Appendix A. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2344.06	42.72	-31.28	74	43.54	27.1	5.33	33.25	319	62	P	H
		2344.06	17.93	-36.07	54							A	H
	*	2402.04	105.22	-	-	105.82	27.23	5.39	33.22	319	62	P	H
	*	2402.04	80.43	-	-							A	H
													H
													H
		2366.16	43.08	-30.92	74	43.79	27.14	5.39	33.24	107	108	P	V
		2366.16	18.29	-35.71	54							A	V
	*	2402.04	107.45	-	-	108.05	27.23	5.39	33.22	107	108	P	V
	*	2402.04	82.66	-	-							A	V
													V
													V
BT CH 39 2441MHz		2354.27	42.86	-31.14	74	43.64	27.14	5.33	33.25	353	59	P	H
		2354.27	18.07	-35.93	54							A	H
	*	2441.1	106.08	-	-	106.49	27.37	5.42	33.2	353	59	P	H
	*	2441.1	81.29	-	-							A	H
		2486.7	42.6	-31.4	74	42.86	27.46	5.46	33.18	353	59	P	H
		2486.7	17.81	-36.19	54							A	H
		2332.8	42.77	-31.23	74	43.65	27.05	5.33	33.26	100	109	P	V
		2332.8	17.98	-36.02	54							A	V
	*	2441.1	107.55	-	-	107.96	27.37	5.42	33.2	100	109	P	V
	*	2441.1	82.76	-	-							A	V
		2488.79	43.47	-30.53	74	43.69	27.5	5.46	33.18	100	109	P	V
		2488.79	18.68	-35.32	54							A	V

BT CH 78 2480MHz	*	2479.98	103.85	-	-	104.13	27.46	5.44	33.18	341	60	P	H
	*	2479.98	79.06	-	-							A	H
		2483.5	53.21	-20.79	74	53.47	27.46	5.46	33.18	341	60	P	H
		2483.5	28.42	-25.58	54							A	H
													H
													H
	*	2480.05	105.65	-	-	105.93	27.46	5.44	33.18	100	103	P	V
	*	2480.05	80.86	-	-							A	V
		2483.76	53.95	-20.05	74	54.21	27.46	5.46	33.18	100	103	P	V
		2483.76	29.16	-24.84	54							A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

BT	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH 00 2402MHz		4806	40.18	-33.82	74	61.82	31.42	7.58	60.64	100	0	P	H
		4806	15.39	-38.61	54							A	H
													H
													H
		4806	41.89	-32.11	74	63.53	31.42	7.58	60.64	100	0	P	V
		4806	17.1	-36.9	54							A	V
													V
													V
BT CH 39 2441MHz		4884	40.2	-33.8	74	61.34	31.56	7.82	60.52	100	0	P	H
		4884	15.41	-38.59	54							A	H
		7320	42.63	-31.37	74	57.9	36.22	9.49	60.98	100	0	P	H
		7320	17.84	-36.16	54							A	H
		4884	40.73	-33.27	74	61.87	31.56	7.82	60.52	100	0	P	V
		4884	15.94	-38.06	54							A	V
		7320	41.87	-32.13	74	57.14	36.22	9.49	60.98	100	0	P	V
		7320	17.08	-36.92	54							A	V
BT CH 78 2480MHz		4962	46.92	-27.08	74	67.5	31.73	8.05	60.36	100	0	P	H
		4962	22.13	-31.87	54							A	H
		7440	42.86	-31.14	74	58.1	36.49	9.61	61.34	100	0	P	H
		7440	18.07	-35.93	54							A	H
		4962	40.32	-33.68	74	60.9	31.73	8.05	60.36	100	0	P	V
		4962	15.53	-38.47	54							A	V
		7440	41.98	-32.02	74	57.22	36.49	9.61	61.34	100	0	P	V
		7440	17.19	-36.81	54							A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz BT (LF)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		77.79	26.11	-13.89	40	50.23	7.65	0.93	32.7			P	H
		143.67	19.17	-24.33	43.5	38.72	11.79	1.33	32.67			P	H
		231.15	27.84	-18.16	46	47.77	11.18	1.62	32.73			P	H
		415.5	34.18	-11.82	46	48.12	16.75	2.16	32.85	117	3	P	H
		470.8	25.2	-20.8	46	38.14	17.66	2.3	32.9			P	H
		722.8	30.48	-15.52	46	39.57	21.05	2.82	32.96			P	H
													H
													H
													H
													H
													H
													H
		60.78	34.8	-5.2	40	60.46	6.16	0.93	32.75	100	66	P	V
		176.88	34.15	-9.35	43.5	55.73	9.65	1.48	32.71			P	V
		294.87	31.23	-14.77	46	48.38	13.7	1.88	32.73			P	V
		363	29.84	-16.16	46	45.17	15.53	1.94	32.8			P	V
		413.4	37.09	-8.91	46	51.06	16.72	2.16	32.85			P	V
		708.8	30	-16	46	39.38	20.78	2.82	32.98			P	V
													V
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													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBµV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBµV/m) – Limit Line(dBµV/m)

For Peak Limit @ 2390MHz:

1. Level(dBµV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBµV) – 35.86 (dB)

= 55.45 (dBµV/m)

2. Over Limit(dB)

= Level(dBµV/m) – Limit Line(dBµV/m)

= 55.45(dBµV/m) – 74(dBµV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBµV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBµV) – 35.86 (dB)

= 43.54 (dBµV/m)

2. Over Limit(dB)

= Level(dBµV/m) – Limit Line(dBµV/m)

= 43.54(dBµV/m) – 54(dBµV/m)

= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is "PASS".