



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: AMD R1305G Player

Test Model: SMPA-R1305G

Environmental Conditions

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



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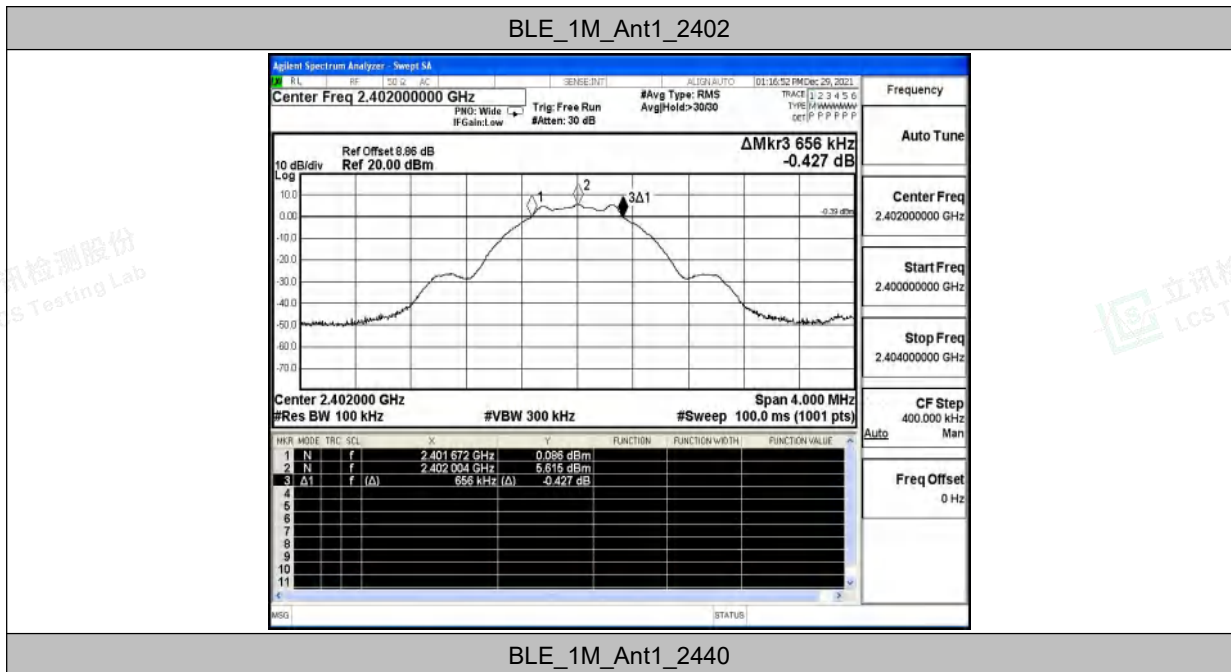


B.1 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.672	2402.328	0.5	PASS
		2440	0.656	2439.672	2440.328	0.5	PASS
		2480	0.652	2479.672	2480.324	0.5	PASS
BLE_2M	Ant1	2402	1.112	2401.448	2402.560	0.5	PASS
		2440	1.116	2439.444	2440.560	0.5	PASS
		2480	1.112	2479.448	2480.560	0.5	PASS

Test Graphs

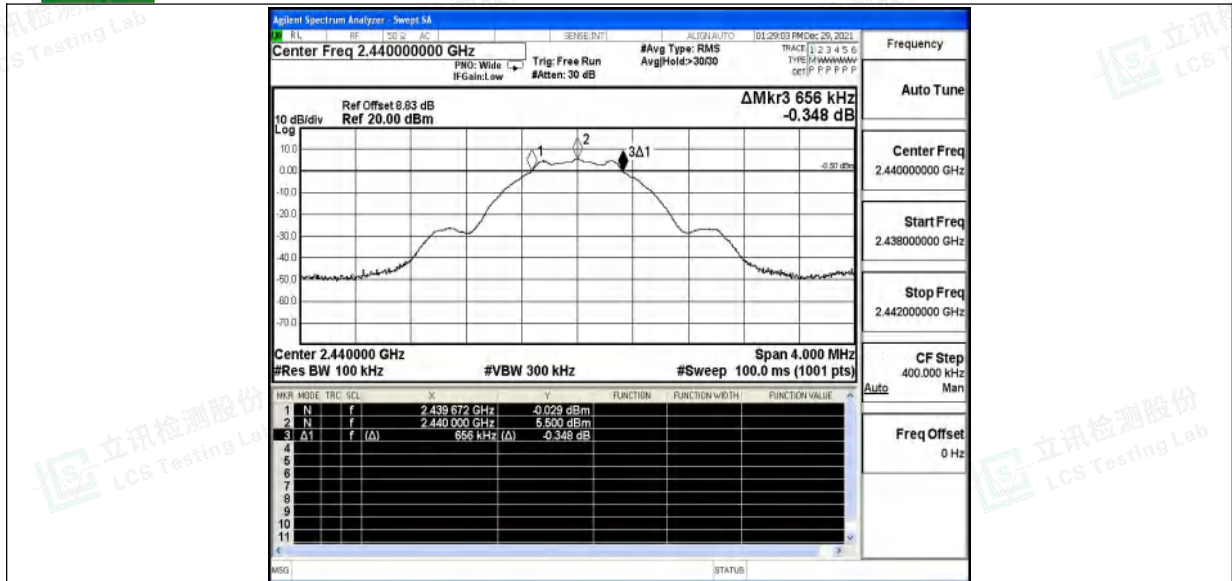


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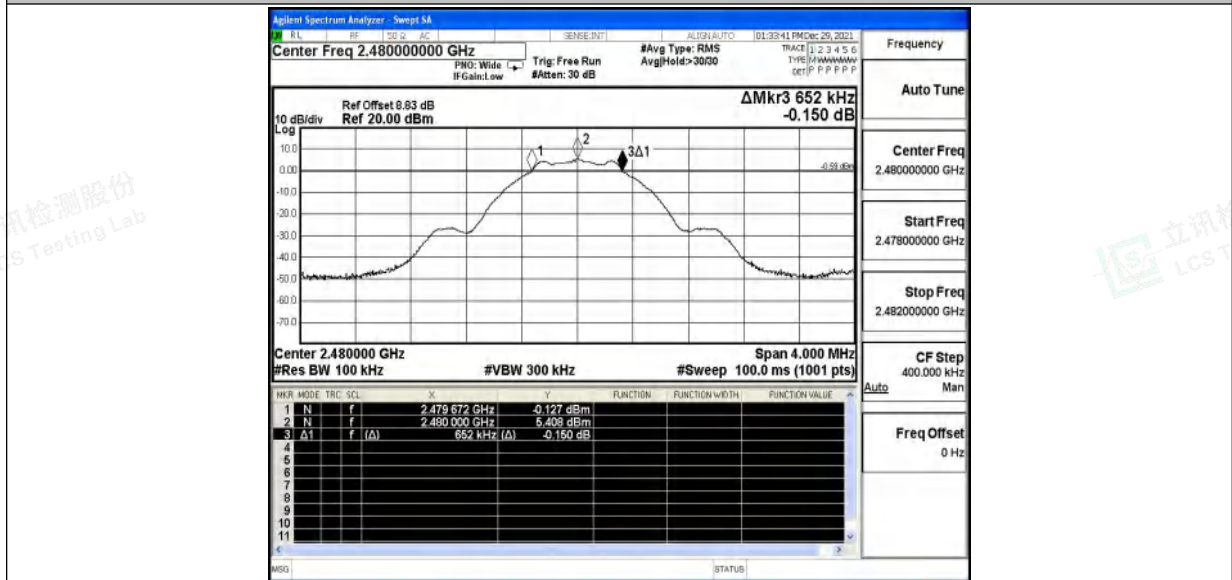
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BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

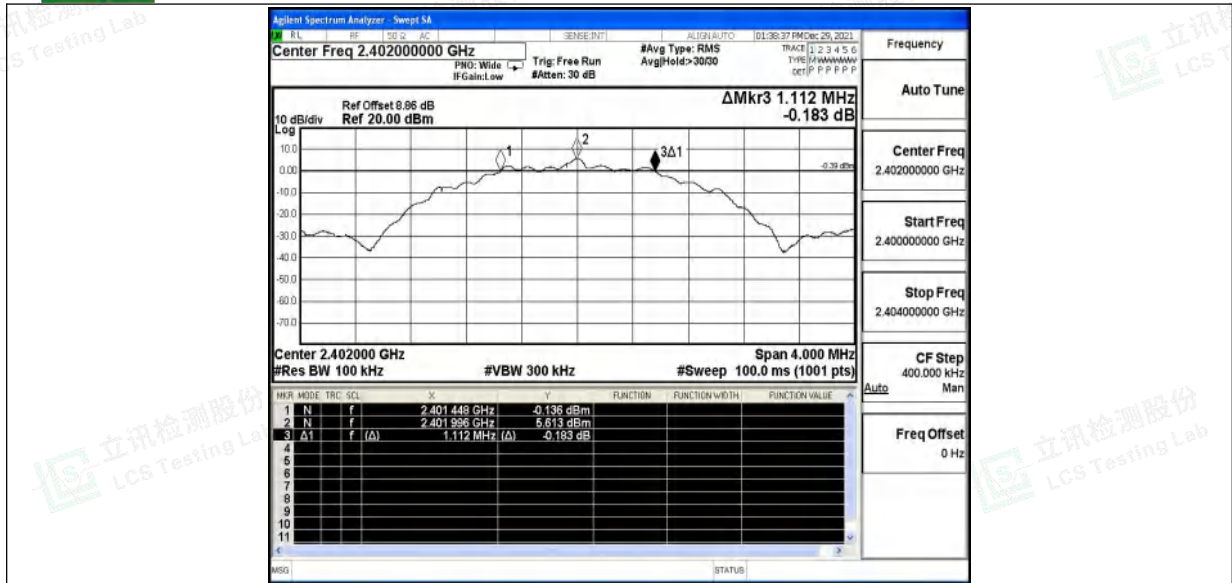


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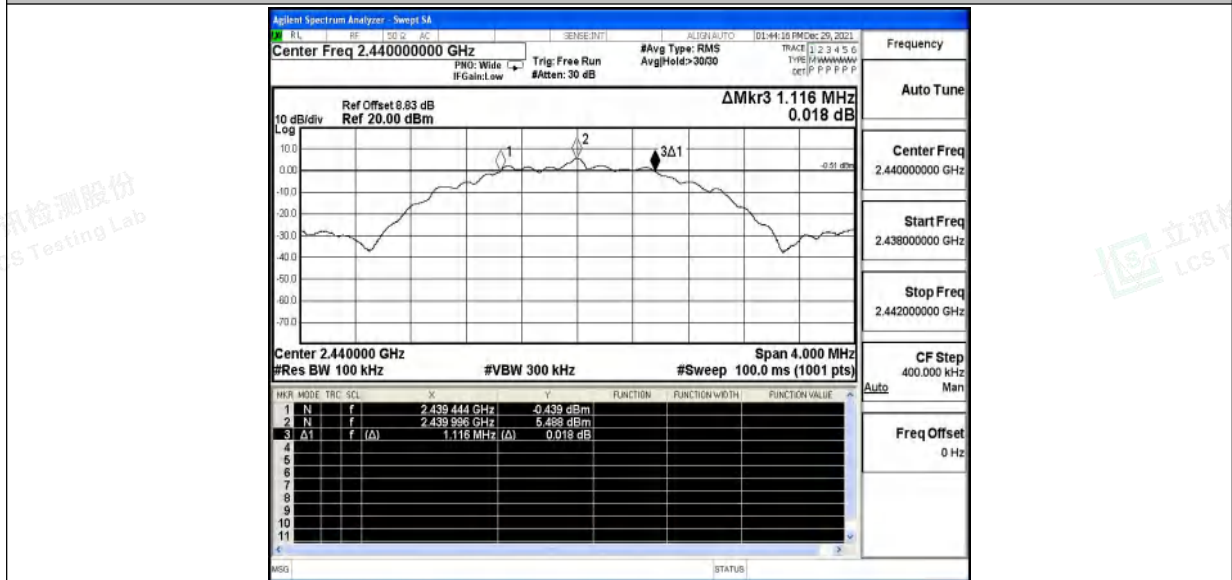
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BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

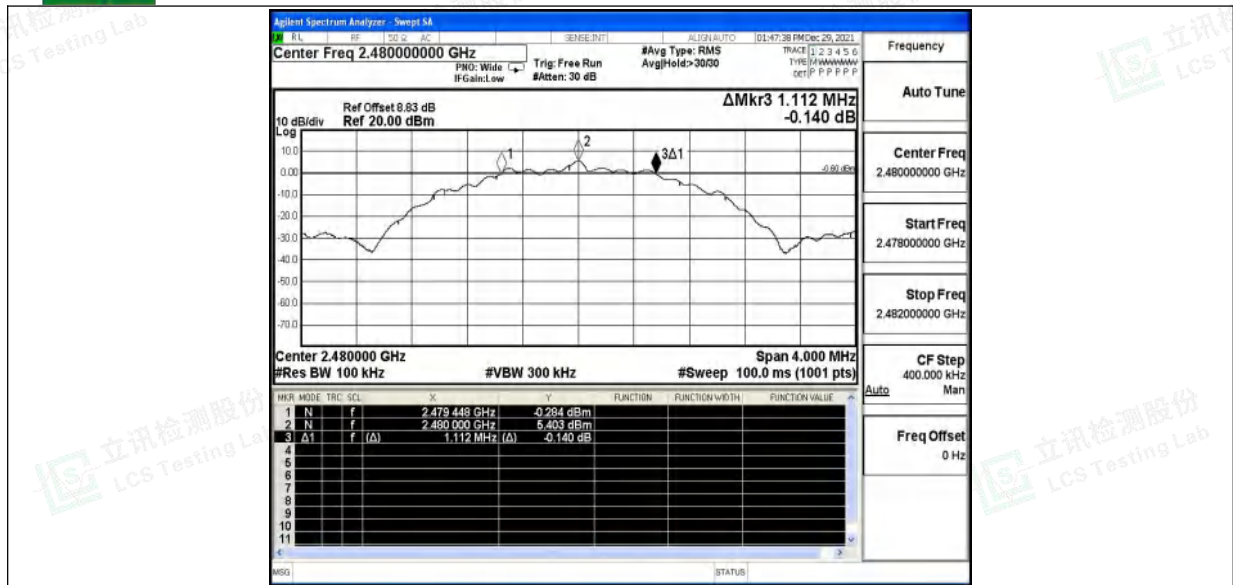


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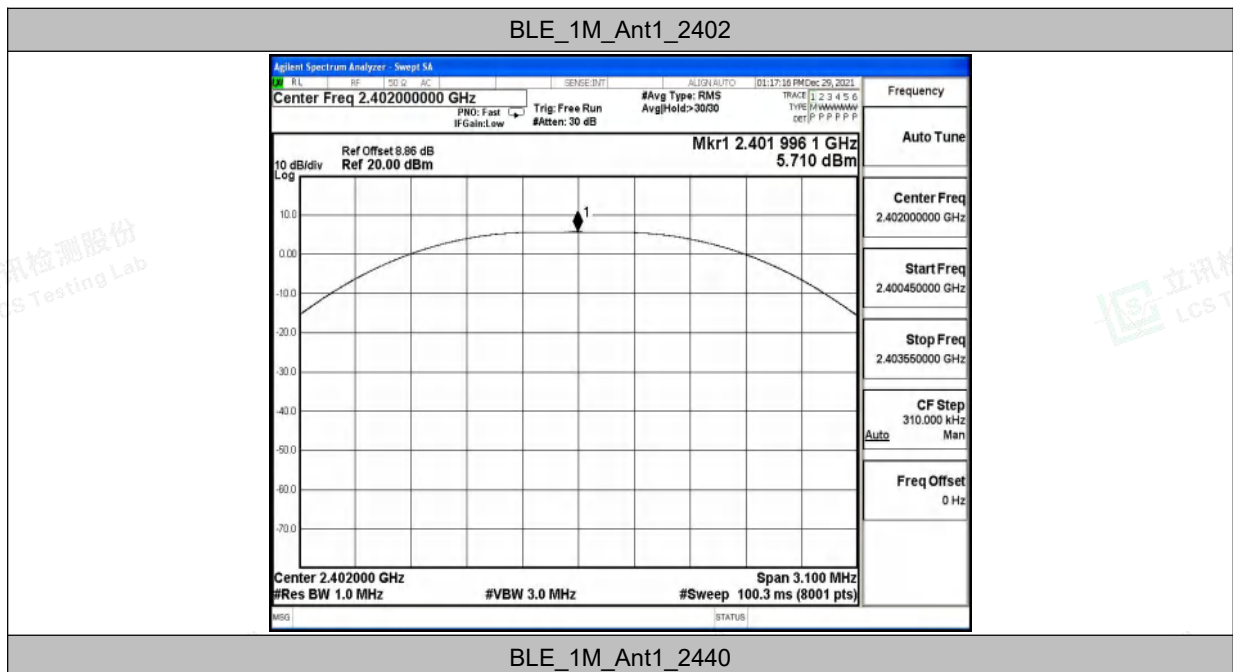


B.2 Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	5.71	≤30	PASS
		2440	5.59	≤30	PASS
		2480	5.49	≤30	PASS
BLE_2M	Ant1	2402	5.82	≤30	PASS
		2440	5.7	≤30	PASS
		2480	5.6	≤30	PASS

Test Graphs

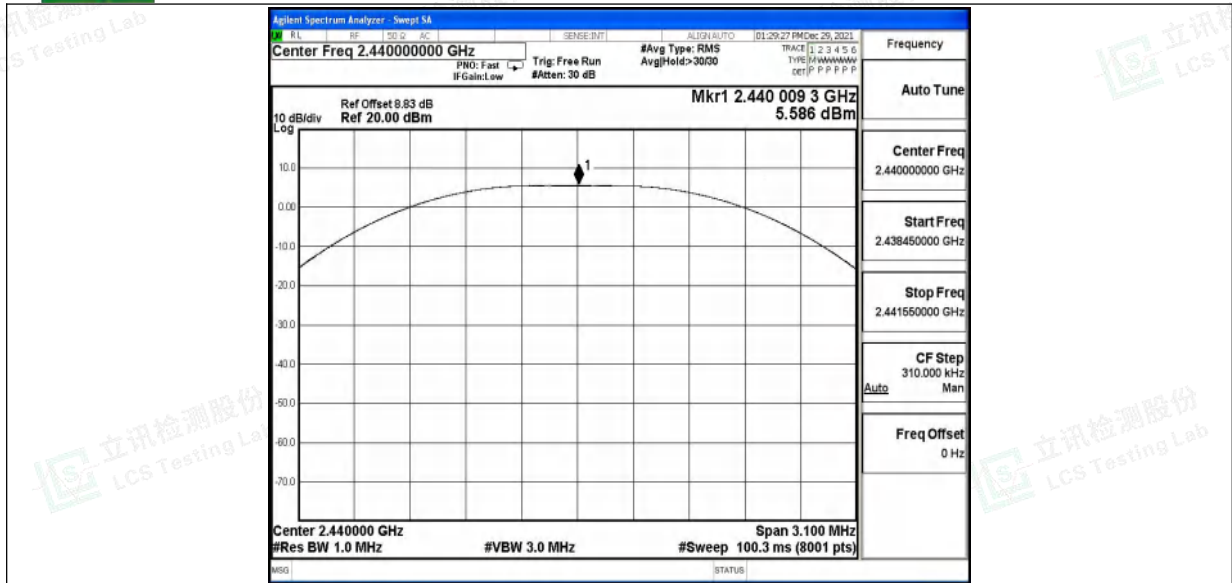


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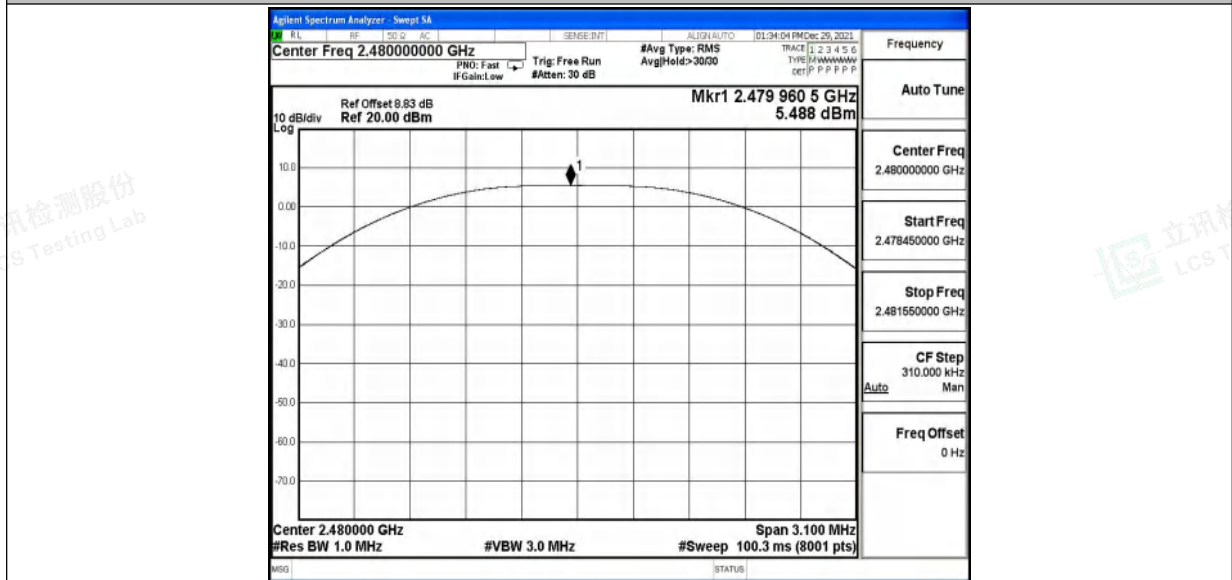
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BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

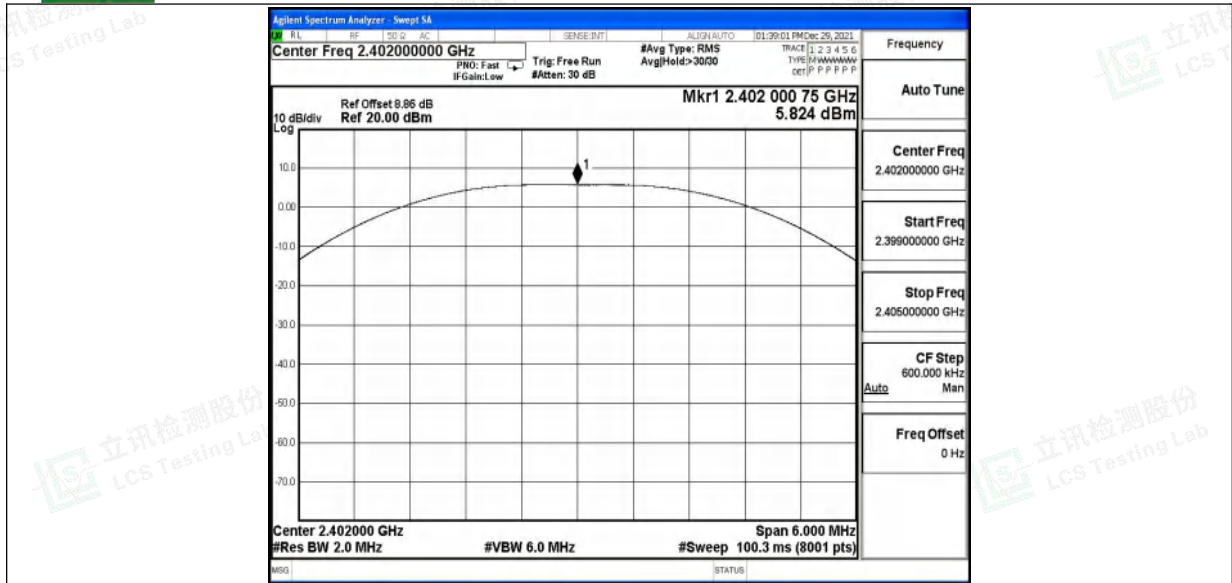


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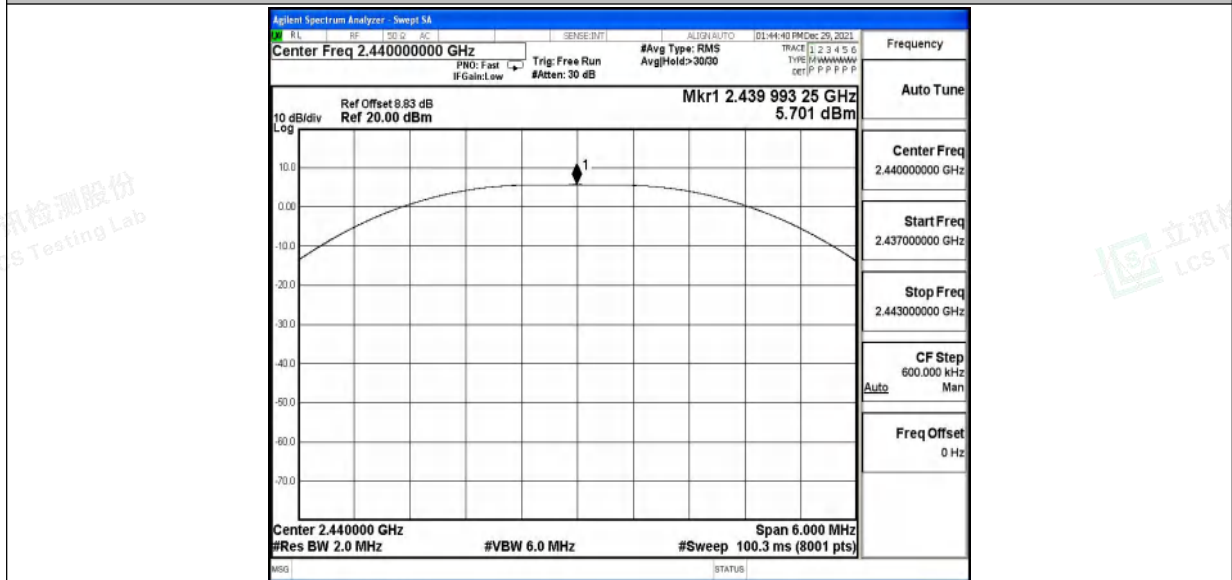
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BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

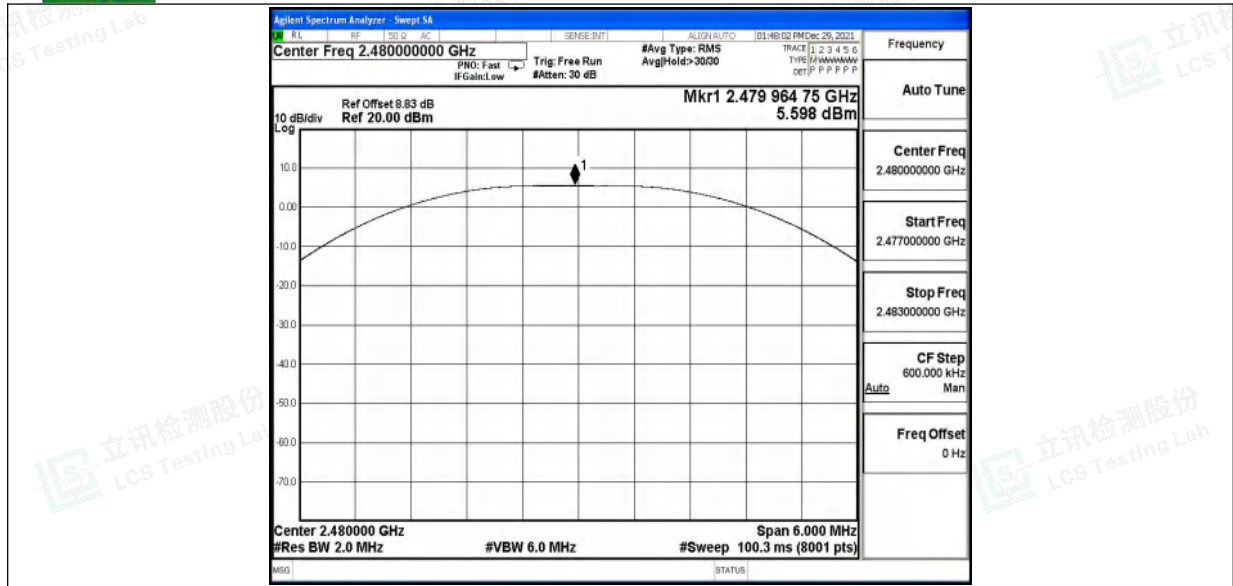


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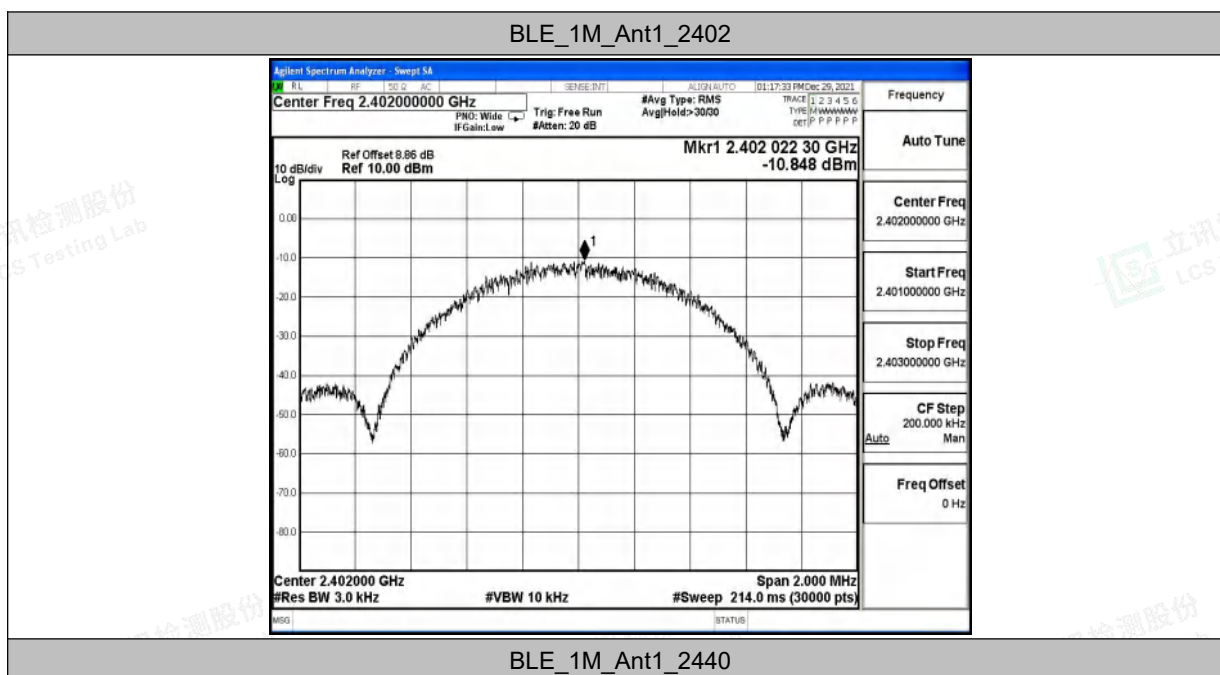


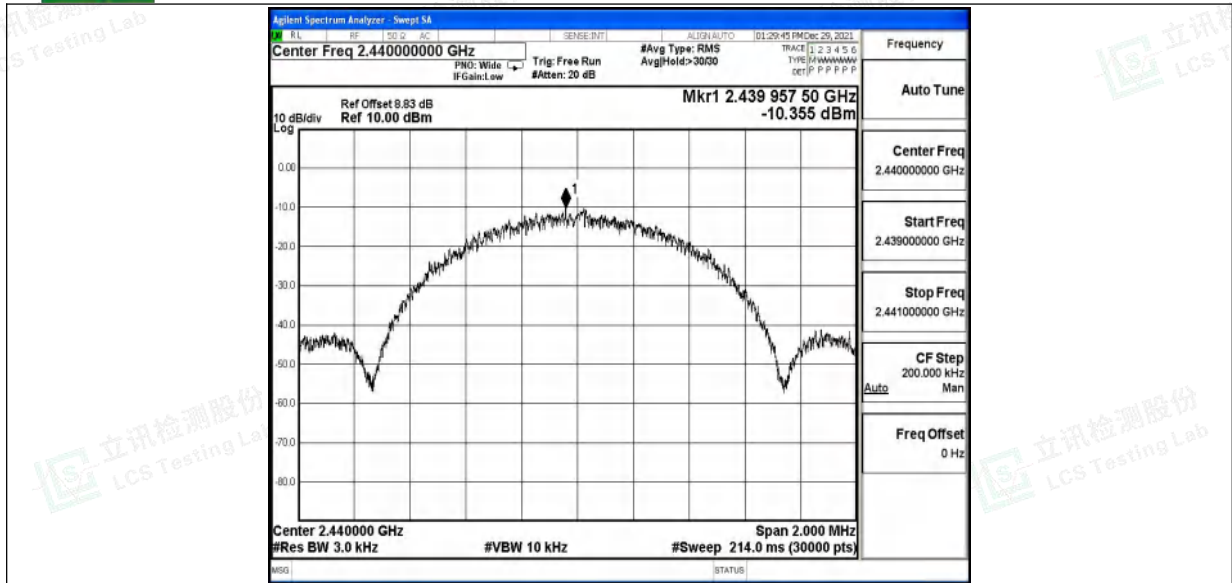
B.3 Maximum power spectral density

Test Result

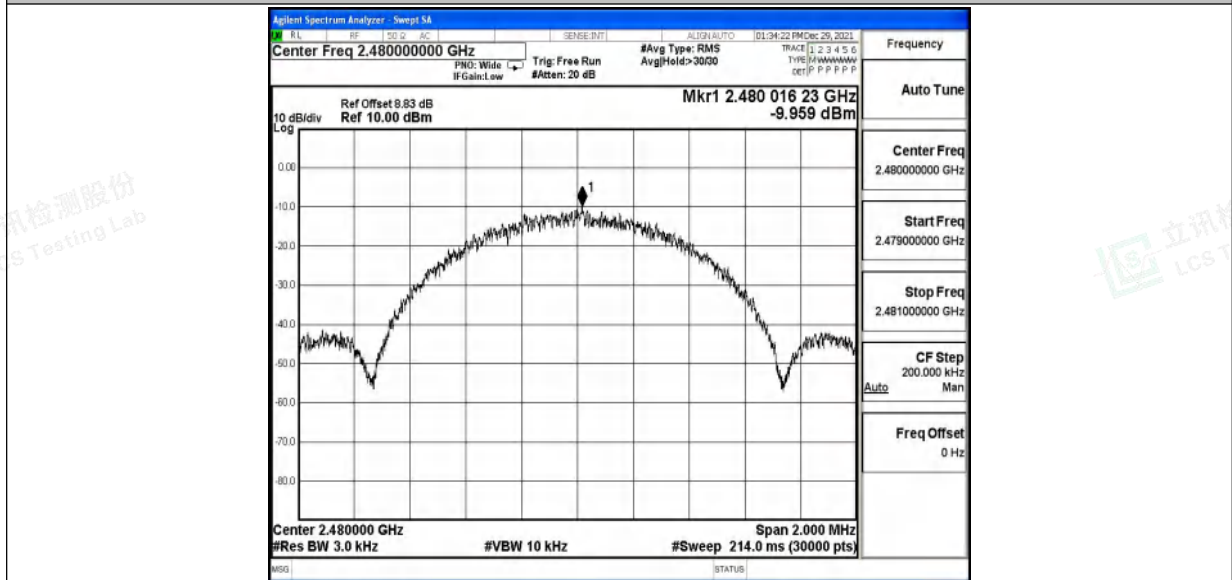
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.85	≤8.00	PASS
		2440	-10.36	≤8.00	PASS
		2480	-9.96	≤8.00	PASS
BLE_2M	Ant1	2402	-11.66	≤8.00	PASS
		2440	-12.11	≤8.00	PASS
		2480	-12.83	≤8.00	PASS

Test Graphs





BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

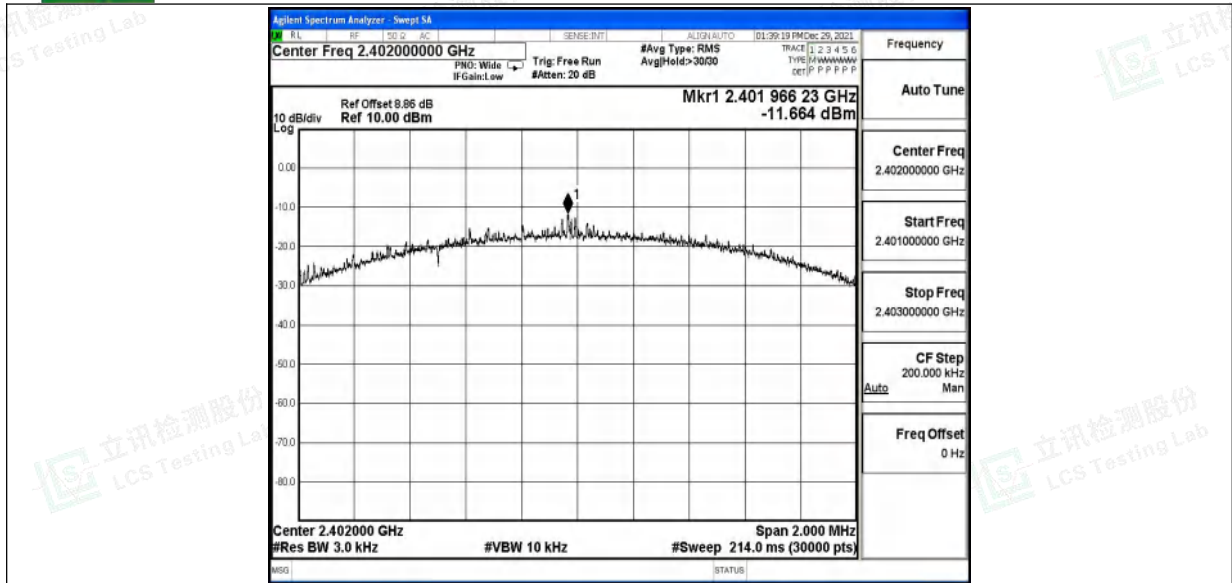


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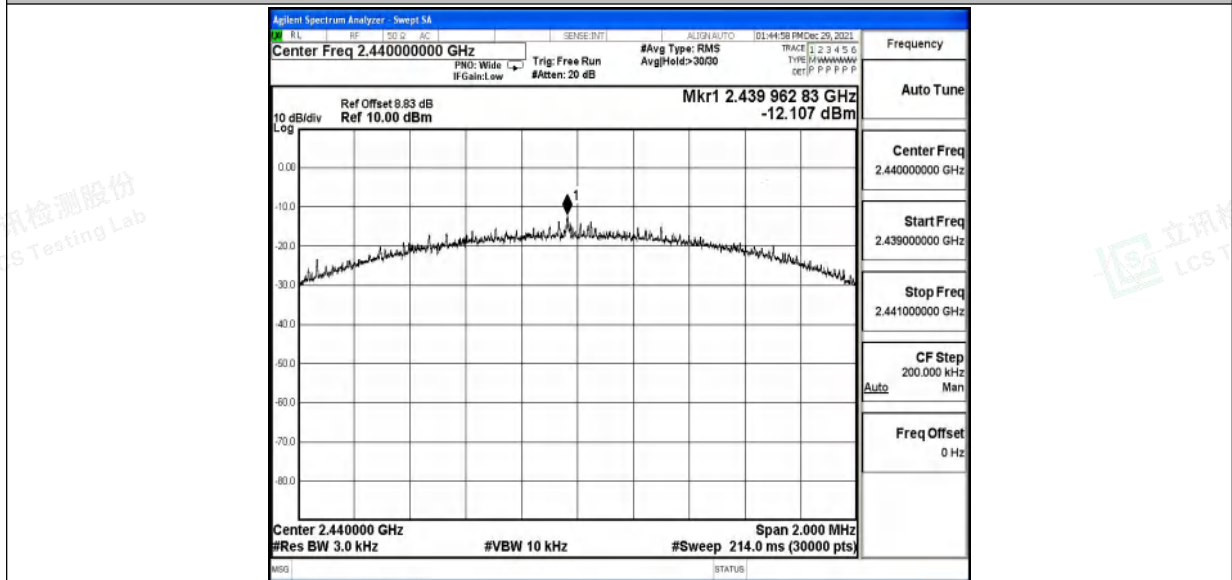
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BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

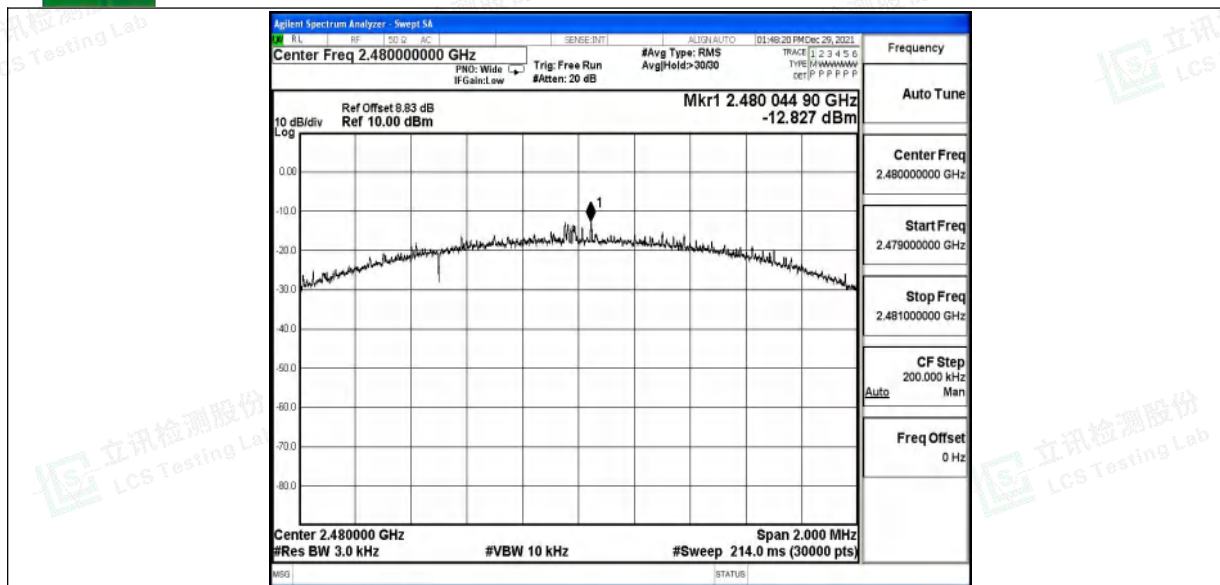


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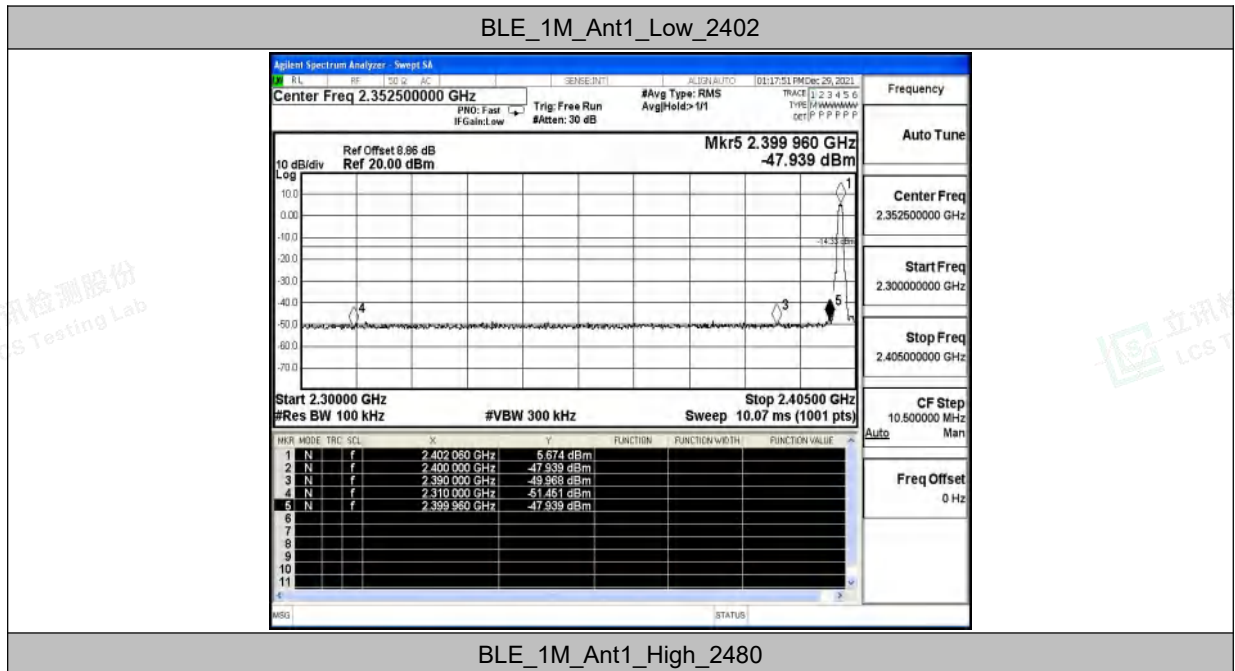


B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	5.67	-47.94	≤-14.33	PASS
		High	2480	5.53	-46.92	≤-14.47	PASS
BLE_2M	Ant1	Low	2402	5.63	-27.42	≤-14.37	PASS
		High	2480	5.50	-47.82	≤-14.5	PASS

Test Graphs

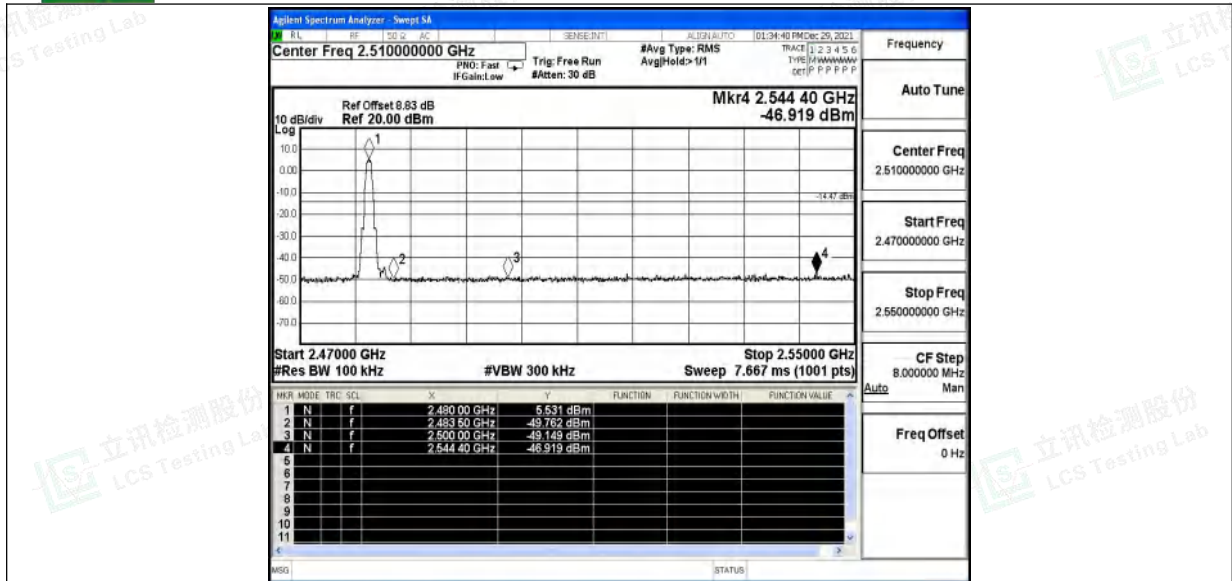


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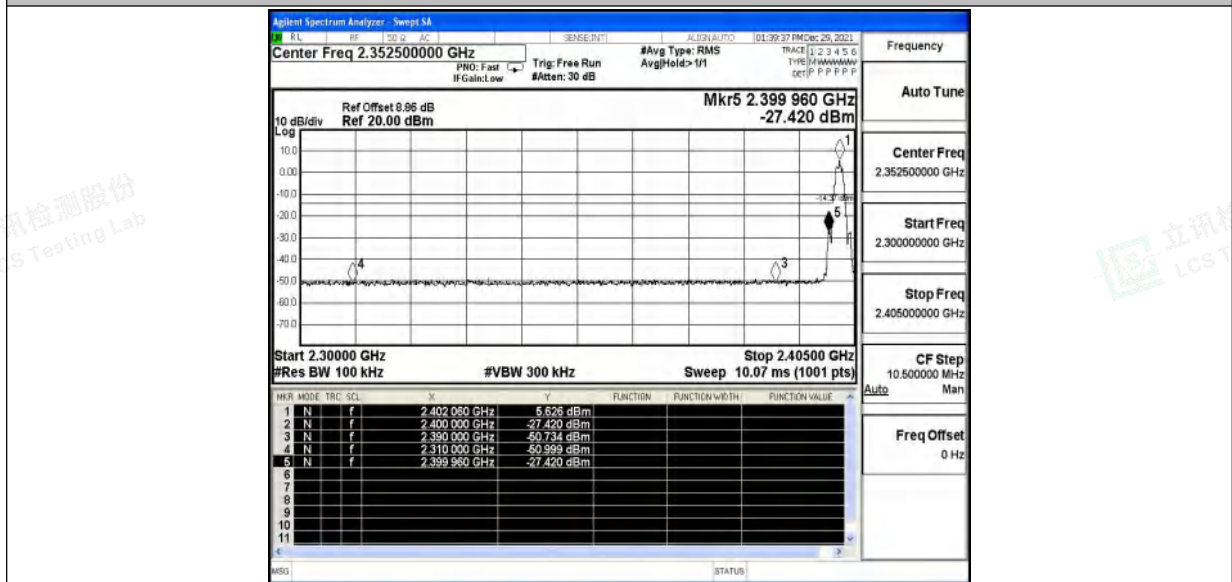
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BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480

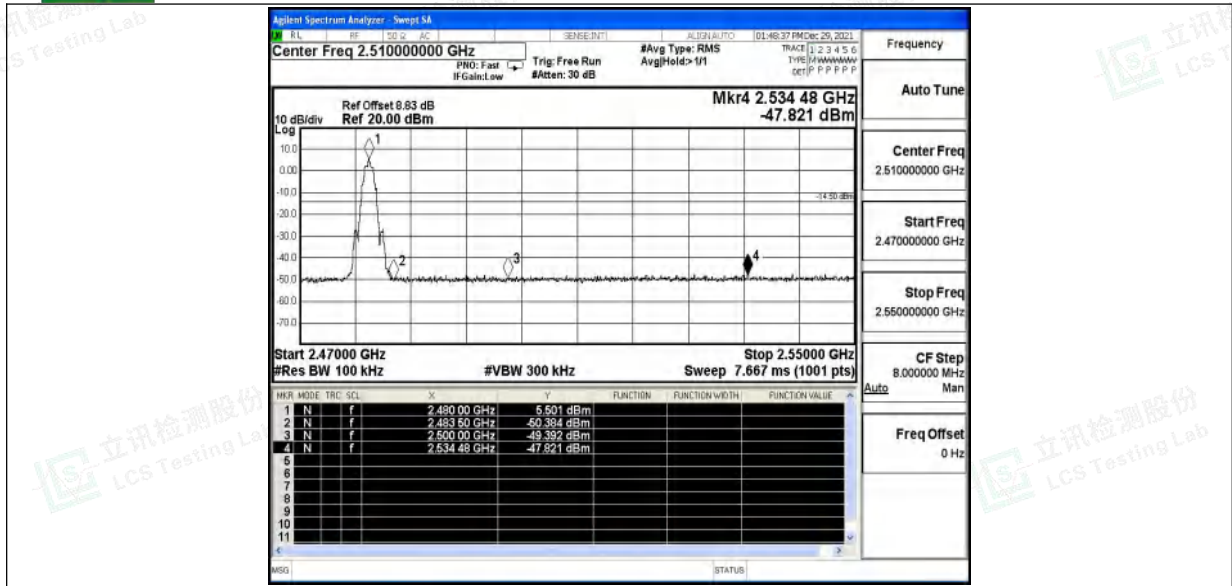


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B.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.61	5.61	---	PASS
			30~1000	5.61	-60.21	≤-14.39	PASS
			1000~26500	5.61	-46.26	≤-14.39	PASS
		2440	Reference	5.26	5.26	---	PASS
			30~1000	5.26	-60.99	≤-14.74	PASS
			1000~26500	5.26	-45.45	≤-14.74	PASS
		2480	Reference	5.23	5.23	---	PASS
			30~1000	5.23	-60.72	≤-14.77	PASS
			1000~26500	5.23	-45.43	≤-14.77	PASS
BLE_2M	Ant1	2402	Reference	5.60	5.60	---	PASS
			30~1000	5.60	-60.31	≤-14.4	PASS
			1000~26500	5.60	-46.04	≤-14.4	PASS
		2440	Reference	5.48	5.48	---	PASS
			30~1000	5.48	-60.45	≤-14.52	PASS
			1000~26500	5.48	-46.49	≤-14.52	PASS
		2480	Reference	5.38	5.38	---	PASS
			30~1000	5.38	-60.04	≤-14.62	PASS
			1000~26500	5.38	-45.9	≤-14.62	PASS

Test Graphs

BLE_1M_Ant1_2402_0~Reference

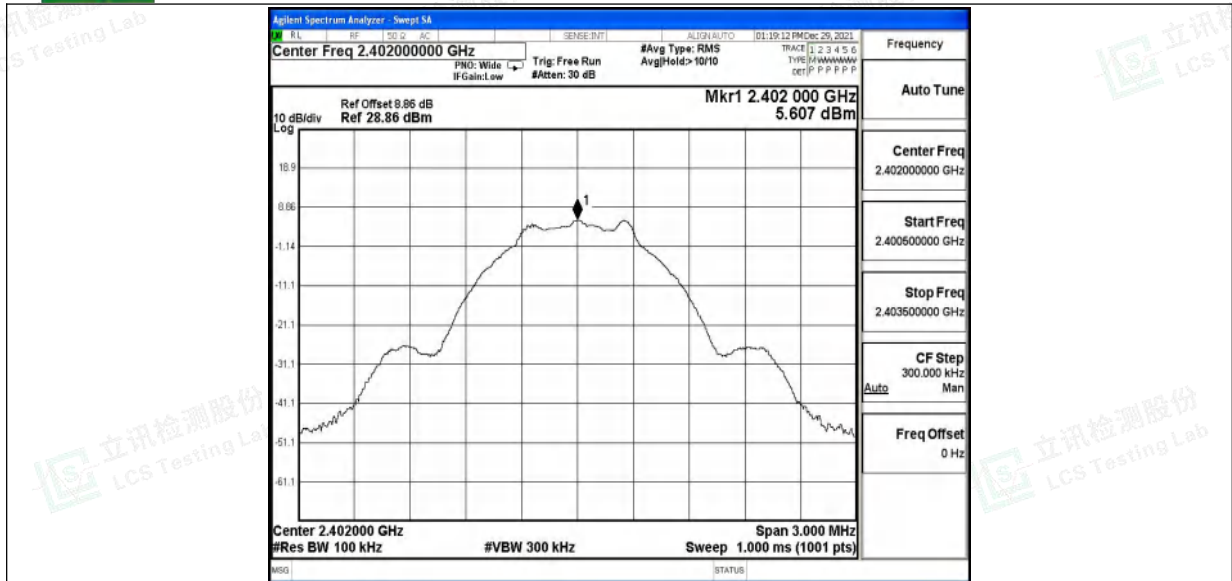


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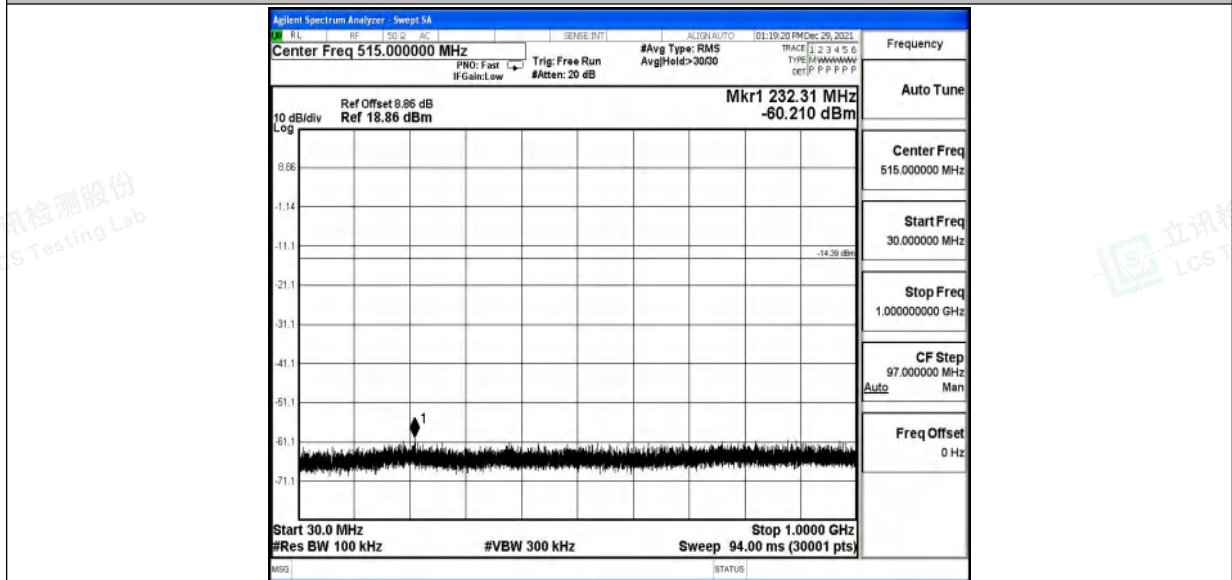
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BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

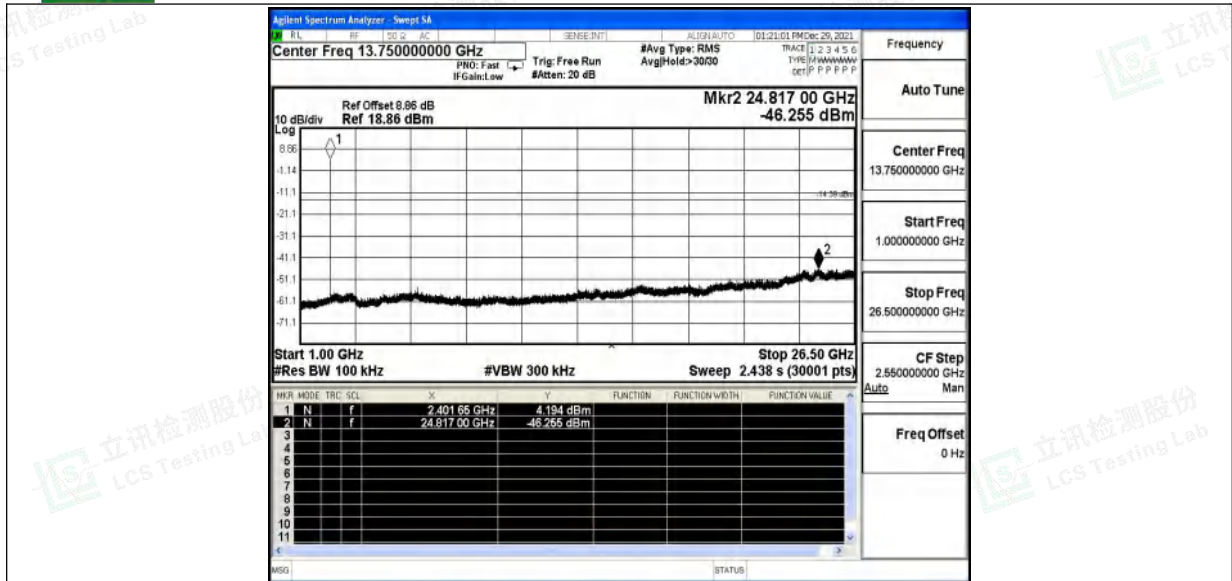


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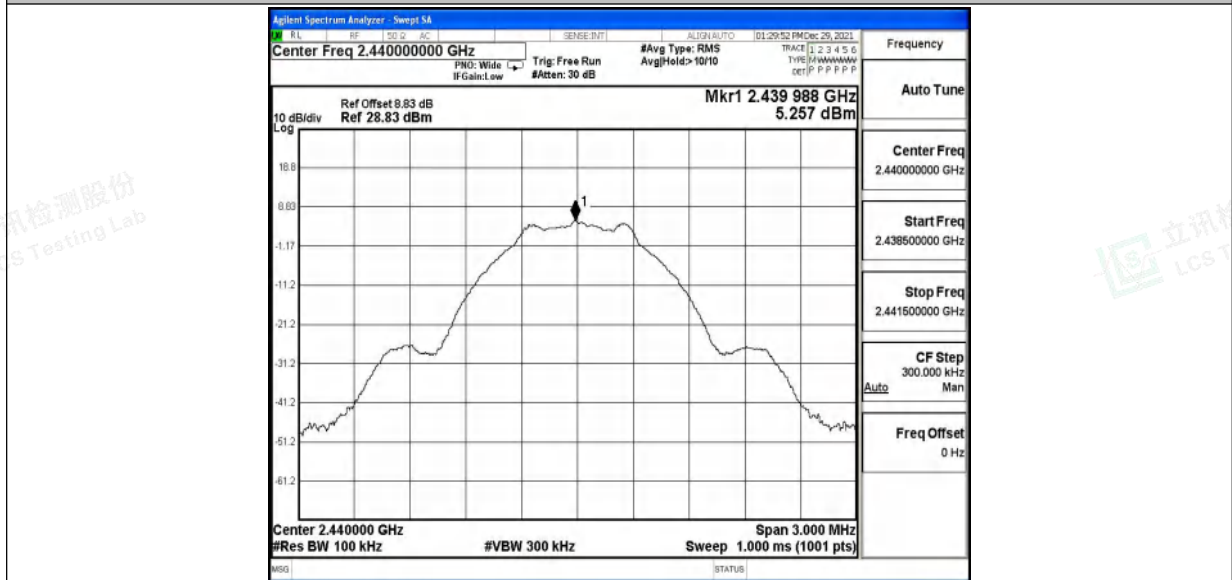
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

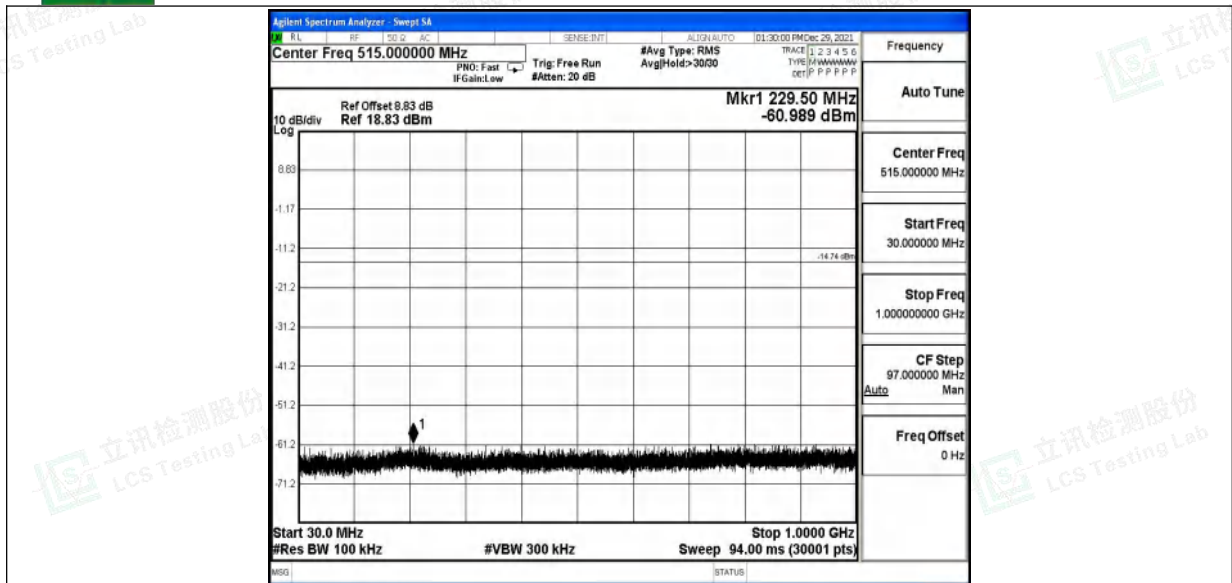


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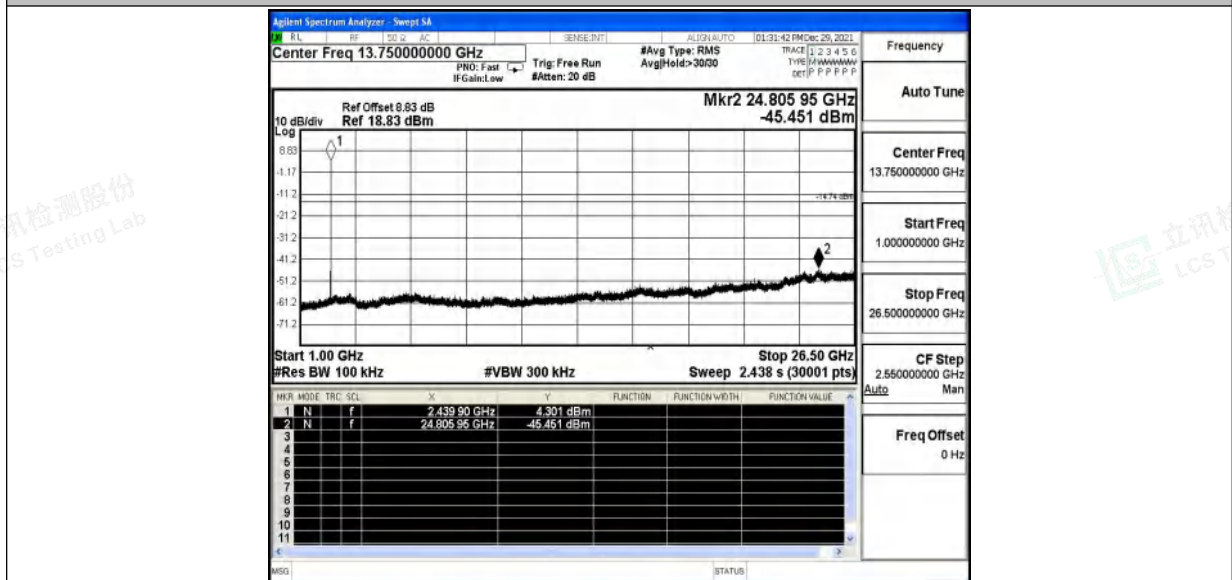
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

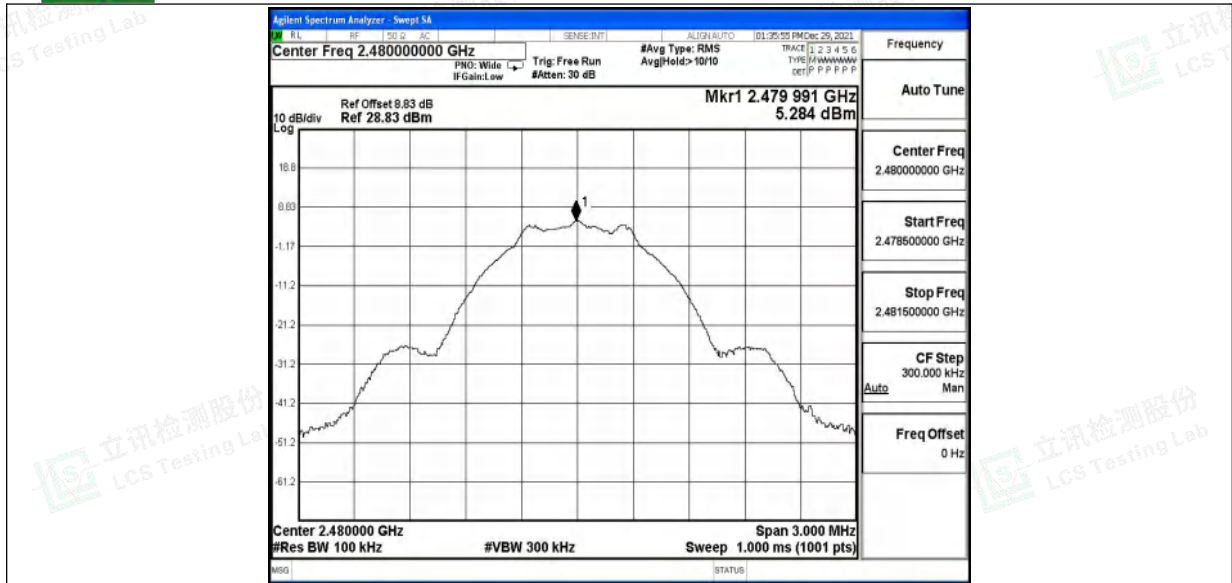


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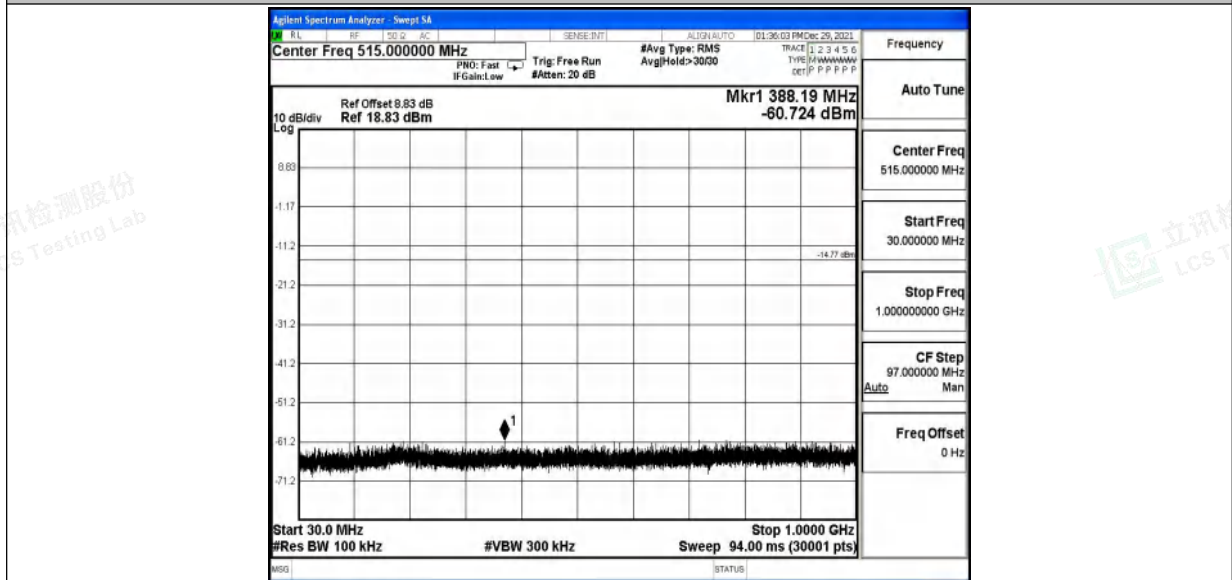
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

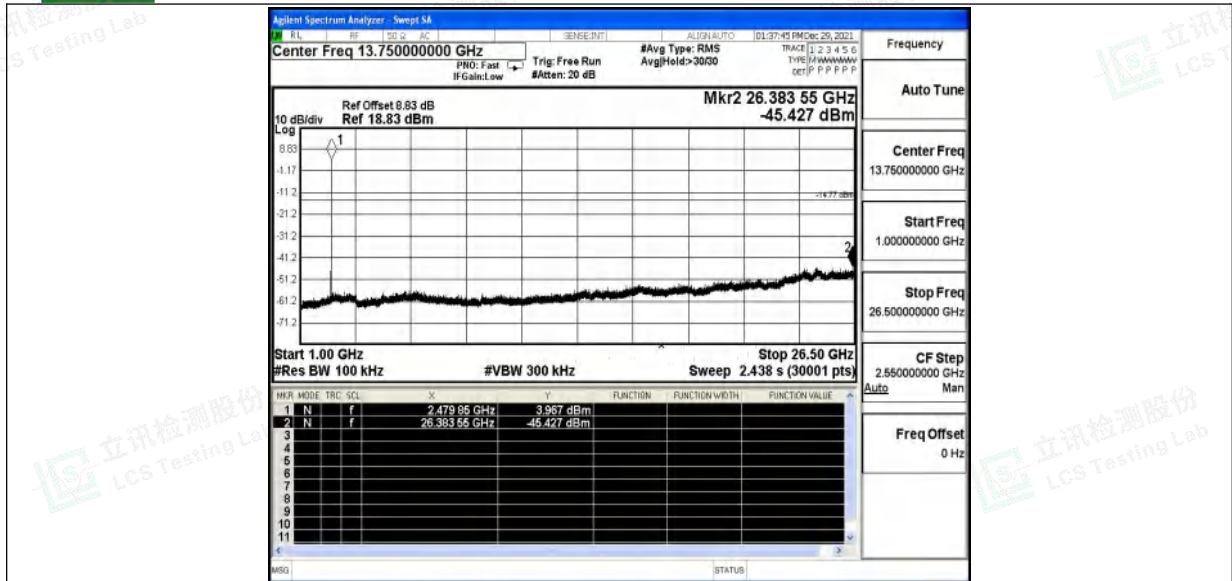


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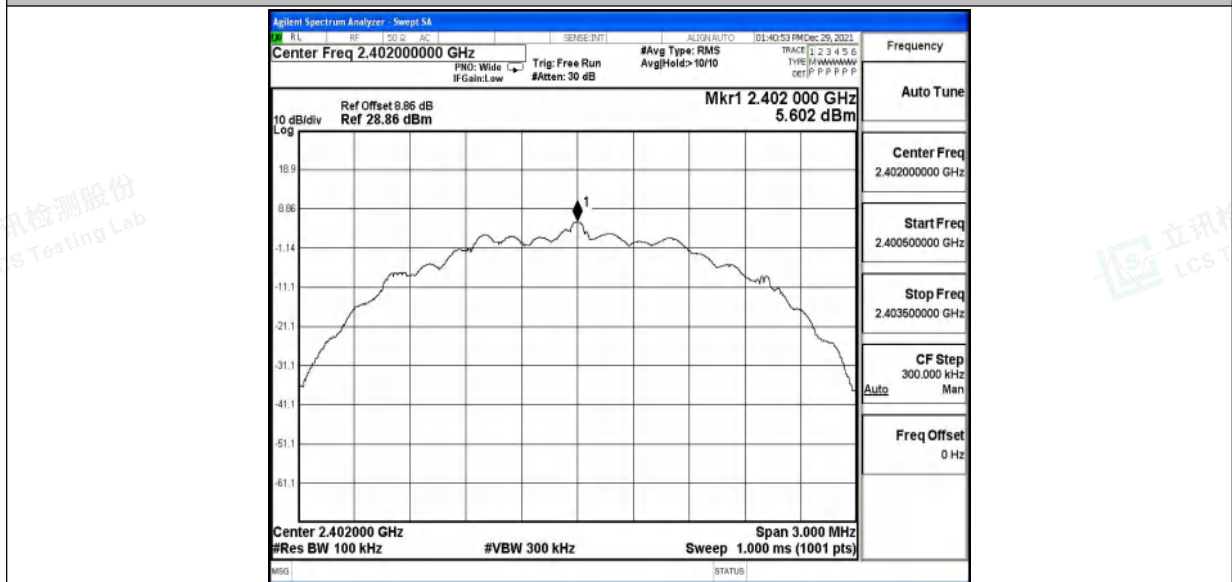
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BLE_2M_Ant1_2402_0~Reference



BLE_2M_Ant1_2402_30~1000

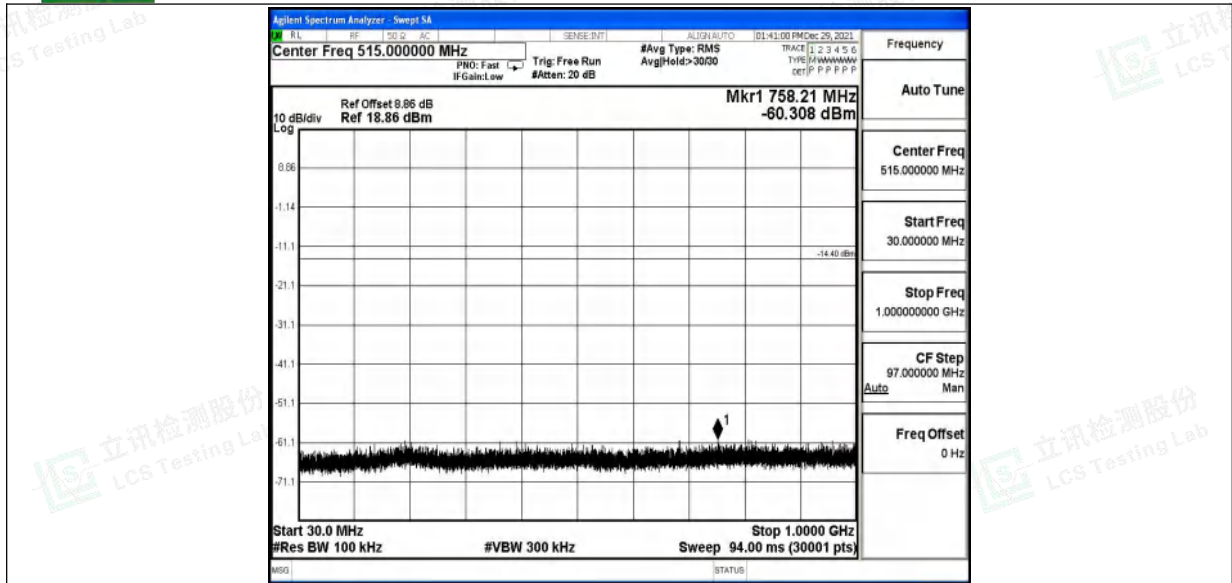


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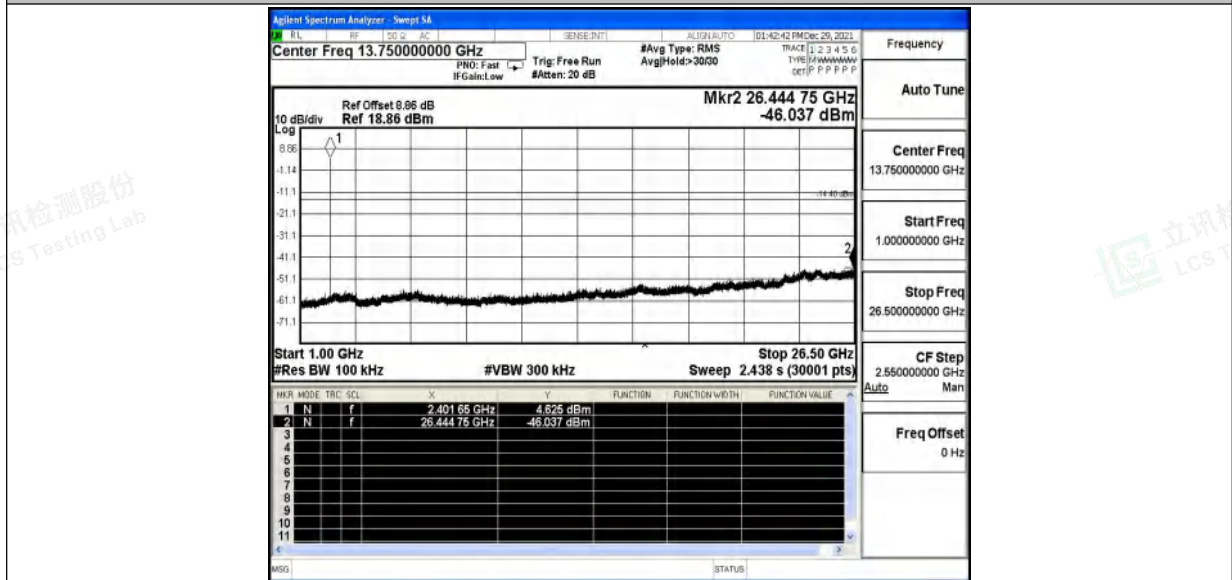
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BLE_2M_Ant1_2402_1000~26500



BLE_2M_Ant1_2440_0~Reference

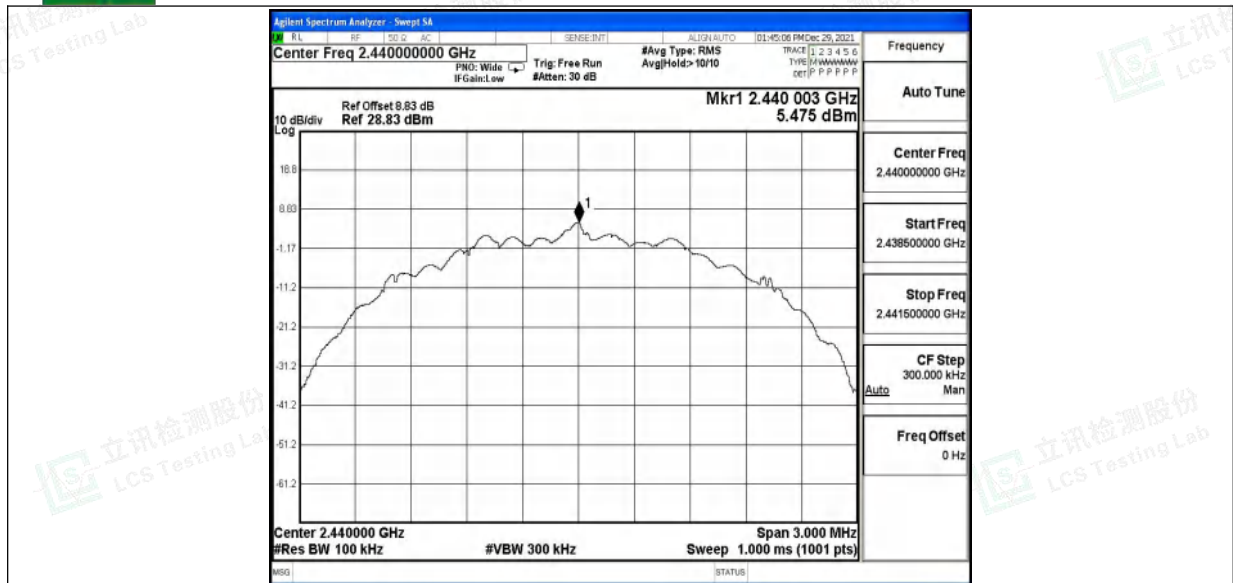


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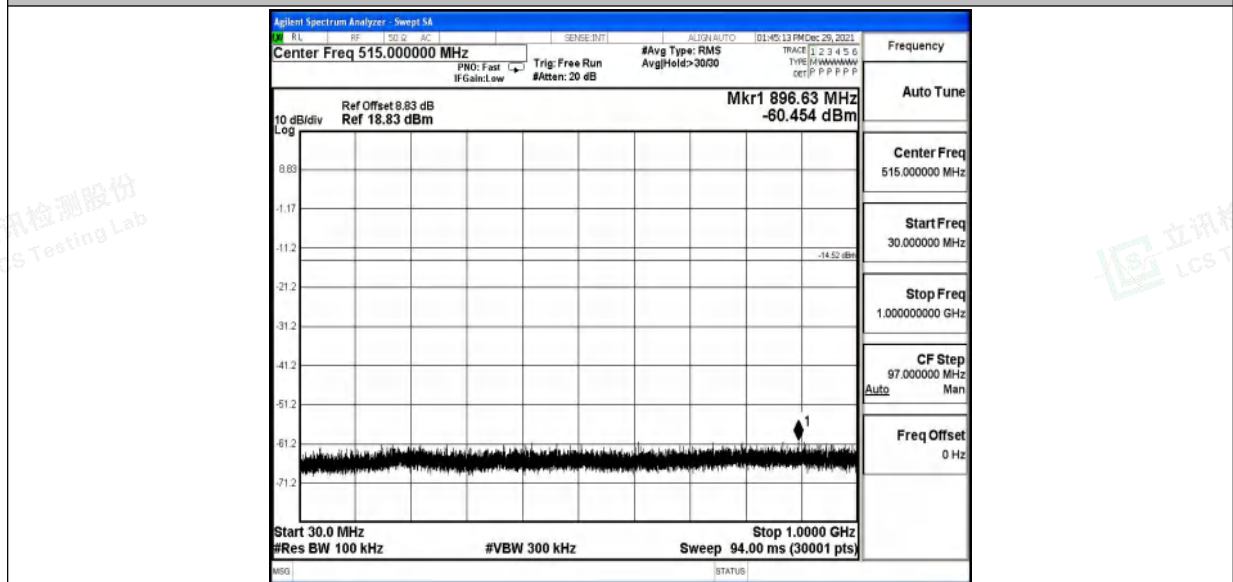
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BLE_2M_Ant1_2440_30~1000



BLE_2M_Ant1_2440_1000~26500

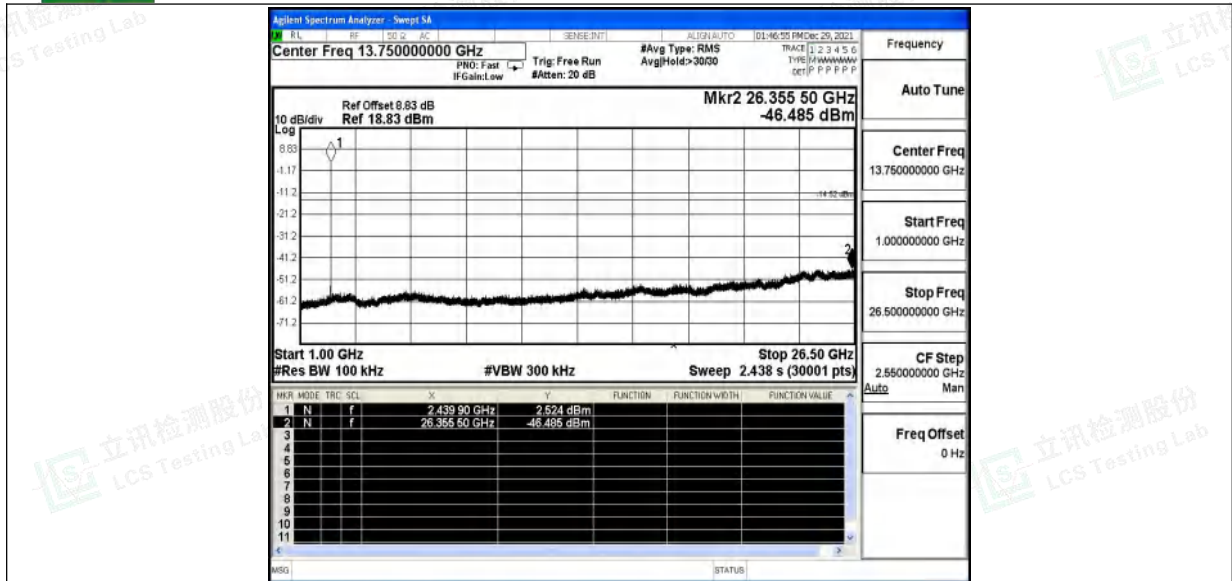


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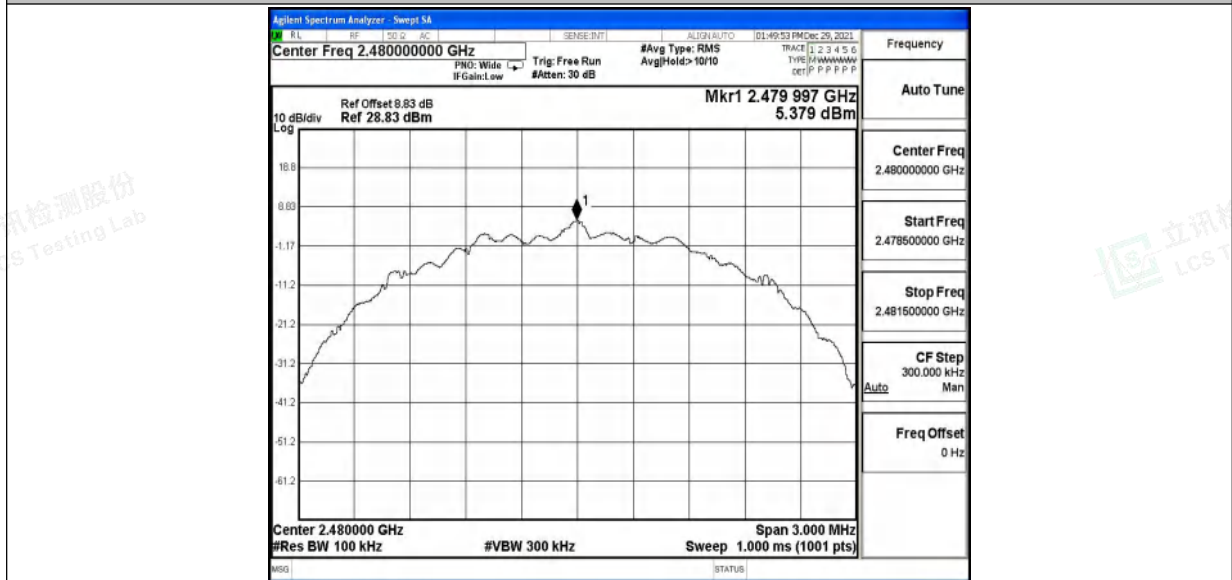
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BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000

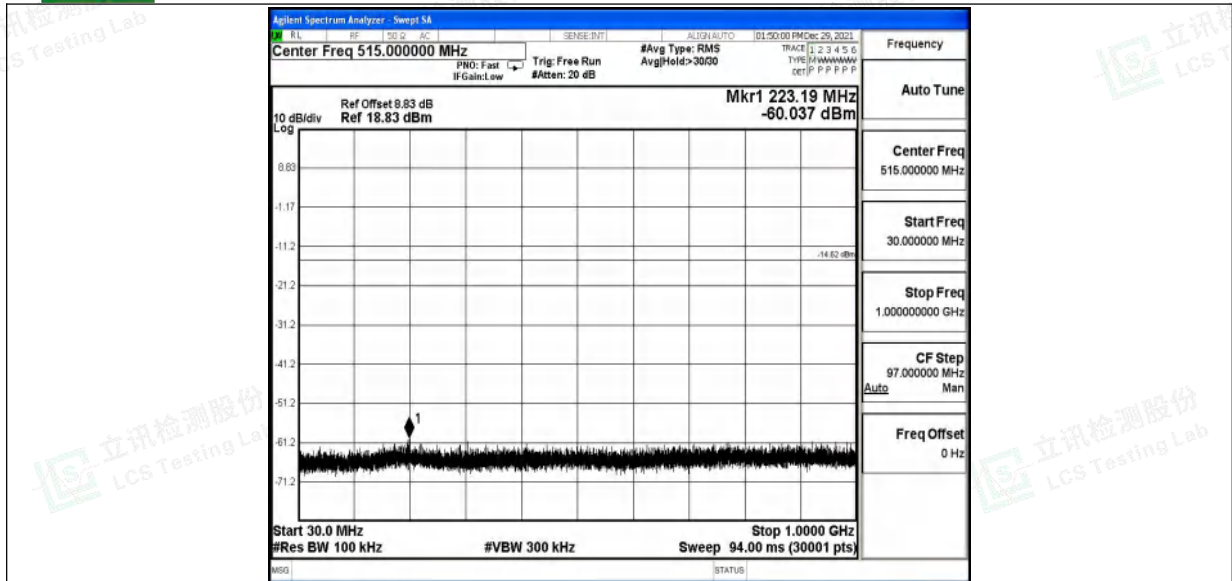


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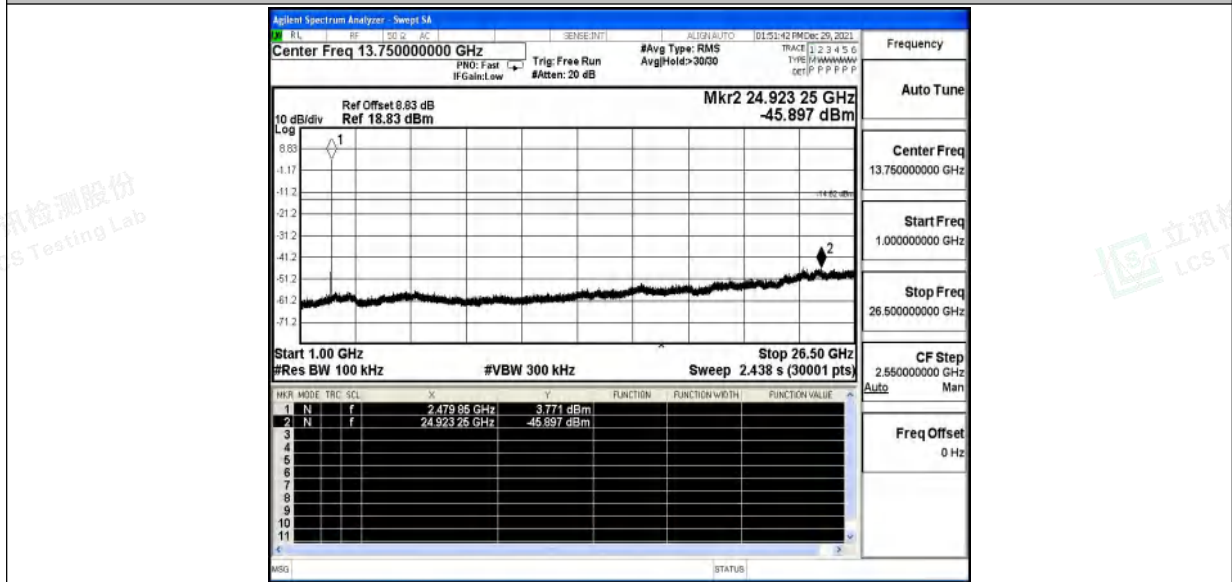
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BLE_2M_Ant1_2480_1000~26500



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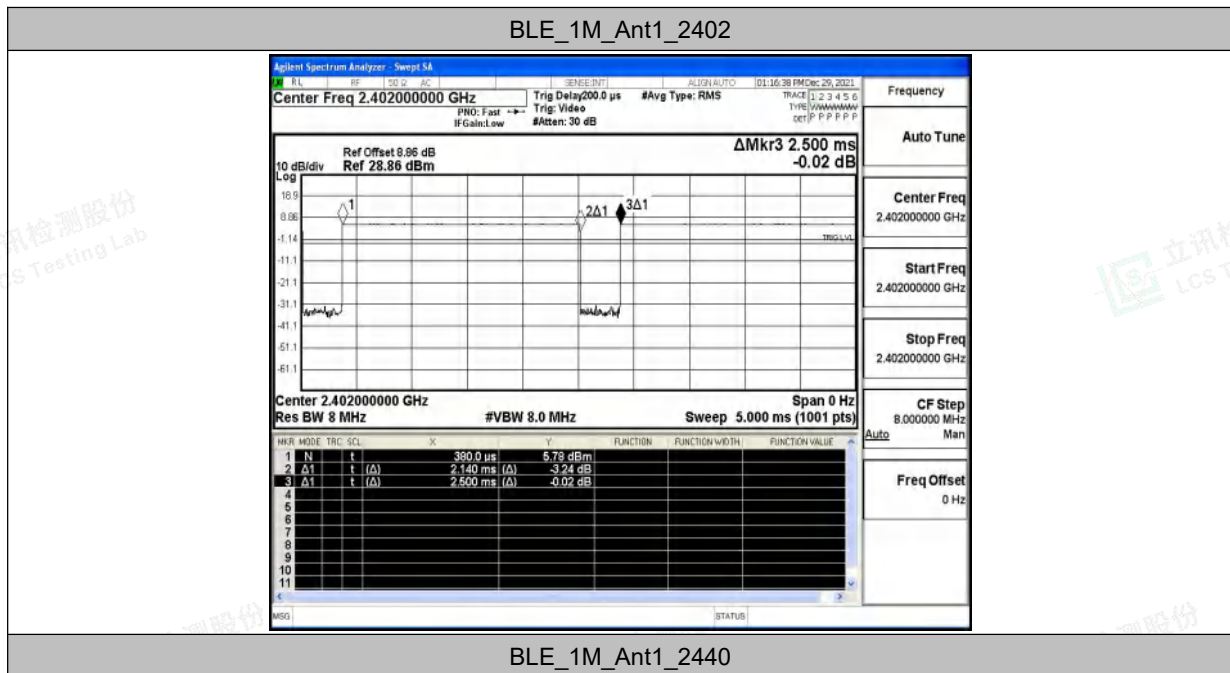


B.6 Duty Cycle

Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.14	2.50	0.8560	85.60	0.68	---	---
		2440	2.14	2.50	0.8560	85.60	0.68	---	---
		2480	2.14	2.50	0.8560	85.60	0.68	---	---
BLE_2M	Ant1	2402	1.08	1.87	0.5775	57.75	2.38	---	---
		2440	1.08	1.88	0.5745	57.45	2.41	---	---
		2480	1.08	1.88	0.5745	57.45	2.41	---	---

Test Graphs

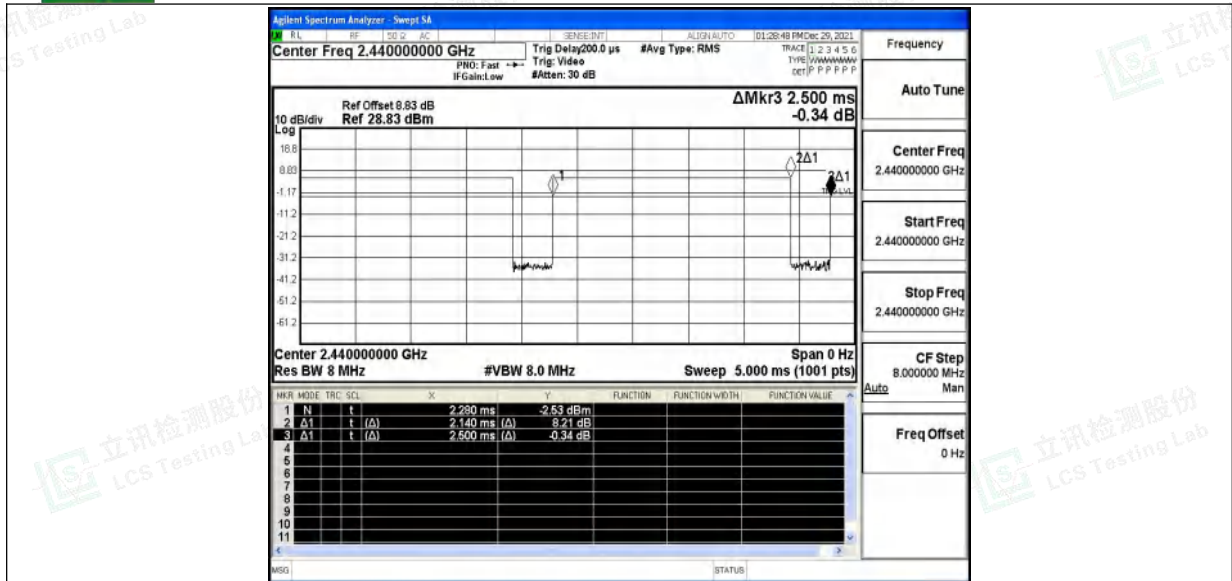


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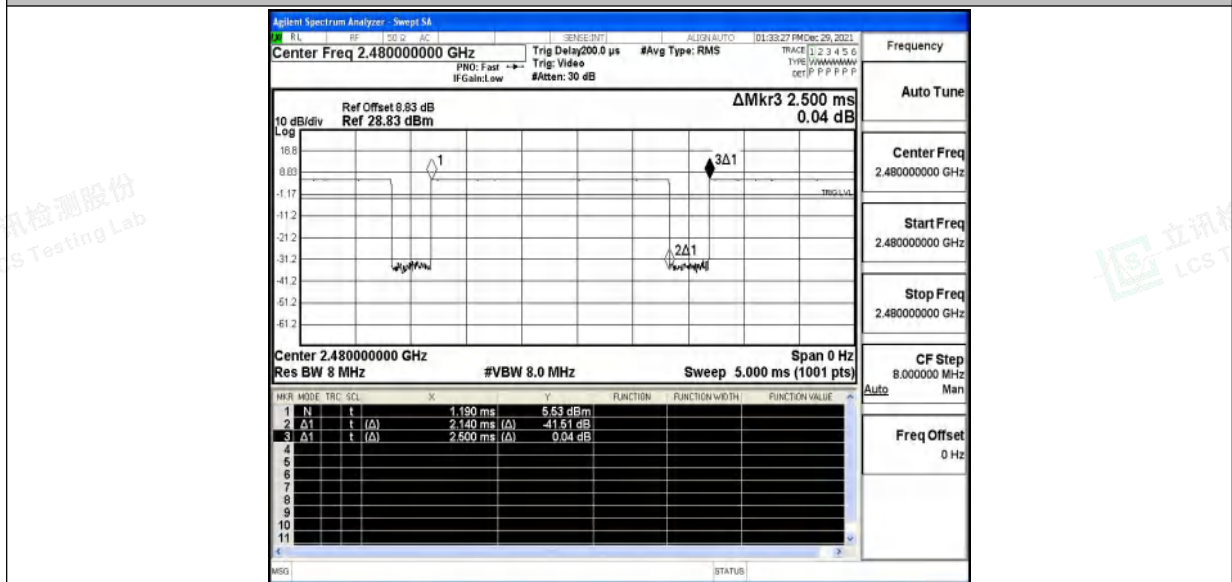
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BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

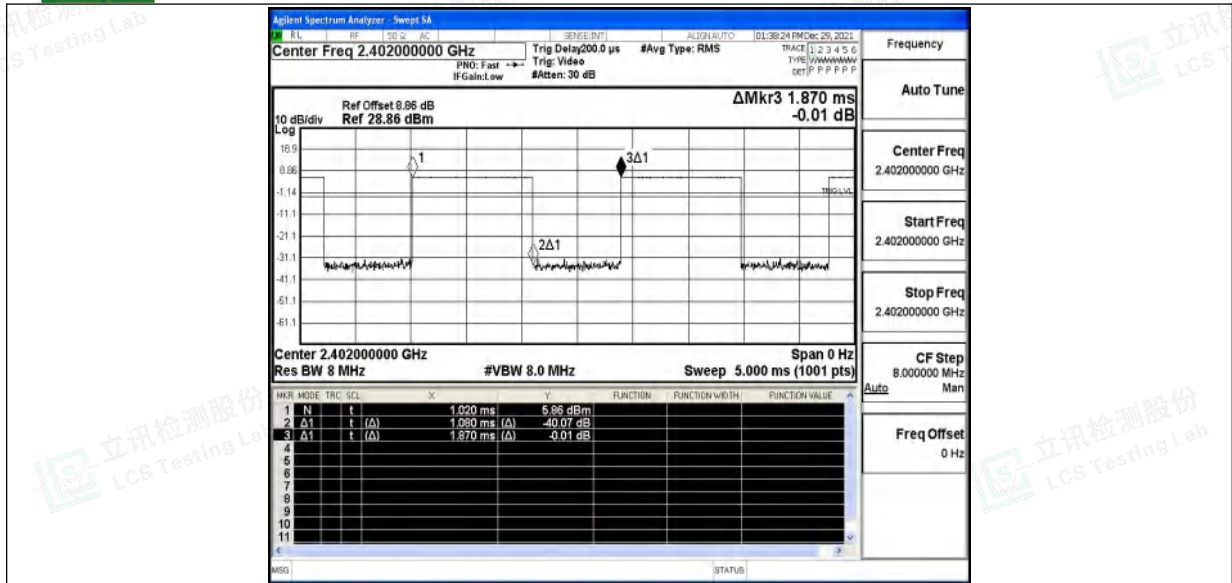


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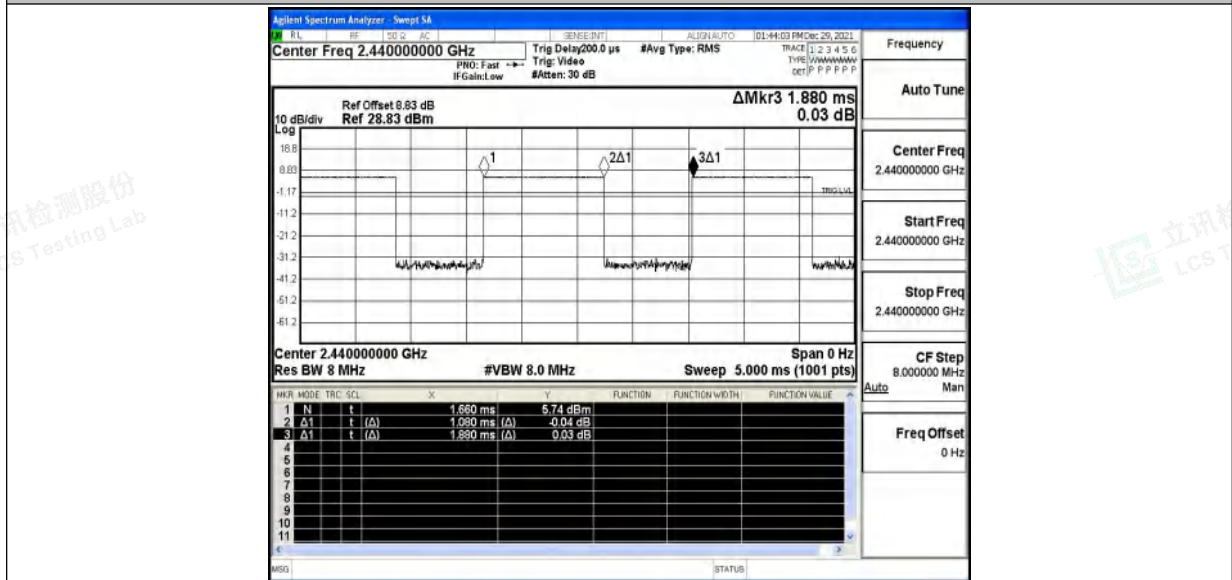
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BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

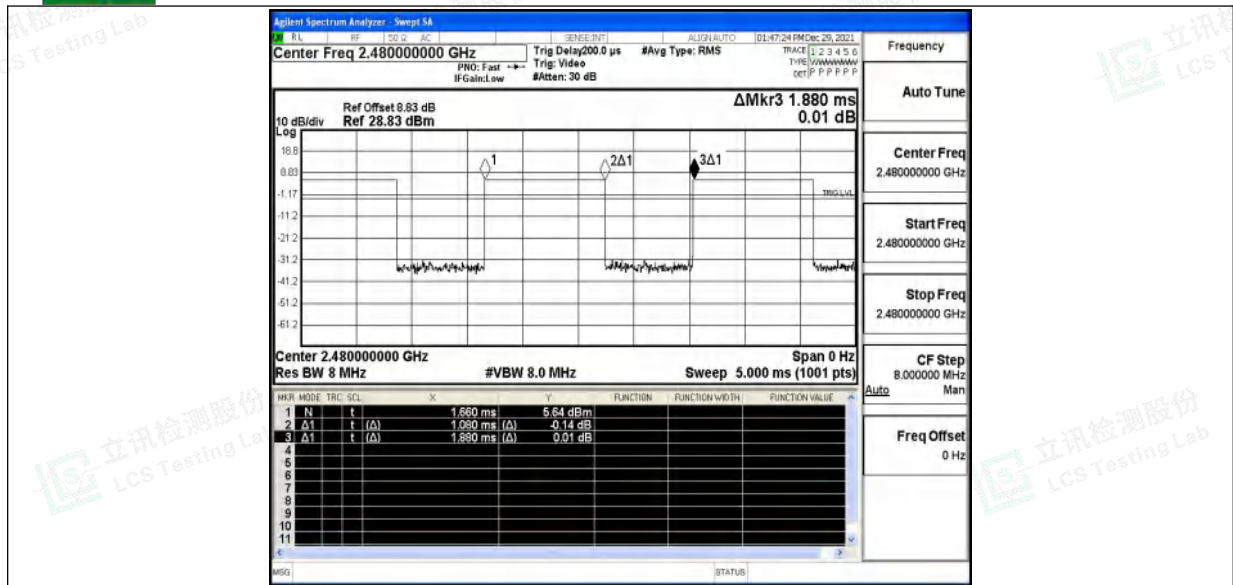


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B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Ver
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.97	≤-41.20	47.23	≤54	PA
				AV	2387.990	-47.34	≤-41.20	47.86	≤54	PA
				AV	2390.000	-47.53	≤-41.20	47.67	≤54	PA
				Peak	2310.000	-39.2	≤-21.20	56.00	≤74	PA
				Peak	2377.700	-36.67	≤-21.20	58.53	≤74	PA
				Peak	2390.000	-37.82	≤-21.20	57.38	≤74	PA
		High	2480	AV	2483.500	-45.88	≤-41.20	49.32	≤54	PA
				AV	2483.520	-45.88	≤-41.20	49.32	≤54	PA
				AV	2500.000	-47	≤-41.20	48.20	≤54	PA
				Peak	2483.500	-38.03	≤-21.20	57.17	≤74	PA
				Peak	2498.720	-35.62	≤-21.20	59.58	≤74	PA
				Peak	2500.000	-37.46	≤-21.20	57.74	≤74	PA
BLE_2M	Ant1	Low	2402	AV	2310.000	-47.59	≤-41.20	47.61	≤54	PA
				AV	2384.210	-47.14	≤-41.20	48.06	≤54	PA
				AV	2390.000	-47.32	≤-41.20	47.88	≤54	PA
				Peak	2310.000	-38.42	≤-21.20	56.78	≤74	PA
				Peak	2368.880	-36.17	≤-21.20	59.03	≤74	PA
				Peak	2390.000	-38.04	≤-21.20	57.16	≤74	PA
		High	2480	AV	2483.500	-42.99	≤-41.20	52.21	≤54	PA
				AV	2483.520	-42.99	≤-41.20	52.21	≤54	PA
				AV	2500.000	-46.85	≤-41.20	48.35	≤54	PA
				Peak	2483.500	-36.47	≤-21.20	58.73	≤74	PA
				Peak	2495.840	-35.93	≤-21.20	59.27	≤74	PA
				Peak	2500.000	-37.36	≤-21.20	57.84	≤74	PA

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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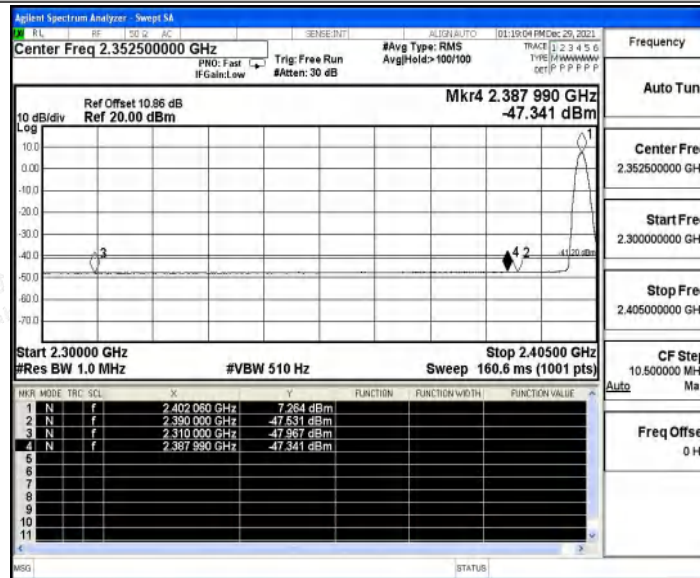
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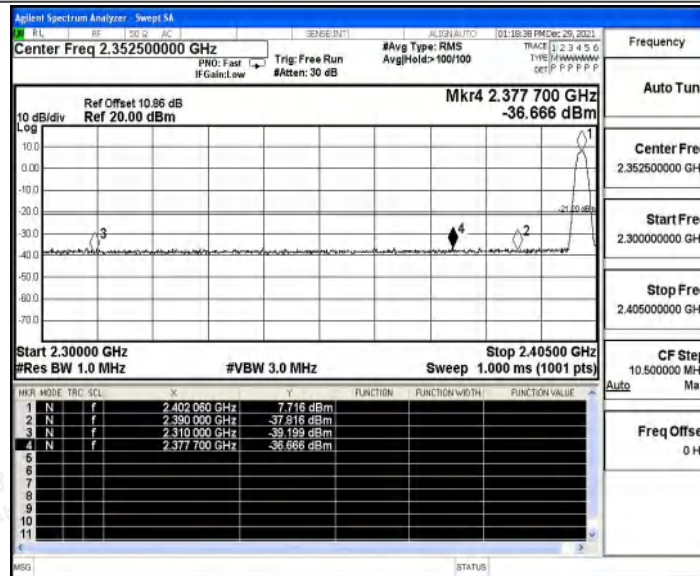


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

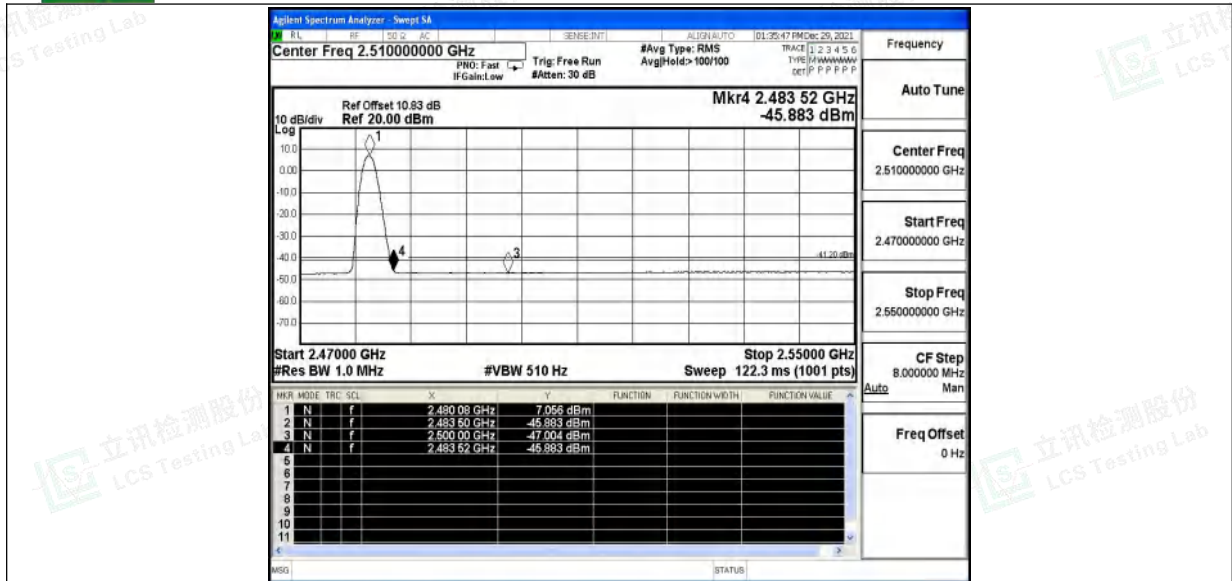


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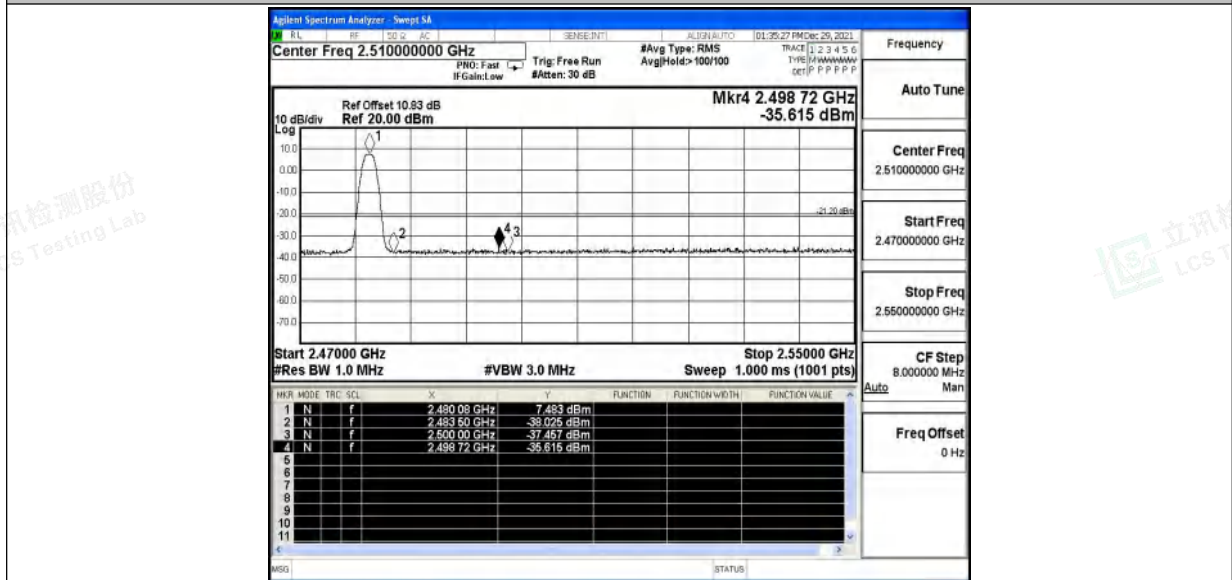
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BLE_1M_Ant1_High_2480_Peak



BLE_2M_Ant1_Low_2402_AV

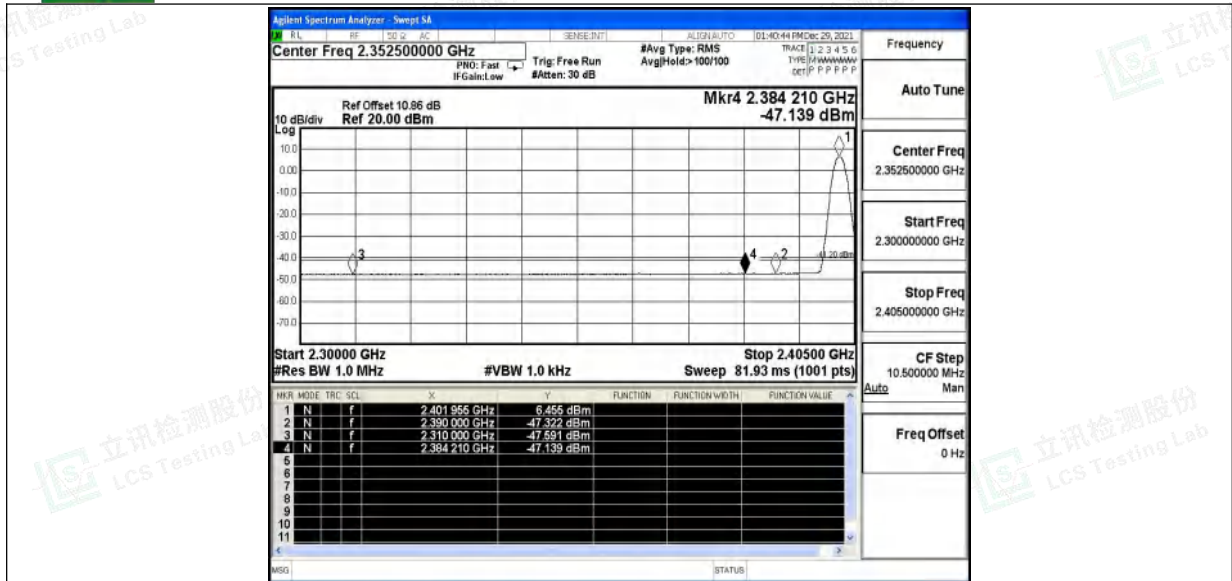


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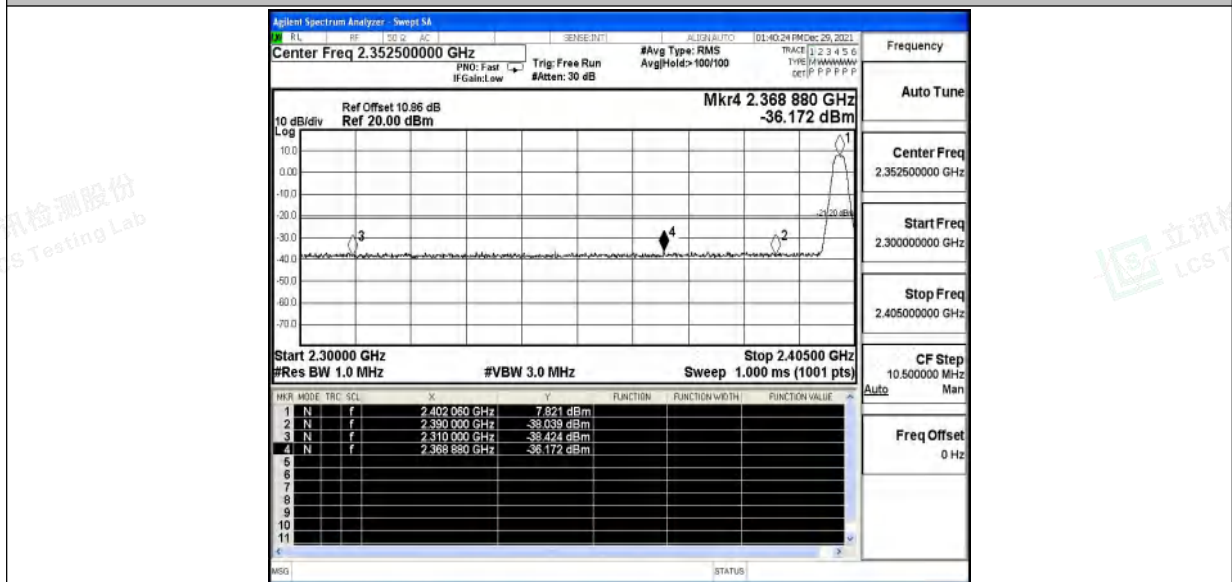
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BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV

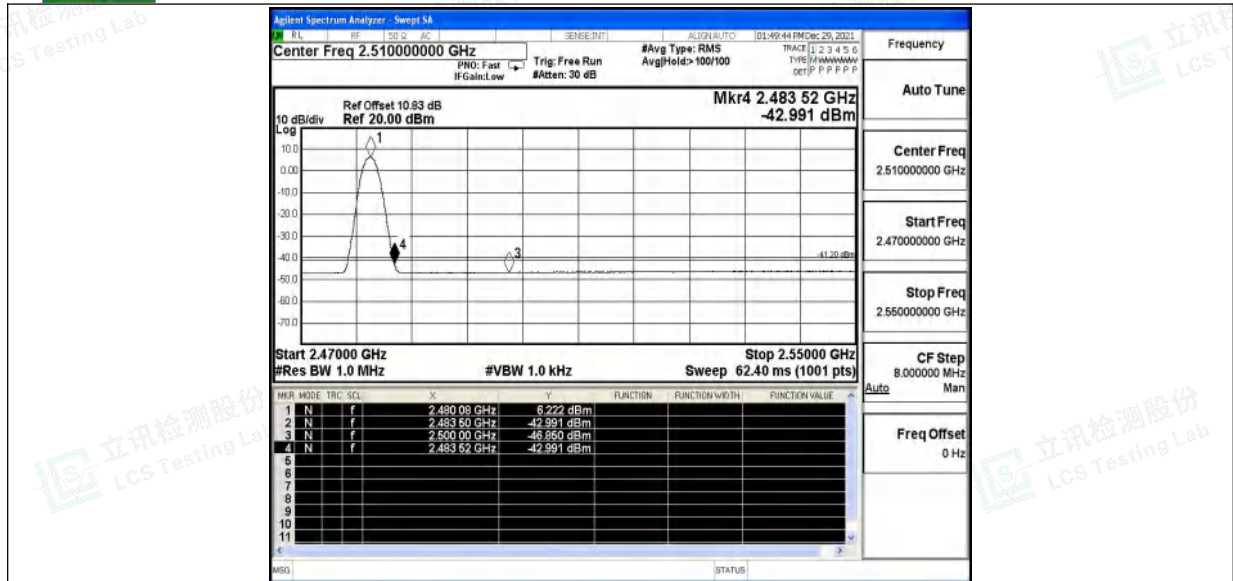


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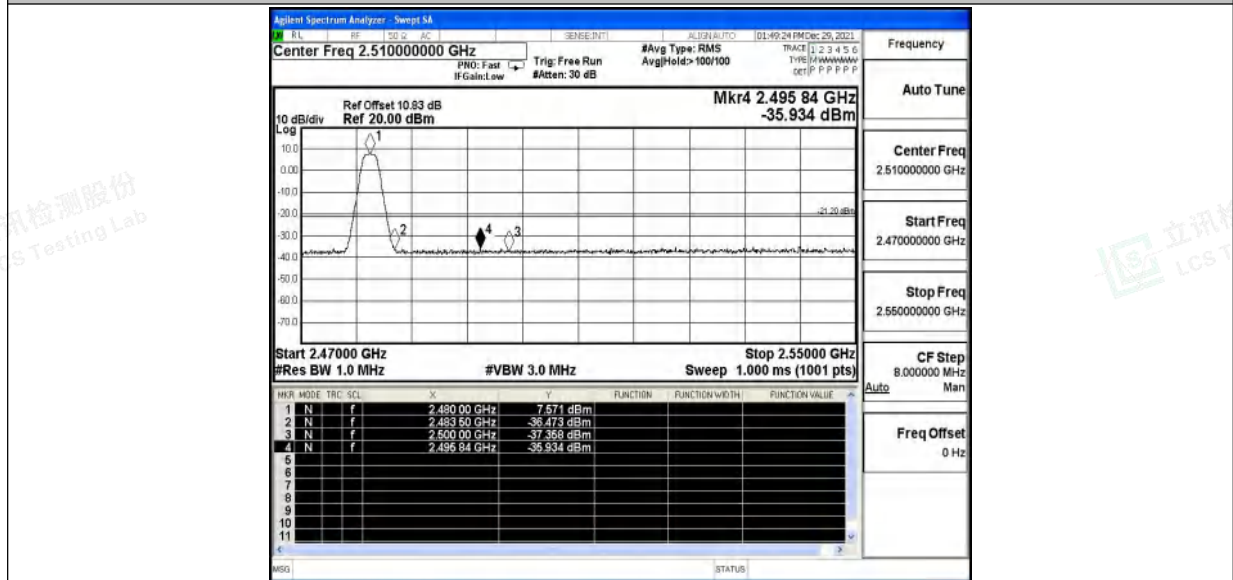
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BLE_2M_Ant1_High_2480_Peak



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