



Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: LED lamp

Test Model: TSZ8.5A19-LD001-CEC

Environmental Conditions

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



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B.1 DTS Bandwidth

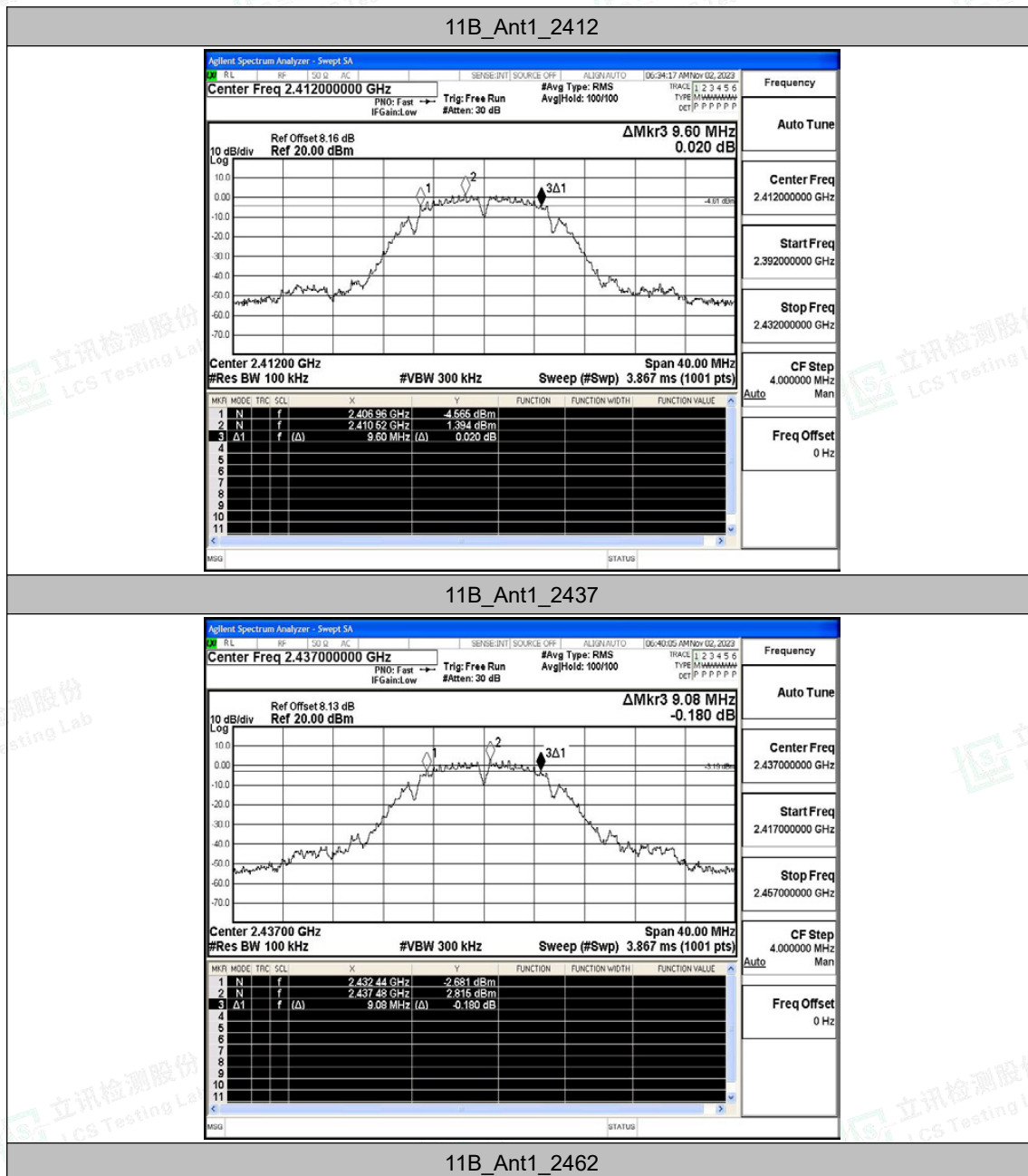
Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.600	2406.960	2416.560	0.5	PASS
		2437	9.080	2432.440	2441.520	0.5	PASS
		2462	9.040	2457.520	2466.560	0.5	PASS
11G	Ant1	2412	16.400	2403.800	2420.200	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.400	2453.840	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.560	2403.200	2420.760	0.5	PASS
		2437	16.360	2429.120	2445.480	0.5	PASS
		2462	17.520	2453.240	2470.760	0.5	PASS
11N40SISO	Ant1	2422	35.760	2404.400	2440.160	0.5	PASS
		2437	35.760	2419.080	2454.840	0.5	PASS
		2452	35.840	2434.080	2469.920	0.5	PASS





Test Graphs

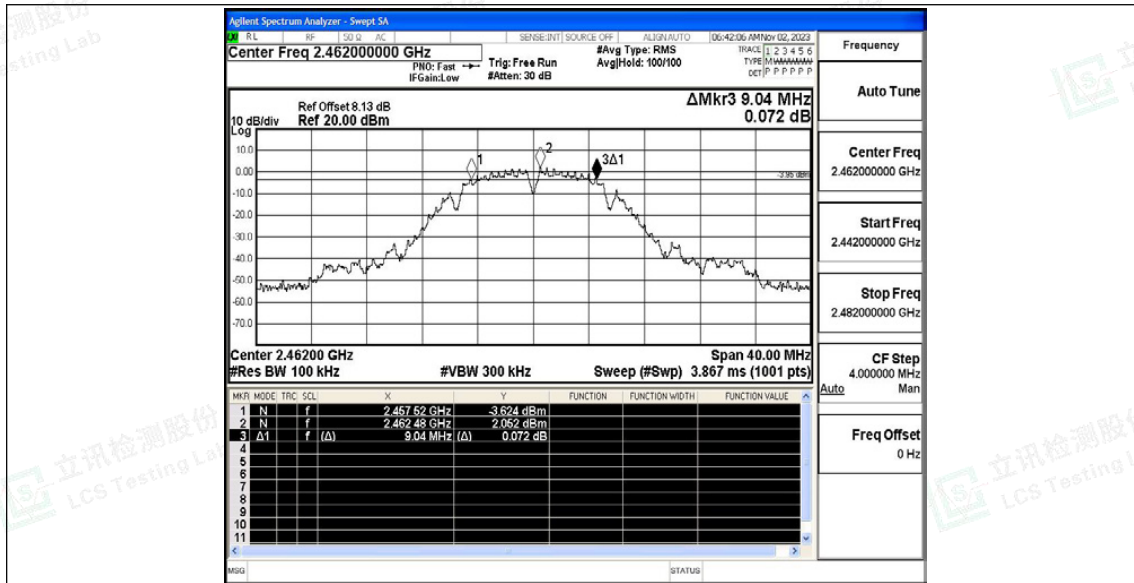


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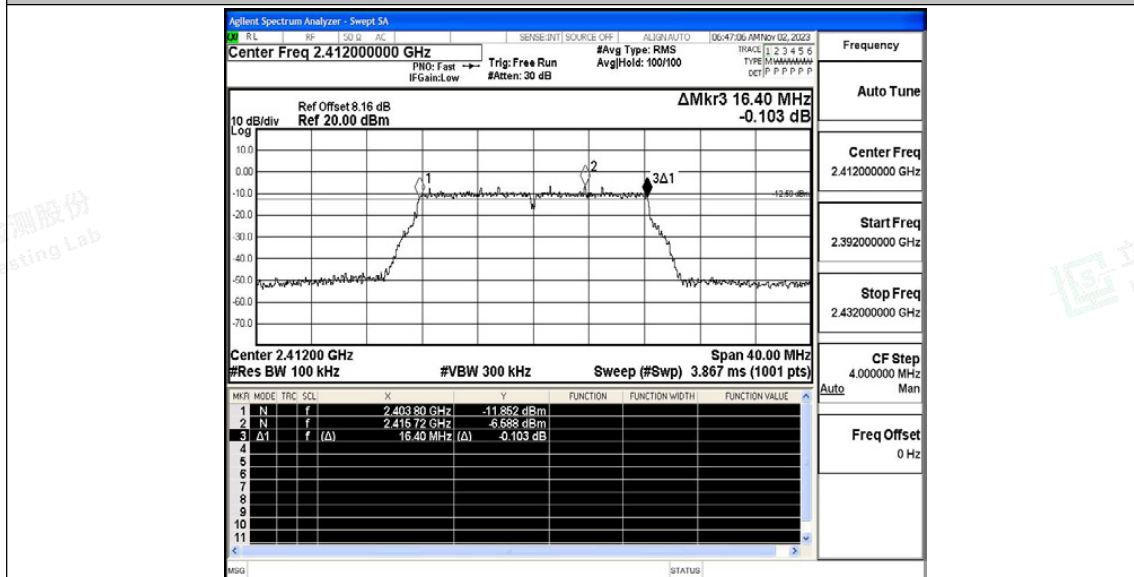
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11G_Ant1_2412



11G_Ant1_2437

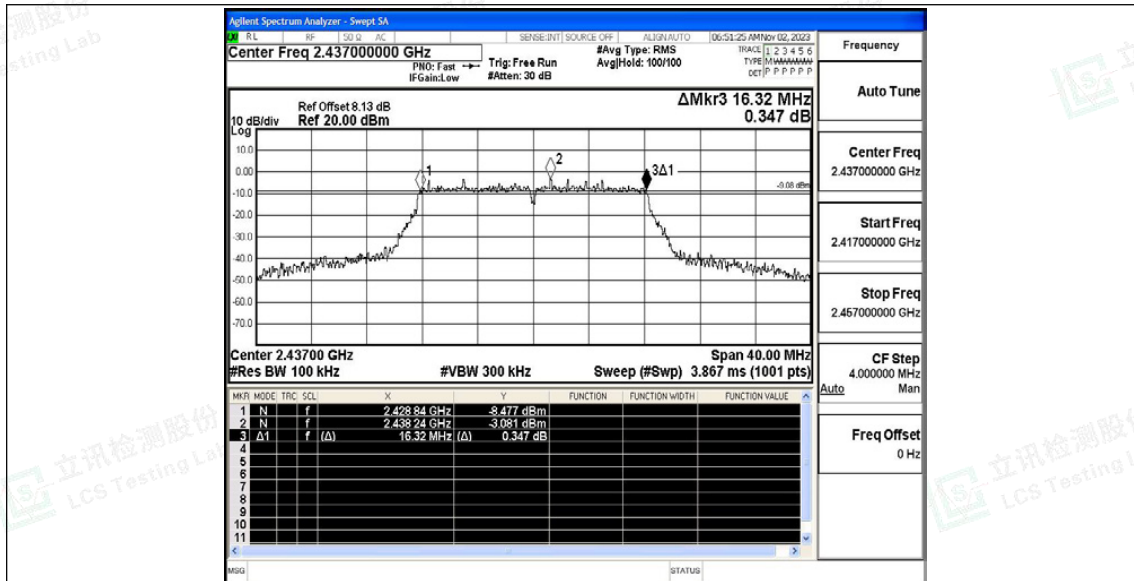


Shenzhen LCS Compliance Testing Laboratory Ltd.

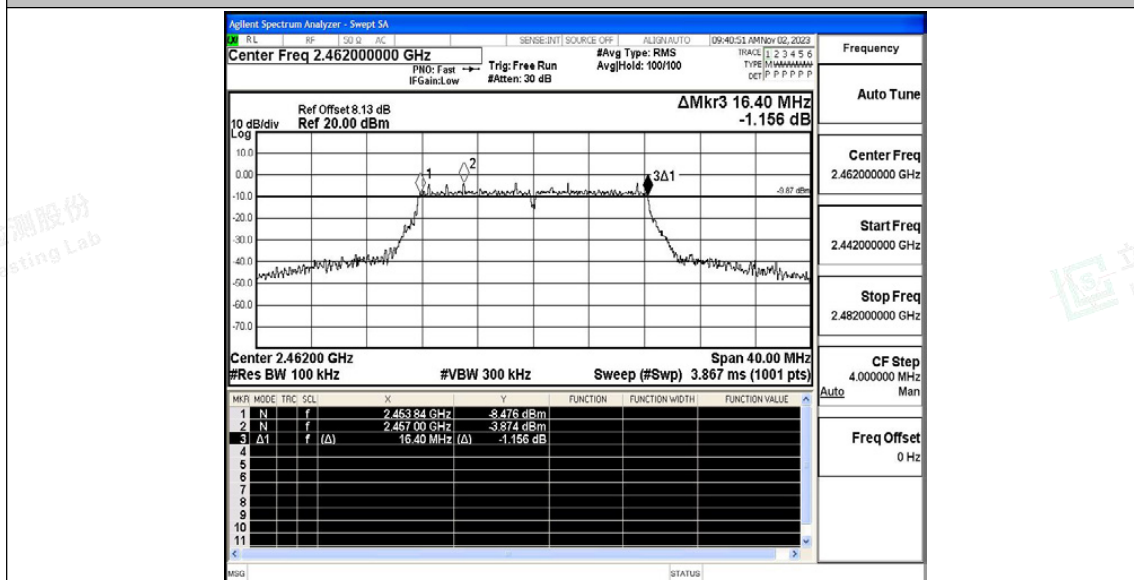
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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11G_Ant1_2462



11N20SISO_Ant1_2412

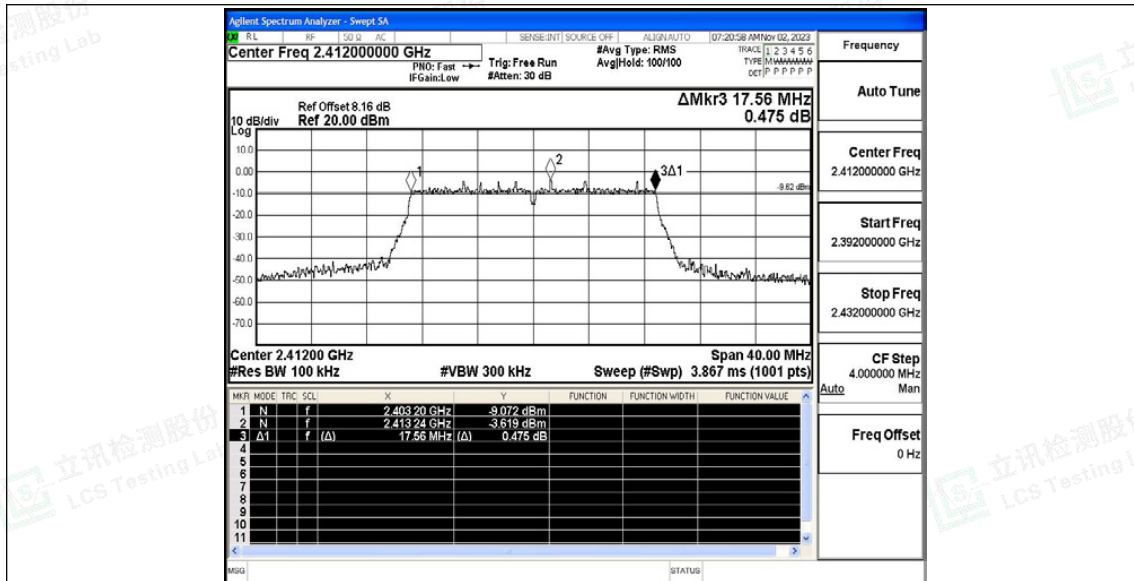


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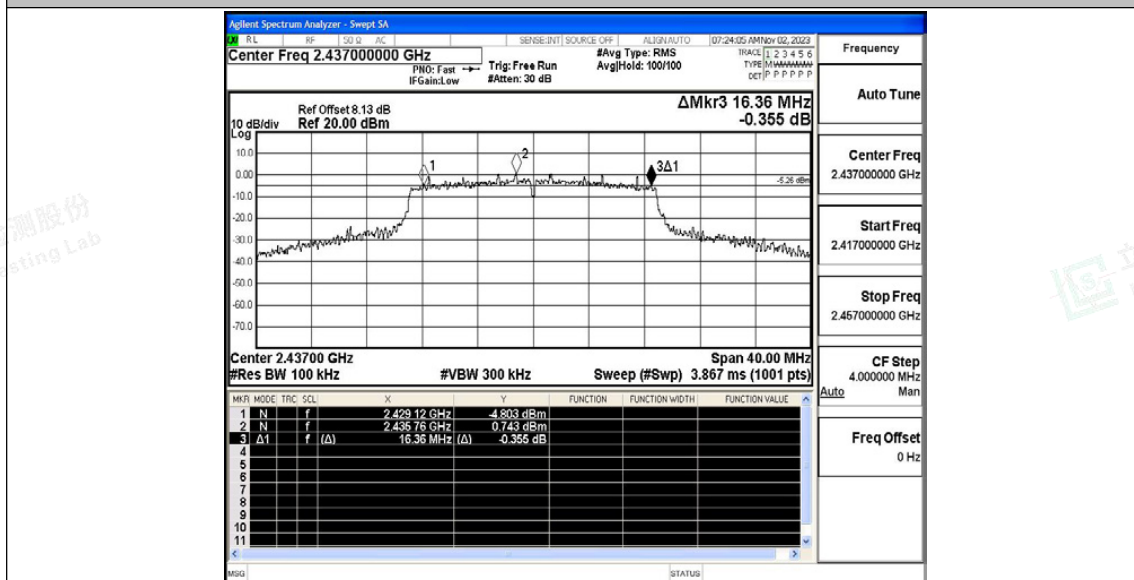
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

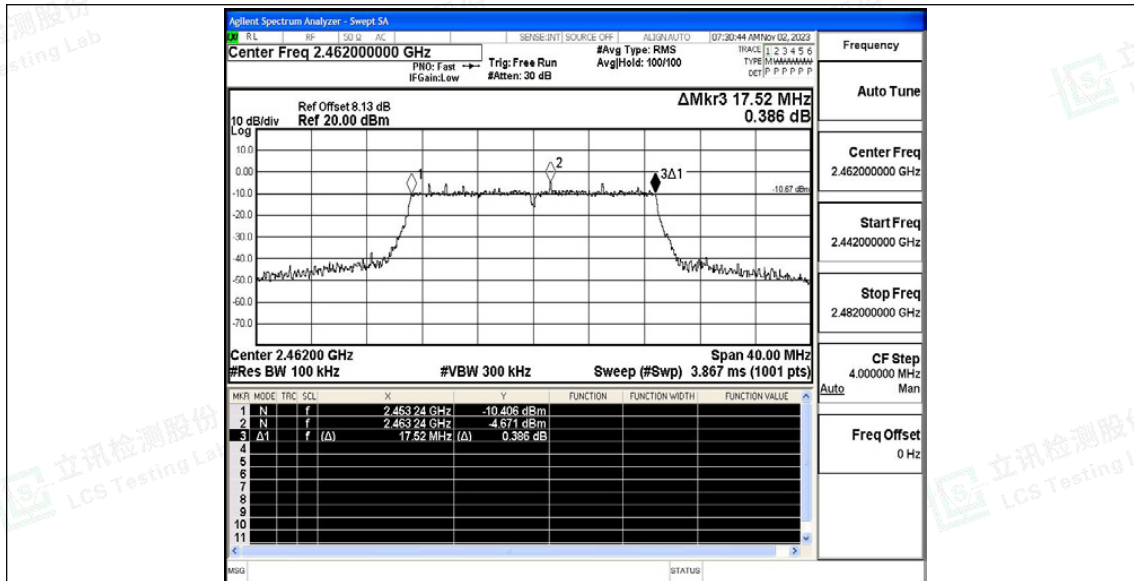


Shenzhen LCS Compliance Testing Laboratory Ltd.

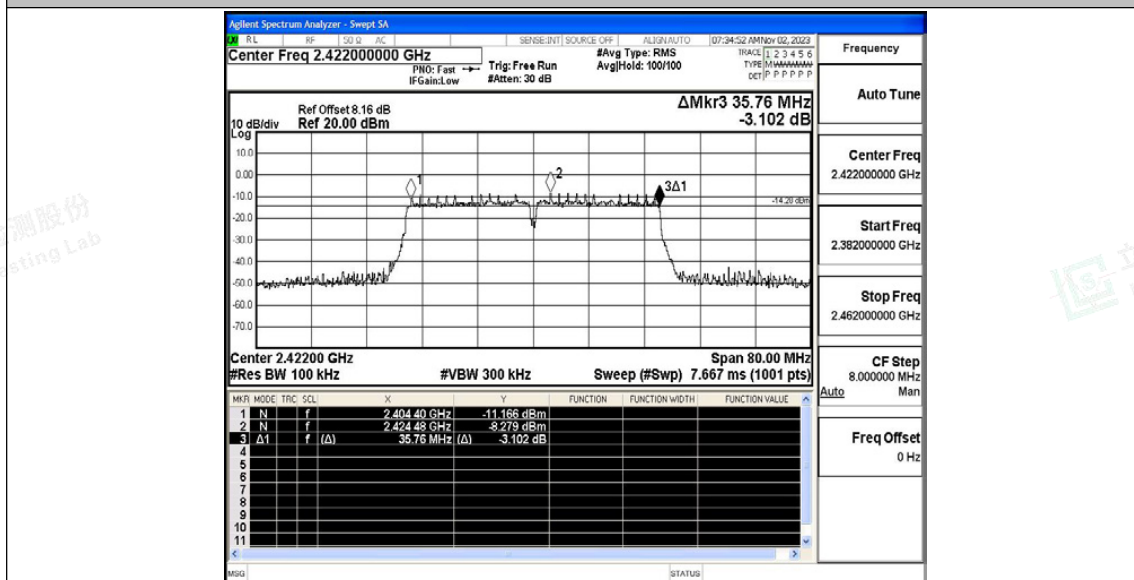
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11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

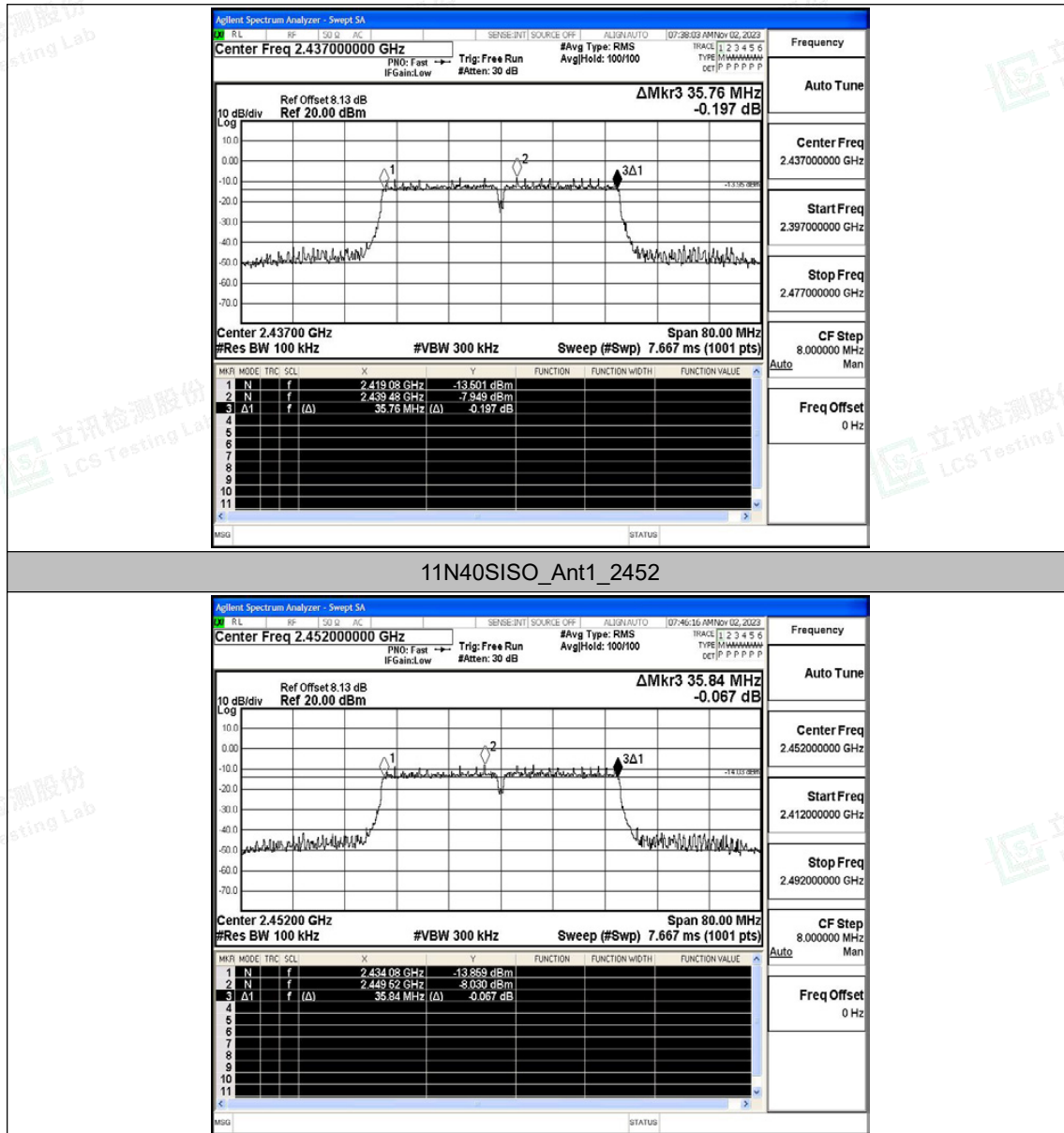


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B.2 Occupied Channel Bandwidth

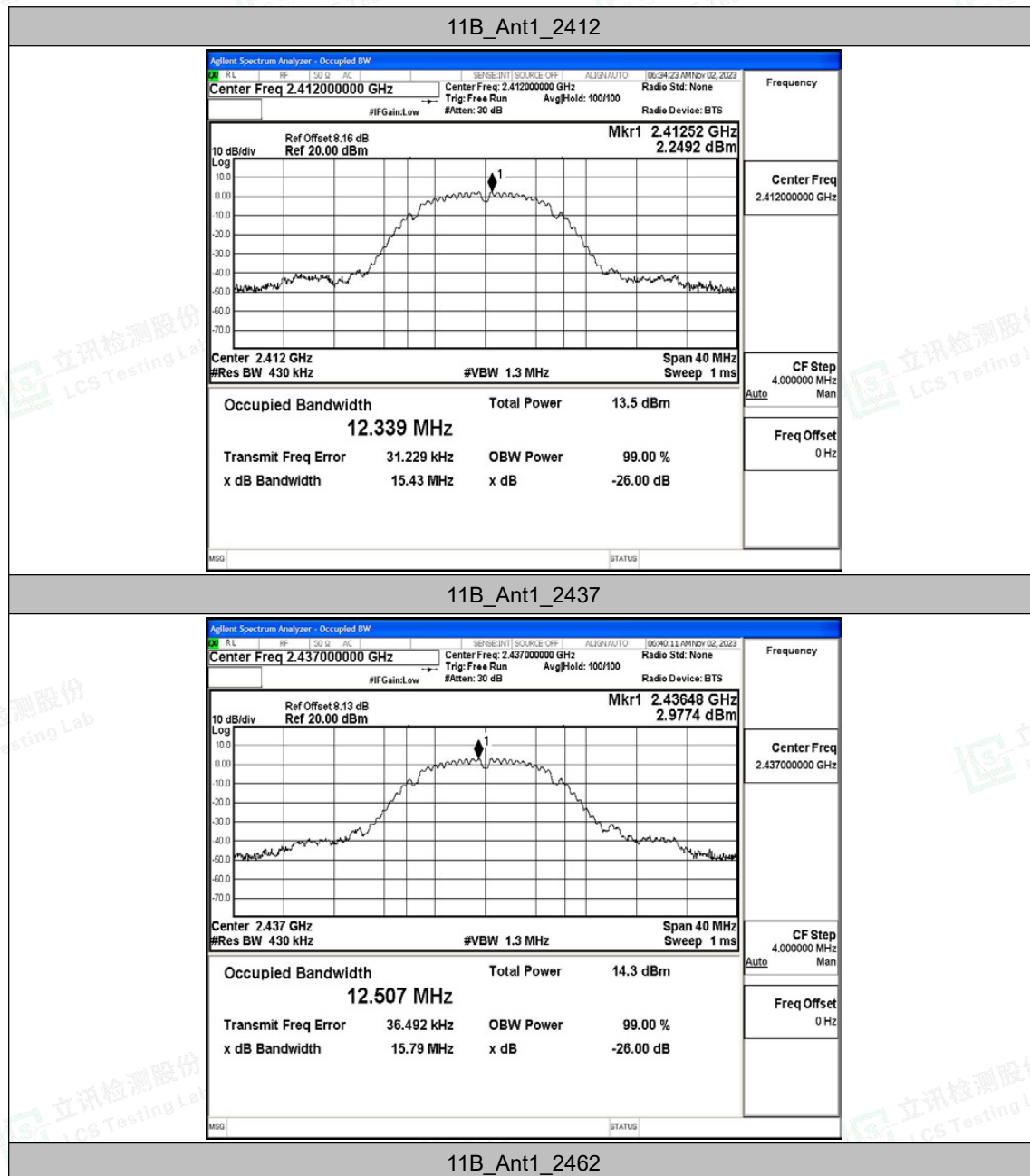
Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.339	2405.8617	2418.2007	---	---
		2437	12.507	2430.7830	2443.2900	---	---
		2462	12.585	2455.7530	2468.3380	---	---
11G	Ant1	2412	17.049	2403.4743	2420.5233	---	---
		2437	17.034	2428.4639	2445.4979	---	---
		2462	17.037	2453.4624	2470.4994	---	---
11N20SISO	Ant1	2412	17.901	2403.0552	2420.9562	---	---
		2437	17.970	2428.0313	2446.0013	---	---
		2462	17.941	2453.0364	2470.9774	---	---
11N40SISO	Ant1	2422	36.272	2403.9228	2440.1948	---	---
		2437	36.233	2418.8926	2455.1256	---	---
		2452	36.327	2433.9031	2470.2301	---	---





Test Graphs

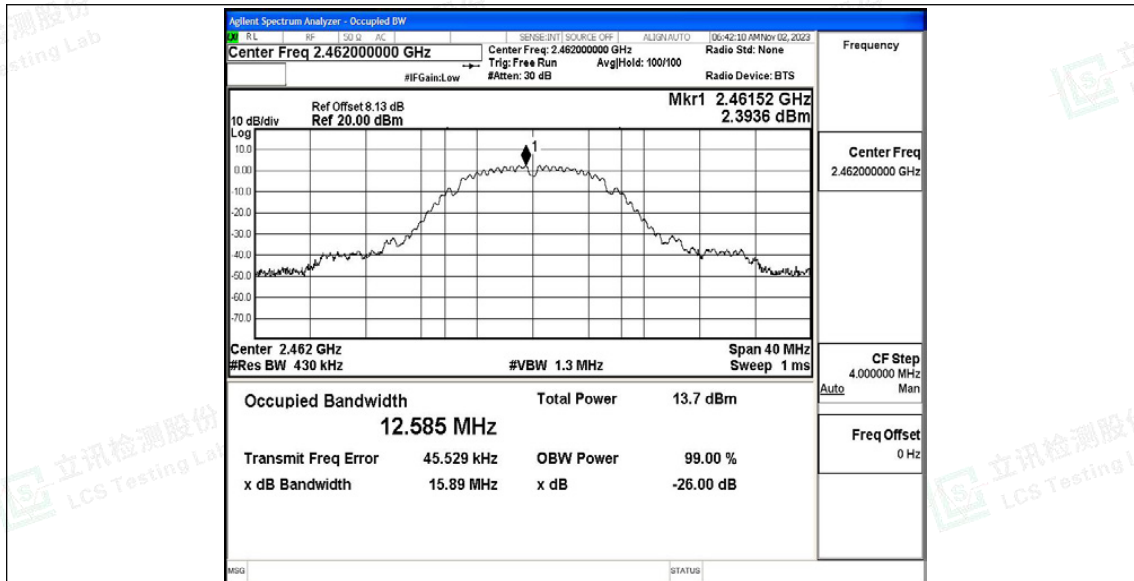


Shenzhen LCS Compliance Testing Laboratory Ltd.

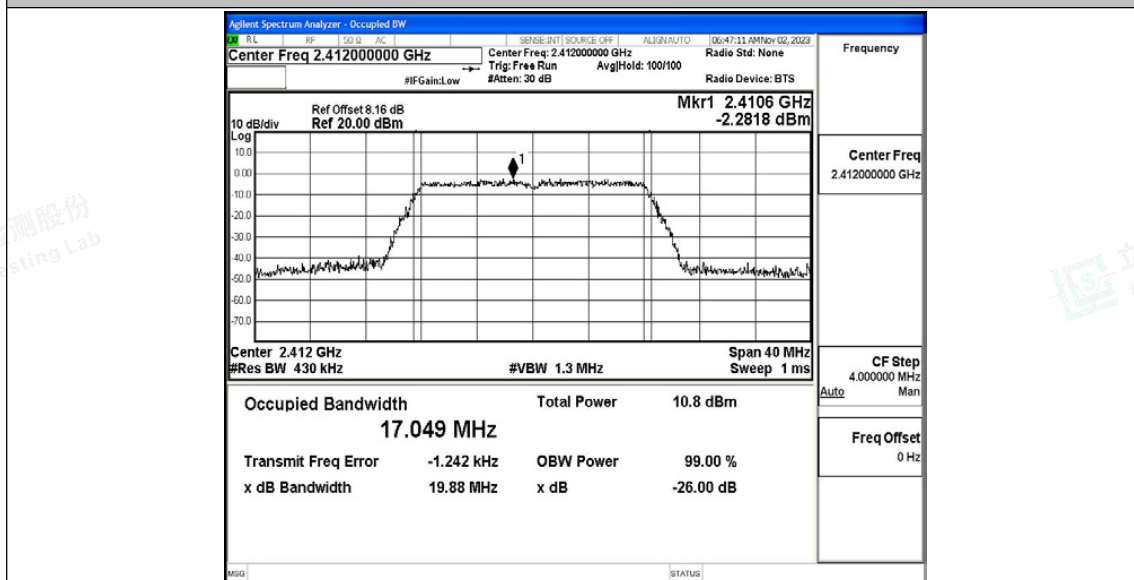
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11G_Ant1_2412



11G_Ant1_2437

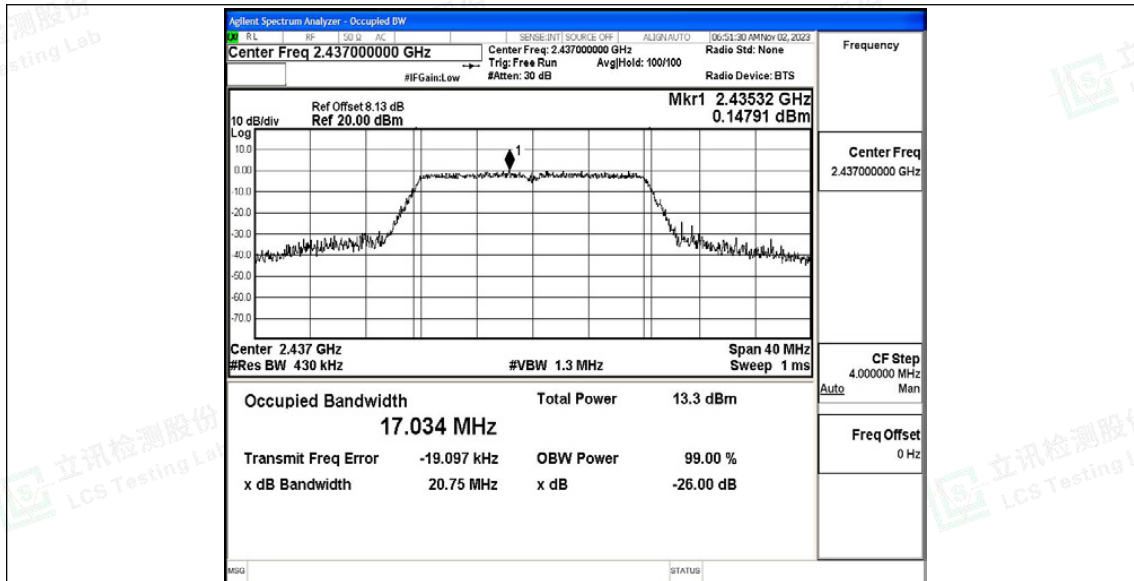


Shenzhen LCS Compliance Testing Laboratory Ltd.

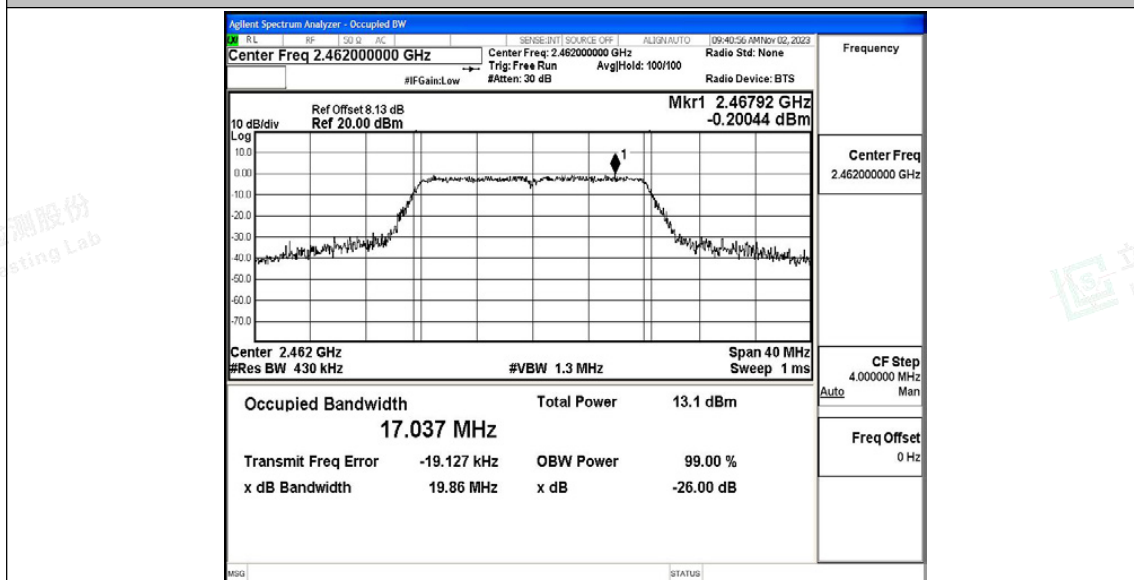
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11G_Ant1_2462



11N20SISO_Ant1_2412

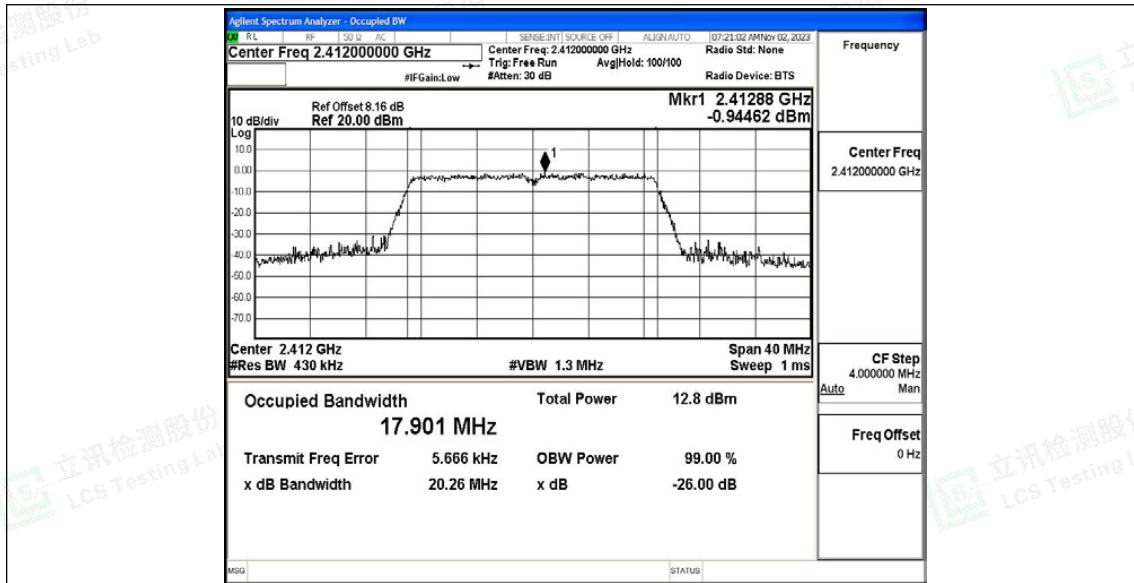


Shenzhen LCS Compliance Testing Laboratory Ltd.

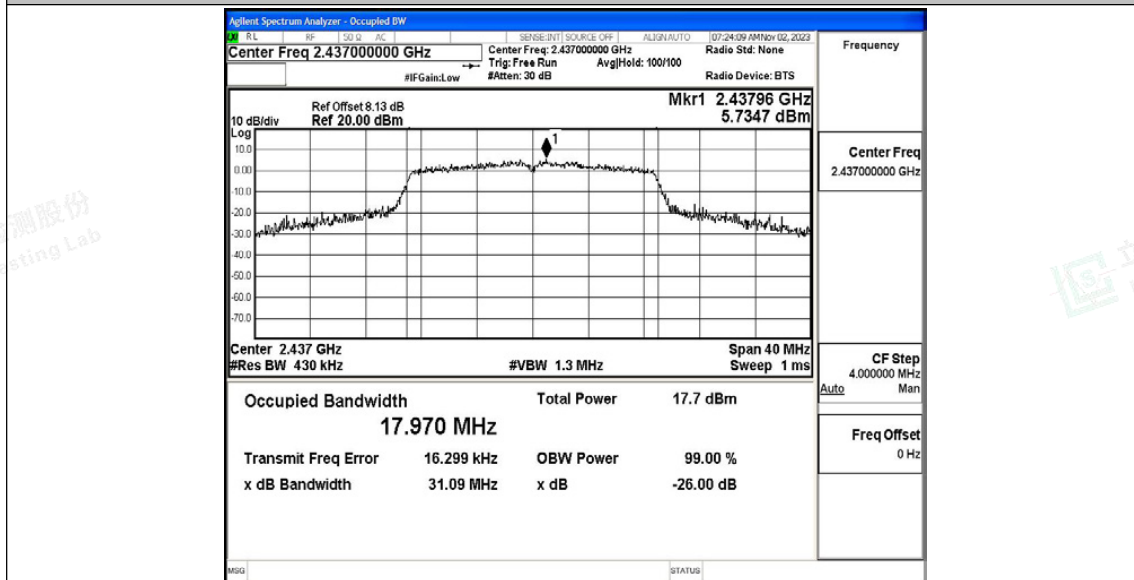
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

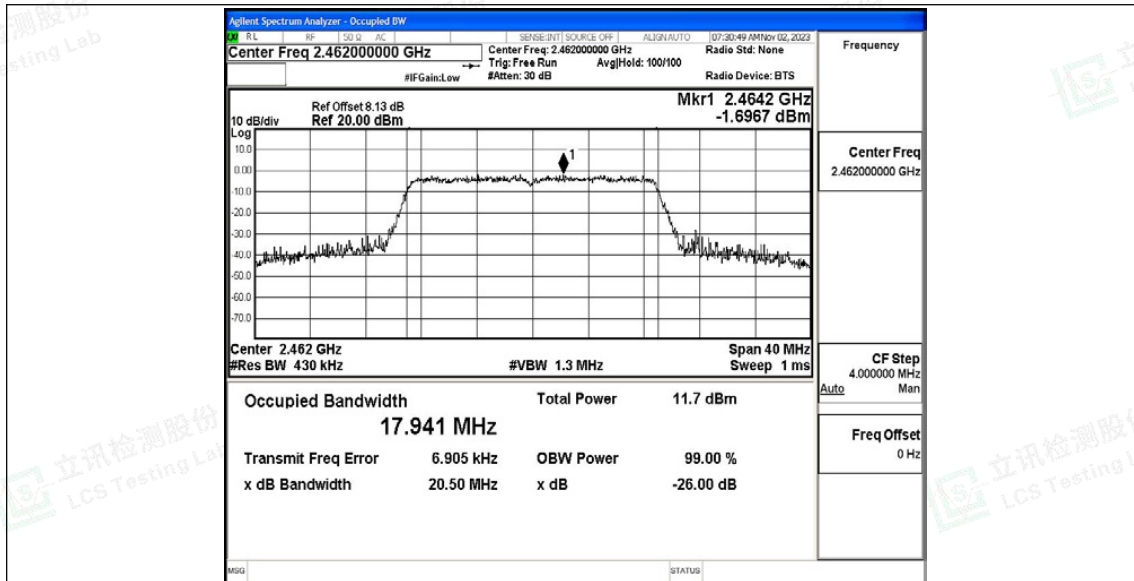


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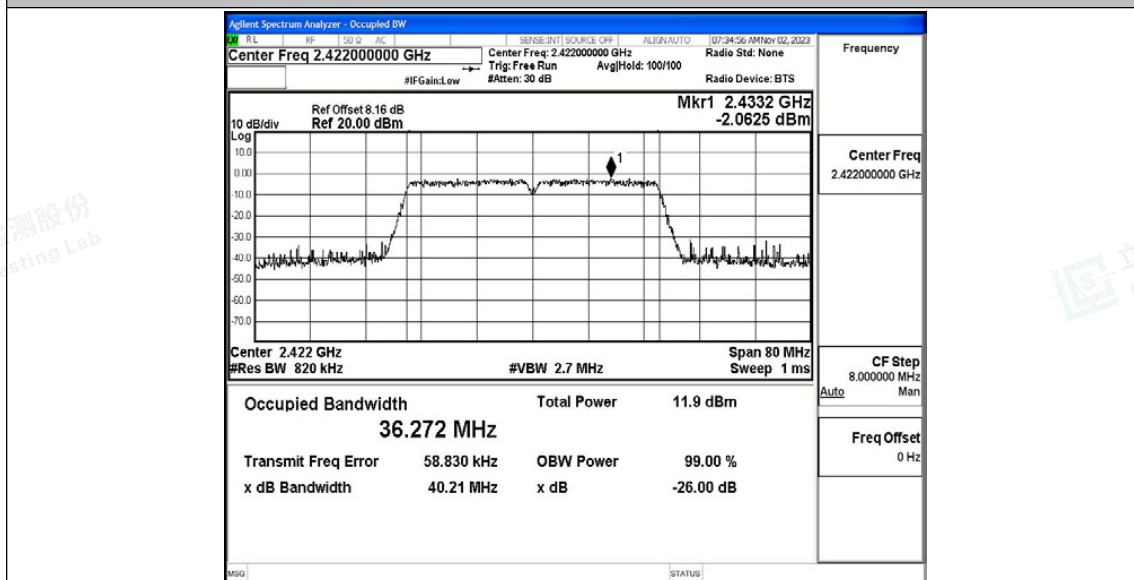
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11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

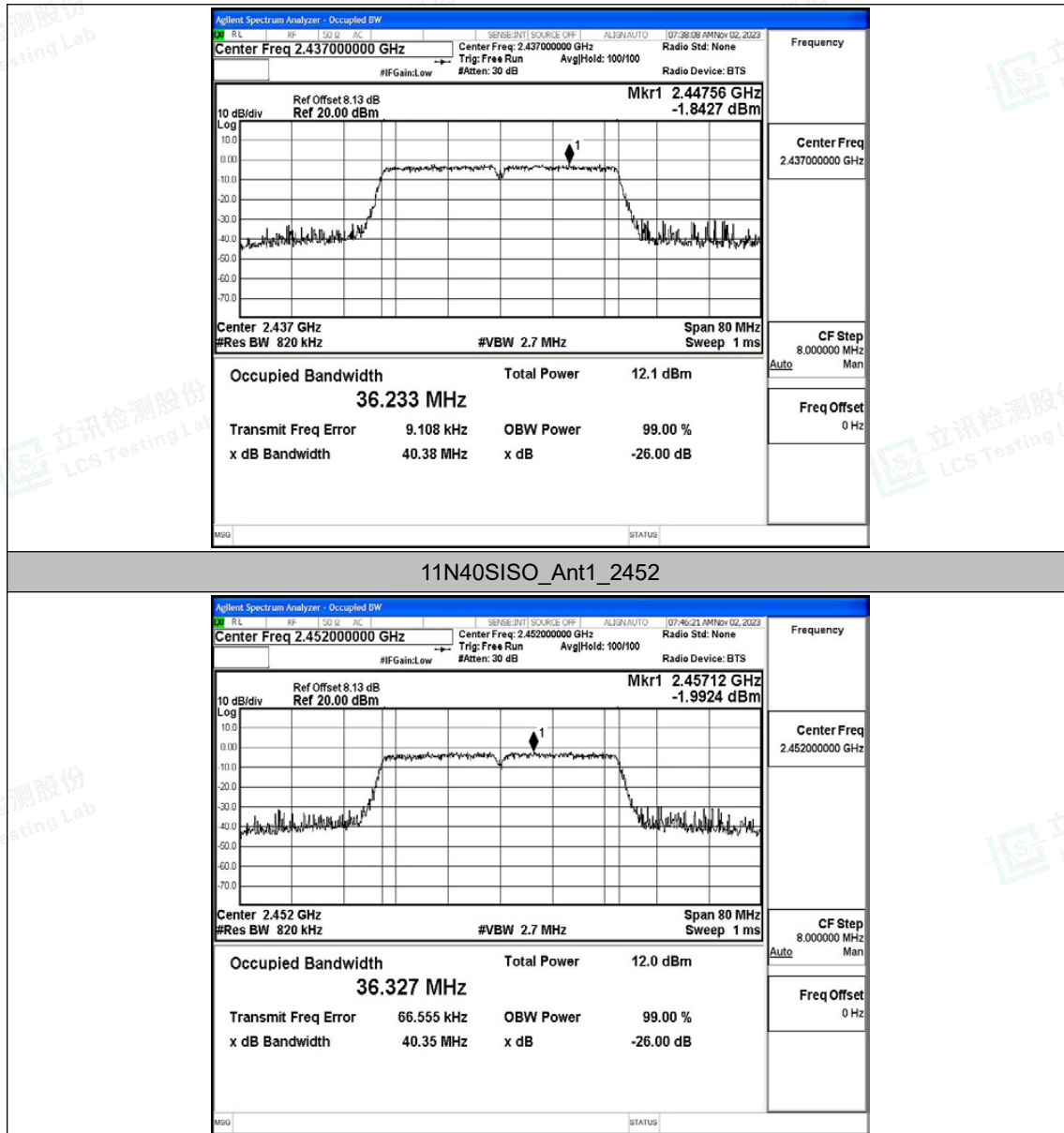


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B.3 Maximum Peak Conducted Output Power and e.i.r.p.

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Antenna gain [dBi]	EIRP [dBm]	EIRP Limit[dBm]	Verdict
11B	Ant1	2412	14.86	≤30.00	1.2	16.06	≤36.00	PASS
		2437	14.47	≤30.00	1.2	15.67	≤36.00	PASS
		2462	13.89	≤30.00	1.2	15.09	≤36.00	PASS
11G	Ant1	2412	14.31	≤30.00	1.2	15.51	≤36.00	PASS
		2437	14.35	≤30.00	1.2	15.55	≤36.00	PASS
		2462	14.01	≤30.00	1.2	15.21	≤36.00	PASS
11N20SISO	Ant1	2412	13.87	≤30.00	1.2	15.07	≤36.00	PASS
		2437	18.45	≤30.00	1.2	19.65	≤36.00	PASS
		2462	12.66	≤30.00	1.2	13.86	≤36.00	PASS
11N40SISO	Ant1	2422	12.36	≤30.00	1.2	13.56	≤36.00	PASS
		2437	12.55	≤30.00	1.2	13.75	≤36.00	PASS
		2452	12.29	≤30.00	1.2	13.49	≤36.00	PASS





B.4 Maximum power spectral density

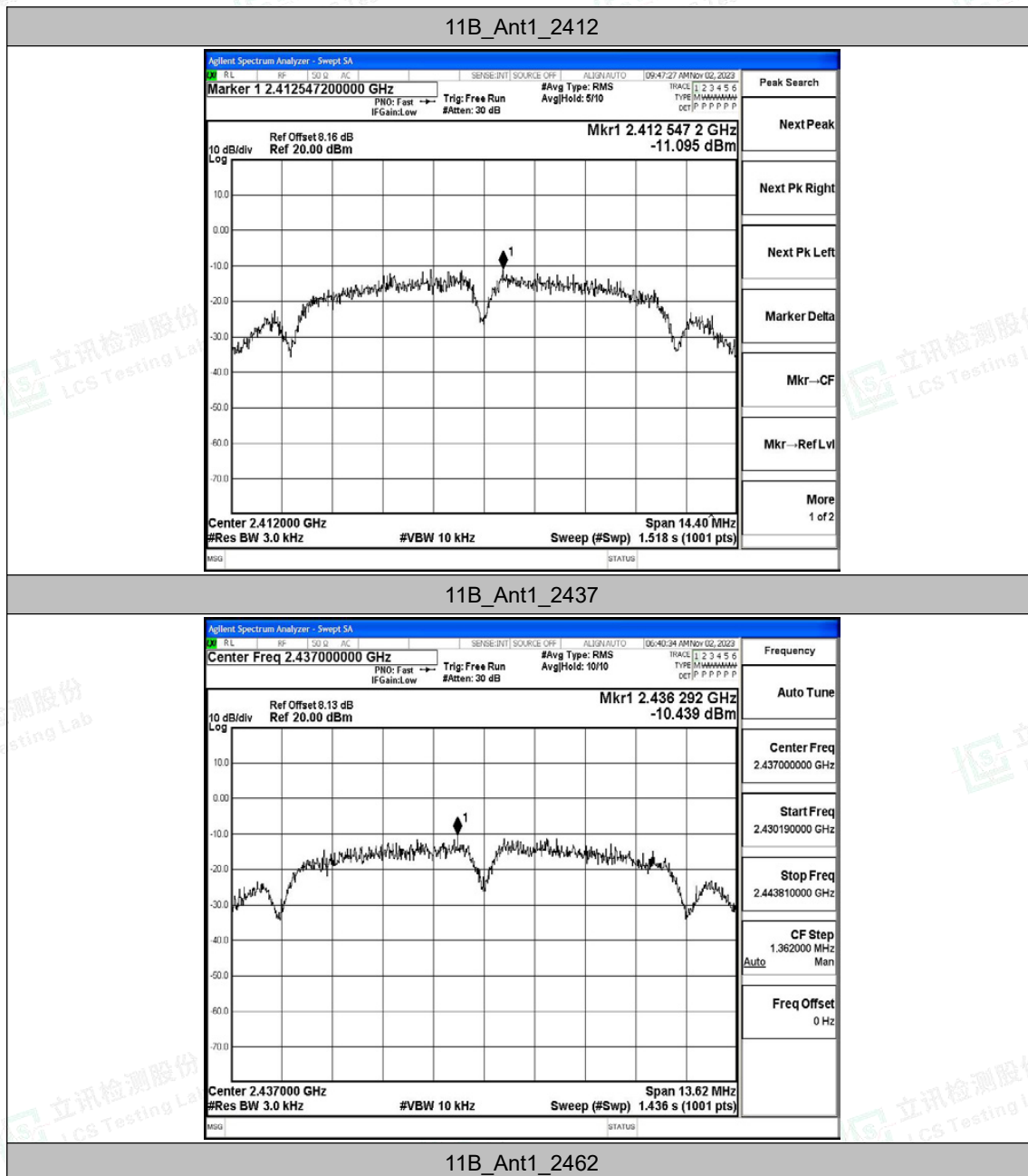
Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-11.10	≤8.00	PASS
		2437	-10.44	≤8.00	PASS
		2462	-11.02	≤8.00	PASS
11G	Ant1	2412	-17.29	≤8.00	PASS
		2437	-16.52	≤8.00	PASS
		2462	-17.72	≤8.00	PASS
11N20SISO	Ant1	2412	-17.46	≤8.00	PASS
		2437	-12.41	≤8.00	PASS
		2462	-18.65	≤8.00	PASS
11N40SISO	Ant1	2422	-21.76	≤8.00	PASS
		2437	-22.18	≤8.00	PASS
		2452	-21.63	≤8.00	PASS





Test Graphs

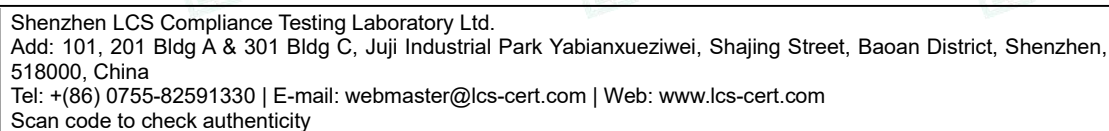
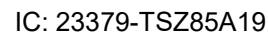


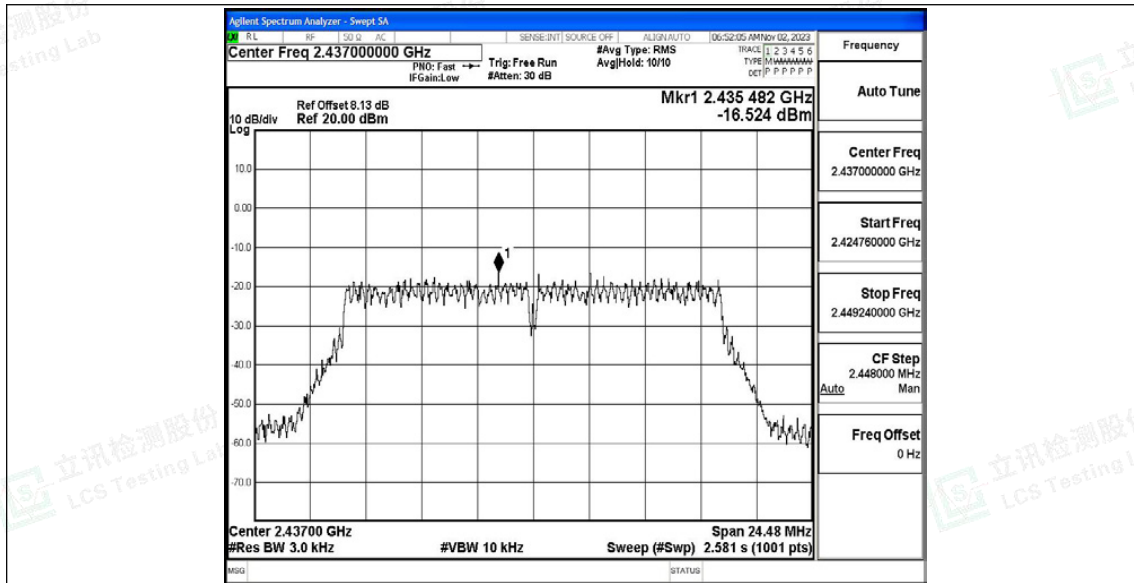
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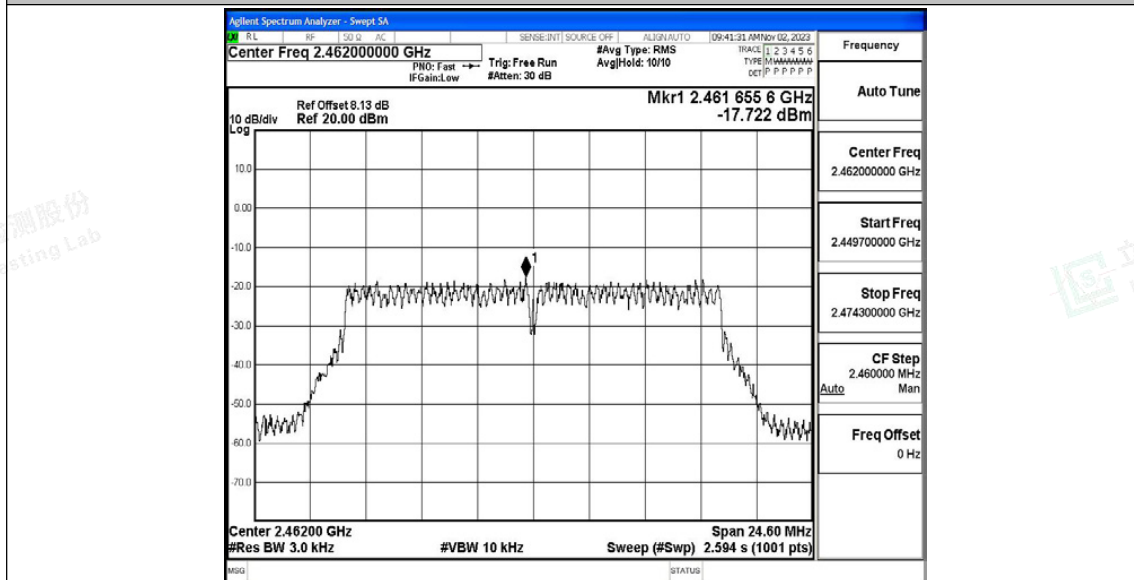
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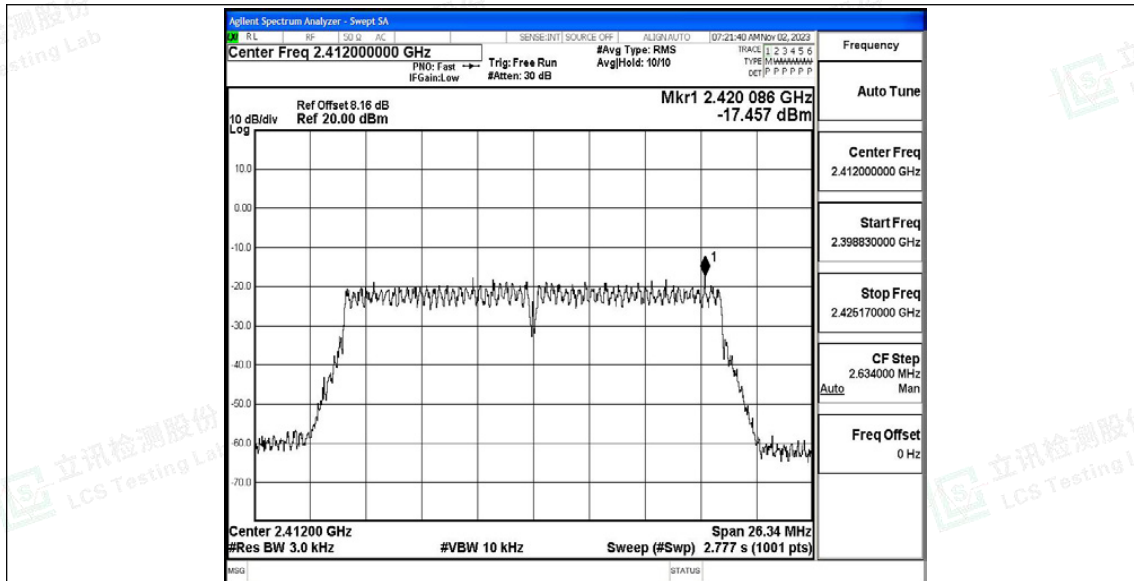


11G_Ant1_2462

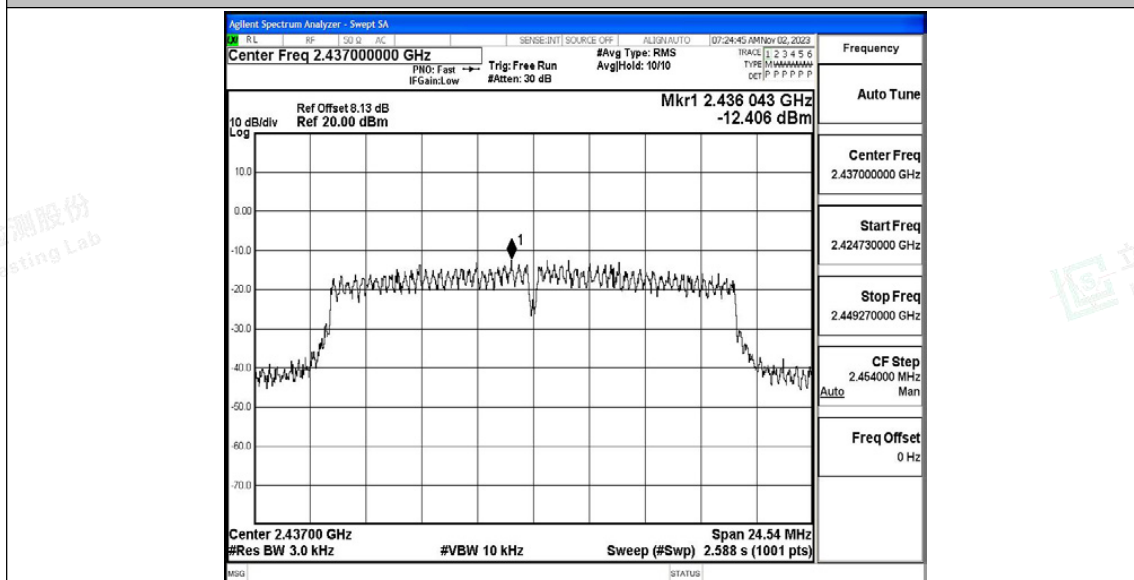


11N20SISO_Ant1_2412



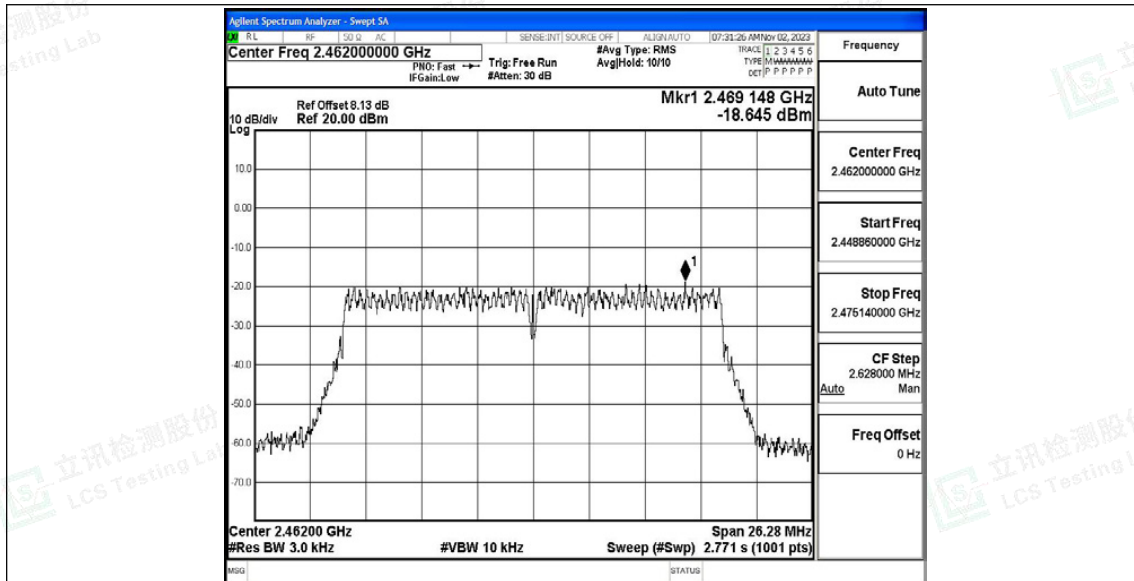


11N20SISO_Ant1_2437

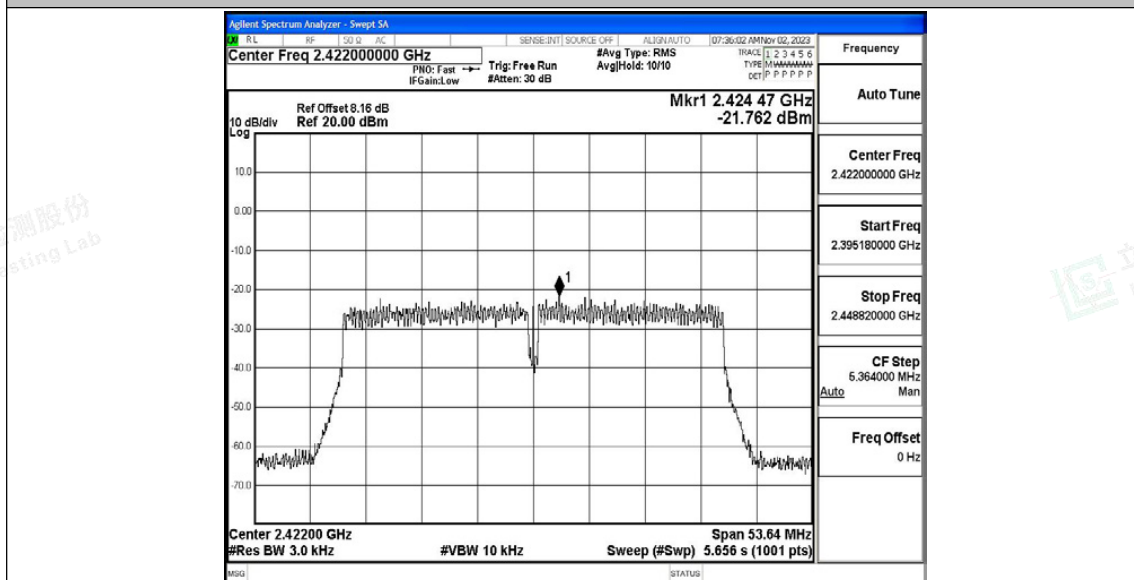


11N20SISO_Ant1_2462



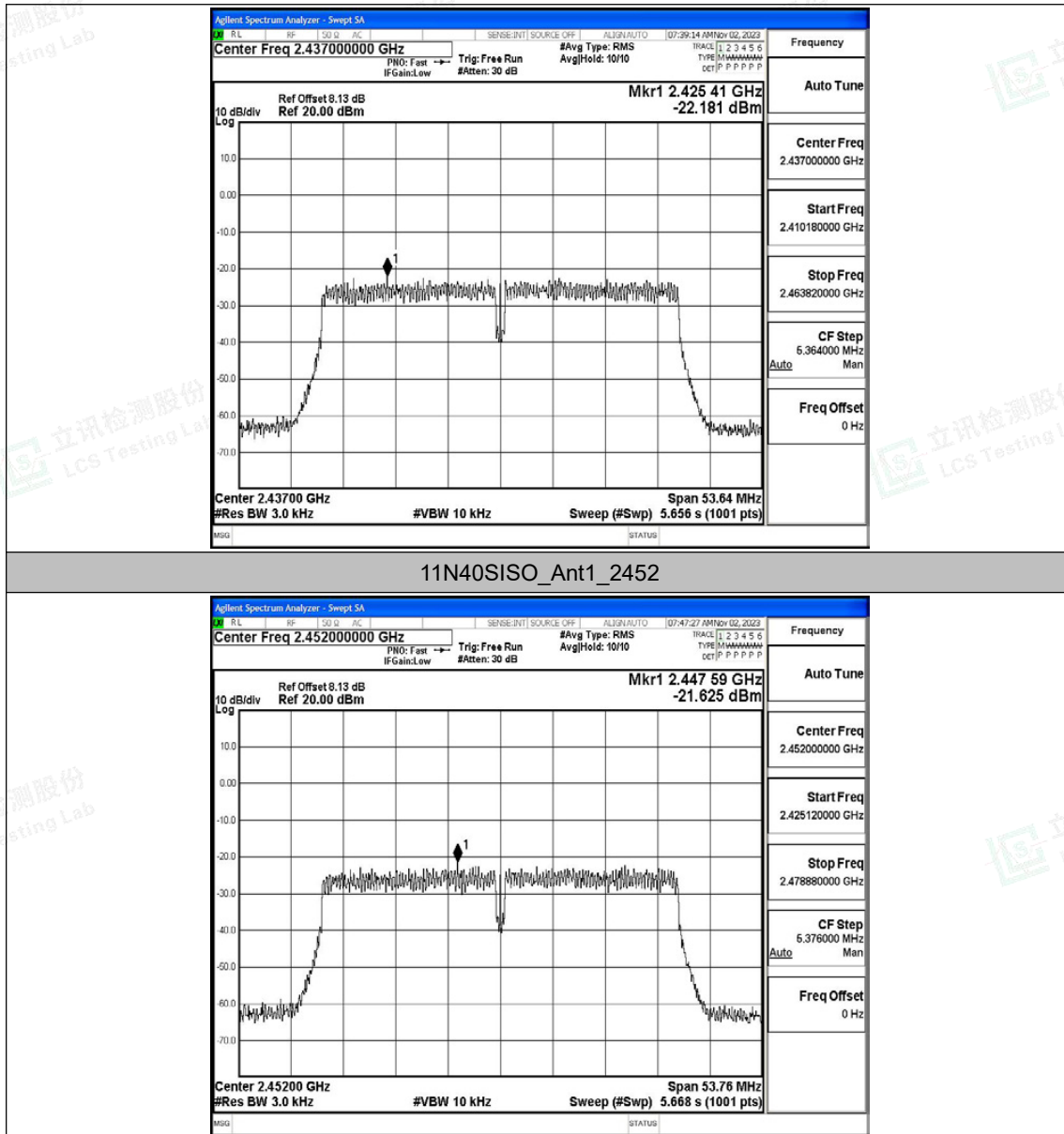


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437







B.5 Band edge measurements

Reference level measurement_Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2412.99	2.72
		2437	2436.01	2.22
		2462	2461.00	2.21
11G	Ant1	2412	2413.28	-3.34
		2437	2431.98	-3.51
		2462	2464.51	-4.02
11N20SISO	Ant1	2412	2406.97	-4.26
		2437	2441.98	0.92
		2462	2466.97	-5.00
11N40SISO	Ant1	2422	2424.52	-8.03
		2437	2440.75	-8.22
		2452	2454.47	-8.23

Band edge measurements_Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.72	-42.62	≤-17.28	PASS
		High	2462	2.21	-49.47	≤-17.79	PASS
11G	Ant1	Low	2412	-3.34	-41.14	≤-23.34	PASS
		High	2462	-4.02	-48.36	≤-24.02	PASS
11N20SISO	Ant1	Low	2412	-4.26	-40.82	≤-24.26	PASS
		High	2462	-5.00	-47.89	≤-25	PASS
11N40SISO	Ant1	Low	2422	-8.03	-43.92	≤-28.03	PASS
		High	2452	-8.23	-43.94	≤-28.23	PASS





Reference level measurement_Test Graphs

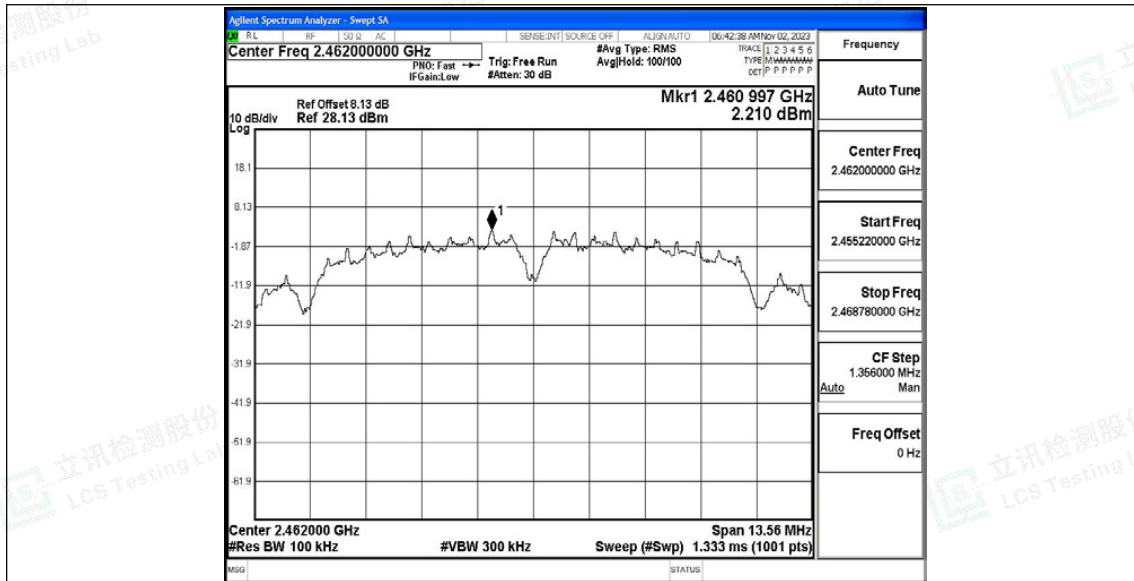


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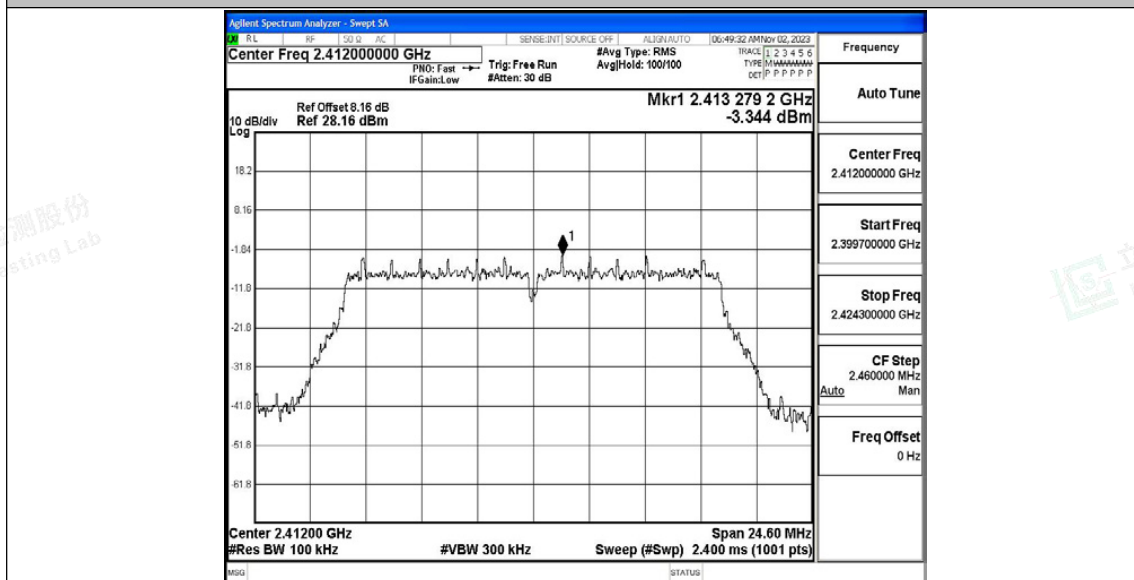
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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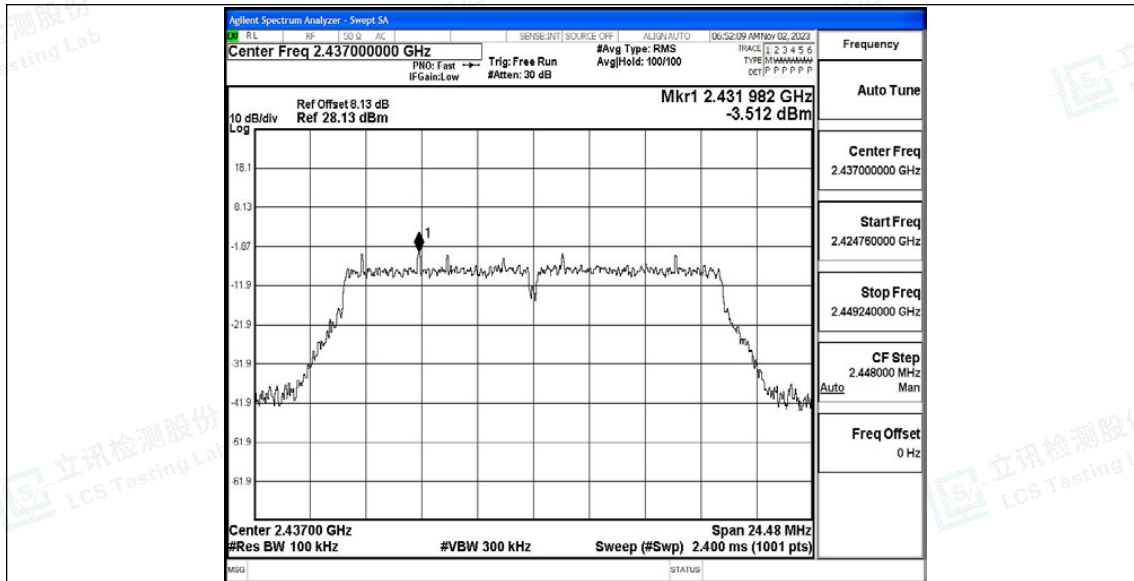


11G_Ant1_2412

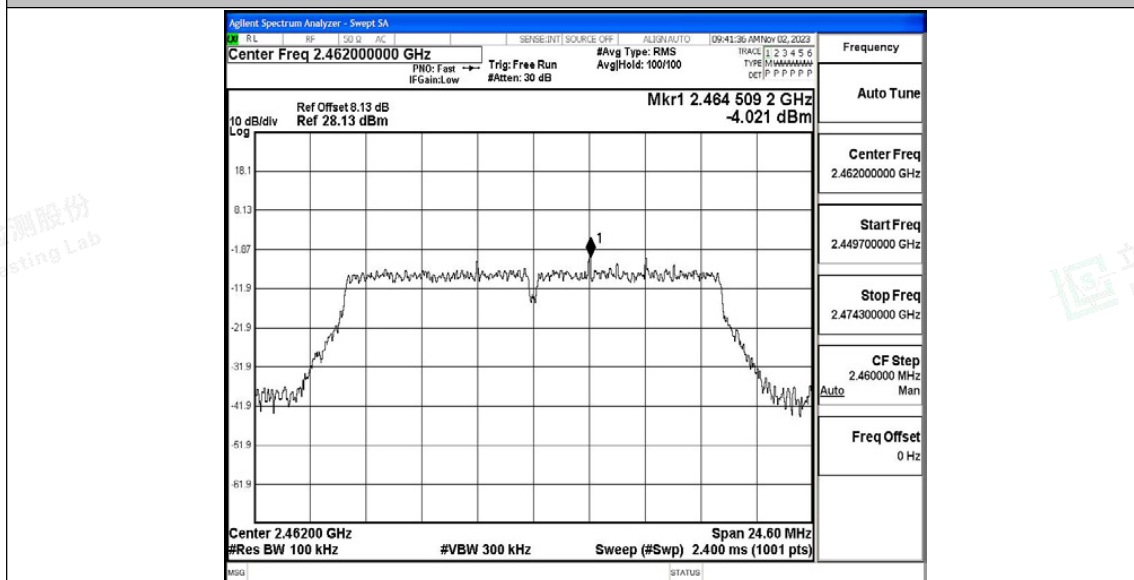


11G_Ant1_2437



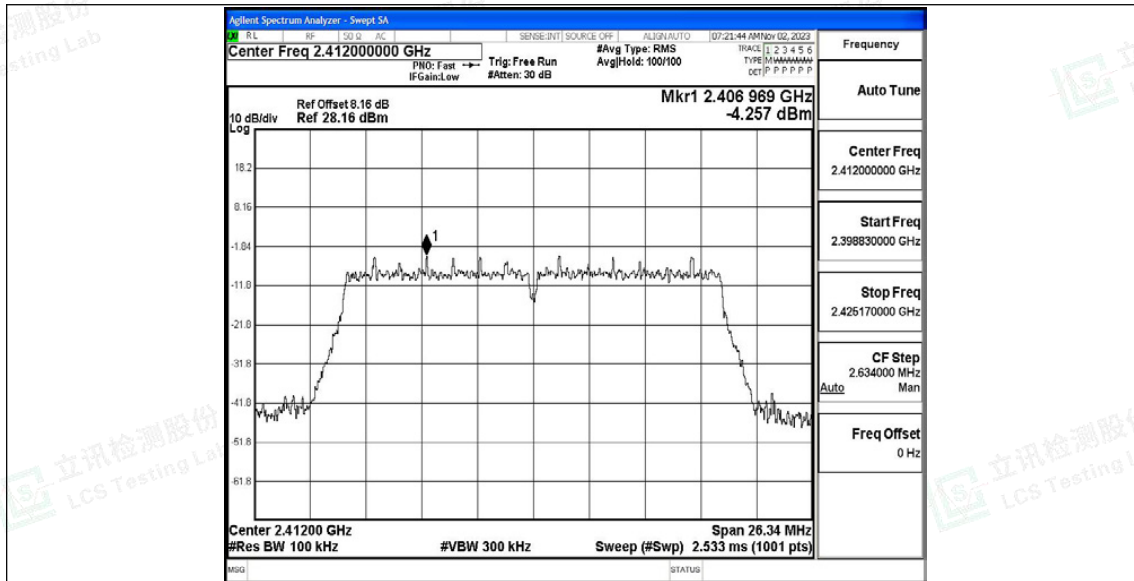


11G_Ant1_2462

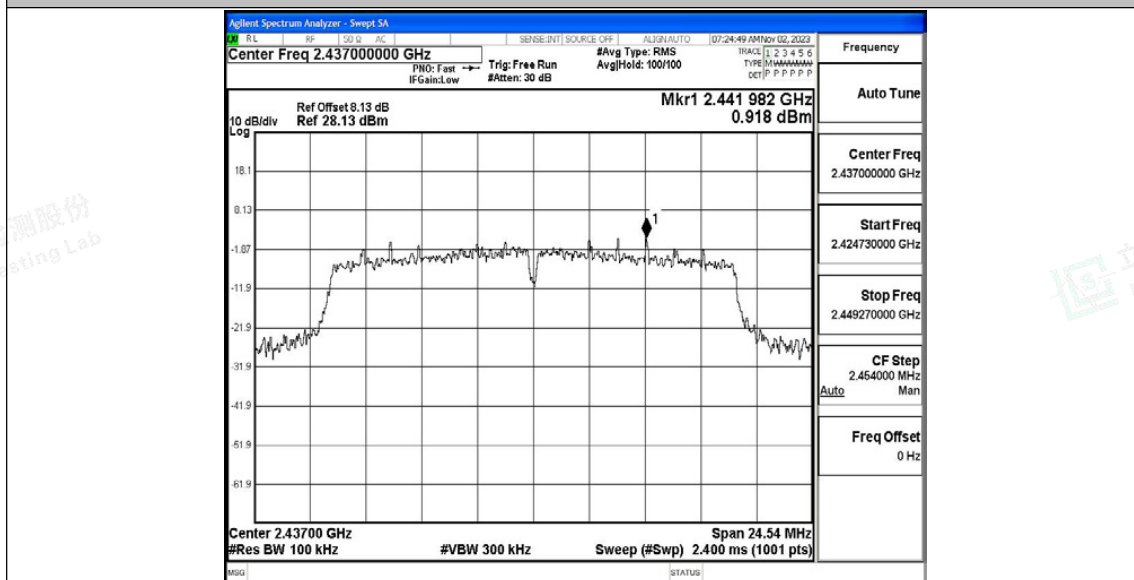


11N20SISO_Ant1_2412



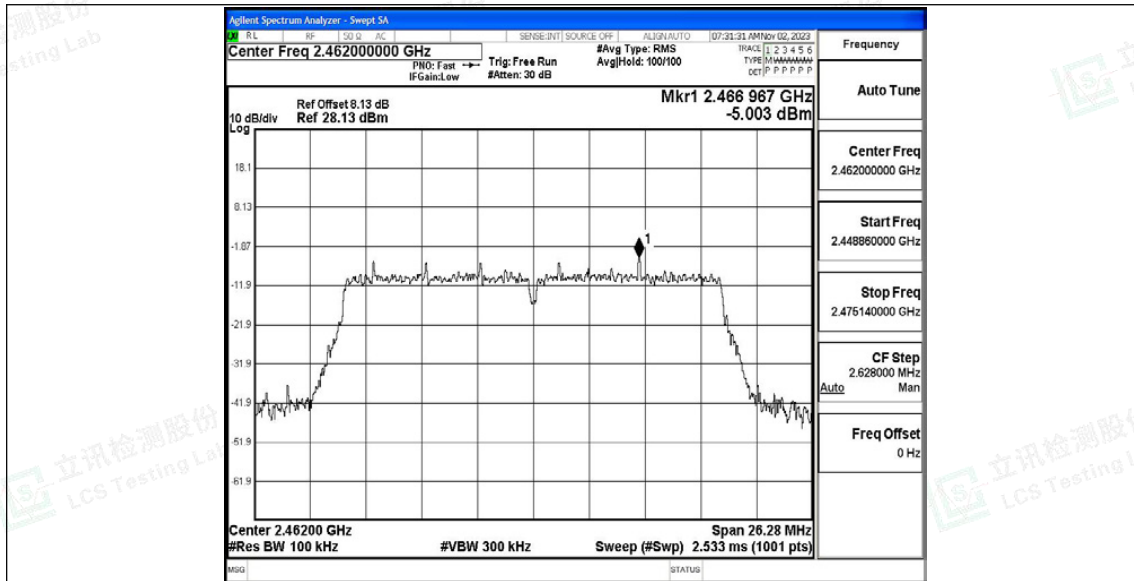


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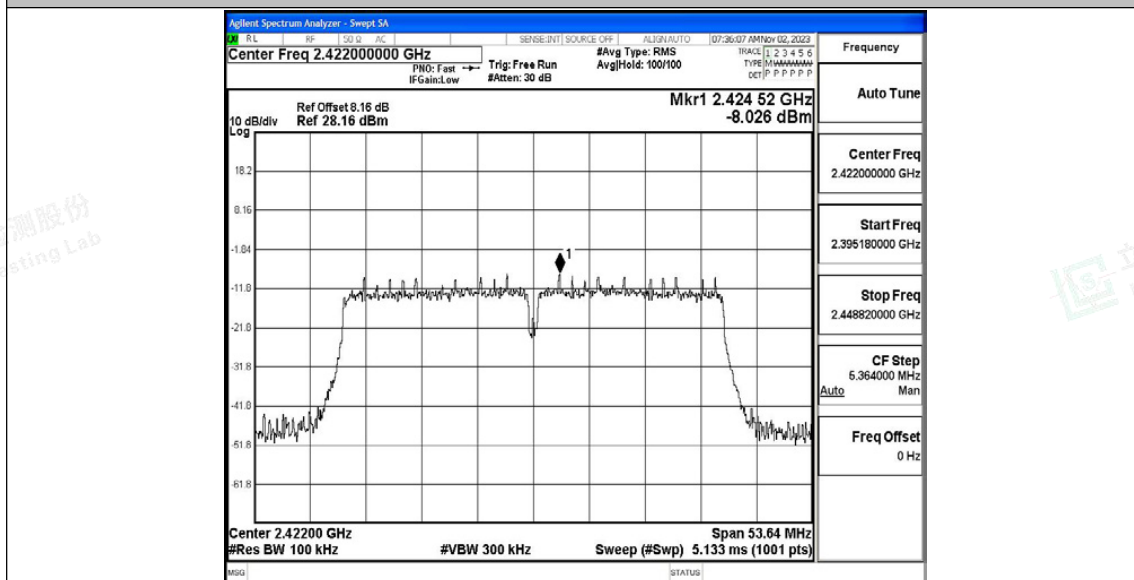


11N20SISO_Ant1_2462



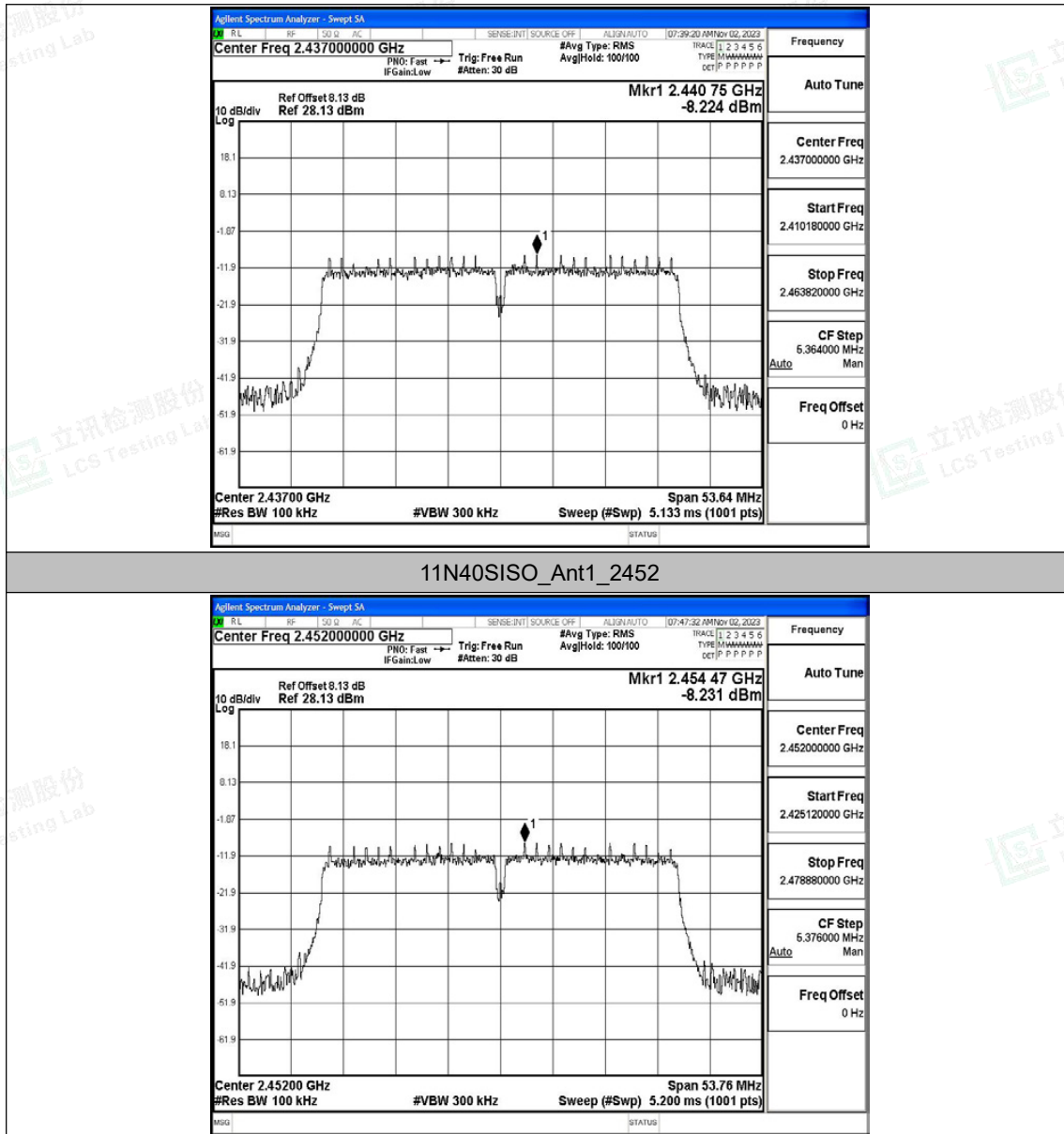


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

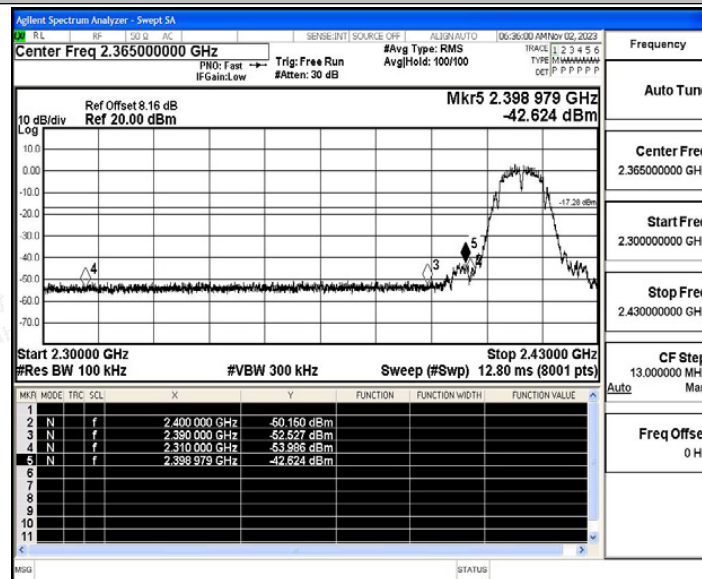




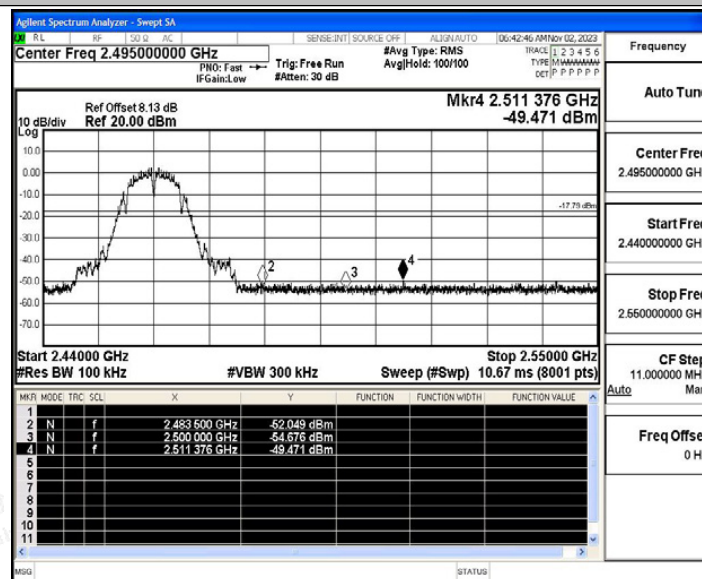


Band edge measurements_Test Graphs

11B_Ant1_Low_2412



11B_Ant1_High_2462



11G_Ant1_Low_2412

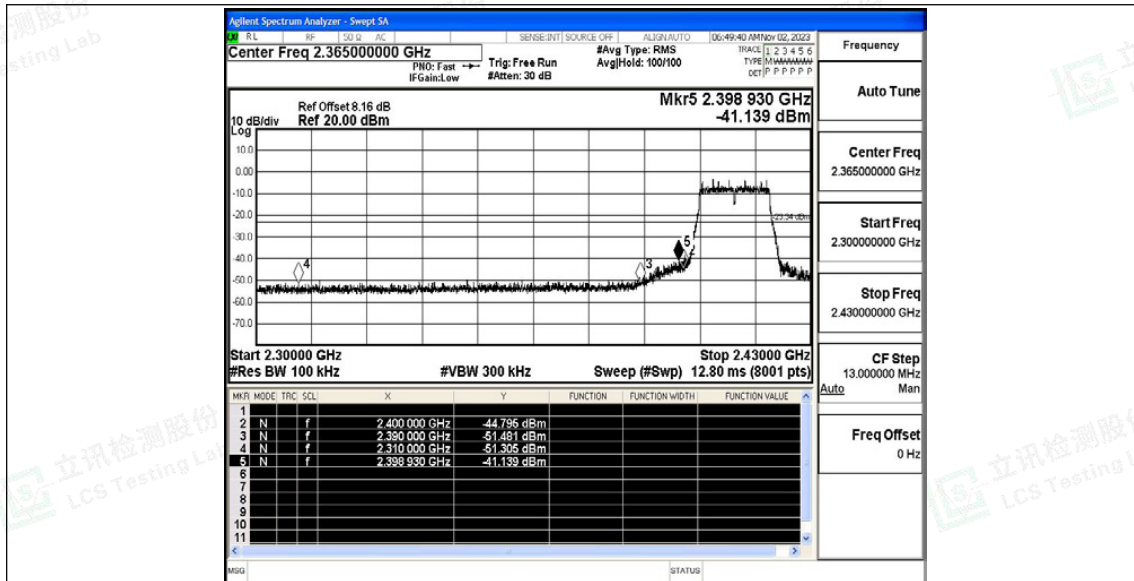


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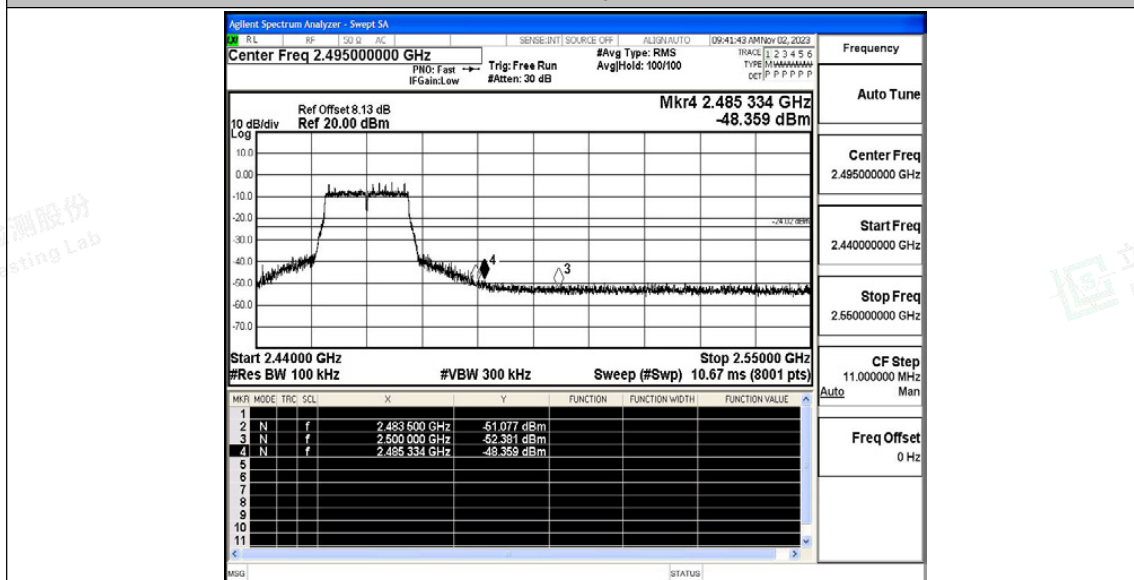
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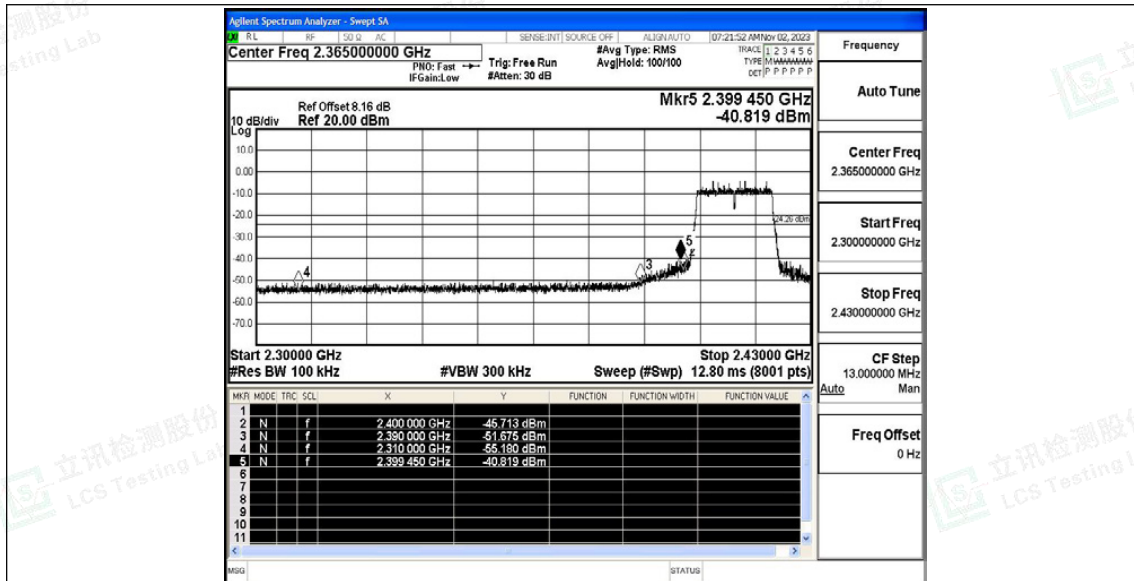


11G_Ant1_High_2462

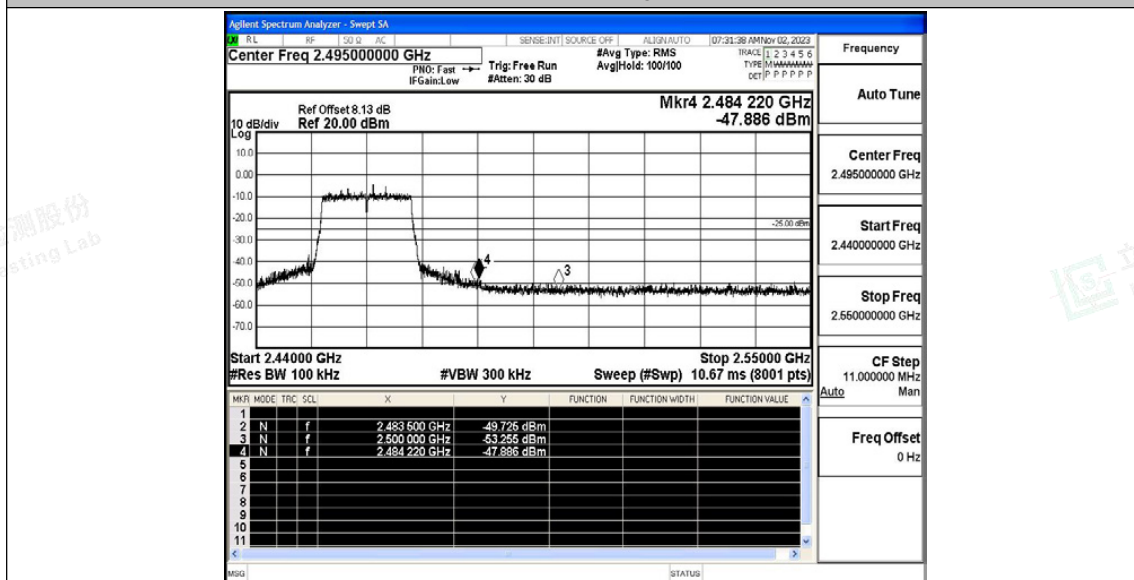


11N20SISO_Ant1_Low_2412



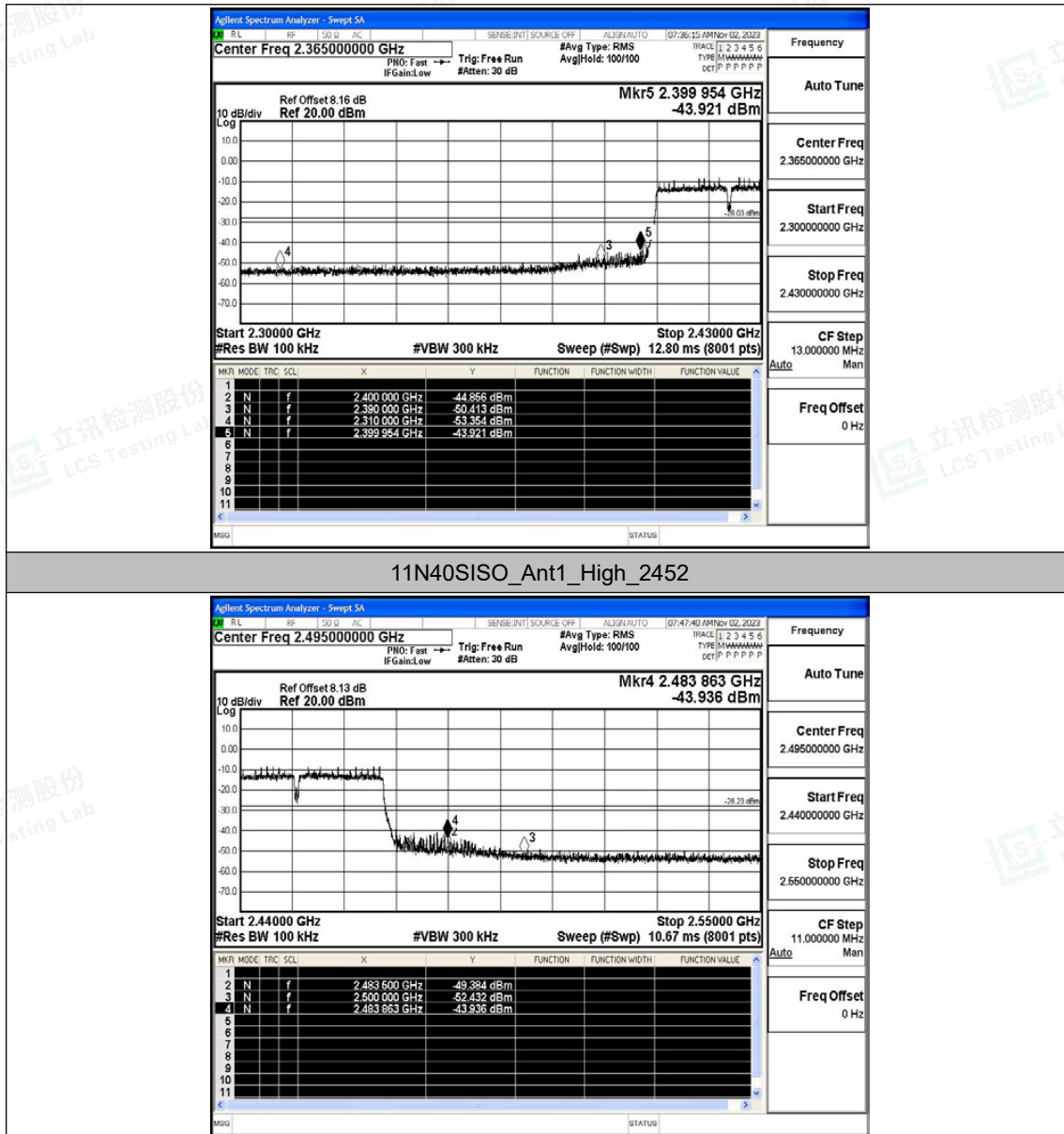


11N20ISO_Ant1_High_2462



11N40ISO_Ant1_Low_2422





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B.6 Conducted Spurious Emission

Reference level measurement_Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant1	2412	2412.99	2.72
		2437	2436.01	2.22
		2462	2461.00	2.21
11G	Ant1	2412	2413.28	-3.34
		2437	2431.98	-3.51
		2462	2464.51	-4.02
11N20SISO	Ant1	2412	2406.97	-4.26
		2437	2441.98	0.92
		2462	2466.97	-5.00
11N40SISO	Ant1	2422	2424.52	-8.03
		2437	2440.75	-8.22
		2452	2454.47	-8.23



**Conducted Spurious Emission_Test Result**

TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	2.72	-61.68	≤-17.28	PASS
			1000~26500	2.72	-49.62	≤-17.28	PASS
		2437	30~1000	2.22	-61.51	≤-17.78	PASS
			1000~26500	2.22	-48.25	≤-17.78	PASS
		2462	30~1000	2.21	-61.68	≤-17.79	PASS
			1000~26500	2.21	-49.37	≤-17.79	PASS
11G	Ant1	2412	30~1000	-3.34	-61.52	≤-23.34	PASS
			1000~26500	-3.34	-49.74	≤-23.34	PASS
		2437	30~1000	-3.51	-45.41	≤-23.51	PASS
			1000~26500	-3.51	-49.36	≤-23.51	PASS
		2462	30~1000	-4.02	-61.42	≤-24.02	PASS
			1000~26500	-4.02	-48.71	≤-24.02	PASS
11N20SISO	Ant1	2412	30~1000	-4.26	-61.21	≤-24.26	PASS
			1000~26500	-4.26	-49.3	≤-24.26	PASS
		2437	30~1000	0.92	-61.92	≤-19.08	PASS
			1000~26500	0.92	-48.69	≤-19.08	PASS
		2462	30~1000	-5.00	-61.16	≤-25	PASS
			1000~26500	-5.00	-48.77	≤-25	PASS
11N40SISO	Ant1	2422	30~1000	-8.03	-61.46	≤-28.03	PASS
			1000~26500	-8.03	-49.1	≤-28.03	PASS
		2437	30~1000	-8.22	-62.04	≤-28.22	PASS
			1000~26500	-8.22	-49.1	≤-28.22	PASS
		2452	30~1000	-8.23	-61.57	≤-28.23	PASS
			1000~26500	-8.23	-48.93	≤-28.23	PASS





Reference level measurement_Test Graphs

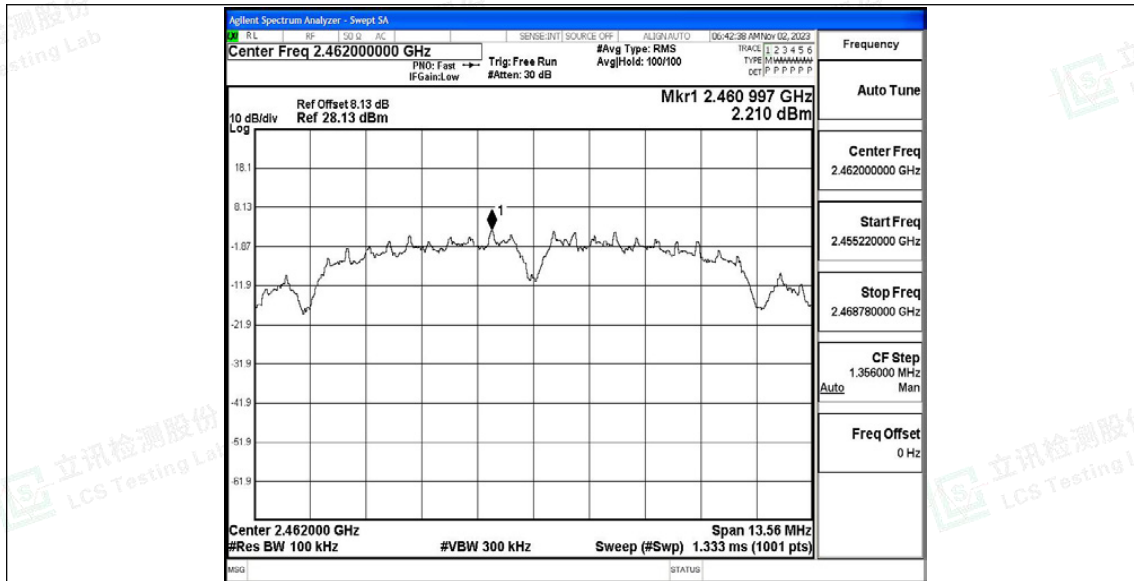


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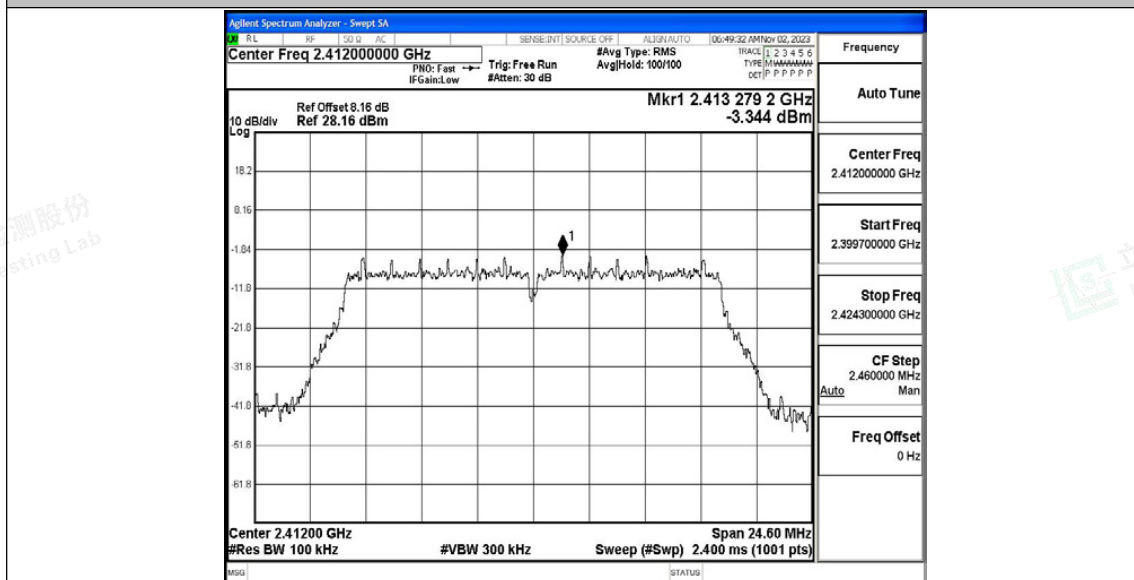
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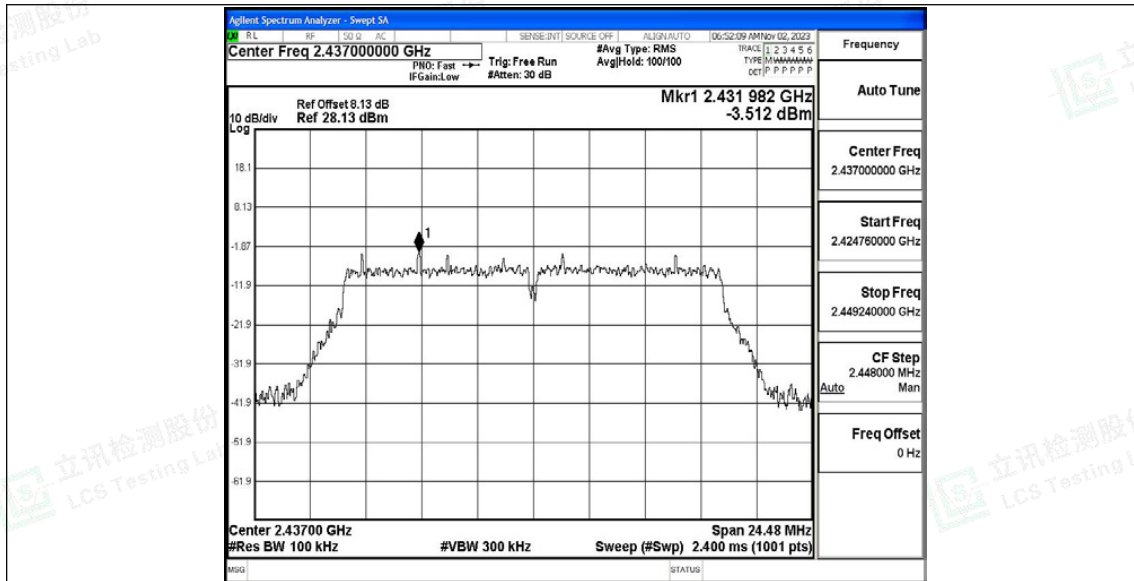


11G_Ant1_2412

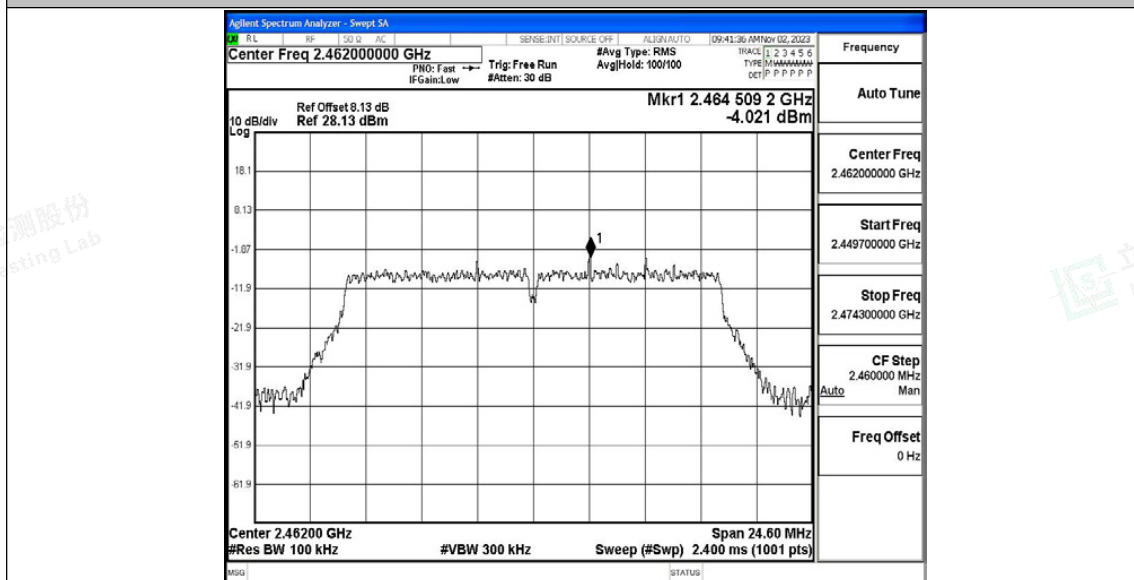


11G_Ant1_2437





11G_Ant1_2462



11N20SISO_Ant1_2412

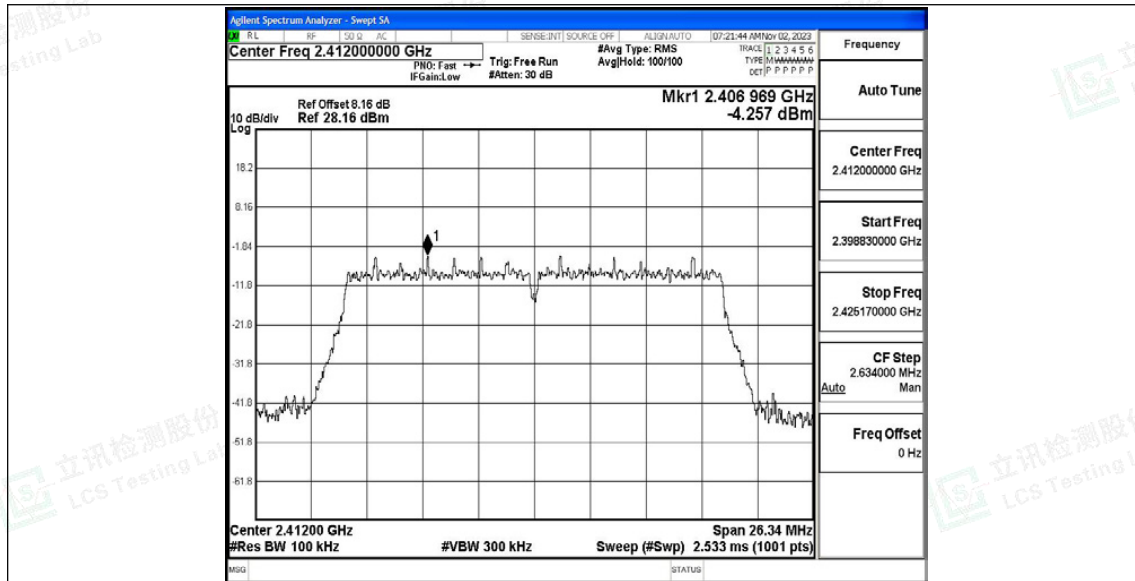


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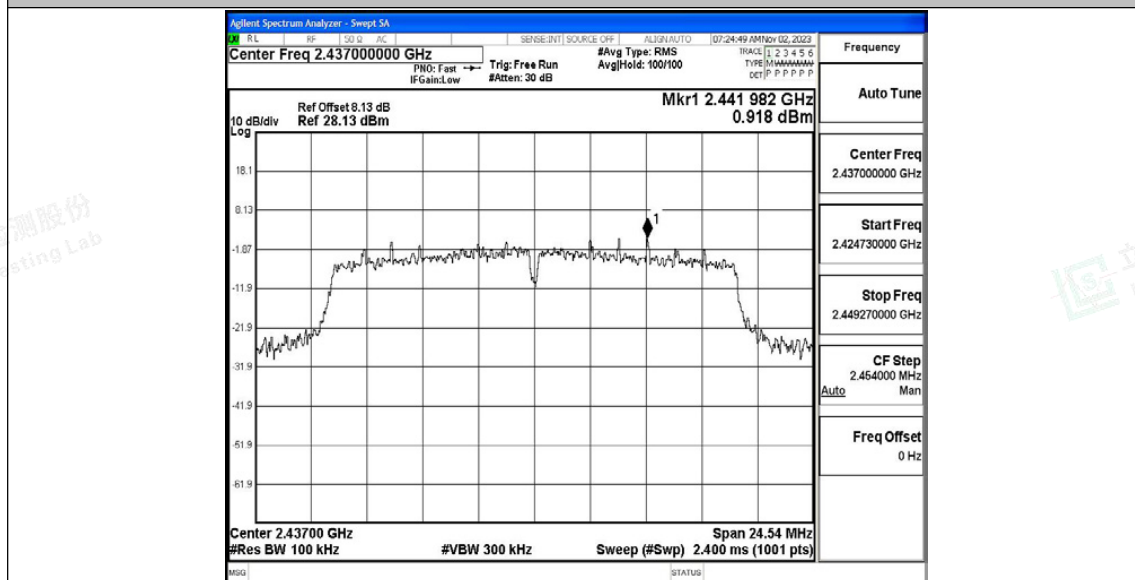
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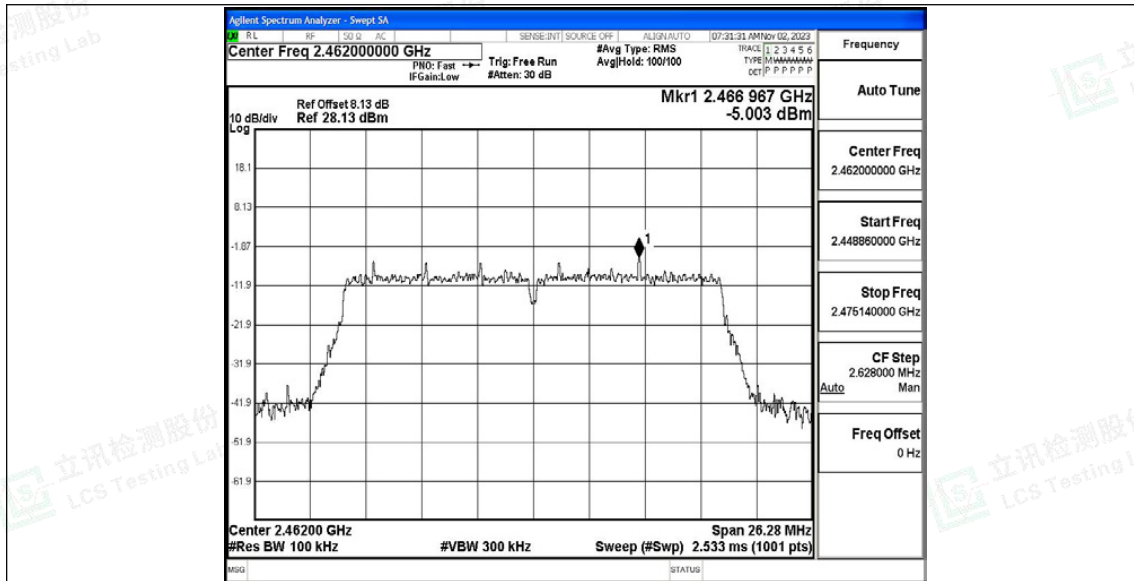


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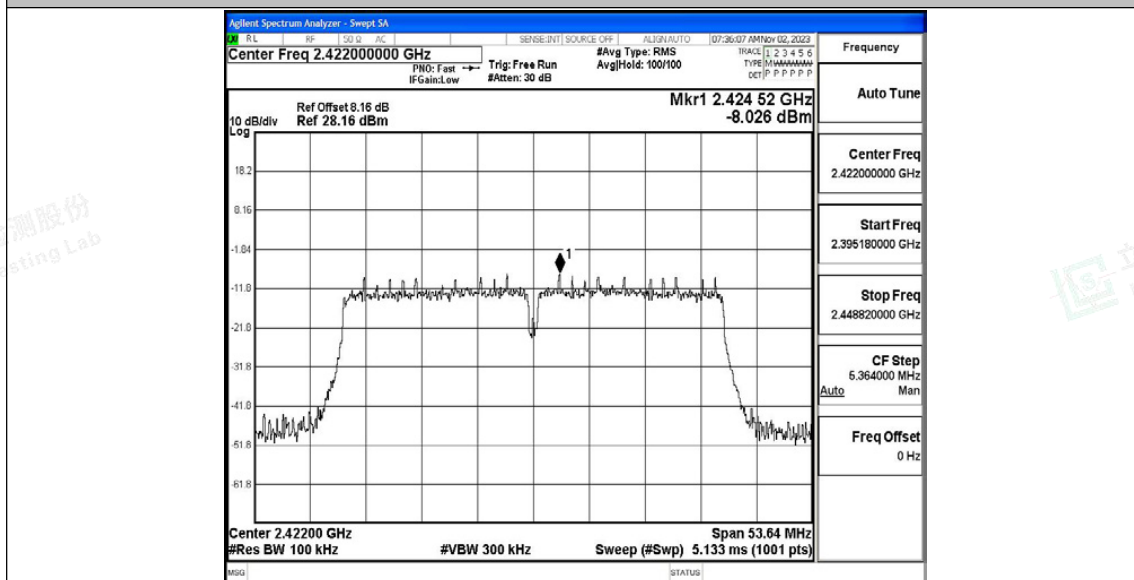


11N20SISO_Ant1_2462



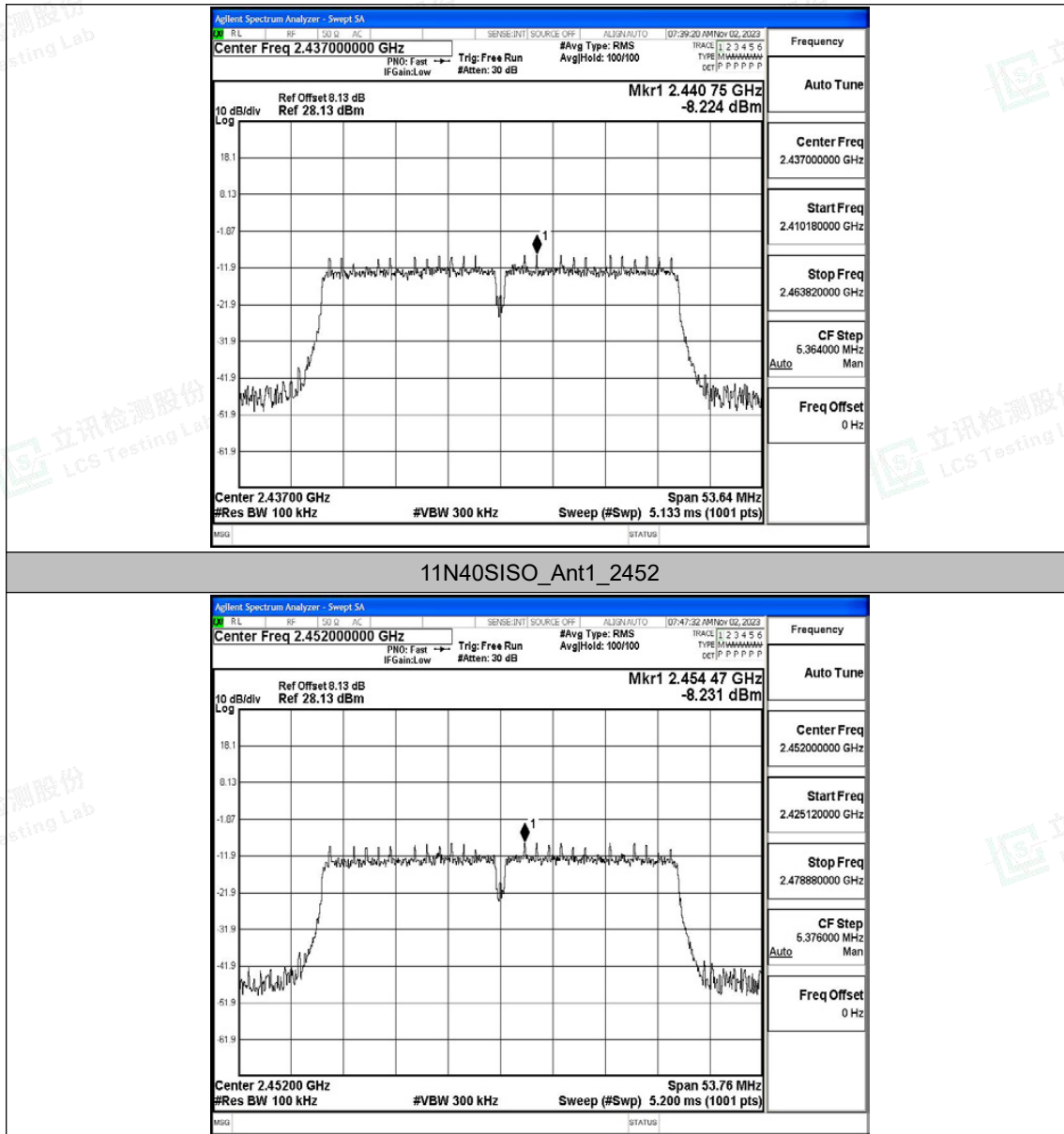


11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

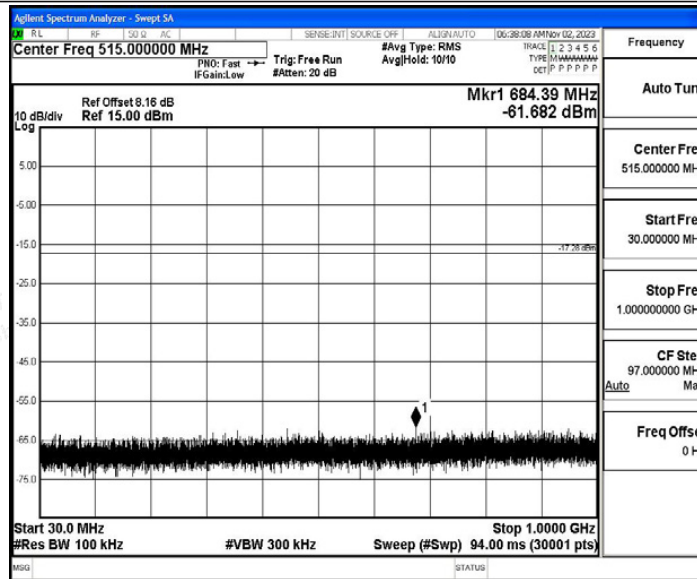




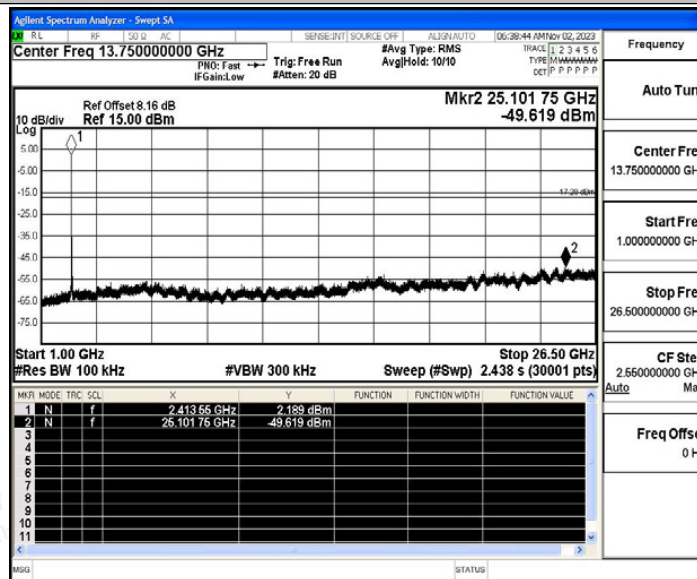


Conducted Spurious Emission_Test Graphs

11B_Ant1_2412_30~1000



11B_Ant1_2412_1000~26500



11B_Ant1_2437_30~1000

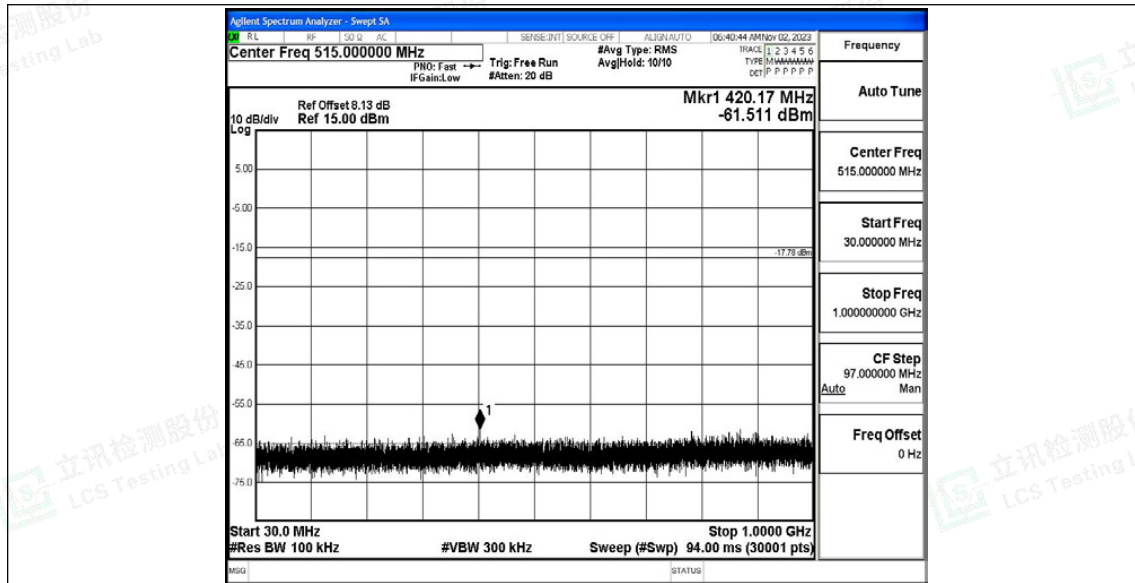


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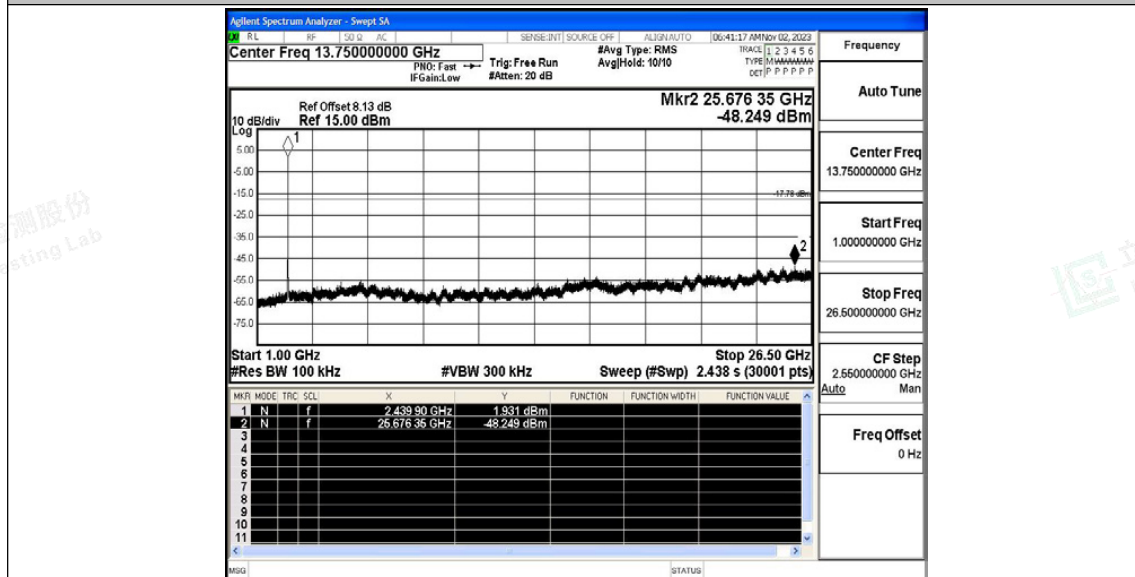
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11B_Ant1_2437_1000~26500



11B_Ant1_2462_30~1000

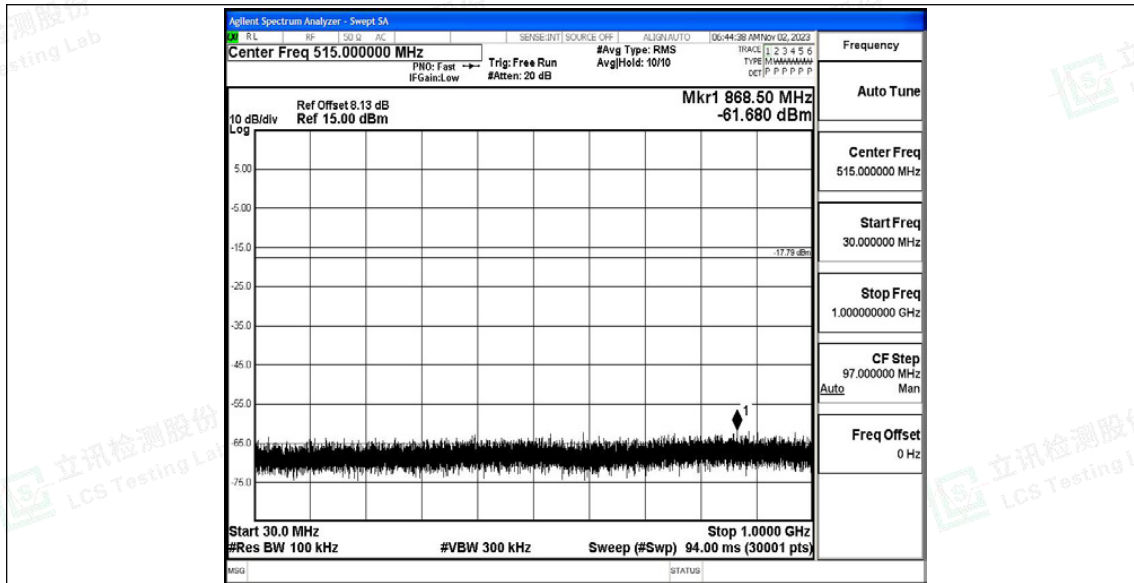


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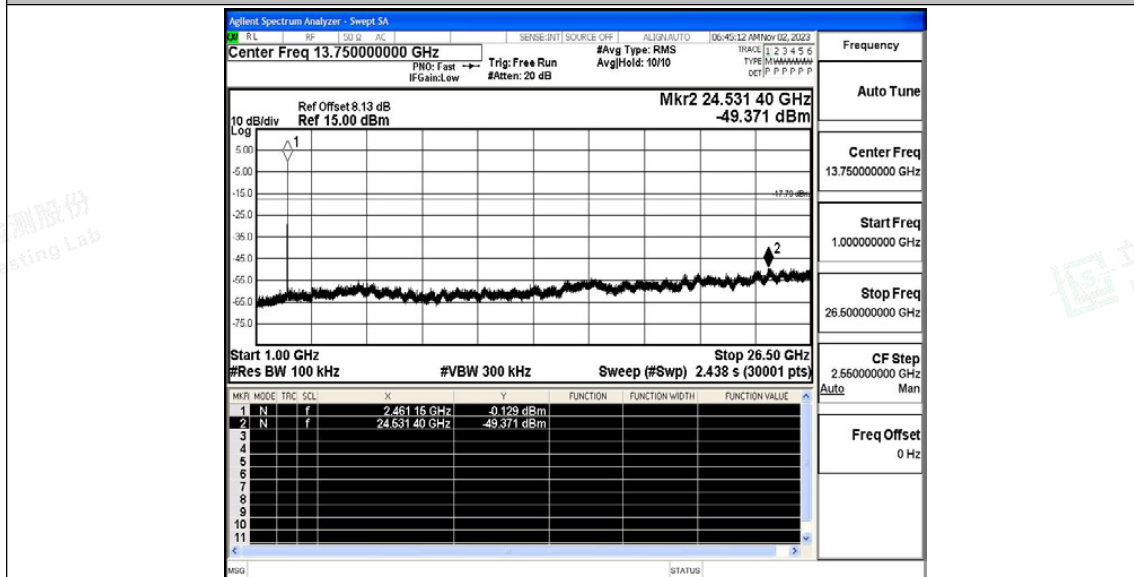
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11B_Ant1_2462_1000~26500



11G_Ant1_2412_30~1000

