



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Stick Logger(WiFi)

Test Model: LSW-5

Environmental Conditions

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



A.1 DTS Bandwidth

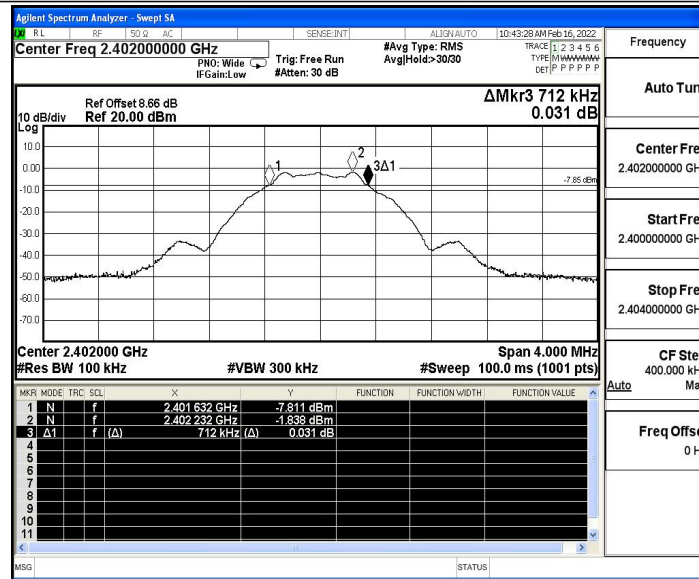
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.632	2402.344	0.5	PASS
		2440	0.708	2439.636	2440.344	0.5	PASS
		2480	0.716	2479.632	2480.348	0.5	PASS

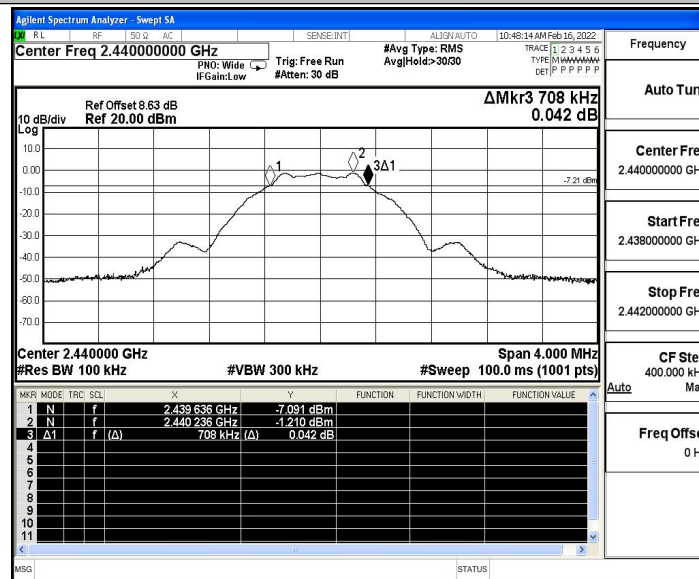


Test Graphs

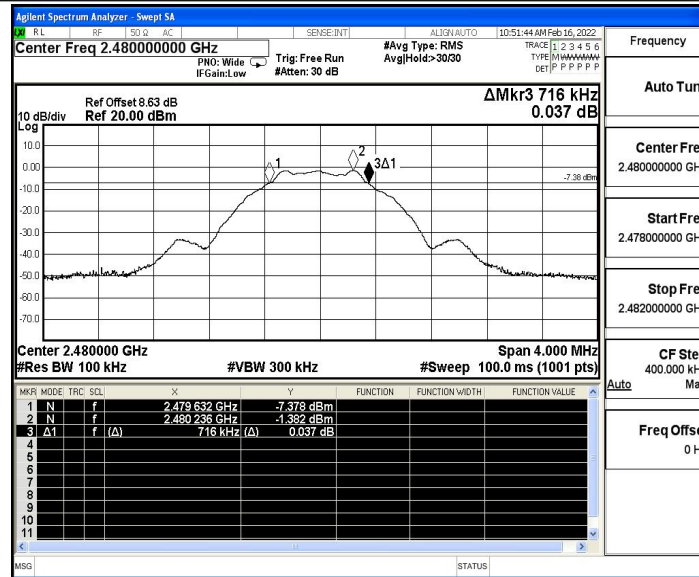
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

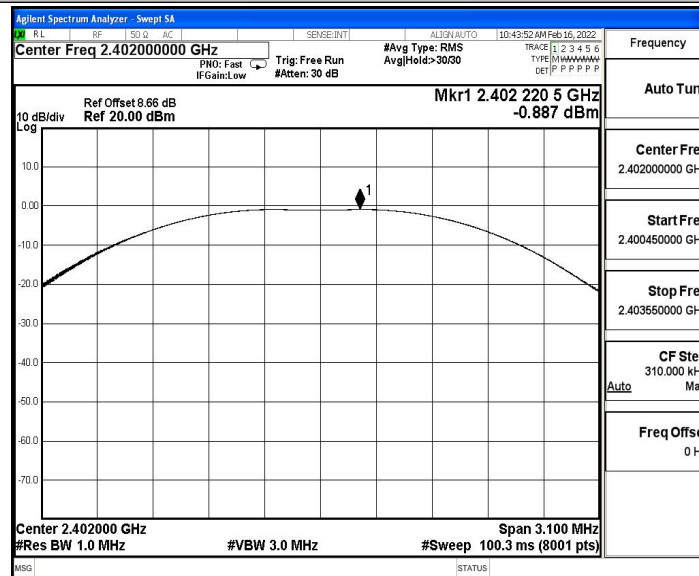
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.89	≤30	PASS
		2440	-0.26	≤30	PASS
		2480	-0.44	≤30	PASS

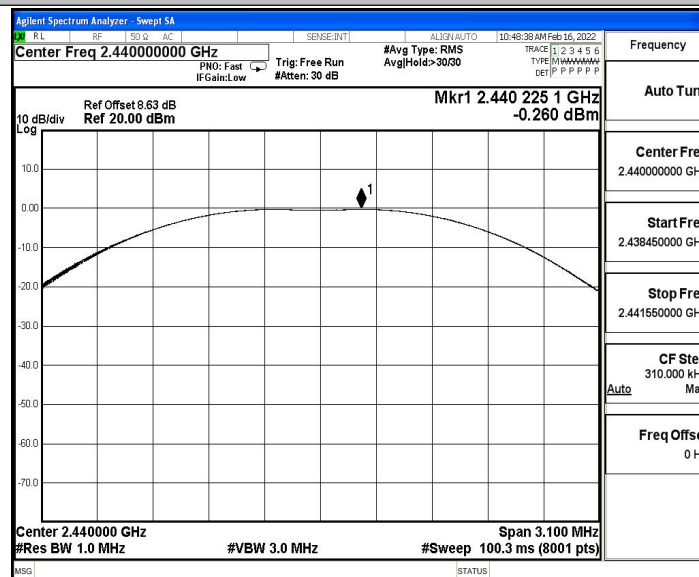


Test Graphs

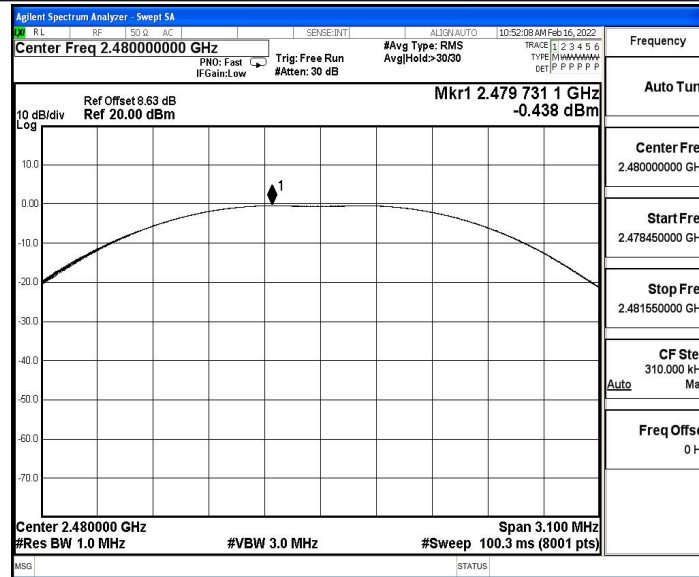
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.3 Maximum power spectral density

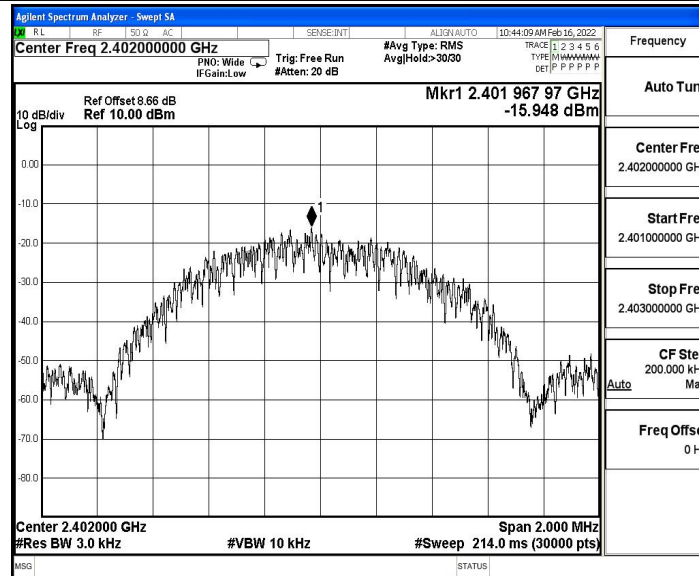
Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16	≤8.00	PASS
		2440	-15.33	≤8.00	PASS
		2480	-15.57	≤8.00	PASS

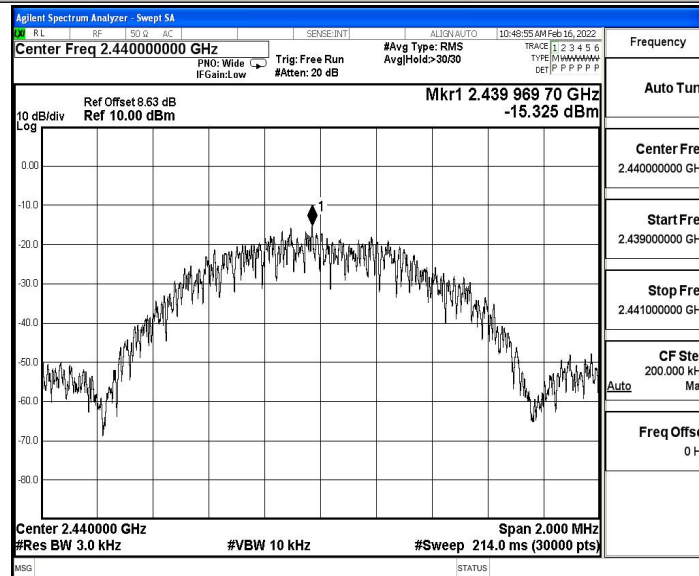


Test Graphs

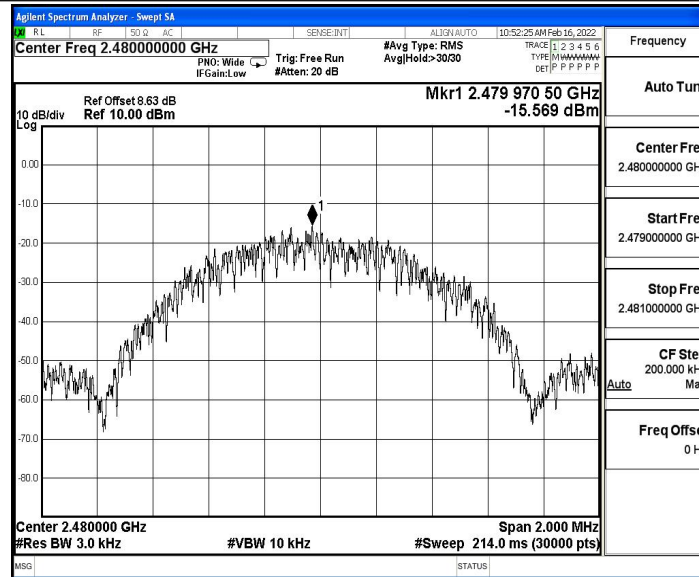
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.4 Band edge measurements

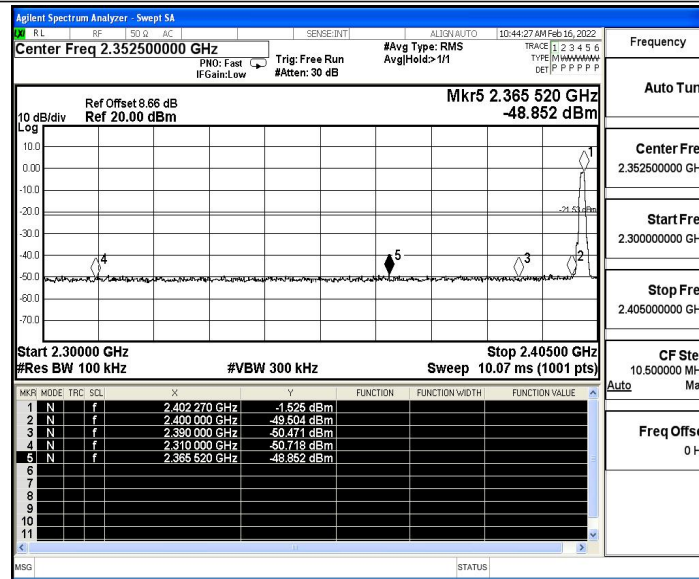
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.53	-48.85	≤ -21.53	PASS
		High	2480	-1.10	-47.81	≤ -21.1	PASS

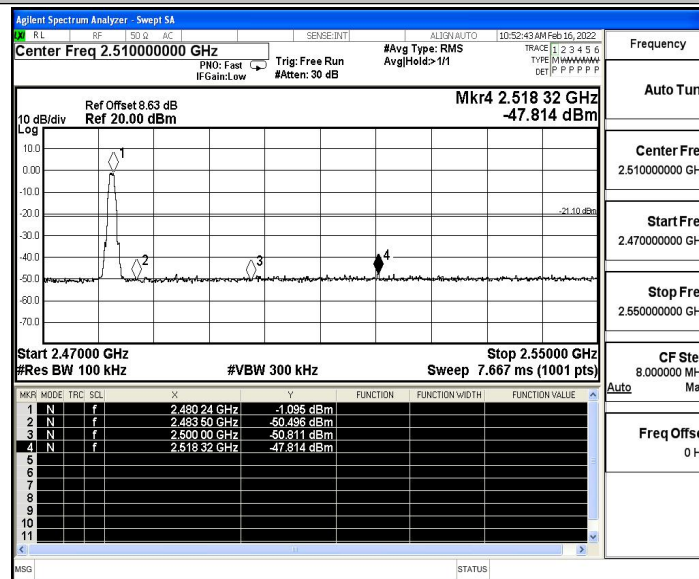


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

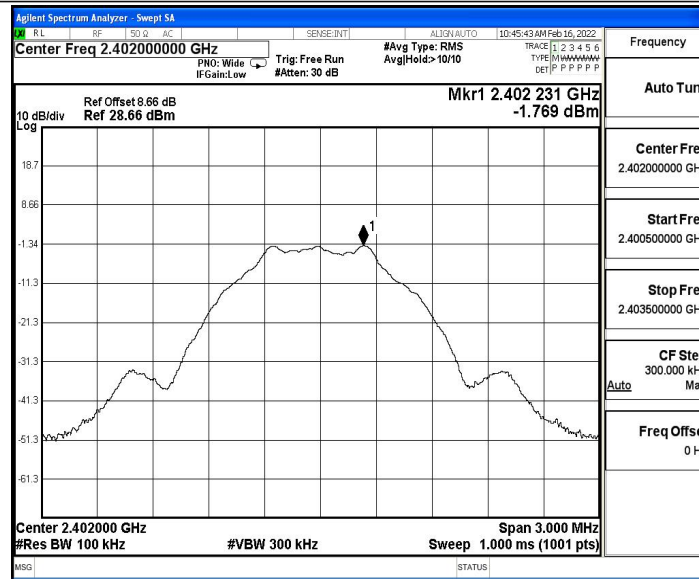
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.77	-1.77	---	PASS
			30~1000	-1.77	-60.24	≤ -21.77	PASS
			1000~26500	-1.77	-46.59	≤ -21.77	PASS
		2440	Reference	-1.18	-1.18	---	PASS
			30~1000	-1.18	-60.56	≤ -21.18	PASS
			1000~26500	-1.18	-45.5	≤ -21.18	PASS
		2480	Reference	-1.35	-1.35	---	PASS
			30~1000	-1.35	-60.08	≤ -21.35	PASS
			1000~26500	-1.35	-45.98	≤ -21.35	PASS

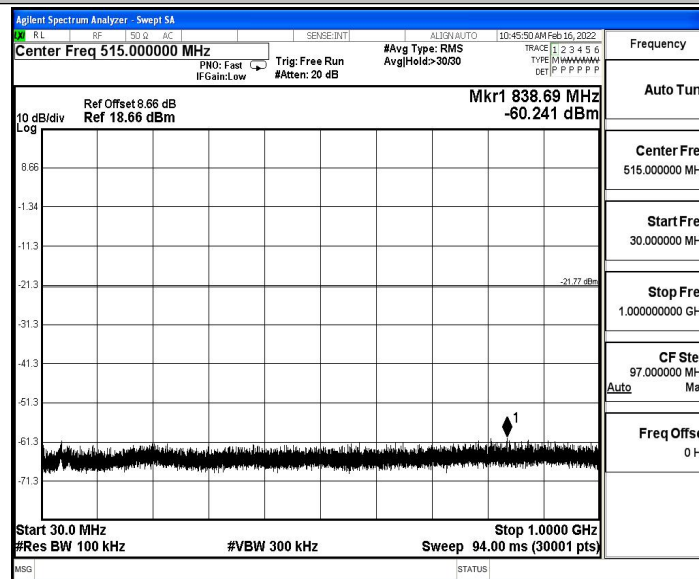


Test Graphs

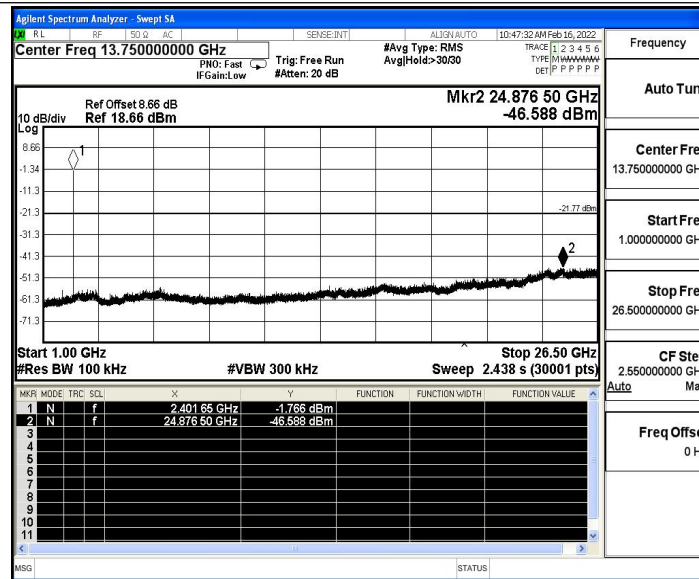
BLE_1M_Ant1_2402_0~Reference



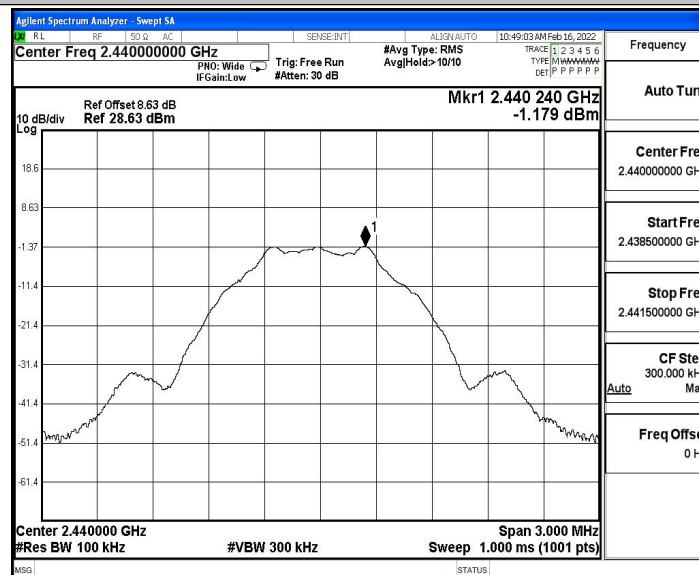
BLE_1M_Ant1_2402_30~1000



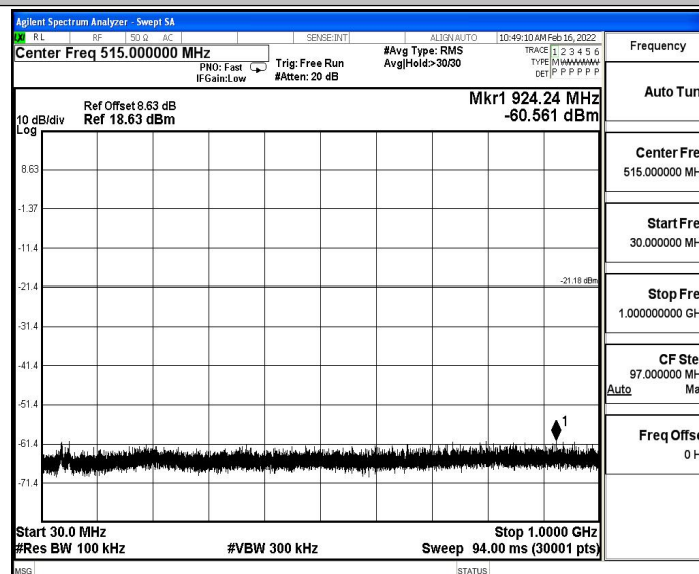
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

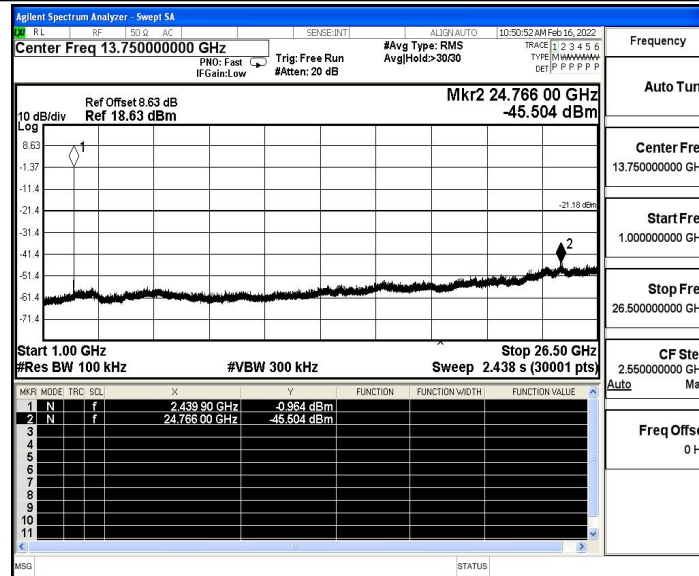


BLE_1M_Ant1_2440_30~1000

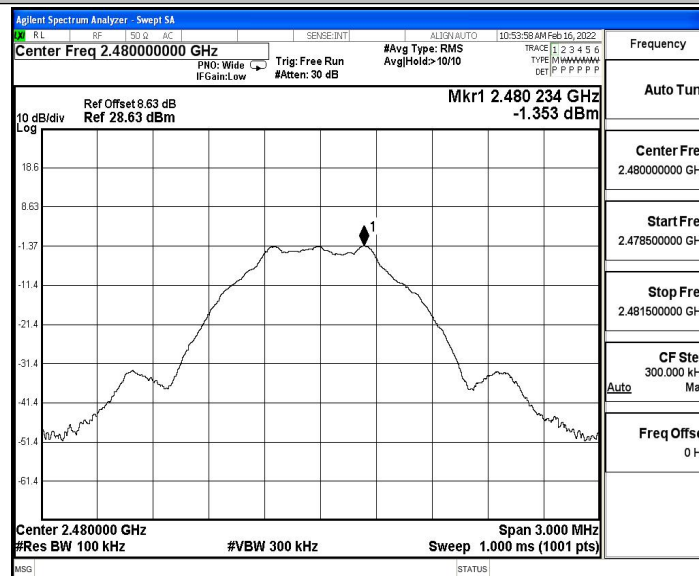




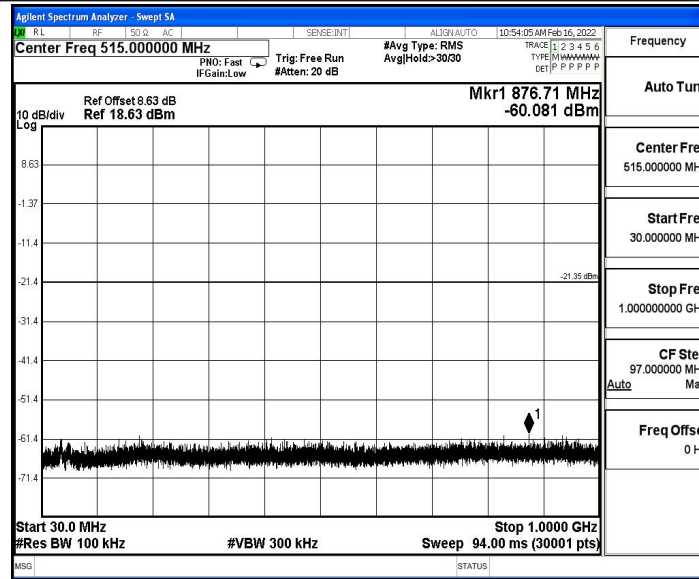
BLE_1M_Ant1_2440_1000~26500



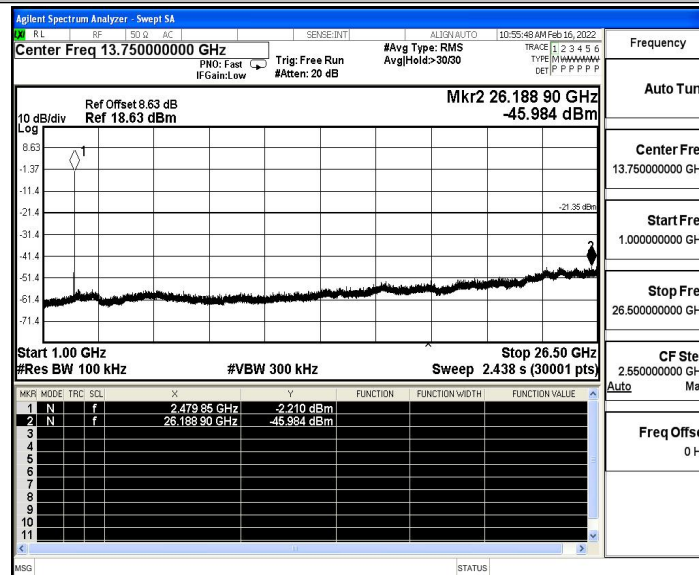
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





A.6 Duty Cycle

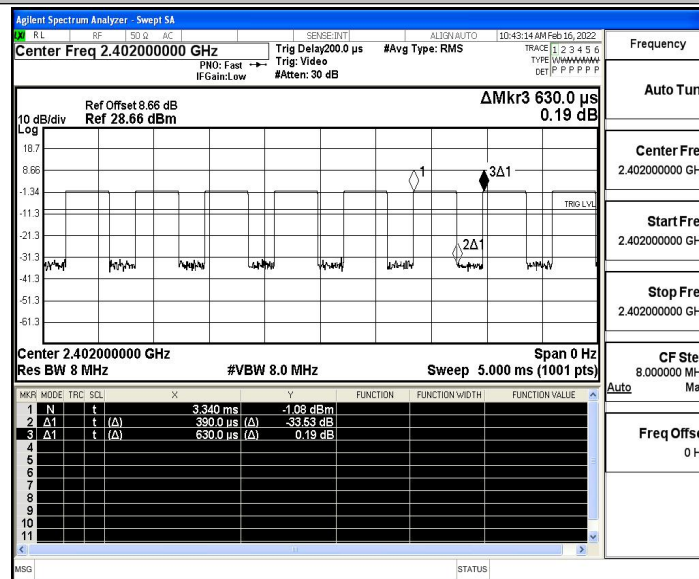
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T[KHz]
BLE_1M	Ant1	2402	0.39	0.63	0.6190	61.90	2.08	2.56
		2440	0.39	0.63	0.6190	61.90	2.08	2.56
		2480	0.38	0.62	0.6129	61.29	2.13	2.56

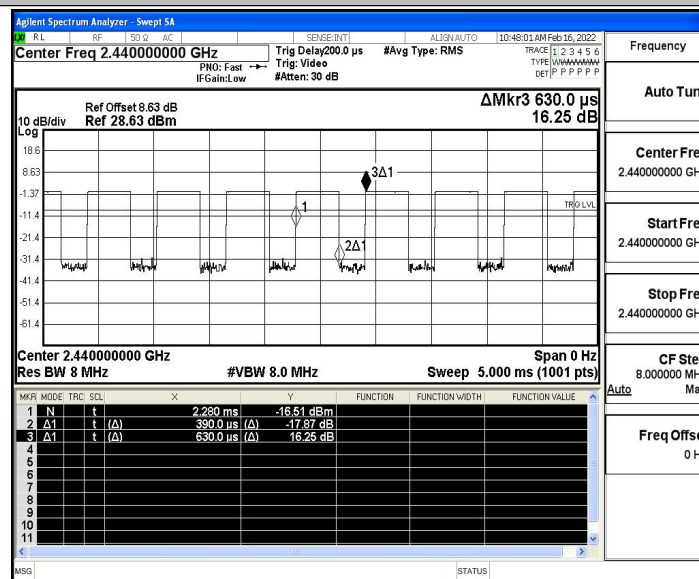


Test Graphs

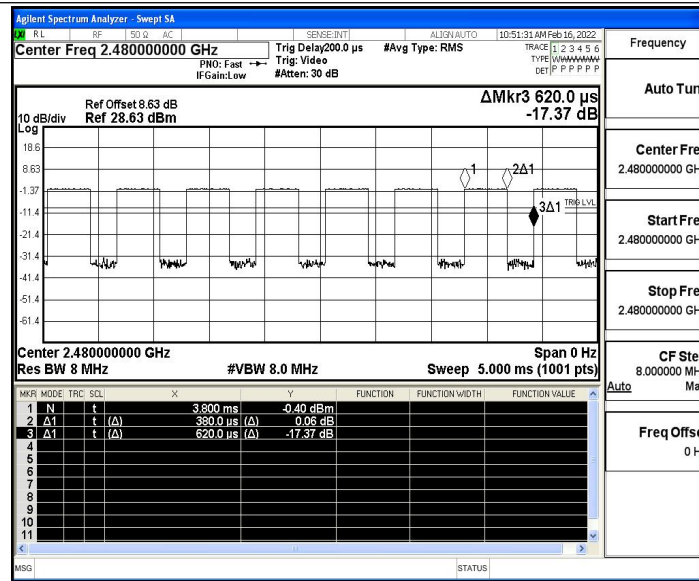
BLE_1M_Ant1_2402



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	-47.58	≤-41.20	47.62	≤54	PASS
				AV	2378.960	-46.67	≤-41.20	48.53	≤54	PASS
				AV	2390.000	-47.12	≤-41.20	48.08	≤54	PASS
				Peak	2310.000	-37.89	≤-21.20	57.31	≤74	PASS
				Peak	2388.620	-36.75	≤-21.20	58.45	≤74	PASS
				Peak	2390.000	-37.88	≤-21.20	57.32	≤74	PASS
		High	2480	AV	2483.500	-46.37	≤-41.20	48.83	≤54	PASS
				AV	2498.800	-46.24	≤-41.20	48.96	≤54	PASS
				AV	2500.000	-46.21	≤-41.20	48.99	≤54	PASS
				Peak	2483.500	-36.9	≤-21.20	58.30	≤74	PASS
				Peak	2492.400	-36.82	≤-21.20	58.38	≤74	PASS
				Peak	2500.000	-37.12	≤-21.20	58.08	≤74	PASS

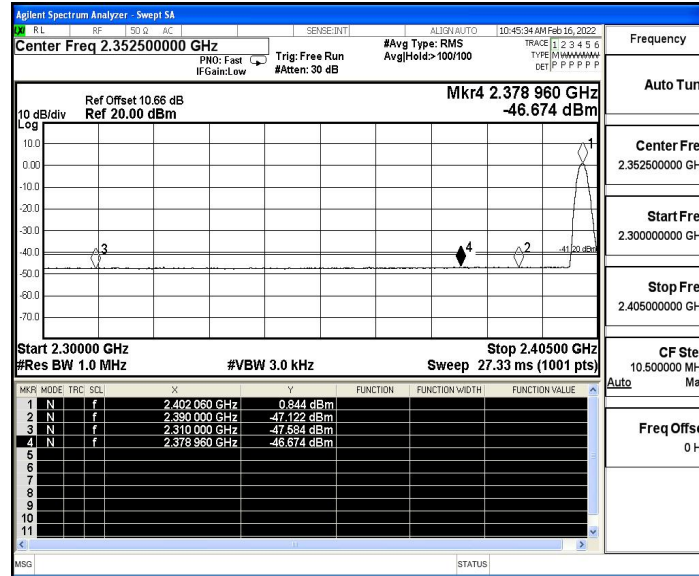
Note:

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.

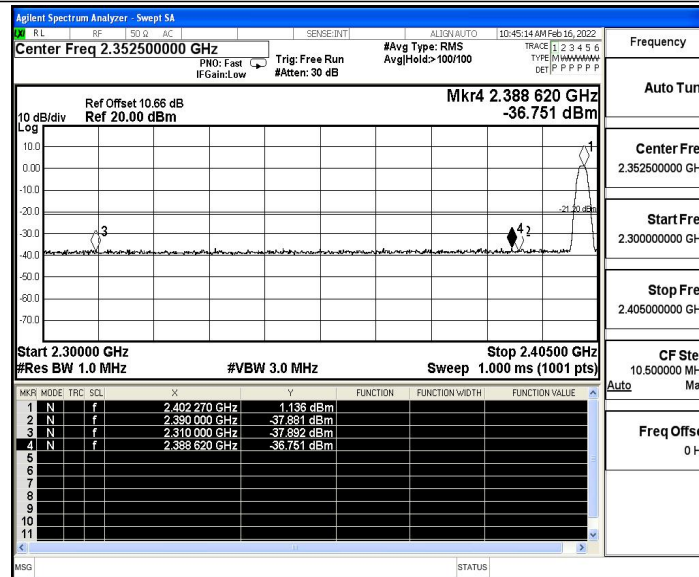


Test Graphs

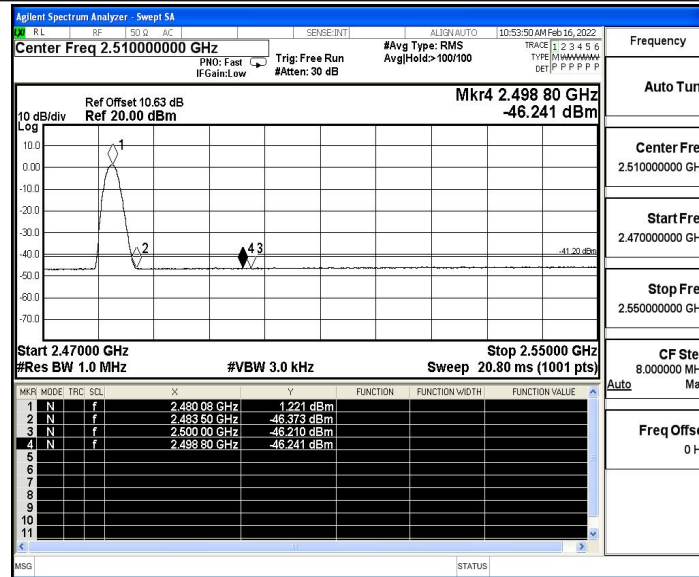
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

