



## Appendix A

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

Product Name: Aroma Diffuser

Test Model: A316

#### 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

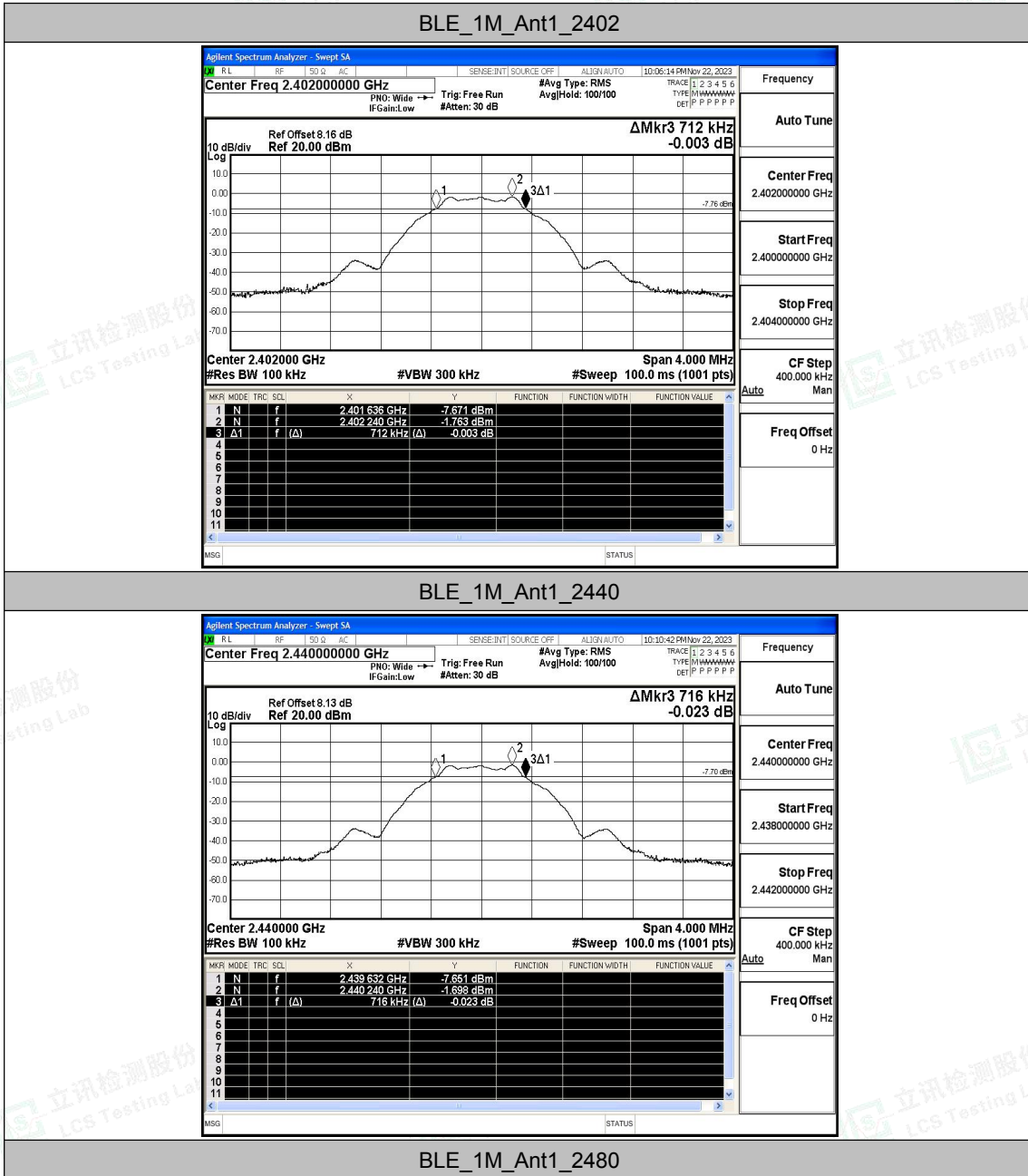
### Test Result

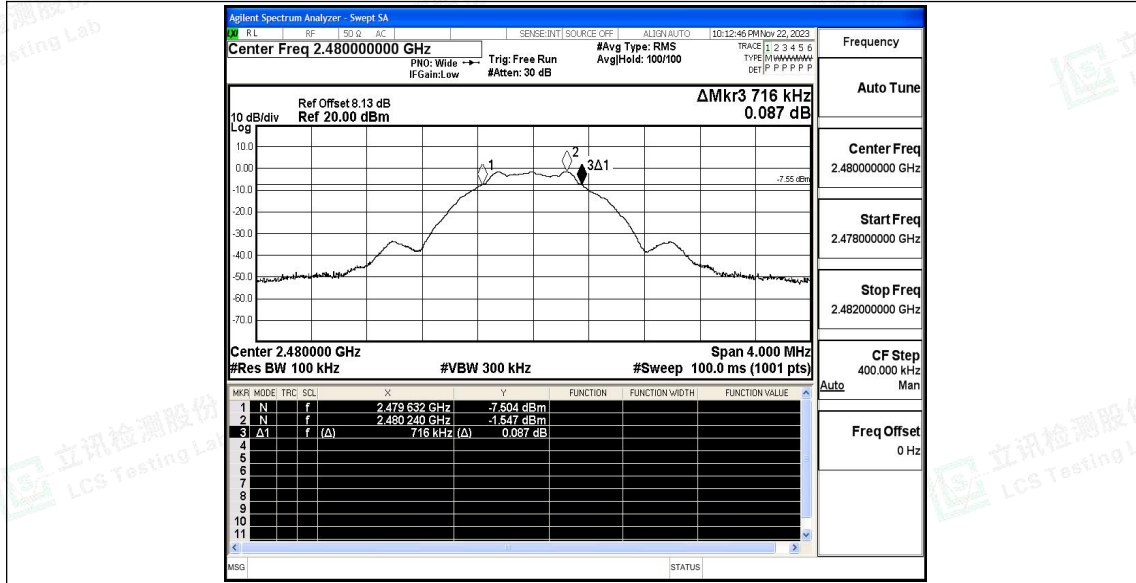
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.636	2402.348	0.5	PASS
		2440	0.716	2439.632	2440.348	0.5	PASS
		2480	0.716	2479.632	2480.348	0.5	PASS





### Test Graphs







## A.2 Maximum peak conducted output power

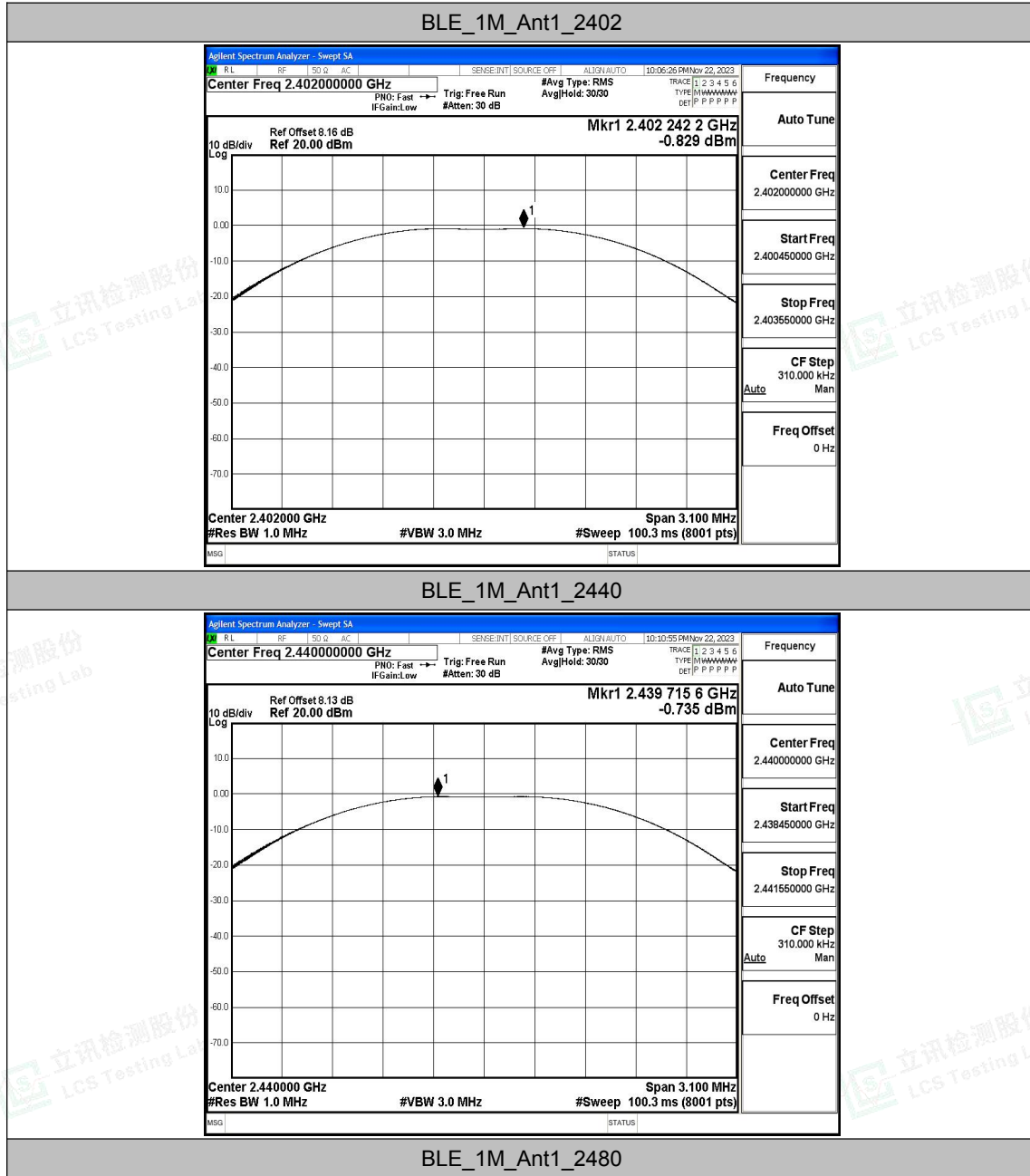
### Test Result

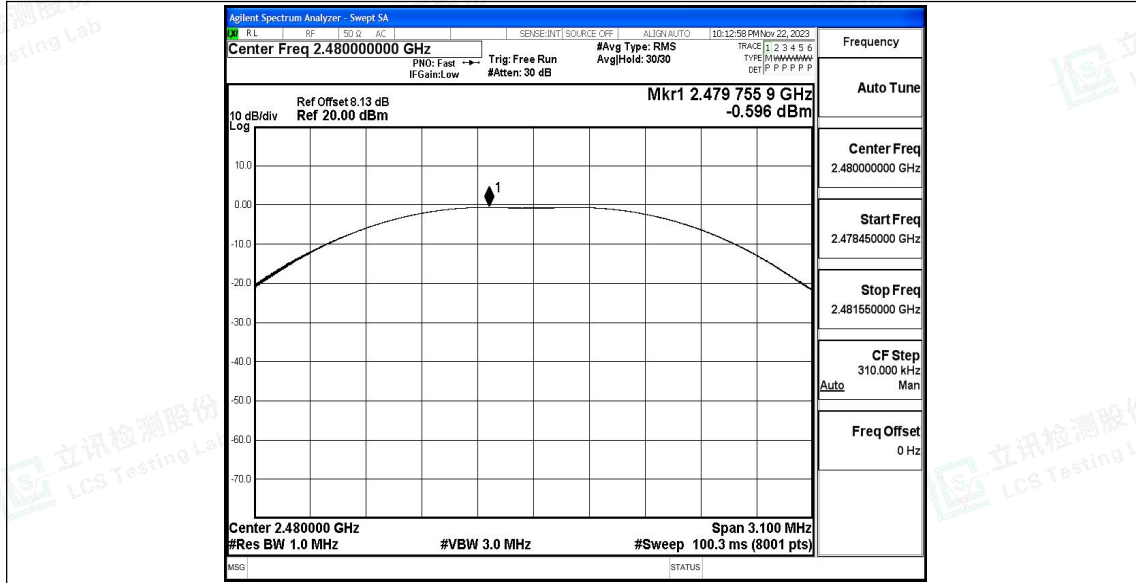
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.83	≤30	PASS
		2440	-0.74	≤30	PASS
		2480	-0.6	≤30	PASS





### Test Graphs







### A.3 Maximum power spectral density

#### Test Result

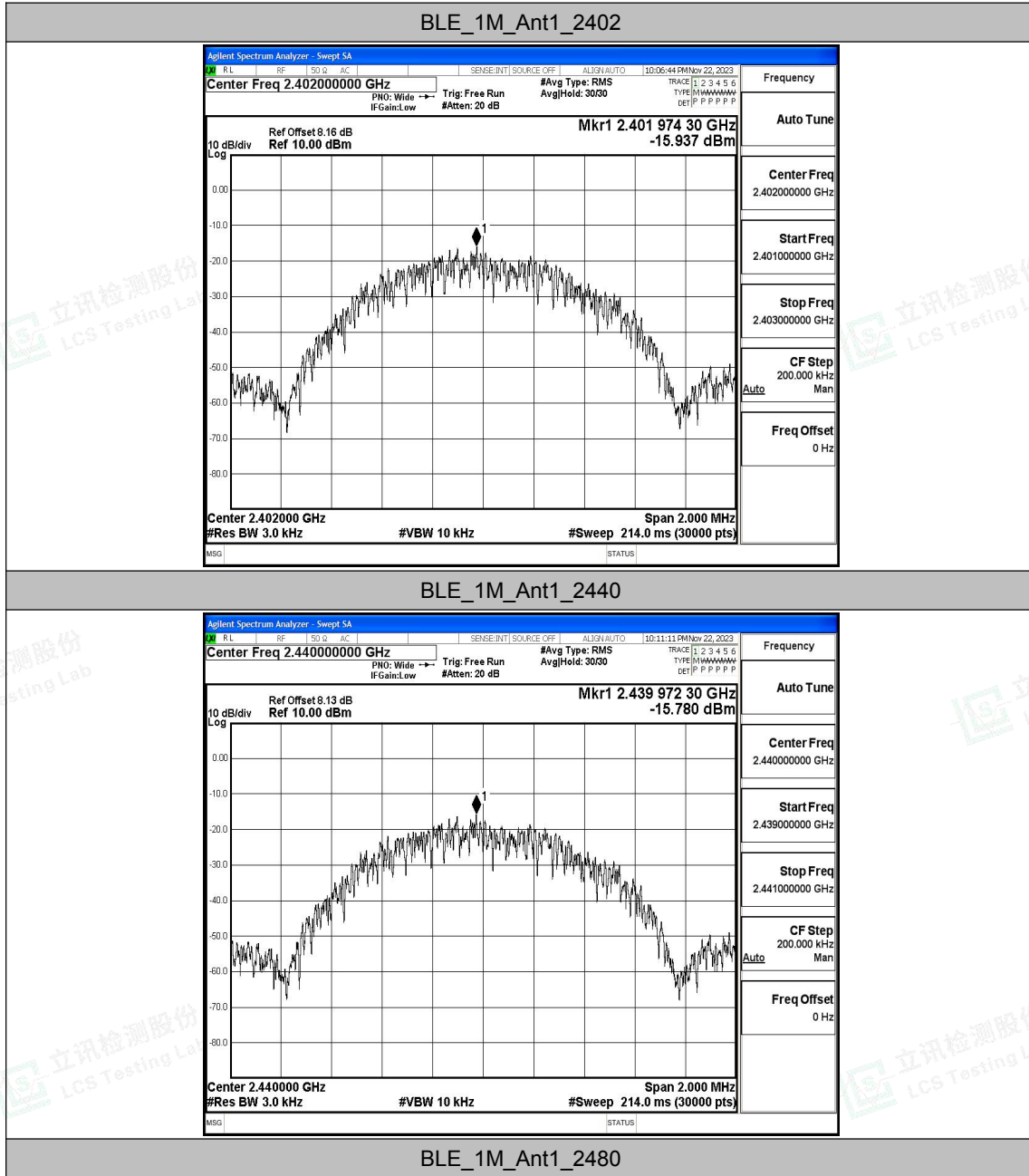
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.94	≤8.00	PASS
		2440	-15.78	≤8.00	PASS
		2480	-15.66	≤8.00	PASS

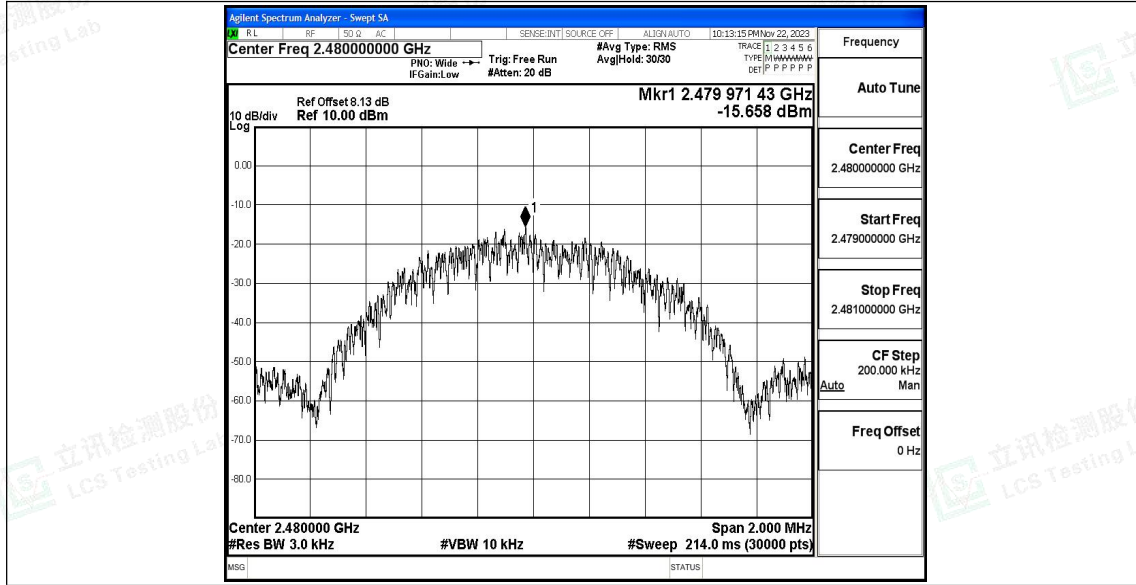






### Test Graphs







## A.4 Band edge measurements

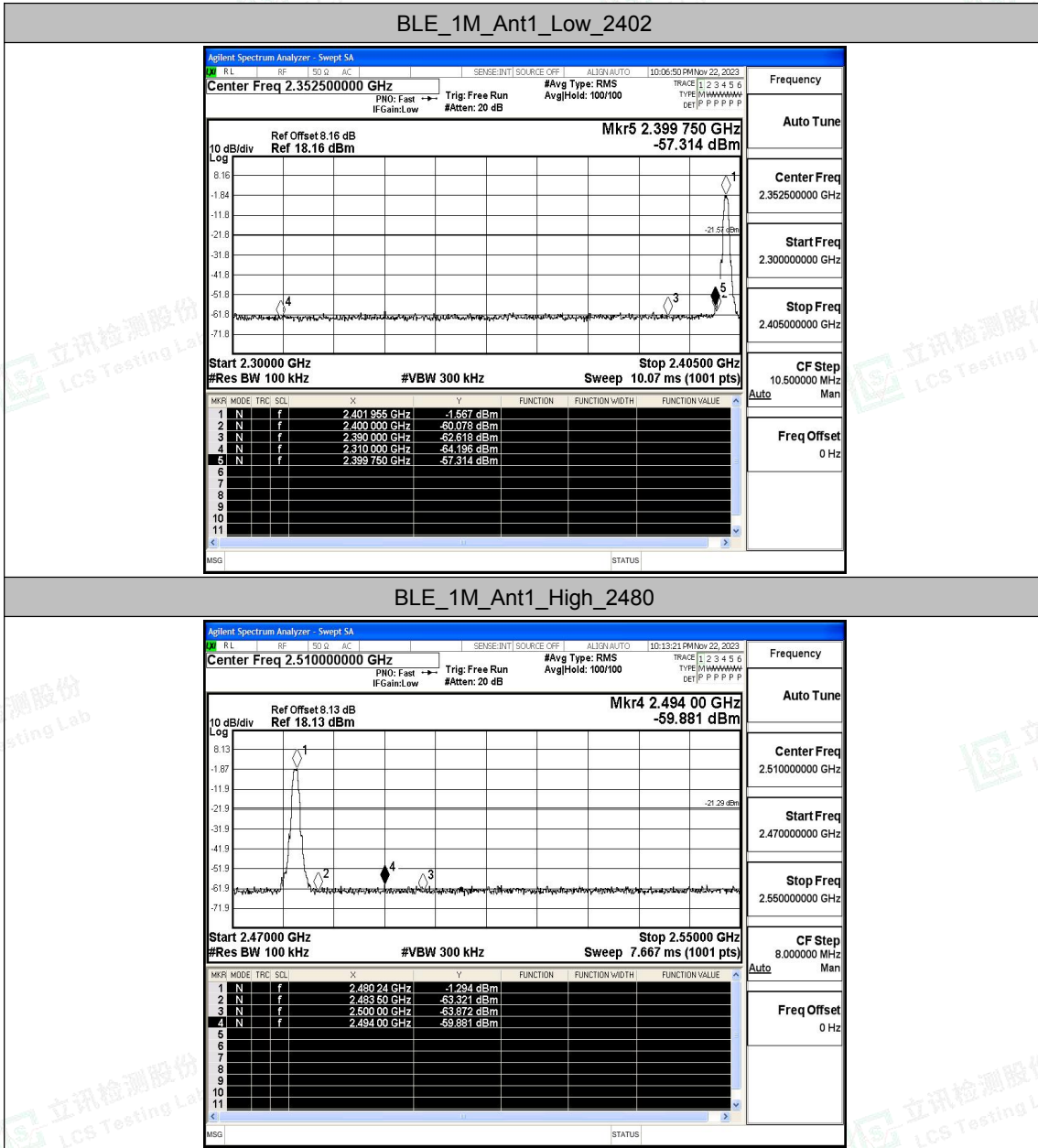
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.57	-57.31	≤-21.57	PASS
		High	2480	-1.29	-59.88	≤-21.29	PASS





### Test Graphs





### A.5 Conducted Spurious Emission

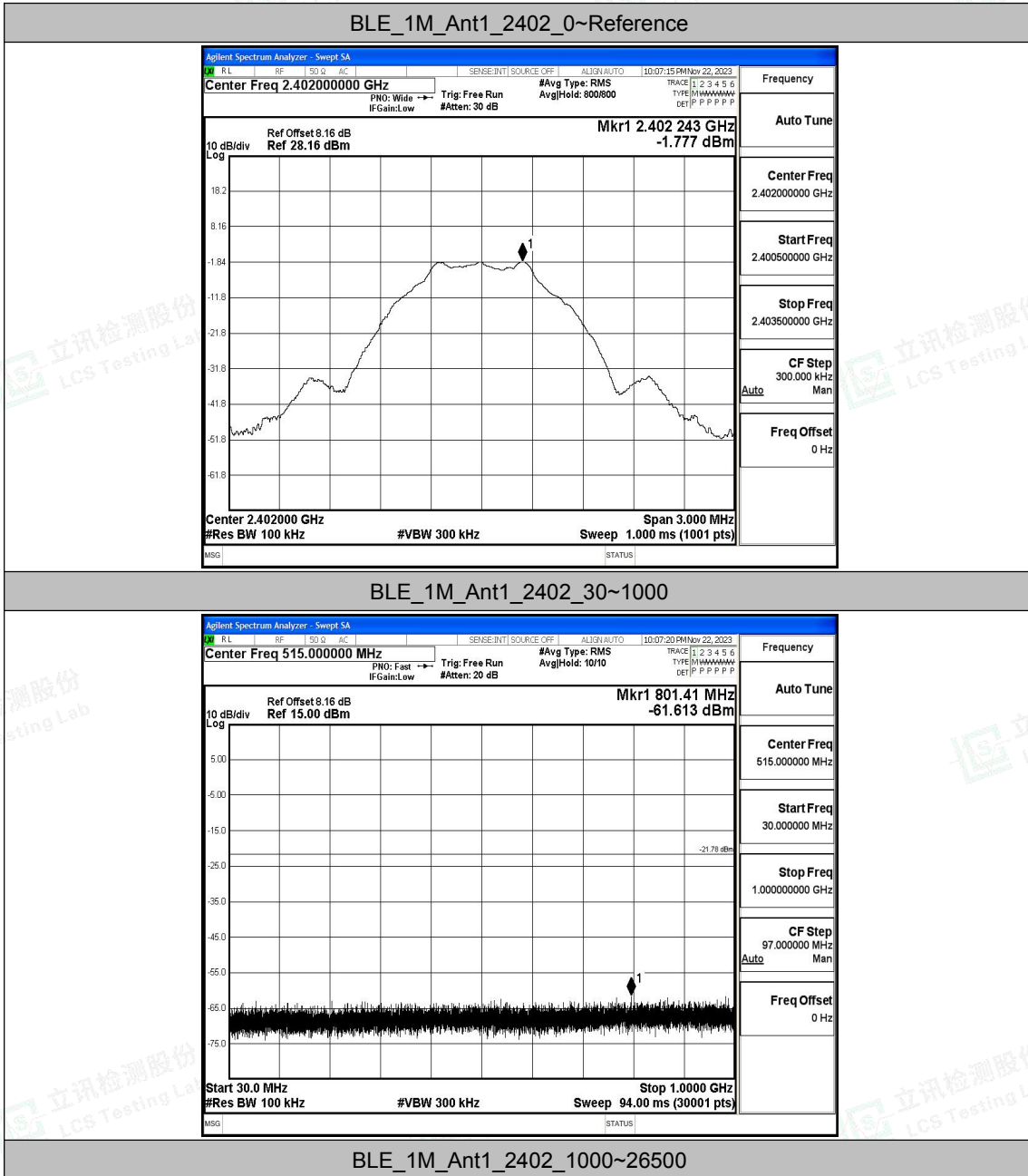
#### Test Result

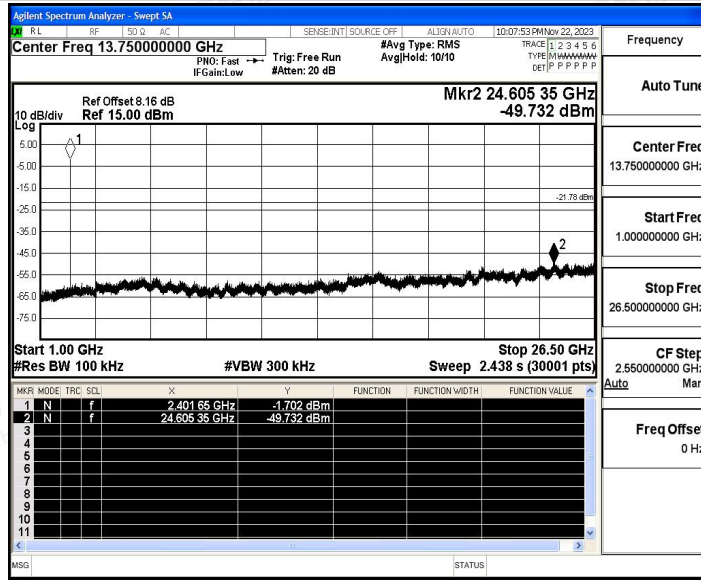
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.78	-1.78	---	PASS
			30~1000	-1.78	-61.61	≤-21.78	PASS
			1000~26500	-1.78	-49.73	≤-21.78	PASS
		2440	Reference	-1.69	-1.69	---	PASS
			30~1000	-1.69	-62.05	≤-21.69	PASS
			1000~26500	-1.69	-48.73	≤-21.69	PASS
		2480	Reference	-1.54	-1.54	---	PASS
			30~1000	-1.54	-61.76	≤-21.54	PASS
			1000~26500	-1.54	-49.42	≤-21.54	PASS



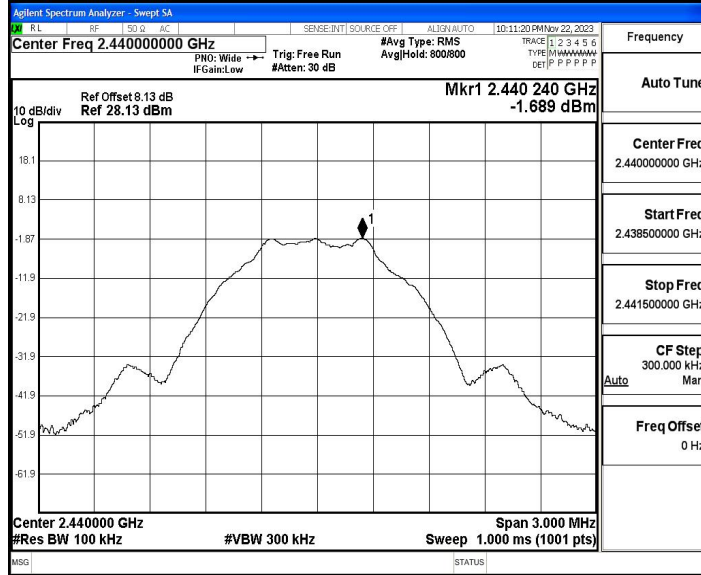


### Test Graphs



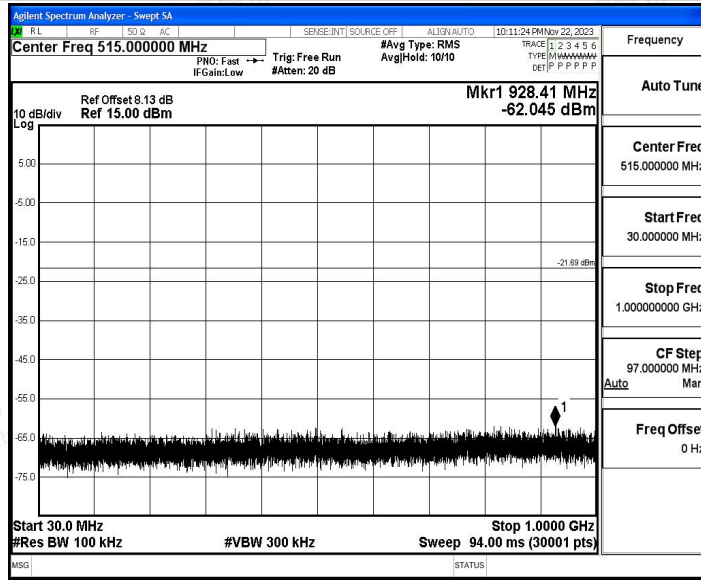


BLE\_1M\_Ant1\_2440\_0~Reference

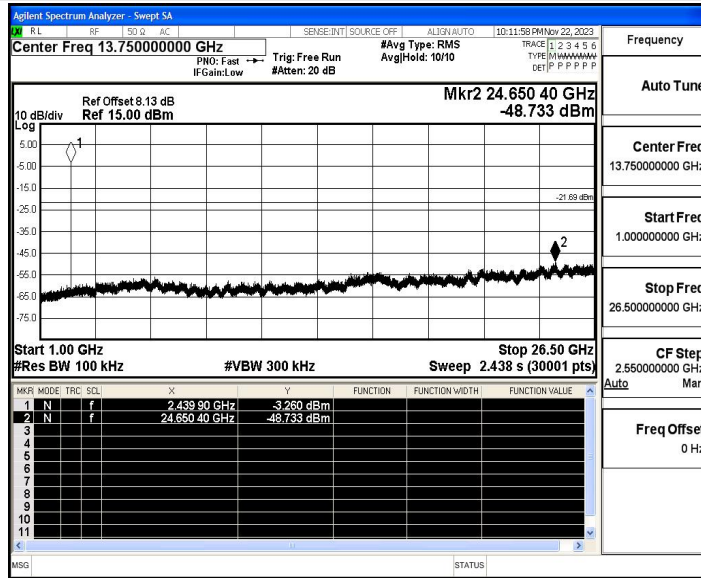


BLE\_1M\_Ant1\_2440\_30~1000





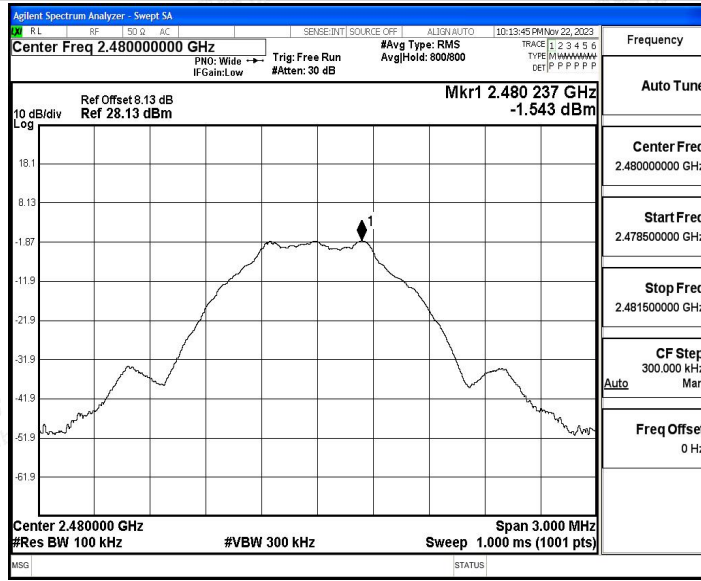
BLE\_1M\_Ant1\_2440\_1000~26500



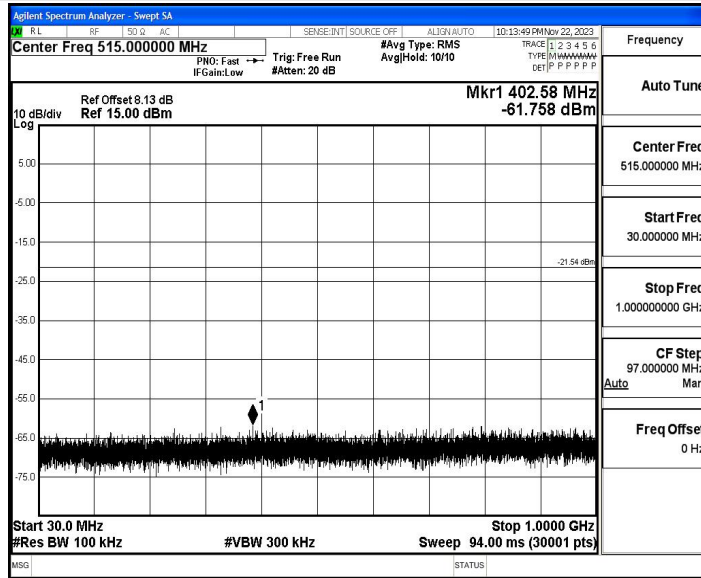
BLE\_1M\_Ant1\_2480\_0~Reference





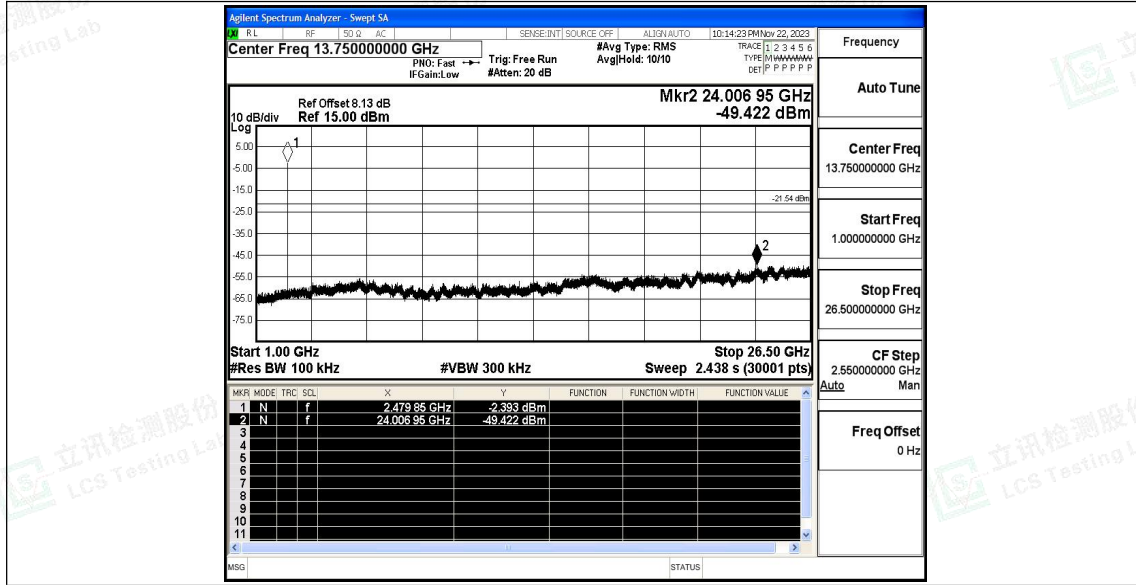


BLE\_1M\_Ant1\_2480\_30~1000



BLE\_1M\_Ant1\_2480\_1000~26500







### A.6 Duty Cycle

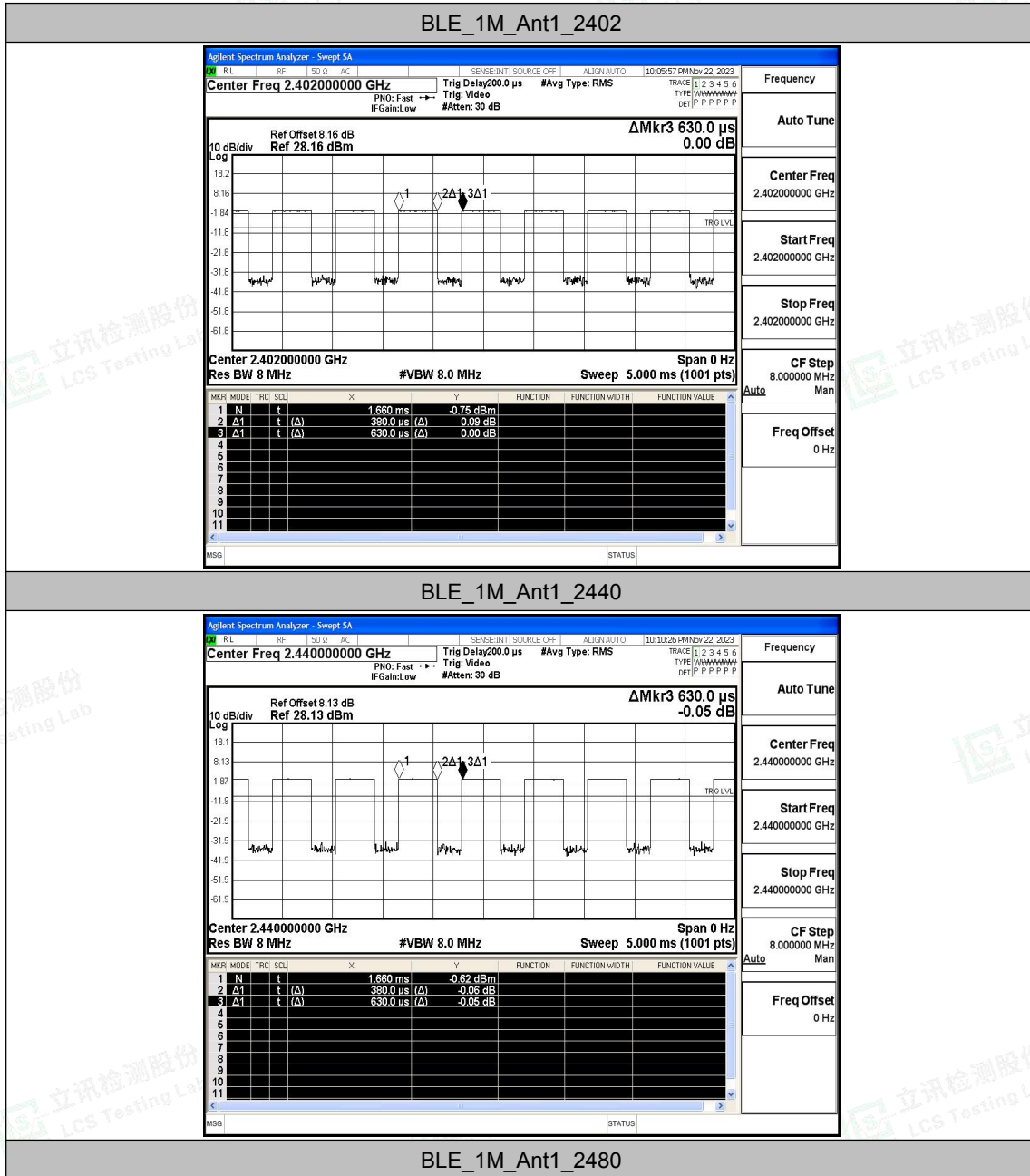
#### Test Result

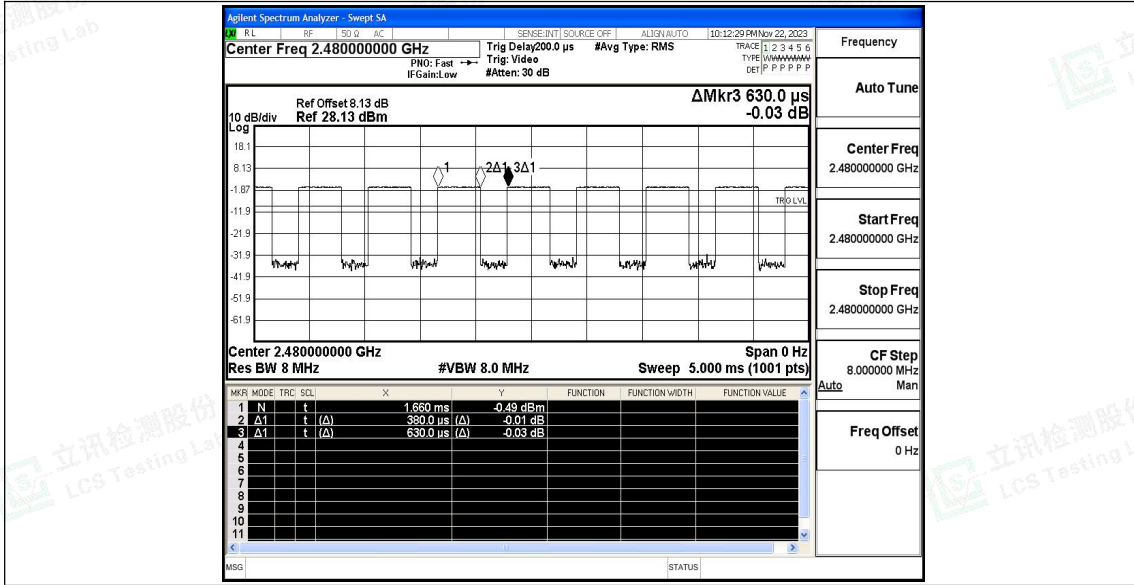
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---





### 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	-58.51	≤-41.20	36.69	≤54	PASS
				AV	2387.570	-57.76	≤-41.20	37.44	≤54	PASS
				AV	2390.000	-58.15	≤-41.20	37.05	≤54	PASS
				Peak	2310.000	-52.39	≤-21.20	42.81	≤74	PASS
				Peak	2379.905	-48.38	≤-21.20	46.82	≤74	PASS
				Peak	2390.000	-53.25	≤-21.20	41.95	≤74	PASS
		High	2480	AV	2483.500	-54.57	≤-41.20	40.63	≤54	PASS
				AV	2483.520	-54.57	≤-41.20	40.63	≤54	PASS
				AV	2500.000	-58.12	≤-41.20	37.08	≤54	PASS
				Peak	2483.500	-51.5	≤-21.20	43.70	≤74	PASS
				Peak	2492.080	-48.22	≤-21.20	46.98	≤74	PASS
				Peak	2500.000	-52.28	≤-21.20	42.92	≤74	PASS

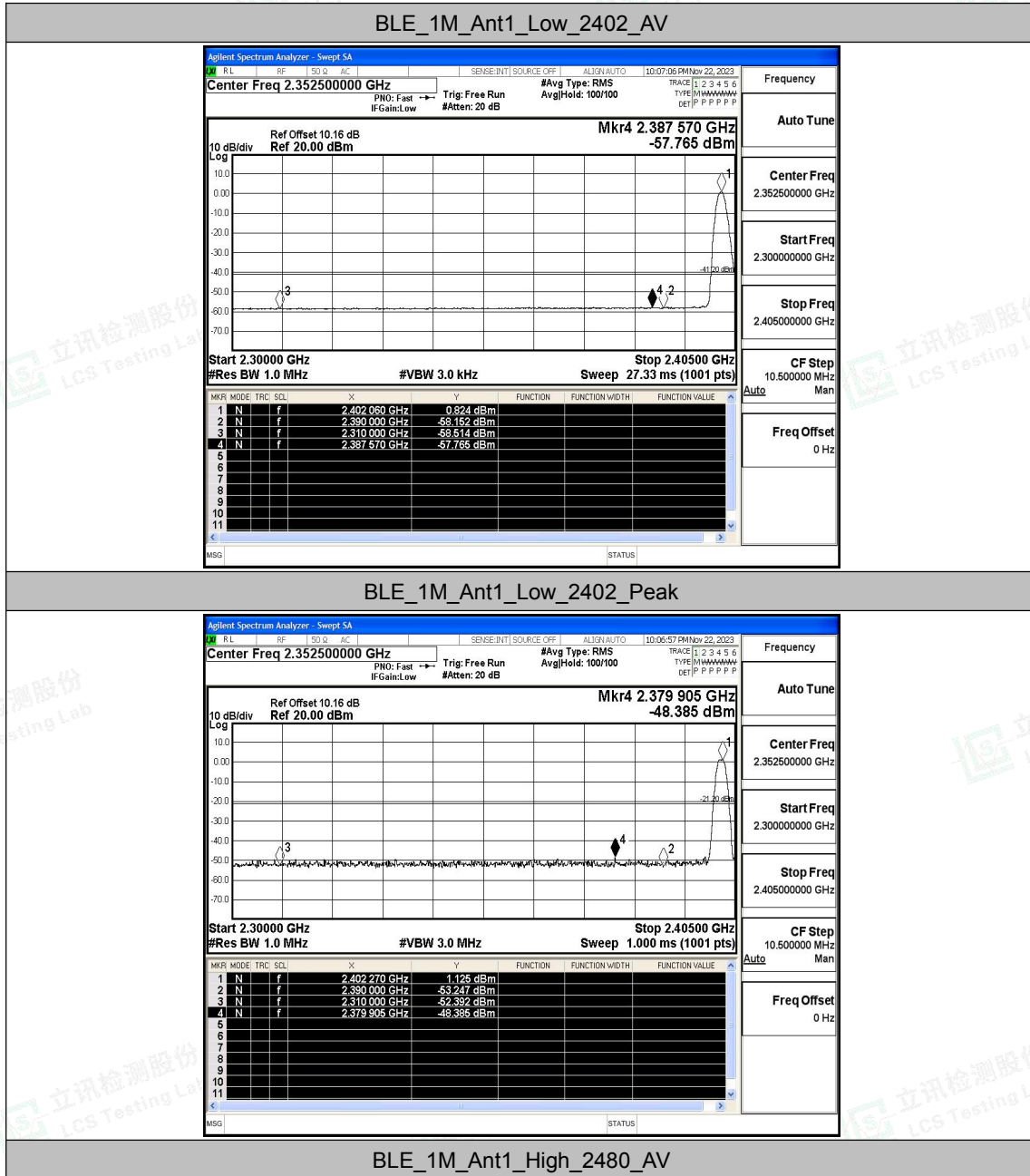
Note:

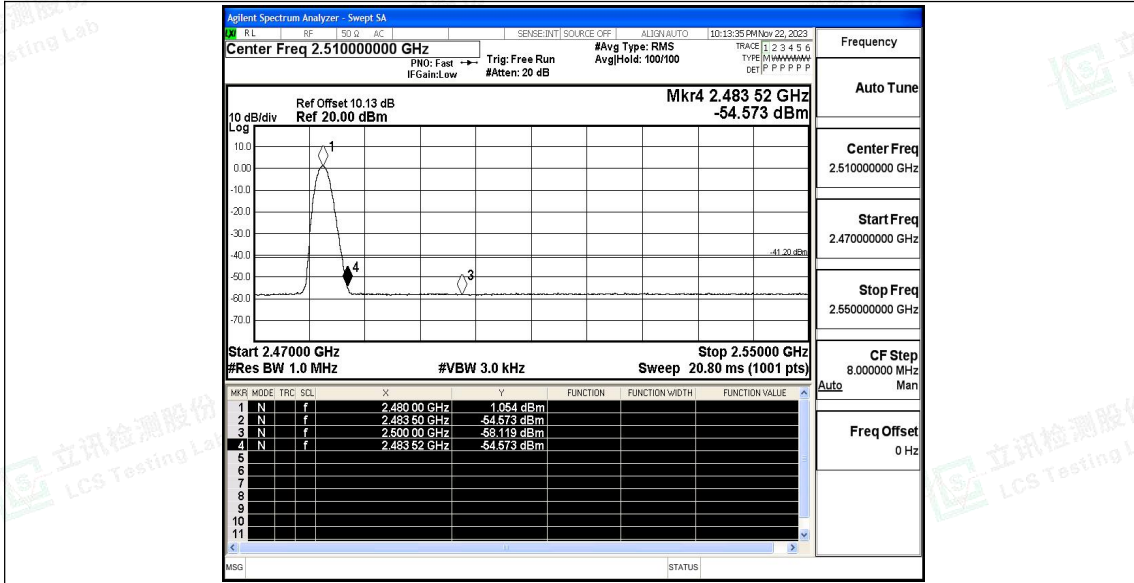
- The Antenna Gain is compensated in the graph.
- The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.





### Test Graphs





BLE\_1M\_Ant1\_High\_2480\_Peak

