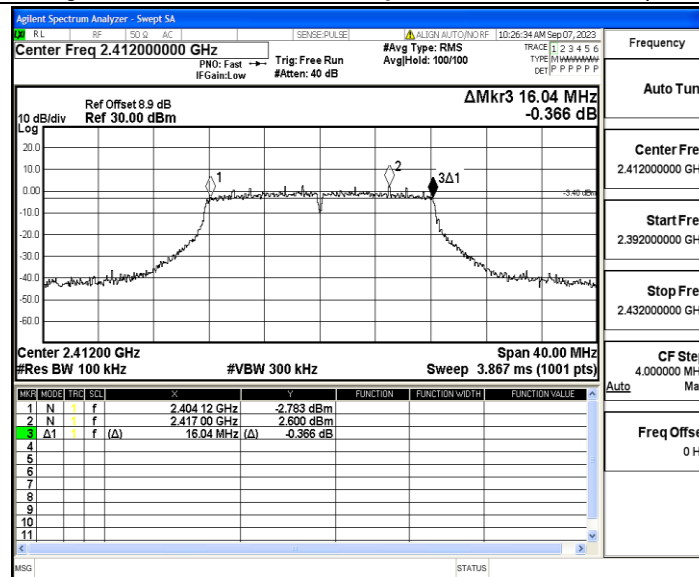
11B_Ant1_2437



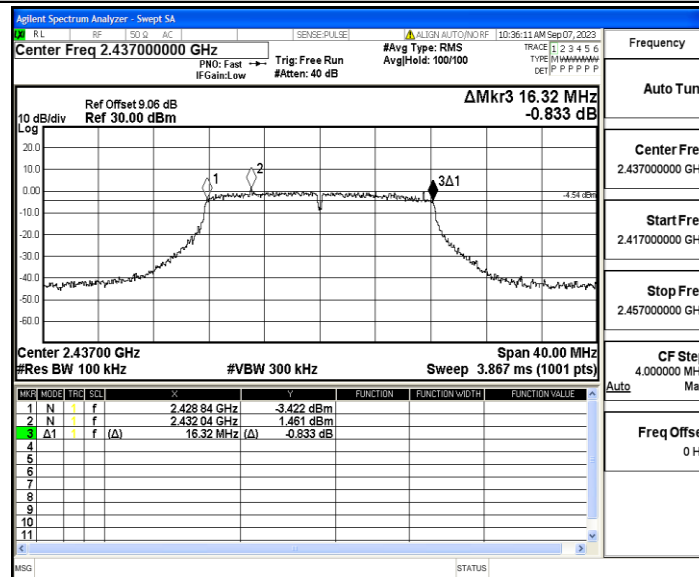
11B_Ant1_2462



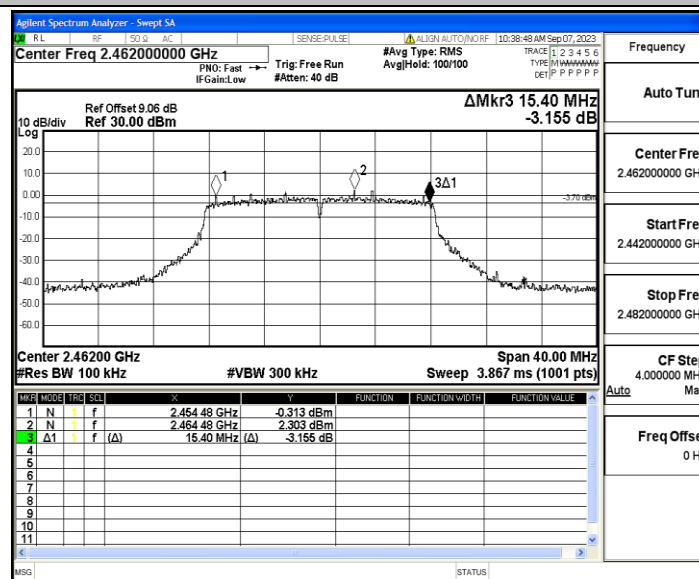
11G_Ant1_2412



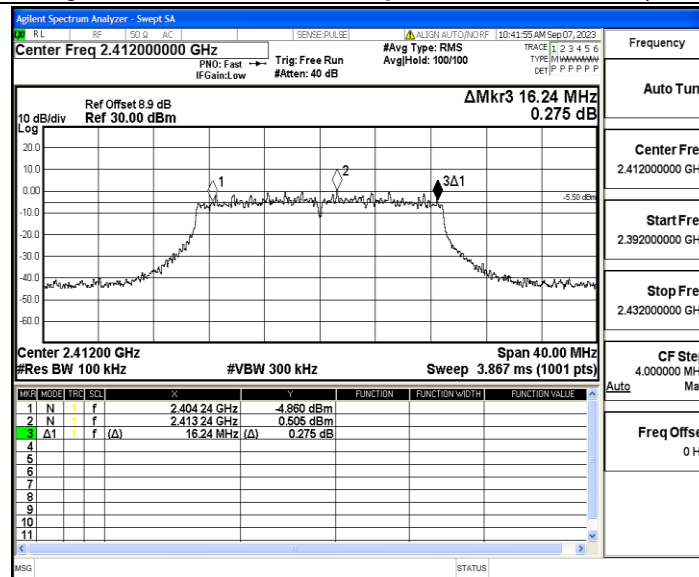
11G_Ant1_2437



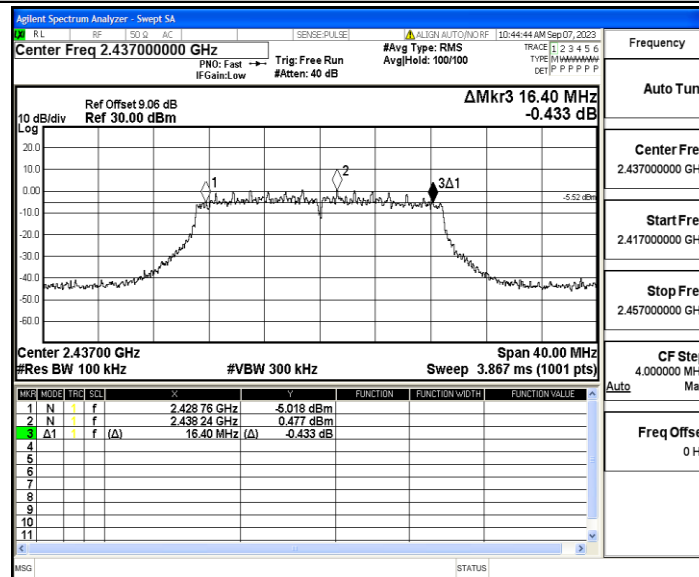
11G_Ant1_2462



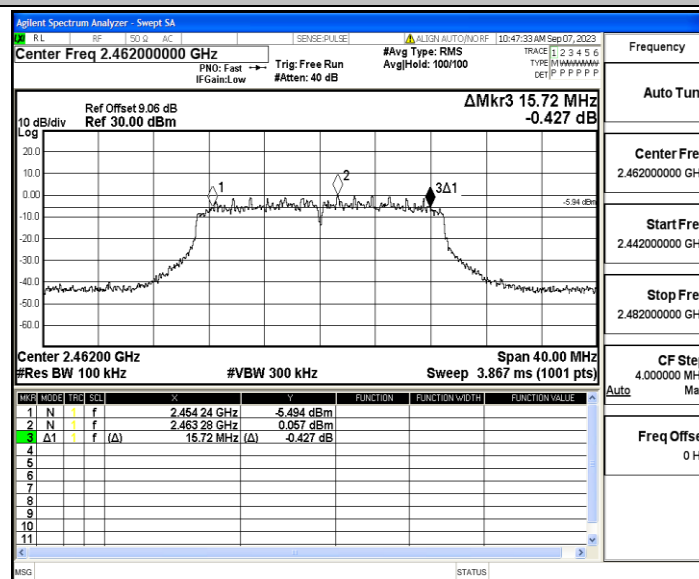
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



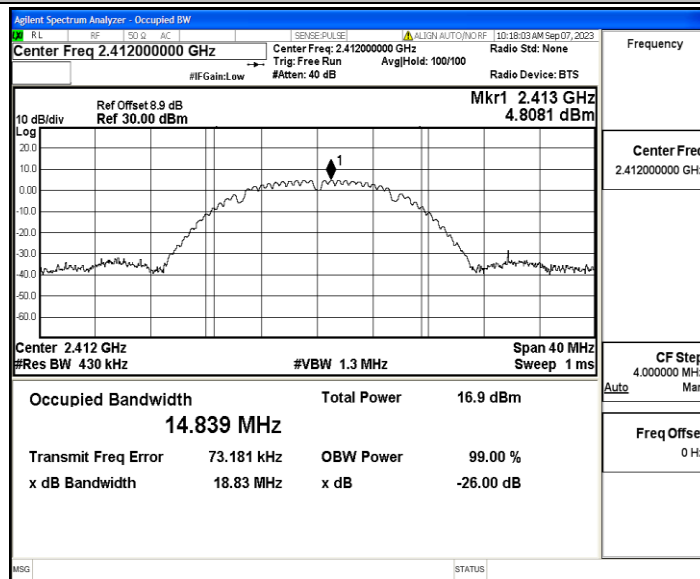
Appendix B: Occupied Channel Bandwidth

Test Result

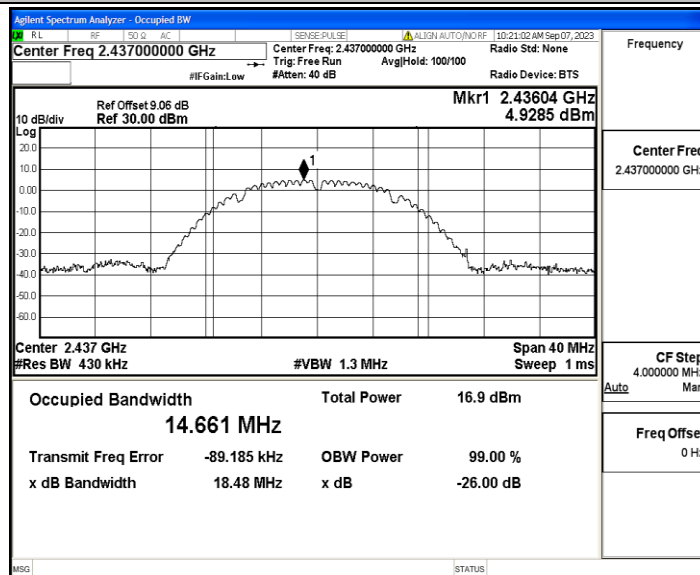
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.839	2404.6537	2419.4927	---	---
		2437	14.661	2429.5803	2444.2413	---	---
		2462	14.777	2454.7129	2469.4899	---	---
11G	Ant1	2412	16.756	2403.6912	2420.4472	---	---
		2437	16.784	2428.5751	2445.3591	---	---
		2462	16.743	2453.7211	2470.4641	---	---
11N20SISO	Ant1	2412	17.822	2403.1381	2420.9601	---	---
		2437	17.812	2428.0223	2445.8343	---	---
		2462	17.627	2453.2584	2470.8854	---	---

Test Graphs

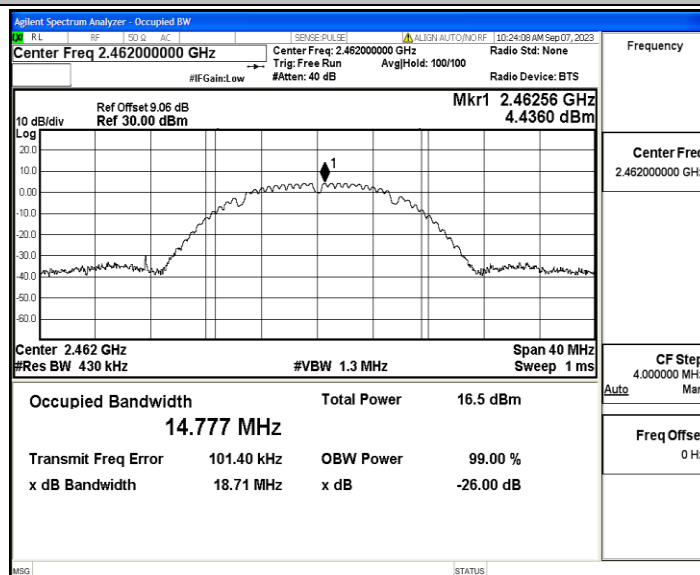
11B_Ant1_2412



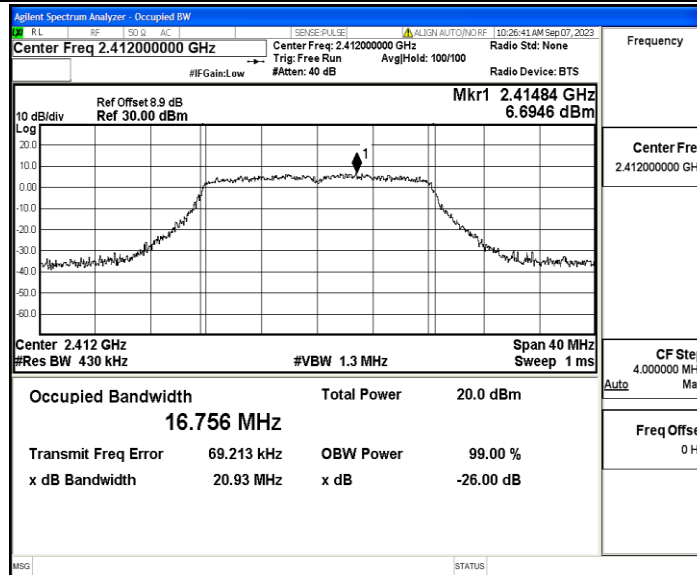
11B_Ant1_2437



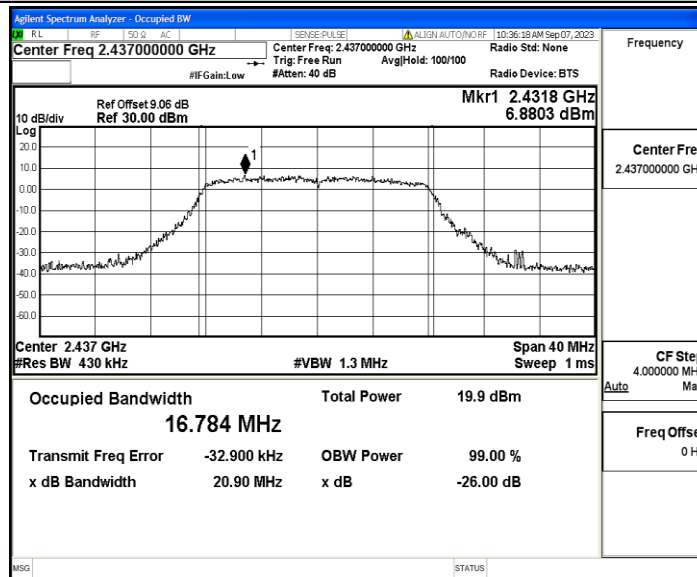
11B_Ant1_2462



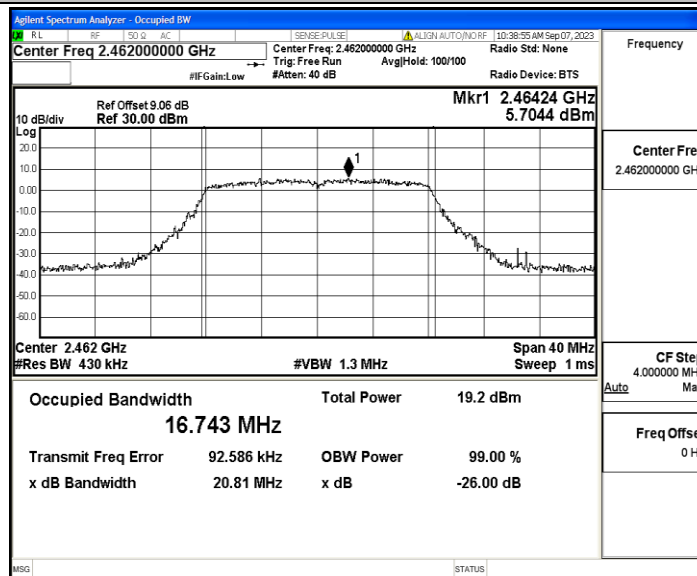
11G_Ant1_2412



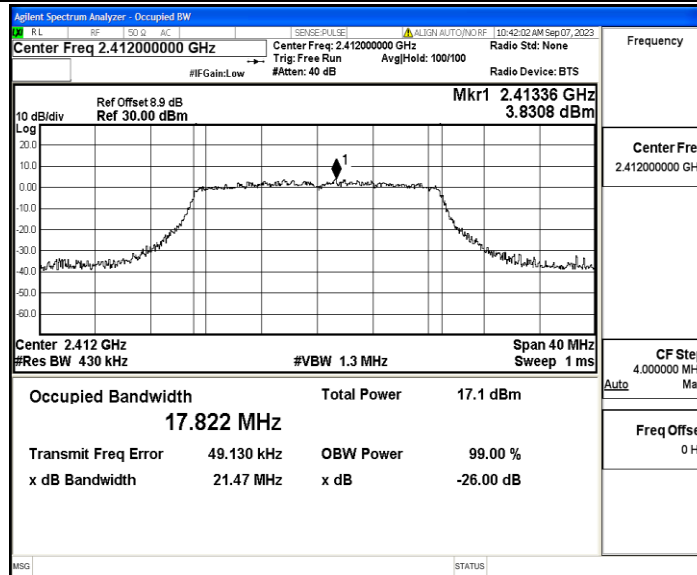
11G_Ant1_2437



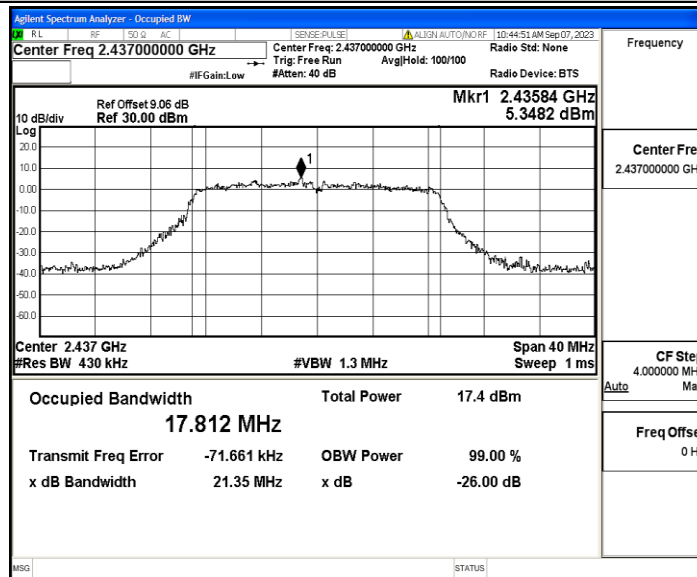
11G_Ant1_2462



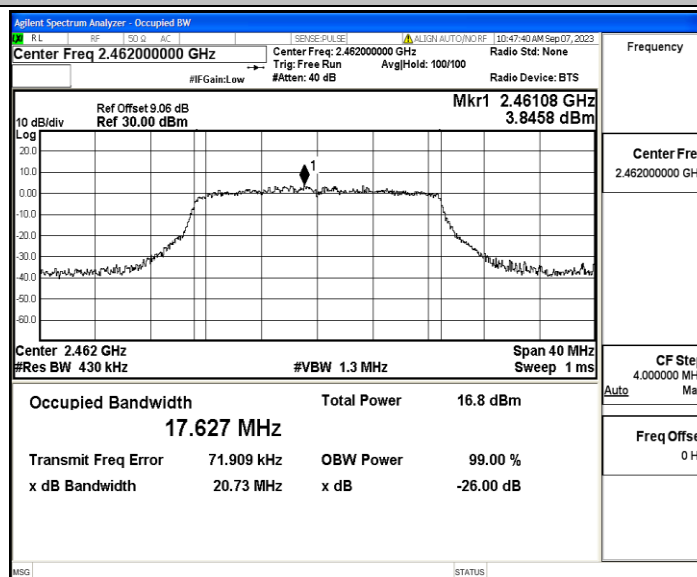
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	13.99	≤30.00	PASS
		2437	13.90	≤30.00	PASS
		2462	13.54	≤30.00	PASS
11G	Ant1	2412	14.15	≤30.00	PASS
		2437	14.15	≤30.00	PASS
		2462	13.31	≤30.00	PASS
11N20SISO	Ant1	2412	11.60	≤30.00	PASS
		2437	12.08	≤30.00	PASS
		2462	11.42	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the test result.

Appendix D: Maximum power spectral density

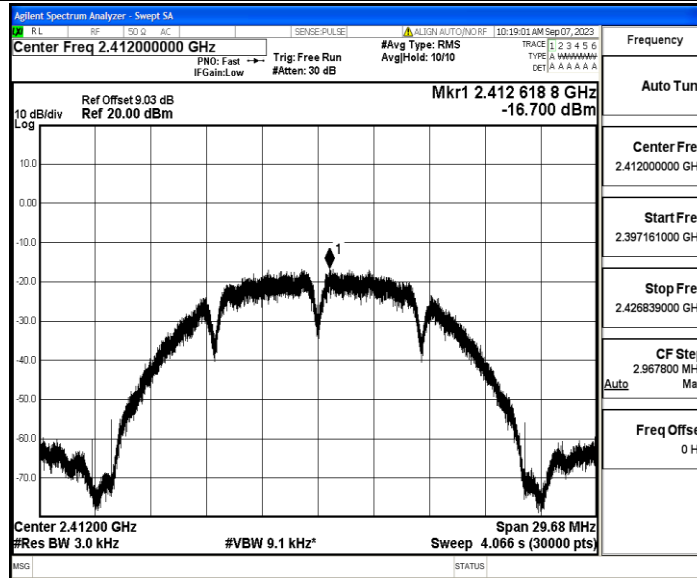
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-16.7	≤8.00	PASS
		2437	-16.21	≤8.00	PASS
		2462	-16.71	≤8.00	PASS
11G	Ant1	2412	-16.09	≤8.00	PASS
		2437	-15.31	≤8.00	PASS
		2462	-16.37	≤8.00	PASS
11N20SISO	Ant1	2412	-15.94	≤8.00	PASS
		2437	-14.61	≤8.00	PASS
		2462	-14.89	≤8.00	PASS

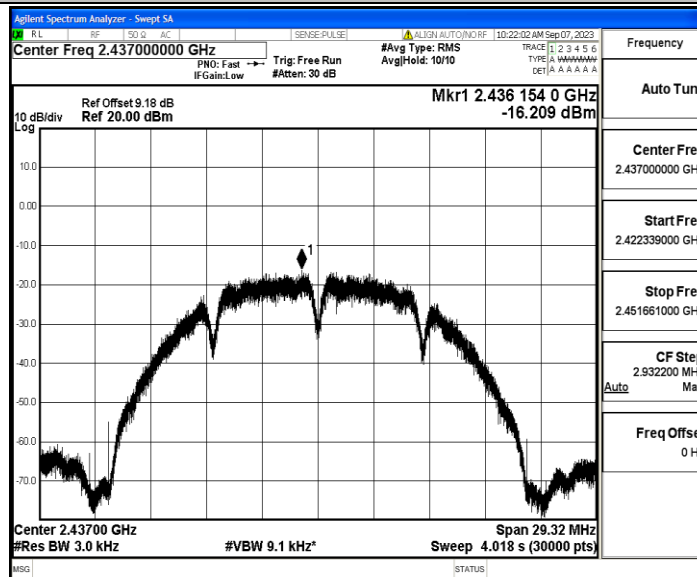
Note: The Duty Cycle Factor is compensated in the test result.

Test Graphs

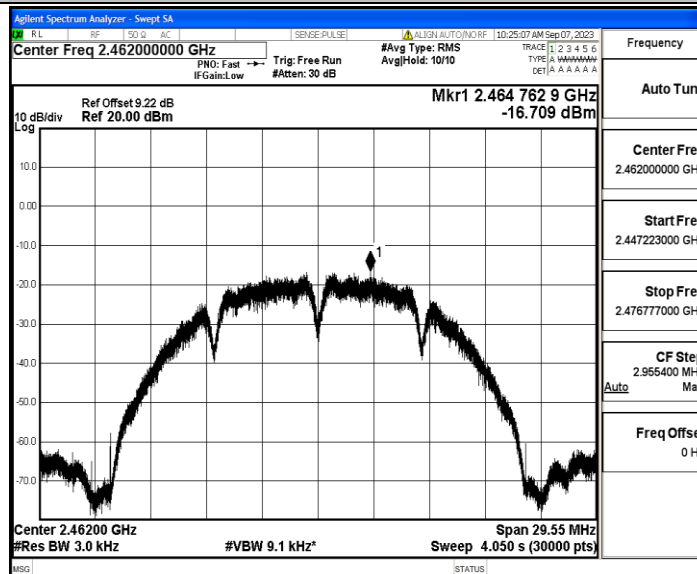
11B_Ant1_2412



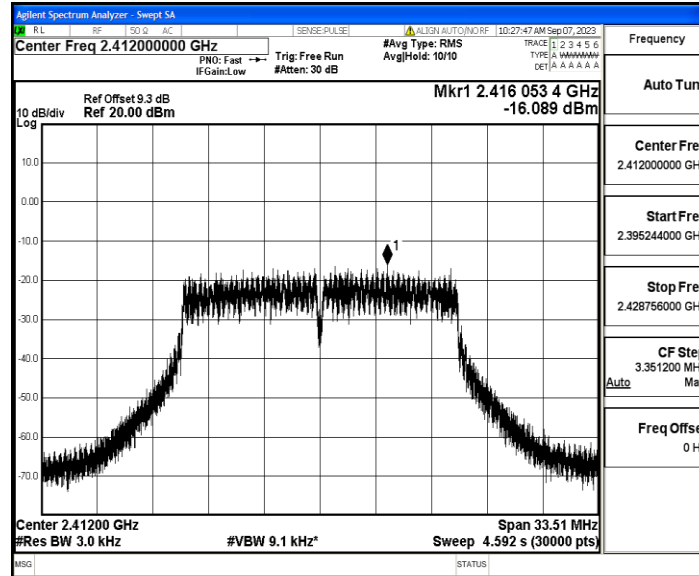
11B_Ant1_2437



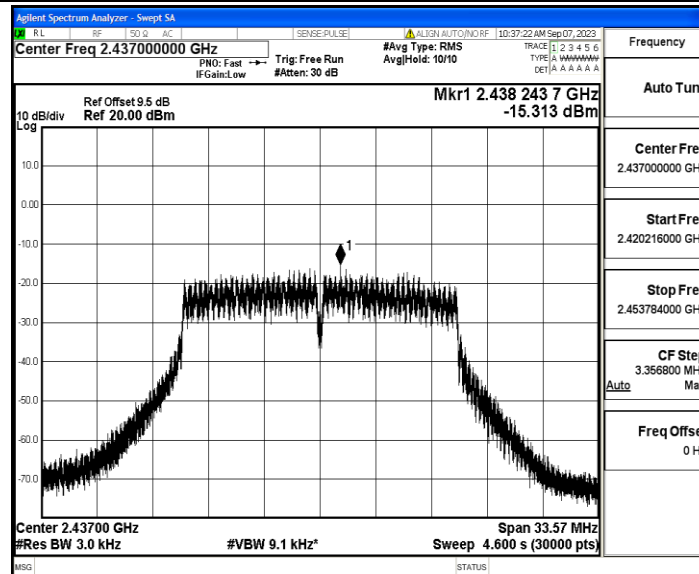
11B_Ant1_2462



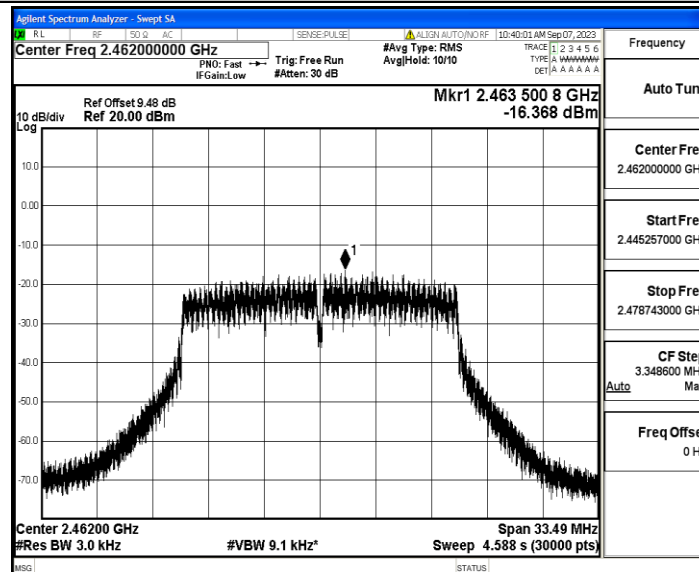
11G_Ant1_2412



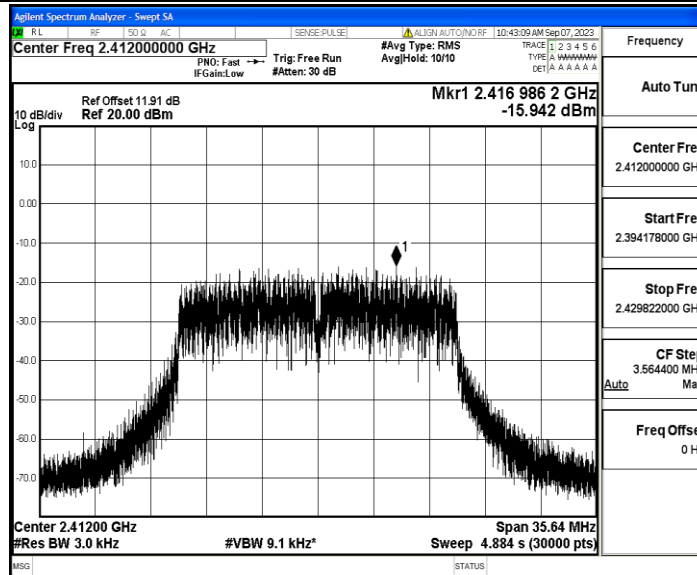
11G_Ant1_2437



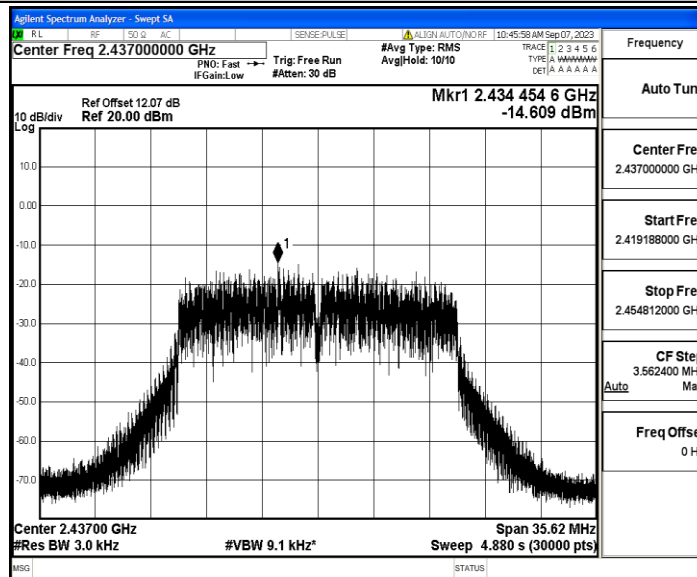
11G_Ant1_2462



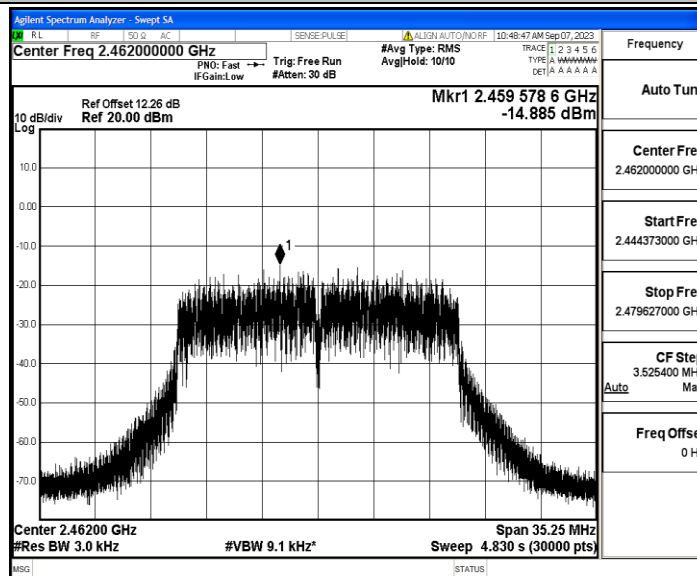
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



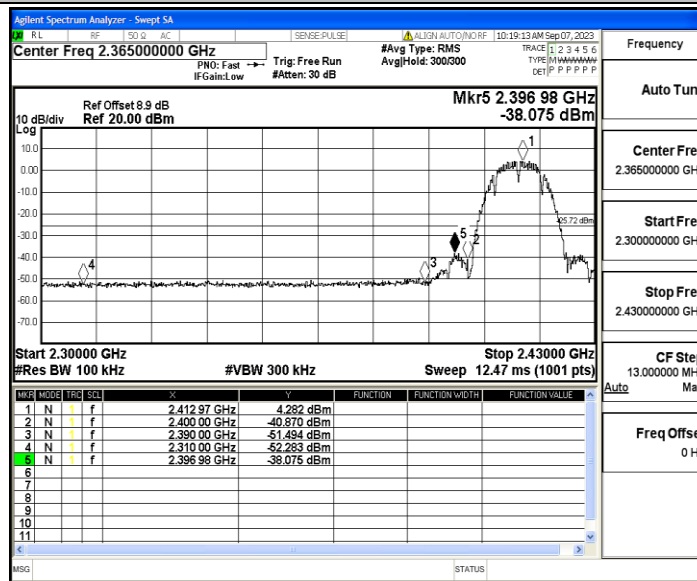
Appendix E: Band edge measurements

Test Result

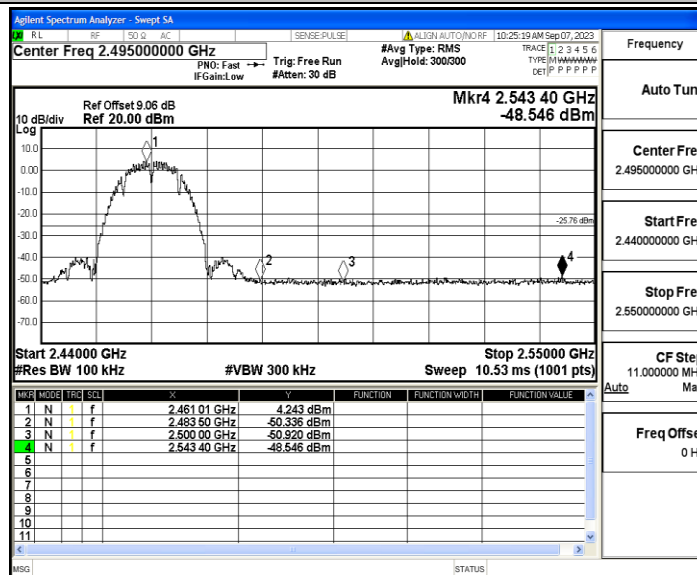
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.28	-38.08	≤-25.72	PASS
		High	2462	4.24	-48.55	≤-25.76	PASS
11G	Ant1	Low	2412	2.92	-33.7	≤-27.08	PASS
		High	2462	1.92	-48.79	≤-28.08	PASS
11N20SISO	Ant1	Low	2412	0.64	-36.11	≤-29.36	PASS
		High	2462	0.28	-48.18	≤-29.72	PASS

Test Graphs

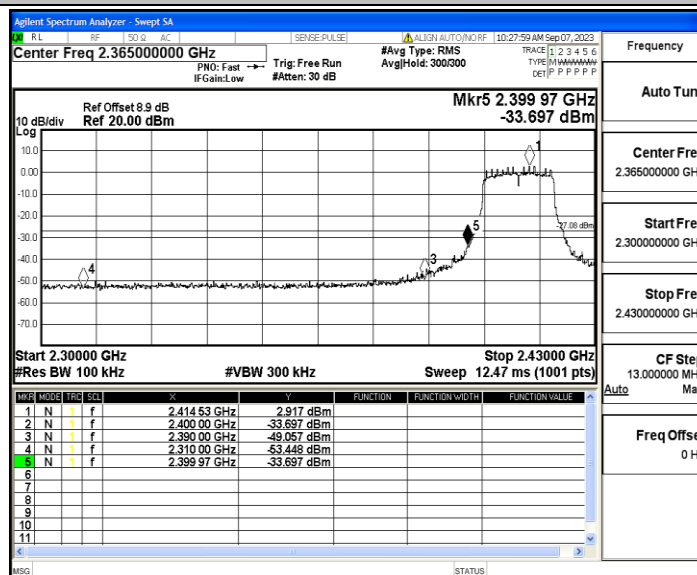
11B_Ant1_Low_2412



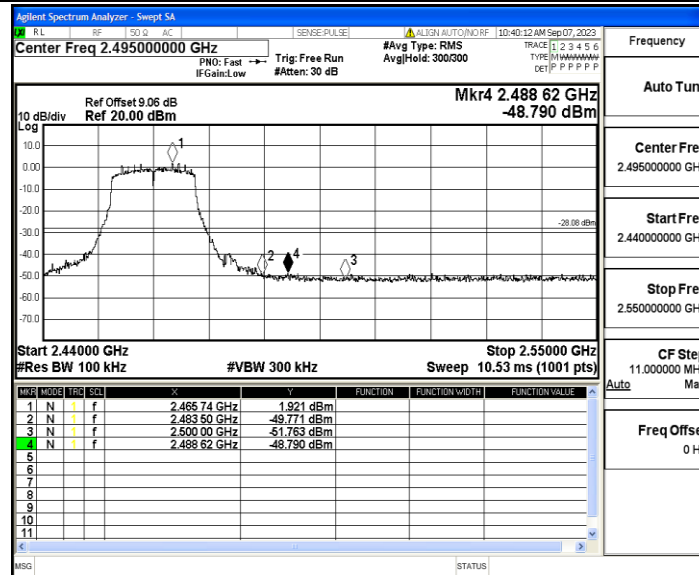
11B_Ant1_High_2462



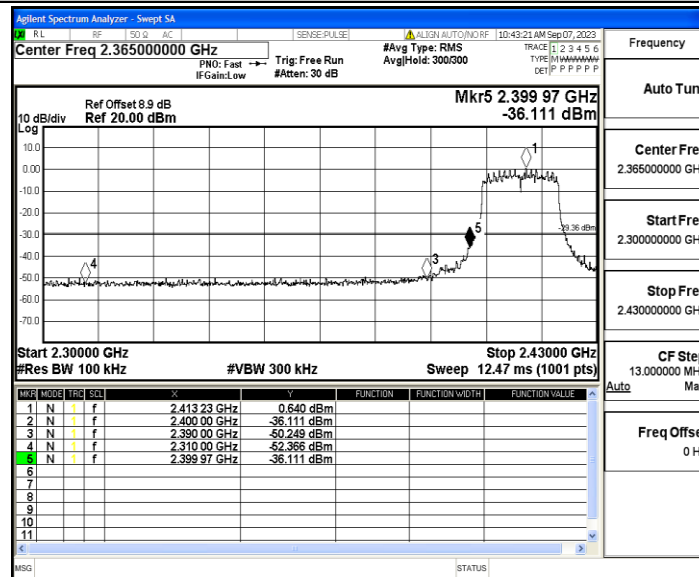
11G_Ant1_Low_2412



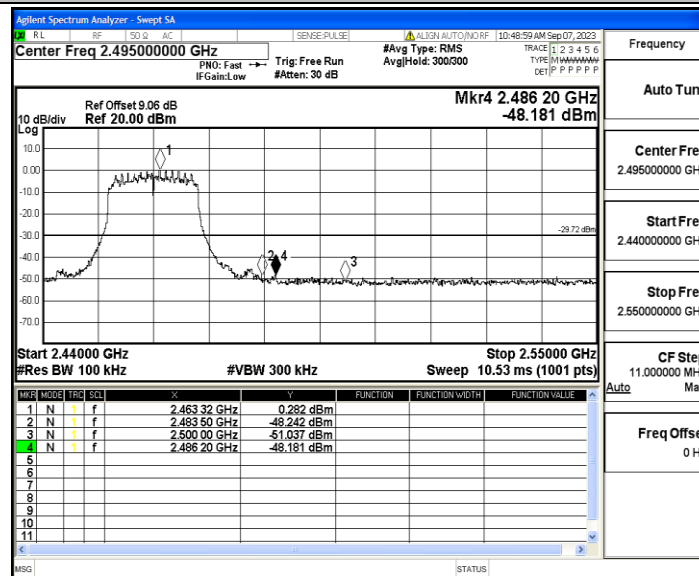
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



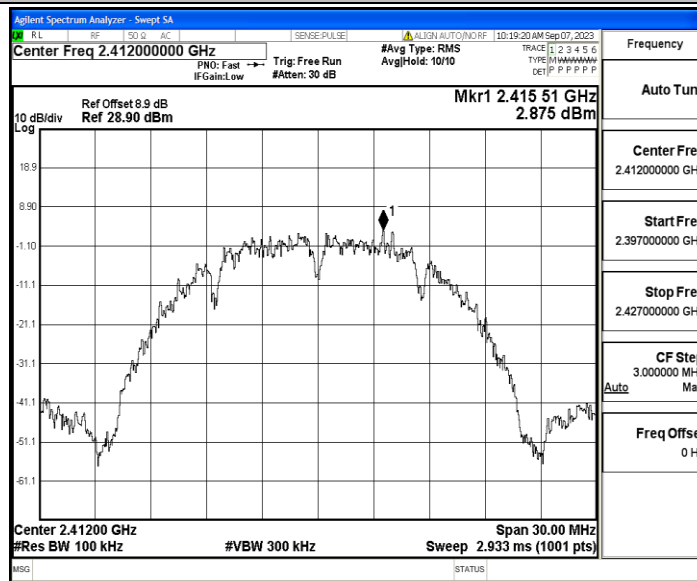
Appendix F: Conducted Spurious Emission

Test Result

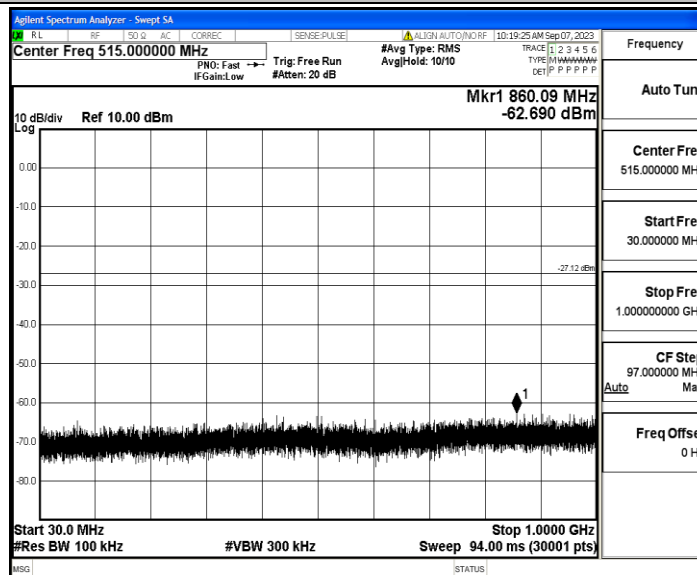
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.88	2.88	---	PASS
			30~1000	2.88	-62.69	≤-27.12	PASS
			1000~26500	2.88	-47.34	≤-27.12	PASS
		2437	Reference	4.19	4.19	---	PASS
			30~1000	4.19	-62.61	≤-25.81	PASS
			1000~26500	4.19	-44.37	≤-25.81	PASS
		2462	Reference	4.23	4.23	---	PASS
			30~1000	4.23	-63.37	≤-25.77	PASS
			1000~26500	4.23	-49.74	≤-25.77	PASS
11G	Ant1	2412	Reference	-0.33	-0.33	---	PASS
			30~1000	-0.33	-62.46	≤-30.33	PASS
			1000~26500	-0.33	-50.07	≤-30.33	PASS
		2437	Reference	3.23	3.23	---	PASS
			30~1000	3.23	-62.68	≤-26.77	PASS
			1000~26500	3.23	-50.29	≤-26.77	PASS
		2462	Reference	-0.03	-0.03	---	PASS
			30~1000	-0.03	-62.54	≤-30.03	PASS
			1000~26500	-0.03	-50.09	≤-30.03	PASS
11N20SISO	Ant1	2412	Reference	-1.08	-1.08	---	PASS
			30~1000	-1.08	-50.25	≤-31.08	PASS
			1000~26500	-1.08	-50.23	≤-31.08	PASS
		2437	Reference	-0.97	-0.97	---	PASS
			30~1000	-0.97	-60.49	≤-30.97	PASS
			1000~26500	-0.97	-50.17	≤-30.97	PASS
		2462	Reference	-1.97	-1.97	---	PASS
			30~1000	-1.97	-62.71	≤-31.97	PASS
			1000~26500	-1.97	-50.64	≤-31.97	PASS

Test Graphs

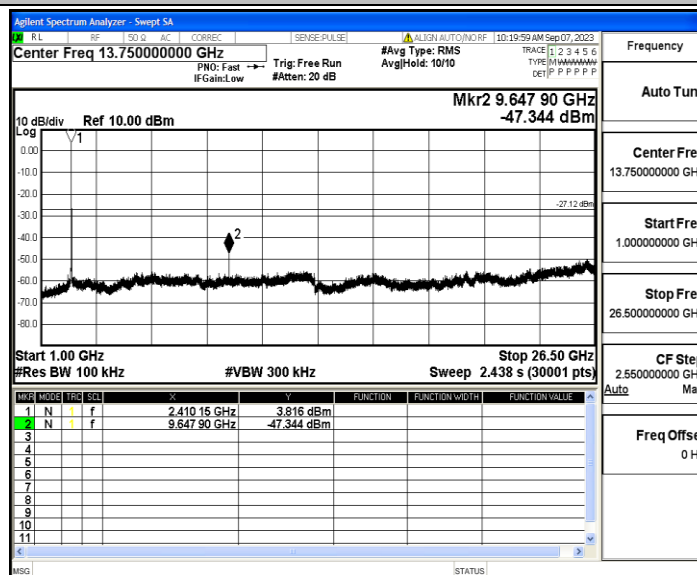
11B_Ant1_2412_0~Reference



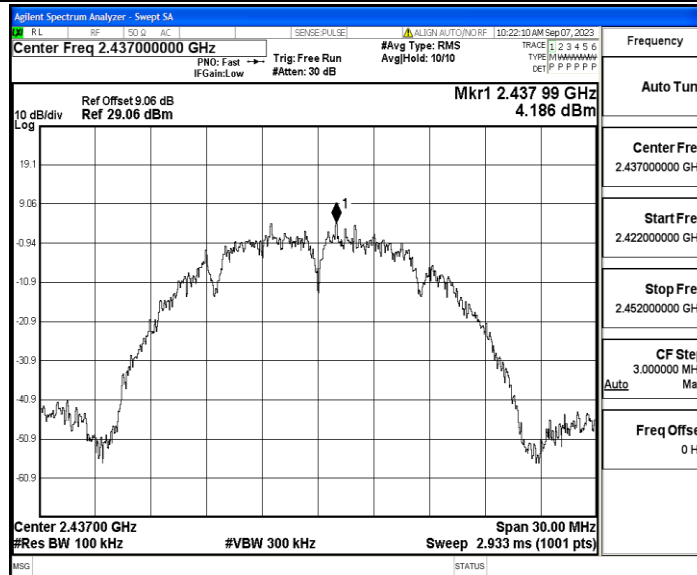
11B_Ant1_2412_30~1000



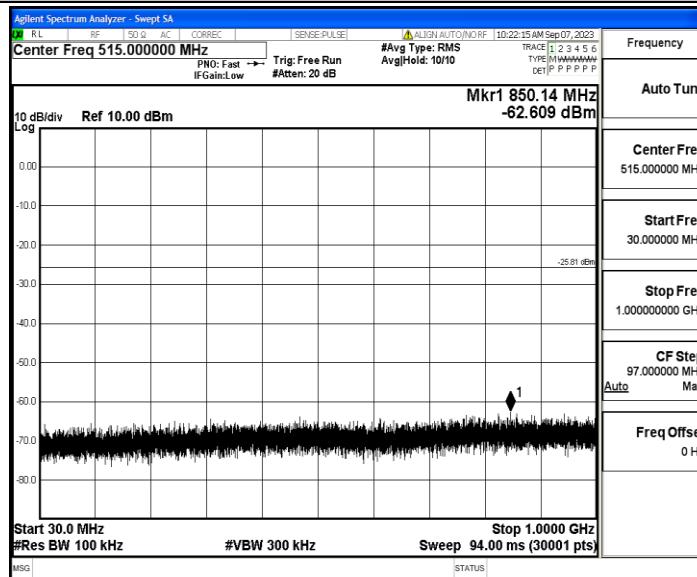
11B_Ant1_2412_1000~26500



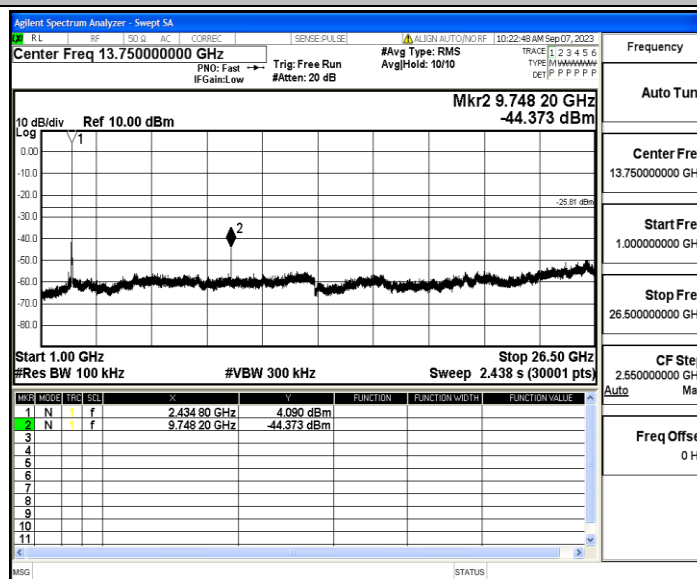
11B_Ant1_2437_0~Reference



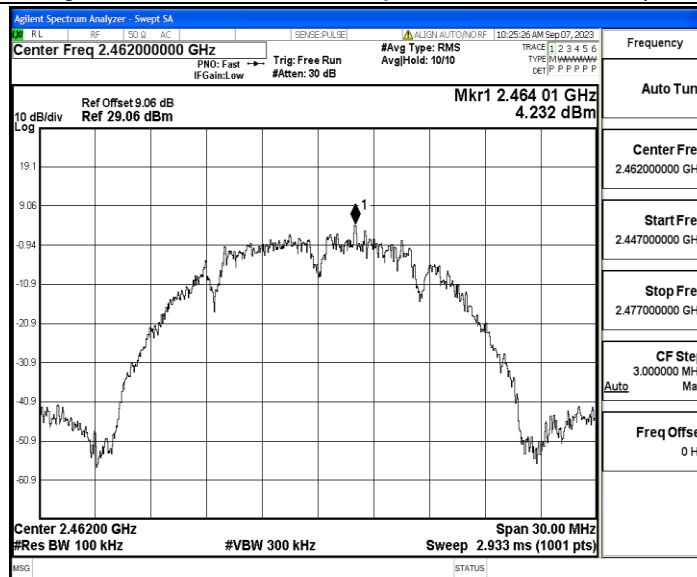
11B_Ant1_2437_30~1000



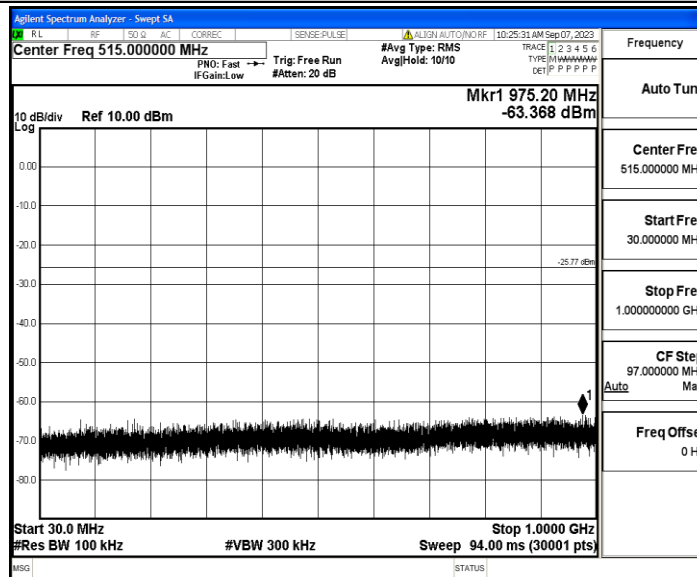
11B_Ant1_2437_1000~26500



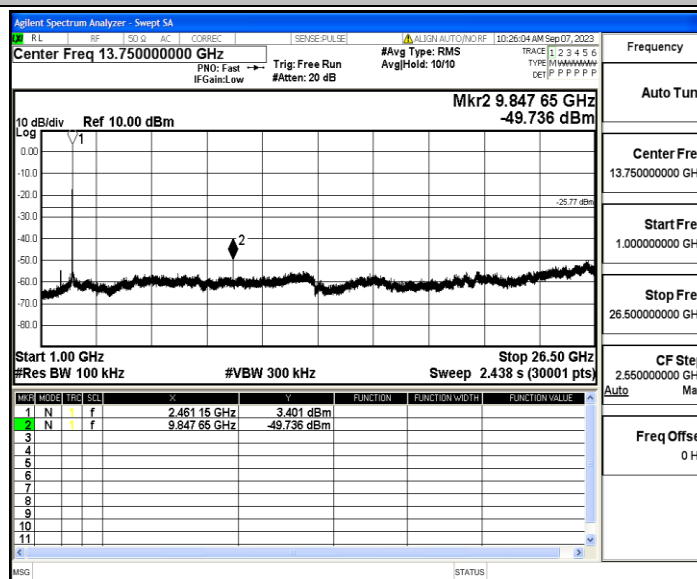
11B_Ant1_2462_0~Reference



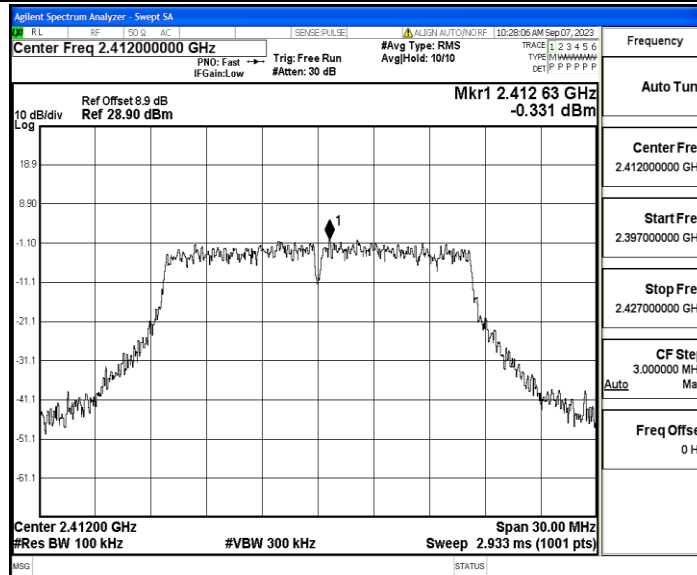
11B_Ant1_2462_30~1000



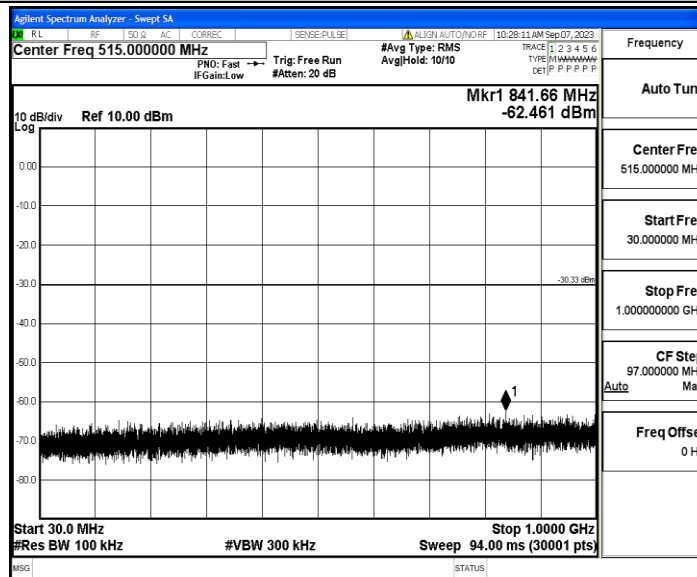
11B_Ant1_2462_1000~26500



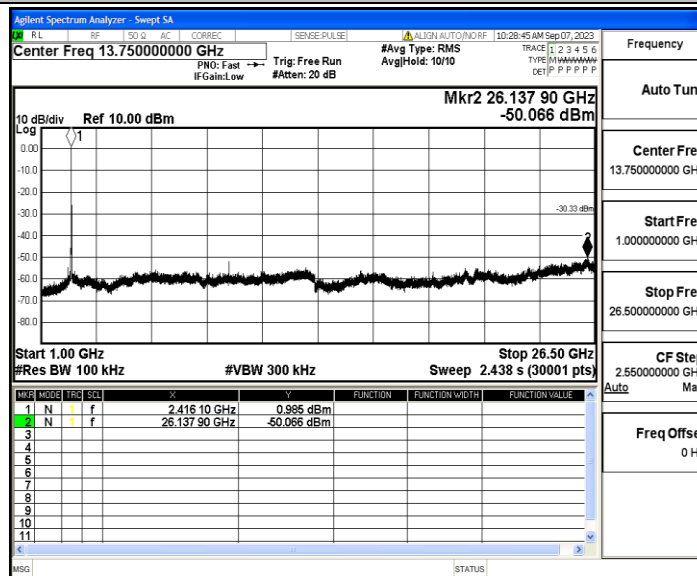
11G_Ant1_2412_0~Reference



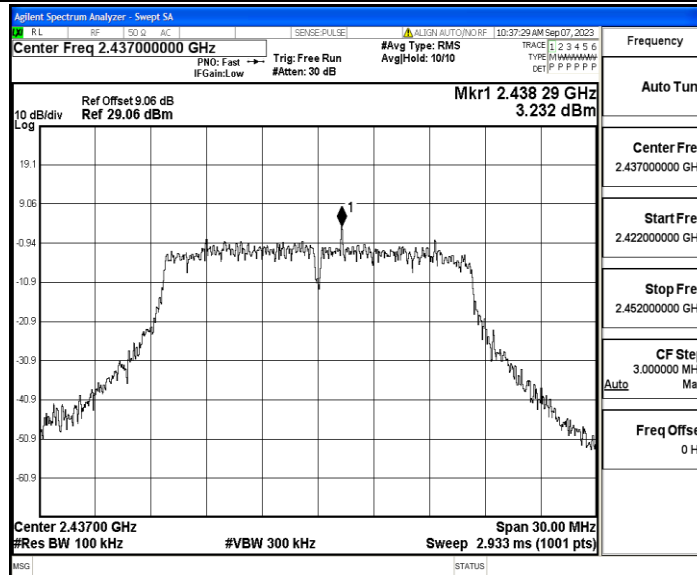
11G_Ant1_2412_30~1000



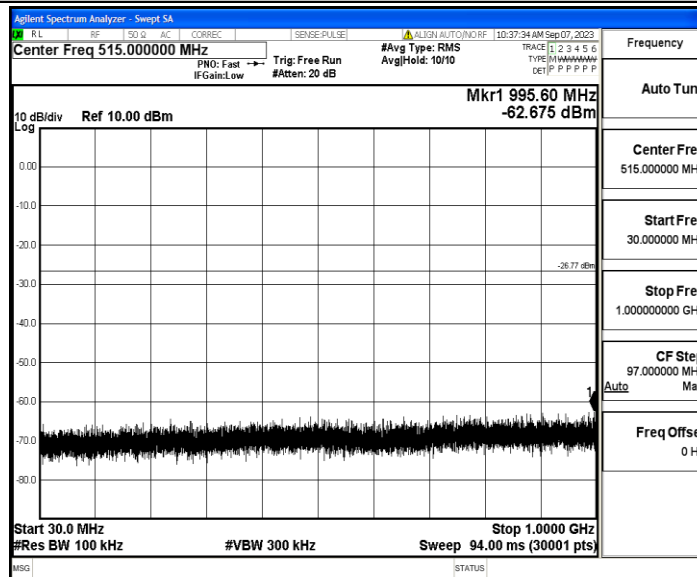
11G_Ant1_2412_1000~26500



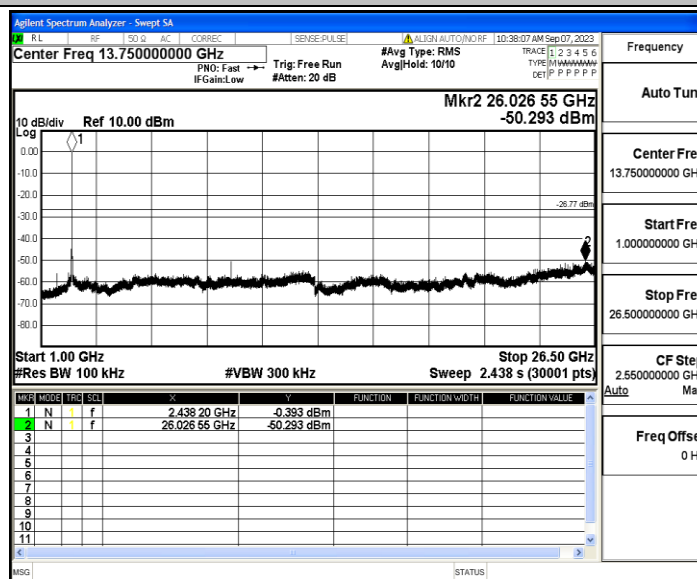
11G_Ant1_2437_0~Reference



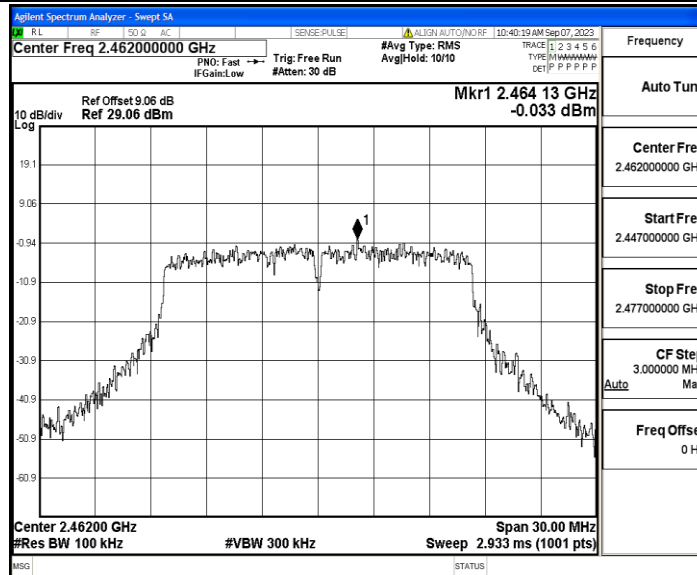
11G_Ant1_2437_30~1000



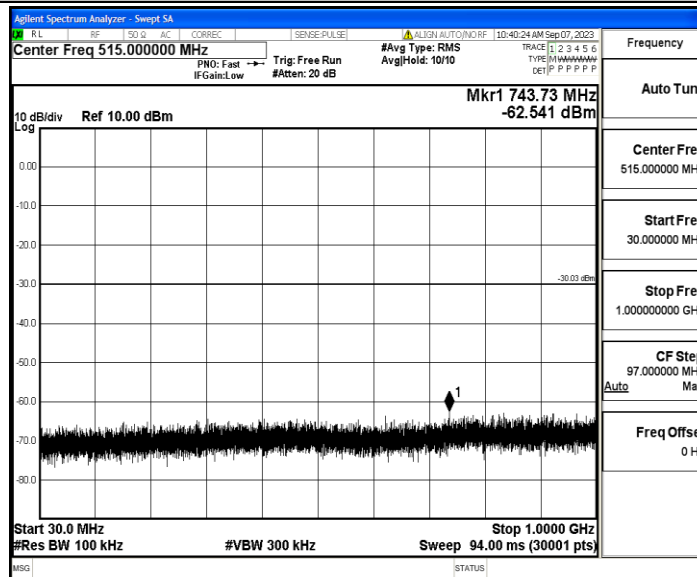
11G_Ant1_2437_1000~26500



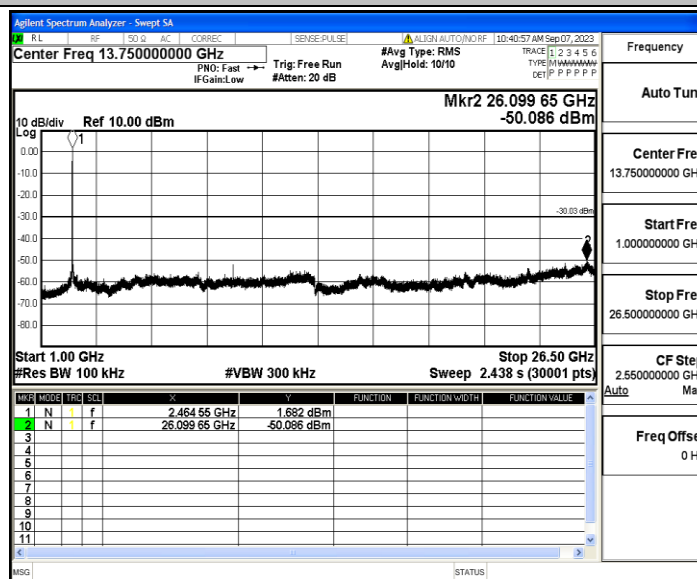
11G_Ant1_2462_0~Reference



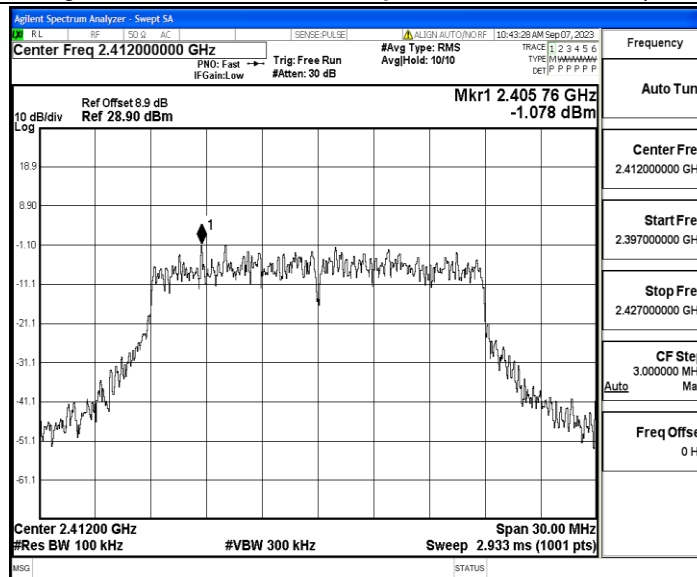
11G_Ant1_2462_30~1000



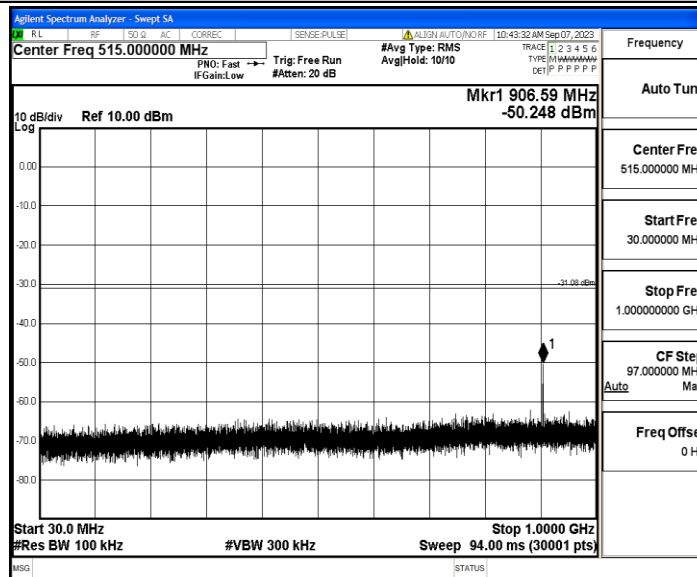
11G_Ant1_2462_1000~26500



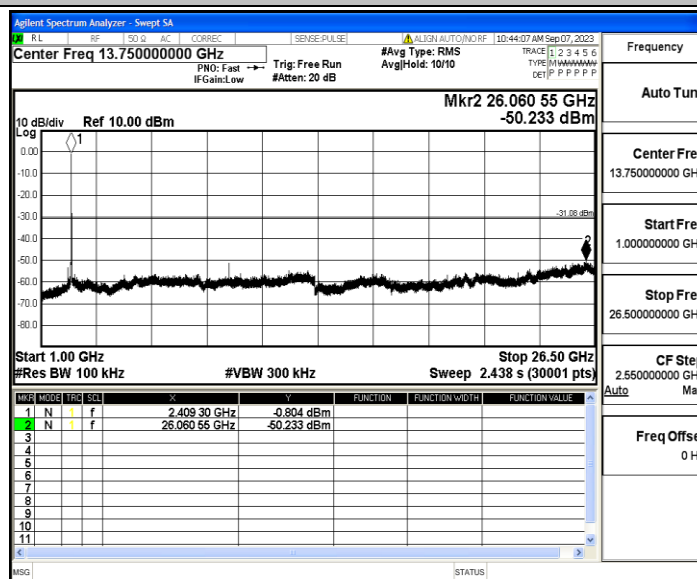
11N20SISO_Ant1_2412_0~Reference



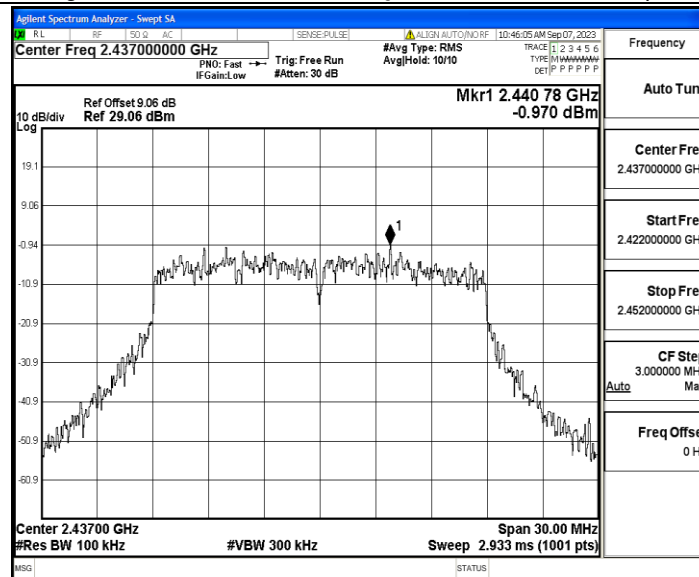
11N20SISO_Ant1_2412_30~1000



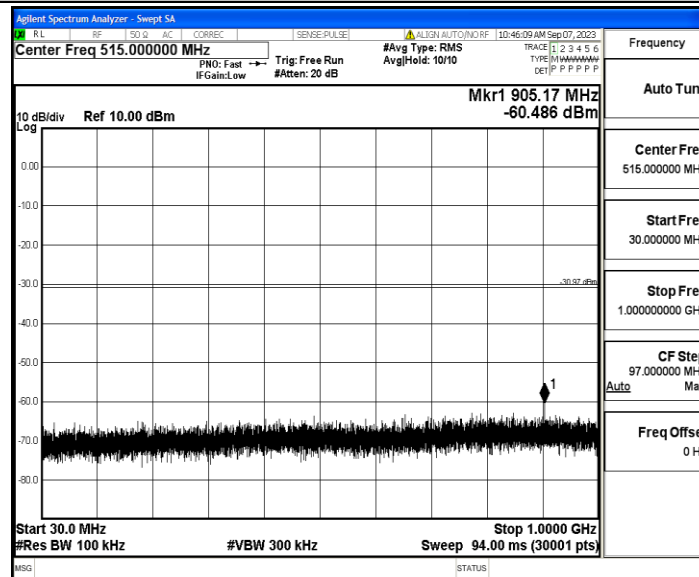
11N20SISO_Ant1_2412_1000~26500



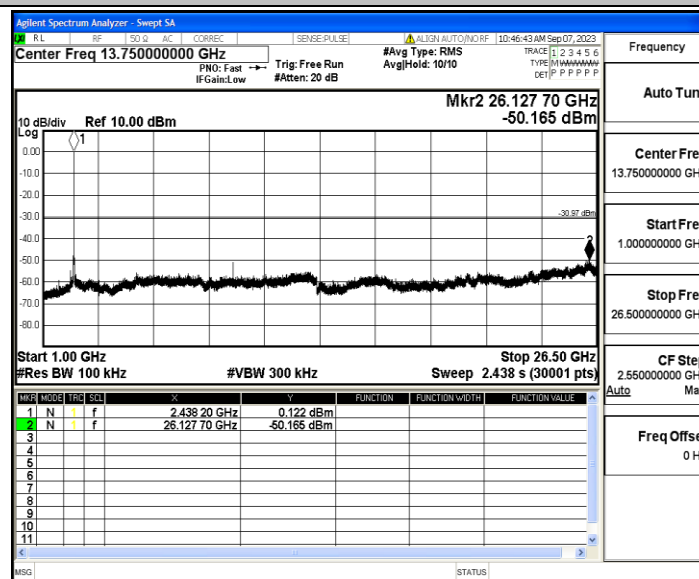
11N20SISO_Ant1_2437_0~Reference



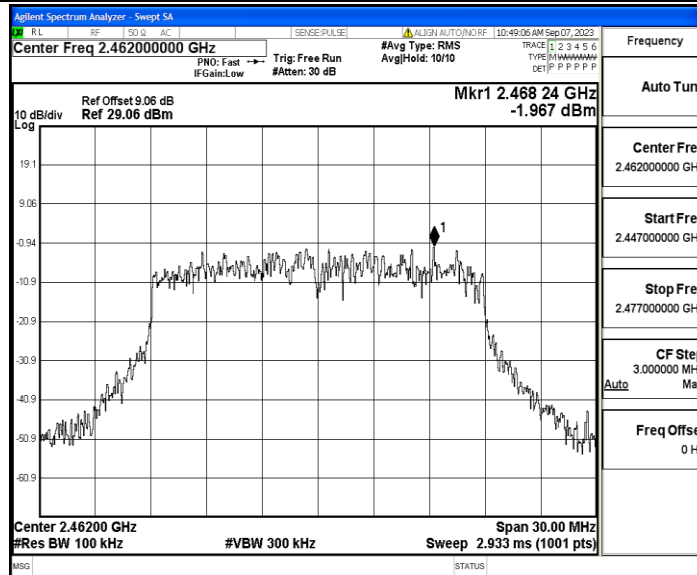
11N20SISO_Ant1_2437_30~1000



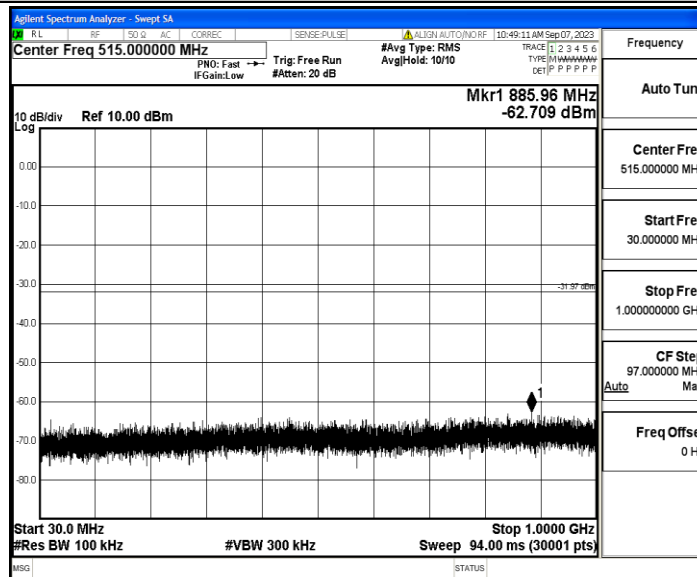
11N20SISO_Ant1_2437_1000~26500



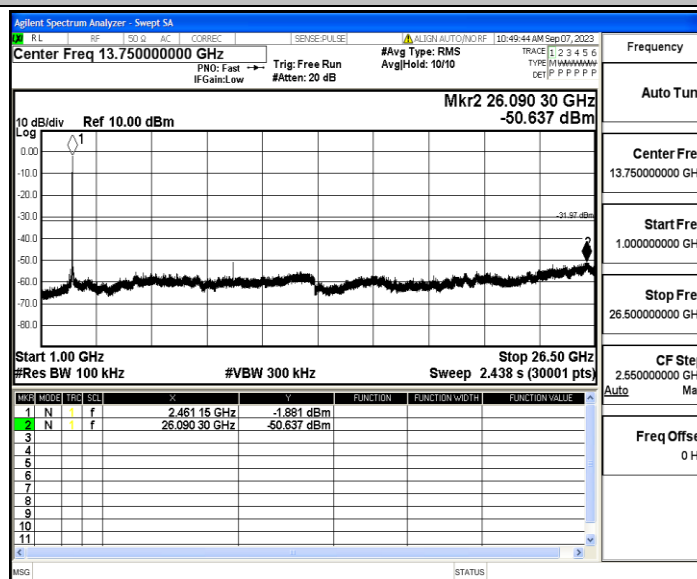
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500



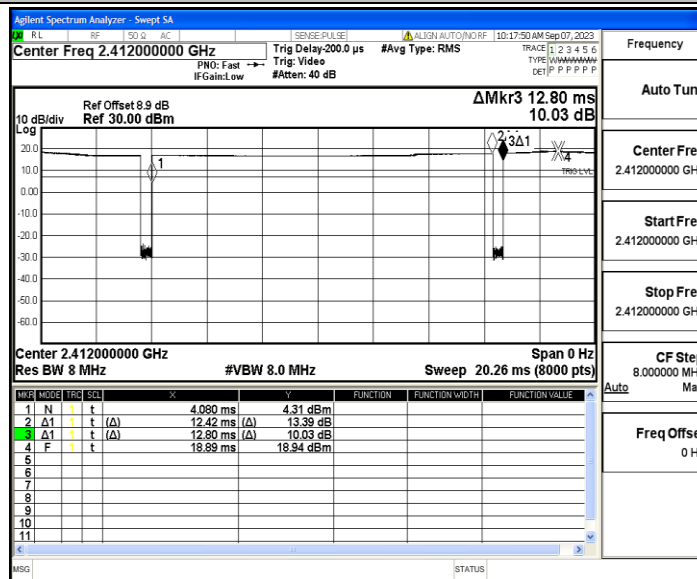
Appendix G: Duty Cycle

Test Result

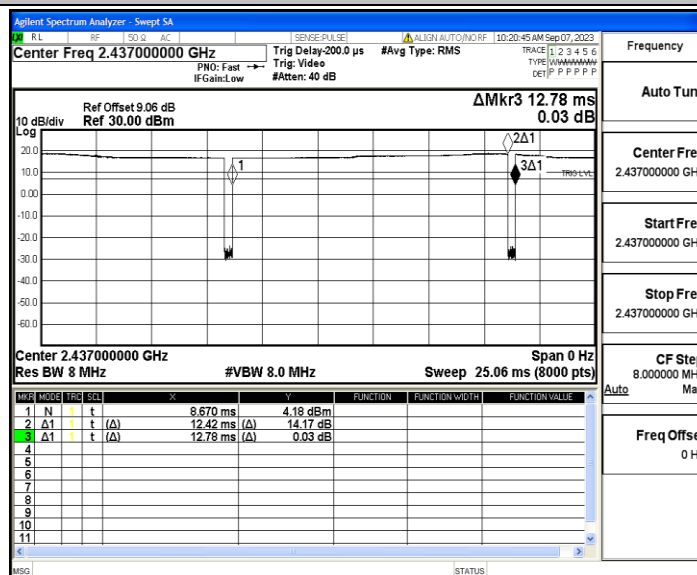
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
11B	Ant1	2412	12.42	12.80	97.03	0.08
		2437	12.42	12.78	97.18	0.08
		2462	12.41	12.88	96.35	0.08
11G	Ant1	2412	2.06	2.26	91.15	0.49
		2437	2.07	2.29	90.39	0.48
		2462	2.06	2.27	90.75	0.49
11N20SISO	Ant1	2412	0.23	0.46	50.00	4.35
		2437	0.23	0.46	50.00	4.35
		2462	0.22	0.46	47.83	4.55

Test Graphs

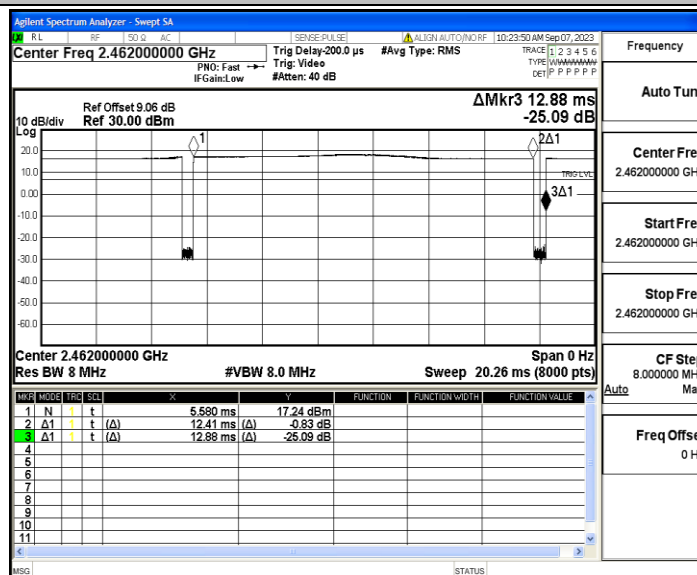
11B_Ant1_2412



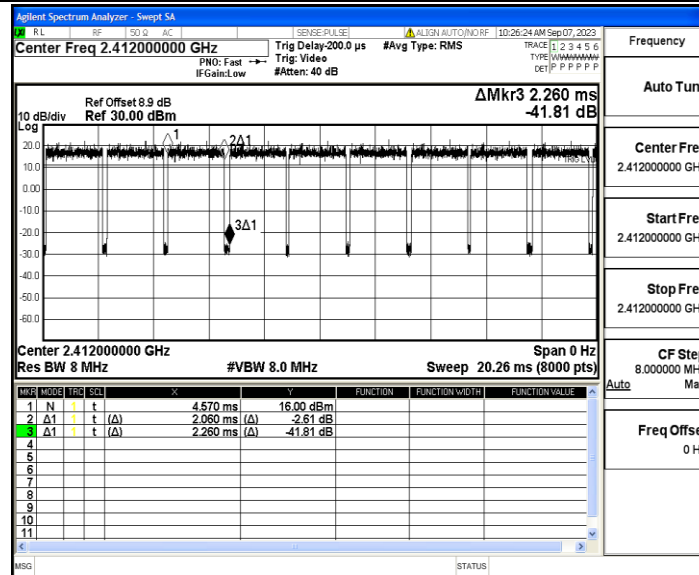
11B_Ant1_2437



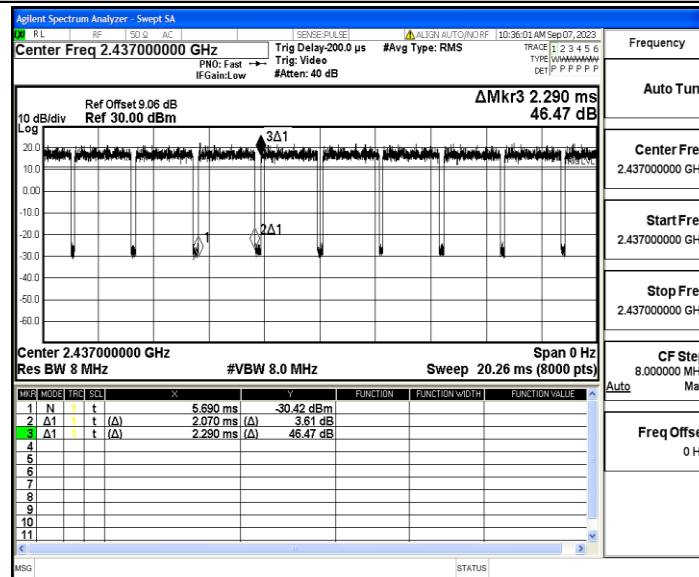
11B_Ant1_2462



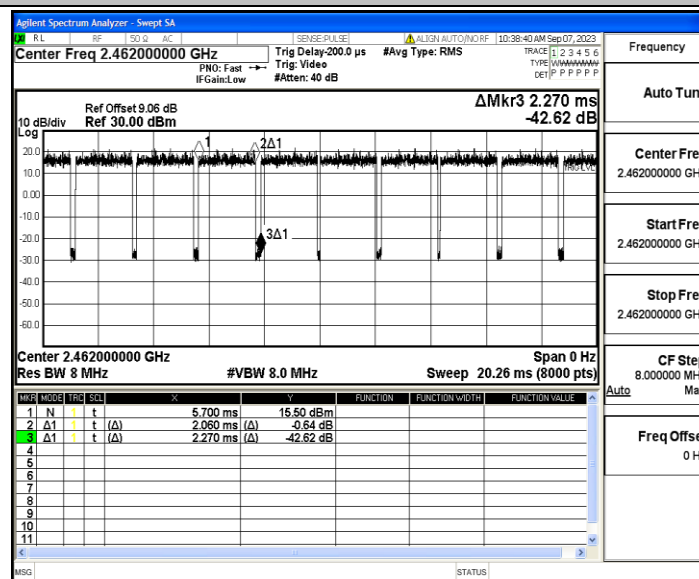
11G_Ant1_2412



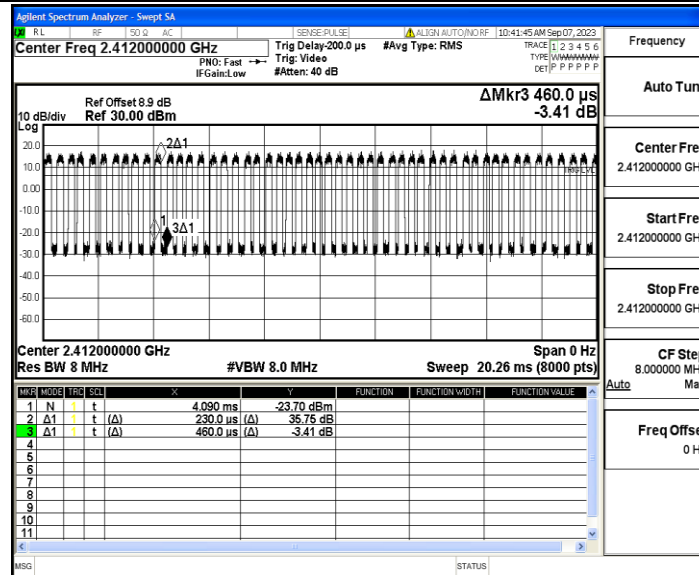
11G_Ant1_2437



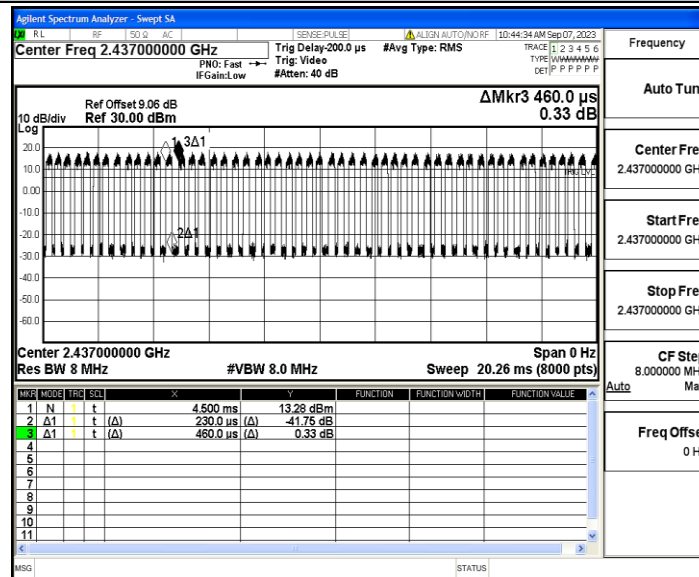
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

