



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: TS Smart Interconnect Lock

Test Model: e-Genius-7000-OS-55

Environmental Conditions

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





A.1 DTS Bandwidth

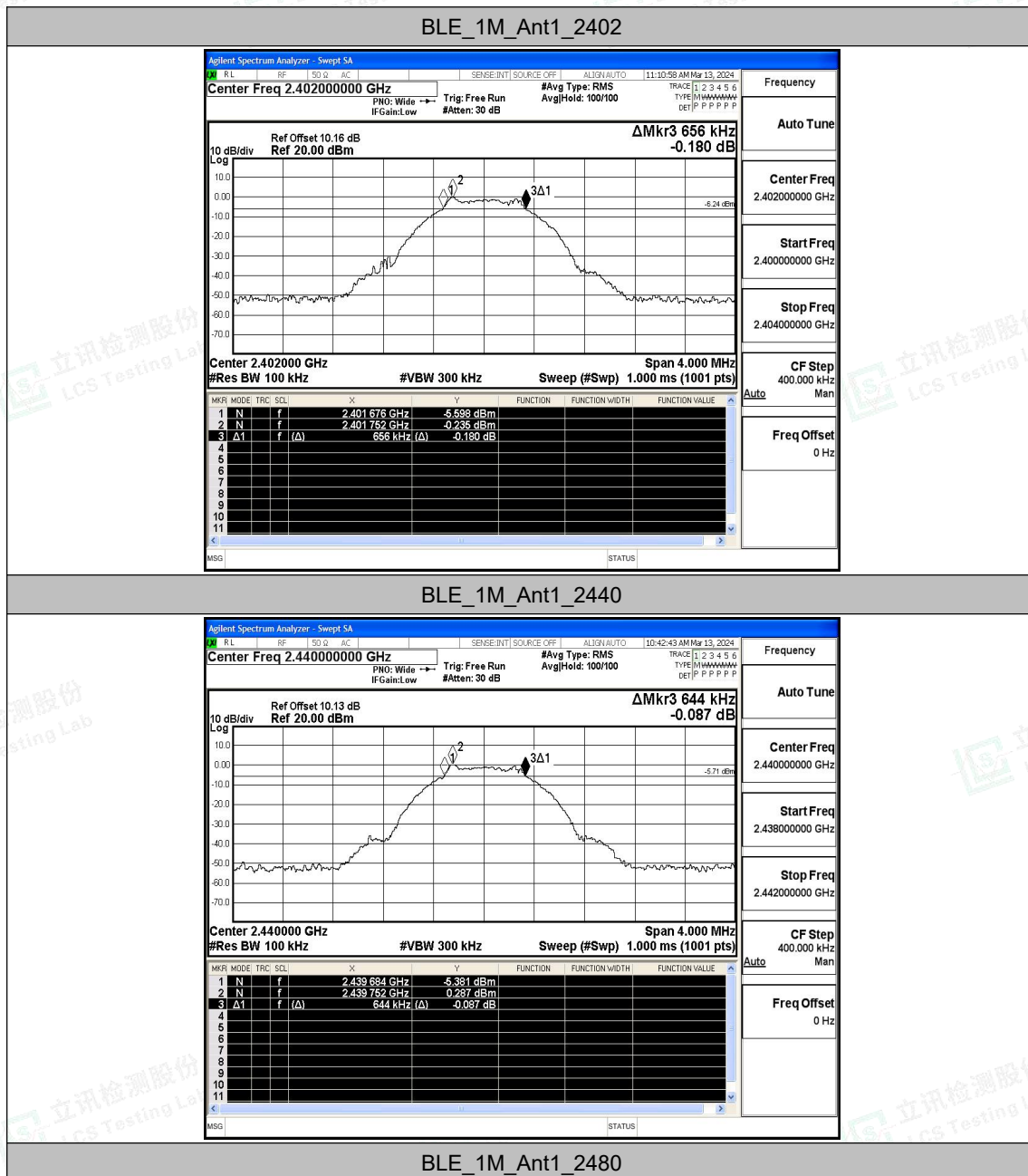
Test Result

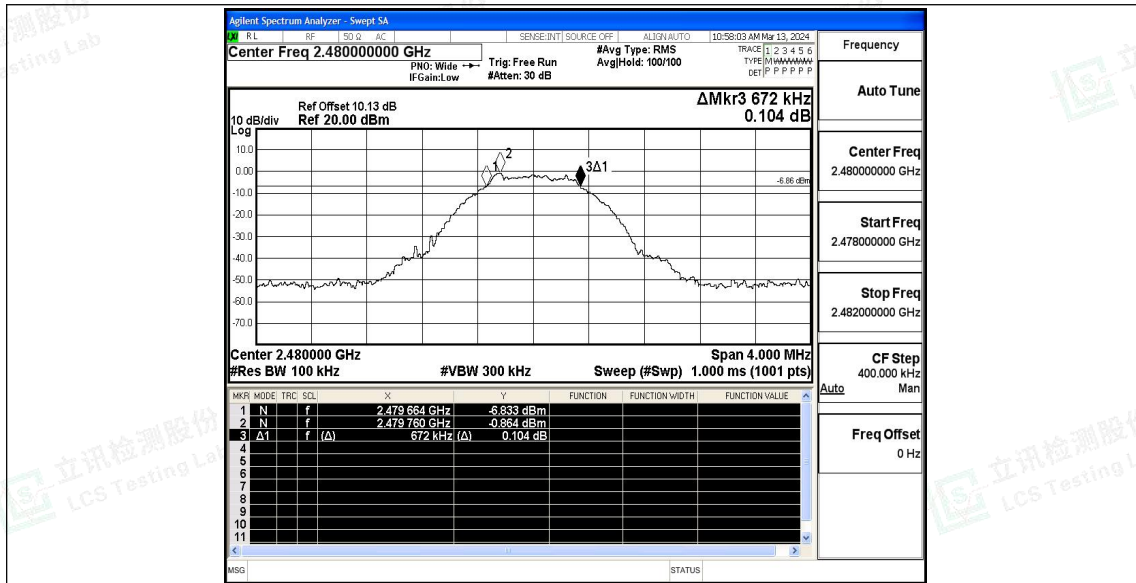
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.676	2402.332	0.5	PASS
		2440	0.644	2439.684	2440.328	0.5	PASS
		2480	0.672	2479.664	2480.336	0.5	PASS
BLE_2M	Ant1	2402	1.136	2401.440	2402.576	0.5	PASS
		2440	1.124	2439.440	2440.564	0.5	PASS
		2480	1.160	2479.412	2480.572	0.5	PASS



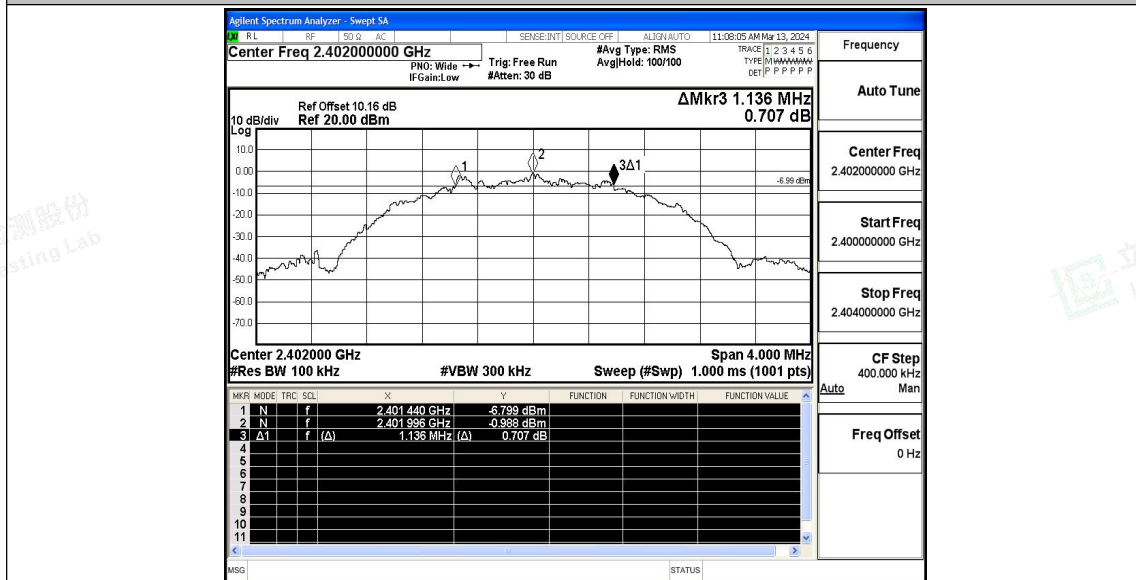


Test Graphs



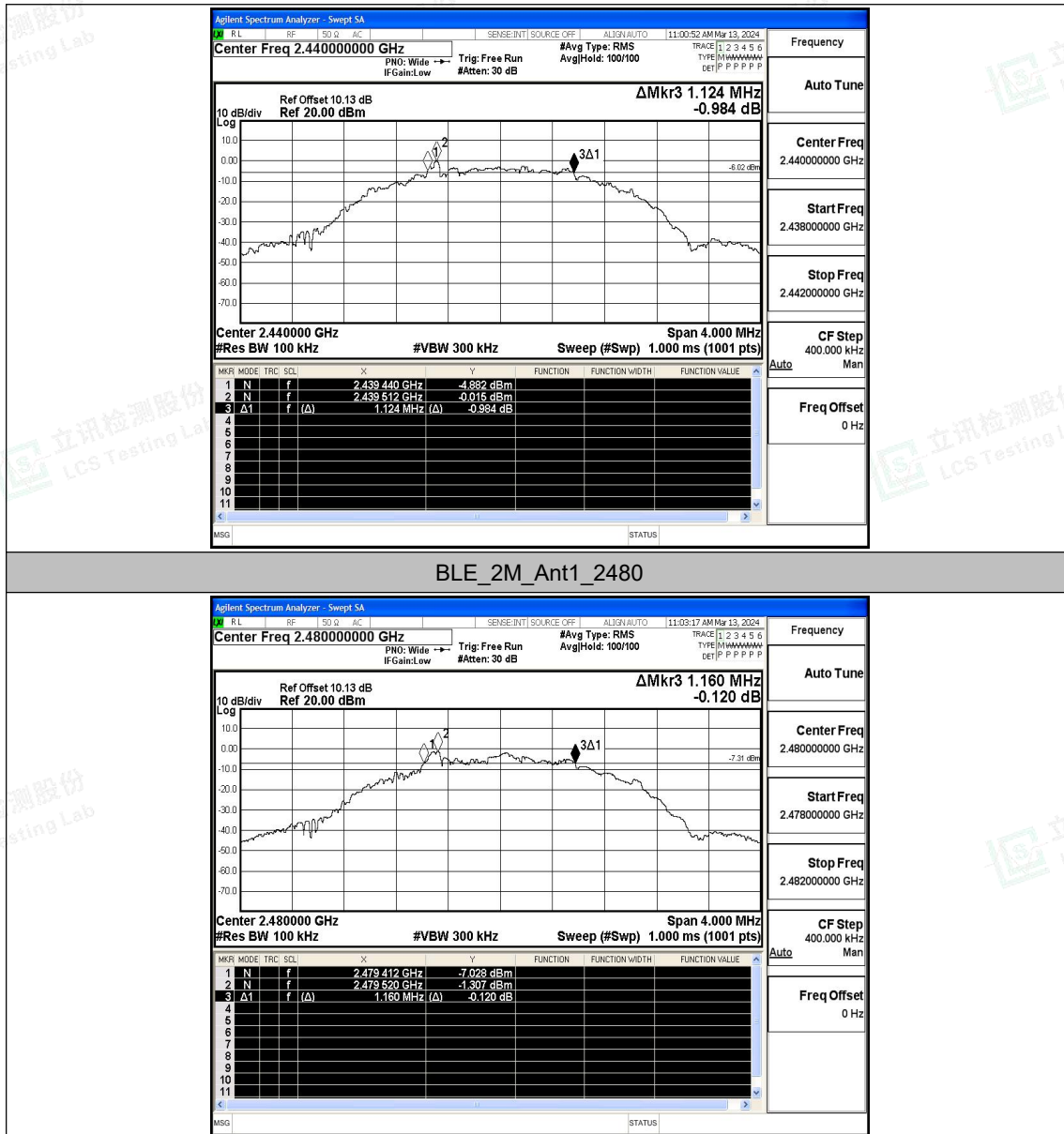


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.2 Maximum conducted output power

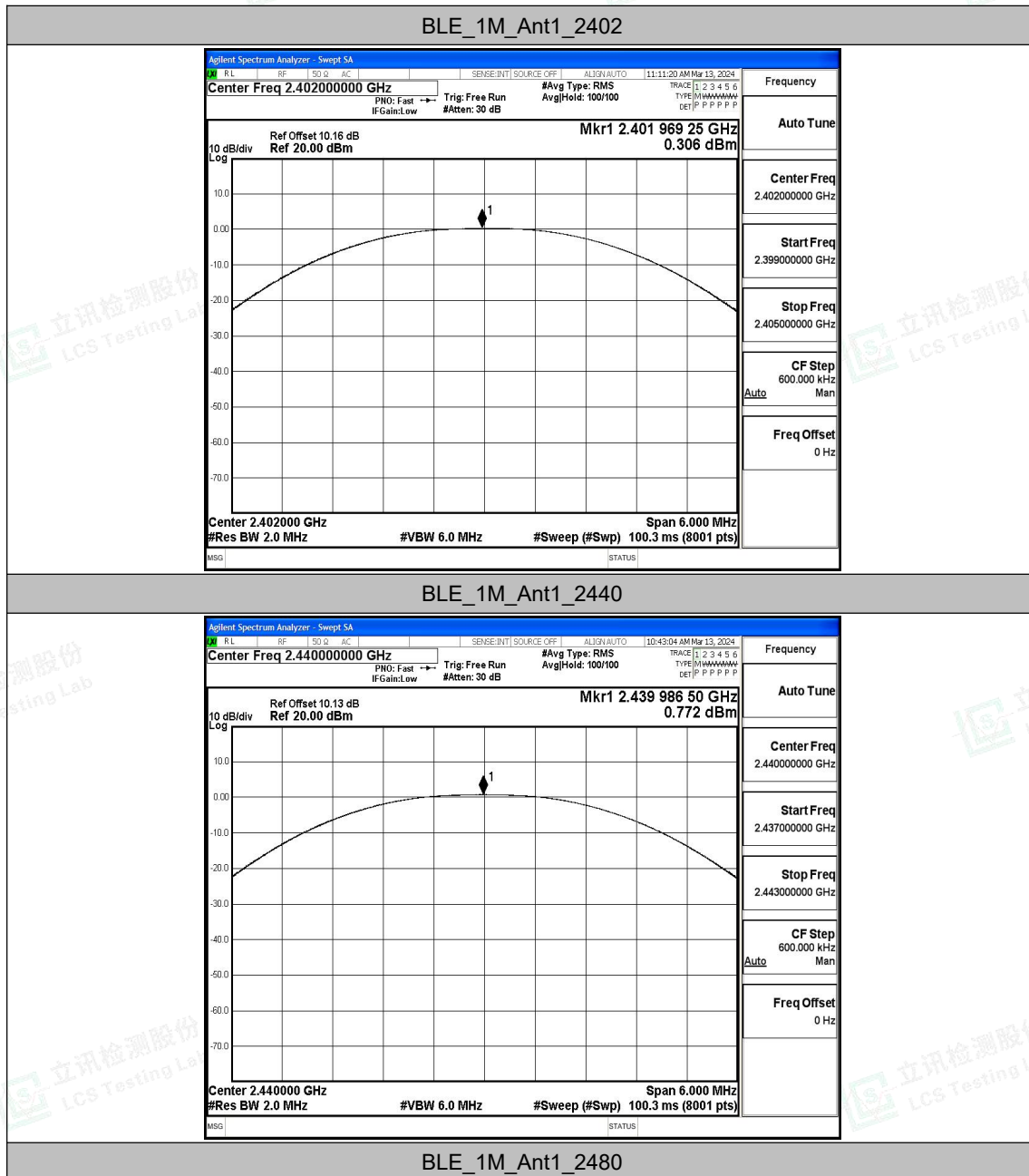
Test Result

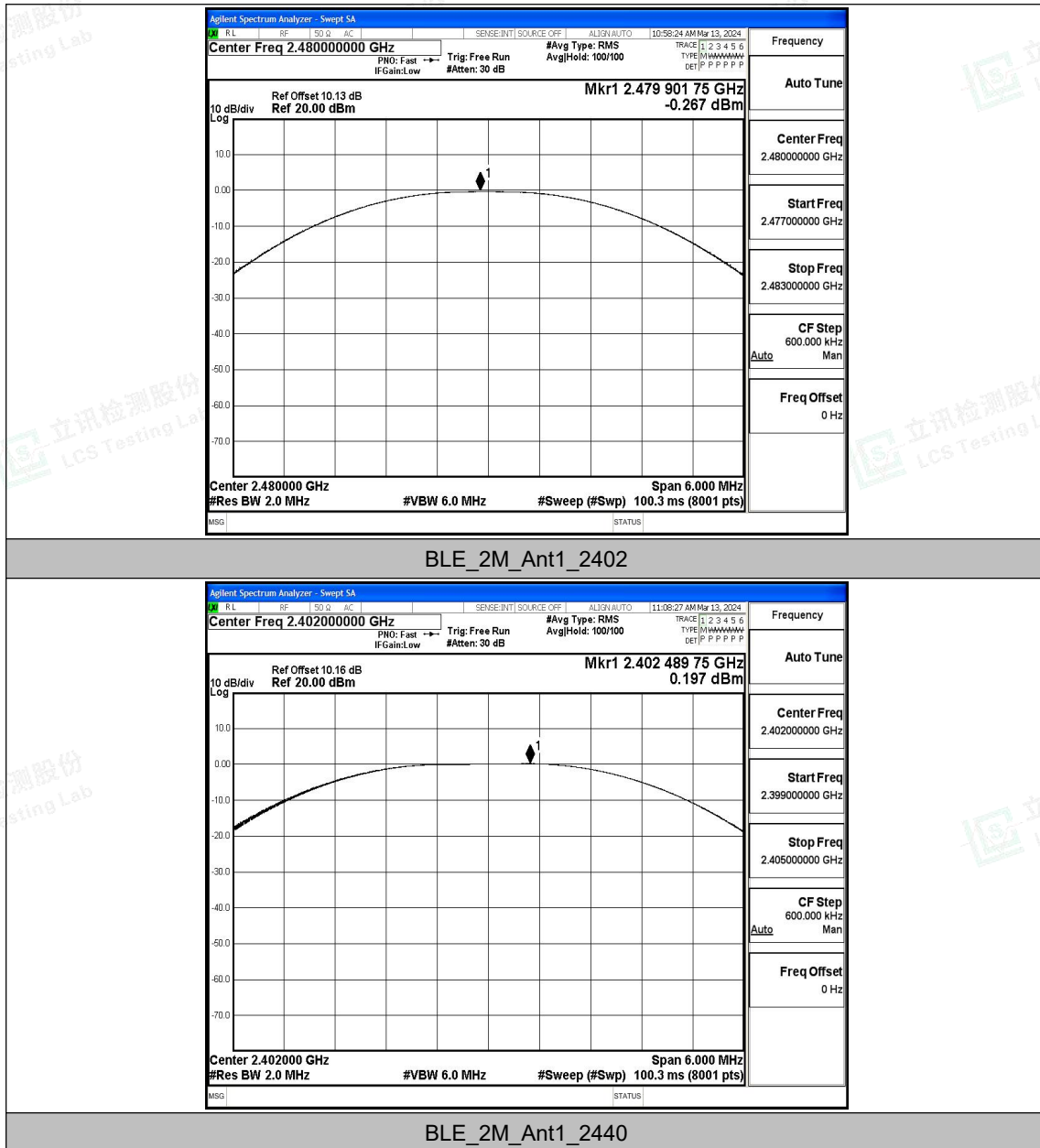
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.31	≤30	PASS
		2440	0.77	≤30	PASS
		2480	-0.27	≤30	PASS
BLE_2M	Ant1	2402	0.20	≤30	PASS
		2440	0.60	≤30	PASS
		2480	-0.44	≤30	PASS

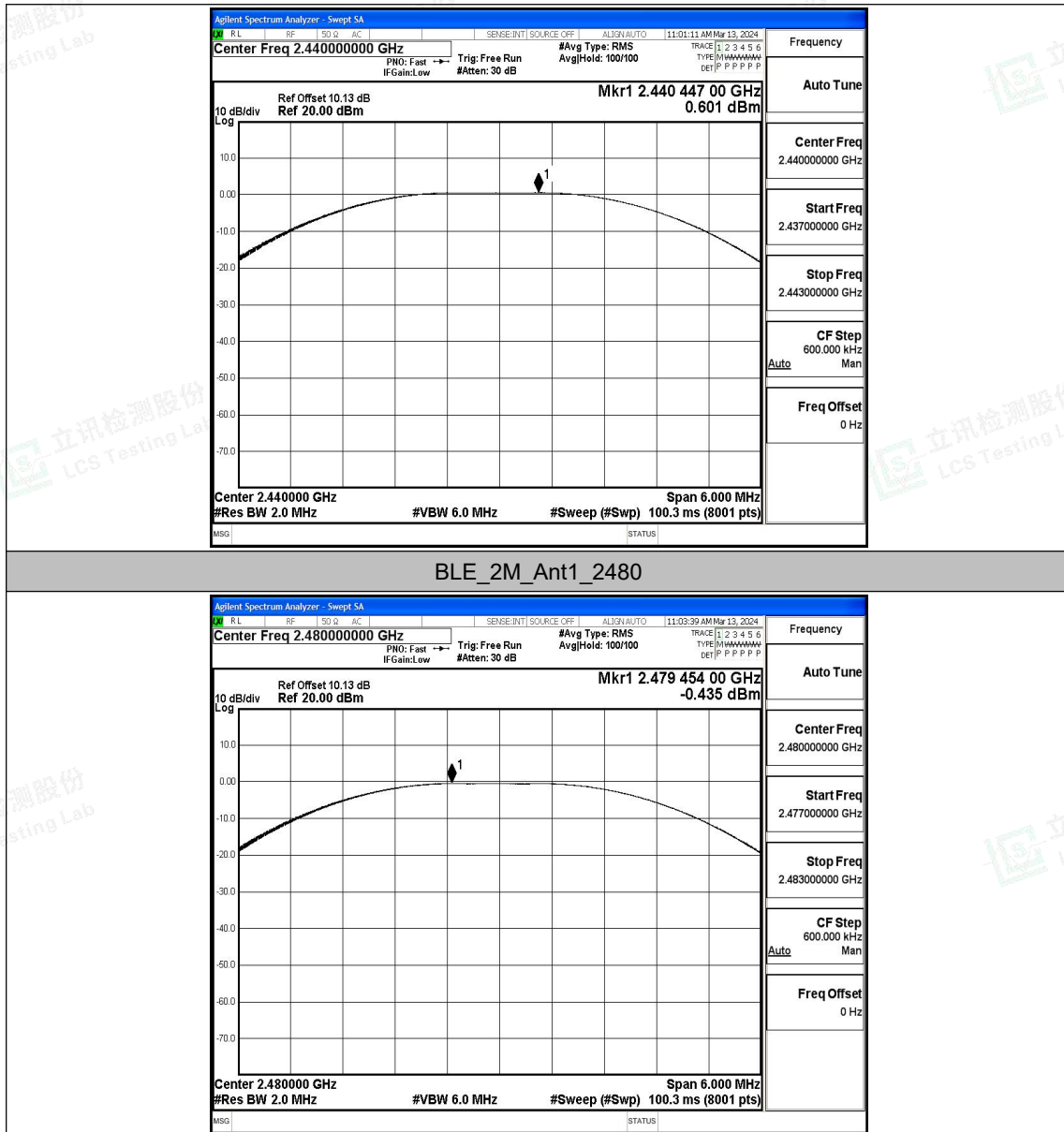




Test Graphs









A.3 Maximum power spectral density

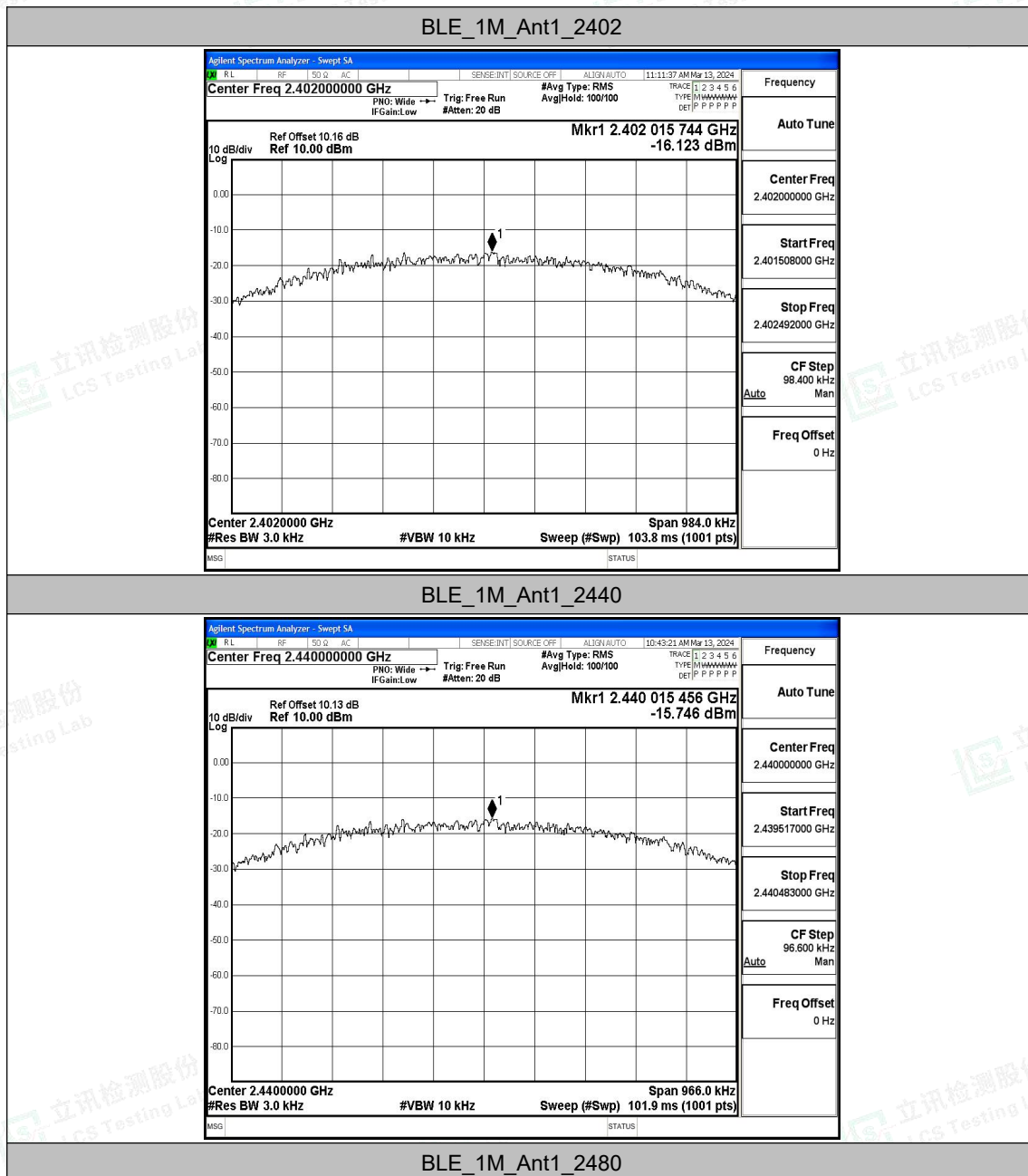
Test Result

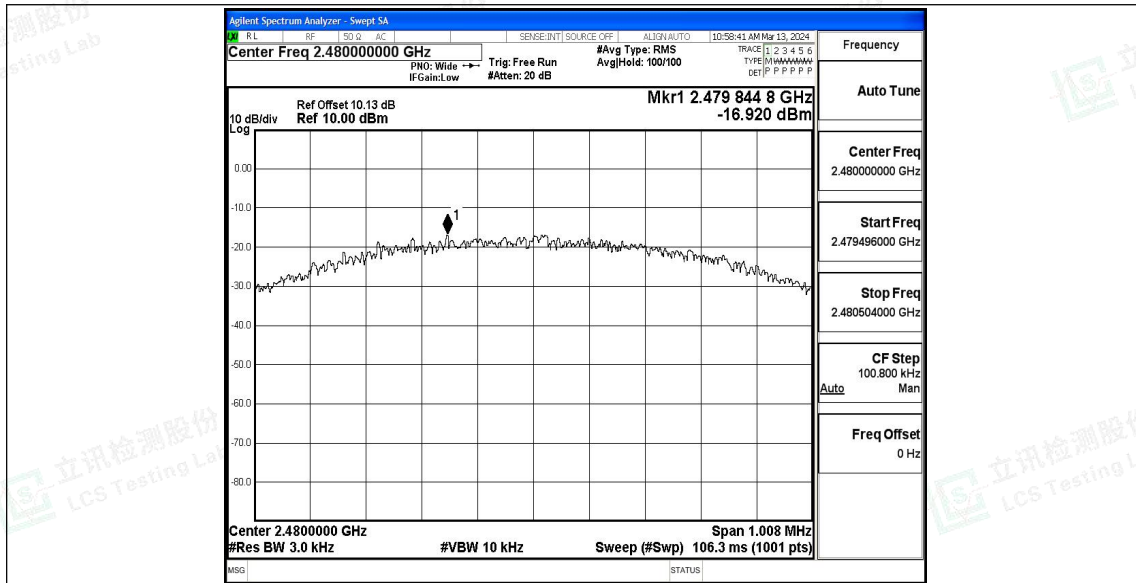
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.12	≤8.00	PASS
		2440	-15.75	≤8.00	PASS
		2480	-16.92	≤8.00	PASS
BLE_2M	Ant1	2402	-19.37	≤8.00	PASS
		2440	-18.77	≤8.00	PASS
		2480	-20.04	≤8.00	PASS



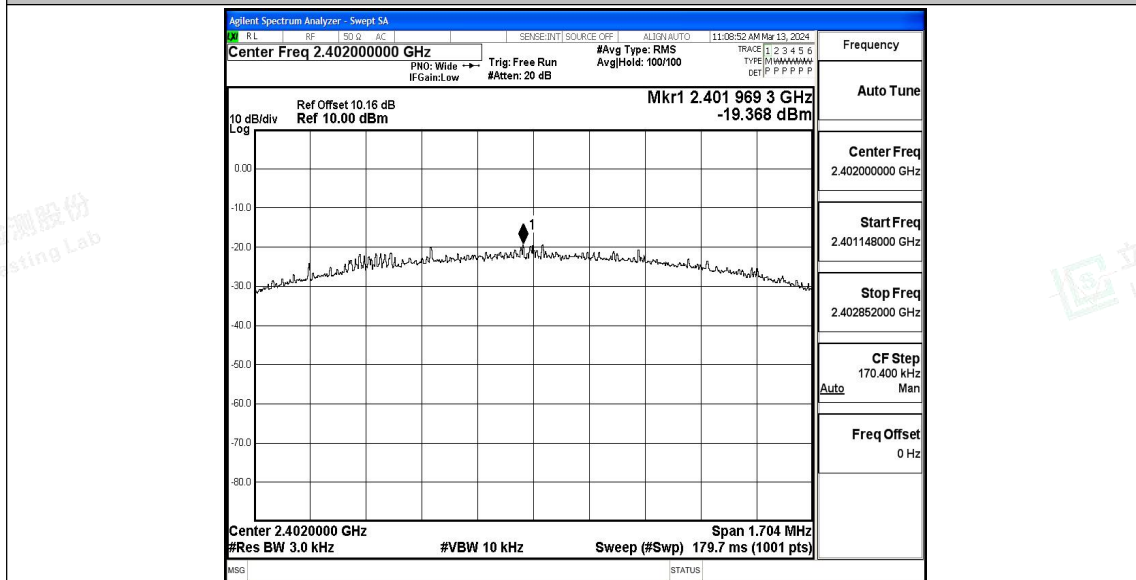


Test Graphs



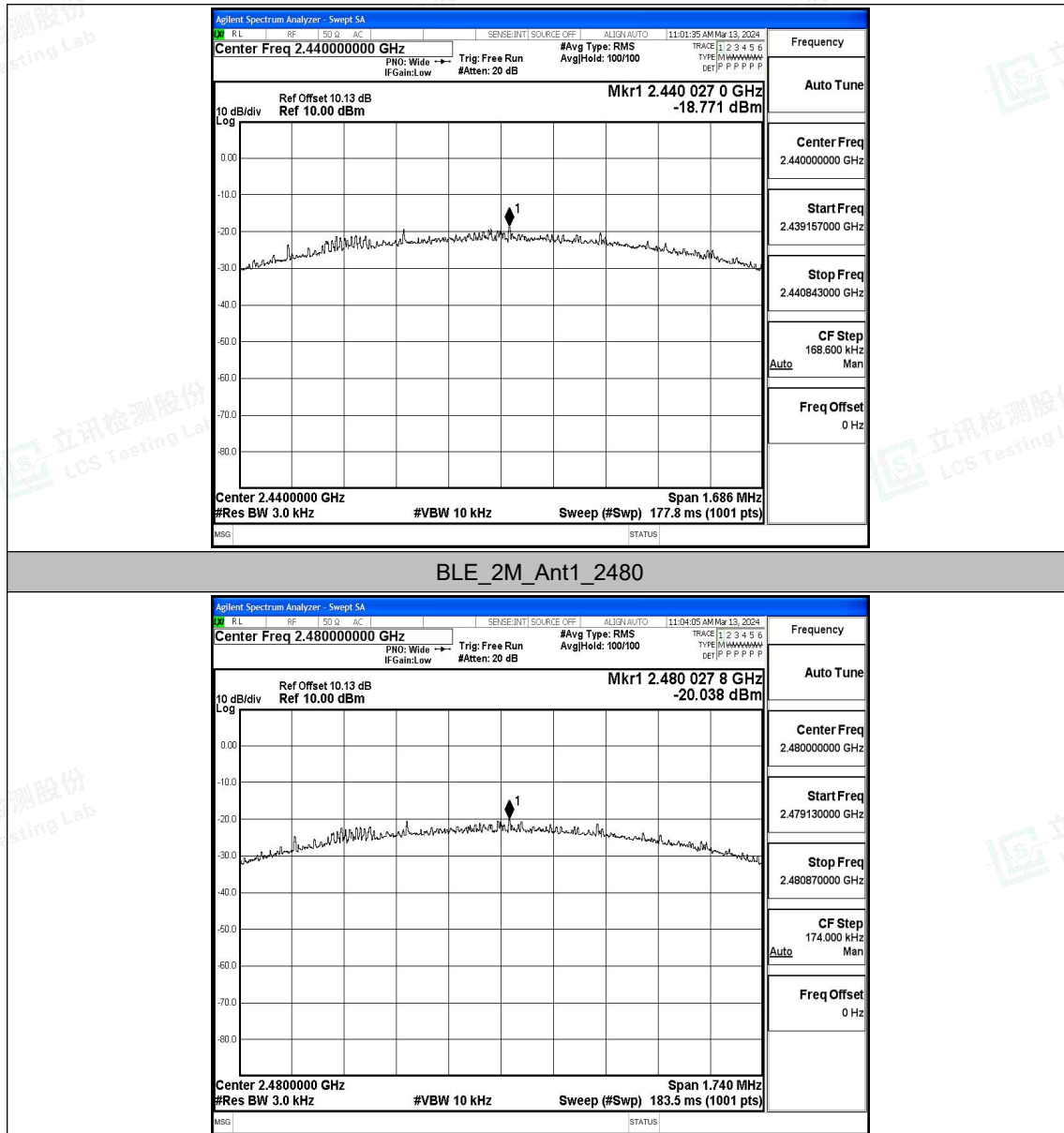


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.4 Band edge measurements

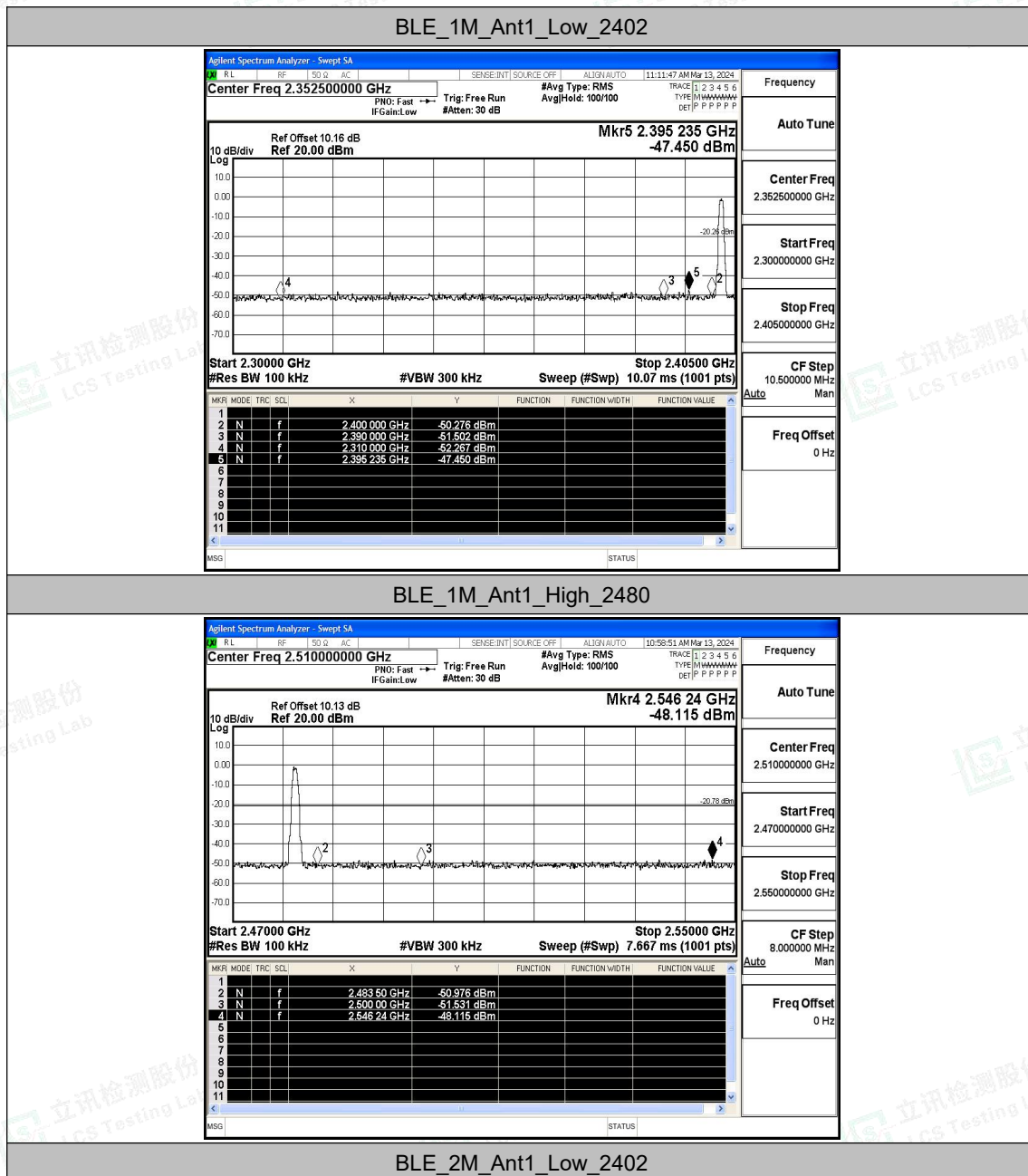
Test Result

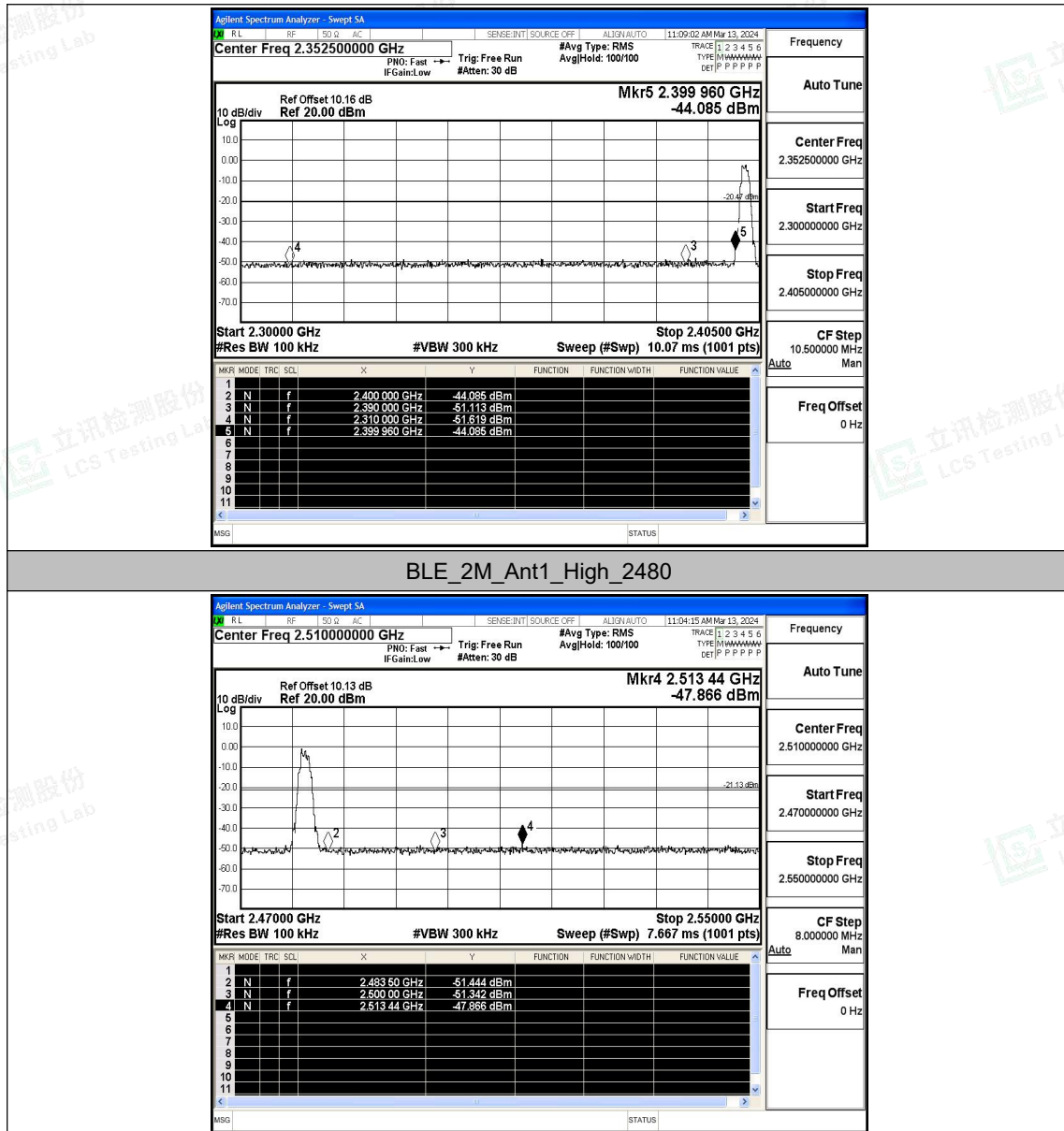
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.26	-47.45	≤-20.26	PASS
		High	2480	-0.78	-48.12	≤-20.78	PASS
BLE_2M	Ant1	Low	2402	-0.47	-44.09	≤-20.47	PASS
		High	2480	-1.13	-47.87	≤-21.13	PASS





Test Graphs







A.5 Conducted Spurious Emission

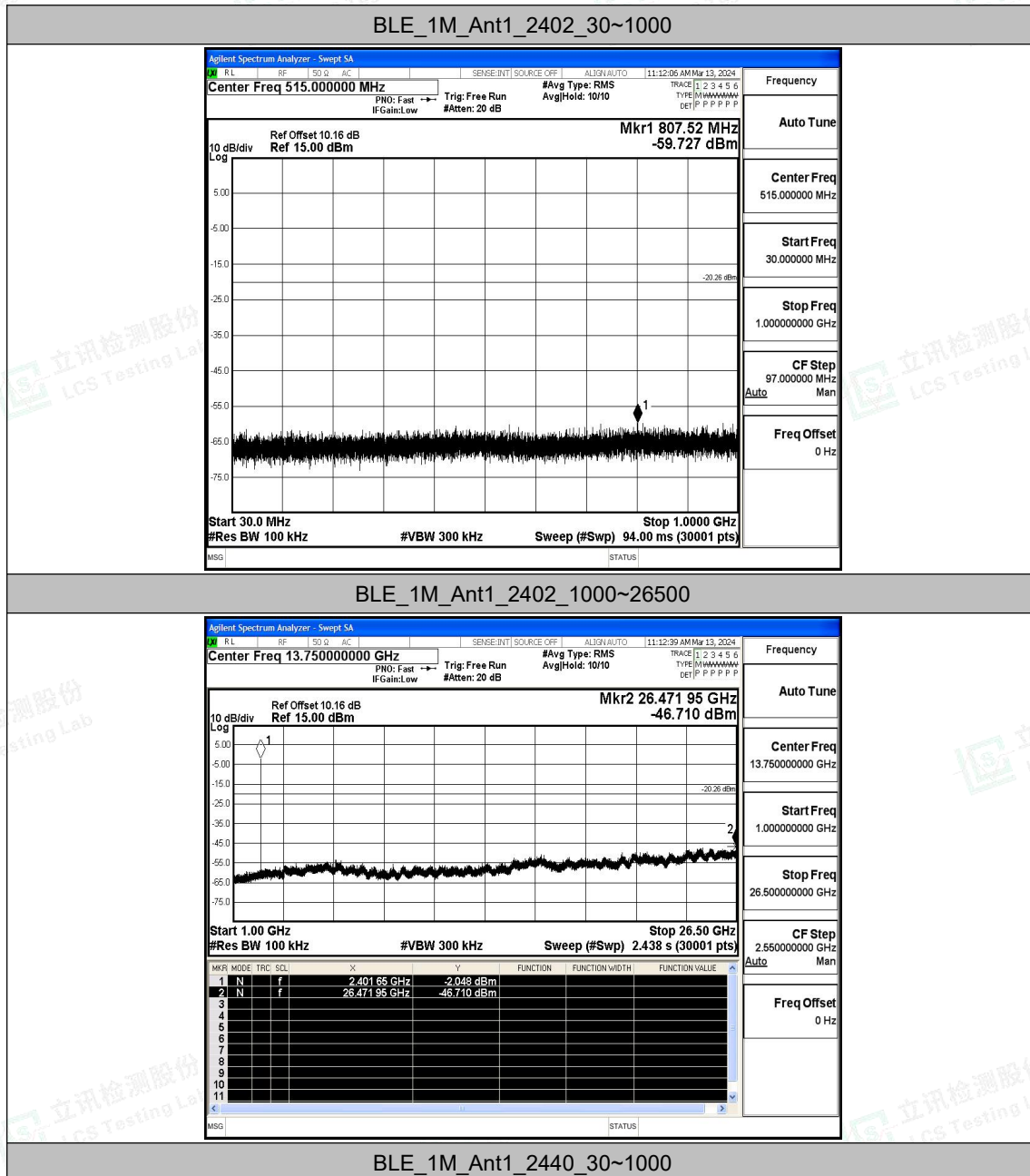
Test Result

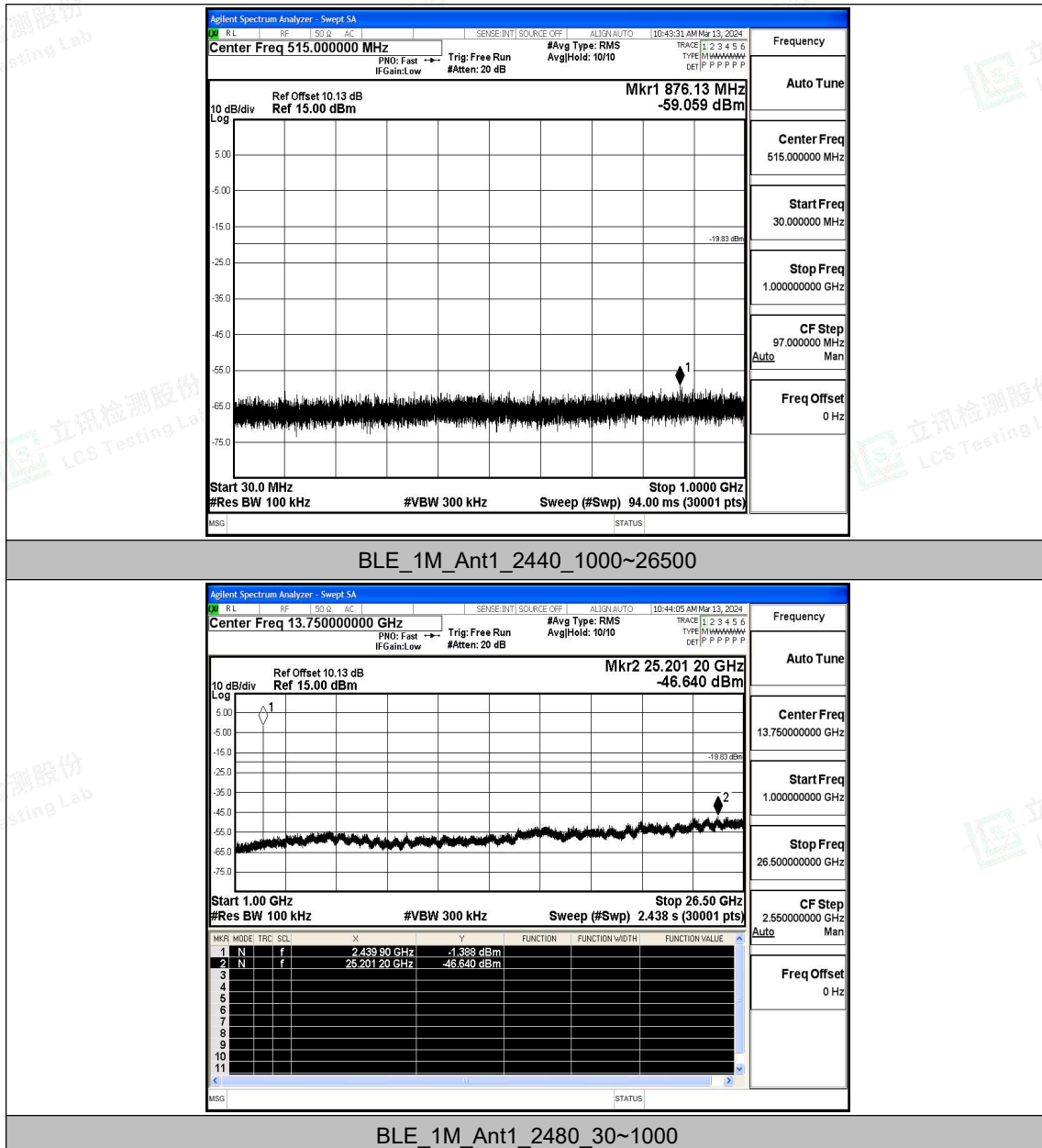
TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	-0.26	-59.73	≤-20.26	PASS
			1000~26500	-0.26	-46.71	≤-20.26	PASS
		2440	30~1000	0.17	-59.06	≤-19.83	PASS
			1000~26500	0.17	-46.64	≤-19.83	PASS
		2480	30~1000	-0.78	-59.56	≤-20.78	PASS
			1000~26500	-0.78	-46.87	≤-20.78	PASS
BLE_2M	Ant1	2402	30~1000	-0.47	-59.56	≤-20.47	PASS
			1000~26500	-0.47	-46.99	≤-20.47	PASS
		2440	30~1000	-0.04	-60.1	≤-20.04	PASS
			1000~26500	-0.04	-47.37	≤-20.04	PASS
		2480	30~1000	-1.13	-59.76	≤-21.13	PASS
			1000~26500	-1.13	-47.61	≤-21.13	PASS

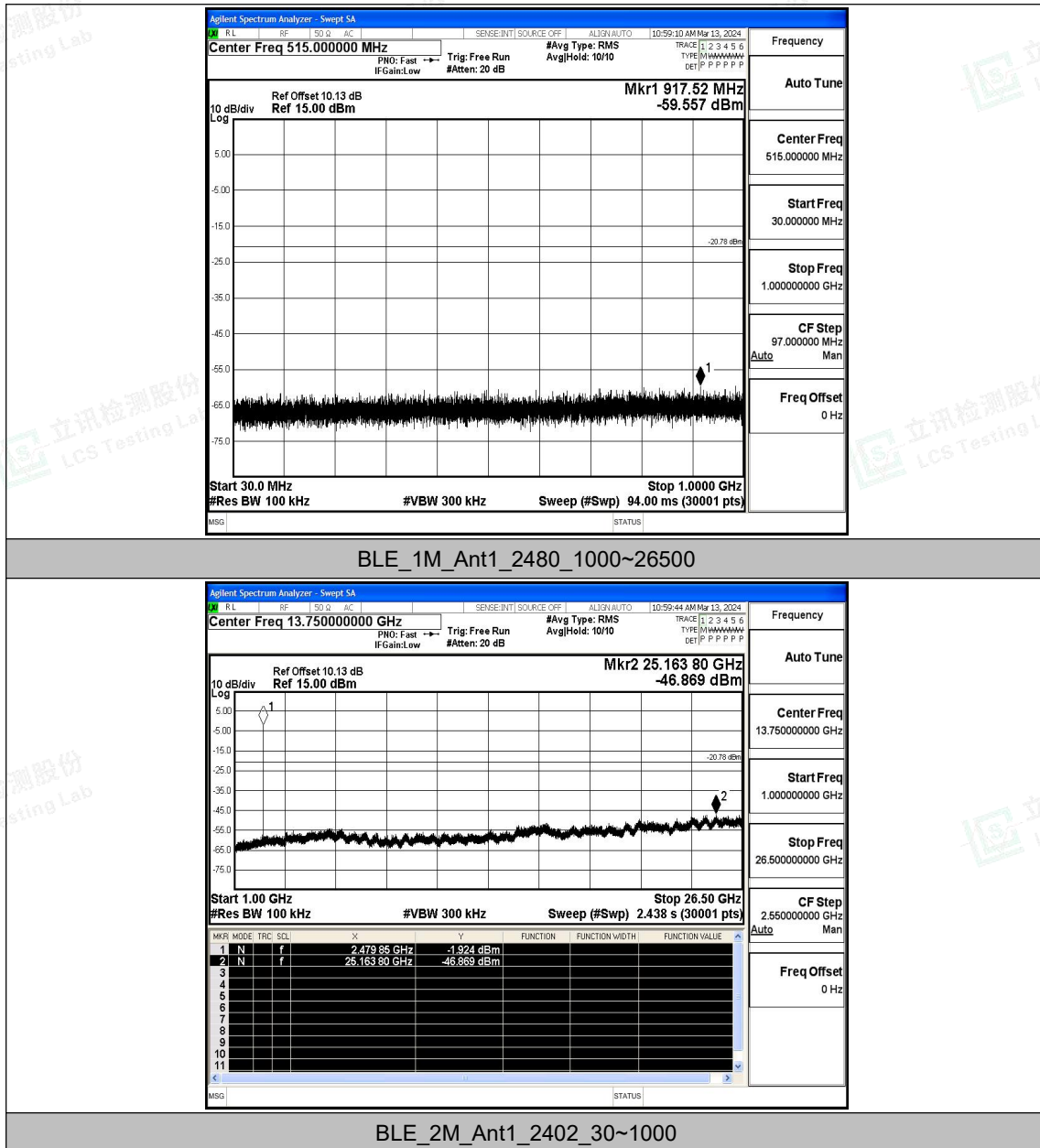


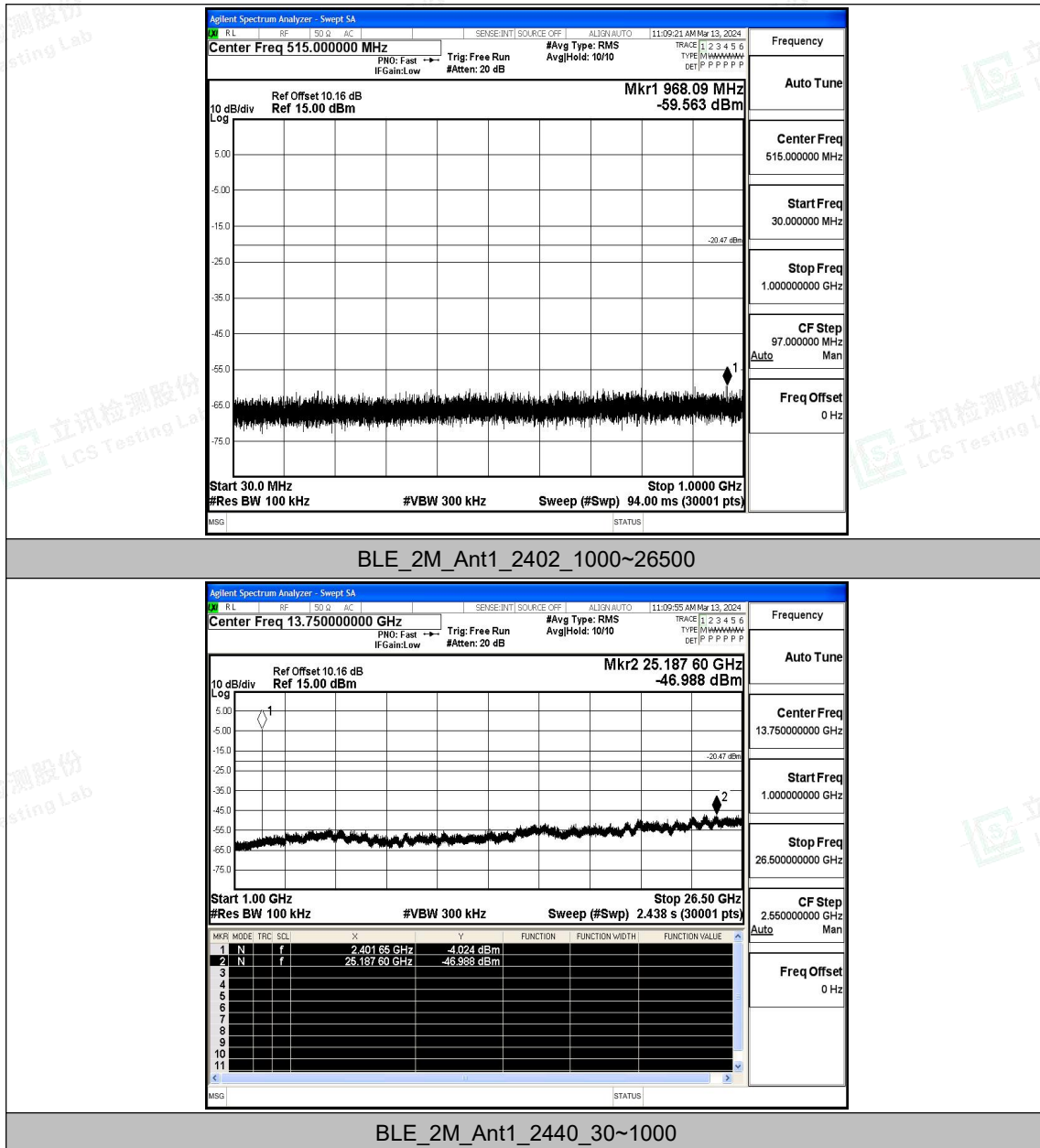


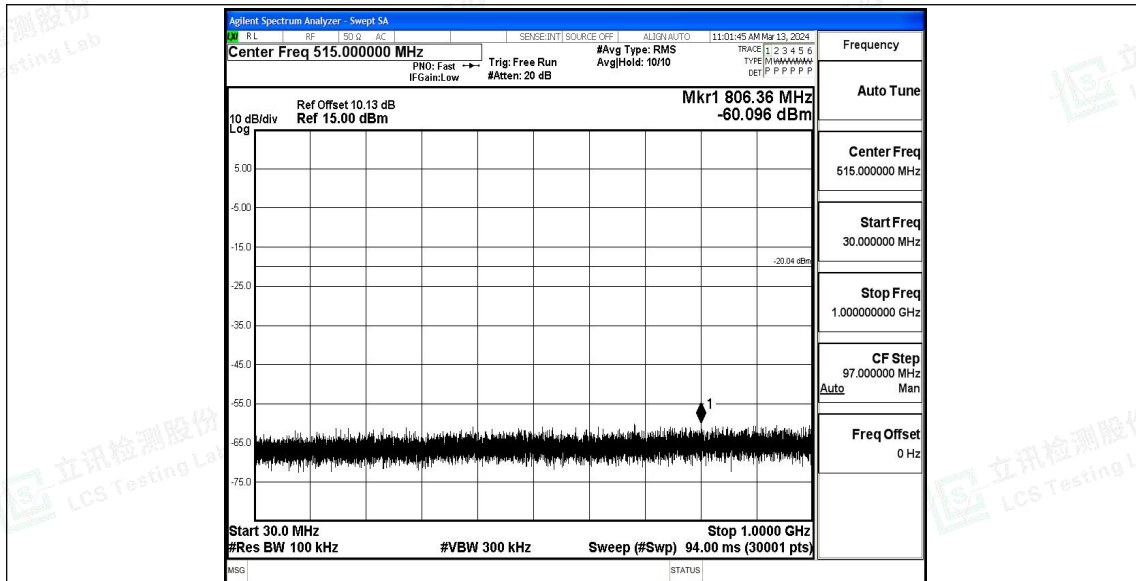
Test Graphs



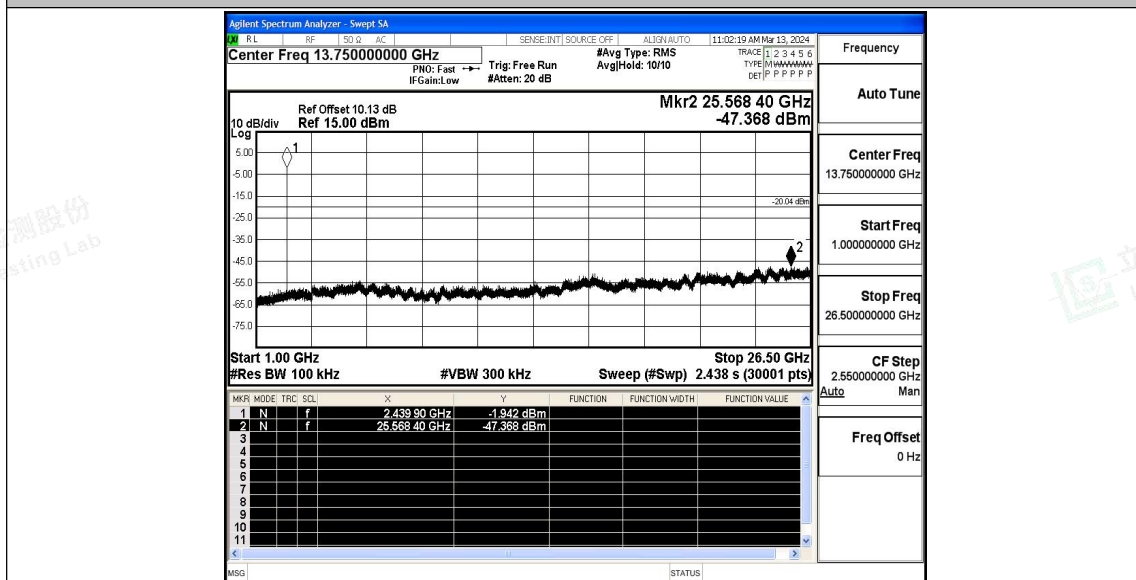






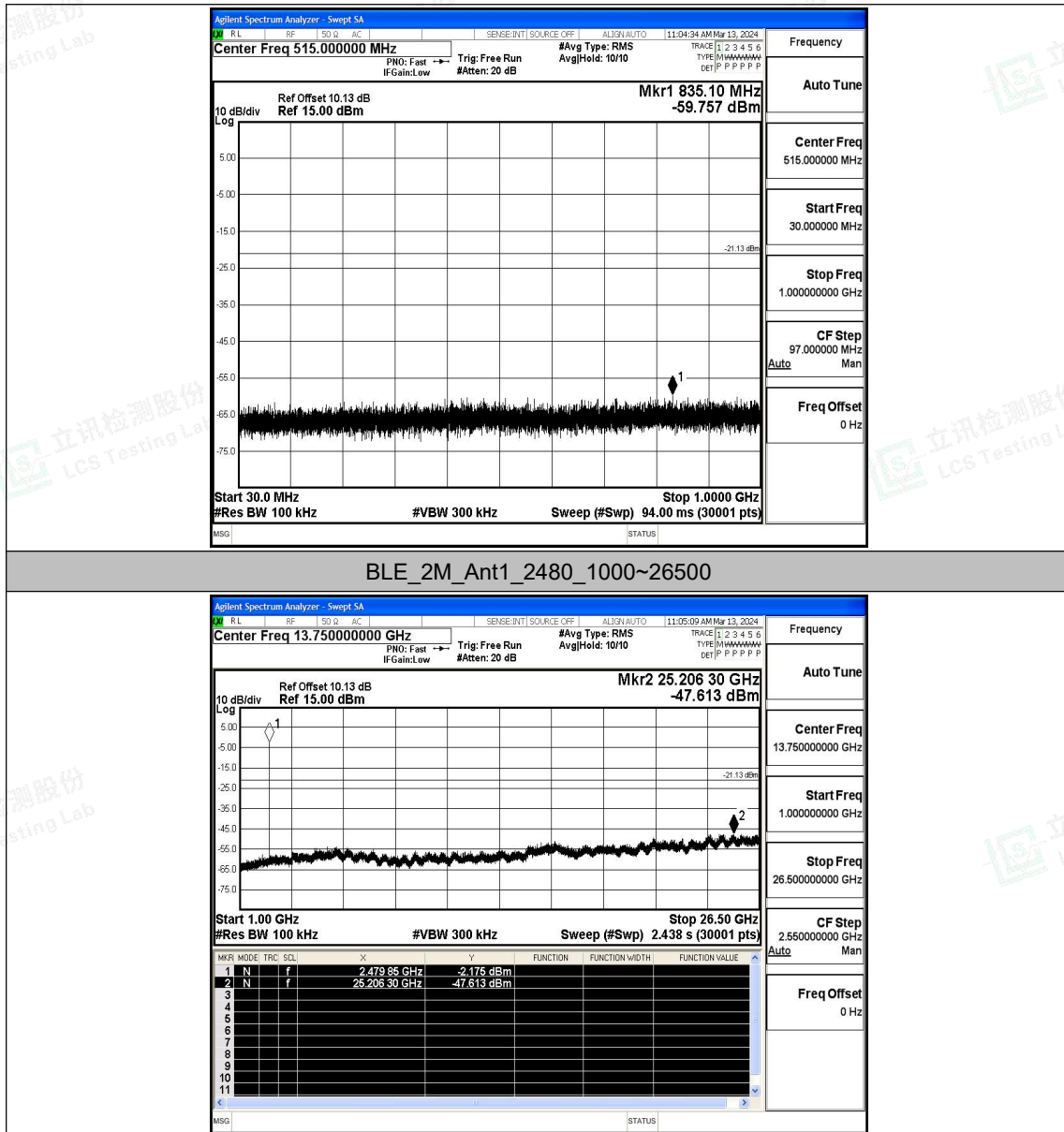


BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_30~1000







Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2401.76	-0.26
		2440	2439.74	0.17
		2480	2479.75	-0.78
BLE_2M	Ant1	2402	2401.50	-0.47
		2440	2439.50	-0.04
		2480	2479.51	-1.13

