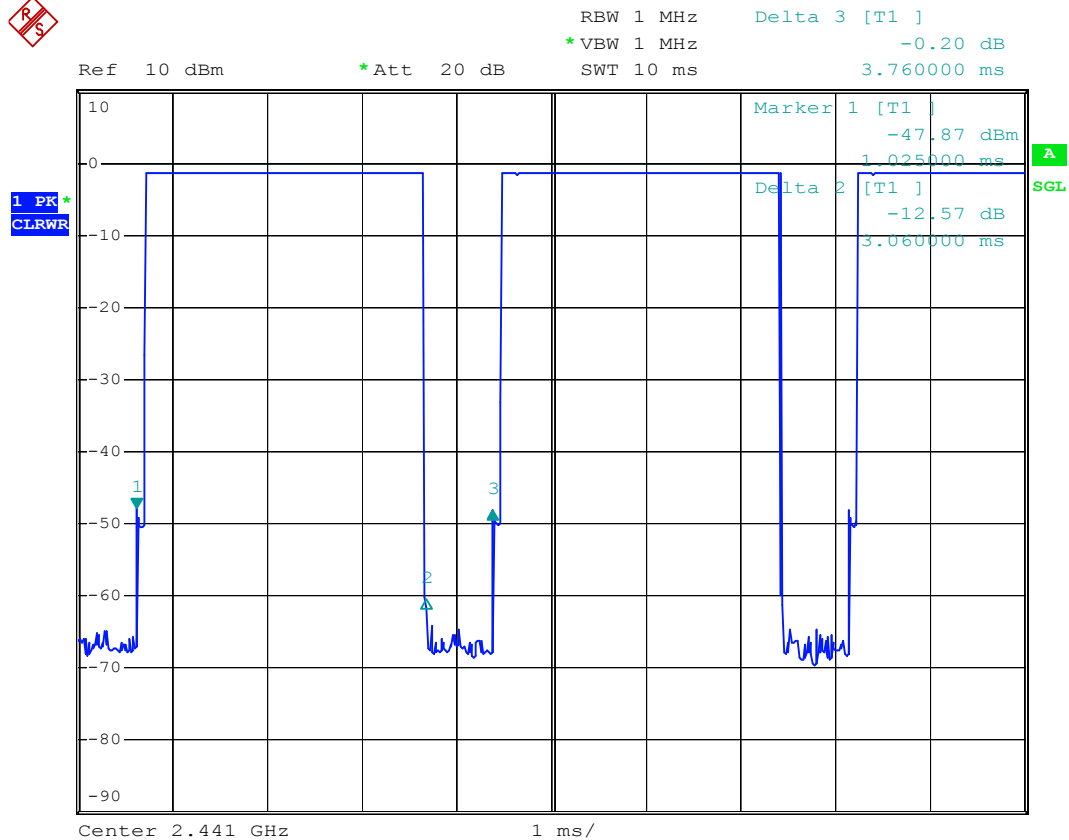




DH5 (CH39)



Date: 17.MAY.2005 23:58:30

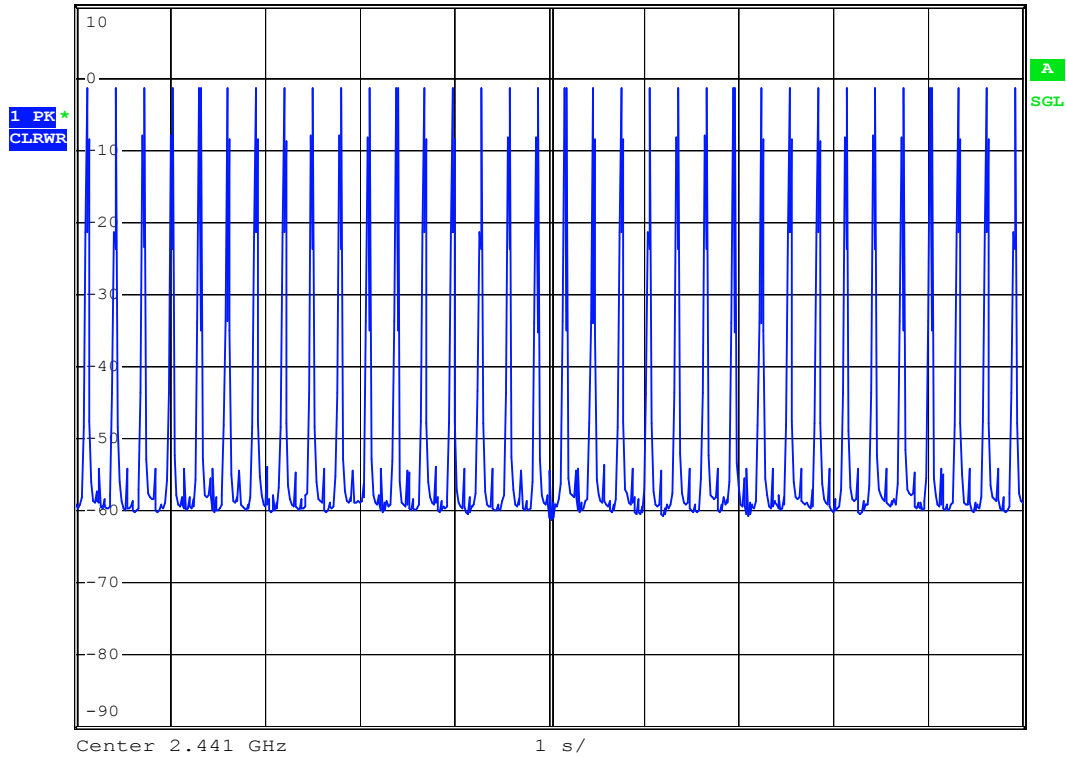


FCC TEST REPORT

Report No. : FR541416



Ref 10 dBm RBW 1 MHz
*Att 20 dB *VBW 1 MHz
SWT 10 s



Date: 18.MAY.2005 00:03:09

SPORTON International Inc.

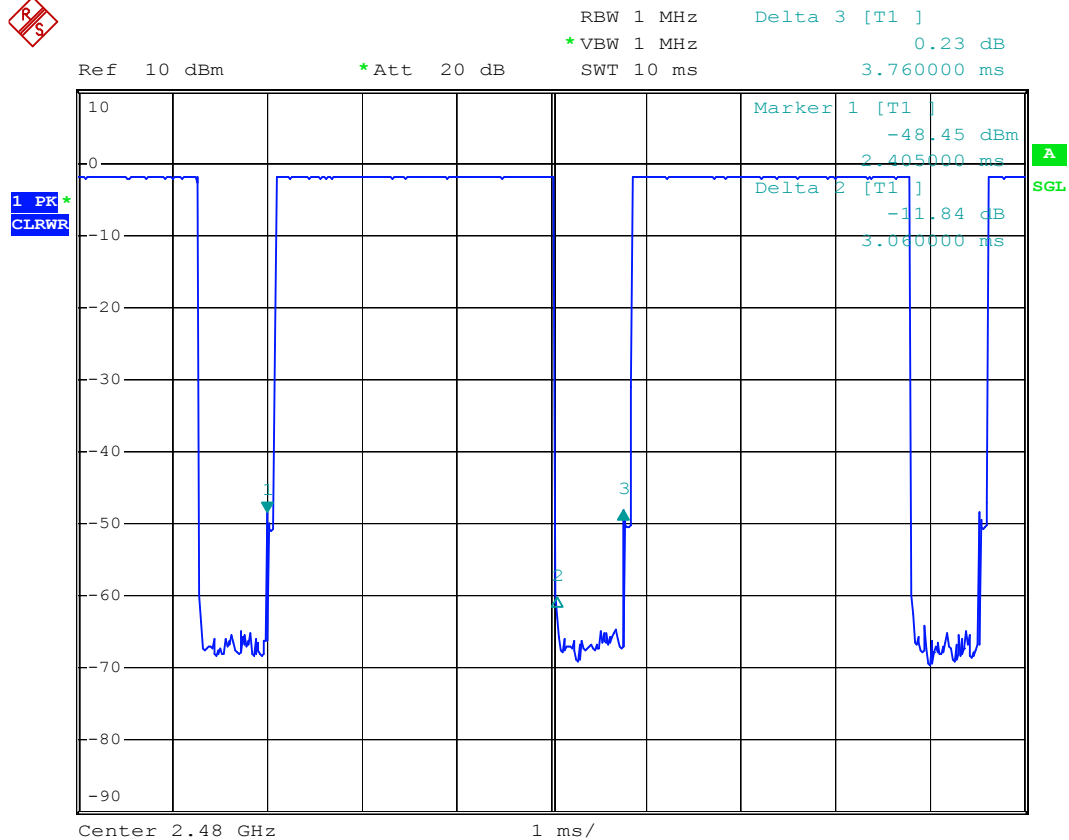
TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

FCC ID : Q3N-8500
IC ID : 5121A-8500
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Report Issued Date : Oct. 07, 2005
Report Version : Rev. 01



DH5 (CH78)



Date: 18.MAY.2005 00:02:03

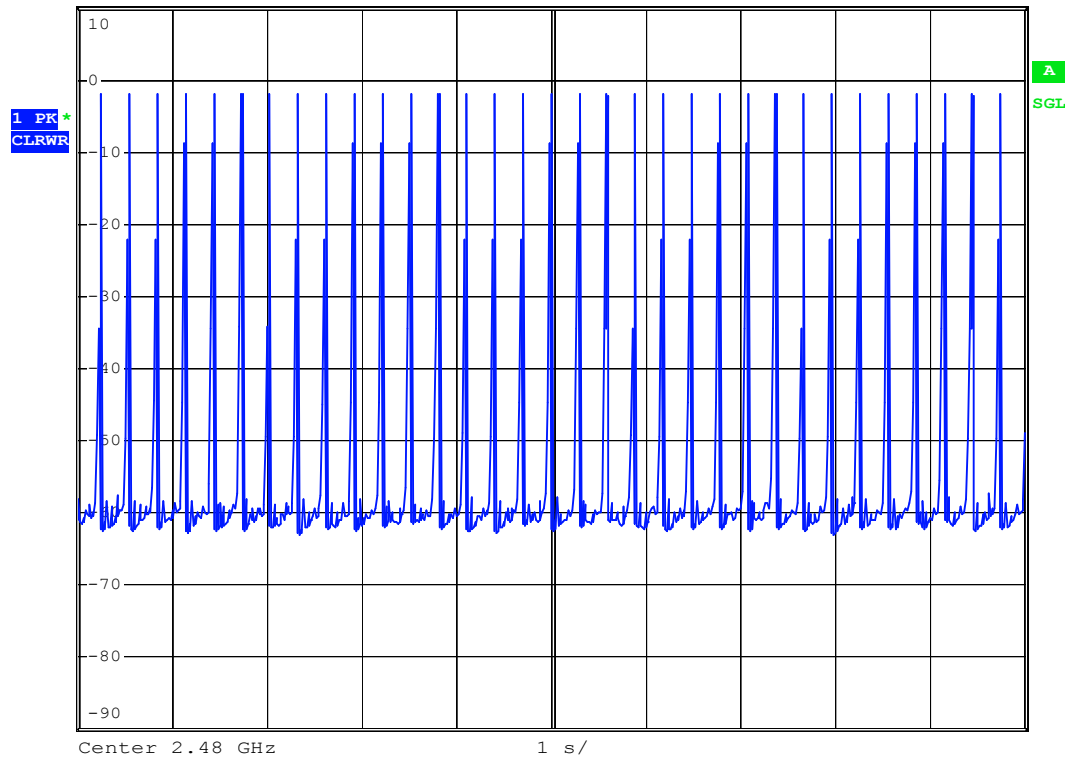


FCC TEST REPORT

Report No. : FR541416



Ref 10 dBm RBW 1 MHz
*Att 20 dB *VBW 1 MHz
SWT 10 s



Date: 18.MAY.2005 00:02:44

SPORTON International Inc.

TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

FCC ID : Q3N-8500
IC ID : 5121A-8500
Page No. : 51 of 71
Report Issued Date : Oct. 07, 2005
Report Version : Rev. 01

5.9 Peak Output Power Measurement

5.9.1 Measuring Instruments :

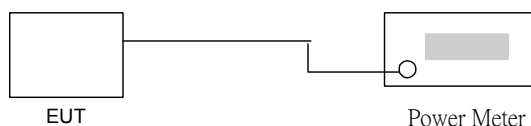
As described in chapter 6 of this test report.

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 : 27°C
- Relative Humidity : 58 %
- Test Enginner : Jay

WLAN 802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	14.37	1W/30 dBm
06	2437	14.59	1W/30 dBm
11	2462	14.5	1W/30 dBm

BT

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-1.65	1W/30 dBm
39	2441	-1.32	1W/30 dBm
78	2480	-2.18	1W/30 dBm





5.10 Conducted Emission

5.10.1 Measuring Instruments

As described in chapter 6 of this test Report.

5.10.2 Test Procedures :

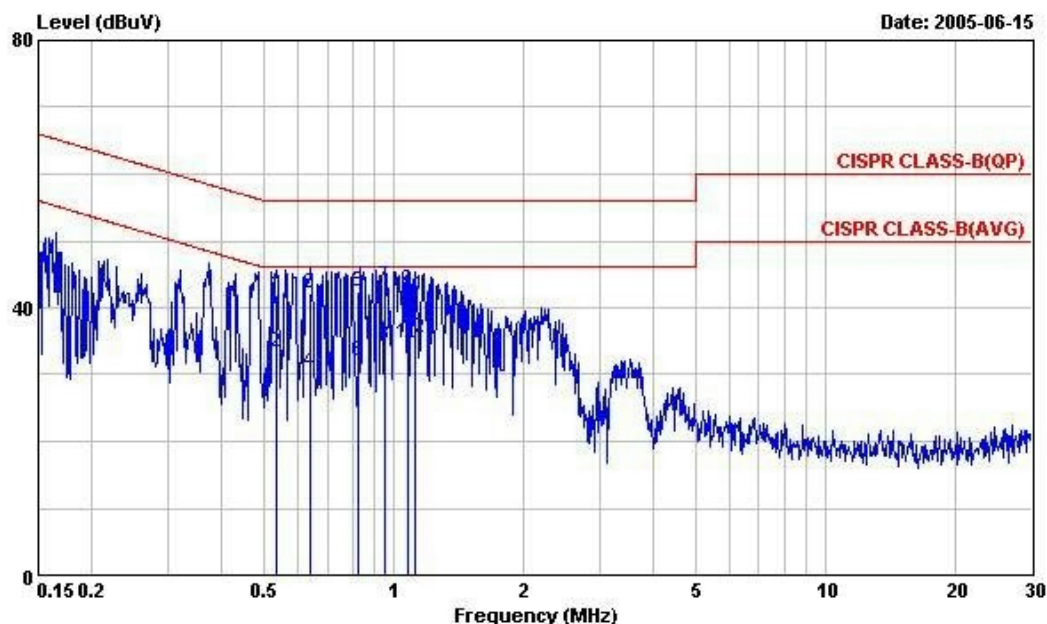
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.
- 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.



5.10.3 Test Data

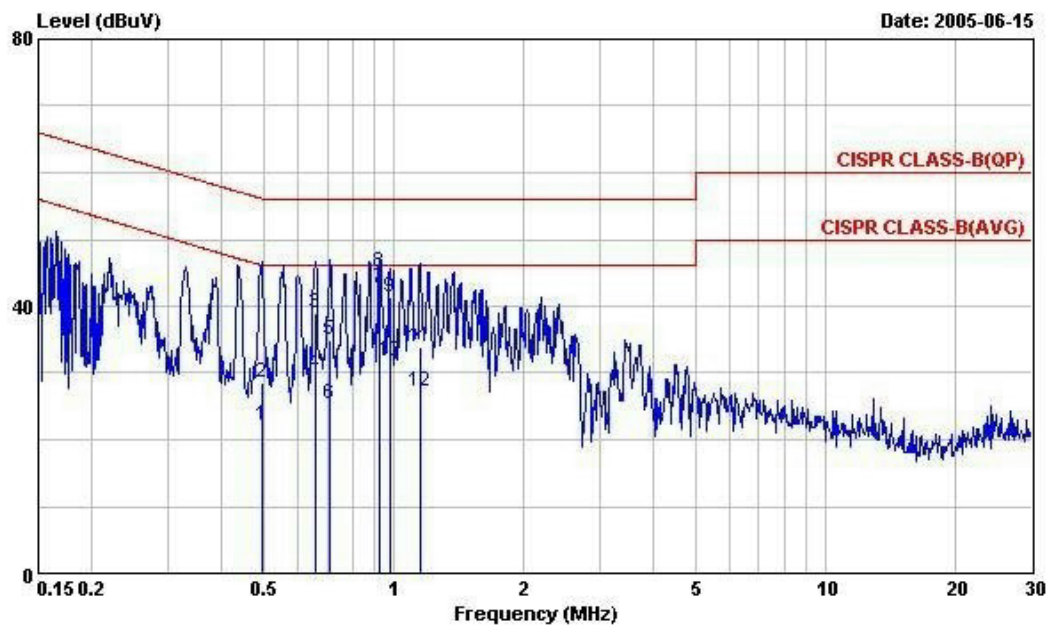
- Temperature : 26 °C
- Relating Humidity : 53 %
- Test Enginner : Jay
- Test Mode : Mode 1

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



Site : CO02_LK
 Condition : CISPR CLASS-B(QP) LISN02/10070-930902 LINE
 EUT: : Wireless Terminal
 MODEL: : 8500
 POWER: : 120 Vac60Hz
 MEMO: : IR MODE
 : 8500 GUN 24 KEY

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Cable Loss	LISN Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.535	41.90	-14.10	56.00	41.78	0.12	0.02	0.10	QP
2	0.535	33.40	-12.60	46.00	33.28	0.12	0.02	0.10	Average
3	0.641	42.18	-13.82	56.00	42.05	0.13	0.03	0.10	QP
4	0.641	30.50	-15.50	46.00	30.37	0.13	0.03	0.10	Average
5	0.830	42.37	-13.63	56.00	42.24	0.13	0.03	0.10	QP
6	0.830	31.88	-14.12	46.00	31.75	0.13	0.03	0.10	Average
7	0.948	43.32	-12.68	56.00	43.18	0.14	0.04	0.10	QP
8	0.948	34.44	-11.56	46.00	34.30	0.14	0.04	0.10	Average
9	1.080	42.64	-13.36	56.00	42.49	0.15	0.05	0.10	QP
10	1.080	34.76	-11.24	46.00	34.61	0.15	0.05	0.10	Average
11	1.120	41.84	-14.16	56.00	41.69	0.15	0.05	0.10	QP
12	1.120	35.34	-10.66	46.00	35.19	0.15	0.05	0.10	Average



Site : CO02_LK
Condition : CISPR CLASS-B(QP) LISN02/10070-930902 NEUTRAL
EUT: : Wireless Terminal
MODEL: : 8500
POWER: : 120 Vac 60Hz
MEMO: : IR MODE
: 8500 GUN 24 KEY

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Cable Loss	LISN Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.497	22.10	-23.95	46.05	21.98	0.12	0.02	0.10	Average
2	0.497	28.45	-27.60	56.05	28.33	0.12	0.02	0.10	QP
3	0.658	39.06	-16.94	56.00	38.93	0.13	0.03	0.10	QP
4	0.658	29.77	-16.23	46.00	29.64	0.13	0.03	0.10	Average
5	0.708	34.82	-21.18	56.00	34.69	0.13	0.03	0.10	QP
6	0.708	25.21	-20.79	46.00	25.08	0.13	0.03	0.10	Average
7	0.923	42.68	-3.32	46.00	42.54	0.14	0.04	0.10	Average
8	0.923	45.19	-10.81	56.00	45.05	0.14	0.04	0.10	QP
9	0.979	41.38	-14.62	56.00	41.24	0.14	0.04	0.10	QP
10	0.979	31.66	-14.34	46.00	31.52	0.14	0.04	0.10	Average
11	1.150	33.74	-22.26	56.00	33.59	0.15	0.05	0.10	QP
12	1.150	27.25	-18.75	46.00	27.10	0.15	0.05	0.10	Average



5.11 Radiated Emission Measurement

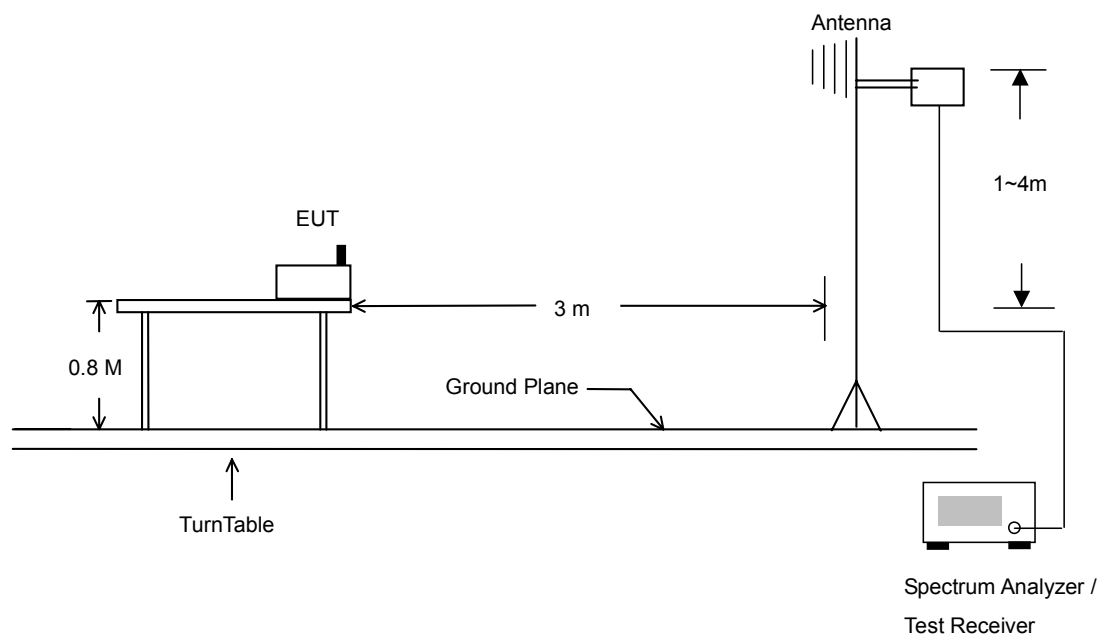
5.11.1 Measuring Instruments

As described in chapter 6 of this Report.

5.11.2 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. 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.
- e. 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.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. 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.
- h. 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





5.11.4 Test Data

- Temperature : 27°C
- Relating Humidity : 58%
- 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	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	53.89	-0.11	54.00	54.12	30.48	35.14	4.43	Average	100	221
2 @	2390.00	71.38	-2.62	74.00	71.61	30.48	35.14	4.43	Peak	173	1
3 @	2410.00	108.34			108.59	30.47	35.14	4.43	Peak	173	1
4 @	2410.00	104.76			105.00	30.47	35.14	4.43	Average	100	221
5 @	2498.00	54.78	-19.22	74.00	55.03	30.40	35.20	4.55	Peak	173	1
6 @	2498.00	43.20	-10.80	54.00	43.45	30.40	35.20	4.55	Average	100	221

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	4824.00	50.00	-24.00	74.00	45.27	33.21	35.09	6.61	Peak	200	0
2 @	4824.00	45.32	-8.68	54.00	40.59	33.21	35.09	6.61	Average	147	107

- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	71.33	-2.67	74.00	71.56	30.48	35.14	4.43	Peak	106	358
2 @	2390.00	53.24	-0.76	54.00	53.47	30.48	35.14	4.43	Average	100	177
3 @	2414.00	107.15			107.39	30.47	35.14	4.43	Peak	106	358
4 @	2414.00	103.46			103.70	30.47	35.14	4.43	Average	100	177
5 @	2484.00	55.46	-18.54	74.00	55.71	30.41	35.19	4.52	Peak	106	358
6 @	2484.00	43.11	-10.89	54.00	43.36	30.41	35.19	4.52	Average	100	177

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	4824.00	52.42	-21.58	74.00	47.69	33.21	35.09	6.61	Peak	200	0
2 @	4824.00	49.98	-4.02	54.00	45.25	33.21	35.09	6.61	Average	124	178



- Test Mode : Mode 2
- Polarization : Horizontal

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	70.23	21.87	-18.13	40.00	46.91	6.26	32.33	1.02	Peak	400	0
2 @	282.18	22.99	-23.01	46.00	39.82	12.92	31.98	2.24	Peak	400	0
3 @	299.19	28.67	-17.33	46.00	45.25	12.94	31.92	2.40	Peak	400	0

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	351.80	17.27	-28.73	46.00	31.97	14.48	31.59	2.41	Peak	100	0
2 @	803.30	23.95	-22.05	46.00	28.91	21.84	31.52	4.71	Peak	100	0
3 @	988.80	24.45	-29.55	54.00	27.90	22.62	31.07	5.01	Peak	100	0

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2328.00	55.26	-18.74	74.00	55.48	30.54	35.10	4.34	Peak	197	360
2 @	2328.00	43.69	-10.31	54.00	43.91	30.54	35.10	4.34	Average	136	128
3 @	2438.00	104.19			104.44	30.44	35.16	4.46	Peak	197	360
4 @	2438.00	100.44			100.70	30.44	35.16	4.46	Average	136	128
5 @	2484.00	54.87	-19.13	74.00	55.12	30.41	35.19	4.52	Peak	197	360
6 @	2484.00	43.64	-10.36	54.00	43.89	30.41	35.19	4.52	Average	136	128

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	4874.00	50.45	-23.55	74.00	45.58	33.39	35.09	6.57	Peak	200	0
2 @	4874.00	43.74	-10.26	54.00	38.87	33.39	35.09	6.57	Average	100	122



- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamplifier Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	52.68	20.36	-19.64	40.00	42.66	9.24	32.44	0.90	Peak	400	0
2 @	264.09	19.31	-26.69	46.00	36.11	12.90	31.91	2.20	Peak	400	0
3 @	274.89	18.87	-27.13	46.00	35.68	12.91	31.96	2.24	Peak	400	0

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamplifier Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	372.80	25.84	-20.16	46.00	39.68	15.07	31.43	2.52	Peak	100	0
2 @	439.30	25.15	-20.85	46.00	37.79	16.40	31.92	2.89	Peak	100	0
3 @	791.40	26.61	-19.39	46.00	32.47	21.65	31.46	3.94	Peak	100	0

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamplifier Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	55.50	-18.50	74.00	55.73	30.48	35.14	4.43	Peak	164	0
2 @	2390.00	44.85	-9.15	54.00	45.08	30.48	35.14	4.43	Average	100	189
3 @	2438.00	107.36			107.61	30.44	35.16	4.46	Peak	164	0
4 @	2438.00	103.44			103.70	30.44	35.16	4.46	Average	100	189
5 @	2484.00	55.18	-18.82	74.00	55.43	30.41	35.19	4.52	Peak	164	0
6 @	2484.00	43.45	-10.55	54.00	43.70	30.41	35.19	4.52	Average	100	189

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamplifier Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	4874.00	52.36	-21.64	74.00	47.49	33.39	35.09	6.57	Peak	200	0
2 @	4874.00	49.64	-4.36	54.00	44.77	33.39	35.09	6.57	Average	100	176



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	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2338.00	55.30	-18.70	74.00	55.53	30.52	35.10	4.34	Peak	179	0
2 @	2338.00	43.66	-30.34	74.00	43.89	30.52	35.10	4.34	Peak	127	136
3 @	2458.00	103.33			103.58	30.43	35.17	4.49	Peak	179	0
4 @	2458.00	101.15			101.40	30.43	35.17	4.49	Average	127	136
5 @	2483.50	57.40	-16.60	74.00	57.66	30.41	35.19	4.52	Peak	179	0
6 @	2483.50	48.04	-25.96	74.00	48.29	30.41	35.19	4.52	Peak	127	136

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	4924.00	51.97	-22.03	74.00	46.96	33.57	35.08	6.52	Peak	200	0
2 @	4924.00	44.85	-9.15	54.00	39.84	33.57	35.08	6.52	Average	186	161

- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2384.00	43.63	-10.37	54.00	43.86	30.50	35.13	4.40	Average	100	203
2 @	2384.00	55.45	-18.55	74.00	55.68	30.50	35.13	4.40	Peak	113	0
3 @	2458.00	105.68			105.94	30.43	35.17	4.49	Peak	113	0
4 @	2458.00	101.95			102.20	30.43	35.17	4.49	Average	100	203
5 @	2483.50	59.08	-14.92	74.00	59.33	30.41	35.19	4.52	Peak	113	0
6 @	2483.50	48.93	-5.07	54.00	49.18	30.41	35.19	4.52	Average	100	203

Remark: #3 and #4 Fundamental Signal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	4924.00	53.28	-20.72	74.00	48.27	33.57	35.08	6.52	Peak	200	0
2 @	4924.00	49.30	-4.70	54.00	44.29	33.57	35.08	6.52	Average	100	161

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Test Mode : Mode 4

- Polarization : Horizontal

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB		cm	deg
1 @	2370.00	39.72	-14.28	54.00	39.95	30.50	35.13	4.40 Average	---	---
2 @	2370.00	46.66	-27.34	74.00	46.89	30.50	35.13	4.40 Peak	---	---
3 @	2402.00	88.77			89.00	30.48	35.14	4.43 Peak	---	---
4 @	2402.00	76.65			76.88	30.48	35.14	4.43 Average	---	---
5 @	2483.50	37.90	-16.10	54.00	38.15	30.41	35.19	4.52 Average	---	---
6 @	2483.50	44.48	-29.52	74.00	44.73	30.41	35.19	4.52 Peak	---	---

Remark: #3 and 4 Fundamental Signal

- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB		cm	deg
1 @	2390.00	44.92	-29.08	74.00	45.15	30.48	35.14	4.43 Peak	---	---
2 @	2390.00	37.22	-16.78	54.00	37.45	30.48	35.14	4.43 Average	---	---
3 @	2402.00	82.46			82.69	30.48	35.14	4.43 Peak	---	---
4 @	2402.00	72.06			72.29	30.48	35.14	4.43 Average	---	---
5 @	2483.50	46.52	-27.48	74.00	46.77	30.41	35.19	4.52 Peak	---	---
6 @	2483.50	38.20	-15.80	54.00	38.45	30.41	35.19	4.52 Average	---	---

Remark: #3 and #4 Fundamental Signal

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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	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	274.89	24.77	-21.23	46.00	41.58	12.91	31.96	2.24	Peak	---	---
2 @	282.99	24.62	-21.38	46.00	41.44	12.92	31.98	2.24	Peak	---	---
3 @	299.19	25.70	-20.30	46.00	42.28	12.94	31.92	2.40	Peak	---	---

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	686.40	30.93	-15.07	46.00	39.85	18.89	31.41	3.60	Peak	---	---
2 @	806.80	33.00	-13.00	46.00	38.28	21.77	31.60	4.55	Peak	100	334
3 @	871.90	32.10	-13.90	46.00	38.17	20.49	31.27	4.71	Peak	---	---

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	44.67	-29.33	74.00	44.90	30.48	35.14	4.43	Peak	---	---
2 @	2390.00	36.22	-17.78	54.00	36.45	30.48	35.14	4.43	Average	---	---
3 @	2441.00	77.19			77.43	30.44	35.17	4.49	Average	---	---
4 @	2441.00	90.22			90.46	30.44	35.17	4.49	Peak	---	---
5 @	2483.50	36.48	-17.52	54.00	36.73	30.41	35.19	4.52	Average	---	---
6 @	2483.50	44.60	-29.40	74.00	44.85	30.41	35.19	4.52	Peak	---	---

Remark: #3 and 4 Fundamental Signal

SPORTON International Inc.

TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

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- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	266.79	23.13	-22.87	46.00	39.94	12.91	31.92	2.21	Peak	---	---
2 @	274.89	26.17	-19.83	46.00	42.98	12.91	31.96	2.24	Peak	---	---
3 @	299.19	27.33	-18.67	46.00	43.91	12.94	31.92	2.40	Peak	---	---
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	770.40	23.36	-22.64	46.00	29.74	21.04	31.58	4.16	Peak	---	---
2 @	805.40	23.50	-22.50	46.00	28.63	21.80	31.56	4.63	Peak	---	---
3 @	988.80	24.76	-29.24	54.00	28.21	22.62	31.07	5.01	Peak	---	---
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	45.13	-28.87	74.00	45.35	30.48	35.14	4.43	Peak	---	---
2 @	2390.00	35.22	-18.78	54.00	35.45	30.48	35.14	4.43	Average	---	---
3 @	2441.00	86.59			86.83	30.44	35.17	4.49	Peak	---	---
4 @	2441.00	72.88			73.12	30.44	35.17	4.49	Average	---	---
5 @	2483.50	45.37	-28.63	74.00	45.62	30.41	35.19	4.52	Peak	---	---
6 @	2483.50	36.25	-17.75	54.00	36.48	30.48	35.14	4.43	Average	---	---

Remark: #3 and #4 Fundamental Signal

**FCC TEST REPORT****Report No. : FR541416**

Test Mode : Mode 6

- Polarization : Horizontal

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	44.86	-29.14	74.00	45.09	30.48	35.14	4.43	Peak	---	---
2 @	2390.00	34.07	-19.93	54.00	34.30	30.48	35.14	4.43	Average	---	---
3 @	2480.00	90.19			90.44	30.41	35.19	4.52	Peak	---	---
4 @	2480.00	74.20			74.45	30.41	35.19	4.52	Average	---	---
5 @	2483.50	46.87	-7.13	54.00	47.12	30.41	35.19	4.52	Average	---	---
6 @	2483.50	55.23	-18.77	74.00	55.48	30.41	35.19	4.52	Peak	---	---

Remark: #3 and #4 Fundamental Signal

- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	2390.00	44.90	-29.10	74.00	45.13	30.48	35.14	4.43	Peak	100	360
2 @	2390.00	35.22	-18.78	54.00	35.45	30.48	35.14	4.43	Average	---	---
3 @	2480.00	83.74			83.99	30.41	35.19	4.52	Peak	---	---
4 @	2480.00	69.87			70.12	30.41	35.19	4.52	Average	---	---
5 @	2483.50	42.20	-11.80	54.00	42.45	30.41	35.19	4.52	Average	---	---
6 @	2483.50	49.43	-24.57	74.00	49.68	30.41	35.19	4.52	Peak	---	---

Remark: #3 and #4 Fundamental Signal

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**FCC TEST REPORT****Report No. : FR541416**

Test Mode : Mode 7

- Polarization : Horizontal

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	35.13	32.96	-7.04	40.00	46.84	17.07	31.64	0.69	Peak	---	---
2 @	67.53	32.31	-7.69	40.00	56.53	6.32	31.56	1.02	Peak	---	---
3 @	81.03	31.33	-8.67	40.00	54.56	7.27	31.59	1.10	Peak	---	---

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	325.90	23.64	-22.36	46.00	38.47	13.71	30.94	2.39	Peak	---	---
2	771.80	25.59	-20.41	46.00	30.71	21.09	30.35	4.13	Peak	---	---
3 @	901.30	30.74	-15.26	46.00	36.47	19.97	30.58	4.89	Peak	---	---

- Polarization : Vertical

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

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	34.59	28.73	-11.27	40.00	42.61	17.07	31.64	0.69	Peak	---	---
2 @	40.26	29.66	-10.34	40.00	46.37	14.28	31.72	0.72	Peak	---	---
3 @	67.53	27.57	-12.43	40.00	51.79	6.32	31.56	1.02	Peak	---	---

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	488.30	26.68	-19.32	46.00	37.05	17.07	30.49	3.06	Peak	---	---
2 @	514.90	28.68	-17.32	46.00	39.25	16.92	30.83	3.34	Peak	---	---
3	528.90	26.79	-19.21	46.00	37.80	16.75	30.99	3.24	Peak	---	---



5.12 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.

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 are 2 PIFA antennas for WLAN and BT with SMD connector and it is considered to meet antenna requirement of FCC.

6. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Jul. 27, 2004	Jul. 26, 2005	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jun. 29, 2005	Jun. 27, 2006	Radiation (03CH06-HY)
Controller	INN-CO	CO2000	114/8000604/L	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 21, 2004	Nov. 20, 2005	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 01, 2005	Jun. 31, 2006	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jul. 21, 2004	Jul. 20, 2005	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	INN-CO	MM3000	114/8000604/L	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)
Base Station Emulator	Agilent	E5515C	GB43460754	Qual-band	Jan. 12, 2004	Jan. 12, 2006	Base Station
Radio Communication Tester	R&S	CMU200	105934	Qual-band	Aug. 24, 2004	Aug. 24, 2005	Base Station
Thermal Chamber	Ten Billion	TTH-D35P	N/A	N/A	NCR	NCR	EMS Chamber



7. Uncertainty Evaluation

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

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability 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	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
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	+0.39/-0.41	U-shaped	0.28
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 Measurement (1GHz ~ 40GHz)**

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability 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 $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				