



Appendix A. Radiated Spurious Emission

Test Engineer :	Bill Chang and Ian Liang	Temperature :	25~26°C
		Relative Humidity :	50~51%

15C 2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2360.18	43.59	-30.41	74	43.43	26.94	6.62	33.4	133	239	P	H
		2360.18	18.8	-35.2	54	-	-	-	-	-	-	A	H
	*	2401.91	100.32	-	-	100.07	27.03	6.57	33.35	133	239	P	H
	*	2401.91	75.53	-	-	-	-	-	-	-	-	A	H
													H
													H
		2355.37	41.36	-32.64	74	41.16	26.94	6.66	33.4	100	192	P	V
		2355.37	16.57	-37.43	54	-	-	-	-	-	-	A	V
	*	2401.91	96.25	-	-	96	27.03	6.57	33.35	100	192	P	V
	*	2401.91	71.46	-	-	-	-	-	-	-	-	A	V
													V
													V
BT CH 39 2441MHz		2376.31	41.52	-32.48	74	41.29	26.99	6.62	33.38	130	237	P	H
		2376.31	16.73	-37.27	54	-	-	-	-	-	-	A	H
	*	2440.91	101.13	-	-	100.48	27.17	6.79	33.31	130	237	P	H
	*	2440.91	76.34	-	-	-	-	-	-	-	-	A	H
		2487.84	44.47	-29.53	74	43.42	27.3	7.01	33.26	130	237	P	H
		2487.84	19.68	-34.32	54	-	-	-	-	-	-	A	H
		2372.7	41.6	-32.4	74	41.37	26.99	6.62	33.38	100	192	P	V
		2372.7	16.81	-37.19	54	-	-	-	-	-	-	A	V
	*	2441.1	96.78	-	-	96.13	27.17	6.79	33.31	100	192	P	V
	*	2441.1	71.99	-	-	-	-	-	-	-	-	A	V
		2495.06	41.67	-32.33	74	40.62	27.3	7.01	33.26	100	192	P	V
		2495.06	16.88	-37.12	54	-	-	-	-	-	-	A	V



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)
BT CH 78 2480MHz	*	2479.91	102.77	-	-	101.77	27.26	7.01	33.27	102	240	P	H
	*	2479.91	77.98	-	-	-	-	-	-	-	-	A	H
		2483.62	45.51	-28.49	74	44.51	27.26	7.01	33.27	102	240	P	H
		2483.62	20.72	-33.28	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480.12	96.77	-	-	95.77	27.26	7.01	33.27	118	195	P	V
	*	2480.12	71.98	-	-	-	-	-	-	-	-	A	V
		2483.5	43.05	-30.95	74	42.05	27.26	7.01	33.27	118	195	P	V
		2483.5	18.26	-35.74	54	-	-	-	-	-	-	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



15C 2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

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)
BT CH 00 2402MHz		4804	43.02	-30.98	74	56.84	31.03	10.53	55.38	100	0	P	H
													H
													H
													H
		4804	45.11	-28.89	74	58.93	31.03	10.53	55.38	100	0	P	V
													V
													V
													V
BT CH 39 2441MHz		4882	45.23	-28.77	74	58.85	31.13	10.67	55.42	100	0	P	H
		7323	49.87	-24.13	74	55.66	36.15	13.63	55.57	100	0	P	H
													H
													H
		4882	46.89	-27.11	74	60.51	31.13	10.67	55.42	100	0	P	V
		7323	50.26	-23.74	74	56.05	36.15	13.63	55.57	100	0	P	V
													V
													V
BT CH 78 2480MHz		4960	46.02	-27.98	74	59.48	31.25	10.77	55.48	100	0	P	H
		7440	49.32	-24.68	74	54.6	36.47	13.7	55.45	100	0	P	H
													H
													H
		4960	46.8	-27.2	74	60.26	31.25	10.77	55.48	100	0	P	V
		7440	50.52	-23.48	74	55.8	36.47	13.7	55.45	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15C Emission below 1GHz

2.4GHz BT (LF)

[illegible]

**Note symbol**

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency per 15.209(c).
!	Test result is over limit line.
P/A	Peak or Average
H/V	Horizontal or Vertical



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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		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”.