



Appendix A

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Permanent Outdoor Light

Test Model: OS010

Environmental Conditions

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



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A.1 DTS Bandwidth

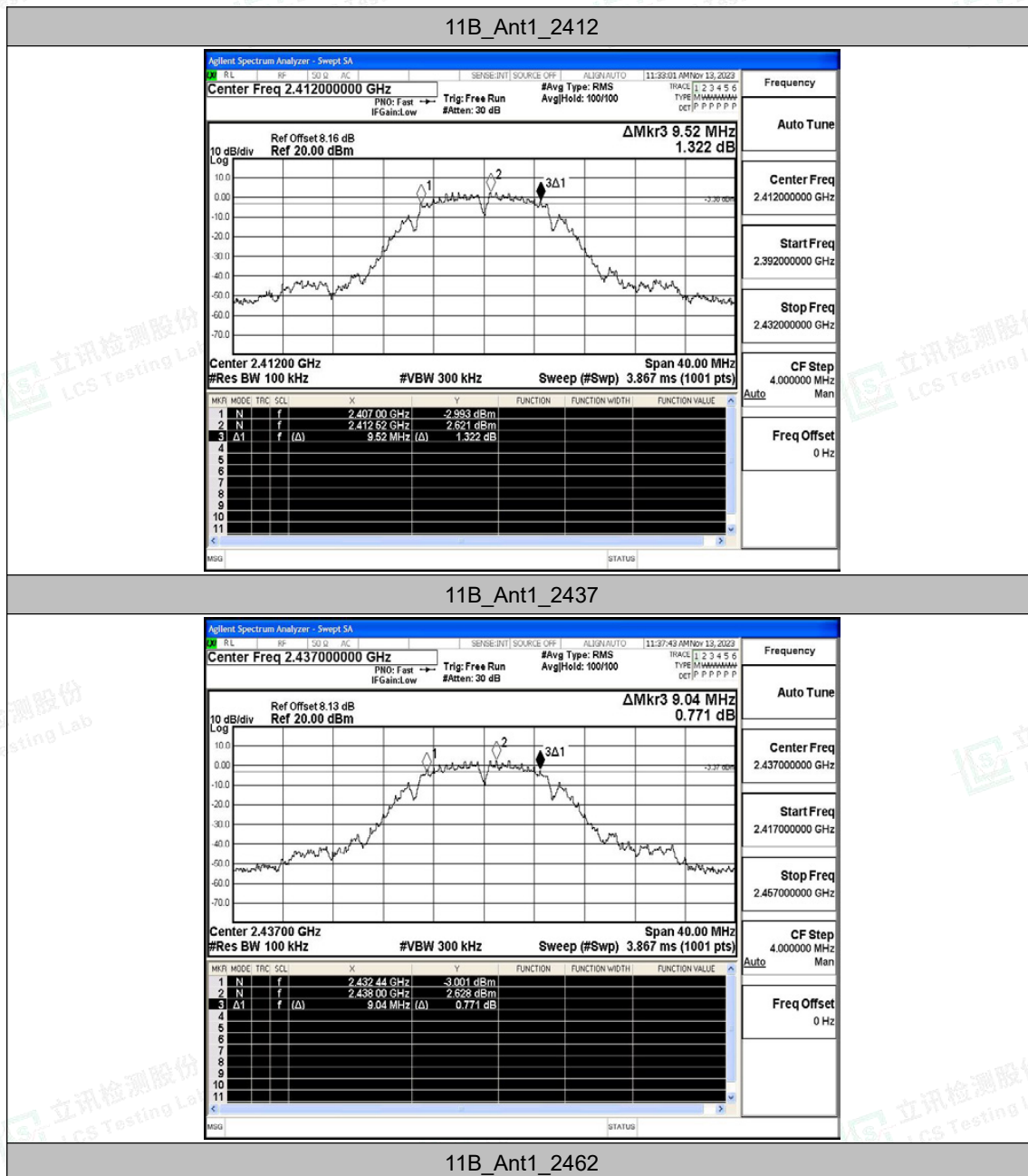
Test Result

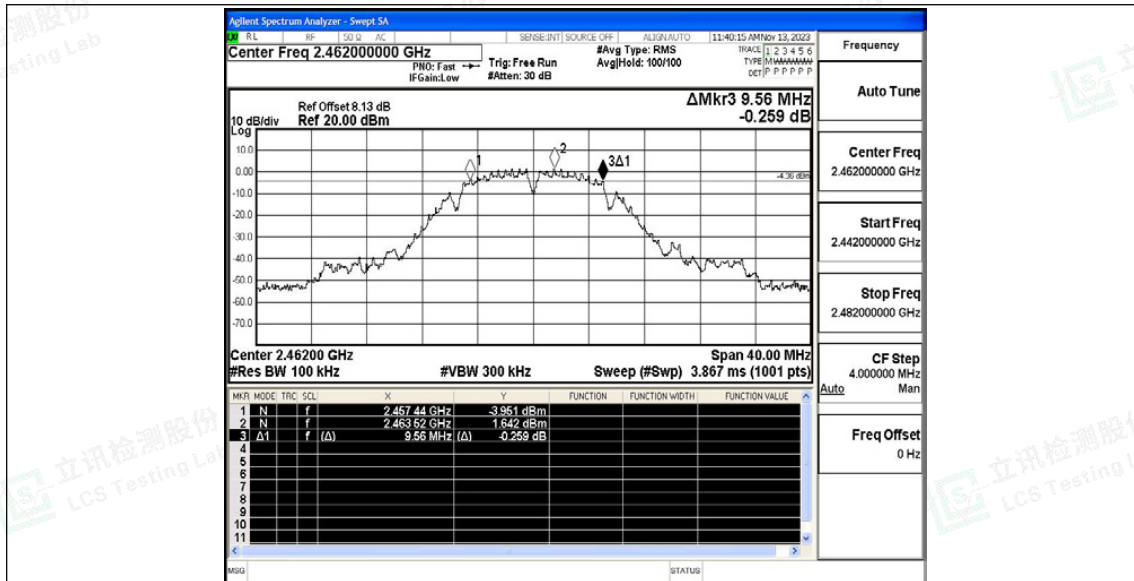
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.520	2407.000	2416.520	0.5	PASS
		2437	9.040	2432.440	2441.480	0.5	PASS
		2462	9.560	2457.440	2467.000	0.5	PASS
11G	Ant1	2412	16.360	2403.800	2420.160	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.200	2420.800	0.5	PASS
		2437	17.600	2428.200	2445.800	0.5	PASS
		2462	17.600	2453.200	2470.800	0.5	PASS
11N40SISO	Ant1	2422	35.760	2404.080	2439.840	0.5	PASS
		2437	35.680	2419.080	2454.760	0.5	PASS
		2452	35.840	2434.080	2469.920	0.5	PASS



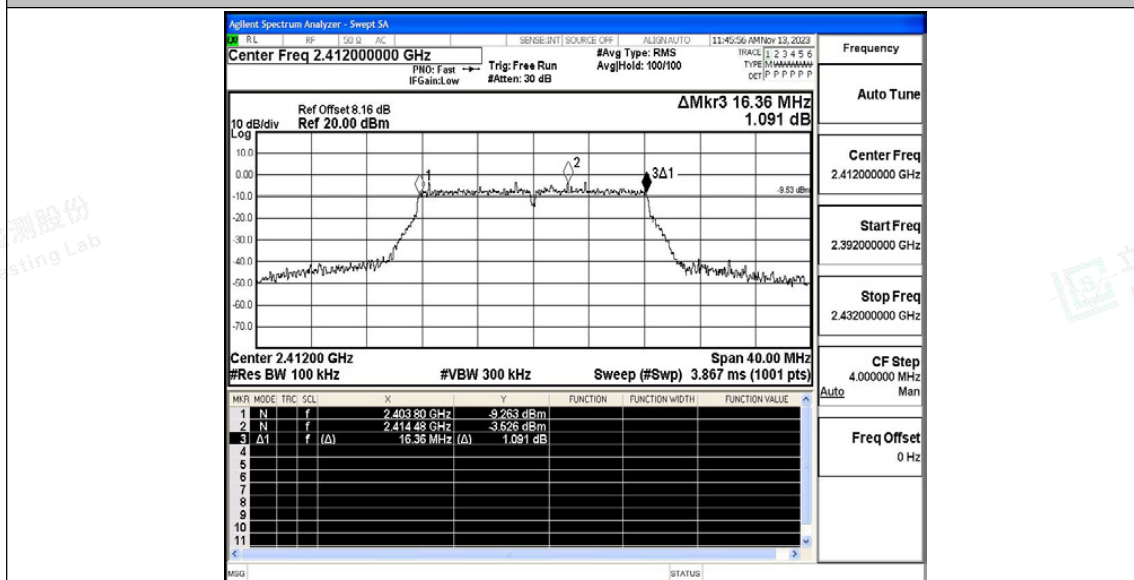


Test Graphs



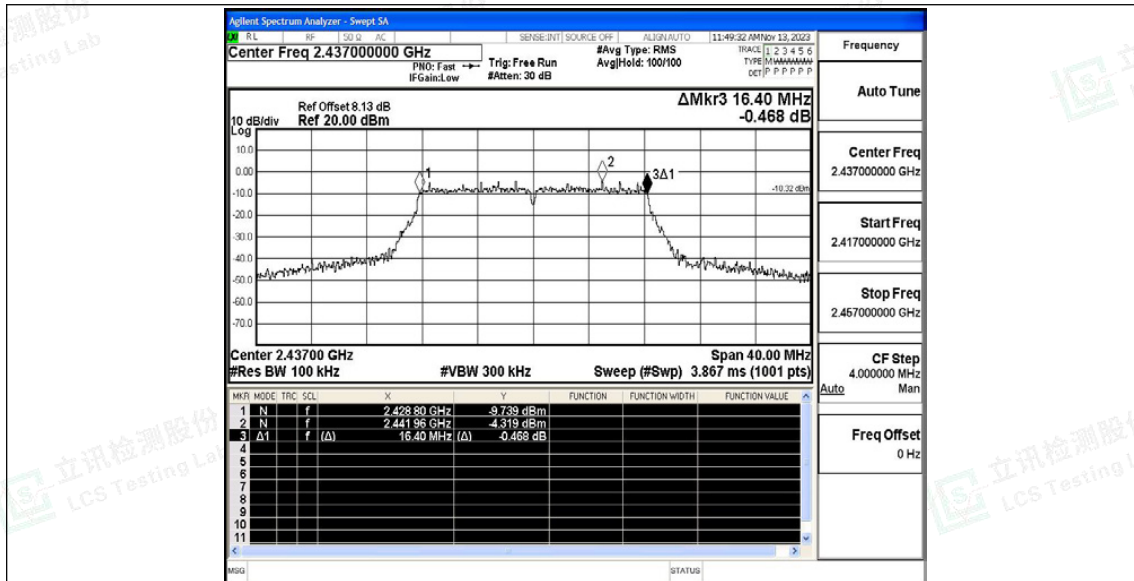


11G_Ant1_2412

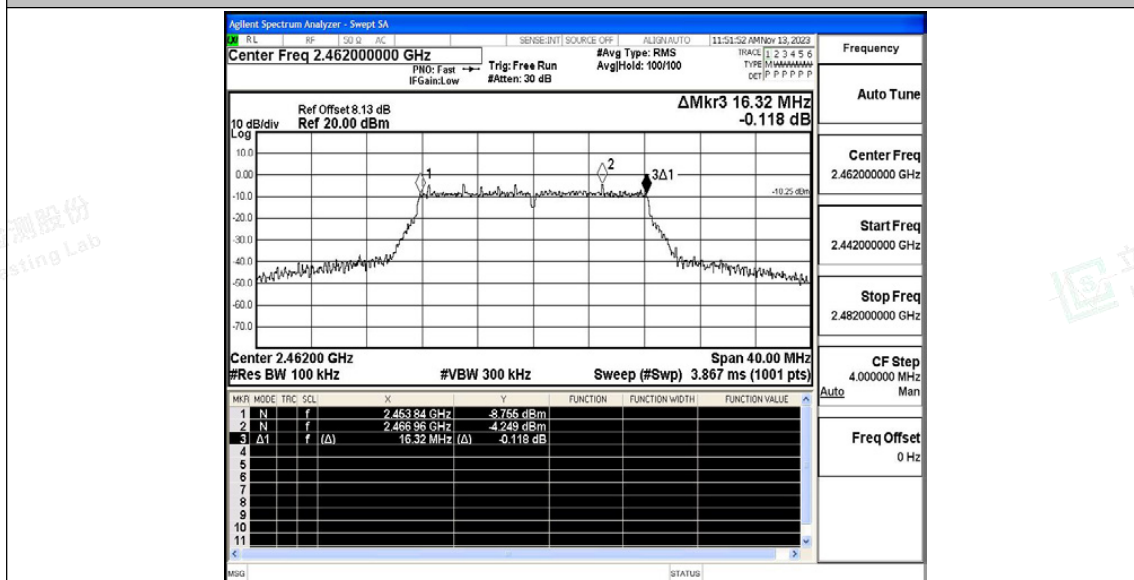


11G_Ant1_2437



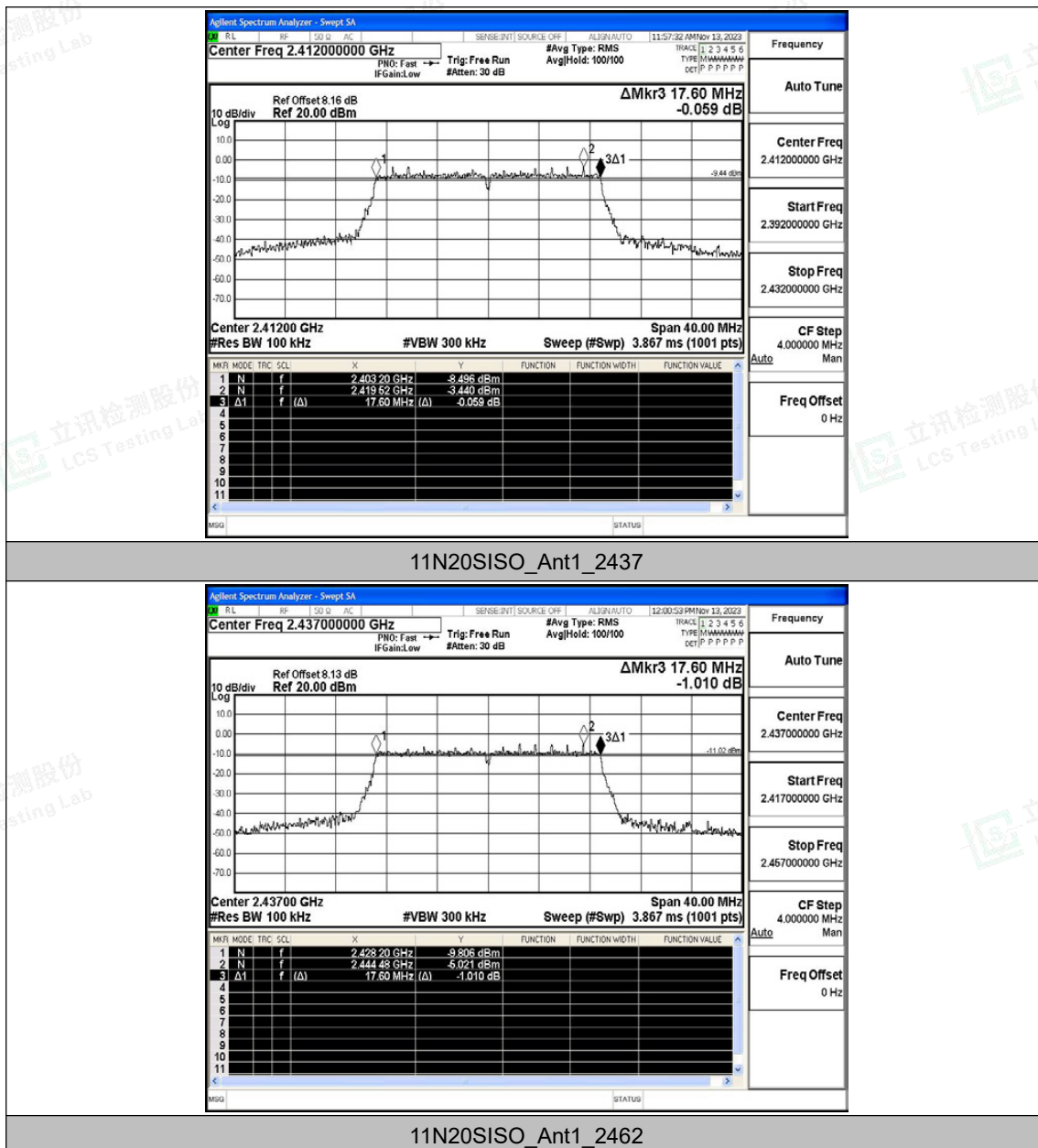


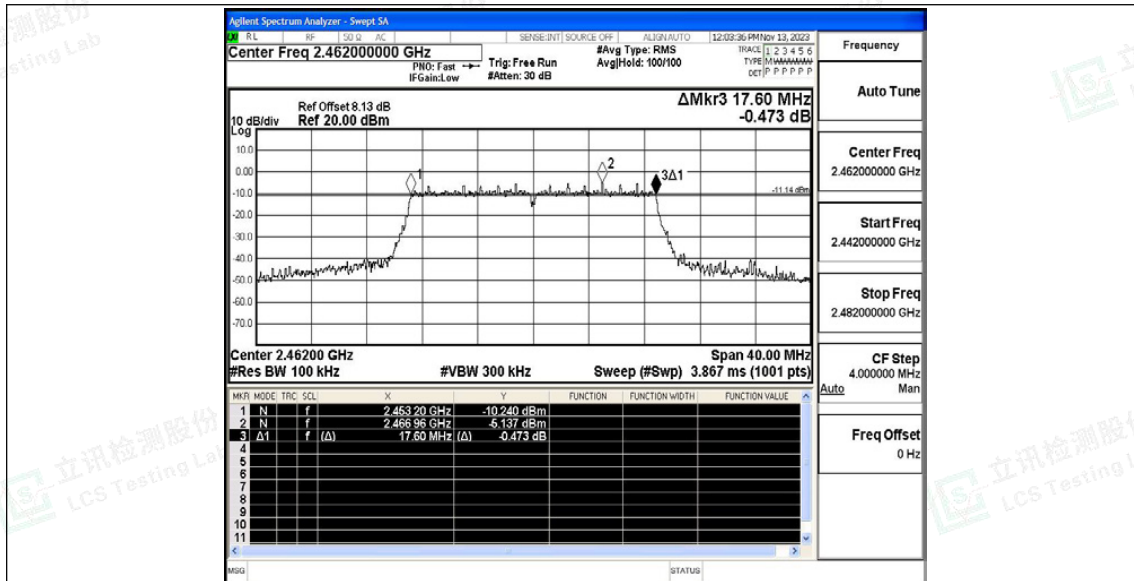
11G_Ant1_2462



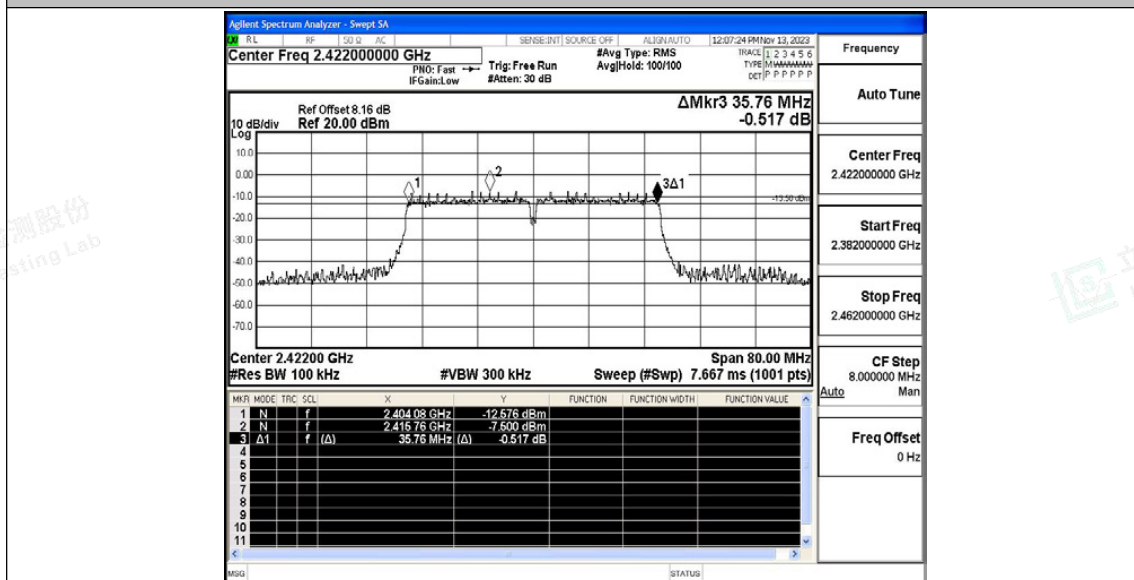
11N20SISO_Ant1_2412





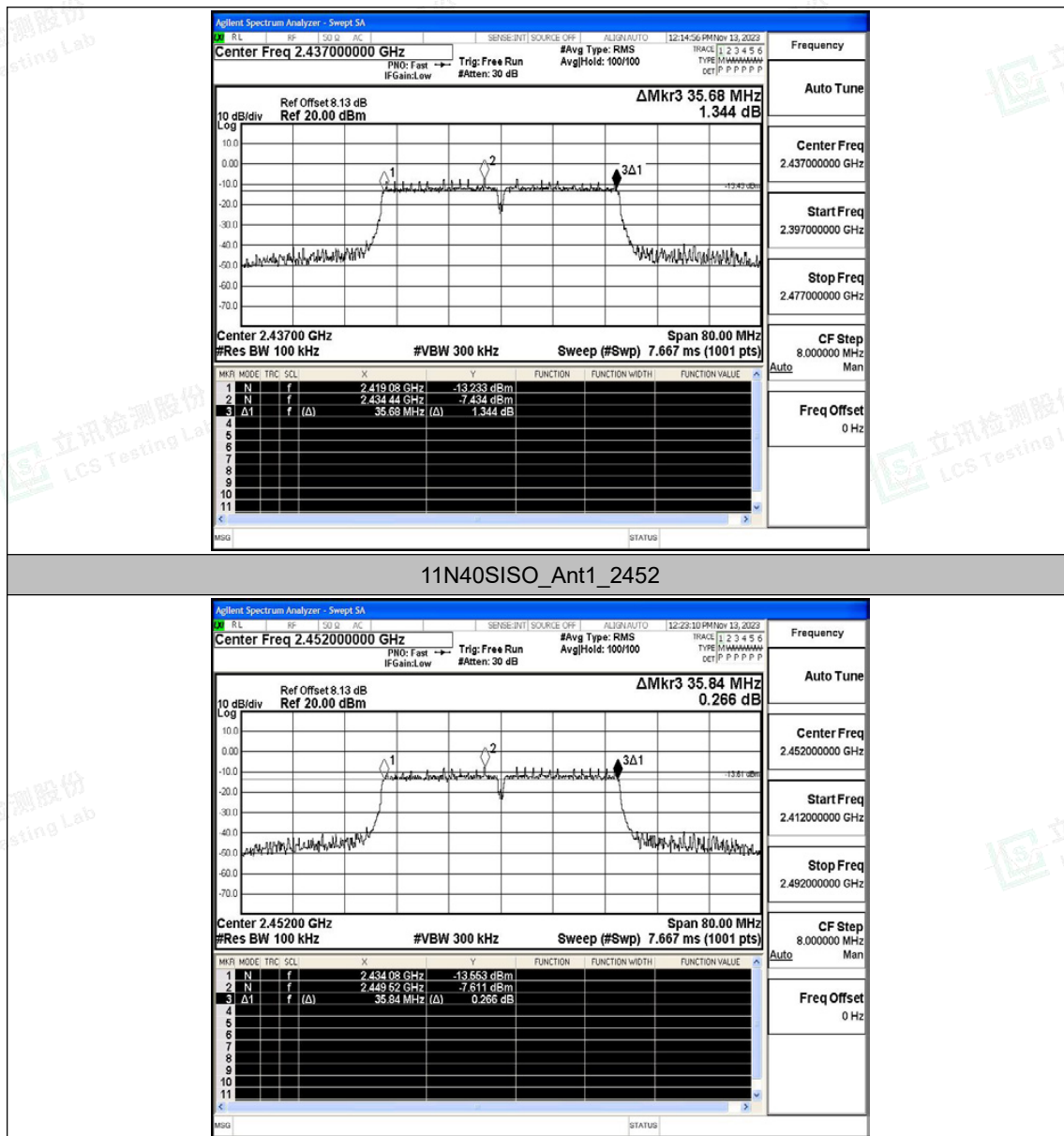


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437







A.2 Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	14.92	≤30.00	PASS
		2437	14.46	≤30.00	PASS
		2462	13.85	≤30.00	PASS
11G	Ant1	2412	14.43	≤30.00	PASS
		2437	13.82	≤30.00	PASS
		2462	13.51	≤30.00	PASS
11N20SISO	Ant1	2412	14.76	≤30.00	PASS
		2437	12.97	≤30.00	PASS
		2462	13.39	≤30.00	PASS
11N40SISO	Ant1	2422	13.01	≤30.00	PASS
		2437	13.04	≤30.00	PASS
		2452	12.81	≤30.00	PASS



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A.3 Maximum power spectral density

Test Result

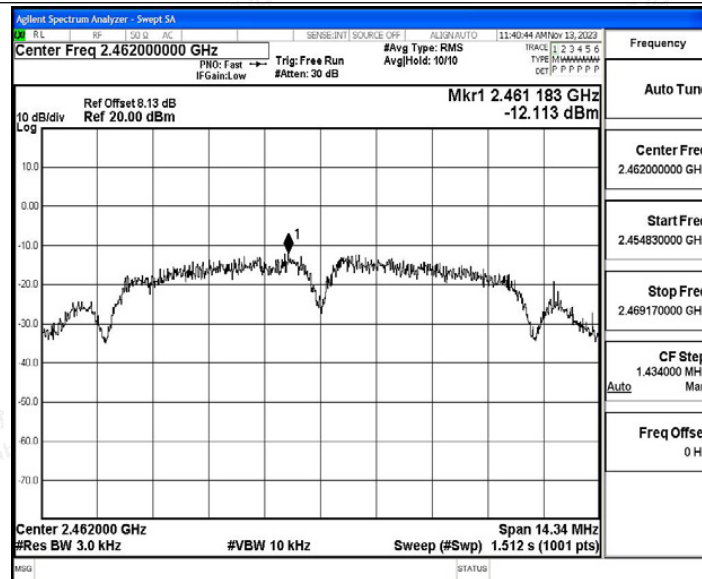
TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-10.67	≤8.00	PASS
		2437	-0.08	≤8.00	PASS
		2462	-12.11	≤8.00	PASS
11G	Ant1	2412	-16.62	≤8.00	PASS
		2437	-17.01	≤8.00	PASS
		2462	-17.92	≤8.00	PASS
11N20SISO	Ant1	2412	-16.57	≤8.00	PASS
		2437	-18.19	≤8.00	PASS
		2462	-17.07	≤8.00	PASS
11N40SISO	Ant1	2422	-20.2	≤8.00	PASS
		2437	-21.95	≤8.00	PASS
		2452	-21.4	≤8.00	PASS



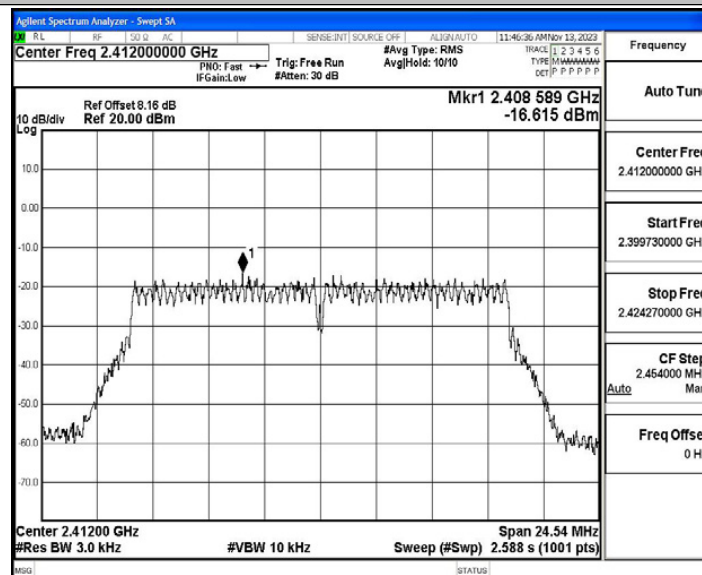


Test Graphs



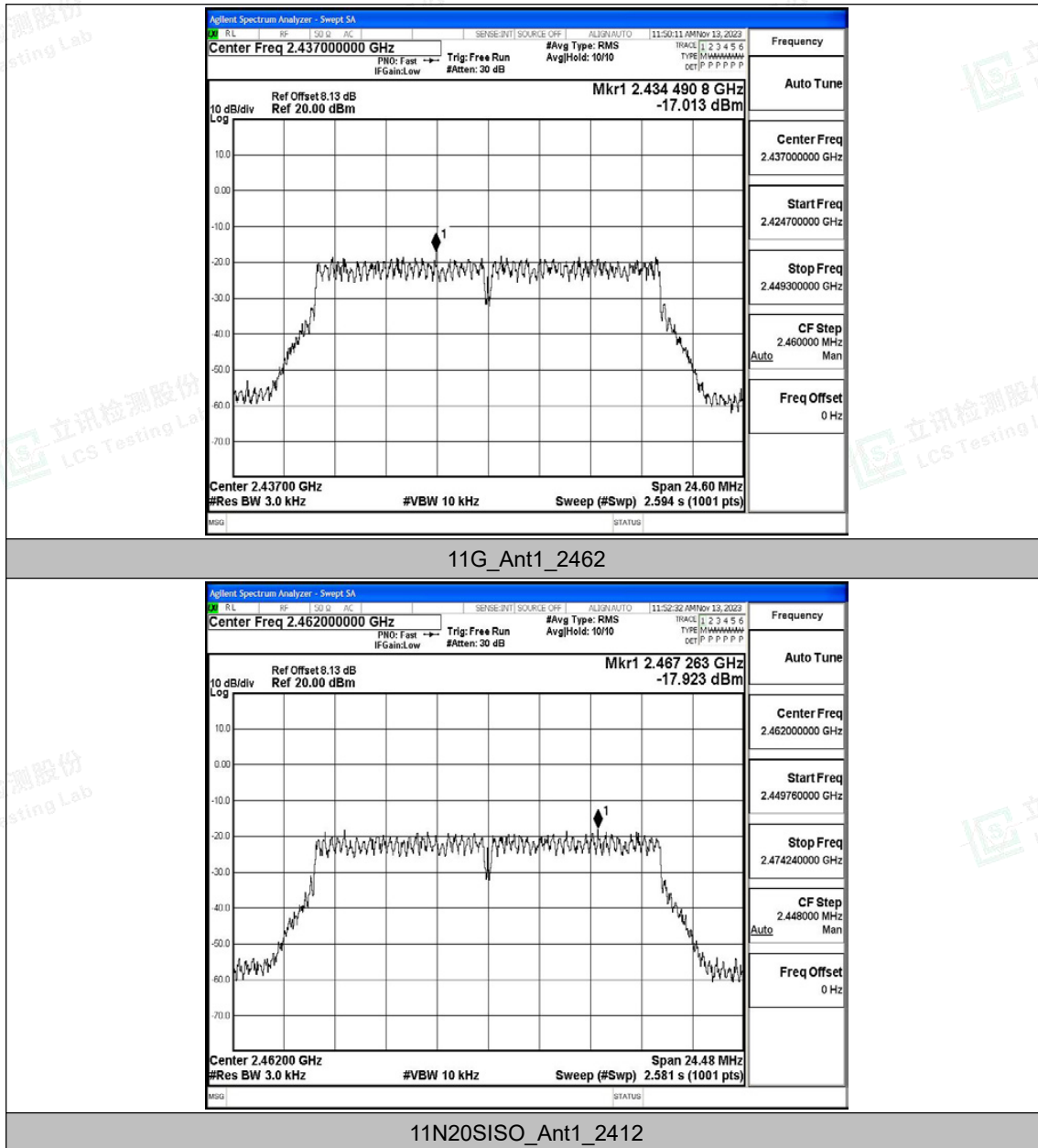


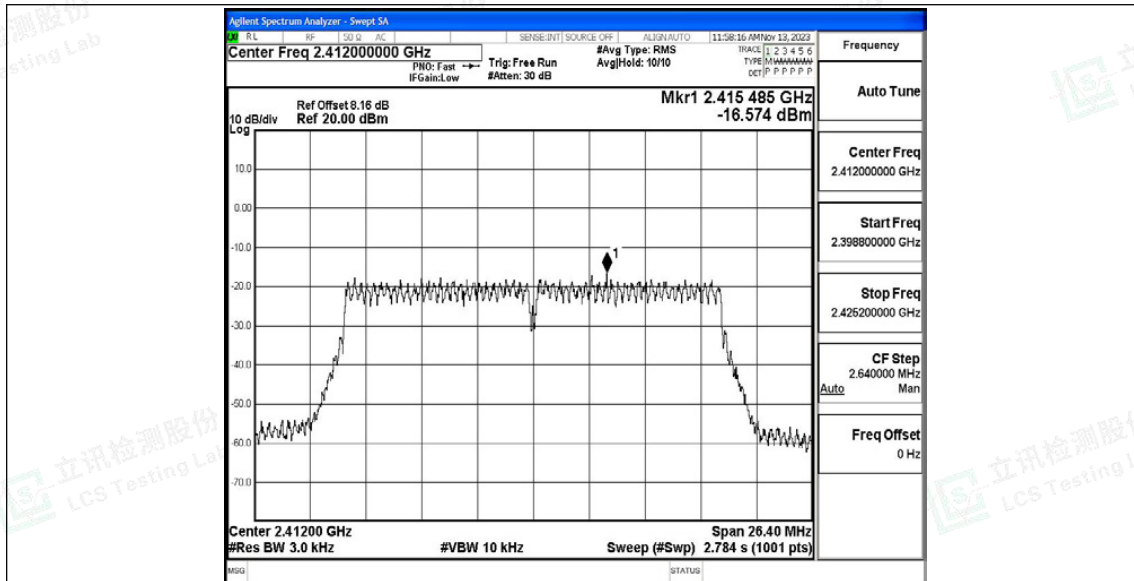
11G_Ant1_2412



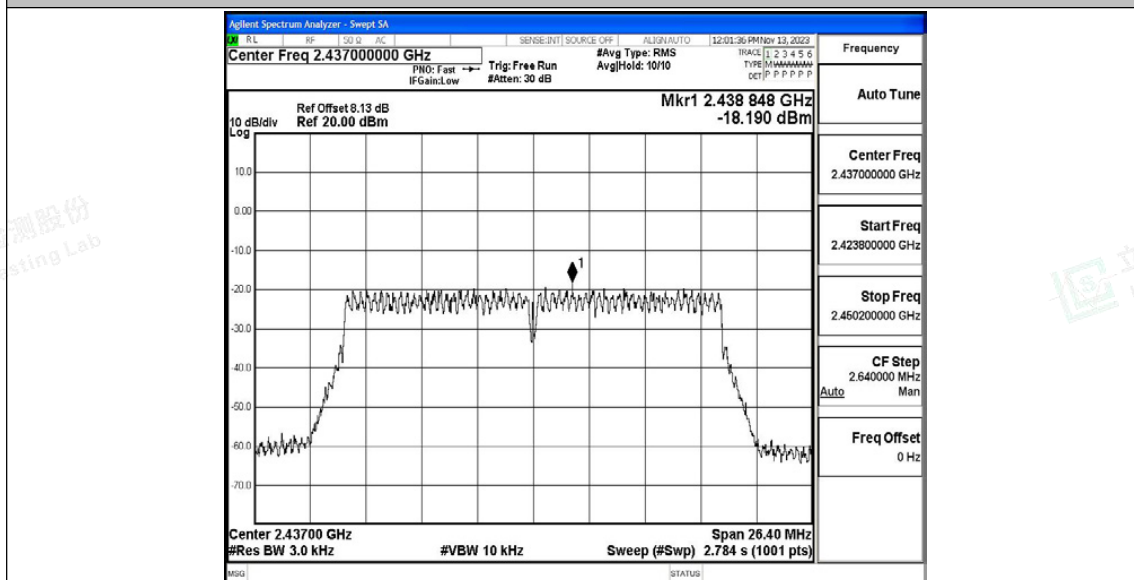
11G_Ant1_2437





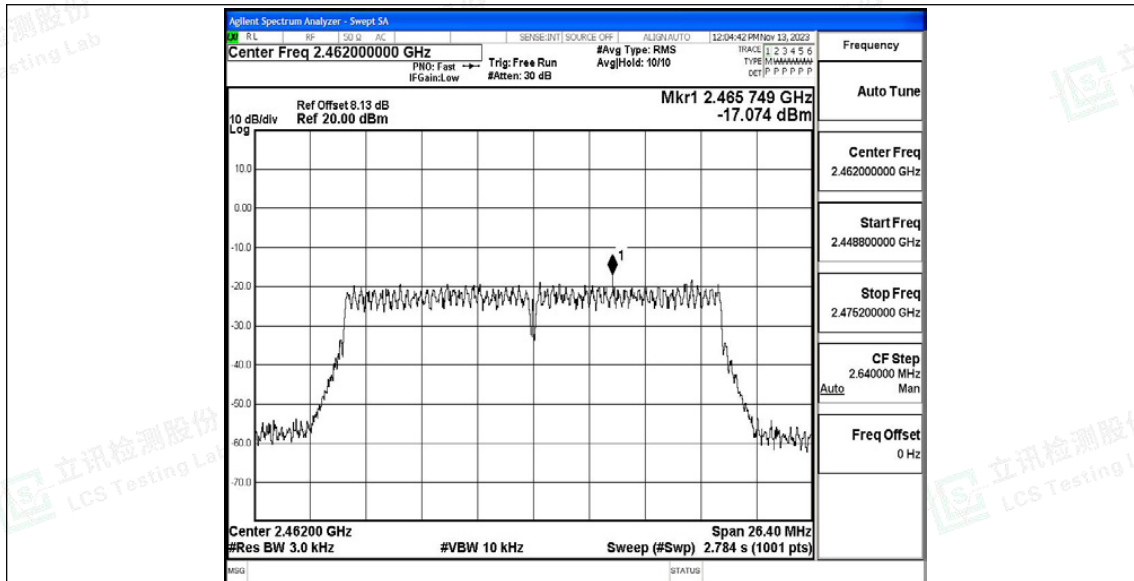


11N20SISO_Ant1_2437

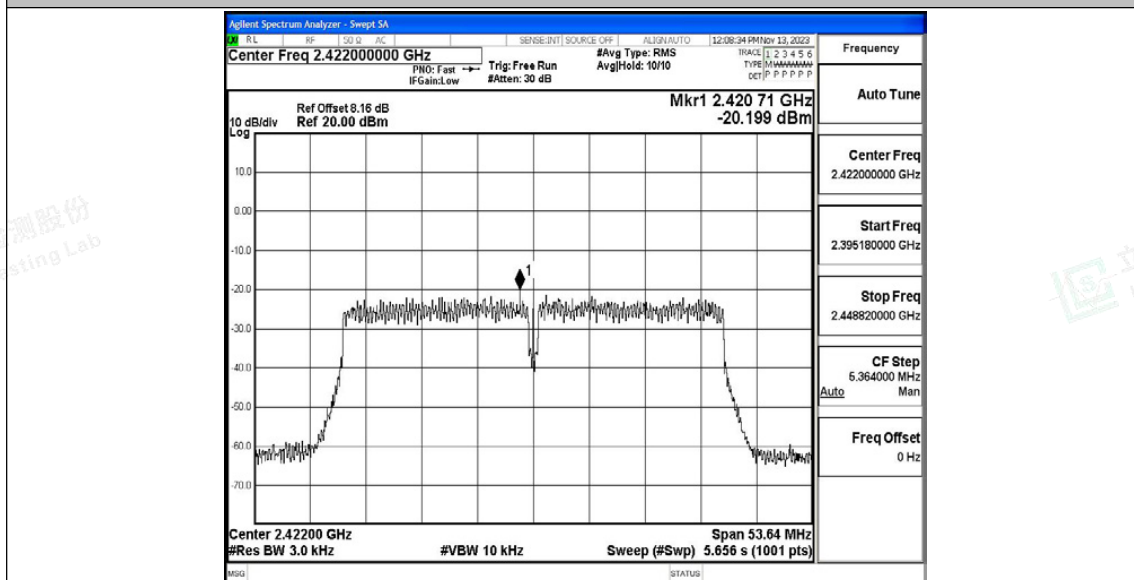


11N20SISO_Ant1_2462



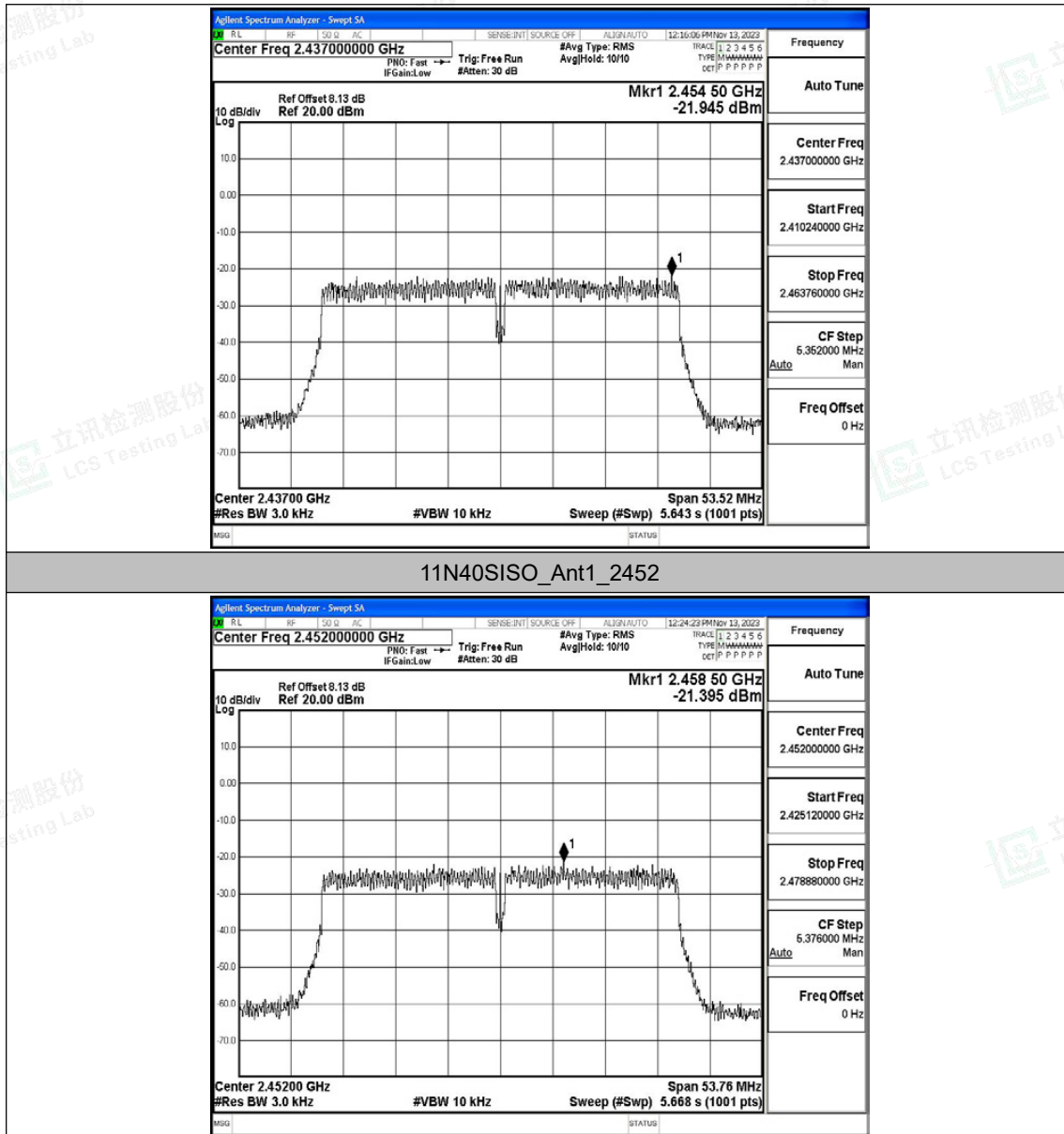


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437







A.4 Band edge measurements

Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2411.01	2.42
		2437	2437.49	2.85
		2462	2462.49	2.21
11G	Ant1	2412	2417.01	-3.67
		2437	2438.28	-4.33
		2462	2460.73	-4.45
11N20SISO	Ant1	2412	2413.27	-2.89
		2437	2438.24	-4.51
		2462	2463.24	-4.09
11N40SISO	Ant1	2422	2424.52	-7.19
		2437	2439.52	-7.38
		2452	2457.00	-7.84

Band edge measurements

Test Result

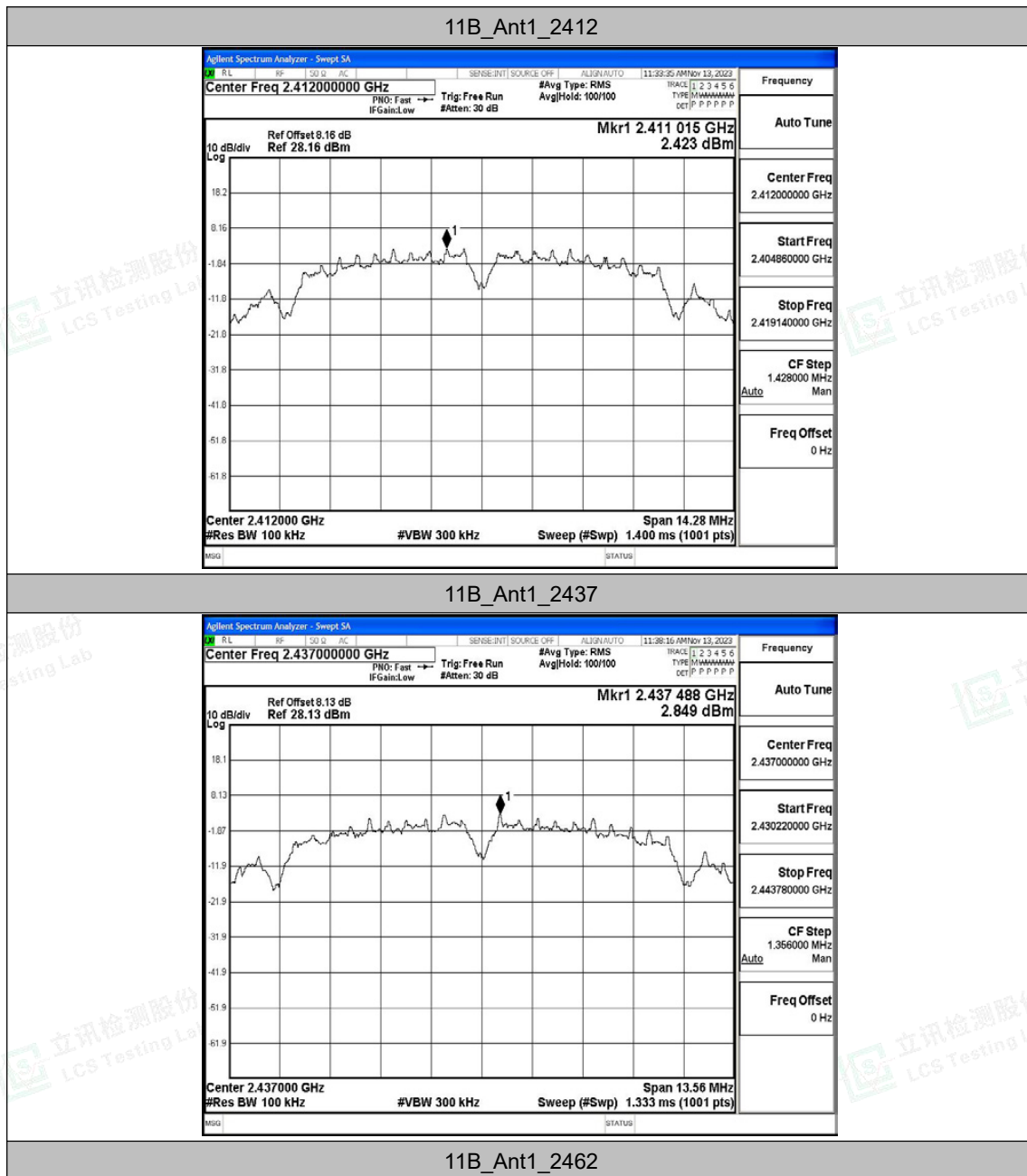
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.42	-42.43	≤-17.58	PASS
		High	2462	2.21	-49.55	≤-17.79	PASS
11G	Ant1	Low	2412	-3.67	-39.35	≤-23.67	PASS
		High	2462	-4.45	-48.42	≤-24.45	PASS
11N20SISO	Ant1	Low	2412	-2.89	-39.26	≤-22.89	PASS
		High	2462	-4.09	-46.97	≤-24.09	PASS
11N40SISO	Ant1	Low	2422	-7.19	-41.6	≤-27.19	PASS
		High	2452	-7.84	-41.9	≤-27.84	PASS

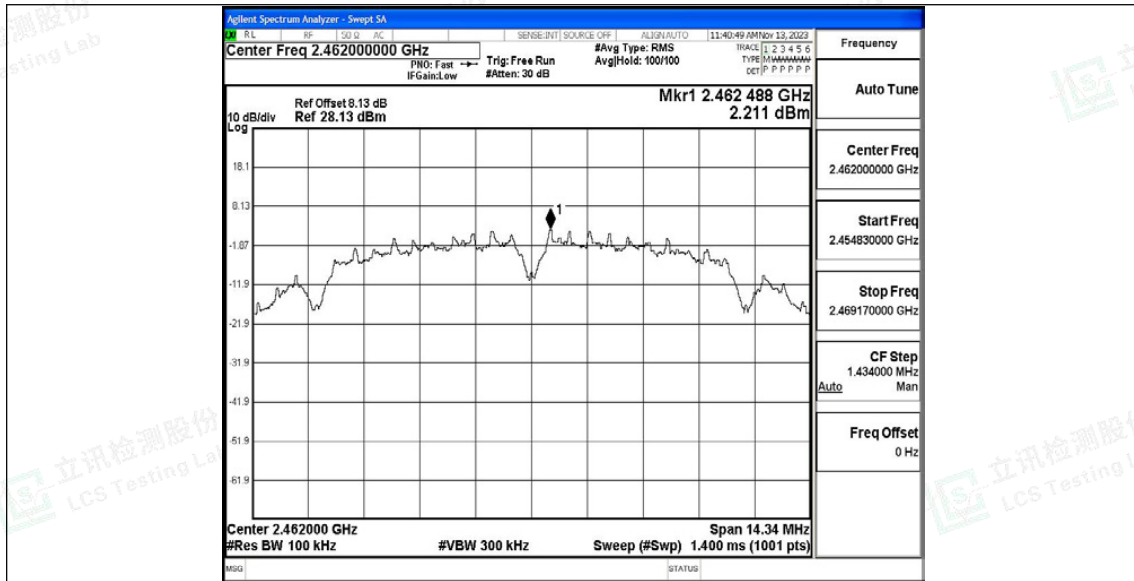




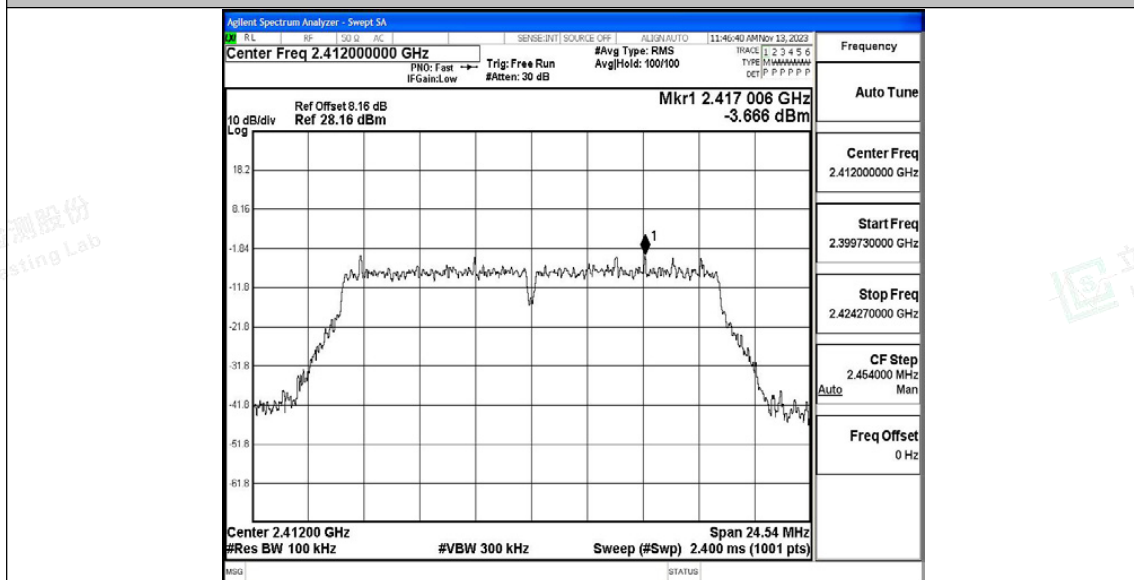
Reference level measurement

Test Graphs



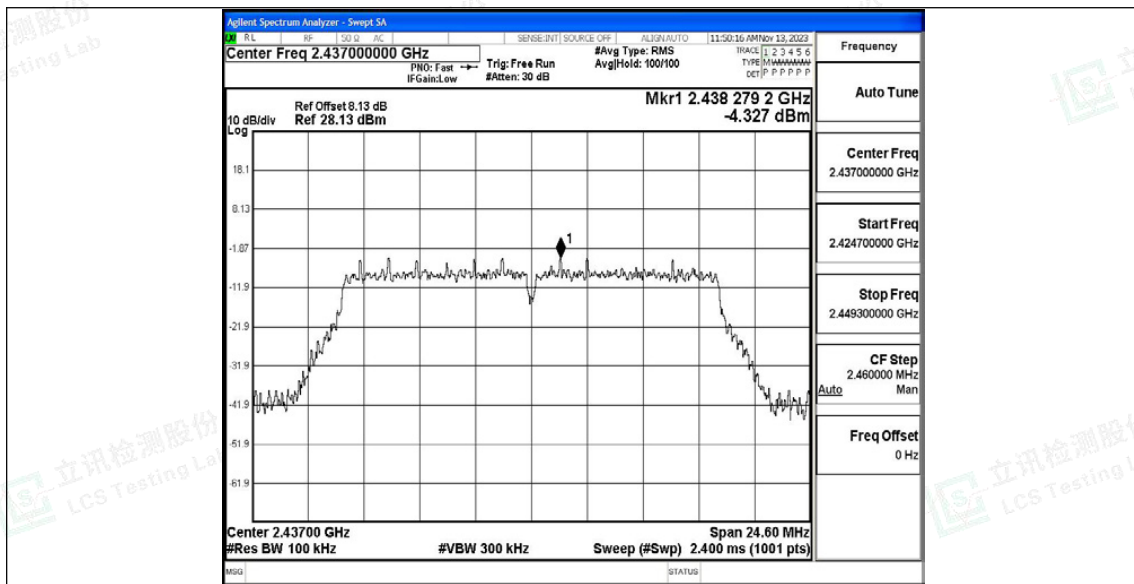


11G_Ant1_2412

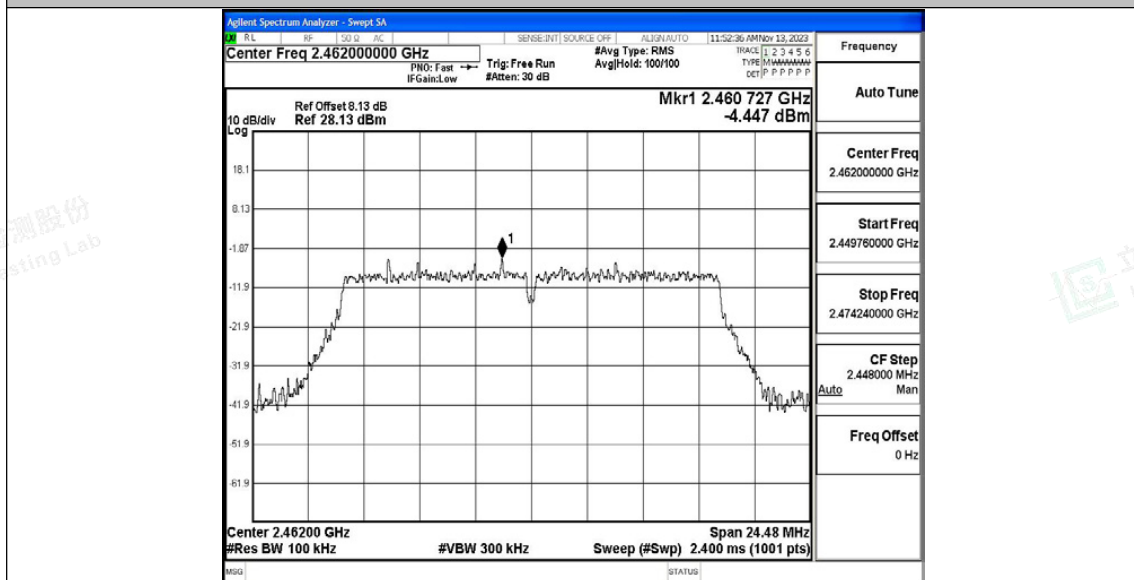


11G_Ant1_2437



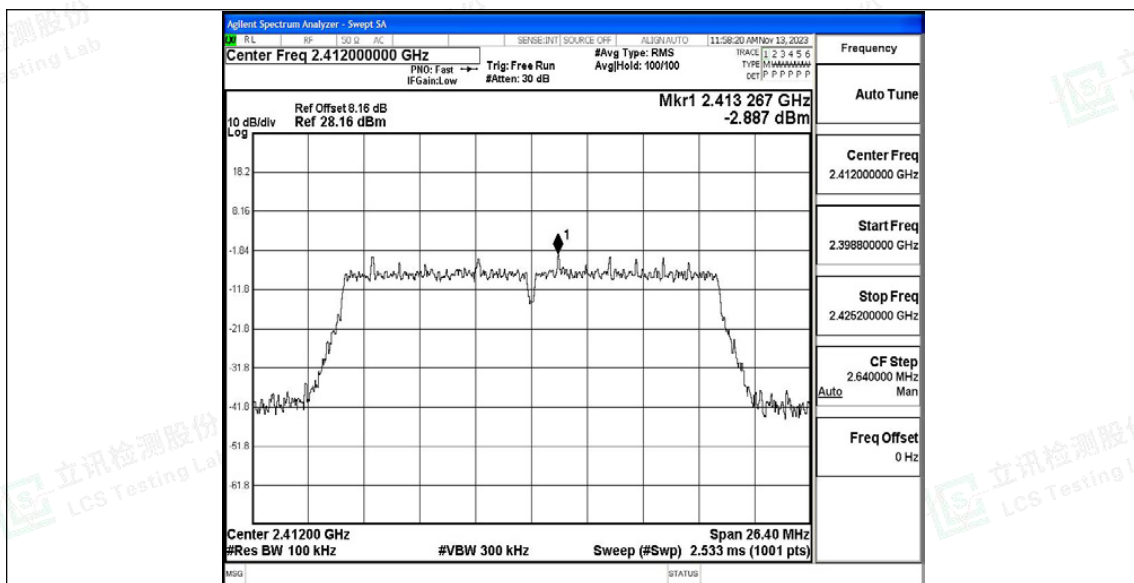


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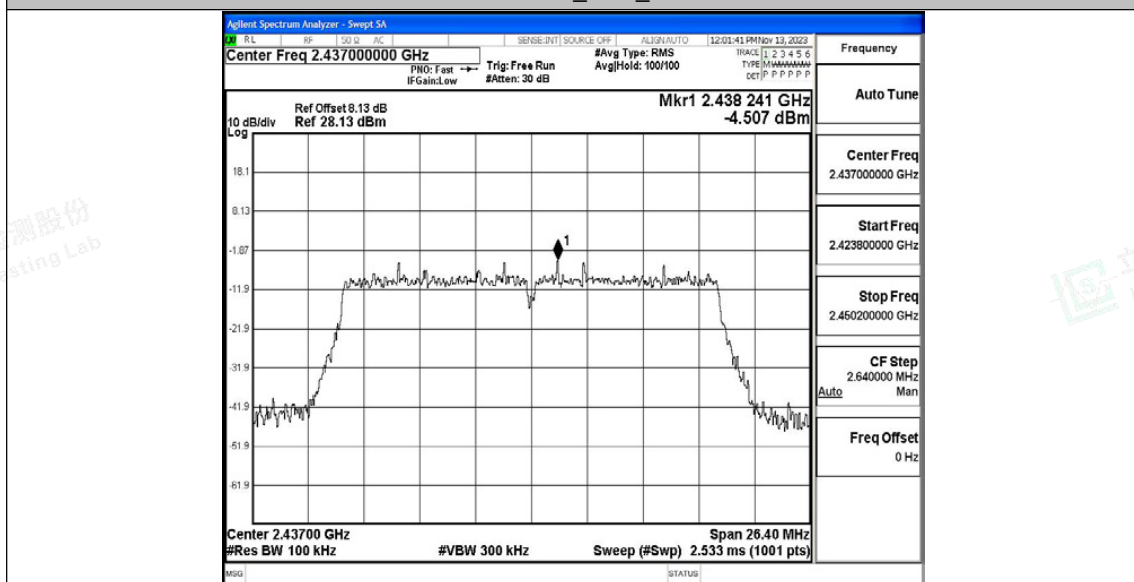


11N20SISO_Ant1_2412



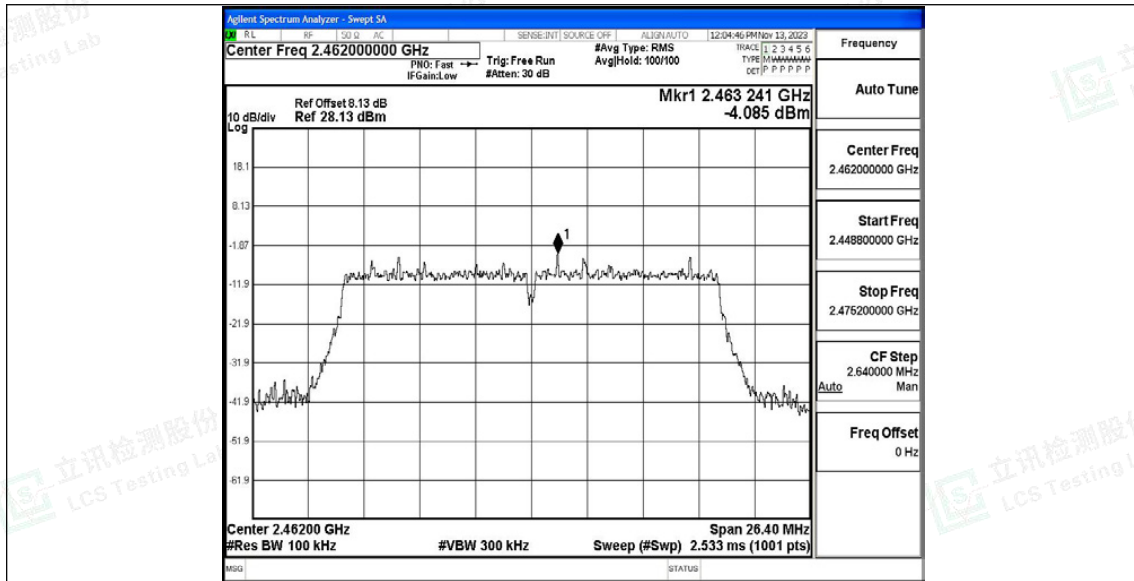


11N20SISO Ant1 2437

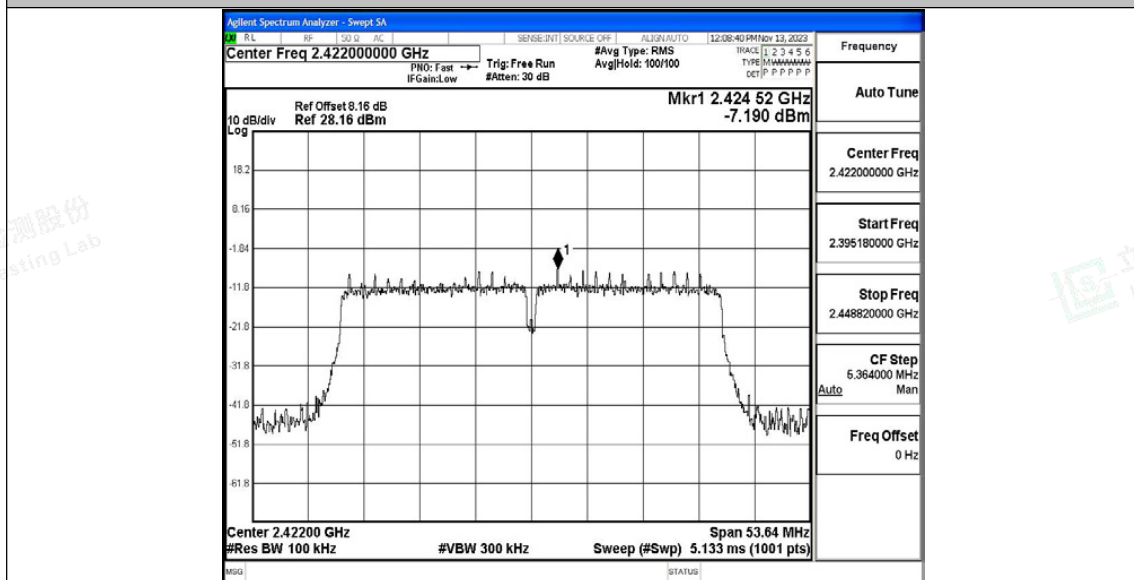


11N20SISO Ant1 2462



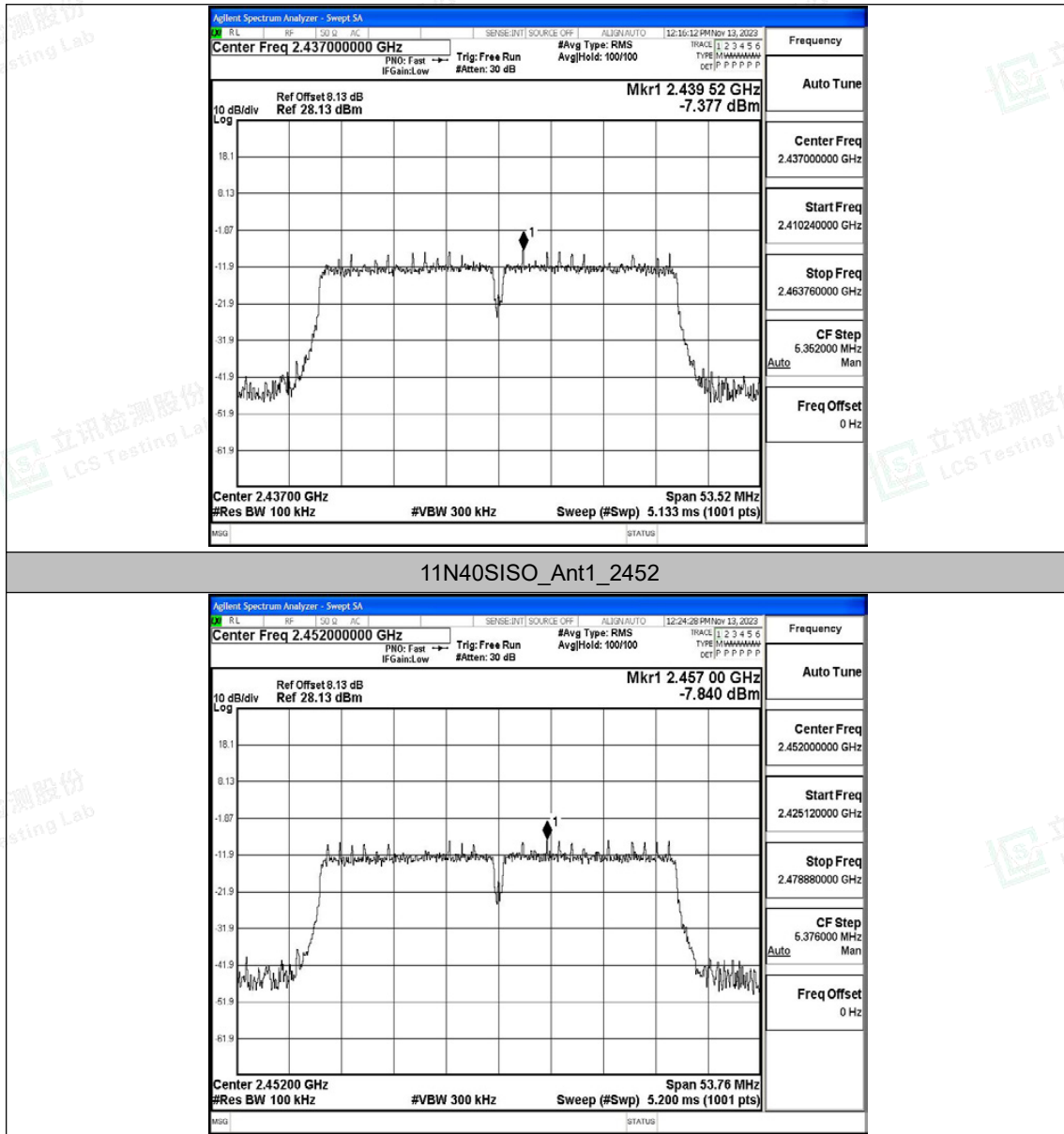


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

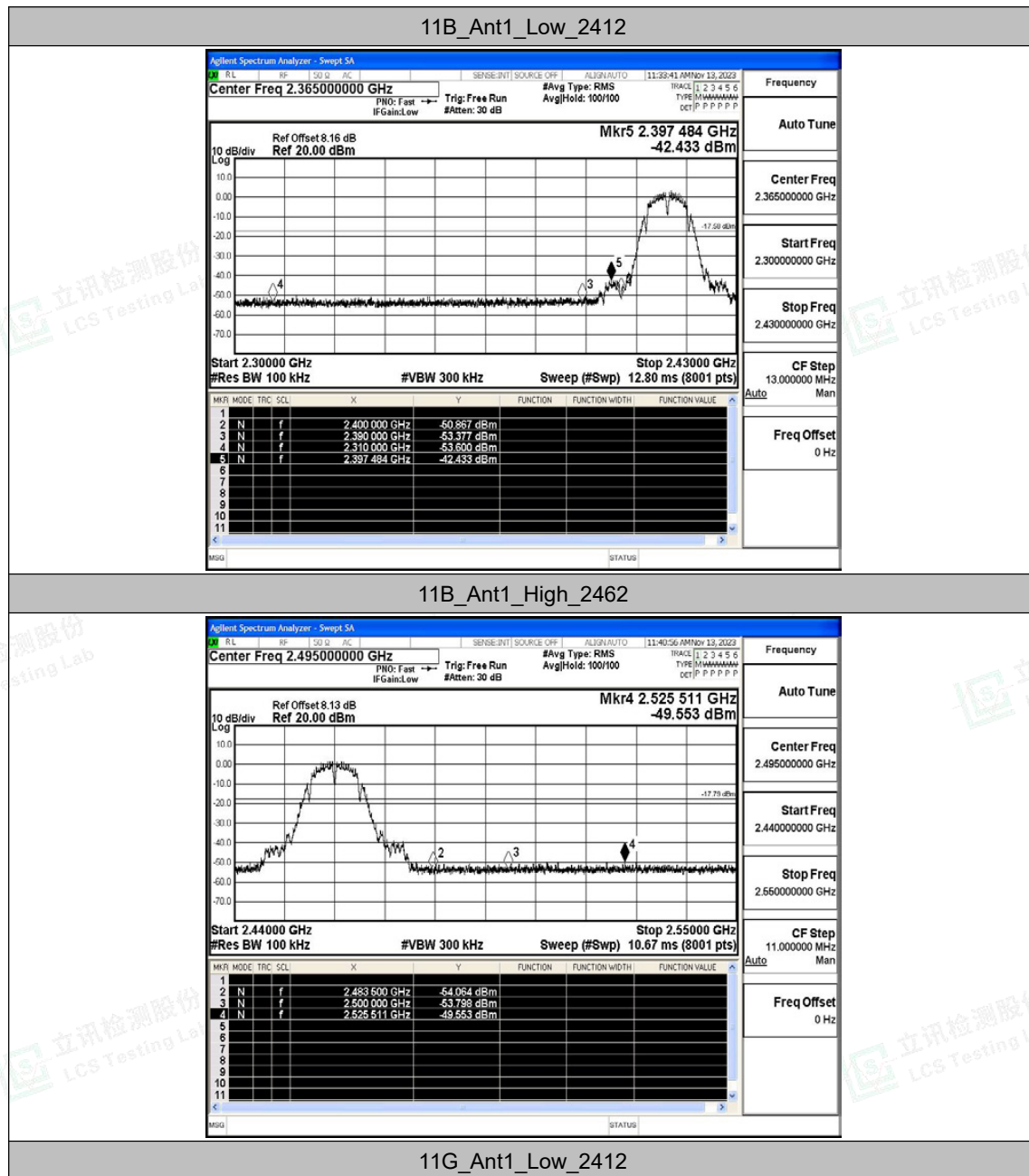


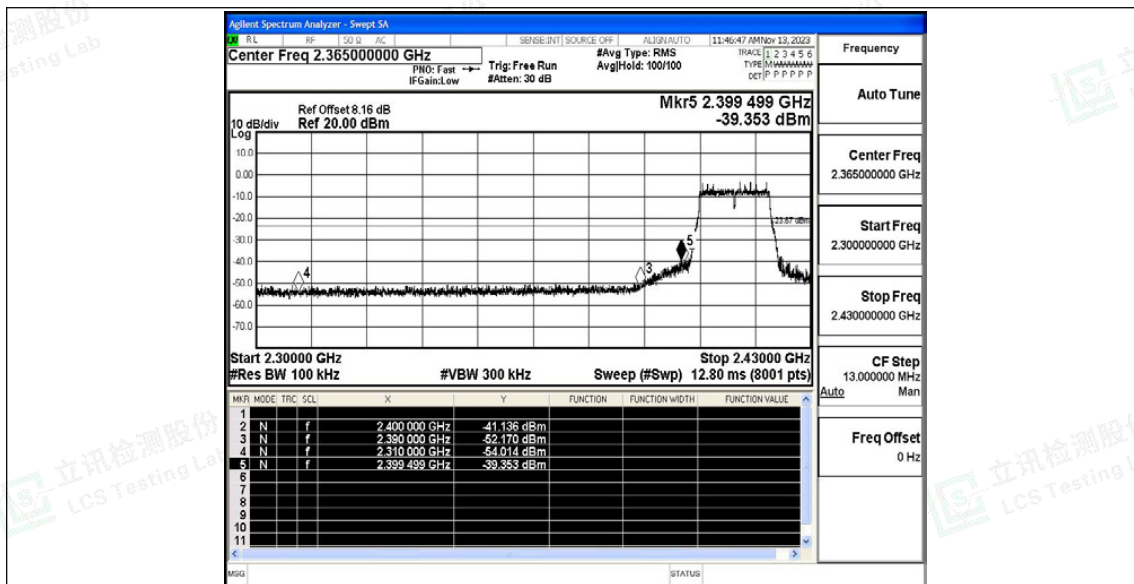




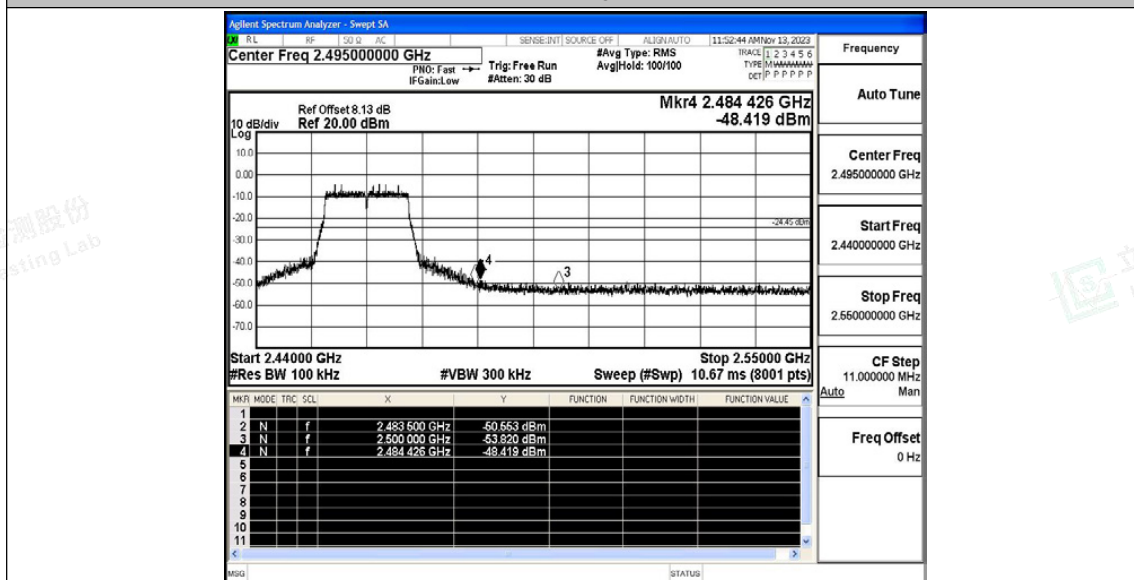
Band edge measurements

Test Graphs



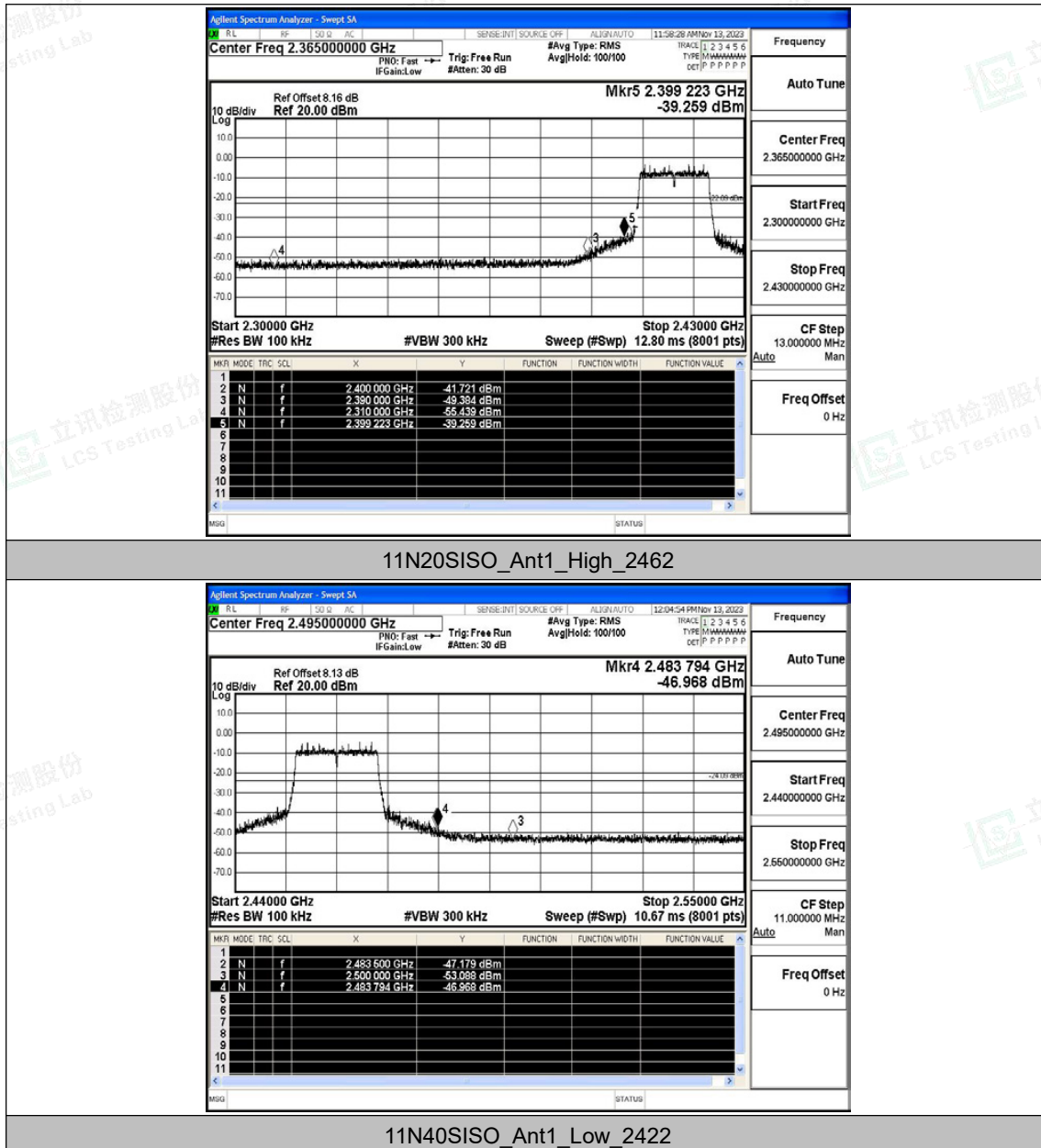


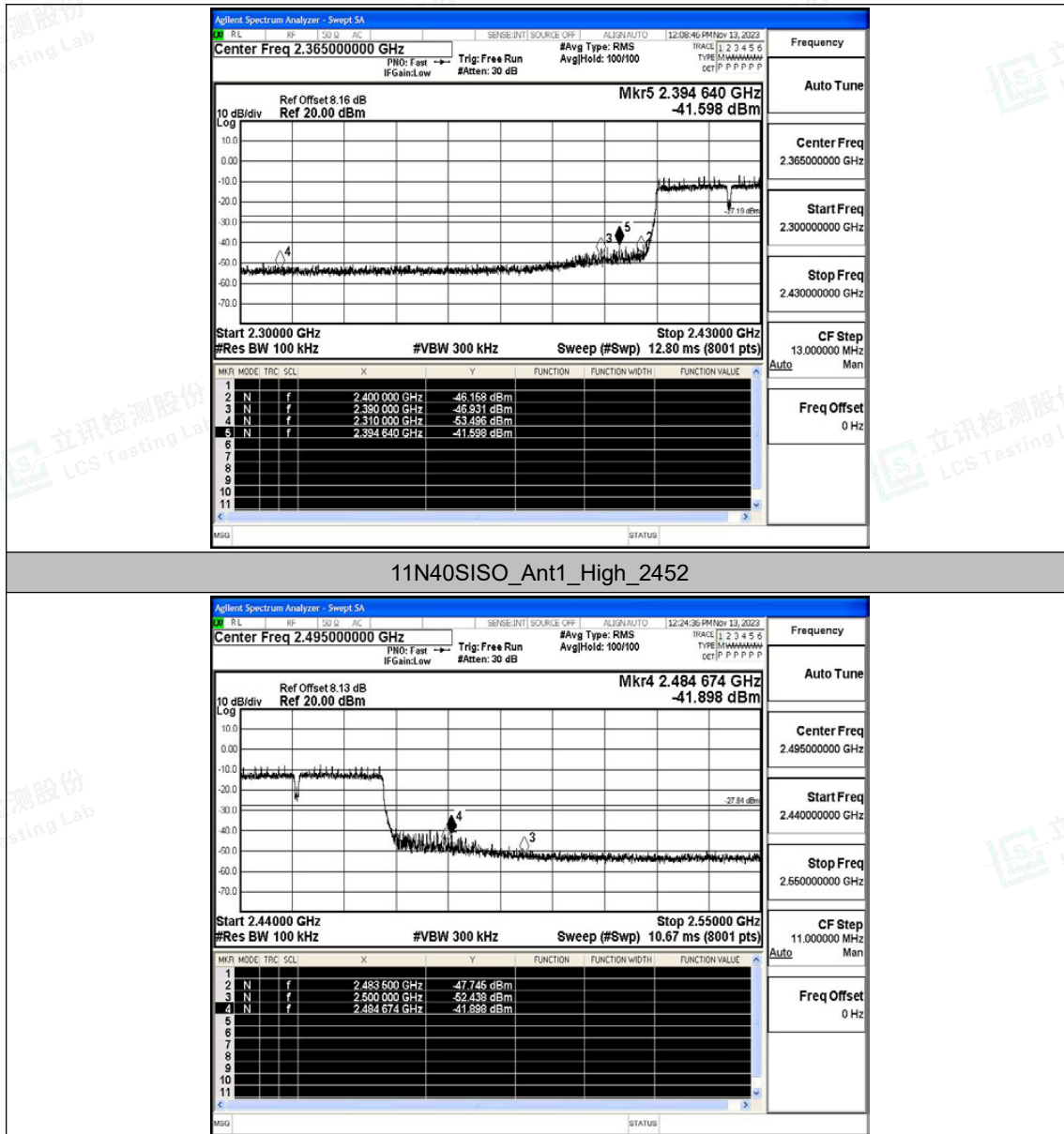
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412









A.5 Conducted Spurious Emission

Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2411.01	2.42
		2437	2437.49	2.85
		2462	2462.49	2.21
11G	Ant1	2412	2417.01	-3.67
		2437	2438.28	-4.33
		2462	2460.73	-4.45
11N20SISO	Ant1	2412	2413.27	-2.89
		2437	2438.24	-4.51
		2462	2463.24	-4.09
11N40SISO	Ant1	2422	2424.52	-7.19
		2437	2439.52	-7.38
		2452	2457.00	-7.84

Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	2.42	-60.87	≤-17.58	PASS
			1000~26500	2.42	-49.28	≤-17.58	PASS
		2437	30~1000	2.85	-61.61	≤-17.15	PASS
			1000~26500	2.85	-48.35	≤-17.15	PASS
		2462	30~1000	2.21	-60.3	≤-17.79	PASS
			1000~26500	2.21	-49.61	≤-17.79	PASS
11G	Ant1	2412	30~1000	-3.67	-61.62	≤-23.67	PASS
			1000~26500	-3.67	-48.86	≤-23.67	PASS
		2437	30~1000	-4.33	-61.4	≤-24.33	PASS
			1000~26500	-4.33	-49.13	≤-24.33	PASS
		2462	30~1000	-4.45	-62.21	≤-24.45	PASS
			1000~26500	-4.45	-48.92	≤-24.45	PASS
11N20SISO	Ant1	2412	30~1000	-2.89	-61.84	≤-22.89	PASS
			1000~26500	-2.89	-47.71	≤-22.89	PASS
		2437	30~1000	-4.51	-61.79	≤-24.51	PASS



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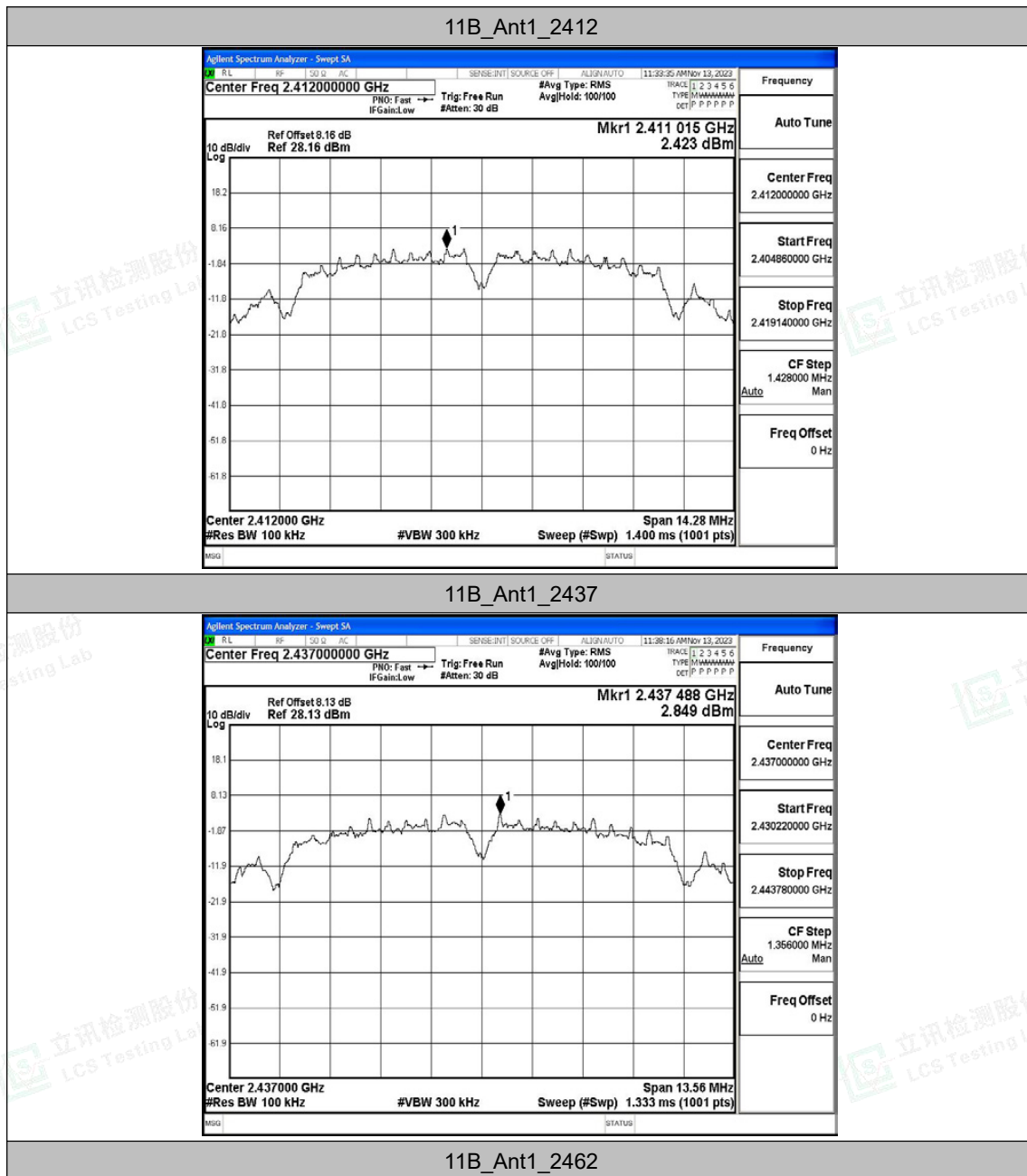
11N40SISO	Ant1	2462	1000~26500	-4.51	-48.71	≤ -24.51	PASS
			30~1000	-4.09	-61.29	≤ -24.09	PASS
			1000~26500	-4.09	-48.58	≤ -24.09	PASS
		2422	30~1000	-7.19	-61.72	≤ -27.19	PASS
			1000~26500	-7.19	-49.2	≤ -27.19	PASS
		2437	30~1000	-7.38	-61.98	≤ -27.38	PASS
			1000~26500	-7.38	-49.16	≤ -27.38	PASS
		2452	30~1000	-7.84	-62.02	≤ -27.84	PASS
			1000~26500	-7.84	-48.94	≤ -27.84	PASS

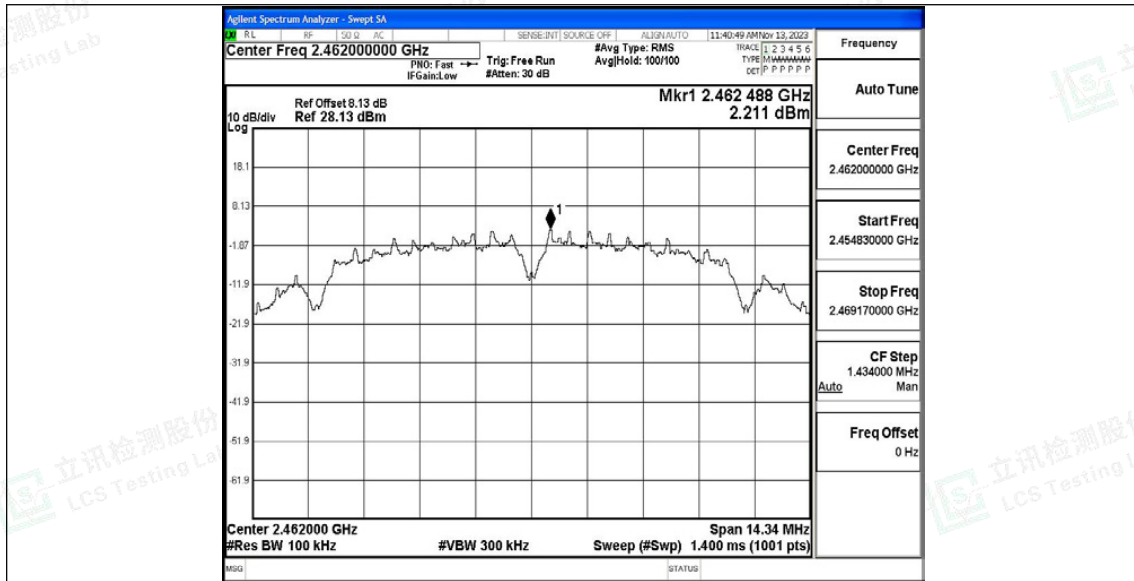




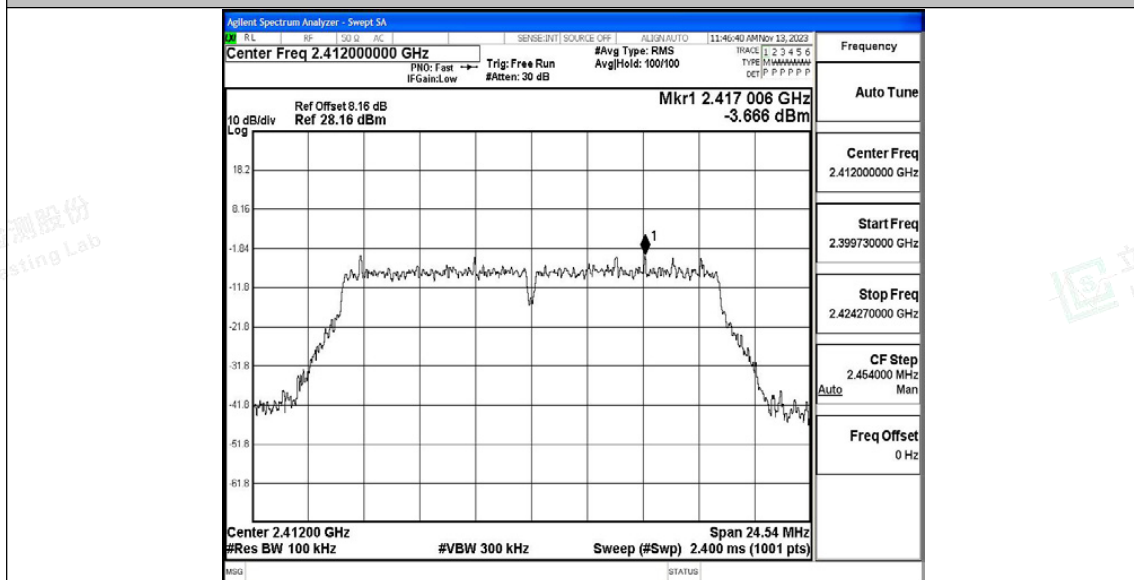
Reference level measurement

Test Graphs



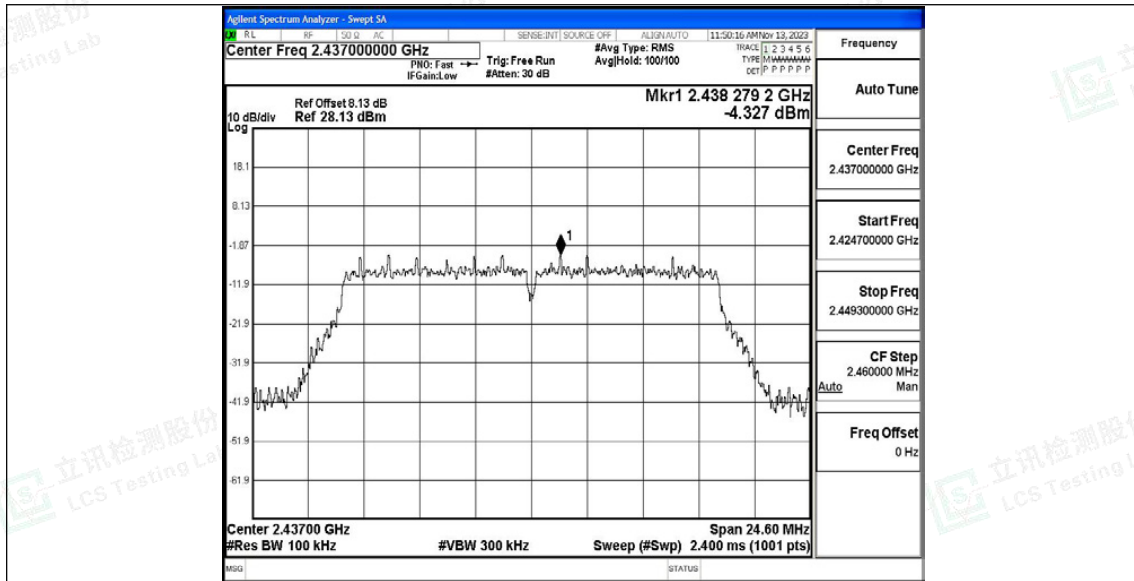


11G_Ant1_2412

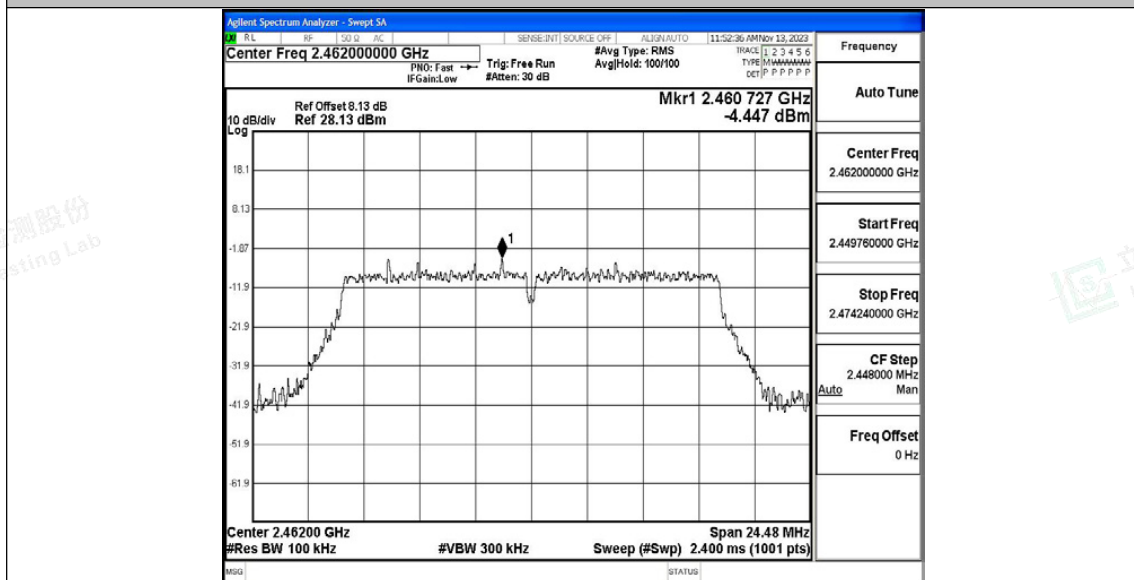


11G_Ant1_2437



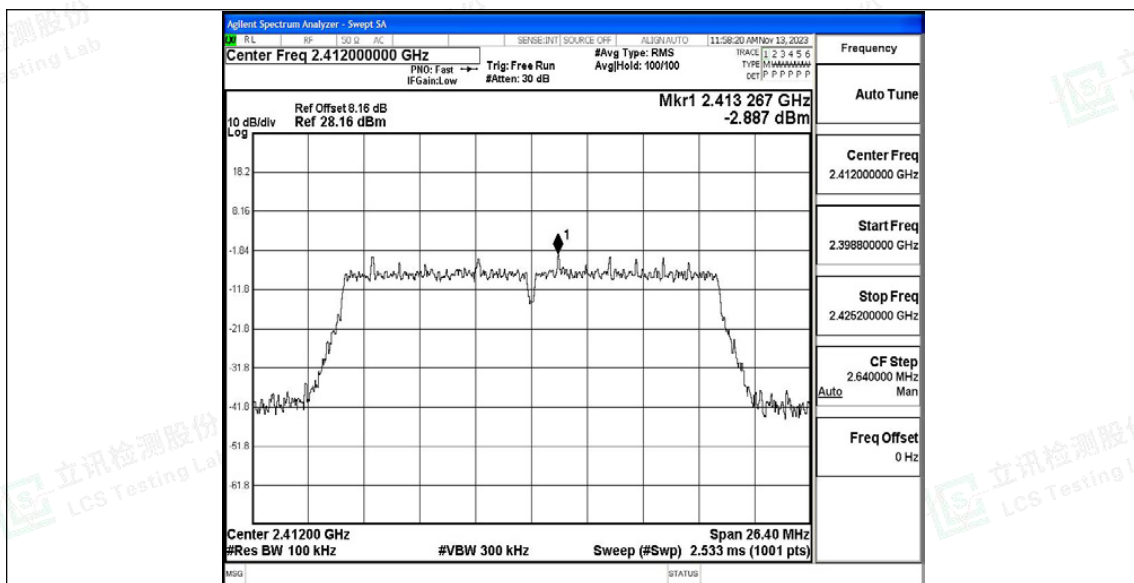


11G_Ant1_2462

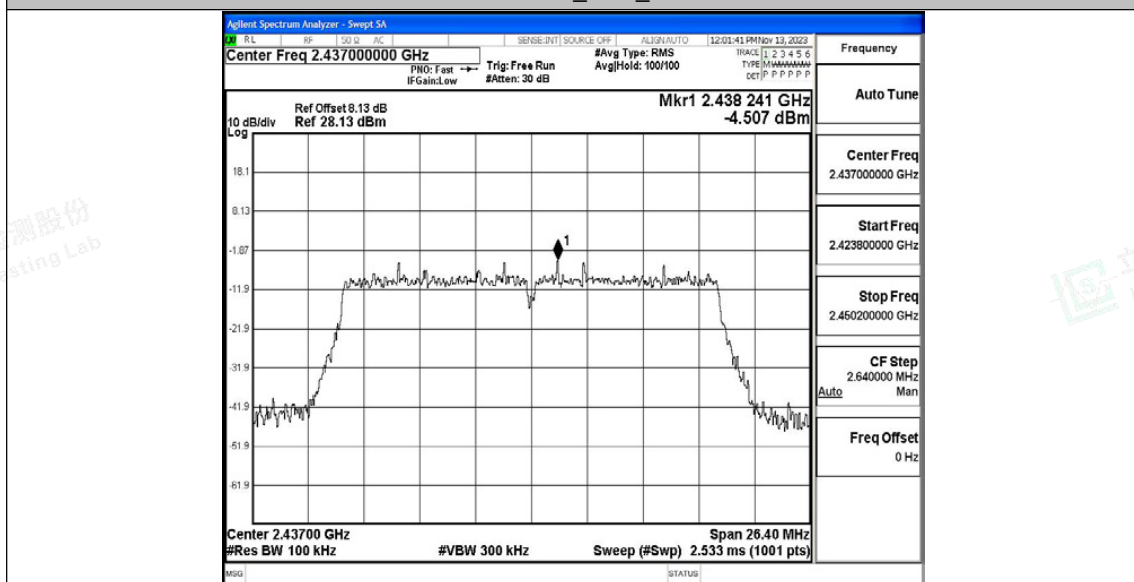


11N20SISO_Ant1_2412



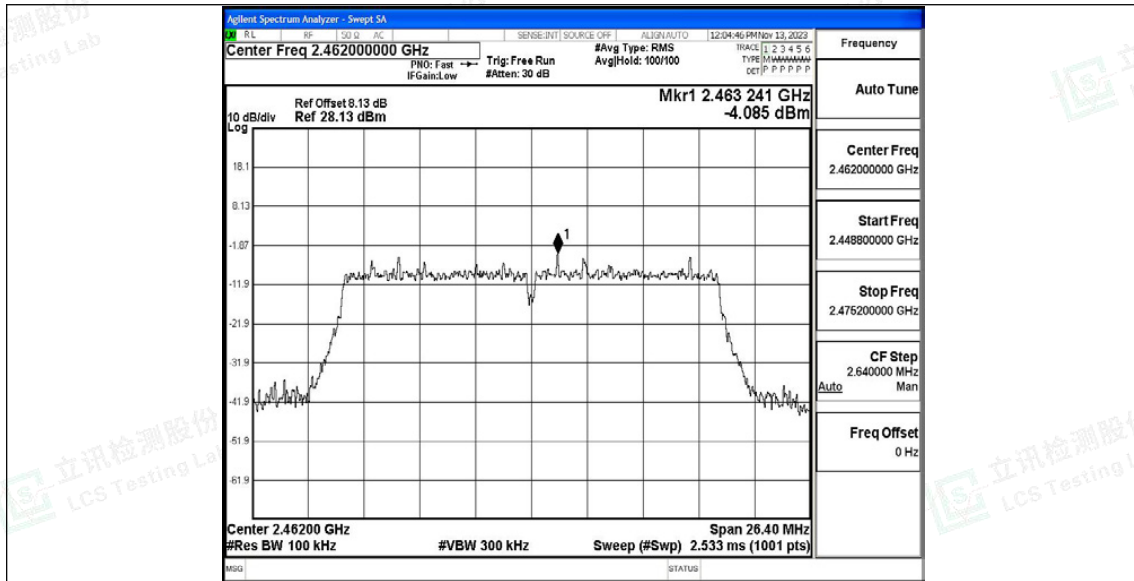


11N20SISO Ant1 2437

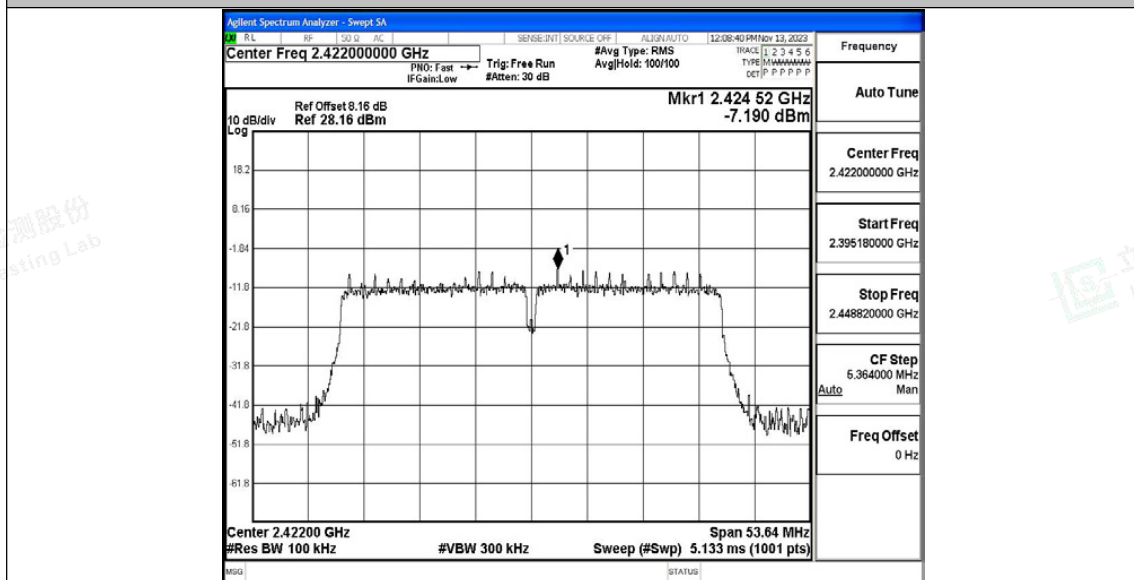


11N20SISO Ant1 2462



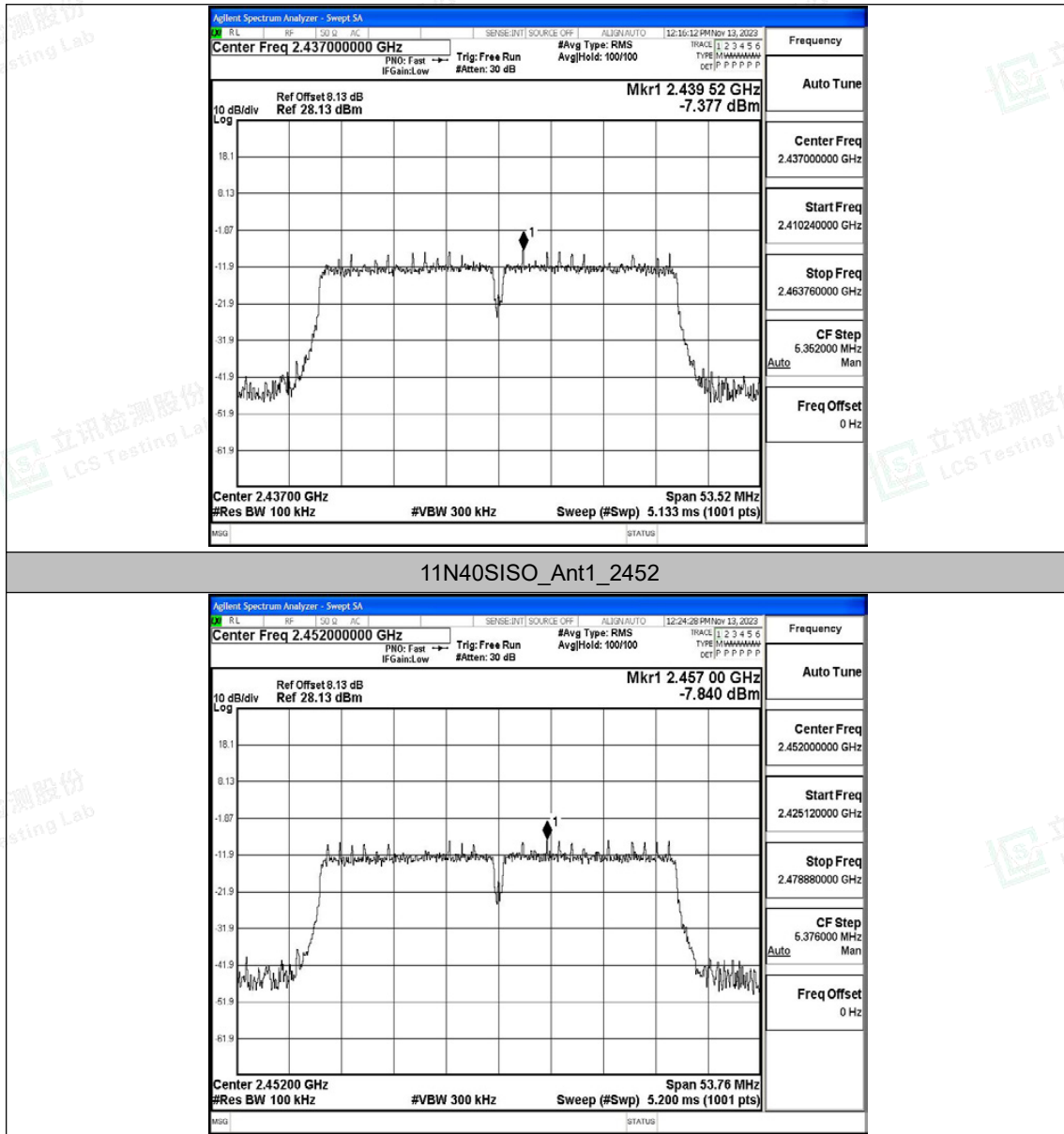


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

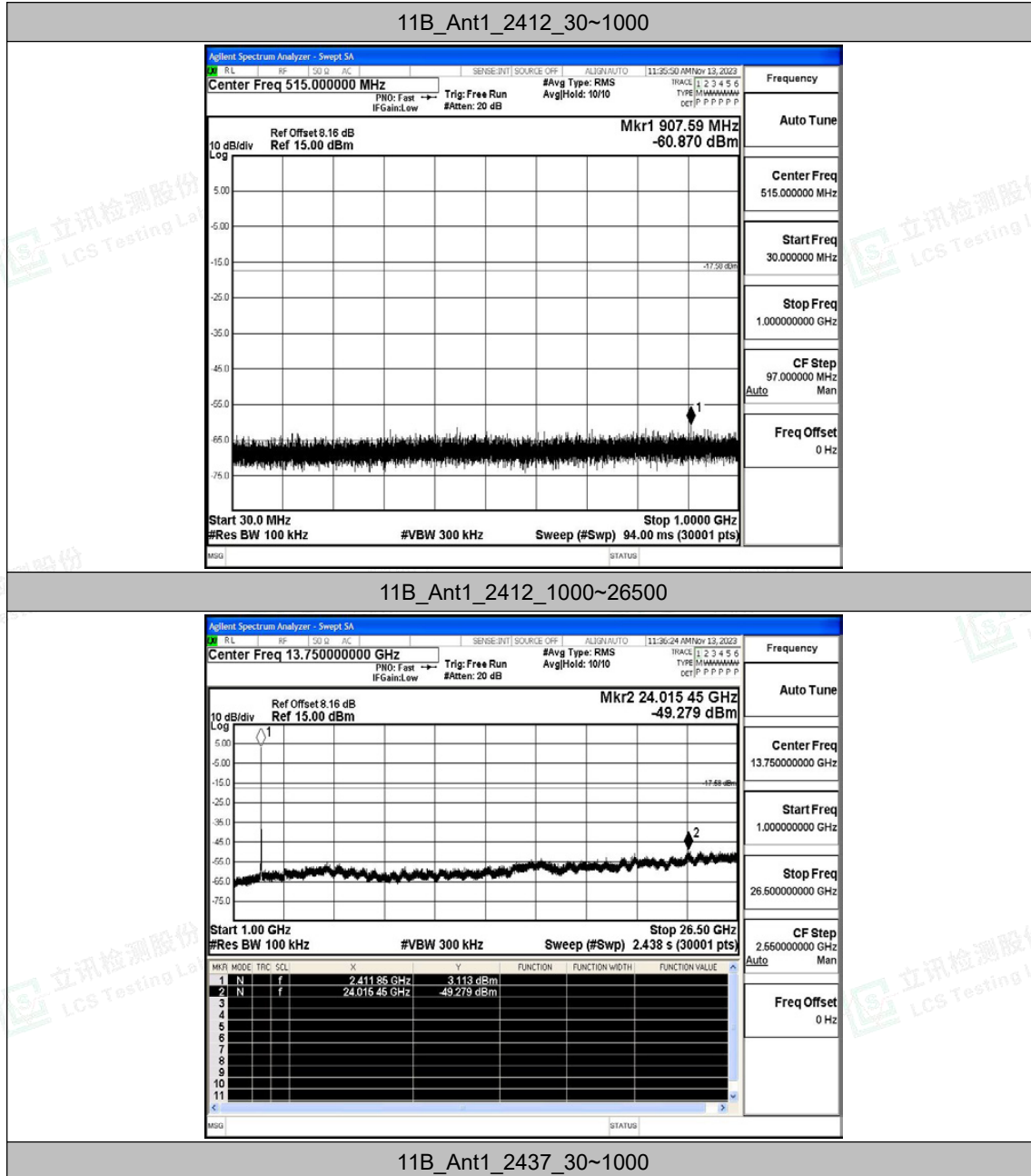


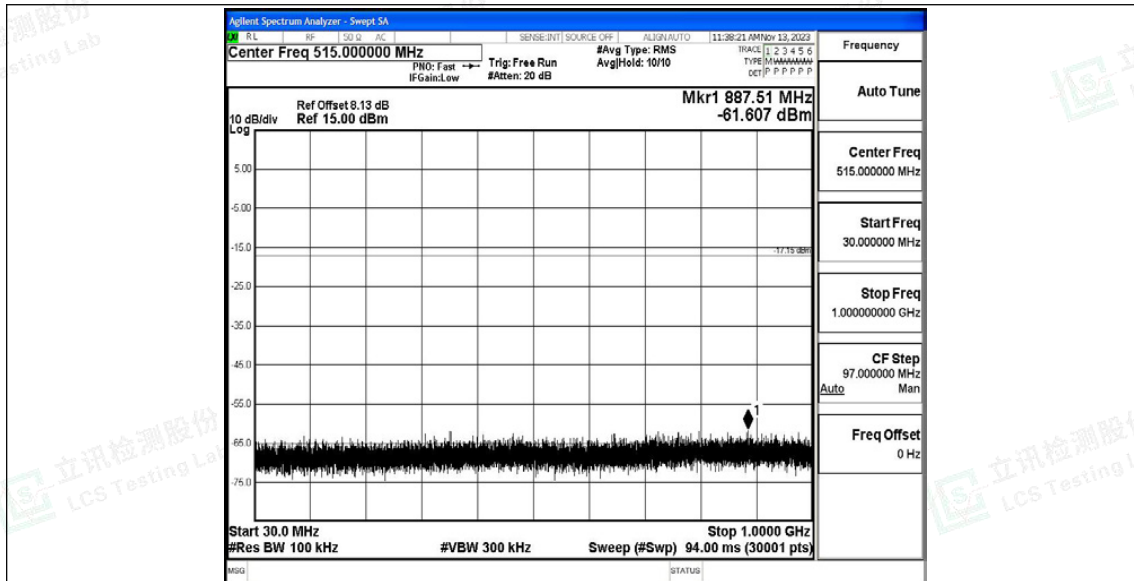




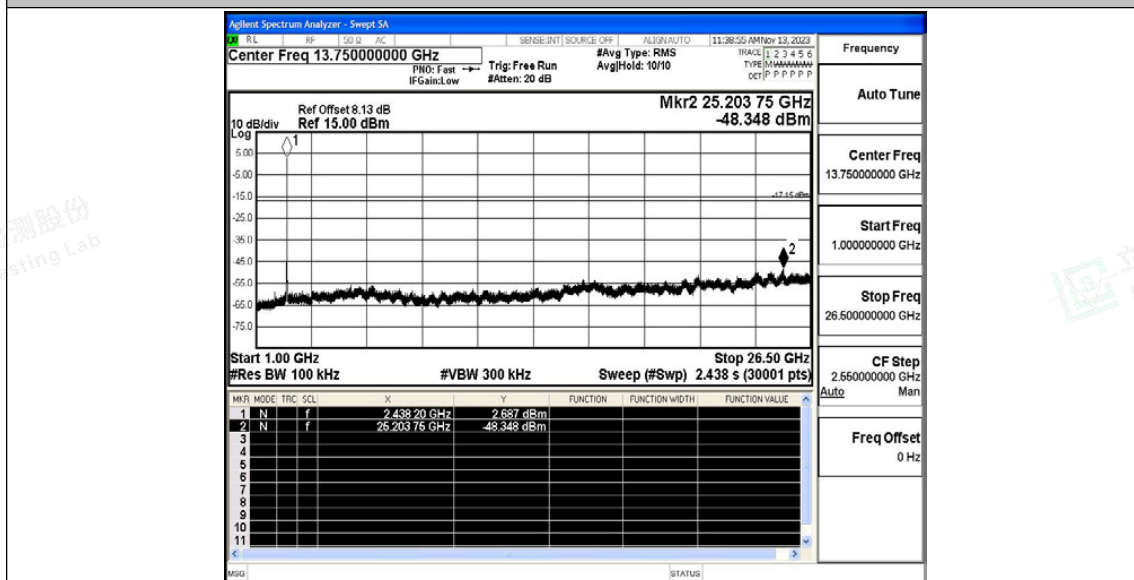
Conducted Spurious Emission

Test Graphs



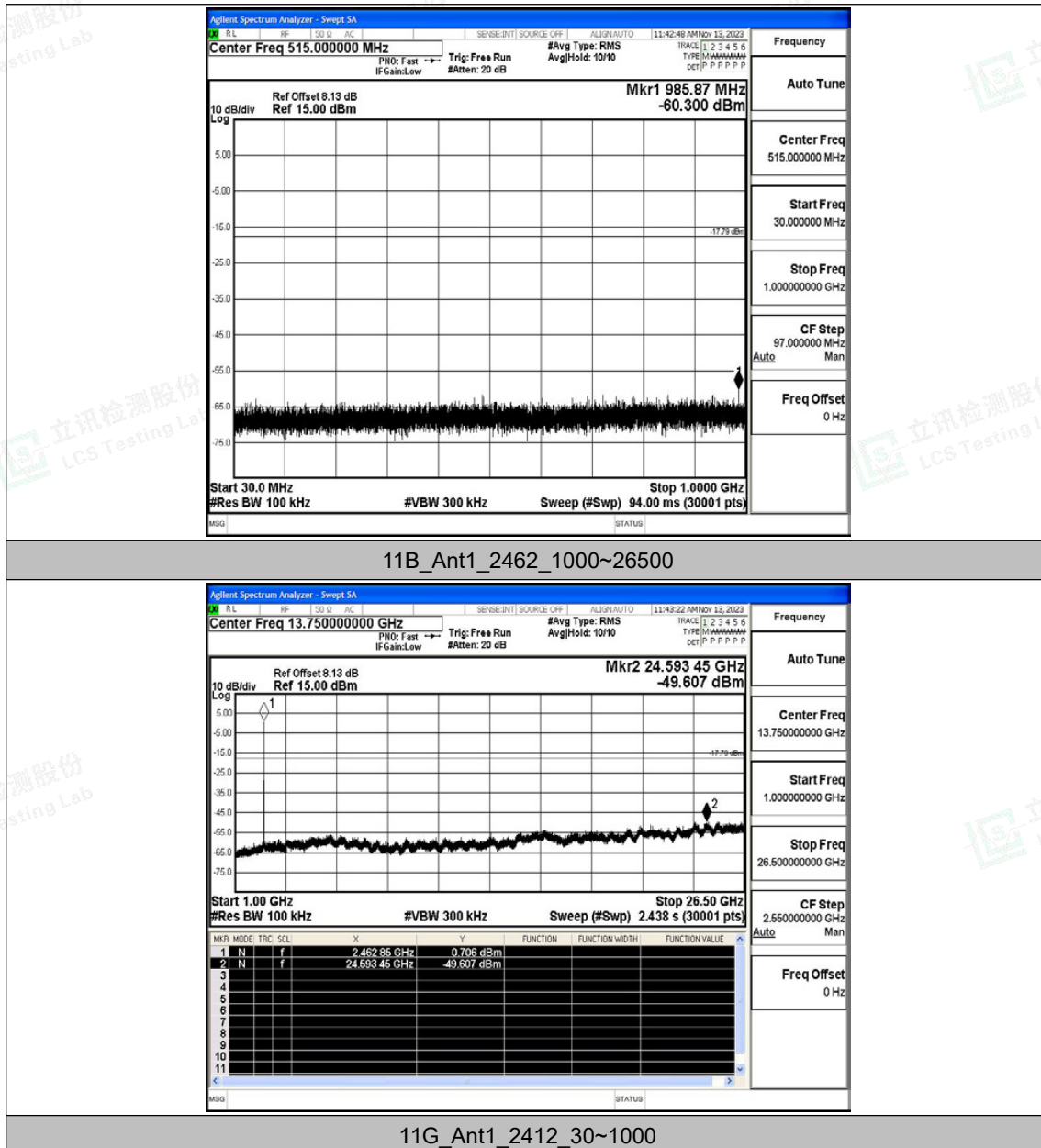


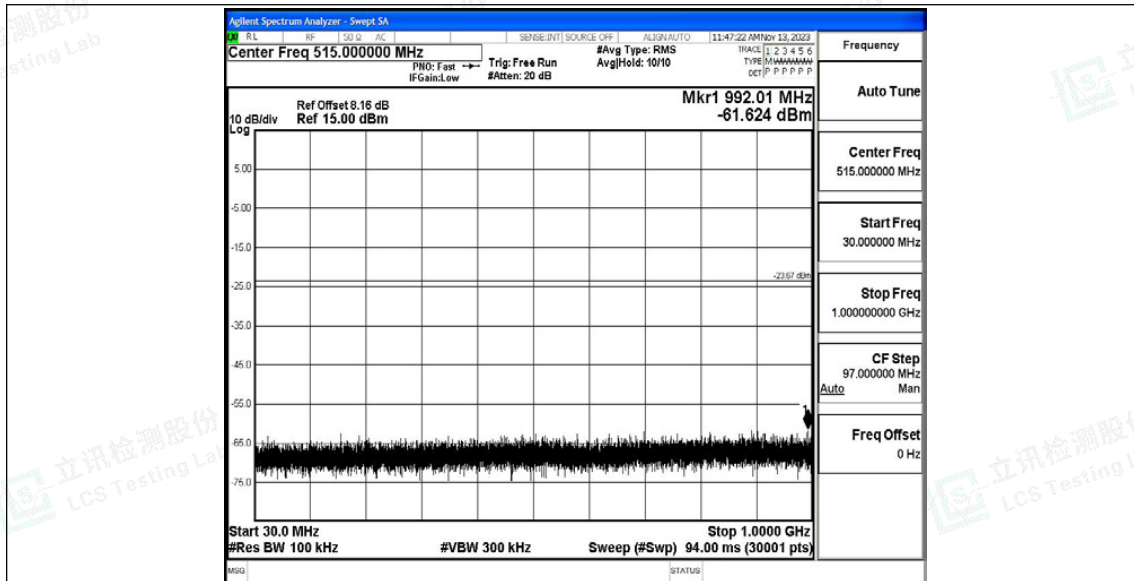
11B_Ant1_2437_1000~26500



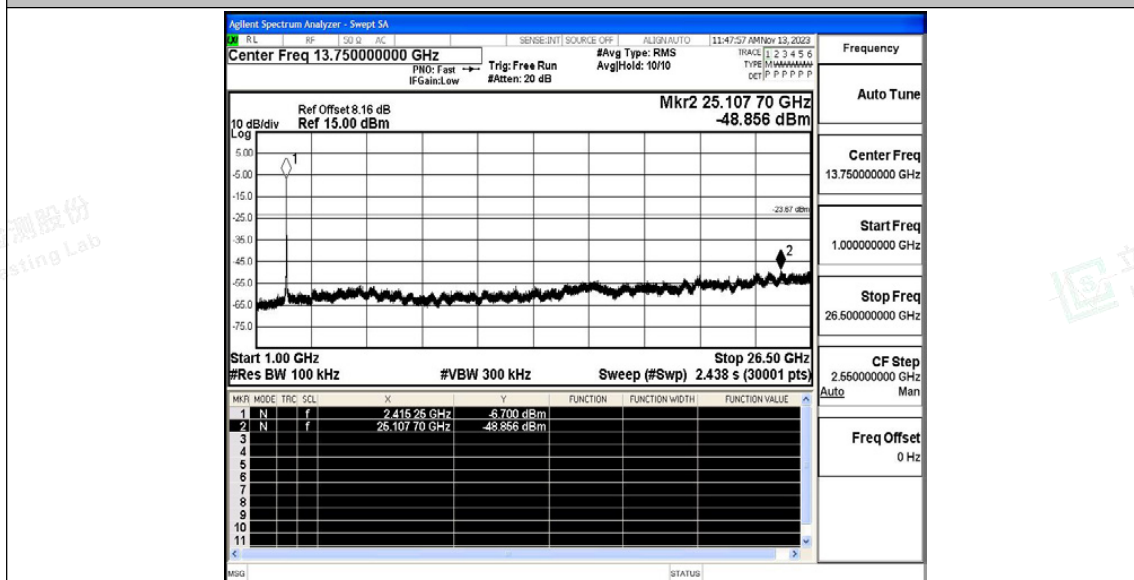
11B_Ant1_2462_30~1000





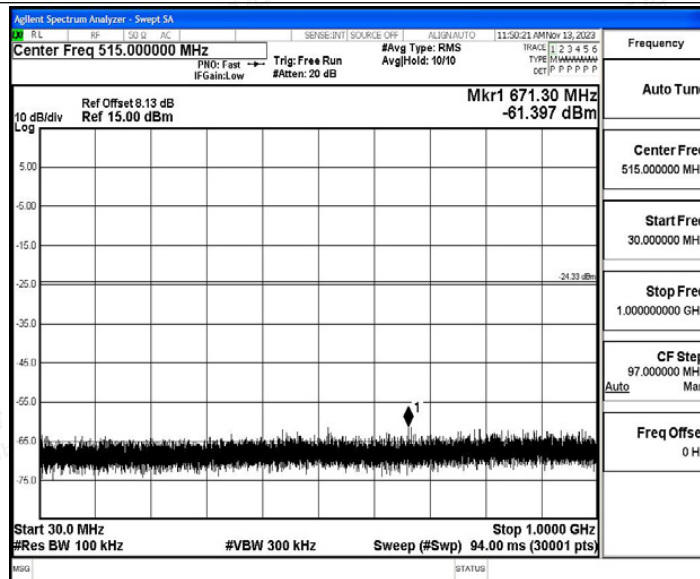


11G_Ant1_2412_1000~26500

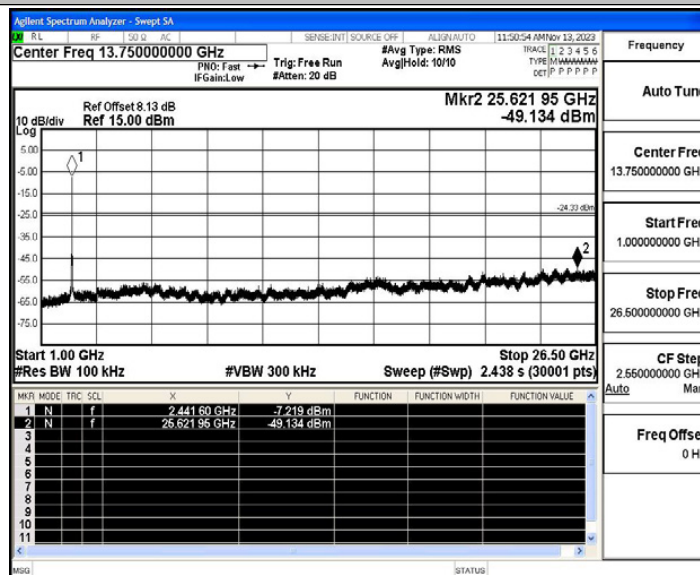


11G_Ant1_2437_30~1000



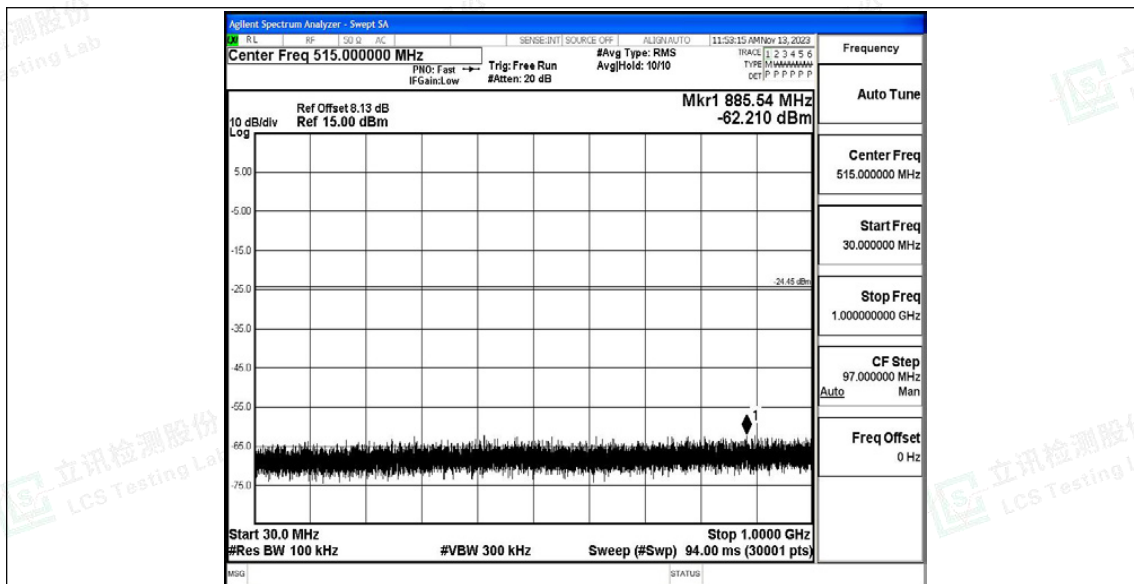


11G_Ant1_2437_1000~26500

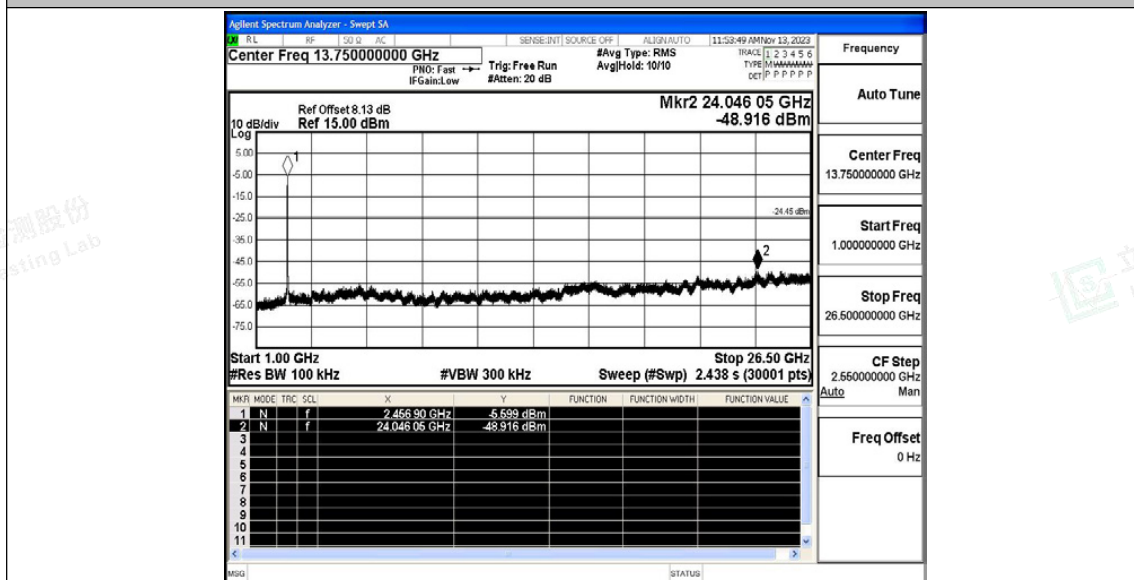


11G_Ant1_2462_30~1000



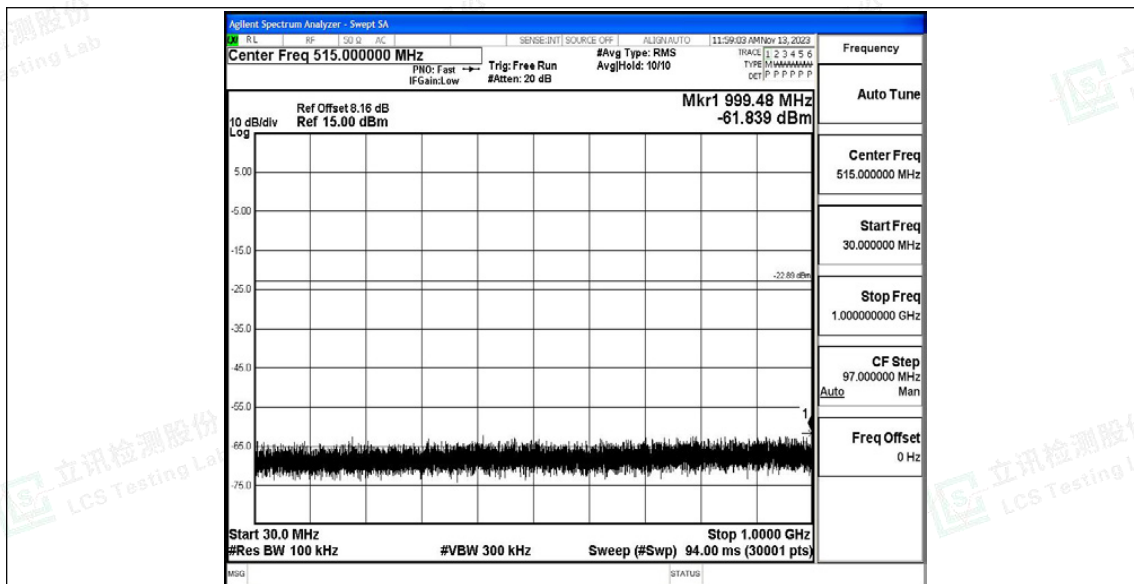


11G_Ant1_2462_1000~26500

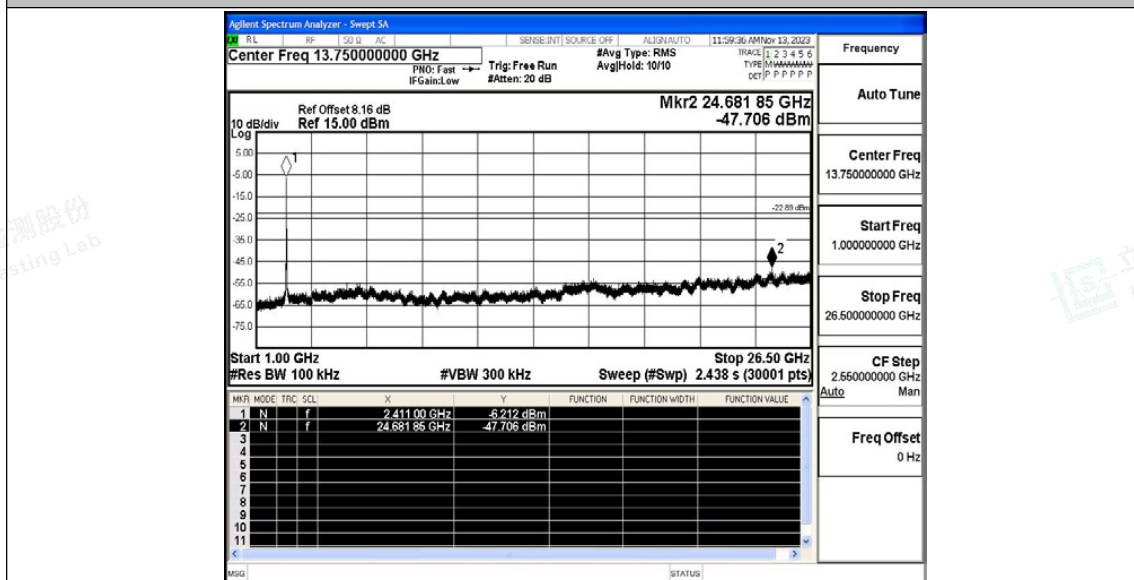


11N20SISO_Ant1_2412_30~1000



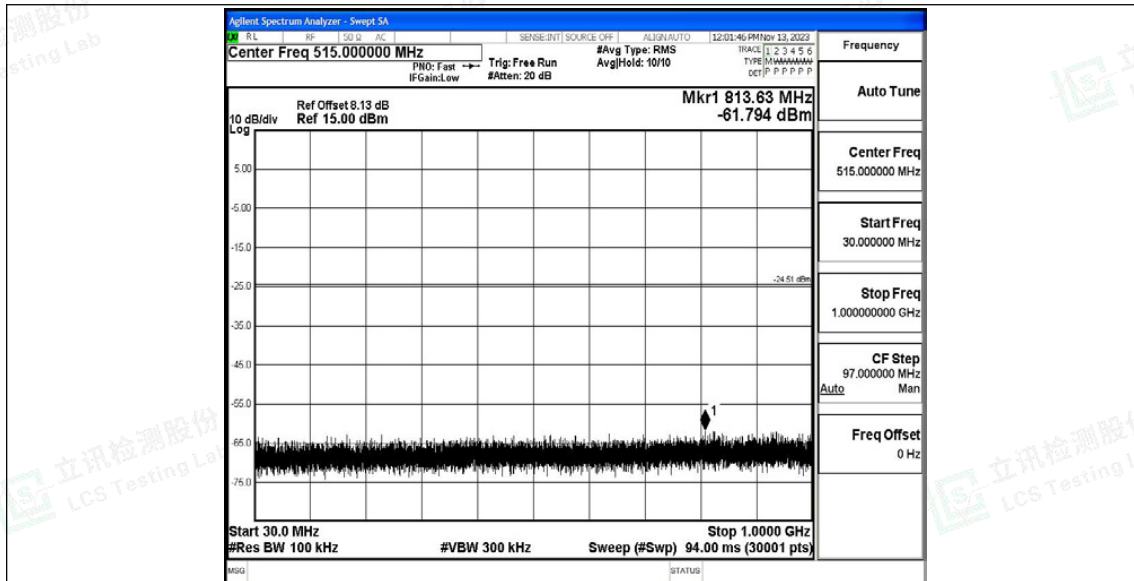


11N20SISO_Ant1_2412_1000~26500

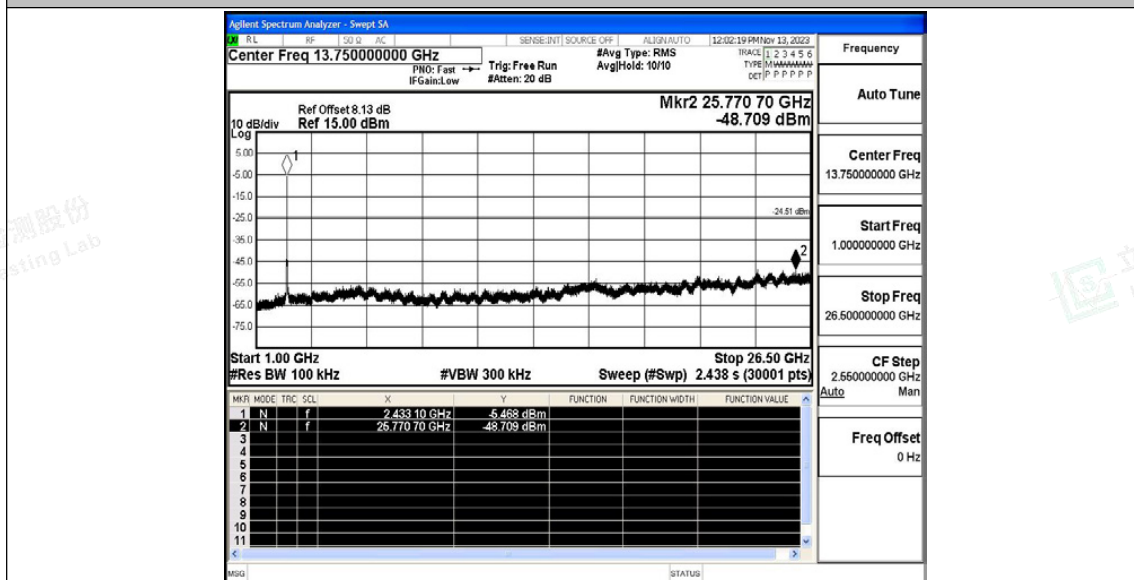


11N20SISO_Ant1_2437_30~1000





11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_30~1000

