



### Appendix C

## RF Test Data for 2.4GWIFI(Conducted Measurement)

Product Name: GNSS Receiver

Test Model: Q300

#### Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Eason Zhou
Supervised by:	Nick Peng





### C.1 DTS Bandwidth

#### Test Result

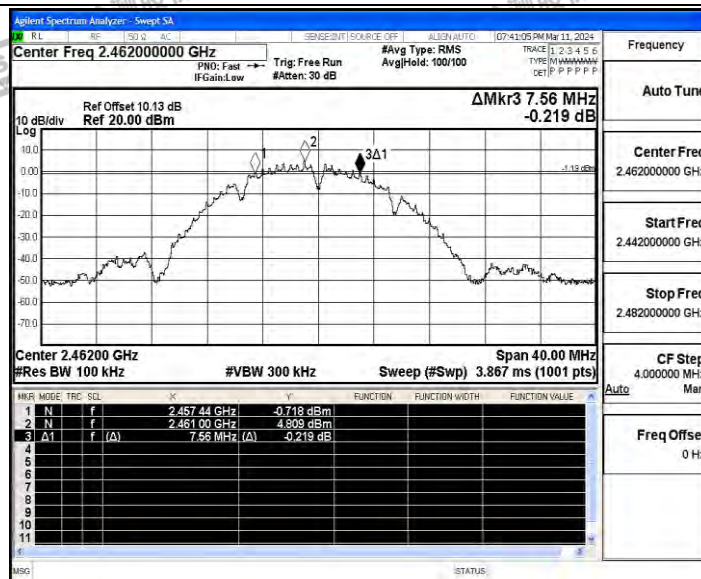
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant	2412	7.560	2407.480	2415.040	0.5	PASS
		2437	7.120	2433.920	2441.040	0.5	PASS
		2462	7.560	2457.440	2465.000	0.5	PASS
11G	Ant	2412	13.120	2405.120	2418.240	0.5	PASS
		2437	14.480	2430.680	2445.160	0.5	PASS
		2462	10.640	2453.880	2464.520	0.5	PASS
11N20SISO	Ant	2412	15.080	2404.440	2419.520	0.5	PASS
		2437	15.080	2430.680	2445.760	0.5	PASS
		2462	12.240	2453.480	2465.720	0.5	PASS



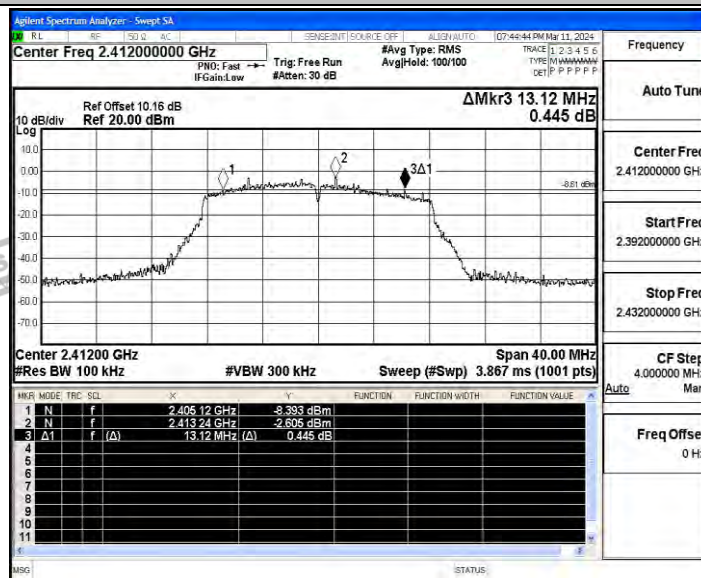


### Test Graphs



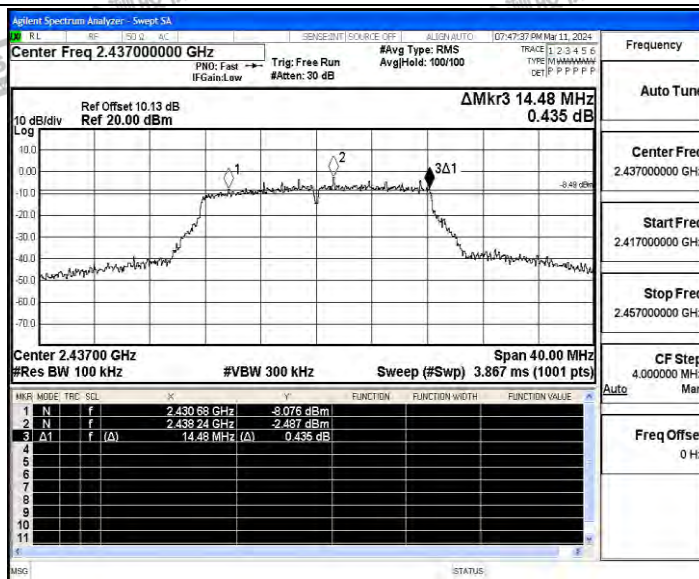


11G\_Ant\_2412

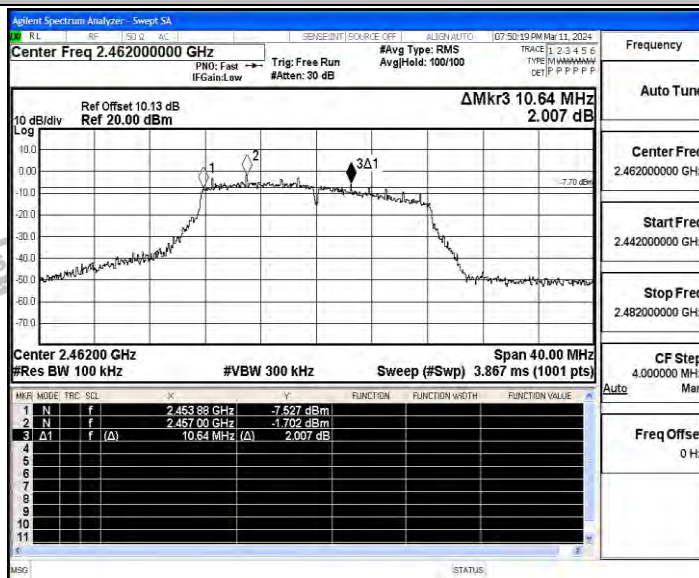


11G\_Ant\_2437



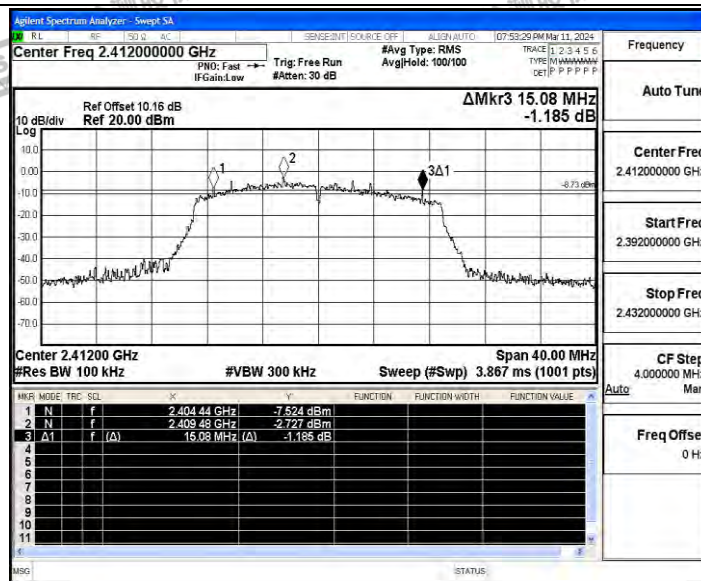


11G\_Ant\_2462

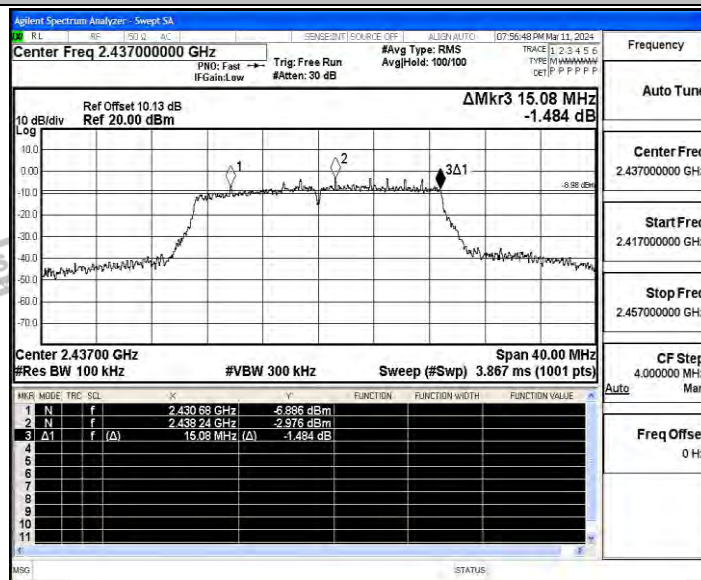


11N20SISO\_Ant\_2412



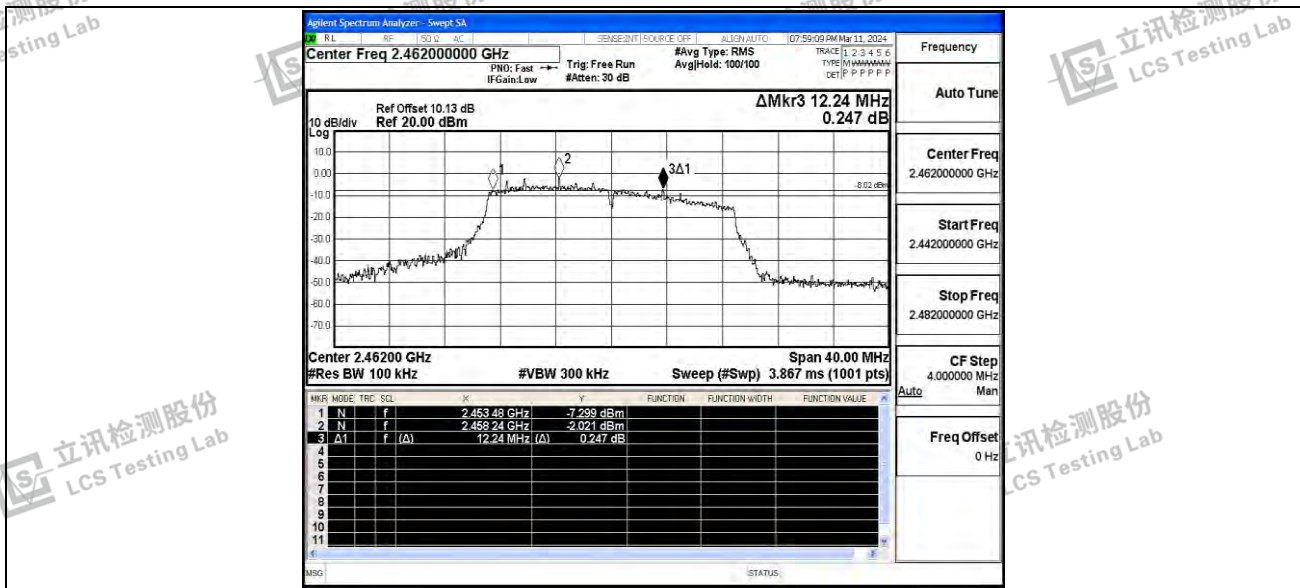


11N20SISO\_Ant\_2437



11N20SISO\_Ant\_2462







### C.2 Maximum conducted output power

#### Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant	2412	15.45	≤30.00	PASS
		2437	15.56	≤30.00	PASS
		2462	15.57	≤30.00	PASS
11G	Ant	2412	13.92	≤30.00	PASS
		2437	13.94	≤30.00	PASS
		2462	13.97	≤30.00	PASS
11N20SISO	Ant	2412	13.80	≤30.00	PASS
		2437	13.81	≤30.00	PASS
		2462	13.93	≤30.00	PASS







### C.3 Maximum power spectral density

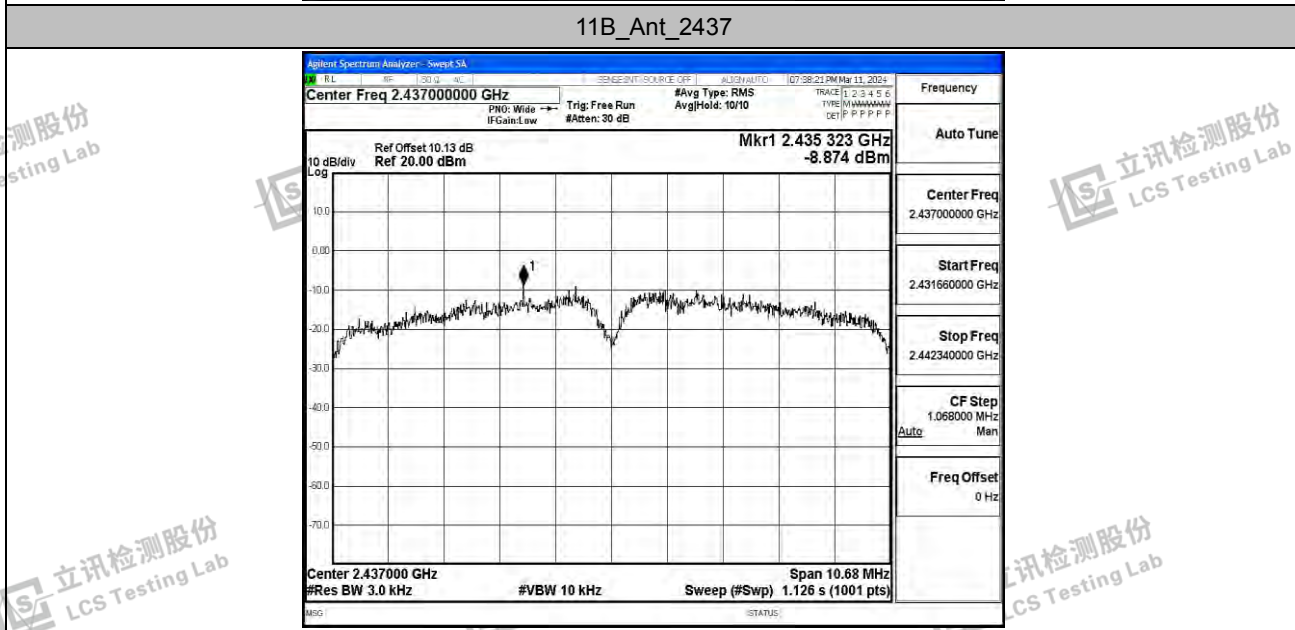
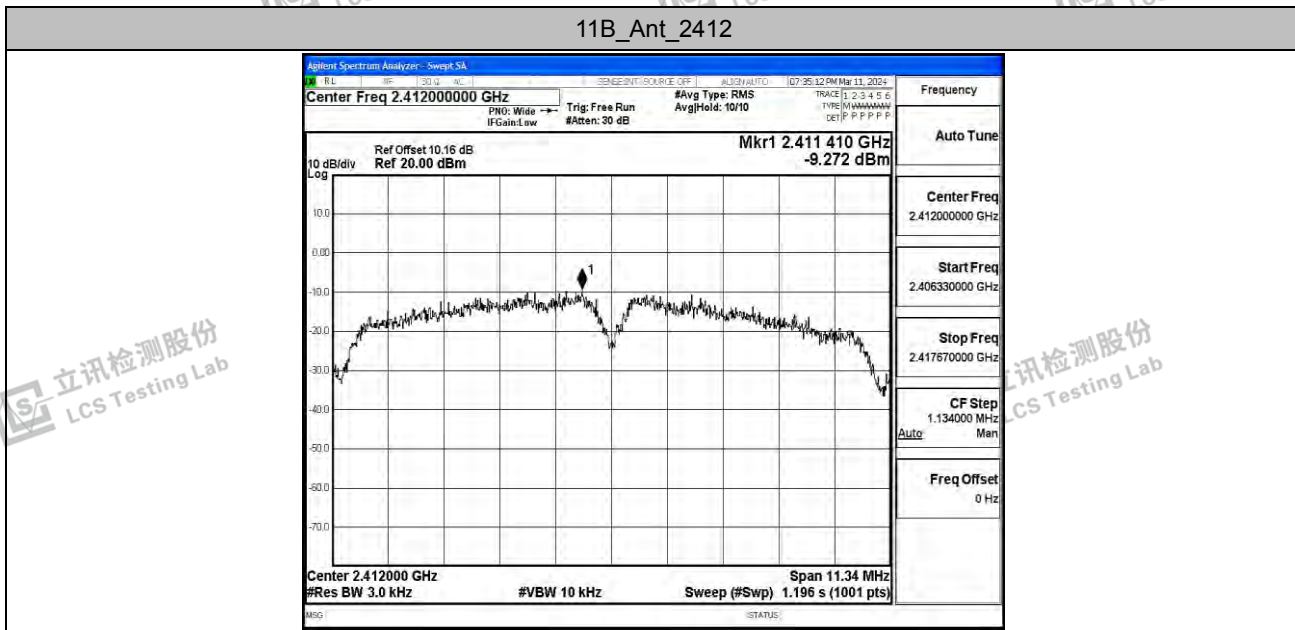
#### Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant	2412	-9.27	≤8.00	PASS
		2437	-8.87	≤8.00	PASS
		2462	-9.89	≤8.00	PASS
11G	Ant	2412	-15.63	≤8.00	PASS
		2437	-16.65	≤8.00	PASS
		2462	-14.56	≤8.00	PASS
11N20SISO	Ant	2412	-15.24	≤8.00	PASS
		2437	-15.83	≤8.00	PASS
		2462	-16.76	≤8.00	PASS



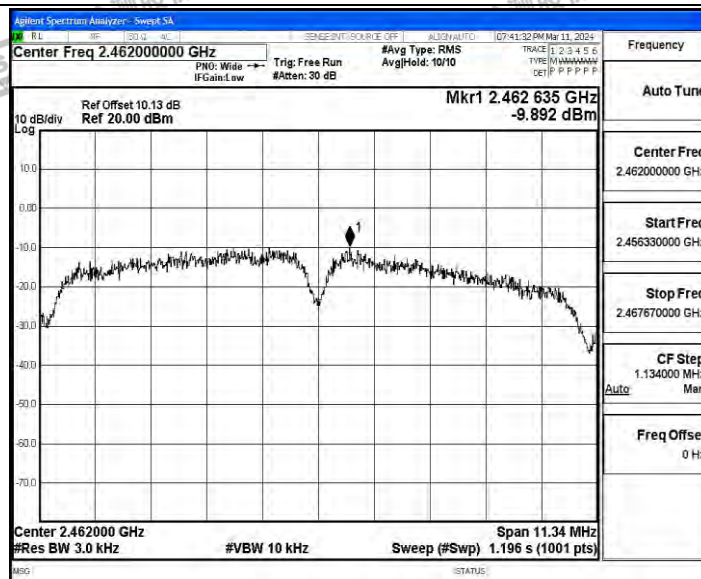


### Test Graphs

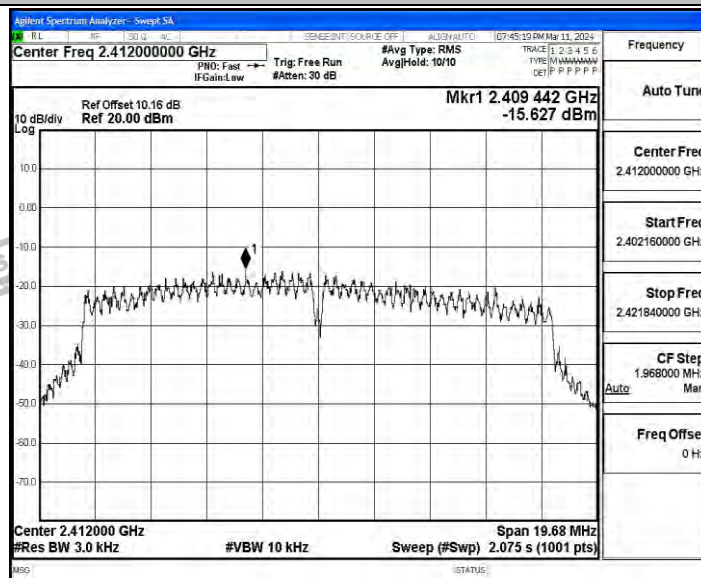


11B\_Ant\_2462



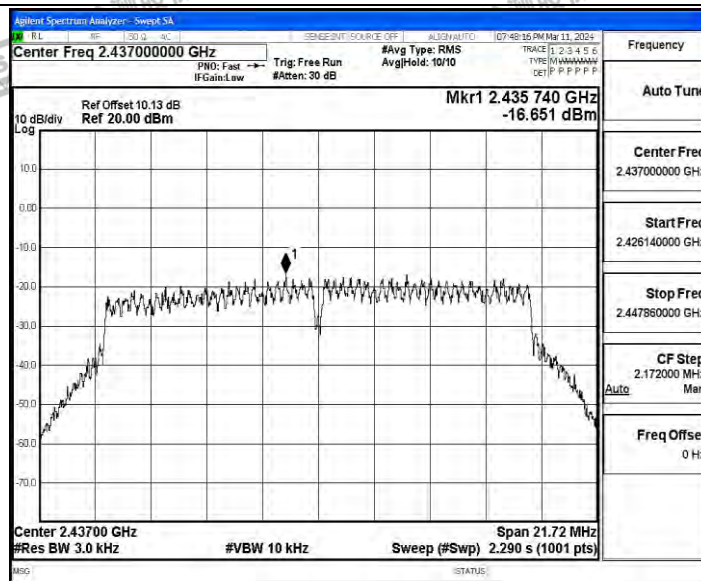


11G\_Ant\_2412

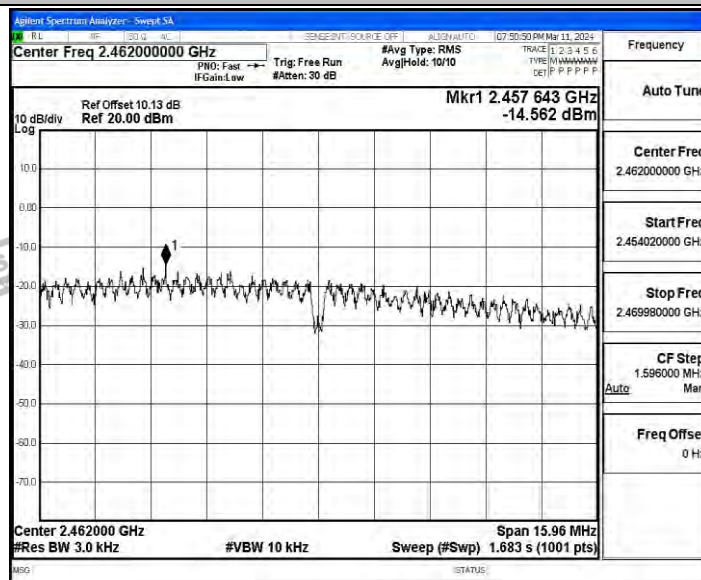


11G\_Ant\_2437



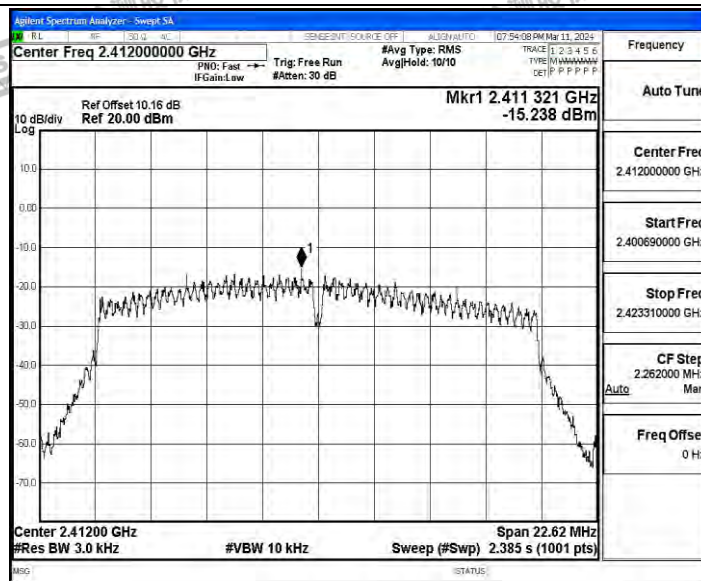


11G\_Ant\_2462

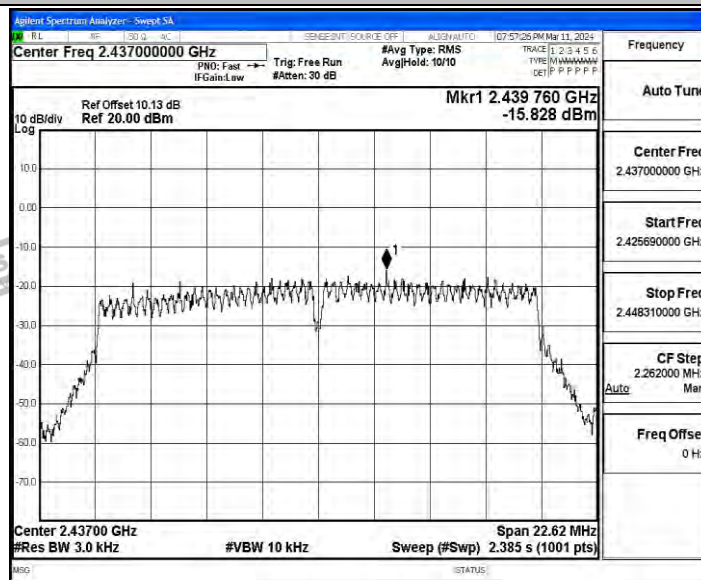


11N20SISO\_Ant\_2412



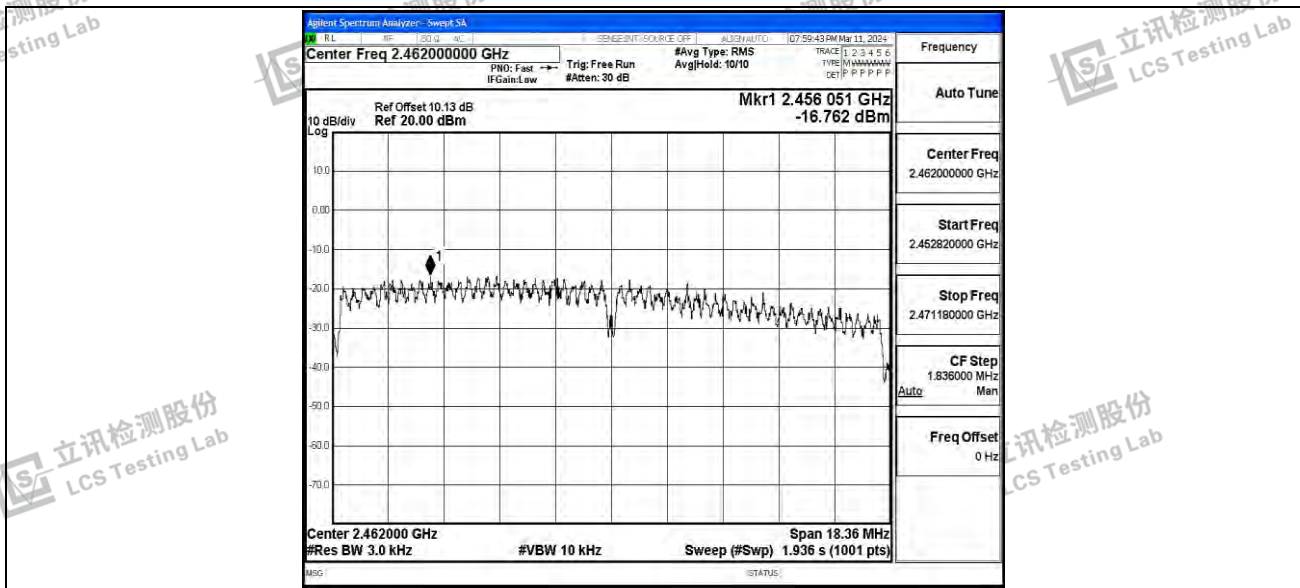


11N20SISO\_Ant\_2437



11N20SISO\_Ant\_2462







### C.4 Band edge measurements

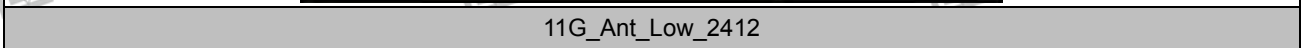
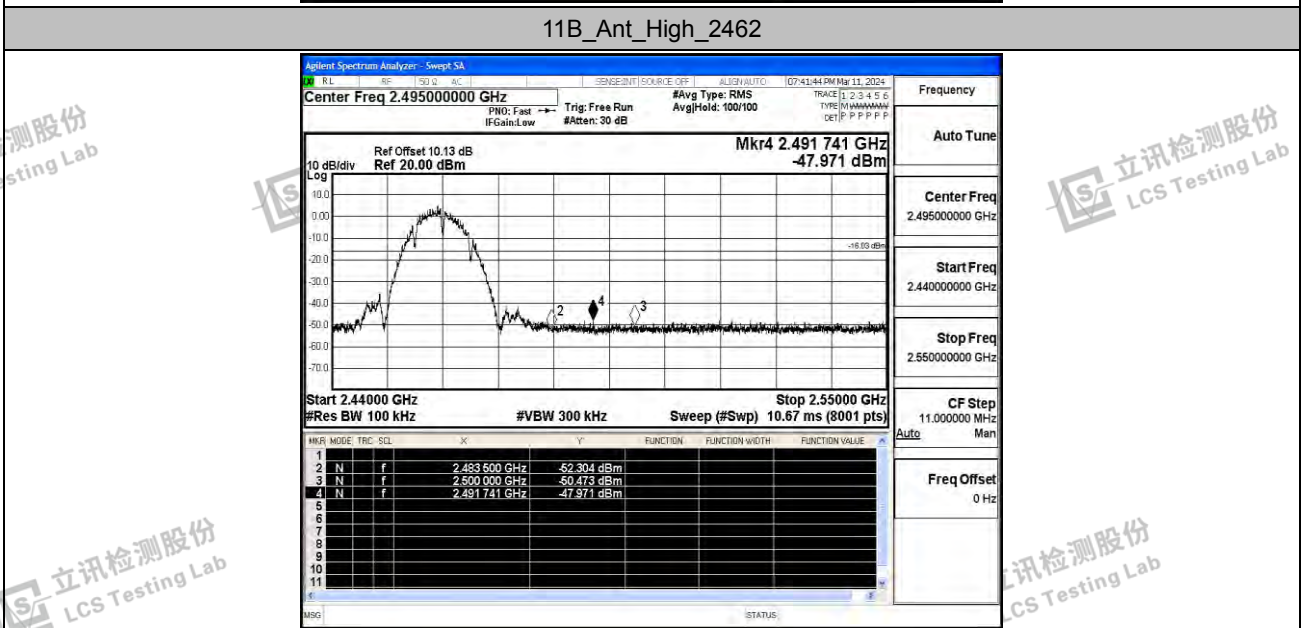
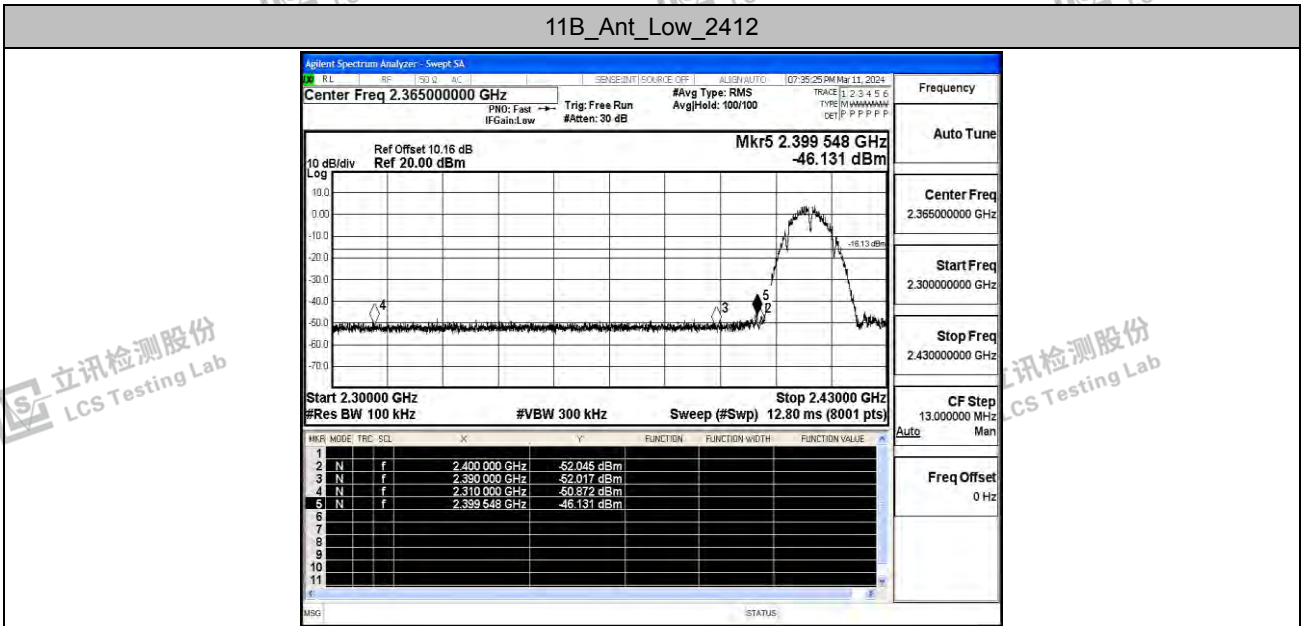
#### Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant	Low	2412	3.87	-46.13	≤-16.13	PASS
		High	2462	3.97	-47.97	≤-16.03	PASS
11G	Ant	Low	2412	-3.48	-42.29	≤-23.48	PASS
		High	2462	-1.90	-48.39	≤-21.9	PASS
11N20SISO	Ant	Low	2412	-2.39	-41.37	≤-22.39	PASS
		High	2462	-2.09	-46.7	≤-22.09	PASS

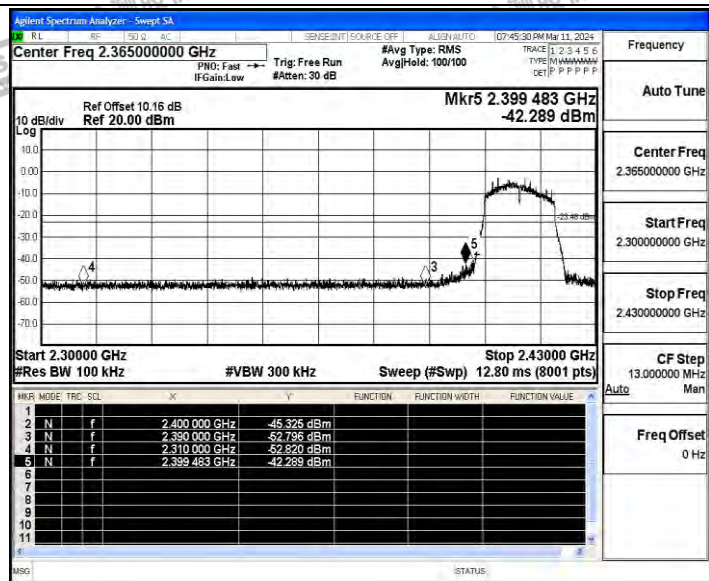




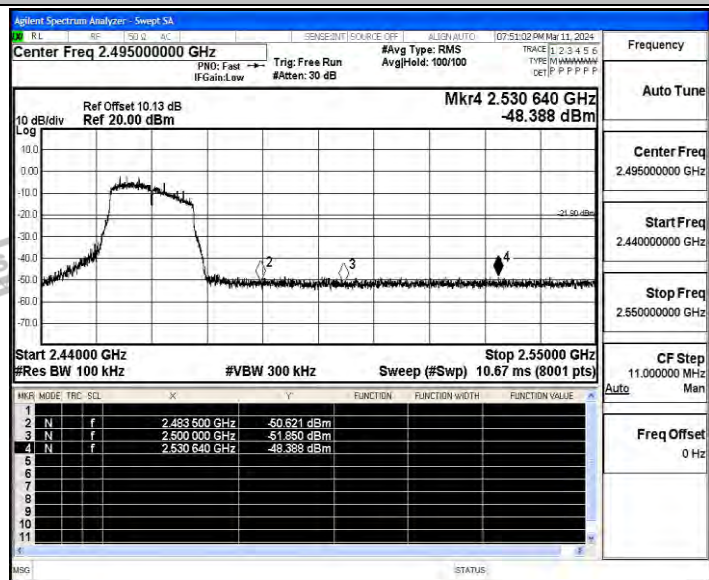
### Test Graphs





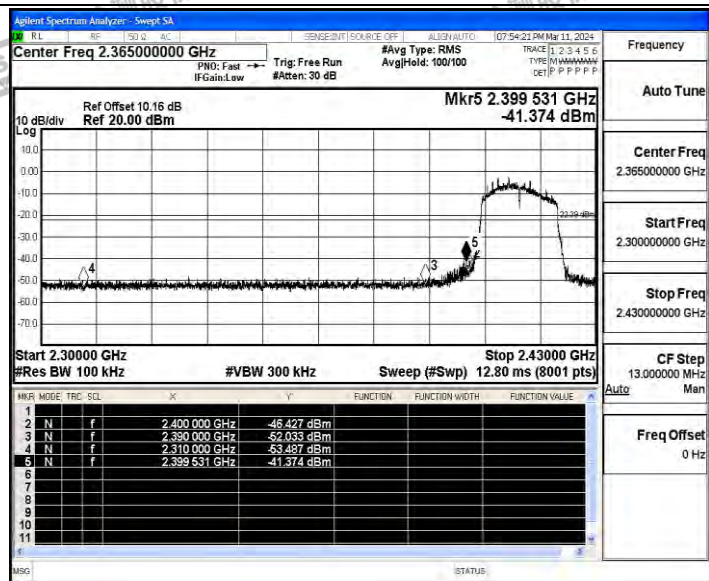


11G\_Ant\_High\_2462

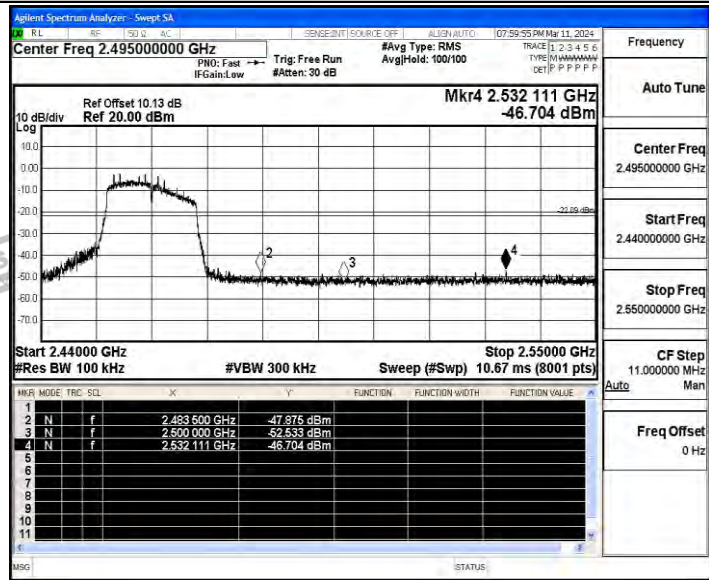


11N20SISO\_Ant\_Low\_2412





11N20SISO\_Ant\_High\_2462



**C.5 Conducted Spurious Emission****Test Result**

TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant	2412	30~1000	3.87	-59.81	≤-16.13	PASS
			1000~26500	3.87	-46.69	≤-16.13	PASS
		2437	30~1000	4.11	-60.02	≤-15.89	PASS
			1000~26500	4.11	-44.52	≤-15.89	PASS
		2462	30~1000	3.97	-59.75	≤-16.03	PASS
			1000~26500	3.97	-46.7	≤-16.03	PASS
11G	Ant	2412	30~1000	-3.48	-59.56	≤-23.48	PASS
			1000~26500	-3.48	-46.72	≤-23.48	PASS
		2437	30~1000	-2.92	-59.71	≤-22.92	PASS
			1000~26500	-2.92	-46.71	≤-22.92	PASS
		2462	30~1000	-1.90	-59.23	≤-21.9	PASS
			1000~26500	-1.90	-47.35	≤-21.9	PASS
11N20SISO	Ant	2412	30~1000	-2.39	-58.67	≤-22.39	PASS
			1000~26500	-2.39	-45.86	≤-22.39	PASS
		2437	30~1000	-2.78	-57.68	≤-22.78	PASS
			1000~26500	-2.78	-46.8	≤-22.78	PASS
		2462	30~1000	-2.09	-59.91	≤-22.09	PASS
			1000~26500	-2.09	-47.35	≤-22.09	PASS



Shenzhen LCS Compliance Testing Laboratory Ltd.

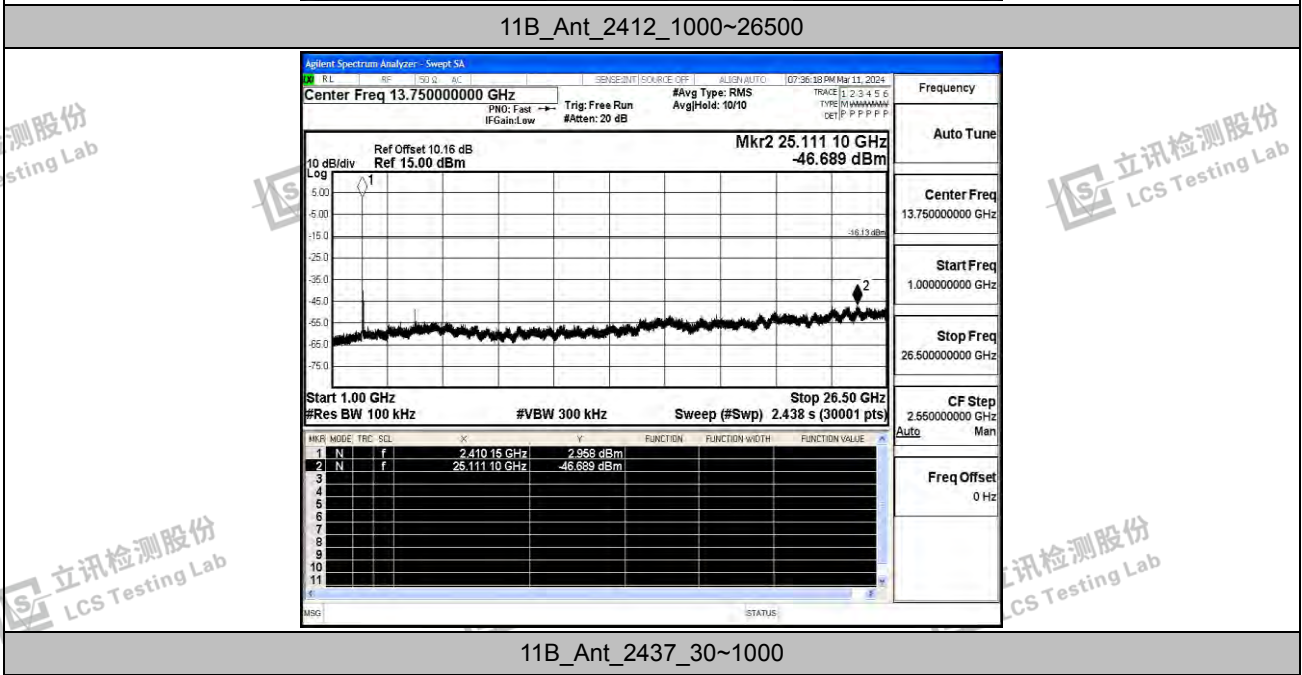
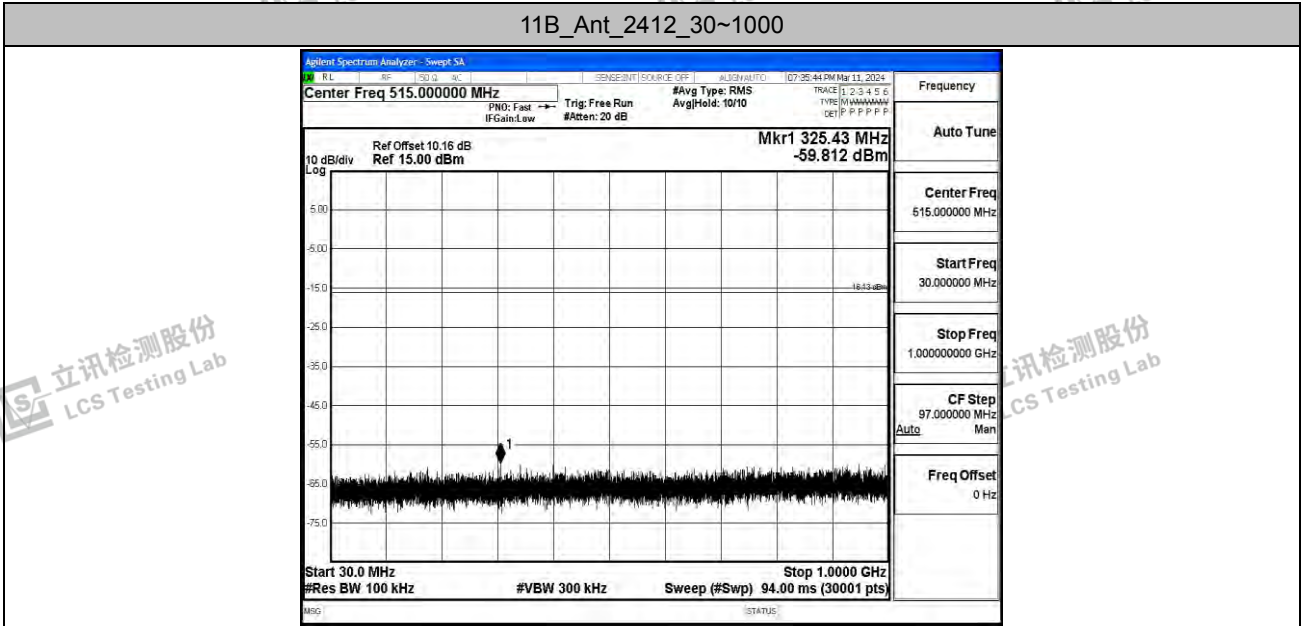
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

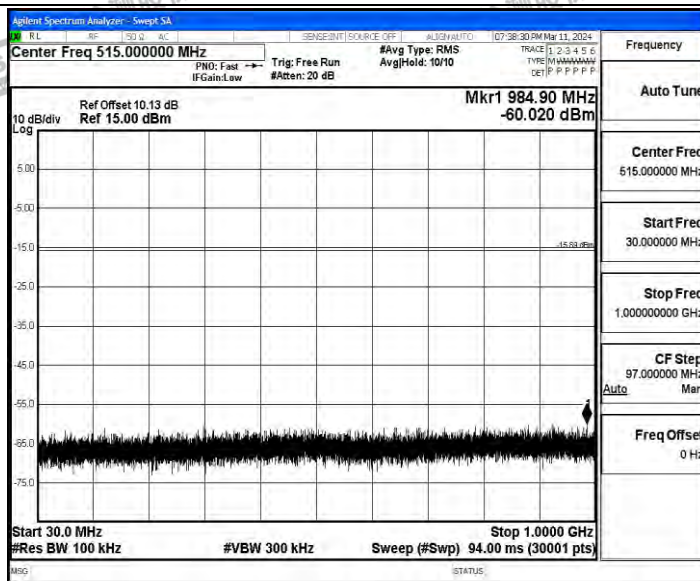


Test Graphs

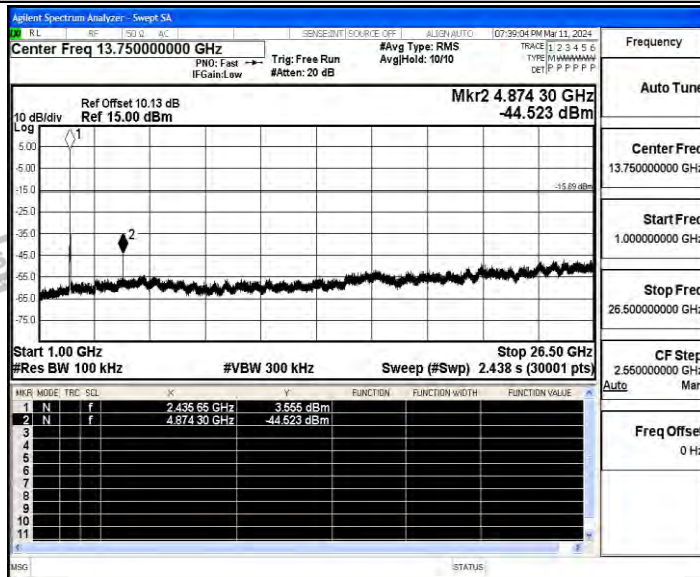


11B\_Ant\_2437\_30~1000



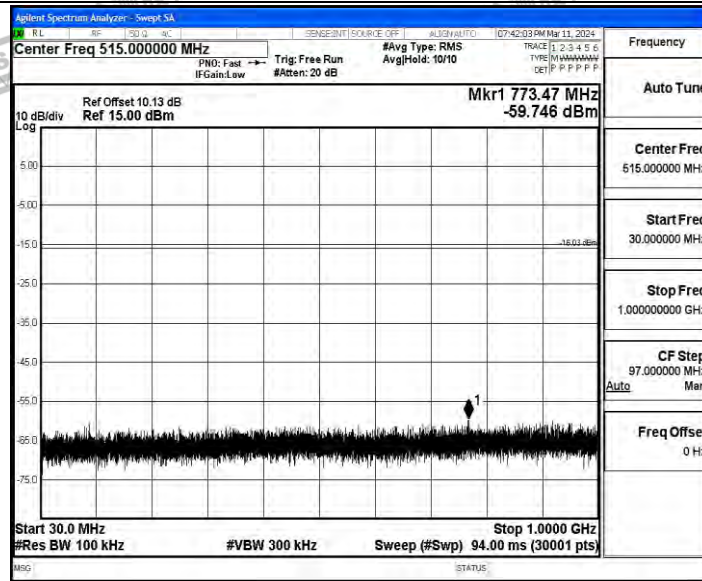


11B\_Ant\_2437\_1000~26500

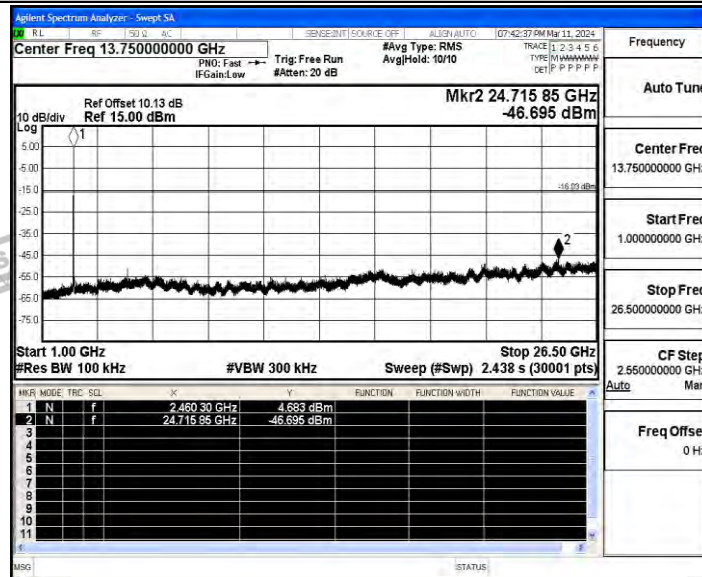


11B\_Ant\_2462\_30~1000



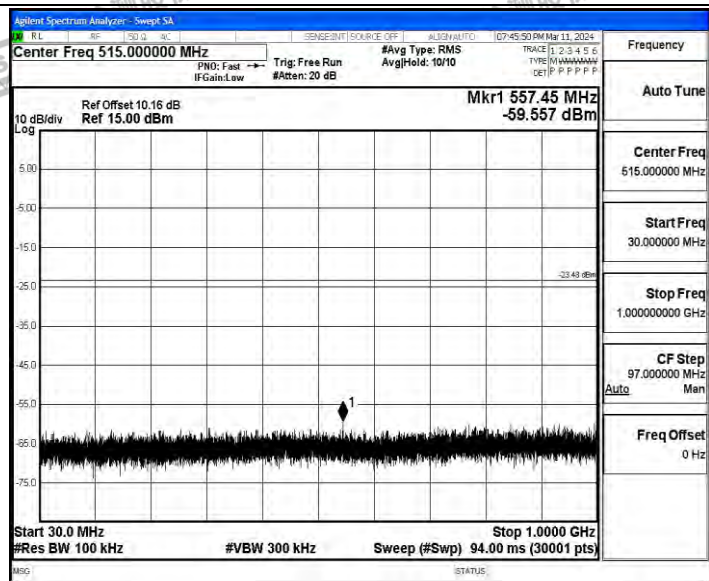


11B\_Ant\_2462\_1000~26500

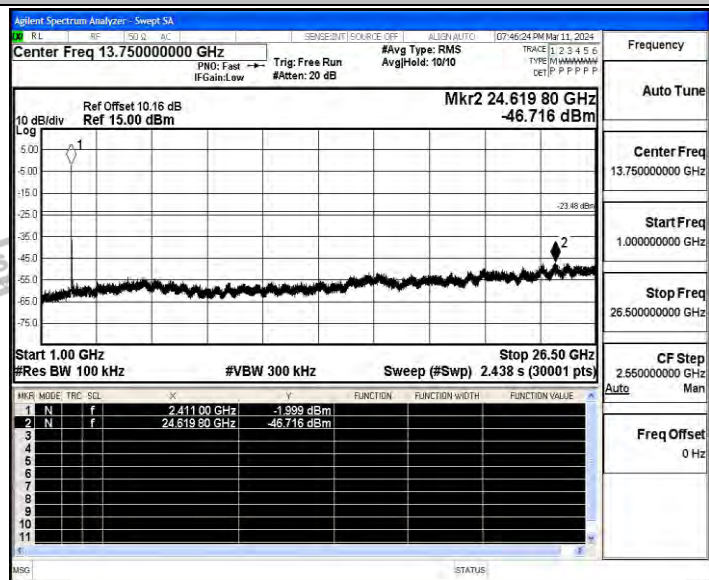


11G\_Ant\_2412\_30~1000



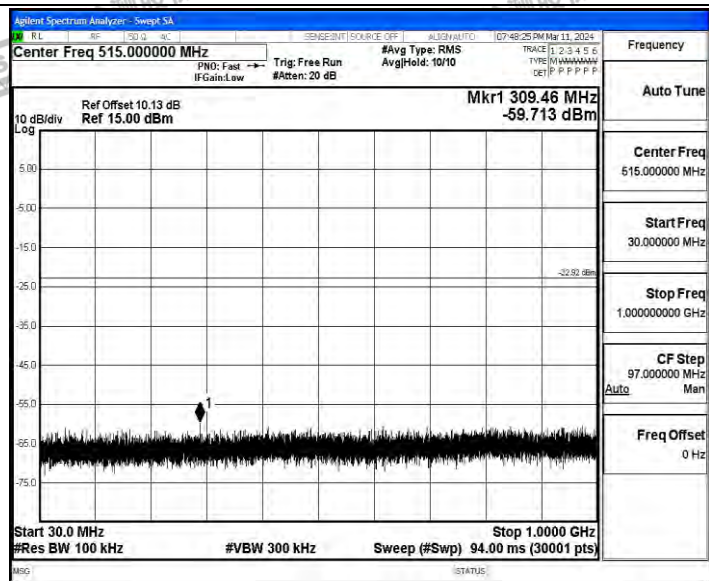


11G\_Ant\_2412\_1000~26500

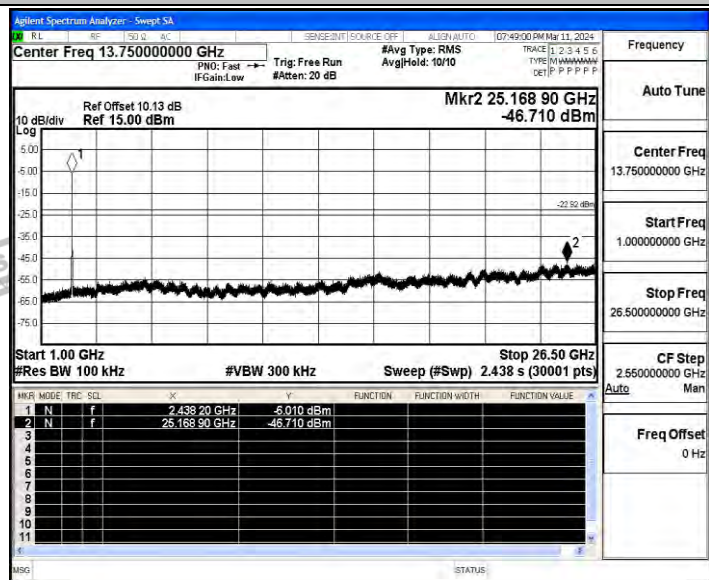


11G\_Ant\_2437\_30~1000





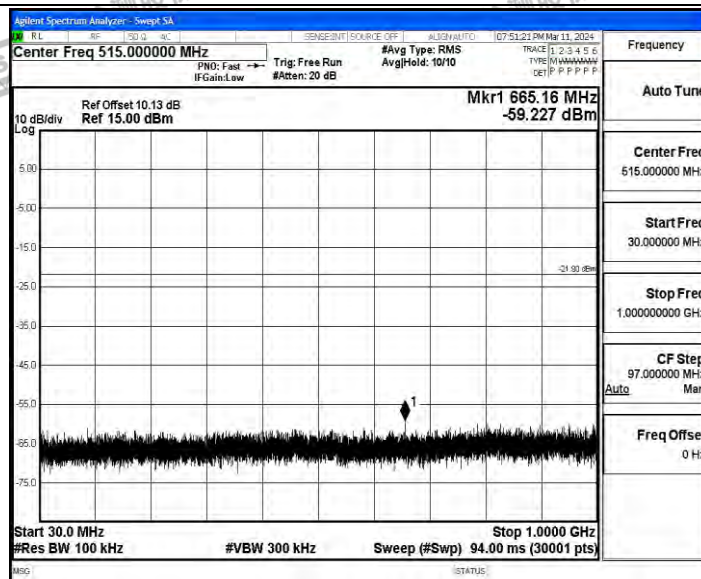
11G\_Ant\_2437\_1000~26500



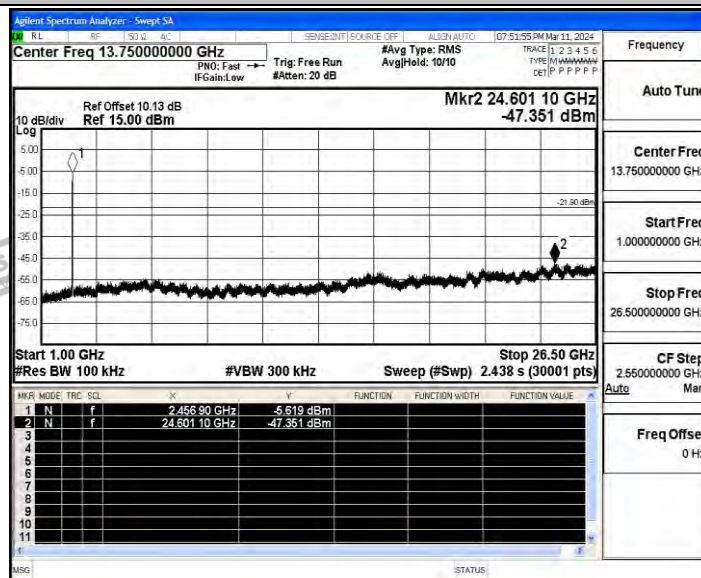
11G\_Ant\_2462\_30~1000





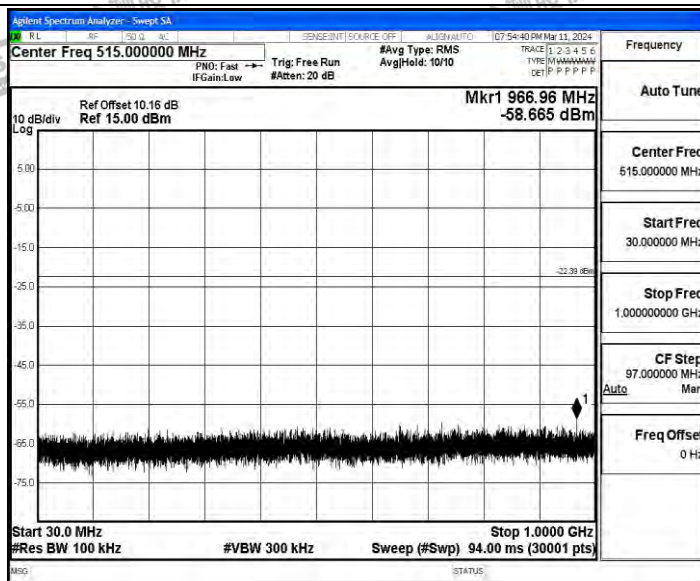


11G\_Ant\_2462\_1000~26500

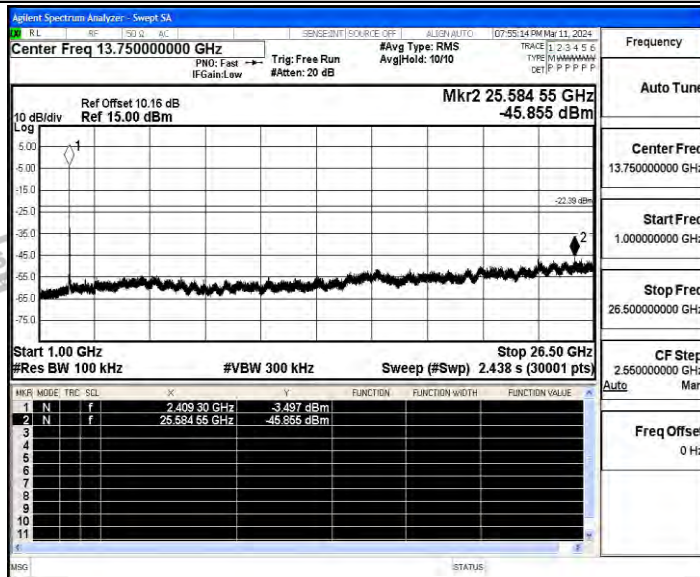


11N20SISO\_Ant\_2412\_30~1000



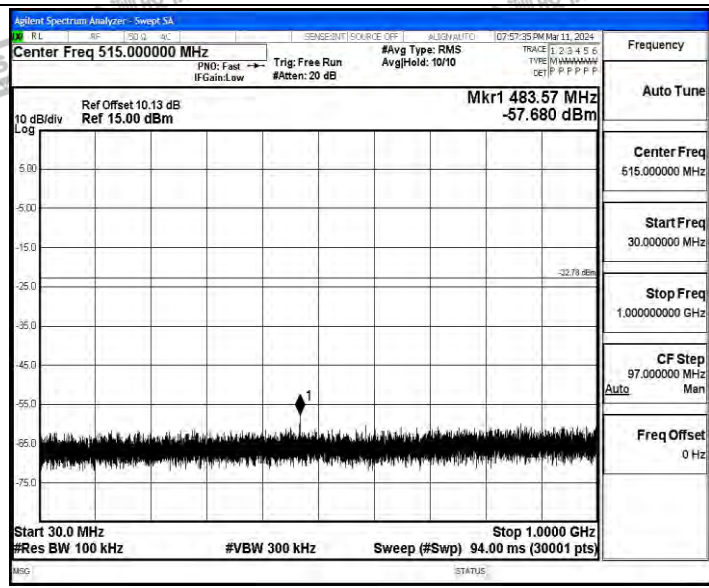


11N20SISO\_Ant\_2412\_1000~26500

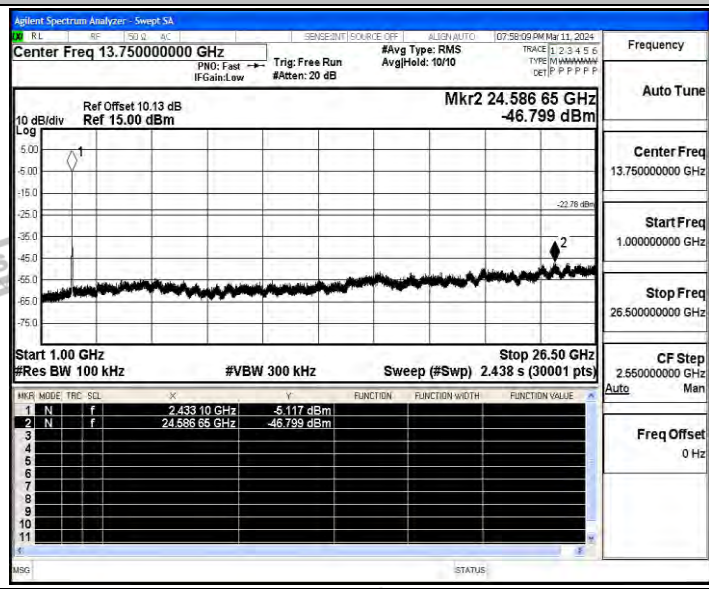


11N20SISO\_Ant\_2437\_30~1000



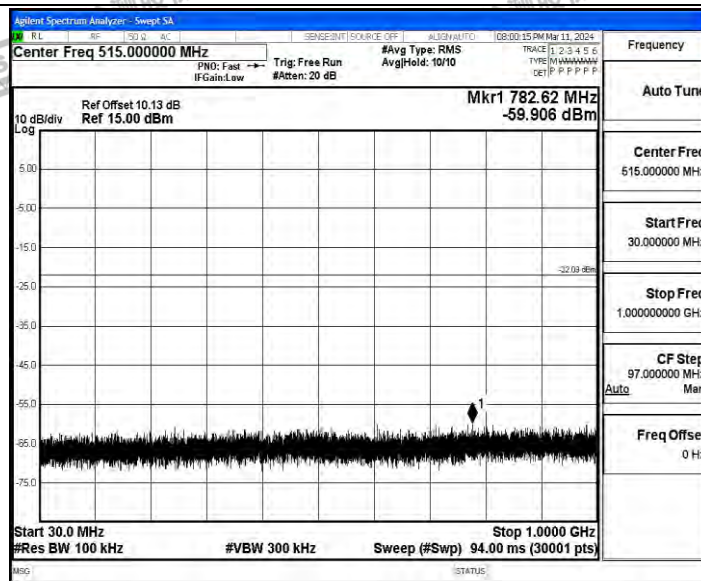


11N20SISO\_Ant\_2437\_1000~26500

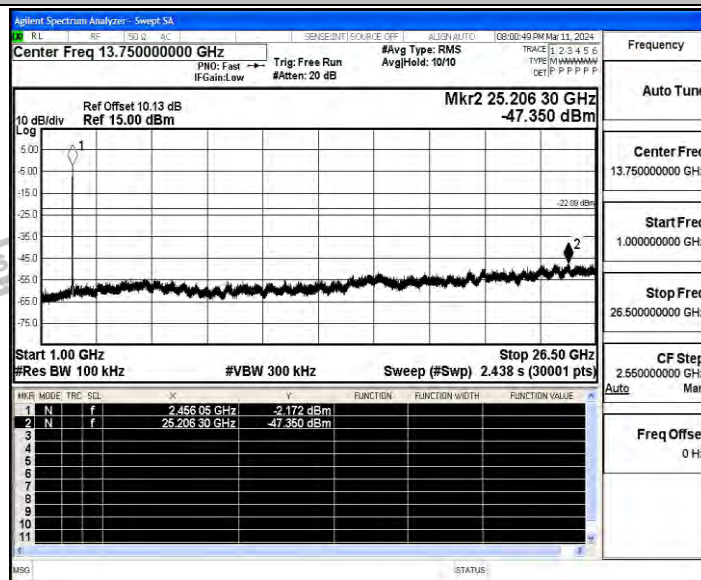


11N20SISO\_Ant\_2462\_30~1000





11N20SISO\_Ant\_2462\_1000~26500





### Reference level measurement

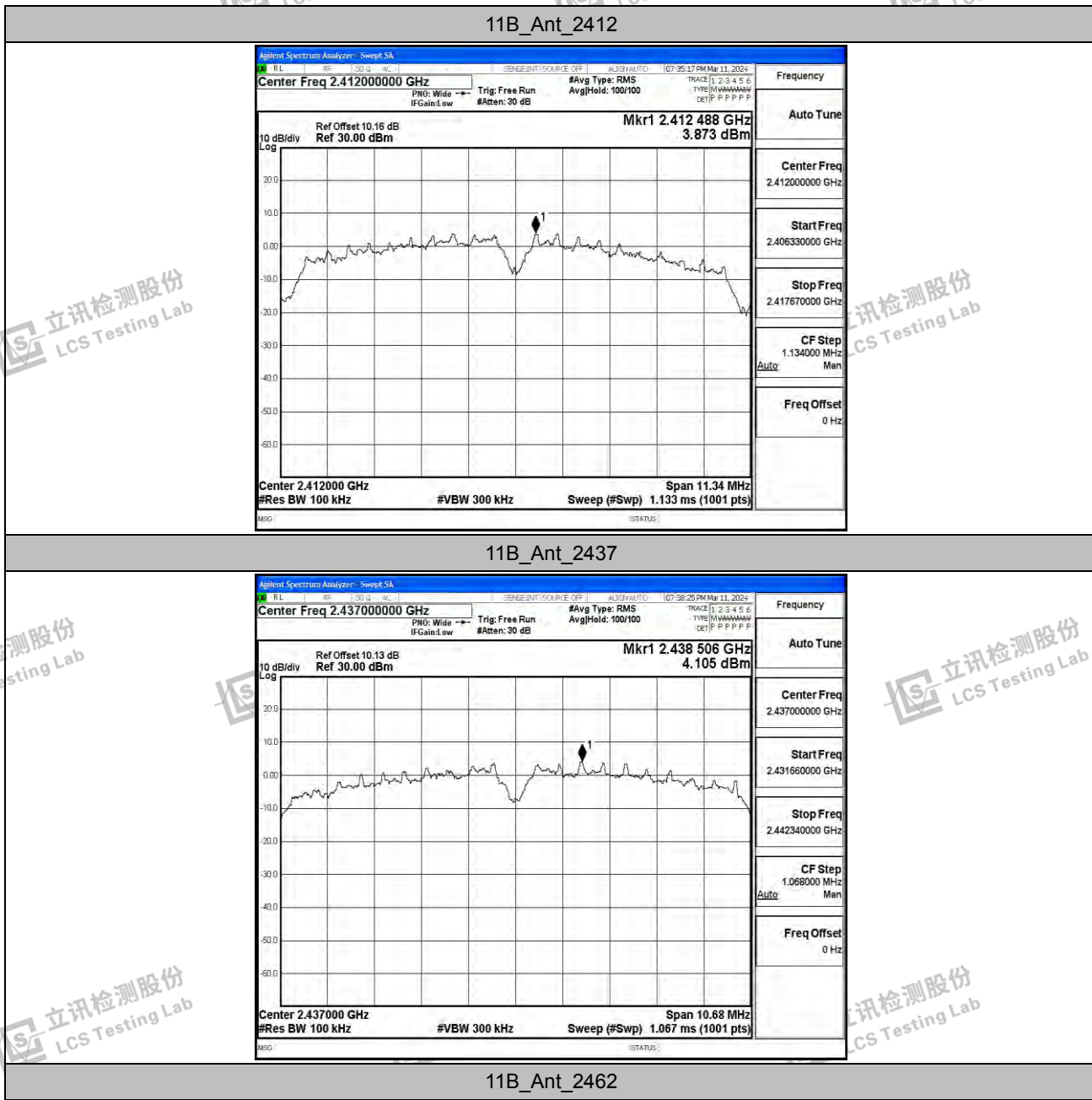
#### Test Result

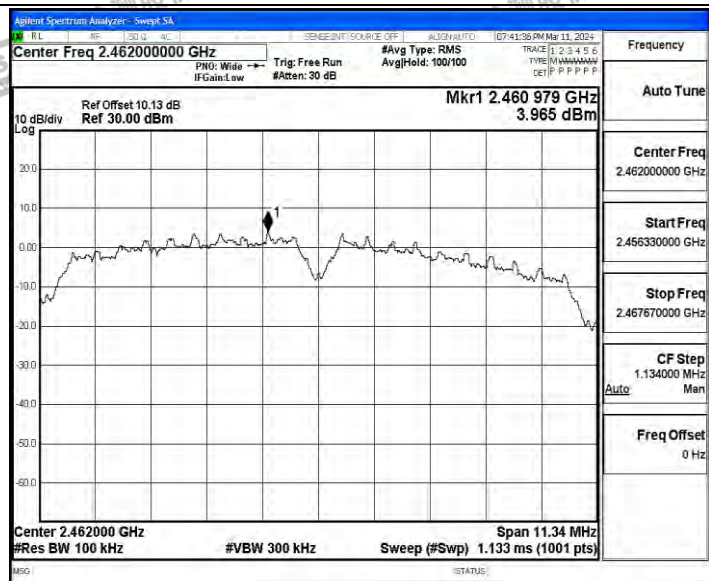
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
11B	Ant	2412	2412.49	3.87
		2437	2438.51	4.11
		2462	2460.98	3.97
11G	Ant	2412	2413.22	-3.48
		2437	2439.50	-2.92
		2462	2456.97	-1.90
11N20SISO	Ant	2412	2409.49	-2.39
		2437	2438.29	-2.78
		2462	2457.01	-2.09



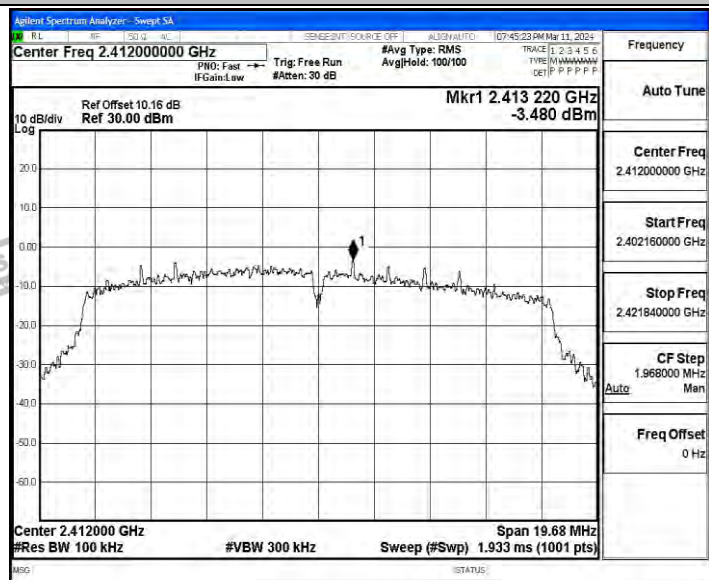


### Test Graphs



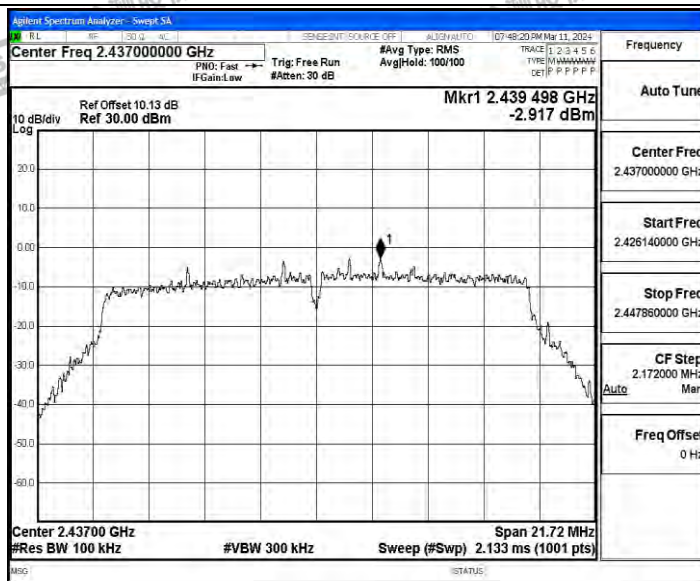


11G\_Ant\_2412

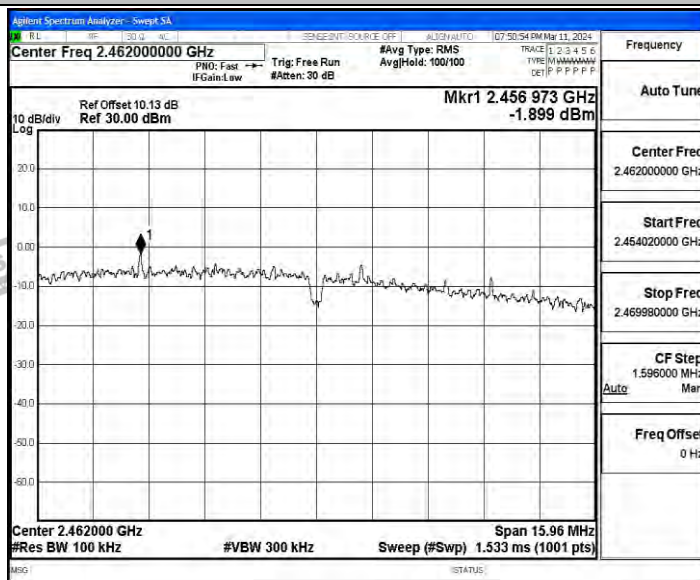


11G\_Ant\_2437





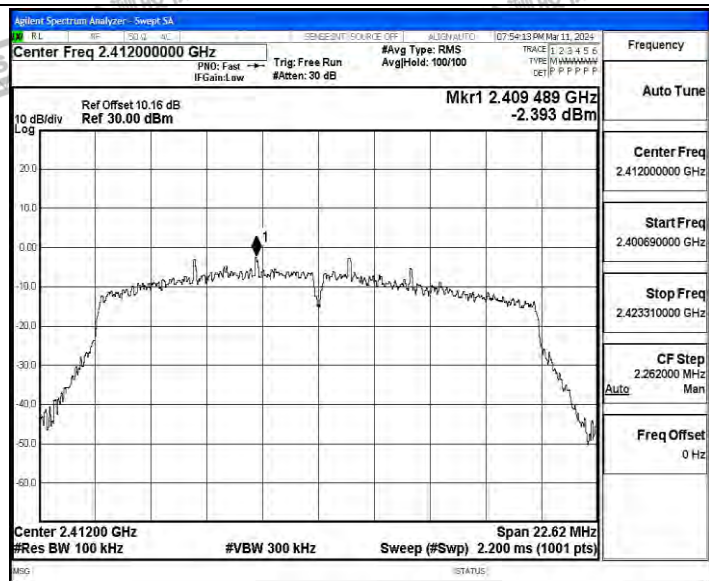
11G\_Ant\_2462



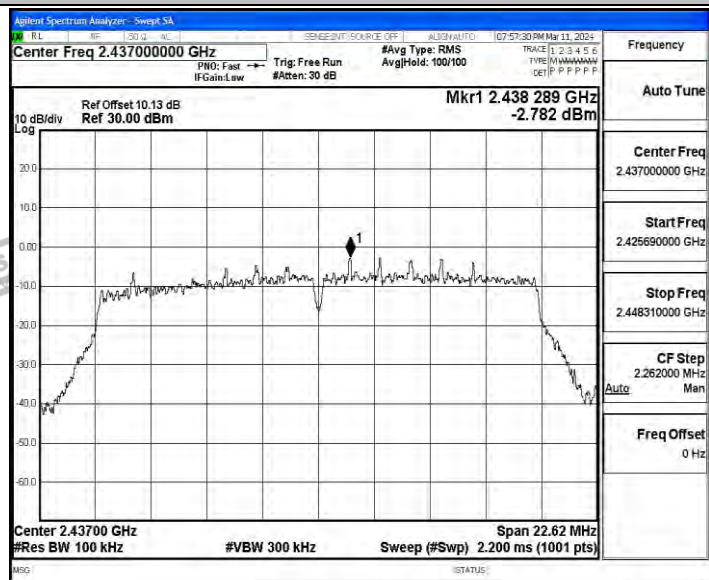
11N20SISO\_Ant\_2412





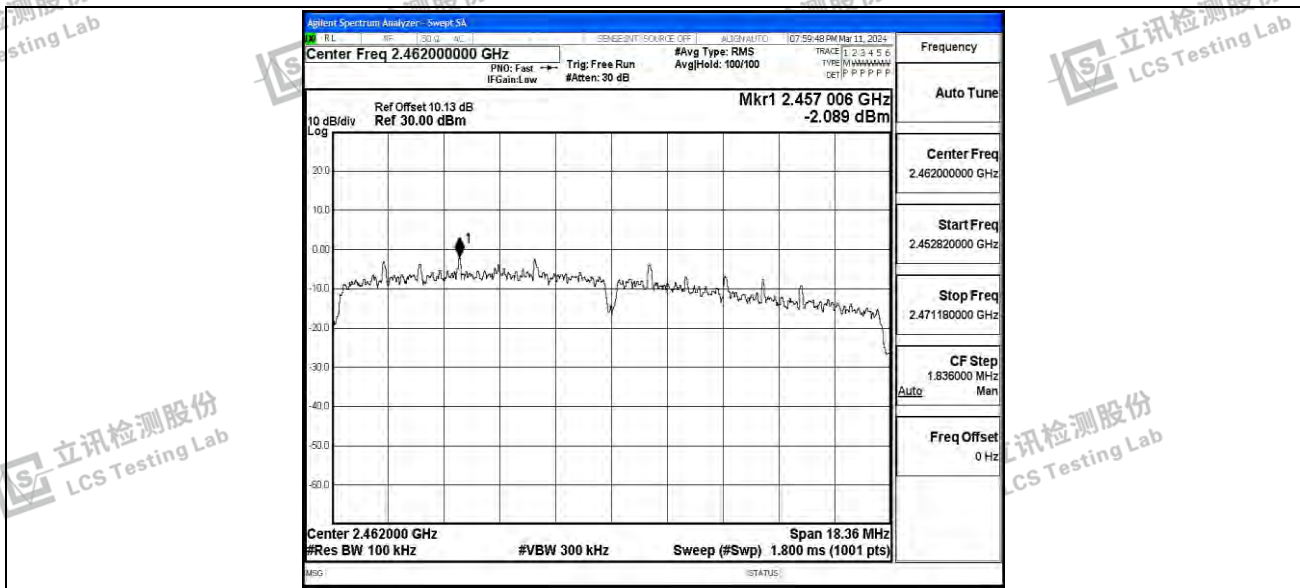


11N20SISO\_Ant\_2437



11N20SISO\_Ant\_2462







### C.6 Duty Cycle

#### Test Result

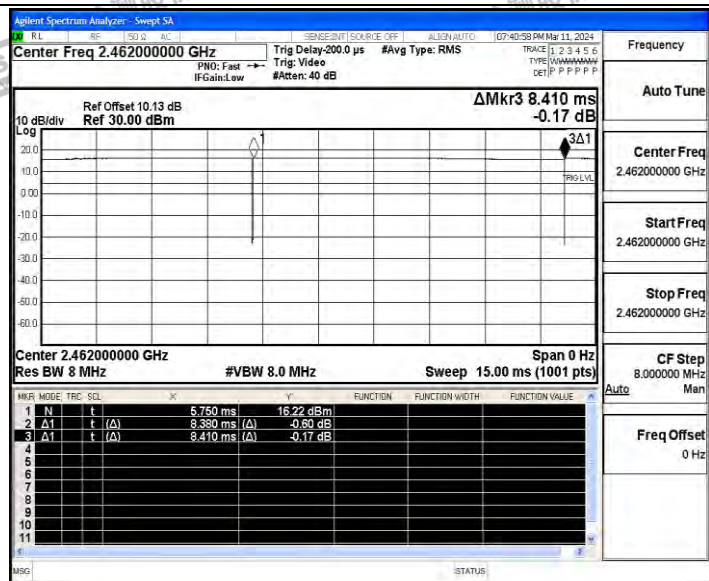
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor	1/T Factor[kHz]	Verdict
11B	Ant	2412	8.37	8.41	99.52	0.02	0.12	---
		2437	8.38	8.41	99.64	0.02	0.12	---
		2462	8.38	8.41	99.64	0.02	0.12	---
11G	Ant	2412	1.39	1.44	96.53	0.15	0.72	---
		2437	1.39	1.44	96.53	0.15	0.72	---
		2462	1.40	1.44	97.22	0.12	0.71	---
11N20SISO	Ant	2412	1.30	1.34	97.01	0.13	0.77	---
		2437	1.30	1.34	97.01	0.13	0.77	---
		2462	1.30	1.35	96.30	0.16	0.77	---



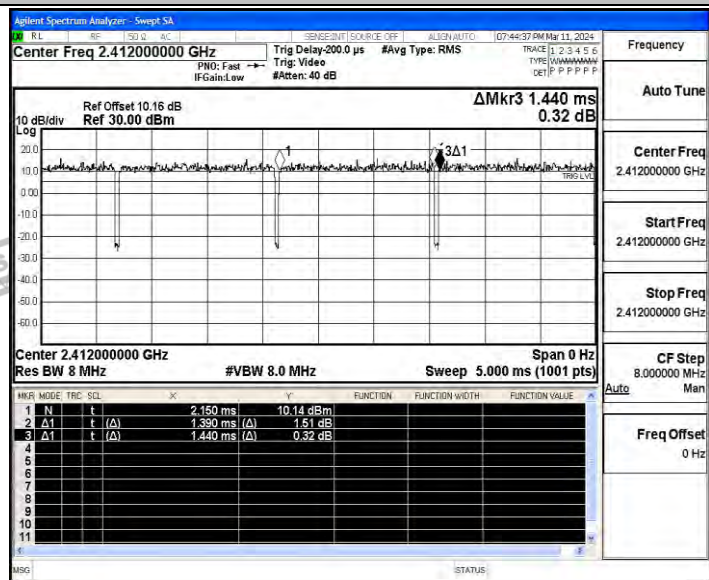


### Test Graphs



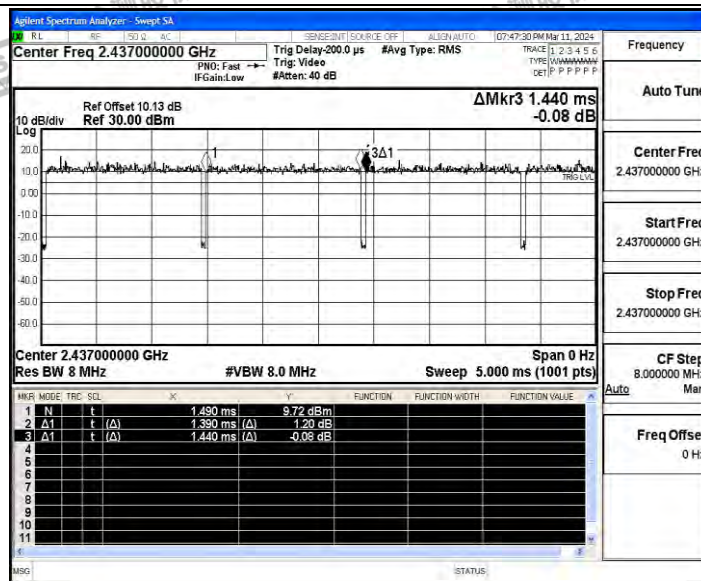


11G\_Ant\_2412

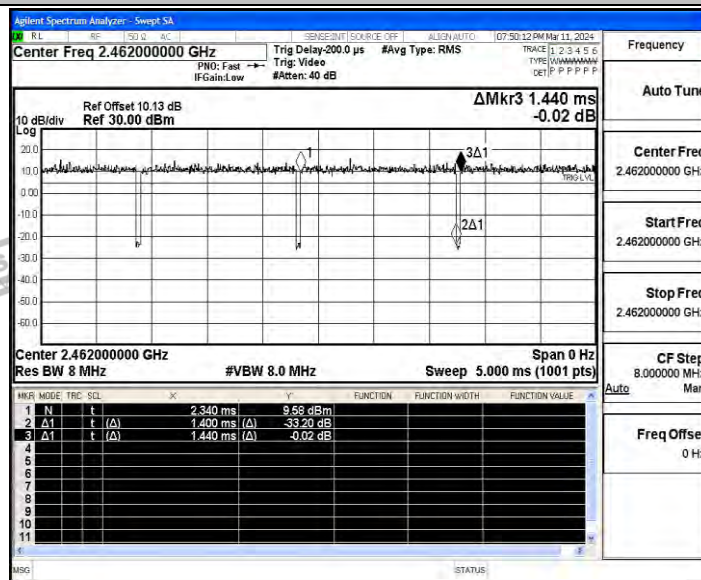


11G\_Ant\_2437



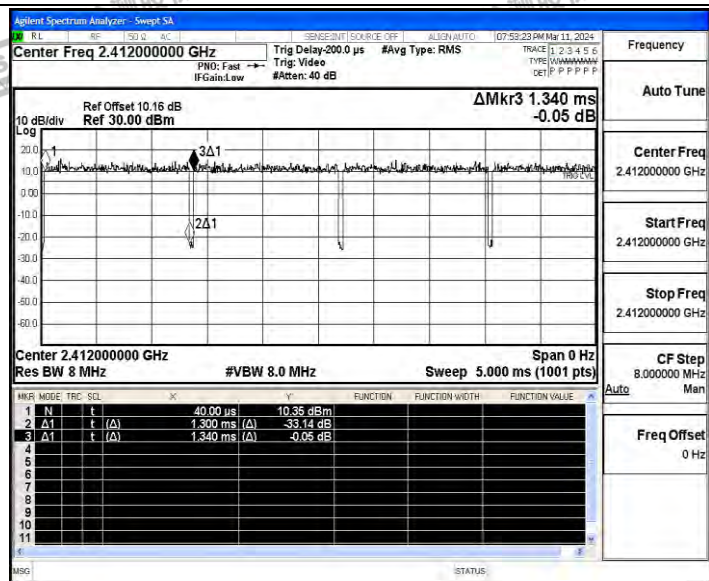


11G\_Ant\_2462

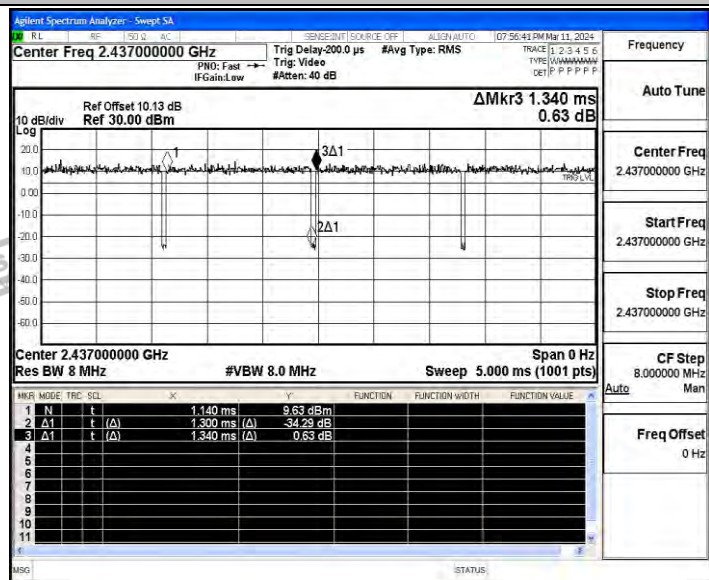


11N20SISO\_Ant\_2412



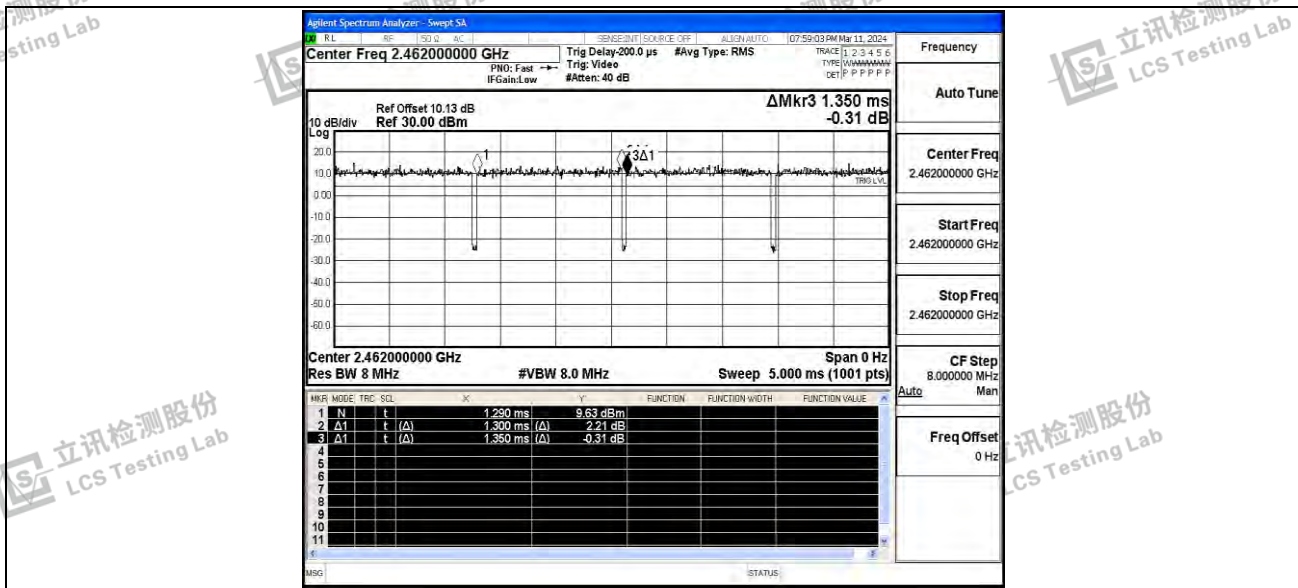


11N20SISO\_Ant\_2437



11N20SISO\_Ant\_2462









### C.7 Emissions in Restricted Bands

#### Test Result

TestM ode	Antenn a	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBUV/m]	Limit [dBUV/m]	Verdict
11B	Ant	Low	2412	AV	2310.000	-48.18	≤-41.20	47.02	≤54	PASS
				AV	2385.670	-47.01	≤-41.20	48.19	≤54	PASS
				AV	2390.000	-47.9	≤-41.20	47.30	≤54	PASS
				Peak	2310.000	-39.66	≤-21.20	55.54	≤74	PASS
				Peak	2370.460	-36.95	≤-21.20	58.25	≤74	PASS
				Peak	2390.000	-39.46	≤-21.20	55.74	≤74	PASS
		High	2462	AV	2483.500	-46.75	≤-41.20	48.45	≤54	PASS
				AV	2484.220	-46.52	≤-41.20	48.68	≤54	PASS
				AV	2500.000	-47.69	≤-41.20	47.51	≤54	PASS
				Peak	2483.500	-39.3	≤-21.20	55.90	≤74	PASS
				Peak	2499.180	-36.82	≤-21.20	58.38	≤74	PASS
				Peak	2500.000	-40.2	≤-21.20	55.00	≤74	PASS
11G	Ant	Low	2412	AV	2310.000	-47.89	≤-41.20	47.31	≤54	PASS
				AV	2385.150	-46.81	≤-41.20	48.39	≤54	PASS
				AV	2390.000	-47.52	≤-41.20	47.68	≤54	PASS
				Peak	2310.000	-38.26	≤-21.20	56.94	≤74	PASS
				Peak	2369.420	-36.68	≤-21.20	58.52	≤74	PASS
				Peak	2390.000	-40.42	≤-21.20	54.78	≤74	PASS
		High	2462	AV	2483.500	-47.04	≤-41.20	48.16	≤54	PASS
				AV	2487.190	-46.42	≤-41.20	48.78	≤54	PASS
				AV	2500.000	-47.23	≤-41.20	47.97	≤54	PASS
				Peak	2483.500	-39.12	≤-21.20	56.08	≤74	PASS
				Peak	2487.410	-36.55	≤-21.20	58.65	≤74	PASS
				Peak	2500.000	-39.84	≤-21.20	55.36	≤74	PASS
11N20 SISO	Ant	Low	2412	AV	2310.000	-47.75	≤-41.20	47.45	≤54	PASS
				AV	2389.830	-46.14	≤-41.20	49.06	≤54	PASS
				AV	2390.000	-46.96	≤-41.20	48.24	≤54	PASS
				Peak	2310.000	-40.33	≤-21.20	54.87	≤74	PASS
				Peak	2389.310	-32.17	≤-21.20	63.03	≤74	PASS
				Peak	2390.000	-39.85	≤-21.20	55.35	≤74	PASS
		High	2462	AV	2483.500	-47.59	≤-41.20	47.61	≤54	PASS
				AV	2486.310	-46.34	≤-41.20	48.86	≤54	PASS
				AV	2500.000	-47.59	≤-41.20	47.61	≤54	PASS
				Peak	2483.500	-38.81	≤-21.20	56.39	≤74	PASS
				Peak	2494.890	-37.4	≤-21.20	57.80	≤74	PASS
				Peak	2500.000	-39.54	≤-21.20	55.66	≤74	PASS



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 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
 Scan code to check authenticity



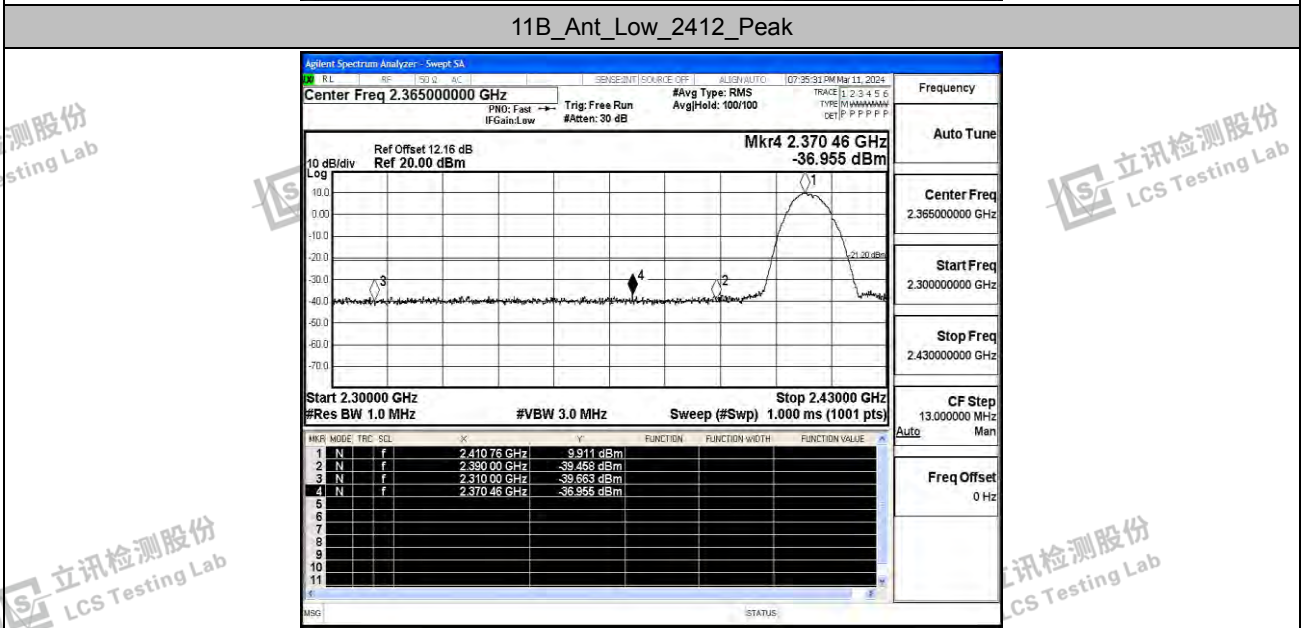
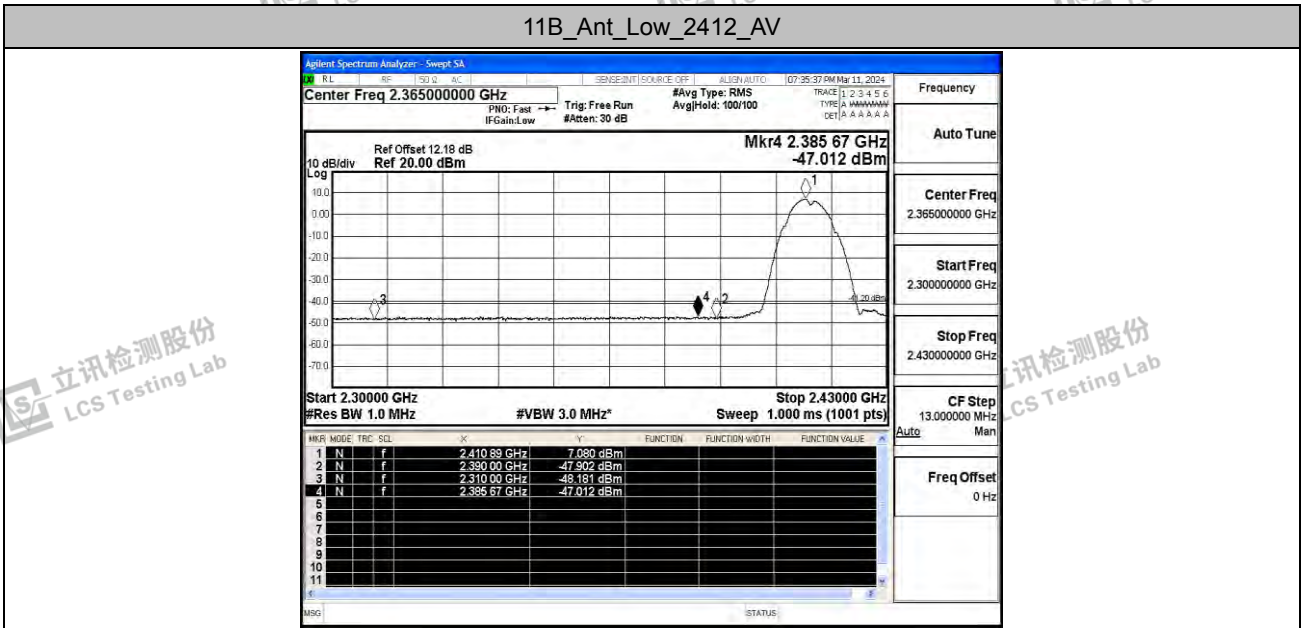
Note:

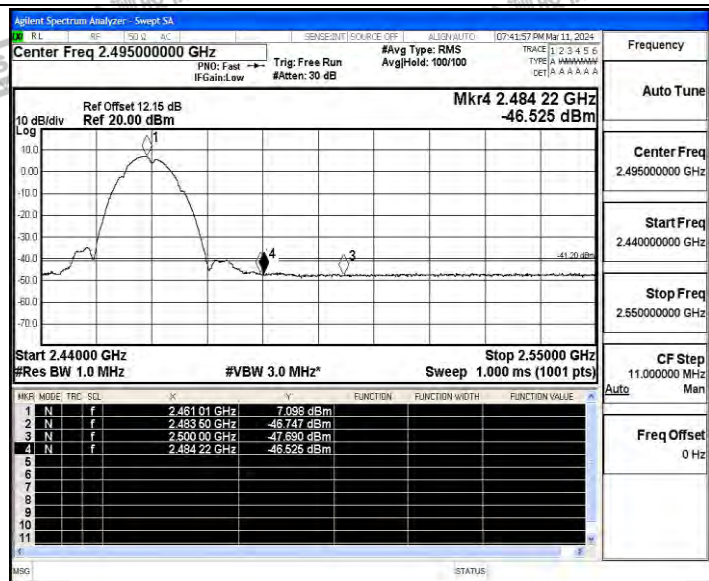
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



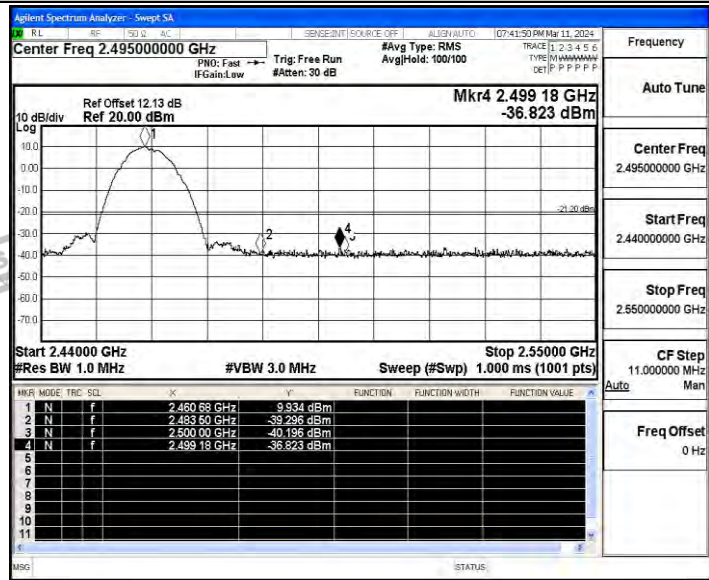


Test Graphs



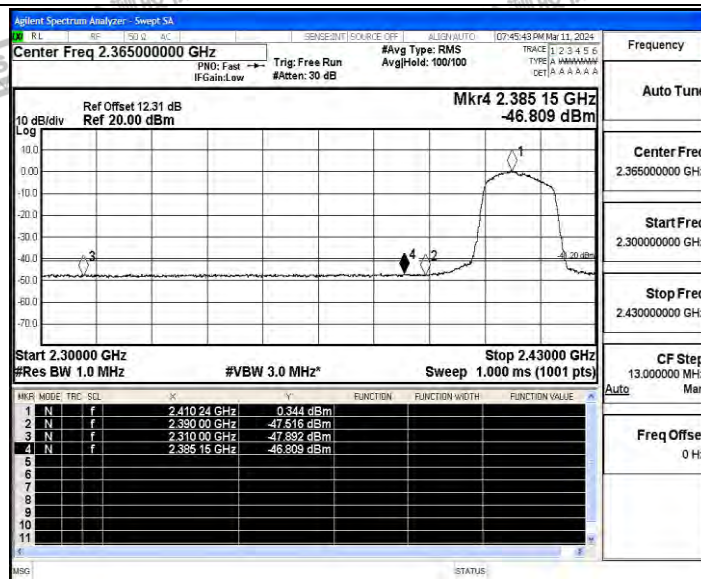


11B\_Ant\_High\_2462\_Peak

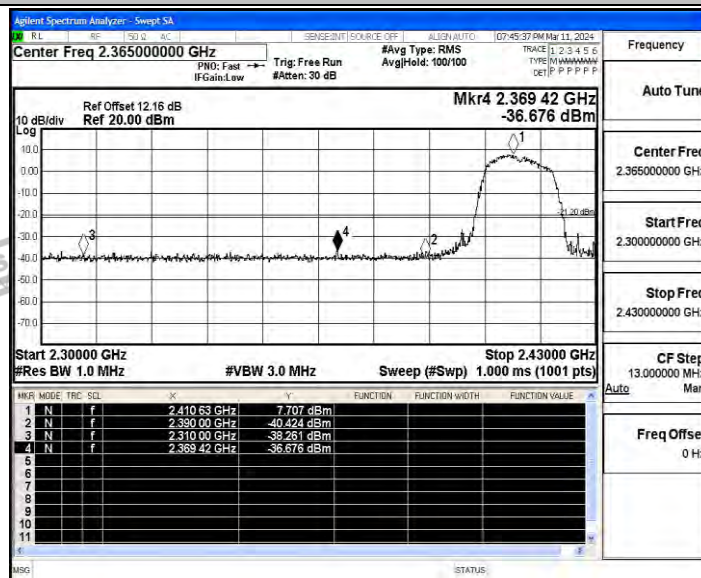


11G\_Ant\_Low\_2412\_AV



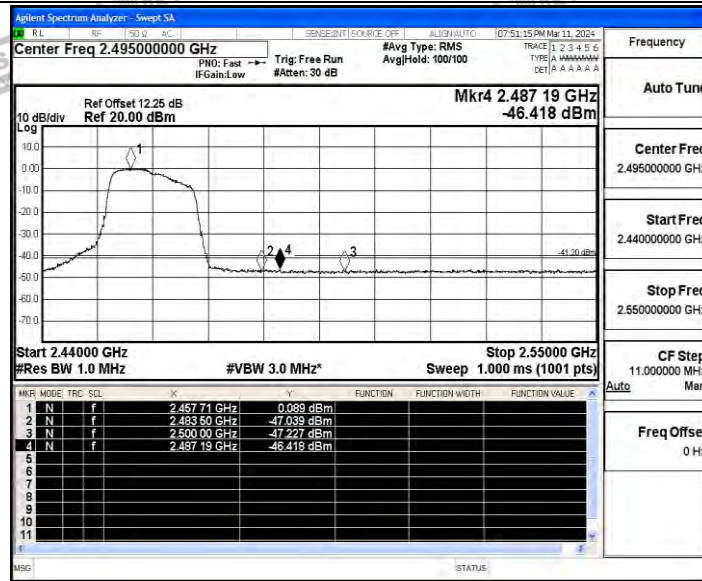


11G\_Ant\_Low\_2412\_Peak

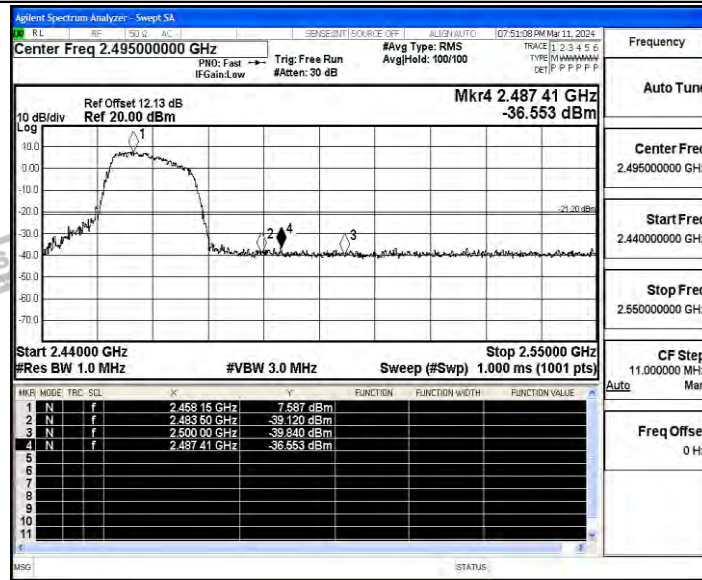


11G\_Ant\_High\_2462\_AV



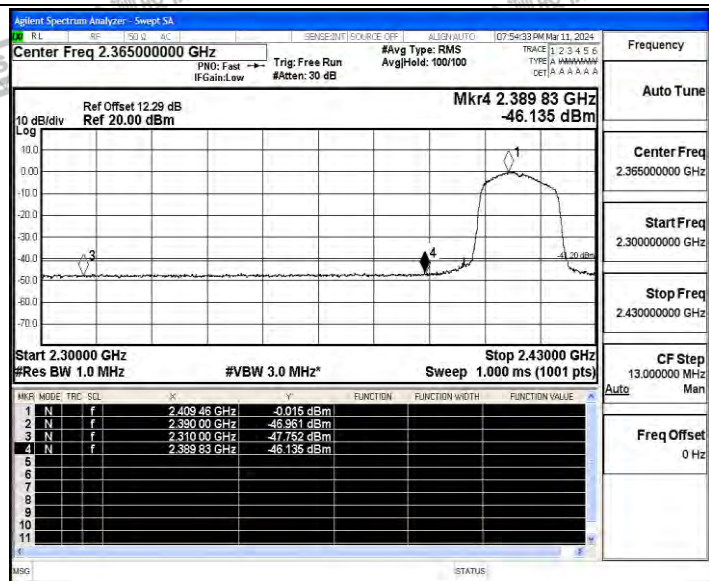


11G\_Ant\_High\_2462\_Peak

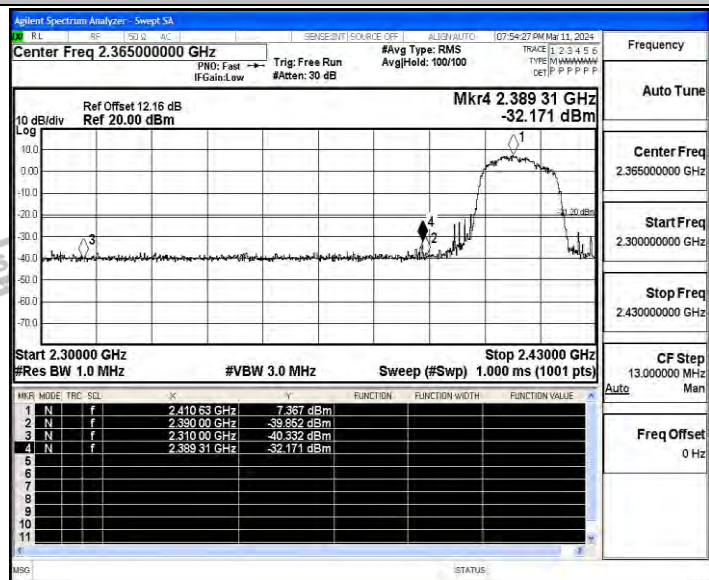


11N20SISO\_Ant\_Low\_2412\_AV



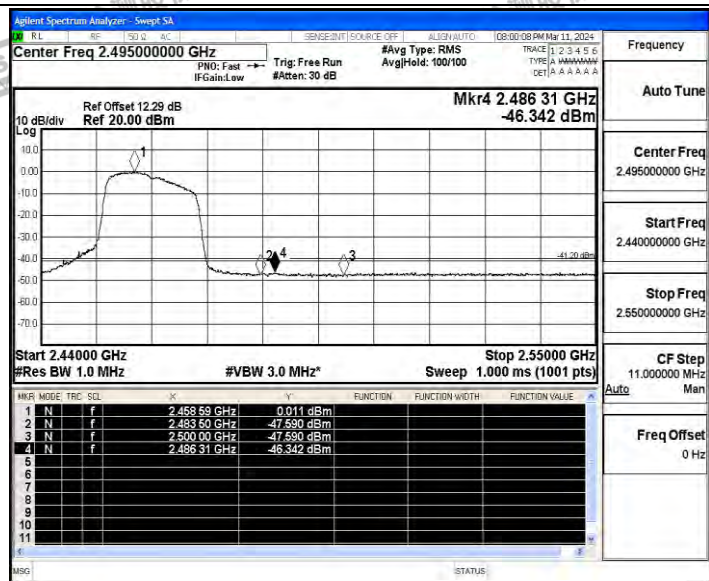


11N20SISO\_Ant\_Low\_2412\_Peak



11N20SISO\_Ant\_High\_2462\_AV





11N20SISO\_Ant\_High\_2462\_Peak

