



## Appendix A

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

Product Name: Aroma Diffuser

Test Model: A501

#### Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





## A.1 DTS Bandwidth

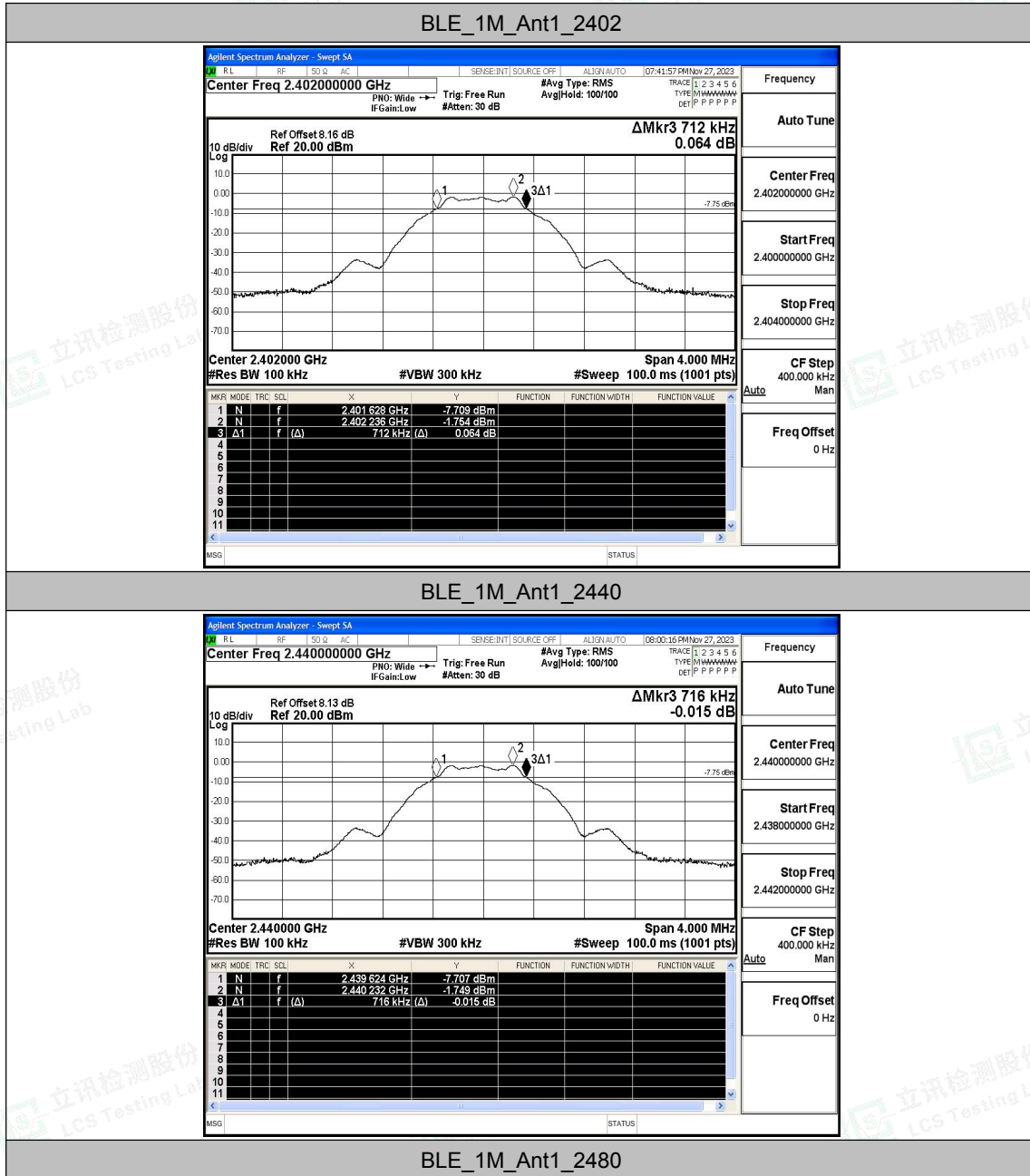
### Test Result

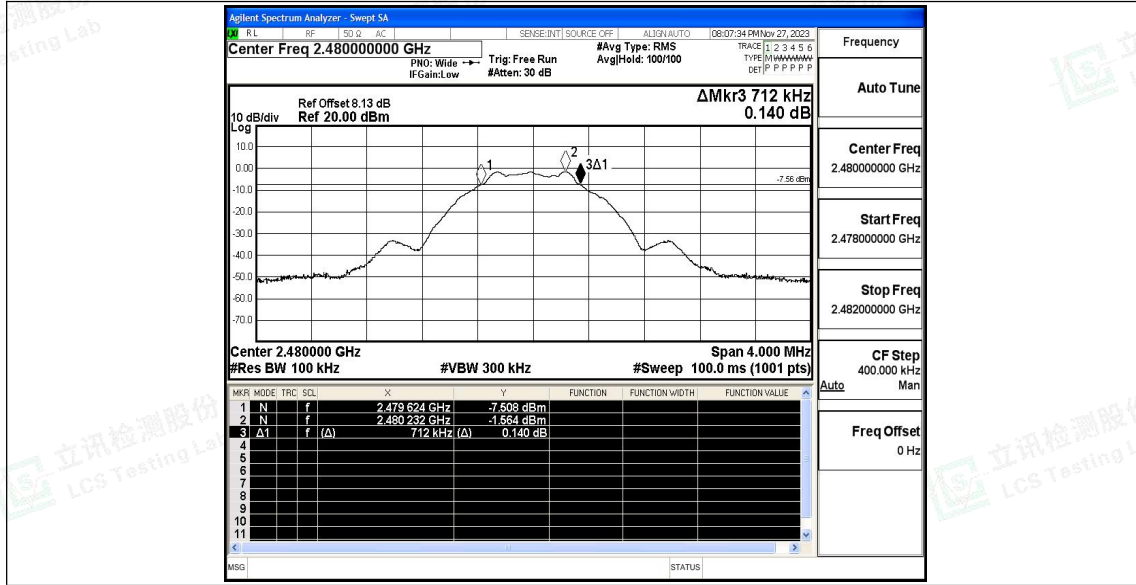
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.628	2402.340	0.5	PASS
		2440	0.716	2439.624	2440.340	0.5	PASS
		2480	0.712	2479.624	2480.336	0.5	PASS





### Test Graphs







## A.2 Maximum peak conducted output power

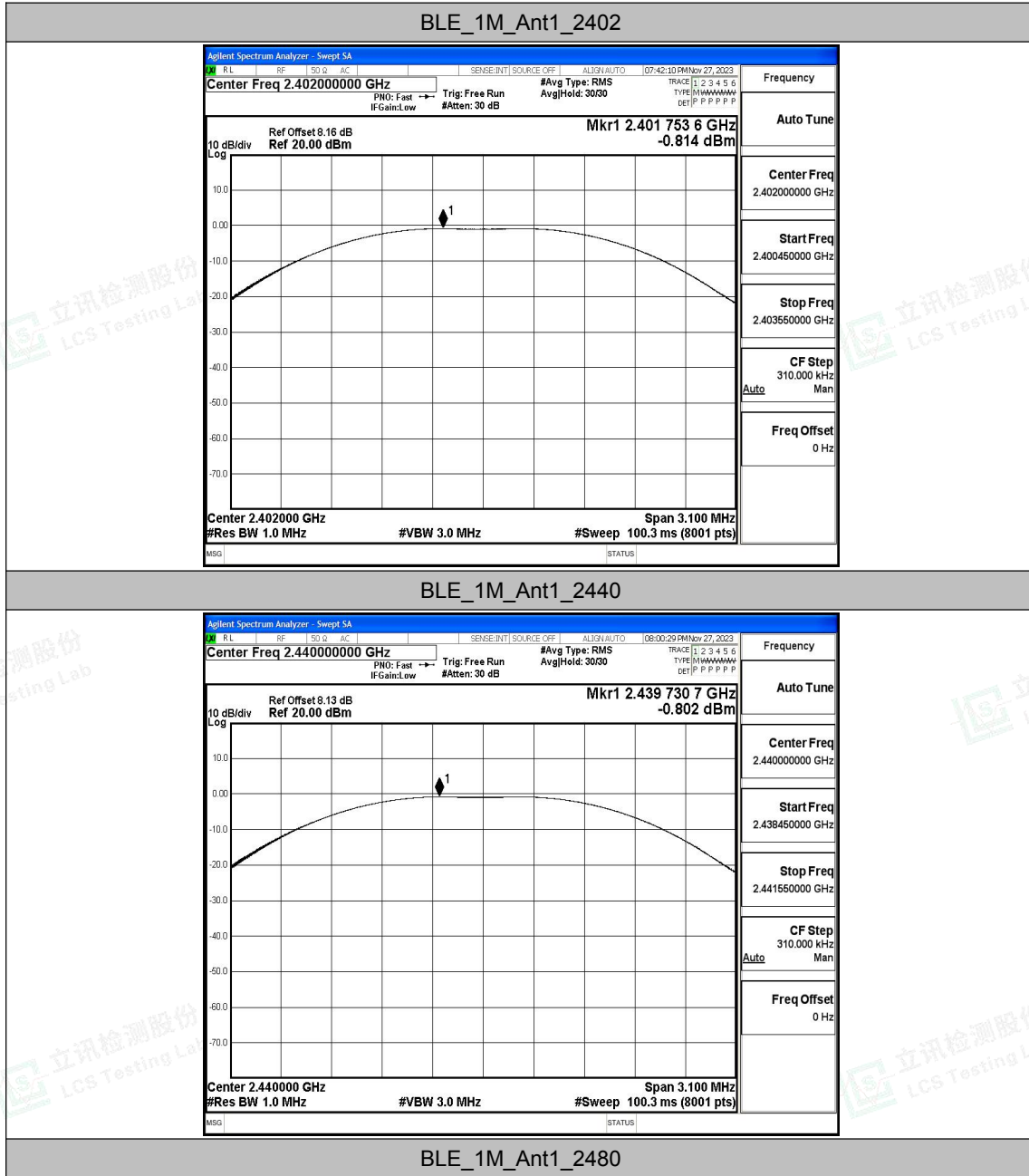
### Test Result

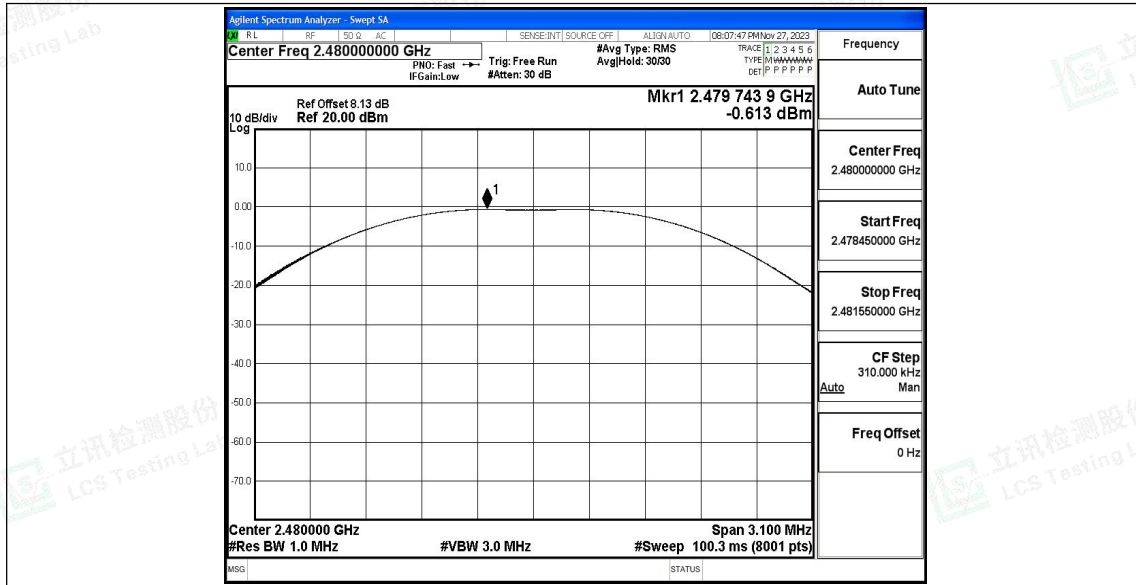
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.81	≤30	PASS
		2440	-0.8	≤30	PASS
		2480	-0.61	≤30	PASS





### Test Graphs







### A.3 Maximum power spectral density

#### Test Result

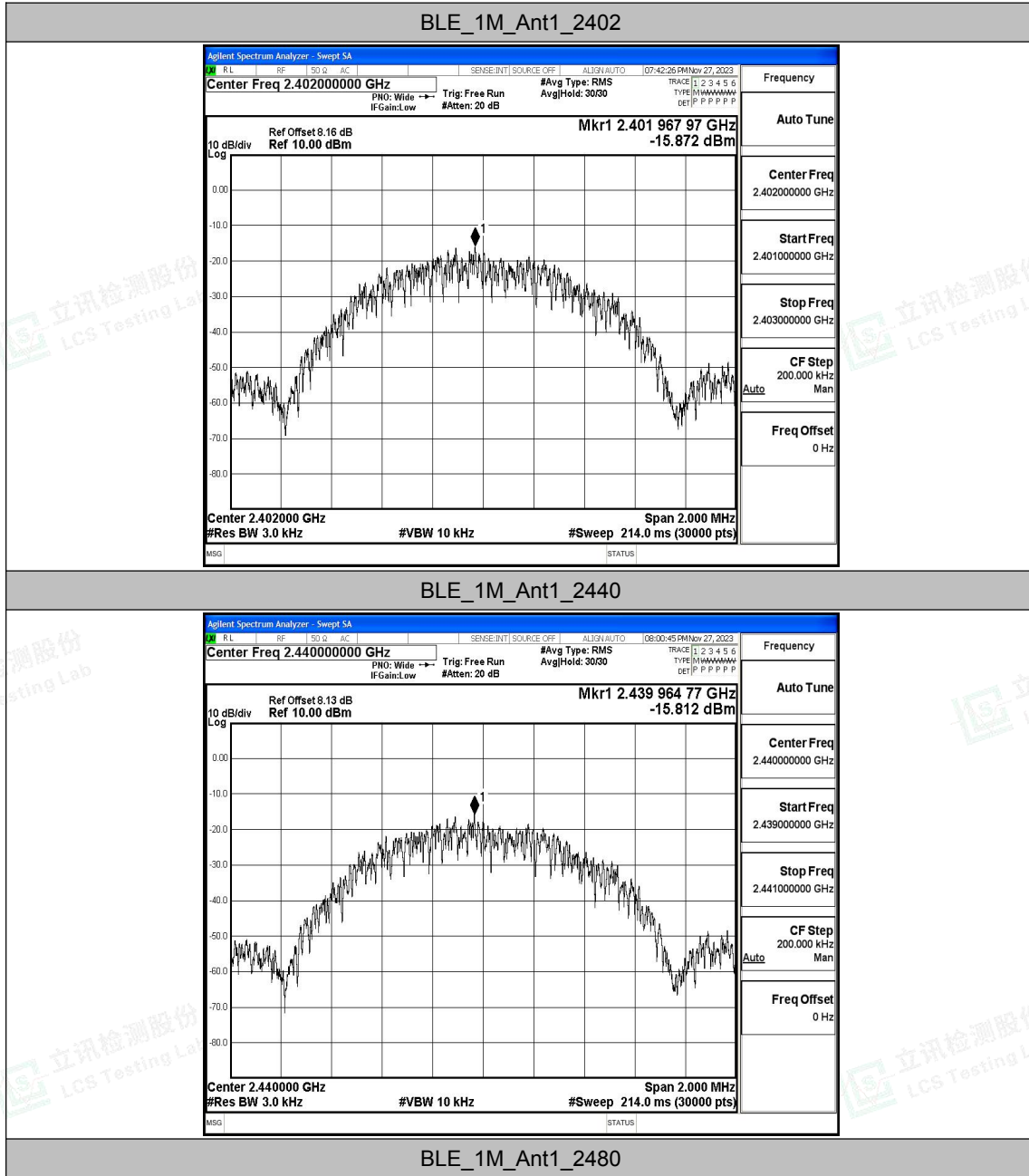
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.87	≤8.00	PASS
		2440	-15.81	≤8.00	PASS
		2480	-15.7	≤8.00	PASS

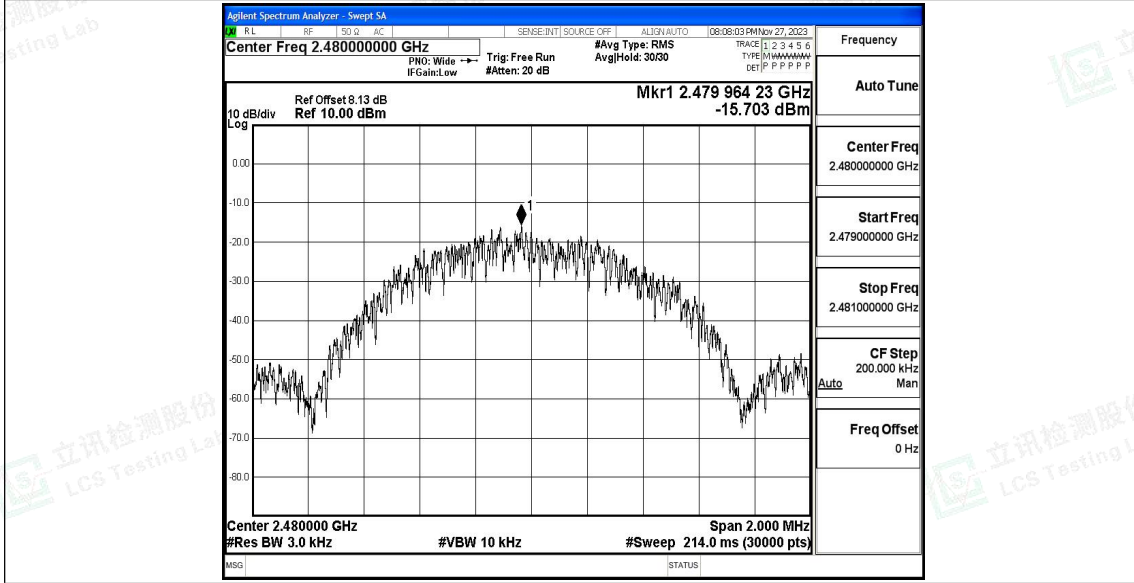






### Test Graphs







## A.4 Band edge measurements

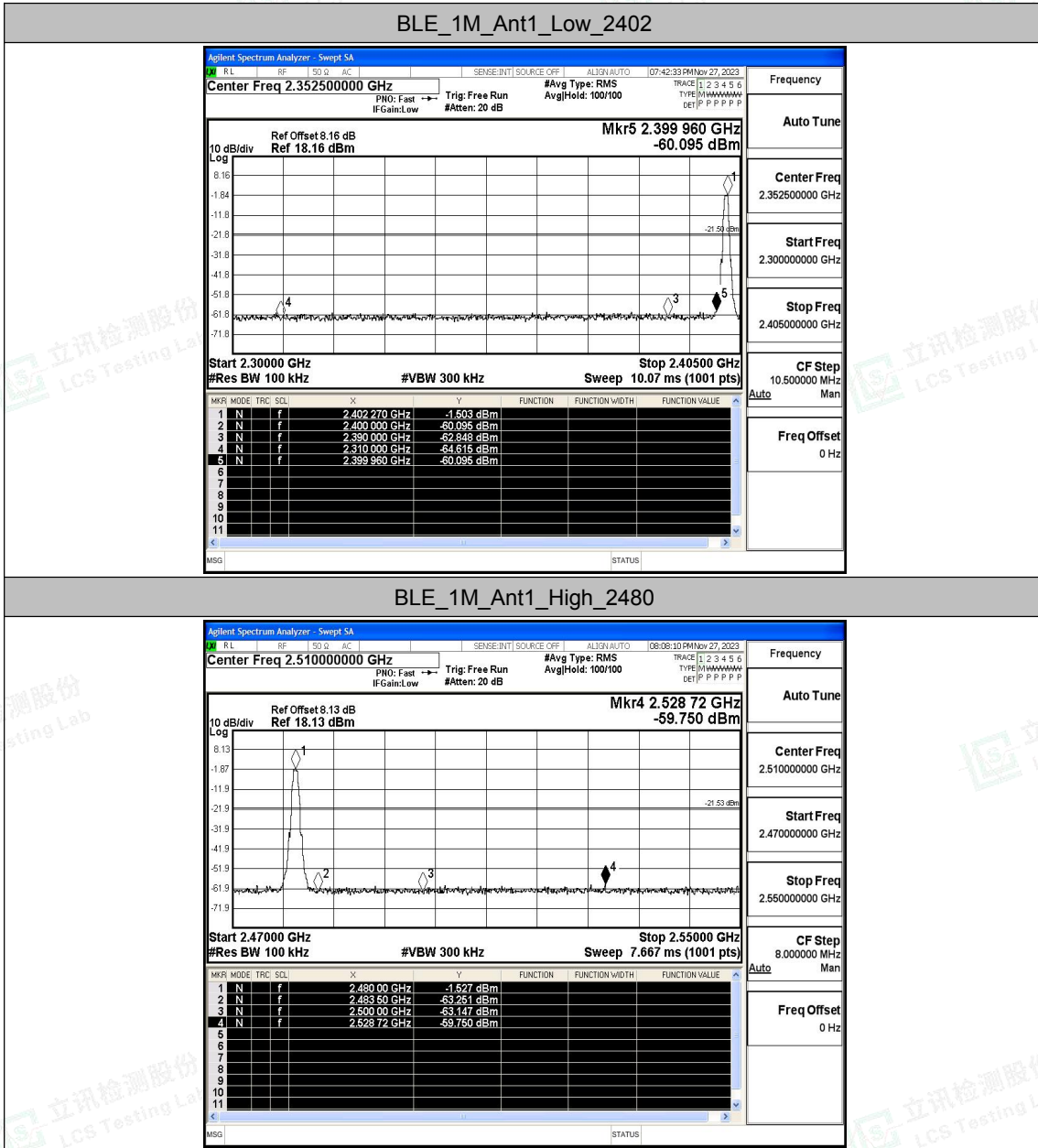
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.50	-60.1	≤-21.5	PASS
		High	2480	-1.53	-59.75	≤-21.53	PASS





### Test Graphs





### A.5 Conducted Spurious Emission

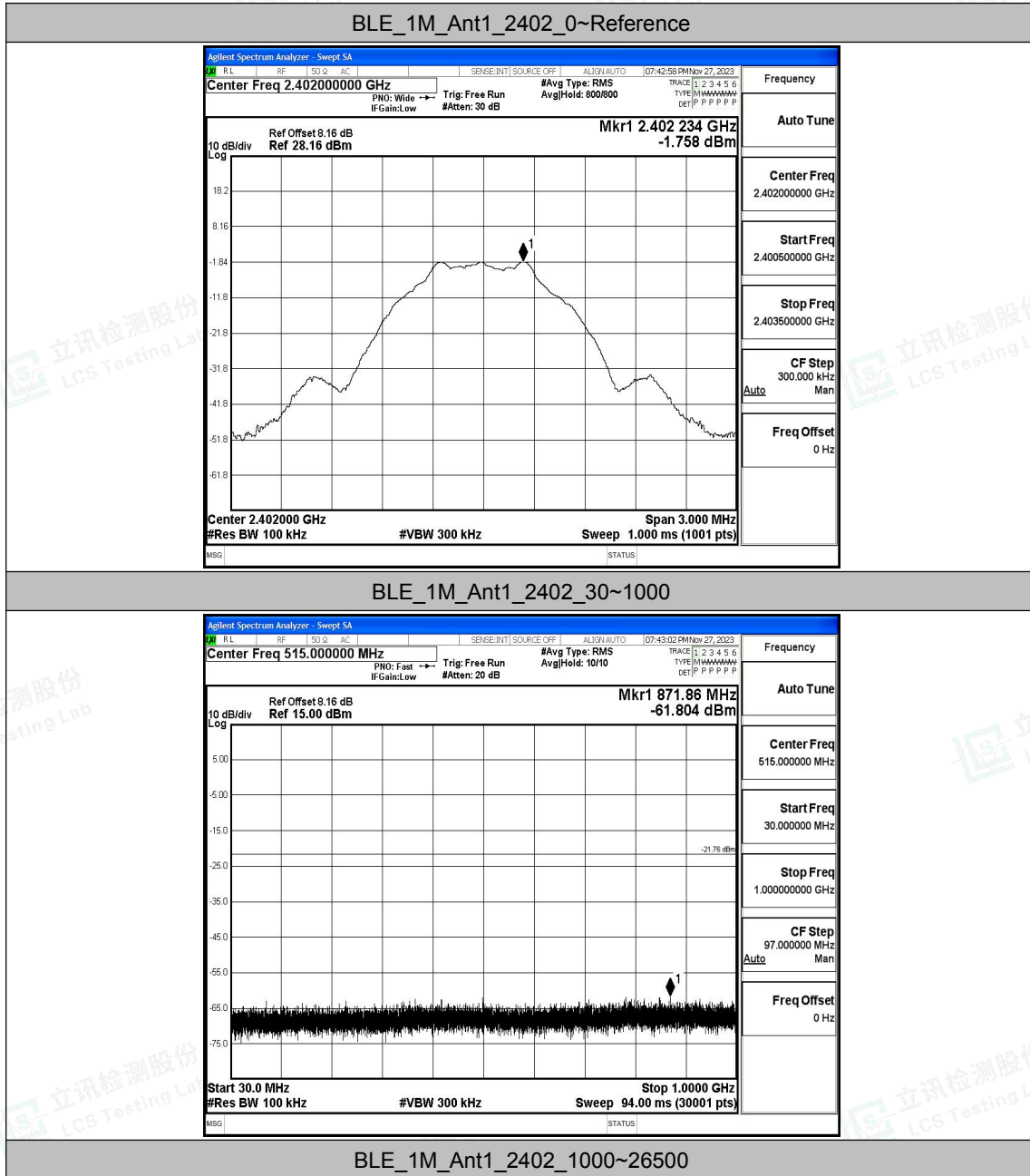
#### Test Result

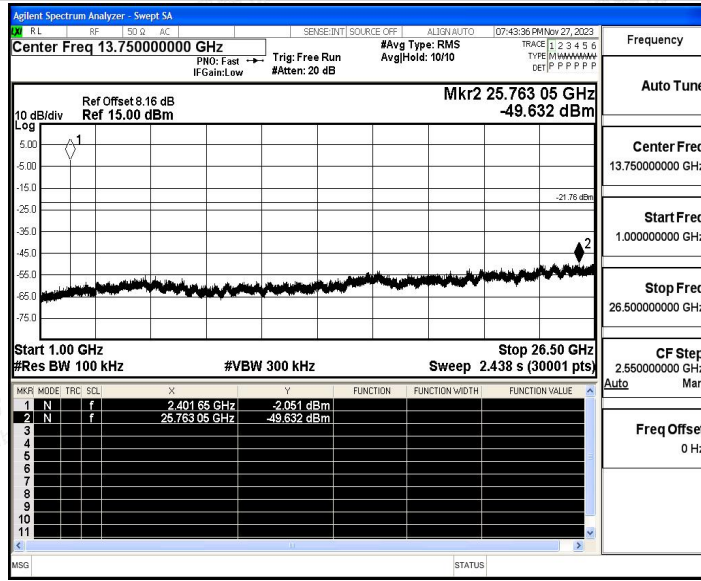
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.76	-1.76	---	PASS
			30~1000	-1.76	-61.8	≤-21.76	PASS
			1000~26500	-1.76	-49.63	≤-21.76	PASS
		2440	Reference	-1.74	-1.74	---	PASS
			30~1000	-1.74	-61.24	≤-21.74	PASS
			1000~26500	-1.74	-48.01	≤-21.74	PASS
		2480	Reference	-1.55	-1.55	---	PASS
			30~1000	-1.55	-61.71	≤-21.55	PASS
			1000~26500	-1.55	-49.32	≤-21.55	PASS



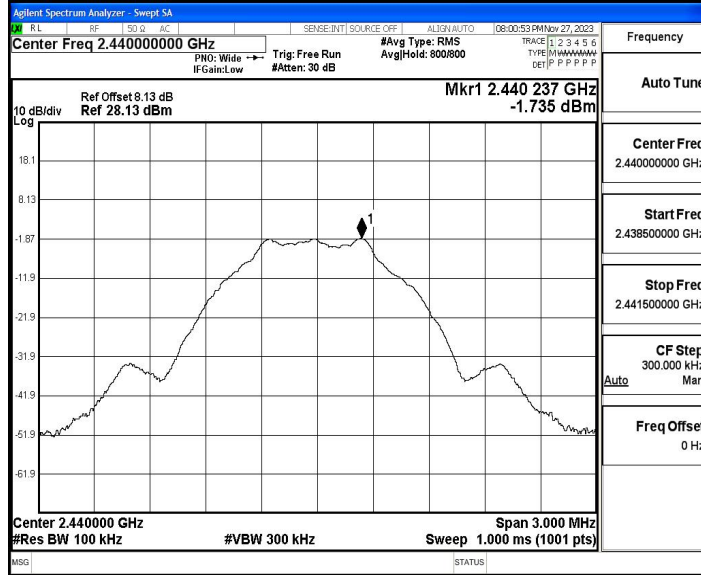


### Test Graphs





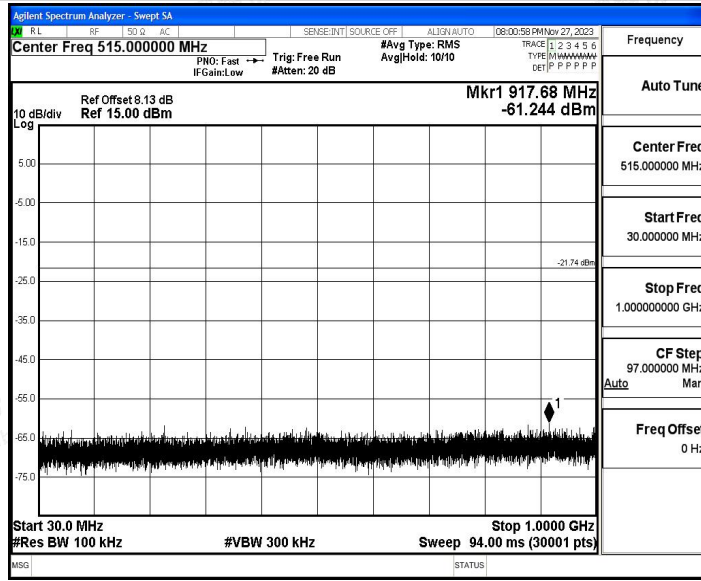
BLE\_1M\_Ant1\_2440\_0~Reference



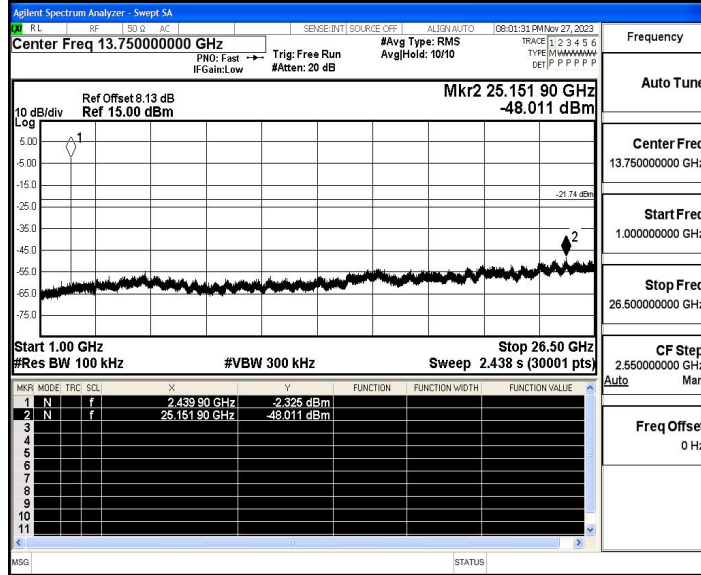
BLE\_1M\_Ant1\_2440\_30~1000







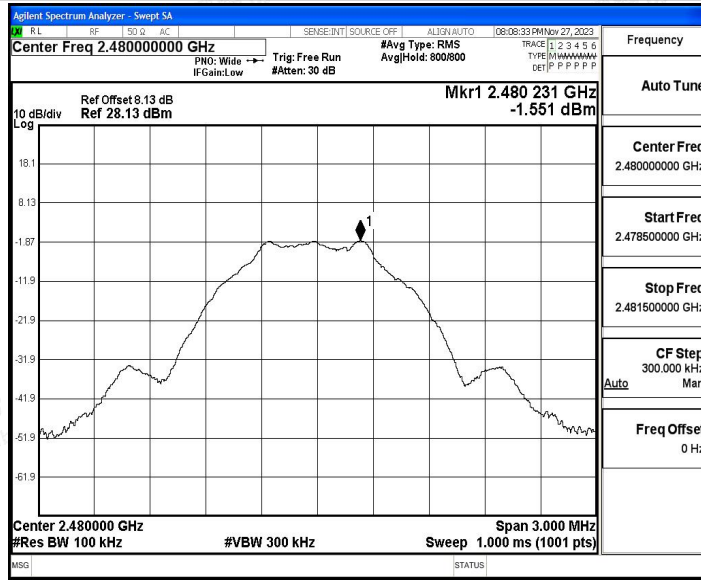
BLE\_1M\_Ant1\_2440\_1000~26500



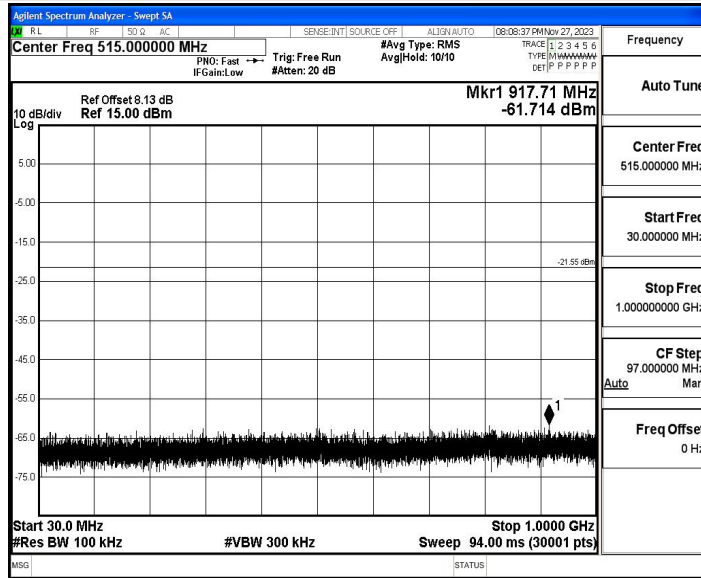
BLE\_1M\_Ant1\_2480\_0~Reference





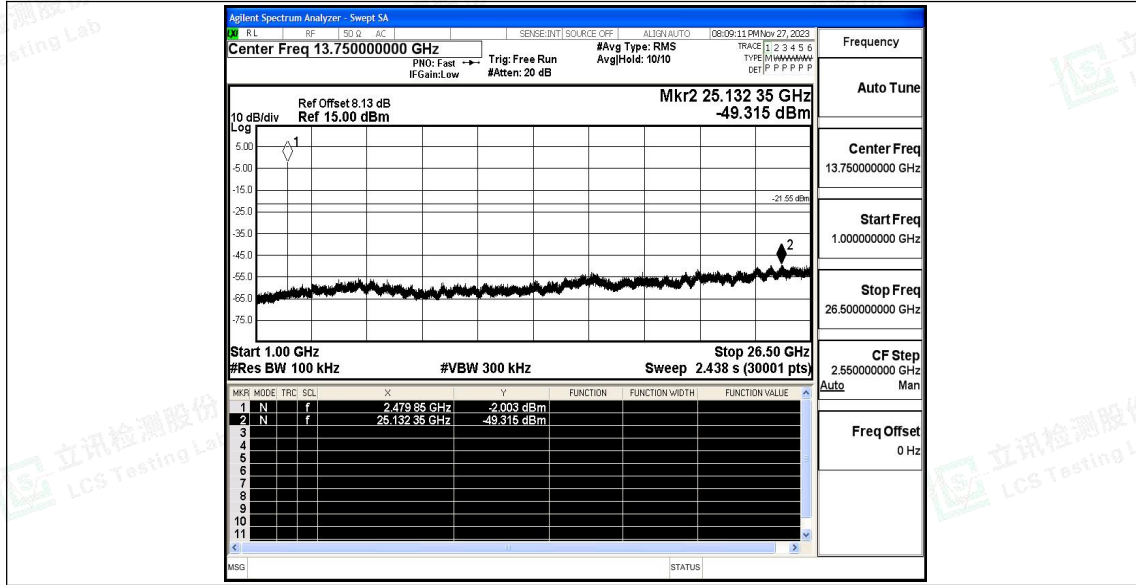


BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500







## A.6 Duty Cycle

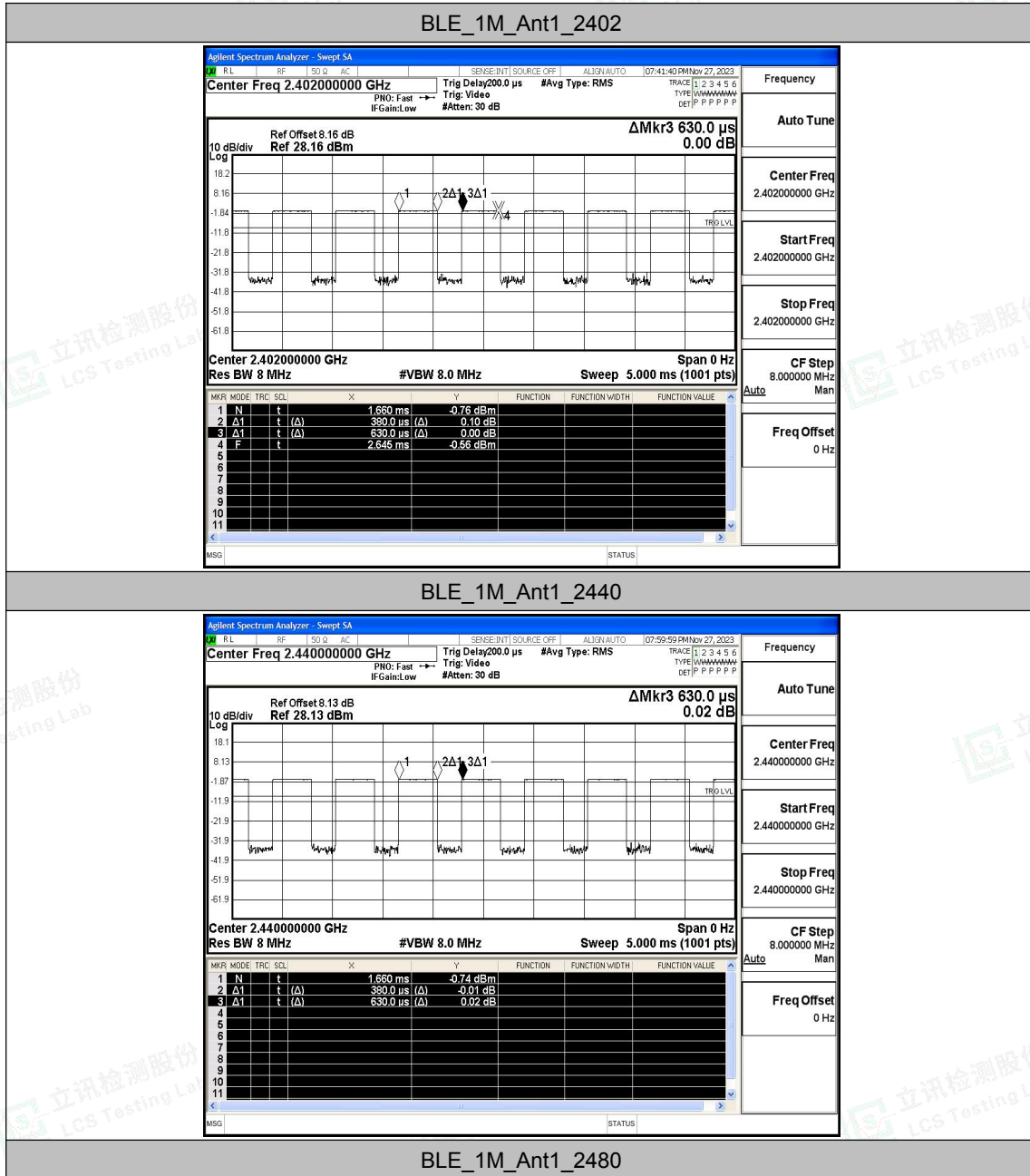
### Test Result

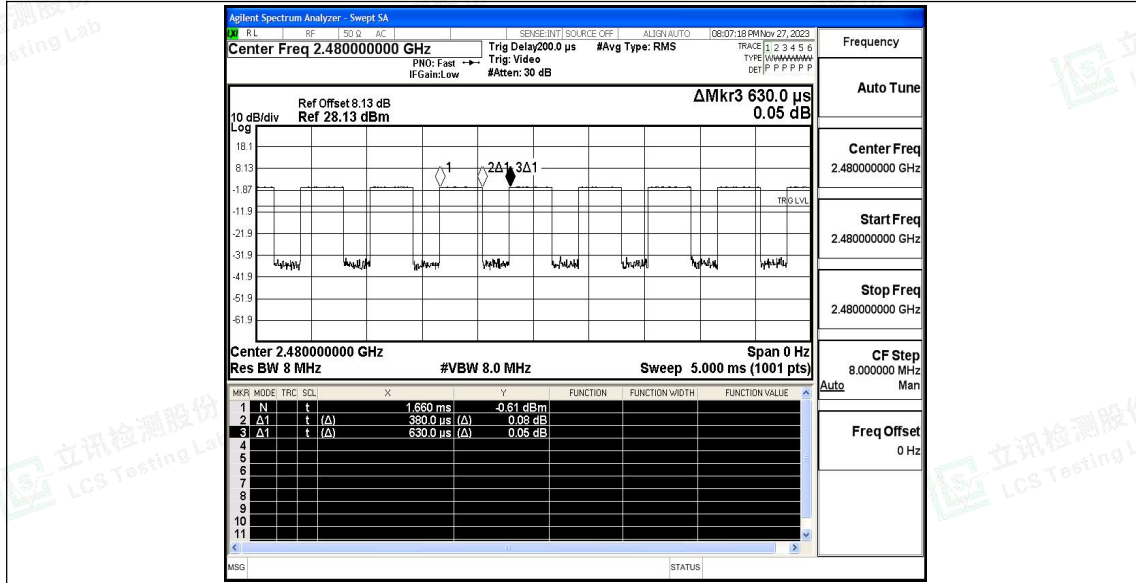
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---





### Test Graphs







### 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	-58.53	≤-41.20	36.67	≤54	PASS
				AV	2367.830	-57.58	≤-41.20	37.62	≤54	PASS
				AV	2390.000	-58.04	≤-41.20	37.16	≤54	PASS
				Peak	2310.000	-50.82	≤-21.20	44.38	≤74	PASS
				Peak	2386.520	-49.01	≤-21.20	46.19	≤74	PASS
				Peak	2390.000	-51.72	≤-21.20	43.48	≤74	PASS
		High	2480	AV	2483.500	-54.24	≤-41.20	40.96	≤54	PASS
				AV	2483.520	-54.24	≤-41.20	40.96	≤54	PASS
				AV	2500.000	-58.1	≤-41.20	37.10	≤54	PASS
				Peak	2483.500	-51.74	≤-21.20	43.46	≤74	PASS
				Peak	2487.840	-48.38	≤-21.20	46.82	≤74	PASS
				Peak	2500.000	-52.37	≤-21.20	42.83	≤74	PASS

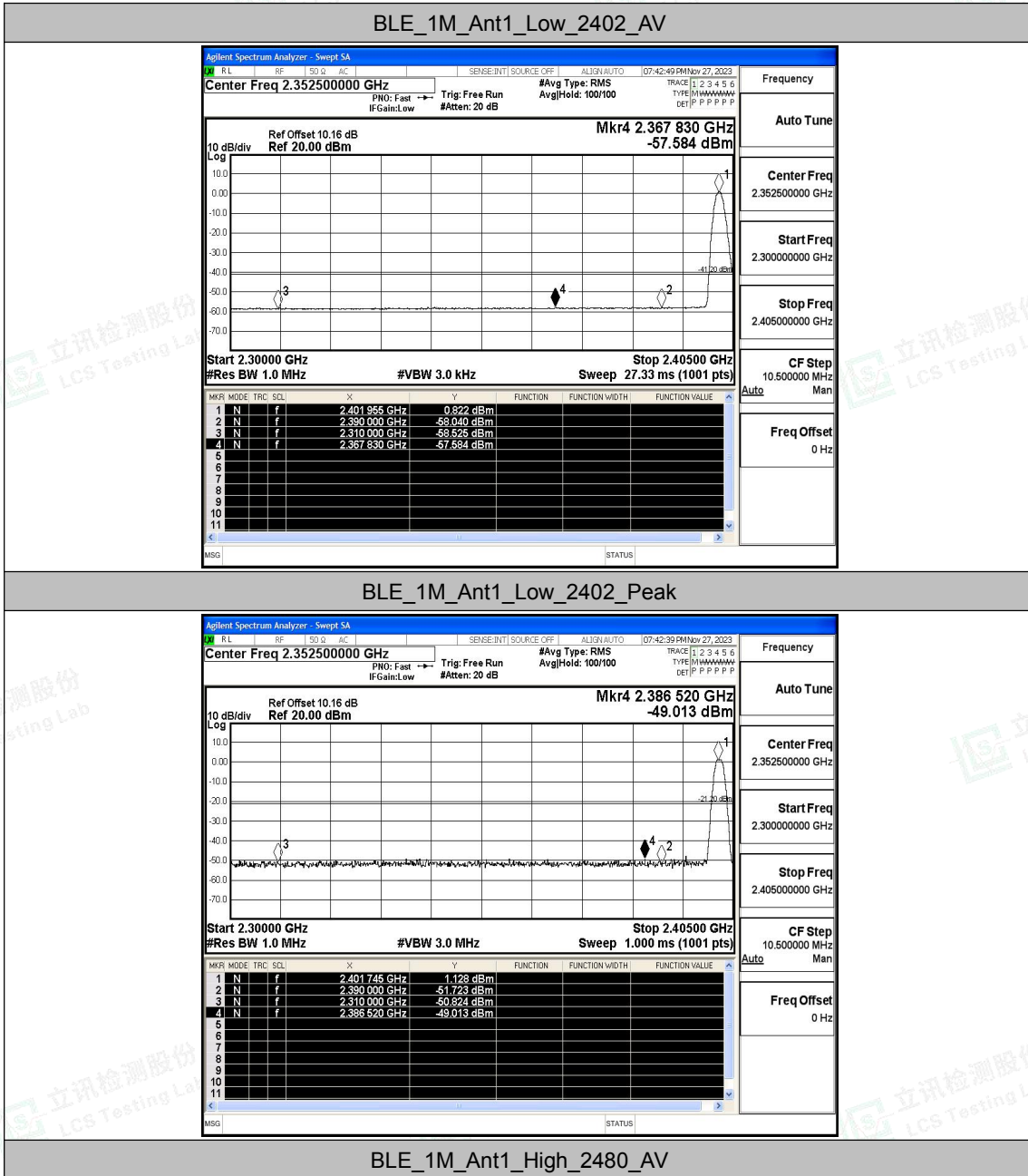
Note:

- The Antenna Gain 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.

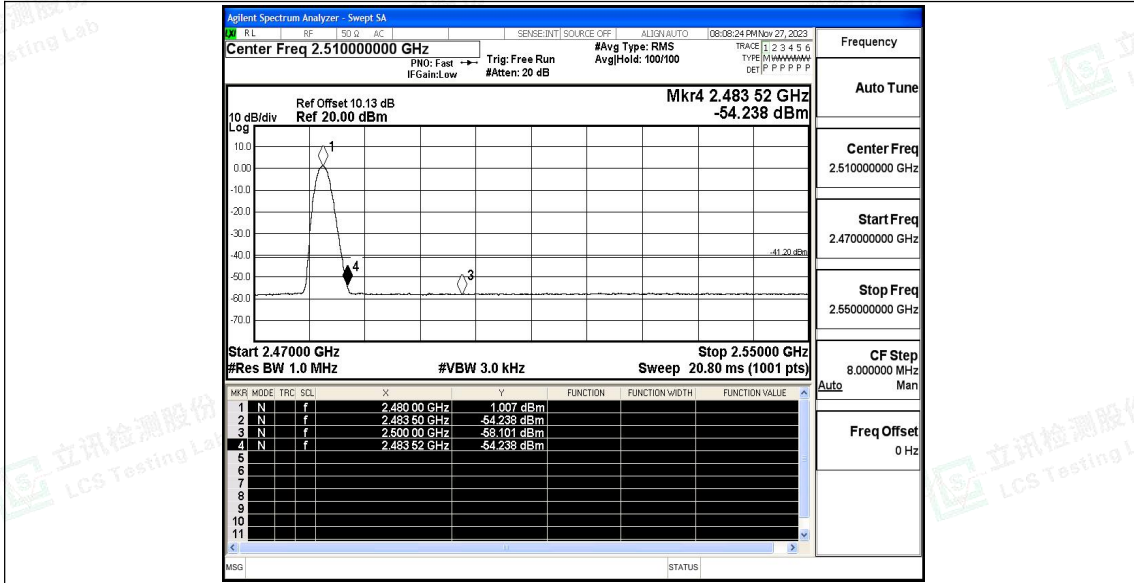




### Test Graphs







BLE\_1M\_Ant1\_High\_2480\_Peak

