

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.684	2401.576	2402.260	0.5	PASS
		2440	0.668	2439.580	2440.248	0.5	PASS
		2480	0.552	2479.664	2480.216	0.5	PASS

Test Graphs



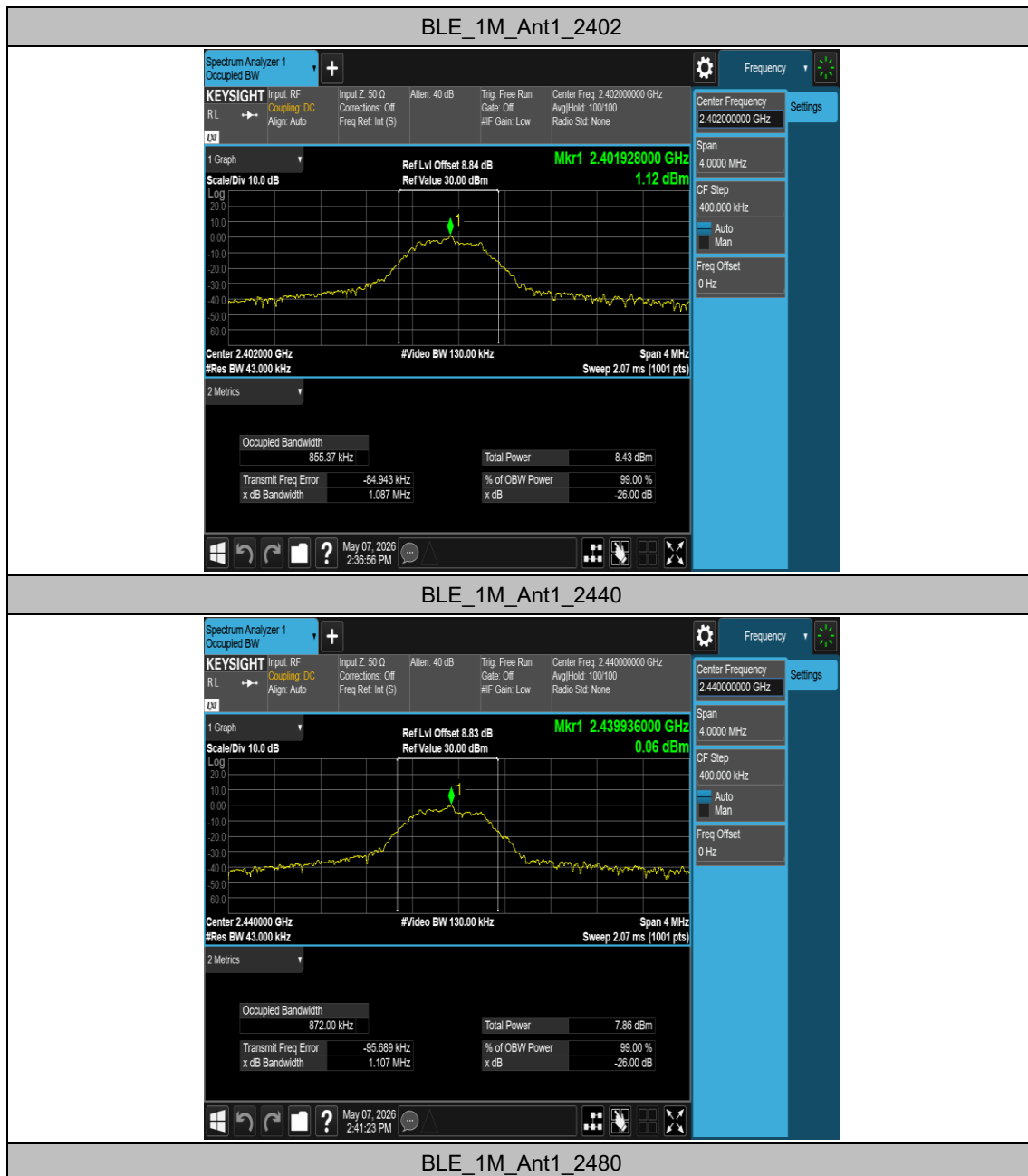


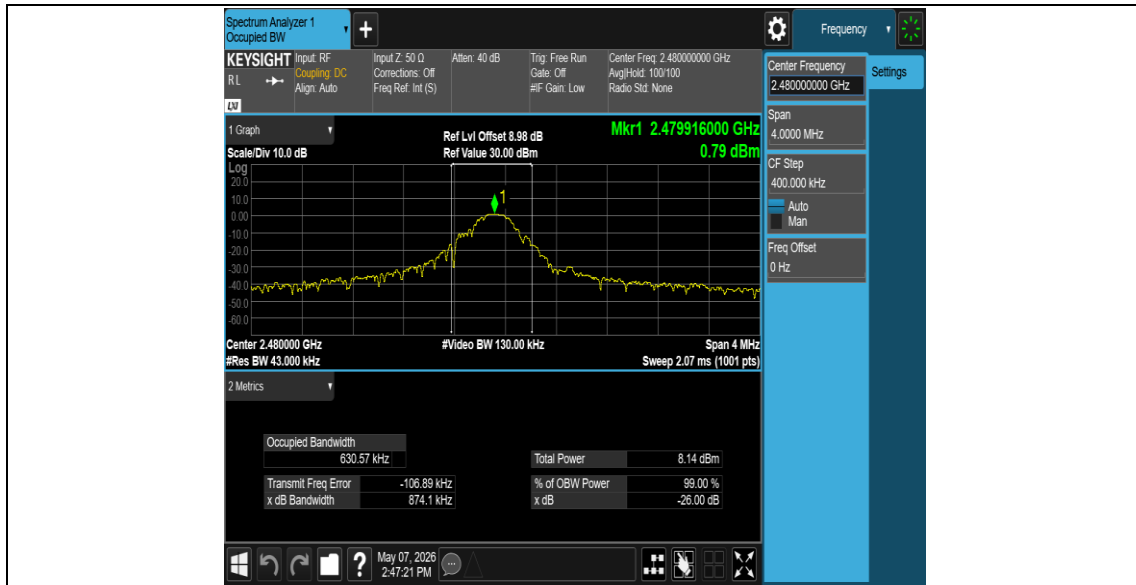
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.85537	2401.4874	2402.3427	---	---
		2440	0.87200	2439.4683	2440.3403	---	---
		2480	0.63057	2479.5778	2480.2084	---	---

Test Graphs



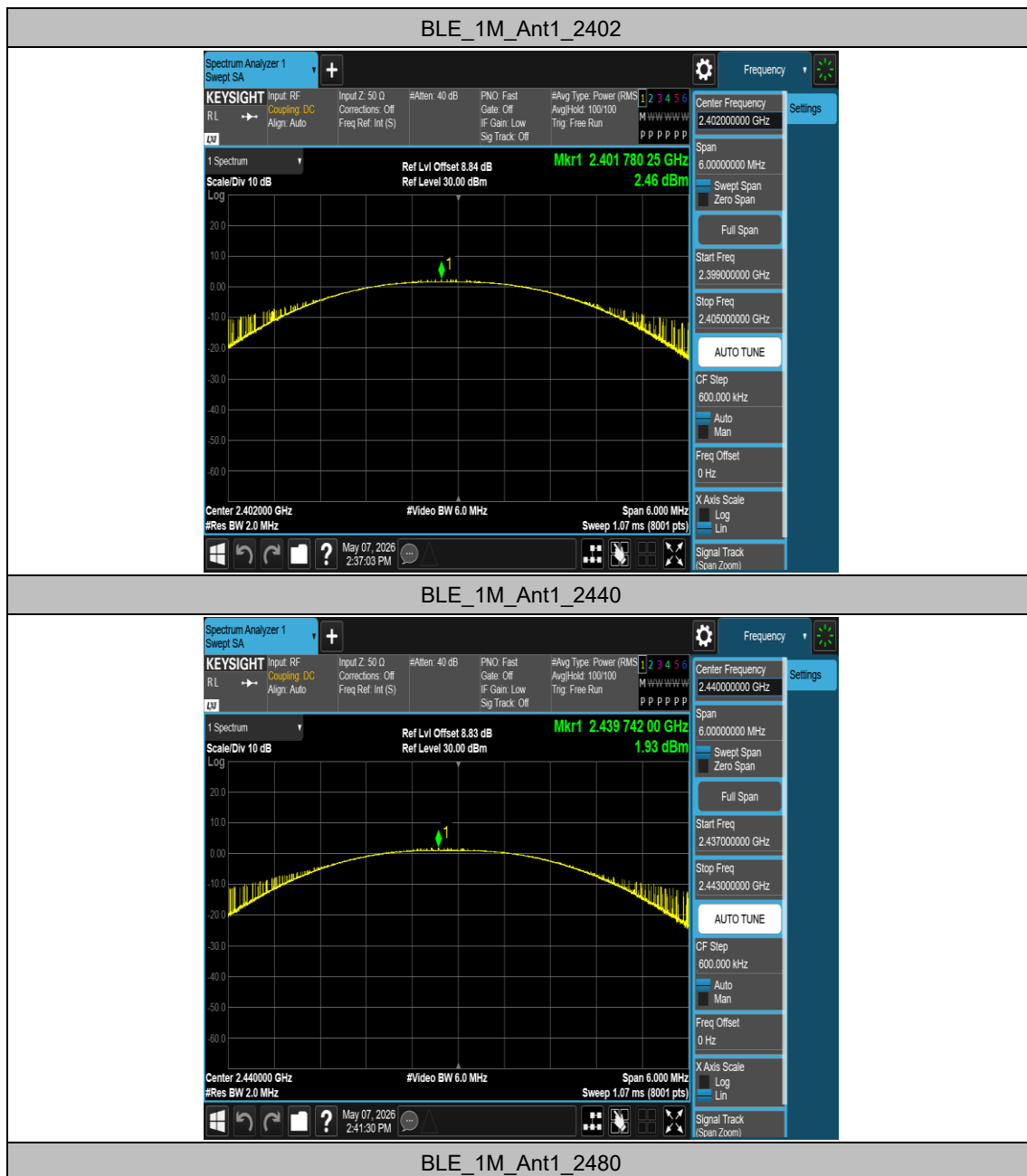


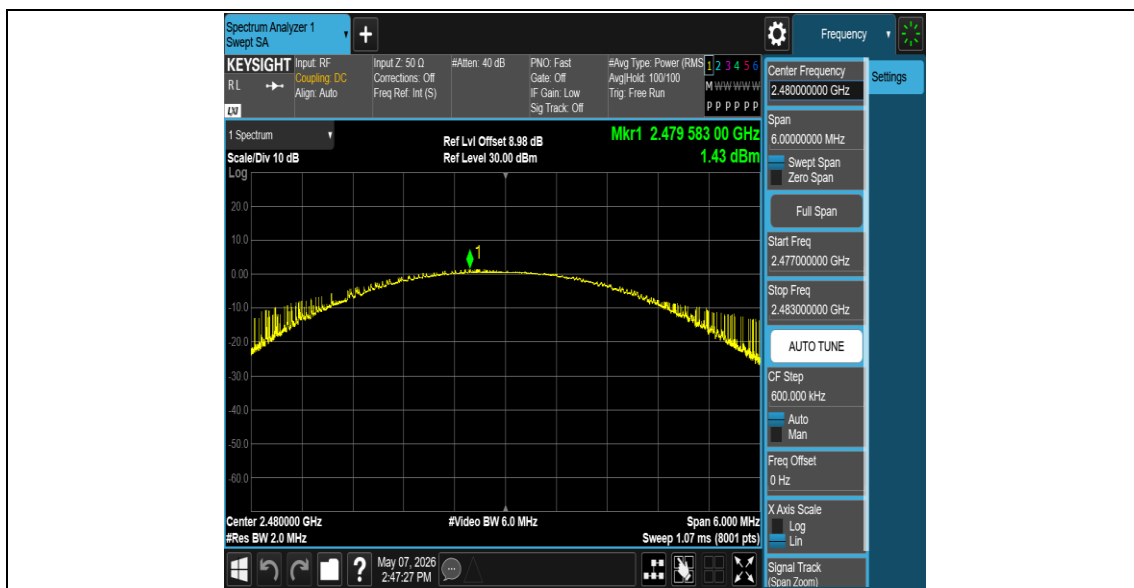
Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.46	≤30	PASS
		2440	1.93	≤30	PASS
		2480	1.43	≤30	PASS

Test Graphs



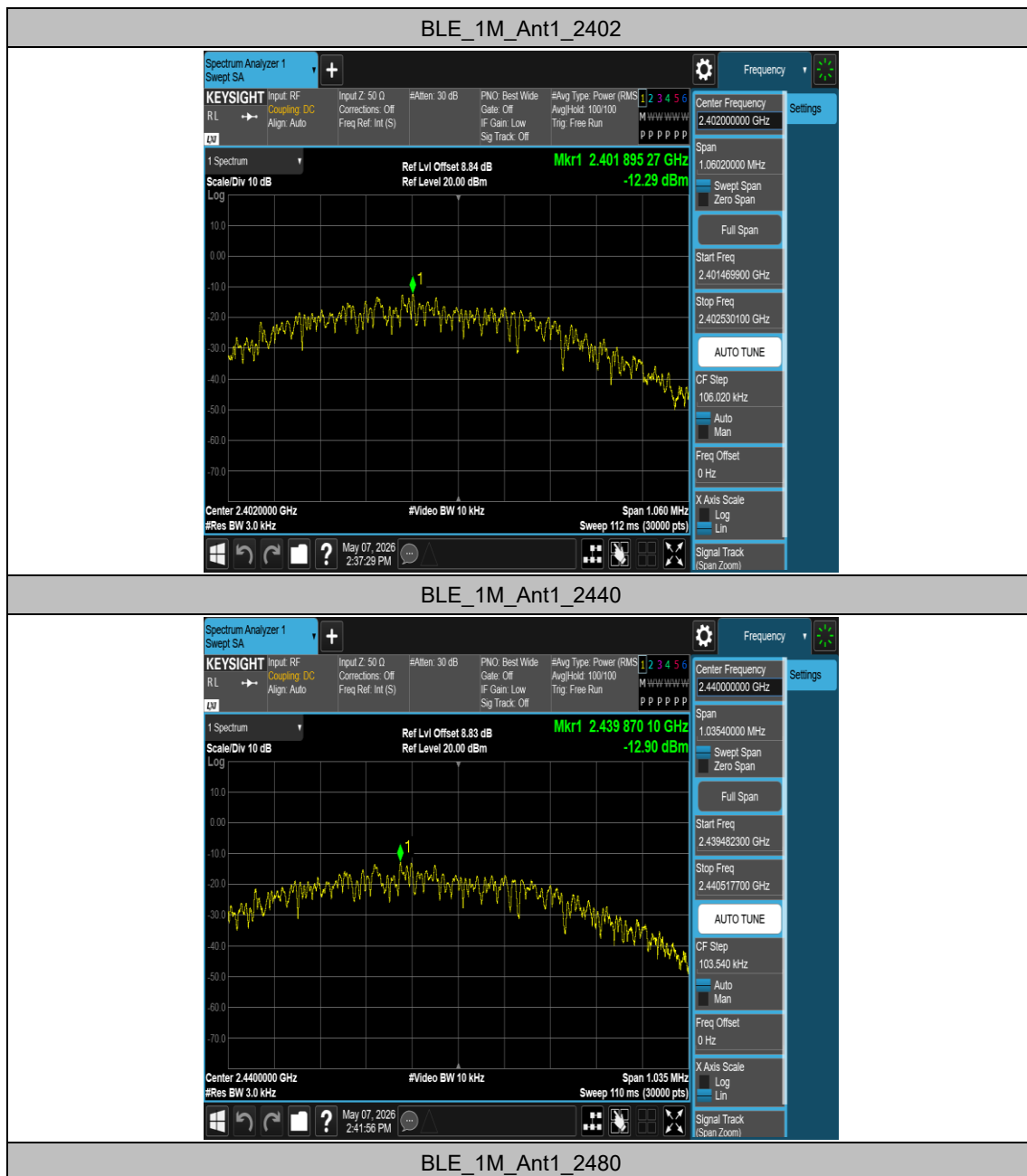


Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.29	≤8.00	PASS
		2440	-12.91	≤8.00	PASS
		2480	-9.24	≤8.00	PASS

Test Graphs





Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.30	-34.58	≤-18.71	PASS
		High	2480	0.70	-41.73	≤-19.3	PASS

Test Graphs

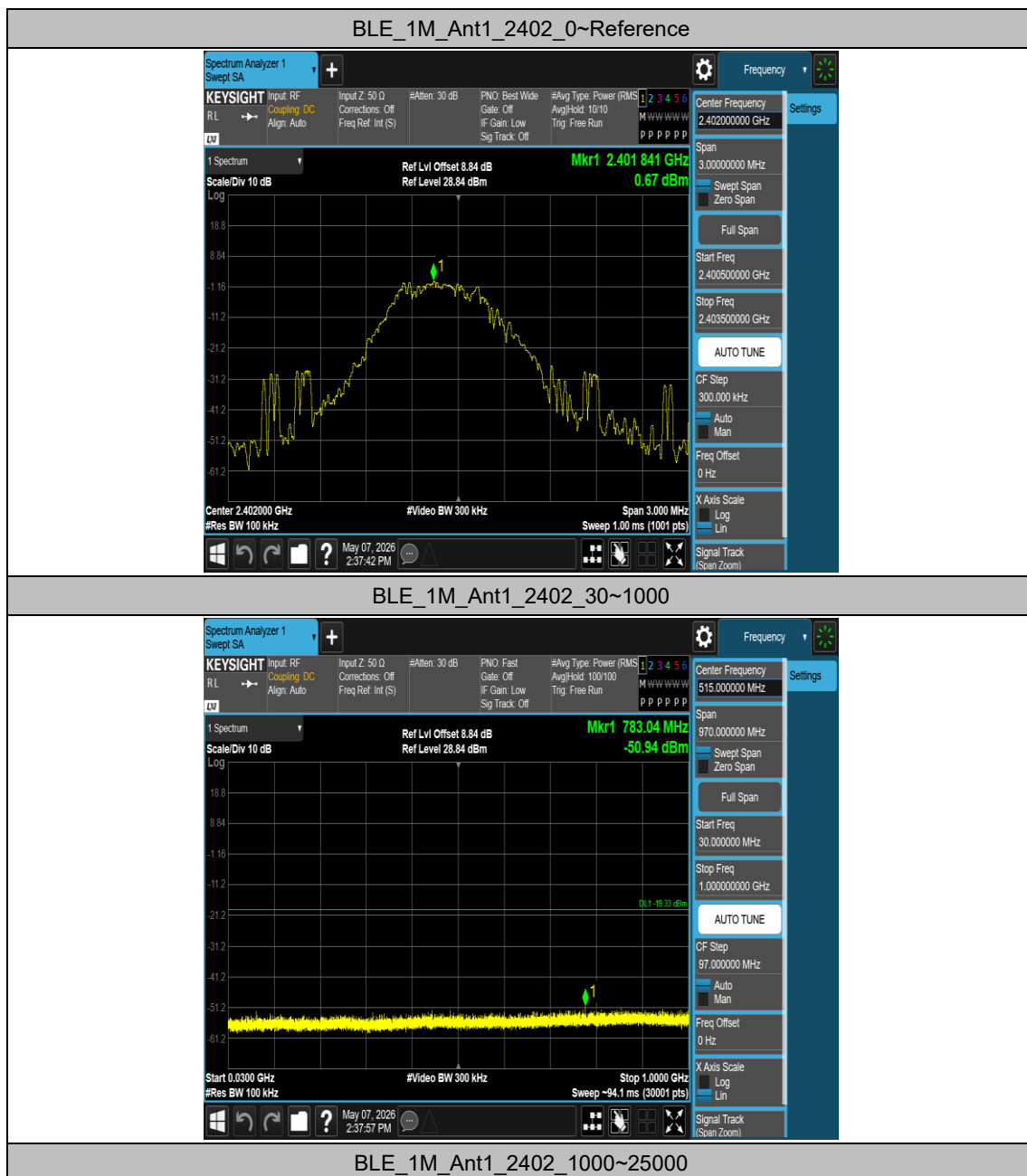


Appendix F: Conducted Spurious Emission

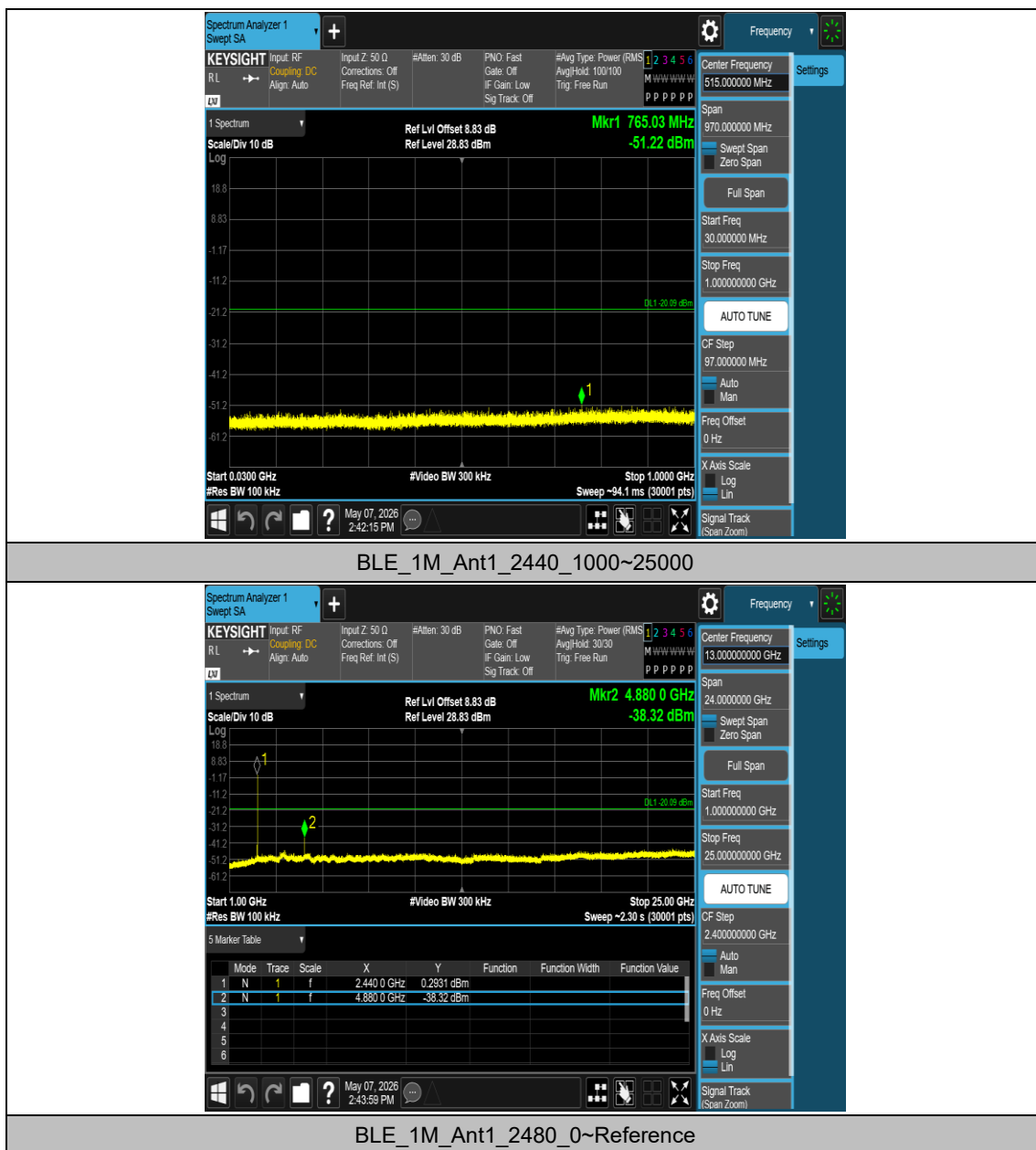
Test Result

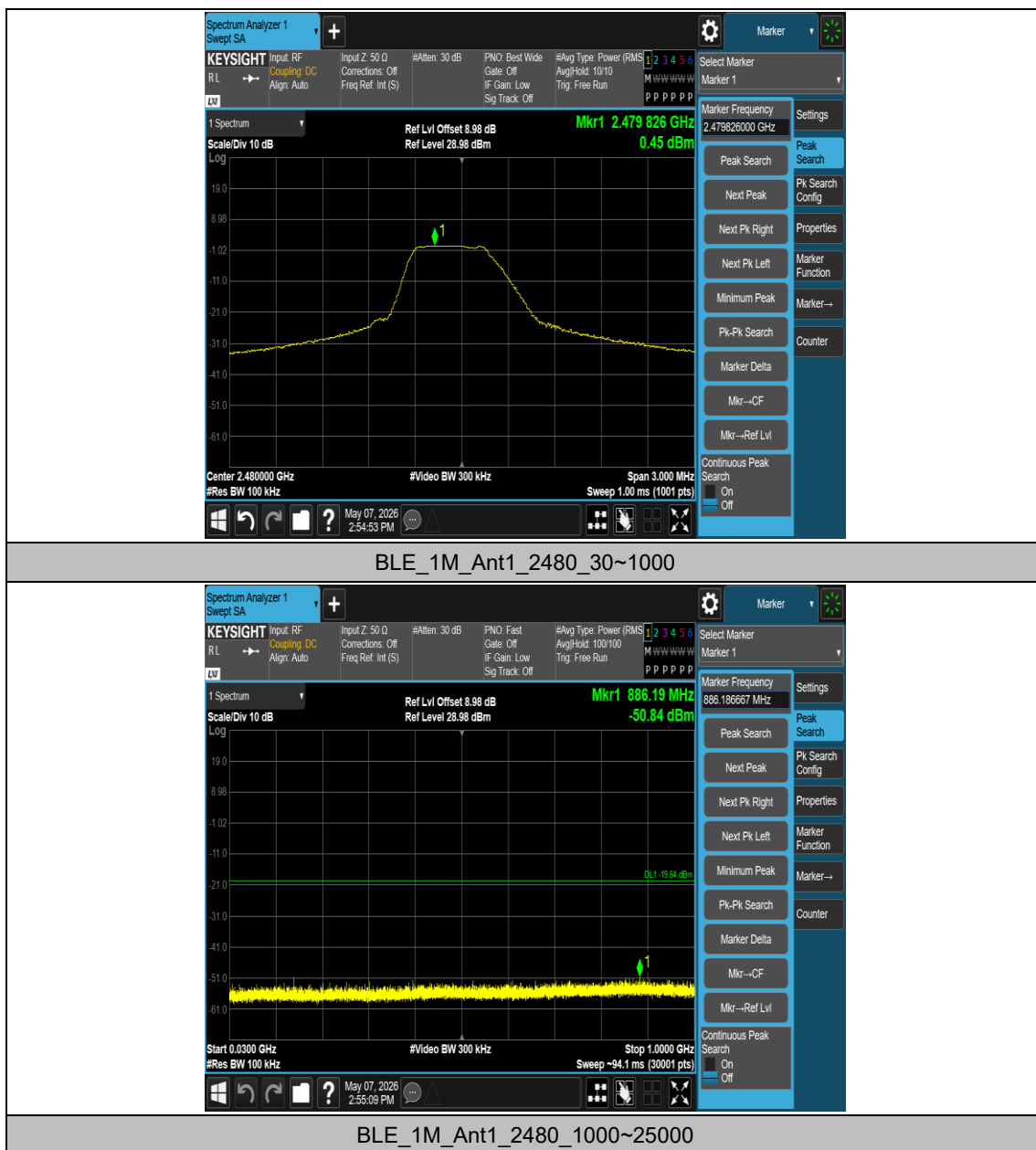
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.67	0.67	---	PASS
			30~1000	0.67	-50.94	≤-19.33	PASS
			1000~25000	0.67	-39.82	≤-19.33	PASS
		2440	Reference	-0.09	-0.09	---	PASS
			30~1000	-0.09	-51.22	≤-20.09	PASS
			1000~25000	-0.09	-38.32	≤-20.09	PASS
		2480	Reference	0.36	0.36	---	PASS
			30~1000	0.36	-50.84	≤-19.64	PASS
			1000~25000	0.36	-38.15	≤-19.64	PASS

Test Graphs











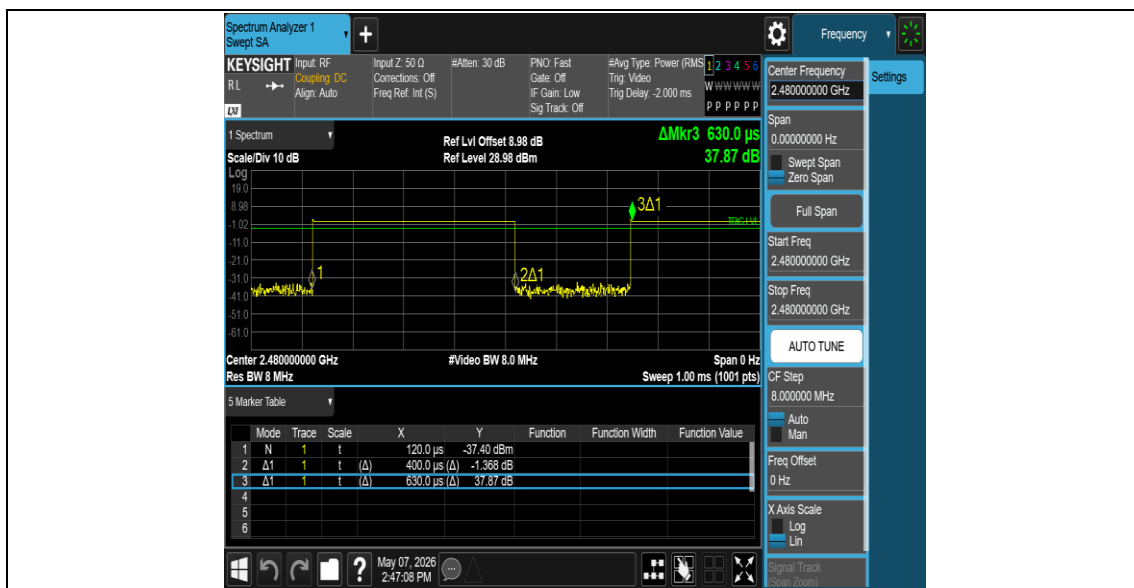
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]
BLE_1M	Ant1	2402	0.40	0.63	0.6349	63.49
		2440	0.40	0.63	0.6349	63.49
		2480	0.40	0.63	0.6349	63.49

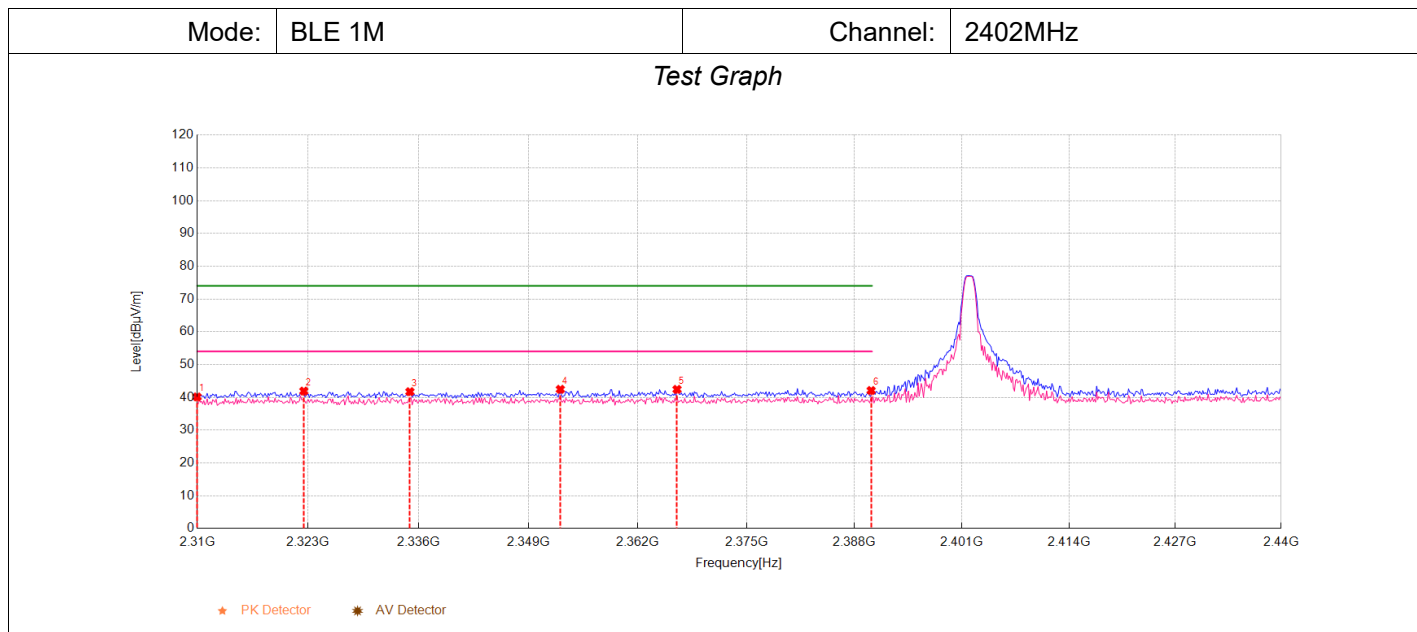
Test Graphs





Appendix H: Emissions in Restricted Bands

Test Result



Suspected Data List

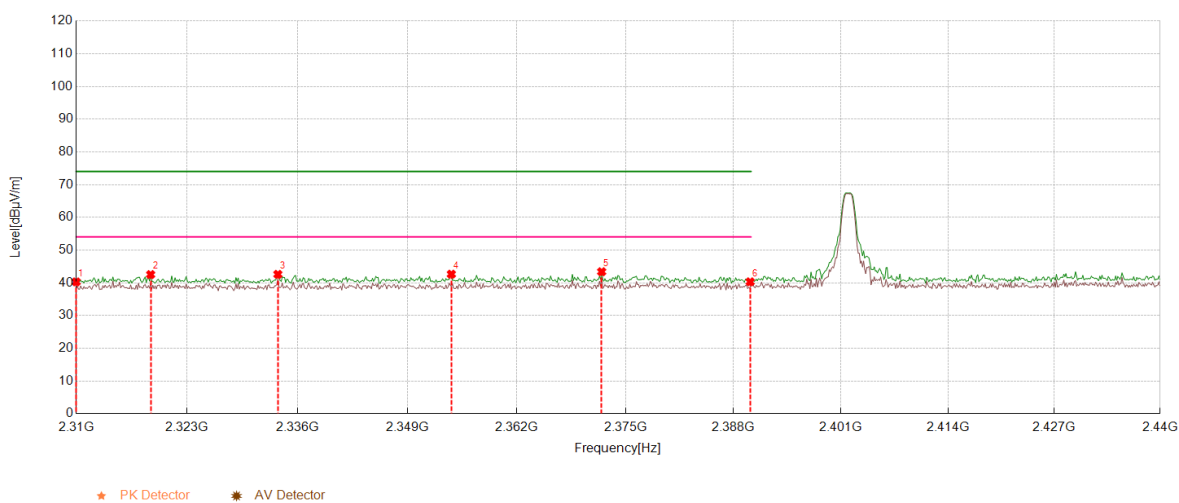
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	2310.0000	37.46	40.13	2.67	74.00	33.87	150	356	PK	Horizontal	PASS
2	2322.4800	39.04	41.91	2.87	74.00	32.09	150	56	PK	Horizontal	PASS
3	2334.9600	38.91	41.72	2.81	74.00	32.28	150	206	PK	Horizontal	PASS
4	2352.7700	39.50	42.45	2.95	74.00	31.55	150	151	PK	Horizontal	PASS
5	2366.6800	39.44	42.43	2.99	74.00	31.57	150	151	PK	Horizontal	PASS
6	2390.0000	39.13	42.08	2.95	74.00	31.92	150	356	PK	Horizontal	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2402MHz

Test Graph

Suspected Data List

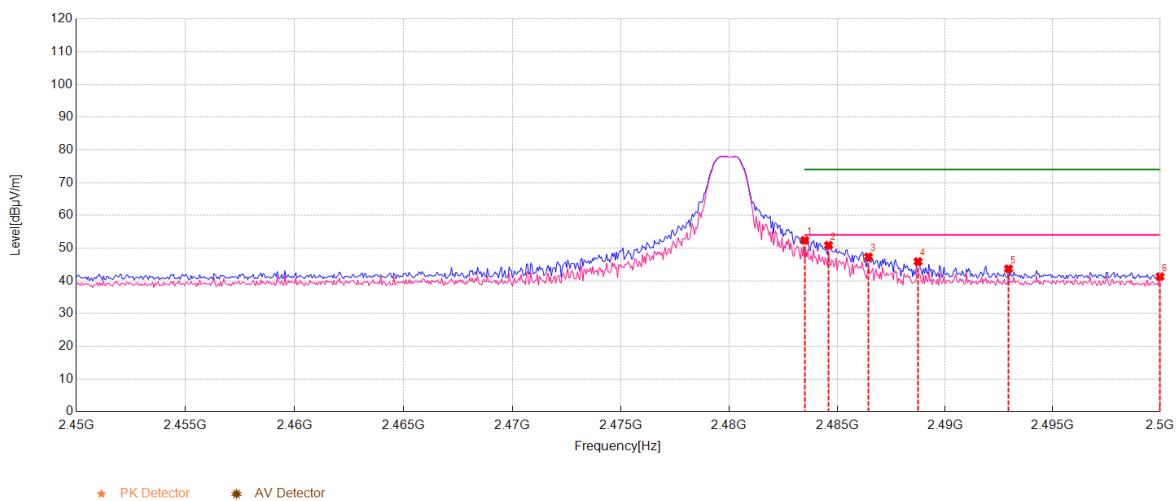
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	2310.0000	37.61	40.28	2.67	74.00	33.72	150	212	PK	Vertical	PASS
2	2318.7100	39.61	42.52	2.91	74.00	31.48	150	348	PK	Vertical	PASS
3	2333.6600	39.82	42.59	2.77	74.00	31.41	150	158	PK	Vertical	PASS
4	2354.2000	39.67	42.64	2.97	74.00	31.36	150	302	PK	Vertical	PASS
5	2372.1400	40.36	43.38	3.02	74.00	30.62	150	102	PK	Vertical	PASS
6	2390.0000	37.35	40.30	2.95	74.00	33.70	150	58	PK	Vertical	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2480MHz

Test Graph

Suspected Data List

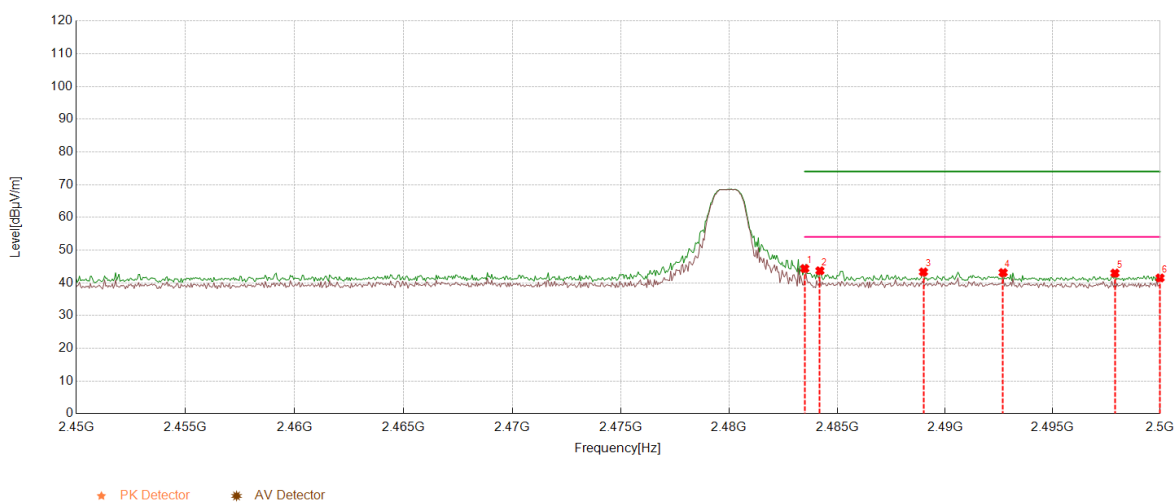
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	2483.5000	48.89	52.35	3.46	74.00	21.65	150	4	PK	Horizontal	PASS
2	2484.6000	47.34	50.85	3.51	74.00	23.15	150	25	PK	Horizontal	PASS
3	2486.4500	43.81	47.31	3.50	74.00	26.69	150	9	PK	Horizontal	PASS
4	2488.7500	42.34	45.88	3.54	74.00	28.12	150	22	PK	Horizontal	PASS
5	2492.9500	40.09	43.66	3.57	74.00	30.34	150	14	PK	Horizontal	PASS
6	2500.0000	37.75	41.25	3.50	74.00	32.75	150	278	PK	Horizontal	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2480MHz

Test Graph

Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	2483.5000	40.89	44.35	3.46	74.00	29.65	150	52	PK	Vertical	PASS
2	2484.2000	40.20	43.68	3.48	74.00	30.32	150	76	PK	Vertical	PASS
3	2489.0000	39.75	43.31	3.56	74.00	30.69	150	360	PK	Vertical	PASS
4	2492.7000	39.55	43.12	3.57	74.00	30.88	150	348	PK	Vertical	PASS
5	2497.9000	39.38	42.96	3.58	74.00	31.04	150	151	PK	Vertical	PASS
6	2500.0000	37.98	41.48	3.50	74.00	32.52	150	173	PK	Vertical	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

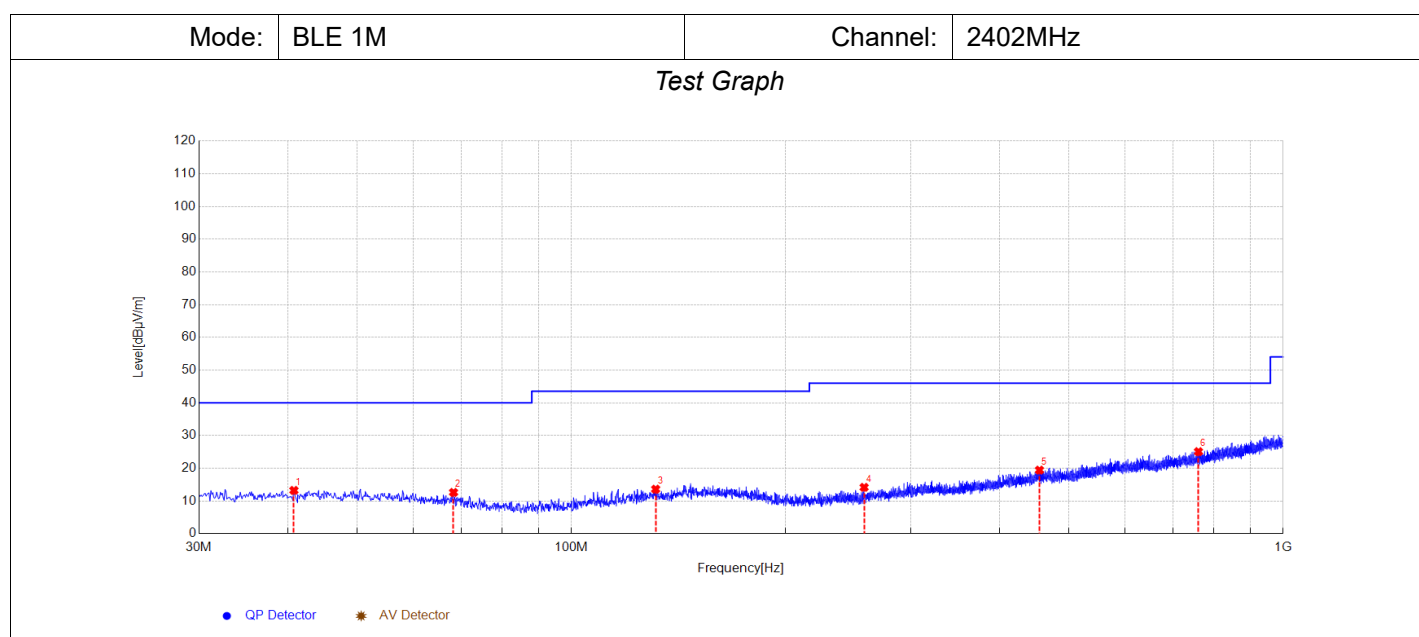
Appendix I: Spurious emissions

Test Result

Note:

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes with all channels. The test data of the worst-case (1M-2402MHz) condition was recorded in this report. The measurement results above 18GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz are reported.



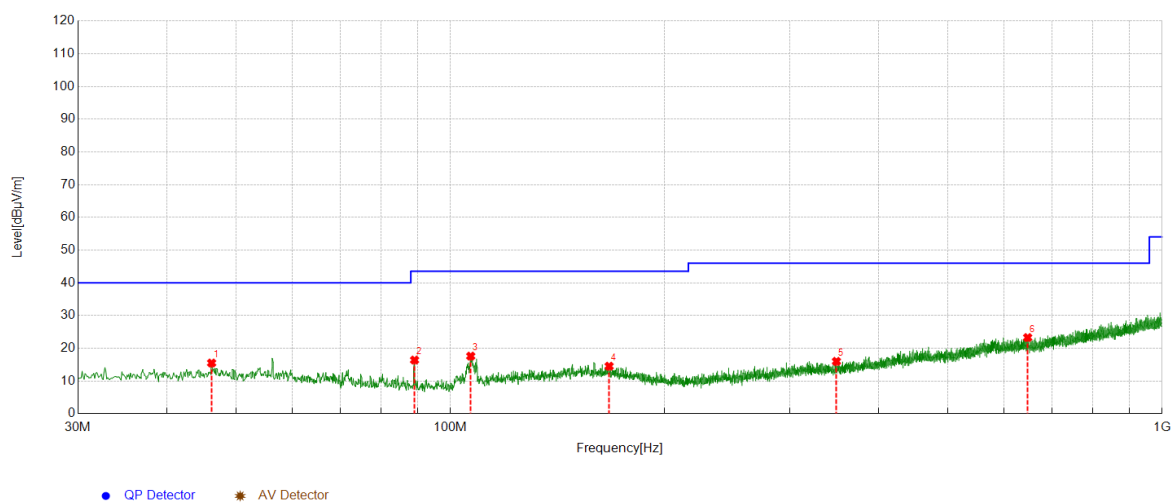
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	40.7681	29.16	13.23	-15.93	40.00	26.77	150	334	PK	Horizontal	PASS
2	68.3188	30.39	12.62	-17.77	40.00	27.38	150	14	PK	Horizontal	PASS
3	131.3751	30.46	13.60	-16.86	43.50	29.90	150	90	PK	Horizontal	PASS
4	257.8758	31.72	14.17	-17.55	46.00	31.83	150	65	PK	Horizontal	PASS
5	454.8055	31.08	19.43	-11.65	46.00	26.57	150	190	PK	Horizontal	PASS
6	760.6771	31.39	25.08	-6.31	46.00	20.92	150	278	PK	Horizontal	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2402MHz

Test Graph


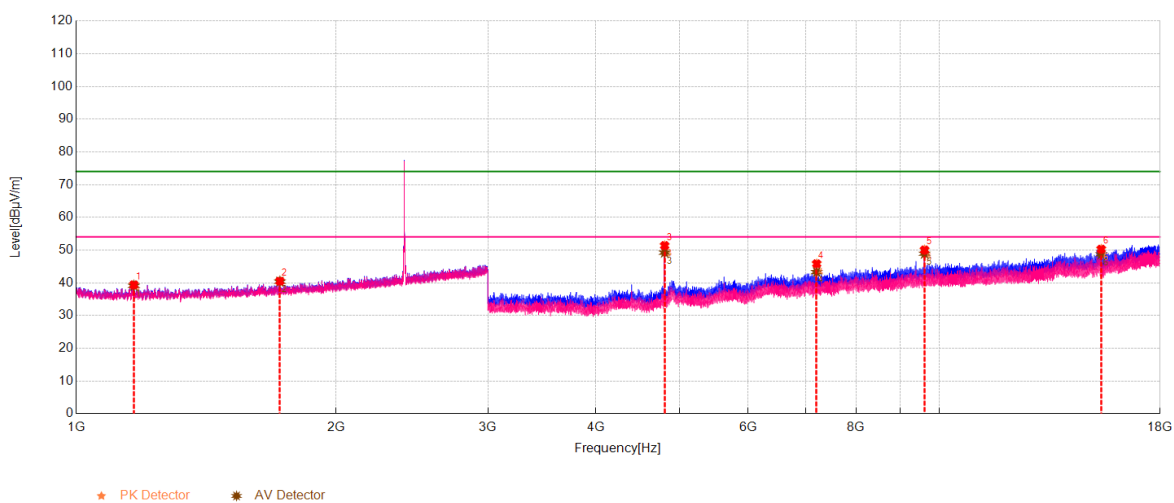
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	46.2006	31.38	15.49	-15.89	40.00	24.51	150	30	PK	Vertical	PASS
2	89.0789	36.65	16.40	-20.25	43.50	27.10	150	272	PK	Vertical	PASS
3	106.8317	36.62	17.60	-19.02	43.50	25.90	150	69	PK	Vertical	PASS
4	167.1717	30.52	14.51	-16.01	43.50	28.99	150	127	PK	Vertical	PASS
5	348.7739	31.07	15.99	-15.08	46.00	30.01	150	12	PK	Vertical	PASS
6	647.4667	31.69	23.27	-8.42	46.00	22.73	150	234	PK	Vertical	PASS

Note: (1) Level = Reading + Factor

(2) Margin = Limit - Level

Mode: BLE 1M

Channel: 2402MHz

Test Graph

Suspected Data List

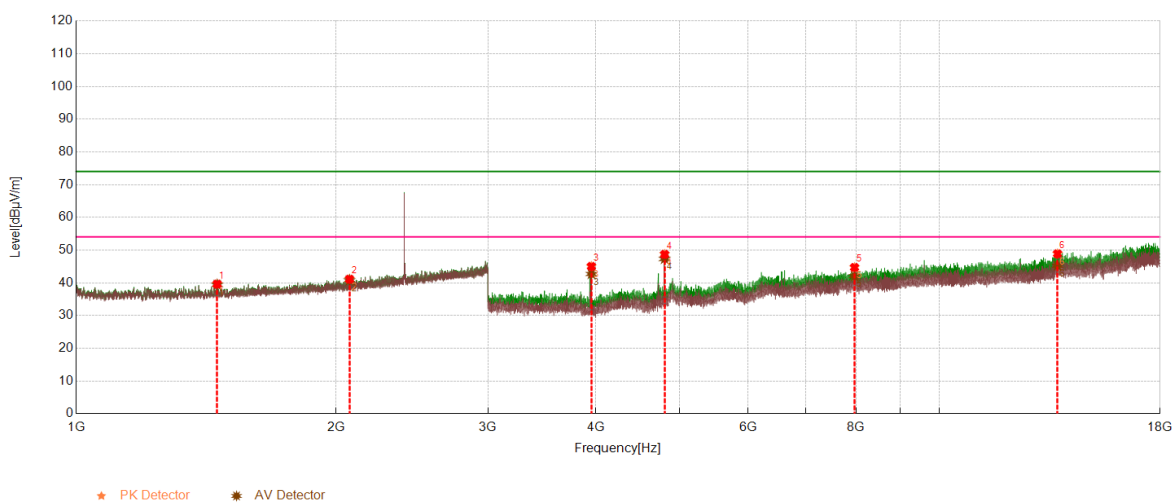
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	1166.4000	39.55	39.39	-0.16	74.00	34.61	150	73	PK	Horizontal	PASS
2	1721.8000	39.86	40.50	0.64	74.00	33.50	150	286	PK	Horizontal	PASS
3	4803.5000	65.94	51.38	-14.56	74.00	22.62	150	81	PK	Horizontal	PASS
4	7205.0000	55.30	45.82	-9.48	74.00	28.18	150	58	PK	Horizontal	PASS
5	9607.5000	55.12	50.05	-5.07	74.00	23.95	150	120	PK	Horizontal	PASS
6	15387.000	48.26	50.28	2.02	74.00	23.72	150	331	PK	Horizontal	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2402MHz

Test Graph

Suspected Data List

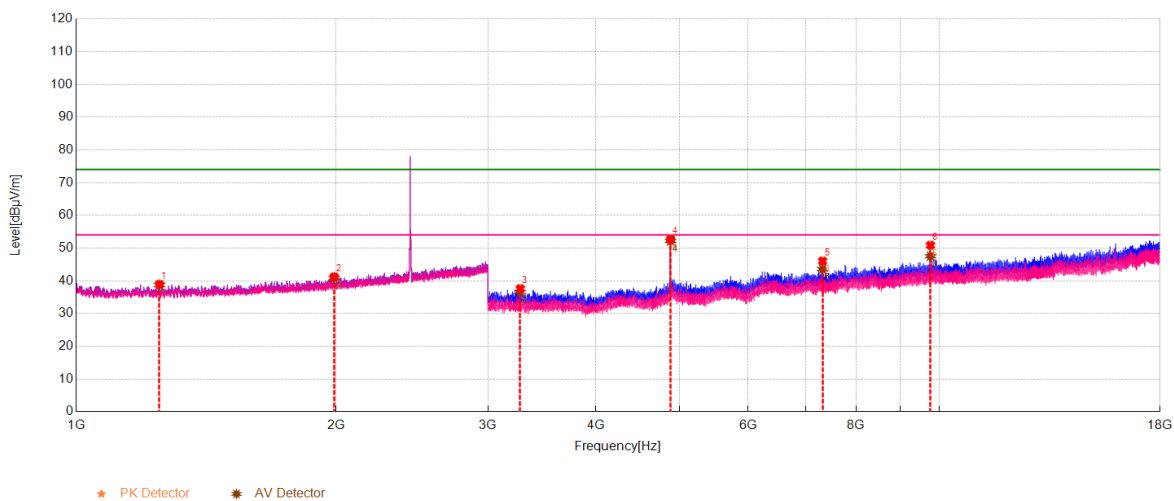
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	1456.6000	39.69	39.62	-0.07	74.00	34.38	150	290	PK	Vertical	PASS
2	2073.0000	39.07	41.12	2.05	74.00	32.88	150	258	PK	Vertical	PASS
3	3951.0000	62.33	45.02	-17.31	74.00	28.98	150	130	PK	Vertical	PASS
4	4803.0000	63.29	48.71	-14.58	74.00	25.29	150	217	PK	Vertical	PASS
5	7970.5000	52.33	44.70	-7.63	74.00	29.30	150	60	PK	Vertical	PASS
6	13695.000	48.13	48.87	0.74	74.00	25.13	150	83	PK	Vertical	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2440MHz

Test Graph

Suspected Data List

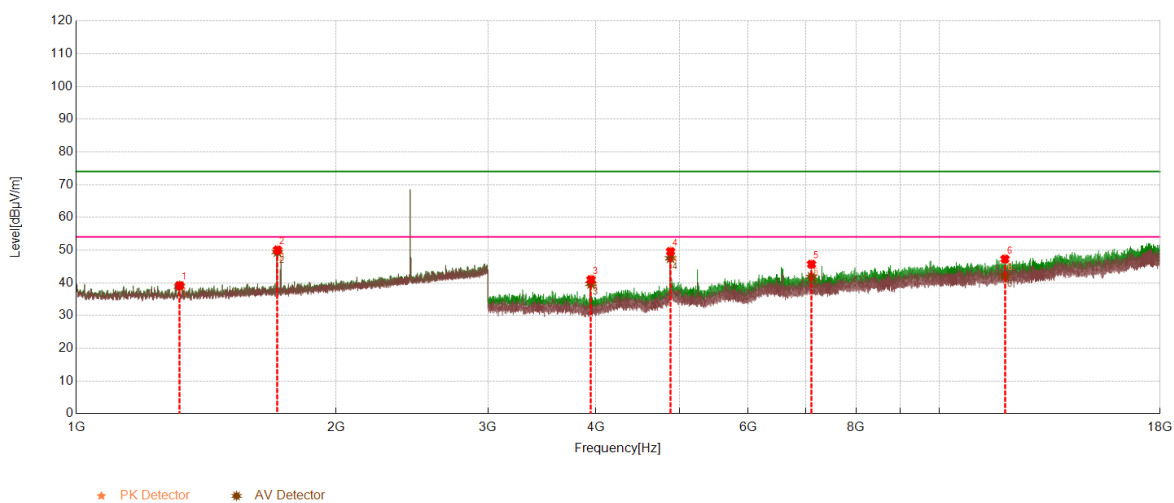
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	1249.0000	39.41	38.87	-0.54	74.00	35.13	150	261	PK	Horizontal	PASS
2	1990.0000	39.37	41.21	1.84	74.00	32.79	150	152	PK	Horizontal	PASS
3	3268.5000	57.40	37.62	-19.78	74.00	36.38	150	235	PK	Horizontal	PASS
4	4880.0000	66.72	52.65	-14.07	74.00	21.35	150	197	PK	Horizontal	PASS
5	7319.0000	55.24	46.05	-9.19	74.00	27.95	150	357	PK	Horizontal	PASS
6	9759.0000	55.47	50.87	-4.60	74.00	23.13	150	173	PK	Horizontal	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2440MHz

Test Graph

Suspected Data List

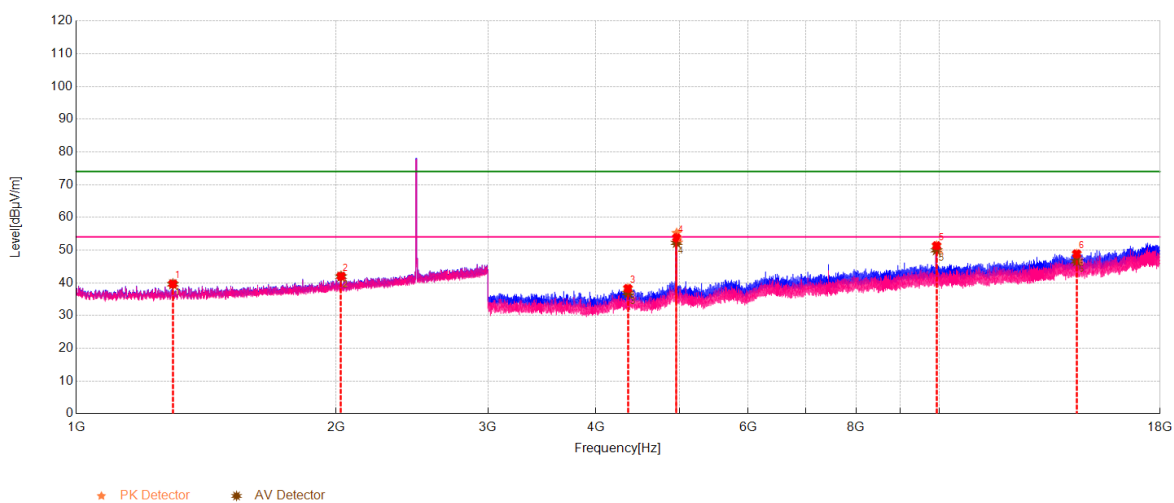
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	1317.8000	39.41	39.16	-0.25	74.00	34.84	150	124	PK	Vertical	PASS
2	1711.0000	49.32	50.03	0.71	74.00	23.97	150	356	PK	Vertical	PASS
3	3947.0000	58.43	40.99	-17.44	74.00	33.01	150	159	PK	Vertical	PASS
4	4880.0000	63.65	49.58	-14.07	74.00	24.42	150	229	PK	Vertical	PASS
5	7107.0000	55.58	45.68	-9.90	74.00	28.32	150	81	PK	Vertical	PASS
6	11903.500	48.93	47.26	-1.67	74.00	26.74	150	19	PK	Vertical	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2480MHz

Test Graph

Suspected Data List

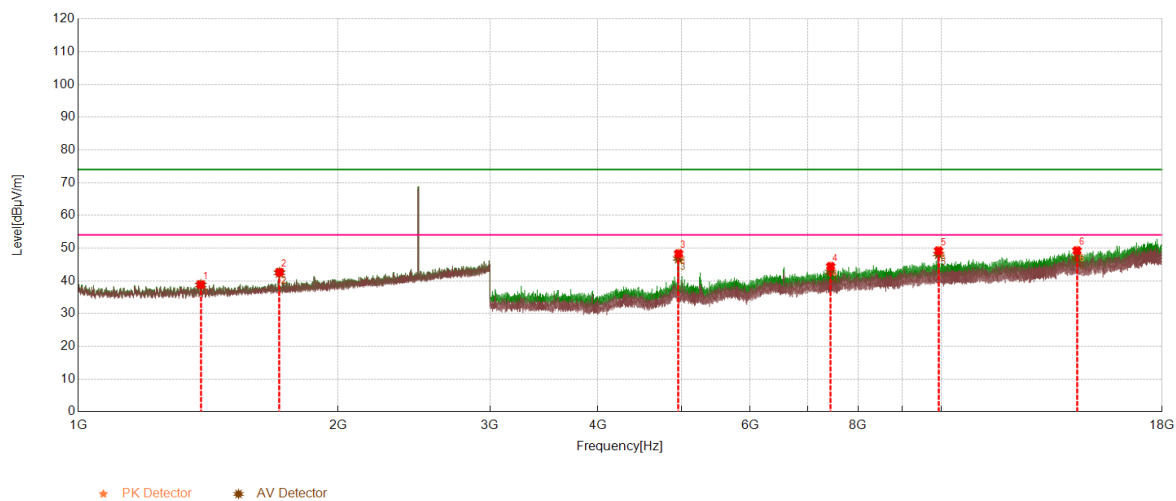
NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	1294.4000	40.15	39.71	-0.44	74.00	34.29	150	217	PK	Horizontal	PASS
2	2026.8000	40.25	42.03	1.78	74.00	31.97	150	6	PK	Horizontal	PASS
3	4355.5000	55.19	38.30	-16.89	74.00	35.70	150	351	PK	Horizontal	PASS
4	4959.5000	68.52	53.73	-14.79	74.00	20.27	150	195	PK	Horizontal	PASS
5	9919.0000	55.63	51.34	-4.29	74.00	22.66	150	139	PK	Horizontal	PASS
6	14414.000	47.83	48.87	1.04	74.00	25.13	150	12	PK	Horizontal	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

Mode: BLE 1M

Channel: 2480MHz

Test Graph

Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity	Verdict
1	1387.0000	39.26	38.85	-0.41	74.00	35.15	150	147	PK	Vertical	PASS
2	1711.0000	41.89	42.60	0.71	74.00	31.40	150	356	PK	Vertical	PASS
3	4959.5000	63.10	48.31	-14.79	74.00	25.69	150	262	PK	Vertical	PASS
4	7439.0000	53.36	44.42	-8.94	74.00	29.58	150	28	PK	Vertical	PASS
5	9920.0000	53.48	49.20	-4.28	74.00	24.80	150	168	PK	Vertical	PASS
6	14349.000	47.83	49.23	1.40	74.00	24.77	150	137	PK	Vertical	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level