



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Karaoke System

Test Model: K6

Environmental Conditions

Temperature:	23.9° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan



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B.1 DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.660	2402.320	0.5	PASS
		2440	0.656	2439.660	2440.316	0.5	PASS
		2480	0.660	2479.652	2480.312	0.5	PASS



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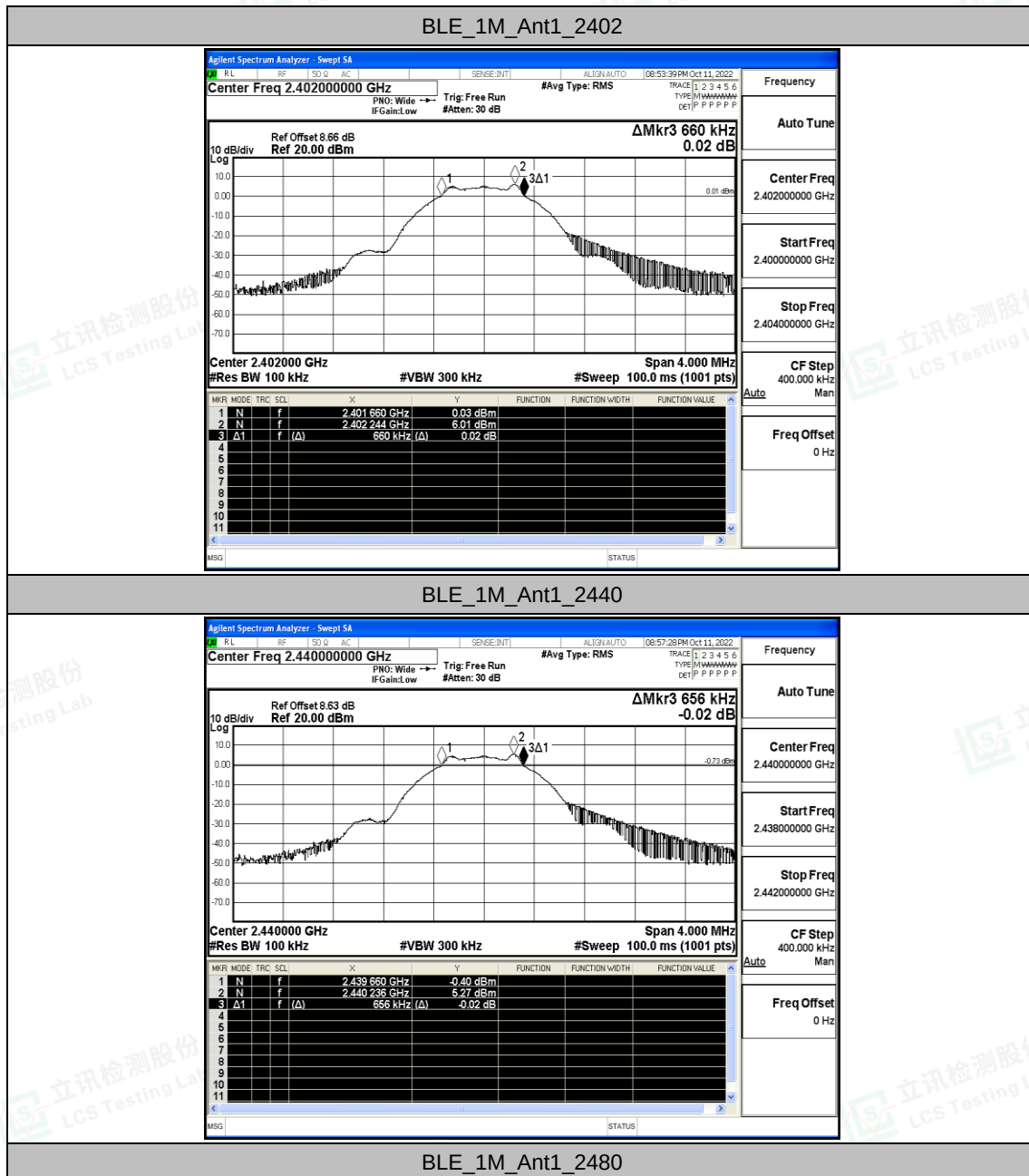
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Test Graphs

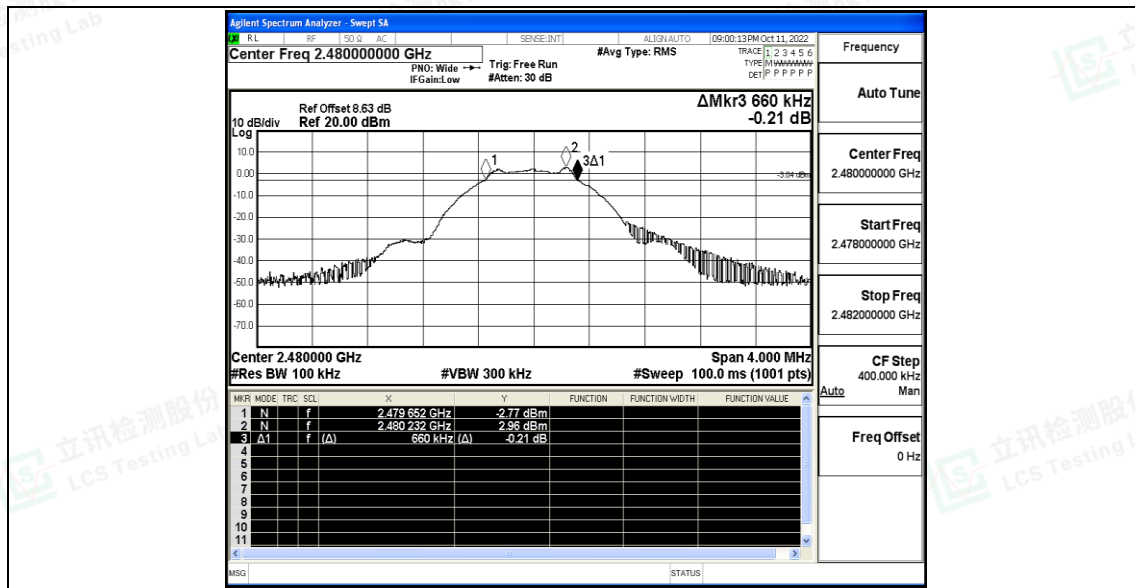


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B.2 Maximum conducted output power

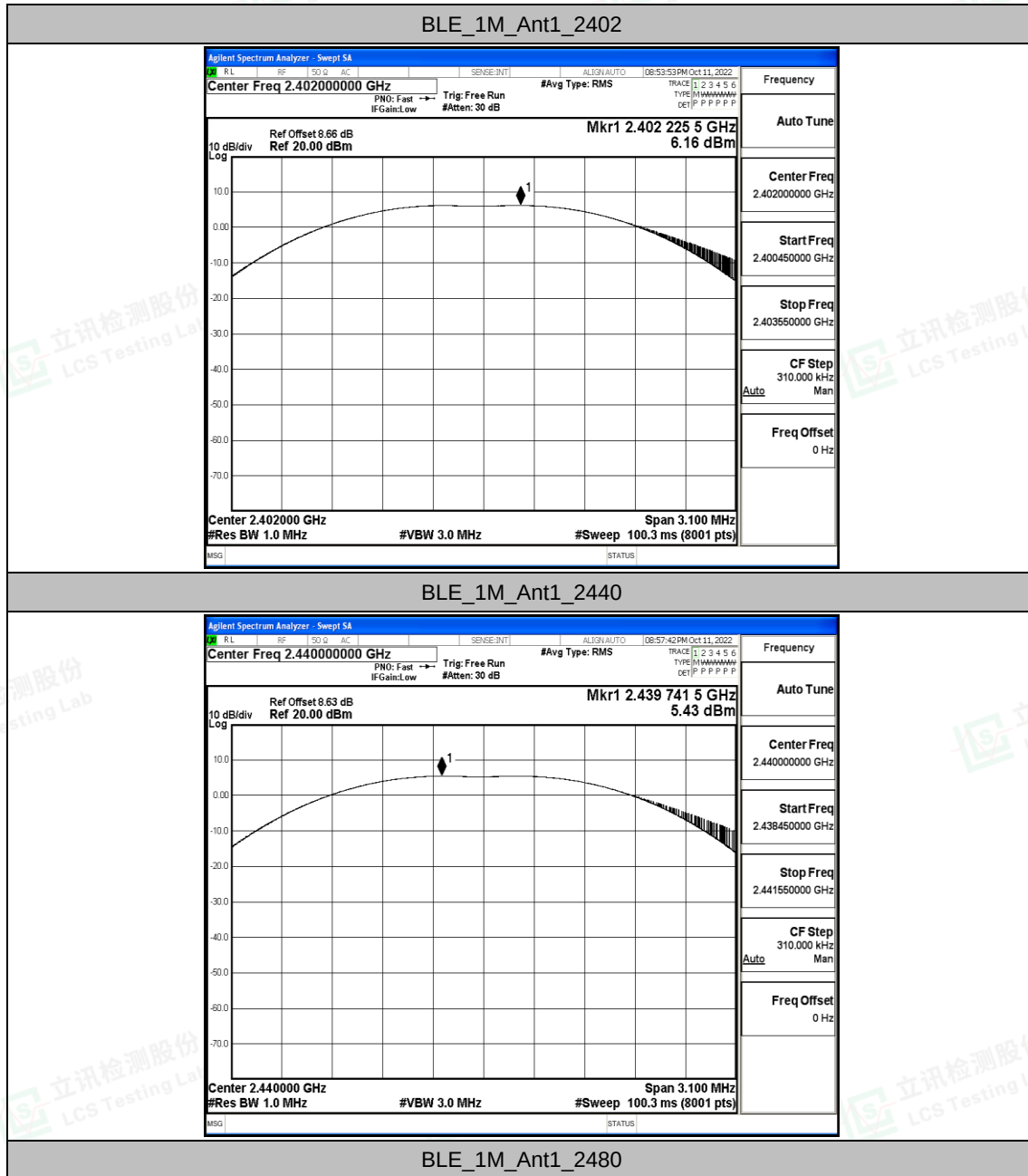
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.16	≤30	PASS
		2440	5.43	≤30	PASS
		2480	3.18	≤30	PASS





Test Graphs

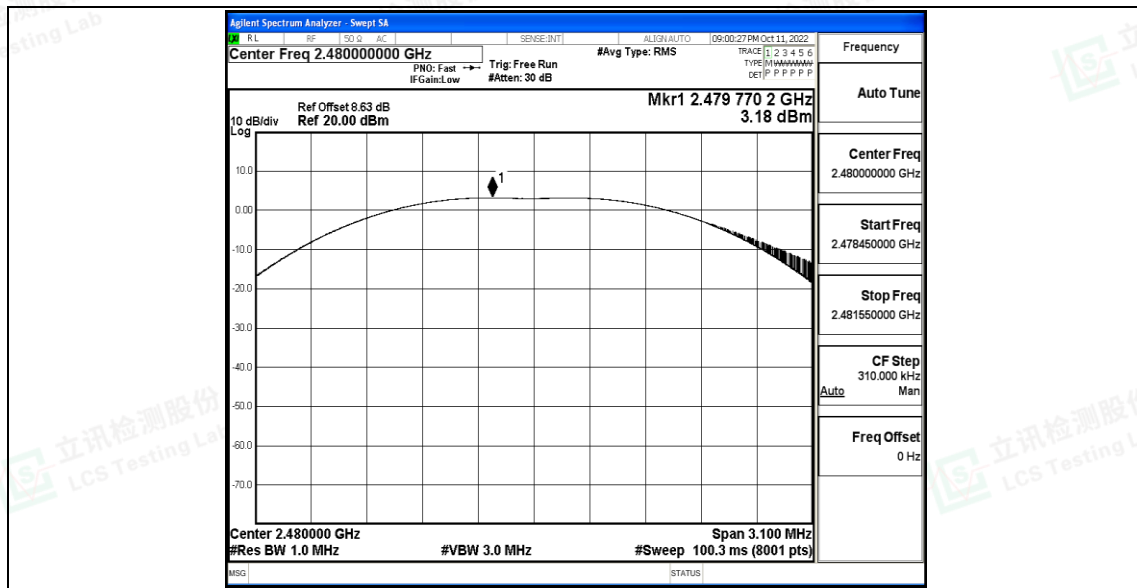


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B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.33	≤8.00	PASS
		2440	-11.02	≤8.00	PASS
		2480	-13.31	≤8.00	PASS



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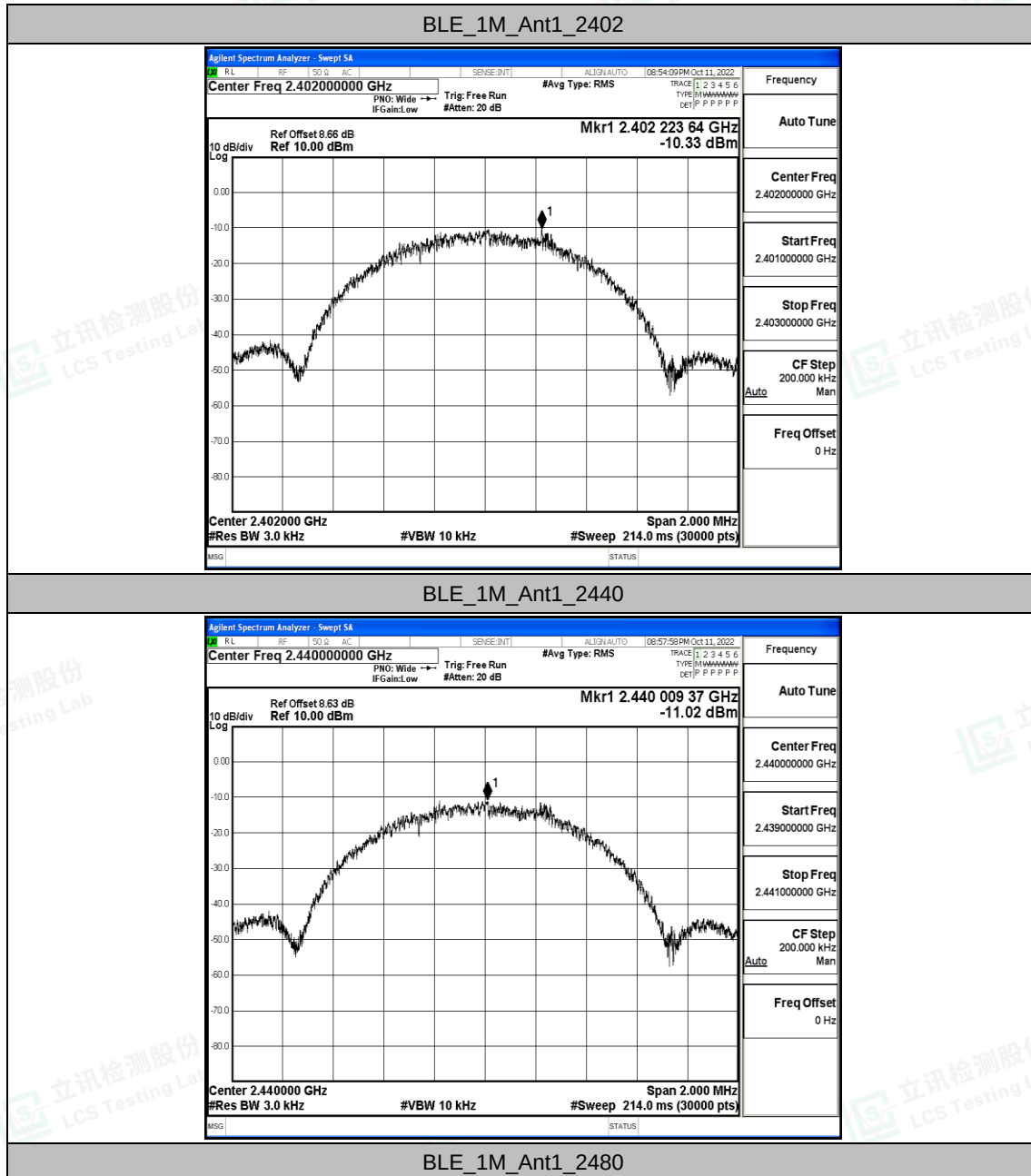
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Test Graphs

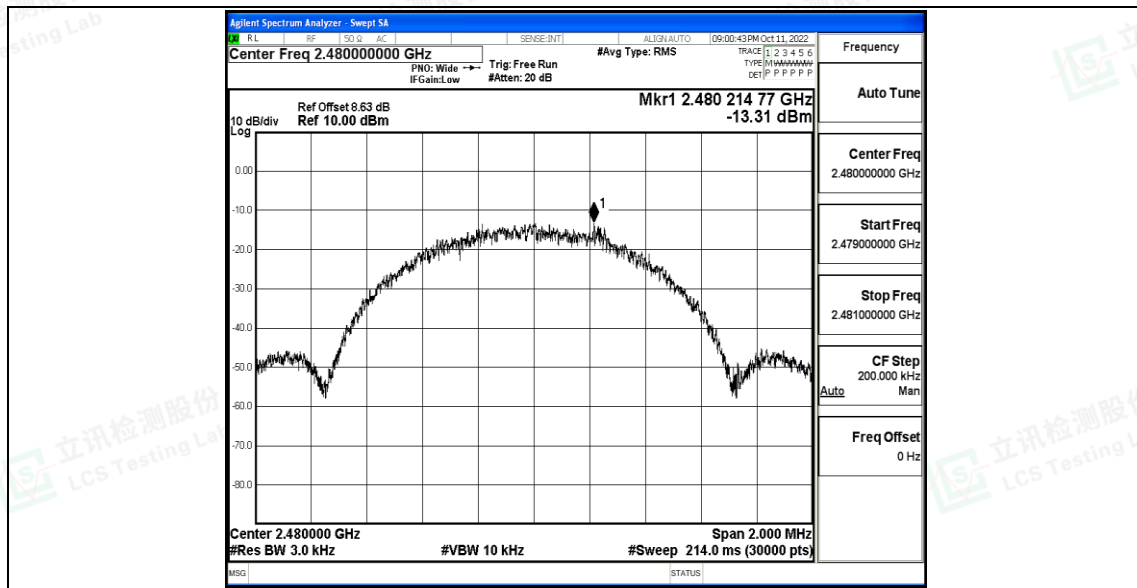


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B.4 Band edge measurements

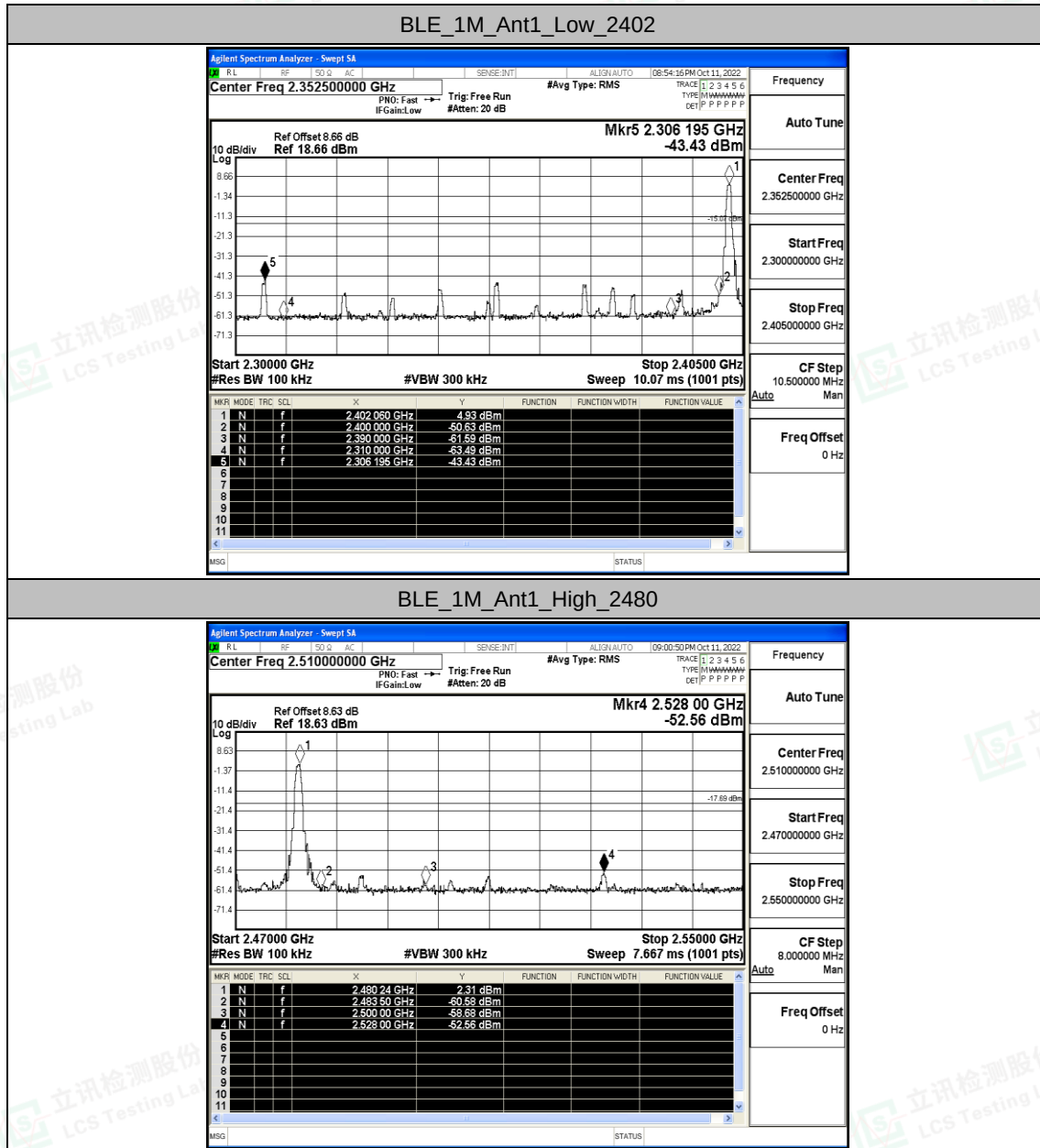
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	4.93	-43.43	≤ -15.07	PASS
		High	2480	2.31	-52.56	≤ -17.69	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	3.70	3.70	---	PASS
			30~1000	3.70	-41.93	≤-16.3	PASS
			1000~26500	3.70	-39.33	≤-16.3	PASS
		2440	Reference	5.12	5.12	---	PASS
			30~1000	5.12	-46.76	≤-14.88	PASS
			1000~26500	5.12	-38.43	≤-14.88	PASS
		2480	Reference	2.90	2.90	---	PASS
			30~1000	2.90	-48.04	≤-17.1	PASS
			1000~26500	2.90	-40.93	≤-17.1	PASS



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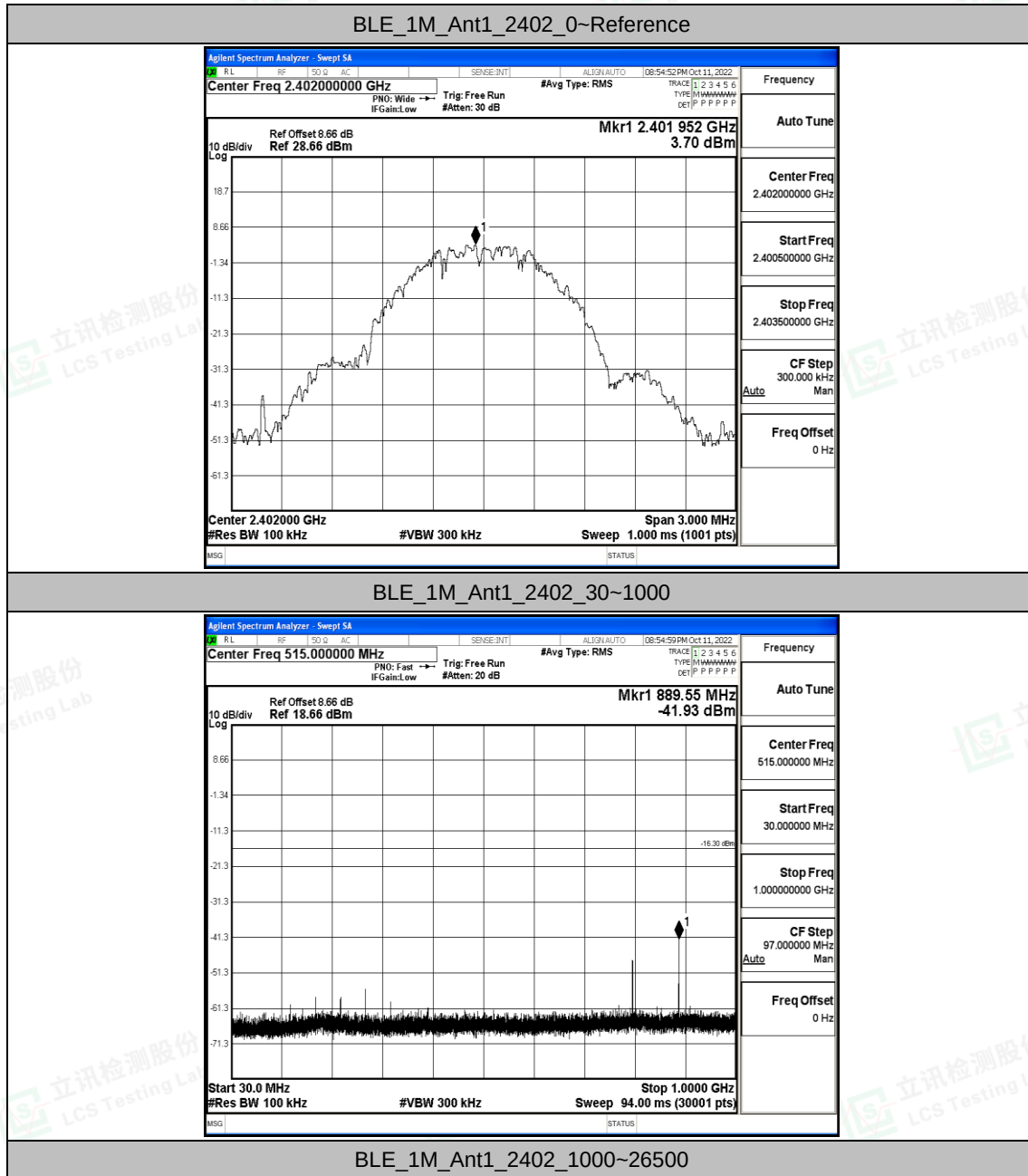
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Test Graphs

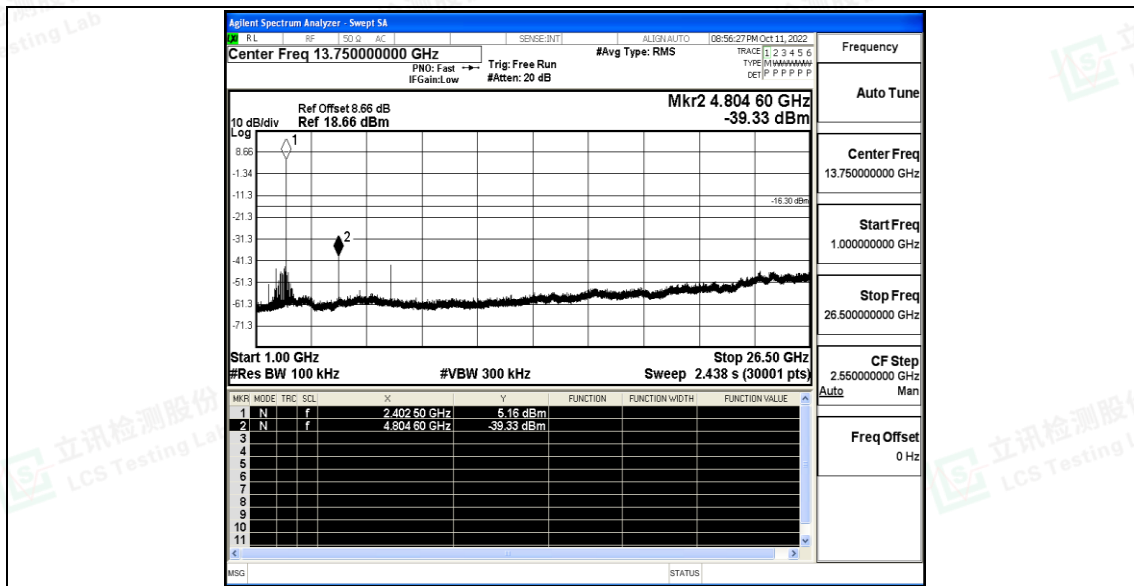


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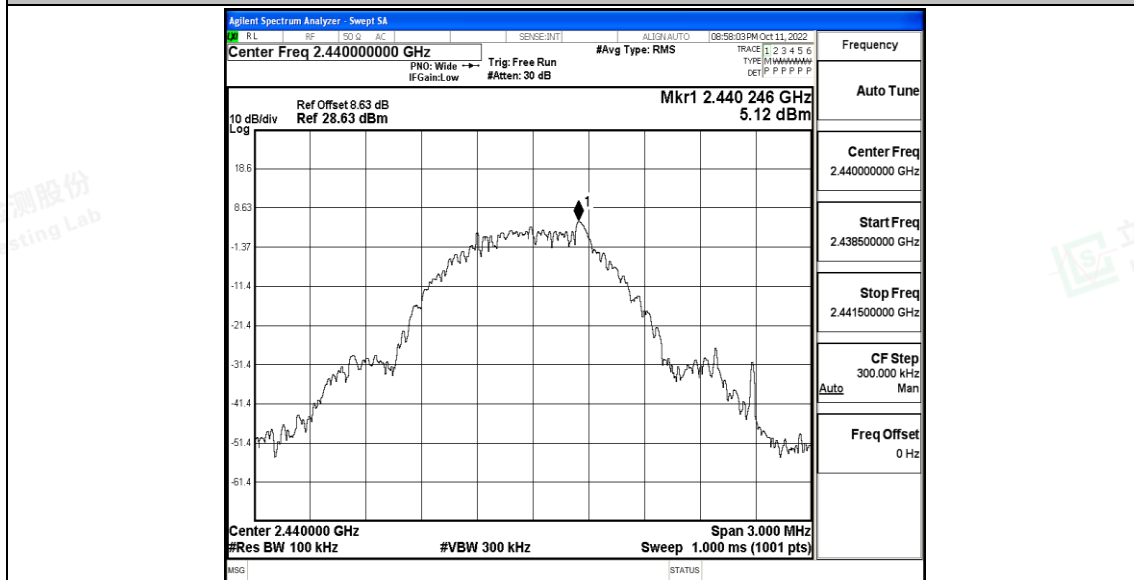
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

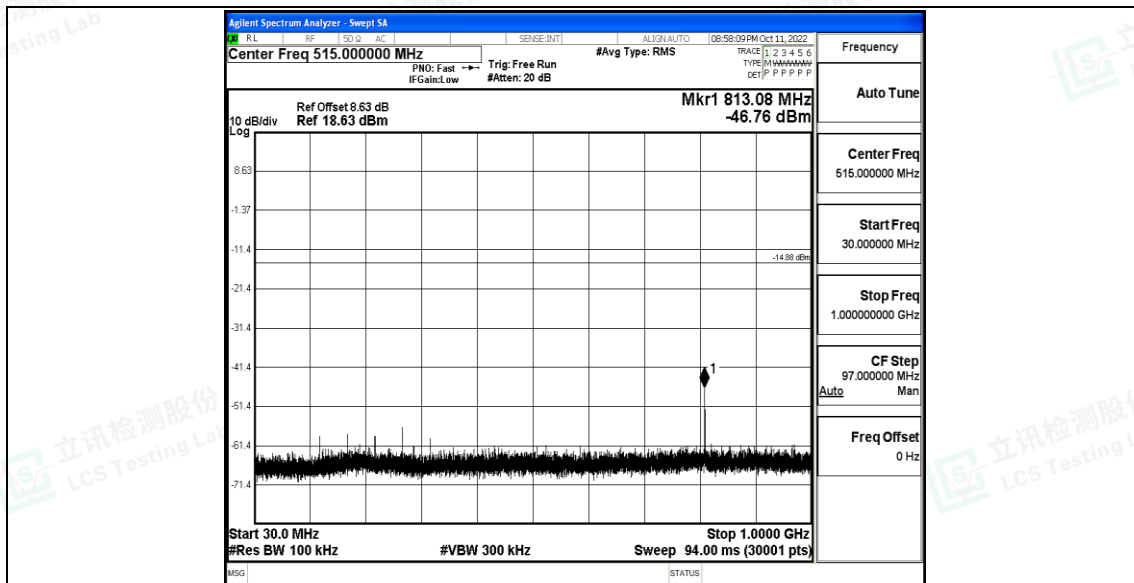


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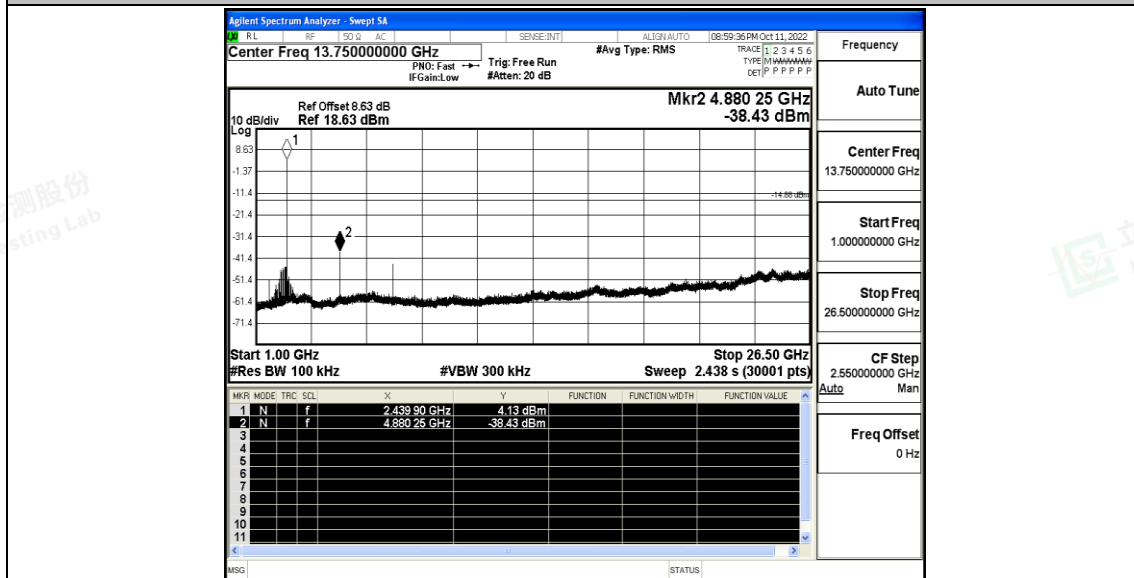
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

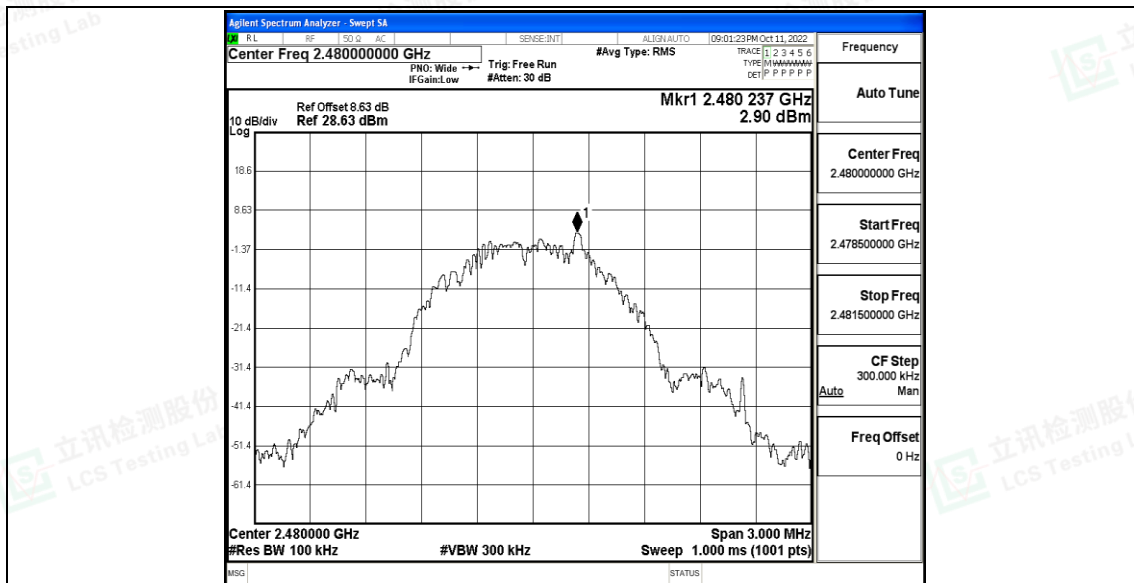


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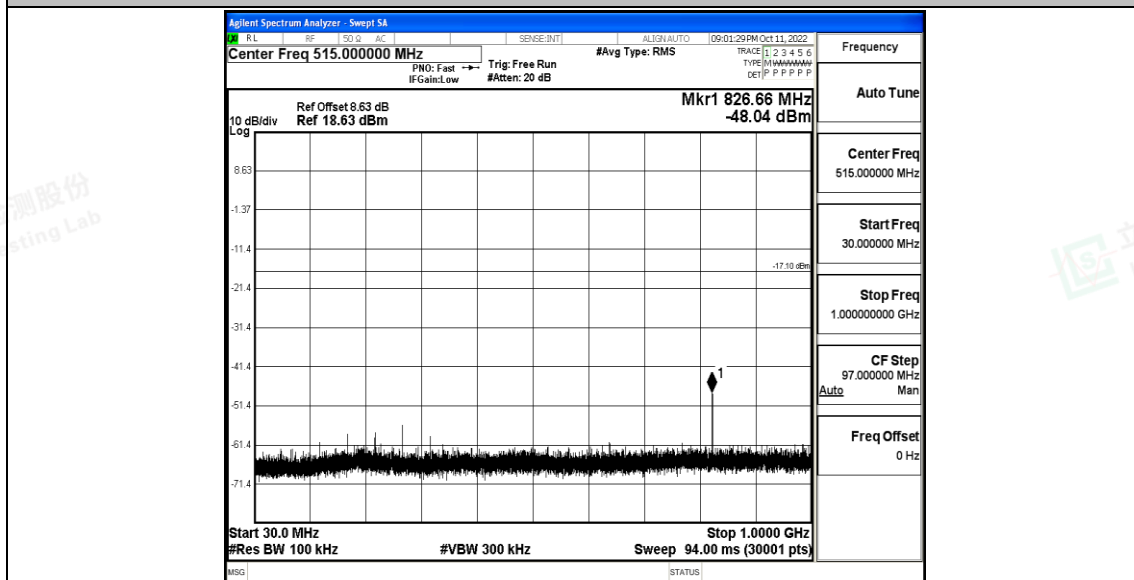
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

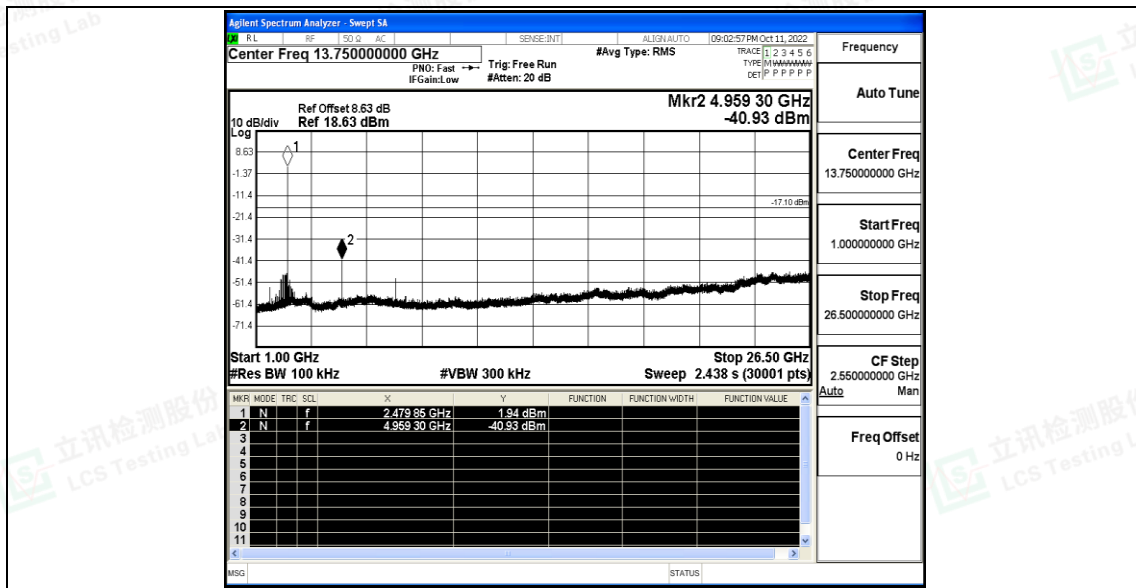


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B.6 Duty Cycle

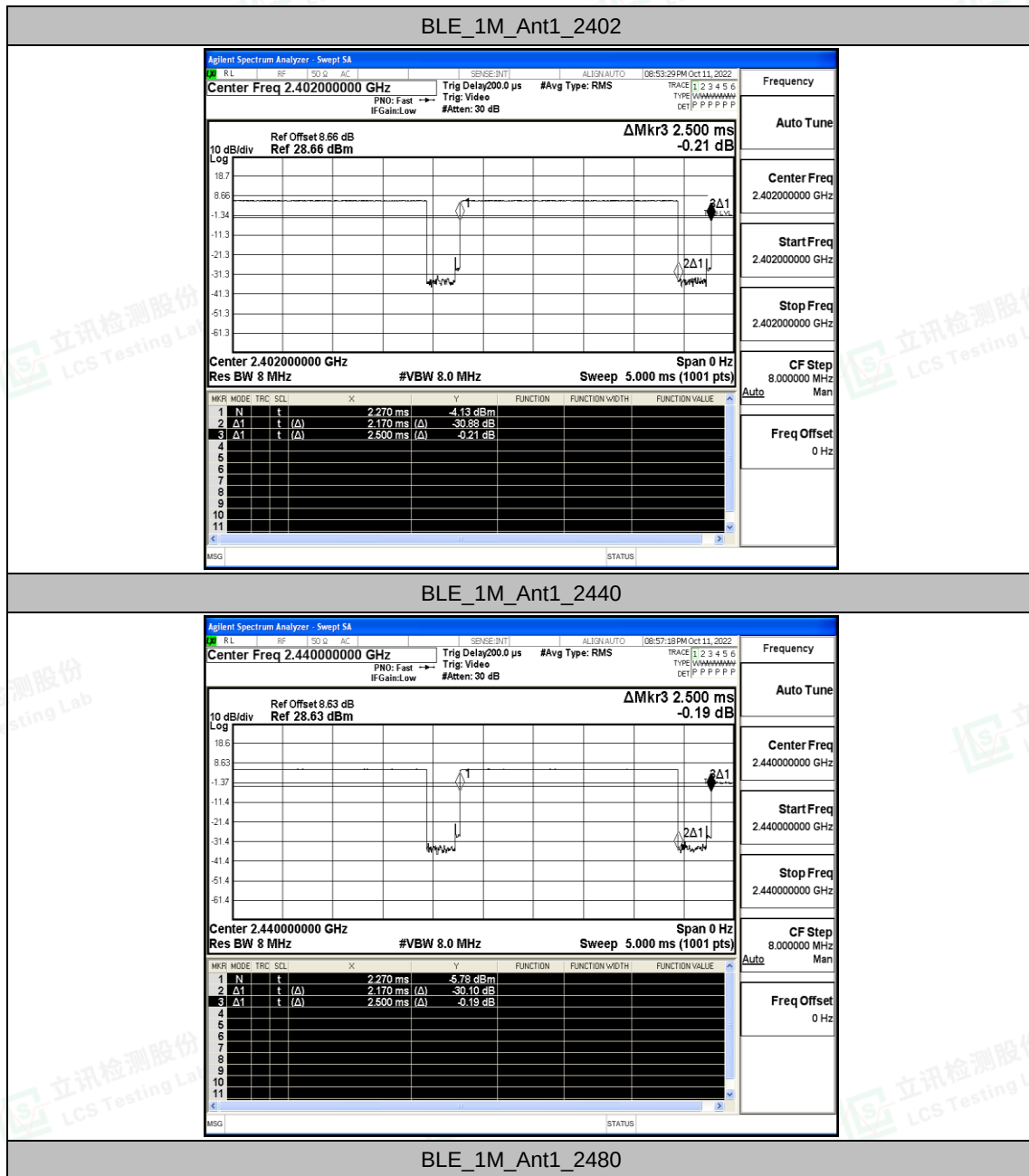
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	2.17	2.50	0.8680	86.80	0.61	0.46	---	---
		2440	2.17	2.50	0.8680	86.80	0.61	0.46	---	---
		2480	2.16	2.50	0.8640	86.40	0.63	0.46	---	---





Test Graphs

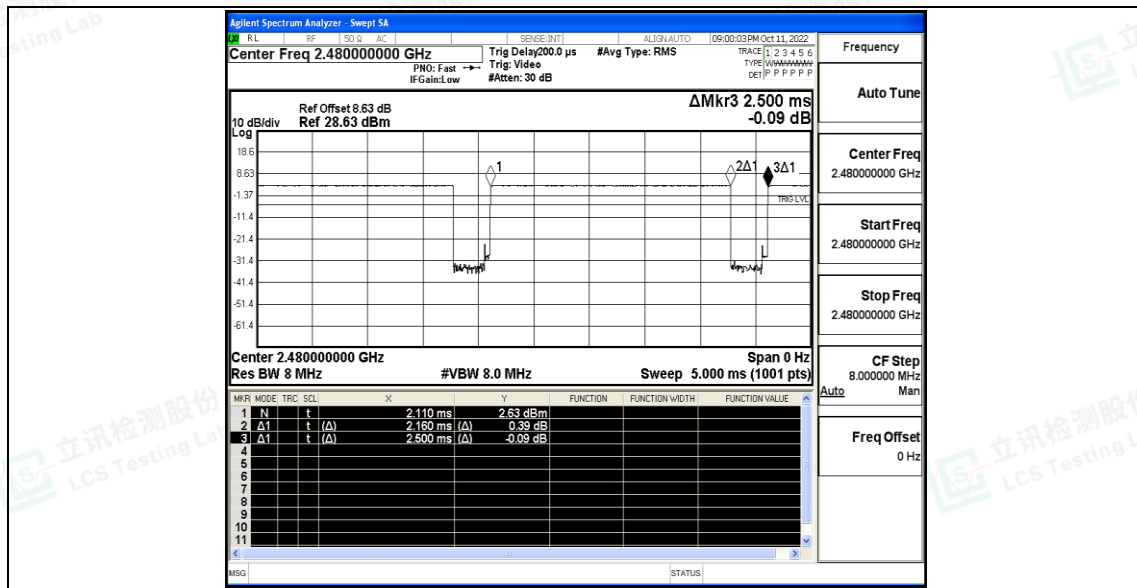


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B.7 Emissions in Restricted Bands

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	-57.85	≤-41.20	37.35	≤54	PASS
				AV	2354.075	-42.1	≤-41.20	53.10	≤54	PASS
				AV	2390.000	-56.59	≤-41.20	38.61	≤54	PASS
				Peak	2310.000	-48.94	≤-21.20	46.26	≤74	PASS
				Peak	2353.760	-39.5	≤-21.20	55.70	≤74	PASS
				Peak	2390.000	-49.62	≤-21.20	45.58	≤74	PASS
		High	2480	AV	2483.500	-51.96	≤-41.20	43.24	≤54	PASS
				AV	2489.920	-50.94	≤-41.20	44.26	≤54	PASS
				AV	2500.000	-55.16	≤-41.20	40.04	≤54	PASS
				Peak	2483.500	-43.15	≤-21.20	52.05	≤74	PASS
				Peak	2483.520	-43.15	≤-21.20	52.05	≤74	PASS
				Peak	2500.000	-48.53	≤-21.20	46.67	≤74	PASS

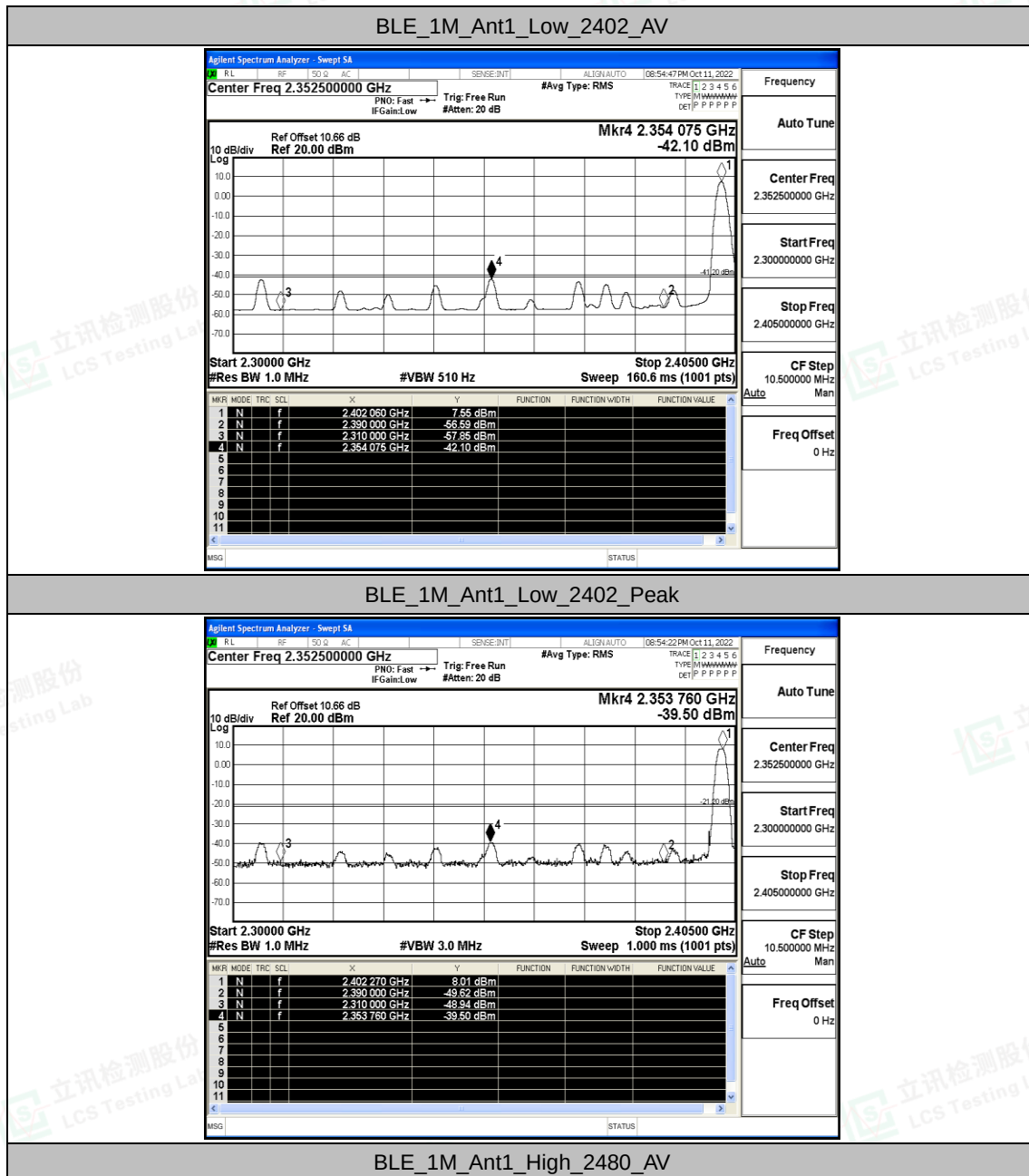
Note:

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.





Test Graphs

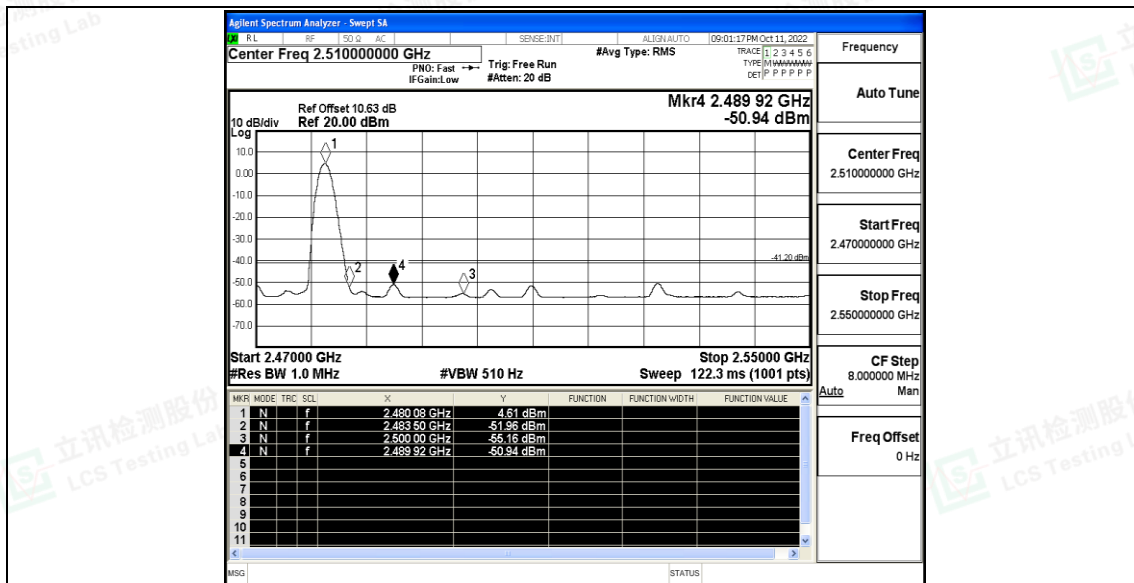


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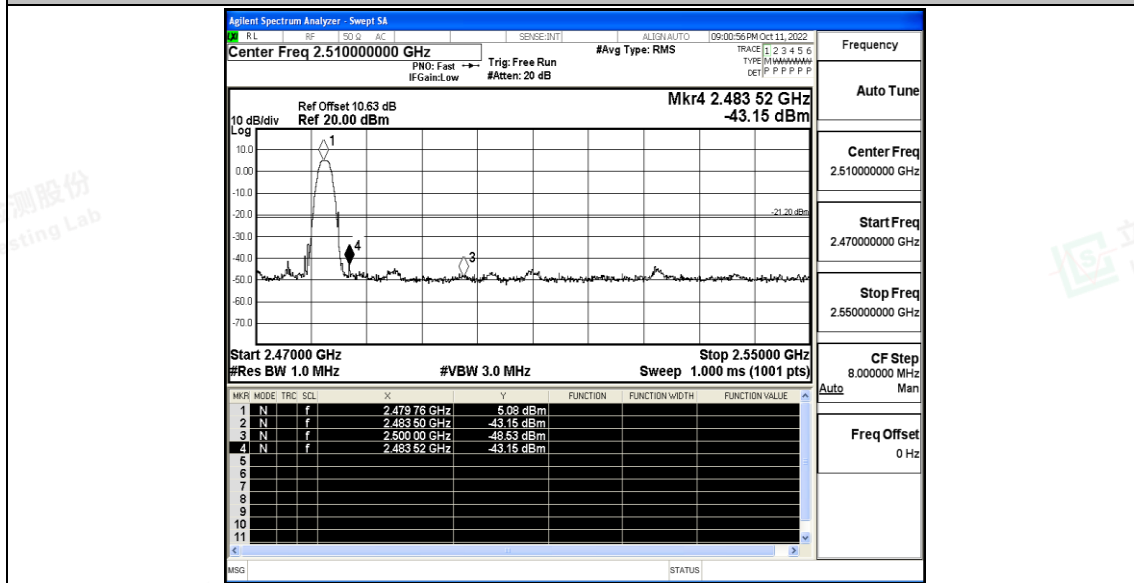
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BLE_1M_Ant1_High_2480_Peak



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