



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: P060Eye Massager

Test Model: HXR-P060

Environmental Conditions

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



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B.1 DTS Bandwidth

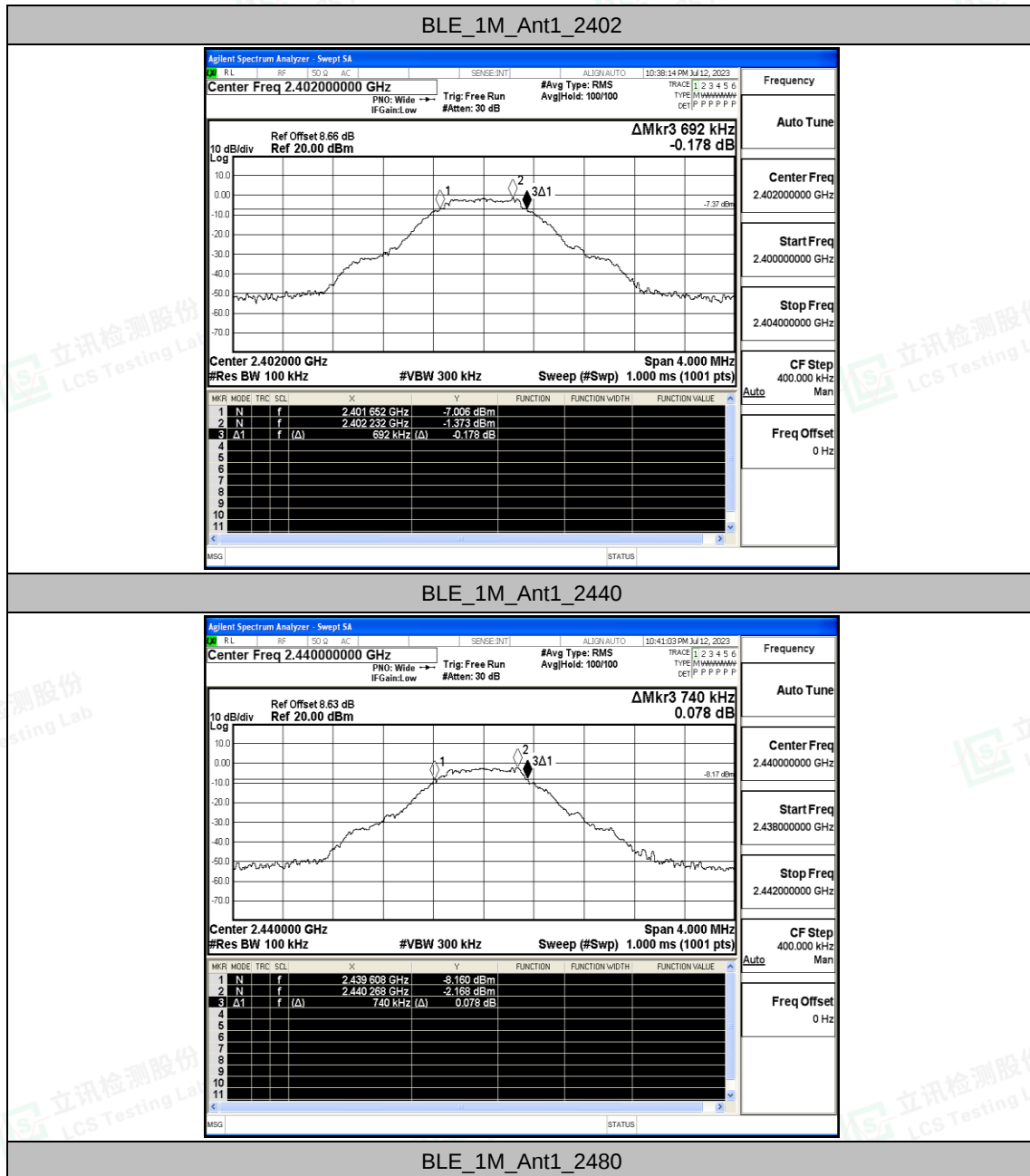
Test Result

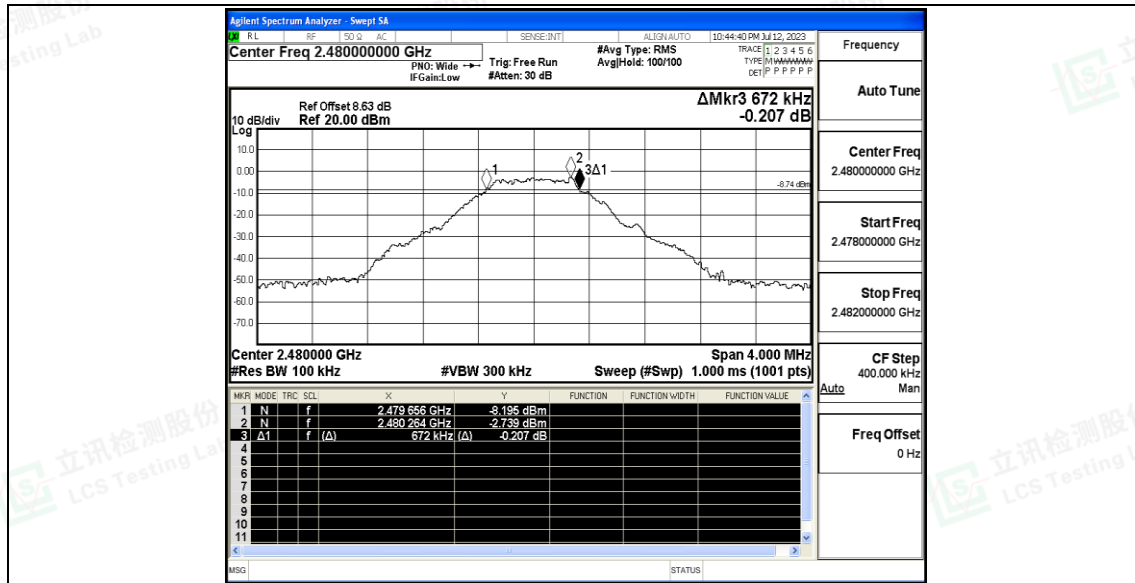
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.692	2401.652	2402.344	0.5	PASS
		2440	0.740	2439.608	2440.348	0.5	PASS
		2480	0.672	2479.656	2480.328	0.5	PASS
BLE_2M	Ant1	2402	1.232	2401.352	2402.584	0.5	PASS
		2440	1.148	2439.428	2440.576	0.5	PASS
		2480	1.148	2479.428	2480.576	0.5	PASS



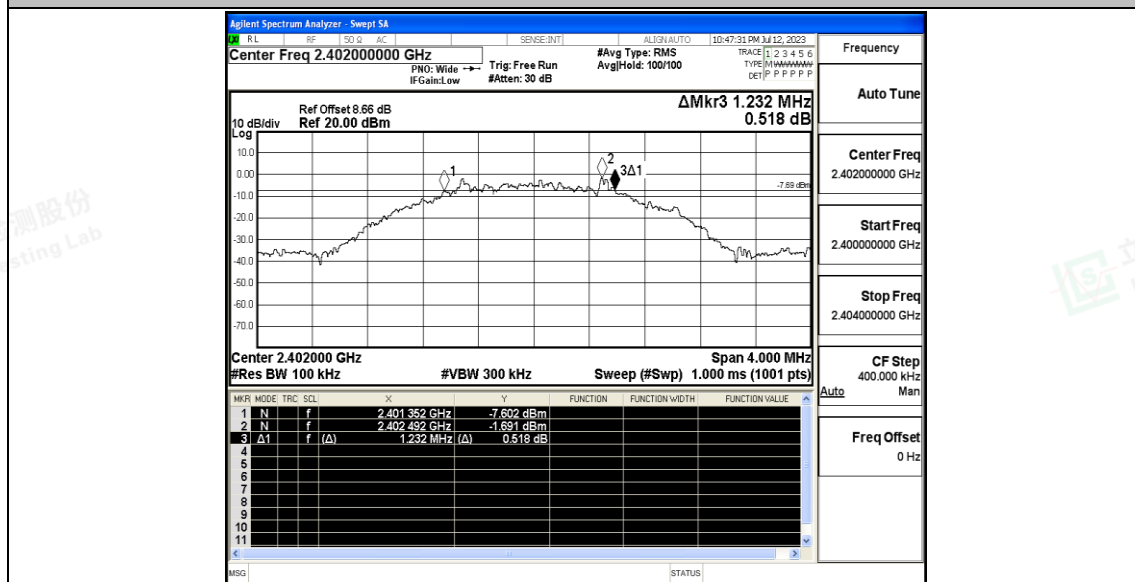


Test Graphs



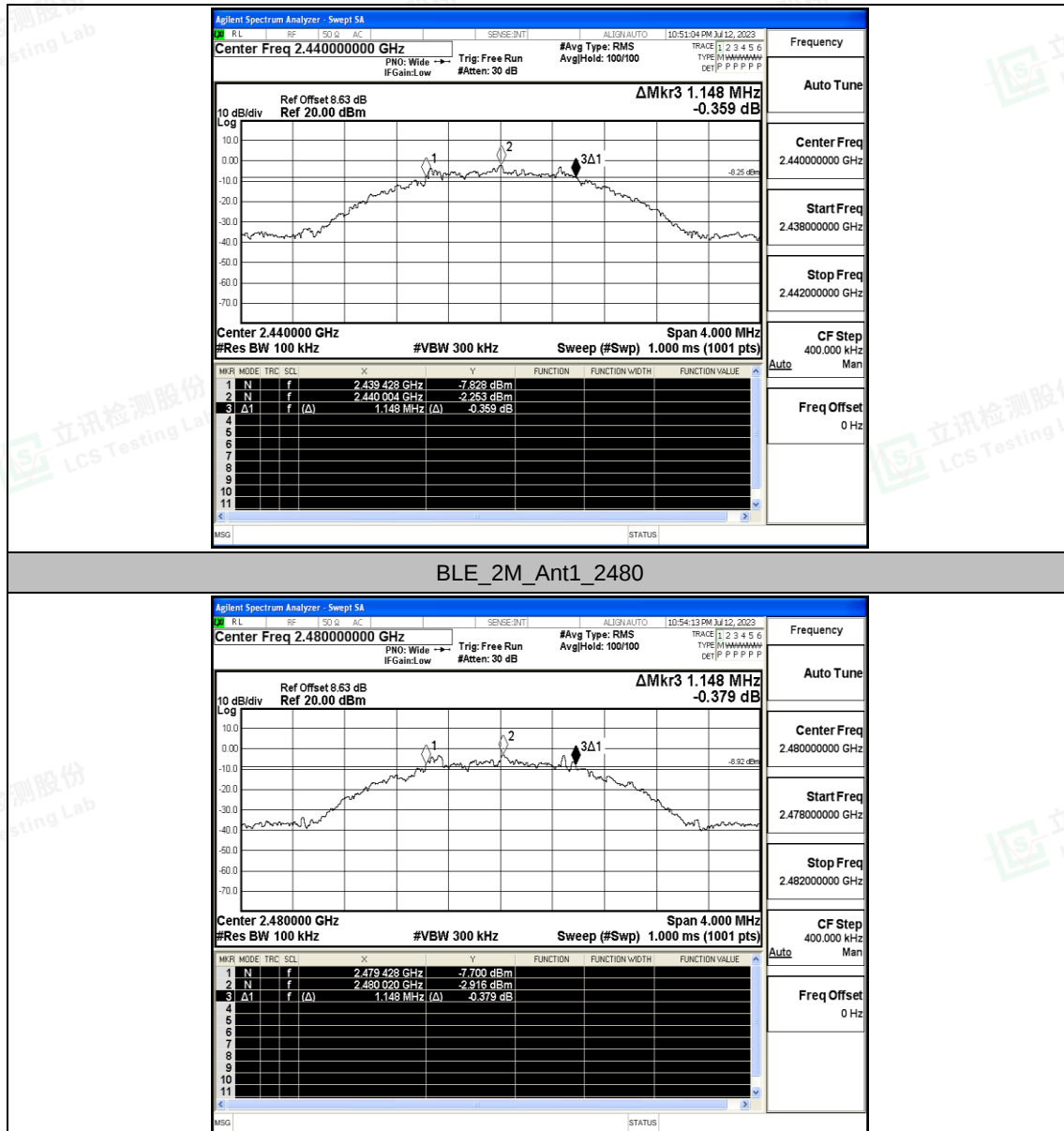


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







B.2 Maximum conducted output power

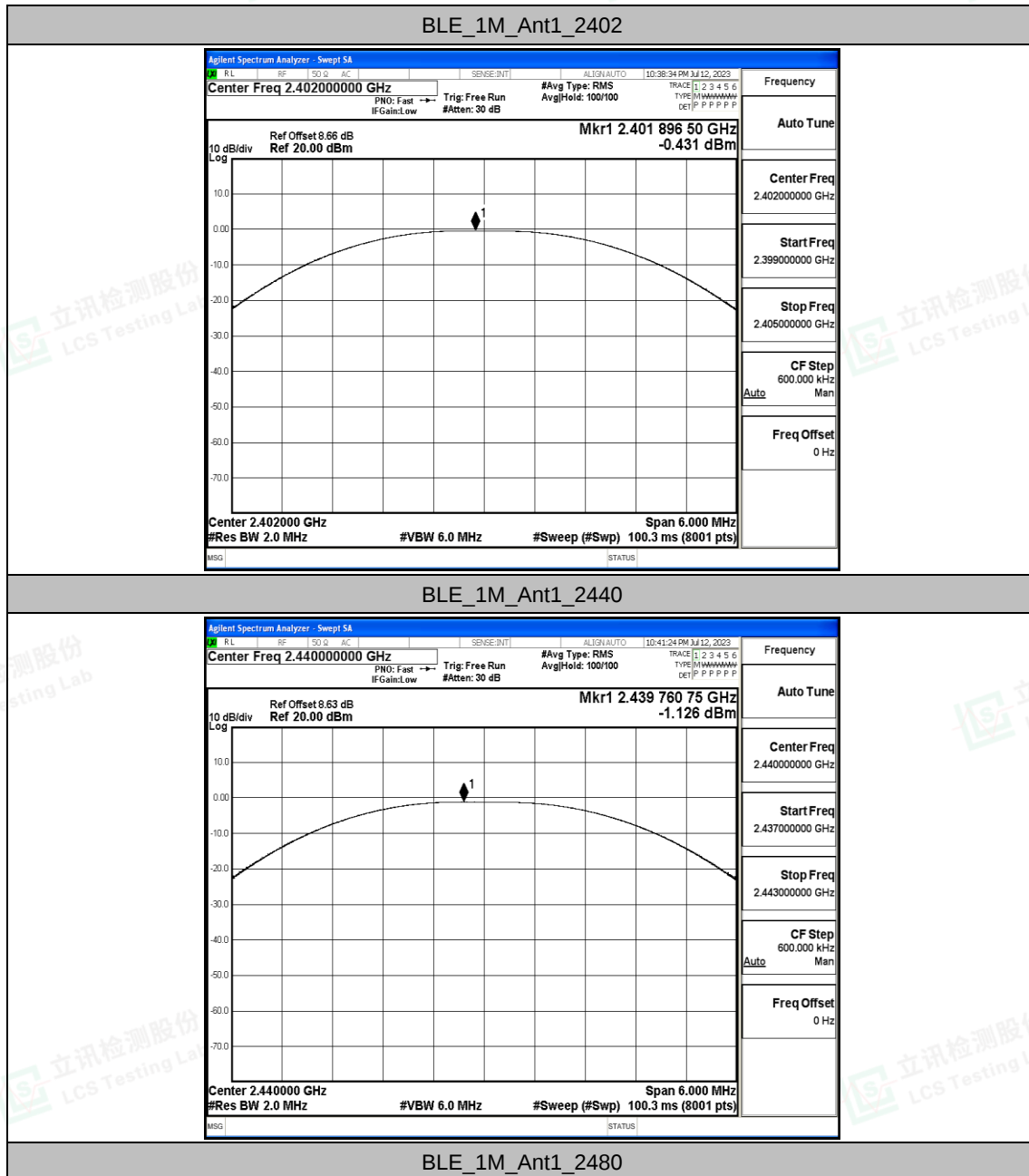
Test Result

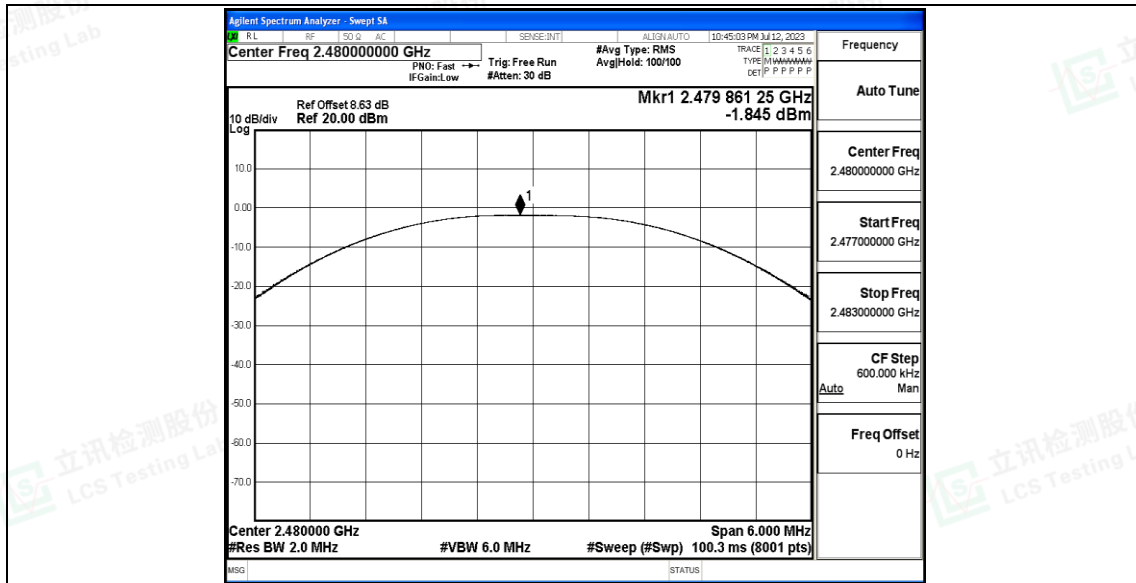
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.43	≤30	PASS
		2440	-1.13	≤30	PASS
		2480	-1.85	≤30	PASS
BLE_2M	Ant1	2402	-0.44	≤30	PASS
		2440	-1.11	≤30	PASS
		2480	-1.82	≤30	PASS



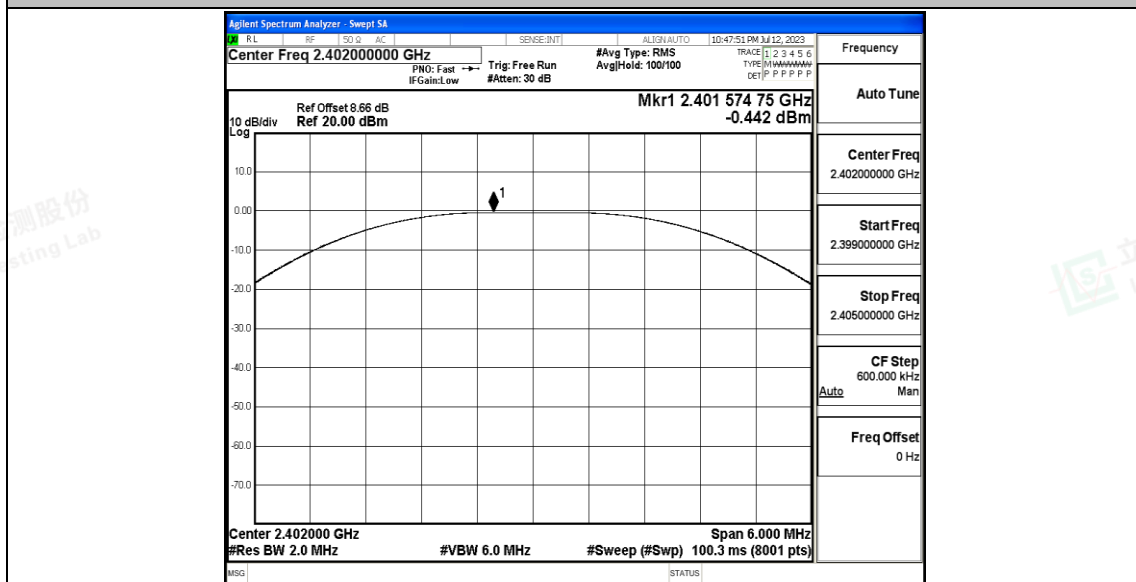


Test Graphs



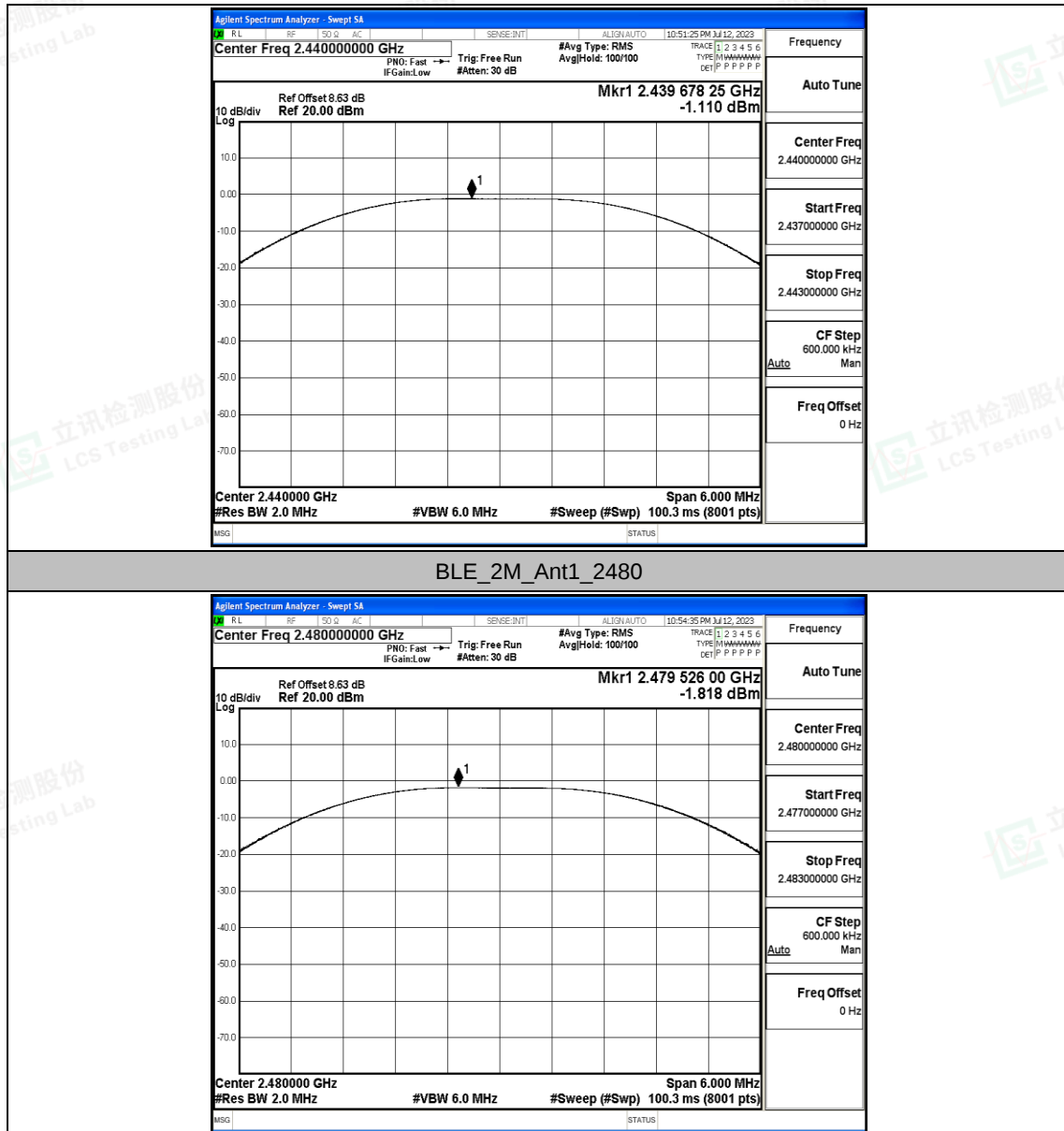


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







B.3 Maximum power spectral density

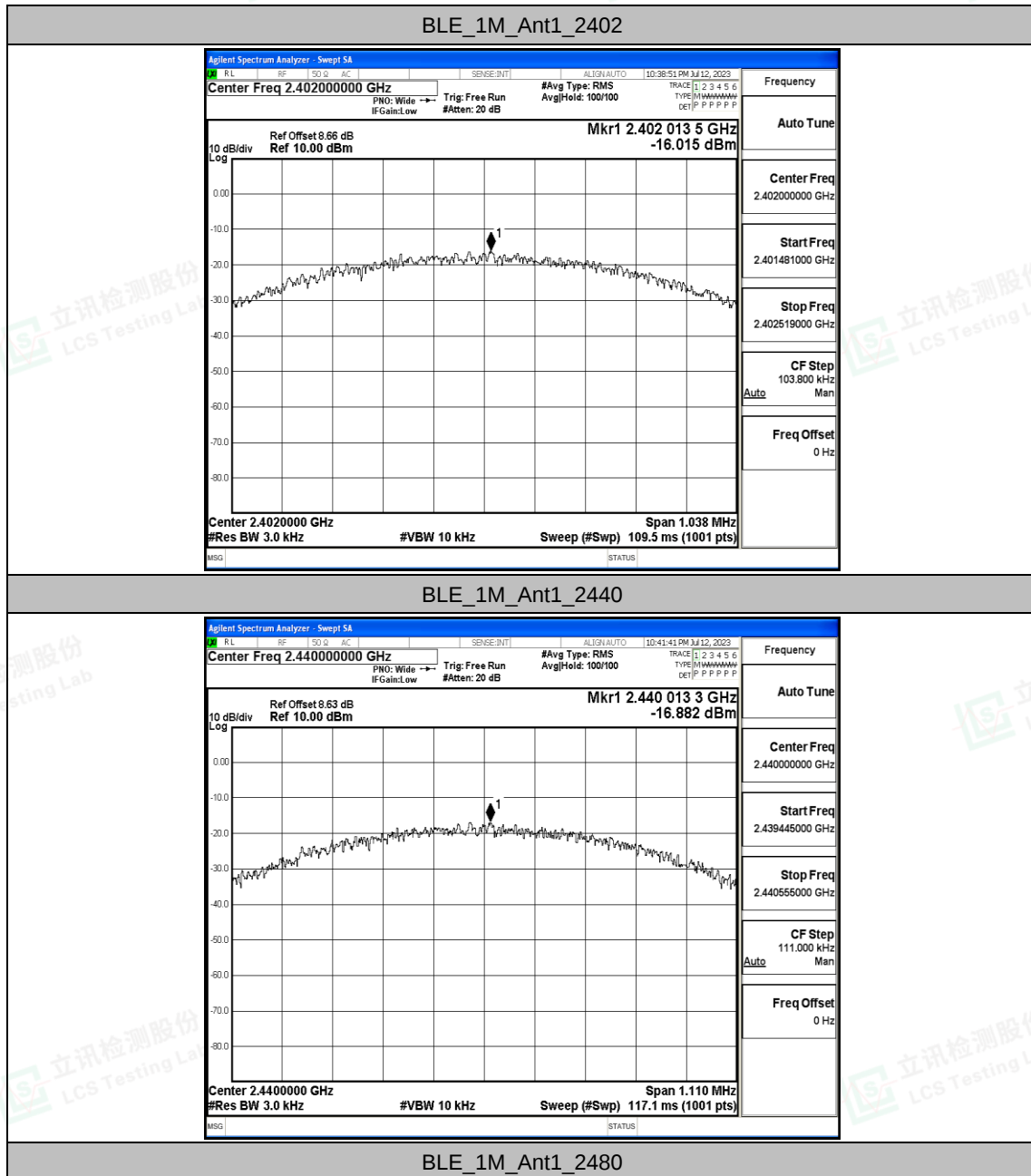
Test Result

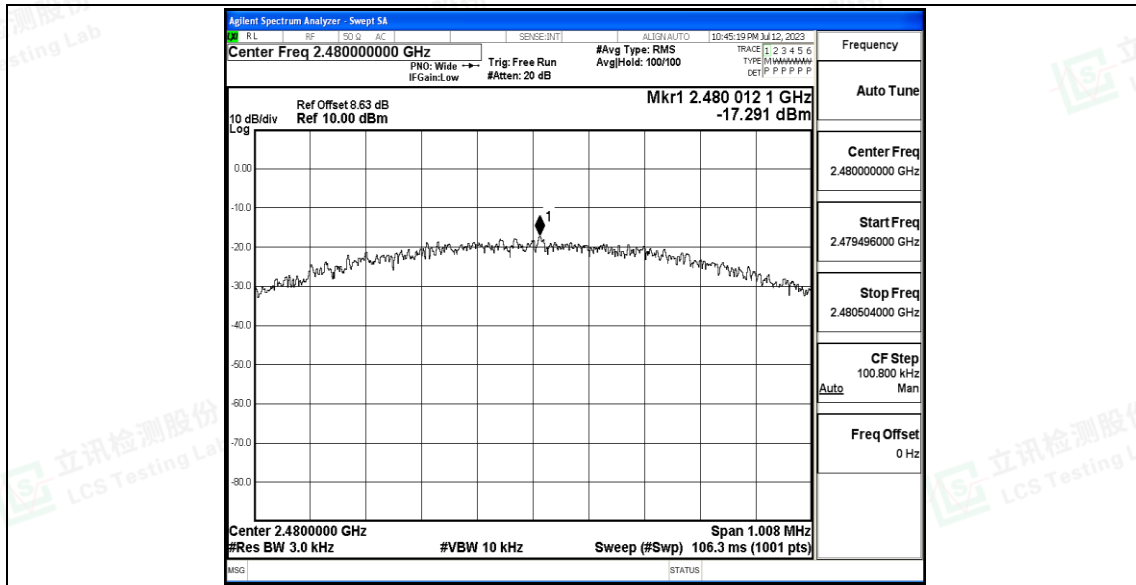
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.02	≤8.00	PASS
		2440	-16.88	≤8.00	PASS
		2480	-17.29	≤8.00	PASS
BLE_2M	Ant1	2402	-20.26	≤8.00	PASS
		2440	-21.05	≤8.00	PASS
		2480	-21.14	≤8.00	PASS



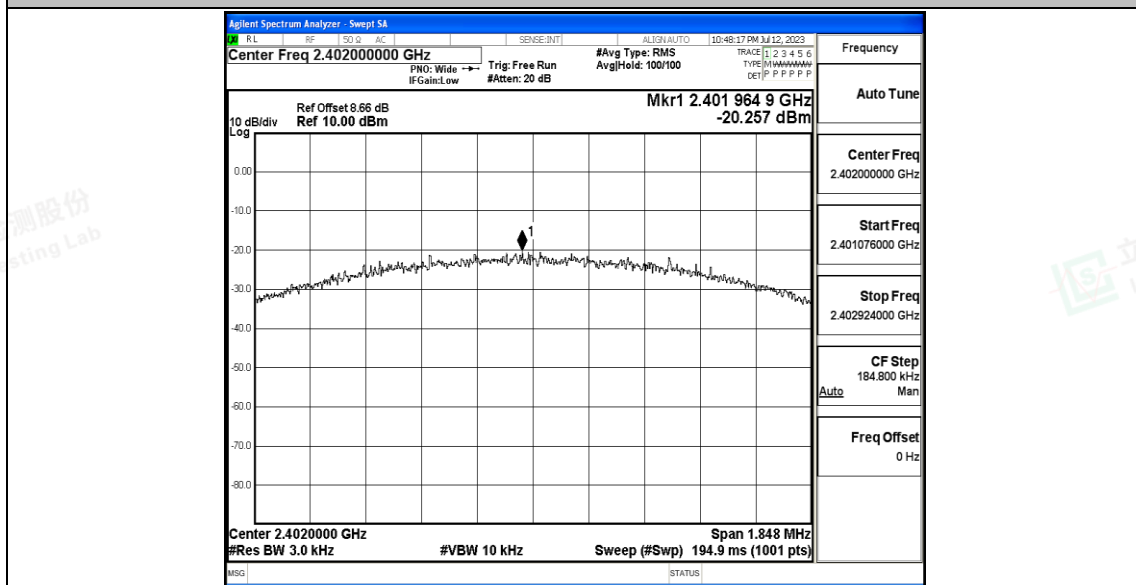


Test Graphs



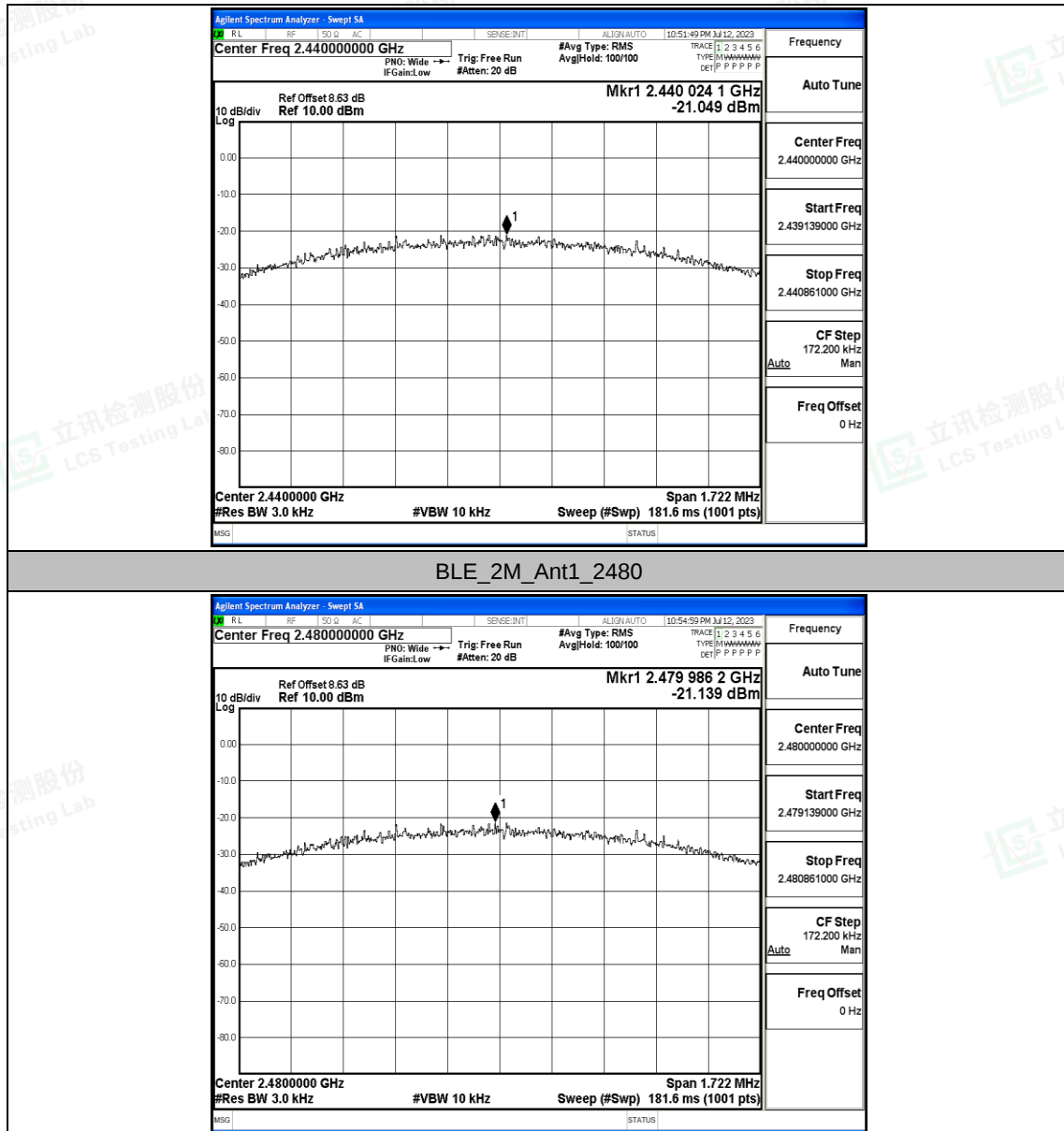


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







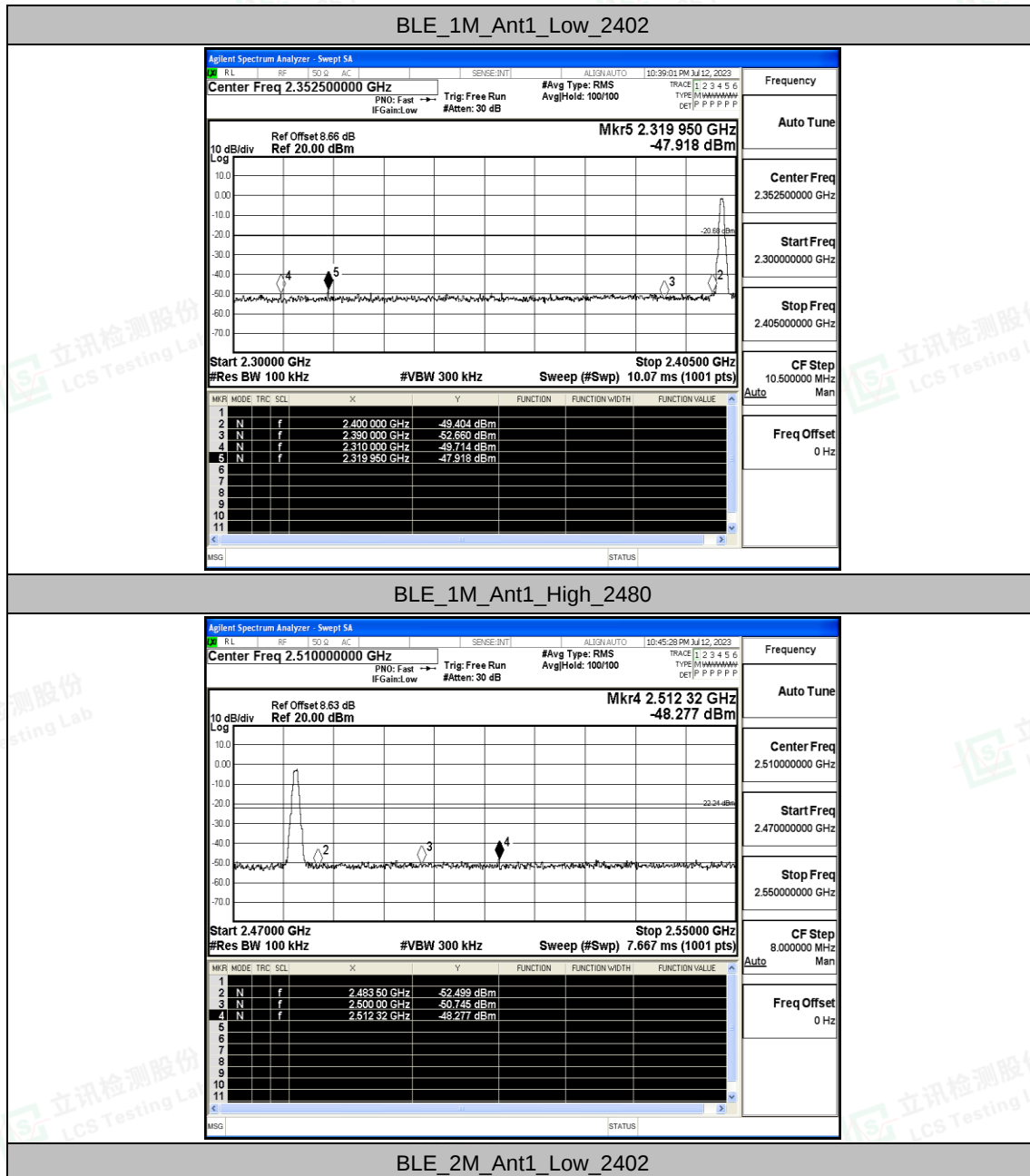
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.68	-47.92	≤ -20.68	PASS
		High	2480	-2.24	-48.28	≤ -22.24	PASS
BLE_2M	Ant1	Low	2402	-1.65	-35.34	≤ -21.65	PASS
		High	2480	-2.73	-48.81	≤ -22.73	PASS



Test Graphs







B.5 Conducted Spurious Emission

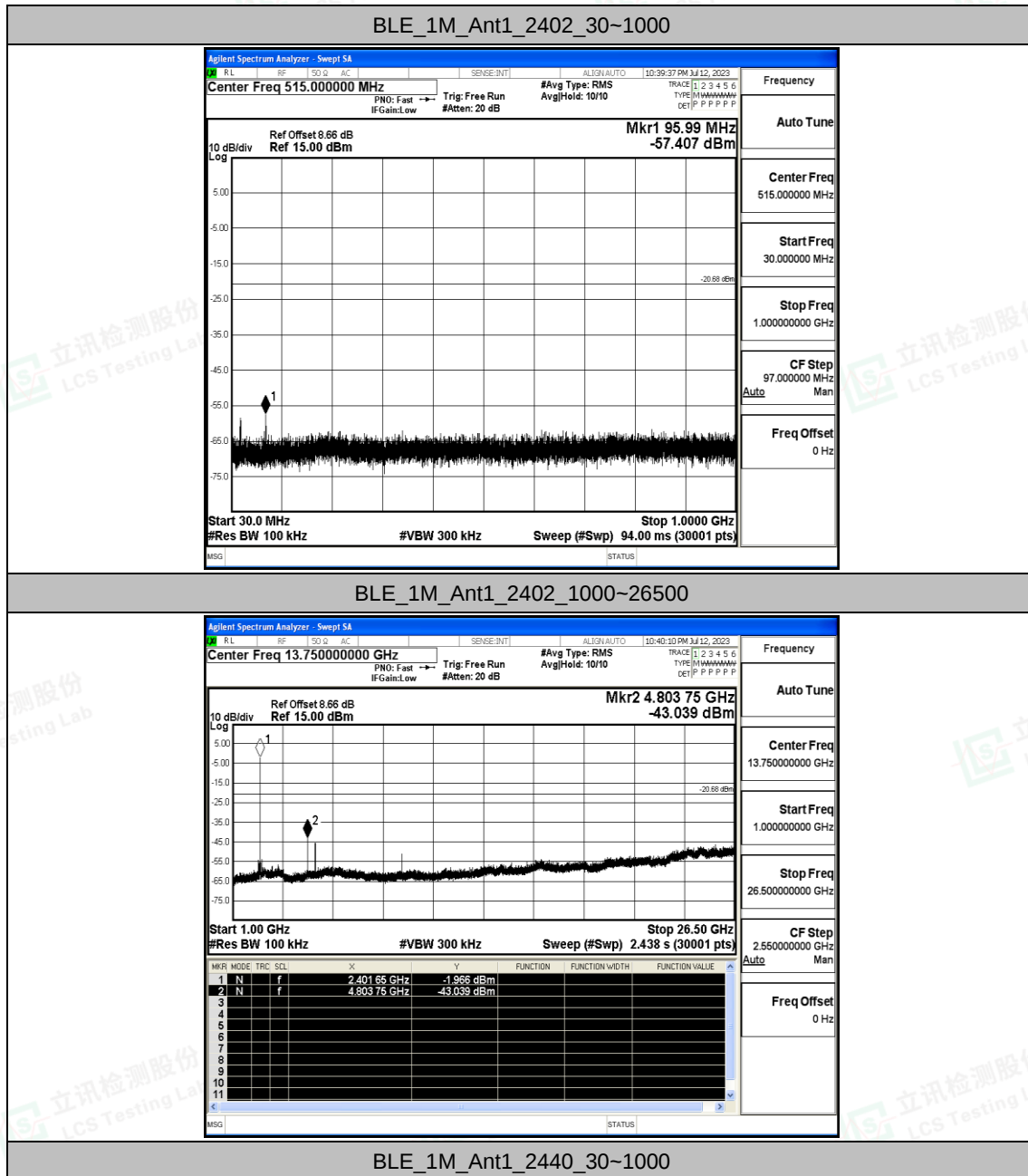
Test Result

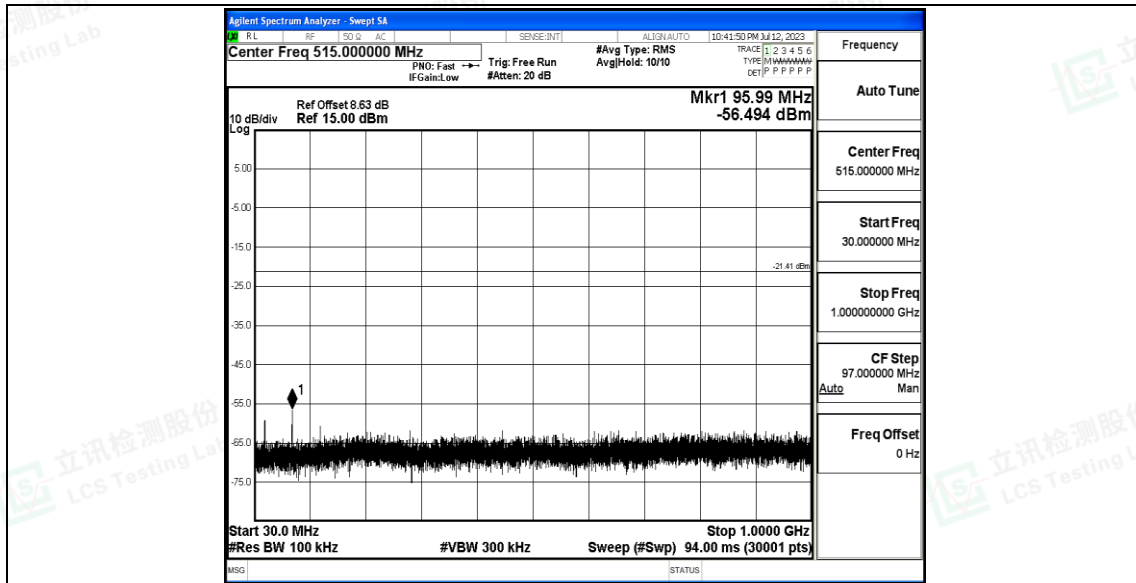
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	-0.68	-57.41	≤-20.68	PASS
			1000~26500	-0.68	-43.04	≤-20.68	PASS
		2440	30~1000	-1.41	-56.49	≤-21.41	PASS
			1000~26500	-1.41	-43.55	≤-21.41	PASS
		2480	30~1000	-2.24	-56.48	≤-22.24	PASS
			1000~26500	-2.24	-43.93	≤-22.24	PASS
BLE_2M	Ant1	2402	30~1000	-1.65	-54.66	≤-21.65	PASS
			1000~26500	-1.65	-46.12	≤-21.65	PASS
		2440	30~1000	-2.45	-56.95	≤-22.45	PASS
			1000~26500	-2.45	-44.85	≤-22.45	PASS
		2480	30~1000	-2.73	-55.65	≤-22.73	PASS
			1000~26500	-2.73	-41.97	≤-22.73	PASS



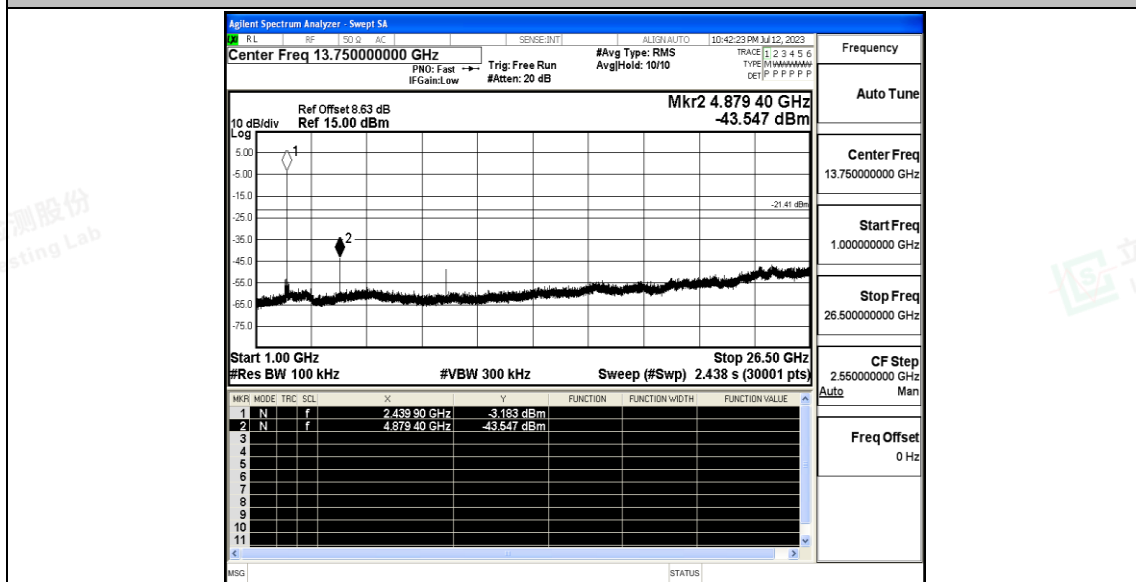


Test Graphs



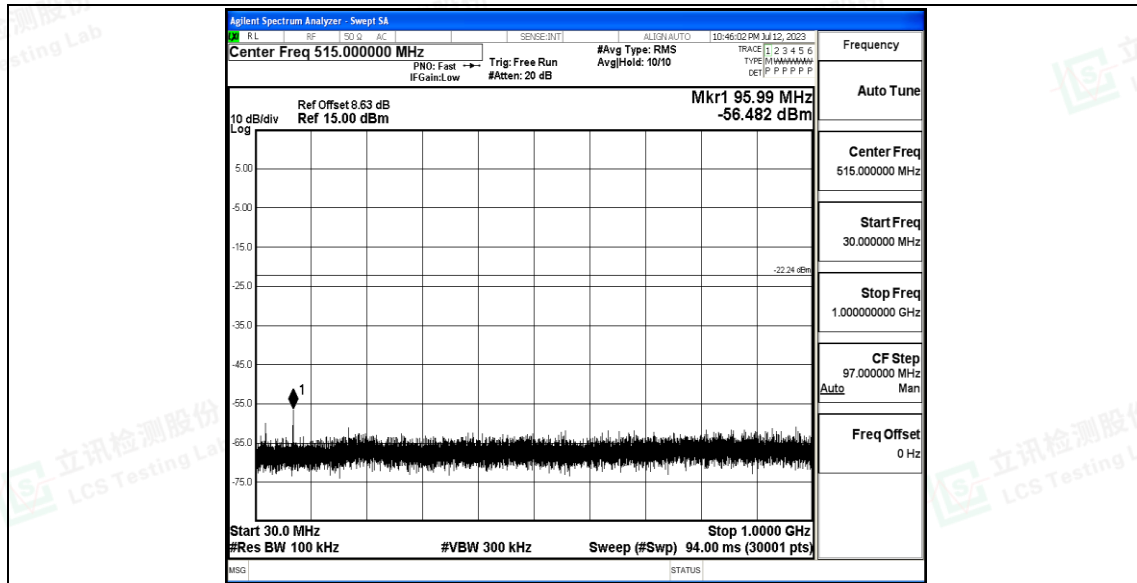


BLE_1M_Ant1_2440_1000~26500

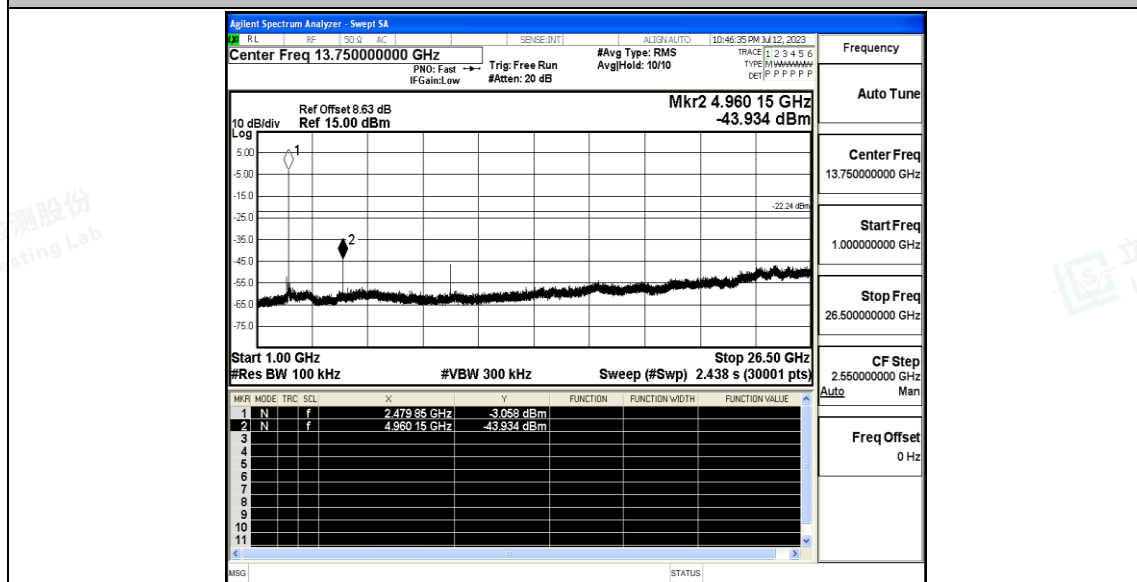


BLE_1M_Ant1_2480_30~1000



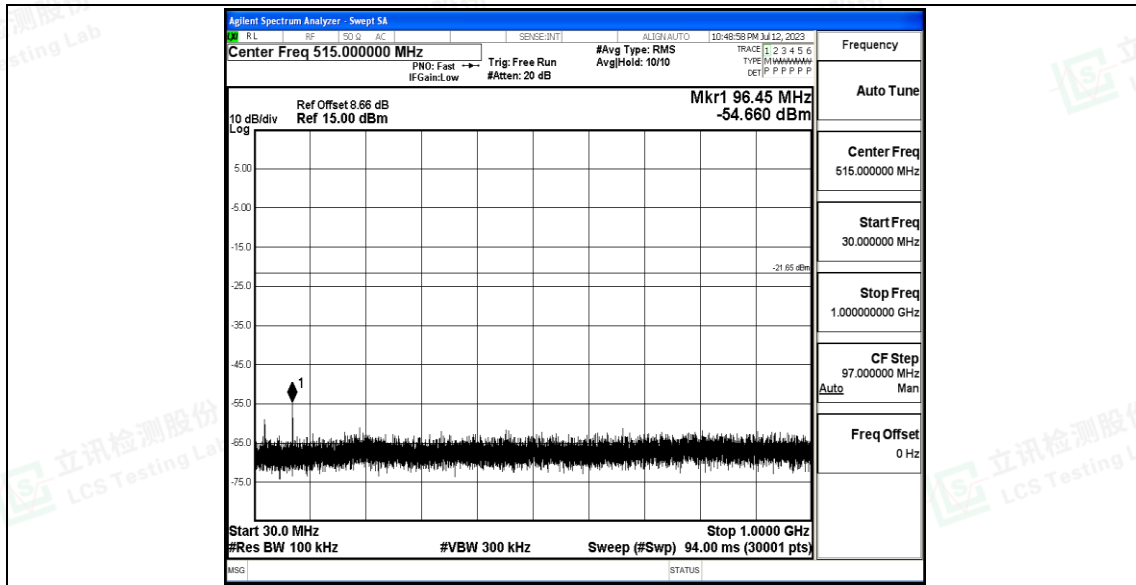


BLE_1M_Ant1_2480_1000~26500

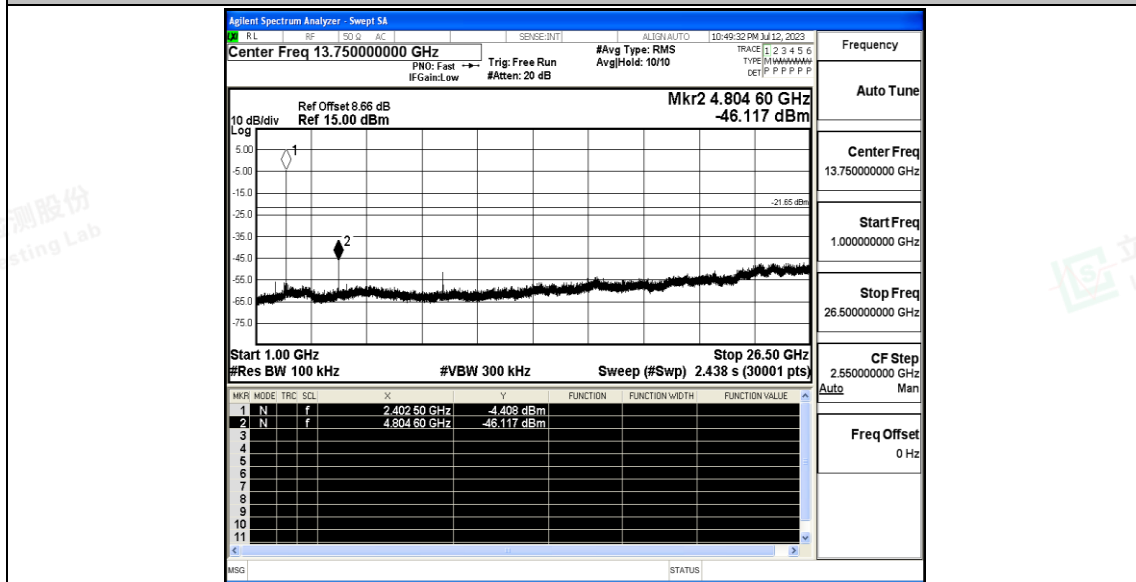


BLE_2M_Ant1_2402_30~1000



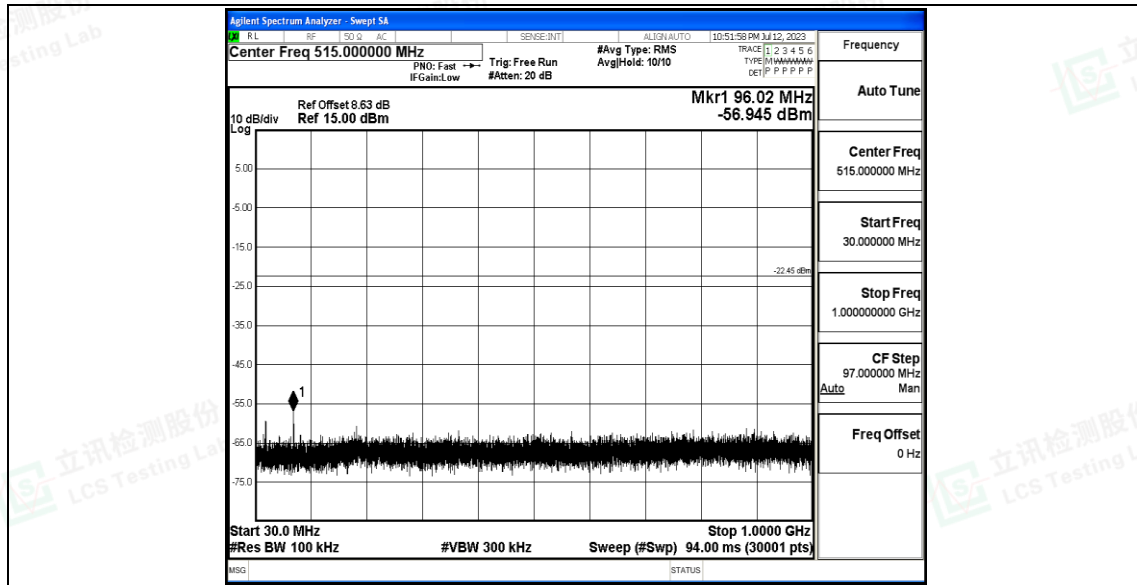


BLE_2M_Ant1_2402_1000~26500

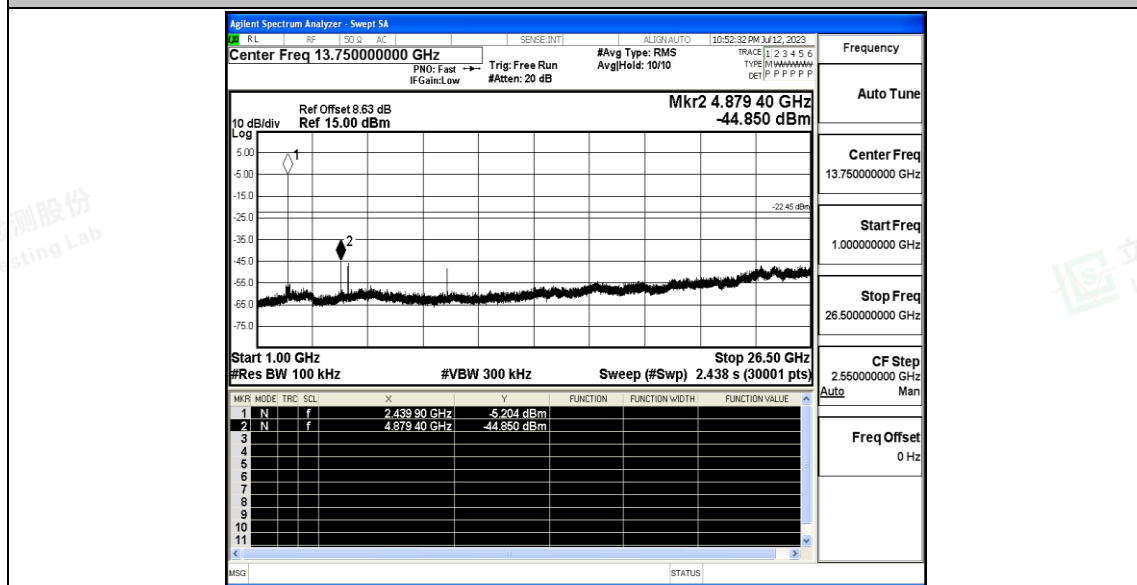


BLE_2M_Ant1_2440_30~1000



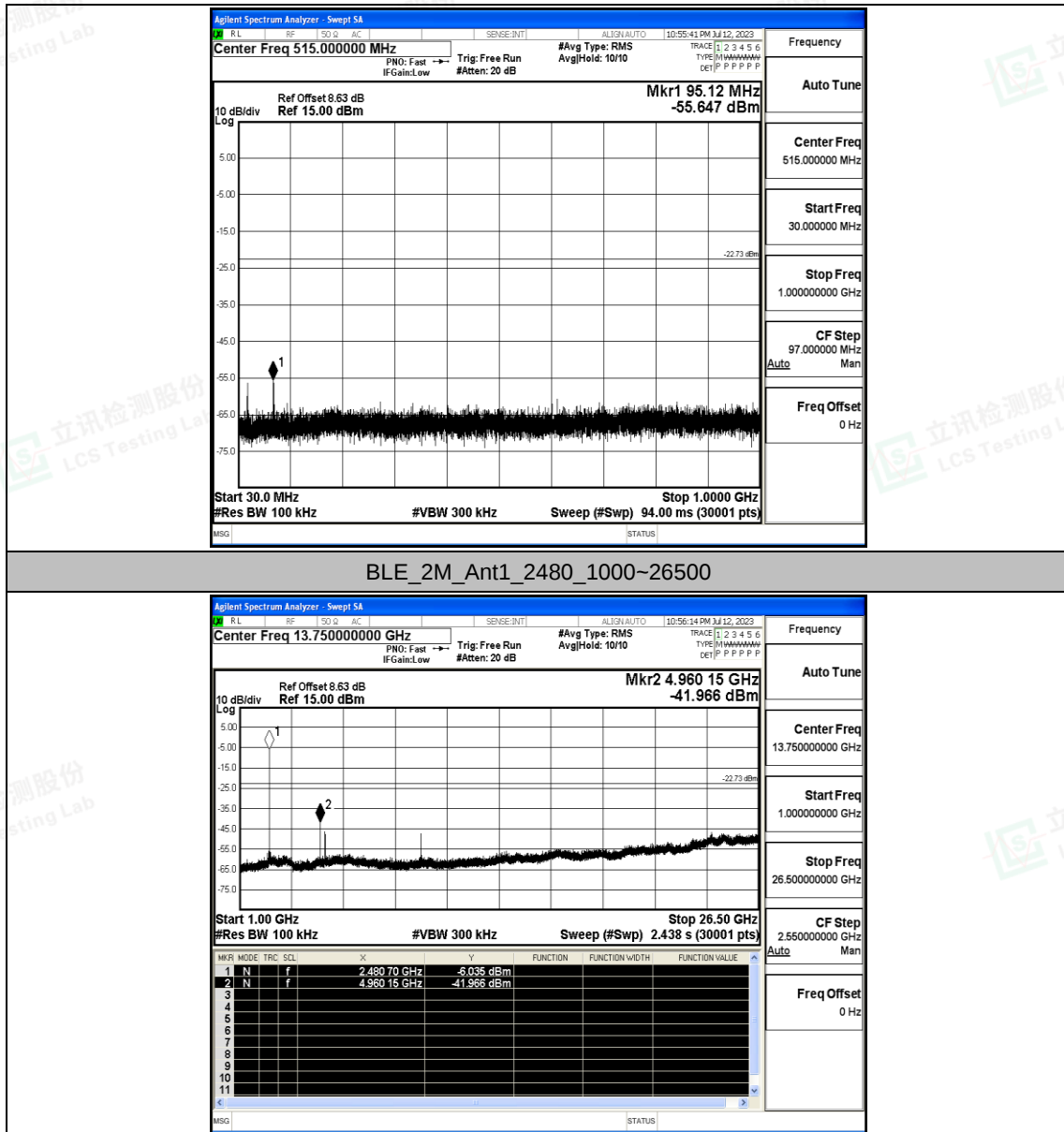


BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_30~1000







B.6 Duty Cycle

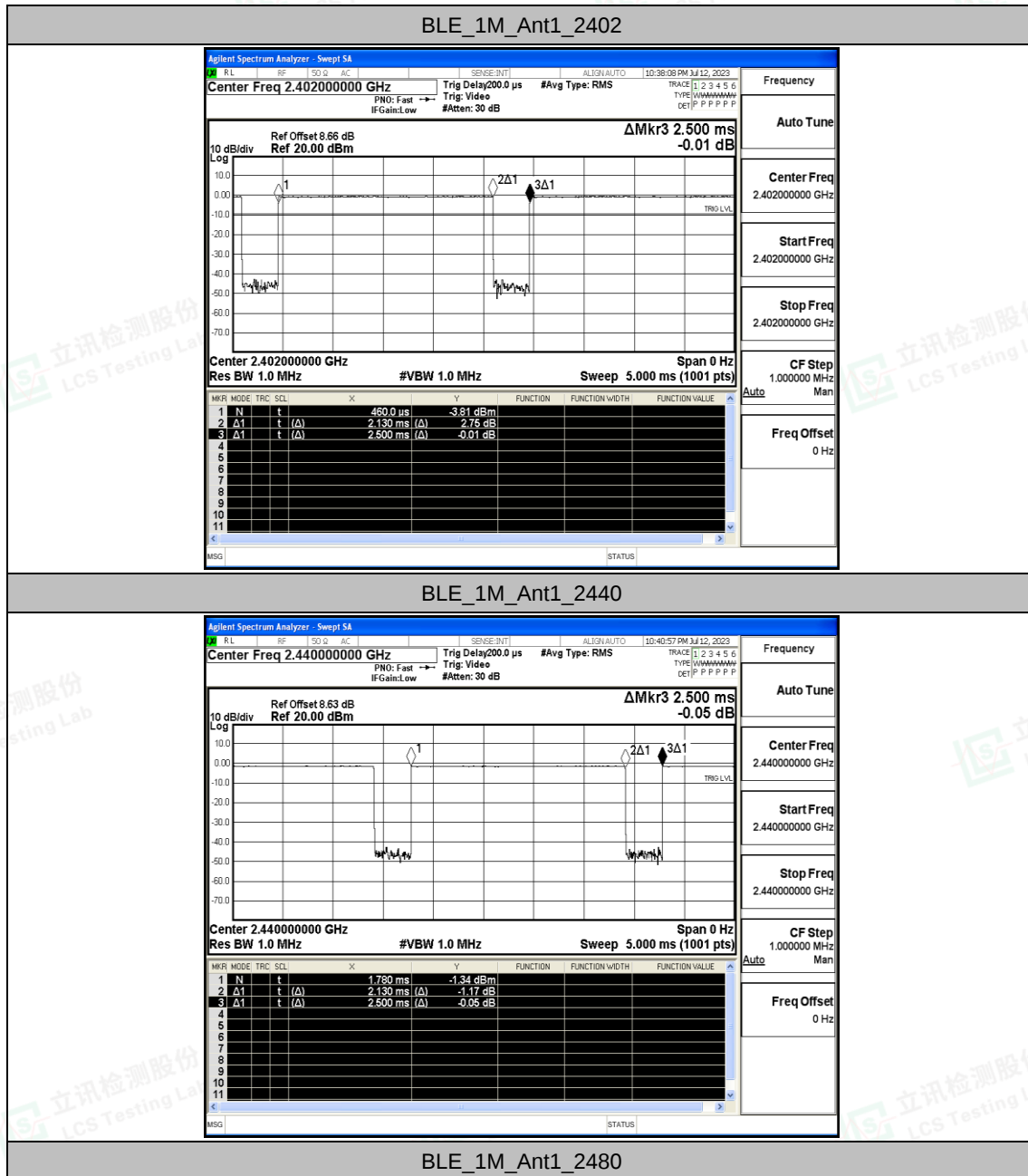
Test Result

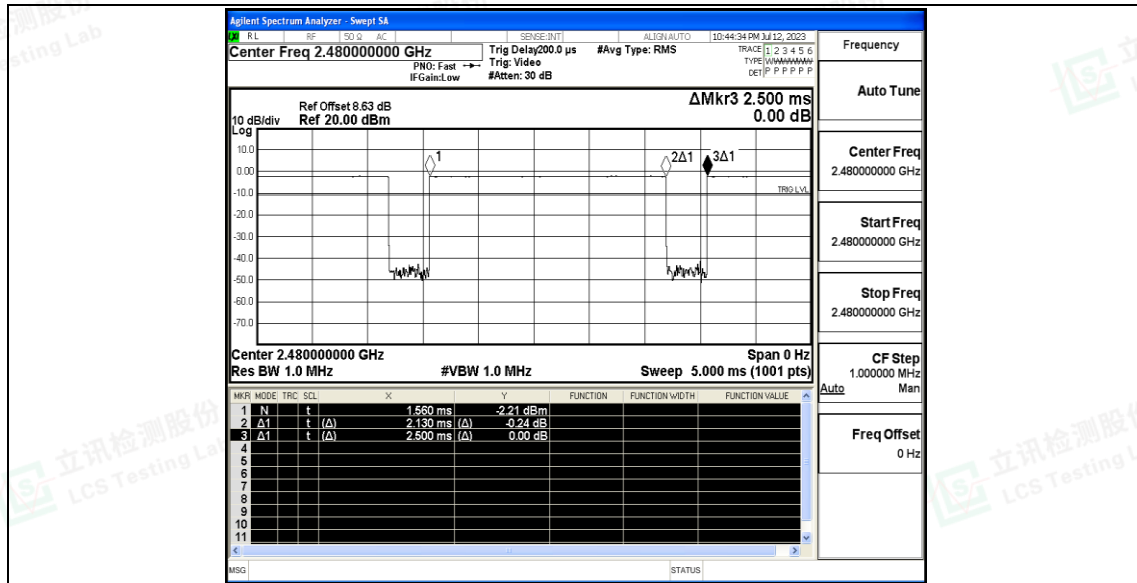
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	0.47	---	---
		2440	2.13	2.50	0.8520	85.20	0.70	0.47	---	---
		2480	2.13	2.50	0.8520	85.20	0.70	0.47	---	---
BLE_2M	Ant1	2402	1.07	2.50	0.4280	42.80	3.69	0.93	---	---
		2440	1.08	2.50	0.4320	43.20	3.65	0.93	---	---
		2480	1.07	2.50	0.4280	42.80	3.69	0.93	---	---



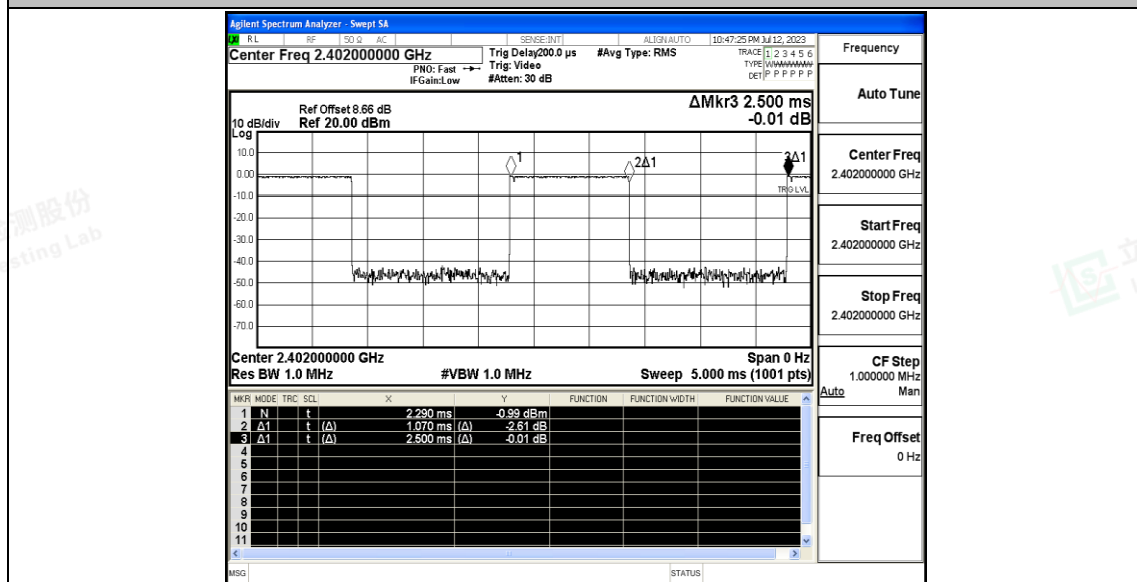


Test Graphs



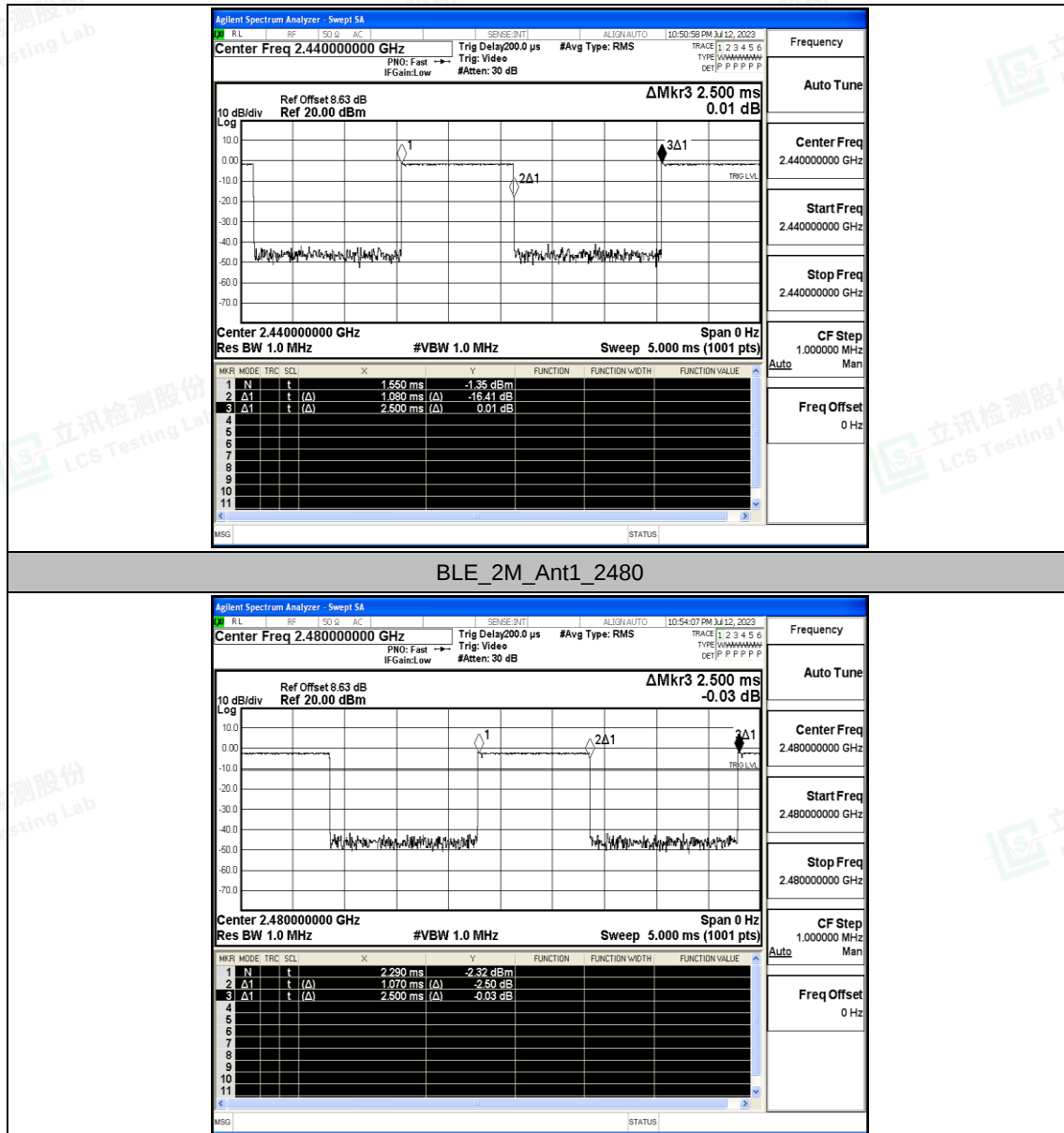


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







B.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
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.21	≤-41.20	46.99	≤54	PASS
				AV	2378.015	-46.73	≤-41.20	48.47	≤54	PASS
				AV	2390.000	-47.36	≤-41.20	47.84	≤54	PASS
				Peak	2310.000	-40.09	≤-21.20	55.11	≤74	PASS
				Peak	2388.725	-37.02	≤-21.20	58.18	≤74	PASS
				Peak	2390.000	-41.46	≤-21.20	53.74	≤74	PASS
		High	2480	AV	2483.500	-47.02	≤-41.20	48.18	≤54	PASS
				AV	2497.360	-46.7	≤-41.20	48.50	≤54	PASS
				AV	2500.000	-46.7	≤-41.20	48.50	≤54	PASS
				Peak	2483.500	-40.17	≤-21.20	55.03	≤74	PASS
				Peak	2487.680	-36.72	≤-21.20	58.48	≤74	PASS
				Peak	2500.000	-37.65	≤-21.20	57.55	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-48.02	≤-41.20	47.18	≤54	PASS
				AV	2354.075	-46.63	≤-41.20	48.57	≤54	PASS
				AV	2390.000	-47.26	≤-41.20	47.94	≤54	PASS
				Peak	2310.000	-39.63	≤-21.20	55.57	≤74	PASS
				Peak	2342.000	-37.92	≤-21.20	57.28	≤74	PASS
				Peak	2390.000	-40.76	≤-21.20	54.44	≤74	PASS
		High	2480	AV	2483.500	-46.49	≤-41.20	48.71	≤54	PASS
				AV	2483.520	-46.49	≤-41.20	48.71	≤54	PASS
				AV	2500.000	-46.91	≤-41.20	48.29	≤54	PASS
				Peak	2483.500	-38.07	≤-21.20	57.13	≤74	PASS
				Peak	2484.960	-36.51	≤-21.20	58.69	≤74	PASS
				Peak	2500.000	-39.77	≤-21.20	55.43	≤74	PASS

Note:

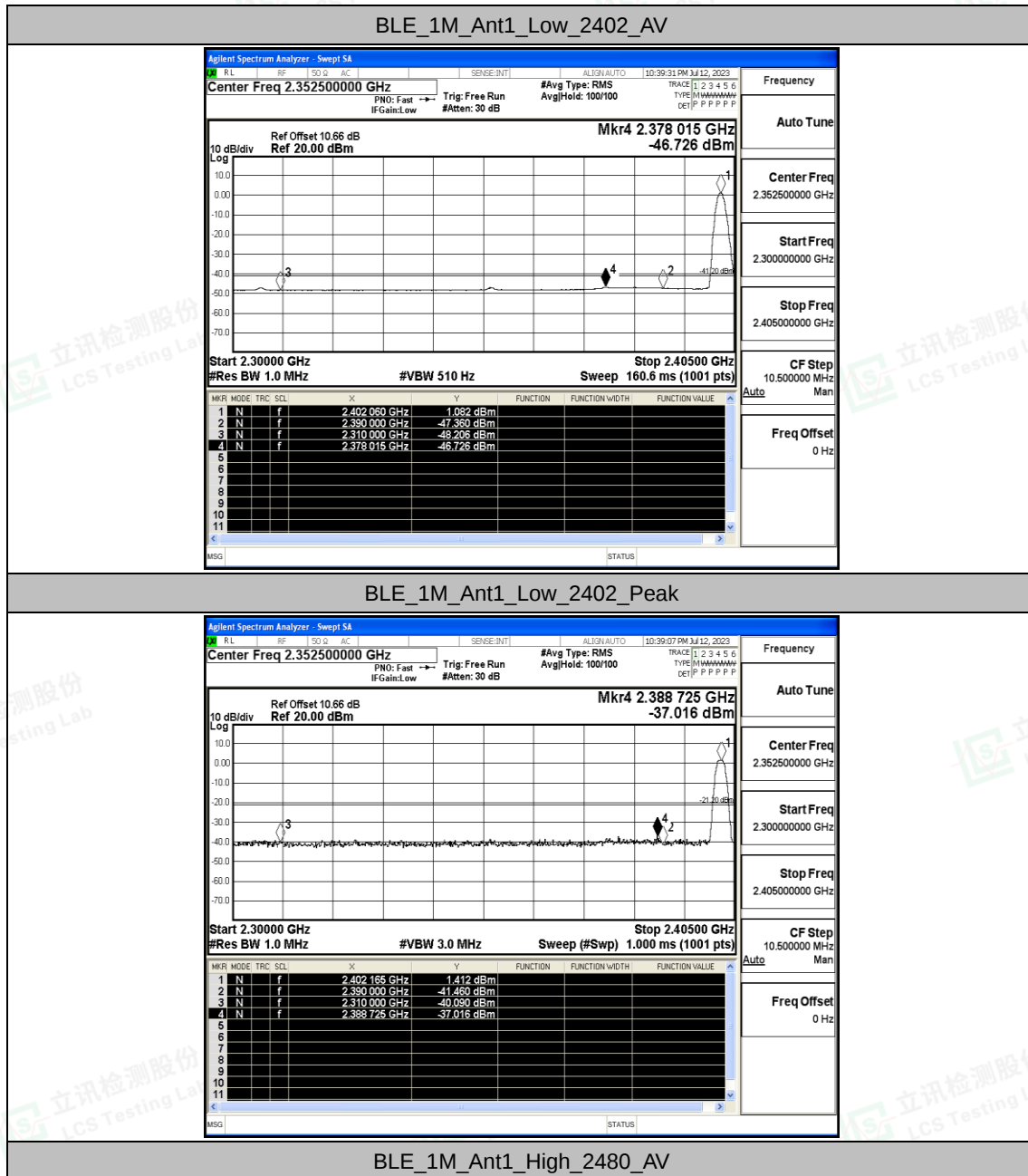
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

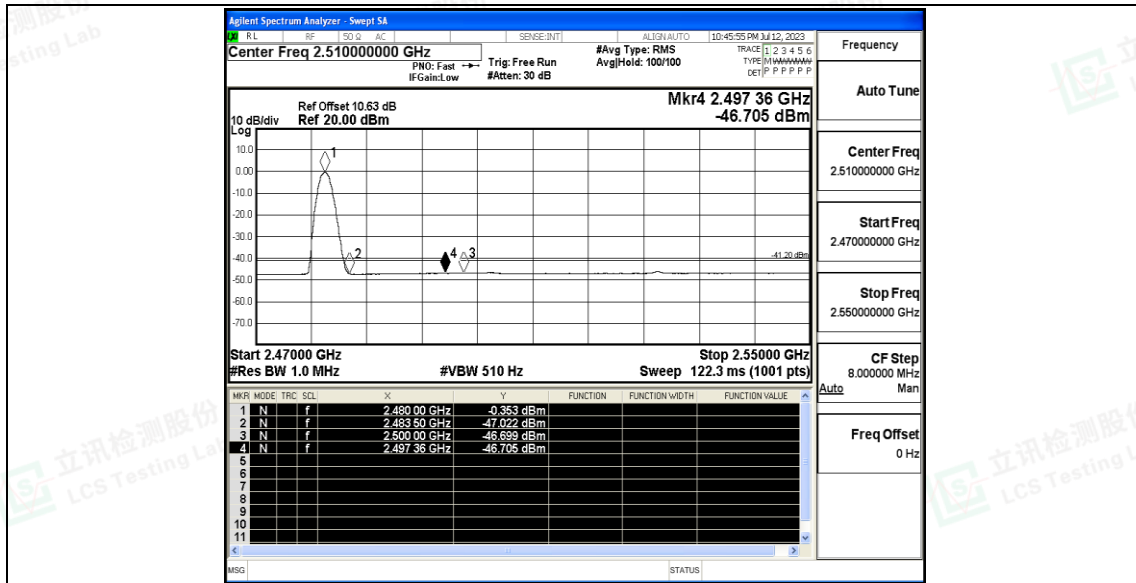


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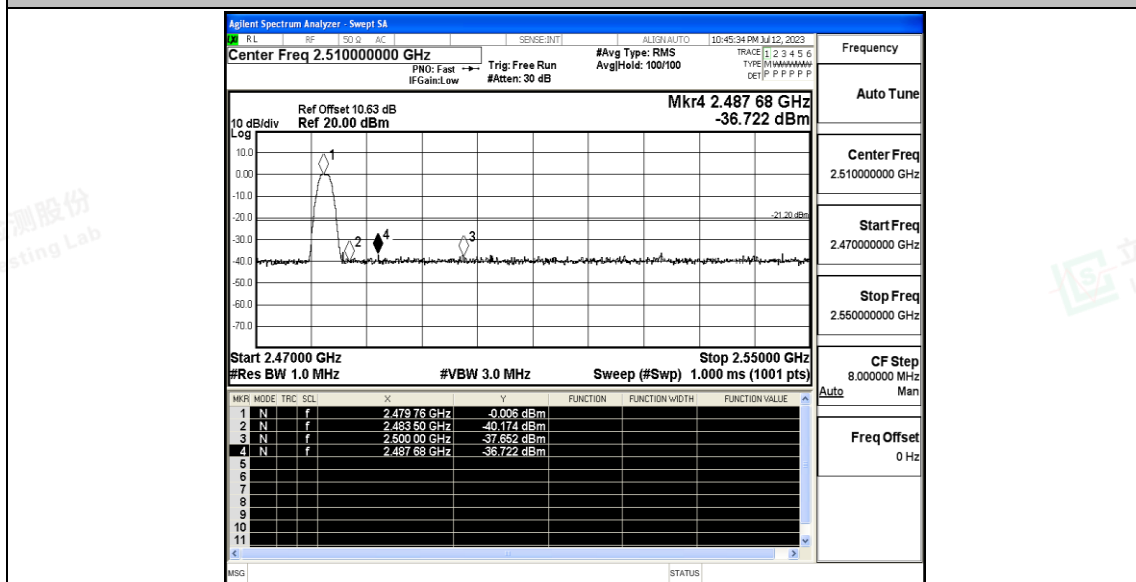


Test Graphs



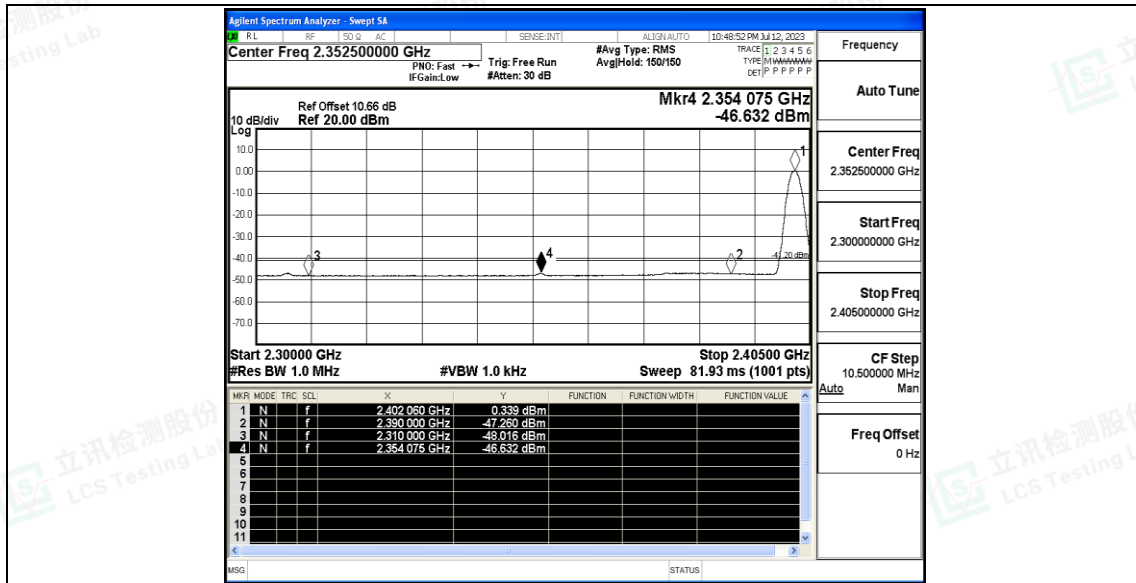


BLE_1M_Ant1_High_2480_Peak

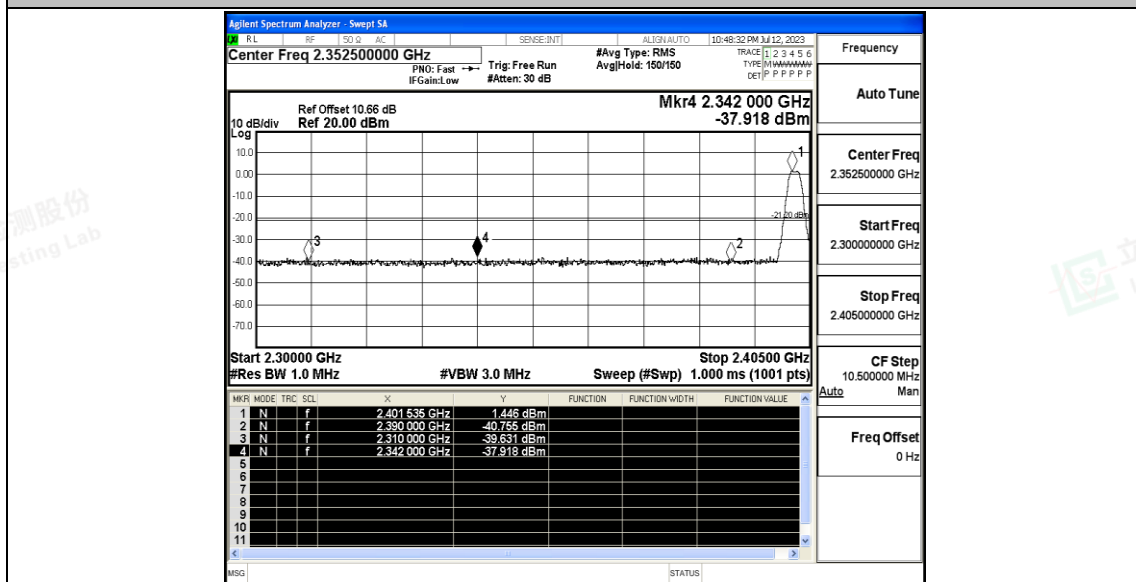


BLE_2M_Ant1_Low_2402_AV



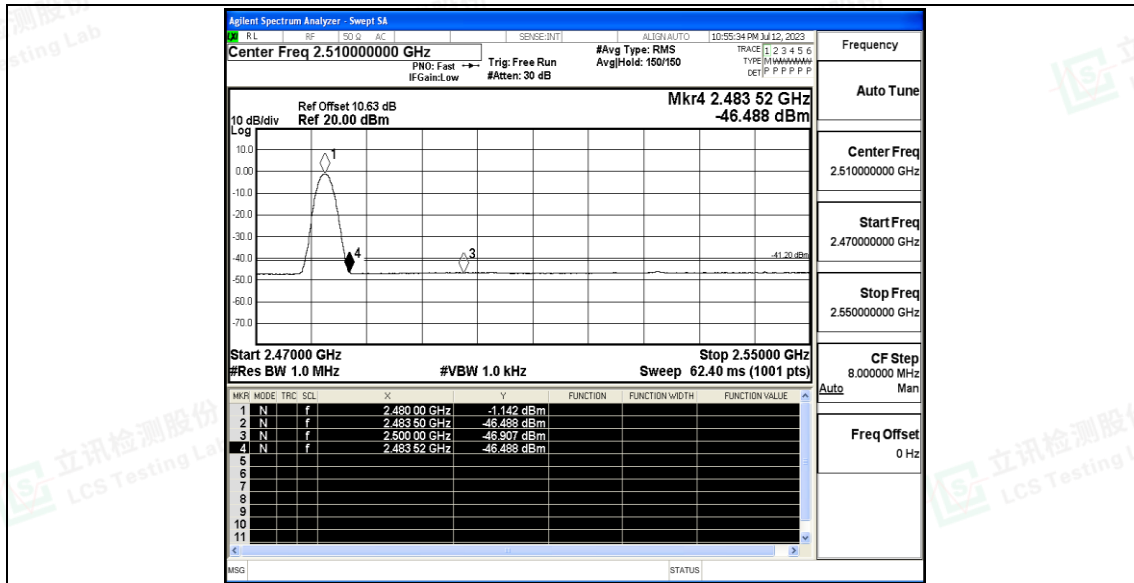


BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV





BLE_2M_Ant1_High_2480_Peak

