



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: laptop

Test Model: FZTK142

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan



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B.1 6dB Bandwidth

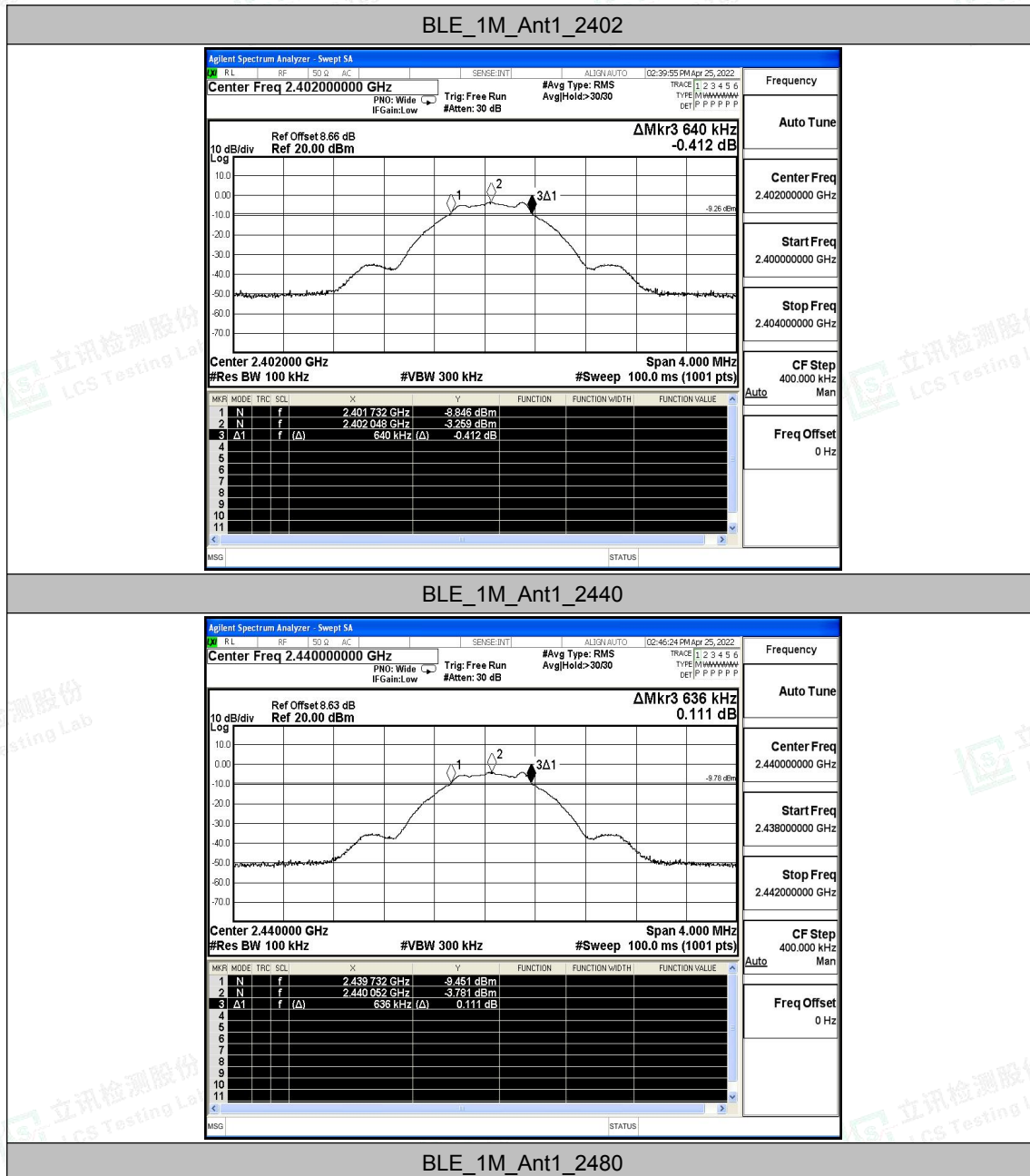
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.640	2401.732	2402.372	0.5	PASS
		2440	0.636	2439.732	2440.368	0.5	PASS
		2480	0.640	2479.732	2480.372	0.5	PASS





Test Graphs

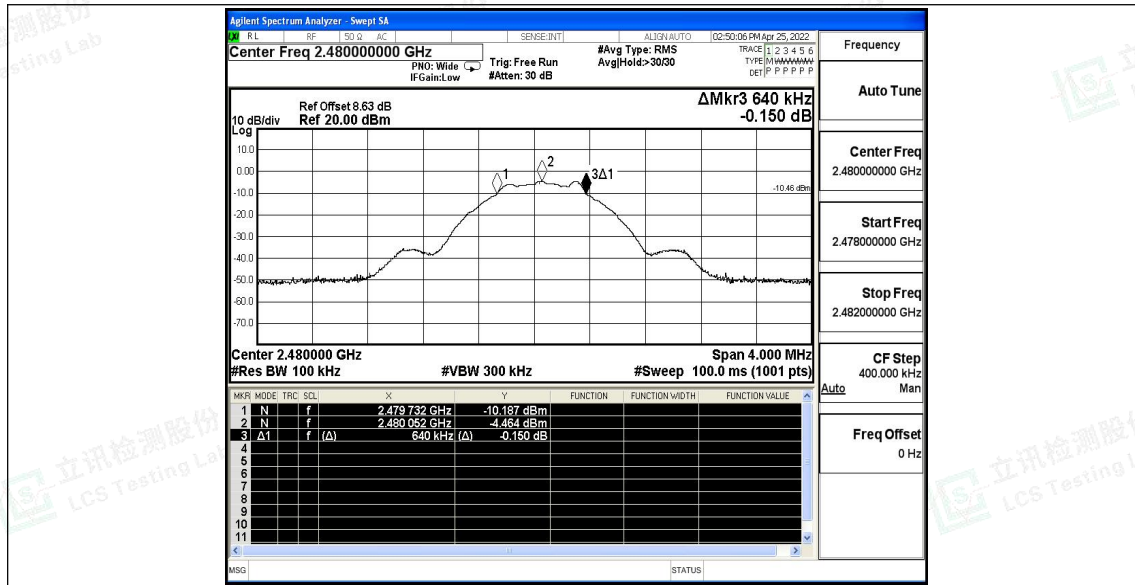


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B.2 Maximum conducted output power

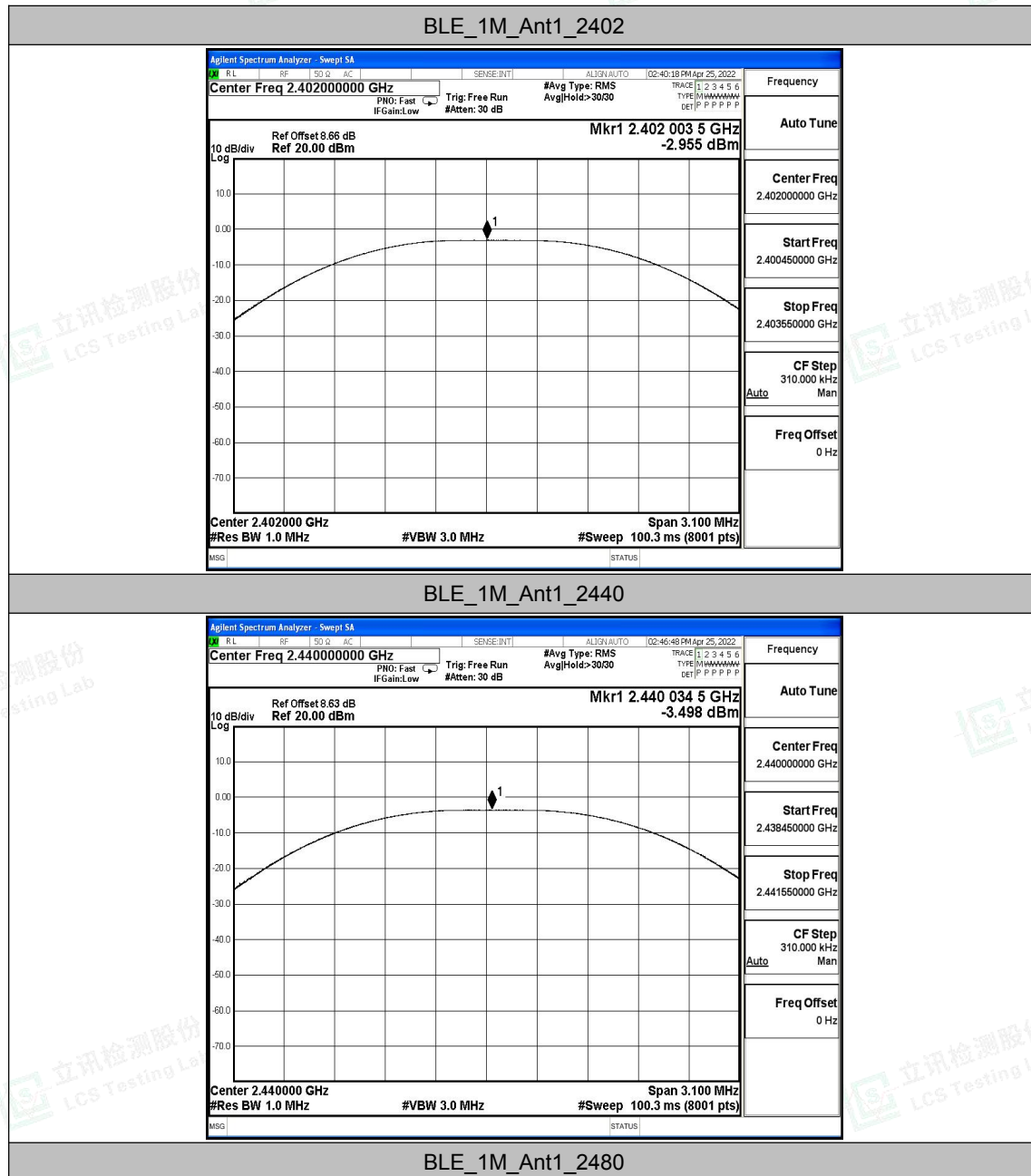
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.96	≤30	PASS
		2440	-3.5	≤30	PASS
		2480	-4.1	≤30	PASS





Test Graphs

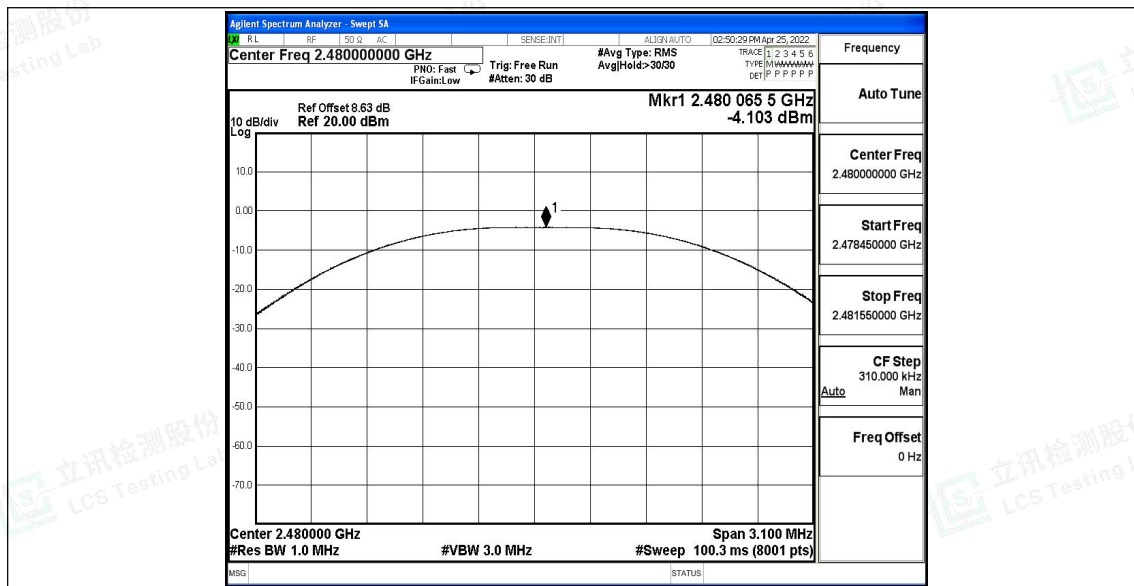


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B.3 Maximum power spectral density

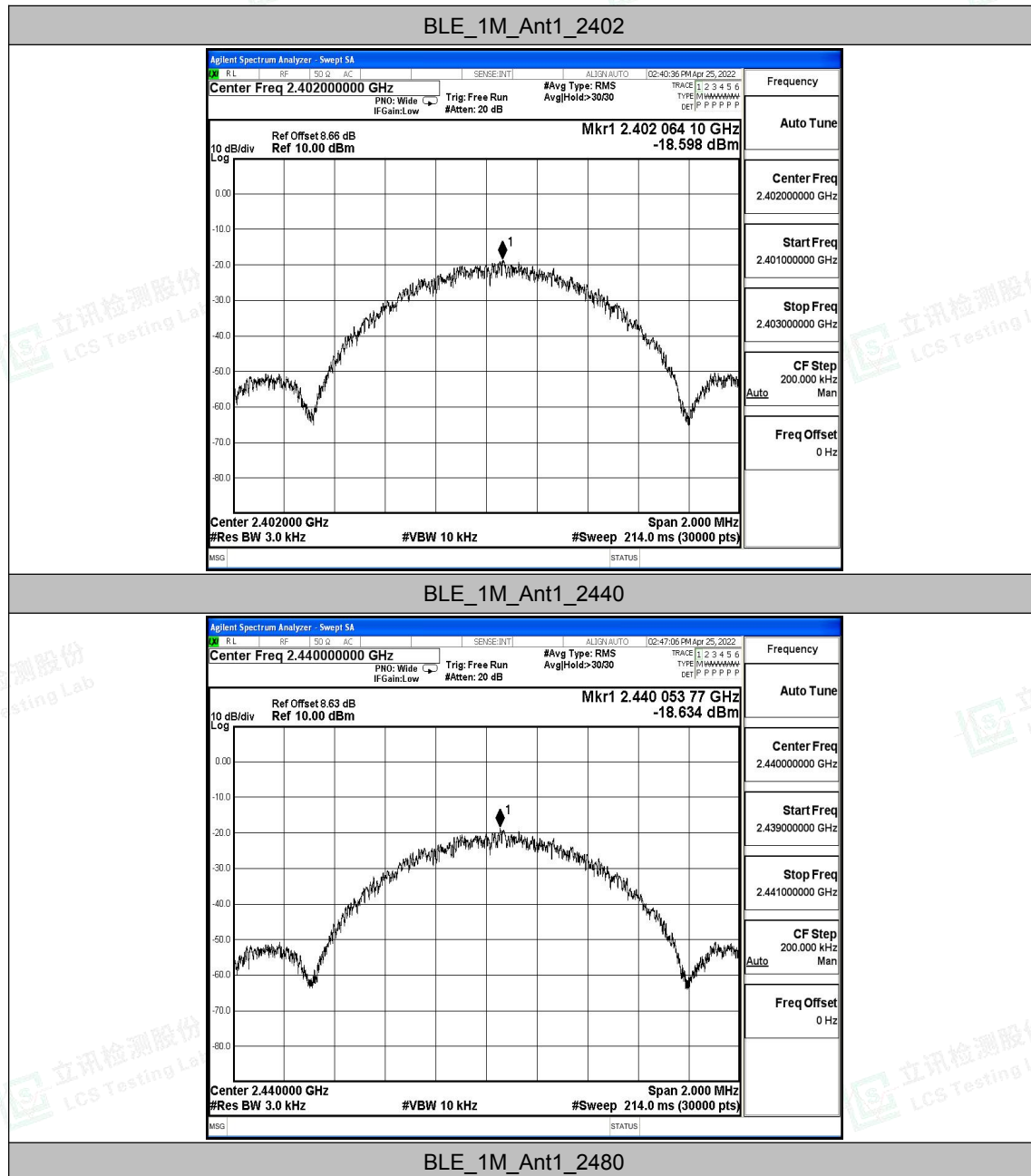
Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.6	≤8.00	PASS
		2440	-18.63	≤8.00	PASS
		2480	-19.43	≤8.00	PASS





Test Graphs

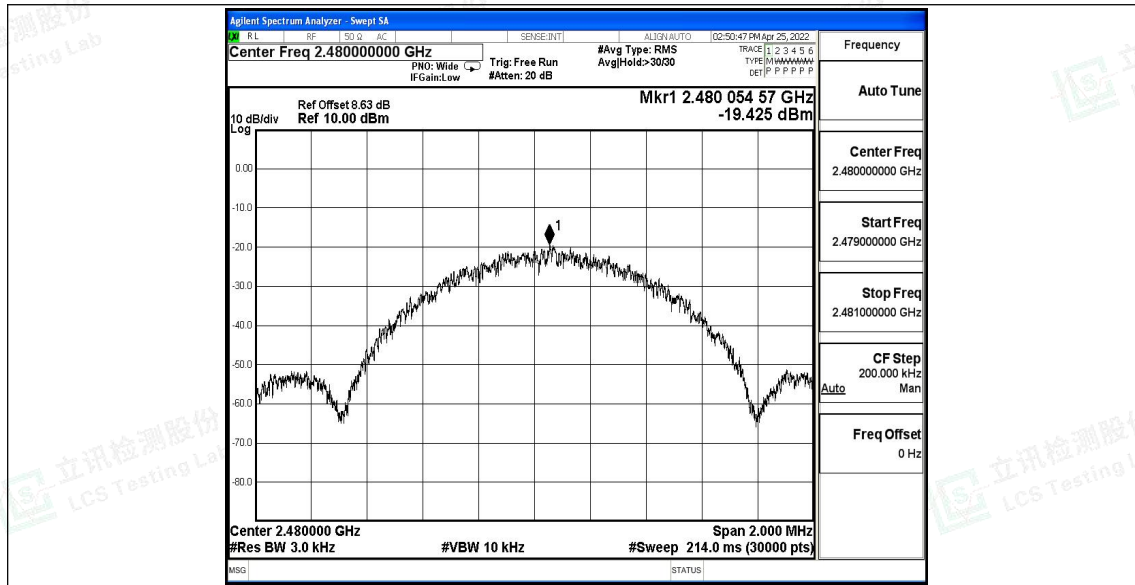


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B.4 Band edge measurements

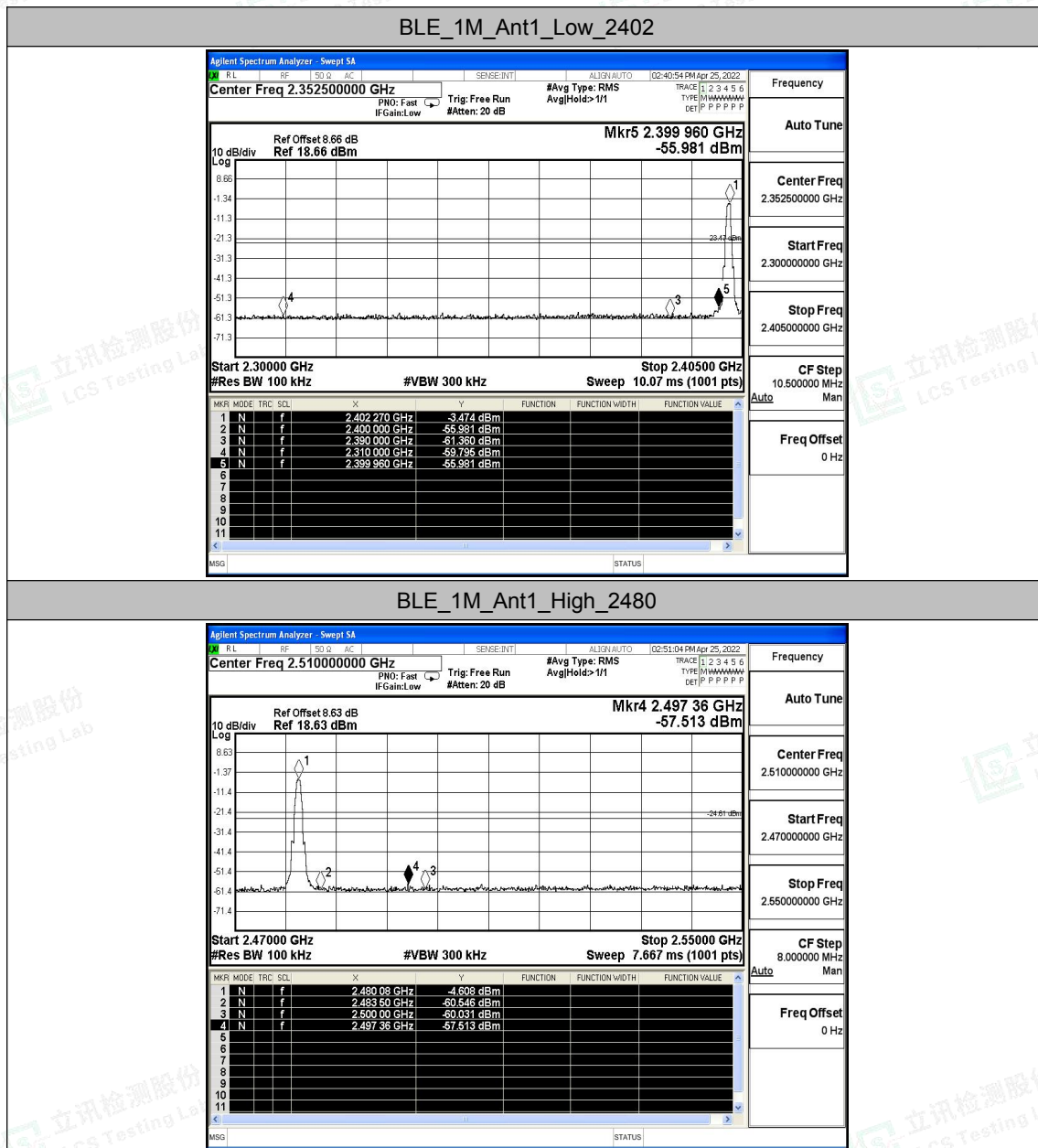
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.47	-57.38	≤-23.47	PASS
		High	2480	-4.61	-57.51	≤-24.61	PASS





Test Graphs



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B.5 Conducted Spurious Emission

Test Result

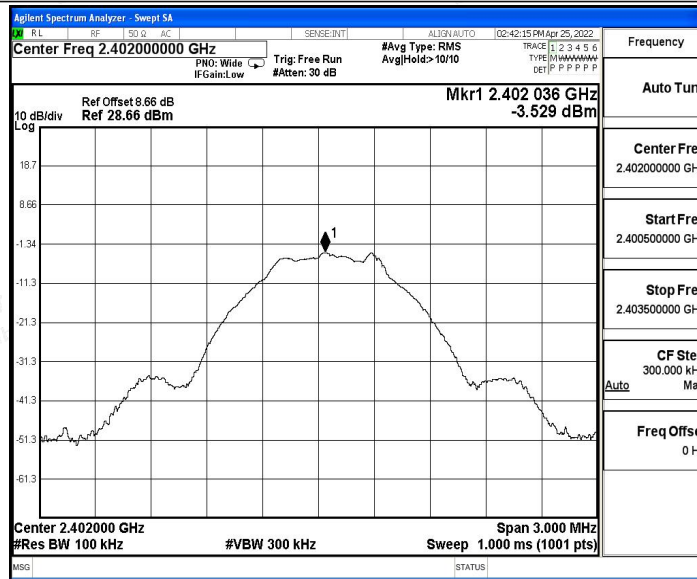
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.53	-3.53	---	PASS
			30~1000	-3.53	-52.19	≤-23.53	PASS
			1000~26500	-3.53	-45.7	≤-23.53	PASS
		2440	Reference	-4.02	-4.02	---	PASS
			30~1000	-4.02	-50.97	≤-24.02	PASS
			1000~26500	-4.02	-46.25	≤-24.02	PASS
		2480	Reference	-4.56	-4.56	---	PASS
			30~1000	-4.56	-50.72	≤-24.56	PASS
			1000~26500	-4.56	-45.91	≤-24.56	PASS



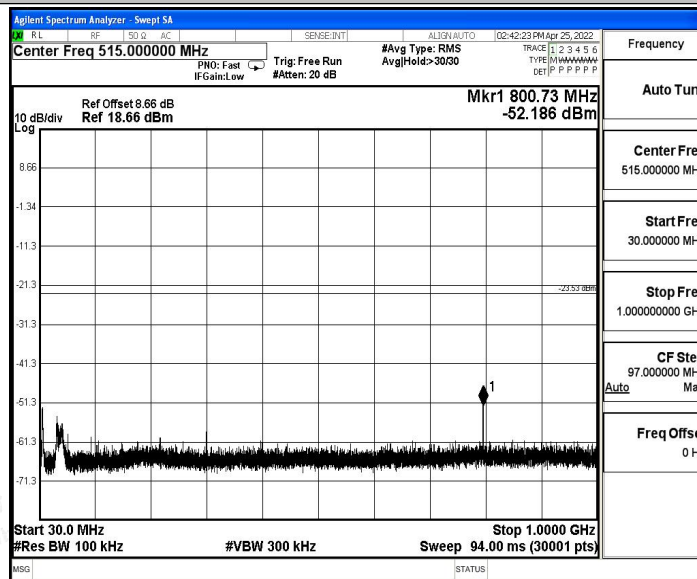


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

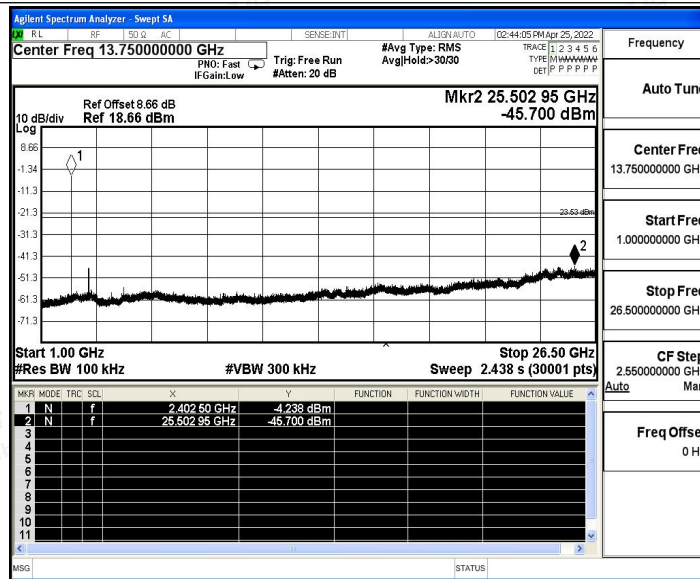


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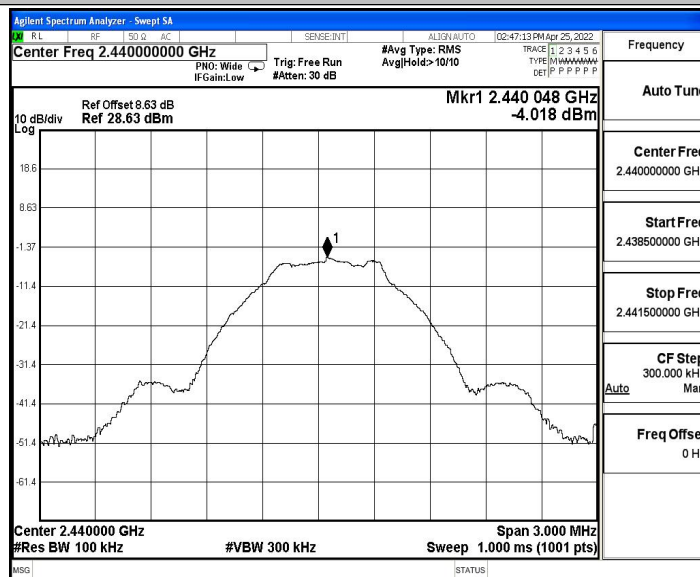
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

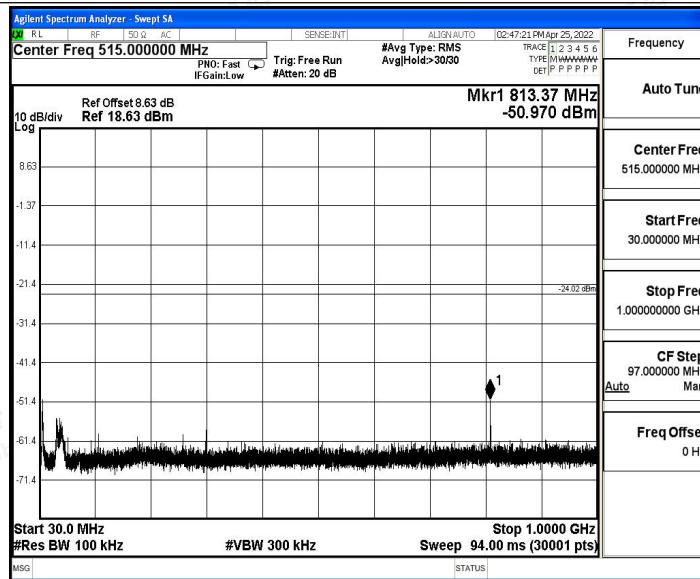


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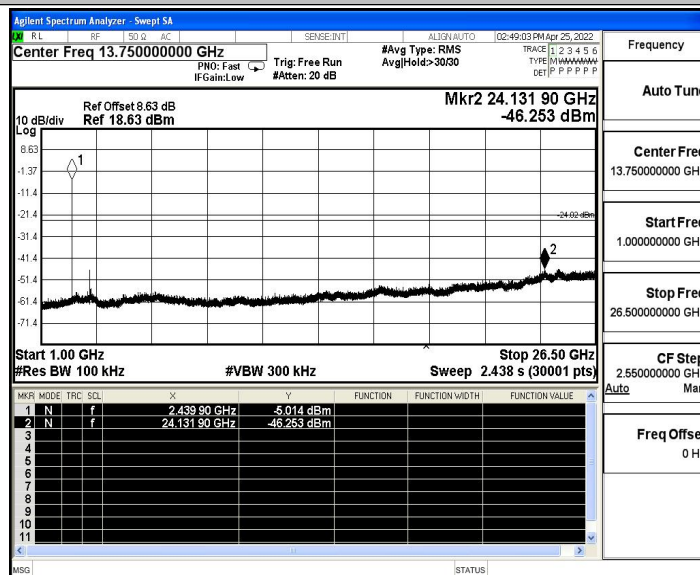
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

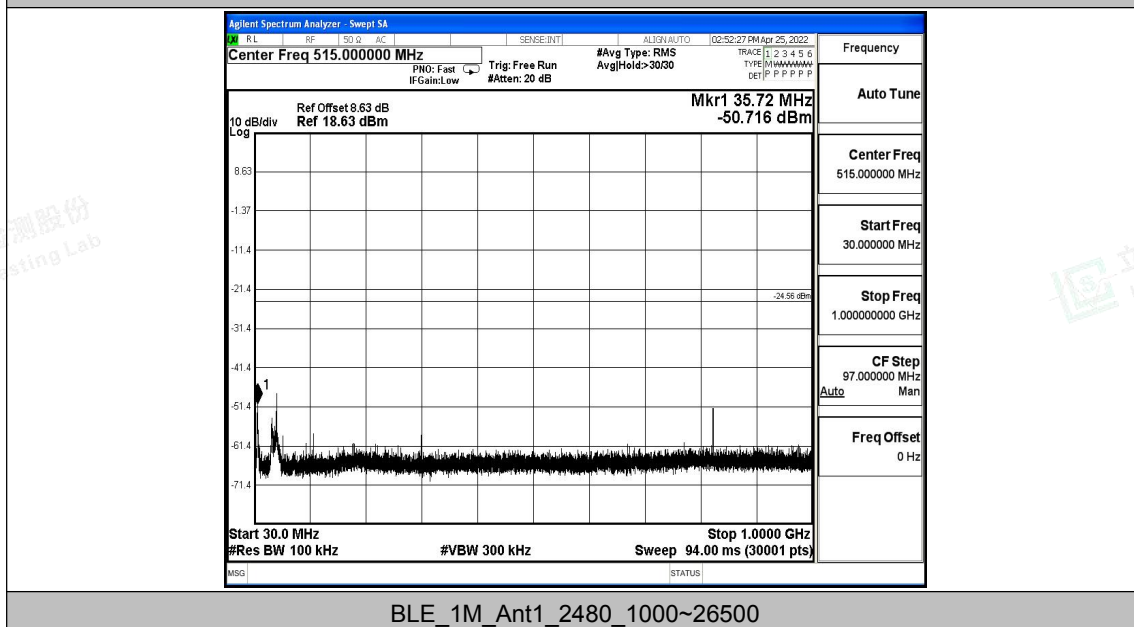
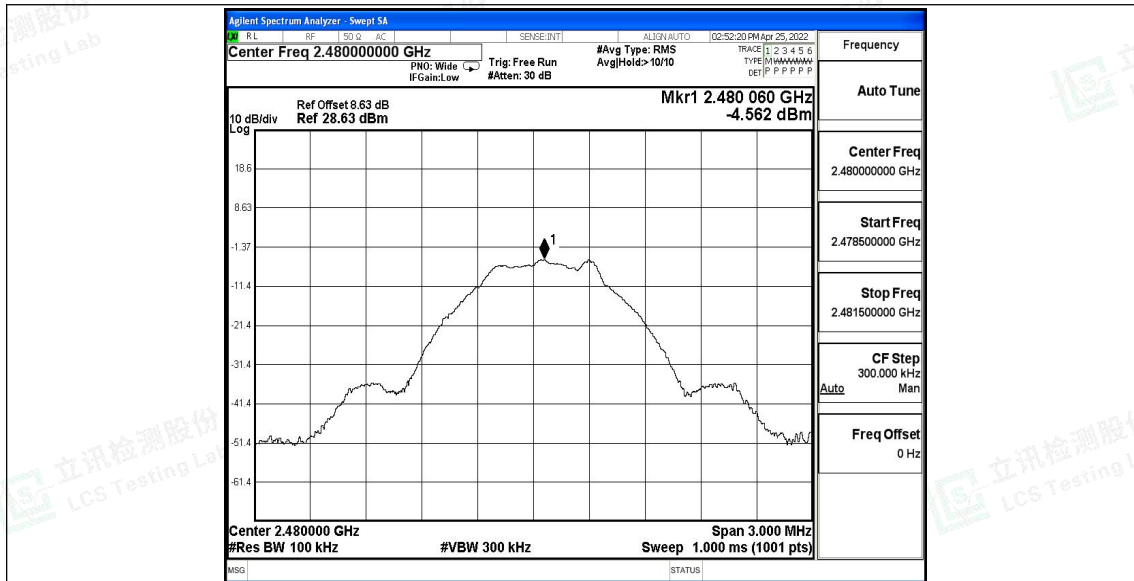


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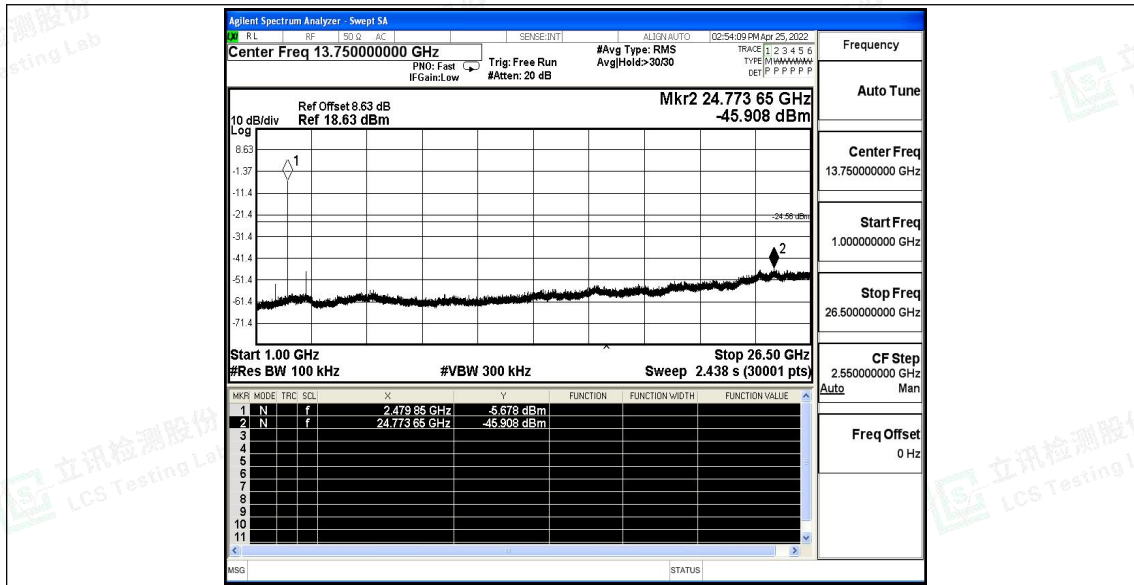


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B.6 Duty Cycle

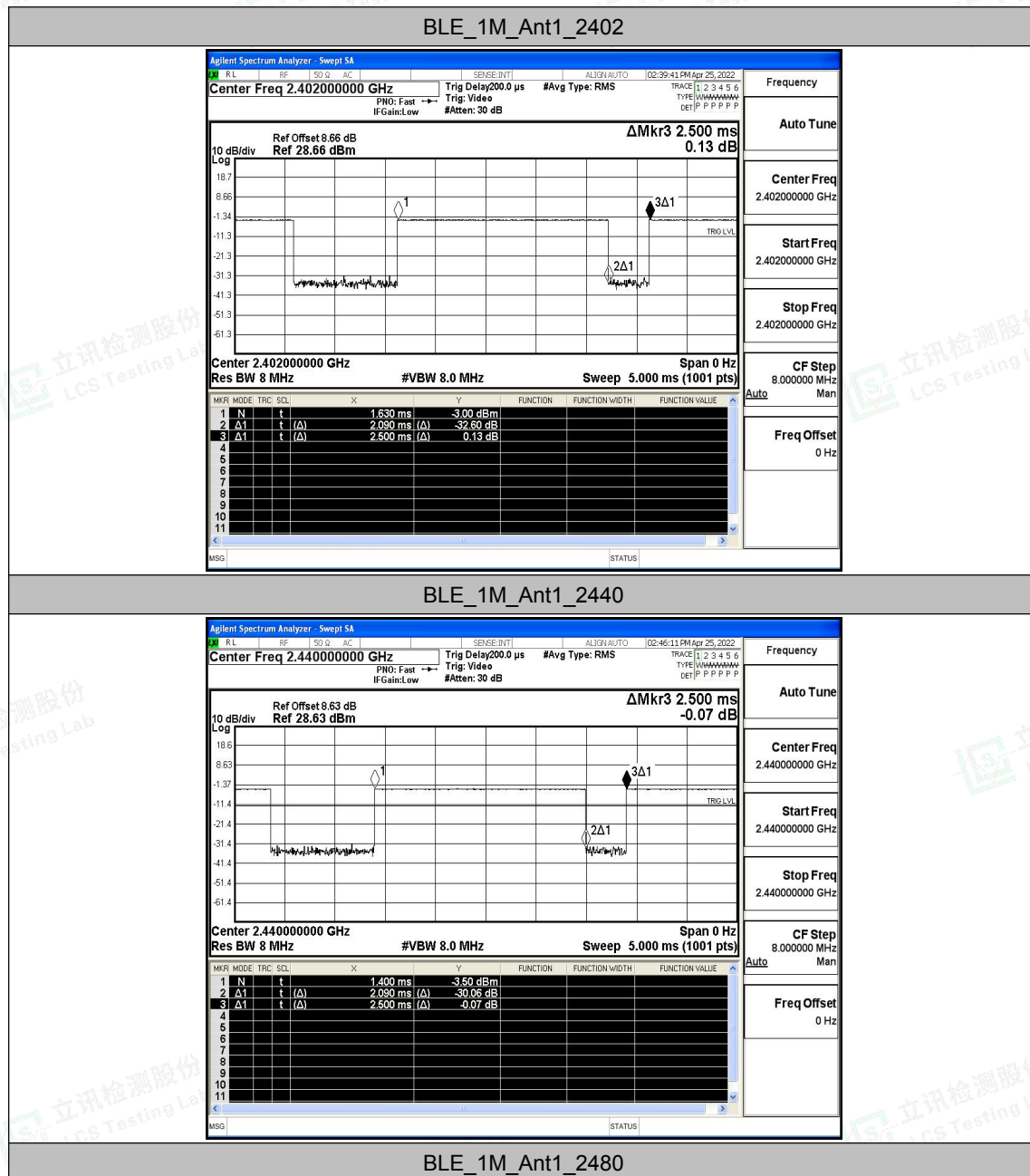
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T[kHz]
BLE_1M	Ant1	2402	2.09	2.50	0.8360	83.60	0.78	0.48
		2440	2.09	2.50	0.8360	83.60	0.78	0.48
		2480	2.09	3.12	0.6699	66.99	1.74	0.48





Test Graphs

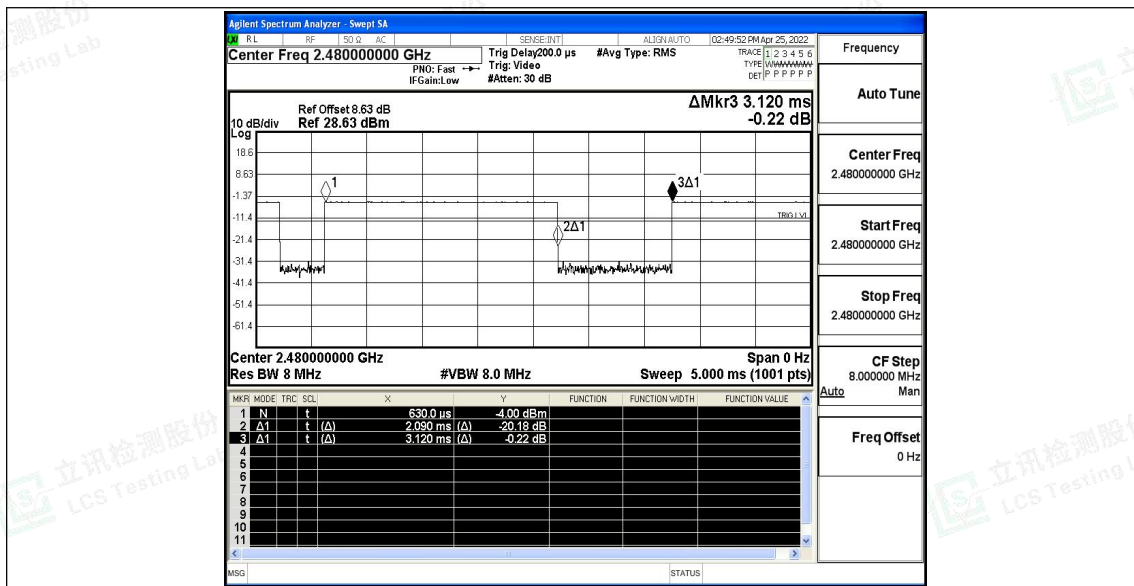


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B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.97	≤-41.20	37.23	≤54	PASS
				AV	2388.935	-57.44	≤-41.20	37.76	≤54	PASS
				AV	2390.000	-57.49	≤-41.20	37.71	≤54	PASS
				Peak	2310.000	-48.2	≤-21.20	47.00	≤74	PASS
				Peak	2342.105	-46.05	≤-21.20	49.15	≤74	PASS
				Peak	2390.000	-47.72	≤-21.20	47.48	≤74	PASS
		High	2480	AV	2483.500	-55.69	≤-41.20	39.51	≤54	PASS
				AV	2483.520	-55.69	≤-41.20	39.51	≤54	PASS
				AV	2500.000	-57.08	≤-41.20	38.12	≤54	PASS
				Peak	2483.500	-47.84	≤-21.20	47.36	≤74	PASS
				Peak	2494.880	-46.25	≤-21.20	48.95	≤74	PASS
				Peak	2500.000	-47.83	≤-21.20	47.37	≤74	PASS

Note:

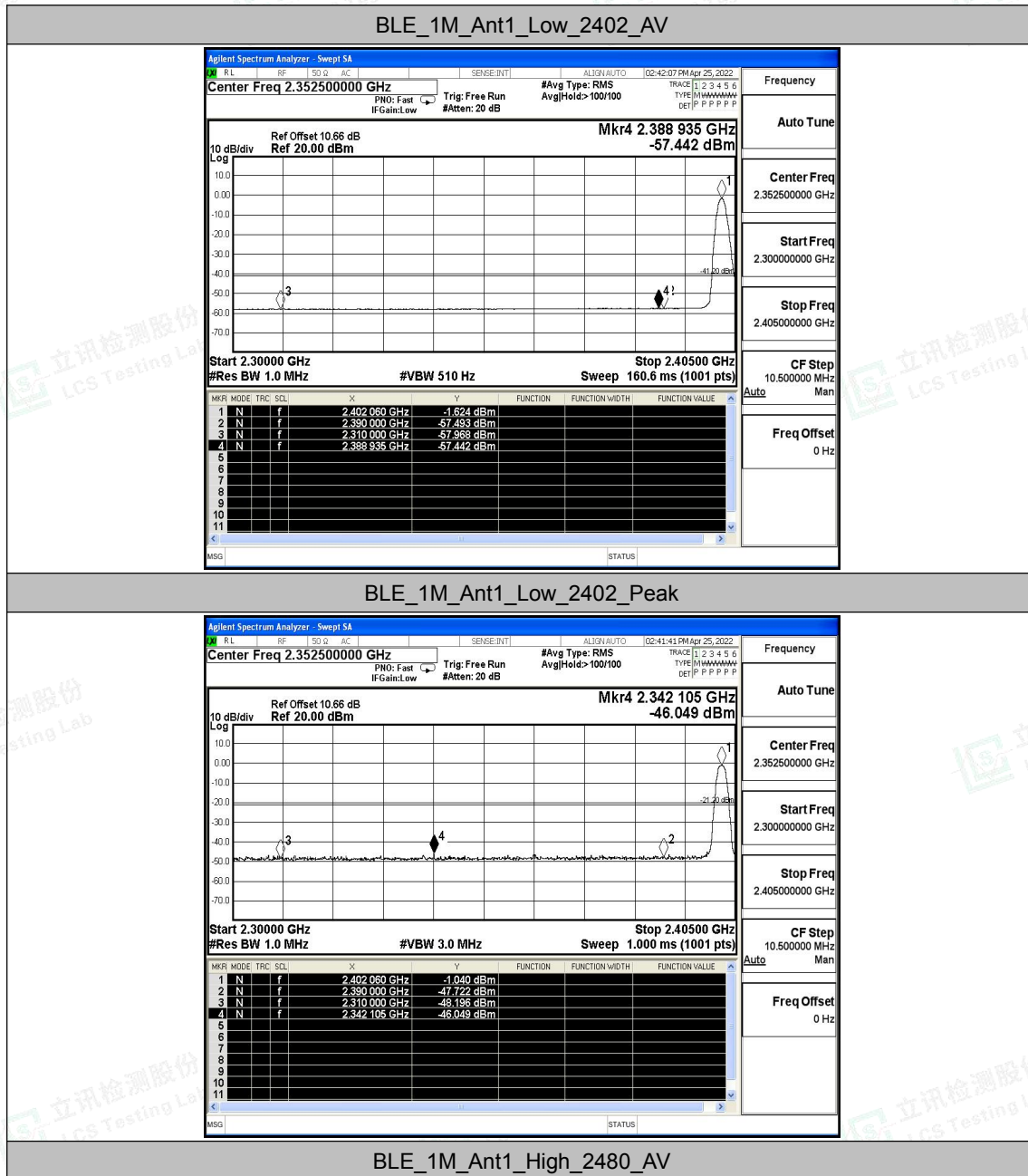
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



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Test Graphs

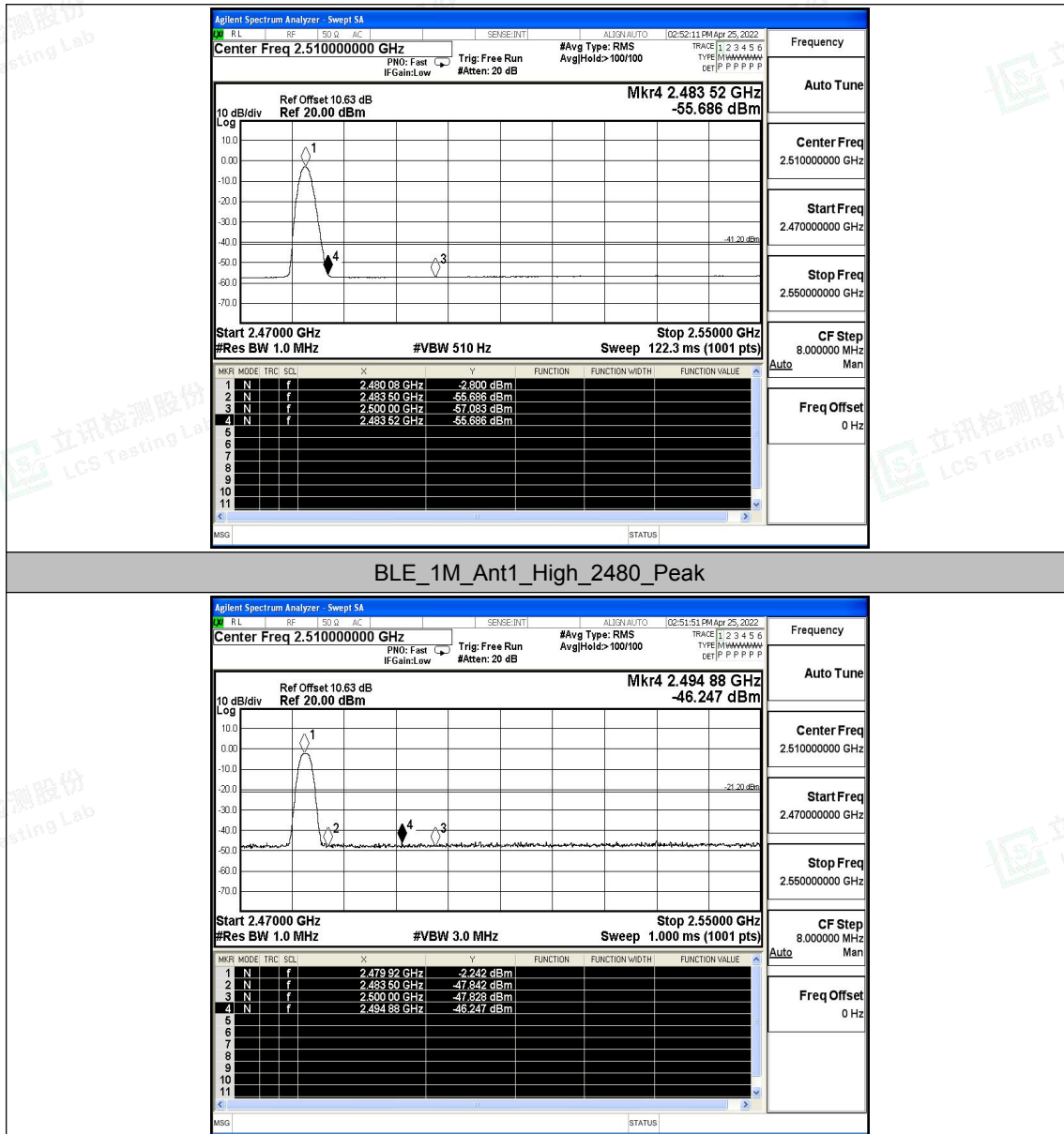


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