

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.680	2401.664	2402.344	0.5	PASS
		2440	0.692	2439.660	2440.352	0.5	PASS
		2480	0.680	2479.668	2480.348	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



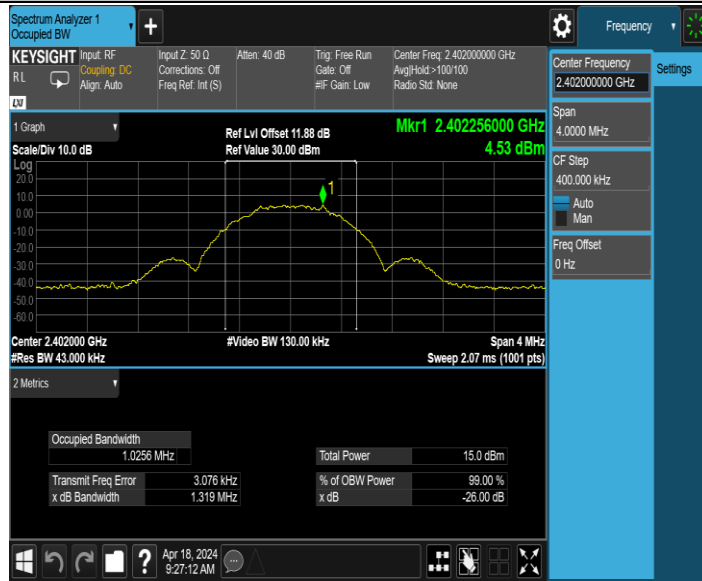
Appendix B: Occupied Channel Bandwidth

Test Result

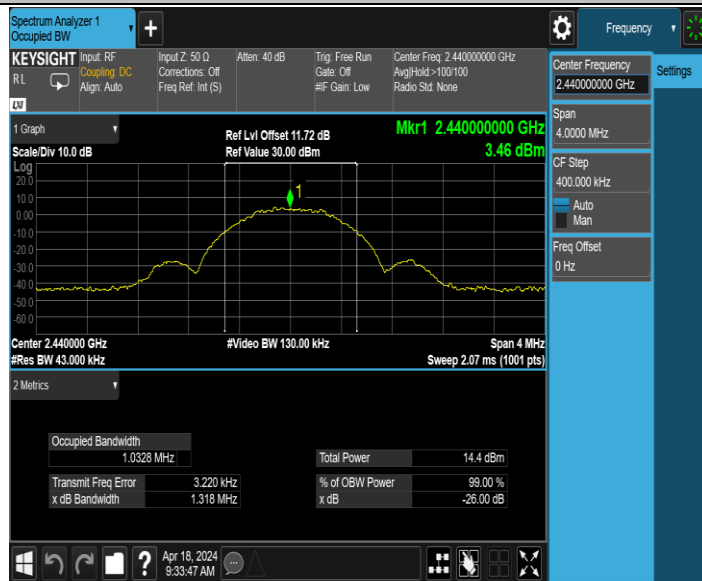
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0270	2401.4896	2402.5166	---	---
		2440	1.0376	2439.4841	2440.5217	---	---
		2480	1.0316	2479.4856	2480.5172	---	---

Test Graphs

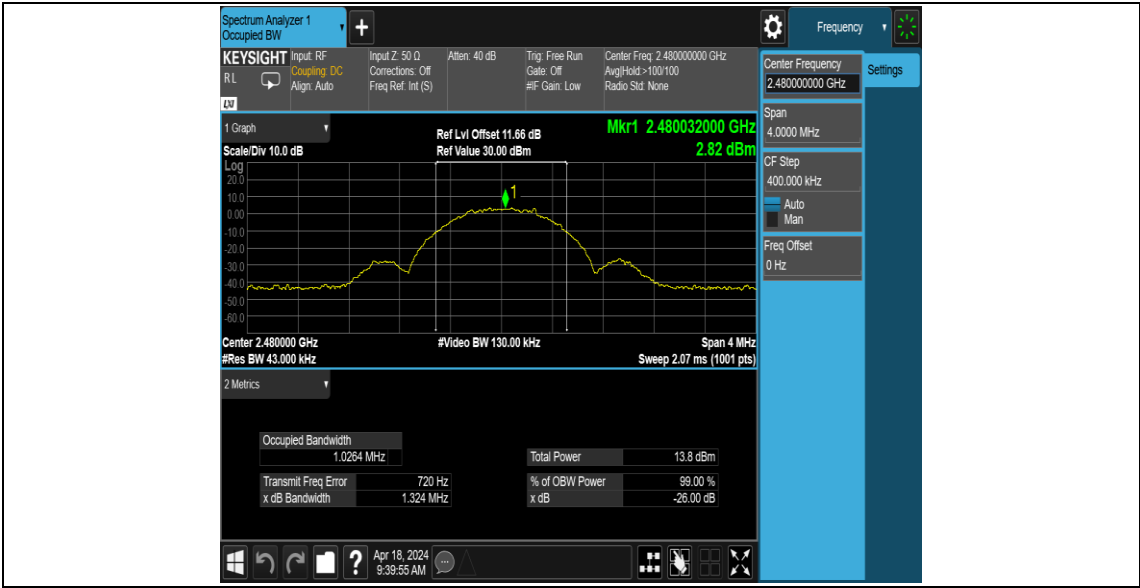
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



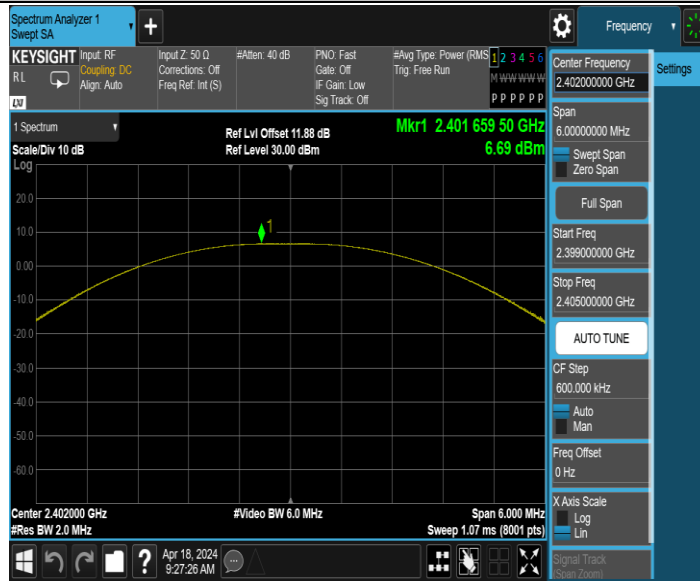
Appendix C: Maximum conducted output power

Test Result Peak

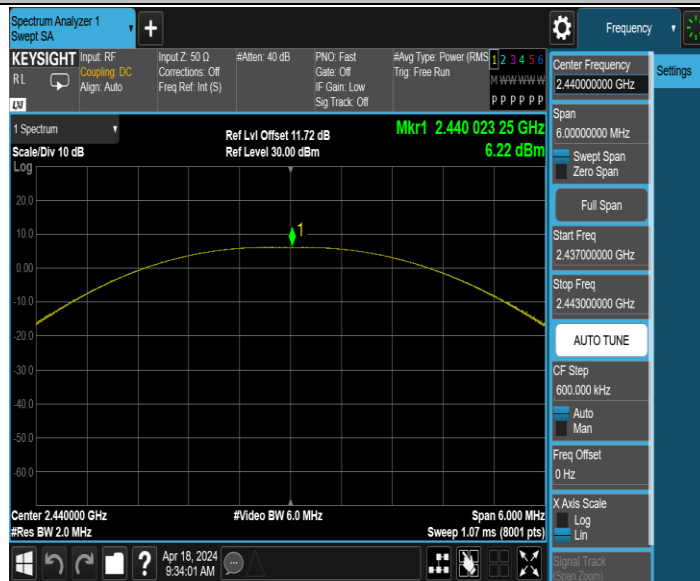
TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.69	≤30	PASS
		2440	6.22	≤30	PASS
		2480	5.47	≤30	PASS

Test Graphs Peak

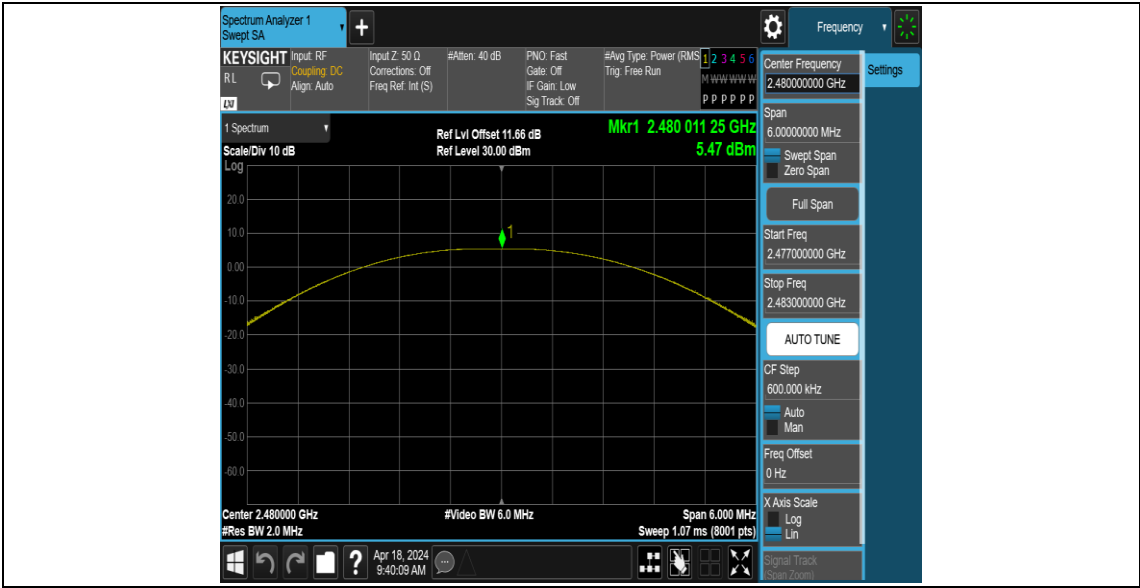
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



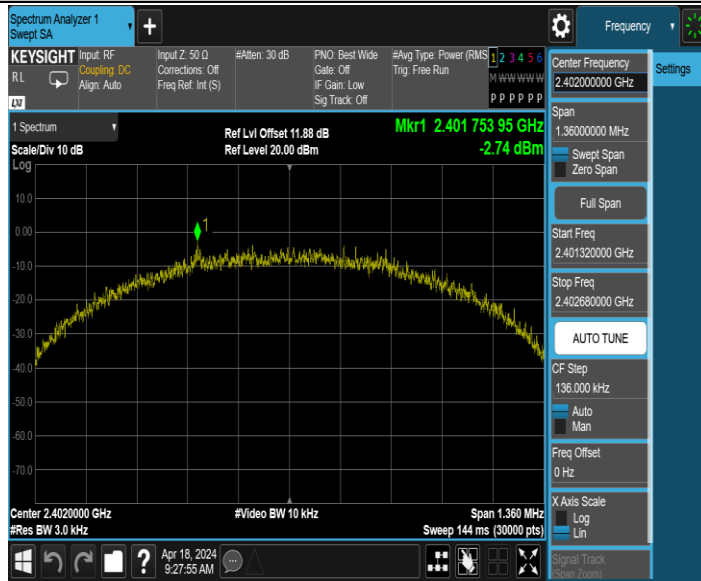
Appendix D: Maximum power spectral density

Test Result

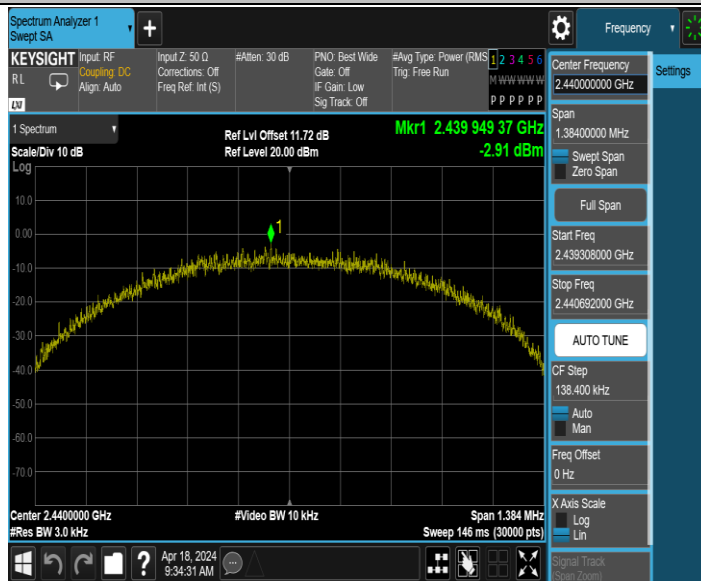
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-2.74	≤8.00	PASS
		2440	-2.91	≤8.00	PASS
		2480	-2.61	≤8.00	PASS

Test Graphs

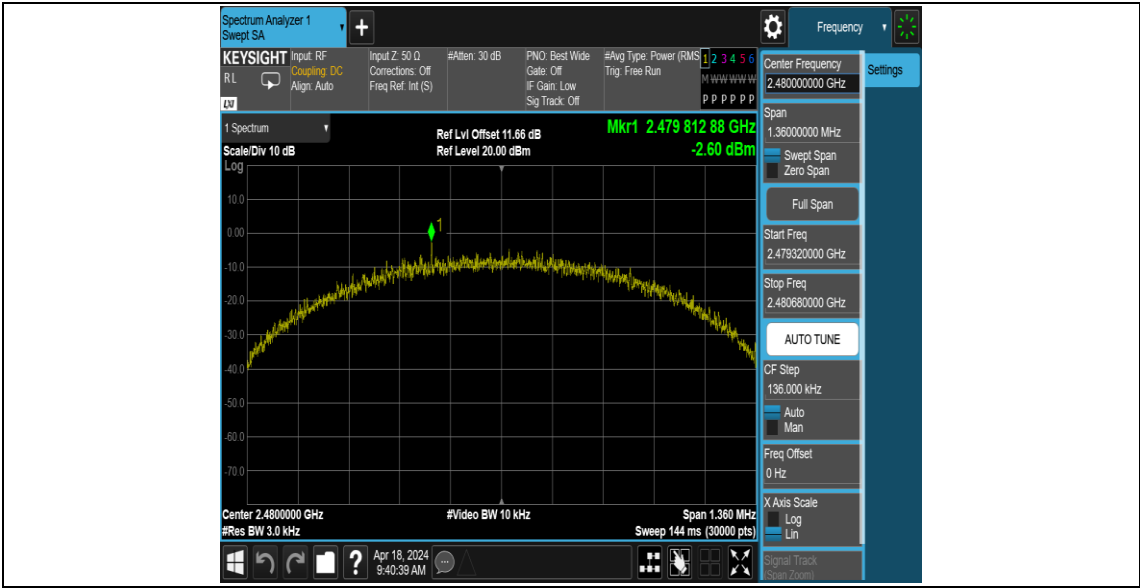
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



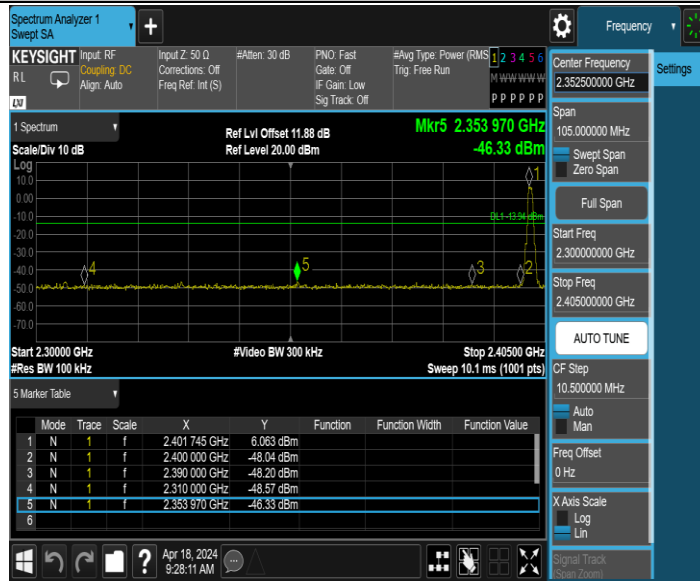
Appendix E: Band edge measurements

Test Result

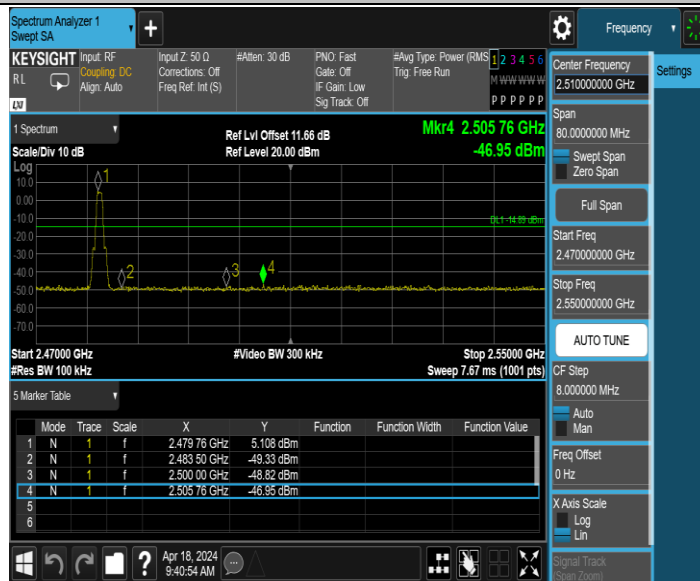
TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.06	-46.33	≤-13.94	PASS
		High	2480	5.11	-46.95	≤-14.89	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

Test Result

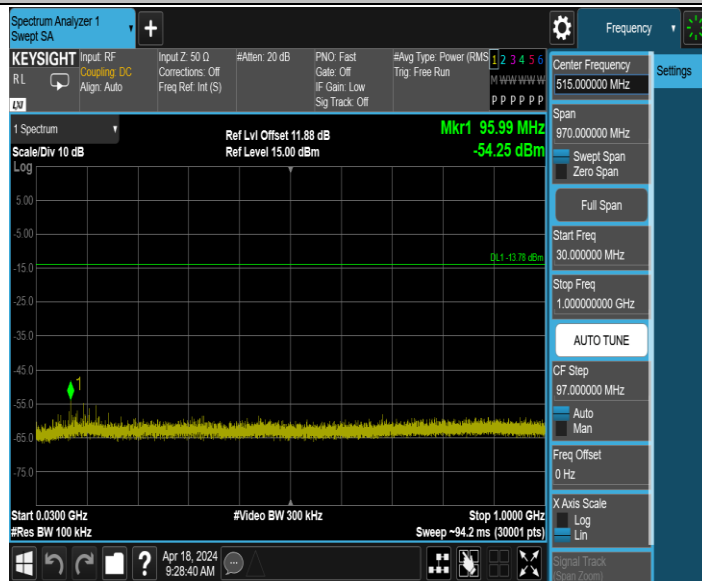
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	6.22	6.22	---	PASS
			30~1000	6.22	-54.25	≤-13.78	PASS
			1000~26500	6.22	-49.56	≤-13.78	PASS
		2440	Reference	5.82	5.82	---	PASS
			30~1000	5.82	-54.56	≤-14.18	PASS
			1000~26500	5.82	-50.36	≤-14.18	PASS
		2480	Reference	5.20	5.20	---	PASS
			30~1000	5.20	-54.23	≤-14.8	PASS
			1000~26500	5.20	-49.3	≤-14.8	PASS

Test Graphs

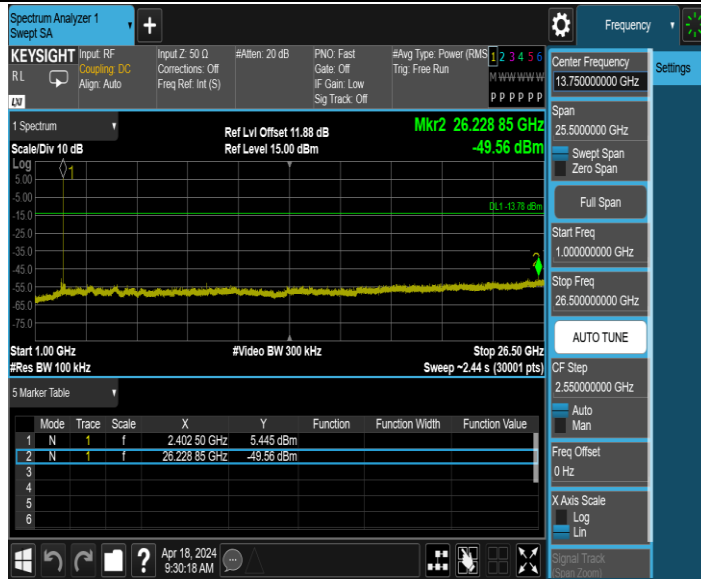
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



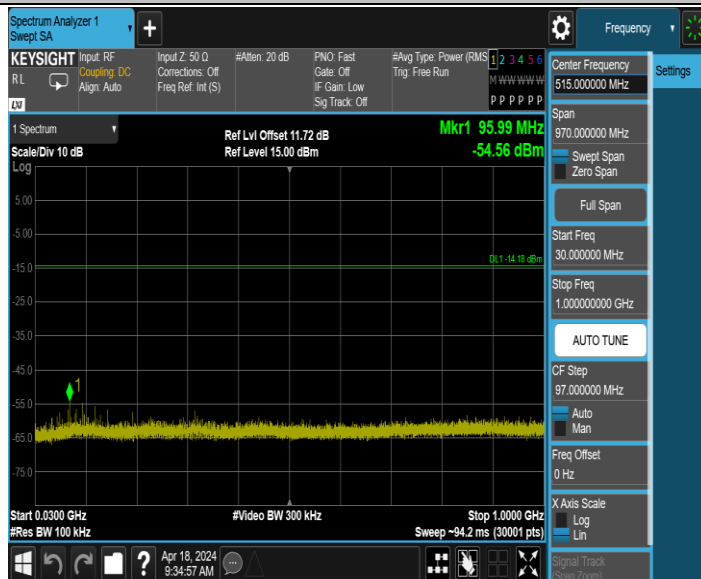
BLE_1M_Ant1_2402_1000~26500



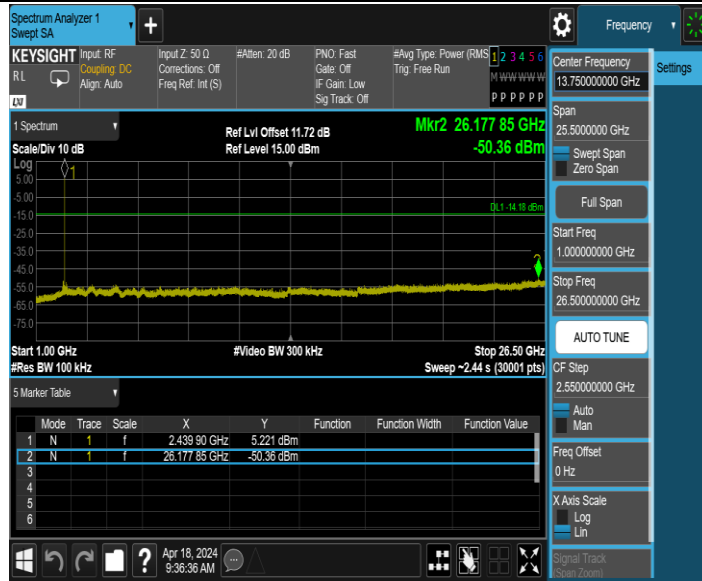
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



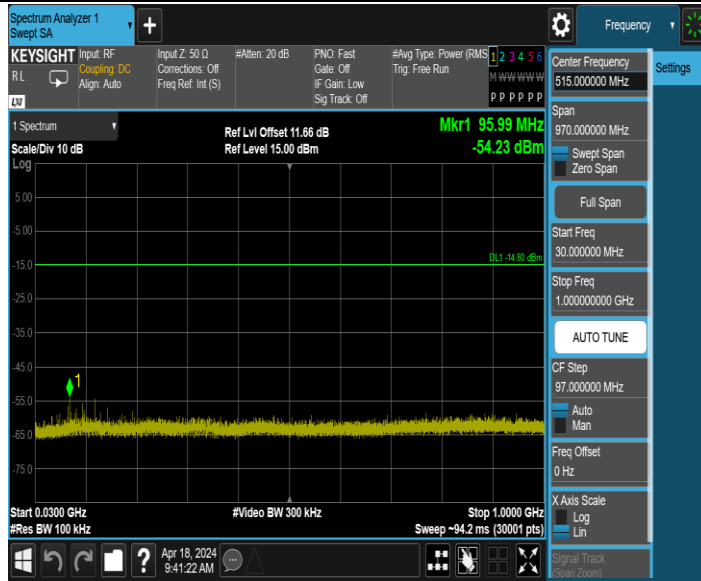
BLE_1M_Ant1_2440_1000~26500



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	Frequency[MHz]	Duty Cycle [%]
BLE_1M	Ant1	2402	100
		2440	100
		2480	100

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

Mode:	BLE 1M-2402
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NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	2310	48.27	9.07	74.00	25.73	150	259	Horizontal	PASS
2	2314.8	50.78	9.03	74.00	23.22	150	265	Horizontal	PASS
3	2335.92	50.40	9.19	74.00	23.60	150	223	Horizontal	PASS
4	2338.24	51.40	9.20	74.00	22.60	150	94	Horizontal	PASS
5	2367.76	50.82	9.47	74.00	23.18	150	167	Horizontal	PASS
6	2390	50.19	10.38	74.00	23.81	150	114	Horizontal	PASS

NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	2310	48.39	9.07	74.00	25.61	150	240	Vertical	PASS
2	2321.92	50.28	9.20	74.00	23.72	150	272	Vertical	PASS
3	2335.28	50.79	9.23	74.00	23.21	150	349	Vertical	PASS
4	2360.64	50.74	9.33	74.00	23.26	150	45	Vertical	PASS
5	2370.72	51.29	9.52	74.00	22.71	150	175	Vertical	PASS
6	2390	49.71	10.38	74.00	24.29	150	310	Vertical	PASS

Mode:	BLE 1M-2480
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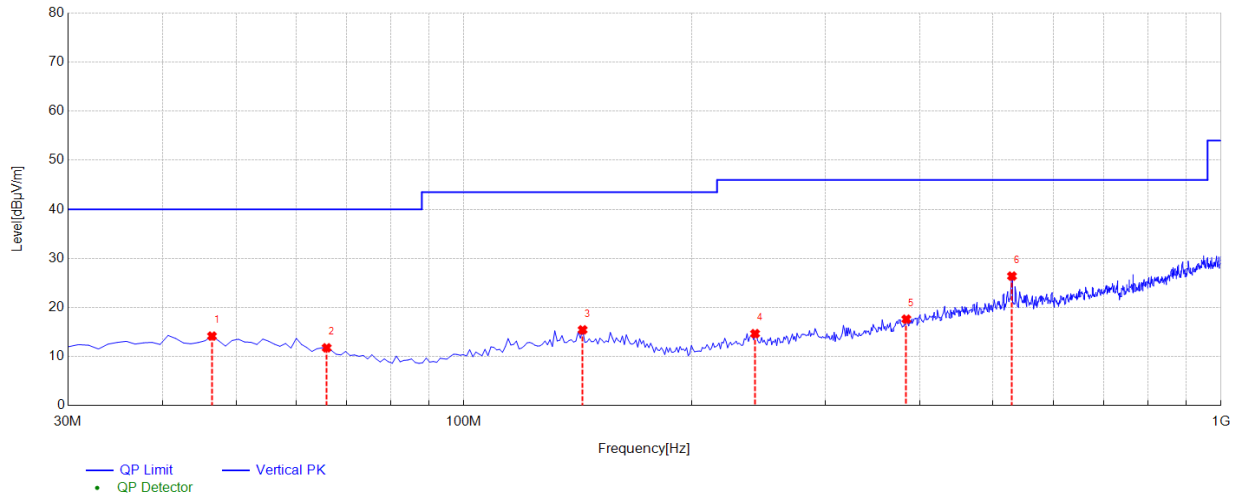
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	2483.5	51.95	10.62	74.00	22.05	150	152	Horizontal	PASS
2	2486.17	52.53	10.37	74.00	21.47	150	155	Horizontal	PASS
3	2488.81	51.61	10.24	74.00	22.39	150	176	Horizontal	PASS
4	2492.70	51.45	10.42	74.00	22.55	150	205	Horizontal	PASS
5	2496.41	51.46	10.35	74.00	22.54	150	240	Horizontal	PASS
6	2500	49.43	10.10	74.00	24.57	150	26	Horizontal	PASS

NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	2483.5	51.05	10.62	74.00	22.95	150	56	Vertical	PASS
2	2486.23	51.93	10.37	74.00	22.07	150	196	Vertical	PASS
3	2490.82	50.97	10.34	74.00	23.03	150	143	Vertical	PASS
4	2492.08	51.96	10.40	74.00	22.04	150	290	Vertical	PASS
5	2497.12	51.10	10.28	74.00	22.90	150	14	Vertical	PASS
6	2500	50.27	10.10	74.00	23.73	150	299	Vertical	PASS

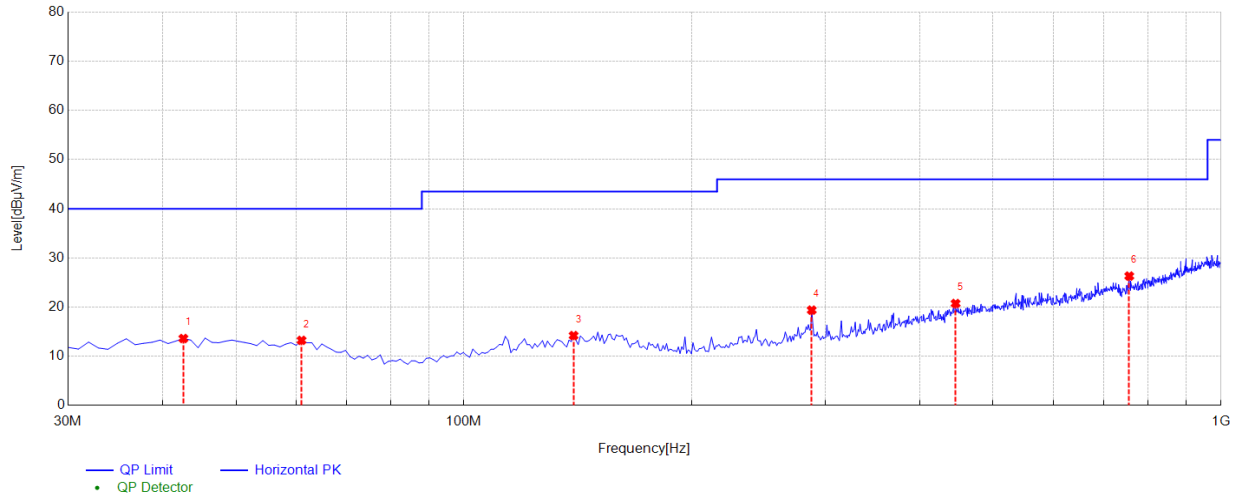
Note:

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

Appendix I: Spurious emissions



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	46.4900	14.18	-15.81	40.00	25.82	100	204	Vertical	PASS
2	65.8900	11.79	-17.65	40.00	28.21	100	334	Vertical	PASS
3	143.490	15.45	-16.45	43.50	28.05	100	237	Vertical	PASS
4	242.430	14.68	-17.17	46.00	31.32	100	52	Vertical	PASS
5	384.050	17.63	-13.46	46.00	28.37	100	187	Vertical	PASS
6	529.550	26.40	-10.28	46.00	19.60	100	210	Vertical	PASS



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	42.6100	13.62	-15.71	40.00	26.38	100	246	Horizontal	PASS
2	61.0400	13.25	-16.81	40.00	26.75	100	160	Horizontal	PASS
3	139.610	14.22	-16.46	43.50	29.28	100	224	Horizontal	PASS
4	288.020	19.39	-16.01	46.00	26.61	100	113	Horizontal	PASS
5	446.130	20.74	-11.77	46.00	25.26	100	251	Horizontal	PASS
6	756.530	26.32	-5.72	46.00	19.68	100	12	Horizontal	PASS

Mode:	BLE 1M-2402
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NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1214	41.38	1.09	74.00	32.62	150	360	Horizontal	PASS
2	1854	43.73	4.76	74.00	30.27	150	100	Horizontal	PASS
3	3801	43.34	-16.91	74.00	30.66	150	238	Horizontal	PASS
4	5916	43.73	-12.47	74.00	30.27	150	332	Horizontal	PASS
5	10461	46.28	-7.58	74.00	27.72	150	53	Horizontal	PASS
6	12960	47.58	-3.54	74.00	26.42	150	160	Horizontal	PASS

NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1224	43.11	1.08	74.00	30.89	150	102	Vertical	PASS
2	1716	42.87	3.31	74.00	31.13	150	63	Vertical	PASS
3	5265	46.58	-14.09	74.00	27.42	150	82	Vertical	PASS
4	7278	44.50	-11.91	74.00	29.50	150	249	Vertical	PASS
5	9630	45.43	-8.53	74.00	28.57	150	200	Vertical	PASS
6	12921	48.49	-3.26	74.00	25.51	150	1	Vertical	PASS

Mode:	BLE 1M-2440
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NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1200	41.95	1.12	74.00	32.05	150	125	Horizontal	PASS
2	1692	42.71	3.09	74.00	31.29	150	132	Horizontal	PASS
3	4296	42.06	-16.27	74.00	31.94	150	248	Horizontal	PASS
4	6945	44.00	-12.10	74.00	30.00	150	306	Horizontal	PASS
5	9354	45.00	-9.16	74.00	29.00	150	356	Horizontal	PASS
6	13665	49.20	-2.35	74.00	24.80	150	246	Horizontal	PASS

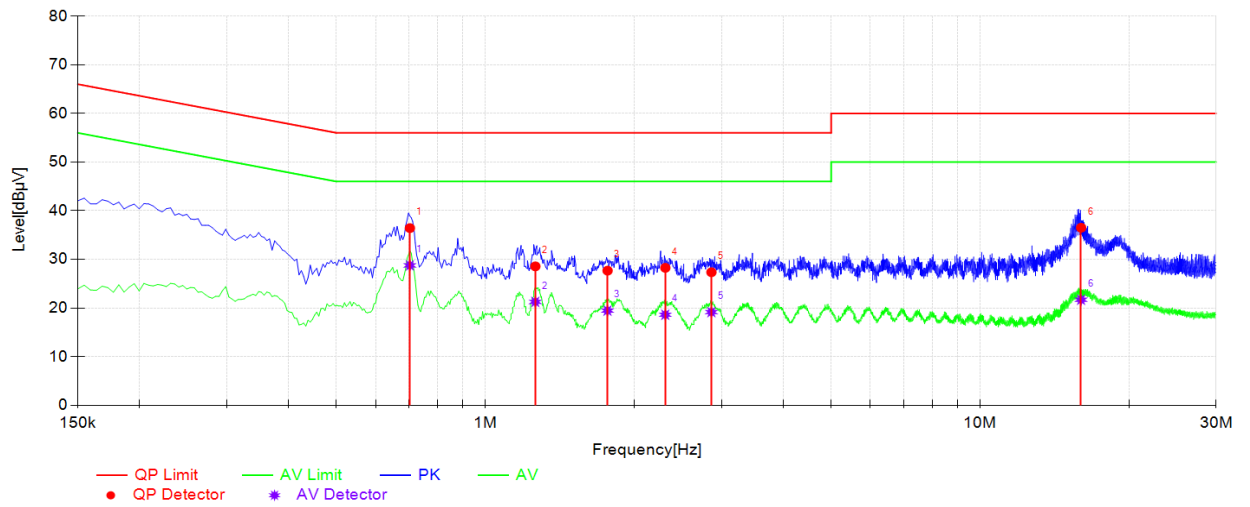
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1316	41.82	1.15	74.00	32.18	150	174	Vertical	PASS
2	1742	43.73	3.54	74.00	30.27	150	55	Vertical	PASS
3	3945	44.92	-17.27	74.00	29.08	150	179	Vertical	PASS
4	5253	48.68	-14.20	74.00	25.32	150	78	Vertical	PASS
5	7992	45.22	-11.13	74.00	28.78	150	113	Vertical	PASS
6	13599	48.95	-2.99	74.00	25.05	150	267	Vertical	PASS

Mode:	BLE 1M-2480
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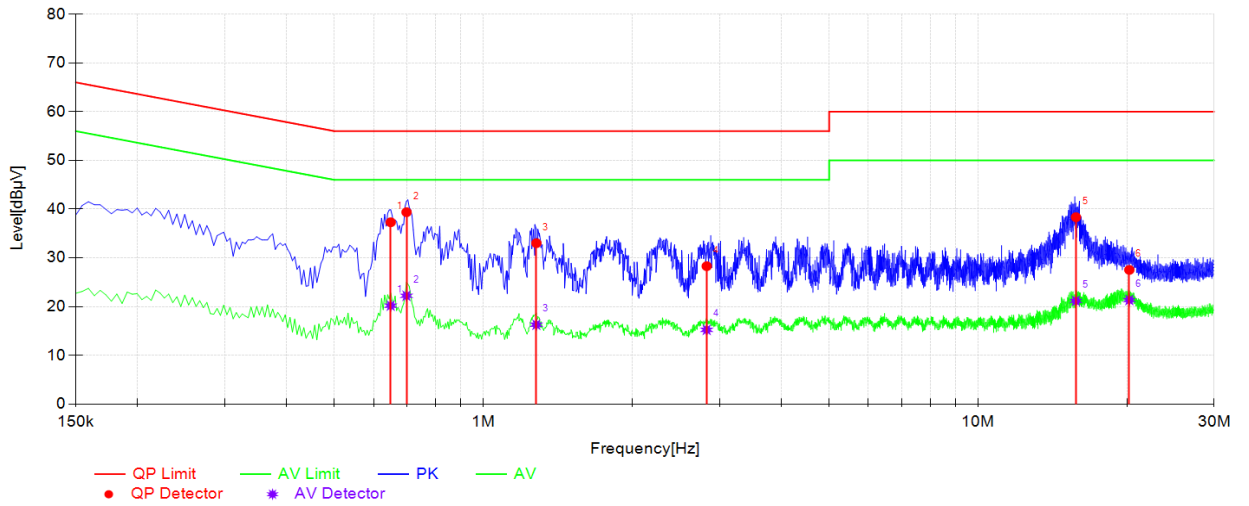
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1192	41.39	1.10	74.00	32.61	150	184	Horizontal	PASS
2	1738	42.53	3.51	74.00	31.47	150	332	Horizontal	PASS
3	4233	42.44	-16.60	74.00	31.56	150	39	Horizontal	PASS
4	5943	43.53	-12.01	74.00	30.47	150	65	Horizontal	PASS
5	8373	44.58	-10.14	74.00	29.42	150	73	Horizontal	PASS
6	13137	48.28	-3.07	74.00	25.72	150	108	Horizontal	PASS

NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1282	41.60	1.13	74.00	32.40	150	360	Vertical	PASS
2	1976	45.86	5.82	74.00	28.14	150	125	Vertical	PASS
3	5256	48.40	-14.16	74.00	25.60	150	82	Vertical	PASS
4	8175	43.83	-10.74	74.00	30.17	150	283	Vertical	PASS
5	10164	46.24	-7.44	74.00	27.76	150	195	Vertical	PASS
6	16869	51.81	1.38	74.00	22.19	150	87	Vertical	PASS

Appendix J: Conducted emission AC power port



Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Type	Verdict
1	0.7035	10.28	36.43	56.00	19.57	28.76	46.00	17.24	L1	PASS
2	1.2615	10.28	28.57	56.00	27.43	21.26	46.00	24.74	L1	PASS
3	1.7655	10.29	27.68	56.00	28.32	19.47	46.00	26.53	L1	PASS
4	2.31	10.29	28.26	56.00	27.74	18.62	46.00	27.38	L1	PASS
5	2.8635	10.30	27.36	56.00	28.64	19.16	46.00	26.84	L1	PASS
6	16.0035	10.56	36.51	60.00	23.49	21.70	50.00	28.30	L1	PASS



Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Type	Verdict
1	0.6495	10.27	37.31	56.00	18.69	20.20	46.00	25.80	N	PASS
2	0.699	10.28	39.38	56.00	16.62	22.22	46.00	23.78	N	PASS
3	1.2795	10.28	33.02	56.00	22.98	16.29	46.00	29.71	N	PASS
4	2.8275	10.34	28.30	56.00	27.70	15.24	46.00	30.76	N	PASS
5	15.7695	10.58	38.35	60.00	21.65	21.18	50.00	28.82	N	PASS
6	20.22	10.66	27.54	60.00	32.46	21.35	50.00	28.65	N	PASS