



Appendix B. Radiated Spurious Emission

Test Engineer :	Stan Hsieh, Luke Chang, and Lewis He	Temperature :	22~23°C
		Relative Humidity :	45~47%
Remark:	For radiated emission, all tests were performed with iPod earphone, USB Cable, and Adapter 1		

Band 4 5725~5850MHz

WIFI 802.11a (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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5704.76	56.46	-17.54	74	48.42	32.29	9.39	33.64	166	240	P	H
		5723.64	65.48	-12.82	78.3	57.37	32.31	9.44	33.64	166	240	P	H
		5714.6	45.6	-8.4	54	37.56	32.29	9.39	33.64	166	240	A	H
	*	5743	99.07	-	-	90.94	32.34	9.44	33.65	166	240	P	H
	*	5743	92.78	-	-	84.65	32.34	9.44	33.65	166	240	A	H
													H
													H
													H
		5714.52	67.57	-6.43	74	59.53	32.29	9.39	33.64	177	116	P	V
		5721.72	75.25	-3.05	78.3	67.14	32.31	9.44	33.64	177	116	P	V
		5714.92	53.64	-0.36	54	45.6	32.29	9.39	33.64	177	116	A	V
	*	5743	106.66	-	-	98.53	32.34	9.44	33.65	177	116	P	V
	*	5743	101.15	-	-	93.02	32.34	9.44	33.65	177	116	A	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 157 5785MHz		5695.88	49.42	-24.58	74	41.39	32.27	9.39	33.63	168	0	P	H
		5723.4	50.31	-27.99	78.3	42.2	32.31	9.44	33.64	168	0	P	H
		5713.48	40.86	-13.14	54	32.82	32.29	9.39	33.64	168	0	A	H
	*	5786	100.44	-	-	92.2	32.41	9.49	33.66	168	0	P	H
	*	5786	93.85	-	-	85.61	32.41	9.49	33.66	168	0	A	H
		5857.2	48.59	-29.71	78.3	40.22	32.51	9.54	33.68	168	0	P	H
		5866.48	49.64	-24.36	74	41.28	32.51	9.54	33.69	168	0	P	H
		5865.36	40.8	-13.2	54	32.44	32.51	9.54	33.69	168	0	A	H
		5704.2	51.62	-22.38	74	43.57	32.29	9.39	33.63	162	144	P	V
		5719	53.68	-24.62	78.3	45.62	32.31	9.39	33.64	162	144	P	V
		5709.08	43.22	-10.78	54	35.18	32.29	9.39	33.64	162	144	A	V
	*	5786	106.36	-	-	98.12	32.41	9.49	33.66	162	144	P	V
	*	5786	99.91	-	-	91.67	32.41	9.49	33.66	162	144	A	V
		5854.16	49.79	-28.51	78.3	41.42	32.51	9.54	33.68	162	144	P	V
		5862.56	51	-23	74	42.64	32.51	9.54	33.69	162	144	P	V
		5860.32	41.91	-12.09	54	33.55	32.51	9.54	33.69	162	144	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 165 5825MHz	*	5824	102.13	-	-	93.82	32.46	9.52	33.67	149	0	P	H
	*	5824	95.42	-	-	87.11	32.46	9.52	33.67	149	0	A	H
		5850.24	65.49	-12.81	78.3	57.15	32.48	9.54	33.68	149	0	P	H
		5863.44	60.64	-13.36	74	52.28	32.51	9.54	33.69	149	0	P	H
		5860.48	46.8	-7.2	54	38.44	32.51	9.54	33.69	149	0	A	H
													H
													H
													H
	*	5827	104.67	-	-	96.36	32.46	9.52	33.67	130	118	P	V
	*	5827	98.1	-	-	89.79	32.46	9.52	33.67	130	118	A	V
		5859.28	63.6	-14.7	78.3	55.24	32.51	9.54	33.69	130	118	P	V
		5860	61.24	-12.76	74	52.88	32.51	9.54	33.69	130	118	P	V
		5861.12	49.59	-4.41	54	41.23	32.51	9.54	33.69	130	118	A	V
													V
													V
													V
													V
													V
Remark - No other spurious found. - All results are PASS against Peak and Average limit line.													



Band 4 5725~5850MHz

WIFI 802.11a (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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		11490	41.46	-32.54	74	44.41	40.01	13.95	56.91	100	0	P	H
		17232	42.13	-31.87	74	41.5	41.41	16.93	57.71	100	0	P	H
													H
													H
		11490	41.63	-32.37	74	44.58	40.01	13.95	56.91	100	0	P	V
		17232	43.03	-30.97	74	42.4	41.41	16.93	57.71	100	0	P	V
													V
													V
802.11a CH 157 5785MHz		11570	41.86	-32.14	74	44.88	39.89	14	56.91	100	0	P	H
		17352	41.77	-32.23	74	41.11	41.67	17	58.01	100	0	P	H
													H
													H
		11570	42.04	-31.96	74	45.06	39.89	14	56.91	100	0	P	V
		17352	42.04	-31.96	74	41.38	41.67	17	58.01	100	0	P	V
													V
													V
802.11a CH 165 5825MHz		11650	42.6	-31.4	74	45.7	39.78	14.05	56.93	100	0	P	H
		17472	40.91	-33.09	74	40.21	41.93	17.08	58.31	100	0	P	H
													H
													H
		11650	42.77	-31.23	74	45.87	39.78	14.05	56.93	100	0	P	V
		17472	41.14	-32.86	74	40.44	41.93	17.08	58.31	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 149 5745MHz		5712.6	57.38	-16.62	74	49.34	32.29	9.39	33.64	155	0	P	H
		5724.92	58.88	-19.42	78.3	50.77	32.31	9.44	33.64	155	0	P	H
		5714.52	44.96	-9.04	54	36.92	32.29	9.39	33.64	155	0	A	H
	*	5745	99.59	-	-	91.46	32.34	9.44	33.65	155	0	P	H
	*	5745	92.67	-	-	84.54	32.34	9.44	33.65	155	0	A	H
													H
													H
													H
		5713.72	57.65	-16.35	74	49.61	32.29	9.39	33.64	135	106	P	V
		5722.36	63.5	-14.8	78.3	55.39	32.31	9.44	33.64	135	106	P	V
		5714.36	48.91	-5.09	54	40.87	32.29	9.39	33.64	135	106	A	V
	*	5745	104.64	-	-	96.51	32.34	9.44	33.65	135	106	P	V
	*	5745	97.54	-	-	89.41	32.34	9.44	33.65	135	106	A	V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 149 5745MHz		11490	42.98	-31.02	74	45.93	40.01	13.95	56.91	100	0	P	H
		17235	44.42	-29.58	74	43.77	41.41	16.95	57.71	100	0	P	H
													H
													H
		11490	42.66	-31.34	74	45.61	40.01	13.95	56.91	100	0	P	V
		17235	43.34	-30.66	74	42.69	41.41	16.95	57.71	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 151 5755MHz		5712.44	60.2	-13.8	74	52.16	32.29	9.39	33.64	150	0	P	H
		5722.36	66.05	-12.25	78.3	57.94	32.31	9.44	33.64	150	0	P	H
		5714.84	50.26	-3.74	54	42.22	32.29	9.39	33.64	150	0	A	H
	*	5755	97.6	-	-	89.45	32.36	9.44	33.65	150	0	P	H
	*	5755	90.28	-	-	82.13	32.36	9.44	33.65	150	0	A	H
		5856.24	48.88	-29.42	78.3	40.51	32.51	9.54	33.68	150	0	P	H
		5878	50.93	-23.07	74	42.55	32.53	9.54	33.69	150	0	P	H
		5864.88	42.09	-11.91	54	33.73	32.51	9.54	33.69	150	0	A	H
		5710.84	64.64	-9.36	74	56.6	32.29	9.39	33.64	146	85	P	V
		5723.16	64.14	-14.16	78.3	56.03	32.31	9.44	33.64	146	85	P	V
		5714.44	53.78	-0.22	54	45.74	32.29	9.39	33.64	146	85	A	V
	*	5755	100.28	-	-	92.13	32.36	9.44	33.65	146	85	P	V
	*	5755	93.81	-	-	85.66	32.36	9.44	33.65	146	85	A	V
		5859.2	50.56	-27.74	78.3	42.2	32.51	9.54	33.69	146	85	P	V
		5864.48	51.17	-22.83	74	42.81	32.51	9.54	33.69	146	85	P	V
		5860.24	42.27	-11.73	54	33.91	32.51	9.54	33.69	146	85	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 151 5755MHz		11510	42.71	-31.29	74	45.66	40	13.95	56.9	100	0	P	H
		17265	42.4	-31.6	74	41.75	41.49	16.95	57.79	100	0	P	H
													H
													H
		11510	44.31	-29.69	74	47.26	40	13.95	56.9	100	0	P	V
		17265	43.22	-30.78	74	42.57	41.49	16.95	57.79	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11a (LF @ 3m)

[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	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		(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”.



Band 4 5725~5850MHz

WIFI 802.11a (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)
802.11a CH 149 5745MHz		5705.72	56.96	-17.04	74	48.92	32.29	9.39	33.64	138	157	P	H
		5724.92	65.72	-12.58	78.3	57.61	32.31	9.44	33.64	138	157	P	H
		5715	46.6	-7.4	54	38.56	32.29	9.39	33.64	138	157	A	H
	*	5747	100.46	-	-	92.33	32.34	9.44	33.65	138	157	P	H
	*	5747	93.19	-	-	85.06	32.34	9.44	33.65	138	157	A	H
													H
													H
													H
		5708.68	58.1	-15.9	74	50.06	32.29	9.39	33.64	107	6	P	V
		5717.32	63.82	-14.48	78.3	55.78	32.29	9.39	33.64	107	6	P	V
		5714.76	46.45	-7.55	54	38.41	32.29	9.39	33.64	107	6	A	V
	*	5747	101.9	-	-	93.77	32.34	9.44	33.65	107	6	P	V
	*	5747	94.37	-	-	86.24	32.34	9.44	33.65	107	6	A	V
													V
													V
													V
Remark - No other spurious found. - All results are PASS against Peak and Average limit line.													



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)
802.11a CH 157 5785MHz		5685.72	49.19	-24.81	74	41.16	32.27	9.39	33.63	134	152	P	H
		5719.8	49.73	-28.57	78.3	41.67	32.31	9.39	33.64	134	152	P	H
		5711.88	41.26	-12.74	54	33.22	32.29	9.39	33.64	134	152	A	H
	*	5786	99.31	-	-	91.07	32.41	9.49	33.66	134	152	P	H
	*	5786	92.91	-	-	84.67	32.41	9.49	33.66	134	152	A	H
		5852.8	49.47	-28.83	78.3	41.13	32.48	9.54	33.68	134	152	P	H
		5860.24	50.86	-23.14	74	42.5	32.51	9.54	33.69	134	152	P	H
		5862	41.67	-12.33	54	33.31	32.51	9.54	33.69	134	152	A	H
		5709	49.37	-24.63	74	41.33	32.29	9.39	33.64	107	360	P	V
		5716.2	48.32	-29.98	78.3	40.28	32.29	9.39	33.64	107	360	P	V
		5711.72	40.19	-13.81	54	32.15	32.29	9.39	33.64	107	360	A	V
	*	5787	97.04	-	-	88.8	32.41	9.49	33.66	107	360	P	V
	*	5787	90.77	-	-	82.53	32.41	9.49	33.66	107	360	A	V
		5855.2	50.12	-28.18	78.3	41.75	32.51	9.54	33.68	107	360	P	V
		5888.8	49.8	-24.2	74	41.37	32.56	9.57	33.7	107	360	P	V
		5867.44	41.23	-12.77	54	32.87	32.51	9.54	33.69	107	360	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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)
802.11a CH 165 5825MHz	*	5827	99.85	-	-	91.54	32.46	9.52	33.67	123	155	P	H
	*	5827	93	-	-	84.69	32.46	9.52	33.67	123	155	A	H
		5850.01	60.12	-18.18	78.3	51.78	32.48	9.54	33.68	123	155	P	H
		5861.84	56.74	-17.26	74	48.38	32.51	9.54	33.69	123	155	P	H
		5860.32	44.73	-9.27	54	36.37	32.51	9.54	33.69	123	155	A	H
													H
													H
													H
	*	5827	99.63	-	-	91.32	32.46	9.52	33.67	112	359	P	V
	*	5827	93.64	-	-	85.33	32.46	9.52	33.67	112	359	A	V
		5851.04	59.39	-18.91	78.3	51.05	32.48	9.54	33.68	112	359	P	V
		5861.2	57.84	-16.16	74	49.48	32.51	9.54	33.69	112	359	P	V
		5860.08	45.77	-8.23	54	37.41	32.51	9.54	33.69	112	359	A	V
													V
													V
													V
													V
Remark - No other spurious found. - All results are PASS against Peak and Average limit line.													



Band 4 5725~5850MHz

WIFI 802.11a (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)
802.11a CH 149 5745MHz		11490	41.48	-32.52	74	44.43	40.01	13.95	56.91	100	0	P	H
		17232	41.98	-32.02	74	41.35	41.41	16.93	57.71	100	0	P	H
													H
													H
		11490	41.55	-32.45	74	44.5	40.01	13.95	56.91	100	0	P	V
		17232	41.83	-32.17	74	41.2	41.41	16.93	57.71	100	0	P	V
													V
													V
802.11a CH 157 5785MHz		11570	41.7	-32.3	74	44.72	39.89	14	56.91	100	0	P	H
		17352	42.62	-31.38	74	41.96	41.67	17	58.01	100	0	P	H
													H
													H
		11570	41.9	-32.1	74	44.92	39.89	14	56.91	100	0	P	V
		17352	41.34	-32.66	74	40.68	41.67	17	58.01	100	0	P	V
													V
													V
802.11a CH 165 5825MHz		11650	41.23	-32.77	74	44.33	39.78	14.05	56.93	100	0	P	H
		17472	40.68	-33.32	74	39.98	41.93	17.08	58.31	100	0	P	H
													H
													H
		11650	40.9	-33.1	74	44	39.78	14.05	56.93	100	0	P	V
		17472	40.8	-33.2	74	40.1	41.93	17.08	58.31	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)
802.11n HT20 CH 149 5745MHz		5710.6	54.95	-19.05	74	46.91	32.29	9.39	33.64	162	17	P	H
		5722.52	61.2	-17.1	78.3	53.09	32.31	9.44	33.64	162	17	P	H
		5715	46.31	-7.69	54	38.27	32.29	9.39	33.64	162	17	A	H
	*	5745	99.91	-	-	91.78	32.34	9.44	33.65	162	17	P	H
	*	5745	93.34	-	-	85.21	32.34	9.44	33.65	162	17	A	H
													H
													H
													H
		5713.56	58.9	-15.1	74	50.86	32.29	9.39	33.64	177	34	P	V
		5724.92	64.77	-13.53	78.3	56.66	32.31	9.44	33.64	177	34	P	V
		5714.92	46.78	-7.22	54	38.74	32.29	9.39	33.64	177	34	A	V
	*	5745	100.8	-	-	92.67	32.34	9.44	33.65	177	34	P	V
	*	5745	94.37	-	-	86.24	32.34	9.44	33.65	177	34	A	V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												


Band 4 5725~5850MHz
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)
802.11n HT20 CH 149 5745MHz		11490	42.41	-31.59	74	45.36	40.01	13.95	56.91	100	0	P	H
		17235	43.81	-30.19	74	43.18	41.41	16.93	57.71	100	0	P	H
													H
													H
		11490	42.89	-31.11	74	45.84	40.01	13.95	56.91	100	0	P	V
		17235	44.83	-29.17	74	44.18	41.41	16.95	57.71	100	0	P	V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)
802.11n HT40 CH 151 5755MHz		5712.6	61.71	-12.29	74	53.67	32.29	9.39	33.64	121	246	P	H
		5718.52	62.71	-15.59	78.3	54.65	32.31	9.39	33.64	121	246	P	H
		5713.32	49.56	-4.44	54	41.52	32.29	9.39	33.64	121	246	A	H
	*	5755	96.19	-	-	88.04	32.36	9.44	33.65	121	246	P	H
	*	5755	89.21	-	-	81.06	32.36	9.44	33.65	121	246	A	H
		5856.24	51.36	-26.94	78.3	42.99	32.51	9.54	33.68	121	246	P	H
		5874.08	50.45	-23.55	74	42.07	32.53	9.54	33.69	121	246	P	H
		5865.2	42.81	-11.19	54	34.45	32.51	9.54	33.69	121	246	A	H
		5713.16	59.42	-14.58	74	51.38	32.29	9.39	33.64	173	33	P	V
		5721.64	61.45	-16.85	78.3	53.34	32.31	9.44	33.64	173	33	P	V
		5714.04	49.69	-4.31	54	41.65	32.29	9.39	33.64	173	33	A	V
	*	5755	97.08	-	-	88.93	32.36	9.44	33.65	173	33	P	V
	*	5755	90.54	-	-	82.39	32.36	9.44	33.65	173	33	A	V
		5851.28	52.45	-25.85	78.3	44.11	32.48	9.54	33.68	173	33	P	V
		5877.52	50.87	-23.13	74	42.49	32.53	9.54	33.69	173	33	P	V
		5861.12	43.3	-10.7	54	34.94	32.51	9.54	33.69	173	33	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)
802.11n HT40 CH 151 5755MHz		11510	42.51	-31.49	74	45.46	40	13.95	56.9	100	0	P	H
		17265	42.96	-31.04	74	42.31	41.49	16.95	57.79	100	0	P	H
													H
													H
		11510	42.26	-31.74	74	45.21	40	13.95	56.9	100	0	P	V
		17265	42.32	-31.68	74	41.67	41.49	16.95	57.79	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11a (LF @ 3m)

[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	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.	
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”.



Band 4 5725~5850MHz

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)
802.11n HT20 CH 149 5745MHz		5711.4	54.6	-19.4	74	46.56	32.29	9.39	33.64	205	246	P	H
		5724.2	57.14	-21.16	78.3	49.03	32.31	9.44	33.64	205	246	P	H
		5714.68	44.38	-9.62	54	36.34	32.29	9.39	33.64	205	246	A	H
	*	5747	99.03	-	-	90.9	32.34	9.44	33.65	205	246	P	H
	*	5747	91.99	-	-	83.86	32.34	9.44	33.65	205	246	A	H
													H
													H
													H
		5711.32	52.09	-21.91	74	44.05	32.29	9.39	33.64	135	96	P	V
		5724.84	61.45	-16.85	78.3	53.34	32.31	9.44	33.64	135	96	P	V
		5714.52	43.52	-10.48	54	35.48	32.29	9.39	33.64	135	96	A	V
	*	5747	97.73	-	-	89.6	32.34	9.44	33.65	135	96	P	V
	*	5747	90.71	-	-	82.58	32.34	9.44	33.65	135	96	A	V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



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)
802.11n HT20 CH 157 5785MHz		5687.4	49.43	-24.57	74	41.4	32.27	9.39	33.63	209	244	P	H
		5719.56	49.09	-29.21	78.3	41.03	32.31	9.39	33.64	209	244	P	H
		5711.96	41.4	-12.6	54	33.36	32.29	9.39	33.64	209	244	A	H
	*	5784	98.69	-	-	90.47	32.39	9.49	33.66	209	244	P	H
	*	5784	92.46	-	-	84.24	32.39	9.49	33.66	209	244	A	H
		5856.64	49.49	-28.81	78.3	41.12	32.51	9.54	33.68	209	244	P	H
		5866.96	50.92	-23.08	74	42.56	32.51	9.54	33.69	209	244	P	H
		5861.76	42.12	-11.88	54	33.76	32.51	9.54	33.69	209	244	A	H
		5711.64	49.09	-24.91	74	41.05	32.29	9.39	33.64	110	88	P	V
		5715.08	49.25	-29.05	78.3	41.21	32.29	9.39	33.64	110	88	P	V
		5714.44	40.91	-13.09	54	32.87	32.29	9.39	33.64	110	88	A	V
	*	5787	97.1	-	-	88.86	32.41	9.49	33.66	110	88	P	V
	*	5787	90.72	-	-	82.48	32.41	9.49	33.66	110	88	A	V
		5850.4	49.98	-28.32	78.3	41.64	32.48	9.54	33.68	110	88	P	V
		5866.96	50.4	-23.6	74	42.04	32.51	9.54	33.69	110	88	P	V
		5865.76	41.63	-12.37	54	33.27	32.51	9.54	33.69	110	88	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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)
802.11n HT20 CH 165 5825MHz	*	5827	98.49	-	-	90.18	32.46	9.52	33.67	204	249	P	H
	*	5827	92.6	-	-	84.29	32.46	9.52	33.67	204	249	A	H
		5850.64	55.37	-22.93	78.3	47.03	32.48	9.54	33.68	204	249	P	H
		5864.08	52.6	-21.4	74	44.24	32.51	9.54	33.69	204	249	P	H
		5862.24	43.8	-10.2	54	35.44	32.51	9.54	33.69	204	249	A	H
													H
													H
													H
	*	5827	98	-	-	89.69	32.46	9.52	33.67	196	92	P	V
	*	5827	91.52	-	-	83.21	32.46	9.52	33.67	196	92	A	V
		5850.56	53.39	-24.91	78.3	45.05	32.48	9.54	33.68	196	92	P	V
		5865.52	51.91	-22.09	74	43.55	32.51	9.54	33.69	196	92	P	V
		5861.12	43.42	-10.58	54	35.06	32.51	9.54	33.69	196	92	A	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)
802.11n HT20 CH 149 5745MHz		11490	42.97	-31.03	74	45.92	40.01	13.95	56.91	100	0	P	H
		17232	42.01	-31.99	74	41.38	41.41	16.93	57.71	100	0	P	H
													H
													H
		11490	41.6	-32.4	74	44.55	40.01	13.95	56.91	100	0	P	V
		17232	43.34	-30.66	74	42.71	41.41	16.93	57.71	100	0	P	V
													V
													V
802.11n HT20 CH 157 5785MHz		11570	42.25	-31.75	74	45.27	39.89	14	56.91	100	0	P	H
		17352	42.86	-31.14	74	42.2	41.67	17	58.01	100	0	P	H
													H
													H
		11570	41.18	-32.82	74	44.2	39.89	14	56.91	100	0	P	V
		17352	41.29	-32.71	74	40.63	41.67	17	58.01	100	0	P	V
													V
													V
802.11n HT20 CH 165 5825MHz		11650	41.66	-32.34	74	44.76	39.78	14.05	56.93	100	0	P	H
		17472	40.72	-33.28	74	40.02	41.93	17.08	58.31	100	0	P	H
													H
													H
		11650	41.95	-32.05	74	45.05	39.78	14.05	56.93	100	0	P	V
		17472	40.17	-33.83	74	39.47	41.93	17.08	58.31	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)
802.11n HT40 CH 151 5755MHz		5708.6	57.46	-16.54	74	49.42	32.29	9.39	33.64	197	243	P	H
		5718.2	61.95	-16.35	78.3	53.89	32.31	9.39	33.64	197	243	P	H
		5714.92	49.31	-4.69	54	41.27	32.29	9.39	33.64	197	243	A	H
	*	5757	95.45	-	-	87.3	32.36	9.44	33.65	197	243	P	H
	*	5757	89.04	-	-	80.89	32.36	9.44	33.65	197	243	A	H
		5858.16	50.56	-27.74	78.3	42.2	32.51	9.54	33.69	197	243	P	H
		5874.4	49.84	-24.16	74	41.46	32.53	9.54	33.69	197	243	P	H
		5863.04	42.49	-11.51	54	34.13	32.51	9.54	33.69	197	243	A	H
		5708.28	56.2	-17.8	74	48.16	32.29	9.39	33.64	219	68	P	V
		5722.52	60.8	-17.5	78.3	52.69	32.31	9.44	33.64	219	68	P	V
		5713.72	48.03	-5.97	54	39.99	32.29	9.39	33.64	219	68	A	V
	*	5753	94.89	-	-	86.74	32.36	9.44	33.65	219	68	P	V
	*	5753	88.05	-	-	79.9	32.36	9.44	33.65	219	68	A	V
		5856.4	49.88	-28.42	78.3	41.51	32.51	9.54	33.68	219	68	P	V
		5881.28	50.75	-23.25	74	42.37	32.53	9.54	33.69	219	68	P	V
		5863.84	41.73	-12.27	54	33.37	32.51	9.54	33.69	219	68	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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)
802.11n HT40 CH 159 5795MHz		5714.92	49.94	-24.06	74	41.9	32.29	9.39	33.64	210	246	P	H
		5718.6	51.02	-27.28	78.3	42.96	32.31	9.39	33.64	210	246	P	H
		5713.72	42.14	-11.86	54	34.1	32.29	9.39	33.64	210	246	A	H
	*	5793	96.08	-	-	87.84	32.41	9.49	33.66	210	246	P	H
	*	5793	89.24	-	-	81	32.41	9.49	33.66	210	246	A	H
		5850.88	54.11	-24.19	78.3	45.77	32.48	9.54	33.68	210	246	P	H
		5875.84	53.7	-20.3	74	45.32	32.53	9.54	33.69	210	246	P	H
		5860.24	44.8	-9.2	54	36.44	32.51	9.54	33.69	210	246	A	H
		5703.8	49.81	-24.19	74	41.76	32.29	9.39	33.63	111	89	P	V
		5715.08	50.6	-27.7	78.3	42.56	32.29	9.39	33.64	111	89	P	V
		5714.12	41.68	-12.32	54	33.64	32.29	9.39	33.64	111	89	A	V
	*	5793	93.81	-	-	85.57	32.41	9.49	33.66	111	89	P	V
	*	5793	87.59	-	-	79.35	32.41	9.49	33.66	111	89	A	V
		5851.92	52.38	-25.92	78.3	44.04	32.48	9.54	33.68	111	89	P	V
		5865.44	50.42	-23.58	74	42.06	32.51	9.54	33.69	111	89	P	V
		5860.4	43.76	-10.24	54	35.4	32.51	9.54	33.69	111	89	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

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)
802.11n HT40 CH 151 5755MHz		11510	43.02	-30.98	74	45.97	40	13.95	56.9	100	0	P	H
		17268	41.57	-32.43	74	40.92	41.49	16.95	57.79	100	0	P	H
													H
													H
		11510	42.04	-31.96	74	44.99	40	13.95	56.9	100	0	P	V
		17268	42.6	-31.4	74	41.95	41.49	16.95	57.79	100	0	P	V
													V
													V
802.11n HT40 CH 159 5795MHz		11590	42.45	-31.55	74	45.51	39.86	14	56.92	100	0	P	H
		17388	42.56	-31.44	74	41.89	41.74	17.03	58.1	100	0	P	H
													H
													H
		11590	42.54	-31.46	74	45.6	39.86	14	56.92	100	0	P	V
		17388	42.18	-31.82	74	41.51	41.74	17.03	58.1	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11n HT20 (LF @ 3m)

[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”.