



## Appendix B

### RF Test Data for BLE (Conducted Measurement)

Product Name: TWS Earphone

Test Model: ePRO-AE01

#### Environmental Conditions

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





## B.1 DTS Bandwidth

### Test Result

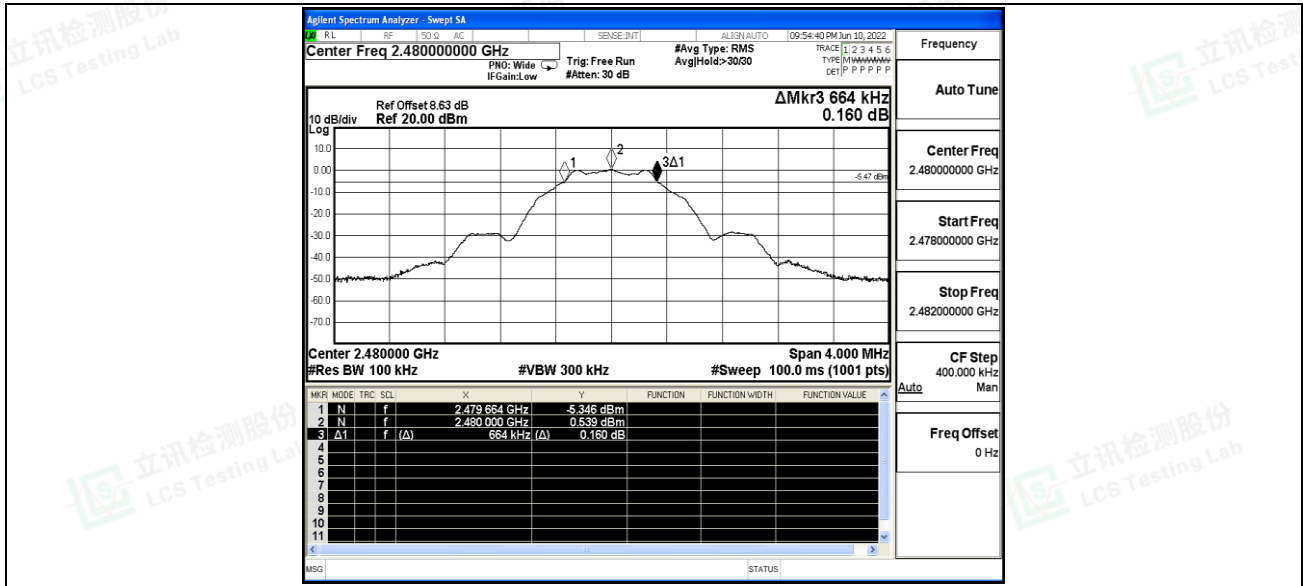
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant	2402	0.664	2401.668	2402.332	0.5	PASS
		2440	0.668	2439.664	2440.332	0.5	PASS
		2480	0.664	2479.664	2480.328	0.5	PASS





### Test Graphs







## B.2 Maximum conducted output power

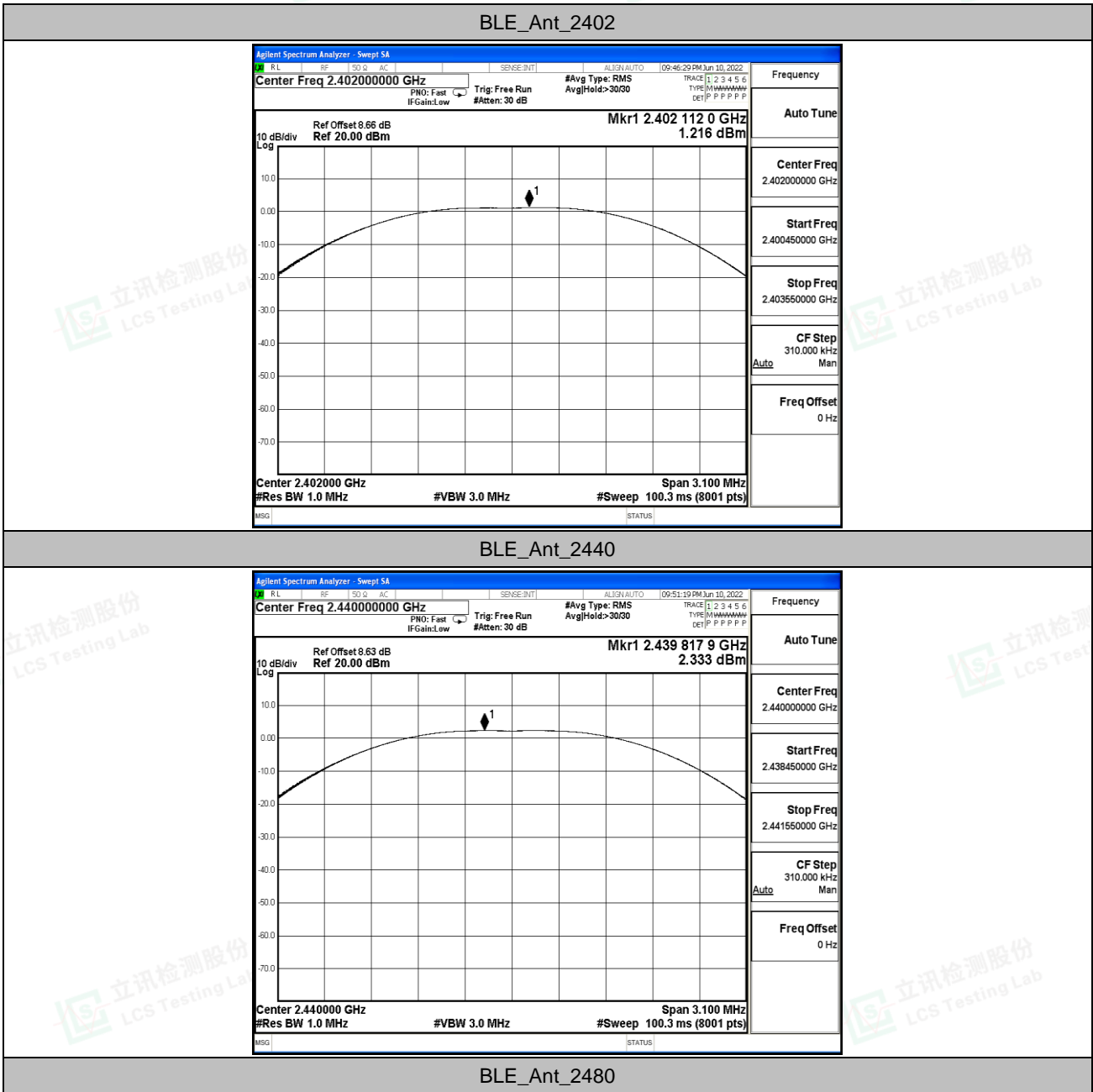
### Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	1.22	≤30	PASS
		2440	<b>2.33</b>	≤30	PASS
		2480	1.08	≤30	PASS





### Test Graphs

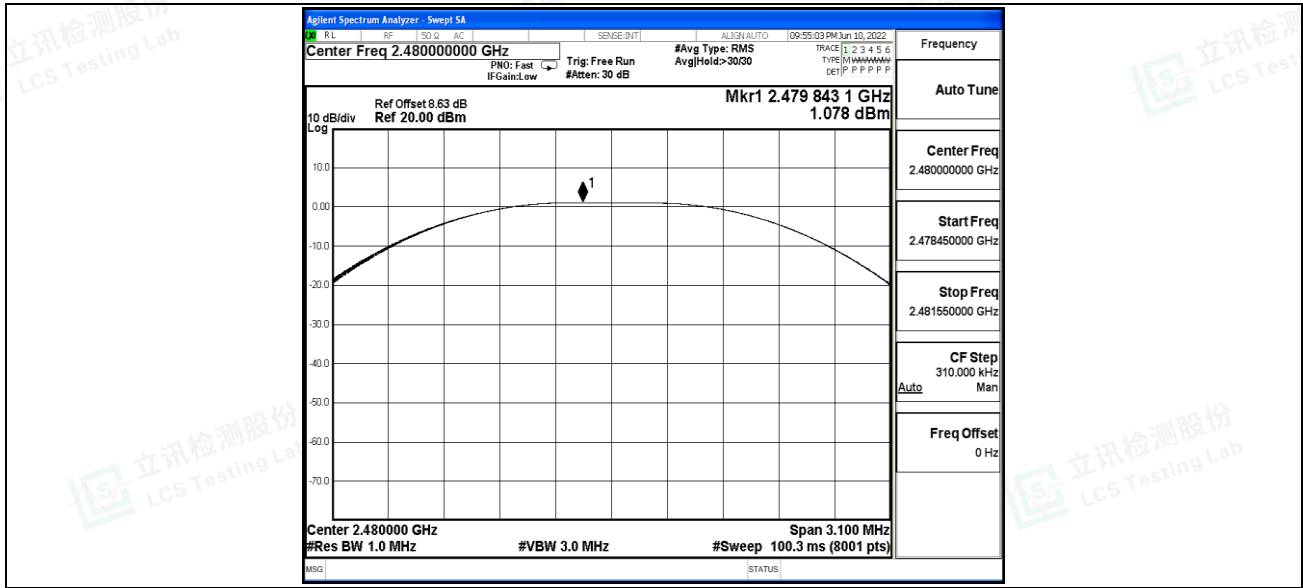


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### B.3 Maximum power spectral density

#### Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant	2402	-13.58	≤8.00	PASS
		2440	-12.44	≤8.00	PASS
		2480	-13.74	≤8.00	PASS

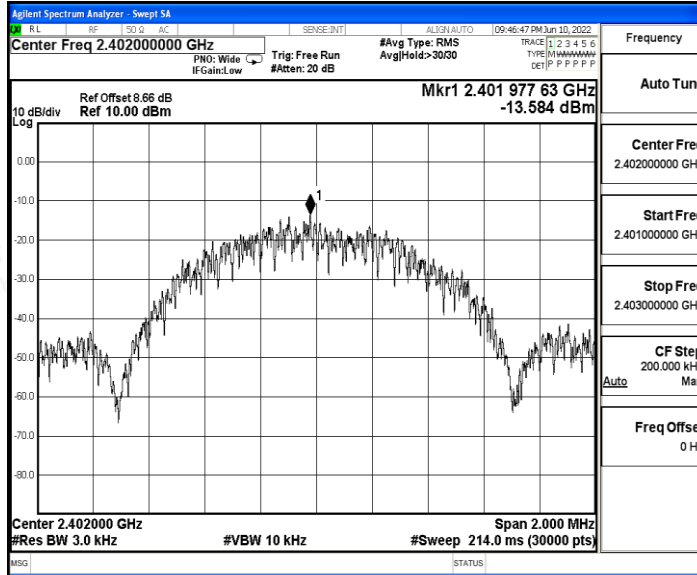




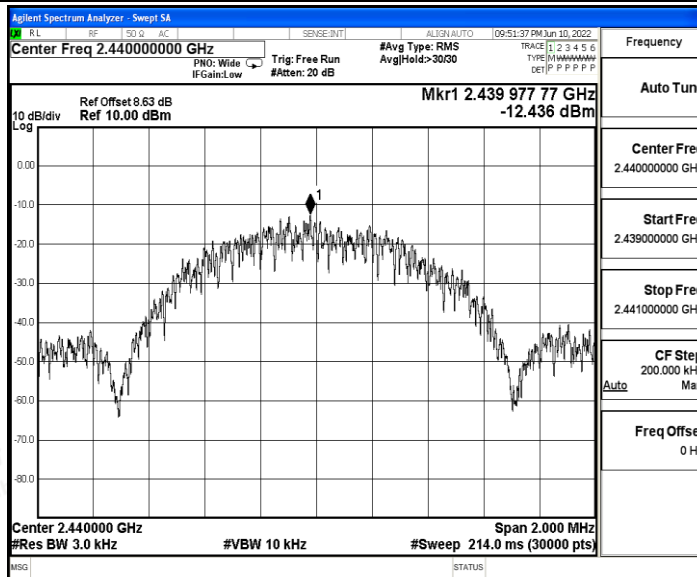


### Test Graphs

BLE\_Ant\_2402



BLE\_Ant\_2440



BLE\_Ant\_2480

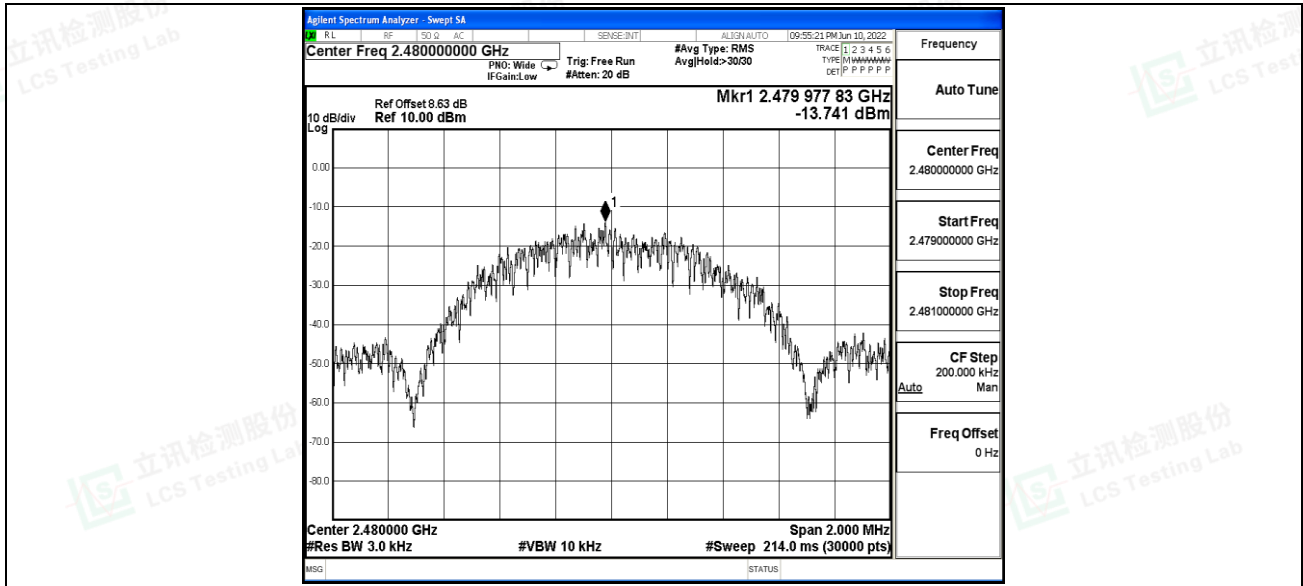


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## B.4 Band edge measurements

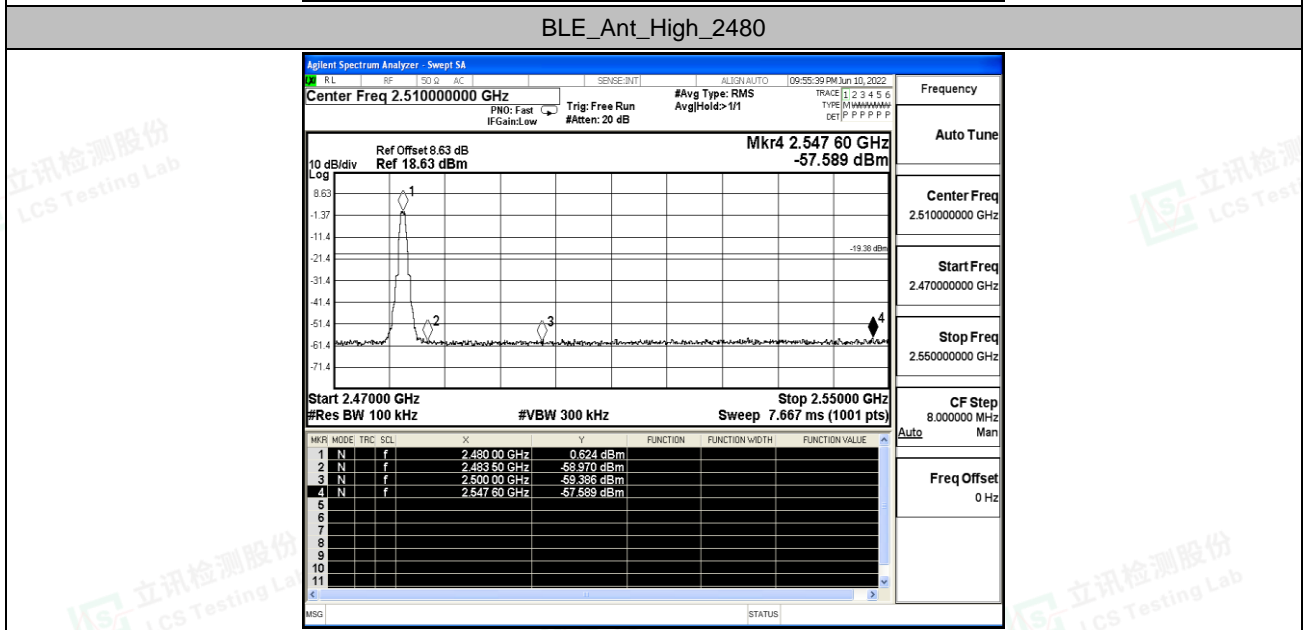
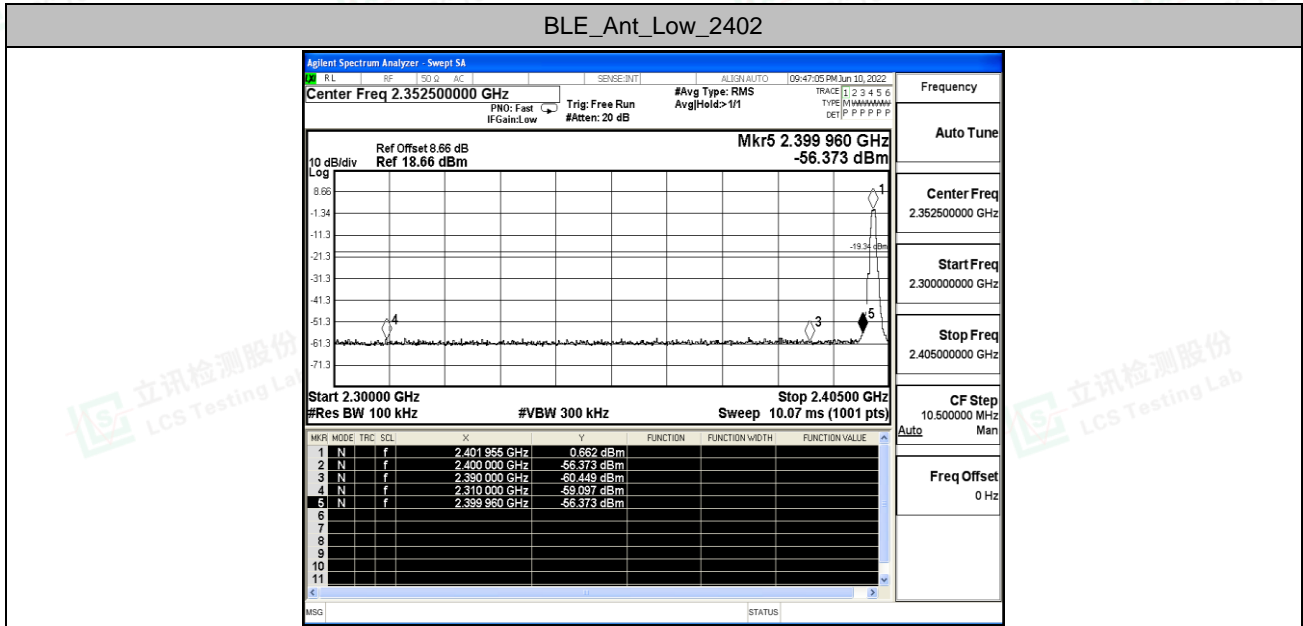
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	Low	2402	0.66	-56.37	≤-19.34	PASS
		High	2480	0.62	-57.59	≤-19.38	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	Ant	2402	Reference	0.68	0.68	---	PASS
			30~1000	0.68	-50.32	≤-19.32	PASS
			1000~26500	0.68	-45.82	≤-19.32	PASS
		2440	Reference	1.81	1.81	---	PASS
			30~1000	1.81	-49.75	≤-18.19	PASS
			1000~26500	1.81	-46.17	≤-18.19	PASS
		2480	Reference	0.55	0.55	---	PASS
			30~1000	0.55	-49.92	≤-19.45	PASS
			1000~26500	0.55	-46.06	≤-19.45	PASS



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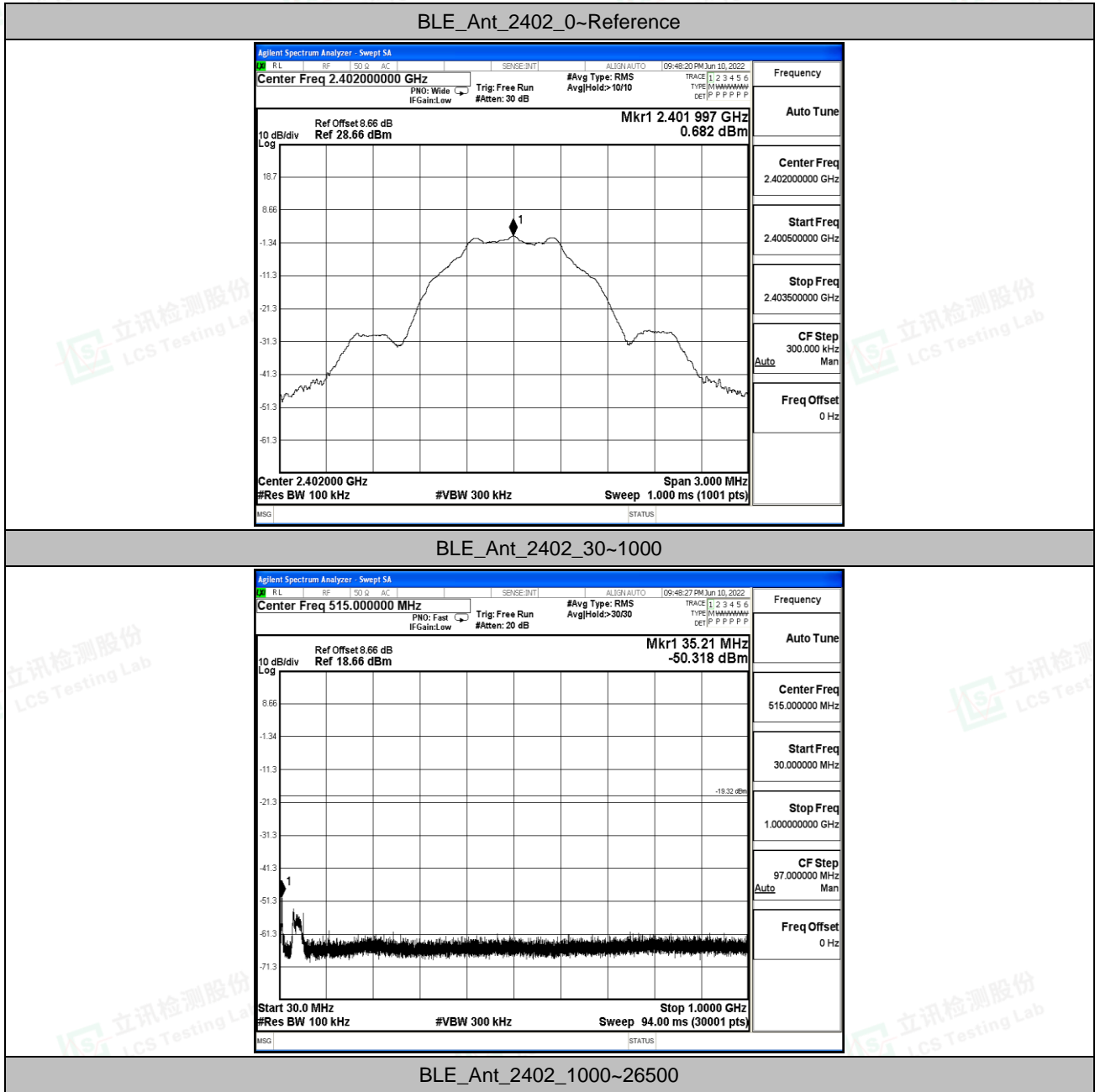
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### Test Graphs

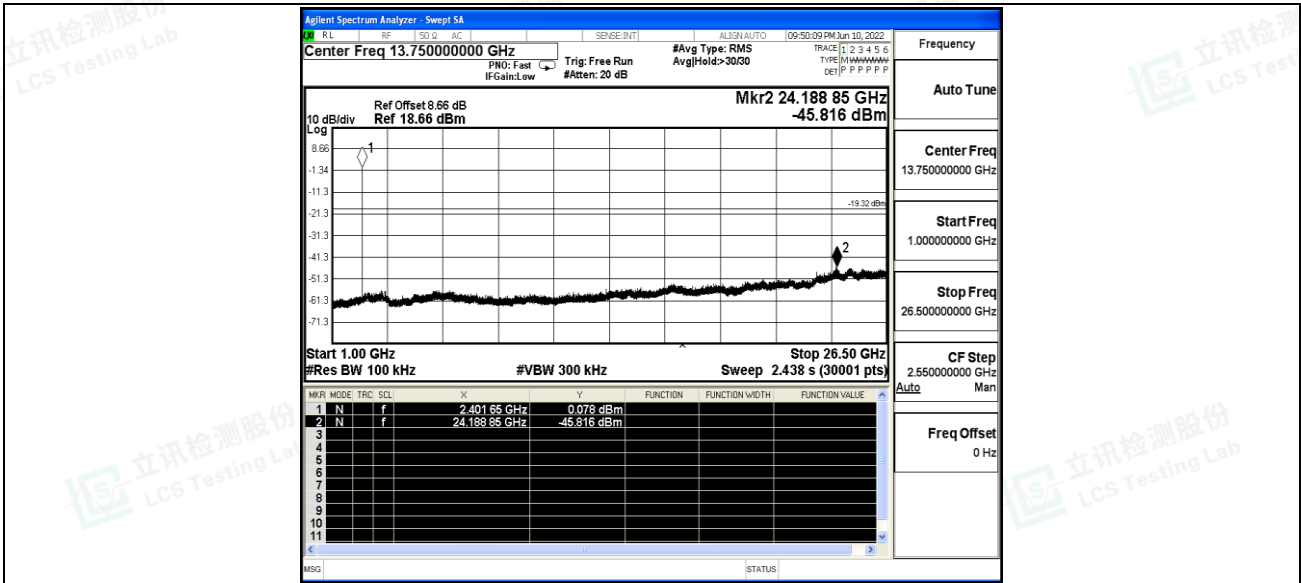


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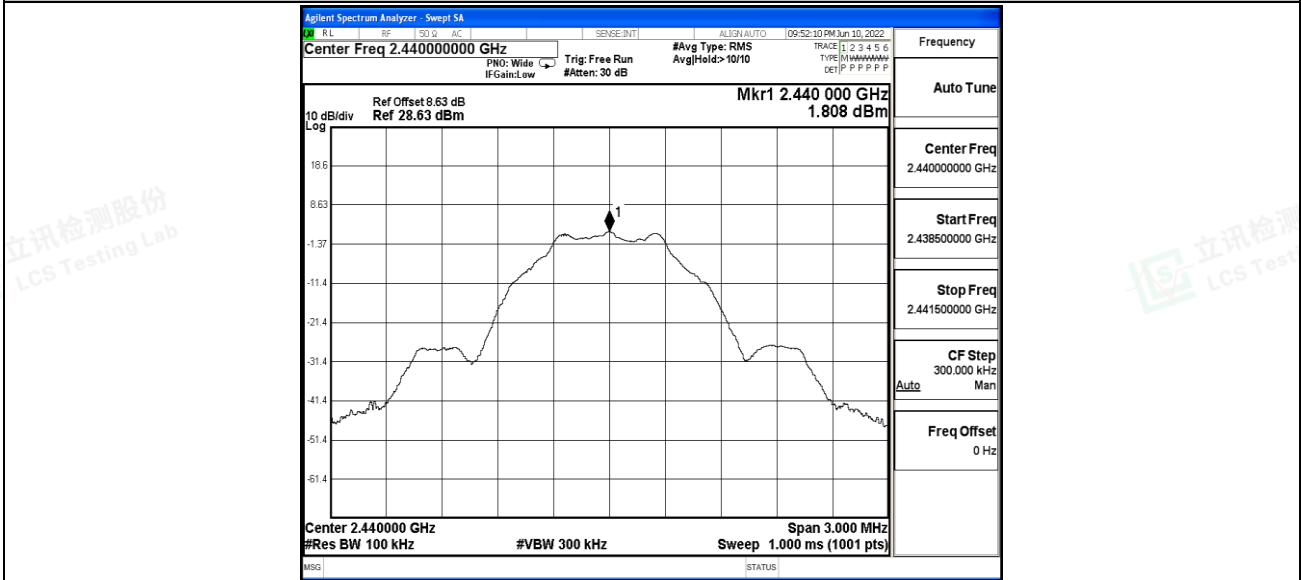
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BLE\_Ant\_2440\_0~Reference



BLE\_Ant\_2440\_30~1000

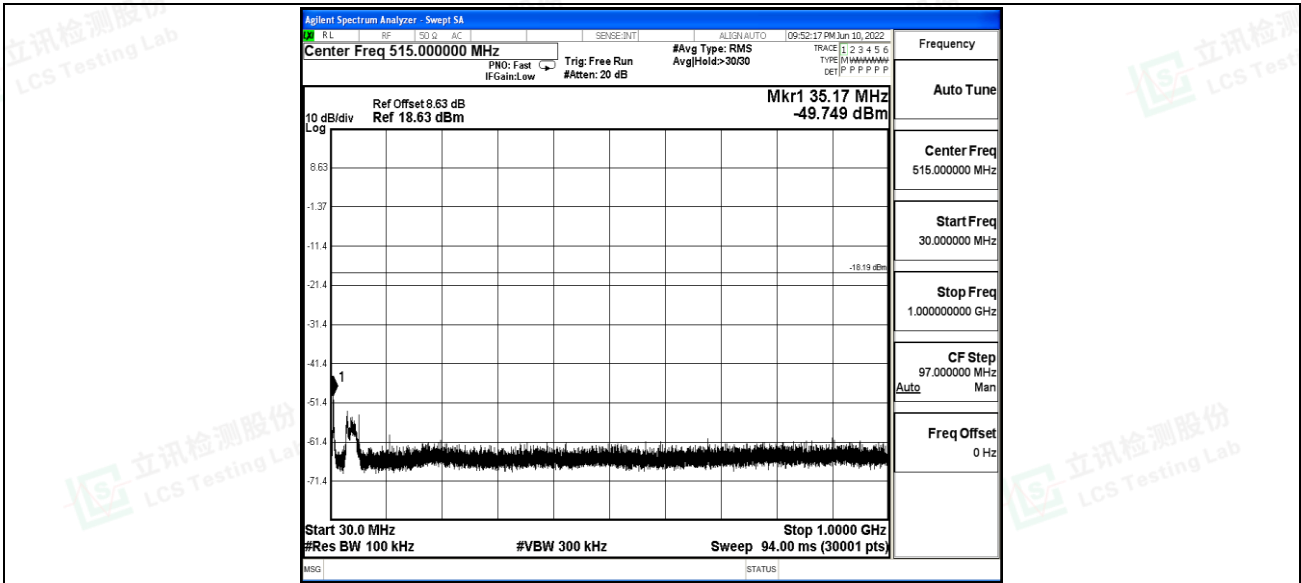


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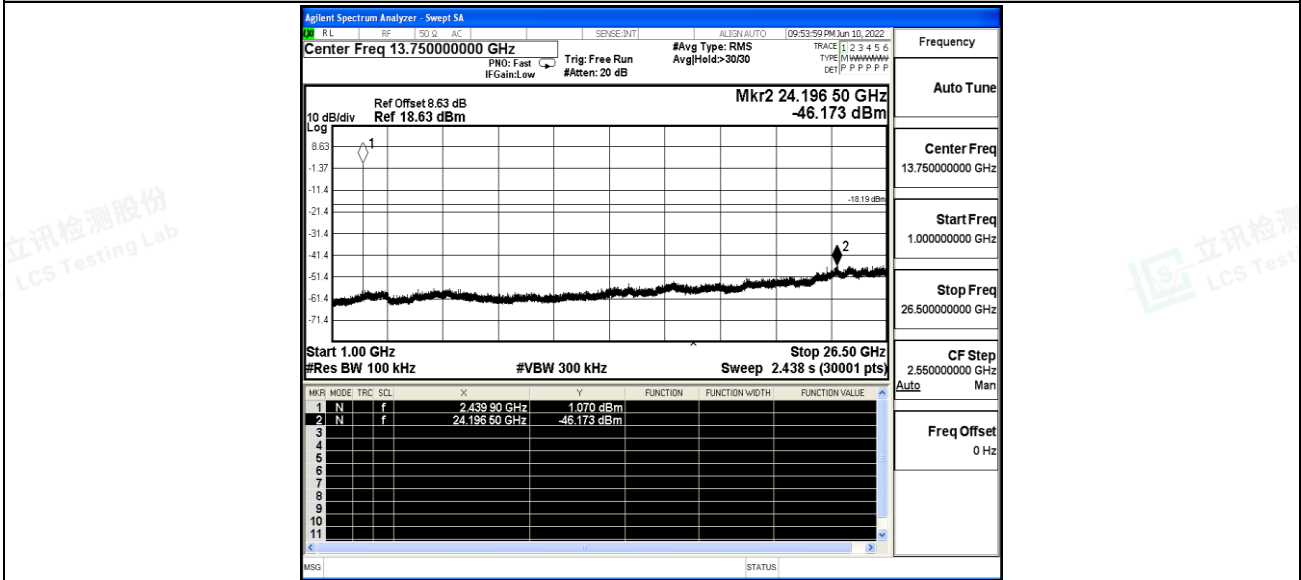
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BLE\_Ant\_2440\_1000~26500



BLE\_Ant\_2480\_0~Reference



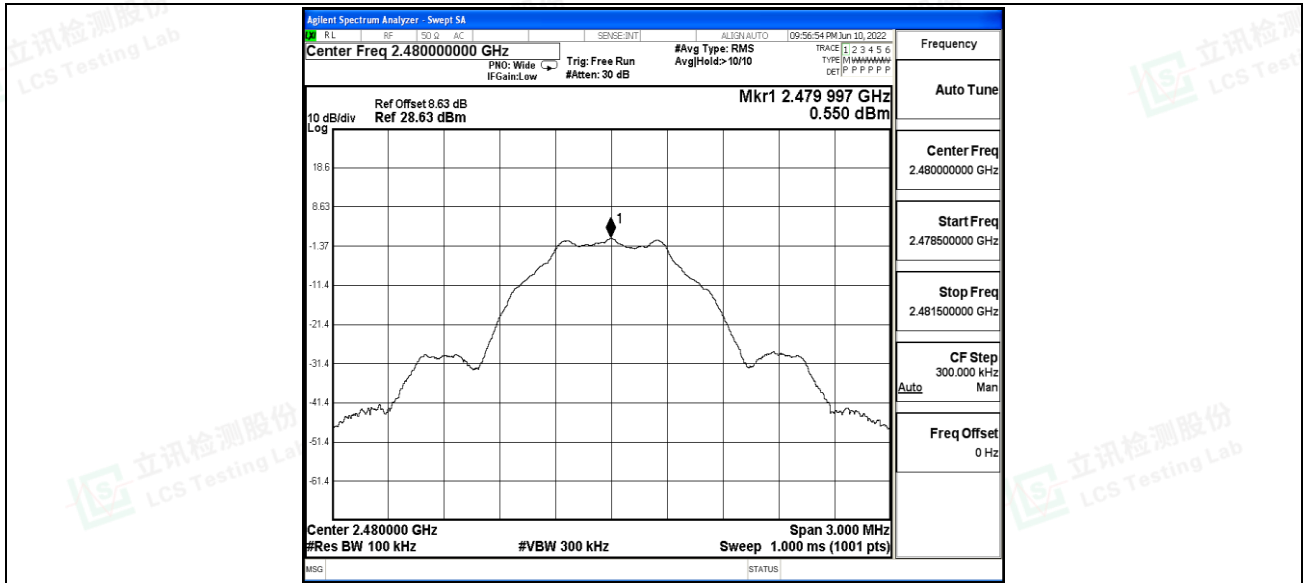
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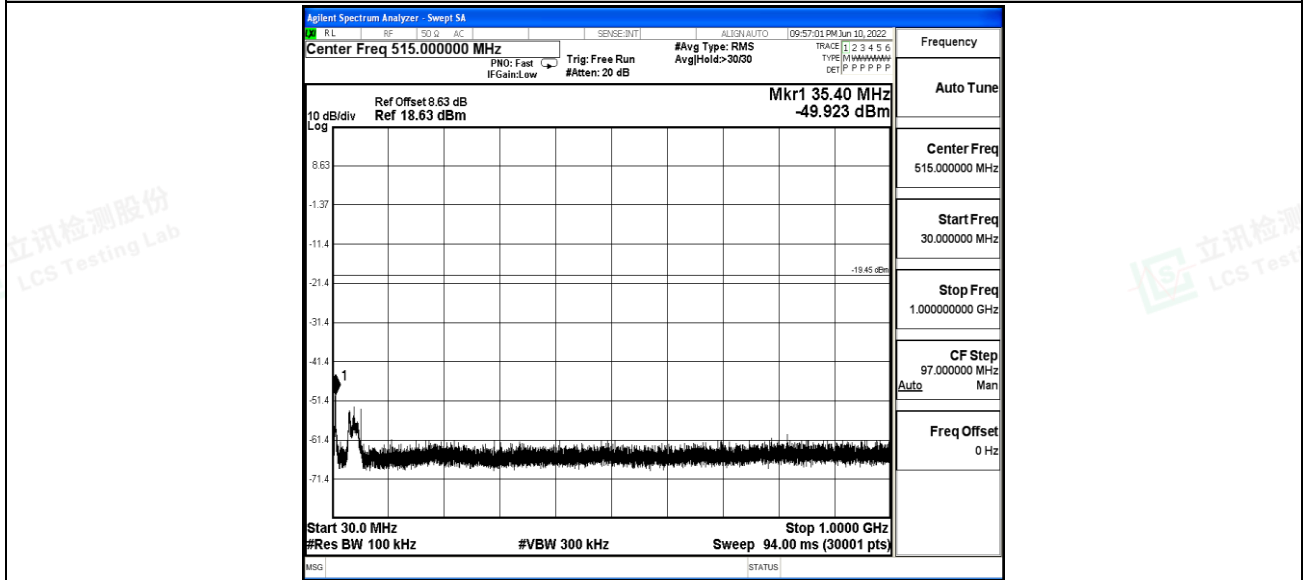
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BLE\_Ant\_2480\_30~1000



BLE\_Ant\_2480\_1000~26500

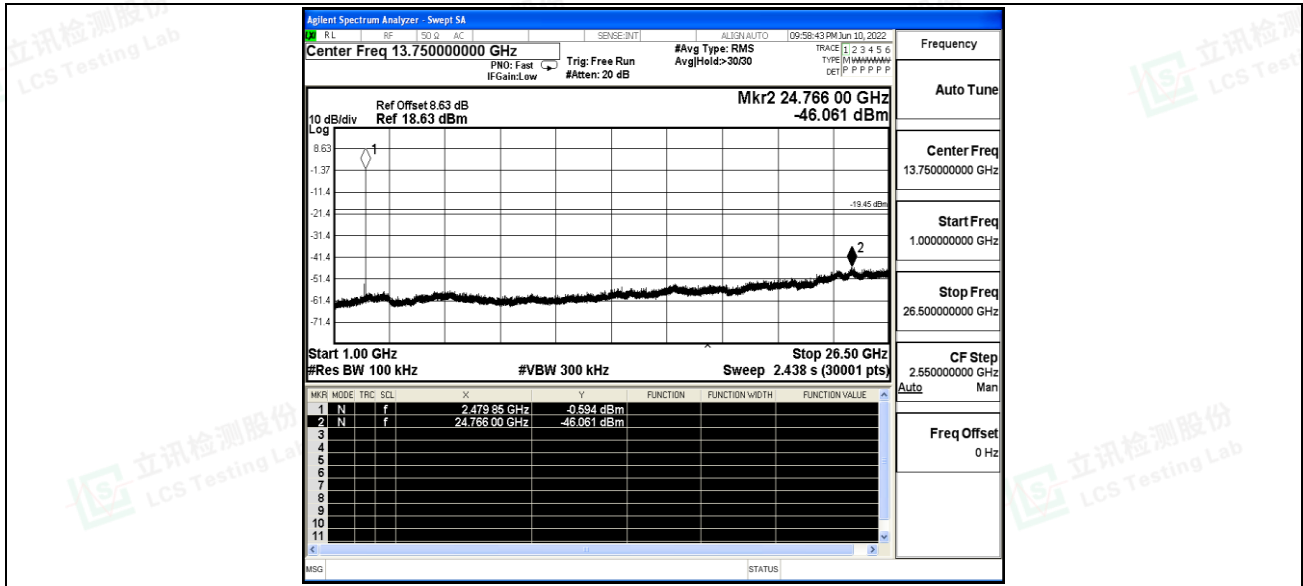


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## B.6 Duty Cycle

### Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE	Ant	2402	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		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	---	---





### Test Graphs

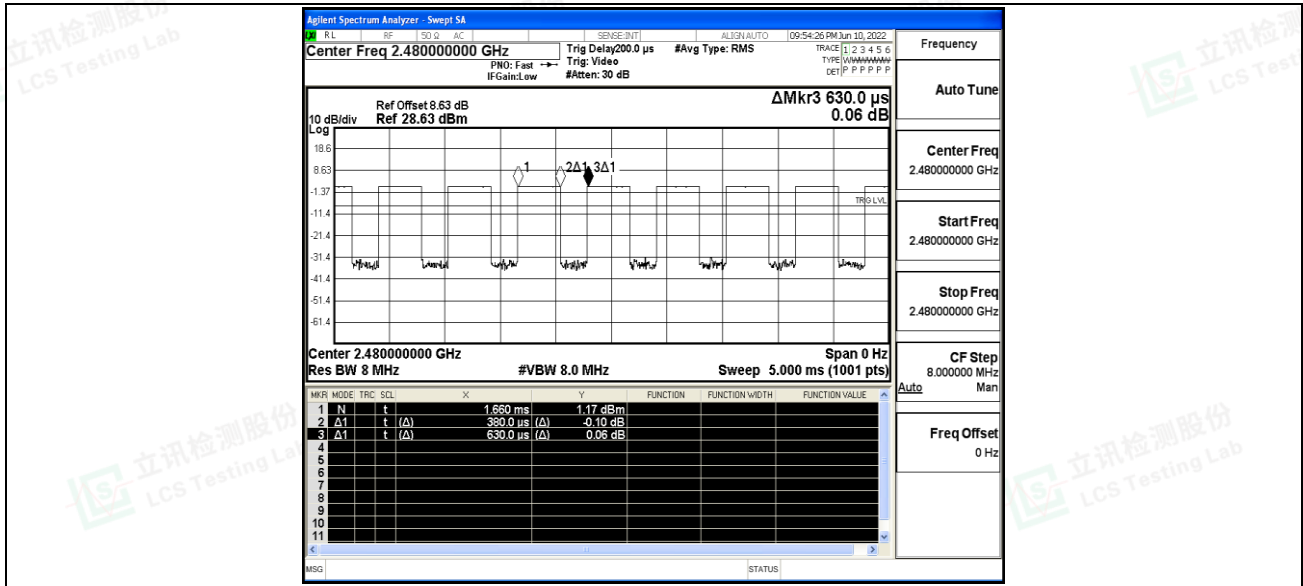


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## B.7 Emissions in Restricted Bands

### Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant	Low	2402	AV	2310.000	-57.21	≤-41.20	37.99	≤54	PASS
				AV	2384.630	-56.48	≤-41.20	38.72	≤54	PASS
				AV	2390.000	-56.73	≤-41.20	38.47	≤54	PASS
				Peak	2310.000	-48.59	≤-21.20	46.61	≤74	PASS
				Peak	2385.575	-46.32	≤-21.20	48.88	≤74	PASS
				Peak	2390.000	-48.13	≤-21.20	47.07	≤74	PASS
		High	2480	AV	2483.500	-52.69	≤-41.20	42.51	≤54	PASS
				AV	2483.520	-52.69	≤-41.20	42.51	≤54	PASS
				AV	2500.000	-56.38	≤-41.20	38.82	≤54	PASS
				Peak	2483.500	-47.43	≤-21.20	47.77	≤74	PASS
				Peak	2487.440	-45.76	≤-21.20	49.44	≤74	PASS
				Peak	2500.000	-47.48	≤-21.20	47.72	≤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

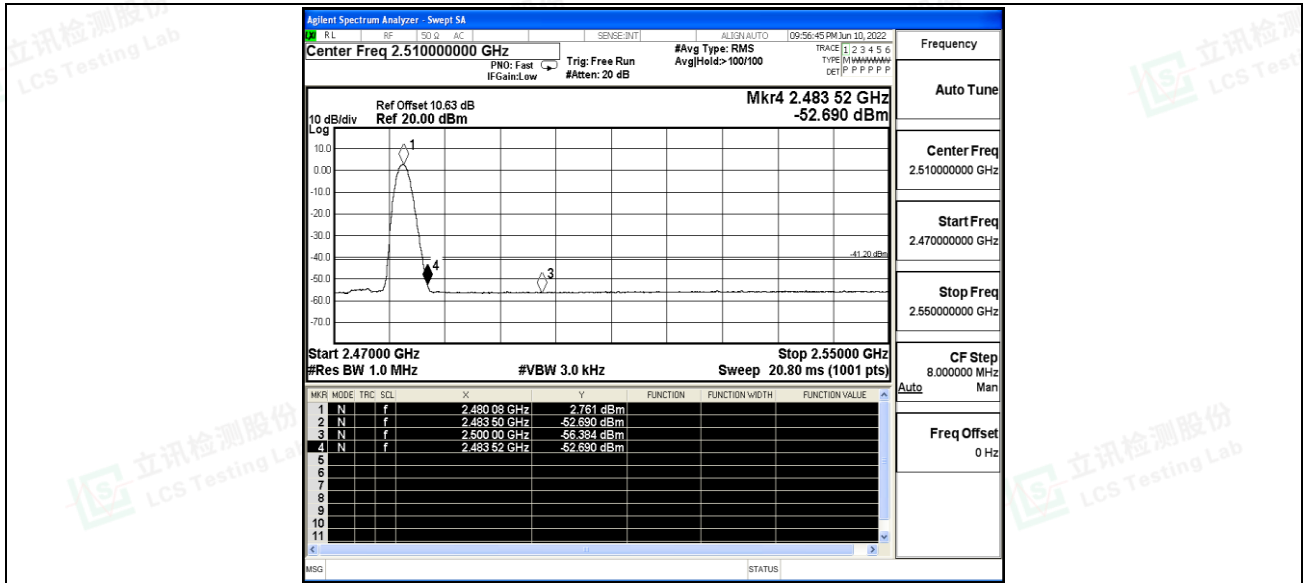


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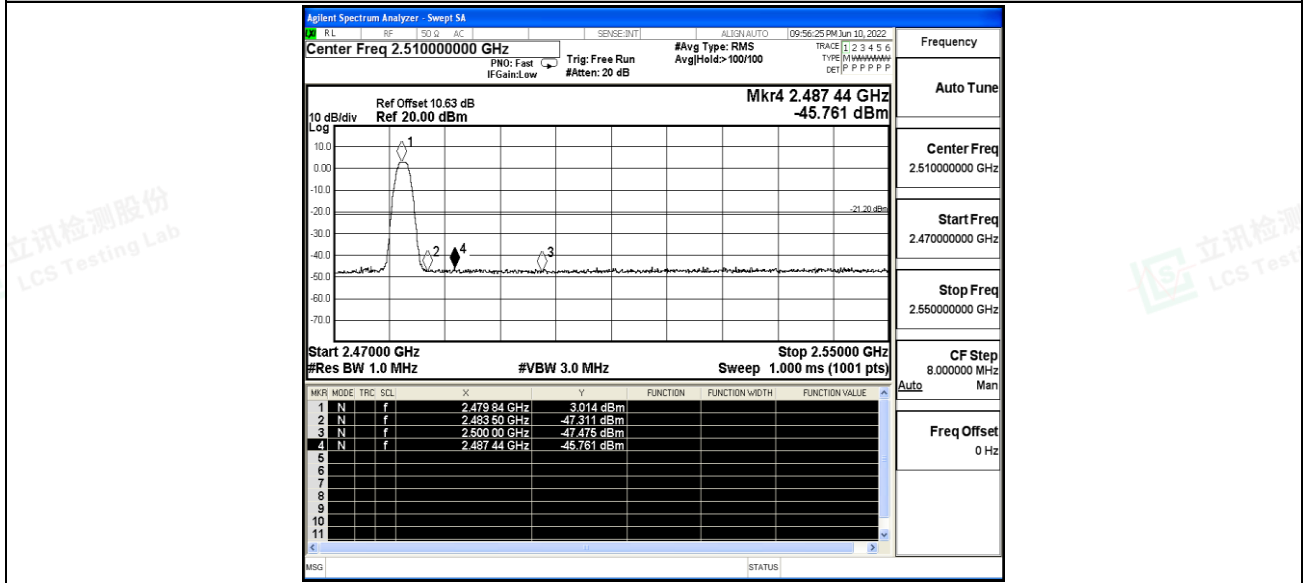
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BLE\_Ant\_High\_2480\_Peak



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