



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Treadmill

Test Model: BA04

Environmental Conditions

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



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Scan code to check authenticity



A.1 DTS Bandwidth

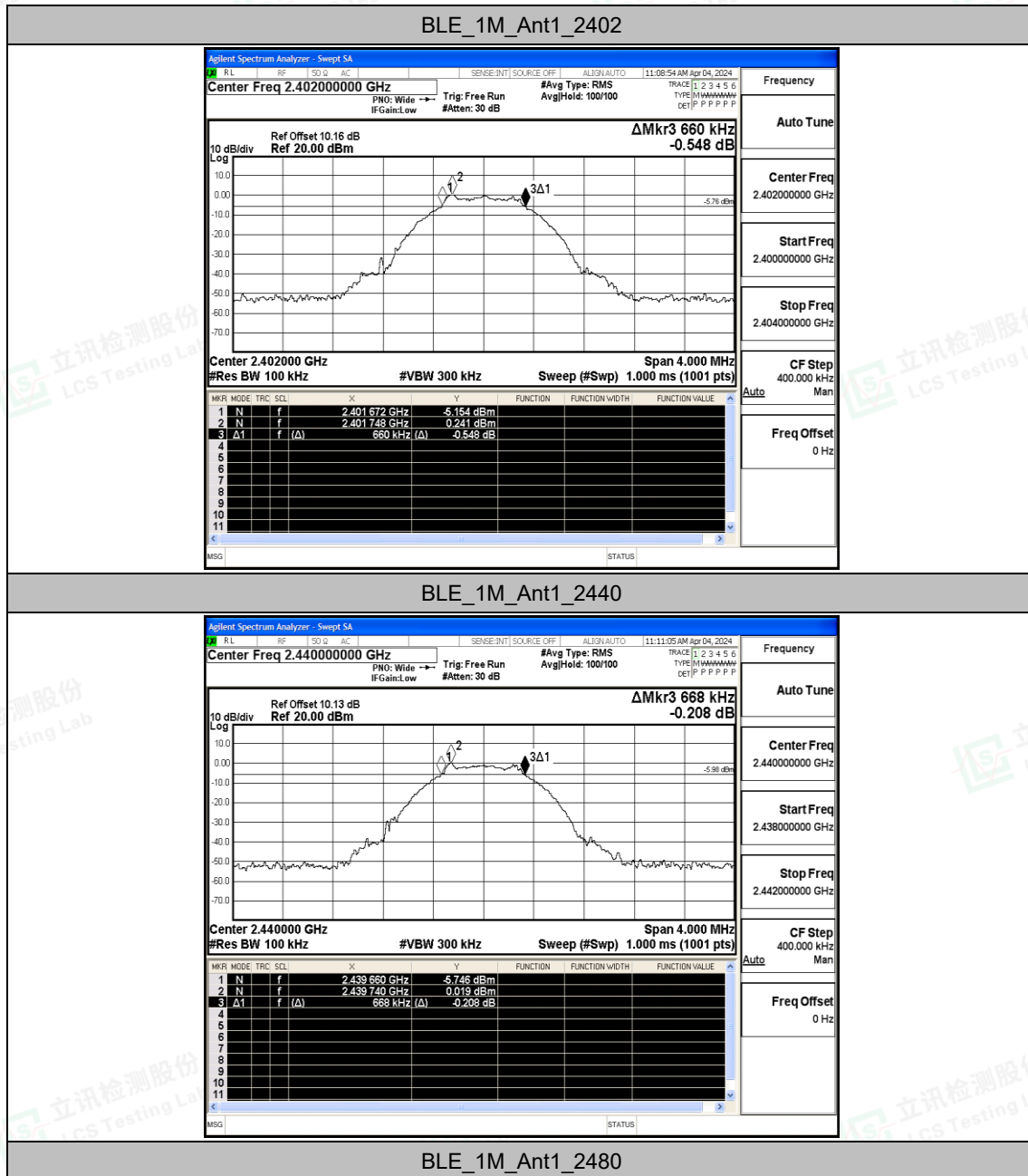
Test Result

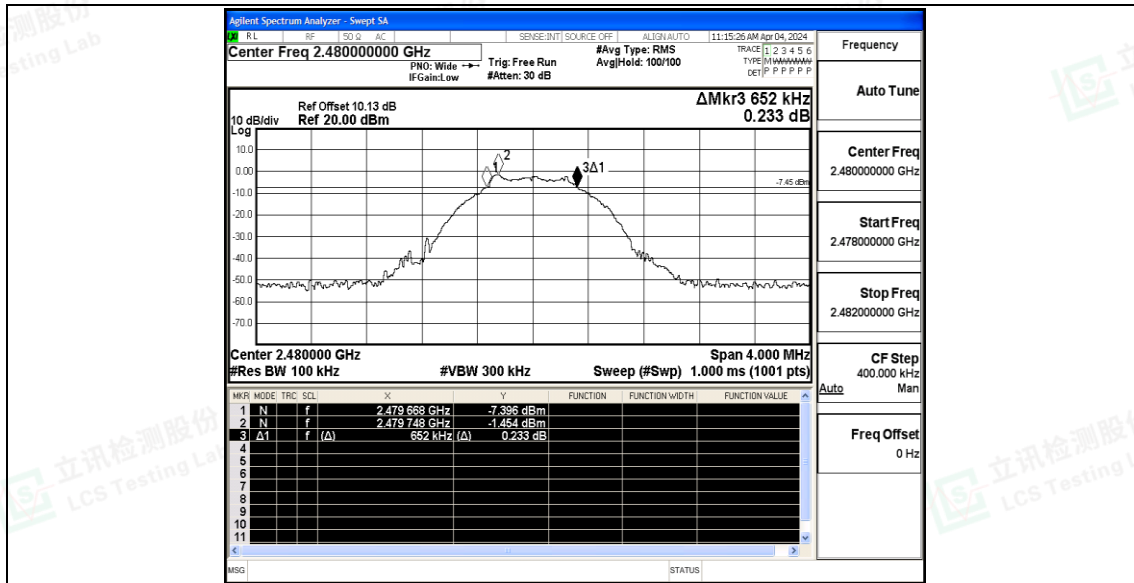
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.672	2402.332	0.5	PASS
		2440	0.668	2439.660	2440.328	0.5	PASS
		2480	0.652	2479.668	2480.320	0.5	PASS
BLE_2M	Ant1	2402	1.144	2401.412	2402.556	0.5	PASS
		2440	1.124	2439.420	2440.544	0.5	PASS
		2480	1.156	2479.404	2480.560	0.5	PASS



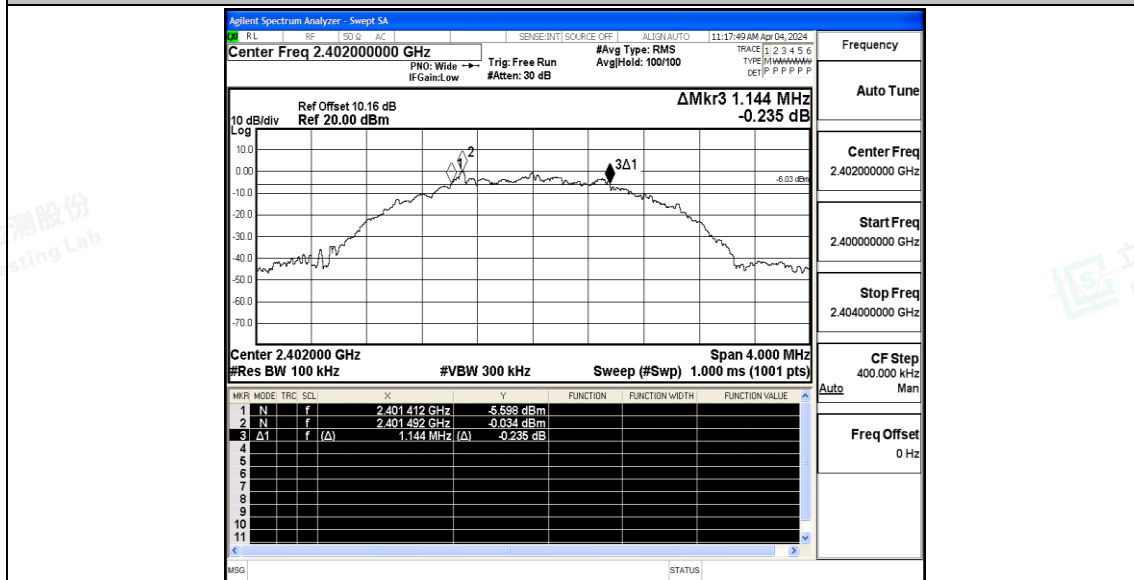


Test Graphs



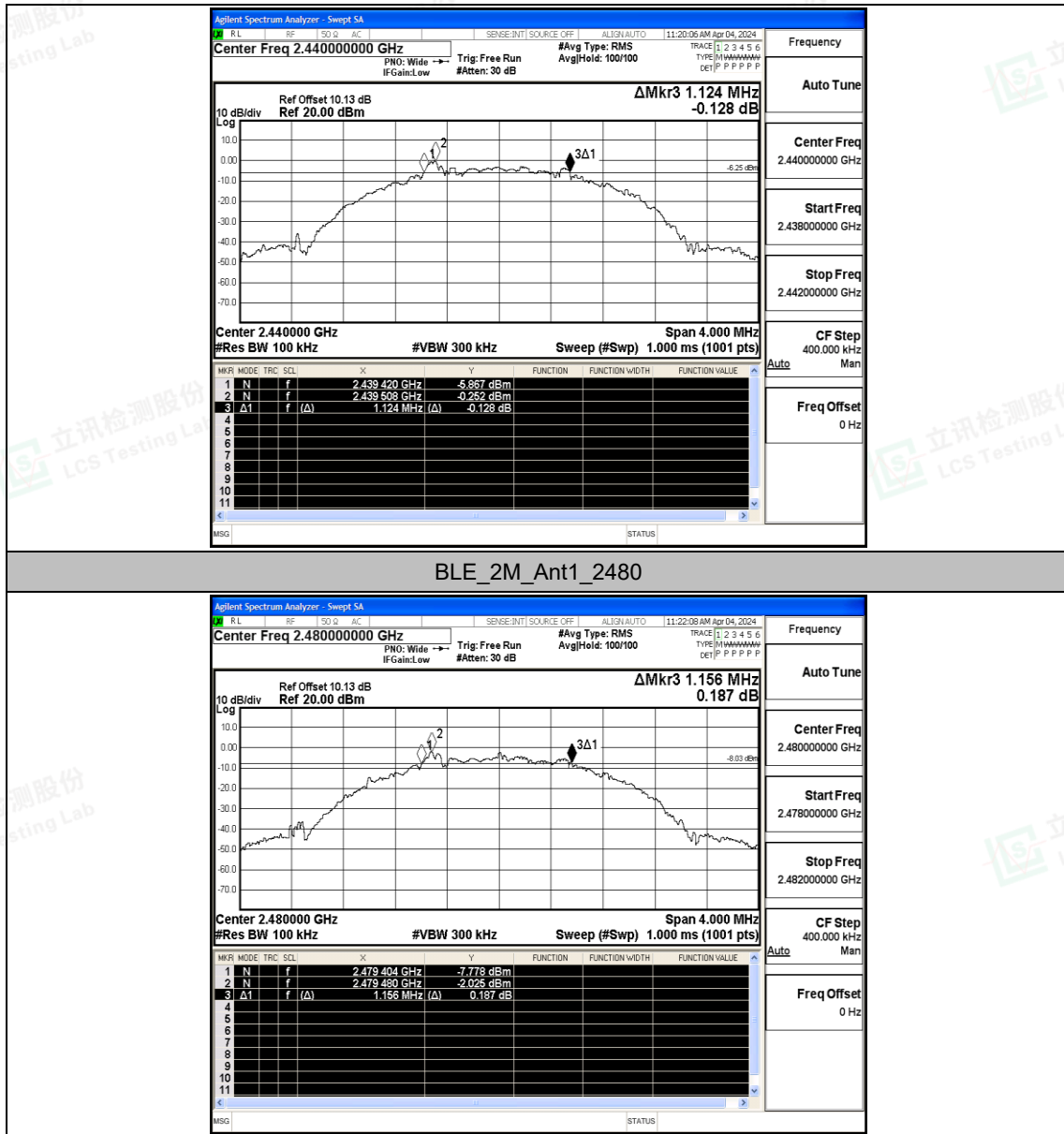


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.2 Maximum conducted output power

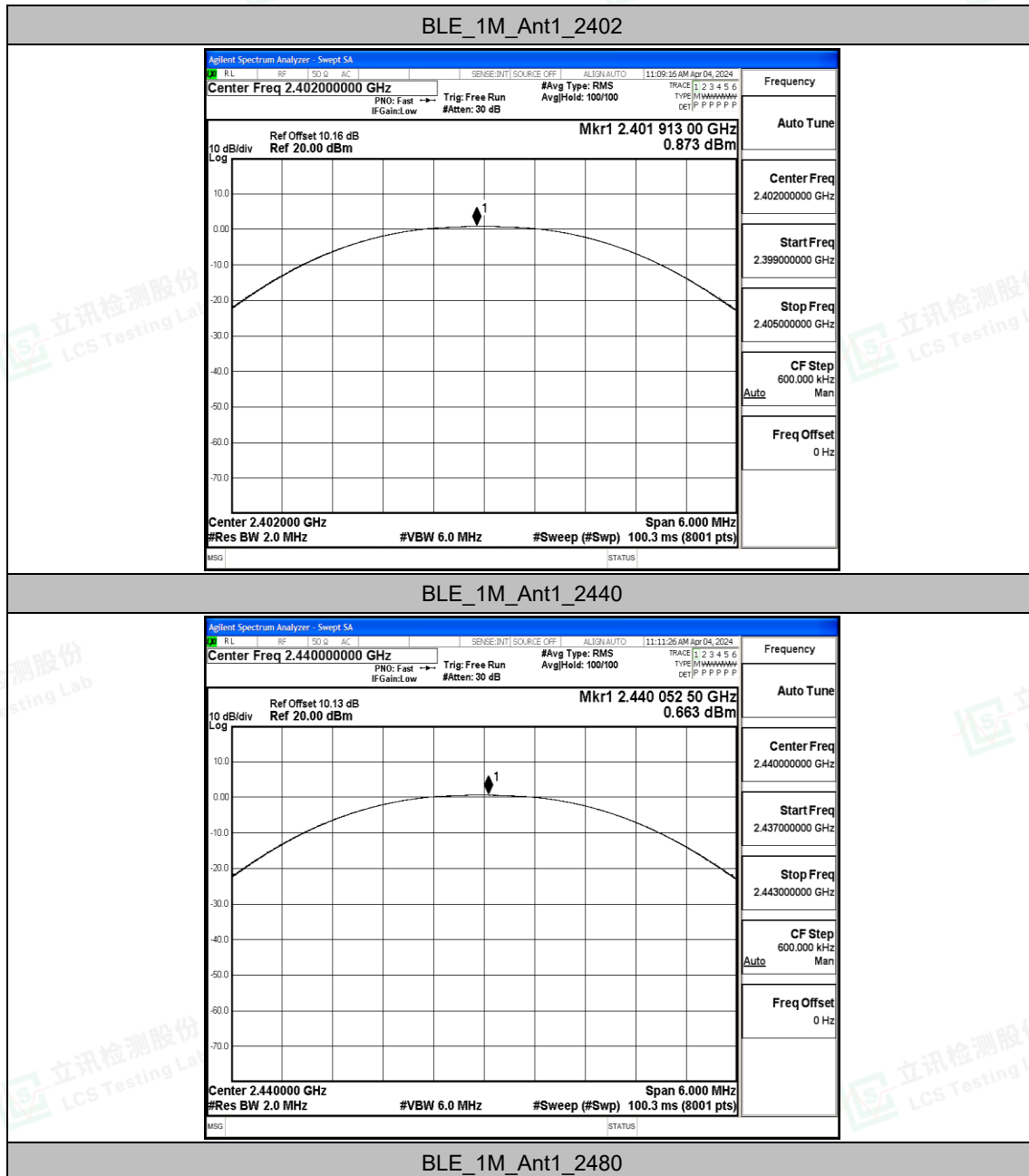
Test Result

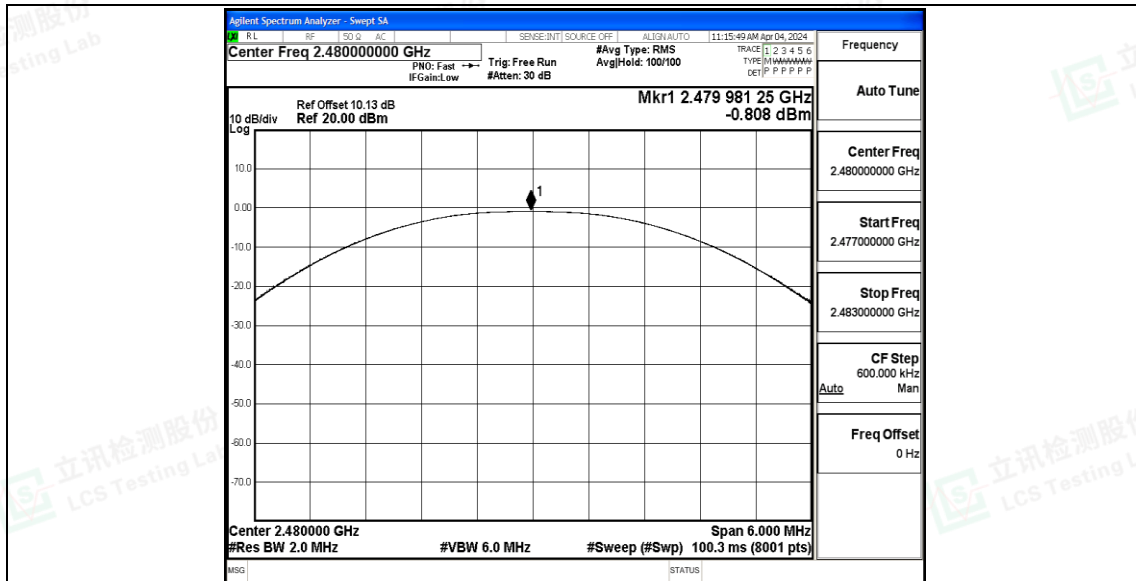
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.87	≤30	PASS
		2440	0.66	≤30	PASS
		2480	-0.81	≤30	PASS
BLE_2M	Ant1	2402	0.70	≤30	PASS
		2440	0.45	≤30	PASS
		2480	-1.01	≤30	PASS



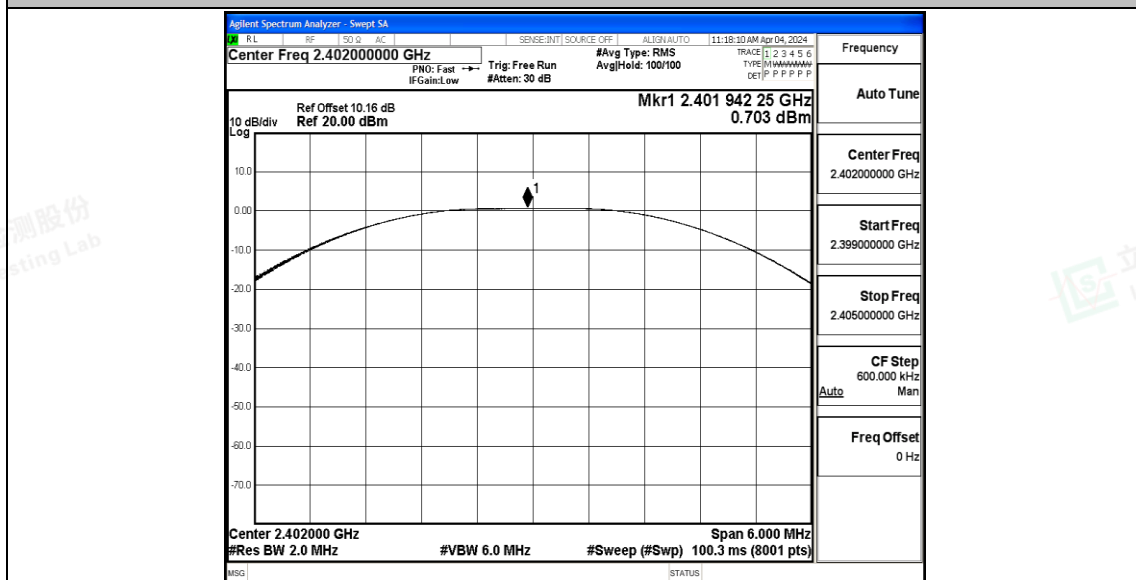


Test Graphs



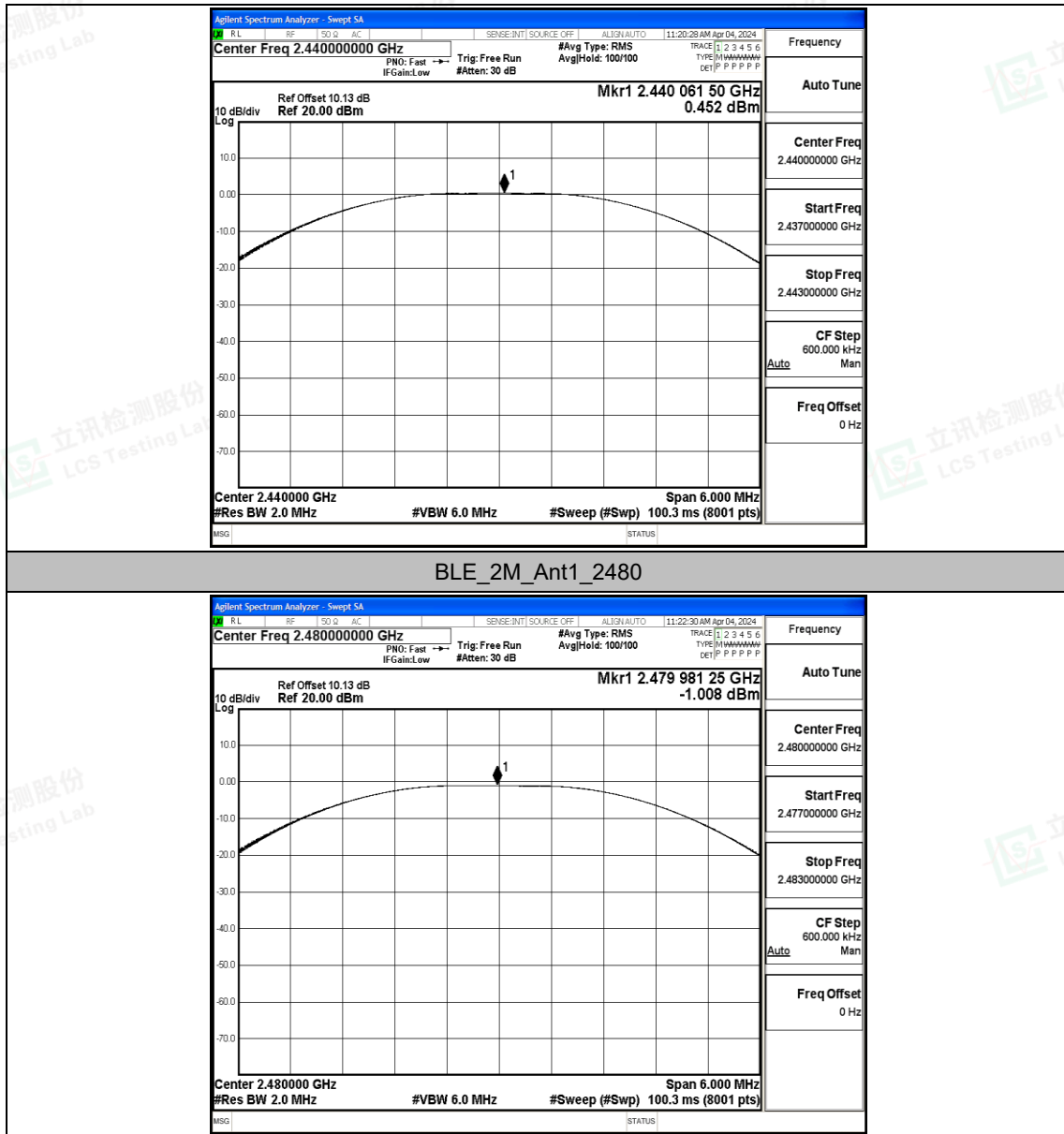


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.3 Maximum power spectral density

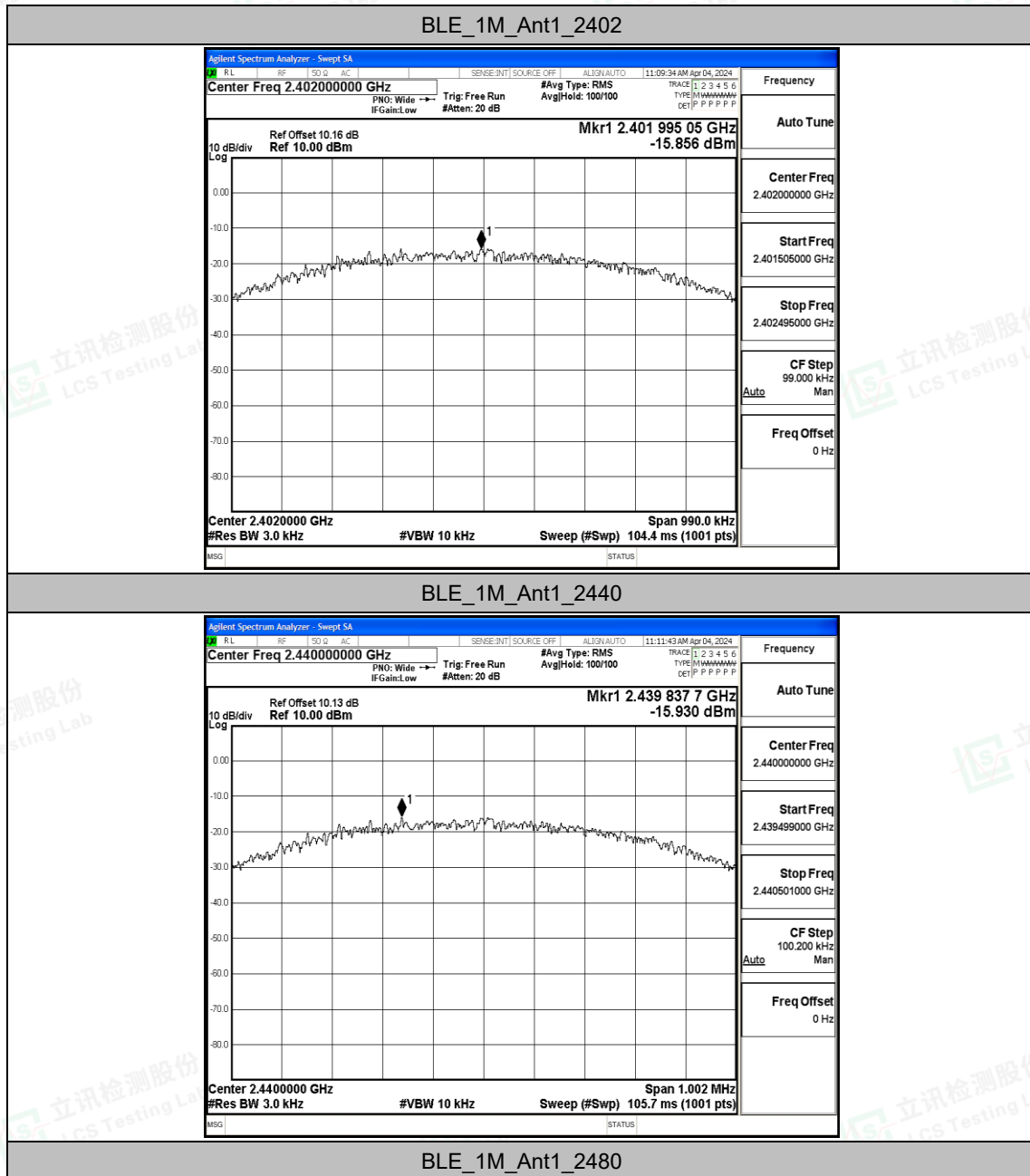
Test Result

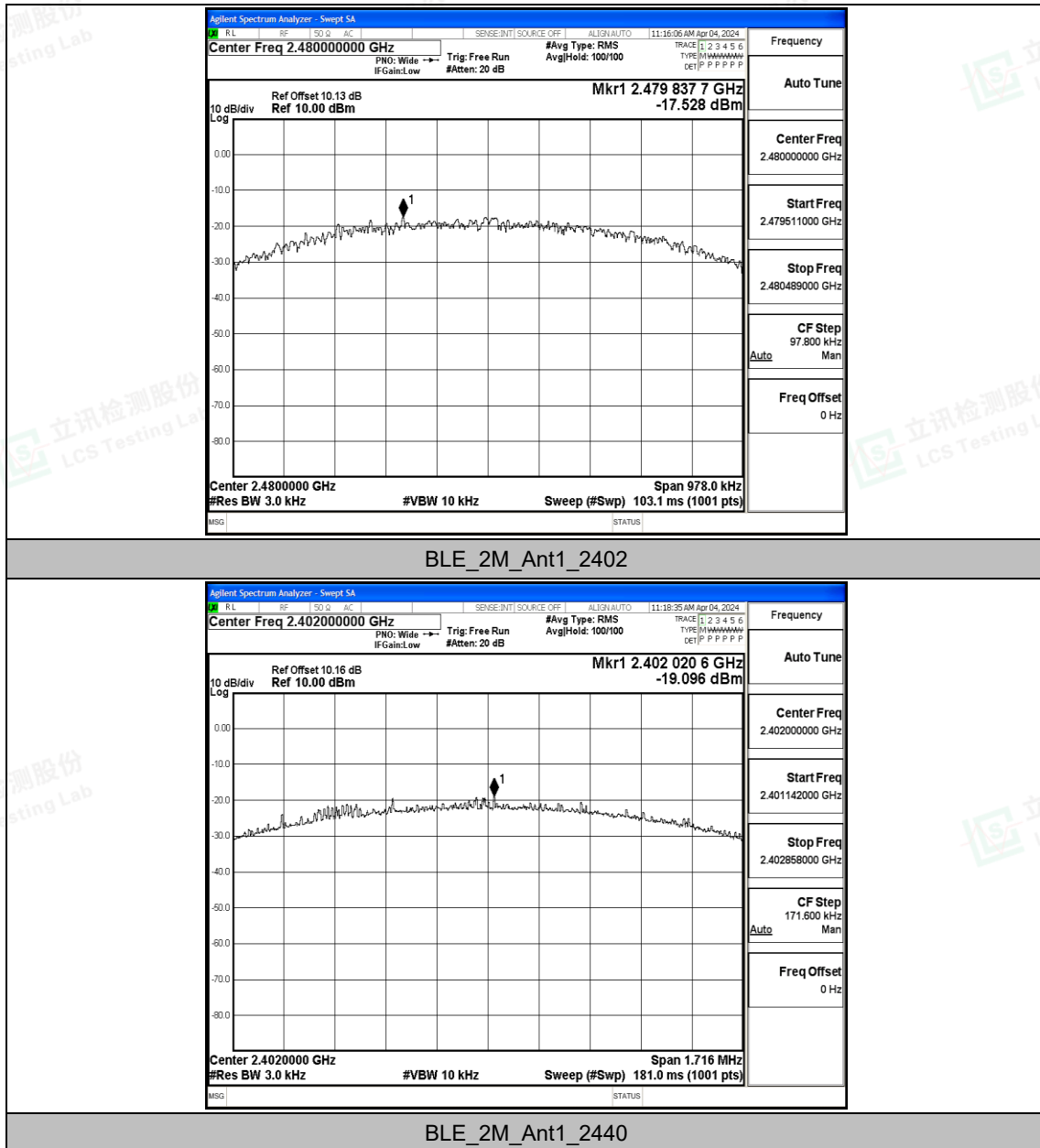
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.86	≤8.00	PASS
		2440	-15.93	≤8.00	PASS
		2480	-17.53	≤8.00	PASS
BLE_2M	Ant1	2402	-19.10	≤8.00	PASS
		2440	-19.33	≤8.00	PASS
		2480	-20.80	≤8.00	PASS

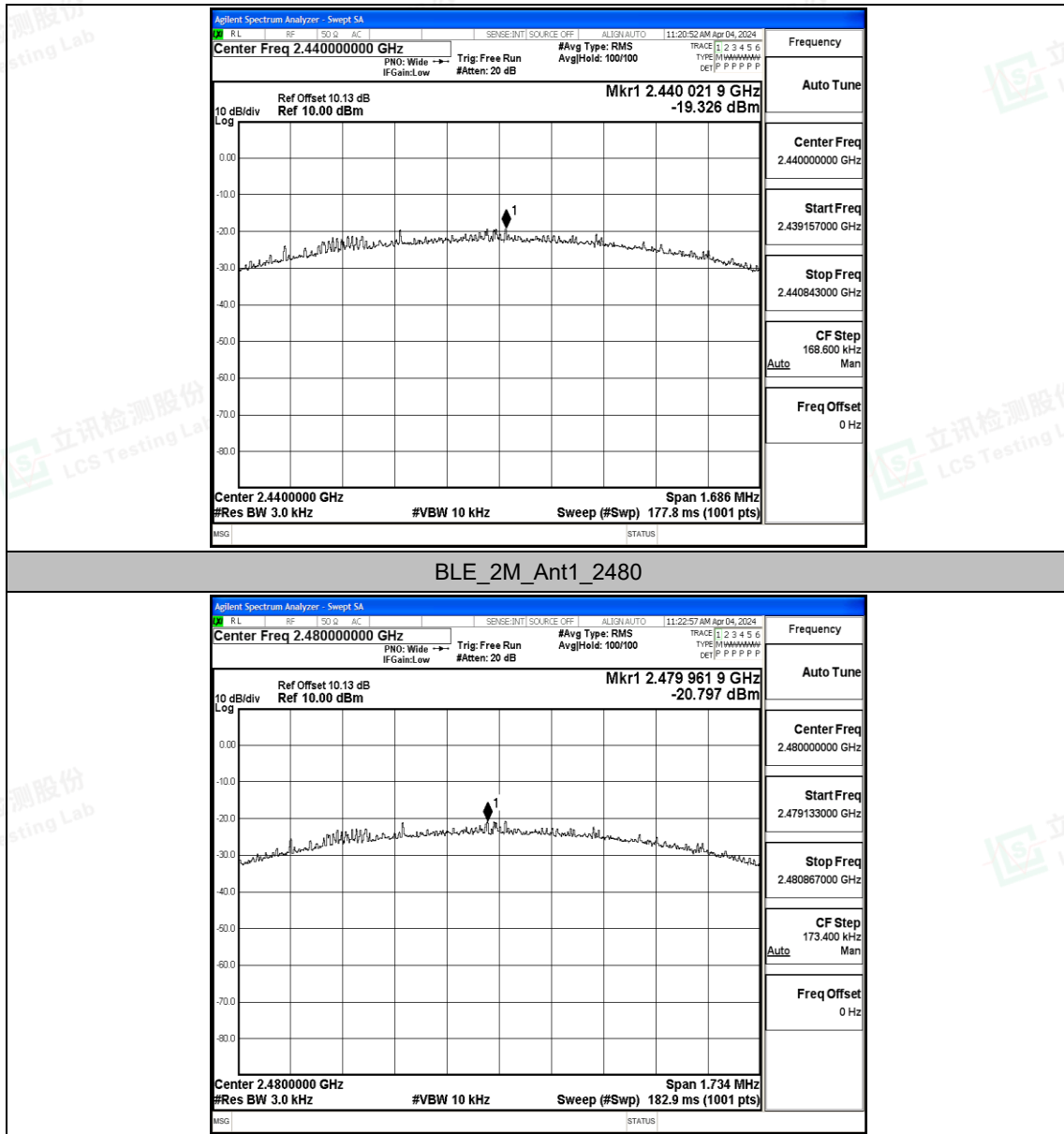




Test Graphs









A.4 Band edge measurements

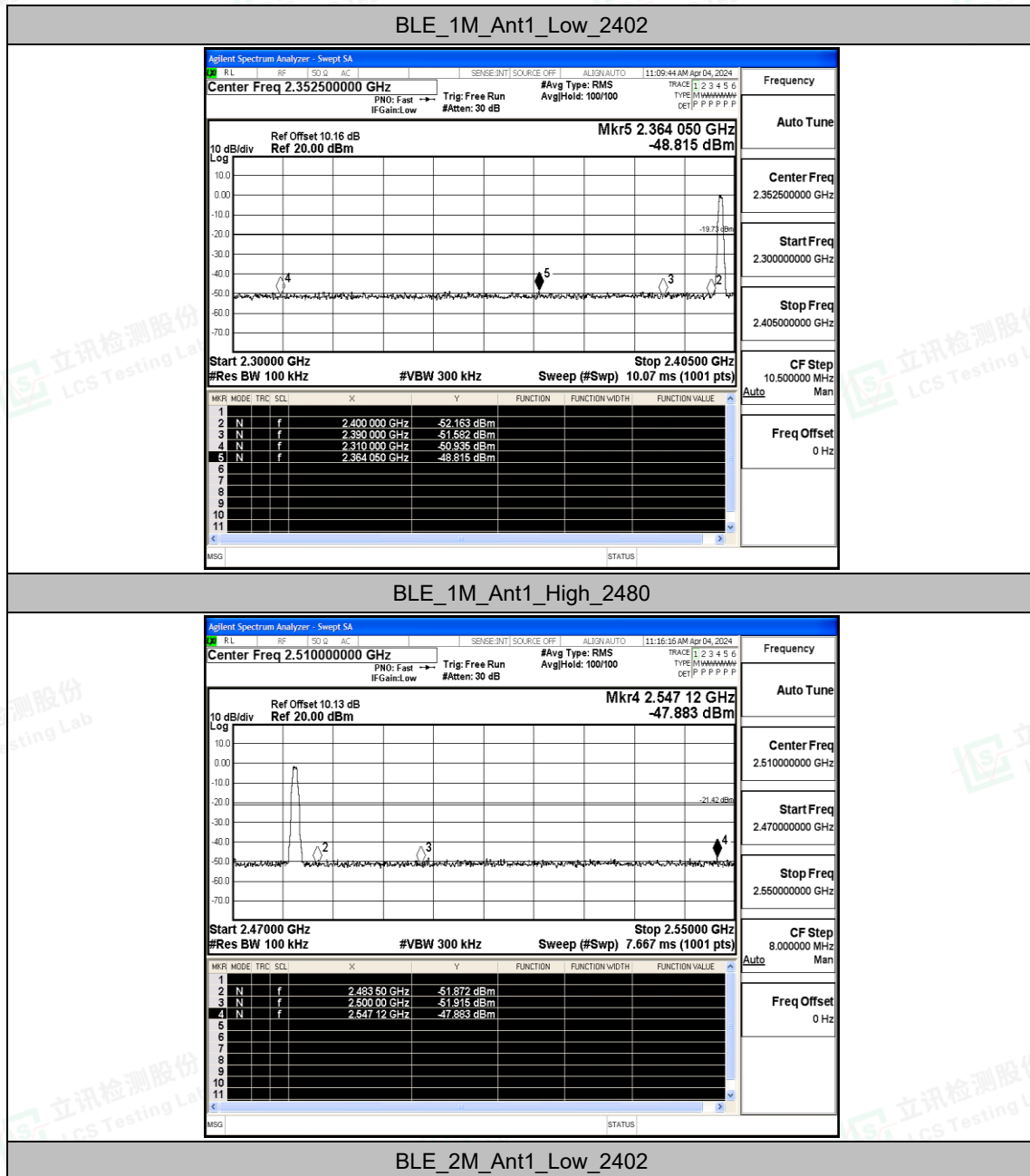
Test Result

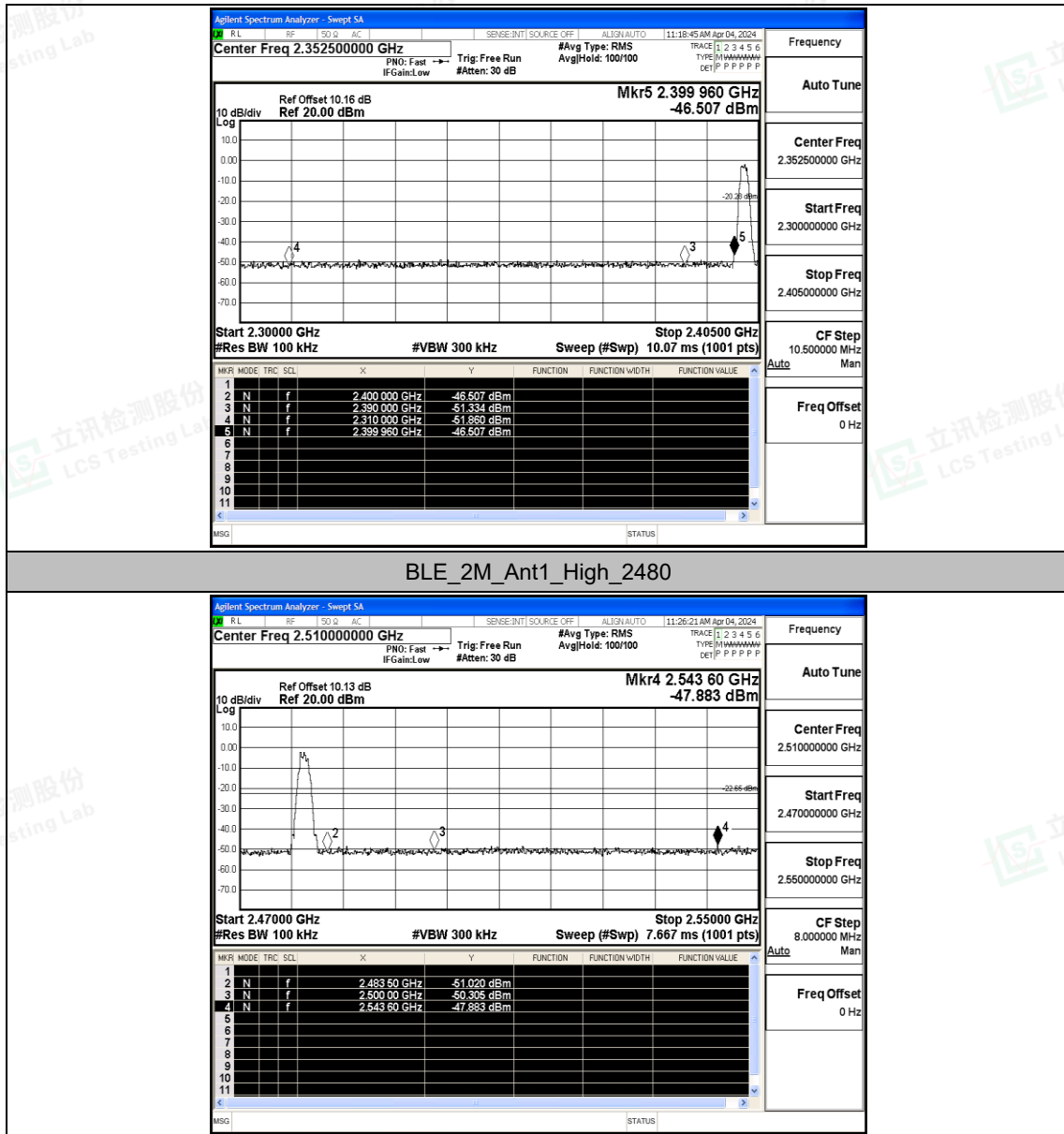
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.27	-48.82	≤-19.73	PASS
		High	2480	-1.42	-47.88	≤-21.42	PASS
BLE_2M	Ant1	Low	2402	-0.28	-46.51	≤-20.28	PASS
		High	2480	-2.65	-47.88	≤-22.65	PASS





Test Graphs







A.5 Conducted Spurious Emission

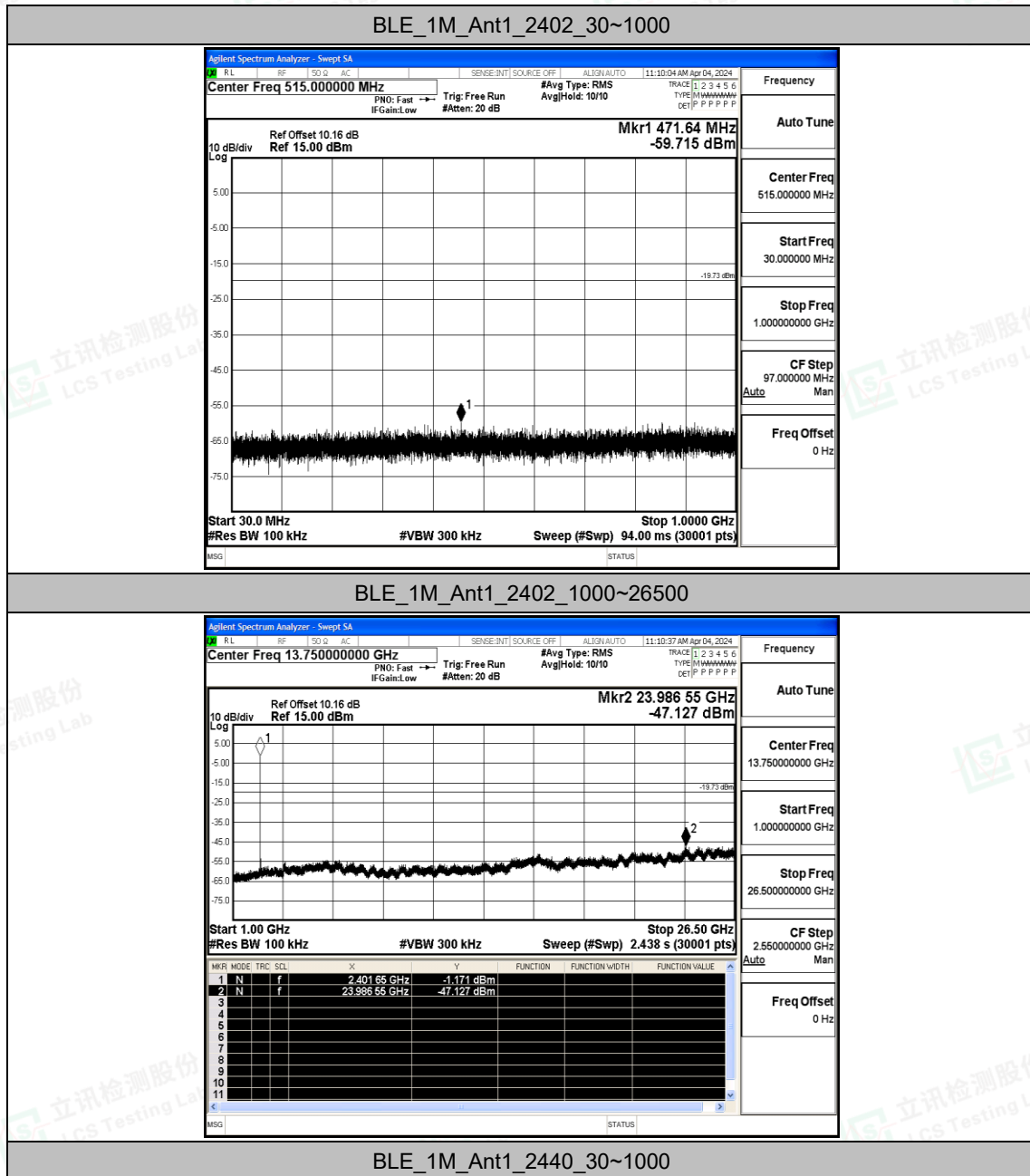
Test Result

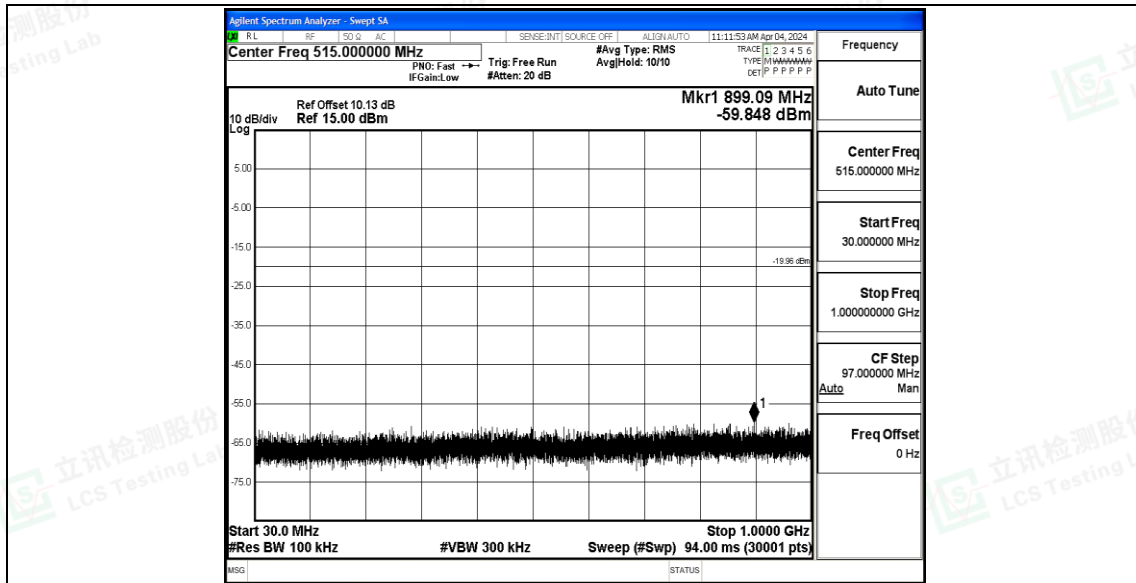
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	0.27	-59.72	≤-19.73	PASS
			1000~26500	0.27	-47.13	≤-19.73	PASS
		2440	30~1000	0.04	-59.85	≤-19.96	PASS
			1000~26500	0.04	-46.03	≤-19.96	PASS
		2480	30~1000	-1.42	-59.8	≤-21.42	PASS
			1000~26500	-1.42	-47.11	≤-21.42	PASS
BLE_2M	Ant1	2402	30~1000	-0.28	-60.19	≤-20.28	PASS
			1000~26500	-0.28	-45.6	≤-20.28	PASS
		2440	30~1000	-0.31	-60.25	≤-20.31	PASS
			1000~26500	-0.31	-47.05	≤-20.31	PASS
		2480	30~1000	-2.65	-59.36	≤-22.65	PASS
			1000~26500	-2.65	-47.06	≤-22.65	PASS



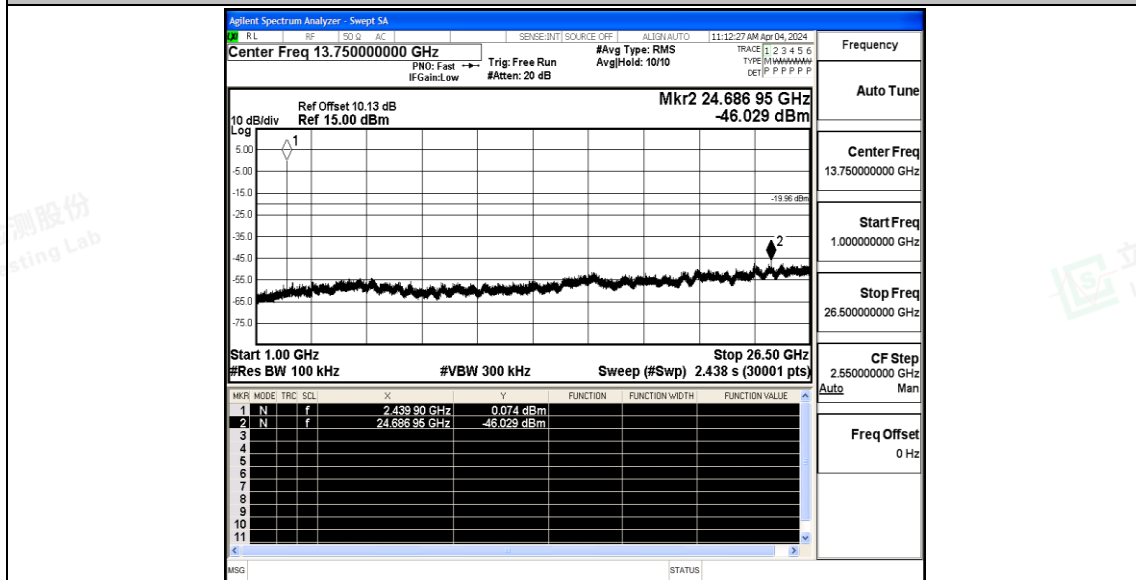


Test Graphs



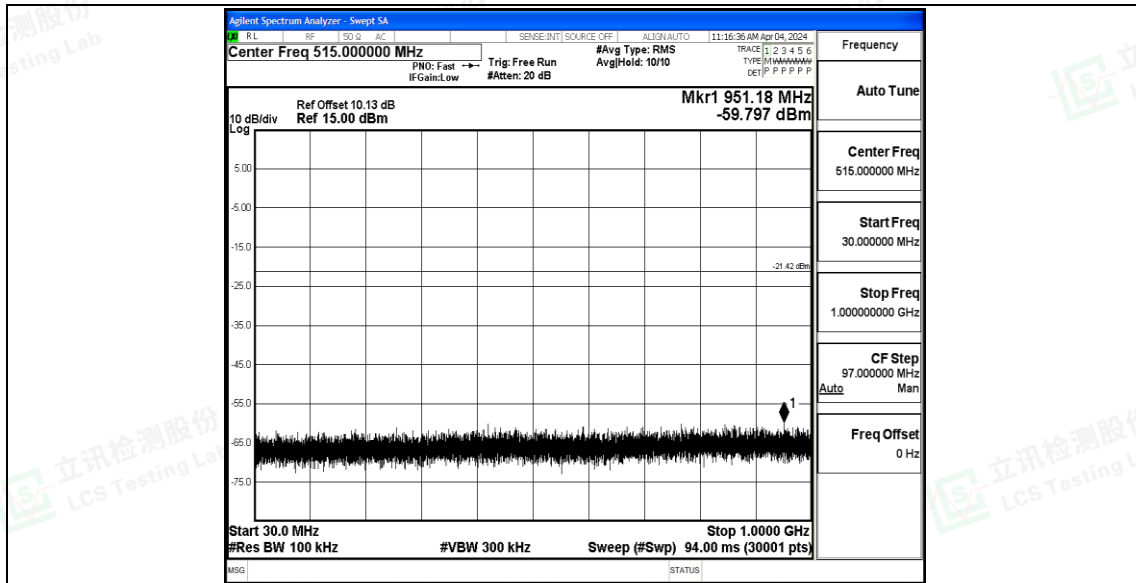


BLE_1M_Ant1_2440_1000~26500

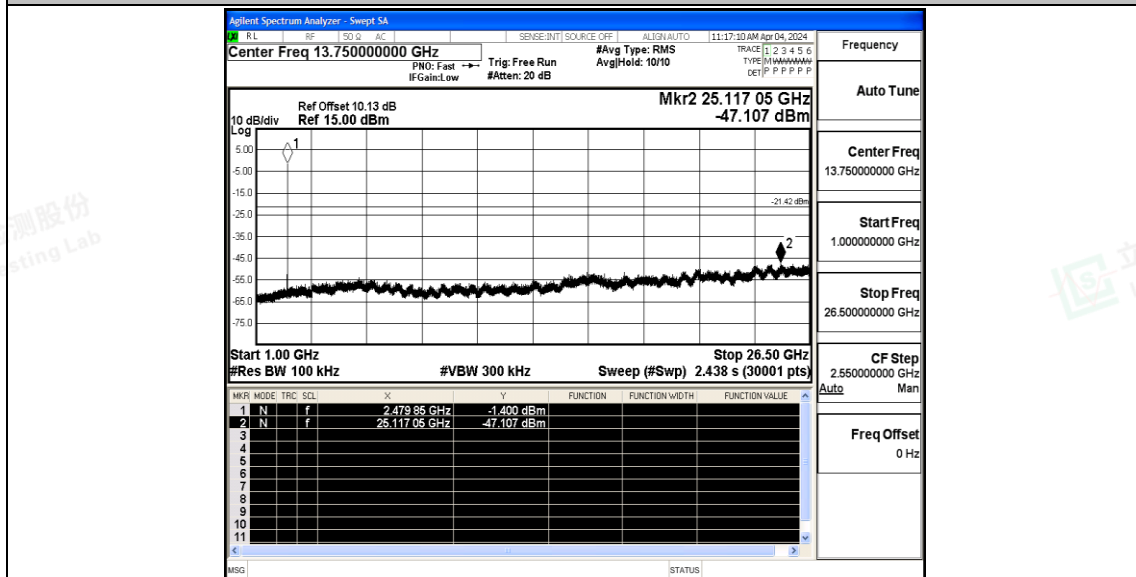


BLE_1M_Ant1_2480_30~1000



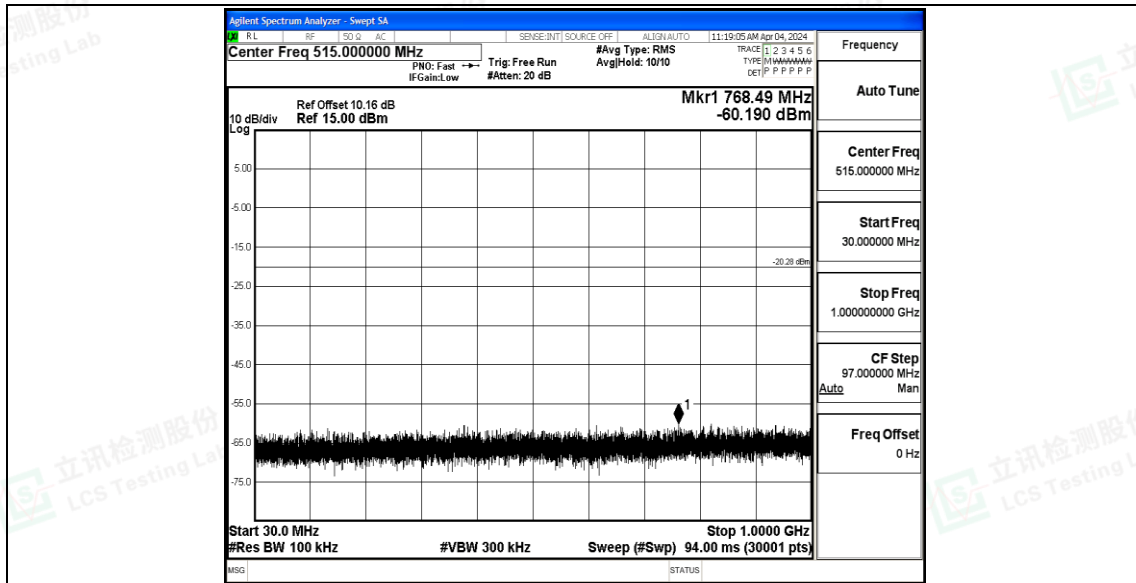


BLE_1M_Ant1_2480_1000~26500

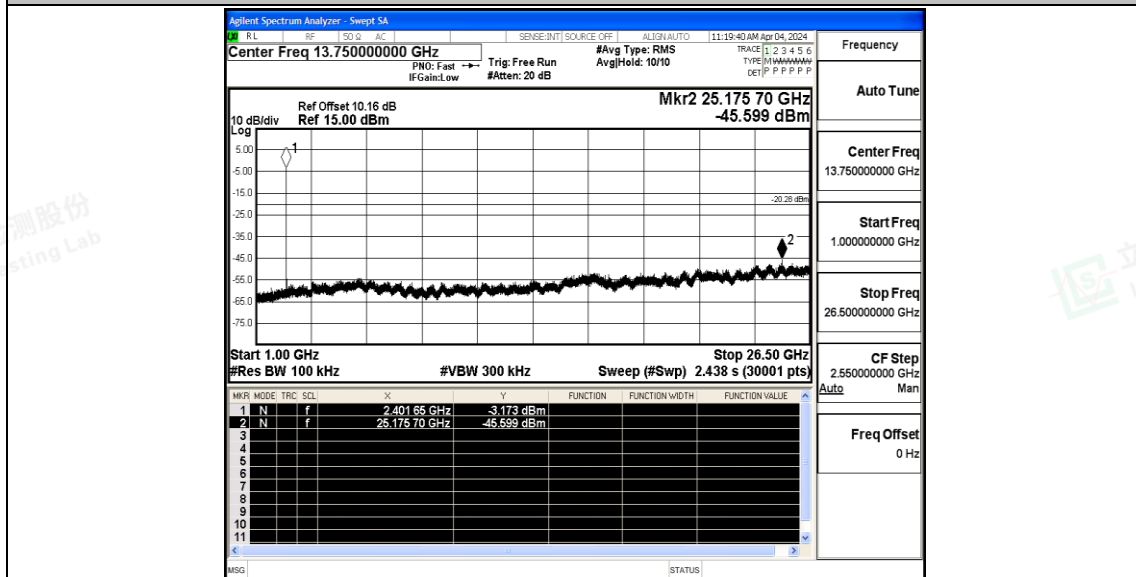


BLE_2M_Ant1_2402_30~1000



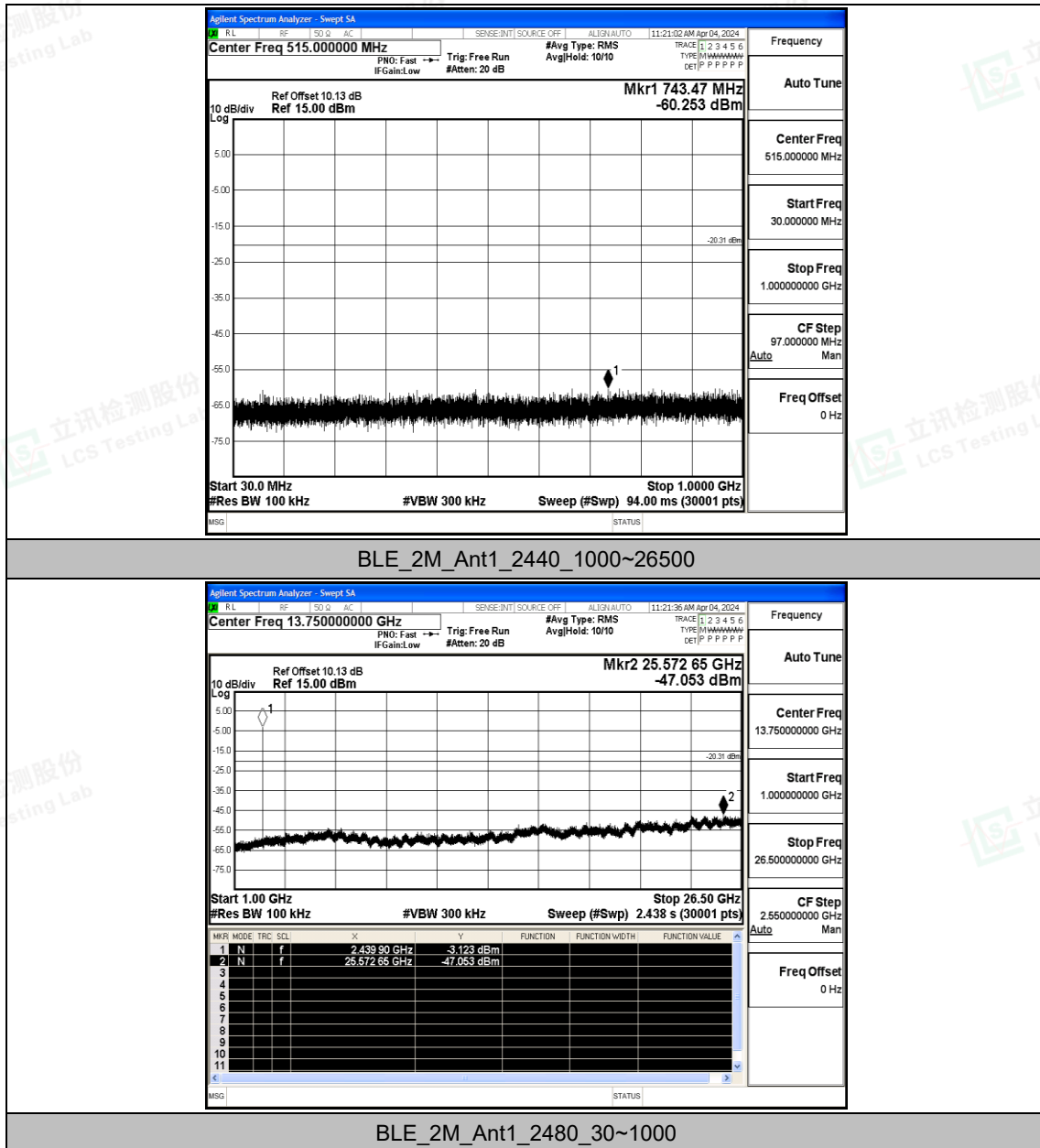


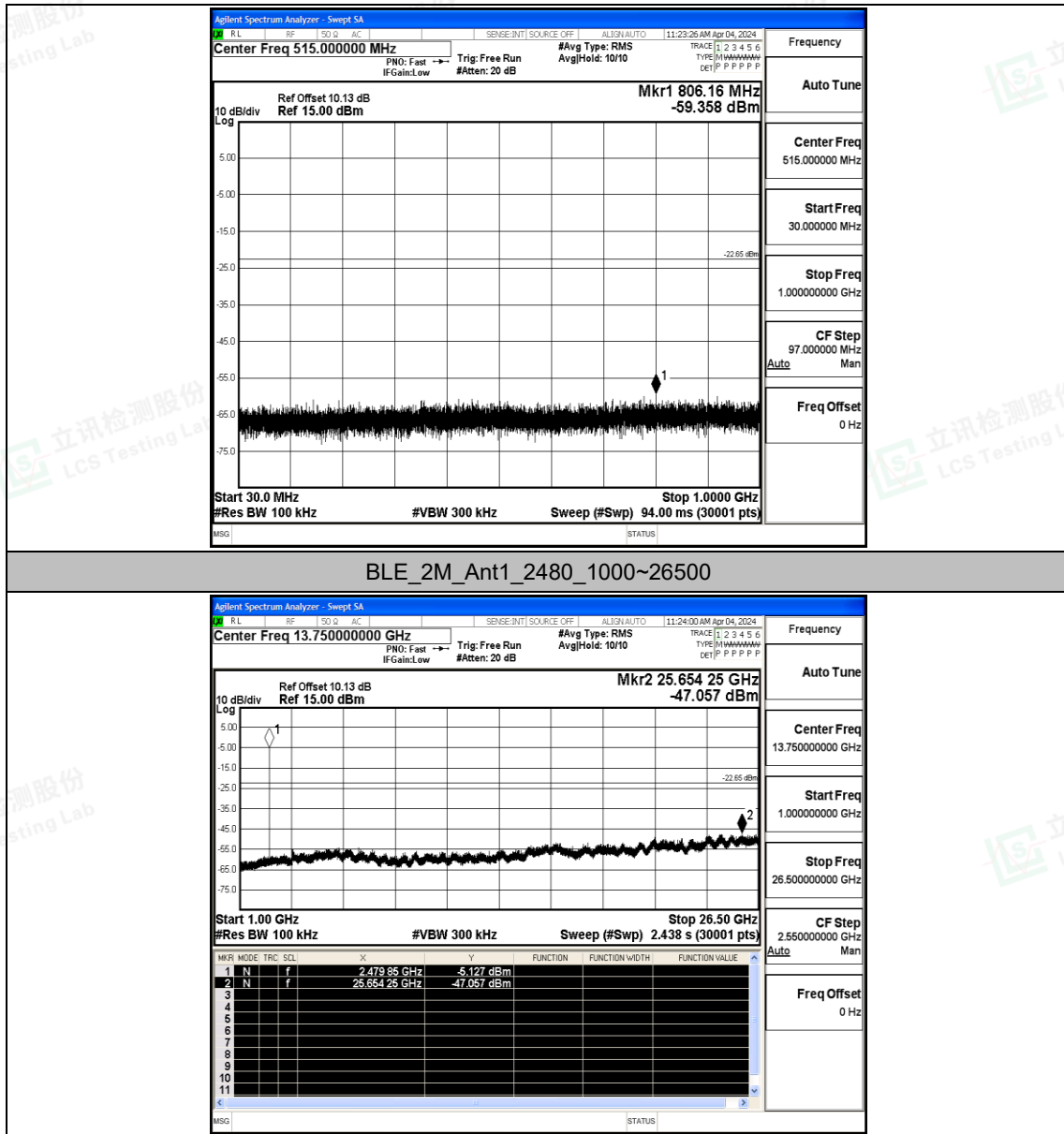
BLE_2M_Ant1_2402_1000~26500



BLE_2M_Ant1_2440_30~1000









Reference level measurement

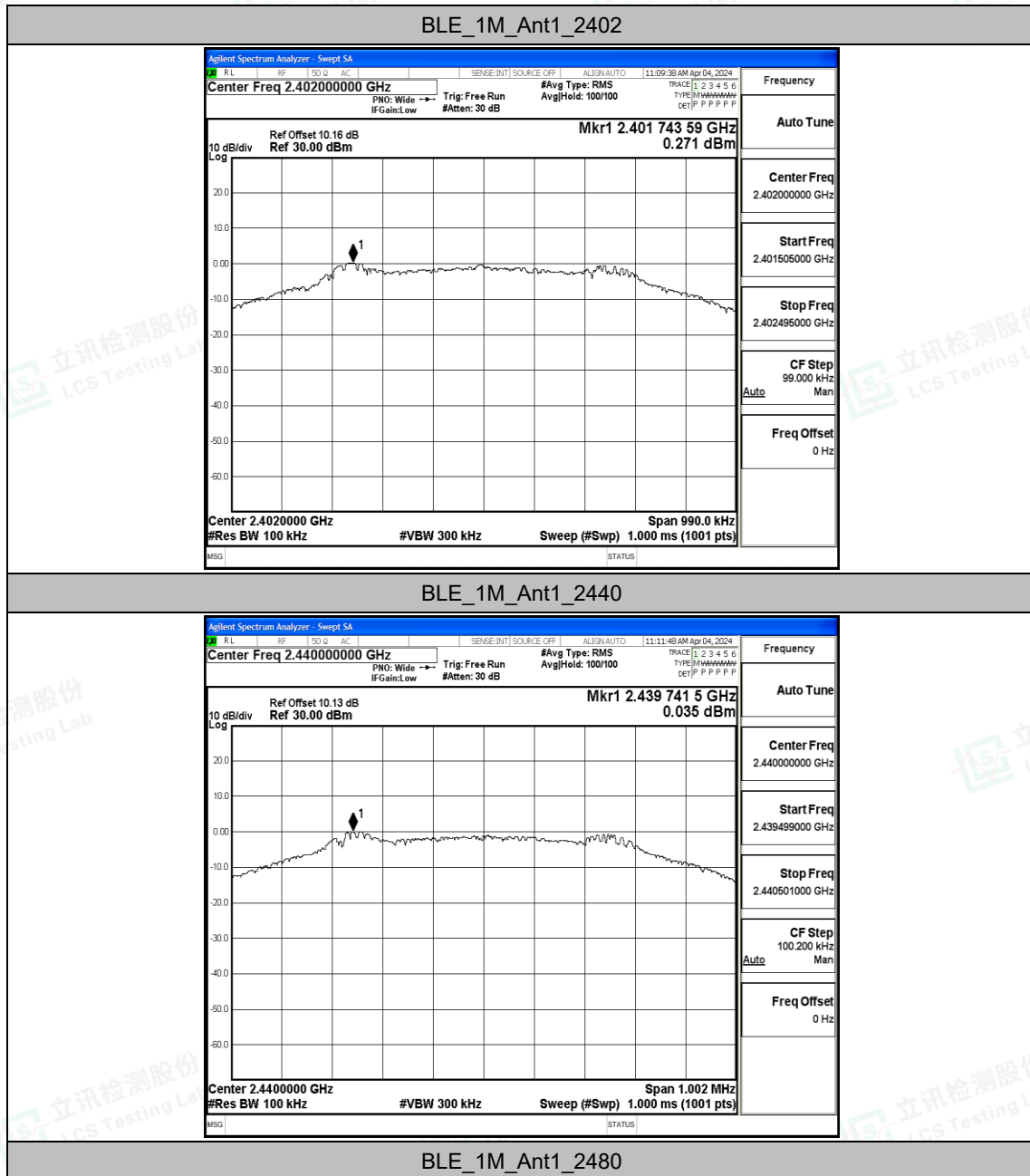
Test Result

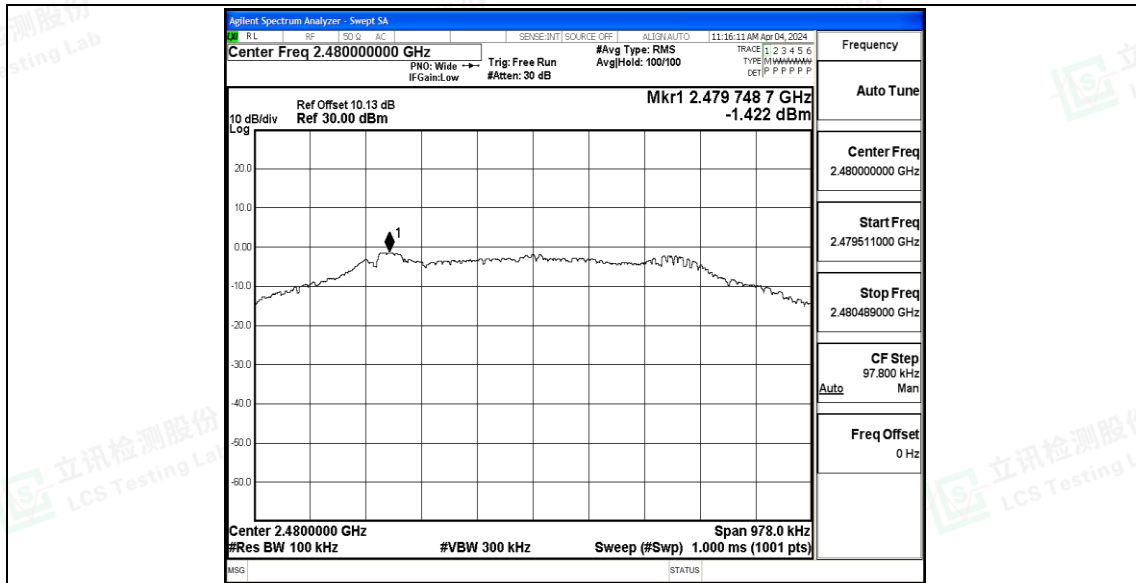
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2401.74	0.27
		2440	2439.74	0.04
		2480	2479.75	-1.42
BLE_2M	Ant1	2402	2401.48	-0.28
		2440	2439.51	-0.31
		2480	2480.02	-2.65



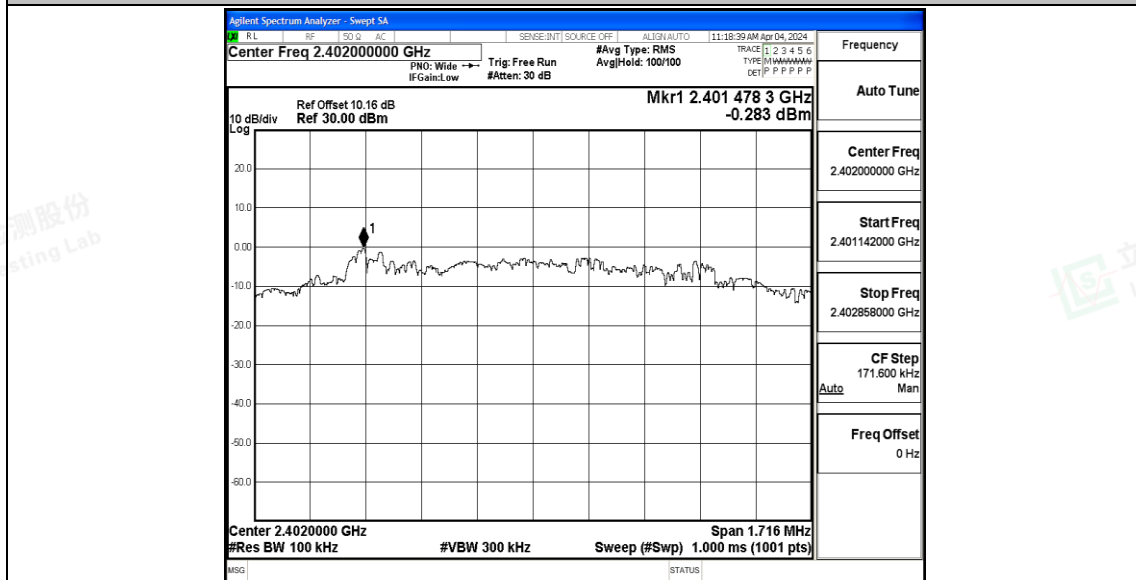


Test Graphs



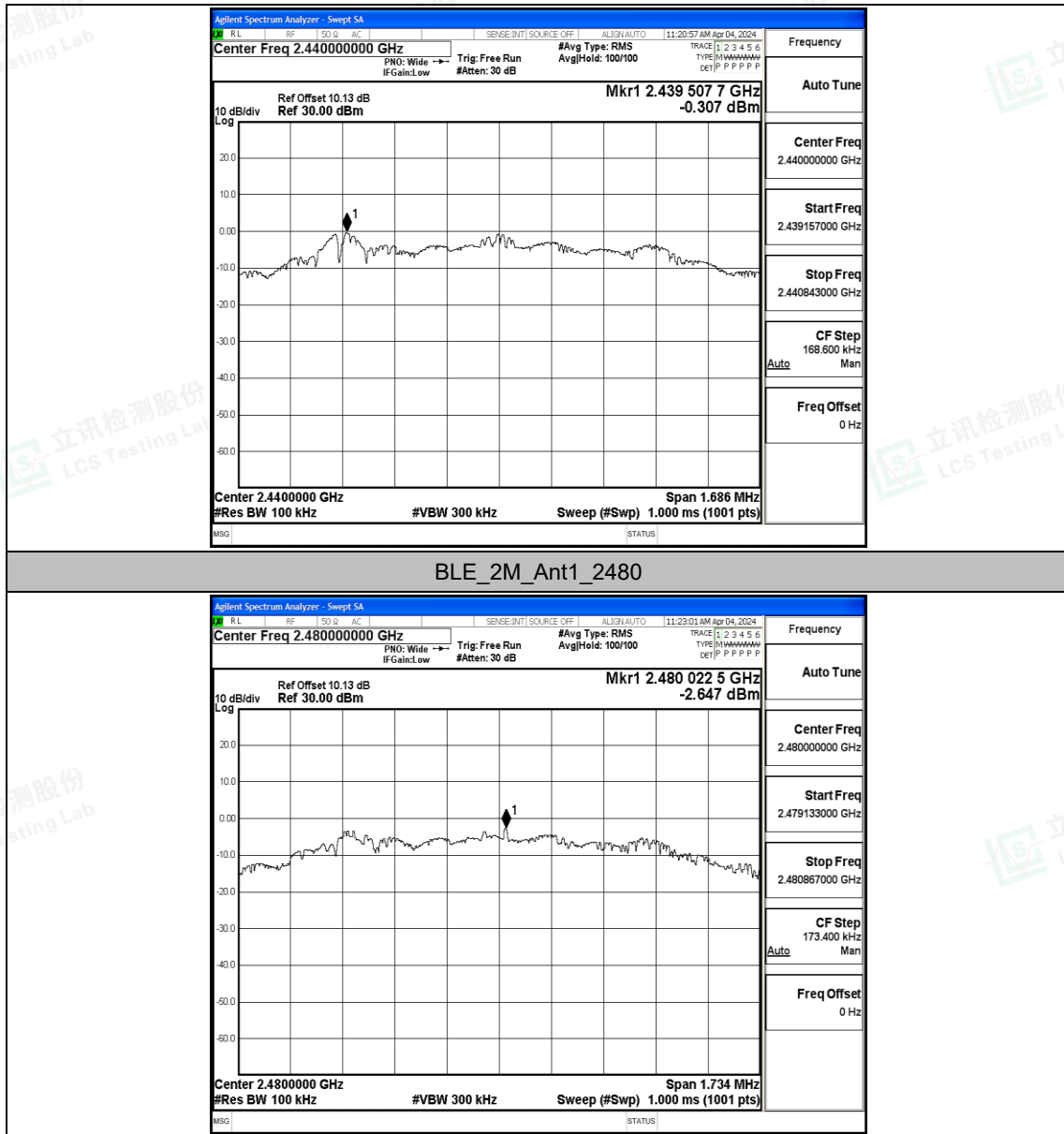


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.6 Duty Cycle

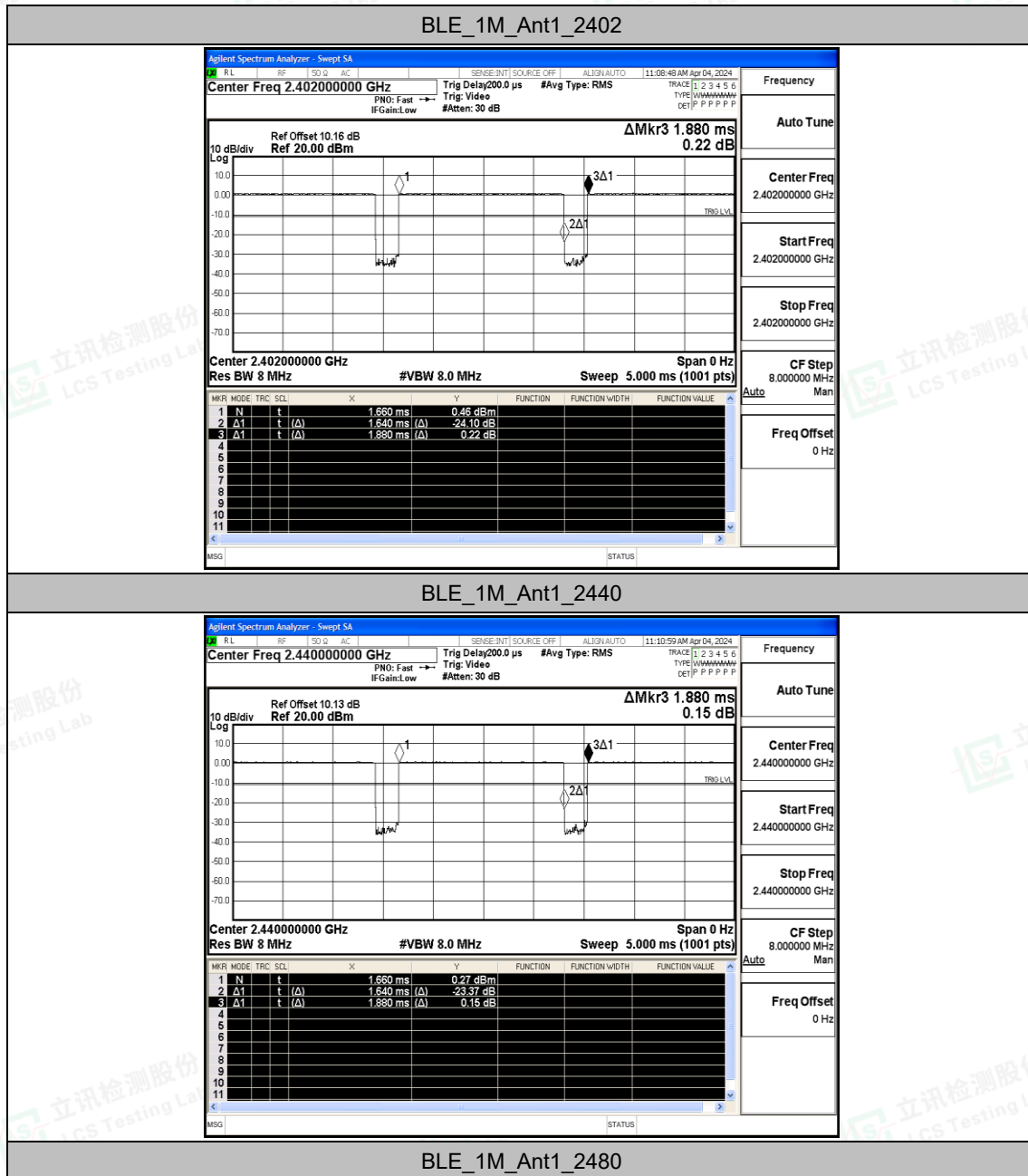
Test Result

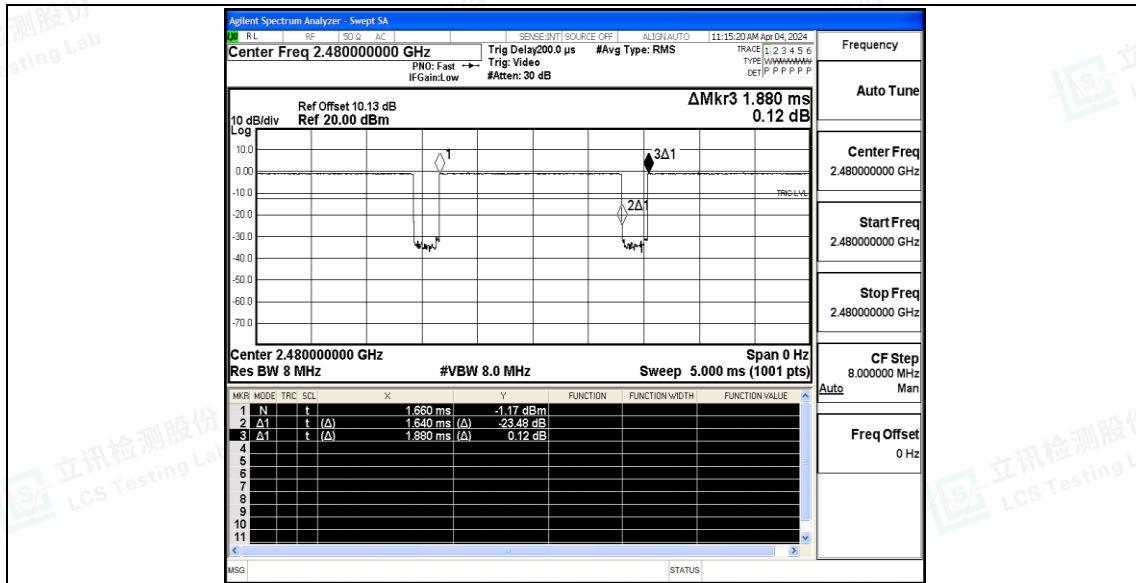
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[dB]
BLE_1M	Ant1	2402	1.64	1.88	87.23	0.59	0.61
		2440	1.64	1.88	87.23	0.59	0.61
		2480	1.64	1.88	87.23	0.59	0.61
BLE_2M	Ant1	2402	0.82	1.25	65.60	1.83	1.22
		2440	0.82	1.25	65.60	1.83	1.22
		2480	0.82	1.25	65.60	1.83	1.22



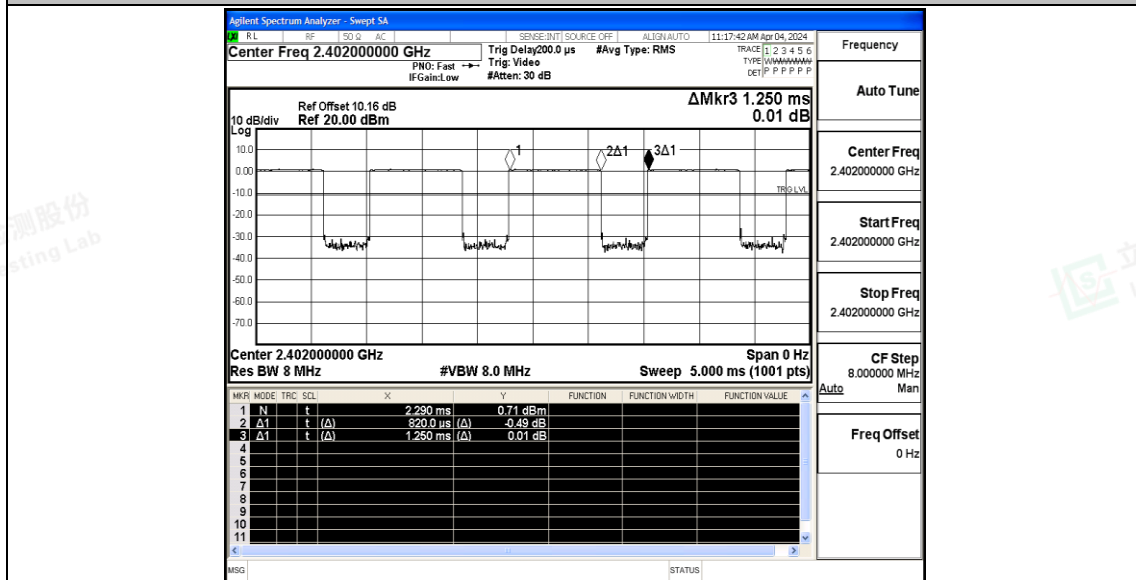


Test Graphs



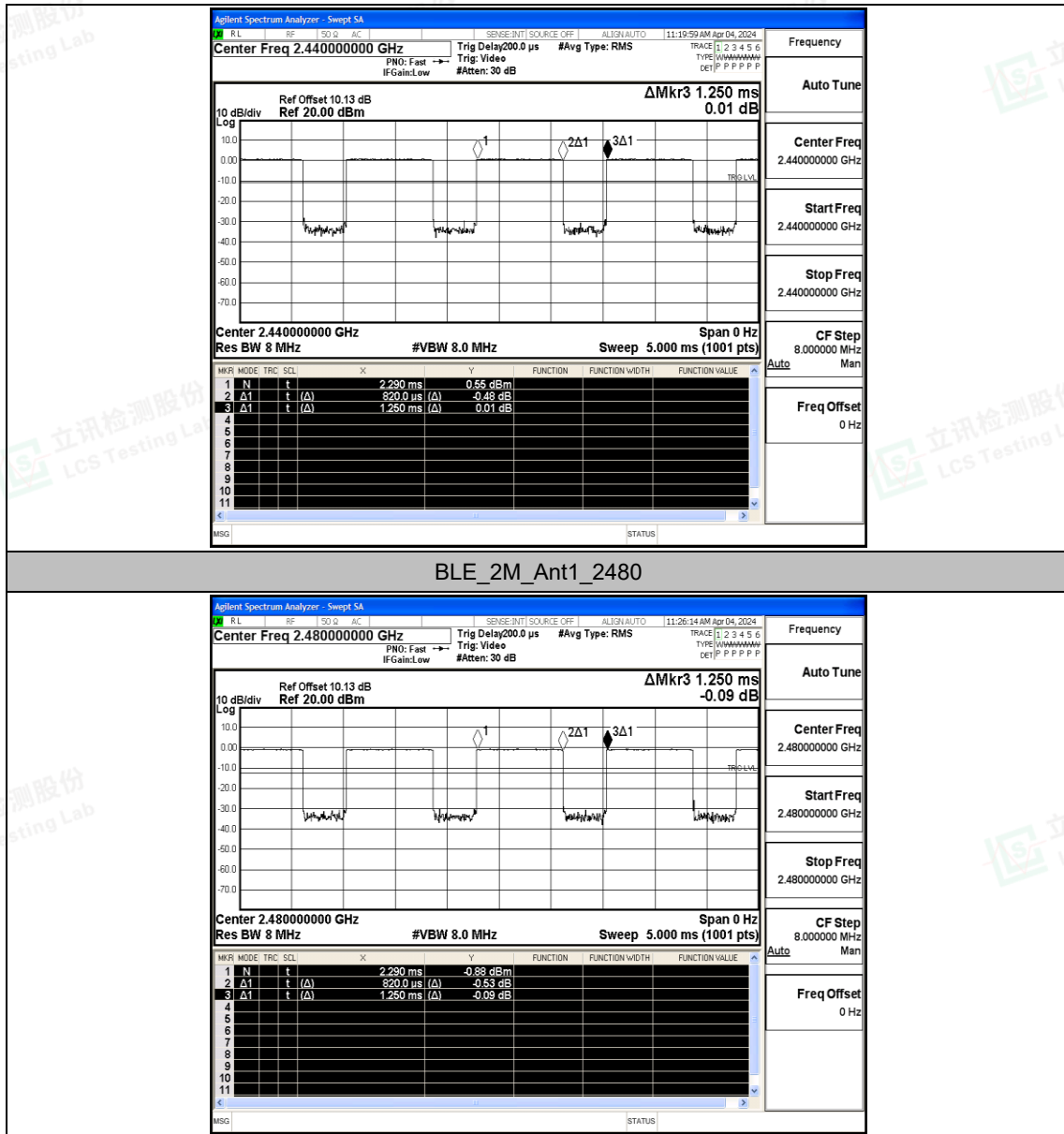


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.22	≤-41.20	47.98	≤54	PASS
				AV	2368.040	-46.16	≤-41.20	49.04	≤54	PASS
				AV	2390.000	-47.05	≤-41.20	48.15	≤54	PASS
				Peak	2310.000	-39.99	≤-21.20	55.21	≤74	PASS
				Peak	2368.670	-36.66	≤-21.20	58.54	≤74	PASS
				Peak	2390.000	-41.26	≤-21.20	53.94	≤74	PASS
		High	2480	AV	2483.500	-47.47	≤-41.20	47.73	≤54	PASS
				AV	2492.560	-46.2	≤-41.20	49.00	≤54	PASS
				AV	2500.000	-47.56	≤-41.20	47.64	≤54	PASS
				Peak	2483.500	-39.94	≤-21.20	55.26	≤74	PASS
				Peak	2489.280	-35.68	≤-21.20	59.52	≤74	PASS
				Peak	2500.000	-39.18	≤-21.20	56.02	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-46.15	≤-41.20	49.05	≤54	PASS
				AV	2372.765	-45.24	≤-41.20	49.96	≤54	PASS
				AV	2390.000	-46.21	≤-41.20	48.99	≤54	PASS
				Peak	2310.000	-39.15	≤-21.20	56.05	≤74	PASS
				Peak	2363.105	-36.2	≤-21.20	59.00	≤74	PASS
				Peak	2390.000	-40.22	≤-21.20	54.98	≤74	PASS
		High	2480	AV	2483.500	-47.23	≤-41.20	47.97	≤54	PASS
				AV	2485.040	-45.58	≤-41.20	49.62	≤54	PASS
				AV	2500.000	-47.41	≤-41.20	47.79	≤54	PASS
				Peak	2483.500	-39.24	≤-21.20	55.96	≤74	PASS
				Peak	2498.080	-37.27	≤-21.20	57.93	≤74	PASS
				Peak	2500.000	-40.96	≤-21.20	54.24	≤74	PASS

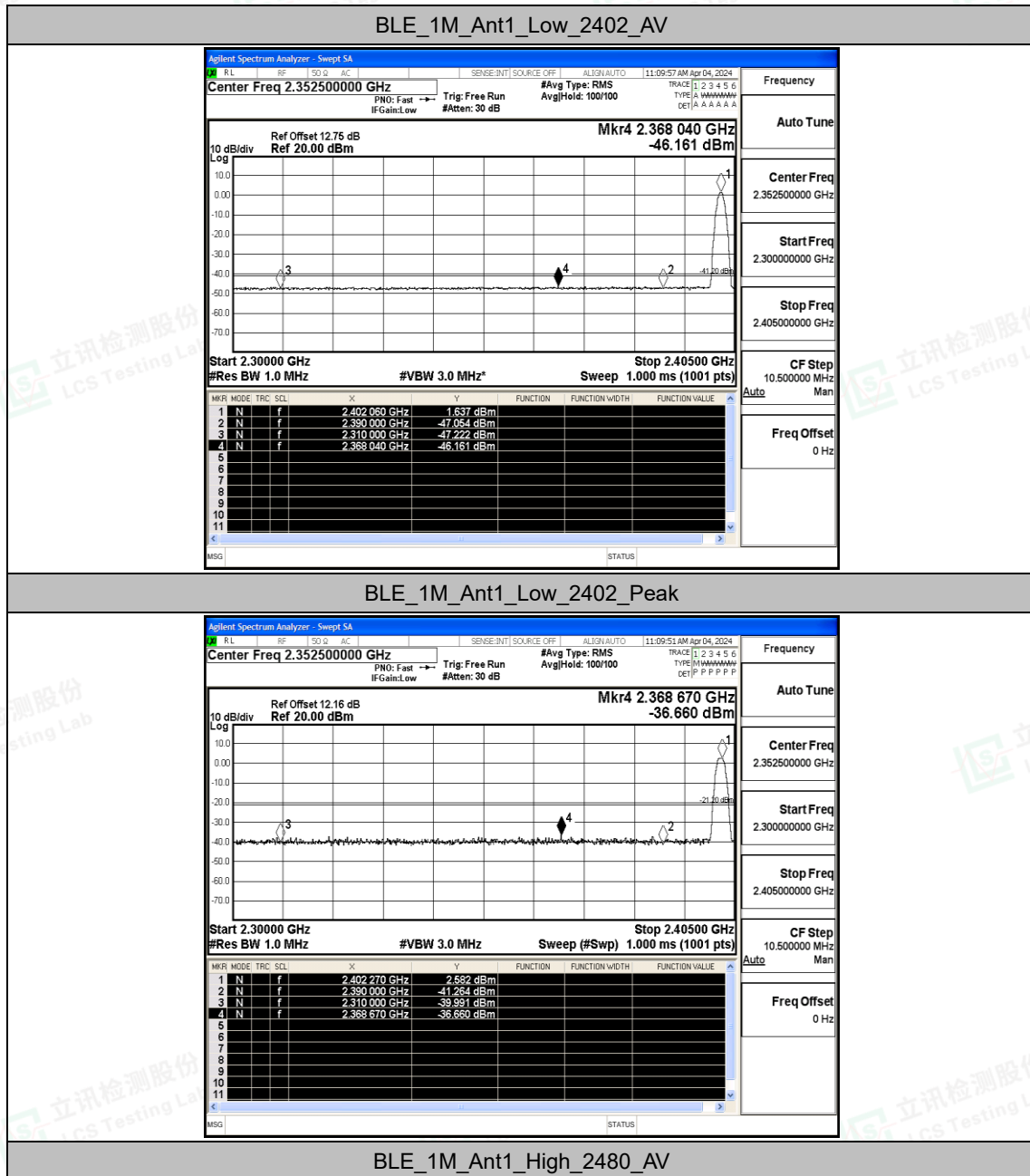
Note:

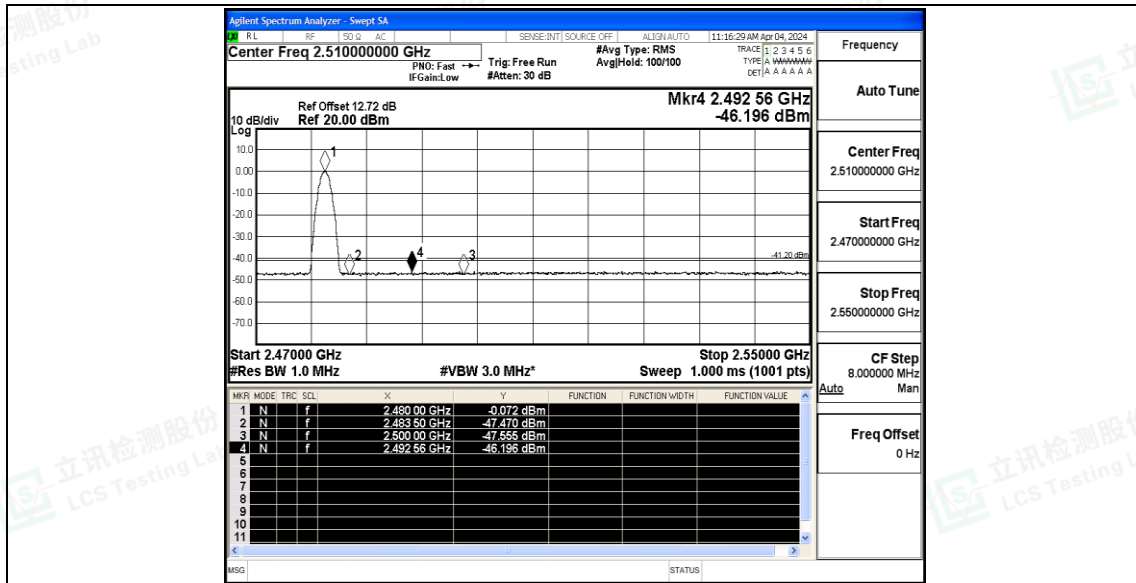
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



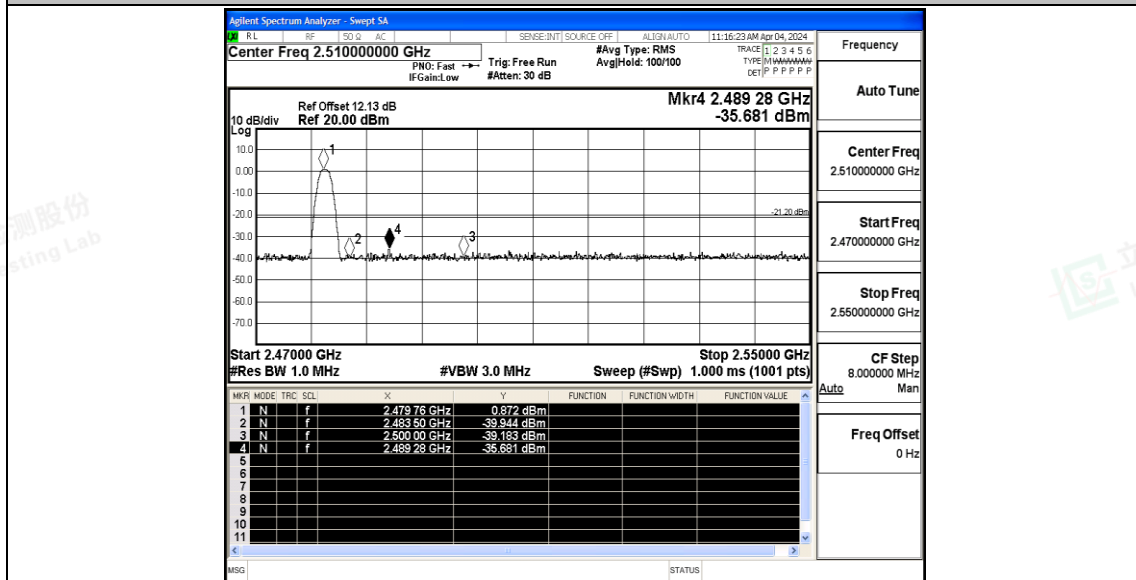


Test Graphs



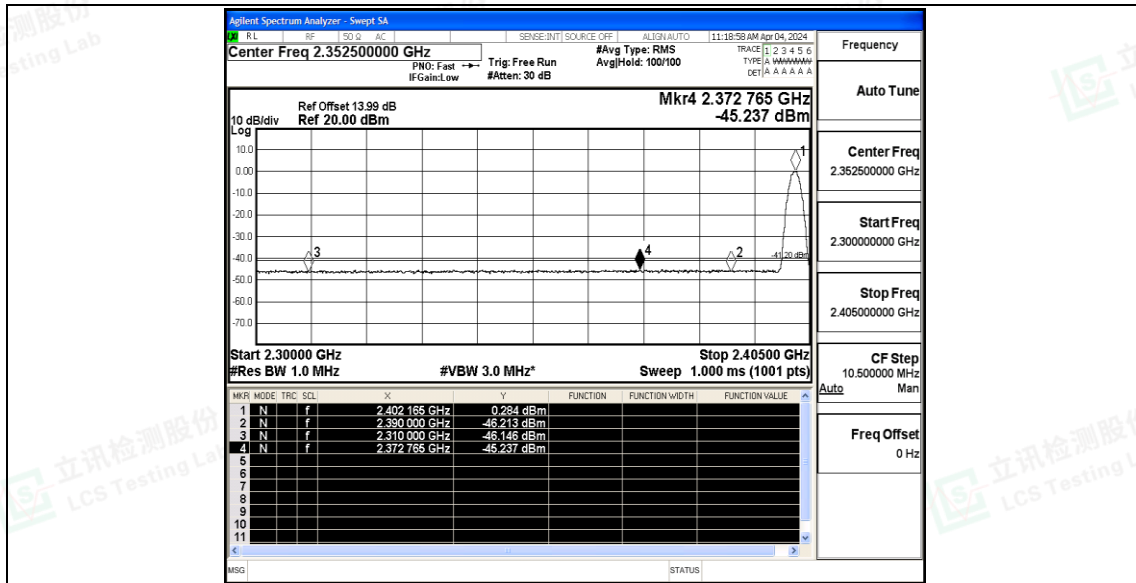


BLE_1M_Ant1_High_2480_Peak

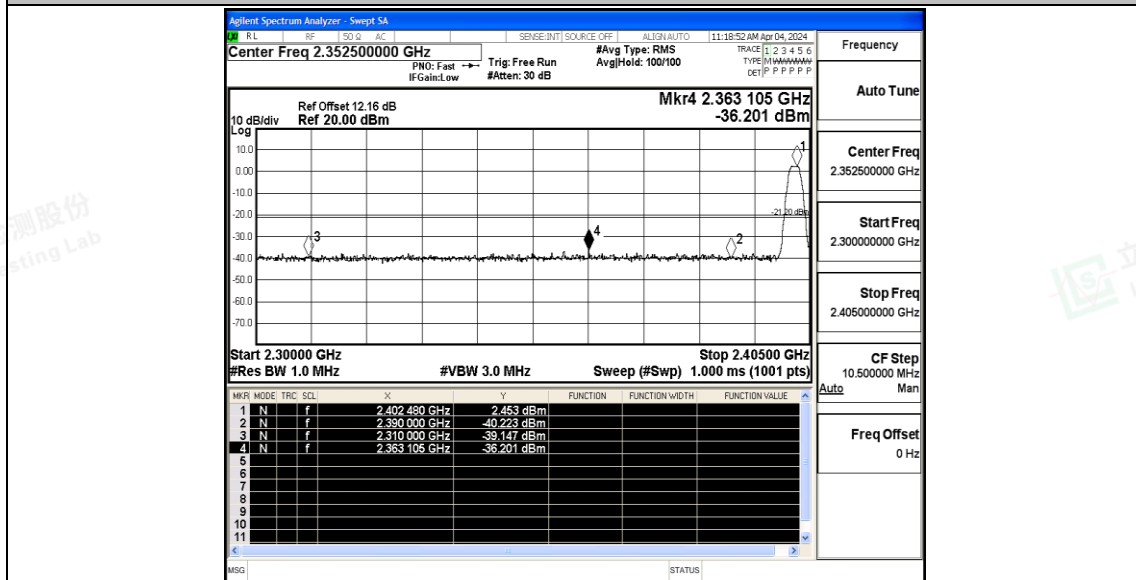


BLE_2M_Ant1_Low_2402_AV





BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



