

Appendix C. Unwanted Emissions Measurement for Antenna 8

	Antenna Information							
	Model Name	ML-2499-PNAHD-02R						
Antenna 8	Antenna Type	Patch Antenna						
	Antenna Gain	6.2 dBi						

	Test Cases
Test Item	802.11b (Modulation : DSSS)
rest item	802.11g/n (Modulation : OFDM)
	Mode 1: 802.11b_CH01_2412 MHz (Chain 1+2)
	Mode 2: 802.11b_CH02_2417 MHz (Chain 1+2)
	Mode 3: 802.11b_CH06_2437 MHz (Chain 1+2)
	Mode 4: 802.11b_CH10_2457 MHz (Chain 1+2)
	Mode 5: 802.11b_CH11_2462 MHz (Chain 1+2)
	Mode 6: 802.11g_CH01_2412 MHz (Chain 1+2)
	Mode 7: 802.11g_CH02_2417 MHz (Chain 1+2)
	Mode 8: 802.11g_CH06_2437 MHz (Chain 1+2)
	Mode 9: 802.11g_CH10_2457 MHz (Chain 1+2)
	Mode 10: 802.11g_CH11_2462 MHz (Chain 1+2)
	Mode 11: 802.11n HT20_CH01_2412 MHz (Chain 1+2)
Radiated	Mode 12: 802.11n HT20_CH02_2417 MHz (Chain 1+2)
TCs	Mode 13: 802.11n HT20_CH06_2437 MHz (Chain 1+2)
	Mode 14: 802.11n HT20_CH10_2457 MHz (Chain 1+2)
	Mode 15: 802.11n HT20_CH11_2462 MHz (Chain 1+2)
	Mode 16: 802.11n HT40_CH03_2422 MHz (Chain 1+2)
	Mode 17: 802.11n HT40_CH04_2427 MHz (Chain 1+2)
	Mode 18: 802.11n HT40_CH05_2432 MHz (Chain 1+2)
	Mode 19: 802.11n HT40_CH06_2437 MHz (Chain 1+2)
	Mode 20: 802.11n HT40_CH07_2442 MHz (Chain 1+2)
	Mode 21: 802.11n HT40_CH08_2447 MHz (Chain 1+2)
	Mode 22: 802.11n HT40_CH09_2452 MHz (Chain 1+2)
	Mode 23: 802.11b_CH11_2462 MHz (Chain 1+2)
	Mode 24: 802.11n HT20_CH11_2462 MHz (Chain 1+2)
Remark: Mode	1 to 22 of radiation test were performed on DC 4.5V and Mode 23 to 24 were performed on

Remark: Mode 1 to 22 of radiation test were performed on DC 4.5V and Mode 23 to 24 were performed on

DC 3.3V.

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C1 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



> Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	22~24°C
Test Band :	802.11b	Relative Humidity :	50~52%
Test Channel :	01	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2386.68	59.39	-14.61	74	55.02	32.3	6.03	33.96	105	324	Peak		
2385.42	47.7	-6.3	54	43.35	32.28	6.03	33.96	105	324	Average		
2494.18	59.32	-14.68	74	54.74	32.4	6.18	34	105	324	Peak		
2496.12	46.17	-7.83	54	41.59	32.4	6.18	34	105	324	Average		

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2386.77	63.46	-10.54	74	59.09	32.3	6.03	33.96	119	17	Peak		
2385.87	53.23	-0.77	54	48.86	32.3	6.03	33.96	119	17	Average		
2496.2	62.17	-11.83	74	57.59	32.4	6.18	34	119	17	Peak		
2496.58	51.13	-2.87	54	46.55	32.4	6.18	34	119	17	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C2 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 2	Temperature :	22~24°C
Test Band :	802.11b	Relative Humidity :	50~52%
Test Channel :	02	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.83	58.4	-15.6	74	54.03	32.3	6.03	33.96	104	46	Peak		
2388.66	45.33	-8.67	54	40.96	32.3	6.03	33.96	104	46	Average		
2496.22	58.17	-15.83	74	53.59	32.4	6.18	34	104	46	Peak		
2495.08	44.81	-9.19	54	40.23	32.4	6.18	34	104	46	Average		

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.65	64.05	-9.95	74	59.68	32.3	6.03	33.96	122	5	Peak		
2390	53.4	-0.6	54	49.03	32.3	6.03	33.96	122	5	Average		
2498.5	62.13	-11.87	74	57.55	32.4	6.18	34	122	5	Peak		
2497.92	49.4	-4.6	54	44.82	32.4	6.18	34	122	5	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C3 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 4	Temperature :	22~24°C
Test Band :	802.11b	Relative Humidity :	50~52%
Test Channel :	10	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2337.54	57.73	-16.27	74	53.48	32.24	5.95	33.94	103	313	Peak		
2372.64	44.37	-9.63	54	40.05	32.28	5.99	33.95	103	313	Average		
2499.32	58.81	-15.19	74	54.23	32.4	6.18	34	103	313	Peak		
2483.74	45.36	-8.64	54	40.8	32.38	6.18	34	103	313	Average		

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2377.95	59.82	-14.18	74	55.5	32.28	5.99	33.95	116	8	Peak		
2372.46	47.48	-6.52	54	43.16	32.28	5.99	33.95	116	8	Average		
2483.88	64.17	-9.83	74	59.61	32.38	6.18	34	116	8	Peak		
2483.76	53.1	-0.9	54	48.54	32.38	6.18	34	116	8	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C4 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 5	Temperature :	22~24°C
Test Band :	802.11b	Relative Humidity :	50~52%
Test Channel :	11	Test Engineer :	Kyle Jhuang

			ANTE	NNA POL	ARITY : HO	RIZONTA	L			
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2332.05	57.15	-16.85	74	52.91	32.23	5.95	33.94	102	56	Peak
2377.5	44.11	-9.89	54	39.79	32.28	5.99	33.95	102	56	Average
2484.08	59.33	-14.67	74	54.77	32.38	6.18	34	102	56	Peak
2488.18	45.83	-8.17	54	41.25	32.4	6.18	34	102	56	Average

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2378.22	60.51	-13.49	74	56.19	32.28	5.99	33.95	119	2	Peak		
2376.87	49.2	-4.8	54	44.88	32.28	5.99	33.95	119	2	Average		
2487.74	65.26	-8.74	74	60.68	32.4	6.18	34	119	2	Peak		
2488.04	53.41	-0.59	54	48.83	32.4	6.18	34	119	2	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C5 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 6	Temperature :	22~24°C
Test Band :	802.11g	Relative Humidity :	50~52%
Test Channel :	01	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2390	61.23	-12.77	74	56.86	32.3	6.03	33.96	104	46	Peak		
2389.74	46.1	-7.9	54	41.73	32.3	6.03	33.96	104	46	Average		
2492.86	57.89	-16.11	74	53.31	32.4	6.18	34	104	46	Peak		
2493.98	44.37	-9.63	54	39.79	32.4	6.18	34	104	46	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2390	73.4	-0.6	74	69.03	32.3	6.03	33.96	100	3	Peak	
2390	52.73	-1.27	54	48.36	32.3	6.03	33.96	100	3	Average	
2492.6	59.3	-14.7	74	54.72	32.4	6.18	34	100	3	Peak	
2488.38	45.59	-8.41	54	41.01	32.4	6.18	34	100	3	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C6 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 7	Temperature :	22~24°C
Test Band :	802.11g	Relative Humidity :	50~52%
Test Channel :	02	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.74	60.37	-13.63	74	56	32.3	6.03	33.96	186	36	Peak		
2389.74	46.21	-7.79	54	41.84	32.3	6.03	33.96	186	36	Average		
2499.86	60.64	-13.36	74	56.06	32.4	6.18	34	186	36	Peak		
2497.98	47.32	-6.68	54	42.74	32.4	6.18	34	186	36	Average		

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.38	68.07	-5.93	74	63.7	32.3	6.03	33.96	100	347	Peak		
2389.83	53.19	-0.81	54	48.82	32.3	6.03	33.96	100	347	Average		
2490.14	62.93	-11.07	74	58.35	32.4	6.18	34	100	347	Peak		
2489.86	48.9	-5.1	54	44.32	32.4	6.18	34	100	347	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C7 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 9	Temperature :	22~24°C
Test Band :	802.11g	Relative Humidity :	50~52%
Test Channel :	10	Test Engineer :	Kyle Jhuang

			ANTE	NNA POL	ARITY : HO	RIZONTA	L			
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2339.97	58.3	-15.7	74	54.05	32.24	5.95	33.94	103	324	Peak
2383.62	45.09	-8.91	54	40.74	32.28	6.03	33.96	103	324	Average
2487.98	61.98	-12.02	74	57.4	32.4	6.18	34	103	324	Peak
2492.24	47.01	-6.99	54	42.43	32.4	6.18	34	103	324	Average

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2376.24	62.86	-11.14	74	58.54	32.28	5.99	33.95	119	9	Peak	
2376.42	49.33	-4.67	54	45.01	32.28	5.99	33.95	119	9	Average	
2483.98	69.22	-4.78	74	64.66	32.38	6.18	34	119	9	Peak	
2483.98	52.07	-1.93	54	47.51	32.38	6.18	34	119	9	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C8 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 10	Temperature :	22~24°C
Test Band :	802.11g	Relative Humidity :	50~52%
Test Channel :	11	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2323.41	57.03	-16.97	74	52.81	32.23	5.92	33.93	103	324	Peak		
2386.32	44.01	-9.99	54	39.64	32.3	6.03	33.96	103	324	Average		
2483.9	63.05	-10.95	74	58.49	32.38	6.18	34	103	324	Peak		
2483.5	46.66	-7.34	54	42.1	32.38	6.18	34	103	324	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2376.06	59.24	-14.76	74	54.92	32.28	5.99	33.95	117	7	Peak	
2377.77	46.39	-7.61	54	42.07	32.28	5.99	33.95	117	7	Average	
2483.66	72.99	-1.01	74	68.43	32.38	6.18	34	117	7	Peak	
2483.5	53.16	-0.84	54	48.6	32.38	6.18	34	117	7	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C9 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 11	Temperature :	22~24°C
Test Band :	802.11n HT20	Relative Humidity :	50~52%
Test Channel :	01	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.83	62.27	-11.73	74	57.9	32.3	6.03	33.96	105	325	Peak		
2389.74	46.57	-7.43	54	42.2	32.3	6.03	33.96	105	325	Average		
2493.4	58.64	-15.36	74	54.06	32.4	6.18	34	105	325	Peak		
2492.92	44.73	-9.27	54	40.15	32.4	6.18	34	105	325	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2388.75	69.42	-4.58	74	65.05	32.3	6.03	33.96	120	4	Peak	
2390	53.53	-0.47	54	49.16	32.3	6.03	33.96	120	4	Average	
2488.98	62.15	-11.85	74	57.57	32.4	6.18	34	120	4	Peak	
2489.34	47.92	-6.08	54	43.34	32.4	6.18	34	120	4	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C10 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 12	Temperature :	22~24°C
Test Band :	802.11n HT20	Relative Humidity :	50~52%
Test Channel :	02	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2389.74	60.67	-13.33	74	56.3	32.3	6.03	33.96	160	36	Peak	
2390	46.95	-7.05	54	42.58	32.3	6.03	33.96	160	36	Average	
2492.76	59.13	-14.87	74	54.55	32.4	6.18	34	160	36	Peak	
2487.86	45.6	-8.4	54	41.02	32.4	6.18	34	160	36	Average	

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2389.92	69.84	-4.16	74	65.47	32.3	6.03	33.96	121	8	Peak	
2389.74	53.18	-0.82	54	48.81	32.3	6.03	33.96	121	8	Average	
2489.1	65.23	-8.77	74	60.65	32.4	6.18	34	121	8	Peak	
2489.74	50.9	-3.1	54	46.32	32.4	6.18	34	121	8	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C11 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 14	Temperature :	22~24°C
Test Band :	802.11n HT20	Relative Humidity :	50~52%
Test Channel :	10	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2328.63	57.76	-16.24	74	53.54	32.23	5.92	33.93	190	284	Peak		
2388.84	44.73	-9.27	54	40.36	32.3	6.03	33.96	190	284	Average		
2485.82	61.33	-12.67	74	56.77	32.38	6.18	34	190	284	Peak		
2483.56	47.43	-6.57	54	42.87	32.38	6.18	34	190	284	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2379.48	64.03	-9.97	74	59.71	32.28	5.99	33.95	118	1	Peak	
2376.42	50.44	-3.56	54	46.12	32.28	5.99	33.95	118	1	Average	
2483.74	70.37	-3.63	74	65.81	32.38	6.18	34	118	1	Peak	
2483.5	53.11	-0.89	54	48.55	32.38	6.18	34	118	1	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C12 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 15	Temperature :	22~24°C
Test Band :	802.11n HT20	Relative Humidity :	50~52%
Test Channel :	11	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.65	57.22	-16.78	74	52.85	32.3	6.03	33.96	191	284	Peak		
2386.86	43.86	-10.14	54	39.49	32.3	6.03	33.96	191	284	Average		
2483.68	61.49	-12.51	74	56.93	32.38	6.18	34	191	284	Peak		
2483.5	46.6	-7.4	54	42.04	32.38	6.18	34	191	284	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2350.77	58.54	-15.46	74	54.29	32.24	5.95	33.94	117	1	Peak	
2376.42	46.09	-7.91	54	41.77	32.28	5.99	33.95	117	1	Average	
2484.4	69.12	-4.88	74	64.56	32.38	6.18	34	117	1	Peak	
2483.5	53.58	-0.42	54	49.02	32.38	6.18	34	117	1	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C13 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 16	Temperature :	22~24°C
Test Band :	802.11n HT40	Relative Humidity :	50~52%
Test Channel :	03	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.38	62.5	-11.5	74	58.13	32.3	6.03	33.96	191	284	Peak		
2390	46.23	-7.77	54	41.86	32.3	6.03	33.96	191	284	Average		
2494.92	57.66	-16.34	74	53.08	32.4	6.18	34	191	284	Peak		
2483.94	44.14	-9.86	54	39.58	32.38	6.18	34	191	284	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2390	71.76	-2.24	74	67.39	32.3	6.03	33.96	120	7	Peak	
2390	53.15	-0.85	54	48.78	32.3	6.03	33.96	120	7	Average	
2489.42	62.05	-11.95	74	57.47	32.4	6.18	34	120	7	Peak	
2489.14	47.18	-6.82	54	42.6	32.4	6.18	34	120	7	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C14 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 17	Temperature :	22~24°C
Test Band :	802.11n HT40	Relative Humidity :	50~52%
Test Channel :	04	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2388.84	60.79	-13.21	74	56.42	32.3	6.03	33.96	193	285	Peak	
2390	46.51	-7.49	54	42.14	32.3	6.03	33.96	193	285	Average	
2494.04	57.79	-16.21	74	53.21	32.4	6.18	34	193	285	Peak	
2483.56	44.28	-9.72	54	39.72	32.38	6.18	34	193	285	Average	

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2390	68.76	-5.24	74	64.39	32.3	6.03	33.96	100	344	Peak	
2389.92	52.78	-1.22	54	48.41	32.3	6.03	33.96	100	344	Average	
2488.42	59.41	-14.59	74	54.83	32.4	6.18	34	100	344	Peak	
2483.5	46.04	-7.96	54	41.48	32.38	6.18	34	100	344	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C15 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 18	Temperature :	22~24°C
Test Band :	802.11n HT40	Relative Humidity :	50~52%
Test Channel :	05	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2389.56	58.29	-15.71	74	53.92	32.3	6.03	33.96	190	284	Peak		
2389.92	45.56	-8.44	54	41.19	32.3	6.03	33.96	190	284	Average		
2484.44	58.15	-15.85	74	53.59	32.38	6.18	34	190	284	Peak		
2483.66	44.8	-9.2	54	40.24	32.38	6.18	34	190	284	Average		

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2389.02	67.72	-6.28	74	63.35	32.3	6.03	33.96	121	5	Peak	
2389.74	53.32	-0.68	54	48.95	32.3	6.03	33.96	121	5	Average	
2489.56	62.38	-11.62	74	57.8	32.4	6.18	34	121	5	Peak	
2489.1	48.48	-5.52	54	43.9	32.4	6.18	34	121	5	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C16 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 20	Temperature :	22~24°C
Test Band :	802.11n HT40	Relative Humidity :	50~52%
Test Channel :	07	Test Engineer :	Kyle Jhuang

			ANTE	NNA POL	ARITY : HO	RIZONTA	L			
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2345.1	57.79	-16.21	74	53.54	32.24	5.95	33.94	190	284	Peak
2389.65	44.08	-9.92	54	39.71	32.3	6.03	33.96	190	284	Average
2484.12	61.06	-12.94	74	56.5	32.38	6.18	34	190	284	Peak
2483.6	47.13	-6.87	54	42.57	32.38	6.18	34	190	284	Average

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2382.36	61.32	-12.68	74	56.97	32.28	6.03	33.96	120	4	Peak	
2390	48.63	-5.37	54	44.26	32.3	6.03	33.96	120	4	Average	
2486.76	68.87	-5.13	74	64.31	32.38	6.18	34	120	4	Peak	
2483.76	53.1	-0.9	54	48.54	32.38	6.18	34	120	4	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C17 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 21	Temperature :	22~24°C
Test Band :	802.11n HT40	Relative Humidity :	50~52%
Test Channel :	08	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2381.19	57.16	-16.84	74	52.81	32.28	6.03	33.96	192	284	Peak		
2387.31	43.92	-10.08	54	39.55	32.3	6.03	33.96	192	284	Average		
2483.56	61.56	-12.44	74	57	32.38	6.18	34	192	284	Peak		
2483.62	46.48	-7.52	54	41.92	32.38	6.18	34	192	284	Average		

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2379.39	59.13	-14.87	74	54.81	32.28	5.99	33.95	117	6	Peak		
2376.69	46.06	-7.94	54	41.74	32.28	5.99	33.95	117	6	Average		
2483.76	70.44	-3.56	74	65.88	32.38	6.18	34	117	6	Peak		
2483.5	53.49	-0.51	54	48.93	32.38	6.18	34	117	6	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C18 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 22	Temperature :	22~24°C
Test Band :	802.11n HT40	Relative Humidity :	50~52%
Test Channel :	09	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2337.63	57.5	-16.5	74	53.25	32.24	5.95	33.94	189	287	Peak		
2384.79	43.52	-10.48	54	39.17	32.28	6.03	33.96	189	287	Average		
2483.6	64.61	-9.39	74	60.05	32.38	6.18	34	189	287	Peak		
2483.54	46.38	-7.62	54	41.82	32.38	6.18	34	189	287	Average		

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2377.59	57.85	-16.15	74	53.53	32.28	5.99	33.95	116	6	Peak		
2377.95	44.48	-9.52	54	40.16	32.28	5.99	33.95	116	6	Average		
2483.98	73.34	-0.66	74	68.78	32.38	6.18	34	116	6	Peak		
2483.6	51.86	-2.14	54	47.3	32.38	6.18	34	116	6	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C19 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 23	Temperature :	22~24°C
Test Band :	802.11b	Relative Humidity :	50~52%
Test Channel :	11	Test Engineer :	Kyle Jhuang

			ANTE	NNA POL	ARITY : HO	RIZONTA	L			
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2339.25	45.83	-28.17	74	43.53	32.24	5.95	35.89	101	90	Peak
2378.4	33.69	-20.31	54	31.3	32.28	5.99	35.88	101	90	Average
2488.1	53.08	-20.92	74	50.3	32.4	6.18	35.8	101	90	Peak
2487.12	41.99	-12.01	54	39.23	32.38	6.18	35.8	101	90	Average

	ANTENNA POLARITY : VERTICAL											
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark		
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos			
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)			
2378.13	58.11	-15.89	74	55.72	32.28	5.99	35.88	118	1	Peak		
2376.6	46.15	-7.85	54	43.76	32.28	5.99	35.88	118	1	Average		
2487.88	63.05	-10.95	74	60.27	32.4	6.18	35.8	118	1	Peak		
2488.42	53.11	-0.89	54	50.33	32.4	6.18	35.8	118	1	Average		

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C20 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 24	Temperature :	22~24°C
Test Band :	802.11n HT20	Relative Humidity :	50~52%
Test Channel :	11	Test Engineer :	Kyle Jhuang

	ANTENNA POLARITY : HORIZONTAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2319.54	57.2	-16.8	74	52.98	32.23	5.92	33.93	118	3	Peak	
2349.6	43.45	-10.55	54	39.2	32.24	5.95	33.94	118	3	Average	
2493.44	57.32	-16.68	74	52.74	32.4	6.18	34	118	3	Peak	
2493.28	43.69	-10.31	54	39.11	32.4	6.18	34	118	3	Average	

	ANTENNA POLARITY : VERTICAL										
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark	
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos		
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)		
2389.65	59.34	-14.66	74	54.97	32.3	6.03	33.96	118	3	Peak	
2389.11	46.13	-7.87	54	41.76	32.3	6.03	33.96	118	3	Average	
2483.7	70.32	-3.68	74	65.76	32.38	6.18	34	118	3	Peak	
2483.52	53.60	-0.4	54	49.23	32.38	6.18	34	118	3	Average	

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C21 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01

Test Results of Radiated Emissions (30MHz ~ 10th Harmonic)

Test Mode :	Mode 1	1	Temperature :	22~24°C
Test Channel :	01		Relative Humidity :	50~52%
Test Engineer :	Kyle Jh	nuang	Polarization :	Horizontal
	1. 24	412 MHz is fundamental siç	gnal which can be ignore	ed.
Remark :	2. Te	est result of emissions which	ch are 20 dB lower than	the limit is not reported
	ре	er15.31.		

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2412	109.34	-	-	104.93	32.31	6.07	33.97	105	324	Average
2412	113.74	-	-	109.33	32.31	6.07	33.97	105	324	Peak

Test Mode :	Mod	e 1	Temperature :	22~24°C
Test Channel :	01		Relative Humidity :	50~52%
Test Engineer :	Kyle	Jhuang	Polarization :	Vertical
	1.	2412 MHz is fundamental sig	gnal which can be ignore	ed.
Remark :	2.	Test result of emissions which	ch are 20 dB lower than	the limit is not reported
		per15.31.		

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2412	115.8	-	-	111.39	32.31	6.07	33.97	119	17	Average
2412	120.45	-	-	116.04	32.31	6.07	33.97	119	17	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6

: C22 of C47 Page Number Report Issued Date: Oct. 30, 2012

Report No.: FR290603A

Report Version : Rev. 01



Test Mode :	Mode 2	Temperature :	22~24°C
Test Channel :	02	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal
	1. 2417 MHz is fundamental sig	gnal which can be ignore	ed.
Remark :	2. Test result of emissions which	ch are 20 dB lower than	the limit is not reported
	per15.31.		

Frequency	Level	Over	Limit	Read	Antenna		Preamp			Remark
(MHz)	(dBuV/m)	Limit (dB)	Line (dBuV/m)	Level (dBuV)	Factor (dB)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	
2417	108.88	-	-	104.47	32.31	6.07	33.97	104	46	Average
2417	113.35	-	-	108.94	32.31	6.07	33.97	104	46	Peak

Test Mode :	Mod	le 2	Temperature :	22~24°C
Test Channel :	02		Relative Humidity :	50~52%
Test Engineer :	Kyle	Jhuang	Polarization :	Vertical
	1.	2417 MHz is fundamental sig	gnal which can be ignore	ed.
Remark :	2.	Test result of emissions which	ch are 20 dB lower than	the limit is not reported
		per15.31.		

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2417	116.15	-	-	111.74	32.31	6.07	33.97	122	5	Average
2417	121.73	-	-	117.32	32.31	6.07	33.97	122	5	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C23 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01

Test Mode: Mode 3 22~24°C Temperature : Test Channel: 06 Relative Humidity: 50~52% Test Engineer : Kyle Jhuang Polarization: Horizontal 1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported Remark:

per15.31.

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2382	45.56	-8.44	54	41.21	32.28	6.03	33.96	159	63	Average
2383.35	58.82	-15.18	74	54.47	32.28	6.03	33.96	159	63	Peak
2437	111.89	-	-	107.41	32.35	6.11	33.98	159	63	Average
2437	116.98	-	-	112.5	32.35	6.11	33.98	159	63	Peak
2484.7	45.68	-8.32	54	41.12	32.38	6.18	34	159	63	Average
2487.22	59.53	-14.47	74	54.97	32.38	6.18	34	159	63	Peak

Test Mode :	Mod	le 3	Temperature :	22~24°C
Test Channel :	06		Relative Humidity :	50~52%
Test Engineer :	Kyle	e Jhuang	Polarization :	Vertical
	1.	2437 MHz is fundamental sig	gnal which can be ignore	ed.
Remark :	2.	Test result of emissions which	ch are 20 dB lower than	the limit is not reported
		per15.31.		

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2346.81	62.23	-11.77	74	57.98	32.24	5.95	33.94	120	6	Peak
2352.21	51.17	-2.83	54	46.9	32.26	5.95	33.94	120	6	Average
2437	120.61	-	-	116.13	32.35	6.11	33.98	120	6	Average
2437	126.15	-	-	121.69	32.33	6.11	33.98	120	6	Peak
2484.34	50.65	-3.35	54	46.09	32.38	6.18	34	120	6	Average
2484.98	63.36	-10.64	74	58.8	32.38	6.18	34	120	6	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C24 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 4	Temperature :	22~24°C			
Test Channel :	10	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal			
	2457 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which	Test result of emissions which are 20 dB lower than the limit is not re				
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)		(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2457	106.19	-	-	101.67	32.37	6.14	33.99	103	313	Average
2457	111.75	-	-	107.23	32.37	6.14	33.99	103	313	Peak

Test Mode :	Mod	le 4	Temperature :	22~24°C		
Test Channel :	10		Relative Humidity :	50~52%		
Test Engineer :	Kyle	Jhuang	Polarization :	Vertical		
	1.	2457 MHz is fundamental sig	gnal which can be igno	red.		
Remark :	2.	Test result of emissions which are 20 dB lower than the limit is not				
		per15.31.				

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2457	115.86	-	-	111.34	32.37	6.14	33.99	116	8	Average
2457	120.92	-	-	116.4	32.37	6.14	33.99	116	8	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C25 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 5	Temperature :	22~24°C			
Test Channel :	11	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal			
	1. 2462 MHz is fundamental sign	nal which can be ignored	l.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not					
	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2462	107.63	-	-	103.11	32.37	6.14	33.99	102	56	Average
2462	112.79	-	-	108.27	32.37	6.14	33.99	102	56	Peak

Test Mode :	Mode 5	Temperature :	22~24°C		
Test Channel :	11	Relative Humidity :	50~52%		
Test Engineer :	Kyle Jhuang	Polarization :	Vertical		
	1. 2462 MHz is fundamental sign	nal which can be ignored	I.		
Remark: 2. Test result of emissions which are 20 dB lower than the limit is r					
	per15.31.				

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2462	114.96	-	-	110.44	32.37	6.14	33.99	119	2	Average
2462	120.2	-	-	115.68	32.37	6.14	33.99	119	2	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C26 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 6	Temperature :	22~24°C			
Test Channel :	01	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal			
	1. 2412 MHz is fundamental sign	nal which can be ignored	l.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not rep					
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2412	98.37	-	-	93.96	32.31	6.07	33.97	104	46	Average
2412	109.39	-	-	104.98	32.31	6.07	33.97	104	46	Peak

Test Mode :	Mode 6	Temperature :	22~24°C			
Test Channel :	01	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	1. 2412 MHz is fundamental sign	nal which can be ignored				
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not rep					
	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2412	106.34	-	-	101.93	32.31	6.07	33.97	100	3	Average
2412	117.36	-	-	112.95	32.31	6.07	33.97	100	3	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C27 of C47
Report Issued Date : Oct. 30, 2012

Report No.: FR290603A

Report Version : Rev. 01



Test Mode :	Mode 7	Temperature :	22~24°C				
Test Channel :	02	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2417 MHz is fundamental sign	nal which can be ignored	l.				
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not rep						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2417	101.07	-	-	96.66	32.31	6.07	33.97	186	36	Average
2417	112.58	-	-	108.17	32.31	6.07	33.97	186	36	Peak

Test Mode :	Mode 7	Temperature :	22~24°C				
Test Channel :	02	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Vertical				
	1. 2417 MHz is fundamental sign	nal which can be ignored					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not re						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2417	108.9	-	-	104.49	32.31	6.07	33.97	100	347	Average
2417	121.26	-	-	116.85	32.31	6.07	33.97	100	347	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C28 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 8	Temperature :	22~24°C				
Test Channel :	06	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2437 MHz is fundamental si	gnal which can be ignore	ed.				
Remark :	2. Test result of emissions whi	Test result of emissions which are 20 dB lower than the limit is not rep					
	per15.31.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
89.13	30.73	-12.77	43.5	52.95	8.51	0.93	31.66	-	-	Peak
151.23	26.94	-16.56	43.5	45.99	11.13	1.21	31.39	-	-	Peak
276.78	37.2	-8.8	46	53.96	12.97	1.64	31.37	100	137	Peak
314	34.05	-11.95	46	49.73	13.69	1.8	31.17	-	-	Peak
426.7	26.02	-19.98	46	38.43	16.57	2.23	31.21	-	-	Peak
897.8	31.84	-14.16	46	36.24	23.08	3.34	30.82	-	-	Peak
2376.24	46.31	-7.69	54	41.99	32.28	5.99	33.95	103	324	Average
2382	59.89	-14.11	74	55.54	32.28	6.03	33.96	103	324	Peak
2437	102.48	-	-	98	32.35	6.11	33.98	103	324	Average
2437	114.08	-	-	109.6	32.35	6.11	33.98	103	324	Peak
2492	47.86	-6.14	54	43.28	32.4	6.18	34	103	324	Average
2492.48	61.28	-12.72	74	56.7	32.4	6.18	34	103	324	Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C29 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 8	Temperature :	22~24°C				
Test Channel :	06	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Vertical				
	1. 2437 MHz is fundamental si	gnal which can be ignore	ich can be ignored.				
Remark :	2. Test result of emissions whi	Test result of emissions which are 20 dB lower than the limit is not rep					
	per15.31.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
86.97	32.18	-7.82	40	54.62	8.33	0.92	31.69	100	137	Peak
150.69	29.09	-14.41	43.5	48.07	11.2	1.21	31.39	-	-	Peak
250.05	30.66	-15.34	46	47.69	12.6	1.53	31.16	-	-	Peak
319.6	25.76	-20.24	46	41.22	13.85	1.81	31.12	-	-	Peak
664	37.07	-8.93	46	44.28	20.31	2.87	30.39	-	-	Peak
997.9	34.13	-19.87	54	36.49	24.57	3.51	30.44	-	-	Peak
2375.79	63.75	-10.25	74	59.43	32.28	5.99	33.95	117	4	Peak
2377.05	50.11	-3.89	54	45.79	32.28	5.99	33.95	117	4	Average
2437	109.96	-	-	105.48	32.35	6.11	33.98	117	4	Average
2437	121.15	-	-	116.67	32.35	6.11	33.98	117	4	Peak
2488.02	53.07	-0.93	54	48.49	32.4	6.18	34	117	4	Average
2492.08	67.97	-6.03	74	63.39	32.4	6.18	34	117	4	Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C30 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mod	le 9	Temperature :	22~24°C			
Test Channel :	10		Relative Humidity :	50~52%			
Test Engineer :	Kyle	. Jhuang	Polarization :	Horizontal			
	red.						
Remark :	2.	Test result of emissions which are 20 dB lower than the limit is not report					
		per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2457	102.03	-	-	97.51	32.37	6.14	33.99	103	324	Average
2457	112.9	-	-	108.38	32.37	6.14	33.99	103	324	Peak

Test Mode :	Mode 9		Temperature :	22~24°C			
Test Channel :	10		Relative Humidity :	50~52%			
Test Engineer :	Kyle	Jhuang	Polarization :	Vertical			
	1.	2457 MHz is fundamental sig	gnal which can be ignore	ed.			
Remark :	2.	Test result of emissions which are 20 dB lower than the limit is not					
		per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2457	109.16	-	-	104.64	32.37	6.14	33.99	119	9	Average
2457	121.18	-	-	116.66	32.37	6.14	33.99	119	9	Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6

Page Number : C31 of C47 Report Issued Date: Oct. 30, 2012

Report No.: FR290603A

Report Version : Rev. 01



Test Mode :	Mode 10	Temperature :	22~24°C				
Test Channel :	11	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2462 MHz is fundamental sign	1. 2462 MHz is fundamental signal which can be ignored.					
Remark :	the limit is not reported						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read	Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)	Level (dBuV)	(dB)	Loss (dB)	(dB)		(deg)	
2462	96.62	-	-	92.1	32.37	6.14	33.99	103	324	Average
2462	108.19	-	-	103.67	32.37	6.14	33.99	103	324	Peak

Test Mode :	Mode 10	Temperature :	22~24°C			
Test Channel :	11	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	2462 MHz is fundamental signal which can be ignored.					
Remark: 2. Test result of emissions which are 20 dB lower than the limit						
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2462	104.52	-	-	100	32.37	6.14	33.99	117	7	Average
2462	116	-	-	111.48	32.37	6.14	33.99	117	7	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C32 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 11	Temperature :	22~24°C				
Test Channel :	01	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2412 MHz is fundamental sign	2412 MHz is fundamental signal which can be ignored.					
Remark :	the limit is not reported						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2412	94.86	-	-	90.45	32.31	6.07	33.97	105	325	Average
2412	108.1	-	-	103.69	32.31	6.07	33.97	105	325	Peak

Test Mode :	Mode 11	Temperature :	22~24°C				
Test Channel :	01	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Vertical				
	1. 2412 MHz is fundamental sign	2412 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not re						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2412	103.51	-	-	99.1	32.31	6.07	33.97	120	4	Average
2412	114.45	-	-	110.04	32.31	6.07	33.97	120	4	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C33 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 12	Temperature :	22~24°C				
Test Channel :	02	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2417 MHz is fundamental siç	2417 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions whi	the limit is not reported					
	per15.31.						

Frequency	Level	Over	Limit	Read	Antenna		Preamp			Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2417	99.25	-	-	94.84	32.31	6.07	33.97	160	36	Average
2417	111.48	-	-	107.07	32.31	6.07	33.97	160	36	Peak

Test Mode :	Mode 12	Temperature :	22~24°C			
Test Channel :	02	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	2417 MHz is fundamental signal which can be ignored.					
Remark :	rk: 2. Test result of emissions which are 20 dB lower than the limit is not					
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2417	108.84	-	-	104.43	32.31	6.07	33.97	121	8	Average
2417	120.32	-	-	115.89	32.33	6.07	33.97	121	8	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C34 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01

Test Mode :	Mode 13	Temperature :	22~24°C				
Test Channel :	06	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2437 MHz is fundamental sign	nal which can be ignored	l.				
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not reported						
	per15.31.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2381.28	59.52	-14.48	74	55.17	32.28	6.03	33.96	197	286	Peak
2389.92	47.03	-6.97	54	42.66	32.3	6.03	33.96	197	286	Average
2437	101.22	-	-	96.74	32.35	6.11	33.98	197	286	Average
2437	113.57	-	-	109.09	32.35	6.11	33.98	197	286	Peak
2483.58	47.11	-6.89	54	42.55	32.38	6.18	34	197	286	Average
2485.3	61.37	-12.63	74	56.81	32.38	6.18	34	197	286	Peak

Test Mode :	Mode 13	Temperature :	22~24°C			
Test Channel :	06	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	2437 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not reported					
	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
(MHz)	(dBuV/m)	Limit (dB)	Line (dBuV/m)	Level (dBuV)	Factor (dB)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	
2387.58	67.14	-6.86	74	62.77	32.3	6.03	33.96	121	2	Peak
2389.56	53.26	-0.74	54	48.89	32.3	6.03	33.96	121	2	Average
2437	109.13	-	-	104.65	32.35	6.11	33.98	121	2	Average
2437	119.93	-	-	115.45	32.35	6.11	33.98	121	2	Peak
2485.48	68.3	-5.7	74	63.74	32.38	6.18	34	121	2	Peak
2489.16	51.68	-2.32	54	47.1	32.4	6.18	34	121	2	Average

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C35 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 14	Temperature :	22~24°C				
Test Channel :	10	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2457 MHz is fundamental siç	2457 MHz is fundamental signal which can be ignored.					
Remark: 2. Test result of emissions which are 20 dB lower than the limit is							
	per15.31.	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp			Remark
(MHz)	(dBuV/m)	Limit (dB)	Line (dBuV/m)	Level (dBuV)	Factor (dB)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	
2457	100.55	-	-	96.03	32.37	6.14	33.99	190	284	Average
2457	113.02	-	-	108.5	32.37	6.14	33.99	190	284	Peak

Test Mode :	Mode	e 14	Temperature :	22~24°C			
Test Channel :	10		Relative Humidity :	50~52%			
Test Engineer :	Kyle	Jhuang	Polarization :	Vertical			
	1.	2457 MHz is fundamental signal which can be ignored.					
Remark :	2.	2. Test result of emissions which are 20 dB lower than the limit is not reported					
		per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2457	108.68	-	-	104.16	32.37	6.14	33.99	118	1	Average
2457	120.61	-	-	116.09	32.37	6.14	33.99	118	1	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C36 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 15	Temperature :	22~24°C				
Test Channel :	11	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	2462 MHz is fundamental signal which can be ignored.						
Remark :	2. Test result of emissions when	2. Test result of emissions which are 20 dB lower than the limit is not reported					
	per15.31.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2462	94.6	-	-	90.08	32.37	6.14	33.99	191	284	Average
2462	107.03	-	-	102.51	32.37	6.14	33.99	191	284	Peak

Test Mode :	Mode 15	Temperature :	22~24°C				
Test Channel :	11	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Vertical				
	2462 MHz is fundamental signal which can be ignored.						
Remark :	2. Test result of emissions w	2. Test result of emissions which are 20 dB lower than the limit is not reported					
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2462	101.91	-	-	97.39	32.37	6.14	33.99	117	1	Average
2462	114.02	-	-	109.5	32.37	6.14	33.99	117	1	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C37 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 16	Temperature :	22~24°C			
Test Channel :	03	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal			
	1. 2422 MHz is fundamental sign	nal which can be ignored	l.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not r					
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2422	87.59	-	-	83.16	32.33	6.07	33.97	191	284	Average
2422	100.86	-	-	96.43	32.33	6.07	33.97	191	284	Peak

Test Mode :	Mode 16	Temperature :	22~24°C			
Test Channel :	03	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	1. 2422 MHz is fundamental sign	nal which can be ignored	l.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not					
	per15.31.					

Frequency		Over Limit	Limit Line	Read Level	Antenna Factor	Loss	Preamp Factor	Pos	Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2422	97.01	-	-	92.58	32.33	6.07	33.97	120	7	Average
2422	108.63	-	-	104.2	32.33	6.07	33.97	120	7	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C38 of C47
Report Issued Date : Oct. 30, 2012

Report No.: FR290603A

Report Version : Rev. 01



Test Mode :	Mode 17	7	Temperature :	22~24°C			
Test Channel :	04		Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhu	ang	Polarization :	Horizontal			
	1. 242	7 MHz is fundamental sign	nal which can be ignored				
Remark :	2. Test	. Test result of emissions which are 20 dB lower than the limit is not re					
	per1	5.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2427	90.06	-	-	85.63	32.33	6.07	33.97	193	285	Average
2427	101.96	-	-	97.53	32.33	6.07	33.97	193	285	Peak

Test Mode :	Mode 17	Temperature :	22~24°C		
Test Channel :	04	Relative Humidity :	50~52%		
Test Engineer :	Kyle Jhuang	Polarization :	Vertical		
	1. 2427 MHz is fundamental sign	nal which can be ignored	l.		
Remark: 2. Test result of emissions which are 20 dB lower than the limit is no					
	per15.31.				

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2427	97.18	-	-	92.75	32.33	6.07	33.97	100	344	Average
2427	109.47	-	-	105.04	32.33	6.07	33.97	100	344	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C39 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 18	Temperature :	22~24°C			
Test Channel :	05	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal			
	1. 2432 MHz is fundamental sign	nal which can be ignored	l.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not					
	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna		Preamp	1		Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2432	91.46	-	-	87	32.33	6.11	33.98	190	284	Average
2432	104.18	-	-	99.72	32.33	6.11	33.98	190	284	Peak

Test Mode :	Mode 18	Temperature :	22~24°C
Test Channel :	05	Relative Humidity :	50~52%
Test Engineer :	Kyle Jhuang	Polarization :	Vertical
	1. 2432 MHz is fundamental sign	nal which can be ignored	I.
Remark :	2. Test result of emissions which	h are 20 dB lower than	the limit is not reported
	per15.31.		

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2432	100.08	-	-	95.62	32.33	6.11	33.98	121	5	Average
2432	112.59	-	-	108.18	32.31	6.07	33.97	121	5	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C40 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 19	Temperature :	22~24°C			
Test Channel :	06	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal			
	1. 2437 MHz is fundamental sign	nal which can be ignored	I.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not reported					
	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2390	58.23	-15.77	74	53.86	32.3	6.03	33.96	189	284	Peak
2390	45.07	-8.93	54	40.7	32.3	6.03	33.96	189	284	Average
2437	92.82	-	-	88.34	32.35	6.11	33.98	189	284	Average
2437	106.7	-	-	102.22	32.35	6.11	33.98	189	284	Peak
2483.54	46.94	-7.06	54	42.38	32.38	6.18	34	189	284	Average
2484.26	61.31	-12.69	74	56.75	32.38	6.18	34	189	284	Peak

Test Mode :	Mode 19	Temperature :	22~24°C			
Test Channel :	06	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	1. 2437 MHz is fundamental sign	nal which can be ignored	l.			
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not reported					
	per15.31.					

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2389.56	66.14	-7.86	74	61.77	32.3	6.03	33.96	119	9	Peak
2389.74	51.95	-2.05	54	47.58	32.3	6.03	33.96	119	9	Average
2437	101.78	-	-	97.3	32.35	6.11	33.98	119	9	Average
2437	114.91	-	-	110.43	32.35	6.11	33.98	119	9	Peak
2483.56	70.76	-3.24	74	66.2	32.38	6.18	34	119	9	Peak
2483.72	53.57	-0.43	54	49.01	32.38	6.18	34	119	9	Average

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C41 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 20		Temperature :	22~24°C		
Test Channel :	07		Relative Humidity :	50~52%		
Test Engineer :	Kyle Jhuang		Polarization :	Horizontal		
	1. 2442	MHz is fundamental si	gnal which can be ignore	ed.		
Remark :	2. Test	Test result of emissions which are 20 dB lower than the limit is not reported				
	per15	5.31.				

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2442	92.1	-	-	87.62	32.35	6.11	33.98	190	284	Average
2442	105.72	-	-	101.24	32.35	6.11	33.98	190	284	Peak

Test Mode :	Mode 20	Temperature :	22~24°C				
Test Channel :	07	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Vertical				
	1. 2442 MHz is fundamental si	2442 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not reported						
	per15.31.						

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2442	100.3	-	-	95.82	32.35	6.11	33.98	120	4	Average
2442	112.08	-	-	107.6	32.35	6.11	33.98	120	4	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C42 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 21		Temperature :	22~24°C			
Test Channel :	08		Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang		Polarization :	Horizontal			
	1.	2447 MHz is fundamental sig	gnal which can be ignore	ed.			
Remark :	2.	2. Test result of emissions which are 20 dB lower than the limit is not reported					
		per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2447	89.42	-	-	84.94	32.35	6.11	33.98	192	284	Average
2447	101.94	-	-	97.46	32.35	6.11	33.98	192	284	Peak

Test Mode :	Mode 21	Temperature :	22~24°C			
Test Channel :	08	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	1. 2447 MHz is fur	ndamental signal which can be ignor	ed.			
Remark :	Test result of er	. Test result of emissions which are 20 dB lower than the limit is not reported				
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2447	97.19	-	-	92.71	32.35	6.11	33.98	117	6	Average
2447	109.39	-	-	104.87	32.37	6.14	33.99	117	6	Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C43 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 22	Temperature :	22~24°C				
Test Channel :	09	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2452 MHz is fundamental sign	2452 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2452	84.92	-	-	80.44	32.35	6.11	33.98	189	287	Average
2452	99.37	-	-	94.89	32.35	6.11	33.98	189	287	Peak

Test Mode :	Mode 22	Temperature :	22~24°C			
Test Channel :	09	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	1. 2452 MHz is fundamental sign	nal which can be ignored.				
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not repo					
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2452	93.24	-	-	88.76	32.35	6.11	33.98	116	6	Average
2452	105.89	-	-	101.37	32.37	6.14	33.99	116	6	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C44 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 23	Temperature :	22~24°C				
Test Channel :	11	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2462 MHz is fundamental sign	2462 MHz is fundamental signal which can be ignored.					
Remark :	emark: 2. Test result of emissions which are 20 dB lower than the limit is no						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	•	(dBuV/m)		(dB)	(dB)	(dB)		(deg)	
2462	100.37	-	-	97.67	32.37	6.14	35.81	101	90	Average
2462	105.84	-	-	103.14	32.37	6.14	35.81	101	90	Peak

Test Mode :	Mode 23	Temperature :	22~24°C			
Test Channel :	11	Relative Humidity :	50~52%			
Test Engineer :	Kyle Jhuang	Polarization :	Vertical			
	2462 MHz is fundamental signal which can be ignored.					
Remark: 2. Test result of emissions which are 20 dB lower than the limit is						
	per15.31.					

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2462	111.8	-	-	109.1	32.37	6.14	35.81	118	1	Average
2462	116.18	-	-	113.48	32.37	6.14	35.81	118	1	Peak

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C45 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 24	Temperature :	22~24°C				
Test Channel :	11	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal				
	1. 2462 MHz is fundamental sign	2462 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not re						
	per15.31.						

Frequency	Level	Over	Limit Line	Read	Antenna Factor	Cable	Preamp	Ant	Table	Remark
(MHz)	(dBuV/m)	Limit (dB)	(dBuV/m)	Level (dBuV)	(dB)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	
68.07	27.76	-12.24	40	52.46	6.26	0.82	31.78	-	-	Peak
209.28	26.18	-17.32	43.5	46.46	9.77	1.36	31.41	-	-	Peak
240.06	38.45	-7.55	46	56.19	11.93	1.53	31.2	100	113	Peak
624.1	34.45	-11.55	46	42.15	19.99	2.76	30.45	-	-	Peak
672.4	31.17	-14.83	46	38.33	20.37	2.88	30.41	-	-	Peak
902.7	30.93	-15.07	46	35.27	23.14	3.35	30.83	-	-	Peak
2462	78.34	-	-	73.82	32.37	6.14	33.99	118	3	Average
2462	90.92	-	-	86.4	32.37	6.14	33.99	118	3	Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C46 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01



Test Mode :	Mode 24	Temperature :	22~24°C				
Test Channel :	11	Relative Humidity :	50~52%				
Test Engineer :	Kyle Jhuang	Polarization :	Vertical				
	1. 2462 MHz is fundamental sign	2462 MHz is fundamental signal which can be ignored.					
Remark :	2. Test result of emissions which are 20 dB lower than the limit is not re						
	per15.31.						

Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
(MHz)	(dBuV/m)	(dB)	(dBuV/m)		(dB)	(dB)	(dB)	(cm)	(deg)	
72.39	31.61	-8.39	40	55.85	6.68	0.85	31.77	100	57	Peak
139.35	29.88	-13.62	43.5	48.75	11.4	1.2	31.47	-	-	Peak
250.05	30.46	-15.54	46	47.49	12.6	1.53	31.16	-	-	Peak
399.4	33.94	-12.06	46	47.31	16	2.14	31.51	-	-	Peak
666.1	35.93	-10.07	46	43.12	20.33	2.87	30.39	-	-	Peak
913.9	30.62	-15.38	46	34.78	23.3	3.37	30.83	-	-	Peak
2462	101.05	-	-	96.53	32.37	6.14	33.99	118	3	Average
2462	114	-	-	109.48	32.37	6.14	33.99	118	3	Peak

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7AP6 Page Number : C47 of C47
Report Issued Date : Oct. 30, 2012
Report Version : Rev. 01