



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: LCD PROJECTOR

Test Model: L011

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
	<i>Nick Peng</i>
Supervised by:	Ling Zhu
	<i>Ling.zhu</i>





C.1 DTS Bandwidth

Test Result

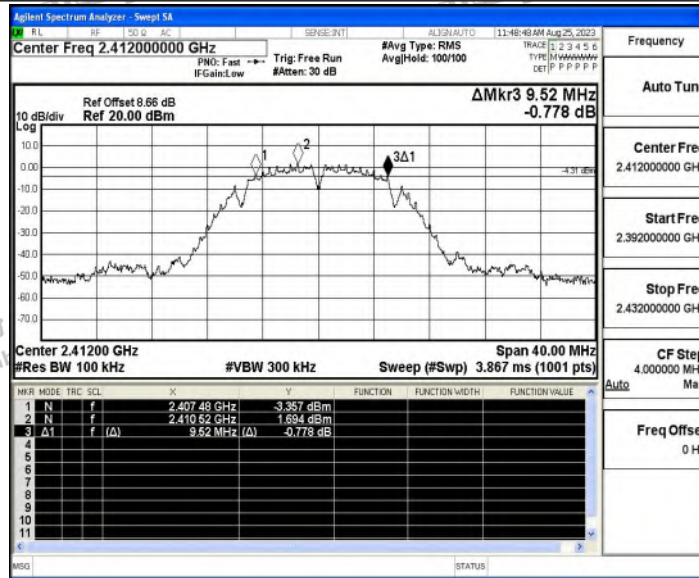
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.520	2407.480	2417.000	0.5	PASS
		2437	9.080	2432.440	2441.520	0.5	PASS
		2462	10.040	2456.960	2467.000	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.360	2453.800	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.160	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	36.080	2404.080	2440.160	0.5	PASS
		2437	35.120	2419.400	2454.520	0.5	PASS
		2452	35.440	2434.400	2469.840	0.5	PASS



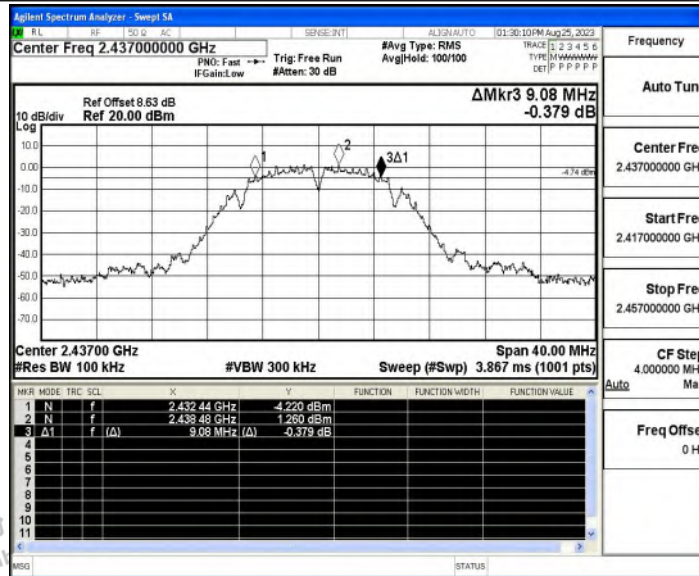


Test Graphs

11B_Ant1_2412

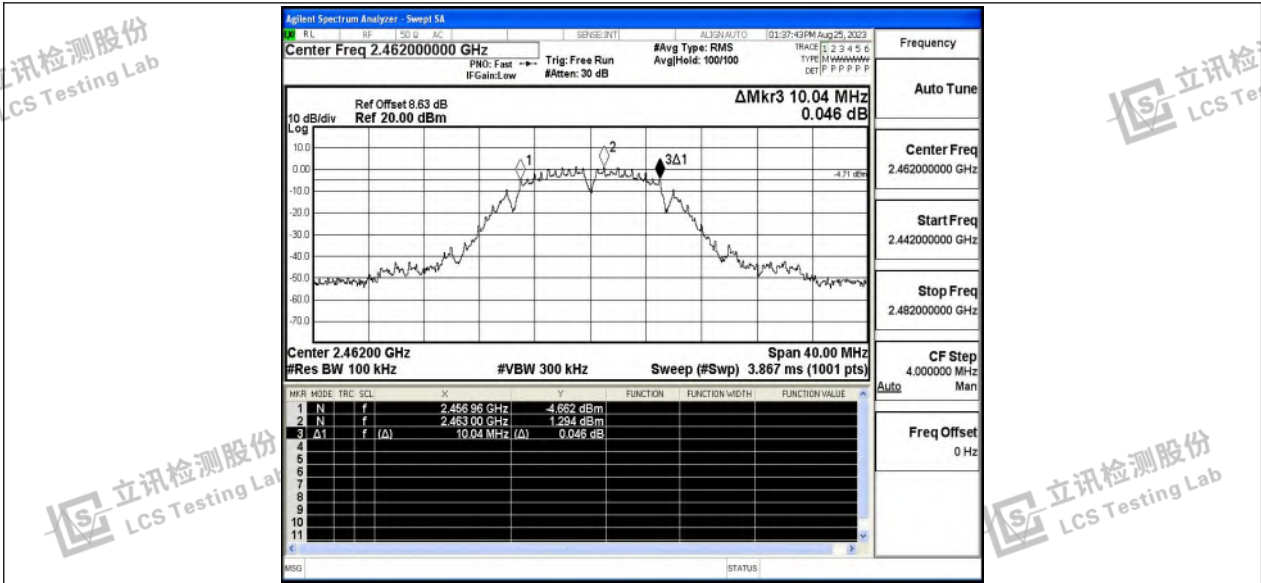


11B_Ant1_2437

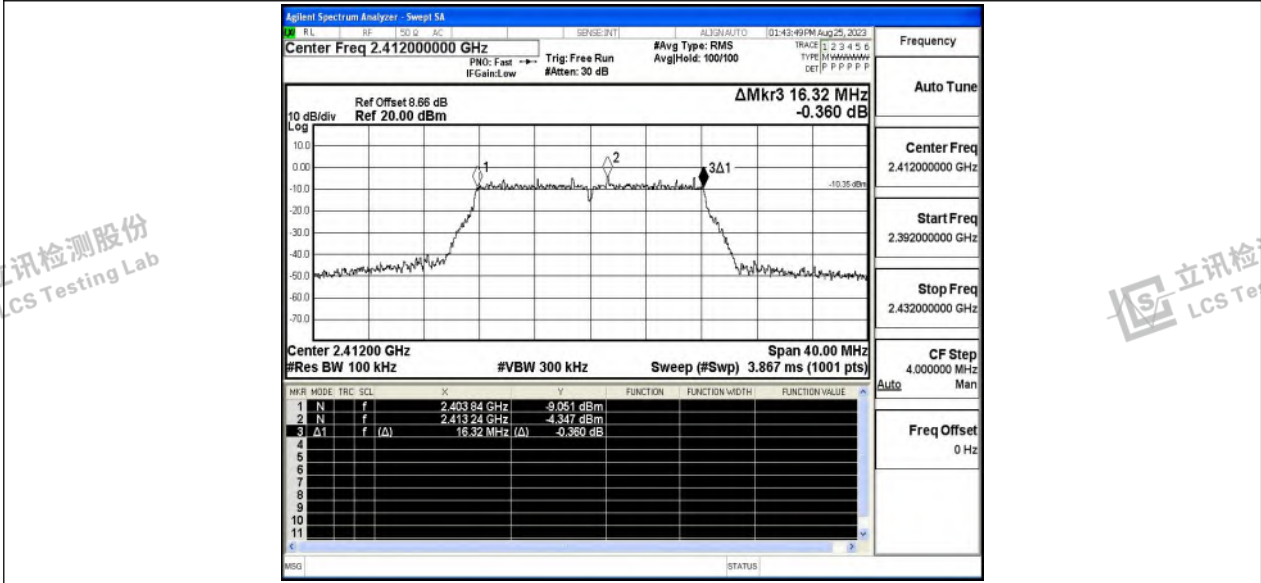


11B_Ant1_2462



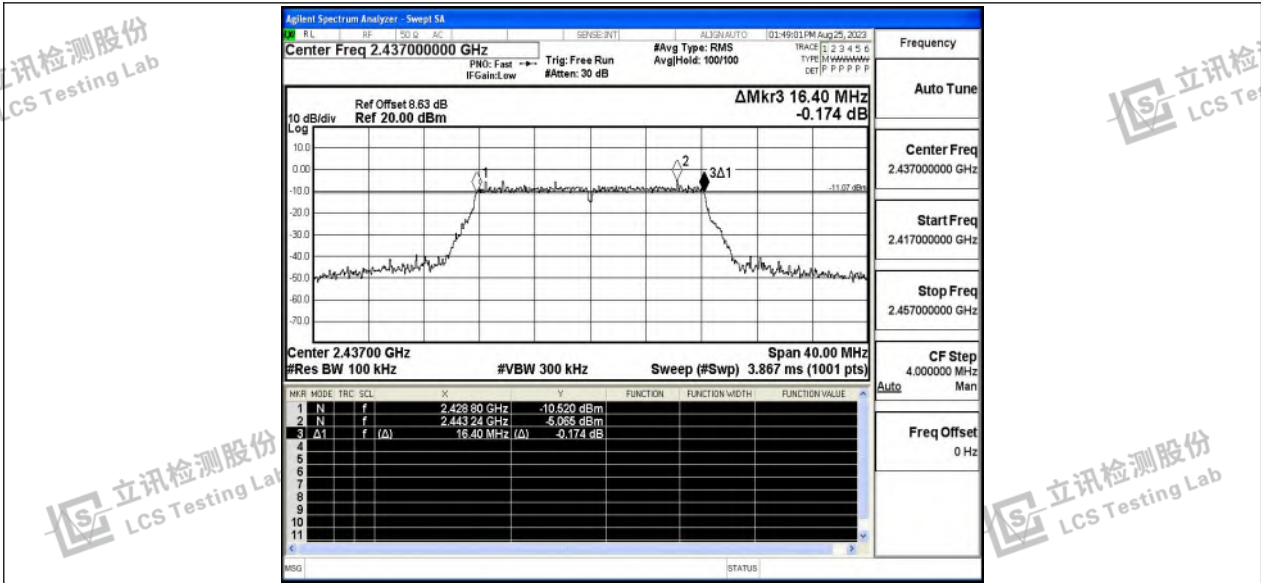


11G_Ant1_2412

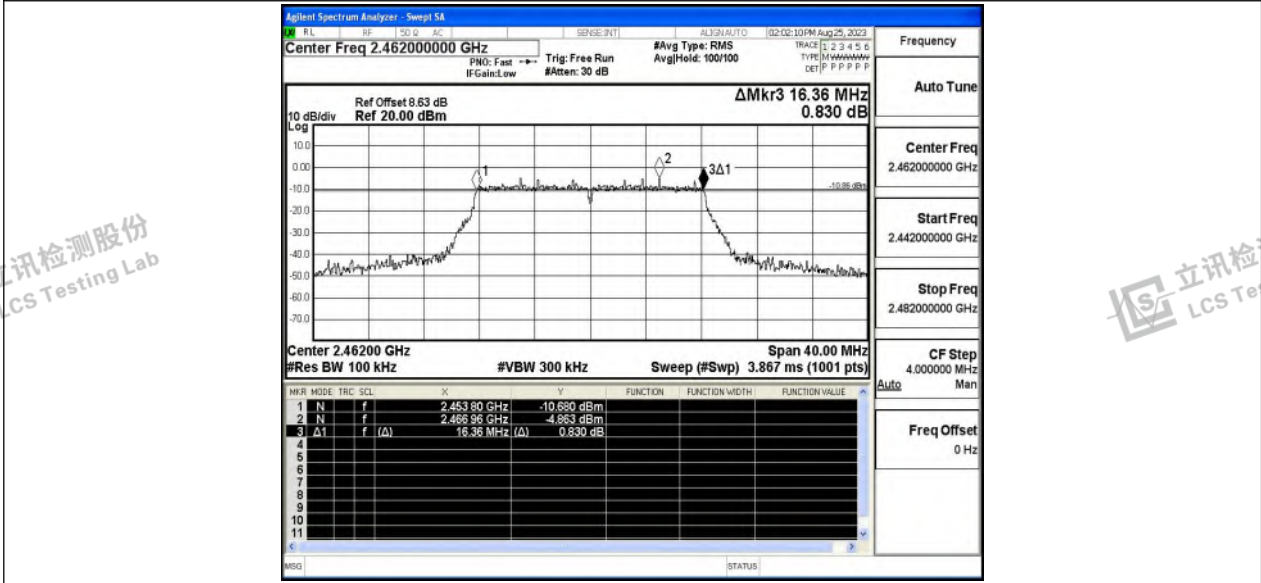


11G_Ant1_2437



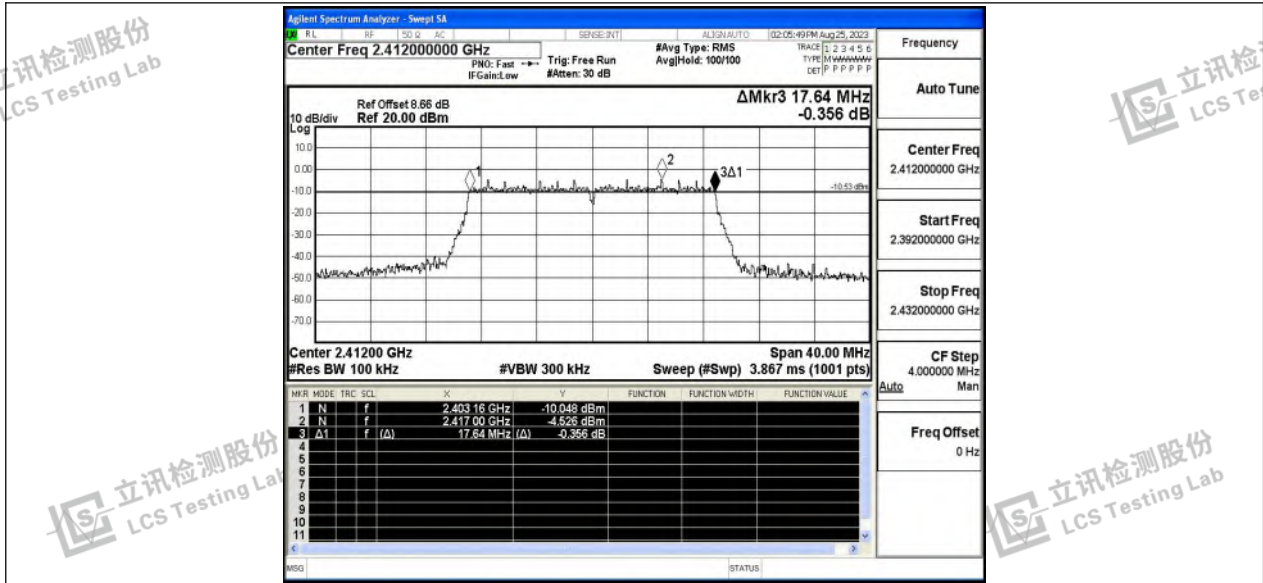


11G_Ant1_2462

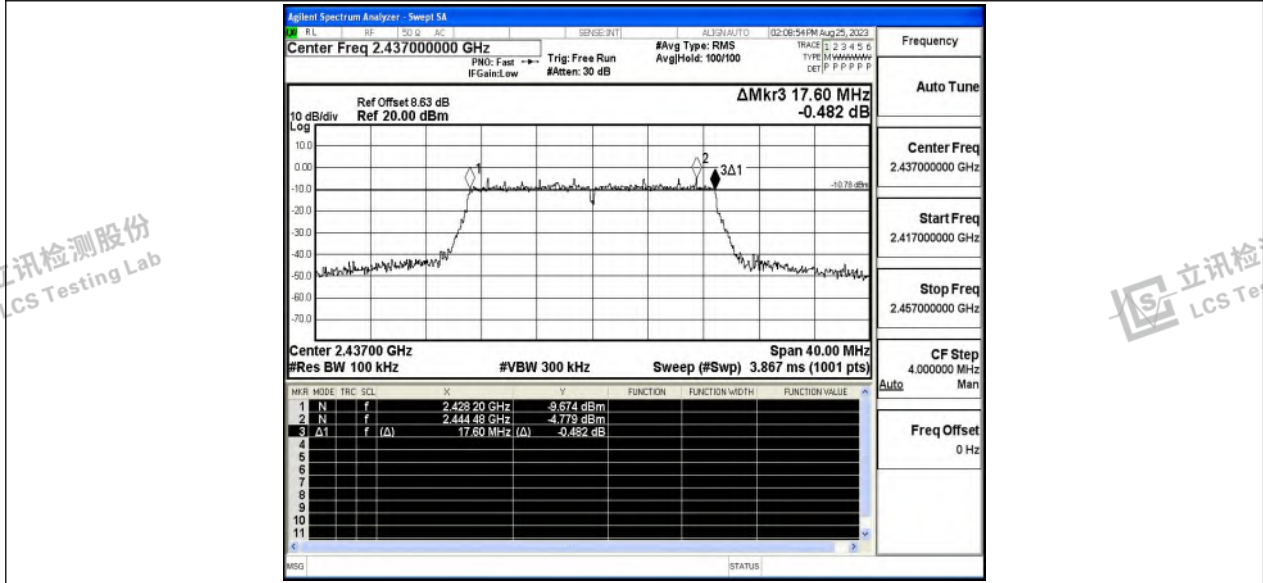


11N20SISO_Ant1_2412



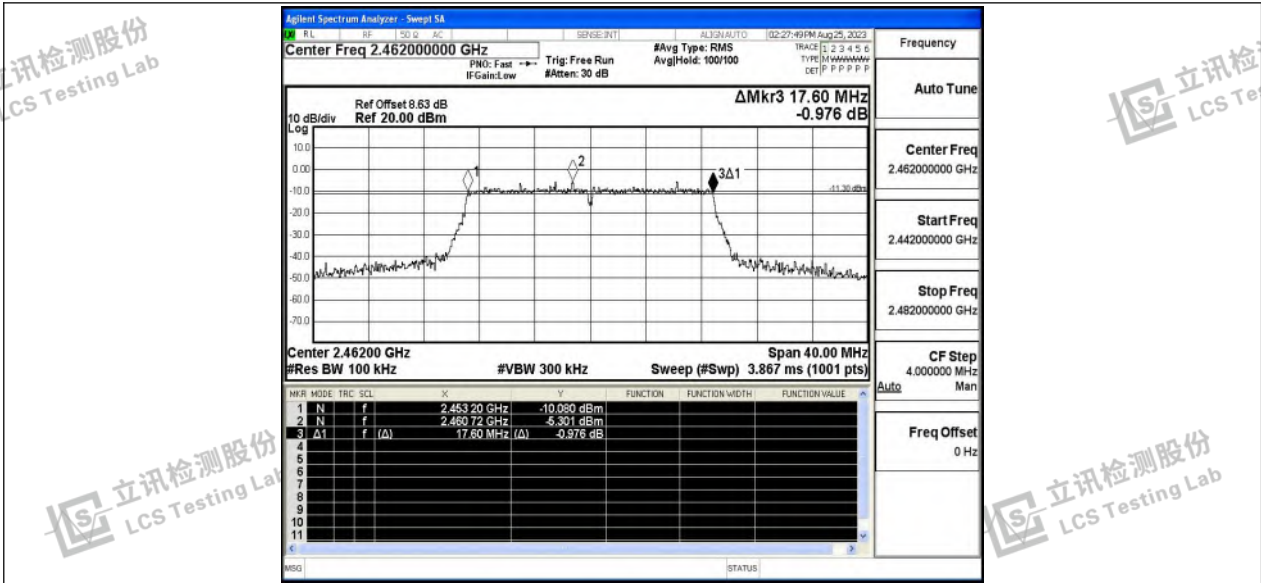


11N20SISO_Ant1_2437

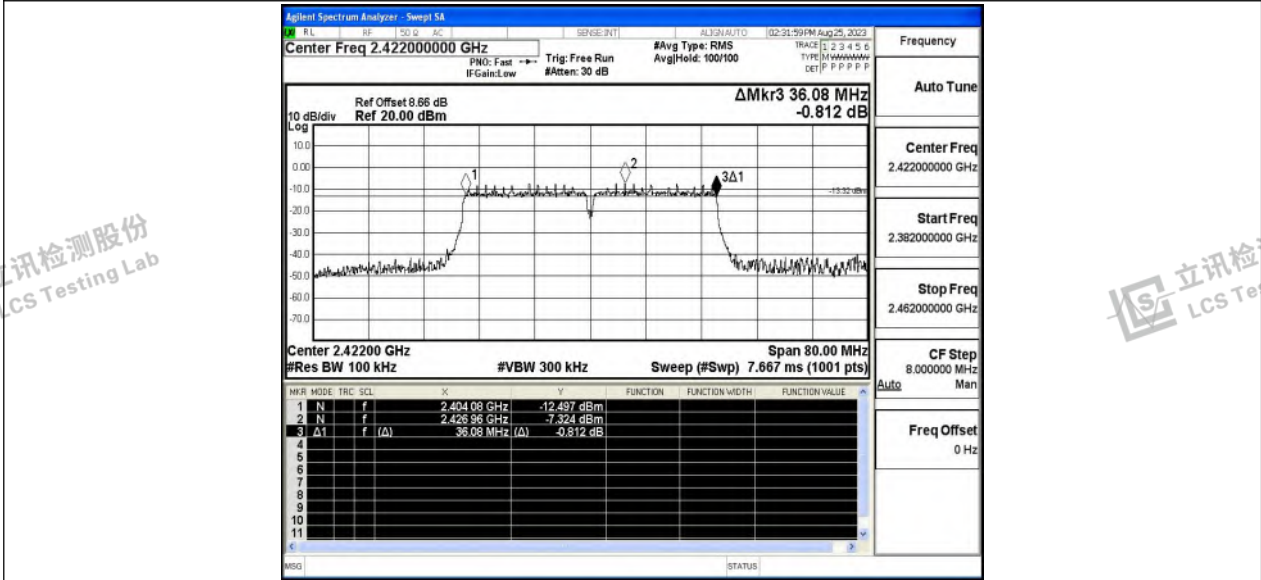


11N20SISO_Ant1_2462



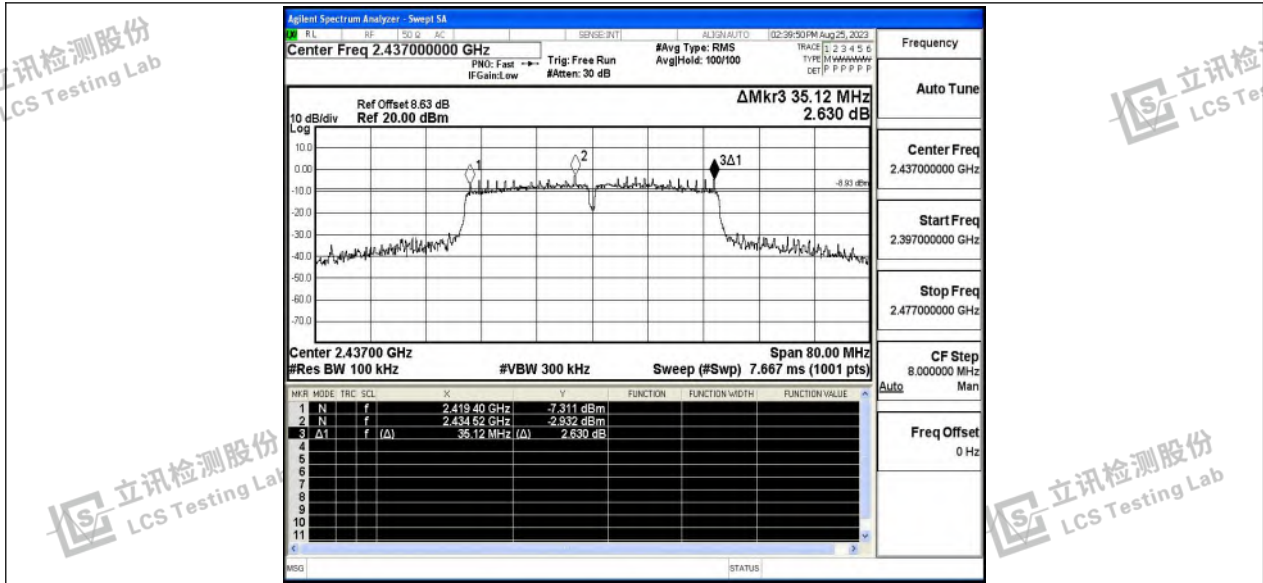


11N40SISO_Ant1_2422

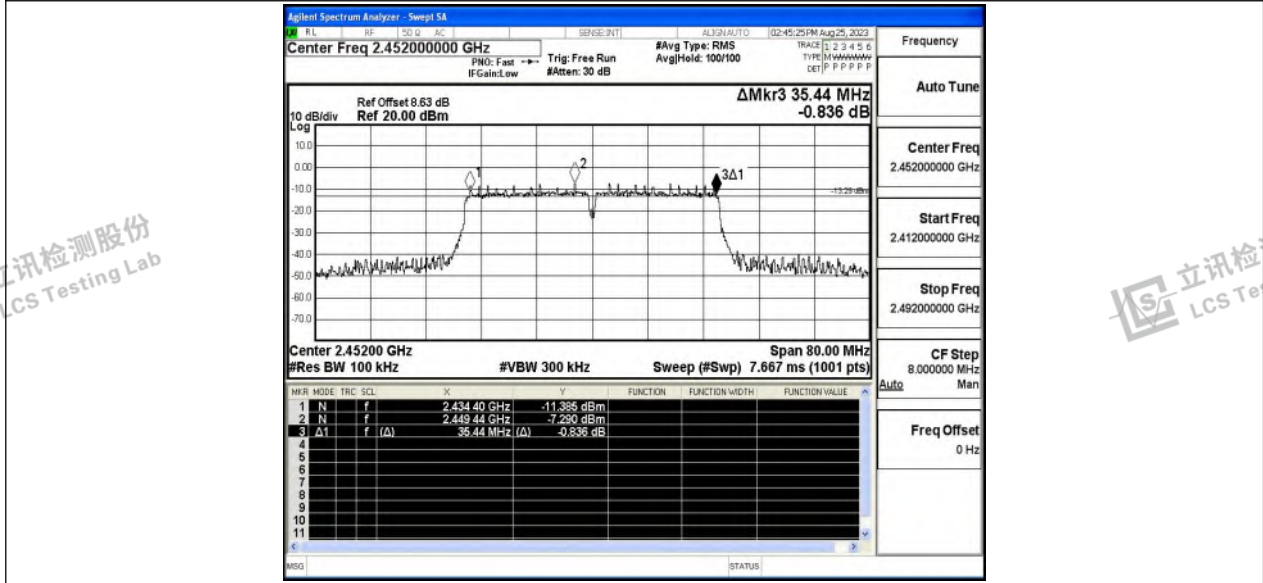


11N40SISO_Ant1_2437





11N40SISO_Ant1_2452





C.2 Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	13.89	≤30.00	PASS
		2437	13.38	≤30.00	PASS
		2462	12.90	≤30.00	PASS
11G	Ant1	2412	13.31	≤30.00	PASS
		2437	13.15	≤30.00	PASS
		2462	12.93	≤30.00	PASS
11N20SISO	Ant1	2412	13.58	≤30.00	PASS
		2437	13.25	≤30.00	PASS
		2462	12.68	≤30.00	PASS
11N40SISO	Ant1	2422	13.27	≤30.00	PASS
		2437	13.24	≤30.00	PASS
		2452	12.87	≤30.00	PASS





C.3 Maximum power spectral density

Test Result

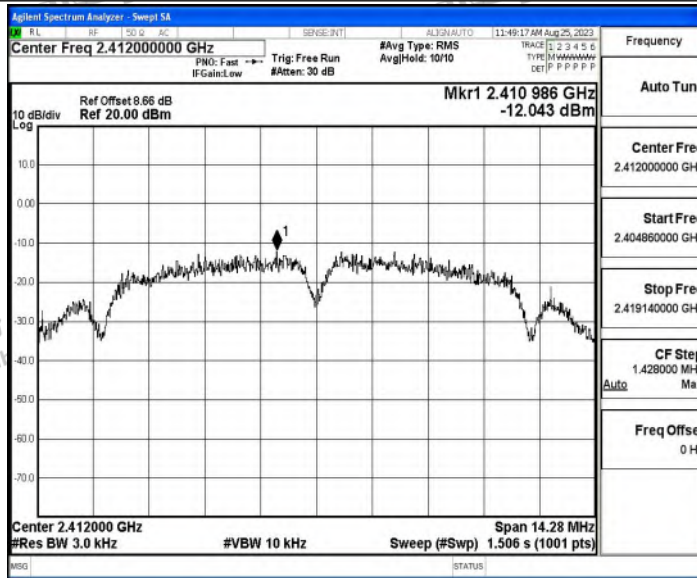
TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-12.04	≤8.00	PASS
		2437	-11.96	≤8.00	PASS
		2462	-13.19	≤8.00	PASS
11G	Ant1	2412	-18.2	≤8.00	PASS
		2437	-17.89	≤8.00	PASS
		2462	-18.93	≤8.00	PASS
11N20SISO	Ant1	2412	-17.68	≤8.00	PASS
		2437	-18.5	≤8.00	PASS
		2462	-18.42	≤8.00	PASS
11N40SISO	Ant1	2422	-20.96	≤8.00	PASS
		2437	-20.79	≤8.00	PASS
		2452	-20.98	≤8.00	PASS



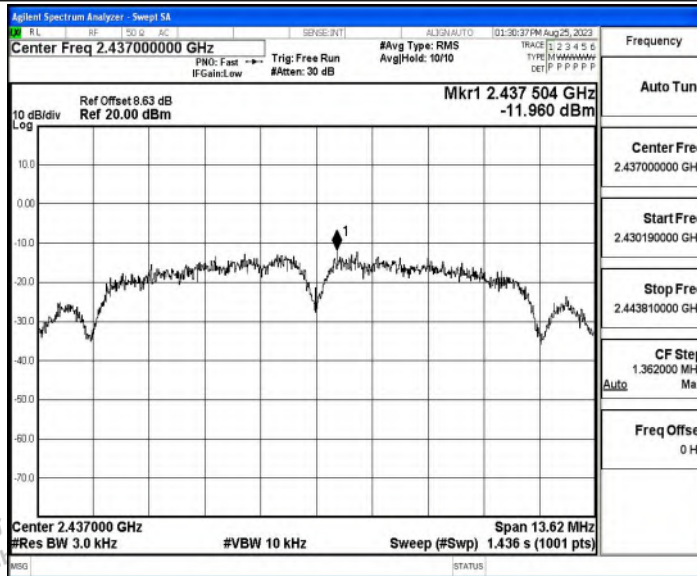


Test Graphs

11B_Ant1_2412

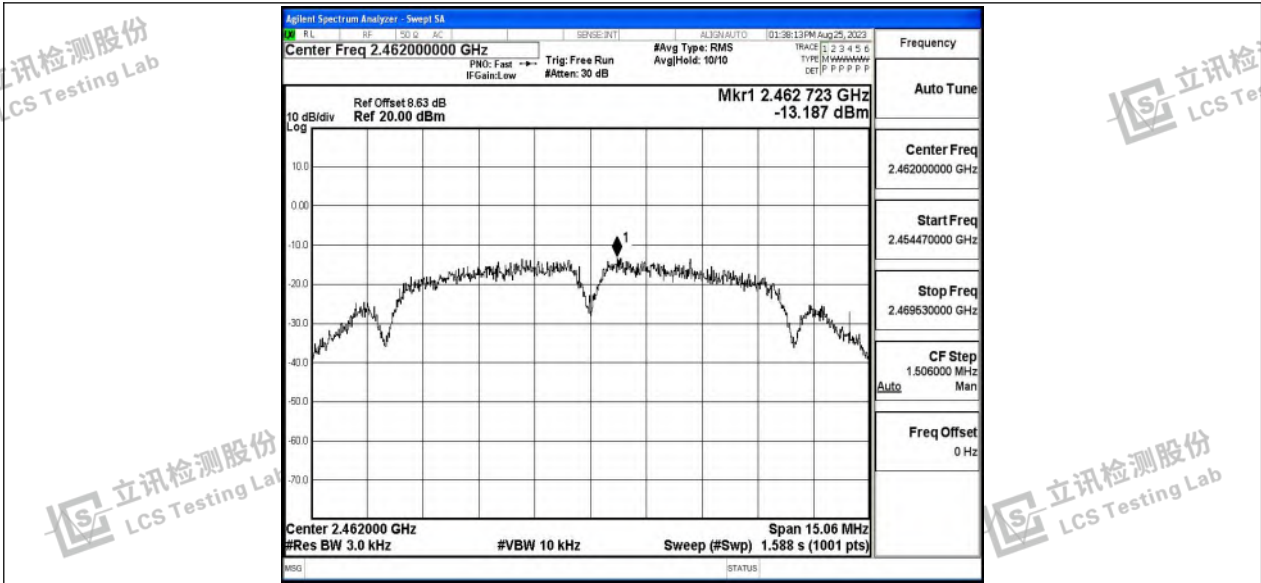


11B_Ant1_2437

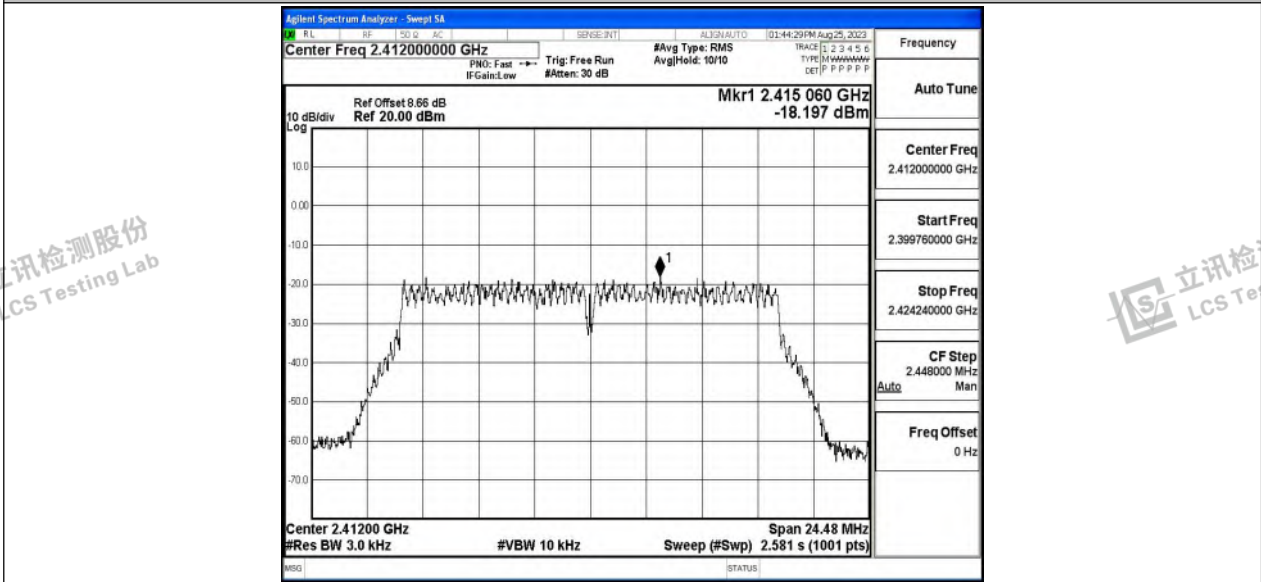


11B_Ant1_2462



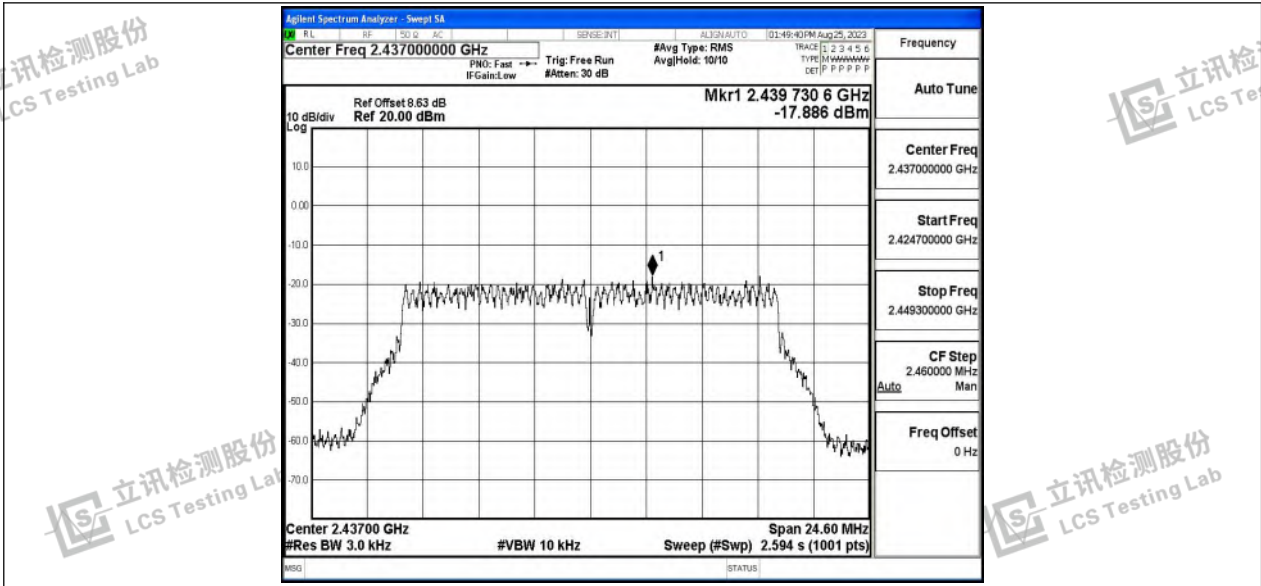


11G_Ant1_2412

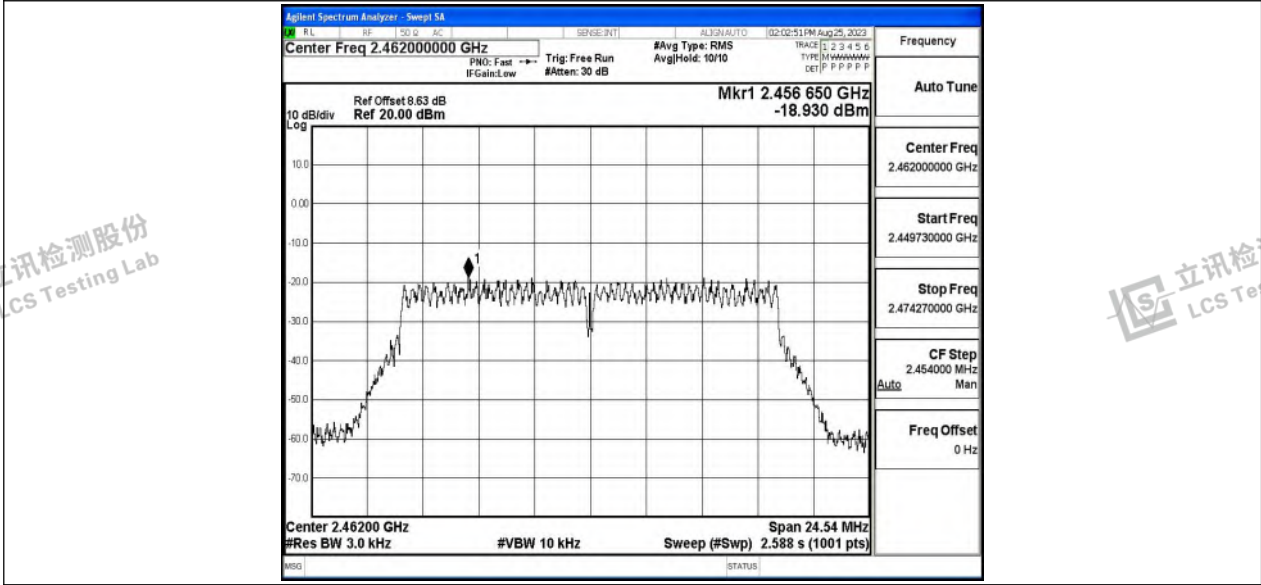


11G_Ant1_2437



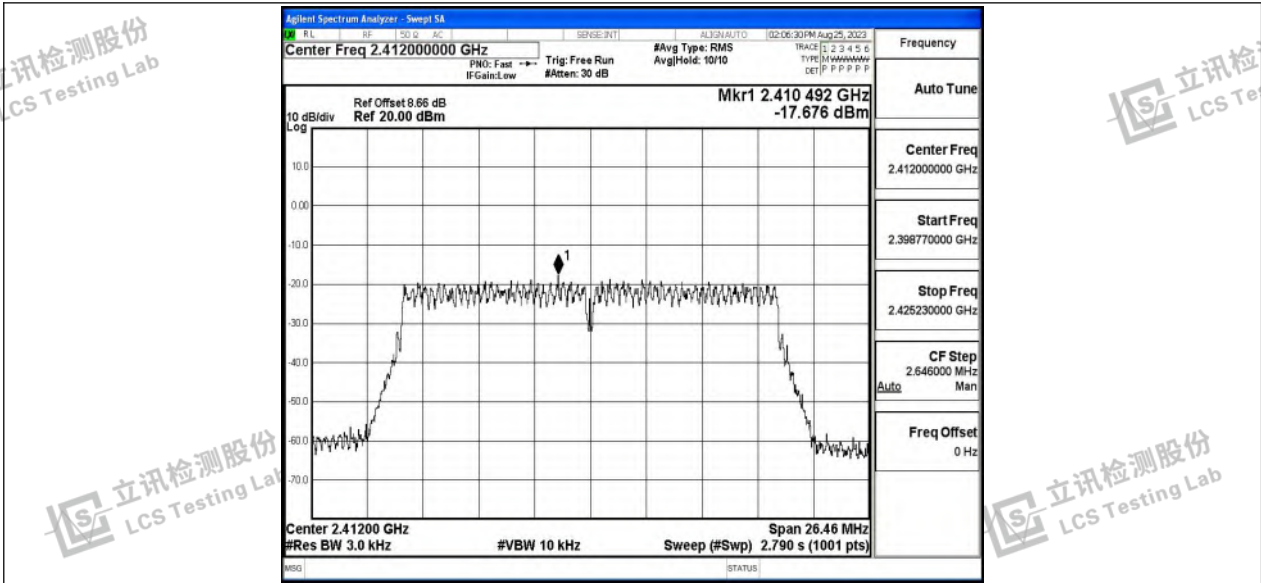


11G_Ant1_2462

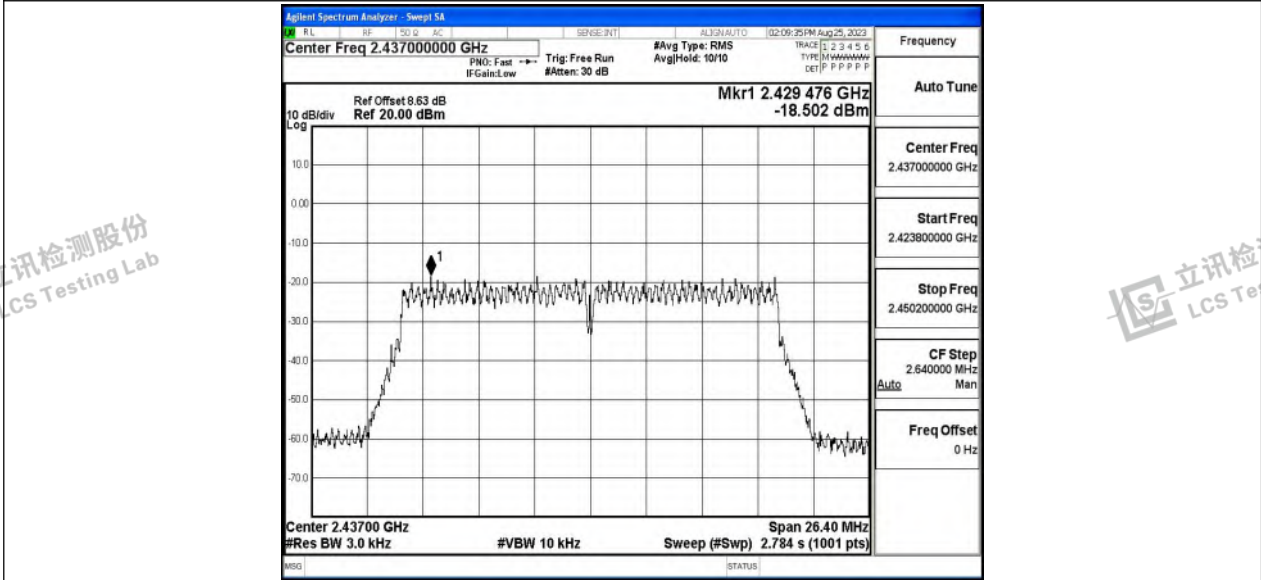


11N20SISO_Ant1_2412



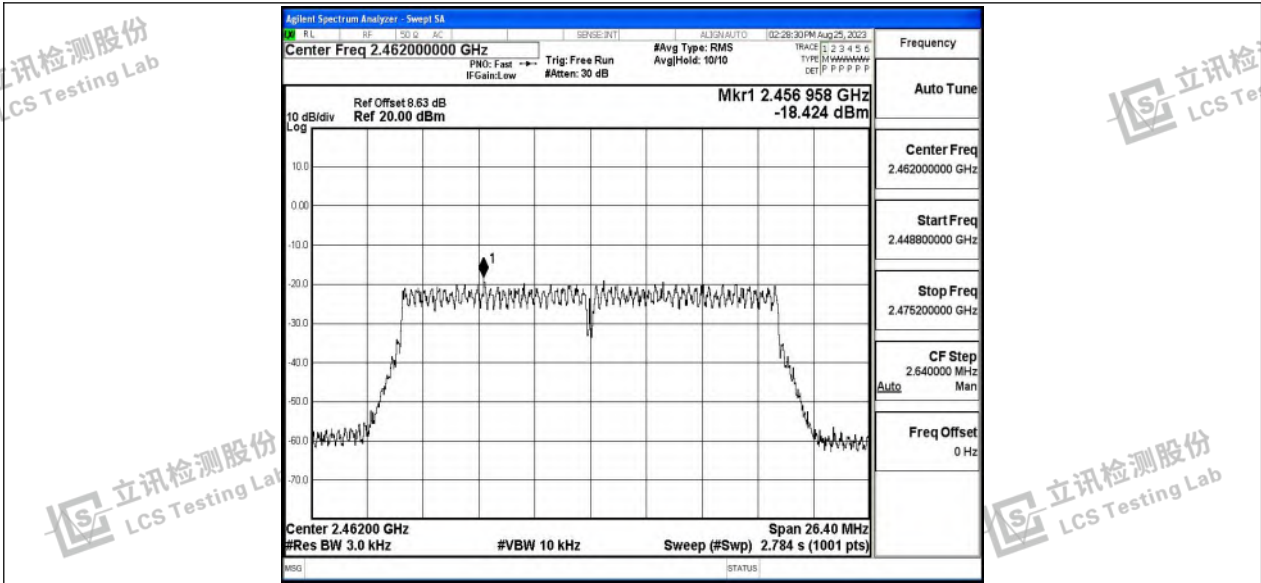


11N20SISO_Ant1_2437

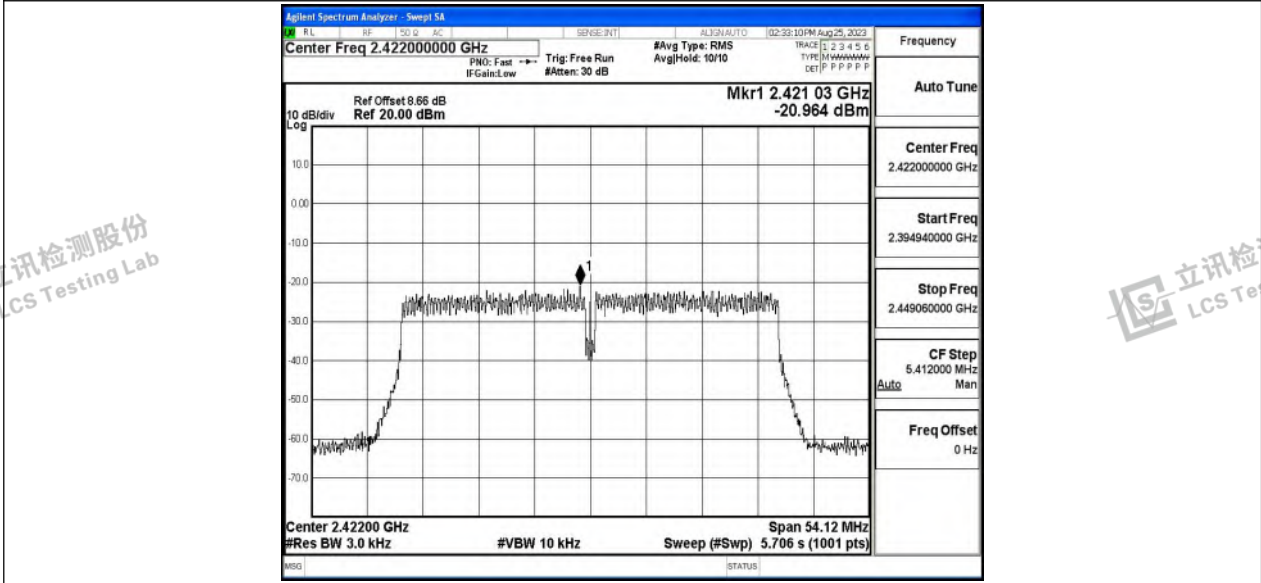


11N20SISO_Ant1_2462



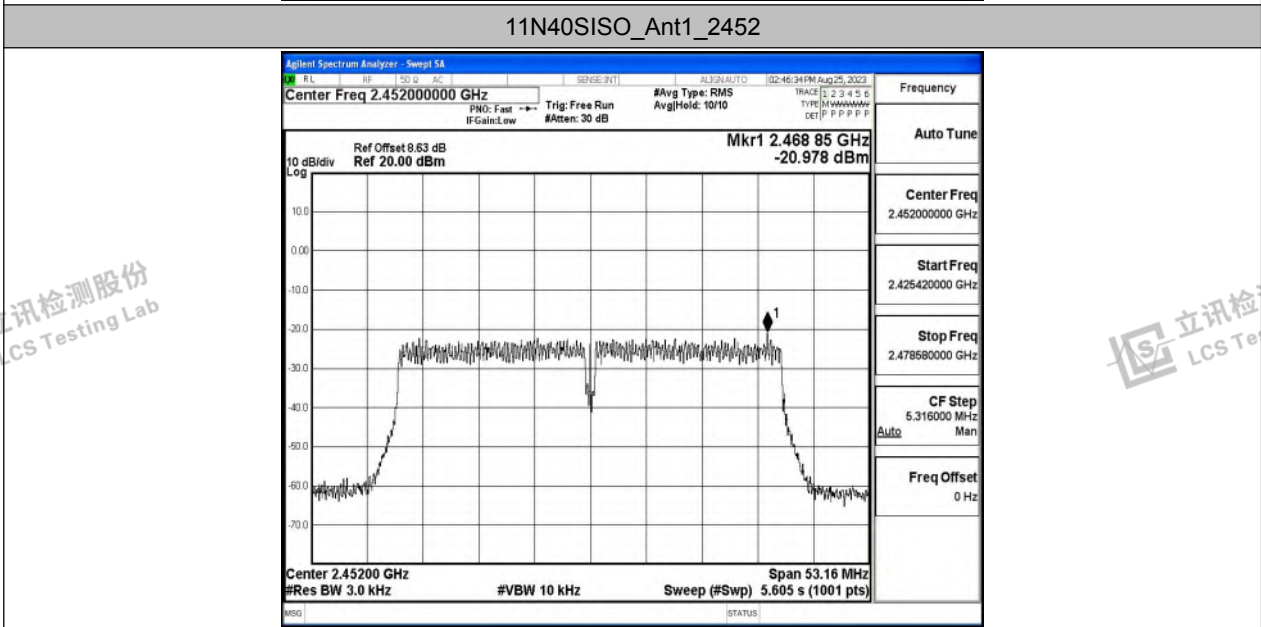
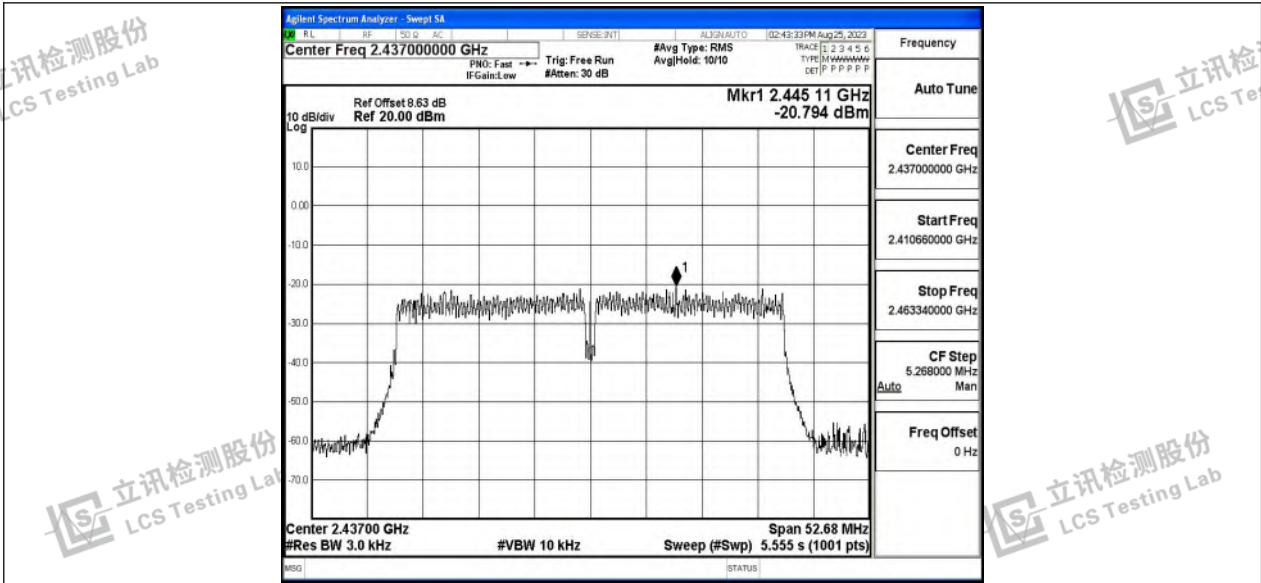


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437







C.4 Band edge measurements

Test Result

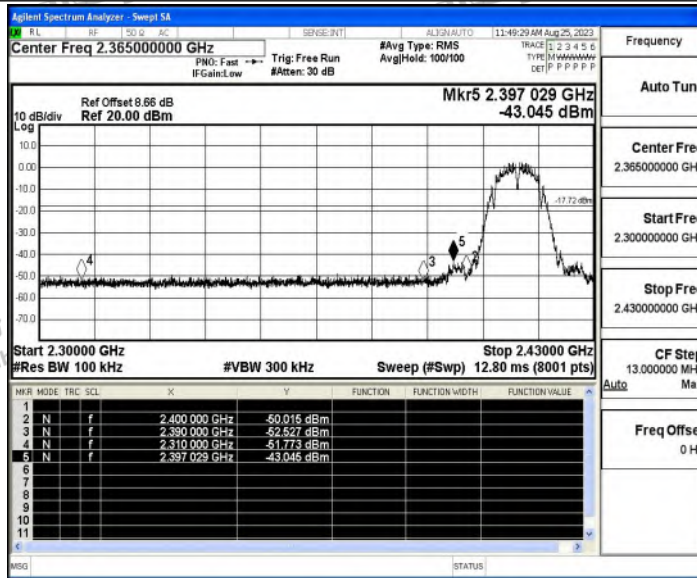
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.28	-43.05	≤-17.72	PASS
		High	2462	0.54	-47.96	≤-19.46	PASS
11G	Ant1	Low	2412	-4.62	-43.36	≤-24.62	PASS
		High	2462	-5.19	-47.64	≤-25.19	PASS
11N20SISO	Ant1	Low	2412	-3.89	-41.31	≤-23.89	PASS
		High	2462	-4.45	-47.13	≤-24.45	PASS
11N40SISO	Ant1	Low	2422	-7.24	-41.47	≤-27.24	PASS
		High	2452	-7.76	-41.43	≤-27.76	PASS



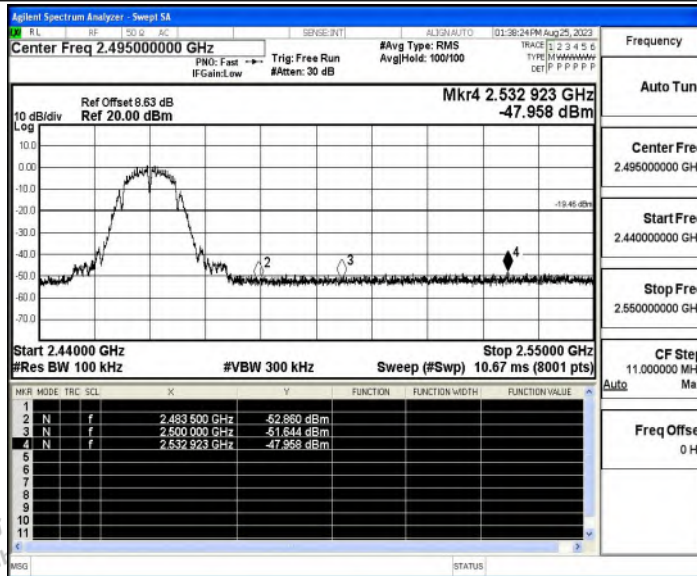


Test Graphs

11B_Ant1_Low_2412

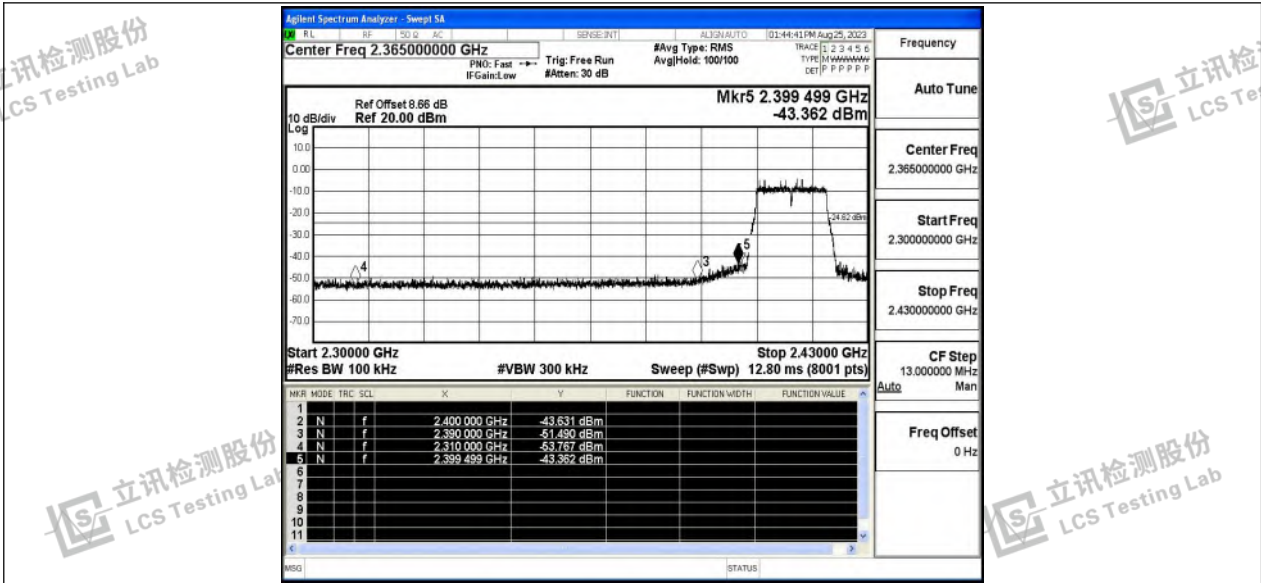


11B_Ant1_High_2462

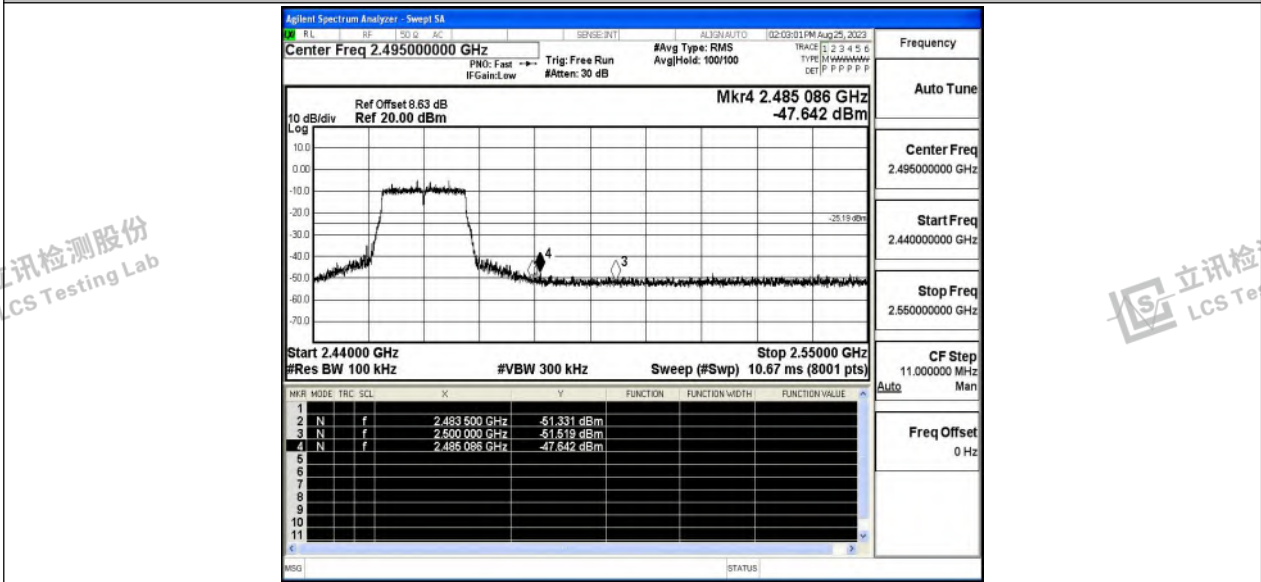


11G_Ant1_Low_2412



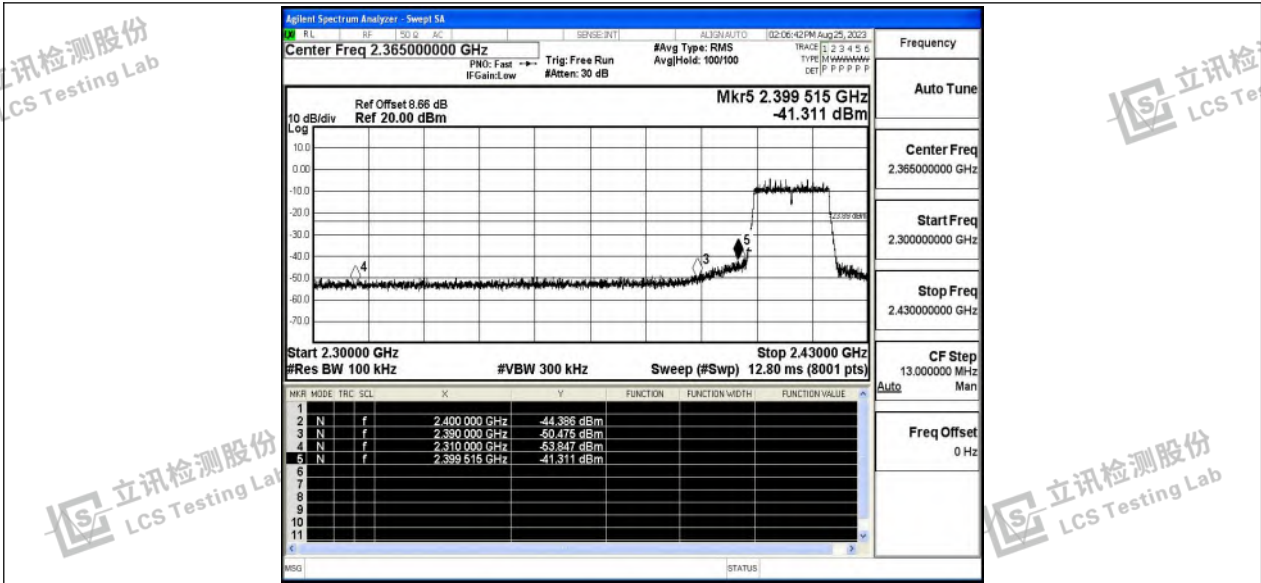


11G_Ant1_High_2462

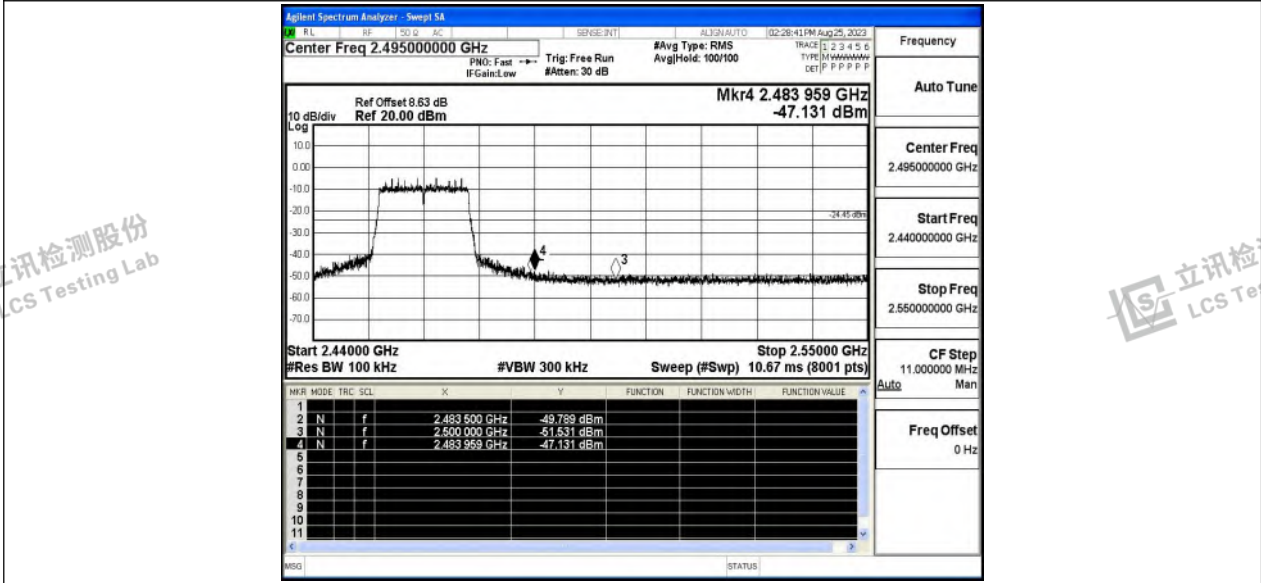


11N20SISO_Ant1_Low_2412



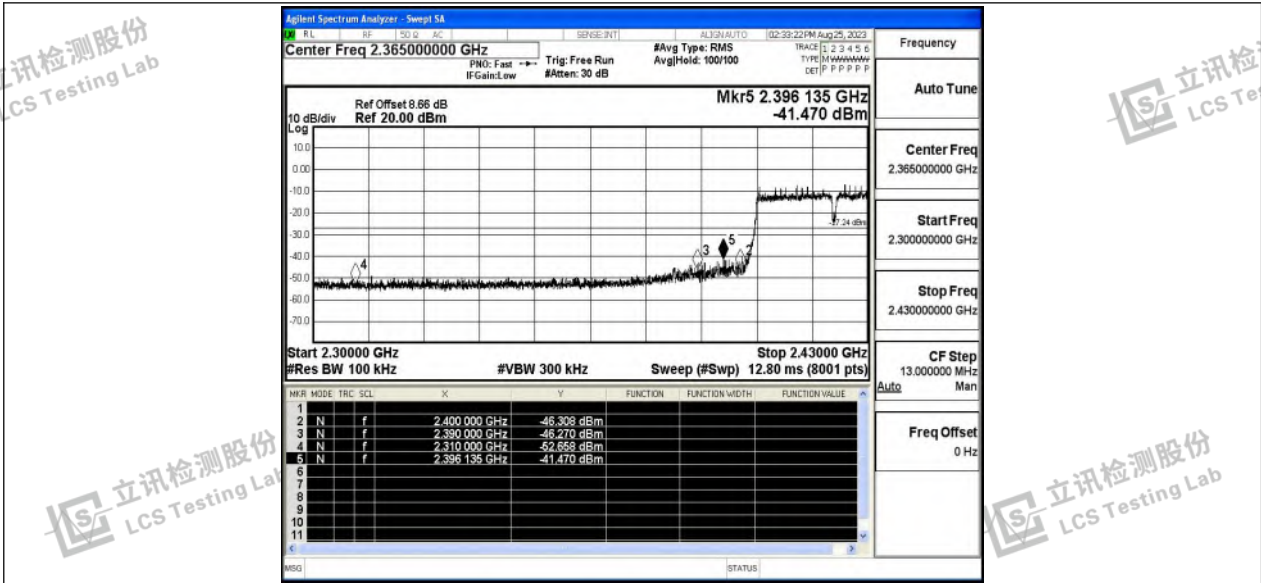


11N20SISO_Ant1_High_2462

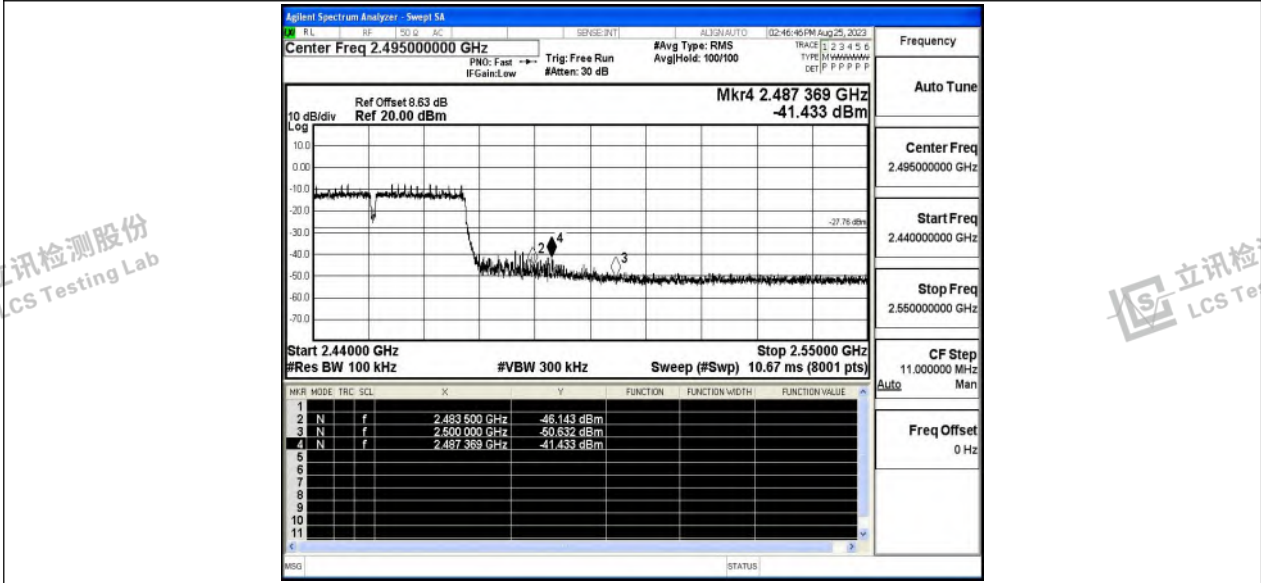


11N40SISO_Ant1_Low_2422





11N40SISO_Ant1_High_2452





C.5 Conducted Spurious Emission

Test Result

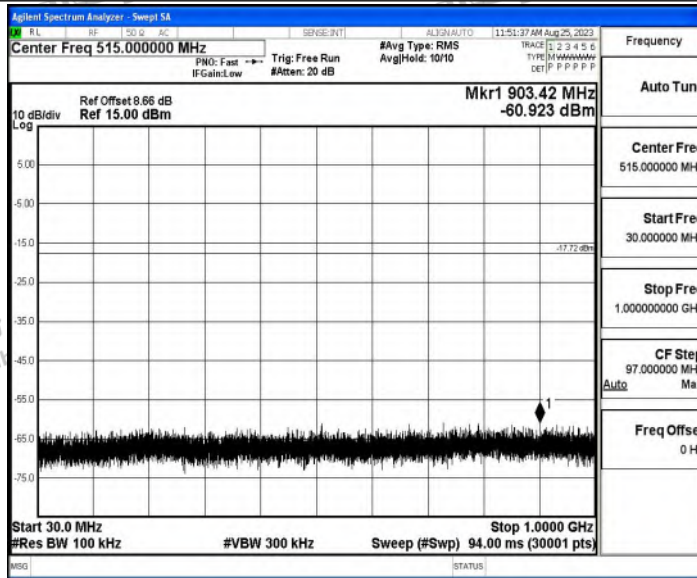
TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	2.28	-60.92	≤-17.72	PASS
			1000~26500	2.28	-46.81	≤-17.72	PASS
		2437	30~1000	1.85	-60.32	≤-18.15	PASS
			1000~26500	1.85	-46.36	≤-18.15	PASS
		2462	30~1000	0.54	-60.32	≤-19.46	PASS
			1000~26500	0.54	-46.16	≤-19.46	PASS
11G	Ant1	2412	30~1000	-4.62	-60.85	≤-24.62	PASS
			1000~26500	-4.62	-46.61	≤-24.62	PASS
		2437	30~1000	-4.71	-60.75	≤-24.71	PASS
			1000~26500	-4.71	-46.59	≤-24.71	PASS
		2462	30~1000	-5.19	-59.52	≤-25.19	PASS
			1000~26500	-5.19	-45.34	≤-25.19	PASS
11N20SISO	Ant1	2412	30~1000	-3.89	-61.13	≤-23.89	PASS
			1000~26500	-3.89	-46.29	≤-23.89	PASS
		2437	30~1000	-4.79	-60.63	≤-24.79	PASS
			1000~26500	-4.79	-46.85	≤-24.79	PASS
		2462	30~1000	-4.45	-60.45	≤-24.45	PASS
			1000~26500	-4.45	-46.8	≤-24.45	PASS
11N40SISO	Ant1	2422	30~1000	-7.24	-60.59	≤-27.24	PASS
			1000~26500	-7.24	-46.32	≤-27.24	PASS
		2437	30~1000	-2.96	-60.45	≤-22.96	PASS
			1000~26500	-2.96	-46.19	≤-22.96	PASS
		2452	30~1000	-7.76	-60.98	≤-27.76	PASS
			1000~26500	-7.76	-46.09	≤-27.76	PASS



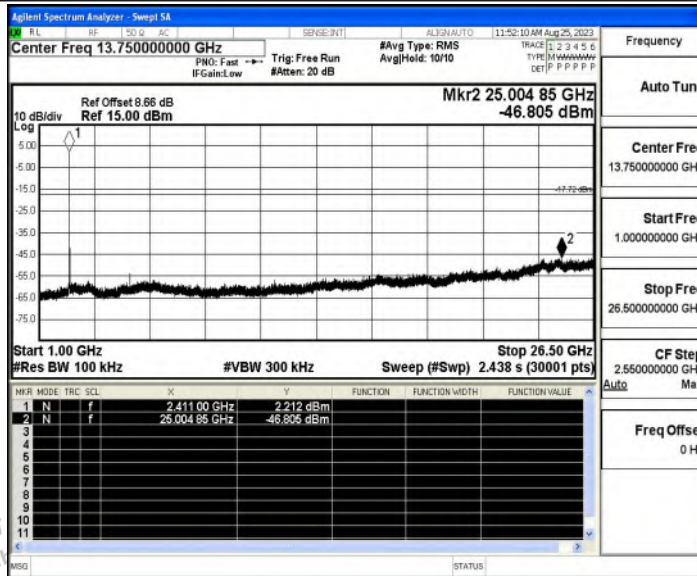


Test Graphs

11B_Ant1_2412_30~1000

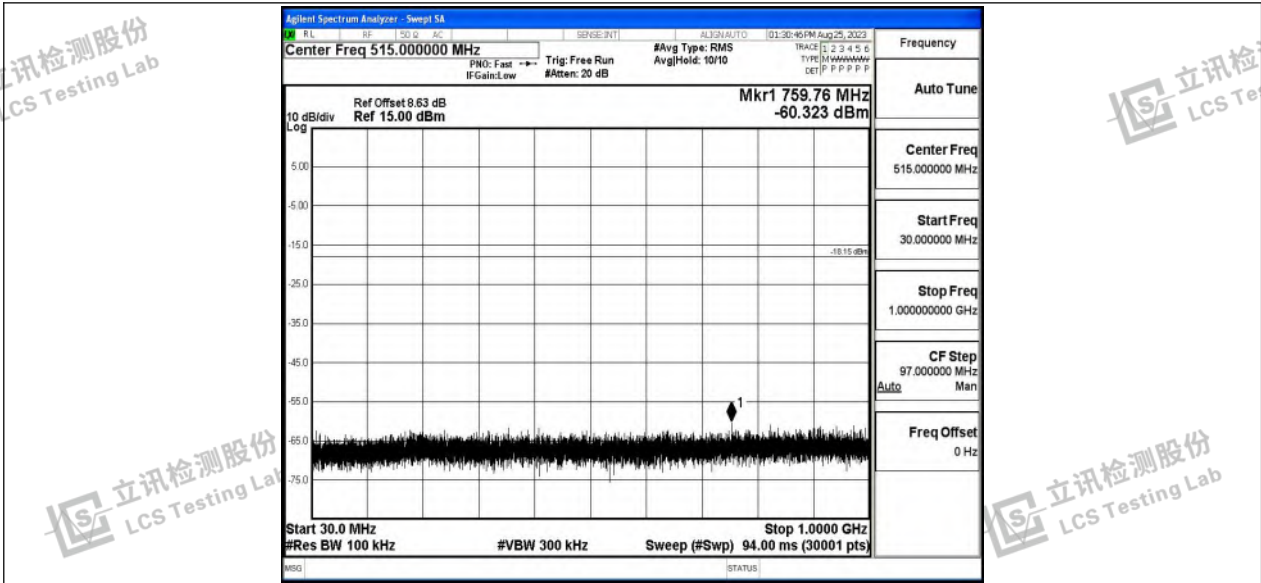


11B_Ant1_2412_1000~26500

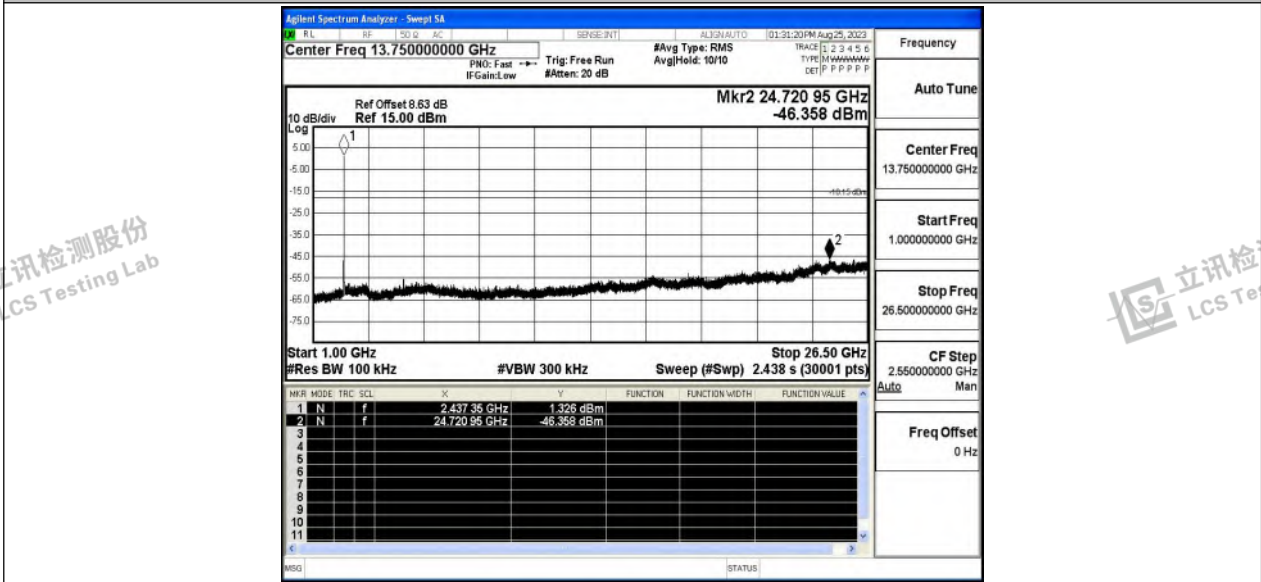


11B_Ant1_2437_30~1000



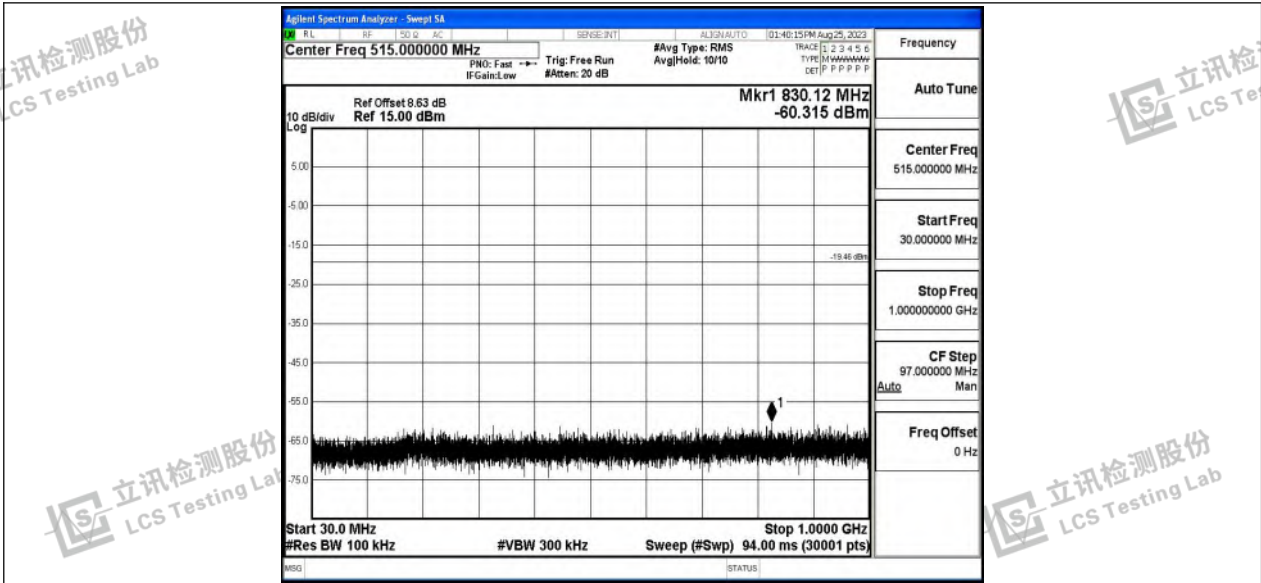


11B_Ant1_2437_1000~26500

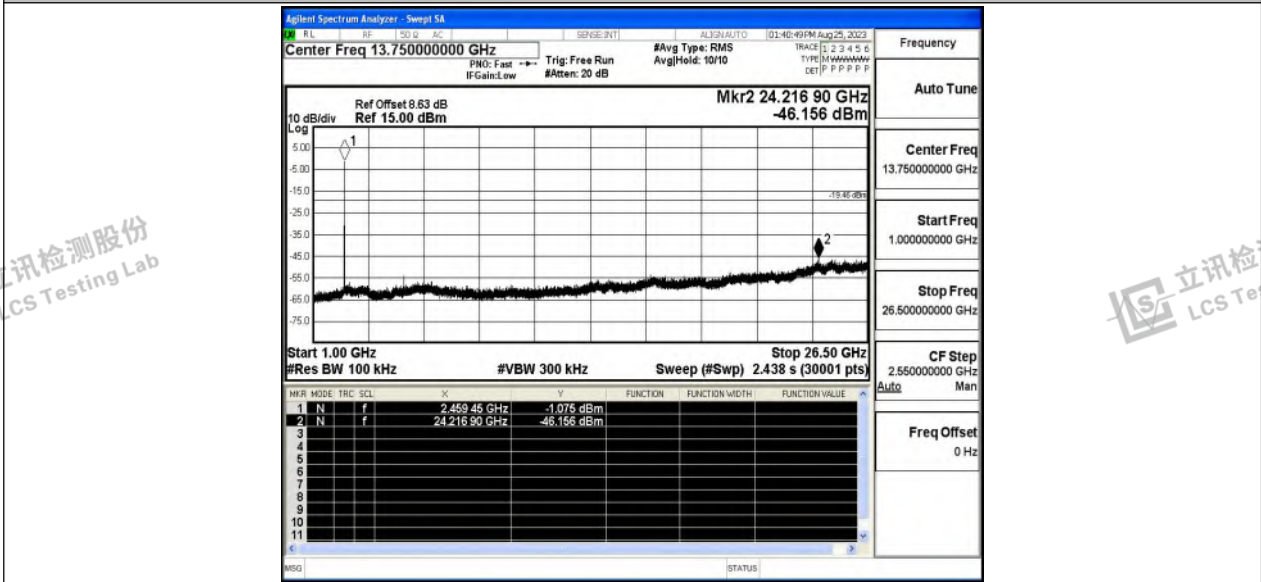


11B_Ant1_2462_30~1000



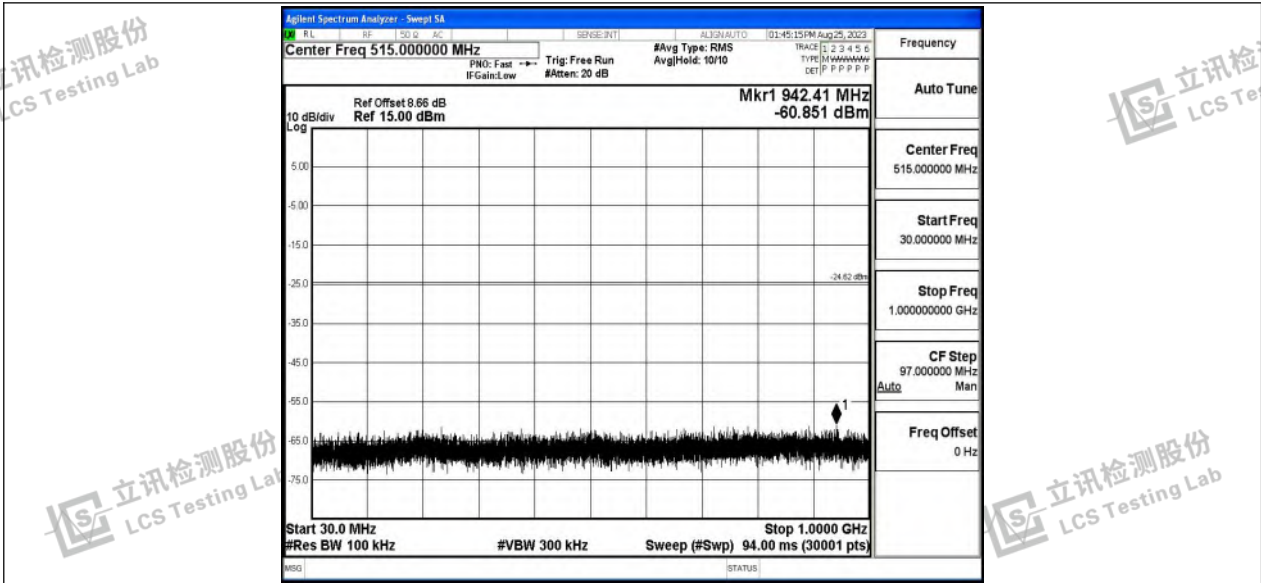


11B_Ant1_2462_1000~26500

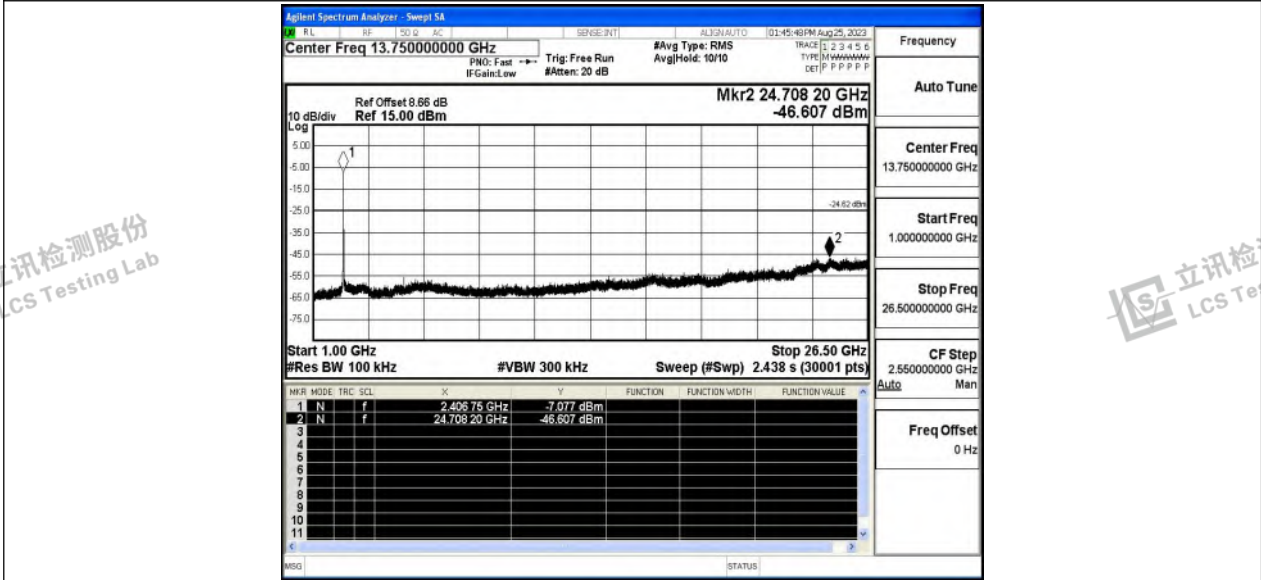


11G_Ant1_2412_30~1000



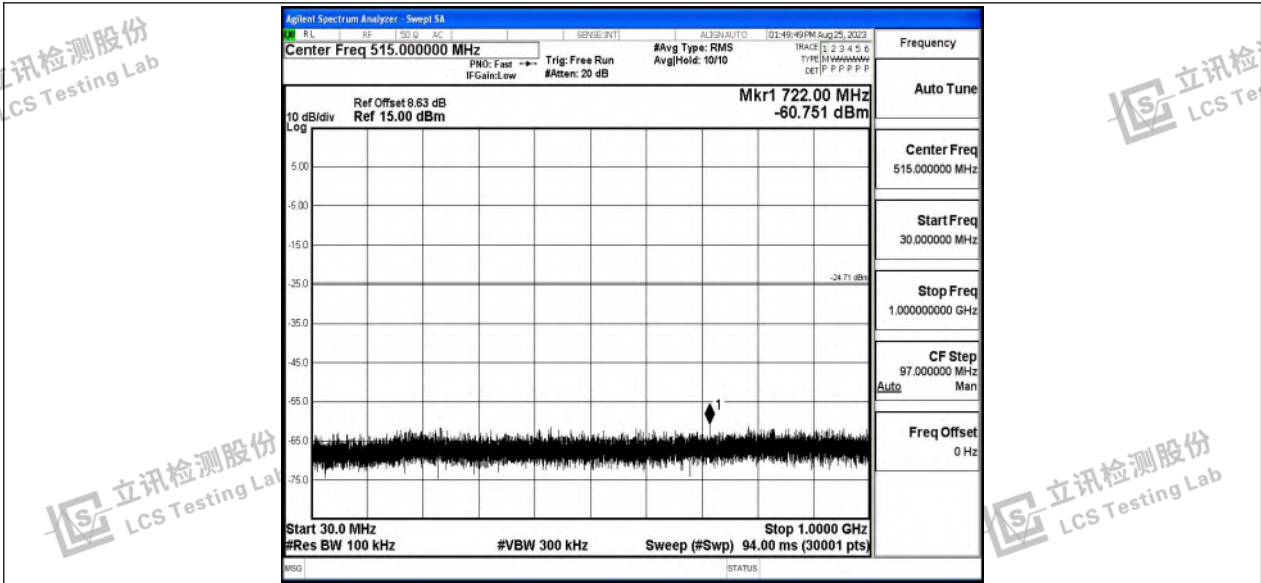


11G_Ant1_2412_1000~26500

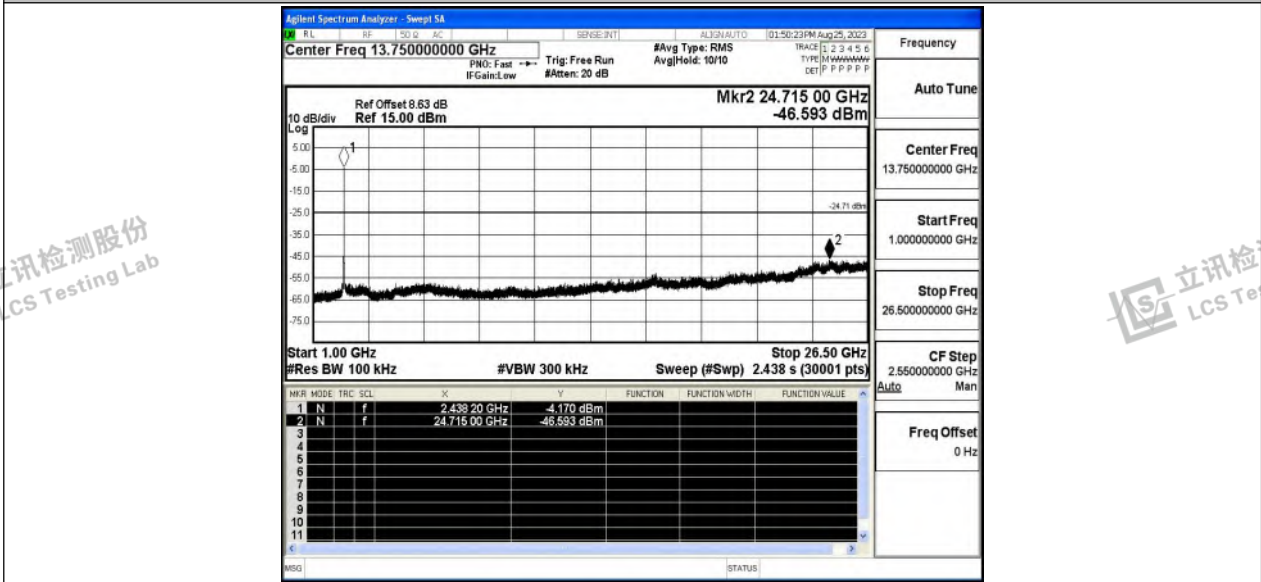


11G_Ant1_2437_30~1000



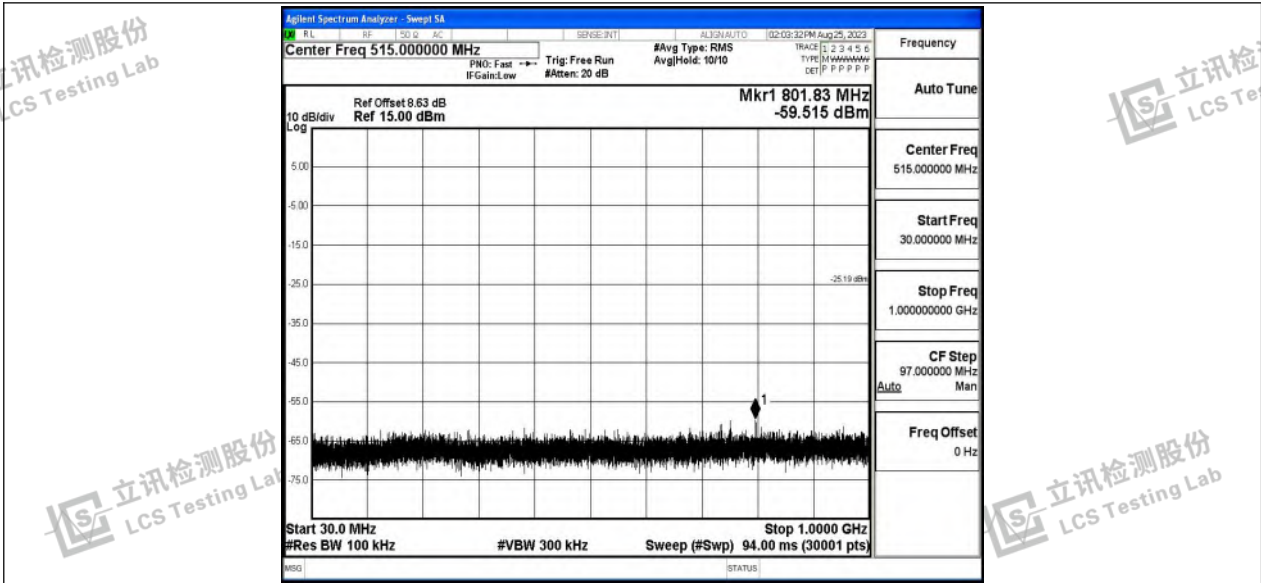


11G_Ant1_2437_1000~26500

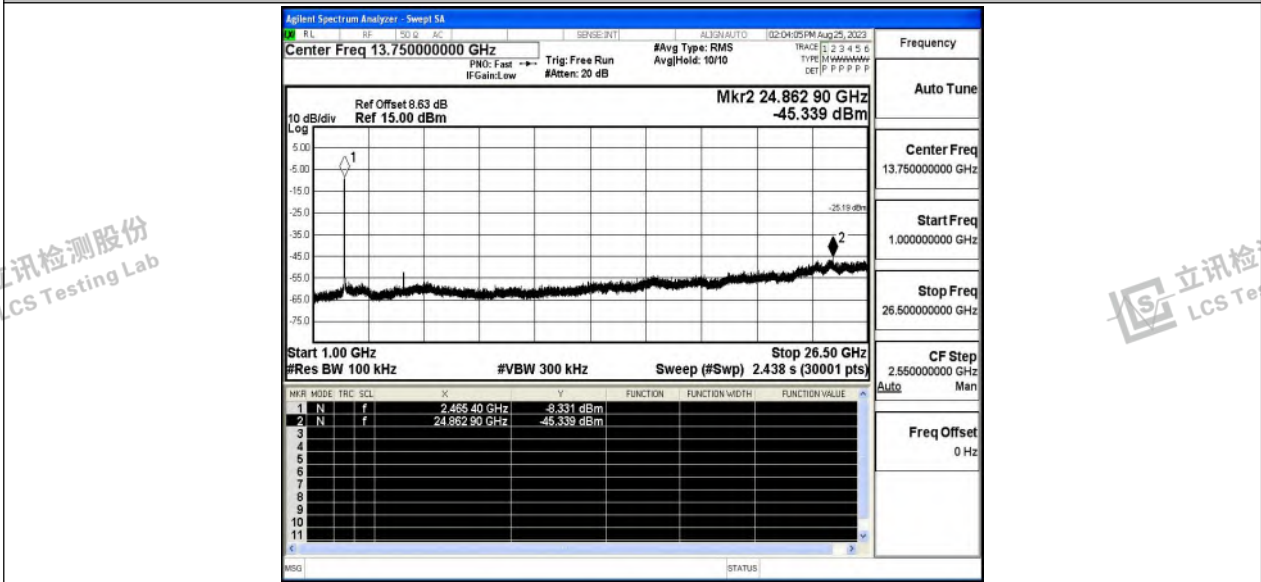


11G_Ant1_2462_30~1000



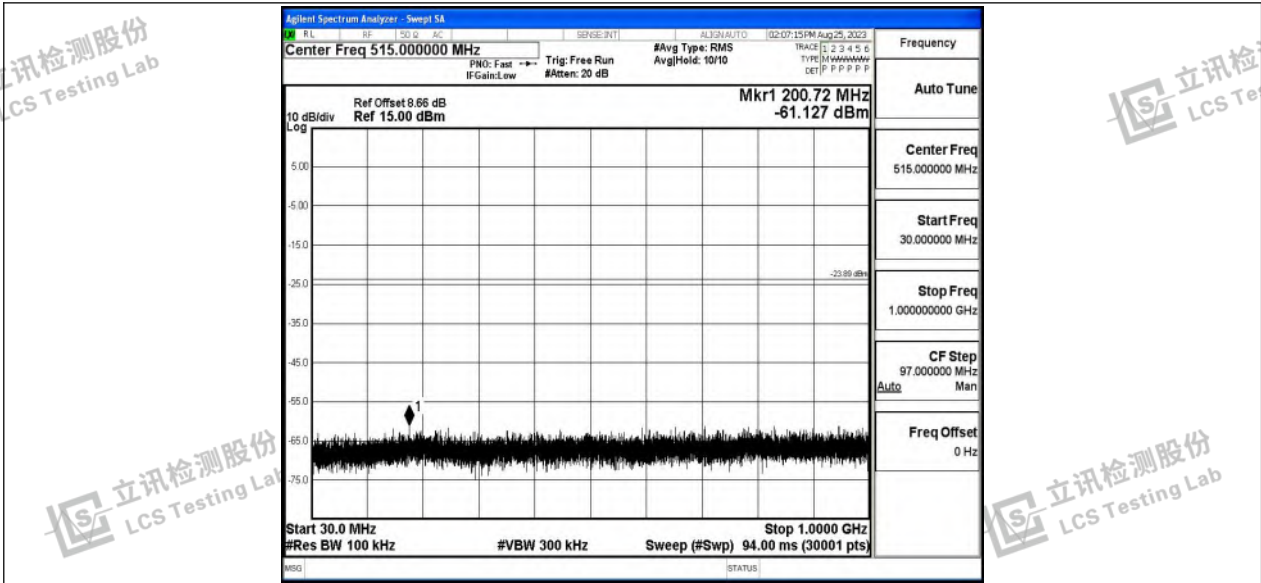


11G_Ant1_2462_1000~26500

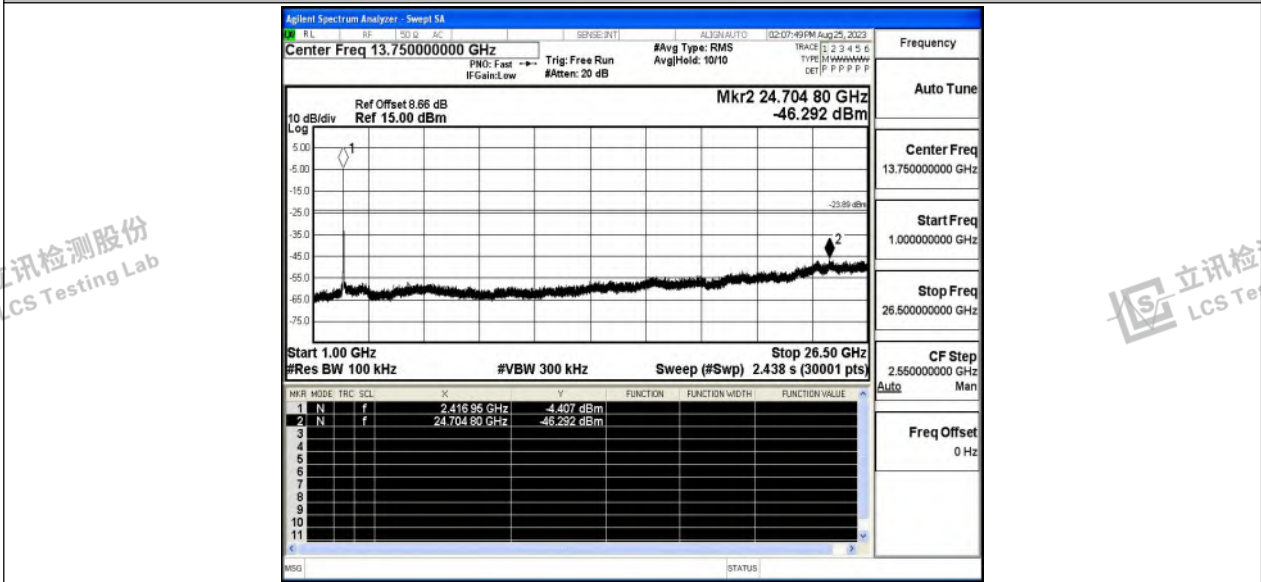


11N20SISO_Ant1_2412_30~1000



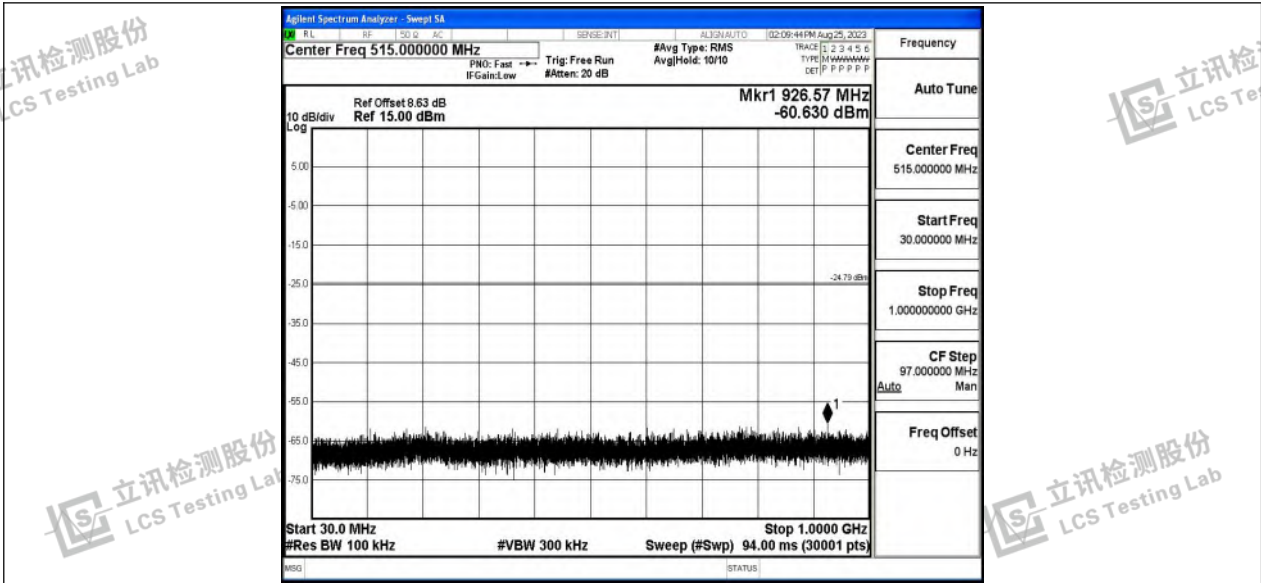


11N20SISO_Ant1_2412_1000~26500

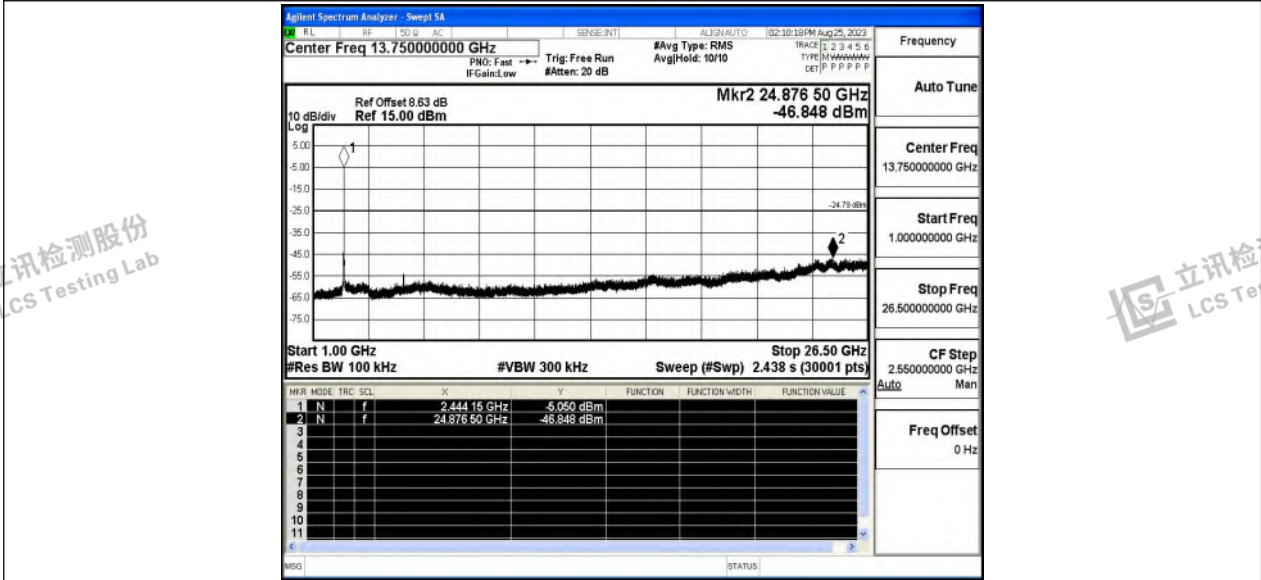


11N20SISO_Ant1_2437_30~1000



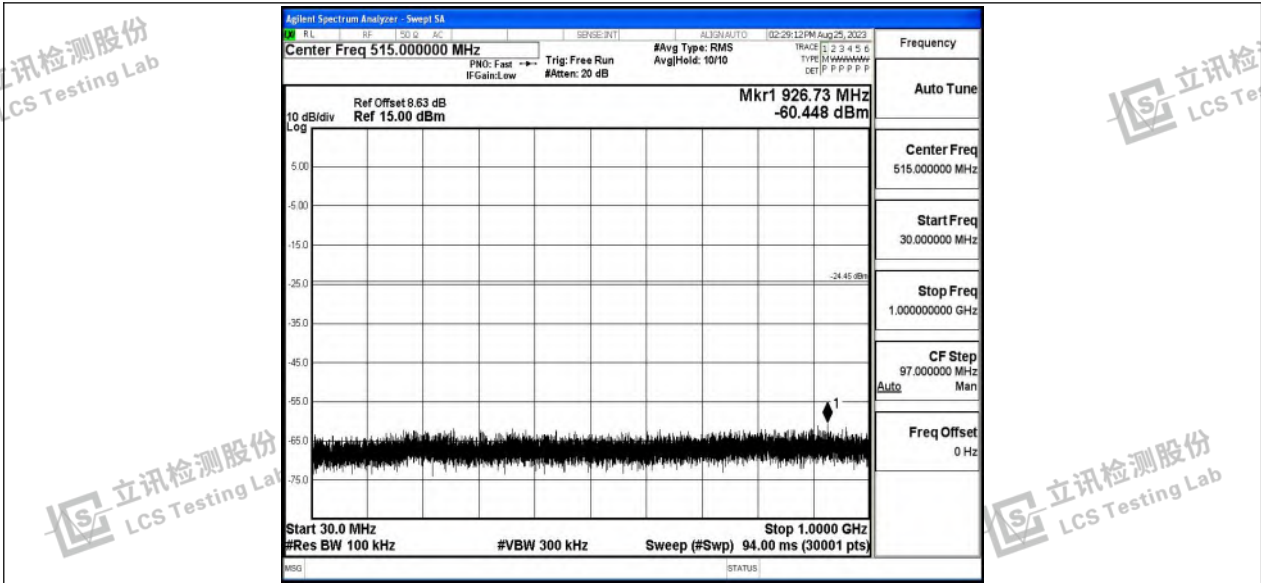


11N20SISO_Ant1_2437_1000~26500

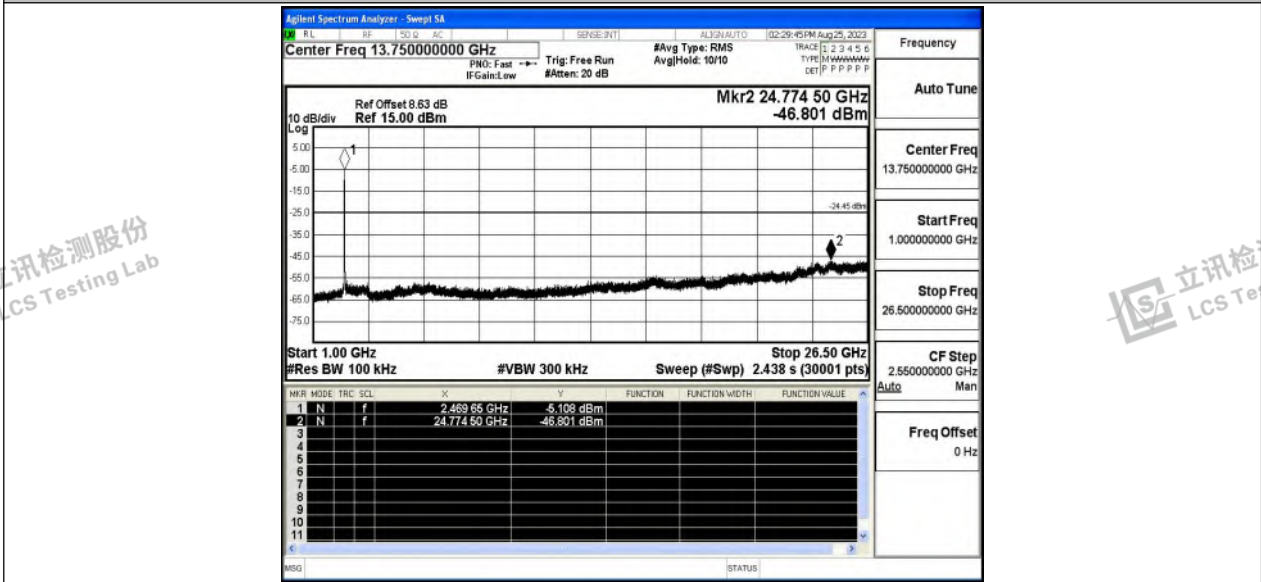


11N20SISO_Ant1_2462_30~1000



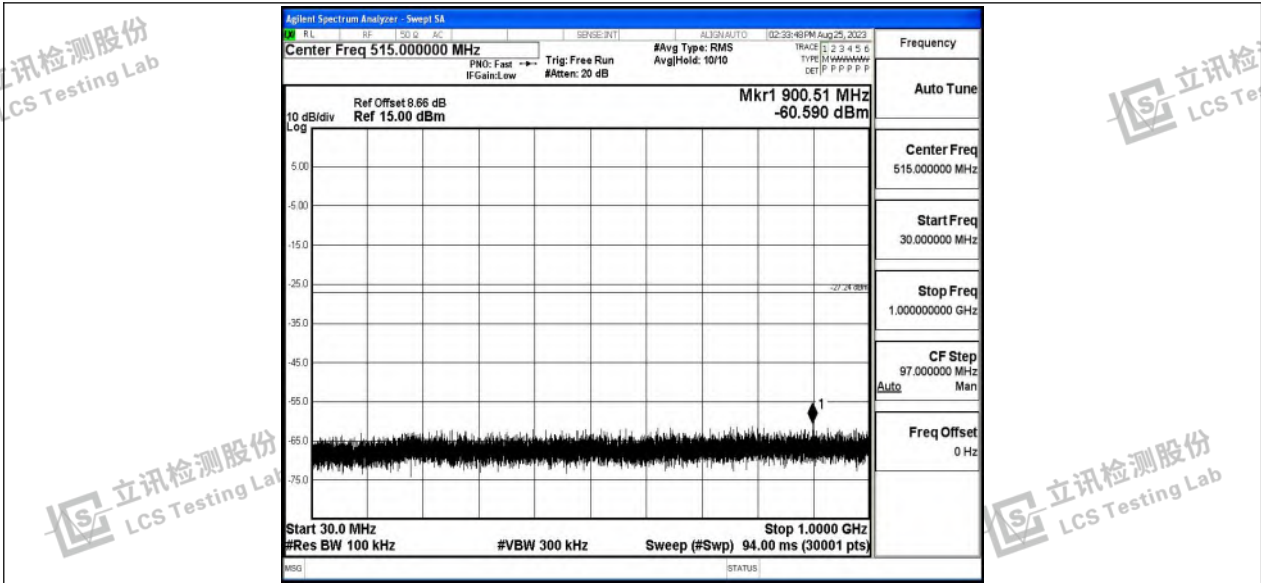


11N20SISO_Ant1_2462_1000~26500

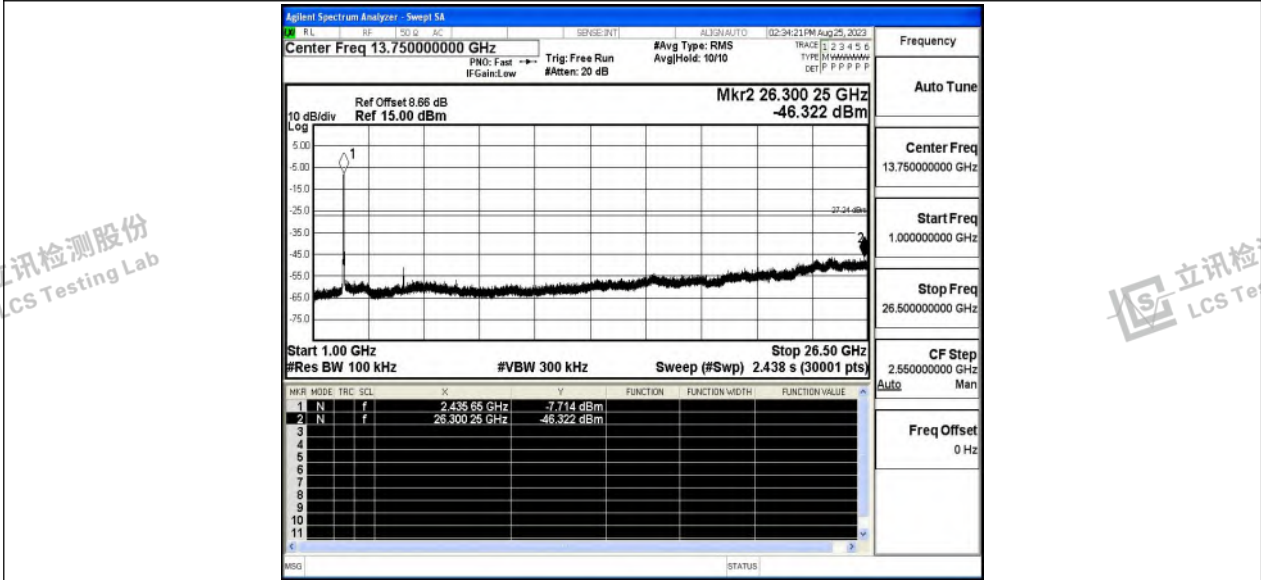


11N40SISO_Ant1_2422_30~1000



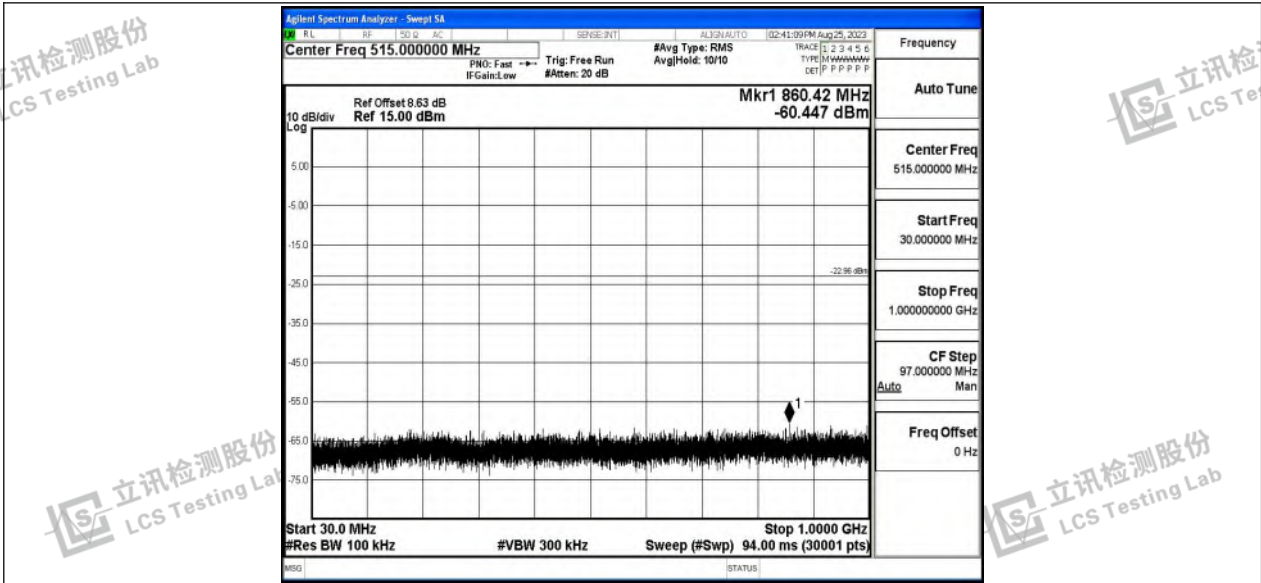


11N40SISO_Ant1_2422_1000~26500

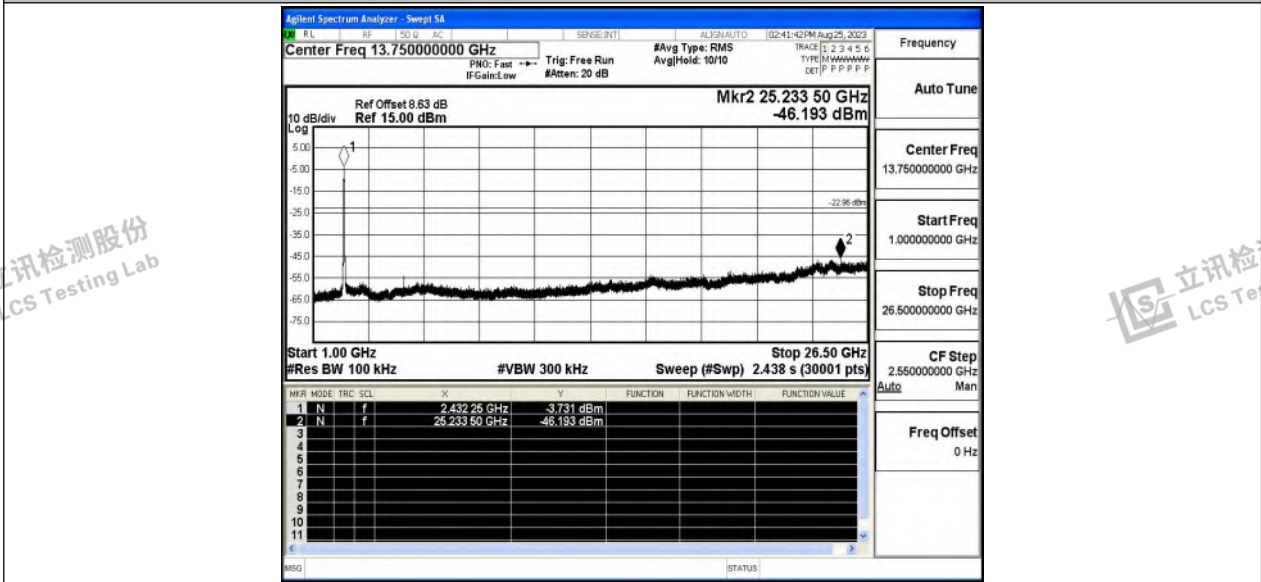


11N40SISO_Ant1_2437_30~1000



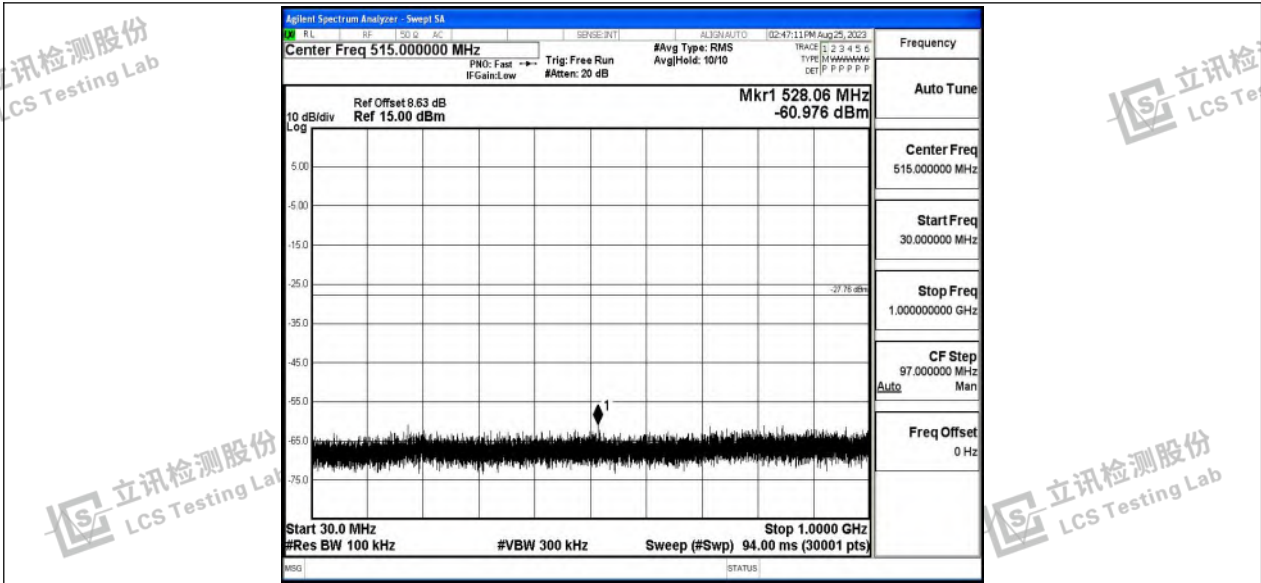


11N40SISO_Ant1_2437_1000~26500

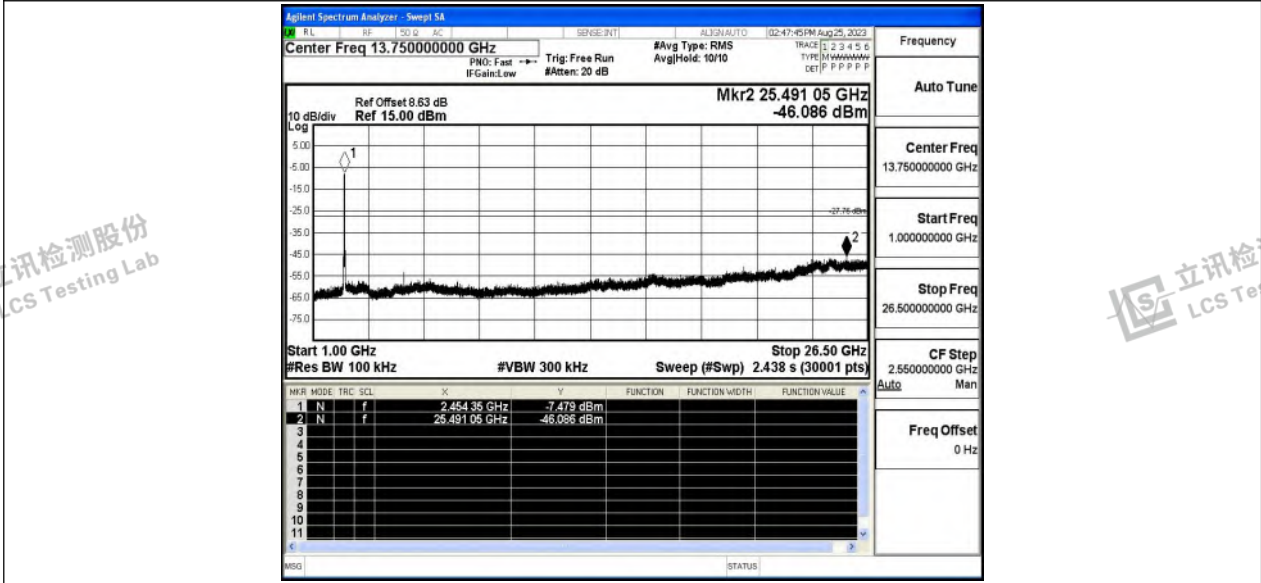


11N40SISO_Ant1_2452_30~1000





11N40SISO_Ant1_2452_1000~26500





C.6 Duty Cycle

Test Result

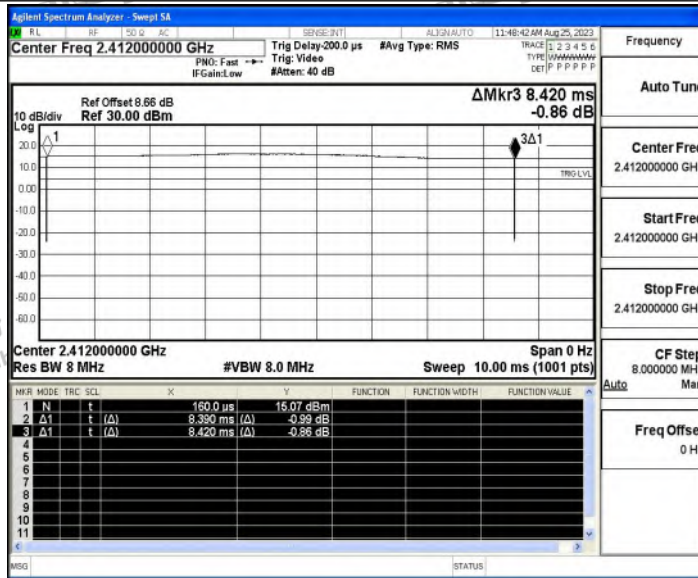
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor	Verdict
11B	Ant1	2412	8.39	8.42	99.64	0.02	---
		2437	8.38	8.41	99.64	0.02	---
		2462	8.38	8.41	99.64	0.02	---
11G	Ant1	2412	1.39	1.43	97.20	0.12	---
		2437	1.39	1.42	97.89	0.09	---
		2462	1.39	1.43	97.20	0.12	---
11N20SISO	Ant1	2412	1.30	1.34	97.01	0.13	---
		2437	1.30	1.34	97.01	0.13	---
		2462	1.30	1.34	97.01	0.13	---
11N40SISO	Ant1	2422	0.64	0.68	94.12	0.26	---
		2437	0.65	0.68	95.59	0.20	---
		2452	0.65	0.68	95.59	0.20	---



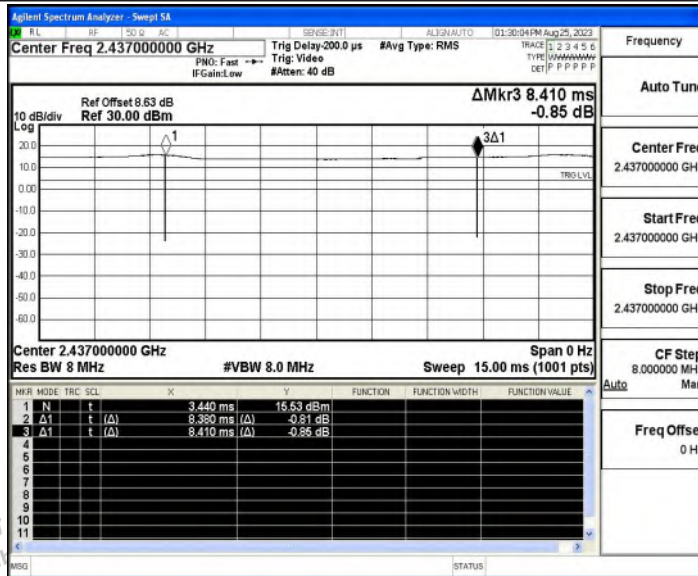


Test Graphs

11B_Ant1_2412

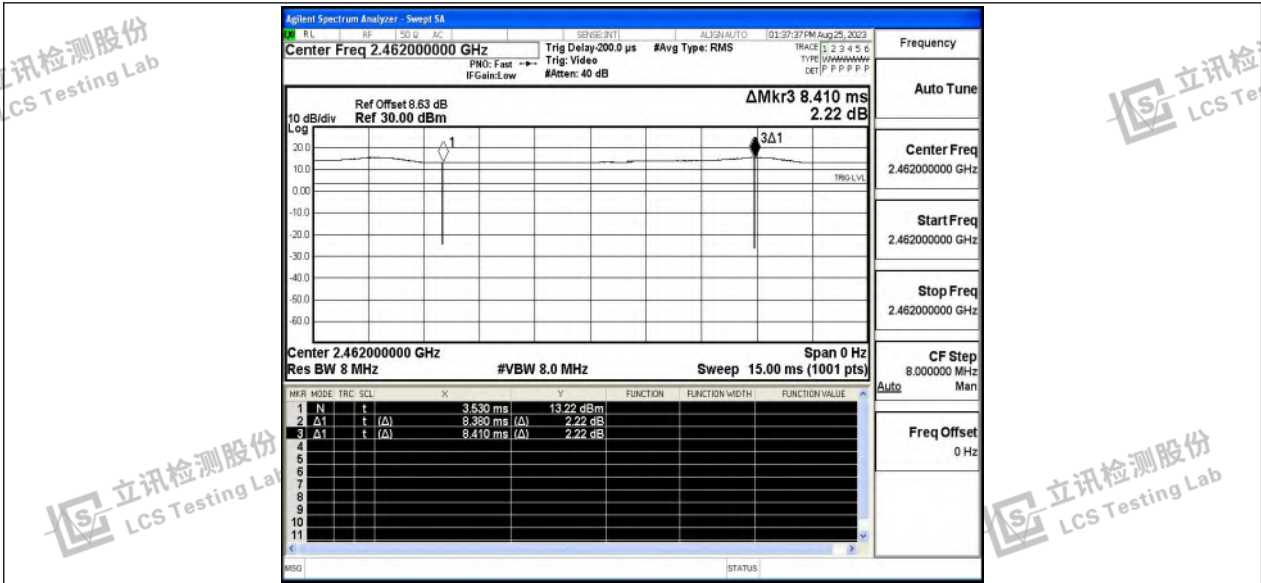


11B_Ant1_2437

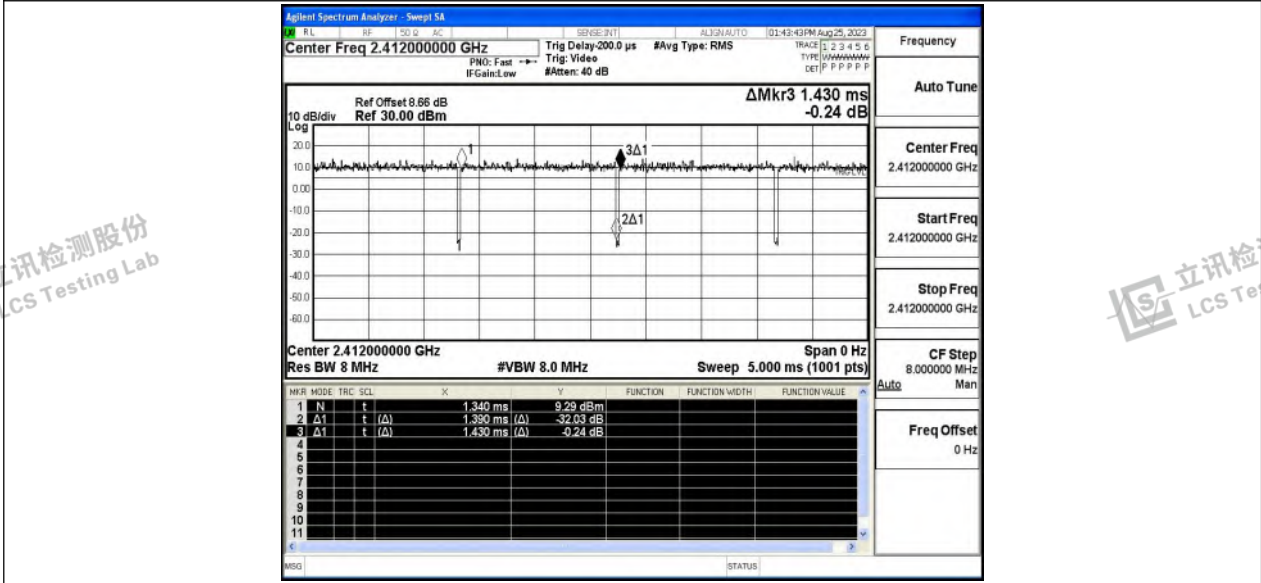


11B_Ant1_2462



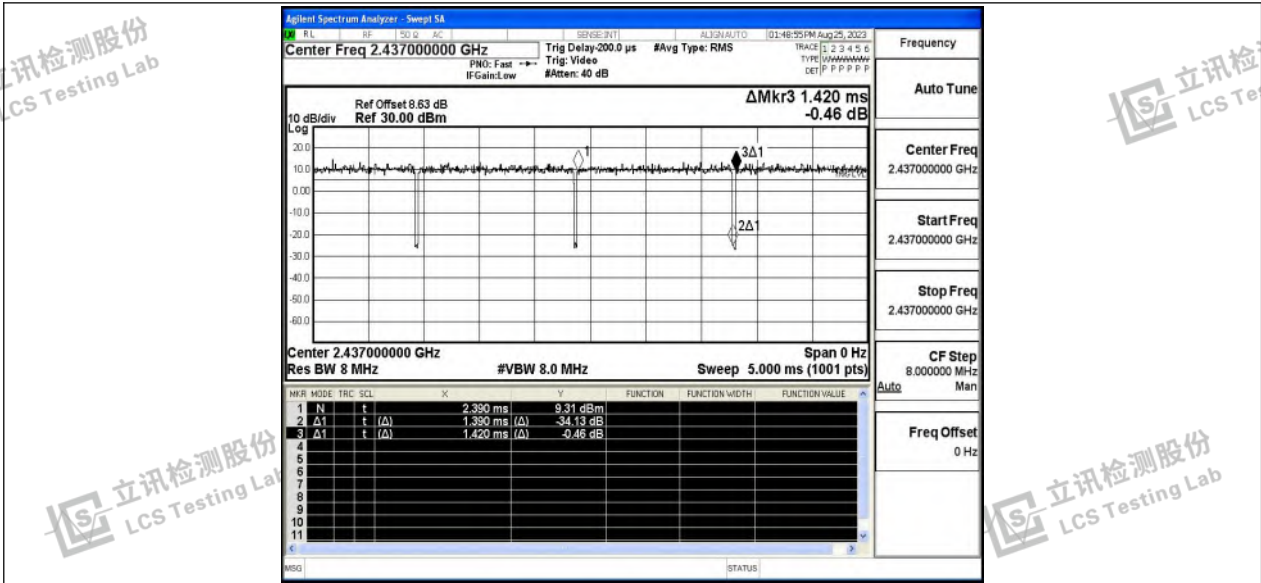


11G_Ant1_2412

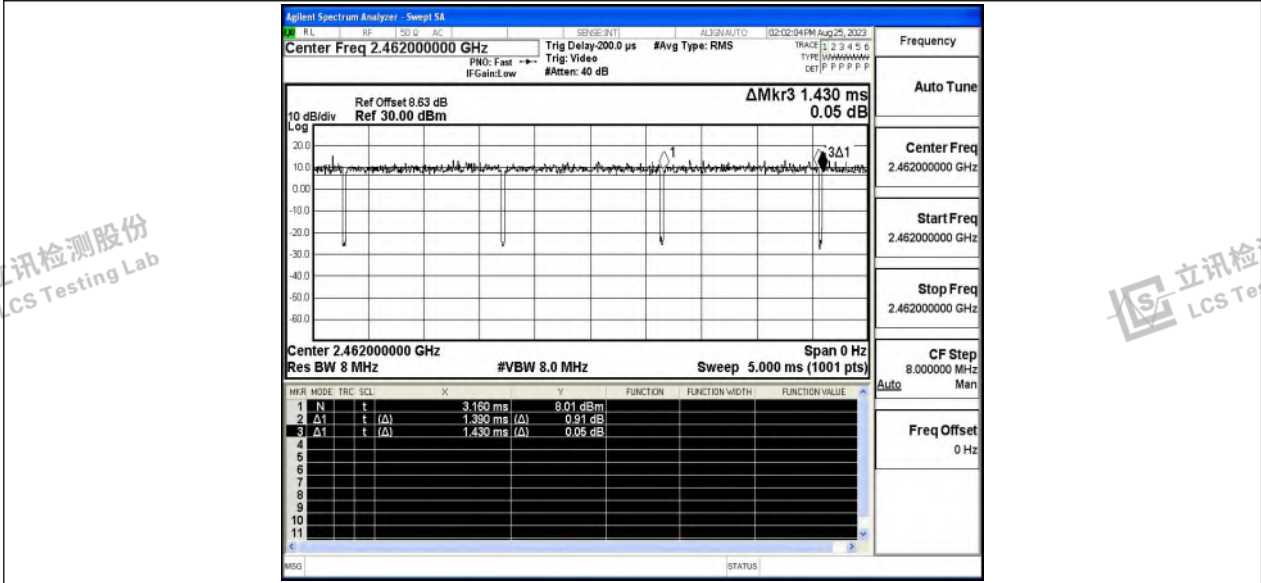


11G_Ant1_2437



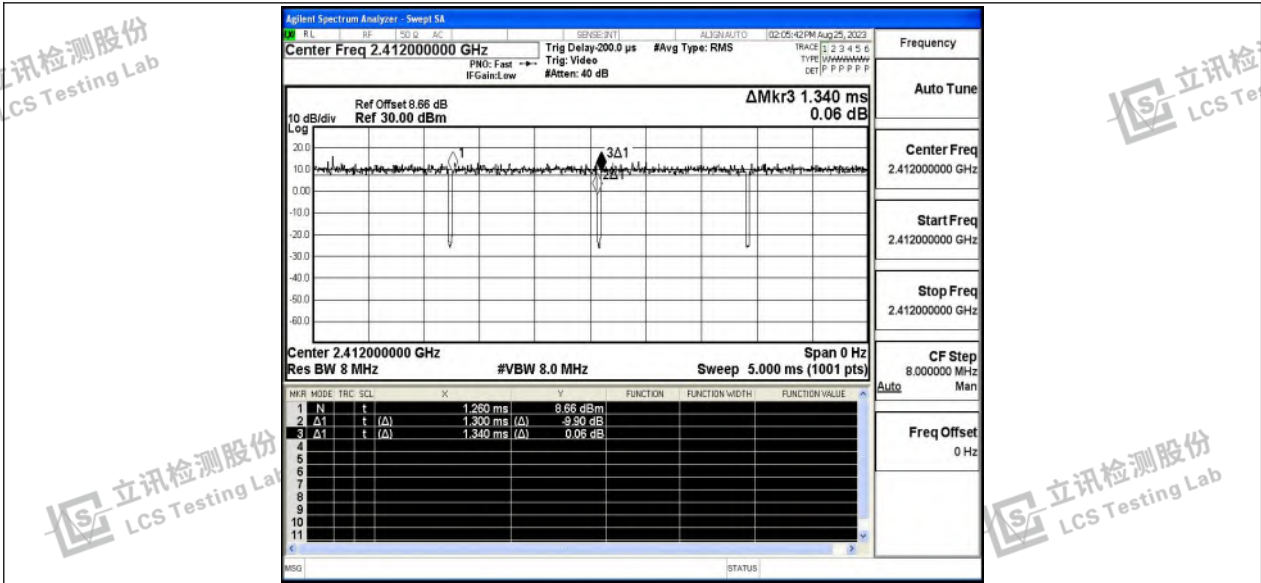


11G_Ant1_2462

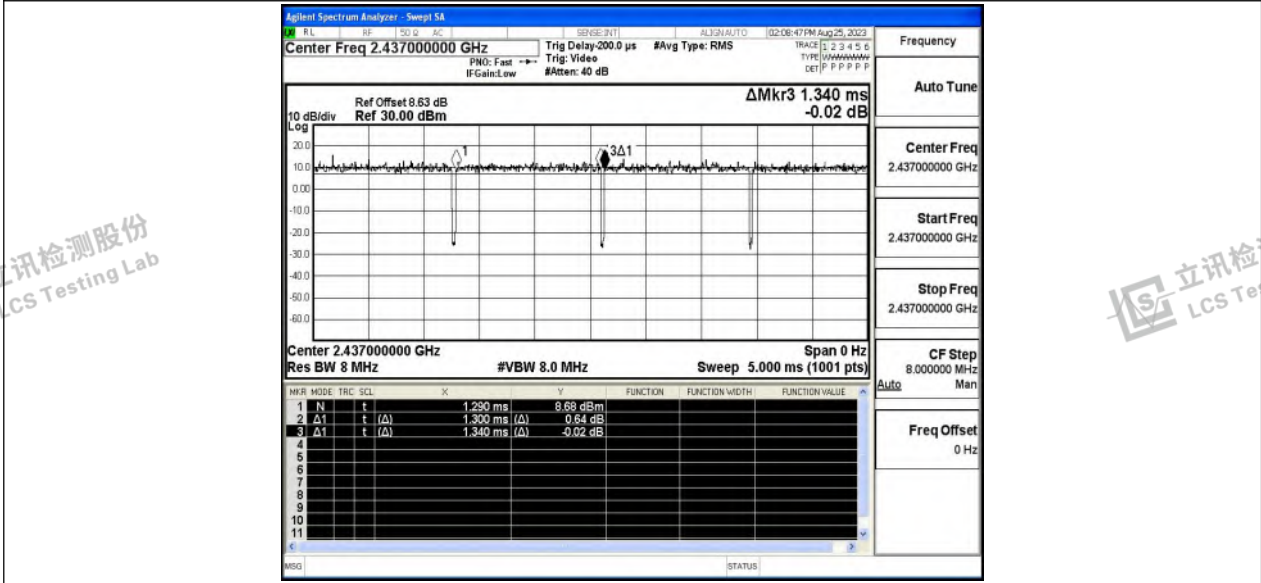


11N20SISO_Ant1_2412



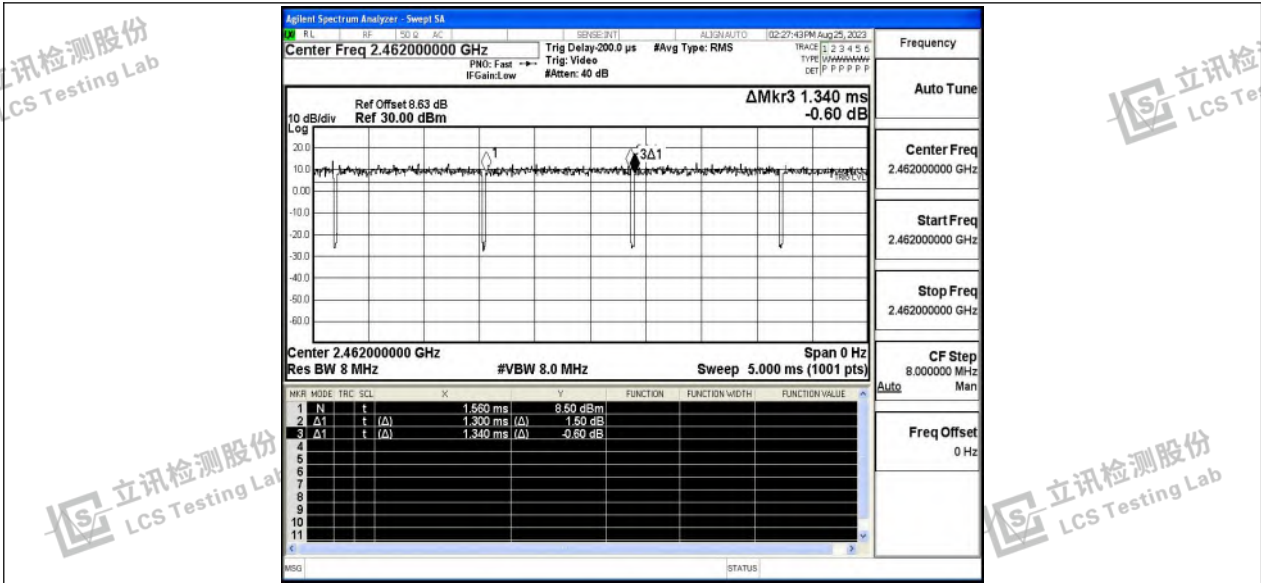


11N20SISO_Ant1_2437

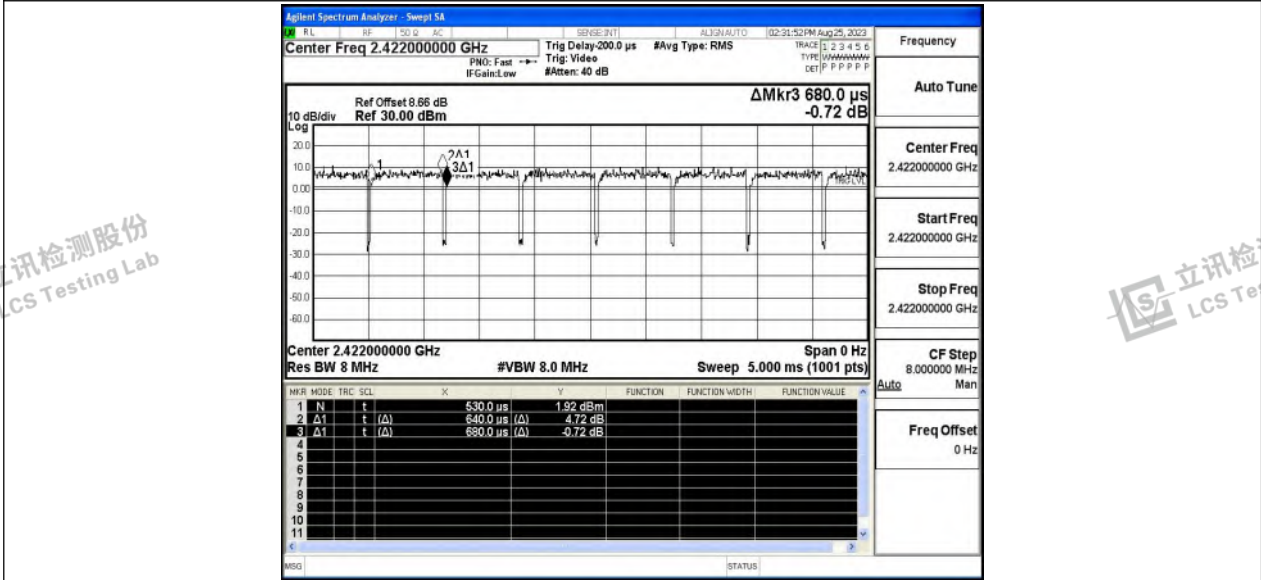


11N20SISO_Ant1_2462



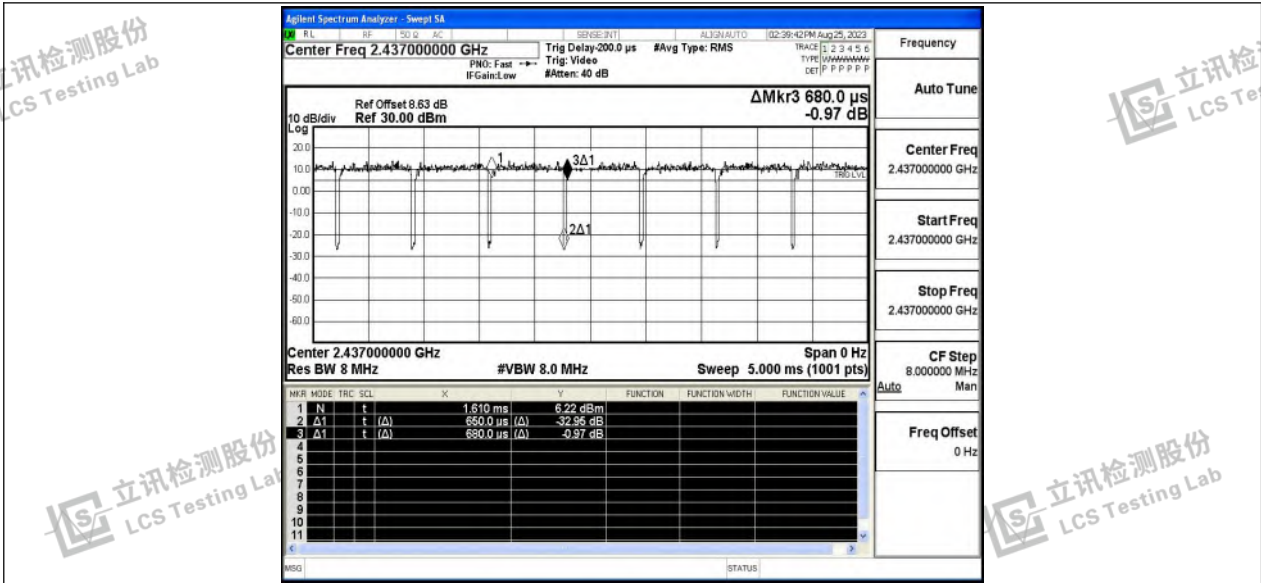


11N40SISO_Ant1_2422

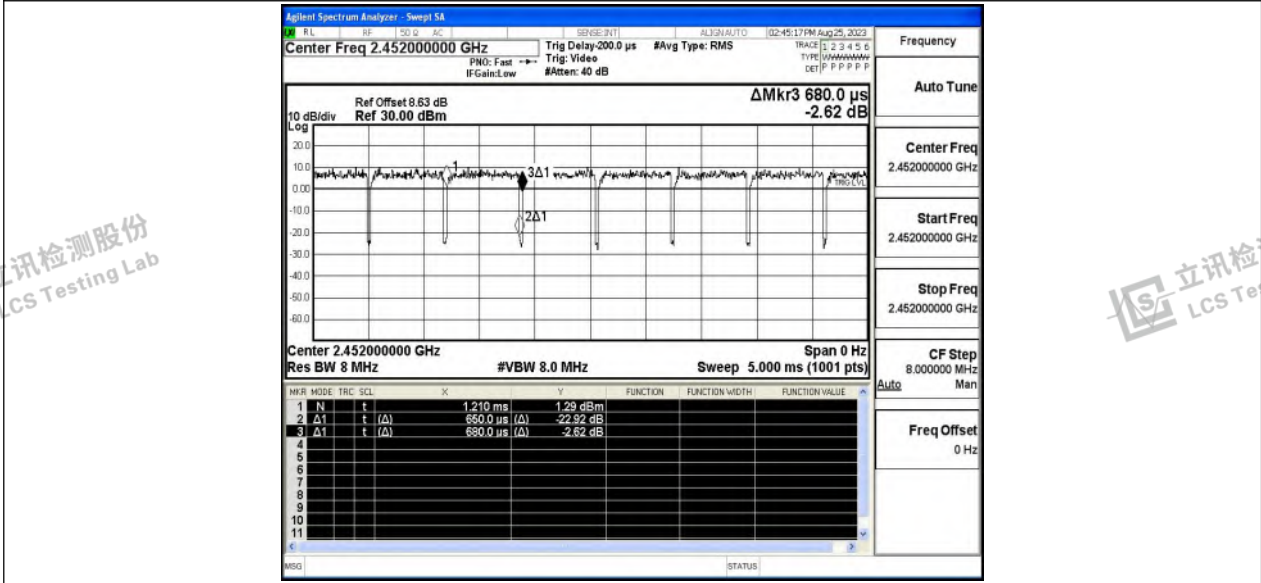


11N40SISO_Ant1_2437





11N40SISO_Ant1_2452





C.7 Emissions in Restricted Bands

Test Result

TestModel	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain (dBi)	E (dBUV/m)	Limit [dBUV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-48.42	4.62	51.46	≤54	PASS
				AV	2389.830	-48.01	4.62	51.87	≤54	PASS
				AV	2390.000	-48.03	4.62	51.85	≤54	PASS
				Peak	2310.000	-42.15	4.62	57.73	≤74	PASS
				Peak	2381.900	-37.07	4.62	62.81	≤74	PASS
				Peak	2390.000	-41.66	4.62	58.22	≤74	PASS
		High	2462	AV	2483.500	-47.67	4.62	52.21	≤54	PASS
				AV	2499.950	-47.41	4.62	52.47	≤54	PASS
				AV	2500.000	-47.41	4.62	52.47	≤54	PASS
				Peak	2483.500	-41.36	4.62	58.52	≤74	PASS
				Peak	2495.880	-37.38	4.62	62.50	≤74	PASS
				Peak	2500.000	-40.44	4.62	59.44	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-47.84	4.62	52.04	≤54	PASS
				AV	2382.810	-47.2	4.62	52.68	≤54	PASS
				AV	2390.000	-47.39	4.62	52.49	≤54	PASS
				Peak	2310.000	-42.52	4.62	57.36	≤74	PASS
				Peak	2384.110	-38.74	4.62	61.14	≤74	PASS
				Peak	2390.000	-40.75	4.62	59.13	≤74	PASS
		High	2462	AV	2483.500	-47.02	4.62	52.86	≤54	PASS
				AV	2498.080	-46.65	4.62	53.23	≤54	PASS
				AV	2500.000	-46.91	4.62	52.97	≤54	PASS
				Peak	2483.500	-41.01	4.62	58.87	≤74	PASS
				Peak	2485.760	-37.88	4.62	62.00	≤74	PASS
				Peak	2500.000	-39.88	4.62	60.00	≤74	PASS
11N20 SISO	Ant1	Low	2412	AV	2310.000	-47.85	4.62	52.03	≤54	PASS
				AV	2378.260	-47.28	4.62	52.60	≤54	PASS
				AV	2390.000	-47.52	4.62	52.36	≤54	PASS
				Peak	2310.000	-41.16	4.62	58.72	≤74	PASS
				Peak	2321.970	-38.6	4.62	61.28	≤74	PASS
				Peak	2390.000	-42.34	4.62	57.54	≤74	PASS
		High	2462	AV	2483.500	-47.04	4.62	52.84	≤54	PASS
				AV	2498.630	-46.63	4.62	53.25	≤54	PASS
				AV	2500.000	-46.84	4.62	53.04	≤54	PASS
				Peak	2483.500	-40.93	4.62	58.95	≤74	PASS
				Peak	2499.510	-37.64	4.62	62.24	≤74	PASS
				Peak	2500.000	-41.08	4.62	58.80	≤74	PASS





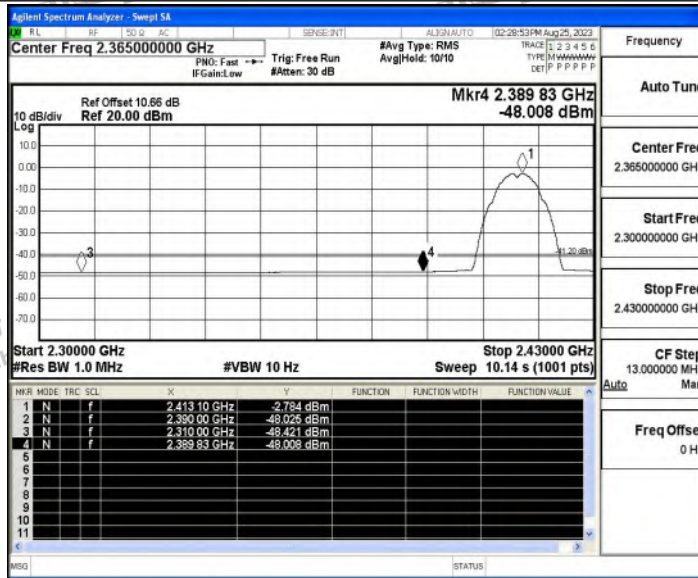
11N40 SISO	Ant1	Low	2422	AV	2310.000	-47.64	4.62	52.24	≤54	PASS
				AV	2385.670	-46.9	4.62	52.98	≤54	PASS
				AV	2390.000	-47.17	4.62	52.71	≤54	PASS
				Peak	2310.000	-41.37	4.62	58.51	≤74	PASS
				Peak	2381.770	-38.29	4.62	61.59	≤74	PASS
				Peak	2390.000	-42.24	4.62	57.64	≤74	PASS
	High	2452	AV	2483.500	-46.63	4.62	53.25	≤54	PASS	
			AV	2485.760	-46.2	4.62	53.68	≤54	PASS	
			AV	2500.000	-46.51	4.62	53.37	≤54	PASS	
			Peak	2483.500	-40.56	4.62	59.32	≤74	PASS	
			Peak	2492.800	-37.72	4.62	62.16	≤74	PASS	
			Peak	2500.000	-41.94	4.62	57.94	≤74	PASS	



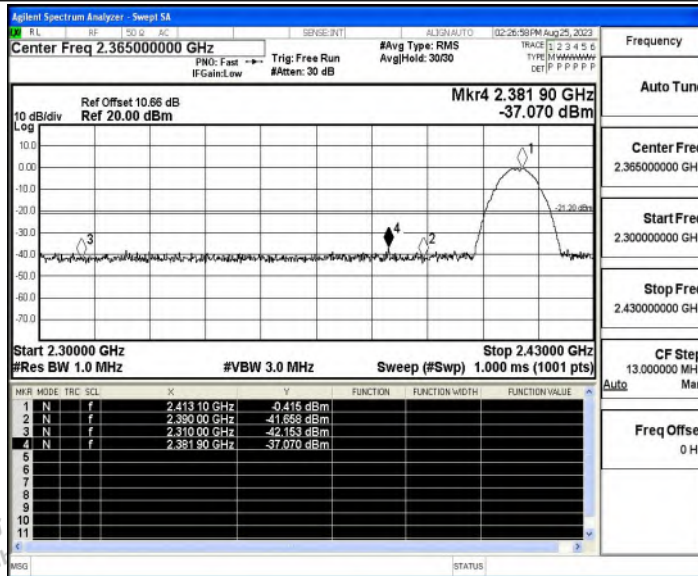


Test Graphs

11B_Ant1_Low_2412_AV

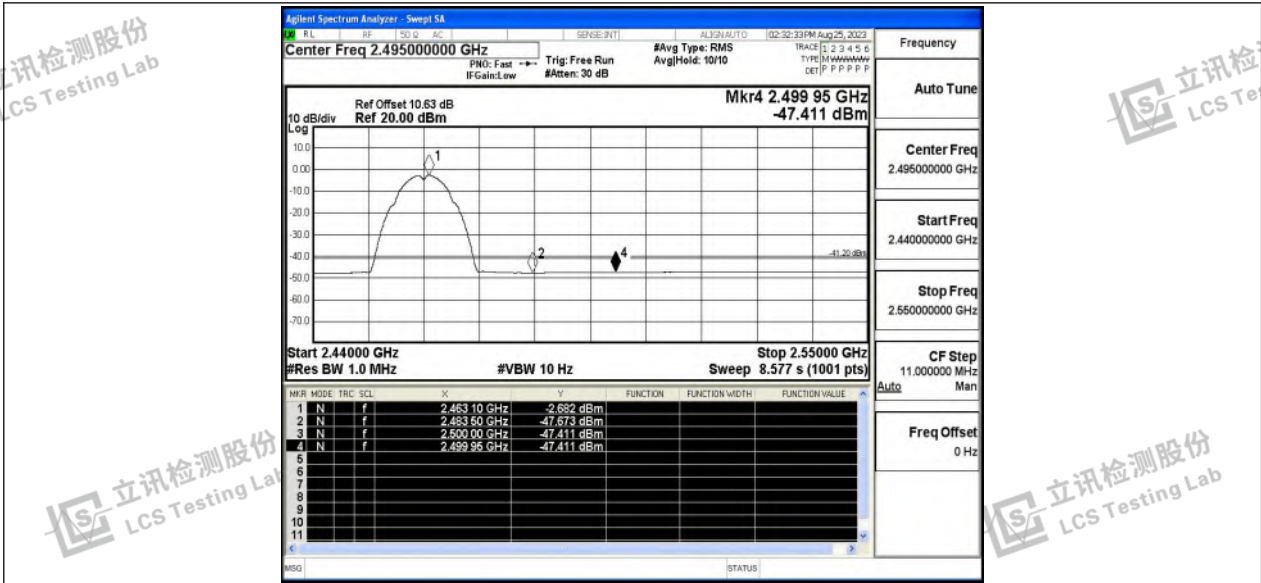


11B_Ant1_Low_2412_Peak

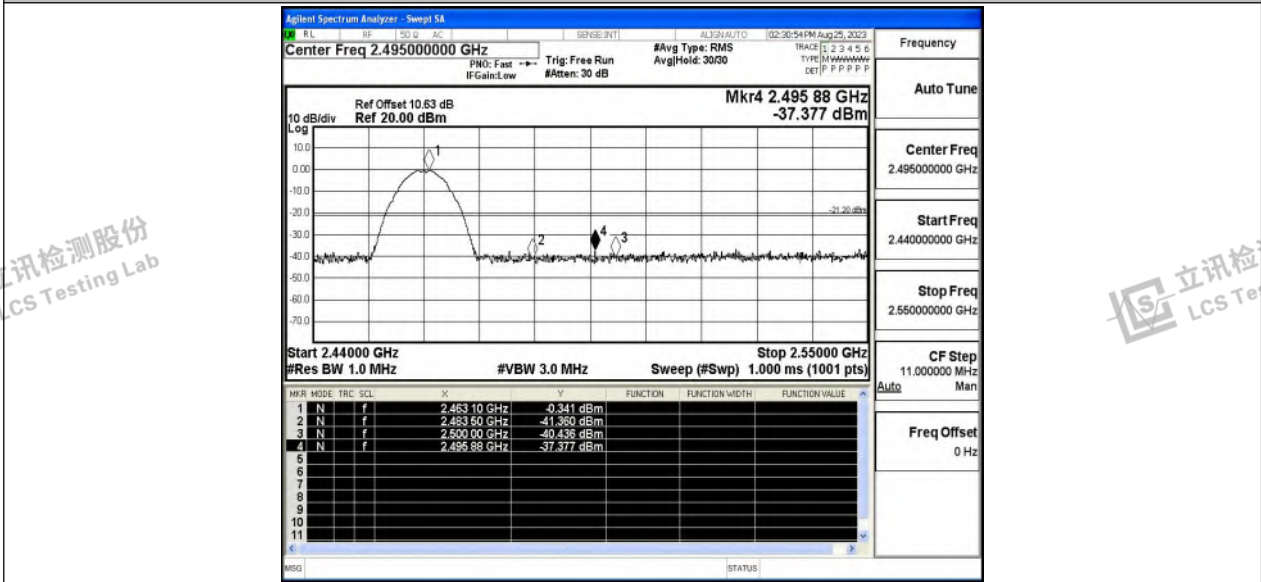


11B_Ant1_High_2462_AV



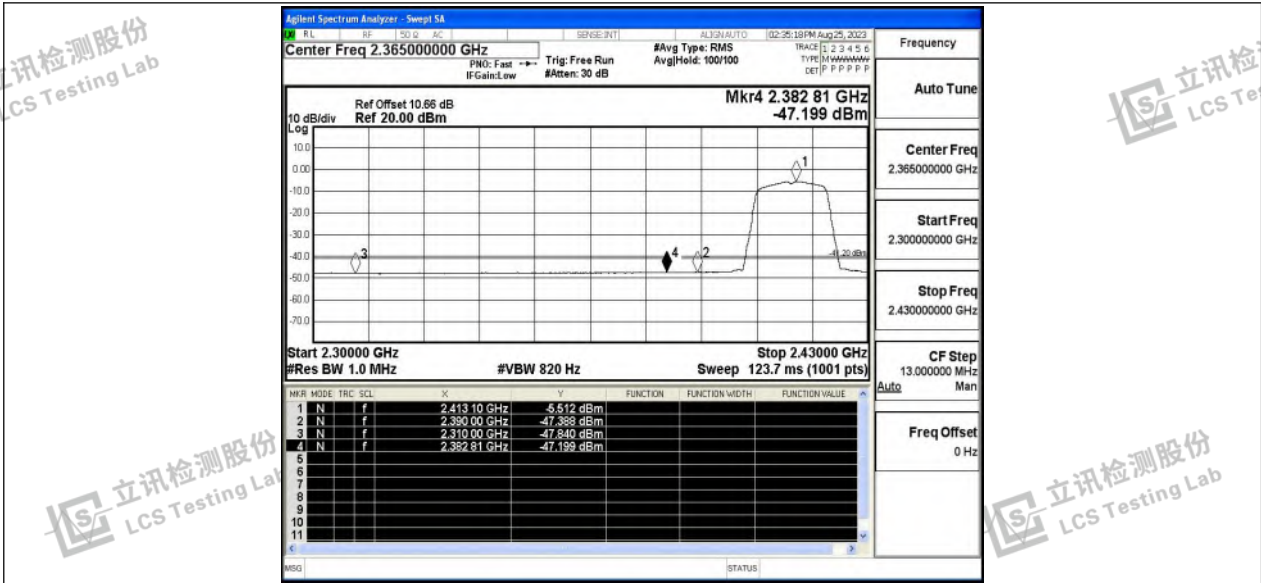


11B_Ant1_High_2462_Peak

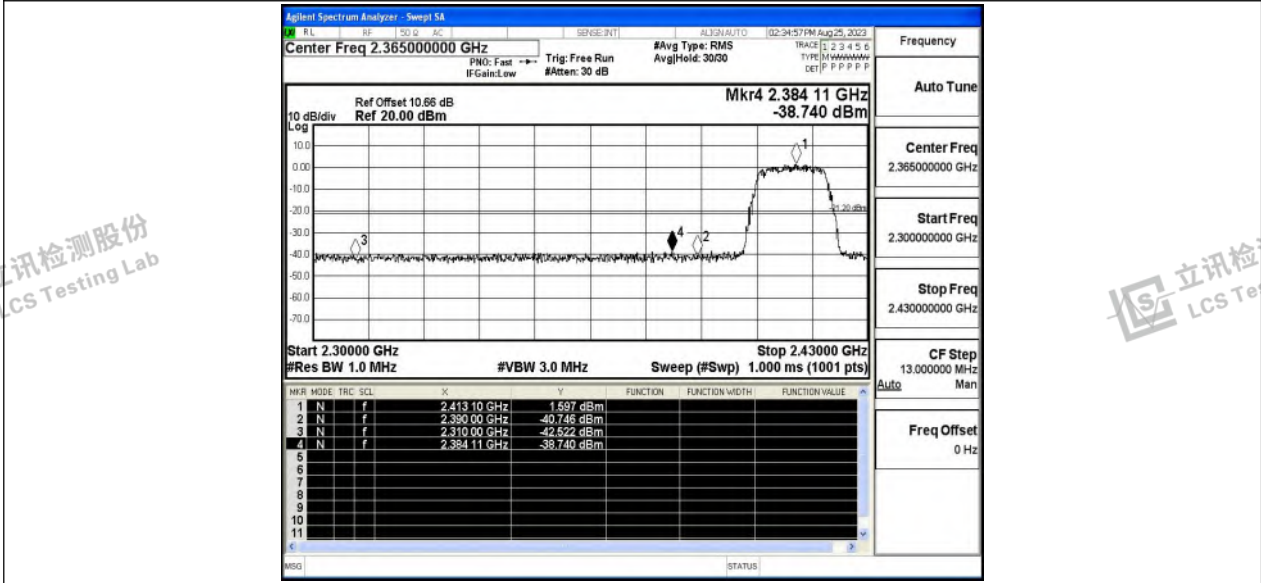


11G_Ant1_Low_2412_AV



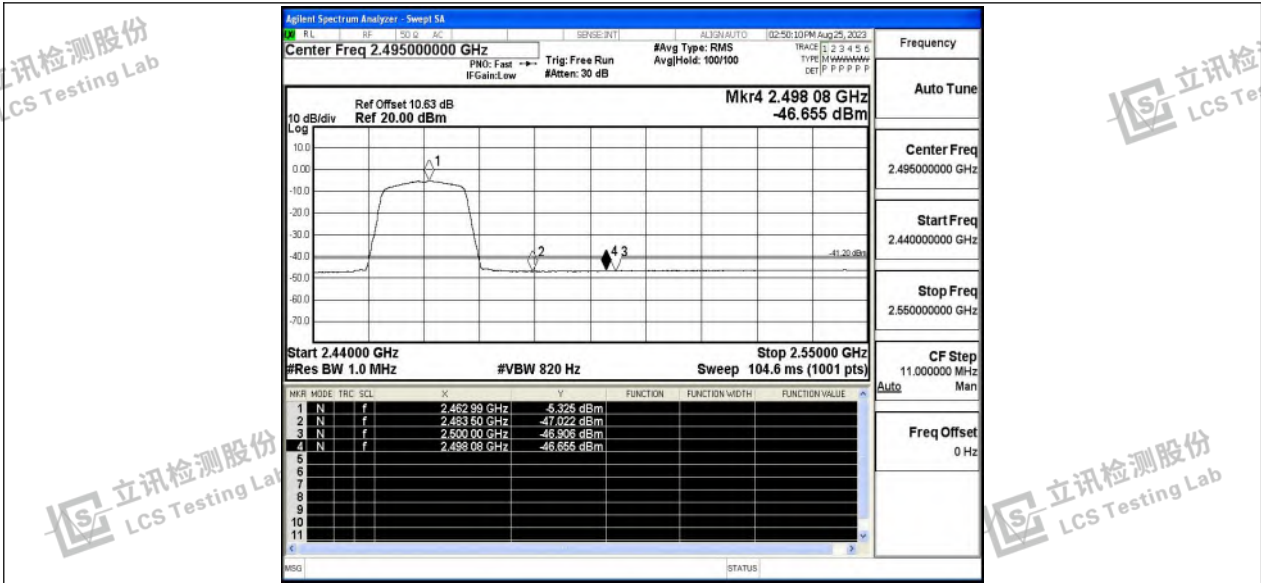


11G_Ant1_Low_2412_Peak

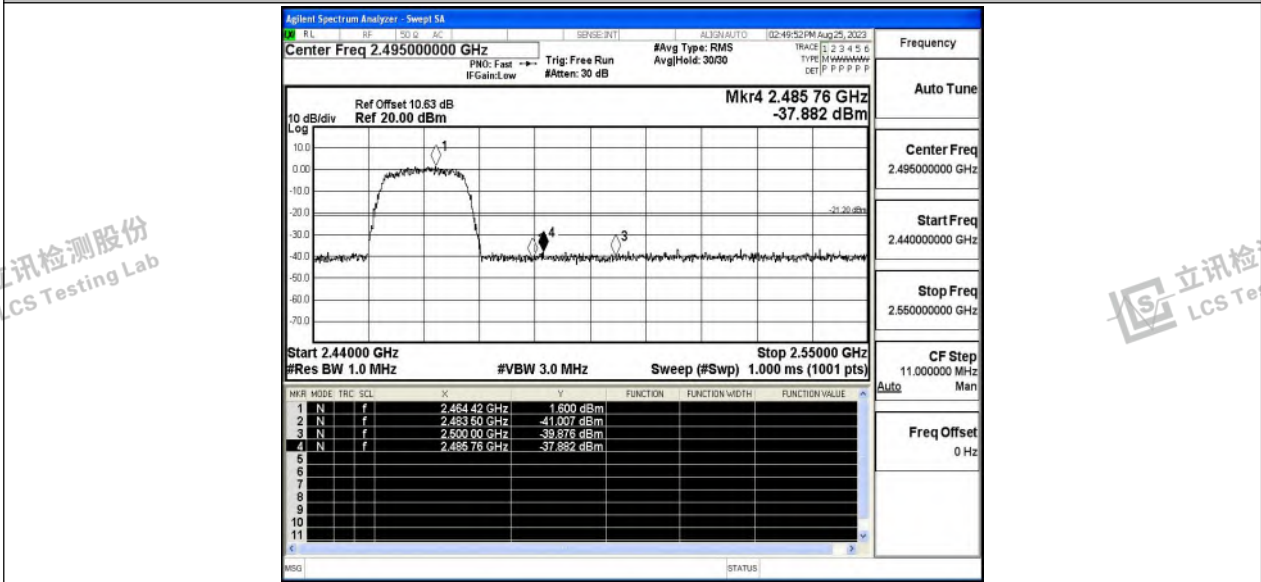


11G_Ant1_High_2462_AV



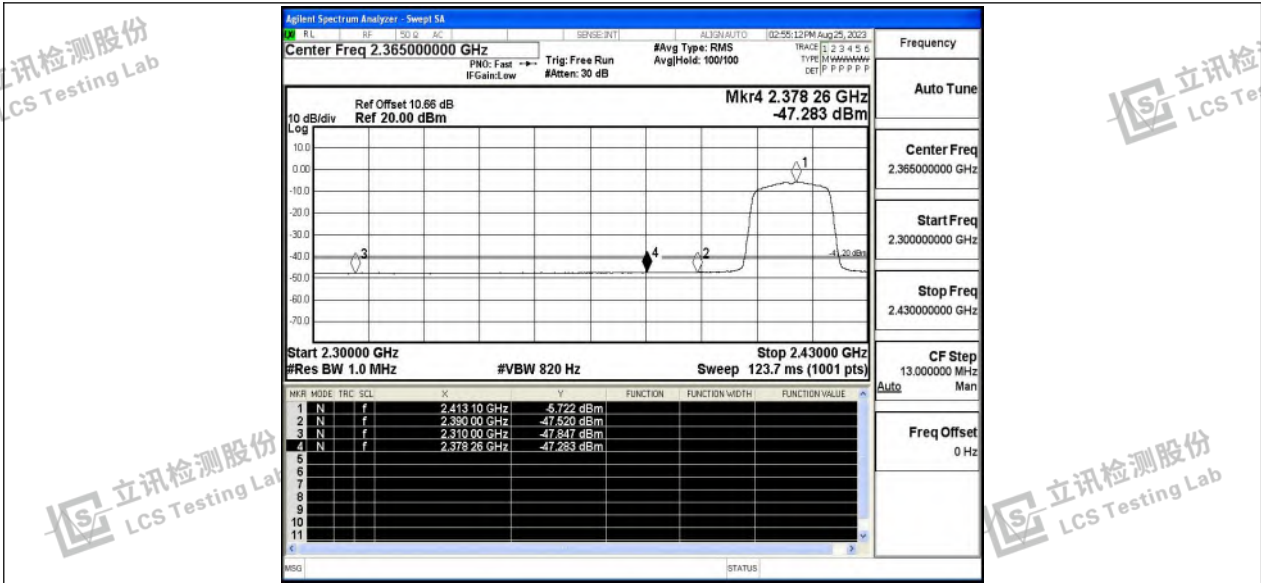


11G_Ant1_High_2462_Peak

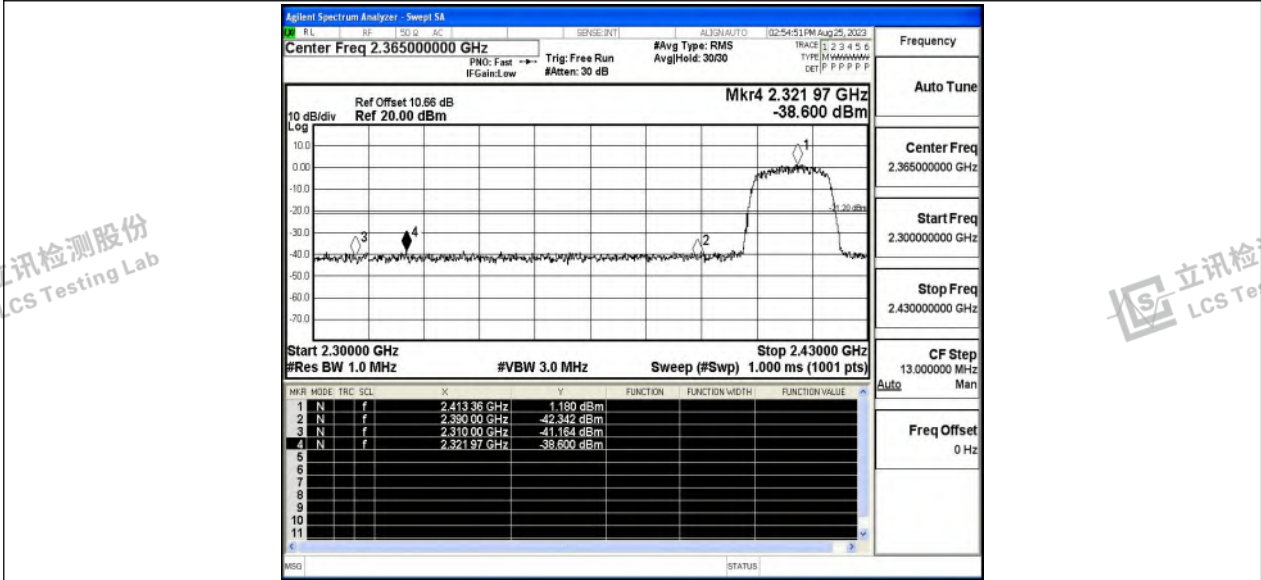


11N20SISO_Ant1_Low_2412_AV



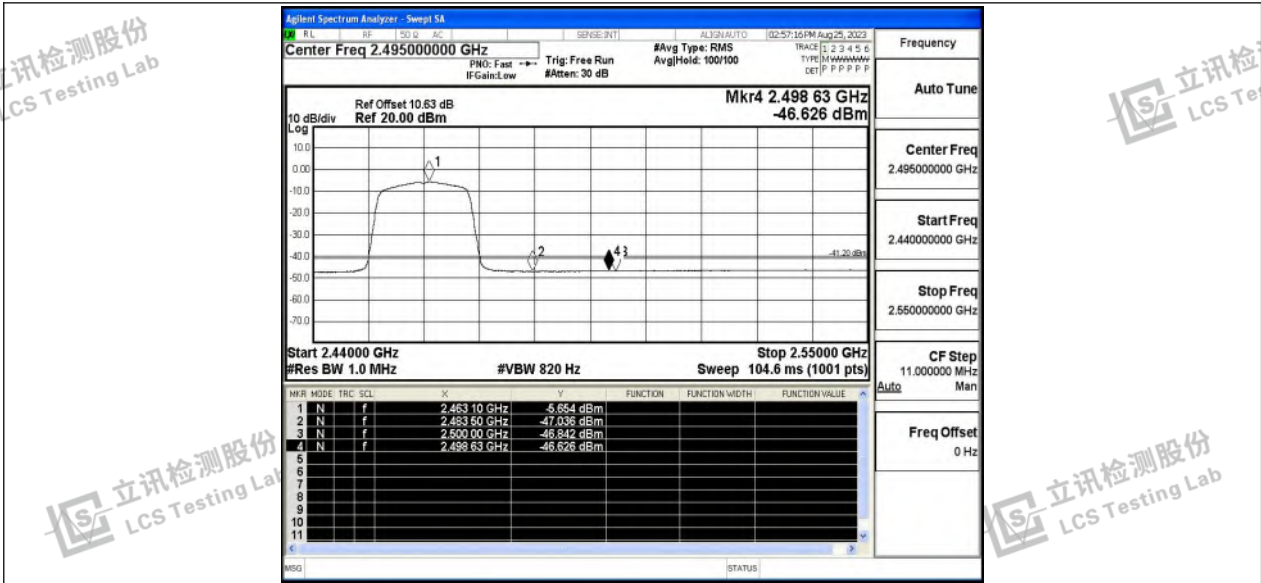


11N20SISO_Ant1_Low_2412_Peak

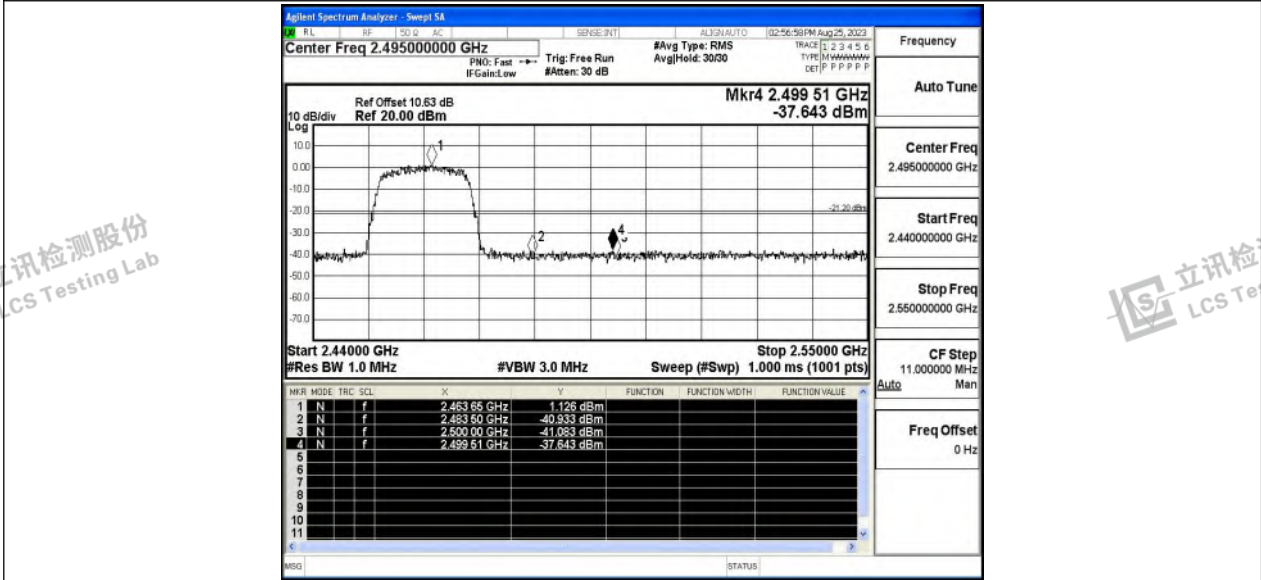


11N20SISO_Ant1_High_2462_AV



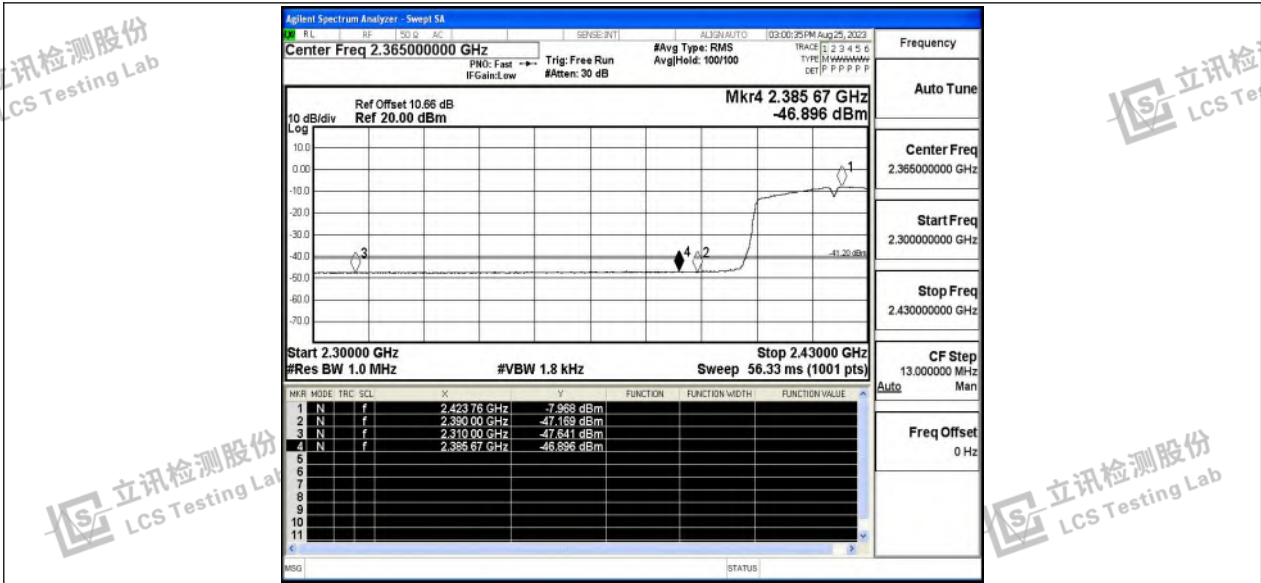


11N20SISO_Ant1_High_2462_Peak

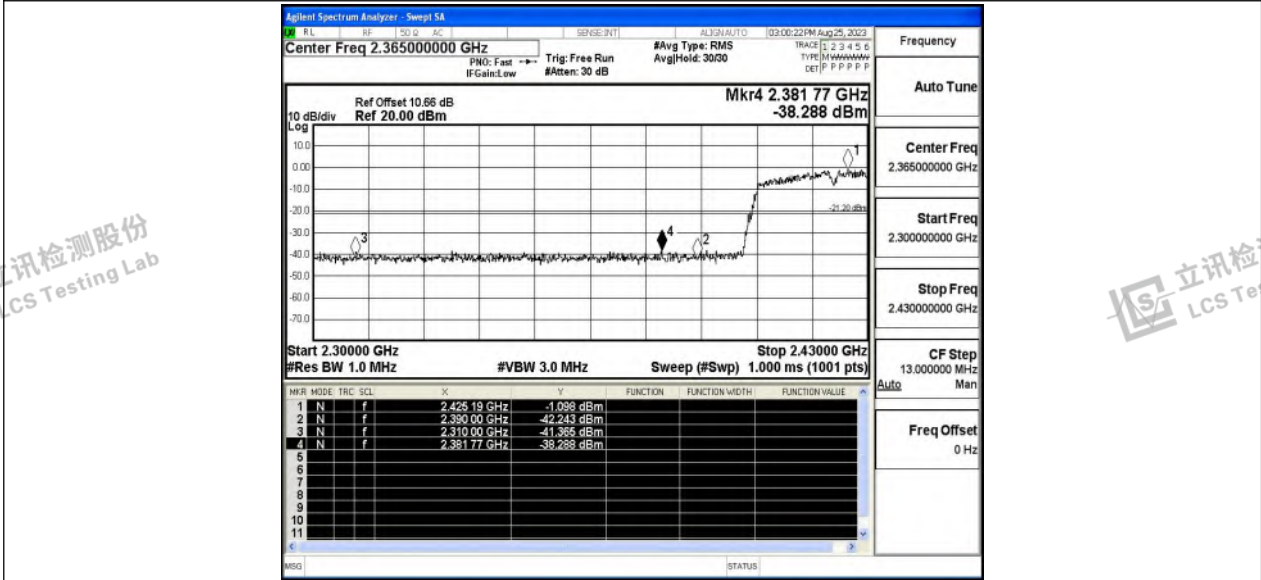


11N40SISO_Ant1_Low_2422_AV



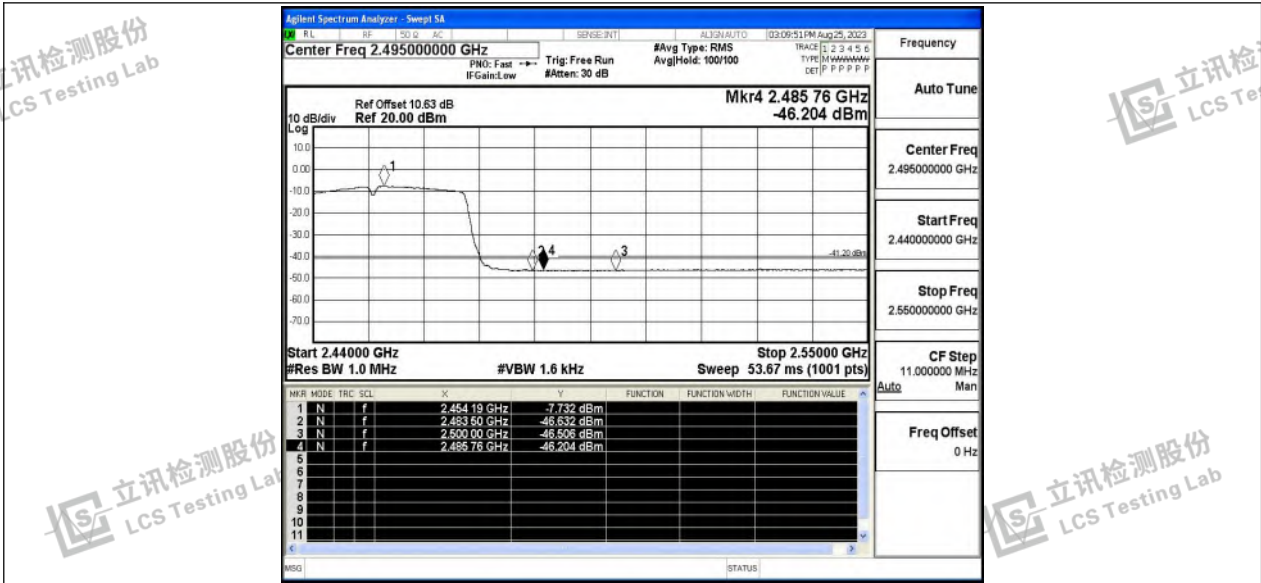


11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV





11N40SISO_Ant1_High_2452_Peak

