



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)	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 CH00 2402MHz		2374.87	40.61	-33.39	74	40.38	26.99	6.62	33.38	100	142	P	H
		2374.87	15.82	-38.18	54	-	-	-	-	-	-	A	H
	*	2402.04	91.98	-	-	91.73	27.03	6.57	33.35	100	142	P	H
		2402.04	67.19	-	-	-	-	-	-	-	-	A	H
													H
													H
		2357.97	40.75	-33.25	74	40.59	26.94	6.62	33.4	100	269	P	V
		2357.97	15.96	-38.04	54	-	-	-	-	-	-	A	V
	*	2402.04	96.37	-	-	96.12	27.03	6.57	33.35	100	269	P	V
		2402.04	71.58	-	-	-	-	-	-	-	-	A	V
													V
													V
BT CH 39 2441MHz		2378.59	40.8	-33.2	74	40.57	26.99	6.62	33.38	114	335	P	H
		2378.59	16.01	-37.99	54	-	-	-	-	-	-	A	H
	*	2441.1	98.77	-	-	98.12	27.17	6.79	33.31	114	335	P	H
		2441.1	73.98	-	-	-	-	-	-	-	-	A	H
		2484.23	41.49	-32.51	74	40.49	27.26	7.01	33.27	114	335	P	H
		2484.23	16.7	-37.3	54	-	-	-	-	-	-	A	H
		2352.37	41.14	-32.86	74	40.94	26.94	6.66	33.4	168	360	P	V
		2352.37	16.35	-37.65	54	-	-	-	-	-	-	A	V
	*	2440.72	93.29	-	-	92.64	27.17	6.79	33.31	168	360	P	V
		2440.72	68.5	-	-	-	-	-	-	-	-	A	V
		2496.39	42.2	-31.8	74	41.15	27.3	7.01	33.26	168	360	P	V
		2496.39	17.41	-36.59	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz	*	2480.05	94.57	-	-	93.57	27.26	7.01	33.27	113	336	P	H
		2480.05	69.78	-	-	-	-	-	-	-	-	A	H
		2495.94	41.22	-32.78	74	40.17	27.3	7.01	33.26	113	336	P	H
		2495.94	16.43	-37.57	54	-	-	-	-	-	-	A	H
													H
													H
	*	2479.98	90.63	-	-	89.63	27.26	7.01	33.27	154	0	P	V
		2479.98	65.84	-	-	-	-	-	-	-	-	A	V
		2491.95	42.3	-31.7	74	41.25	27.3	7.01	33.26	154	0	P	V
		2491.95	17.51	-36.49	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		4803	43.8	-30.2	74	57.62	31.03	10.53	55.38	100	0	P	H
													H
													H
													H
		4803	43.33	-30.67	74	57.15	31.03	10.53	55.38	100	0	P	V
													V
													V
													V
BT CH 39 2441MHz		4881	44.19	-29.81	74	57.81	31.13	10.67	55.42	100	0	P	H
		7323	48.2	-25.8	74	53.99	36.15	13.63	55.57	100	0	P	H
													H
													H
		4881	43.99	-30.01	74	57.61	31.13	10.67	55.42	100	0	P	V
		7323	48.29	-25.71	74	54.08	36.15	13.63	55.57	100	0	P	V
													V
													V
BT CH 78 2480MHz		4959	43.95	-30.05	74	57.41	31.25	10.77	55.48	200	0	P	H
		7440	50.25	-23.75	74	55.53	36.47	13.7	55.45	100	0	P	H
													H
													H
		4959	44.31	-29.69	74	57.77	31.25	10.77	55.48	200	0	P	V
		7440	48.7	-25.3	74	53.98	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”.