# Appendix B. Radiated Spurious Emission

Test Engineer :	Elvis Chen and Stan Hsieh and Karl Hou and Lewis He	Temperature :	21~23°C
rest Engineer .		Relative Humidity :	41~42%

Report No.: FR573017E

<For Sample 2>

### 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		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	( deg )		(H/V)
		5145.2	65.54	-8.46	74	58.19	31.98	7.94	32.57	135	35	Р	Н
		5150	51.16	-2.84	54	43.81	31.98	7.94	32.57	135	35	Α	Н
	*	5182	113.14	-	-	105.78	32.02	7.91	32.57	135	35	Р	Н
	*	5182	105.95	-	-	98.59	32.02	7.91	32.57	135	35	Α	Н
802.11a													Н
CH 36													Н
5180MHz		5150	65.03	-8.97	74	57.68	31.98	7.94	32.57	104	78	Р	V
3100W112		5150	49.6	-4.4	54	42.25	31.98	7.94	32.57	104	78	Α	V
	*	5178	111.71	-	-	104.35	32.02	7.91	32.57	104	78	Р	V
	*	5178	103.03	-	-	95.67	32.02	7.91	32.57	104	78	Α	V
													٧
													<
		5124.05	54.15	-19.85	74	46.82	31.96	7.94	32.57	100	29	Р	Н
		5129	45.97	-8.03	54	38.64	31.96	7.94	32.57	100	29	Α	Η
	*	5218	115.97	-	-	108.47	32.06	8.01	32.57	100	29	Р	Н
	*	5218	108.41	-	-	100.91	32.06	8.01	32.57	100	29	Α	Н
//		5437.56	51.86	-22.14	74	43.82	32.32	8.29	32.57	100	29	Р	Н
802.11a CH 44		5408.74	42.13	-11.87	54	34.13	32.28	8.29	32.57	100	29	Α	Η
5220MHz		5146.25	55.32	-18.68	74	47.97	31.98	7.94	32.57	100	81	Р	<
3220WIF12		5128.7	43.85	-10.15	54	36.52	31.96	7.94	32.57	100	81	Α	٧
	*	5218	112.3	-	-	104.8	32.06	8.01	32.57	100	81	Р	V
	*	5218	105.03	-	-	97.53	32.06	8.01	32.57	100	81	Α	V
		5356.93	50.29	-23.71	74	42.41	32.22	8.23	32.57	100	81	Р	V
		5406.32	40.26	-13.74	54	32.26	32.28	8.29	32.57	100	81	Α	V

Page Number

: B1 of B38

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

		5145.2	54.37	-19.63	74	47.02	31.98	7.94	32.57	100	24	Р	Н
		5137.4	45.39	-8.61	54	38.06	31.96	7.94	32.57	100	24	Α	Н
	*	5241	115.59	-	-	108.07	32.08	8.01	32.57	100	24	Р	Н
	*	5241	107.72	-	-	100.2	32.08	8.01	32.57	100	24	Α	Н
		5430.52	50.48	-23.52	74	42.44	32.32	8.29	32.57	100	24	Р	Н
802.11a		5436.35	41.1	-12.9	54	33.06	32.32	8.29	32.57	100	24	Α	Н
CH 48		5148.95	53.24	-20.76	74	45.89	31.98	7.94	32.57	100	77	Р	V
5240MHz		5139.5	43.84	-10.16	54	36.49	31.98	7.94	32.57	100	77	Α	V
	*	5238	111.74	-	-	104.22	32.08	8.01	32.57	100	77	Р	V
	*	5238	104.39	-	-	96.87	32.08	8.01	32.57	100	77	Α	V
		5452.08	48.9	-25.1	74	40.84	32.34	8.29	32.57	100	77	Р	V
		5428.1	39.83	-14.17	54	31.81	32.3	8.29	32.57	100	77	Α	V
Remark		o other spurious	s found.				32.3	8.29	32.57	100	//	А	L

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Page Number : B2 of B38

### 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 )		( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	1
		10356	52.75	-21.25	74	64.28	39.66	11.93	63.12	100	326	Р	Н
		10356	47.17	-6.83	54	58.7	39.66	11.93	63.12	100	326	Α	Н
802.11a		15538	47.98	-26.02	74	55.37	38.04	14.76	60.19	100	0	Р	Н
CH 36													Н
5180MHz		10362	51.9	-22.1	74	63.36	39.69	11.96	63.11	376	357	Р	V
310011112		10362	46.23	-7.77	54	57.69	39.69	11.96	63.11	376	357	Α	V
		15543	50.82	-23.18	74	58.21	38.04	14.76	60.19	100	0	Р	V
													V
		10438	57.95	-16.05	74	69.21	39.79	12	63.05	100	330	Р	Н
		10438	45.25	-8.75	54	56.51	39.79	12	63.05	100	330	Α	Н
		15660	45.05	-28.95	74	52.58	37.85	14.79	60.17	100	0	Р	Н
802.11a													Н
CH 44		10442	53.05	-20.95	74	64.28	39.79	12.03	63.05	100	43	Р	V
5220MHz		10442	46.98	-7.02	54	58.21	39.79	12.03	63.05	100	43	Α	V
		15664	45.15	-28.85	74	52.71	37.82	14.79	60.17	100	0	Р	V
													V
		10482	53.56	-20.44	74	64.64	39.87	12.06	63.01	100	325	Р	Н
		10482	46.18	-7.82	54	57.26	39.87	12.06	63.01	100	325	Α	Н
		15720	47.46	-26.54	74	55.07	37.74	14.81	60.16	100	0	Р	Н
802.11a													Н
CH 48		10479	53.82	-20.18	74	64.9	39.87	12.06	63.01	100	299	Р	V
5240MHz		10479	46.23	-7.77	54	57.31	39.87	12.06	63.01	100	299	Α	V
		15720	48.91	-25.09	74	56.52	37.74	14.81	60.16	100	0	Р	V
													V
Remark		other spurious					1		1	ı	ı	1	1

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 )		(P/A)	
		5148.5	65.56	-8.44	74	58.21	31.98	7.94	32.57	119	39	Р	Н
		5128.25	51.23	-2.77	54	43.9	31.96	7.94	32.57	119	39	Α	Н
	*	5182	112.09	-	-	104.73	32.02	7.91	32.57	119	39	Р	Н
	*	5182	105.08	-	-	97.72	32.02	7.91	32.57	119	39	Α	Н
802.11n													Н
HT20													Н
CH 36		5148.95	60.65	-13.35	74	53.3	31.98	7.94	32.57	101	79	Р	V
5180MHz		5128.25	48.92	-5.08	54	41.59	31.96	7.94	32.57	101	79	Α	V
	*	5179	108.76	-	-	101.4	32.02	7.91	32.57	101	79	Р	V
	*	5179	101.38	-	-	94.02	32.02	7.91	32.57	101	79	Α	V
													V
													٧
		5119.25	54.57	-19.43	74	47.24	31.94	7.96	32.57	100	30	Р	Н
		5131.25	45.09	-8.91	54	37.76	31.96	7.94	32.57	100	30	Α	Н
	*	5222	113.76	-	-	106.26	32.06	8.01	32.57	100	30	Р	Н
	*	5222	106.95	-	-	99.45	32.06	8.01	32.57	100	30	Α	Н
802.11n		5367.82	49.97	-24.03	74	42.01	32.24	8.29	32.57	100	30	Р	Н
HT20		5407.64	41.27	-12.73	54	33.27	32.28	8.29	32.57	100	30	Α	Н
CH 44		5128.7	51.42	-22.58	74	44.09	31.96	7.94	32.57	100	84	Р	V
5220MHz		5128.1	43.31	-10.69	54	35.98	31.96	7.94	32.57	100	84	Α	V
	*	5222	110.38	-	-	102.88	32.06	8.01	32.57	100	84	Р	V
	*	5222	103.32	-	-	95.82	32.06	8.01	32.57	100	84	Α	V
		5405.33	49.29	-24.71	74	41.29	32.28	8.29	32.57	100	84	Р	V
		5407.75	40.07	-13.93	54	32.07	32.28	8.29	32.57	100	84	Α	V

TEL: 886-3-327-3456 FAX: 886-3-328-4978

		5139.65	53.05	-20.95	74	45.7	31.98	7.94	32.57	104	25	Р	Н
		5149.4	44.42	-9.58	54	37.07	31.98	7.94	32.57	104	25	Α	Н
	*	5241	114.06	-	-	106.54	32.08	8.01	32.57	104	25	Р	Н
	*	5241	106.7	-	-	99.18	32.08	8.01	32.57	104	25	Α	Н
802.11n		5435.8	49.64	-24.36	74	41.6	32.32	8.29	32.57	104	25	Р	Н
HT20		5436.79	40.62	-13.38	54	32.58	32.32	8.29	32.57	104	25	Α	Н
CH 48		5149.1	52.75	-21.25	74	45.4	31.98	7.94	32.57	100	85	Р	V
5240MHz		5139.05	43.35	-10.65	54	36.02	31.96	7.94	32.57	100	85	Α	V
	*	5242	110.7	-	-	103.05	32.1	8.12	32.57	100	85	Р	V
	*	5242	103.37	-	-	95.72	32.1	8.12	32.57	100	85	Α	V
		5362.32	48.73	-25.27	74	40.77	32.24	8.29	32.57	100	85	Р	V
		5351.98	39.63	-14.37	54	31.75	32.22	8.23	32.57	100	85	Α	V

Remark

All results are PASS against Peak and Average limit line.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 )		( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/\
		10362	52.67	-21.33	74	64.13	39.69	11.96	63.11	100	358	Р	Н
		10362	45.06	-8.94	54	56.52	39.69	11.96	63.11	100	358	Α	Н
802.11n		15540	48.79	-25.21	74	56.18	38.04	14.76	60.19	100	0	Р	Н
HT20													Н
CH 36		10362	54.05	-19.95	74	65.51	39.69	11.96	63.11	275	34	Р	V
5180MHz		10362	47.89	-6.11	54	59.35	39.69	11.96	63.11	275	34	Α	V
		15537	49.44	-24.56	74	56.83	38.04	14.76	60.19	100	0	Р	V
													V
		10442	56.33	-17.67	74	67.56	39.79	12.03	63.05	100	328	Р	Н
		10442	44.25	-9.75	54	55.48	39.79	12.03	63.05	100	328	Α	Н
802.11n		15660	42.74	-31.26	74	50.27	37.85	14.79	60.17	100	0	Р	Н
HT20													Н
CH 44		10442	53.84	-20.16	74	65.07	39.79	12.03	63.05	100	40	Р	V
5220MHz		10442	46.52	-7.48	54	57.75	39.79	12.03	63.05	100	40	Α	V
		15663	42.25	-31.75	74	49.81	37.82	14.79	60.17	100	0	Р	V
													V
		10482	53.12	-20.88	74	64.2	39.87	12.06	63.01	100	328	Р	Н
		10482	44.77	-9.23	54	55.85	39.87	12.06	63.01	100	328	Α	Н
802.11n		15720	47.02	-26.98	74	54.63	37.74	14.81	60.16	100	0	Р	Н
HT20													Н
CH 48		10482	54.73	-19.27	74	65.81	39.87	12.06	63.01	268	32	Р	V
5240MHz		10482	47.23	-6.77	54	58.31	39.87	12.06	63.01	268	32	Α	V
		15720	49.55	-24.45	74	57.16	37.74	14.81	60.16	100	0	Р	V
													V

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

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Page Number : B6 of B38

### WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	( dBµV/m )		( dBµV/m )	(dBµV)	( dB/m )	(dB)	(dB)	(cm)		(P/A)	(H/V
		5148.95	63.15	-10.85	74	55.8	31.98	7.94	32.57	135	36	Р	Н
		5150	47.6	-6.4	54	40.25	31.98	7.94	32.57	135	36	Α	Н
	*	5188	106.82	-	-	99.46	32.02	7.91	32.57	135	36	Р	Н
	*	5188	99.63	-	-	92.27	32.02	7.91	32.57	135	36	Α	Н
802.11n		5411.05	48.87	-25.13	74	40.87	32.28	8.29	32.57	135	36	Р	Н
HT40		5375.63	39.61	-14.39	54	31.65	32.24	8.29	32.57	135	36	Α	Н
CH 38		5146.55	59.87	-14.13	74	52.52	31.98	7.94	32.57	103	85	Р	V
5190MHz		5150	46.12	-7.88	54	38.77	31.98	7.94	32.57	103	85	Α	V
	*	5192	104.16	-	-	96.78	32.04	7.91	32.57	103	85	Р	V
	*	5192	96.53	-	-	89.15	32.04	7.91	32.57	103	85	Α	V
		5350.44	48.49	-25.51	74	40.61	32.22	8.23	32.57	103	85	Р	V
		5460	39.37	-14.63	54	31.31	32.34	8.29	32.57	103	85	Α	V
		5125.25	53.18	-20.82	74	45.85	31.96	7.94	32.57	112	38	Р	Н
		5127.35	45.48	-8.52	54	38.15	31.96	7.94	32.57	112	38	Α	Н
	*	5228	107.33	-	-	99.81	32.08	8.01	32.57	112	38	Р	Н
	*	5228	99.78	-	-	92.26	32.08	8.01	32.57	112	38	Α	Н
802.11n		5449	48.78	-25.22	74	40.72	32.34	8.29	32.57	112	38	Р	Н
HT40		5350	42.88	-11.12	54	35	32.22	8.23	32.57	112	38	Α	Н
CH 46		5128.25	53.59	-20.41	74	46.26	31.96	7.94	32.57	112	80	Р	V
5230MHz		5127.5	43.32	-10.68	54	35.99	31.96	7.94	32.57	112	80	Α	V
	*	5228	103.25	-	-	95.73	32.08	8.01	32.57	112	80	Р	V
	*	5228	95.83	-	-	88.31	32.08	8.01	32.57	112	80	Α	V
		5419.74	48.44	-25.56	74	40.42	32.3	8.29	32.57	112	80	Р	V
F		5350	40.73	-13.27	54	32.85	32.22	8.23	32.57	112	80	Α	V

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

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Page Number : B7 of B38

### WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( 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)
		10382	49.54	-24.46	74	60.96	39.71	11.96	63.09	100	0	Р	Н
		15570	44.92	-29.08	74	52.35	37.99	14.77	60.19	100	0	Р	Н
802.11n													Н
HT40													Н
CH 38		10380	50.73	-23.27	74	62.15	39.71	11.96	63.09	100	0	Р	V
5190MHz		15570	44.02	-29.98	74	51.45	37.99	14.77	60.19	100	0	Р	V
													V
													V
		10461	47.13	-26.87	74	58.28	39.85	12.03	63.03	100	0	Р	Н
		15690	46.17	-27.83	74	53.73	37.8	14.8	60.16	100	0	Р	Н
802.11n													Н
HT40													Н
CH 46		10461	49.44	-24.56	74	60.59	39.85	12.03	63.03	100	0	Р	V
5230MHz		15690	44.48	-29.52	74	52.04	37.8	14.8	60.16	100	0	Р	V
													V
													V
Remark		other spurious		Peak and	l Average lim	it line.							

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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)
		5072	52.3	-21.7	74	44.98	31.9	7.99	32.57	100	32	Р	Н
		5062.7	43.16	-10.84	54	35.86	31.88	7.99	32.57	100	32	Α	Н
	*	5259	115.83	-	-	108.16	32.12	8.12	32.57	100	32	Р	Н
	*	5259	107.96	-	-	100.29	32.12	8.12	32.57	100	32	Α	Н
902 44 6		5350	51.76	-22.24	74	43.88	32.22	8.23	32.57	100	32	Р	Н
802.11a CH 52		5350.66	41.92	-12.08	54	34.04	32.22	8.23	32.57	100	32	Α	Н
5260MHz		5072.6	51.4	-22.6	74	44.08	31.9	7.99	32.57	100	77	Р	V
3200WII 12		5064.05	42.28	-11.72	54	34.98	31.88	7.99	32.57	100	77	Α	V
	*	5258	111.89	-	-	104.24	32.1	8.12	32.57	100	77	Р	V
	*	5258	104.39	-	-	96.74	32.1	8.12	32.57	100	77	Α	V
		5361.77	48.8	-25.2	74	40.84	32.24	8.29	32.57	100	77	Р	V
		5350.99	40.53	-13.47	54	32.65	32.22	8.23	32.57	100	77	Α	V
		5101.4	52.91	-21.09	74	45.6	31.92	7.96	32.57	100	28	Р	Н
		5103.05	43.21	-10.79	54	35.9	31.92	7.96	32.57	100	28	Α	Н
	*	5298	114.39	-	-	106.62	32.16	8.18	32.57	100	28	Р	Н
	*	5298	107.1	-	-	99.33	32.16	8.18	32.57	100	28	Α	Н
000 44		5352.75	58.59	-15.41	74	50.71	32.22	8.23	32.57	100	28	Р	I
802.11a CH 60		5352.42	52.8	-1.2	54	44.92	32.22	8.23	32.57	100	28	Α	I
		5054.75	51.42	-22.58	74	44.12	31.88	7.99	32.57	104	81	Р	٧
5300MHz		5102.75	42.02	-11.98	54	34.71	31.92	7.96	32.57	104	81	Α	<b>V</b>
	*	5302	110.15	-	-	102.38	32.16	8.18	32.57	104	81	Р	<b>V</b>
	*	5302	102.98	-	-	95.21	32.16	8.18	32.57	104	81	Α	V
		5353.08	55.62	-18.38	74	47.74	32.22	8.23	32.57	104	81	Р	V
		5352.31	47.7	-6.3	54	39.82	32.22	8.23	32.57	104	81	Α	V

TEL: 886-3-327-3456 FAX: 886-3-328-4978

	*	5318	112.99	-	-	105.2	32.18	8.18	32.57	103	38	Р	Н
	*	5318	105.78	-	-	97.99	32.18	8.18	32.57	103	38	Α	Н
		5351.43	65.41	-8.59	74	57.53	32.22	8.23	32.57	103	38	Р	Н
		5350	51.98	-2.02	54	44.1	32.22	8.23	32.57	103	38	Α	H
20.44 -													Н
02.11a													F
CH 64 320MHz	*	5319	107.91	-	-	100.12	32.18	8.18	32.57	100	85	Р	٧
ZUIVITIZ	*	5319	101.73	-	-	93.94	32.18	8.18	32.57	100	85	Α	٧
		5350.55	60.96	-13.04	74	53.08	32.22	8.23	32.57	100	85	Р	V
		5350	48.34	-5.66	54	40.46	32.22	8.23	32.57	100	85	Α	V
													V
													V

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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)
		10520	58.83	-15.17	74	69.83	39.91	12.08	62.99	100	330	Р	Н
		10520	45.23	-8.77	54	56.23	39.91	12.08	62.99	100	330	Α	Н
802.11a		15780	48.81	-25.19	74	56.47	37.66	14.82	60.14	100	0	Р	Н
CH 52													Н
5260MHz		10521	57.03	-16.97	74	68.03	39.91	12.08	62.99	100	243	Р	V
3200WII 12		10521	44.85	-9.15	54	55.85	39.91	12.08	62.99	100	243	Α	V
		15780	50.39	-23.61	74	58.05	37.66	14.82	60.14	100	0	Р	V
													V
		10599	55.82	-18.18	74	66.69	39.98	12.11	62.96	117	331	Р	Н
		10599	43.54	-10.46	54	54.41	39.98	12.11	62.96	117	331	Α	Н
000 44 -		15897	40.77	-33.23	74	48.57	37.47	14.85	60.12	100	0	Р	Н
802.11a CH 60													Н
5300MHz		10598	53.48	-20.52	74	64.36	39.98	12.1	62.96	100	48	Р	V
3300WII 12		10598	44.79	-9.21	54	55.67	39.98	12.1	62.96	100	48	Α	V
		15903	41.21	-32.79	74	49.04	37.44	14.85	60.12	100	0	Р	V
													V
		10638	49.44	-24.56	74	60.26	40.01	12.11	62.94	100	0	Р	Н
		15960	45.5	-28.5	74	53.38	37.36	14.87	60.11	100	0	Р	Н
802.11a													Н
CH 64													Н
5320MHz		10638	50.64	-23.36	74	61.46	40.01	12.11	62.94	100	0	Р	V
J020111112		15960	45.56	-28.44	74	53.44	37.36	14.87	60.11	100	0	Р	V
													V
													V
Remark	1. No	o other spurious	s found.										
	2. Al	l results are PA	.SS against F	Peak and	Average lim	it line.							

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Page Number : B11 of B38

### 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 )		(P/A)	, ,
		5112.05	51.71	-22.29	74	44.38	31.94	7.96	32.57	100	25	Р	Н
		5067.95	42.84	-11.16	54	35.54	31.88	7.99	32.57	100	25	Α	Н
	*	5258	114.25	-	-	106.6	32.1	8.12	32.57	100	25	Р	Н
	*	5258	107.02	-	-	99.37	32.1	8.12	32.57	100	25	Α	Н
802.11n		5358.14	50.6	-23.4	74	42.72	32.22	8.23	32.57	100	25	Р	Н
HT20		5351.21	41.55	-12.45	54	33.67	32.22	8.23	32.57	100	25	Α	Н
CH 52		5077.1	51.48	-22.52	74	44.16	31.9	7.99	32.57	100	82	Р	V
5260MHz		5067.95	42.04	-11.96	54	34.74	31.88	7.99	32.57	100	82	Α	V
	*	5261	110.11	-	-	102.44	32.12	8.12	32.57	100	82	Р	٧
	*	5261	103.06	-	-	95.39	32.12	8.12	32.57	100	82	Α	<b>V</b>
		5399.61	48.74	-25.26	74	40.74	32.28	8.29	32.57	100	82	Р	٧
		5350.88	40.11	-13.89	54	32.23	32.22	8.23	32.57	100	82	Α	٧
		5019.05	52.26	-21.74	74	44.99	31.82	8.02	32.57	105	28	Р	Η
		5101.55	42.84	-11.16	54	35.53	31.92	7.96	32.57	105	28	Α	Η
	*	5302	113.28	-	-	105.51	32.16	8.18	32.57	105	28	Р	Η
	*	5302	106.21	-	-	98.44	32.16	8.18	32.57	105	28	Α	Н
802.11n		5352.09	59.68	-14.32	74	51.8	32.22	8.23	32.57	105	28	Р	Н
HT20		5351.76	52.31	-1.69	54	44.43	32.22	8.23	32.57	105	28	Α	Н
CH 60		5095.55	53.02	-20.98	74	45.71	31.92	7.96	32.57	107	80	Р	٧
5300MHz		5101.4	41.67	-12.33	54	34.36	31.92	7.96	32.57	107	80	Α	٧
	*	5302	108.36	-	-	100.59	32.16	8.18	32.57	107	80	Р	V
	*	5302	101.55	-	-	93.78	32.16	8.18	32.57	107	80	Α	V
		5353.63	53.67	-20.33	74	45.79	32.22	8.23	32.57	107	80	Р	V
		5351.76	47.47	-6.53	54	39.59	32.22	8.23	32.57	107	80	Α	V

TEL: 886-3-327-3456 FAX: 886-3-328-4978

	*	5318	111.68	-	-	103.89	32.18	8.18	32.57	100	27	Р	Н
	*	5318	104.97	-	-	97.18	32.18	8.18	32.57	100	27	Α	Н
		5350.22	68.63	-5.37	74	60.75	32.22	8.23	32.57	100	27	Р	Н
		5350	51.54	-2.46	54	43.66	32.22	8.23	32.57	100	27	Α	Н
802.11n													Н
HT20													Н
CH 64	*	5318	107.36	-	-	99.57	32.18	8.18	32.57	100	79	Р	V
5320MHz	*	5318	100.61	-	-	92.82	32.18	8.18	32.57	100	79	Α	V
		5350.44	62.93	-11.07	74	55.05	32.22	8.23	32.57	100	79	Р	V
		5350	47.47	-6.53	54	39.59	32.22	8.23	32.57	100	79	Α	٧
													V
													V

All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 )		( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/\
		10521	55.08	-18.92	74	66.08	39.91	12.08	62.99	100	330	Р	Н
		10521	43.46	-10.54	54	54.46	39.91	12.08	62.99	100	330	Α	Н
802.11n		15780	50.12	-23.88	74	57.78	37.66	14.82	60.14	100	0	Р	Н
HT20													Н
CH 52		10521	52.58	-21.42	74	63.58	39.91	12.08	62.99	100	26	Р	V
5260MHz		10521	44.94	-9.06	54	55.94	39.91	12.08	62.99	100	26	Α	V
		15780	48.81	-25.19	74	56.47	37.66	14.82	60.14	100	0	Р	V
													V
		10602	54.76	-19.24	74	65.63	39.98	12.11	62.96	100	329	Р	Н
		10602	41.72	-12.28	54	52.59	39.98	12.11	62.96	100	329	Α	Н
802.11n		15903	39.05	-34.95	74	46.88	37.44	14.85	60.12	100	0	Р	Н
HT20													Н
CH 60		10599	52.18	-21.82	74	63.05	39.98	12.11	62.96	100	45	Р	٧
5300MHz		10599	44.13	-9.87	54	55	39.98	12.11	62.96	100	45	Α	V
		15903	42.36	-31.64	74	50.19	37.44	14.85	60.12	100	0	Р	V
													V
		10641	48.67	-25.33	74	59.47	40.01	12.13	62.94	100	0	Р	Н
		15960	46.12	-27.88	74	54	37.36	14.87	60.11	100	0	Р	Н
802.11n													Н
HT20													Н
CH 64		10638	48.8	-25.2	74	59.62	40.01	12.11	62.94	100	0	Р	V
5320MHz		15960	45.95	-28.05	74	53.83	37.36	14.87	60.11	100	0	Р	V
													V
													V

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

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Page Number : B14 of B38

### 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		Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V
		5087.75	51.1	-22.9	74	43.81	31.9	7.96	32.57	100	26	Р	Н
		5150	43.96	-10.04	54	36.61	31.98	7.94	32.57	100	26	Α	Н
	*	5268	107.82	-	-	100.15	32.12	8.12	32.57	100	26	Р	Н
	*	5268	100.54	-	-	92.87	32.12	8.12	32.57	100	26	Α	Н
802.11n		5373.98	51.3	-22.7	74	43.34	32.24	8.29	32.57	100	26	Р	Н
HT40		5372.88	43.64	-10.36	54	35.68	32.24	8.29	32.57	100	26	Α	Н
CH 54		5068.4	51.04	-22.96	74	43.74	31.88	7.99	32.57	100	78	Р	V
5270MHz		5150	42.04	-11.96	54	34.69	31.98	7.94	32.57	100	78	Α	V
	*	5268	104.02	-	-	96.35	32.12	8.12	32.57	100	78	Р	V
	*	5268	96.3	-	-	88.63	32.12	8.12	32.57	100	78	Α	V
		5351.87	48.82	-25.18	74	40.94	32.22	8.23	32.57	100	78	Р	V
		5373.1	41.1	-12.9	54	33.14	32.24	8.29	32.57	100	78	Α	V
		5061.05	51.91	-22.09	74	44.61	31.88	7.99	32.57	100	27	Р	Н
		5022.05	42.15	-11.85	54	34.86	31.84	8.02	32.57	100	27	Α	Н
	*	5308	108.1	-	-	100.33	32.16	8.18	32.57	100	27	Р	Н
	*	5308	100.43	-	-	92.66	32.16	8.18	32.57	100	27	Α	Н
802.11n		5356.27	64.02	-9.98	74	56.14	32.22	8.23	32.57	100	27	Р	Н
HT40		5350	49.58	-4.42	54	41.7	32.22	8.23	32.57	100	27	Α	Н
CH 62		5088.65	50.72	-23.28	74	43.41	31.92	7.96	32.57	100	84	Р	V
5310MHz		5037.2	41.41	-12.59	54	34.12	31.84	8.02	32.57	100	84	Α	V
	*	5308	102.11	-	-	94.34	32.16	8.18	32.57	100	84	Р	V
	*	5308	95.69	-	-	87.92	32.16	8.18	32.57	100	84	Α	V
		5352.53	62.21	-11.79	74	54.33	32.22	8.23	32.57	100	84	Р	V
		5350	46.13	-7.87	54	38.25	32.22	8.23	32.57	100	84	Α	V

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

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		(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
		10539	47.91	-26.09	74	58.89	39.93	12.08	62.99	100	0	Р	Н
		15810	44.72	-29.28	74	52.43	37.6	14.83	60.14	100	0	Р	Н
802.11n													Н
HT40													Н
CH 54		10539	48.22	-25.78	74	59.2	39.93	12.08	62.99	100	0	Р	V
5270MHz		15810	45.2	-28.8	74	52.91	37.6	14.83	60.14	100	0	Р	V
													V
													V
		10620	46.86	-27.14	74	57.7	40	12.11	62.95	100	0	Р	Н
		15930	43.65	-30.35	74	51.49	37.41	14.86	60.11	100	0	Р	Н
802.11n													Н
HT40													Н
CH 62		10620	48.3	-25.7	74	59.14	40	12.11	62.95	100	0	Р	V
5310MHz		15930	42.62	-31.38	74	50.46	37.41	14.86	60.11	100	0	Р	V
													V
													V
Remark		other spurious results are PA		Peak and	l Average lim	it line.	,				<u>'</u>	ı	,

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 )	` '	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )		(P/A)	
		5470	62.36	-11.64	74	54.28	32.36	8.29	32.57	100	28	Р	Н
		5447.6	50.58	-3.42	54	42.52	32.34	8.29	32.57	100	28	Α	Н
	*	5502	111.2	-	-	103.09	32.4	8.29	32.58	100	28	Р	Н
	*	5502	103.96	-	-	95.85	32.4	8.29	32.58	100	28	Α	Н
802.11a													Н
CH 100													Н
5500MHz		5469.84	60.51	-13.49	74	52.43	32.36	8.29	32.57	100	75	Р	V
		5447.6	46	-8	54	37.94	32.34	8.29	32.57	100	75	Α	V
	*	5498	106.84	-	-	98.72	32.4	8.29	32.57	100	75	Р	V
	*	5498	99.22	-	-	91.1	32.4	8.29	32.57	100	75	Α	>
													V
													V
		5382.16	52.54	-21.46	74	44.56	32.26	8.29	32.57	100	29	Р	Н
		5381.68	42.81	-11.19	54	34.83	32.26	8.29	32.57	100	29	Α	Н
	*	5578	114.85	-	-	106.82	32.44	8.2	32.61	100	29	Р	Н
	*	5578	107.82	-	-	99.79	32.44	8.2	32.61	100	29	Α	Н
000 44 -		5753.64	51.61	-22.39	74	43.39	32.56	8.33	32.67	100	29	Р	Н
802.11a		5765	42.38	-11.62	54	34.14	32.56	8.35	32.67	100	29	Α	Н
CH 116 5580MHz		5383.76	50.53	-23.47	74	42.55	32.26	8.29	32.57	100	79	Р	٧
3300WIF12		5394.16	40.59	-13.41	54	32.61	32.26	8.29	32.57	100	79	Α	<b>V</b>
	*	5578	109.79	-	-	101.76	32.44	8.2	32.61	100	79	Р	V
	*	5578	102.97	-	-	94.94	32.44	8.2	32.61	100	79	Α	V
		5736.44	50.15	-23.85	74	41.95	32.54	8.33	32.67	100	79	Р	V
		5765	41.05	-12.95	54	32.81	32.56	8.35	32.67	100	79	Α	٧

TEL: 886-3-327-3456 FAX: 886-3-328-4978

	*	5698	113.4	-	-	105.24	32.51	8.3	32.65	100	338	Р
	*	5698	105.83	-	-	97.67	32.51	8.3	32.65	100	338	Α
		5726.28	67.9	-6.1	74	59.7	32.53	8.33	32.66	100	338	Р
		5752.44	51.69	-2.31	54	43.47	32.56	8.33	32.67	100	338	Α
)2.11a												
H 140	*	5698	105.71	-	-	97.55	32.51	8.3	32.65	100	76	Р
00MHz	*	5698	99	-	-	90.84	32.51	8.3	32.65	100	76	Α
		5725.64	56.11	-17.89	74	47.91	32.53	8.33	32.66	100	76	Р
		5725.08	45.44	-8.56	54	37.24	32.53	8.33	32.66	100	76	Α

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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)
		10998	55.19	-18.81	74	65.41	40.3	12.28	62.8	103	44	Р	Н
		10998	44.64	-9.36	54	54.86	40.3	12.28	62.8	103	44	Α	Н
802.11a		16500	44.67	-29.33	74	50.04	38.8	15.23	59.4	100	0	Р	Н
CH 100													Н
5500MHz		11000	50.63	-23.37	74	60.83	40.3	12.3	62.8	100	0	Р	V
JJUUMHZ		16500	45.46	-28.54	74	50.83	38.8	15.23	59.4	100	0	Р	V
													V
													V
		11160	57.12	-16.88	74	67.33	40.2	12.39	62.8	102	325	Р	Н
		11160	47.62	-6.38	54	57.83	40.2	12.39	62.8	102	325	Α	Н
		16740	42.47	-31.53	74	47.29	39.57	15.3	59.69	100	0	Р	Н
802.11a													Н
CH 116 5580MHz		11160	51.8	-22.2	74	62.01	40.2	12.39	62.8	100	315	Р	V
3360WITI2		11160	46.69	-7.31	54	56.9	40.2	12.39	62.8	100	315	Α	V
		16740	40.55	-33.45	74	45.37	39.57	15.3	59.69	100	0	Р	V
													V
		11402	60.49	-13.51	74	70.7	40.06	12.53	62.8	102	1	Р	Н
		11402	49.56	-4.44	54	59.77	40.06	12.53	62.8	102	1	Α	Н
		17100	46.83	-27.17	74	50.73	40.68	15.48	60.06	100	0	Р	Н
802.11a													Н
CH 140 5700MHz		11402	57	-17	74	67.21	40.06	12.53	62.8	100	344	Р	V
37 00WITI2		11402	46.42	-7.58	54	56.63	40.06	12.53	62.8	100	344	Α	V
		17100	47.49	-26.51	74	51.39	40.68	15.48	60.06	100	0	Р	V
													V
Remark	1. No	other spurious	s found.										
IVEIIIAI K	2. All	results are PA	SS against F	Peak and	Average lim	it line.							

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Page Number : B19 of B38

### 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 )		
		5469.36	63.55	-10.45	74	55.47	32.36	8.29	32.57	100	27	Р	Н
		5470	51.5	-2.5	54	43.42	32.36	8.29	32.57	100	27	Α	Н
	*	5502	111.58	-	-	103.47	32.4	8.29	32.58	100	27	Р	Н
	*	5502	103.86	-	-	95.75	32.4	8.29	32.58	100	27	Α	Н
802.11n													Н
HT20													Н
CH 100		5466.16	57.07	-16.93	74	48.99	32.36	8.29	32.57	111	78	Р	V
5500MHz		5470	47.42	-6.58	54	39.34	32.36	8.29	32.57	111	78	Α	٧
	*	5502	107.26	-	-	99.15	32.4	8.29	32.58	111	78	Р	V
	*	5502	99.53	-	-	91.42	32.4	8.29	32.58	111	78	Α	V
													V
													٧
		5386.32	50.8	-23.2	74	42.82	32.26	8.29	32.57	100	30	Р	Н
		5384.08	42.25	-11.75	54	34.27	32.26	8.29	32.57	100	30	Α	Н
	*	5578	114.22	-	-	106.19	32.44	8.2	32.61	100	30	Р	I
	*	5578	106.83	-	-	98.8	32.44	8.2	32.61	100	30	Α	Н
802.11n		5742.6	51.37	-22.63	74	43.17	32.54	8.33	32.67	100	30	Р	Н
HT20		5765	41.97	-12.03	54	33.73	32.56	8.35	32.67	100	30	Α	Н
CH 116		5358.16	49.28	-24.72	74	41.4	32.22	8.23	32.57	100	79	Р	٧
5580MHz		5394.96	40.25	-13.75	54	32.25	32.28	8.29	32.57	100	79	Α	٧
	*	5582	108.8	-	-	100.76	32.45	8.2	32.61	100	79	Р	٧
	*	5582	101.77	-	-	93.73	32.45	8.2	32.61	100	79	Α	V
		5726.92	50.69	-23.31	74	42.49	32.53	8.33	32.66	100	79	Р	V
		5765	40.91	-13.09	54	32.67	32.56	8.35	32.67	100	79	Α	٧

TEL: 886-3-327-3456 FAX: 886-3-328-4978

	T	T	1	Т			ı	T	1	1	T		
	*	5702	111.84	-	-	103.67	32.52	8.3	32.65	100	338	Р	Н
	*	5702	105.25	-	-	97.08	32.52	8.3	32.65	100	338	Α	Н
		5731	67.1	-6.9	74	58.91	32.53	8.33	32.67	100	338	Р	Н
		5725	52.81	-1.19	54	44.61	32.53	8.33	32.66	100	338	Α	Н
802.11n													Н
HT20													Н
CH 140	*	5698	106.12	-	-	97.96	32.51	8.3	32.65	100	65	Р	V
5700MHz	*	5698	98.74	-	-	90.58	32.51	8.3	32.65	100	65	Α	V
		5731.24	58.58	-15.42	74	50.39	32.53	8.33	32.67	100	65	Р	V
		5725.24	46.45	-7.55	54	38.25	32.53	8.33	32.66	100	65	Α	V
													V
													V
Remark	1. N	o other spurious	s found.										
Remark	2. A	ll results are PA	SS against I	Peak and	Average lin	nit line.							

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Band 3 - 5470~5725MHz

### 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/\
		11001	54.24	-19.76	74	64.44	40.3	12.3	62.8	100	3	Р	Н
		11001	43.62	-10.38	54	53.82	40.3	12.3	62.8	100	3	Α	Н
802.11n		16500	44.18	-29.82	74	49.55	38.8	15.23	59.4	100	0	Р	Н
HT20													Н
CH 100		11002	52.28	-21.72	74	62.48	40.3	12.3	62.8	100	305	Р	V
5500MHz		11002	42.99	-11.01	54	53.19	40.3	12.3	62.8	100	305	Α	V
		16500	42.95	-31.05	74	48.32	38.8	15.23	59.4	100	0	Р	V
													V
		11160	56.23	-17.77	74	66.44	40.2	12.39	62.8	100	41	Р	Н
		11160	47.58	-6.42	54	57.79	40.2	12.39	62.8	100	41	Α	Н
802.11n		16740	37.94	-36.06	74	42.76	39.57	15.3	59.69	100	0	Р	Н
HT20													Н
CH 116		11160	53.59	-20.41	74	63.8	40.2	12.39	62.8	100	312	Р	V
5580MHz		11160	46.33	-7.67	54	56.54	40.2	12.39	62.8	100	312	Α	V
		16740	38.05	-35.95	74	42.87	39.57	15.3	59.69	100	0	Р	V
													V
		11400	60.35	-13.65	74	70.56	40.06	12.53	62.8	100	1	Р	Н
		11400	49.04	-4.96	54	59.25	40.06	12.53	62.8	100	1	Α	Н
802.11n		17100	47.04	-26.96	74	50.94	40.68	15.48	60.06	100	0	Р	Н
HT20													Н
CH 140		11400	56.47	-17.53	74	66.68	40.06	12.53	62.8	100	344	Р	V
5700MHz		11400	46.18	-7.82	54	56.39	40.06	12.53	62.8	100	344	Α	V
		17100	47.19	-26.81	74	51.09	40.68	15.48	60.06	100	0	Р	V
													V

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

TEL: 886-3-327-3456 FAX: 886-3-328-4978

Band 3 - 5470~5725MHz

### WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.		<b>,</b> .		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	( deg )		
		5468.4	62.23	-11.77	74	54.15	32.36	8.29	32.57	100	26	Р	Н
		5470	51.84	-2.16	54	43.76	32.36	8.29	32.57	100	26	Α	Н
	*	5508	105.9	-	-	97.79	32.4	8.29	32.58	100	26	Р	Н
	*	5508	98.28	-	-	90.17	32.4	8.29	32.58	100	26	Α	Н
802.11n		5760.04	50.38	-23.62	74	42.16	32.56	8.33	32.67	100	26	Р	Н
HT40		5760.12	41.56	-12.44	54	33.34	32.56	8.33	32.67	100	26	Α	Н
CH 102		5469.2	56.22	-17.78	74	48.14	32.36	8.29	32.57	100	78	Р	٧
5510MHz		5470	47.9	-6.1	54	39.82	32.36	8.29	32.57	100	78	Α	٧
	*	5508	100.79	-	-	92.68	32.4	8.29	32.58	100	78	Р	V
	*	5508	93.62	-	-	85.51	32.4	8.29	32.58	100	78	Α	٧
		5735.56	50.27	-23.73	74	42.07	32.54	8.33	32.67	100	78	Р	٧
		5758.52	41.21	-12.79	54	32.99	32.56	8.33	32.67	100	78	Α	٧
		5448.08	52.84	-21.16	74	44.78	32.34	8.29	32.57	103	30	Р	Н
		5447.28	45.59	-8.41	54	37.53	32.34	8.29	32.57	103	30	Α	Н
	*	5550	108.36	-	-	100.28	32.43	8.24	32.59	103	30	Р	Н
	*	5550	103.5	-	-	95.42	32.43	8.24	32.59	103	30	Α	Н
802.11n		5729.56	51.82	-22.18	74	43.62	32.53	8.33	32.66	103	30	Р	Н
HT40		5741.96	41.21	-12.79	54	33.01	32.54	8.33	32.67	103	30	Α	Н
CH 110		5439.28	49.87	-24.13	74	41.83	32.32	8.29	32.57	100	82	Р	V
5550MHz		5447.12	42.2	-11.8	54	34.14	32.34	8.29	32.57	100	82	Α	V
	*	5555	103.71	-	-	95.64	32.43	8.24	32.6	100	82	Р	٧
	*	5555	96.23	-	-	88.16	32.43	8.24	32.6	100	82	Α	V
		5762.04	51.19	-22.81	74	42.95	32.56	8.35	32.67	100	82	Р	V
		5754.92	40.69	-13.31	54	32.47	32.56	8.33	32.67	100	82	Α	V

TEL: 886-3-327-3456 FAX: 886-3-328-4978

		5360.4	49.67	-24.33	74	41.79	32.22	8.23	32.57	100	333	Р	Н
		5467.12	40.49	-13.51	54	32.41	32.36	8.29	32.57	100	333	Α	Н
	*	5672	108.51	-	-	100.38	32.5	8.27	32.64	100	333	Р	Н
	*	5672	101.12	-	-	92.99	32.5	8.27	32.64	100	333	Α	Н
802.11n		5731.16	55.53	-18.47	74	47.34	32.53	8.33	32.67	100	333	Р	Н
HT40		5725	45.21	-8.79	54	37.01	32.53	8.33	32.66	100	333	Α	Н
CH 134		5441.52	48.44	-25.56	74	40.4	32.32	8.29	32.57	126	74	Р	V
5670MHz		5469.36	39.72	-14.28	54	31.64	32.36	8.29	32.57	126	74	Α	V
	*	5672	100.97	-	-	92.84	32.5	8.27	32.64	126	74	Р	V
	*	5672	93.87	-	-	85.74	32.5	8.27	32.64	126	74	Α	V
		5729.8	52.13	-21.87	74	43.93	32.53	8.33	32.66	126	74	Р	V
		5725.08	41.77	-12.23	54	33.57	32.53	8.33	32.66	126	74	Α	V

All results are PASS against Peak and Average limit line.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 )	(dB <sub>µ</sub> V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/\
		11019	50.79	-23.21	74	61	40.29	12.3	62.8	100	0	Р	Н
		16530	42.89	-31.11	74	48.18	38.91	15.24	59.44	100	0	Р	Н
802.11n													Н
HT40													Н
CH 102		11019	49.16	-24.84	74	59.37	40.29	12.3	62.8	100	0	Р	V
5510MHz		16530	42.34	-31.66	74	47.63	38.91	15.24	59.44	100	0	Р	V
													V
													V
		11100	51.53	-22.47	74	61.74	40.24	12.35	62.8	100	44	Р	Н
		11100	44.09	-9.91	54	54.3	40.24	12.35	62.8	100	44	Α	Н
802.11n		16650	37.83	-36.17	74	42.84	39.3	15.28	59.59	100	0	Р	Н
HT40													Н
CH 110		11100	49.59	-24.41	74	59.8	40.24	12.35	62.8	113	313	Р	V
5550MHz		11100	41.81	-12.19	54	52.02	40.24	12.35	62.8	113	313	Α	V
		16650	36.52	-37.48	74	41.53	39.3	15.28	59.59	100	0	Р	V
													V
		11340	55.18	-18.82	74	65.39	40.1	12.49	62.8	100	360	Р	Н
		11340	45.4	-8.6	54	55.61	40.1	12.49	62.8	100	360	Α	Н
802.11n		17010	46.49	-27.51	74	50.66	40.45	15.39	60.01	100	0	Р	Н
HT40													Н
CH 134		11343	50.71	-23.29	74	60.92	40.1	12.49	62.8	100	0	Р	V
5670MHz		17010	46.36	-27.64	74	50.53	40.45	15.39	60.01	100	0	Р	V
													V
													V
Remark		other spurious								•			

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

#### **Emission below 1GHz**

### WIFI 802.11n HT20 (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		(MHz)	( dBµV/m )		( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	(cm)	( deg )	(P/A)	
		31.08	16.65	-23.35	40	29.36	19.46	0.65	32.82			Р	Н
		41.61	11.93	-28.07	40	30.7	13.38	0.65	32.8			Р	Н
		109.65	11.93	-31.57	43.5	32.03	11.4	1.14	32.64			Р	Н
		472.9	24.03	-21.97	46	36.91	17.72	2.3	32.9			Р	Н
		512.1	25.95	-20.05	46	38.23	18.32	2.33	32.93			Р	Н
		542.2	27.16	-18.84	46	39.04	18.62	2.47	32.97	111	223	Р	Н
													Н
													Н
													Н
													Н
802.11n HT20 LF													Н
													Н
		32.7	19.94	-20.06	40	33.72	18.38	0.65	32.81	100	66	Р	V
LF		41.07	12.6	-27.4	40	30.81	13.94	0.65	32.8			Р	V
		87.24	9.93	-30.07	40	32.62	8.84	1.14	32.67			Р	V
		379.1	24.83	-21.17	46	39.56	15.96	2.13	32.82			Р	V
		484.8	25.29	-20.71	46	37.95	17.92	2.33	32.91			Р	V
		752.9	24.13	-21.87	46	32.52	21.63	2.91	32.93			Р	V
													V
													V
													V
													V
													V
													V

2. All results are PASS against limit line.

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

: B26 of B38 Page Number

### 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 <b>over limit</b> line.
P/A	Peak or Average
H/V	Horizontal or Vertical

TEL: 886-3-327-3456 FAX: 886-3-328-4978

#### 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	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 $\mu$ V/m) – Limit Line(dB $\mu$ 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 $\mu$ 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".

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### <For Sample 1>

#### Band 3 - 5470~5725MHz

### 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)
	*	5698	112.38	-	-	104.22	32.51	8.3	32.65	100	331	Р	Н
	*	5698	103.76	-	-	95.6	32.51	8.3	32.65	100	331	Α	Н
		5728.04	61.48	-12.52	74	53.28	32.53	8.33	32.66	100	331	Р	Н
		5751.8	50.76	-3.24	54	42.54	32.56	8.33	32.67	100	331	Α	Н
802.11n													Н
HT20													Н
CH 140	*	5698	105.8	-	-	97.64	32.51	8.3	32.65	107	63	Р	V
5700MHz	*	5698	98.56	-	-	90.4	32.51	8.3	32.65	107	63	Α	V
		5725.08	56.46	-17.54	74	48.26	32.53	8.33	32.66	107	63	Р	V
		5751.72	45.86	-8.14	54	37.64	32.56	8.33	32.67	107	63	Α	V
													V
													V
Remark	3. No	other spurious	s found.										
	4. All	results are PA	SS against F	Peak and	Average lim	it line.							

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	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)	Pos	Peak Avg. (P/A)	
		11400	55.64	-18.36	74	65.85	40.06	12.53	62.8	100	26	Р	Н
		11400	48.46	-5.54	54	58.67	40.06	12.53	62.8	100	26	Α	Н
802.11n		17100	47.03	-26.97	74	50.93	40.68	15.48	60.06	100	0	Р	Н
HT20													Н
CH 140		11397	55.51	-18.49	74	65.74	40.06	12.51	62.8	100	313	Р	V
5700MHz		11397	46.84	-7.16	54	57.07	40.06	12.51	62.8	100	313	Α	V
		17100	47.45	-26.55	74	51.35	40.68	15.48	60.06	100	0	Р	V
													V
Remark		o other spurious		Peak and	Average lim	it line.	ı		1	1	1	1	1

TEL: 886-3-327-3456 FAX: 886-3-328-4978

#### **Emission below 1GHz**

### WIFI 802.11n HT20 (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		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
		30	25.68	-14.32	40	37.85	20	0.65	32.82			Р	Н
		79.41	32.01	-7.99	40	55.89	7.88	0.93	32.69	128	12	Р	Н
		139.62	30.86	-12.64	43.5	50.3	11.9	1.33	32.67			Р	Н
		329.4	24.59	-21.41	46	40.78	14.63	1.94	32.76			Р	Н
		752.2	23.85	-22.15	46	32.24	21.63	2.91	32.93			Р	Н
		920.9	24.67	-21.33	46	29.9	23.65	3.2	32.08			Р	Н
													Н
													Н
													Н
													Н
802.11n													Н
HT20													Н
LF		30	33.64	-6.36	40	45.81	20	0.65	32.82			Р	V
		76.44	36.25	-3.75	40	60.49	7.53	0.93	32.7	166	99	Р	V
		139.62	24.59	-18.91	43.5	44.03	11.9	1.33	32.67			Р	V
		304.2	18.96	-27.04	46	35.88	13.93	1.88	32.73			Р	V
		323.1	18.82	-27.18	46	35.25	14.45	1.88	32.76			Р	V
		621.3	23.18	-22.82	46	33.72	19.86	2.62	33.02			Р	V
													V
													V
													V
													V
													V
													V

### SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 <b>over limit</b> line.
P/A	Peak or Average
H/V	Horizontal or Vertical

TEL: 886-3-327-3456 FAX: 886-3-328-4978

#### 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	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 $\mu$ V/m) – Limit Line(dB $\mu$ 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
- 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 $\mu$ 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".

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### <For Sample 2>

#### Band 3 - 5470~5725MHz

### 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)
	*	5698	111.09	-	-	102.93	32.51	8.3	32.65	100	327	Р	Н
	*	5698	102.18	-	-	94.02	32.51	8.3	32.65	100	327	Α	Н
		5731.56	67.5	-6.5	74	59.31	32.53	8.33	32.67	100	327	Р	Н
		5751.88	49.55	-4.45	54	41.33	32.56	8.33	32.67	100	327	Α	Н
802.11n													Н
HT20													Н
CH 140	*	5698	105.68	-	-	97.52	32.51	8.3	32.65	100	63	Р	٧
5700MHz	*	5698	98.48	-	-	90.32	32.51	8.3	32.65	100	63	Α	٧
		5725	58.85	-15.15	74	50.65	32.53	8.33	32.66	100	63	Р	٧
		5725	46.75	-7.25	54	38.55	32.53	8.33	32.66	100	63	Α	٧
													V
													V
Remark		other spurious											
	6. All	results are PA	SS against F	eak and	Average lim	it line.							

TEL: 886-3-327-3456 FAX: 886-3-328-4978

## WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	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 )		Avg.	
		11400	58.51	-15.49	74	68.72	40.06	12.53	62.8	100	2	Р	Н
		11400	48.16	-5.84	54	58.37	40.06	12.53	62.8	100	2	Α	Н
802.11n		17100	46.26	-27.74	74	50.16	40.68	15.48	60.06	100	0	Р	Н
HT20													Н
CH 140		11400	53.79	-20.21	74	64	40.06	12.53	62.8	102	6	Р	V
5700MHz		11400	46.64	-7.36	54	56.85	40.06	12.53	62.8	102	6	Α	V
		17100	47.23	-26.77	74	51.13	40.68	15.48	60.06	100	0	Р	V
													V
Remark		o other spurious		Peak and	Average lim	it line.							

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

#### **Emission below 1GHz**

### WIFI 802.11n HT20 (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		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)		(H/V)
		31.89	16.8	-23.2	40	30.05	18.92	0.65	32.82			Р	Н
		122.88	11.3	-32.2	43.5	30.88	11.93	1.14	32.65			Р	Н
		210.36	13.22	-30.28	43.5	33.93	10.4	1.62	32.73			Р	Н
		303.5	18.77	-27.23	46	35.71	13.91	1.88	32.73			Р	Н
		602.4	33.49	-12.51	46	44.33	19.62	2.57	33.03	106	63	Р	Н
		789.3	26.9	-19.1	46	34.83	21.99	2.97	32.89			Р	Н
													Н
													Н
													Н
													Н
													Н
802.11n HT20													Н
LF		31.62	23.37	-16.63	40	36.62	18.92	0.65	32.82			Р	V
		35.4	20.14	-19.86	40	35.56	16.74	0.65	32.81			Р	V
		201.72	14.58	-28.92	43.5	35.68	10.15	1.48	32.73			Р	V
		505.1	28.18	-17.82	46	40.53	18.25	2.33	32.93			Р	V
		514.2	29.54	-16.46	46	41.81	18.34	2.33	32.94	164	183	Р	V
		785.1	27.16	-18.84	46	35.14	21.95	2.97	32.9			Р	V
													V
													V
													V
													V
													V
													V

### SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978

### 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 <b>over limit</b> line.								
P/A	Peak or Average								
H/V	Horizontal or Vertical								

TEL: 886-3-327-3456 FAX: 886-3-328-4978

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

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

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

4. Over Limit(dB) = Level(dB $\mu$ V/m) – Limit Line(dB $\mu$ V/m)

#### For Peak Limit @ 2390MHz:

- 3. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 54.51(dB\mu V) 35.86 (dB)$
- $= 55.45 (dB\mu V/m)$
- 4. 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:

- 3. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dB $\mu$ V) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 42.6(dB\mu V) 35.86 (dB)$
- $= 43.54 (dB\mu V/m)$
- 4. 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".

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978