



Appendix C

RF Test Data for 2.4GWIFI(Conducted Measurement)

Product Name: IP PHONE

Test Model: CIP270V2

Environmental Conditions

Temperature:	23.6°C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun





C.1 DTS Bandwidth

Test Result

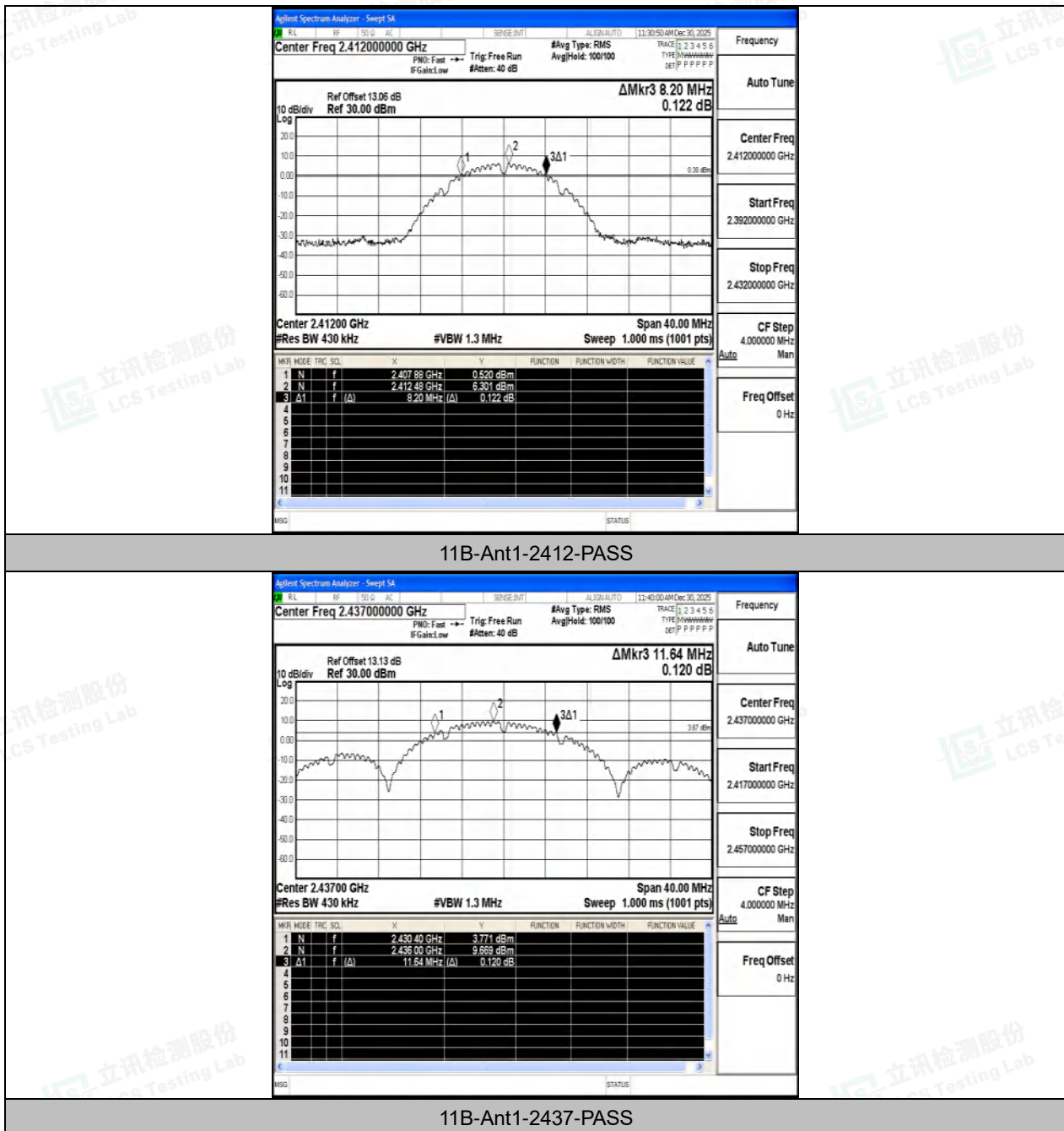
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.200	2407.880	2416.080	0.5	PASS
11B	Ant1	2437	11.640	2430.400	2442.040	0.5	PASS
11B	Ant1	2462	8.160	2457.840	2466.000	0.5	PASS
11G	Ant1	2412	16.280	2403.840	2420.120	0.5	PASS
11G	Ant1	2437	16.280	2428.880	2445.160	0.5	PASS
11G	Ant1	2462	15.840	2454.000	2469.840	0.5	PASS
11N20SISO	Ant1	2412	17.200	2403.400	2420.600	0.5	PASS
11N20SISO	Ant1	2437	17.400	2428.280	2445.680	0.5	PASS
11N20SISO	Ant1	2462	17.160	2453.160	2470.320	0.5	PASS
11N40SISO	Ant1	2422	35.360	2404.240	2439.600	0.5	PASS
11N40SISO	Ant1	2437	35.760	2419.080	2454.840	0.5	PASS
11N40SISO	Ant1	2452	35.200	2434.320	2469.520	0.5	PASS

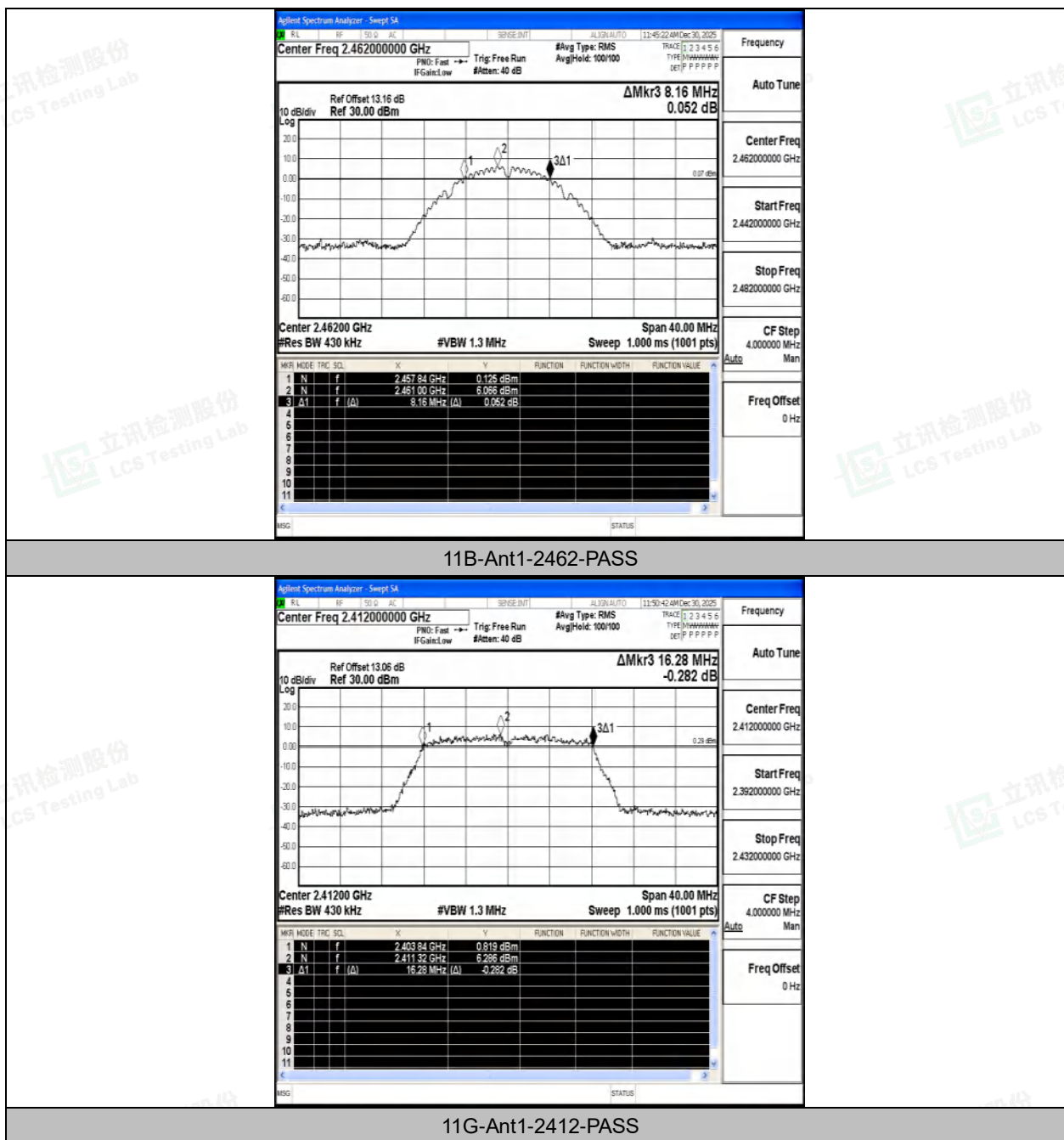
Note :offset=System attenuation +cabal loss

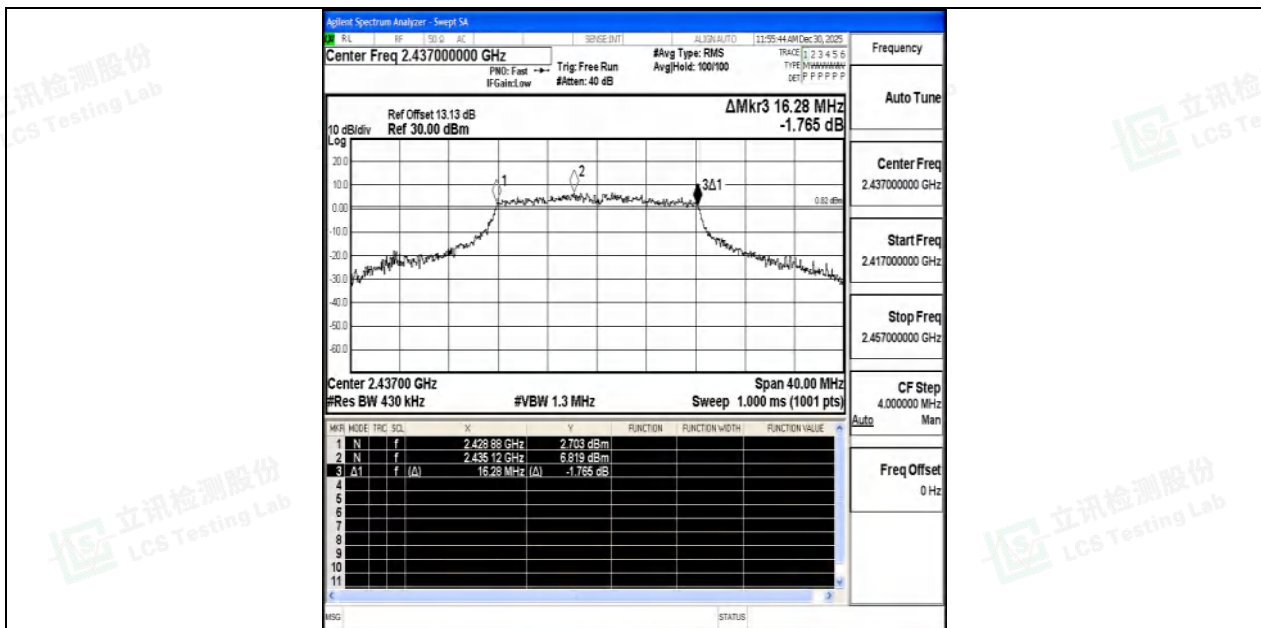




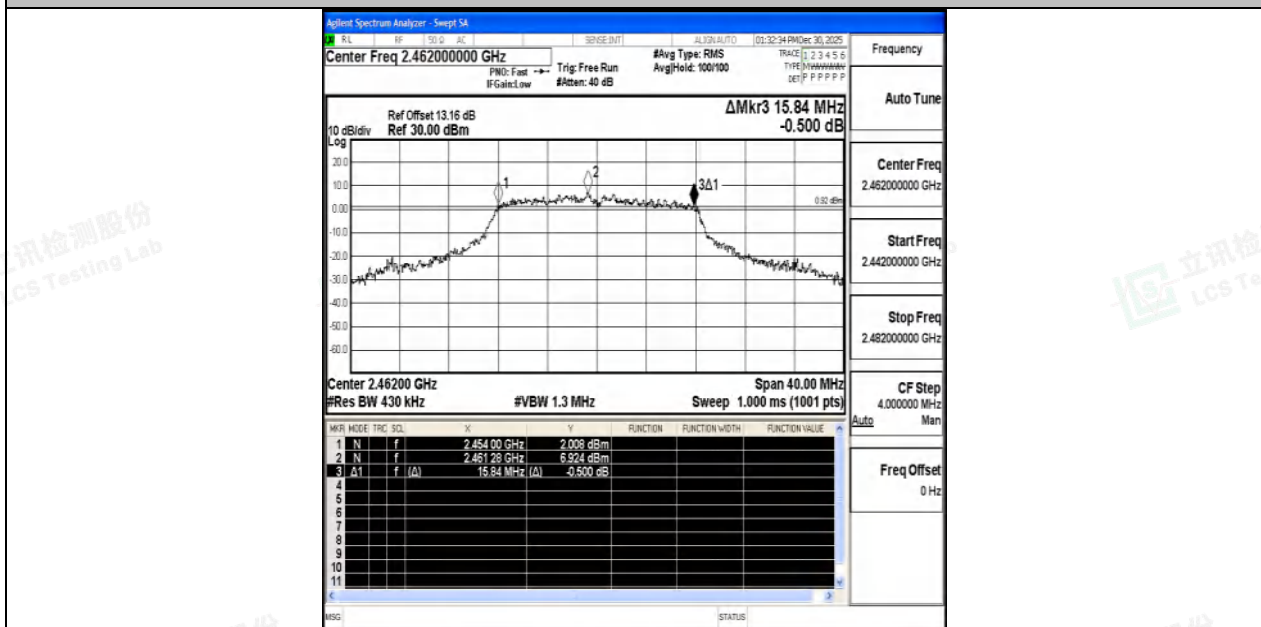
Test Graphs





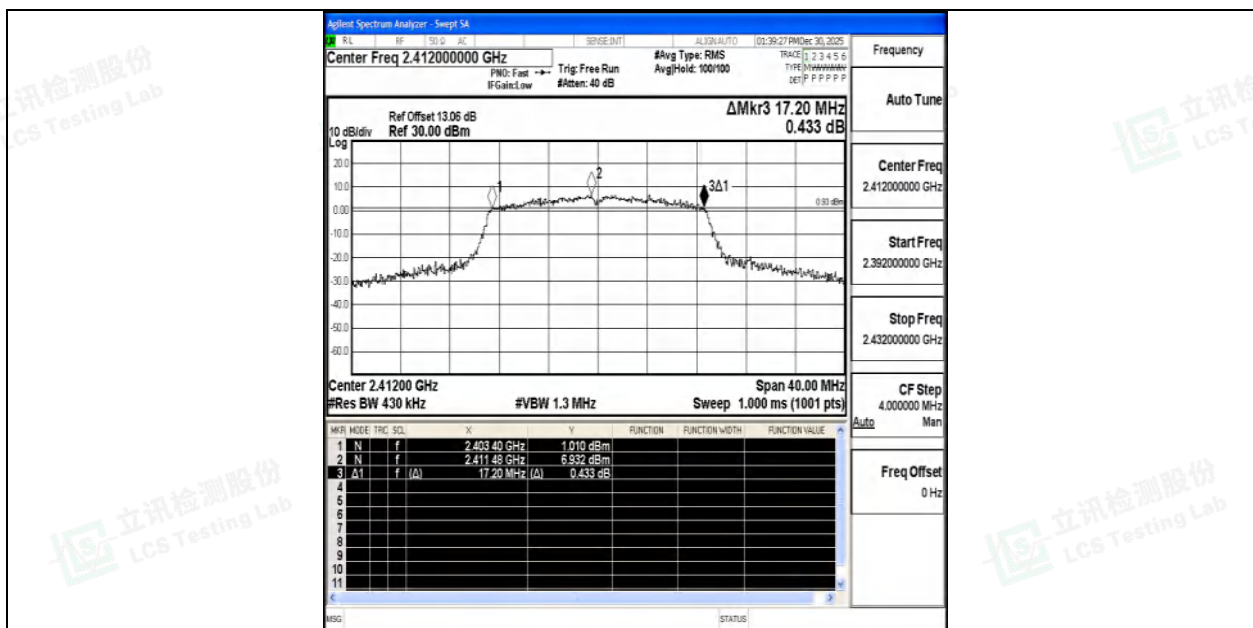


11G-Ant1-2437-PASS

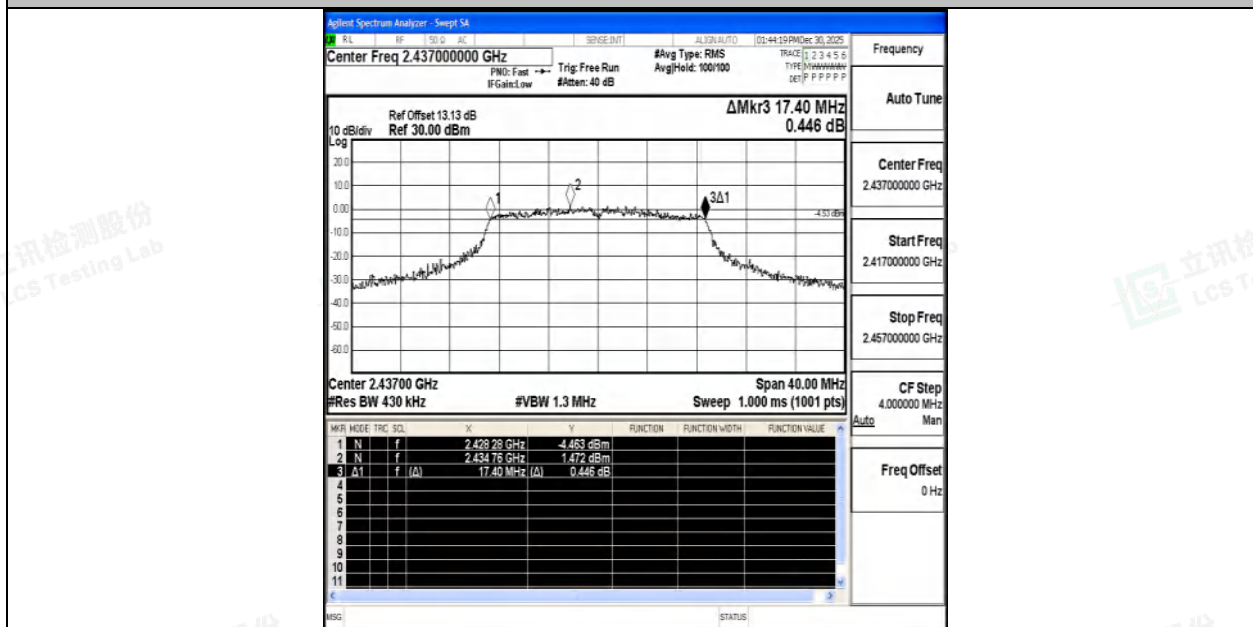


11G-Ant1-2462-PASS



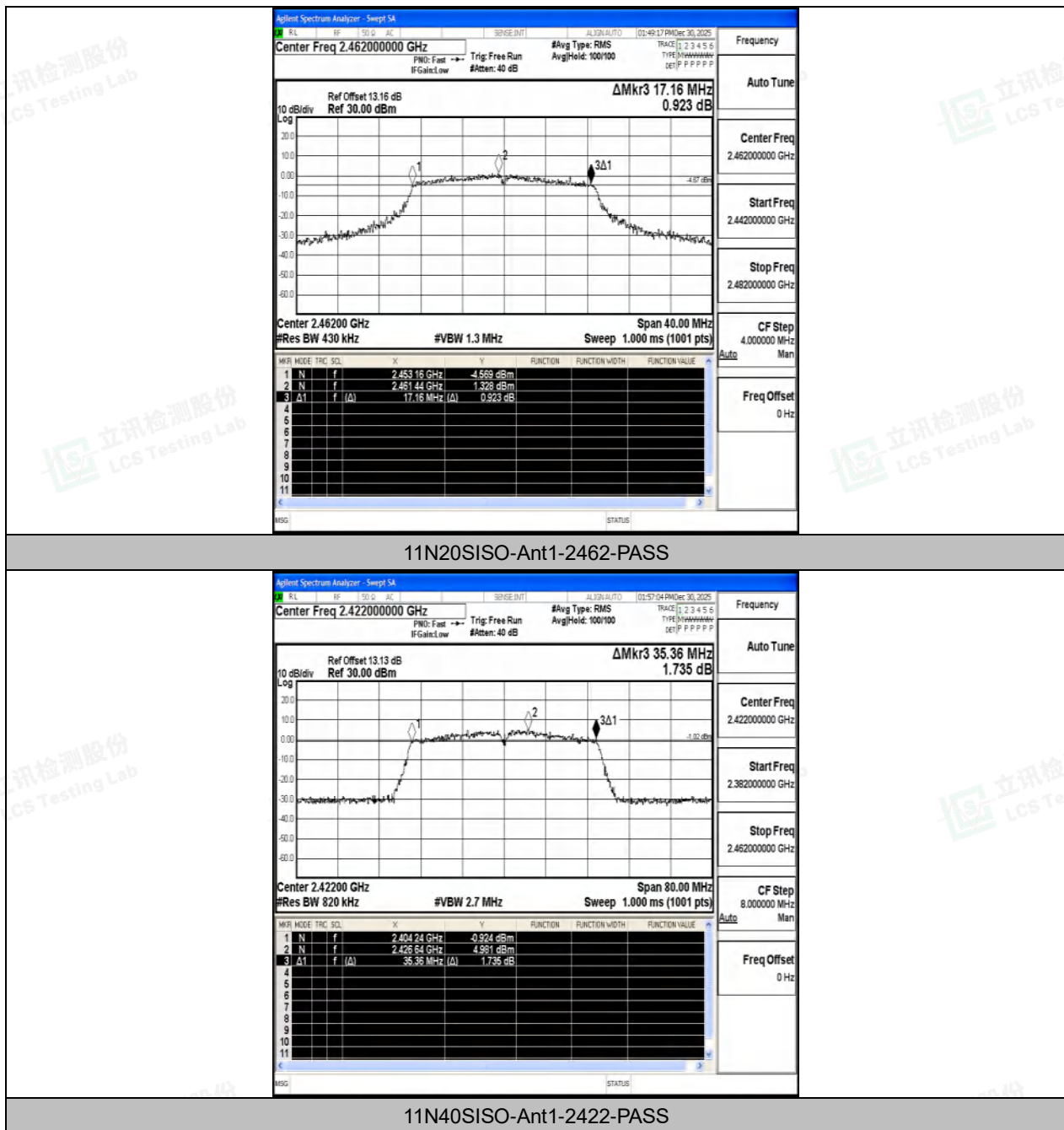


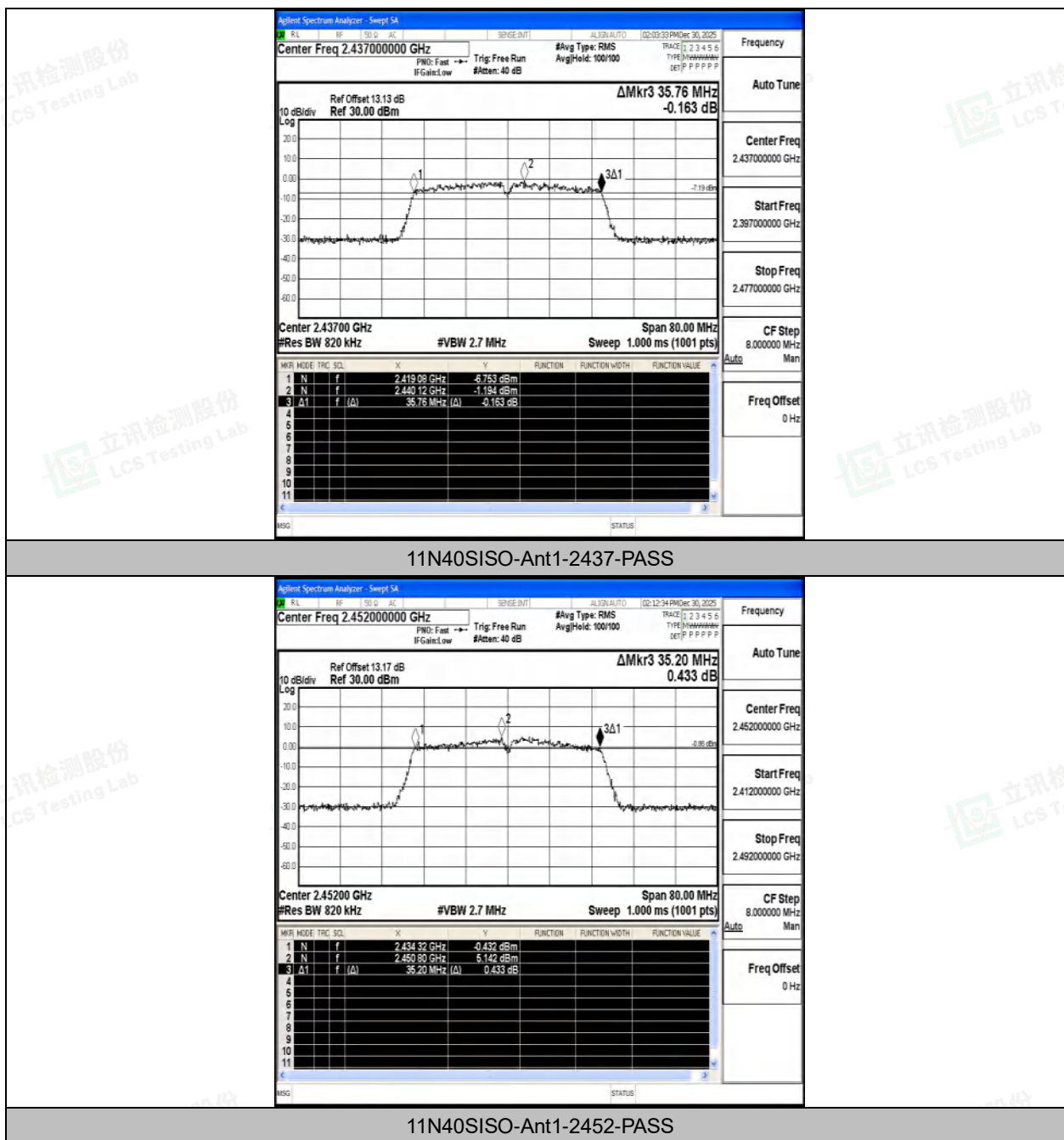
11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS









C.2 Maximum Average conducted output power

TestMode	Antenna	Frequency[MHz]	Average power [dBm]	Duty Factor (dB)	Total Maximum Average	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	13.78	0.02	13.8	≤30.00	PASS
11B	Ant1	2437	13.91	0.02	13.93	≤30.00	PASS
11B	Ant1	2462	13.90	0.02	13.92	≤30.00	PASS
11G	Ant1	2412	13.10	0.09	13.19	≤30.00	PASS
11G	Ant1	2437	13.72	0.09	13.81	≤30.00	PASS
11G	Ant1	2462	13.50	0.09	13.59	≤30.00	PASS
11N20SISO	Ant1	2412	13.72	0.10	13.82	≤30.00	PASS
11N20SISO	Ant1	2437	12.26	0.13	12.39	≤30.00	PASS
11N20SISO	Ant1	2462	12.16	0.13	12.29	≤30.00	PASS
11N40SISO	Ant1	2422	12.67	3.59	16.26	≤30.00	PASS
11N40SISO	Ant1	2437	12.84	3.59	16.43	≤30.00	PASS
11N40SISO	Ant1	2452	12.15	3.31	15.46	≤30.00	PASS

Note :offset=System attenuation +cabel loss





C.3 Maximum power spectral density

Test Result

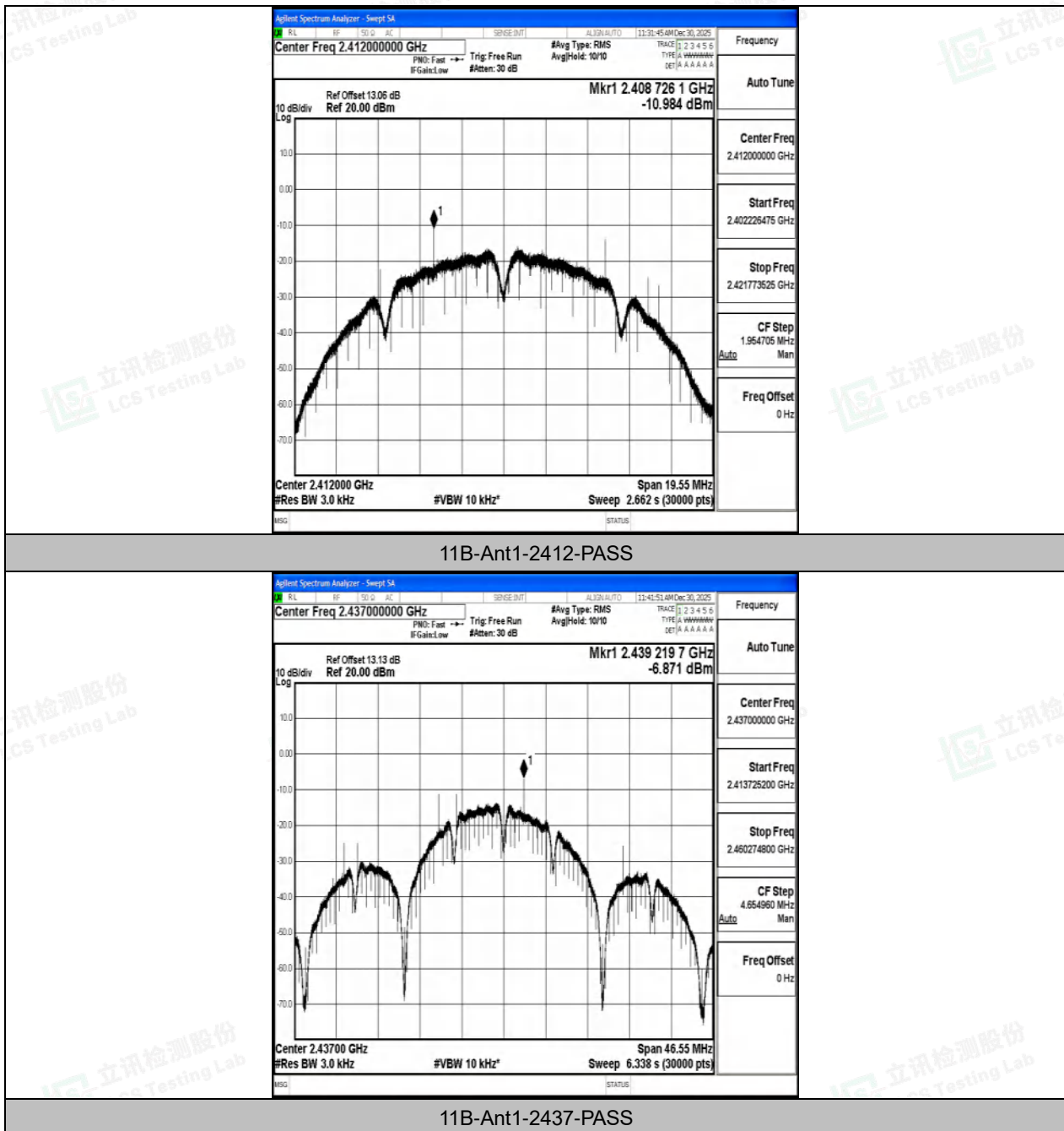
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Duty Factor (dB)	Total PSD (dBm/30kHz)	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.96	0.02	-10.94	≤8.00	PASS
11B	Ant1	2437	-6.85	0.02	-6.83	≤8.00	PASS
11B	Ant1	2462	-6.66	0.02	-6.64	≤8.00	PASS
11G	Ant1	2412	-18.08	0.09	-17.99	≤8.00	PASS
11G	Ant1	2437	-18.31	0.09	-18.22	≤8.00	PASS
11G	Ant1	2462	-16.79	0.09	-16.7	≤8.00	PASS
11N20SISO	Ant1	2412	-18.18	0.10	-18.08	≤8.00	PASS
11N20SISO	Ant1	2437	-24.00	0.13	-23.87	≤8.00	PASS
11N20SISO	Ant1	2462	-23.95	0.13	-23.82	≤8.00	PASS
11N40SISO	Ant1	2422	-15.51	3.59	-11.92	≤8.00	PASS
11N40SISO	Ant1	2437	-21.43	3.59	-17.84	≤8.00	PASS
11N40SISO	Ant1	2452	-16.00	3.31	-12.69	≤8.00	PASS

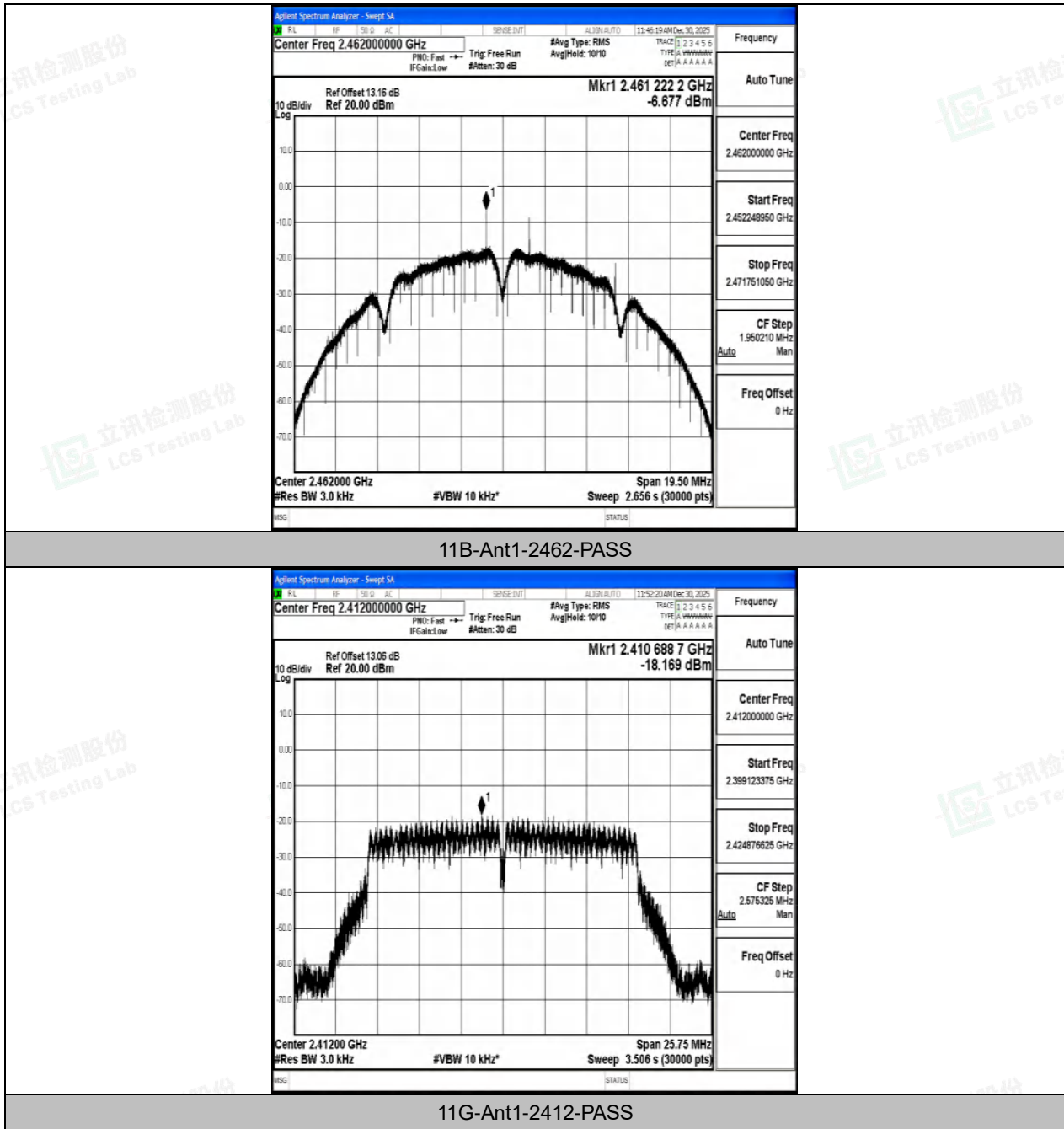
Note :offset=System attenuation +cable loss

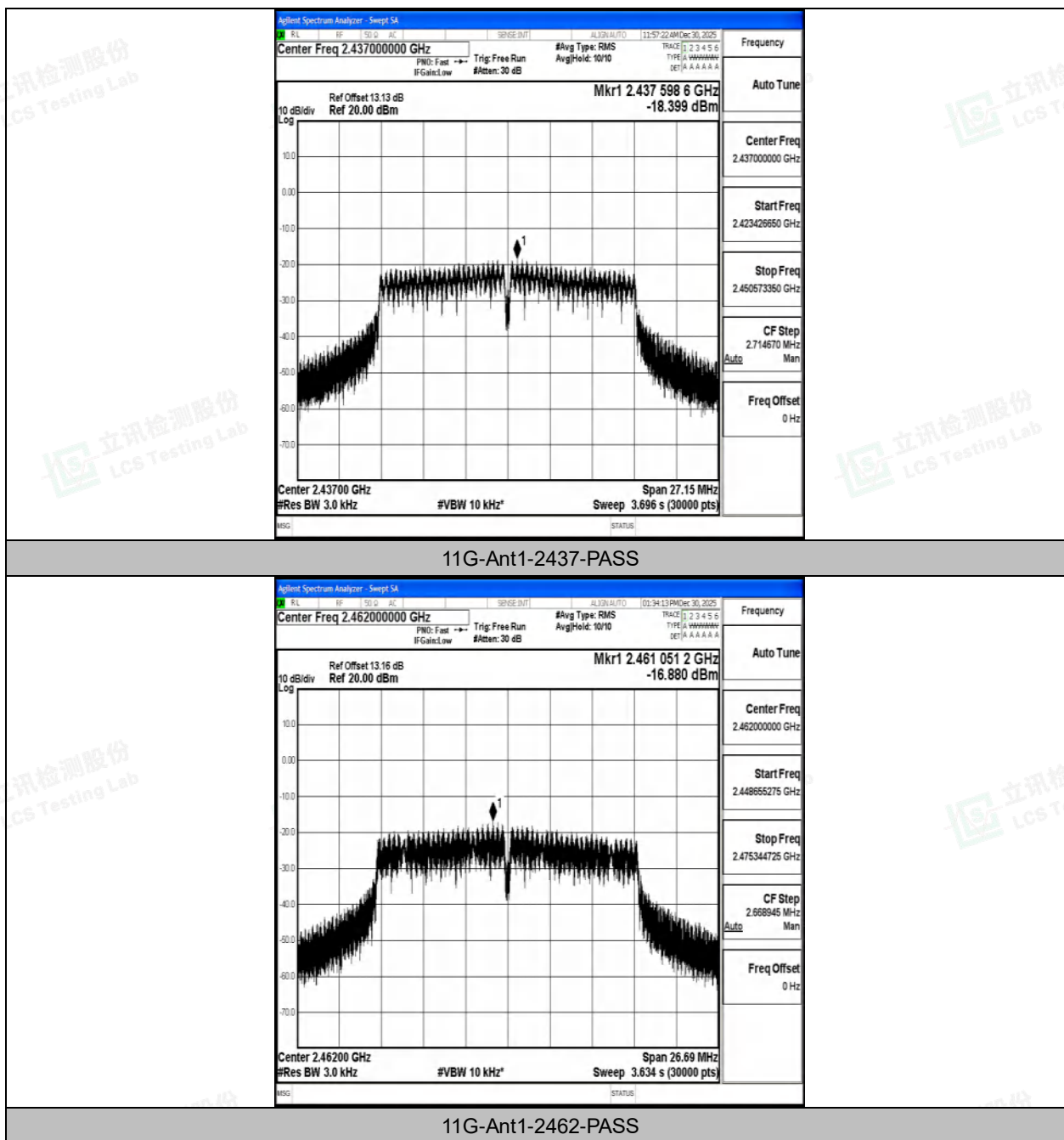


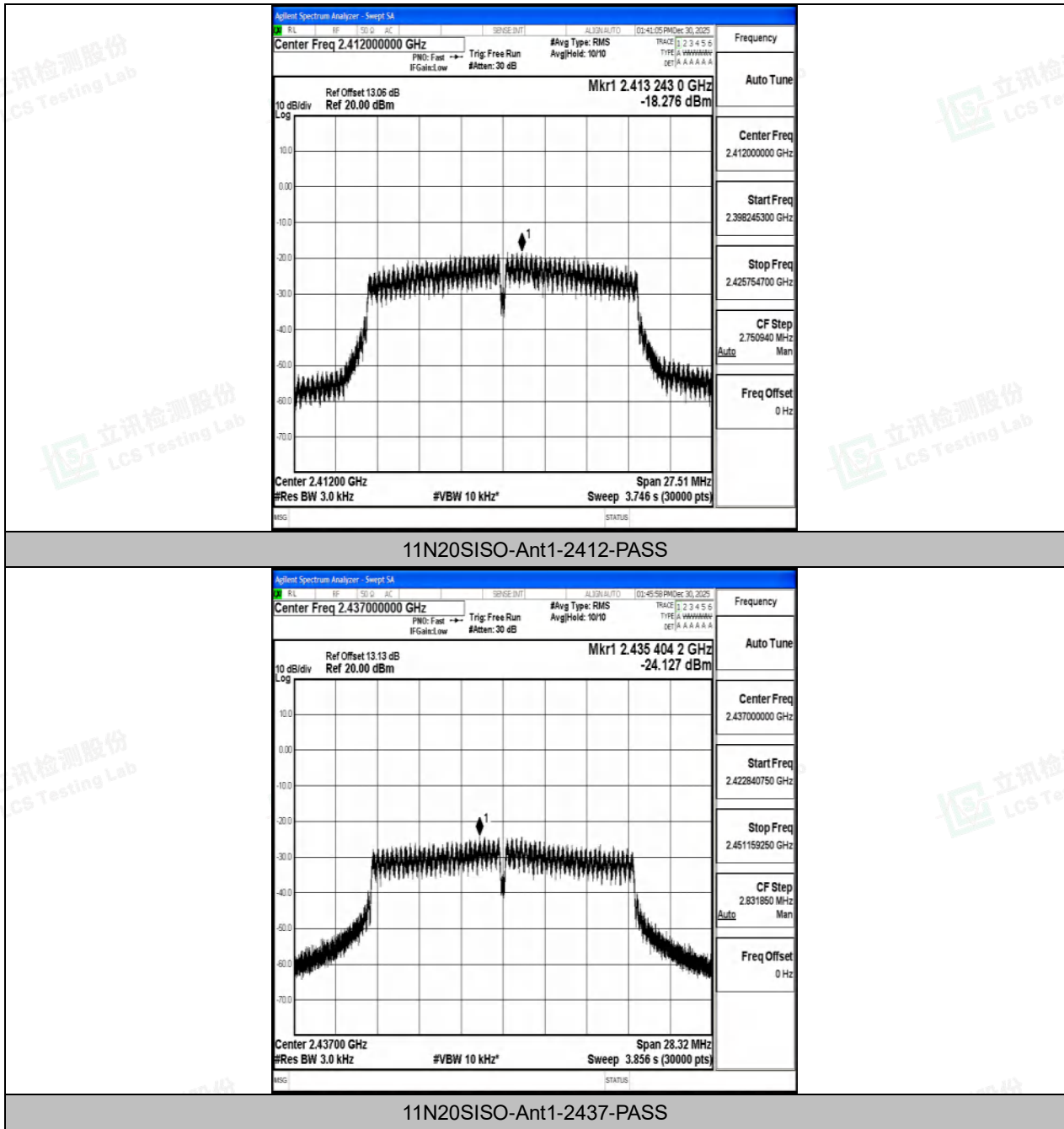


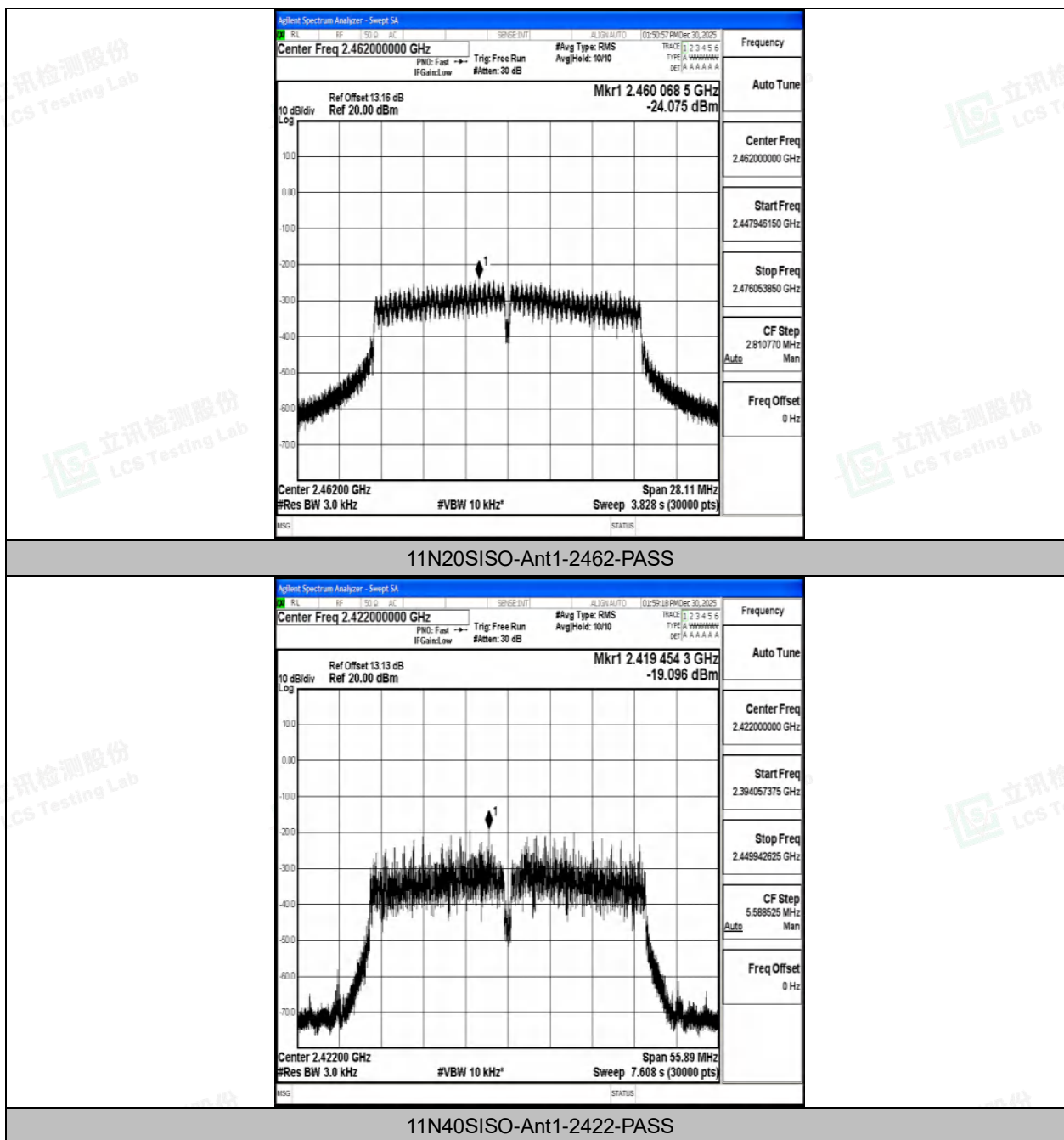
Test Graphs

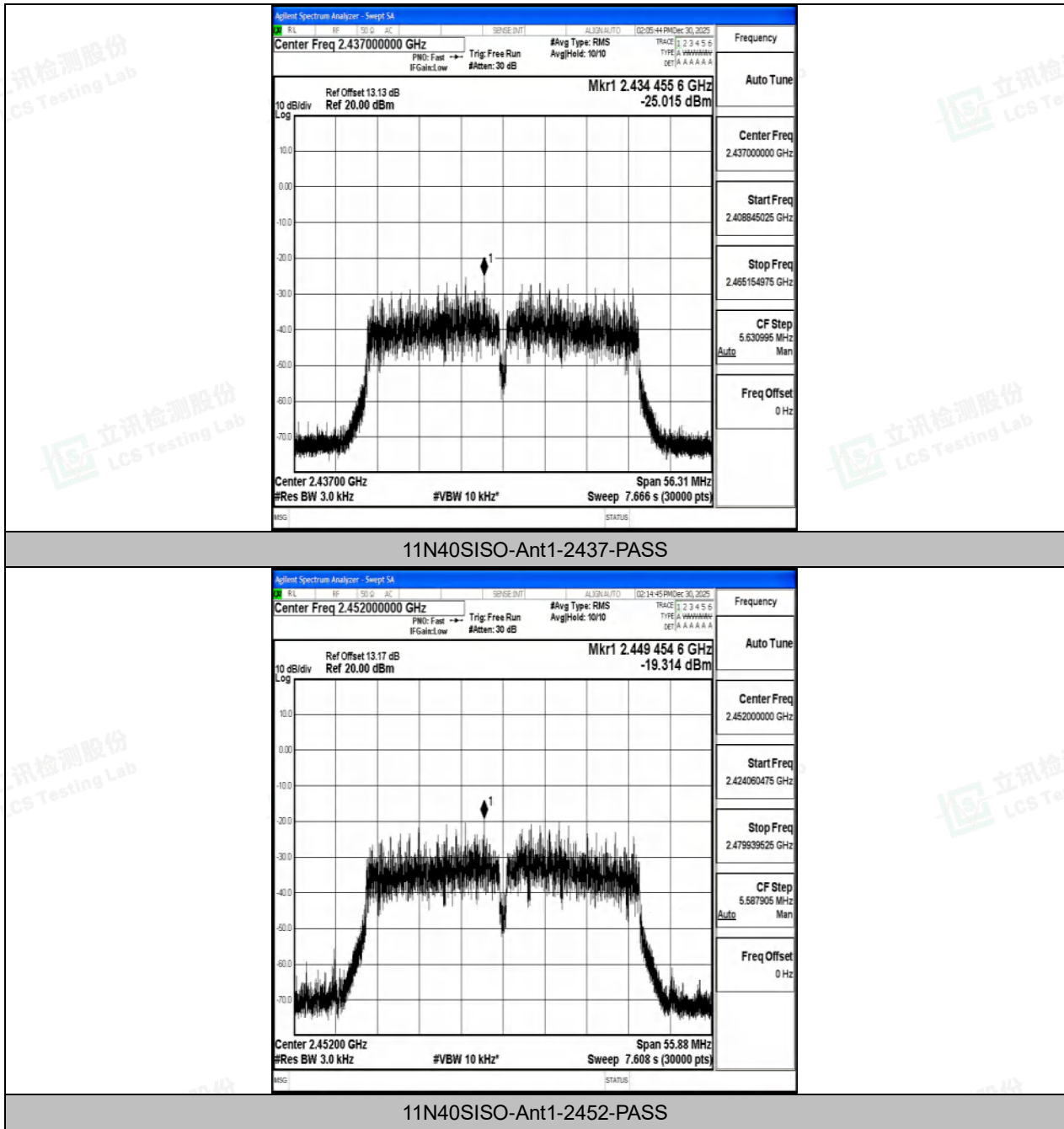














C.4 Band edge

Test Result

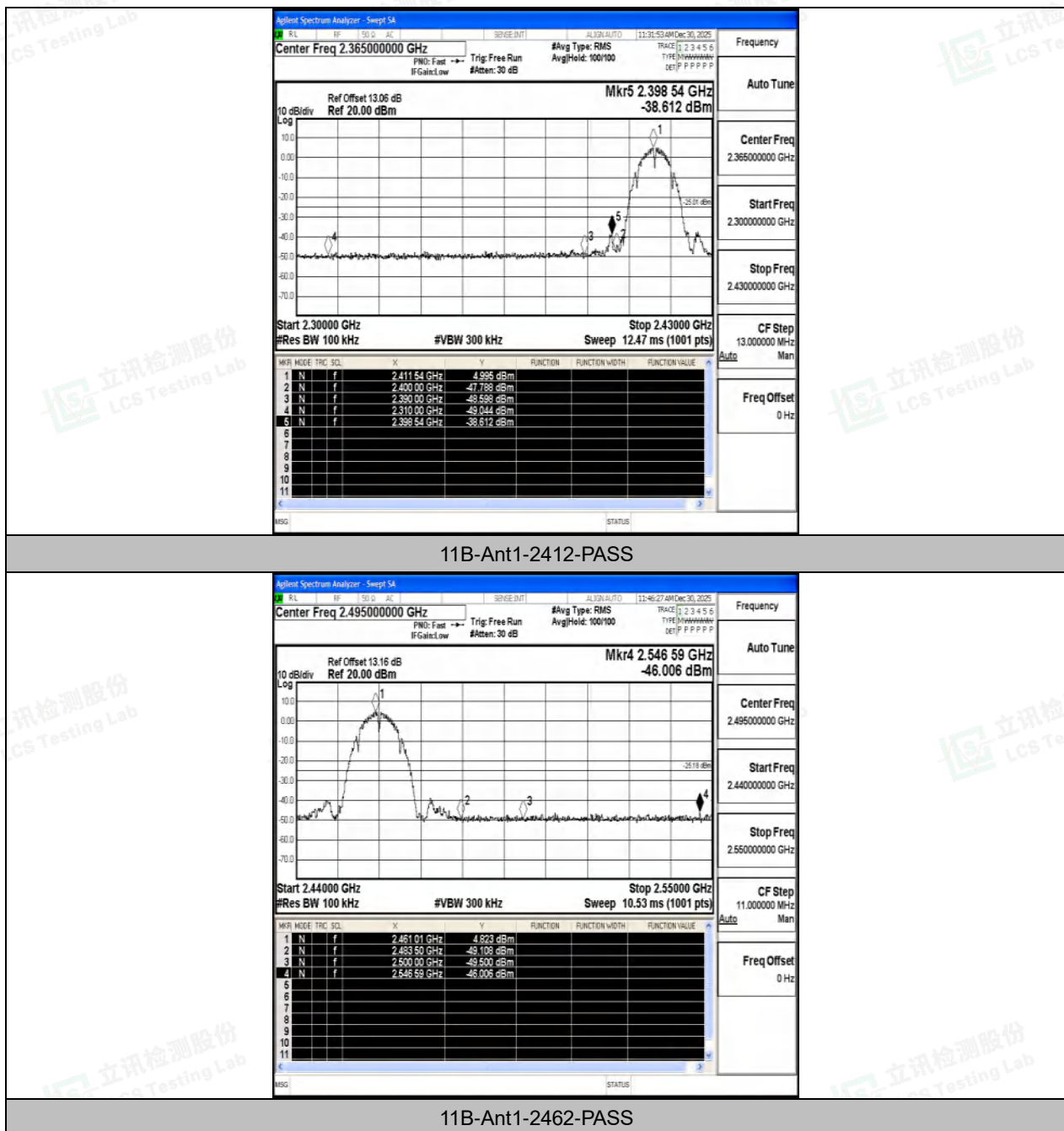
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.00	-38.61	≤-25.01	PASS
11B	Ant1	High	2462	4.82	-46.01	≤-25.18	PASS
11G	Ant1	Low	2412	1.05	-38.47	≤-28.95	PASS
11G	Ant1	High	2462	1.91	-46.09	≤-28.09	PASS
11N20SISO	Ant1	Low	2412	2.95	-42	≤-27.05	PASS
11N20SISO	Ant1	High	2462	-3.44	-46.09	≤-33.44	PASS
11N40SISO	Ant1	Low	2422	-1.21	-38.42	≤-31.21	PASS
11N40SISO	Ant1	High	2452	-1.50	-45.87	≤-31.5	PASS

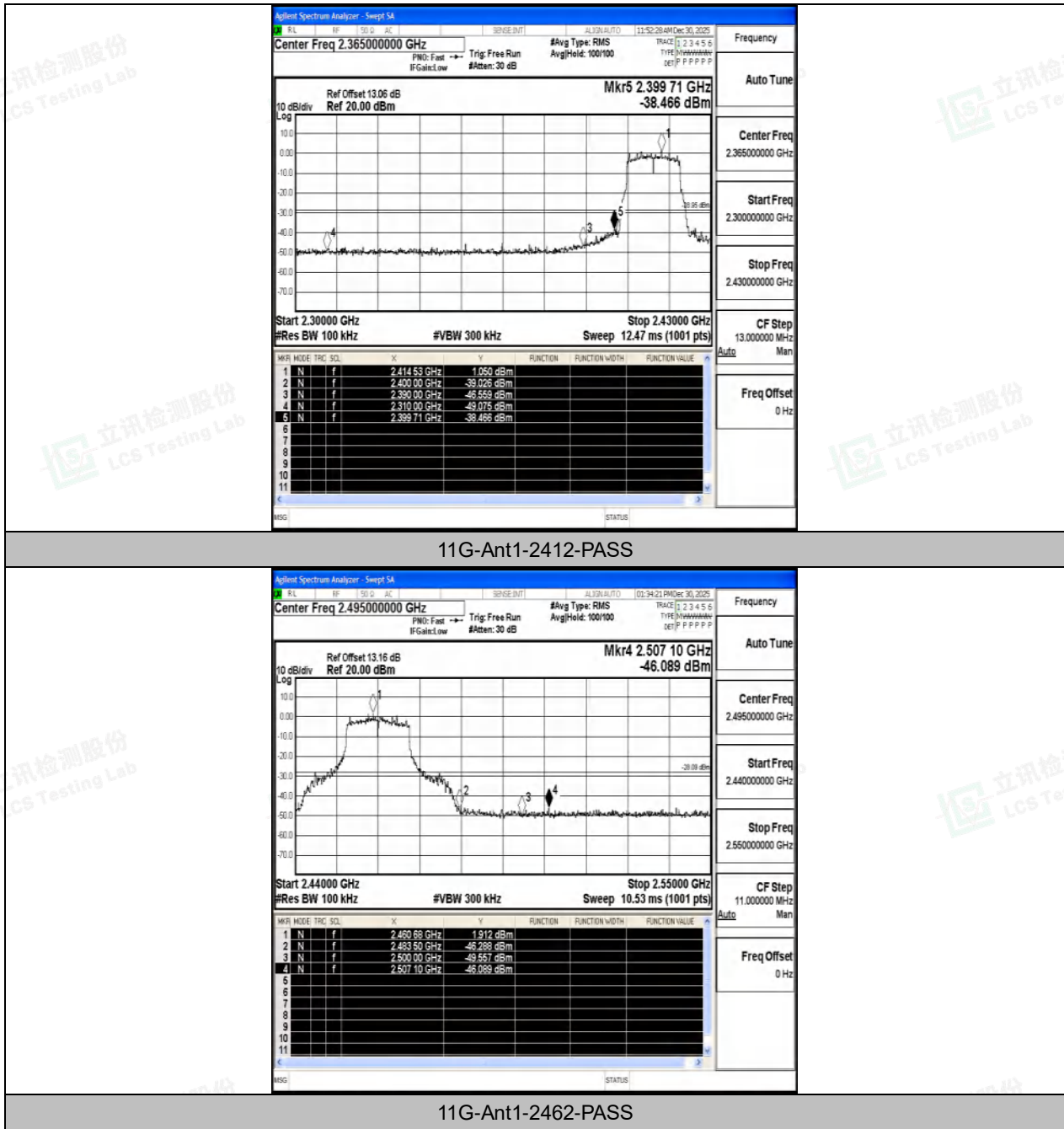
Note :offset=System attenuation +cabal loss

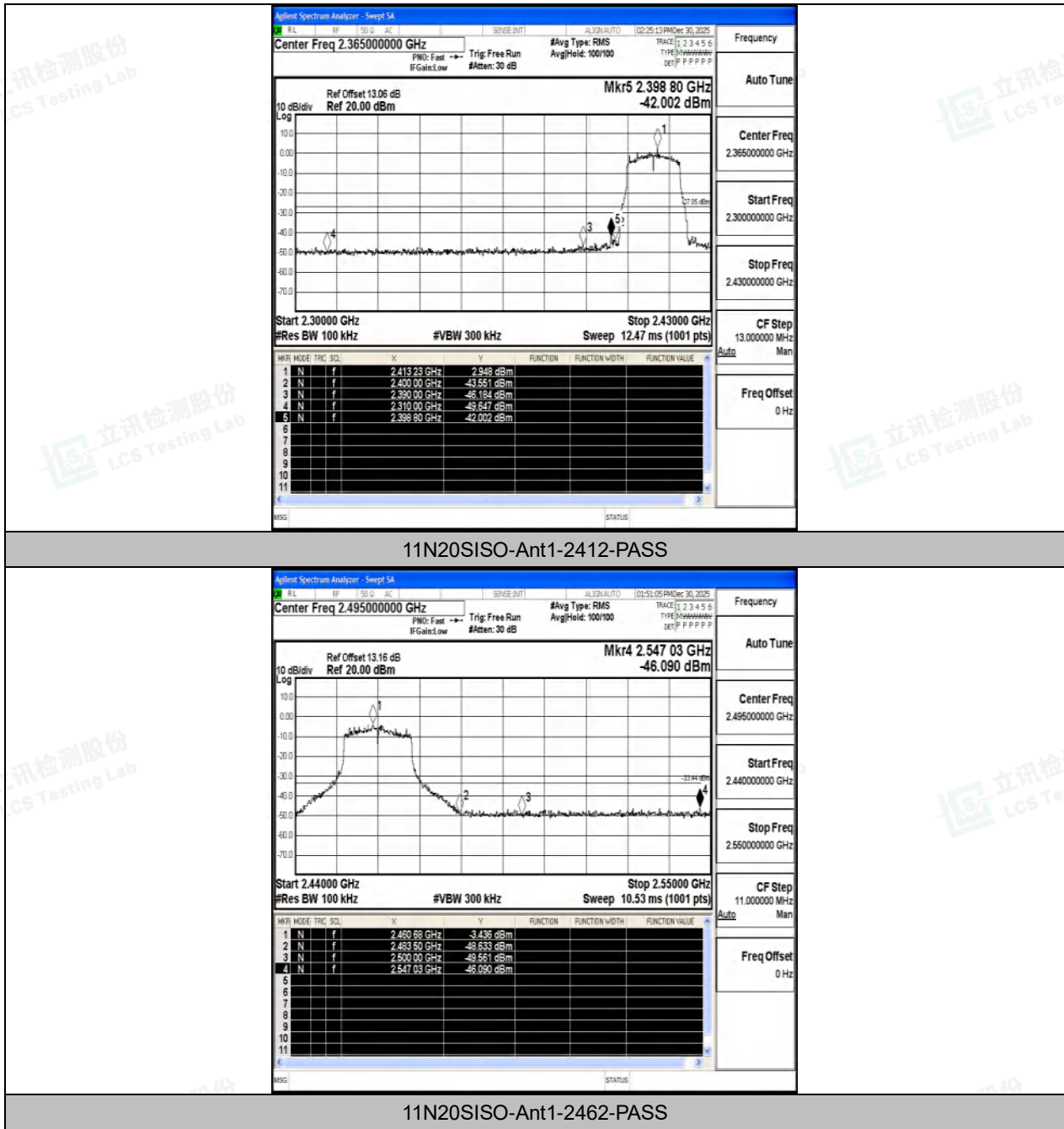


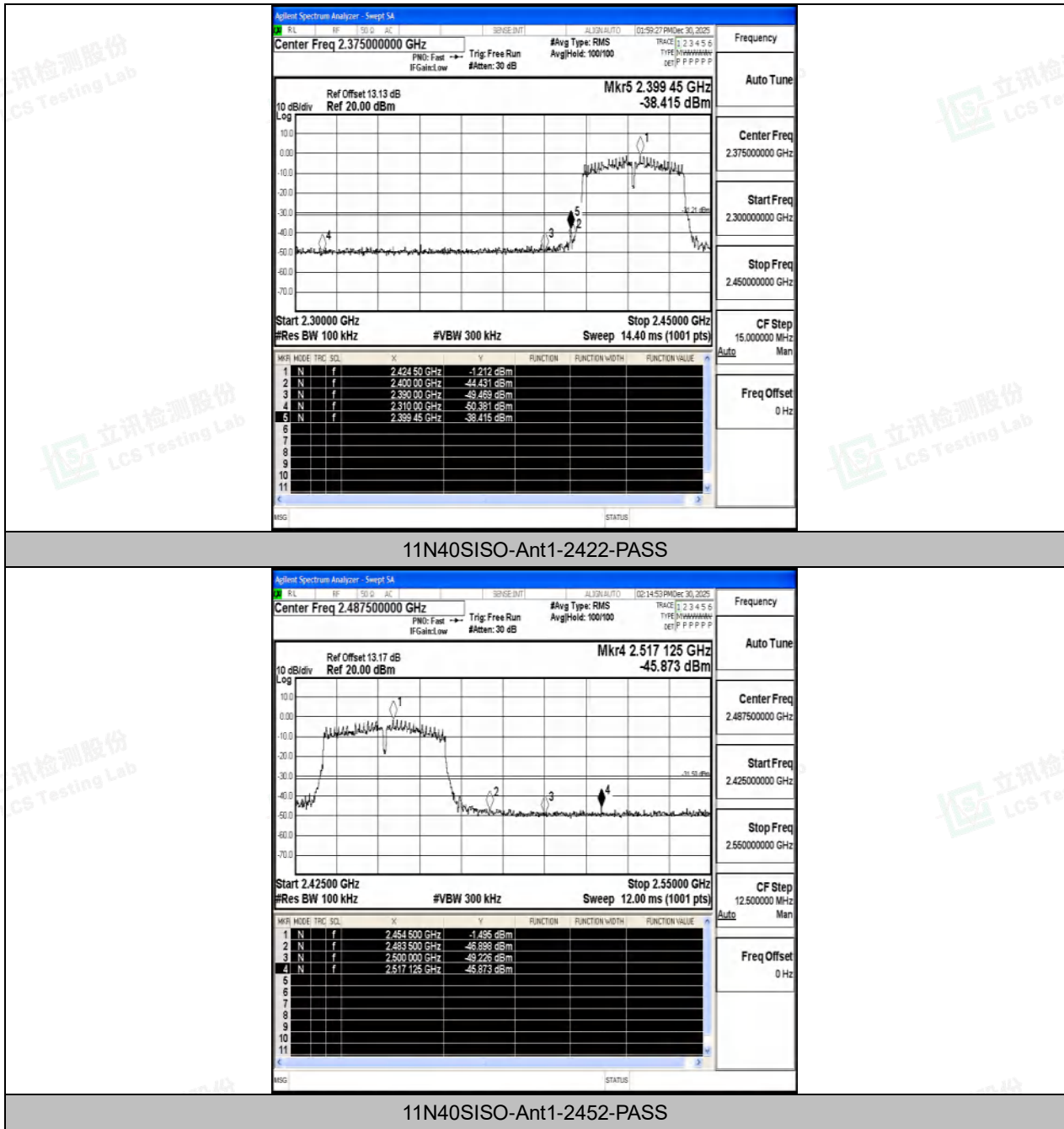


Test Graphs











C.5 Conducted Spurious Emission

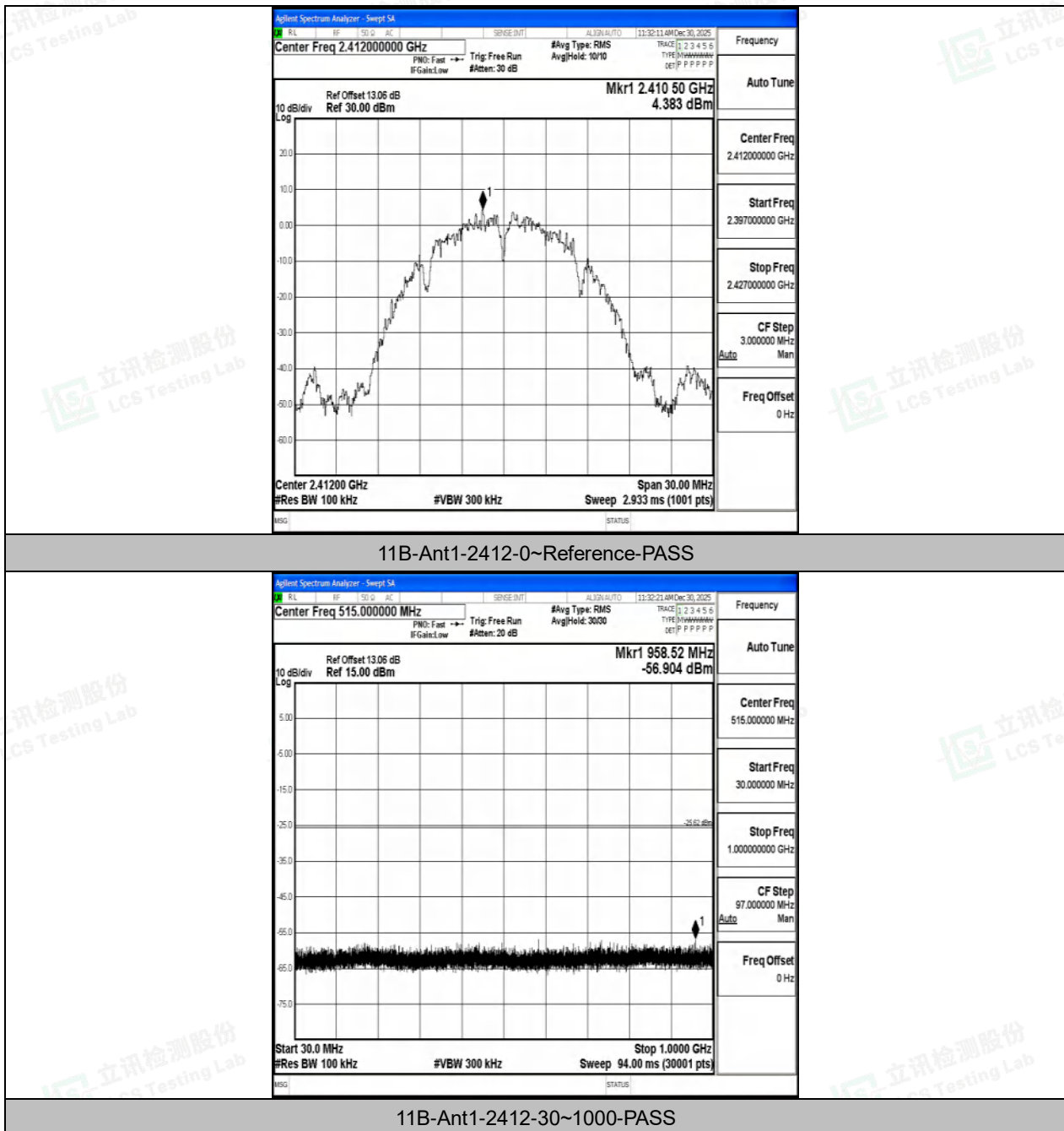
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	0~Reference	4.38	4.38	---	PASS
11B	Ant1	2412	30~1000	4.38	-56.9	≤-25.62	PASS
11B	Ant1	2412	1000~26500	4.38	-43.81	≤-25.62	PASS
11B	Ant1	2437	0~Reference	8.13	8.13	---	PASS
11B	Ant1	2437	30~1000	8.13	-56.71	≤-21.87	PASS
11B	Ant1	2437	1000~26500	8.13	-43.06	≤-21.87	PASS
11B	Ant1	2462	0~Reference	4.17	4.17	---	PASS
11B	Ant1	2462	30~1000	4.17	-57.38	≤-25.83	PASS
11B	Ant1	2462	1000~26500	4.17	-43.82	≤-25.83	PASS
11G	Ant1	2412	0~Reference	-1.09	-1.09	---	PASS
11G	Ant1	2412	30~1000	-1.09	-57.14	≤-31.09	PASS
11G	Ant1	2412	1000~26500	-1.09	-44.64	≤-31.09	PASS
11G	Ant1	2437	0~Reference	2.03	2.03	---	PASS
11G	Ant1	2437	30~1000	2.03	-57.12	≤-27.97	PASS
11G	Ant1	2437	1000~26500	2.03	-44.82	≤-27.97	PASS
11G	Ant1	2462	0~Reference	0.29	0.29	---	PASS
11G	Ant1	2462	30~1000	0.29	-57.04	≤-29.71	PASS
11G	Ant1	2462	1000~26500	0.29	-44.55	≤-29.71	PASS
11N20SISO	Ant1	2412	0~Reference	-0.97	-0.97	---	PASS
11N20SISO	Ant1	2412	30~1000	-0.97	-56.55	≤-30.97	PASS
11N20SISO	Ant1	2412	1000~26500	-0.97	-44.65	≤-30.97	PASS
11N20SISO	Ant1	2437	0~Reference	-4.70	-4.70	---	PASS
11N20SISO	Ant1	2437	30~1000	-4.70	-57.39	≤-34.7	PASS
11N20SISO	Ant1	2437	1000~26500	-4.70	-44.33	≤-34.7	PASS
11N20SISO	Ant1	2462	0~Reference	-5.63	-5.63	---	PASS
11N20SISO	Ant1	2462	30~1000	-5.63	-57.2	≤-35.63	PASS
11N20SISO	Ant1	2462	1000~26500	-5.63	-44.19	≤-35.63	PASS
11N40SISO	Ant1	2422	0~Reference	-1.51	-1.51	---	PASS
11N40SISO	Ant1	2422	30~1000	-1.51	-56.78	≤-31.51	PASS
11N40SISO	Ant1	2422	1000~26500	-1.51	-44.92	≤-31.51	PASS
11N40SISO	Ant1	2437	0~Reference	-7.61	-7.61	---	PASS
11N40SISO	Ant1	2437	30~1000	-7.61	-57.13	≤-37.61	PASS
11N40SISO	Ant1	2437	1000~26500	-7.61	-43.31	≤-37.61	PASS
11N40SISO	Ant1	2452	0~Reference	-2.05	-2.05	---	PASS
11N40SISO	Ant1	2452	30~1000	-2.05	-57.14	≤-32.05	PASS
11N40SISO	Ant1	2452	1000~26500	-2.05	-44.42	≤-32.05	PASS

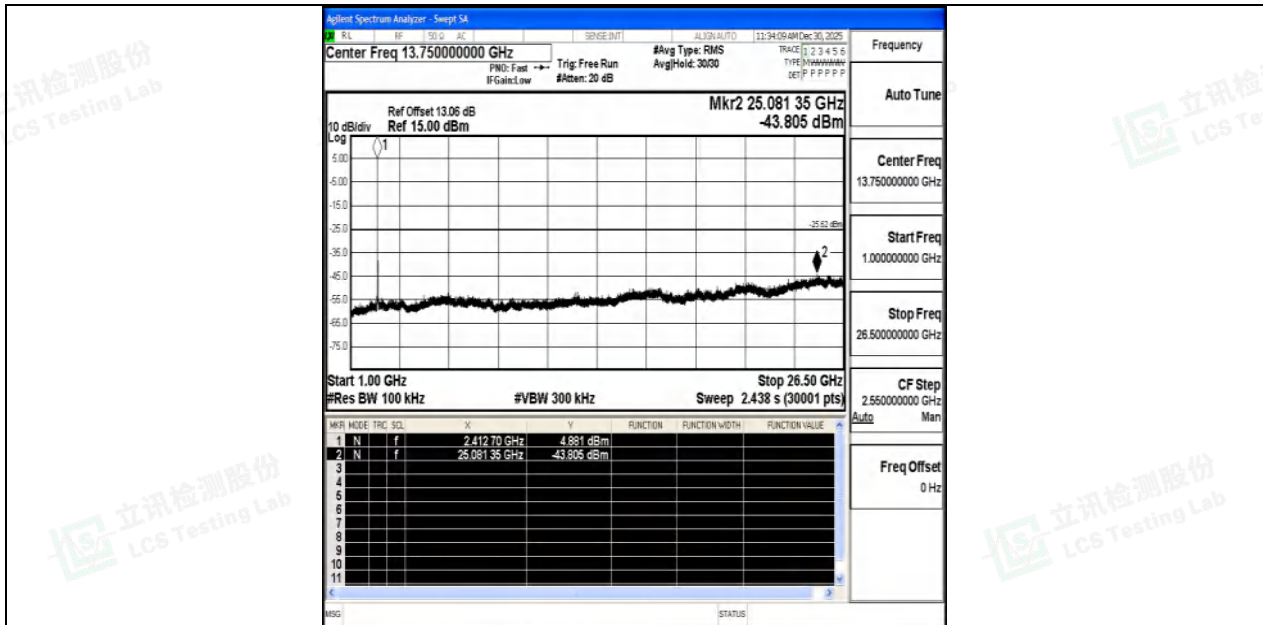
Note :Regarding the spurious emissions from 30MHz to 26.5GHz, the cable lose have been set in the CORREC' of the Spectrum Analyzer during the test.



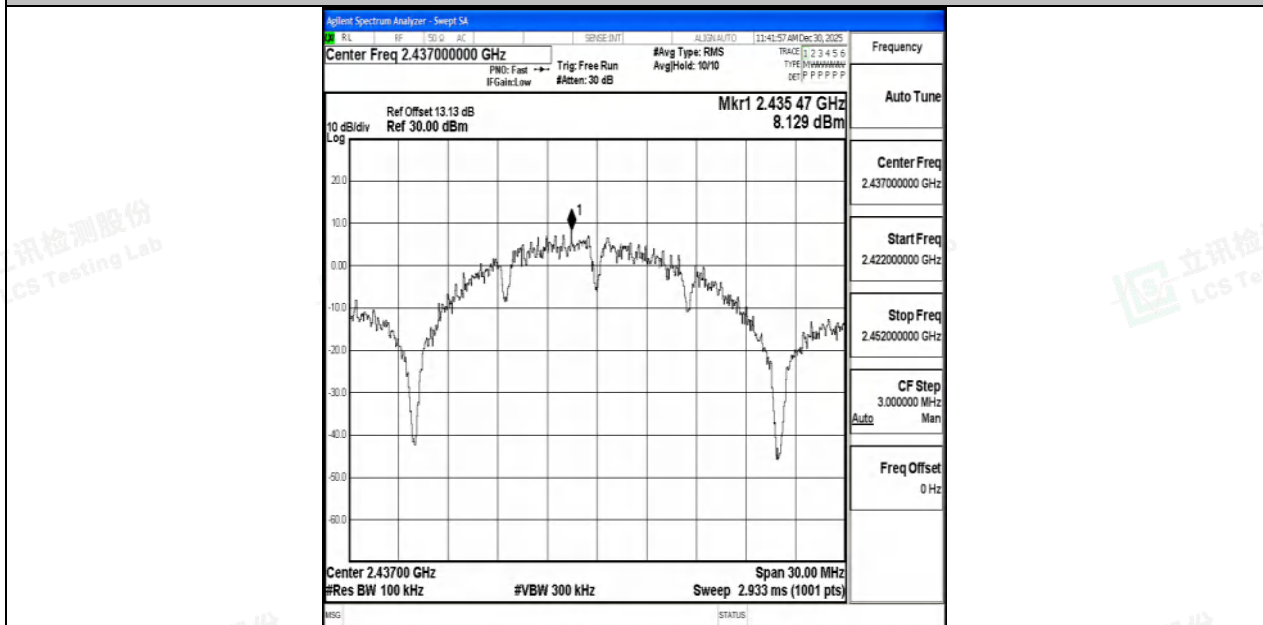


Test Graphs



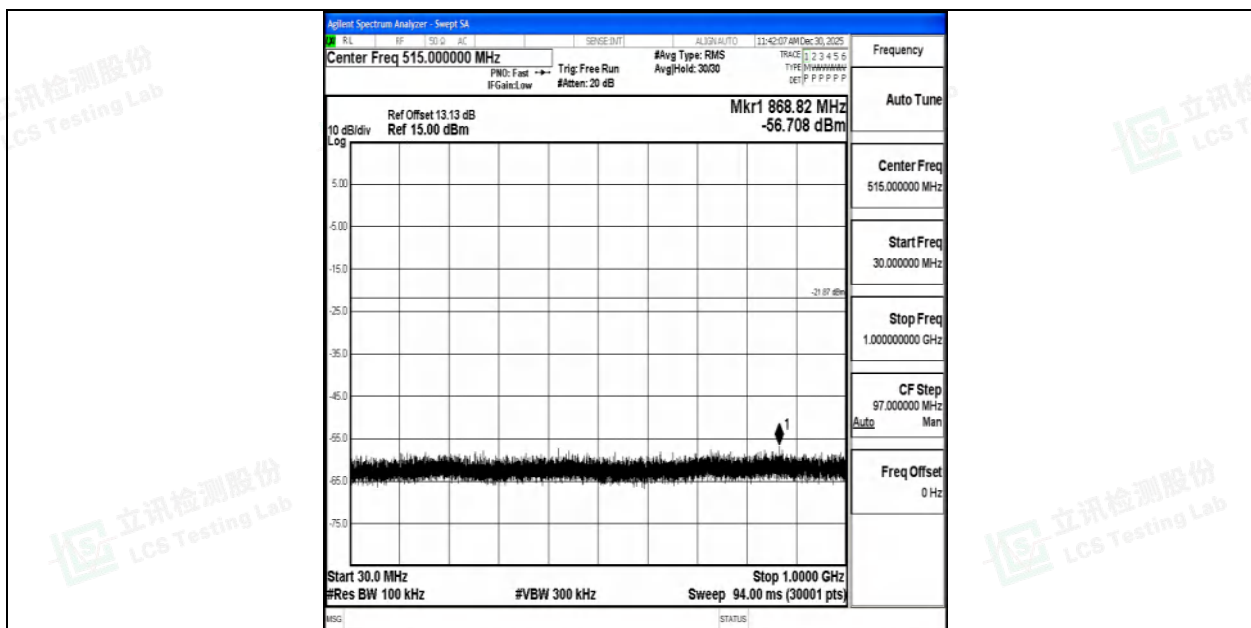


11B-Ant1-2412-1000~26500-PASS

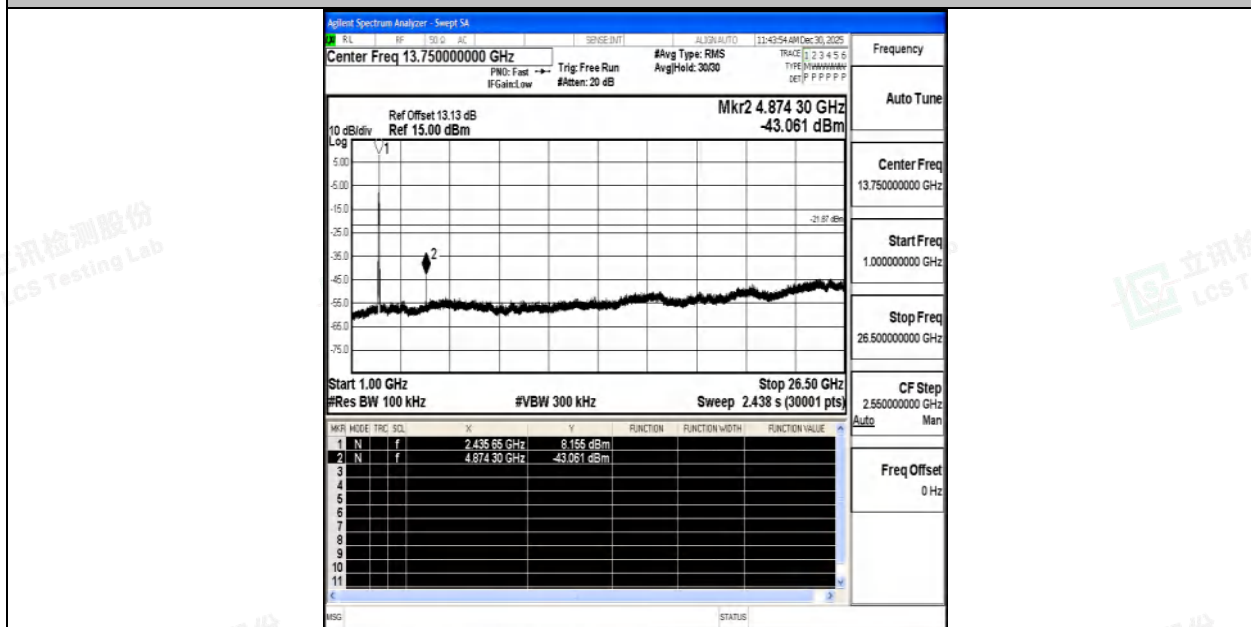


11B-Ant1-2437-0~Reference-PASS



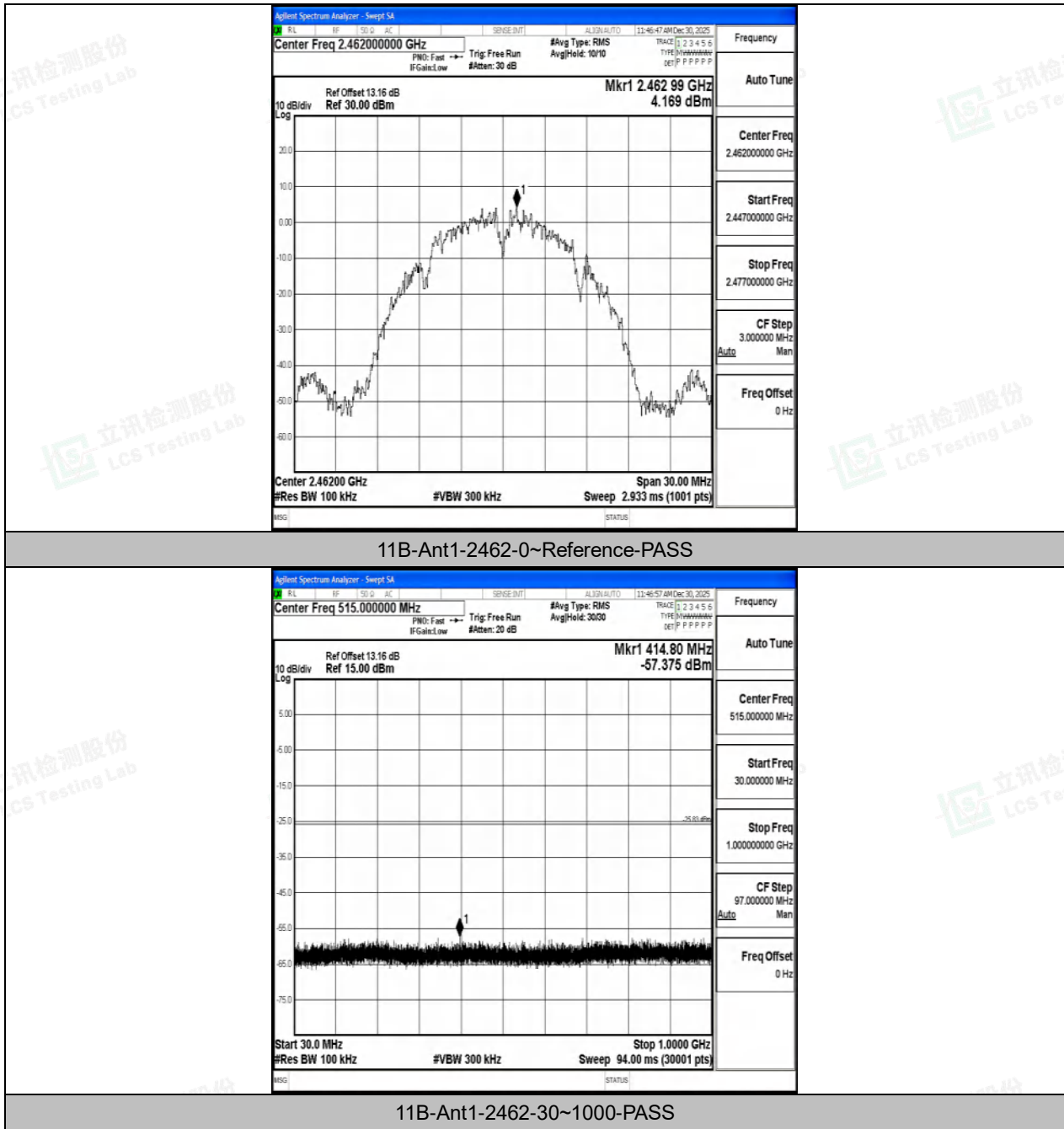


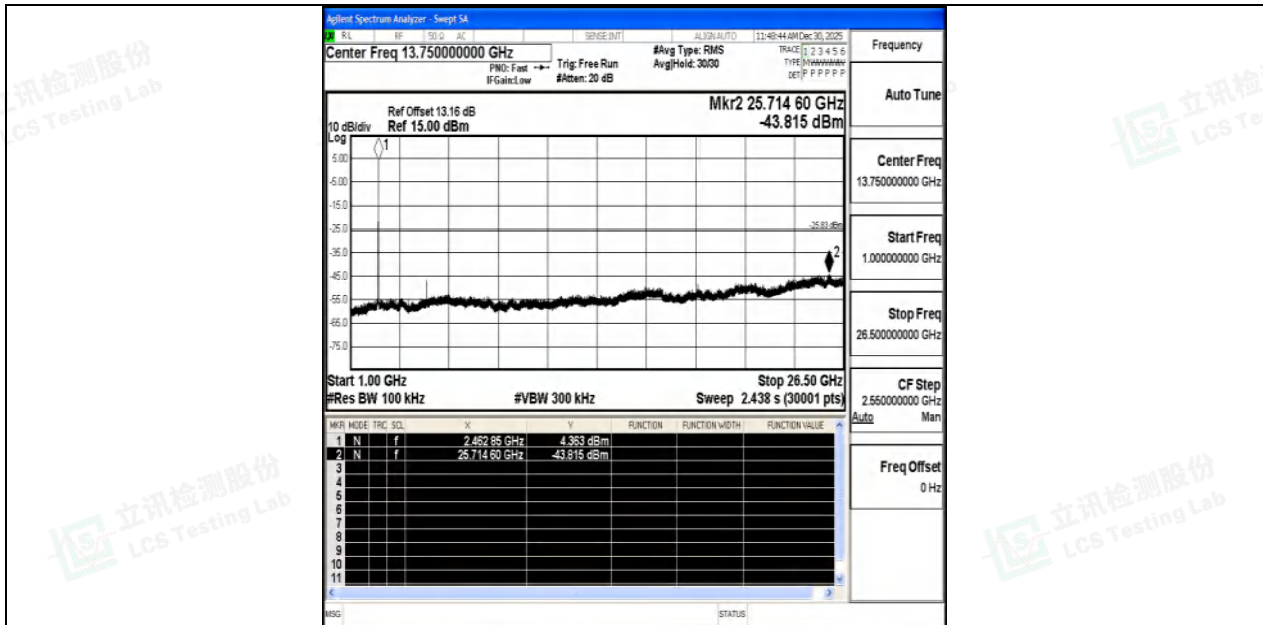
11B-Ant1-2437-30~1000-PASS



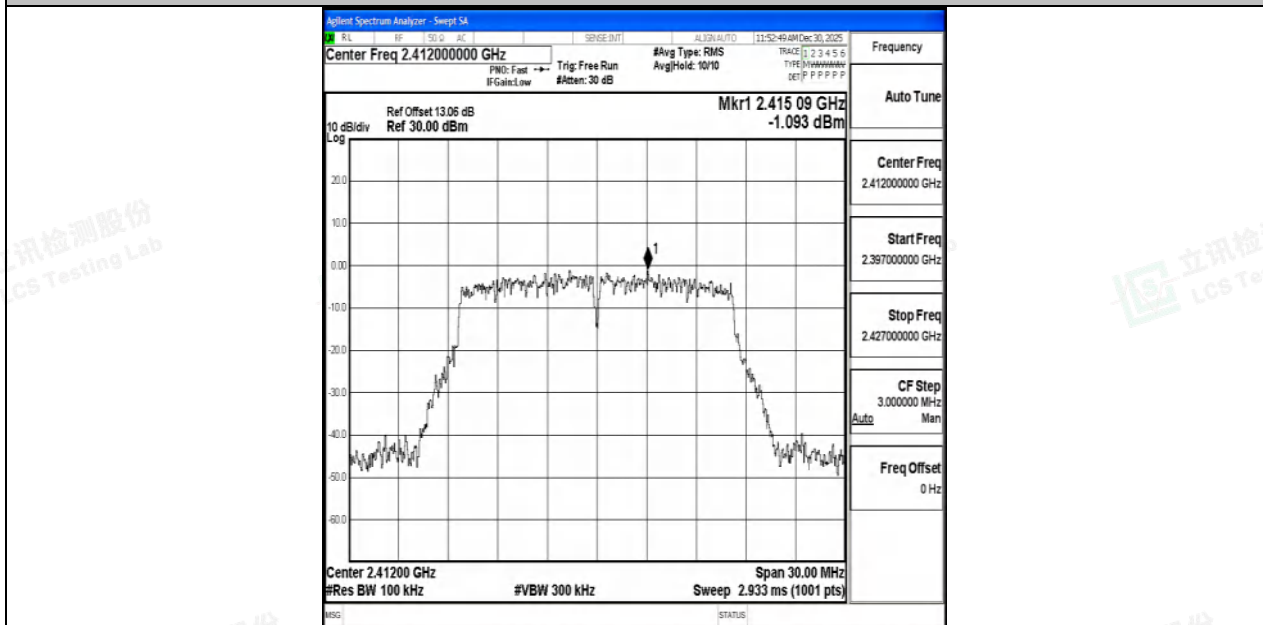
11B-Ant1-2437-1000~26500-PASS





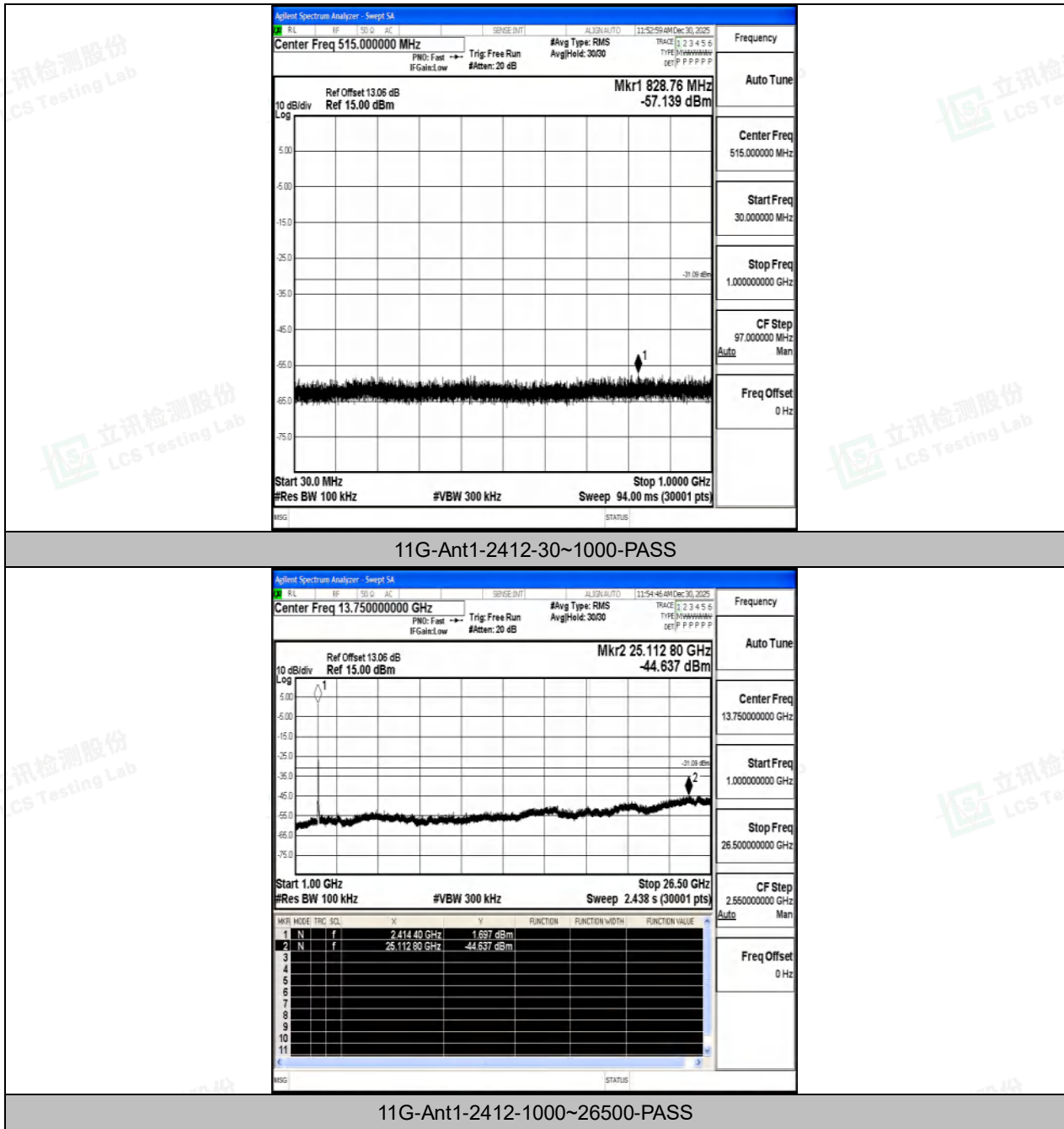


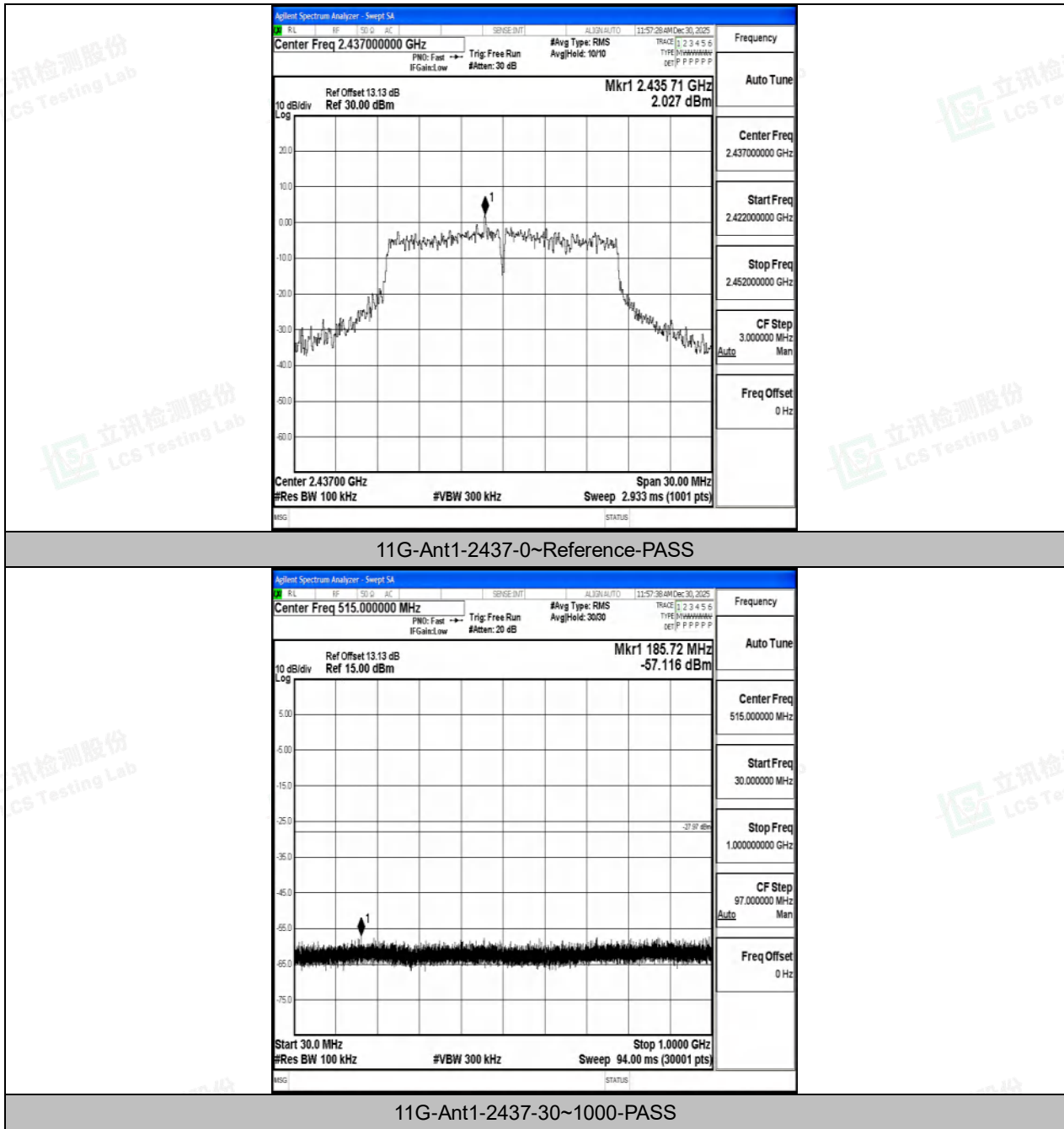
11B-Ant1-2462-1000~26500-PASS

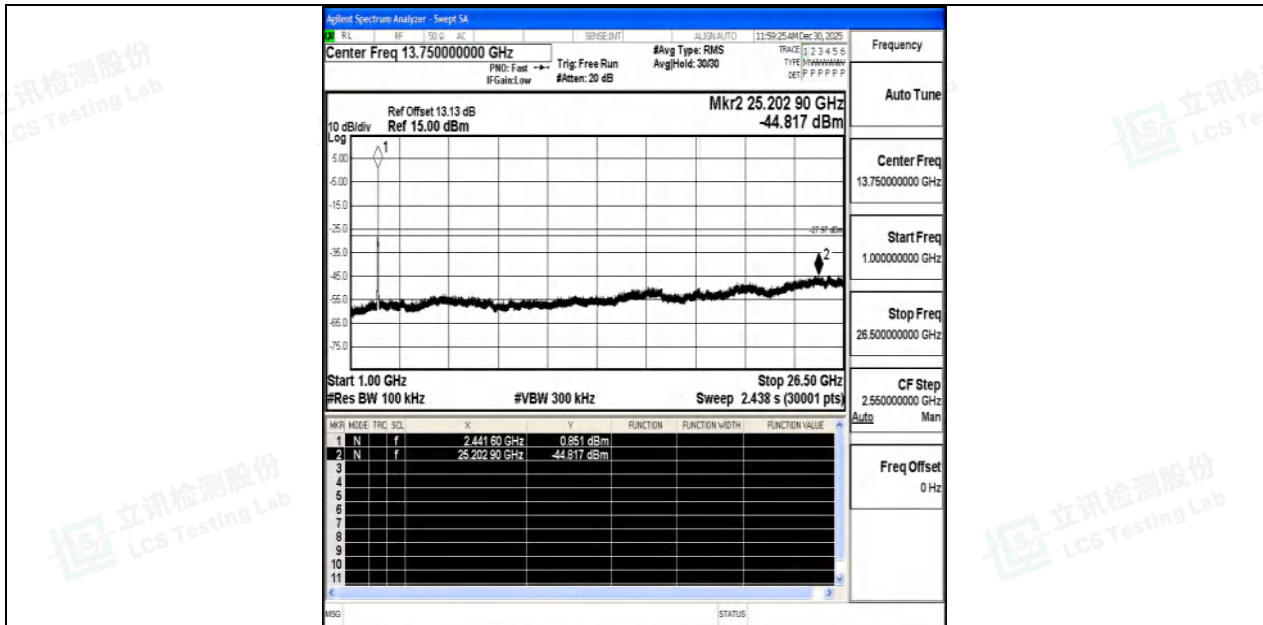


11G-Ant1-2412-0~Reference-PASS

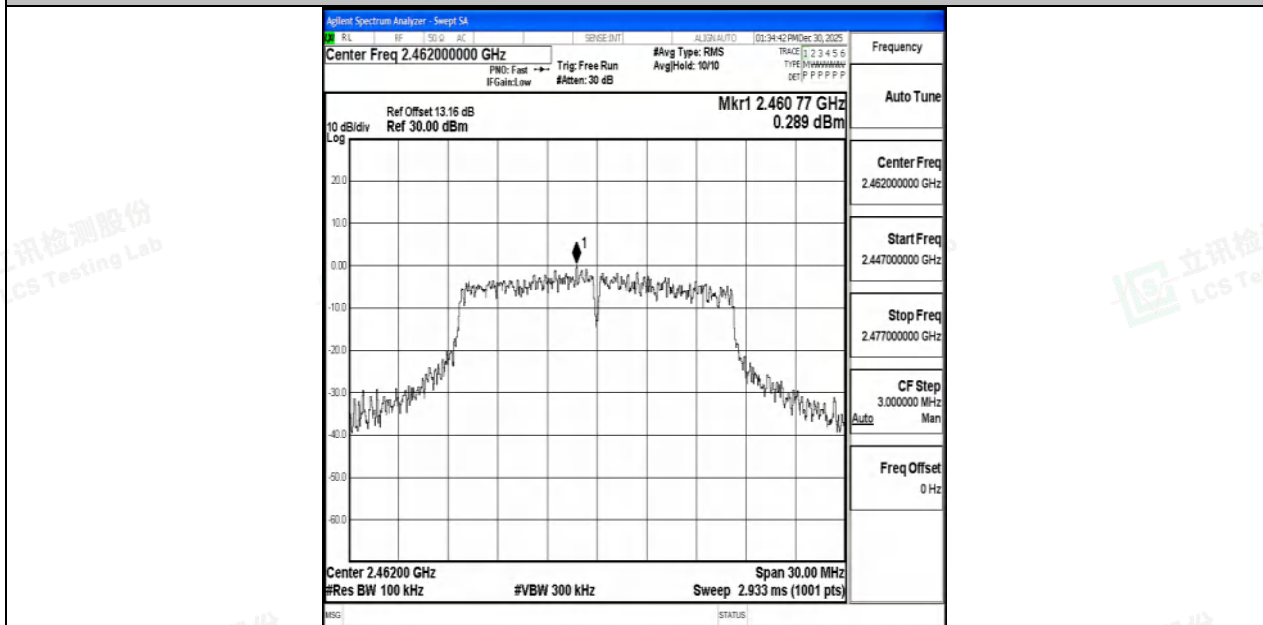






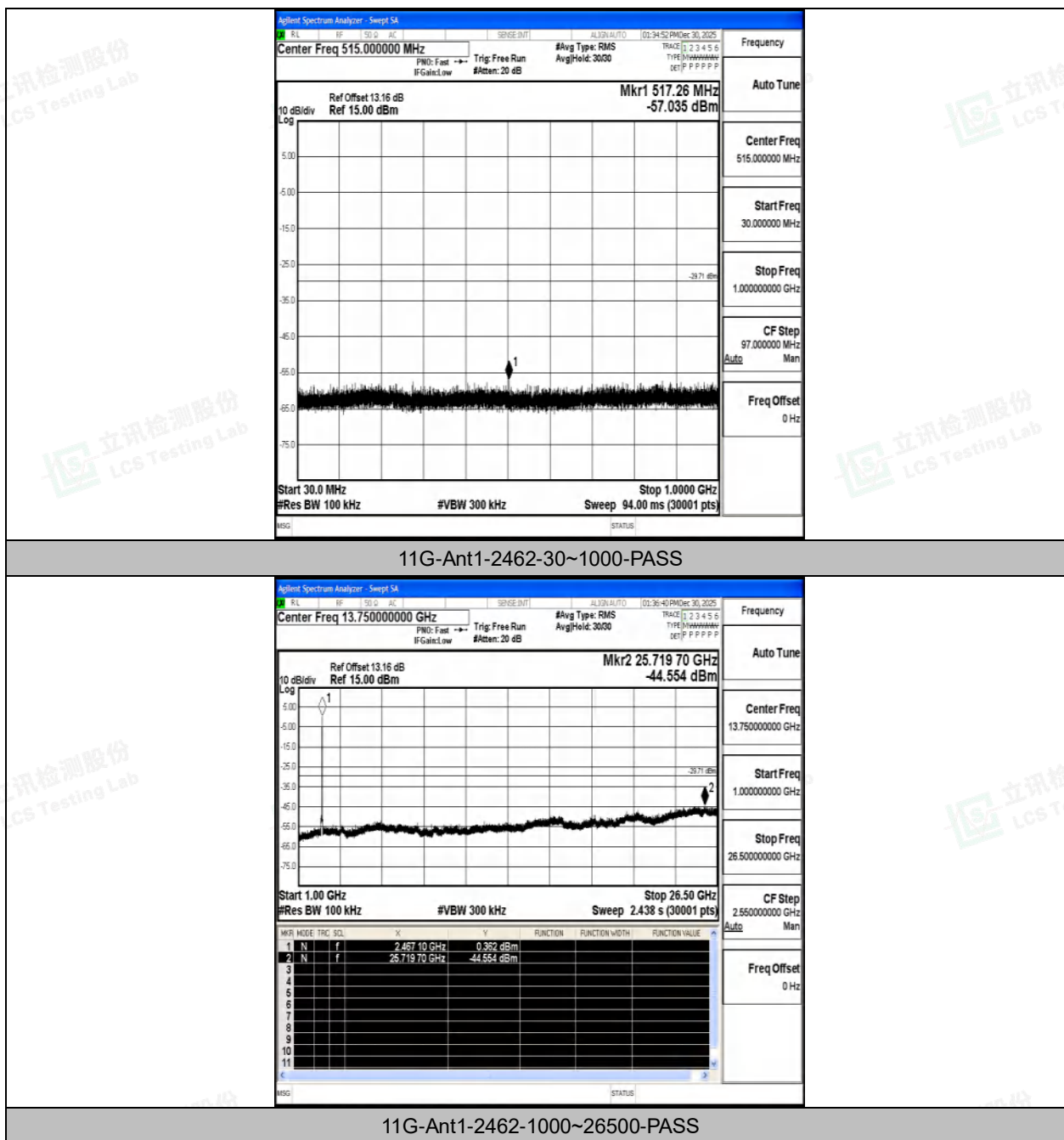


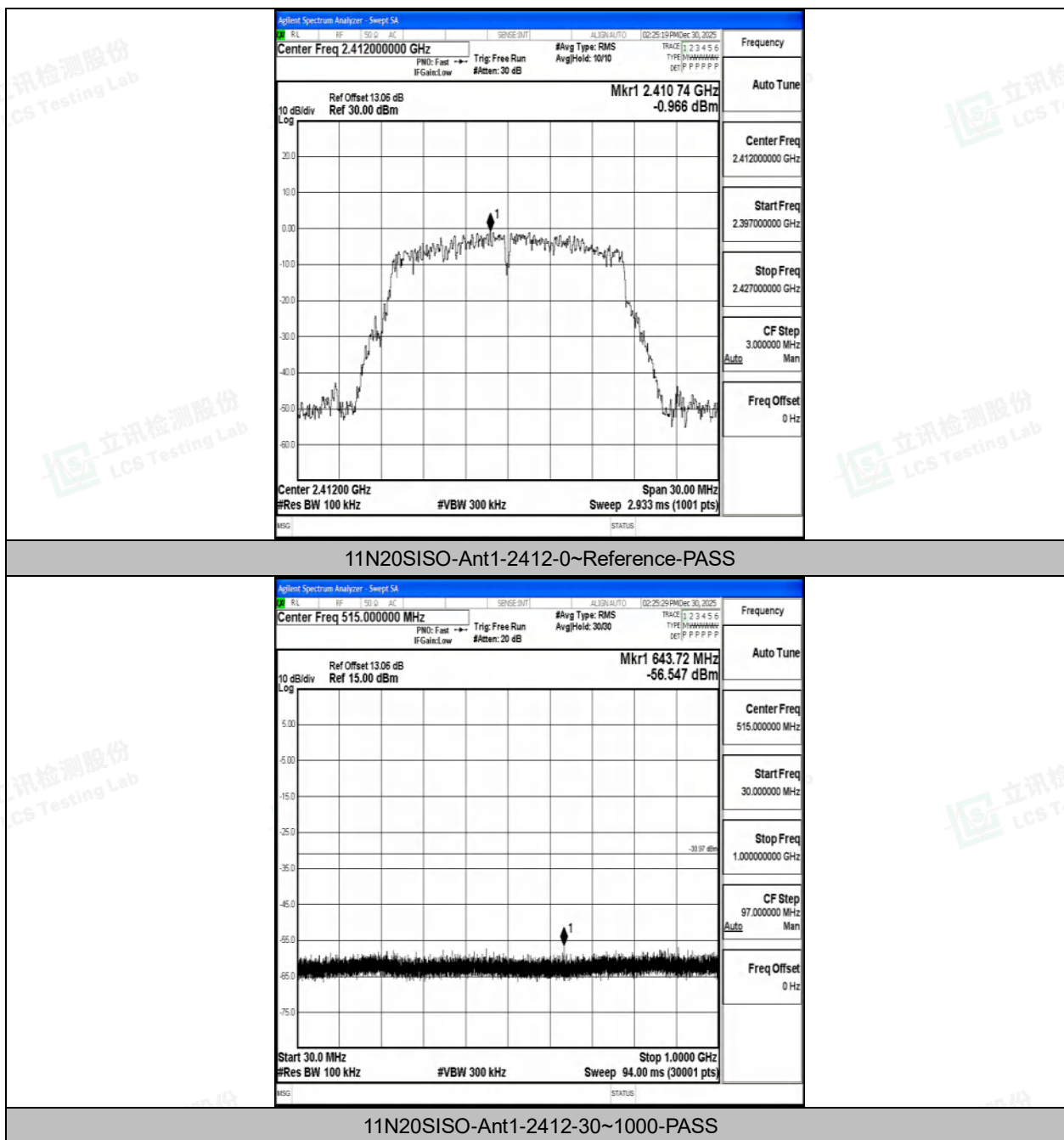
11G-Ant1-2437-1000~26500-PASS

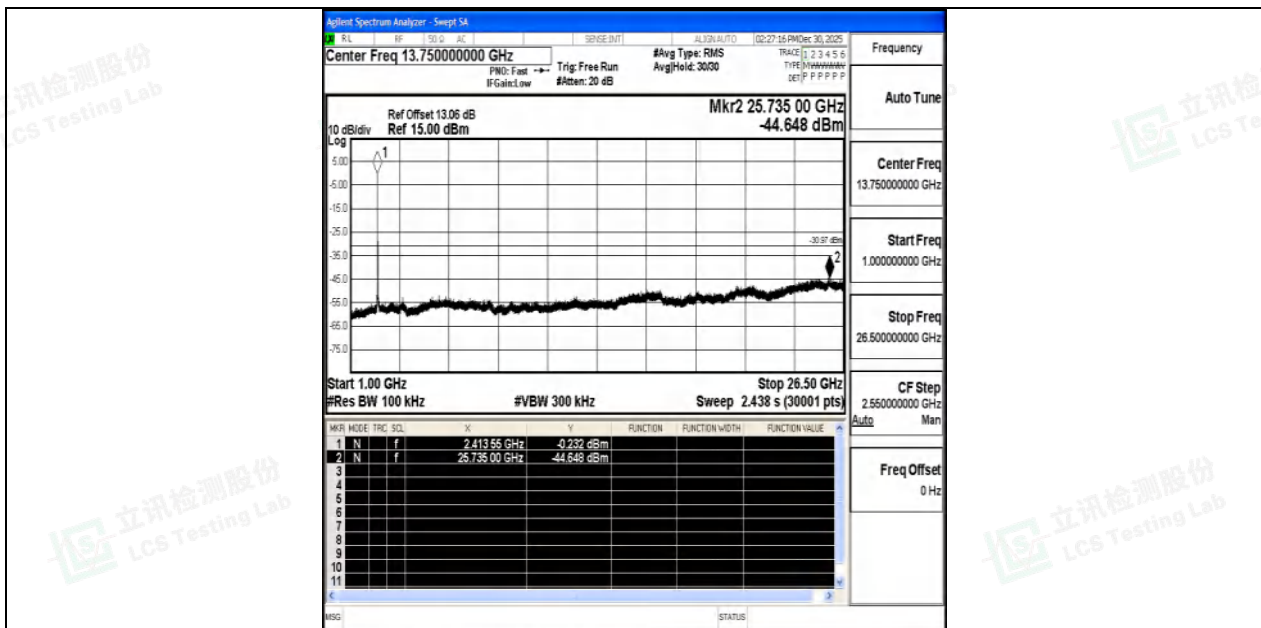


11G-Ant1-2462-0~Reference-PASS

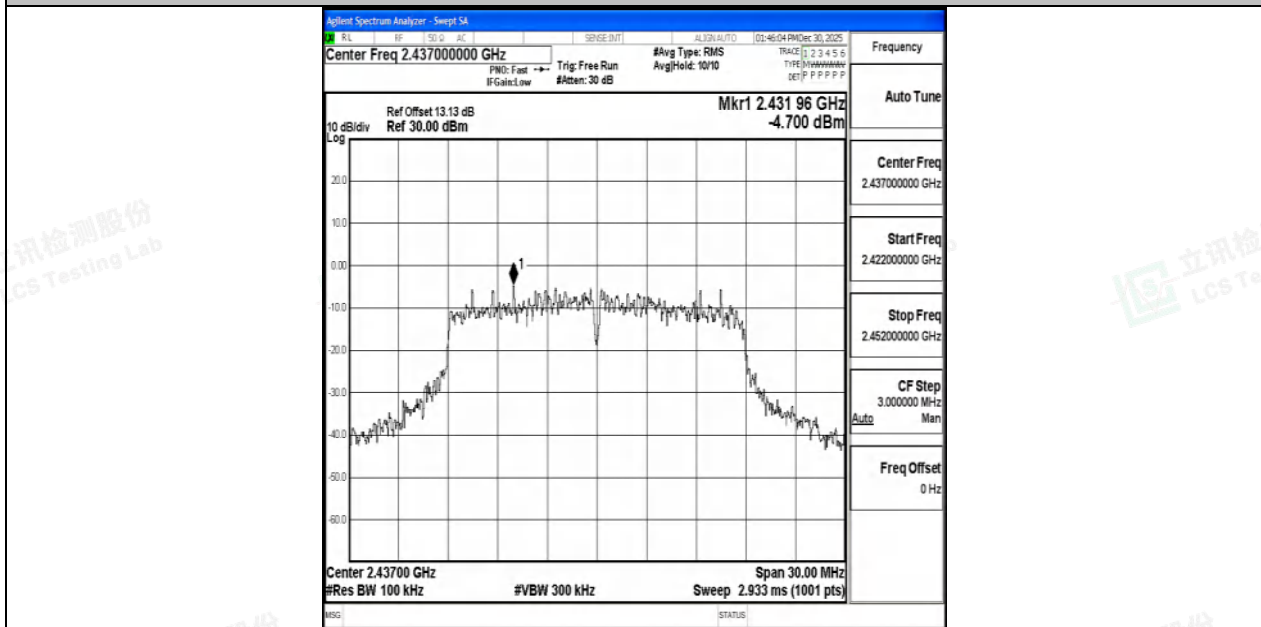






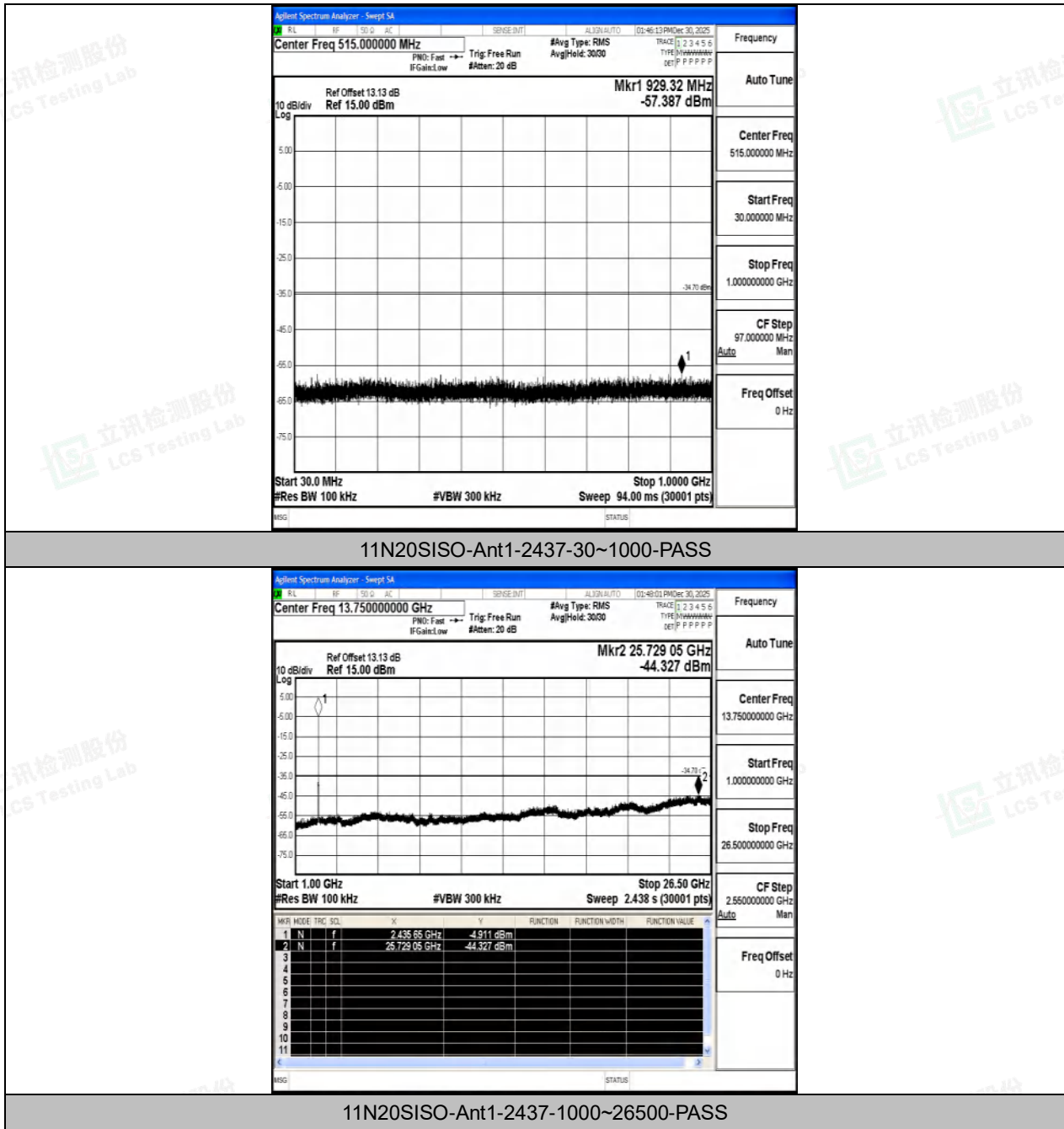


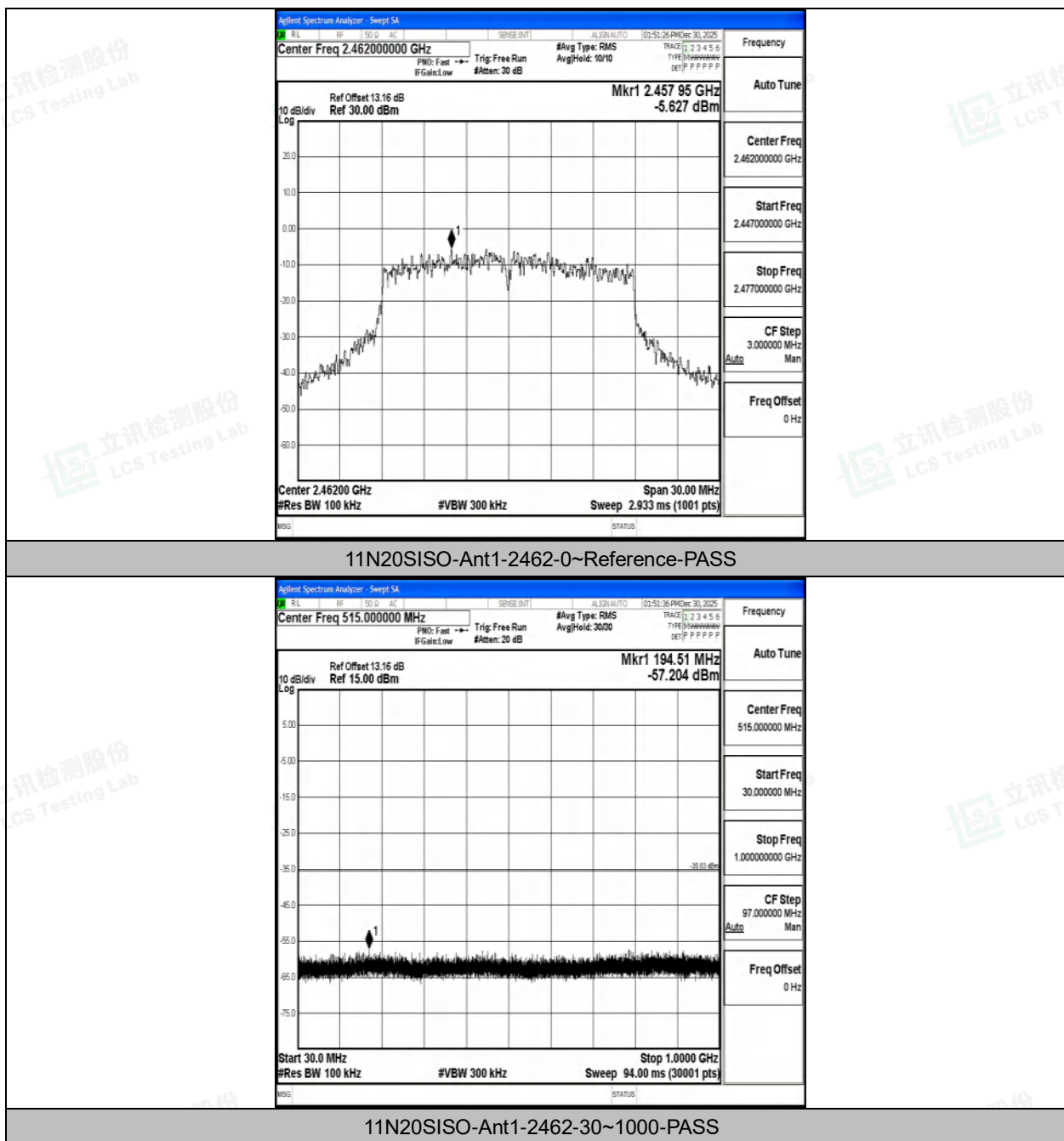
11N20SISO-Ant1-2412-1000~26500-PASS

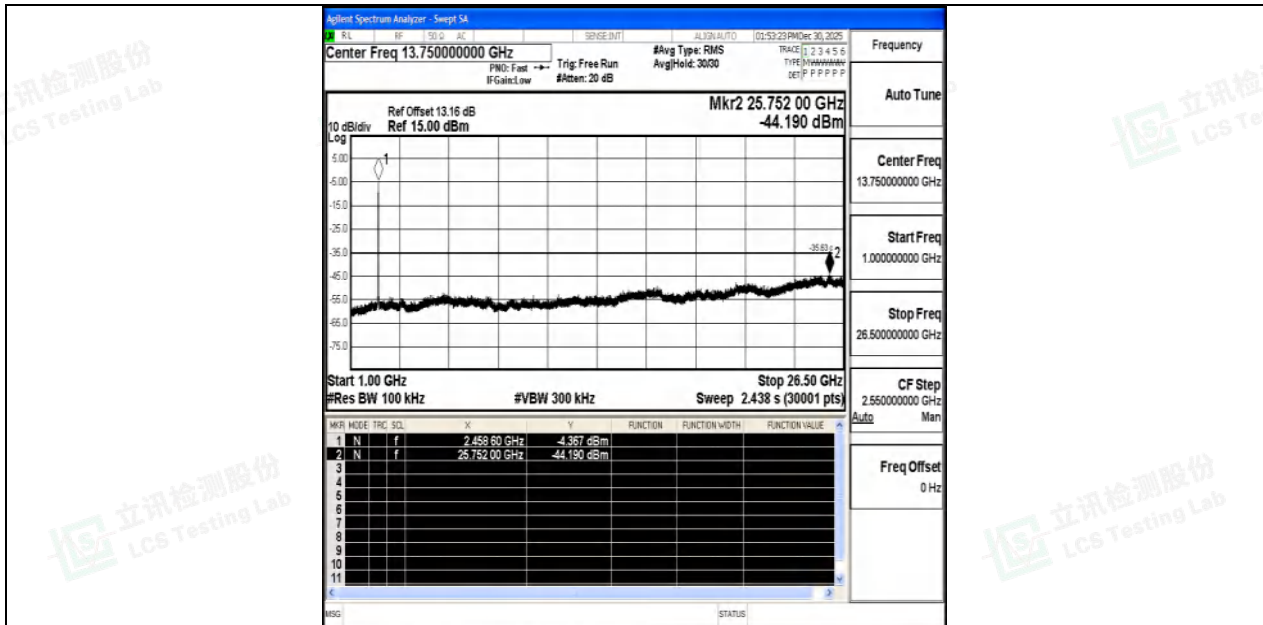


11N20SISO-Ant1-2437-0~Reference-PASS

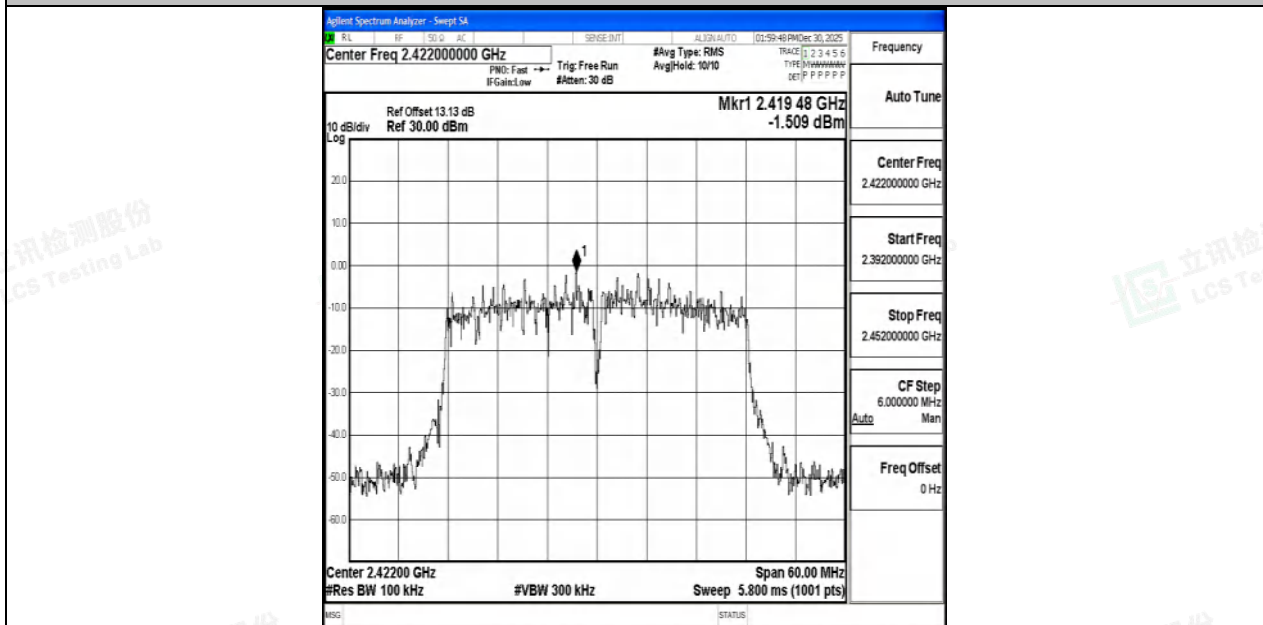






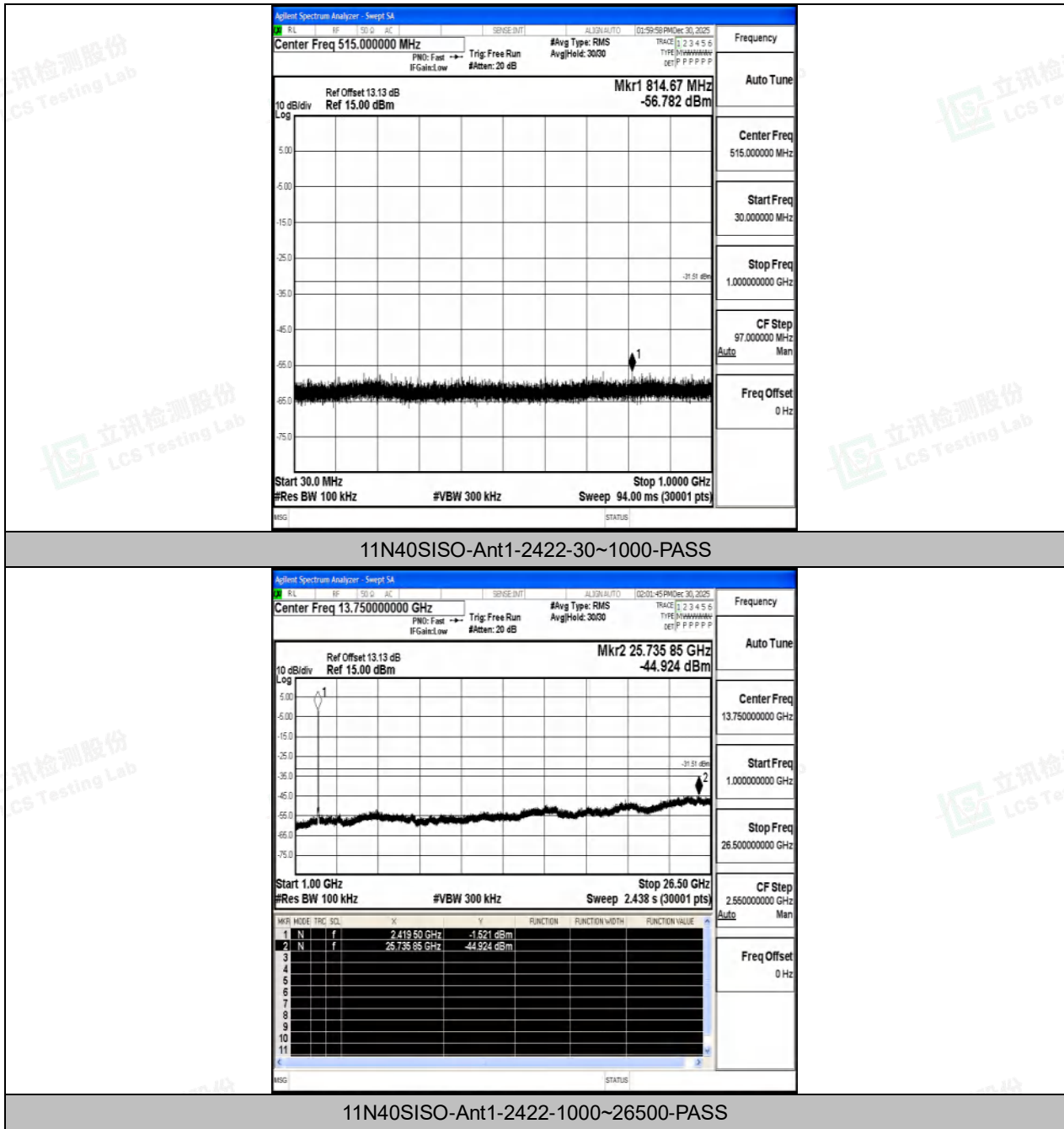


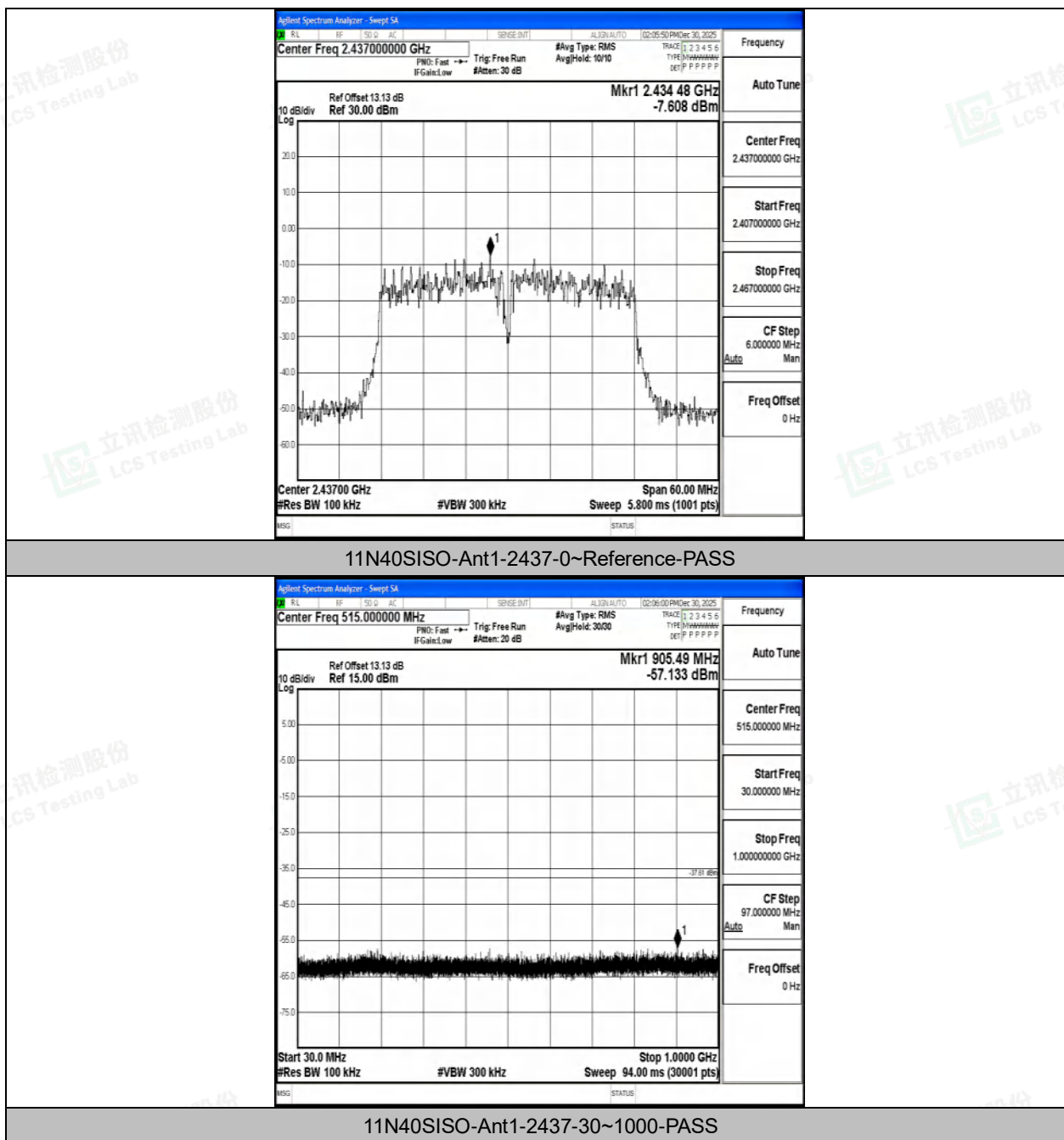
11N20SISO-Ant1-2462-1000~26500-PASS

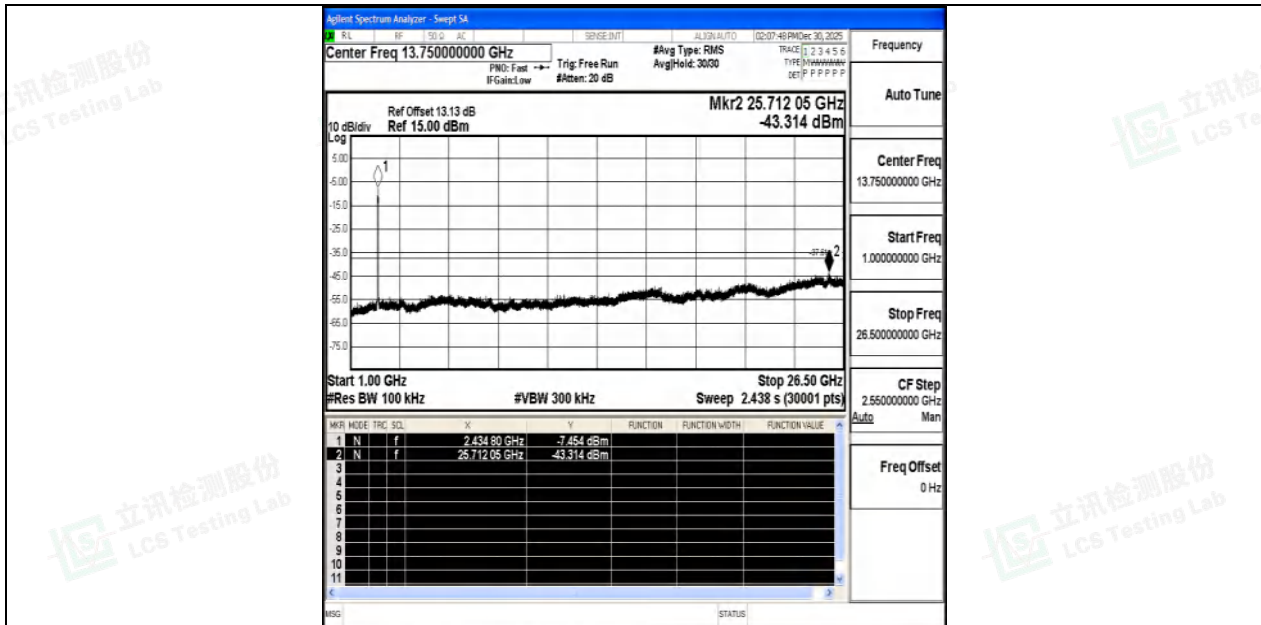


11N40SISO-Ant1-2422-0~Reference-PASS

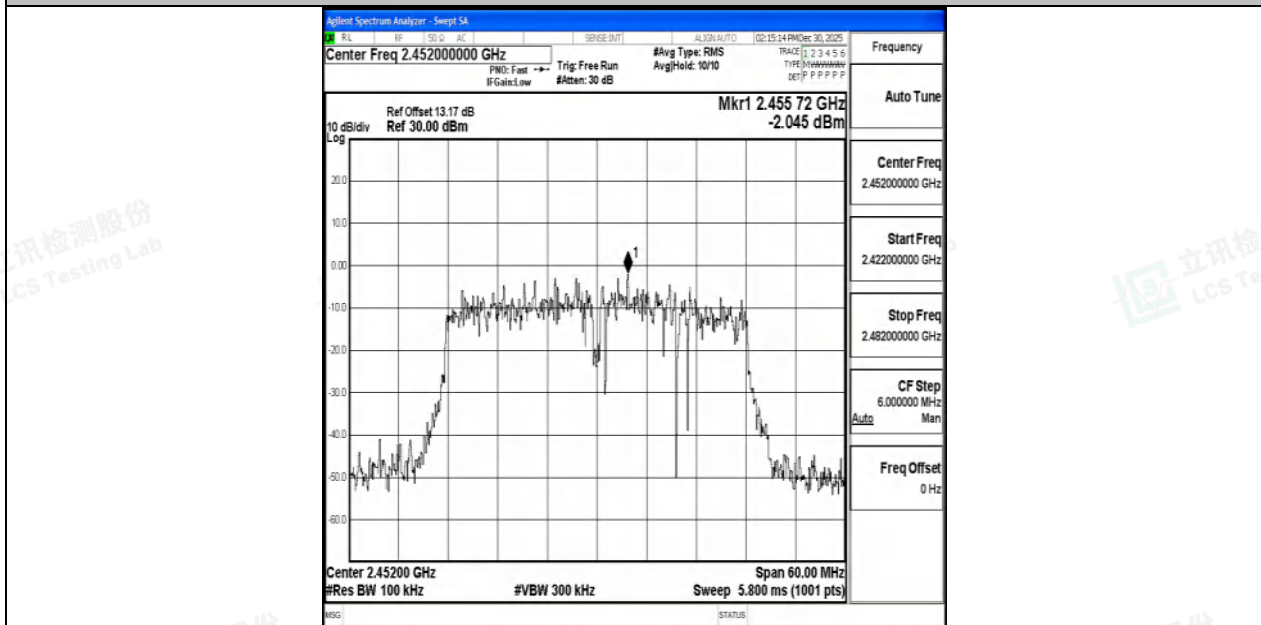






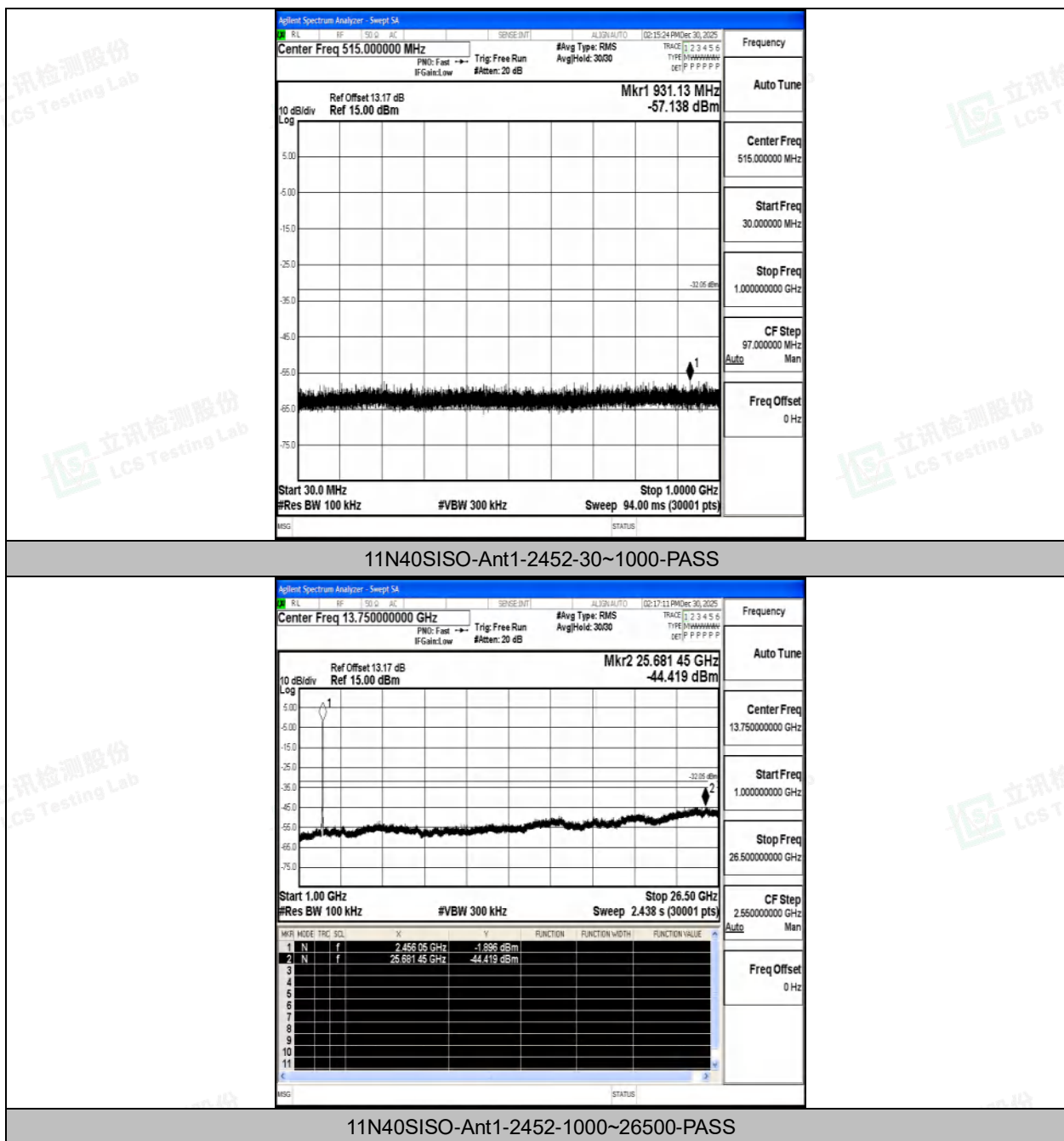


11N40SISO-Ant1-2437-1000~26500-PASS



11N40SISO-Ant1-2452-0~Reference-PASS







C.6 Duty Cycle

Test Result

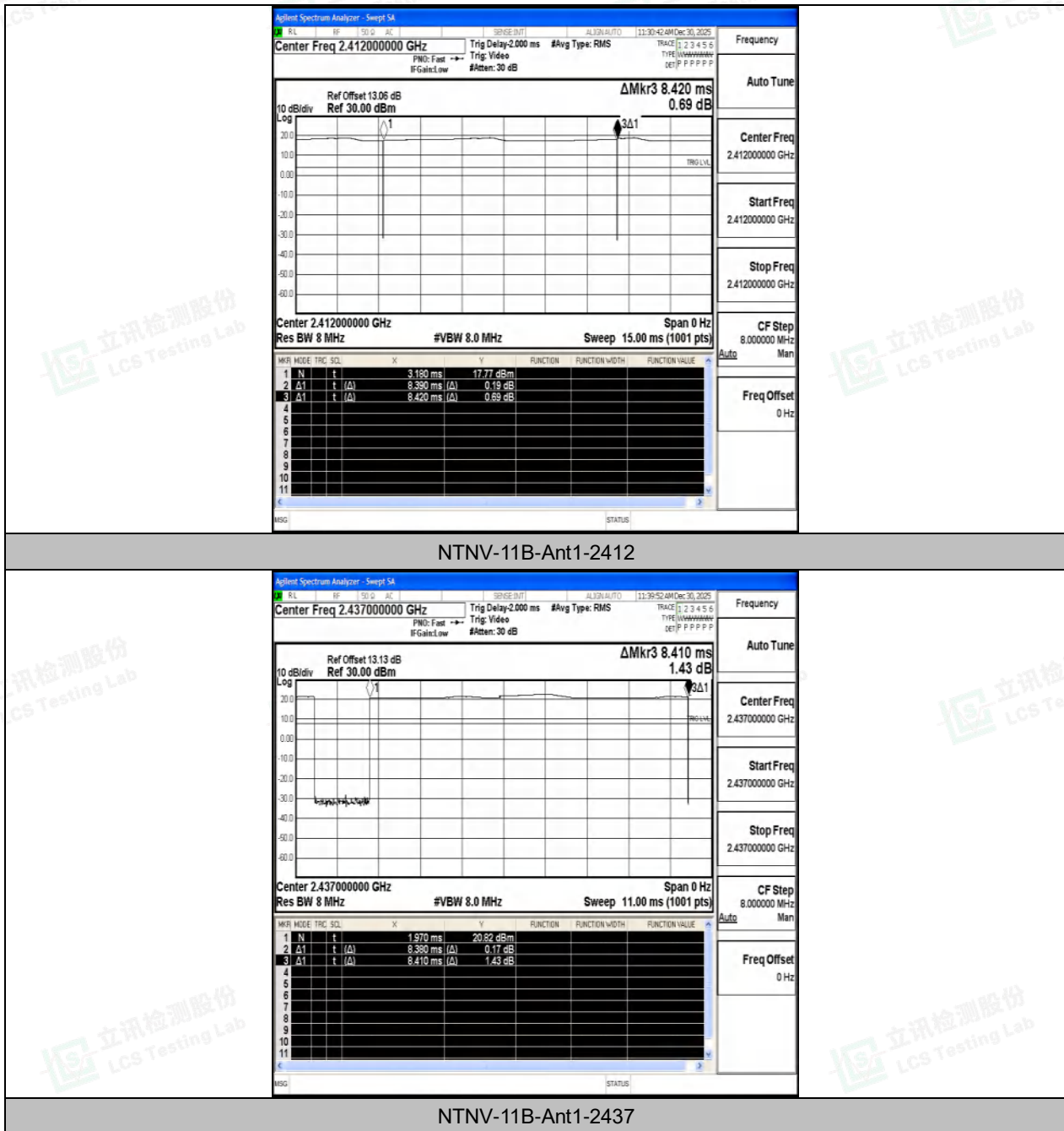
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	8.39	8.42	99.64	0.02
11B	Ant1	2437	8.38	8.41	99.64	0.02
11B	Ant1	2462	8.39	8.42	99.64	0.02
11G	Ant1	2412	1.40	1.43	97.90	0.09
11G	Ant1	2437	1.40	1.43	97.90	0.09
11G	Ant1	2462	1.39	1.42	97.89	0.09
11N20SISO	Ant1	2412	1.31	1.34	97.76	0.10
11N20SISO	Ant1	2437	1.31	1.35	97.04	0.13
11N20SISO	Ant1	2462	1.31	1.35	97.04	0.13
11N40SISO	Ant1	2422	0.07	0.16	43.75	3.59
11N40SISO	Ant1	2437	0.07	0.16	43.75	3.59
11N40SISO	Ant1	2452	0.07	0.15	46.67	3.31

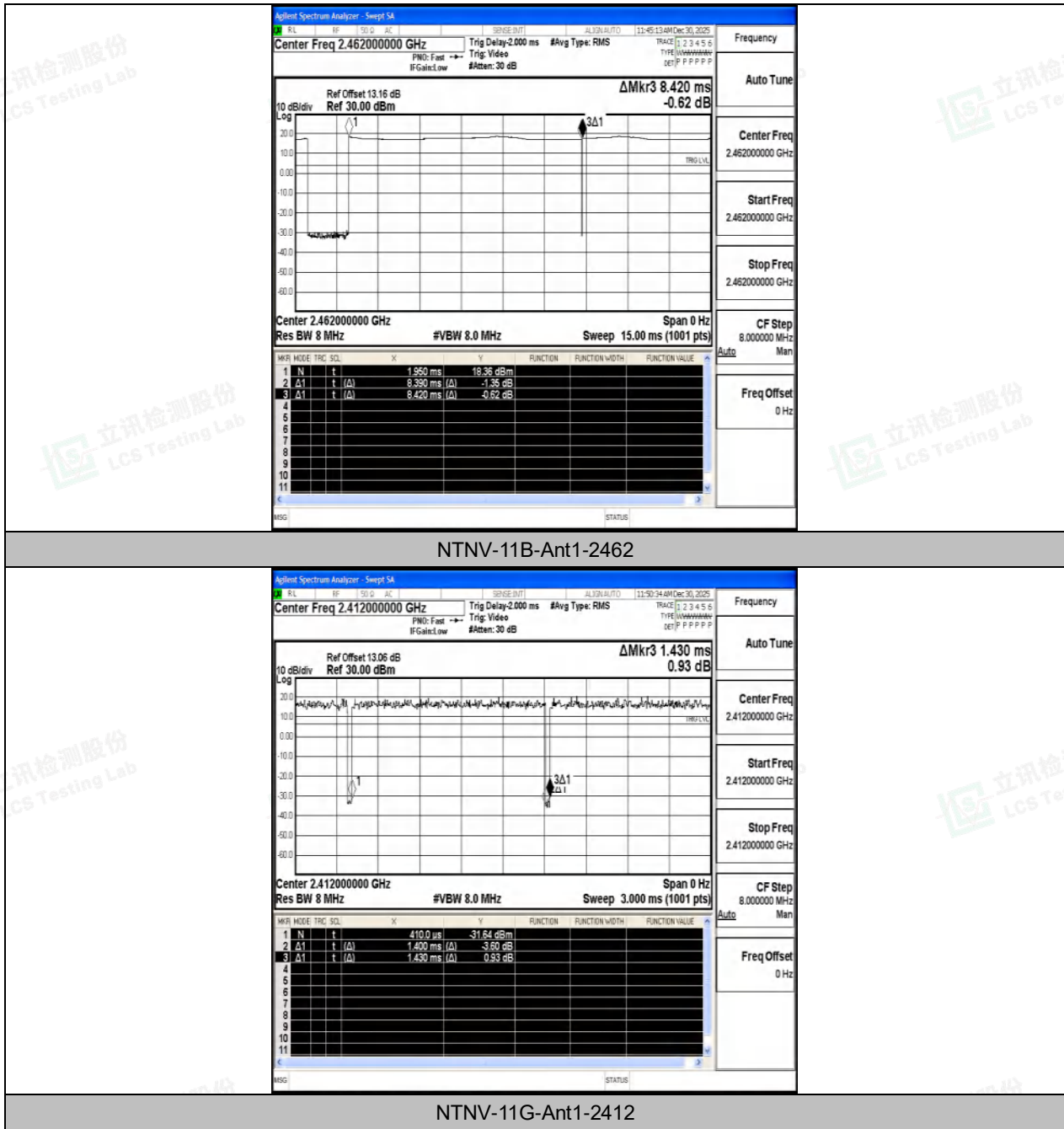
Note :offset=System attenuation +cabel loss

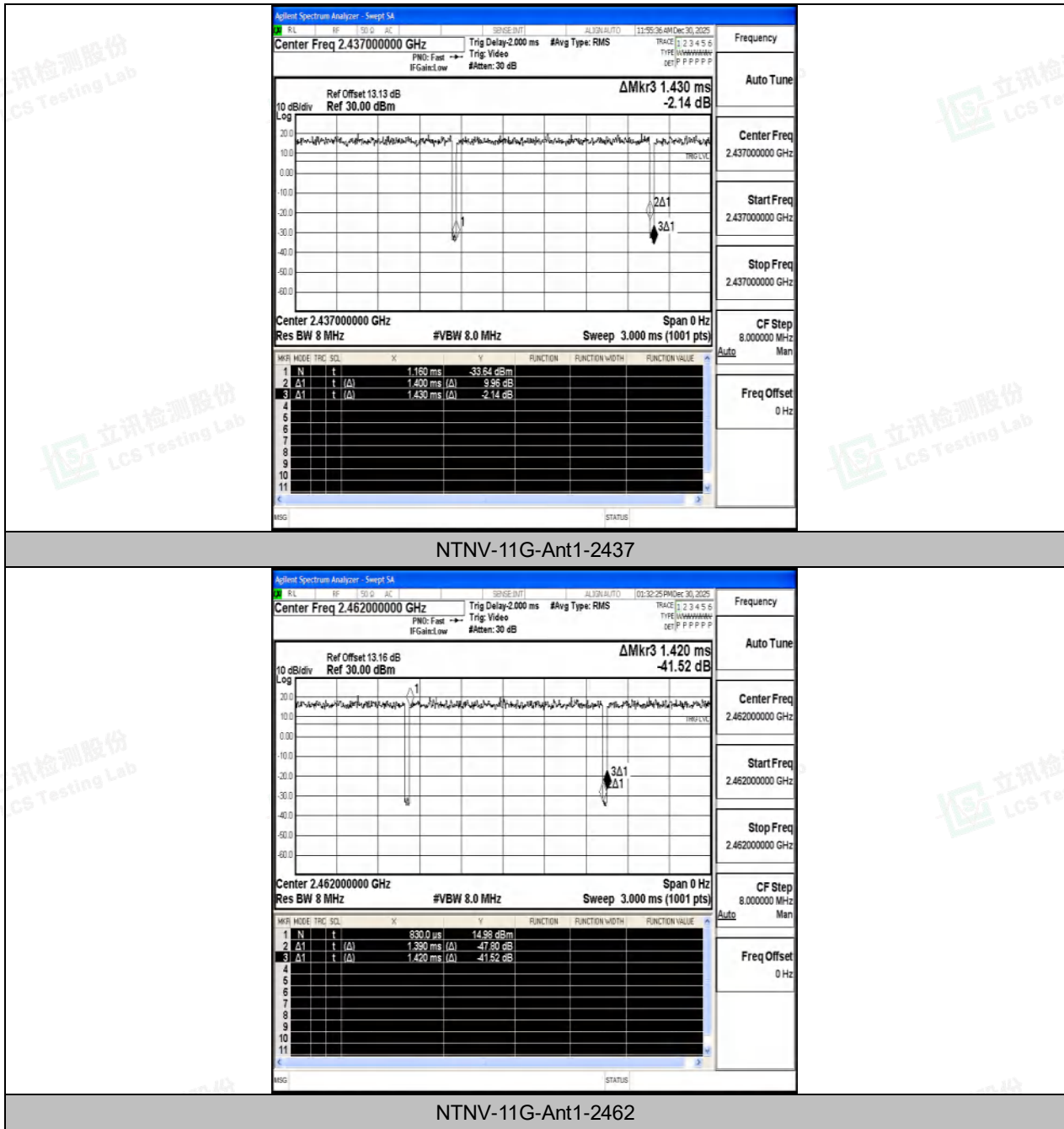


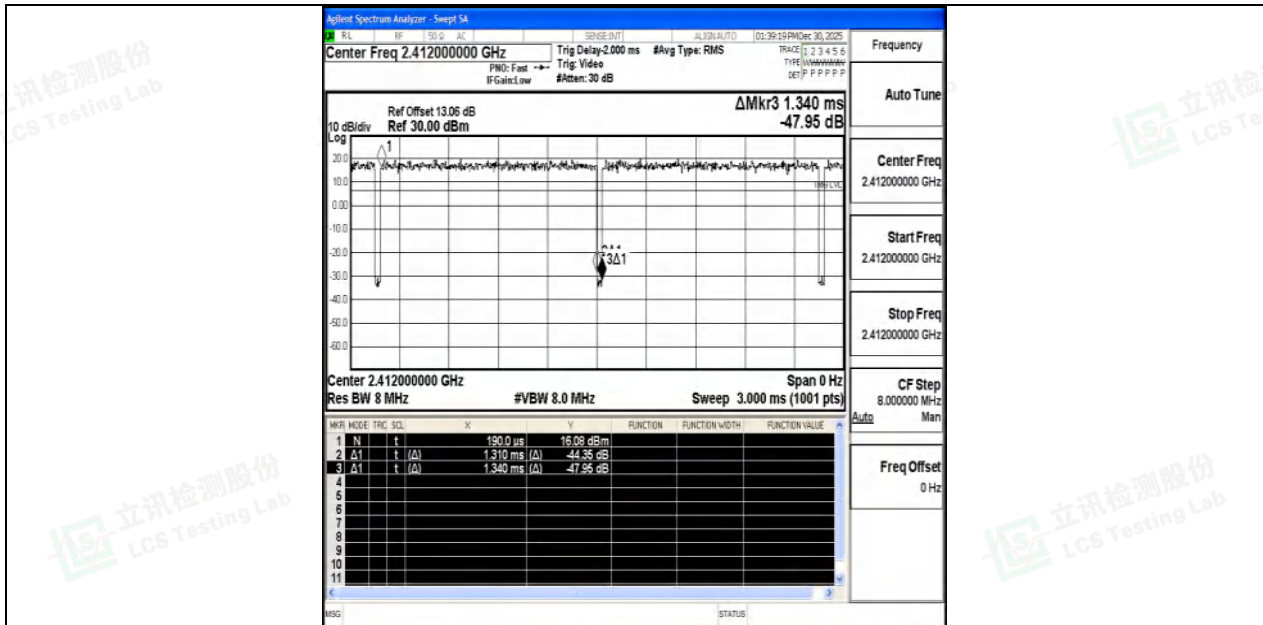


Test Graphs

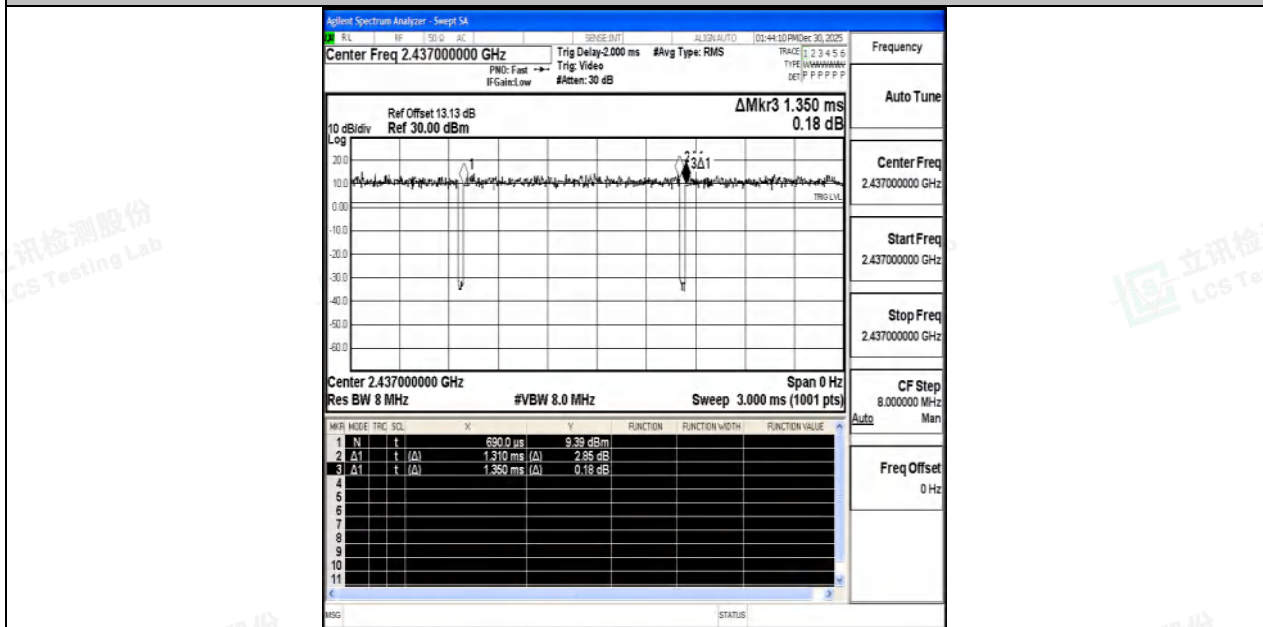






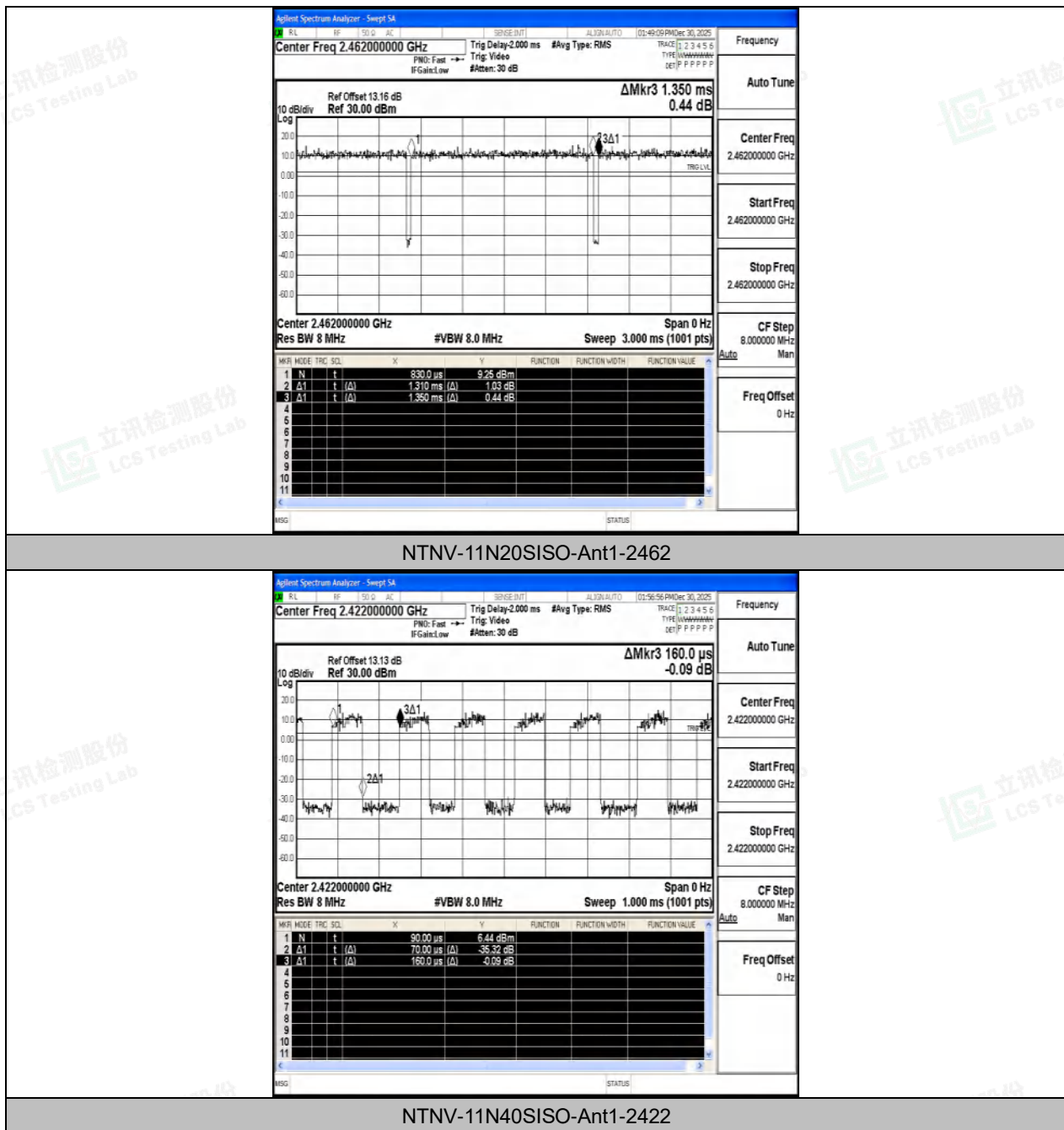


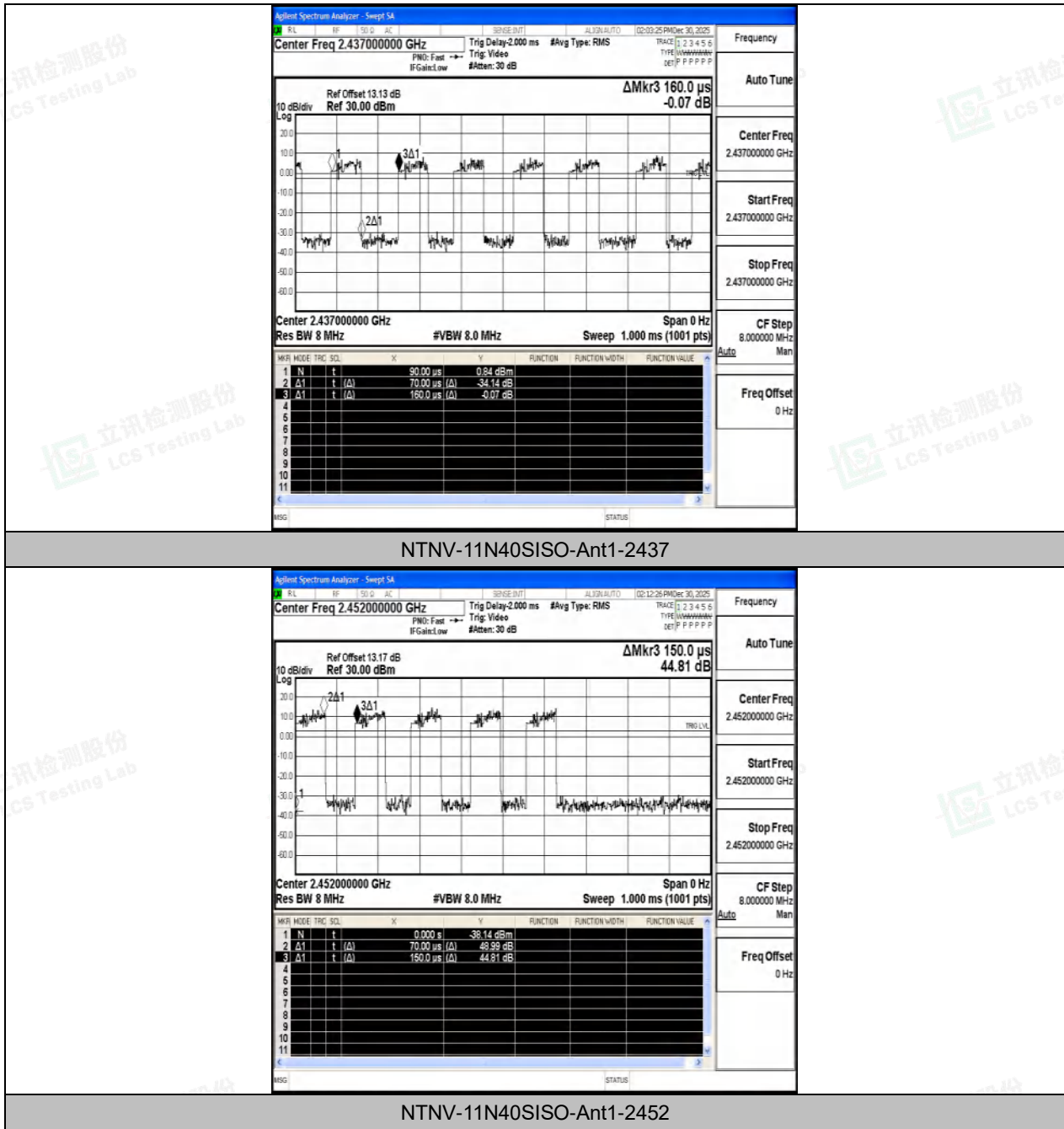
NTNV-11N20SISO-Ant1-2412



NTNV-11N20SISO-Ant1-2437









C.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	Channel Name	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	Peak	2390.000	-49.91	≤-21.20	45.29	≤74	PASS
11B	Ant1	Low	2412	Peak	2310.000	-52.51	≤-21.20	42.69	≤74	PASS
11B	Ant1	Low	2412	Peak	2387.100	-43.82	≤-21.20	51.38	≤74	PASS
11B	Ant1	Low	2412	AV	2390.000	-54.87	≤-41.20	40.33	≤54	PASS
11B	Ant1	Low	2412	AV	2310.000	-56.12	≤-41.20	39.08	≤54	PASS
11B	Ant1	Low	2412	AV	2387.360	-50.39	≤-41.20	44.81	≤54	PASS
11B	Ant1	High	2462	Peak	2483.500	-48.64	≤-21.20	46.56	≤74	PASS
11B	Ant1	High	2462	Peak	2500.000	-48.65	≤-21.20	46.55	≤74	PASS
11B	Ant1	High	2462	Peak	2483.780	-45.05	≤-21.20	50.15	≤74	PASS
11B	Ant1	High	2462	AV	2483.500	-52.55	≤-41.20	42.65	≤54	PASS
11B	Ant1	High	2462	AV	2500.000	-55.37	≤-41.20	39.83	≤54	PASS
11B	Ant1	High	2462	AV	2483.560	-52.02	≤-41.20	43.18	≤54	PASS
11G	Ant1	Low	2412	Peak	2390.000	-35.87	≤-21.20	59.33	≤74	PASS
11G	Ant1	Low	2412	Peak	2310.000	-49.1	≤-21.20	46.10	≤74	PASS
11G	Ant1	Low	2412	Peak	2389.960	-35.87	≤-21.20	59.33	≤74	PASS
11G	Ant1	Low	2412	AV	2390.000	-46.46	≤-41.20	48.74	≤54	PASS
11G	Ant1	Low	2412	AV	2310.000	-56.43	≤-41.20	38.77	≤54	PASS
11G	Ant1	Low	2412	AV	2389.830	-46.32	≤-41.20	48.88	≤54	PASS
11G	Ant1	High	2462	Peak	2483.500	-39.45	≤-21.20	55.75	≤74	PASS
11G	Ant1	High	2462	Peak	2500.000	-49.53	≤-21.20	45.67	≤74	PASS
11G	Ant1	High	2462	Peak	2483.560	-38.66	≤-21.20	56.54	≤74	PASS
11G	Ant1	High	2462	AV	2483.500	-46.3	≤-41.20	48.90	≤54	PASS
11G	Ant1	High	2462	AV	2500.000	-56.81	≤-41.20	38.39	≤54	PASS
11G	Ant1	High	2462	AV	2483.780	-47.02	≤-41.20	48.18	≤54	PASS
11N20SISO	Ant1	Low	2412	Peak	2390.000	-42.73	≤-21.20	52.47	≤74	PASS
11N20SISO	Ant1	Low	2412	Peak	2310.000	-48.53	≤-21.20	46.67	≤74	PASS
11N20SISO	Ant1	Low	2412	Peak	2389.830	-42.59	≤-21.20	52.61	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2390.000	-51.89	≤-41.20	43.31	≤54	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-56.65	≤-41.20	38.55	≤54	PASS
11N20SISO	Ant1	Low	2412	AV	2388.920	-51.05	≤-41.20	44.15	≤54	PASS
11N20SISO	Ant1	High	2462	Peak	2483.500	-39.91	≤-21.20	55.29	≤74	PASS
11N20SISO	Ant1	High	2462	Peak	2500.000	-47.61	≤-21.20	47.59	≤74	PASS
11N20SISO	Ant1	High	2462	Peak	2483.780	-38.72	≤-21.20	56.48	≤74	PASS
11N20SISO	Ant1	High	2462	AV	2483.500	-50.47	≤-41.20	44.73	≤54	PASS
11N20SISO	Ant1	High	2462	AV	2500.000	-56.02	≤-41.20	39.18	≤54	PASS
11N20SISO	Ant1	High	2462	AV	2483.560	-50.86	≤-41.20	44.34	≤54	PASS





11N40SISO	Ant1	Low	2422	Peak	2390.000	-40.42	≤-21.20	54.78	≤74	PASS
11N40SISO	Ant1	Low	2422	Peak	2310.000	-47.33	≤-21.20	47.87	≤74	PASS
11N40SISO	Ant1	Low	2422	Peak	2389.250	-28.84	≤-21.20	66.36	≤74	PASS
11N40SISO	Ant1	Low	2422	AV	2390.000	-50.05	≤-41.20	45.15	≤54	PASS
11N40SISO	Ant1	Low	2422	AV	2310.000	-56.55	≤-41.20	38.65	≤54	PASS
11N40SISO	Ant1	Low	2422	AV	2387.900	-46.12	≤-41.20	49.08	≤54	PASS
11N40SISO	Ant1	High	2452	Peak	2483.500	-38.53	≤-21.20	56.67	≤74	PASS
11N40SISO	Ant1	High	2452	Peak	2500.000	-47.09	≤-21.20	48.11	≤74	PASS
11N40SISO	Ant1	High	2452	Peak	2483.750	-34.68	≤-21.20	60.52	≤74	PASS
11N40SISO	Ant1	High	2452	AV	2483.500	-51.35	≤-41.20	43.85	≤54	PASS
11N40SISO	Ant1	High	2452	AV	2500.000	-54.69	≤-41.20	40.51	≤54	PASS
11N40SISO	Ant1	High	2452	AV	2484.375	-48.39	≤-41.20	46.81	≤54	PASS

Note :offset=System attenuation +cabal loss

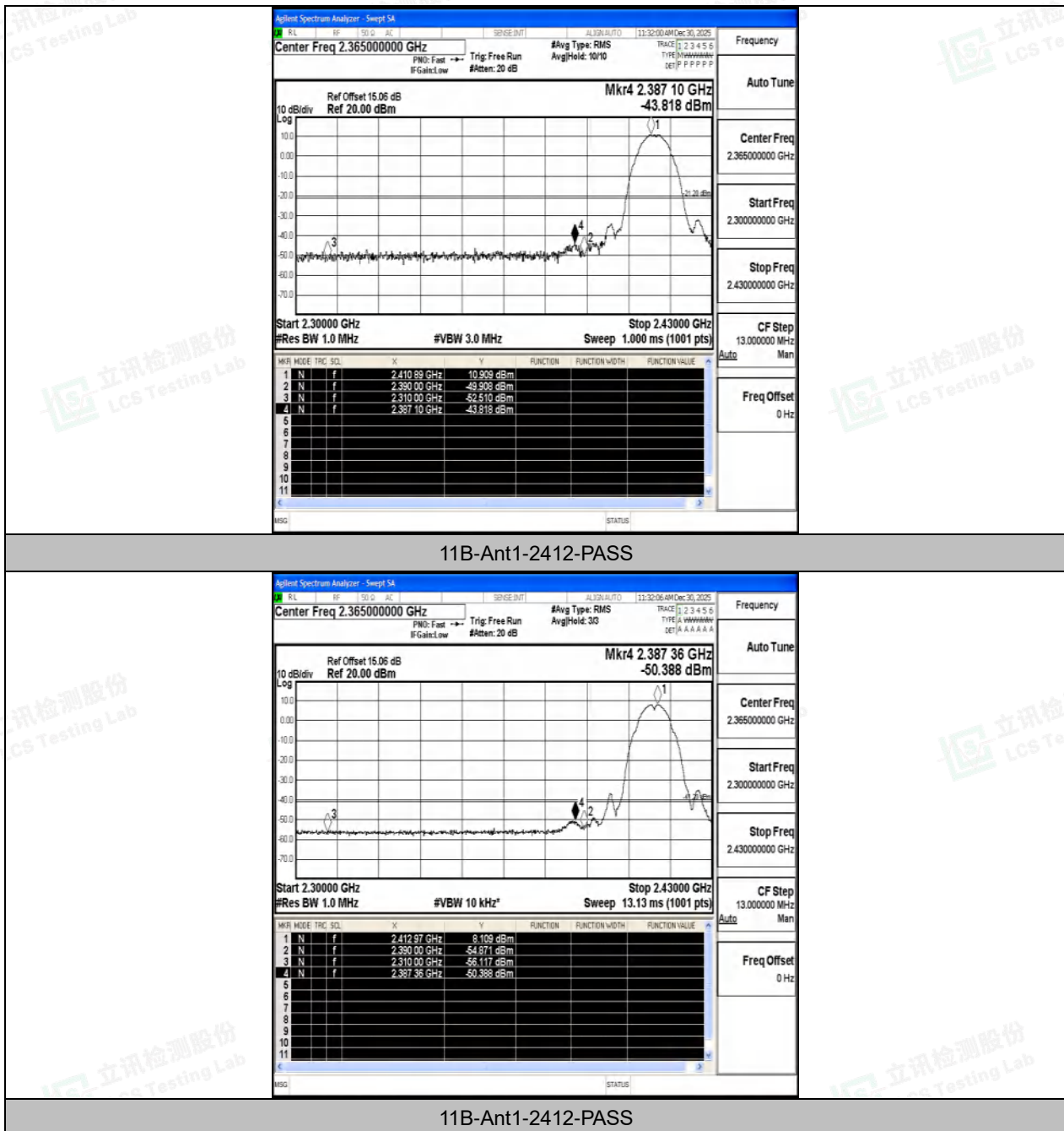
Note:

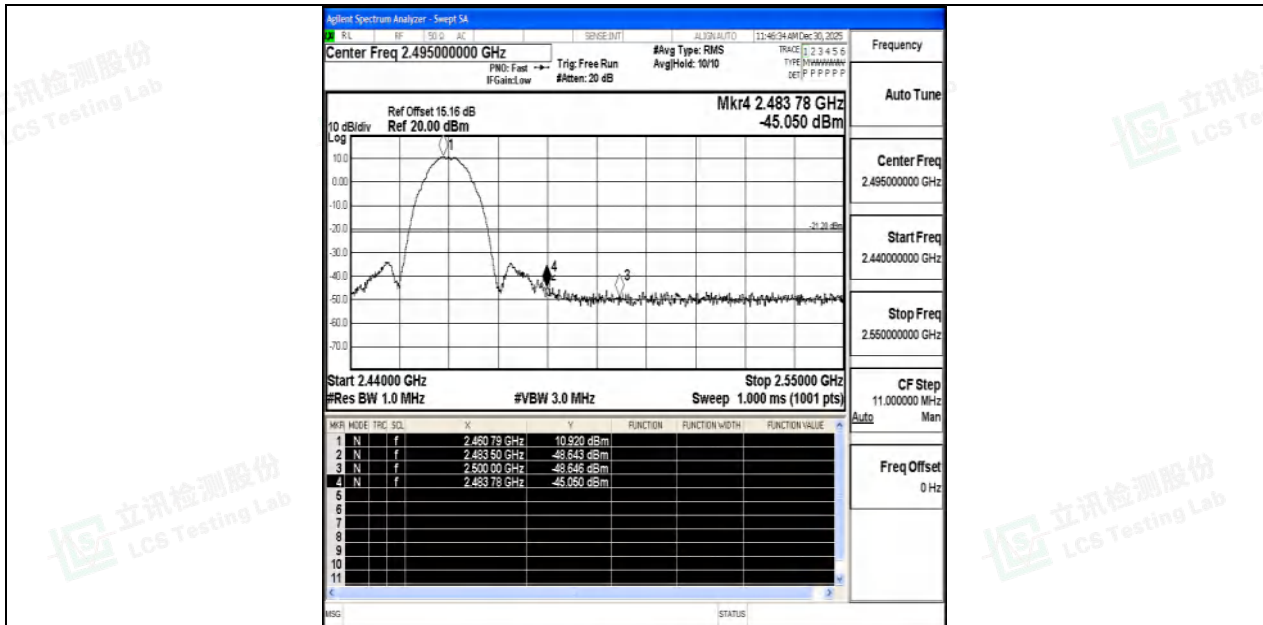
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



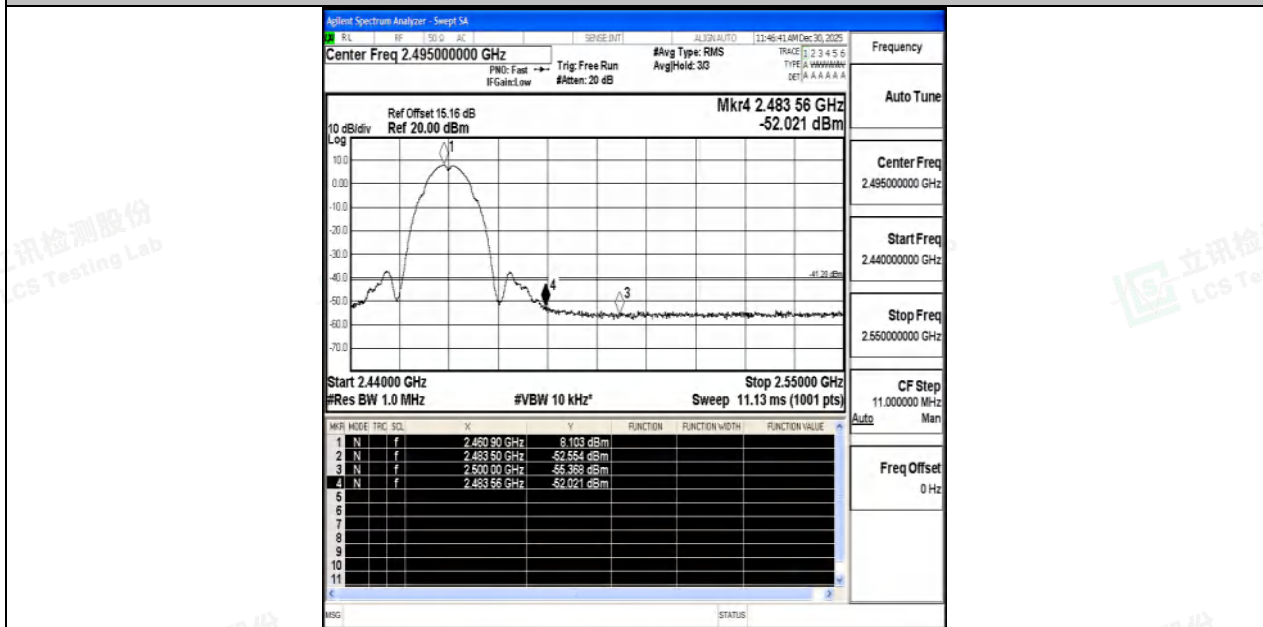


Test Graphs



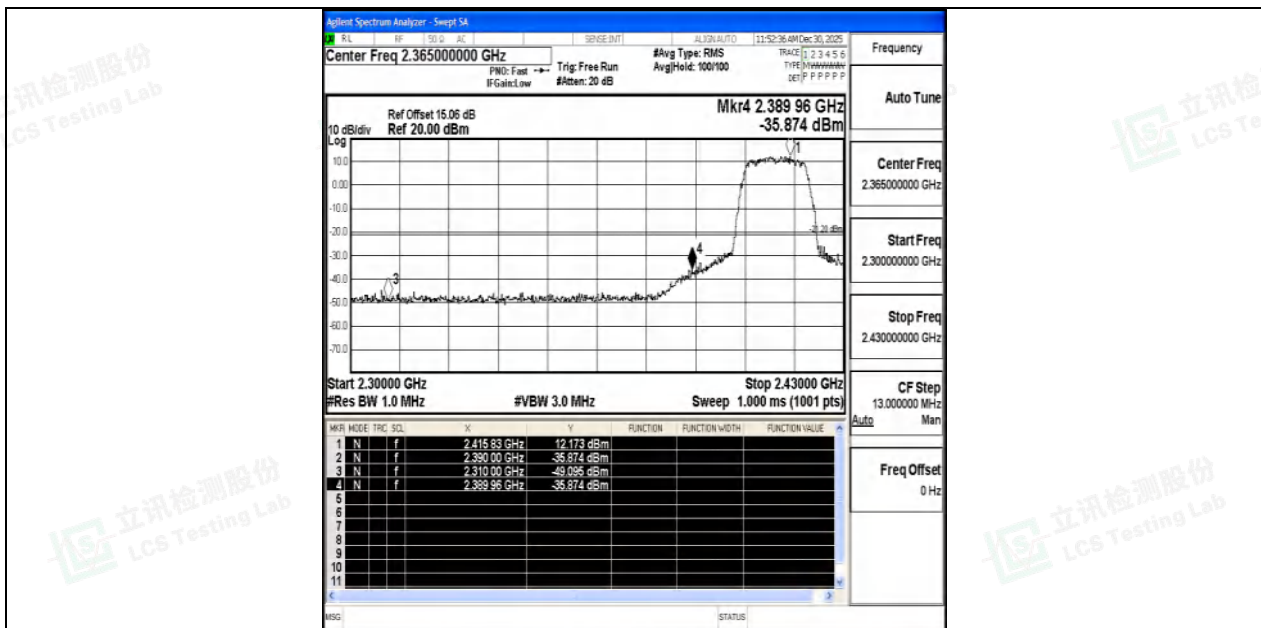


11B-Ant1-2462-PASS

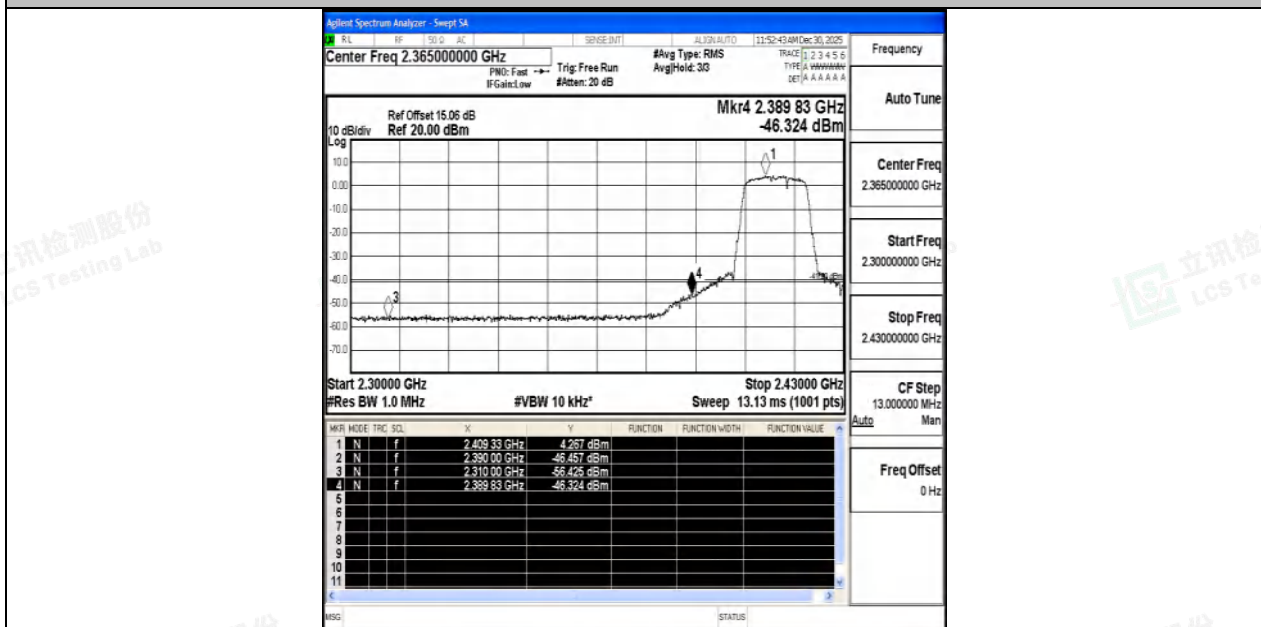


11B-Ant1-2462-PASS



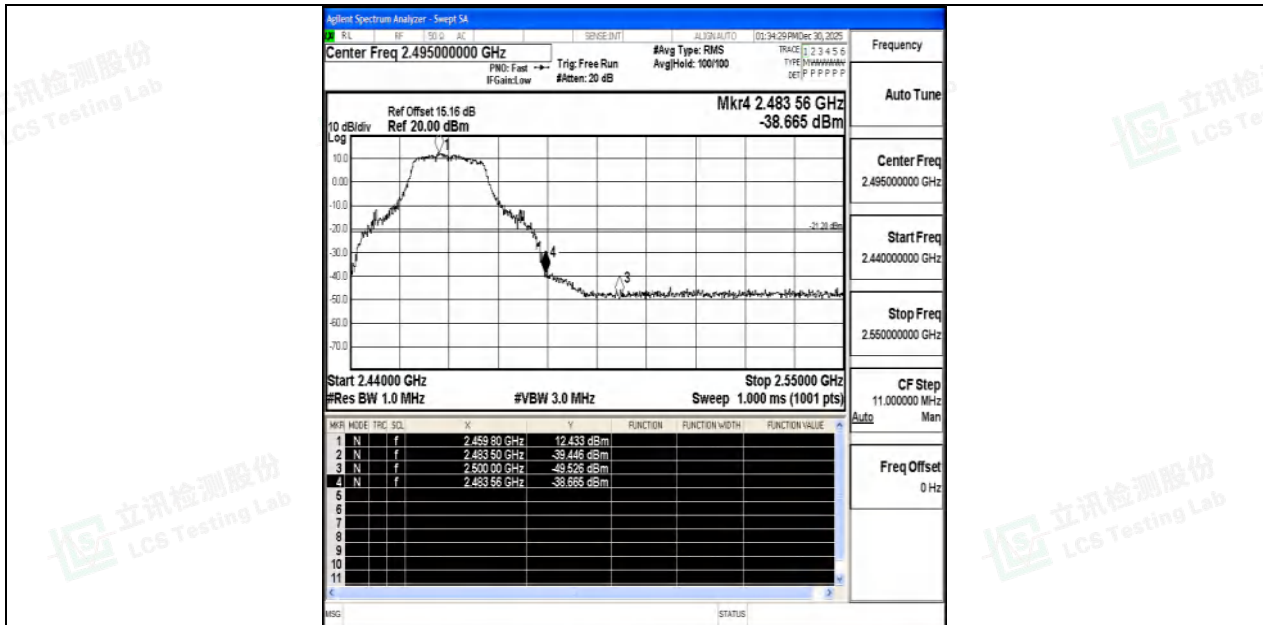


11G-Ant1-2412-PASS

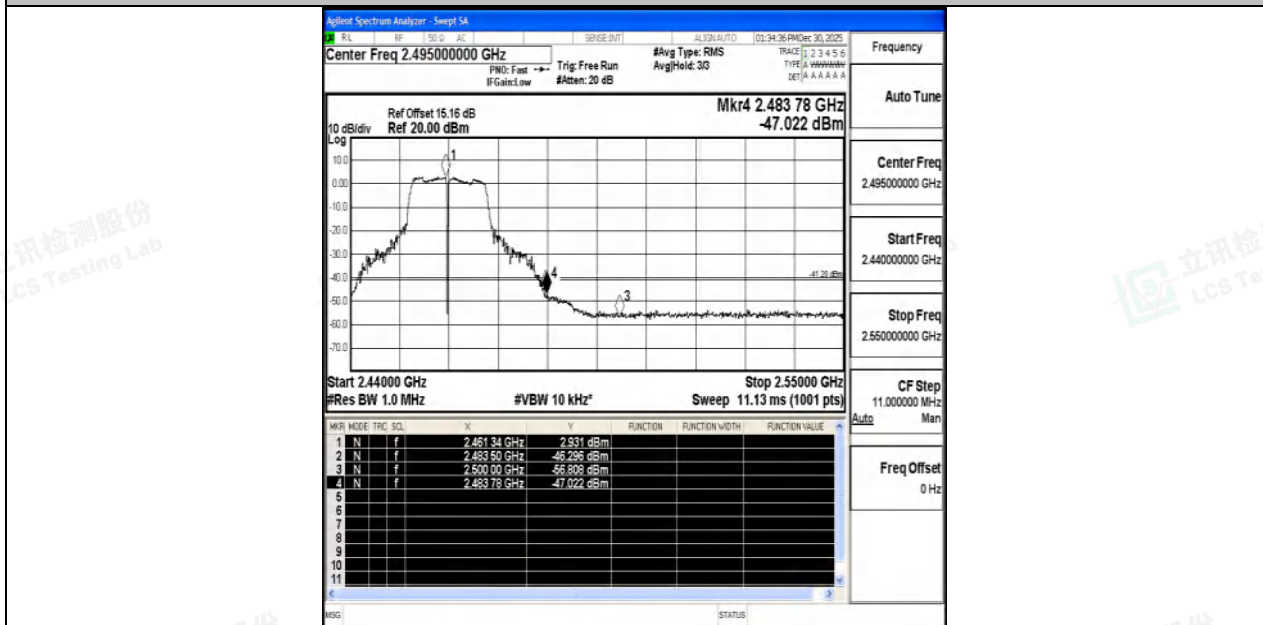


11G-Ant1-2412-PASS



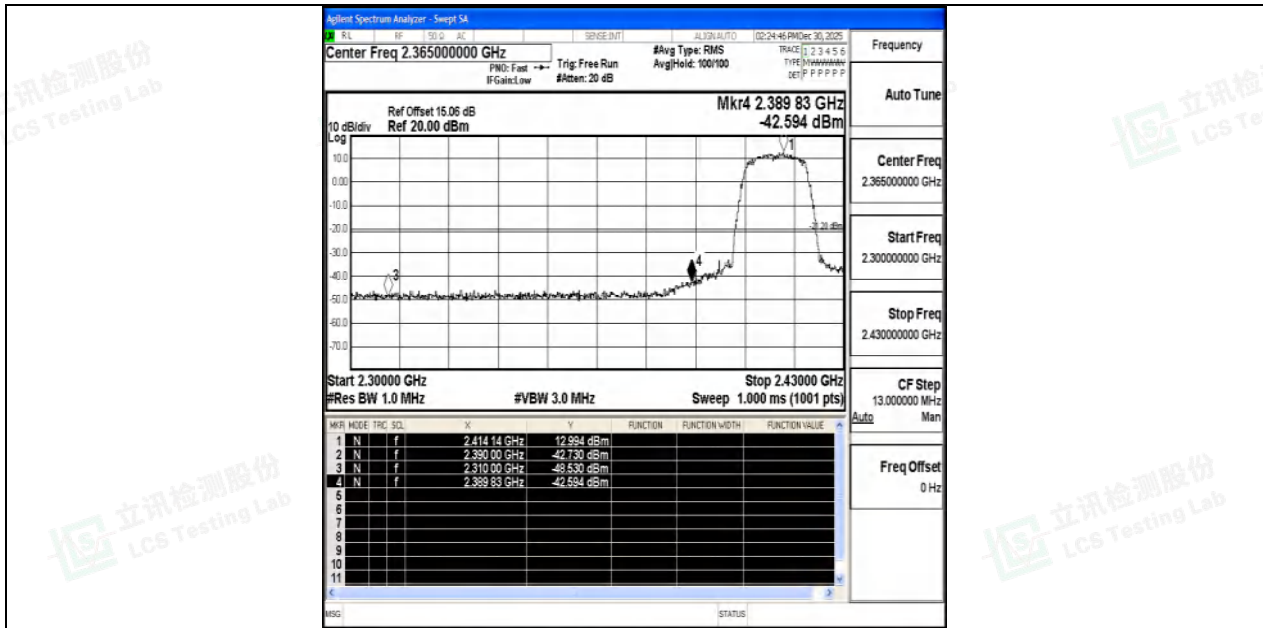


11G-Ant1-2462-PASS

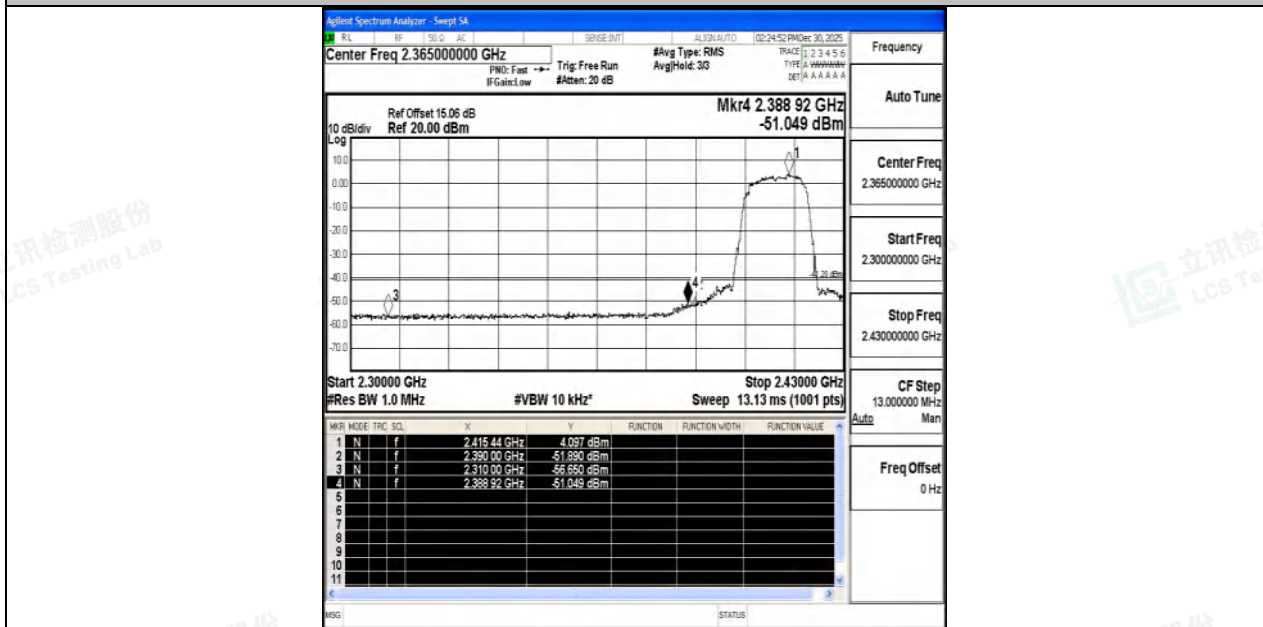


11G-Ant1-2462-PASS



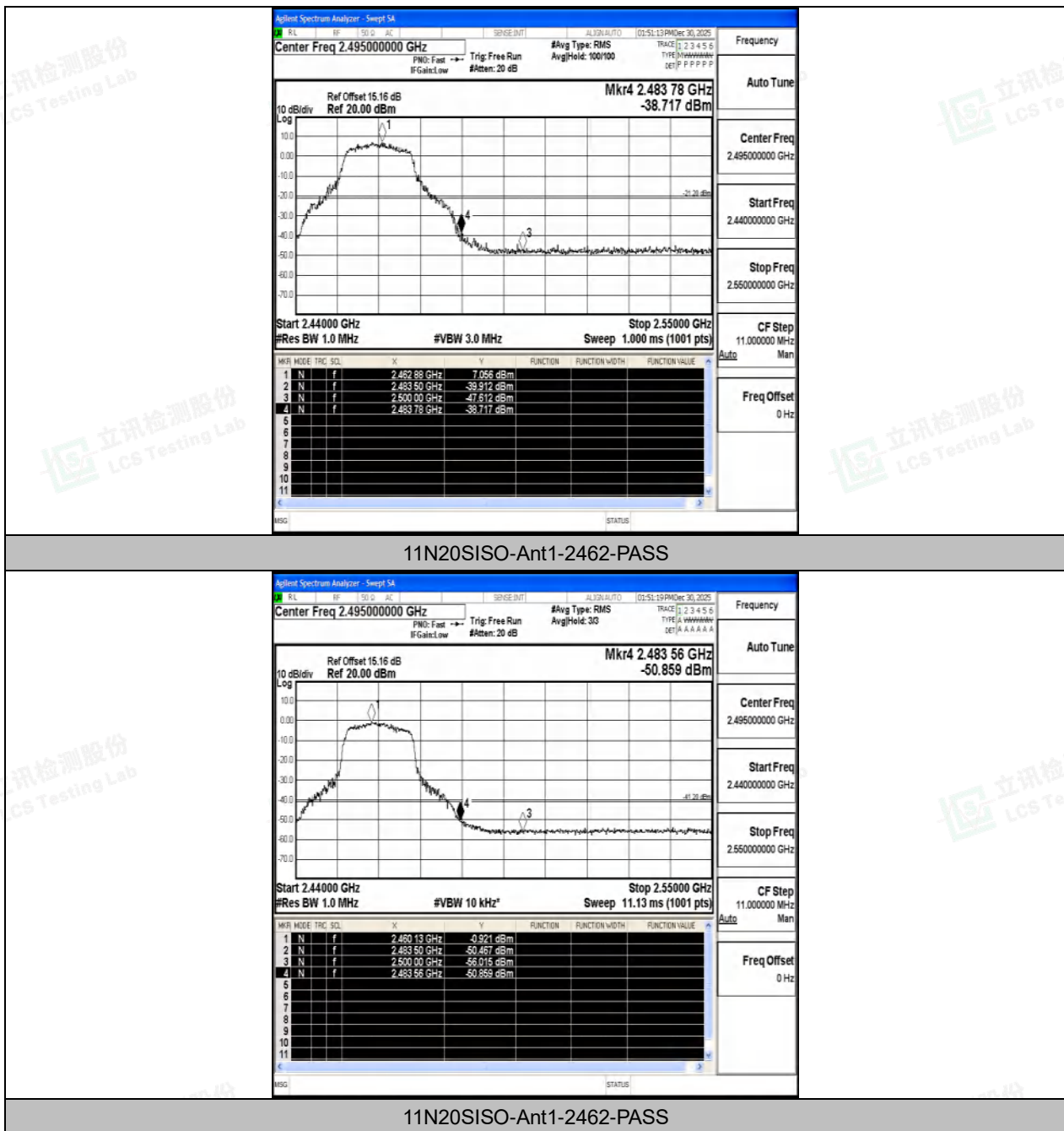


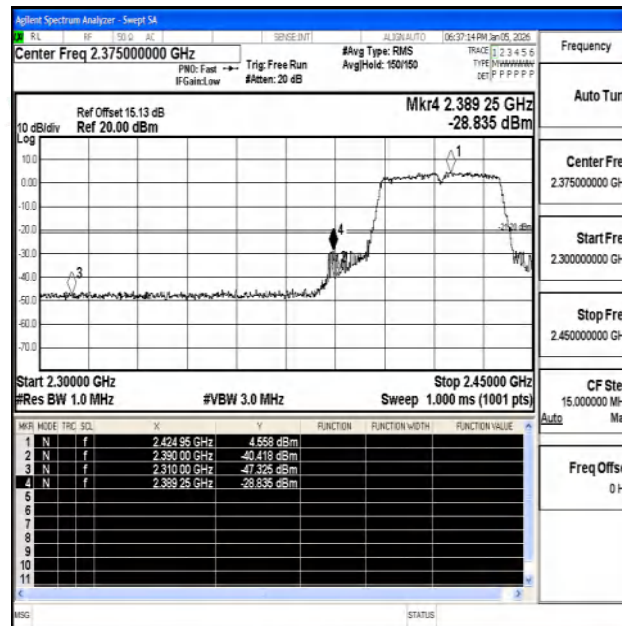
11N20SISO-Ant1-2412-PASS



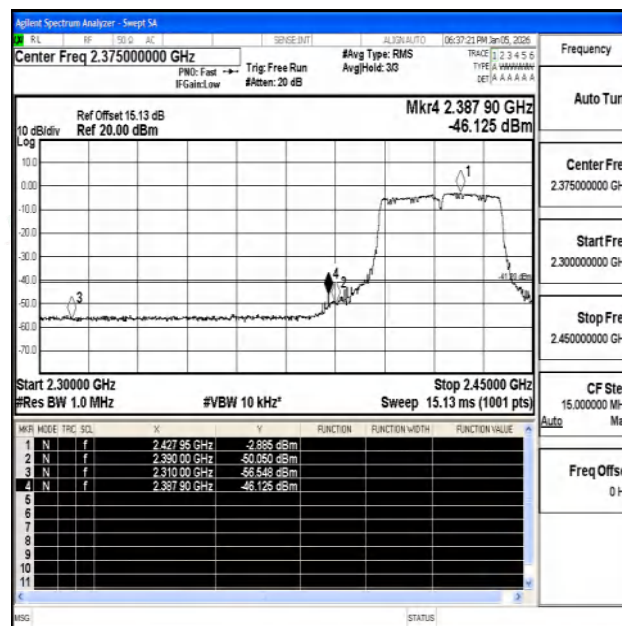
11N20SISO-Ant1-2412-PASS





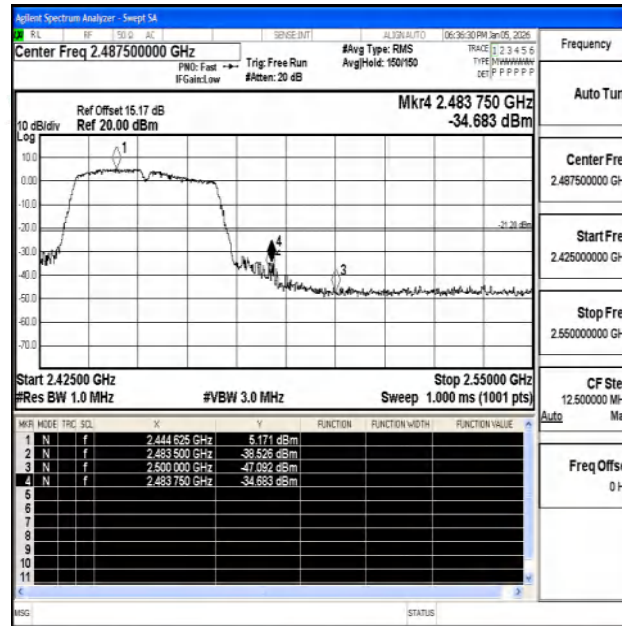


11N40SISO-Ant1-2422-PASS

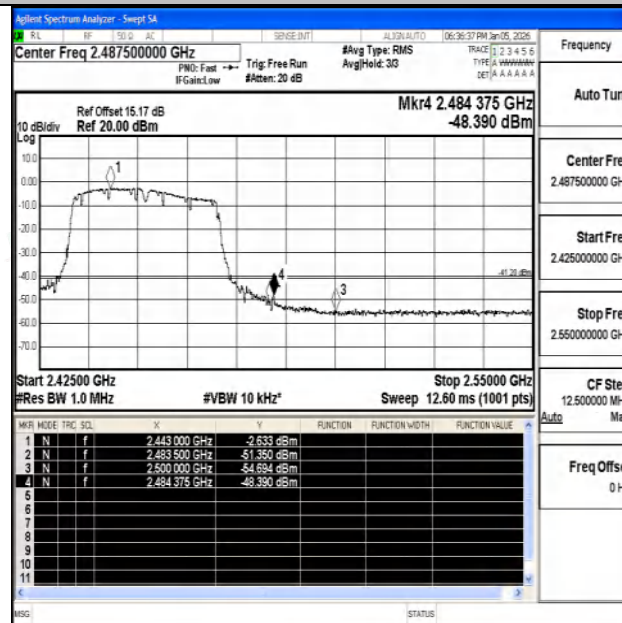


11N40SISO-Ant1-2422-PASS





11N40SISO-Ant1-2452-PASS



11N40SISO-Ant1-2452-PASS

