

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.736	2401.608	2402.344	0.5	PASS
		2440	0.696	2439.632	2440.328	0.5	PASS
		2480	0.676	2479.636	2480.312	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



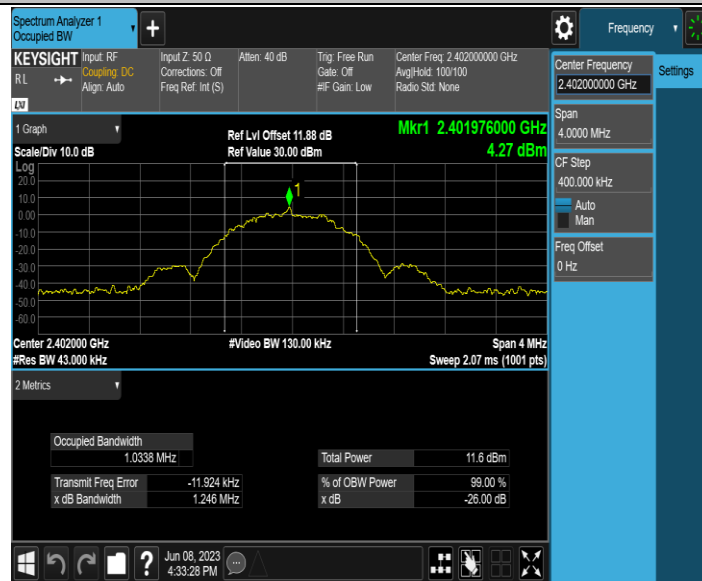
Appendix B: Occupied Channel Bandwidth

Test Result

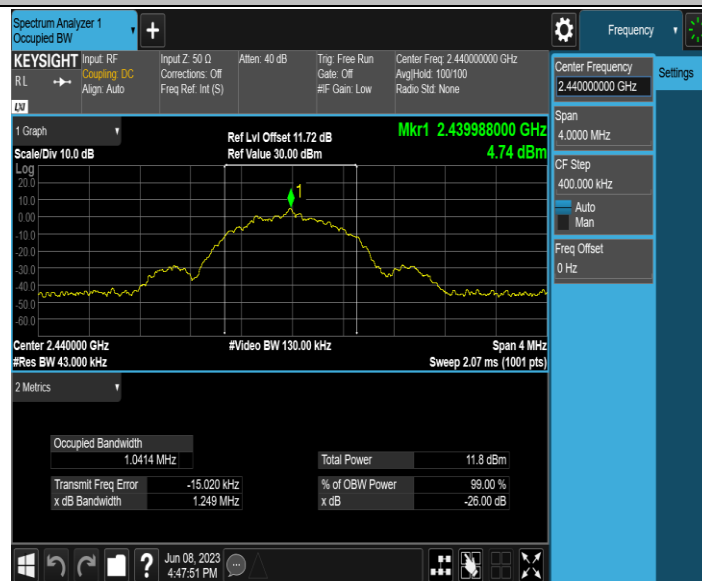
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0338	2401.4712	2402.5050	---	---
		2440	1.0414	2439.4643	2440.5057	---	---
		2480	1.0339	2479.4714	2480.5053	---	---

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



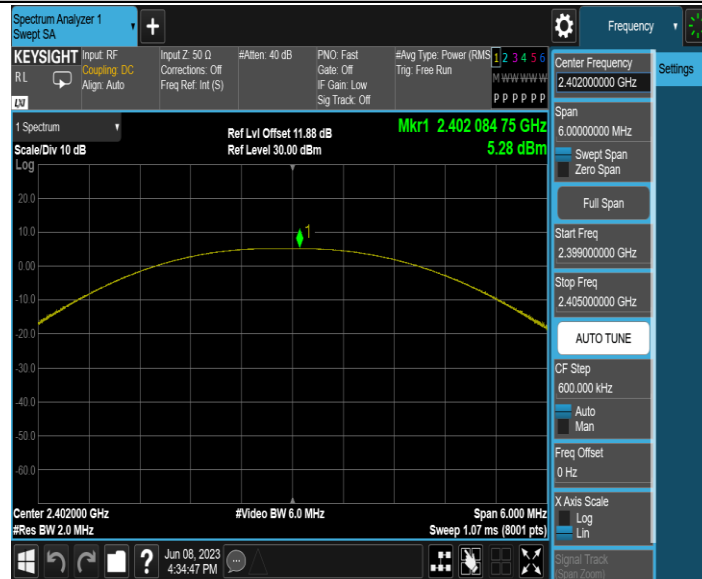
Appendix C: Maximum conducted output power

Test Result

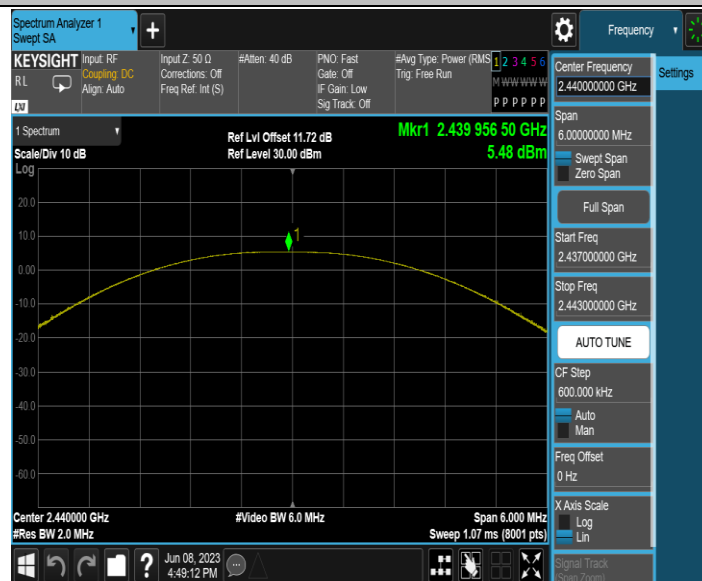
TestMode	Antenna	Frequency[MHz]	Conducted Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	5.28	≤30	PASS
		2440	5.48	≤30	PASS
		2480	5.16	≤30	PASS

Test Graphs

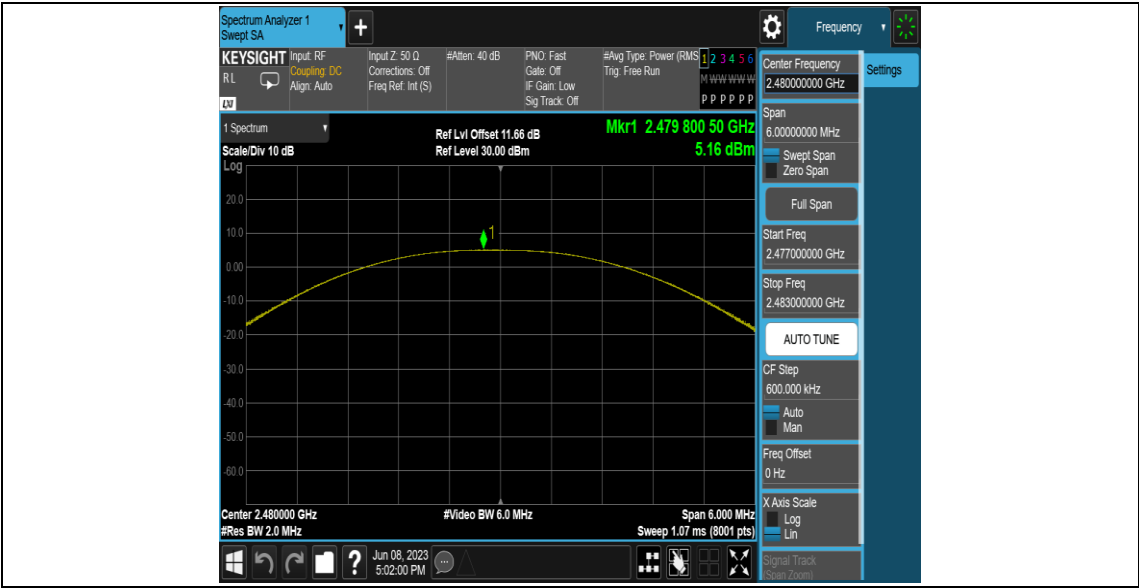
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



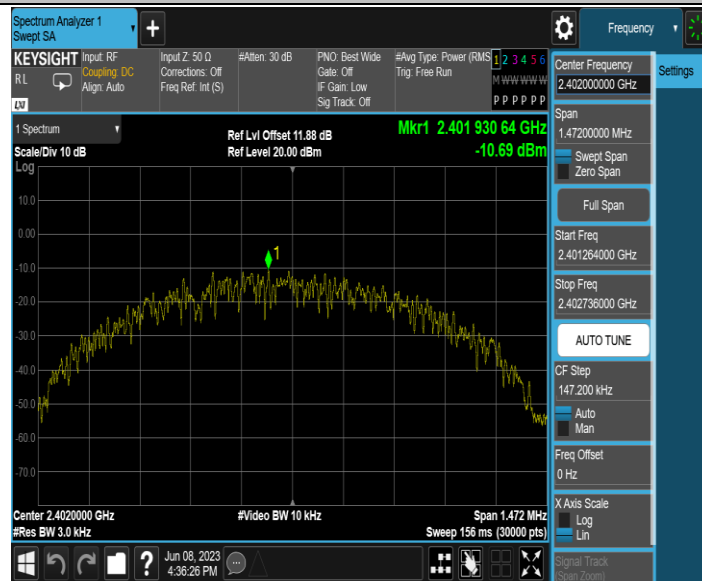
Appendix D: Maximum power spectral density

Test Result

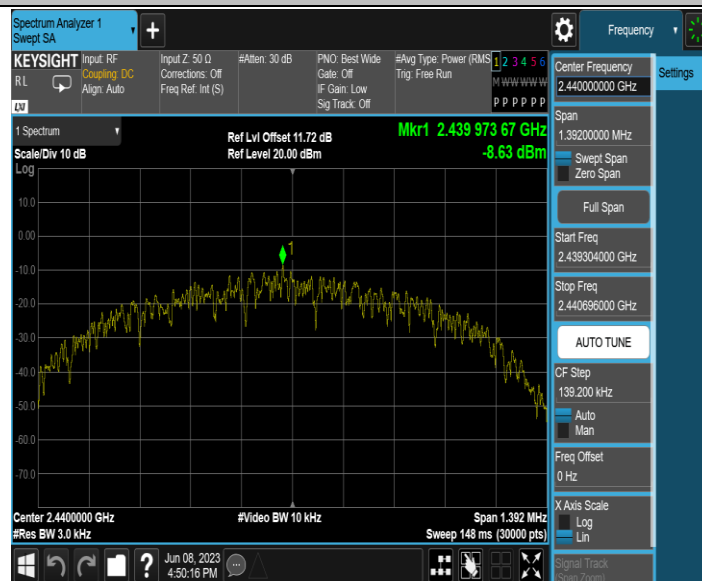
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.69	≤8.00	PASS
		2440	-8.64	≤8.00	PASS
		2480	-10.1	≤8.00	PASS

Test Graphs

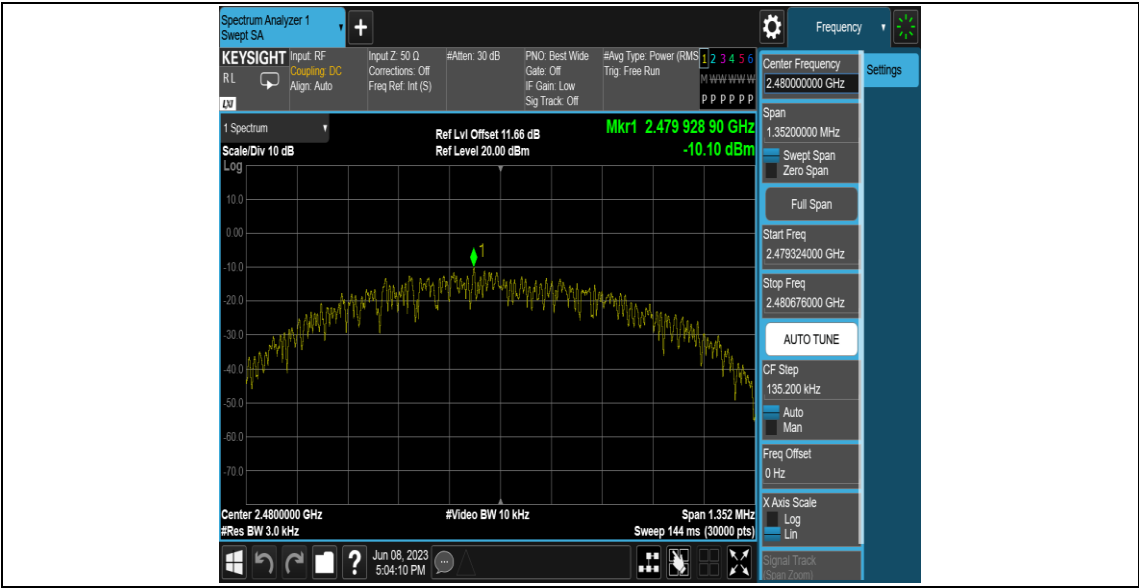
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



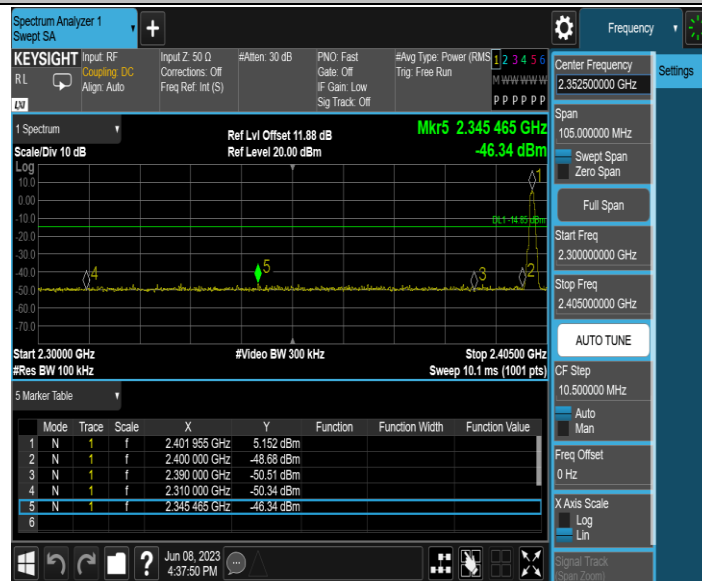
Appendix E: Band edge measurements

Test Result

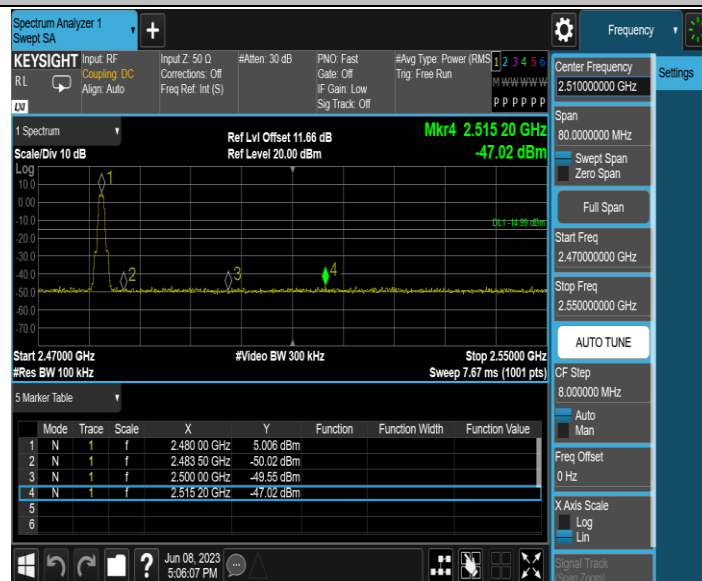
TestMod e	Antenn a	ChNam e	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	5.15	-46.34	≤-14.85	PASS
		High	2480	5.01	-47.02	≤-14.99	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

Test Result

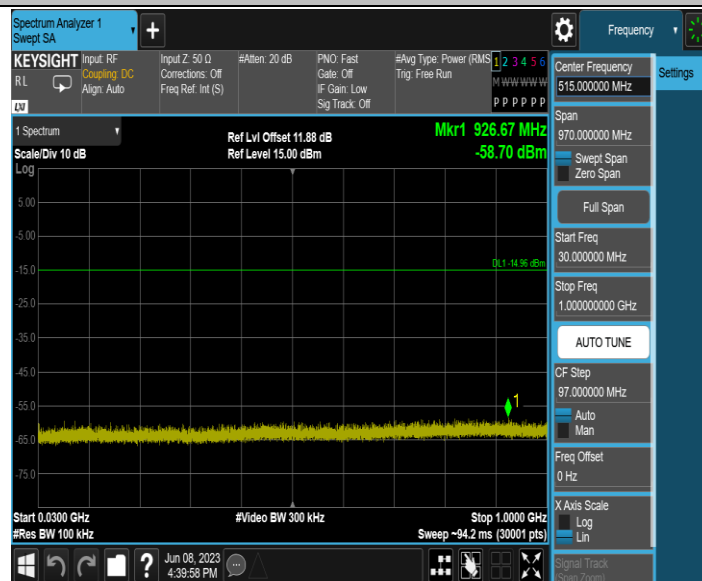
TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.04	5.04	---	PASS
			30~1000	5.04	-58.7	≤-14.96	PASS
			1000~26500	5.04	-50.05	≤-14.96	PASS
		2440	Reference	5.30	5.30	---	PASS
			30~1000	5.30	-58.13	≤-14.7	PASS
			1000~26500	5.30	-49.77	≤-14.7	PASS
		2480	Reference	4.90	4.90	---	PASS
			30~1000	4.90	-58.16	≤-15.1	PASS
			1000~26500	4.90	-50.2	≤-15.1	PASS

Test Graphs

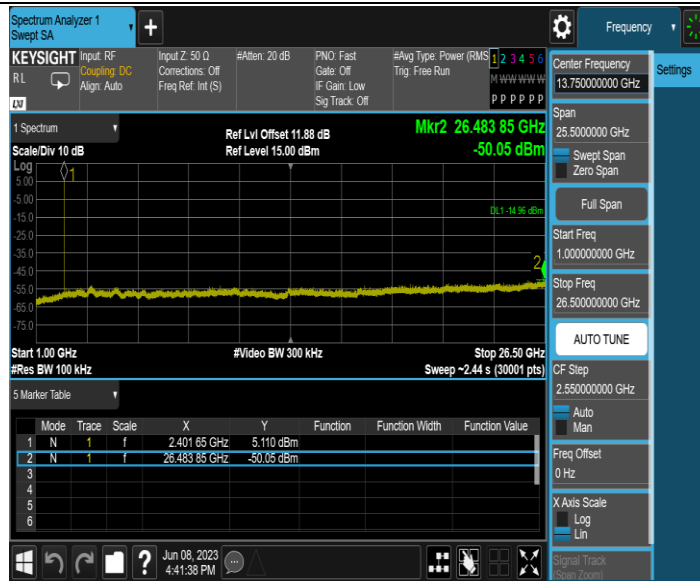
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



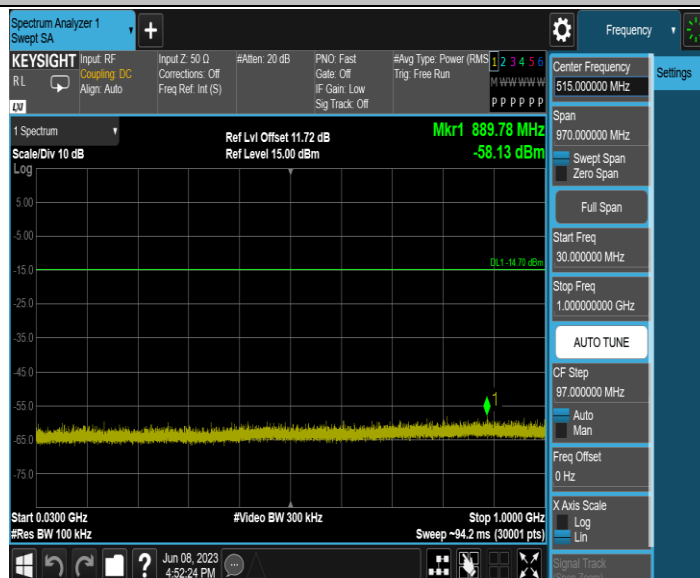
BLE_1M_Ant1_2402_1000~26500



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



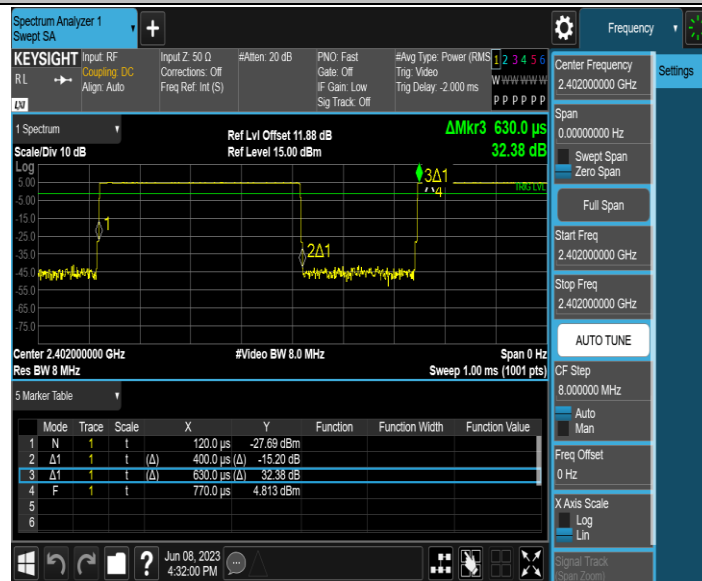
Appendix G: Duty Cycle

Test Result

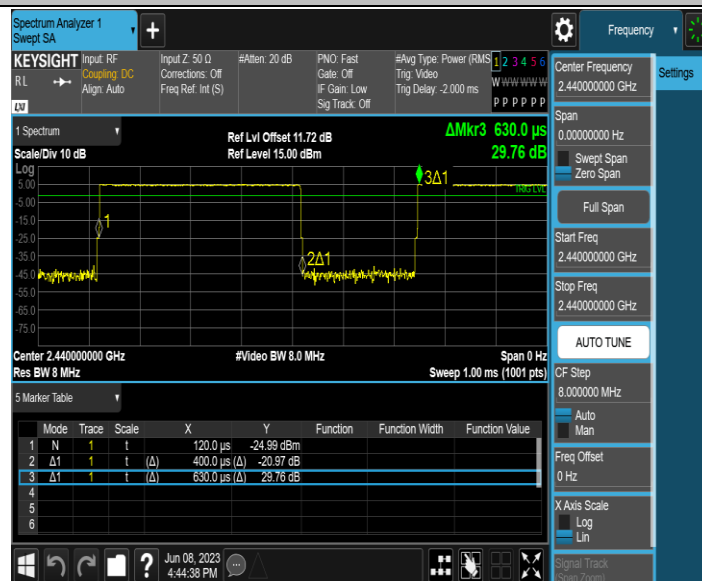
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]
BLE_1M	Ant1	2402	0.40	0.63	63.49
		2440	0.40	0.63	63.49
		2480	0.40	0.63	63.49

Test Graphs

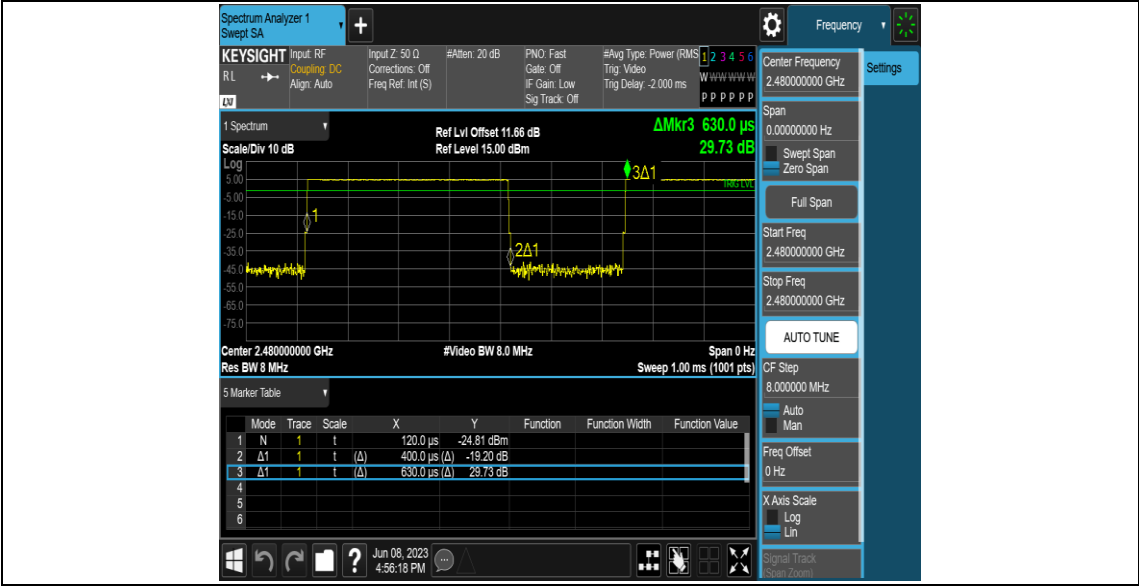
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

Mode:	BLE-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	47.86	7.84	74.00	26.14	150	85	Horizontal
2	2333.92	49.70	8.00	74.00	24.30	150	332	Horizontal
3	2345.6	49.71	8.11	74.00	24.29	150	137	Horizontal
4	2361.12	49.96	8.45	74.00	24.04	150	101	Horizontal
5	2384.56	50.89	8.99	74.00	23.11	150	192	Horizontal
6	2390	50.41	9.32	74.00	23.59	150	360	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	48.70	7.84	74.00	25.30	150	190	Vertical
2	2329.12	49.86	8.12	74.00	24.14	150	190	Vertical
3	2355.68	49.49	8.35	74.00	24.51	150	143	Vertical
4	2368.64	49.50	8.40	74.00	24.50	150	283	Vertical
5	2380.08	51.18	8.99	74.00	22.82	150	186	Vertical
6	2390	49.62	9.32	74.00	24.38	150	45	Vertical

Mode:	BLE-2480
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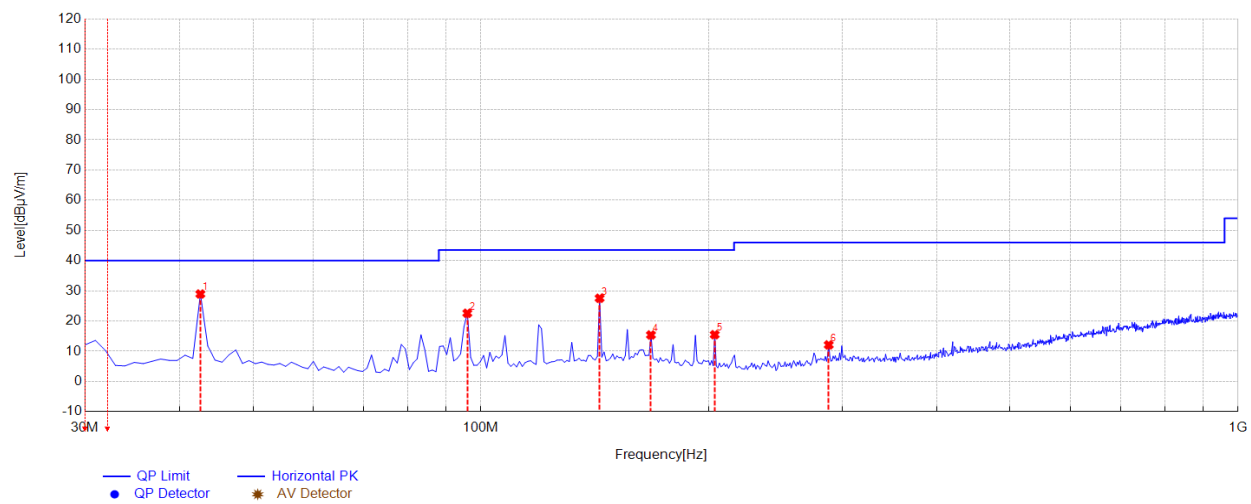
NO.	Freq. [MHz]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	49.69	9.65	74.00	24.31	150	53	Horizontal
2	2488.12	51.16	9.38	74.00	22.84	150	266	Horizontal
3	2491.98	51.05	9.01	74.00	22.95	150	332	Horizontal
4	2493.44	50.91	9.31	74.00	23.09	150	288	Horizontal
5	2495.39	50.93	9.32	74.00	23.07	150	360	Horizontal
6	2500	49.99	9.28	74.00	24.01	150	254	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	49.55	9.65	74.00	24.45	150	205	Vertical
2	2485.76	51.11	9.21	74.00	22.89	150	24	Vertical
3	2492.36	51.33	9.14	74.00	22.67	150	81	Vertical
4	2497.70	50.35	9.36	74.00	23.65	150	270	Vertical
5	2498.35	50.28	9.35	74.00	23.72	150	161	Vertical
6	2500	48.62	9.28	74.00	25.38	150	78	Vertical

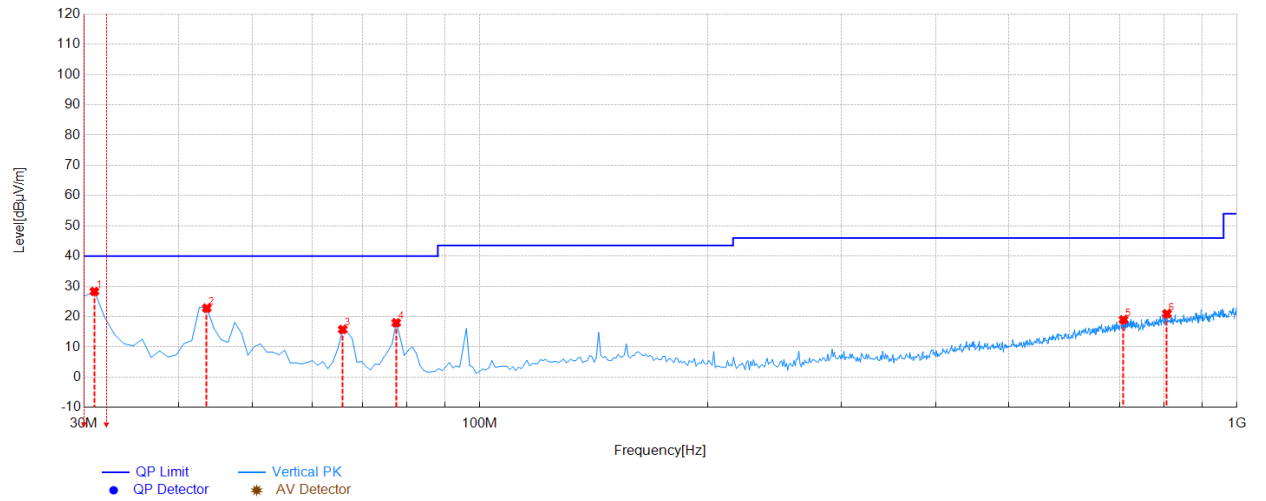
Note:

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 emissions



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	42.61	28.96	-10.35	40.00	11.04	150	196	Horizontal
2	95.96	22.61	-14.65	43.50	20.89	150	94	Horizontal
3	143.49	27.56	-11.05	43.50	15.94	150	121	Horizontal
4	167.74	15.40	-10.47	43.50	28.10	150	135	Horizontal
5	203.63	15.50	-13.73	43.50	28.00	150	9	Horizontal
6	288.02	12.11	-10.70	46.00	33.89	150	113	Horizontal



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.97	28.35	-10.12	40.00	11.65	150	69	Vertical
2	43.58	22.83	-10.69	40.00	17.17	150	16	Vertical
3	65.89	15.78	-13.08	40.00	24.22	150	49	Vertical
4	77.53	18.00	-15.08	40.00	22.00	150	49	Vertical
5	708.03	19.00	-1.40	46.00	27.00	150	55	Vertical
6	807.94	20.96	0.49	46.00	25.04	150	66	Vertical

Mode:	BLE-2402
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1590	43.38	3.05	74.00	30.62	150	30	Horizontal
2	4212	42.82	-14.51	74.00	31.18	150	240	Horizontal
3	5316	44.39	-12.12	74.00	29.61	150	74	Horizontal
4	6957	45.08	-9.80	74.00	28.92	150	240	Horizontal
5	9330	46.13	-6.51	74.00	27.87	150	324	Horizontal
6	13143	49.23	0.08	74.00	24.77	150	132	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1786	43.90	4.93	74.00	30.10	150	164	Vertical
2	3858	43.04	-15.29	74.00	30.96	150	218	Vertical
3	5760	45.20	-11.28	74.00	28.80	150	147	Vertical
4	8445	45.61	-8.18	74.00	28.39	150	18	Vertical
5	11712	48.09	-2.26	74.00	25.91	150	346	Vertical
6	14634	49.38	0.99	74.00	24.62	150	41	Vertical

Mode:	BLE-2440
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1642	44.43	3.51	74.00	29.57	150	319	Horizontal
2	4284	43.24	-14.72	74.00	30.76	150	343	Horizontal
3	6189	44.64	-10.26	74.00	29.36	150	254	Horizontal
4	8793	45.33	-7.34	74.00	28.67	150	27	Horizontal
5	11724	48.33	-2.28	74.00	25.67	150	241	Horizontal
6	13830	49.61	0.58	74.00	24.39	150	282	Horizontal

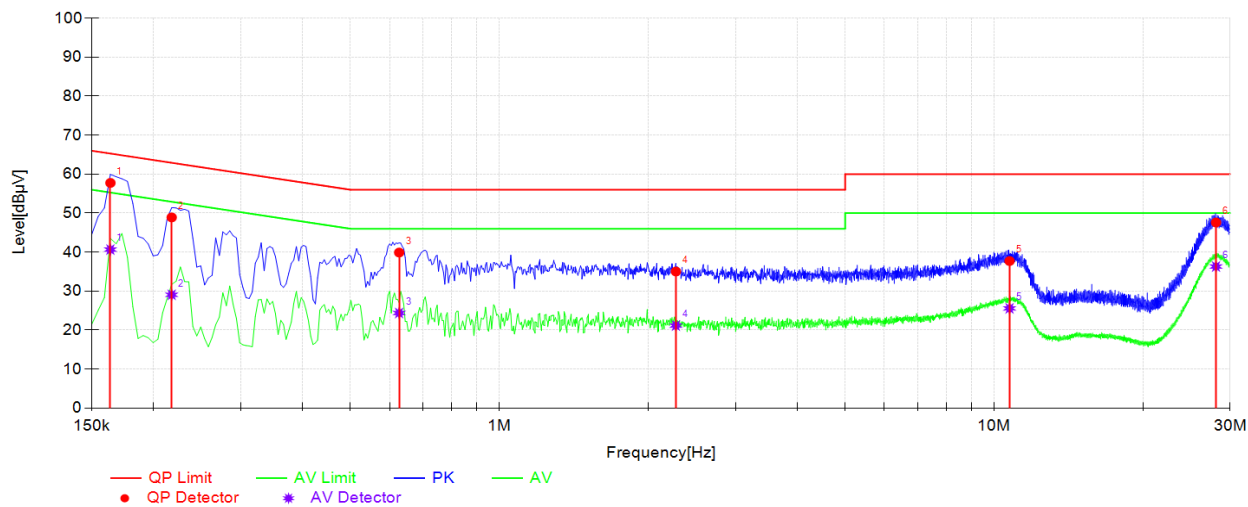
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1952	46.19	6.68	74.00	27.81	150	135	Vertical
2	4266	42.94	-14.66	74.00	31.06	150	215	Vertical
3	5760	45.86	-11.28	74.00	28.14	150	231	Vertical
4	7050	44.76	-9.73	74.00	29.24	150	356	Vertical
5	9915	46.92	-5.33	74.00	27.08	150	166	Vertical
6	13842	48.99	0.61	74.00	25.01	150	141	Vertical

Mode:	BLE-2480
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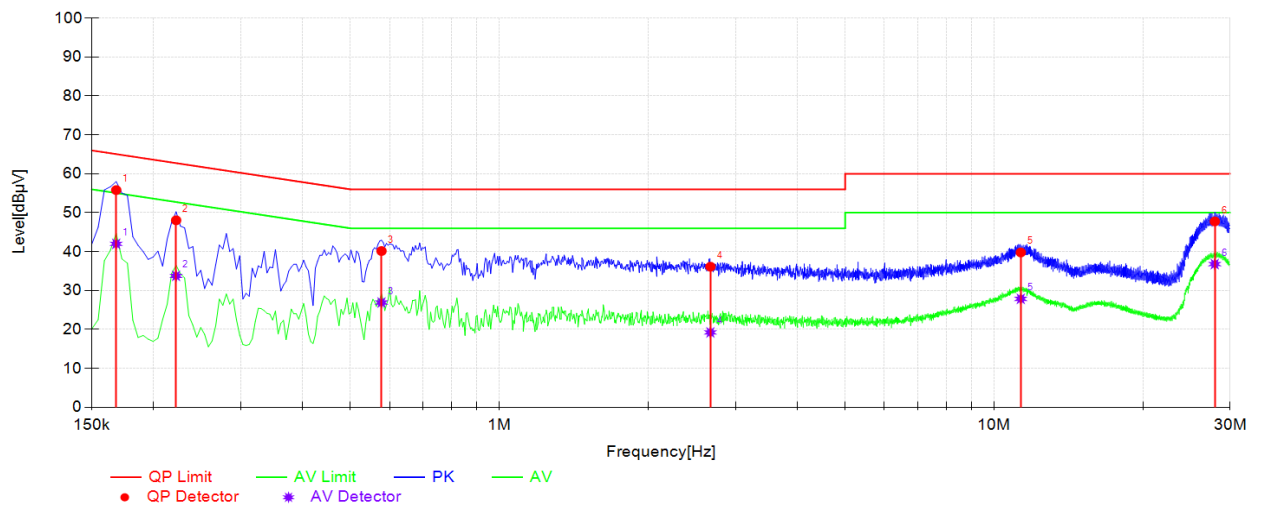
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1978	47.45	6.88	74.00	26.55	150	342	Horizontal
2	4212	43.07	-14.51	74.00	30.93	150	121	Horizontal
3	5727	45.44	-11.24	74.00	28.56	150	331	Horizontal
4	8439	44.87	-8.16	74.00	29.13	150	19	Horizontal
5	9624	46.56	-6.32	74.00	27.44	150	337	Horizontal
6	13194	49.05	0.59	74.00	24.95	150	210	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1928	46.86	6.50	74.00	27.14	150	265	Vertical
2	4260	43.64	-14.65	74.00	30.36	150	295	Vertical
3	5760	45.96	-11.28	74.00	28.04	150	209	Vertical
4	7866	44.53	-8.71	74.00	29.47	150	244	Vertical
5	10638	46.93	-4.25	74.00	27.07	150	100	Vertical
6	13101	48.56	-0.35	74.00	25.44	150	336	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	0.1635	10.26	57.76	65.28	7.52	40.66	55.28	14.62	L1	PASS
2	0.2175	10.26	48.91	62.91	14.00	29.06	52.91	23.85	L1	PASS
3	0.627	10.27	39.90	56.00	16.10	24.39	46.00	21.61	L1	PASS
4	2.274	10.29	35.04	56.00	20.96	21.16	46.00	24.84	L1	PASS
5	10.7475	10.45	37.73	60.00	22.27	25.57	50.00	24.43	L1	PASS
6	28.0995	10.67	47.61	60.00	12.39	36.31	50.00	13.69	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	0.168	10.26	55.82	65.06	9.24	42.00	55.06	13.06	N	PASS
2	0.222	10.26	48.06	62.74	14.68	33.77	52.74	18.97	N	PASS
3	0.5775	10.27	40.16	56.00	15.84	26.92	46.00	19.08	N	PASS
4	2.67	10.33	36.14	56.00	19.86	19.24	46.00	26.76	N	PASS
5	11.3235	10.47	39.80	60.00	20.20	27.87	50.00	22.13	N	PASS
6	27.933	10.77	47.77	60.00	12.23	36.80	50.00	13.20	N	PASS