

Appendix Test Data for BT(BLE) (Conducted Measurement)

Product Name: Wireless Mechanical Keyboard

Trade Mark: Keychron

Test Model: V5 Max

FCC ID: 2ASF4-V5MAX

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

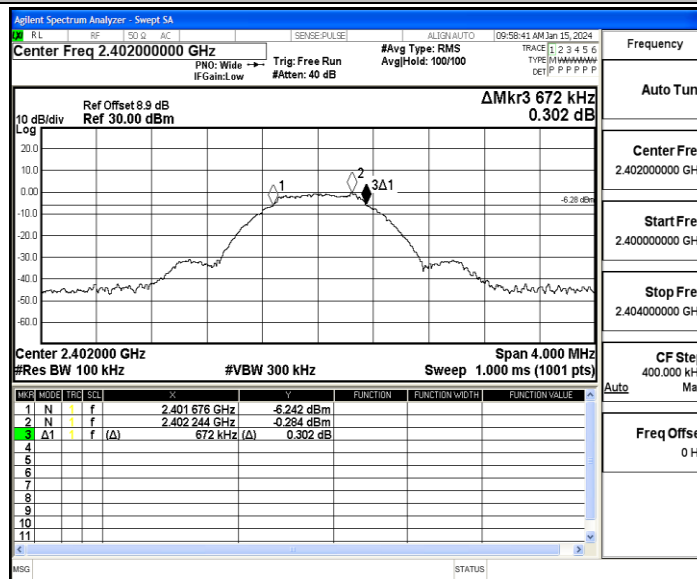
Appendix A: DTS Bandwidth

Test Result

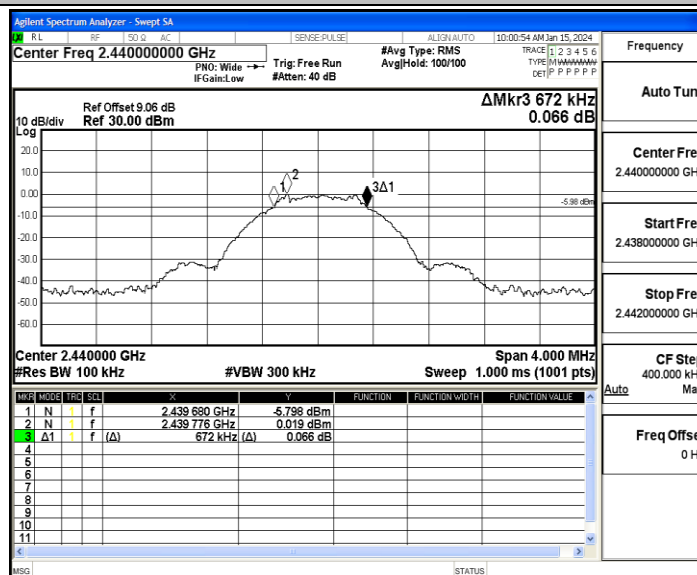
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.676	2402.348	0.5	PASS
		2440	0.672	2439.680	2440.352	0.5	PASS
		2480	0.704	2479.656	2480.360	0.5	PASS

Test Graphs

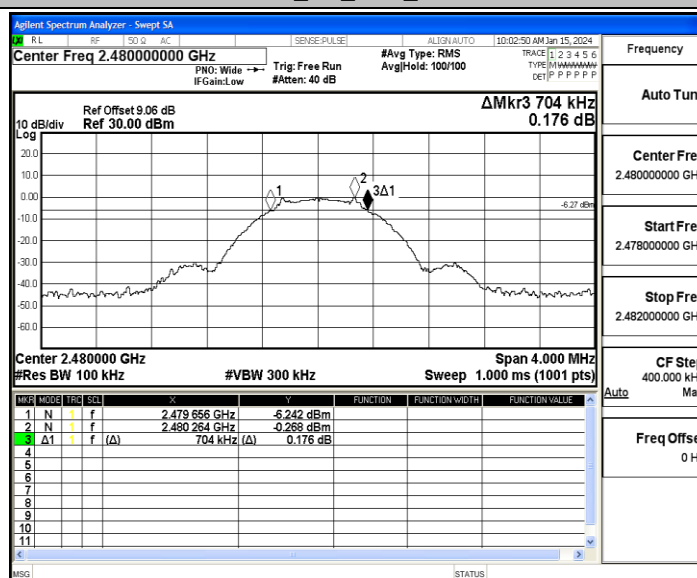
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



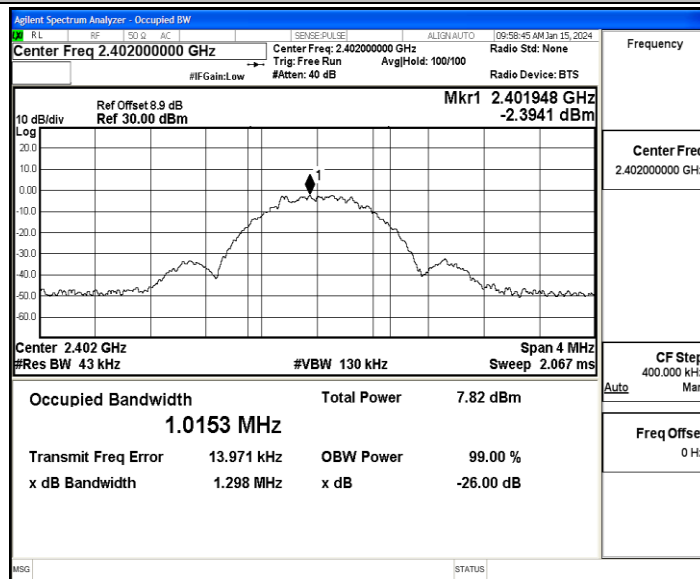
Appendix B: Occupied Channel Bandwidth

Test Result

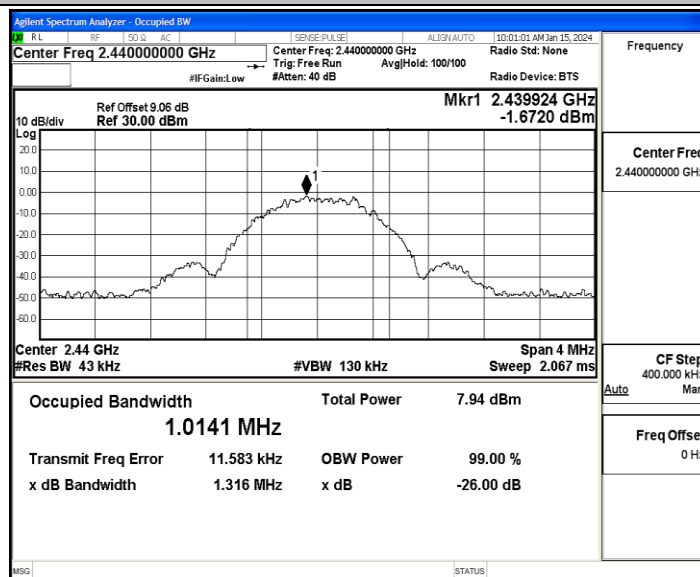
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0153	2401.5063	2402.5216	---	---
		2440	1.0141	2439.5045	2440.5186	---	---
		2480	1.0251	2479.4994	2480.5245	---	---

Test Graphs

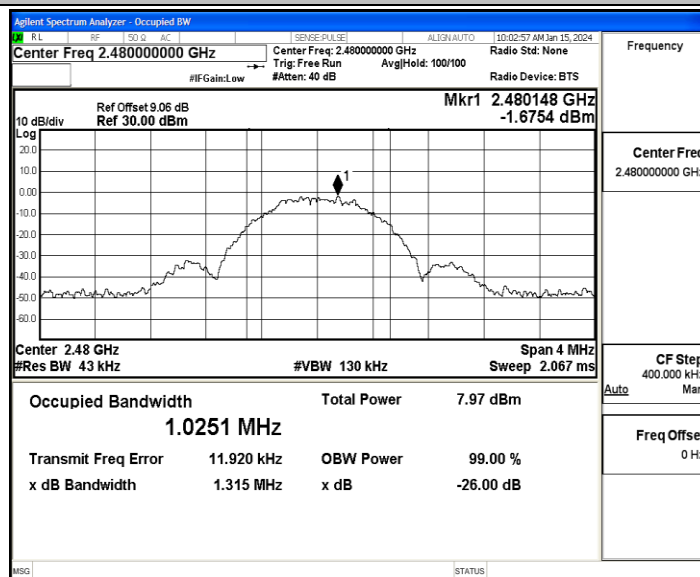
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



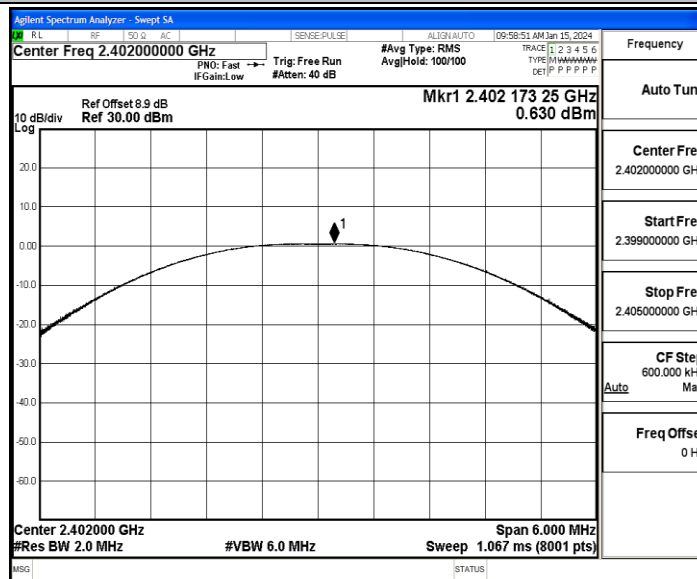
Appendix C: Maximum Peak conducted output power

Test Result

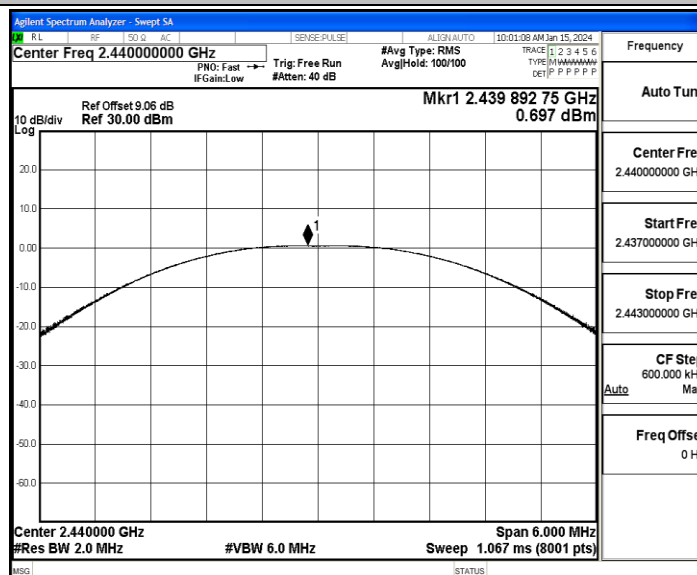
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.63	≤30	PASS
		2440	0.7	≤30	PASS
		2480	0.87	≤30	PASS

Test Graphs

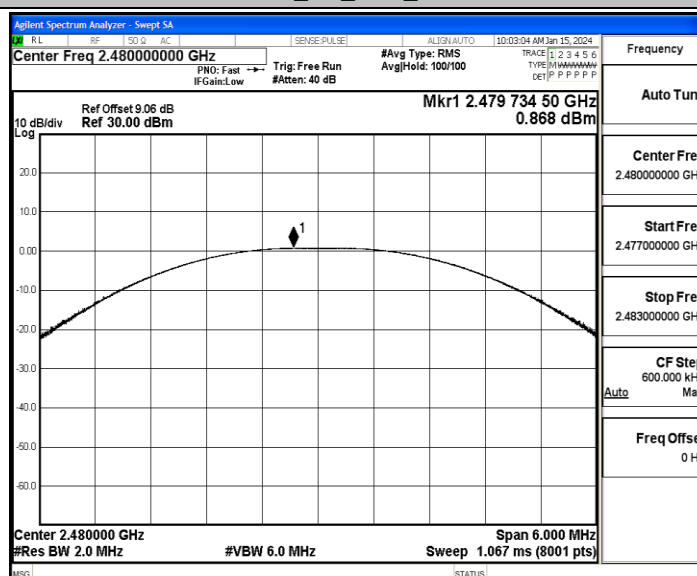
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



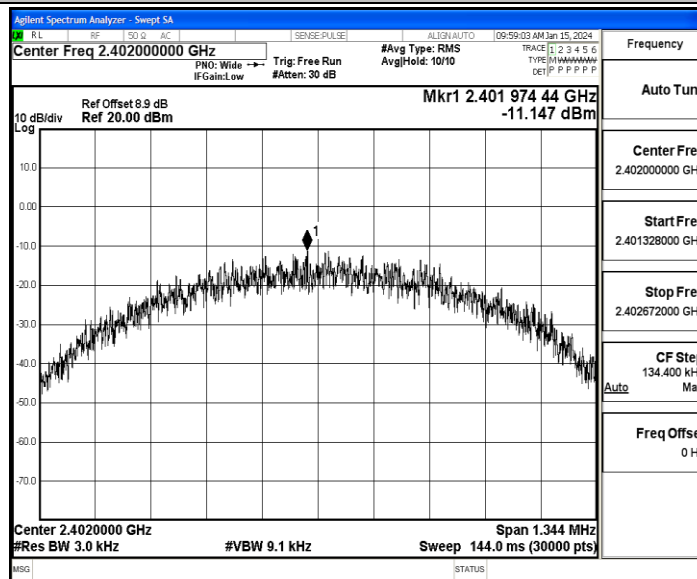
Appendix D: Maximum power spectral density

Test Result

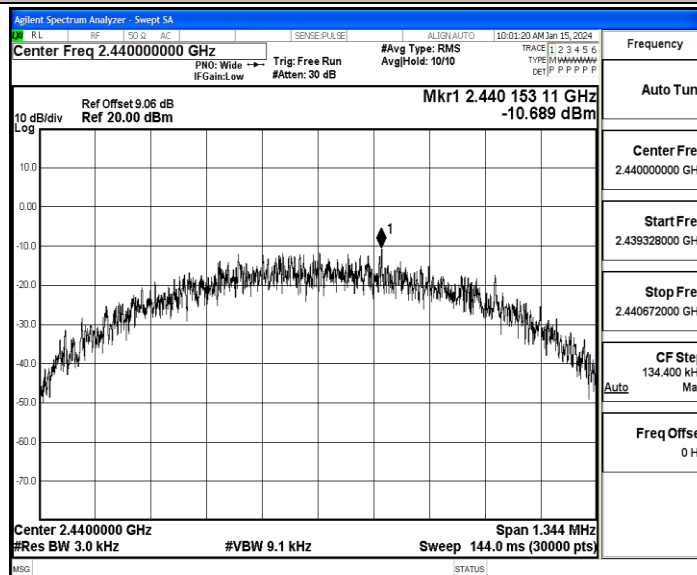
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.15	≤8.00	PASS
		2440	-10.69	≤8.00	PASS
		2480	-10.68	≤8.00	PASS

Test Graphs

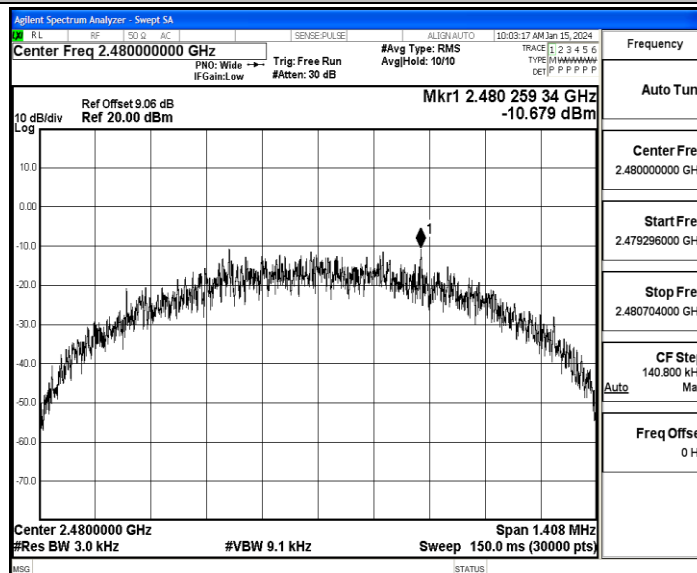
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

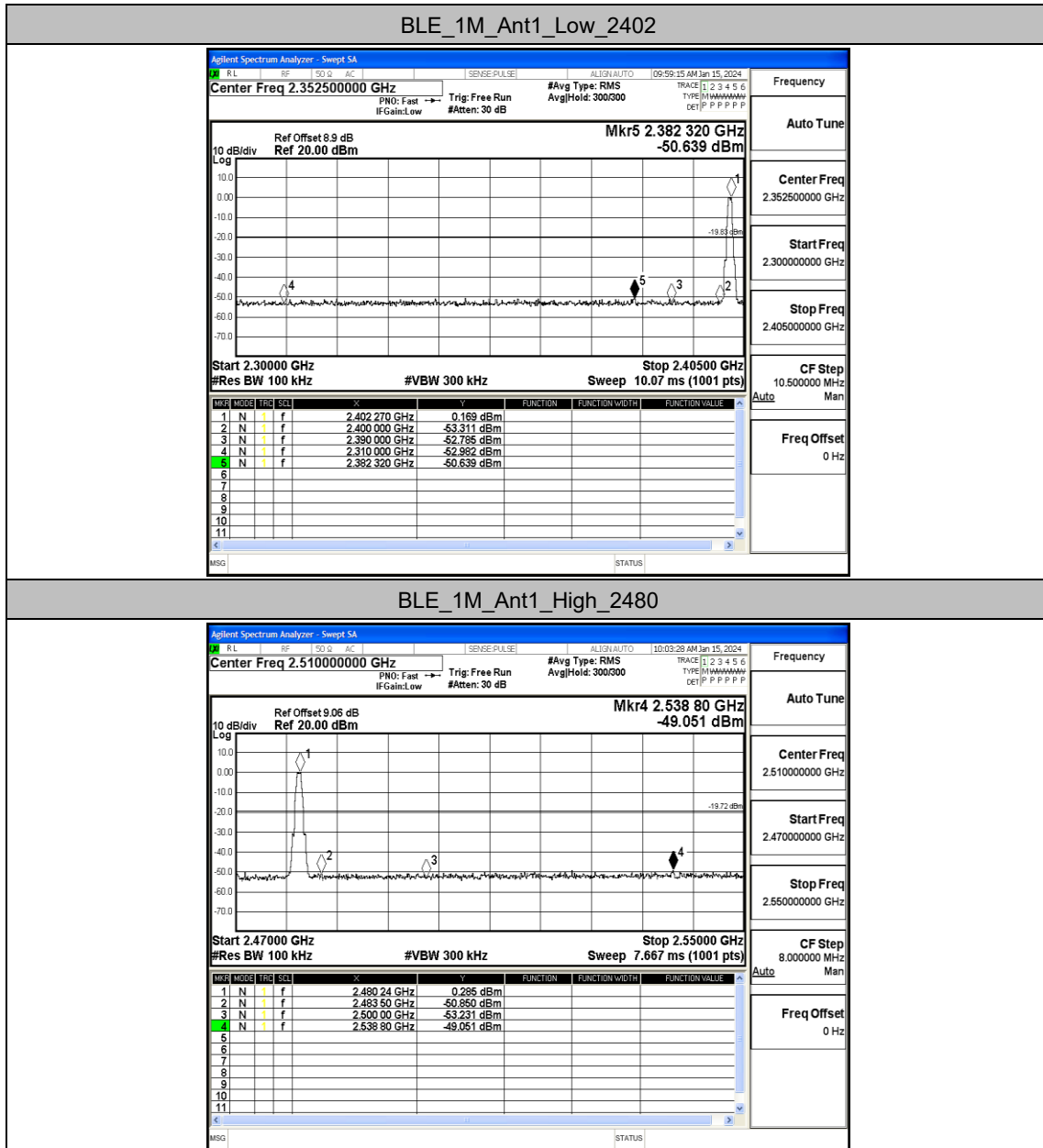


Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.17	-50.64	≤-19.83	PASS
		High	2480	0.29	-49.05	≤-19.72	PASS

Test Graphs



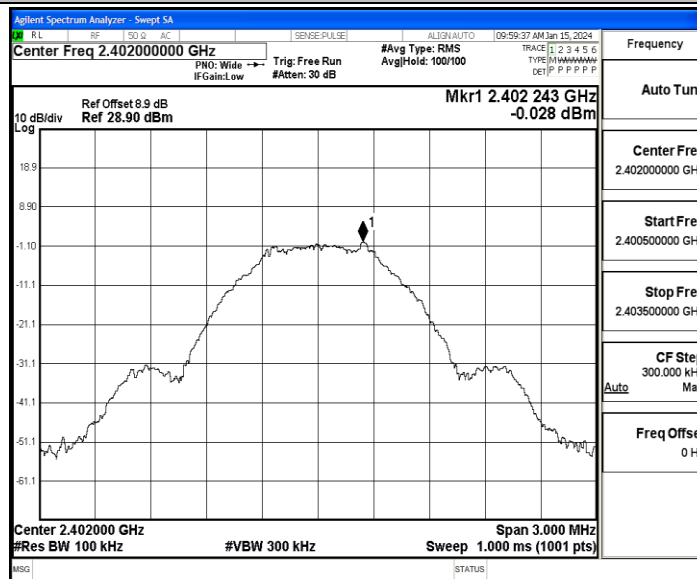
Appendix F: Conducted Spurious Emission

Test Result

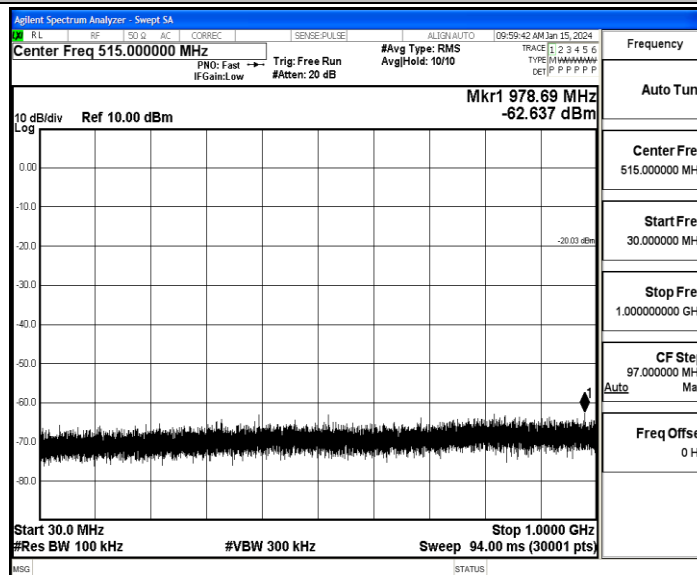
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.03	-0.03	---	PASS
			30~1000	-0.03	-62.64	≤-20.03	PASS
			1000~26500	-0.03	-46.02	≤-20.03	PASS
		2440	Reference	-0.22	-0.22	---	PASS
			30~1000	-0.22	-62.75	≤-20.22	PASS
			1000~26500	-0.22	-44.45	≤-20.22	PASS
		2480	Reference	-0.16	-0.16	---	PASS
			30~1000	-0.16	-62.37	≤-20.16	PASS
			1000~26500	-0.16	-46.67	≤-20.16	PASS

Test Graphs

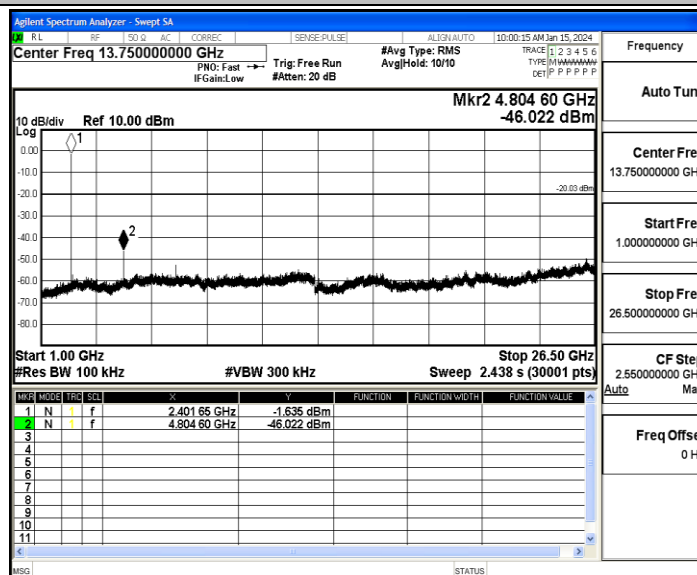
BLE_1M_Ant1_2402_0~Reference



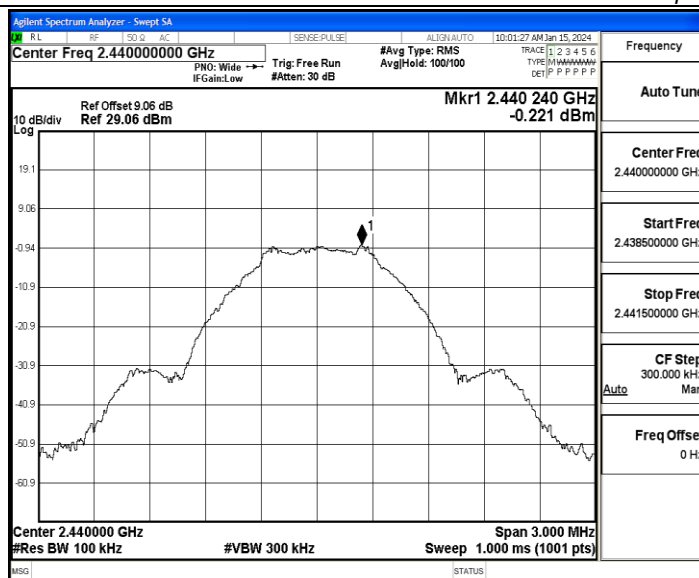
BLE_1M_Ant1_2402_30~1000



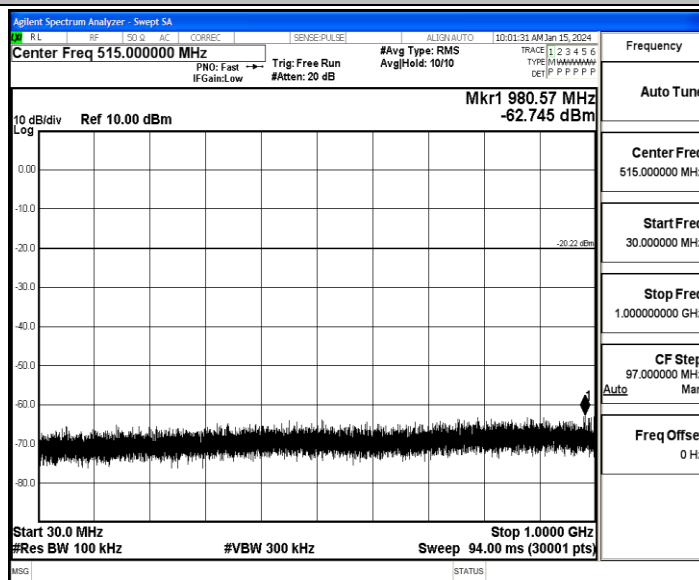
BLE_1M_Ant1_2402_1000~26500



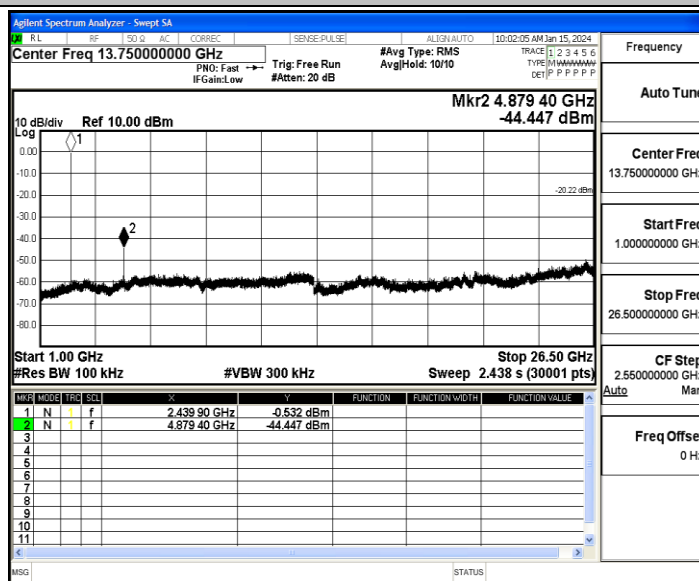
BLE_1M_Ant1_2440_0~Reference



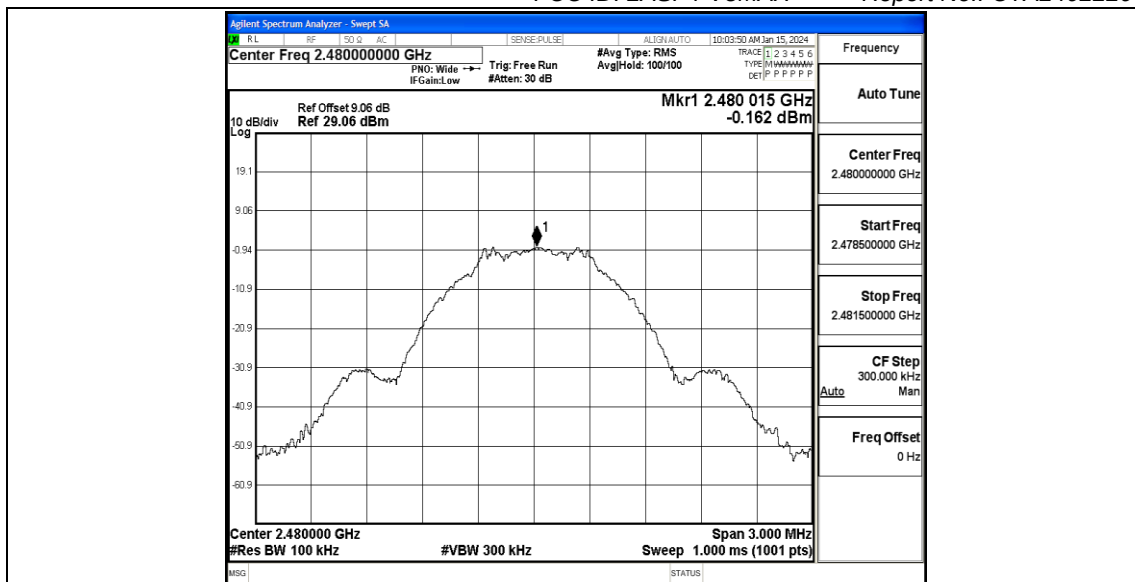
BLE_1M_Ant1_2440_30~1000



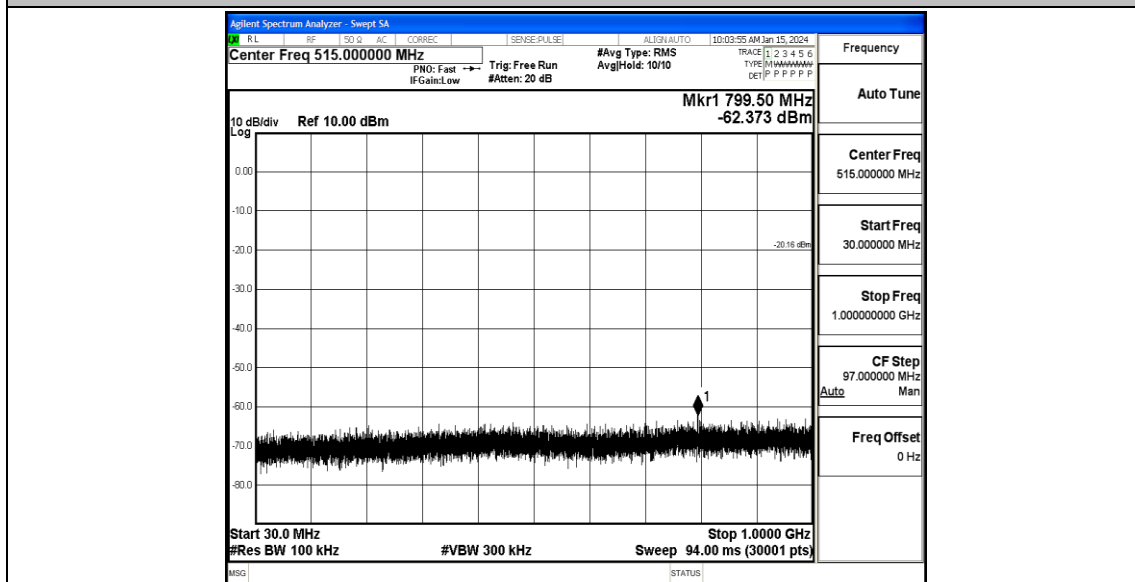
BLE_1M_Ant1_2440_1000~26500



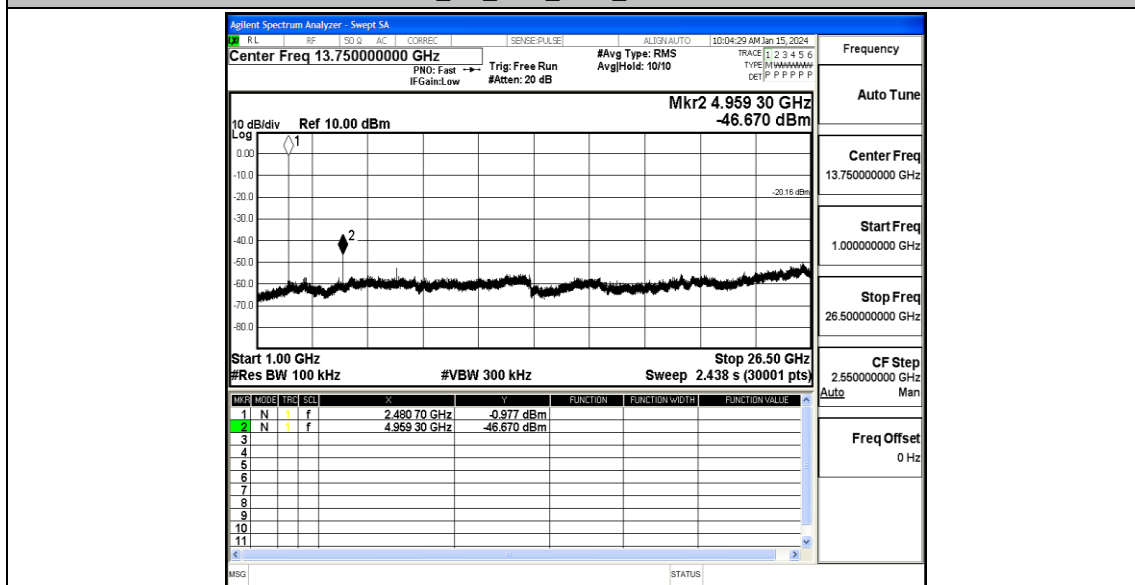
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
BLE_1M	Ant1	2402	10.13	10.13	100
		2440	10.13	10.13	100
		2480	10.13	10.13	100

Test Graphs



Appendix H: Emissions in Restricted Bands

Test Result

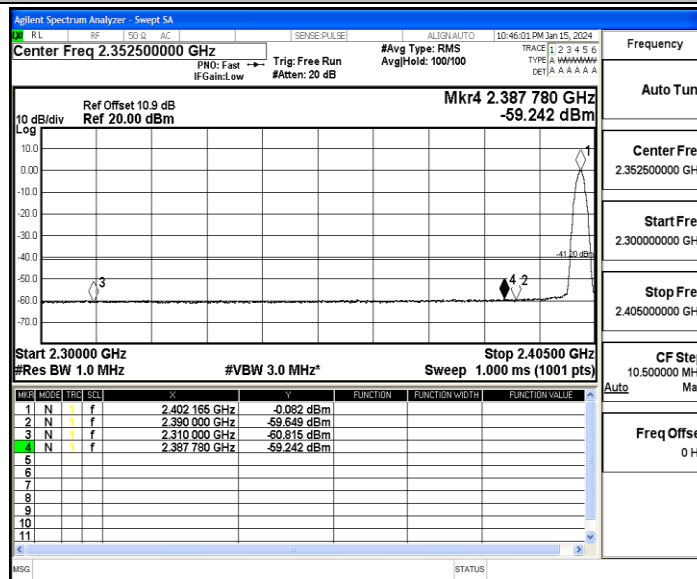
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.82	≤-41.20	PASS
				AV	2387.780	-59.24	≤-41.20	PASS
				AV	2390.000	-59.65	≤-41.20	PASS
				Peak	2310.000	-53.52	≤-21.20	PASS
				Peak	2371.715	-49.65	≤-21.20	PASS
				Peak	2390.000	-51.81	≤-21.20	PASS
		High	2480	AV	2483.500	-58.06	≤-41.20	PASS
				AV	2484.240	-57.96	≤-41.20	PASS
				AV	2500.000	-59.16	≤-41.20	PASS
				Peak	2483.500	-52.09	≤-21.20	PASS
				Peak	2486.080	-49.72	≤-21.20	PASS
				Peak	2500.000	-51.26	≤-21.20	PASS

Note:

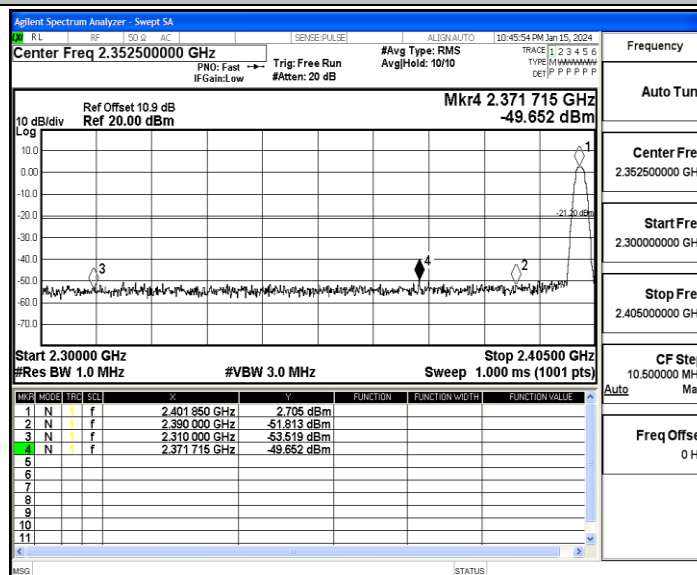
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

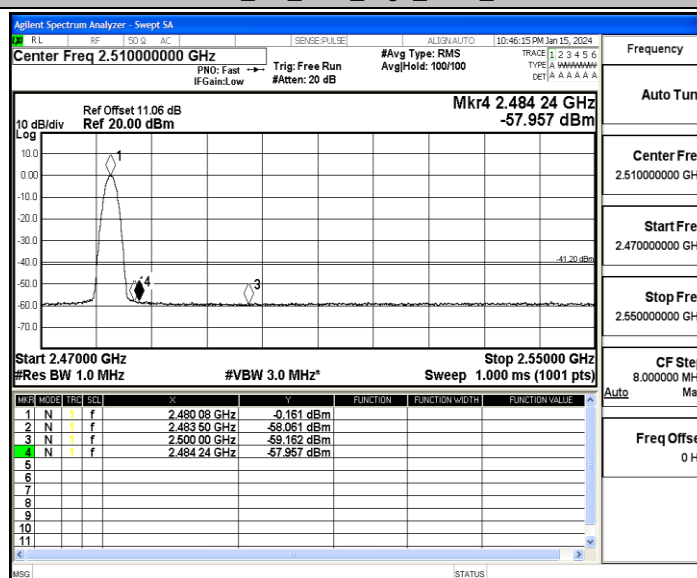
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

