



Appendix D

RF Test Data for ANT+ (Conducted Measurement)

Product Name: WIMU PRO EVO

Test Model: WT200

Environmental Conditions

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





D.1 DTS Bandwidth

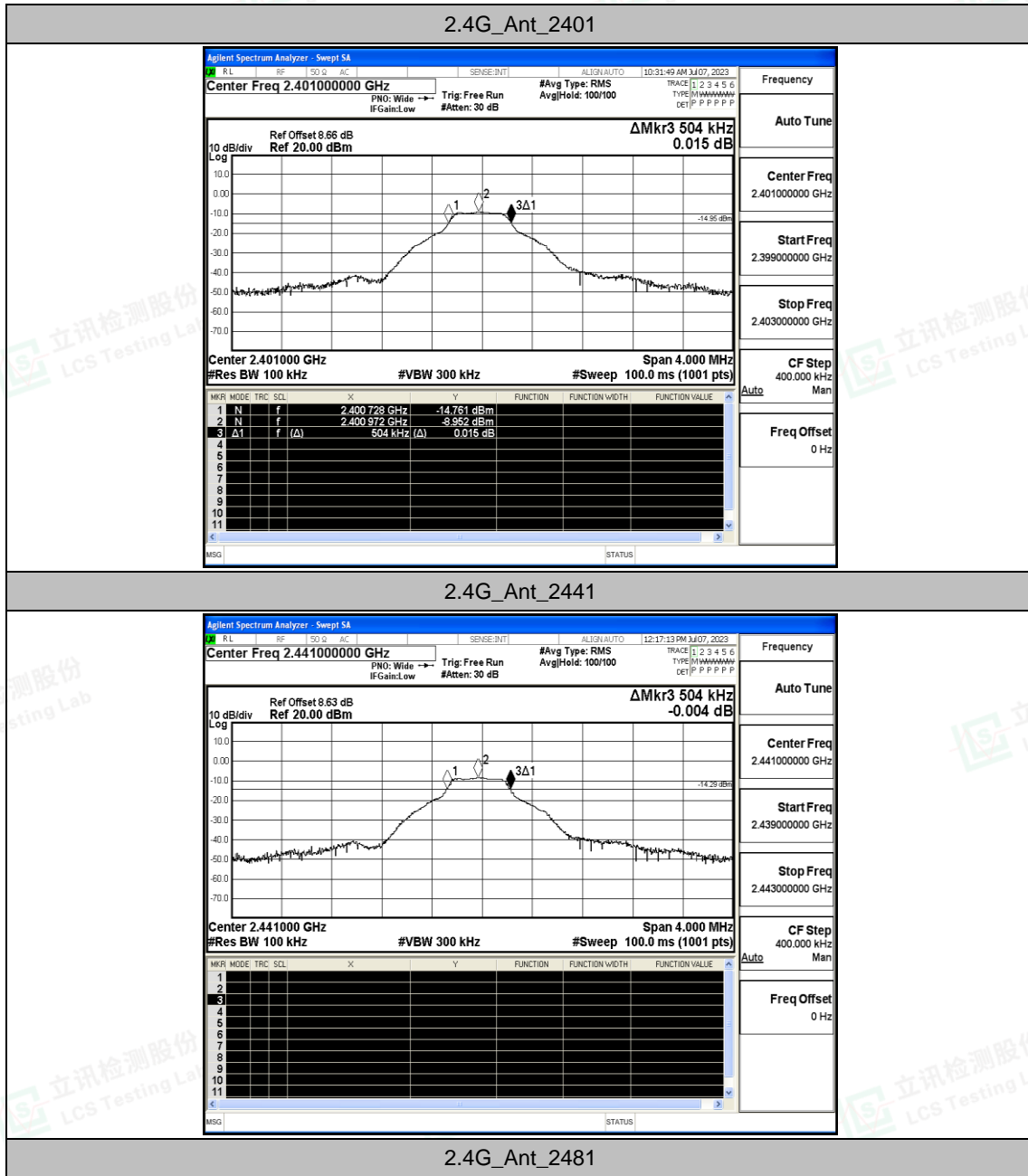
Test Result

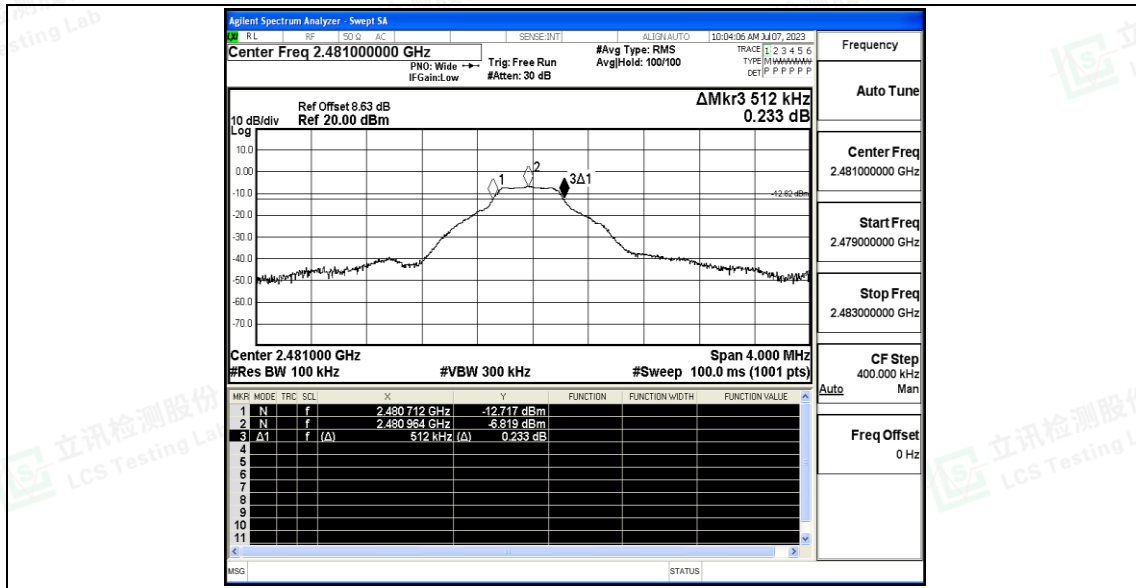
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
ANT+	Ant	2401	0.504	2400.728	2401.232	0.5	PASS
		2441	0.504	2440.720	2441.224	0.5	PASS
		2481	0.512	2480.712	2481.224	0.5	PASS





Test Graphs





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D.2 Maximum conducted output power

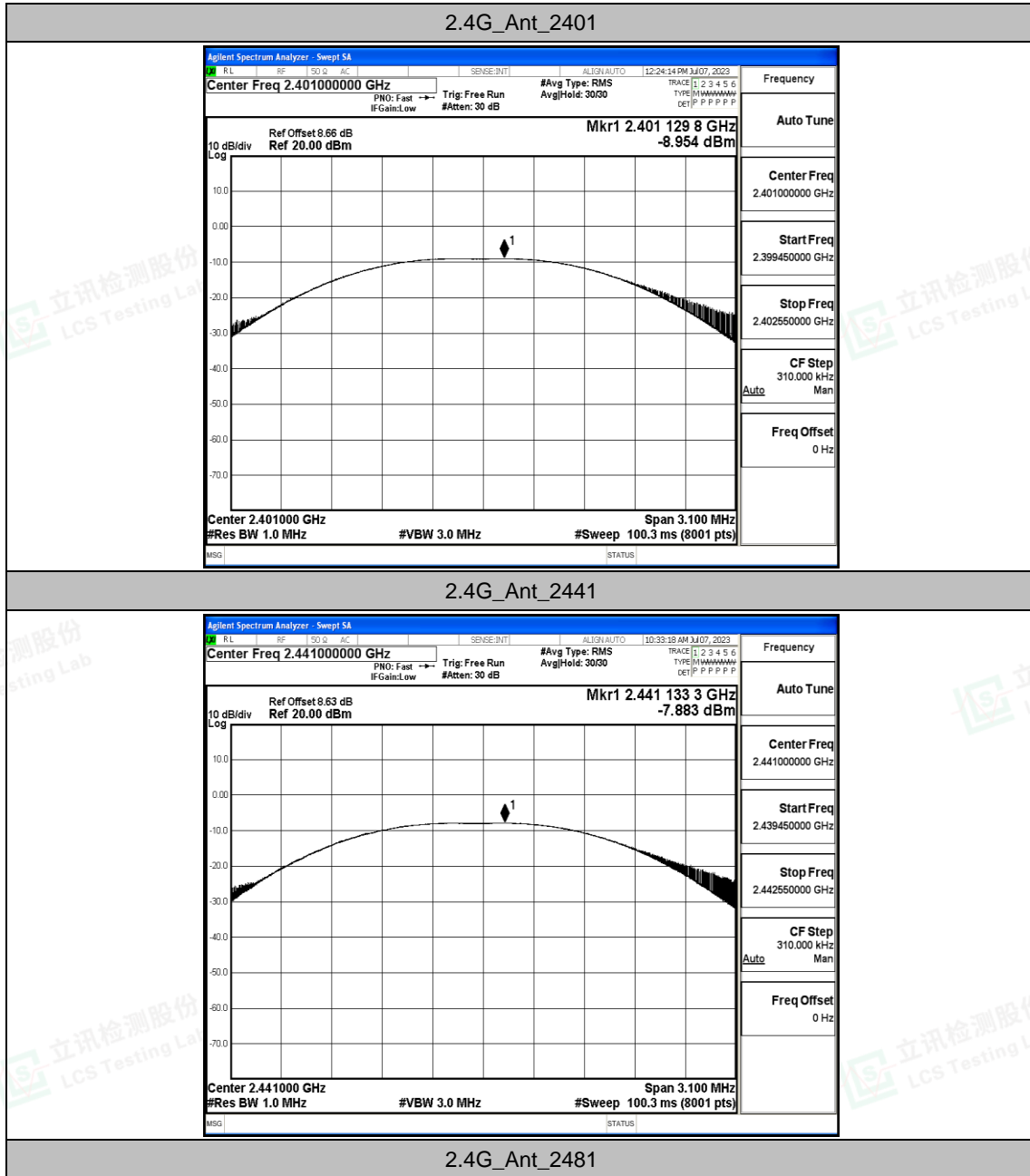
Test Result

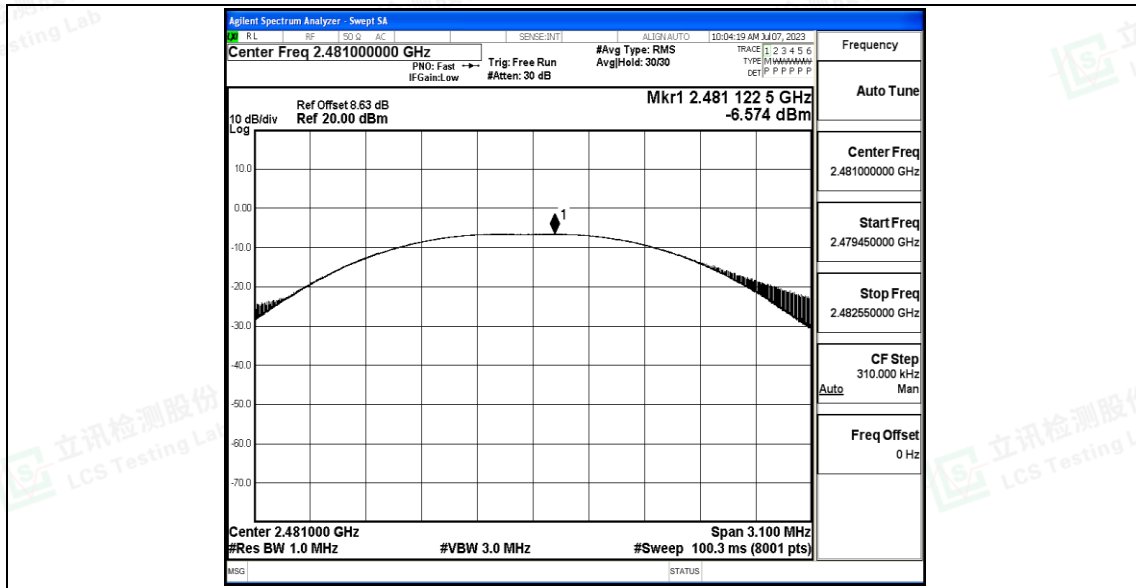
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
ANT+	Ant	2401	-8.95	≤30	PASS
		2441	-7.88	≤30	PASS
		2481	-6.57	≤30	PASS





Test Graphs





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D.3 Maximum power spectral density

Test Result

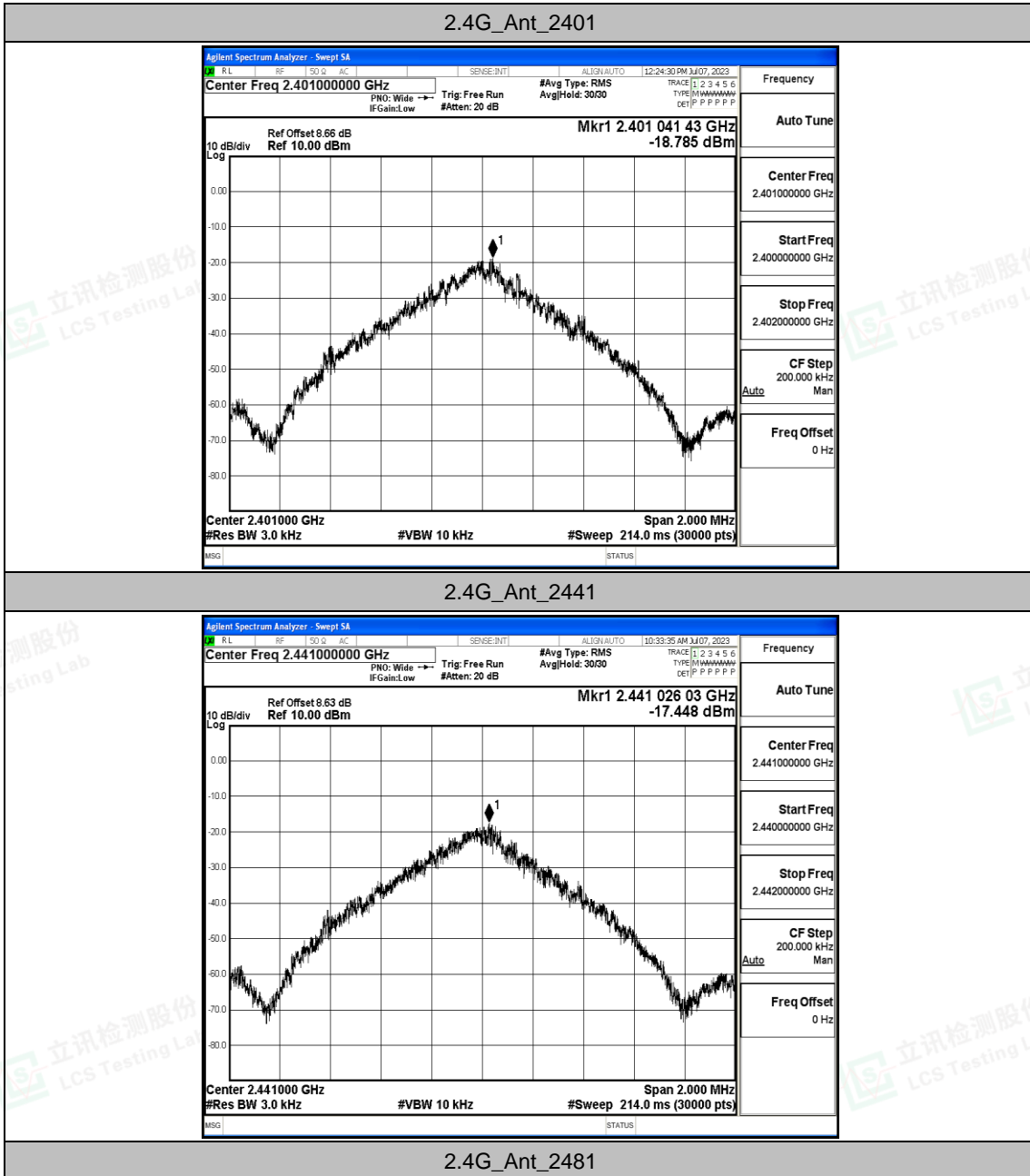
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
ANT+	Ant	2401	-18.79	≤8.00	PASS
		2441	-17.45	≤8.00	PASS
		2481	-17.15	≤8.00	PASS

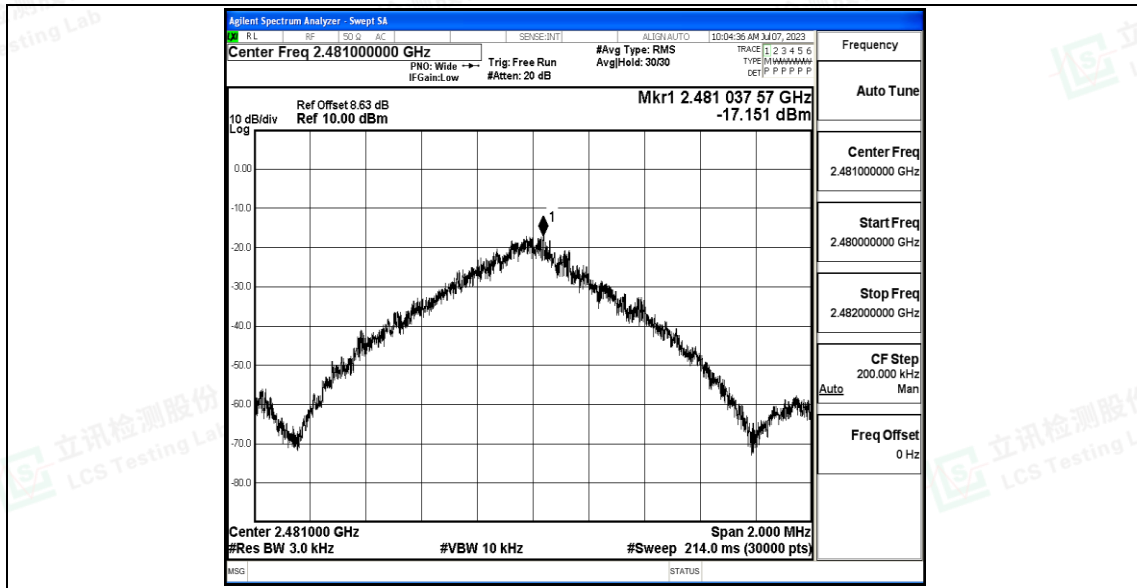


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Test Graphs





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D.4 Band edge measurements

Test Result

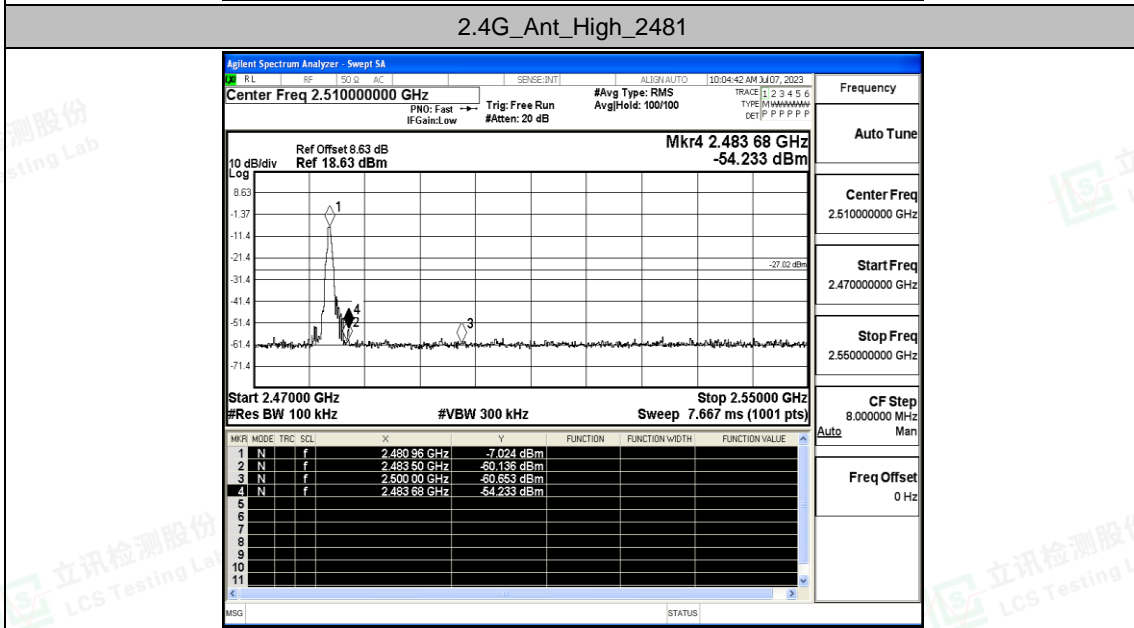
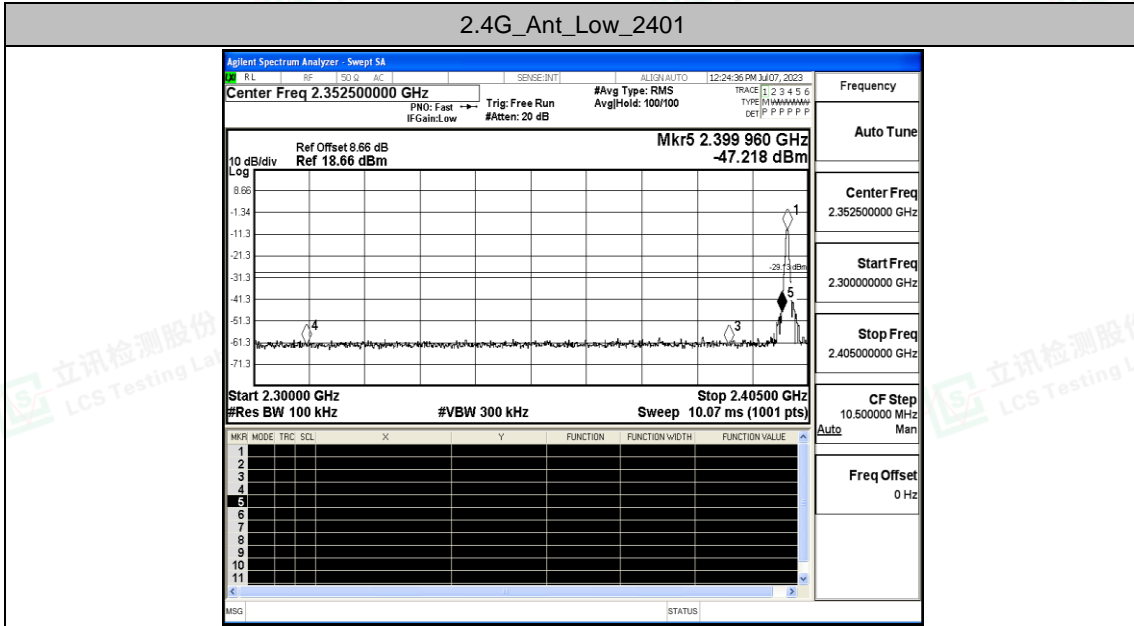
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
ANT+	Ant	Low	2401	-9.13	-47.22	≤-29.13	PASS
		High	2481	-7.02	-54.23	≤-27.02	PASS



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Test Graphs





D.5 Conducted Spurious Emission

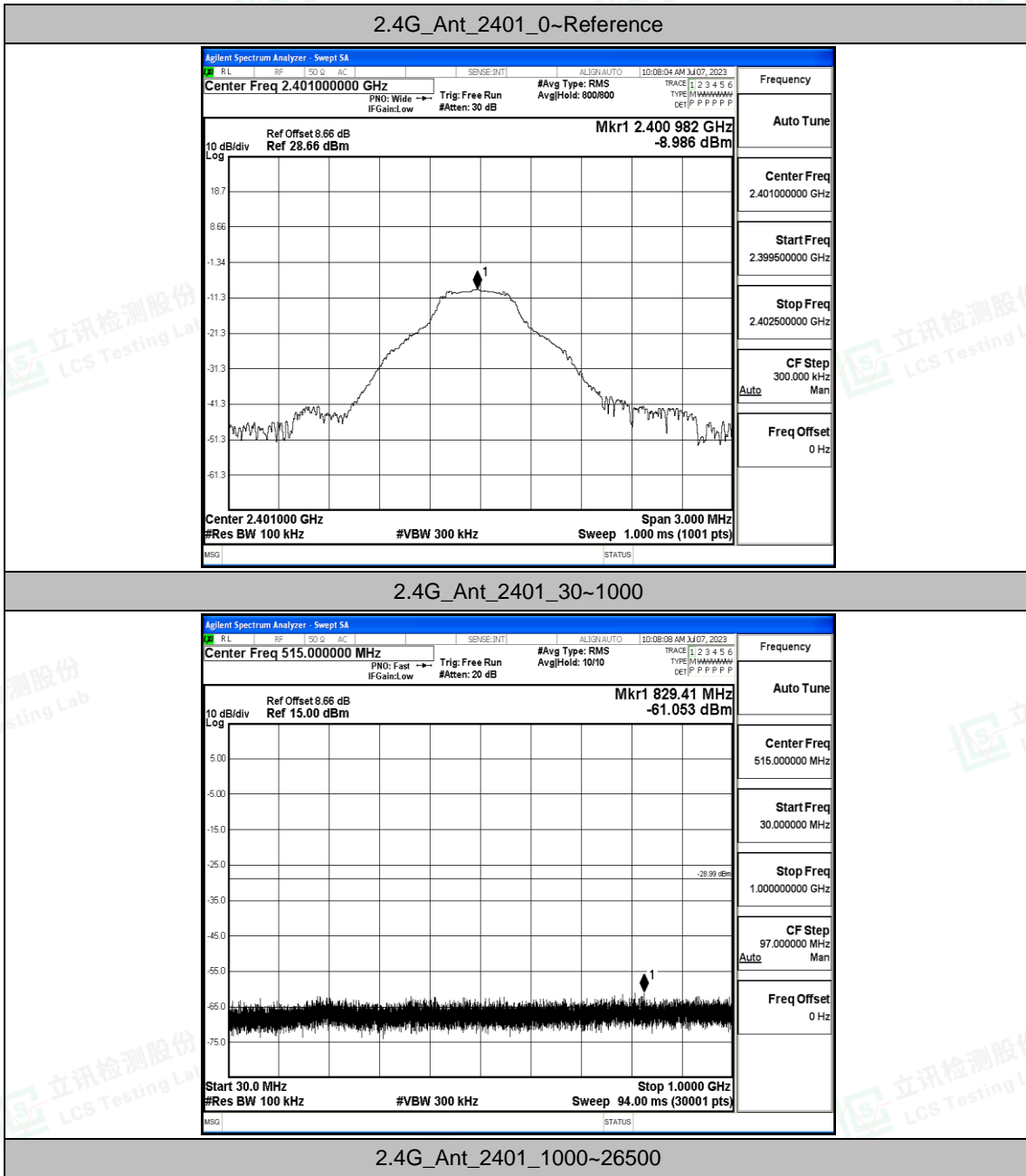
Test Result

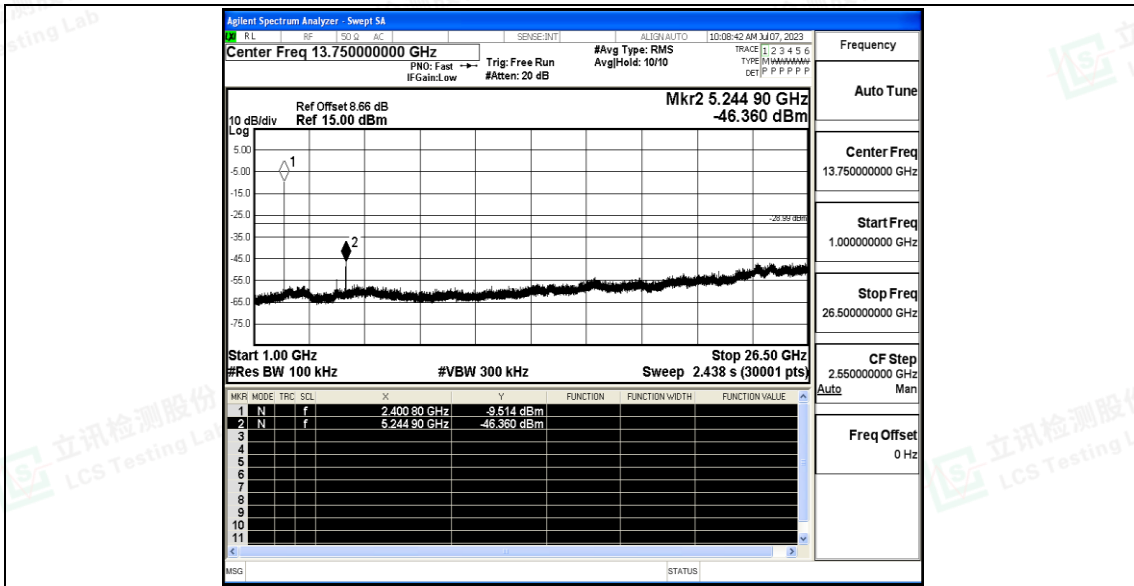
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
ANT+	Ant	2401	Reference	-8.99	-8.99	---	PASS
			30~1000	-8.99	-61.05	≤-28.99	PASS
			1000~26500	-8.99	-46.36	≤-28.99	PASS
		2441	Reference	-8.08	-8.08	---	PASS
			30~1000	-8.08	-61.17	≤-28.08	PASS
			1000~26500	-8.08	-46.35	≤-28.08	PASS
		2481	Reference	-6.80	-6.80	---	PASS
			30~1000	-6.80	-59.37	≤-26.8	PASS
			1000~26500	-6.80	-46.95	≤-26.8	PASS



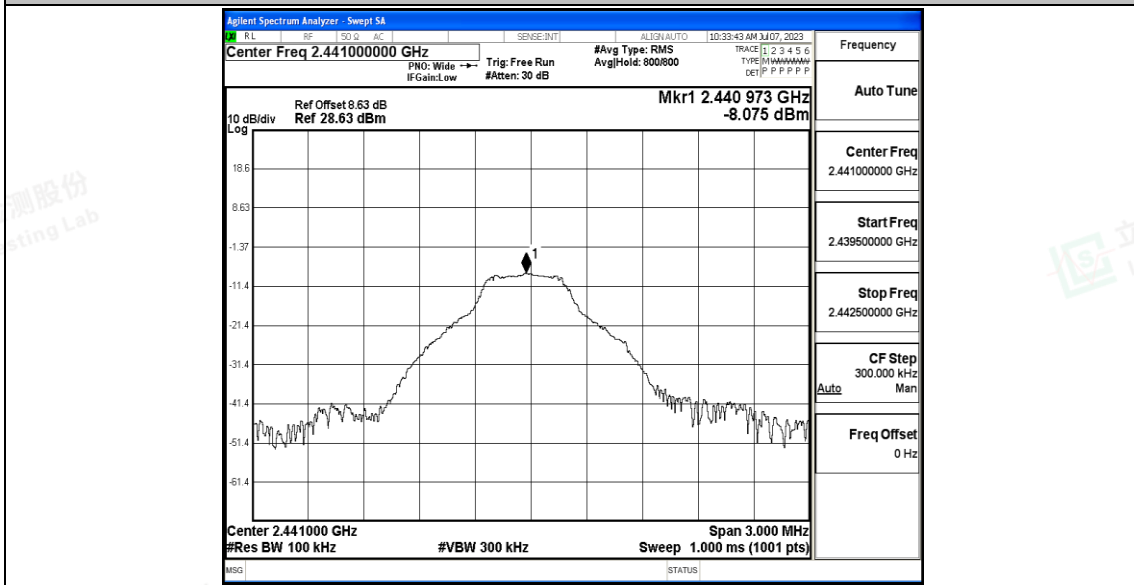


Test Graphs



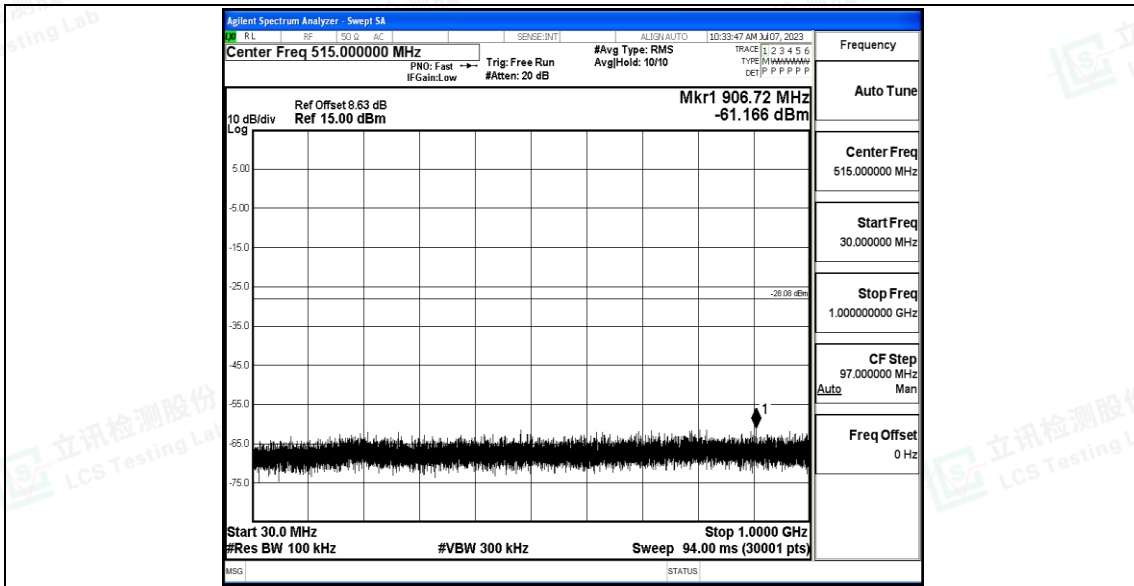


2.4G_Ant_2441_0~Reference

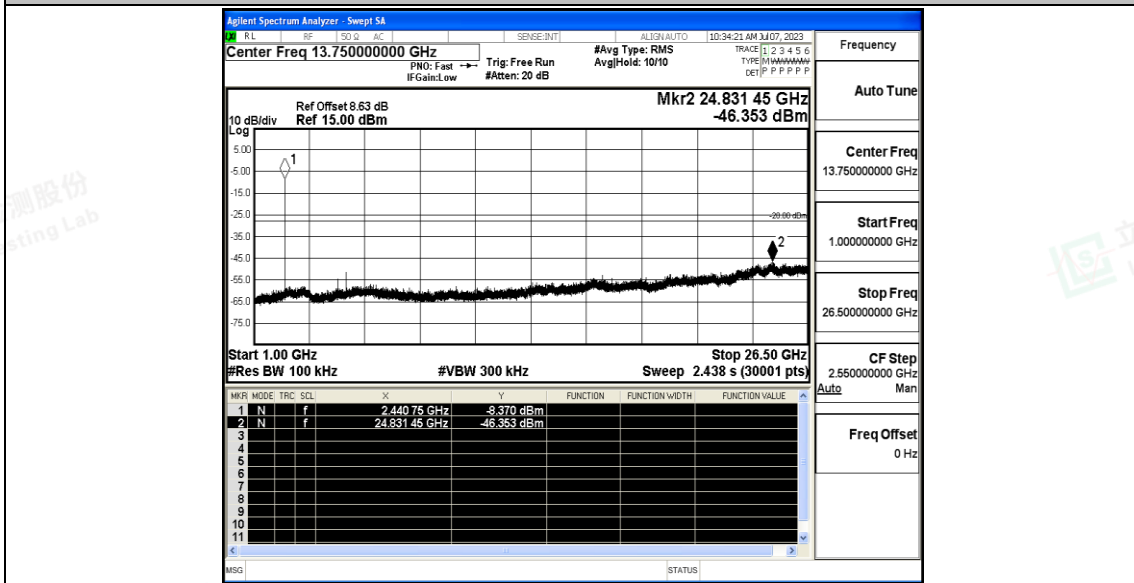


2.4G_Ant_2441_30~1000



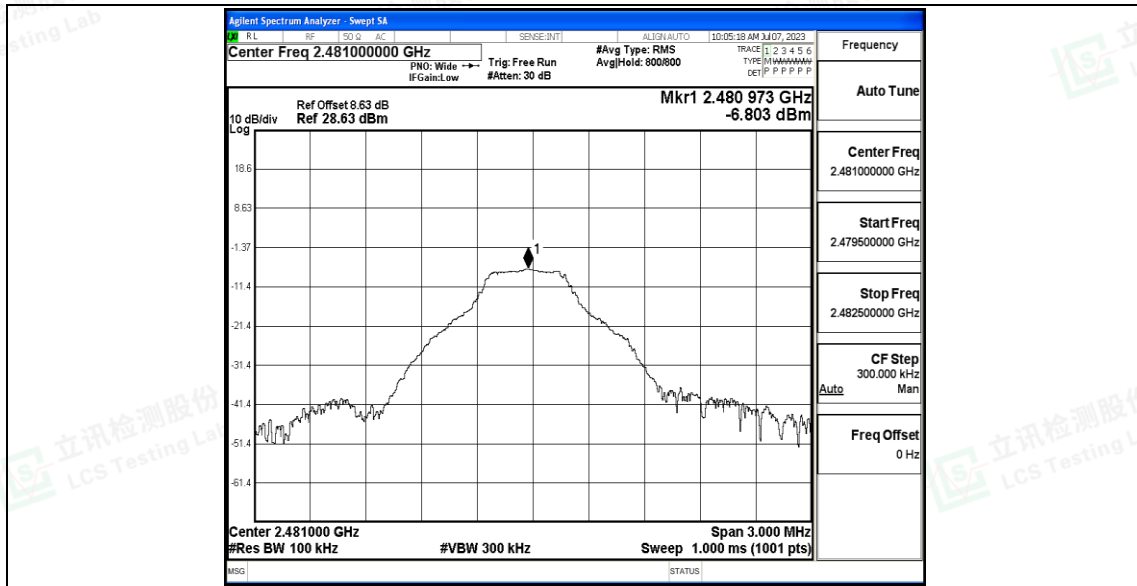


2.4G_Ant_2441_1000~26500

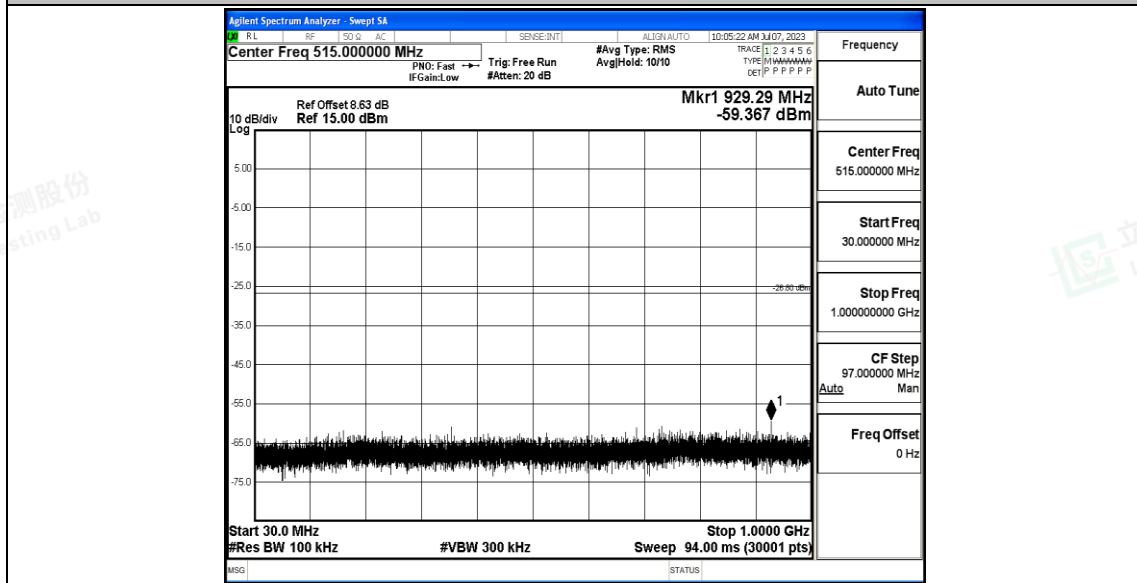


2.4G_Ant_2481_0~Reference



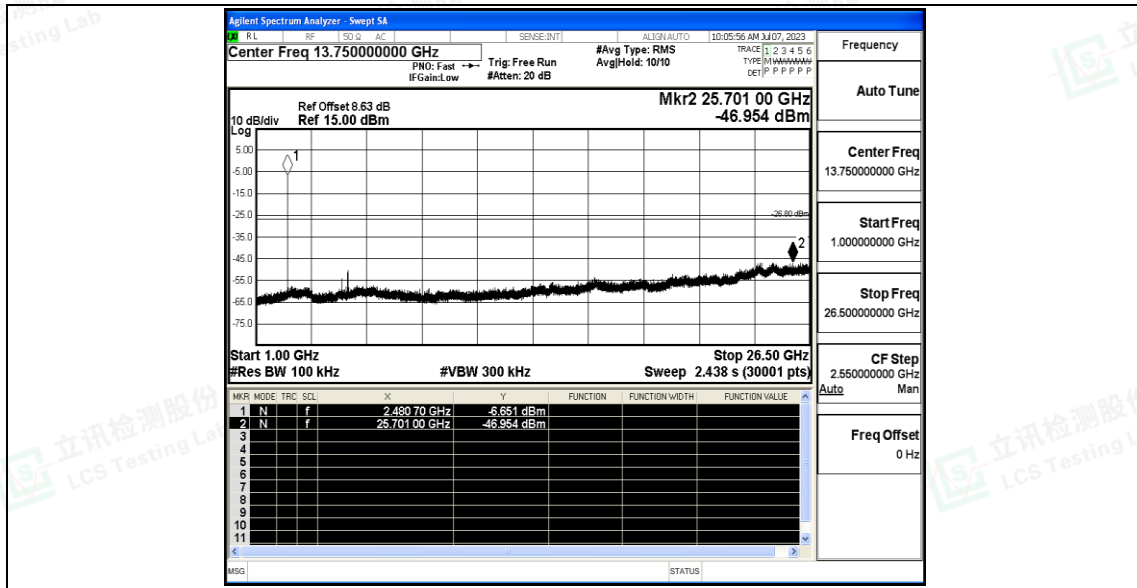


2.4G_Ant_2481_30~1000



2.4G_Ant_2481_1000~26500







D.6 Duty Cycle

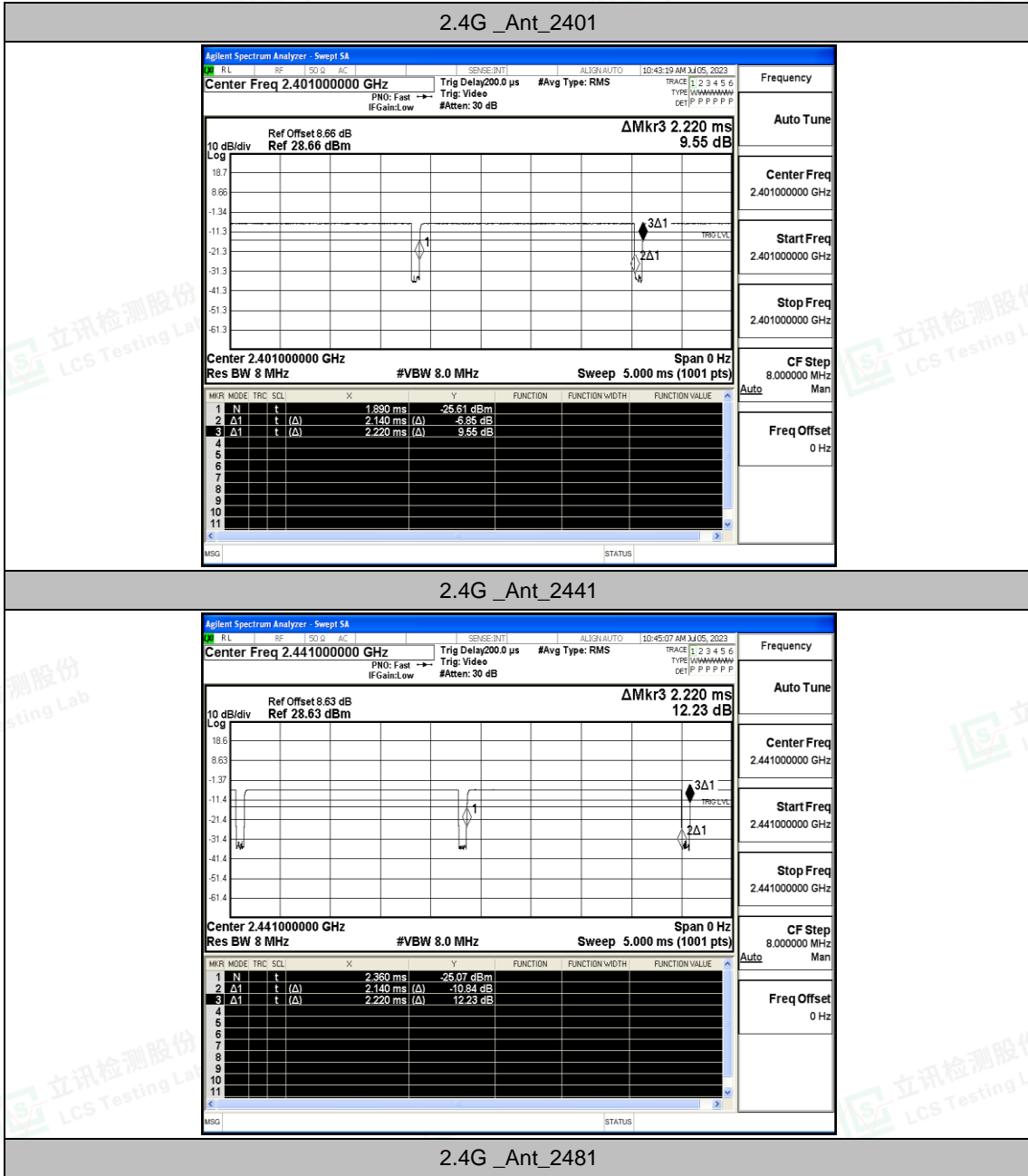
Test Result

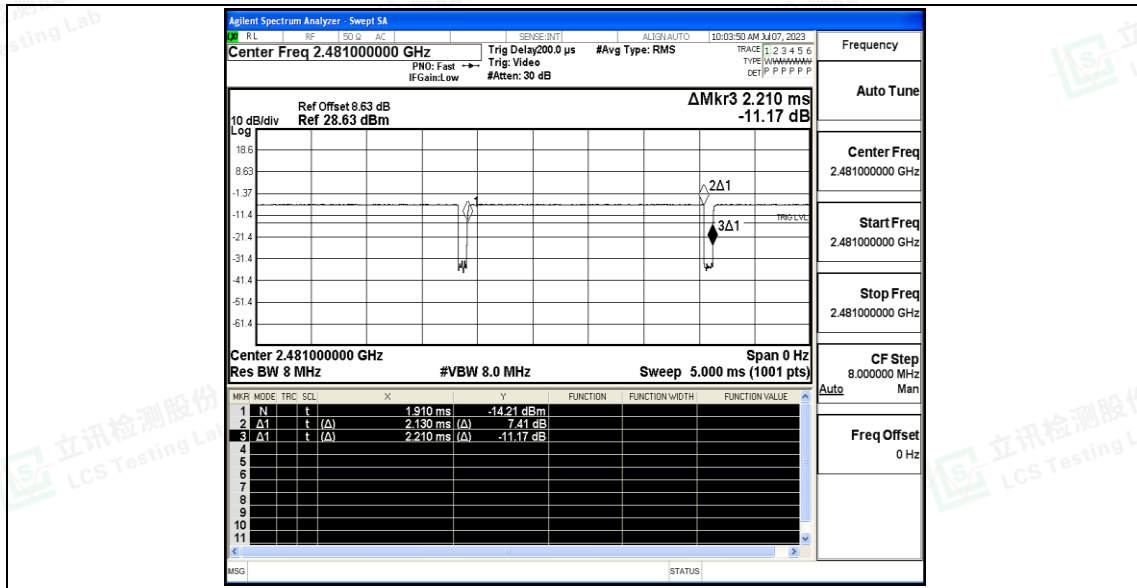
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
ANT+	Ant	2401	2.14	2.22	0.9640	96.40	0.16	0.47	---	---
		2441	2.14	2.22	0.9640	96.40	0.16	0.47	---	---
		2481	2.13	2.21	0.9638	96.38	0.16	0.47	---	---





Test Graphs





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D.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
ANT+	Ant	Low	2401	AV	2310.000	-58.01	≤-41.20	37.19	≤54	PASS
				AV	2385.050	-56.91	≤-41.20	38.29	≤54	PASS
				AV	2390.000	-57.66	≤-41.20	37.54	≤54	PASS
				Peak	2310.000	-51.19	≤-21.20	44.01	≤74	PASS
				Peak	2310.080	-47.78	≤-21.20	47.42	≤74	PASS
				Peak	2390.000	-49.97	≤-21.20	45.23	≤74	PASS
		High	2481	AV	2483.500	-43.93	≤-41.20	51.27	≤54	PASS
				AV	2483.520	-43.93	≤-41.20	51.27	≤54	PASS
				AV	2500.000	-56.98	≤-41.20	38.22	≤54	PASS
				Peak	2483.500	-49.86	≤-21.20	45.34	≤74	PASS
				Peak	2483.680	-33.38	≤-21.20	61.82	≤74	PASS
				Peak	2500.000	-48.85	≤-21.20	46.35	≤74	PASS

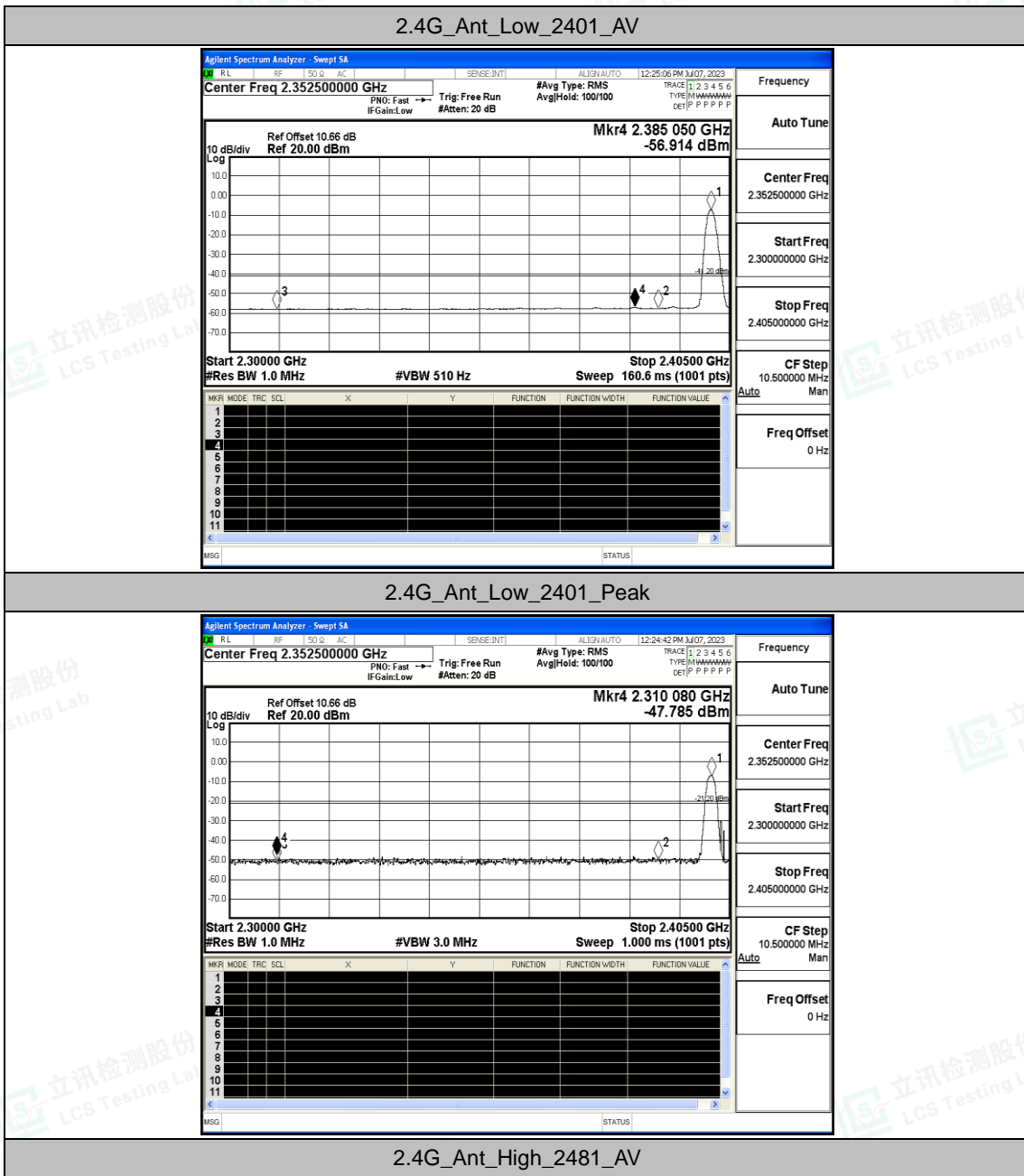
Note:

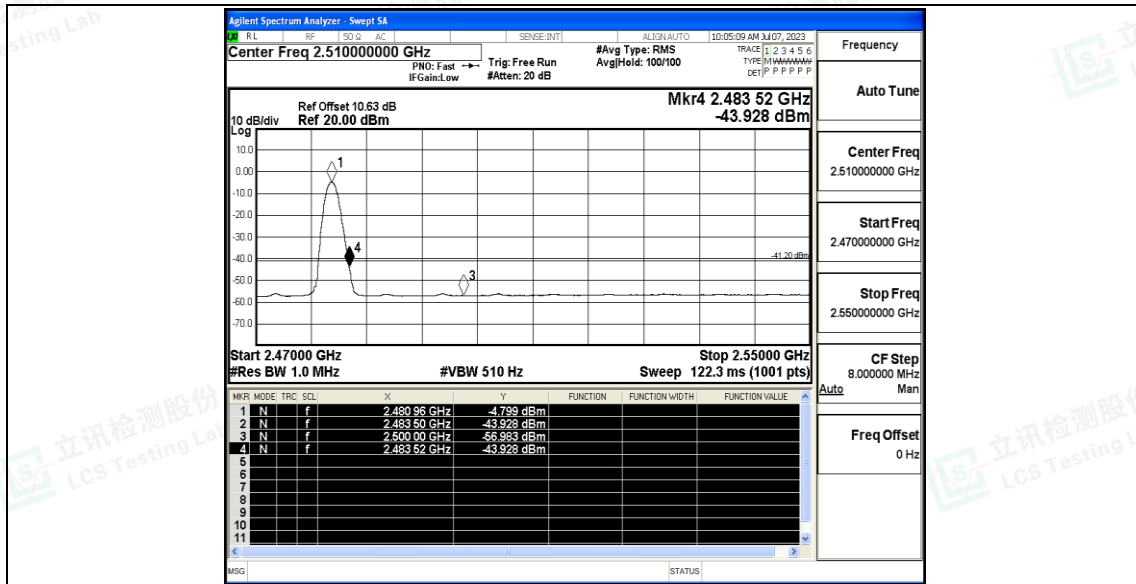
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.





Test Graphs





2.4G_Ant_High_2481_Peak

