



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: LED Bulb

Test Model: 61222605

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Nick Peng</i> Nick Peng
Supervised by:	<i>Li Huan</i> Li Huan



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A.1 DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.668	2402.332	0.5	PASS
		2440	0.668	2439.664	2440.332	0.5	PASS
		2480	0.668	2479.664	2480.332	0.5	PASS



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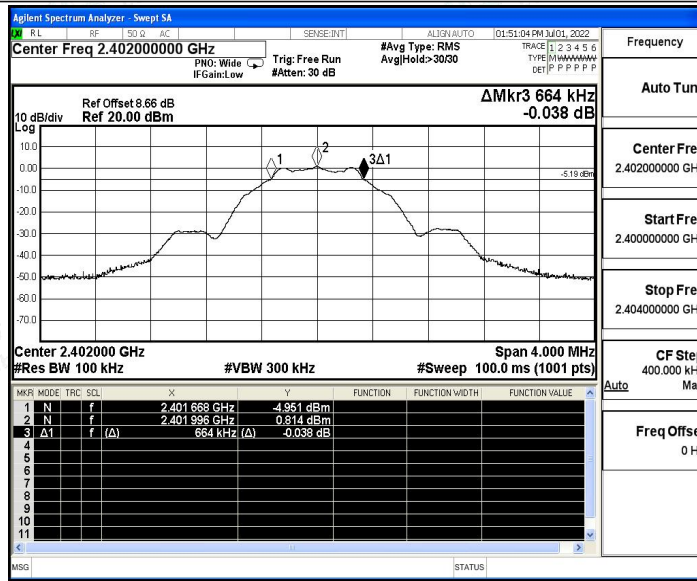
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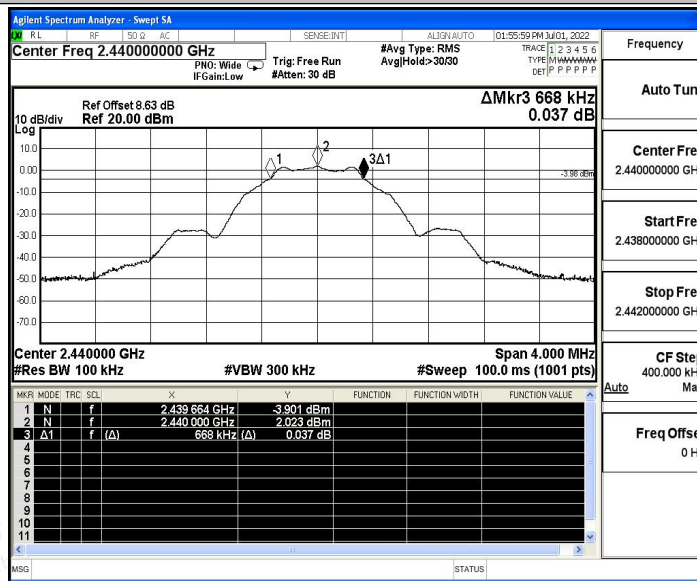


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

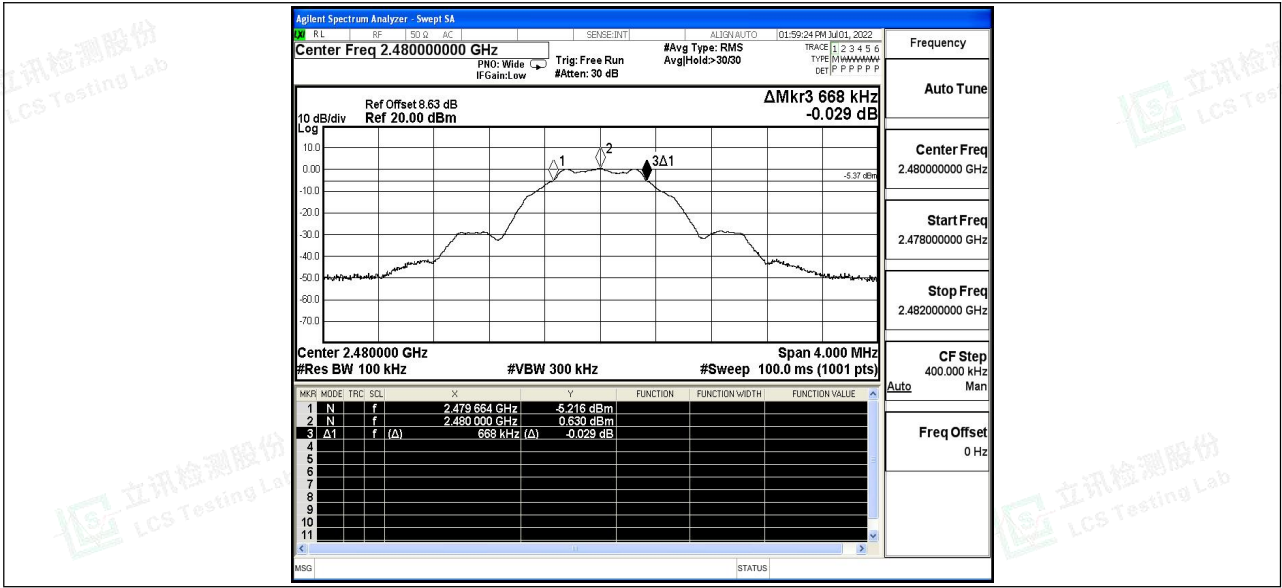


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A.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.39	≤30	PASS
		2440	2.56	≤30	PASS
		2480	1.17	≤30	PASS



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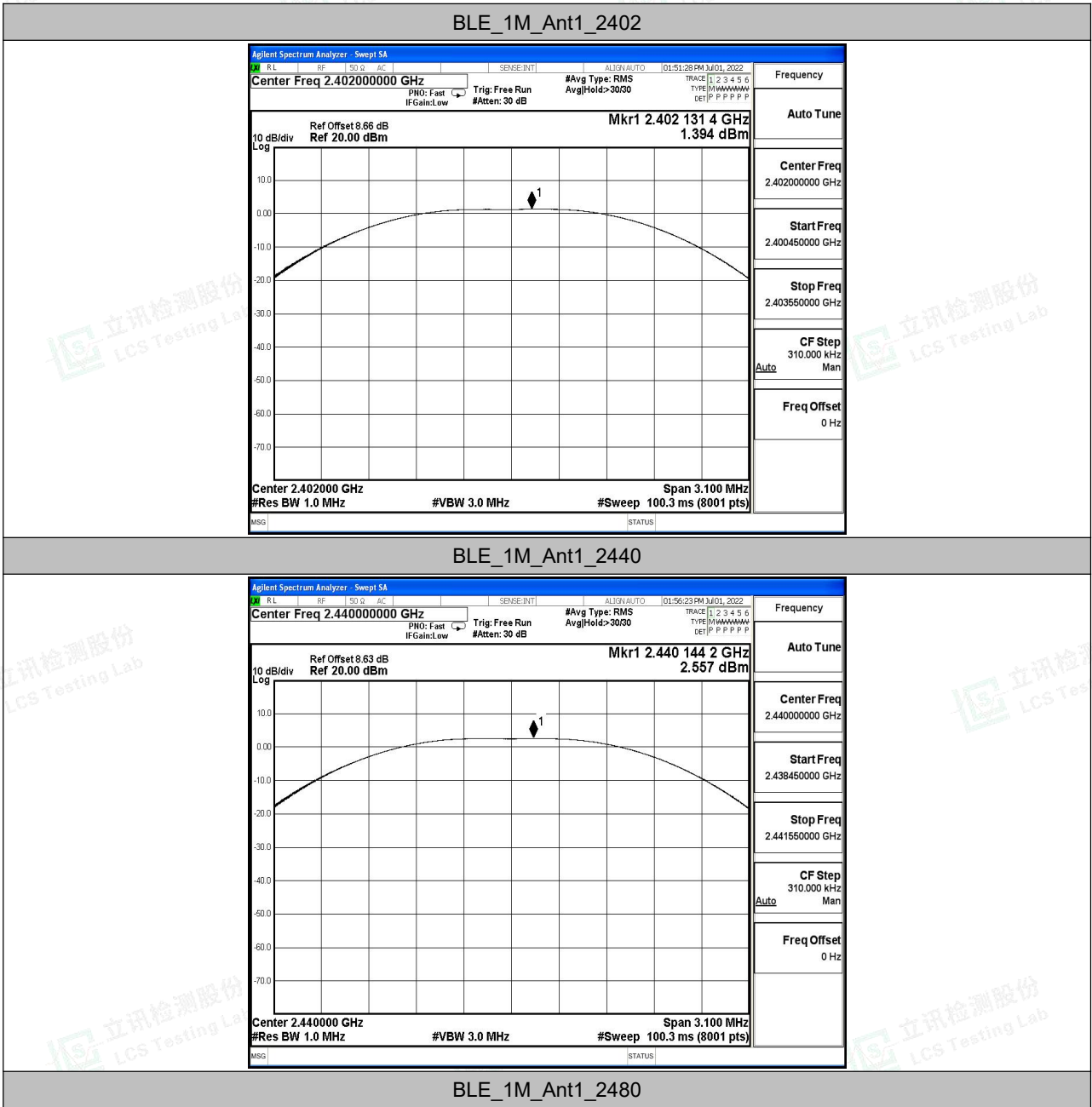
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Test Graphs

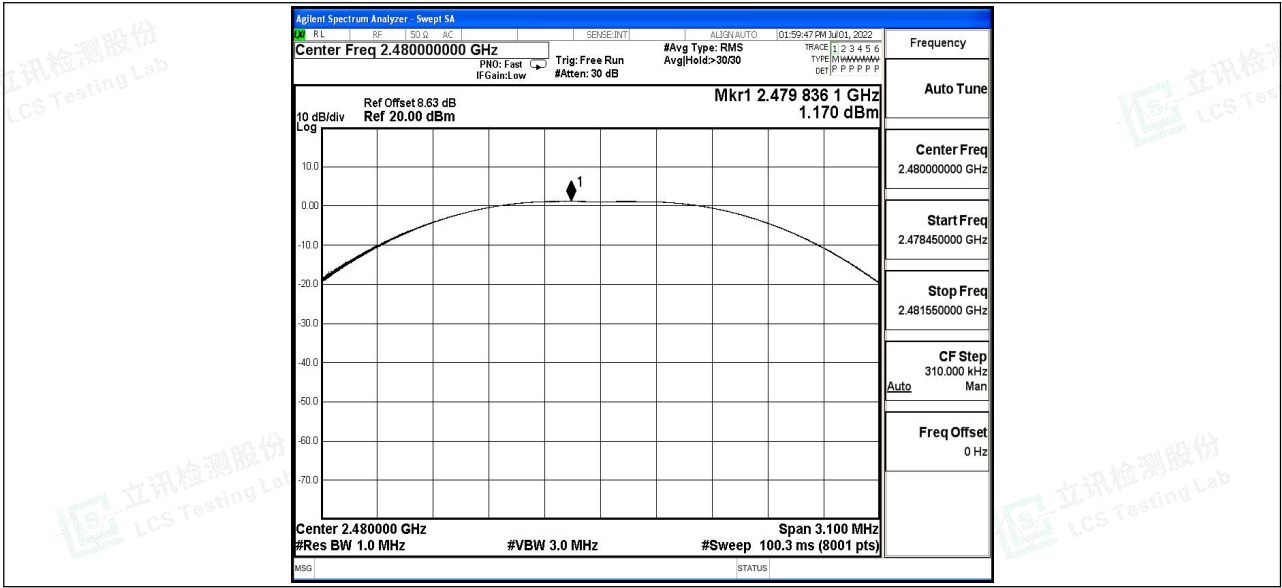


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A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.44	≤8.00	PASS
		2440	-12.2	≤8.00	PASS
		2480	-13.52	≤8.00	PASS



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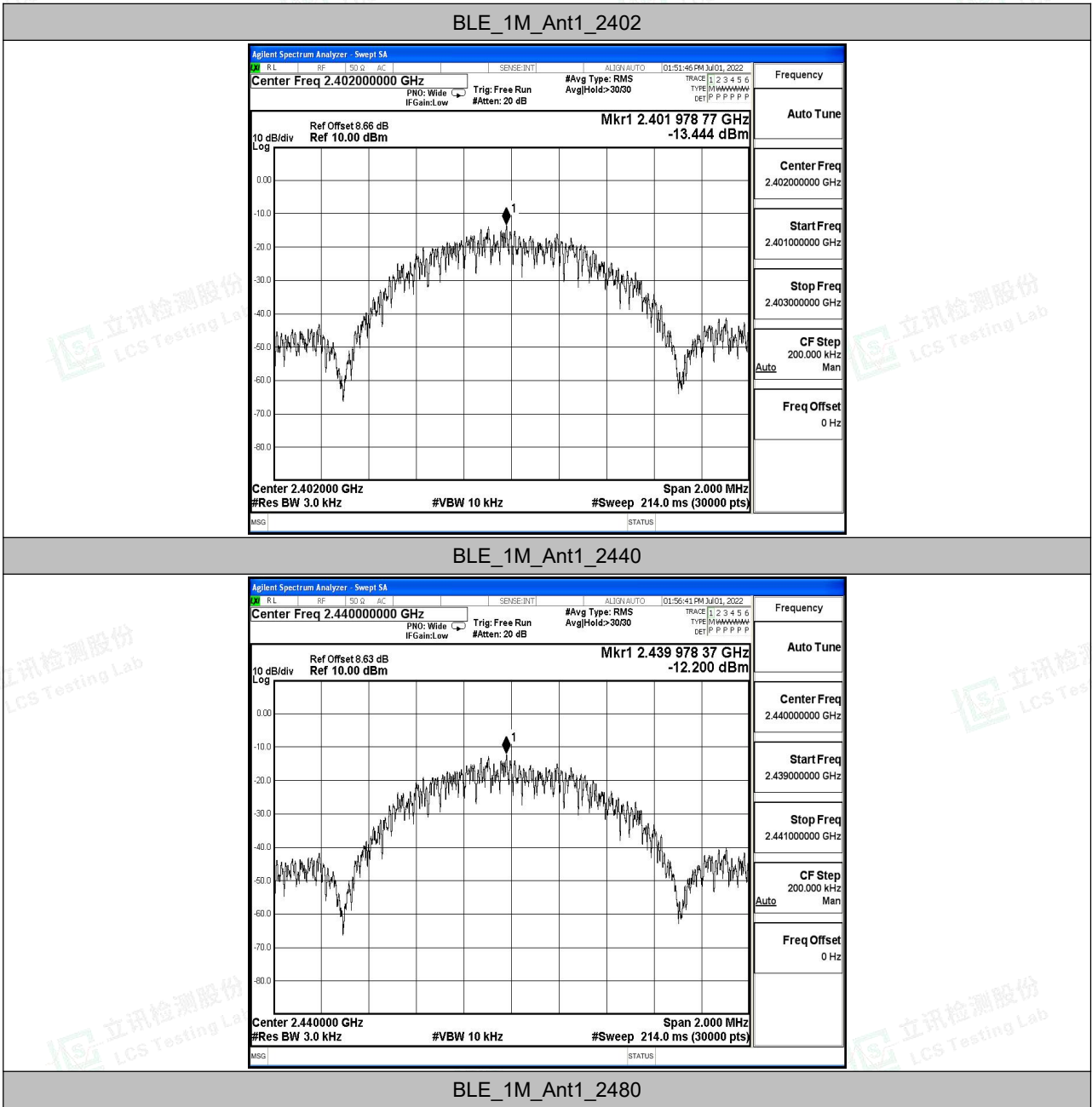
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Test Graphs

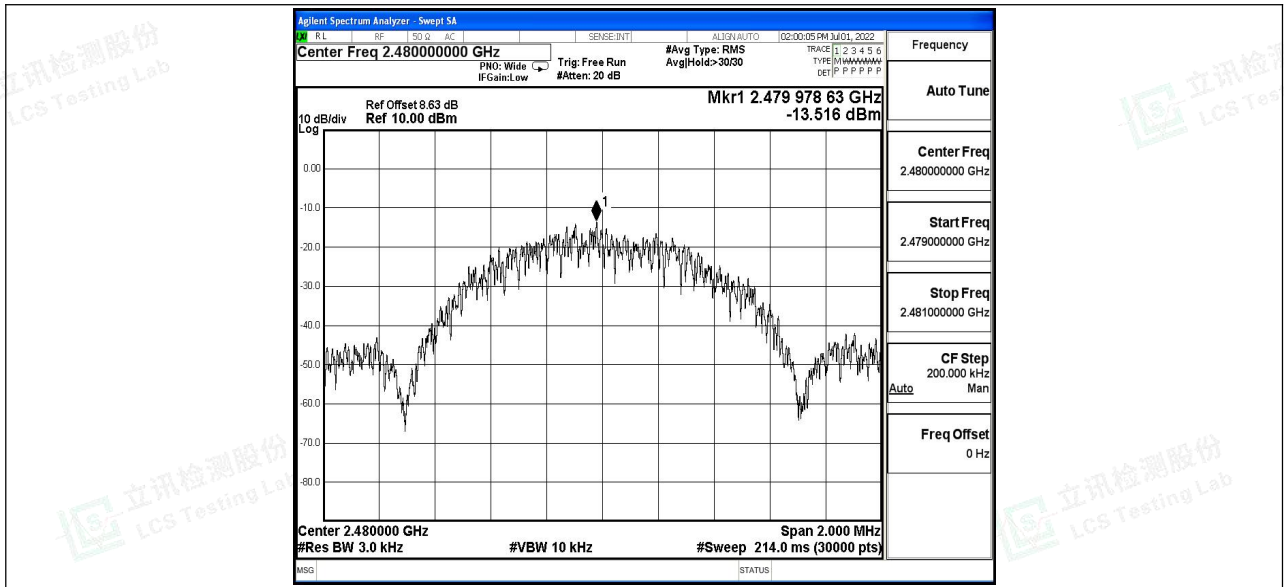


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A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.83	-57.03	≤-19.17	PASS
		High	2480	0.83	-57.06	≤-19.17	PASS



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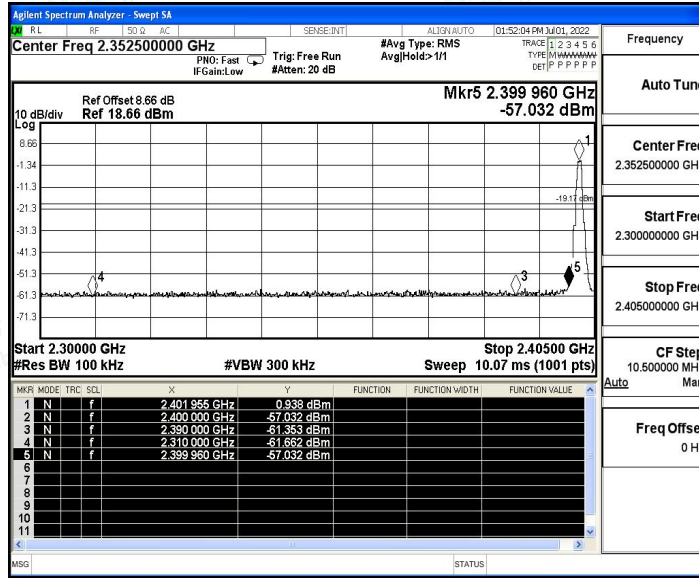
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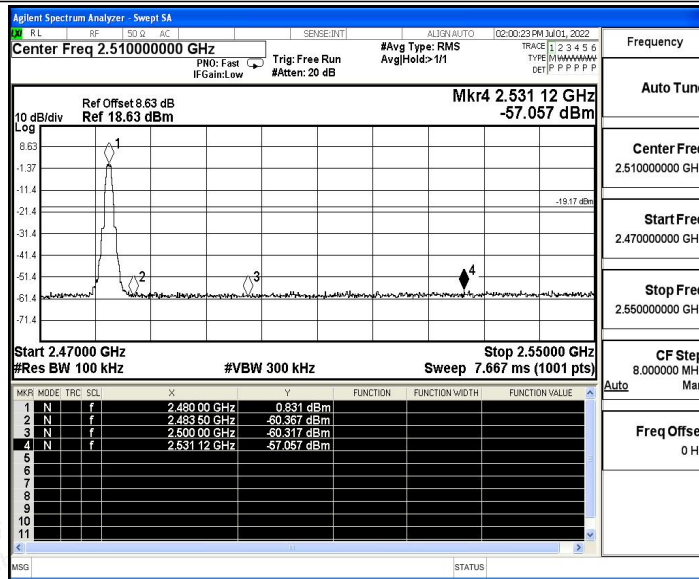


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



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A.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.88	0.88	---	PASS
			30~1000	0.88	-52.05	≤-19.12	PASS
			1000~26500	0.88	-45.68	≤-19.12	PASS
		2440	Reference	2.04	2.04	---	PASS
			30~1000	2.04	-52.83	≤-17.96	PASS
			1000~26500	2.04	-45.96	≤-17.96	PASS
		2480	Reference	0.68	0.68	---	PASS
			30~1000	0.68	-56.29	≤-19.32	PASS
			1000~26500	0.68	-46.15	≤-19.32	PASS



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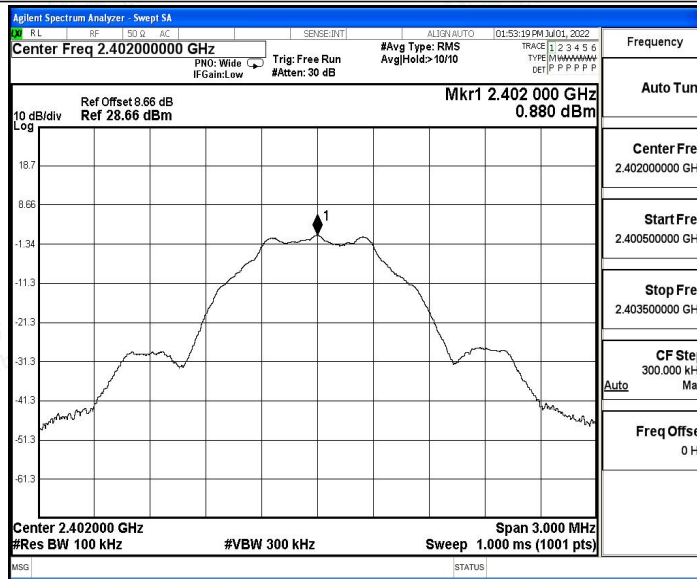
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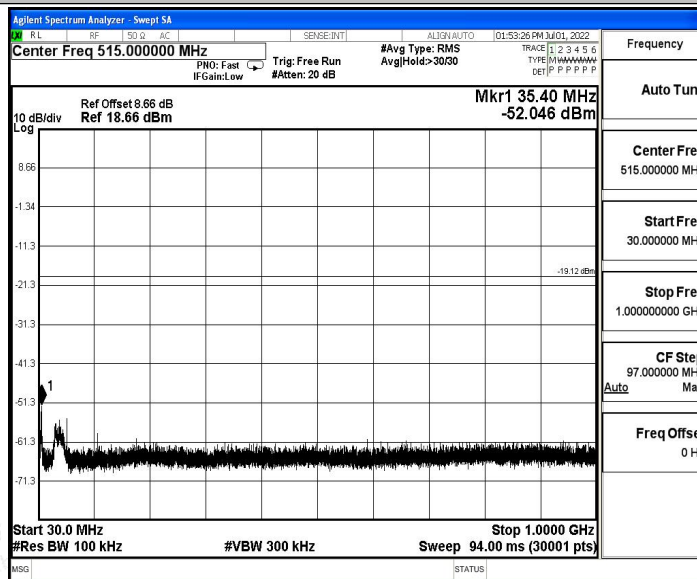


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

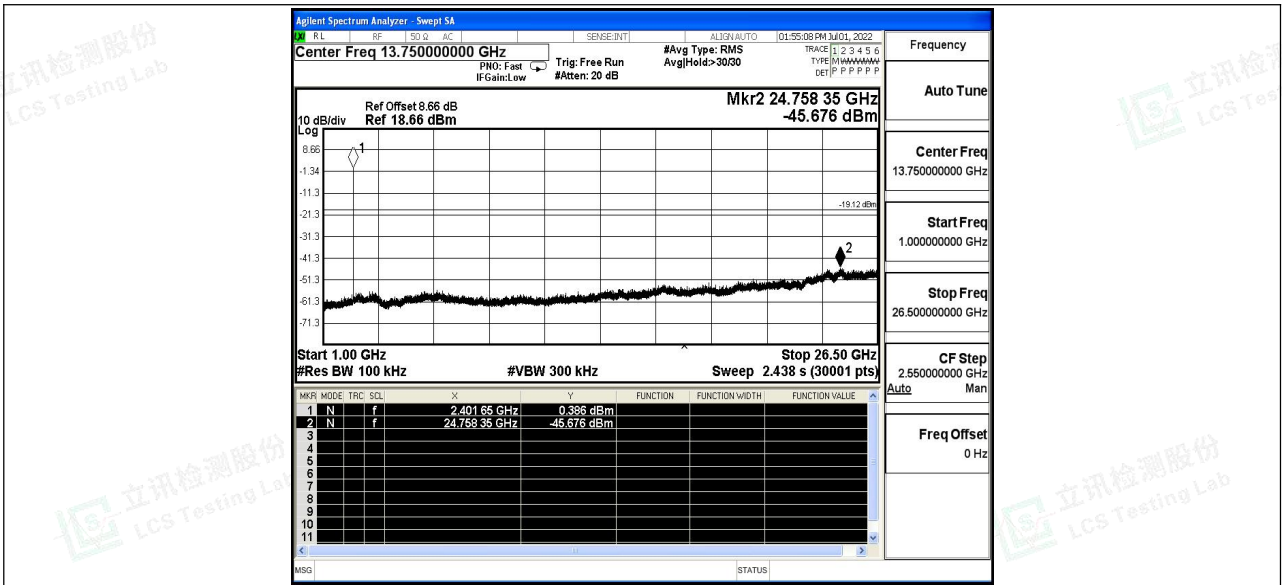


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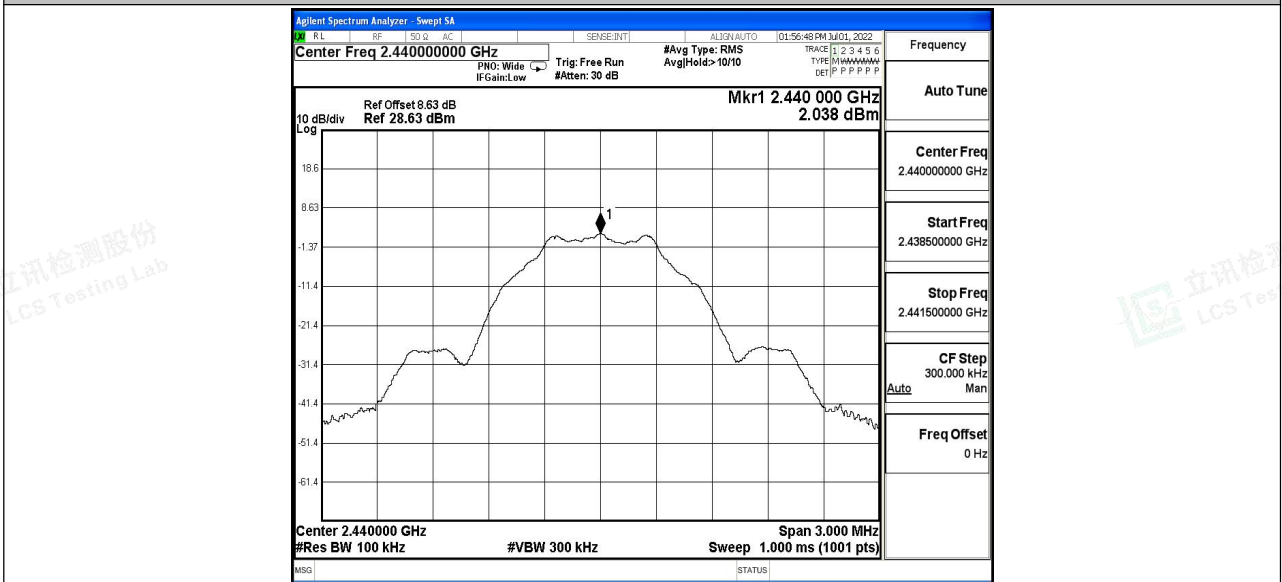
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

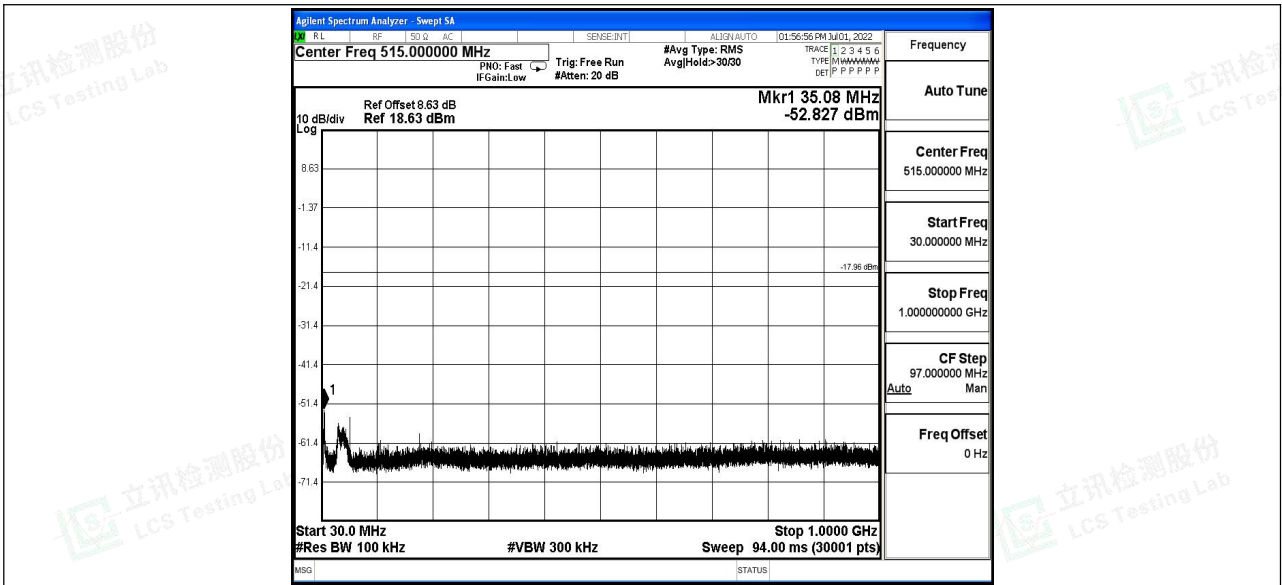


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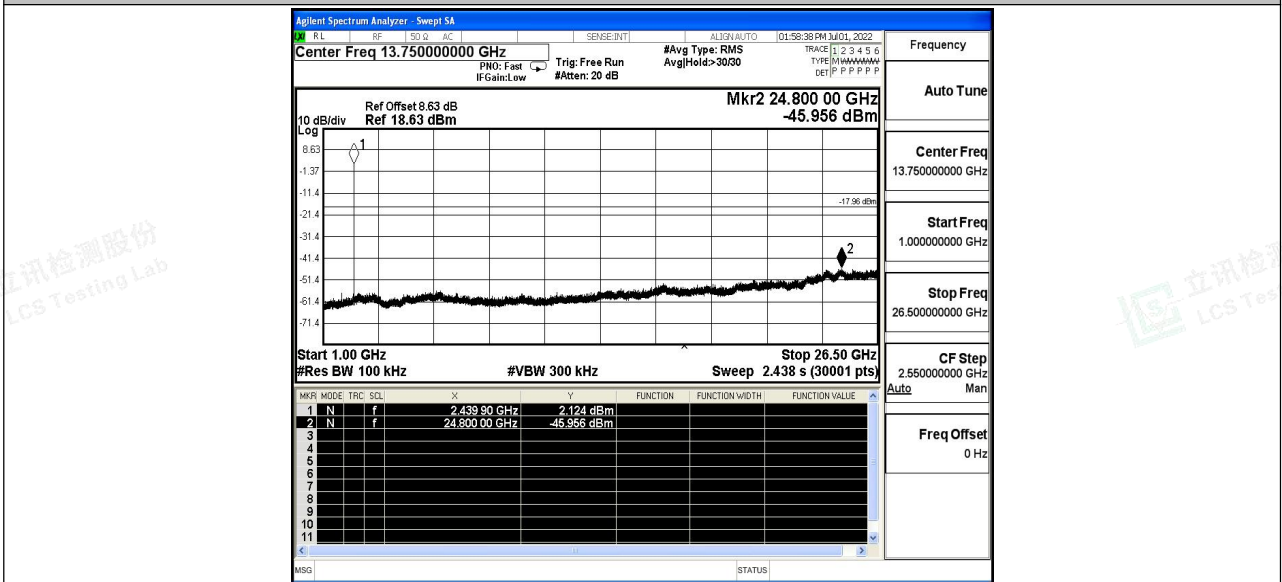
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

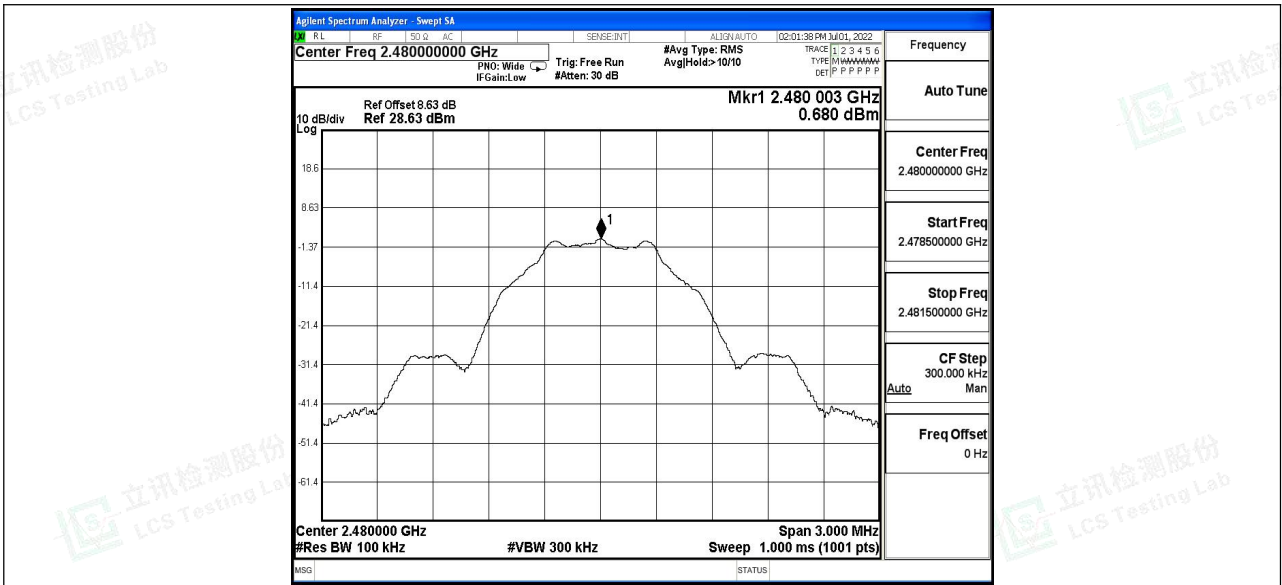


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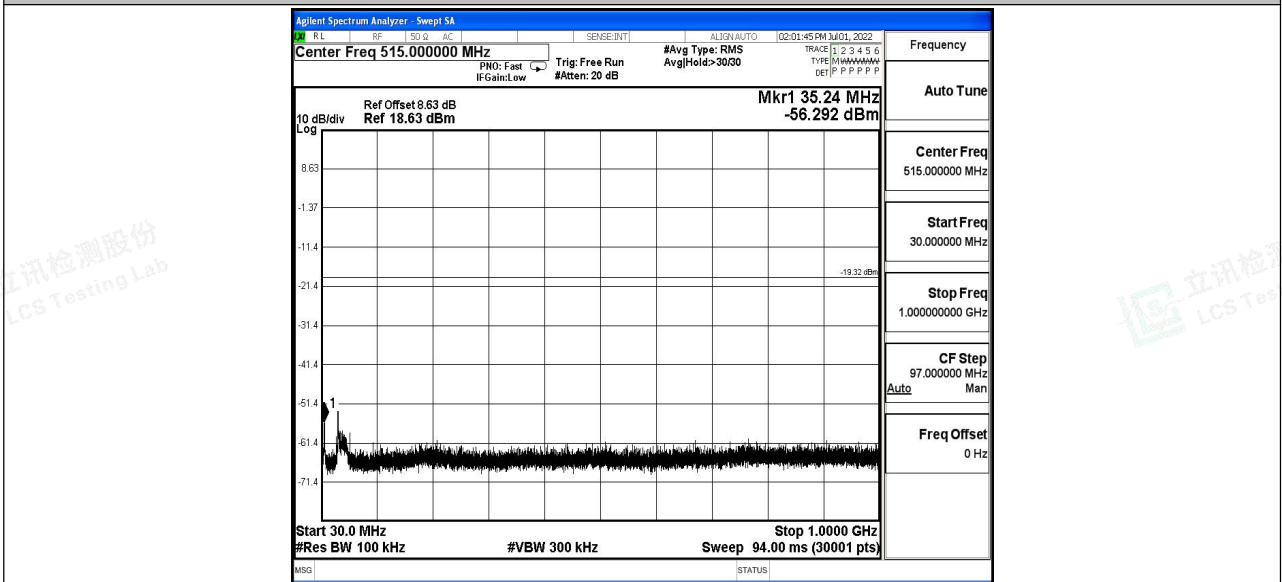
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

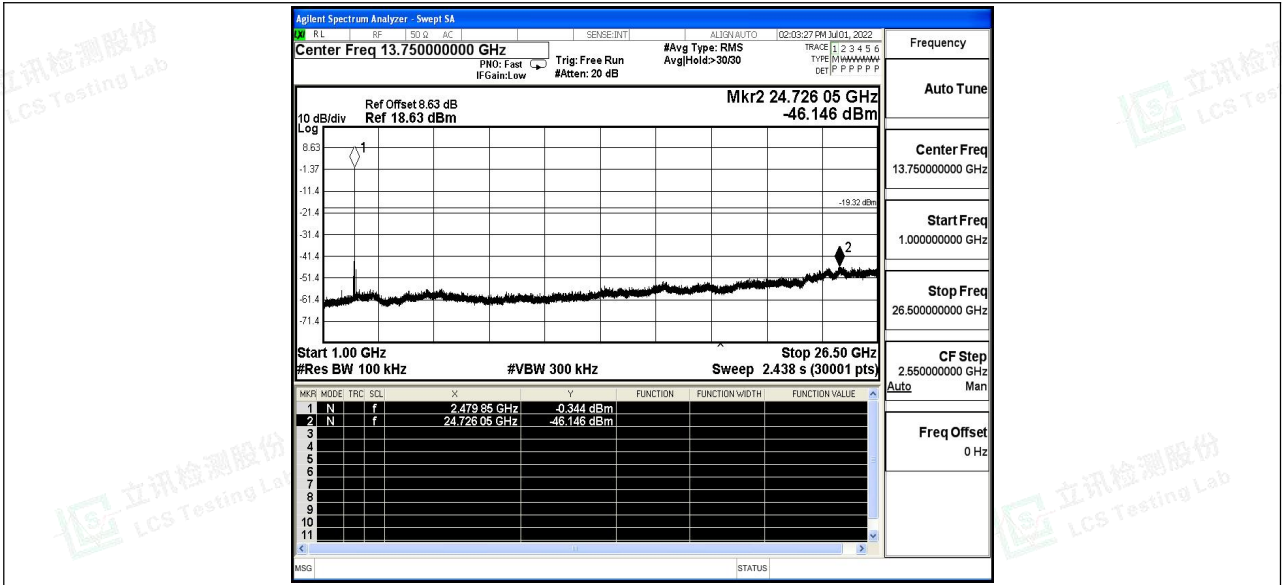


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A.6 Duty Cycle

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	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---



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Test Graphs

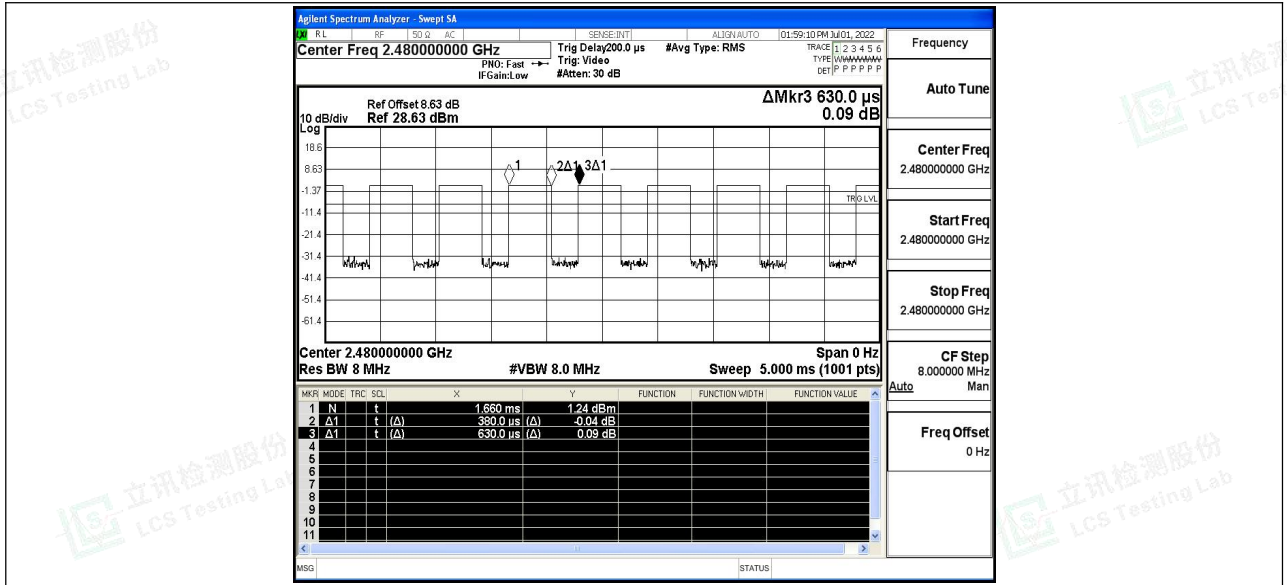


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A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-56.9	≤-41.20	38.30	≤54	PASS
				AV	2375.705	-56.24	≤-41.20	38.96	≤54	PASS
				AV	2390.000	-56.67	≤-41.20	38.53	≤54	PASS
				Peak	2310.000	-48.44	≤-21.20	46.76	≤74	PASS
				Peak	2377.070	-45.83	≤-21.20	49.37	≤74	PASS
				Peak	2390.000	-47.82	≤-21.20	47.38	≤74	PASS
		High	2480	AV	2483.500	-52.55	≤-41.20	42.65	≤54	PASS
				AV	2483.520	-52.57	≤-41.20	42.63	≤54	PASS
				AV	2500.000	-56.33	≤-41.20	38.87	≤54	PASS
				Peak	2483.500	-46.25	≤-21.20	48.95	≤74	PASS
				Peak	2483.600	-45.3	≤-21.20	49.90	≤74	PASS
				Peak	2500.000	-47.14	≤-21.20	48.06	≤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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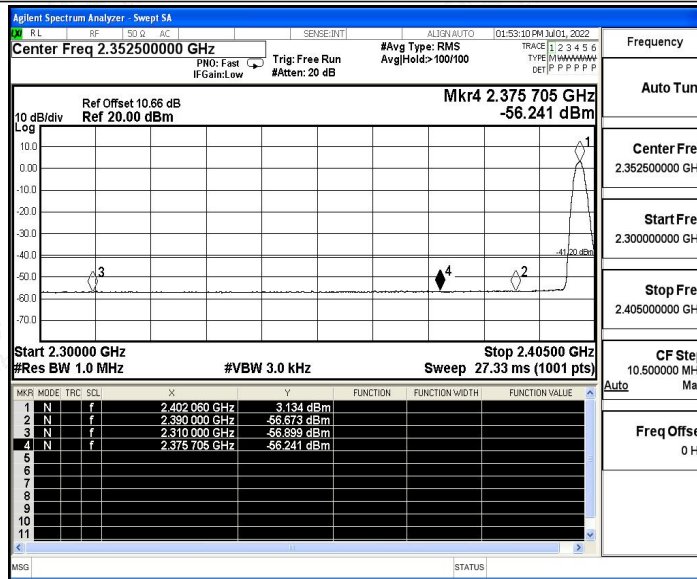
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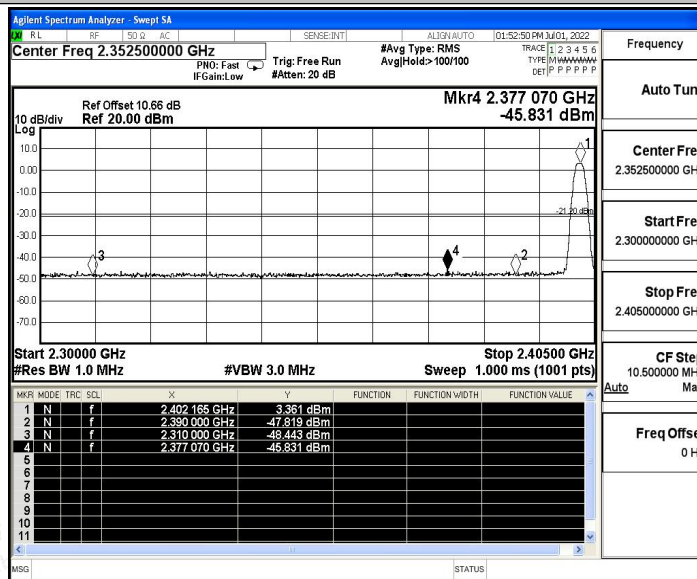


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

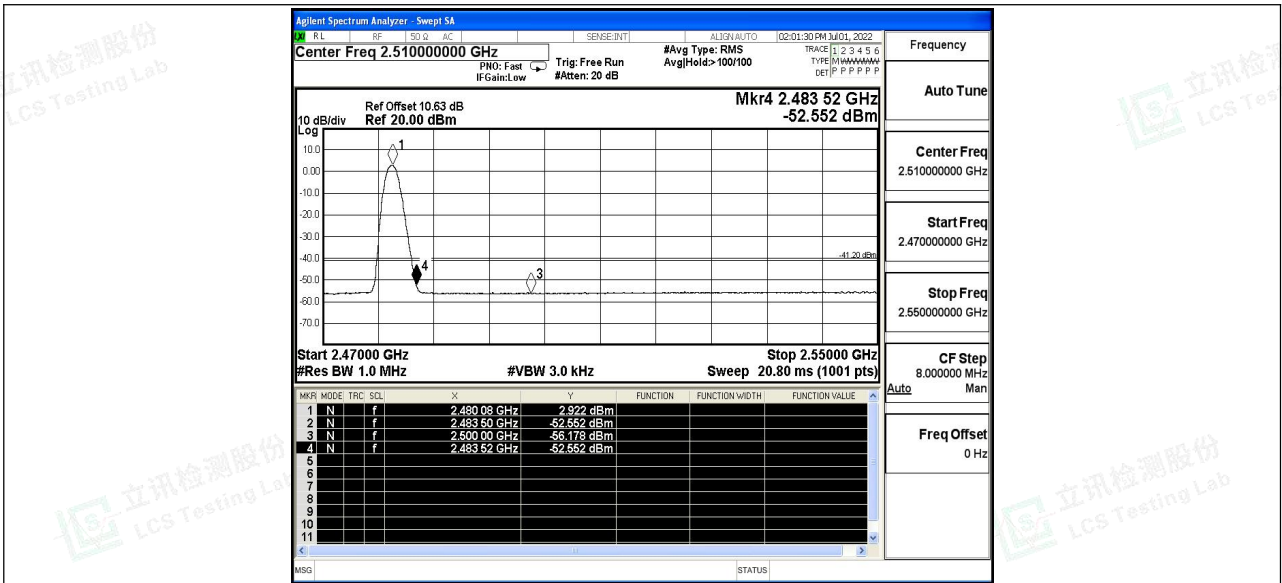


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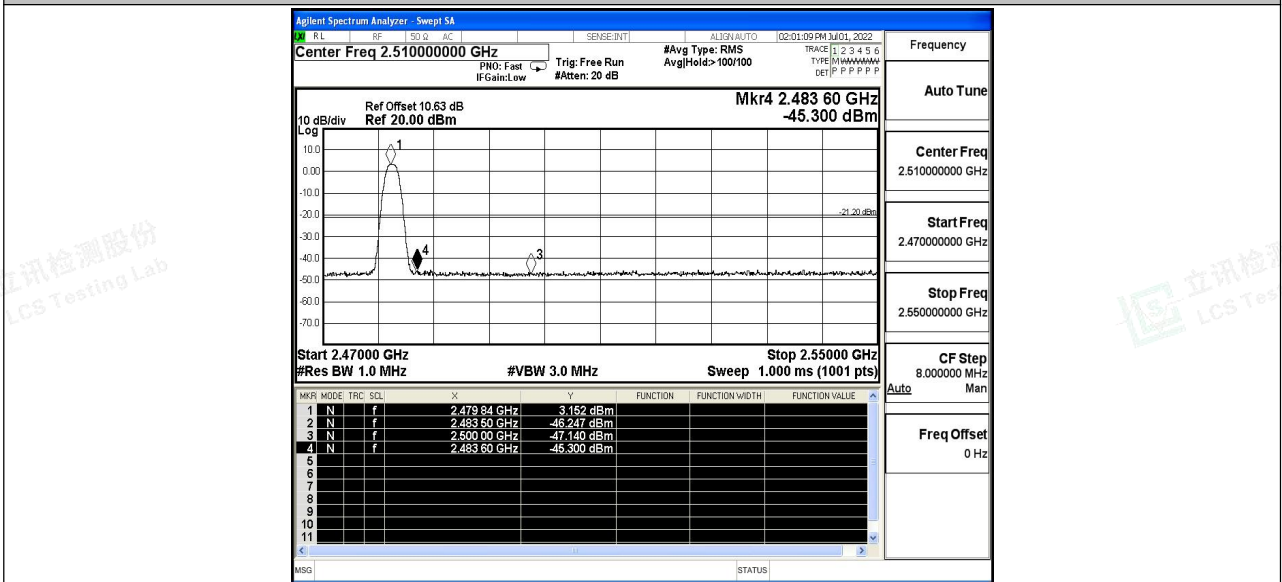
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BLE_1M_Ant1_High_2480_Peak



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