Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Protector Film Cutter

Test Model: Kaizen Atlas

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Nick Peng

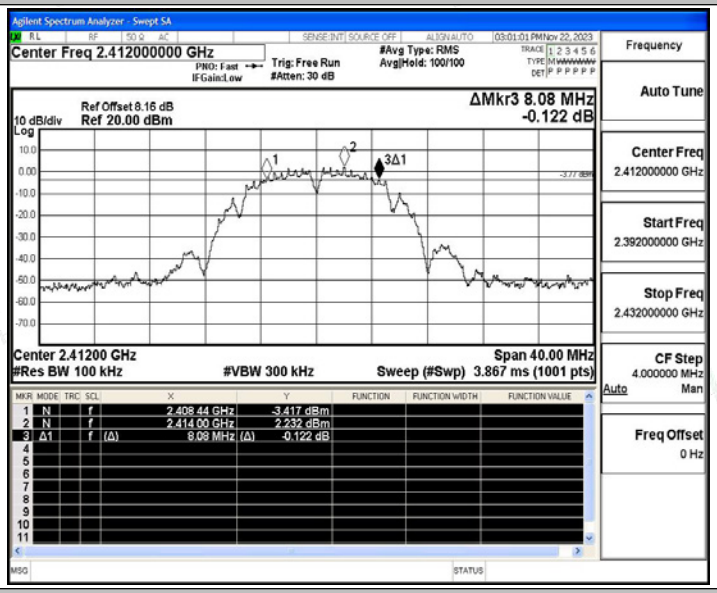
B.1 DTS Bandwidth

Test Result

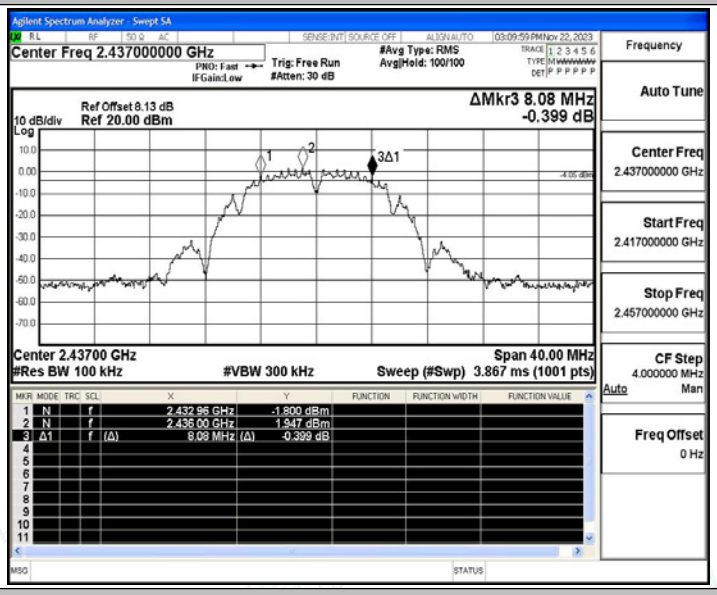
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.080	2408.440	2416.520	0.5	PASS
		2437	8.080	2432.960	2441.040	0.5	PASS
		2462	8.600	2457.920	2466.520	0.5	PASS
11G	Ant1	2412	15.400	2404.760	2420.160	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.320	2453.880	2470.200	0.5	PASS
11N20SISO	Ant1	2412	16.320	2404.440	2420.760	0.5	PASS
		2437	17.280	2428.240	2445.520	0.5	PASS
		2462	16.960	2453.680	2470.640	0.5	PASS
11N40SISO	Ant1	2422	35.840	2404.400	2440.240	0.5	PASS
		2437	35.680	2418.920	2454.600	0.5	PASS
		2452	34.560	2435.680	2470.240	0.5	PASS

Test Graphs

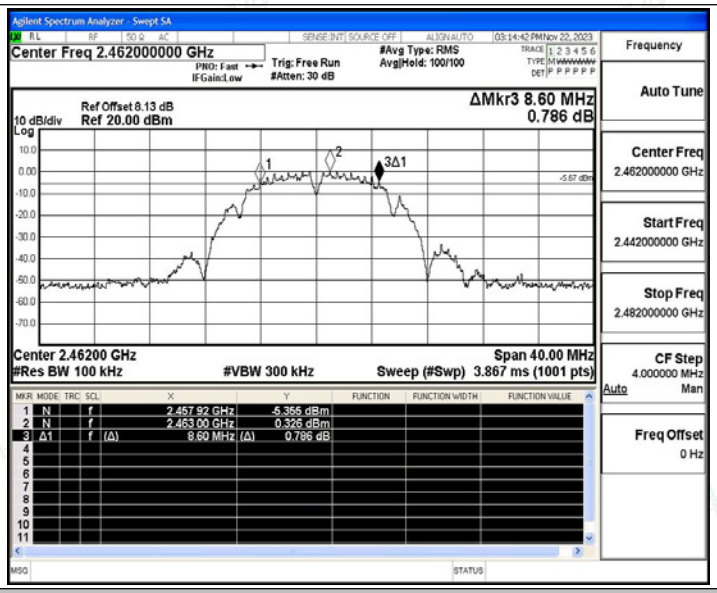
11B_Ant1_2412



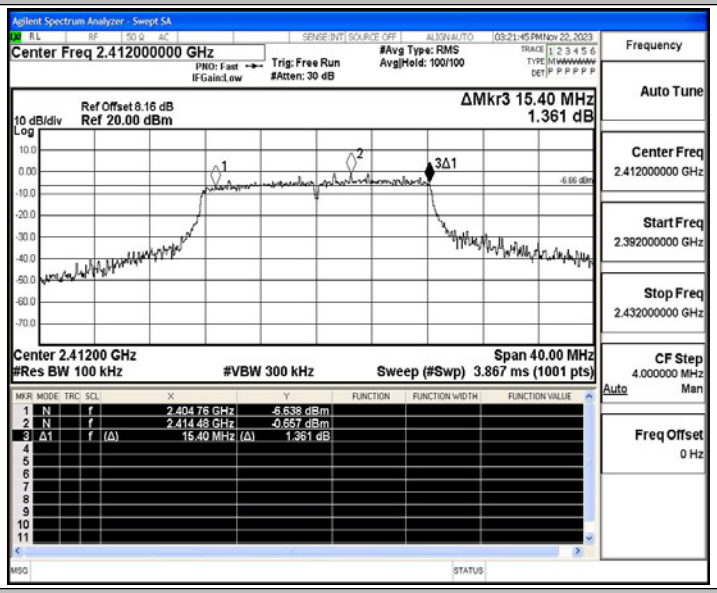
11B_Ant1_2437



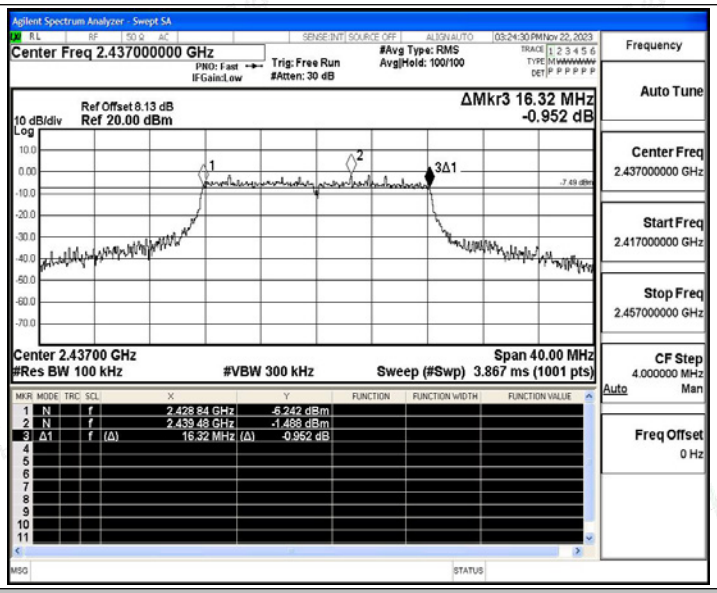
11B_Ant1_2462



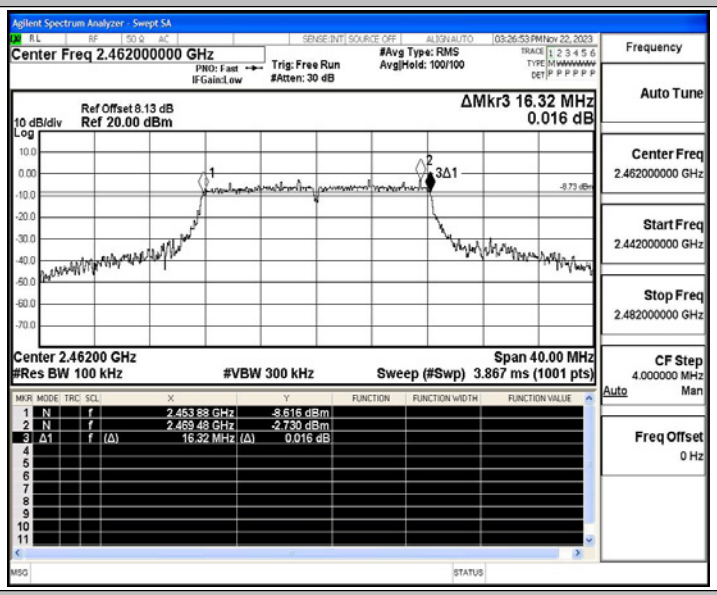
11G_Ant1_2412



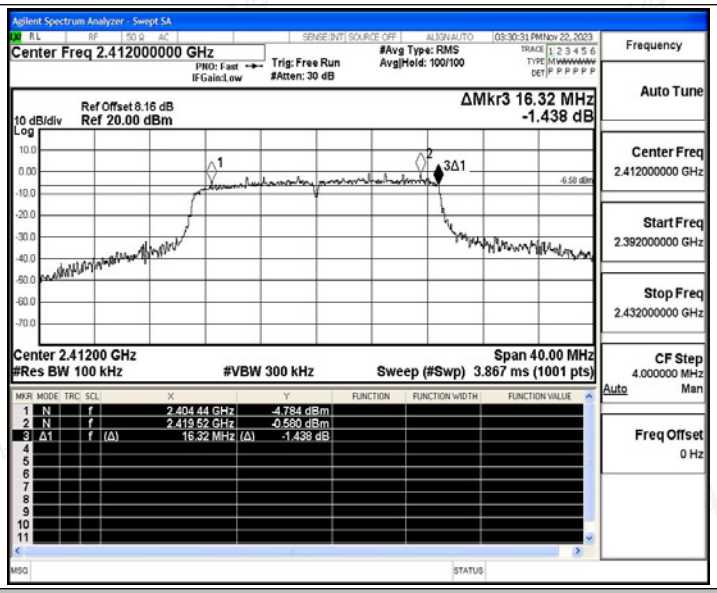
11G_Ant1_2437



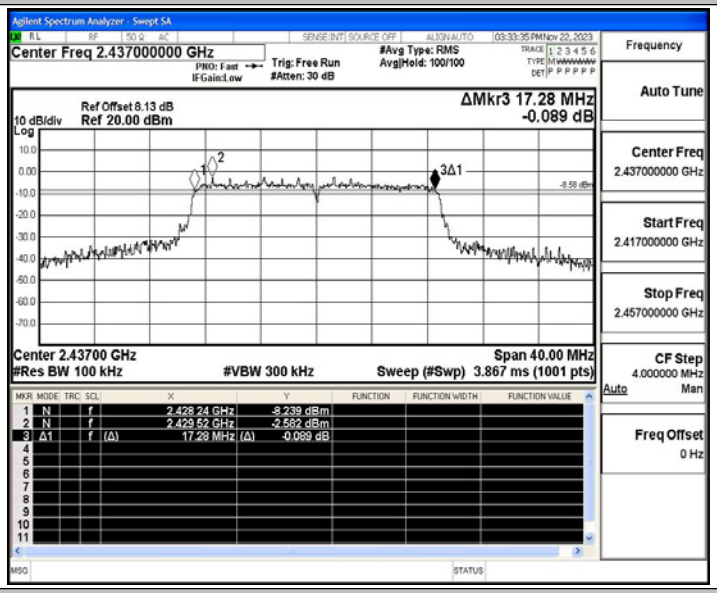
11G_Ant1_2462



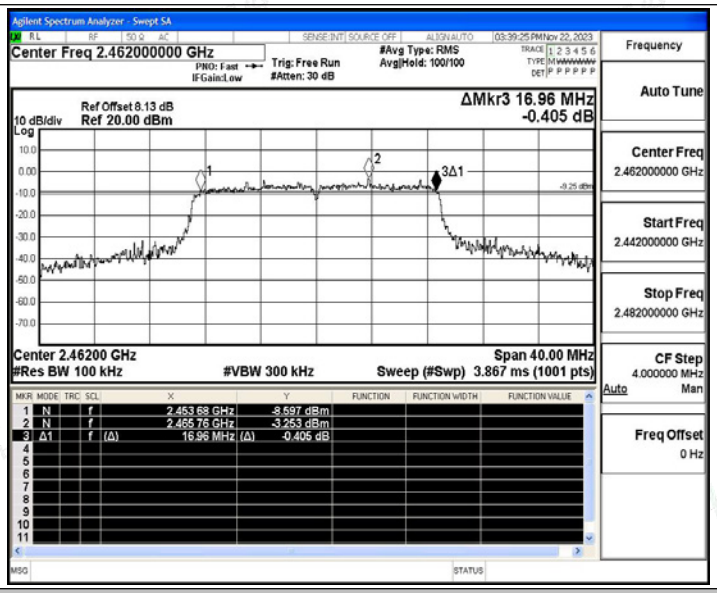
11N20SISO_Ant1_2412



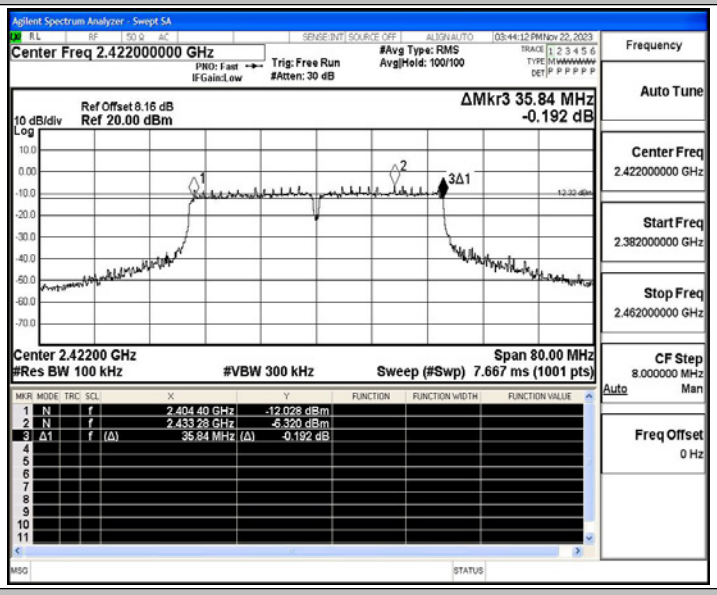
11N20SISO_Ant1_2437



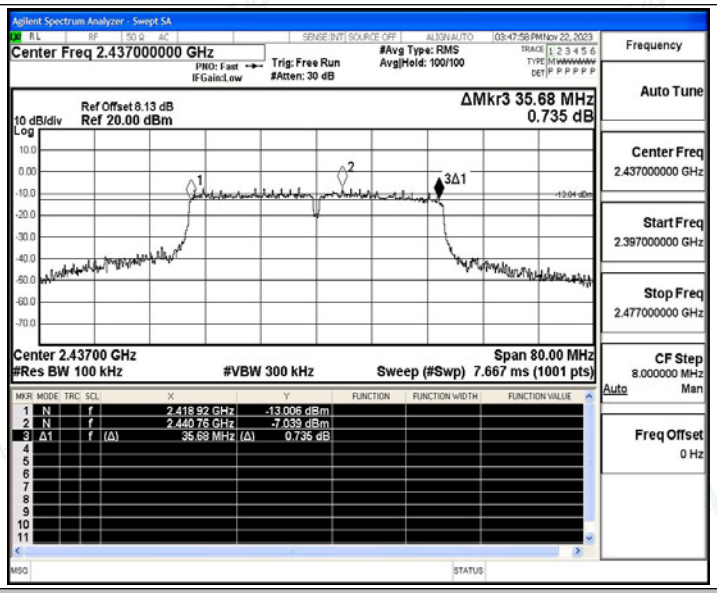
11N20SISO_Ant1_2462



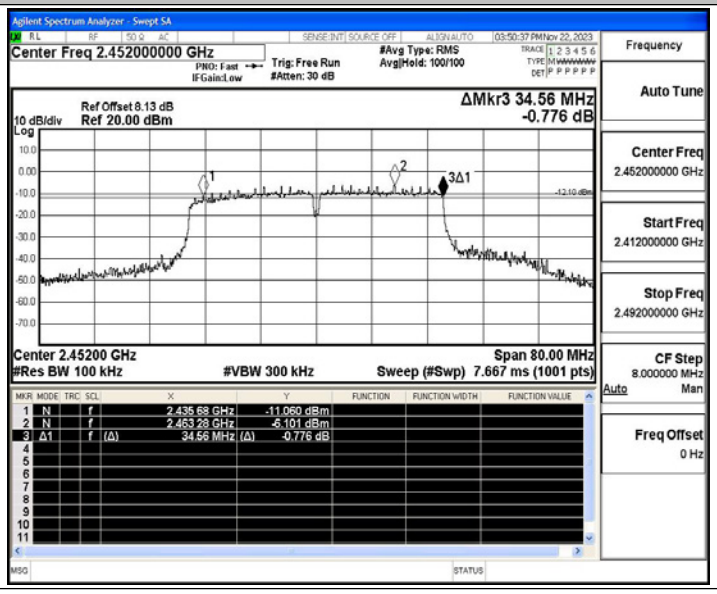
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



B.2 Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	14.84	≤30.00	PASS
		2437	14.63	≤30.00	PASS
		2462	14.11	≤30.00	PASS
11G	Ant1	2412	14.21	≤30.00	PASS
		2437	14.01	≤30.00	PASS
		2462	13.92	≤30.00	PASS
11N20SISO	Ant1	2412	13.51	≤30.00	PASS
		2437	13.29	≤30.00	PASS
		2462	12.02	≤30.00	PASS
11N40SISO	Ant1	2422	12.85	≤30.00	PASS
		2437	13.19	≤30.00	PASS
		2452	12.96	≤30.00	PASS

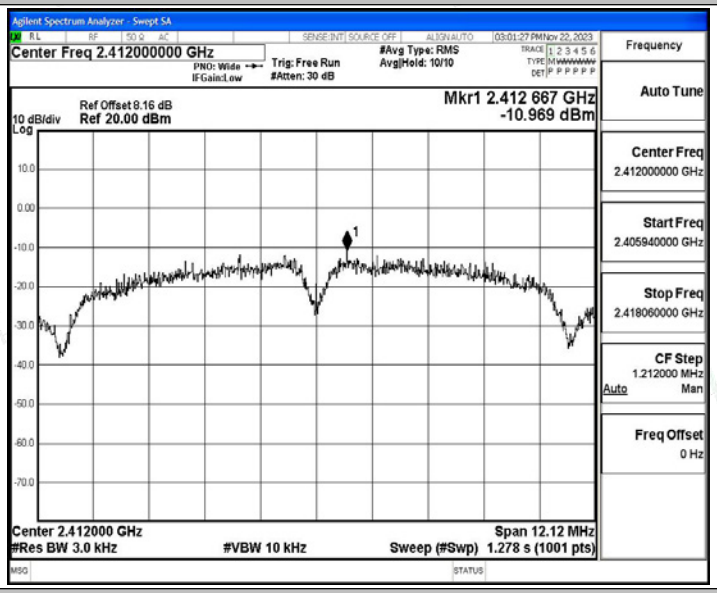
B.3 Maximum power spectral density

Test Result

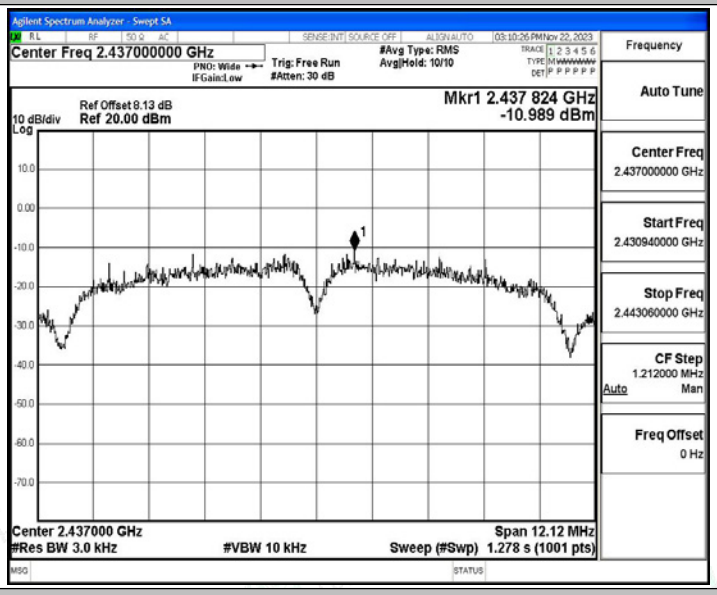
TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-10.97	≤8.00	PASS
		2437	-10.99	≤8.00	PASS
		2462	-11.22	≤8.00	PASS
11G	Ant1	2412	-15.15	≤8.00	PASS
		2437	-15.34	≤8.00	PASS
		2462	-16.01	≤8.00	PASS
11N20SISO	Ant1	2412	-14.48	≤8.00	PASS
		2437	-16.39	≤8.00	PASS
		2462	-16.7	≤8.00	PASS
11N40SISO	Ant1	2422	-20.22	≤8.00	PASS
		2437	-21.07	≤8.00	PASS
		2452	-19.85	≤8.00	PASS

Test Graphs

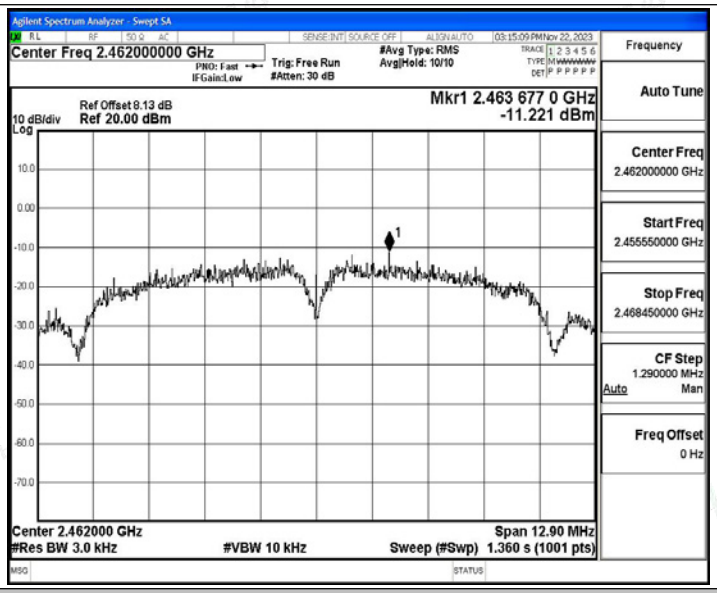
11B_Ant1_2412



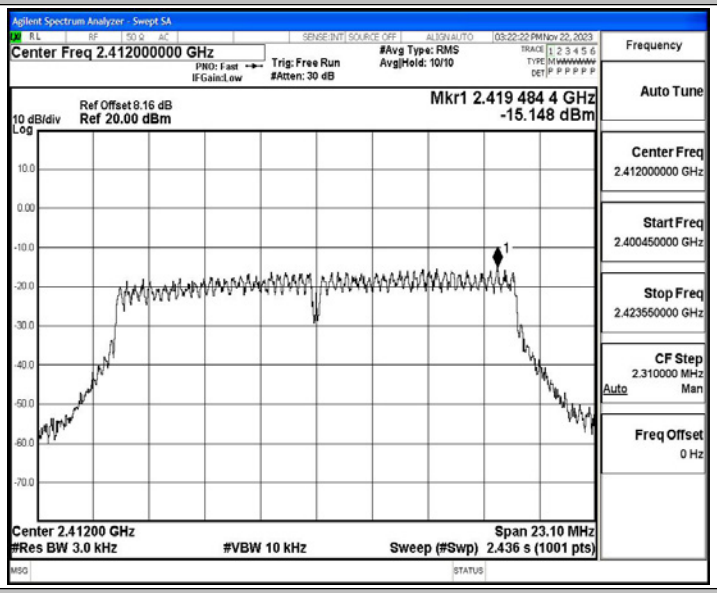
11B_Ant1_2437



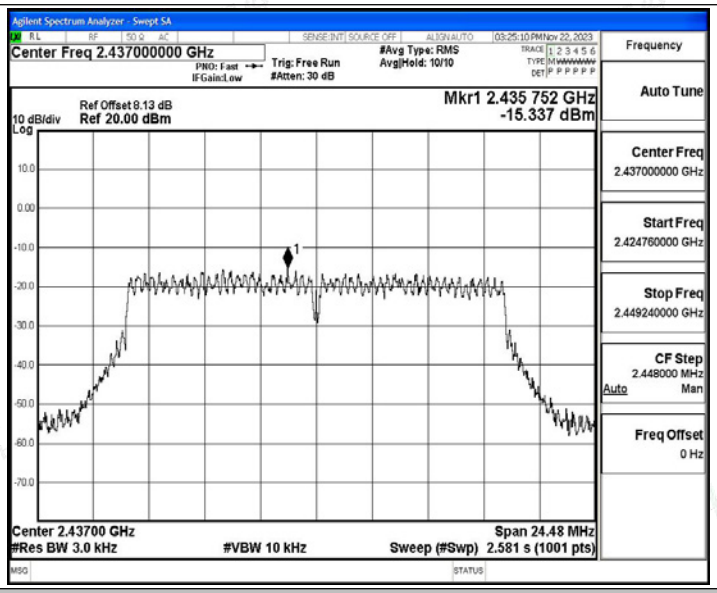
11B_Ant1_2462



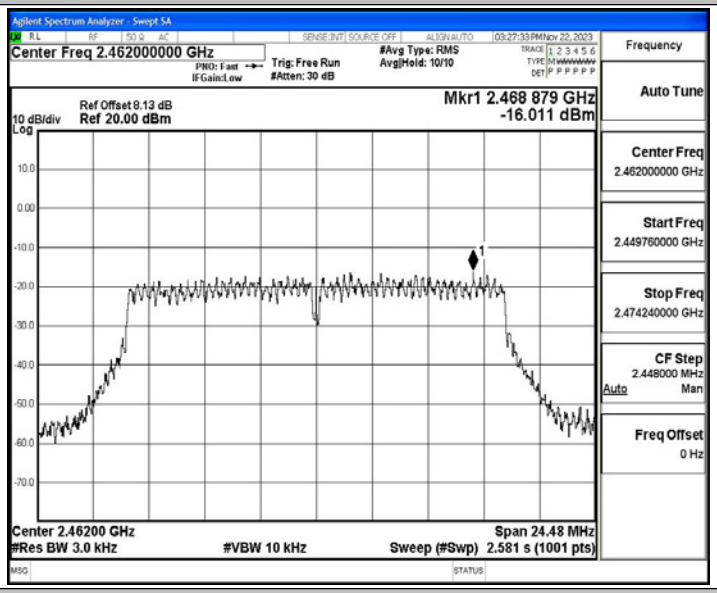
11G_Ant1_2412



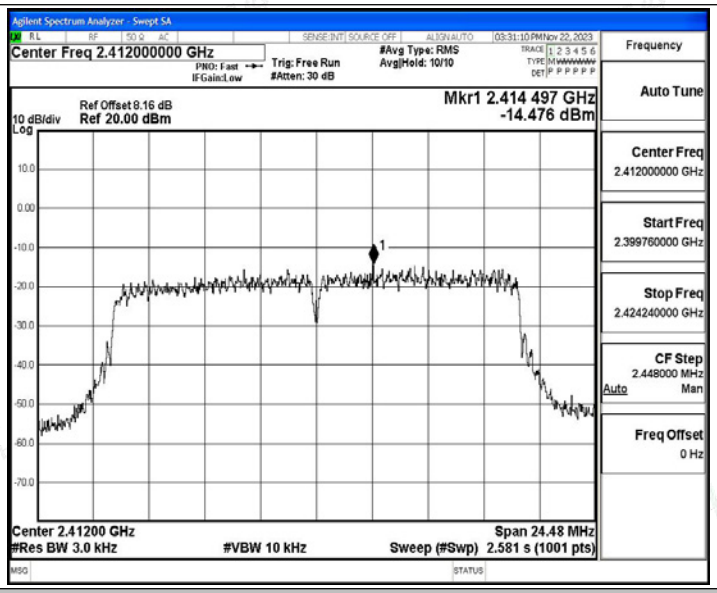
11G_Ant1_2437



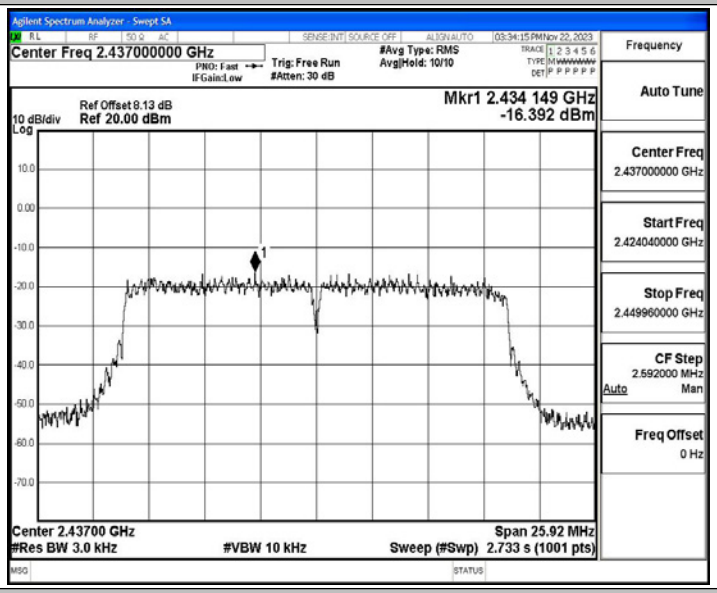
11G_Ant1_2462



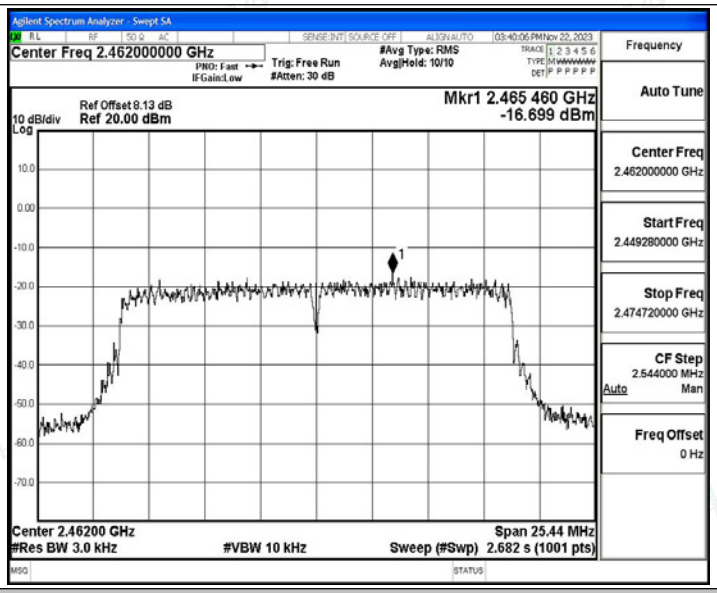
11N20SISO_Ant1_2412



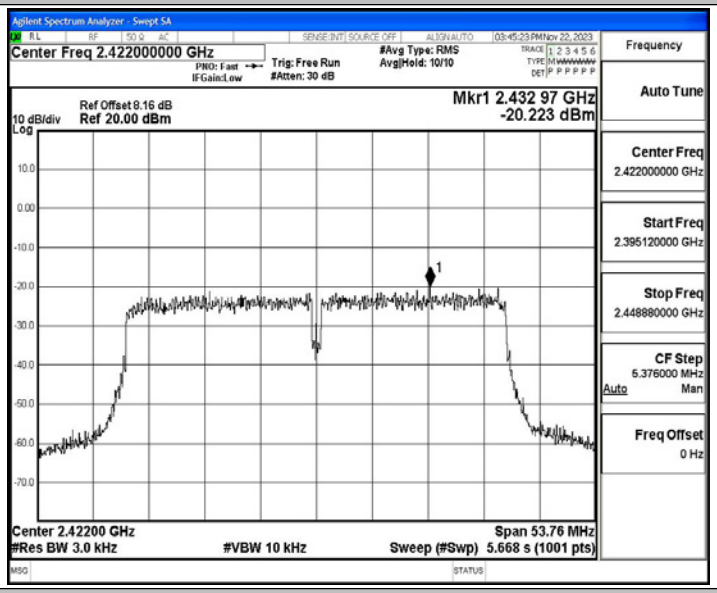
11N20SISO_Ant1_2437



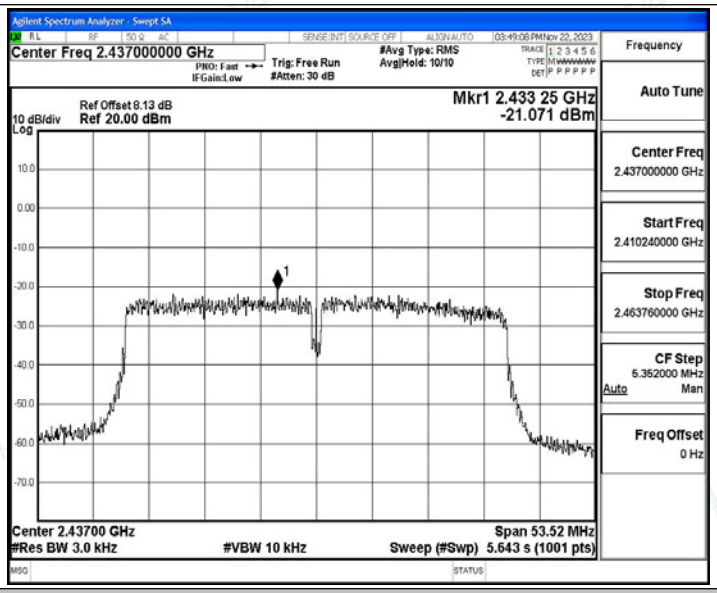
11N20SISO_Ant1_2462



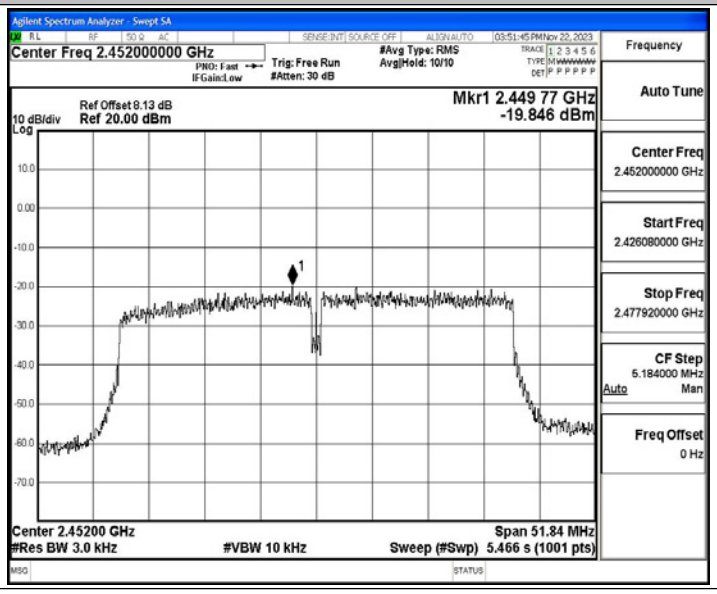
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



B.4 Band edge measurements

Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2411.01	2.13
		2437	2438.01	2.02
		2462	2462.50	0.75
11G	Ant1	2412	2413.27	-0.42
		2437	2433.25	-1.44
		2462	2460.73	-2.69
11N20SISO	Ant1	2412	2413.27	-0.55
		2437	2429.48	-2.60
		2462	2463.27	-2.87
11N40SISO	Ant1	2422	2433.24	-6.41
		2437	2440.75	-7.05
		2452	2454.54	-5.96

Band edge measurements

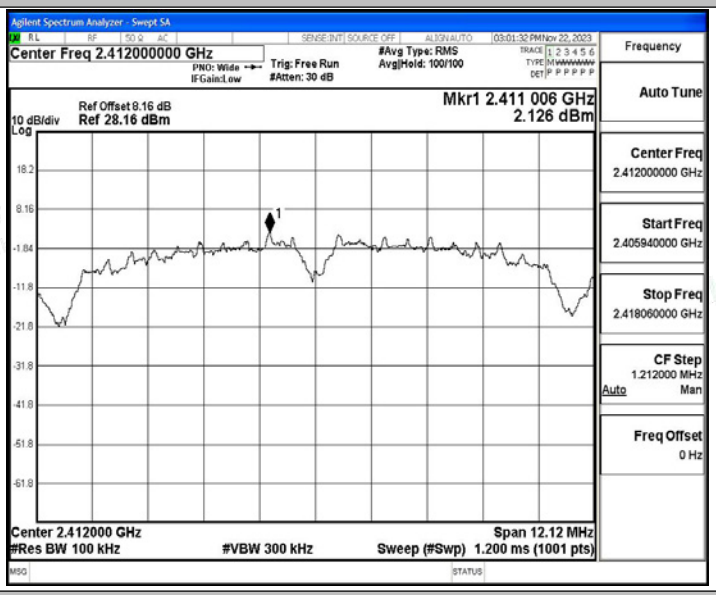
Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.13	-47.23	≤-17.87	PASS
		High	2462	0.75	-48.9	≤-19.25	PASS
11G	Ant1	Low	2412	-0.42	-34.96	≤-20.42	PASS
		High	2462	-2.69	-44.23	≤-22.69	PASS
11N20SISO	Ant1	Low	2412	-0.55	-34.5	≤-20.55	PASS
		High	2462	-2.87	-44.51	≤-22.87	PASS
11N40SISO	Ant1	Low	2422	-6.41	-37.43	≤-26.41	PASS
		High	2452	-5.96	-39.97	≤-25.96	PASS

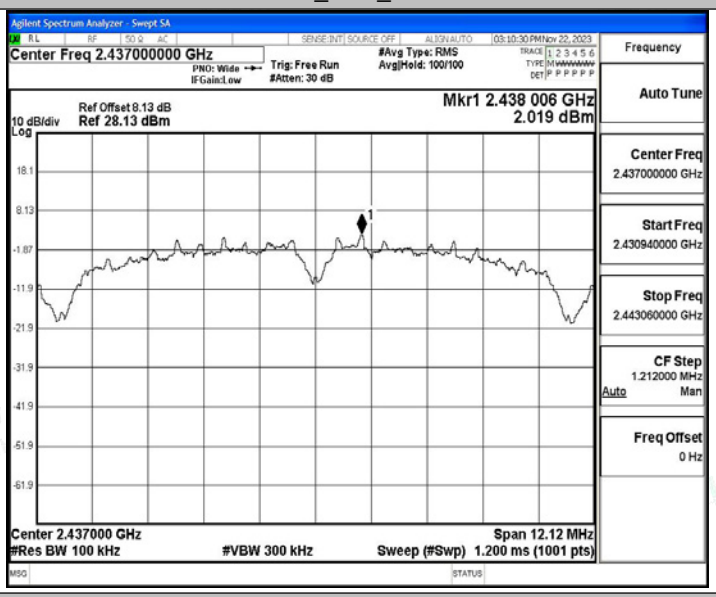
Reference level measurement

Test Graphs

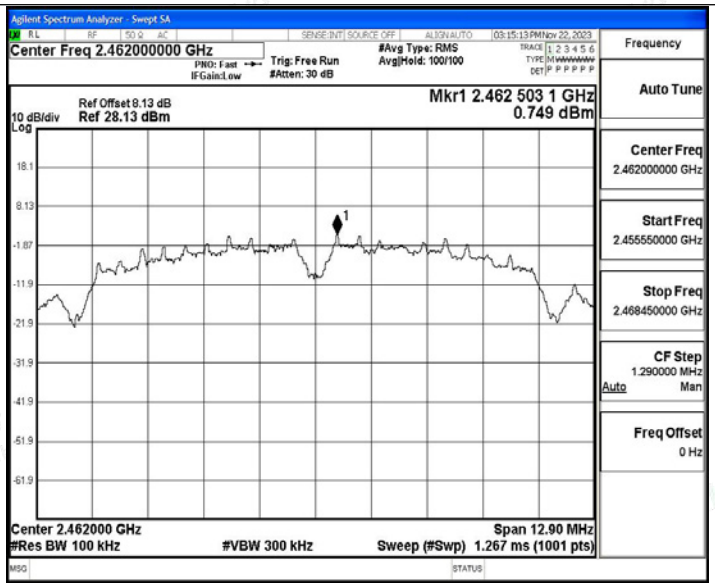
11B_Ant1_2412



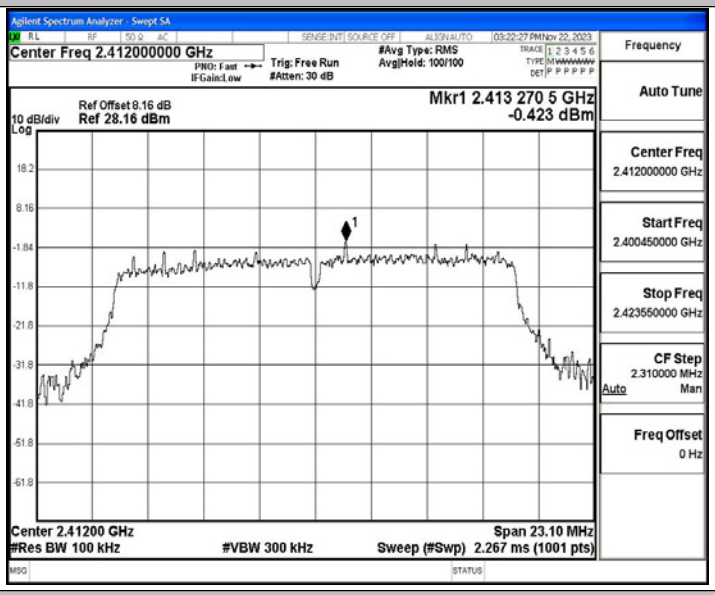
11B_Ant1_2437



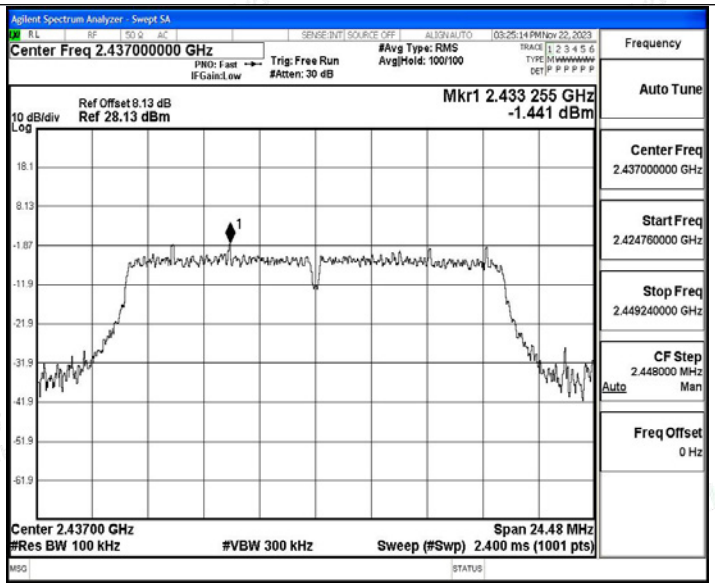
11B_Ant1_2462



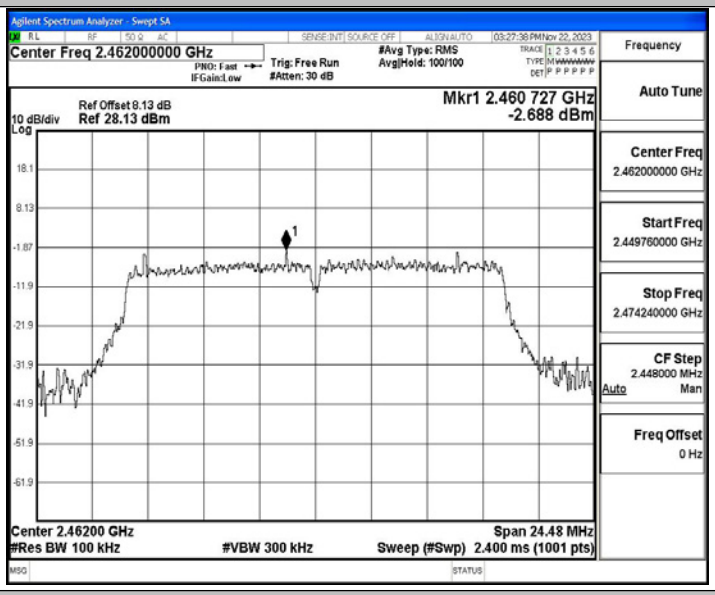
11G_Ant1_2412



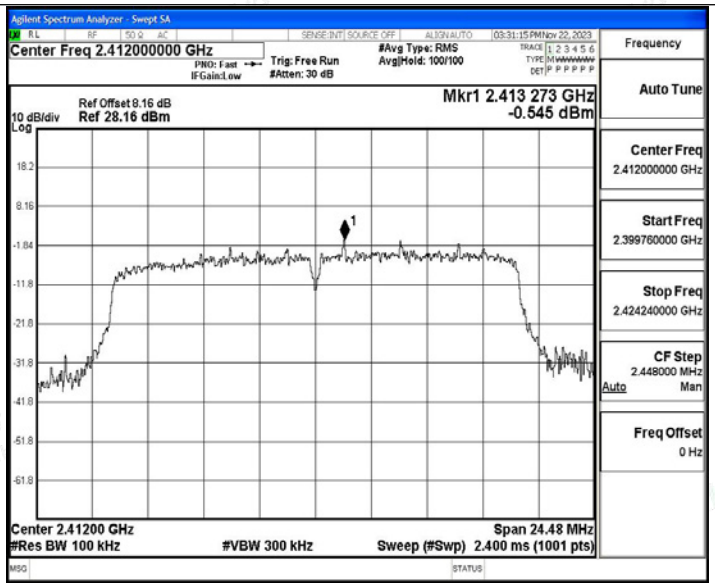
11G_Ant1_2437



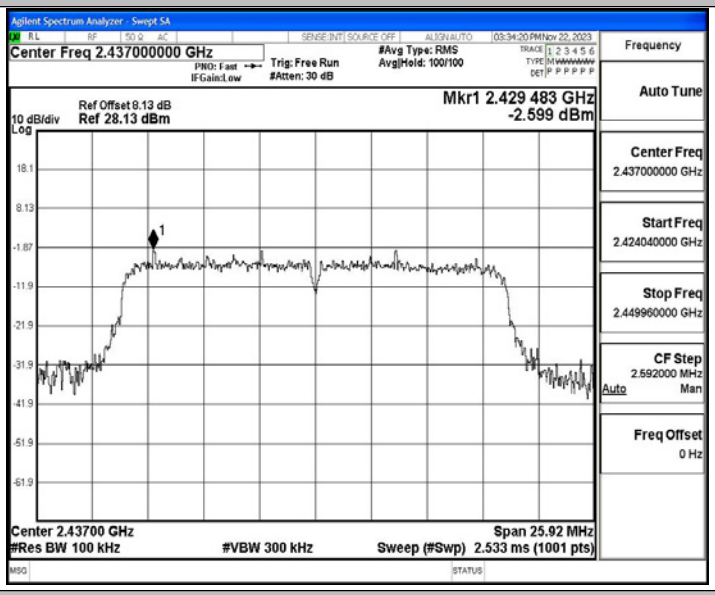
11G_Ant1_2462



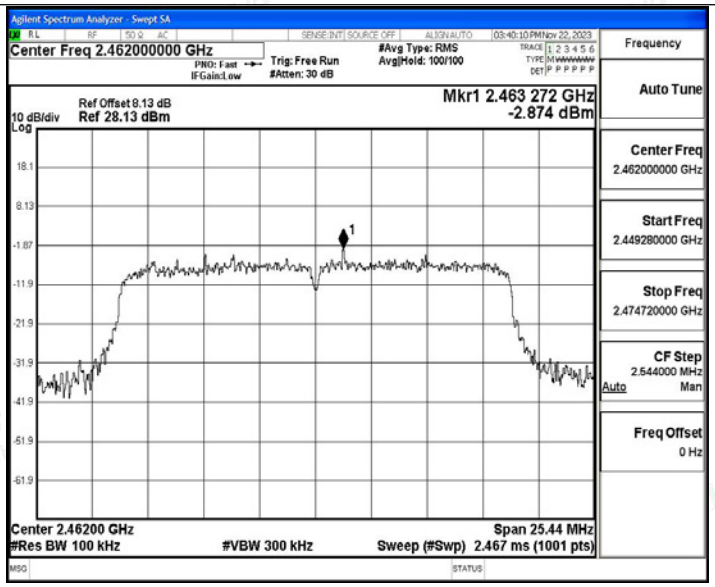
11N20SISO_Ant1_2412



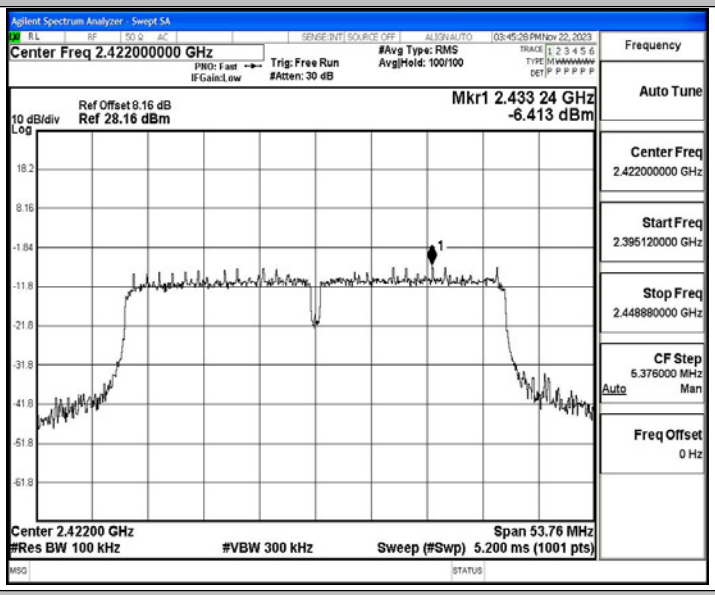
11N20SISO_Ant1_2437



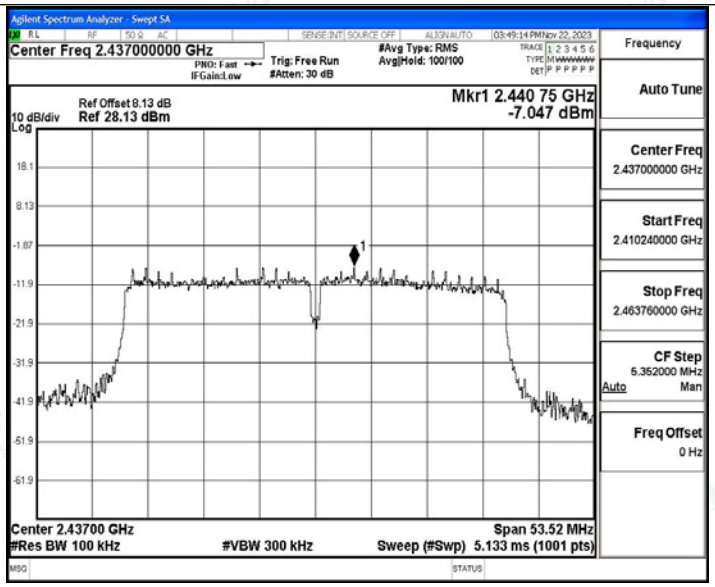
11N20SISO_Ant1_2462



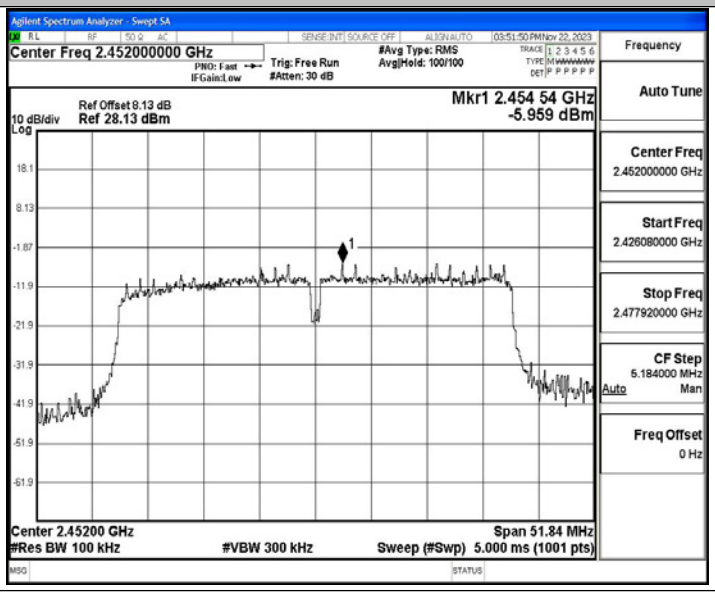
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



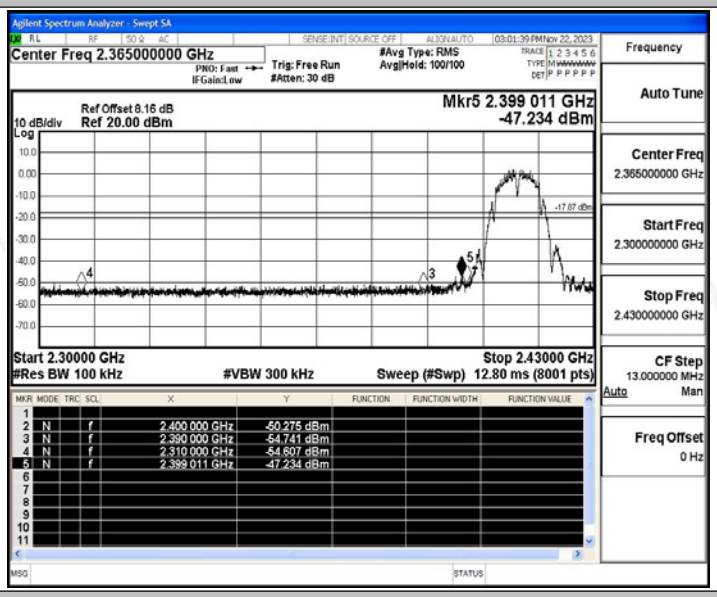
11N40SISO_Ant1_2452



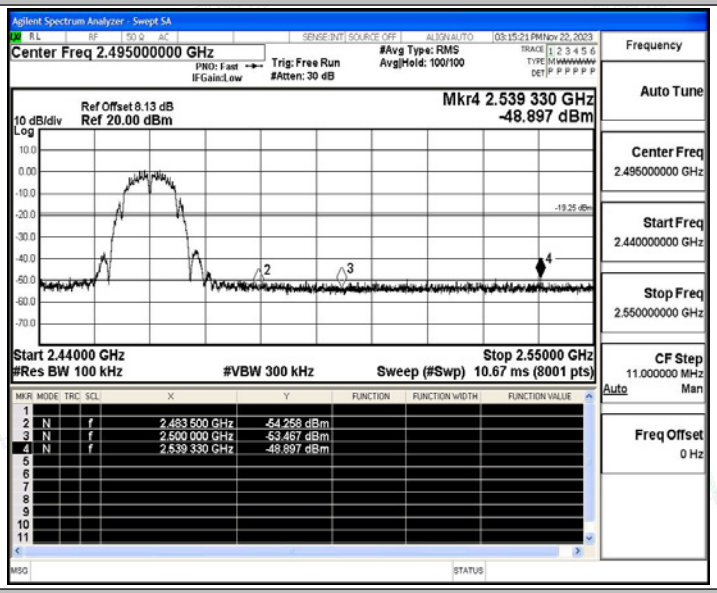
Band edge measurements

Test Graphs

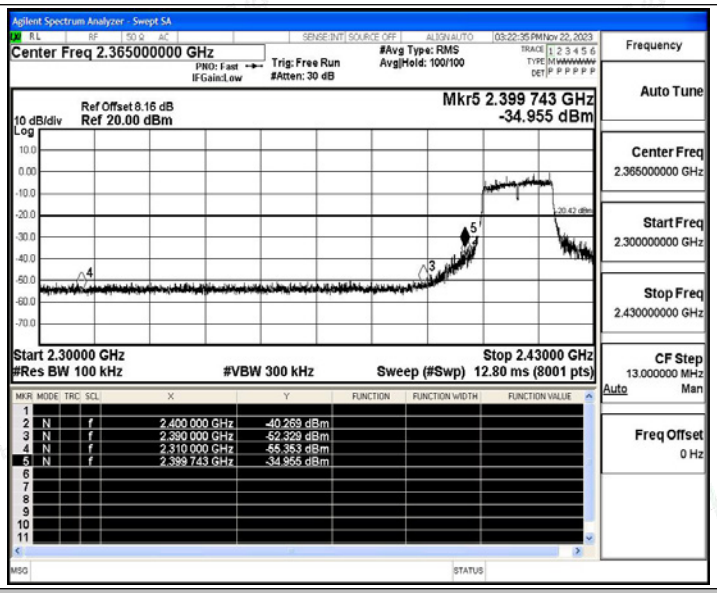
11B_Ant1_Low_2412



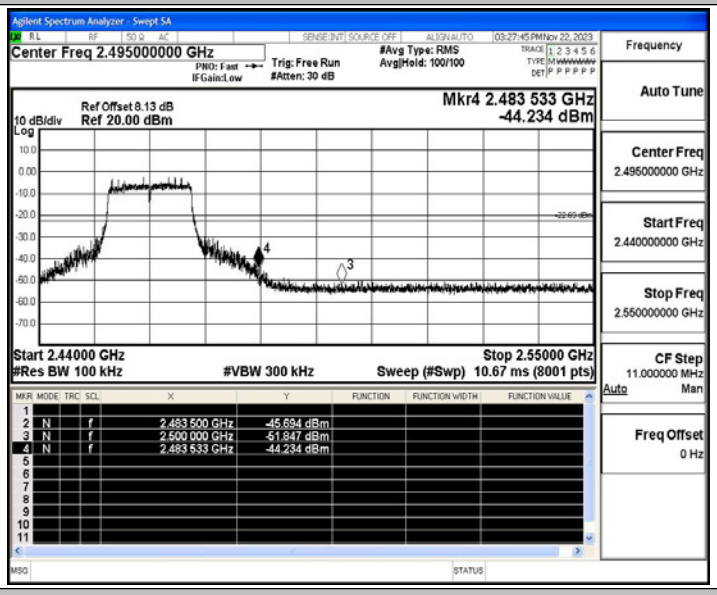
11B_Ant1_High_2462



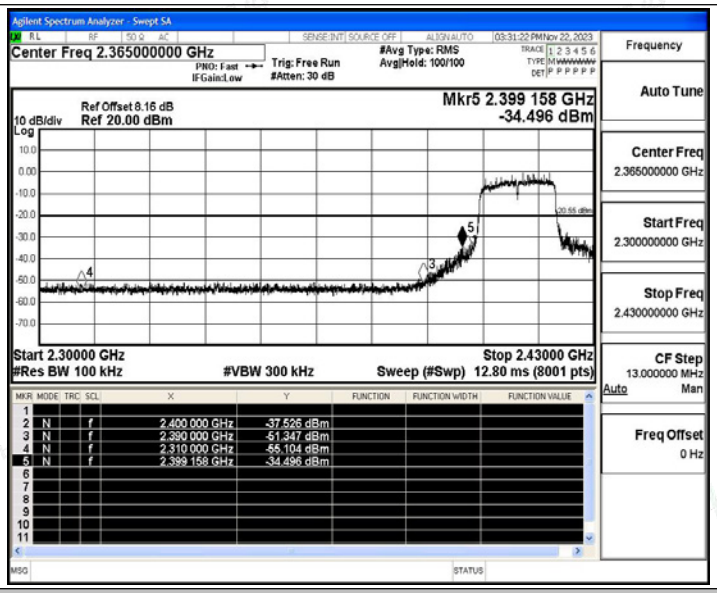
11G_Ant1_Low_2412



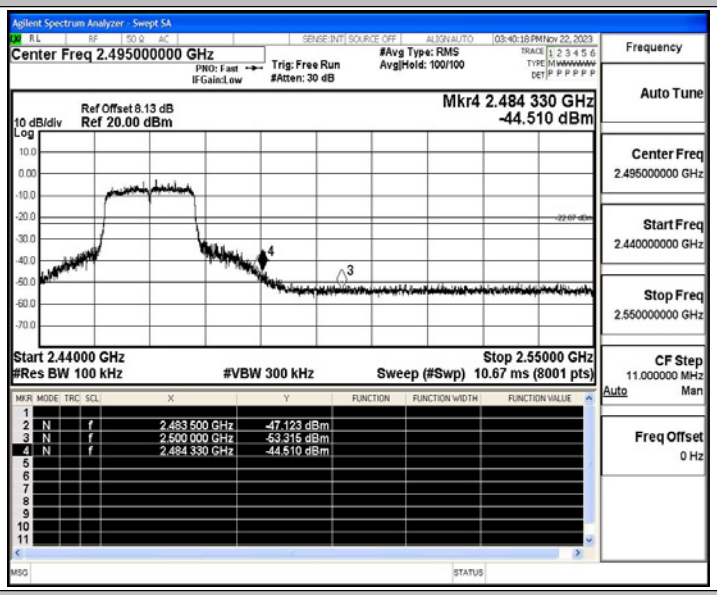
11G_Ant1_High_2462



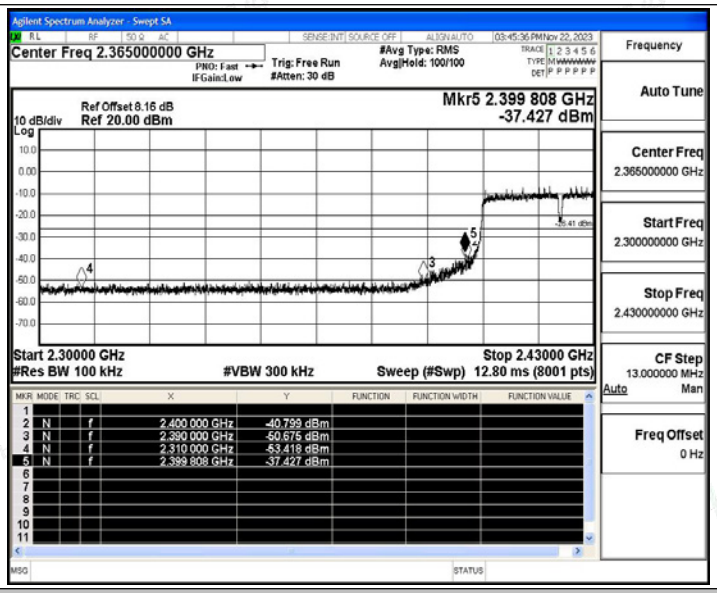
11N20SISO_Ant1_Low_2412



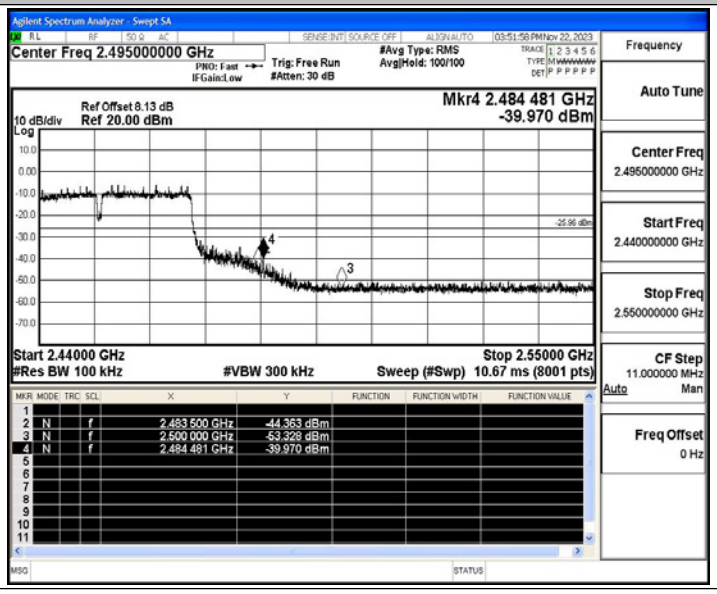
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



B.5 Conducted Spurious Emission

Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2411.01	2.13
		2437	2438.01	2.02
		2462	2462.50	0.75
11G	Ant1	2412	2413.27	-0.42
		2437	2433.25	-1.44
		2462	2460.73	-2.69
11N20SISO	Ant1	2412	2413.27	-0.55
		2437	2429.48	-2.60
		2462	2463.27	-2.87
11N40SISO	Ant1	2422	2433.24	-6.41
		2437	2440.75	-7.05
		2452	2454.54	-5.96

Conducted Spurious Emission

Test Result

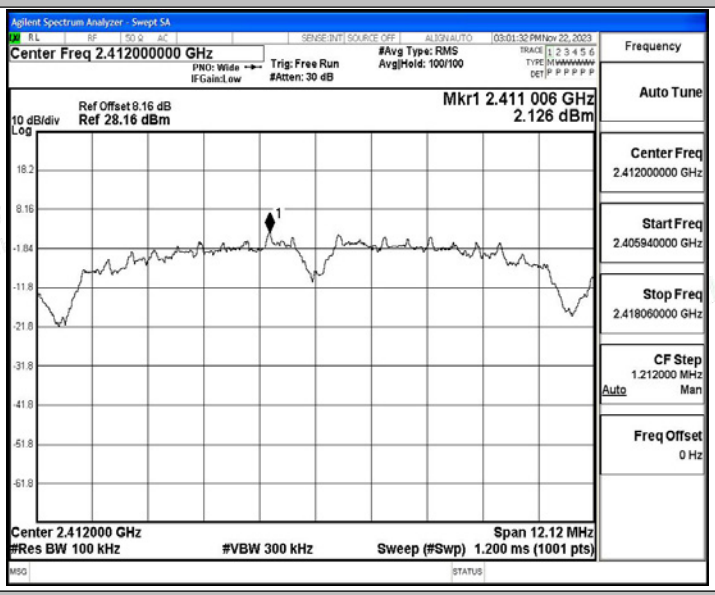
TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	2.13	-61.17	≤-17.87	PASS
			1000~26500	2.13	-49.64	≤-17.87	PASS
		2437	30~1000	2.02	-61.9	≤-17.98	PASS
			1000~26500	2.02	-49.52	≤-17.98	PASS
		2462	30~1000	0.75	-61.09	≤-19.25	PASS
			1000~26500	0.75	-49.22	≤-19.25	PASS
11G	Ant1	2412	30~1000	-0.42	-61.66	≤-20.42	PASS
			1000~26500	-0.42	-48.64	≤-20.42	PASS
		2437	30~1000	-1.44	-61.86	≤-21.44	PASS
			1000~26500	-1.44	-49.31	≤-21.44	PASS
		2462	30~1000	-2.69	-61.96	≤-22.69	PASS
			1000~26500	-2.69	-49.67	≤-22.69	PASS
11N20SISO	Ant1	2412	30~1000	-0.55	-60.64	≤-20.55	PASS
			1000~26500	-0.55	-49.32	≤-20.55	PASS

		2437	30~1000	-2.60	-60.74	≤-22.6	PASS
			1000~26500	-2.60	-49.26	≤-22.6	PASS
		2462	30~1000	-2.87	-61.66	≤-22.87	PASS
			1000~26500	-2.87	-49.06	≤-22.87	PASS
11N40SISO	Ant1	2422	30~1000	-6.41	-62.24	≤-26.41	PASS
			1000~26500	-6.41	-49.43	≤-26.41	PASS
		2437	30~1000	-7.05	-61.21	≤-27.05	PASS
			1000~26500	-7.05	-49	≤-27.05	PASS
		2452	30~1000	-5.96	-61.42	≤-25.96	PASS
			1000~26500	-5.96	-48.81	≤-25.96	PASS

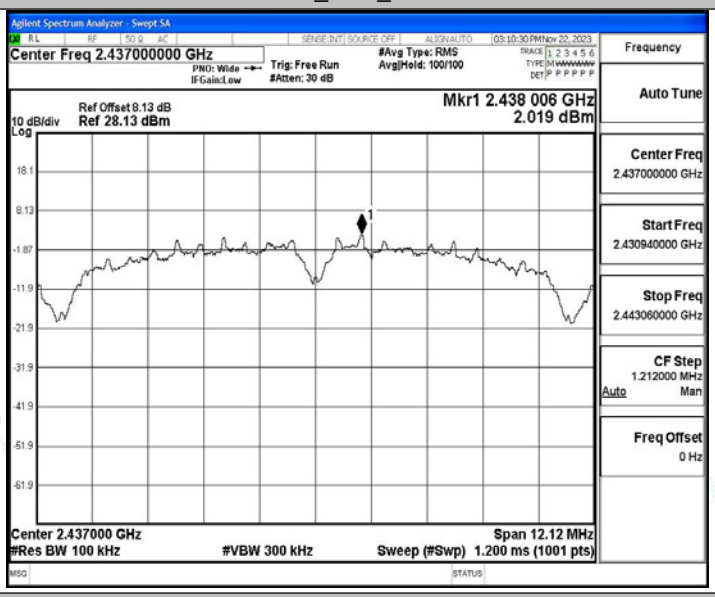
Reference level measurement

Test Graphs

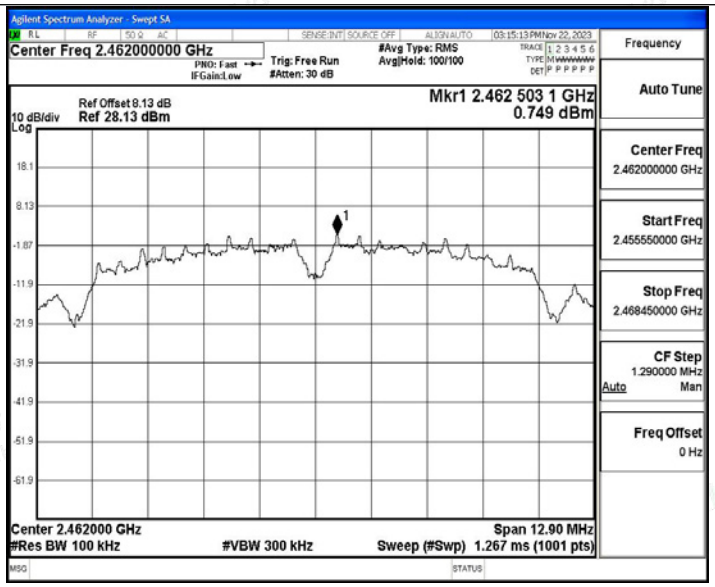
11B_Ant1_2412



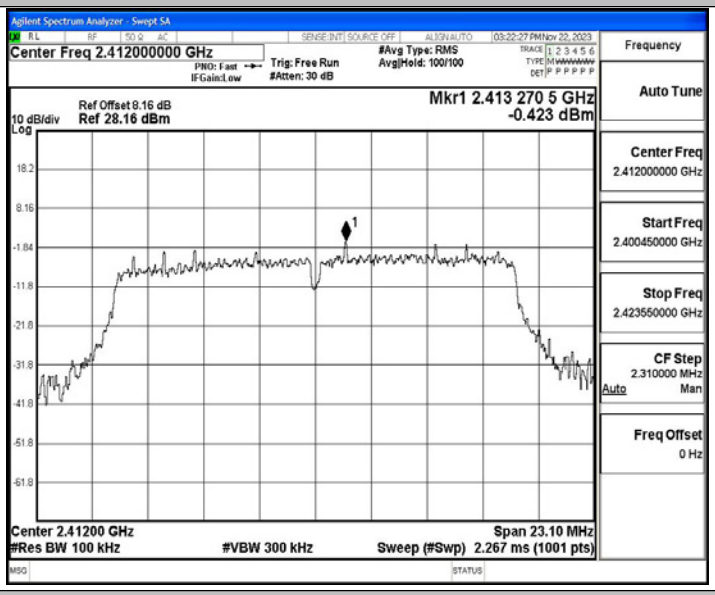
11B_Ant1_2437



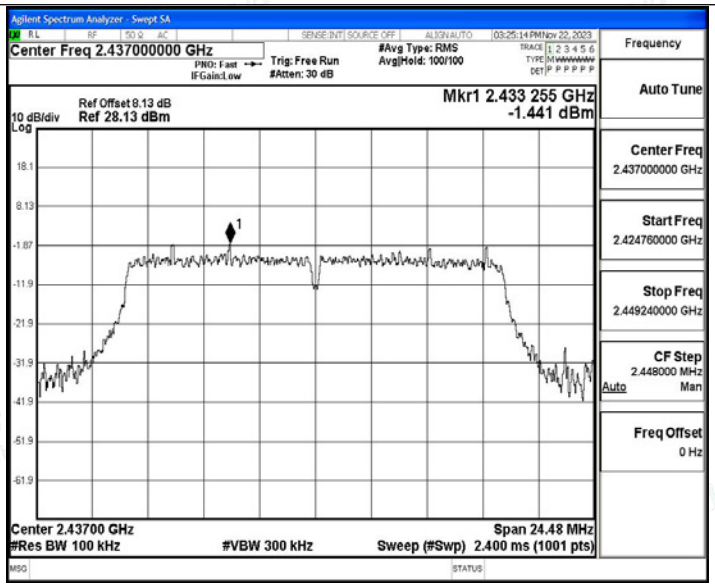
11B_Ant1_2462



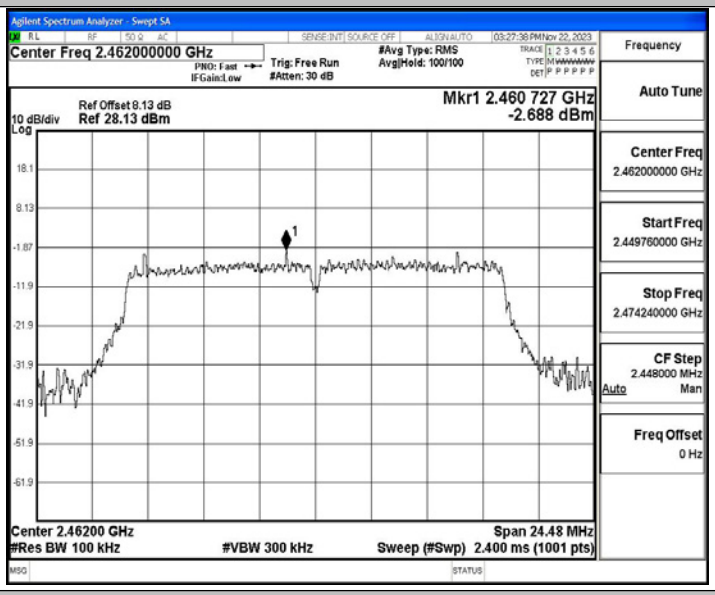
11G_Ant1_2412



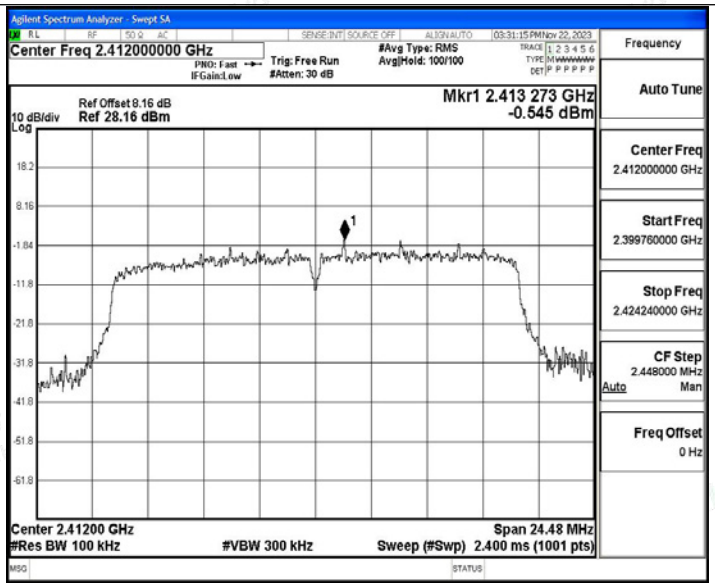
11G_Ant1_2437



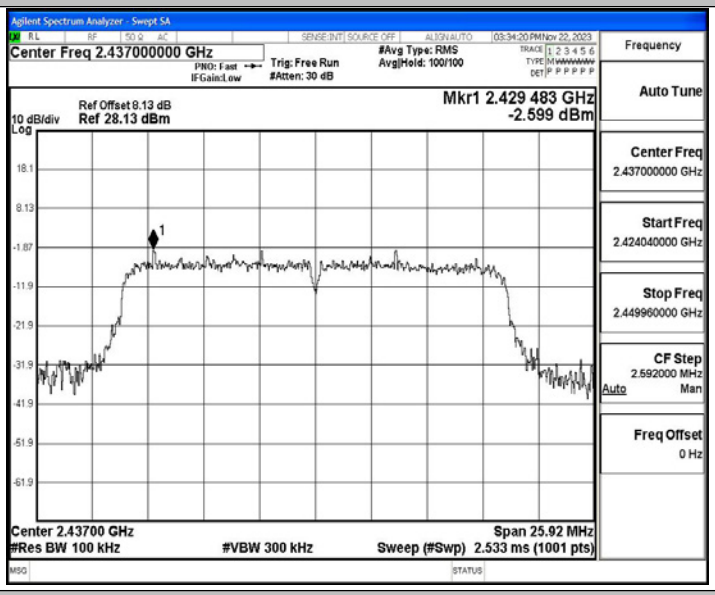
11G_Ant1_2462



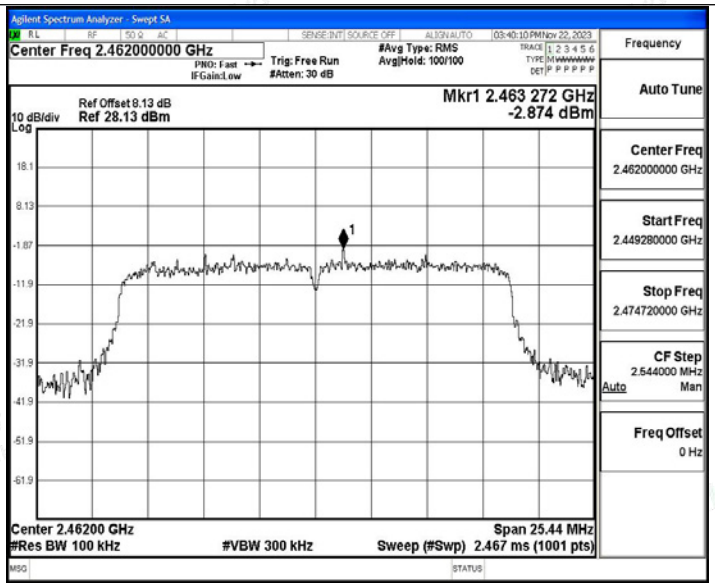
11N20SISO_Ant1_2412



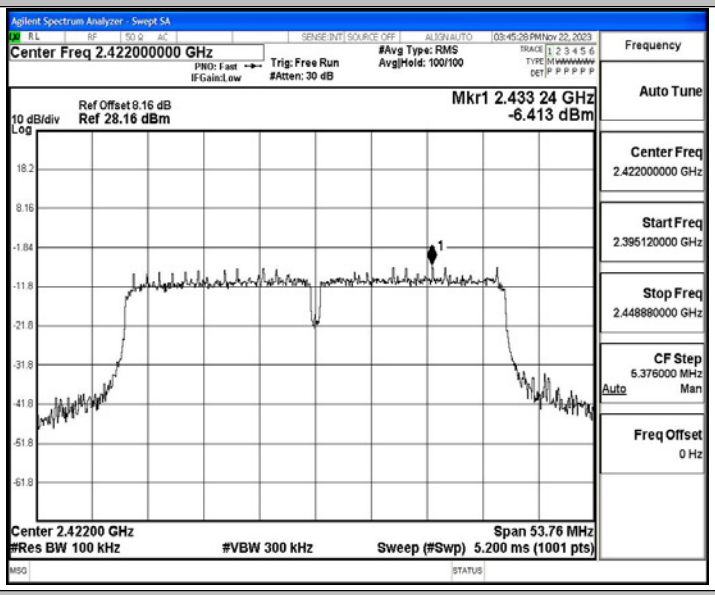
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437