Appendix B. Radiated Spurious Emission

Toot Engineer	Karl Hay Bayer Las Batar Line Citta Kaland Nick Vy	Temperature :	22~25°C
rest Engineer:	Karl Hou, Rover Lee, Peter Liao, Citta Ke, and Nick Yu	Relative Humidity :	52~56%

Band 1 - 5150~5250MHz

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+2		(MHz)	(dBµV/m)		(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)		(H/V)
		5150	62.57	-11.43	74	50.66	31.65	11.21	30.95	301	179	Р	Н
		5150	52.77	-1.23	54	40.86	31.65	11.21	30.95	301	179	Α	Н
	*	5180	101.28	-	-	89.34	31.68	11.21	30.95	301	179	Α	Н
	*	5180	110.78	-	-	98.84	31.68	11.21	30.95	301	179	Р	Н
802.11a													Н
CH 36													Н
5180MHz		5145.86	61.27	-12.73	74	49.36	31.65	11.21	30.95	115	120	Р	V
3100W112		5147.68	50.27	-3.73	54	38.36	31.65	11.21	30.95	115	120	Α	V
	*	5180	98.82	-	-	86.88	31.68	11.21	30.95	115	120	Α	V
	*	5180	107.71	-	-	95.77	31.68	11.21	30.95	115	120	Р	V
													V
													V
		5148.46	58.76	-15.24	74	46.85	31.65	11.21	30.95	270	181	Р	Н
		5054.86	48.39	-5.61	54	36.46	31.57	11.31	30.95	270	181	Α	Н
	*	5220	111.86	-	-	99.91	31.72	11.18	30.95	270	181	Р	Н
	*	5220	102.6	-	-	90.65	31.72	11.18	30.95	270	181	Α	Н
000 44 -		5419.44	60.22	-13.78	74	47.65	31.92	11.6	30.95	270	181	Р	Н
802.11a CH 44		5411.52	49.05	-4.95	54	36.48	31.92	11.6	30.95	270	181	Α	Н
5220MHz		5031.46	58.75	-15.25	74	46.86	31.53	11.31	30.95	100	295	Р	V
OZZOWII IZ		5106.86	48.19	-5.81	54	36.28	31.62	11.24	30.95	100	295	Α	٧
	*	5218	106.84	-	-	94.89	31.72	11.18	30.95	100	295	Р	V
	*	5218	98.32	-	-	86.37	31.72	11.18	30.95	100	295	Α	V
		5417.28	59.46	-14.54	74	46.89	31.92	11.6	30.95	100	295	Р	V
		5431.2	48.79	-5.21	54	36.17	31.93	11.64	30.95	100	295	Α	V

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5009.1 -15.01 47.08 31.52 11.34 30.95 Ρ 58.99 74 254 195 Н 5050.44 48.37 -5.63 54 36.46 31.55 11.31 30.95 254 195 Α Н 5240 31.73 254 Ρ 110.52 98.48 11.26 30.95 195 Н 254 5240 102.55 90.51 31.73 11.26 30.95 195 Α Н 5377.68 59.87 -14.13 47.42 31.88 11.52 30.95 254 Ρ Н 74 195 802.11a 5454.72 -4.97 31.95 254 49.03 54 36.39 11.64 30.95 195 Α Н CH 48 ٧ 5004.94 58.66 -15.34 74 46.75 31.52 11.34 30.95 100 302 5240MHz 5078 48.09 -5.91 54 36.19 31.58 11.27 30.95 100 302 Α V 5240 106.84 94.8 31.73 11.26 30.95 100 302 V 302 ٧ 5240 99.02 86.98 31.73 11.26 30.95 100 Α _ _ -14.51 302 Р ٧ 5412.72 59.49 74 46.92 31.92 11.6 30.95 100 5398.8 48.9 54 36.35 31.9 11.6 30.95 100 302 Α ٧ -5.1 No other spurious found. Remark All results are PASS against Peak and Average limit line.

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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+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V
		10360	60	-8.2	68.2	60.75	39.59	17.13	57.47	100	0	Р	Н
		15540	46.91	-27.09	74	45.57	38.26	21.61	58.53	100	0	Р	Н
802.11a													Н
CH 36													Н
		10360	62.81	-5.39	68.2	63.56	39.59	17.13	57.47	100	0	Р	V
5180MHz		15540	48.01	-25.99	74	46.67	38.26	21.61	58.53	100	0	Р	V
													V
													V
		10440	64.16	-4.04	68.2	64.58	39.69	17.22	57.33	100	0	Р	Н
		15660	44.11	-29.89	74	42.59	38.11	21.7	58.29	100	0	Р	Н
802.11a													Н
CH 44													Н
5220MHz		10440	67.17	-1.03	68.2	67.59	39.69	17.22	57.33	100	141	Р	V
		15660	44.35	-29.65	74	42.83	38.11	21.7	58.29	100	0	Р	V
													V
		10480	60.24	-7.96	68.2	60.43	39.77	17.27	57.23	100	0	Р	V
		15720	45.09	-28.91	74	43.45	38.03	21.76	58.15	100	0	Р	Н
													Н
802.11a													Н
CH 48		10480	67.05	-1.15	68.2	67.24	39.77	17.27	57.23	100	143	Р	V
5240MHz		15720	44.04	-29.96	74	42.4	38.03	21.76	58.15	100	0	Р	V
													V
													V

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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)		(P/A)	, ,
		5150	62.71	-11.29	74	50.8	31.65	11.21	30.95	301	184	Р	Н
		5150	52.11	-1.89	54	40.2	31.65	11.21	30.95	301	184	Α	Н
	*	5180	99.46	-	-	87.52	31.68	11.21	30.95	301	184	Α	Н
	*	5180	108.82	-	-	96.88	31.68	11.21	30.95	301	184	Р	Н
802.11n													Н
HT20													Н
CH 36		5148.46	60.63	-13.37	74	48.72	31.65	11.21	30.95	106	120	Р	V
5180MHz		5150	50.74	-3.26	54	38.83	31.65	11.21	30.95	106	120	Α	V
	*	5180	98.33	-	-	86.39	31.68	11.21	30.95	106	120	Α	V
	*	5180	107.49	-	-	95.55	31.68	11.21	30.95	106	120	Р	V
													V
													٧
		5108.68	59.11	-14.89	74	47.2	31.62	11.24	30.95	241	189	Р	Н
		5134.94	48.36	-5.64	54	36.44	31.63	11.24	30.95	241	189	Α	Н
	*	5220	110.19	-	-	98.24	31.72	11.18	30.95	241	189	Р	Н
	*	5220	100.58	-	-	88.63	31.72	11.18	30.95	241	189	Α	Н
802.11n		5441.28	59.89	-14.11	74	47.27	31.93	11.64	30.95	241	189	Р	Н
HT20		5422.8	49.32	-4.68	54	36.71	31.92	11.64	30.95	241	189	Α	Н
CH 44		5010.92	59.7	-14.3	74	47.79	31.52	11.34	30.95	100	125	Р	V
5220MHz		5124.28	48.09	-5.91	54	36.17	31.63	11.24	30.95	100	125	Α	V
	*	5218	108.58	-	-	96.63	31.72	11.18	30.95	100	125	Р	V
	*	5218	98.28	-	-	86.33	31.72	11.18	30.95	100	125	Α	V
		5414.4	59.79	-14.21	74	47.22	31.92	11.6	30.95	100	125	Р	V
		5428.08	49.13	-4.87	54	36.52	31.92	11.64	30.95	100	125	Α	V

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-14.79 31.55 11.31 30.95 Ρ 5045.24 59.21 74 47.3 254 190 Н 5000 48.36 -5.64 54 36.47 31.5 11.34 30.95 254 190 Α Н 5240 31.73 254 Ρ 110.56 98.52 11.26 30.95 190 Н 254 5240 100.77 88.73 31.73 11.26 30.95 190 Н 5433.6 59.41 -14.59 46.79 31.93 11.64 30.95 254 Ρ Н 74 190 802.11n 5440.08 -4.9 31.93 254 HT20 49.1 54 36.48 11.64 30.95 190 Α Н ٧ **CH 48** 5118.56 59.22 -14.78 74 47.31 31.62 11.24 30.95 100 120 5240MHz 5085.54 48.13 -5.87 54 36.23 31.58 11.27 30.95 100 120 Α V 5242 109.5 97.44 31.75 11.26 30.95 100 120 V ٧ 5242 99.95 87.89 31.75 11.26 30.95 100 120 Α _ -14.04 Р ٧ 5361.6 59.96 74 47.52 31.87 11.52 30.95 100 120 5406.48 49.04 -4.96 54 36.49 31.9 11.6 30.95 100 120 Α ٧ No other spurious found.

Remark

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All results are PASS against Peak and Average limit line.

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
		10360	57.73	-10.47	68.2	58.48	39.59	17.13	57.47	100	0	Р	Н
		15540	45.2	-28.8	74	43.86	38.26	21.61	58.53	100	0	Р	Н
802.11n													Н
HT20													Н
CH 36		10360	61.26	-6.94	68.2	62.01	39.59	17.13	57.47	100	0	Р	V
5180MHz		15540	45.3	-28.7	74	43.96	38.26	21.61	58.53	100	0	Р	V
													V
													V
		10440	64.12	-4.08	68.2	64.54	39.69	17.22	57.33	301	153	Р	Н
		15660	44.14	-29.86	74	42.62	38.11	21.7	58.29	100	0	Р	Н
802.11n													Н
HT20													Н
CH 44		10440	66.87	-1.33	68.2	67.29	39.69	17.22	57.33	100	145	Р	V
5220MHz		15660	46.98	-27.02	74	45.46	38.11	21.7	58.29	100	0	Р	V
													V
													V
		10480	65.19	-3.01	68.2	65.38	39.77	17.27	57.23	292	152	Р	Н
		15720	44.07	-29.93	74	42.43	38.03	21.76	58.15	100	0	Р	Н
802.11n													Н
HT20													Н
CH 48		10480	66.89	-1.31	68.2	67.08	39.77	17.27	57.23	100	144	Р	V
5240MHz		15720	44.02	-29.98	74	42.38	38.03	21.76	58.15	100	0	Р	٧
													V
													V

2. All results are PASS against Peak and Average limit line.

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WIFI 802.11n HT40 (Band Edge @ 3m)

			Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
	(MHz)	(dBµV/m)	(dB)	($dB\mu V/m$)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
	5150	63.02	-10.98	74	51.11	31.65	11.21	30.95	298	181	Р	Н
	5149.5	51.95	-2.05	54	40.04	31.65	11.21	30.95	298	181	Α	Η
*	5190	93.49	-	-	81.58	31.68	11.18	30.95	298	181	Α	Η
*	5190	104.29	-	-	92.38	31.68	11.18	30.95	298	181	Р	Ι
	5363.76	55.79	-18.21	74	43.35	31.87	11.52	30.95	298	181	Р	Н
	5376.48	45.2	-8.8	54	32.76	31.87	11.52	30.95	298	181	Α	Η
	5147.94	60.25	-13.75	74	48.34	31.65	11.21	30.95	100	120	Р	٧
	5150	50.65	-3.35	54	38.74	31.65	11.21	30.95	100	120	Α	٧
*	5194	92.3	-	-	80.37	31.7	11.18	30.95	100	120	Α	٧
*	5194	101.71	-	-	89.78	31.7	11.18	30.95	100	120	Р	٧
	5425.92	55.76	-18.24	74	43.15	31.92	11.64	30.95	100	120	Р	٧
	5405.04	45.22	-8.78	54	32.67	31.9	11.6	30.95	100	120	Α	٧
	5148.98	63.41	-10.59	74	51.5	31.65	11.21	30.95	100	193	Р	Н
	5150	52.43	-1.57	54	40.52	31.65	11.21	30.95	100	193	Α	Η
*	5228	111.39	-	-	99.35	31.73	11.26	30.95	100	193	Р	Н
*	5228	98.76	-	-	86.72	31.73	11.26	30.95	100	193	Α	Η
	5357.28	58.48	-15.52	74	46.06	31.85	11.52	30.95	100	193	Р	Η
	5350.8	47.65	-6.35	54	35.23	31.85	11.52	30.95	100	193	Α	Η
	5148.46	61.69	-12.31	74	49.78	31.65	11.21	30.95	103	119	Р	٧
	5149.76	51.59	-2.41	54	39.68	31.65	11.21	30.95	103	119	Α	٧
*	5228	109.78	-	-	97.74	31.73	11.26	30.95	103	119	Р	٧
*	5228	98.27	-	-	86.23	31.73	11.26	30.95	103	119	Α	٧
	5382.96	57.4	-16.6	74	44.87	31.88	11.6	30.95	103	119	Р	>
	5350.32	47.11	-6.89	54	34.69	31.85	11.52	30.95	103	119	Α	٧
	* * * *	* 5149.5 * 5190 * 5190 5363.76 5376.48 5147.94 5150 * 5194 * 5194 * 5425.92 5405.04 5148.98 5150 * * 5228 * 5228 5357.28 5350.8 5148.46 5149.76 * 5228 * 5228 * 5228 * 5228 * 5228 * 5382.96	* 5149.5 51.95 * 5190 93.49 * 5190 104.29 5363.76 55.79 5376.48 45.2 5147.94 60.25 5150 50.65 * 5194 92.3 * 5194 101.71 5425.92 55.76 5405.04 45.22 5148.98 63.41 5150 52.43 * 5228 111.39 * 5228 98.76 5357.28 58.48 5350.8 47.65 5148.46 61.69 5149.76 51.59 * 5228 109.78 * 5228 98.27 5382.96 57.4	5149.5 51.95 -2.05 * 5190 93.49 - * 5190 104.29 - 5363.76 55.79 -18.21 5376.48 45.2 -8.8 5147.94 60.25 -13.75 5150 50.65 -3.35 * 5194 92.3 - * 5194 101.71 - 5425.92 55.76 -18.24 5405.04 45.22 -8.78 5148.98 63.41 -10.59 5150 52.43 -1.57 * 5228 111.39 - * 5228 98.76 - 5357.28 58.48 -15.52 5350.8 47.65 -6.35 5148.46 61.69 -12.31 * 5228 109.78 - * 5228 98.27 - * 5382.96 57.4 -16.6	5149.5 51.95 -2.05 54 * 5190 93.49 - - \$5190 104.29 - - \$5363.76 55.79 -18.21 74 \$5376.48 45.2 -8.8 54 \$147.94 60.25 -13.75 74 \$150 50.65 -3.35 54 * 5194 92.3 - - * 5194 101.71 - - \$425.92 55.76 -18.24 74 \$405.04 45.22 -8.78 54 \$148.98 63.41 -10.59 74 \$150 \$2.43 -1.57 54 * \$228 111.39 - - * \$228 98.76 - - \$357.28 58.48 -15.52 74 \$350.8 47.65 -6.35 54 \$149.76 \$1.59 -2.41 54 * \$228 109.78 - - * \$228	5149.5 51.95 -2.05 54 40.04 * 5190 93.49 - - 81.58 * 5190 104.29 - - 92.38 5363.76 55.79 -18.21 74 43.35 5376.48 45.2 -8.8 54 32.76 5147.94 60.25 -13.75 74 48.34 5150 50.65 -3.35 54 38.74 * 5194 92.3 - - 80.37 * 5194 101.71 - - 89.78 5425.92 55.76 -18.24 74 43.15 5405.04 45.22 -8.78 54 32.67 5148.98 63.41 -10.59 74 51.5 5150 52.43 -1.57 54 40.52 * 5228 111.39 - - 99.35 * 5228 98.76 - - 86.72 5357.28 58.48 -15.52 74 46.06	5149.5 51.95 -2.05 54 40.04 31.65 * 5190 93.49 - - 81.58 31.68 * 5190 104.29 - - 92.38 31.68 \$363.76 55.79 -18.21 74 43.35 31.87 \$376.48 45.2 -8.8 54 32.76 31.87 \$147.94 60.25 -13.75 74 48.34 31.65 \$150 50.65 -3.35 54 38.74 31.65 * \$194 92.3 - - 80.37 31.7 * \$194 101.71 - - 89.78 31.7 \$425.92 \$5.76 -18.24 74 43.15 31.92 \$405.04 45.22 -8.78 54 32.67 31.9 \$148.98 63.41 -10.59 74 51.5 31.65 * \$228 111.39 - - 99.35 <td>* 5149.5 51.95 -2.05 54 40.04 31.65 11.21 * 5190 93.49 - - 81.58 31.68 11.18 * 5190 104.29 - - 92.38 31.68 11.18 5363.76 55.79 -18.21 74 43.35 31.87 11.52 5376.48 45.2 -8.8 54 32.76 31.87 11.52 5147.94 60.25 -13.75 74 48.34 31.65 11.21 5150 50.65 -3.35 54 38.74 31.65 11.21 * 5194 92.3 - - 80.37 31.7 11.18 * 5194 101.71 - 89.78 31.7 11.18 * 5425.92 55.76 -18.24 74 43.15 31.92 11.64 5405.04 45.22 -8.78 54 32.67 31.9 11.6 * 5148.98 63.41 -10.59 74 51.5<</td> <td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 * 5190 93.49 - - 81.58 31.68 11.18 30.95 * 5190 104.29 - - 92.38 31.68 11.18 30.95 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 * 5194 92.3 - - 80.37 31.7 11.18 30.95 * 5194 101.71 - - 89.78 31.7 11.18 30.95 * 5425.92 55.76 -18.24 74 43.15 31.92 11.64<td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 5190 93.49 - - 81.58 31.68 11.18 30.95 298 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 * 5194 92.3 - - 80.37 31.7 11.18 30.95 100 * 5194 101.71 - - 89.78 31.7 11.18 30.95 100 5425.92 55.76 -18.24 74 43.15 31.92 11.64 30.95 100 5148.98 63.41</td><td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 * 5194 92.3 - - 80.37 31.7 11.18 30.95 100 120 * 5194 101.71 - - 89.78 31.7 11.18 30.95 100 120 * 5425.92<td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 A * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 A * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 P 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 P 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 A 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 P 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 120 A * 5194 101.71 - - 89.78 31.7 11.18</td></td></td>	* 5149.5 51.95 -2.05 54 40.04 31.65 11.21 * 5190 93.49 - - 81.58 31.68 11.18 * 5190 104.29 - - 92.38 31.68 11.18 5363.76 55.79 -18.21 74 43.35 31.87 11.52 5376.48 45.2 -8.8 54 32.76 31.87 11.52 5147.94 60.25 -13.75 74 48.34 31.65 11.21 5150 50.65 -3.35 54 38.74 31.65 11.21 * 5194 92.3 - - 80.37 31.7 11.18 * 5194 101.71 - 89.78 31.7 11.18 * 5425.92 55.76 -18.24 74 43.15 31.92 11.64 5405.04 45.22 -8.78 54 32.67 31.9 11.6 * 5148.98 63.41 -10.59 74 51.5<	5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 * 5190 93.49 - - 81.58 31.68 11.18 30.95 * 5190 104.29 - - 92.38 31.68 11.18 30.95 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 * 5194 92.3 - - 80.37 31.7 11.18 30.95 * 5194 101.71 - - 89.78 31.7 11.18 30.95 * 5425.92 55.76 -18.24 74 43.15 31.92 11.64 <td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 5190 93.49 - - 81.58 31.68 11.18 30.95 298 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 * 5194 92.3 - - 80.37 31.7 11.18 30.95 100 * 5194 101.71 - - 89.78 31.7 11.18 30.95 100 5425.92 55.76 -18.24 74 43.15 31.92 11.64 30.95 100 5148.98 63.41</td> <td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 * 5194 92.3 - - 80.37 31.7 11.18 30.95 100 120 * 5194 101.71 - - 89.78 31.7 11.18 30.95 100 120 * 5425.92<td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 A * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 A * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 P 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 P 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 A 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 P 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 120 A * 5194 101.71 - - 89.78 31.7 11.18</td></td>	5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 5190 93.49 - - 81.58 31.68 11.18 30.95 298 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 * 5194 92.3 - - 80.37 31.7 11.18 30.95 100 * 5194 101.71 - - 89.78 31.7 11.18 30.95 100 5425.92 55.76 -18.24 74 43.15 31.92 11.64 30.95 100 5148.98 63.41	5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 * 5194 92.3 - - 80.37 31.7 11.18 30.95 100 120 * 5194 101.71 - - 89.78 31.7 11.18 30.95 100 120 * 5425.92 <td>5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 A * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 A * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 P 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 P 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 A 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 P 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 120 A * 5194 101.71 - - 89.78 31.7 11.18</td>	5149.5 51.95 -2.05 54 40.04 31.65 11.21 30.95 298 181 A * 5190 93.49 - - 81.58 31.68 11.18 30.95 298 181 A * 5190 104.29 - - 92.38 31.68 11.18 30.95 298 181 P 5363.76 55.79 -18.21 74 43.35 31.87 11.52 30.95 298 181 P 5376.48 45.2 -8.8 54 32.76 31.87 11.52 30.95 298 181 A 5147.94 60.25 -13.75 74 48.34 31.65 11.21 30.95 100 120 P 5150 50.65 -3.35 54 38.74 31.65 11.21 30.95 100 120 A * 5194 101.71 - - 89.78 31.7 11.18

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WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V
		10380	51.31	-16.89	68.2	52	39.61	17.13	57.43	100	0	Р	Н
		15570	45.66	-28.34	74	44.26	38.22	21.64	58.46	100	0	Р	Н
802.11n													Н
HT40													Н
CH 38		10380	56.64	-11.56	68.2	57.33	39.61	17.13	57.43	100	0	Р	V
5190MHz		15570	44.48	-29.52	74	43.08	38.22	21.64	58.46	100	0	Р	V
													V
													V
		10460	62.06	-6.14	68.2	62.42	39.72	17.22	57.3	100	0	Р	Н
		15690	43.36	-30.64	74	41.78	38.07	21.73	58.22	100	0	Р	Н
802.11n													Н
HT40													Н
CH 46		10460	63.56	-4.64	68.2	63.92	39.72	17.22	57.3	100	0	Р	V
5230MHz		15690	43.67	-30.33	74	42.09	38.07	21.73	58.22	100	0	Р	V
													V
													V

^{2.} All results are PASS against Peak and Average limit line.

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WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
		5140.4	63.57	-10.43	74	51.66	31.65	11.21	30.95	106	178	Р	Н
		5145.08	52.08	-1.92	54	40.17	31.65	11.21	30.95	106	178	Α	Н
	*	5212	101.55	-	-	89.6	31.72	11.18	30.95	106	178	Р	Н
	*	5212	89.37	-	-	77.42	31.72	11.18	30.95	106	178	Α	Н
802.11ac		5422.08	59.62	-14.38	74	47.01	31.92	11.64	30.95	106	178	Р	Н
VHT80		5354.4	50.1	-3.9	54	37.68	31.85	11.52	30.95	106	178	Р	Н
CH 42		5145.6	60.85	-13.15	74	48.94	31.65	11.21	30.95	100	121	Р	V
5210MHz		5145.6	50.42	-3.58	54	38.51	31.65	11.21	30.95	100	121	Α	V
	*	5208	99.64	-	-	87.69	31.72	11.18	30.95	100	121	Р	V
	*	5208	88.37	-	-	76.42	31.72	11.18	30.95	100	121	Α	V
		5382.72	59.27	-14.73	74	46.74	31.88	11.6	30.95	100	121	Р	V
		5432.16	50.25	-3.75	54	37.63	31.93	11.64	30.95	100	121	Α	V

Remark

SPORTON INTERNATIONAL INC.

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^{1.} No other spurious found.

^{2.} All results are PASS against Peak and Average limit line.

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.		(84 11 -)	(-ID)//)	Limit	Line	Level	Factor	Loss	Factor	Pos		Avg.	
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		10420	45.72	-28.28	74	46.24	39.67	17.18	57.37	100	0	Р	Н
		15630	42.64	-31.36	74	41.13	38.13	21.7	58.32	100	0	Р	Н
802.11ac													Н
VHT80													Н
CH 42		10420	45.99	-28.01	74	46.51	39.67	17.18	57.37	100	0	Р	V
5210MHz		15630	44.29	-29.71	74	42.78	38.13	21.7	58.32	100	0	Р	V
													V
													V
	1 N/	o other equipour	n found	1			ı		1	ı	ı	1	
Remark	I. INC	o other spurious	s iourid.										
	2. Al	l results are PA	SS against F	Peak and	Average lim	it line.							

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Emission below 1GHz

WIFI 802.11a (LF @ 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)	
		30.54	24.12	-15.88	40	30.54	25.26	0.78	32.46	-	-	Р	Н
		81.03	24.19	-15.81	40	41.76	13.81	1.06	32.44	-	-	Р	Н
		139.08	31.77	-11.73	43.5	44.94	17.82	1.43	32.42	-	-	Р	Н
		141.24	31.97	-11.53	43.5	44.89	17.75	1.75	32.42	170	272	Р	Н
		250.05	24.42	-21.58	46	36.41	18.5	1.83	32.32	-	-	Р	Н
		957.3	33.48	-12.52	46	29.59	30.21	4.75	31.07	-	-	Р	F
													F
													F
													F
													ŀ
													H
802.11a													F
LF		45.12	35.31	-4.69	40	49.92	17.07	0.78	32.46	-	-	Р	\
		47.82	35.46	-4.54	40	50.94	16.2	0.78	32.46	100	187	Р	\
		81.03	30.57	-9.43	40	48.14	13.81	1.06	32.44	-	-	Р	\
		172.02	31.55	-11.95	43.5	46.43	15.79	1.75	32.42	-	-	Р	٧
		890.1	32.07	-13.93	46	30.41	28.84	4.45	31.63	-	-	Р	٧
		944.7	32.92	-13.08	46	29.18	30.16	4.75	31.17	-	-	Р	٧
													٧
													٧
													٧
													٧
													V
													V

2. All results are PASS against limit line.

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<EUT with RJ-45>

Band 1 - 5150~5250MHz

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+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5053.56	59.06	-14.94	74	47.15	31.55	11.31	30.95	100	235	Р	Н
		5102.18	47.75	-6.25	54	35.86	31.6	11.24	30.95	100	235	Α	Н
	*	5218	111.83	-	-	99.88	31.72	11.18	30.95	100	235	Р	Н
	*	5218	101.11	-	-	89.16	31.72	11.18	30.95	100	235	Α	Н
		5440.08	60.37	-13.63	74	47.75	31.93	11.64	30.95	100	235	Р	Н
802.11a		5448.24	48.46	-5.54	54	35.82	31.95	11.64	30.95	100	235	Α	Н
CH 44 5220MHz		5022.62	59.29	-14.71	74	47.4	31.53	11.31	30.95	119	182	Р	٧
3220WITZ		5028.86	47.74	-6.26	54	35.85	31.53	11.31	30.95	119	182	Α	٧
	*	5222	111.65	-	-	99.62	31.72	11.26	30.95	119	182	Р	٧
	*	5222	101.03	-	-	89	31.72	11.26	30.95	119	182	Α	V
		5357.28	59.65	-14.35	74	47.23	31.85	11.52	30.95	119	182	Р	V
		5453.52	48.18	-5.82	54	35.54	31.95	11.64	30.95	119	182	Α	٧
Remark		other spurious		eak and	l Average lim	it line.							

SPORTON INTERNATIONAL INC.

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WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level	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)	
112		10440	56.74	-11.46	68.2	57.16	39.69	17.22	57.33	100	0	P	Η
		15660	47.13	-26.87	74	45.61	38.11	21.7	58.29	100	0	Р	Н
													Н
802.11a													Н
CH 44 5220MHz		10440	60.08	-8.12	68.2	60.5	39.69	17.22	57.33	100	0	Р	V
JZZUWINZ		15660	45.17	-28.83	74	43.65	38.11	21.7	58.29	100	0	Р	V
													V
													V
Remark		o other spurious		Peak and	Average lim	it line.							

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Emission below 1GHz

WIFI 802.11a (LF @ 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/\
		45.66	21.69	-18.31	40	36.3	17.07	0.78	32.46	-	-	Р	Н
		140.16	29.98	-13.52	43.5	42.88	17.77	1.75	32.42	100	0	Р	Н
		157.17	29.79	-13.71	43.5	43.31	17.15	1.75	32.42	-	-	Р	Н
		419	23.1	-22.9	46	30.25	22.55	2.68	32.38	-	-	Р	Н
		618.5	26.2	-19.8	46	29.48	25.62	3.5	32.4	-	-	Р	Н
		787.9	29.42	-16.58	46	29.76	27.75	4.14	32.23	-	-	Р	Н
													Н
													Н
													Н
													Н
													Н
802.11a													Н
LF		46.47	36.9	-3.1	40	51.95	16.63	0.78	32.46	100	0	Р	V
		59.97	35.48	-4.52	40	55.35	11.8	0.78	32.45	-	-	Р	V
		161.76	28.57	-14.93	43.5	42.46	16.78	1.75	32.42	-	-	Р	V
		363	22.9	-23.1	46	31.47	21.31	2.44	32.32	-	-	Р	V
		489	24.46	-21.54	46	29.99	23.79	3.08	32.4	-	-	Р	V
		671.7	27.47	-18.53	46	29.88	26.18	3.82	32.41	-	-	Р	V
													V
													V
													V
													V
													V
													V

2. All results are PASS against limit line.

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Note symbol

Report No.: FR6O0801-01D

*	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	Peak or Average								
H/V	Horizontal or Vertical								

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A calculation example for radiated spurious emission is shown as below:

Report No.: FR6O0801-01D

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	Р	Н
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	Α	Н

1. Level($dB\mu V/m$) =

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

2. Over Limit(dB) = Level(dB μ V/m) – Limit Line(dB μ V/m)

For Peak Limit @ 2390MHz:

- 1. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 54.51(dB\mu V) 35.86 (dB)$
- $= 55.45 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level($dB\mu V/m$) Limit Line($dB\mu V/m$)
- $= 55.45(dB\mu V/m) 74(dB\mu V/m)$
- = -18.55(dB)

For Average Limit @ 2390MHz:

- 1. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dB μ V) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 42.6(dB\mu V) 35.86 (dB)$
- $= 43.54 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level($dB\mu V/m$) Limit Line($dB\mu V/m$)
- $=43.54(dB\mu V/m) 54(dB\mu V/m)$
- = -10.46(dB)

Both peak and average measured complies with the limit line, so test result is "PASS".

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