



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

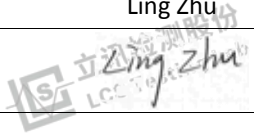
Product Name: Smart Pet Feeder with Camera

Test Model: PF007



Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
	<i>Nick Peng</i>
Supervised by:	Ling Zhu
	<i>Ling Zhu</i>





A.1 DTS Bandwidth

Test Result

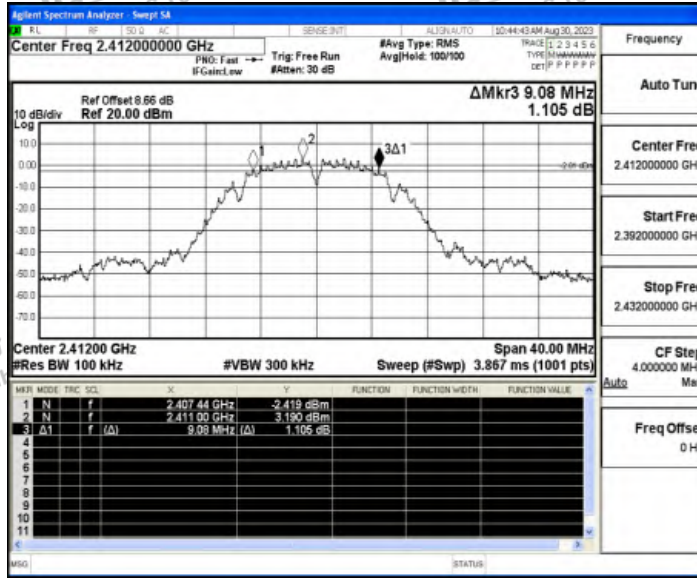
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant	2412	9.080	2407.440	2416.520	0.5	PASS
		2437	9.520	2432.000	2441.520	0.5	PASS
		2462	10.040	2456.960	2467.000	0.5	PASS
11G	Ant	2412	15.600	2404.080	2419.680	0.5	PASS
		2437	15.800	2429.080	2444.880	0.5	PASS
		2462	15.680	2454.080	2469.760	0.5	PASS
11N20SISO	Ant	2412	17.600	2403.200	2420.800	0.5	PASS
		2437	17.600	2428.200	2445.800	0.5	PASS
		2462	17.600	2453.200	2470.800	0.5	PASS
11N40SISO	Ant	2422	35.120	2404.400	2439.520	0.5	PASS
		2437	35.120	2419.480	2454.600	0.5	PASS
		2452	35.200	2434.400	2469.600	0.5	PASS



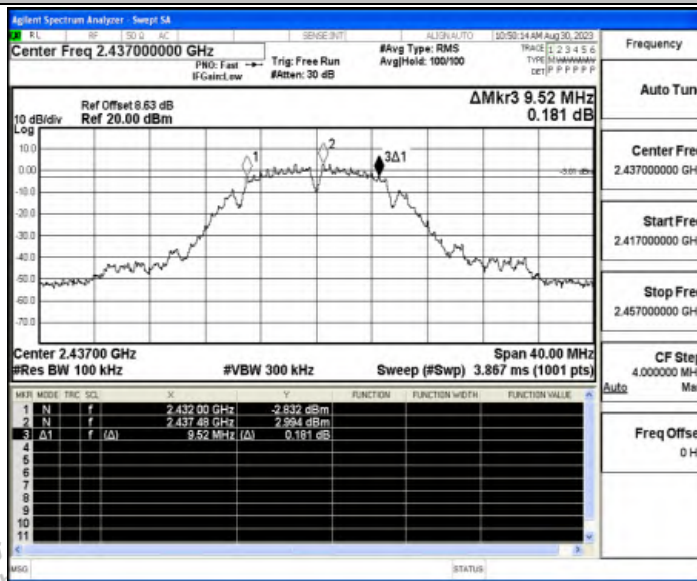


Test Graphs

11B_Ant_2412

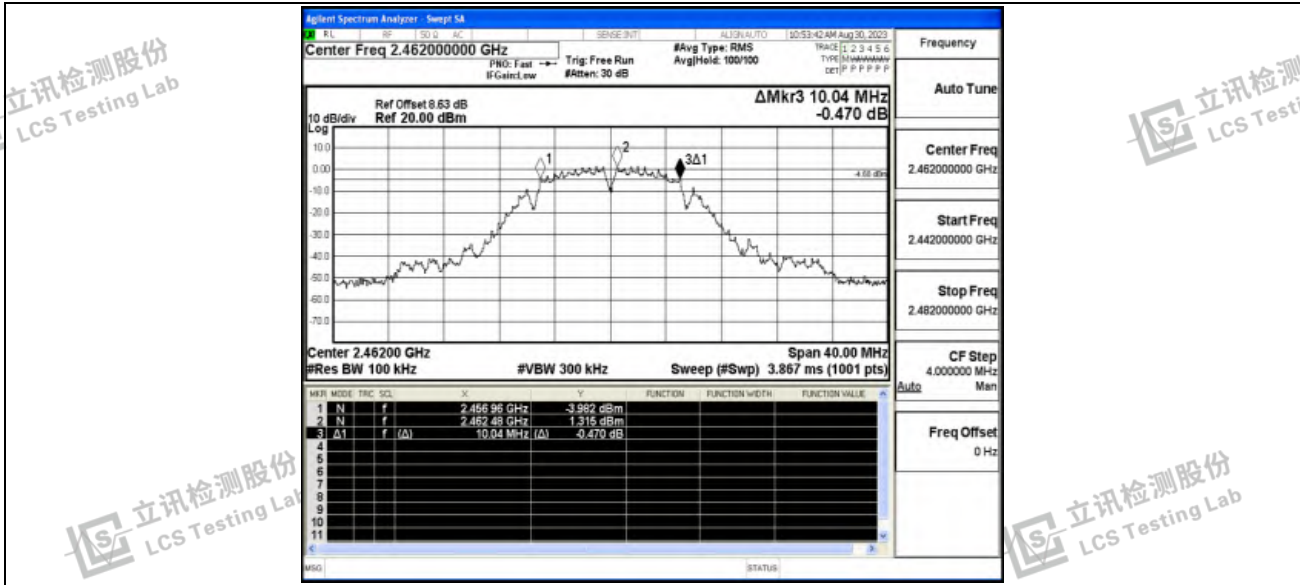


11B_Ant_2437

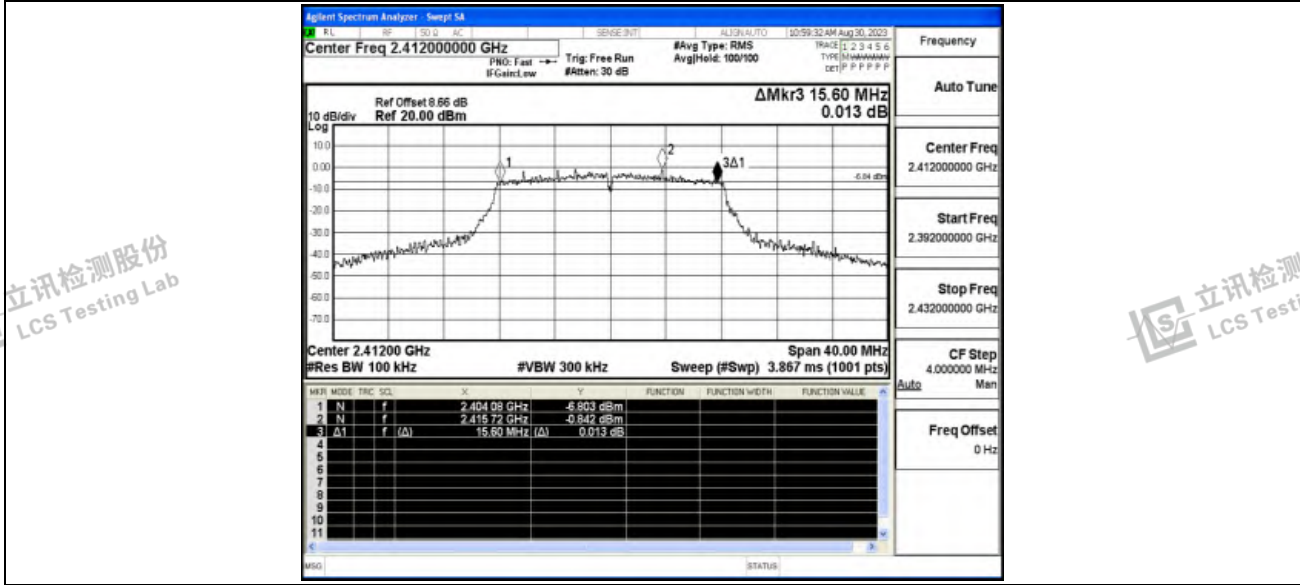


11B_Ant_2462

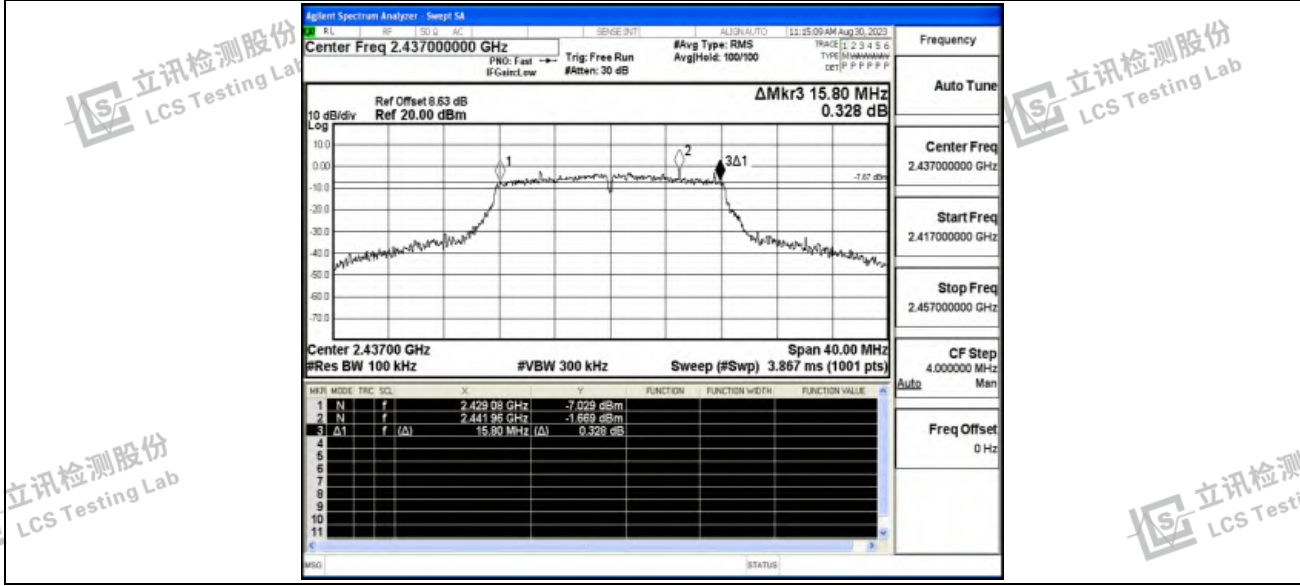




11G_Ant_2412

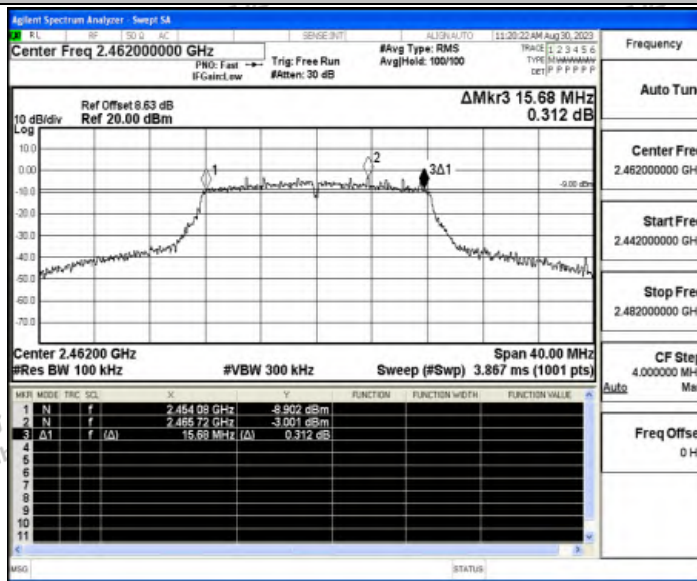


11G_Ant_2437

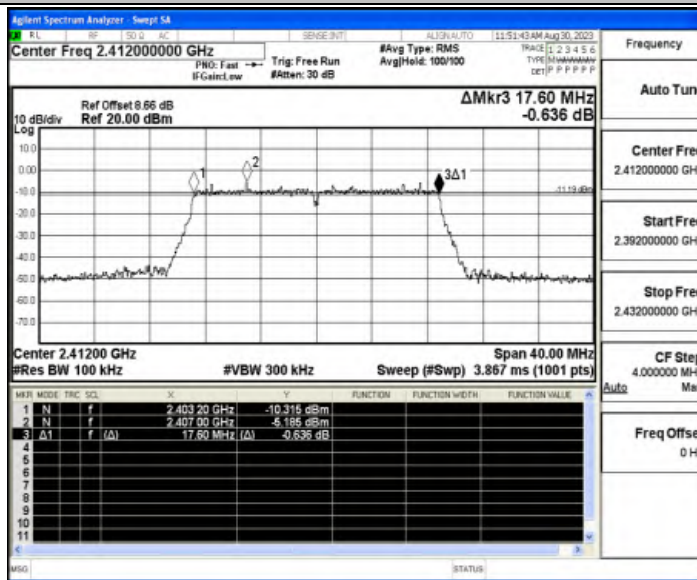




11G_Ant_2462

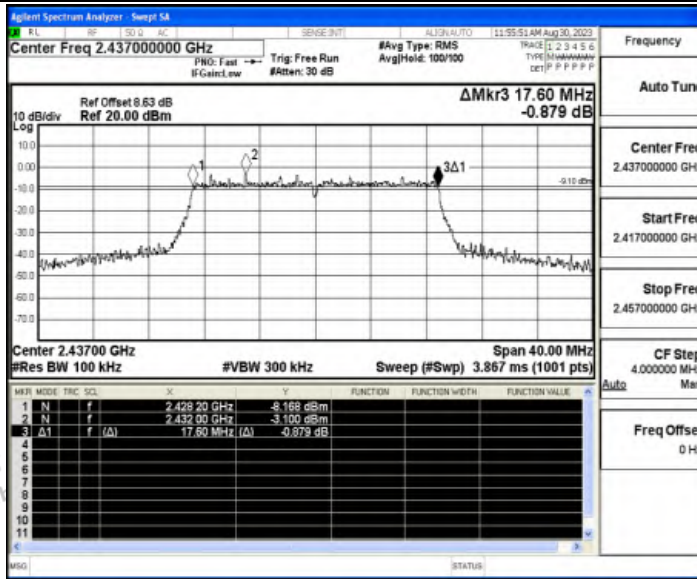


11N20SISO_Ant_2412

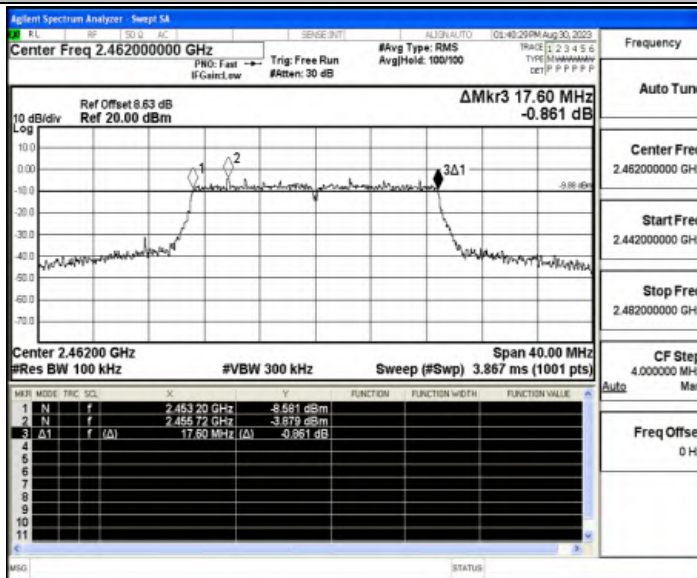


11N20SISO_Ant_2437

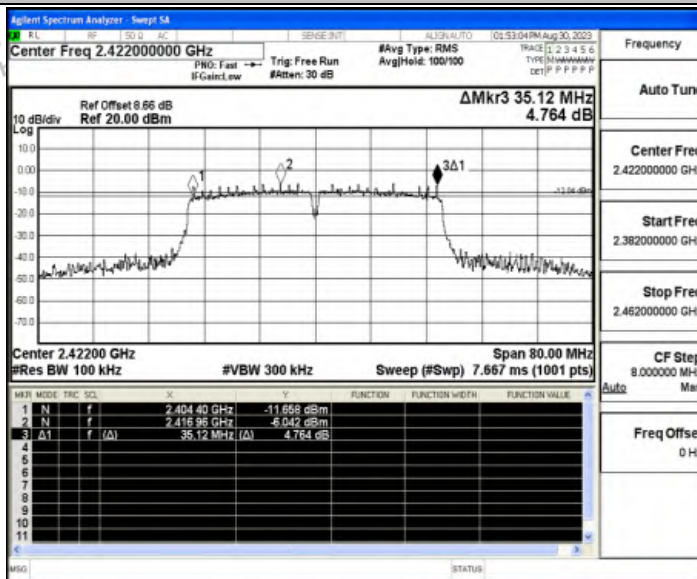




11N20SISO_Ant_2462

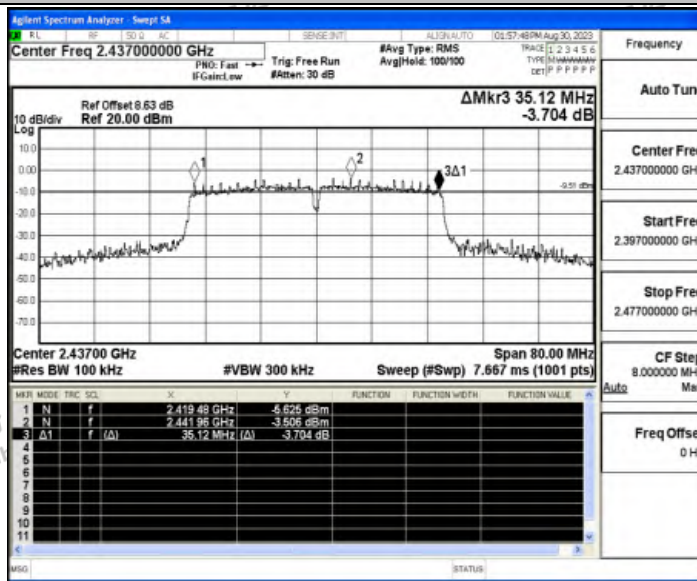


11N40SISO_Ant_2422

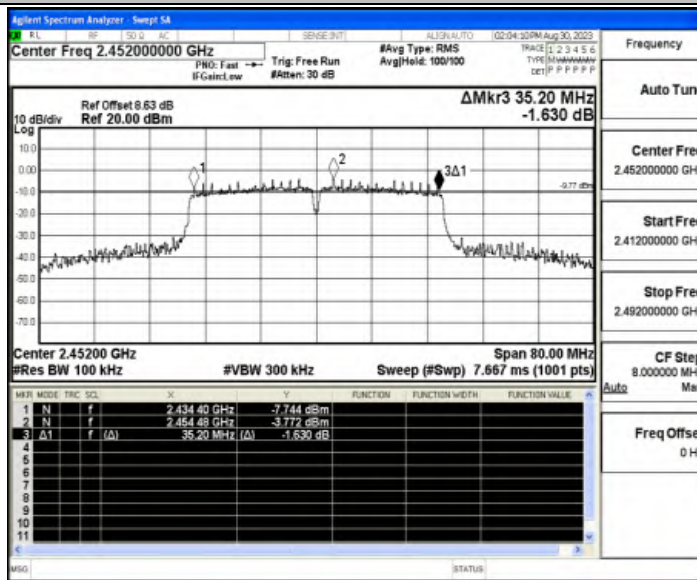




11N40SISO_Ant_2437



11N40SISO_Ant_2452





A.2 Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant	2412	15.14	≤30.00	PASS
		2437	14.73	≤30.00	PASS
		2462	13.93	≤30.00	PASS
11G	Ant	2412	14.76	≤30.00	PASS
		2437	16.20	≤30.00	PASS
		2462	14.66	≤30.00	PASS
11N20SISO	Ant	2412	14.53	≤30.00	PASS
		2437	14.86	≤30.00	PASS
		2462	14.31	≤30.00	PASS
11N40SISO	Ant	2422	14.61	≤30.00	PASS
		2437	14.79	≤30.00	PASS
		2452	14.17	≤30.00	PASS





A.3 Maximum power spectral density

Test Result

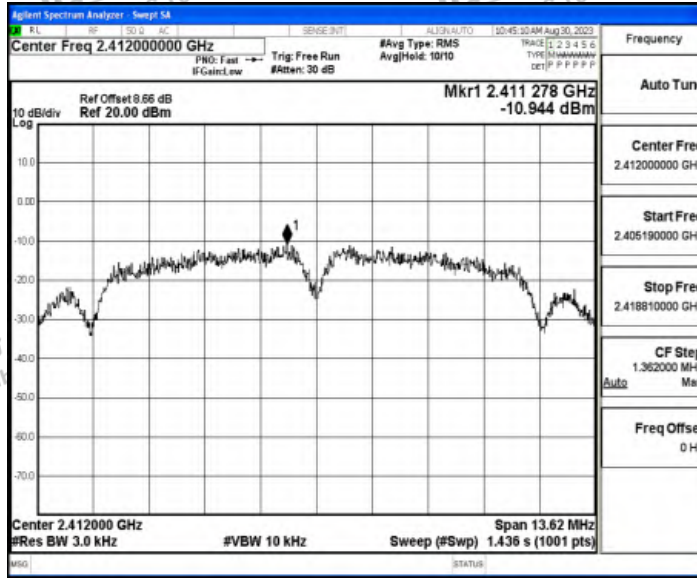
TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant	2412	-10.94	≤8.00	PASS
		2437	-10.46	≤8.00	PASS
		2462	-11.68	≤8.00	PASS
11G	Ant	2412	-17.08	≤8.00	PASS
		2437	-13.56	≤8.00	PASS
		2462	-14.96	≤8.00	PASS
11N20SISO	Ant	2412	-17.1	≤8.00	PASS
		2437	-16.97	≤8.00	PASS
		2462	-16.33	≤8.00	PASS
11N40SISO	Ant	2422	-19.38	≤8.00	PASS
		2437	-18.34	≤8.00	PASS
		2452	-19.56	≤8.00	PASS



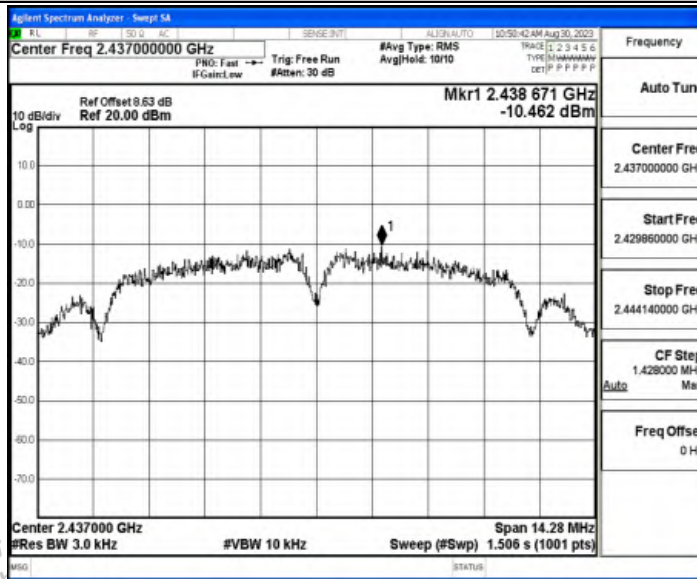


Test Graphs

11B_Ant_2412

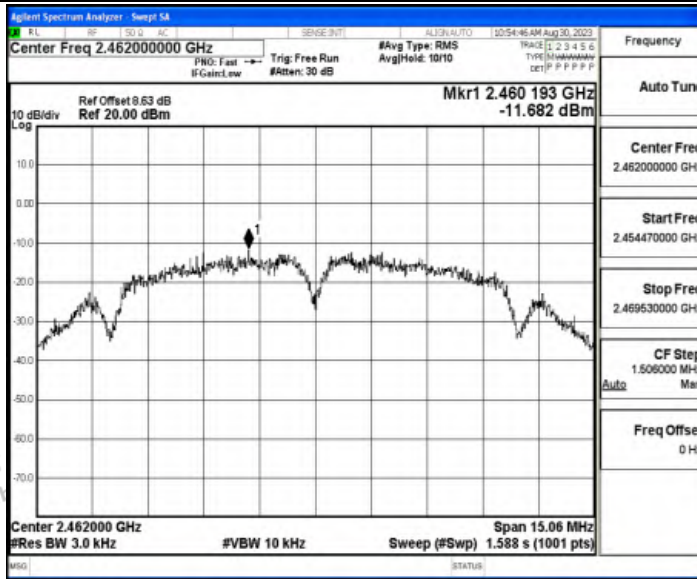


11B_Ant_2437

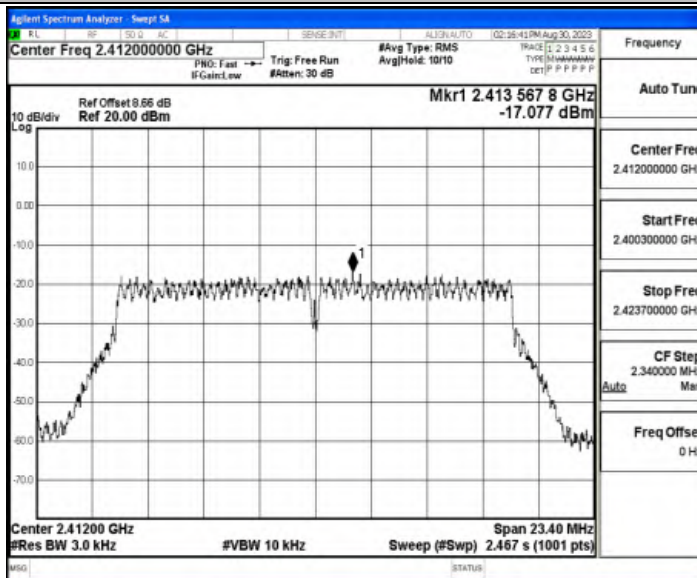


11B_Ant_2462

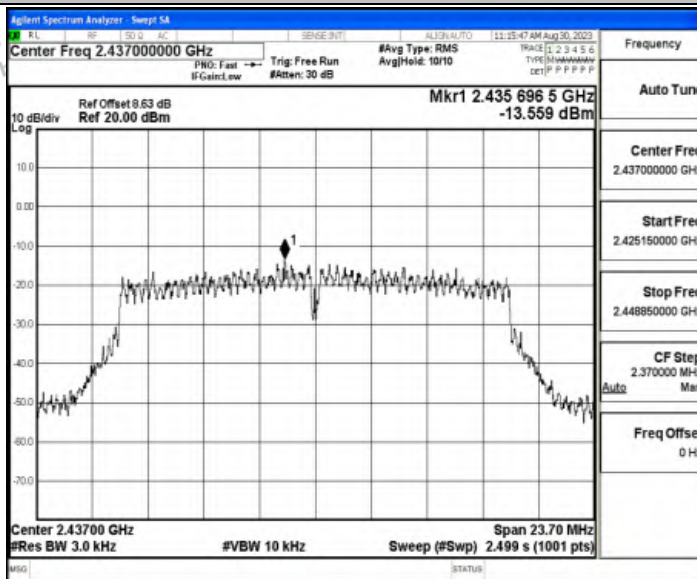




11G_Ant_2412

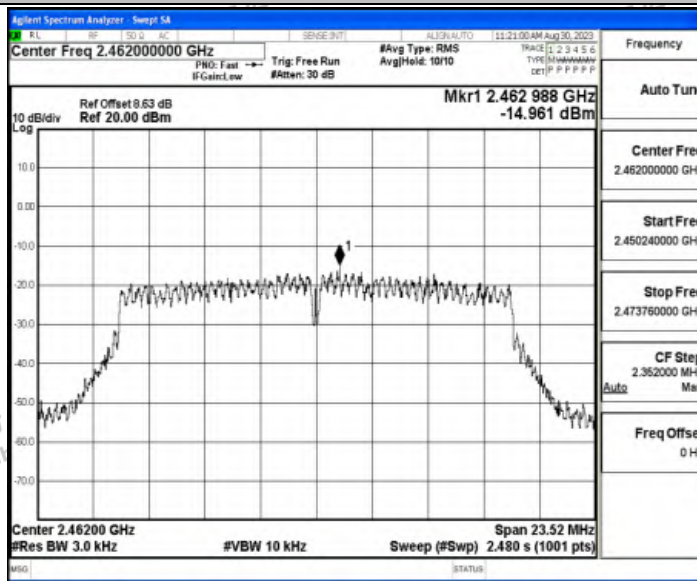


11G_Ant_2437

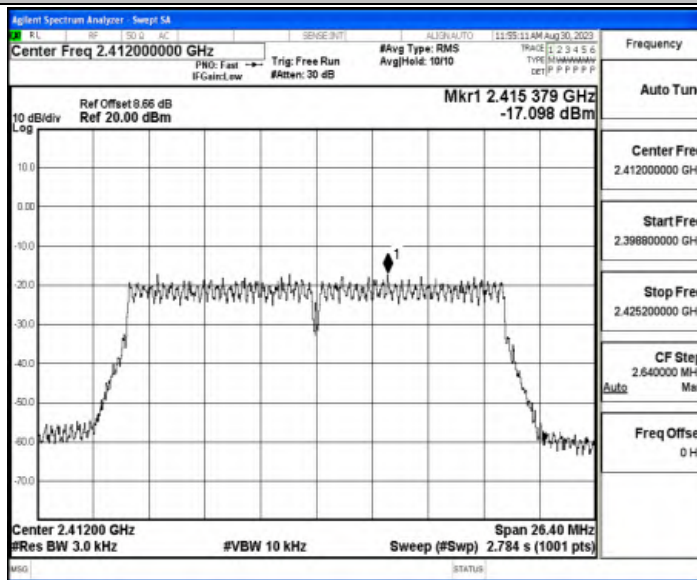




11G_Ant_2462

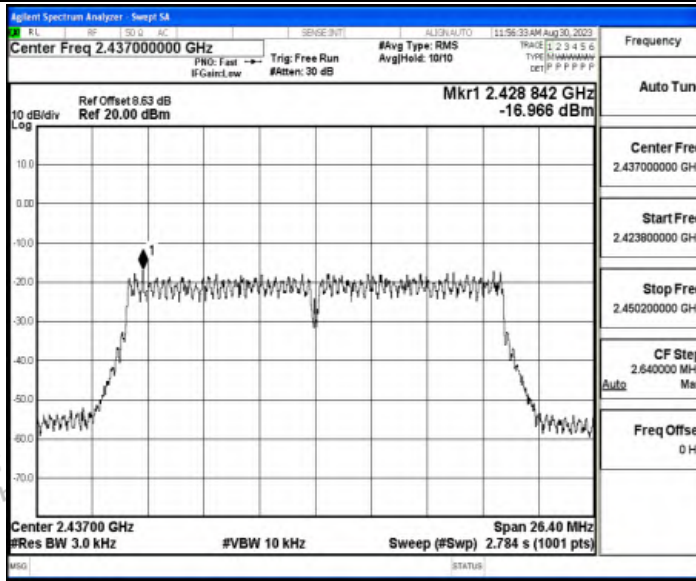


11N20SISO_Ant_2412

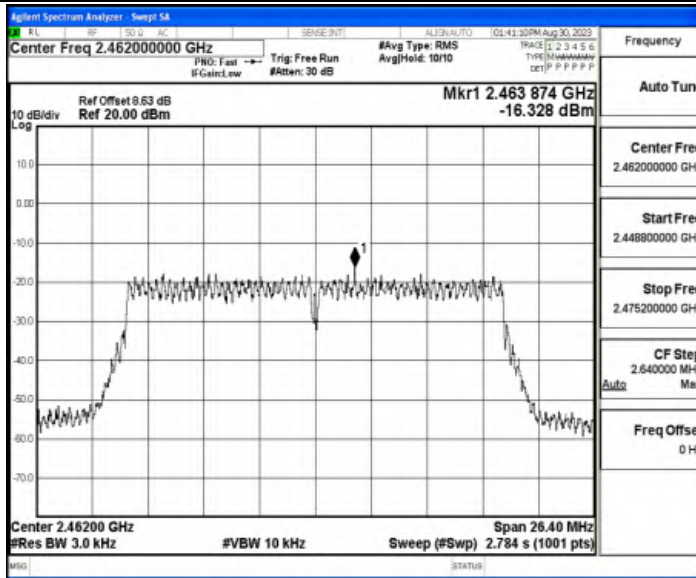


11N20SISO_Ant_2437

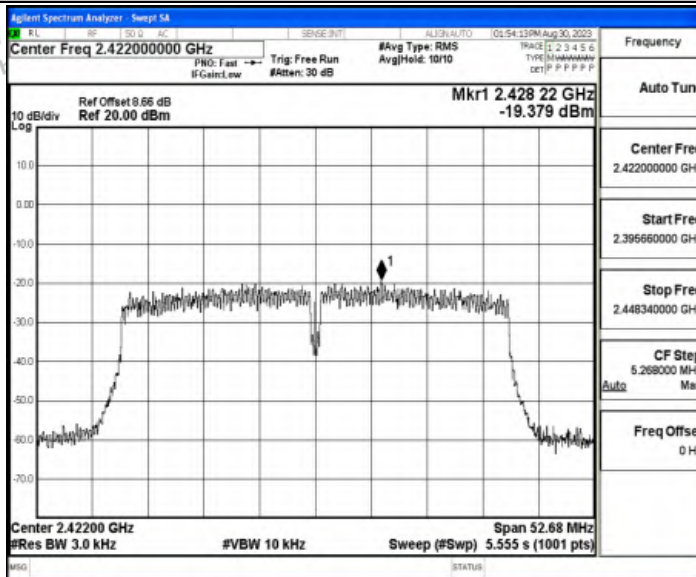




11N20SISO_Ant_2462

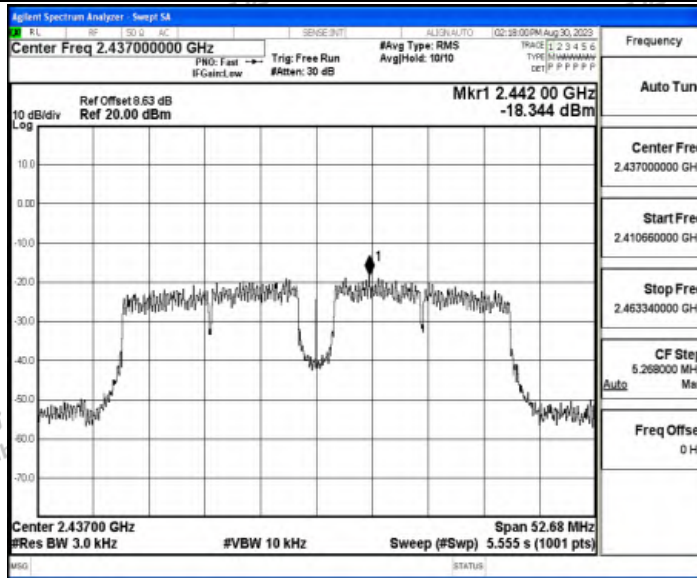


11N40SISO_Ant_2422

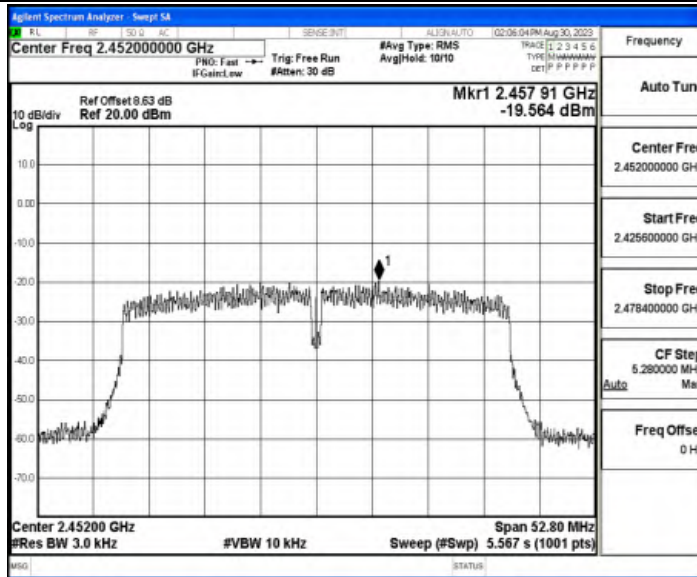




11N40SISO_Ant_2437



11N40SISO_Ant_2452





A.4 Band edge measurements

Test Result

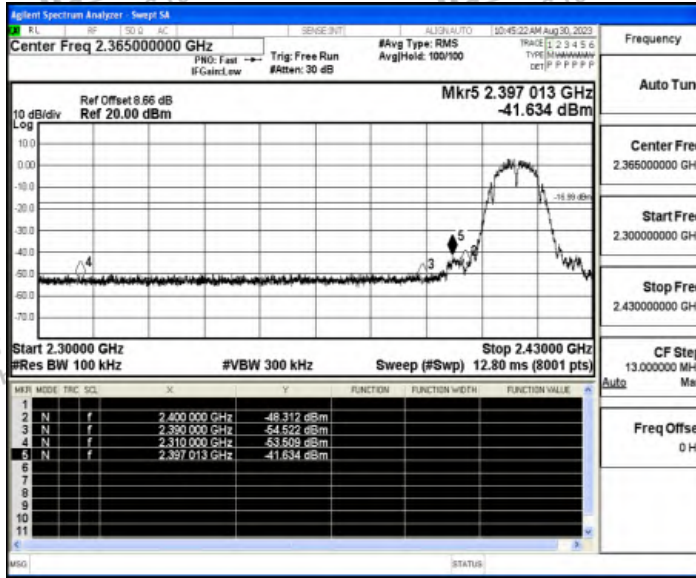
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant			3.01	-41.63	≤-16.99	PASS
				2.00	-47.99	≤-18	PASS
11G	Ant			-1.08	-31.84	≤-21.08	PASS
				-2.63	-46.27	≤-22.63	PASS
11N20SISO	Ant			-4.78	-43.59	≤-24.78	PASS
				-3.12	-44.53	≤-23.12	PASS
11N40SISO	Ant			-5.37	-38.68	≤-25.37	PASS
				-5.62	-40.1	≤-25.62	PASS



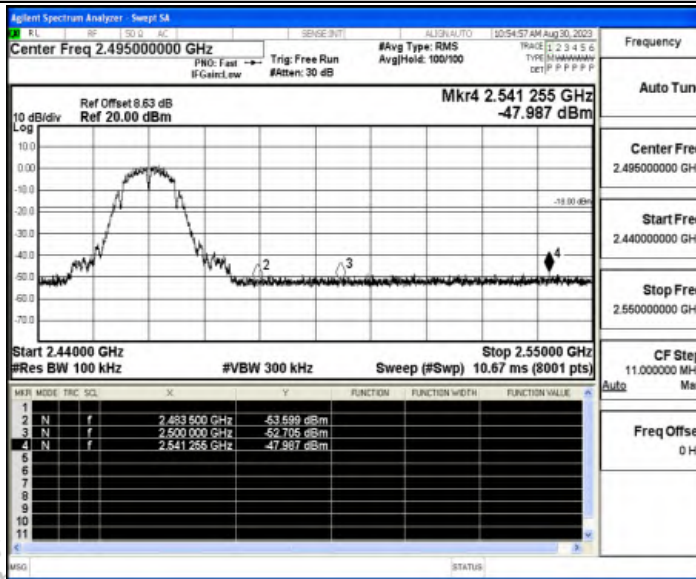


Test Graphs

11B_Ant_Low_2412

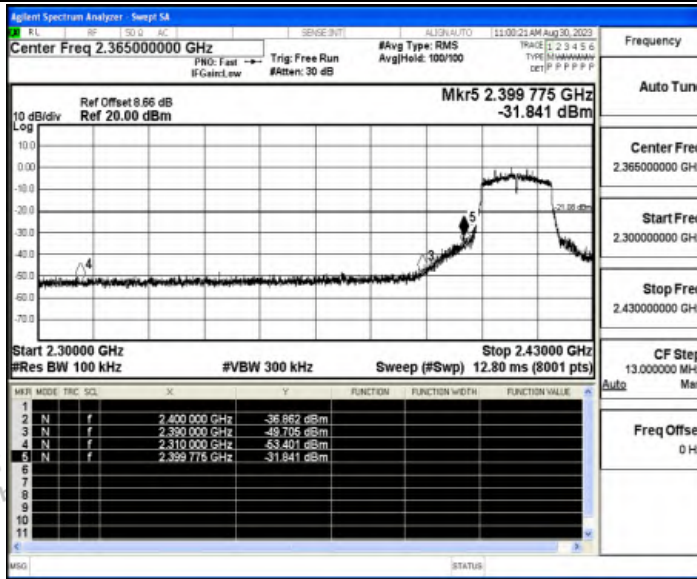


11B_Ant_High_2462

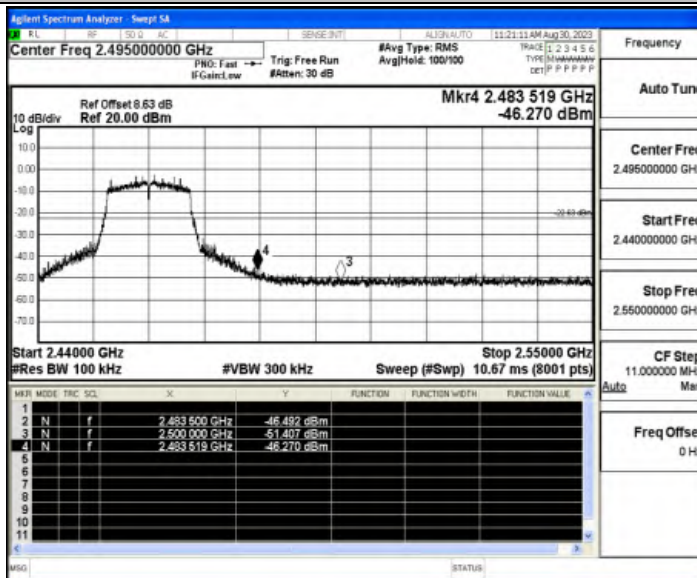


11G_Ant_Low_2412

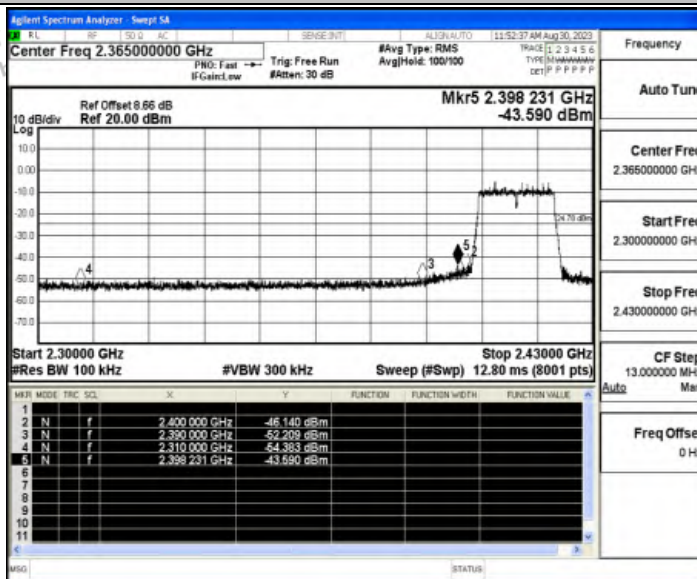




11G_Ant_High_2462

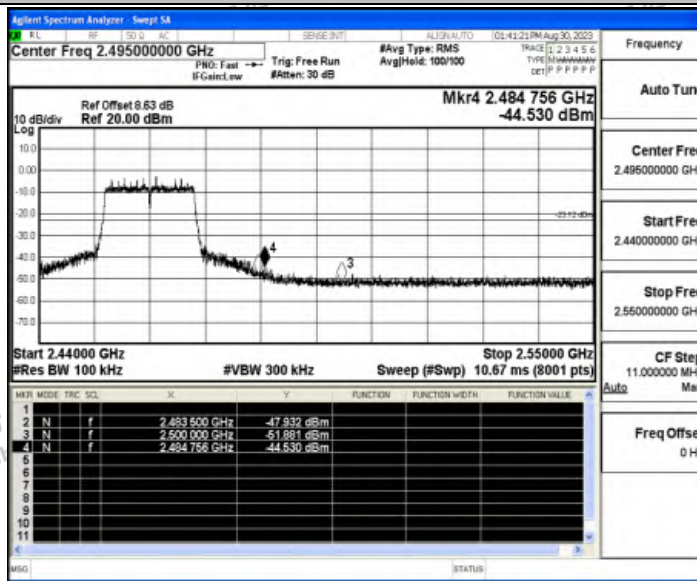


11N20SISO_Ant_Low_2412

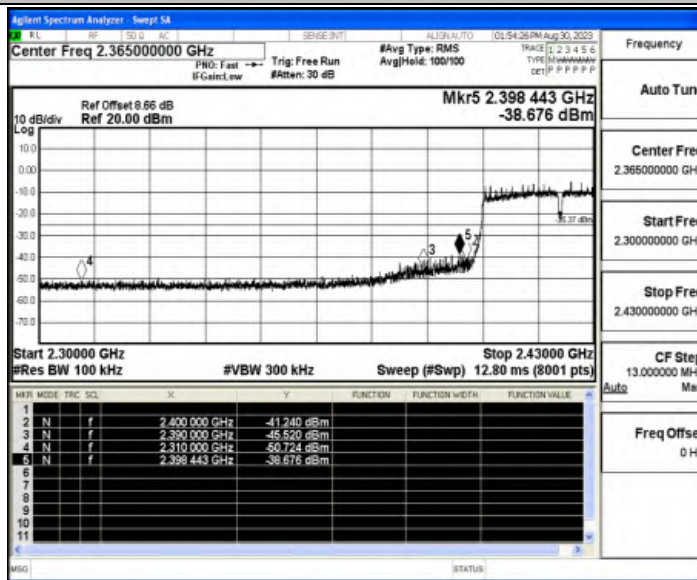




11N20SISO_Ant_High_2462

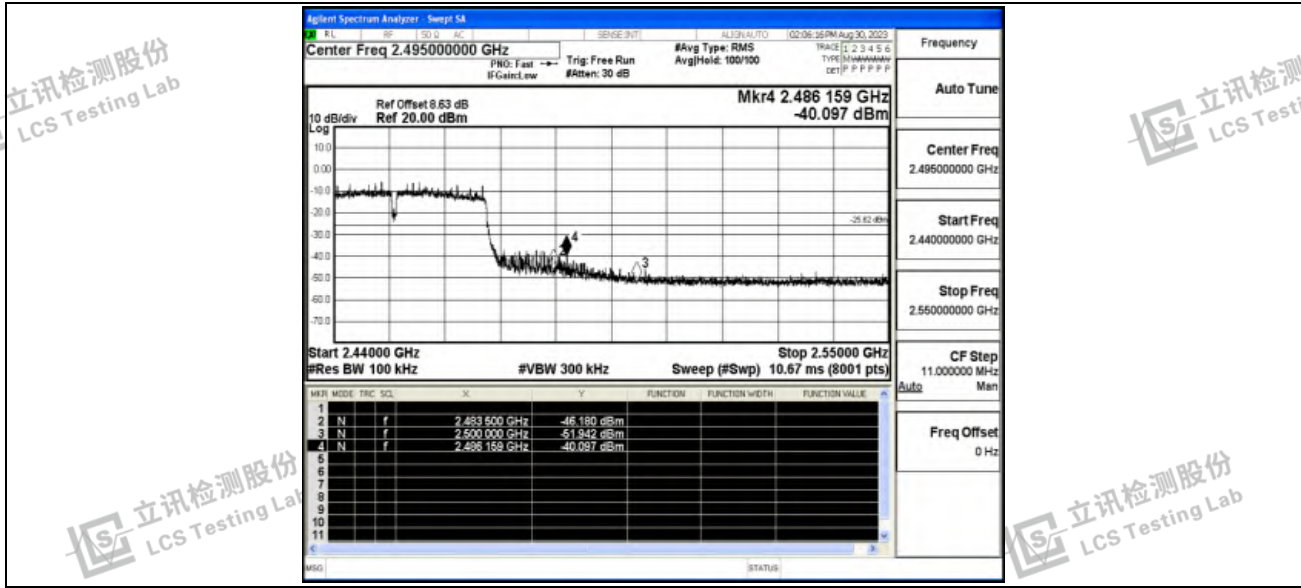


11N40SISO_Ant_Low_2422



11N40SISO_Ant_High_2452







A.5 Conducted Spurious Emission

Test Result

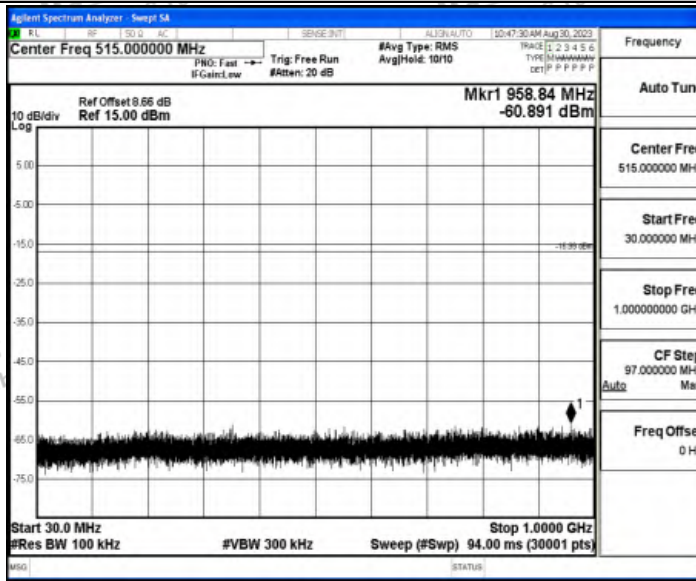
TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant	2412	30~1000	3.01	-60.89	≤-16.99	PASS
			1000~26500	3.01	-46.01	≤-16.99	PASS
		2437	30~1000	2.84	-61.08	≤-17.16	PASS
			1000~26500	2.84	-46.82	≤-17.16	PASS
		2462	30~1000	2.00	-60.86	≤-18	PASS
			1000~26500	2.00	-46.38	≤-18	PASS
11G	Ant	2412	30~1000	-1.08	-59.87	≤-21.08	PASS
			1000~26500	-1.08	-45.77	≤-21.08	PASS
		2437	30~1000	-1.92	-60.91	≤-21.92	PASS
			1000~26500	-1.92	-45.88	≤-21.92	PASS
		2462	30~1000	-2.63	-61.13	≤-22.63	PASS
			1000~26500	-2.63	-46.64	≤-22.63	PASS
11N20SISO	Ant	2412	30~1000	-4.78	-60.87	≤-24.78	PASS
			1000~26500	-4.78	-46.57	≤-24.78	PASS
		2437	30~1000	-3.26	-59.84	≤-23.26	PASS
			1000~26500	-3.26	-46.78	≤-23.26	PASS
		2462	30~1000	-3.12	-60.95	≤-23.12	PASS
			1000~26500	-3.12	-46.25	≤-23.12	PASS
11N40SISO	Ant	2422	30~1000	-5.37	-60.64	≤-25.37	PASS
			1000~26500	-5.37	-46.31	≤-25.37	PASS
		2437	30~1000	-3.33	-61.02	≤-23.33	PASS
			1000~26500	-3.33	-46.32	≤-23.33	PASS
		2452	30~1000	-5.62	-61.53	≤-25.62	PASS
			1000~26500	-5.62	-46.41	≤-25.62	PASS



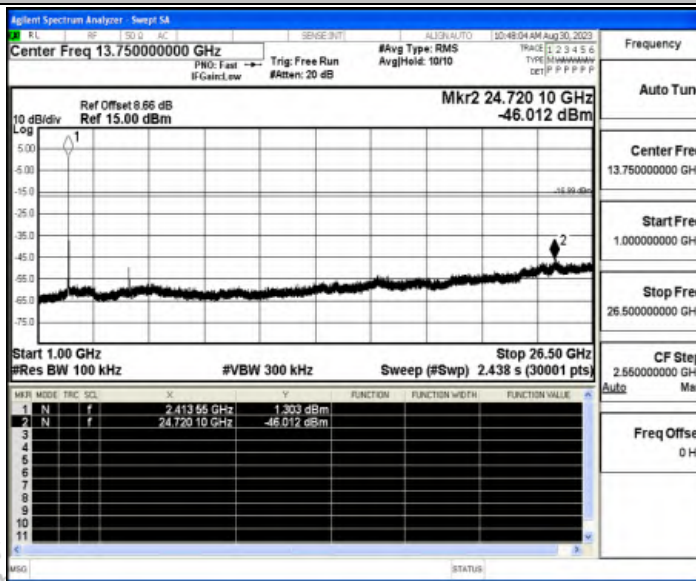


Test Graphs

11B_Ant_2412_30~1000

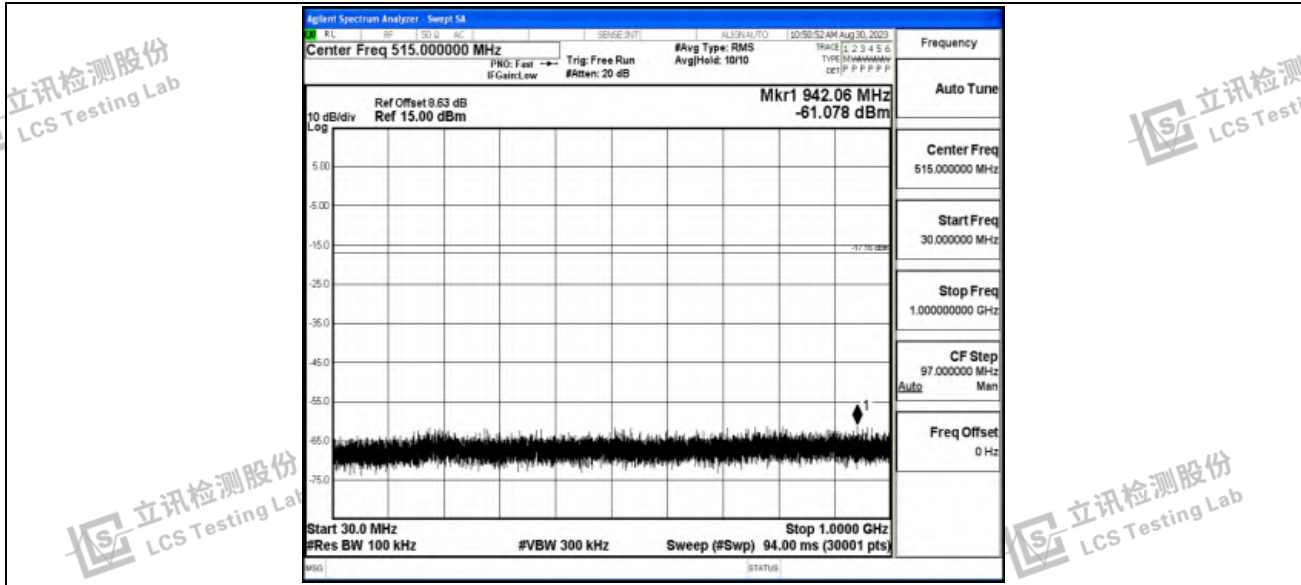


11B_Ant_2412_1000~26500

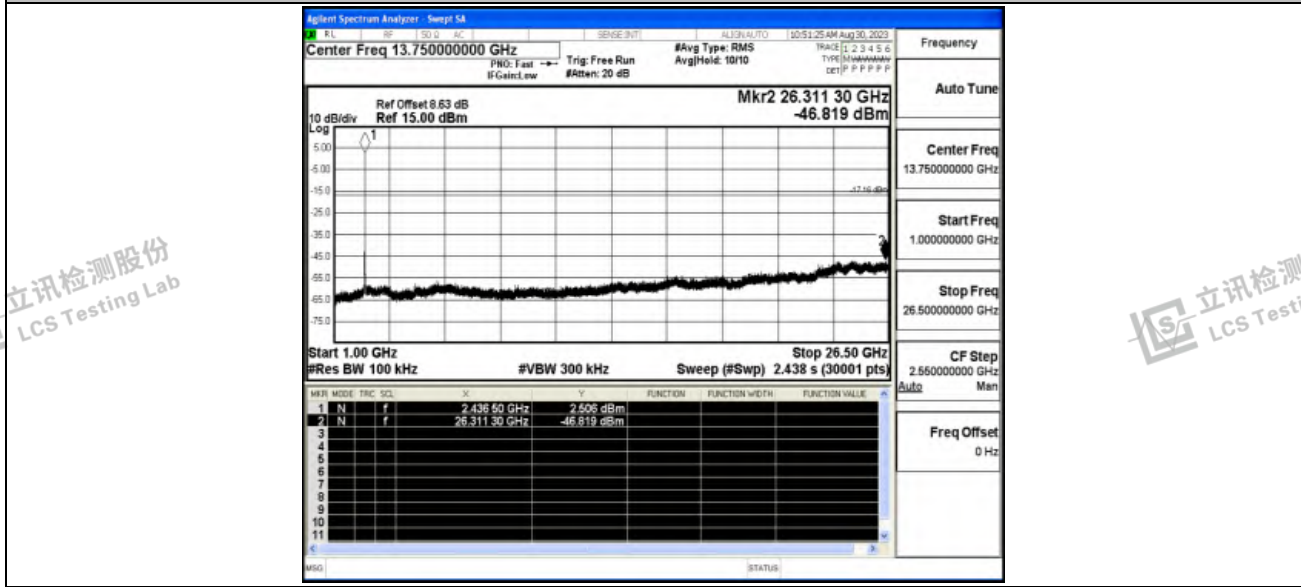


11B_Ant_2437_30~1000

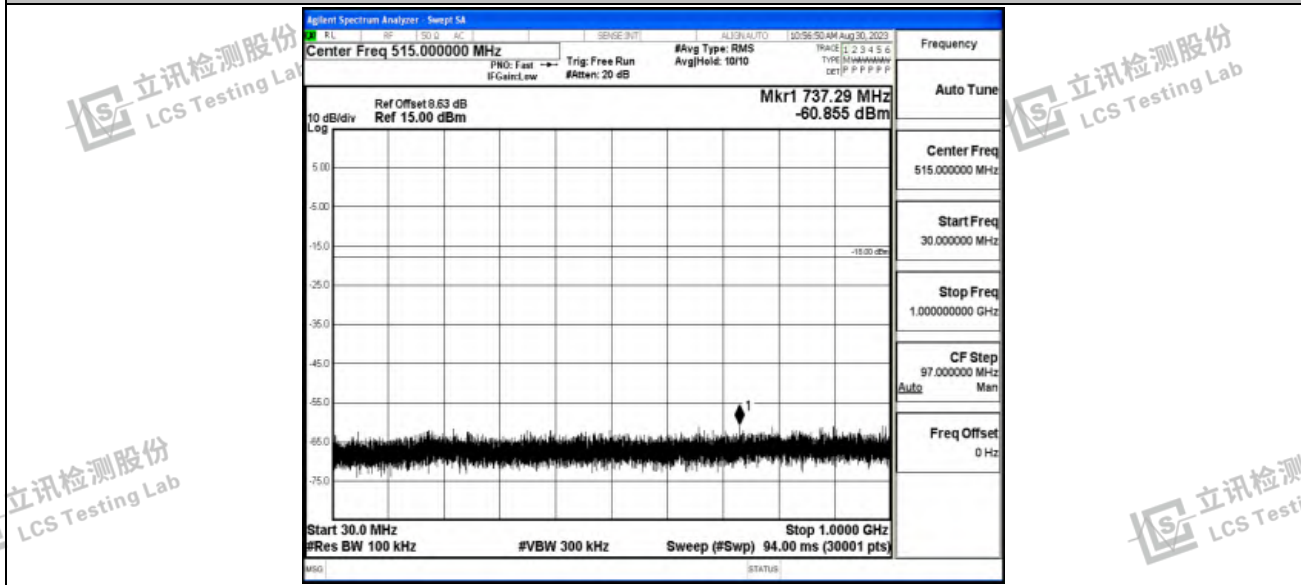




11B_Ant_2437_1000~26500

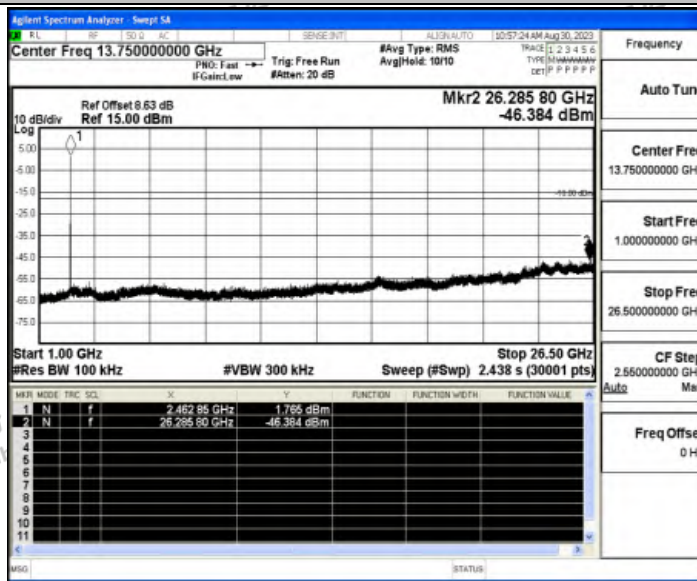


11B_Ant_2462_30~1000

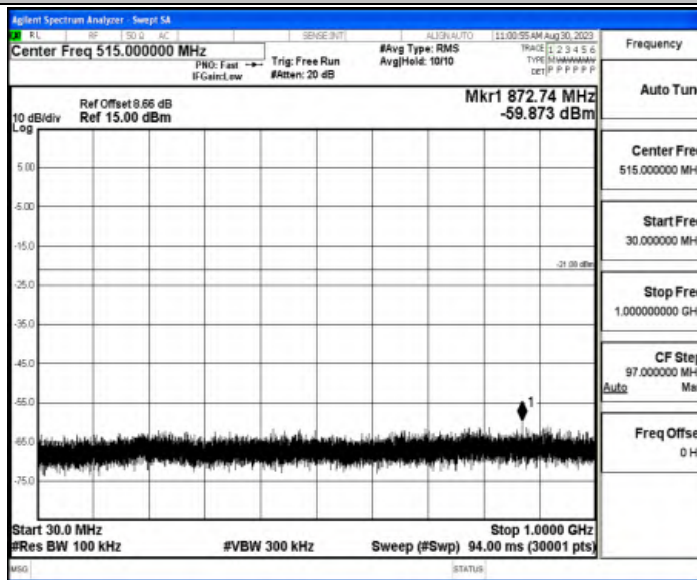




11B_Ant_2462_1000~26500

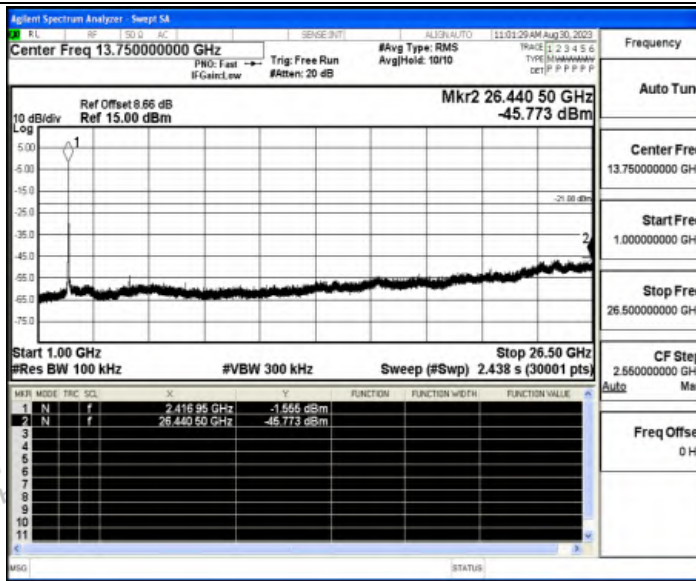


11G_Ant_2412_30~1000

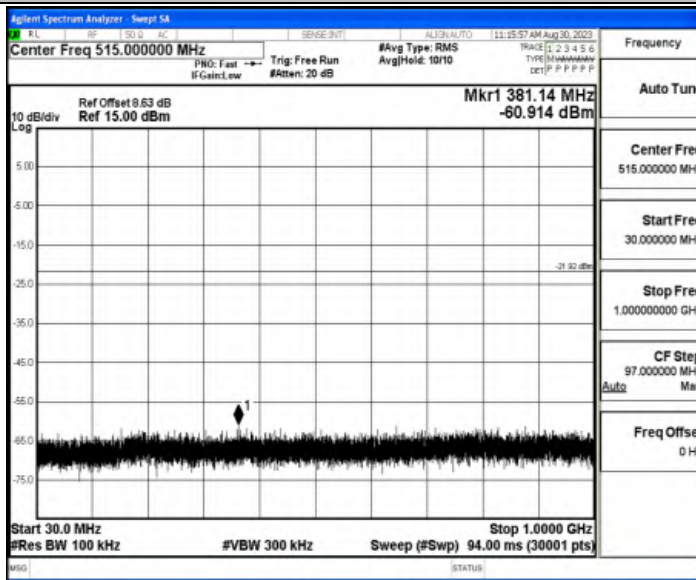


11G_Ant_2412_1000~26500

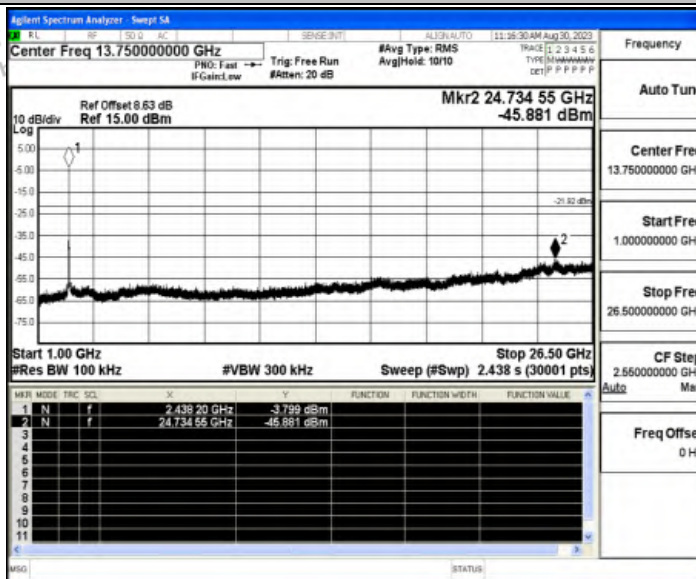




11G_Ant_2437_30~1000

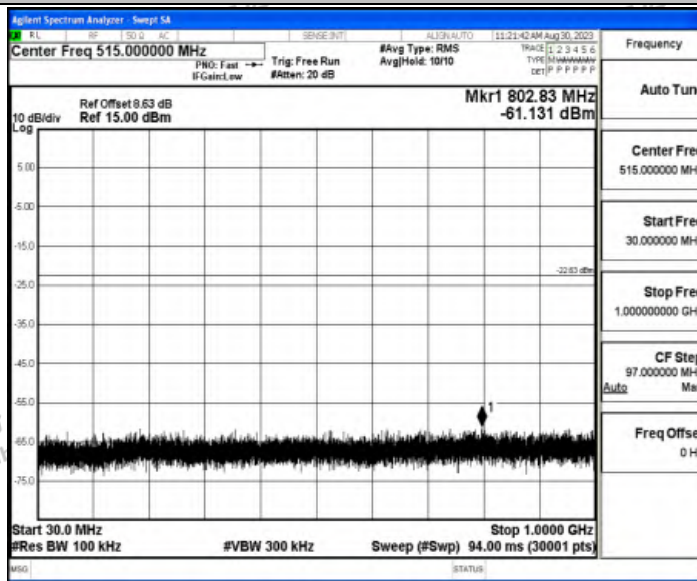


11G_Ant_2437_1000~26500

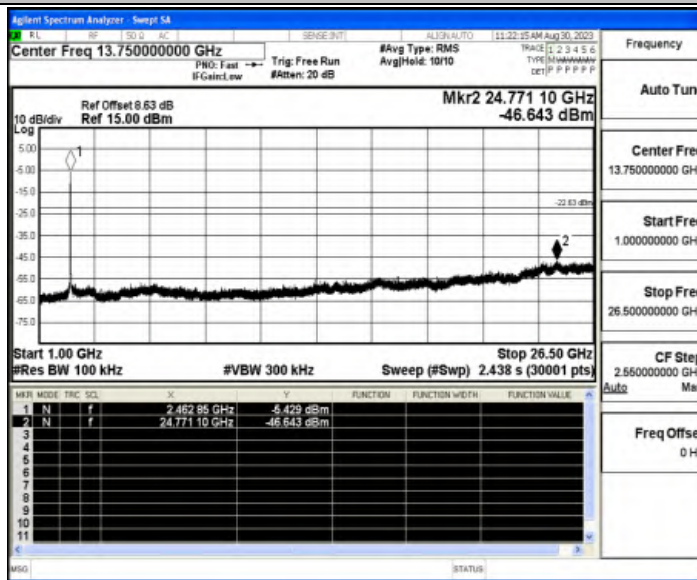




11G_Ant_2462_30~1000

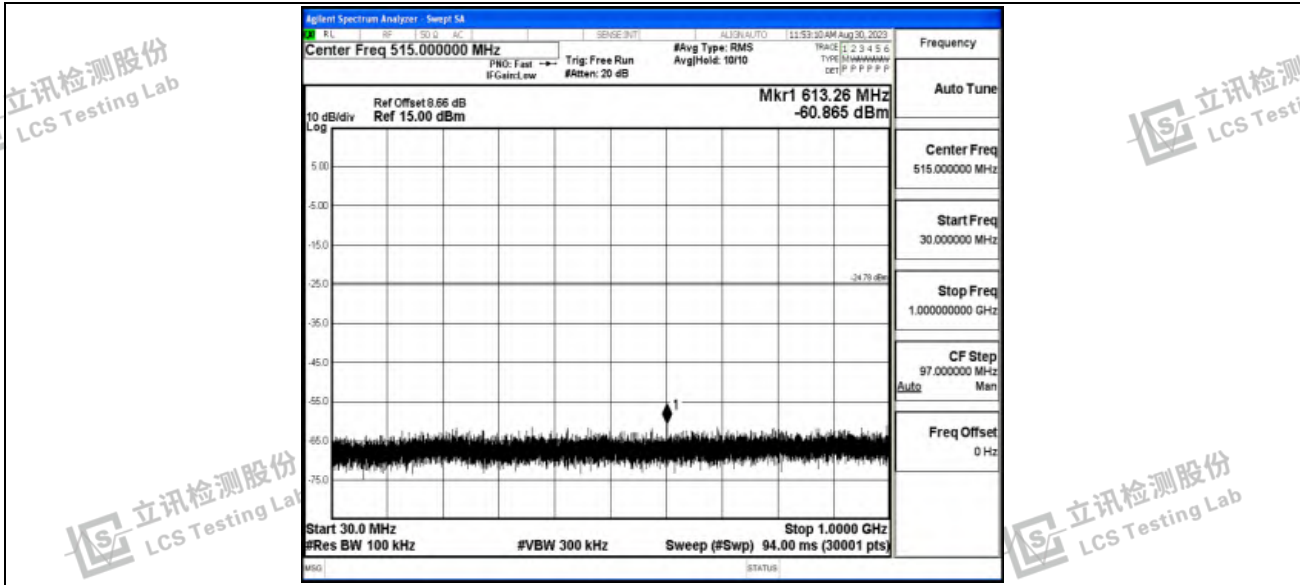


11G_Ant_2462_1000~26500

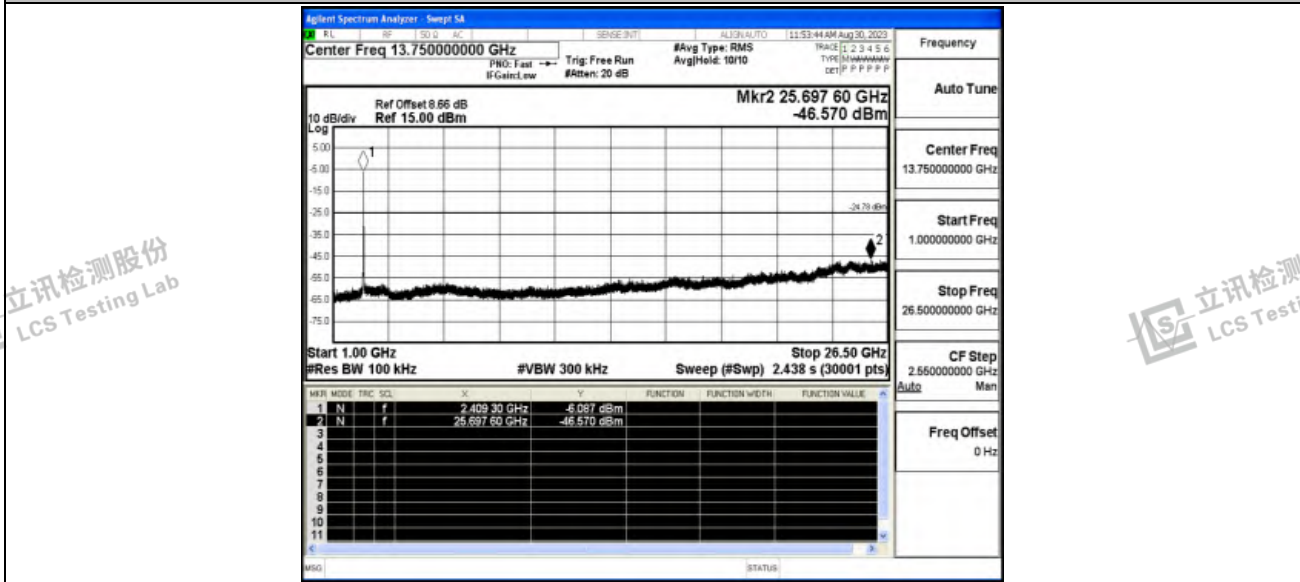


11N20SISO_Ant_2412_30~1000

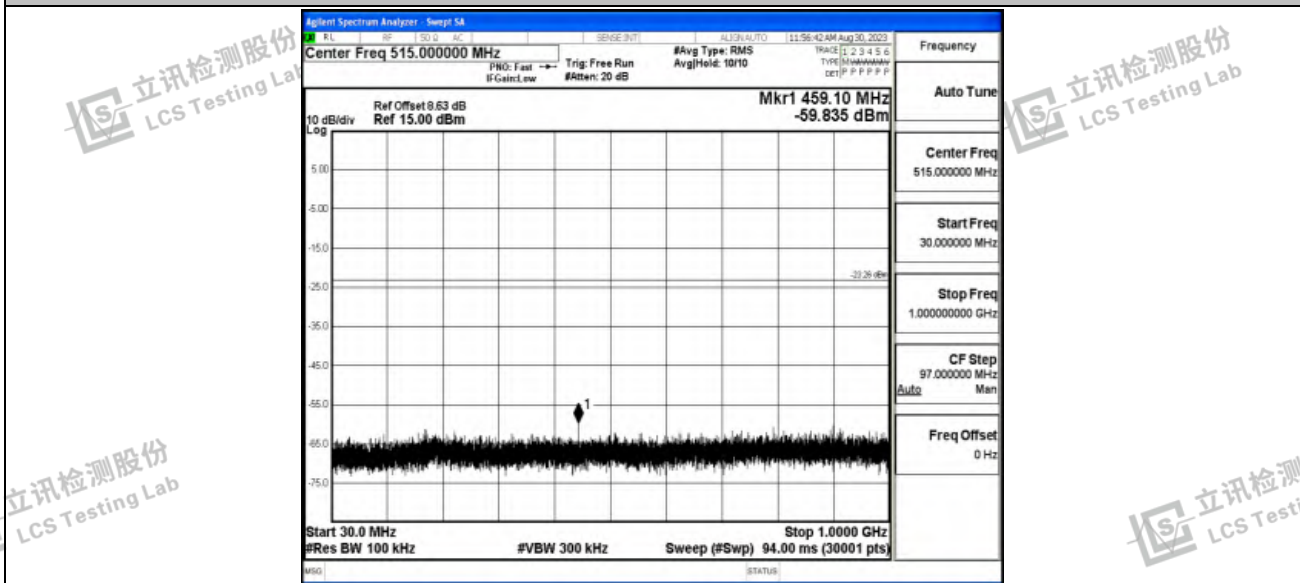




11N20SISO_Ant_2412_1000~26500

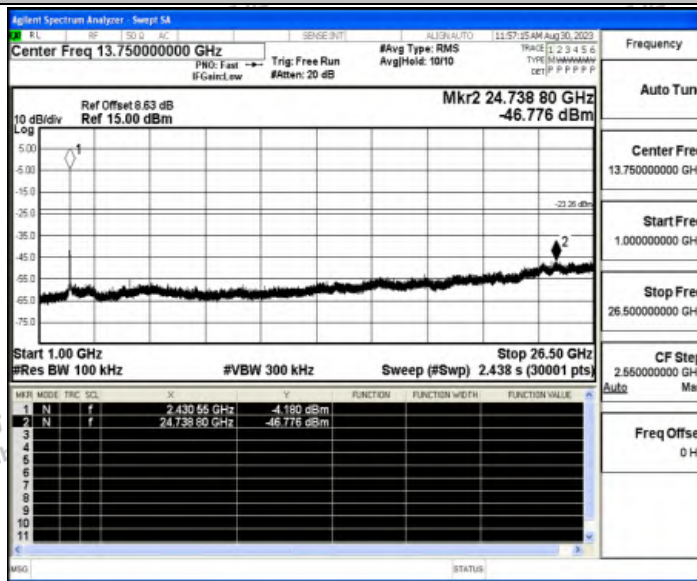


11N20SISO_Ant_2437_30~1000

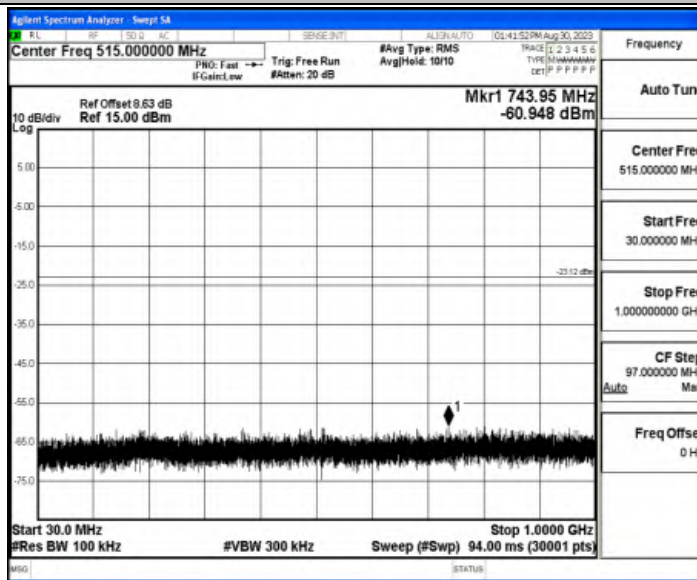




11N20SISO_Ant_2437_1000~26500

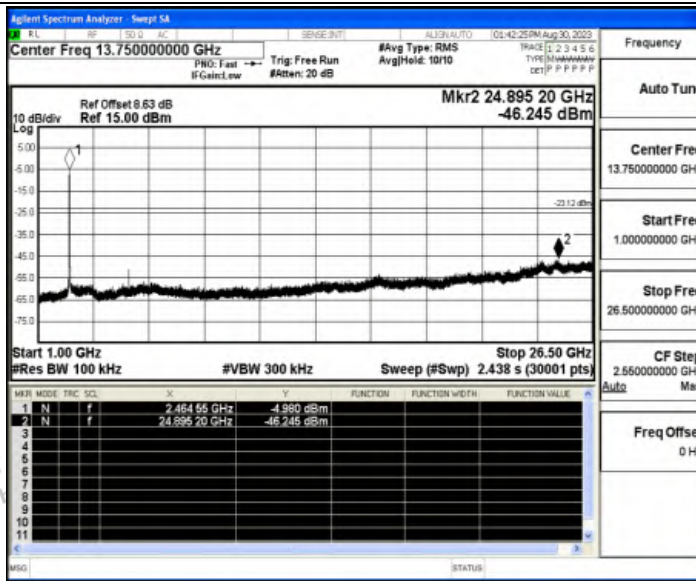


11N20SISO_Ant_2462_30~1000

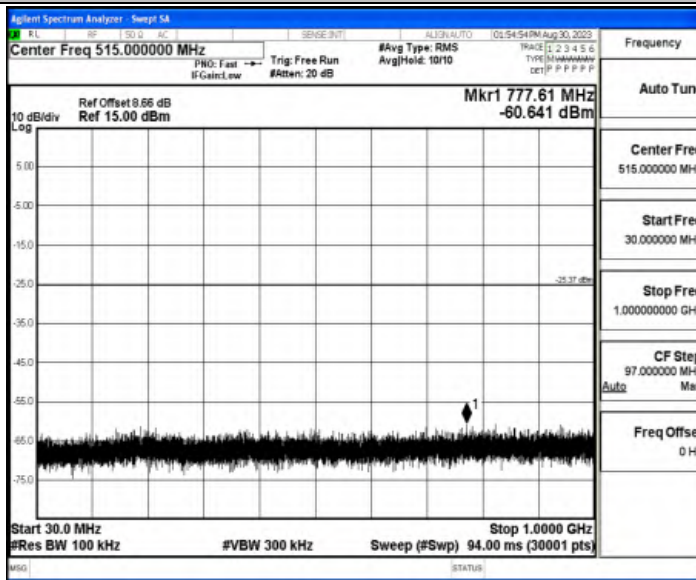


11N20SISO_Ant_2462_1000~26500

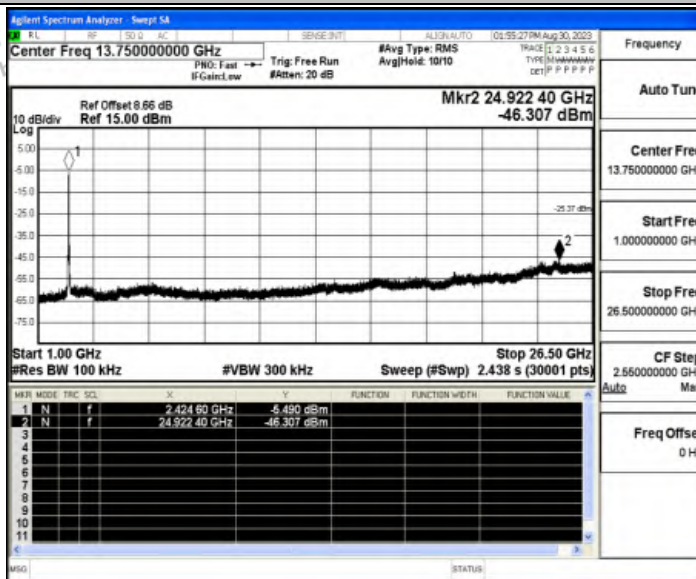




11N40SISO_Ant_2422_30~1000

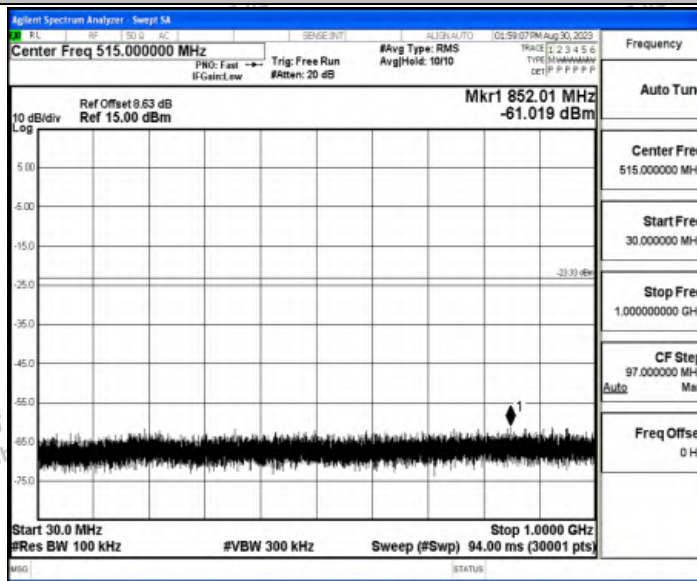


11N40SISO_Ant_2422_1000~26500

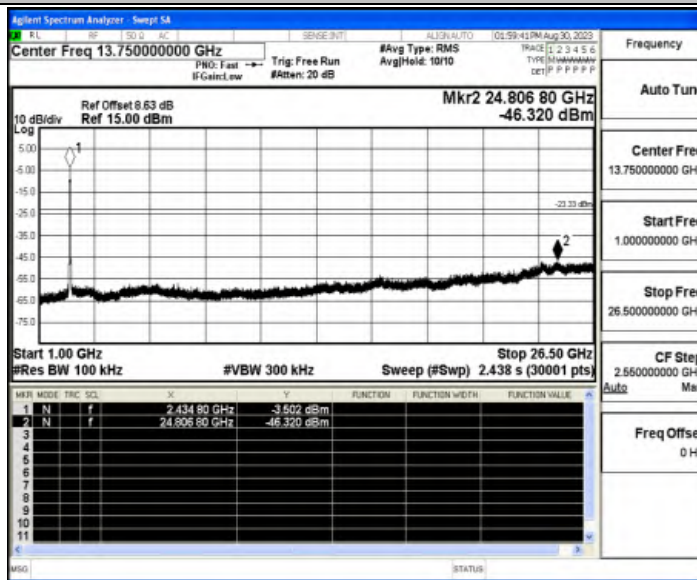




11N40SISO_Ant_2437_30~1000

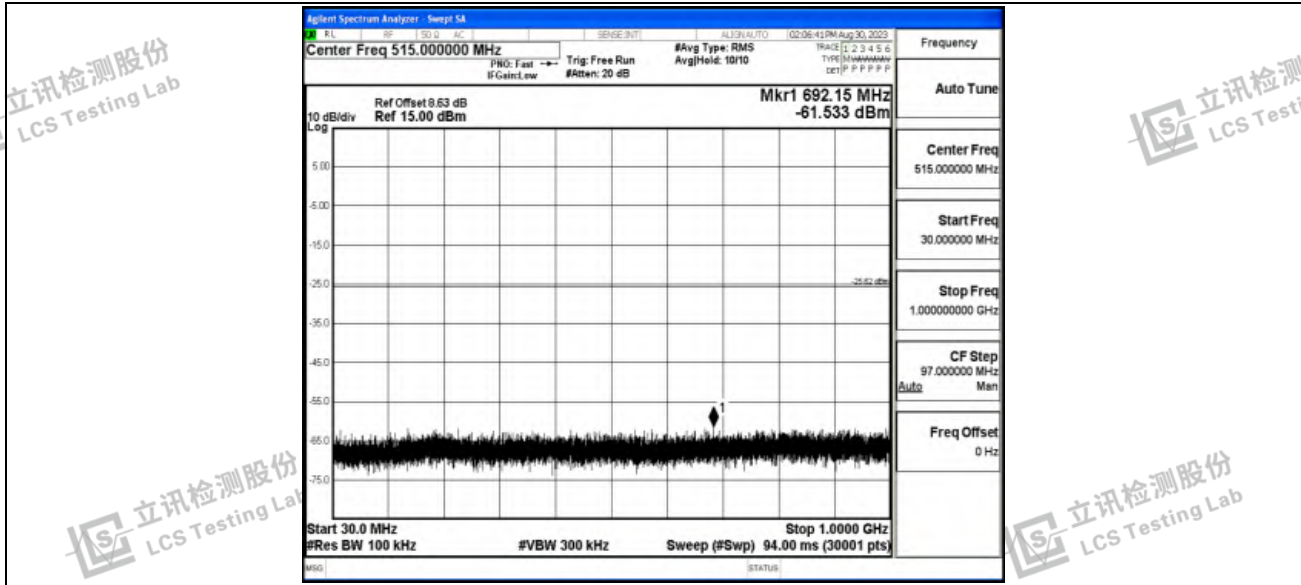


11N40SISO_Ant_2437_1000~26500

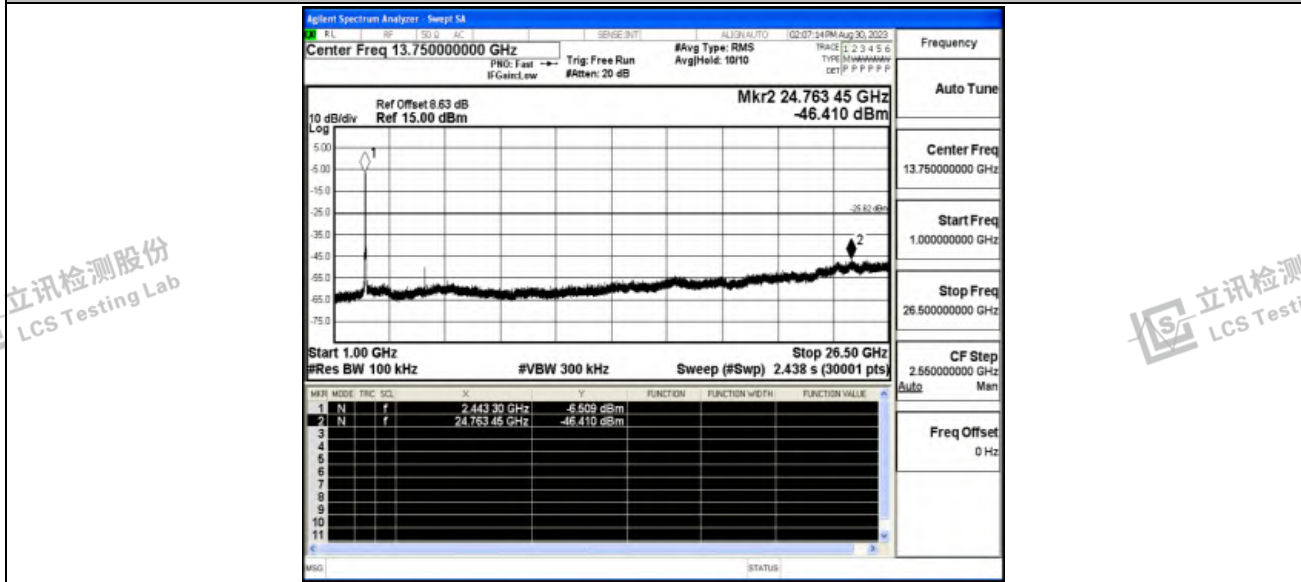


11N40SISO_Ant_2452_30~1000





11N40SISO_Ant_2452_1000~26500





A.6 Duty Cycle

Test Result

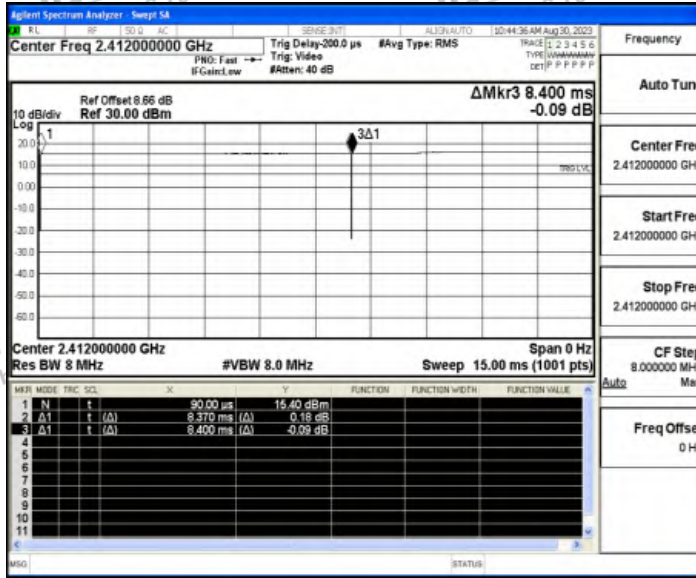
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor	Verdict
11B	Ant		8.37	8.40	99.64	0.02	---
			8.38	8.41	99.64	0.02	---
			20.00	20.00	100.00	0.00	---
11G	Ant		1.39	1.43	97.20	0.12	---
			1.39	1.43	97.20	0.12	---
			1.39	1.43	97.20	0.12	---
11N20SISO	Ant		1.30	1.34	97.01	0.13	---
			1.30	1.33	97.74	0.10	---
			1.30	1.34	97.01	0.13	---
11N40SISO	Ant		0.65	0.68	95.59	0.20	---
			0.65	0.68	95.59	0.20	---
			0.65	0.68	95.59	0.20	---



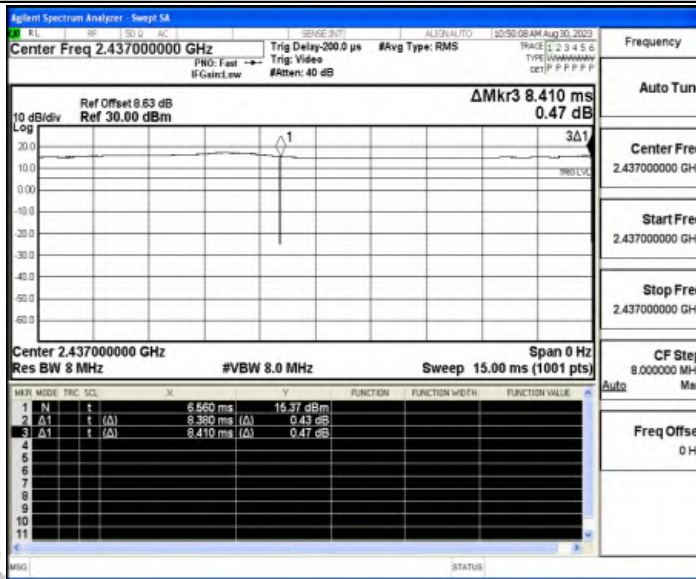


Test Graphs

11B_Ant_2412

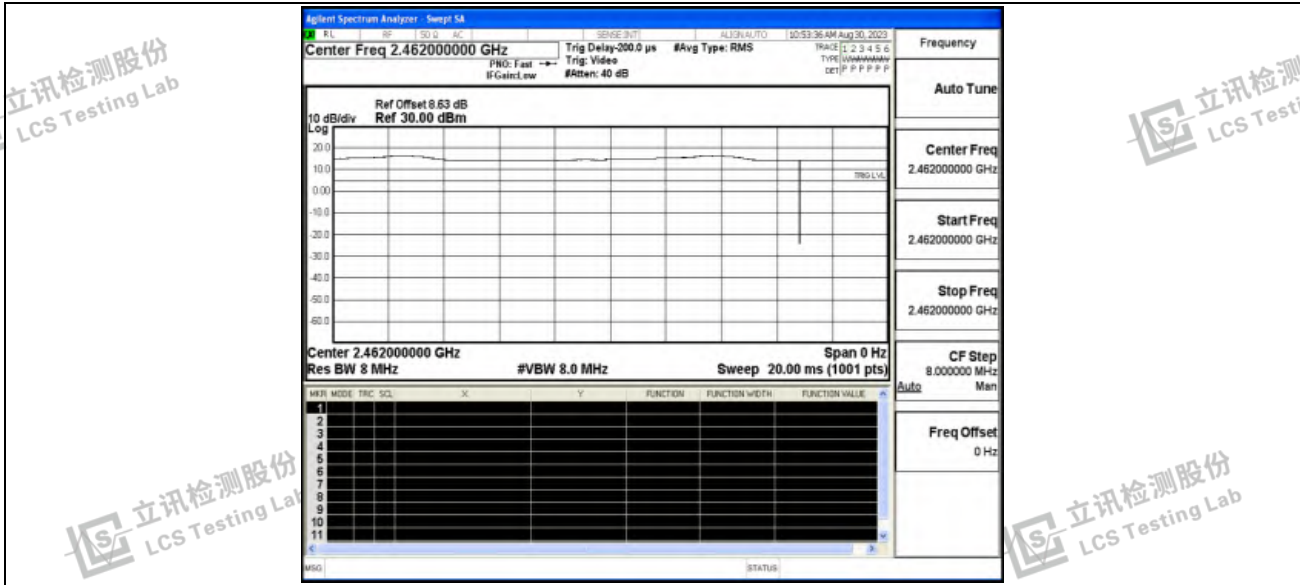


11B_Ant_2437

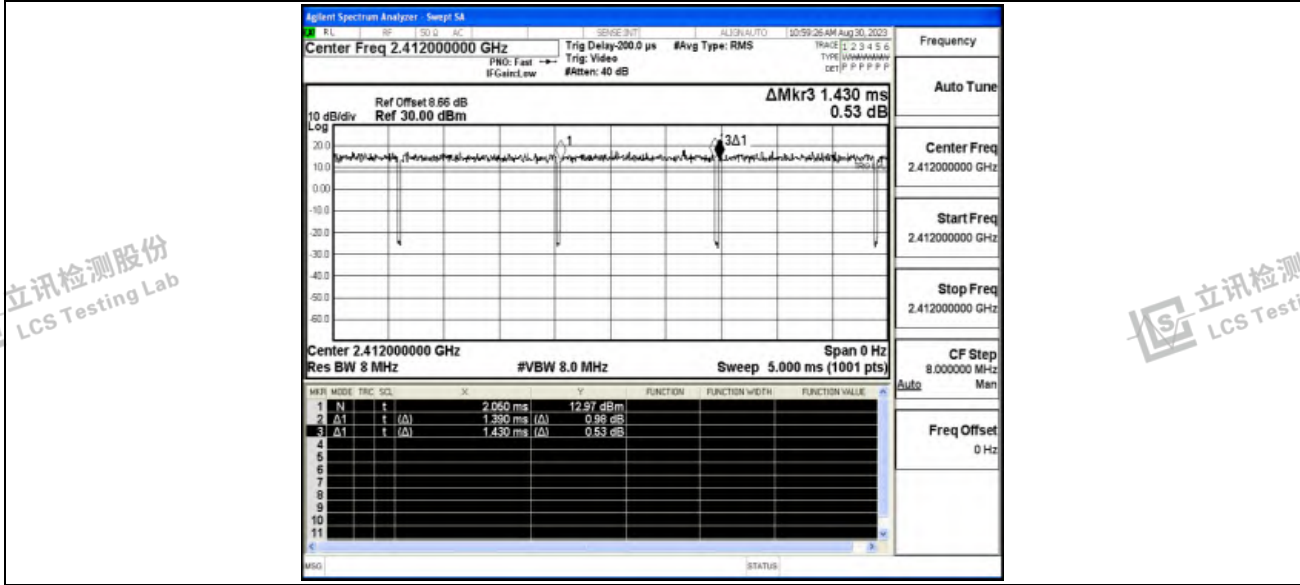


11B_Ant_2462

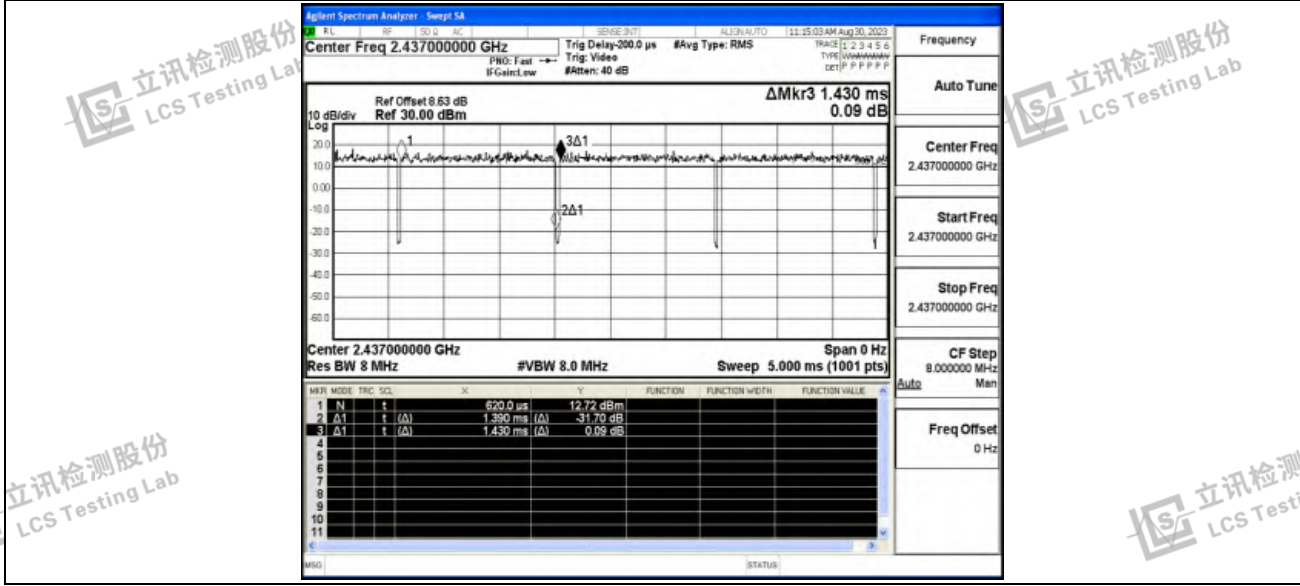




11G_Ant_2412

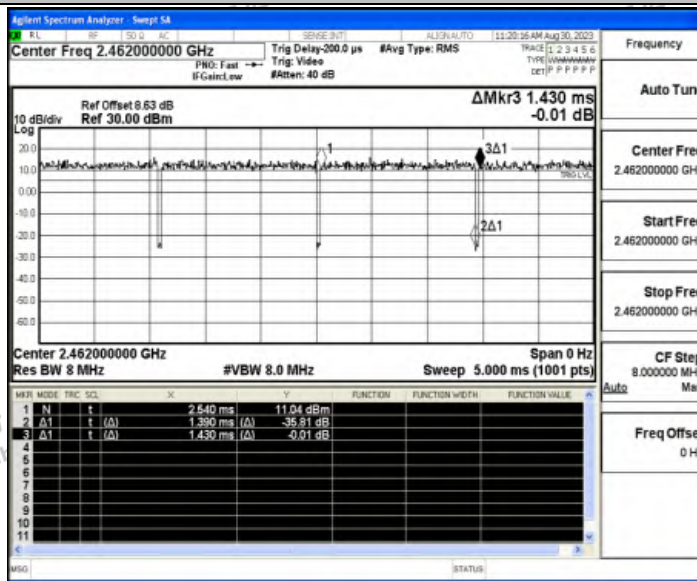


11G_Ant_2437

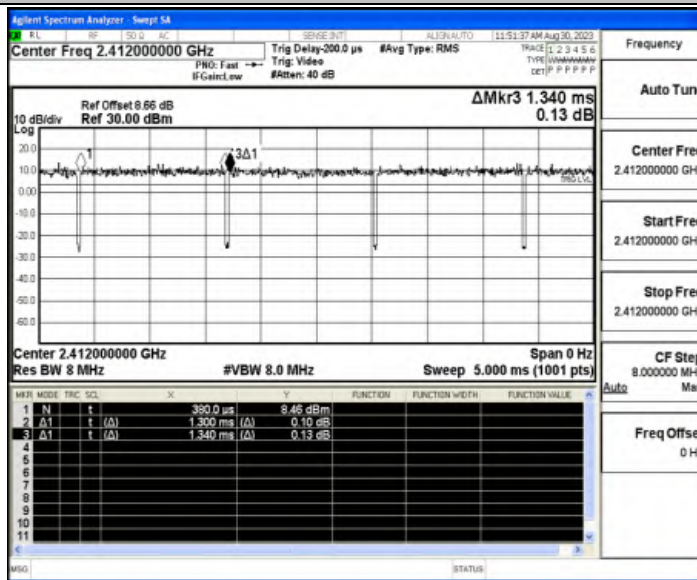




11G_Ant_2462

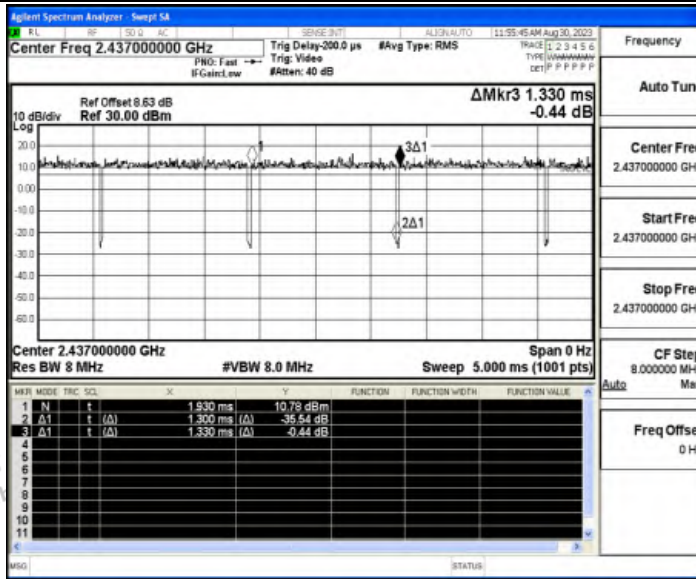


11N20SISO_Ant_2412

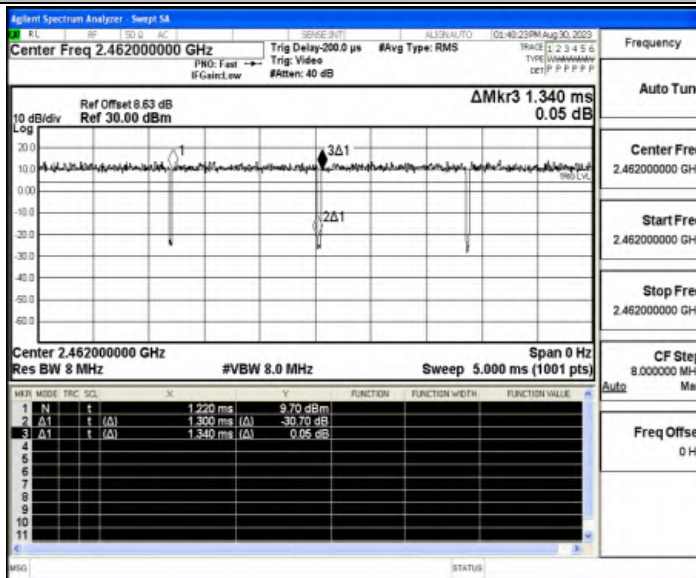


11N20SISO_Ant_2437

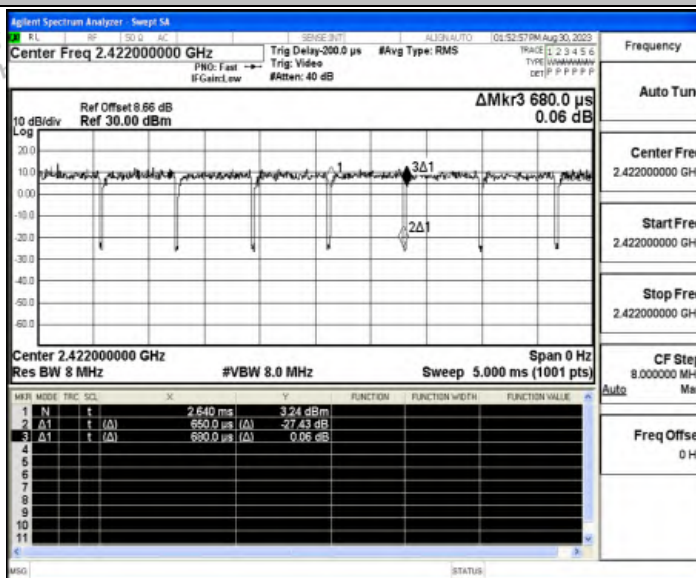




11N20SISO_Ant_2462

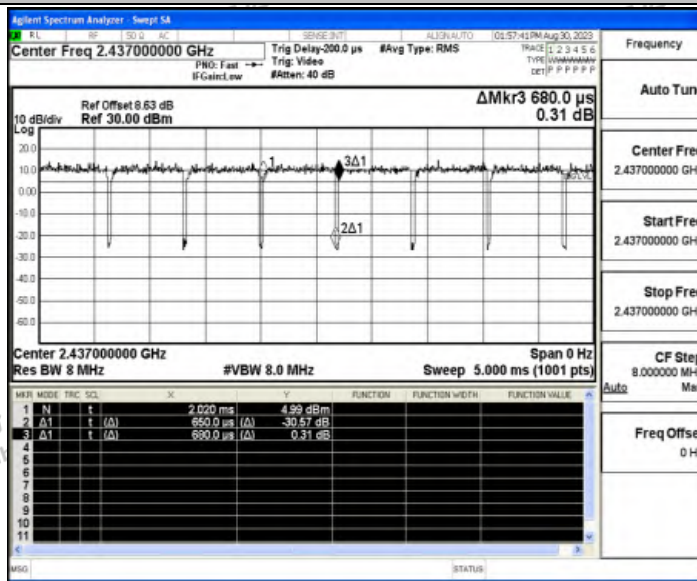


11N40SISO_Ant_2422

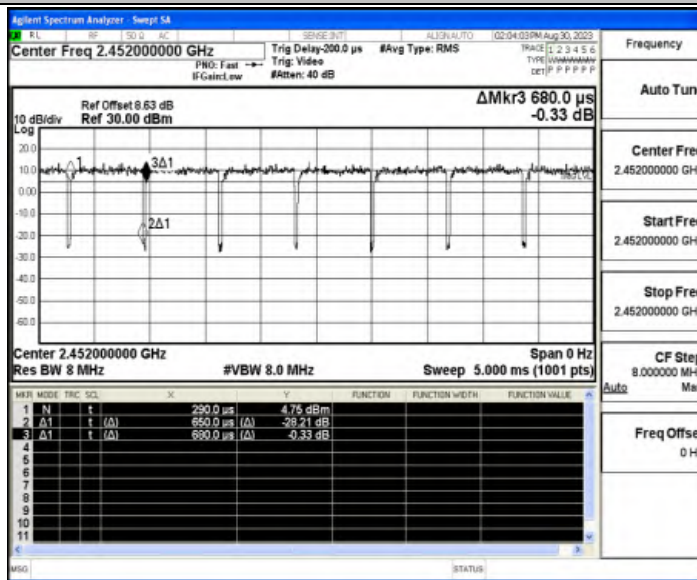




11N40SISO_Ant_2437



11N40SISO_Ant_2452





A.7 Emissions in Restricted Bands

Test Result

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant	2310	-49.06	3.53	49.70	Peak	74	Pass
NVNT	b	2412	Ant	2310	-57.18	3.53	41.58	Average	54	Pass
NVNT	b	2412	Ant	2370.021	-46.43	3.53	52.33	Peak	74	Pass
NVNT	b	2412	Ant	2389.911	-56.63	3.53	42.13	Average	54	Pass
NVNT	b	2412	Ant	2390	-49.31	3.53	49.45	Peak	74	Pass
NVNT	b	2412	Ant	2390	-56.66	3.53	42.10	Average	54	Pass
NVNT	b	2462	Ant	2483.5	-48.8	3.53	49.96	Peak	74	Pass
NVNT	b	2462	Ant	2483.5	-56.51	3.53	42.25	Average	54	Pass
NVNT	b	2462	Ant	2498.463	-46.28	3.53	52.48	Peak	74	Pass
NVNT	b	2462	Ant	2498.251	-56.34	3.53	42.42	Average	54	Pass
NVNT	b	2462	Ant	2500	-49.28	3.53	49.48	Peak	74	Pass
NVNT	b	2462	Ant	2500	-56.38	3.53	42.38	Average	54	Pass
NVNT	g	2412	Ant	2310	-50.42	3.53	48.34	Peak	74	Pass
NVNT	g	2412	Ant	2310	-56.44	3.53	42.32	Average	54	Pass
NVNT	g	2412	Ant	2334.687	-45.81	3.53	52.95	Peak	74	Pass
NVNT	g	2412	Ant	2389.911	-53.99	3.53	44.77	Average	54	Pass
NVNT	g	2412	Ant	2390	-47.44	3.53	51.32	Peak	74	Pass
NVNT	g	2412	Ant	2390	-54.02	3.53	44.74	Average	54	Pass
NVNT	g	2462	Ant	2483.5	-46.15	3.53	52.61	Peak	74	Pass
NVNT	g	2462	Ant	2483.5	-54.53	3.53	44.23	Average	54	Pass
NVNT	g	2462	Ant	2484.047	-41.99	3.53	56.77	Peak	74	Pass
NVNT	g	2462	Ant	2483.729	-54.41	3.53	44.35	Average	54	Pass
NVNT	g	2462	Ant	2500	-49.35	3.53	49.41	Peak	74	Pass
NVNT	g	2462	Ant	2500	-55.26	3.53	43.50	Average	54	Pass
NVNT	n20	2412	Ant	2310	-49.05	3.53	49.71	Peak	74	Pass
NVNT	n20	2412	Ant	2310	-56.39	3.53	42.37	Average	54	Pass
NVNT	n20	2412	Ant	2389.092	-43.97	3.53	54.79	Peak	74	Pass
NVNT	n20	2412	Ant	2389.794	-53.07	3.53	45.69	Average	54	Pass
NVNT	n20	2412	Ant	2390	-41.49	3.53	57.27	Peak	74	Pass
NVNT	n20	2412	Ant	2390	-53.05	3.53	45.71	Average	54	Pass
NVNT	n20	2462	Ant	2483.5	-44.12	3.53	54.64	Peak	74	Pass
NVNT	n20	2462	Ant	2483.5	-54.08	3.53	44.68	Average	54	Pass
NVNT	n20	2462	Ant	2484.577	-42.22	3.53	56.54	Peak	74	Pass
NVNT	n20	2462	Ant	2483.623	-54.06	3.53	44.70	Average	54	Pass
NVNT	n20	2462	Ant	2500	-49.05	3.53	49.71	Peak	74	Pass
NVNT	n20	2462	Ant	2500	-55.26	3.53	43.50	Average	54	Pass
NVNT	n40	2422	Ant	2310	-49.24	3.53	49.52	Peak	74	Pass
NVNT	n40	2422	Ant	2310	-56.34	3.53	42.42	Average	54	Pass
NVNT	n40	2422	Ant	2388.526	-35.64	3.53	63.12	Peak	74	Pass



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 Scan code to check authenticity



NVNT	n40	2422	Ant	2389.946	-50.35	3.53	48.41	Average	54	Pass
NVNT	n40	2422	Ant	2390	-43.69	3.53	55.07	Peak	74	Pass
NVNT	n40	2422	Ant	2390	-50.35	3.53	48.41	Average	54	Pass
NVNT	n40	2452	Ant	2483.5	-44.17	3.53	54.59	Peak	74	Pass
NVNT	n40	2452	Ant	2483.5	-49.64	3.53	49.12	Average	54	Pass
NVNT	n40	2452	Ant	2484.556	-33.88	3.53	64.88	Peak	74	Pass
NVNT	n40	2452	Ant	2484.4	-49.58	3.53	49.18	Average	54	Pass
NVNT	n40	2452	Ant	2500	-47.37	3.53	51.39	Peak	74	Pass
NVNT	n40	2452	Ant	2500	-53.88	3.53	44.88	Average	54	Pass



