



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Portable Power Station

Test Model: P2001 PLUS

Environmental Conditions

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



Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
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C.1 DTS Bandwidth

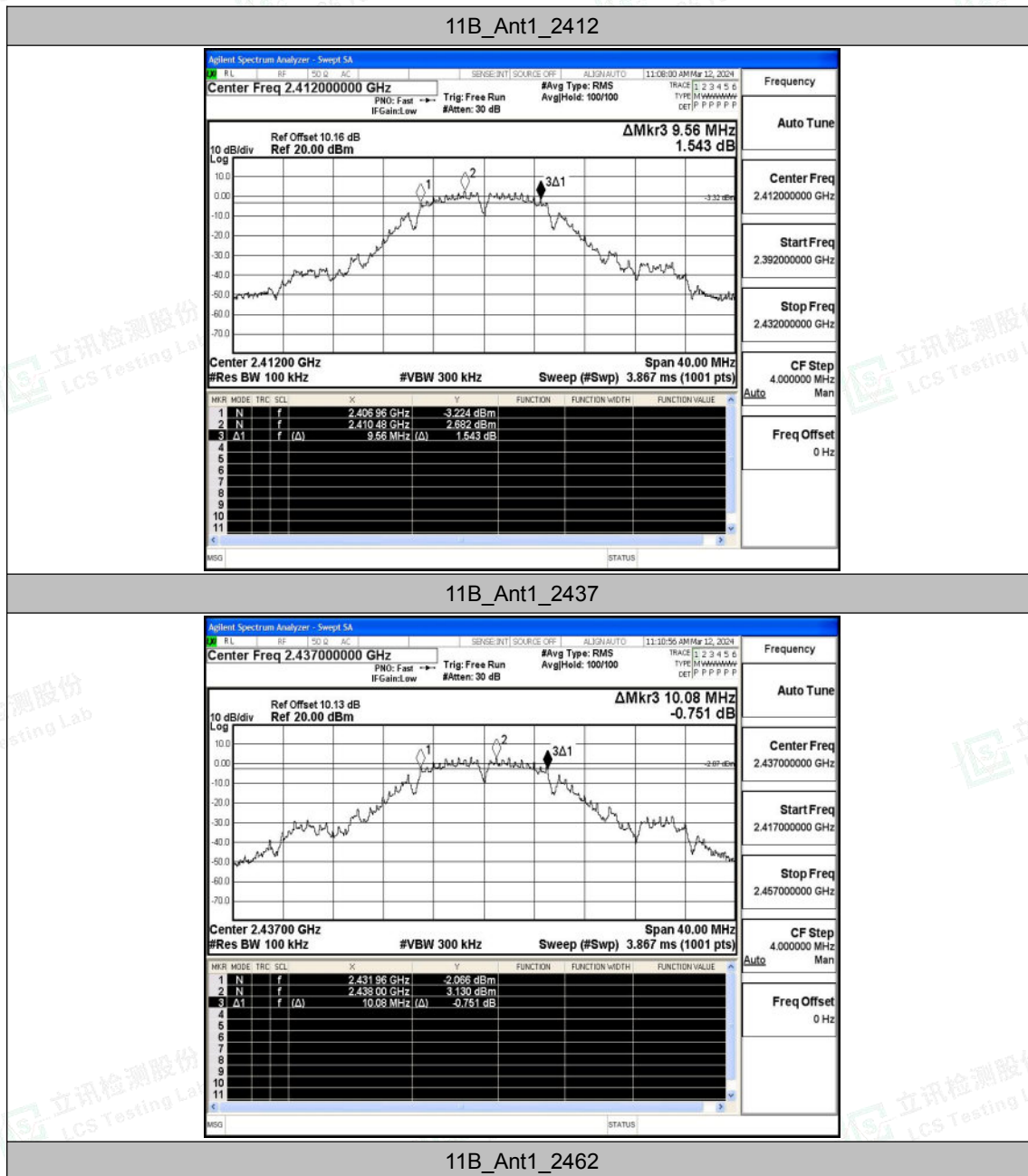
Test Result

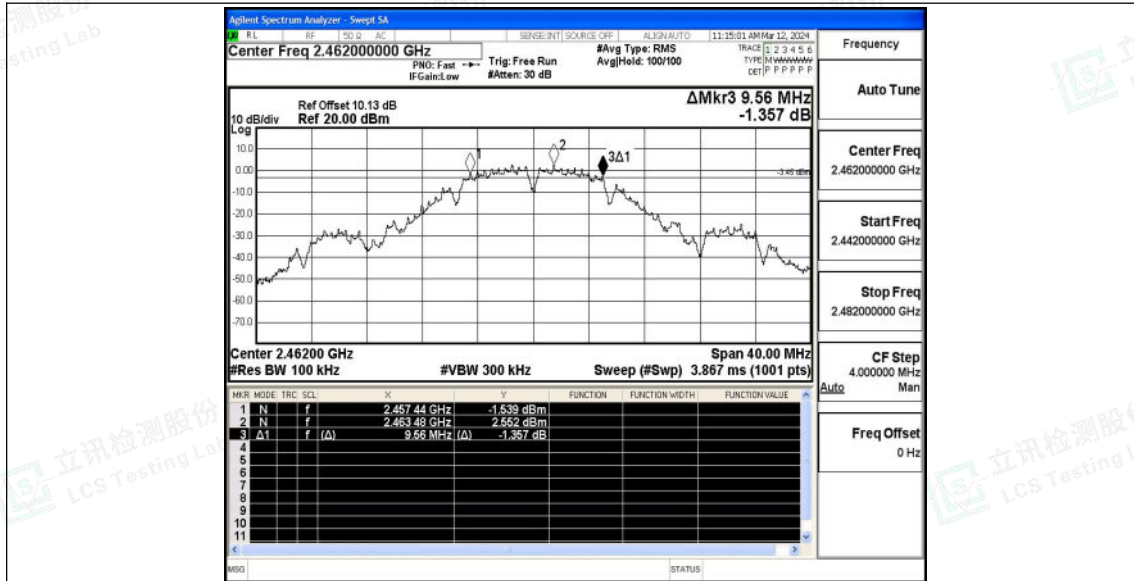
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.560	2406.960	2416.520	0.5	PASS
		2437	10.080	2431.960	2442.040	0.5	PASS
		2462	9.560	2457.440	2467.000	0.5	PASS
11G	Ant1	2412	14.600	2404.880	2419.480	0.5	PASS
		2437	15.880	2428.880	2444.760	0.5	PASS
		2462	15.360	2454.400	2469.760	0.5	PASS
11N20SISO	Ant1	2412	15.080	2404.480	2419.560	0.5	PASS
		2437	17.480	2428.240	2445.720	0.5	PASS
		2462	16.640	2453.480	2470.120	0.5	PASS



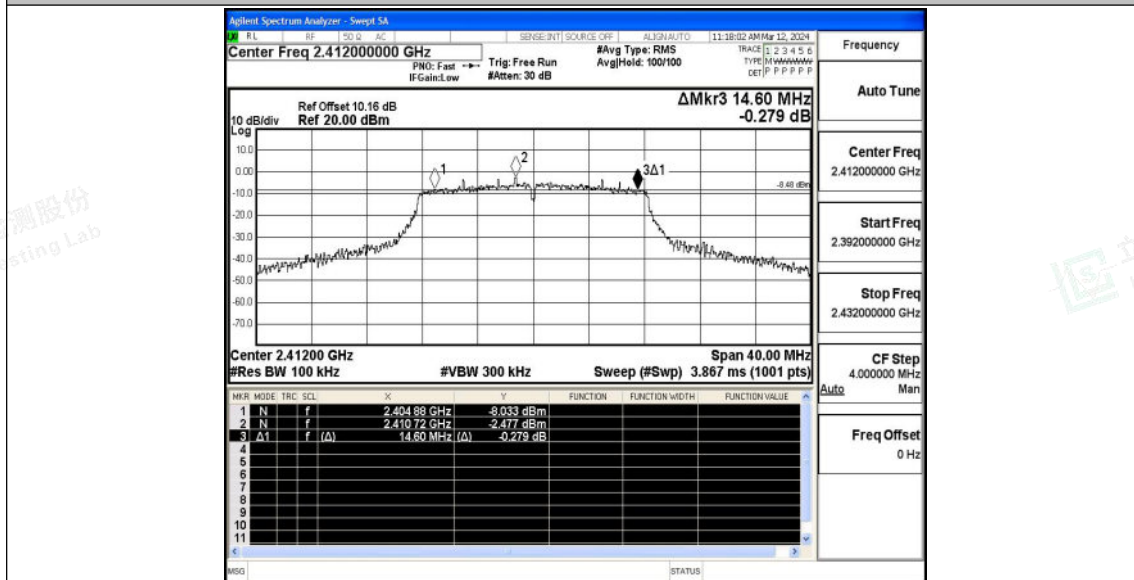


Test Graphs



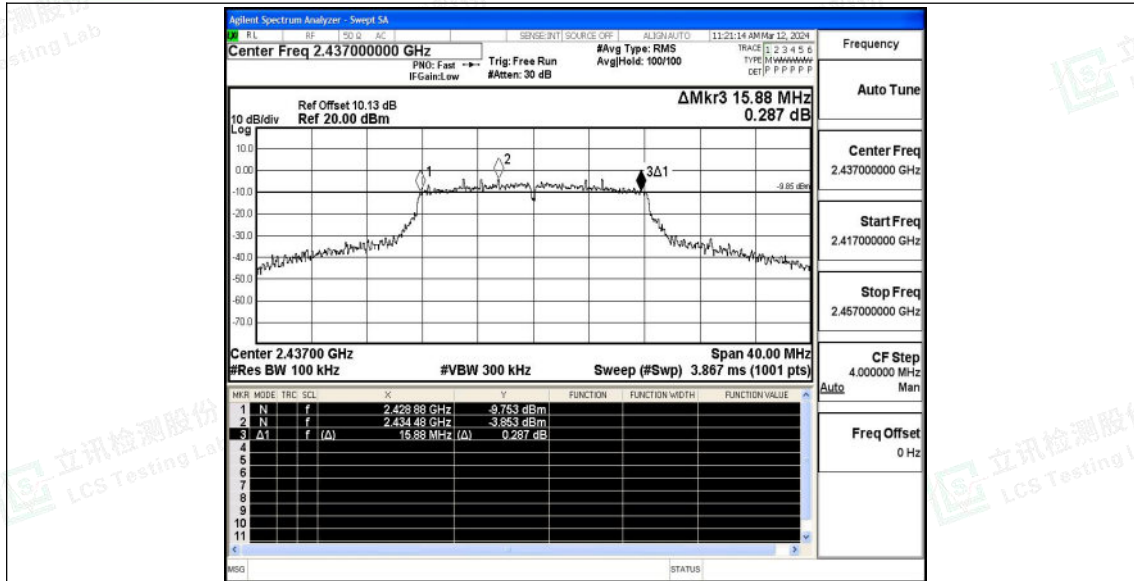


11G_Ant1_2412

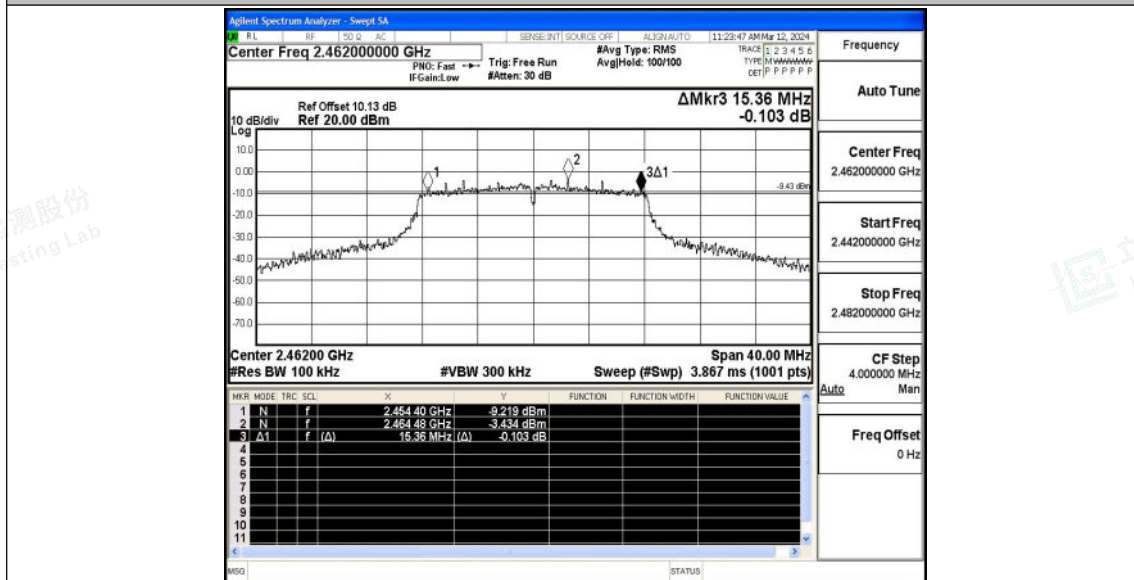


11G_Ant1_2437



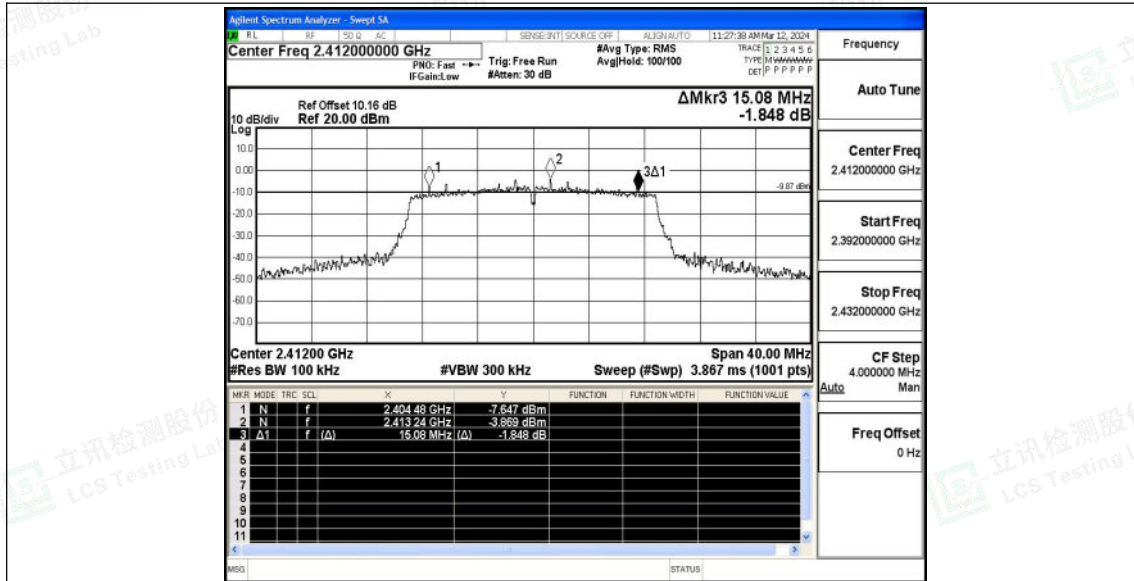


11G_Ant1_2462

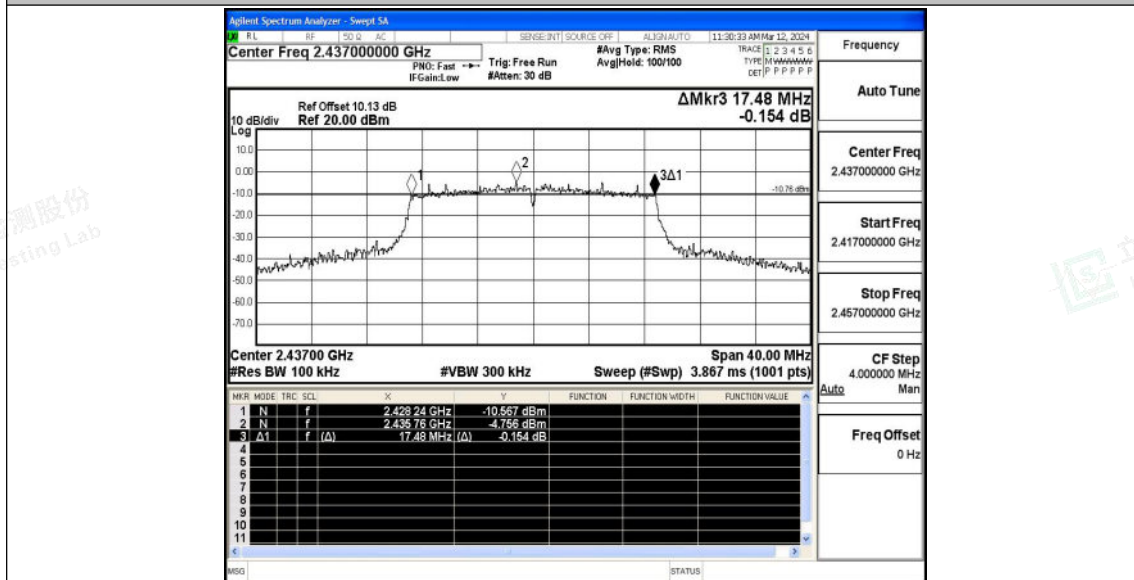


11N20SISO_Ant1_2412



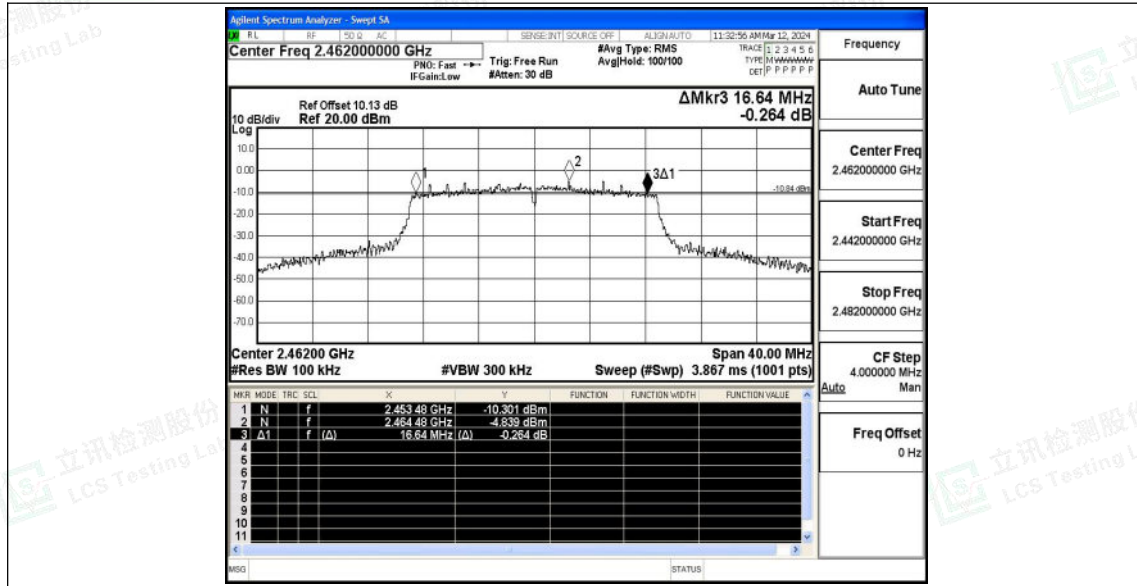


11N20SISO_Ant1_2437



11N20SISO_Ant1_2462







C.2 Maximum conducted output power

Test Result

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	14.77	≤30.00	PASS
		2437	15.05	≤30.00	PASS
		2462	14.83	≤30.00	PASS
11G	Ant1	2412	14.60	≤30.00	PASS
		2437	13.96	≤30.00	PASS
		2462	13.60	≤30.00	PASS
11N20SISO	Ant1	2412	12.80	≤30.00	PASS
		2437	13.30	≤30.00	PASS
		2462	12.98	≤30.00	PASS





C.3 Maximum power spectral density

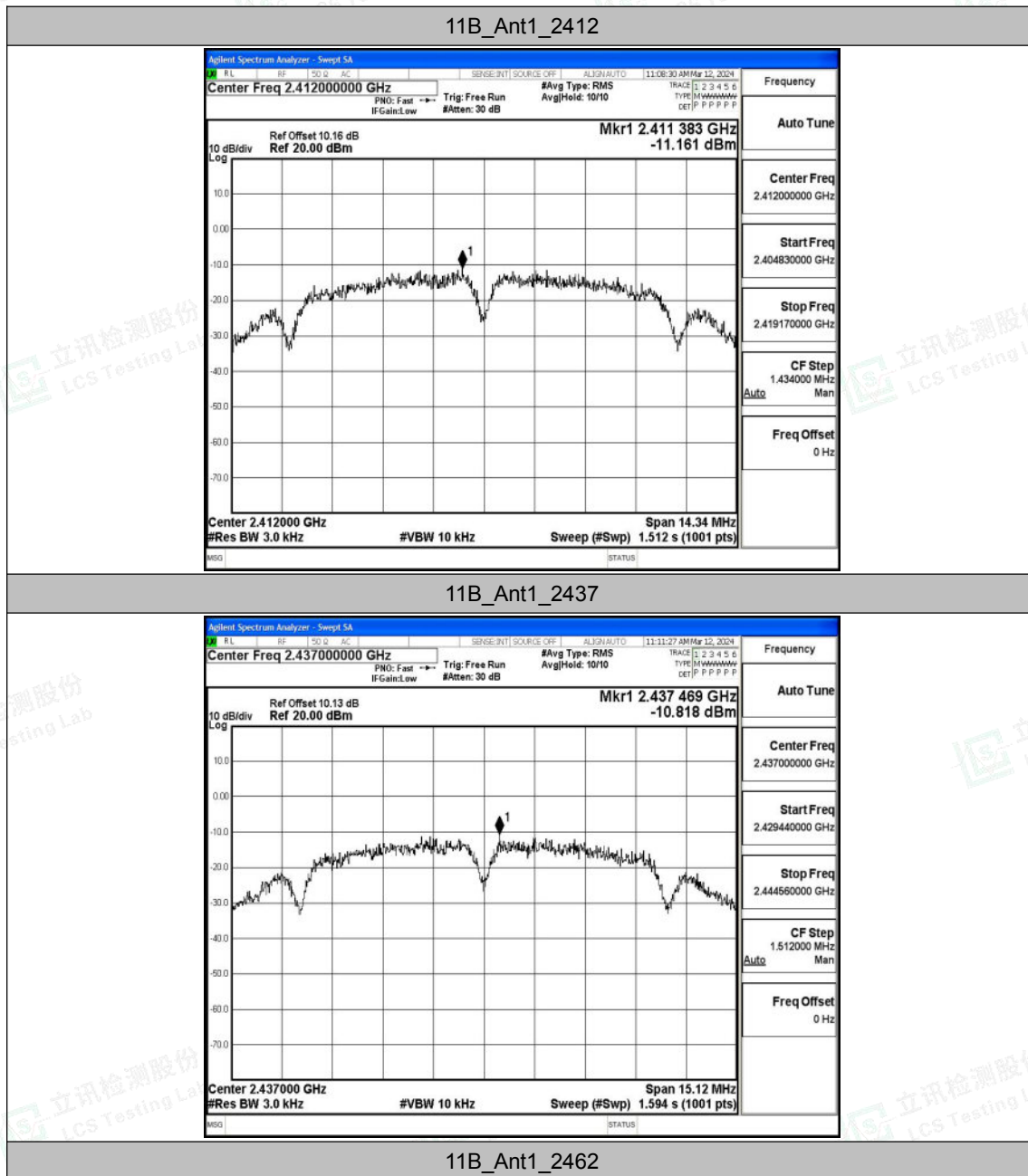
Test Result

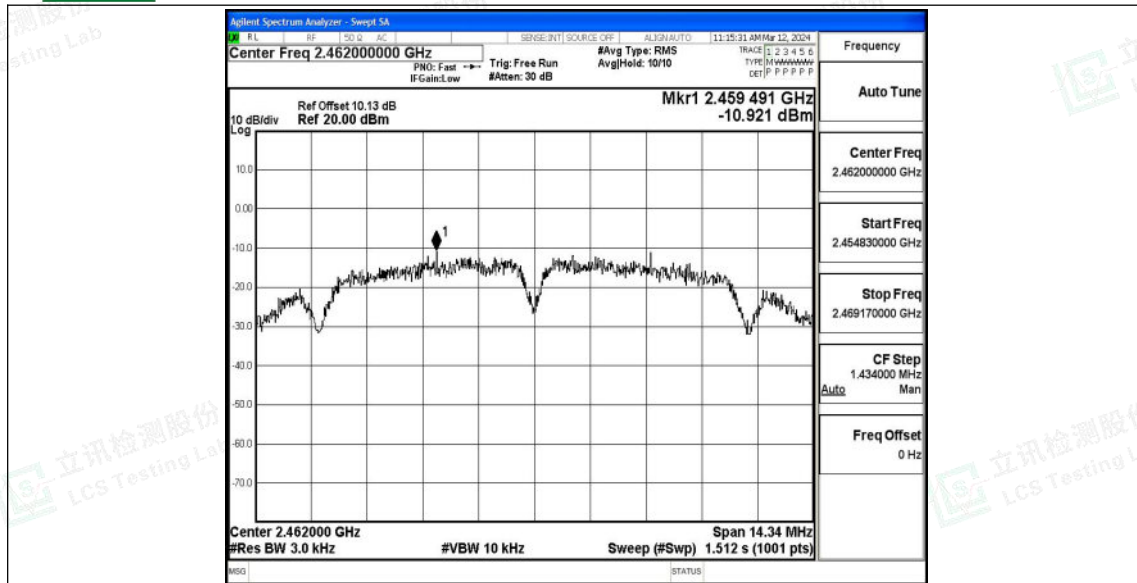
TestMode	Antenna	Freq(MHz)	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-11.16	≤8.00	PASS
		2437	-10.82	≤8.00	PASS
		2462	-10.92	≤8.00	PASS
11G	Ant1	2412	-16.43	≤8.00	PASS
		2437	-14.90	≤8.00	PASS
		2462	-16.94	≤8.00	PASS
11N20SISO	Ant1	2412	-17.48	≤8.00	PASS
		2437	-18.12	≤8.00	PASS
		2462	-18.58	≤8.00	PASS



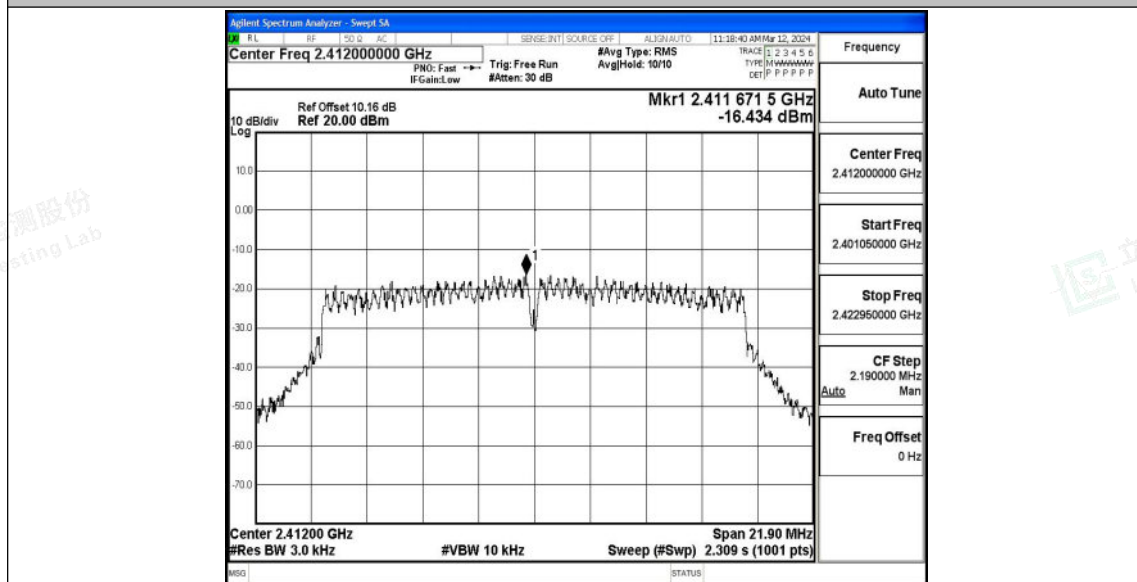


Test Graphs



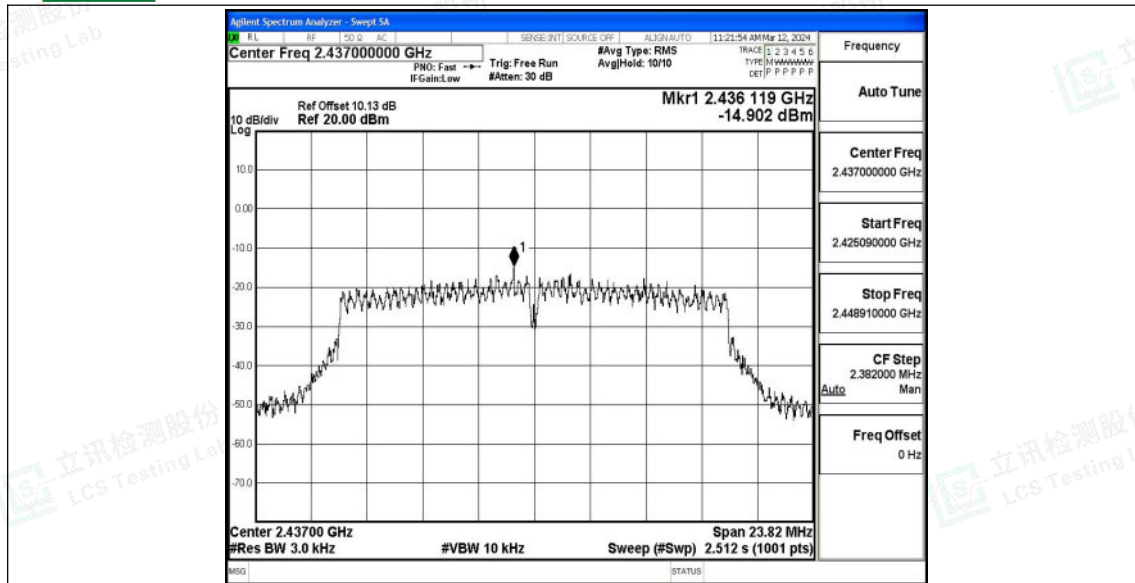


11G_Ant1_2412

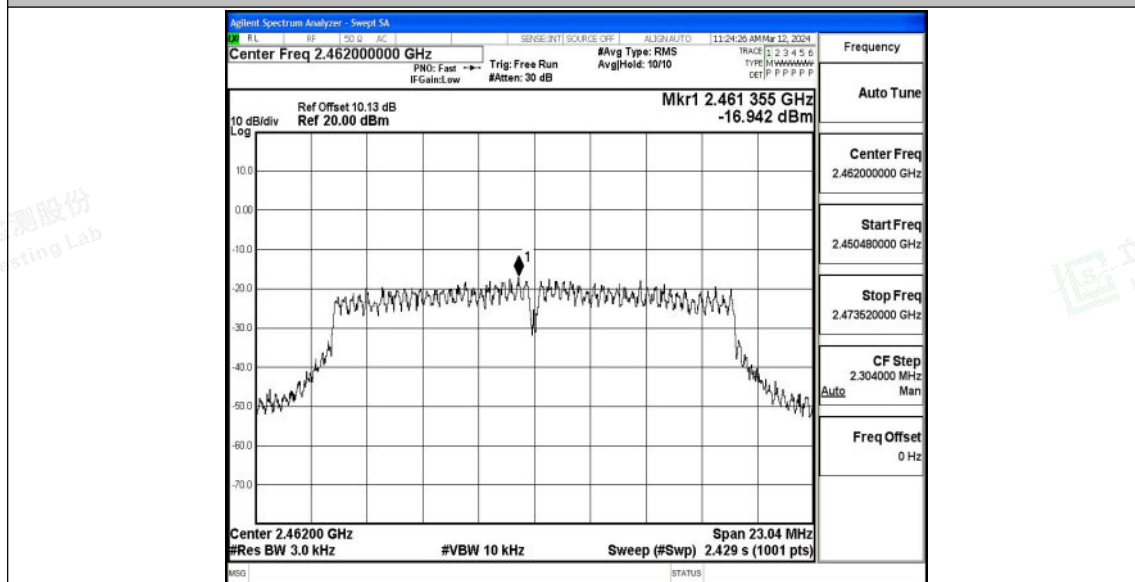


11G_Ant1_2437



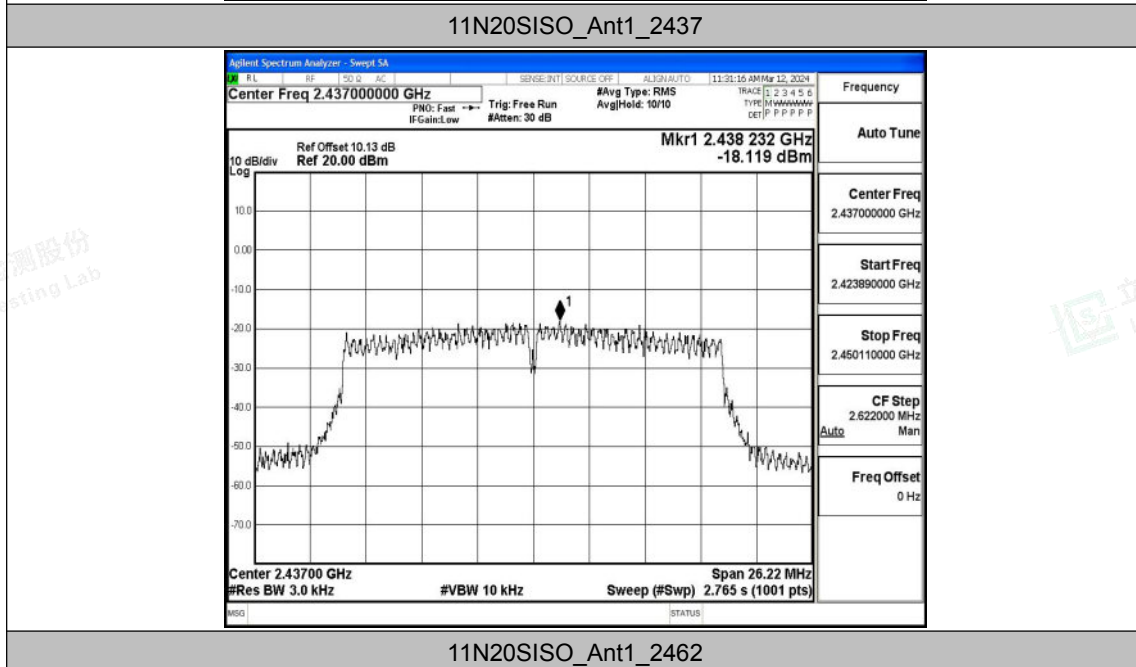
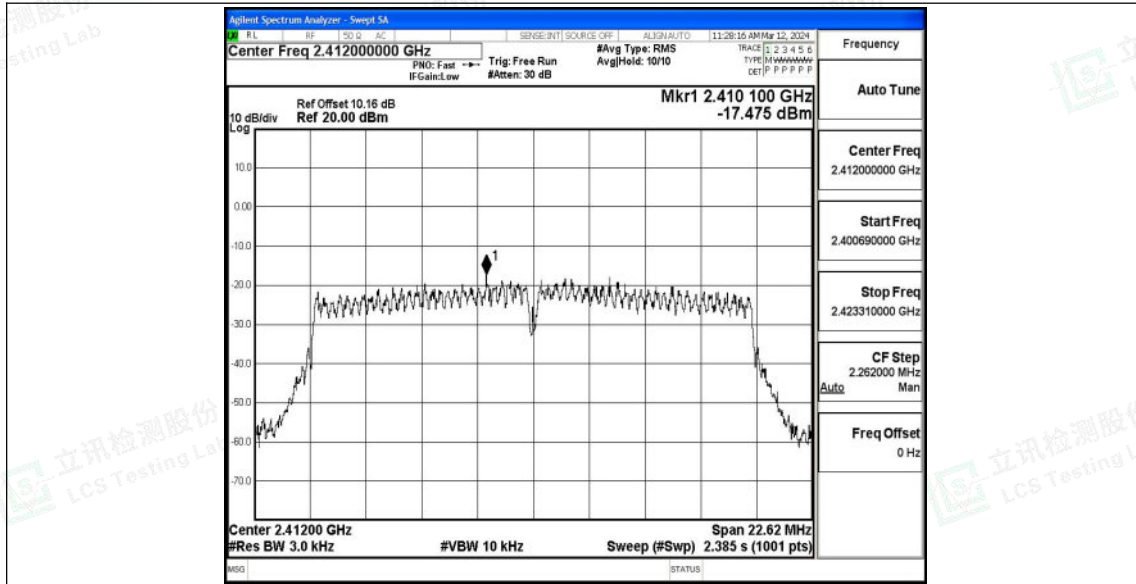


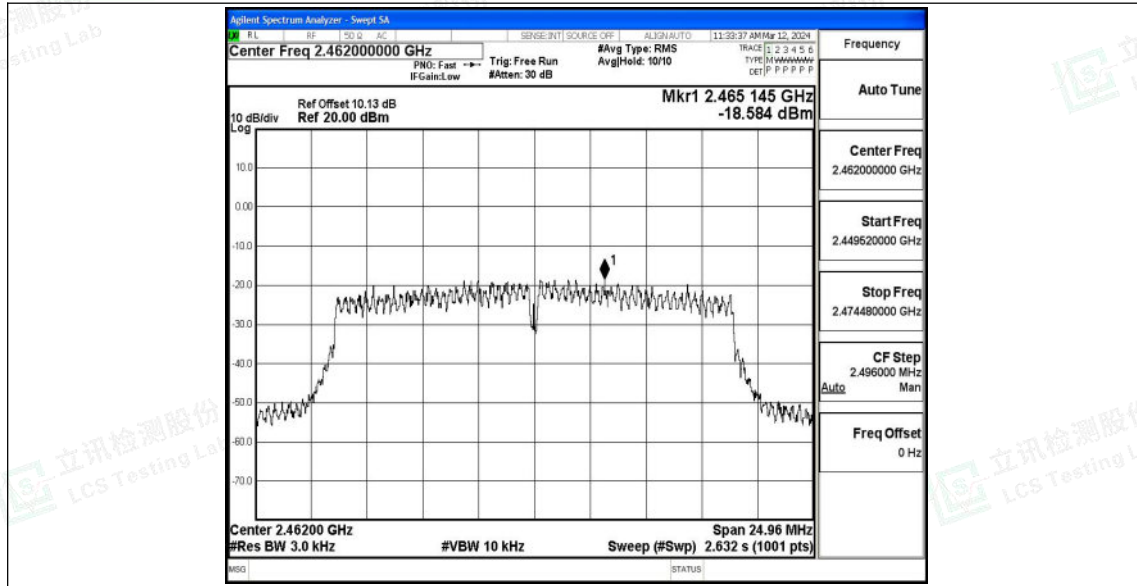
11G_Ant1_2462



11N20SISO_Ant1_2412







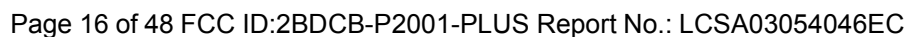


C.4 Band edge measurements

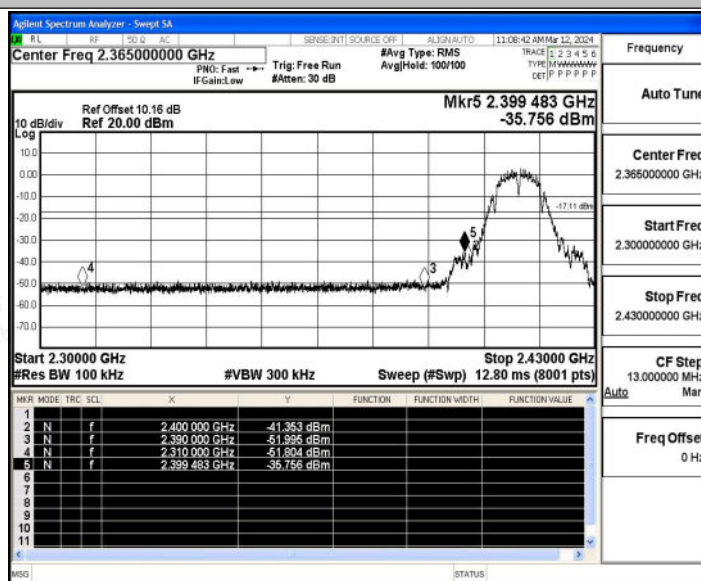
Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.89	-35.76	≤-17.11	PASS
		High	2462	2.55	-41.23	≤-17.45	PASS
11G	Ant1	Low	2412	-3.56	-34.03	≤-23.56	PASS
		High	2462	-2.58	-45.39	≤-22.58	PASS
11N20SISO	Ant1	Low	2412	-5.16	-39.14	≤-25.16	PASS
		High	2462	-4.35	-45.96	≤-24.35	PASS

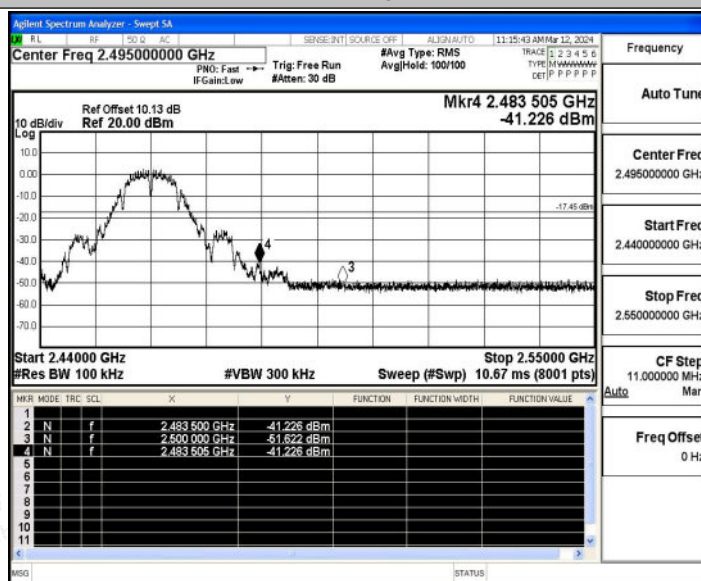




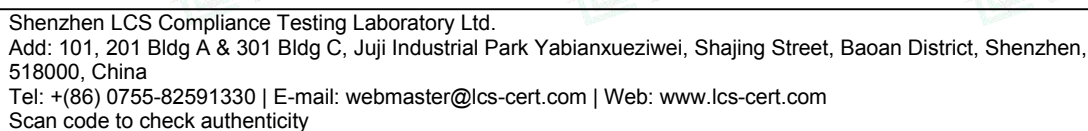
11B Ant1 Low 2412

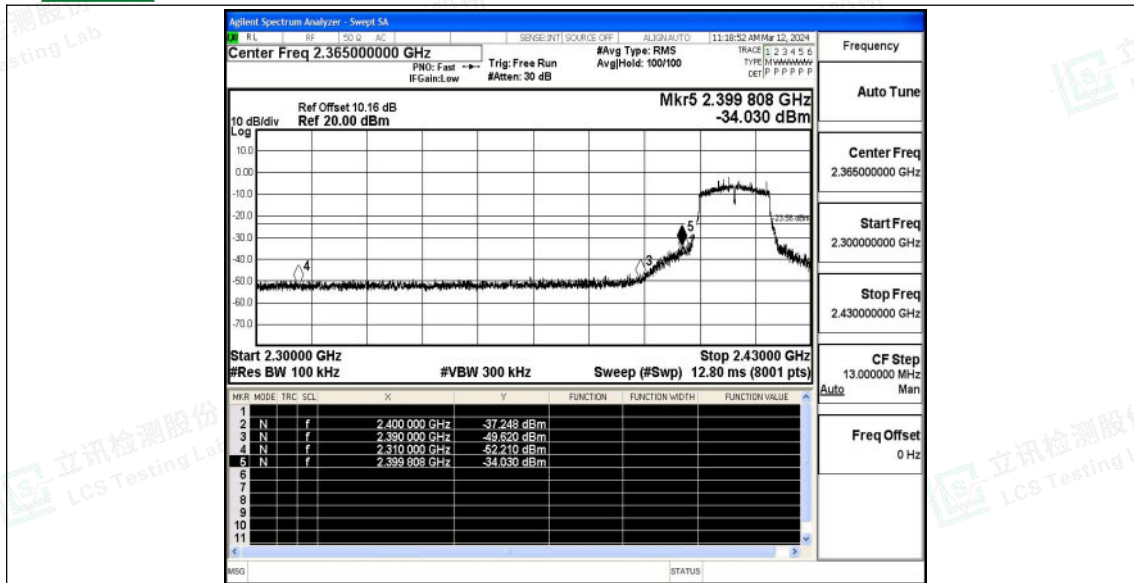


11B_Ant1_High_2462

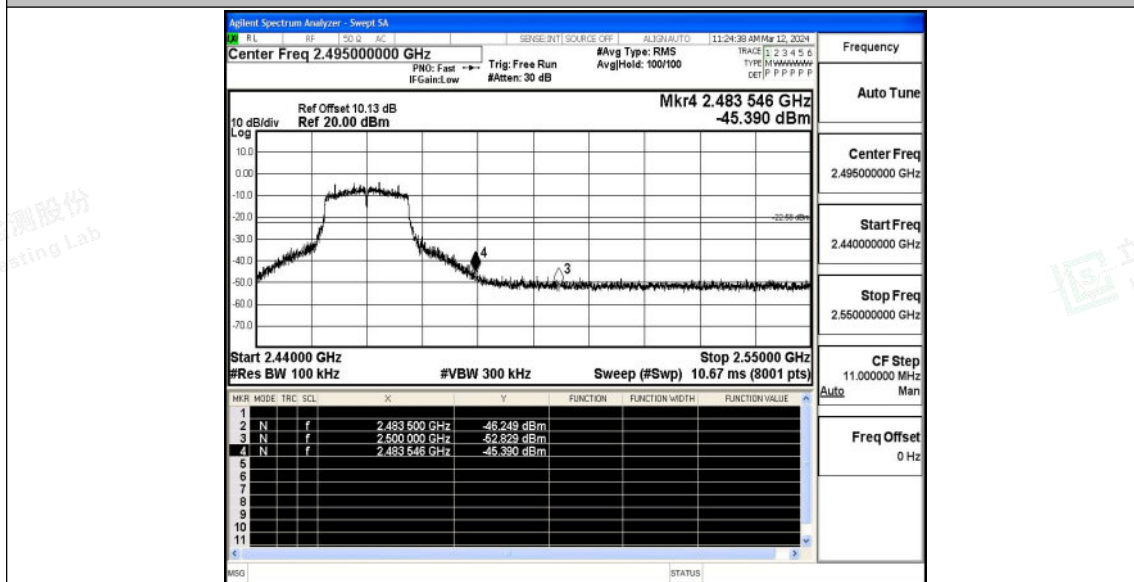


11G_Ant1_Low_2412



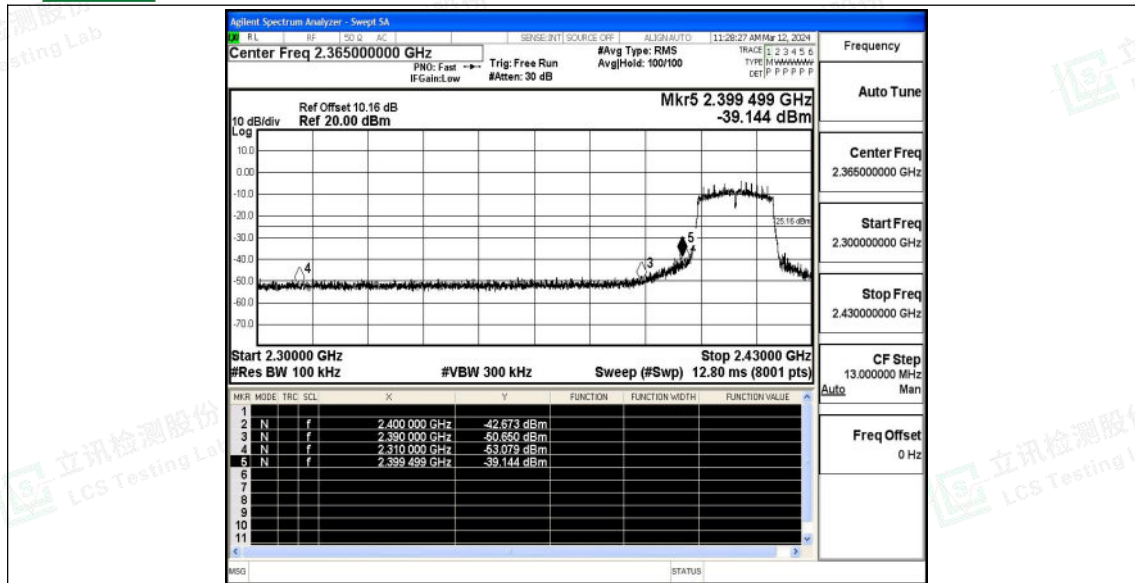


11G_Ant1_High_2462

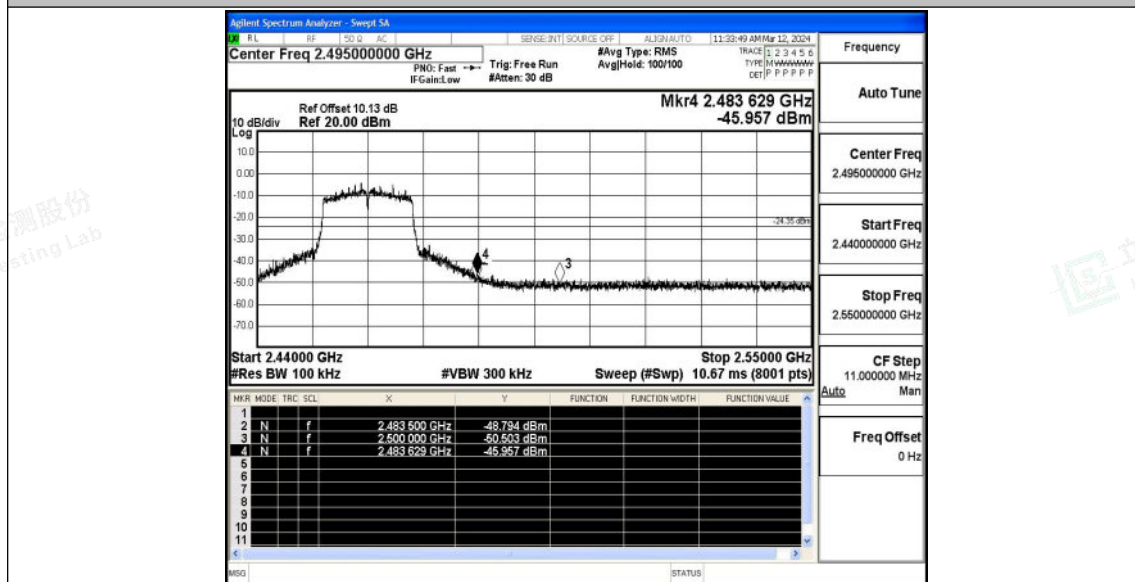


11N20SISO_Ant1_Low_2412





11N20SISO_Ant1_High_2462



C.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
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Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
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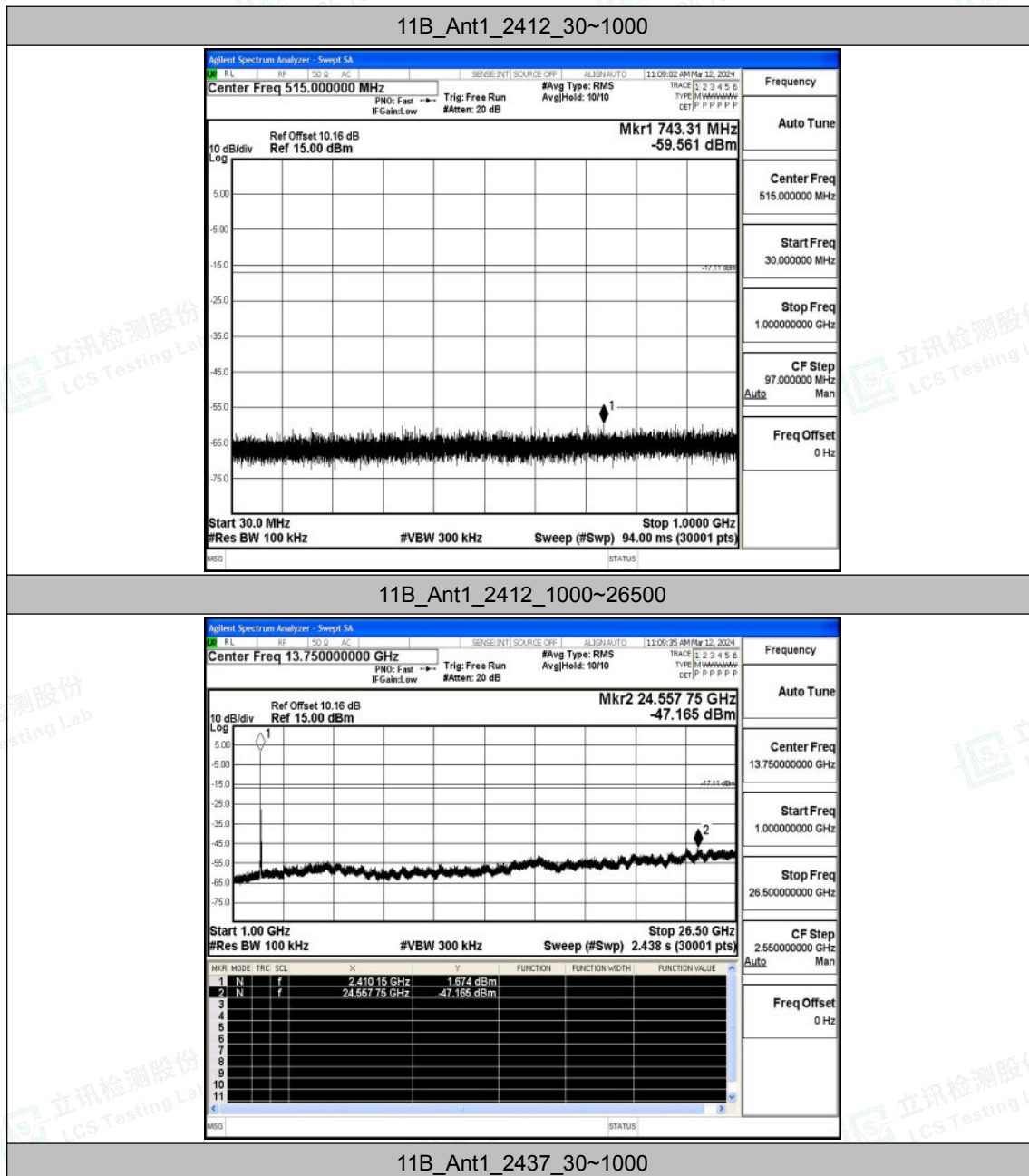


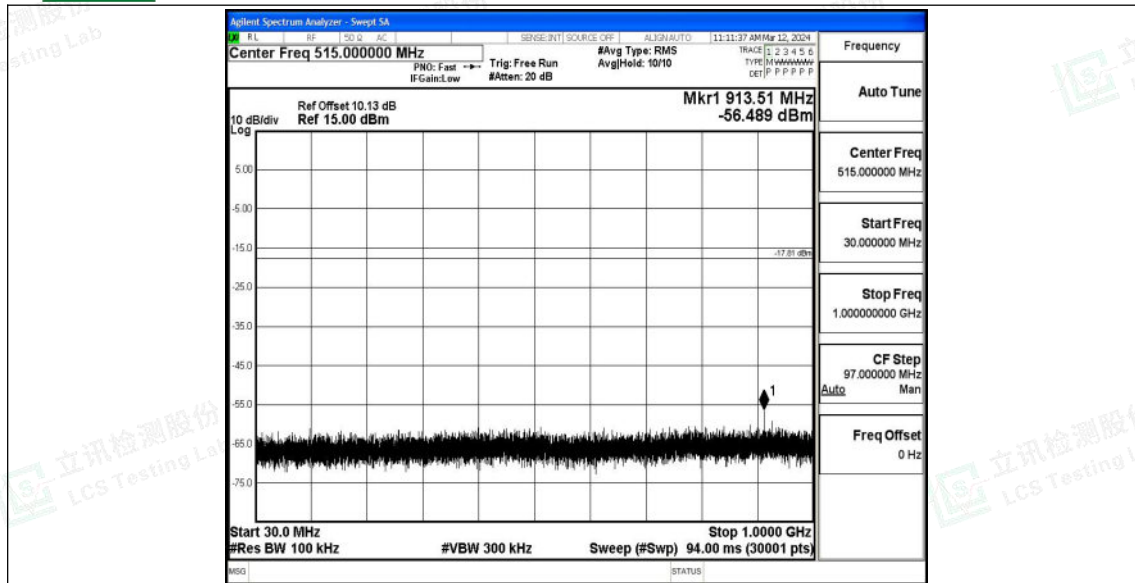
11B	Ant1	2412	30~1000	2.89	-59.56	≤ -17.11	PASS
			1000~26500	2.89	-47.17	≤ -17.11	PASS
		2437	30~1000	2.19	-56.49	≤ -17.81	PASS
			1000~26500	2.19	-46.33	≤ -17.81	PASS
		2462	30~1000	2.55	-59.8	≤ -17.45	PASS
			1000~26500	2.55	-46.59	≤ -17.45	PASS
11G	Ant1	2412	30~1000	-3.56	-59.65	≤ -23.56	PASS
			1000~26500	-3.56	-47.55	≤ -23.56	PASS
		2437	30~1000	-2.56	-60.04	≤ -22.56	PASS
			1000~26500	-2.56	-47.57	≤ -22.56	PASS
		2462	30~1000	-2.58	-59.6	≤ -22.58	PASS
			1000~26500	-2.58	-47.41	≤ -22.58	PASS
11N20SISO	Ant1	2412	30~1000	-5.16	-59.95	≤ -25.16	PASS
			1000~26500	-5.16	-46.38	≤ -25.16	PASS
		2437	30~1000	-3.05	-59.4	≤ -23.05	PASS
			1000~26500	-3.05	-47.79	≤ -23.05	PASS
		2462	30~1000	-4.35	-59.82	≤ -24.35	PASS
			1000~26500	-4.35	-46.21	≤ -24.35	PASS



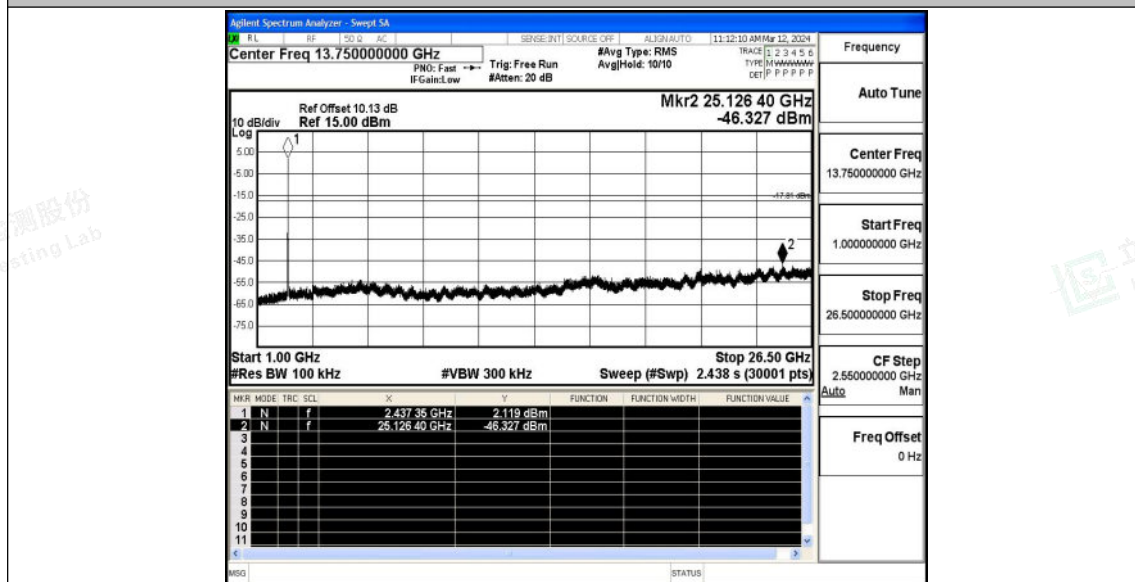


Test Graphs



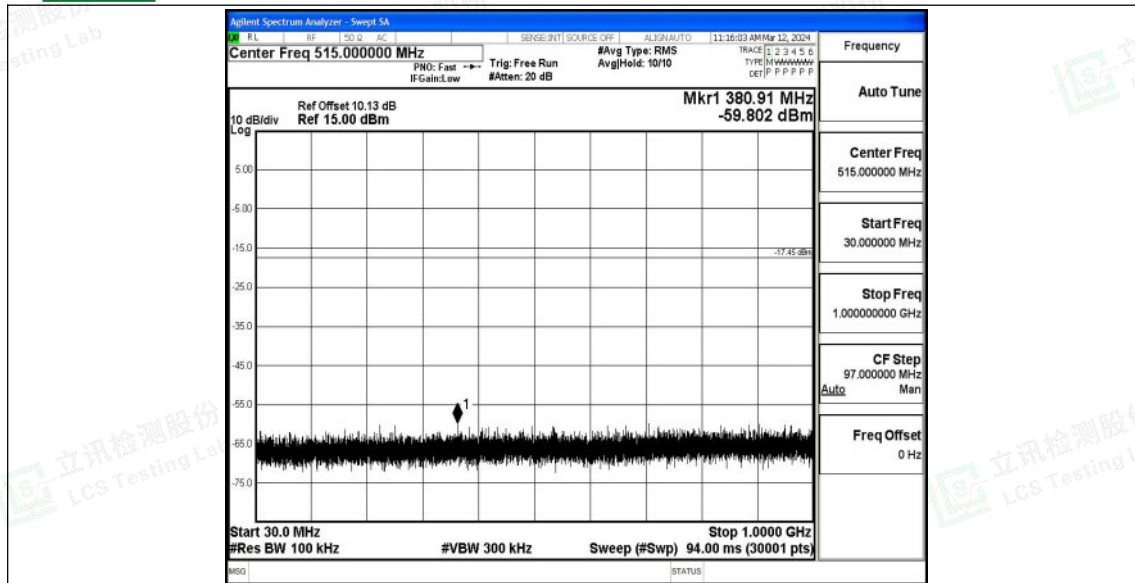


11B_Ant1_2437_1000~26500

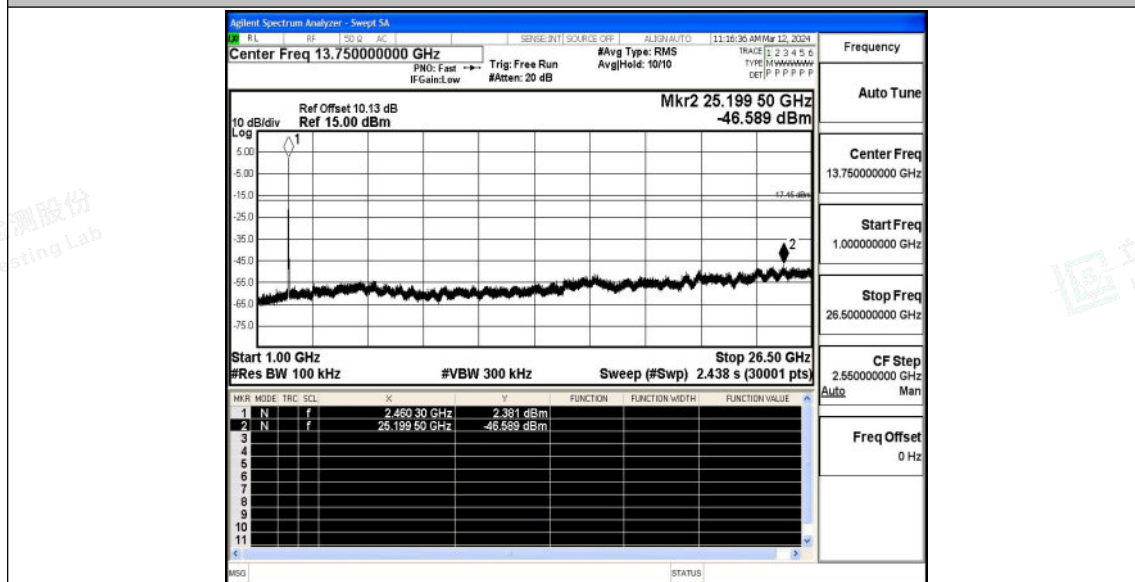


11B_Ant1_2462_30~1000



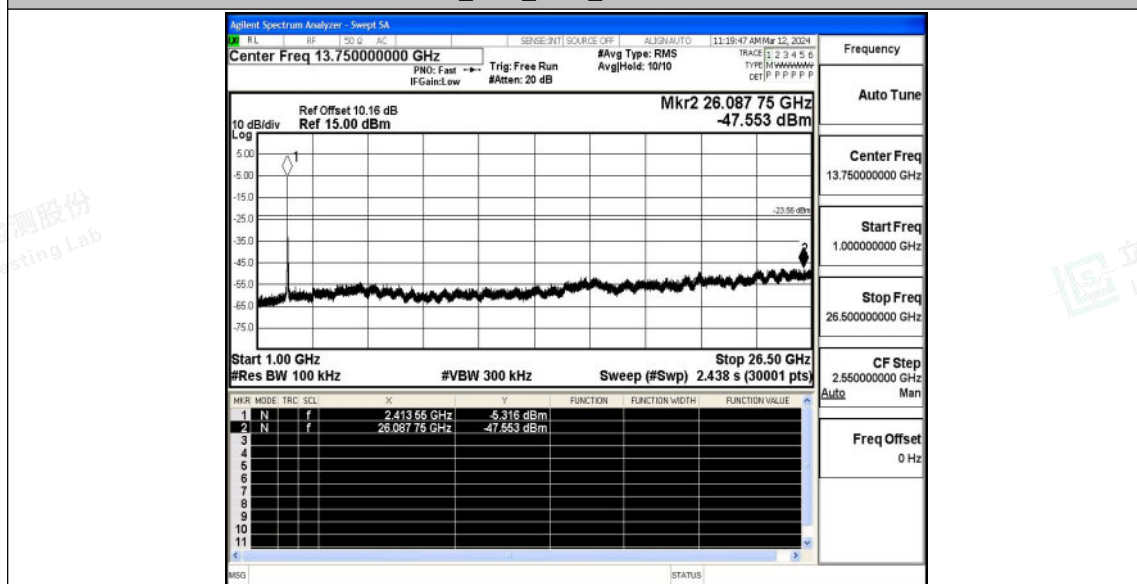
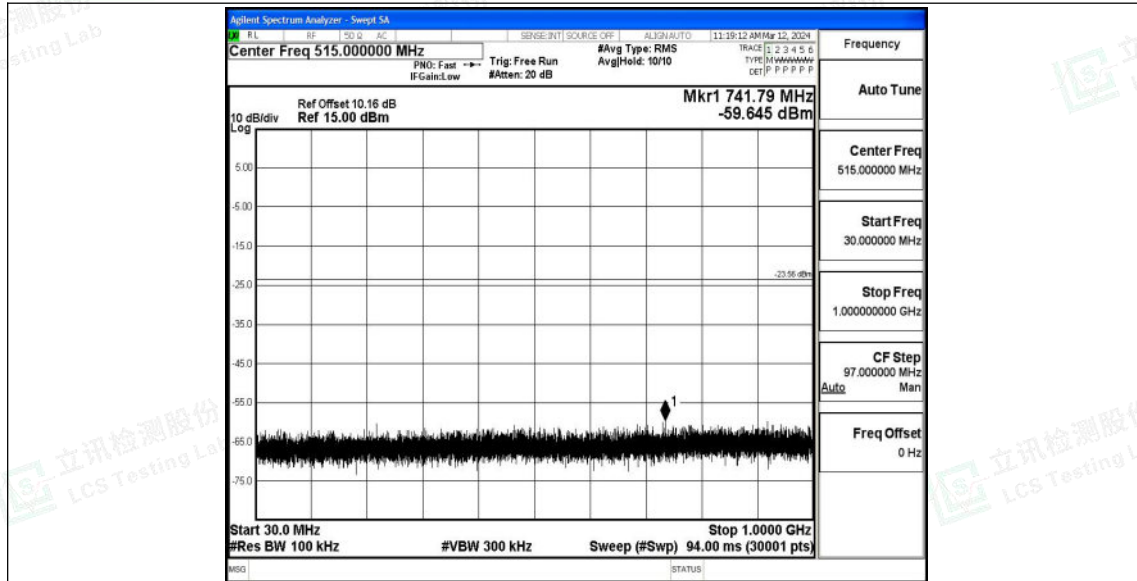


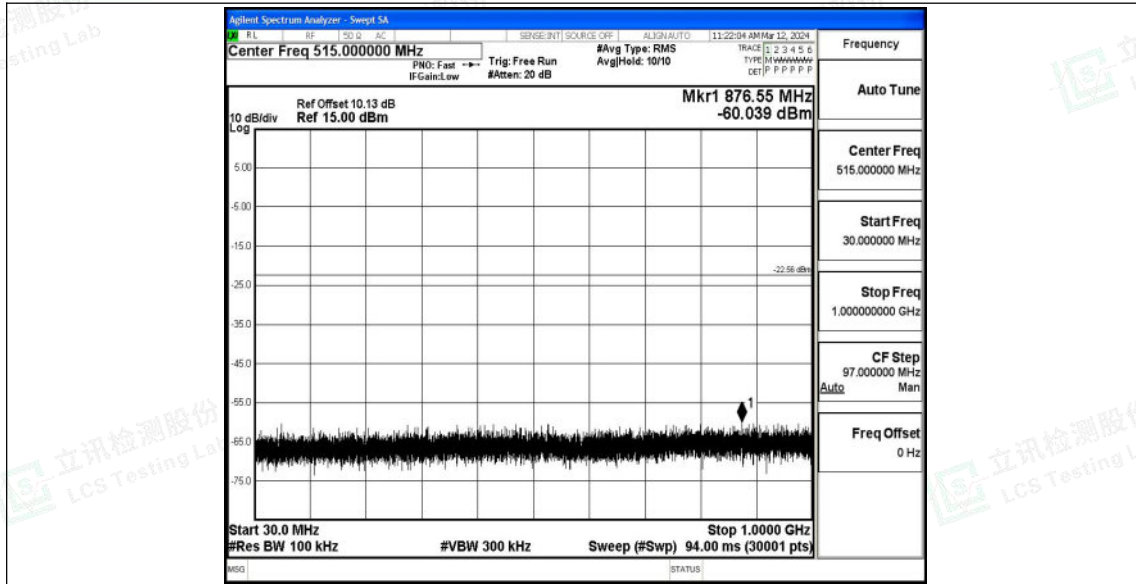
11B_Ant1_2462_1000~26500



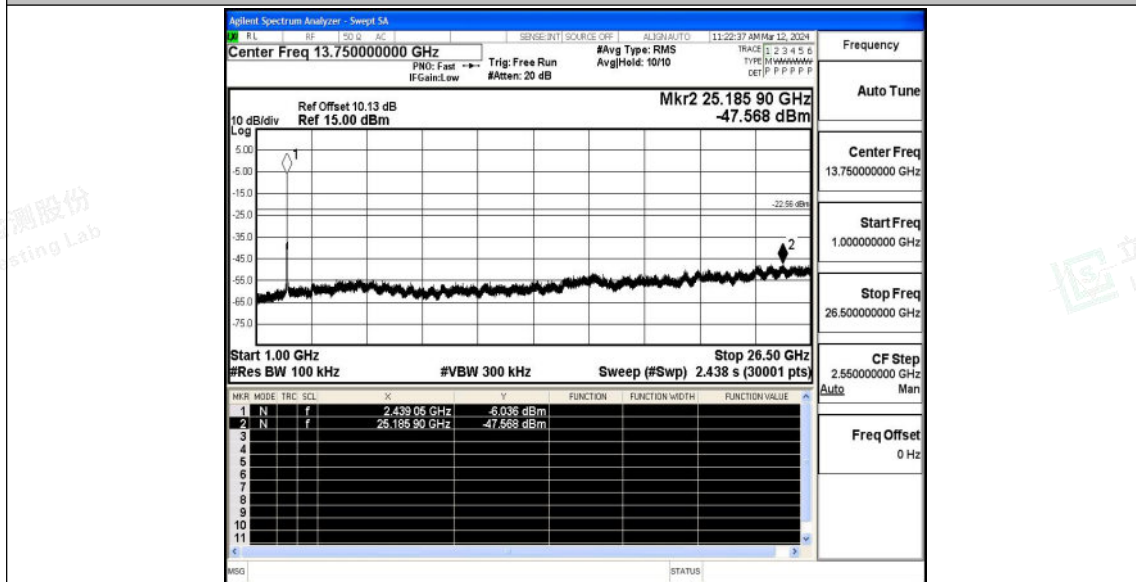
11G_Ant1_2412_30~1000





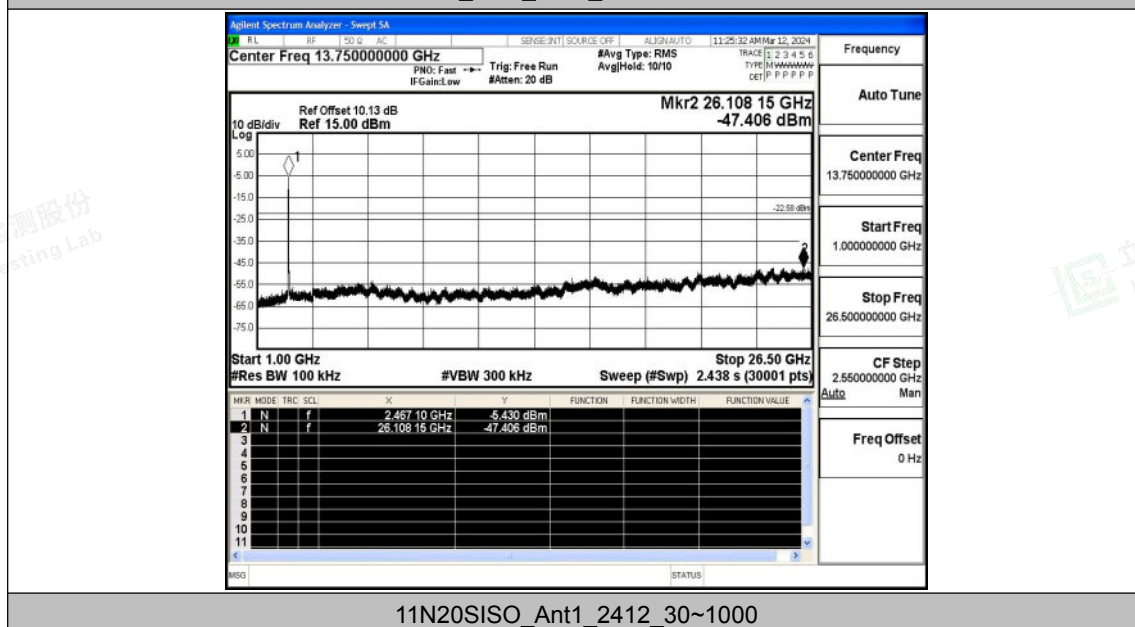
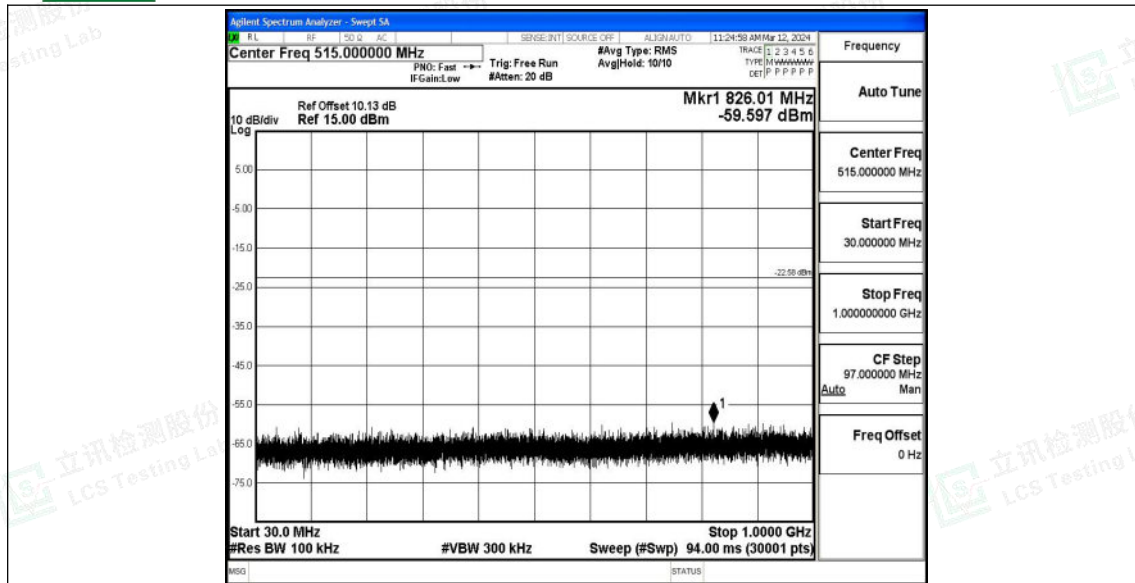


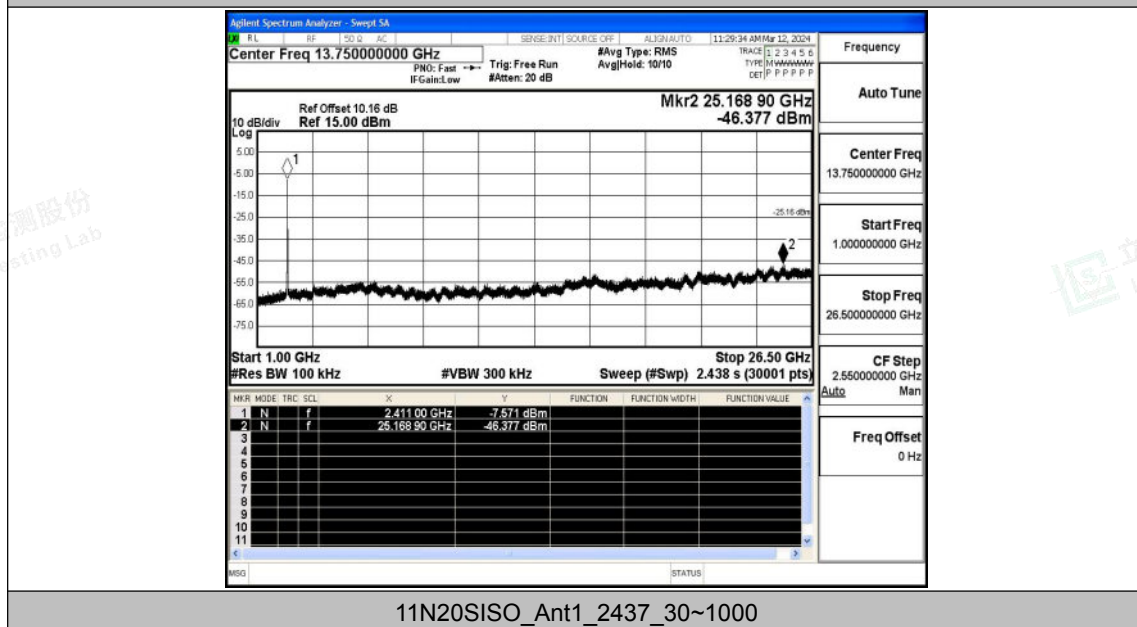
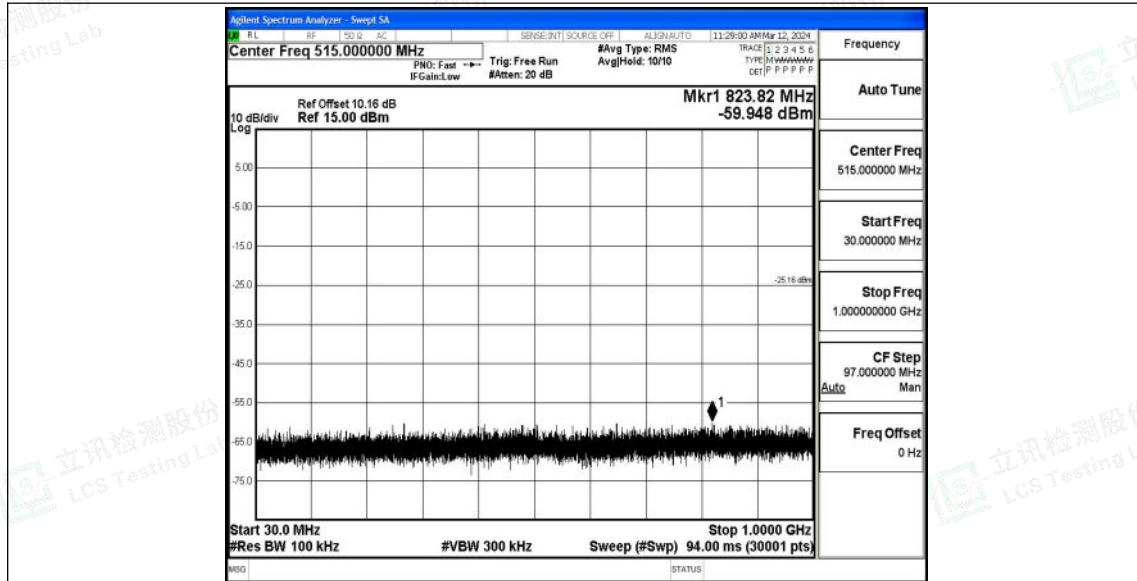
11G_Ant1_2437_1000~26500

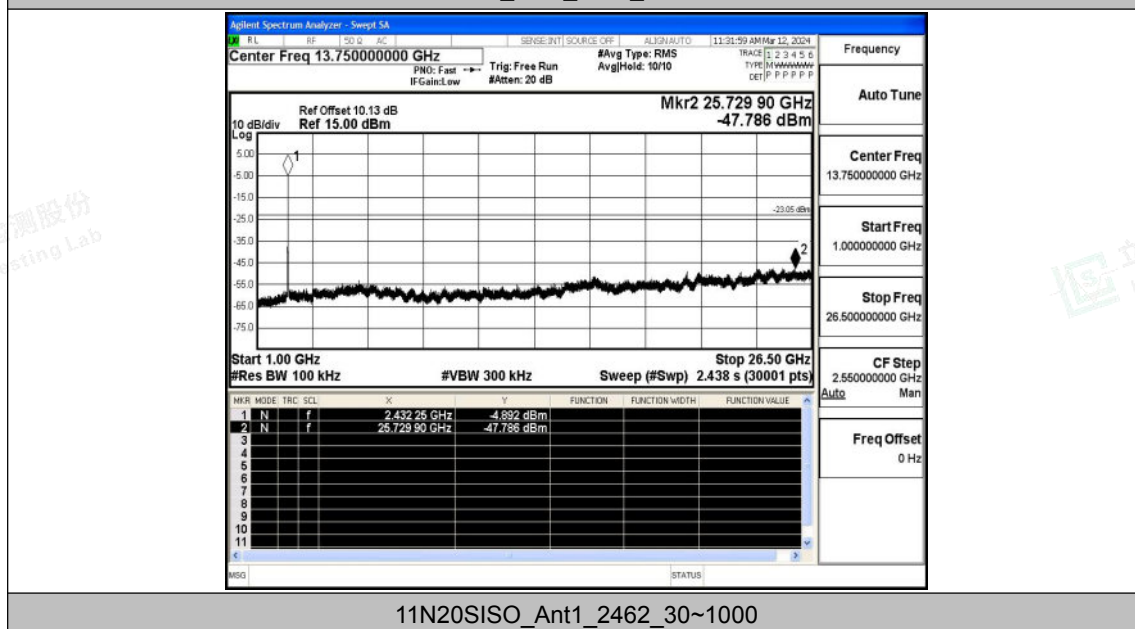
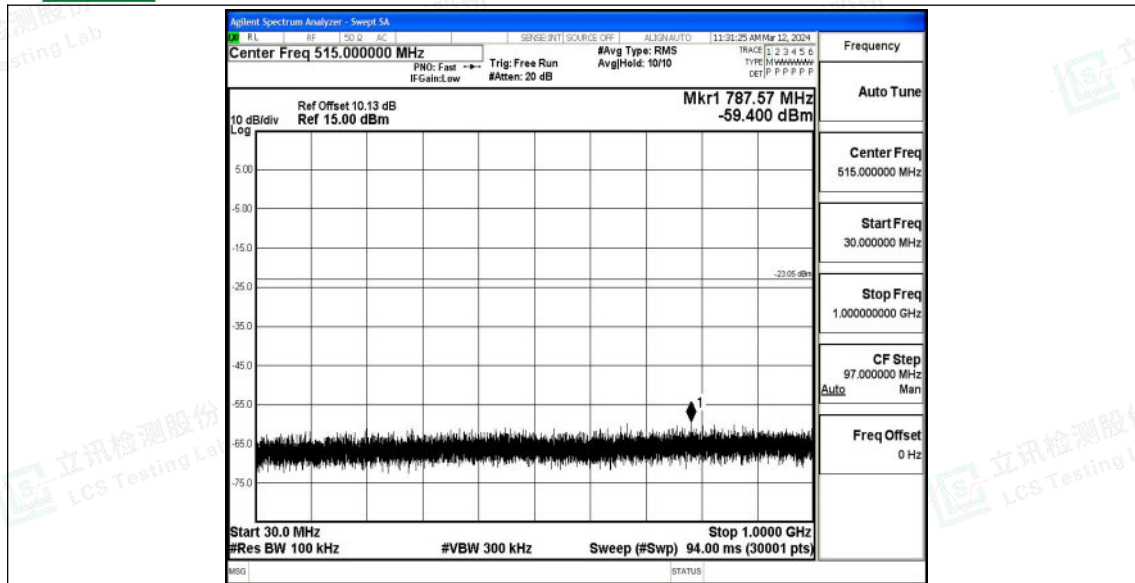


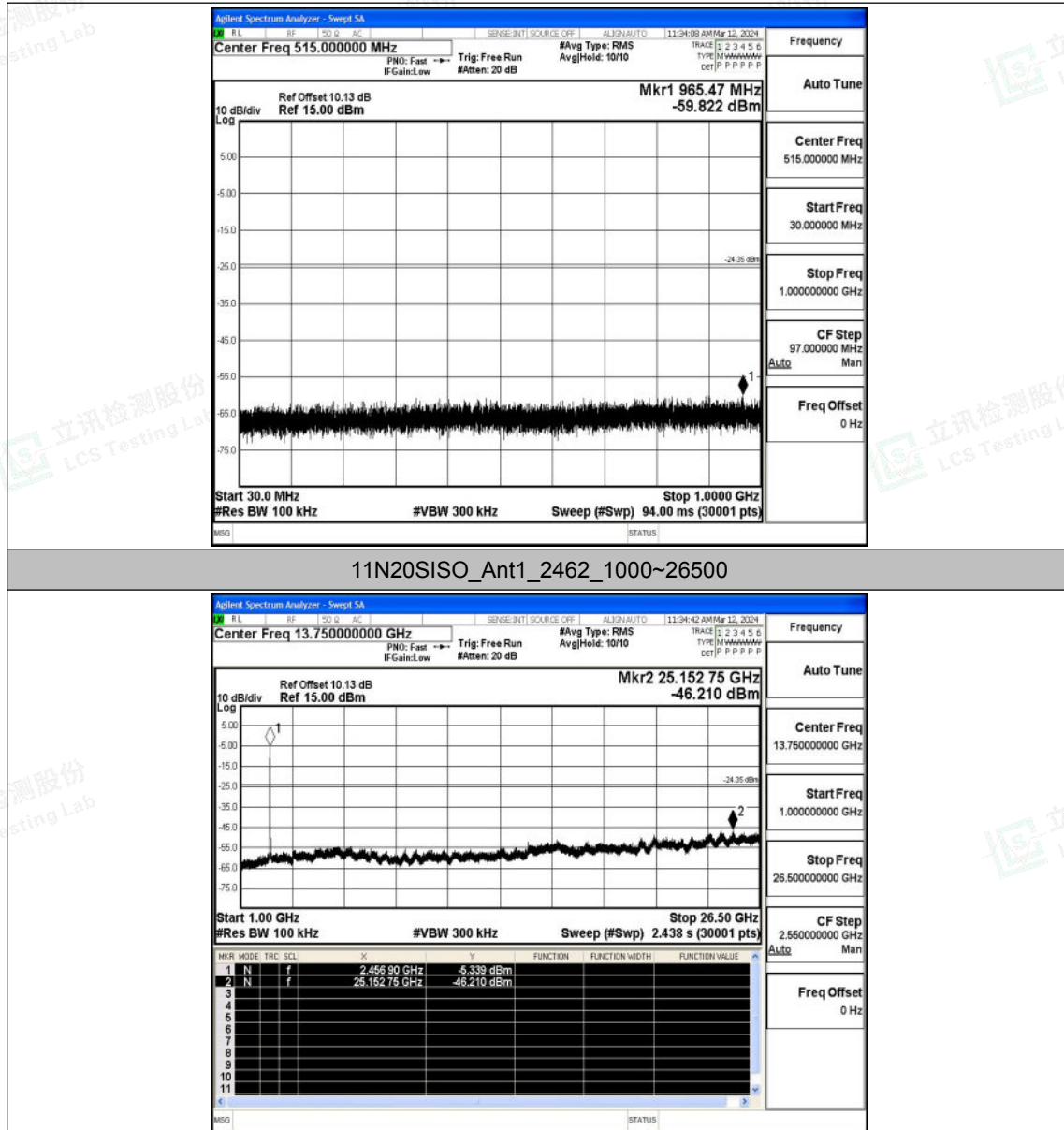
11G_Ant1_2462_30~1000











Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
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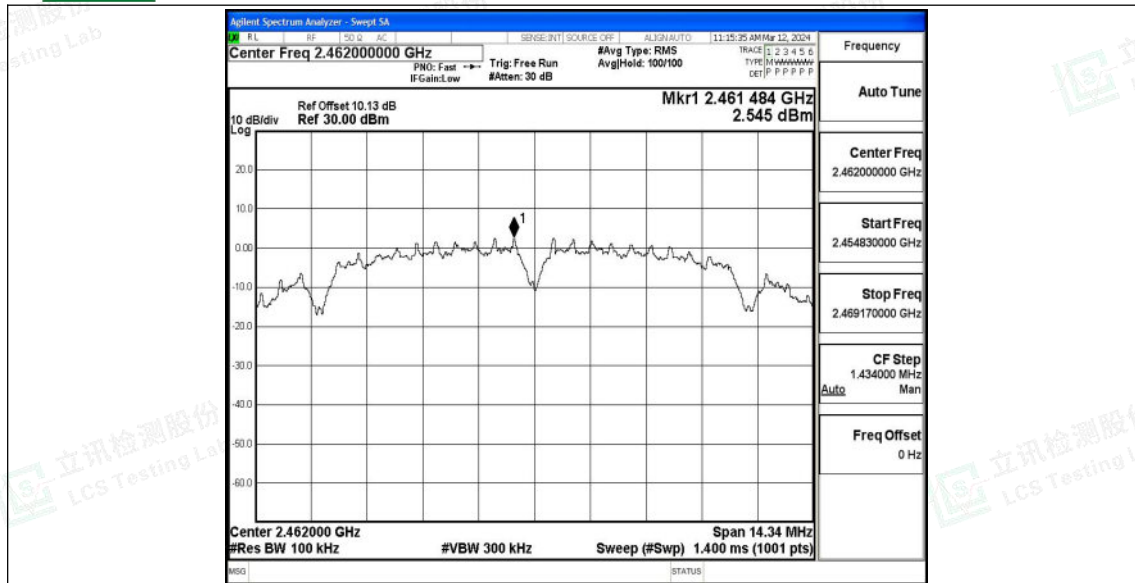
11B	Ant1	2412	2411.00	2.89
		2437	2436.00	2.19
		2462	2461.48	2.55
11G	Ant1	2412	2409.50	-3.56
		2437	2438.26	-2.56
		2462	2463.24	-2.58
11N20SISO	Ant1	2412	2415.73	-5.16
		2437	2438.23	-3.05
		2462	2464.47	-4.35



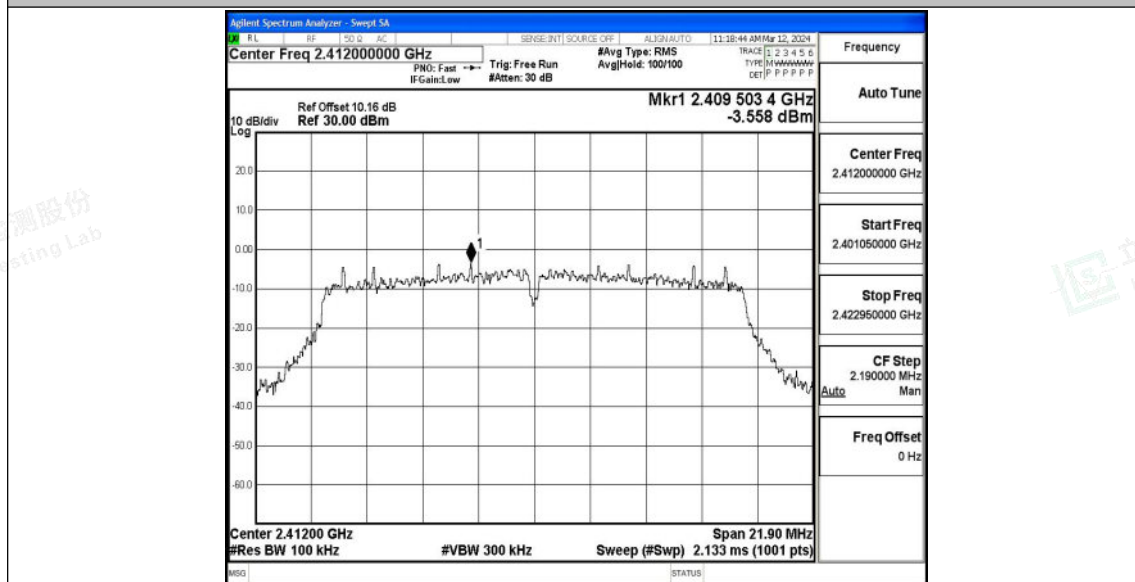


Test Graphs



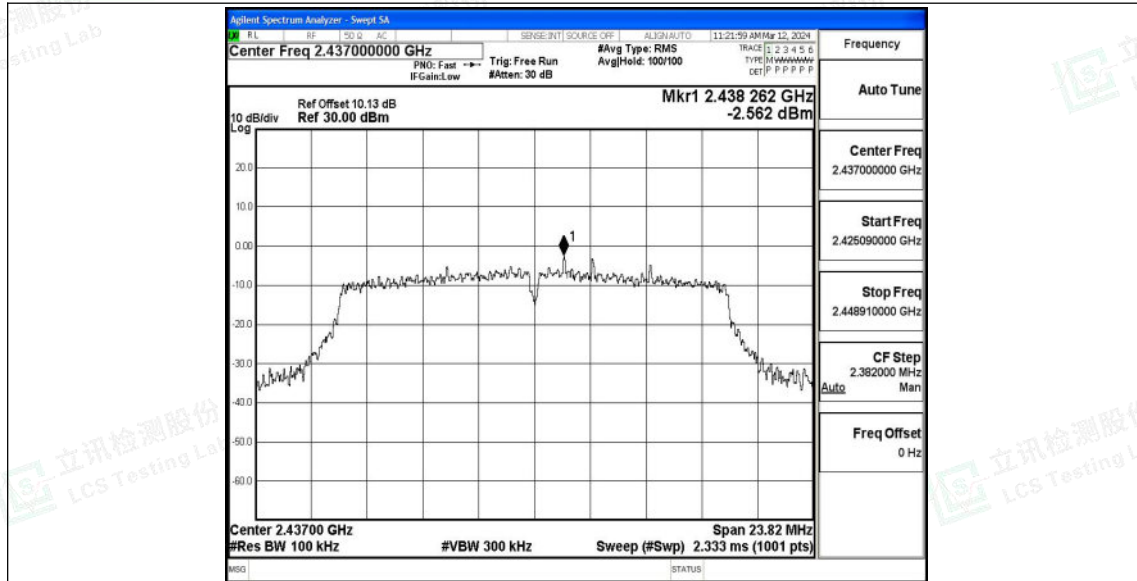


11G_Ant1_2412

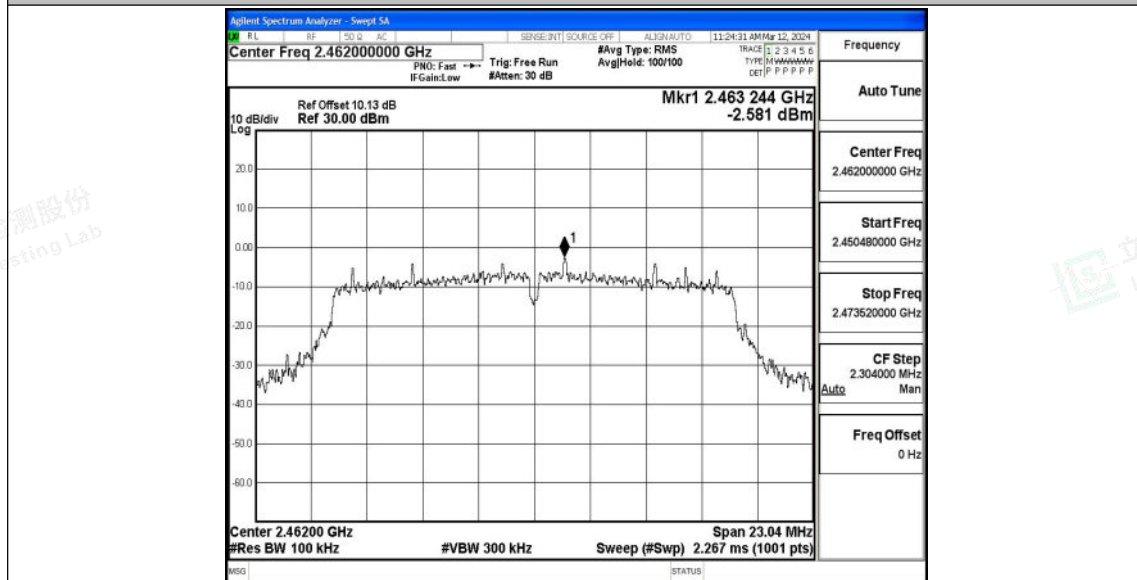


11G_Ant1_2437



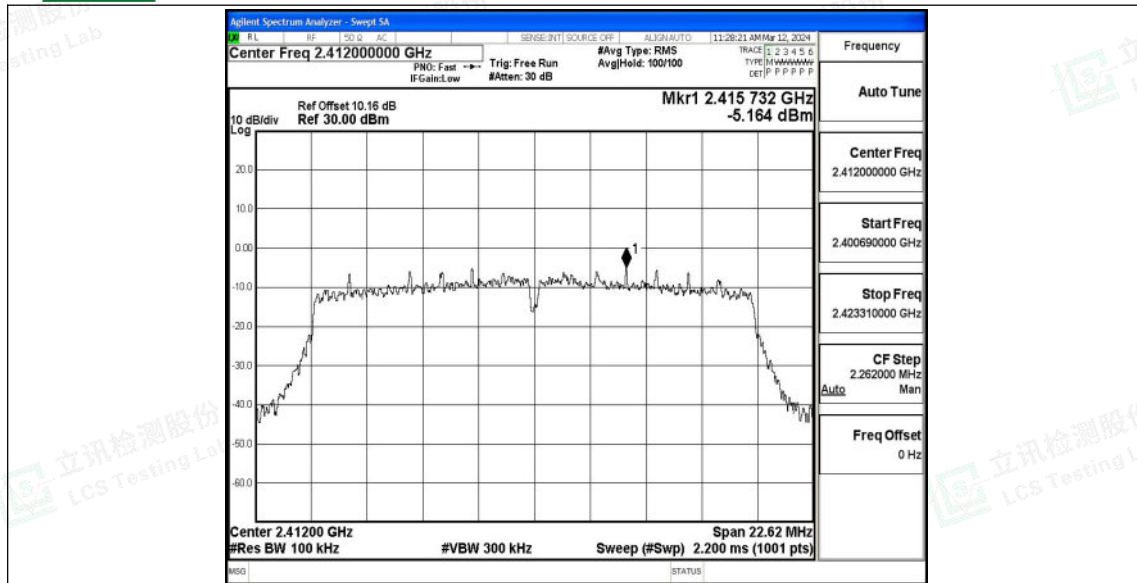


11G_Ant1_2462

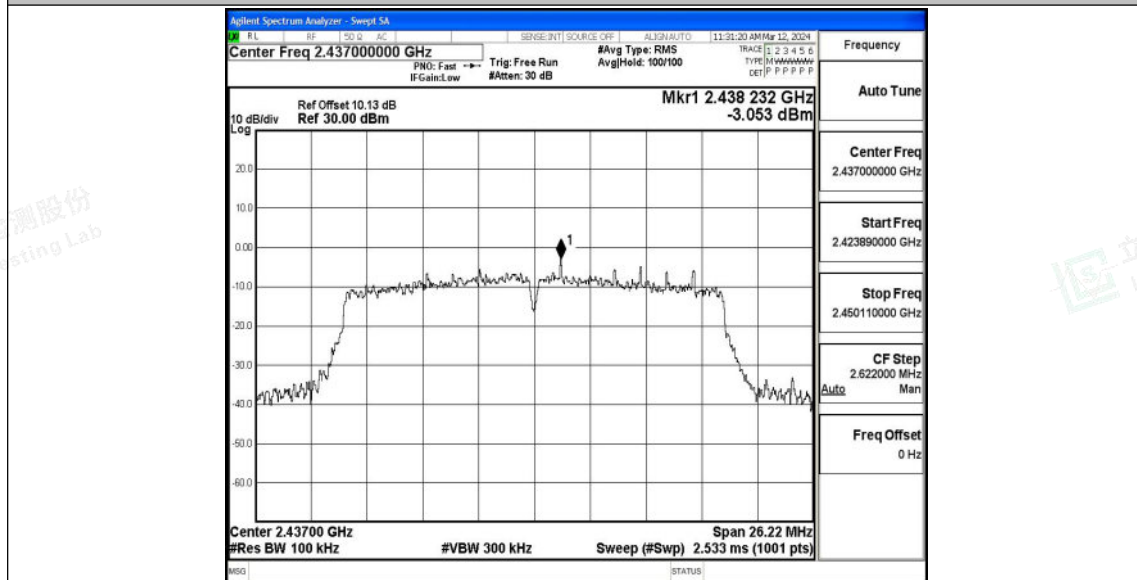


11N20SISO_Ant1_2412



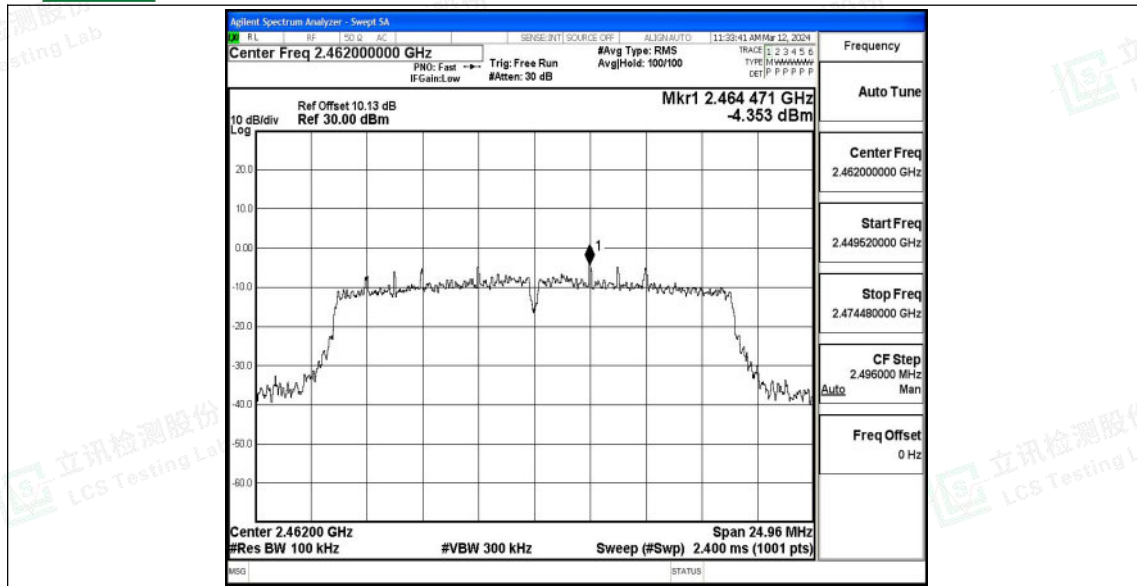


11N20SISO_Ant1_2437



11N20SISO_Ant1_2462





C.6 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	Transmission Duration	Transmission Period [ms]	Duty Cycle	Factor	1/T Factor[kHz]	Verdict
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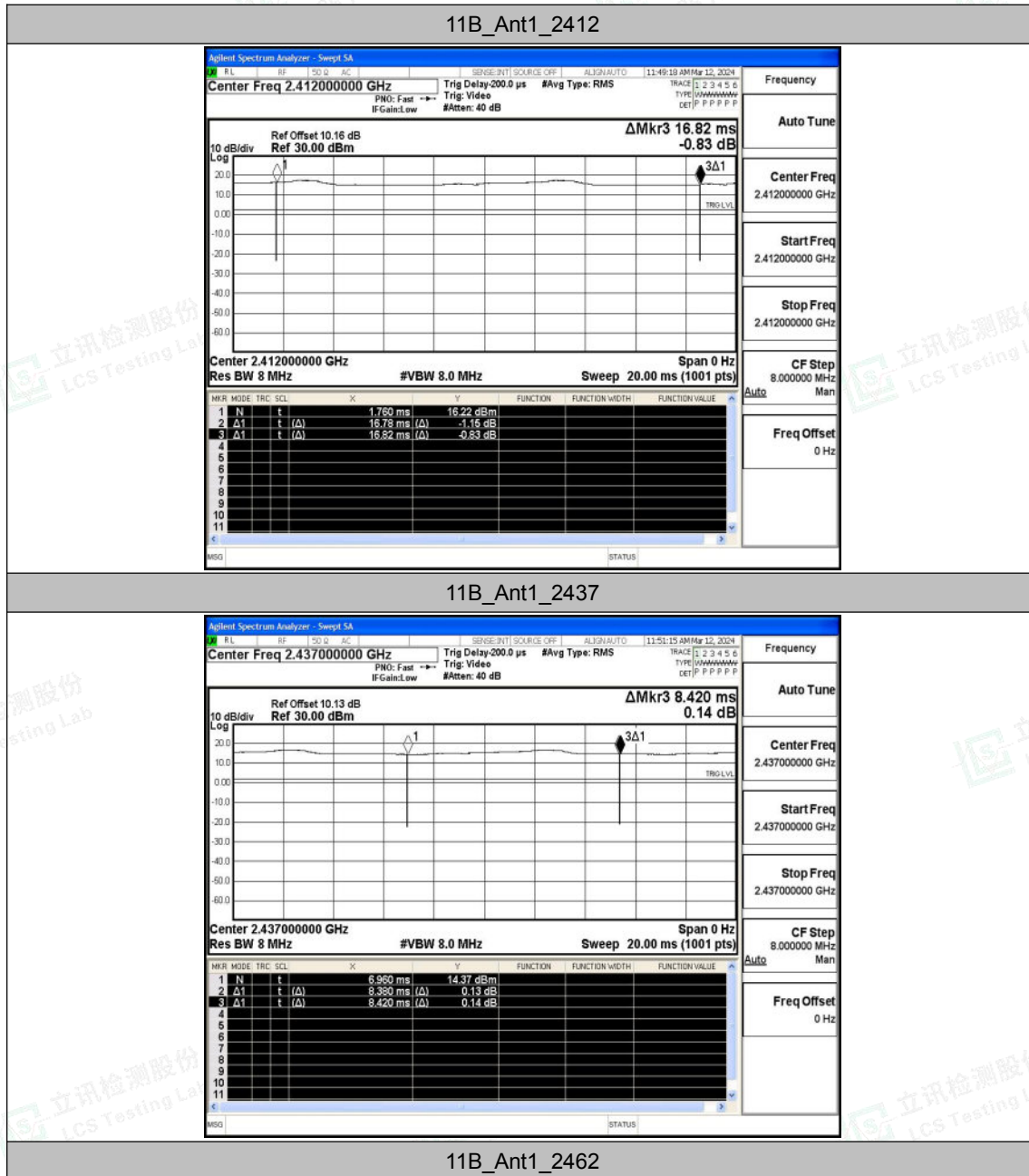


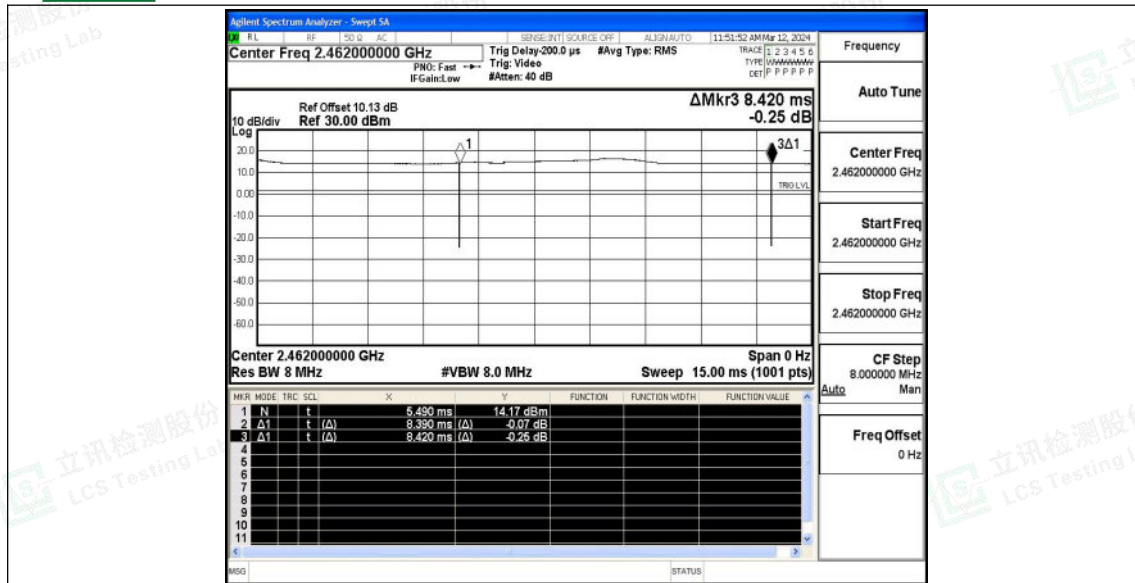
			[ms]		[%]			
11B	Ant1	2412	16.78	16.82	99.76	0.01	0.06	---
		2437	8.38	8.42	99.52	0.02	0.12	---
		2462	8.39	8.42	99.64	0.02	0.12	---
11G	Ant1	2412	1.39	1.43	97.20	0.12	0.72	---
		2437	1.39	1.43	97.20	0.12	0.72	---
		2462	1.39	1.42	97.89	0.09	0.72	---
11N20SISO	Ant1	2412	1.30	1.34	97.01	0.13	0.77	---
		2437	1.30	1.34	97.01	0.13	0.77	---
		2462	1.30	1.33	97.74	0.10	0.77	---



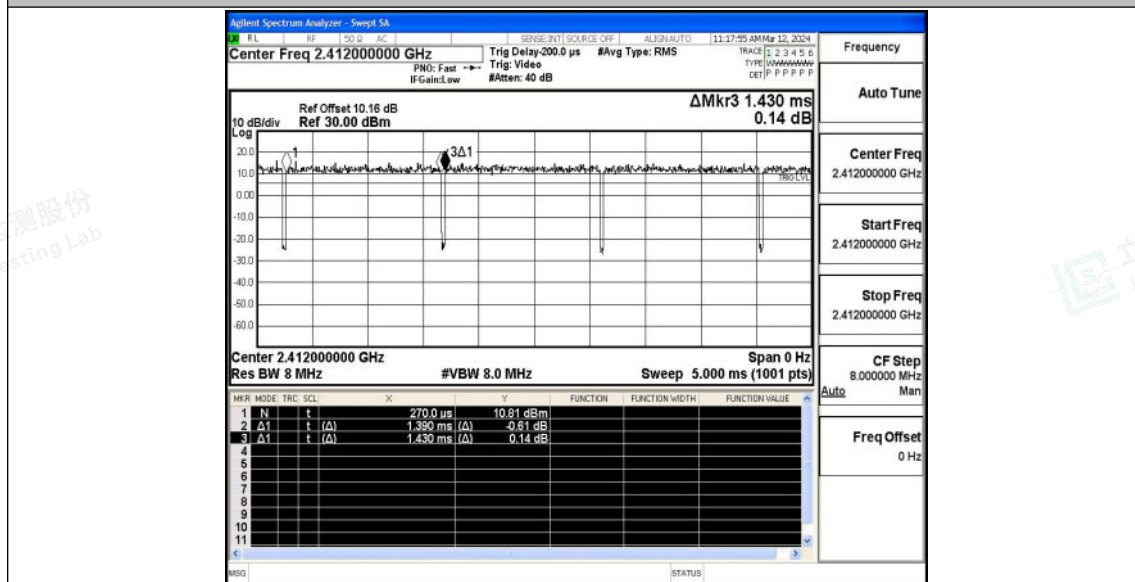


Test Graphs



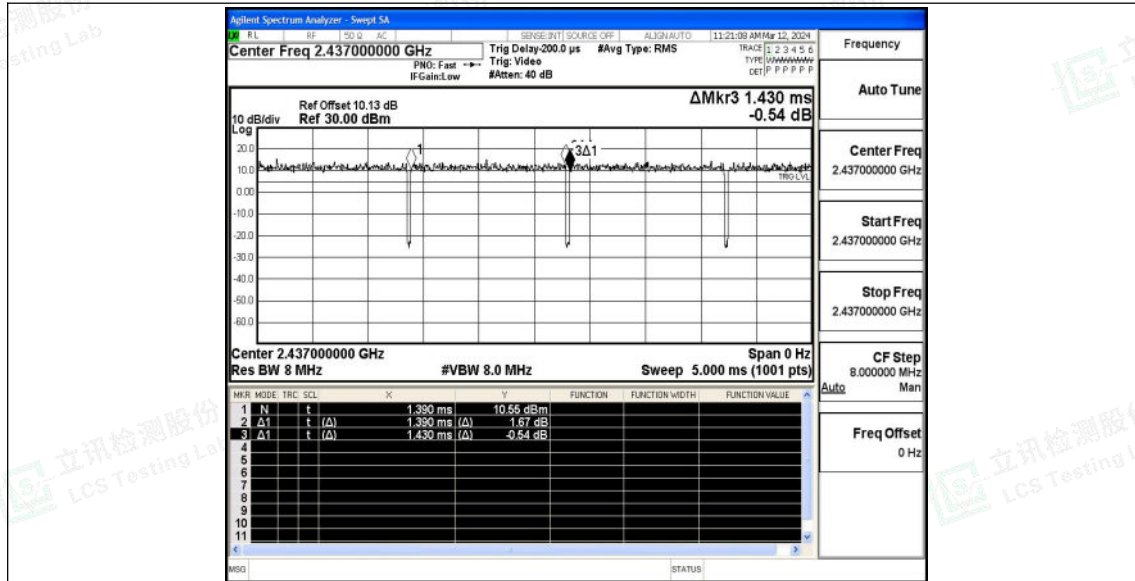


11G_Ant1_2412

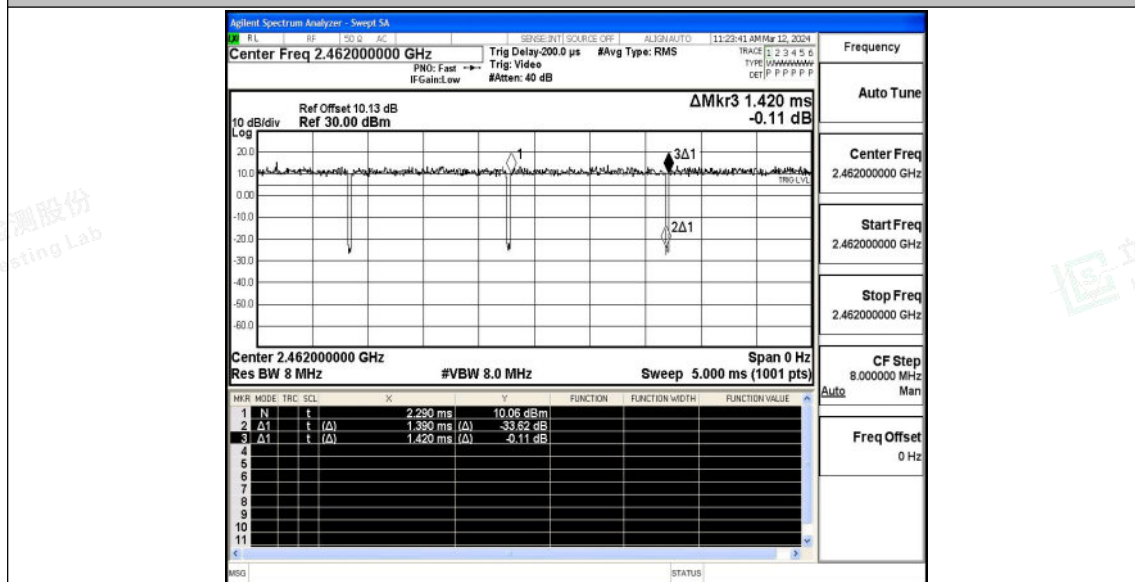


11G_Ant1_2437



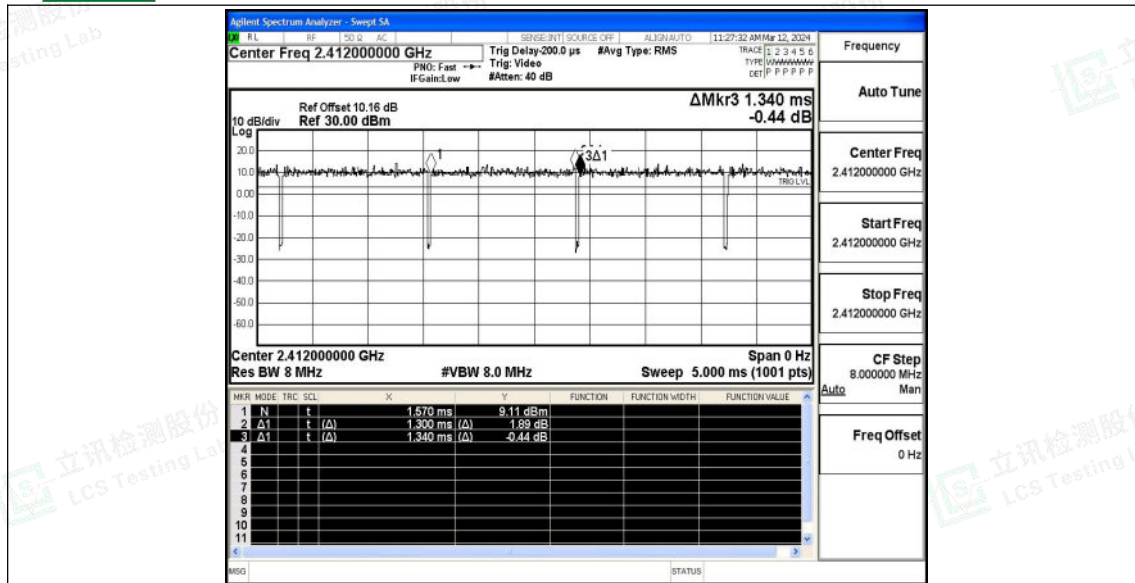


11G_Ant1_2462

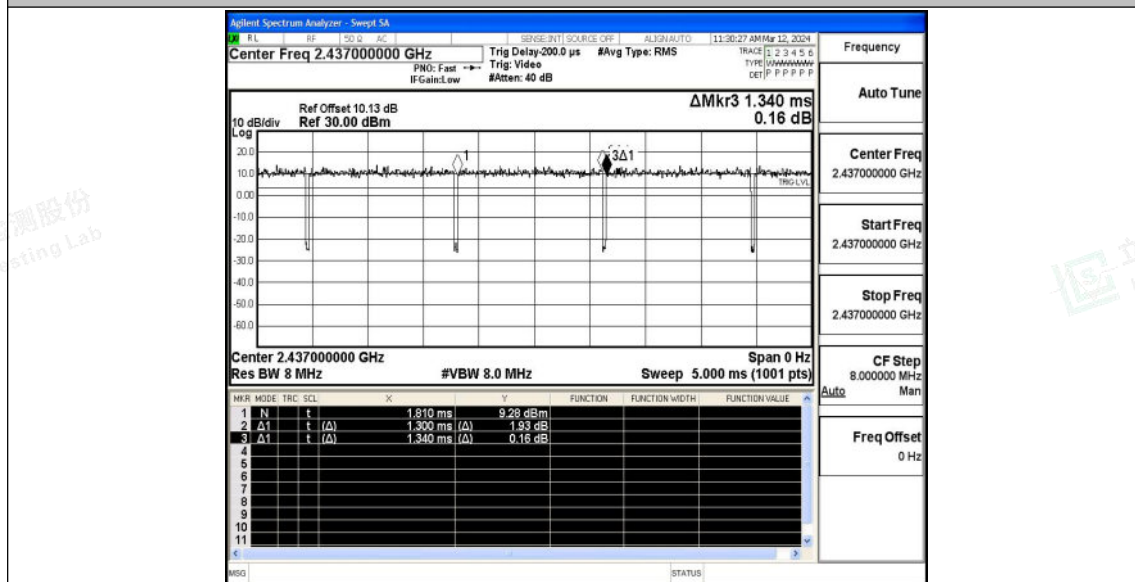


11N20SISO_Ant1_2412



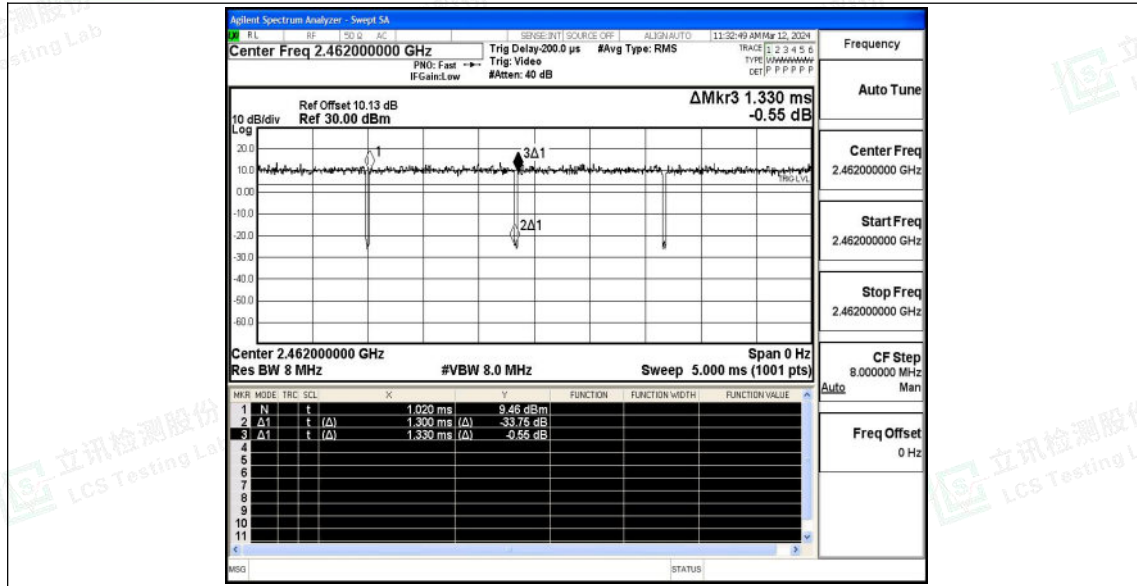


11N20SISO_Ant1_2437



11N20SISO_Ant1_2462







C.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-48.12	≤-41.20	47.08	≤54	PASS
				AV	2386.710	-45.28	≤-41.20	49.92	≤54	PASS
				AV	2390.000	-46.9	≤-41.20	48.30	≤54	PASS
				Peak	2310.000	-40.14	≤-21.20	55.06	≤74	PASS
				Peak	2377.870	-36.17	≤-21.20	59.03	≤74	PASS
				Peak	2390.000	-36.45	≤-21.20	58.75	≤74	PASS
		High	2462	AV	2483.500	-41.75	≤-41.20	53.45	≤54	PASS
				AV	2483.560	-42.29	≤-41.20	52.91	≤54	PASS
				AV	2500.000	-47.11	≤-41.20	48.09	≤54	PASS
				Peak	2483.500	-35.2	≤-21.20	60.00	≤74	PASS
				Peak	2484.440	-34.91	≤-21.20	60.29	≤74	PASS
				Peak	2500.000	-39.32	≤-21.20	55.88	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-48.05	≤-41.20	47.15	≤54	PASS
				AV	2389.960	-44.63	≤-41.20	50.57	≤54	PASS
				AV	2390.000	-44.63	≤-41.20	50.57	≤54	PASS
				Peak	2310.000	-40.01	≤-21.20	55.19	≤74	PASS
				Peak	2389.440	-33.11	≤-21.20	62.09	≤74	PASS
				Peak	2390.000	-35.27	≤-21.20	59.93	≤74	PASS
		High	2462	AV	2483.500	-43.07	≤-41.20	52.13	≤54	PASS
				AV	2483.890	-43.34	≤-41.20	51.86	≤54	PASS
				AV	2500.000	-47.46	≤-41.20	47.74	≤54	PASS
				Peak	2483.500	-33.52	≤-21.20	61.68	≤74	PASS
				Peak	2484.770	-32.29	≤-21.20	62.91	≤74	PASS
				Peak	2500.000	-39.09	≤-21.20	56.11	≤74	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-47.85	≤-41.20	47.35	≤54	PASS
				AV	2389.570	-45.78	≤-41.20	49.42	≤54	PASS
				AV	2390.000	-46.11	≤-41.20	49.09	≤54	PASS
				Peak	2310.000	-40.26	≤-21.20	54.94	≤74	PASS
				Peak	2389.960	-35.43	≤-21.20	59.77	≤74	PASS
				Peak	2390.000	-35.43	≤-21.20	59.77	≤74	PASS
		High	2462	AV	2483.500	-43.95	≤-41.20	51.25	≤54	PASS
				AV	2483.560	-43.43	≤-41.20	51.77	≤54	PASS
				AV	2500.000	-47.2	≤-41.20	48.00	≤54	PASS
				Peak	2483.500	-32.74	≤-21.20	62.46	≤74	PASS
				Peak	2483.560	-32.48	≤-21.20	62.72	≤74	PASS



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



				Peak	2500.000	-39.52	≤-21.20	55.68	≤74	PASS
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Note:

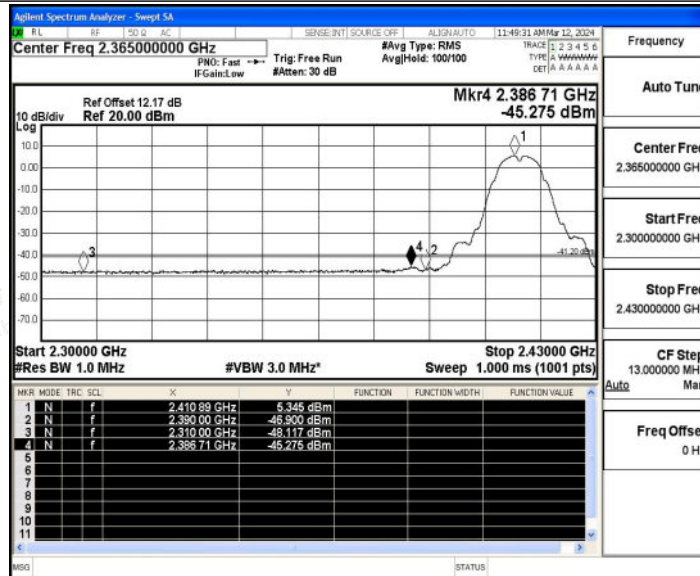
- 1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
- 2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



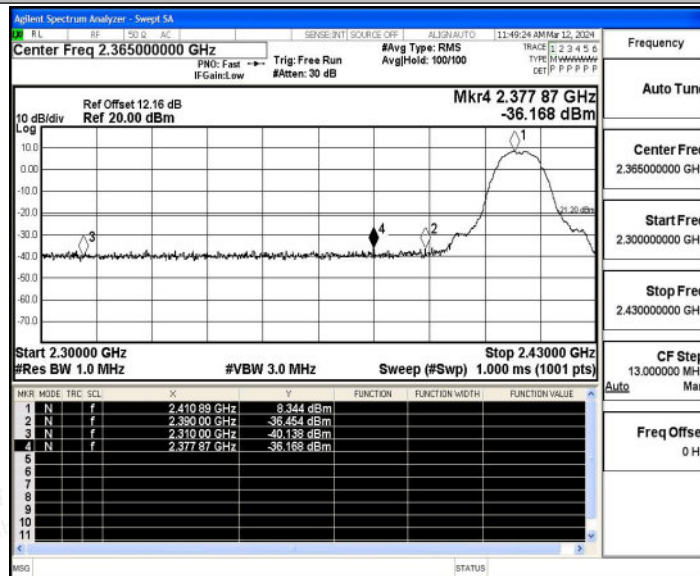


Test Graphs

11B_Ant1_Low_2412_AV

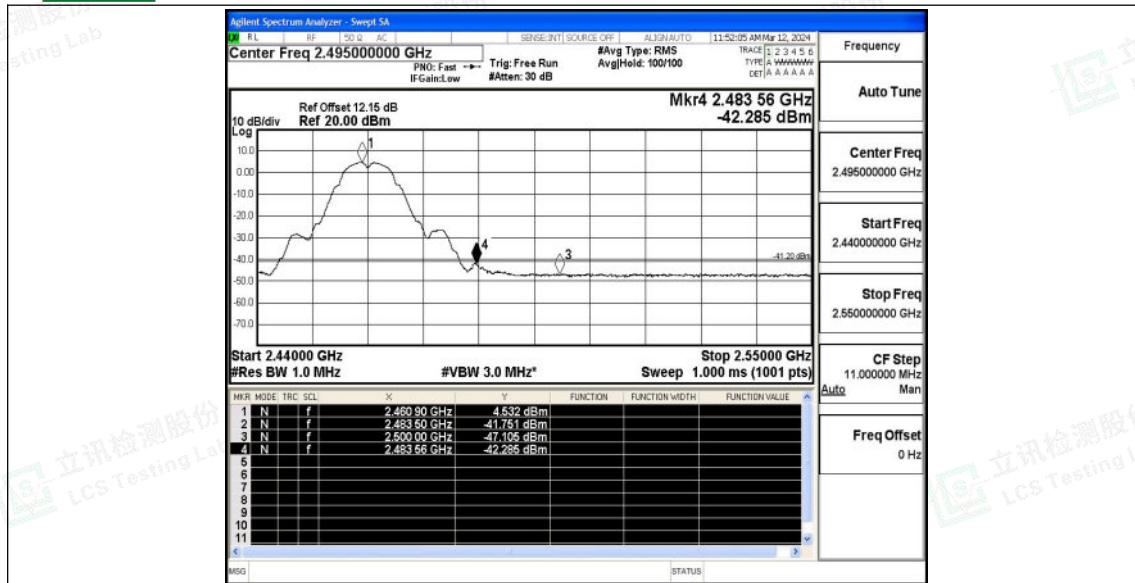


11B_Ant1_Low_2412_Peak

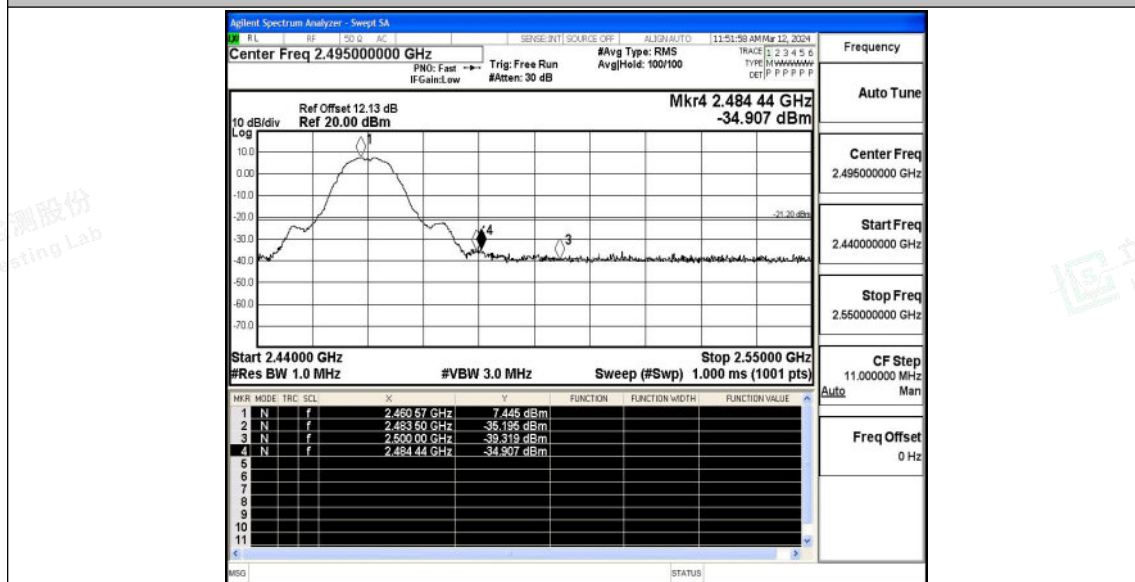


11B_Ant1_High_2462_AV



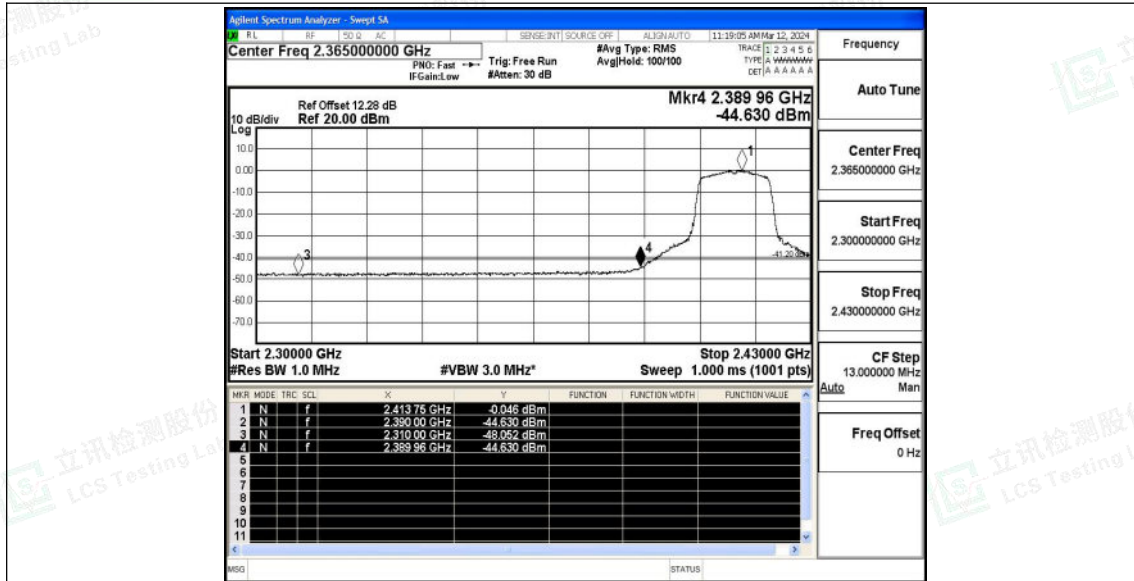


11B_Ant1_High_2462_Peak

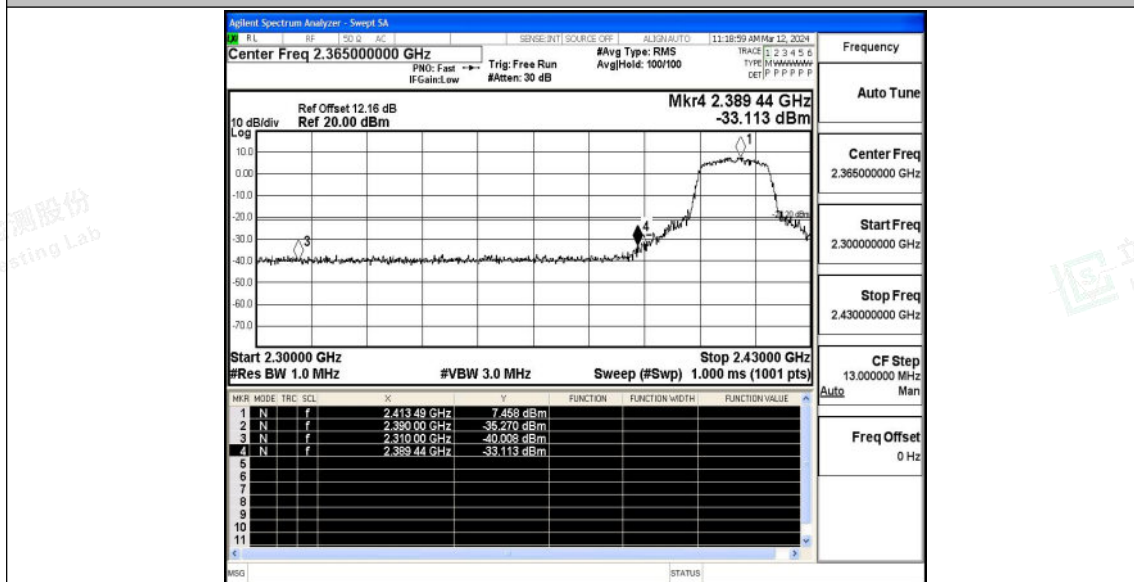


11G_Ant1_Low_2412_AV



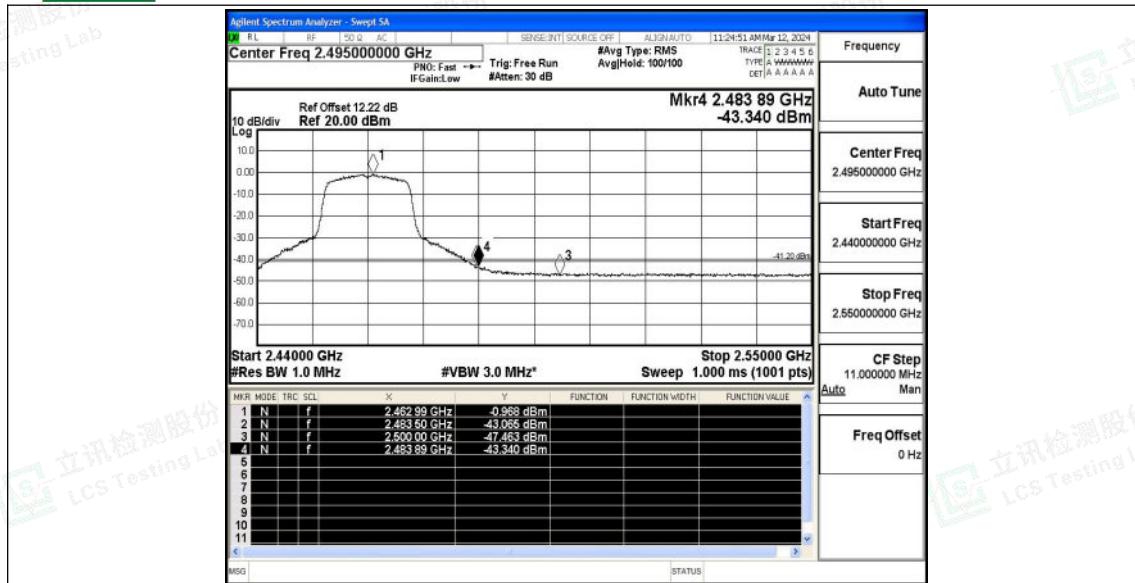


11G_Ant1_Low_2412_Peak

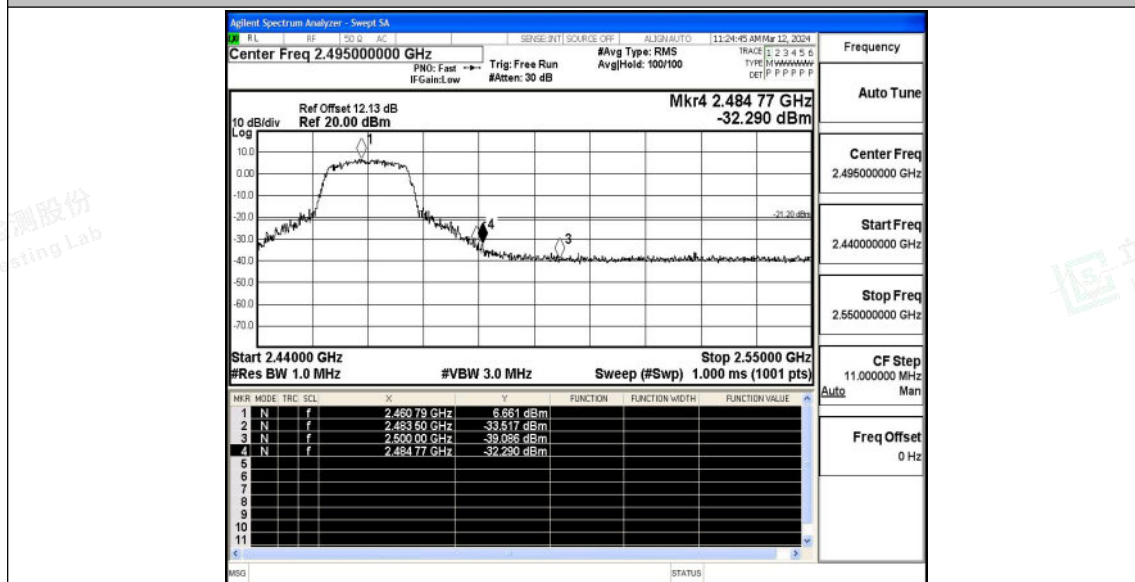


11G_Ant1_High_2462_AV



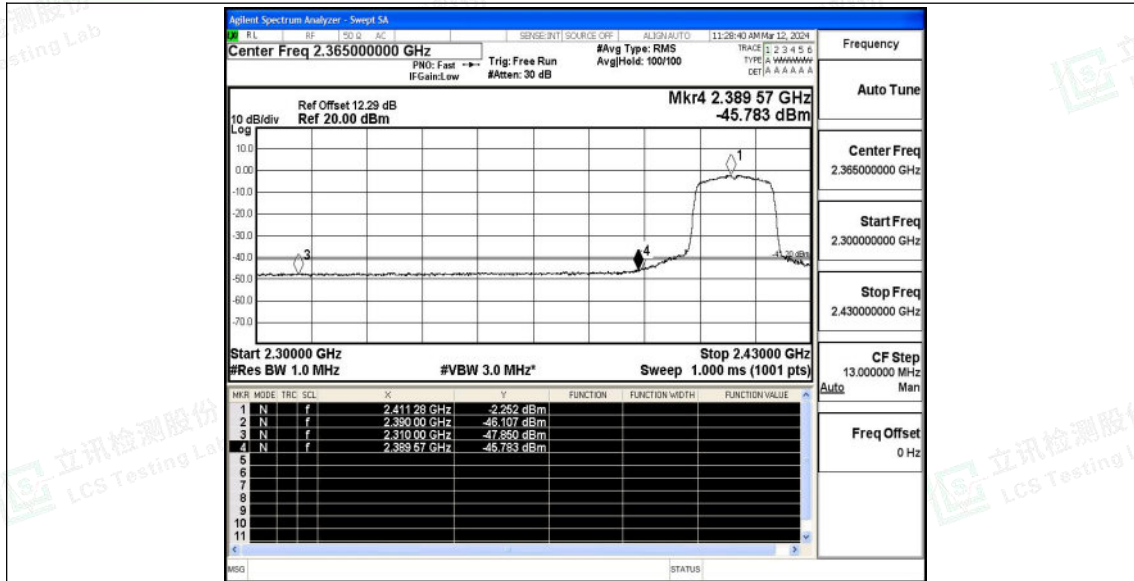


11G_Ant1_High_2462_Peak

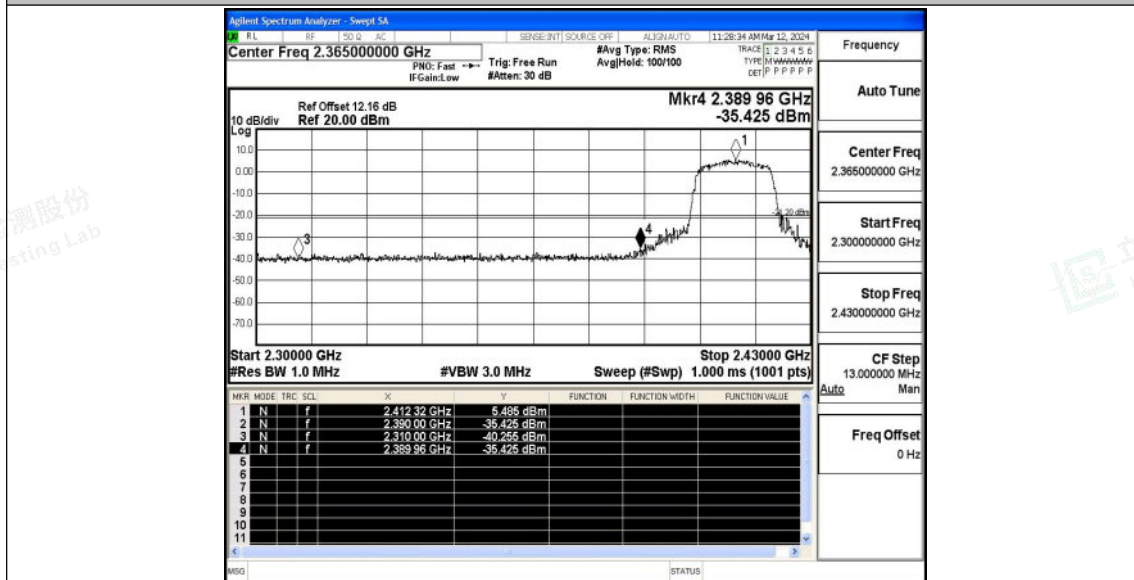


11N20SISO_Ant1_Low_2412_AV





11N20SISO_Ant1_Low_2412_Peak



11N20SISO_Ant1_High_2462_AV



