

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.648	2401.664	2402.312	0.5	PASS
		2440	0.660	2439.652	2440.312	0.5	PASS
		2480	0.672	2479.644	2480.316	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



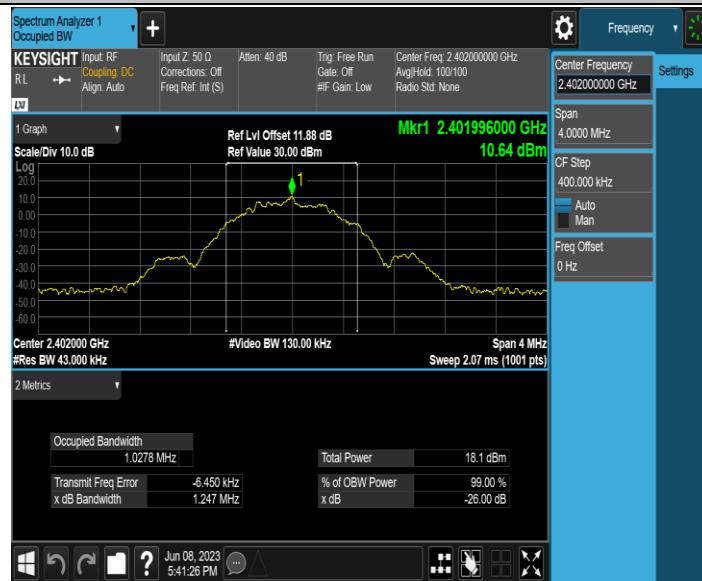
Appendix B: Occupied Channel Bandwidth

Test Result

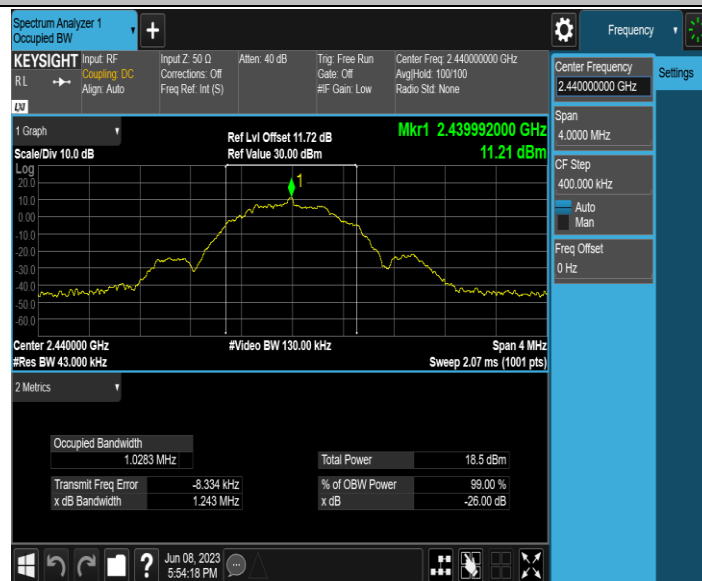
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0278	2401.4797	2402.5075	---	---
		2440	1.0283	2439.4775	2440.5058	---	---
		2480	1.0302	2479.4724	2480.5026	---	---

Test Graphs

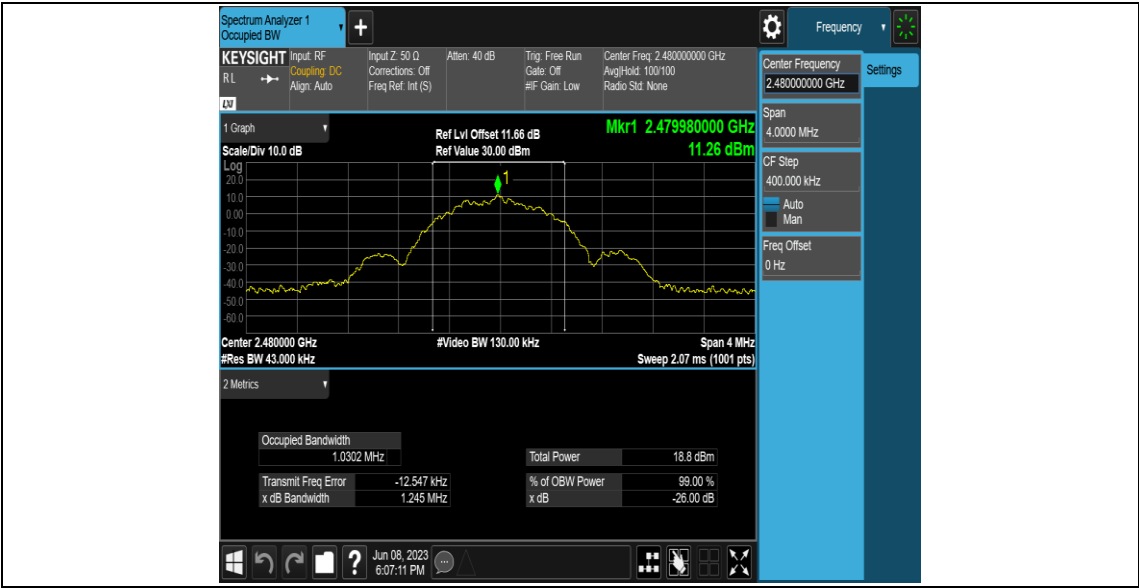
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



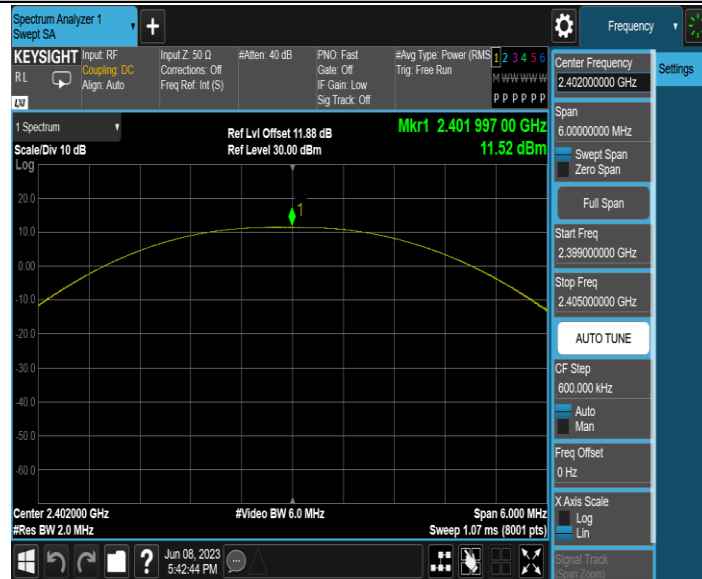
Appendix C: Maximum conducted output power

Test Result Peak

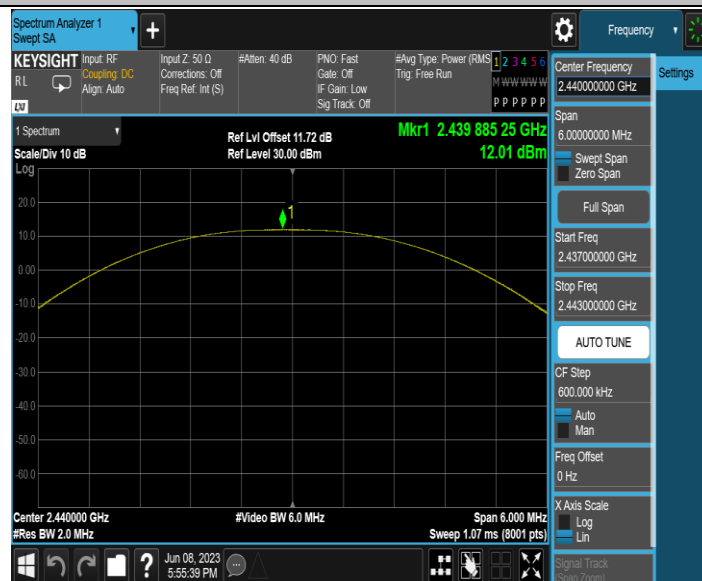
TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	11.52	≤30	14.02	≤36	PASS
		2440	12.01	≤30	14.51	≤36	PASS
		2480	12.18	≤30	14.68	≤36	PASS

Test Graphs Peak

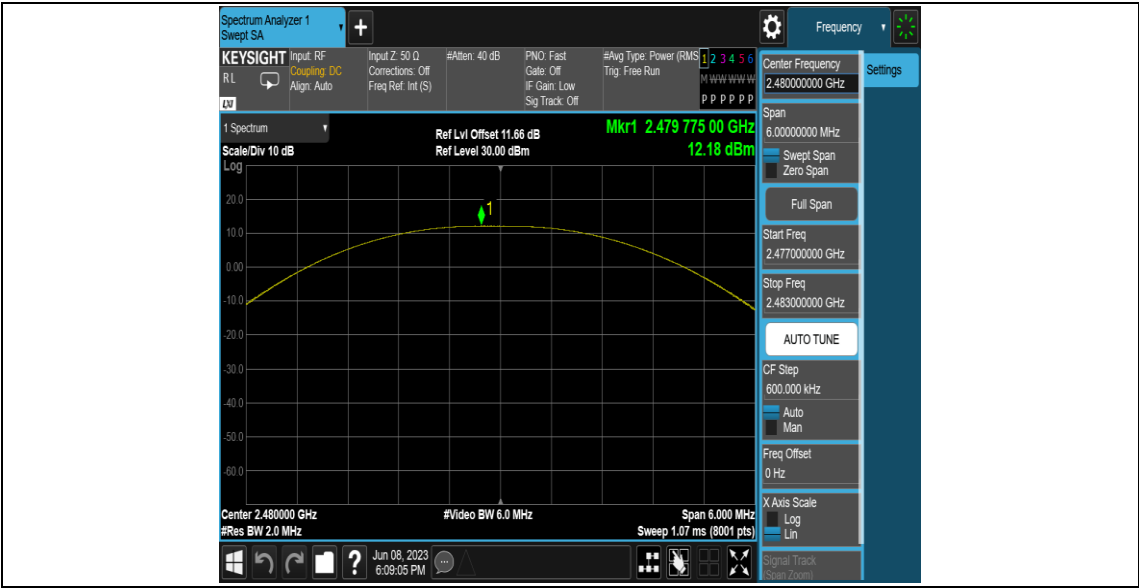
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



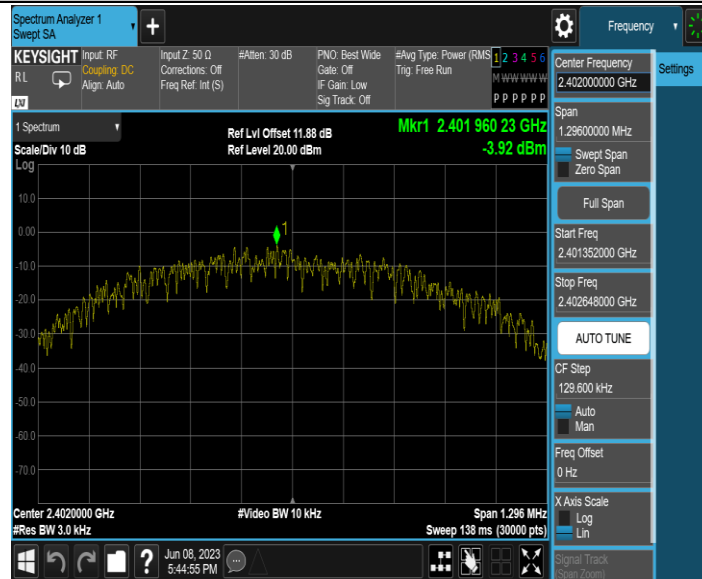
Appendix D: Maximum power spectral density

Test Result

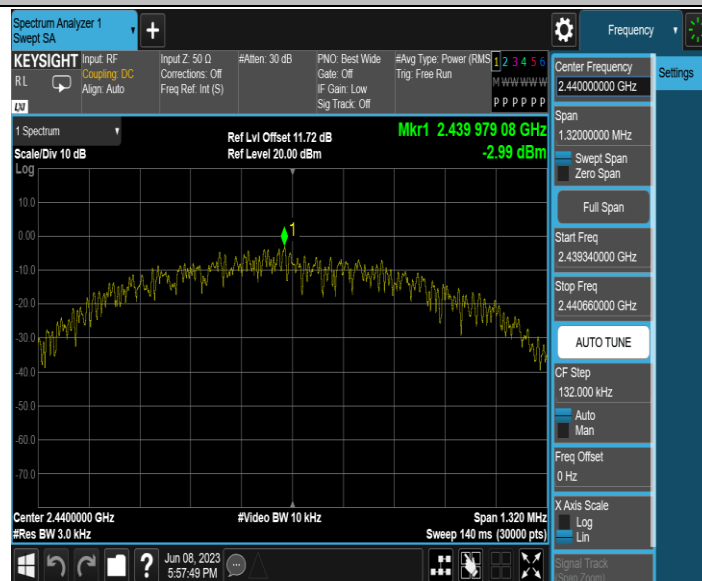
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-3.92	≤8.00	PASS
		2440	-2.99	≤8.00	PASS
		2480	-3.26	≤8.00	PASS

Test Graphs

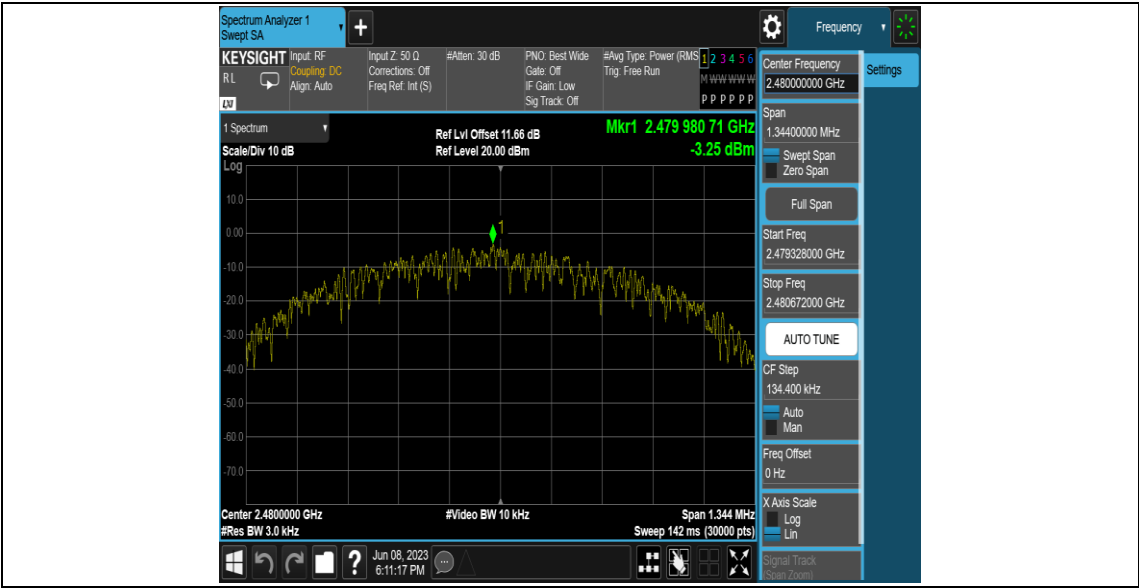
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



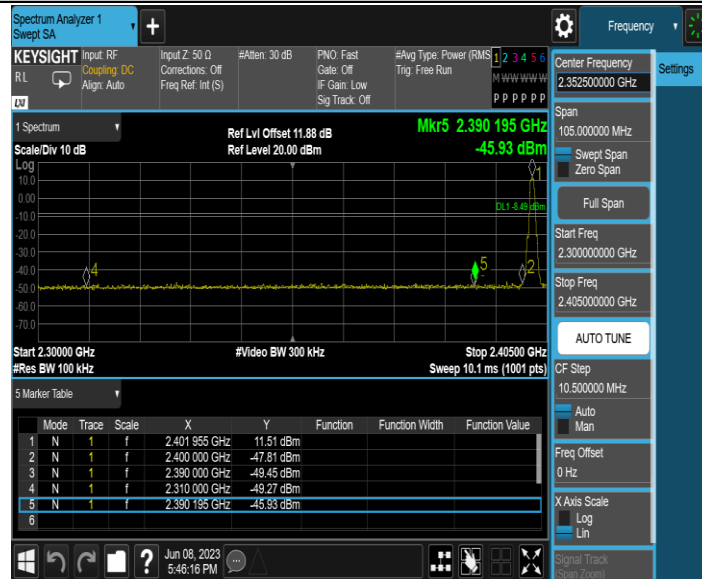
Appendix E: Band edge measurements

Test Result

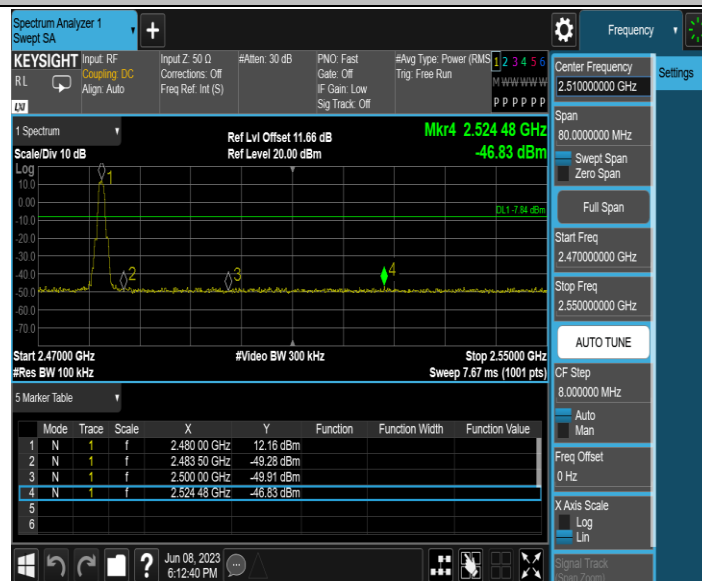
TestMod e	Antenn a	ChNam e	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	11.51	-45.93	≤-8.49	PASS
		High	2480	12.16	-46.83	≤-7.84	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

Test Result

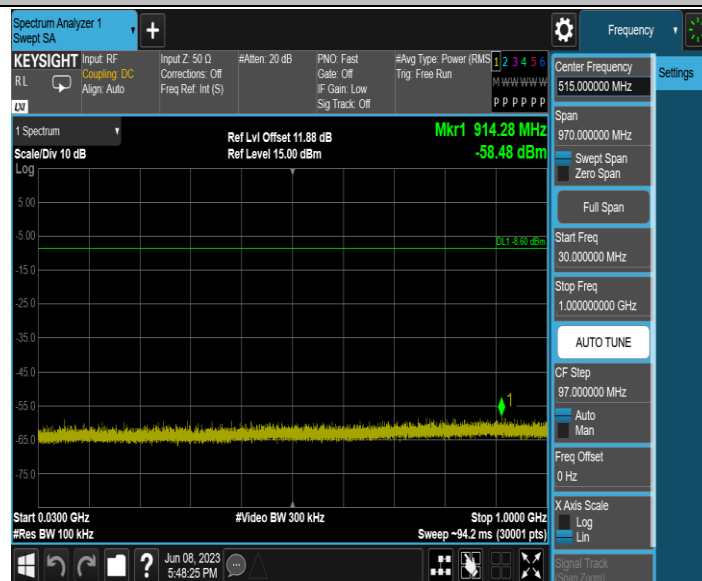
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	11.40	11.40	---	PASS
			30~1000	11.40	-58.48	≤-8.6	PASS
			1000~26500	11.40	-49.94	≤-8.6	PASS
		2440	Reference	11.91	11.91	---	PASS
			30~1000	11.91	-58.14	≤-8.09	PASS
			1000~26500	11.91	-50.17	≤-8.09	PASS
		2480	Reference	12.06	12.06	---	PASS
			30~1000	12.06	-58.61	≤-7.94	PASS
			1000~26500	12.06	-50.3	≤-7.94	PASS

Test Graphs

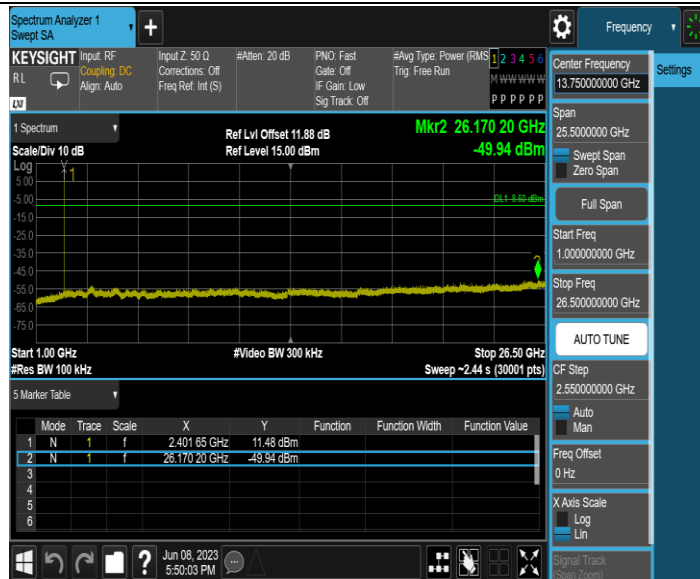
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



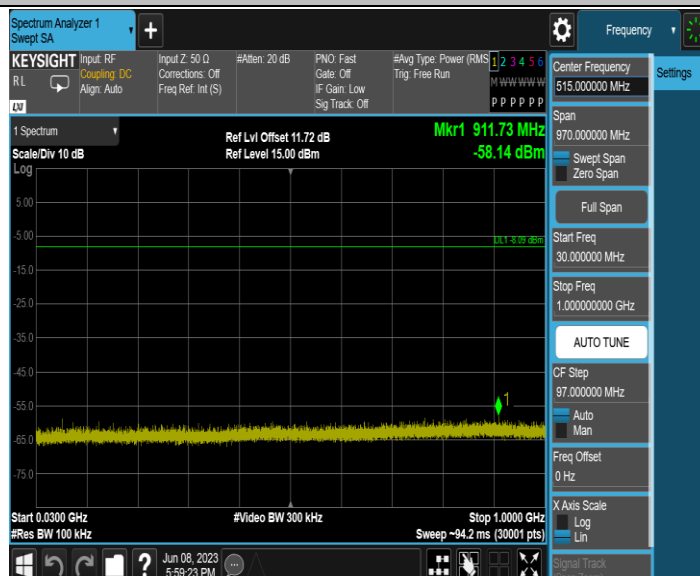
BLE_1M_Ant1_2402_1000~26500



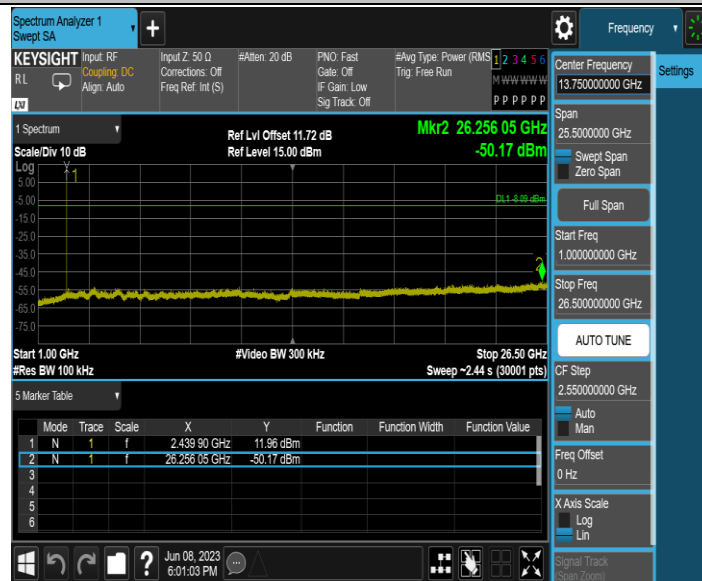
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



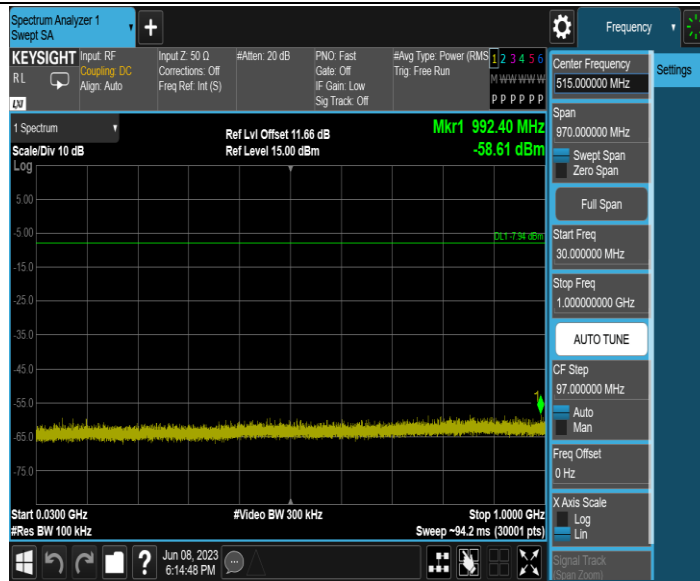
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



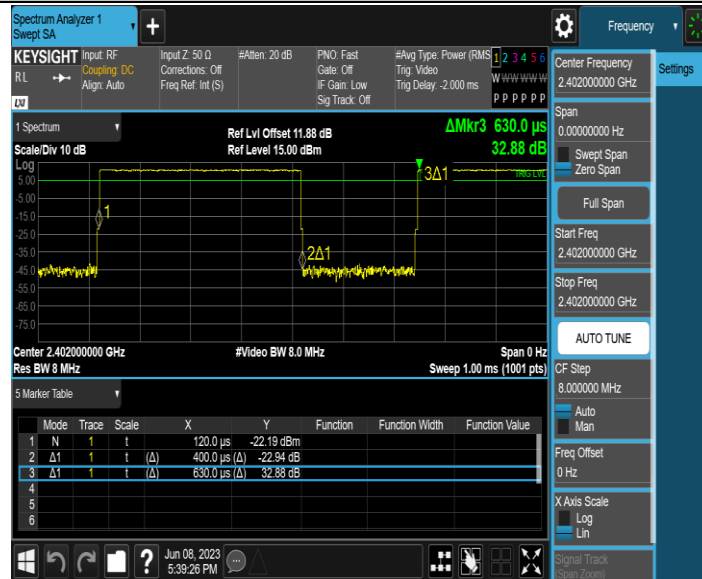
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]
BLE_1M	Ant1	2402	0.40	0.63	63.49
		2440	0.40	0.63	63.49
		2480	0.40	0.63	63.49

Test Graphs

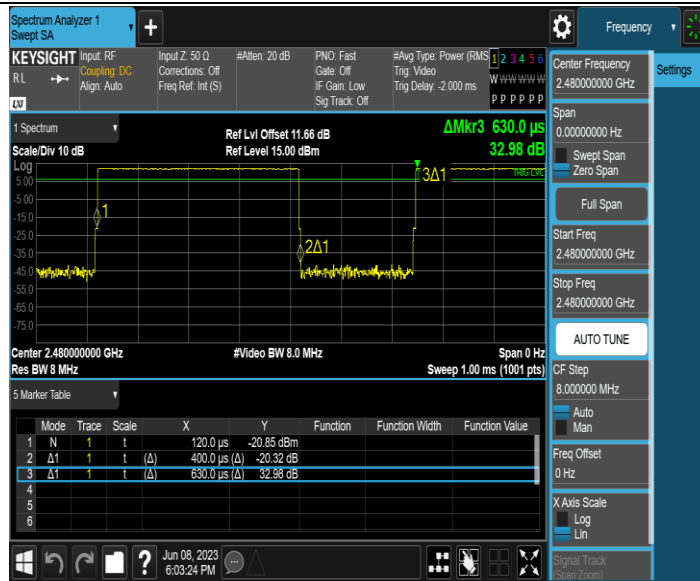
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

Mode:	BLE1M-2402
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	47.53	7.84	74.00	26.47	150	278	Horizontal
2	2346.08	49.25	8.13	74.00	24.75	150	19	Horizontal
3	2347.84	50.25	7.93	74.00	23.75	150	0	Horizontal
4	2375.84	49.91	9.04	74.00	24.09	150	201	Horizontal
5	2382.56	50.62	8.87	74.00	23.38	150	148	Horizontal
6	2390	50.62	9.32	74.00	23.38	150	182	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	47.73	7.84	74.00	26.27	150	106	Vertical
2	2325.52	49.59	8.14	74.00	24.41	150	222	Vertical
3	2341.36	49.54	8.21	74.00	24.46	150	255	Vertical
4	2349.68	49.45	8.24	74.00	24.55	150	329	Vertical
5	2375.04	49.83	9.05	74.00	24.17	150	13	Vertical
6	2390	49.50	9.32	74.00	24.50	150	66	Vertical

Mode:	BLE1M-2480
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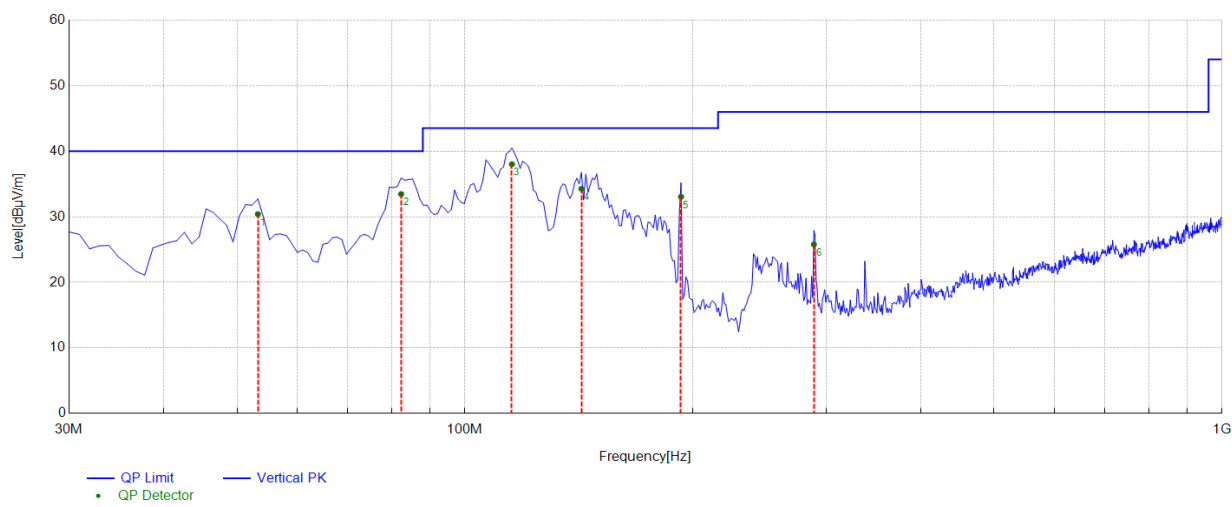
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	52.23	9.65	74.00	21.77	150	200	Horizontal
2	2487.64	50.85	9.29	74.00	23.15	150	49	Horizontal
3	2491.51	50.26	9.05	74.00	23.74	150	5	Horizontal
4	2493.99	50.67	9.24	74.00	23.33	150	233	Horizontal
5	2496.91	50.42	9.32	74.00	23.58	150	278	Horizontal
6	2500	48.95	9.28	74.00	25.05	150	169	Horizontal

NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	50.21	9.65	74.00	23.79	150	267	Vertical
2	2486.12	50.96	9.10	74.00	23.04	150	261	Vertical
3	2489.85	51.24	9.10	74.00	22.76	150	84	Vertical
4	2492.44	51.09	9.17	74.00	22.91	150	28	Vertical
5	2497.44	50.18	9.34	74.00	23.82	150	160	Vertical
6	2500	49.04	9.28	74.00	24.96	150	354	Vertical

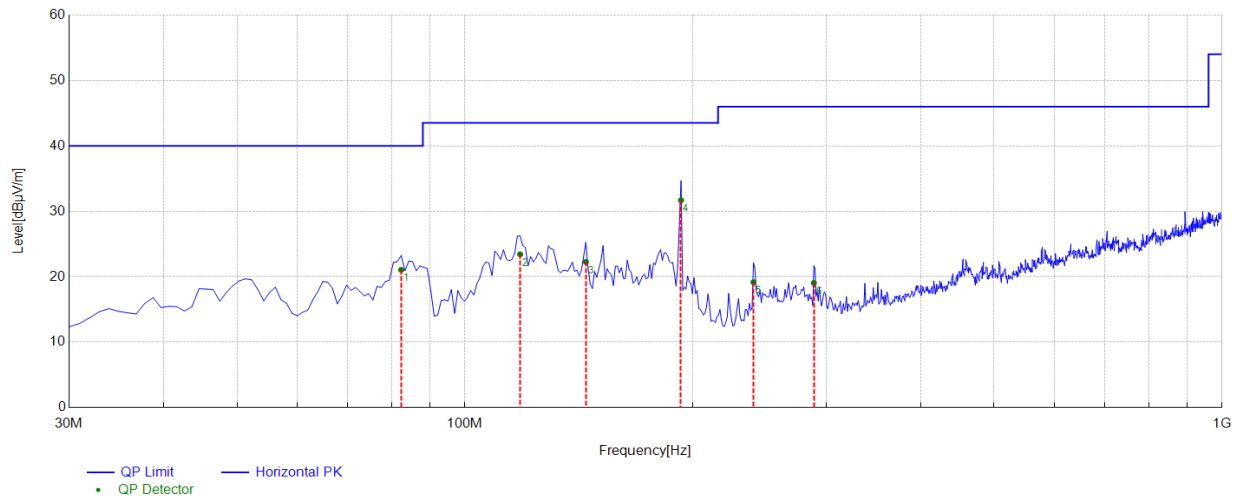
Note:

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 Emission



Final Data List									
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	53.28	-16.59	30.41	40.00	9.59	100	244	Vertical	PASS
2	82.38	-20.40	33.46	40.00	6.54	100	225	Vertical	PASS
3	115.36	-18.42	38.02	43.50	5.48	100	275	Vertical	PASS
4	142.52	-16.50	34.27	43.50	9.23	100	278	Vertical	PASS
5	192.96	-18.69	33.06	43.50	10.44	100	258	Vertical	PASS
6	288.99	-16.59	25.78	46.00	20.22	100	331	Vertical	PASS



Final Data List									
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	82.38	-20.40	21.06	40.00	18.94	200	304	Horizontal	PASS
2	118.27	-18.12	23.44	43.50	20.06	100	242	Horizontal	PASS
3	144.46	-16.26	22.28	43.50	21.22	100	98	Horizontal	PASS
4	192.96	-18.69	31.70	43.50	11.80	100	242	Horizontal	PASS
5	240.49	-18.13	19.18	46.00	26.82	100	40	Horizontal	PASS
6	288.99	-16.59	19.06	46.00	26.94	100	0	Horizontal	PASS

Mode:	BLE1M-2402
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1560	44.63	2.77	74.00	29.37	150	167	Horizontal
2	4804.55	45.79	-12.69	74.00	28.21	150	172	Horizontal
3	6024.58	45.11	-9.53	74.00	28.89	150	270	Horizontal
4	7694.24	45.17	-9.13	74.00	28.83	150	51	Horizontal
5	12685.2	47.79	-0.89	74.00	26.21	150	137	Horizontal
6	15494.0	51.27	3.17	74.00	22.73	150	223	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1792	46.23	4.98	74.00	27.77	150	65	Vertical
2	4804.55	44.49	-12.69	74.00	29.51	150	302	Vertical
3	5760.79	45.25	-11.28	74.00	28.75	150	169	Vertical
4	8923.26	45.09	-7.60	74.00	28.91	150	40	Vertical
5	11714.0	49.07	-2.27	74.00	24.93	150	150	Vertical
6	15122.3	50.34	3.78	74.00	23.66	150	47	Vertical

Mode:	BLE1M-2440
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1836	47.18	5.51	74.00	26.82	150	176	Horizontal
2	4879.49	49.09	-13.73	74.00	24.91	150	321	Horizontal
3	6021.58	44.44	-9.52	74.00	29.56	150	274	Horizontal
4	7673.26	44.31	-9.32	74.00	29.69	150	306	Horizontal
5	11162.4	46.87	-3.31	74.00	27.13	150	329	Horizontal
6	14927.4	49.93	1.93	74.00	24.07	150	70	Horizontal

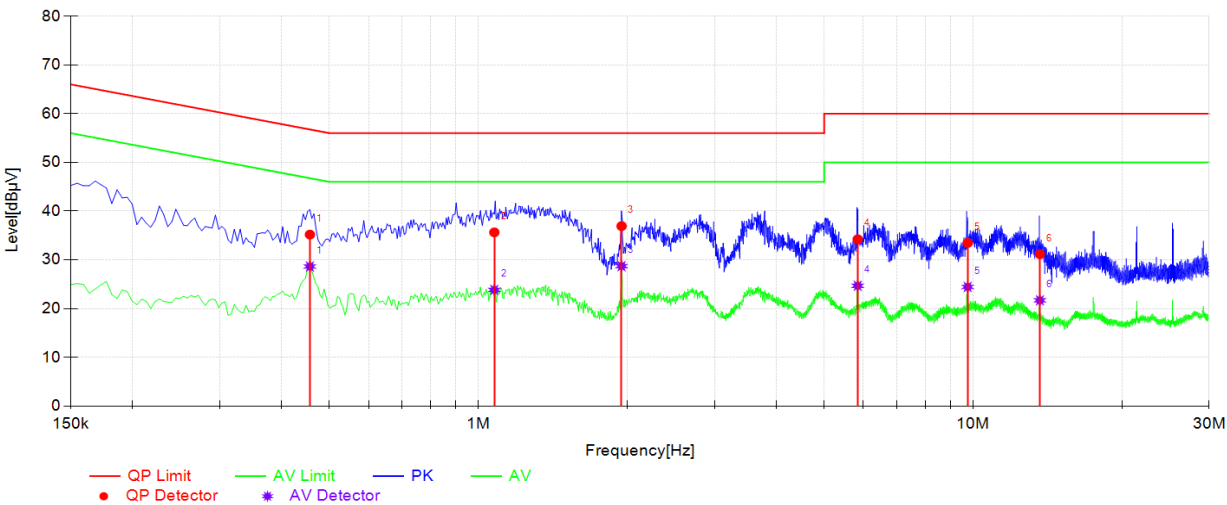
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2132	50.45	7.41	74.00	23.55	150	194	Vertical
2	4879.49	47.58	-13.73	74.00	26.42	150	311	Vertical
3	7358.51	44.32	-9.69	74.00	29.68	150	252	Vertical
4	10377.0	46.04	-5.43	74.00	27.96	150	128	Vertical
5	13161.8	48.28	0.27	74.00	25.72	150	335	Vertical
6	15592.9	50.82	2.92	74.00	23.18	150	323	Vertical

Mode:	BLE1M-2480
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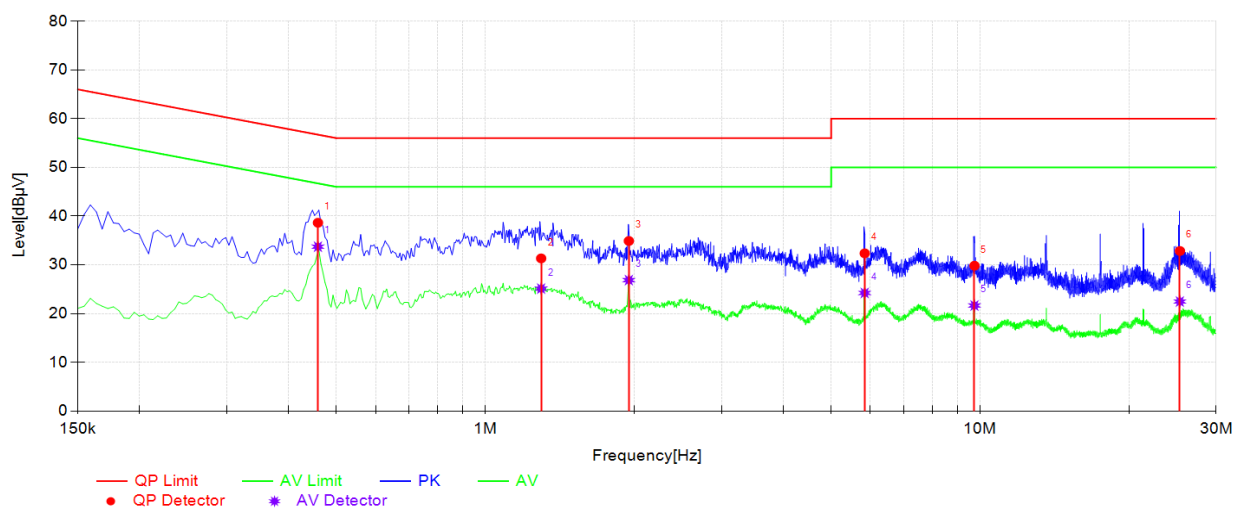
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1902	49.29	6.30	74.00	24.71	150	219	Horizontal
2	4960.43	53.38	-13.34	74.00	20.62	150	358	Horizontal
3	5649.88	44.69	-11.47	74.00	29.31	150	225	Horizontal
4	8209.83	45.14	-8.27	74.00	28.86	150	95	Horizontal
5	11219.4	47.50	-3.28	74.00	26.50	150	71	Horizontal
6	14924.4	50.73	1.93	74.00	23.27	150	284	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1730	45.90	4.34	74.00	28.10	150	346	Vertical
2	4960.43	49.73	-13.34	74.00	24.27	150	318	Vertical
3	5760.79	46.04	-11.28	74.00	27.96	150	154	Vertical
4	8488.60	44.93	-8.29	74.00	29.07	150	346	Vertical
5	10874.7	47.57	-4.17	74.00	26.43	150	280	Vertical
6	12229.6	47.86	-2.27	74.00	26.14	150	8	Vertical

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	0.4564	10.27	35.19	56.76	21.57	28.64	46.76	18.12	L1	PASS
2	1.0768	10.28	35.65	56.00	20.35	23.84	46.00	22.16	L1	PASS
3	1.9469	10.29	36.94	56.00	19.06	28.72	46.00	17.28	L1	PASS
4	5.8441	10.38	34.23	60.00	25.77	24.69	50.00	25.31	L1	PASS
5	9.7526	10.44	33.49	60.00	26.51	24.45	50.00	25.55	L1	PASS
6	13.6496	10.53	31.16	60.00	28.84	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	0.4586	10.27	38.65	56.72	18.07	33.73	46.72	12.99	N	PASS
2	1.2961	10.28	31.34	56.00	24.66	25.13	46.00	20.87	N	PASS
3	1.9497	10.29	34.91	56.00	21.09	26.87	46.00	19.13	N	PASS
4	5.8444	10.42	32.37	60.00	27.63	24.24	50.00	25.76	N	PASS
5	9.7425	10.44	29.83	60.00	30.17	21.66	50.00	28.34	N	PASS
6	25.3499	10.73	32.86	60.00	27.14	22.48	50.00	27.52	N	PASS