



## Appendix B

### RF Test Data for 2.4G WIFI (Conducted Measurement)

**Product Name: control box**

**Test Model: CBU12-24VDD**

#### Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li huan





## B.1 6dB Bandwidth

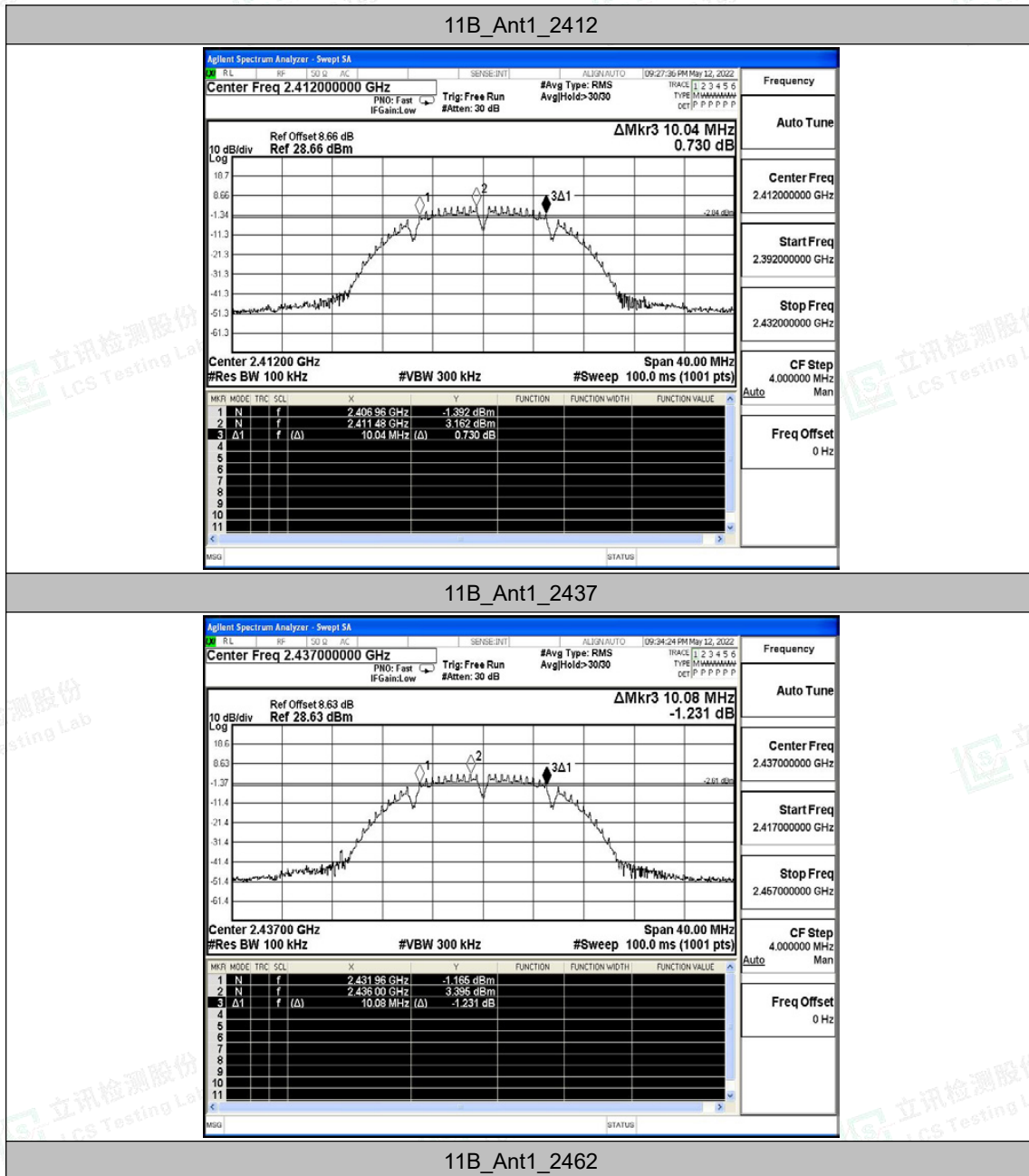
### Test Result

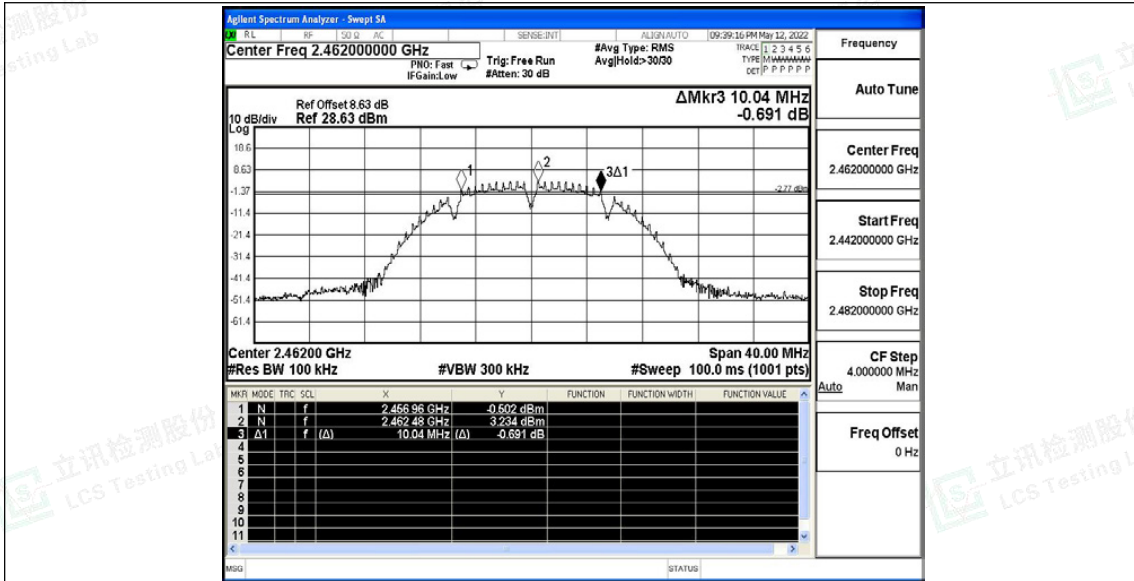
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.040	2406.960	2417.000	0.5	PASS
		2437	10.080	2431.960	2442.040	0.5	PASS
		2462	10.040	2456.960	2467.000	0.5	PASS
11G	Ant1	2412	16.280	2403.840	2420.120	0.5	PASS
		2437	16.280	2428.840	2445.120	0.5	PASS
		2462	16.280	2453.840	2470.120	0.5	PASS
11N20SISO	Ant1	2412	16.520	2403.600	2420.120	0.5	PASS
		2437	17.040	2428.440	2445.480	0.5	PASS
		2462	16.760	2453.600	2470.360	0.5	PASS
11N40SISO	Ant1	2422	35.040	2404.480	2439.520	0.5	PASS
		2437	35.440	2419.080	2454.520	0.5	PASS
		2452	35.120	2434.400	2469.520	0.5	PASS



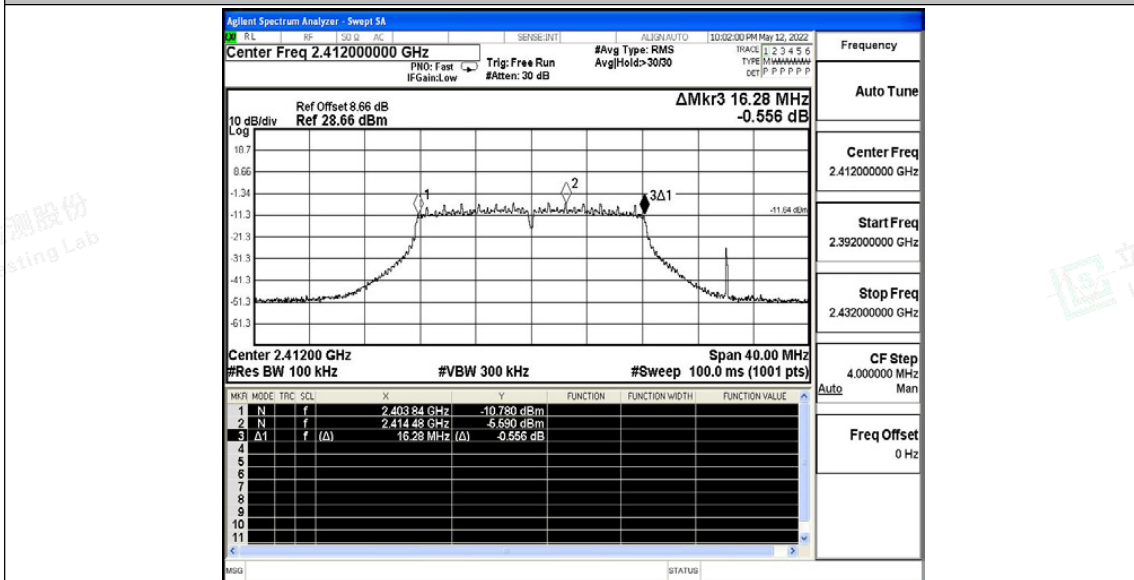


### Test Graphs



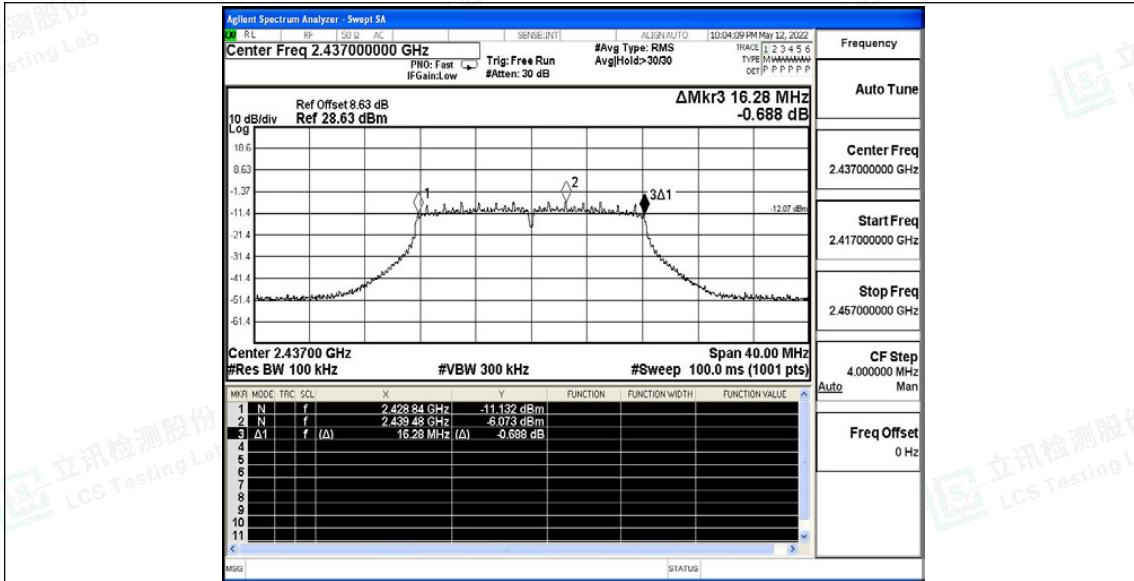


11G\_Ant1\_2412

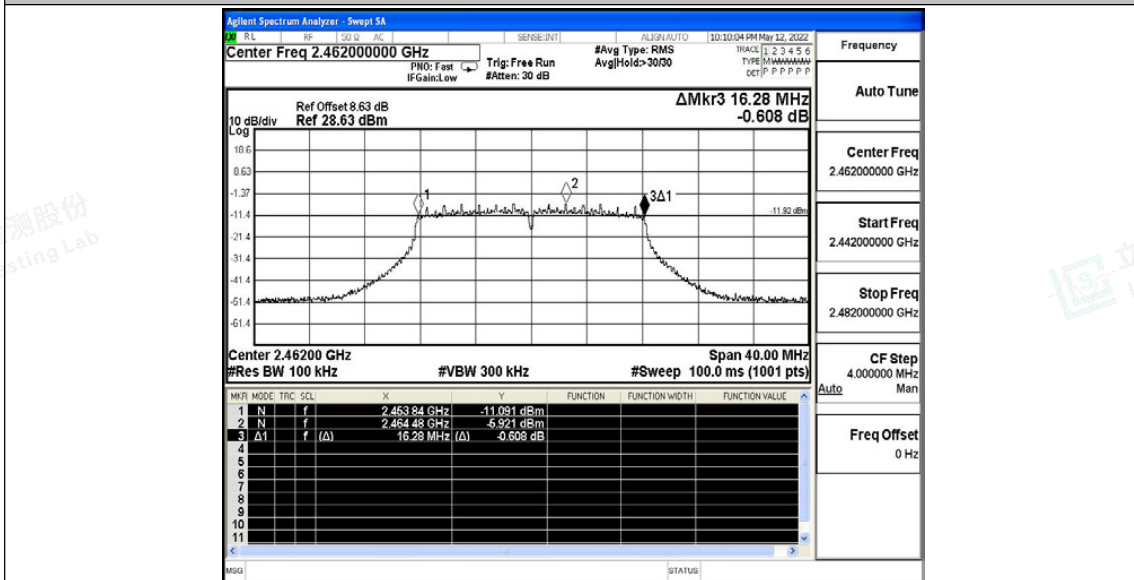


11G\_Ant1\_2437



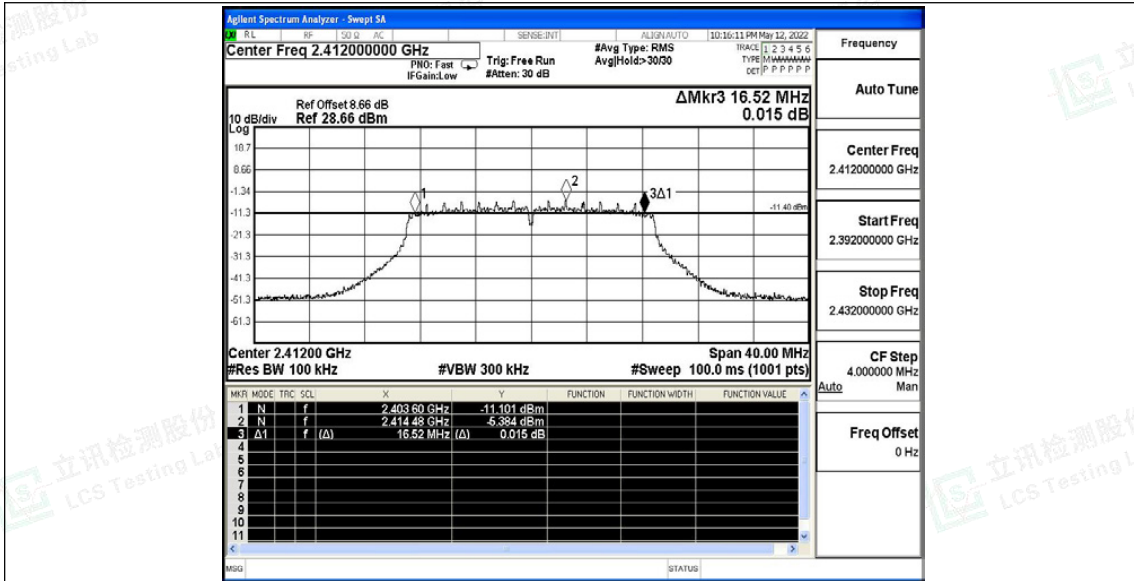


11G\_Ant1\_2462

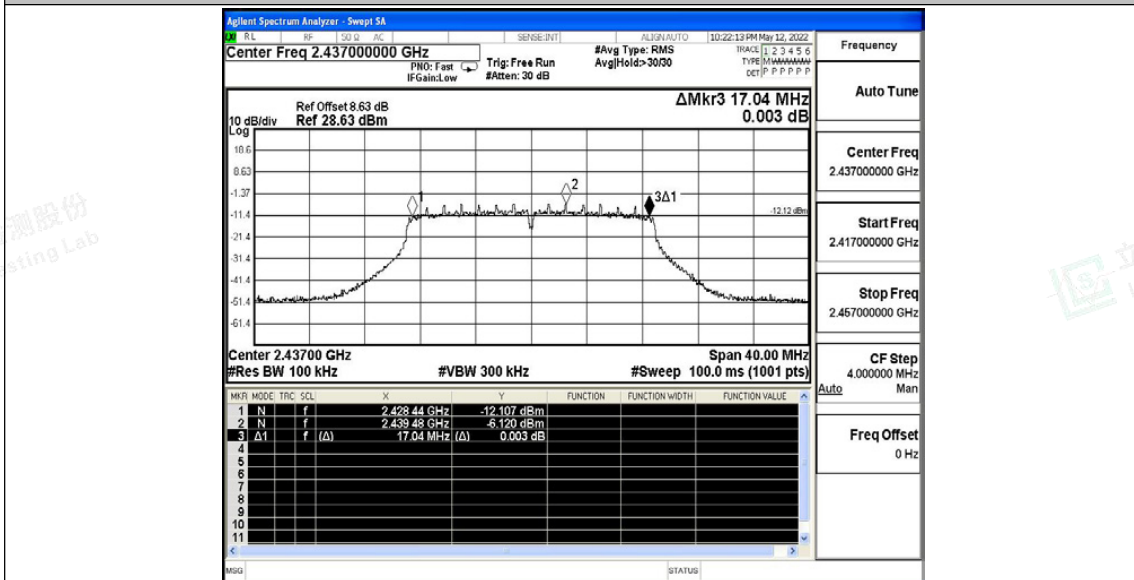


11N20SISO\_Ant1\_2412





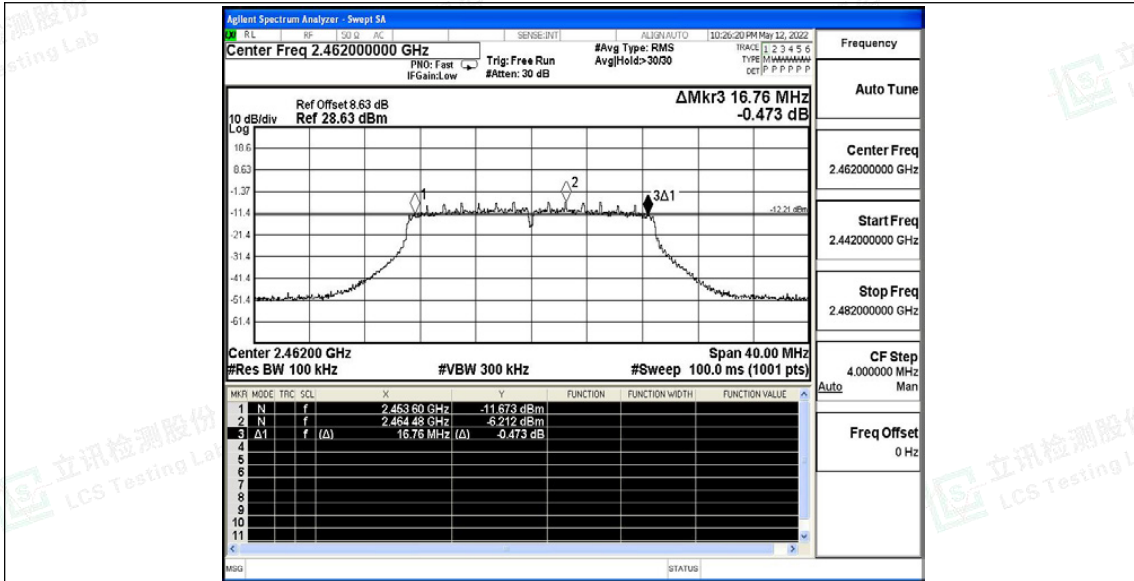
11N20SISO\_Ant1\_2437



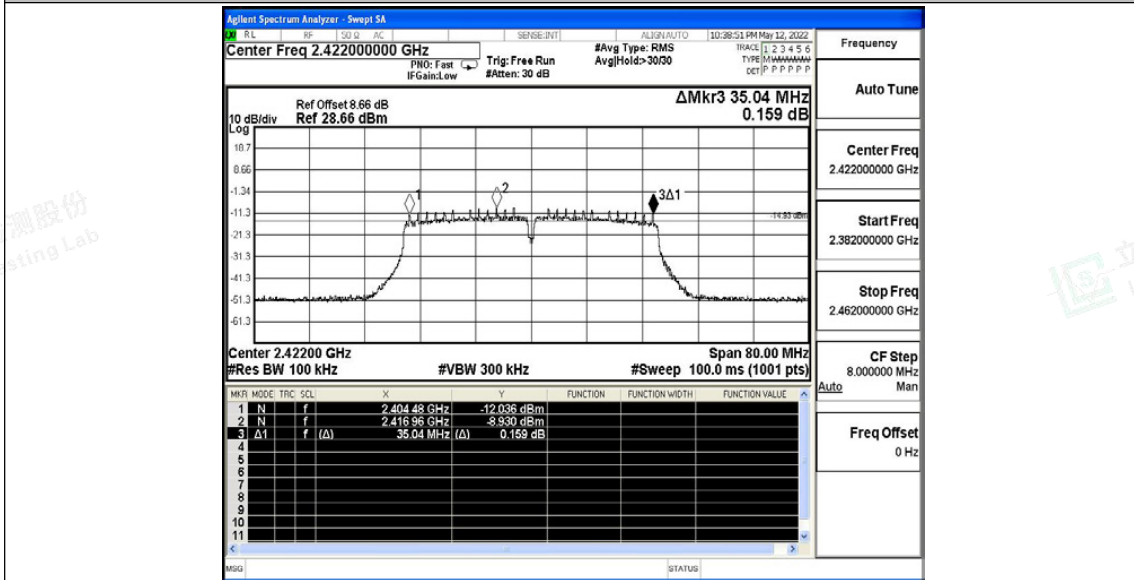
11N20SISO\_Ant1\_2462





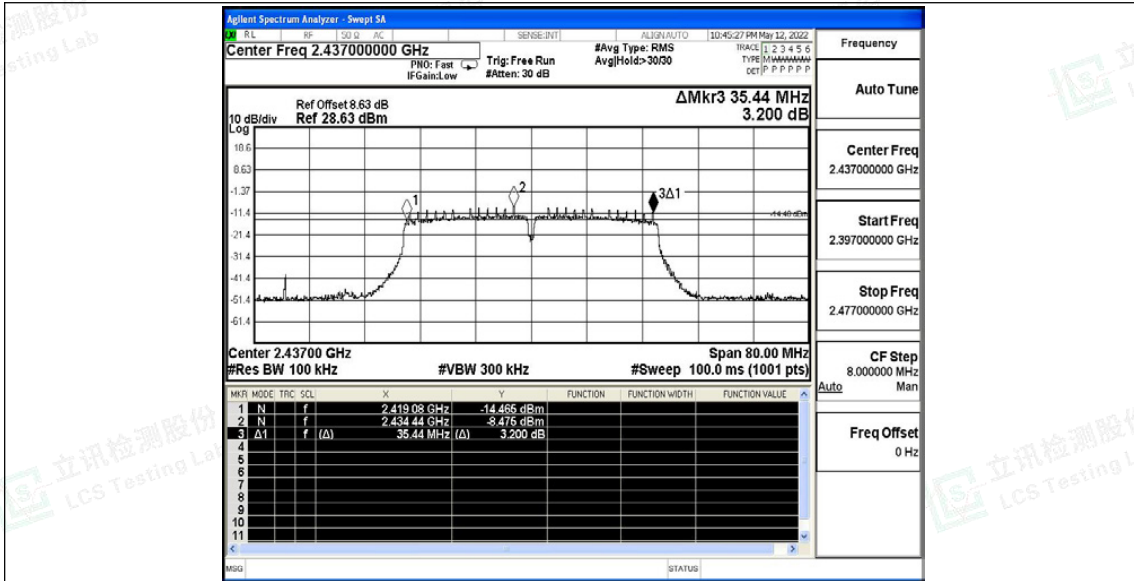


11N40SISO\_Ant1\_2422

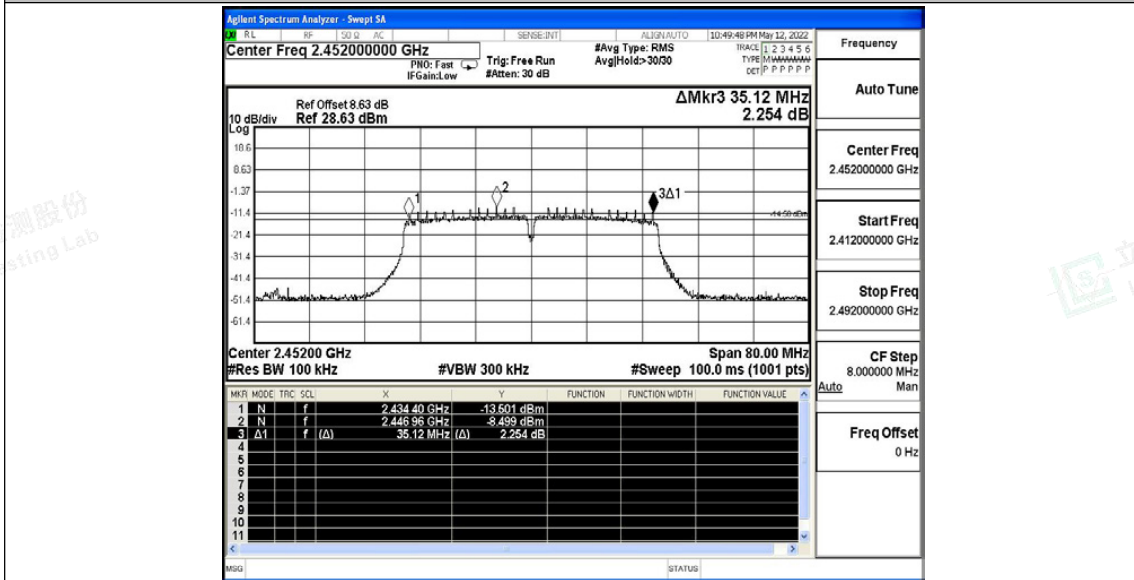


11N40SISO\_Ant1\_2437





11N40SISO\_Ant1\_2452







## B.2 Maximum conducted output power

### Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	15.54	≤30.00	PASS
		2437	15.89	≤30.00	PASS
		2462	15.78	≤30.00	PASS
11G	Ant1	2412	14.31	≤30.00	PASS
		2437	13.80	≤30.00	PASS
		2462	13.95	≤30.00	PASS
11N20SISO	Ant1	2412	13.67	≤30.00	PASS
		2437	13.07	≤30.00	PASS
		2462	12.96	≤30.00	PASS
11N40SISO	Ant1	2422	12.68	≤30.00	PASS
		2437	13.23	≤30.00	PASS
		2452	13.11	≤30.00	PASS





### B.3 Maximum power spectral density

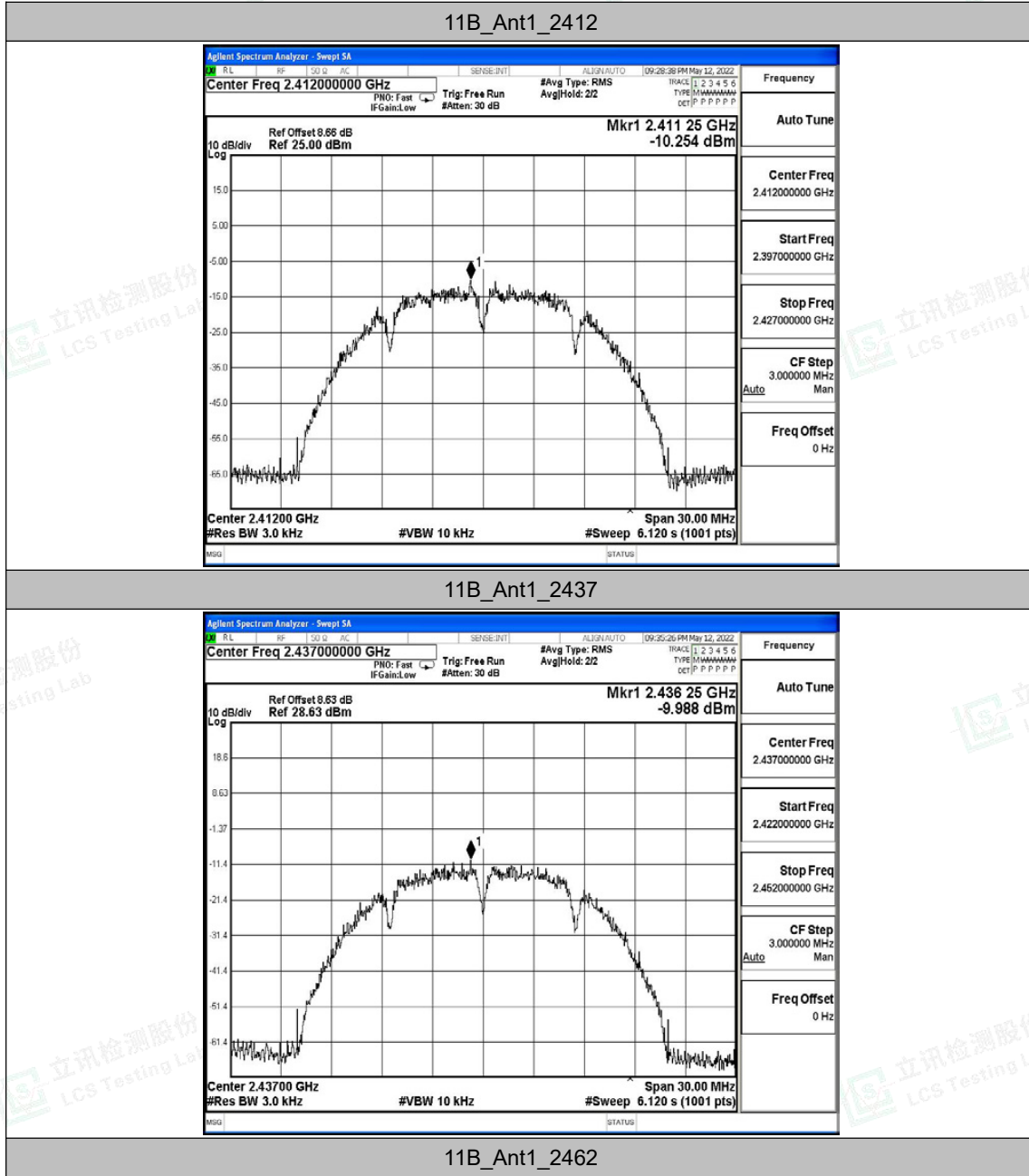
#### Test Result

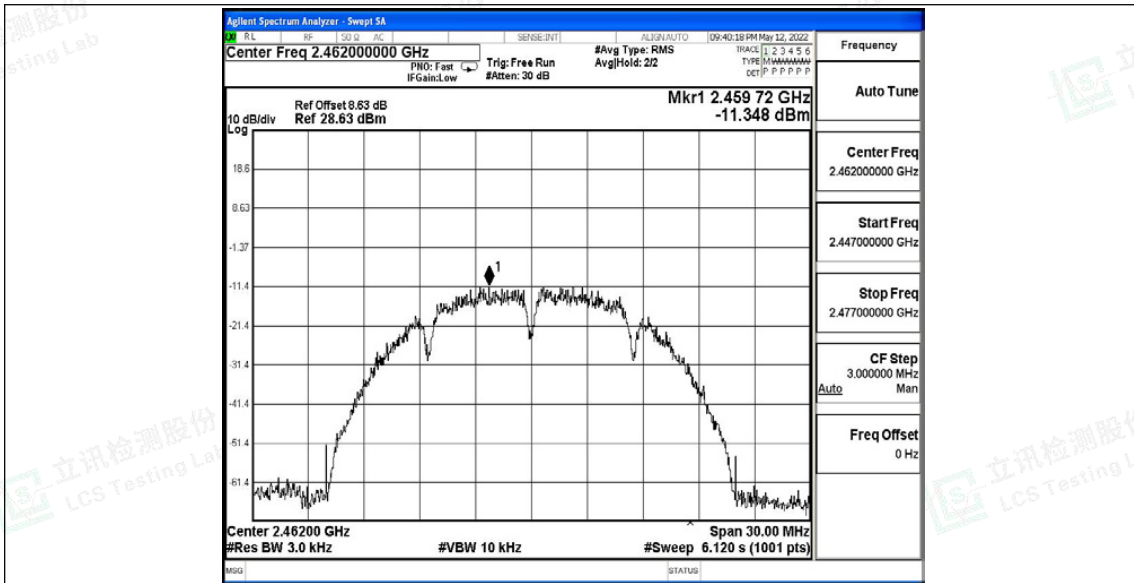
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.25	≤8.00	PASS
		2437	-9.99	≤8.00	PASS
		2462	-11.35	≤8.00	PASS
11G	Ant1	2412	-19.63	≤8.00	PASS
		2437	-20.15	≤8.00	PASS
		2462	-20.32	≤8.00	PASS
11N20SISO	Ant1	2412	-20.57	≤8.00	PASS
		2437	-20.28	≤8.00	PASS
		2462	-20.02	≤8.00	PASS
11N40SISO	Ant1	2422	-23.21	≤8.00	PASS
		2437	-22.73	≤8.00	PASS
		2452	-22.29	≤8.00	PASS



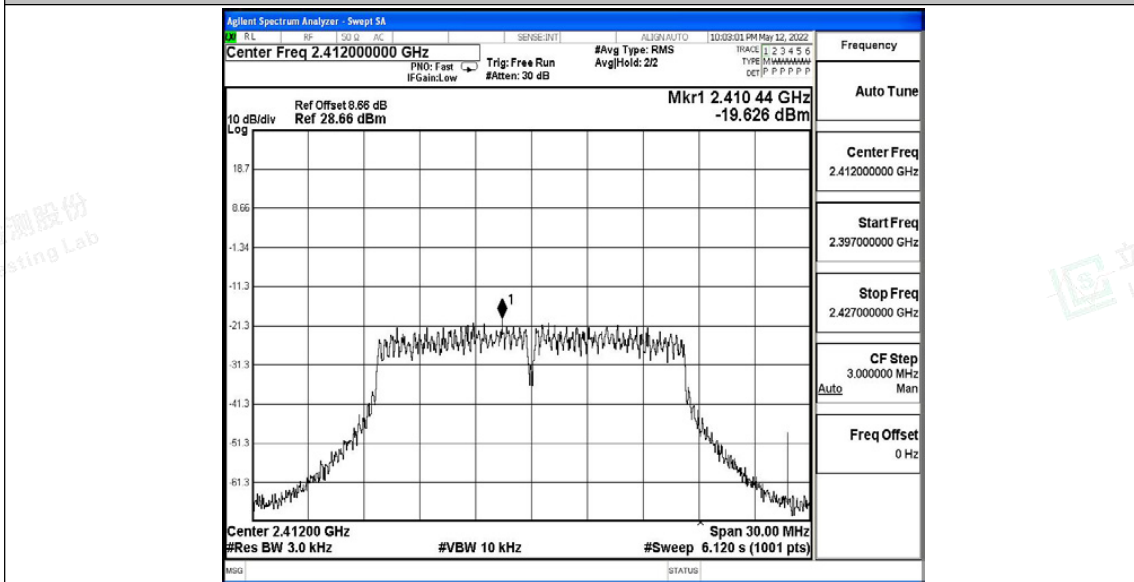


### Test Graphs



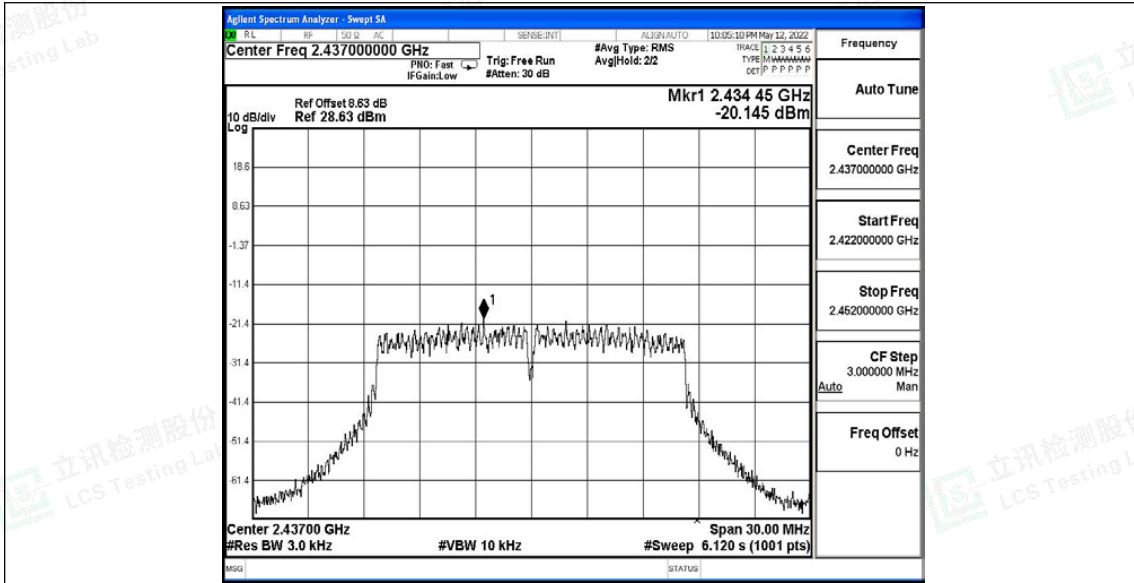


11G\_Ant1\_2412

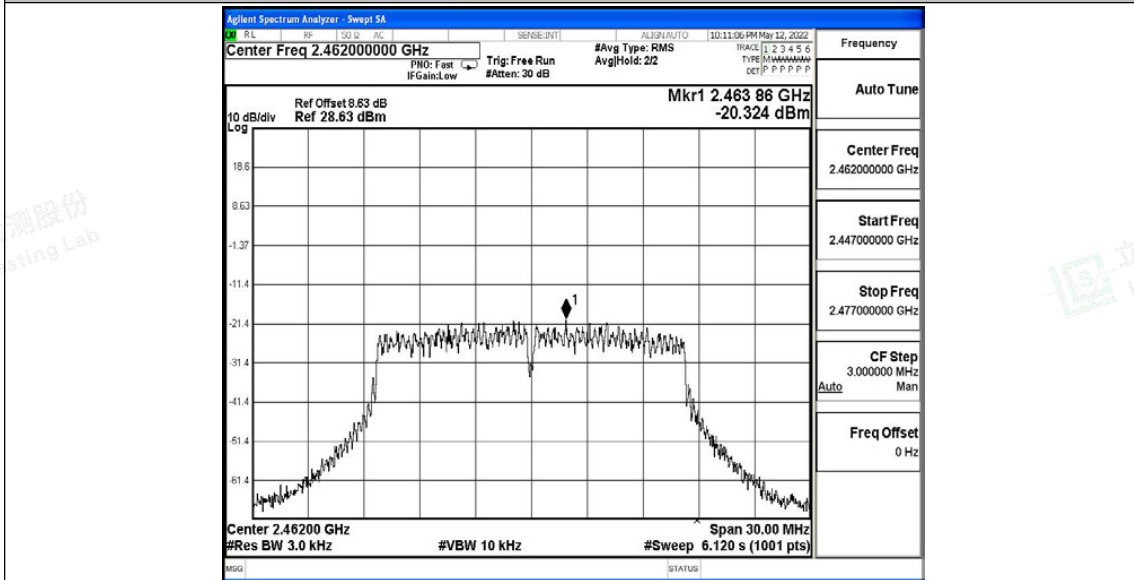


11G\_Ant1\_2437





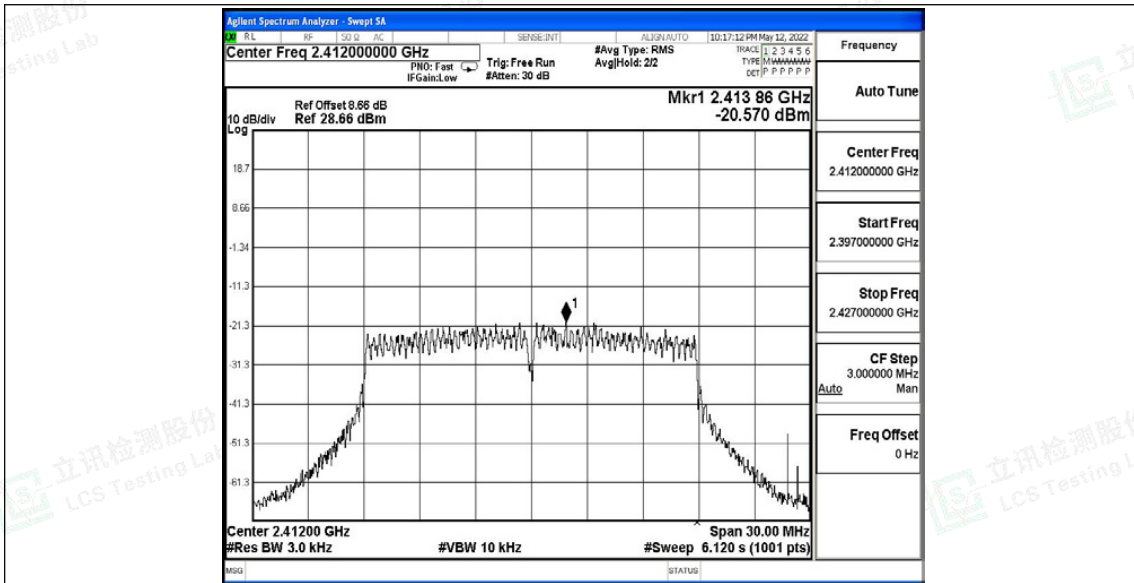
11G\_Ant1\_2462



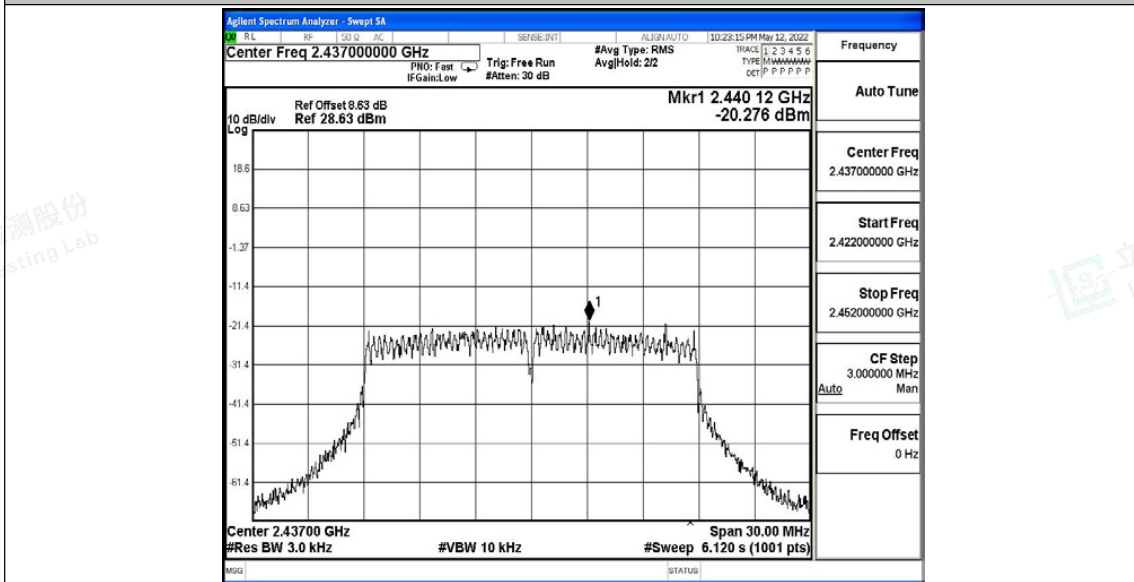
11N20SISO\_Ant1\_2412





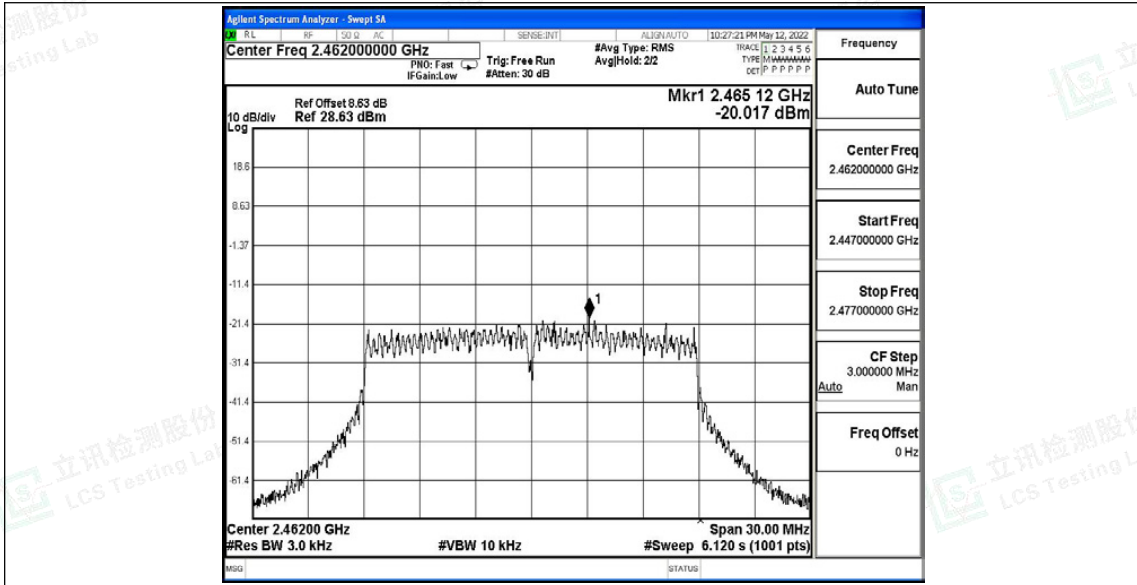


11N20SISO\_Ant1\_2437

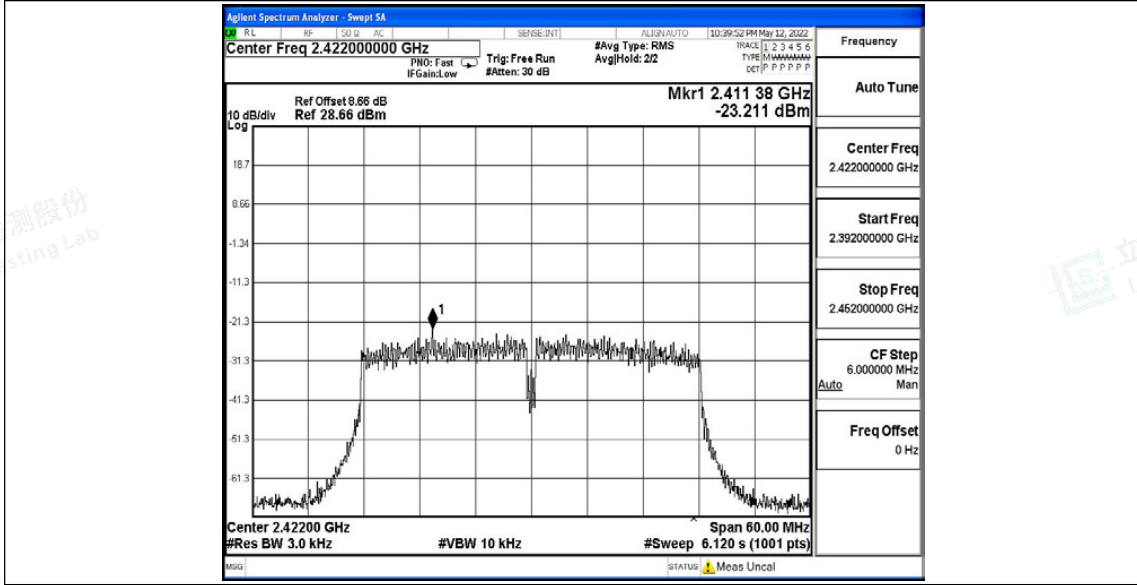


11N20SISO\_Ant1\_2462



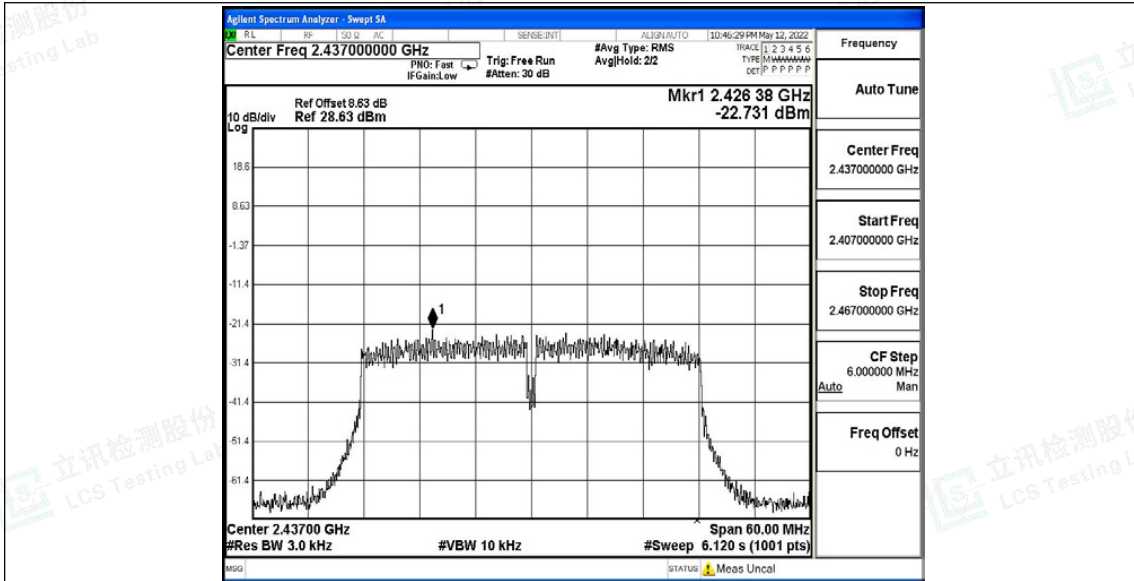


11N40SISO\_Ant1\_2422

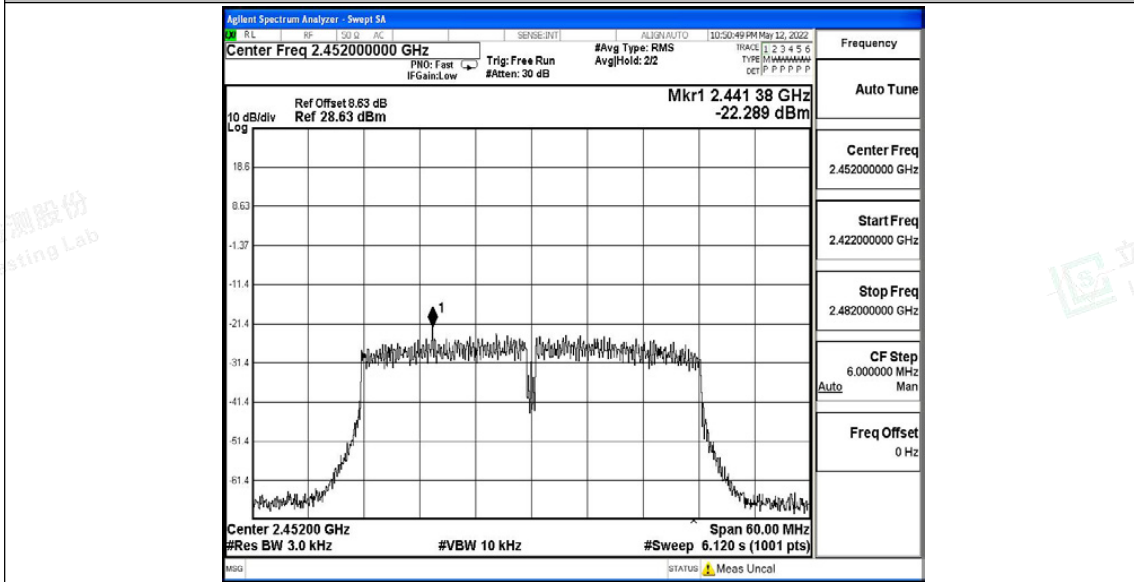


11N40SISO\_Ant1\_2437





11N40SISO\_Ant1\_2452





## B.4 Band edge measurements

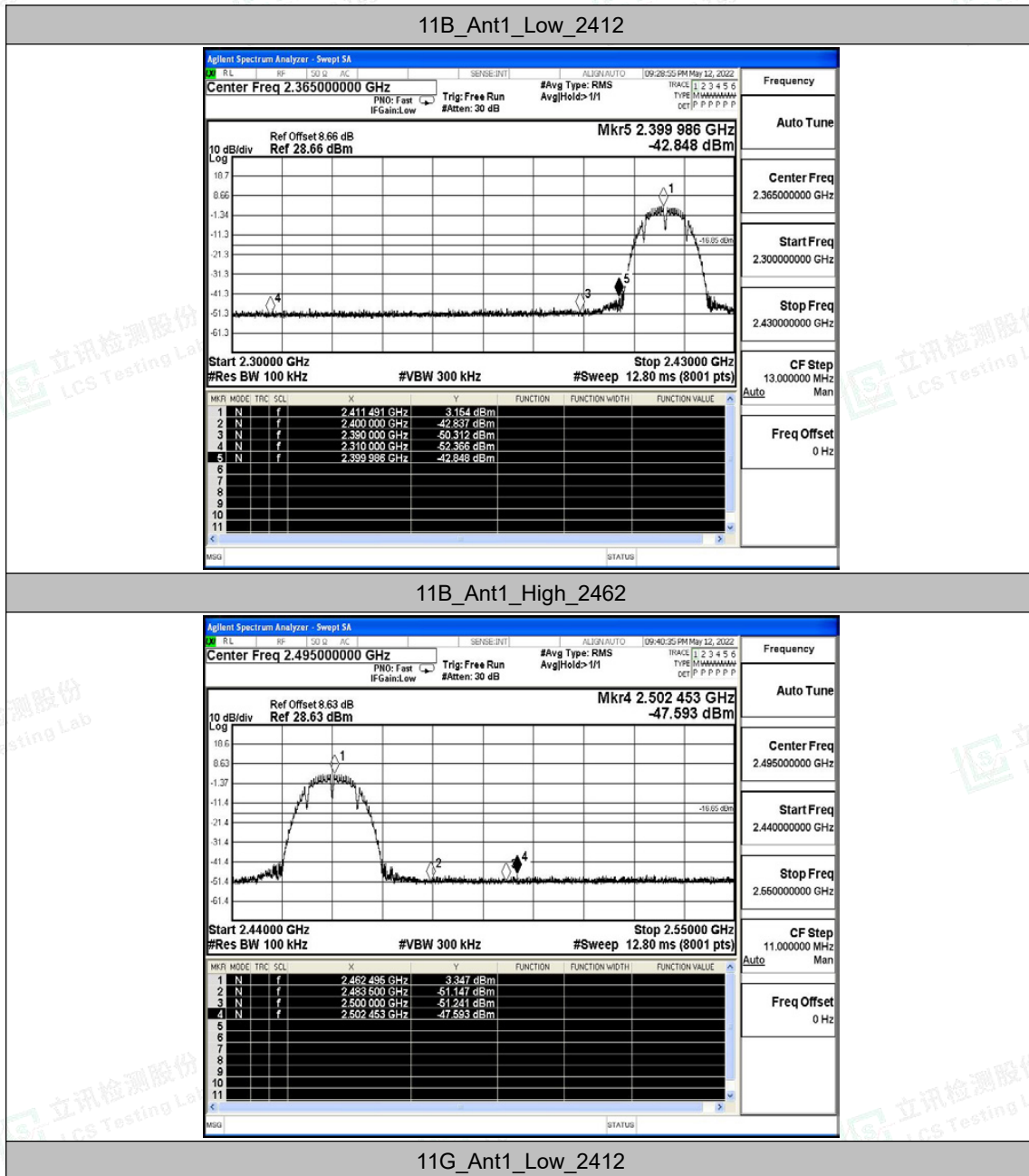
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	3.15	-42.85	≤-16.85	PASS
		High	2462	3.35	-47.59	≤-16.65	PASS
11G	Ant1	Low	2412	2.85	-34.38	≤-17.15	PASS
		High	2462	-5.88	-48.2	≤-25.88	PASS
11N20SISO	Ant1	Low	2412	-5.54	-41.78	≤-25.54	PASS
		High	2462	-5.73	-47.72	≤-25.73	PASS
11N40SISO	Ant1	Low	2422	-8.98	-47.59	≤-28.98	PASS
		High	2452	-8.54	-47.44	≤-28.54	PASS

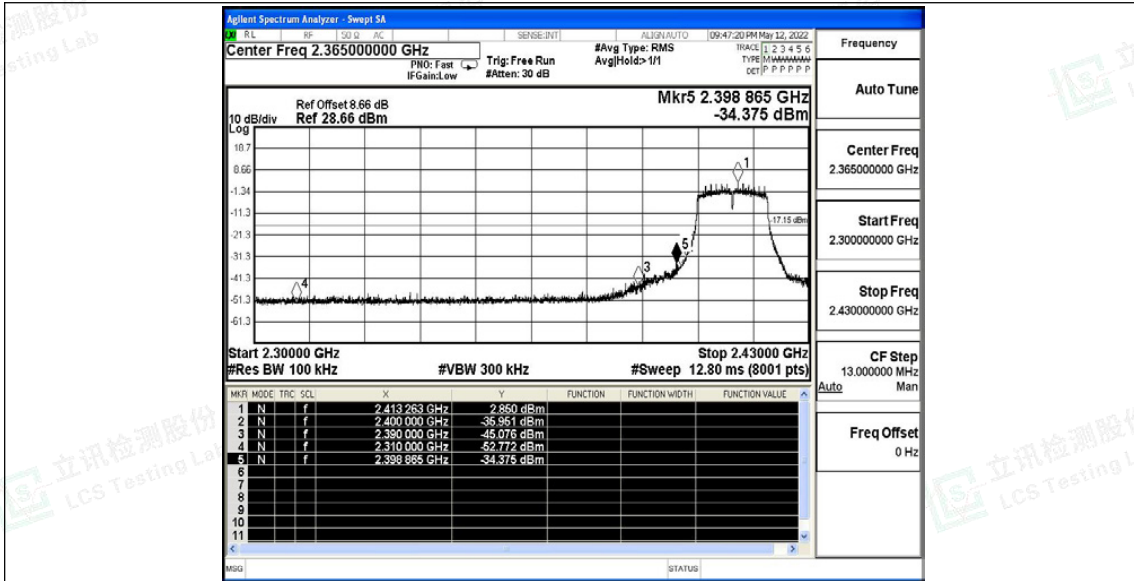




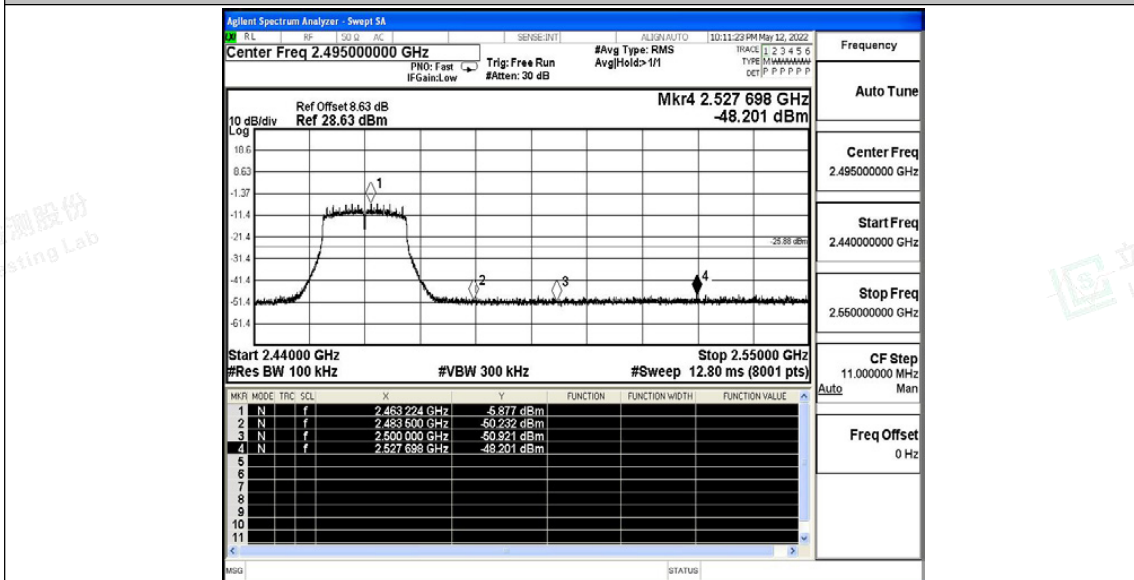
### Test Graphs





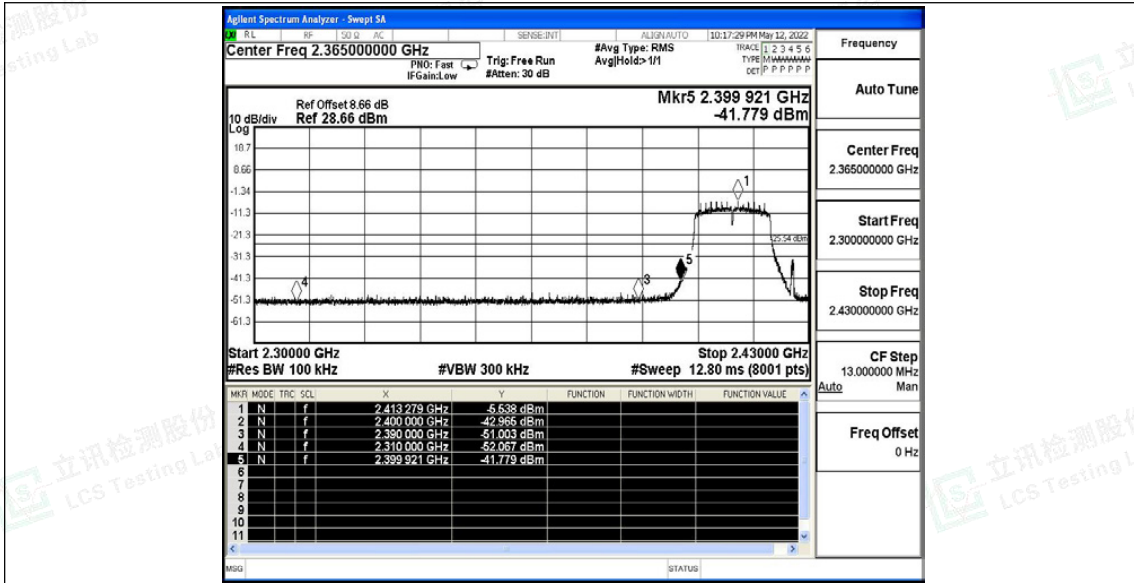


11G\_Ant1\_High\_2462

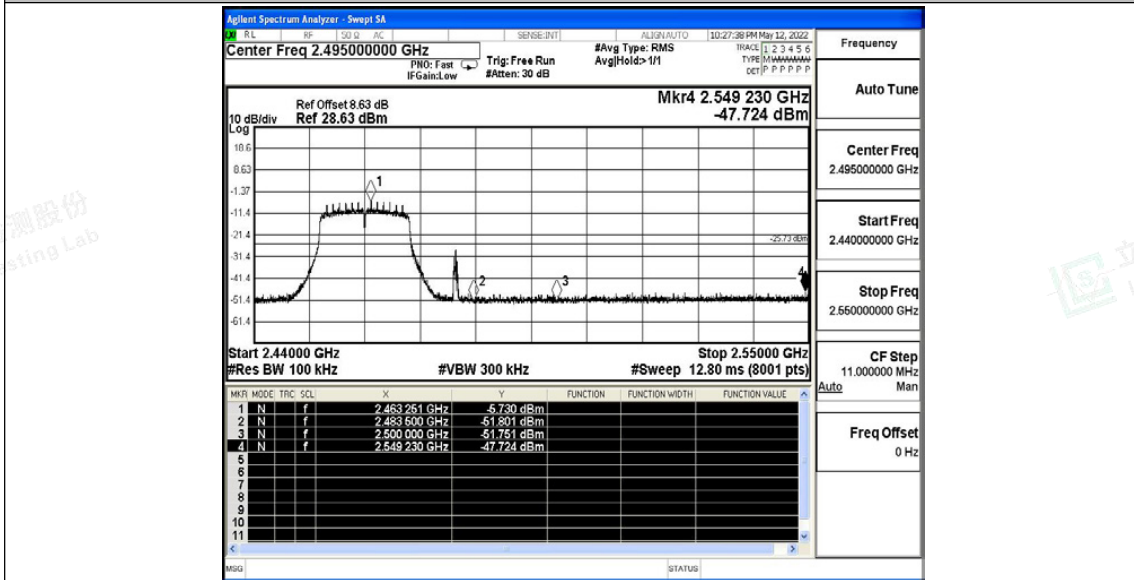


11N20SISO\_Ant1\_Low\_2412



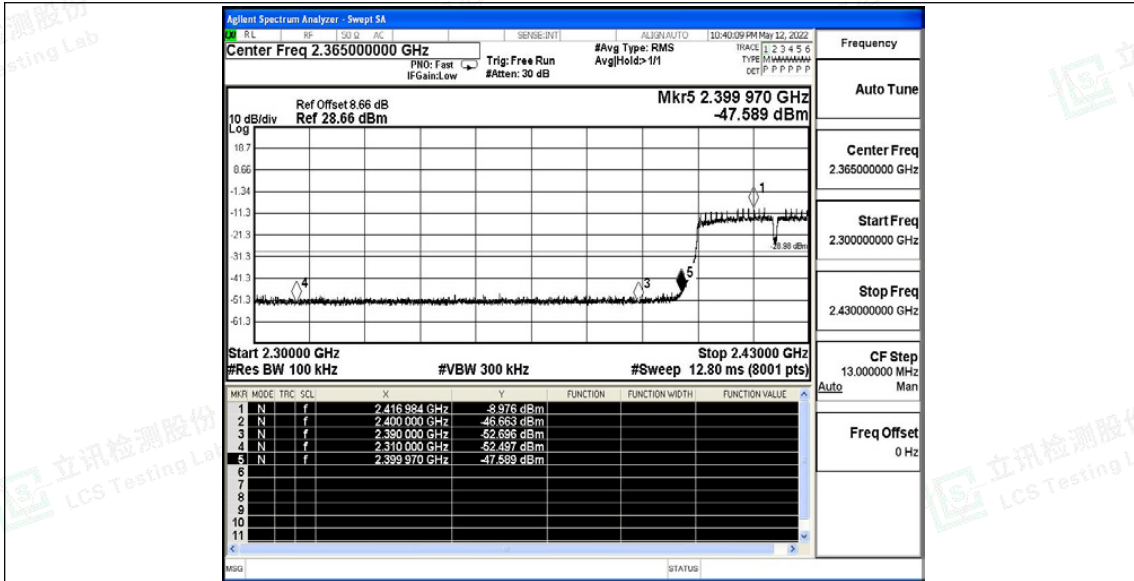


11N20SISO\_Ant1\_High\_2462

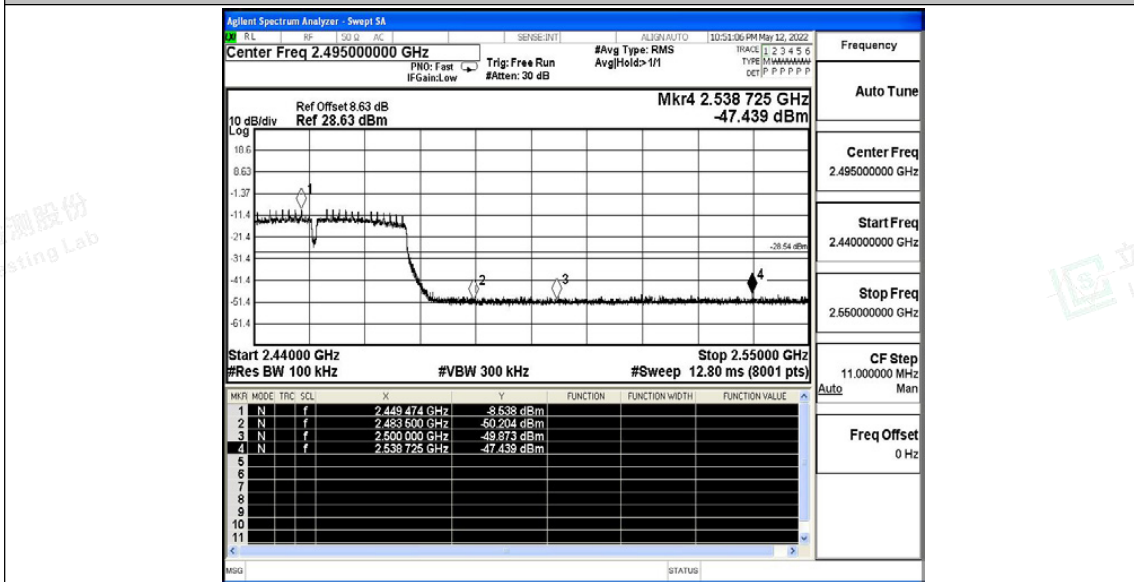


11N40SISO\_Ant1\_Low\_2422





11N40SISO\_Ant1\_High\_2452





## B.5 Conducted Spurious Emission

### Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.79	2.79	---	PASS
			30~1000	2.79	-60.21	≤-17.21	PASS
			1000~26500	2.79	-46.08	≤-17.21	PASS
		2437	Reference	3.44	3.44	---	PASS
			30~1000	3.44	-60.6	≤-16.56	PASS
			1000~26500	3.44	-46.2	≤-16.56	PASS
		2462	Reference	3.30	3.30	---	PASS
			30~1000	3.30	-60.39	≤-16.7	PASS
			1000~26500	3.30	-46.14	≤-16.7	PASS
11G	Ant1	2412	Reference	2.78	2.78	---	PASS
			30~1000	2.78	-60.44	≤-17.22	PASS
			1000~26500	2.78	-46.39	≤-17.22	PASS
		2437	Reference	3.27	3.27	---	PASS
			30~1000	3.27	-60.48	≤-16.73	PASS
			1000~26500	3.27	-45.98	≤-16.73	PASS
		2462	Reference	-5.57	-5.57	---	PASS
			30~1000	-5.57	-60.57	≤-25.57	PASS
			1000~26500	-5.57	-46.58	≤-25.57	PASS
11N20SISO	Ant1	2412	Reference	-5.33	-5.33	---	PASS
			30~1000	-5.33	-60.77	≤-25.33	PASS
			1000~26500	-5.33	-45.58	≤-25.33	PASS
		2437	Reference	-6.22	-6.22	---	PASS
			30~1000	-6.22	-60.63	≤-26.22	PASS
			1000~26500	-6.22	-45.99	≤-26.22	PASS
		2462	Reference	-5.76	-5.76	---	PASS
			30~1000	-5.76	-60.82	≤-25.76	PASS
			1000~26500	-5.76	-45.74	≤-25.76	PASS
11N40SISO	Ant1	2422	Reference	-8.80	-8.80	---	PASS
			30~1000	-8.80	-60.15	≤-28.8	PASS
			1000~26500	-8.80	-46.34	≤-28.8	PASS
		2437	Reference	-8.56	-8.56	---	PASS
			30~1000	-8.56	-60.49	≤-28.56	PASS
			1000~26500	-8.56	-45.91	≤-28.56	PASS
		2452	Reference	-8.49	-8.49	---	PASS
			30~1000	-8.49	-60.17	≤-28.49	PASS





			1000~26500	-8.49	-46.36	≤-28.49	PASS
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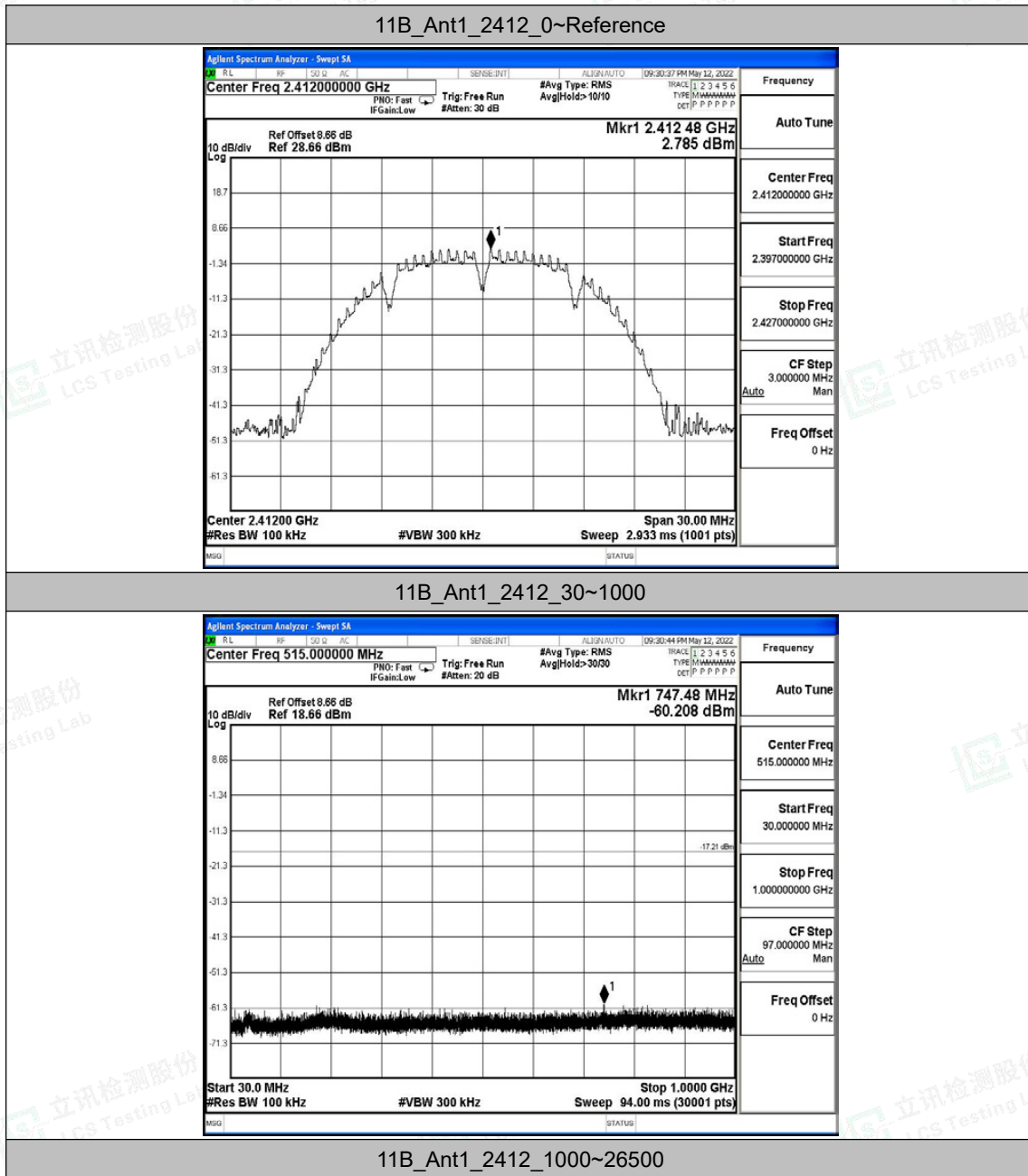


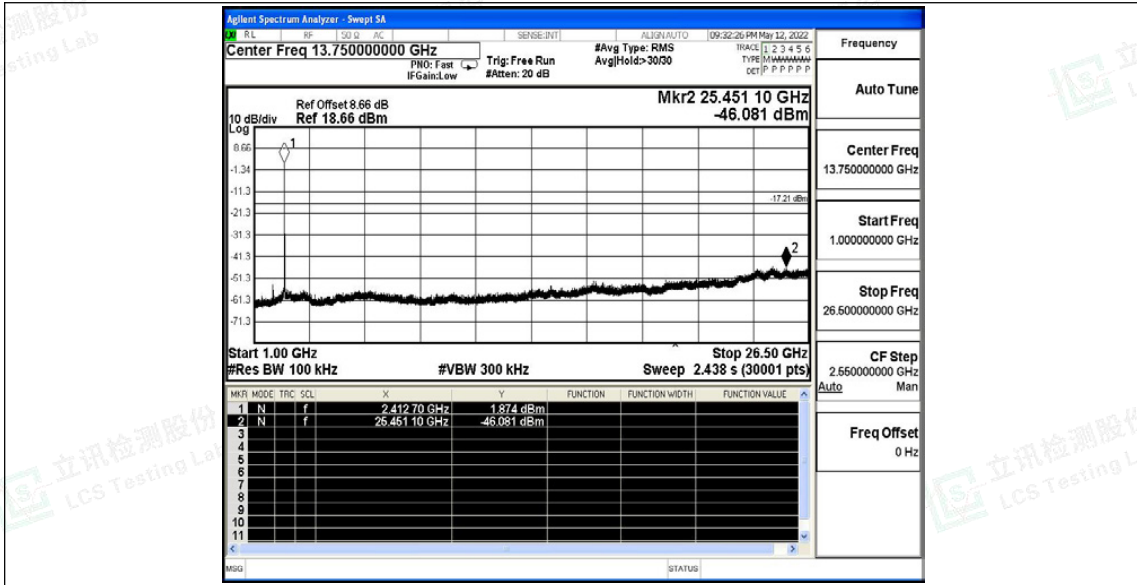
Shenzhen LCS Compliance Testing Laboratory Ltd.  
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China  
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
Scan code to check authenticity



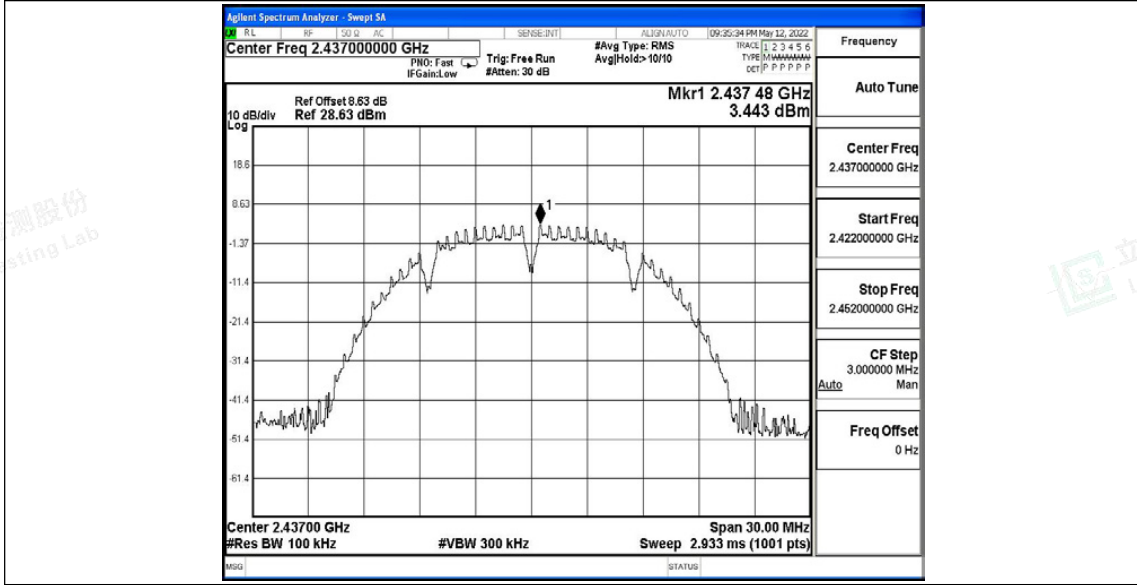


### Test Graphs



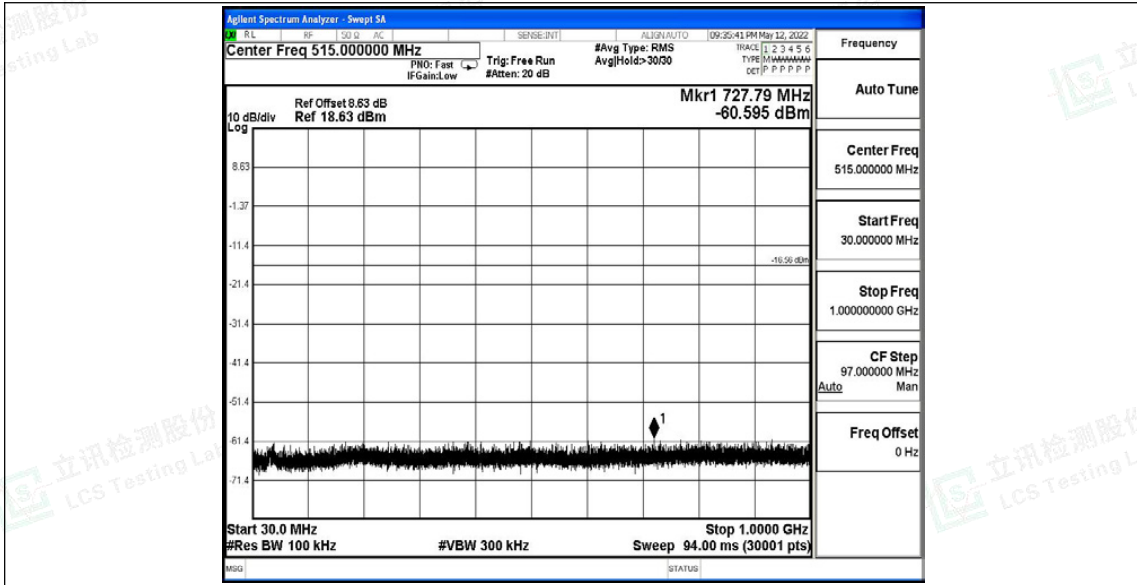


11B\_Ant1\_2437\_0~Reference

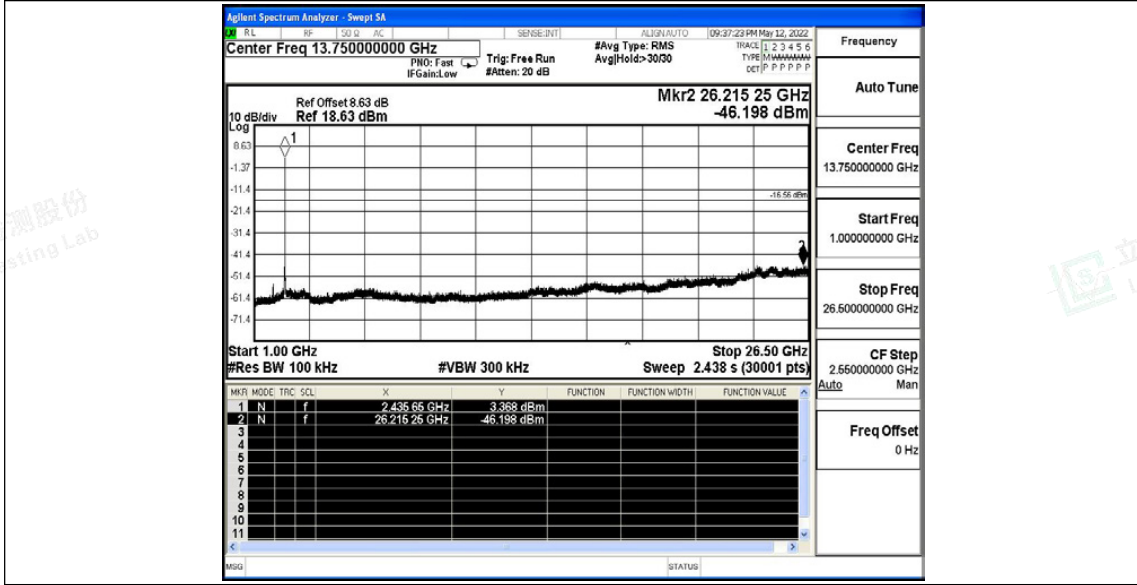


11B\_Ant1\_2437\_30~1000



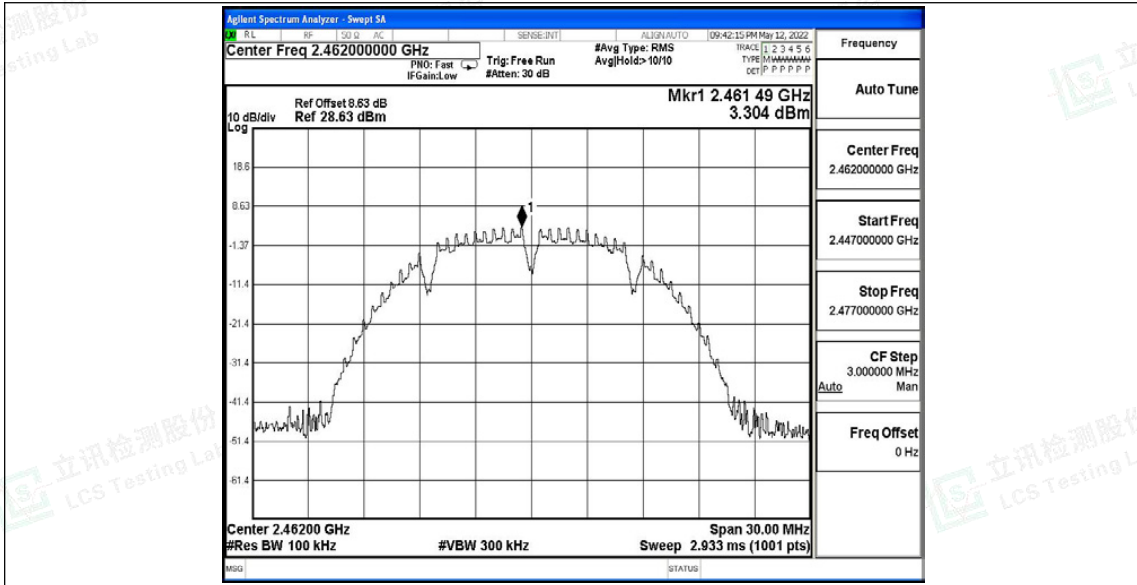


11B\_Ant1\_2437\_1000~26500

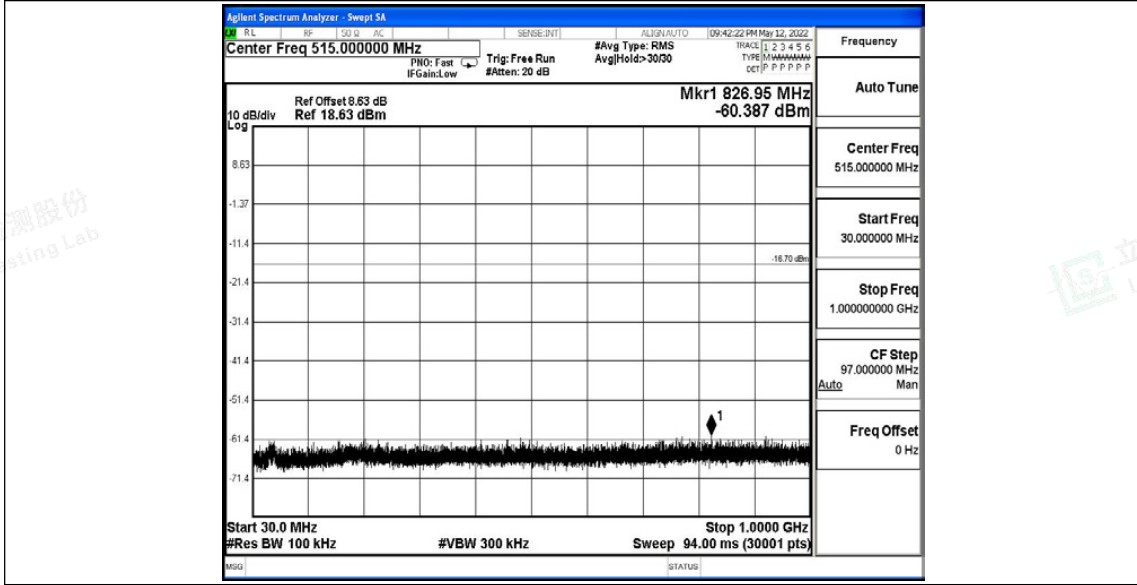


11B\_Ant1\_2462\_0~Reference



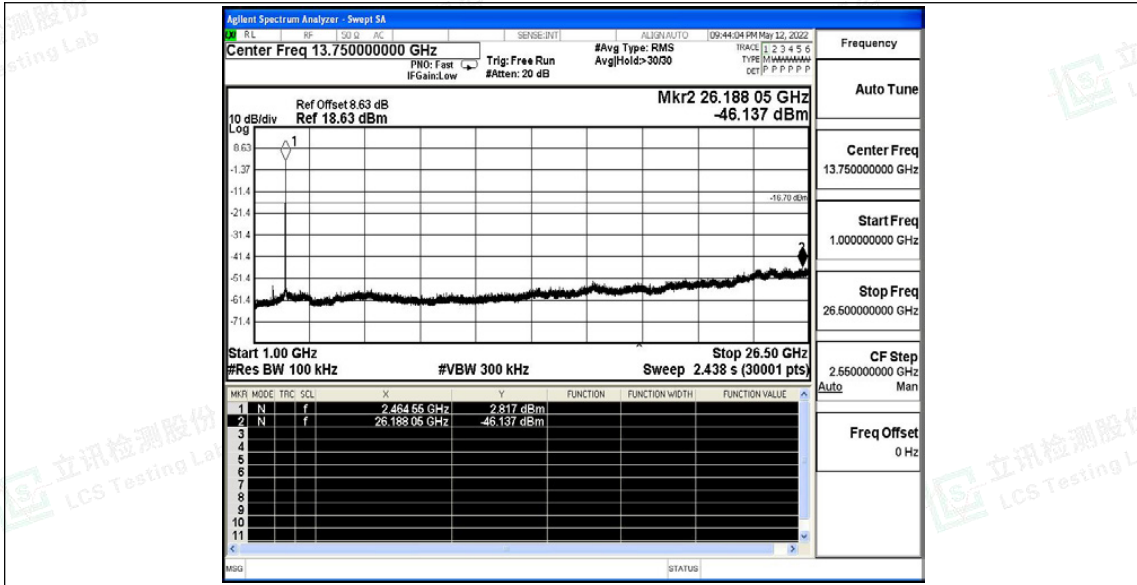


11B\_Ant1\_2462\_30~1000

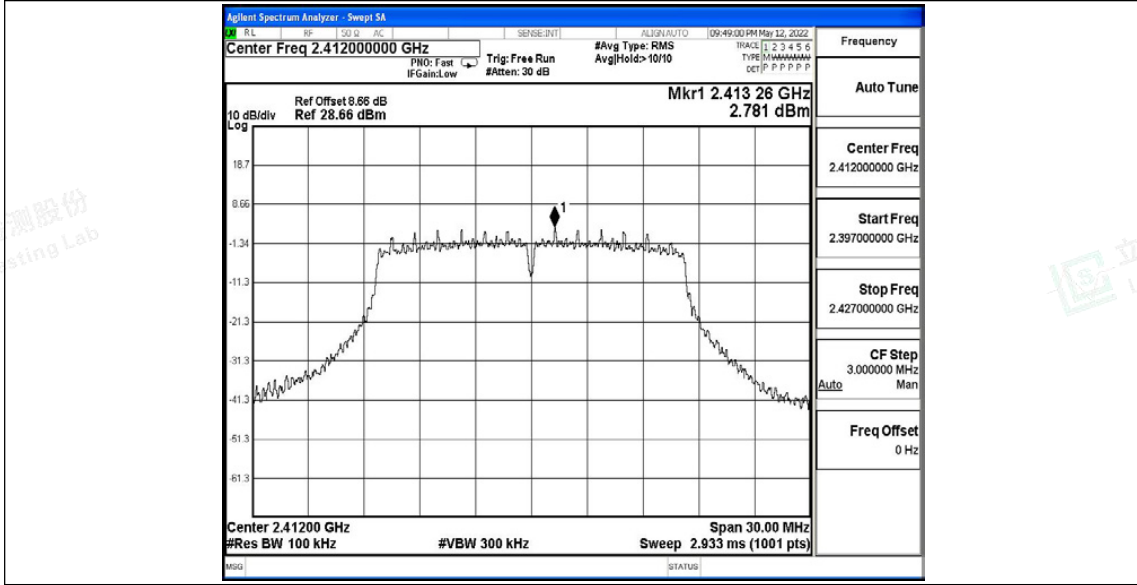


11B\_Ant1\_2462\_1000~26500





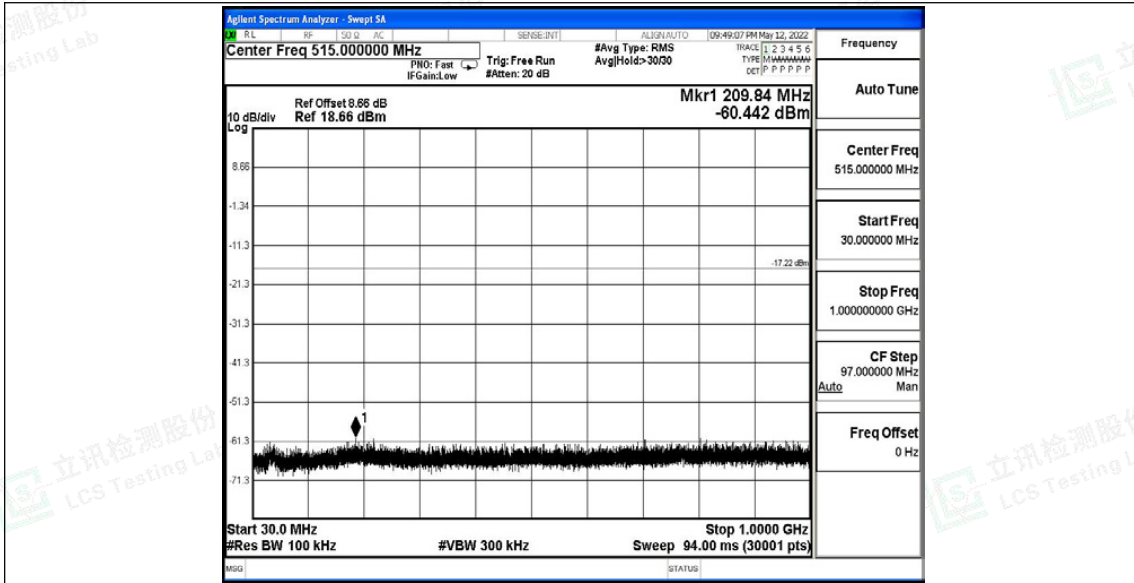
11G\_Ant1\_2412\_0~Reference



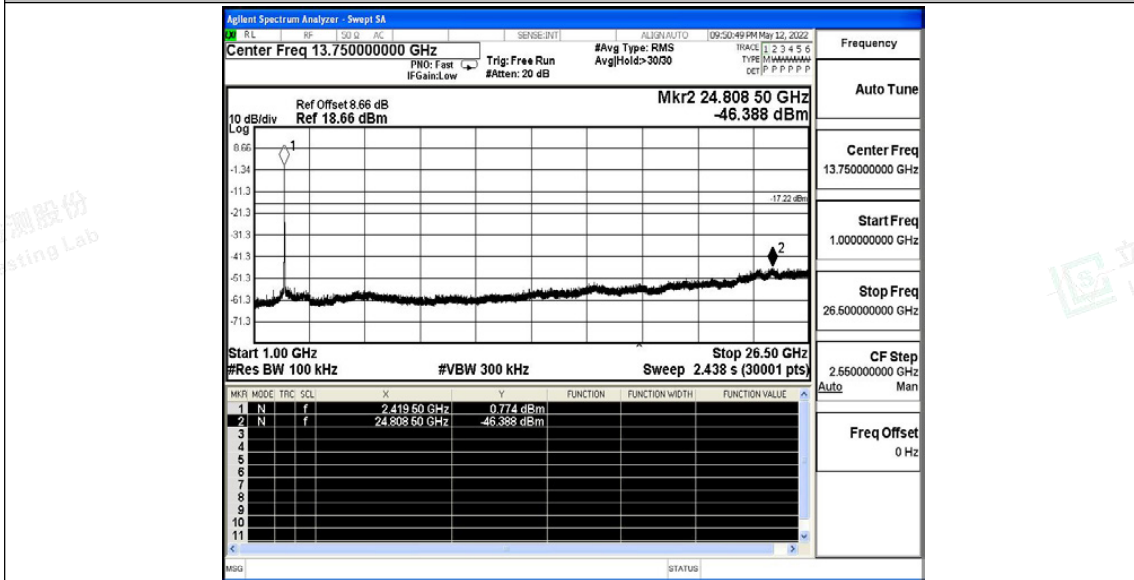
11G\_Ant1\_2412\_30~1000







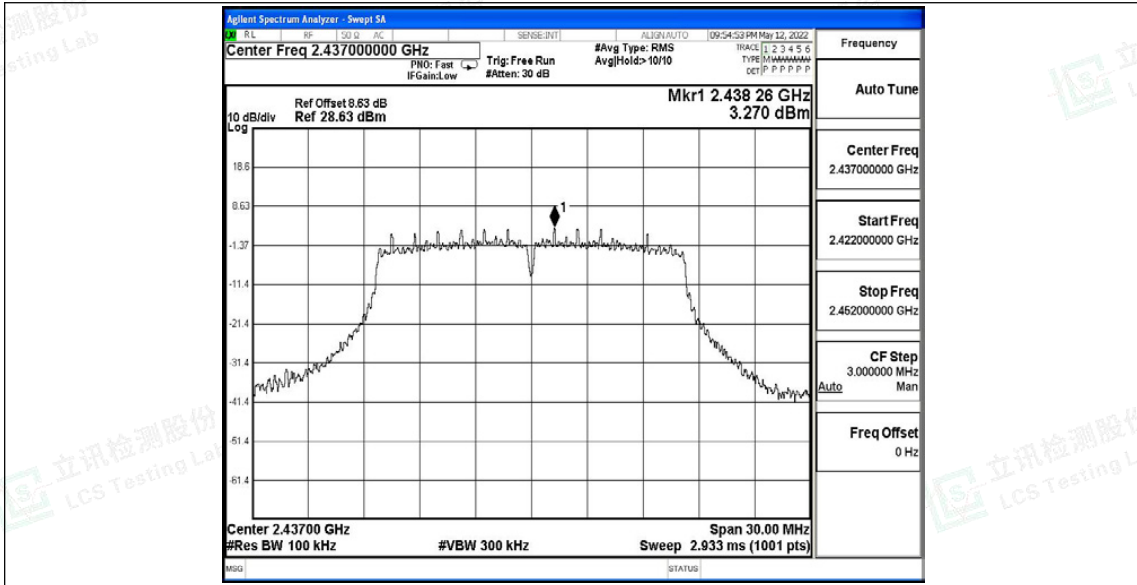
11G\_Ant1\_2412\_1000~26500



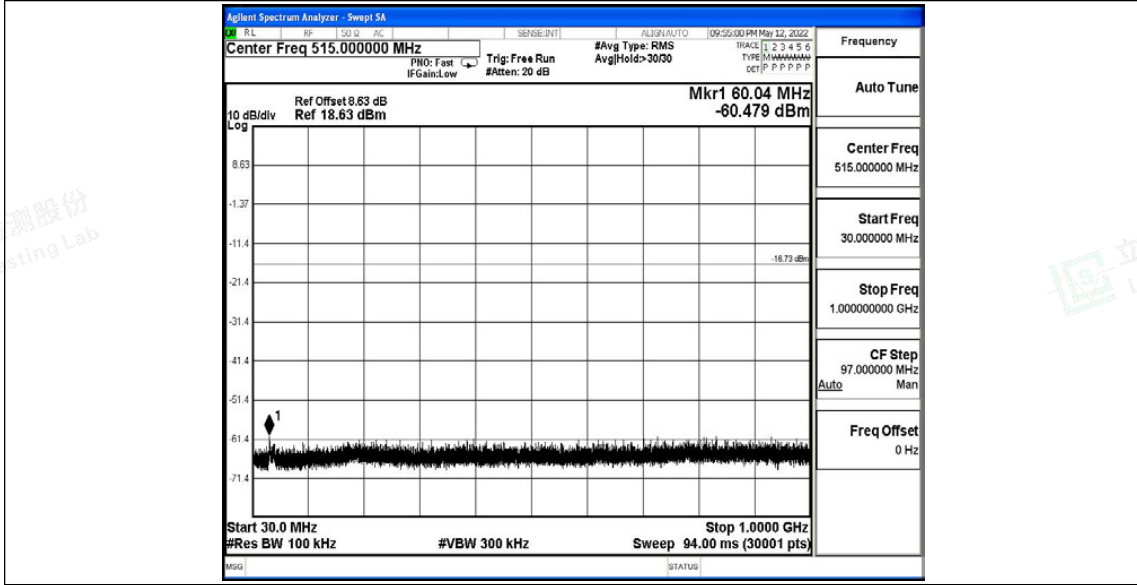
11G\_Ant1\_2437\_0~Reference





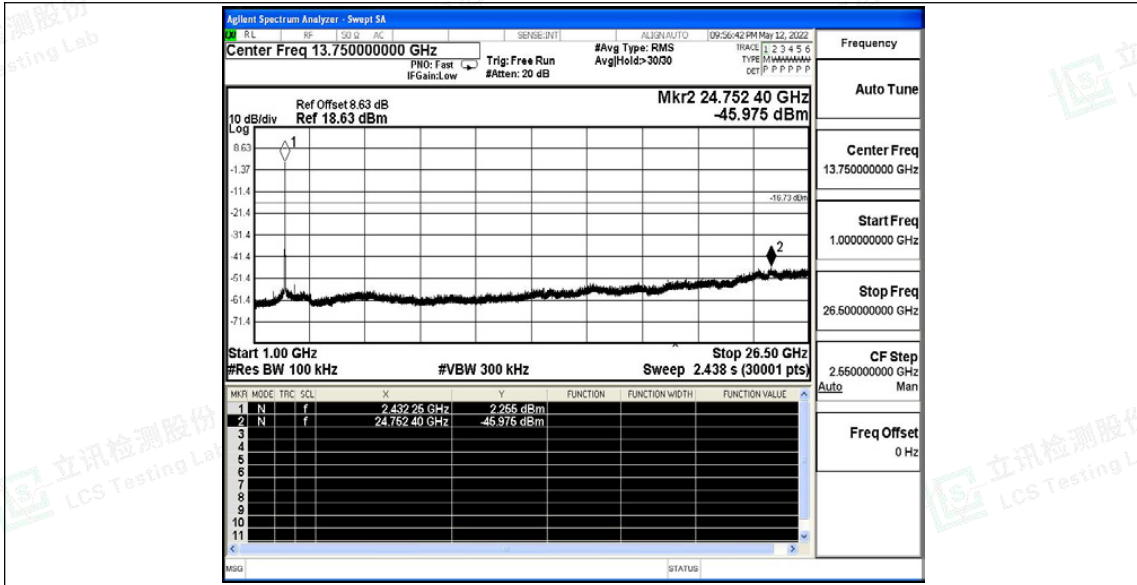


11G\_Ant1\_2437\_30~1000

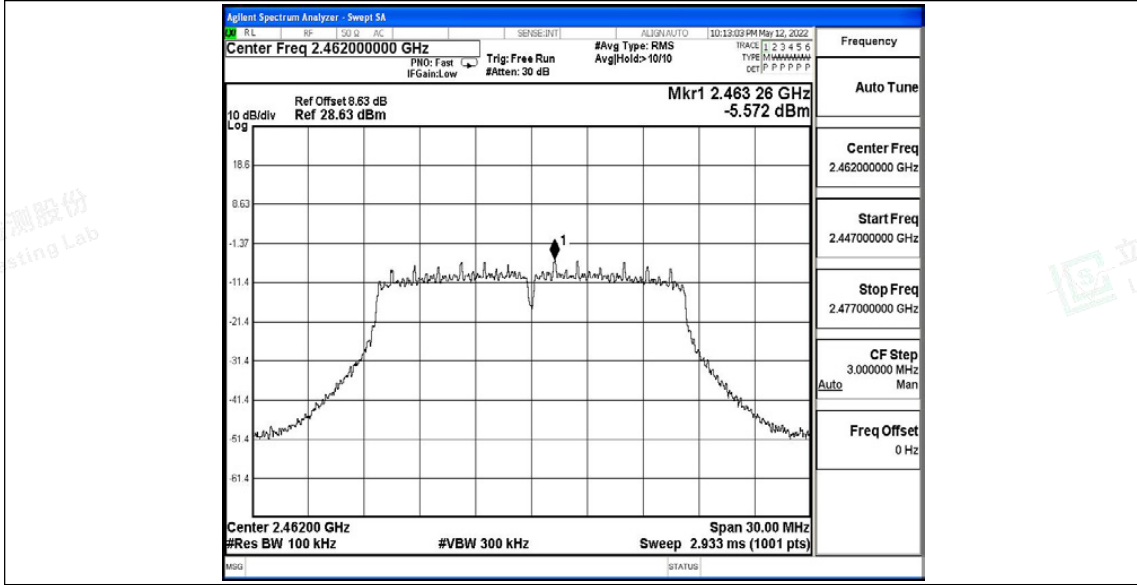


11G\_Ant1\_2437\_1000~26500



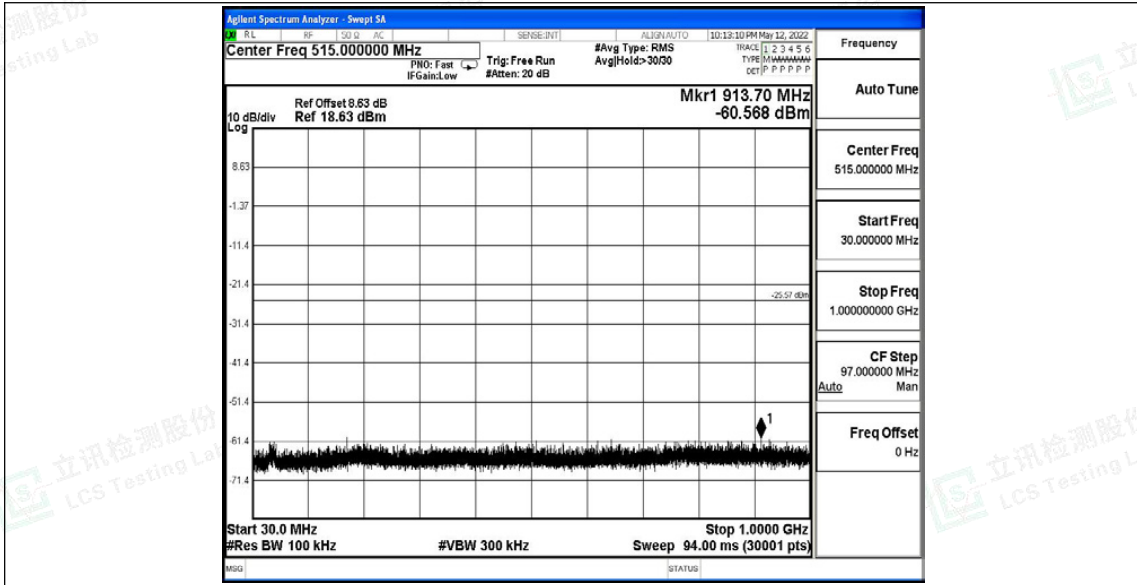


11G\_Ant1\_2462\_0~Reference

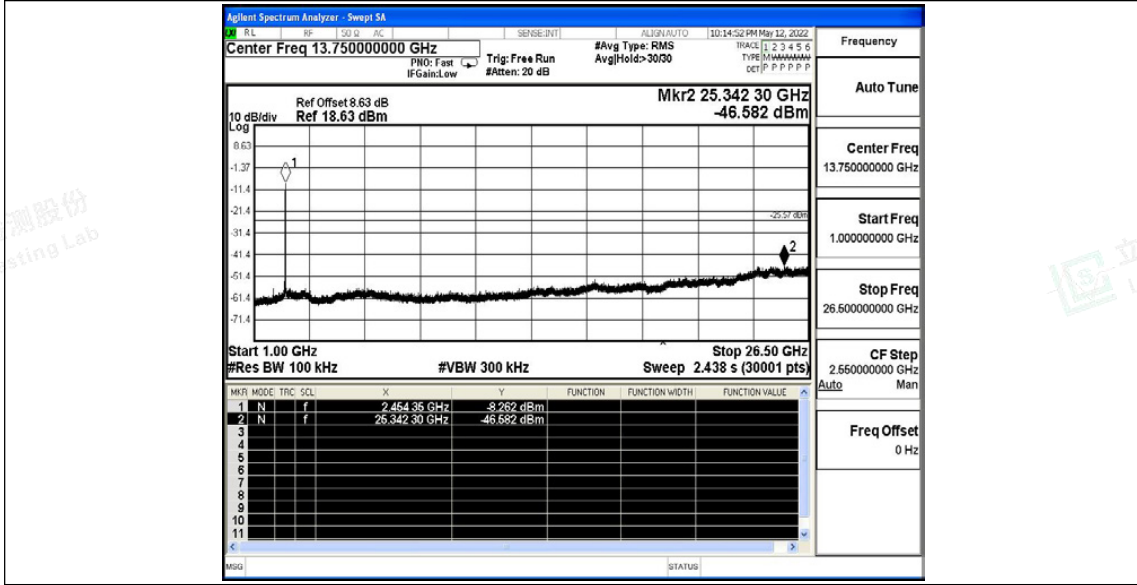


11G\_Ant1\_2462\_30~1000



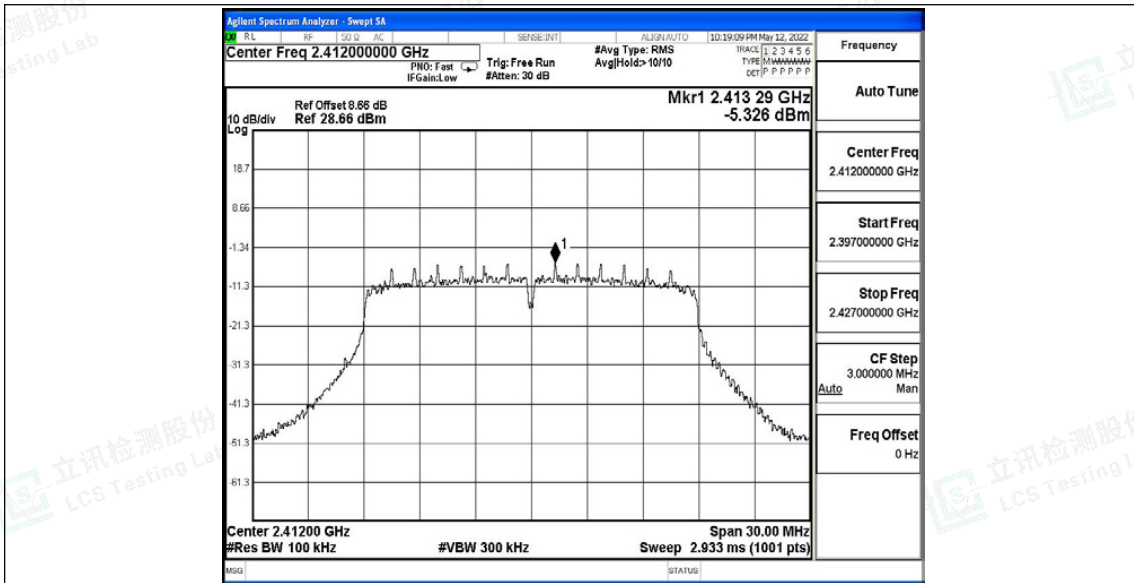


11G\_Ant1\_2462\_1000~26500

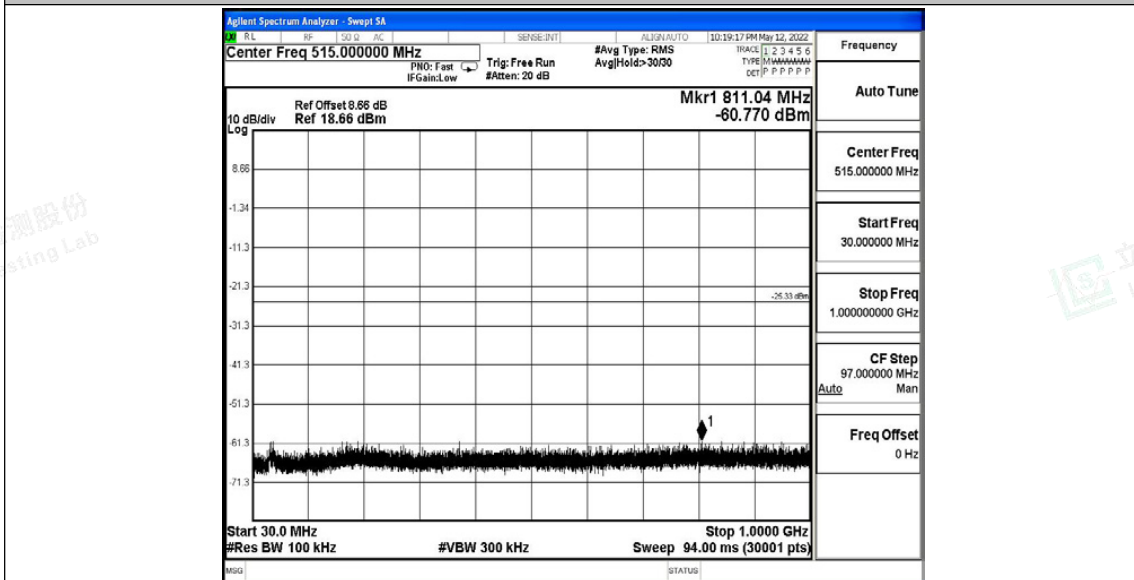


11N20SISO\_Ant1\_2412\_0~Reference





11N20SISO\_Ant1\_2412\_30~1000



11N20SISO\_Ant1\_2412\_1000~26500

