



## Appendix A

### RF Test Data for BT LE (Conducted Measurement)

Product Name: 7.5 inch Wi-Fi/BLE smart ceiling light

Test Model: LMFFM714SMWH

#### Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





## A.1 DTS Bandwidth

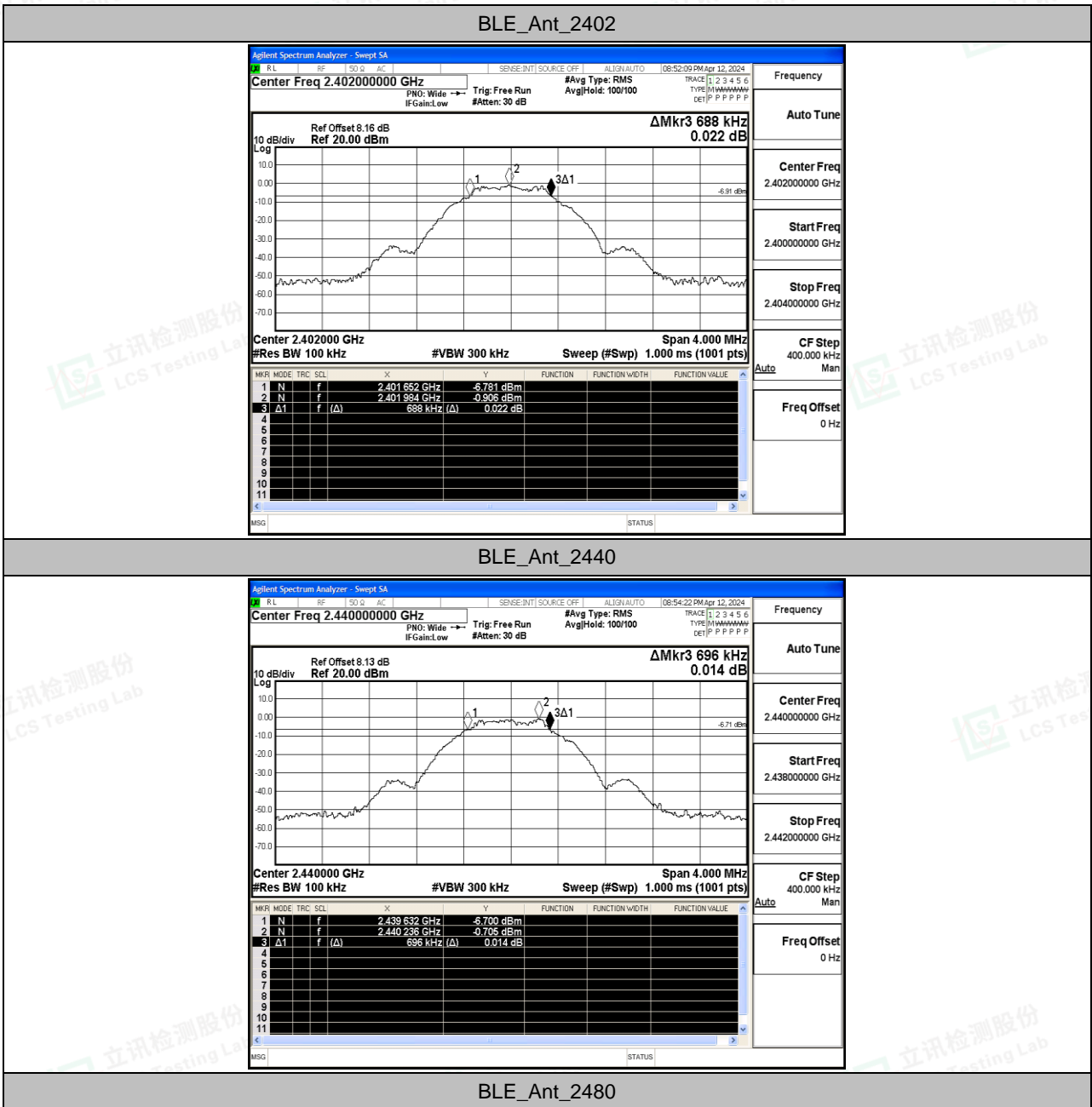
### Test Result

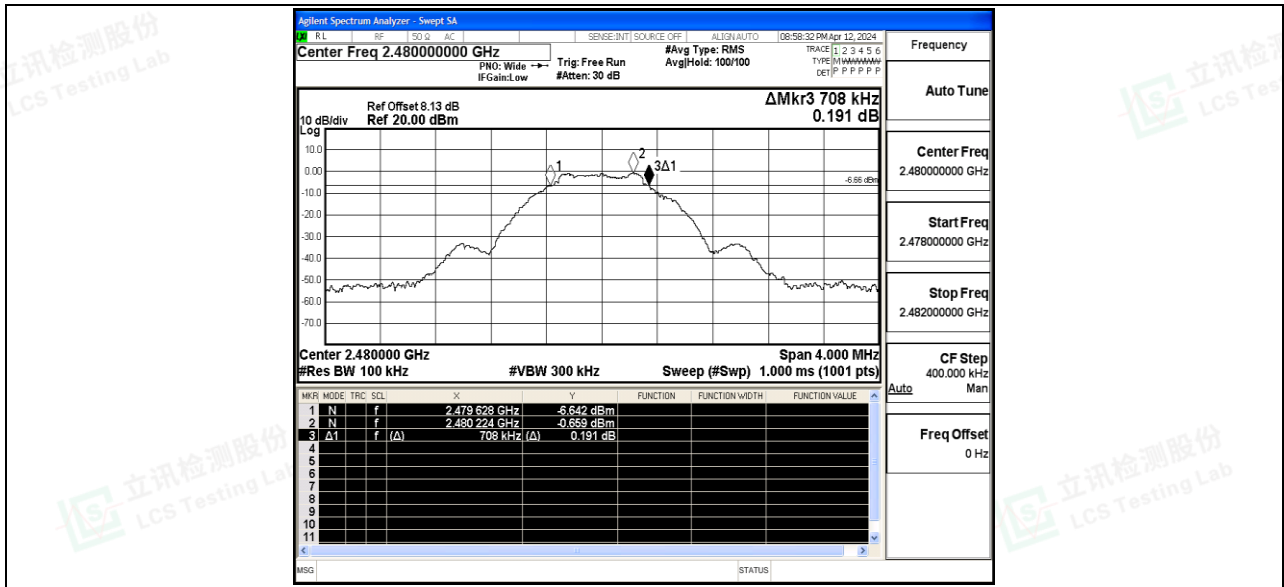
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant	2402	0.688	2401.652	2402.340	0.5	PASS
		2440	0.696	2439.632	2440.328	0.5	PASS
		2480	0.708	2479.628	2480.336	0.5	PASS





### Test Graphs







## A.2 Maximum conducted output power

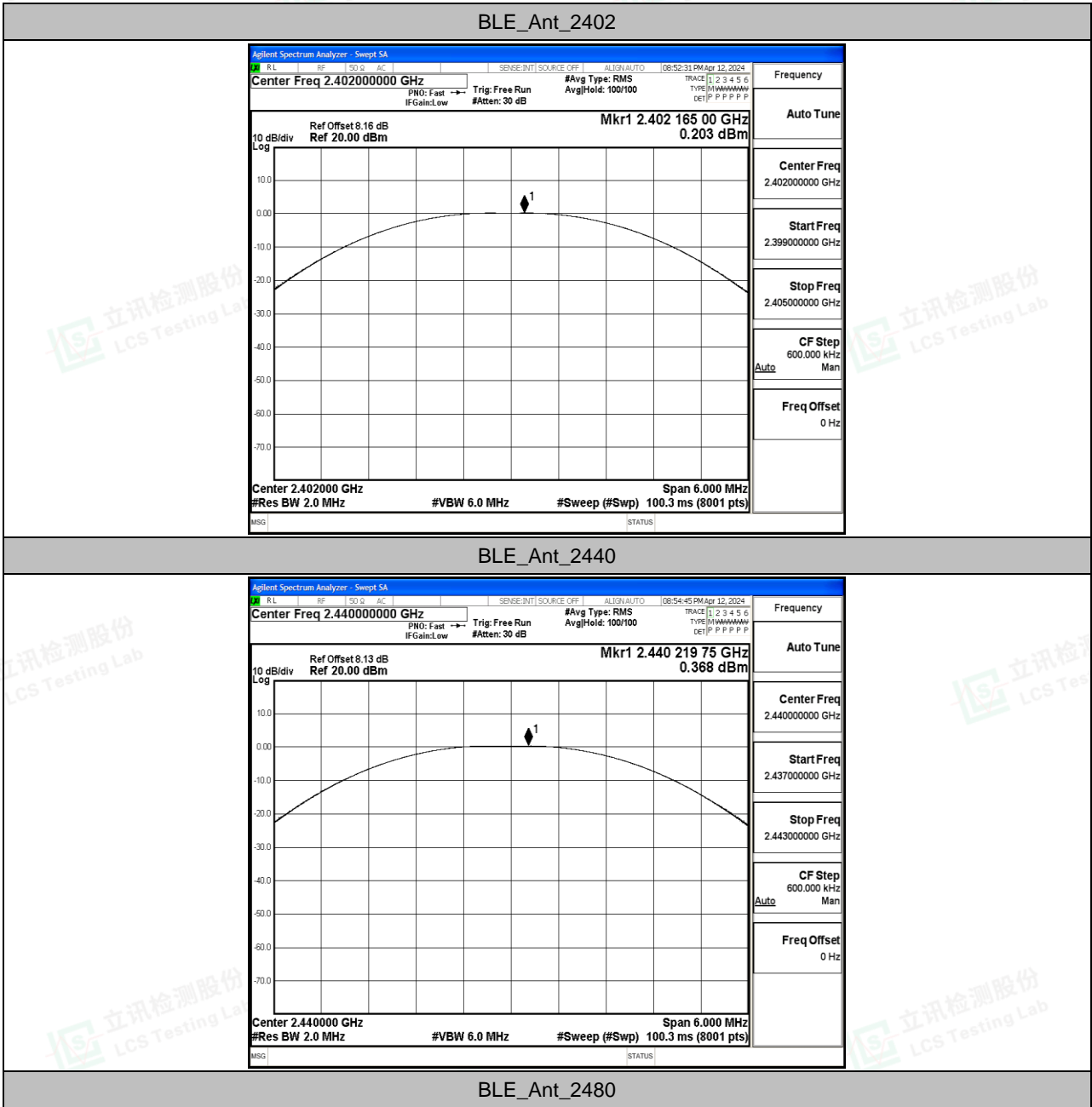
### Test Result

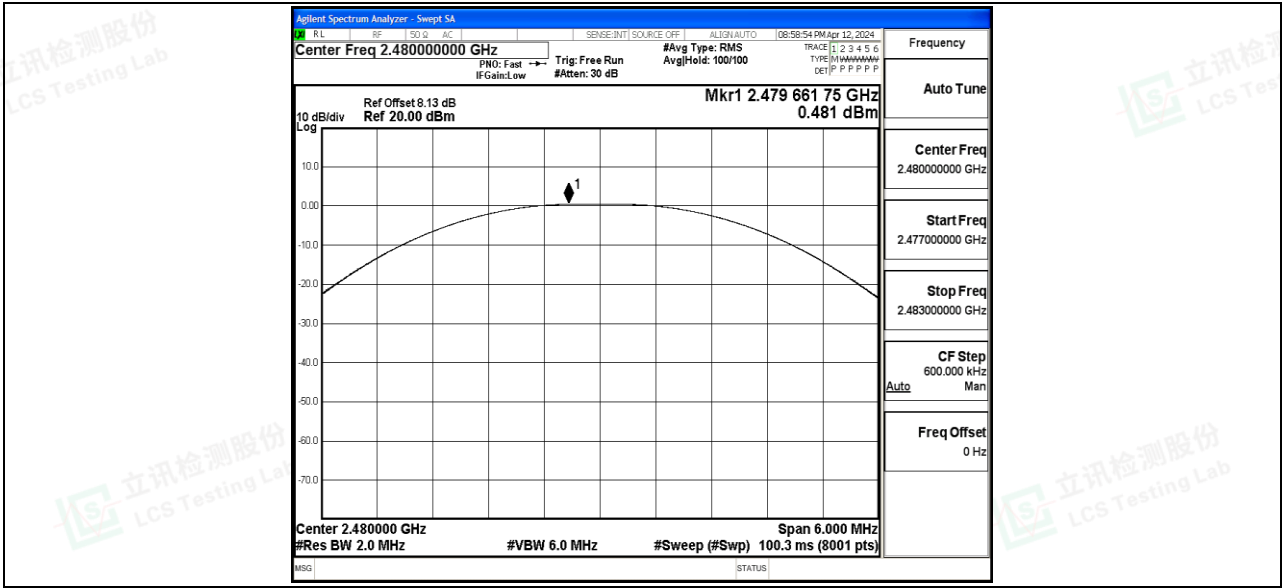
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	0.20	≤30	PASS
		2440	0.37	≤30	PASS
		2480	0.48	≤30	PASS





### Test Graphs







### A.3 Maximum power spectral density

#### Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant	2402	-14.90	≤8.00	PASS
		2440	-14.79	≤8.00	PASS
		2480	-14.65	≤8.00	PASS

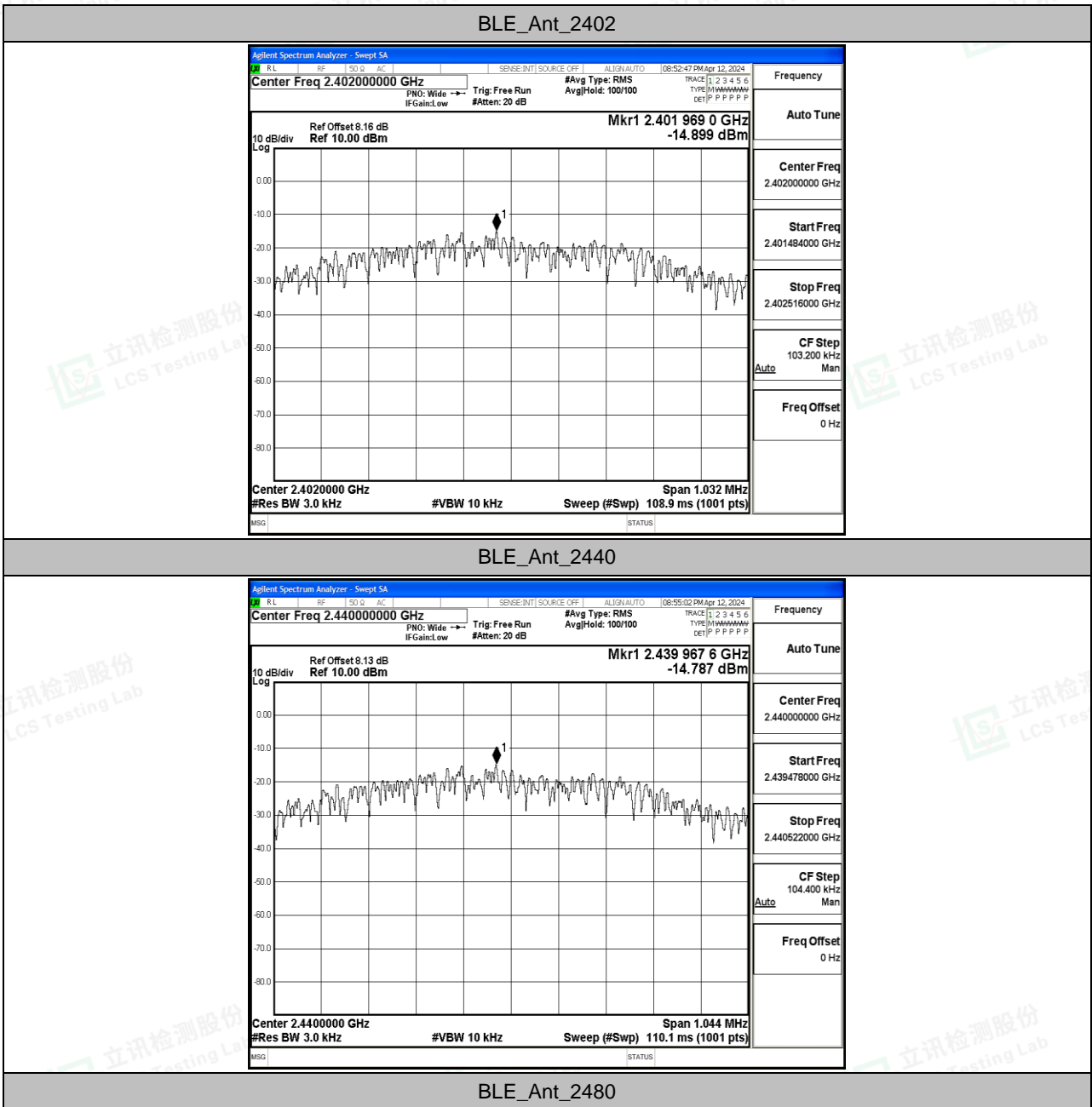


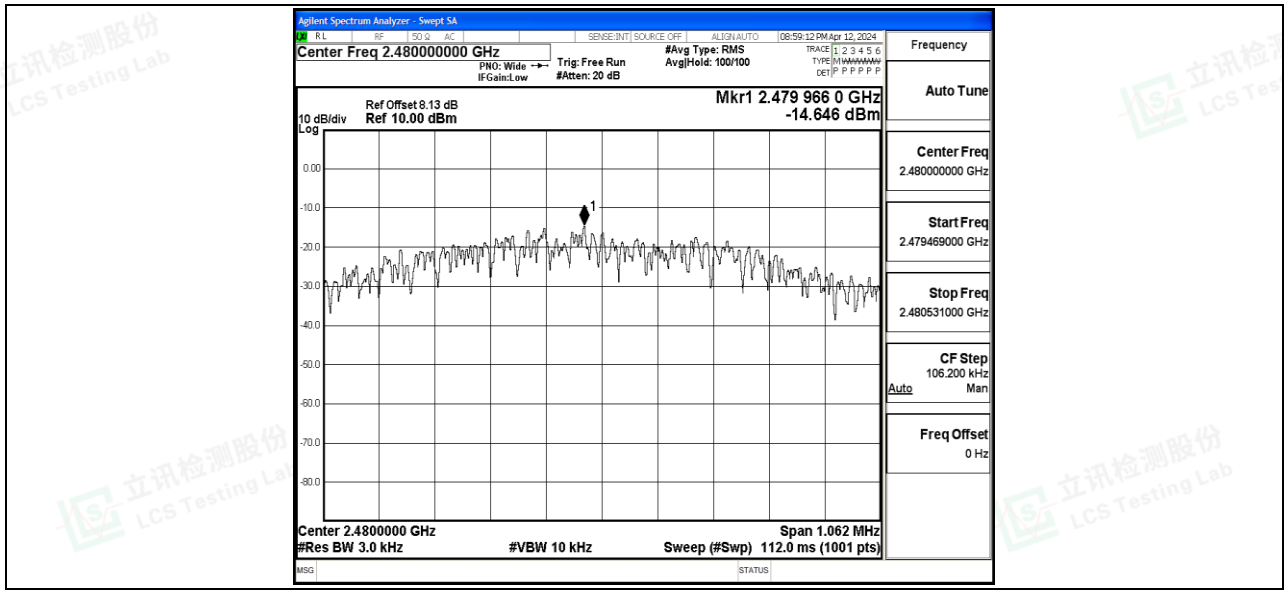
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### Test Graphs







## A.4 Band edge measurements

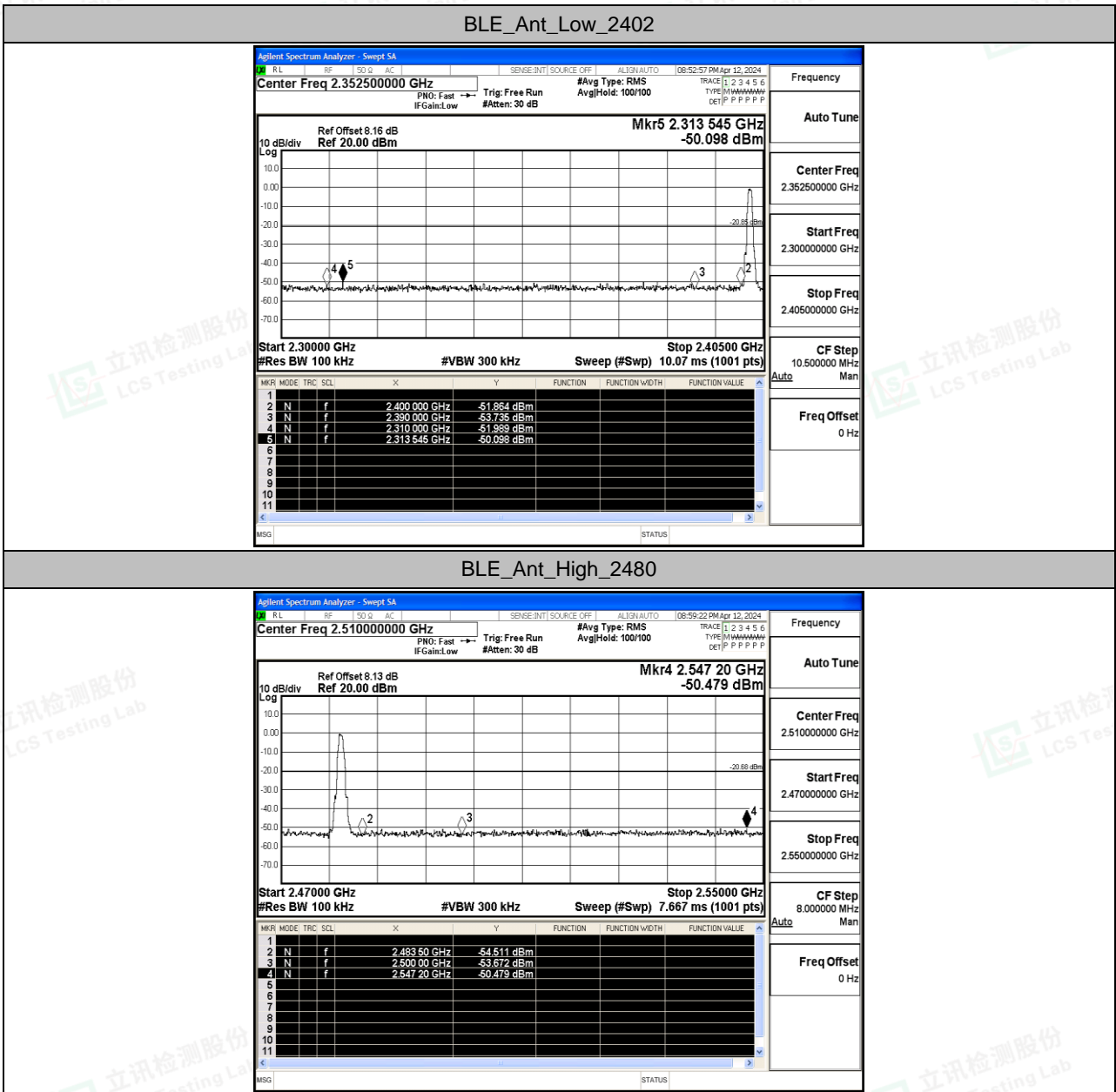
### Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	Low	2402	-0.85	-50.1	≤-20.85	PASS
		High	2480	-0.68	-50.48	≤-20.68	PASS





### Test Graphs





### A.5 Conducted Spurious Emission

#### Test Result

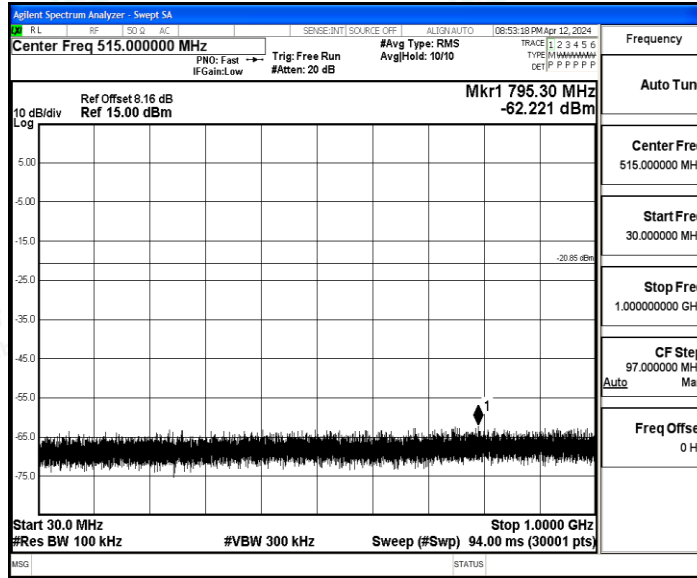
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	30~1000	-0.85	-62.22	≤-20.85	PASS
			1000~26500	-0.85	-48.12	≤-20.85	PASS
		2440	30~1000	-0.70	-62.26	≤-20.7	PASS
			1000~26500	-0.70	-49.07	≤-20.7	PASS
		2480	30~1000	-0.68	-61.54	≤-20.68	PASS
			1000~26500	-0.68	-49.1	≤-20.68	PASS



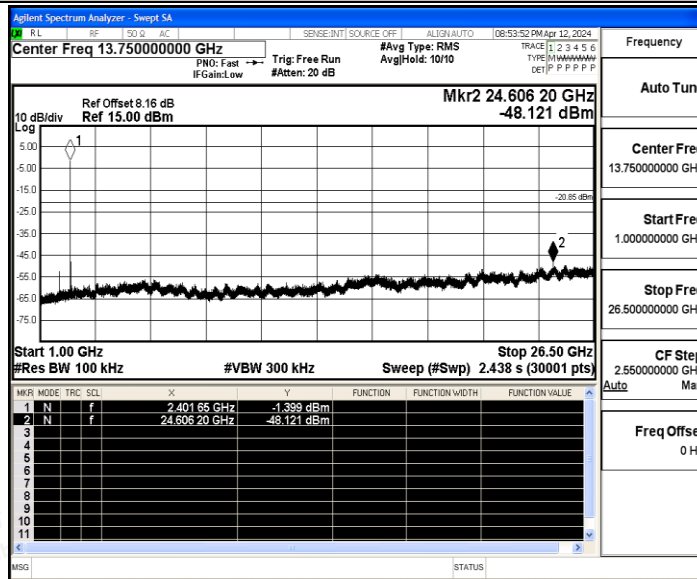


### Test Graphs

BLE\_Ant\_2402\_30~1000

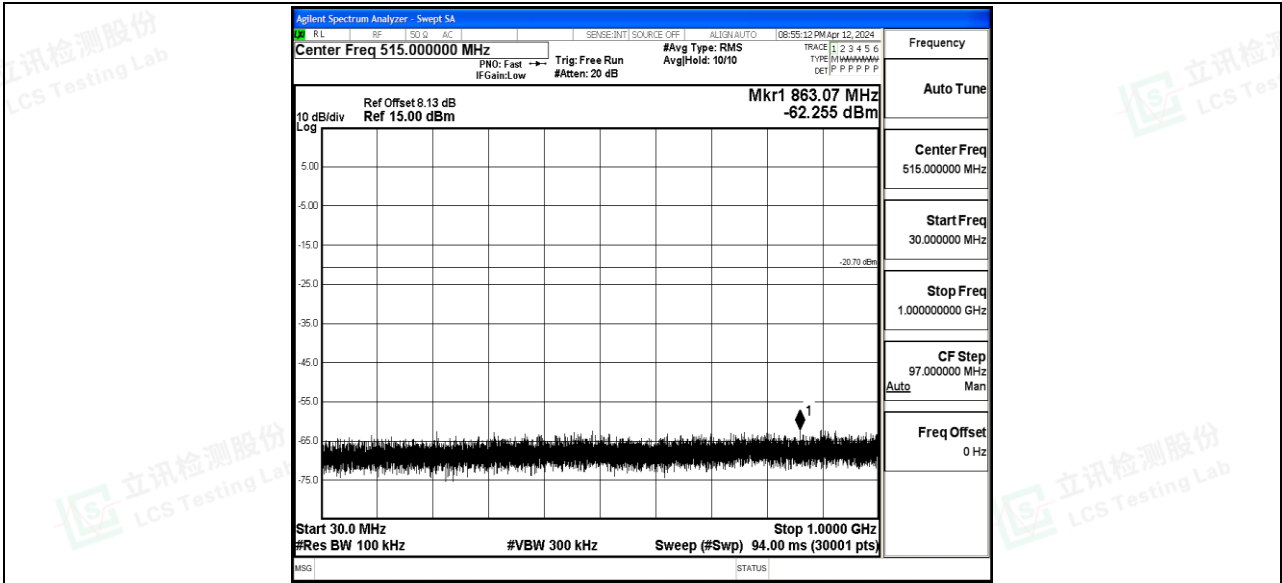


BLE\_Ant\_2402\_1000~26500

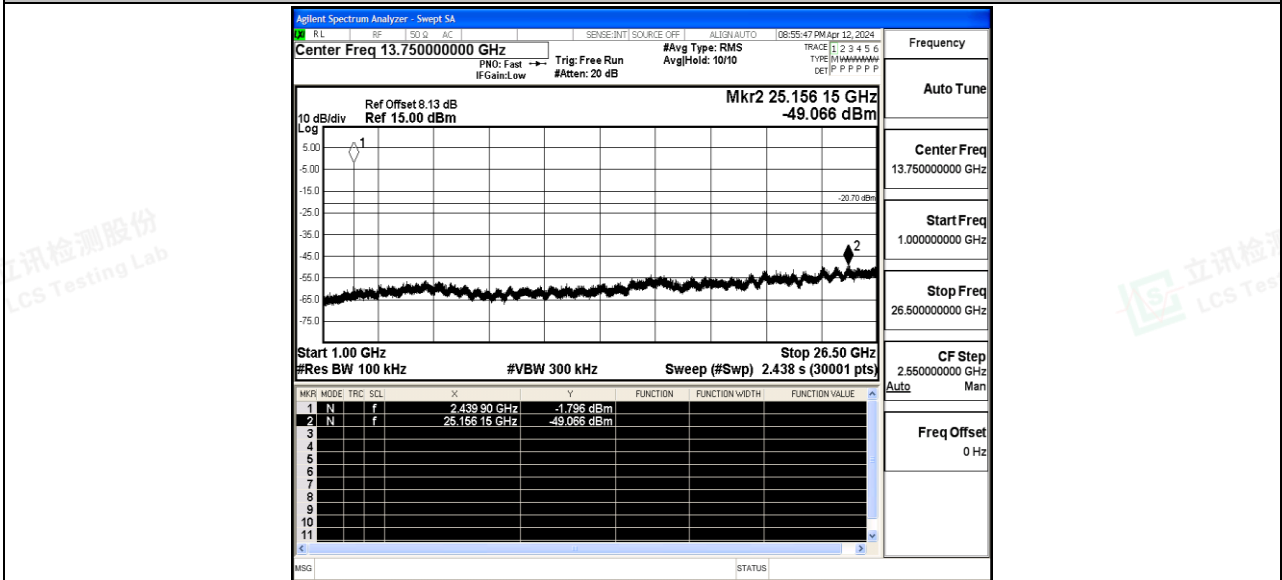


BLE\_Ant\_2440\_30~1000



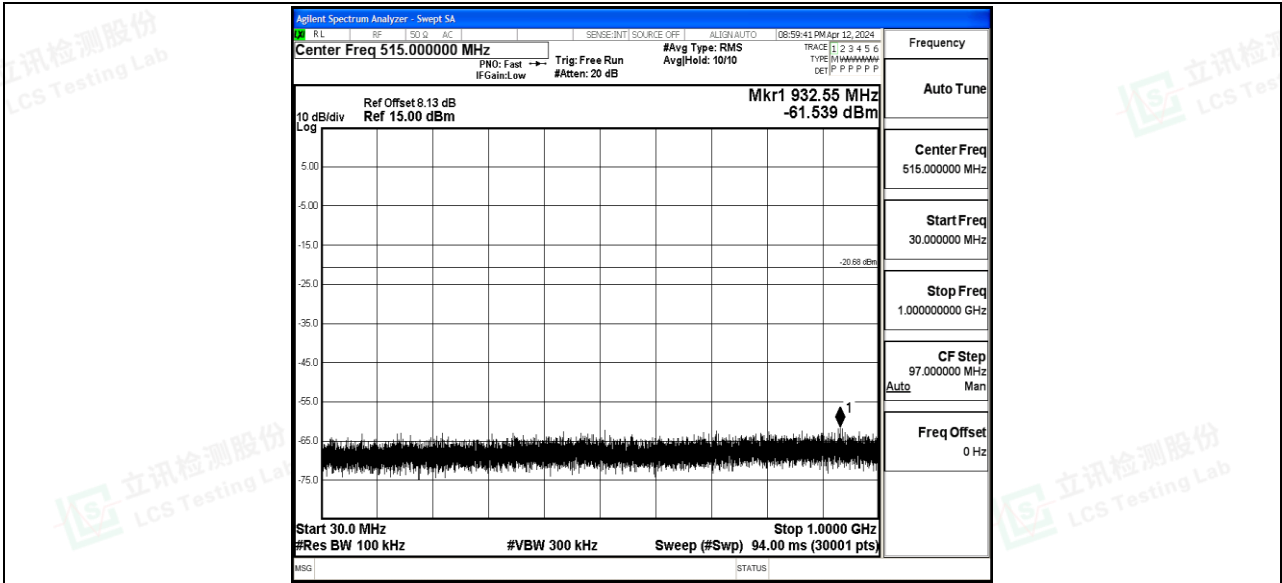


BLE\_Ant\_2440\_1000~26500

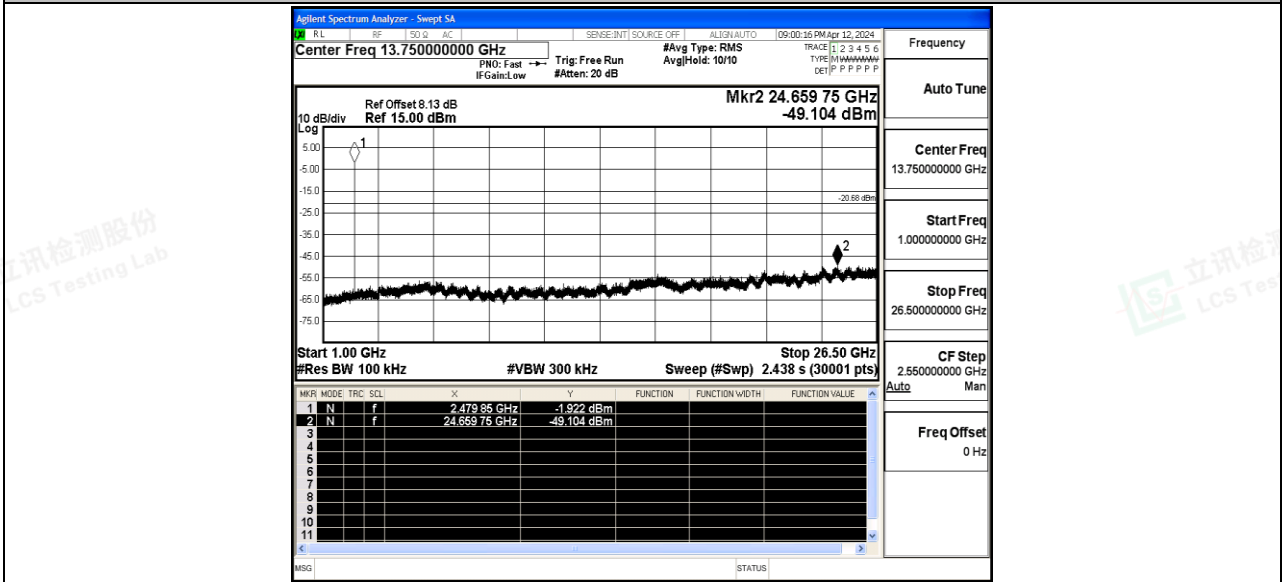


BLE\_Ant\_2480\_30~1000





BLE\_Ant\_2480\_1000~26500







## Reference level measurement

### Test Result

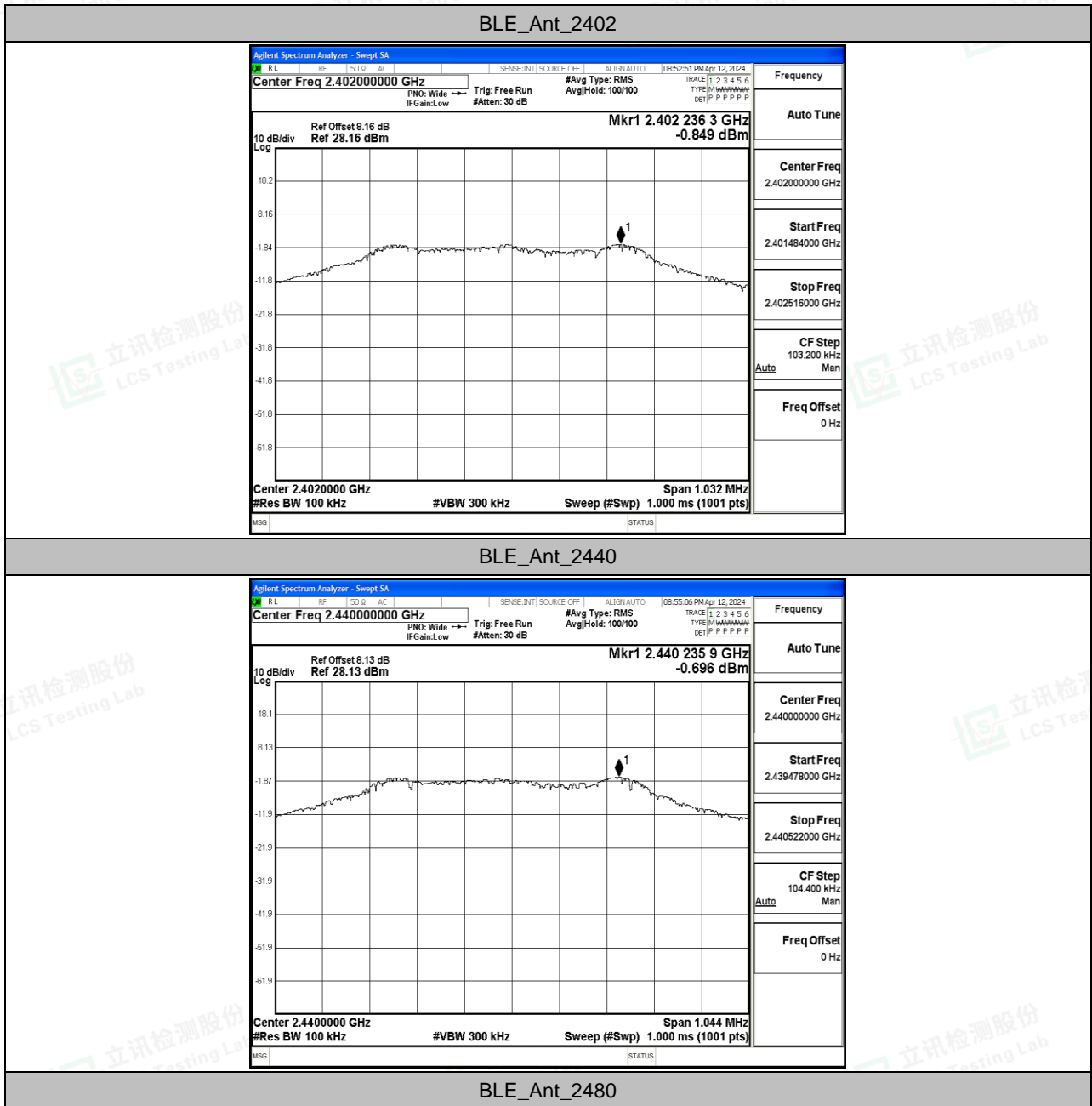
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE	Ant	2402	2402.24	-0.85
		2440	2440.24	-0.70
		2480	2479.98	-0.68

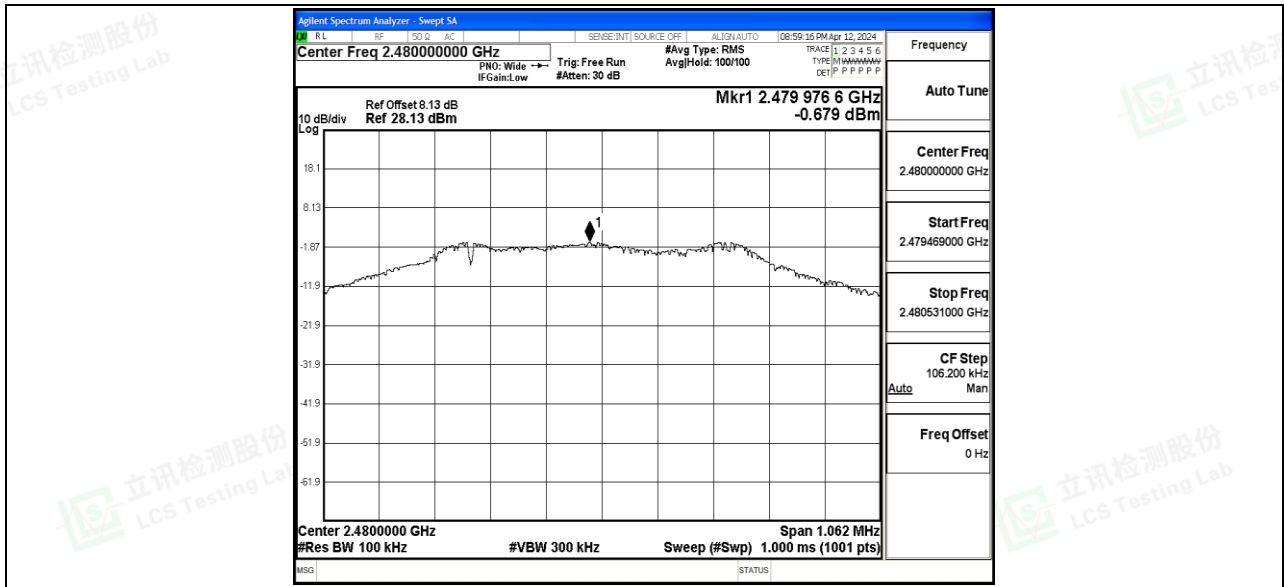


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### Test Graphs







## A.6 Duty Cycle

### Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[dB]
BLE	Ant	2402	0.38	0.63	60.32	2.20	2.63
		2440	0.38	0.63	60.32	2.20	2.63
		2480	0.38	0.63	60.32	2.20	2.63

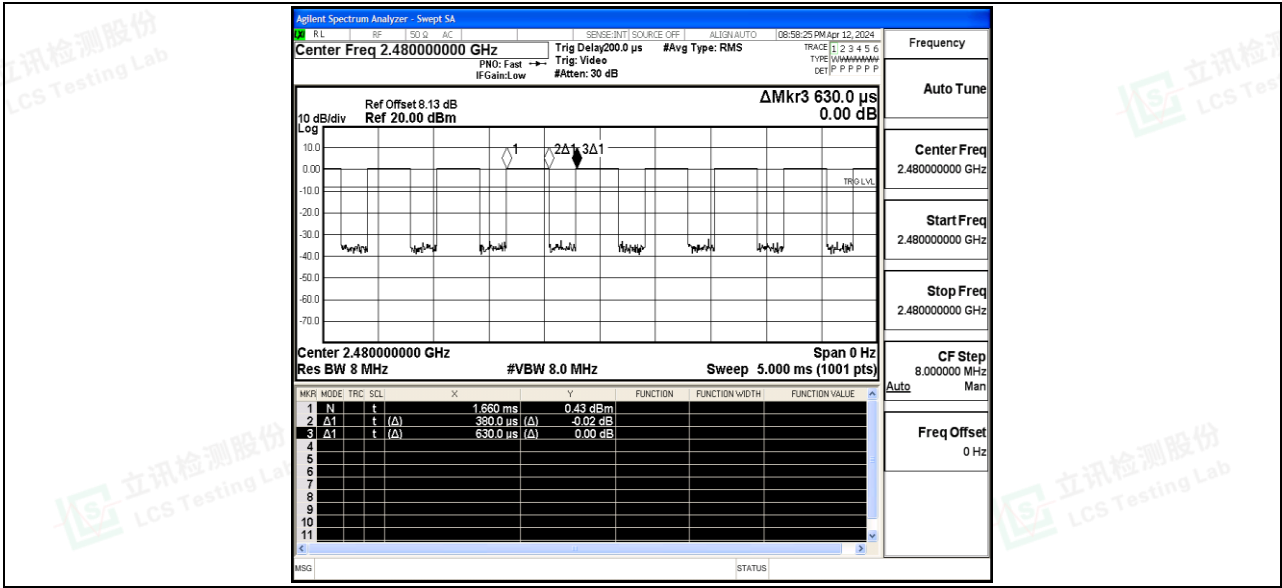


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### Test Graphs







## A.7 Emissions in Restricted Bands

### Test Result

TestMode	Antenna	Channel Name	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant	Low	2402	AV	2310.000	-47.71	≤-41.20	47.49	≤54	PASS
				AV	2376.335	-46.65	≤-41.20	48.55	≤54	PASS
				AV	2390.000	-47.78	≤-41.20	47.42	≤54	PASS
				Peak	2310.000	-42.82	≤-21.20	52.38	≤74	PASS
				Peak	2353.130	-38.8	≤-21.20	56.40	≤74	PASS
				Peak	2390.000	-42.97	≤-21.20	52.23	≤74	PASS
		High	2480	AV	2483.500	-47.68	≤-41.20	47.52	≤54	PASS
				AV	2499.920	-46.77	≤-41.20	48.43	≤54	PASS
				AV	2500.000	-47.09	≤-41.20	48.11	≤54	PASS
				Peak	2483.500	-41.1	≤-21.20	54.10	≤74	PASS
				Peak	2491.360	-39.49	≤-21.20	55.71	≤74	PASS
				Peak	2500.000	-43.14	≤-21.20	52.06	≤74	PASS

#### Note:

- The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
- 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.

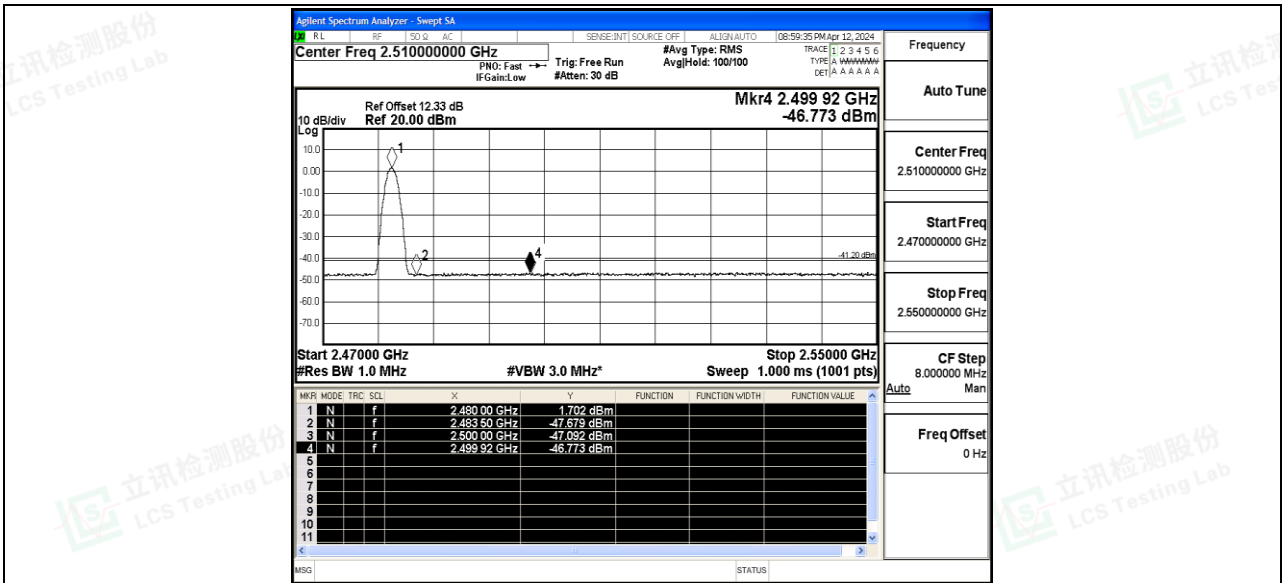




### Test Graphs







BLE\_Ant\_High\_2480\_Peak

