



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: LED Bulb String Lights

Test Model: S1025

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Mening Su</i> Mening Su
Supervised by:	<i>Li Huan</i> Li Huan





A.1 DTS Bandwidth

Test Result

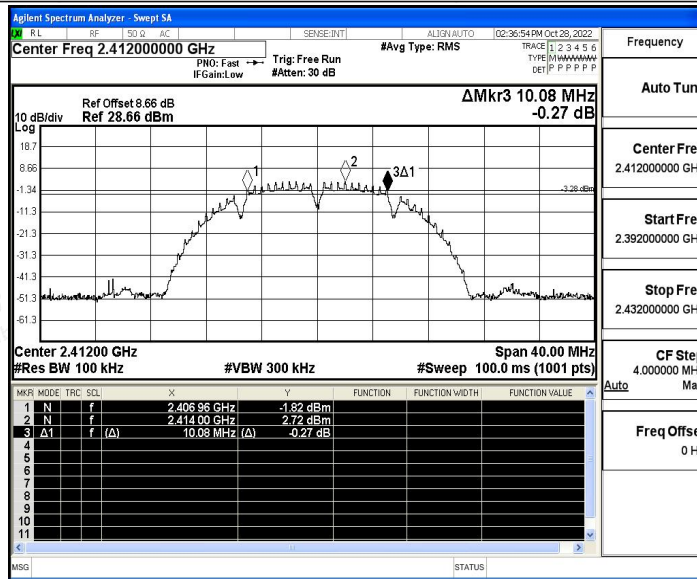
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	10.080	2431.960	2442.040	0.5	PASS
		2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.280	2453.880	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.280	2403.240	2420.520	0.5	PASS
		2437	17.280	2428.240	2445.520	0.5	PASS
		2462	17.280	2453.240	2470.520	0.5	PASS



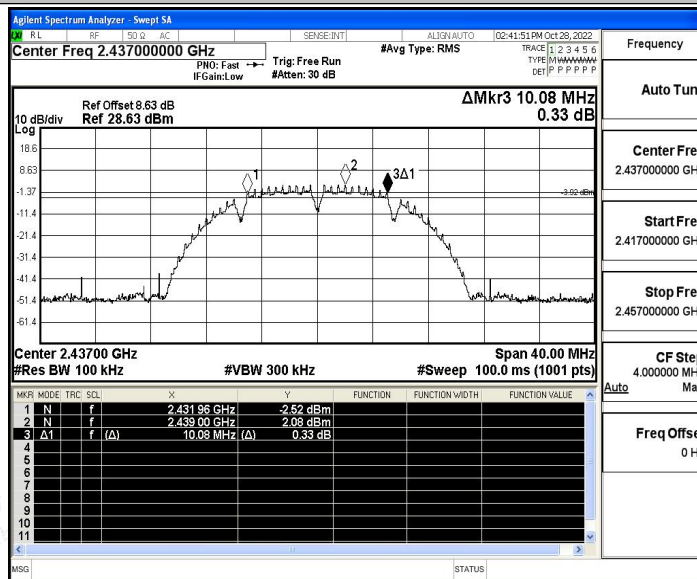


Test Graphs

11B_Ant1_2412

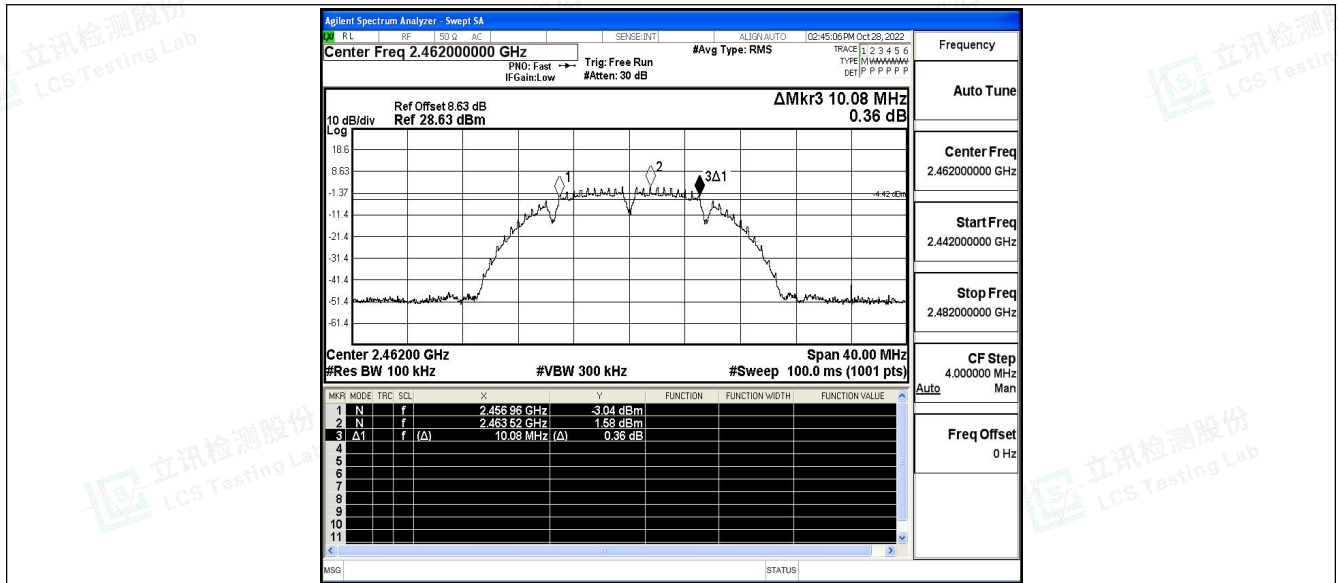


11B_Ant1_2437

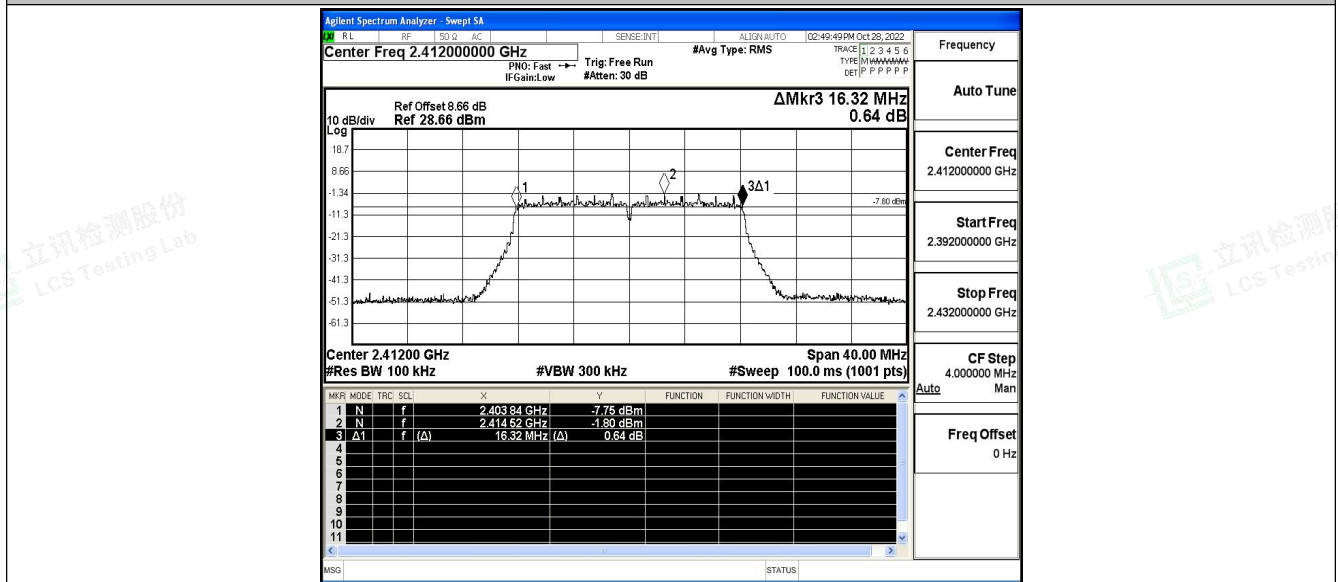


11B_Ant1_2462



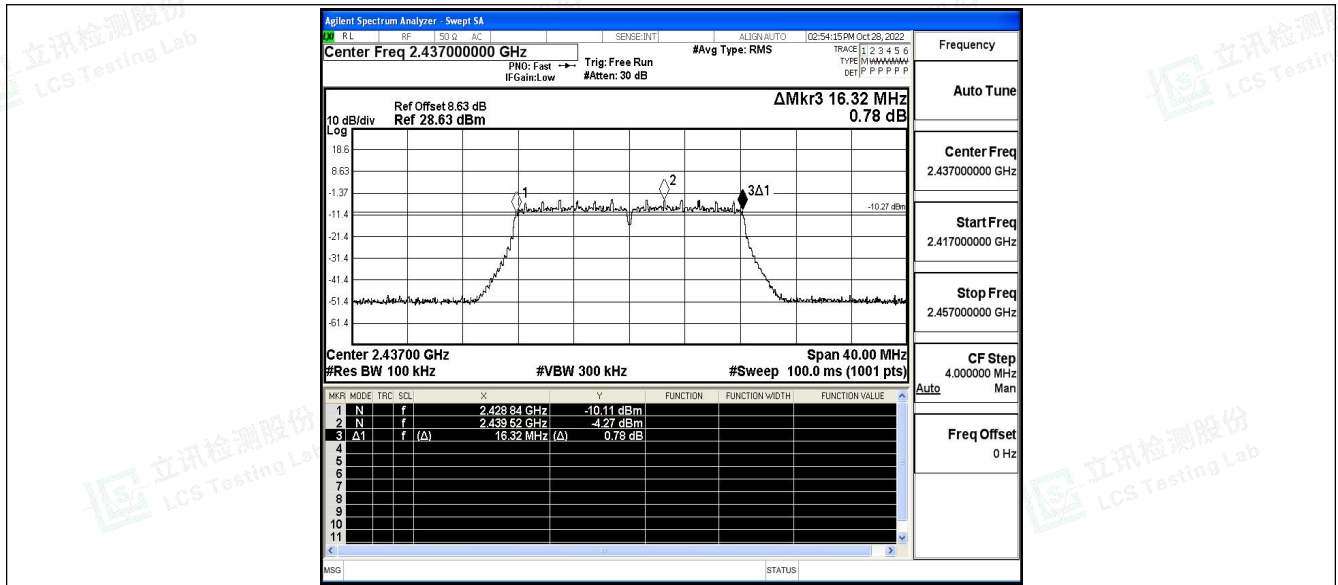


11G_Ant1_2412

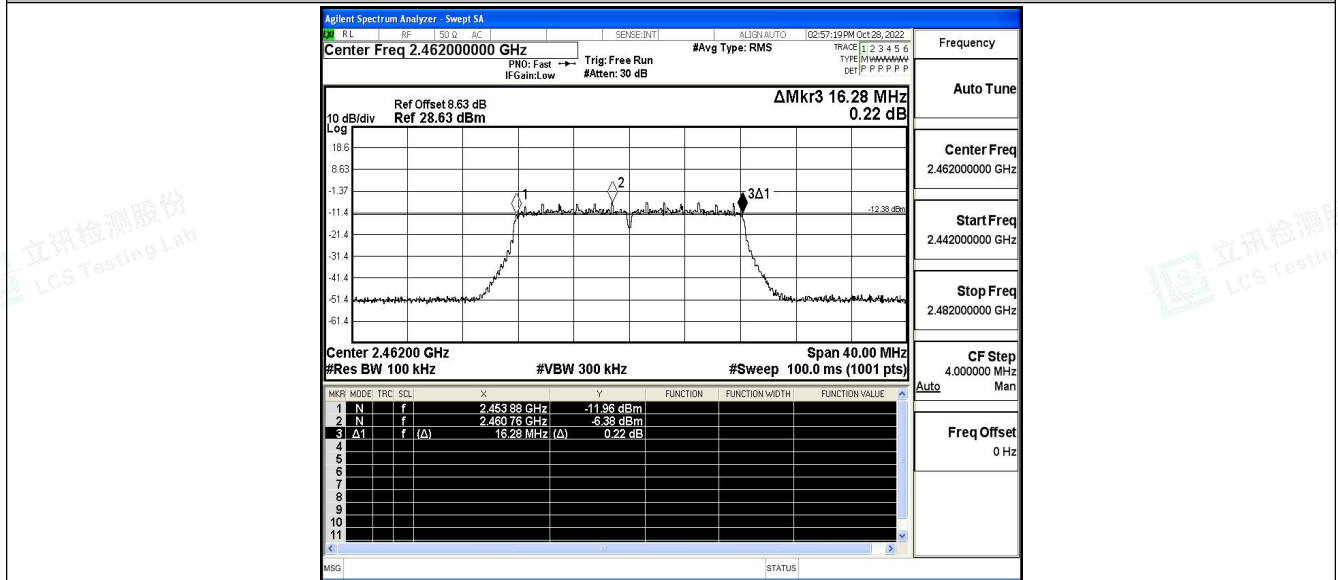


11G_Ant1_2437



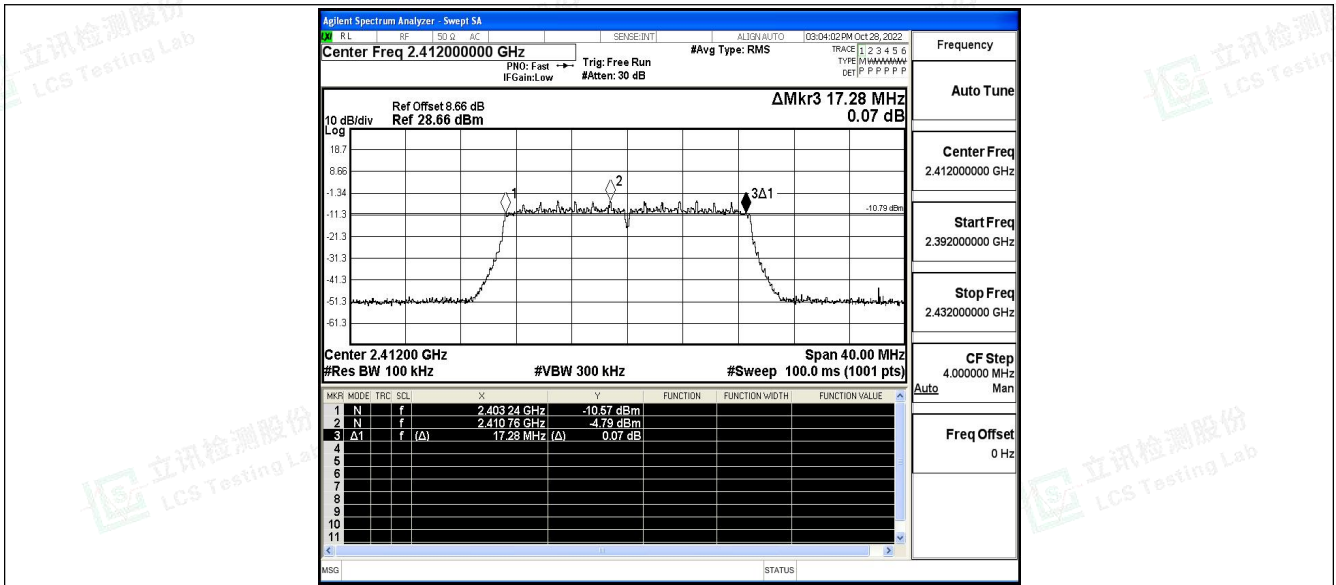


11G_Ant1_2462

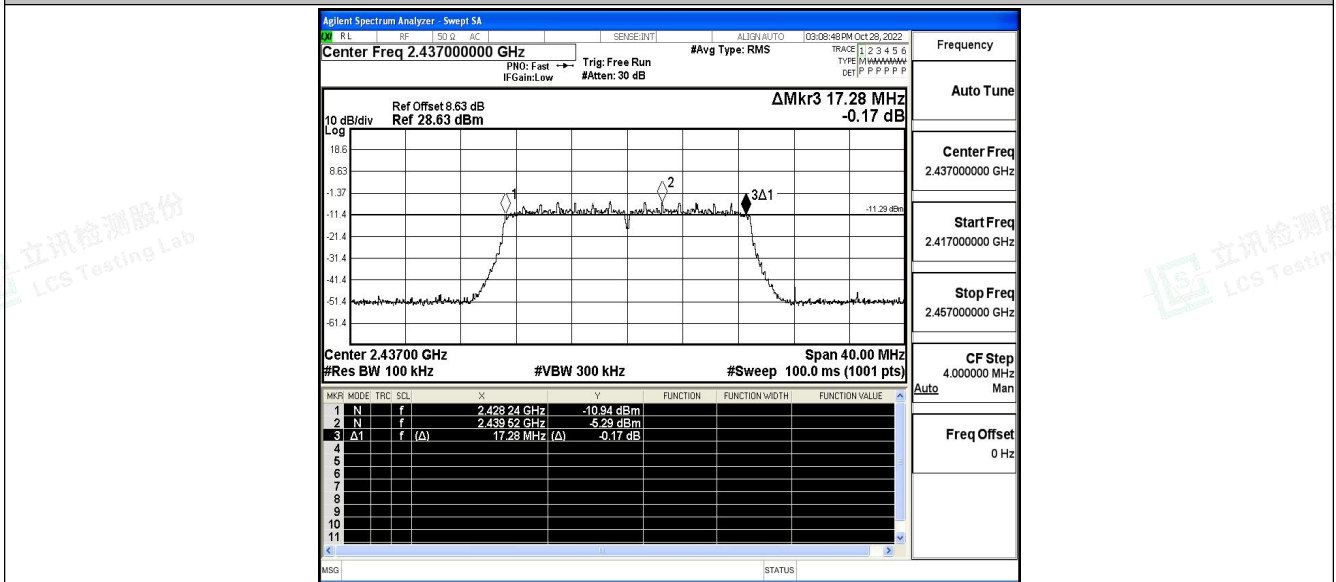


11N20SISO_Ant1_2412



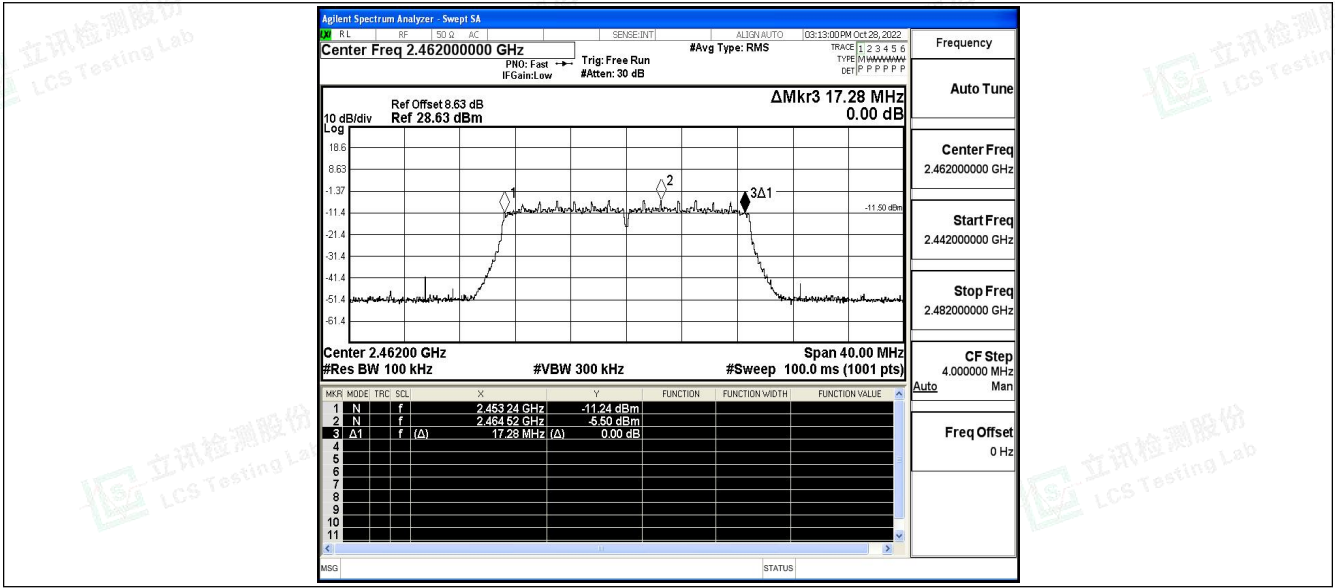


11N20SISO_Ant1_2437



11N20SISO_Ant1_2462







A.2 Occupied Channel Bandwidth

Test Result

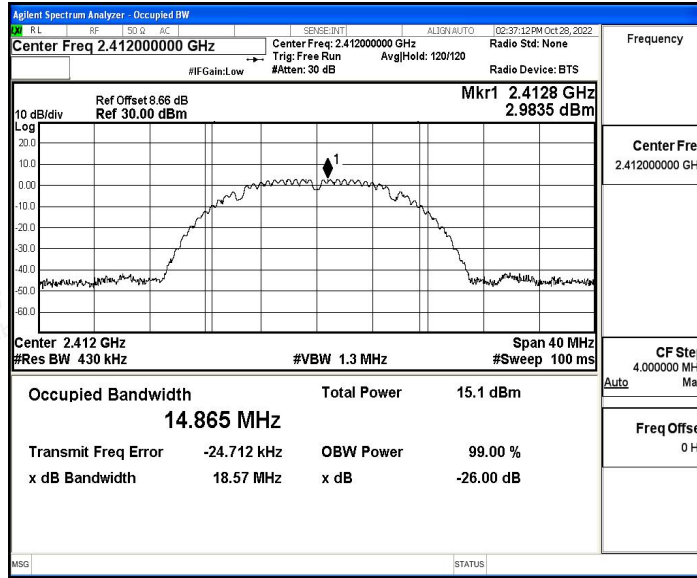
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.865	2404.5428	2419.4078	---	---
		2437	14.885	2429.5525	2444.4375	---	---
		2462	14.879	2454.5550	2469.4340	---	---
11G	Ant1	2412	16.506	2403.7638	2420.2698	---	---
		2437	16.470	2428.7682	2445.2382	---	---
		2462	16.508	2453.7637	2470.2717	---	---
11N20SISO	Ant1	2412	17.603	2403.2002	2420.8032	---	---
		2437	17.619	2428.1847	2445.8037	---	---
		2462	17.619	2453.1944	2470.8134	---	---



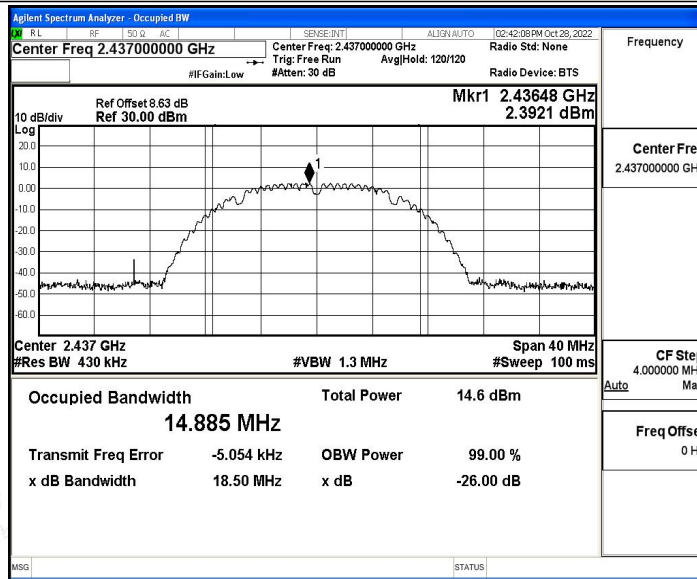


Test Graphs

11B_Ant1_2412

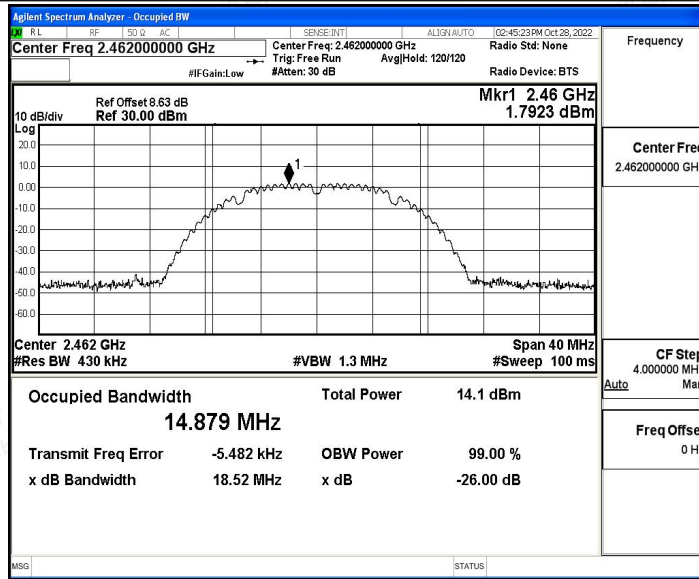


11B_Ant1_2437

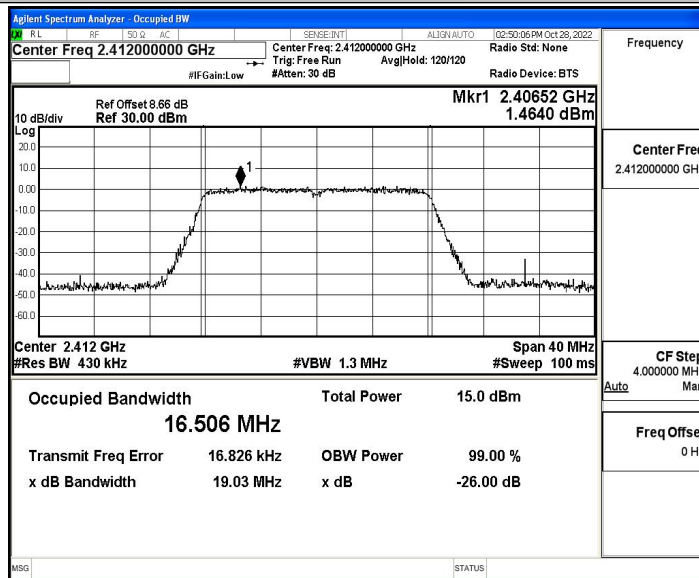


11B_Ant1_2462



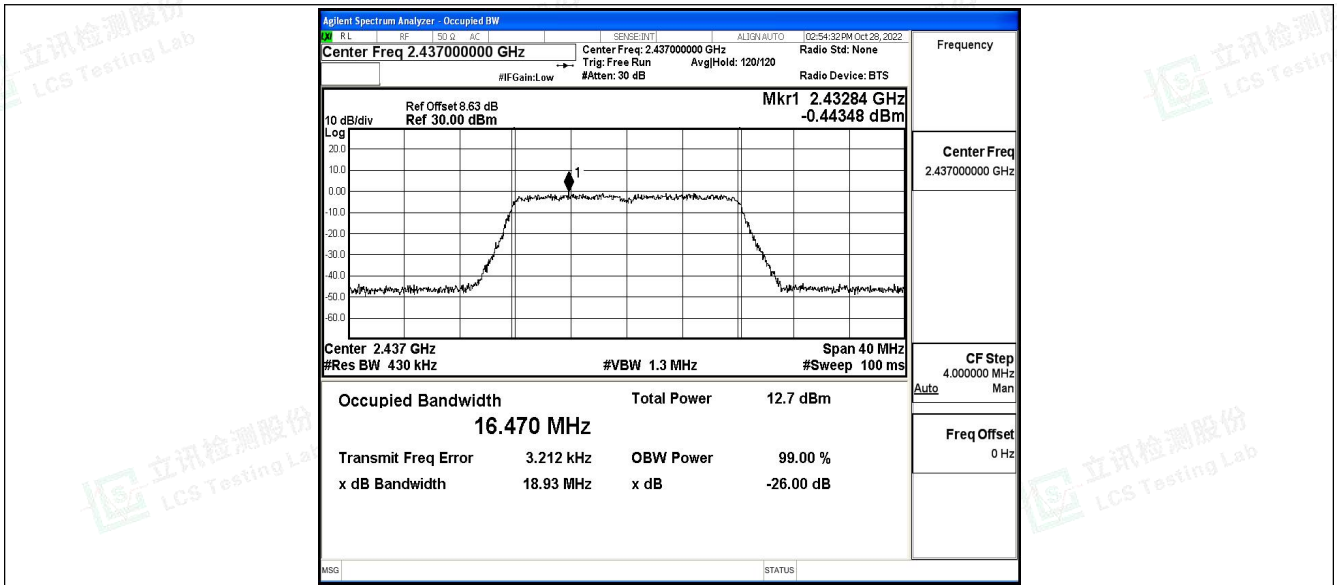


11G_Ant1_2412

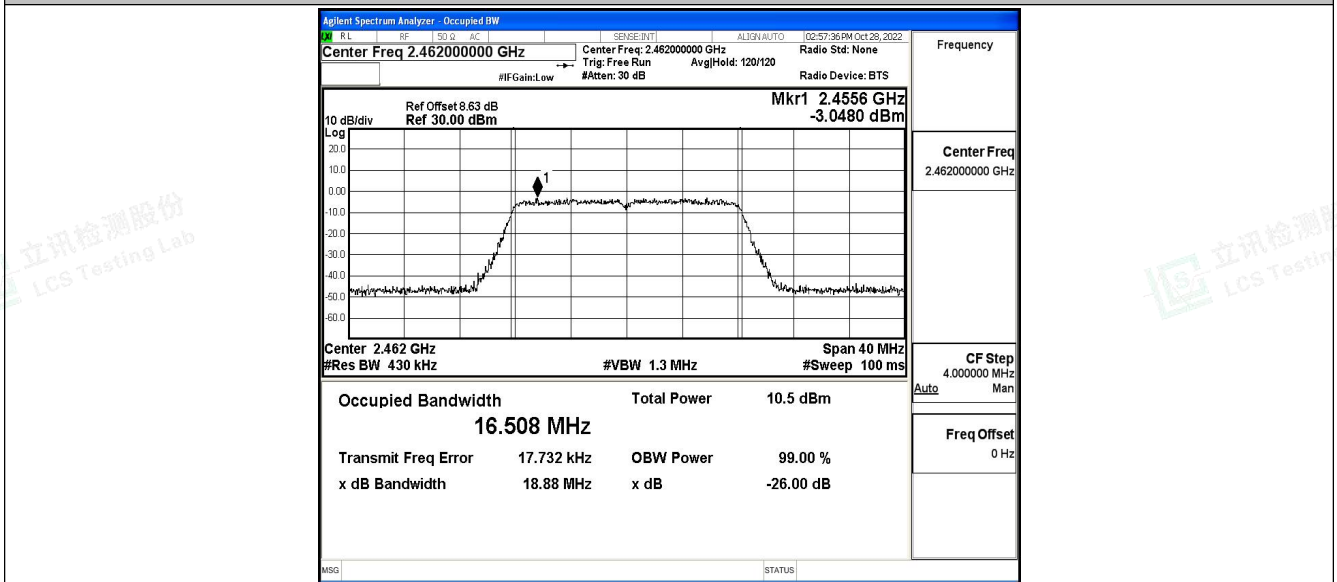


11G_Ant1_2437



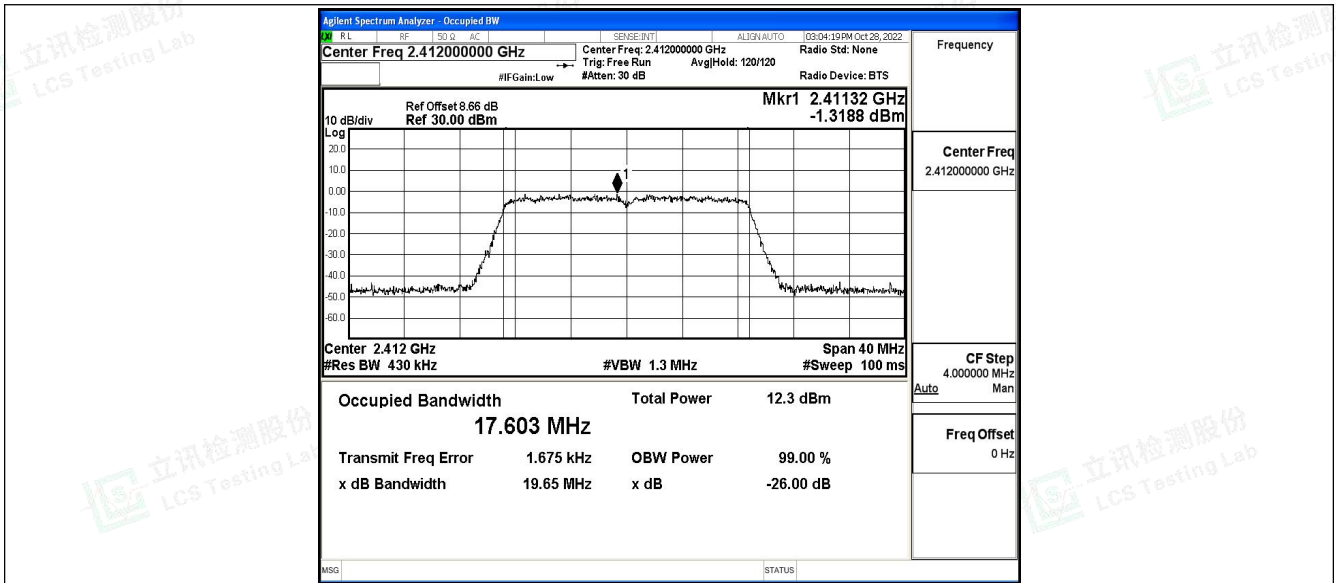


11G_Ant1_2462

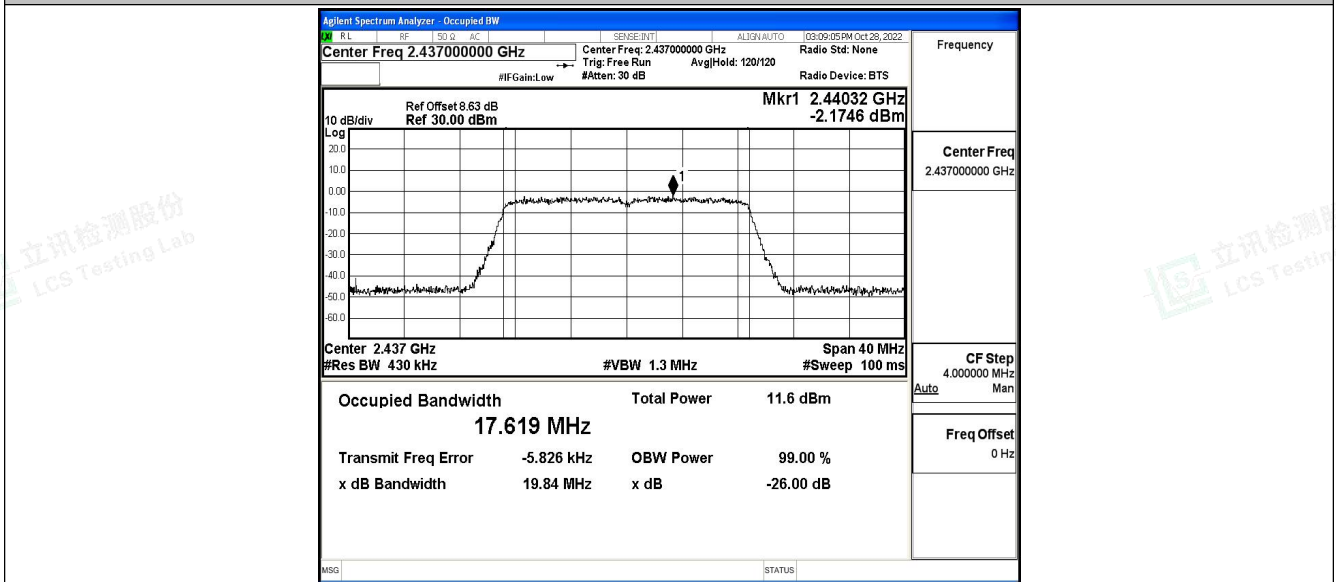


11N20SISO_Ant1_2412



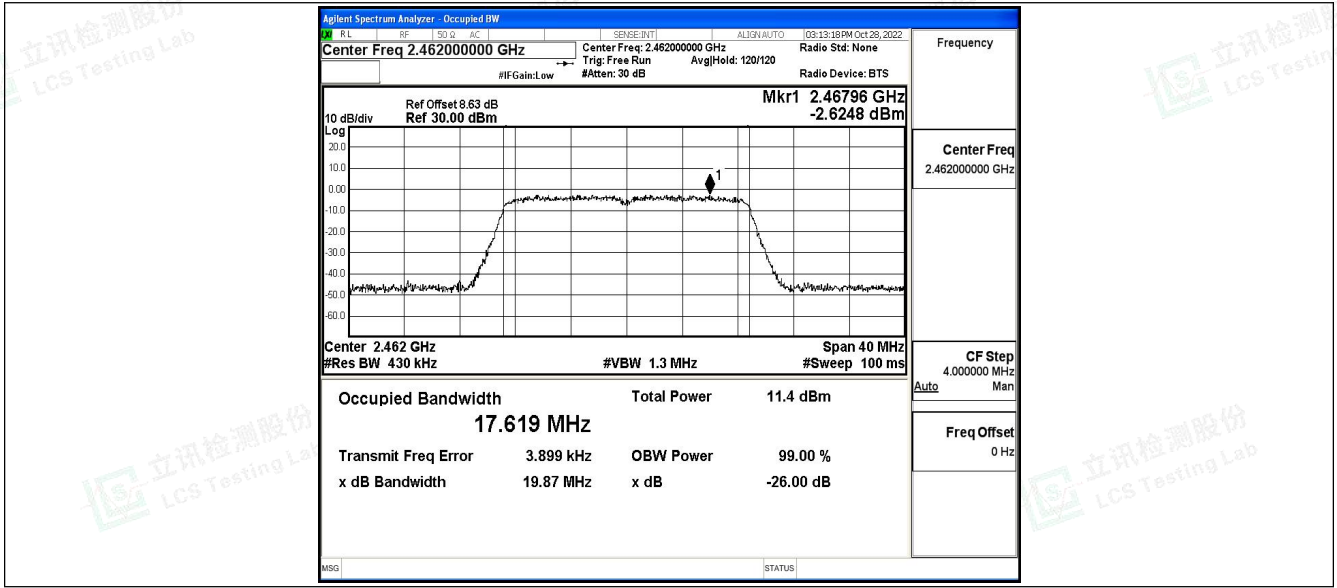


11N20SISO_Ant1_2437



11N20SISO_Ant1_2462







A.3 Maximum conducted output power

Test Result

Test Mode	Antenna	Freq(MHz)	Maximum Peak Output Power [dBm]	Conducted Limit[dBm]	Antenna Gain	Report EIRP Power(dBm)	Limit (dBm)	Verdict
11B	Ant1	2412	15.37	≤30.00	2.4	17.77	≤36.00	PASS
		2437	14.93	≤30.00	2.4	17.33	≤36.00	PASS
		2462	14.46	≤30.00	2.4	16.86	≤36.00	PASS
11G	Ant1	2412	14.39	≤30.00	2.4	16.79	≤36.00	PASS
		2437	14.09	≤30.00	2.4	16.49	≤36.00	PASS
		2462	14.68	≤30.00	2.4	17.08	≤36.00	PASS
11N20SISO	Ant1	2412	14.62	≤30.00	2.4	17.02	≤36.00	PASS
		2437	13.97	≤30.00	2.4	16.37	≤36.00	PASS
		2462	13.82	≤30.00	2.4	16.22	≤36.00	PASS





A.4 Maximum power spectral density

Test Result

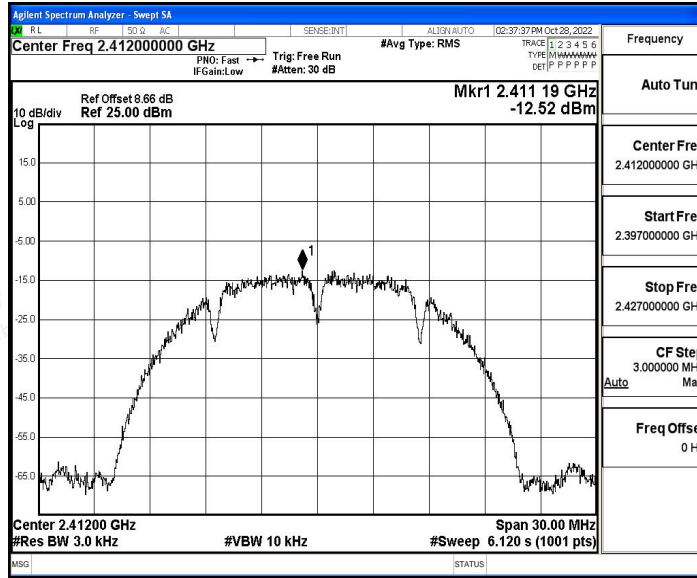
Test Mode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-12.53	≤8.00	PASS
		2437	-13.31	≤8.00	PASS
		2462	-13.8	≤8.00	PASS
11G	Ant1	2412	-21.12	≤8.00	PASS
		2437	-20.7	≤8.00	PASS
		2462	-20.6	≤8.00	PASS
11N20SISO	Ant1	2412	-18.78	≤8.00	PASS
		2437	-19.41	≤8.00	PASS
		2462	-19.5	≤8.00	PASS



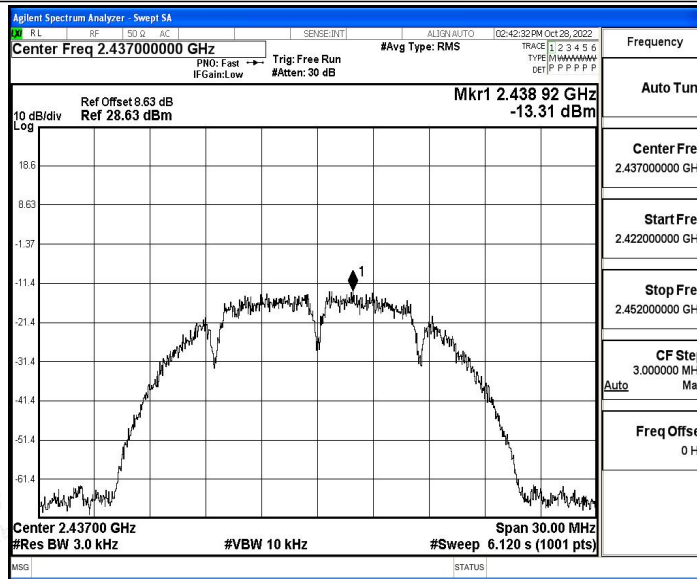


Test Graphs

11B_Ant1_2412

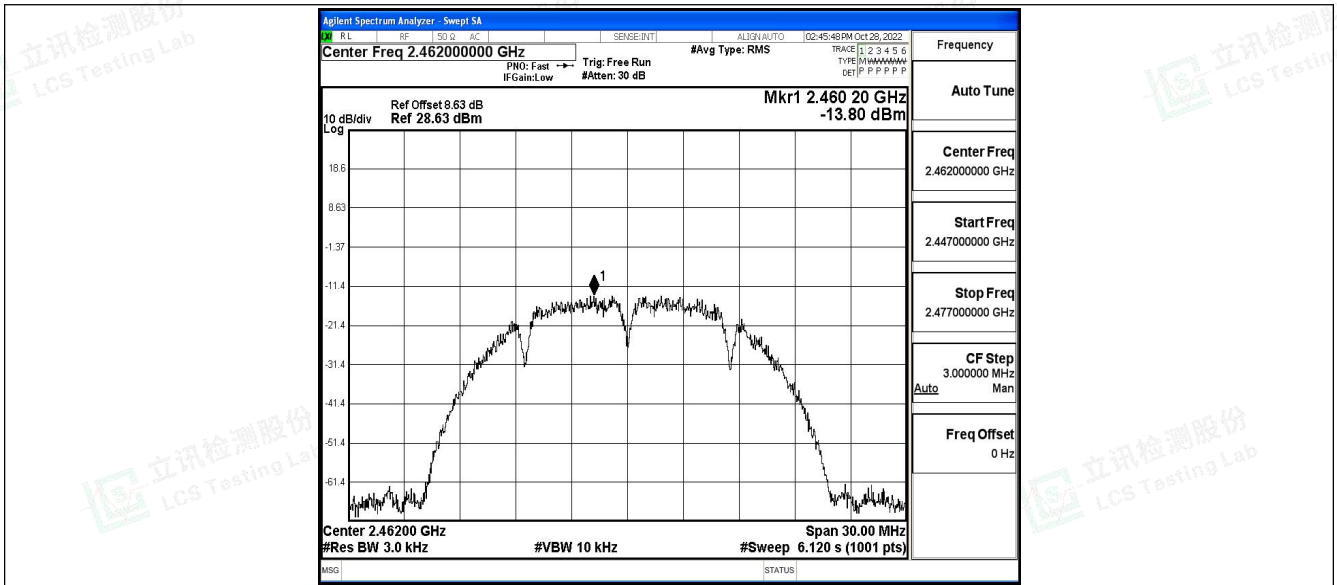


11B_Ant1_2437

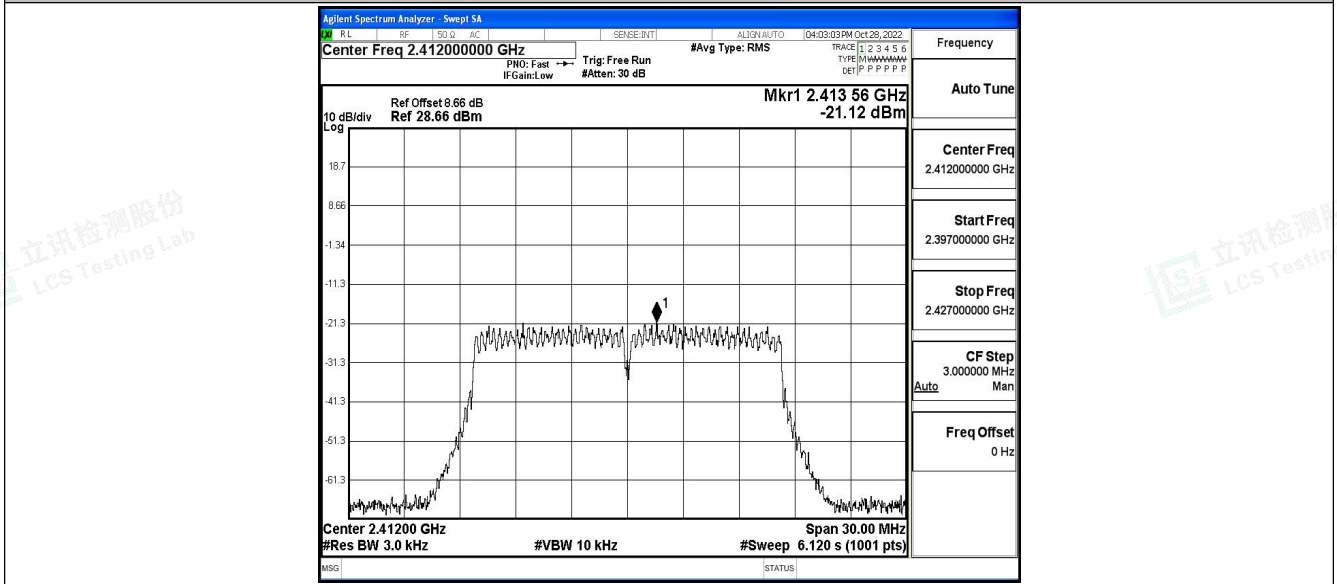


11B_Ant1_2462



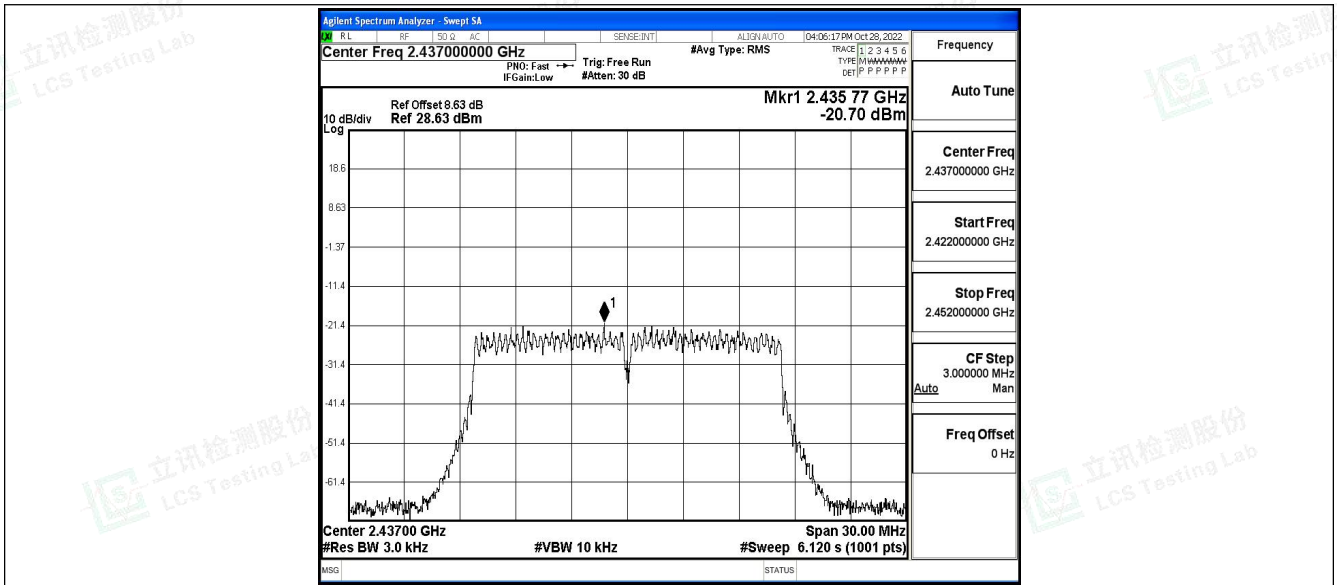


11G_Ant1_2412

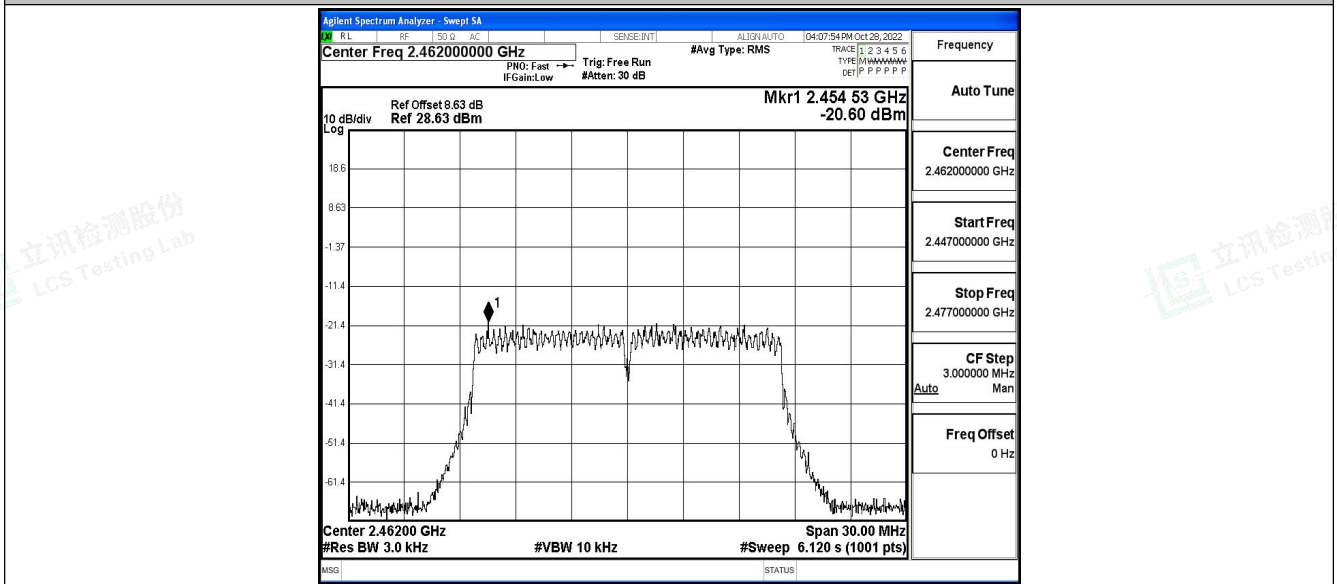


11G_Ant1_2437



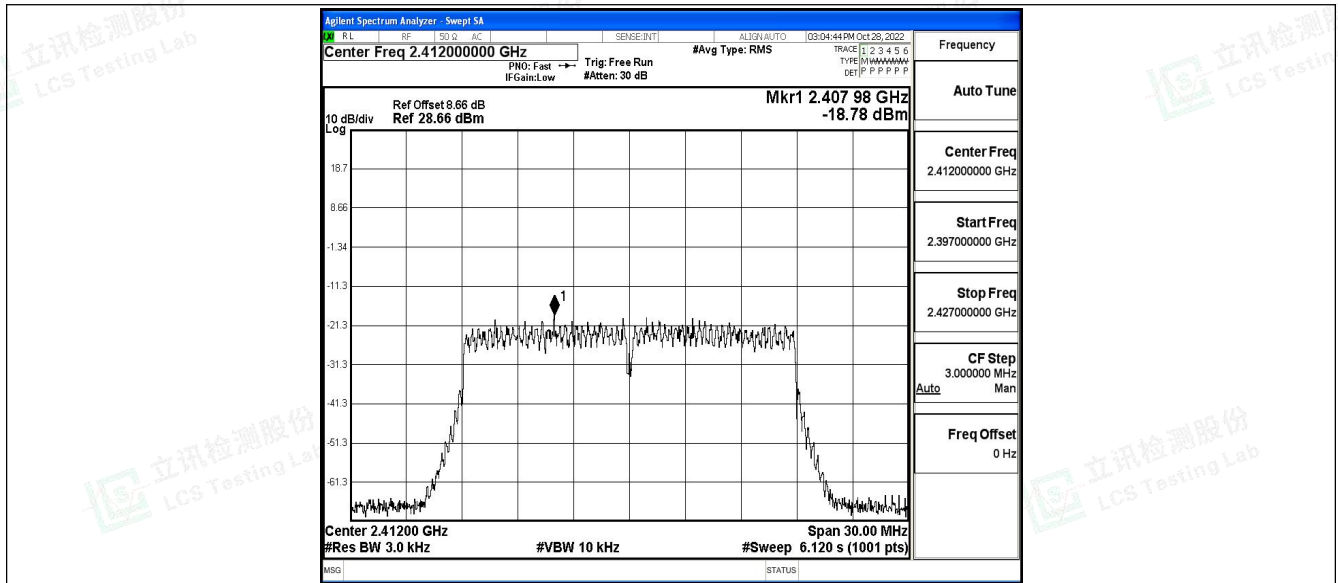


11G_Ant1_2462

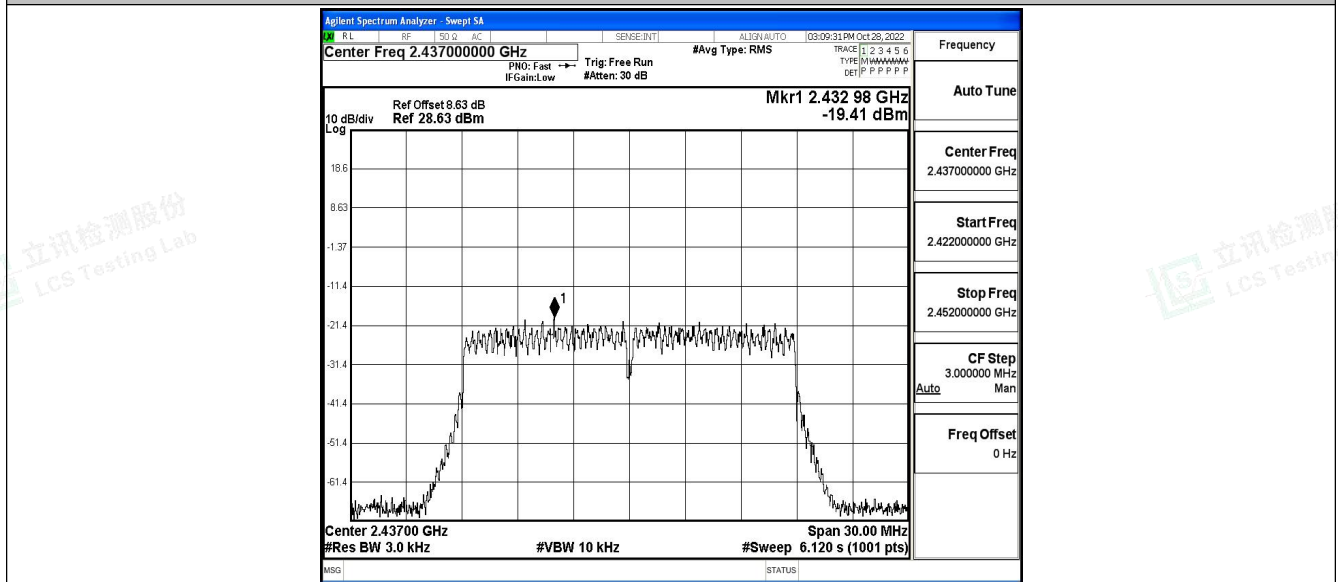


11N20SISO_Ant1_2412



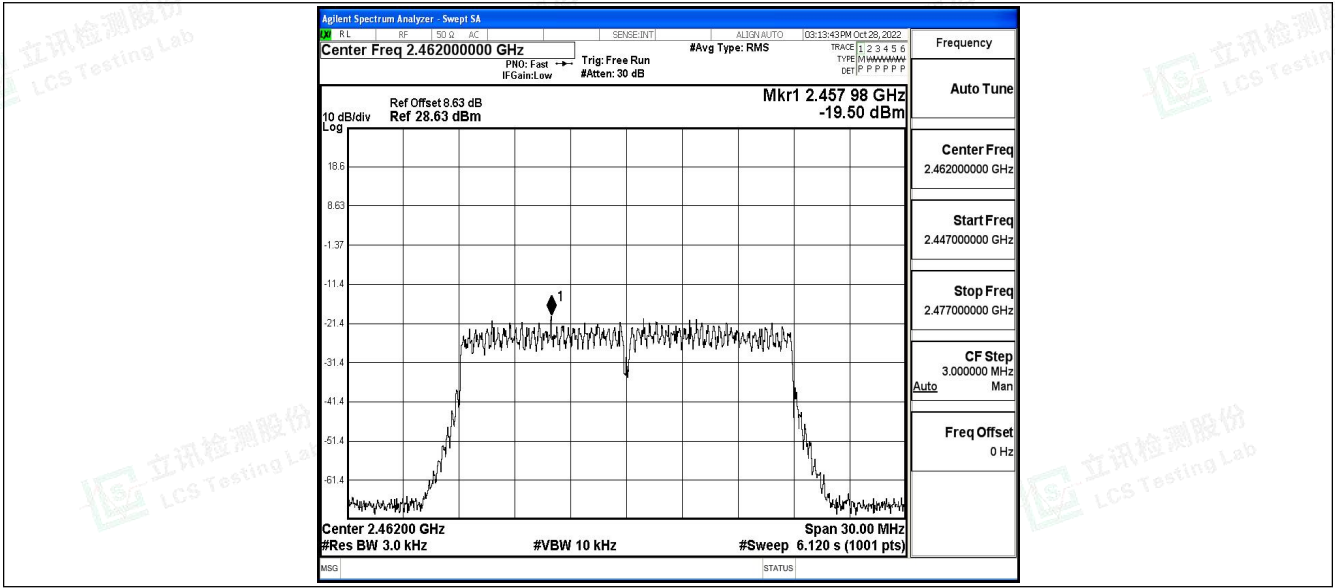


11N20SISO_Ant1_2437



11N20SISO_Ant1_2462







A.5 Band edge measurements

Test Result

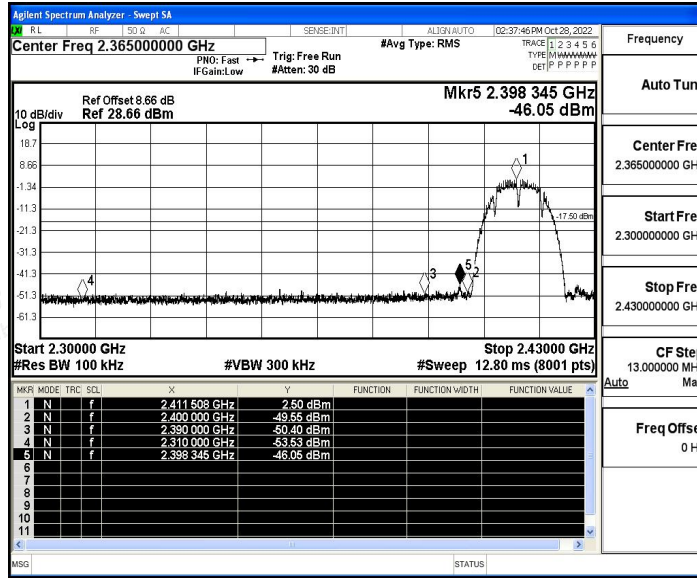
Test Mode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.50	-46.05	≤-17.5	PASS
		High	2462	1.73	-46.82	≤-18.27	PASS
11G	Ant1	Low	2412	-2.08	-42.8	≤-22.08	PASS
		High	2462	-6.89	-48.43	≤-26.89	PASS
11N20SISO	Ant1	Low	2412	-4.68	-48.09	≤-24.68	PASS
		High	2462	-5.64	-48.18	≤-25.64	PASS



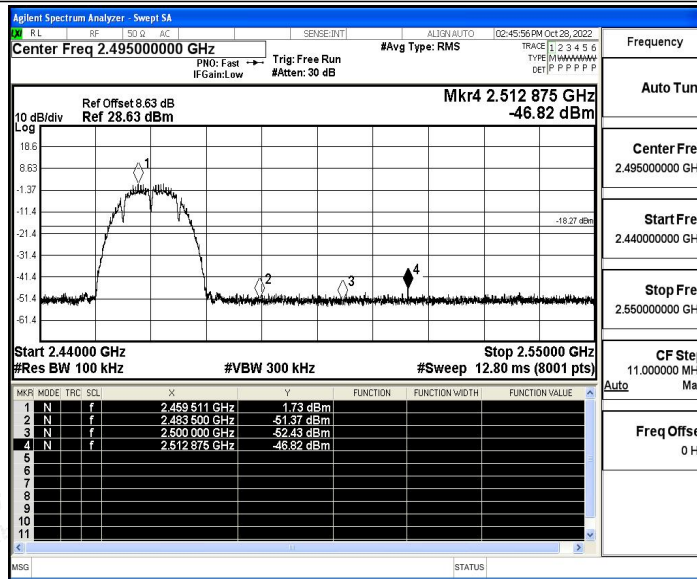


Test Graphs

11B_Ant1_Low_2412

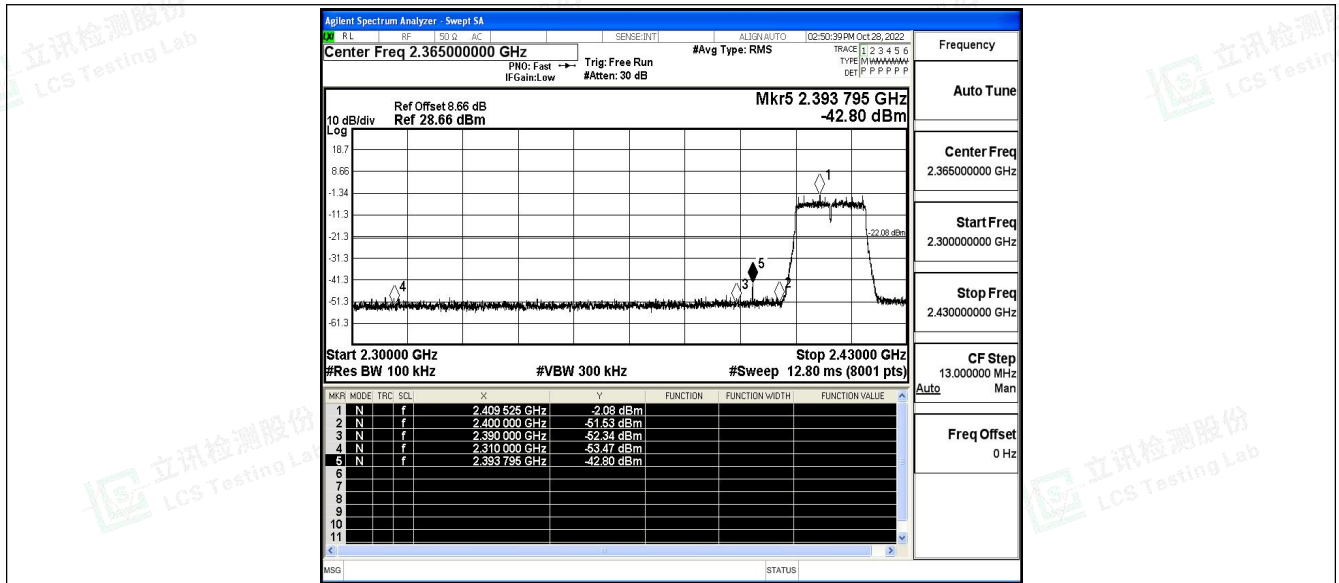


11B_Ant1_High_2462

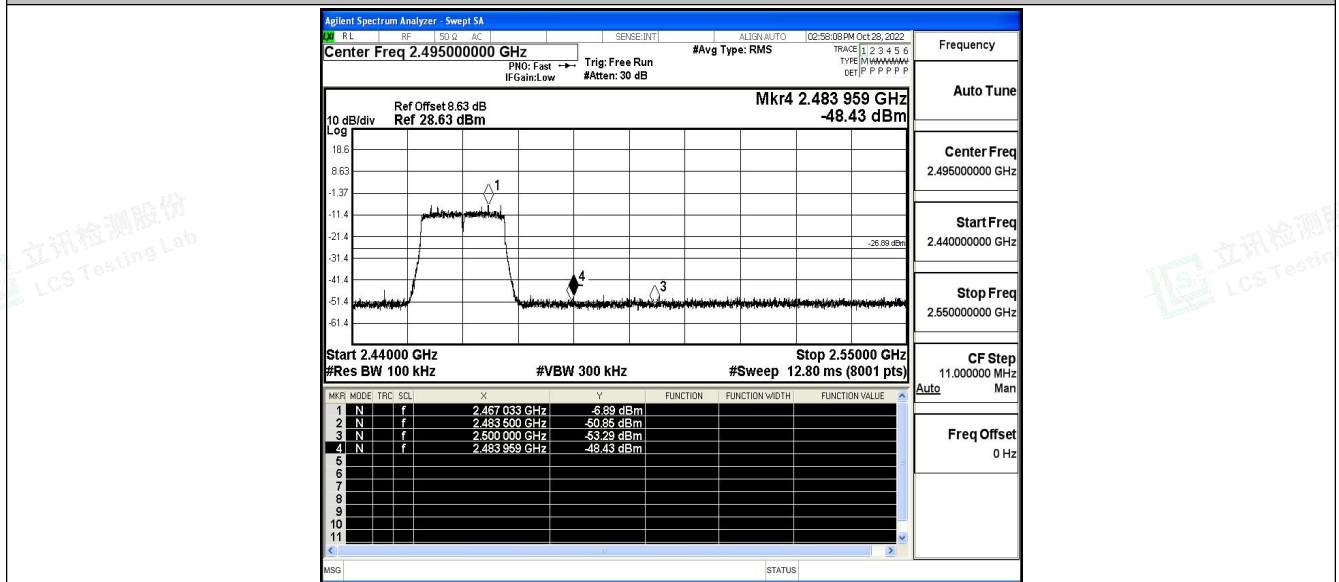


11G_Ant1_Low_2412



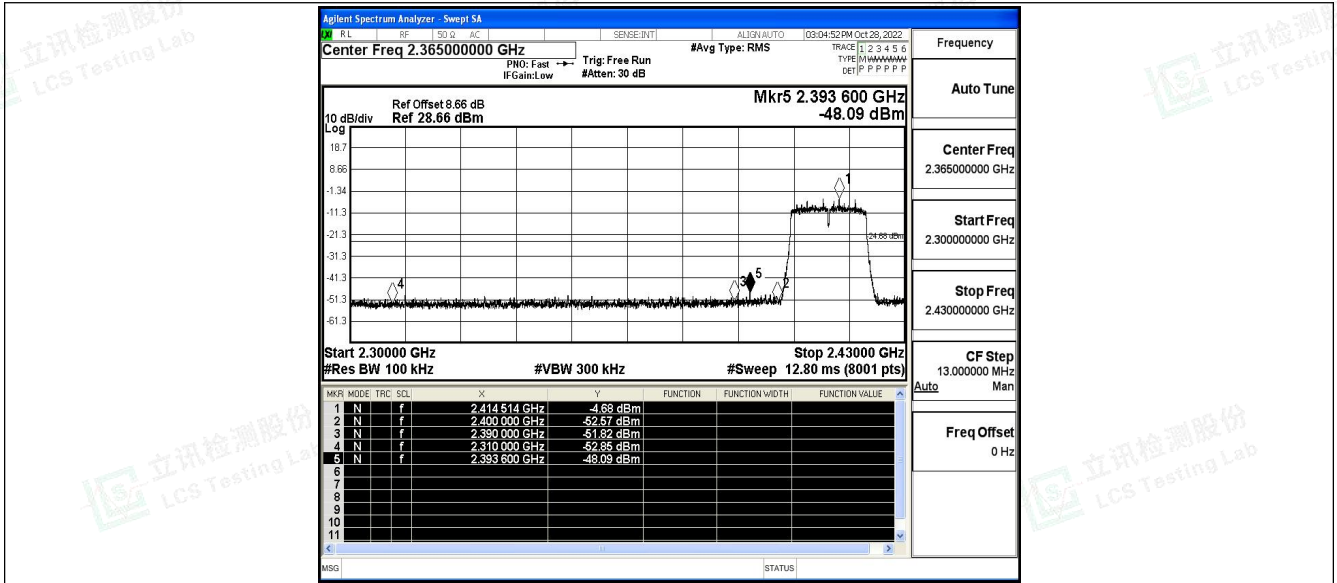


11G_Ant1_High_2462

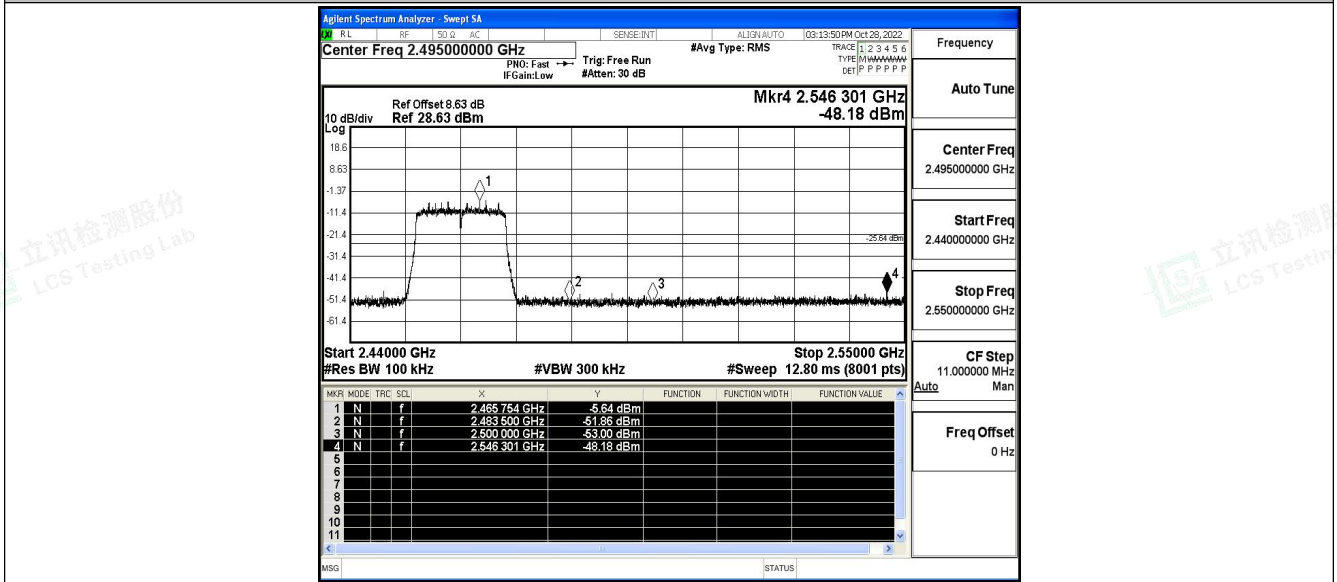


11N20SISO_Ant1_Low_2412





11N20SISO_Ant1_High_2462





A.6 Conducted Spurious Emission

Test Result

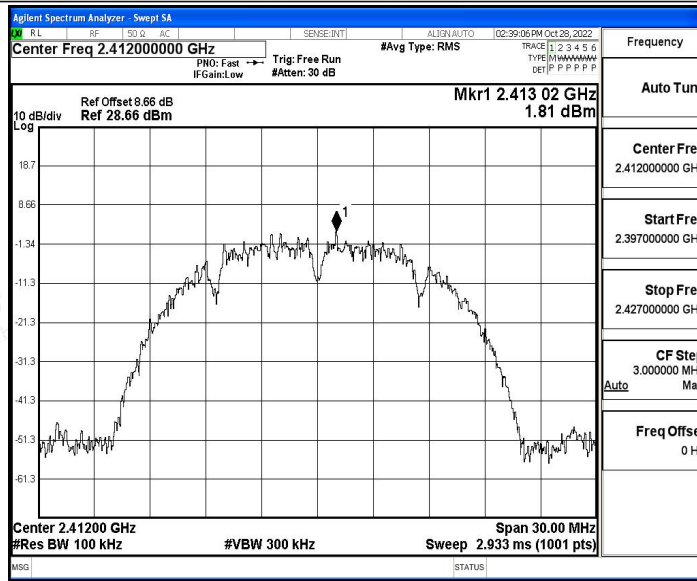
Test Mode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.81	1.81	---	PASS
			30~1000	1.81	-60.79	≤-18.19	PASS
			1000~26500	1.81	-45.41	≤-18.19	PASS
		2437	Reference	0.82	0.82	---	PASS
			30~1000	0.82	-60.37	≤-19.18	PASS
			1000~26500	0.82	-46.26	≤-19.18	PASS
		2462	Reference	0.47	0.47	---	PASS
			30~1000	0.47	-60.89	≤-19.53	PASS
			1000~26500	0.47	-46.25	≤-19.53	PASS
11G	Ant1	2412	Reference	-5.41	-5.41	---	PASS
			30~1000	-5.41	-60.01	≤-25.41	PASS
			1000~26500	-5.41	-45.97	≤-25.41	PASS
		2437	Reference	-6.85	-6.85	---	PASS
			30~1000	-6.85	-60.84	≤-26.85	PASS
			1000~26500	-6.85	-45.84	≤-26.85	PASS
		2462	Reference	-6.53	-6.53	---	PASS
			30~1000	-6.53	-60.33	≤-26.53	PASS
			1000~26500	-6.53	-46.23	≤-26.53	PASS
11N20SISO	Ant1	2412	Reference	-5.59	-5.59	---	PASS
			30~1000	-5.59	-60.49	≤-25.59	PASS
			1000~26500	-5.59	-45.77	≤-25.59	PASS
		2437	Reference	-8.68	-8.68	---	PASS
			30~1000	-8.68	-60.45	≤-28.68	PASS
			1000~26500	-8.68	-46.14	≤-28.68	PASS
		2462	Reference	-8.83	-8.83	---	PASS
			30~1000	-8.83	-61.09	≤-28.83	PASS
			1000~26500	-8.83	-45.99	≤-28.83	PASS



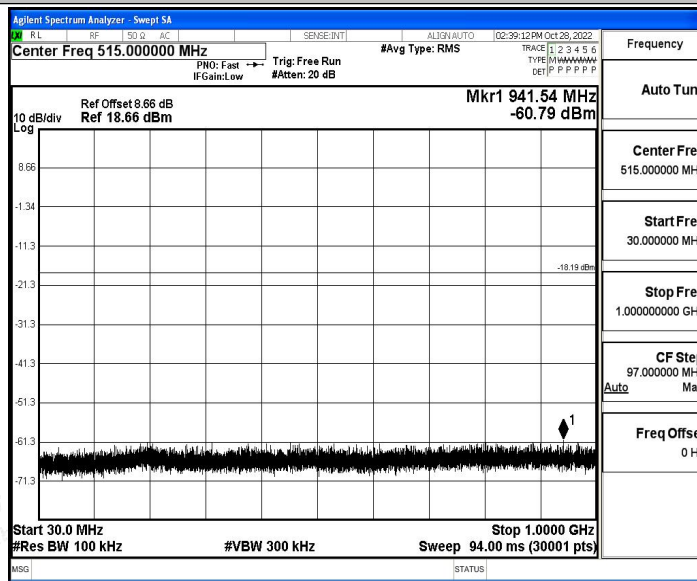


Test Graphs

11B_Ant1_2412_0~Reference

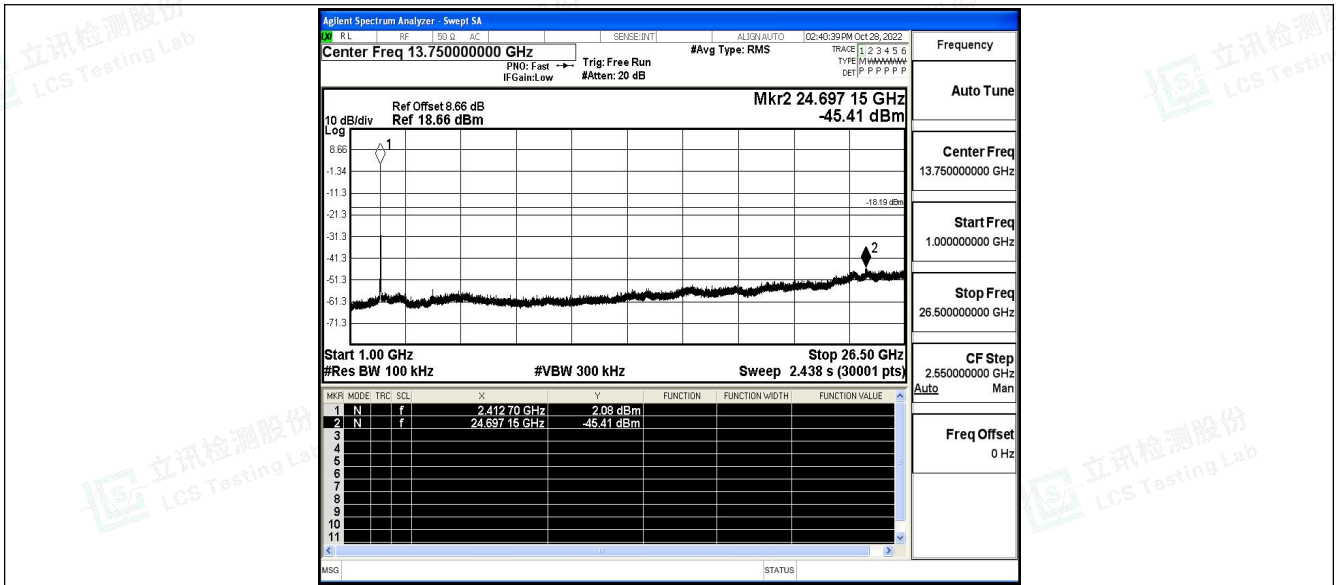


11B_Ant1_2412_30~1000

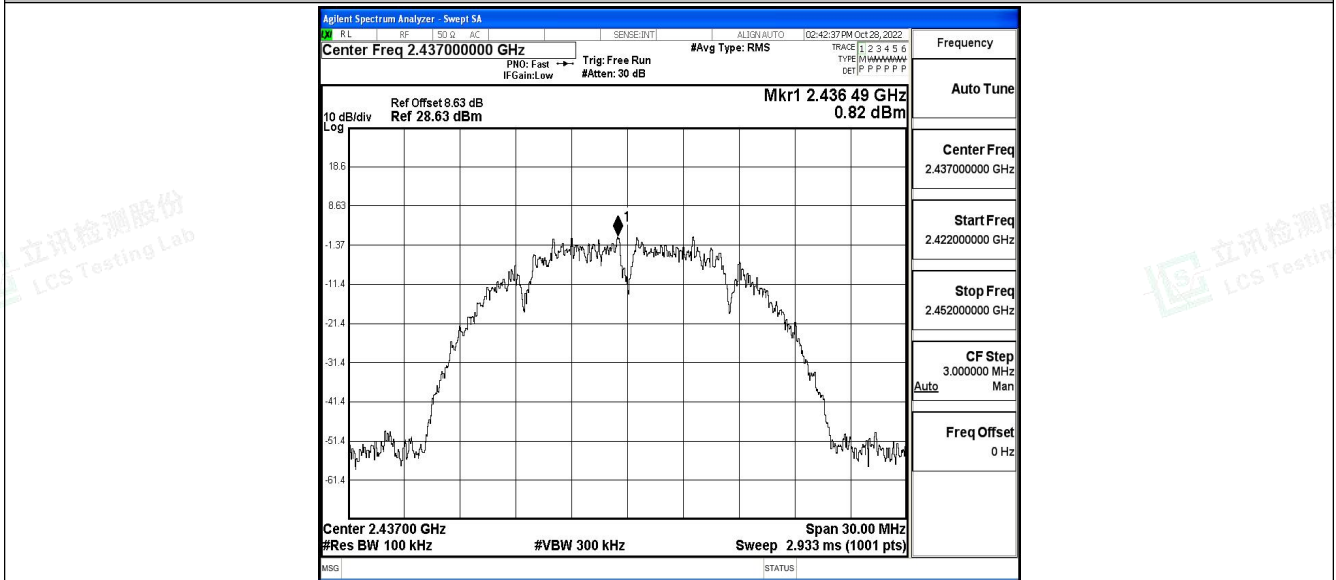


11B_Ant1_2412_1000~26500





11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000

