Appendix A. Radiated Spurious Emission

Test Engineer :	Luke Chang	**Temperature :**	18~20°C
		Relative Humidity :	41~42%

15C 2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2389.2	52.41	-21.59	74	48.95	31.94	6.17	34.65	170	40	P	H
		2378.31	39.56	-14.44	54	36.11	31.93	6.17	34.65	170	40	A	H
	*	2412	102.39	-	-	98.87	31.95	6.21	34.64	170	40	P	H
	*	2412	97.21	-	-	93.69	31.95	6.21	34.64	170	40	A	H
													H
													H
		2378.67	47.4	-26.6	74	43.95	31.93	6.17	34.65	181	331	P	V
		2378.31	35.36	-18.64	54	31.91	31.93	6.17	34.65	181	331	A	V
	*	2412	96.72	-	-	93.2	31.95	6.21	34.64	181	331	P	V
	*	2412	91.45	-	-	87.93	31.95	6.21	34.64	181	331	A	V
													V
													V
802.11b CH 06 2437MHz		2360.58	48.41	-25.59	74	45	31.92	6.14	34.65	311	42	P	H
		2385.78	36.64	-17.36	54	33.18	31.94	6.17	34.65	311	42	A	H
	*	2437	104.41	-	-	100.84	31.97	6.24	34.64	311	42	P	H
	*	2437	99.31	-	-	95.74	31.97	6.24	34.64	311	42	A	H
		2484.08	51.39	-22.61	74	47.73	31.99	6.3	34.63	311	42	P	H
		2484.04	40.66	-13.34	54	37	31.99	6.3	34.63	311	42	A	H
		2378.94	46.74	-27.26	74	43.29	31.93	6.17	34.65	134	119	P	V
		2389.65	33.95	-20.05	54	30.49	31.94	6.17	34.65	134	119	A	V
	*	2437	97.65	-	-	94.08	31.97	6.24	34.64	134	119	P	V
	*	2437	91.96	-	-	88.39	31.97	6.24	34.64	134	119	A	V
		2490.08	47.94	-26.06	74	44.27	32	6.3	34.63	134	119	P	V
		2483.88	35.86	-18.14	54	32.2	31.99	6.3	34.63	134	119	A	V

802.11b CH 11 2462MHz	*	2462	104.24	-	-	100.63	31.98	6.27	34.64	157	75	P	H
	*	2462	98.79	-	-	95.18	31.98	6.27	34.64	157	75	A	H
		2484.84	52.47	-21.53	74	48.81	31.99	6.3	34.63	157	75	P	H
		2488.72	41.61	-12.39	54	37.94	32	6.3	34.63	157	75	A	H
													H
													H
	*	2462	99.42	-	-	95.81	31.98	6.27	34.64	172	114	P	V
	*	2462	94.42	-	-	90.81	31.98	6.27	34.64	172	114	A	V
		2496.12	48.9	-25.1	74	45.19	32	6.34	34.63	172	114	P	V
		2488.72	35.4	-18.6	54	31.73	32	6.3	34.63	172	114	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

WIFI 802.11b (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		4824	42.87	-31.13	74	60.72	34.36	8.6	60.81	100	0	P	H
													H
													H
													H
		4824	44.12	-29.88	74	61.97	34.36	8.6	60.81	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	42.35	-31.65	74	59.87	34.4	8.77	60.69	100	0	P	H
		7311	45.23	-28.77	74	58.07	35.74	11.94	60.52	100	0	P	H
													H
													H
		4874	43.63	-30.37	74	61.15	34.4	8.77	60.69	100	0	P	V
		7311	49.29	-24.71	74	62.13	35.74	11.94	60.52	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	42.73	-31.27	74	59.92	34.44	8.94	60.57	100	0	P	H
		7386	44.93	-29.07	74	57.79	35.72	11.98	60.56	100	0	P	H
													H
													H
		4924	44.33	-29.67	74	61.52	34.44	8.94	60.57	100	0	P	V
		7386	46.41	-27.59	74	59.27	35.72	11.98	60.56	100	0	P	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

WIFI 802.11g (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 01 2412MHz		2390	61.77	-12.23	74	58.26	31.94	6.21	34.64	311	76	P	H
		2390	43.92	-10.08	54	40.41	31.94	6.21	34.64	311	76	A	H
	*	2412	102.78	-	-	99.26	31.95	6.21	34.64	311	76	P	H
	*	2412	91.08	-	-	87.56	31.95	6.21	34.64	311	76	A	H
													H
													H
		2389.47	51.77	-22.23	74	48.31	31.94	6.17	34.65	154	352	P	V
		2390.01	36.13	-17.87	54	32.62	31.94	6.21	34.64	154	352	A	V
	*	2412	97.04	-	-	93.52	31.95	6.21	34.64	154	352	P	V
	*	2412	86	-	-	82.48	31.95	6.21	34.64	154	352	A	V
													V
													V
802.11g CH 06 2437MHz		2389.83	56.35	-17.65	74	52.84	31.94	6.21	34.64	312	44	P	H
		2390	40.91	-13.09	54	37.4	31.94	6.21	34.64	312	44	A	H
	*	2437	107.51	-	-	103.94	31.97	6.24	34.64	312	44	P	H
	*	2437	95.95	-	-	92.38	31.97	6.24	34.64	312	44	A	H
		2491.96	57.11	-16.89	74	53.4	32	6.34	34.63	312	44	P	H
		2483.6	42.67	-11.33	54	39.01	31.99	6.3	34.63	312	44	A	H
		2389.74	49.87	-24.13	74	46.41	31.94	6.17	34.65	146	110	P	V
		2390	36.85	-17.15	54	33.34	31.94	6.21	34.64	146	110	A	V
	*	2437	102.9	-	-	99.33	31.97	6.24	34.64	146	110	P	V
	*	2437	91.05	-	-	87.48	31.97	6.24	34.64	146	110	A	V
		2485.16	49.61	-24.39	74	45.95	31.99	6.3	34.63	146	110	P	V
		2483.52	36.63	-17.37	54	32.97	31.99	6.3	34.63	146	110	A	V

802.11g CH 11 2462MHz	*	2462	106.3	-	-	102.69	31.98	6.27	34.64	186	72	P	H
	*	2462	94.82	-	-	91.21	31.98	6.27	34.64	186	72	A	H
		2483.6	67.76	-6.24	74	64.1	31.99	6.3	34.63	186	72	P	H
		2483.52	48.13	-5.87	54	44.47	31.99	6.3	34.63	186	72	A	H
													H
													H
	*	2462	100.92	-	-	97.31	31.98	6.27	34.64	325	145	P	V
	*	2462	89.85	-	-	86.24	31.98	6.27	34.64	325	145	A	V
		2483.68	65.32	-8.68	74	61.66	31.99	6.3	34.63	325	145	P	V
		2483.52	43.91	-10.09	54	40.25	31.99	6.3	34.63	325	145	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

WIFI 802.11g (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 01 2412MHz		4824	39.78	-34.22	74	57.63	34.36	8.6	60.81	100	0	P	H
													H
													H
													H
		4824	40.03	-33.97	74	57.88	34.36	8.6	60.81	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	38.86	-35.14	74	56.38	34.4	8.77	60.69	100	0	P	H
		7311	46.58	-27.42	74	59.42	35.74	11.94	60.52	100	0	P	H
													H
													H
		4874	40.06	-33.94	74	57.58	34.4	8.77	60.69	100	0	P	V
		7311	51.47	-22.53	74	64.31	35.74	11.94	60.52	169	93	P	V
		7311	46.28	-7.72	54	59.12	35.74	11.94	60.52	169	93	A	V
													V
802.11g CH 11 2462MHz		4924	39.71	-34.29	74	56.9	34.44	8.94	60.57	100	0	P	H
		7386	44.62	-29.38	74	57.48	35.72	11.98	60.56	100	0	P	H
													H
													H
		4924	40	-34	74	57.19	34.44	8.94	60.57	100	0	P	V
		7386	46.45	-27.55	74	59.31	35.72	11.98	60.56	100	0	P	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

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		2390	66.62	-7.38	74	63.11	31.94	6.21	34.64	347	40	P	H
		2390	46.89	-7.11	54	43.38	31.94	6.21	34.64	347	40	A	H
	*	2412	102.91	-	-	99.39	31.95	6.21	34.64	347	40	P	H
	*	2412	91.5	-	-	87.98	31.95	6.21	34.64	347	40	A	H
802.11n													H
HT20													H
CH 01		2389.74	60.75	-13.25	74	57.29	31.94	6.17	34.65	148	333	P	V
2412MHz		2390	43.08	-10.92	54	39.57	31.94	6.21	34.64	148	333	A	V
	*	2412	97.39	-	-	93.87	31.95	6.21	34.64	148	333	P	V
	*	2412	86.06	-	-	82.54	31.95	6.21	34.64	148	333	A	V
													V
													V
		2388.57	58.09	-15.91	74	54.63	31.94	6.17	34.65	235	28	P	H
		2390	43.03	-10.97	54	39.52	31.94	6.21	34.64	235	28	A	H
	*	2437	108.41	-	-	104.84	31.97	6.24	34.64	235	28	P	H
	*	2437	96.8	-	-	93.23	31.97	6.24	34.64	235	28	A	H
802.11n		2486.16	55.59	-18.41	74	51.93	31.99	6.3	34.63	235	28	P	H
HT20		2483.52	42.28	-11.72	54	38.62	31.99	6.3	34.63	235	28	A	H
CH 06		2389.56	48.96	-25.04	74	45.5	31.94	6.17	34.65	136	120	P	V
2437MHz		2390	35.96	-18.04	54	32.45	31.94	6.21	34.64	136	120	A	V
	*	2437	101.17	-	-	97.6	31.97	6.24	34.64	136	120	P	V
	*	2437	90	-	-	86.43	31.97	6.24	34.64	136	120	A	V
		2484.6	52.09	-21.91	74	48.43	31.99	6.3	34.63	136	120	P	V
		2483.56	38.42	-15.58	54	34.76	31.99	6.3	34.63	136	120	A	V

	*	2462	107.03	-	-	103.42	31.98	6.27	34.64	204	4	P	H
	*	2462	95.46	-	-	91.85	31.98	6.27	34.64	204	4	A	H
		2484.92	72.75	-1.25	74	69.09	31.99	6.3	34.63	204	4	P	H
		2483.52	52.27	-1.73	54	48.61	31.99	6.3	34.63	204	4	P	H
802.11n													H
HT20													H
CH 11	*	2465.381	100.76	-	-	97.15	31.98	6.27	34.64	153	331	P	V
2462MHz	*	2466.132	89.4	-	-	85.79	31.98	6.27	34.64	153	331	A	V
		2483.6	64.26	-9.74	74	60.6	31.99	6.3	34.63	153	331	P	V
		2483.52	43.66	-10.34	54	40	31.99	6.3	34.63	153	331	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

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		4824	39.36	-34.64	74	57.21	34.36	8.6	60.81	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	39.45	-34.55	74	57.3	34.36	8.6	60.81	100	0	P	V
2412MHz													V
													V
													V
		4874	39.06	-34.94	74	56.58	34.4	8.77	60.69	100	0	P	H
		7311	47.38	-26.62	74	60.22	35.74	11.94	60.52	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	39.21	-34.79	74	56.73	34.4	8.77	60.69	100	0	P	V
2437MHz		7311	52.44	-21.56	74	65.28	35.74	11.94	60.52	153	67	P	V
		7311	47.33	-6.67	54	60.17	35.74	11.94	60.52	153	67	A	V
													V
		4924	40.35	-33.65	74	57.54	34.44	8.94	60.57	100	0	P	H
		7386	45.92	-28.08	74	58.78	35.72	11.98	60.56	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	39.74	-34.26	74	56.93	34.44	8.94	60.57	100	0	P	V
2462MHz		7386	47.07	-26.93	74	59.93	35.72	11.98	60.56	100	0	P	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

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		2387.85	60.94	-13.06	74	57.48	31.94	6.17	34.65	233	27	P	H
		2389.92	47.83	-6.17	54	44.32	31.94	6.21	34.64	233	27	A	H
	*	2422	100.01	-	-	96.45	31.96	6.24	34.64	233	27	P	H
	*	2422	90.39	-	-	86.83	31.96	6.24	34.64	233	27	A	H
802.11n		2489.68	50.42	-23.58	74	46.75	32	6.3	34.63	233	27	P	H
HT40		2492.24	38.14	-15.86	54	34.43	32	6.34	34.63	233	27	A	H
CH 03		2390.01	55.48	-18.52	74	51.97	31.94	6.21	34.64	151	99	P	V
2422MHz		2389.83	43.21	-10.79	54	39.7	31.94	6.21	34.64	151	99	A	V
	*	2422	92.18	-	-	88.62	31.96	6.24	34.64	151	99	P	V
	*	2422	82.45	-	-	78.89	31.96	6.24	34.64	151	99	A	V
		2493.2	46.84	-27.16	74	43.13	32	6.34	34.63	151	99	P	V
		2496.12	34.74	-19.26	54	31.03	32	6.34	34.63	151	99	A	V
		2389.83	67.84	-6.16	74	64.33	31.94	6.21	34.64	211	27	P	H
		2389.74	51.16	-2.84	54	47.7	31.94	6.17	34.65	211	27	A	H
	*	2437	105.51	-	-	101.94	31.97	6.24	34.64	211	27	P	H
	*	2437	95.37	-	-	91.8	31.97	6.24	34.64	211	27	A	H
802.11n		2484.32	65.68	-8.32	74	62.02	31.99	6.3	34.63	211	27	P	H
HT40		2483.64	50.39	-3.61	54	46.73	31.99	6.3	34.63	211	27	A	H
CH 06		2389.74	57.23	-16.77	74	53.77	31.94	6.17	34.65	176	207	P	V
2437MHz		2390	43.78	-10.22	54	40.27	31.94	6.21	34.64	176	207	A	V
	*	2437	98.83	-	-	95.26	31.97	6.24	34.64	176	207	P	V
	*	2437	88.86	-	-	85.29	31.97	6.24	34.64	176	207	A	V
		2484.48	57.44	-16.56	74	53.78	31.99	6.3	34.63	176	207	P	V
		2483.68	42.83	-11.17	54	39.17	31.99	6.3	34.63	176	207	A	V

802.11n HT40 CH 09 2452MHz		2389.47	50.76	-23.24	74	47.3	31.94	6.17	34.65	334	53	P	H
		2389.38	39.26	-14.74	54	35.8	31.94	6.17	34.65	334	53	A	H
	*	2452	103.4	-	-	99.8	31.97	6.27	34.64	334	53	P	H
	*	2452	93.39	-	-	89.79	31.97	6.27	34.64	334	53	A	H
		2484.2	66.69	-7.31	74	63.03	31.99	6.3	34.63	334	53	P	H
		2483.52	52.52	-1.48	54	48.86	31.99	6.3	34.63	334	53	A	H
		2389.65	48.16	-25.84	74	44.7	31.94	6.17	34.65	165	336	P	V
		2389.56	36.23	-17.77	54	32.77	31.94	6.17	34.65	165	336	A	V
	*	2452	97.5	-	-	93.9	31.97	6.27	34.64	165	336	P	V
	*	2452	87.66	-	-	84.06	31.97	6.27	34.64	165	336	A	V
		2487.4	56.79	-17.21	74	53.13	31.99	6.3	34.63	165	336	P	V
		2483.52	43.96	-10.04	54	40.3	31.99	6.3	34.63	165	336	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15C 2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		4844	38.99	-35.01	74	56.69	34.38	8.69	60.77	100	0	P	H
		7266	41.34	-32.66	74	54.18	35.74	11.93	60.51	100	0	P	H
802.11n													H
HT40													H
CH 03		4844	38.74	-35.26	74	56.44	34.38	8.69	60.77	100	0	P	V
2422MHz		7266	42.35	-31.65	74	55.19	35.74	11.93	60.51	100	0	P	V
													V
													V
		4874	39.02	-34.98	74	56.54	34.4	8.77	60.69	100	0	P	H
		7311	46.12	-27.88	74	58.96	35.74	11.94	60.52	100	0	P	H
802.11n													H
HT40													H
CH 06		4874	38.25	-35.75	74	55.77	34.4	8.77	60.69	100	0	P	V
2437MHz		7311	49.21	-24.79	74	62.05	35.74	11.94	60.52	100	0	P	V
													V
													V
		4904	37.99	-36.01	74	55.32	34.43	8.85	60.61	100	0	P	H
		7356	42.44	-31.56	74	55.28	35.73	11.97	60.54	100	0	P	H
802.11n													H
HT40													H
CH 09		4904	38.51	-35.49	74	55.84	34.43	8.85	60.61	100	0	P	V
2452MHz		7356	42.79	-31.21	74	55.63	35.73	11.97	60.54	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 WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		60.24	28.26	-11.74	40	52.66	6.5	0.87	31.77			P	H
		184.44	36.81	-6.69	43.5	58.04	9.06	1.46	31.75			P	H
		260.04	40.69	-5.31	46	56.93	13.7	1.79	31.73	233	57	P	H
		312.6	38.13	-7.87	46	54.56	13.36	1.94	31.73			P	H
		410.6	39.42	-6.58	46	52.83	16.2	2.22	31.83			P	H
		800.5	35.33	-10.67	46	44.32	19.9	3.06	31.95			P	H
													H
													H
													H
													H
2.4GHz													H
802.11n													H
HT20		30.54	36.3	-3.7	40	49.43	18.02	0.65	31.8	100	96	P	V
LF		61.05	32.92	-7.08	40	57.41	6.4	0.88	31.77			P	V
		125.04	30.51	-12.99	43.5	49.01	12	1.25	31.75			P	V
		455.4	39.54	-6.46	46	52.18	16.92	2.32	31.88			P	V
		520.5	33.47	-12.53	46	45.5	17.42	2.51	31.96			P	V
		758.5	32.68	-13.32	46	41.89	19.72	3.05	31.98			P	V
													V
													V
													V
													V
													V
													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 per 15.209(c).
!	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".

15C 2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

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)
		2388.39	62.15	-11.85	74	58.69	31.94	6.17	34.65	120	242	P	H
		2389.92	46.5	-7.5	54	42.99	31.94	6.21	34.64	120	242	A	H
	*	2412	103.01	-	-	99.49	31.95	6.21	34.64	120	242	P	H
	*	2412	92.47	-	-	88.95	31.95	6.21	34.64	120	242	A	H
802.11n													H
HT20													H
CH 01		2390	61.16	-12.84	74	57.65	31.94	6.21	34.64	161	330	P	V
2412MHz		2390	43.9	-10.1	54	40.39	31.94	6.21	34.64	161	330	A	V
	*	2412	101.07	-	-	97.55	31.95	6.21	34.64	161	330	P	V
	*	2412	91.03	-	-	87.51	31.95	6.21	34.64	161	330	A	V
													V
													V
		2388.57	53.18	-20.82	74	49.72	31.94	6.17	34.65	186	244	P	H
		2389.29	41.18	-12.82	54	37.72	31.94	6.17	34.65	186	244	A	H
	*	2437	104.14	-	-	100.57	31.97	6.24	34.64	186	244	P	H
	*	2437	93.59	-	-	90.02	31.97	6.24	34.64	186	244	A	H
802.11n		2494.12	50.84	-23.16	74	47.13	32	6.34	34.63	186	244	P	H
HT20		2484.08	38.45	-15.55	54	34.79	31.99	6.3	34.63	186	244	A	H
CH 06		2389.74	50.69	-23.31	74	47.23	31.94	6.17	34.65	105	31	P	V
2437MHz		2362.83	38.76	-15.24	54	35.35	31.92	6.14	34.65	105	31	A	V
	*	2437	102.51	-	-	98.94	31.97	6.24	34.64	105	31	P	V
	*	2437	93.02	-	-	89.45	31.97	6.24	34.64	105	31	A	V
		2496.36	49.84	-24.16	74	46.13	32	6.34	34.63	105	31	P	V
		2498.48	37.79	-16.21	54	34.08	32	6.34	34.63	105	31	A	V

	*	2462	102.15	-	-	98.54	31.98	6.27	34.64	196	242	P	H
	*	2462	92.24	-	-	88.63	31.98	6.27	34.64	196	242	A	H
		2484.48	63.54	-10.46	74	59.88	31.99	6.3	34.63	196	242	P	H
		2483.52	44.2	-9.8	54	40.54	31.99	6.3	34.63	196	242	A	H
802.11n													H
HT20													H
CH 11	*	2462	100.37	-	-	96.76	31.98	6.27	34.64	130	331	P	V
2462MHz	*	2462	89.76	-	-	86.15	31.98	6.27	34.64	130	331	A	V
		2484.16	58.56	-15.44	74	54.9	31.99	6.3	34.63	130	331	P	V
		2484.4	41.9	-12.1	54	38.24	31.99	6.3	34.63	130	331	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

WIFI 802.11n HT20 (Harmonic @ 3m)

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)
		4824	38.67	-35.33	74	56.52	34.36	8.6	60.81	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	39.41	-34.59	74	57.26	34.36	8.6	60.81	100	0	P	V
2412MHz													V
													V
													V
		4874	38.4	-35.6	74	55.92	34.4	8.77	60.69	100	0	P	H
		7311	41.82	-32.18	74	54.66	35.74	11.94	60.52	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	38.16	-35.84	74	55.68	34.4	8.77	60.69	100	0	P	V
2437MHz		7311	47.63	-26.37	74	60.47	35.74	11.94	60.52	100	0	P	V
													V
													V
		4924	39.58	-34.42	74	56.77	34.44	8.94	60.57	100	0	P	H
		7386	44.35	-29.65	74	57.21	35.72	11.98	60.56	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	40.21	-33.79	74	57.4	34.44	8.94	60.57	100	0	P	V
2462MHz		7386	46.82	-27.18	74	59.68	35.72	11.98	60.56	100	0	P	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

WIFI 802.11n HT40 (Band Edge @ 3m)

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)
		2389.38	52.79	-21.21	74	49.33	31.94	6.17	34.65	144	244	P	H
		2389.92	40.78	-13.22	54	37.27	31.94	6.21	34.64	144	244	A	H
	*	2422	97.32	-	-	93.76	31.96	6.24	34.64	144	244	P	H
	*	2422	86.3	-	-	82.74	31.96	6.24	34.64	144	244	A	H
802.11n		2487.4	47.55	-26.45	74	43.89	31.99	6.3	34.63	144	244	P	H
HT40		2483.52	36.14	-17.86	54	32.48	31.99	6.3	34.63	144	244	A	H
CH 03		2389.74	50.17	-23.83	74	46.71	31.94	6.17	34.65	163	330	P	V
2422MHz		2389.65	38.96	-15.04	54	35.5	31.94	6.17	34.65	163	330	A	V
	*	2422	96.26	-	-	92.7	31.96	6.24	34.64	163	330	P	V
	*	2422	85.81	-	-	82.25	31.96	6.24	34.64	163	330	A	V
		2492.44	47.93	-26.07	74	44.22	32	6.34	34.63	163	330	P	V
		2484.72	35.73	-18.27	54	32.07	31.99	6.3	34.63	163	330	A	V
		2389.83	53.56	-20.44	74	50.05	31.94	6.21	34.64	162	241	P	H
		2389.56	41.43	-12.57	54	37.97	31.94	6.17	34.65	162	241	A	H
	*	2437	101.42	-	-	97.85	31.97	6.24	34.64	162	241	P	H
	*	2437	90.81	-	-	87.24	31.97	6.24	34.64	162	241	A	H
802.11n		2484.48	55.76	-18.24	74	52.1	31.99	6.3	34.63	162	241	P	H
HT40		2483.56	38.92	-15.08	54	35.26	31.99	6.3	34.63	162	241	A	H
CH 06		2387.85	54.65	-19.35	74	51.19	31.94	6.17	34.65	100	327	P	V
2437MHz		2390	41.28	-12.72	54	37.77	31.94	6.21	34.64	100	327	A	V
	*	2437	99.96	-	-	96.39	31.97	6.24	34.64	100	327	P	V
	*	2437	89.56	-	-	85.99	31.97	6.24	34.64	100	327	A	V
		2486.6	52.03	-21.97	74	48.37	31.99	6.3	34.63	100	327	P	V
		2483.56	38.29	-15.71	54	34.63	31.99	6.3	34.63	100	327	A	V

802.11n HT40 CH 09 2452MHz		2386.32	51.76	-22.24	74	48.3	31.94	6.17	34.65	157	240	P	H
		2389.38	39.85	-14.15	54	36.39	31.94	6.17	34.65	157	240	A	H
	*	2452	100.63	-	-	97.03	31.97	6.27	34.64	157	240	P	H
	*	2452	89.5	-	-	85.9	31.97	6.27	34.64	157	240	A	H
		2484.72	56.71	-17.29	74	53.05	31.99	6.3	34.63	157	240	P	H
		2483.72	43.93	-10.07	54	40.27	31.99	6.3	34.63	157	240	A	H
		2384.07	50.86	-23.14	74	47.41	31.93	6.17	34.65	130	330	P	V
		2383.53	38.98	-15.02	54	35.53	31.93	6.17	34.65	130	330	A	V
	*	2452	98.98	-	-	95.38	31.97	6.27	34.64	130	330	P	V
	*	2452	88.59	-	-	84.99	31.97	6.27	34.64	130	330	A	V
		2484.6	56.23	-17.77	74	52.57	31.99	6.3	34.63	130	330	P	V
		2483.6	44.03	-9.97	54	40.37	31.99	6.3	34.63	130	330	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15C 2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

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)
		4844	39.04	-34.96	74	56.74	34.38	8.69	60.77	100	0	P	H
		7266	41.93	-32.07	74	54.77	35.74	11.93	60.51	100	0	P	H
802.11n													H
HT40													H
CH 03		4844	38.38	-35.62	74	56.08	34.38	8.69	60.77	100	0	P	V
2422MHz		7266	46.16	-27.84	74	59	35.74	11.93	60.51	100	0	P	V
													V
													V
		4874	38.11	-35.89	74	55.63	34.4	8.77	60.69	100	0	P	H
		7311	44.62	-29.38	74	57.46	35.74	11.94	60.52	100	0	P	H
802.11n													H
HT40													H
CH 06		4874	38.79	-35.21	74	56.31	34.4	8.77	60.69	100	0	P	V
2437MHz		7311	47.96	-26.04	74	60.8	35.74	11.94	60.52	100	0	P	V
													V
													V
		4904	37.97	-36.03	74	55.3	34.43	8.85	60.61	100	0	P	H
		7356	41.95	-32.05	74	54.79	35.73	11.97	60.54	100	0	P	H
802.11n													H
HT40													H
CH 09		4904	38.98	-35.02	74	56.31	34.43	8.85	60.61	100	0	P	V
2452MHz		7356	43.74	-30.26	74	56.58	35.73	11.97	60.54	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average 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 per 15.209(c).
!	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

3. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

3. 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)

4. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

3. 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)

4. 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".