

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.648	2402.308	0.5	PASS
		2440	0.668	2439.644	2440.312	0.5	PASS
		2480	0.704	2479.636	2480.340	0.5	PASS

Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



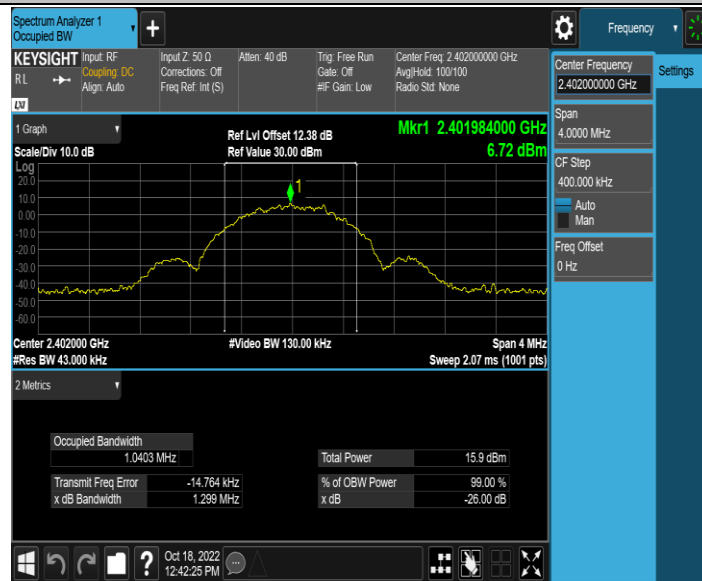
Appendix B: Occupied Channel Bandwidth

Test Result

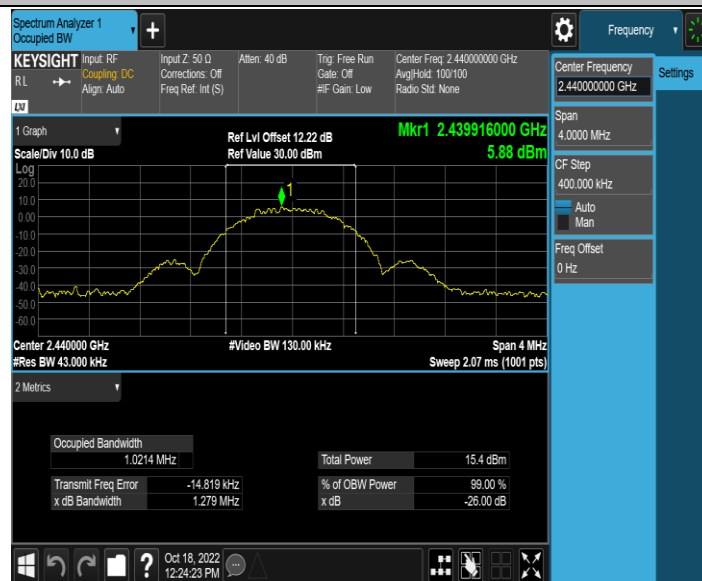
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0403	2401.4651	2402.5054	---	---
		2440	1.0214	2439.4745	2440.4959	---	---
		2480	1.0329	2479.4602	2480.4931	---	---

Test Graphs

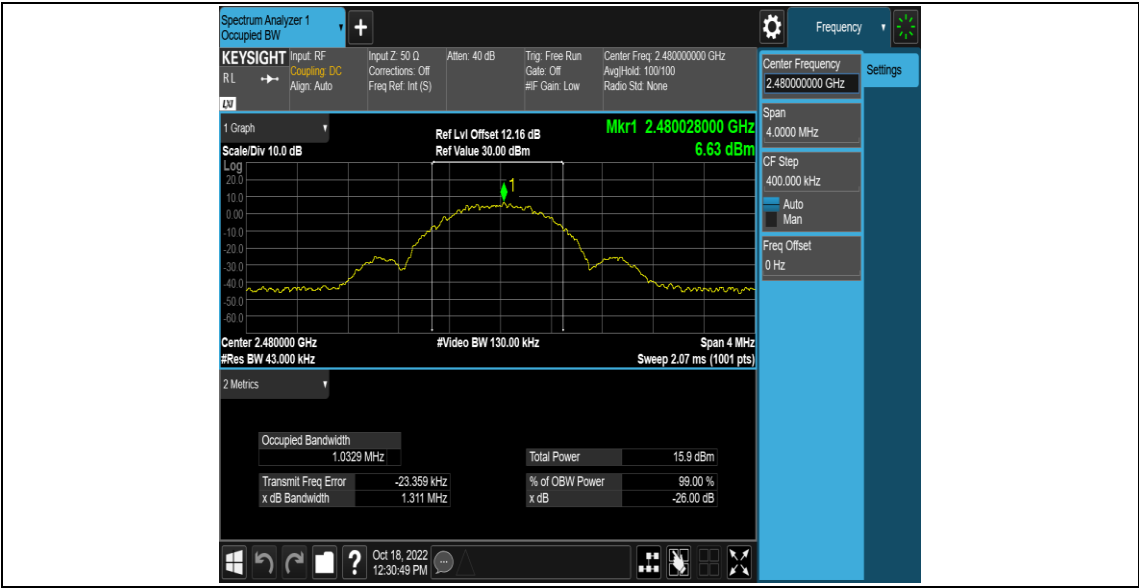
BLE_1M_Ant1_2402



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	8.68	≤30	9.76	≤36	PASS
		2440	8.29	≤30	9.37	≤36	PASS
		2480	8.73	≤30	9.81	≤36	PASS

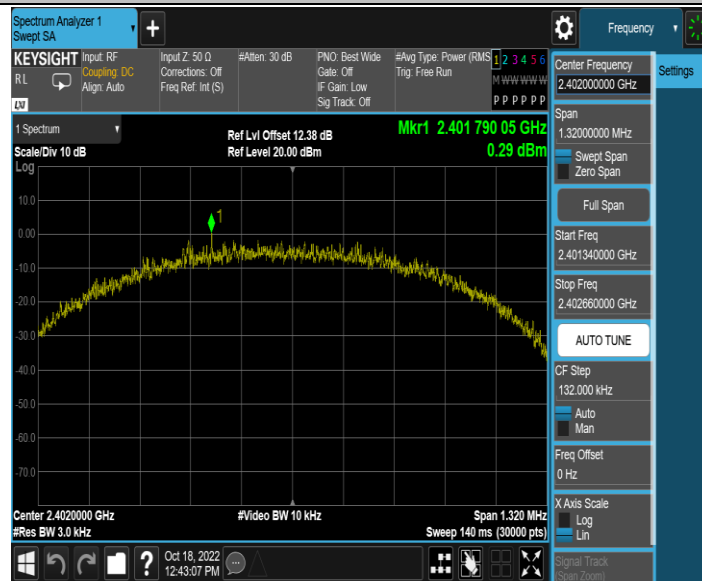
Appendix D: Maximum power spectral density

Test Result

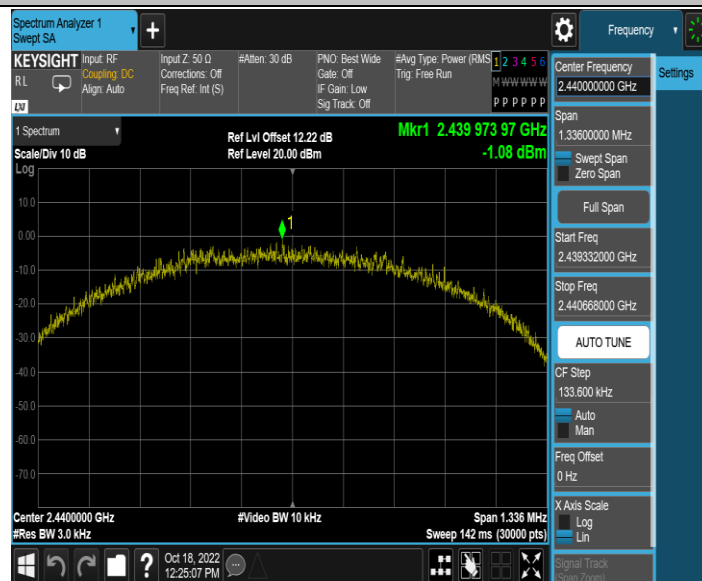
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	0.29	≤8.00	PASS
		2440	-1.08	≤8.00	PASS
		2480	-0.65	≤8.00	PASS

Test Graphs

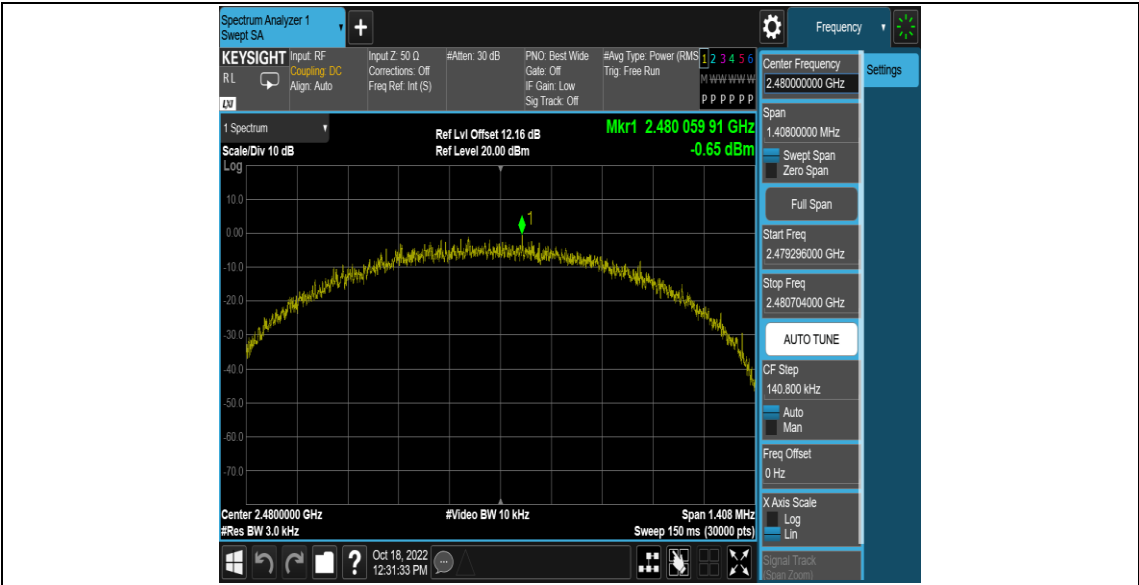
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



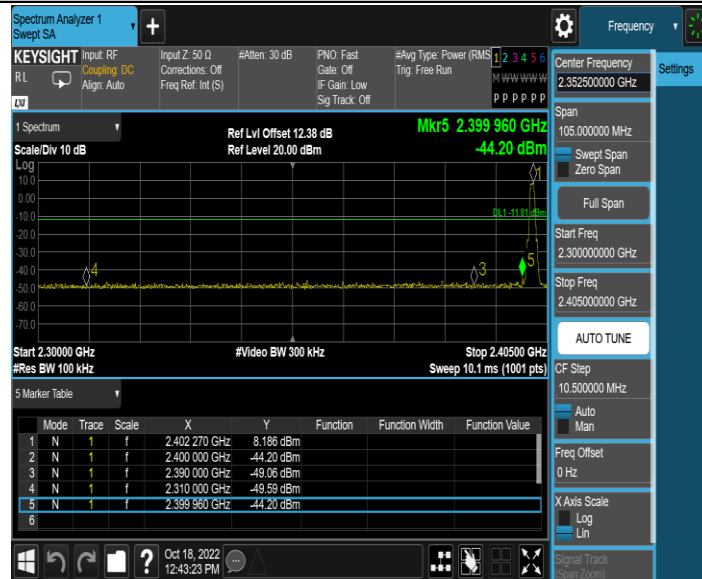
Appendix E: Band edge measurements

Test Result

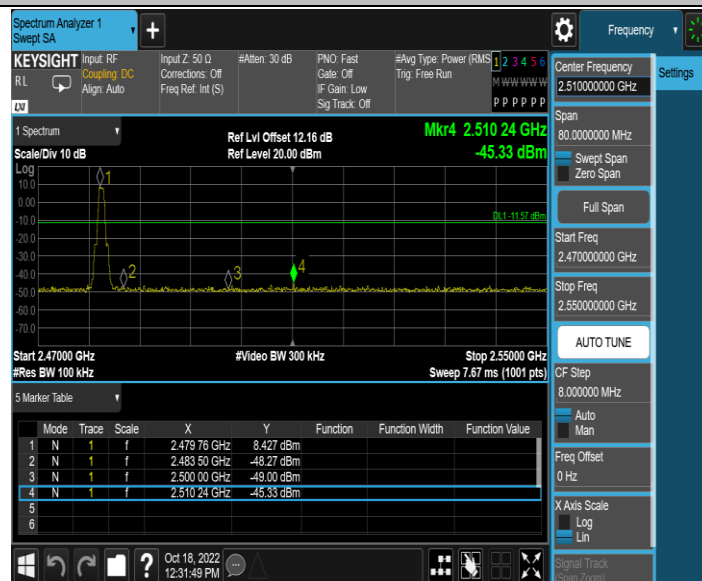
TestMod e	Antenn a	ChNam e	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdic t
BLE_1M	Ant1	Low	2402	8.19	-44.2	≤-11.81	PASS
		High	2480	8.43	-45.33	≤-11.57	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

Test Result

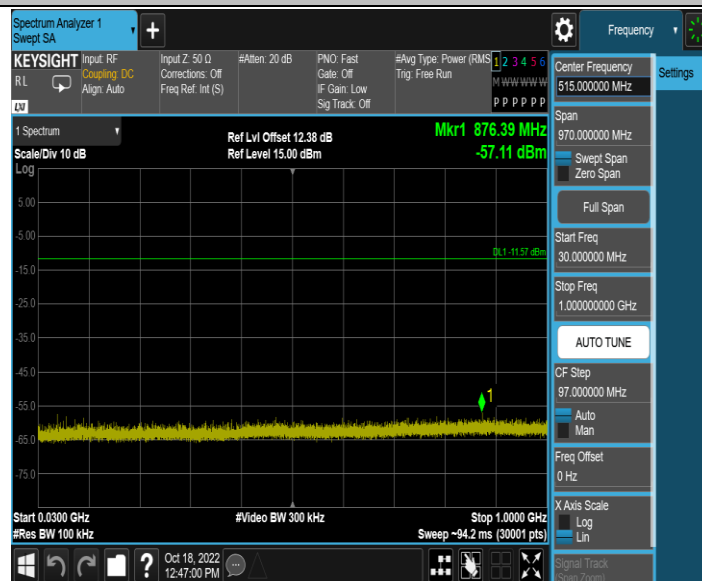
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	8.43	8.43	---	PASS
			30~1000	8.43	-57.11	≤-11.57	PASS
			1000~26500	8.43	-34.65	≤-11.57	PASS
		2440	Reference	7.93	7.93	---	PASS
			30~1000	7.93	-57.89	≤-12.07	PASS
			1000~26500	7.93	-36.75	≤-12.07	PASS
		2480	Reference	8.54	8.54	---	PASS
			30~1000	8.54	-57.71	≤-11.46	PASS
			1000~26500	8.54	-38.9	≤-11.46	PASS

Test Graphs

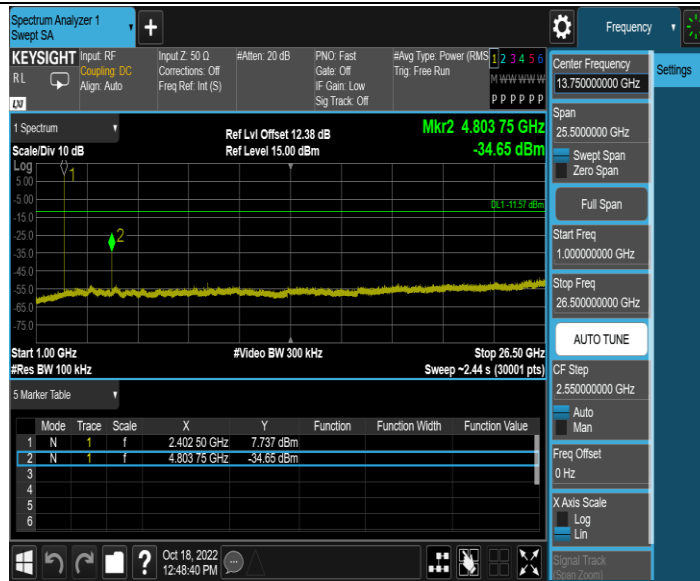
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



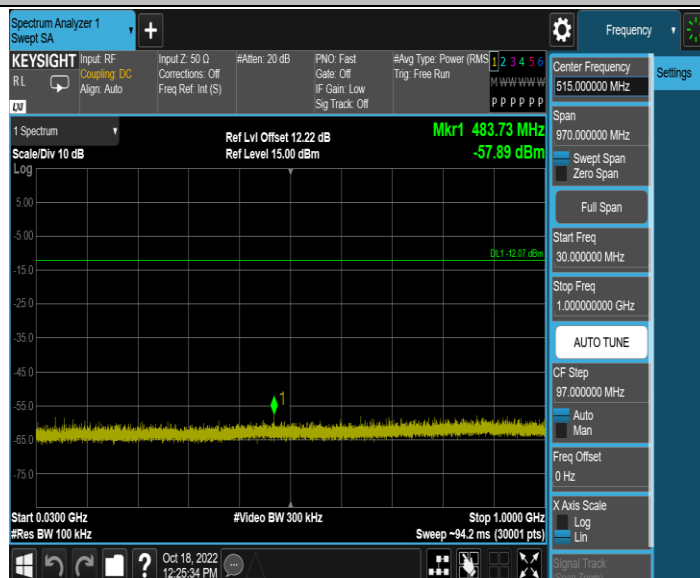
BLE_1M_Ant1_2402_1000~26500



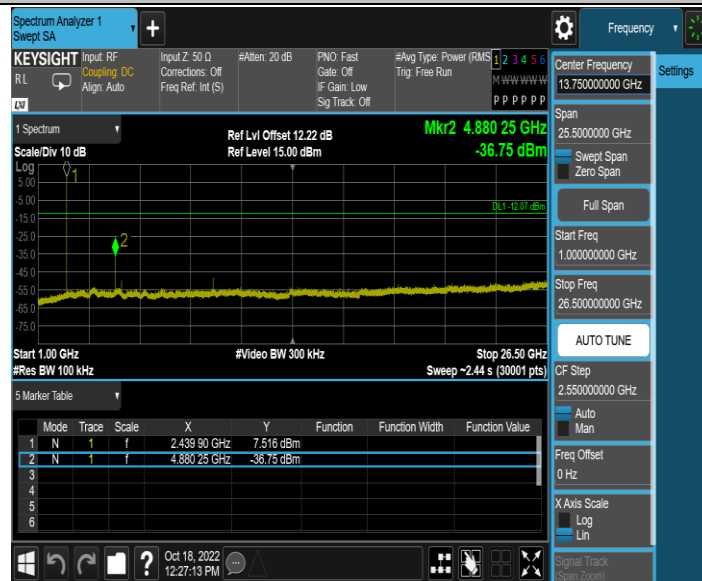
BLE_1M_Ant1_2440_0~Reference



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]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	100	NaN
		2440	100	NaN
		2480	100	NaN

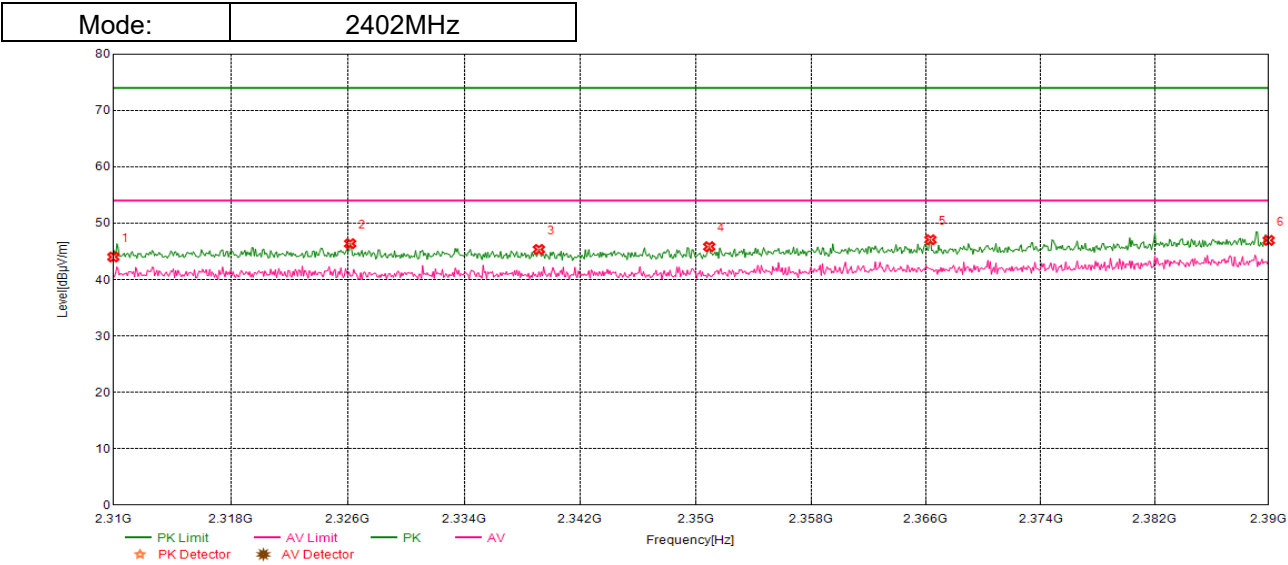
Test Graphs





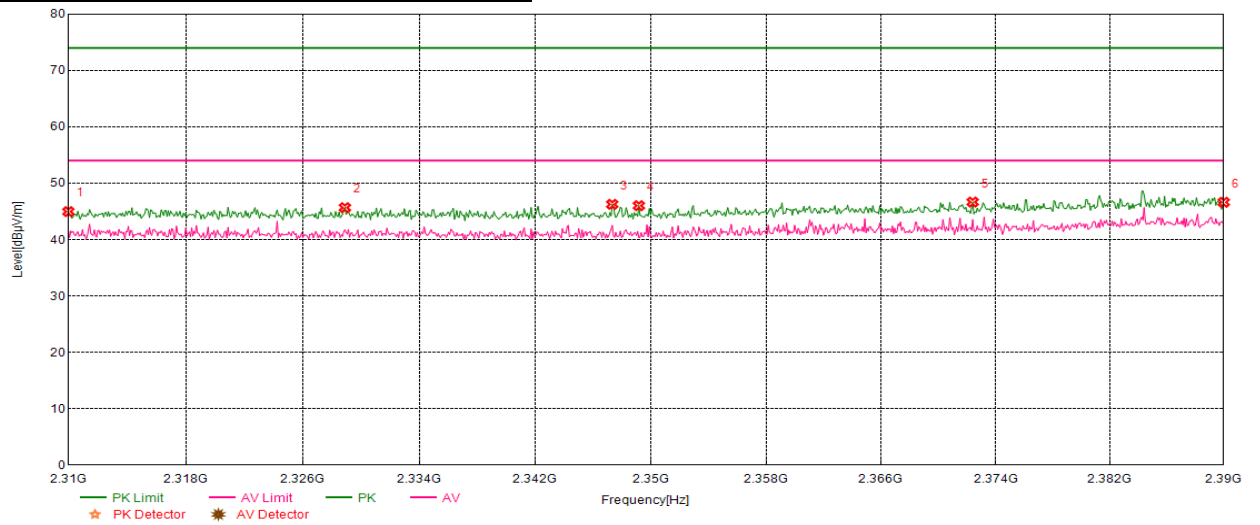
Appendix I: Emissions in Restricted Bands

Test Result



PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBµV/m]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	2310.00	63.80	44.01	-19.79	74.00	29.99	Horizontal	PASS
2	2326.17	66.14	46.38	-19.76	74.00	27.62	Horizontal	PASS
3	2339.14	65.09	45.35	-19.74	74.00	28.65	Horizontal	PASS
4	2350.92	65.51	45.84	-19.67	74.00	28.16	Horizontal	PASS
5	2366.29	65.92	47.07	-18.85	74.00	26.93	Horizontal	PASS
6	2390.00	64.53	46.96	-17.57	74.00	27.04	Horizontal	PASS

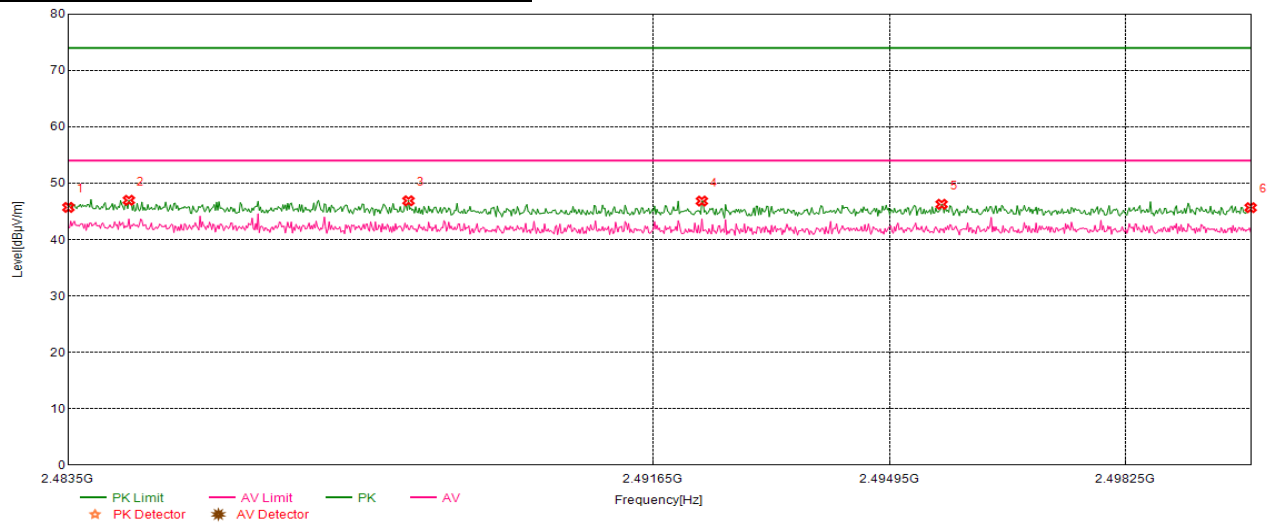
Mode:	2402MHz
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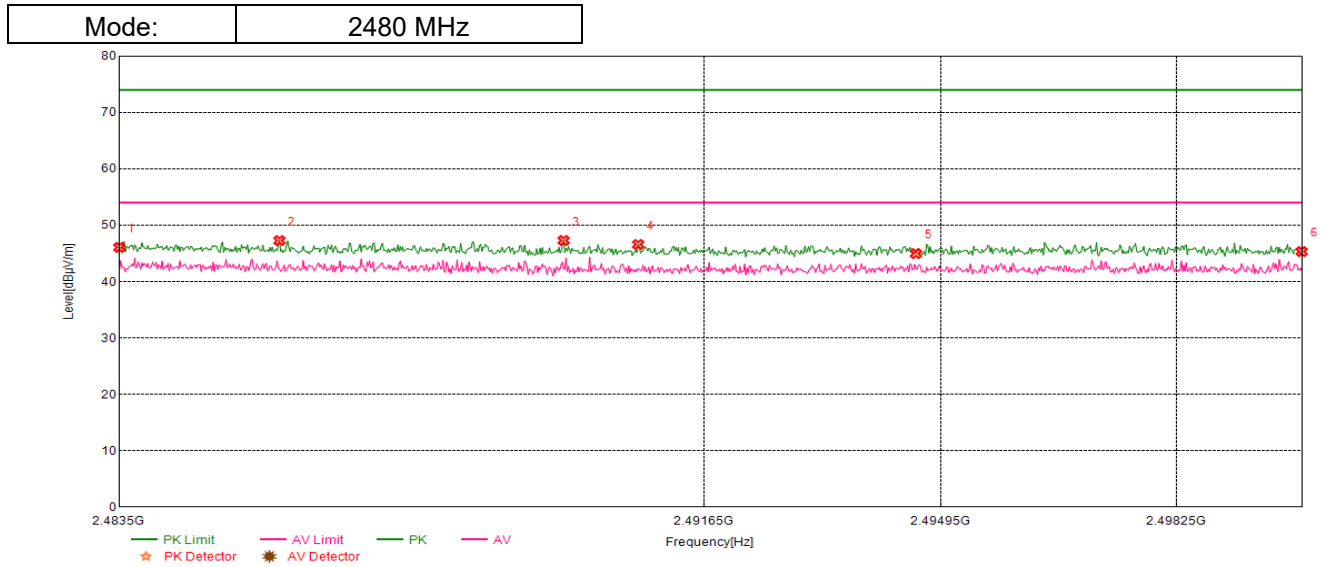
PK Final Data List

NO.	Freq. [MHz]	PK Reading [dBμV/m]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Verdict
1	2310.00	64.76	44.97	-19.79	74.00	29.03	Vertical	PASS
2	2328.89	65.43	45.67	-19.76	74.00	28.33	Vertical	PASS
3	2347.31	65.98	46.26	-19.72	74.00	27.74	Vertical	PASS
4	2349.15	65.74	46.02	-19.72	74.00	27.98	Vertical	PASS
5	2372.38	65.18	46.66	-18.52	74.00	27.34	Vertical	PASS
6	2390.00	64.19	46.62	-17.57	74.00	27.38	Vertical	PASS

Mode:	2480 MHz
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Verdict
1	2483.50	63.73	45.71	-18.02	74.00	28.29	Horizontal	PASS
2	2484.34	65.21	46.97	-18.24	74.00	27.03	Horizontal	PASS
3	2488.23	65.65	46.88	-18.77	74.00	27.12	Horizontal	PASS
4	2492.32	65.78	46.83	-18.95	74.00	27.17	Horizontal	PASS
5	2495.67	65.18	46.27	-18.91	74.00	27.73	Horizontal	PASS
6	2500.00	64.52	45.67	-18.85	74.00	28.33	Horizontal	PASS

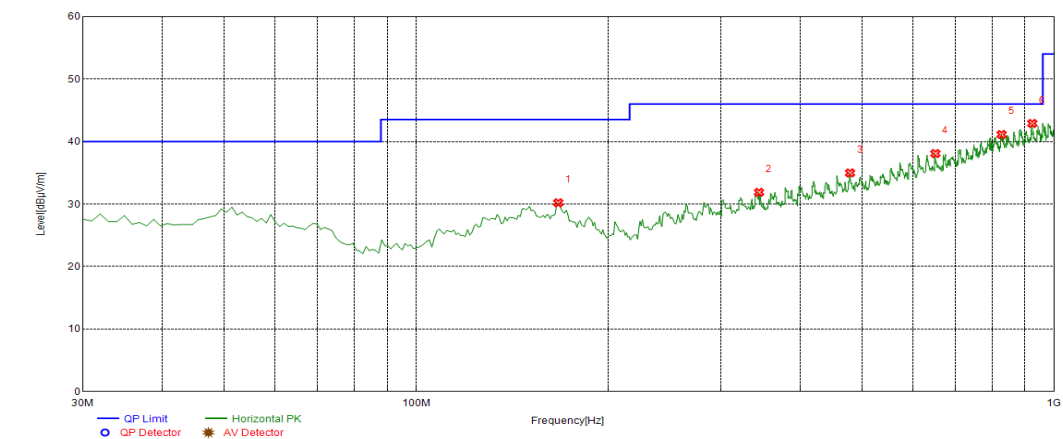


PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Verdict
1	2483.50	64.09	46.07	-18.02	74.00	27.93	Vertical	PASS
2	2485.72	65.77	47.28	-18.49	74.00	26.72	Vertical	PASS
3	2489.68	66.23	47.29	-18.94	74.00	26.71	Vertical	PASS
4	2490.72	65.56	46.59	-18.97	74.00	27.41	Vertical	PASS
5	2494.60	63.90	44.97	-18.93	74.00	29.03	Vertical	PASS
6	2500.00	64.18	45.33	-18.85	74.00	28.67	Vertical	PASS

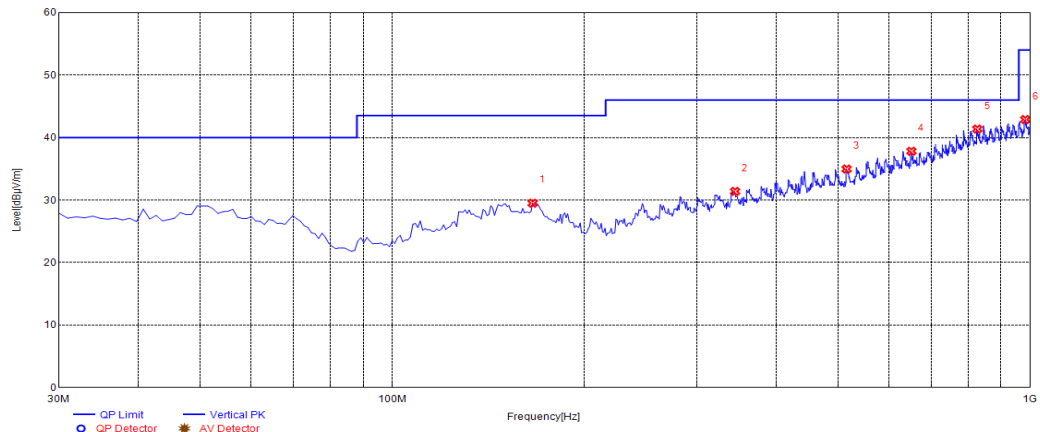
Note:

- The Antenna Gain is compensated in the graph.
- 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 H : Spurious emissions



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	166.906	30.20	-16.15	43.50	13.30	150	102	Horizontal
2	344.594	31.88	-14.61	46.00	14.12	150	191	Horizontal
3	478.588	34.98	-11.63	46.00	11.02	150	225	Horizontal
4	651.421	38.08	-8.40	46.00	7.92	150	330	Horizontal
5	827.167	41.13	-5.82	46.00	4.87	150	311	Horizontal
6	924.264	42.90	-5.05	46.00	3.10	150	251	Horizontal



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	165.935	29.50	-16.06	43.50	14.00	150	95	Vertical
2	344.594	31.39	-14.61	46.00	14.61	150	73	Vertical
3	515.485	34.97	-10.81	46.00	11.03	150	118	Vertical
4	651.421	37.81	-8.40	46.00	8.19	150	99	Vertical
5	826.196	41.36	-5.82	46.00	4.64	150	206	Vertical
6	982.522	42.88	-4.36	54.00	11.12	150	188	Vertical

Mode:	2402
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	7206.5952	71.79	-12.75	59.04	74.00	14.96	Vertical	PASS
2	1588.0000	63.58	-24.03	39.55	74.00	34.45	Vertical	PASS
3	2148.0000	63.74	-20.10	43.64	74.00	30.36	Vertical	PASS
4	3359.7602	62.58	-19.13	43.45	74.00	30.55	Vertical	PASS
5	4803.7975	63.47	-16.47	47.00	74.00	27.00	Vertical	PASS
6	5928.0480	62.2	-14.59	47.61	74.00	26.39	Vertical	PASS

AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBμV/m]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity	Verdict
1	7206.5952	64	-12.75	51.25	54.00	2.75	Vertical	PASS
2	1588.0000	56.89	-24.03	32.86	54.00	21.14	Vertical	PASS
3	2148.0000	57.21	-20.10	37.11	54.00	16.89	Vertical	PASS
4	3359.7602	52.25	-19.13	33.12	54.00	20.88	Vertical	PASS
5	4803.7975	55.48	-16.47	39.01	54.00	14.99	Vertical	PASS
6	5928.0480	51.79	-14.59	37.20	54.00	16.80	Vertical	PASS

Mode:	2402MHz
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	7205.2452	72.61	-12.75	59.86	74.00	14.14	Horizontal	PASS
2	4803.7975	66.5	-16.47	50.03	74.00	23.97	Horizontal	PASS
3	2066.0000	64.78	-20.33	44.45	74.00	29.55	Horizontal	PASS
4	3349.7668	60.94	-19.07	41.87	74.00	32.13	Horizontal	PASS
5	3939.3738	61.91	-17.84	44.07	74.00	29.93	Horizontal	PASS
6	4803.7975	66.24	-16.47	49.77	74.00	24.23	Horizontal	PASS

AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBμV/m]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity	Verdict
1	7205.2452	65.1	-12.75	52.35	54.00	1.65	Horizontal	PASS
2	4803.7975	57.41	-16.47	40.94	54.00	13.06	Horizontal	PASS
3	2066.0000	57.24	-20.33	36.91	54.00	17.09	Horizontal	PASS
4	3349.7668	51.57	-19.07	32.50	54.00	21.50	Horizontal	PASS
5	3939.3738	51.70	-17.84	33.86	54.00	20.14	Horizontal	PASS
6	4803.7975	57.15	-16.47	40.68	54.00	13.32	Horizontal	PASS

Mode:	2440 MHz
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	4879.8875	72.60	-16.32	56.28	74.00	17.72	Horizontal	PASS
2	7319.1186	72.34	-12.90	59.44	74.00	14.56	Horizontal	PASS
3	1238.0000	63.67	-25.59	38.08	74.00	35.92	Horizontal	PASS
4	1774.0000	63.61	-22.44	41.17	74.00	32.83	Horizontal	PASS
5	3629.5803	61.02	-18.68	42.34	74.00	31.66	Horizontal	PASS
6	6107.9280	60.5	-13.61	46.89	74.00	27.11	Horizontal	PASS

AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBμV/m]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity	Verdict
1	4879.8875	68.85	-16.32	52.53	54.00	1.47	Horizontal	PASS
2	7319.1186	65.19	-12.90	52.29	54.00	1.71	Horizontal	PASS
3	1238.0000	56.47	-25.59	30.88	54.00	23.12	Horizontal	PASS
4	1774.0000	56.10	-22.44	33.66	54.00	20.34	Horizontal	PASS
5	3629.5803	51.62	-18.68	32.94	54.00	21.06	Horizontal	PASS
6	6107.9280	49.64	-13.61	36.03	54.00	17.97	Horizontal	PASS

Mode:	2440 MHz
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	7320.6919	71.27	-12.89	58.38	74.00	15.62	Vertical	PASS
2	1418.0000	64.79	-25.05	39.74	74.00	34.26	Vertical	PASS
3	1996.0000	66.12	-20.53	45.59	74.00	28.41	Vertical	PASS
4	3629.5803	62.51	-18.68	43.83	74.00	30.17	Vertical	PASS
5	4878.7475	66.37	-16.32	50.05	74.00	23.95	Vertical	PASS
6	6022.9847	60.95	-14.33	46.62	74.00	27.38	Vertical	PASS

AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBμV/m]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity	Verdict
1	7320.6919	64.12	-12.89	51.23	54.00	2.77	Vertical	PASS
2	1418.0000	58.28	-25.05	33.23	54.00	20.77	Vertical	PASS
3	1996.0000	58.08	-20.53	37.55	54.00	16.45	Vertical	PASS
4	3629.5803	52.15	-18.68	33.47	54.00	20.53	Vertical	PASS
5	4878.7475	49.41	-16.32	33.09	54.00	20.91	Vertical	PASS
6	6022.9847	49.85	-14.33	35.52	54.00	18.48	Vertical	PASS

Mode:	2480 MHz
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	4960.4042	73.51	-16.34	57.17	74.00	16.83	Horizontal	PASS
2	7439.0386	72.65	-12.72	59.93	74.00	14.07	Horizontal	PASS
3	9919.0064	67.11	-8.98	58.13	74.00	15.87	Horizontal	PASS
4	1310.0000	64.71	-25.33	39.38	74.00	34.62	Horizontal	PASS
5	2062.0000	64.2	-20.33	43.87	74.00	30.13	Horizontal	PASS
6	3829.4470	61.33	-18.21	43.12	74.00	30.88	Horizontal	PASS

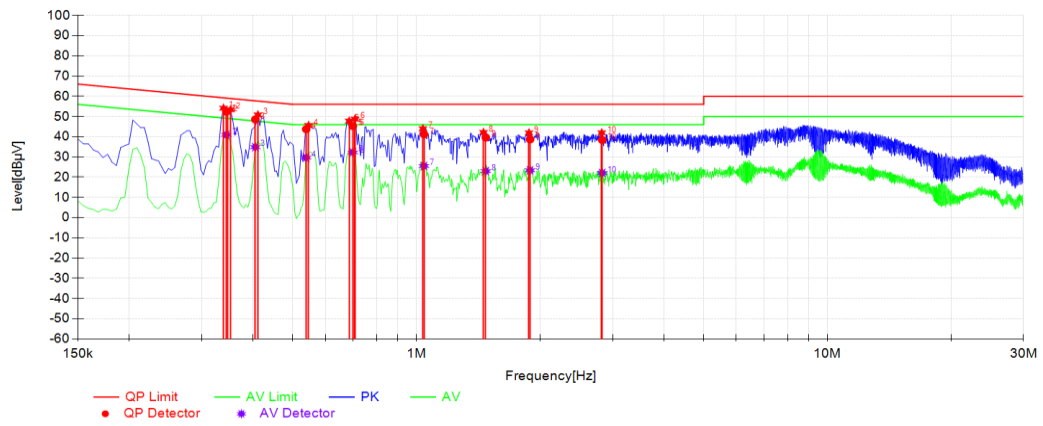
AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBμV/m]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity	Verdict
1	4960.4042	68.23	-16.34	51.89	54.00	2.11	Horizontal	PASS
2	7439.0386	64.42	-12.72	51.70	54.00	2.30	Horizontal	PASS
3	9919.0064	57.43	-8.98	48.45	54.00	5.55	Horizontal	PASS
4	1310.0000	58.02	-25.33	32.69	54.00	21.31	Horizontal	PASS
5	2062.0000	56.37	-20.33	36.04	54.00	17.96	Horizontal	PASS
6	3829.4470	51.19	-18.21	32.98	54.00	21.02	Horizontal	PASS

Mode:	2480 MHz
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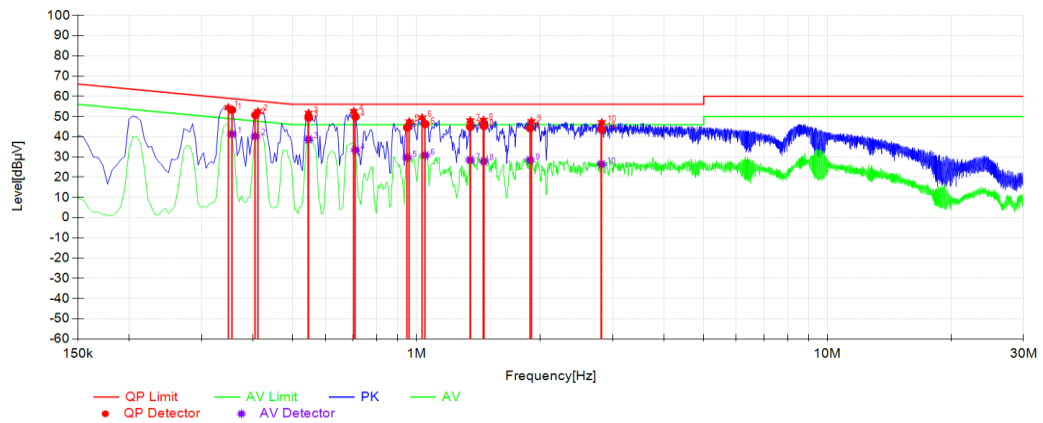
PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	4960.2542	73.08	-16.34	56.74	74.00	17.26	Vertical	PASS
2	7440.5220	71.05	-12.72	58.33	74.00	15.67	Vertical	PASS
3	9920.4764	68.99	-8.98	60.01	74.00	13.99	Vertical	PASS
4	1328.0000	64.08	-25.22	38.86	74.00	35.14	Vertical	PASS
5	2102.0000	63.54	-20.30	43.24	74.00	30.76	Vertical	PASS
6	4134.2438	61.12	-17.12	44.00	74.00	30.00	Vertical	PASS

AV Final Data List								
NO.	Freq. [MHz]	AV Reading [dBμV/m]	Factor [dB/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity	Verdict
1	4960.2542	68.54	-16.34	52.20	54.00	1.80	Vertical	PASS
2	7440.5220	62.71	-12.72	49.99	54.00	4.01	Vertical	PASS
3	9920.4764	60.16	-8.98	51.18	54.00	2.82	Vertical	PASS
4	1328.0000	57.46	-25.22	32.24	54.00	21.76	Vertical	PASS
5	2102.0000	56.63	-20.30	36.33	54.00	17.67	Vertical	PASS
6	4134.2438	51.62	-17.12	34.50	54.00	19.50	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]	Polarity	Verdict
1	0.3443	10.27	52.37	59.10	6.73	40.93	49.10	8.17	L1	PASS
2	0.3466	10.27	52.17	59.04	6.87	40.90	49.04	8.14	L1	PASS
3	0.4052	10.26	48.54	57.75	9.21	34.88	47.75	12.87	L1	PASS
4	0.5388	10.28	43.74	56.00	12.26	29.65	46.00	16.35	L1	PASS
5	0.6998	10.28	45.31	56.00	10.69	32.28	46.00	13.72	L1	PASS
6	0.7049	10.28	45.41	56.00	10.59	31.81	46.00	14.19	L1	PASS
7	1.0426	10.28	41.18	56.00	14.82	25.54	46.00	20.46	L1	PASS
8	1.4743	10.28	39.62	56.00	16.38	23.00	46.00	23.00	L1	PASS
9	1.8894	10.29	38.70	56.00	17.30	23.42	46.00	22.58	L1	PASS
10	2.8307	10.30	38.39	56.00	17.61	22.08	46.00	23.92	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]	Polarity	Verdict
1	0.3554	10.27	53.22	58.83	5.61	41.29	48.83	7.54	N	PASS
2	0.4054	10.26	50.72	57.74	7.02	40.25	47.74	7.49	N	PASS
3	0.5461	10.28	49.34	56.00	6.66	38.70	46.00	7.30	N	PASS
4	0.7102	10.28	49.88	56.00	6.12	33.38	46.00	12.62	N	PASS
5	0.9489	10.28	44.51	56.00	11.49	29.75	46.00	16.25	N	PASS
6	1.0502	10.28	46.23	56.00	9.77	30.79	46.00	15.21	N	PASS
7	1.3507	10.28	44.87	56.00	11.13	28.47	46.00	17.53	N	PASS
8	1.4598	10.28	45.26	56.00	10.74	27.83	46.00	18.17	N	PASS
9	1.8889	10.29	44.21	56.00	11.79	28.41	46.00	17.59	N	PASS
10	2.8210	10.34	43.66	56.00	12.34	26.38	46.00	19.62	N	PASS