



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Bluetooth LED Floodlight

Test Model: BDB55BL-3

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Mening Su
Supervised by:	Ling Zhu



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A.1 DTS Bandwidth

Test Result

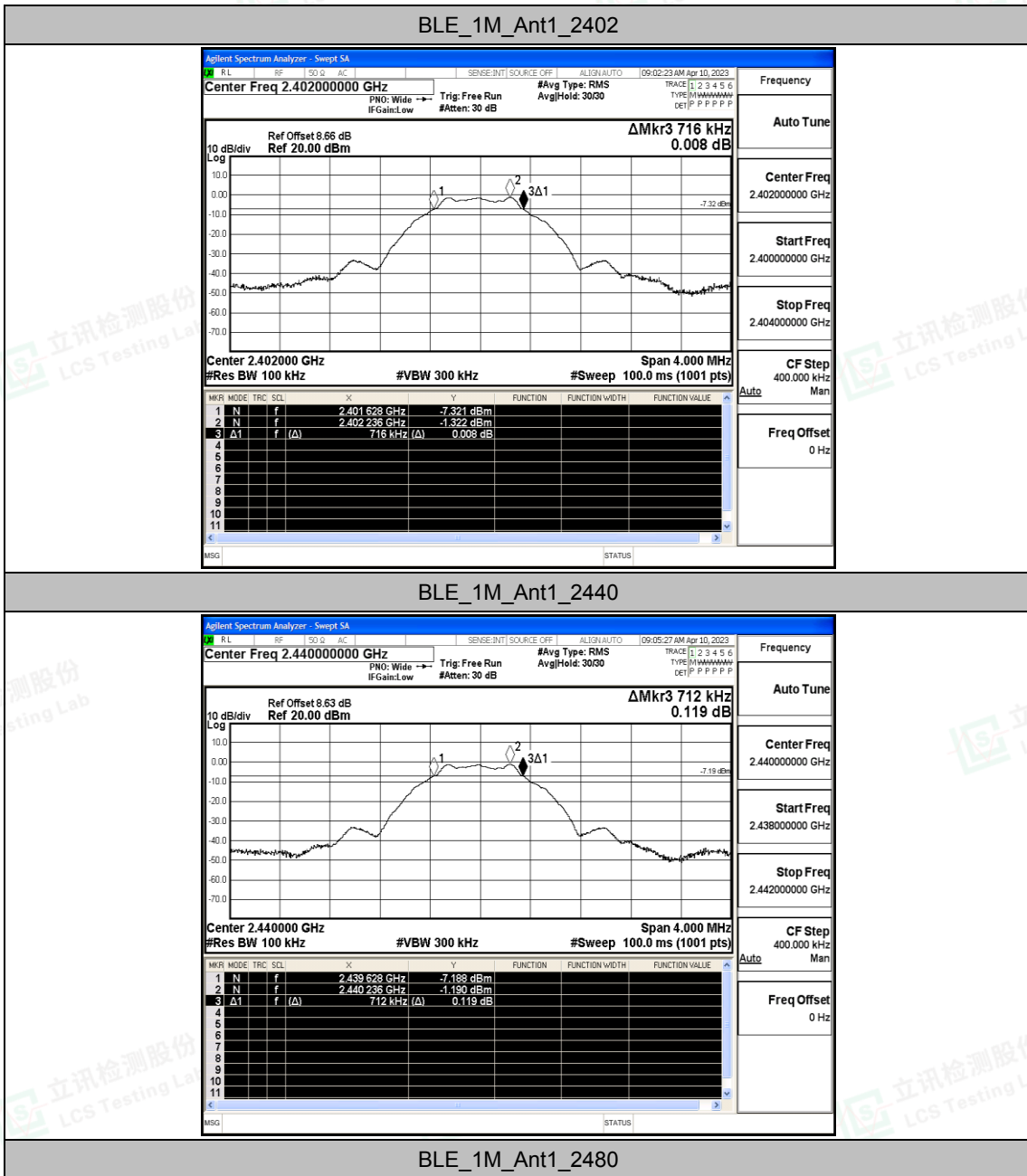
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.628	2402.344	0.5	PASS
		2440	0.712	2439.628	2440.340	0.5	PASS
		2480	0.712	2479.628	2480.340	0.5	PASS



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Test Graphs

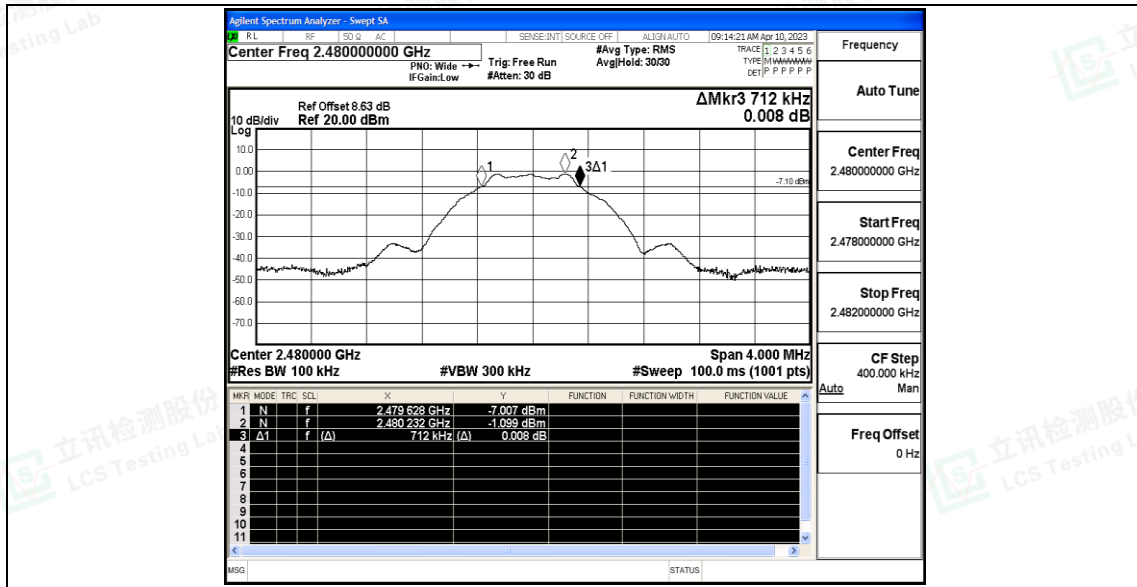


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A.2 Maximum conducted output power

Test Result

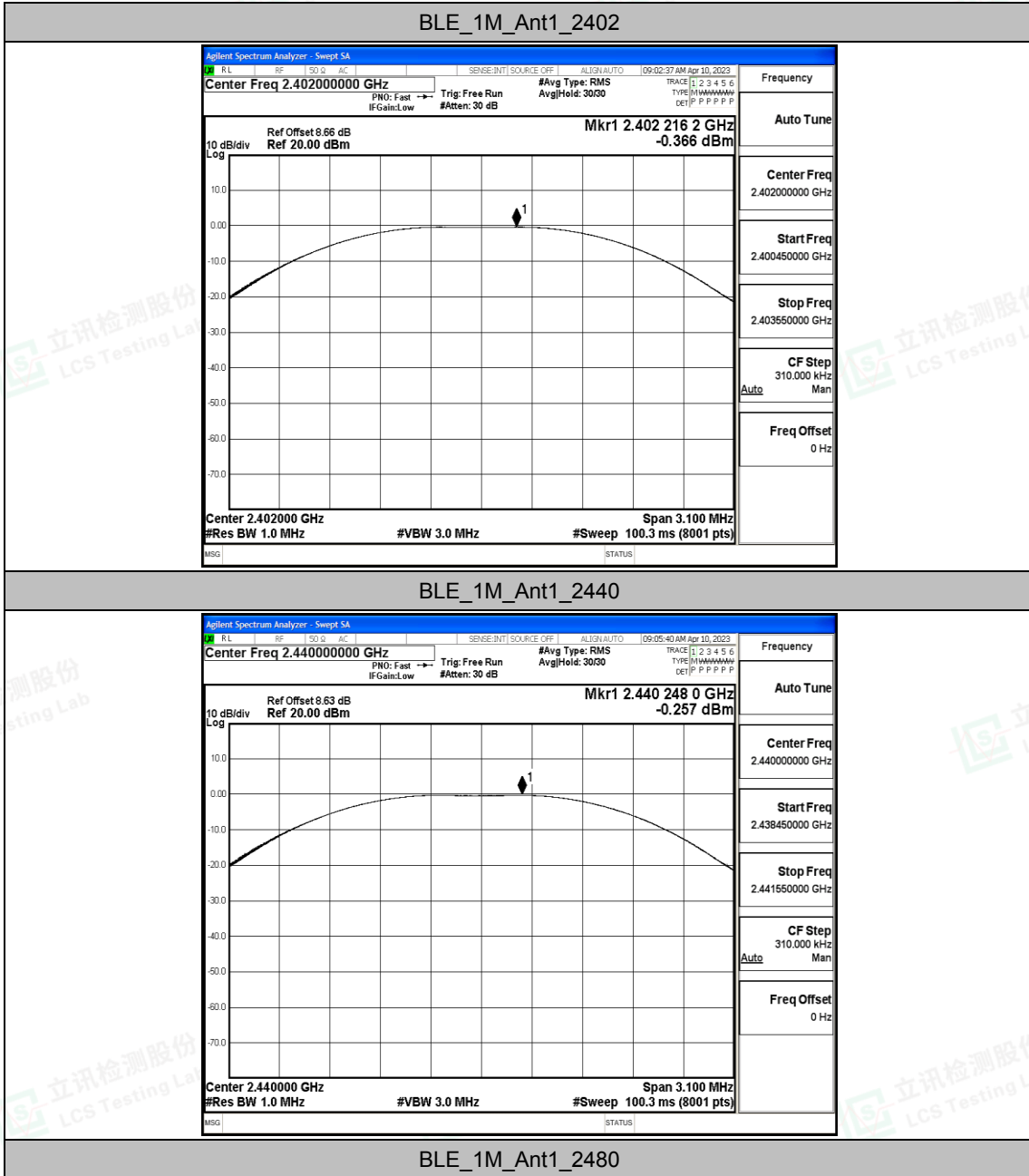
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.37	≤30	PASS
		2440	-0.26	≤30	PASS
		2480	-0.16	≤30	PASS



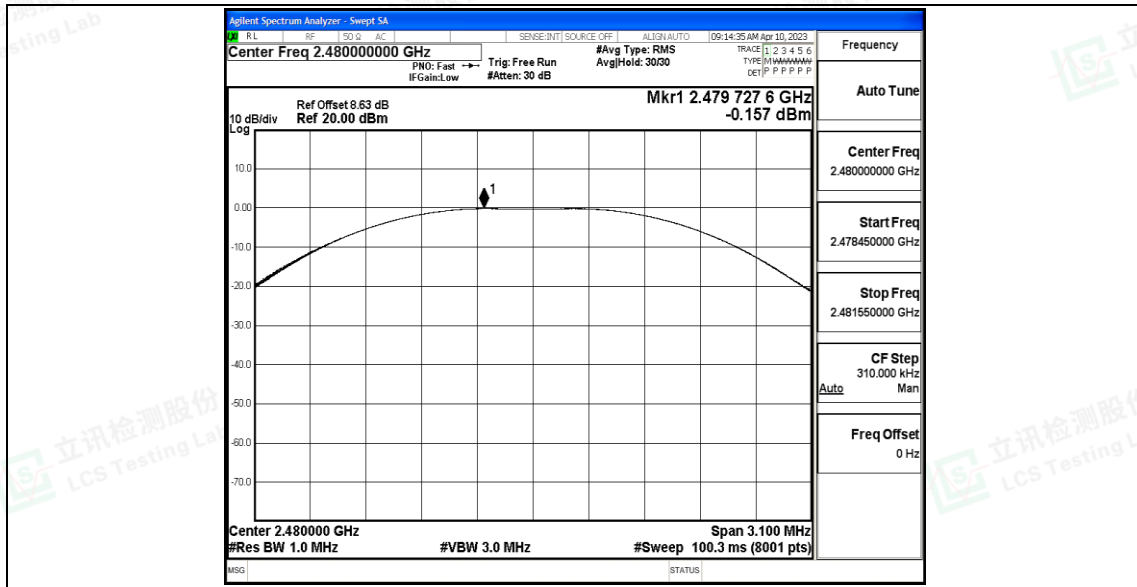
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Test Graphs



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A.3 Maximum power spectral density

Test Result

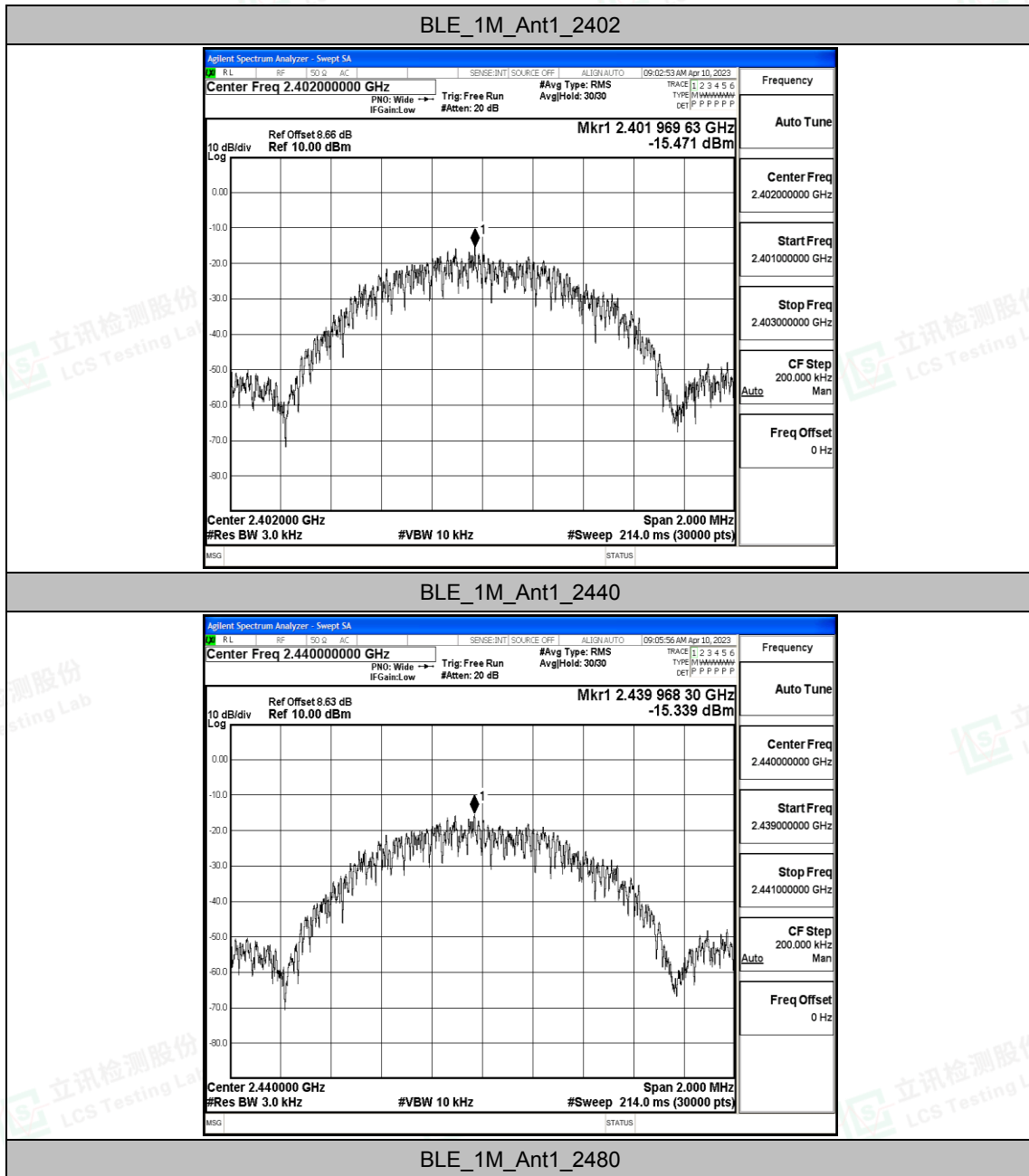
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.47	≤8.00	PASS
		2440	-15.34	≤8.00	PASS
		2480	-15.24	≤8.00	PASS



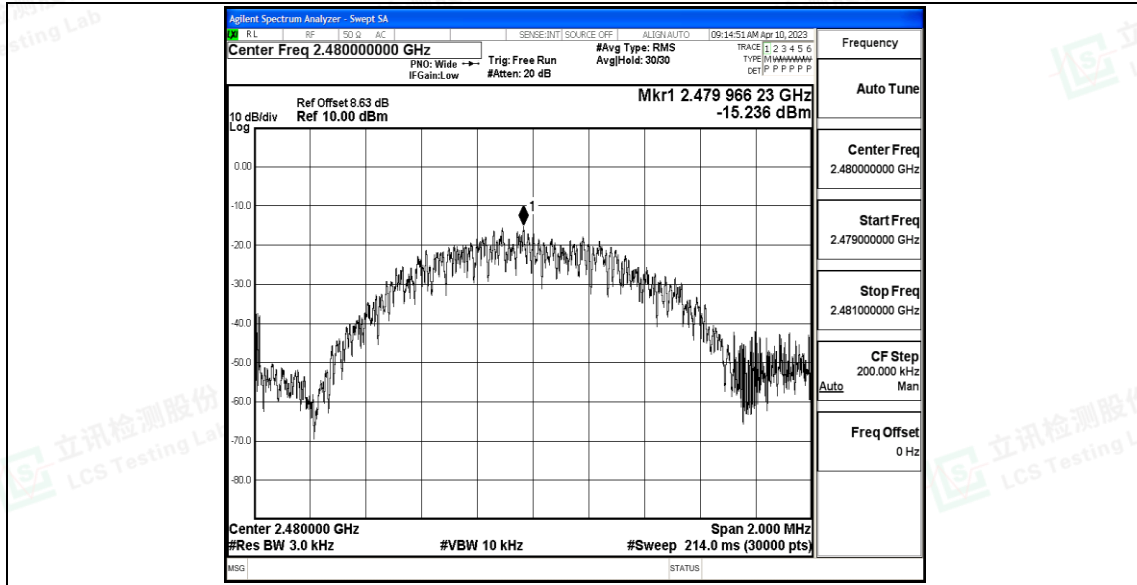
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A.4 Band edge measurements

Test Result

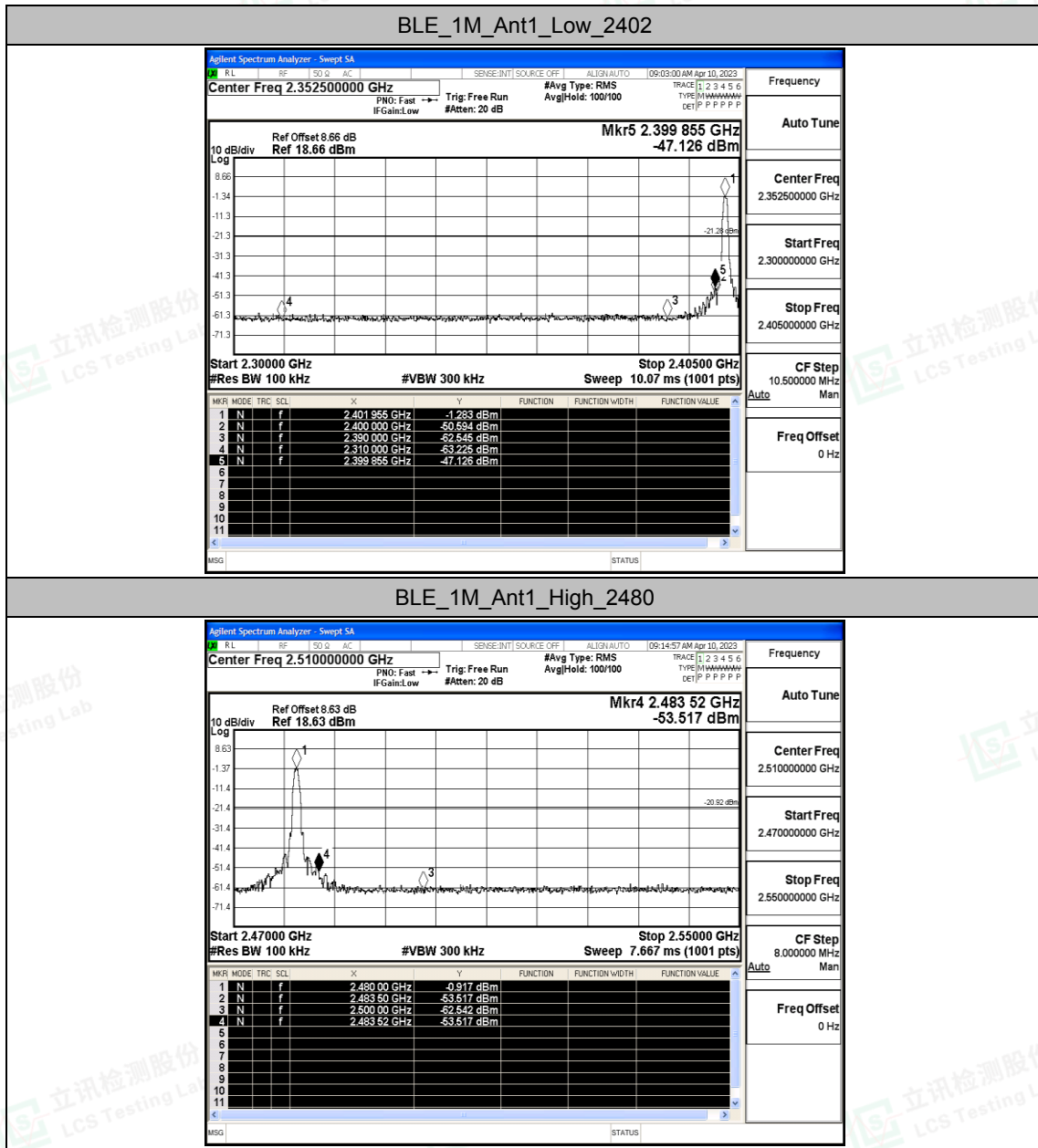
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.28	-47.13	≤-21.28	PASS
		High	2480	-0.92	-53.52	≤-20.92	PASS



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Test Graphs



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A.5 Conducted Spurious Emission

Test Result

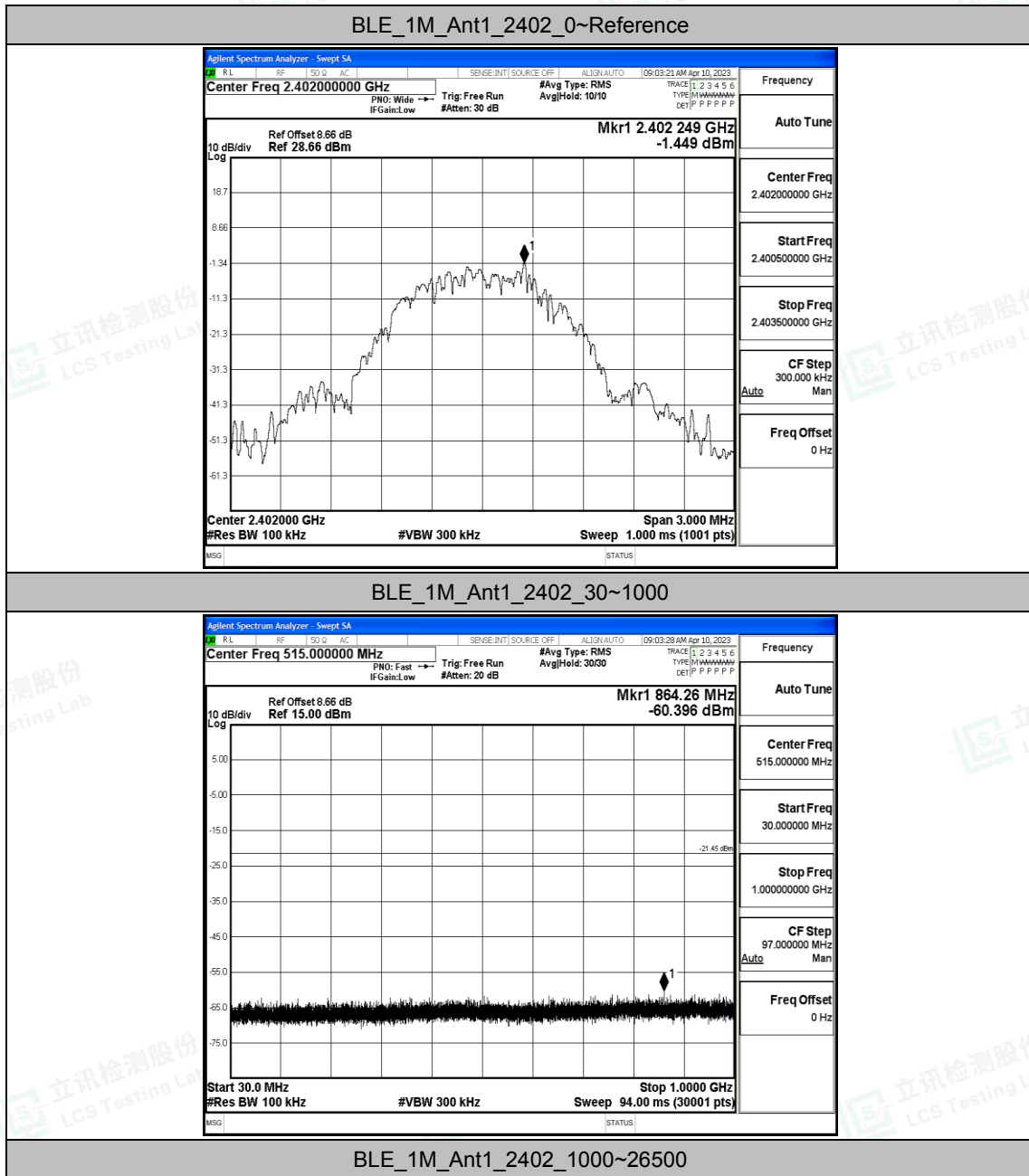
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.45	-1.45	---	PASS
			30~1000	-1.45	-60.4	≤-21.45	PASS
			1000~26500	-1.45	-47.92	≤-21.45	PASS
		2440	Reference	-1.40	-1.40	---	PASS
			30~1000	-1.40	-60.52	≤-21.4	PASS
			1000~26500	-1.40	-48.53	≤-21.4	PASS
		2480	Reference	-1.25	-1.25	---	PASS
			30~1000	-1.25	-60.67	≤-21.25	PASS
			1000~26500	-1.25	-47.13	≤-21.25	PASS



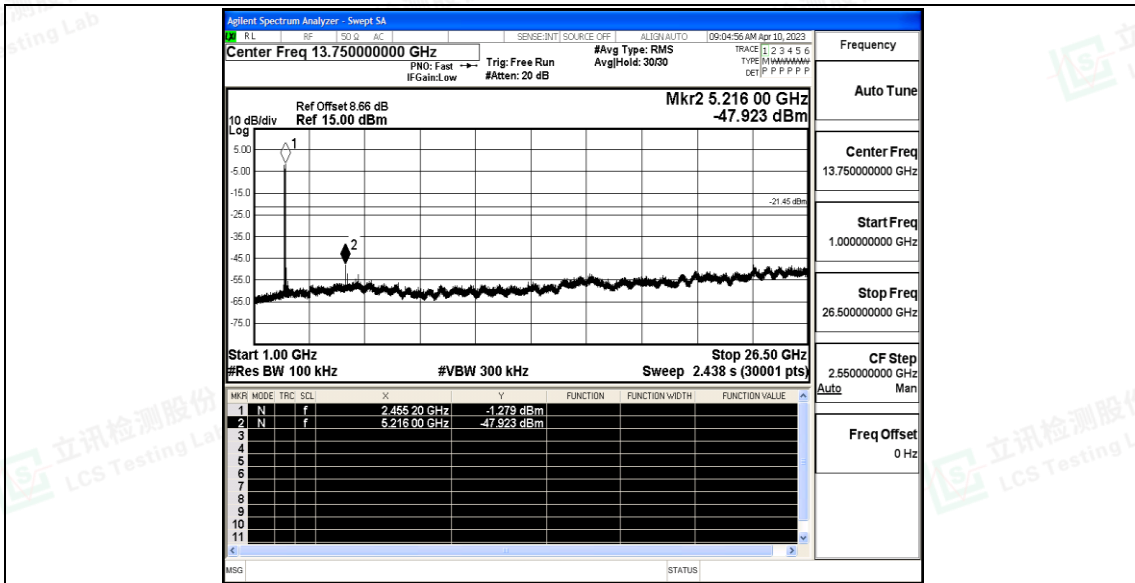
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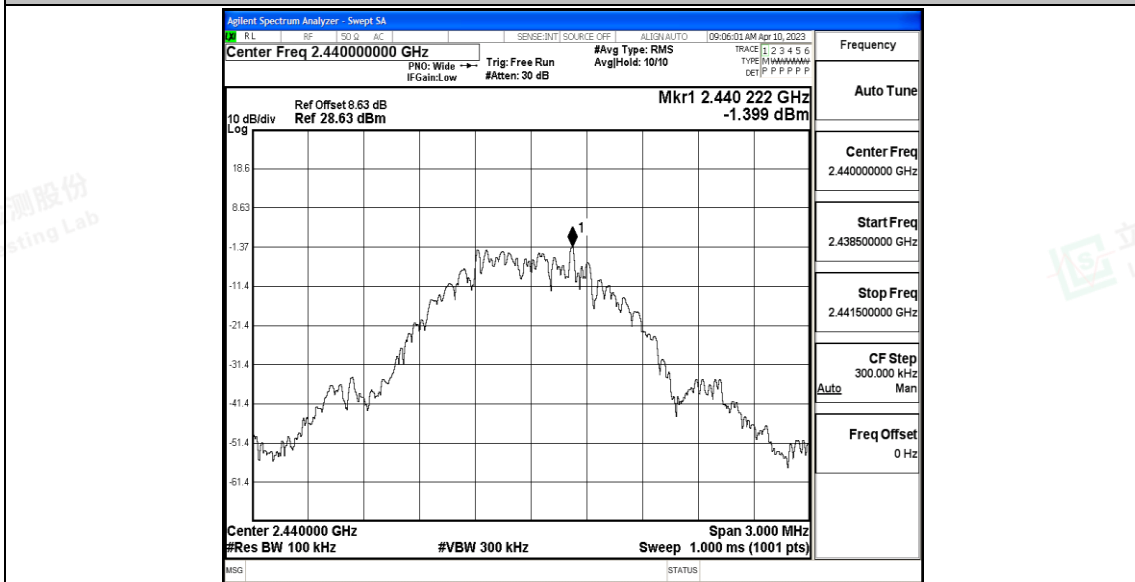
Test Graphs



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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

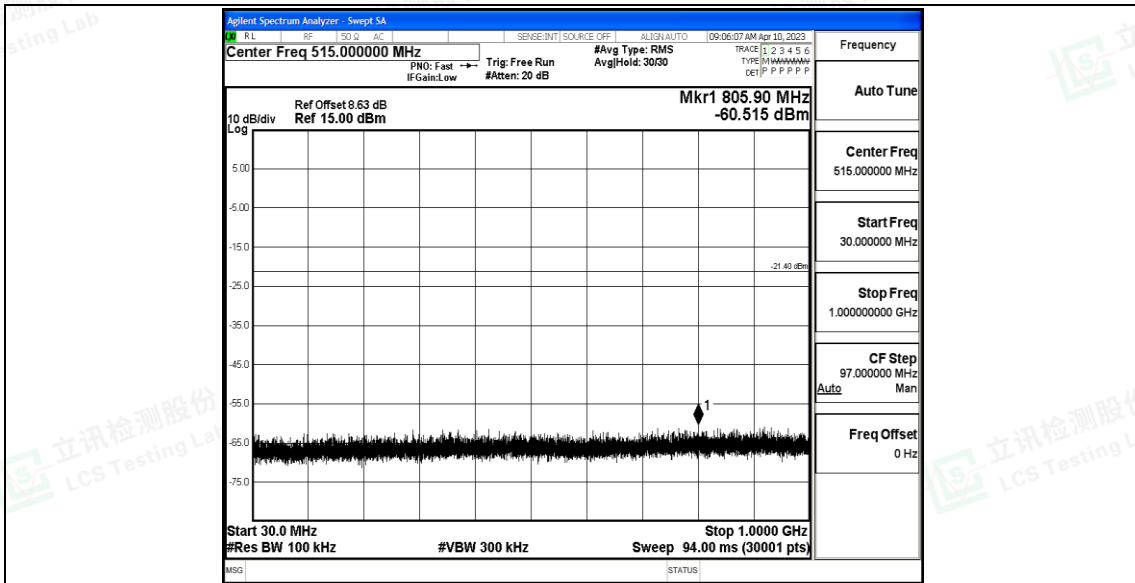


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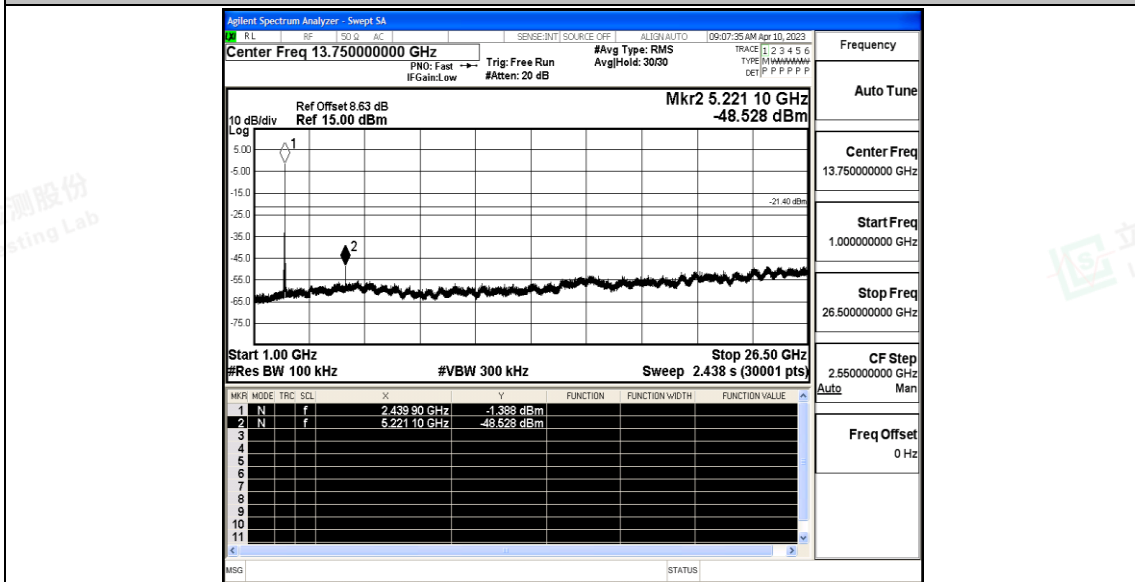
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

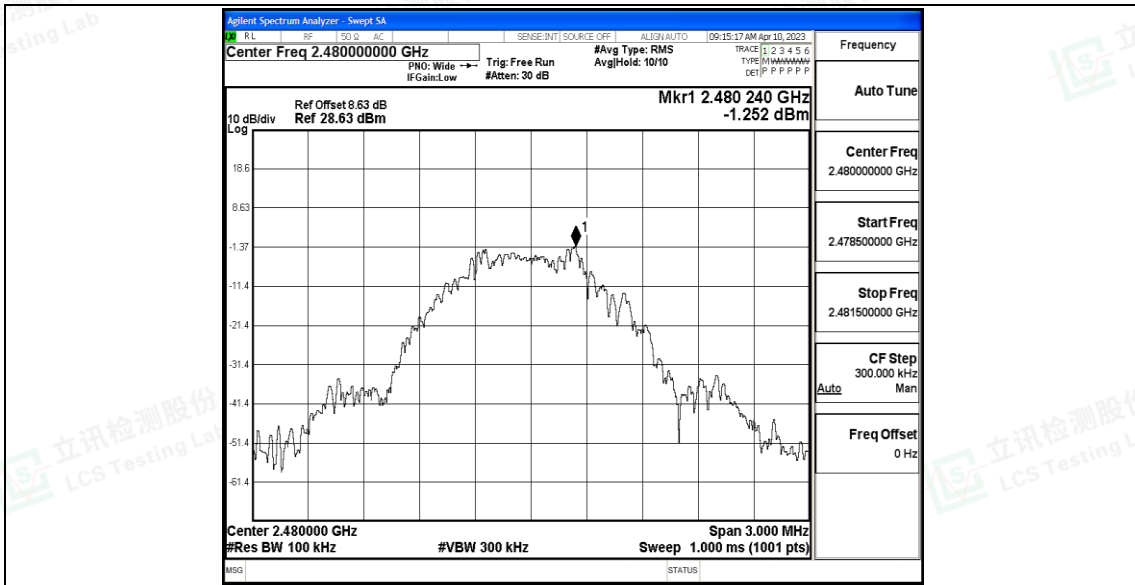


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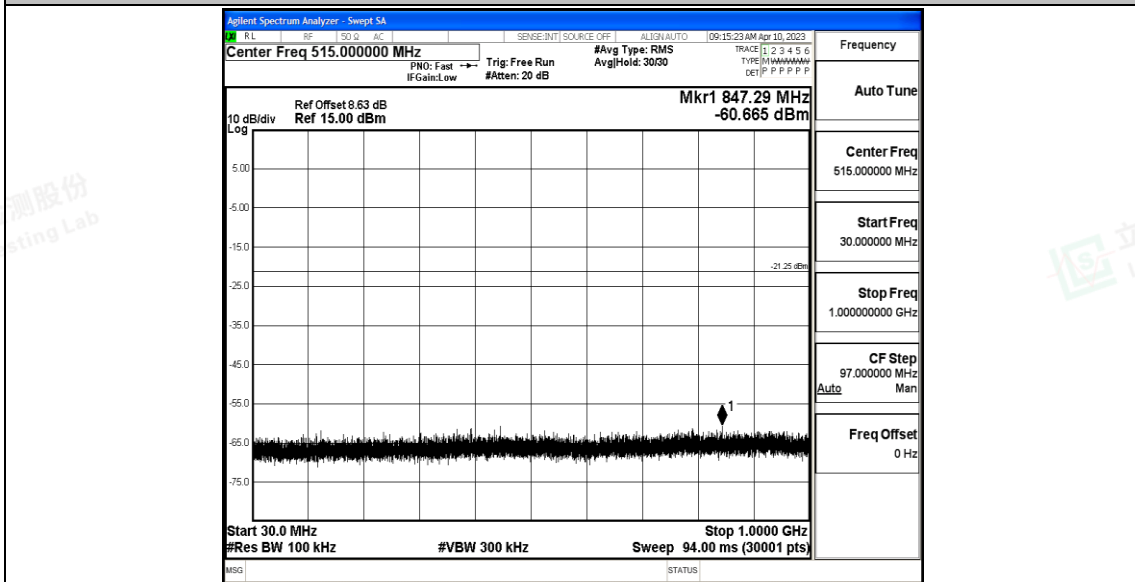
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

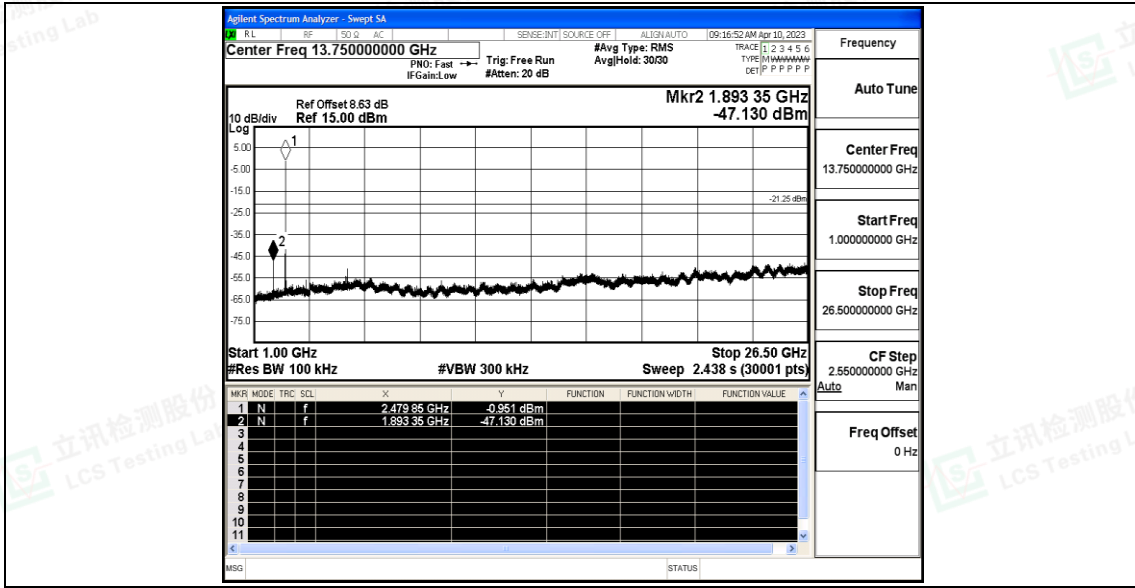


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A.6 Duty Cycle

Test Result

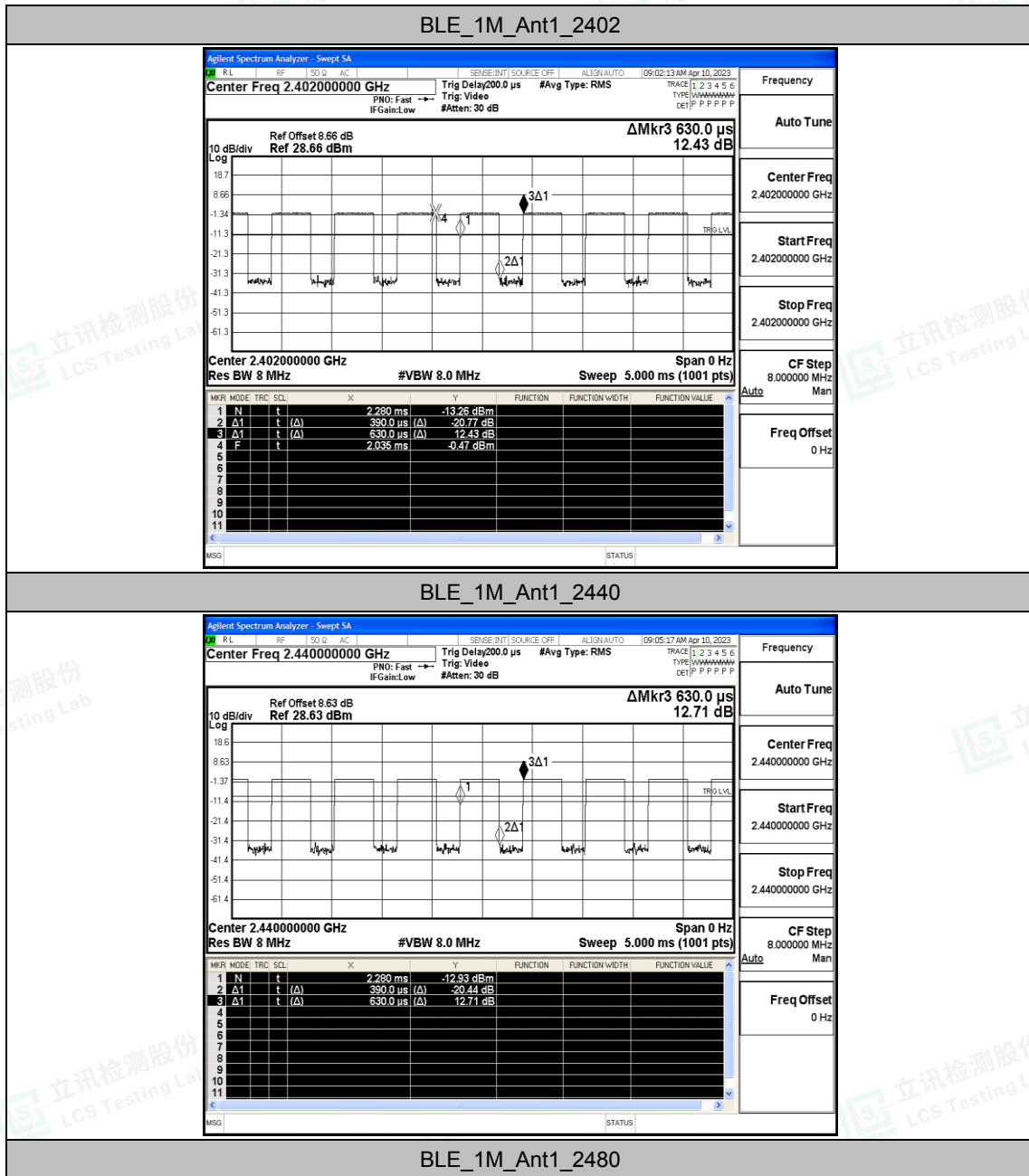
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[dB]
BLE_1M	Ant1	2402	0.39	0.63	61.90	2.08	2.56
		2440	0.39	0.63	61.90	2.08	2.56
		2480	0.39	0.63	61.90	2.08	2.56



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Test Graphs

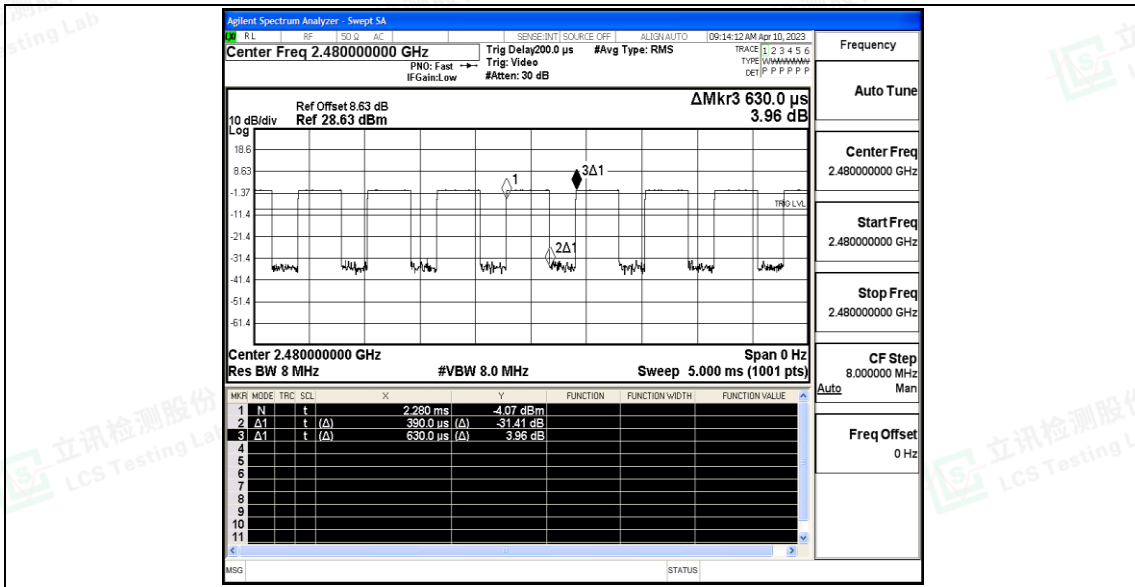


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A.7 Emissions in Restricted Bands

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	-57.87	≤-41.20	37.33	≤54	PASS
				AV	2322.575	-57.23	≤-41.20	37.97	≤54	PASS
				AV	2390.000	-57.67	≤-41.20	37.53	≤54	PASS
				Peak	2310.000	-50.8	≤-21.20	44.40	≤74	PASS
				Peak	2386.730	-48.12	≤-21.20	47.08	≤74	PASS
				Peak	2390.000	-49.64	≤-21.20	45.56	≤74	PASS
		High	2480	AV	2483.500	-51.74	≤-41.20	43.46	≤54	PASS
				AV	2483.520	-51.74	≤-41.20	43.46	≤54	PASS
				AV	2500.000	-57.58	≤-41.20	37.62	≤54	PASS
				Peak	2483.500	-35.07	≤-21.20	60.13	≤74	PASS
				Peak	2483.520	-35.07	≤-21.20	60.13	≤74	PASS
				Peak	2500.000	-50.5	≤-21.20	44.70	≤74	PASS

Note:

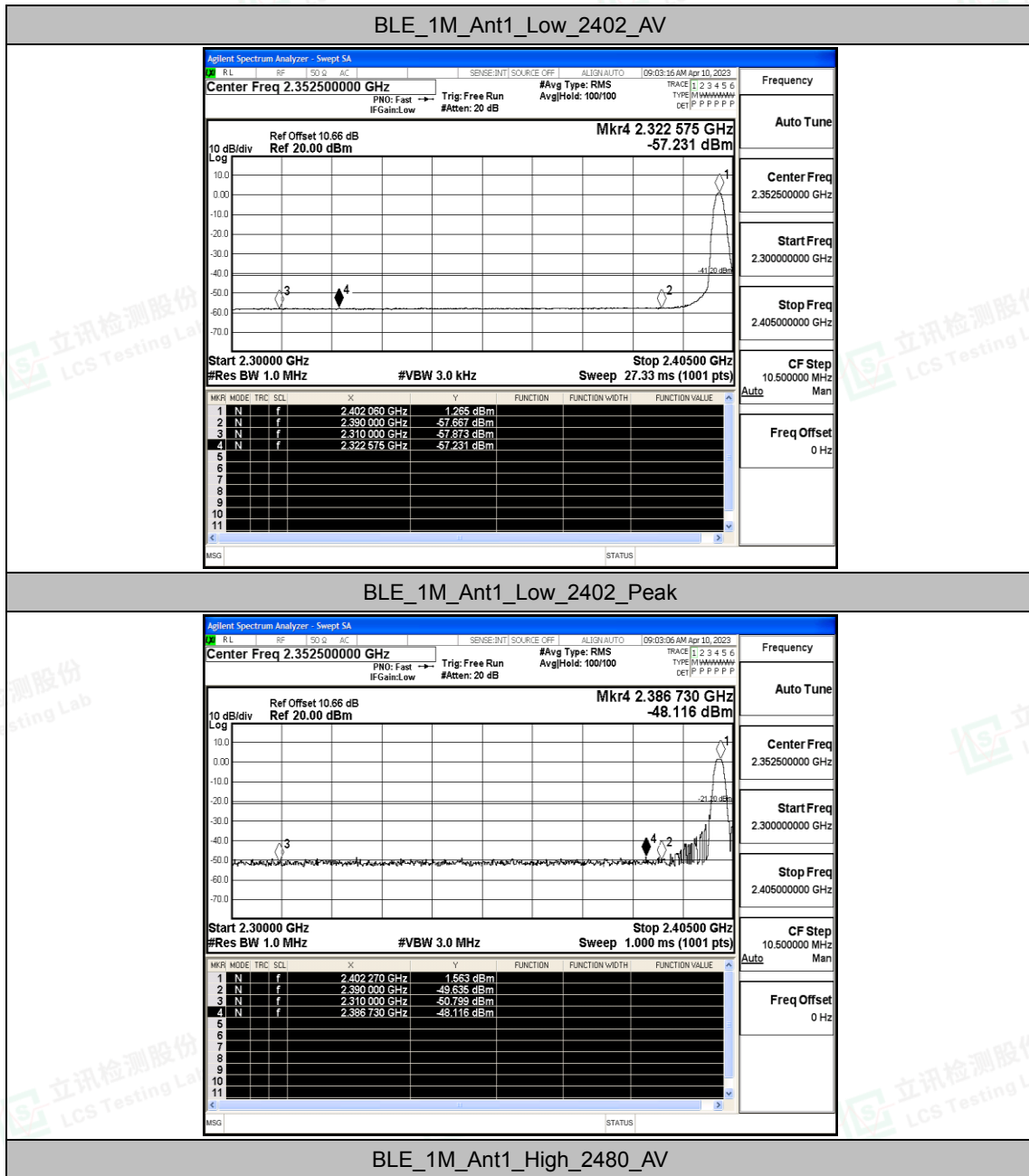
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



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Test Graphs

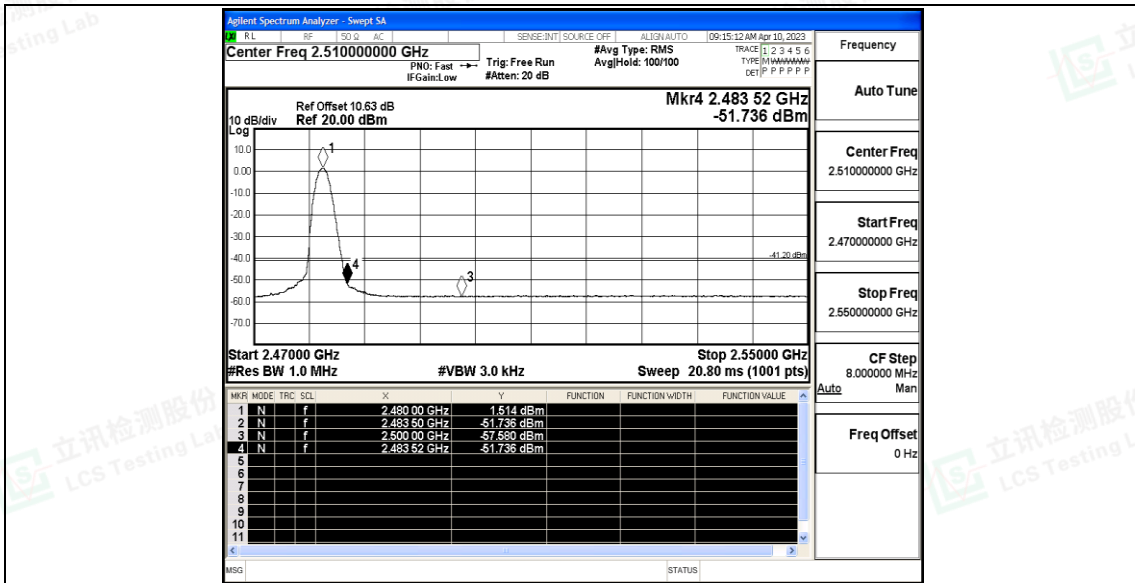


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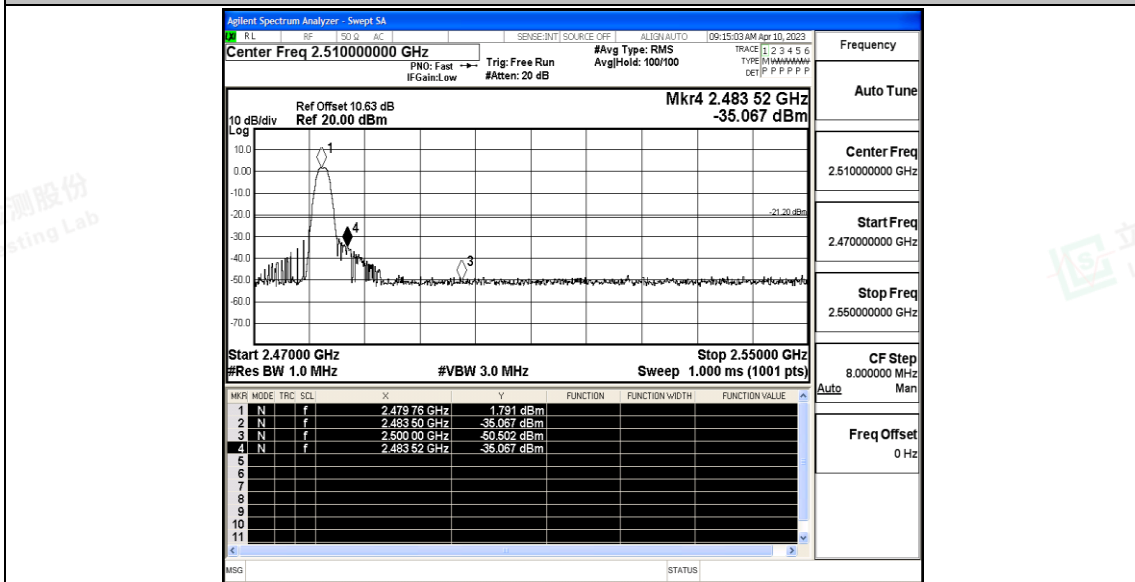
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BLE_1M_Ant1_High_2480_Peak



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