

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.720	2401.644	2402.364	0.5	PASS
		2440	0.720	2439.648	2440.368	0.5	PASS
		2480	0.724	2479.644	2480.368	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



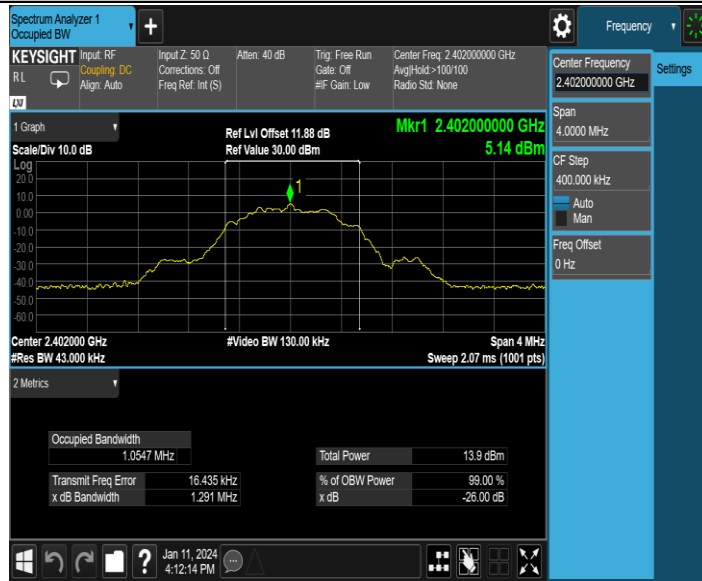
Appendix B: Occupied Channel Bandwidth

Test Result

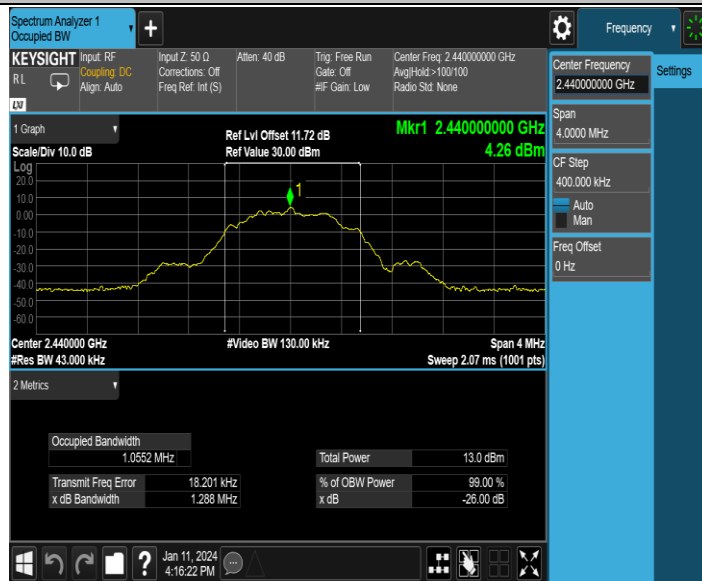
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0544	2401.4893	2402.5437	---	---
		2440	1.0546	2439.4910	2440.5456	---	---
		2480	1.0553	2479.4928	2480.5481	---	---

Test Graphs

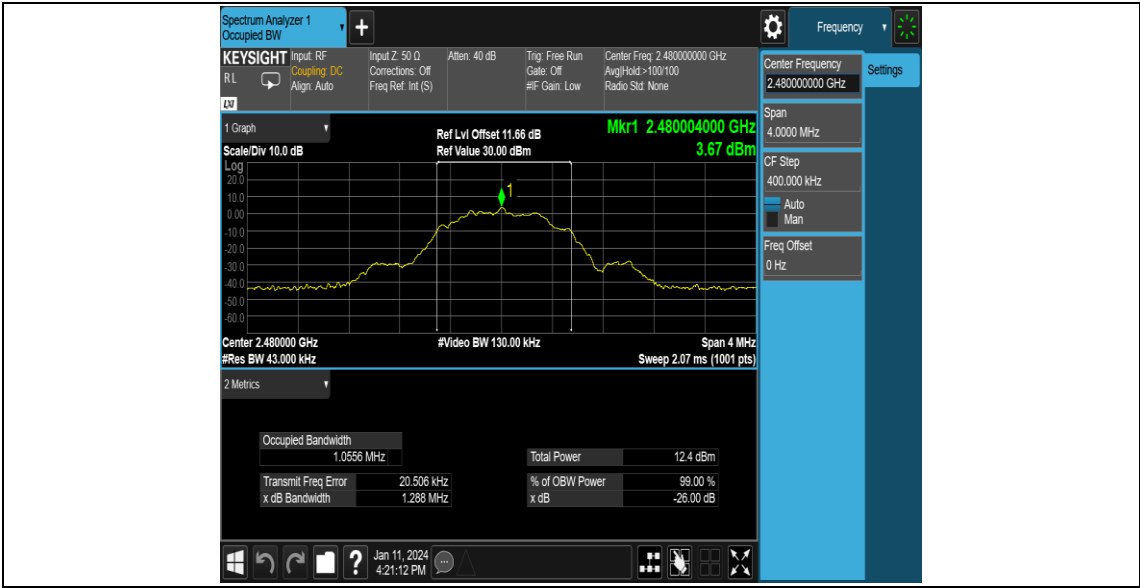
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



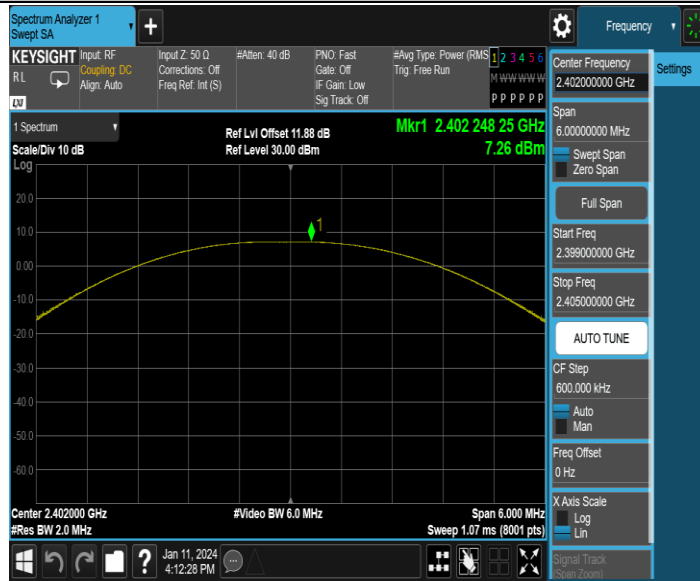
Appendix C: Maximum conducted output power

Test Result Peak

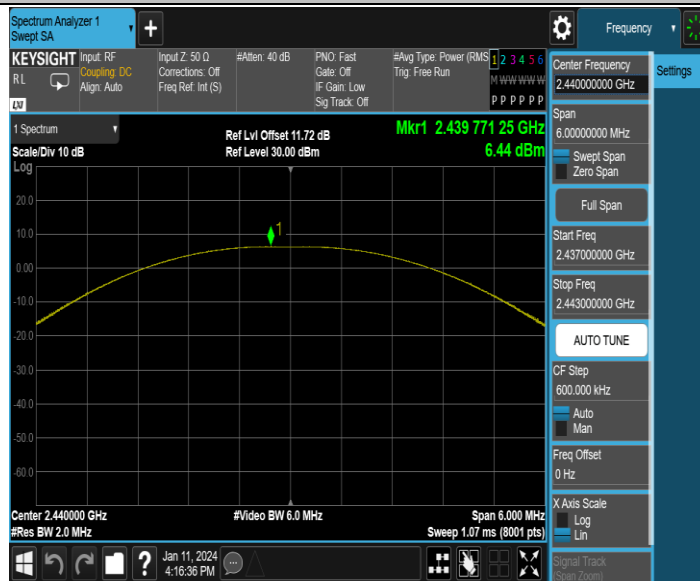
TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	7.26	≤30	8.02	≤36	PASS
		2440	6.44	≤30	7.20	≤36	PASS
		2480	5.81	≤30	6.57	≤36	PASS

Test Graphs Peak

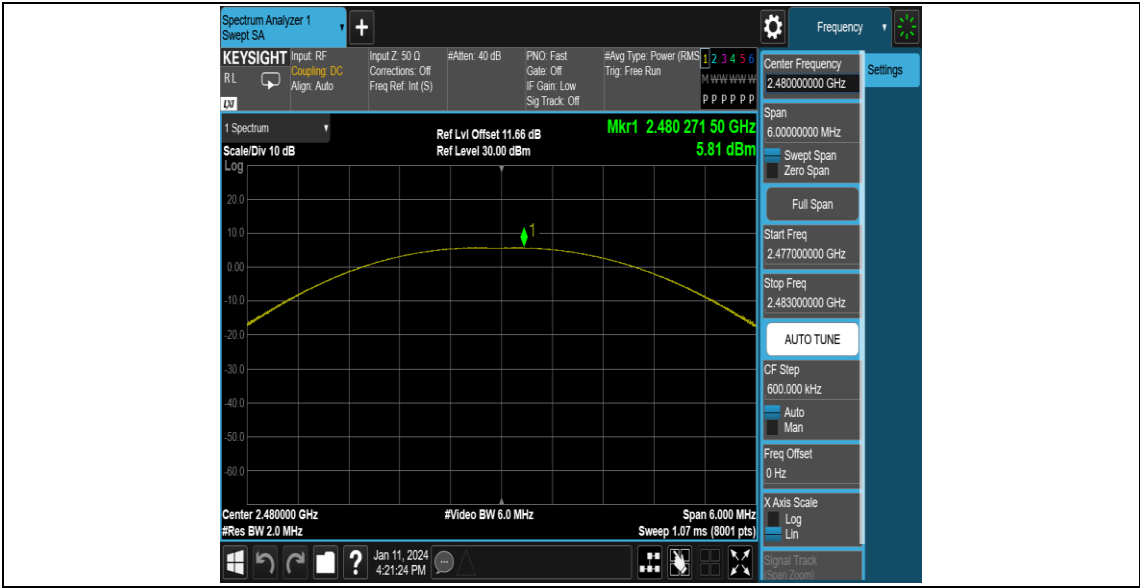
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



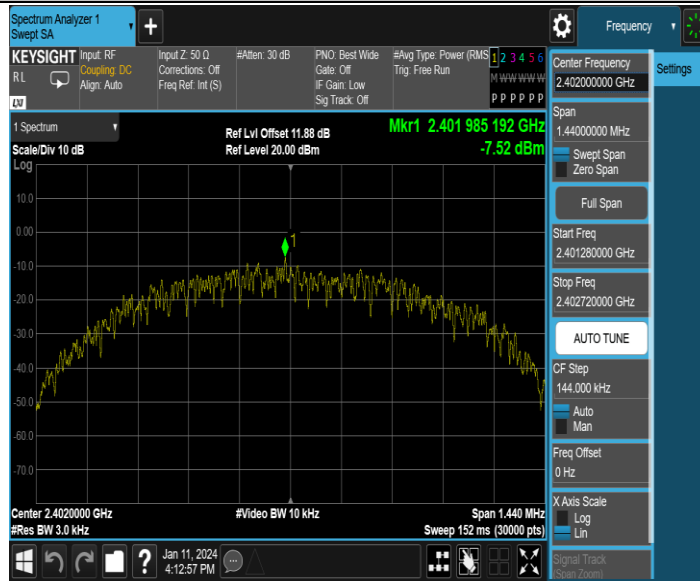
Appendix D: Maximum power spectral density

Test Result

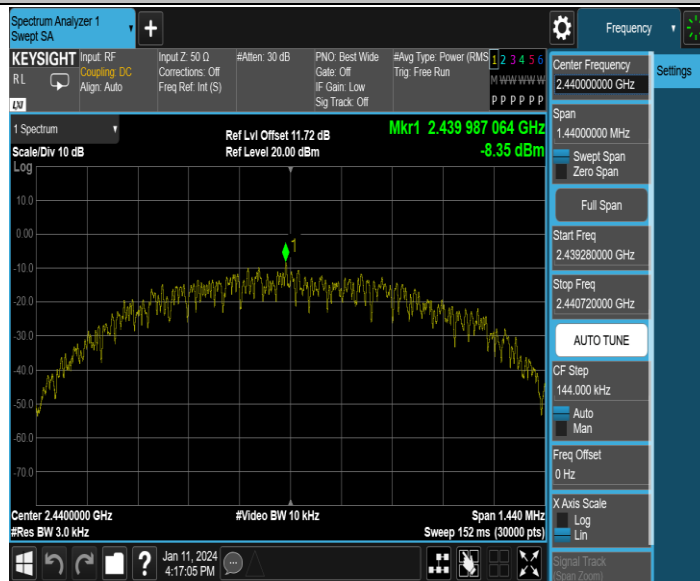
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-7.52	≤8.00	PASS
		2440	-8.35	≤8.00	PASS
		2480	-9.06	≤8.00	PASS

Test Graphs

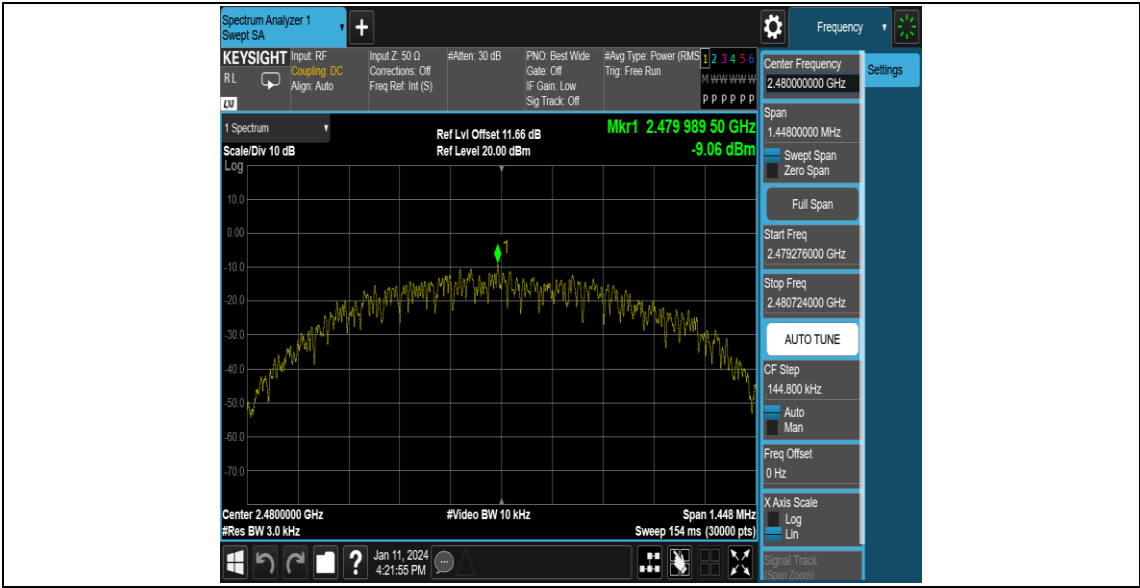
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



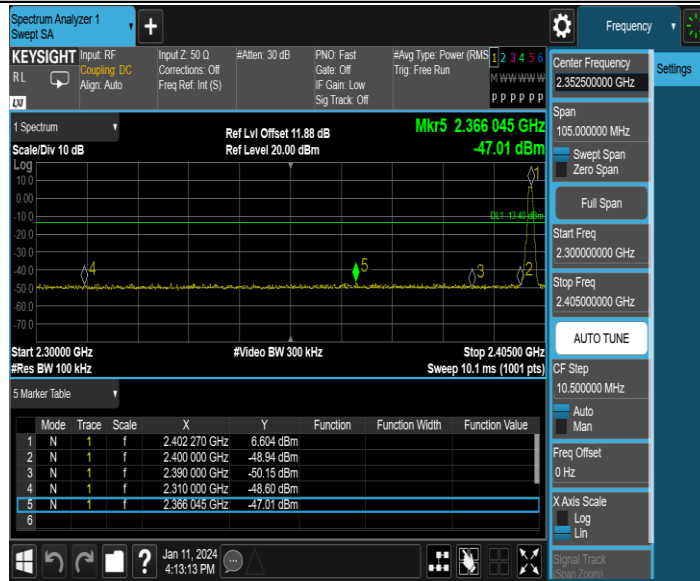
Appendix E: Band edge measurements

Test Result

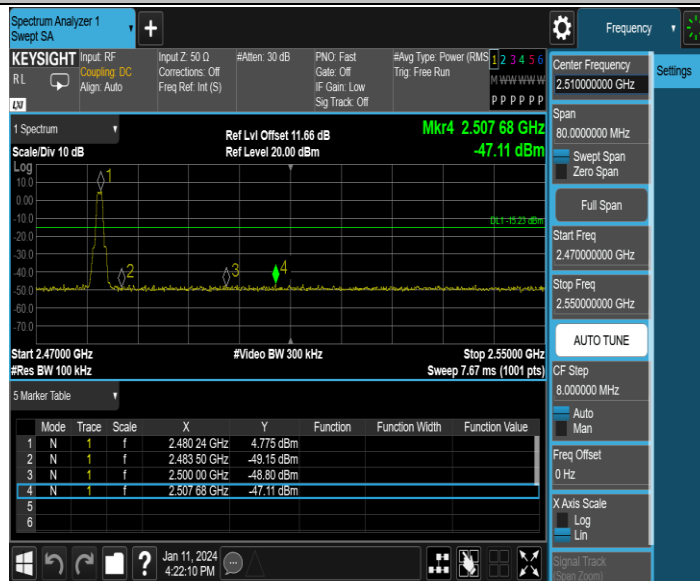
TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.60	-47.01	≤-13.4	PASS
		High	2480	4.78	-47.11	≤-15.23	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

Test Result

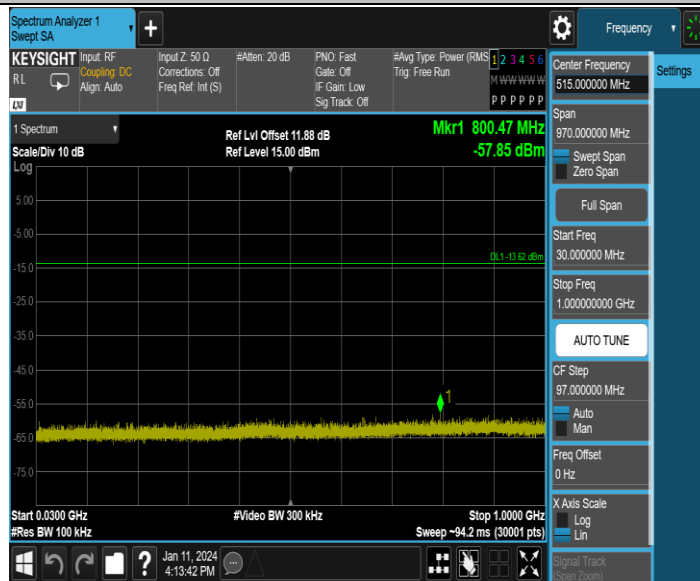
TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	6.38	6.38	---	PASS
			30~1000	6.38	-57.85	≤-13.62	PASS
			1000~26500	6.38	-45.27	≤-13.62	PASS
		2440	Reference	5.26	5.26	---	PASS
			30~1000	5.26	-57.93	≤-14.74	PASS
			1000~26500	5.26	-45.93	≤-14.74	PASS
		2480	Reference	4.57	4.57	---	PASS
			30~1000	4.57	-57.55	≤-15.43	PASS
			1000~26500	4.57	-47.67	≤-15.43	PASS

Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



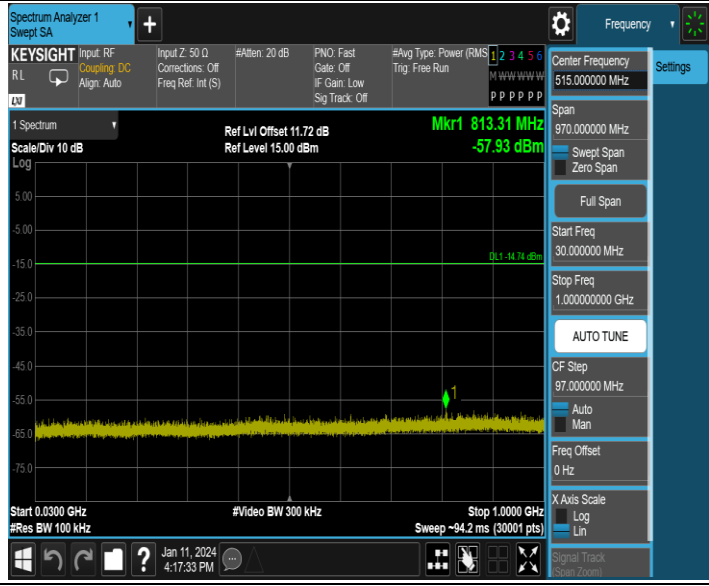
BLE_1M_Ant1_2402_1000~26500



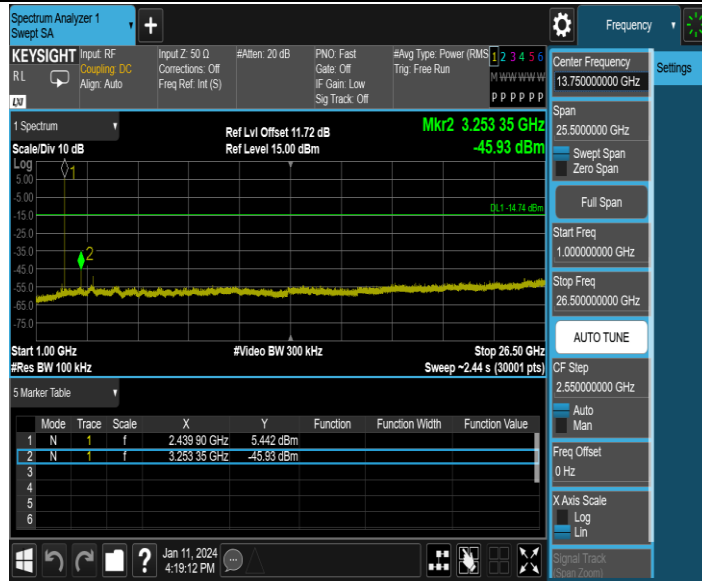
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



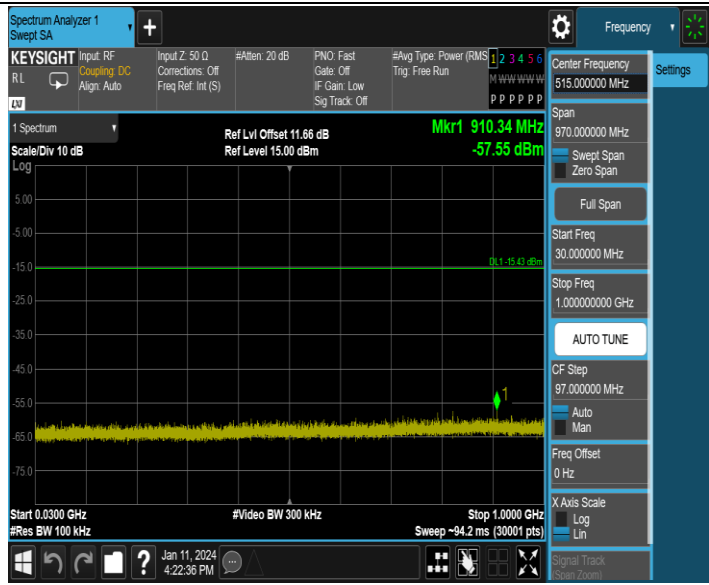
BLE_1M_Ant1_2440_1000~26500



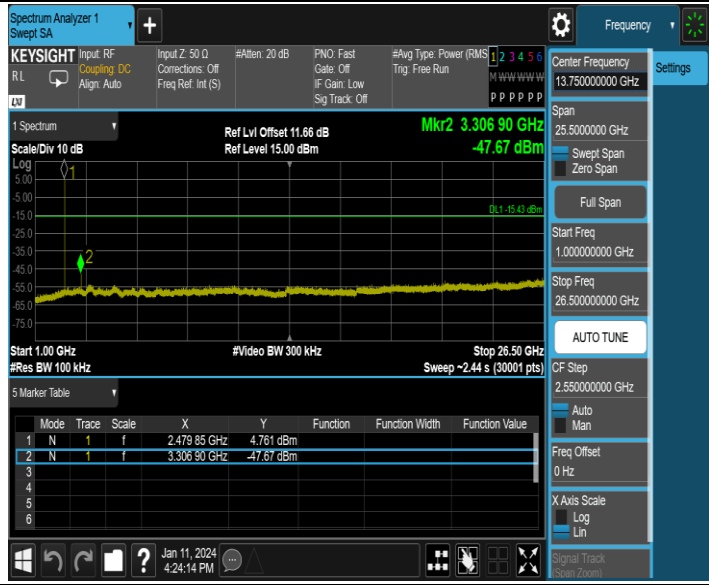
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



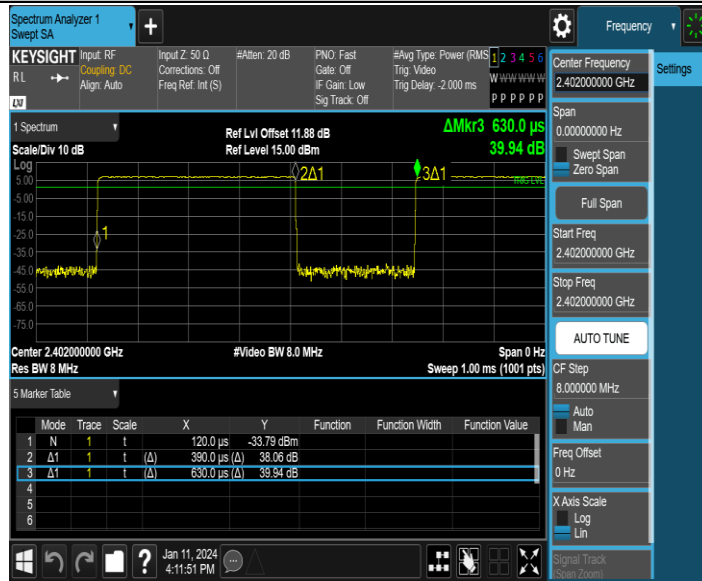
Appendix G: Duty Cycle

Test Result

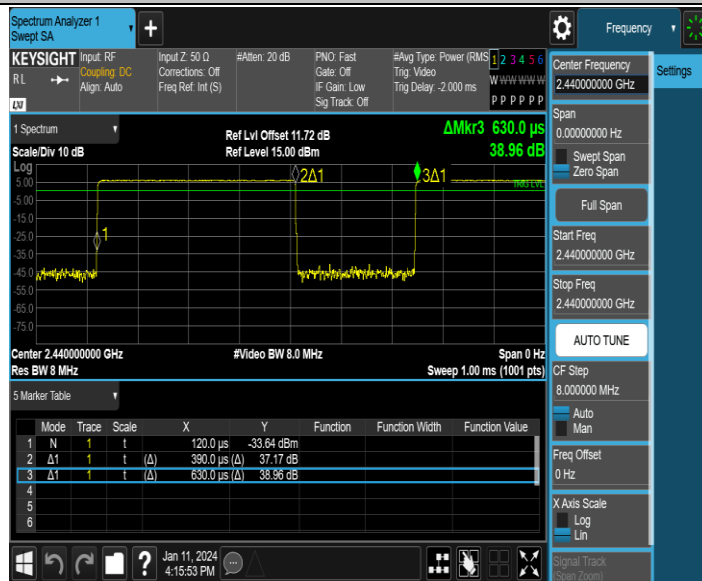
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]
BLE_1M	Ant1	2402	0.39	0.63	61.90
		2440	0.39	0.63	61.90
		2480	0.39	0.63	61.90

Test Graphs

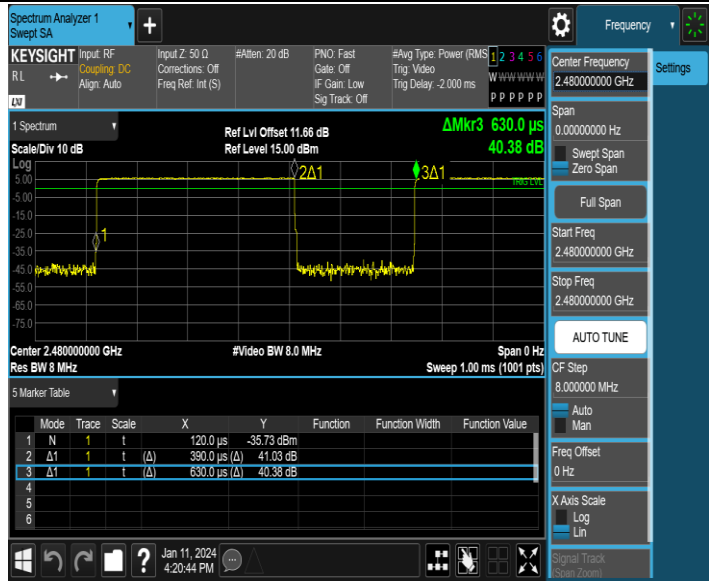
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

Mode:	BLE-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	2310	48.19	9.07	74.00	25.81	150	224	Horizontal	PASS
2	2328.88	49.93	9.16	74.00	24.07	150	47	Horizontal	PASS
3	2343.44	50.62	9.28	74.00	23.38	150	38	Horizontal	PASS
4	2355.76	51.09	9.27	74.00	22.91	150	115	Horizontal	PASS
5	2381.6	50.96	9.93	74.00	23.04	150	56	Horizontal	PASS
6	2390	50.27	10.38	74.00	23.73	150	258	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	48.51	9.07	74.00	25.49	150	148	Vertical	PASS
2	2325.68	50.23	9.16	74.00	23.77	150	250	Vertical	PASS
3	2344.88	50.78	9.29	74.00	23.22	150	359	Vertical	PASS
4	2364.72	50.64	9.48	74.00	23.36	150	172	Vertical	PASS
5	2371.2	50.02	9.53	74.00	23.98	150	190	Vertical	PASS
6	2390	51.52	10.38	74.00	22.48	150	208	Vertical	PASS

Mode:	BLE-2480
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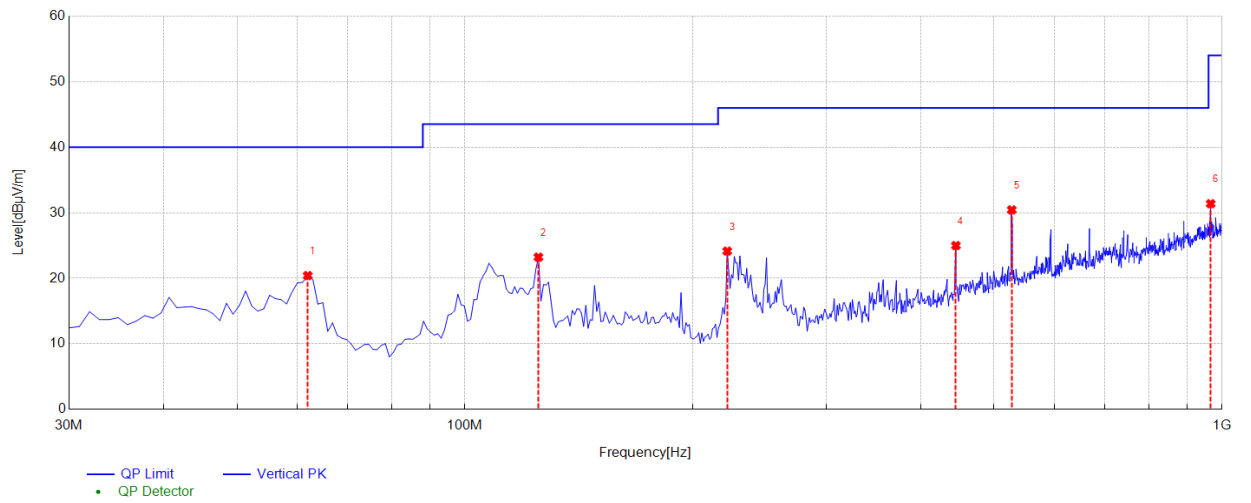
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	2483.5	50.91	10.62	74.00	23.09	150	91	Horizontal	PASS
2	2486.50	51.99	10.36	74.00	22.01	150	26	Horizontal	PASS
3	2490.16	52.08	10.28	74.00	21.92	150	276	Horizontal	PASS
4	2492.41	52.64	10.41	74.00	21.36	150	332	Horizontal	PASS
5	2496.15	51.49	10.37	74.00	22.51	150	79	Horizontal	PASS
6	2500	51.09	10.10	74.00	22.91	150	67	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	49.98	10.62	74.00	24.02	150	166	Vertical	PASS
2	2485.89	51.89	10.39	74.00	22.11	150	95	Vertical	PASS
3	2487.82	52.14	10.23	74.00	21.86	150	37	Vertical	PASS
4	2490.99	51.14	10.35	74.00	22.86	150	157	Vertical	PASS
5	2497.80	51.85	10.20	74.00	22.15	150	291	Vertical	PASS
6	2500	49.37	10.10	74.00	24.63	150	317	Vertical	PASS

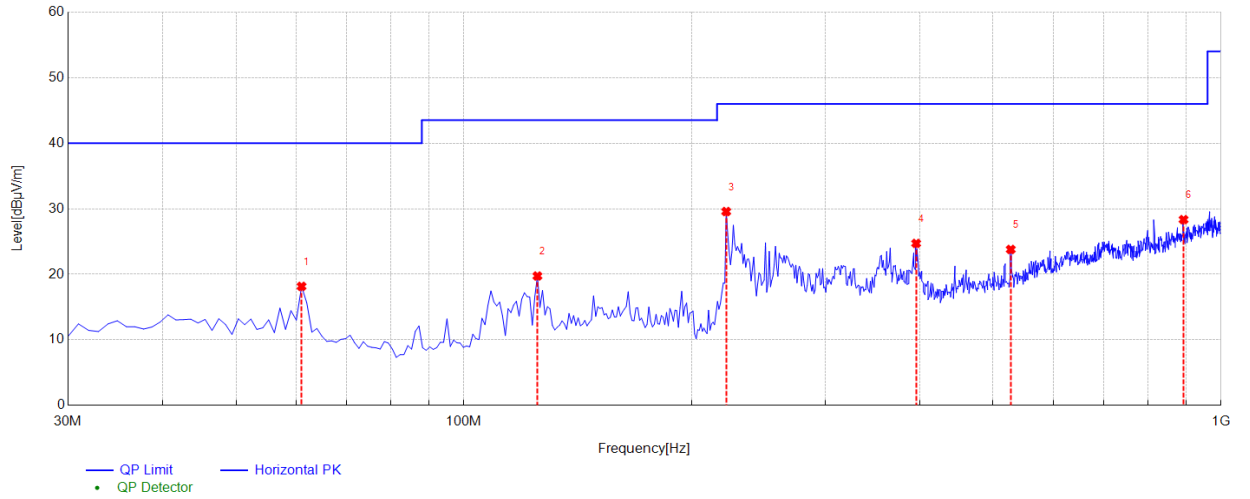
Note:

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	62.0100	20.42	-17.47	40.00	19.58	100	360	Vertical	PASS
2	125.060	23.23	-17.72	43.50	20.27	100	30	Vertical	PASS
3	222.060	24.15	-18.93	46.00	21.85	100	20	Vertical	PASS
4	445.160	25.00	-12.57	46.00	21.00	100	310	Vertical	PASS
5	527.610	30.44	-11.20	46.00	15.56	100	310	Vertical	PASS
6	966.050	31.38	-2.82	54.00	22.62	100	340	Vertical	PASS



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	61.0400	18.17	-17.33	40.00	21.83	100	340	Horizontal	PASS
2	125.060	19.75	-17.72	43.50	23.75	100	340	Horizontal	PASS
3	222.060	29.58	-18.93	46.00	16.42	100	140	Horizontal	PASS
4	395.690	24.72	-13.57	46.00	21.28	100	220	Horizontal	PASS
5	527.610	23.80	-11.20	46.00	22.20	100	190	Horizontal	PASS
6	892.330	28.35	-3.77	46.00	17.65	100	240	Horizontal	PASS

Mode:	BLE-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	1100	41.34	0.79	74.00	32.66	150	278	Horizontal	PASS
2	1650	42.11	2.71	74.00	31.89	150	101	Horizontal	PASS
3	4801.55	41.55	-14.83	74.00	32.45	150	130	Horizontal	PASS
4	8554.55	44.58	-10.37	74.00	29.42	150	105	Horizontal	PASS
5	11168.4	46.15	-6.01	74.00	27.85	150	345	Horizontal	PASS
6	15691.8	49.40	-0.40	74.00	24.60	150	213	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	1428	41.41	1.30	74.00	32.59	150	245	Vertical	PASS
2	1992	45.05	6.02	74.00	28.95	150	77	Vertical	PASS
3	3938.24	44.02	-17.17	74.00	29.98	150	128	Vertical	PASS
4	5269.18	45.83	-14.05	74.00	28.17	150	124	Vertical	PASS
5	8785.37	45.94	-9.51	74.00	28.06	150	272	Vertical	PASS
6	11054.5	47.18	-6.14	74.00	26.82	150	142	Vertical	PASS

Mode:	BLE-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	1556	41.15	1.86	74.00	32.85	150	176	Horizontal	PASS
2	1876	44.08	5.00	74.00	29.92	150	114	Horizontal	PASS
3	4257	41.85	-16.62	74.00	32.15	150	120	Horizontal	PASS
4	6774	43.95	-11.95	74.00	30.05	150	106	Horizontal	PASS
5	9195	44.35	-8.75	74.00	29.65	150	294	Horizontal	PASS
6	13611	49.18	-2.85	74.00	24.82	150	260	Horizontal	PASS

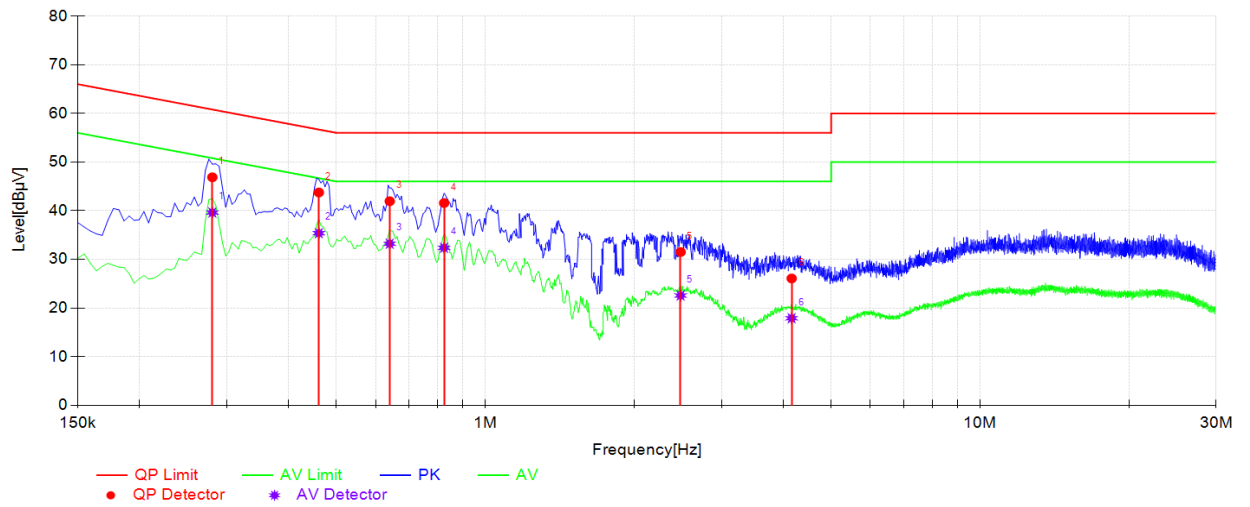
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1418	41.34	1.28	74.00	32.66	150	167	Vertical	PASS
2	2296	46.26	7.16	74.00	27.74	150	247	Vertical	PASS
3	5250	44.87	-14.22	74.00	29.13	150	122	Vertical	PASS
4	7668	44.56	-11.44	74.00	29.44	150	306	Vertical	PASS
5	10167	47.99	-7.48	74.00	26.01	150	283	Vertical	PASS
6	14805	49.54	-1.35	74.00	24.46	150	154	Vertical	PASS

Mode:	BLE-2480
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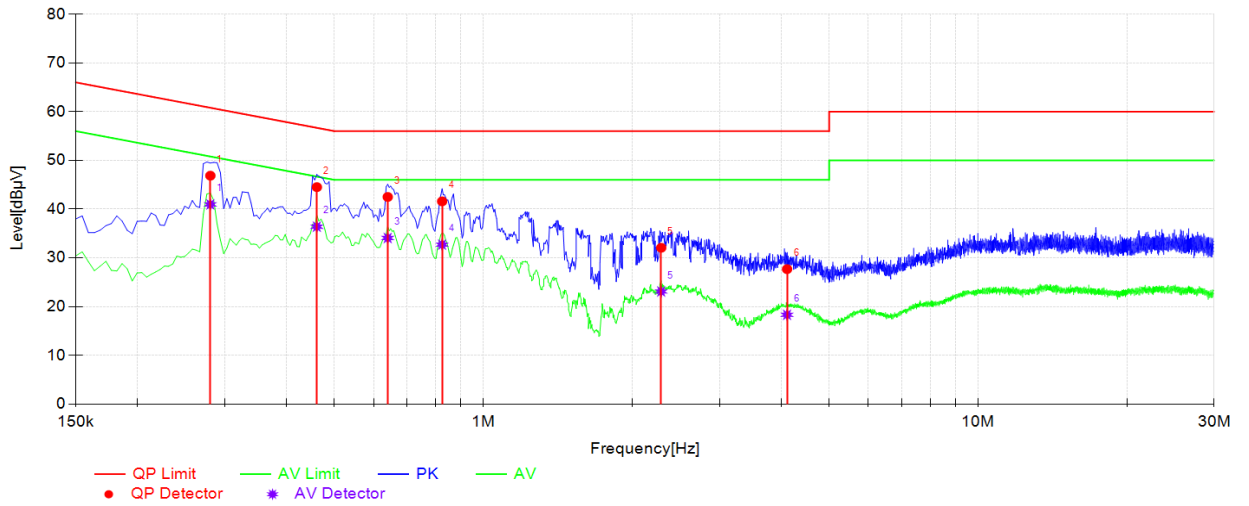
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	1216	41.77	1.09	74.00	32.23	150	294	Horizontal	PASS
2	1806	43.73	4.28	74.00	30.27	150	163	Horizontal	PASS
3	4269	41.80	-16.51	74.00	32.20	150	91	Horizontal	PASS
4	6717	43.45	-12.31	74.00	30.55	150	25	Horizontal	PASS
5	10485	46.39	-7.66	74.00	27.61	150	360	Horizontal	PASS
6	14250	48.93	-1.14	74.00	25.07	150	65	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	1274	42.19	1.11	74.00	31.81	150	51	Vertical	PASS
2	2010	45.20	6.17	74.00	28.80	150	317	Vertical	PASS
3	4722	41.89	-14.97	74.00	32.11	150	43	Vertical	PASS
4	6576	45.95	-12.30	74.00	28.05	150	171	Vertical	PASS
5	9663	46.46	-8.50	74.00	27.54	150	144	Vertical	PASS
6	13827	48.67	-2.34	74.00	25.33	150	304	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	0.2805	10.27	46.88	60.80	13.92	39.63	50.80	11.17	L1	PASS
2	0.4605	10.27	43.76	56.68	12.92	35.38	46.68	11.30	L1	PASS
3	0.6405	10.27	41.96	56.00	14.04	33.22	46.00	12.78	L1	PASS
4	0.825	10.27	41.58	56.00	14.42	32.38	46.00	13.62	L1	PASS
5	2.481	10.29	31.51	56.00	24.49	22.57	46.00	23.43	L1	PASS
6	4.1595	10.32	26.08	56.00	29.92	17.90	46.00	28.10	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	0.2805	10.27	46.87	60.80	13.93	40.97	50.80	9.83	N	PASS
2	0.4605	10.27	44.52	56.68	12.16	36.40	46.68	10.28	N	PASS
3	0.6405	10.27	42.51	56.00	13.49	34.08	46.00	11.92	N	PASS
4	0.825	10.27	41.60	56.00	14.40	32.72	46.00	13.28	N	PASS
5	2.2875	10.31	32.08	56.00	23.92	23.11	46.00	22.89	N	PASS
6	4.11	10.41	27.70	56.00	28.30	18.32	46.00	27.68	N	PASS