

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

Product Name: NucBox

Trade Mark: GMKtec

Test Model: G1

FCC ID: 2AXUD-G1

Environmental Conditions

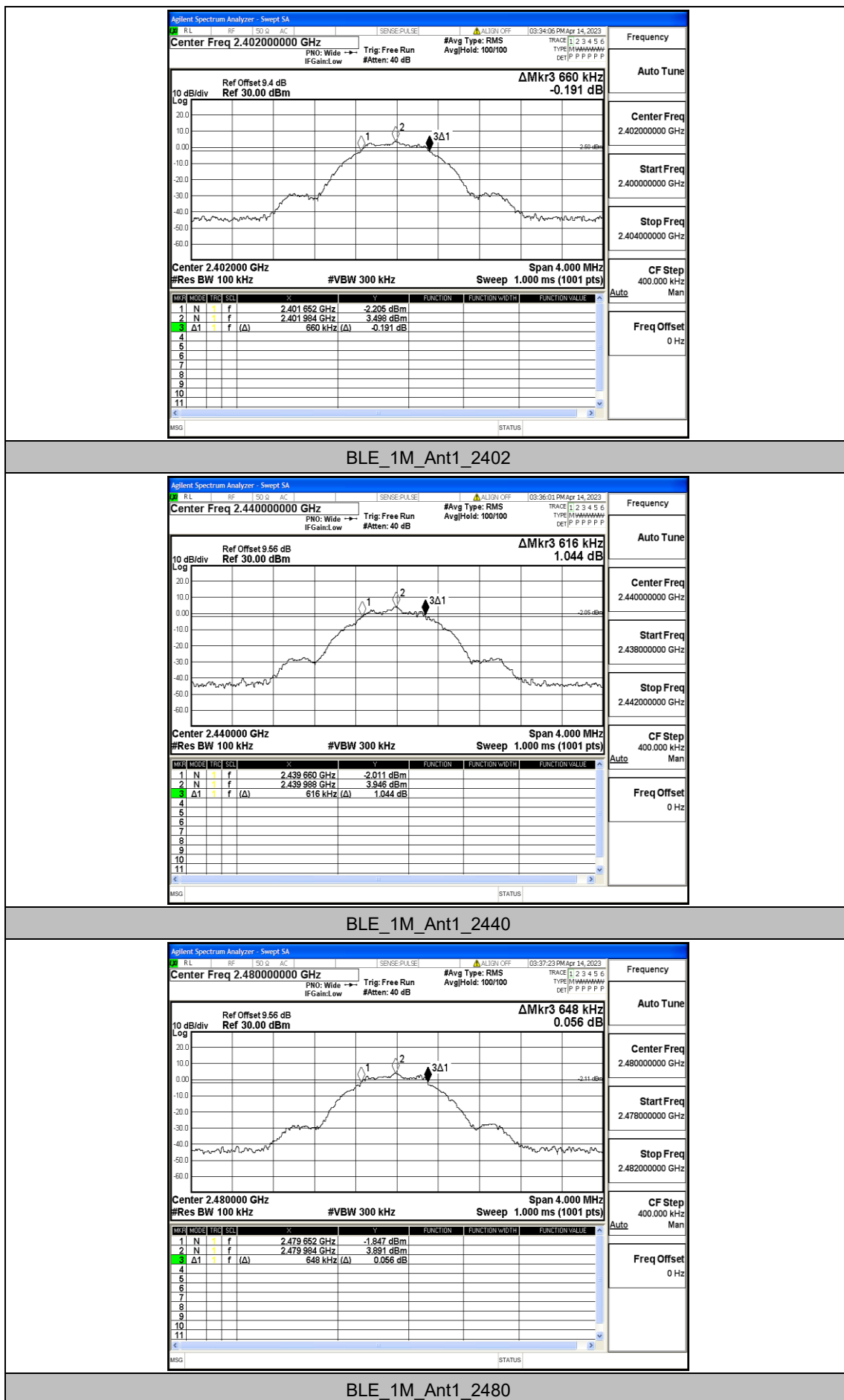
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

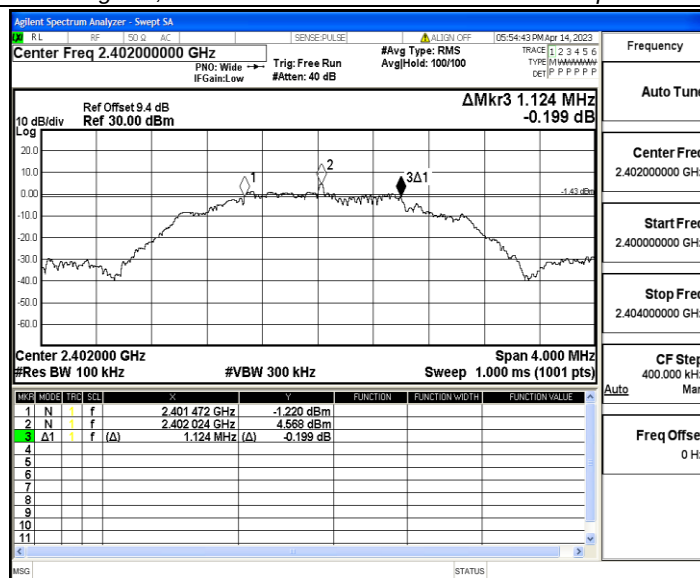
Appendix A: DTS Bandwidth

Test Result

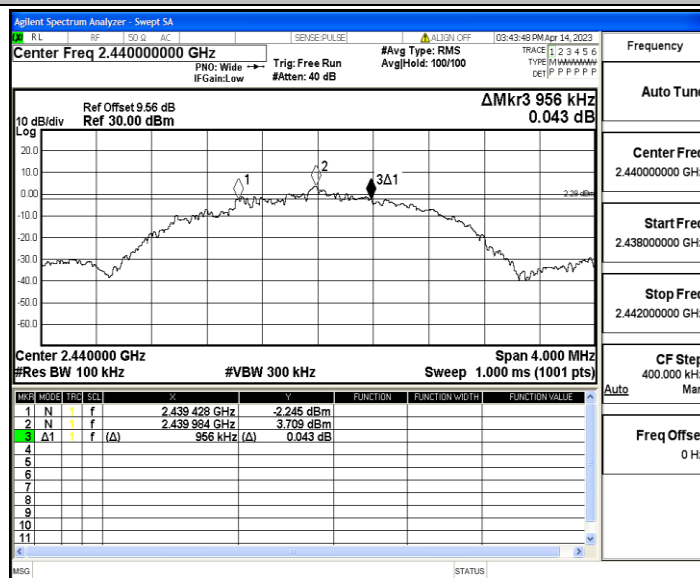
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.652	2402.312	0.5	PASS
		2440	0.616	2439.660	2440.276	0.5	PASS
		2480	0.648	2479.652	2480.300	0.5	PASS
BLE_2M	Ant1	2402	1.124	2401.472	2402.596	0.5	PASS
		2440	0.956	2439.428	2440.384	0.5	PASS
		2480	1.064	2479.516	2480.580	0.5	PASS

Test Graphs

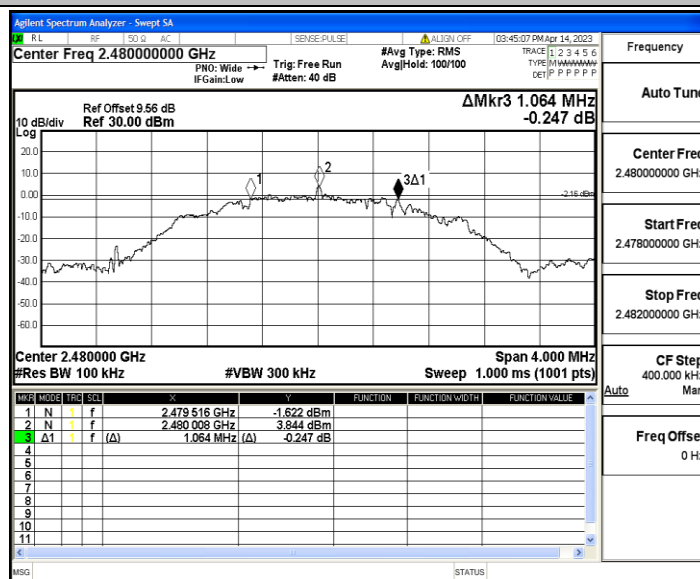




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



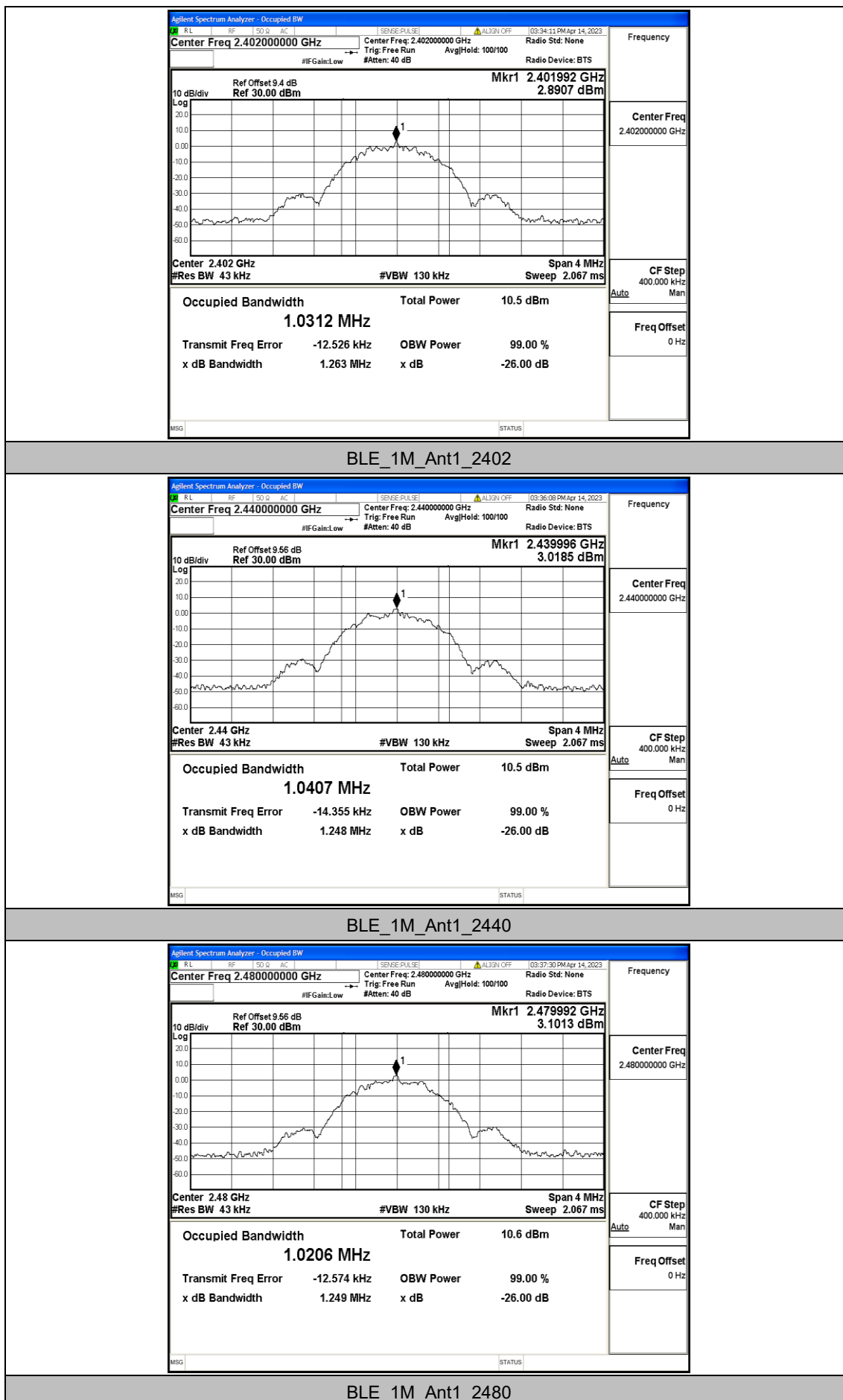
BLE_2M_Ant1_2480

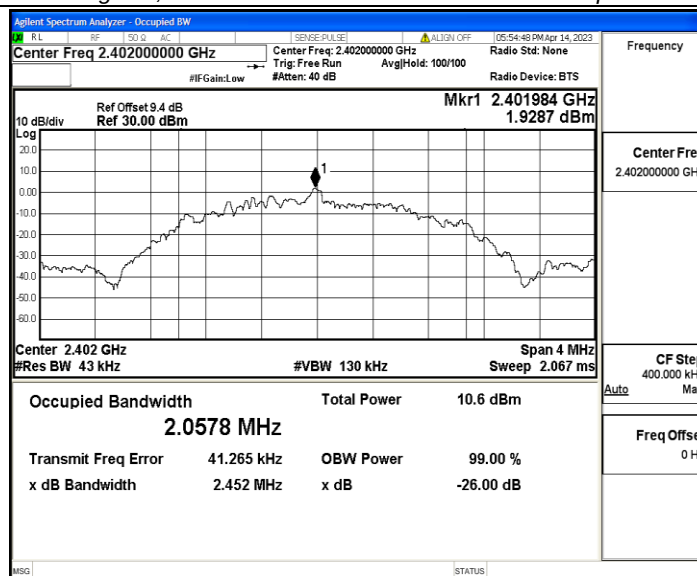
Appendix B: Occupied Channel Bandwidth

Test Result

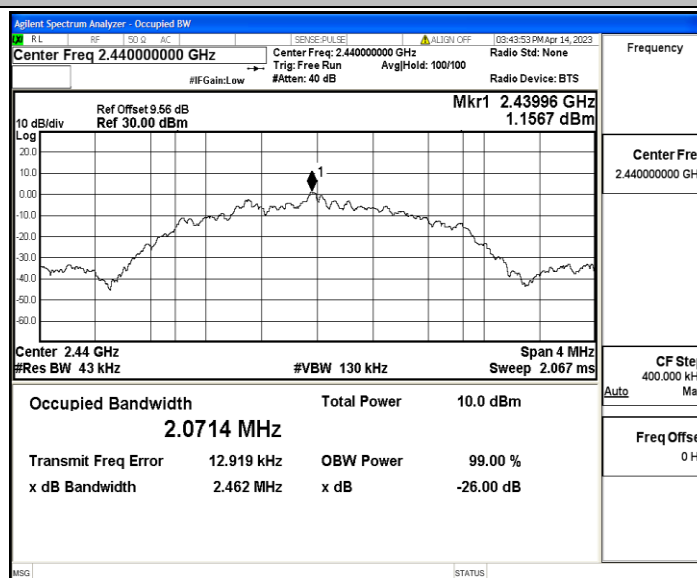
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0312	2401.4719	2402.5031	---	---
		2440	1.0407	2439.4653	2440.5060	---	---
		2480	1.0206	2479.4771	2480.4977	---	---
BLE_2M	Ant1	2402	2.0578	2401.0124	2403.0702	---	---
		2440	2.0714	2438.9772	2441.0486	---	---
		2480	2.0599	2478.9974	2481.0573	---	---

Test Graphs

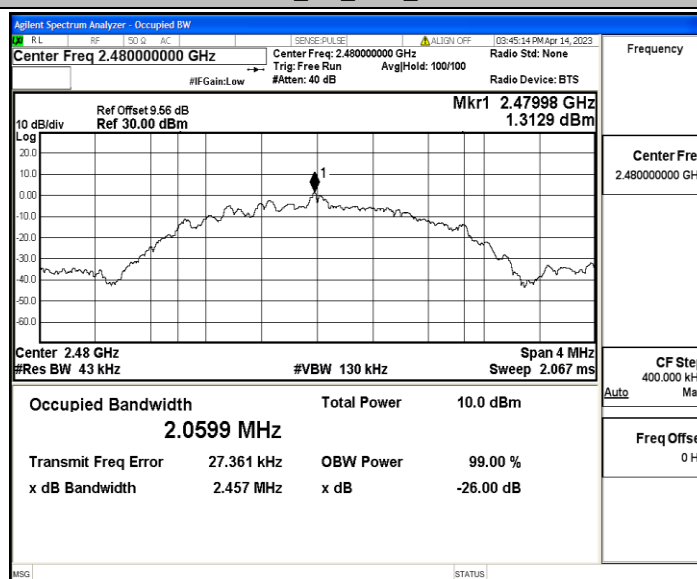




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



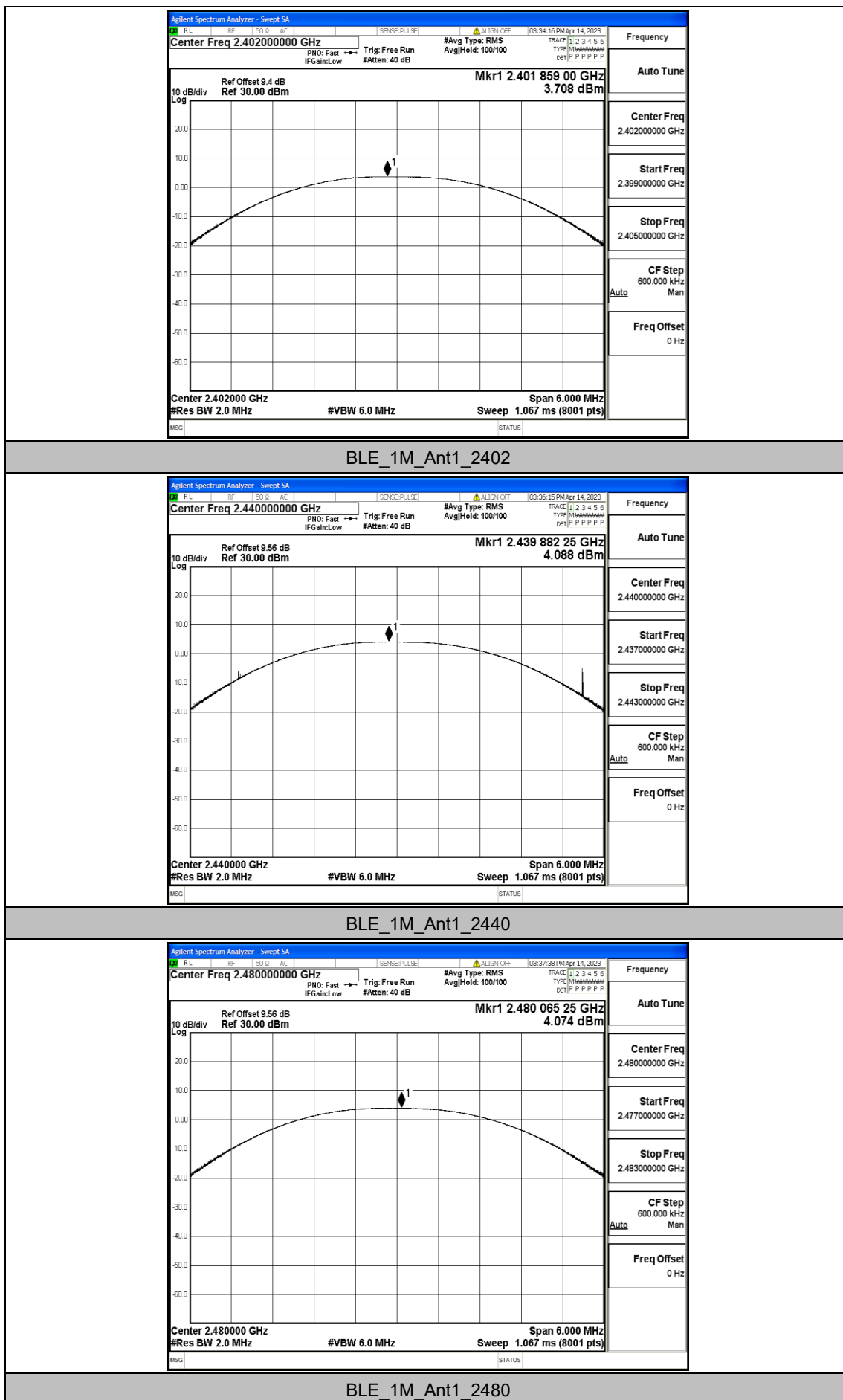
BLE_2M_Ant1_2480

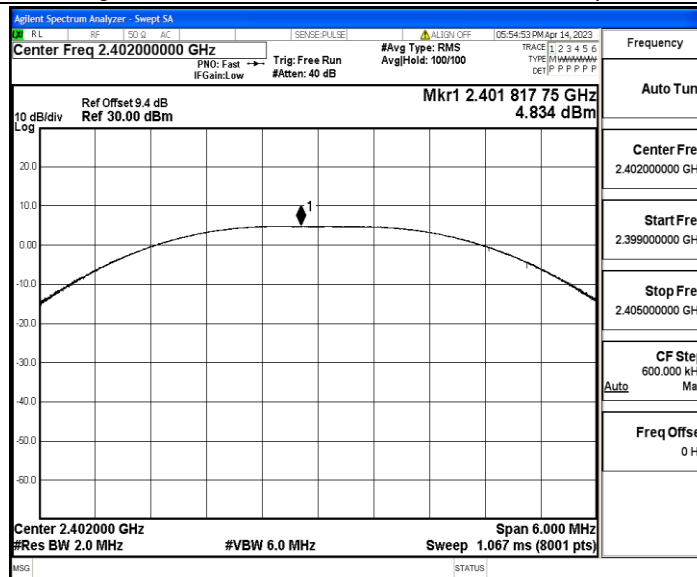
Appendix C: Maximum Peak conducted output power

Test Result

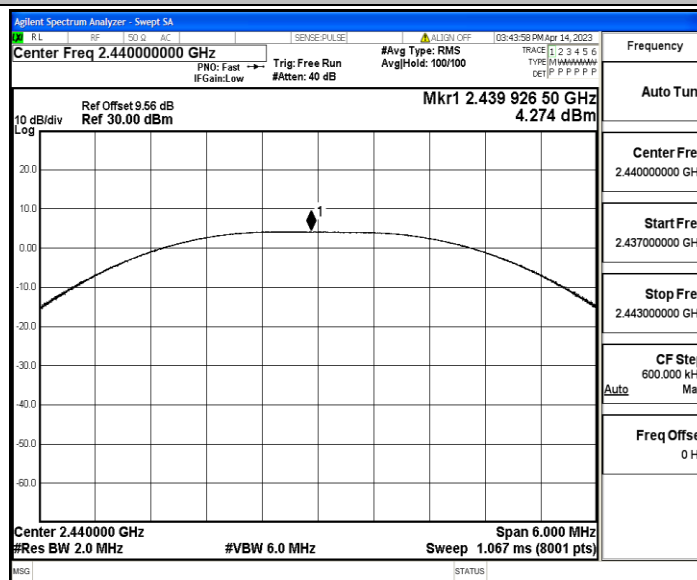
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.71	≤30	PASS
		2440	4.09	≤30	PASS
		2480	4.07	≤30	PASS
BLE_2M	Ant1	2402	4.83	≤30	PASS
		2440	4.27	≤30	PASS
		2480	4.17	≤30	PASS

Test Graphs

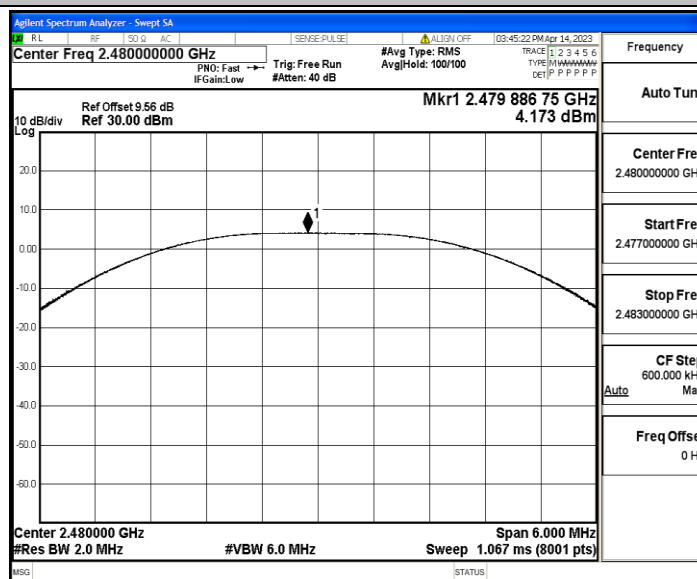




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



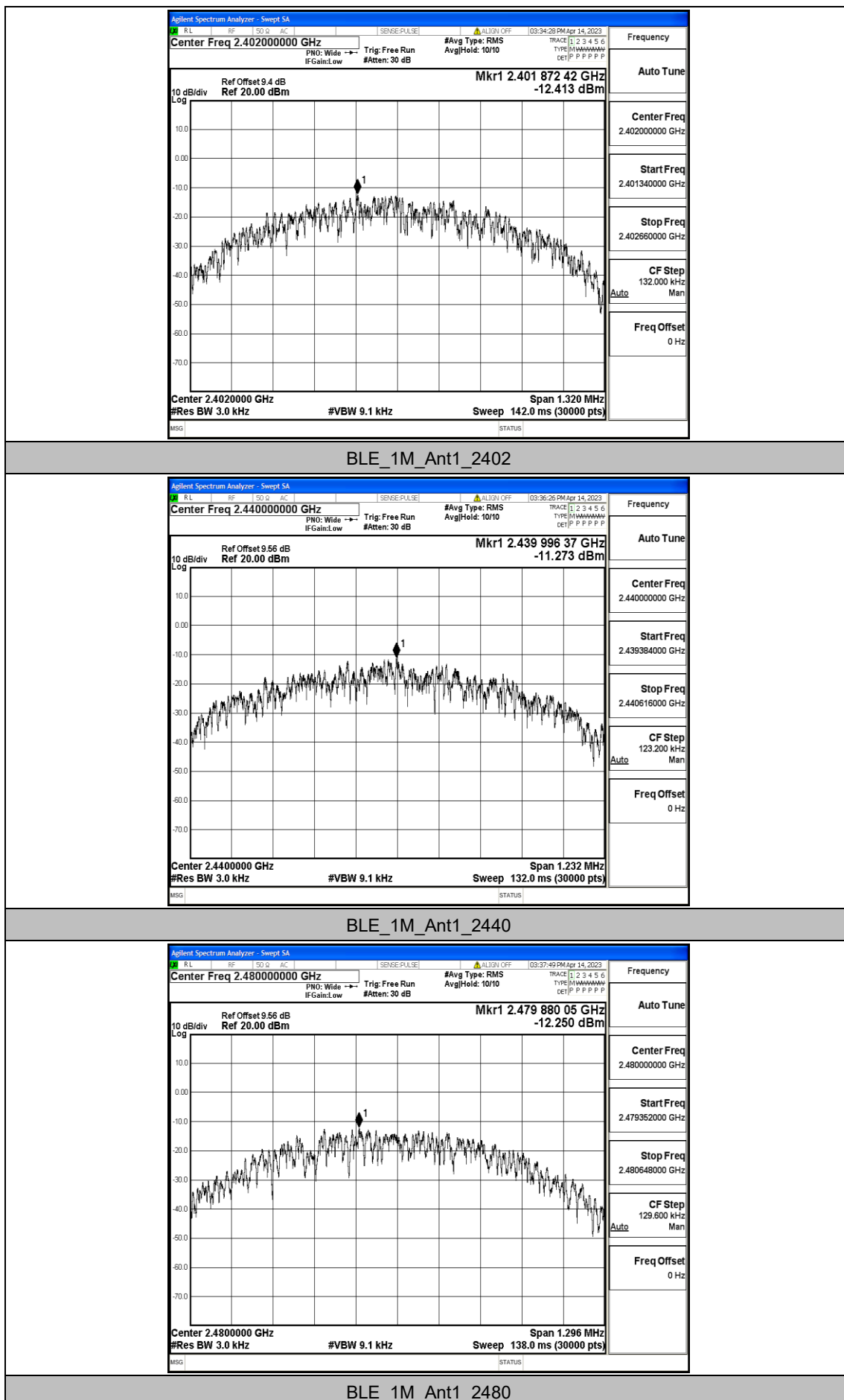
BLE_2M_Ant1_2480

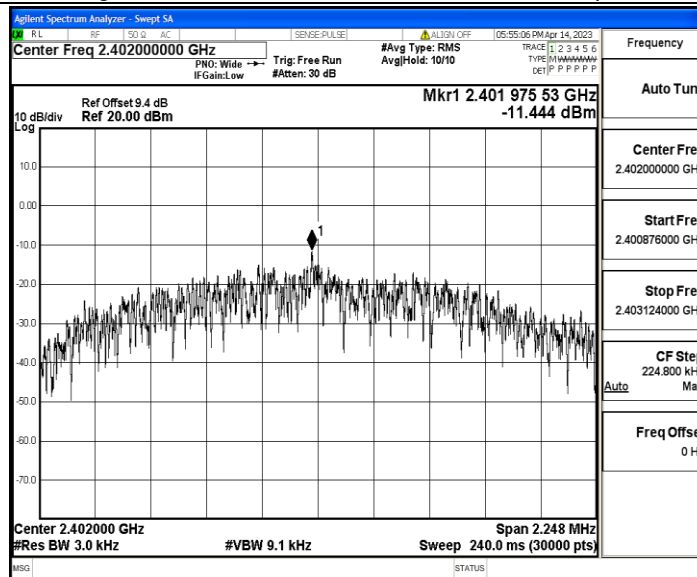
Appendix D: Maximum power spectral density

Test Result

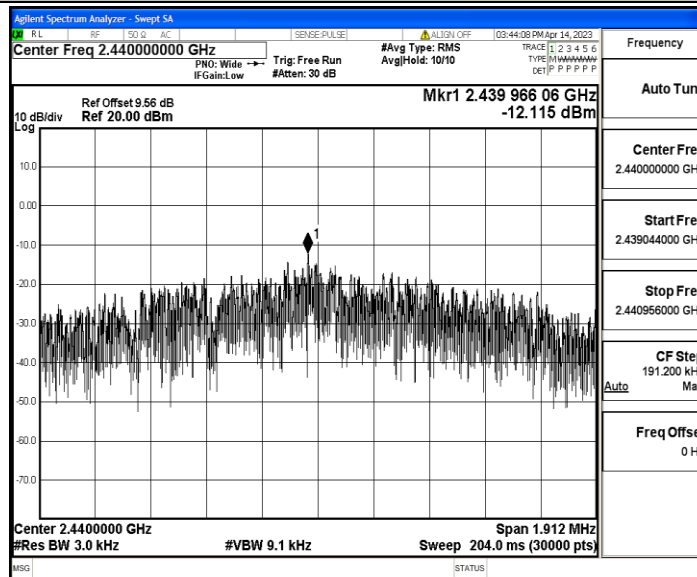
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.41	≤8.00	PASS
		2440	-11.27	≤8.00	PASS
		2480	-12.25	≤8.00	PASS
BLE_2M	Ant1	2402	-11.44	≤8.00	PASS
		2440	-12.12	≤8.00	PASS
		2480	-14.17	≤8.00	PASS

Test Graphs

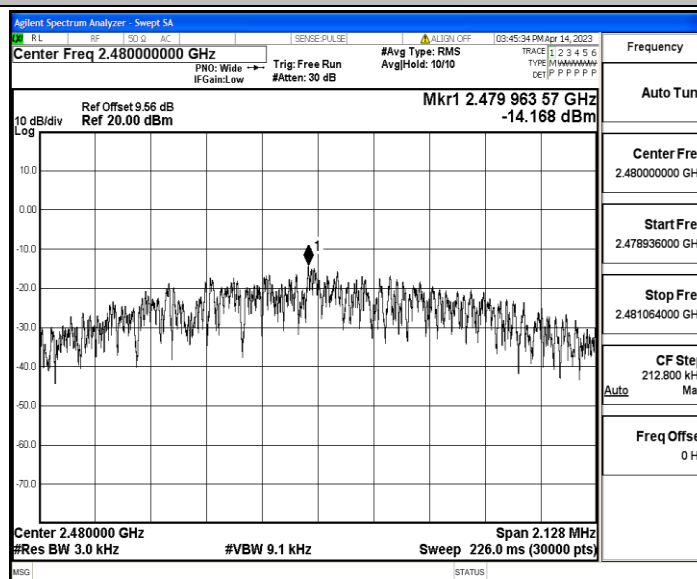




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



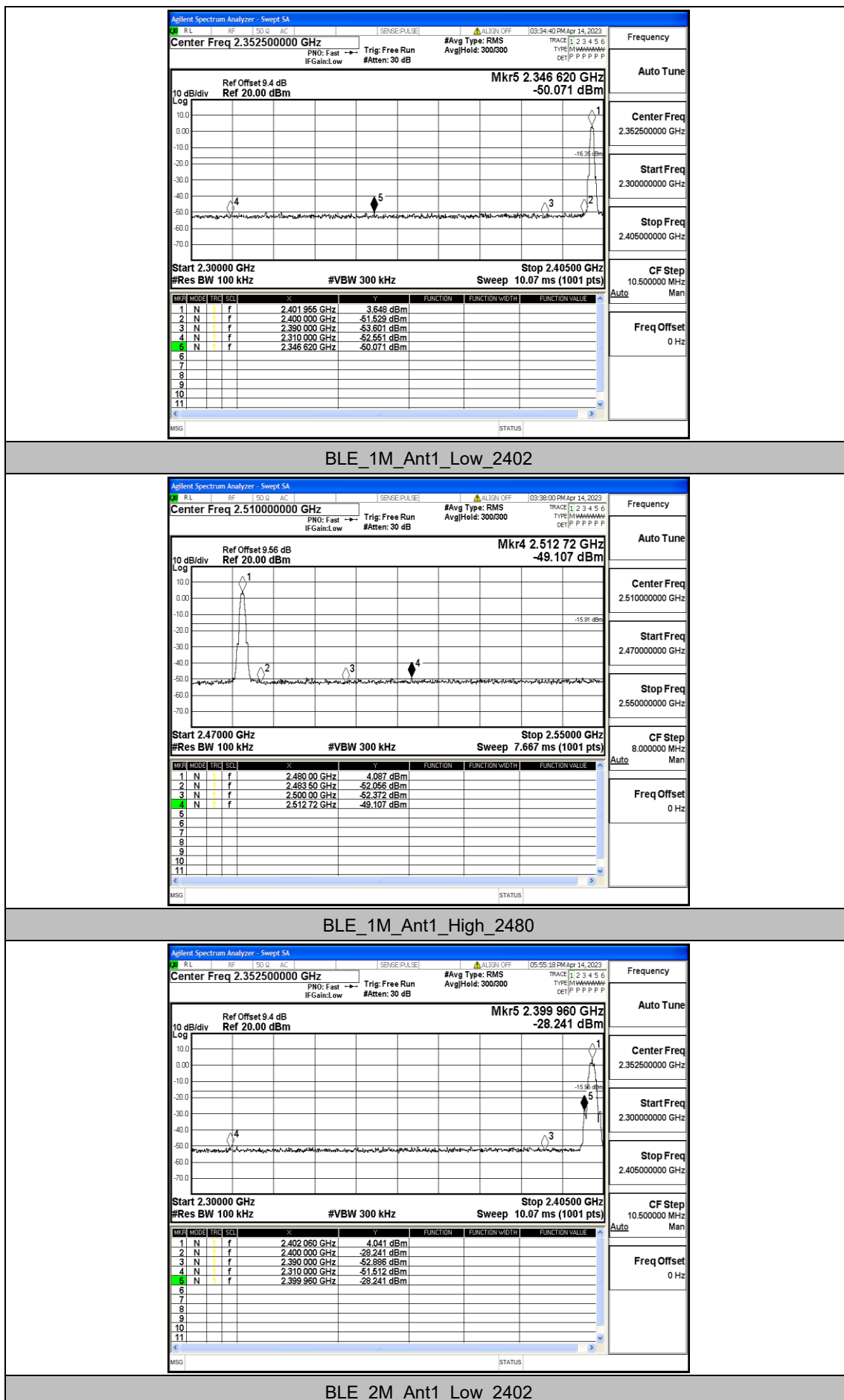
BLE_2M_Ant1_2480

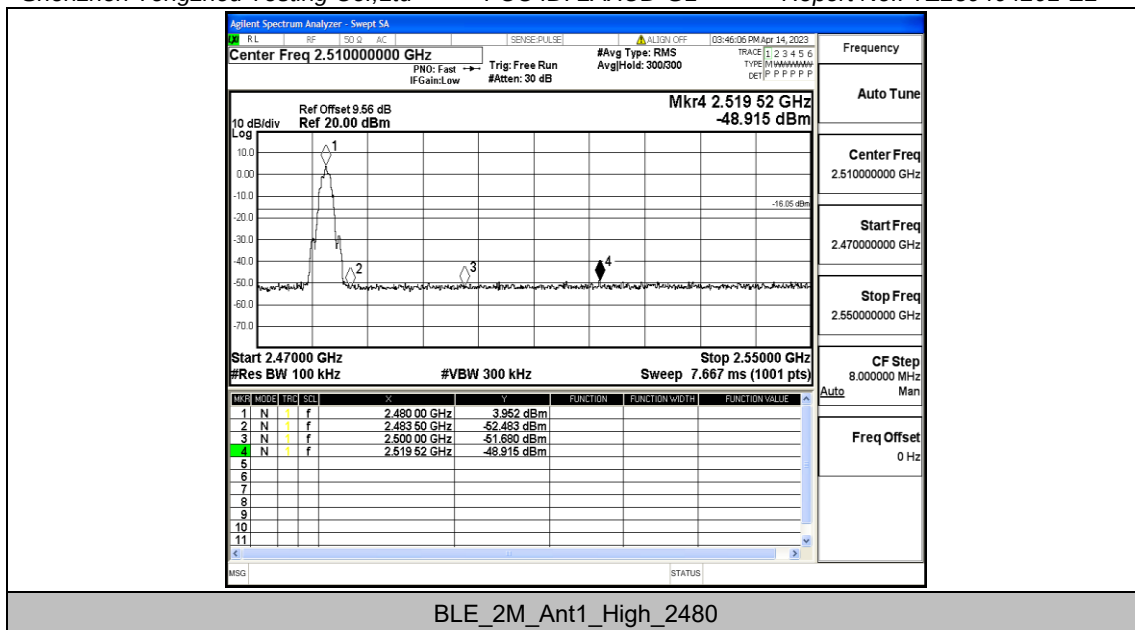
Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.65	-50.07	≤-16.35	PASS
		High	2480	4.09	-49.11	≤-15.91	PASS
BLE_2M	Ant1	Low	2402	4.04	-28.24	≤-15.96	PASS
		High	2480	3.95	-48.92	≤-16.05	PASS

Test Graphs



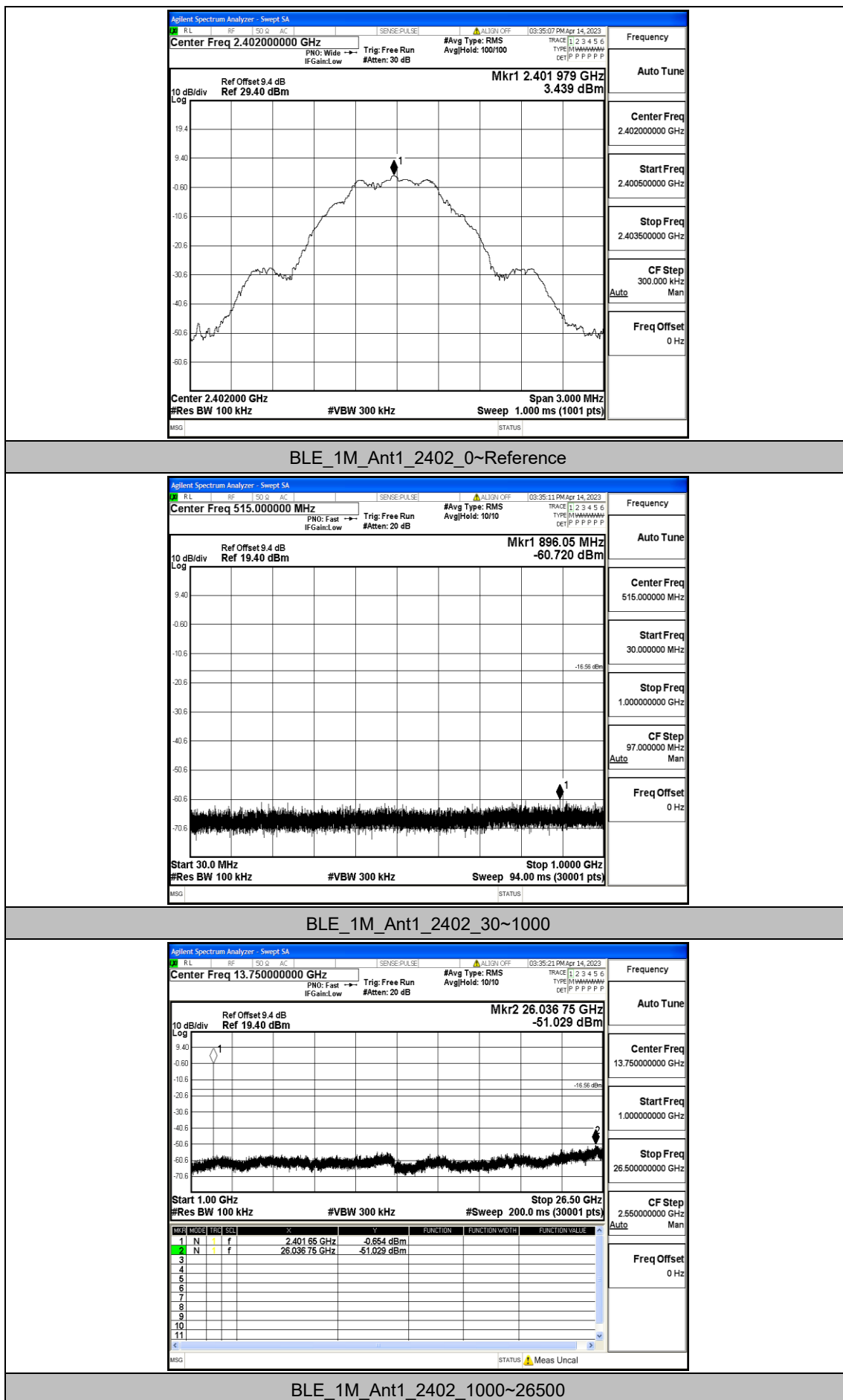


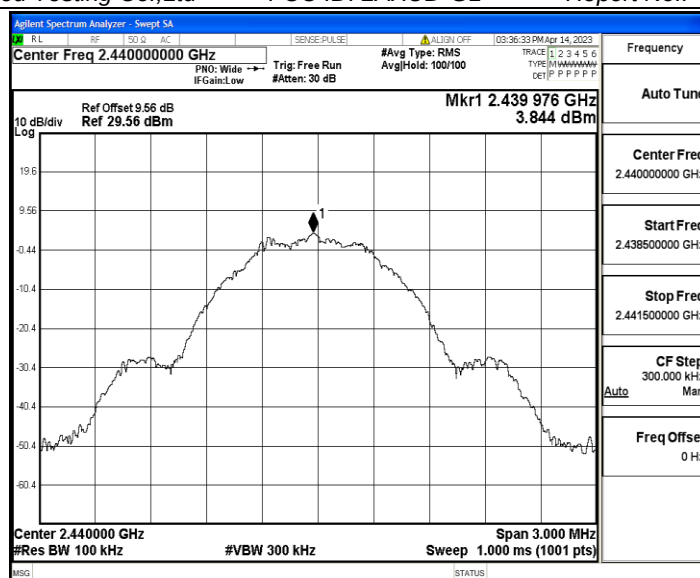
Appendix F: Conducted Spurious Emission

Test Result

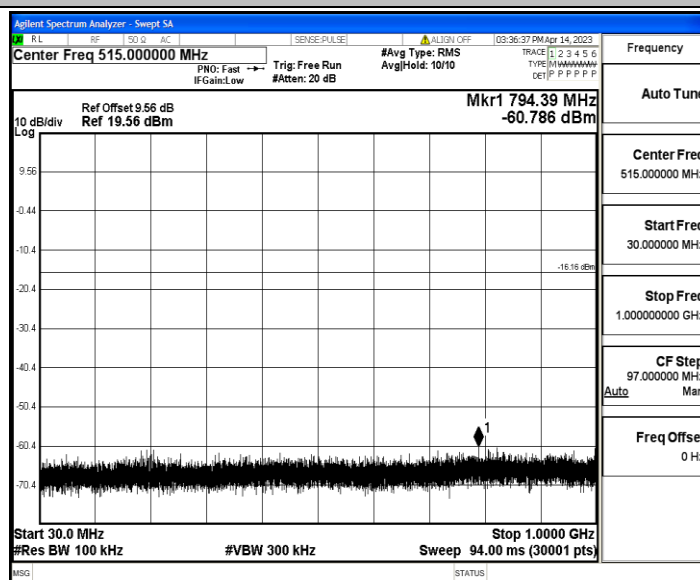
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	3.44	3.44	---	PASS
			30~1000	3.44	-60.72	≤-16.56	PASS
			1000~26500	3.44	-51.03	≤-16.56	PASS
		2440	Reference	3.84	3.84	---	PASS
			30~1000	3.84	-60.79	≤-16.16	PASS
			1000~26500	3.84	-50.78	≤-16.16	PASS
		2480	Reference	3.84	3.84	---	PASS
			30~1000	3.84	-61.36	≤-16.16	PASS
			1000~26500	3.84	-50.93	≤-16.16	PASS
BLE_2M	Ant1	2402	Reference	4.66	4.66	---	PASS
			30~1000	4.66	-60.86	≤-15.34	PASS
			1000~26500	4.66	-51.41	≤-15.34	PASS
		2440	Reference	3.82	3.82	---	PASS
			30~1000	3.82	-60.98	≤-16.18	PASS
			1000~26500	3.82	-50.34	≤-16.18	PASS
		2480	Reference	3.92	3.92	---	PASS
			30~1000	3.92	-60.76	≤-16.08	PASS
			1000~26500	3.92	-51.21	≤-16.08	PASS

Test Graphs

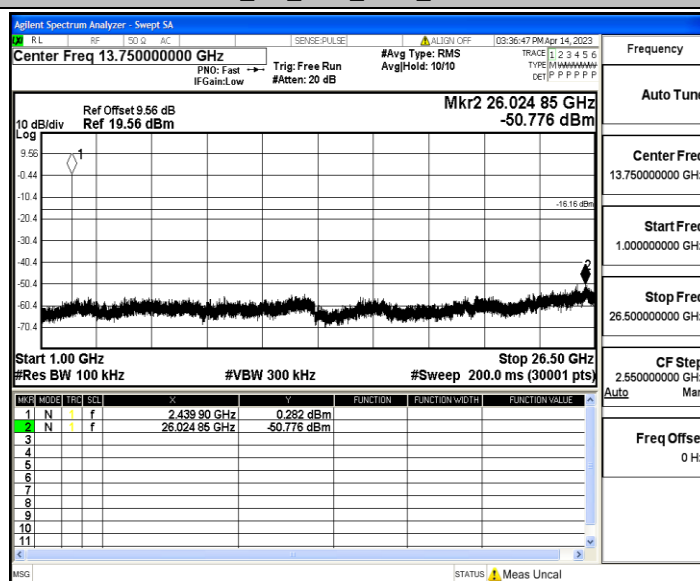




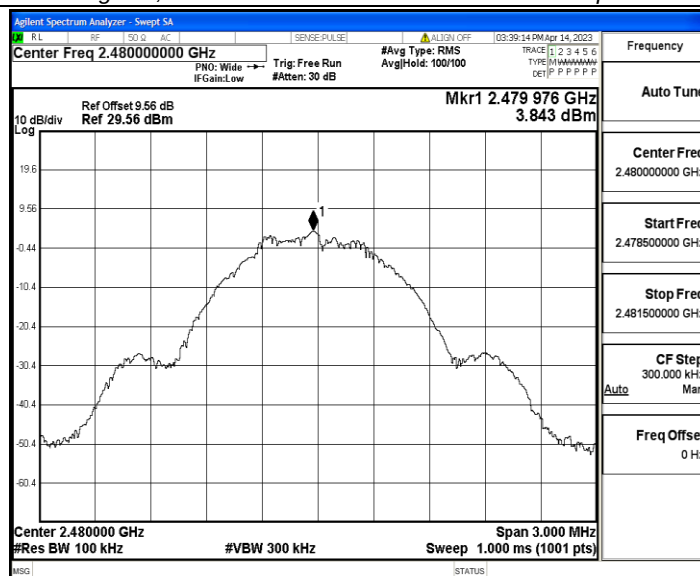
BLE_1M_Ant1_2440_0~Reference



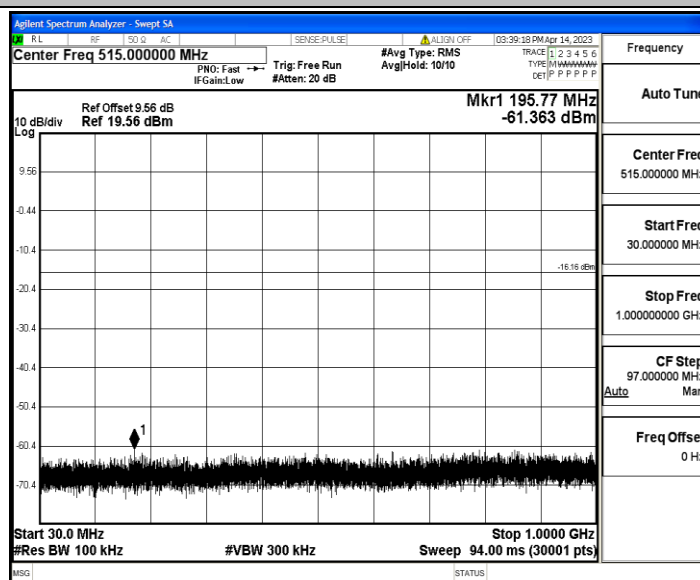
BLE_1M_Ant1_2440_30~1000



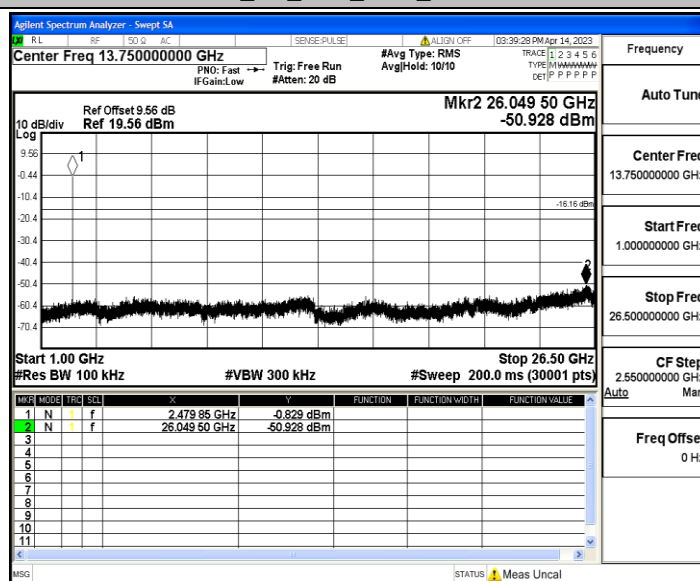
BLE_1M_Ant1_2440_1000~26500



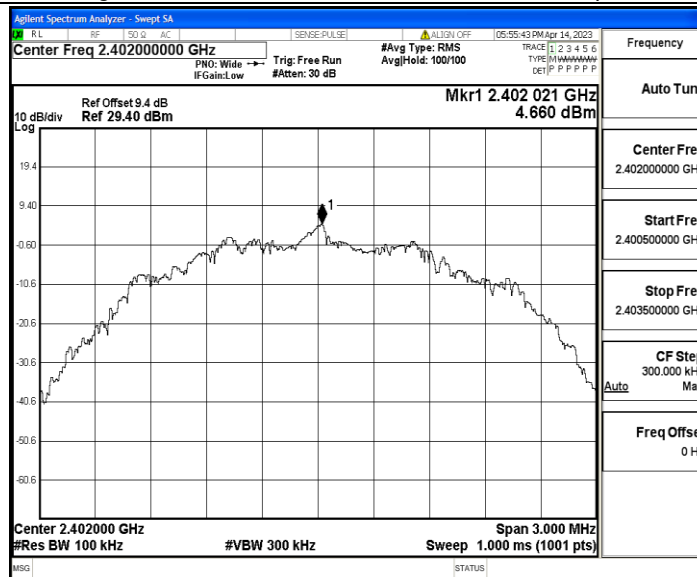
BLE_1M_Ant1_2480_0~Reference



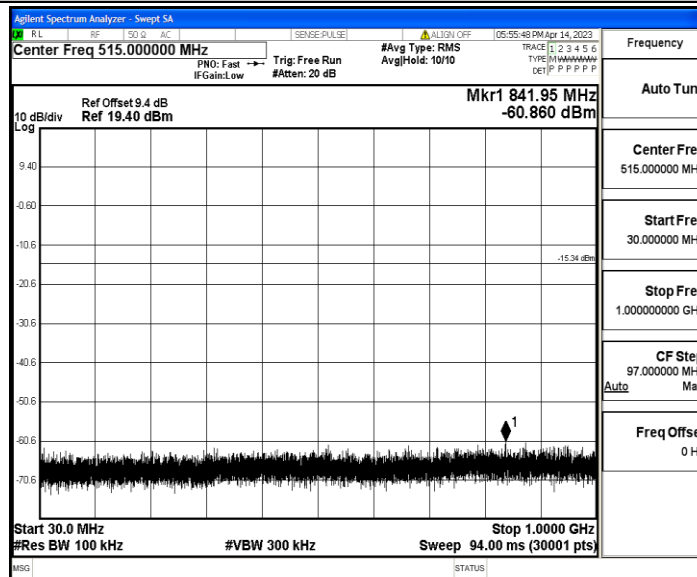
BLE_1M_Ant1_2480_30~1000



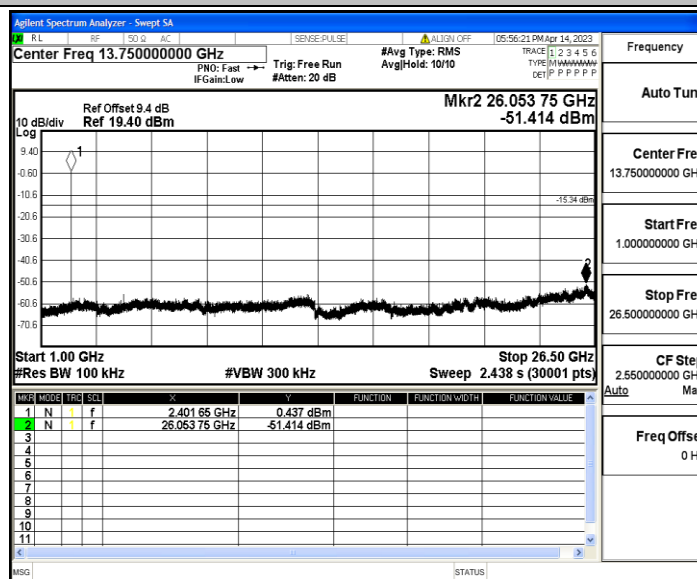
BLE_1M_Ant1_2480_1000~26500



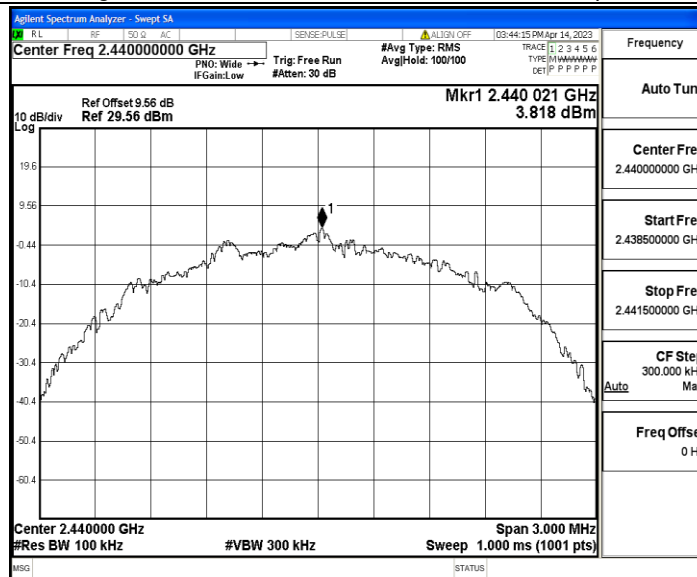
BLE_2M_Ant1_2402_0~Reference



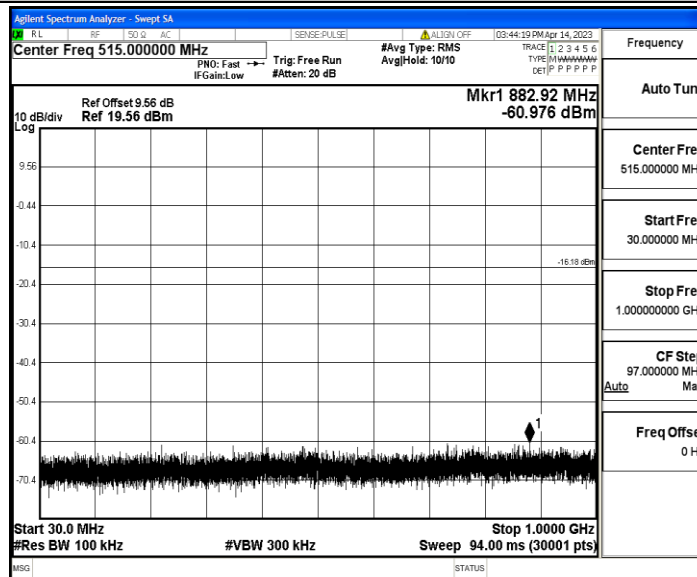
BLE_2M_Ant1_2402_30~1000



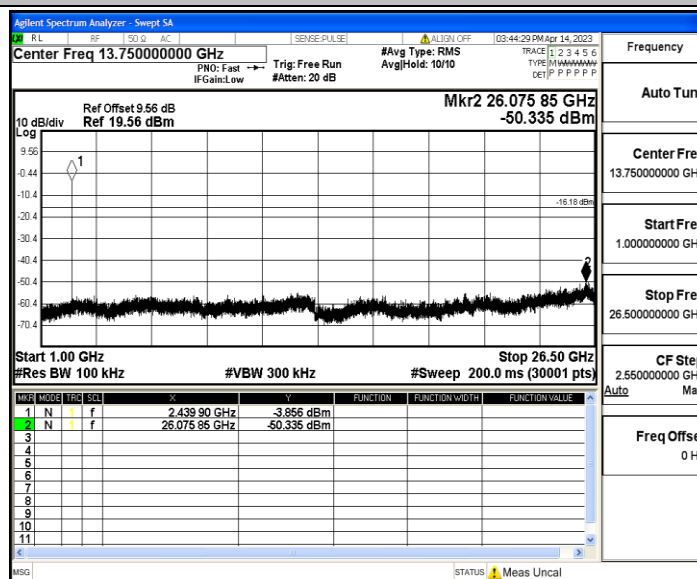
BLE_2M_Ant1_2402_1000~26500



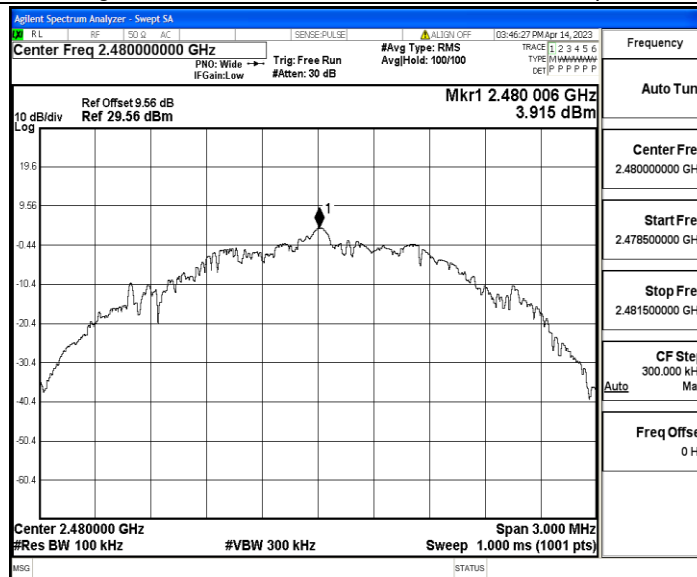
BLE_2M_Ant1_2440_0~Reference



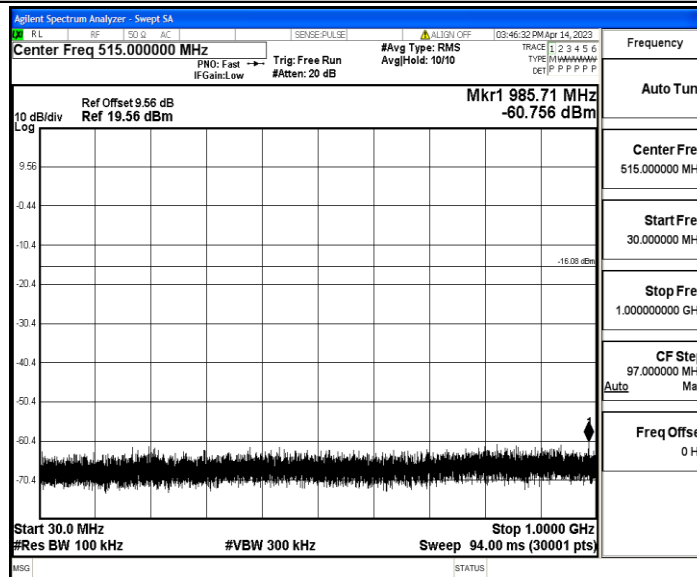
BLE_2M_Ant1_2440_30~1000



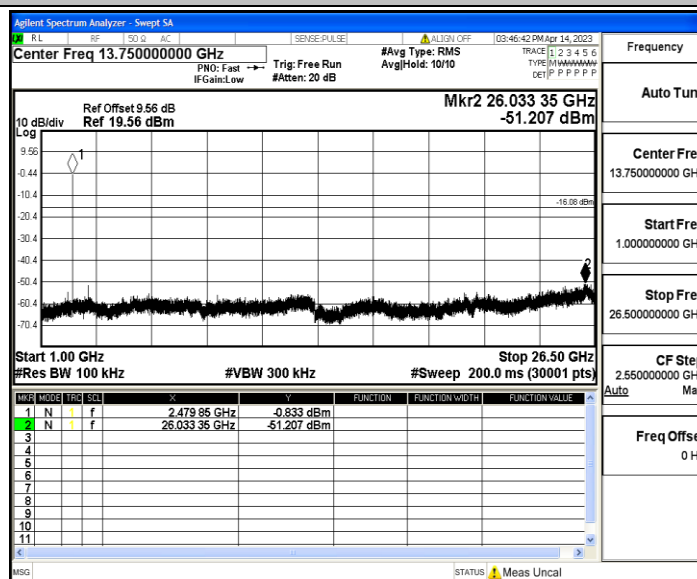
BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



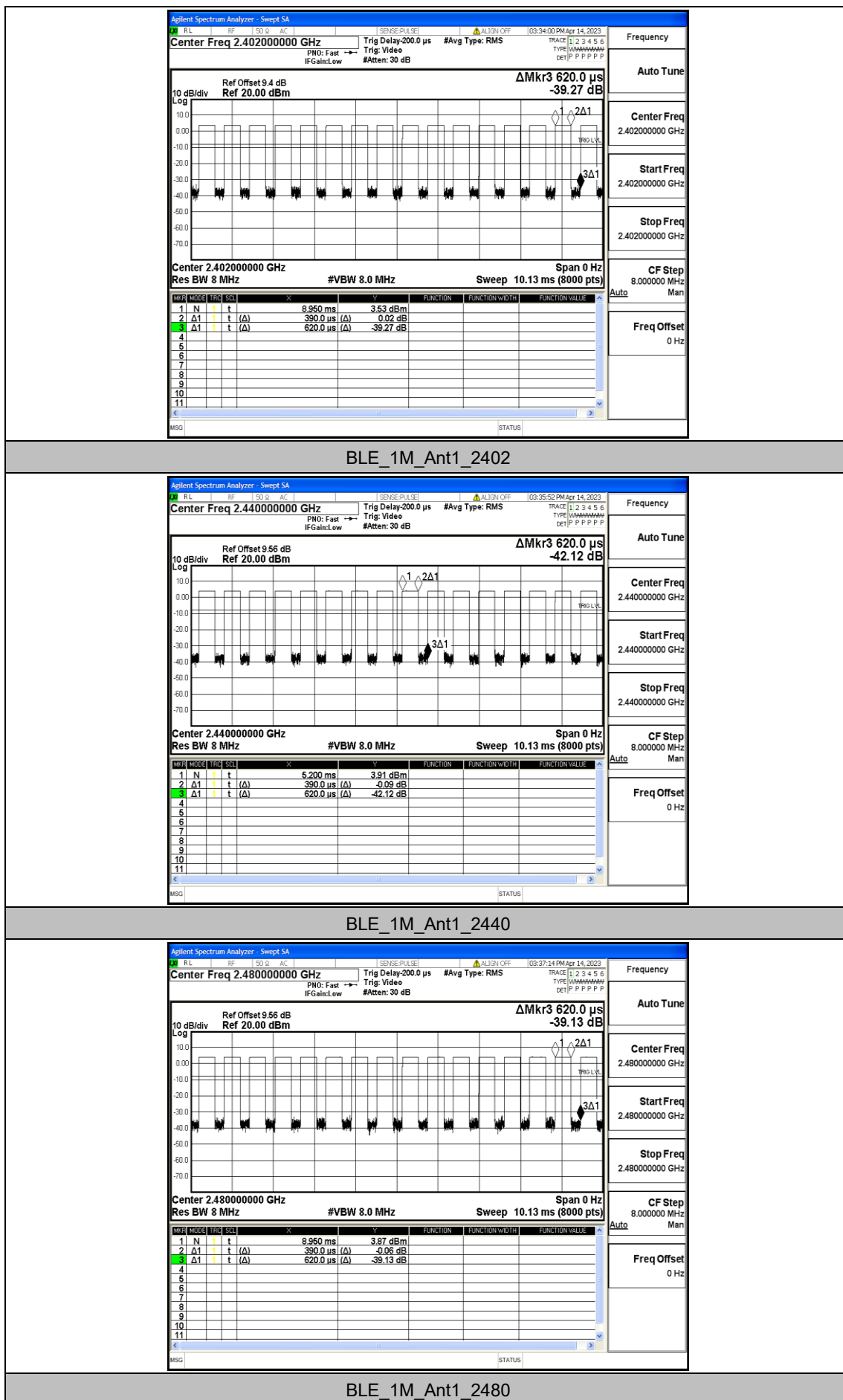
BLE_2M_Ant1_2480_1000~26500

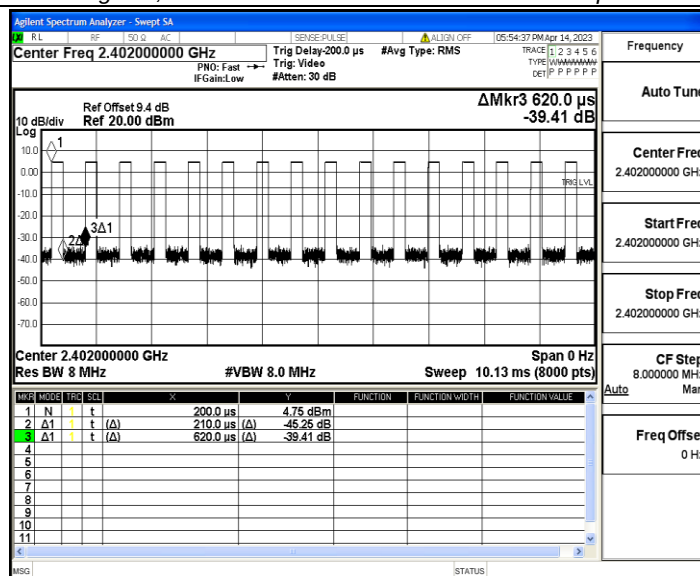
Appendix G: Duty Cycle

Test Result

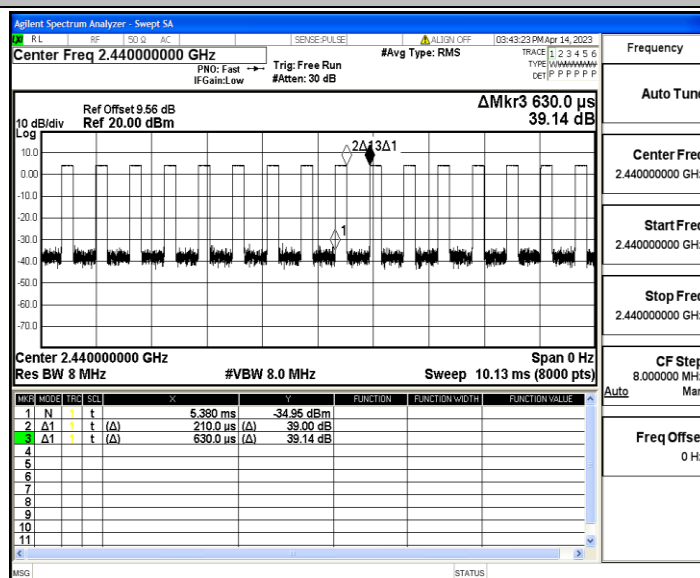
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.39	0.62	62.90	2.56
		2440	0.39	0.62	62.90	2.56
		2480	0.39	0.62	62.90	2.56
BLE_2M	Ant1	2402	0.21	0.62	33.87	4.76
		2440	0.21	0.63	33.33	4.76
		2480	0.21	0.63	33.33	4.76

Test Graphs

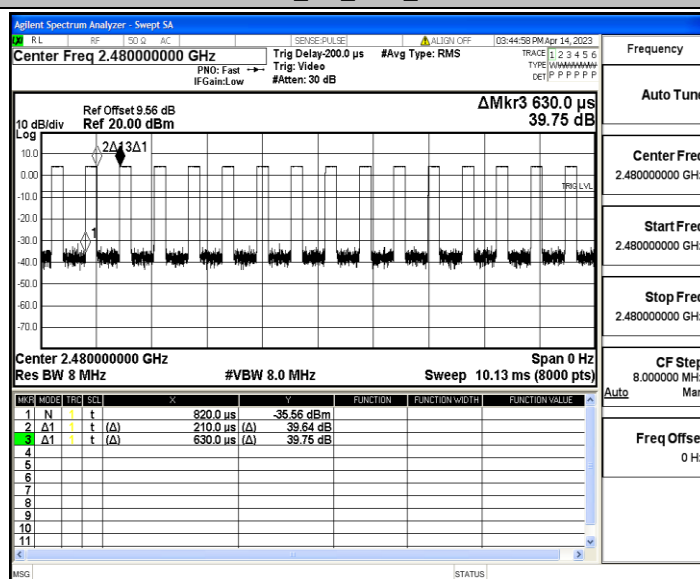




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Appendix H: Emissions in Restricted Bands

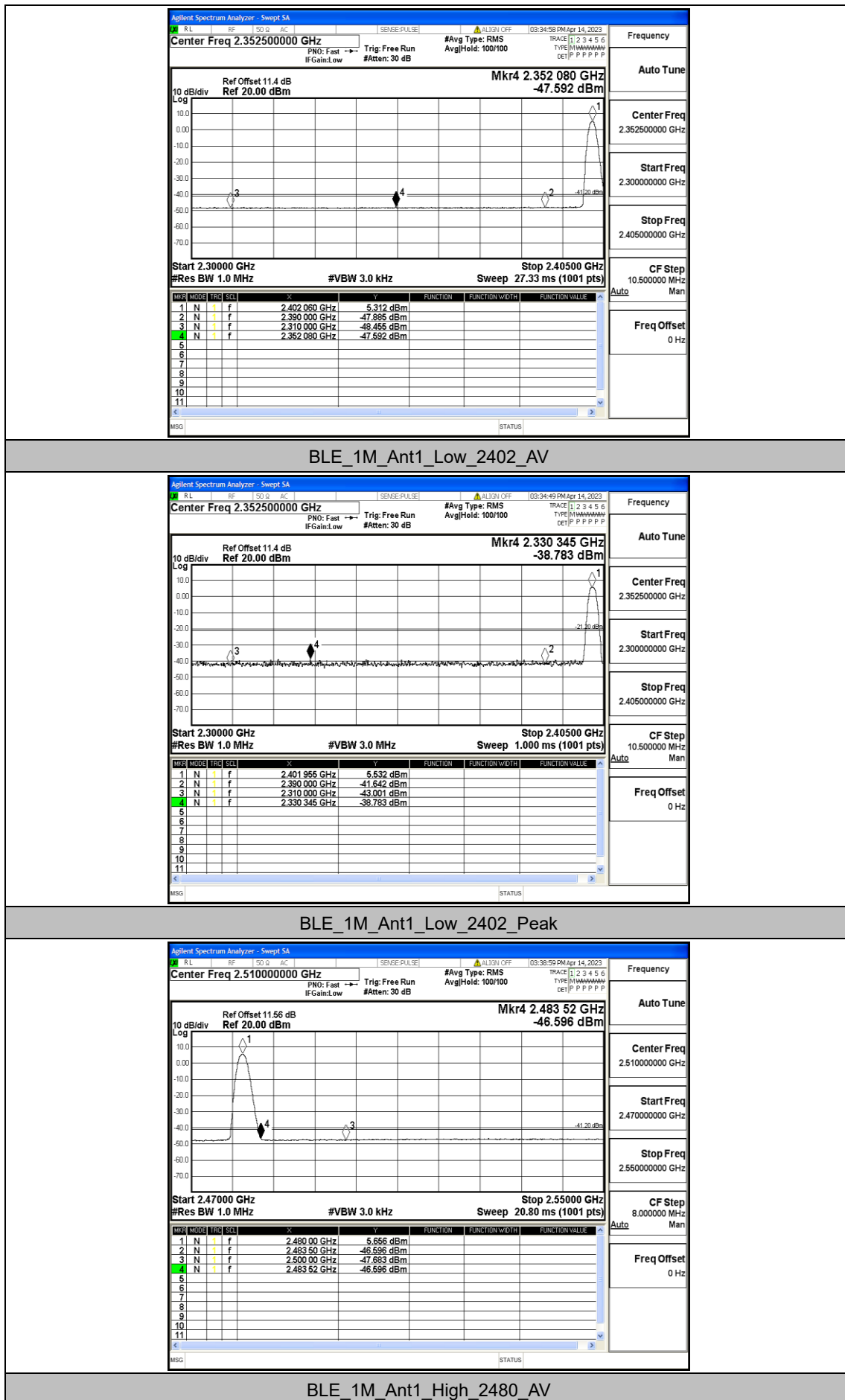
Test Result

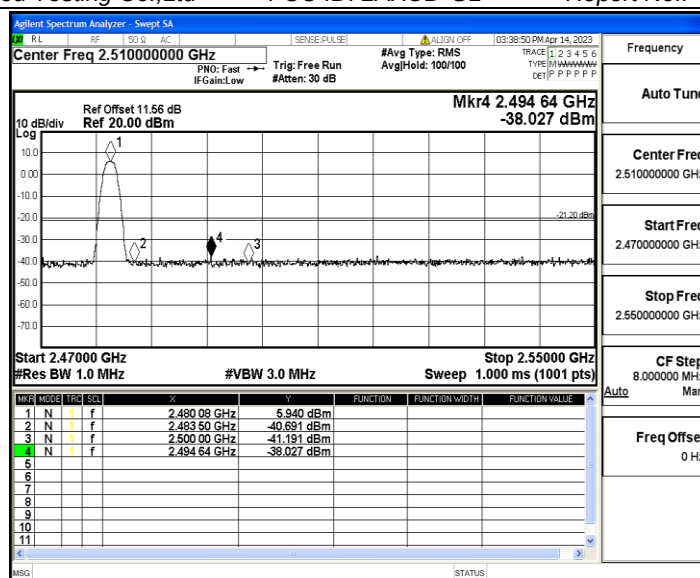
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.46	≤-41.20	PASS
				AV	2352.080	-47.59	≤-41.20	PASS
				AV	2390.000	-47.89	≤-41.20	PASS
				Peak	2310.000	-43	≤-21.20	PASS
				Peak	2330.345	-38.78	≤-21.20	PASS
				Peak	2390.000	-41.64	≤-21.20	PASS
		High	2480	AV	2483.500	-46.6	≤-41.20	PASS
				AV	2483.520	-46.6	≤-41.20	PASS
				AV	2500.000	-47.68	≤-41.20	PASS
				Peak	2483.500	-40.69	≤-21.20	PASS
				Peak	2494.640	-38.03	≤-21.20	PASS
				Peak	2500.000	-41.19	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-48.14	≤-41.20	PASS
				AV	2384.000	-47.32	≤-41.20	PASS
				AV	2390.000	-47.76	≤-41.20	PASS
				Peak	2310.000	-42.14	≤-21.20	PASS
				Peak	2359.955	-38.79	≤-21.20	PASS
				Peak	2390.000	-40.35	≤-21.20	PASS
		High	2480	AV	2483.500	-44.18	≤-41.20	PASS
				AV	2483.520	-44.18	≤-41.20	PASS
				AV	2500.000	-47.28	≤-41.20	PASS
				Peak	2483.500	-39.2	≤-21.20	PASS
				Peak	2487.200	-37.31	≤-21.20	PASS
				Peak	2500.000	-41.18	≤-21.20	PASS

Note:

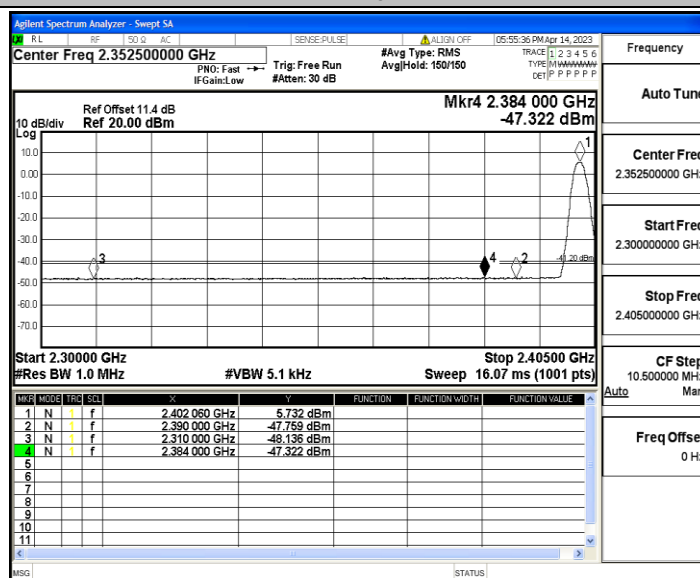
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

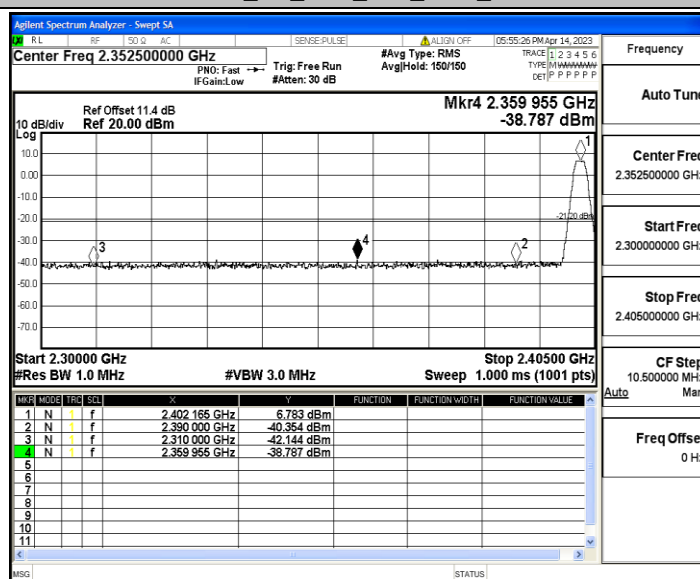




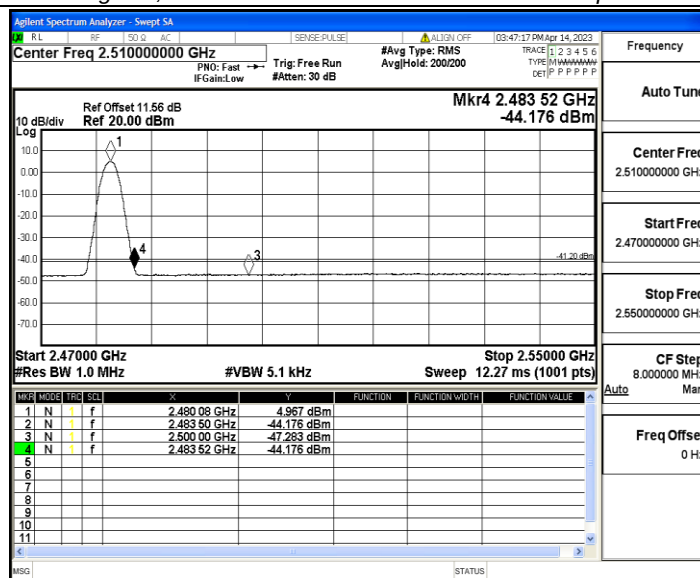
BLE_1M_Ant1_High_2480_Peak



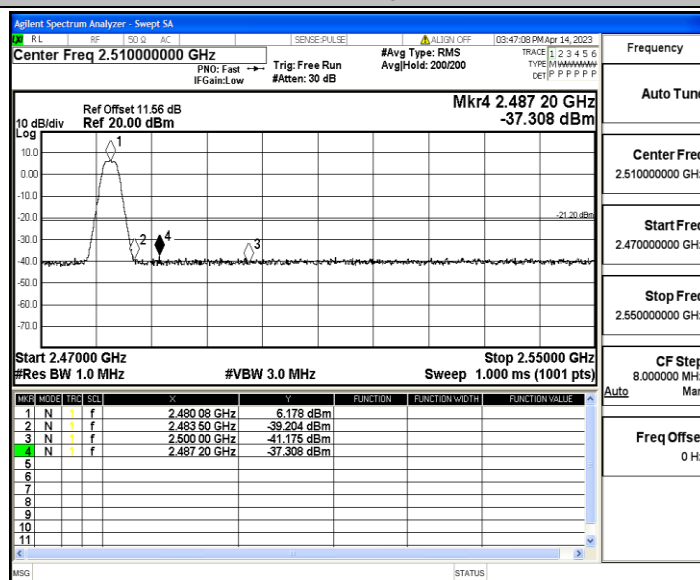
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak