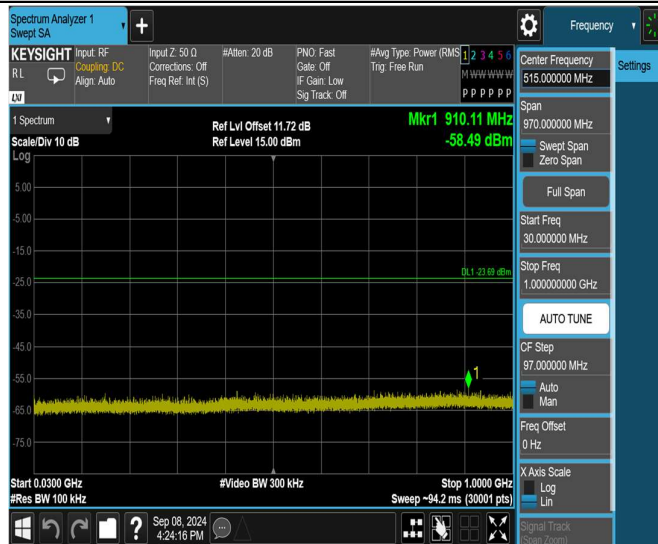




BLE_2M_Ant1_2440_30~1000



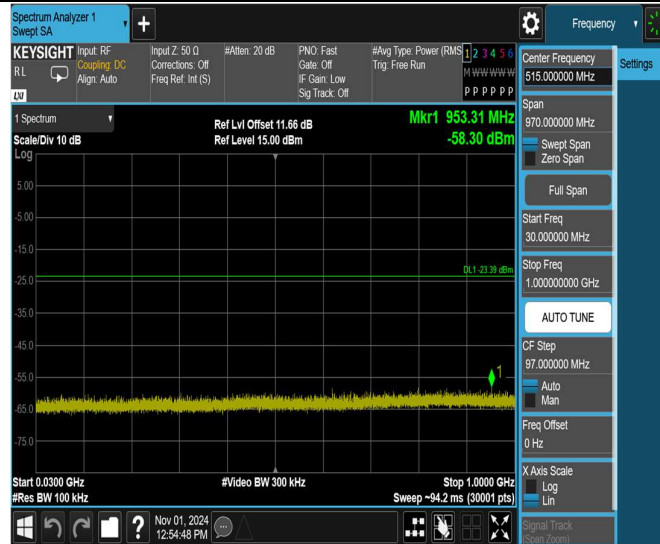
BLE_2M_Ant1_2440_1000~26500



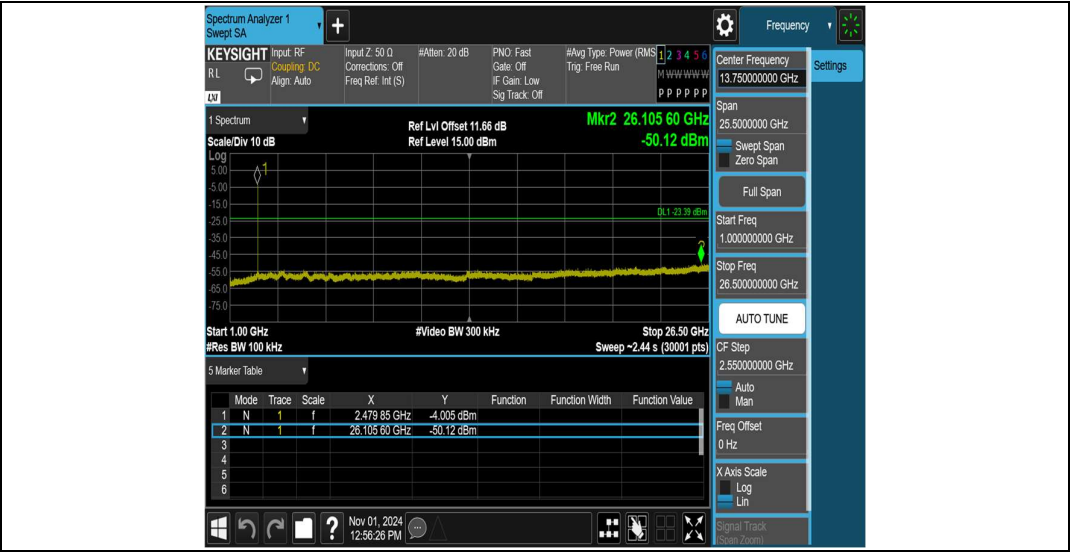
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	Duty Cycle [%]
BLE_1M	Ant1	2402	100.00
		2440	100.00
		2480	100.00
BLE_2M	Ant1	2402	100.00
		2440	100.00
		2480	100.00

The image displays two screenshots of a Spectrum Analyzer interface, likely from a Keysight software, showing the configuration and results for two different BLE signals: BLE_1M_Ant1_2402 and BLE_1M_Ant1_2440.

Top Screenshot: BLE_1M_Ant1_2402

- Center Frequency:** 2.402000000 GHz
- Span:** 0.00000000 Hz
- Start Freq:** 2.402000000 GHz
- Stop Freq:** 2.402000000 GHz
- CF Step:** 8.0000000 MHz
- Freq Offset:** 0 Hz
- X Axis Scale:** Log
- Signal Track:** (Zoom)
- Marker Table:**

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1							
2							
3							
4							
5							
6							

Bottom Screenshot: BLE_1M_Ant1_2440

- Center Frequency:** 2.440000000 GHz
- Span:** 0.00000000 Hz
- Start Freq:** 2.440000000 GHz
- Stop Freq:** 2.440000000 GHz
- CF Step:** 8.0000000 MHz
- Freq Offset:** 0 Hz
- X Axis Scale:** Log
- Signal Track:** (Zoom)
- Marker Table:**

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1							
2							
3							
4							
5							
6							

BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

Mode:	BLE 1M-2402
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PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	-21.24	35.49	74.00	38.51	150	123	Horizontal
2	2320.08	-21.17	36.91	74.00	37.09	150	152	Horizontal
3	2330.24	-21.09	37.08	74.00	36.92	150	111	Horizontal
4	2352.56	-20.94	37.53	74.00	36.47	150	70	Horizontal
5	2370.88	-20.84	37.39	74.00	36.61	150	155	Horizontal
6	2390	-20.73	35.27	74.00	38.73	150	4	Horizontal

PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	-21.24	36.89	74.00	37.11	150	206	Vertical
2	2328.08	-21.10	37.46	74.00	36.54	150	46	Vertical
3	2350.16	-20.95	37.88	74.00	36.12	150	55	Vertical
4	2363.76	-20.87	42.06	74.00	31.94	150	67	Vertical
5	2370.4	-20.84	41.79	74.00	32.21	150	67	Vertical
6	2390	-20.73	36.78	74.00	37.22	150	177	Vertical

Mode:	BLE 1M-2480
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PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	-20.33	45.16	74.00	28.84	150	0	Horizontal
2	2483.79	-20.32	51.96	74.00	22.04	150	0	Horizontal
3	2484.01	-20.32	42.77	74.00	31.23	174.8	268.7	Horizontal
4	2484.37	-20.32	42.78	74.00	31.22	100	223.7	Horizontal
5	2484.65	-20.33	40.26	74.00	33.74	100	41.6	Horizontal
6	2500	-20.34	33.32	74.00	40.68	150	0	Horizontal

PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	-20.33	46.74	74.00	27.26	150	0	Vertical
2	2483.58	-20.33	51.42	74.00	22.58	150	0	Vertical
3	2483.71	-20.33	51.30	74.00	22.70	150	0	Vertical
4	2484.82	-20.33	47.14	74.00	26.86	150	0	Vertical
5	2485.95	-20.33	45.33	74.00	28.67	150	0	Vertical
6	2500	-20.34	33.86	74.00	40.14	150	0	Vertical

Mode:	BLE 2M-2402
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PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	-21.24	37.11	74.00	36.89	150	167	Horizontal
2	2328.24	-21.10	37.82	74.00	36.18	150	173	Horizontal
3	2344.56	-20.99	36.42	74.00	37.58	150	224	Horizontal
4	2368.16	-20.85	36.78	74.00	37.22	150	90	Horizontal
5	2378.4	-20.80	36.97	74.00	37.03	150	152	Horizontal
6	2390	-20.73	35.66	74.00	38.34	150	102	Horizontal

PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	-21.24	35.45	74.00	38.55	150	106	Vertical
2	2335.2	-21.06	38.46	74.00	35.54	150	120	Vertical
3	2356.56	-20.91	37.85	74.00	36.15	150	25	Vertical
4	2368.96	-20.84	43.34	74.00	30.66	150	120	Vertical
5	2370.64	-20.84	42.29	74.00	31.71	150	118	Vertical
6	2390	-20.73	35.70	74.00	38.30	150	13	Vertical

Mode:	BLE 2M-2480
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PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.50	-20.33	52.05	74.00	21.95	150	7	Horizontal
2	2483.68	-20.33	53.00	74.00	21.00	150	4	Horizontal
3	2483.92	-20.32	51.39	74.00	22.61	150	4	Horizontal
4	2485.06	-20.33	53.07	74.00	20.93	150	7	Horizontal
5	2486.17	-20.33	53.03	74.00	20.97	150	4	Horizontal
6	2500.00	-20.34	37.09	74.00	36.91	150	232	Horizontal

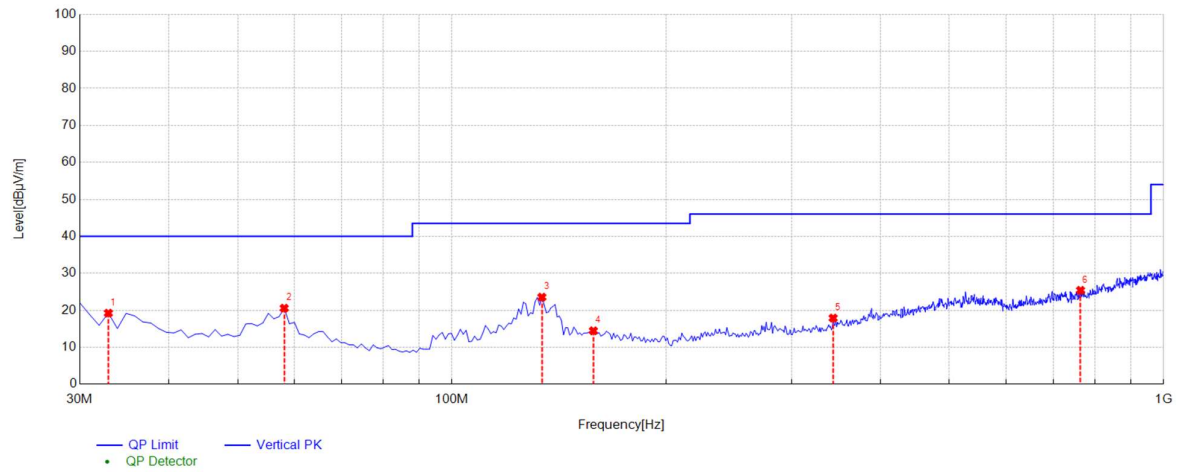
PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	-20.33	54.11	74.00	19.89	150	200	Vertical
2	2483.63	-20.33	53.42	74.00	20.58	150	30	Vertical
3	2484.12	-20.32	52.97	74.00	21.03	150	188	Vertical
4	2485.06	-20.33	53.83	74.00	20.17	150	186	Vertical
5	2486.10	-20.33	52.93	74.00	21.07	150	40	Vertical
6	2500	-20.34	36.54	74.00	37.46	150	157	Vertical

AV Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	-20.33	47.44	54.00	6.56	150	200	Vertical

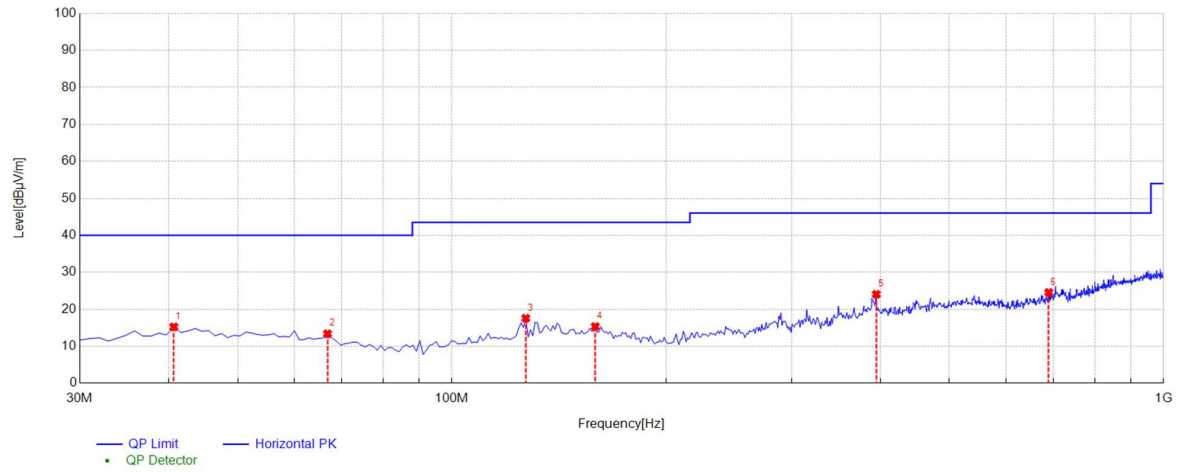
Note:

1. The Antenna Gain is compensated in the graph.
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.

Appendix I: Spurious emissions



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	32.9100	19.24	-16.96	40.00	20.76	100	316	Vertical	PASS
2	58.1300	20.58	-16.47	40.00	19.42	100	95	Vertical	PASS
3	133.790	23.56	-16.82	43.50	19.94	100	158	Vertical	PASS
4	158.040	14.47	-16.32	43.50	29.03	100	238	Vertical	PASS
5	343.310	17.91	-14.81	46.00	28.09	100	131	Vertical	PASS
6	764.290	25.40	-5.56	46.00	20.60	100	197	Vertical	PASS



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	40.6700	15.24	-15.69	40.00	24.76	100	210	Horizontal	PASS
2	66.8600	13.40	-17.87	40.00	26.60	100	254	Horizontal	PASS
3	127.000	17.59	-17.22	43.50	25.91	100	210	Horizontal	PASS
4	159.010	15.34	-16.27	43.50	28.16	100	254	Horizontal	PASS
5	394.720	24.06	-13.06	46.00	21.94	100	35	Horizontal	PASS
6	689.600	24.56	-7.26	46.00	21.44	100	143	Horizontal	PASS

Mode:	BLE 1M-2402
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1234	42.55	2.17	74.00	31.45	150	77	Horizontal
2	1700	43.21	3.23	74.00	30.79	150	178	Horizontal
3	3603	44.70	-17.76	74.00	29.30	150	229	Horizontal
4	5577	43.20	-13.61	74.00	30.80	150	183	Horizontal
5	8754	44.16	-9.94	74.00	29.84	150	86	Horizontal
6	11217	48.20	-5.71	74.00	25.80	150	127	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1216	42.68	2.15	74.00	31.32	150	213	Vertical
2	1798	43.86	4.82	74.00	30.14	150	208	Vertical
3	3942	44.55	-17.16	74.00	29.45	150	225	Vertical
4	5259	48.03	-14.05	74.00	25.97	150	115	Vertical
5	6579	47.30	-12.28	74.00	26.70	150	211	Vertical
6	9777	46.77	-7.79	74.00	27.23	150	73	Vertical

Mode:	BLE 1M-2440
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1236	42.28	2.17	74.00	31.72	150	9	Horizontal
2	1986	45.57	5.84	74.00	28.43	150	110	Horizontal
3	3954	41.33	-17.22	74.00	32.67	150	123	Horizontal
4	4878	44.32	-14.70	74.00	29.68	150	118	Horizontal
5	8385	44.05	-10.18	74.00	29.95	150	260	Horizontal
6	11889	47.63	-4.37	74.00	26.37	150	240	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1316	42.36	2.28	74.00	31.64	150	240	Vertical
2	2046	45.24	5.99	74.00	28.76	150	270	Vertical
3	3945	46.74	-17.20	74.00	27.26	150	237	Vertical
4	5259	46.45	-14.05	74.00	27.55	150	183	Vertical
5	6573	46.67	-12.24	74.00	27.33	150	194	Vertical
6	10002	45.94	-7.60	74.00	28.06	150	171	Vertical

Mode:	BLE 1M-2480
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1350	42.66	2.08	74.00	31.34	150	198	Horizontal
2	2026	45.77	5.96	74.00	28.23	150	91	Horizontal
3	4950	42.91	-15.30	74.00	31.09	150	16	Horizontal
4	6432	43.67	-12.34	74.00	30.33	150	120	Horizontal
5	9627	45.70	-8.34	74.00	28.30	150	50	Horizontal
6	12084	48.25	-3.98	74.00	25.75	150	205	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1312	42.93	2.30	74.00	31.07	150	258	Vertical
2	1934	45.47	5.64	74.00	28.53	150	226	Vertical
3	3759	41.77	-16.97	74.00	32.23	150	218	Vertical
4	6567	46.22	-12.20	74.00	27.78	150	226	Vertical
5	10494	45.73	-7.48	74.00	28.27	150	156	Vertical
6	14370	49.77	-0.98	74.00	24.23	150	35	Vertical

Mode:	BLE 2M-2402
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1282	42.28	2.30	74.00	31.72	150	86	Horizontal
2	1888	44.95	5.61	74.00	29.05	150	86	Horizontal
3	3603	44.65	-17.76	74.00	29.35	150	243	Horizontal
4	5586	43.68	-13.57	74.00	30.32	150	45	Horizontal
5	9198	45.20	-8.71	74.00	28.80	150	161	Horizontal
6	13530	48.45	-2.24	74.00	25.55	150	155	Horizontal

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1260	42.56	2.22	74.00	31.44	150	245	Vertical
2	1986	45.78	5.84	74.00	28.22	150	41	Vertical
3	5259	45.72	-14.05	74.00	28.28	150	266	Vertical
4	6573	46.80	-12.24	74.00	27.20	150	163	Vertical
5	10161	45.74	-7.17	74.00	28.26	150	128	Vertical
6	13545	48.99	-2.20	74.00	25.01	150	48	Vertical

Mode:	BLE 2M-2440
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1340	43.17	2.14	74.00	30.83	150	162	Horizontal
2	1900	45.31	5.69	74.00	28.69	150	112	Horizontal
3	4176	42.04	-16.27	74.00	31.96	150	221	Horizontal
4	6654	43.70	-12.20	74.00	30.30	150	260	Horizontal
5	9663	45.78	-8.27	74.00	28.22	150	51	Horizontal
6	12657	46.96	-3.73	74.00	27.04	150	163	Horizontal

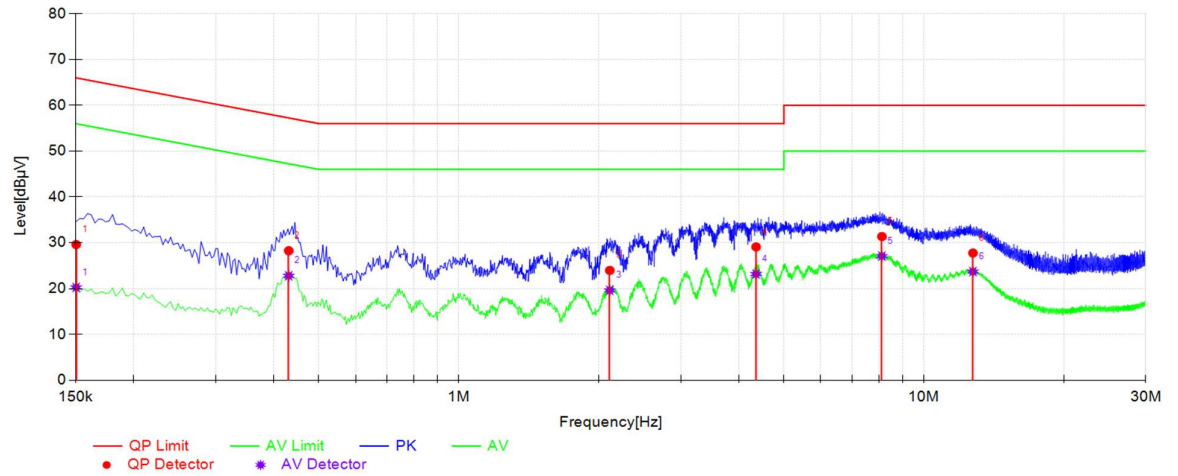
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1282	42.27	2.30	74.00	31.73	150	62	Vertical
2	1808	45.13	4.93	74.00	28.87	150	66	Vertical
3	3948	43.88	-17.25	74.00	30.12	150	239	Vertical
4	4881	43.53	-14.63	74.00	30.47	150	27	Vertical
5	7002	43.72	-11.77	74.00	30.28	150	94	Vertical
6	9198	44.69	-8.71	74.00	29.31	150	13	Vertical

Mode:	BLE 2M-2480
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NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1316	42.59	2.28	74.00	31.41	150	169	Horizontal
2	2182	45.62	6.43	74.00	28.38	150	44	Horizontal
3	4935	42.76	-14.98	74.00	31.24	150	29	Horizontal
4	7845	44.15	-11.18	74.00	29.85	150	266	Horizontal
5	10089	45.59	-7.31	74.00	28.41	150	55	Horizontal
6	14340	49.02	-0.77	74.00	24.98	150	242	Horizontal

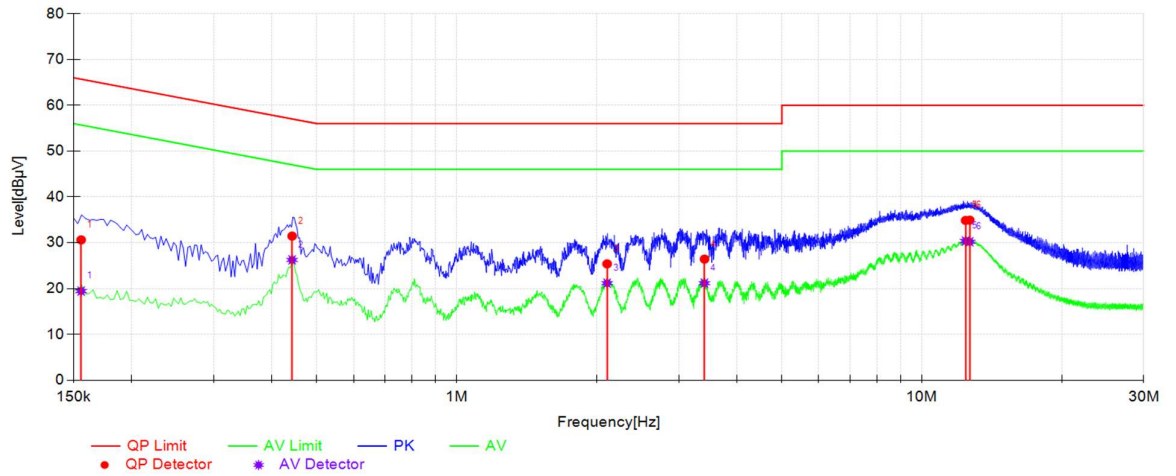
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1226	42.30	2.16	74.00	31.70	150	164	Vertical
2	2012	46.32	5.95	74.00	27.68	150	233	Vertical
3	5250	47.19	-14.12	74.00	26.81	150	142	Vertical
4	6588	47.13	-12.35	74.00	26.87	150	228	Vertical
5	10968	46.61	-6.53	74.00	27.39	150	154	Vertical
6	13632	49.02	-2.65	74.00	24.98	150	262	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	0.1503	10.25	29.61	65.98	36.37	20.24	55.98	35.74	L1	PASS
2	0.4306	10.25	28.27	57.24	28.97	22.79	47.24	24.45	L1	PASS
3	2.1114	10.28	23.97	56.00	32.03	19.61	46.00	26.39	L1	PASS
4	4.3568	10.31	29.10	56.00	26.90	23.17	46.00	22.83	L1	PASS
5	8.1249	10.43	31.36	60.00	28.64	27.09	50.00	22.91	L1	PASS
6	12.7535	10.51	27.77	60.00	32.23	23.71	50.00	26.29	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	0.1556	10.25	30.63	65.70	35.07	19.45	55.70	36.25	N	PASS
2	0.4423	10.25	31.46	57.02	25.56	26.26	47.02	20.76	N	PASS
3	2.1045	10.29	25.40	56.00	30.60	21.18	46.00	24.82	N	PASS
4	3.4089	10.36	26.44	56.00	29.56	21.18	46.00	24.82	N	PASS
5	12.4201	10.50	34.88	60.00	25.12	30.39	50.00	19.61	N	PASS
6	12.6782	10.50	34.93	60.00	25.07	30.22	50.00	19.78	N	PASS