



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Bluetooth Tracker
Test Model: CH01

Environmental Conditions

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





A.1 DTS Bandwidth

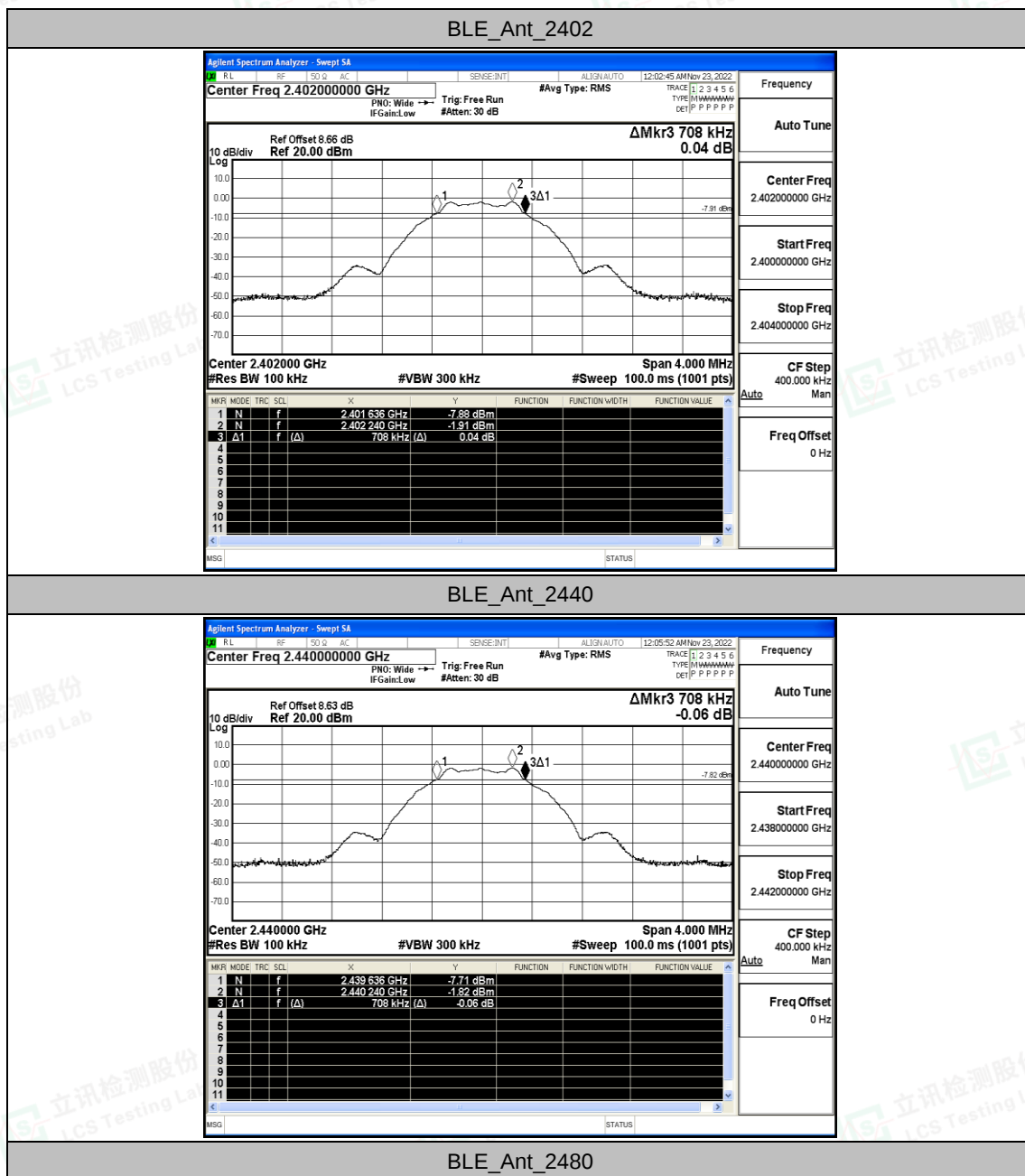
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant	2402	0.708	2401.636	2402.344	0.5	PASS
		2440	0.708	2439.636	2440.344	0.5	PASS
		2480	0.712	2479.632	2480.344	0.5	PASS





Test Graphs

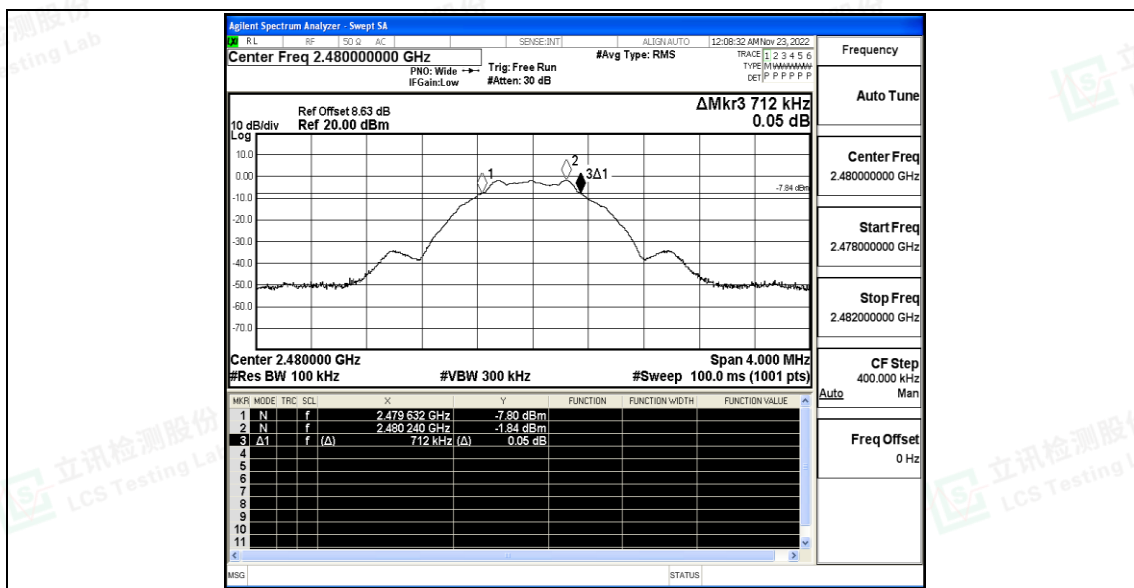
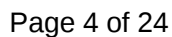


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A.2 Maximum conducted output power

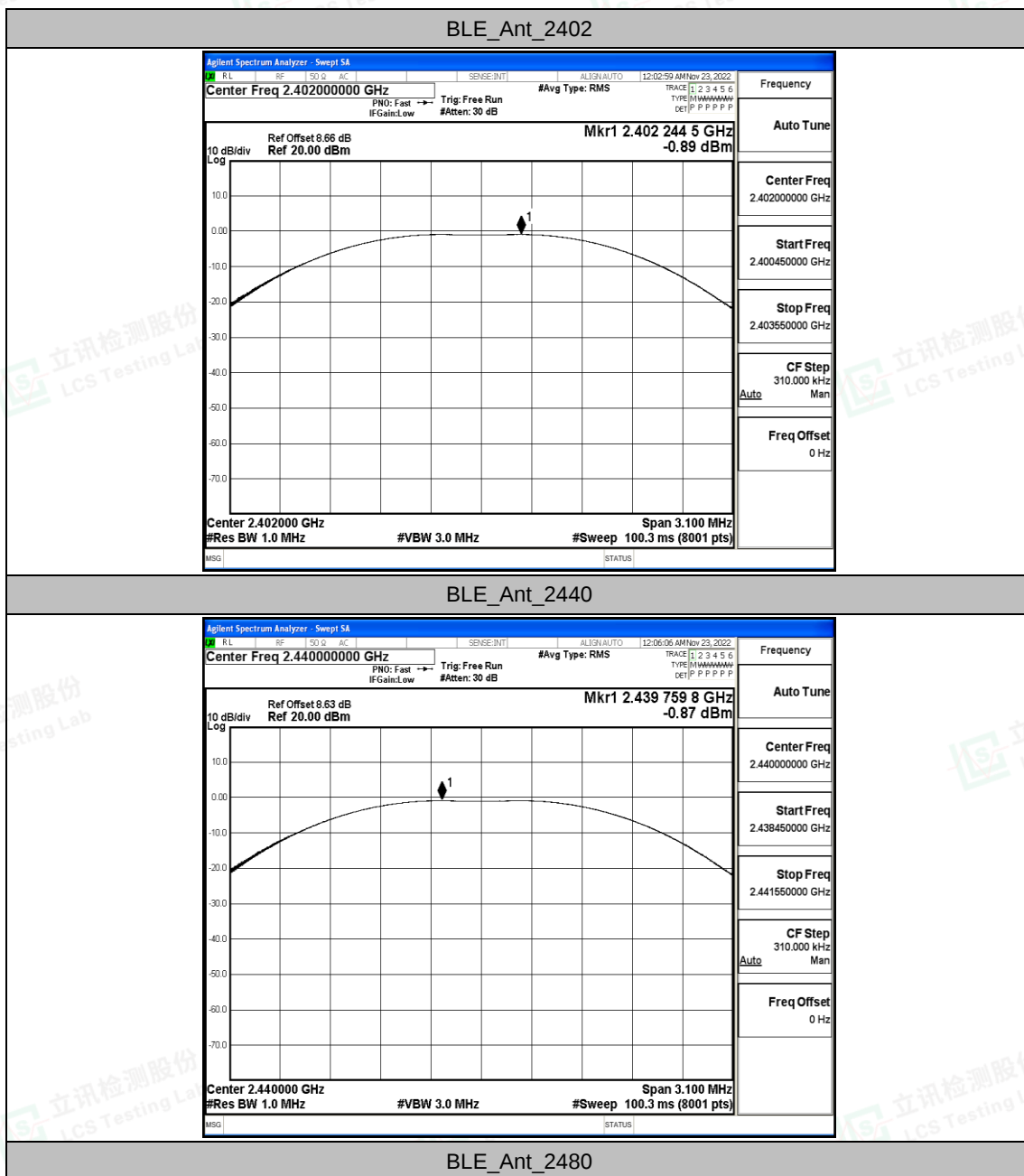
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	-0.89	≤30	PASS
		2440	-0.87	≤30	PASS
		2480	-0.88	≤30	PASS





Test Graphs

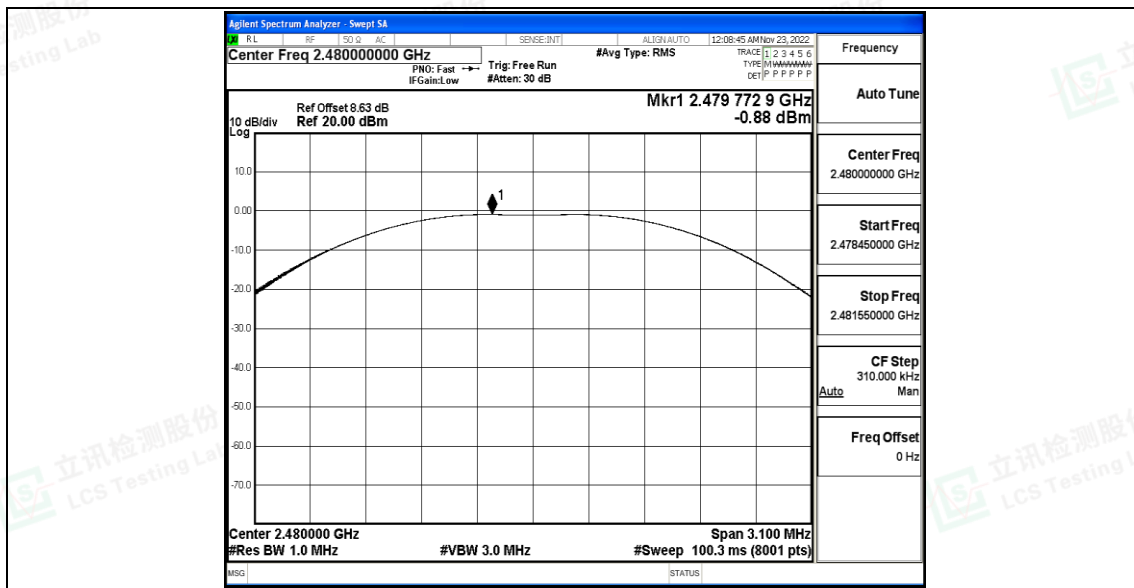


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A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant	2402	-15.98	≤8.00	PASS
		2440	-15.98	≤8.00	PASS
		2480	-15.97	≤8.00	PASS



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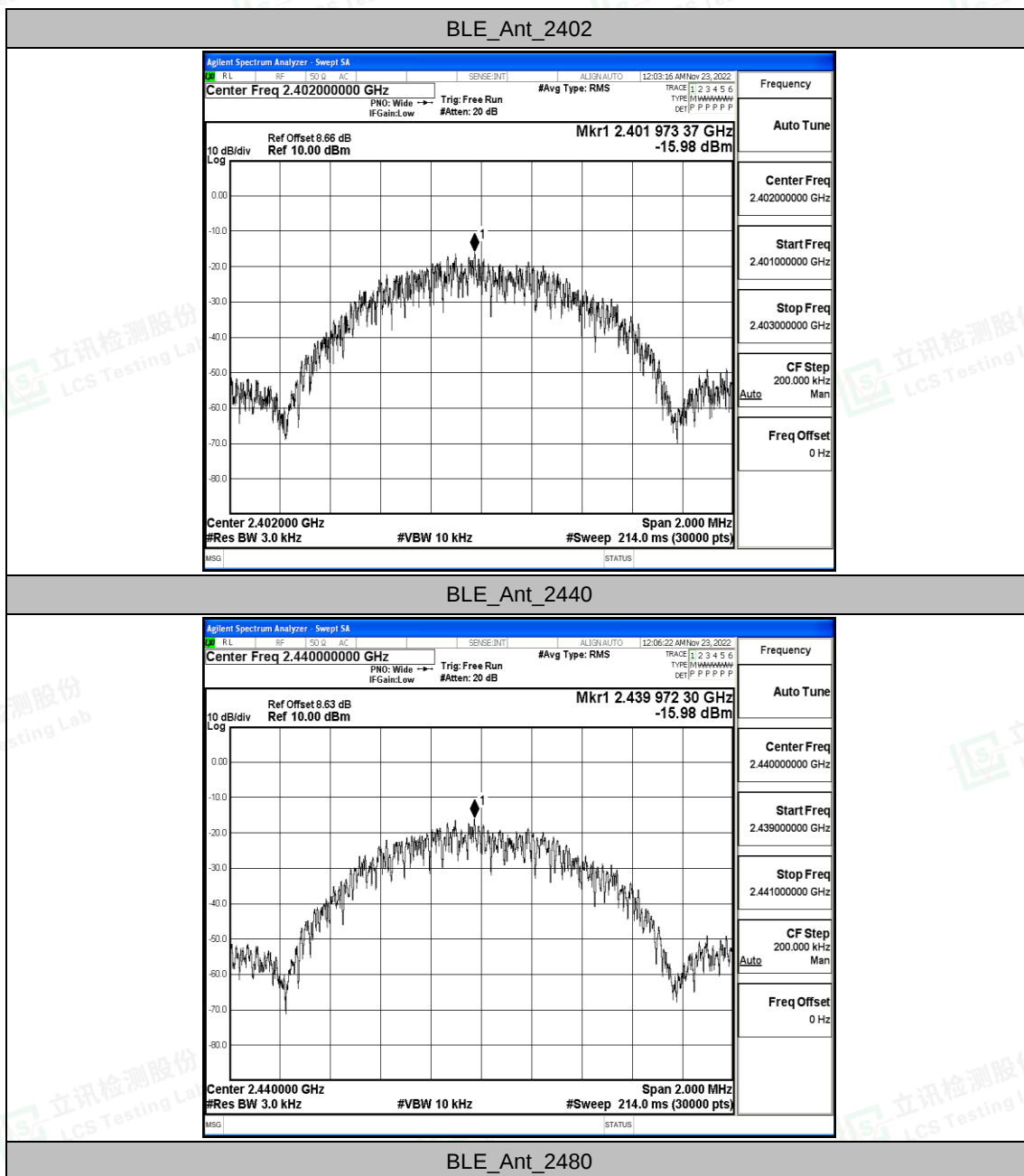
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Test Graphs

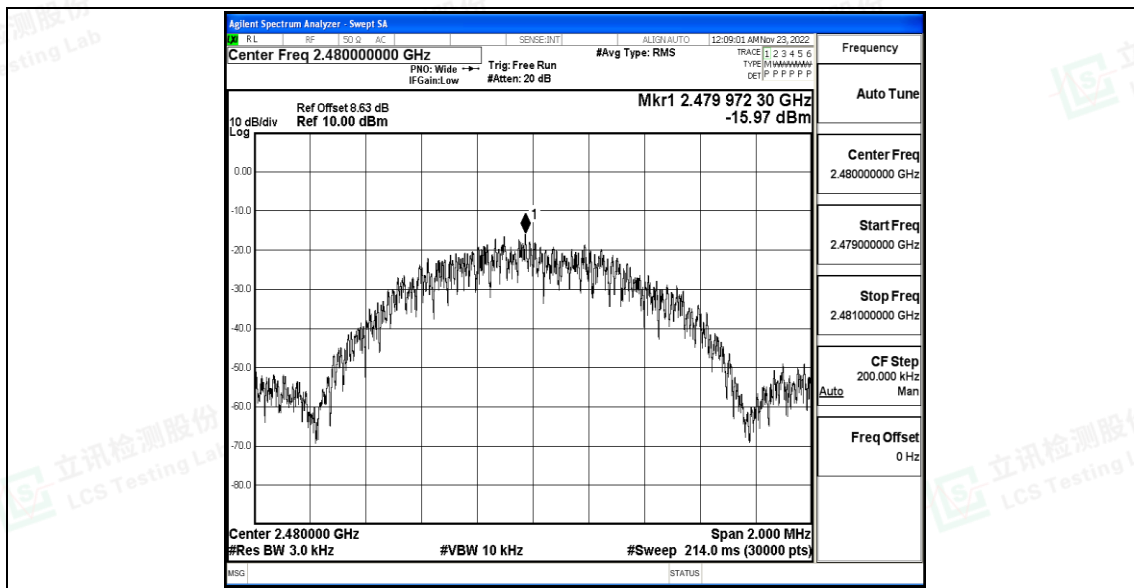


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A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	Low	2402	-2.24	-57.94	≤ -22.24	PASS
		High	2480	-1.66	-58.37	≤ -21.66	PASS

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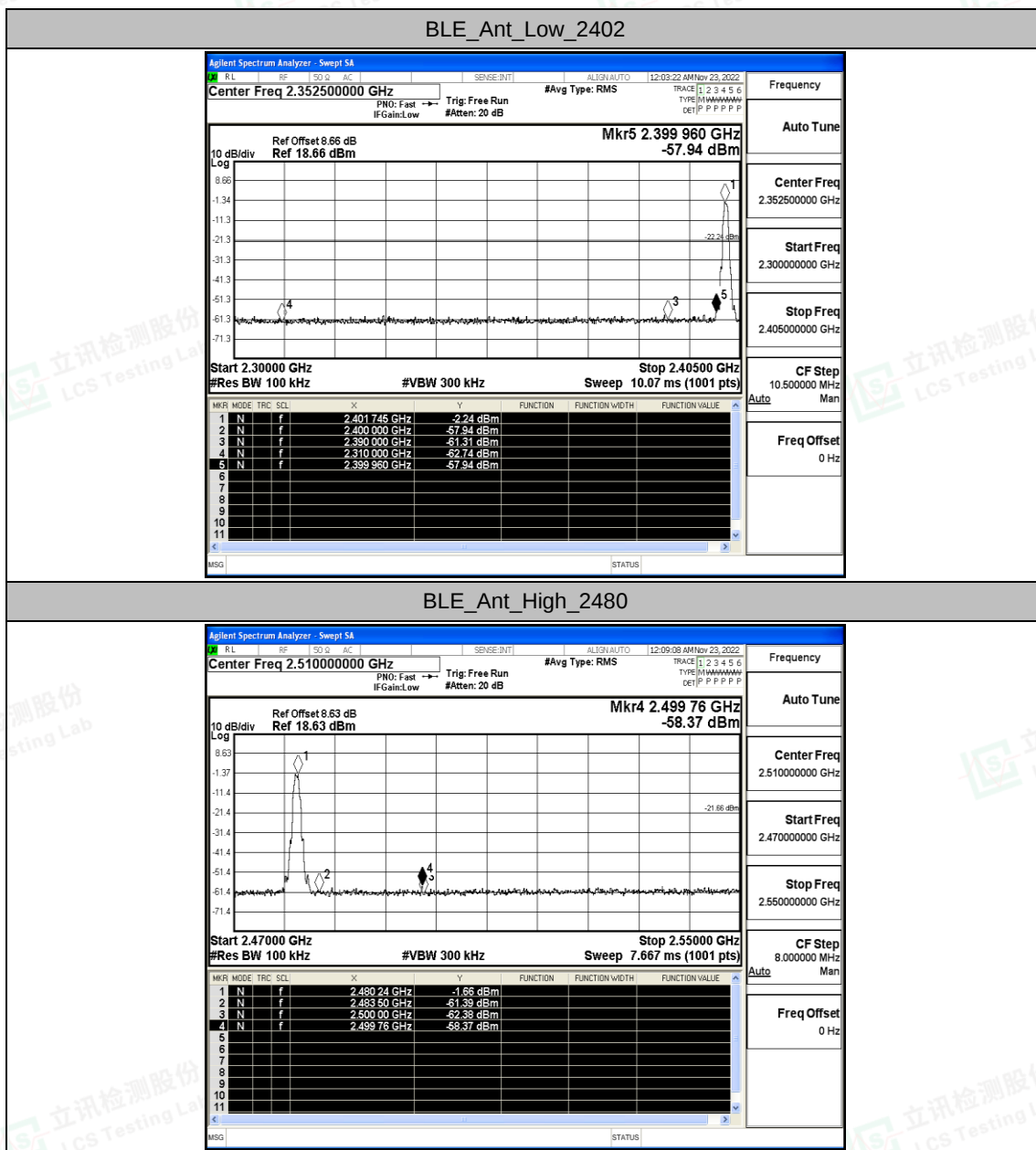
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Test Graphs



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A.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	Reference	-1.95	-1.95	---	PASS
			30~1000	-1.95	-59.19	≤-21.95	PASS
			1000~26500	-1.95	-45.81	≤-21.95	PASS
		2440	Reference	-2.24	-2.24	---	PASS
			30~1000	-2.24	-59.7	≤-22.24	PASS
			1000~26500	-2.24	-45.6	≤-22.24	PASS
		2480	Reference	-1.85	-1.85	---	PASS
			30~1000	-1.85	-60.79	≤-21.85	PASS
			1000~26500	-1.85	-46.33	≤-21.85	PASS



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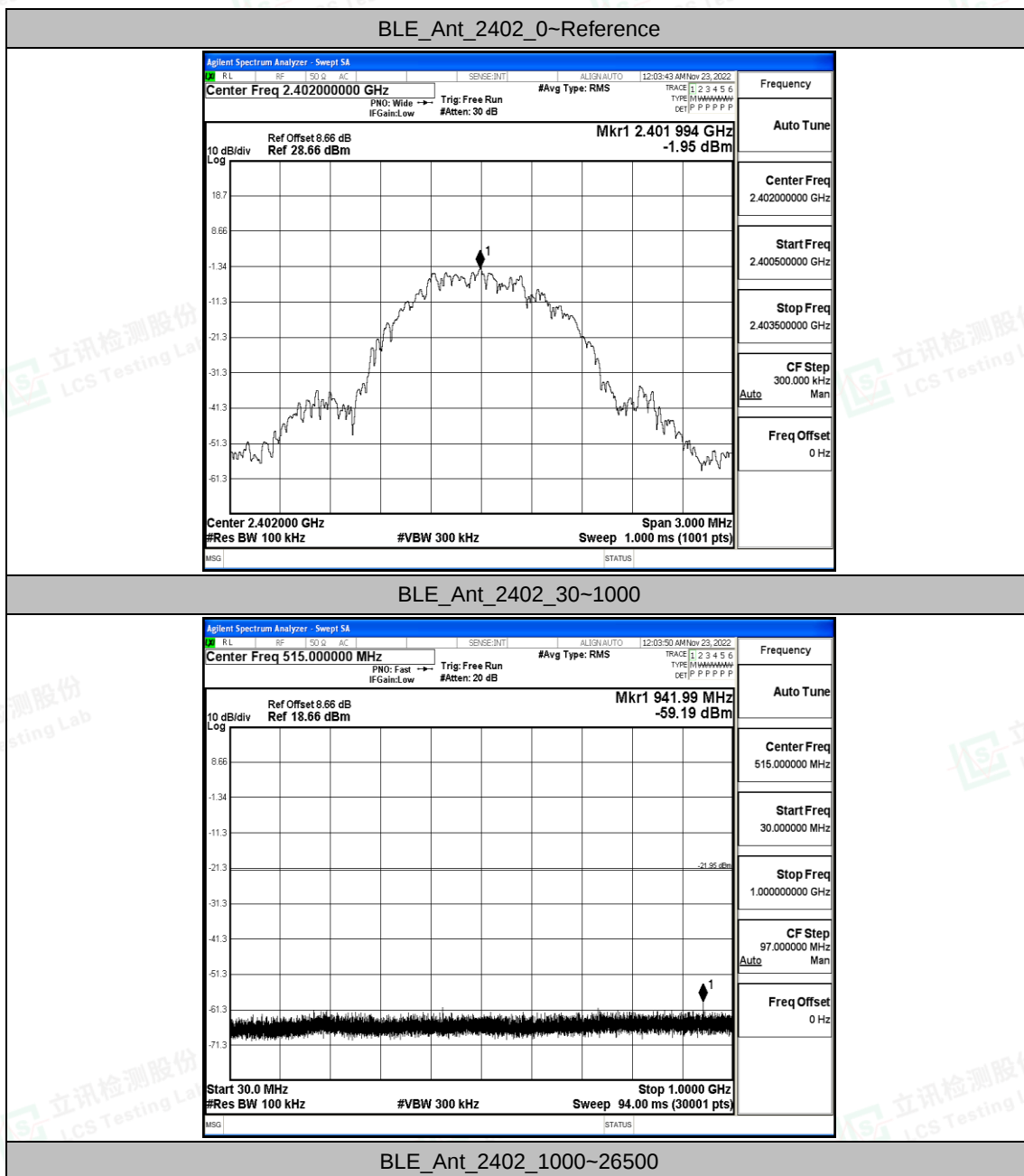
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Test Graphs

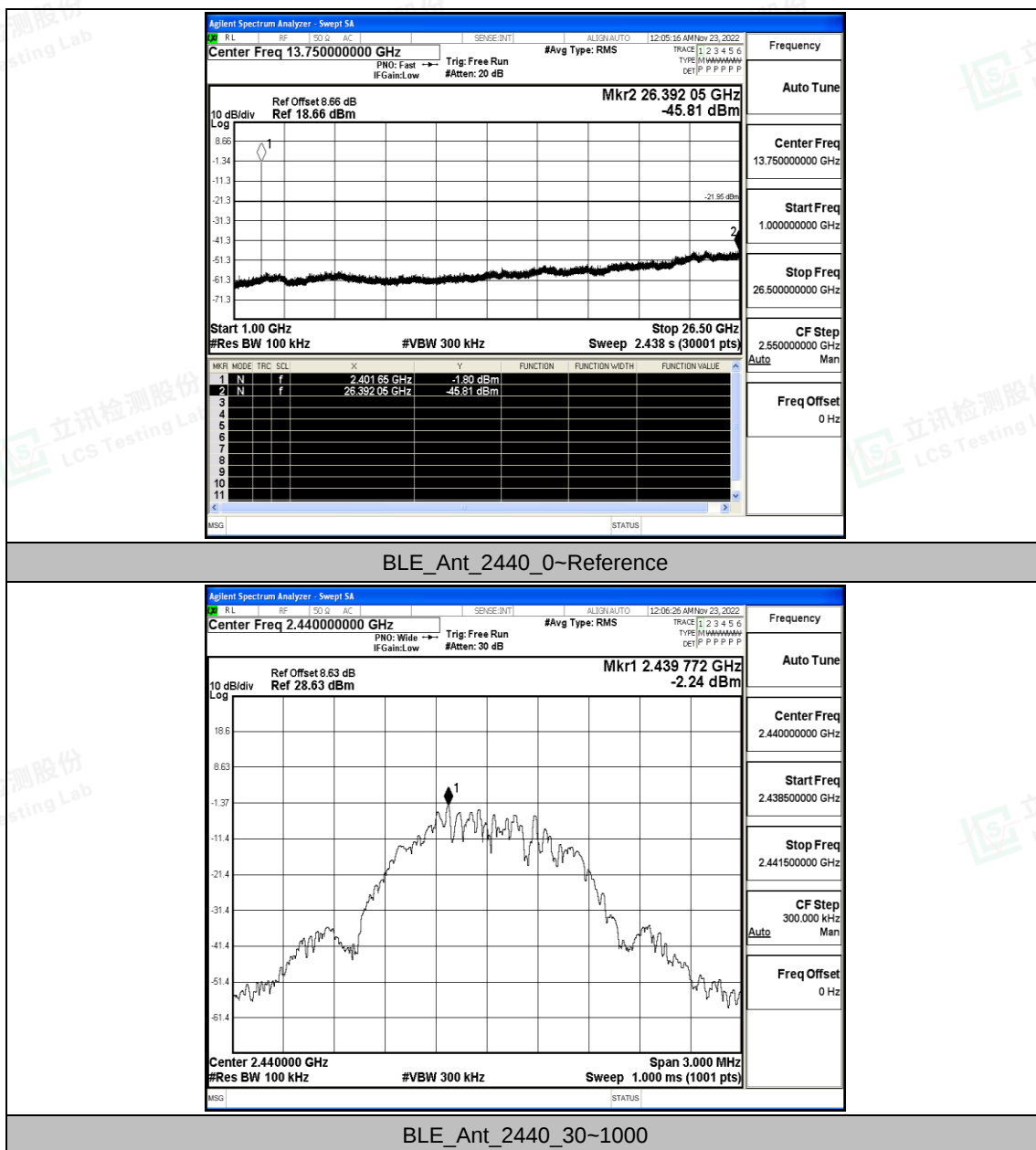


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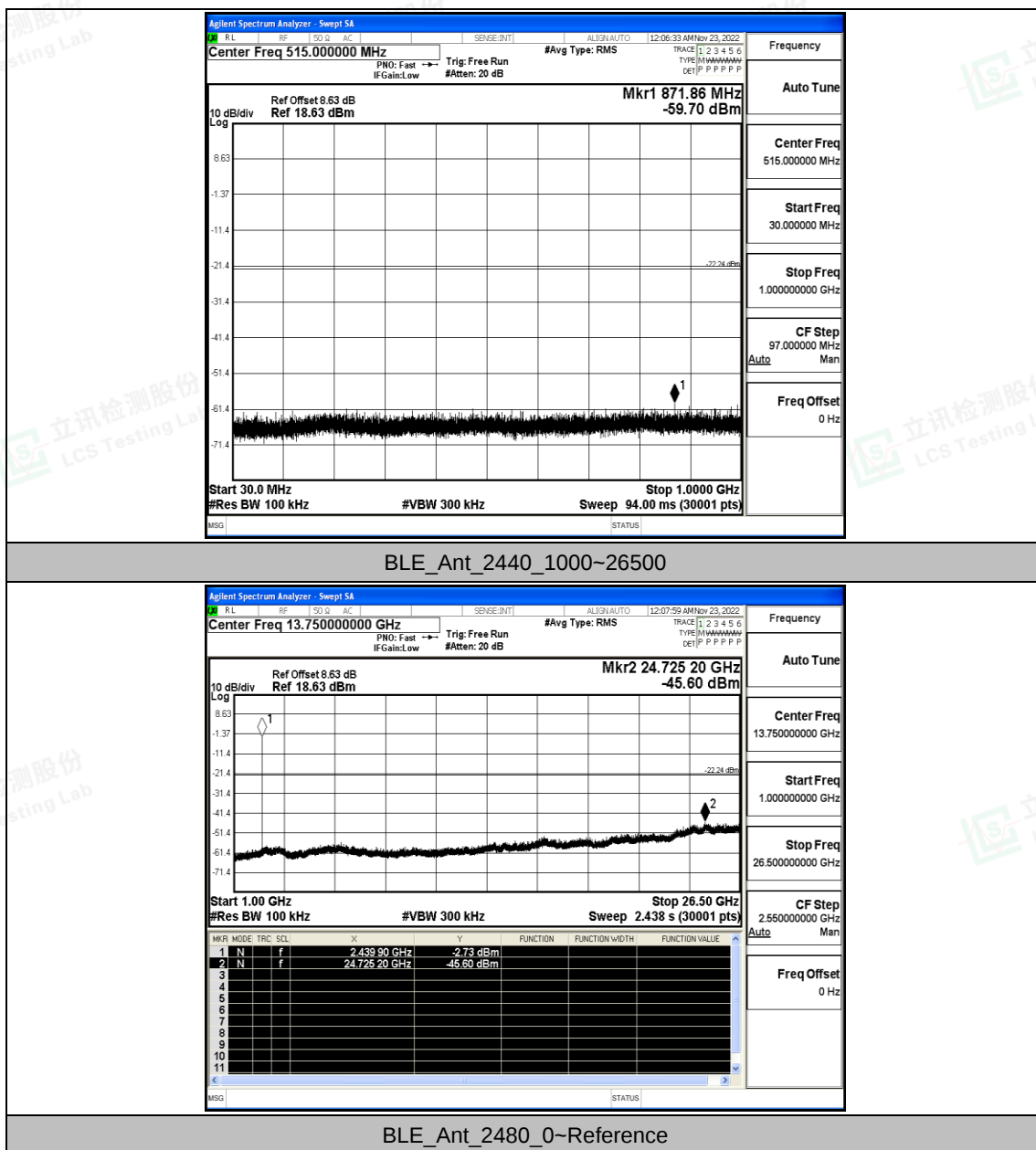


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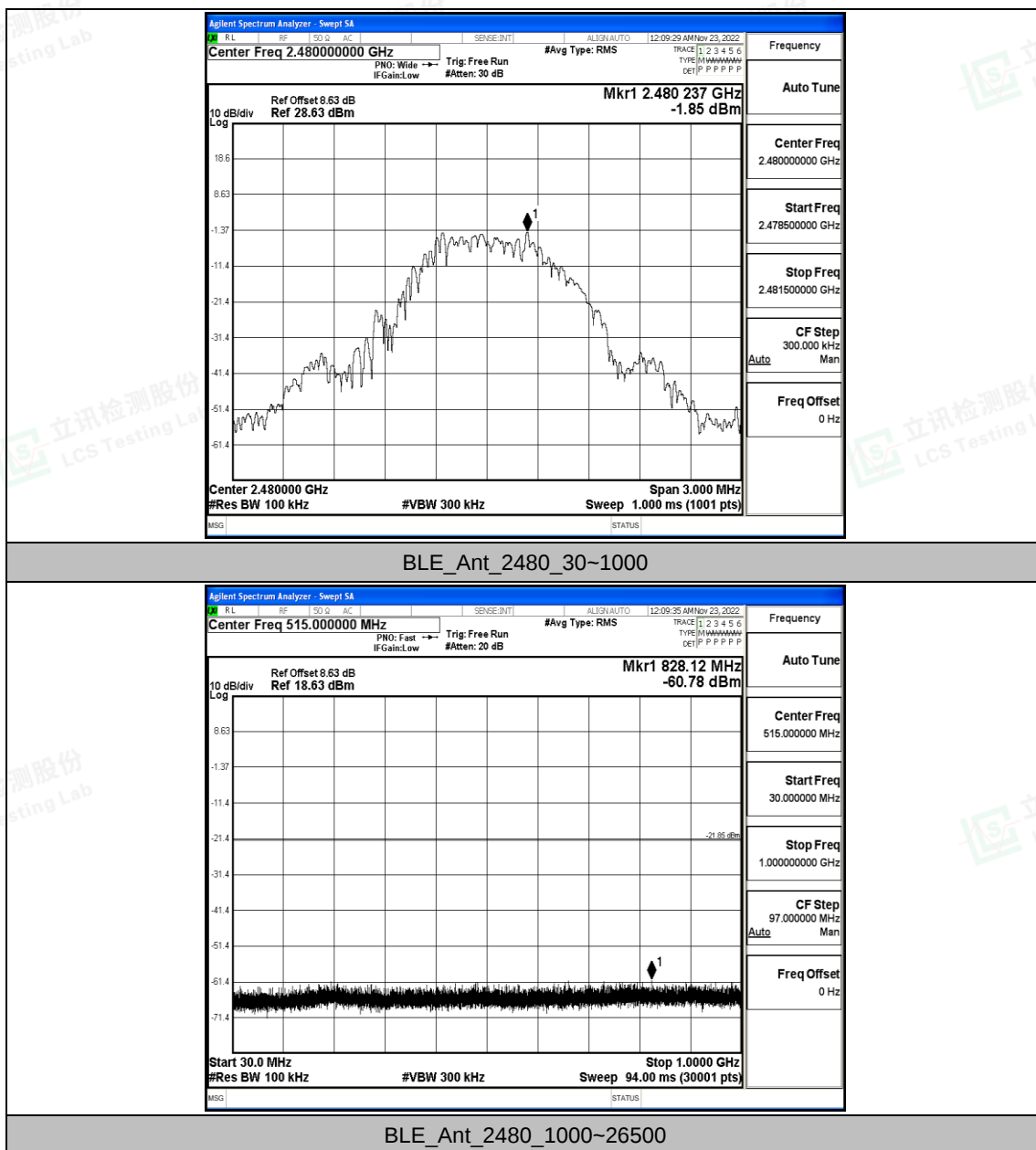


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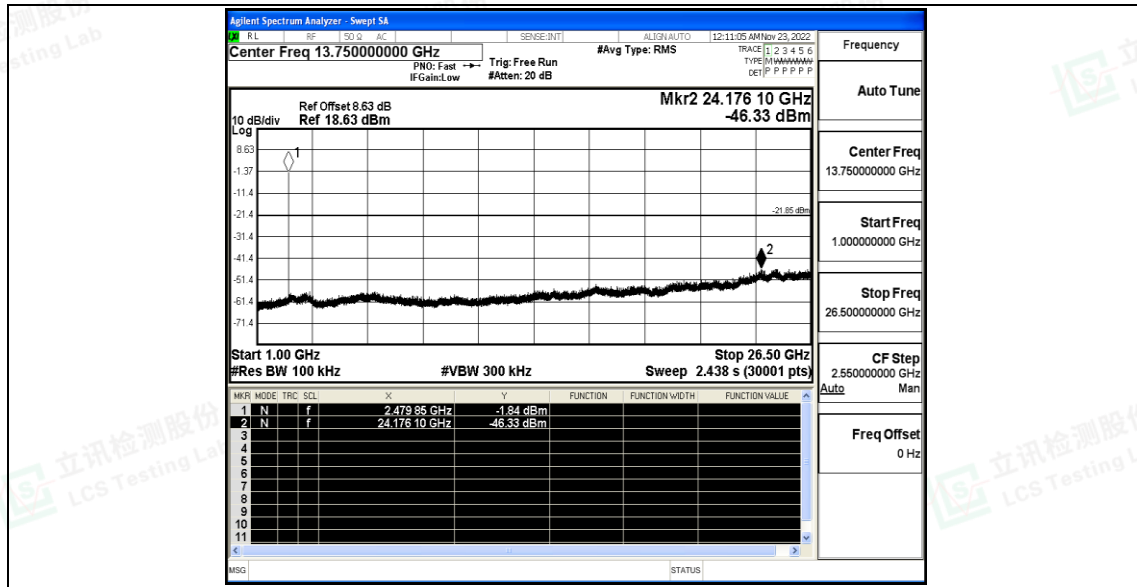


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A.6 Duty Cycle

Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T
BLE	Ant	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	0.38	0.63	0.6032	60.32	2.20	2.63



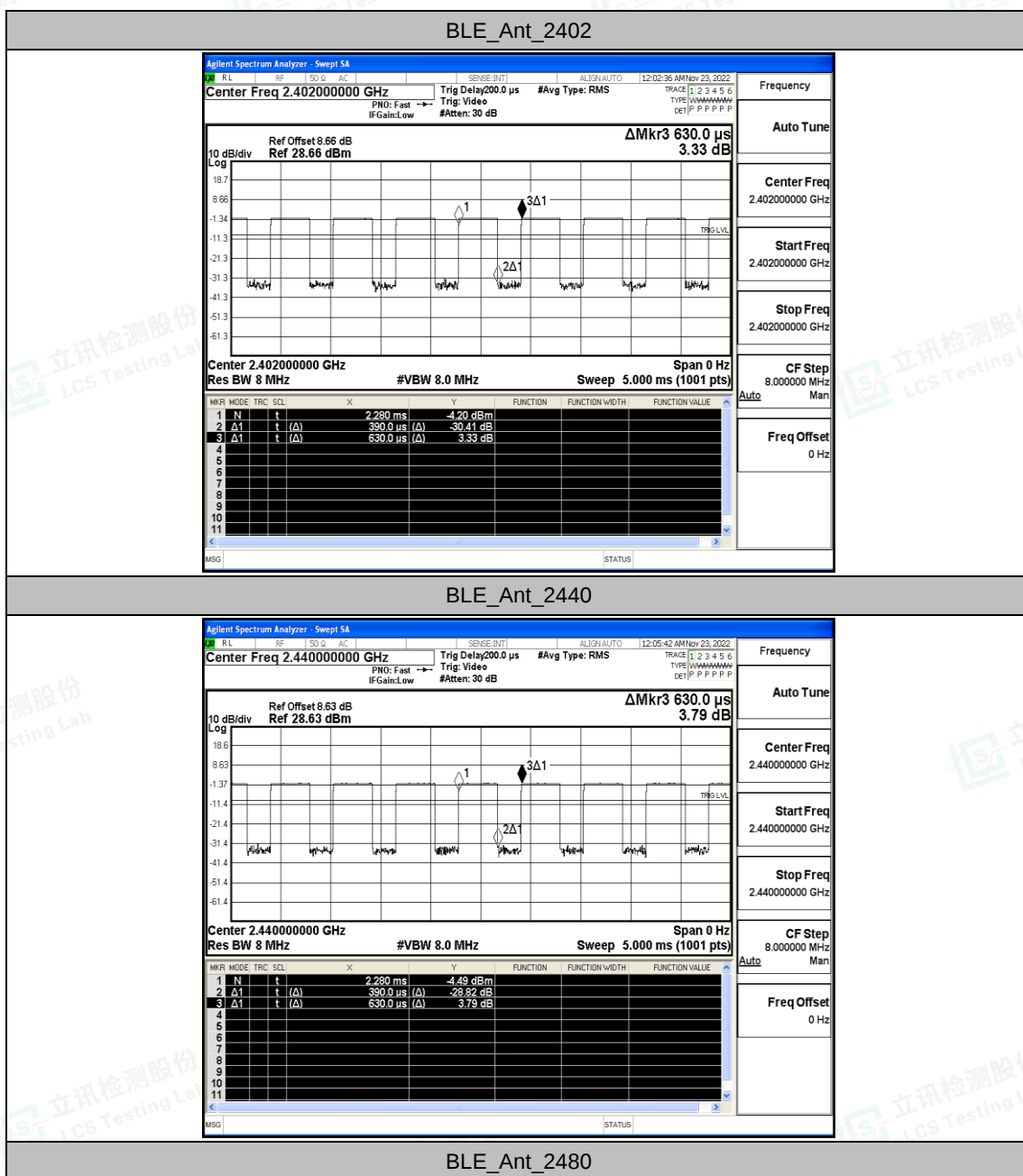
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Test Graphs

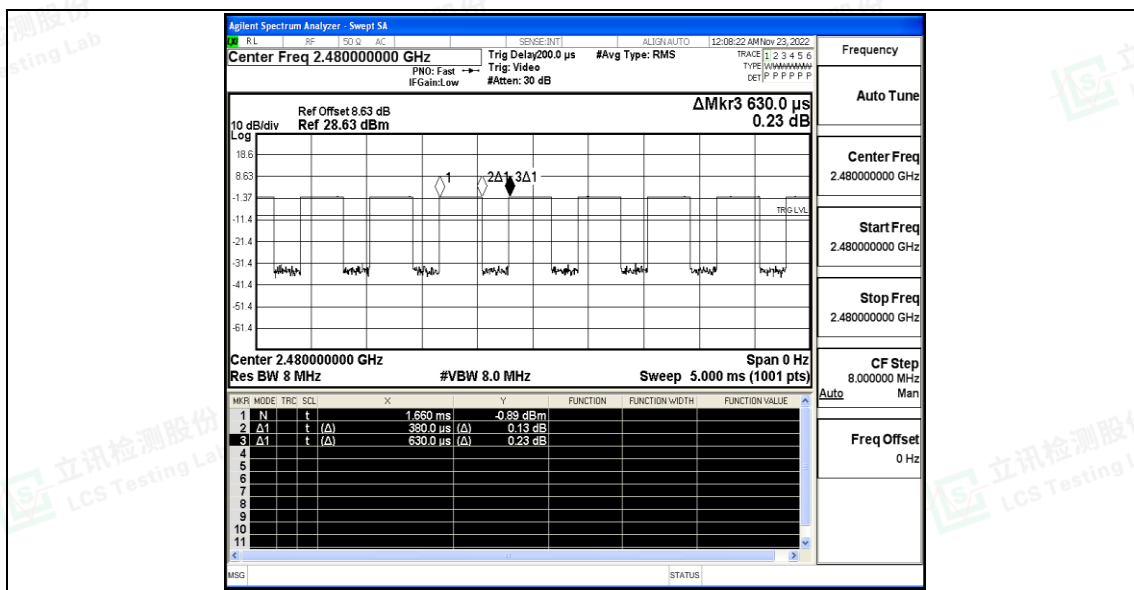


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A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant	Low	2402	AV	2310.000	-57.37	≤-41.20	37.83	≤54	PASS
				AV	2389.355	-56.5	≤-41.20	38.70	≤54	PASS
				AV	2390.000	-57.06	≤-41.20	38.14	≤54	PASS
				Peak	2310.000	-51.24	≤-21.20	43.96	≤74	PASS
				Peak	2385.890	-47.03	≤-21.20	48.17	≤74	PASS
				Peak	2390.000	-50.47	≤-21.20	44.73	≤74	PASS
		High	2480	AV	2483.500	-53.98	≤-41.20	41.22	≤54	PASS
				AV	2483.520	-53.98	≤-41.20	41.22	≤54	PASS
				AV	2500.000	-56.41	≤-41.20	38.79	≤54	PASS
				Peak	2483.500	-48.76	≤-21.20	46.44	≤74	PASS
				Peak	2499.120	-47.19	≤-21.20	48.01	≤74	PASS
				Peak	2500.000	-49.79	≤-21.20	45.41	≤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

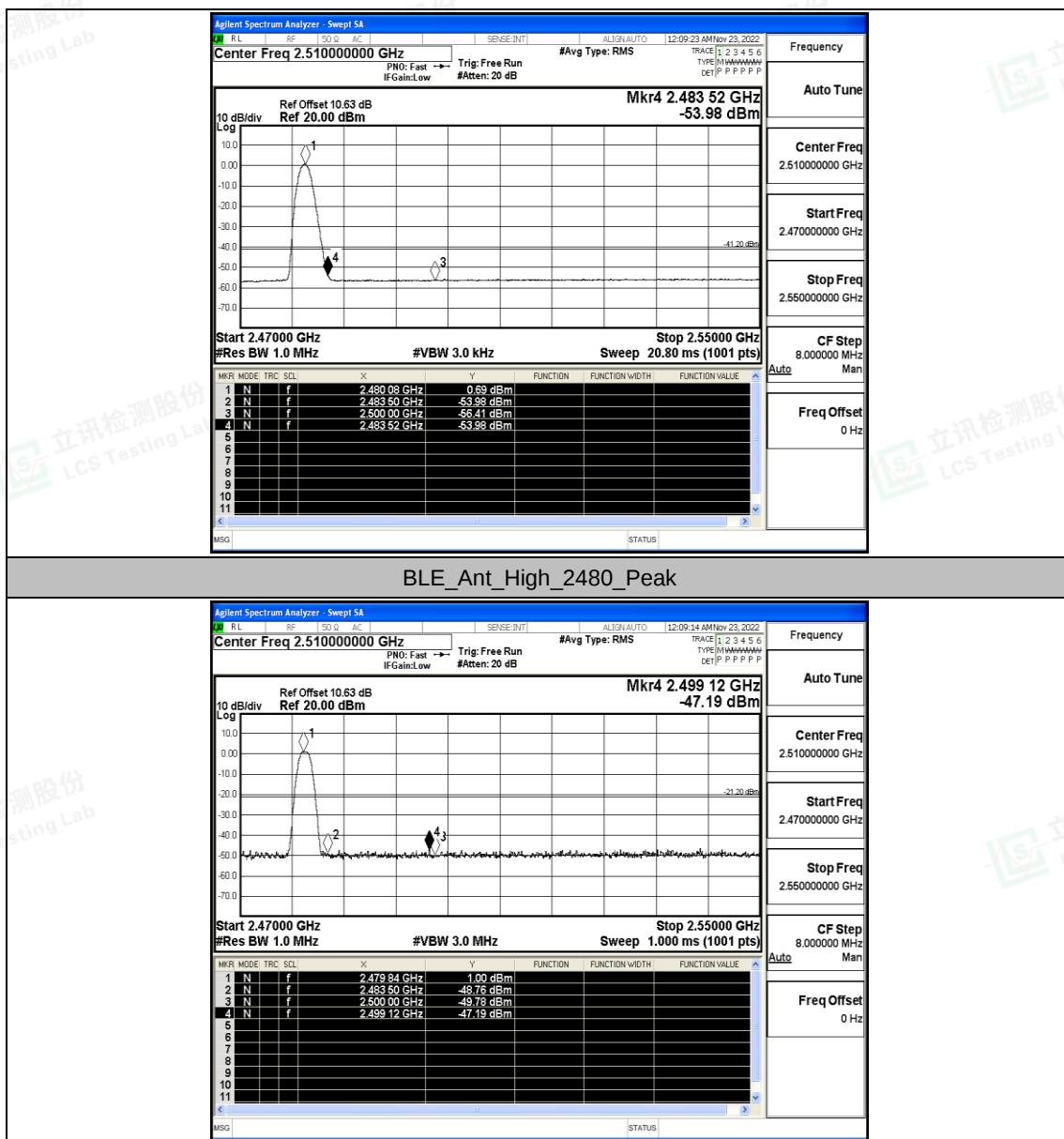


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