



Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: SmartHub

Test Model: SmartHub v2

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan





C.1 DTS Bandwidth

Test Result

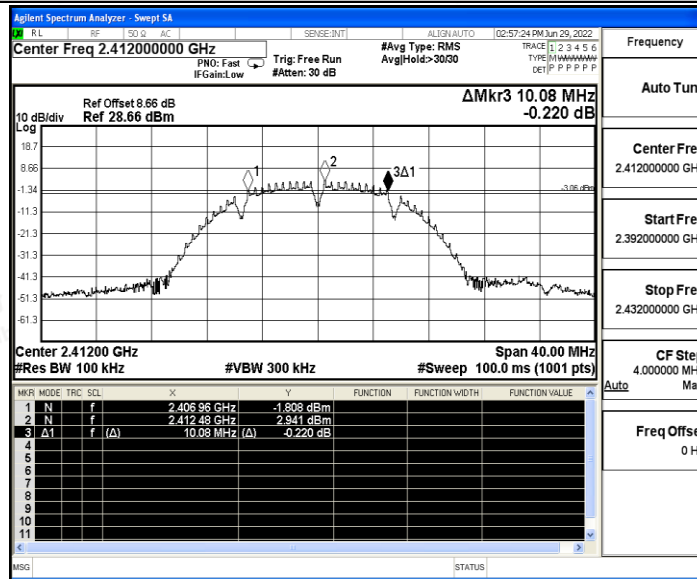
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	10.080	2431.960	2442.040	0.5	PASS
		2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	15.640	2404.120	2419.760	0.5	PASS
		2437	15.640	2429.080	2444.720	0.5	PASS
		2462	15.640	2454.120	2469.760	0.5	PASS
11N20SISO	Ant1	2412	15.800	2404.080	2419.880	0.5	PASS
		2437	16.280	2428.840	2445.120	0.5	PASS
		2462	15.480	2454.080	2469.560	0.5	PASS
11N40SISO	Ant1	2422	35.120	2404.400	2439.520	0.5	PASS
		2437	35.040	2419.480	2454.520	0.5	PASS
		2452	35.040	2434.480	2469.520	0.5	PASS



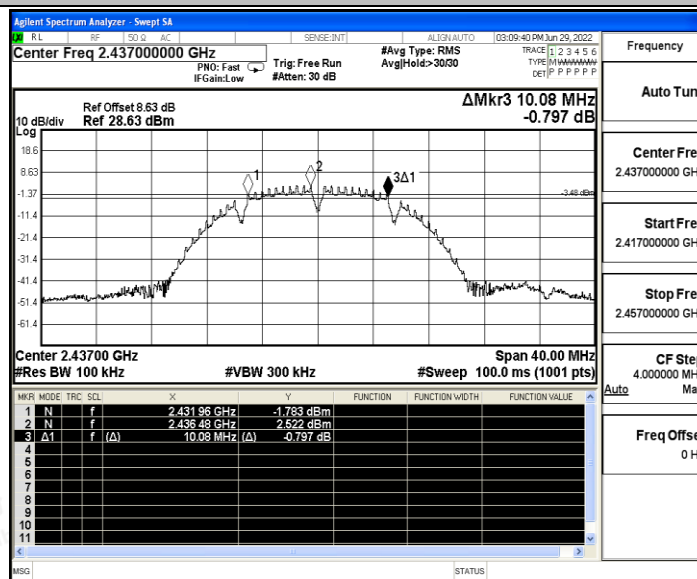


Test Graphs

11B_Ant1_2412

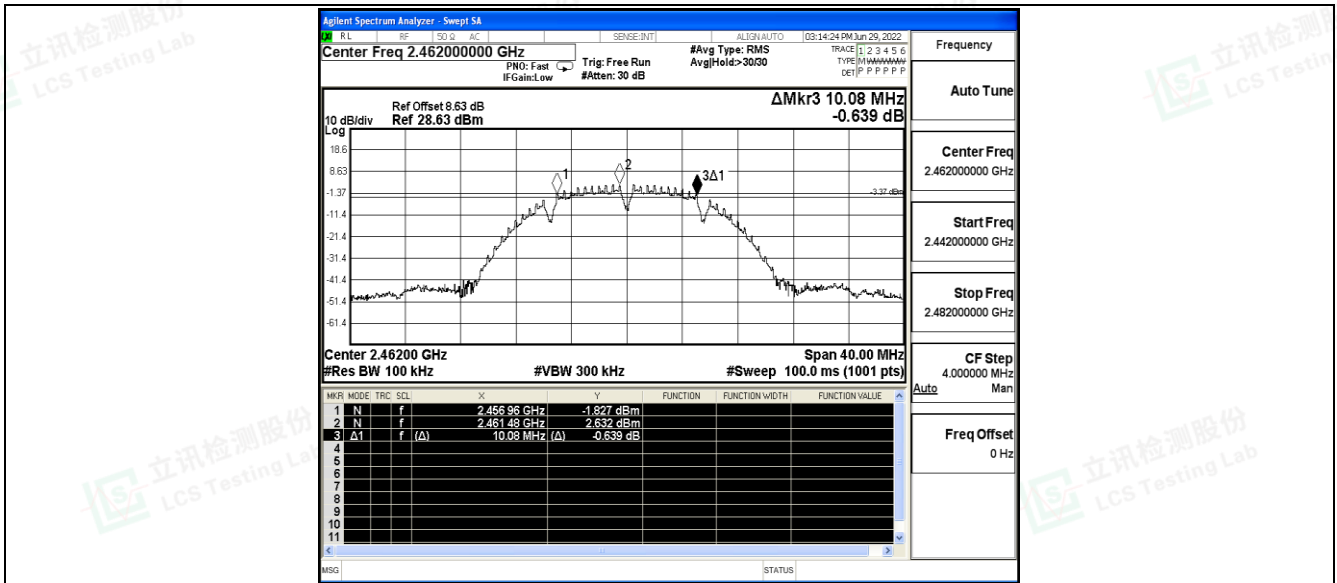


11B_Ant1_2437

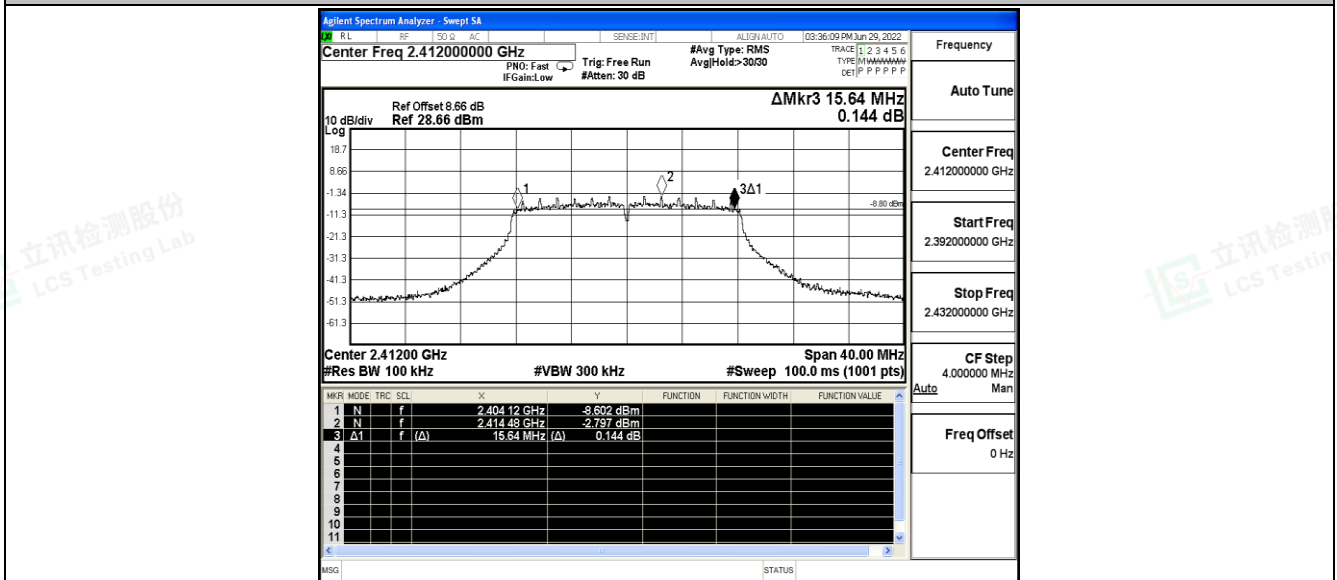


11B_Ant1_2462



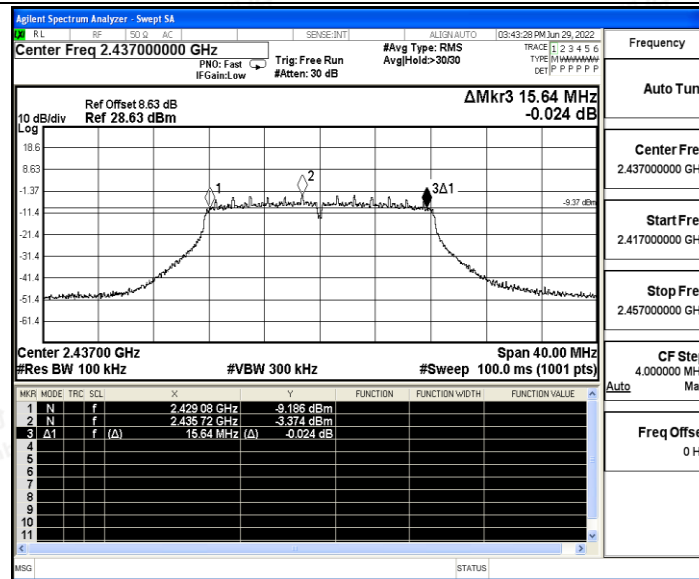


11G_Ant1_2412

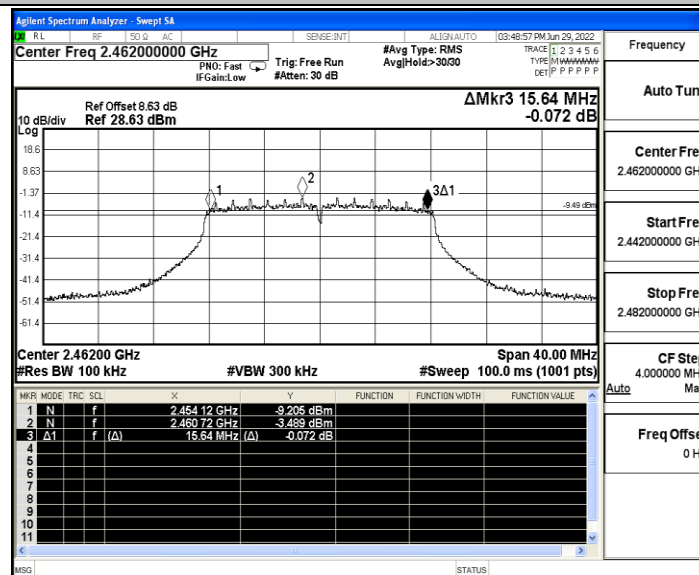


11G_Ant1_2437



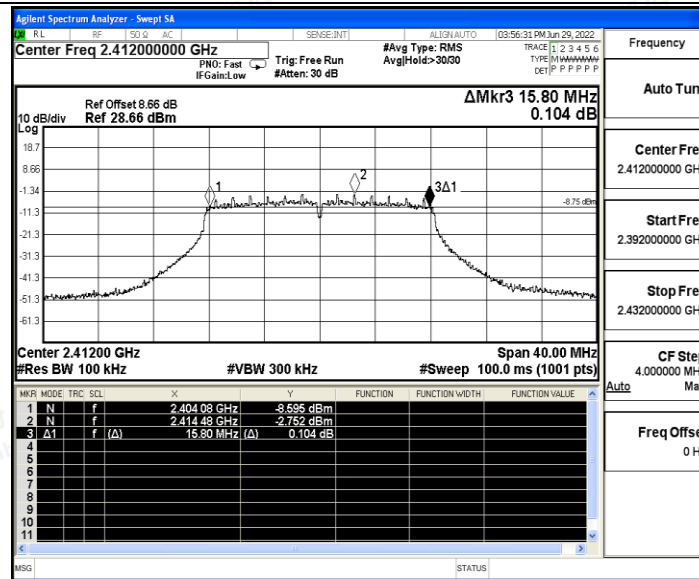


11G_Ant1_2462

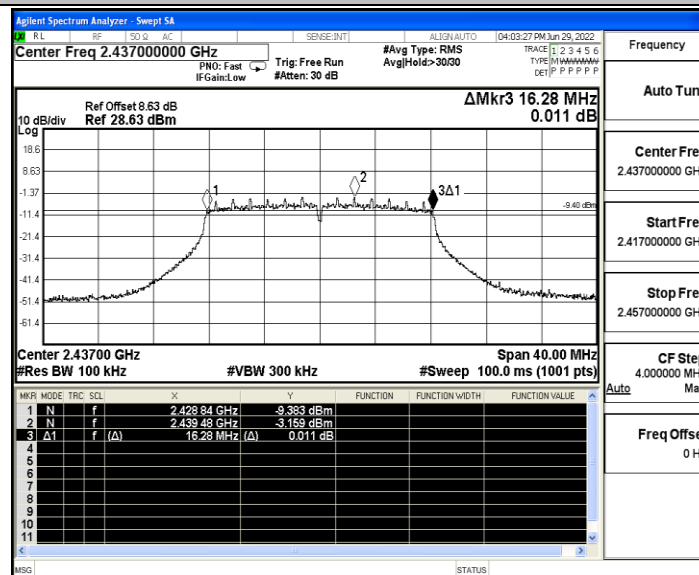


11N20SISO_Ant1_2412



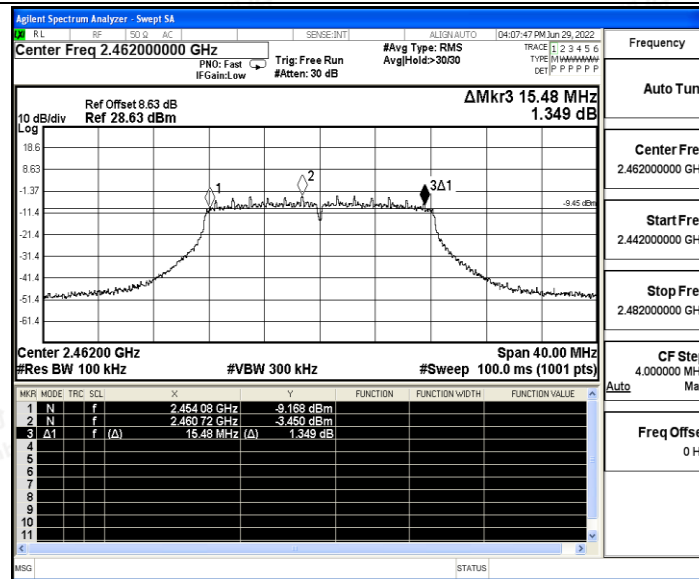


11N20SISO_Ant1_2437

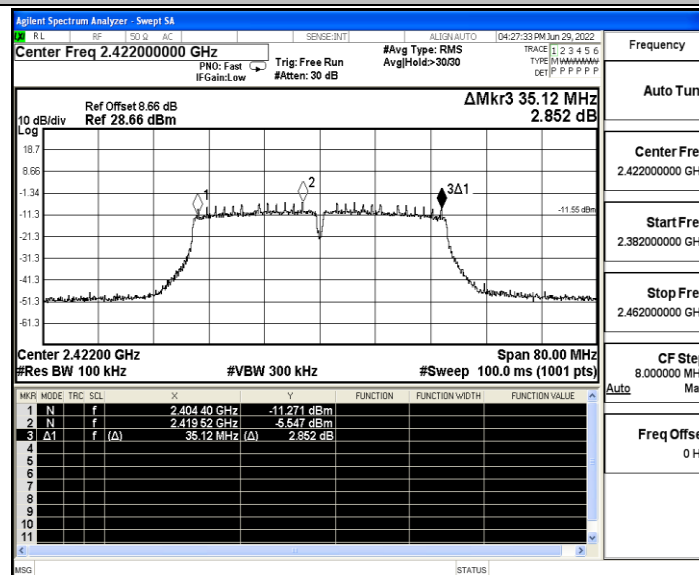


11N20SISO_Ant1_2462





11N40SISO_Ant1_2422



11N40SISO_Ant1_2437







C.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	15.33	≤30.00	PASS
		2437	15.12	≤30.00	PASS
		2462	15.01	≤30.00	PASS
11G	Ant1	2412	16.30	≤30.00	PASS
		2437	16.01	≤30.00	PASS
		2462	15.53	≤30.00	PASS
11N20SISO	Ant1	2412	16.27	≤30.00	PASS
		2437	15.96	≤30.00	PASS
		2462	15.57	≤30.00	PASS
11N40SISO	Ant1	2422	16.25	≤30.00	PASS
		2437	15.58	≤30.00	PASS
		2452	15.12	≤30.00	PASS





C.3 Maximum power spectral density

Test Result

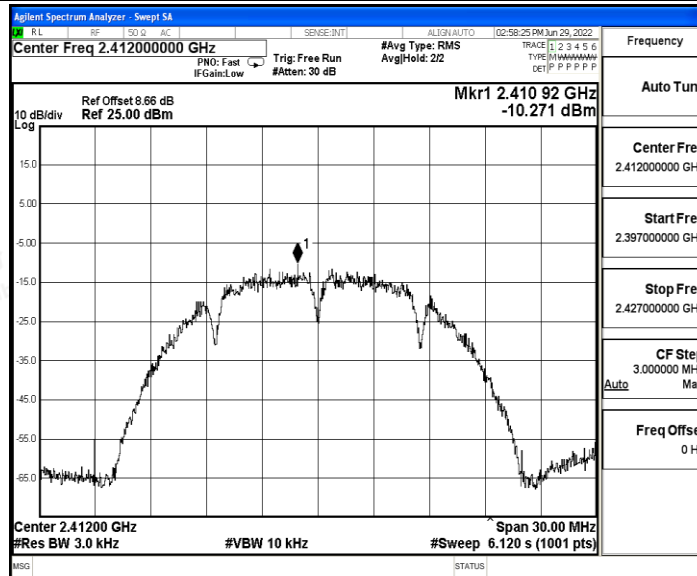
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.27	≤8.00	PASS
		2437	-12.4	≤8.00	PASS
		2462	-11.4	≤8.00	PASS
11G	Ant1	2412	-15.75	≤8.00	PASS
		2437	-17.47	≤8.00	PASS
		2462	-17.58	≤8.00	PASS
11N20SISO	Ant1	2412	-15.12	≤8.00	PASS
		2437	-12.14	≤8.00	PASS
		2462	-15.94	≤8.00	PASS
11N40SISO	Ant1	2422	-19.54	≤8.00	PASS
		2437	-20.75	≤8.00	PASS
		2452	-21.04	≤8.00	PASS



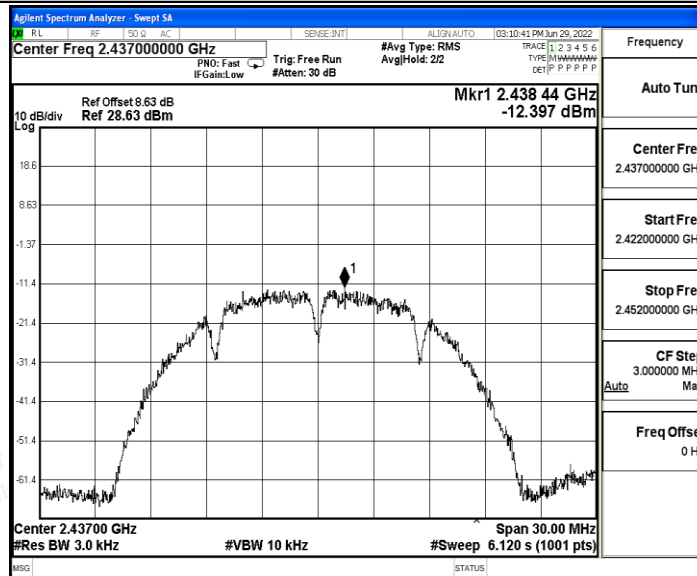


Test Graphs

11B_Ant1_2412

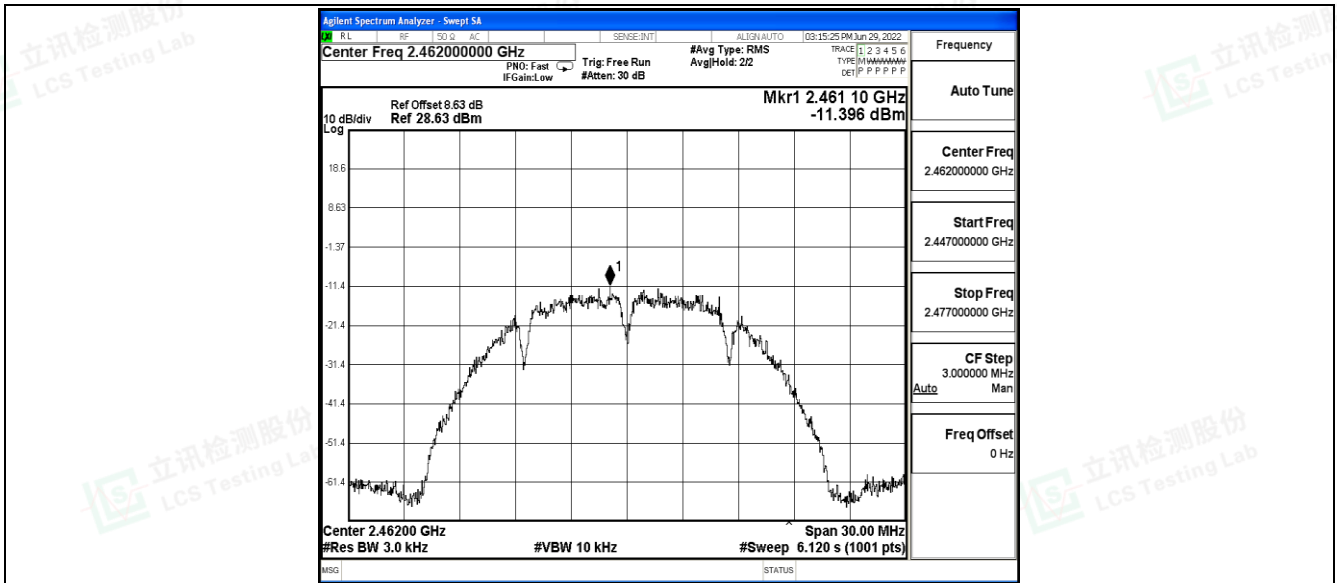


11B_Ant1_2437

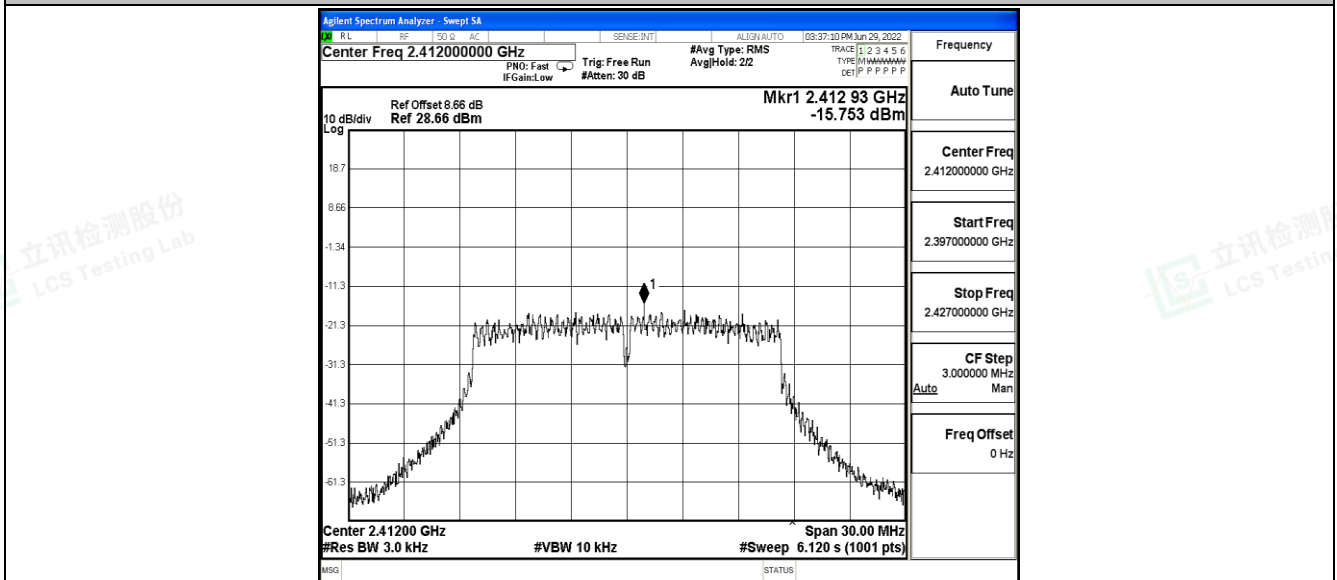


11B_Ant1_2462



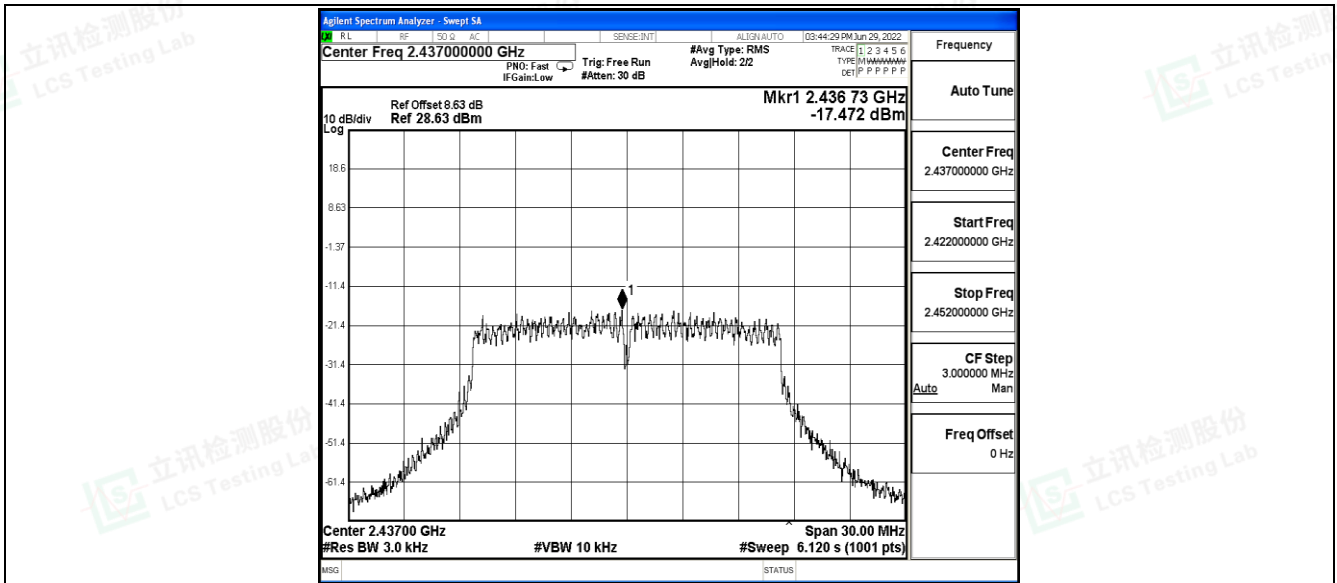


11G_Ant1_2412

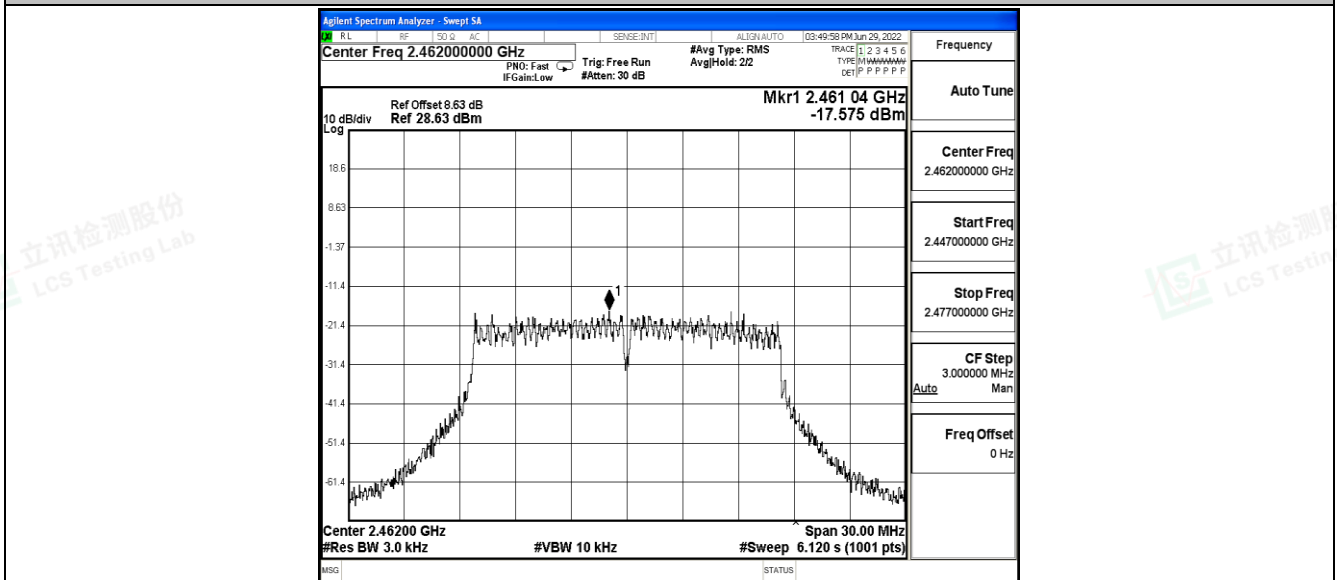


11G_Ant1_2437



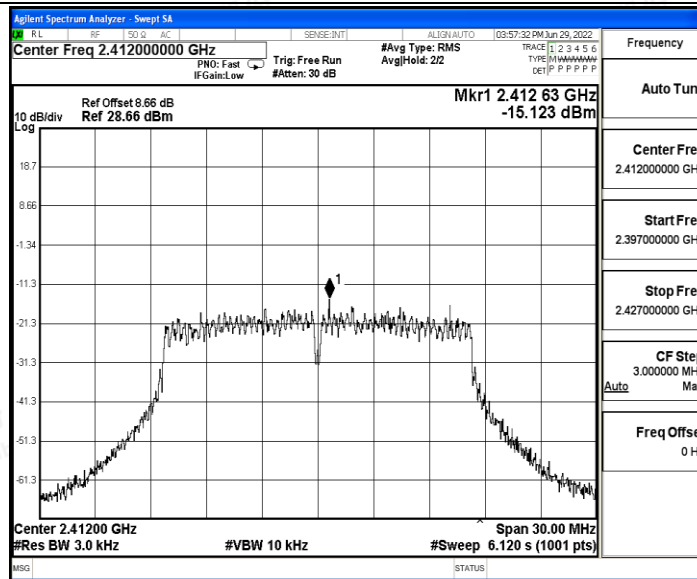


11G_Ant1_2462

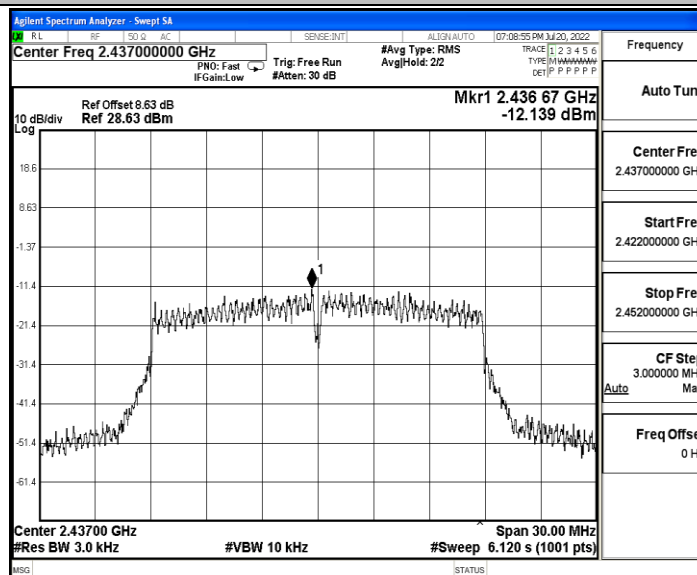


11N20SISO_Ant1_2412



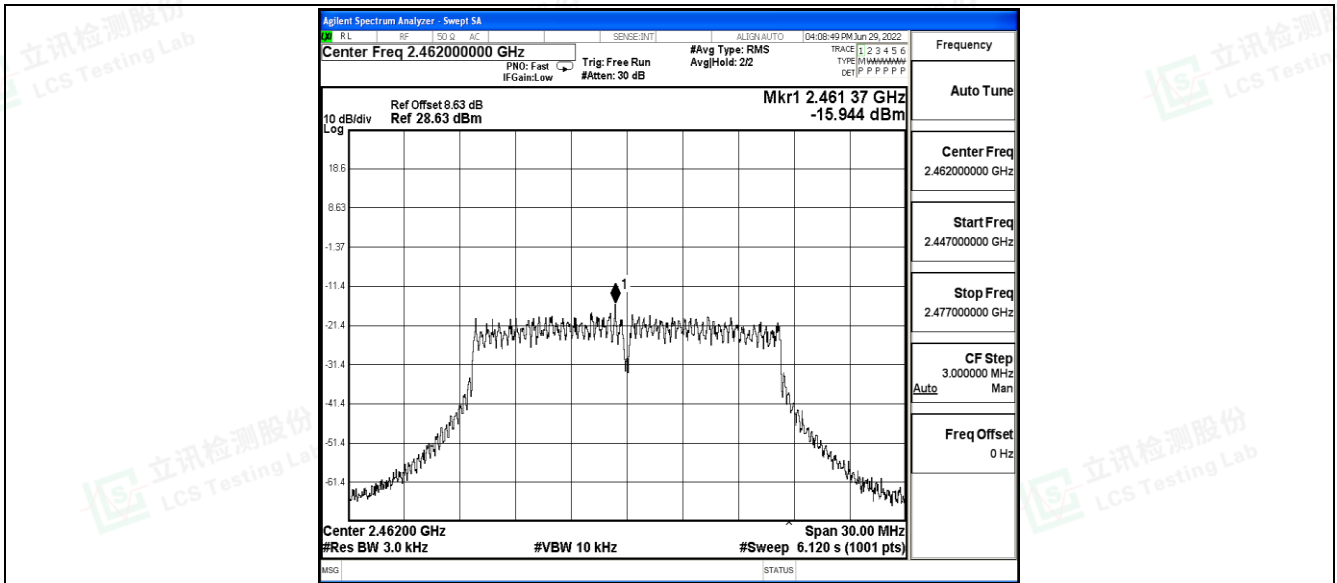


11N20SISO_Ant1_2437

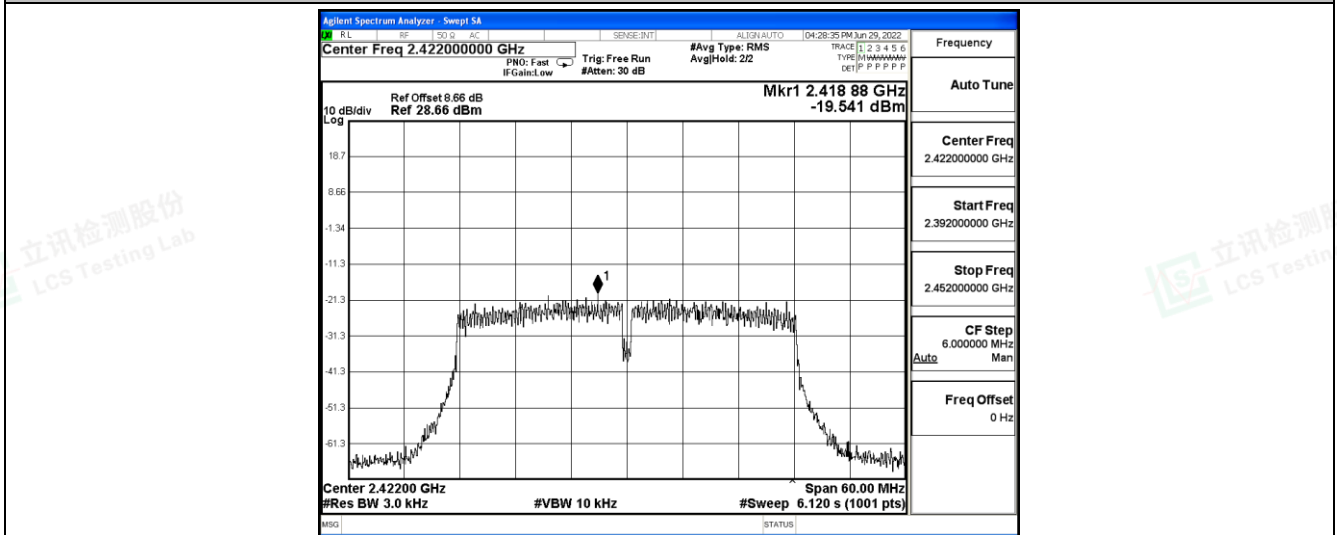


11N20SISO_Ant1_2462

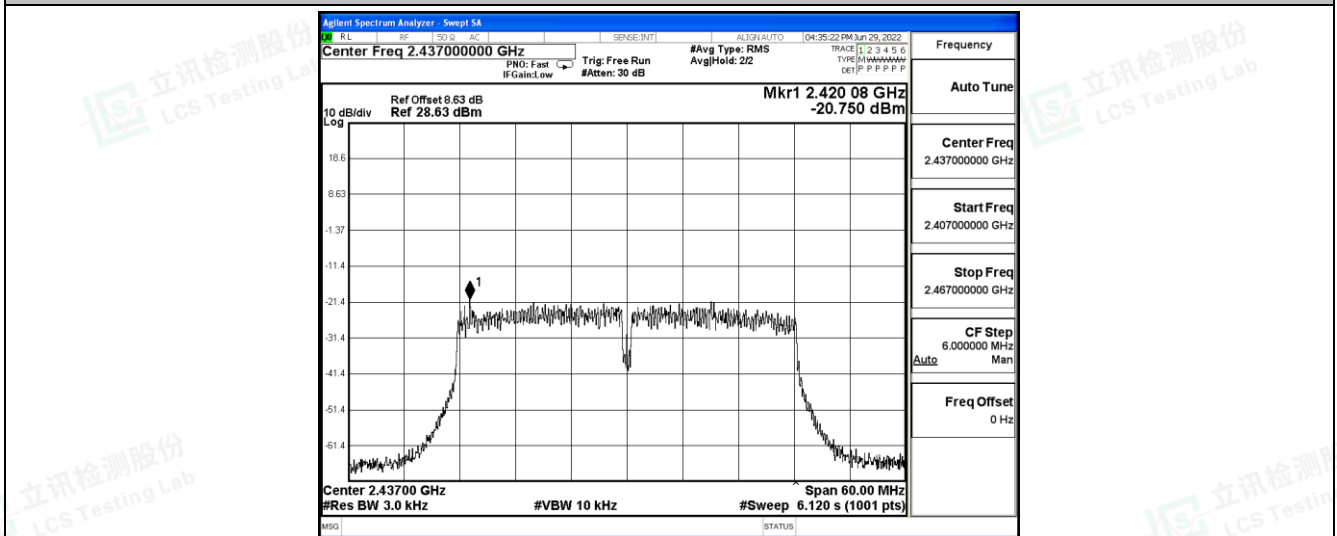




11N40SISO_Ant1_2422

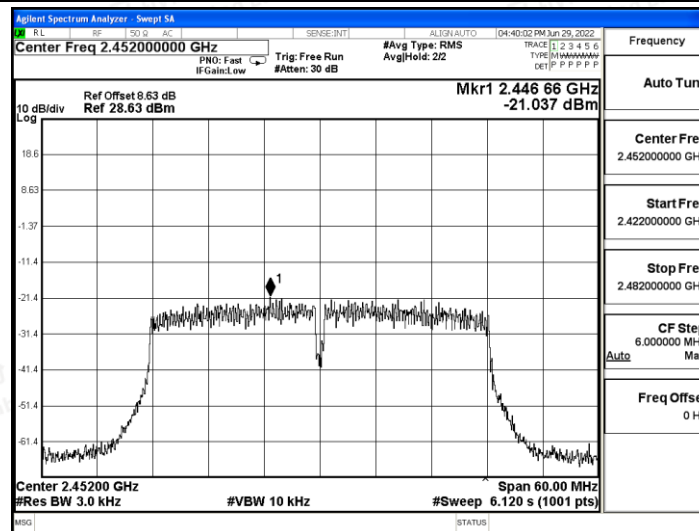


11N40SISO_Ant1_2437





11N40SISO_Ant1_2452





C.4 Band edge measurements

Test Result

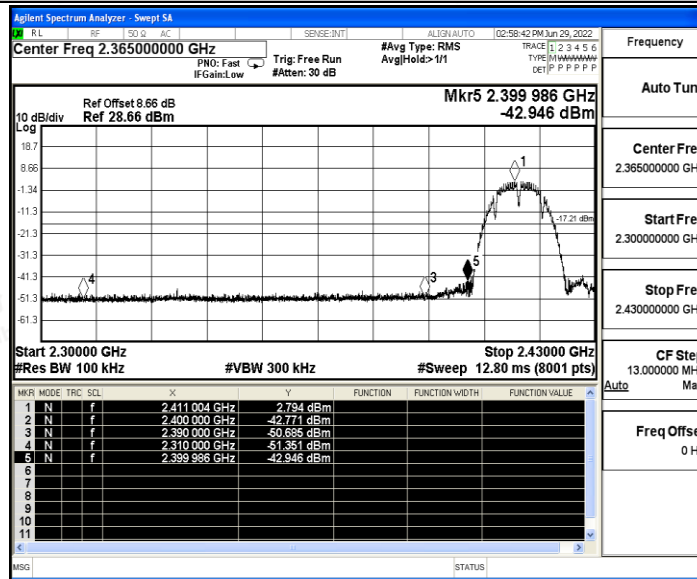
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.79	-42.95	≤ -17.21	PASS
		High	2462	2.52	-47.69	≤ -17.48	PASS
11G	Ant1	Low	2412	-2.25	-41.66	≤ -22.25	PASS
		High	2462	-3.43	-47.92	≤ -23.43	PASS
11N20SISO	Ant1	Low	2412	-2.72	-40.03	≤ -22.72	PASS
		High	2462	-3.04	-47.79	≤ -23.04	PASS
11N40SISO	Ant1	Low	2422	-5.35	-42.07	≤ -25.35	PASS
		High	2452	-6.67	-47.59	≤ -26.67	PASS



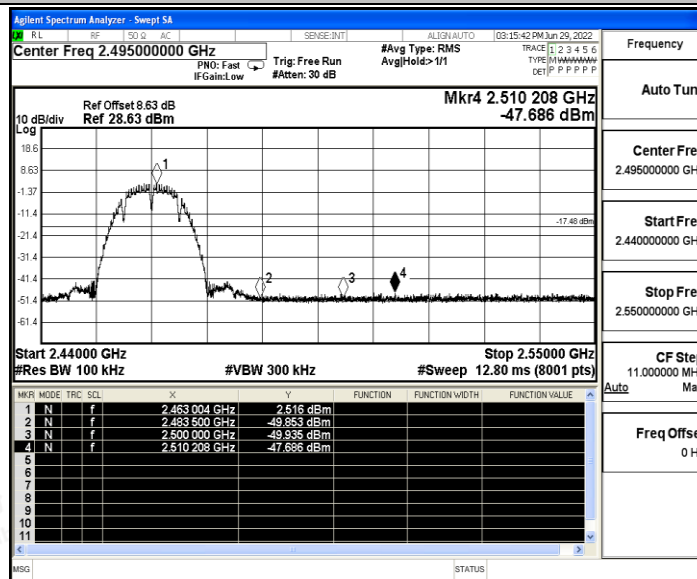


Test Graphs

11B_Ant1_Low_2412

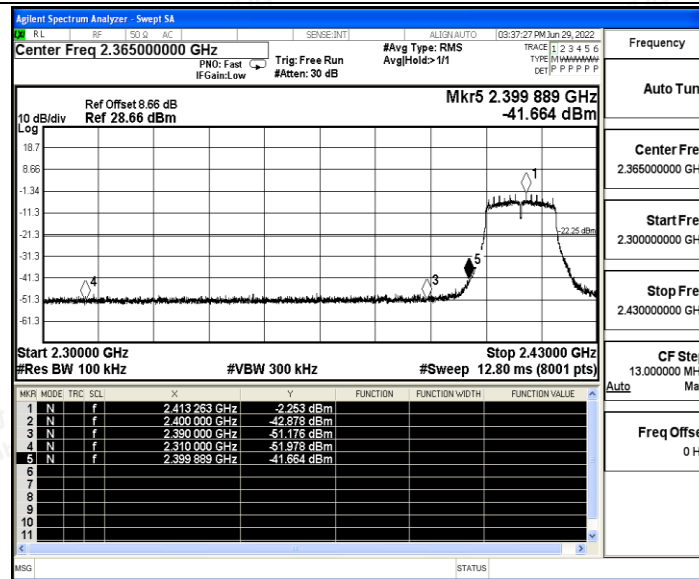


11B_Ant1_High_2462

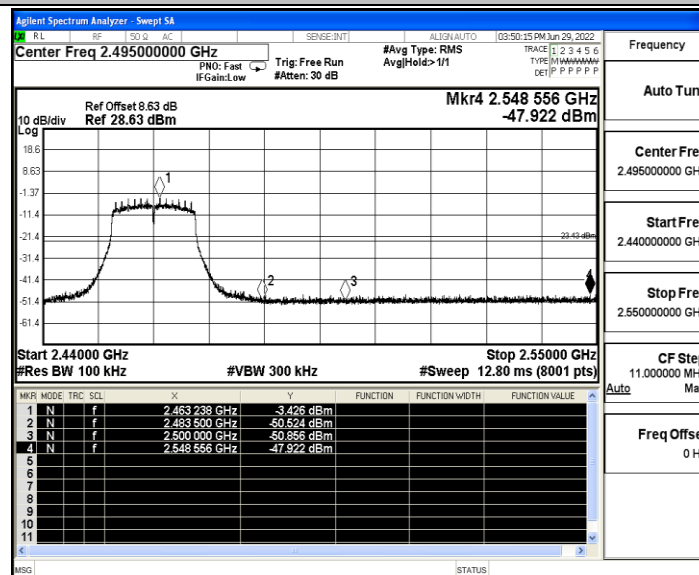


11G_Ant1_Low_2412



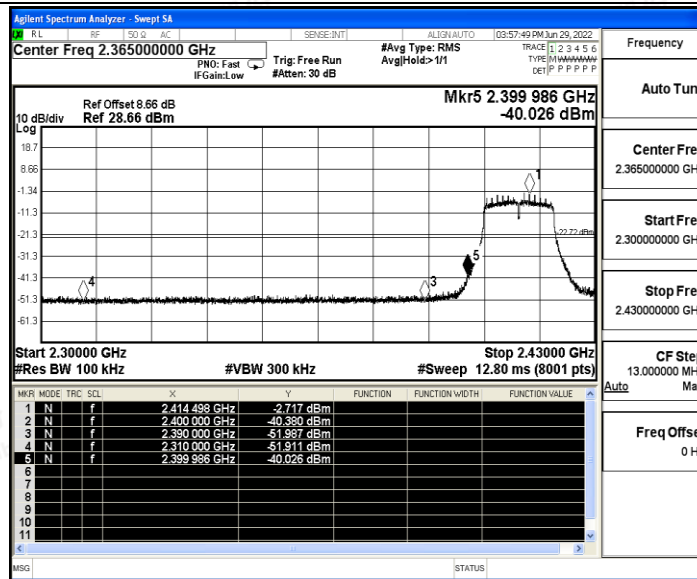


11G_Ant1_High_2462

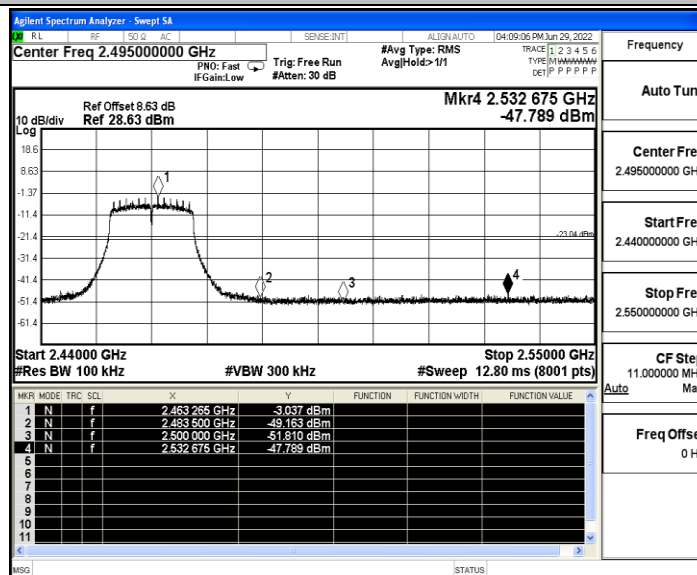


11N20SISO_Ant1_Low_2412



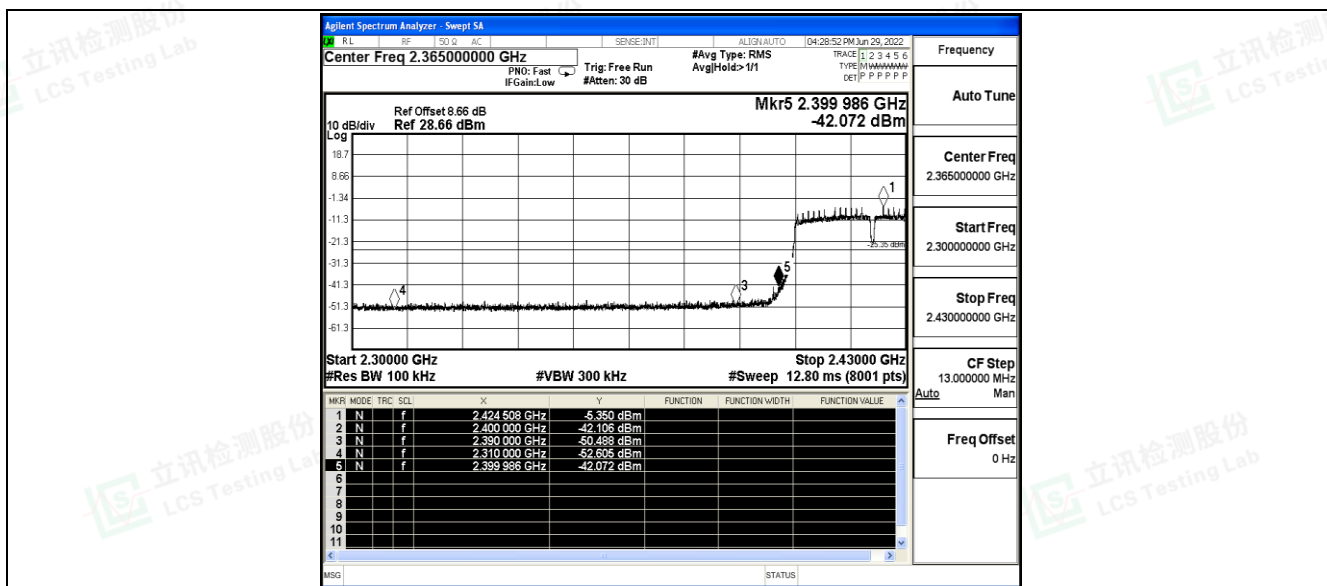


11N20SISO_Ant1_High_2462

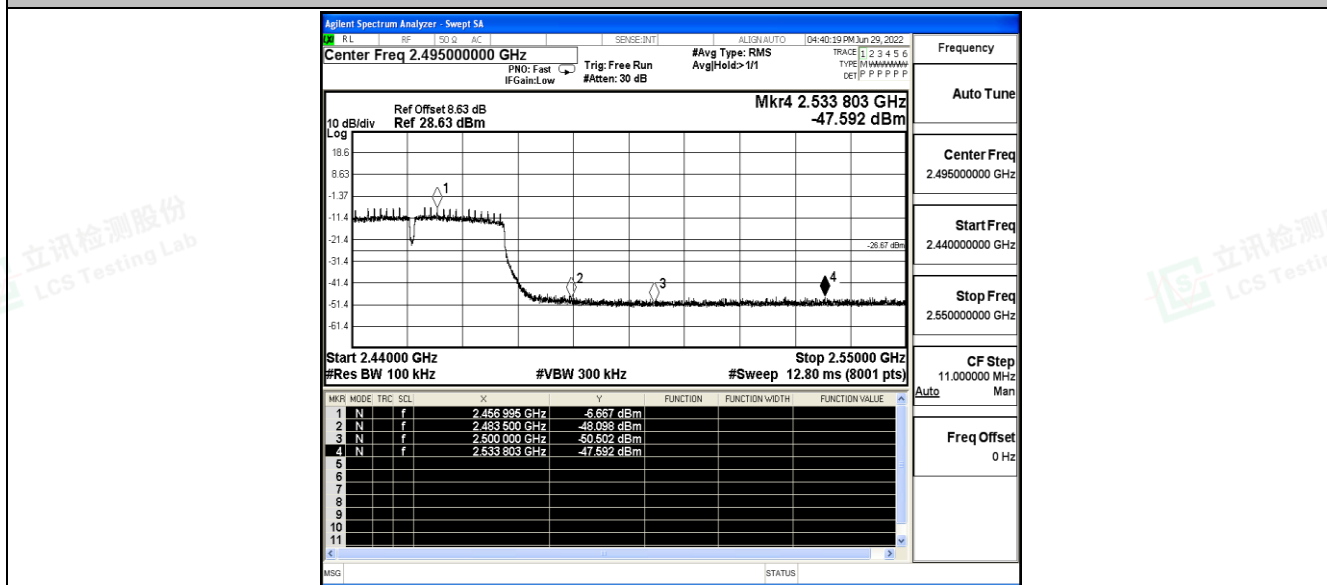


11N40SISO_Ant1_Low_2422





11N40SISO_Ant1_High_2452





C.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.97	2.97	---	PASS
			30~1000	2.97	-59.29	≤-17.03	PASS
			1000~26500	2.97	-46.36	≤-17.03	PASS
		2437	Reference	2.52	2.52	---	PASS
			30~1000	2.52	-58.46	≤-17.48	PASS
			1000~26500	2.52	-45.48	≤-17.48	PASS
		2462	Reference	2.62	2.62	---	PASS
			30~1000	2.62	-58.44	≤-17.38	PASS
			1000~26500	2.62	-45.76	≤-17.38	PASS
11G	Ant1	2412	Reference	-2.29	-2.29	---	PASS
			30~1000	-2.29	-58.53	≤-22.29	PASS
			1000~26500	-2.29	-45.25	≤-22.29	PASS
		2437	Reference	-2.67	-2.67	---	PASS
			30~1000	-2.67	-58.74	≤-22.67	PASS
			1000~26500	-2.67	-46.48	≤-22.67	PASS
		2462	Reference	-2.95	-2.95	---	PASS
			30~1000	-2.95	-59.13	≤-22.95	PASS
			1000~26500	-2.95	-45.99	≤-22.95	PASS
11N20SISO	Ant1	2412	Reference	-2.89	-2.89	---	PASS
			30~1000	-2.89	-57.68	≤-22.89	PASS
			1000~26500	-2.89	-45.91	≤-22.89	PASS
		2437	Reference	-2.53	-2.53	---	PASS
			30~1000	-2.53	-58.48	≤-22.53	PASS
			1000~26500	-2.53	-46.29	≤-22.53	PASS
		2462	Reference	-3.49	-3.49	---	PASS
			30~1000	-3.49	-56.58	≤-23.49	PASS
			1000~26500	-3.49	-45.63	≤-23.49	PASS
11N40SISO	Ant1	2422	Reference	-5.44	-5.44	---	PASS
			30~1000	-5.44	-58.14	≤-25.44	PASS
			1000~26500	-5.44	-46.13	≤-25.44	PASS
		2437	Reference	-6.22	-6.22	---	PASS
			30~1000	-6.22	-59.35	≤-26.22	PASS
			1000~26500	-6.22	-46.51	≤-26.22	PASS
		2452	Reference	-6.66	-6.66	---	PASS
			30~1000	-6.66	-41.03	≤-26.66	PASS





			1000~26500	-6.66	-45.54	≤-26.66	PASS
--	--	--	------------	-------	--------	---------	------

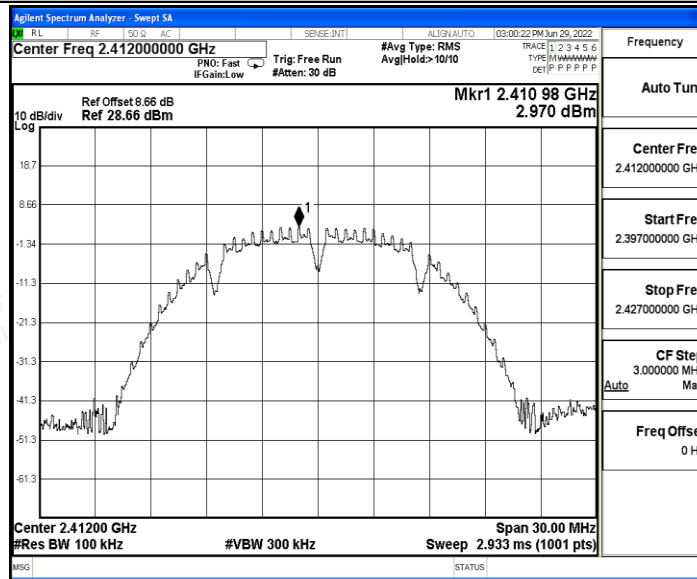


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

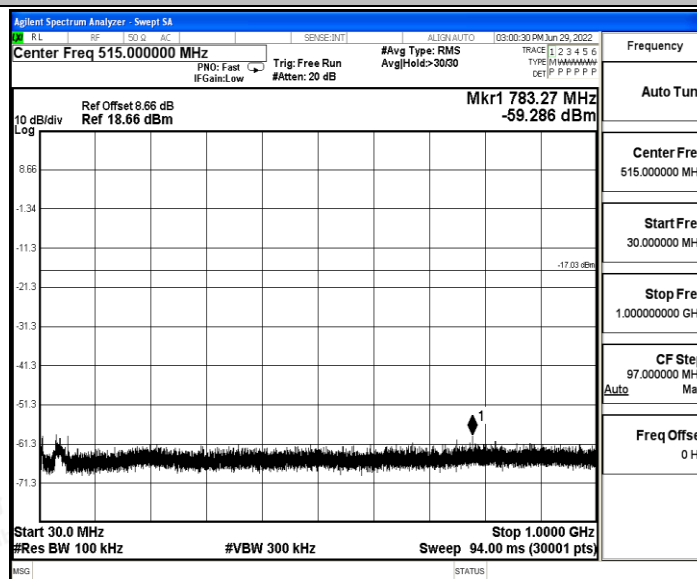


Test Graphs

11B_Ant1_2412_0~Reference

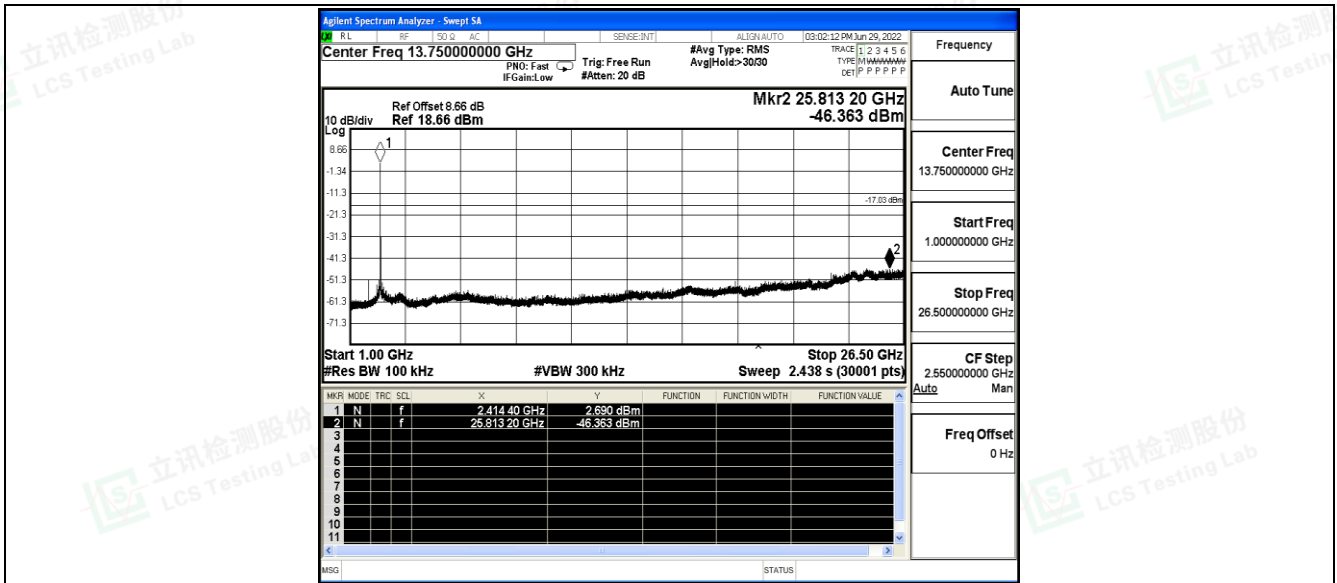


11B_Ant1_2412_30~1000

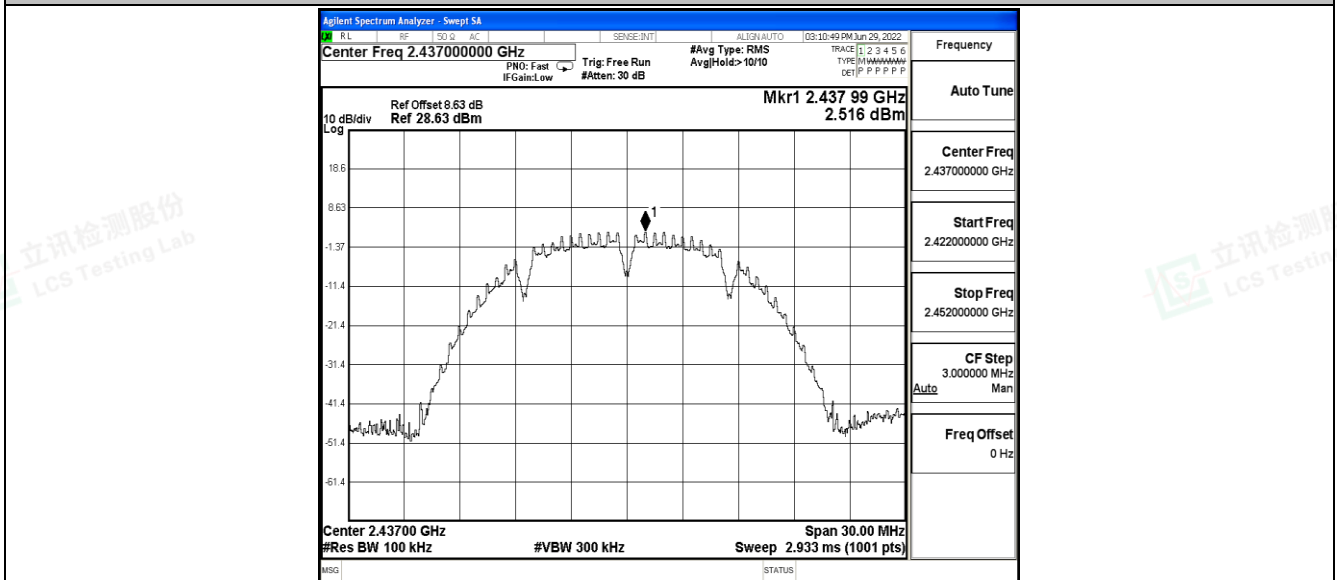


11B_Ant1_2412_1000~26500



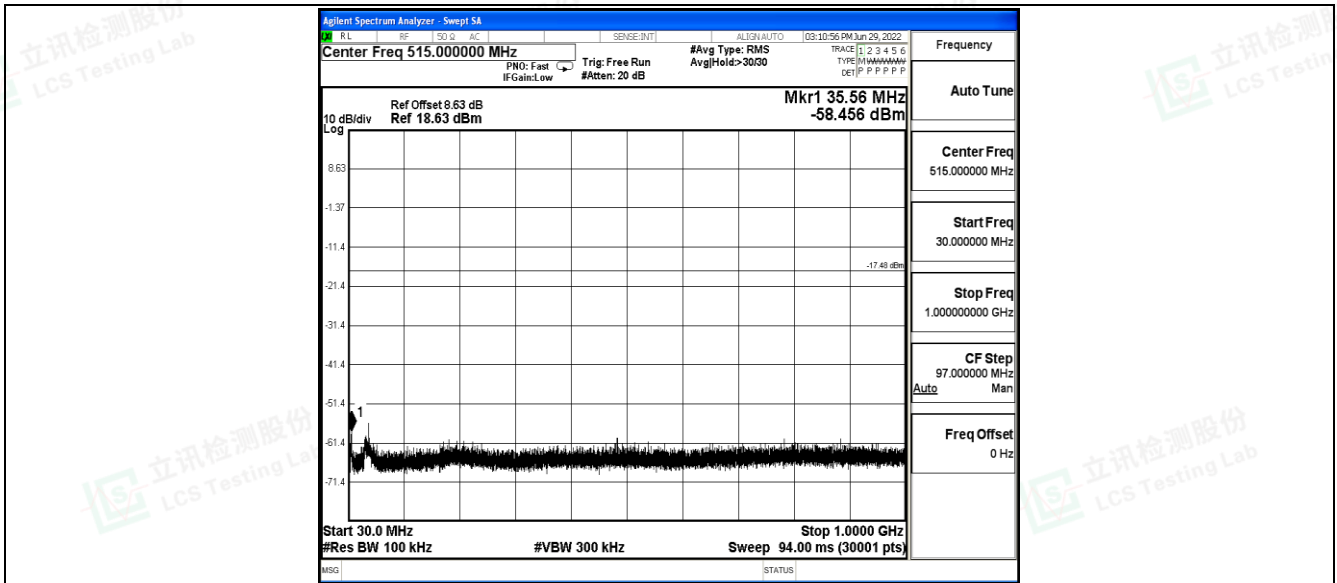


11B_Ant1_2437_0~Reference

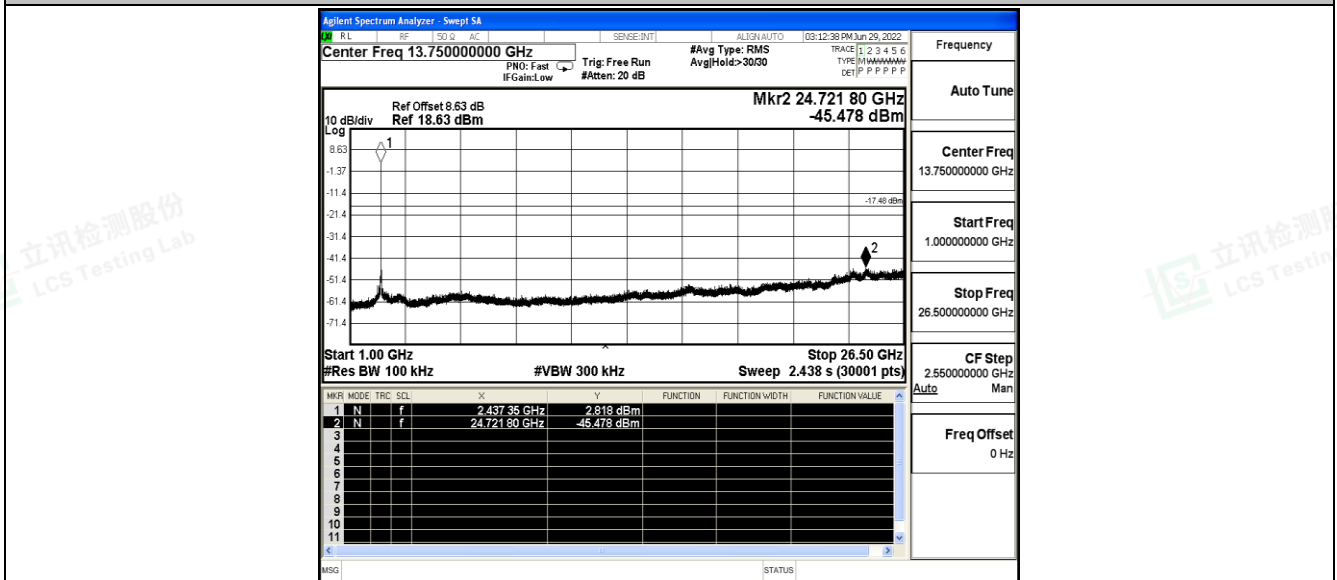


11B_Ant1_2437_30~1000



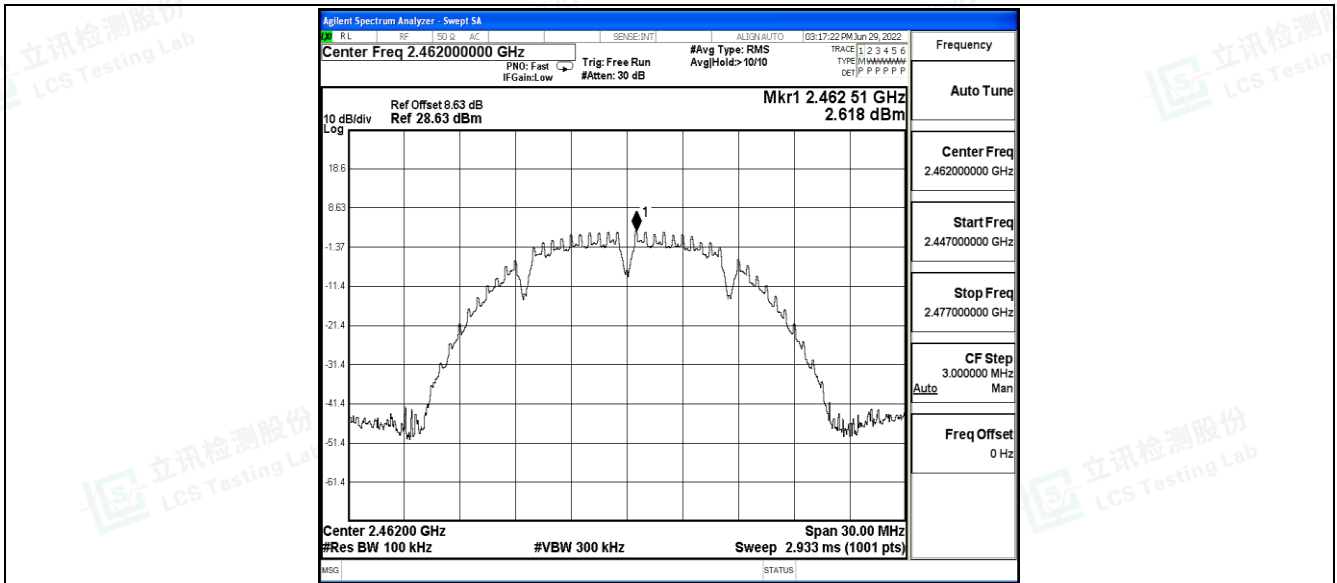


11B_Ant1_2437_1000~26500

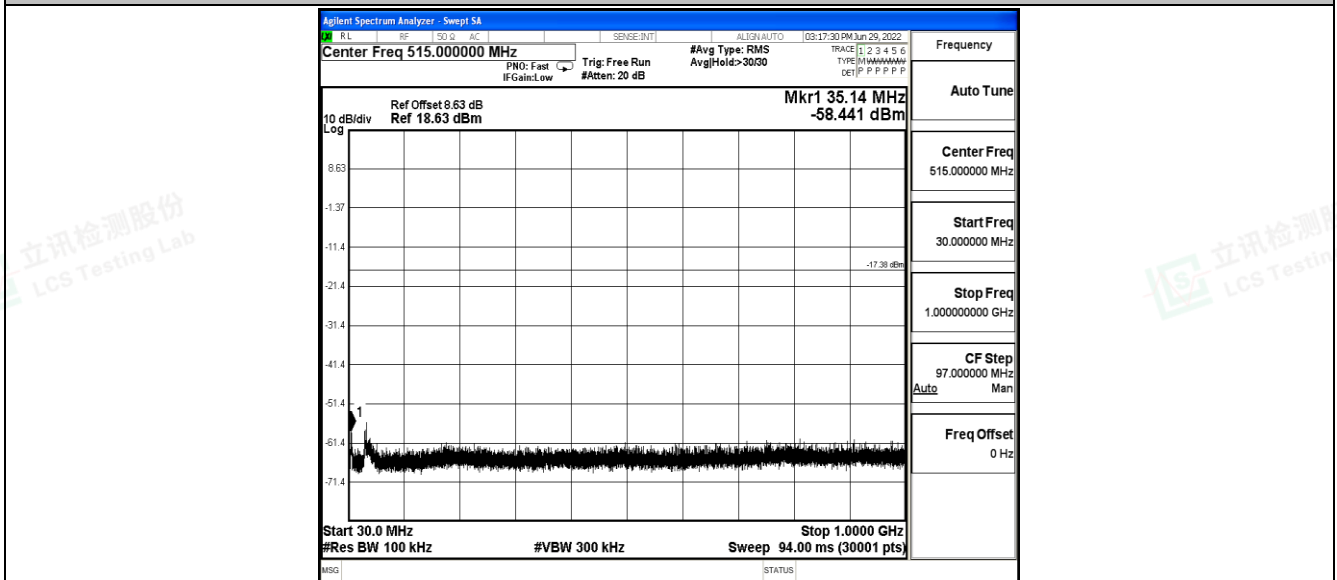


11B_Ant1_2462_0~Reference



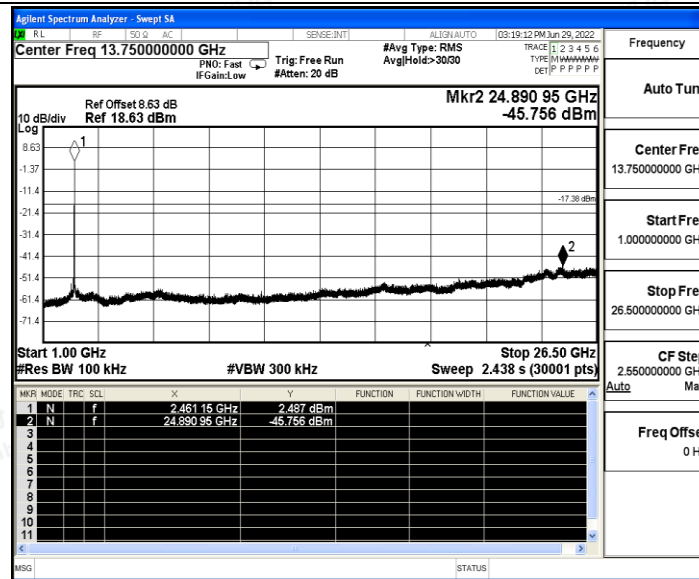


11B_Ant1_2462_30~1000

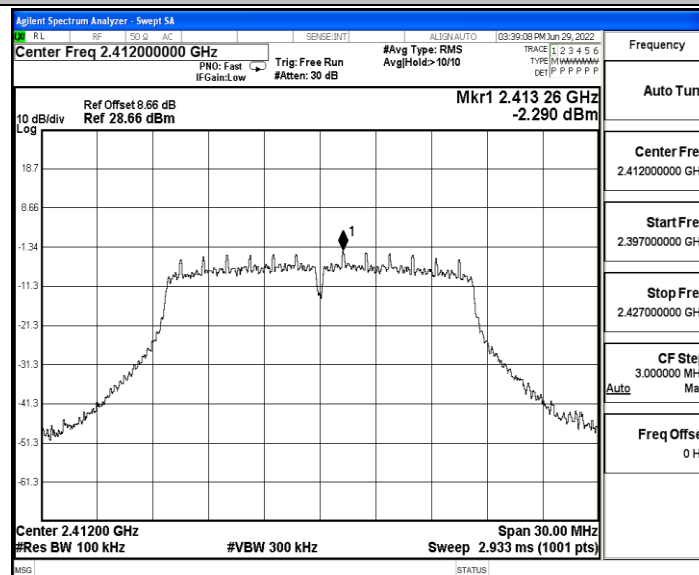


11B_Ant1_2462_1000~26500



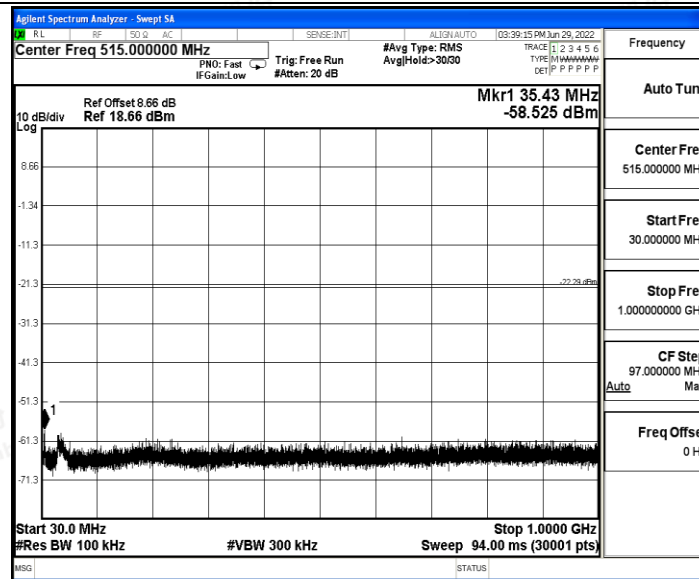


11G_Ant1_2412_0~Reference

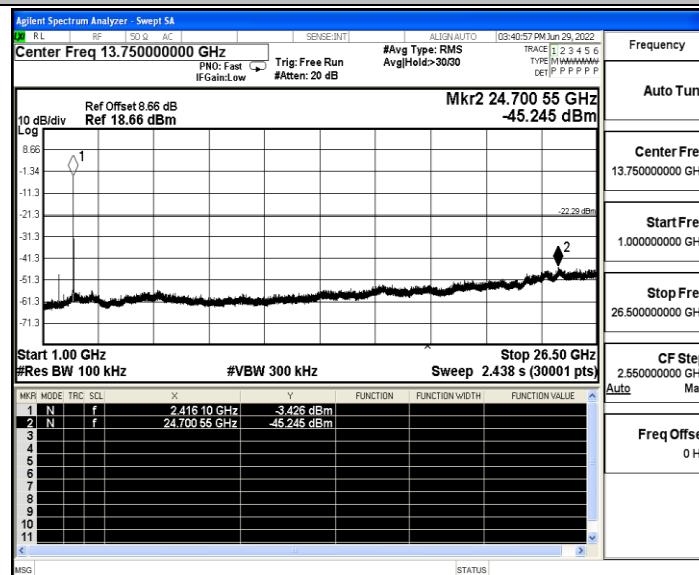


11G_Ant1_2412_30~1000



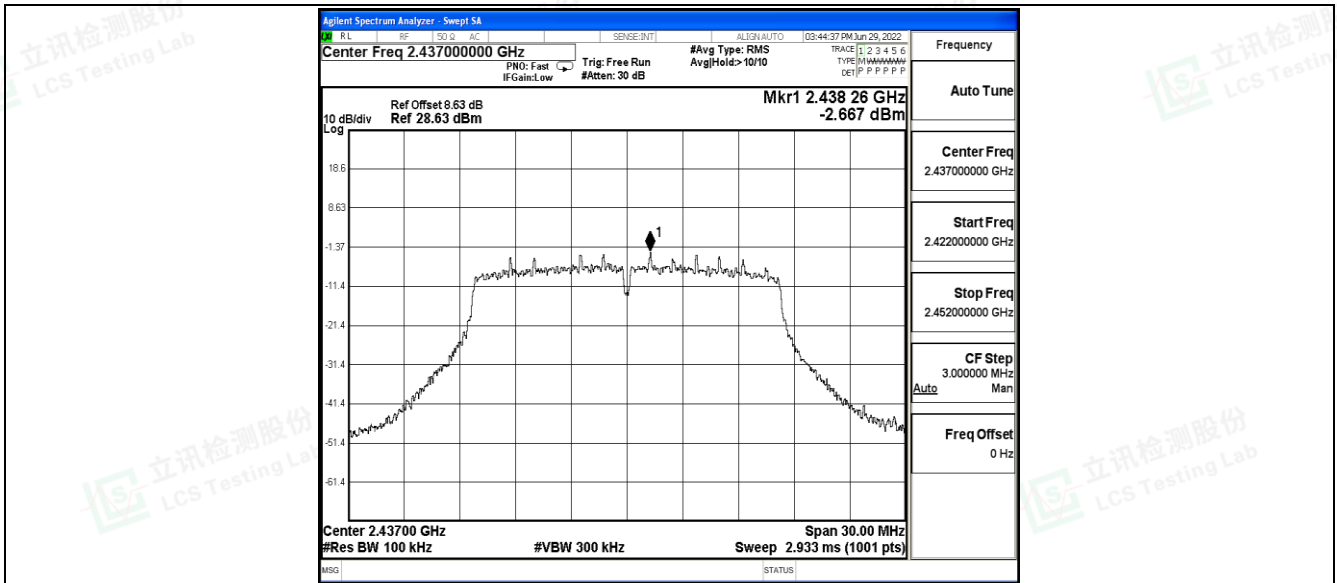


11G_Ant1_2412_1000~26500

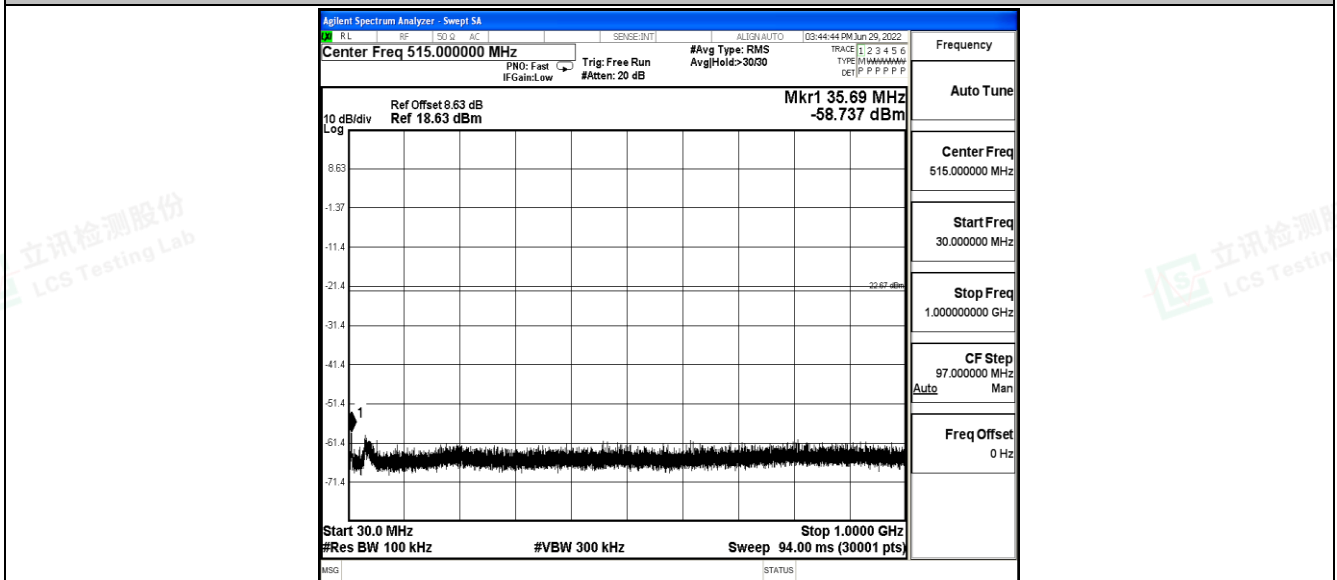


11G_Ant1_2437_0~Reference



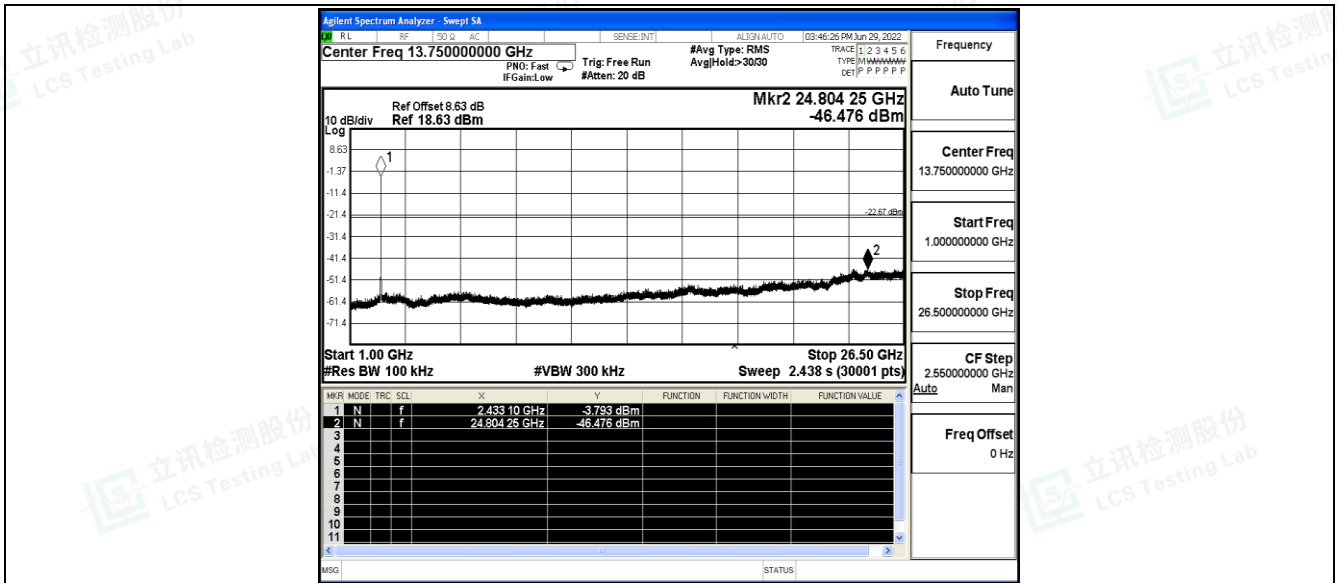


11G_Ant1_2437_30~1000

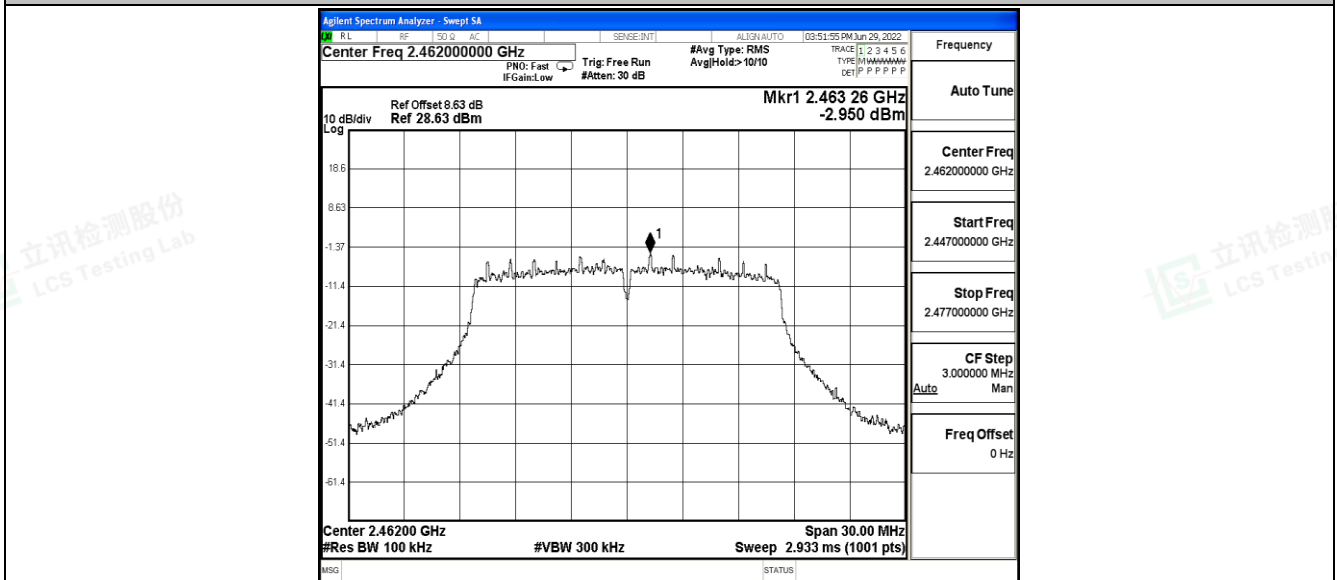


11G_Ant1_2437_1000~26500



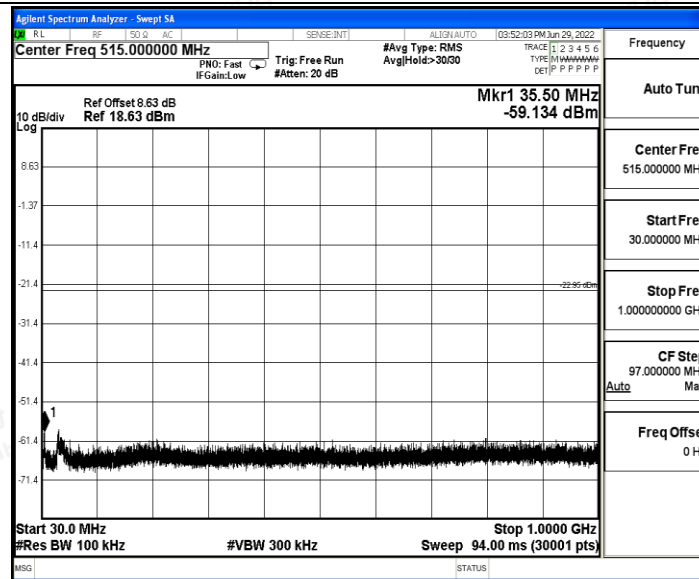


11G_Ant1_2462_0~Reference

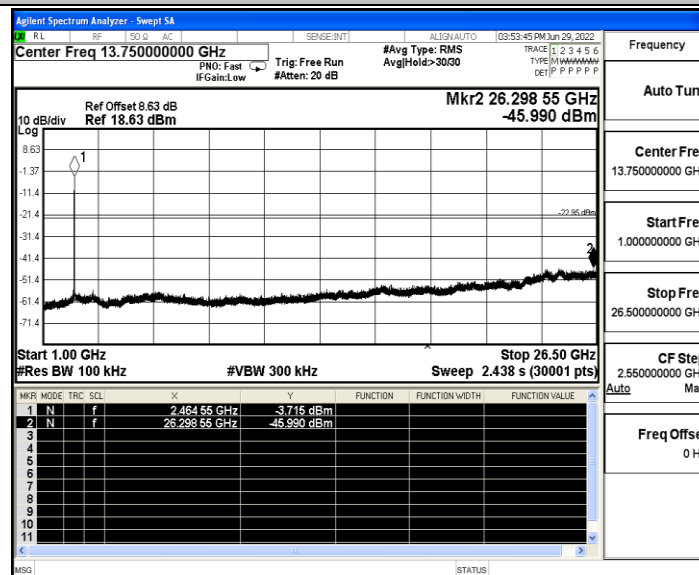


11G_Ant1_2462_30~1000



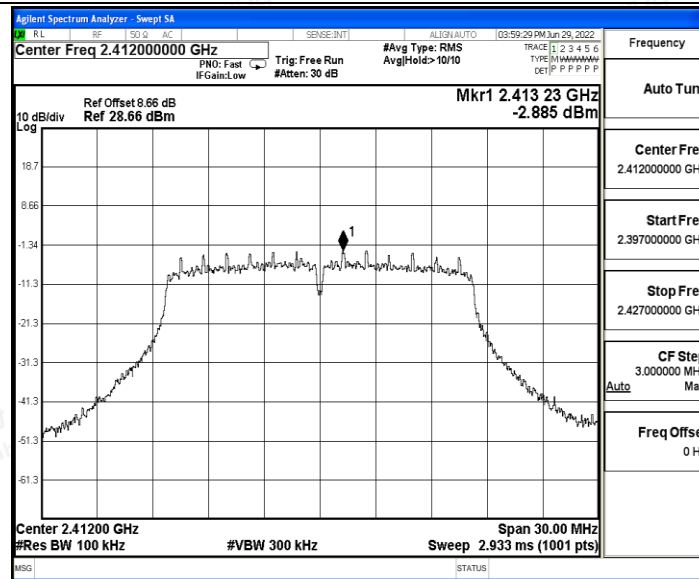


11G_Ant1_2462_1000~26500

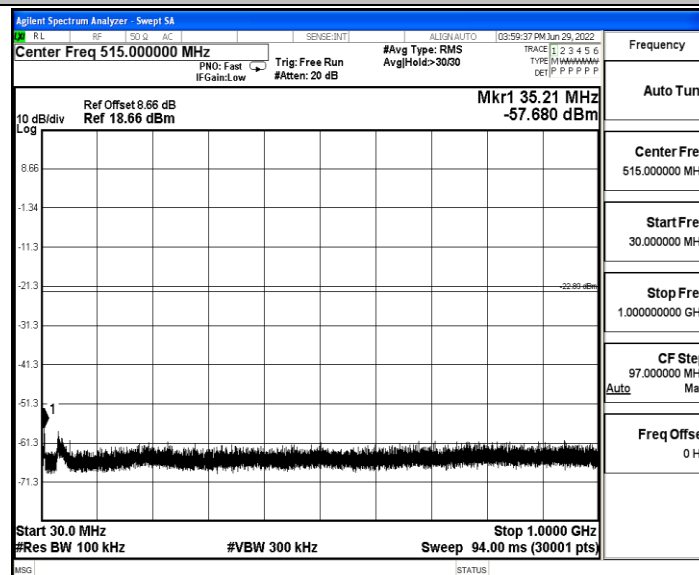


11N20SISO_Ant1_2412_0~Reference



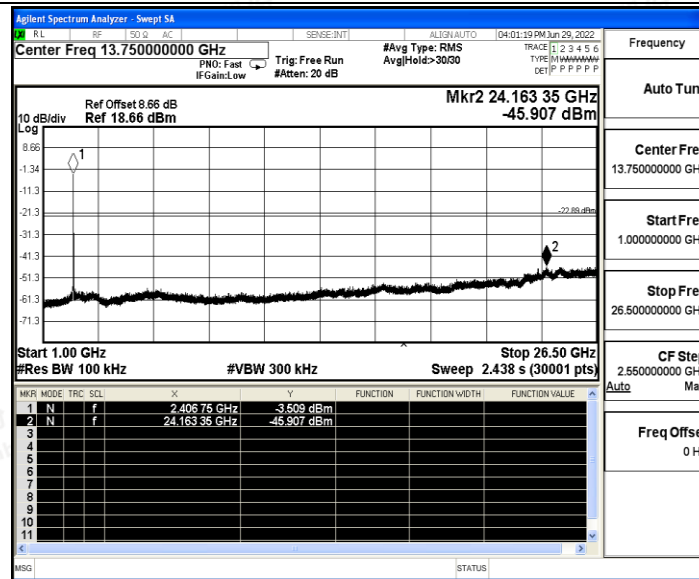


11N20SISO_Ant1_2412_30~1000

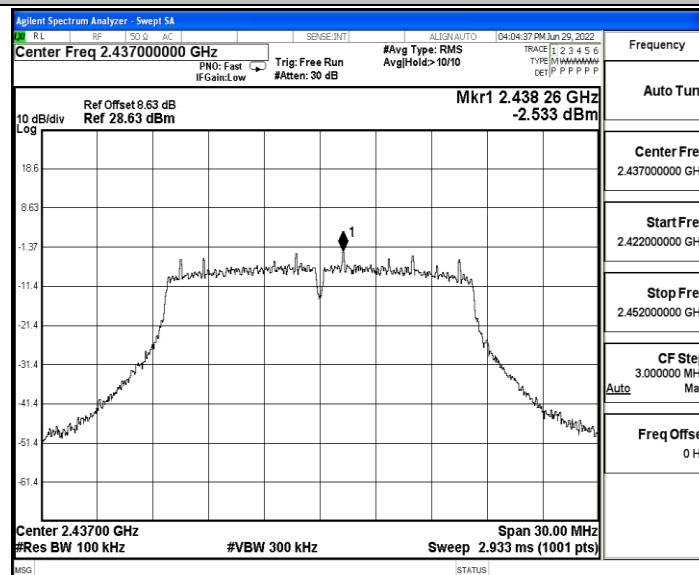


11N20SISO_Ant1_2412_1000~26500



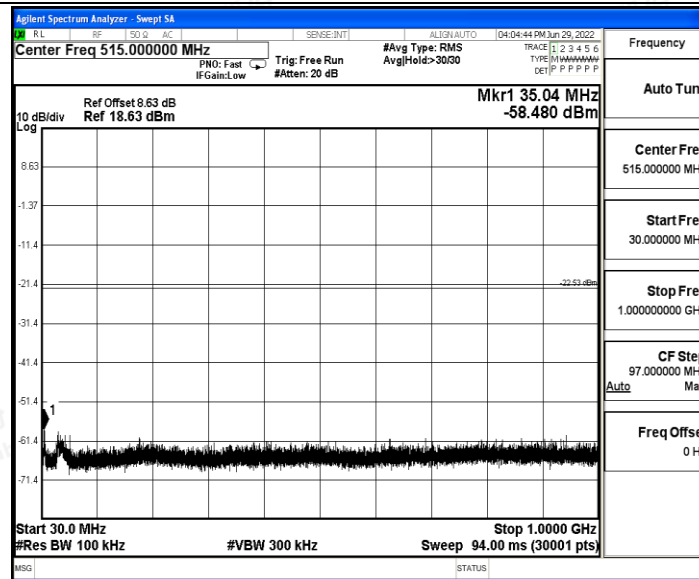


11N20SISO_Ant1_2437_0~Reference

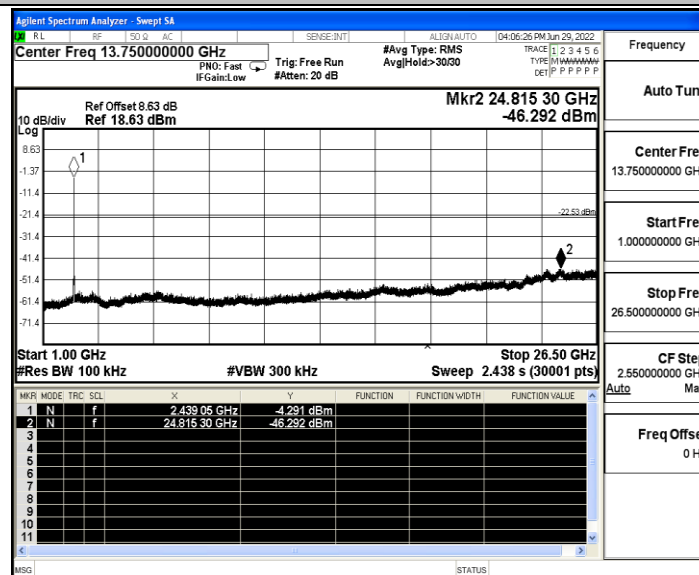


11N20SISO_Ant1_2437_30~1000





11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference

