Appendix A. Radiated Spurious Emission

Test Engineer :	Citta Ke and Ricky Su	Temperature :	23~25°C
		Relative Humidity :	55~60%

11g_Tx_Ch01_11ac(40)_Tx_Ch62

(Harmonic @ 3m)

WIFI Ant. 1+2+3+4	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)
11g_Tx_Ch01_11ac(40)_Tx_Ch62		2898	47.57	-26.43	74	45.21	28.26	8.22	34.12	100	128	P	H
		2898	39	-15	54	36.64	28.26	8.22	34.12	100	128	A	H
		7722	56.94	-17.06	74	40.42	36.82	14.59	34.89	156	21	P	H
		7722	49.31	-4.69	54	32.79	36.82	14.59	34.89	156	21	A	H
												P	H
												A	H
		2898	47.99	-26.01	74	45.63	28.26	8.22	34.12	122	201	P	V
		2898	38.9	-15.1	54	36.54	28.26	8.22	34.12	122	201	A	V
		7722	56.97	-17.03	74	40.45	36.82	14.59	34.89	269	310	P	V
		7722	49.44	-4.56	54	32.92	36.82	14.59	34.89	269	310	A	V
												P	V
												A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

11g_Tx_Ch01_11ac(40)_Tx_Ch62

Adapter mode (LF)

WIFI Ant. 1+2+3+4	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)
11g_Tx_Ch01_11ac(40)_Tx_Ch62		45.66	36.52	-3.48	40	49.08	17.07	0.78	30.41	-	-	P	H
		97.23	40.49	-3.01	43.5	54.2	15.64	1.06	30.41	200	120	P	H
		133.41	36.25	-7.25	43.5	47.27	17.92	1.43	30.37	-	-	P	H
		354.6	28.24	-17.76	46	34.76	21.12	2.44	30.08	-	-	P	H
		374.9	35.34	-10.66	46	41.35	21.61	2.44	30.06	-	-	P	H
		624.8	29.92	-16.08	46	30.24	25.69	3.61	29.62	-	-	P	H
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													H
													H
		44.04	35.68	-4.32	40	47.22	18.06	0.78	30.38	133	12	P	V
		98.31	29.21	-14.29	43.5	42.8	15.76	1.06	30.41	-	-	P	V
		212.52	33.49	-10.01	43.5	45.99	16.08	1.7	30.28	-	-	P	V
		310.5	25.59	-20.41	46	33.57	19.82	2.34	30.14	-	-	P	V
		441.4	26.8	-19.2	46	30.91	22.94	2.89	29.94	-	-	P	V
		808.9	31.62	-14.38	46	28.93	27.94	4.14	29.39	-	-	P	V
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													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

11g_Tx_Ch01_11a_Tx_Ch36

POE mode (LF)

WIFI Ant. 1+2+3+4	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)
11g_Tx_Ch01_11ac(40)_Tx_Ch62		71.58	34.22	-5.78	40	51.05	12.55	1.06	30.44	144	63	P	H
		125.58	31.19	-12.31	43.5	42.3	17.84	1.43	30.38	-	-	P	H
		209.01	29.26	-14.24	43.5	41.78	16.07	1.7	30.29	-	-	P	H
		303.5	25.28	-20.72	46	33.47	19.62	2.34	30.15	-	-	P	H
		624.8	30.97	-15.03	46	31.29	25.69	3.61	29.62	-	-	P	H
		943.3	35.18	-10.82	46	29.41	30.14	4.75	29.12	-	-	P	H
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													H
													H
		48.36	34.23	-5.77	40	48.14	15.77	0.78	30.46	-	-	P	V
		71.04	33.09	-6.91	40	50.04	12.43	1.06	30.44	-	-	P	V
		207.93	39	-4.5	43.5	51.57	16.02	1.7	30.29	160	291	P	V
		302.8	34.98	-11.02	46	43.2	19.59	2.34	30.15	-	-	P	V
		451.2	30.91	-15.09	46	34.82	23.12	2.89	29.92	-	-	P	V
		740.3	31.31	-14.69	46	29.45	27.36	3.97	29.47	-	-	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".