

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

Product Name: 4K Set Top Box

Trade Mark: Homatics

Test Model: SX6BHET

FCC ID: 2AOVU-SX6BHET

Environmental Conditions

Temperature:	23.4℃
Relative Humidity:	49%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

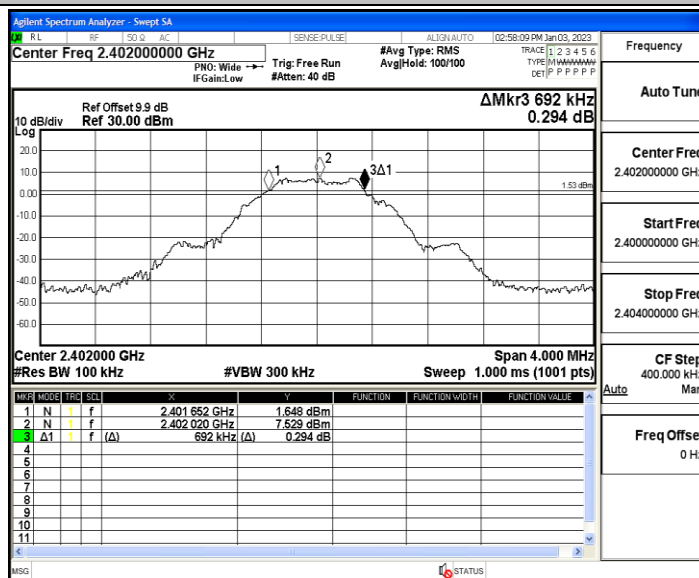
Appendix A: DTS Bandwidth

Test Result

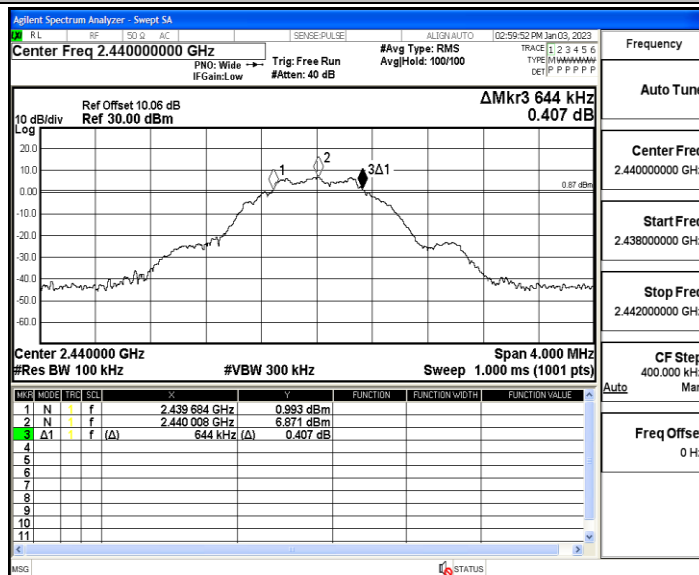
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.692	2401.652	2402.344	0.5	PASS
		2440	0.644	2439.684	2440.328	0.5	PASS
		2480	0.684	2479.648	2480.332	0.5	PASS
BLE_2M	Ant1	2402	1.152	2401.424	2402.576	0.5	PASS
		2440	1.148	2439.440	2440.588	0.5	PASS
		2480	1.192	2479.352	2480.544	0.5	PASS

Test Graphs

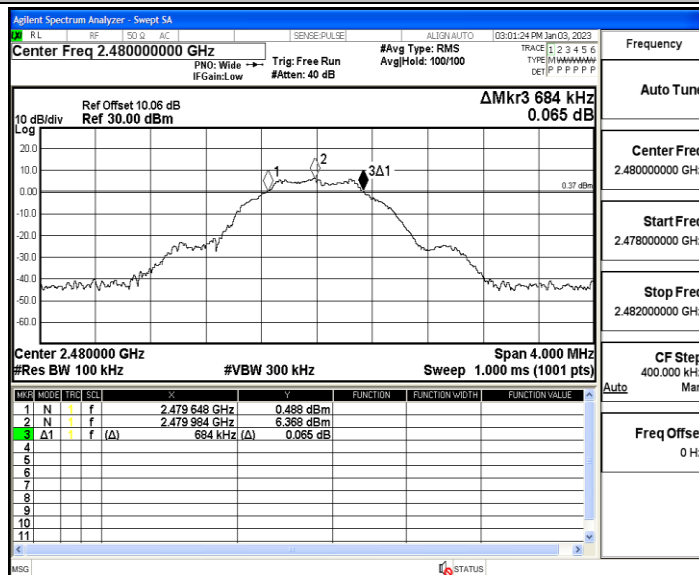
BLE_1M_Ant1_2402



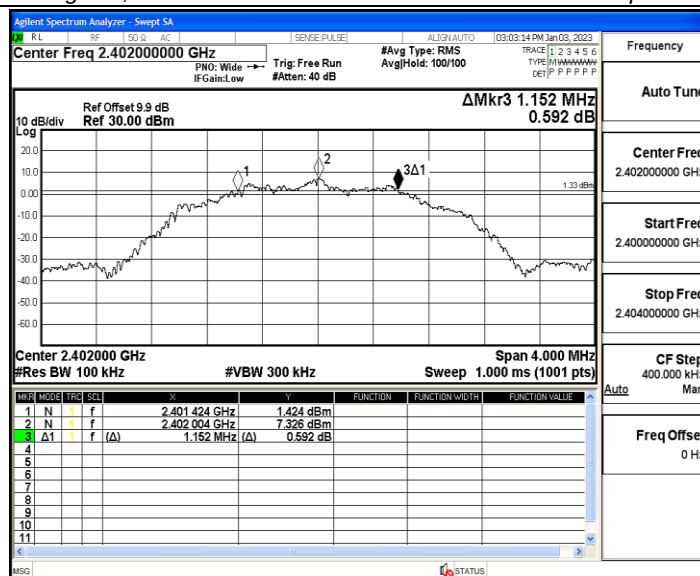
BLE_1M_Ant1_2440



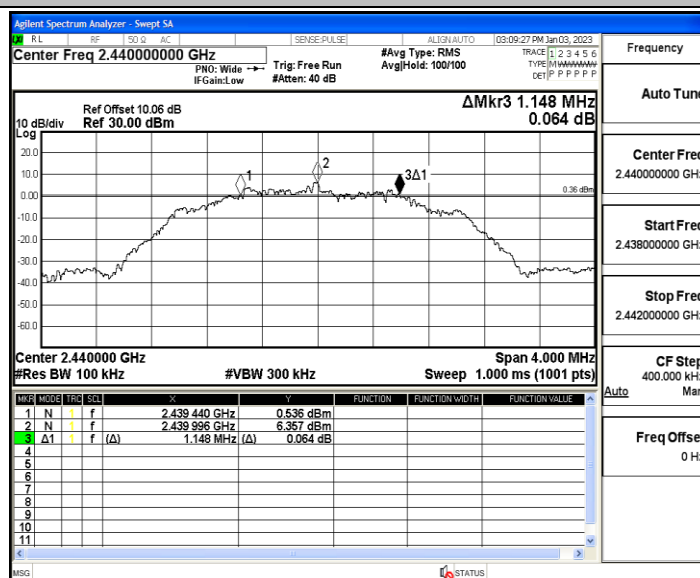
BLE_1M_Ant1_2480



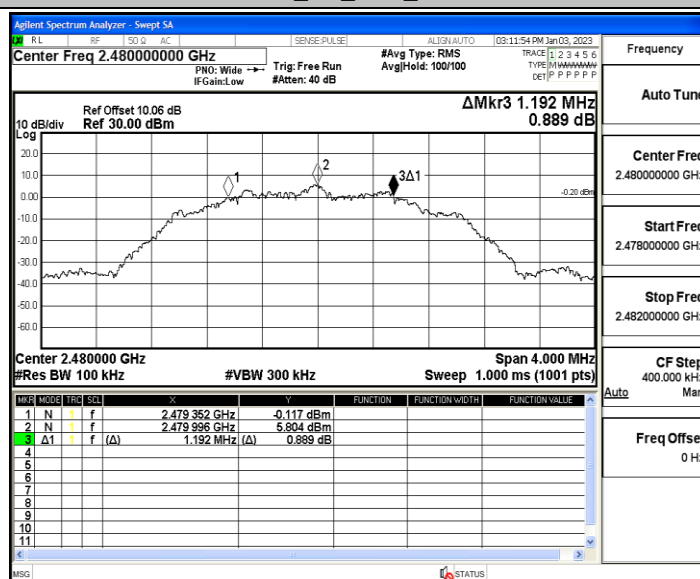
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



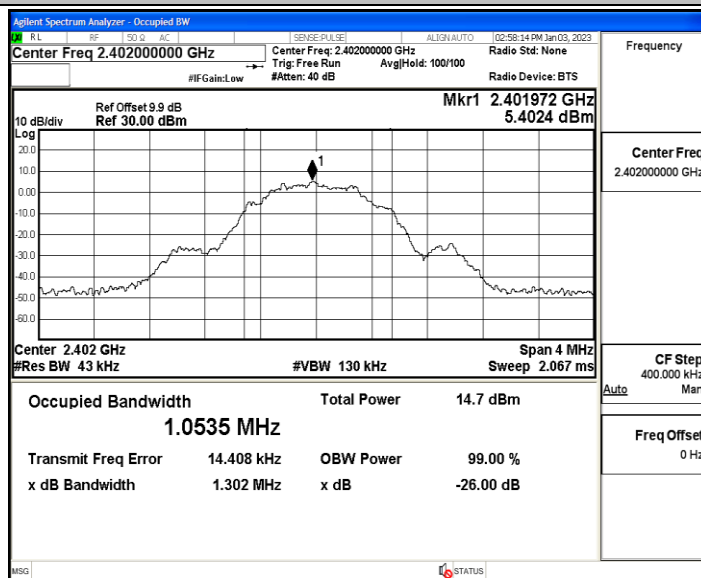
Appendix B: Occupied Channel Bandwidth

Test Result

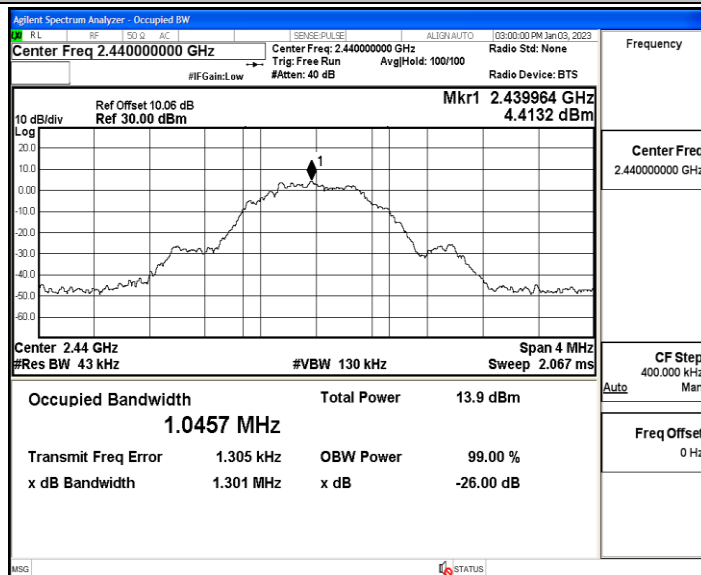
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0535	2401.4877	2402.5412	---	---
		2440	1.0457	2439.4785	2440.5242	---	---
		2480	1.0526	2479.4764	2480.5290	---	---
BLE_2M	Ant1	2402	2.0578	2400.9925	2403.0503	---	---
		2440	2.0615	2438.9815	2441.0430	---	---
		2480	2.0549	2478.9820	2481.0369	---	---

Test Graphs

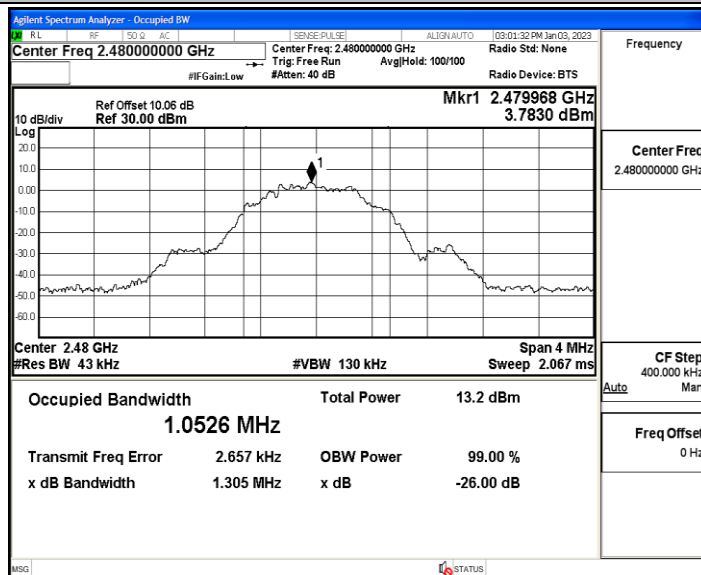
BLE_1M_Ant1_2402



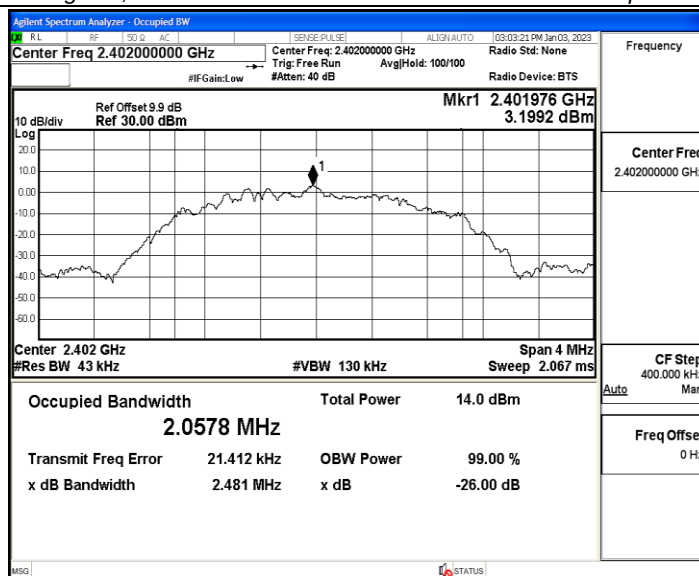
BLE_1M_Ant1_2440



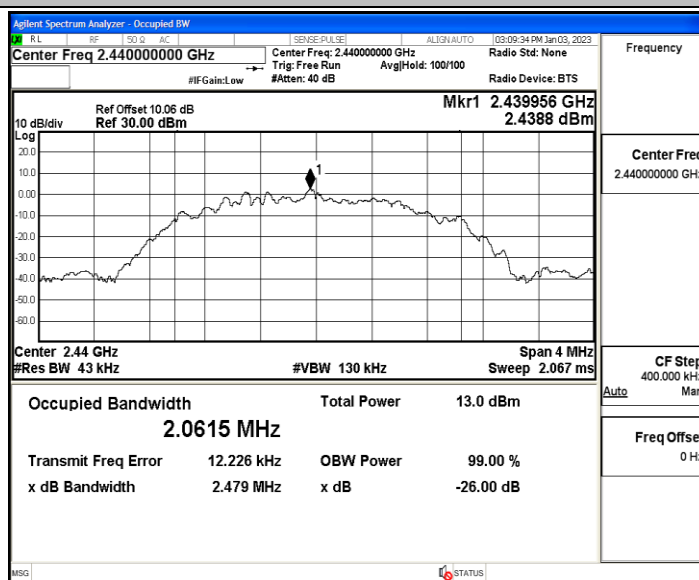
BLE_1M_Ant1_2480



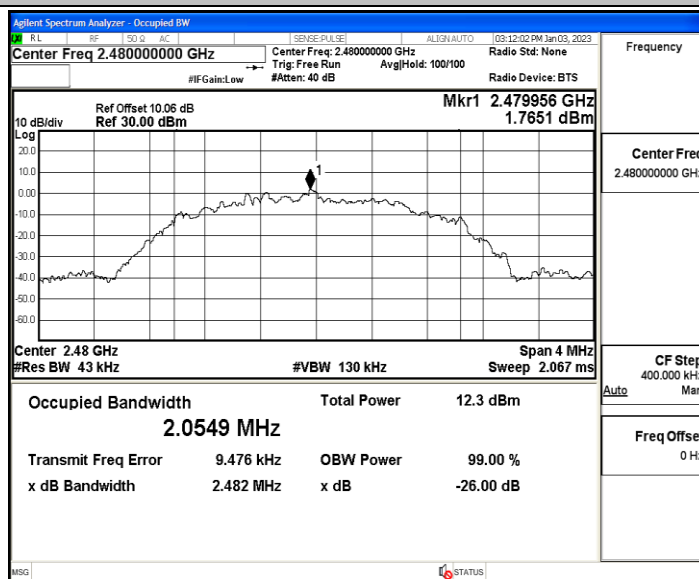
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



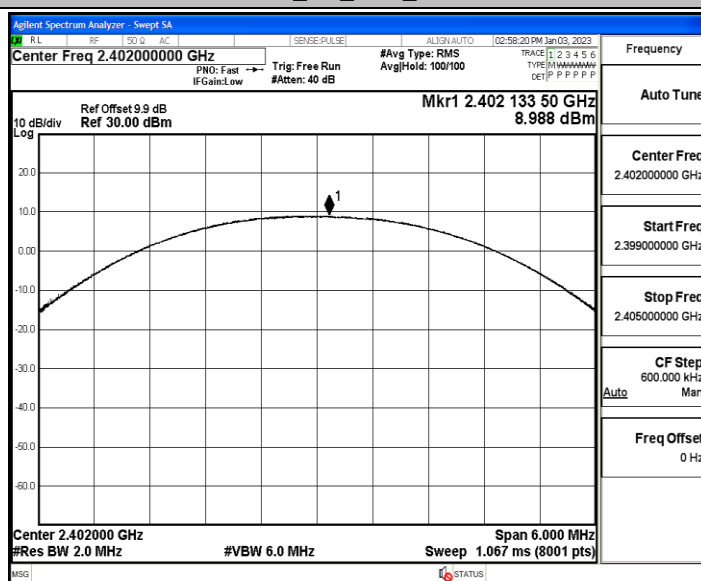
Appendix C: Maximum Peak conducted output power

Test Result

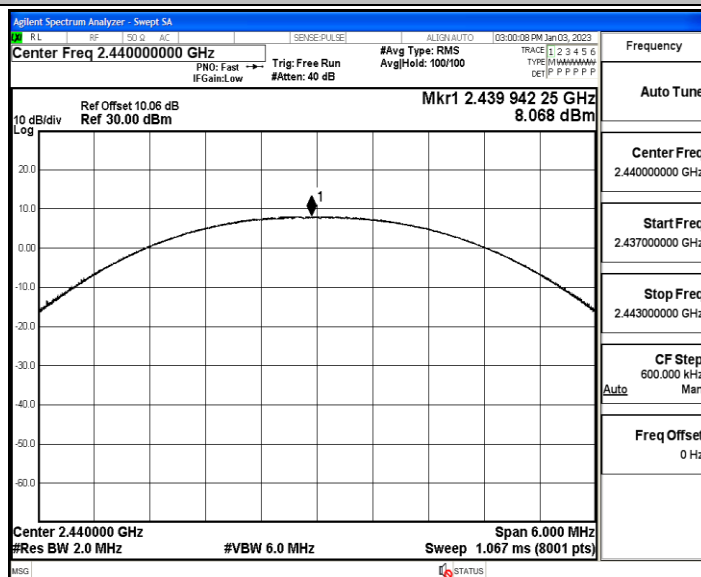
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	8.99	≤30	PASS
		2440	8.07	≤30	PASS
		2480	7.52	≤30	PASS
BLE_2M	Ant1	2402	8.87	≤30	PASS
		2440	7.99	≤30	PASS
		2480	7.49	≤30	PASS

Test Graphs

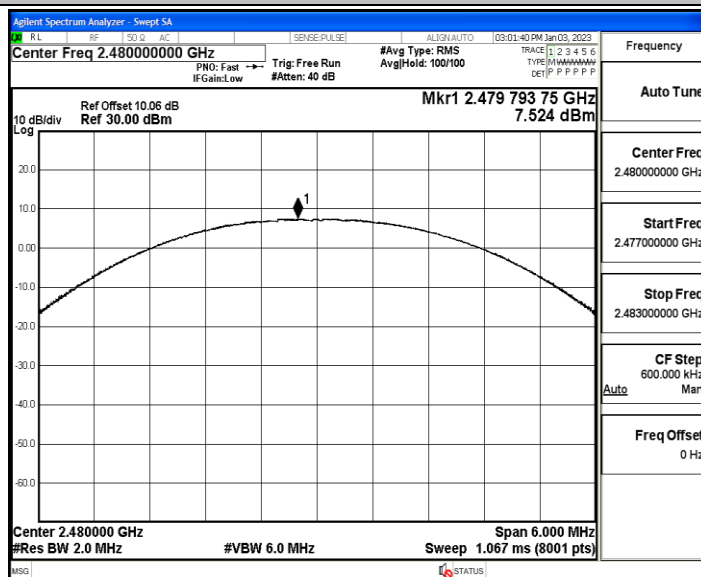
BLE_1M_Ant1_2402



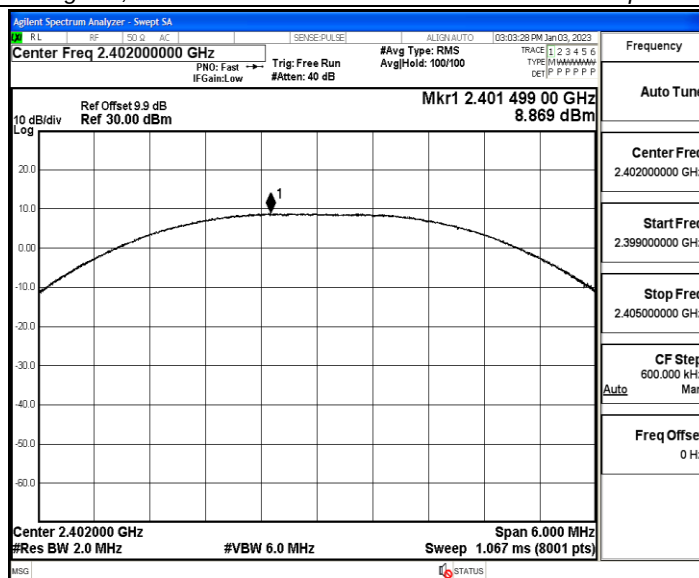
BLE_1M_Ant1_2440



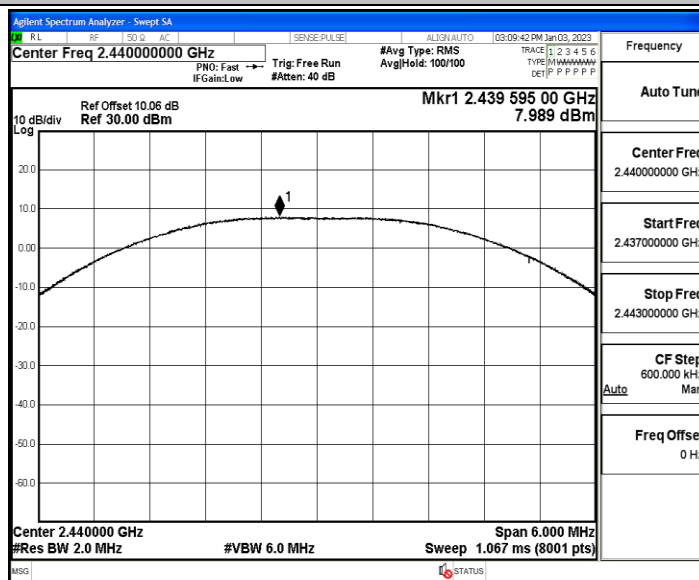
BLE_1M_Ant1_2480



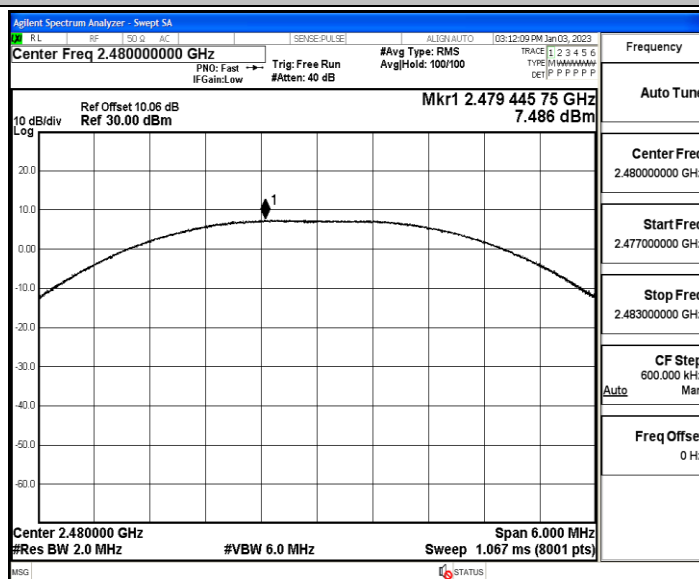
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



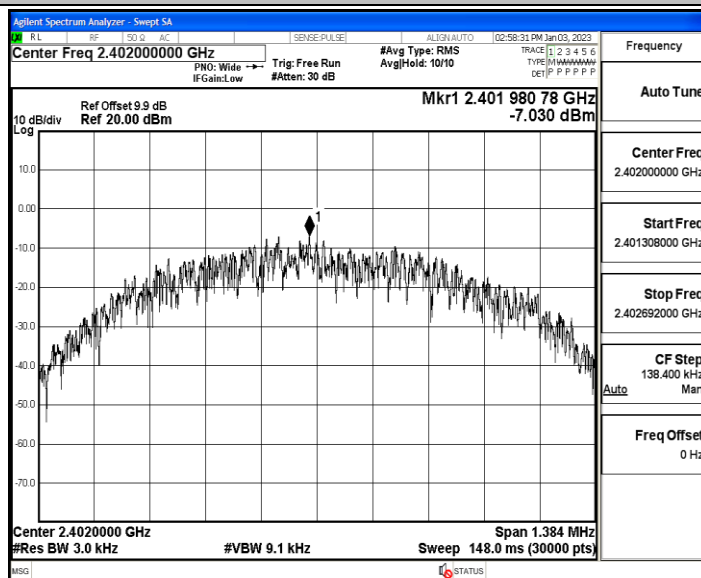
Appendix D: Maximum power spectral density

Test Result

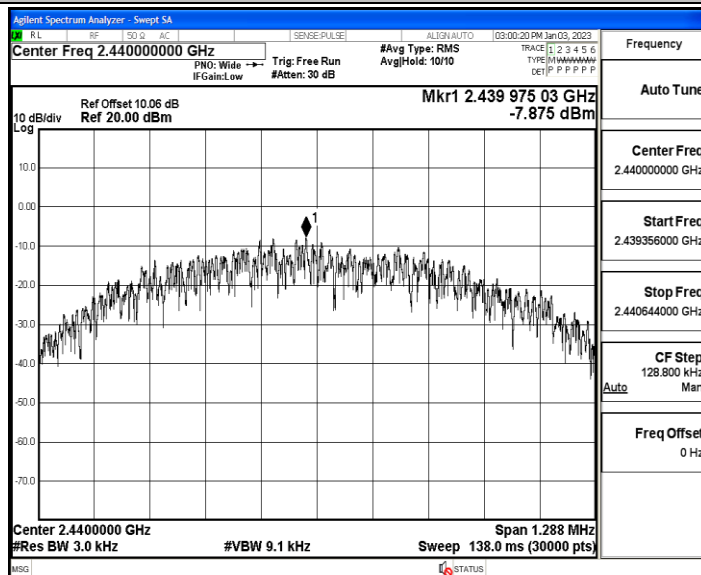
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-7.03	≤8.00	PASS
		2440	-7.88	≤8.00	PASS
		2480	-8.38	≤8.00	PASS
BLE_2M	Ant1	2402	-9.41	≤8.00	PASS
		2440	-10.39	≤8.00	PASS
		2480	-10.76	≤8.00	PASS

Test Graphs

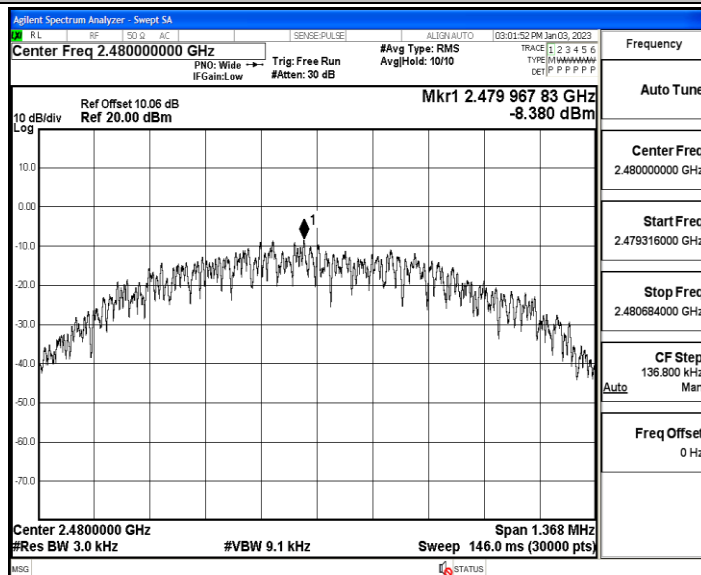
BLE_1M_Ant1_2402



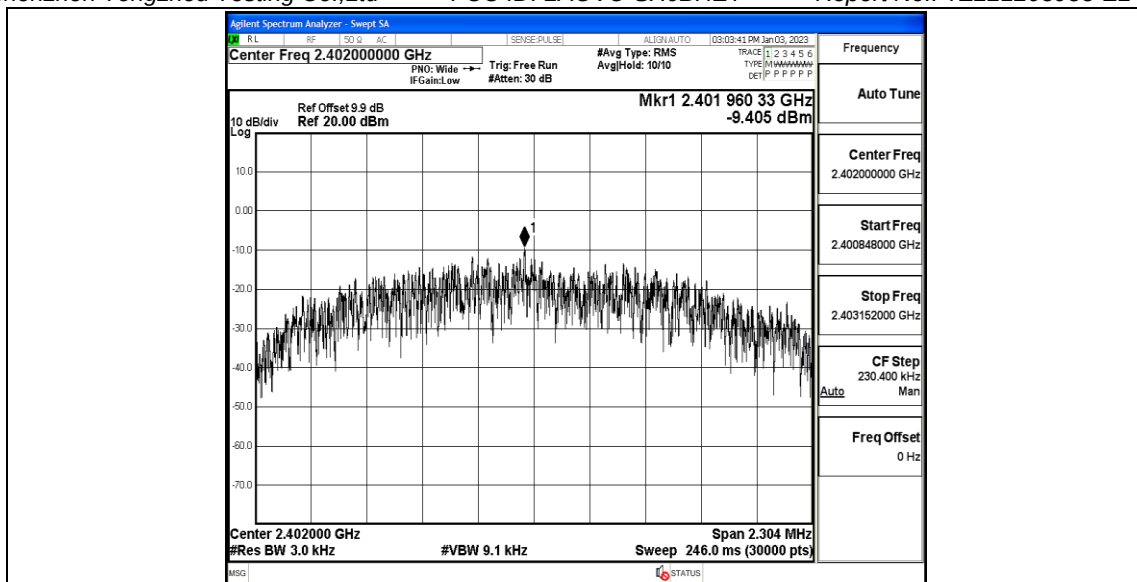
BLE_1M_Ant1_2440



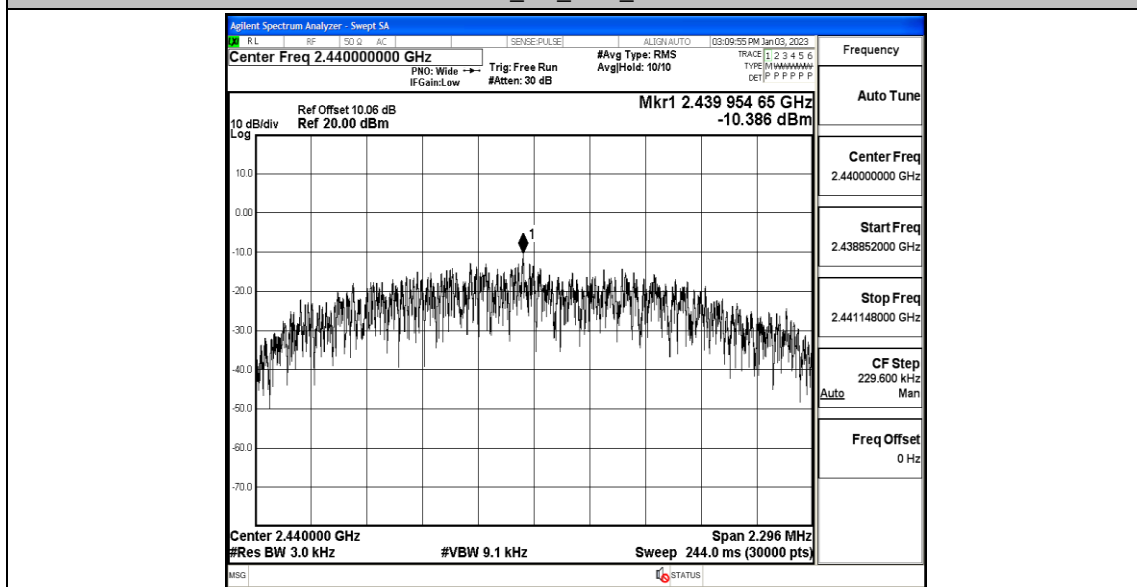
BLE_1M_Ant1_2480



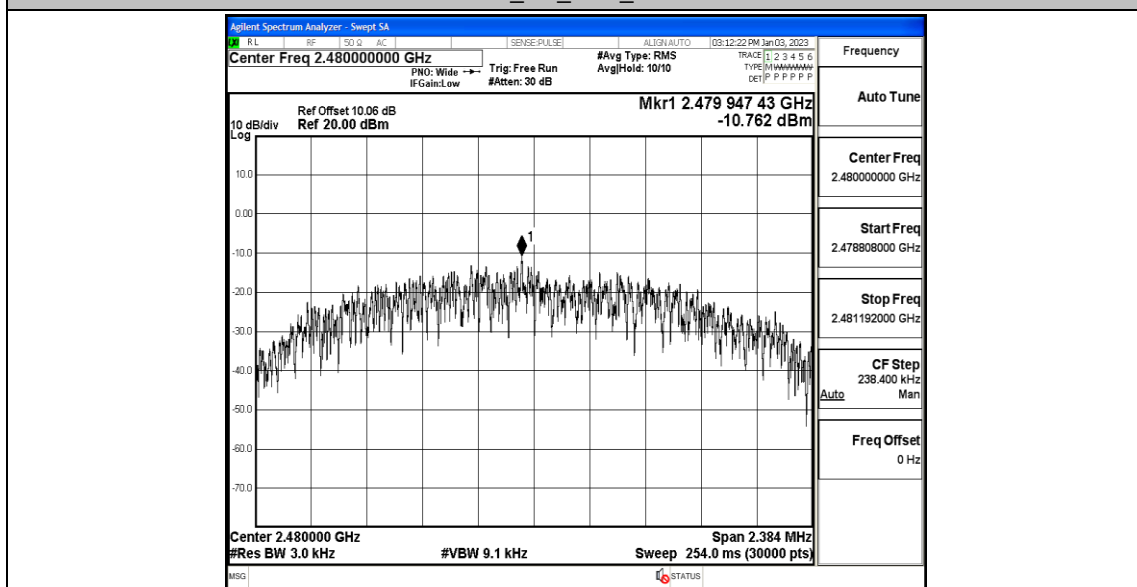
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



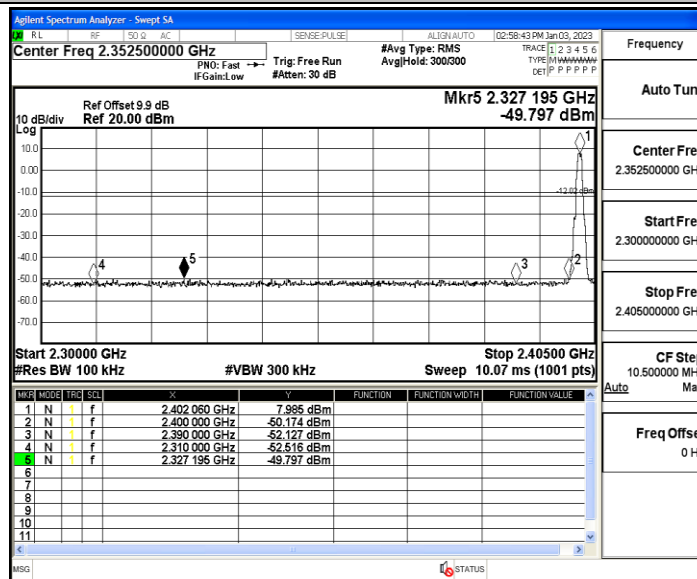
Appendix E: Band edge measurements

Test Result

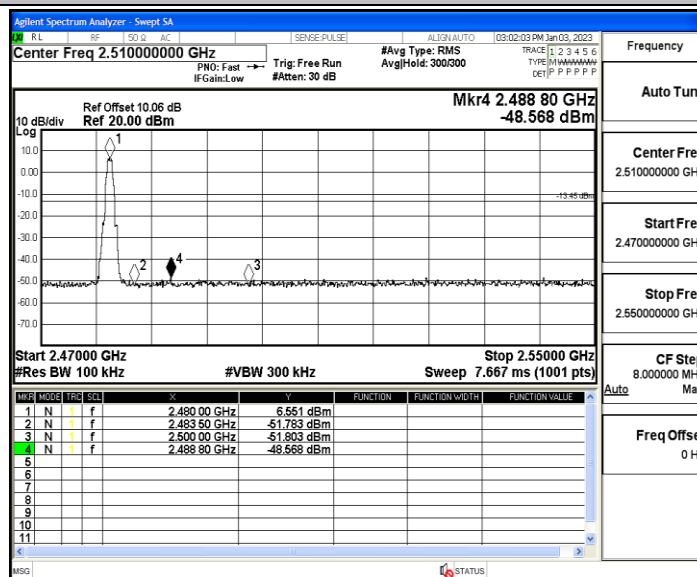
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	7.99	-49.8	≤-12.02	PASS
		High	2480	6.55	-48.57	≤-13.45	PASS
BLE_2M	Ant1	Low	2402	7.48	-31.29	≤-12.52	PASS
		High	2480	3.86	-48.3	≤-16.14	PASS

Test Graphs

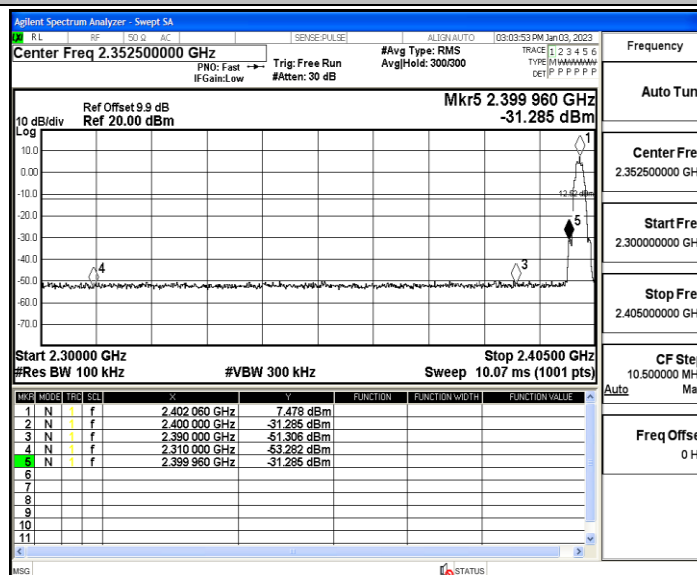
BLE_1M_Ant1_Low_2402



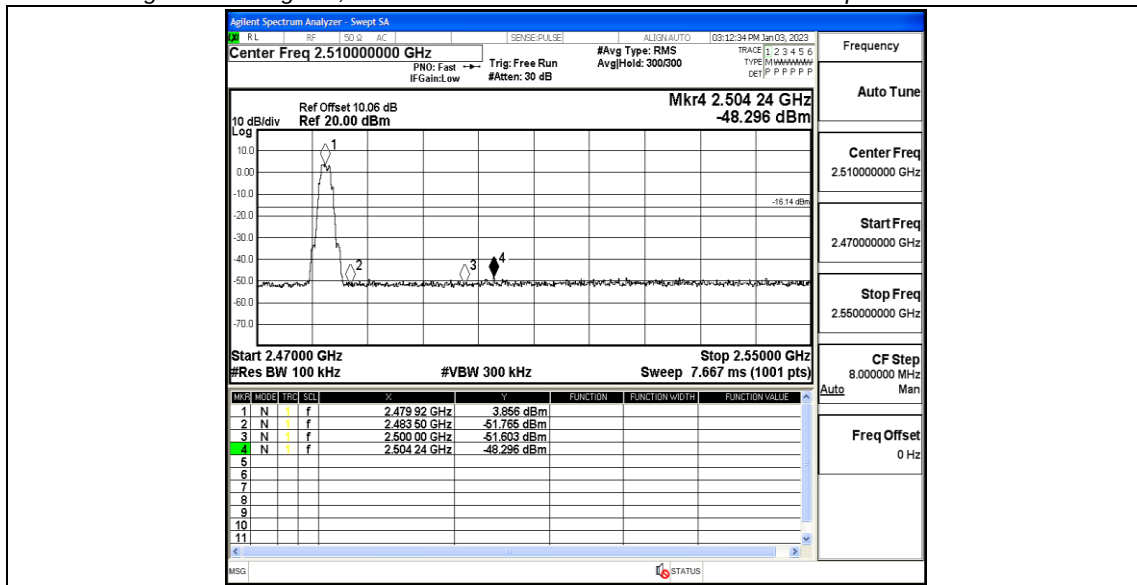
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480

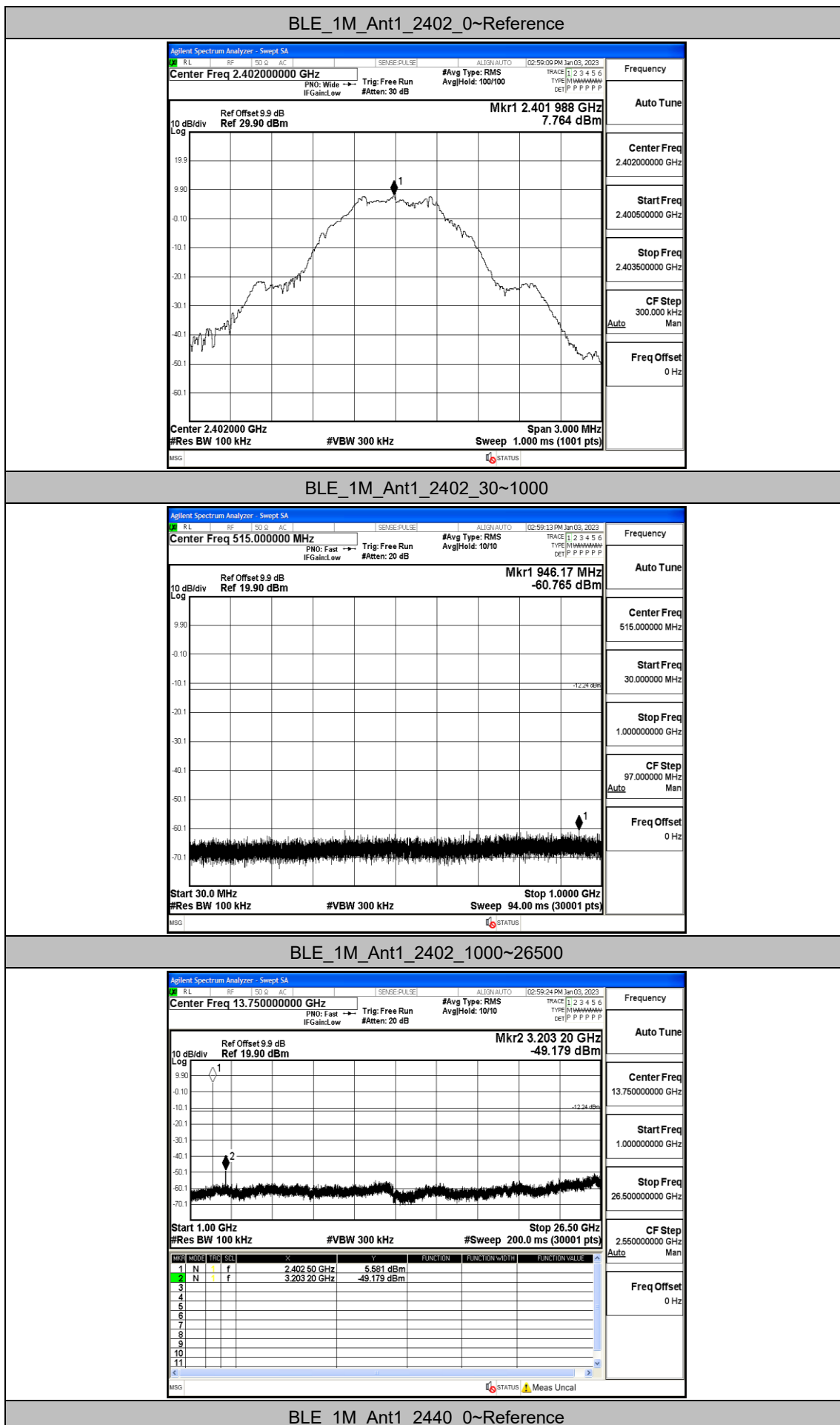


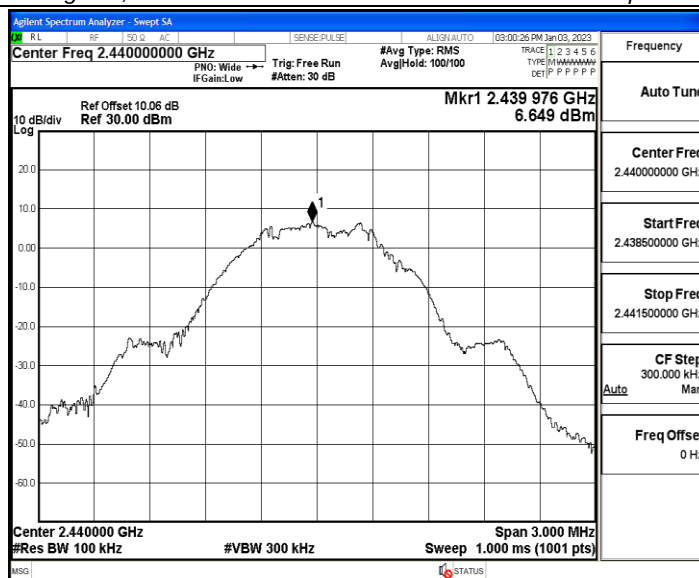
Appendix F: Conducted Spurious Emission

Test Result

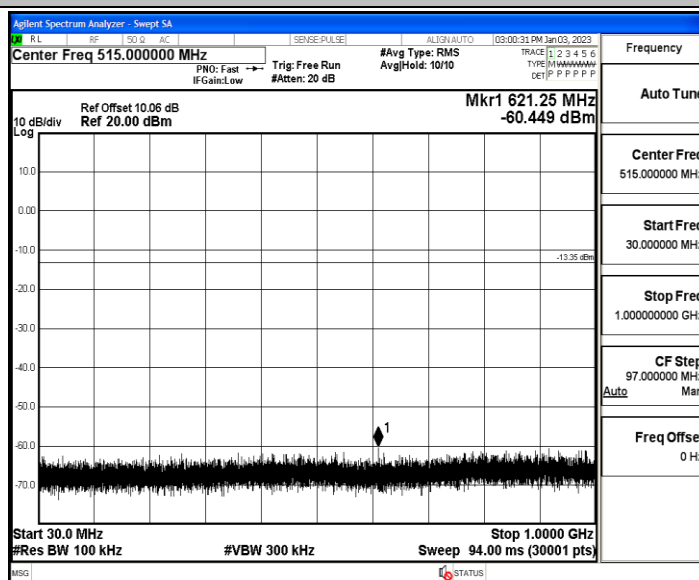
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	7.76	7.76	---	PASS
			30~1000	7.76	-60.77	≤-12.24	PASS
			1000~26500	7.76	-49.18	≤-12.24	PASS
		2440	Reference	6.65	6.65	---	PASS
			30~1000	6.65	-60.45	≤-13.35	PASS
			1000~26500	6.65	-50.87	≤-13.35	PASS
		2480	Reference	6.51	6.51	---	PASS
			30~1000	6.51	-60.22	≤-13.49	PASS
			1000~26500	6.51	-50.48	≤-13.49	PASS
BLE_2M	Ant1	2402	Reference	7.31	7.31	---	PASS
			30~1000	7.31	-60.1	≤-12.69	PASS
			1000~26500	7.31	-49.56	≤-12.69	PASS
		2440	Reference	6.35	6.35	---	PASS
			30~1000	6.35	-59.63	≤-13.65	PASS
			1000~26500	6.35	-51.13	≤-13.65	PASS
		2480	Reference	5.88	5.88	---	PASS
			30~1000	5.88	-59.85	≤-14.12	PASS
			1000~26500	5.88	-50.36	≤-14.12	PASS

Test Graphs

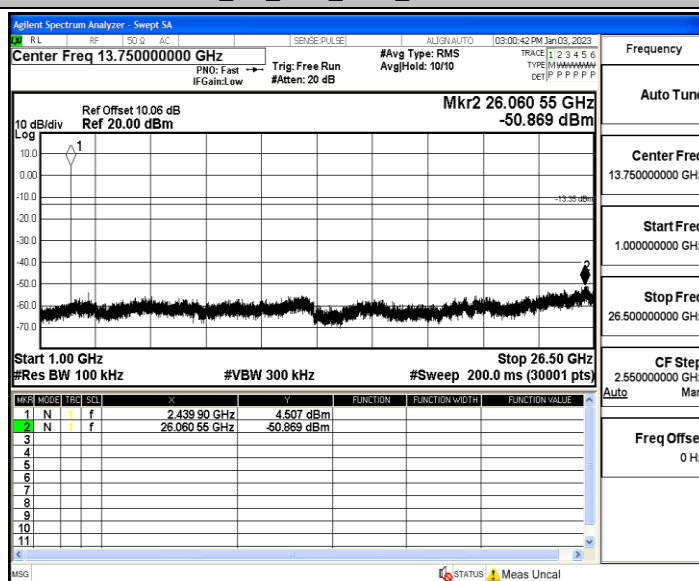




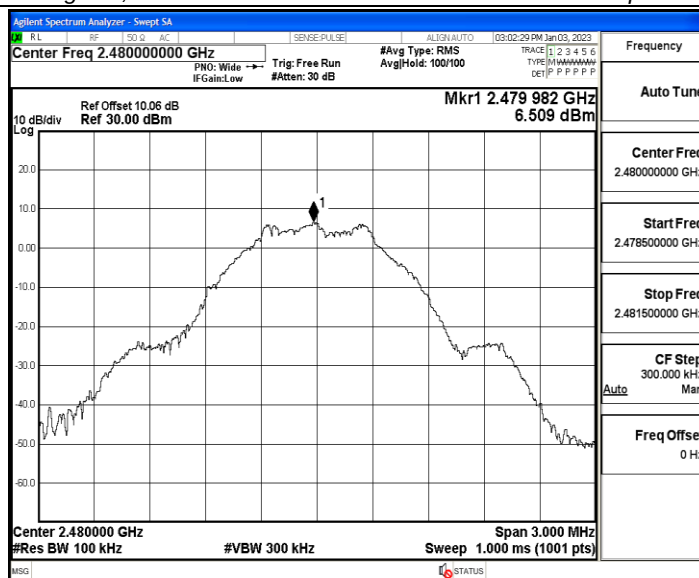
BLE_1M_Ant1_2440_30~1000



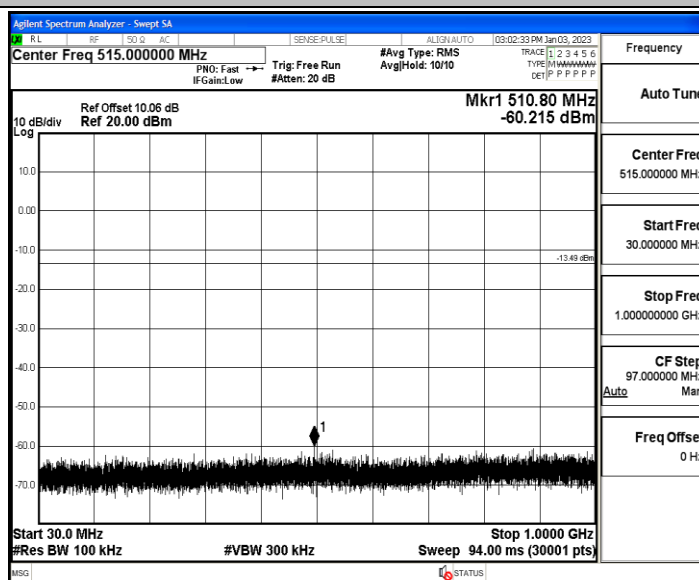
BLE_1M_Ant1_2440_1000~26500



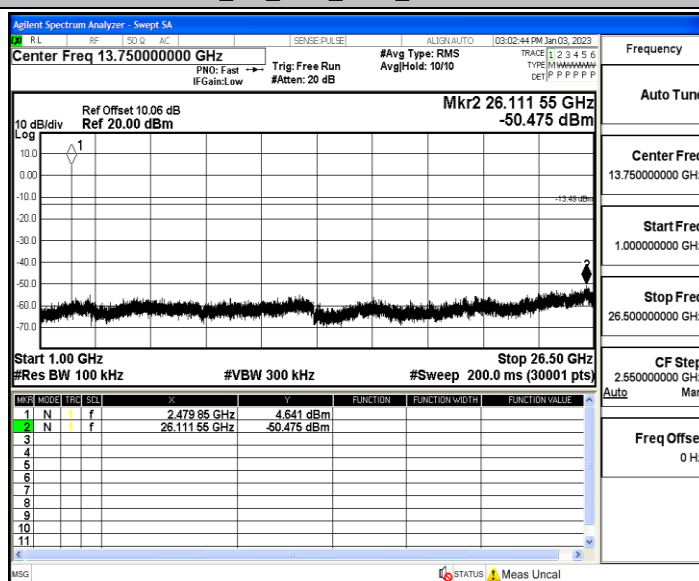
BLE_1M_Ant1_2480_0~Reference



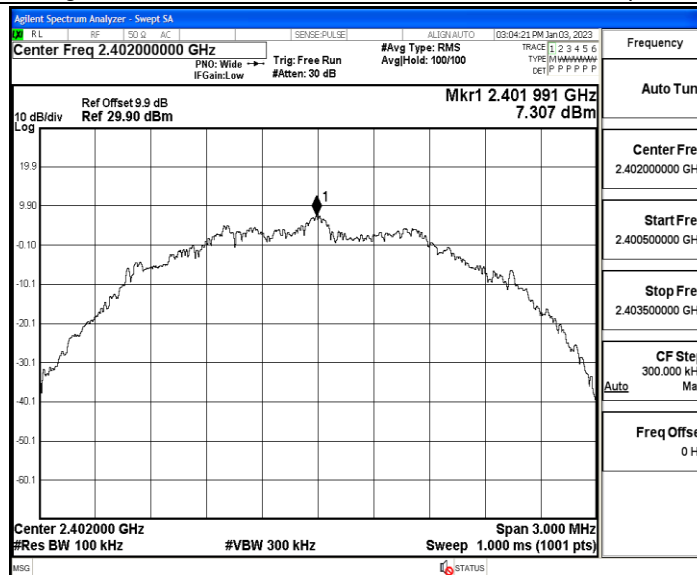
BLE_1M_Ant1_2480_30~1000



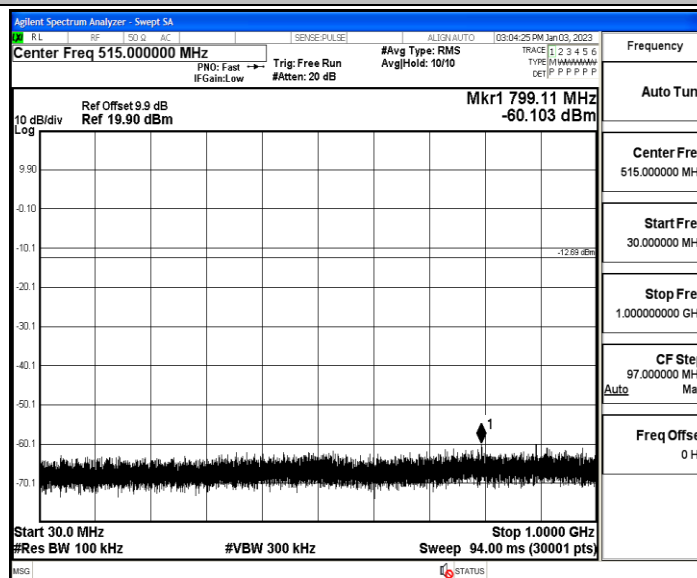
BLE_1M_Ant1_2480_1000~26500



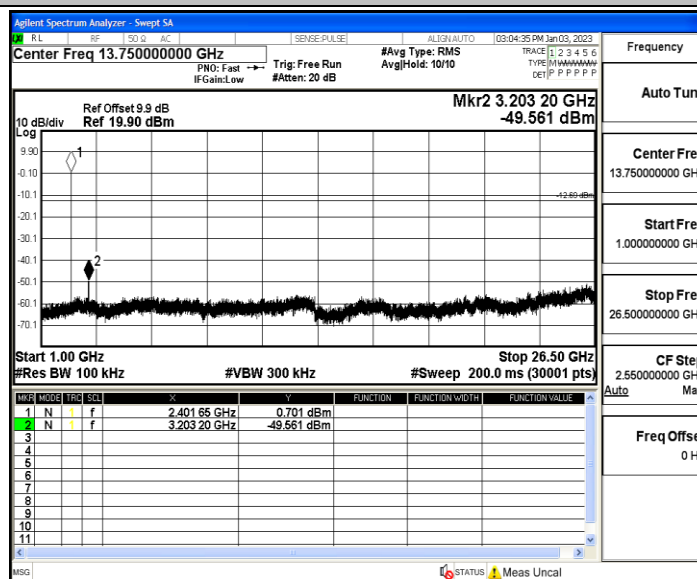
BLE_2M_Ant1_2402_0~Reference



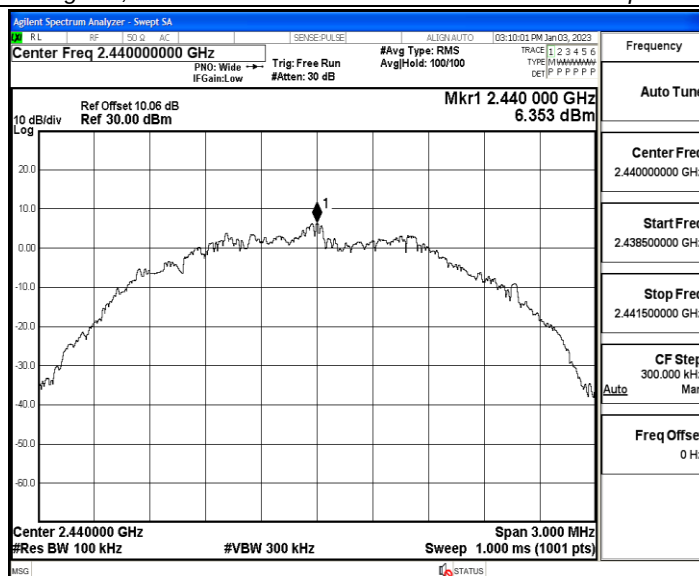
BLE_2M_Ant1_2402_30~1000



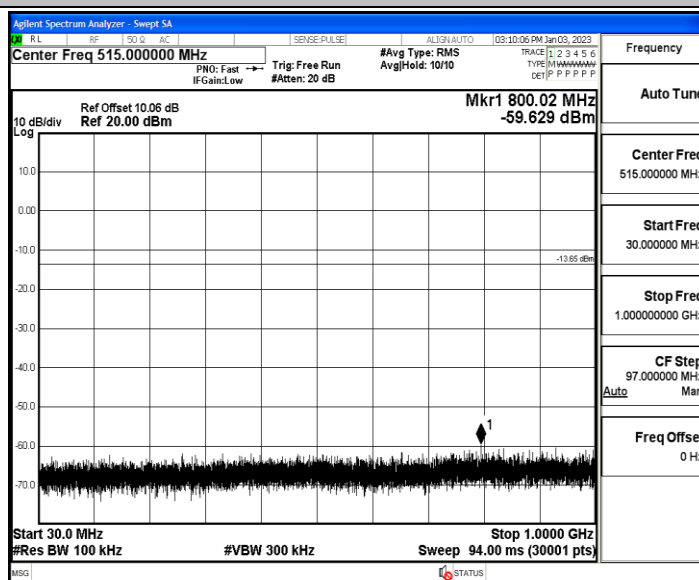
BLE_2M_Ant1_2402_1000~26500



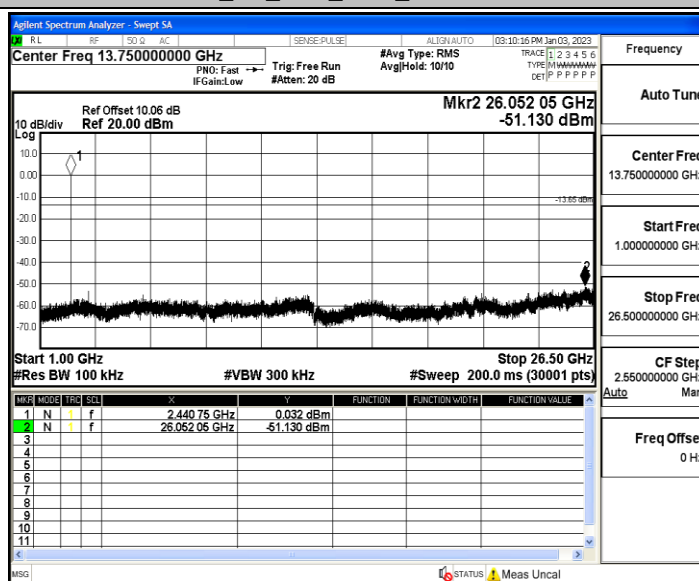
BLE_2M_Ant1_2440_0~Reference



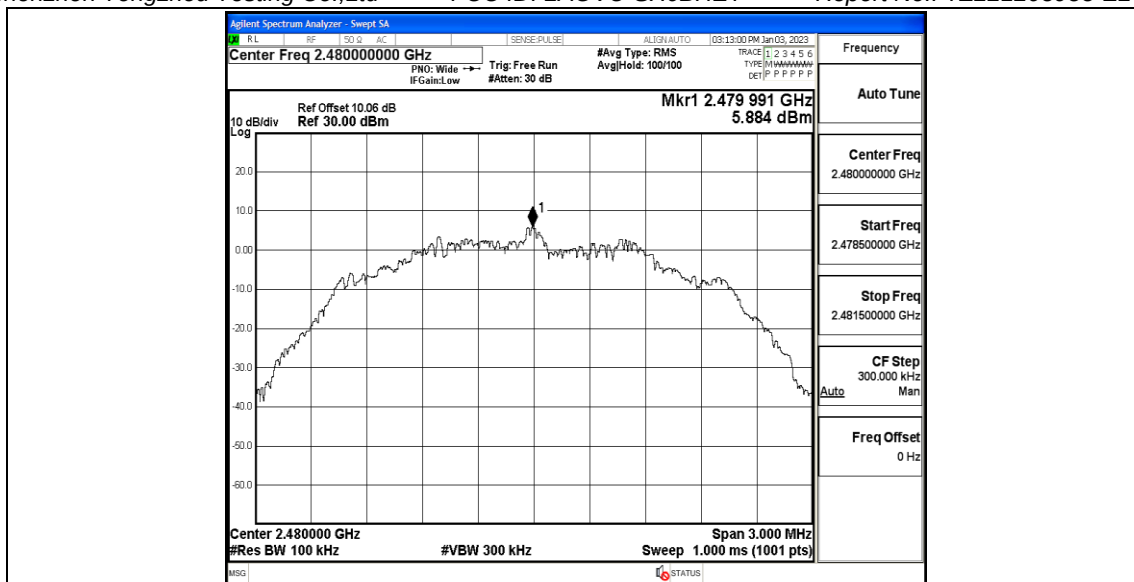
BLE_2M_Ant1_2440_30~1000



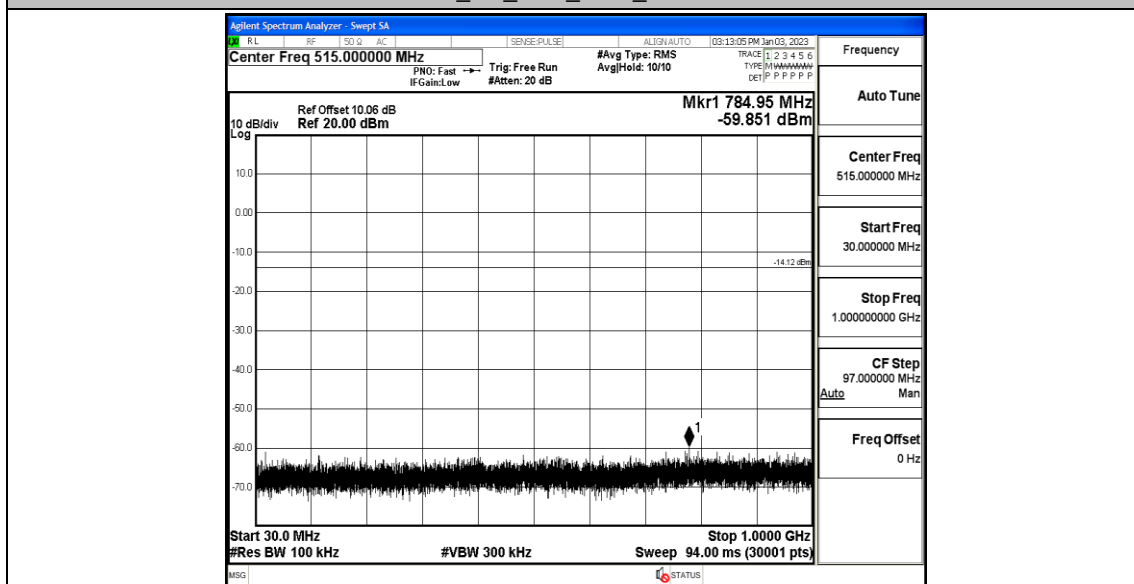
BLE_2M_Ant1_2440_1000~26500



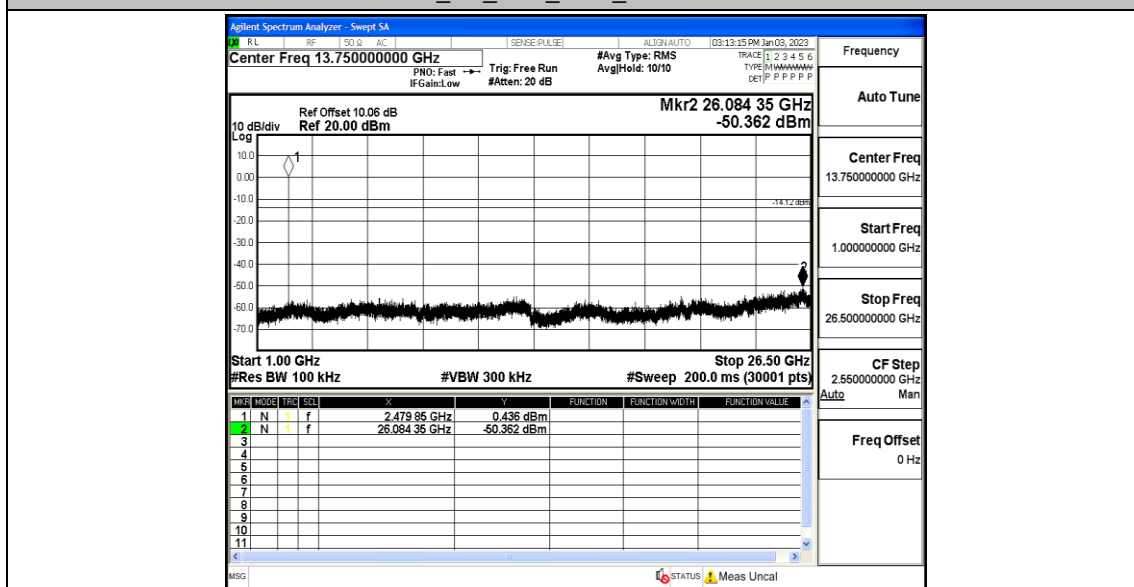
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

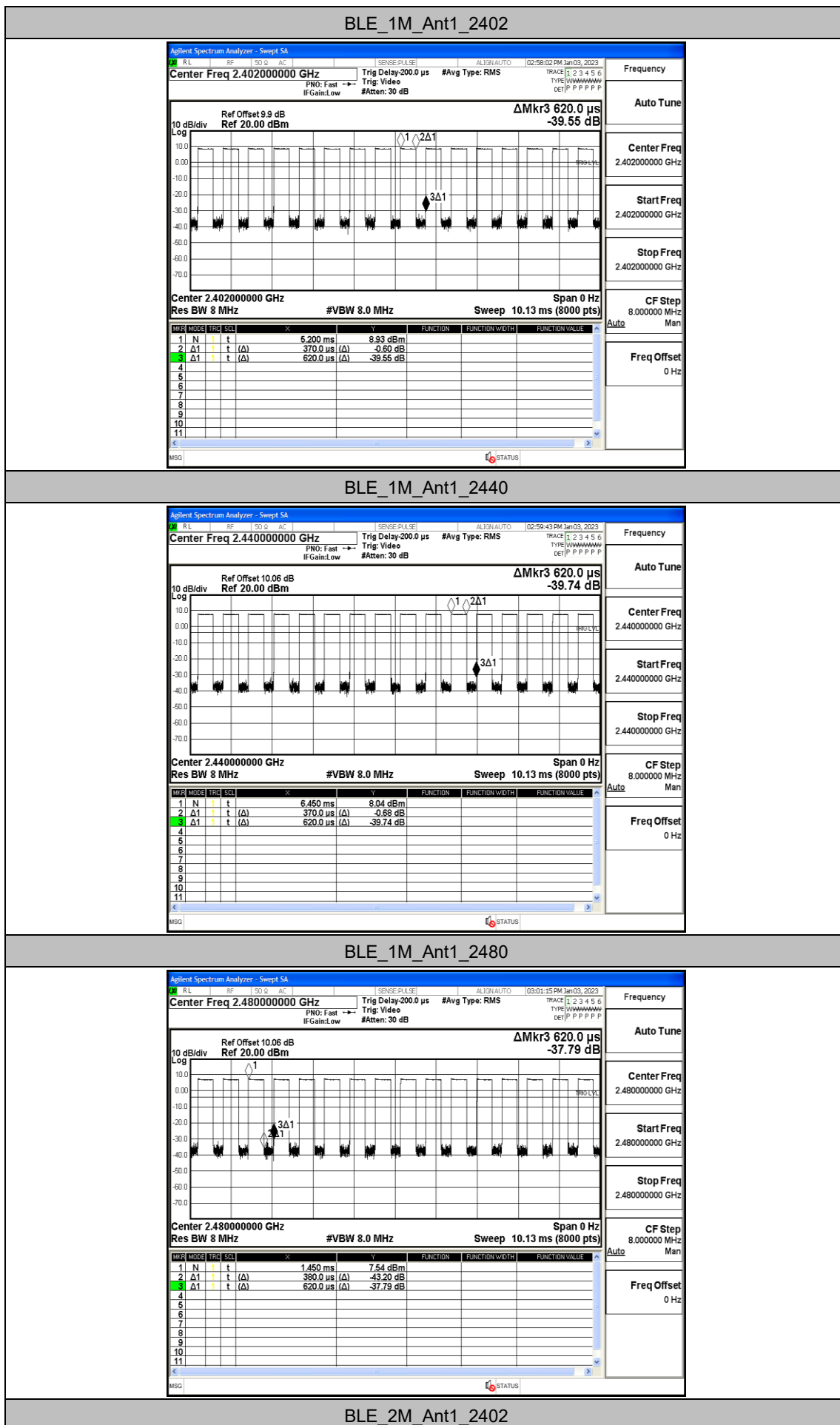


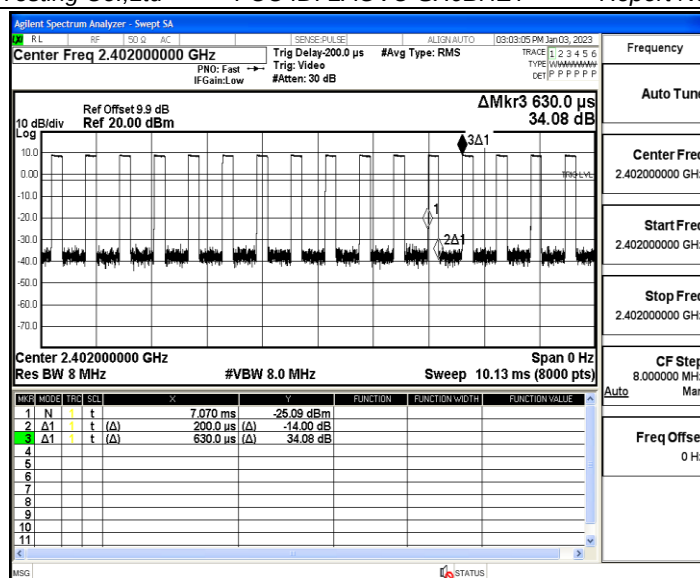
Appendix G: Duty Cycle

Test Result

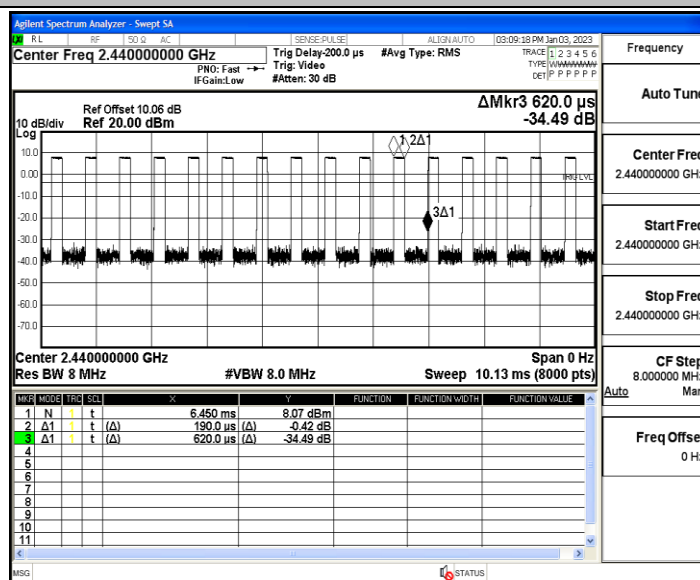
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.37	0.62	59.68	2.70
		2440	0.37	0.62	59.68	2.70
		2480	0.38	0.62	61.29	2.63
BLE_2M	Ant1	2402	0.20	0.63	31.75	5.00
		2440	0.19	0.62	30.65	5.26
		2480	0.20	0.63	31.75	5.00

Test Graphs

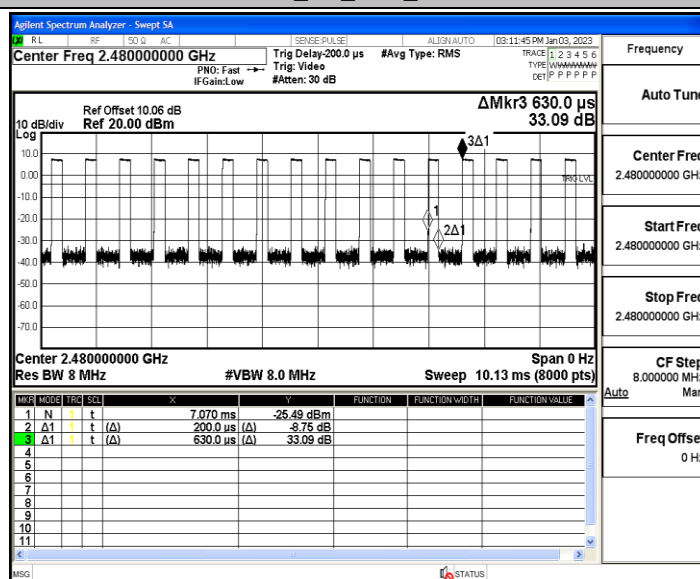




BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

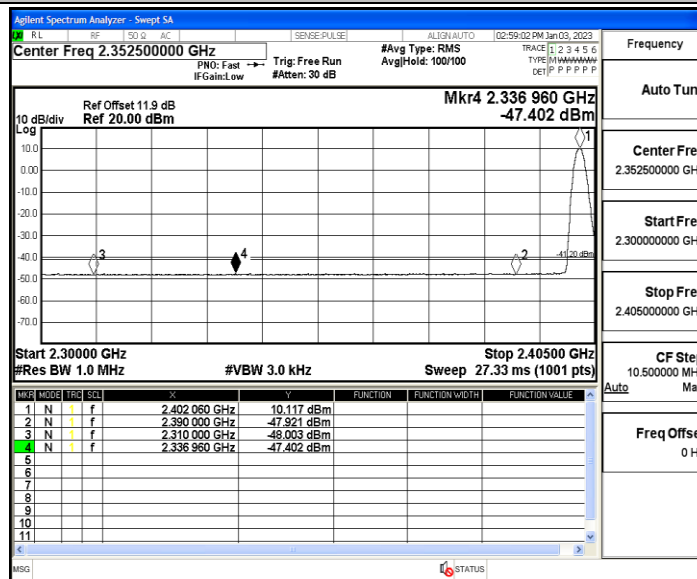
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48	≤-41.20	PASS
				AV	2336.960	-47.4	≤-41.20	PASS
				AV	2390.000	-47.92	≤-41.20	PASS
				Peak	2310.000	-40.31	≤-21.20	PASS
				Peak	2320.685	-38.52	≤-21.20	PASS
				Peak	2390.000	-41.82	≤-21.20	PASS
		High	2480	AV	2483.500	-45.14	≤-41.20	PASS
				AV	2483.520	-45.14	≤-41.20	PASS
				AV	2500.000	-47.08	≤-41.20	PASS
				Peak	2483.500	-41.33	≤-21.20	PASS
				Peak	2493.440	-38.78	≤-21.20	PASS
				Peak	2500.000	-40.69	≤-21.20	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-47.59	≤-41.20	PASS
				AV	2385.470	-46.43	≤-41.20	PASS
				AV	2390.000	-47.25	≤-41.20	PASS
				Peak	2310.000	-41.4	≤-21.20	PASS
				Peak	2347.985	-37.99	≤-21.20	PASS
				Peak	2390.000	-41.97	≤-21.20	PASS
		High	2480	AV	2483.500	-44.17	≤-41.20	PASS
				AV	2483.520	-44.17	≤-41.20	PASS
				AV	2500.000	-46.7	≤-41.20	PASS
				Peak	2483.500	-39.44	≤-21.20	PASS
				Peak	2499.440	-37.39	≤-21.20	PASS
				Peak	2500.000	-38.61	≤-21.20	PASS

Note:

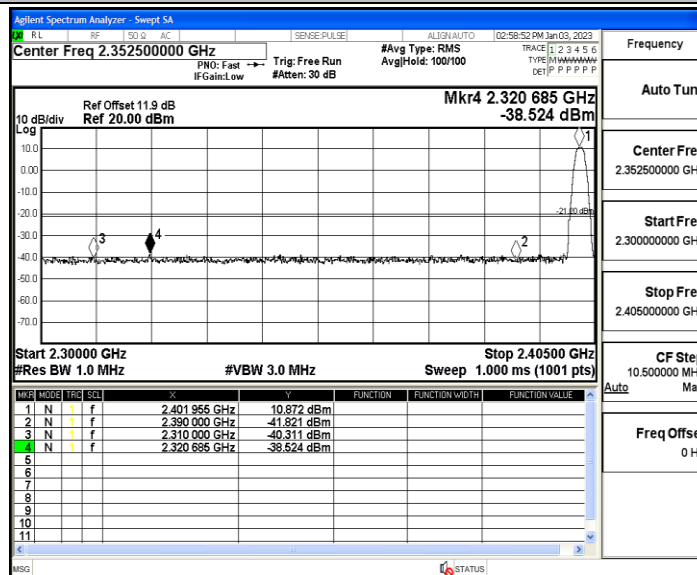
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

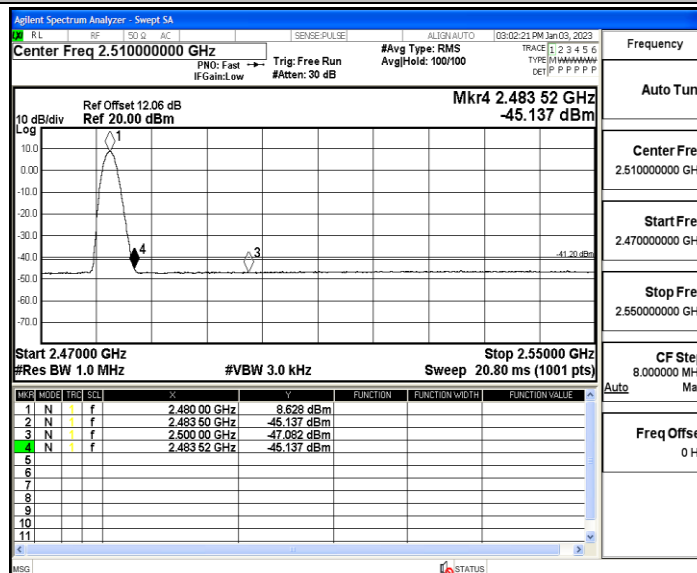
BLE_1M_Ant1_Low_2402_AV



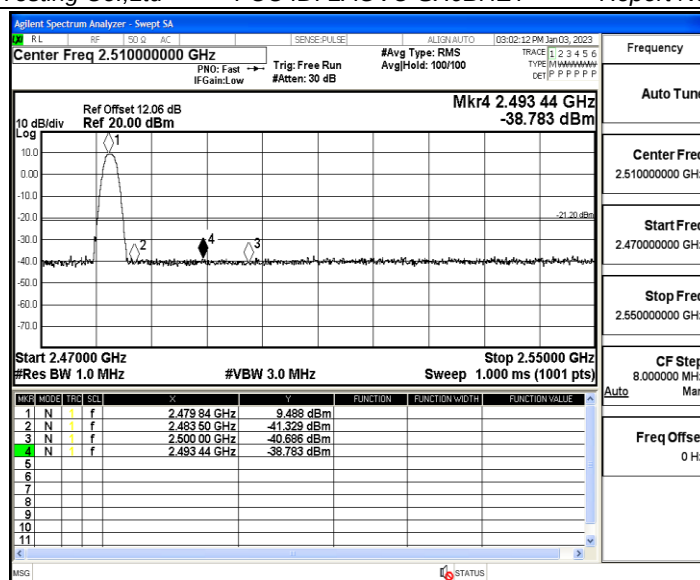
BLE_1M_Ant1_Low_2402_Peak



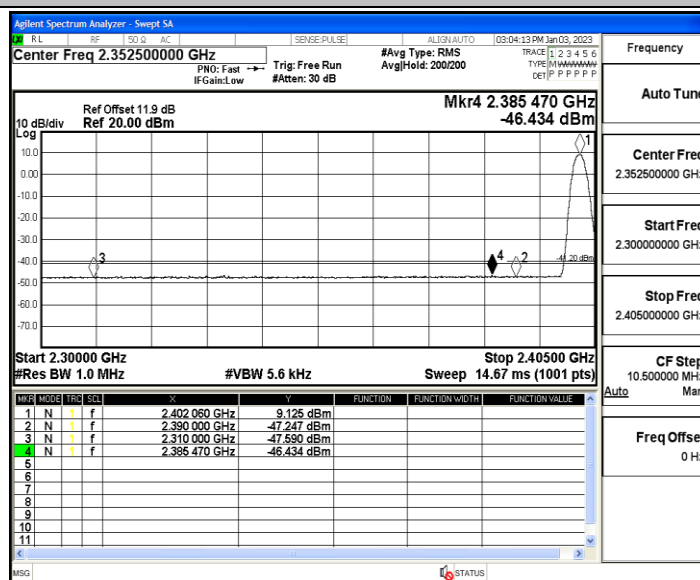
BLE_1M_Ant1_High_2480_AV



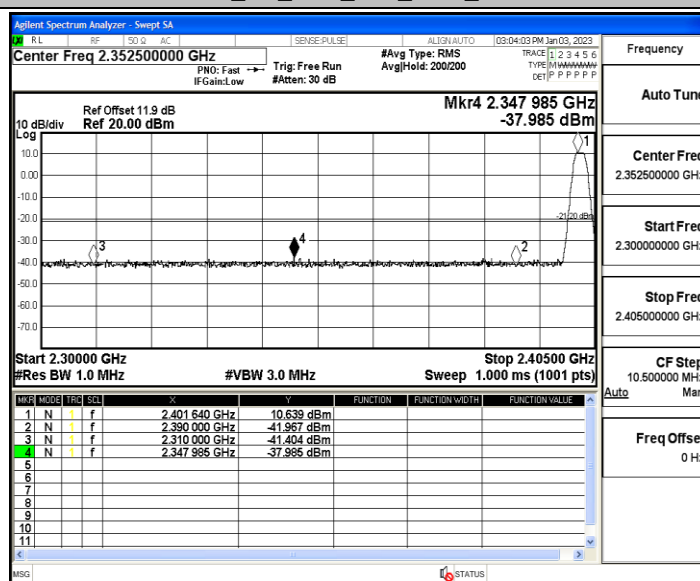
BLE_1M_Ant1_High_2480_Peak



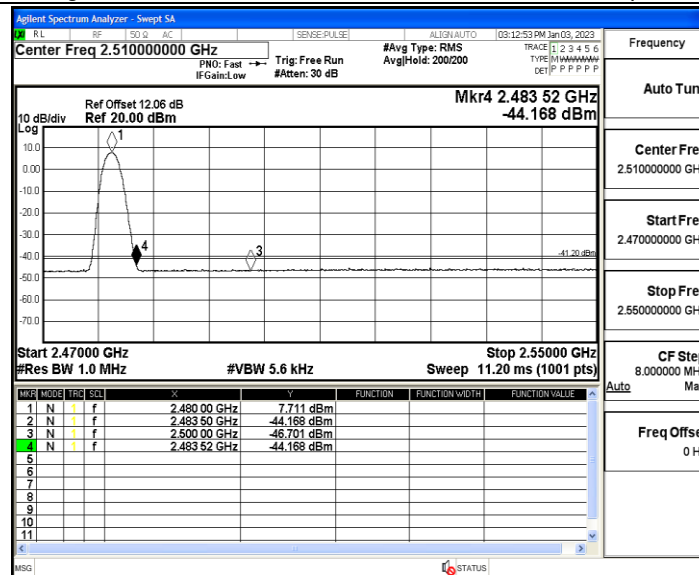
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

