5.9 Peak Output Power Measurement

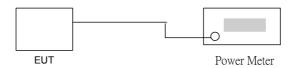
5.9.1 Measuring Instruments:

As described in chapter 6 of this test report.

5.9.2 Test Procedure:

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. The power is equal to the reading level on power meter plus cable loss at the EUT antenna terminal.

5.9.3 Test Setup Layout:



5.9.4 Test Result:

Application Type : WLAN 802.11b and BT

 Temperature : 26°C Relative Humidity: 53 % Test Enginner: Jay

WLAN 802.11b

Channel	Frequency	Measured Output Power	Limits
	(MHz)	(dBm)	(Watt/dBm)
01	2412	14.68	1W/30 dBm
06	2437	14.46	1W/30 dBm
11	2462	14.45	1W/30 dBm

BT

Channel	Frequency	Measured Output Power	Limits
	(MHz)	(dBm)	(Watt/dBm)
00	2402	2.69	1W/30 dBm
39	2441	2.86	1W/30 dBm
78	2480	2.90	1W/30 dBm

SPORTON International Inc.

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5.10 Conducted Emission Measurement

5.10.1 Measuring Instruments

As described in chapter 6 of this test Report.

5.10.2 Test Procedures

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.

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- b. Connect EUT to the power port of the line impedance stabilization network (LISN).
- c. All the support units are connect to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

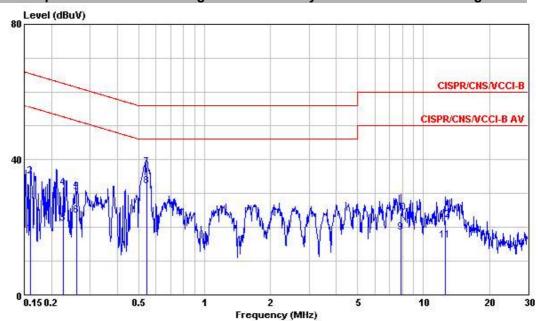
SPORTON International Inc.

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5.10.3 Test Data

Application Type : 802.11b Temperature : 26 °C Relating Humidity: 53 % Test Enginner: Jay Test Mode : Mode 1

The test that passed at minimum margin was marked by the frame in the following table.



Site : site

Condition : CISPR/CNS/VCCI-B 2003 2001/004 LINE

EUT : PDA

:120V/60Hz POWER

MODEL

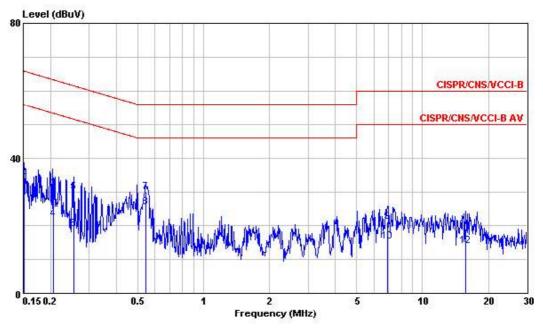
EUT Only MEMO

DIE	IMO	EO I OHLY							
	Freq	Ov Level Lim		mit ine	Read Level	Factor	LISN Factor	Cable Loss	Remark
	MHz	dBuV	āĒ ^{−−} ā	BuV	dBuV	āB	āB	₫B	
1	0.1598470	18.06 -37.	41 55	.47	17.95	0.11	0.10	0.01	Average
2	0.1598470	34.92 -30.	55 65	.47	34.81	0.11	0.10	0.01	OP
3	0.2271010	21.10 -31.	46 52	. 56	20.99	0.11	0.10	0.01	Average
4	0.2271010	31.50 -31.	06 62	.56	31.39	0.11	0.10	0.01	OP
5	0.2601590	30.29 -31.	14 61	.43	30.18	0.11	0.10	0.01	ŎΡ
6	0.2601590	23.50 -27.	93 51	.43	23.39	0.11	0.10	0.01	Äverage
7	@0.5464400	37.60 -18.	40 56	.00	37.47	0.13	0.10	0.03	
8	@0.5464400	32.23 -13.	77 46	.00	32.10	0.13	0.10	0.03	Average
9	7.890	18.41 -31.	59 50	.00	18.21	0.20	0.10	0.10	Average
10	7.890	24.17 -35.	83 60	.00	23.97	0.20	0.10	0.10	QP
11	12.580	16.05 -33.	95 50	.00	15.75	0.30	0.16	0.14	Average
12	12.580	21.99 -38.	01 60	.00	21.69	0.30	0.16	0.14	OP

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Site : site Condition : CISPR/CNS/VCCI-B 2003 2001/004 NEUTRAL

EUT : PDA

POWER :120V/60Hz

MODEL

: EUT Only MEMO

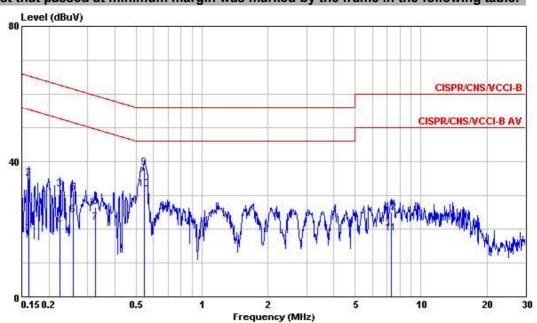
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	LISN Factor	Cable Loss	Remark
	MHz	dBuV	−−−dB	₫BuV	<u>dBuV</u>	₫B	−−−dB	₫B	
1 2 3 4 5 6 7 8 9	0.2054430 0.2547970 0.2547970 0.5464400 @0.5464400 6.910	34.51 30.92 21.89 30.08 18.91 30.01 25.56 21.18	-29.22 -31.40 -32.47 -31.50 -31.52 -32.69 -25.99 -20.44 -38.82 -34.86	55.91 65.91 63.39 53.39 61.60 51.60 56.00 46.00 60.00 50.00	26.58 34.40 30.81 21.78 29.97 18.80 29.88 25.43 20.93 14.89	0.11 0.11 0.11 0.11 0.11 0.13 0.13 0.25	0.10 0.10 0.10 0.10 0.10 0.10	0.01 0.01 0.01 0.01 0.01 0.03 0.03 0.09	ÕP Äverage ÕP Äverage ÕP Äverage
11 12	15.800	18.88	-41.12 -35.97	60.00 50.00	18.49 13.64			0.17	

SPORTON International Inc.

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Application Type : 802.11b Temperature : 26 °C Relating Humidity: 53 % Test Enginner: Jay Test Mode : Mode 2

The test that passed at minimum margin was marked by the frame in the following table.



Site : site

Condition : CISPR/CNS/VCCI-B 2003 2001/004 LINE

EUT : PDA

POWER :120V/60Hz

MODEL

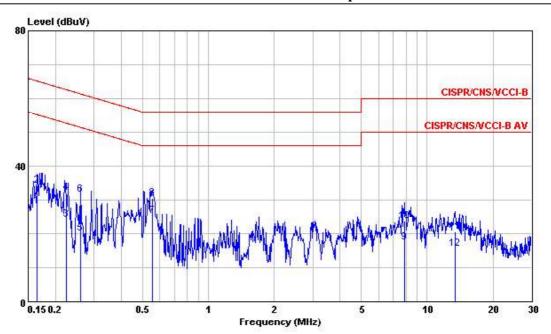
Cradle Mode MEMO

DIED	10 A	rame 1	Mode						
	Freq	Level	Over Limit	Limit Line	Read Level		LISN Factor	Cable Loss	Remark
	MHz	—dBu√	āB	—dBu√	—dBu√	āB	āB	₫B	
1	0.1615500	18.76	-36.62	55.38	18.65	0.11	0.10	0.01	Average
2	0.1615500	35.09	-30.29	65.38	34.98	0.11	0.10	0.01	QP
3	0.2243730	31.78	-30.88	62.66	31.67	0.11	0.10	0.01	ÕΡ
4	0.2243730	20.80	-31.86	52.66	20.69	0.11	0.10	0.01	Average
5	0.2587710	30.78	-30.69	61.47	30.67	0.11	0.10	0.01	OP
6	0.2587710	24.22	-27.25	51.47	24.11	0.11	0.10	0.01	Average
7	0.3251190	21.85	-27.72	49.57	21.73	0.12	0.10		Average
8	0.3251190	26.54	-33.03	59.57	26.42	0.12	0.10	0.02	QP
9 (20.5435530	38.16	-17.84	56.00	38.03	0.13	0.10	0.03	ÓP
10 (20.5435530	31.90	-14.10	46.00	31.77	0.13	0.10	0.03	Average
11	7.290	18.74	-31.26	50.00	18.54	0.20		0.10	Average
12	7.290	25.09	-34.91	60.00	24.89	0.20	0.10	0.10	OP

SPORTON International Inc.

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Site : site

Condition : CISPR/CNS/VCCI-B 2003 2001/004 NEUTRAL

EUT : PDA

POWER MODEL :120V/60Hz

MEMO : Cradle Mode

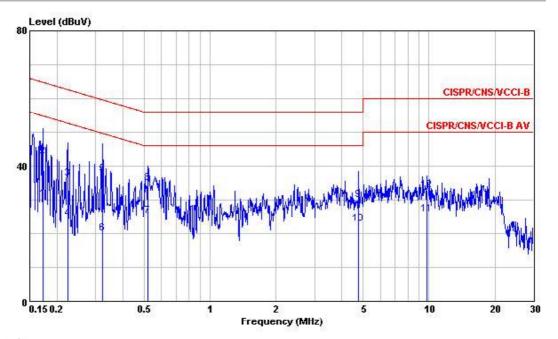
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	LISN Factor	Cable Loss	Remark
	MHz	—dBu√	<u>dB</u>	−dBuV	—dBu∜	āB	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$	āB	
1 2 3 4 5 6 7 8 9	0.1654390 0.1654390 0.2238840 0.2238840 0.2602550 0.2602550 0.5551950 0.5551950 7.850	34.33 24.19 32.11 20.02 31.46 25.38 30.61 17.35	-27.13 -30.86 -28.48 -30.56 -31.40 -29.96 -20.62 -25.39 -32.65 -36.21	55.19 65.19 52.67 62.67 51.42 61.42 46.00 56.00 50.00	27.95 34.22 24.08 32.00 19.91 31.35 25.25 30.48 17.08 23.52	0.11 0.11 0.11 0.11 0.13 0.13 0.27	0.10 0.10 0.10 0.10 0.10 0.10 0.17	0.01 0.01 0.01 0.01 0.01 0.03 0.03	Äverage QP Äverage QP Äverage QP Äverage
11 12	13.480 13.480	20.50	-39.50 -34.40	60.00 50.00	20.15 15.25			0.15	

SPORTON International Inc.

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Application Type : 802.11b Temperature : 26 °C Relating Humidity: 53 % Test Enginner: Jay Test Mode : Mode 3

■ The test that passed at minimum margin was marked by the frame in the following table.



Site : site Condition : CISPR/CNS/VCCI-B 2003 2001/004 LINE

EUT : PDA

POWER :120V/60Hz

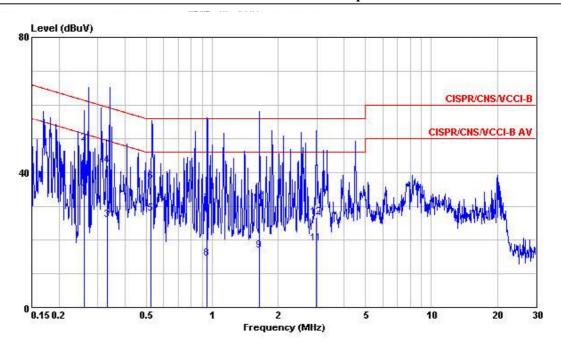
MODEL

: Cradle + USB Mode MEMO

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	LISN Factor	Cable Loss	Remark
	MXz	dBu∜	\overline{dB}	₫BuV	dBu∜	āB	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$	₫B	
1	0.1721540	30.20	-24.66	54.86	30.09	0.11	0.10	0.01	Average
2	0.1721540	42.90	-21.96	64.86	42.79	0.11	0.10	0.01	OP T
3	0.2231870	36.21	-26.49	62.70	36.10	0.11	0.10	0.01	ÕΡ
4	0.2231870	24.42	-28.28	52.70	24.31	0.11	0.10	0.01	Average
5	0.3234010	37.65	-21.97	59.62	37.53	0.12	0.10	0.02	
6	0.3234010	19.99	-29.63	49.62	19.87	0.12	0.10	0.02	Average
7	@0.5209950	25.25	-20.75	46.00	25.12	0.13	0.10		Average
8	0.5209950	34.96	-21.04	56.00	34.83	0.13	0.10	0.03	QP
9	4.770	29.91	-26.09	56.00	29.73	0.18	0.10	0.08	QP
10	4.770	22.96	-23.04	46.00	22.78	0.18	0.10	0.08	Average
11	9.760	25.72	-24.28	50.00	25.51	0.21	0.10	0.11	Average
12	9.760	32.82	-27.18	60.00	32.61	0.21	0.10	0.11	QP

SPORTON International Inc.

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Site : site

Condition : CISPR/CNS/VCCI-B 2003 2001/004 NEUTRAL

EUT : PDA POWER :120V/60Hz

MODEL

: Cradle + USB Mode MEMO

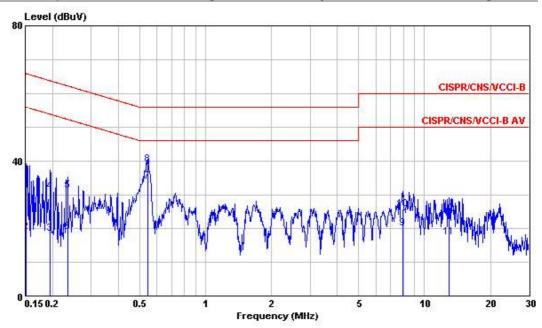
	Freq	Level	Over Limit	Limit Line	Read Level		LISN Factor	Cable Loss	Remark
	MHz	—dBu∀	\overline{dB}	dBu∜	−dBuV	āB	$\phantom{aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa$	āB	
1	@0.2603730	33.74	-17.68	51.42	33.63	0.11	0.10	0.01	Average
2	@0.2603730	48.59	-12.83	61.42	48.48	0.11	0.10	0.01	QP
3	0.3308170	26.14	-23.29	49.43	26.02	0.12	0.10	0.02	Average
4	@0.3308170	42.17	-17.26	59.43	42.05	0.12	0.10	0.02	QP
5	@0.5228120	27.93	-18.07	46.00	27.80	0.13	0.10	0.03	Average
6	@0.5228120	37.28	-18.72	56.00	37.15	0.13	0.10	0.03	
7	0.9480900	30.70	-25.30	56.00	30.56	0.14	0.10	0.04	ÕΡ
8	0.9480900	14.59	-31.41	46.00	14.45	0.14	0.10	0.04	Average
9	1.640	16.77	-29.23	46.00	16.64	0.13	0.10		Average
10	1.640	31.03	-24.97	56.00	30.90	0.13	0.10	0.03	OP
11	2.990	18.94	-27.06	46.00	18.79	0.15	0.10		Average
12	2.990	26.77	-29.23	56.00	26.62	0.15	0.10	0.05	

SPORTON International Inc.

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 Application Type: 802.11b Temperature : 26 °C Relating Humidity: 53 % Test Enginner: <u>Jay</u> Test Mode : Mode 4

■ The test that passed at minimum margin was marked by the frame in the following table.



Site : site

Condition : CISPR/CNS/VCCI-B 2003 2001/004 LINE

EUT : PDA

POWER :120V/60Hz

MODEL

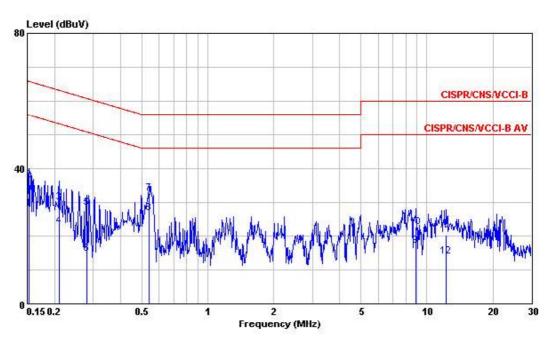
MEMO : USB Mode

Freq	Level	Over Limit	Limit Line			LISN Factor	Cable Loss	Remark
MHz	dBu₹	dB	₫BuV	dBuV	āB	āB	āB	
0.1507970	36.48	-29.48	65.96	36.37	0.11	0.10	0.01	QP .
0.1507970	18.90	-37.06	55.96	18.79	0.11	0.10	0.01	Äverage
0.1954980	18.37	-35.43	53.80	18.26	0.11	0.10	0.01	Average
0.1954980	31.08	-32.72	63.80	30.97	0.11	0.10	0.01	QP
0.2340870	31.21	-31.09	62.30	31.10	0.11	0.10	0.01	ÕΡ
0.2340870	19.05	-33.25	52.30	18.94	0.11	0.10	0.01	Average
@0.5464400	33.94	-12.06	46.00	33.81	0.13	0.10	0.03	Average
@0.5464400			56.00	38.72	0.13		0.03	
7.980	20.11	-29.89	50.00			0.10		Average
7.980			60.00	25.58	0.20	0.10		
12.920			50.00					Average
12.920	24.57	-35.43	60.00	24.27	0.30	0.16	0.14	QP
	MHz 0.1507970 0.1507970 0.1954980 0.1954980 0.2340870 0.2340870 0.2340870 0.5464400 7.980 7.980 12.920	MHz dBuV 0.1507970 36.48 0.1507970 18.90 0.1954980 18.37 0.1954980 31.08 0.2340870 31.21 0.2340870 19.05 0.5464400 33.94 90.5464400 38.85 7.980 20.11 7.980 25.78 12.920 17.45	Freq Level Limit MHz dBuV dB 0.1507970 36.48 -29.48 0.1507970 18.90 -37.06 0.1954980 18.37 -35.43 0.1954980 31.08 -32.72 0.2340870 31.21 -31.09 0.2340870 19.05 -33.25 0.5464400 33.94 -12.06 0.5464400 38.85 -17.15 7.980 20.11 -29.89 7.980 25.78 -34.22 12.920 17.45 -32.55	Freq Level Limit Line MHz dBuV dB dBuV 0.1507970 36.48 -29.48 65.96 0.1507970 18.90 -37.06 55.96 0.1954980 18.37 -35.43 53.80 0.1954980 31.08 -32.72 63.80 0.2340870 19.05 -33.25 52.30 0.2340870 19.05 -33.25 52.30 0.0.5464400 33.94 -12.06 46.00 0.5464400 38.85 -17.15 56.00 7.980 25.78 -34.22 60.00 12.920 17.45 -32.55 50.00	Freq Level Limit Line Level MMz dBuV dB dBuV dBuV 0.1507970 36.48 -29.48 65.96 36.37 0.1507970 18.90 -37.06 55.96 18.79 0.1954980 18.37 -35.43 53.80 18.26 0.1954980 31.08 -32.72 63.80 30.97 0.2340870 31.21 -31.09 62.30 31.10 0.2340870 19.05 -33.25 52.30 18.94 00.5464400 33.94 -12.06 46.00 33.81 00.5464400 38.85 -17.15 56.00 38.72 7.980 20.11 -29.89 50.00 19.91 7.980 25.78 -34.22 60.00 25.58 12.920 17.45 -32.55 50.00 17.15	Freq Level Limit Line Level Factor MHz dBuV dB dBuV dBuV dB W 0.1507970 36.48 -29.48 65.96 36.37 0.11 0.1507970 18.90 -37.06 55.96 18.79 0.11 0.1954980 18.37 -35.43 53.80 18.26 0.11 0.1954980 31.08 -32.72 63.80 30.97 0.11 0.2340870 31.21 -31.09 62.30 31.10 0.11 0.2340870 19.05 -33.25 52.30 18.94 0.11 0.0.3464400 33.94 -12.06 46.00 33.81 0.13 7.980 20.11 -29.89 50.00 19.91 0.20 7.980 25.78 -34.22 60.00 25.58 0.20 12.920 17.45 -32.55 50.00 17.15 0.30	Freq Level Limit Line Level Factor Factor MHz dBuV dB dBuV dBuV dB dB	Freq Level Limit Line Level Factor Factor Loss MHz dBuV dB dBuV dBuV dB dB

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Site : site

Condition : CISPR/CNS/VCCI-B 2003 2001/004 NEUTRAL

EUT : PDA

POWER :120V/60Hz

MODEL

: USB Mode MEMO

101770		000 1010							
	Freq	Level	Over Limit	Limit Line	Read Level	Factor	LISN Factor	Cable Loss	Remark
	MHz	dBuV	−−−dB	₫BuV	-dBuV	₫B	āB	−−−−āB	
1	0.1532130	28.07	-27.75	55.82	27.96	0.11	0.10	0.01	Average
2	0.1532130	36.47	-29.35	65.82	36.36	0.11	0.10	0.01	OP T
3	0.2094380	30.04	-33.19	63.23	29.93	0.11	0.10	0.01	ÕΡ
4	0.2094380	22.81	-30.42	53.23	22.70	0.11	0.10	0.01	Average
5	0.2802930	28.38	-32.43	60.81	28.27	0.11	0.10	0.01	OP
6	0.2802930	14.63	-36.18	50.81	14.52	0.11	0.10	0.01	Average
7	0.5378230	32.51	-23.49	56.00	32.38	0.13	0.10	0.03	QP
8	@0.5378230	26.77	-19.23	46.00	26.64	0.13	0.10	0.03	Average
9	8.920	17.17	-32.83	50.00	16.88	0.29	0.19	0.10	Average
10	8.920	22.76	-37.24	60.00	22.47	0.29	0.19	0.10	
11	12.250	20.32	-39.68	60.00	19.99	0.33	0.20	0.13	
12	12.250	14.05	-35.95	50.00	13.72	0.33	0.20	0.13	Average

SPORTON International Inc.

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5.11 Radiated Emission Measurement

5.11.1 Measuring Instruments

As described in chapter 6 of this Report.

5.11.2 Test Procedures

- 1. The EUT was placed on a rotatable table top 0.8 meter above ground.
- 2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.

Report No.

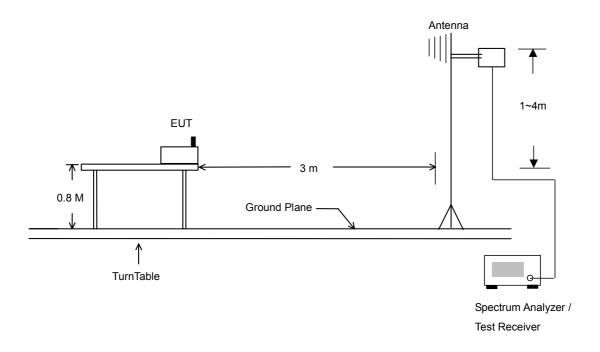
: F451503-01

: NM8BALI

FCC ID

- 3. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- 5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- 6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- 7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
- 8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

5.11.3 Typical Test Setup Layout of Radiated Emission



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5.11.4 Test Data

Application Type : 802.11b Temperature : 26 °C Relating Humidity: 53 % Test Enginner: Jay Test Mode : Mode 1

· Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line			Preamp Factor		Remark	Ant Pos	Table Pos
	MHz	dBu∀/m	dB	dBuV/m	dBu∛	dB/m	dB	dB		сл	deg
1 @ 2 @ 3 @	52.14 190.38 260.04	32.40	-16. 29 -11. 10 -10. 97	40.00 43.50 46.00	47. 22 54. 27 51. 86	8. 03 8. 34 12. 90	32. 44 31. 97 31. 89	1.76	Peak Peak Peak	0 0 100	0 0 230
	200	Level dBu∀/m	Over Limit	Limit Line dBuV/m			Preamp Factor		Remark	Ant Pos ————	Table Pos deg
1 @ 2 @ 3 @	329. 40 414. 80 915. 30	28. 71 32. 91	-17. 29 -13. 09 -15. 44	46.00 46.00 46.00	44. 50 45. 65 36. 21	13. 85 16. 48 20. 67	32. 05 32. 12 31. 06	2. 41 2. 91	Peak Peak Peak	0 0	0
					\						
	Freq	Level	Over Limit	Limit Line		Antenna Factor		Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBu∀/m	dB	dBuV/m	dBu∛	dB/m	dB	dB		cm	deg
1 @ 2 @ 3 @ 4 @ 5 6	2364. 00 2364. 00 2438. 00 2438. 00 2484. 00 2484. 00	30. 28 89. 92 100. 29 42. 67	-31.97 -23.72 -31.33 -21.94	74.00 54.00 74.00 54.00	45. 62 33. 87 93. 38 103. 75 46. 07 35. 46	28. 36 28. 45 28. 45 28. 45 28. 48 28. 48	35. 24 35. 24 35. 25 35. 25 35. 26 35. 26	3. 34 3. 34 3. 38	Average Average Peak	0 0 142 0 0	0 0 184 0 0 0
	2000000	Level	211/07/2010/10	Limit Line	Level	Factor	Preamp Factor	Loss	Remark	Ant Pos	Table Pos
	MHz	dBu∀/m	dB	dBu∛/m	dBu∛	dB/m	dB	dB		сп	deg
1 @	7324.00	51.27	-22.73	74.00	45.02	35. 55	35.51	6.21	Peak		5555

SPORTON International Inc.

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FCC TEST REPORT Report No. : F451503-01

Test Mode : Mode 1Polarization : Vertical

 Polarization 	i : Vertical										
The test the	at passed a	at minin	num ma	rgin wa	s mark	ed by th	ne frame	in the	following ta	ble.	
			Over	Limit		Antenna		Cable		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Factor	Loss	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
	00.5535	30310003130005	839	303030343036	30303034	80304005	8030	8030	_	888	8000000
1 @	45, 93 181, 74	$\frac{35.72}{27.60}$	-4.28	40.00 43.50	57.59 49.64	9, 66 8, 22	$\frac{32.34}{31.85}$	0.81	Peak Peak	100 0	133
2 @ 3 @	260.04	33, 19	-13.81	46.00	50.01	12.90	31.89		reak Peak	ű	0 0
	000.01	00.10	10.01	20.00	00.01	10.00	01.00		1,00011	·	
			0ver	Limit			Preamp			Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Factor	Loss	Remark	Pos	Pos
	MHz	dBuV/m	——dB	dBuV/m	dBu¥	dB/m	dB	dB			deg
									± 16	200	
1 @ 2 @ 3 @	414.80 605.90	36. 31 35. 65	-9.69 -10.35	46.00 46.00	49.05 44.60	16. 48 18. 72	32.12 31.37		Peak Peak	0	0
3 @	955. 90	36, 35	-9.65	46.00	41.38	20. 86			reak Peak	Ů	0 0
- 0											
		•	Over	Limit		Antenna		Cable	Bullione	Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Factor	Loss	Remark	Pos	Pos
	MHz	$\overline{\text{dBuV/m}}$	dB	$\overline{\text{dBuV/m}}$	dBu∛	dB/m	dB	dB		ст	deg
1 @	2384.00	43 42	-30.58	74.00	46.97	28.38	35. 24	3 31	Peak		
1 @ 2 @ 3 @ 4 @ 5 @ 6	2384.00	31.52	-22.48	54.00	35.08	28.38	35.24	3.31	Average		
3 @	2438.00	102.66			106.12	28.45	35.25	3.34	Peak	777	
4 Ø	2438.00 2484.00	91.61	-29.90	74 00	95.07 47.50	28. 45 28. 48	35. 25 35. 26	$\frac{3.34}{2.20}$	Average Peak	100	358
ક પ્ર 6 છે	2484.00	33, 18	-29.90 -20.82	74.00 54.00	36.58	28. 48	35. 26 35. 26	3, 38	reak Average		
A M				5.50	5555		5.50.50	20.20			

 SPORTON International Inc.
 FCC ID
 : NM8BALI

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 Page No.
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 FAX: 886-2-2696-2255
 Issued Date
 : Nov. 15, 2004

FCC TEST REPORT Report No. : F451503-01

Application Type : 802.11b Temperature : 26 °C Relating Humidity: 53 % Test Enginner: Jay

Test Mode : Mode 2 · Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

			0ver			Probe		Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	:	- cm	deg
1	36.630	18 73	-21.27	40.00	33.17	12.56	1 03	28.03	Peak		
2	90.350			43.50			1.62				
3				43.50		13.36		27.75			
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	(- CM	deg
1	311.200	33.35	-12.65	46.00	43.71	13.86	3.14	27.36	Peak	0.7.7.70	2500
2	416.000	29.43	-16.57	46.00	37.77	16.05	3.55	27.94	Peak		
3	960.000	30.31	-15.69	46.00	30.96	21.92	5.67	28.24	Peak		
			0ver	Limit		Probe				Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	2372.000	37.87	-36.13	74.00	49.14	28.16	1.70	41.13	Peak	9.7779	4555
2	2498.000		-37.43				1.85		75.777741		
3	2526.000	38.86	-35.14	74.00	49.67	28.52	1.87	41.20	Peak		
				Limit		Probe				Ant	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4902.000	41.44	-32.56	74.00	48.20	33.23	2.49	42.48	Peak	VF-3578	(7.7.7
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit			Factor			Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	6886.000	43.68	-30.32	74.00	48.60	35.08	3.06	43.06	Peak	(47.75E)	(7.7.7
			56	2000 Ac	20 000	r deser or	59554-00000			Society	\$2007370007000
	11 4 10 1144	F 4720004		Limit		Probe				Ant	
	Freq		Limit			ractor		ractor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	8820.000	46.60	-27.40	74.00	46.30	38.03	3.41	41.14	Peak	(F. 1554)	

SPORTON International Inc.

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Test Mode : Mode 2 Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

_		•						_			
			Over	Limit	Dood	Drohe	Cable	Dreemn		Ant	Table
	Freq	Level							Remark	Pos	
	MHz	dBuV/m		dBuV/m	dBuV	dB	dB	dB	·———	- CM	deg
200	\$0.0000aaace		D 24-12-14-19		2000 Decco	90A000+2+0400+0	704 10000	-1000-000-000-000-	189024270750		0.5
2	45.300 83.550	9 0 1 H. CT 11 C	-9.24 -12.48	40.00		9.69					
3				43.50							
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	S S	cm	deg
1	311.200					13.86				1000	
2				46.00						222	15222
3	819.200	27.377	-18.23	46.00	34.99	17.51	3.99	28.72	Peak		
	To a se	T = 11 = 1		Limit					Remark	Ant Pos	
	Freq	rever	Limit	Line	rever	Factor	Loss	Factor	Kemark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	2364.000	40.51	-33.49	74.00	51.78	28.15	1.70	41.12	Peak	9555	(27.00
2	2498.000	38.98	-35.02	74.00	49.90	28.43	1.85	41.20	Peak		
	Tuo a	1 2022 1		Limit					Remark		Table Pos
	rieq	rever	Limic	Line	rever	Factor	Poss	Factor	Kemark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4924.000	41.27	-32.73	74.00	48.04	33.27	2.47	42.51	Peak	(
			Over	Limit	Dead	Droha	Cabla	Dreemn		Ant	Table
	Freq	Level							Remark	Pos	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	§	cm	deg
1	6862.000	43.74	-30.26	74.00	48.81	35.03	2.98	43.08	Peak	/F072	(1757)
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
									Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·——-	cm	deg

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1 8892.000 46.52 -27.48 74.00 46.23 38.06 3.26 41.03 Peak

Test Mode : Mode 3 · Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line					Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	- dB	(CM.	deg
1	47.340	10.10	00.00	40.00	00.68	10.00	1 12	28.00			
2	90.350			43.50			1.62				
3	173.310			43.50				27.75			
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level							Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	5 55	CM	deg
1	208.000	26.93	-16.57	43.50	37.10	14.91	2.59	27.67	Peak	95550	(17,00
2	311.200	34.64	-11.36	46.00	45.00	13.86	3.14	27.36	Peak		
3	416.000	28.59	-17.41	46.00	36.93	16.05	3.55	27.94	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	(CM.	deg
1	2332.000	38.02	-35.98	74.00	49.34	28.08	1.71	41.11	Peak	95559	(7.7.7
2	2498.000	35.82	-38.18	74.00	46.74	28.43	1.85	41.20	Peak		
3	2540.000	41.06	-32.94	74.00	51.82	28.56	1.88	41.20	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	S	cm cm	deg
1	4854.000	40.93	-33.07	74.00	47.67	33.13	2.54	42.41	Peak	(5.55)	
			Over	Limit	Read	Probe	Cable	Preamn		Ant	Table
	Freq	Level	Limit						Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	(()	- CM	geg
1	6222.000	43.28	-30.72	74.00	49.47	34.25	2.86	43.30	Peak	(47.55)	
			0	¥0	Dec 3	D 1	C-1-1-	D			T-1-1-
	Freq	Level	Limit	Limit Line					Remark	Ant Pos	Table Pos
	5 <u>2</u>		5 - 60-2011 111-11 5 74 3	dBuV/m	9 3		dB			- CM	deg
	11112	ши,	ш.	ши, ш	and an	ш	ш.	ш.			azg
1	8878.000	46.55	-27.45	74.00	46.24	38.05	3.31	41.05	Peak	9-355	(\$300.00)

SPORTON International Inc.

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Test Mode : Mode 3 Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	- dB	dB	S	cm	deg
1	45.300	28.85	-11.15	40.00	45.12	10.59	1.15	28.01	Peak	95550	
2	82.870	26.59	-13.41	40.00	43.28	9.68	1.56	27.93	Peak		
3	173.310	23.38	-20.12	43.50	35.39	13.36	2.38	27.75	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	- dB	dB	(i 	cm	deg
1	2332.000	39.50	-34.50	74.00	50.82	28.08	1.71	41.11	Peak	2555	
2	2500.000	38.39	-35.61	74.00	49.30	28.44	1.85	41.20	Peak		
3	2542.000	45.74	-28.26	74.00	56.49	28.57	1.88	41.20	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	cm	deg
1	4630.000	41.32	-32.68	74.00	48.35	32.68	2.39	42.10	Peak	(47,000)	(17.00
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level				Factor			Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB		dB	·	- cm	deg
1	6588.000	43.10	-30.90	74.00	48.70	34.48	3.16	43.24	Peak	(F.774)	(27.77
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor			Remark	Pos	Pos
				-TTTT-/-		dB		dB	(deg
	MHz	dBuV/m	ав	dBuV/m	dBuV	ав	ав	шь		-сш-	

SPORTON International Inc.

: NM8BALI FCC ID TEL: 886-2-2696-2468 Page No. : 54 of 65 FAX: 886-2-2696-2255 Issued Date : Nov. 15, 2004

Test Mode: Mode 4 · Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

				0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
		Freq	Level	Limit	Line		Factor			Remark	Pos	Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm -	deg
52	1	52.270	17.78	-22.22	40.00	34.42	10.13	1.22	27.99	Peak		
33	2	160.220	22.16	-21.34	43.50	34.93	12.70	2.31	27.78	Peak		
	3	193.030	27.42	-16.08	43.50	38.00	14.64	2.49	27.71	Peak		
					Limit		Probe		0.00 000000000 7 0		Ant	Table
		Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
	1	200.000			43.50		15.39					
	2	352.000		-21.27			15.26					
	3	748.800	26.23	-19.77	46.00	30.14	20.00	4.84	28.75	Peak		
				0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
		Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	-	MHz d	BuV/m	dB	dBuV/m	dBuV	dB	dB	dB	9; 9;	cm	deg
1		2102.000	35.12 -	-38.88	74.00	46.80	27.62		40.97		222	
2		2372.000	42.21 -	-31.79	74.00	53.48	28.16	1.70	41.13	Peak		
3		2372.000			54.00					Average	10000	
4		2510.000							41.20		9533	9 9777
5		2510.000	41.28 -	-12.72	54.00	52.15	28.47	1.86	41.20	Average	1222	
				0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
		Freq	Level	Limit	Line		Factor			Remark	Pos	Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
8	1	4998.000	41.34	-32.66	74.00	47.91	33.40	2.63	42.60	Peak		
				0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
		Freq	Level	Limit			Factor		C. 15 (17 (17 (17 (17 (17 (17 (17 (17 (17 (17	Remark	Pos	Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	cm -	deg
13	1	5734.000	42.94	-31.06	74.00	49.38	34.10	2.66	43.20	Peak		
				0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
		Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
12	1	8918.000	46.00	-28.00	74.00	45.68	38.07	3.25	41.00	Peak		

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Test Mode : Mode 4 Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit			Probe Factor		Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	cm	deg
1	! 48,700	35,71	-4.29	40.00	52.32	10.22	1.17	28.00	Peak	1244	3224
2	102.420	31.16	-12.34	43.50	47.29	9.95	1.81	27.89	Peak		
3	196.260	27.65	-15.85	43.50	38.11	14.72	2.53	27.71	Peak		
			0ver		Read			Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	CIM.	deg
1	200.000	25.90	-17.60	43.50	35.64	15.39	2.57	27.70	Peak		1224
2	352.000	23.71	-22.29	46.00	32.74	15.26	3.27	27.56	Peak		
3	957.600	29.50	-16.50	46.00	30.19	21.90	5.65	28.24	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
-	MHz	BuV/m	dB	dBuV/m	dBuV	dB	dB	dB	%	CM.	deg
1	2262.000	35.28	-38.72	74.00	46.67	27.94	1.73	41.06	Peak		
2	2372.000	42.99	-31.01	74.00	54.26	28.16	1.70	41.13	Peak		
3	2372.000	35.43		54.00	46.70	28.16	1.70		Average		
4	2510.000	45.79		74.00	56.66	28.47	1.86		Peak	8148400	9 9777
5	2510.000	40.38	-13.62	54.00	51.25	28.47	1.86	41.20	Average	1222	3 3224
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	cm	deg
1	4934.000	41.55	-32.45	74.00	48.32	33.29	2.46	42.52	Peak		-
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	8876.000	46.09	-27.91	74.00	45.78	38.05	3.32	41.06	Peak		-

SPORTON International Inc.

FCC ID : NM8BALI TEL: 886-2-2696-2468 : 56 of 65 Page No. FAX: 886-2-2696-2255 Issued Date : Nov. 15, 2004

Test Mode: Mode 5 Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

	Freq	Level	Over Limit	Limit Line		Probe Factor			Remark	Ant Pos	Table Pos
1	Mue	dBuV/m		dBuV/m	-dBuV		dB	dB	S	CM	dec
	TIME	авиу/ш	шь	авиу/ш	авич	ш	аь	ав		-сш-	geo
	33.910	18.80	-21.20	40.00	32.57	13.27	1.00	28.04	Peak	95553	(27)
	94.260	19.05	-24.45	43.50	35.97	9.34	1.65	27.91	Peak		
	173.310	23.68	-19.82	43.50	35.69	13.36	2.38	27.75	Peak		222
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	S	CM.	deg
	311.200	34.44	-11.56	46.00	44.80	13.86	3.14	27.36	Peak		
	416.000) - (T)(T, (T)(T)(T)(T)	-16.87		37.47		3.55				
	957.600	29.34	-16.66	46.00	30.03	21.90	5.65	28.24	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	S	CM	deç
	2372.000	37.28	-36.72	74.00	48.55	28.16	1.70	41.13	Peak	0.777	(27.75
ा	2500 000	0 533518386	-12 93		71 98		1.85	0.0000000000000000000000000000000000000	250000000	100	360
į	2500.000	52.45	-1.55	54.00	63.36	28.44	1.85	41.20	Average	100	360
			Over	Limit	Dood	Probe	Cable	Draamn		Ant	Table
	Freq	Level	Limit			Factor		Factor	Remark	Pos	Pos
-	MHz	dBuV/m	- dB	dBuV/m	dBuV	dB	dB	dB	S	CM.	deg
	4046.000	40.56	-33.44	74.00	47.05	32.58	2.48	41.55	Peak	9555	(47,75)
			8	Limit	D1	980.80.	G-1-1-			980.	Table
	Freq	Level	Over Limit			Probe Factor		Factor	Remark	Ant Pos	Pos
	MHz	dBuV/m	dB	dBuV/m		dB	dB		(- cm	dec
	1112		ш.		- CLD 04 0	ш		- 310			~=9
	8878.000			74.00	46.24	38.05	3.31	41.05			

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Test Mode : Mode 5 Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

	7	¥30034	Over Limit	Limit		Probe			Remark	Ant Pos	Table Pos
	rreq	pever	ниште	nine	pever	raccor	1055	Faccor	Kemark	PUS	POS
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		CM	deg
1	47.340	30.93	-9.07	40.00	47.47	10.30	1.16	28.00	Peak		45000
2	83.550	27.88	-12.12	40.00	44.56	9.69	1.56	27.93	Peak		
3	171.100	22.95	-20.55	43.50	35.05	13.29	2.37	27.76	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	SS-	cm	deg
1	311.200		-15.33				3.14				4.75
2	416.000		-13.37				3.55				3522
3	957.600	29.18	-16.82	46.00	29.87	21.90	5.65	28.24	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit			Factor			Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	-dBuV		dB	dB		- cm	ded
			_					_			
L	2364.000					28.15		41.12		(5335)	4777
2 .	2500.000 2500.000							41.20	Peak Average	100	360 360
	102/03/03			Limit		Probe					Table
	Freq	revel	Limit	Line	revel	Factor	Loss	Factor	Kemark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	cm	deg
L	4070.000	40.18	-33.82	74.00	46.62	32.57	2.56	41.57	Peak	1777	(27.55)
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	·	cm	deç
1	5748.000	42.43	-31.57	74.00	48.92	34.10	2.61	43.20	Peak	84555	62755
	102(1)(1)	2000004		Limit		Probe				Ant	
	Freq	revel	Limit	Line	revel	Factor	Poss	ractor	Kemark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	8884.000	46.57	-27.43	74.00	46.28	38.05	3.29	41.05	Peak	1777	(57.55

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Test Mode: Mode 6 Polarization : Horizontal

■ The test that passed at minimum margin was marked by the frame in the following table.

			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm -	deg
.1	51.590	21.24	-18.76	40.00	37.89	10.13	1.21	27.99	Peak	1222	3224
2		20.07	-23.43	43.50	36.10	10.04	1.82	27.89	Peak		
3	190.820	28.30	-15.20	43.50	38.95	14.59	2.48	27.72	Peak		
osnos	enco present s	.======	0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1			-17.83		35.41		2.57				
2			-21.07		33.57	15.68	3.45	27.77			
3	957.600	30.04	-15.96	46.00	30.73	21.90	5.65	28.24	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Tabl
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Po
	MHz	BuV/m	dB	dBuV/m	dBuV	dB	dB	dB	s s		de
1	2110.000	35.19 -	-38.81	74.00	46.86	27.63	1.67	40.97	Peak		922
2	2366.000	43.58 -	-30.42	74.00	54.86	28.15	1.70	41.13	Peak		9 988
3	2366.000	37.22 -	-16.78	54.00	48.50	28.15	1.70	41.13	Average		2 P
4	2518.000	57.53 -	COLOR OF THE PARTY.	74.00	68.38	28.49	1.86	1 7 1 5 10 10 12 5	Peak		0 070
5!	2518.000	52.73	-1.27	54.00	63.58	28.49	1.86	41.20	Average	1222	3 3502
				V ange				4000000		87442	m
	Fran	Level	Over Limit	Limit Line		Probe Factor		Preamp Factor	Damark	Ant Pos	Table Pos
	rreq	pever	птштс	Bine	never	raccor		FACCOI	Nemair -	FOS	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		CIV	deg
1	4964.000	41.37	-32.63	74.00	48.12	33.35	2.46	42.56	Peak	Pers	1222
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level		Line		Factor		Factor	Remark	Pos	Pos
		-		s 		dB	dB	dB			deg
	MHz	dBuV/m	dB	dBuV/m	dBuV	шь				(CIII)	
1				dBuV/m 74.00		34.30	2.94		Peak		
1			-31.31		48.74		2.94	43.29	Peak		13222
1	6502.000		-31.31 Over	74.00 Limit	48.74 Read	34.30	2.94 Cable	43.29		(P225)	
1	6502.000 Freq	42.69	-31.31 Over Limit	74.00 Limit	48.74 Read	34.30 Probe Factor	2.94 Cable Loss	43.29 Preamp		 Ant	 Table

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Test Mode : Mode 6 Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	[Level				Factor		Factor	Remark	Pos	Pos
	MH2	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm -	deg
	L! 48.700	35.29	-4.71	40.00	51.90	10.22	1.17	28.00	Peak	DEC.	222
	102.590		-11.89		47.73		1.81				
83	194.900	27.64	-15.86	43.50	38.16	14.68	2.51	27.71	Peak		
			0ver			Probe				Ant	Table
	Freq	[Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MH2	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	<u> </u>	cm -	deg
30	200.000	24.78	-18.72	43.50	34.52	15.39	2.57	27.70	Peak		
2	394.400	26.20	-19.80	46.00	34.84	15.68	3.45	27.77	Peak		
83	957.600	29.58	-16.42	46.00	30.27	21.90	5.65	28.24	Peak		
			0ver	Limit	Read	Probe	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dE	8 . — - 8		deg
.1	2124.000	35.21 -	-38 79	74.00	46.85	27.66	1.68	4n 98	Peak		
2	2366.000	43.88		74.00	55.16		1.70		Peak	2222	S 100000
3	2366.000	40.18		54.00	51.46	1076 DEG15	1.70		Average		
4	2518.000	59.16		74.00	70.01		1.86		Peak	0.000	0. 0.000
5 !	2518.000	50.67	-3.33	54.00	61.52	28.49	1.86	41.20	Average		
				T Managara	2014	1 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.0000000000000000000000000000000000000	2000000000		199400	6200000000000
	Free	Level	Over Limit			Probe Factor		Preamp Factor	Domork	Ant Pos	Table Pos
	riec	l never	DIMIC	nine	TEACT	raccor	позз	FACCOI	Vemary	FUS	ros
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	*	cm	deg
8	L 4070.000	41.20	-32.80	74.00	47.64	32.57	2.56	41.57	Peak		
		60 WOOMAN	0ver			Probe		Preamp	2.00000400	Ant	Table
	Freq	[Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	· · · · · · · · · · · · · · · · · · ·	cm_	deg
8	L 6998.00C	43.56	-30.44	74.00	47.99	35.30	3.27	43.00	Peak	222	224
	Freq	Level				Probe Factor			Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm -	deg
. 1	8876.000	46.06	-27.94	74.00	45.75	38.05	3.32	41.06	Peak	222	

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5.11 Antenna Requirements

5.12.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

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And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

5.12.2 Antenna Connected Construction

The antenna used in this product is a PIFA Antenna with IPEX connector and it is considered to meet antenna requirement of FCC.

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6. List of Measuring Equipments Used

<u> </u>	<u> </u>	.p					
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9 KHz – 2.75 GHz	Feb. 16, 2004	Feb. 16, 2005	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9 KHz – 30 MHz	Jun. 09, 2004	Jun. 09, 2005	Conduction (CO04-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	99041	9 KHz – 30 MHz	Apr. 27, 2004	Apr. 27, 2005	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	N/A	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB044	9KHz~30MHz	Apr. 21, 2004	Apr. 21, 2005	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	Jun. 21, 2004	Jun. 21, 2005	Radiation (03CH03-HY)
Spectrum analyzer	R&S	FSP40	100004	9KHZ~40GHz	Aug. 31, 2004	Aug. 31, 2005	Radiation (03CH03-HY)
Amplifier	HP	8447D	2944A09072	100KHz – 1.3GHz	Nov. 10, 2004	Nov. 10, 2004	Radiation (03CH03-HY)
Biconical Antenna	SCHWARZBECK	VHBB 9124	301	30MHz –200MHz	Jul. 28, 2004	Jul. 28, 2005	Radiation (03CH03-HY)
Log Antenna	SCHWARZBECK	VUSLP 9111	221	200MHz -1GHz	Jul. 28, 2004	Jul. 28, 2005	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30MHz~1GHz	Dec. 03, 2003	Dec. 03, 2004	Radiation (03CH03-HY)
Amplifier	MITEQ	AFS44	849984	100MHz~26.5GHz	Mar. 26, 2004	Mar. 26, 2005	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz – 18GHz	Apr. 07, 2004	Apr. 07, 2005	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH03-HY)
Horn Antenna	Schwarzbeck	BBHA9170	154	18GHz~40GHz	Jun. 09, 2004	Jun. 09, 2005	Radiation (03CH03-HY)
RF Cable-HIGH	Jye Bao	RG142	CB030-HIGH	1GHz~29.5GHz	Dec. 05, 2003	Dec. 05, 2005	Radiation (03CH03-HY)
Spectrum analyzer	R&S	FSP40	100057	9KHz-40GHz	Feb. 26, 2004	Feb. 26, 2005	Radiation (03CH06-HY)
							Radiation
Controller	СТ	SC100	N/A	N/A	N/A	N/A	(03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 18, 2003	Dec. 18, 2004	Radiation
J					.,	-, =-3.	(03CH06-HY)

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Horn Antenna	Com-Power	AH118	071025	1G-18G	Fab. 11, 2004	Fab. 11, 2005	Radiation
nom Antenna	Com-Power	АППО	071025	16-166	Feb. 11, 2004	Feb. 11, 2005	(03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jun. 22, 2004	Jun. 22, 2005	Radiation
SHI -LIII HOIII	3CHWARZBEOR	BB11A 9170	9170-249	140 - 400	Juli. 22, 2004	Juli. 22, 2003	(03CH06-HY)
PreAmplifier	Com-Power	PA-103	161055	1MHz - 1000MHz	Apr. 26, 2004	Apr. 26, 2005	Radiation
FreAmpline	Com-Fower	FA-103	101033	11VII 12 - 1000IVII 12	Apr. 20, 2004	Αρι. 20, 2003	(03CH06-HY)
HF Amplifier	MITEQ	AFS44	973248	0.1G - 26.5G	May. 20, 2004	May 20, 2005	Radiation
HF Amplillel	MITEQ	AF344	973246	0.10 - 20.50	May. 20, 2004	May. 20, 2005	(03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jun. 24, 2004	Jun. 24, 2005	Radiation
Amplifier	MITEQ	AIVIF-OF	997 105	200 - 400	Juli. 24, 2004	Juli. 24, 2005	(03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation
Turri Table	ПО	D3 420	420/030/00	0 ~ 300 degree	IN/A	IN/A	(03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation
Antenna wasi	ПО	IVIA 240	240/560/00	1 111 - 4 111	IN/A	IN/A	(03CH06-HY)
Wireless							Radiation
Communications	Agilent	8960	E5515C	Qual-band	N/A	N/A	(03CH06-HY)
Test Set							(03000-01)

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7. Uncertainty Evaluation

Uncertainty of Conducted Emission Evaluation (150kHz ~ 30MHz)

	,	- ,		
Contribution	Uncertainty of x_i			
	٩D	Probability	$u(x_i)$	
	dB	Distribution		
Receiver reading	0.10	Normal(k=2)	0.05	
Cable loss	0.10	Normal(k=2)	0.05	
AMN insertion loss	2.50	Rectangular	0.63	
Receiver Spec	1.50	Rectangular	0.43	
Site imperfection	1.39	Rectangular	0.80	
Mismatch				
Receiver VSWR Γ1=	+0.34/-0.35	U-shape	0.24	
LISN VSWR Γ2=	10.34/-0.33		0.24	
Uncertainty=20log(1-Γ1*Γ2)				
combined standard uncertainty Uc(y)	1.13			
Measuring uncertainty for a level of confidence	2.26			
of 95% U=2Uc(y)				

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Uncertainty of Radiated Emission Evaluation (30MHz ~ 1000MHz) (Site: 03CH03-HY)

		_		
Contribution	Uncerta	ainty of X_i		
Contribution		Probability	$u(x_i)$	
	dB	Distribution	$u(x_i)$	
	0.41		0.21	
Receiver reading	0.41	Normal(k=2)	0.21	
Antenna factor calibration	0.83	Normal(k=2)	0.42	
Cable loss calibration	0.25	Normal(k=2)	0.13	
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14	
RCV/SPA specification	2.50	Rectangular	0.72	
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29	
Site imperfection	1.43	Rectangular	0.83	
Mismatch				
Receiver VSWR Γ1= 0.20	+0.39/-0.41	U-shaped	0.28	
Antenna VSWR Γ2= 0.23	10.007 0.41		0.20	
Uncertainty=20log(1-Γ1*Γ2)				
combined standard uncertainty Uc(y)	1.27			
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54			

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Uncertainty of Radiated Emission Evaluation (30MHz ~ 1000MHz) (Site: 03CH06-HY)

Contribution	Uncertainty of X_i			
Gontabution	٩D	Probability	$u(x_i)$	
	dB	Distribution	(1)	
Receiver reading	0.41	Normal(k=2)	0.21	
Antenna factor calibration	0.83	Normal(k=2)	0.42	
Cable loss calibration	0.25	Normal(k=2)	0.13	
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14	
RCV/SPA specification	2.50	Rectangular	0.72	
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29	
Site imperfection	1.43	Rectangular	0.83	
Mismatch		U-shaped		
Receiver VSWR Γ1= 0.20	+0.39/-0.41		0.28	
Antenna VSWR Γ2= 0.23	10.00/-0.41		0.20	
Uncertainty=20log(1-Γ1*Γ2)				
combined standard uncertainty Uc(y)	1.27			
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54			

Uncertainty of Radiated Emission Evaluation (1GHz ~ 40GHz)

	Uncertainty of $^{\mathcal{X}_i}$		()	C:	$Ci*u(x_i)$
Contribution	dB	Probability	$u(x_i)$	Ci	$Ct \cdot u(x_i)$
		Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch					
Receiver VSWR Γ1= 0.197	+0.34/-0.35	U-shaped	0.244	1	0.244
Antenna VSWR Γ2= 0.194					
Uncertainty=20log(1-Γ1*Γ2*Γ3)					
Combined standard uncertainty Uc(y)	2.36				
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	4.72				

 $U=\sqrt{(0.3/2)^2+(2^2+1.5^2+0.2^2)/3+(0.2)^2/2}=1.66$

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