



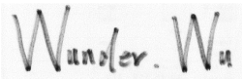
Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: WIFI Music Sync Ambient Lamp

Test Model: FWWDA4-25

Environmental Conditions

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





A.1 DTS Bandwidth

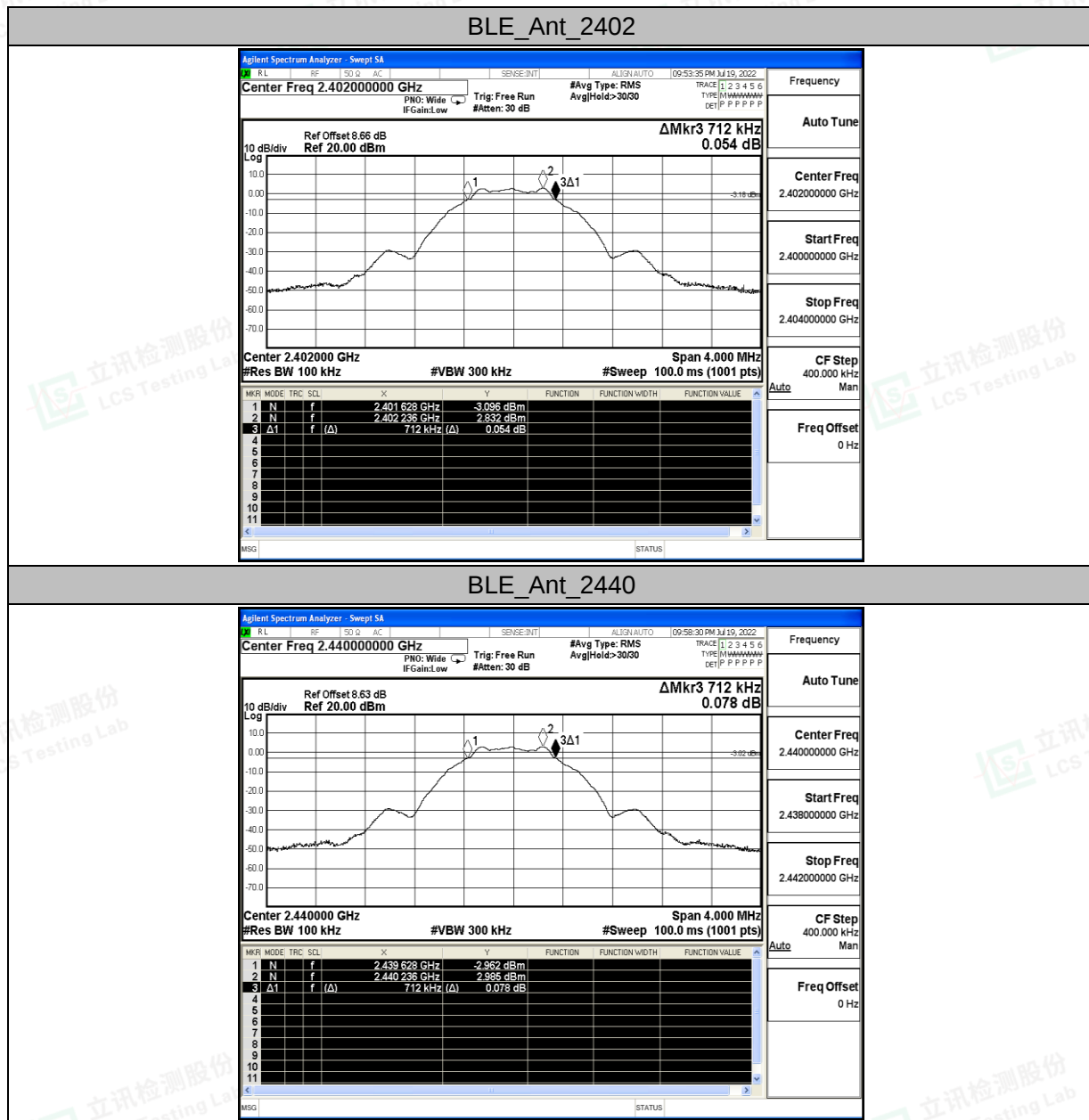
Test Result

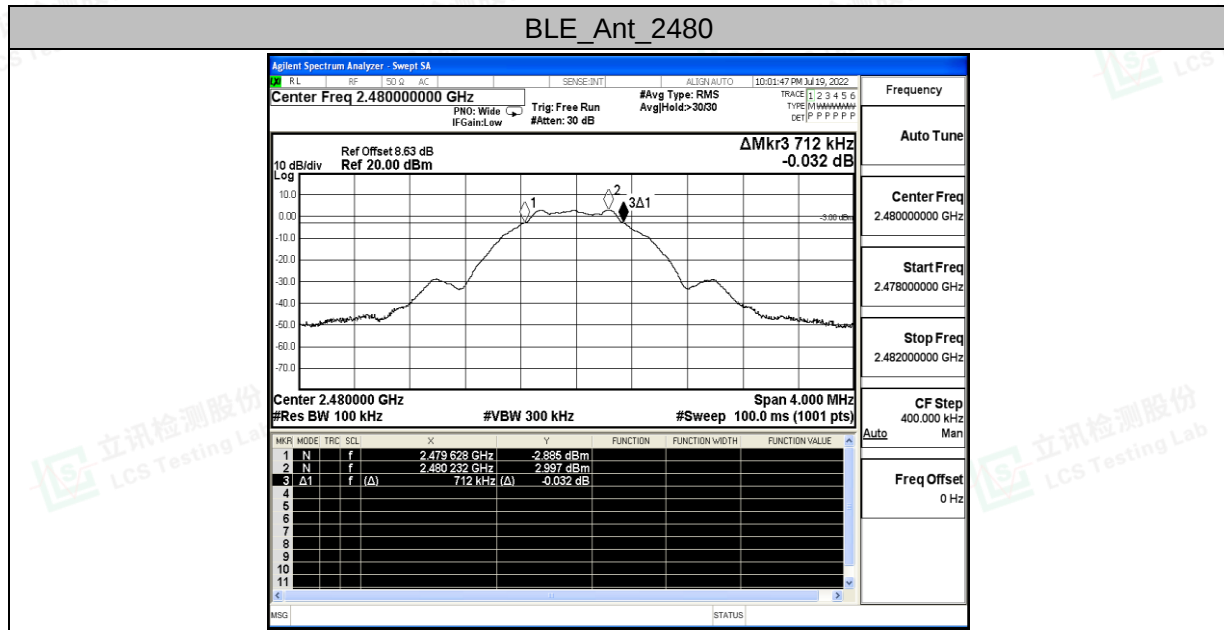
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant	2402	0.712	2401.628	2402.340	0.5	PASS
		2440	0.712	2439.628	2440.340	0.5	PASS
		2480	0.712	2479.628	2480.340	0.5	PASS





Test Graphs







A.2 Maximum conducted output power

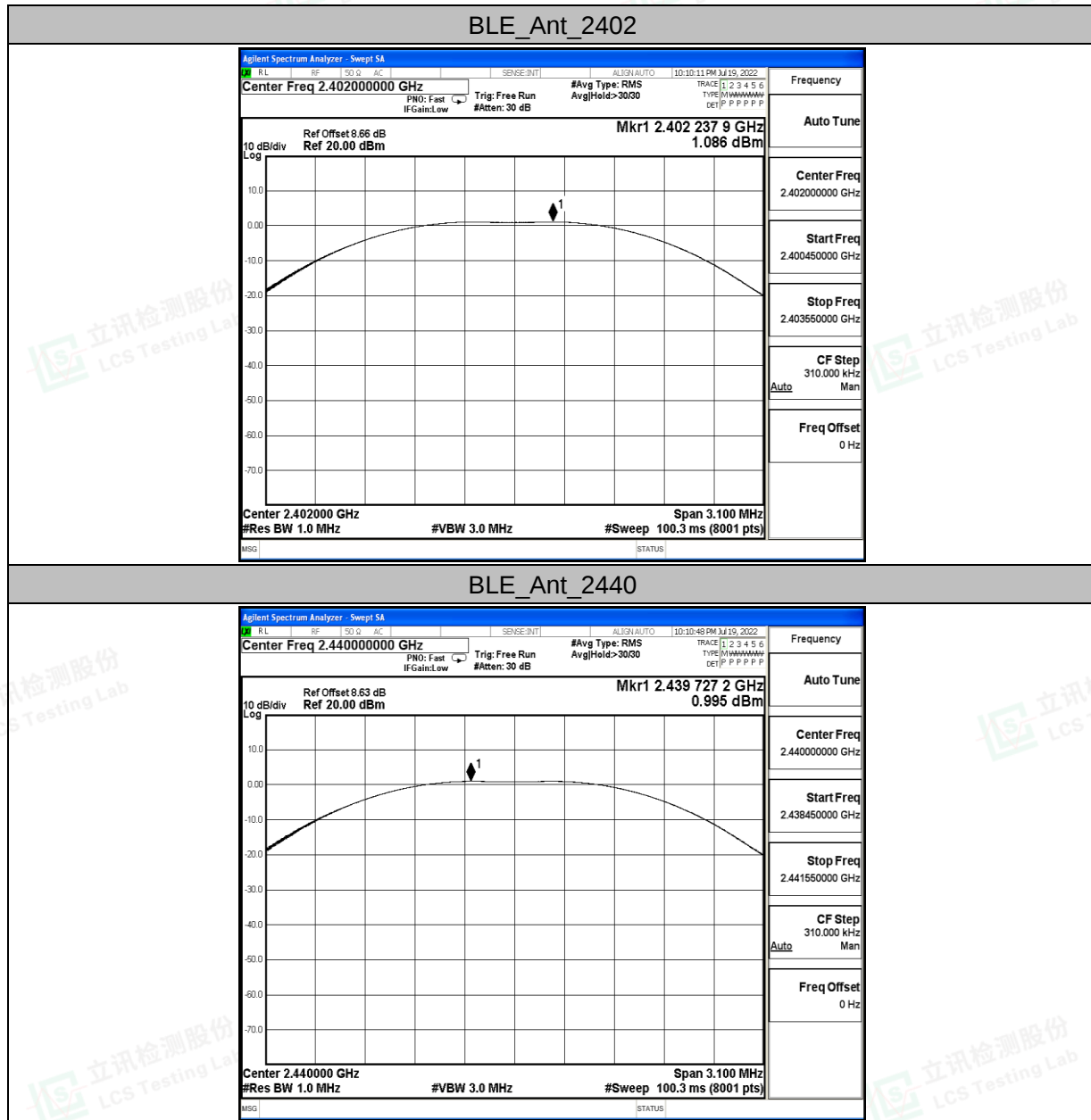
Test Result

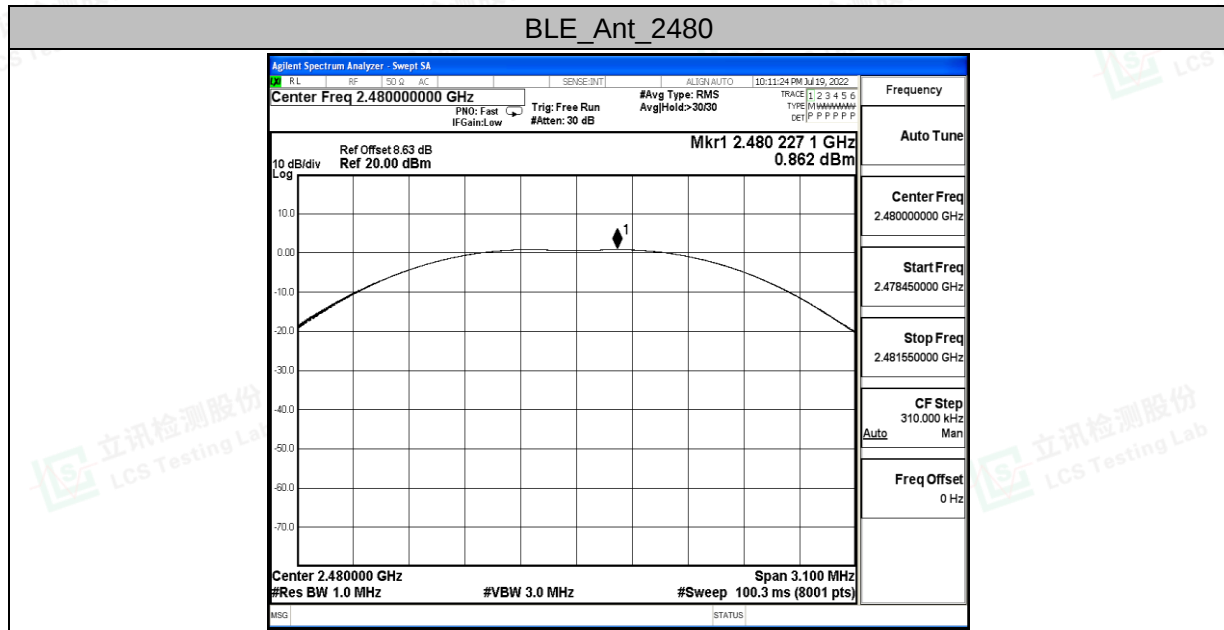
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	1.09	≤30	PASS
		2440	1.00	≤30	PASS
		2480	0.86	≤30	PASS





Test Graphs







A.3 Maximum power spectral density

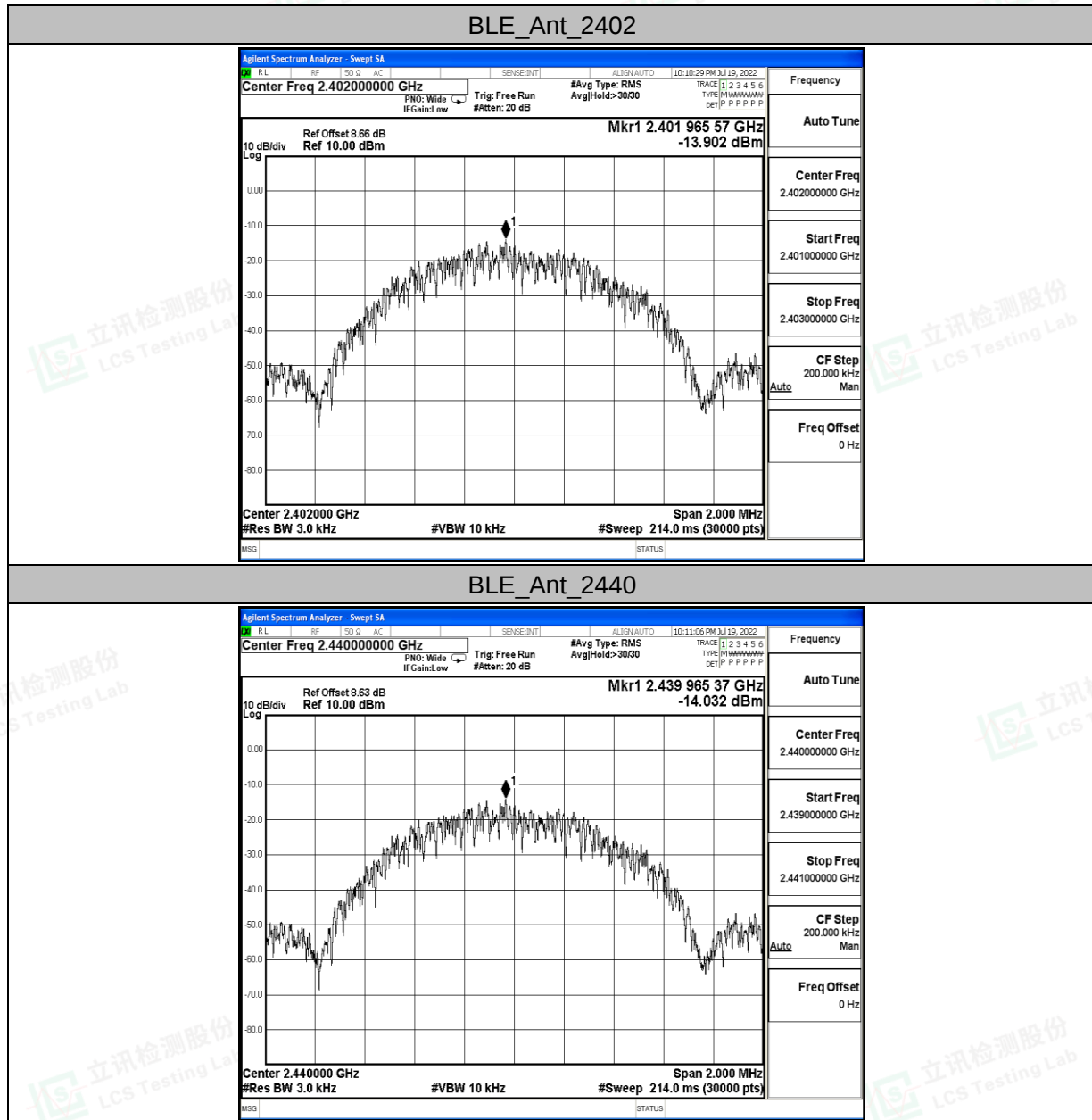
Test Result

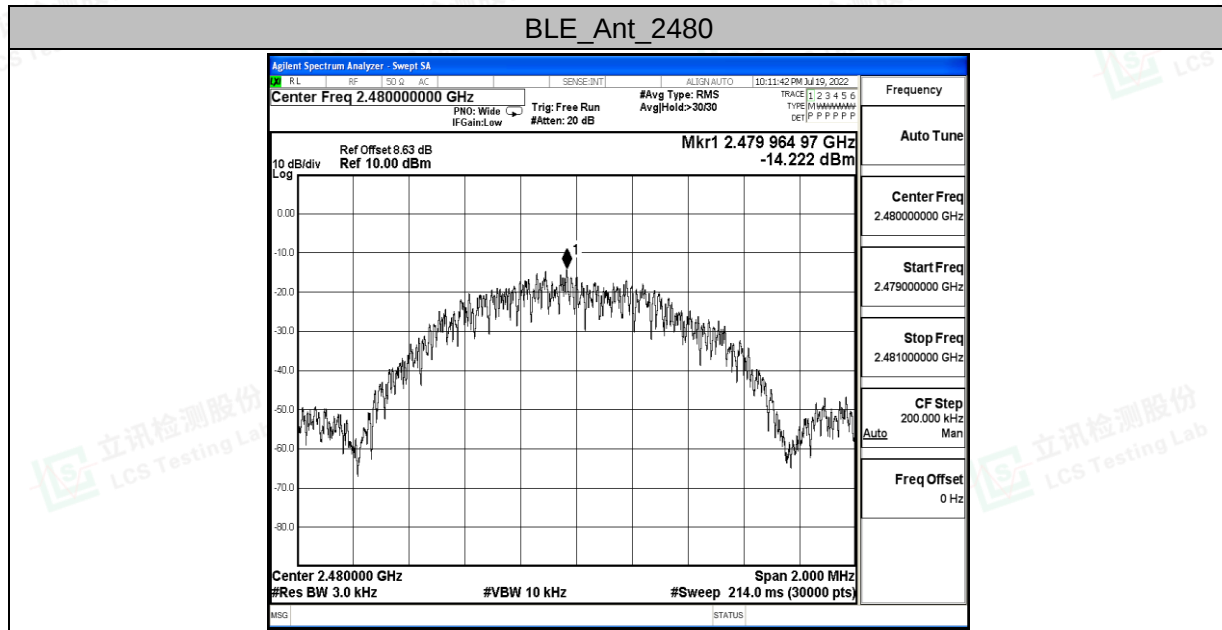
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant	2402	-13.90	≤8.00	PASS
		2440	-14.03	≤8.00	PASS
		2480	-14.22	≤8.00	PASS





Test Graphs







A.4 Band edge measurements

Test Result

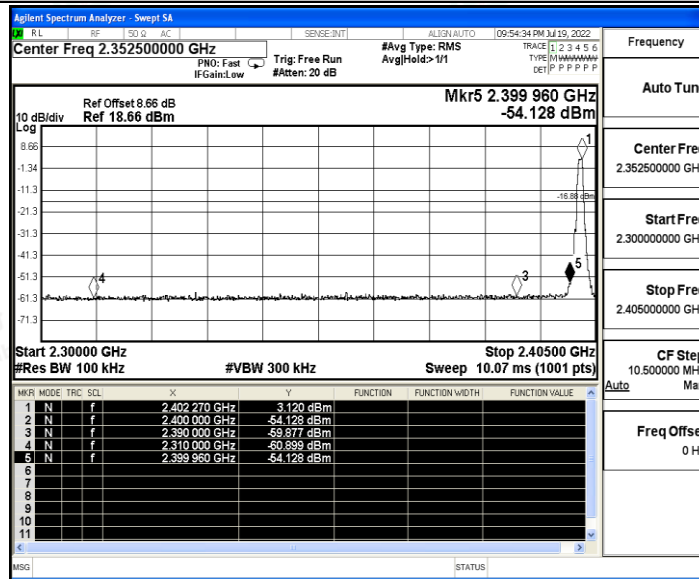
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	Low	2402	3.12	-54.13	≤-16.88	PASS
		High	2480	3.23	-57.61	≤-16.77	PASS



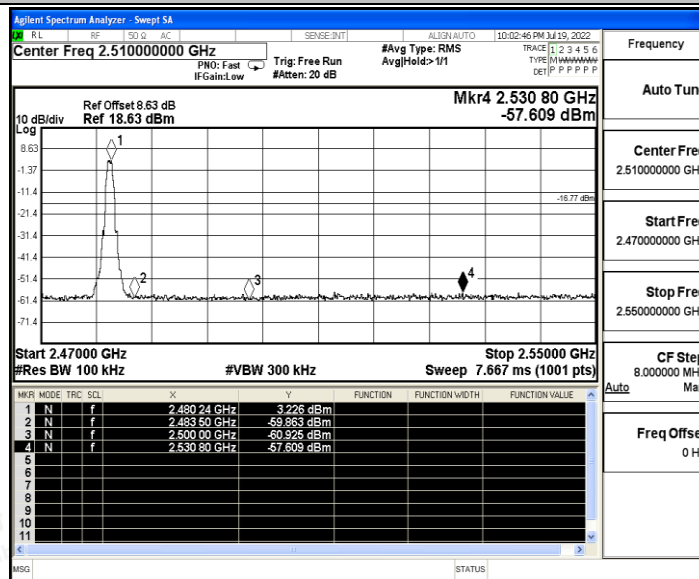


Test Graphs

BLE_Ant_Low_2402



BLE_Ant_High_2480





A.5 Conducted Spurious Emission

Test Result

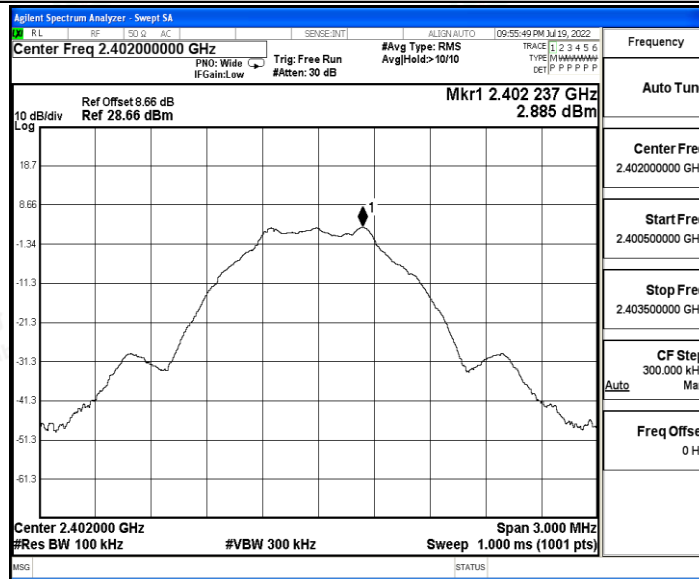
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant	2402	Reference	2.89	2.89	---	PASS
			30~1000	2.89	-57.41	≤-17.11	PASS
			1000~26500	2.89	-45.85	≤-17.11	PASS
		2440	Reference	2.97	2.97	---	PASS
			30~1000	2.97	-59.47	≤-17.03	PASS
			1000~26500	2.97	-46.28	≤-17.03	PASS
		2480	Reference	2.99	2.99	---	PASS
			30~1000	2.99	-60.02	≤-17.01	PASS
			1000~26500	2.99	-46.20	≤-17.01	PASS



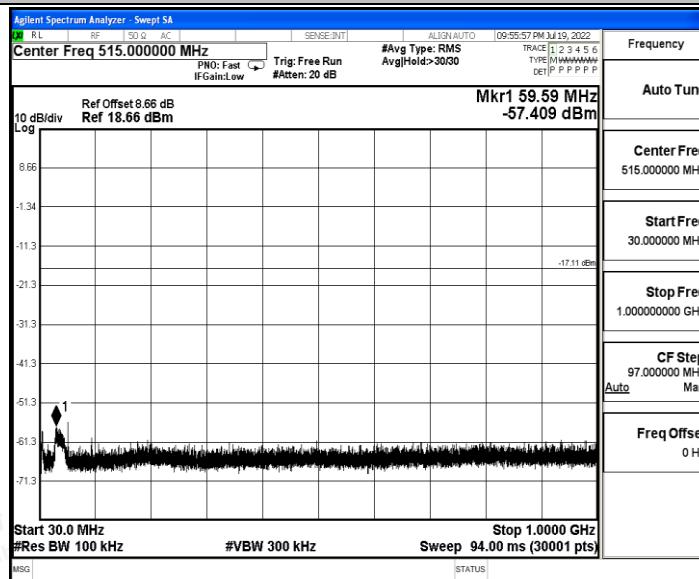


Test Graphs

BLE_Ant_2402_0~Reference

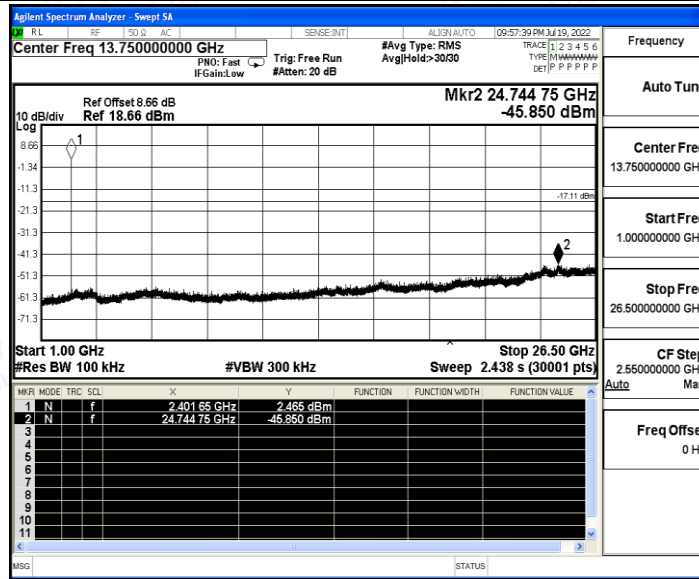


BLE_Ant_2402_30~1000

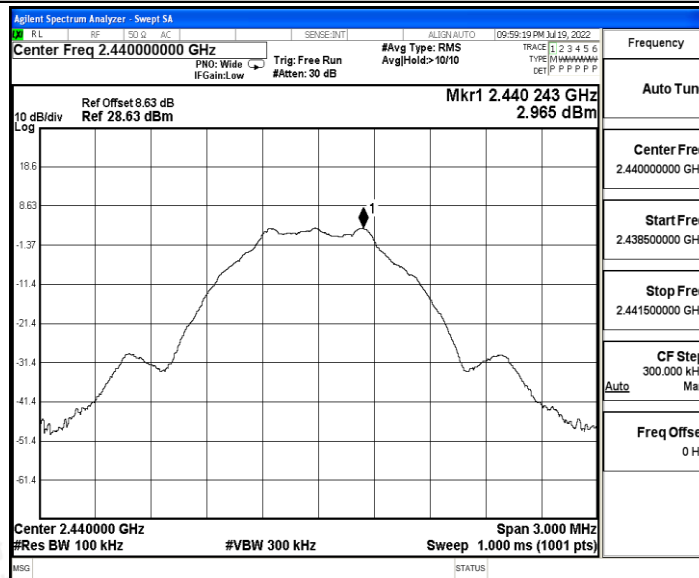




BLE_Ant_2402_1000~26500

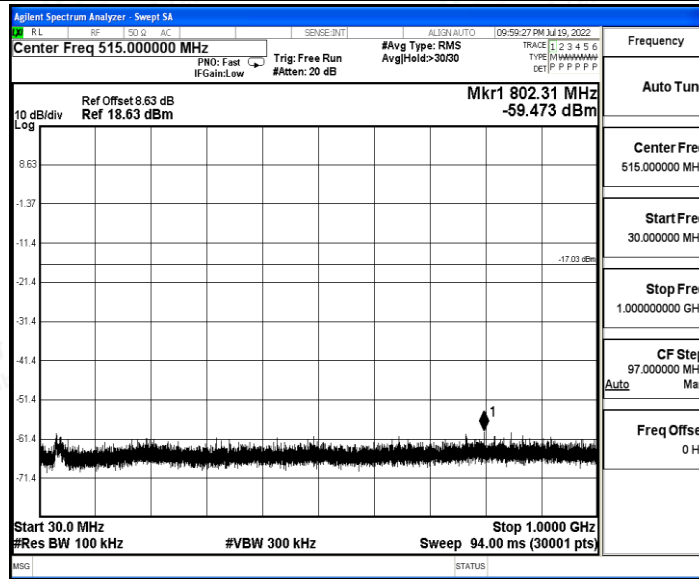


BLE_Ant_2440_0~Reference

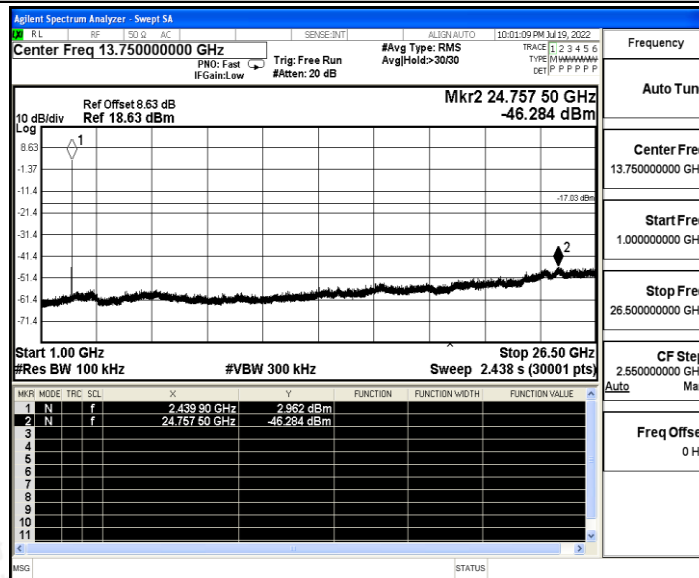




BLE_Ant_2440_30~1000

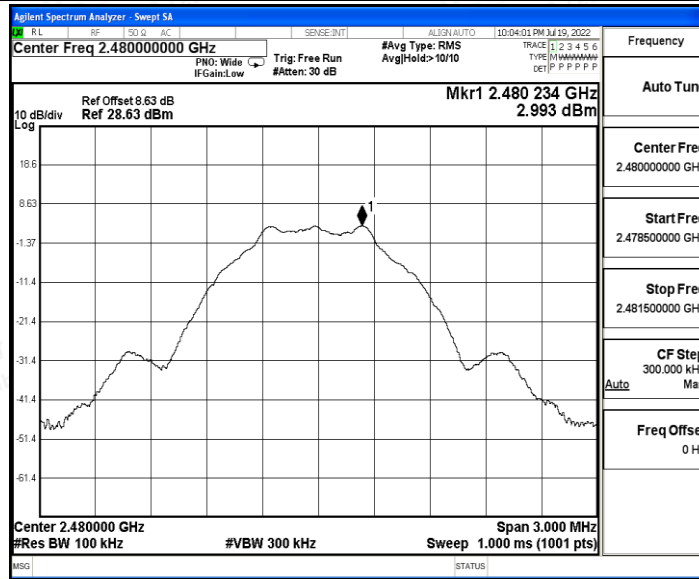


BLE_Ant_2440_1000~26500

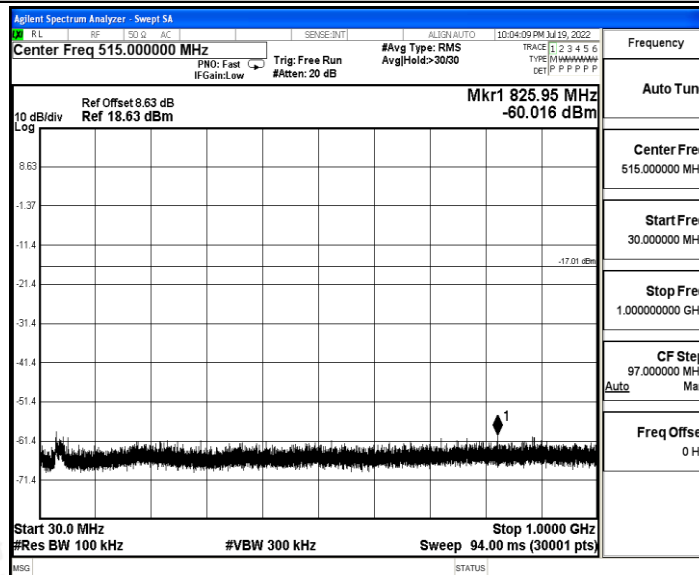


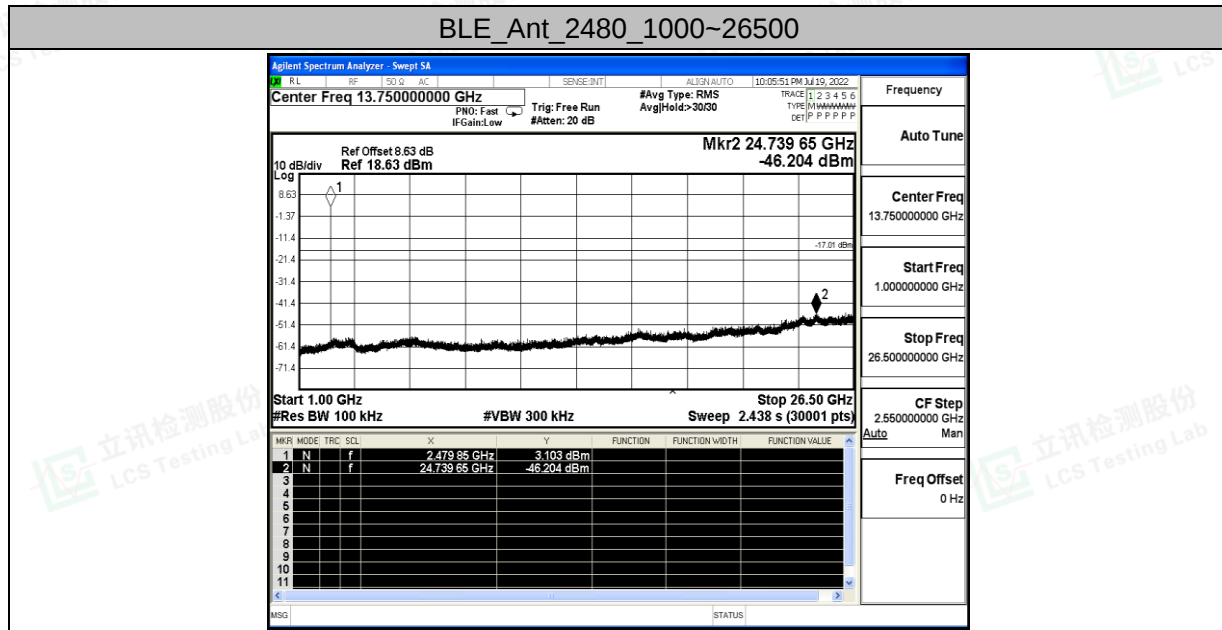


BLE_Ant_2480_0~Reference



BLE_Ant_2480_30~1000







A.6 Duty Cycle

Test Result

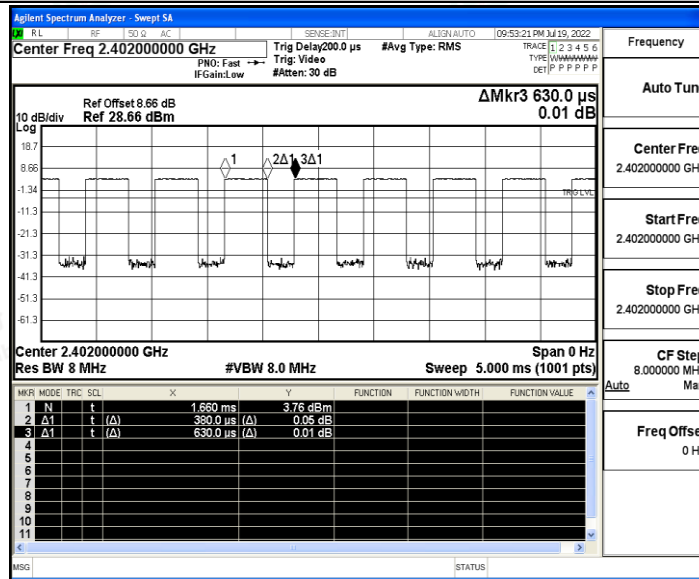
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE	Ant	2402	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---



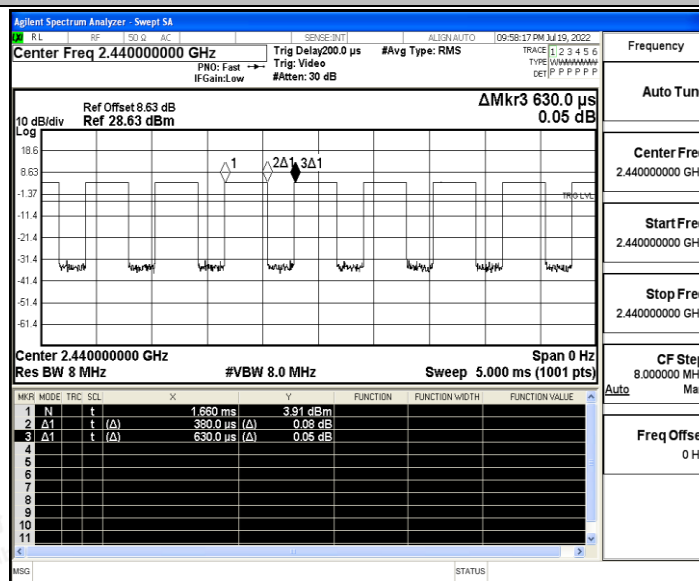


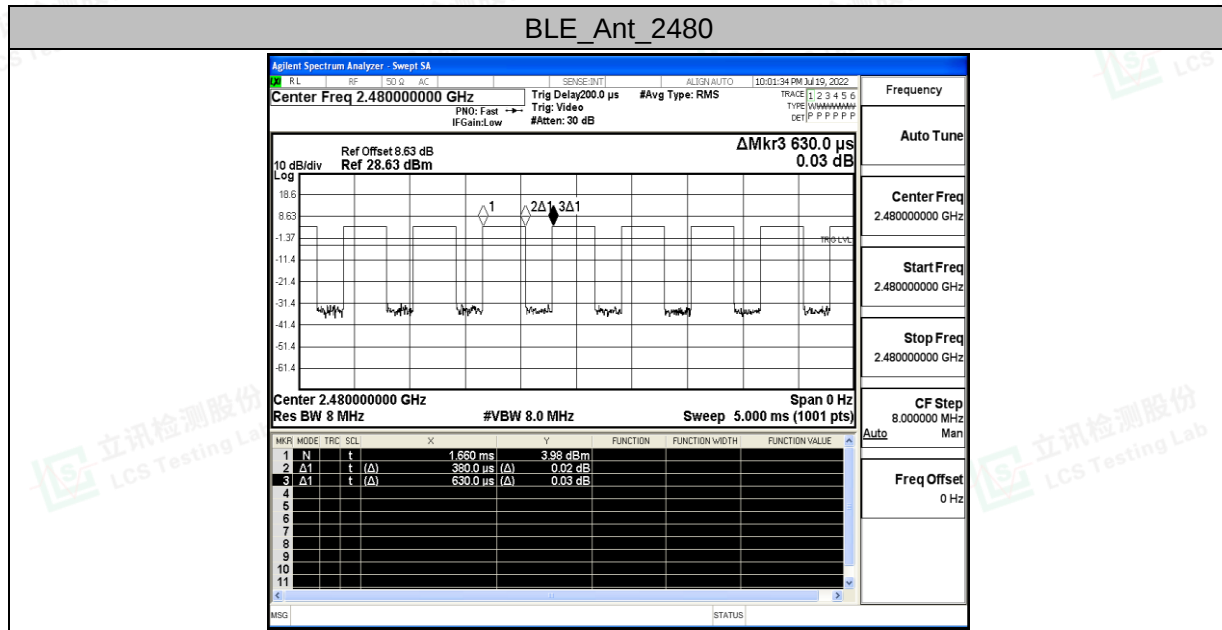
Test Graphs

BLE_Ant_2402



BLE_Ant_2440







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	Ant	Low	2402	AV	2310.000	-57.31	≤-41.20	37.89	≤54	PASS
				AV	2386.940	-56.5	≤-41.20	38.70	≤54	PASS
				AV	2390.000	-56.88	≤-41.20	38.32	≤54	PASS
				Peak	2310.000	-48.91	≤-21.20	46.29	≤74	PASS
				Peak	2383.790	-46.34	≤-21.20	48.86	≤74	PASS
				Peak	2390.000	-47.95	≤-21.20	47.25	≤74	PASS
		High	2480	AV	2483.500	-50.91	≤-41.20	44.29	≤54	PASS
				AV	2483.520	-50.91	≤-41.20	44.29	≤54	PASS
				AV	2500.000	-56.19	≤-41.20	39.01	≤54	PASS
				Peak	2483.500	-47.33	≤-21.20	47.87	≤74	PASS
				Peak	2488.480	-46.14	≤-21.20	49.06	≤74	PASS
				Peak	2500.000	-47.92	≤-21.20	47.28	≤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.



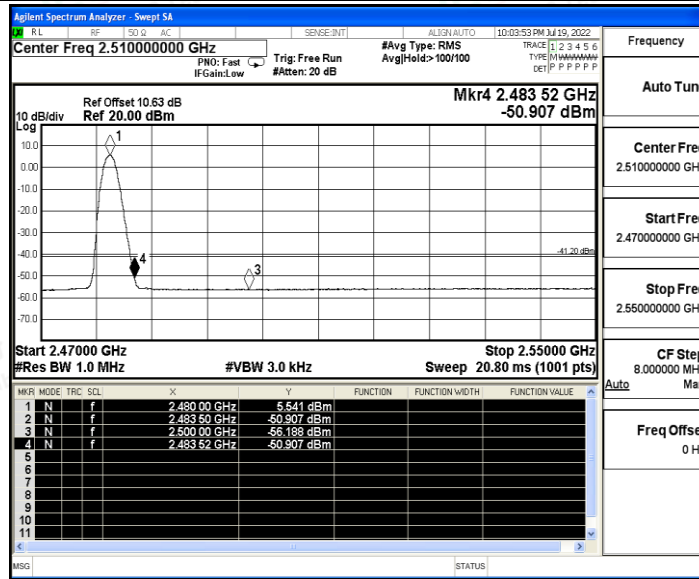


Test Graphs





BLE_Ant_High_2480_AV



BLE_Ant_High_2480_Peak

