



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Pawfit Location and Activity Tracker (Pawfit pet Tracker)

Test Model: TR3A

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan



Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity



A.1 DTS Bandwidth

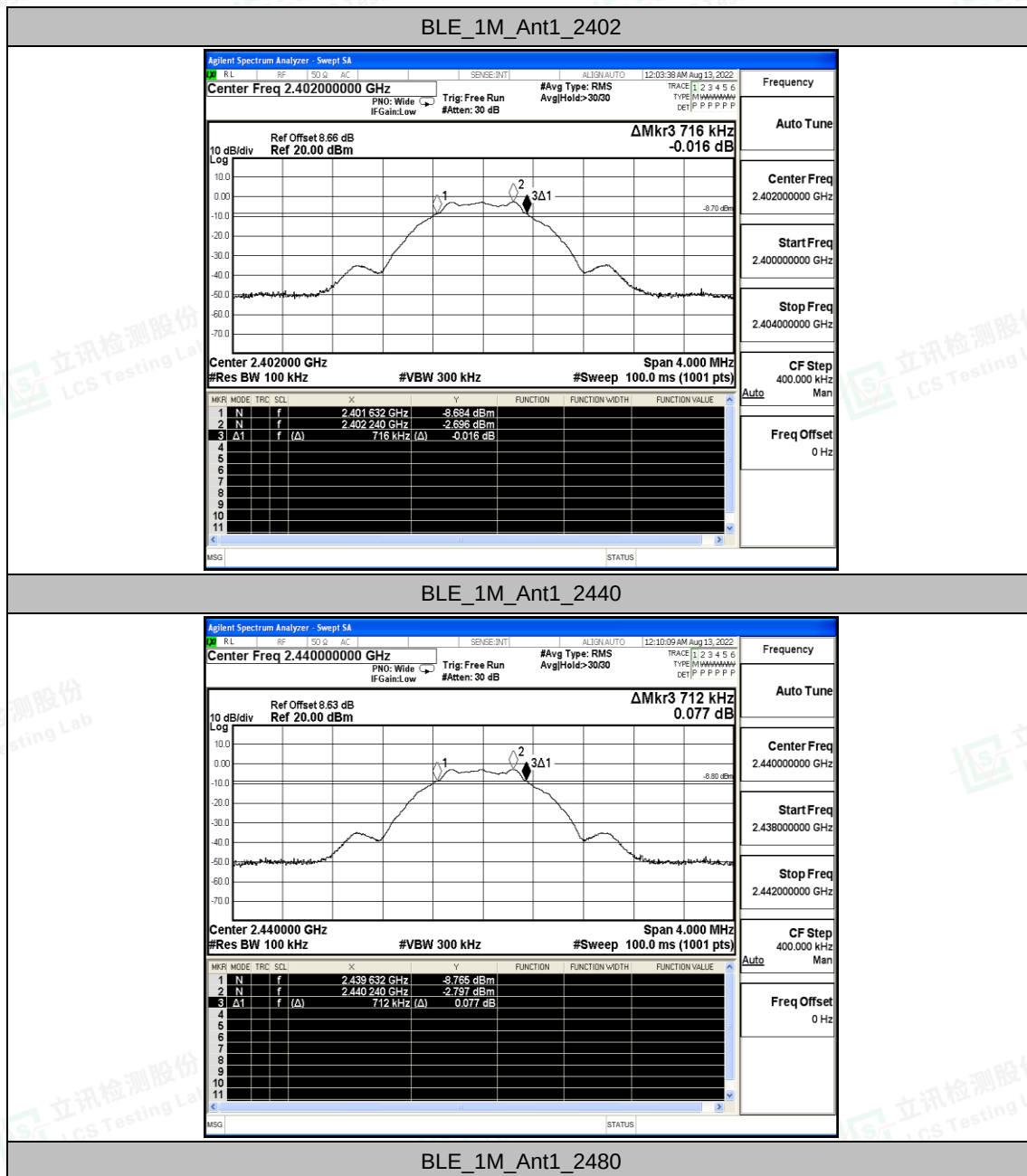
Test Result

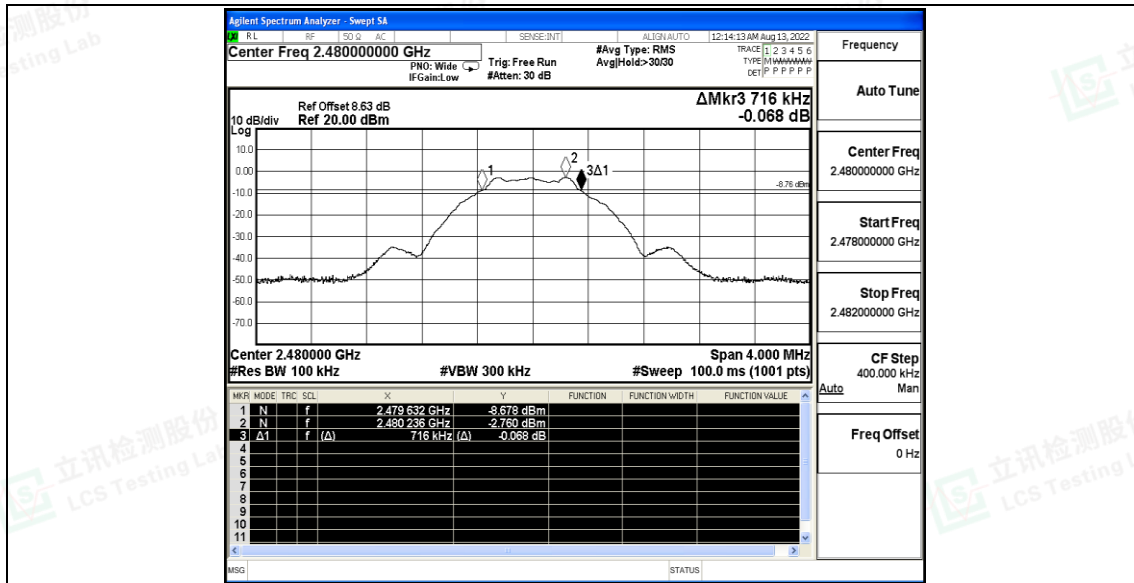
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.632	2402.348	0.5	PASS
		2440	0.712	2439.632	2440.344	0.5	PASS
		2480	0.716	2479.632	2480.348	0.5	PASS
BLE_2M	Ant1	2402	1.152	2401.428	2402.580	0.5	PASS
		2440	1.160	2439.424	2440.584	0.5	PASS
		2480	1.152	2479.428	2480.580	0.5	PASS



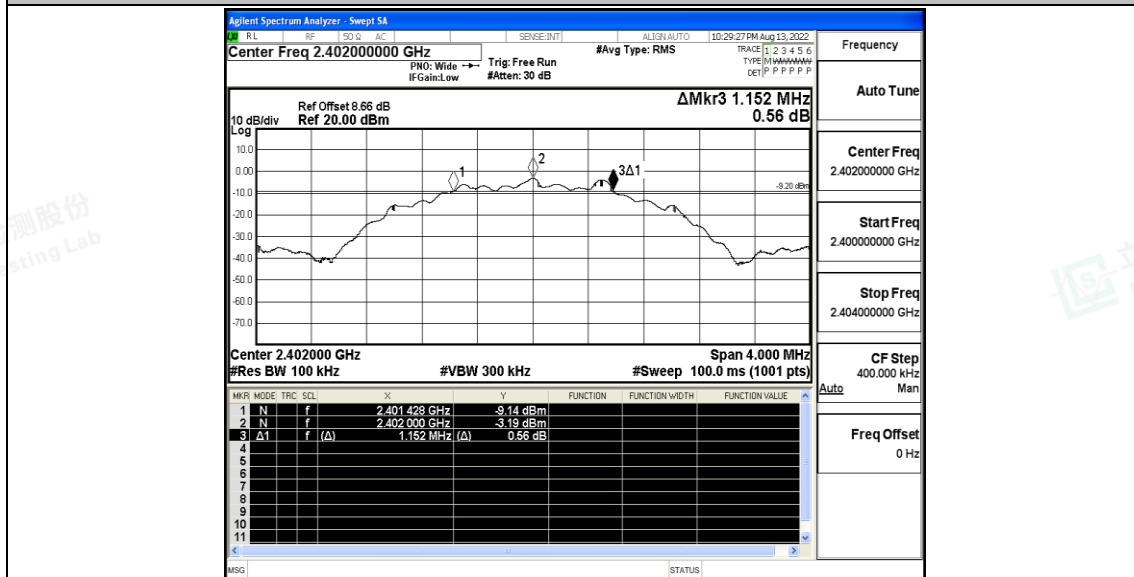


Test Graphs



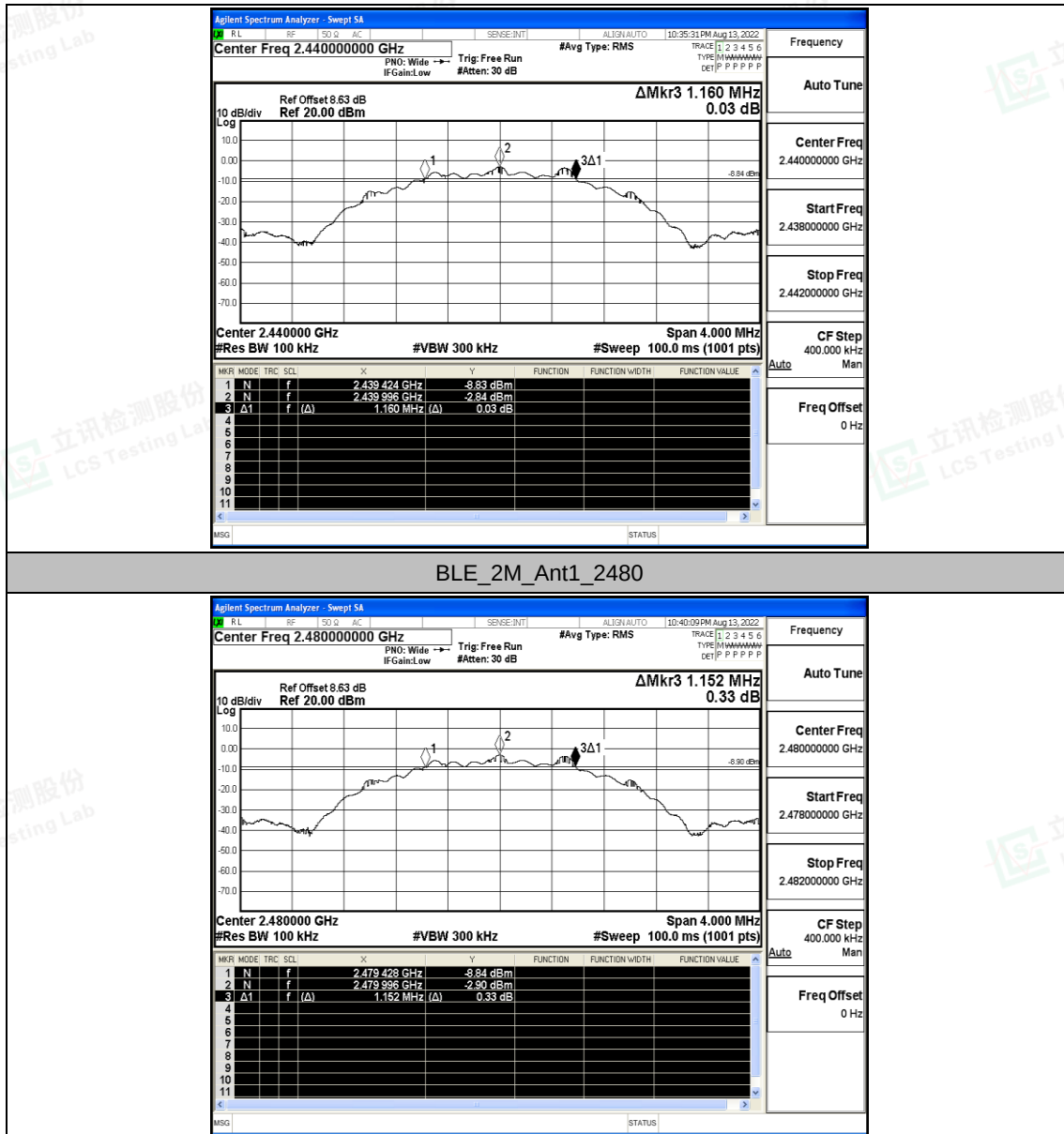


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.2 Occupied Channel Bandwidth

Test Result

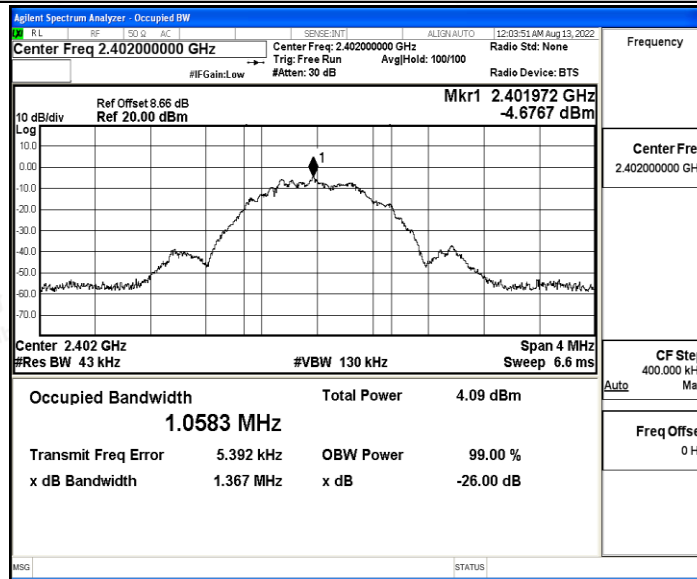
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0583	2401.476	2402.535	---	---
		2440	1.0570	2439.475	2440.532	---	---
		2480	1.0583	2479.474	2480.532	---	---
BLE_2M	Ant1	2402	2.0755	2400.9809	2403.0564	---	---
		2440	2.0718	2438.9823	2441.0541	---	---
		2480	2.0739	2478.9797	2481.0536	---	---



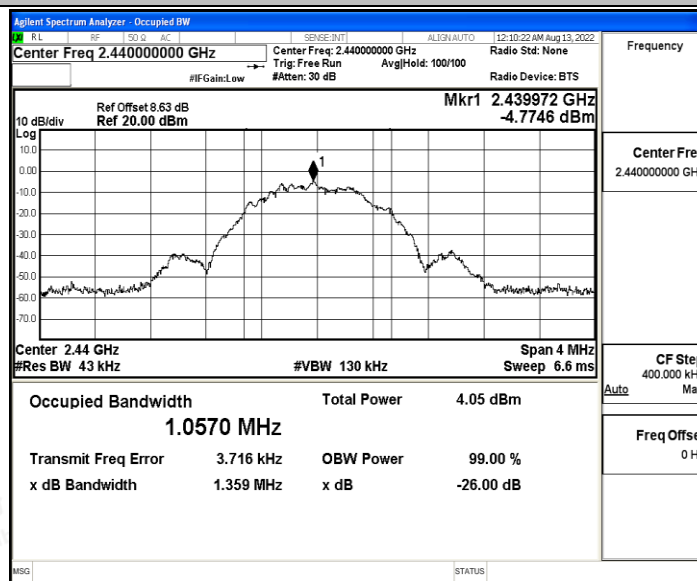


Test Graphs

BLE_1M_Ant1_2402

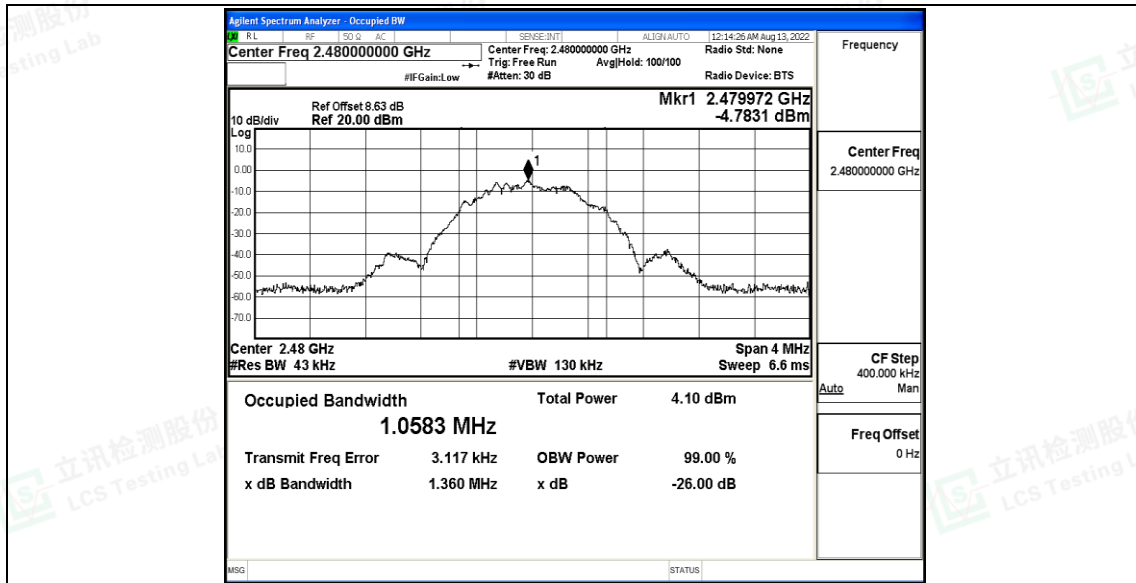


BLE_1M_Ant1_2440

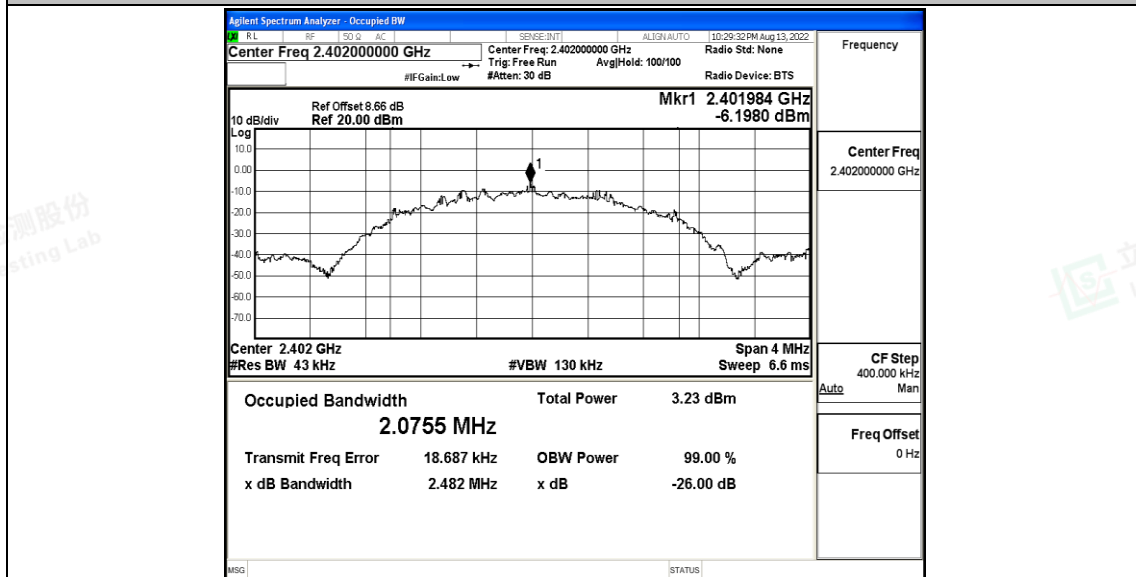


BLE_1M_Ant1_2480



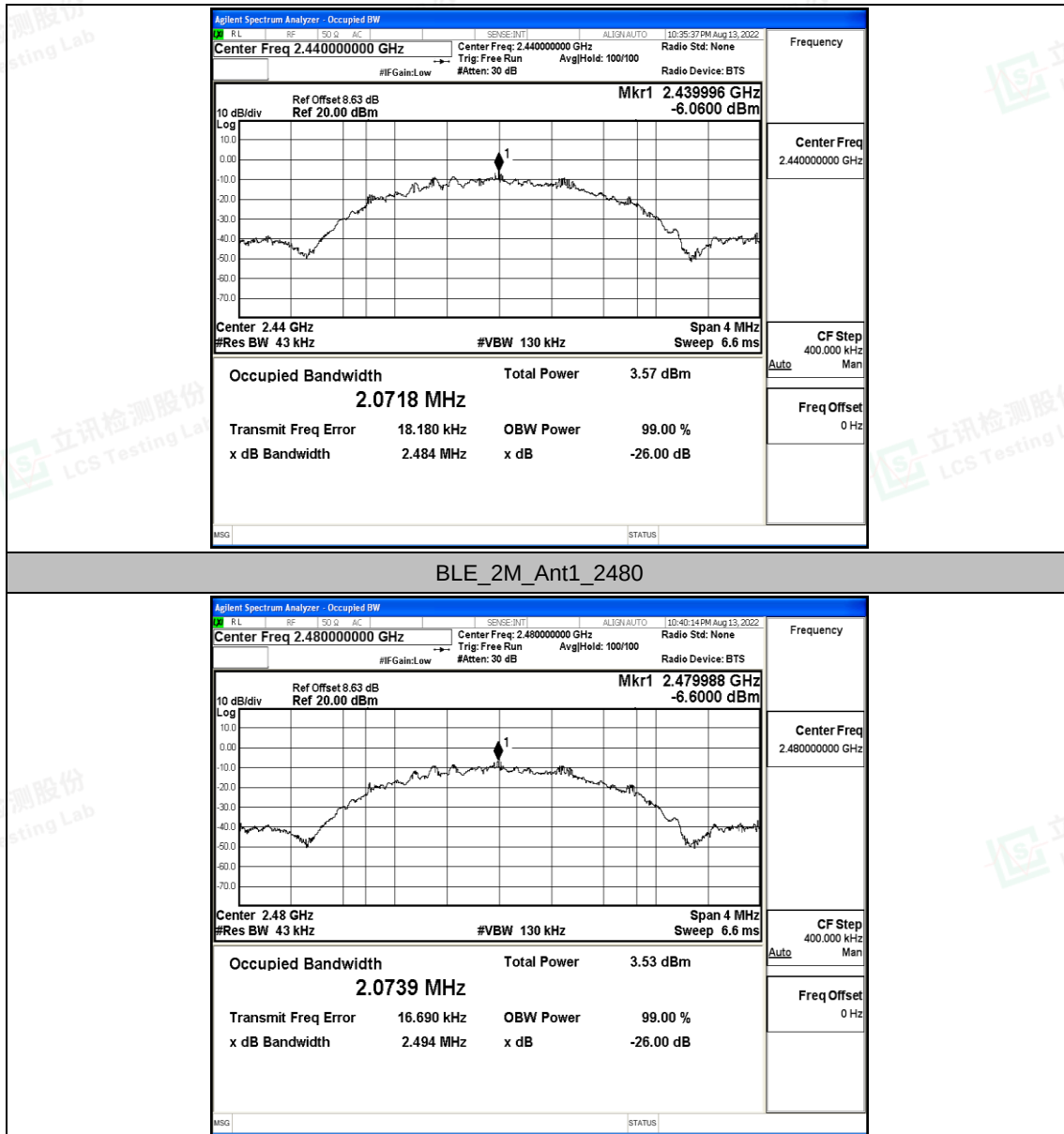


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.3 Maximum conducted output power

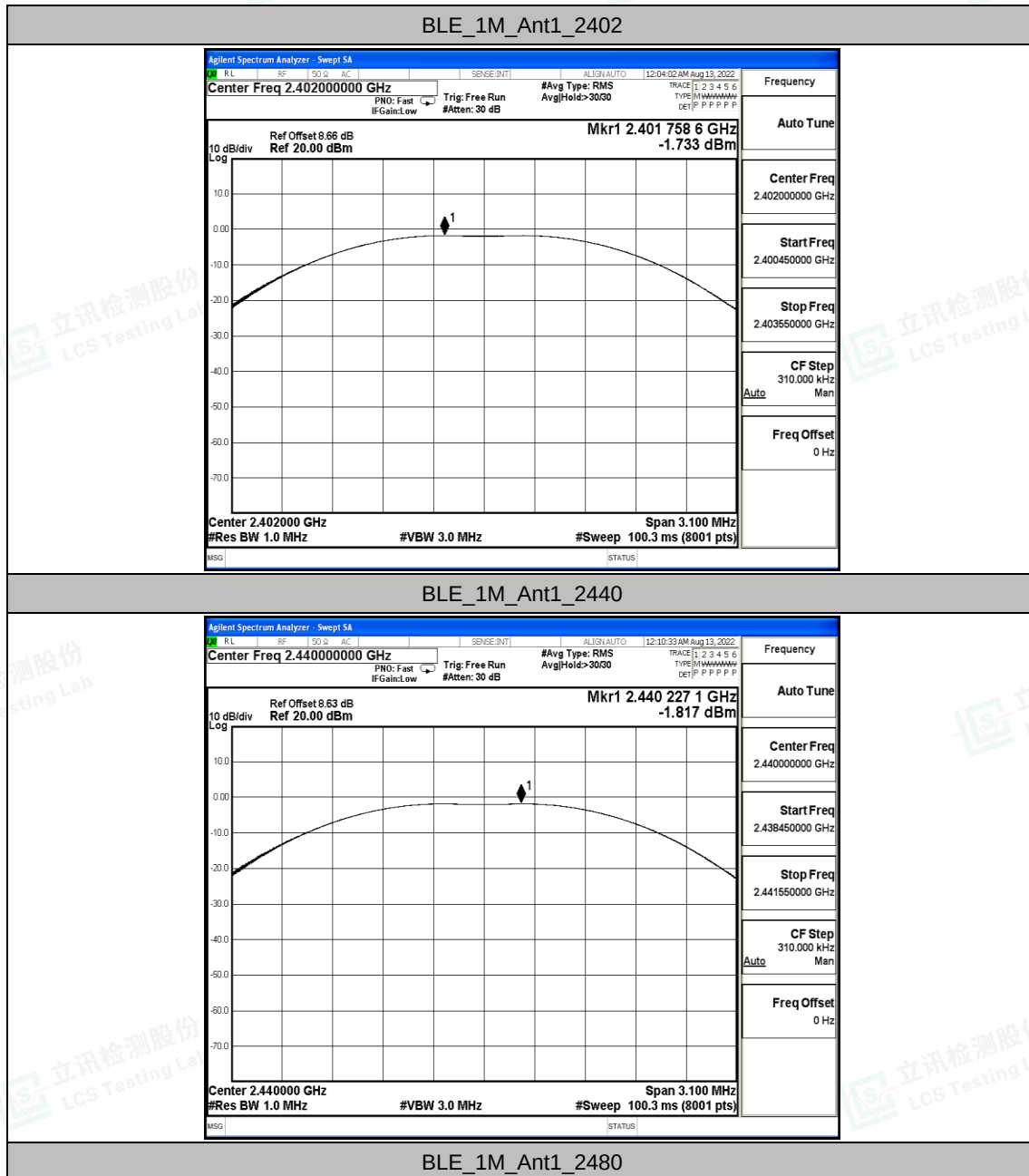
Test Result

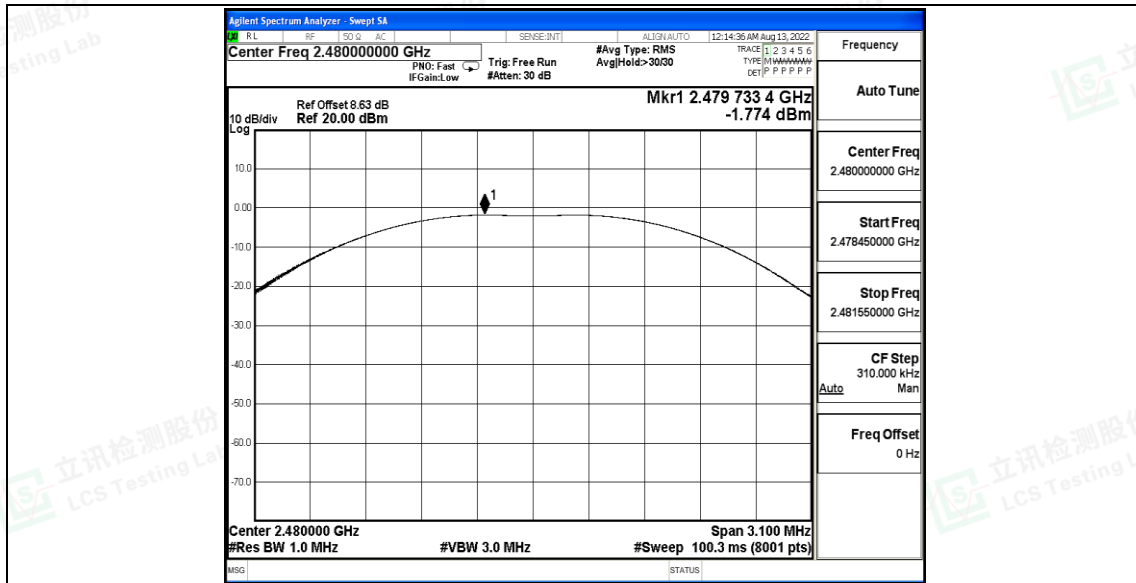
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.73	≤30	PASS
		2440	-1.82	≤30	PASS
		2480	-1.77	≤30	PASS
BLE_2M	Ant1	2402	-2.46	≤30	PASS
		2440	-2.11	≤30	PASS
		2480	-2.16	≤30	PASS



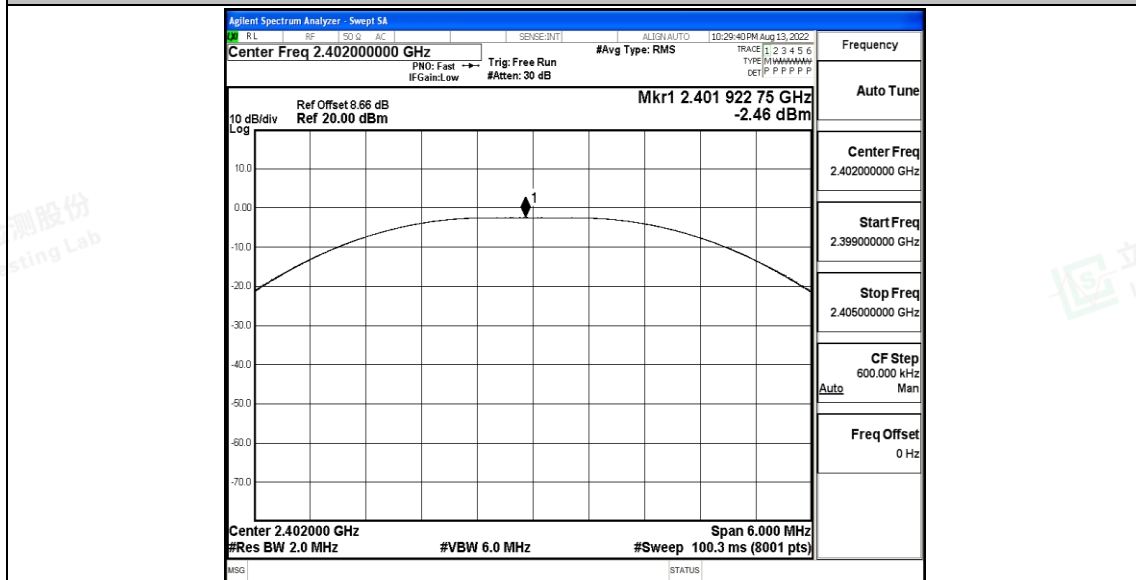


Test Graphs



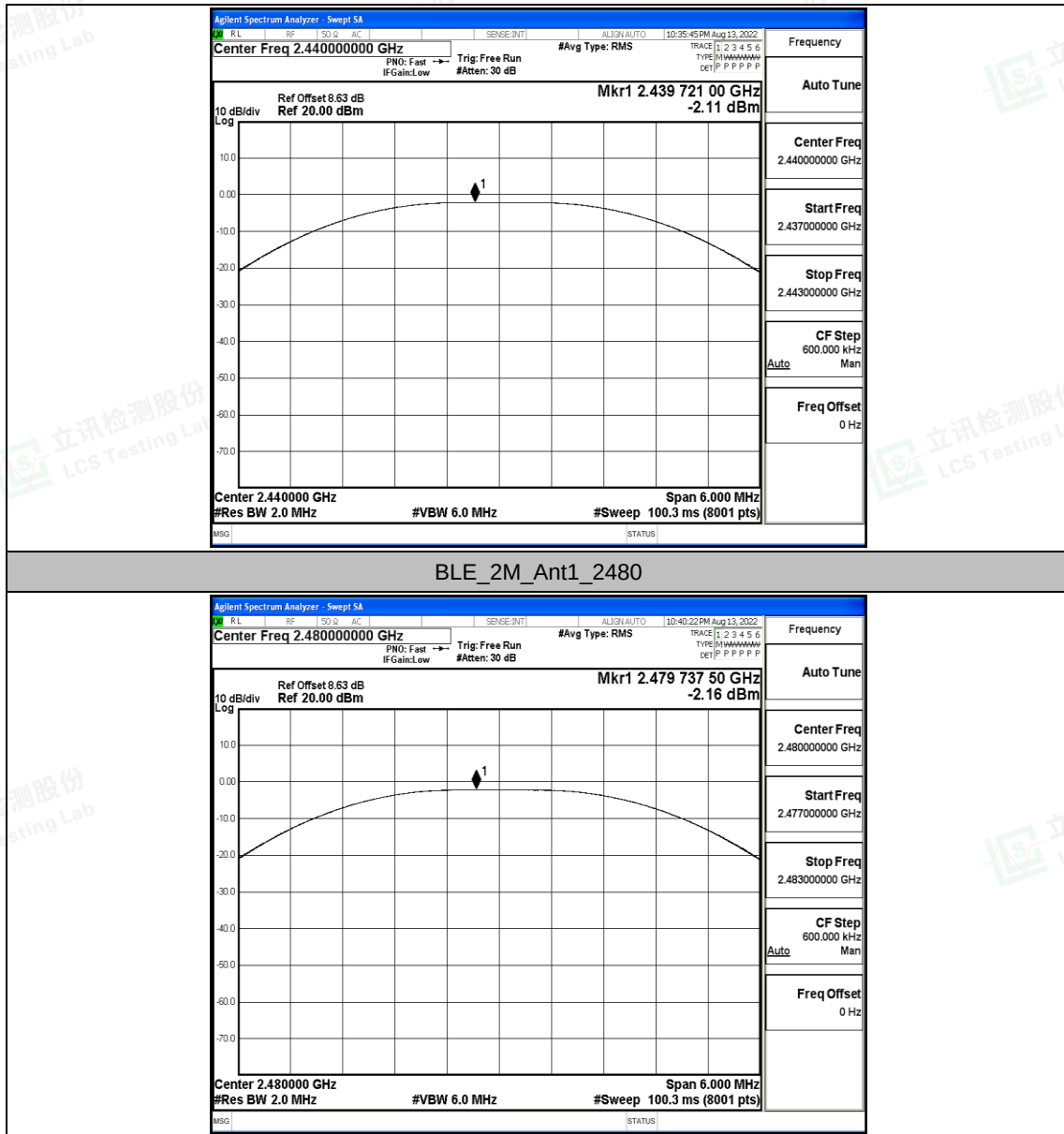


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.4 Maximum power spectral density

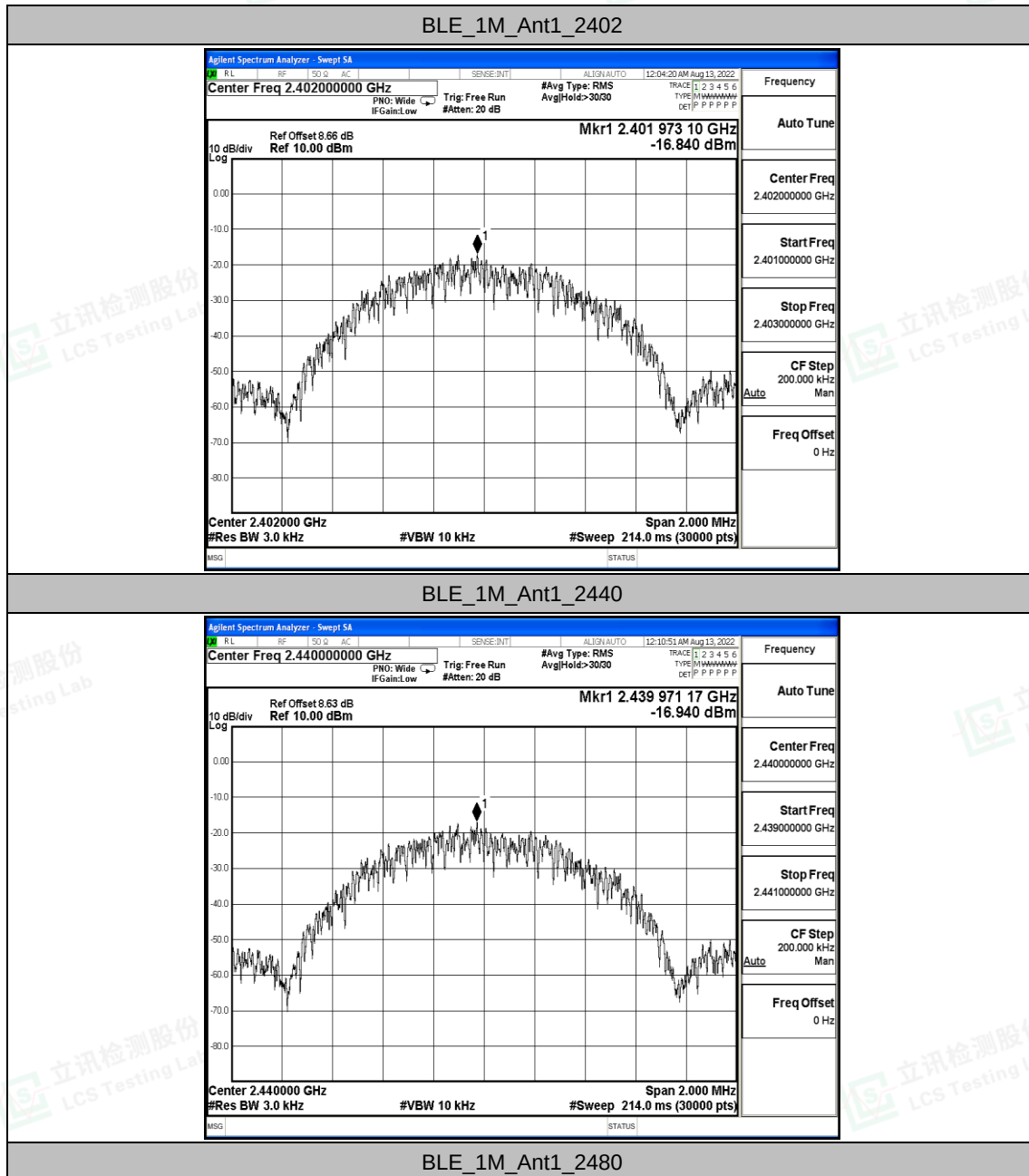
Test Result

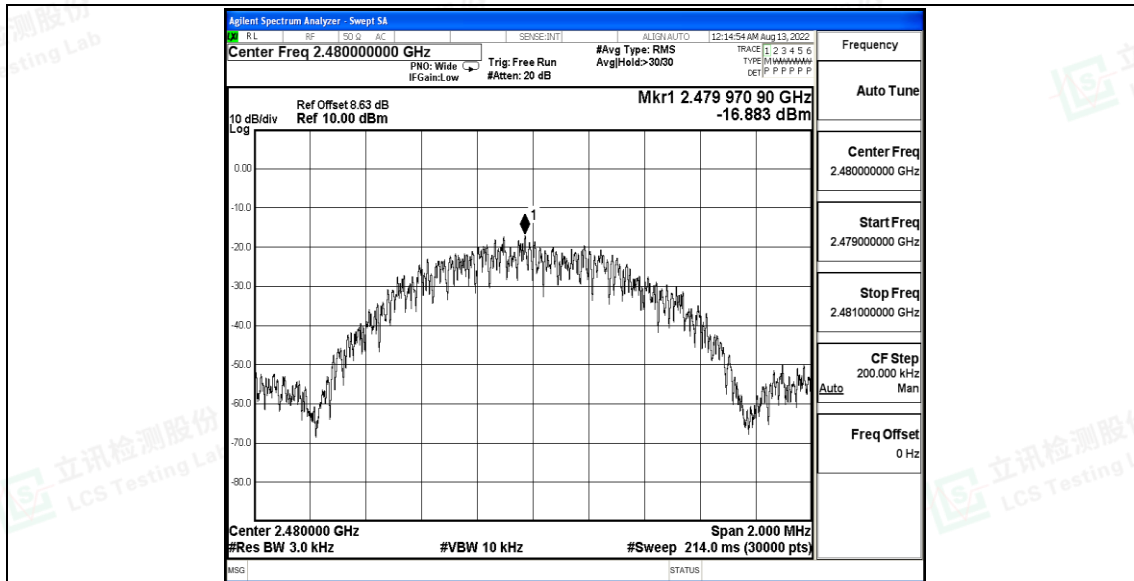
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.84	≤8.00	PASS
		2440	-16.94	≤8.00	PASS
		2480	-16.88	≤8.00	PASS
BLE_2M	Ant1	2402	-20.97	≤8.00	PASS
		2440	-20.48	≤8.00	PASS
		2480	-21.56	≤8.00	PASS



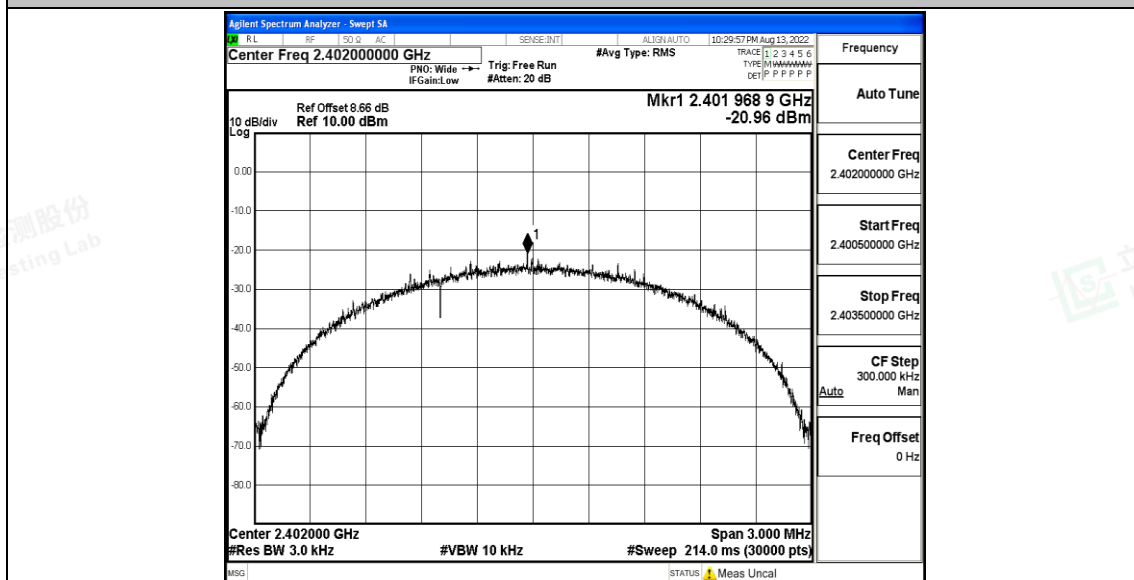


Test Graphs



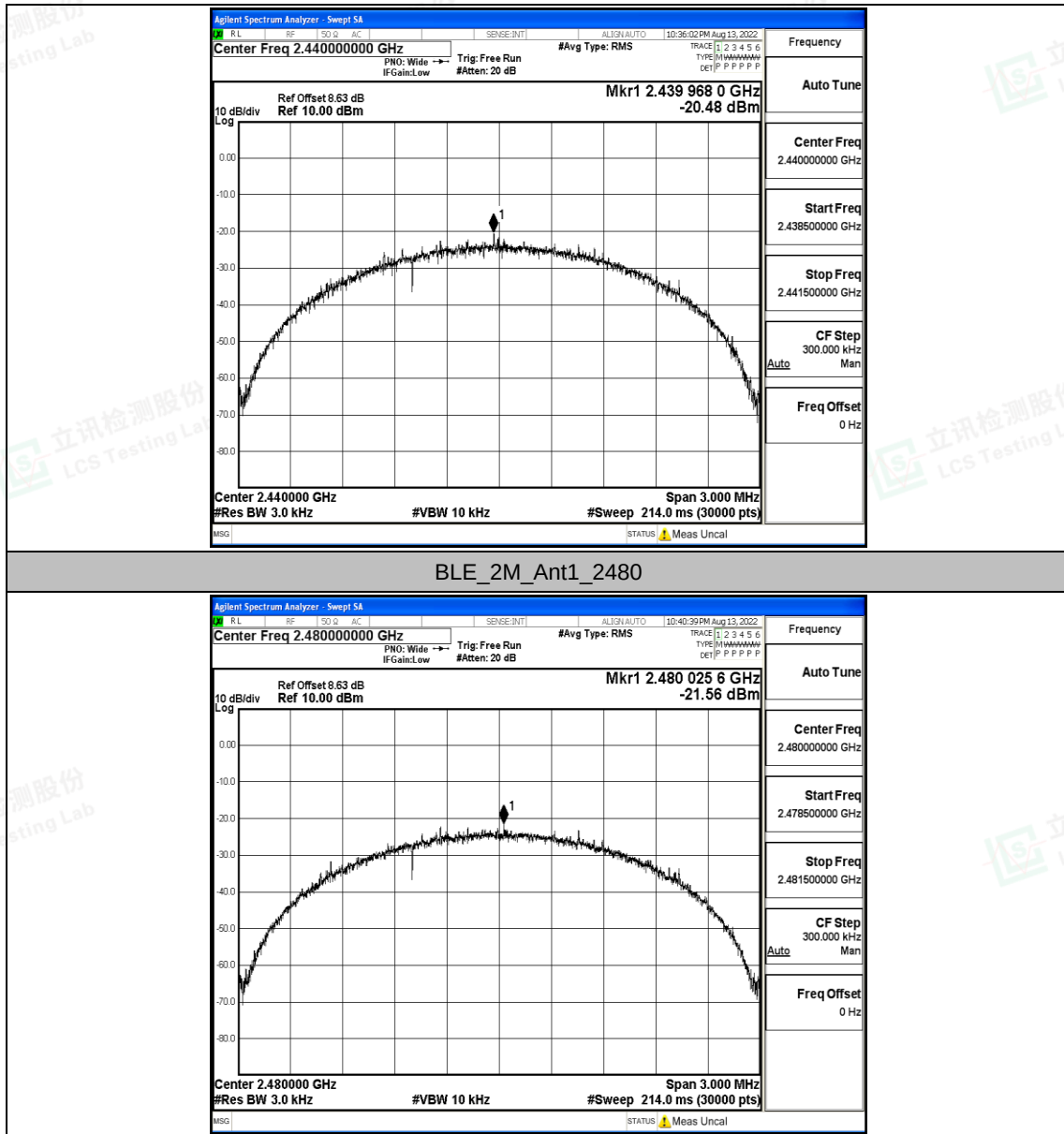


BLE_2M_Ant1_2402



BLE_2M_Ant1_2440







A.5 Band edge measurements

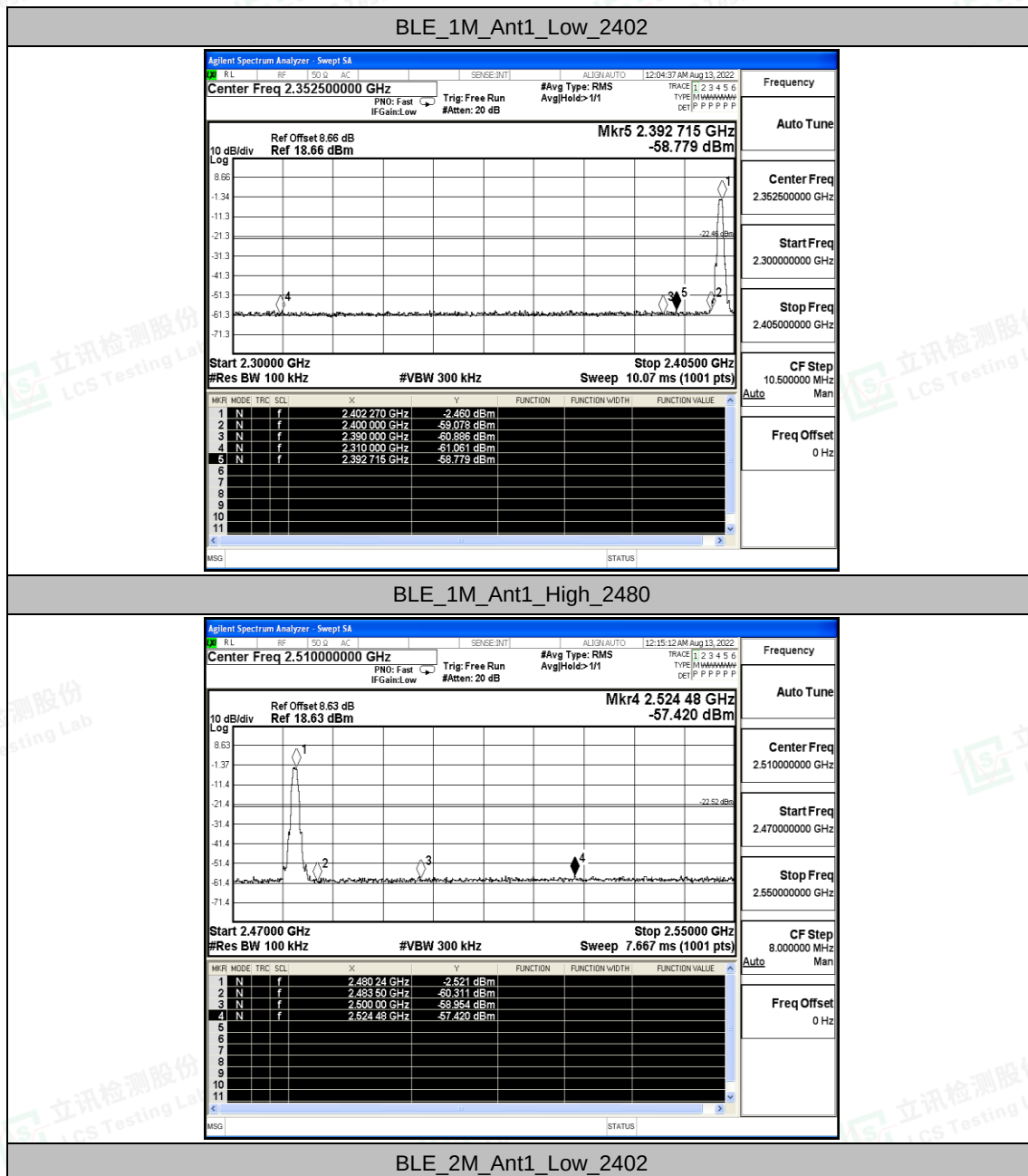
Test Result

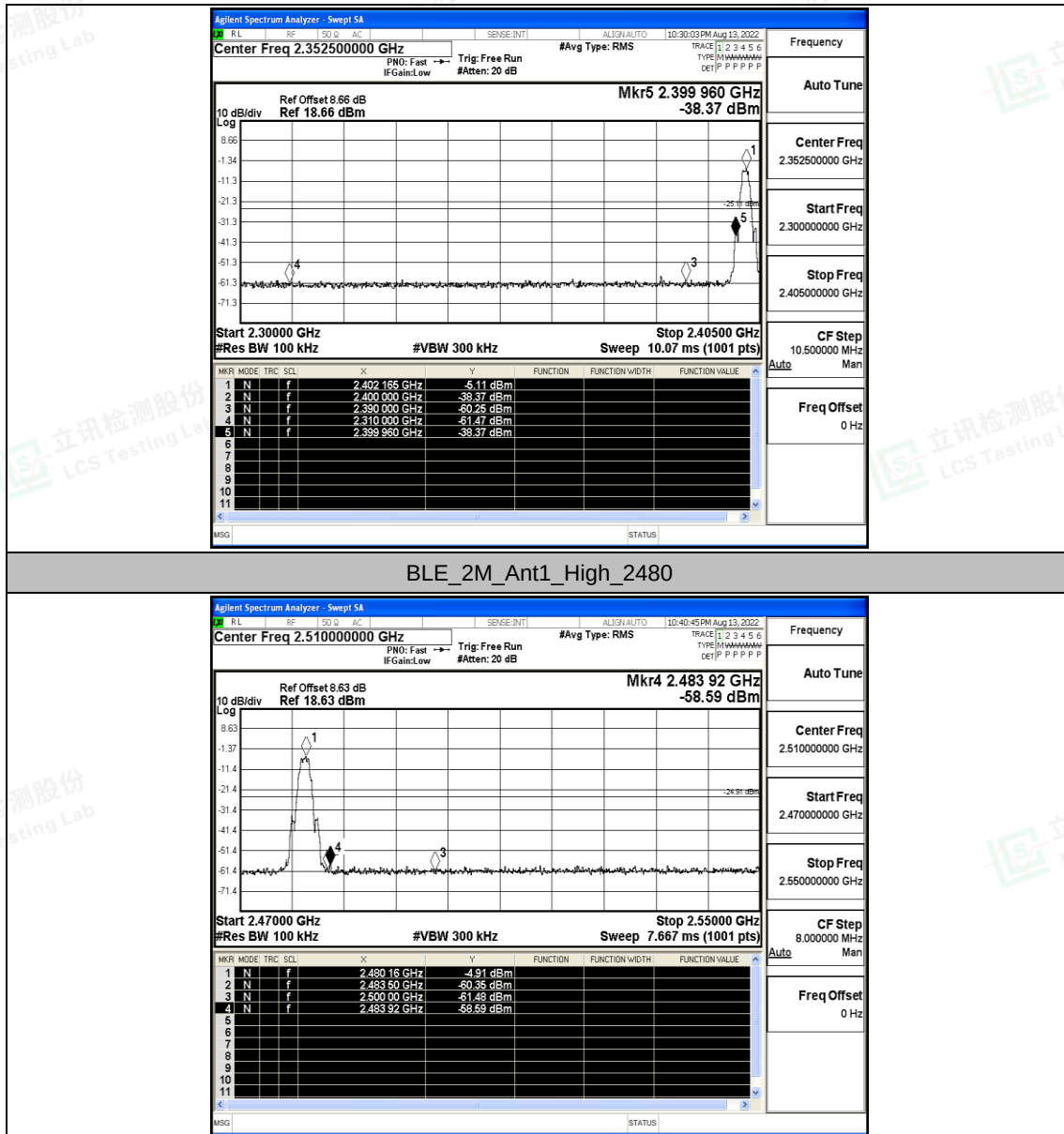
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.46	-58.78	≤ -22.46	PASS
		High	2480	-2.52	-57.42	≤ -22.52	PASS
BLE_2M	Ant1	Low	2402	-5.11	-38.37	≤ -25.11	PASS
		High	2480	-4.91	-58.59	≤ -24.91	PASS





Test Graphs







A.6 Conducted Spurious Emission

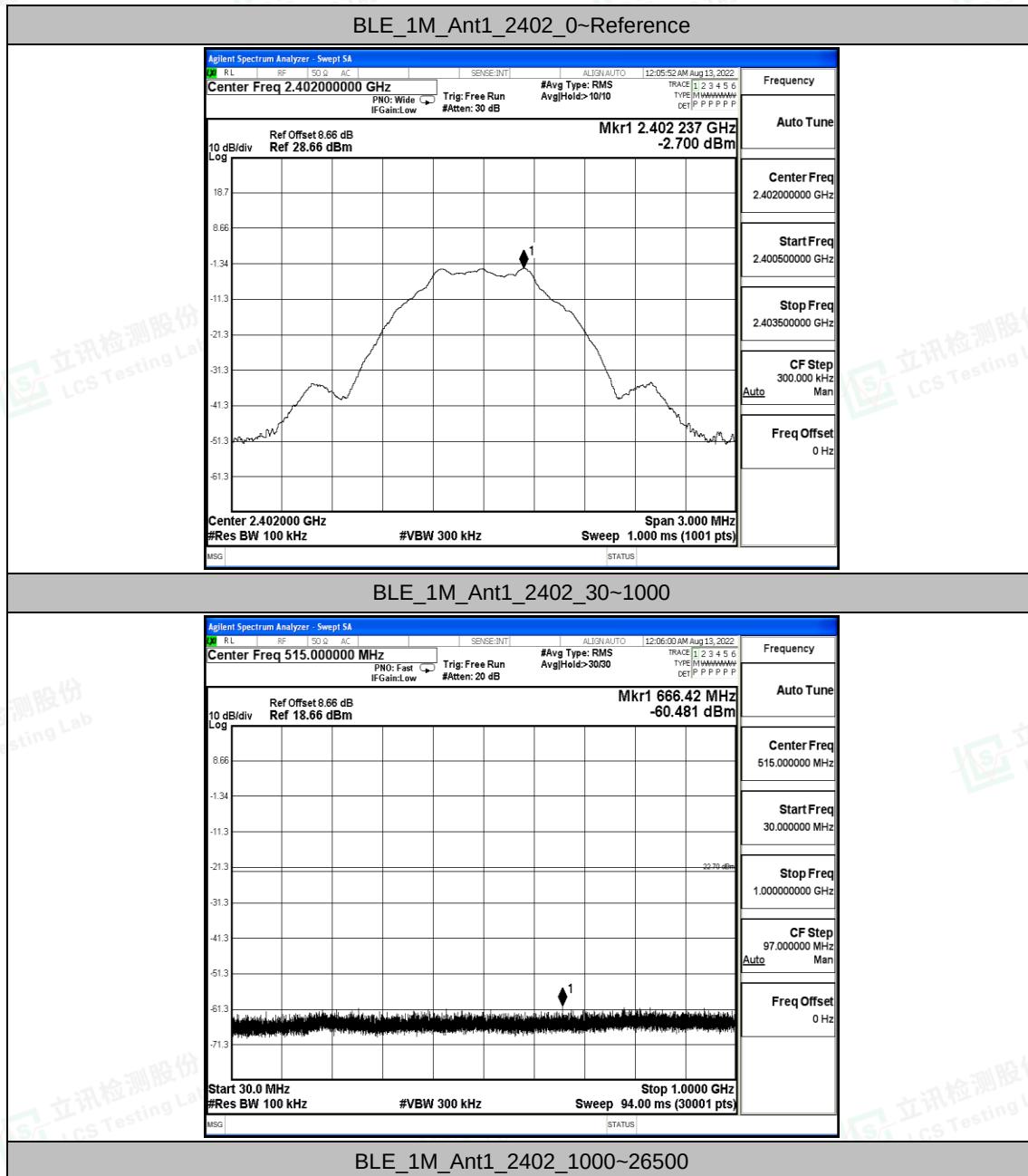
Test Result

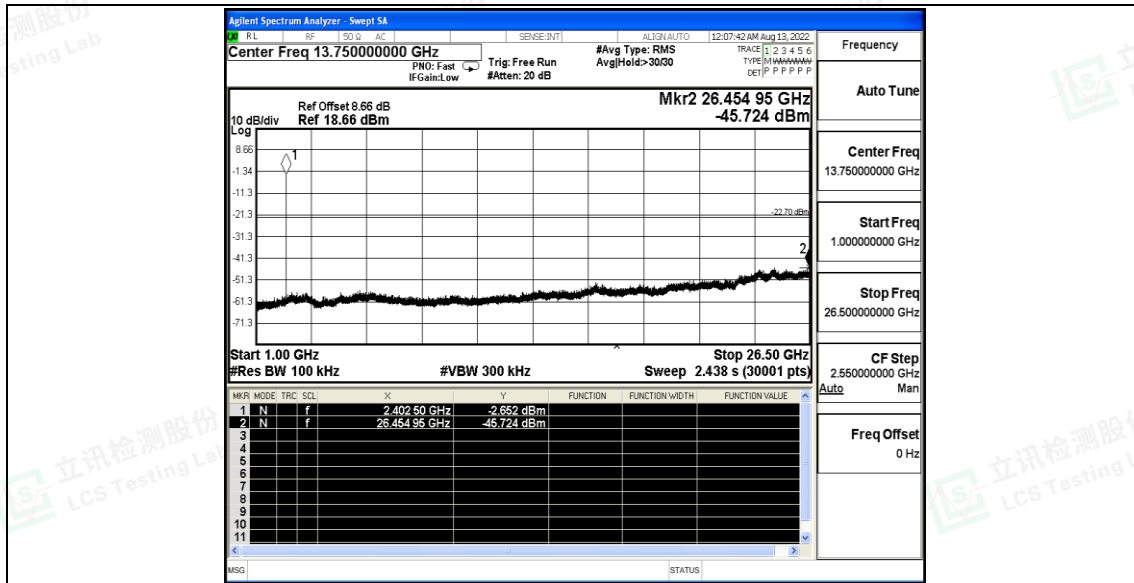
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-2.70	-2.70	---	PASS
			30~1000	-2.70	-60.48	≤-22.7	PASS
			1000~26500	-2.70	-45.72	≤-22.7	PASS
		2440	Reference	-2.78	-2.78	---	PASS
			30~1000	-2.78	-60.33	≤-22.78	PASS
			1000~26500	-2.78	-46.07	≤-22.78	PASS
		2480	Reference	-2.74	-2.74	---	PASS
			30~1000	-2.74	-60.46	≤-22.74	PASS
			1000~26500	-2.74	-45.74	≤-22.74	PASS
BLE_2M	Ant1	2402	Reference	-6.04	-6.04	---	PASS
			30~1000	-6.04	-60.65	≤-26.04	PASS
			1000~26500	-6.04	-46.21	≤-26.04	PASS
		2440	Reference	-6.04	-6.04	---	PASS
			30~1000	-6.04	-60.87	≤-26.04	PASS
			1000~26500	-6.04	-46.15	≤-26.04	PASS
		2480	Reference	-5.61	-5.61	---	PASS
			30~1000	-5.61	-60.97	≤-25.61	PASS
			1000~26500	-5.61	-45.81	≤-25.61	PASS



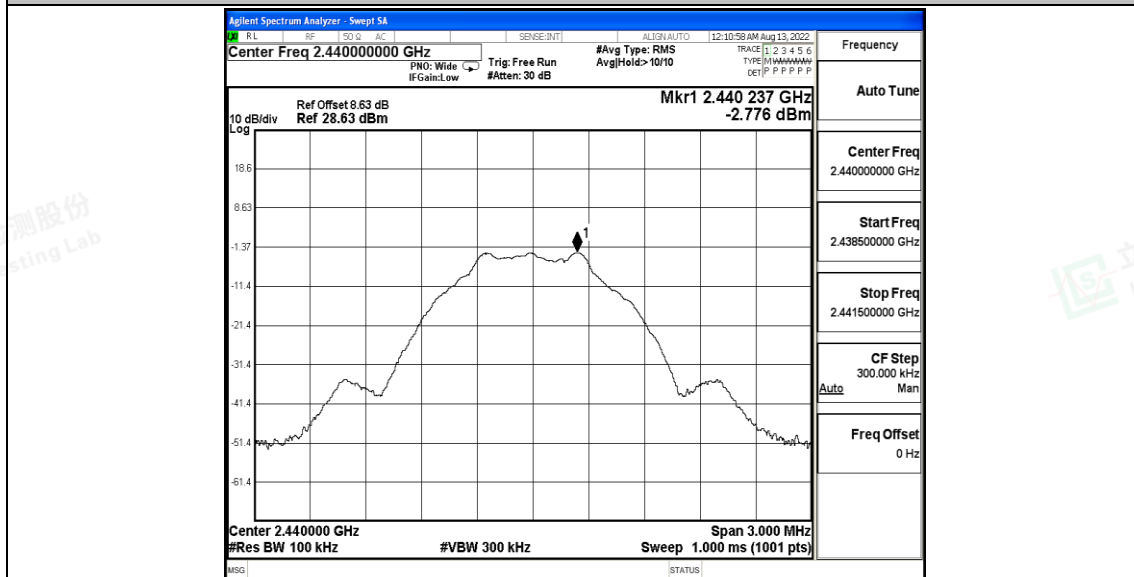


Test Graphs



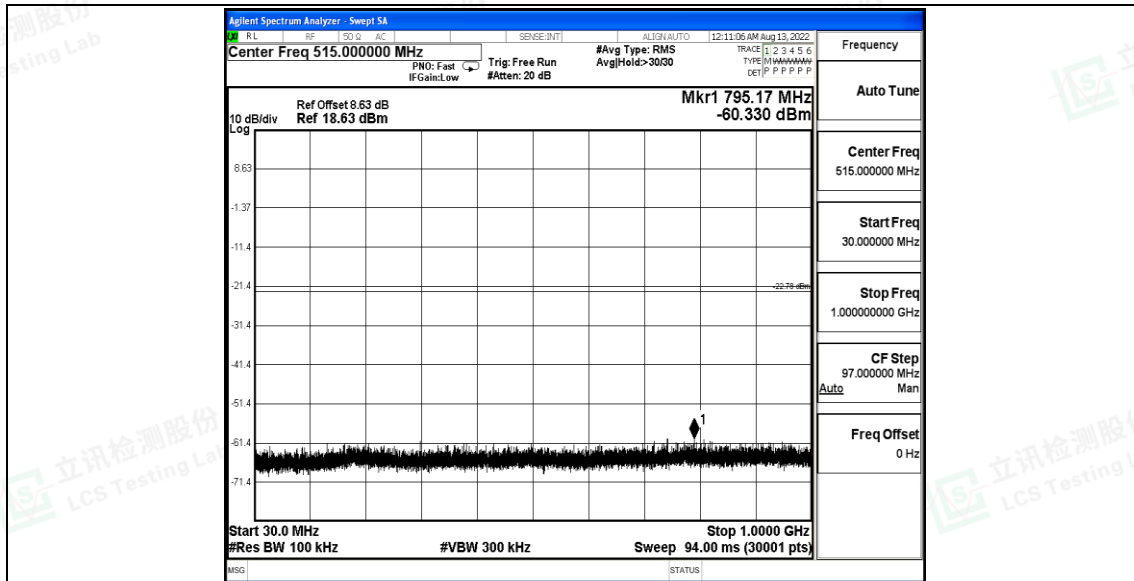


BLE_1M_Ant1_2440_0~Reference

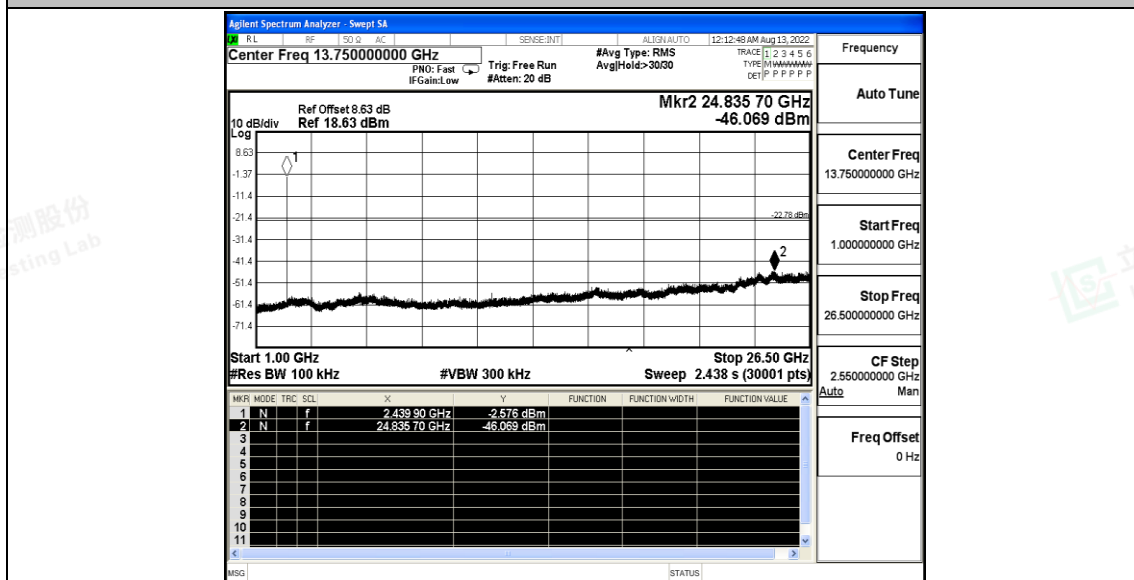


BLE_1M_Ant1_2440_30~1000



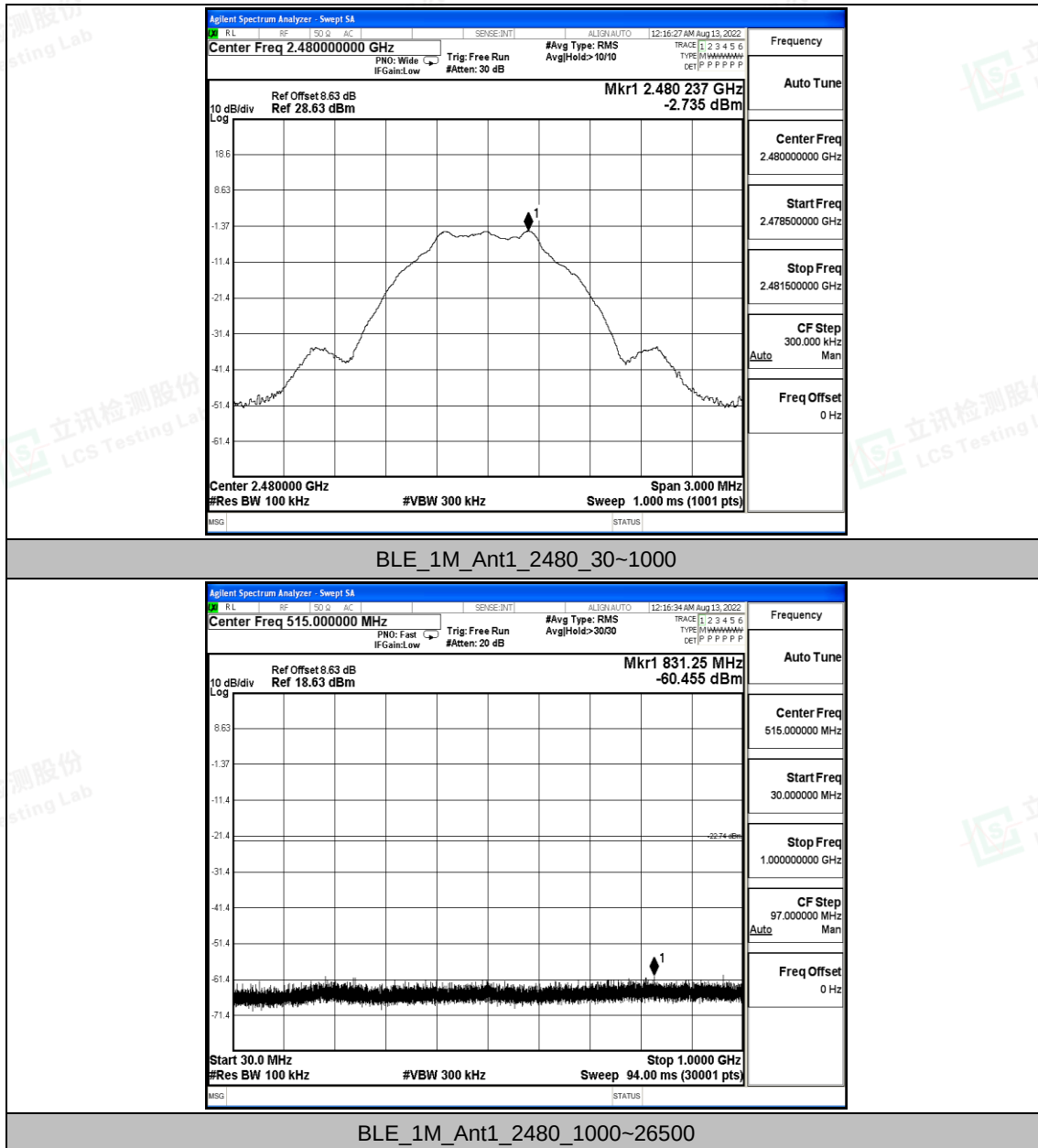


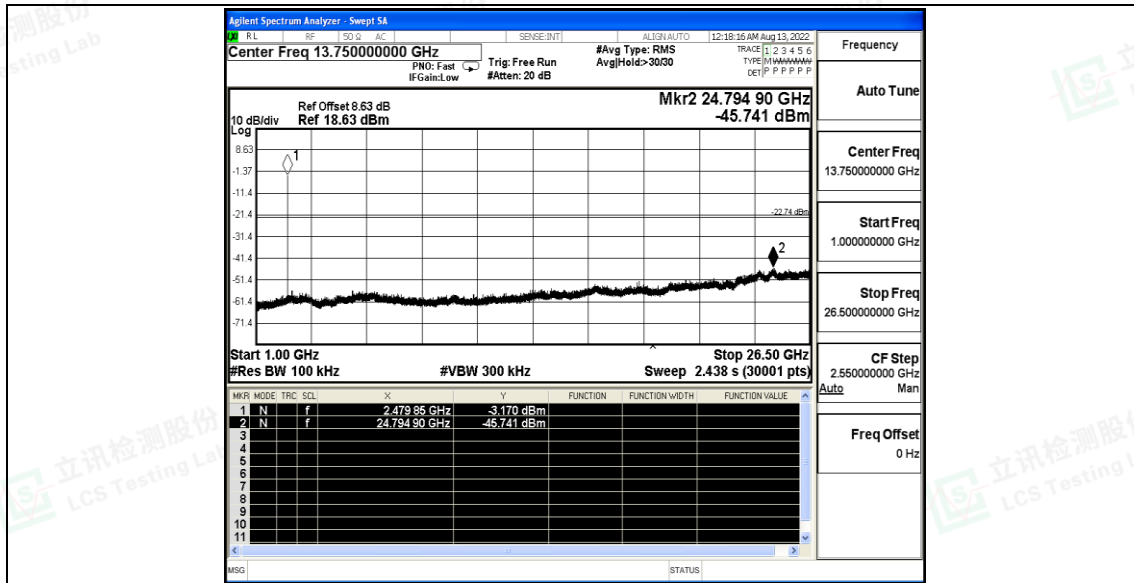
BLE_1M_Ant1_2440_1000~26500



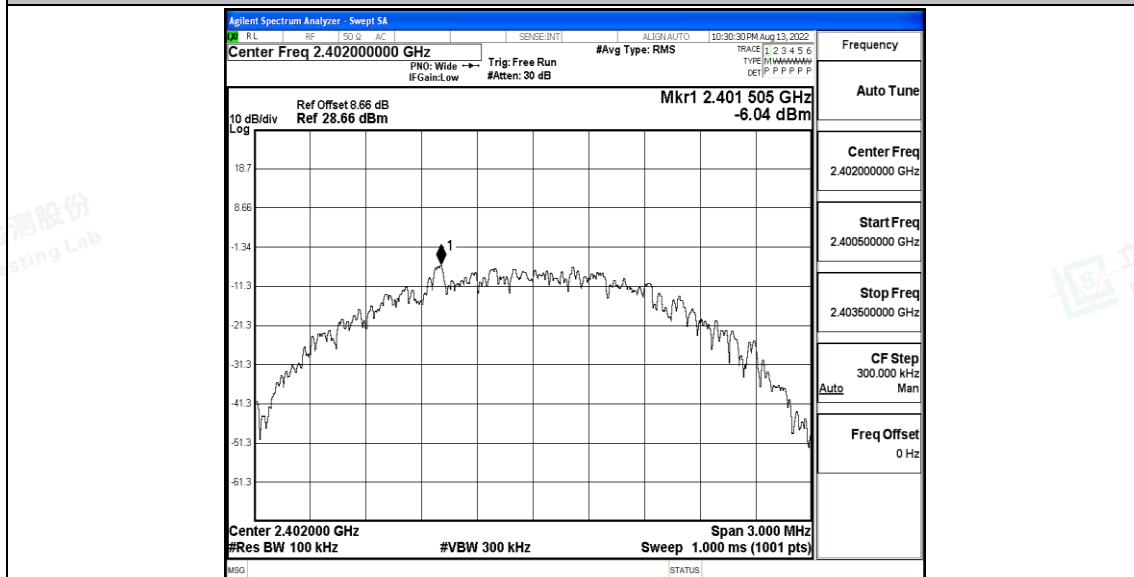
BLE_1M_Ant1_2480_0~Reference





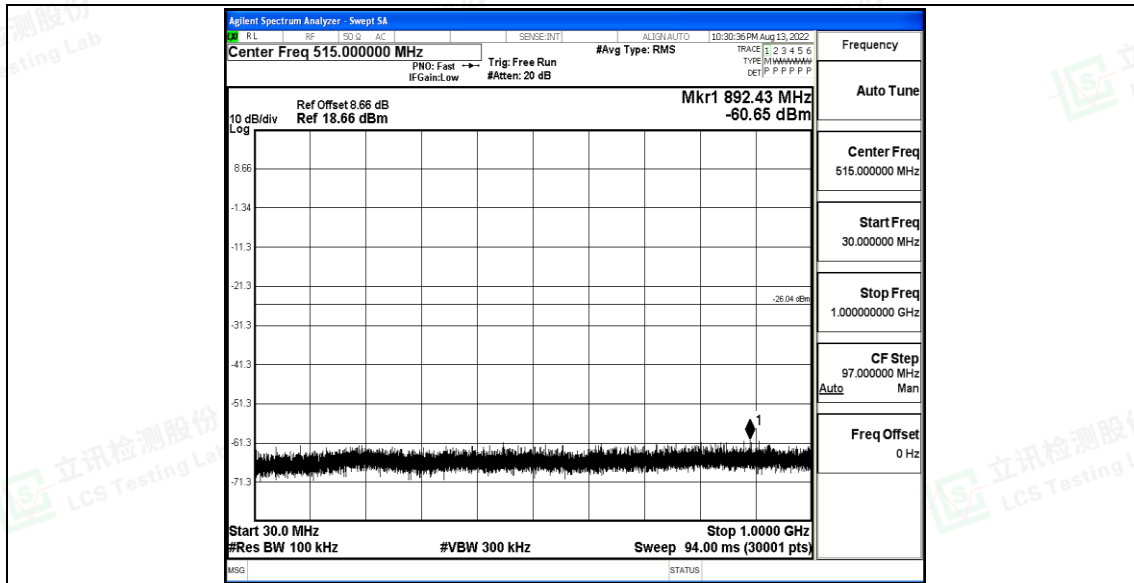


BLE_2M_Ant1_2402_0~Reference

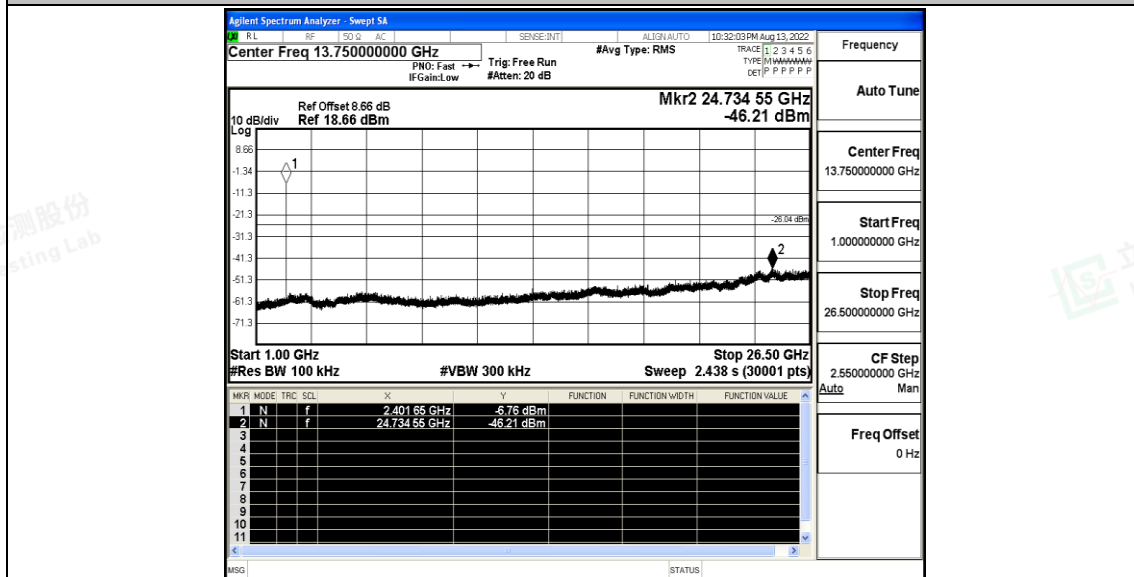


BLE_2M_Ant1_2402_30~1000



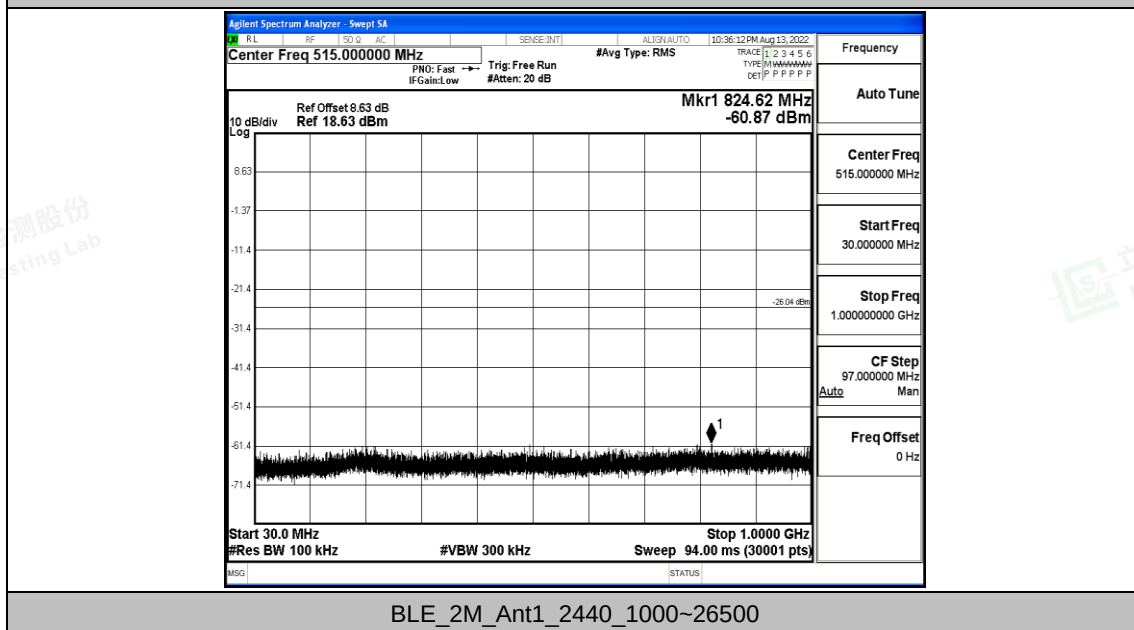
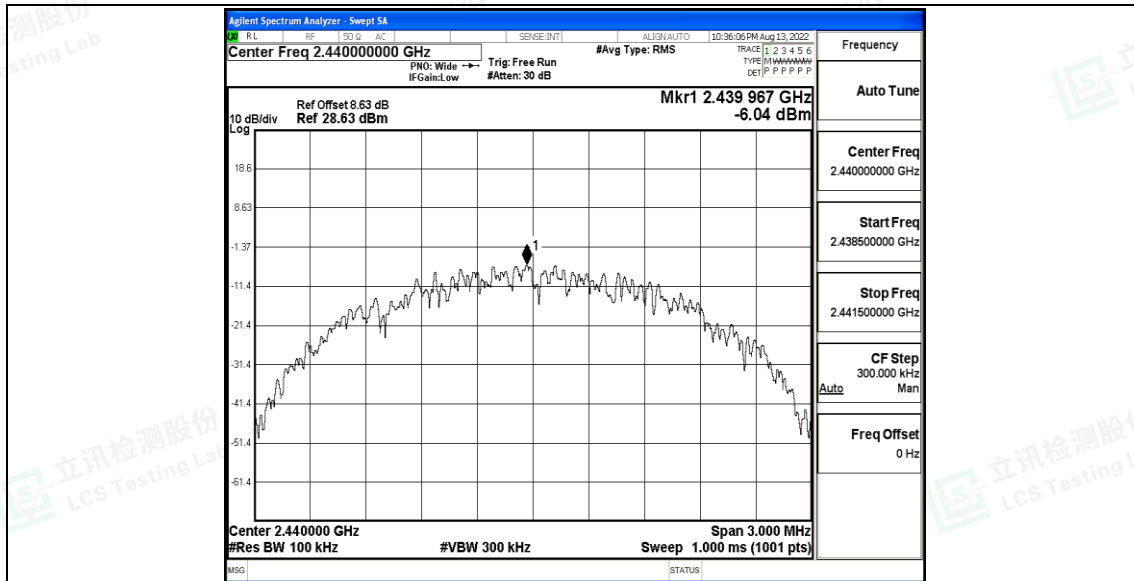


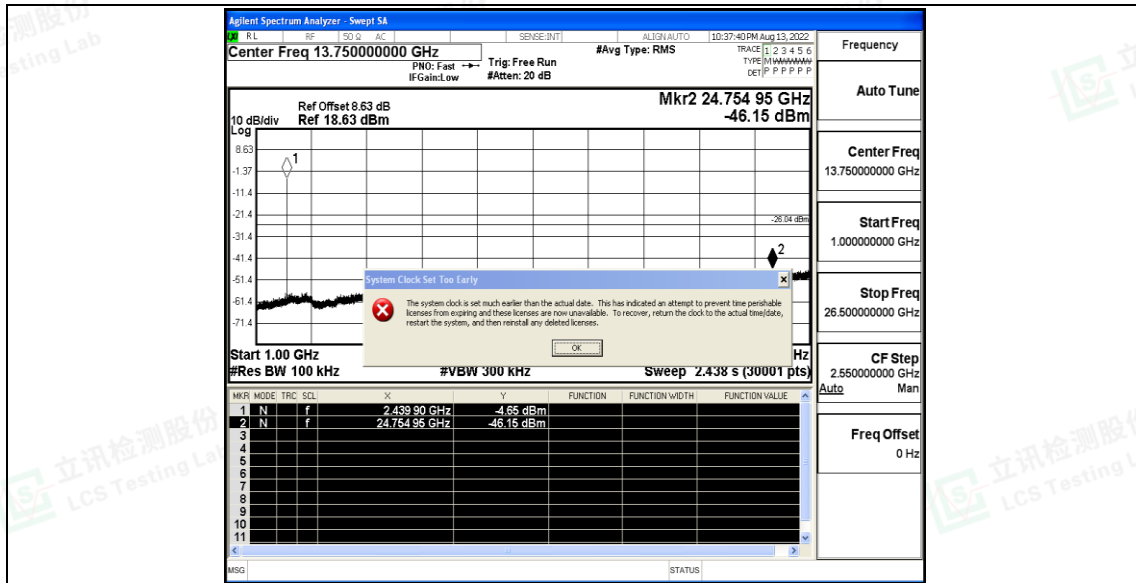
BLE_2M_Ant1_2402_1000~26500



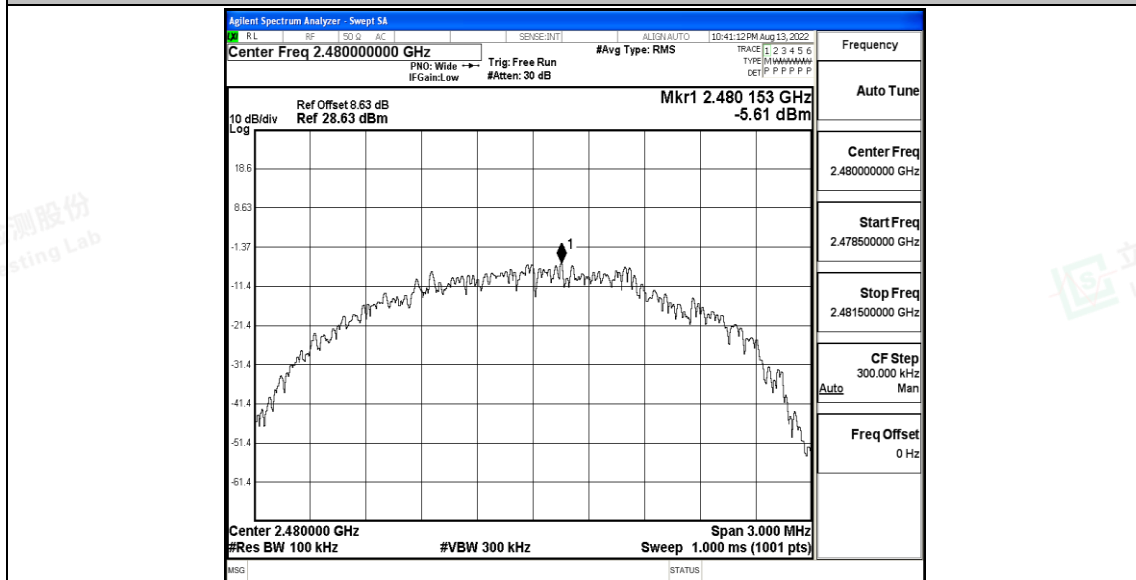
BLE_2M_Ant1_2440_0~Reference





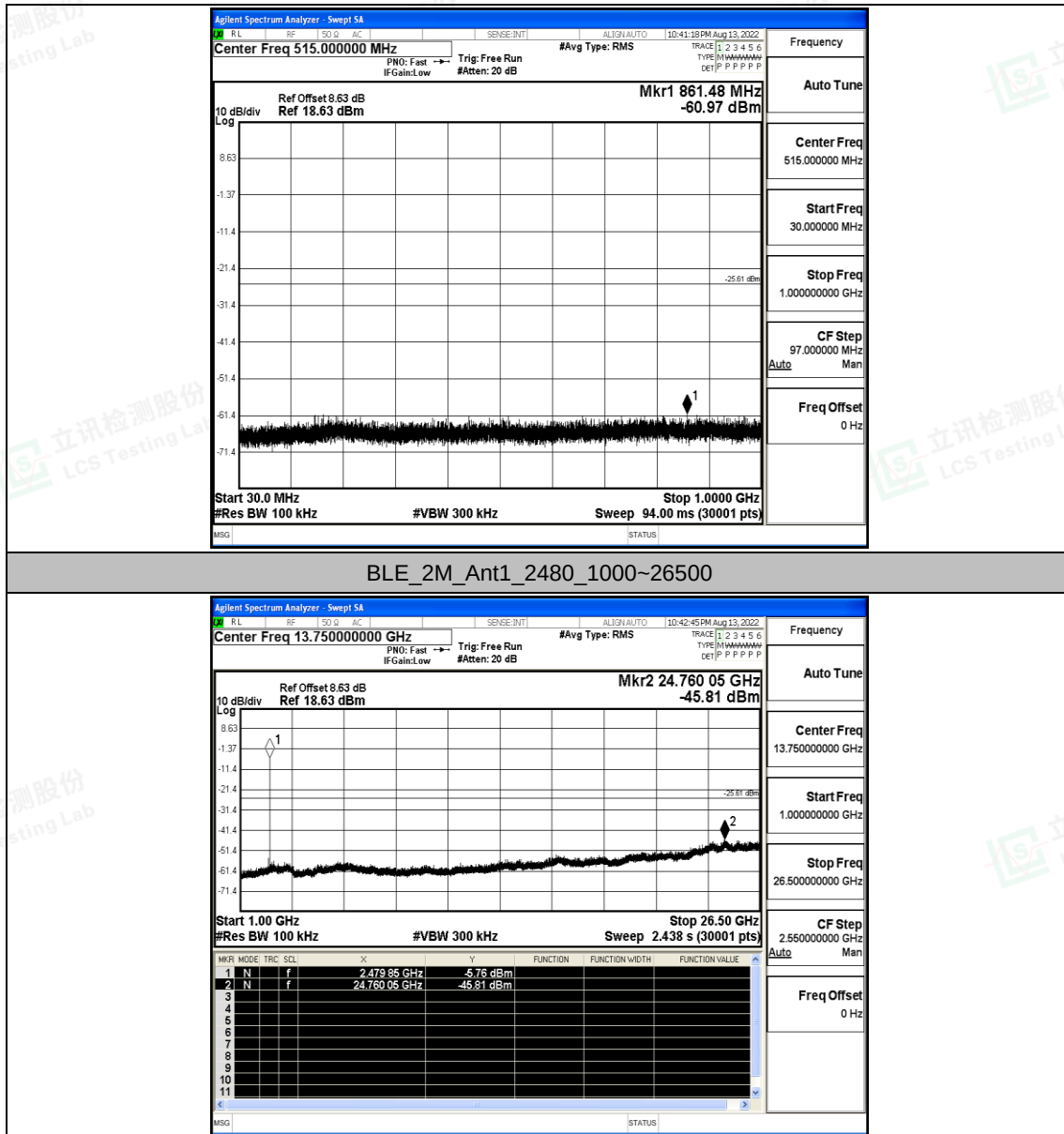


BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000







A.7 Duty Cycle

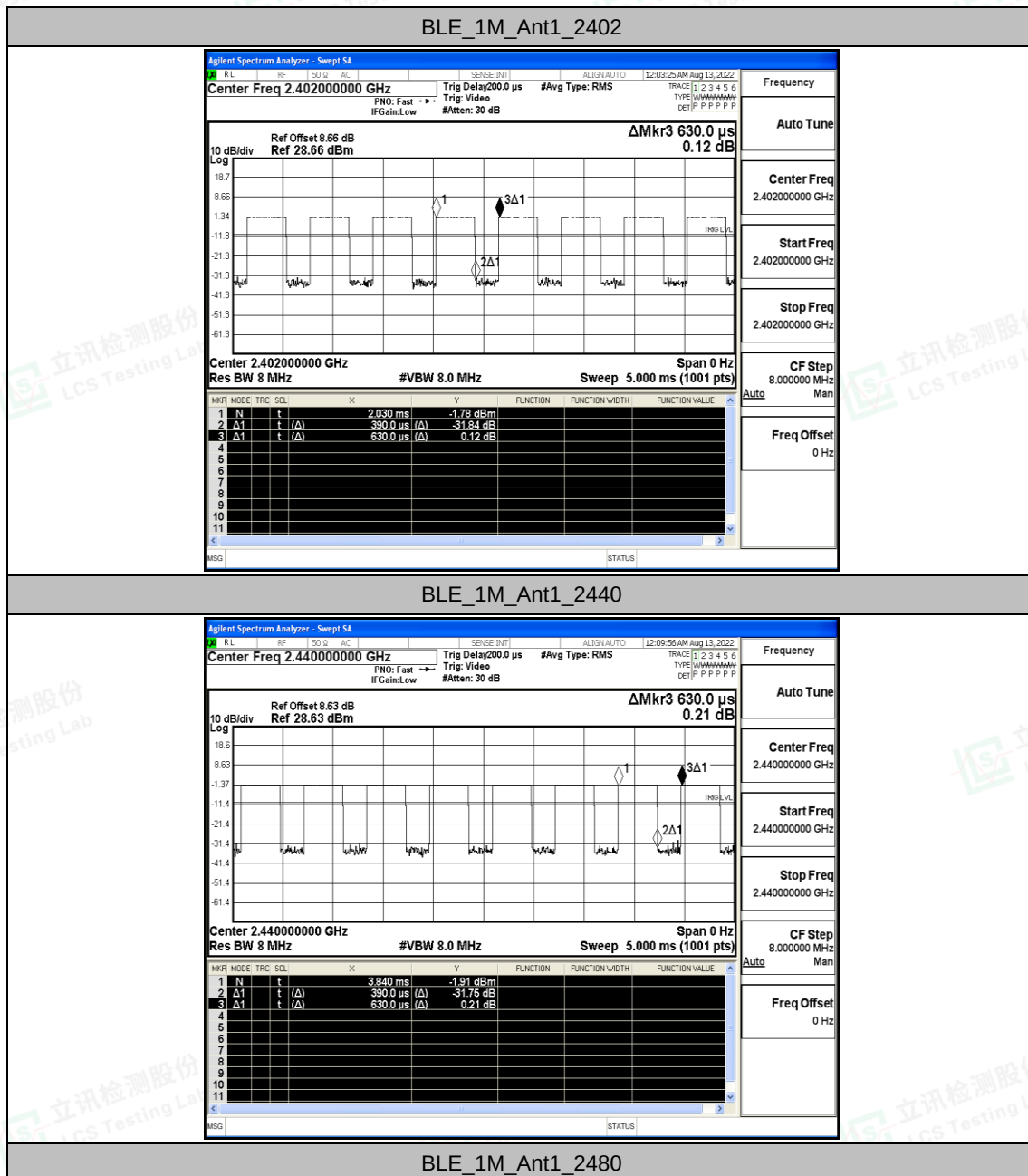
Test Result

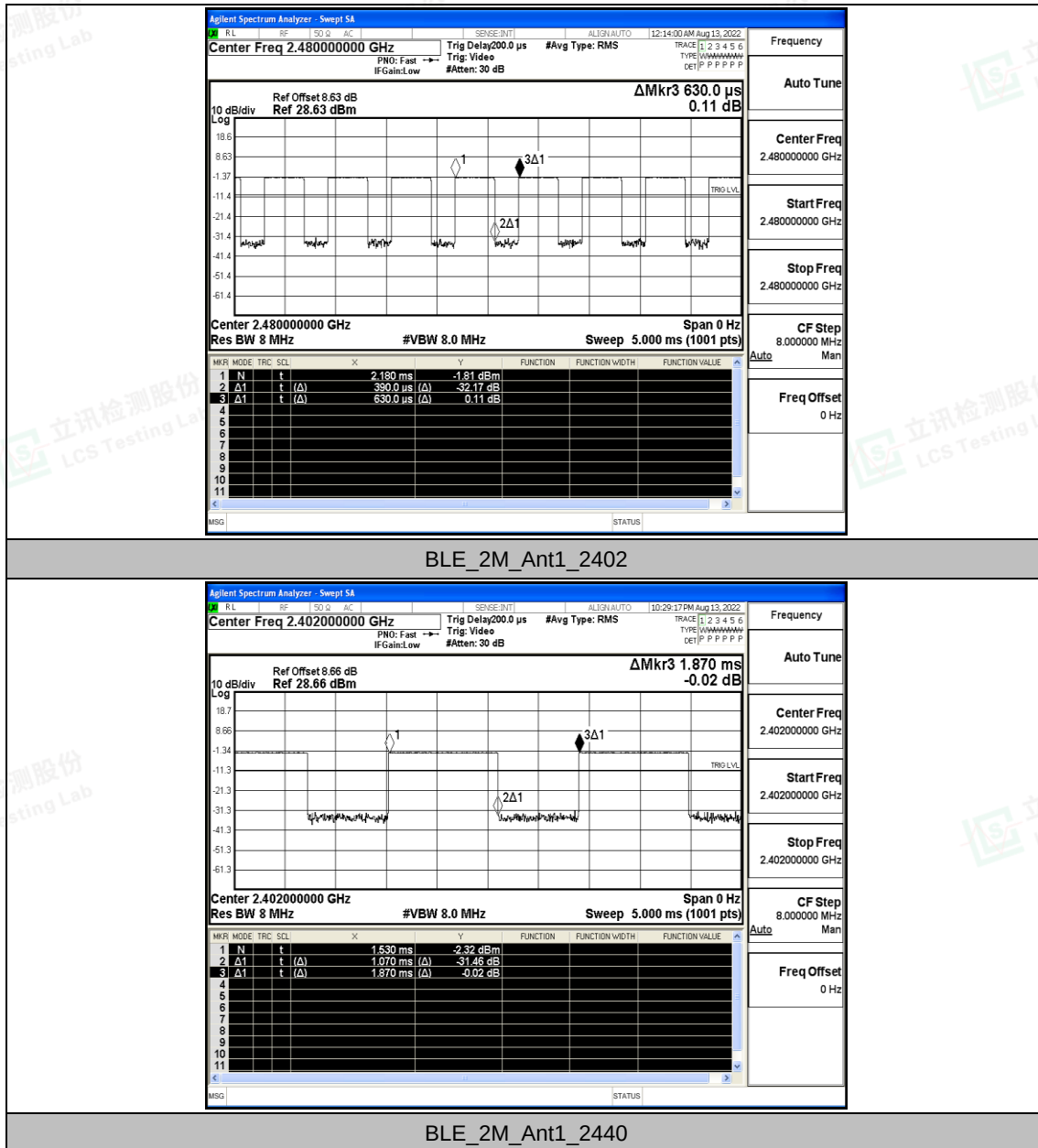
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2440	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2480	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
BLE_2M	Ant1	2402	1.07	1.87	0.5722	57.22	2.42	0.93	---	---
		2440	1.07	1.87	0.5722	57.22	2.42	0.93	---	---
		2480	1.07	1.88	0.5691	56.91	2.45	0.93	---	---

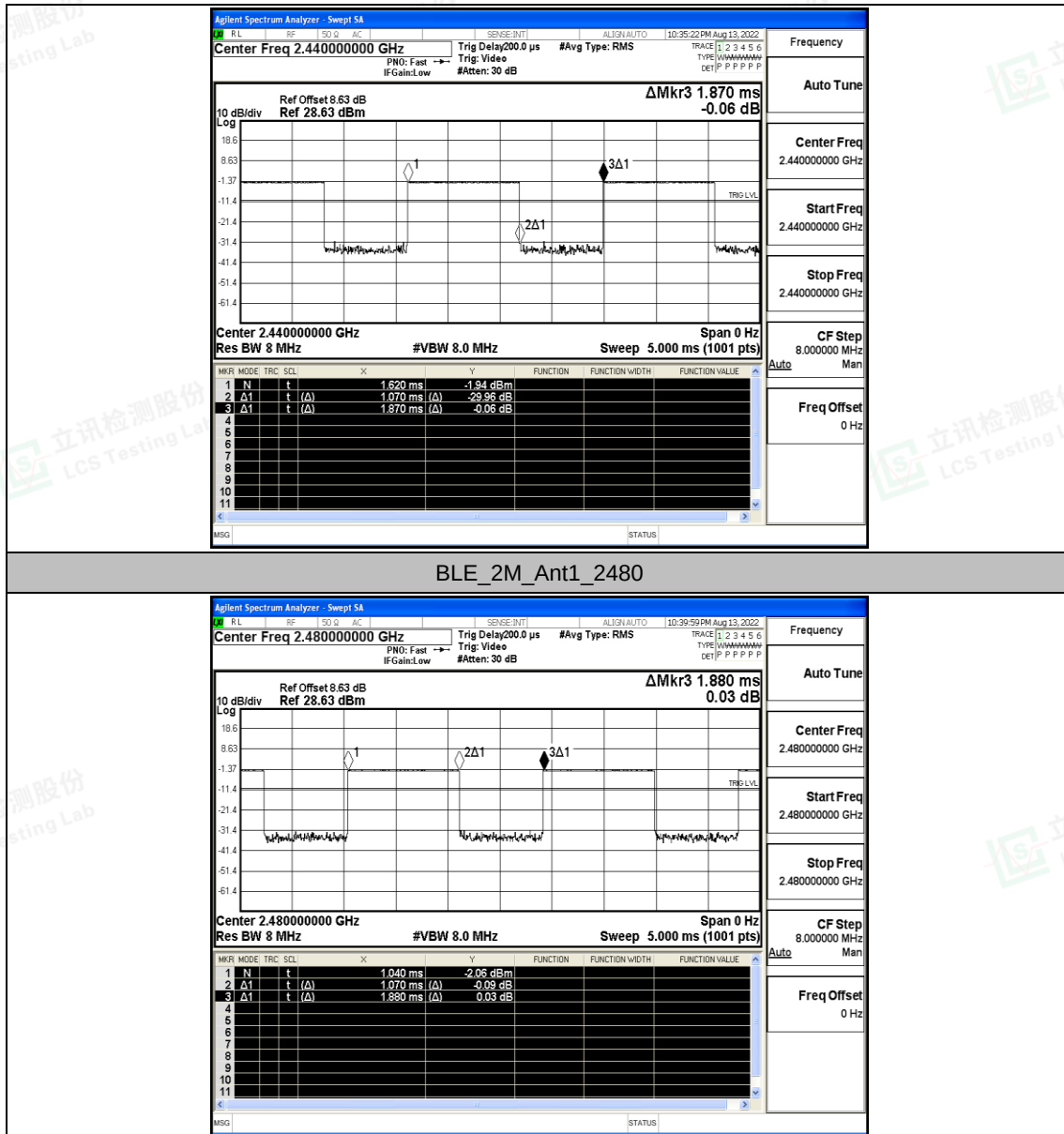




Test Graphs









A.8 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	-56.92	≤-41.20	38.28	≤54	PASS
				AV	2374.130	-56.48	≤-41.20	38.72	≤54	PASS
				AV	2390.000	-56.91	≤-41.20	38.29	≤54	PASS
				Peak	2310.000	-46.25	≤-21.20	48.95	≤74	PASS
				Peak	2310.080	-46.79	≤-21.20	48.41	≤74	PASS
				Peak	2390.000	-48.12	≤-21.20	47.08	≤74	PASS
		High	2480	AV	2483.500	-54.17	≤-41.20	41.03	≤54	PASS
				AV	2483.520	-54.17	≤-41.20	41.03	≤54	PASS
				AV	2500.000	-56.35	≤-41.20	38.85	≤54	PASS
				Peak	2483.500	-47.83	≤-21.20	47.37	≤74	PASS
				Peak	2493.920	-46.1	≤-21.20	49.10	≤74	PASS
				Peak	2500.000	-47.84	≤-21.20	47.36	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-57.56	≤-41.20	37.64	≤54	PASS
				AV	2386.520	-57.21	≤-41.20	37.99	≤54	PASS
				AV	2390.000	-57.39	≤-41.20	37.81	≤54	PASS
				Peak	2310.000	-51.05	≤-21.20	44.15	≤74	PASS
				Peak	2320.685	-46.76	≤-21.20	48.44	≤74	PASS
				Peak	2390.000	-49.87	≤-21.20	45.33	≤74	PASS
		High	2480	AV	2483.500	-51.45	≤-41.20	43.75	≤54	PASS
				AV	2483.520	-51.45	≤-41.20	43.75	≤54	PASS
				AV	2500.000	-56.73	≤-41.20	38.47	≤54	PASS
				Peak	2483.500	-49.02	≤-21.20	46.18	≤74	PASS
				Peak	2483.760	-46.79	≤-21.20	48.41	≤74	PASS
				Peak	2500.000	-50.23	≤-21.20	44.97	≤74	PASS

Note:

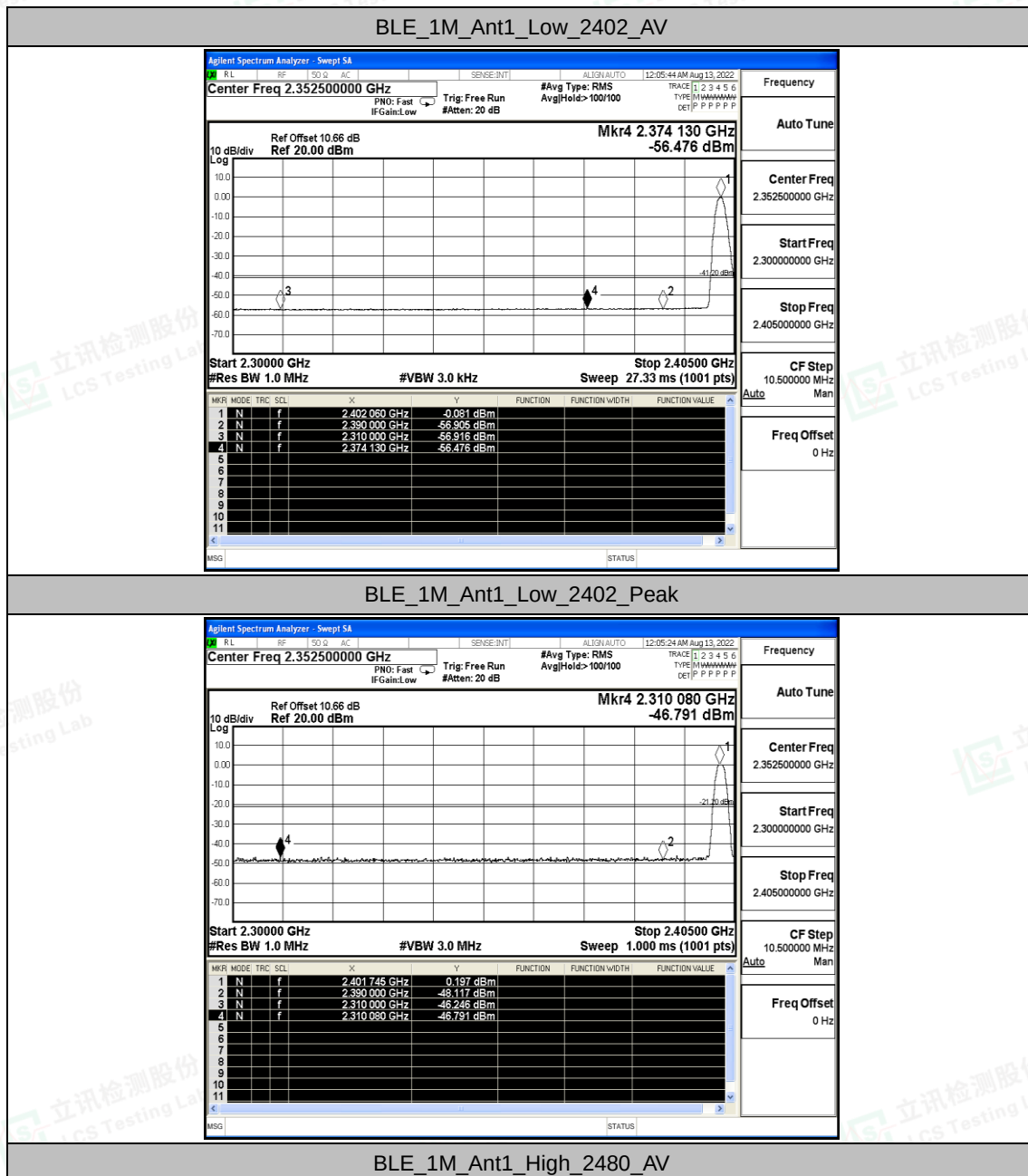
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

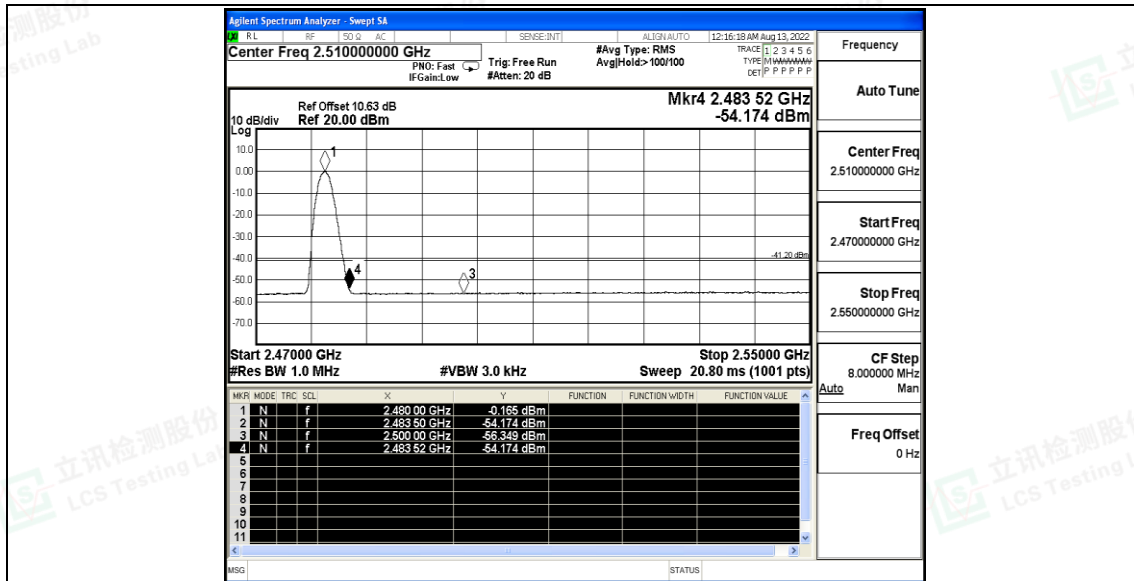


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

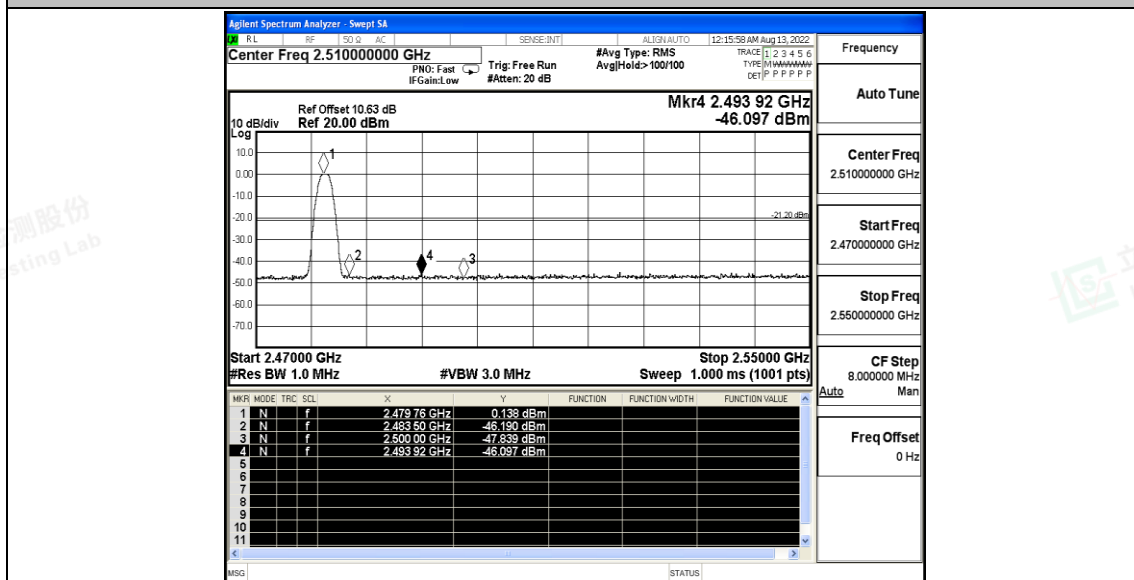


Test Graphs



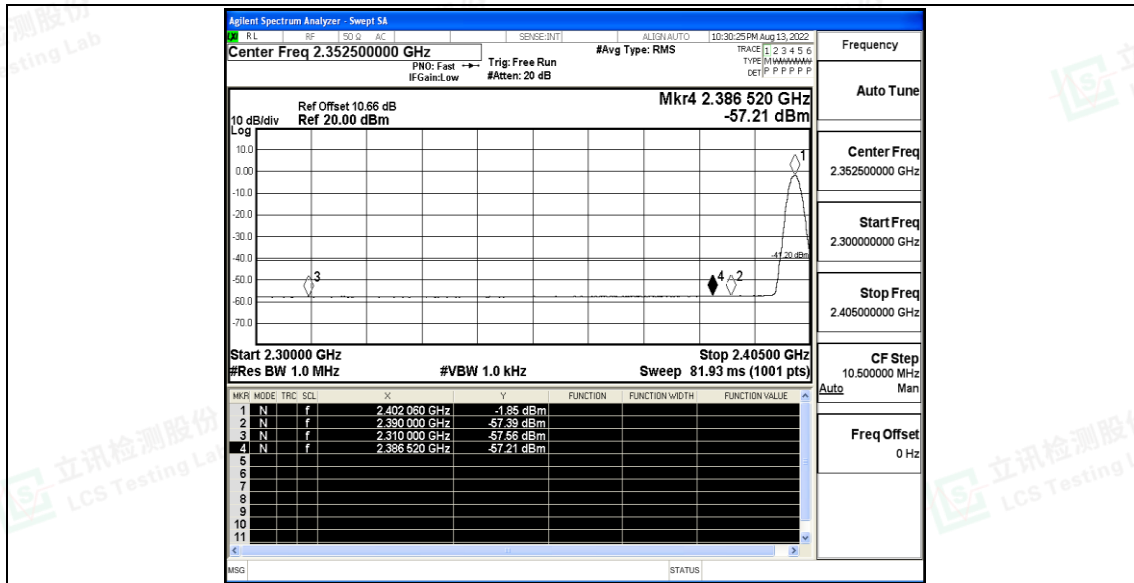


BLE_1M_Ant1_High_2480_Peak

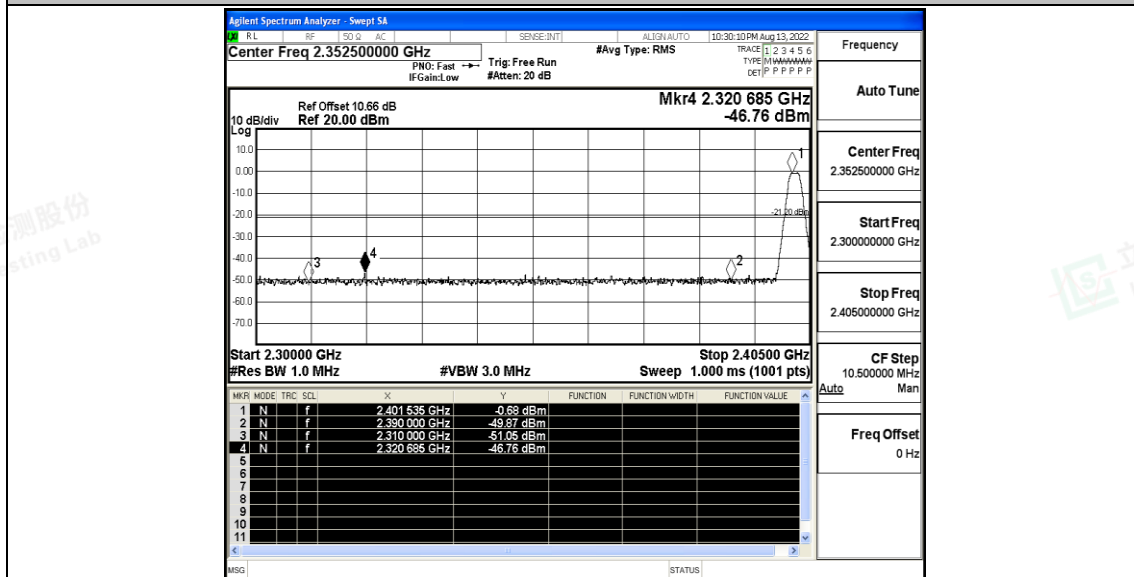


BLE_2M_Ant1_Low_2402_AV





BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



