



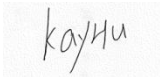
Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: 12 inch LED Ceiling Light

Test Model: DCO1220SMBN

Environmental Conditions

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



A.1 DTS Bandwidth

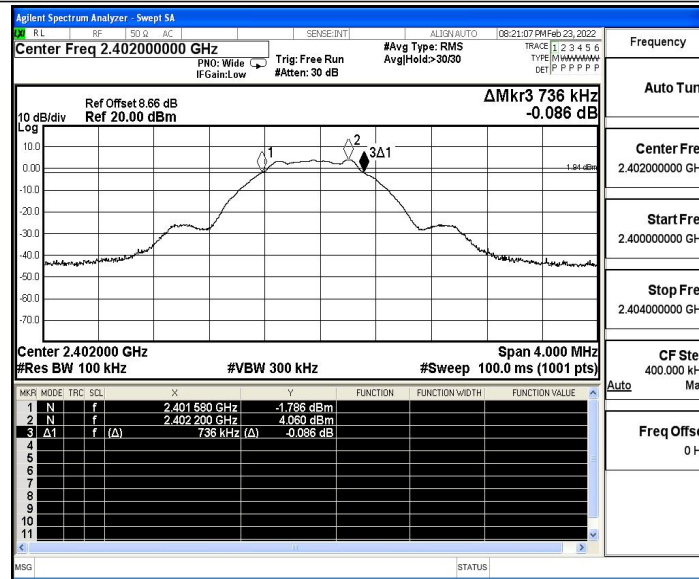
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.736	2401.580	2402.316	0.5	PASS
		2440	0.736	2439.580	2440.316	0.5	PASS
		2480	0.736	2479.576	2480.312	0.5	PASS

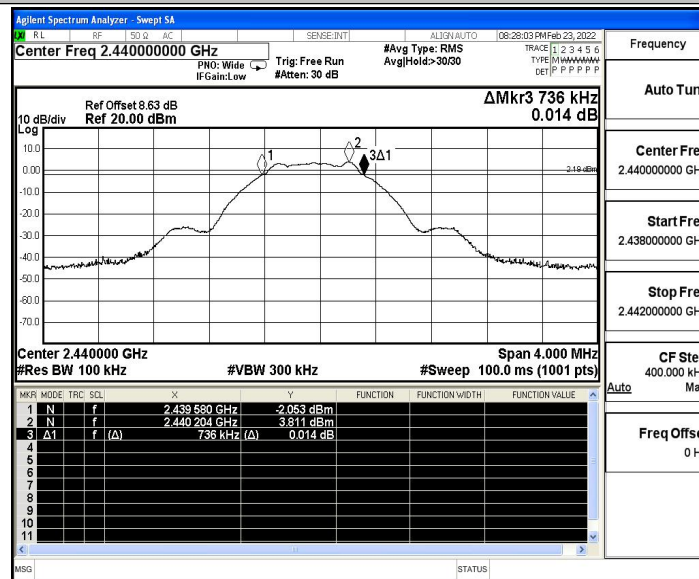


Test Graphs

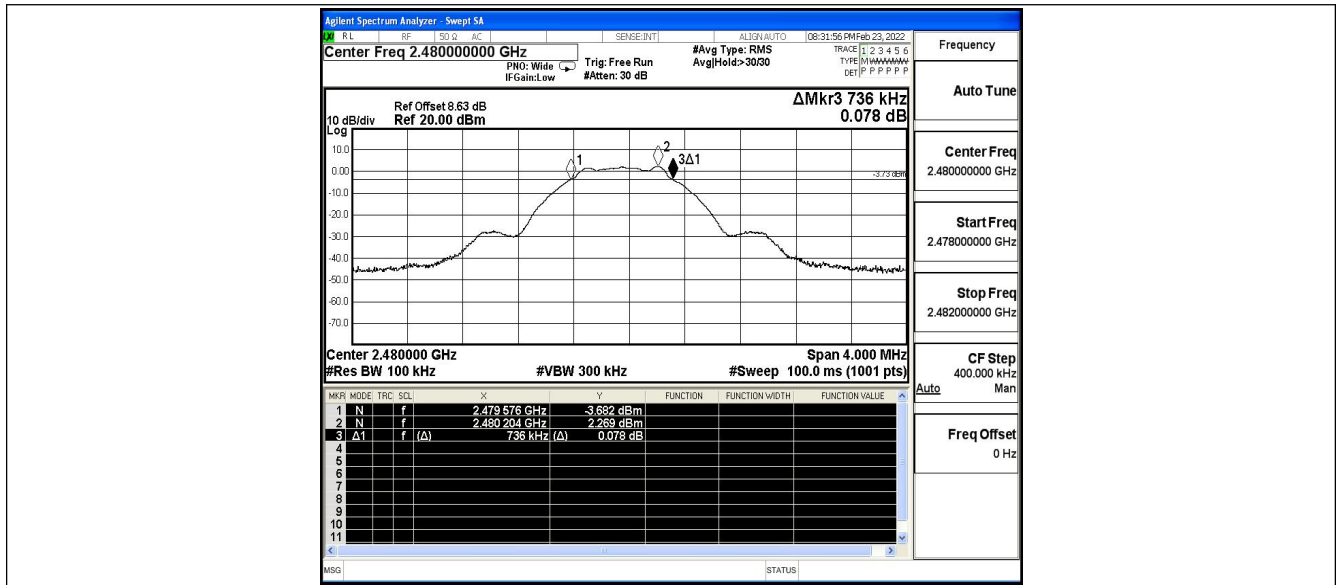
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

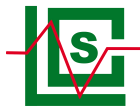




A.2 Maximum peak conducted output power

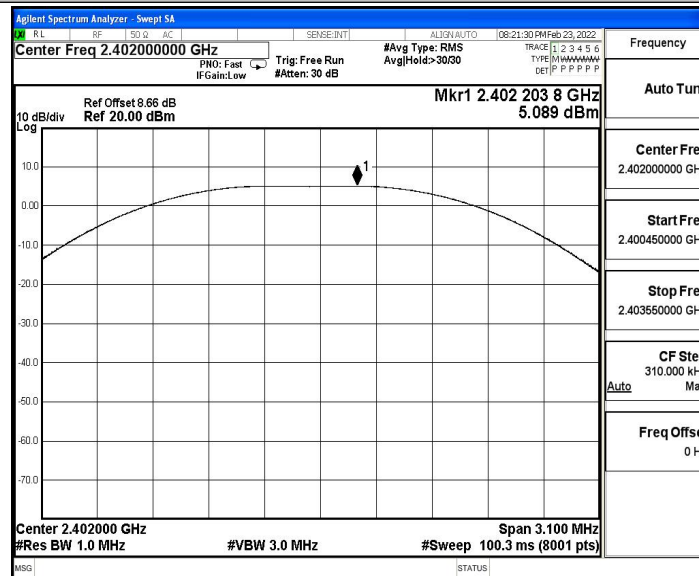
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	5.09	≤ 30	PASS
		2440	4.9	≤ 30	PASS
		2480	3.36	≤ 30	PASS

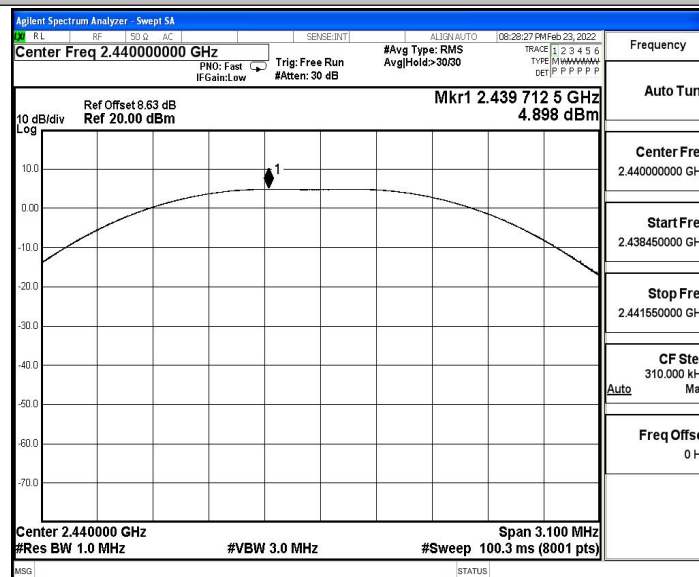


Test Graphs

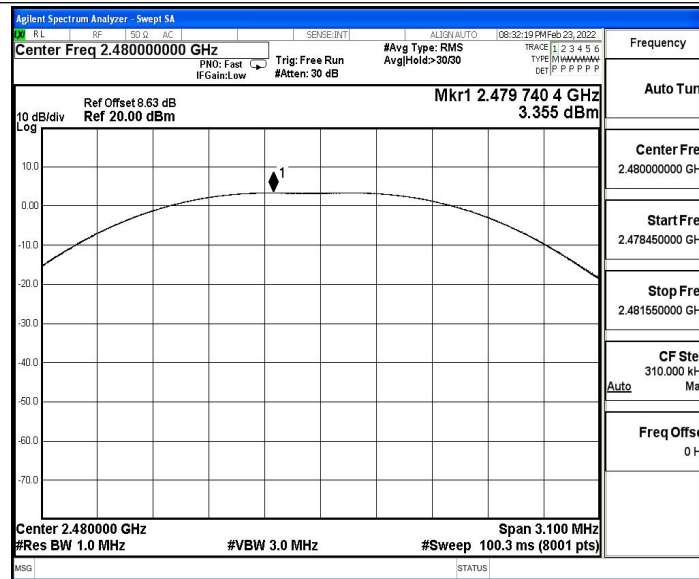
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

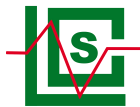




A.3 Maximum power spectral density

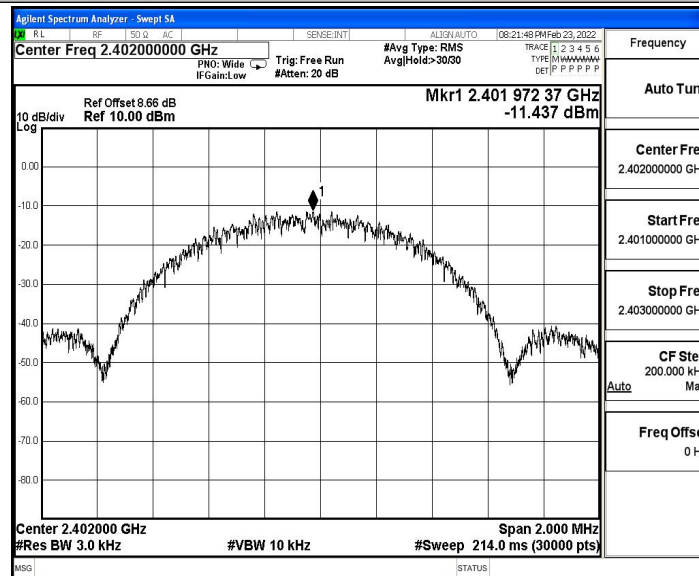
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.44	≤8.00	PASS
		2440	-11.58	≤8.00	PASS
		2480	-13.22	≤8.00	PASS

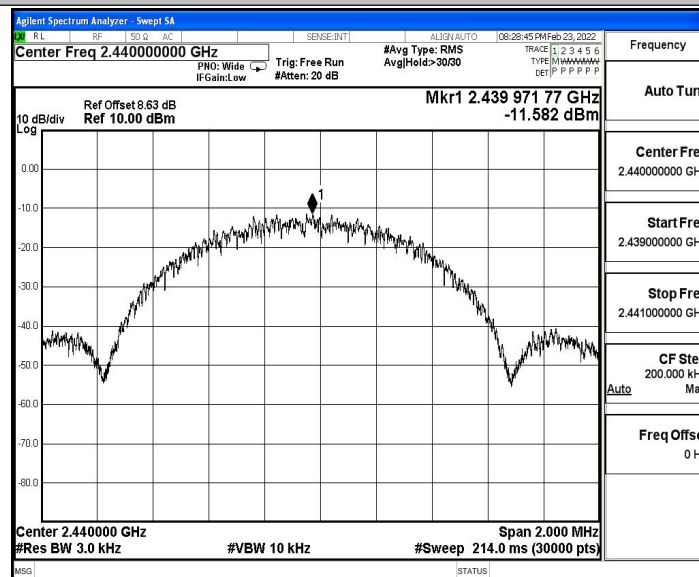


Test Graphs

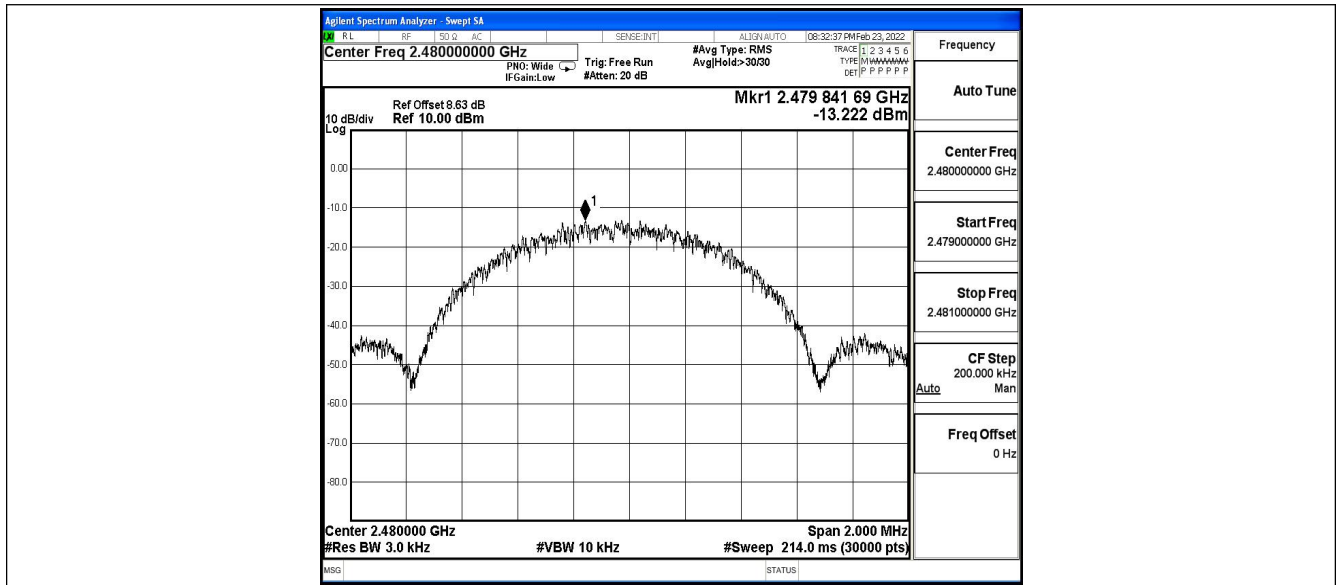
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

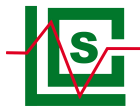




A.4 Band edge measurements

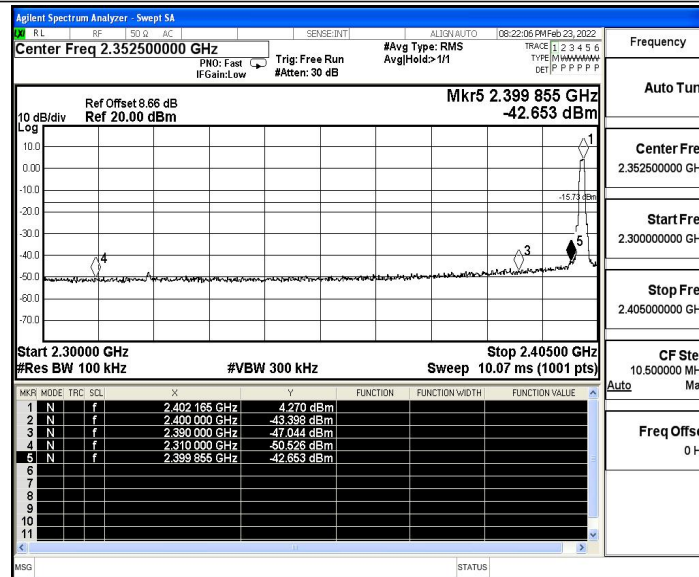
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	4.27	-42.65	≤ -15.73	PASS
		High	2480	2.51	-45.05	≤ -17.49	PASS

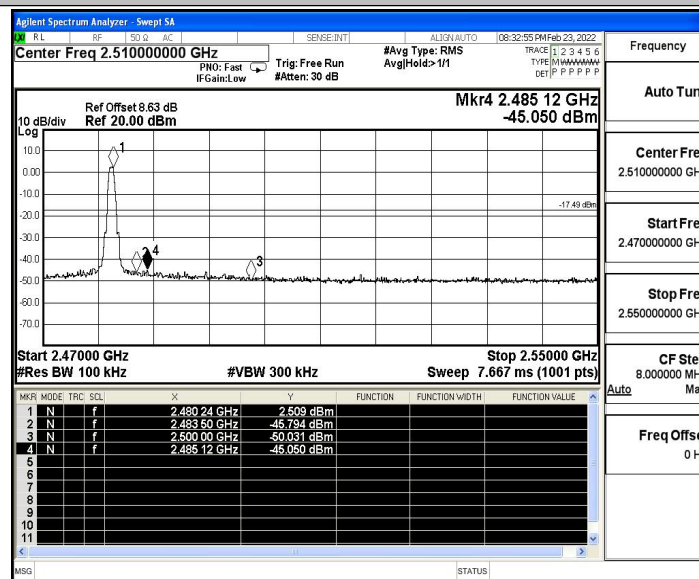


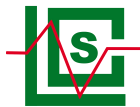
Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

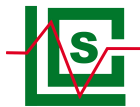




A.5 Conducted Spurious Emission

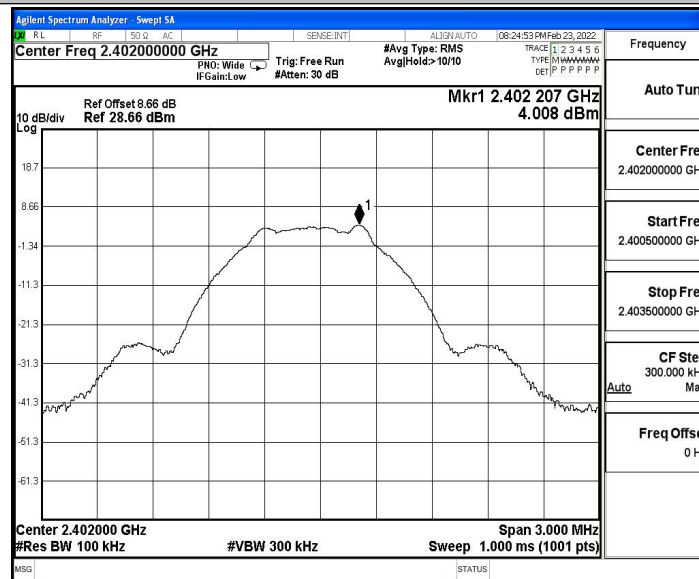
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	4.01	4.01	---	PASS
			30~1000	4.01	-60.81	≤ -15.99	PASS
			1000~26500	4.01	-46.26	≤ -15.99	PASS
		2440	Reference	3.82	3.82	---	PASS
			30~1000	3.82	-59.77	≤ -16.18	PASS
			1000~26500	3.82	-46.29	≤ -16.18	PASS
		2480	Reference	2.32	2.32	---	PASS
			30~1000	2.32	-60.21	≤ -17.68	PASS
			1000~26500	2.32	-46.69	≤ -17.68	PASS

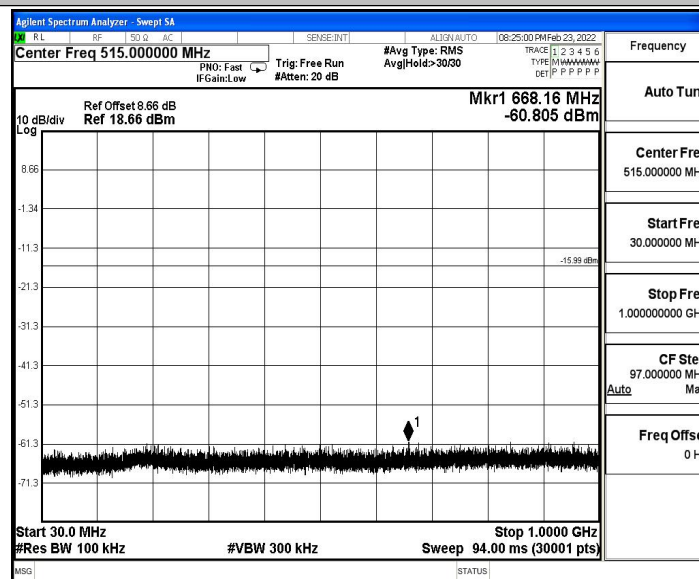


Test Graphs

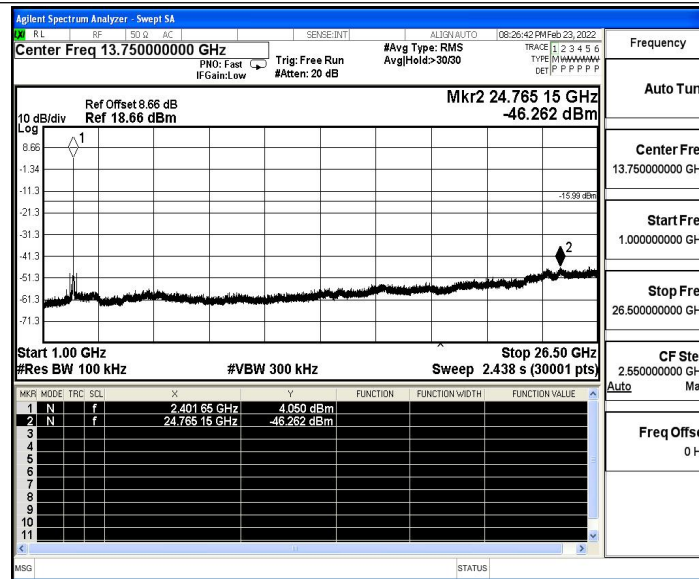
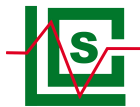
BLE_1M_Ant1_2402_0~Reference



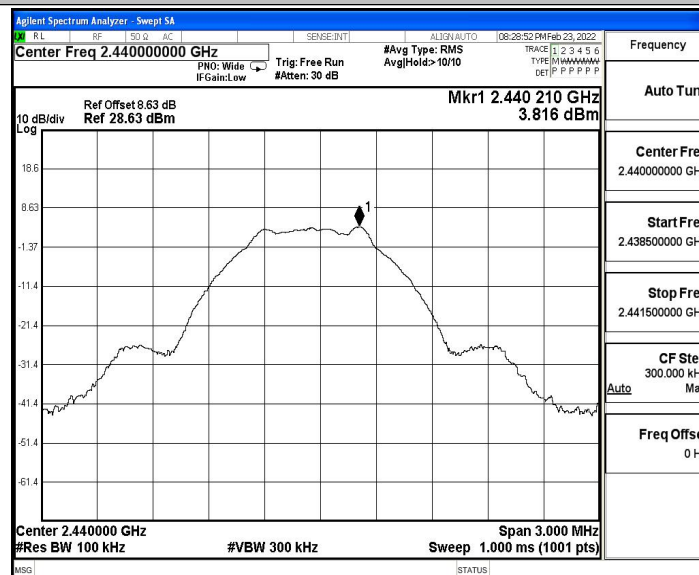
BLE_1M_Ant1_2402_30~1000



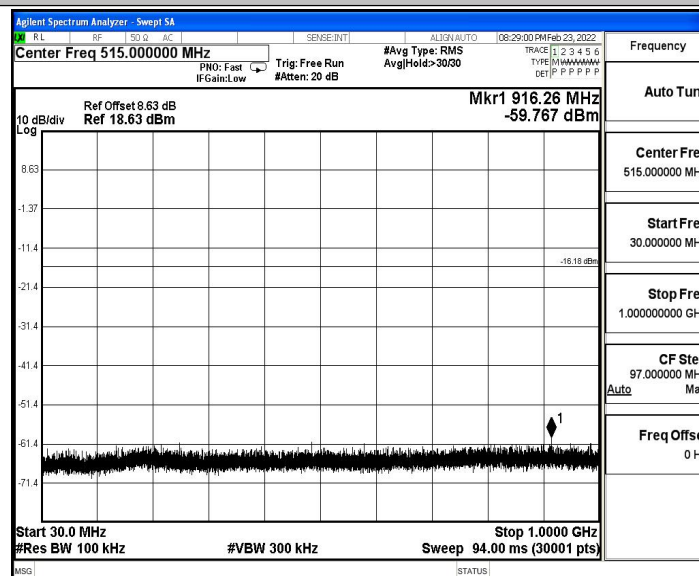
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

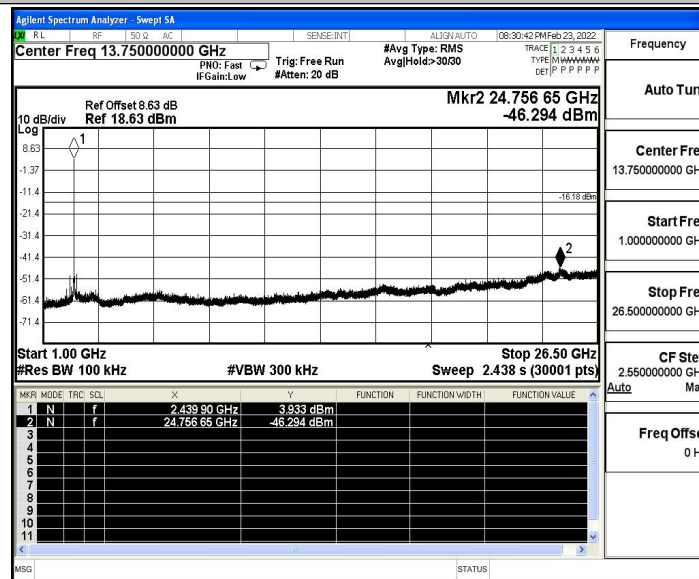


BLE_1M_Ant1_2440_30~1000

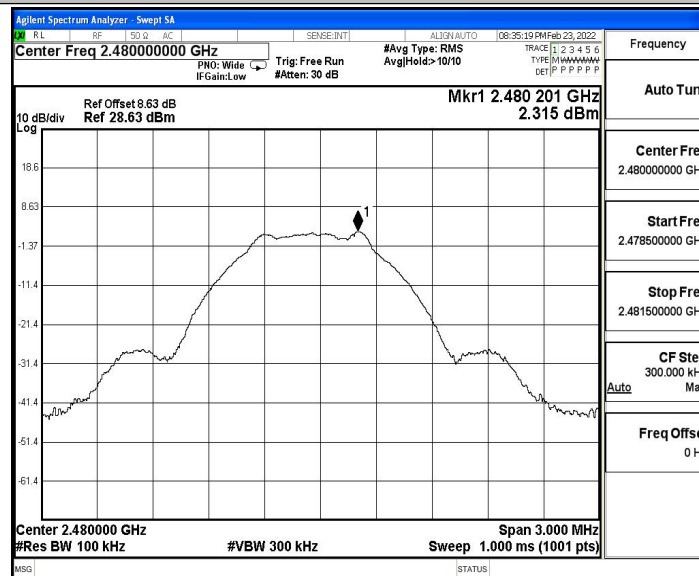




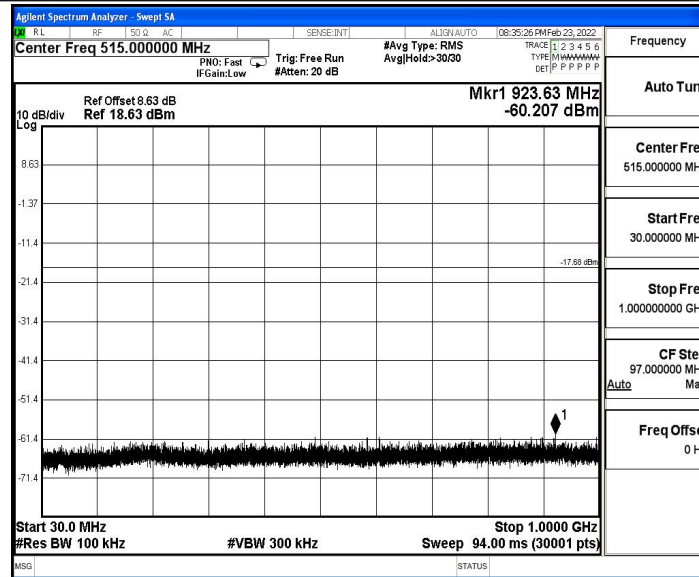
BLE_1M_Ant1_2440_1000~26500



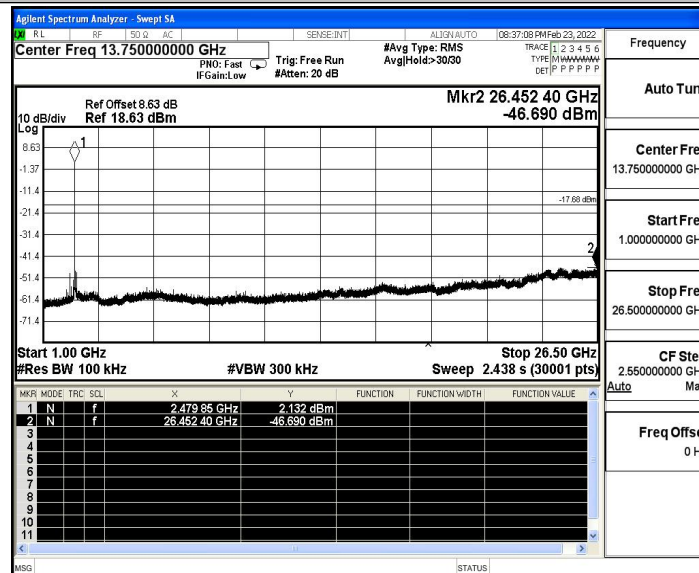
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

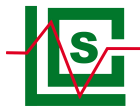




A.6 Duty Cycle

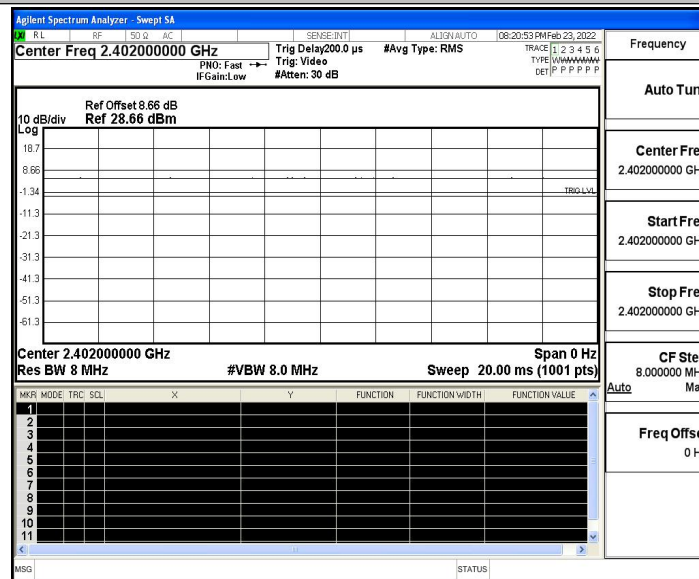
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	20.00	20.00	1.0000	100.00	0.00	---	---
		2440	20.00	20.00	1.0000	100.00	0.00	---	---
		2480	20.00	20.00	1.0000	100.00	0.00	---	---

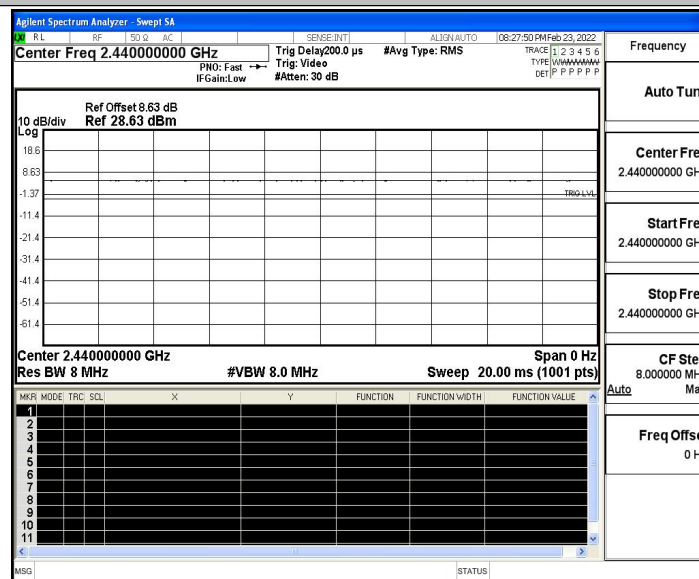


Test Graphs

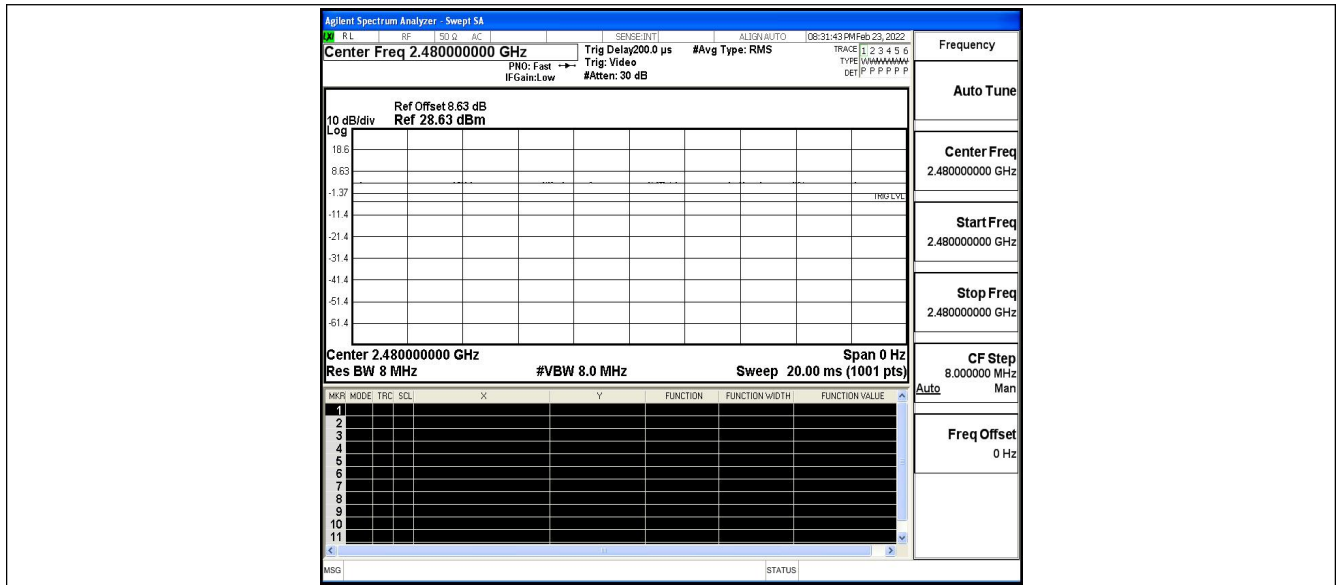
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





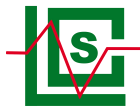
A.7 Emissions in Restricted Bands

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	-48.61	≤-41.20	46.59	≤54	PASS
				AV	2389.880	-44.95	≤-41.20	50.25	≤54	PASS
				AV	2390.000	-44.95	≤-41.20	50.25	≤54	PASS
				Peak	2310.000	-39.36	≤-21.20	55.84	≤74	PASS
				Peak	2389.565	-33.88	≤-21.20	61.32	≤74	PASS
				Peak	2390.000	-34.84	≤-21.20	60.36	≤74	PASS
		High	2480	AV	2483.500	-43.64	≤-41.20	51.56	≤54	PASS
				AV	2483.520	-43.64	≤-41.20	51.56	≤54	PASS
				AV	2500.000	-46.18	≤-41.20	49.02	≤54	PASS
				Peak	2483.500	-33.91	≤-21.20	61.29	≤74	PASS
				Peak	2483.680	-32.26	≤-21.20	62.94	≤74	PASS
				Peak	2500.000	-36.11	≤-21.20	59.09	≤74	PASS

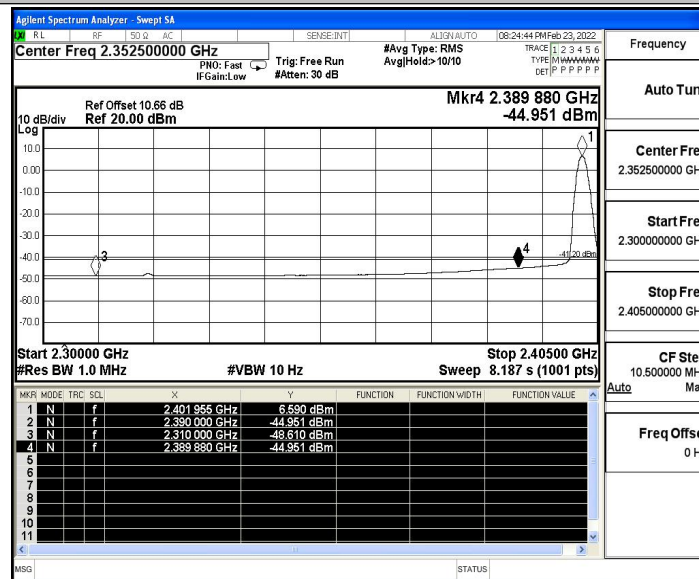
Note:

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.

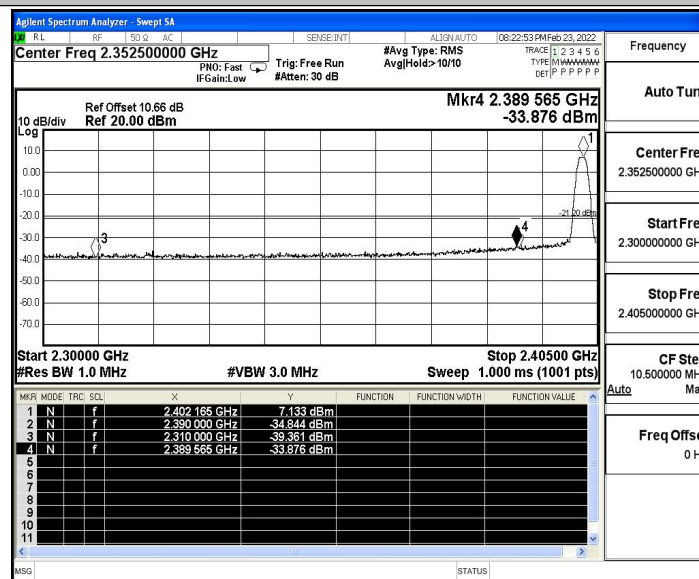


Test Graphs

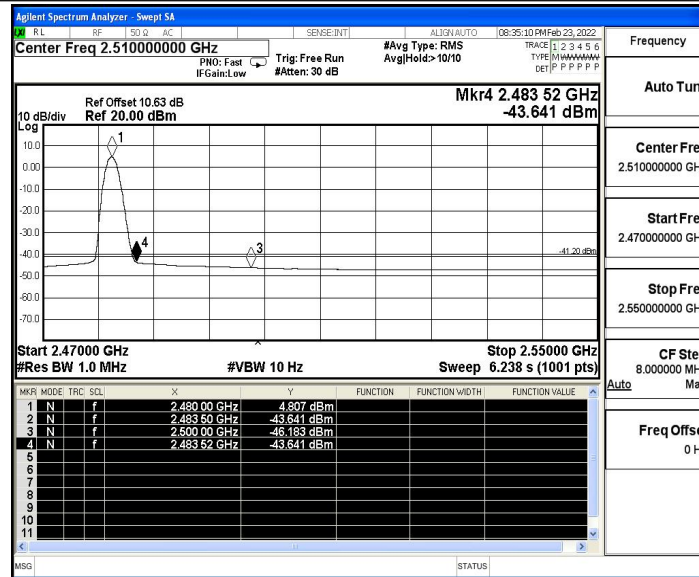
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

