



SPORTON LAB.

Certificate No **FD452603**

CERTIFICATE OF COMPLIANCE

Authorized under Declaration of Conformity
according to

47 CFR, Part 2 and Part 15 of the FCC Rules



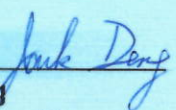
● **EQUIPMENT : Multi-Bay Hard Disk Enclosure**
MODEL NO. : ST8-S3P
APPLICANT : RAIDON TECHNOLOGY, INC.
7F-9, No.16, Lane 609, Sec. 5, Chung-Hsin Rd., San-Chung Dist.,
New Taipei City, Taiwan (R.O.C)



I HEREBY

CERTIFY THAT:

The equipment is in accordance with the procedures are given in **ANSI C63.4-2009**
and the energy emitted by this equipment was **Passed CISPR PUB. 22** and
FCC Part 15 Subpart B in both radiated and conducted emissions **Class B** limits.
The test was carried out on **Jun. 06, 2014** SPORTON INTERNATIONAL INC. LAB.


Jack Deng
Engineering Manager



FCC TEST REPORT

Authorized under **D**eclaration **o**f **C**onformity

according to

**47 CFR FCC Rules and Regulations Part 15 Subpart B,
Class B Digital Device**

Equipment : Multi-Bay Hard Disk Enclosure

Model No. : ST8-S3P

Filing Type : Declaration of Conformity

Applicant : **RAIDON TECHNOLOGY, INC.**
7F-9, No.16, Lane 609, Sec. 5, Chung-Hsin Rd.,
San-Chung Dist., New Taipei City, Taiwan (R.O.C)

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- **Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by TAF or any agency of U.S. government.**

SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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History of this test report

Original Report Issue Date: Jun. 26, 2014

■ No additional attachment.

□ Additional attachment were issued as following record:

Report No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE

According to

47 CFR FCC Rules and Regulations Part 15 Subpart B, Class B Digital Device

Equipment : Multi-Bay Hard Disk Enclosure
Model No. : ST8-S3P
Applicant : **RAIDON TECHNOLOGY, INC.**
7F-9, No.16, Lane 609, Sec. 5, Chung-Hsin Rd.,
San-Chung Dist., New Taipei City, Taiwan (R.O.C)

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4-2009** and the energy emitted by this equipment was **passed CISPR PUB. 22** and **FCC Part 15 Subpart B** in both radiated and conducted emission **Class B** limits.

The product sample received on **Jun. 04, 2014** and completely tested on **Jun. 06, 2014** at **SPORTON International Inc. LAB.**



Jack Deng
Engineering Manager

SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

1. General Description of Equipment under Test

1.1 Applicant

RAIDON TECHNOLOGY, INC.

7F-9, No.16, Lane 609, Sec. 5, Chung-Hsin Rd., San-Chung Dist., New Taipei City, Taiwan (R.O.C)

1.2 Manufacturer

Same as 1.1

1.3 Basic Description of Equipment under Test

Equipment : Multi-Bay Hard Disk Enclosure
Model No. : ST8-S3P
Trade Name : STARDOM
eSATA Cable x2 : D-Shielded, 1.05 m
Power Supply Type : Switching
AC Power Cord : Non-Shielded, 1.8m, 3 pin

The maximum operating frequency is 25MHz.

1.4 Feature of Equipment under Test

Please refer to user manual.

2. Test Configuration of Equipment under Test

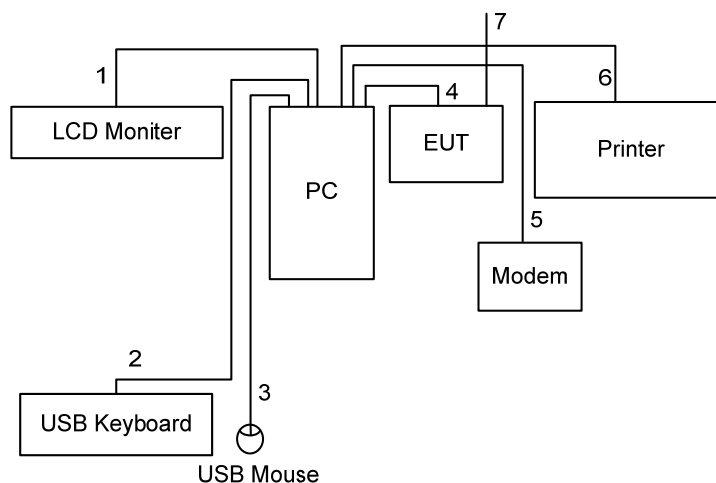
2.1 Test Manner

- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.
- b. The complete test system included PC, LCD Monitor, USB Keyboard, USB Mouse, Printer, Modem, HDD*4, eSATA Card and EUT for EMI test.
- c. The following test modes were pretested for EMI test:
 - Mode 1. eSATA HDD*4 R/W, upper storey
 - Mode 2. eSATA HDD*4 R/W, lower storey
 - ⇒ Cause “**Mode 1**” generated the worst test result; it was reported as final data.
- d. Frequency range investigated: Conducted 150 kHz to 30 MHz, Radiated 30 MHz to 1,000 MHz.

2.2 Description of Test System

No.	Description	Manufacturer	Model	FCC ID	Signal Cable Description
1	PC	Lenovo	C61	DoC	---
2	LCD Monitor	DELL	E198WFPF	DoC	D-SUB Cable, D-Shielded, 1.8m
3	Keyboard	Lenovo	KU-0225	DoC	USB Cable, AL-F-Shielded, 1.8m
4	Mouse	Lenovo	M-U0025-O	DoC	USB Cable, AL-F-Shielded, 1.8m
5	Printer	HP	C2642A	B94C2642X	LPT Cable, D-Shielded, 1.2m
6	Modem	ACEEX	DM1414	IFAXDM1414	RS-232 Cable, D-Shielded, 1.15m
7	HDD*4	HITACHI	320G	DoC	---
8	eSATA Card	STARDOM	ES2-P2	---	---

2.3 Connection Diagram of Test System for Radiated Emission



The support unit 7 is insert into EUT.

1. The D-Sub cable is connected from support unit 1 to the support unit 2.
2. The USB cable is connected from support unit 1 to the support unit 3.
3. The USB cable is connected from support unit 1 to the support unit 4.
4. The eSATA cable is connected from EUT to the support unit 1.
5. The RS232 cable is connected from support unit 1 to the support unit 6.
6. The LPT cable is connected from support unit 1 to the support unit 5.
7. The eSATA cable is floating from EUT.

Note: Above support unit on behalf of the meaning, please refer to section 2.2.

3. Test Software

Two executive programs, "BURNINTEST" and "EMIprogram" under Win 7, which generates a complete line of continuously repeating " H " pattern was used as the test software.

The program was executed as follows :

- a. Turn on the power of all equipment.
- b. The PC reads the test program from the hard disk drive and runs it.
- c. The PC sends " H " messages to the monitor, and the monitor displays " H " patterns on the screen.
- d. The PC sends " H " messages to the printer, then the printer prints them on the paper.
- e. The PC sends " H " messages to the modem.
- f. The PC sends " H " messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
- g. Repeat the steps from c to f.

At the same time, the following program was executed:

- The PC executed "WINTHRAX" to read and write the HDD of EUT via eSATA cable.

4. General Information of Test

4.1 Test Facility

For conducted emission

Test Site Location : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
TEL : 886-2-2631-4739
FAX : 886-2-2631-9740

Test Site No. : CO01-NH

For radiated emission below 1GHz

Test Site Location : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
TEL : 886-2-2631-4739
FAX : 886-2-2631-9740

Test Site No. : OS02-NH

4.2 Uncertainty of Test Site

Test Items	Test Site No.	Uncertainty	Remark
Conducted Emissions	CO01-NH	± 2.62 dB	Confidence levels of 95%
Radiated Emissions below 1GHz	OS02-NH	± 3.04 dB	Confidence levels of 95%

4.3 Test Voltage

120V / 60Hz

4.4 Standard for Methods of Measurement

ANSI C63.4-2009

4.5 Test in Compliance with

CISPR PUB. 22 and FCC Part 15 Subpart B

4.6 Frequency Range Investigated

- a. Conducted emission test: from 150 kHz to 30 MHz
- b. Radiated emission test: from 30 MHz to 1,000 MHz

4.7 Test Distance

The test distance of radiated emission from antenna to EUT is 10 M (from 30MHz ~ 1GHz)

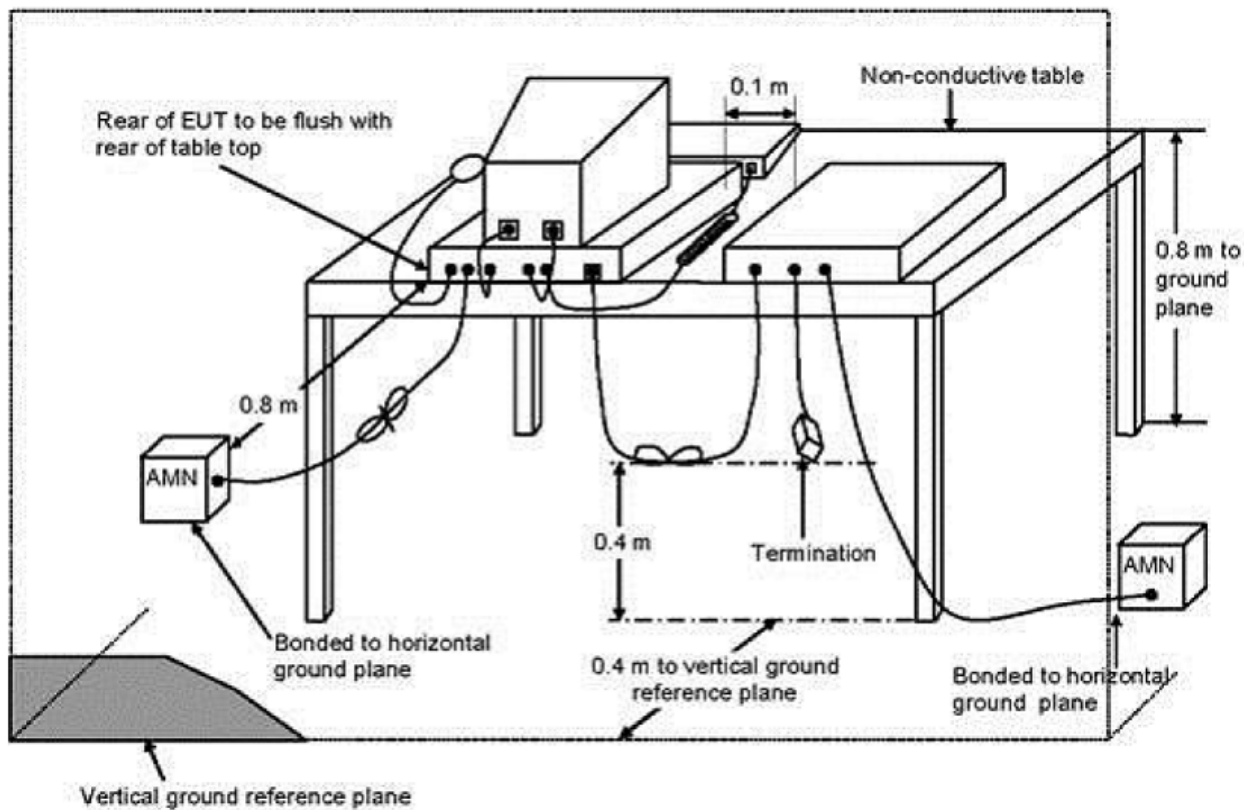
5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in ANSI C63.4, Clause 7. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

5.1 Test Procedures

- a. The EUT was warmed up for 15 minutes before testing started.
- b. The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
- c. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- d. All the support units are connect to the other LISN.
- e. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- f. The CISPR states that a 50 ohm, 50 microhenry LISN should be used.
- g. Both sides of AC line were checked for maximum conducted interference.
- h. The frequency range from 150 kHz to 30 MHz was searched.
- i. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5.2 Typical Test Setup Layout of Conducted Power line



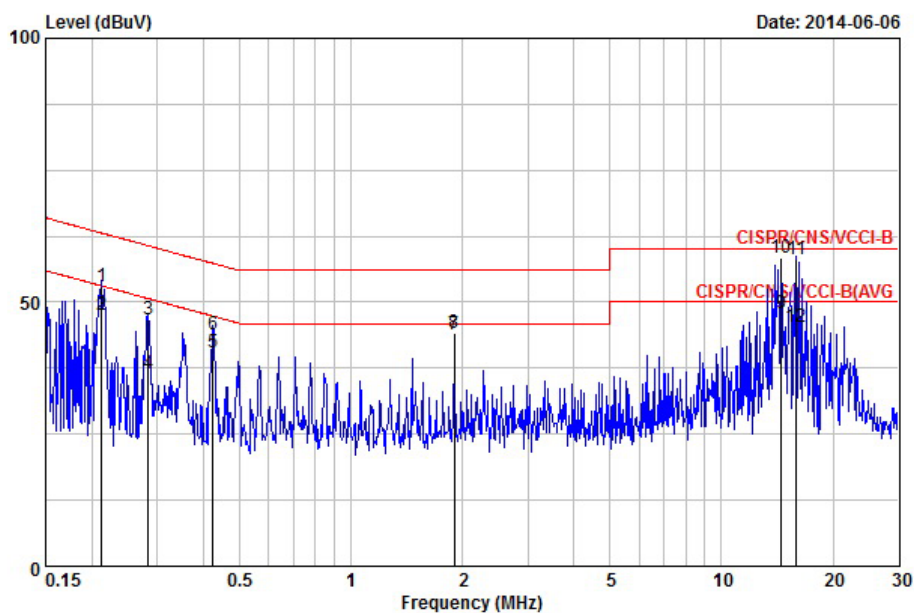
5.3 Test Result of AC Powerline Conducted Emission

Test Mode	Mode 1	Temperature	25°C
Test Engineer	Willy Lee	Humidity	52%

Note: Corrected Reading (dBμV) = LISN Factor + Cable Loss + Read Level = Level

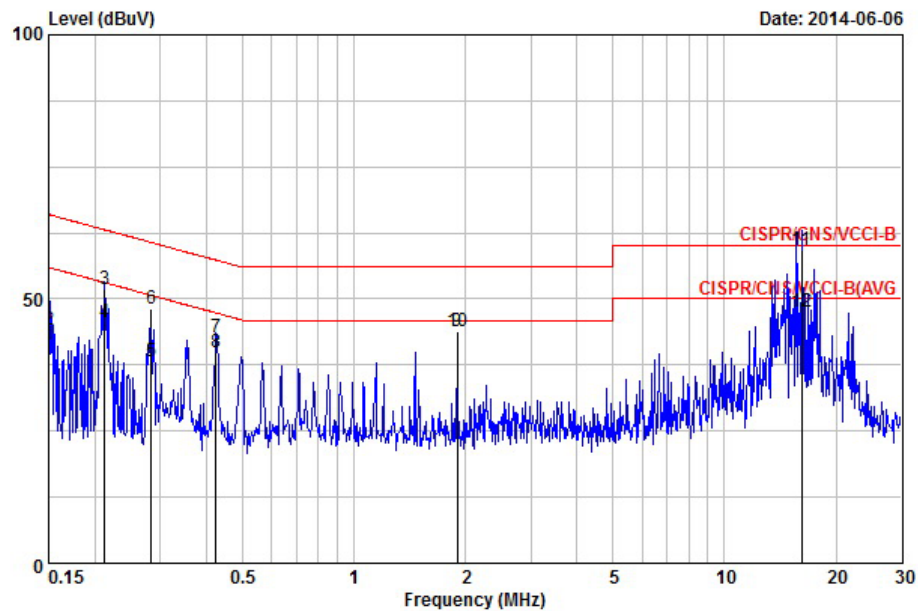
■ The test was passed at the minimum margin that marked by the frame in the following data

LINE



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBμV	dB	dBμV	dBμV	dB	dB	
1	0.213	53.03	-10.07	63.10	42.37	10.55	0.10	QP
2	0.213	47.54	-5.56	53.10	36.88	10.55	0.10	AVERAGE
3	0.283	46.68	-14.04	60.72	36.06	10.52	0.10	QP
4	0.283	36.52	-14.20	50.72	25.90	10.52	0.10	AVERAGE
5	0.424	40.51	-6.86	47.37	29.92	10.49	0.11	AVERAGE
6	0.424	44.00	-13.37	57.37	33.41	10.49	0.11	QP
7	1.898	43.92	-12.08	56.00	33.17	10.55	0.20	QP
8	1.898	44.04	-1.96	46.00	33.29	10.55	0.20	AVERAGE
9	14.497	47.75	-2.25	50.00	36.63	10.83	0.30	AVERAGE
10	14.497	58.26	-1.74	60.00	47.14	10.83	0.30	QP
11	15.906	58.08	-1.92	60.00	46.93	10.85	0.30	QP
12	15.906	45.27	-4.73	50.00	34.12	10.85	0.30	AVERAGE

NEUTRAL



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	41.35	-14.65	56.00	31.16	10.09	0.10	AVERAGE
2	0.150	44.22	-21.78	66.00	34.03	10.09	0.10	QP
3	0.213	51.76	-11.33	63.10	41.58	10.08	0.10	QP
4	0.213	45.71	-7.38	53.10	35.53	10.08	0.10	AVERAGE
5	0.283	38.12	-12.60	50.72	27.94	10.08	0.10	AVERAGE
6	0.283	48.03	-12.69	60.72	37.85	10.08	0.10	QP
7	0.424	42.80	-14.57	57.37	32.62	10.08	0.11	QP
8	0.424	39.80	-7.57	47.37	29.62	10.08	0.11	AVERAGE
9	1.898	43.85	-12.15	56.00	33.53	10.12	0.20	QP
10	1.898	43.86	-2.14	46.00	33.54	10.12	0.20	AVERAGE
11	16.140	59.26	-0.74	60.00	48.55	10.41	0.30	QP
12	16.140	47.68	-2.32	50.00	36.97	10.41	0.30	AVERAGE

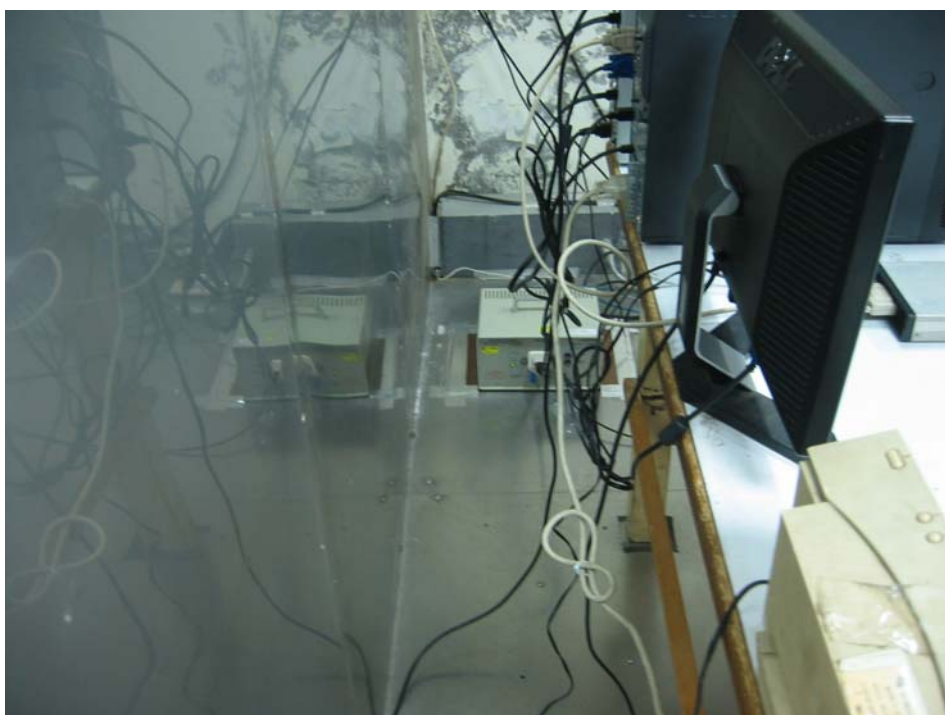
5.4 Photographs of Conducted Power line Test Configuration

- The photographs show the configuration that generates the maximum emission.

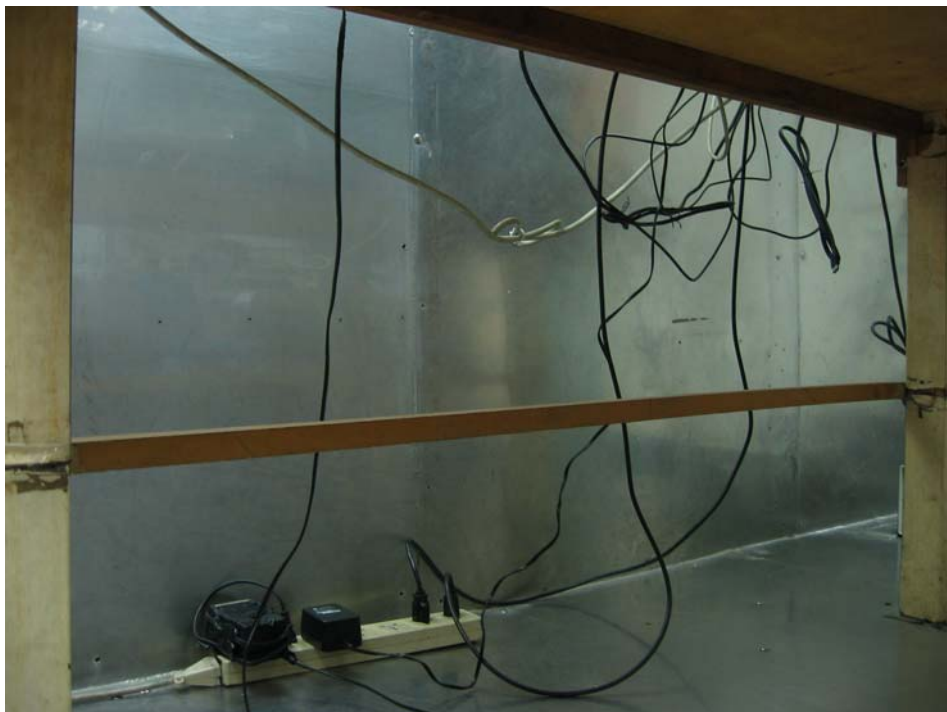
FRONT VIEW



REAR VIEW



SIDE VIEW



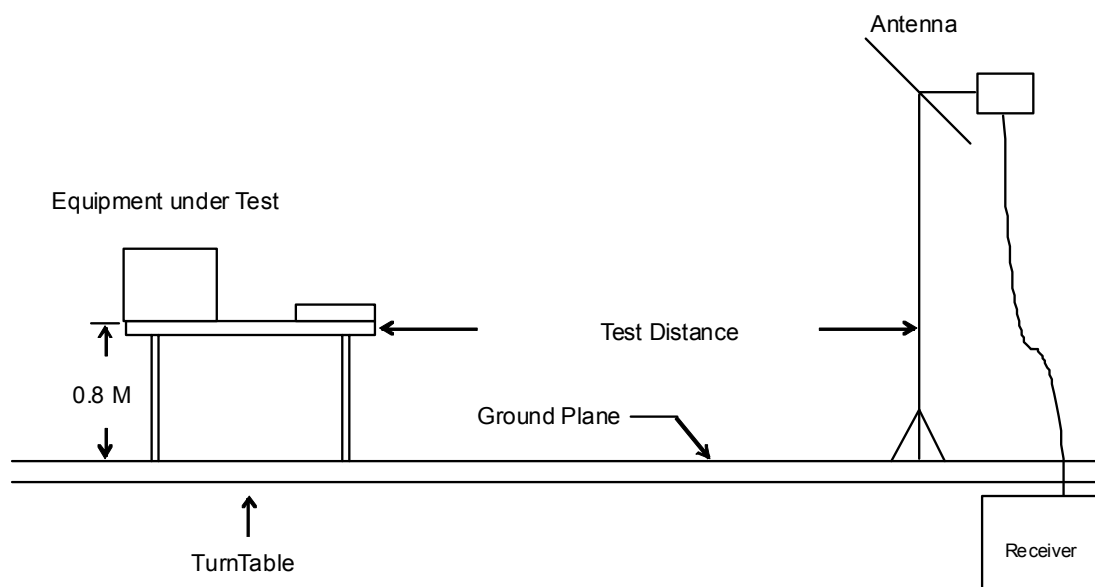
6. Test of Radiated Emission

Radiated emissions below 1 GHz were measured with a bandwidth of 120 kHz for 30 MHz to 1,000 MHz according to the methods defines in ANSI C63.4, Clause 8. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

6.1 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 10 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 both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- 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 turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. 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 which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

6.2 Typical Test Setup Layout of Radiated Emission



6.3 Test Result of Radiated Emission

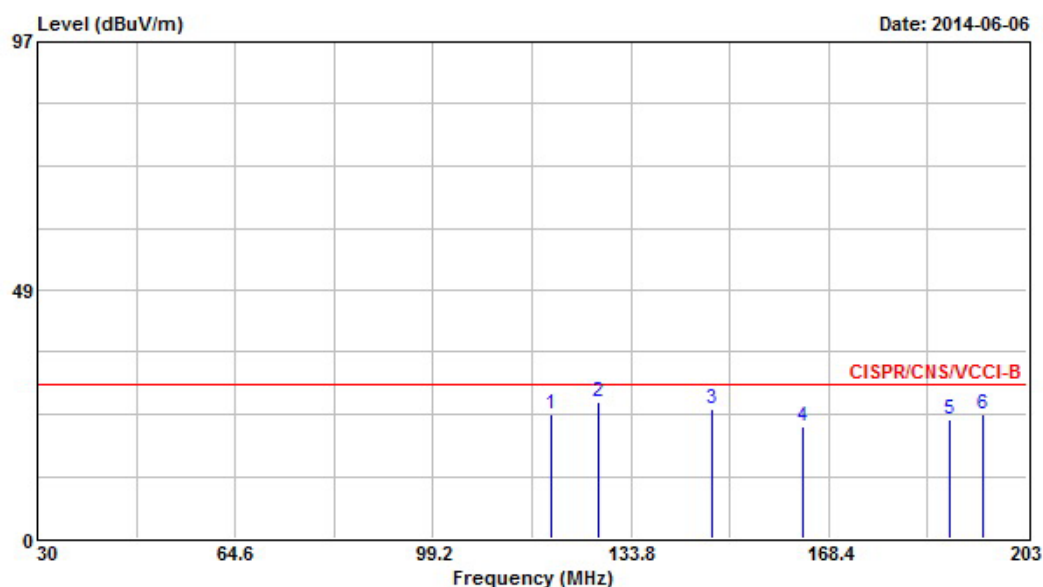
Frequency Range of Test	From 30 MHz to 1000 MHz	Test Distance	10m
Test Mode	Mode 1	Temperature	28°C
Test Engineer	Chas Yeh	Humidity	52%

Note: 1. Emission level (dBμV/m) = 20 log Emission level (μV/m)

2. Corrected Reading : Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level

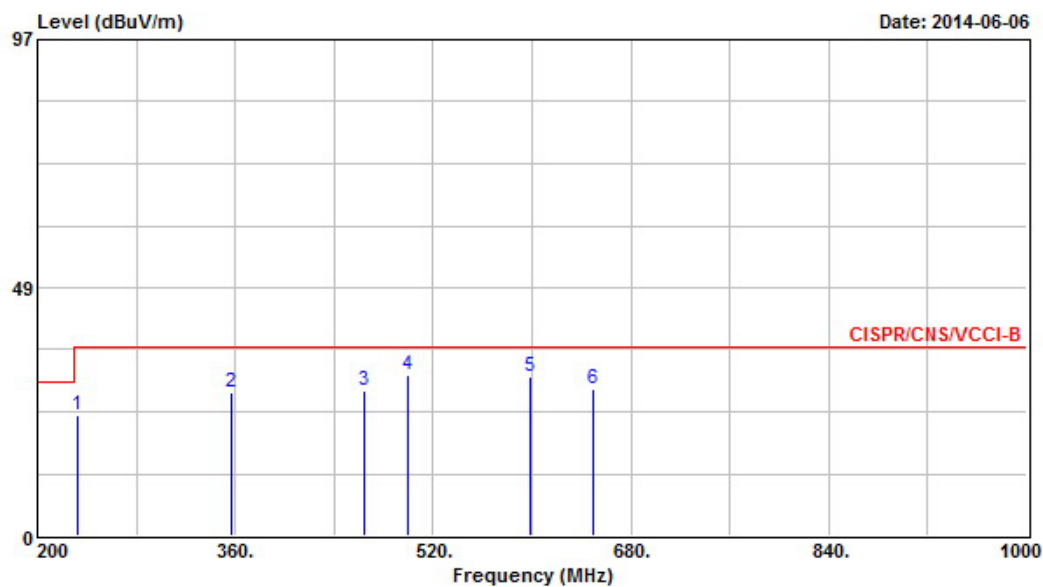
■ The test was passed at the minimum margin that marked by the frame in the following data

Vertical



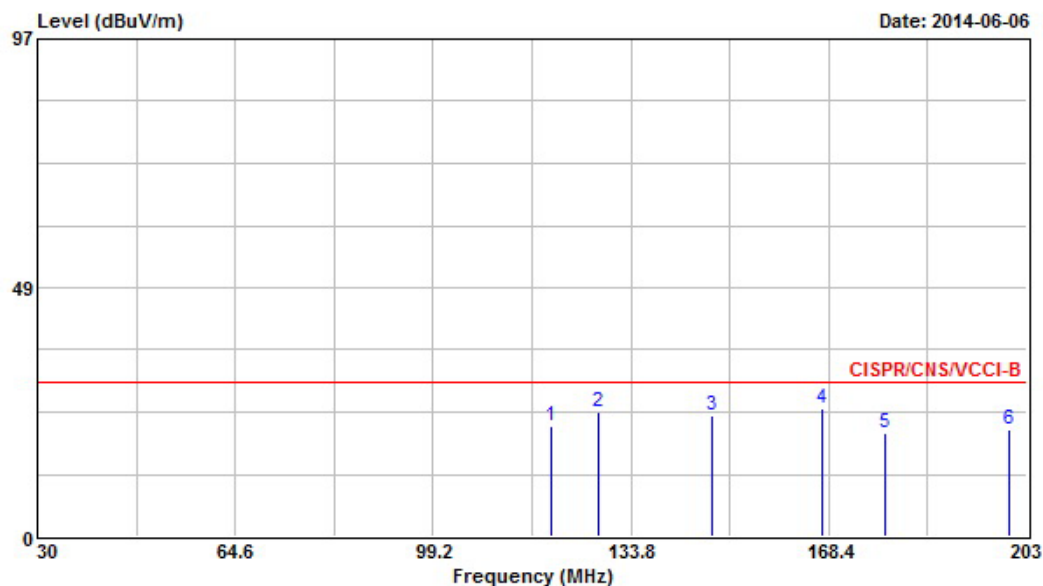
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	119.960	24.39	-5.61	30.00	42.37	12.21	1.41	31.60	Peak	---	---
2	128.090	26.58	-3.42	30.00	44.81	11.92	1.44	31.59	QP	100	180
3	147.990	25.13	-4.87	30.00	44.43	10.70	1.55	31.55	Peak	---	---
4	163.900	22.01	-7.99	30.00	41.80	10.08	1.64	31.51	Peak	---	---
5	189.510	23.18	-6.82	30.00	43.55	9.35	1.74	31.46	Peak	---	---
6	195.220	24.14	-5.86	30.00	44.41	9.39	1.78	31.44	Peak	---	---

Vertical



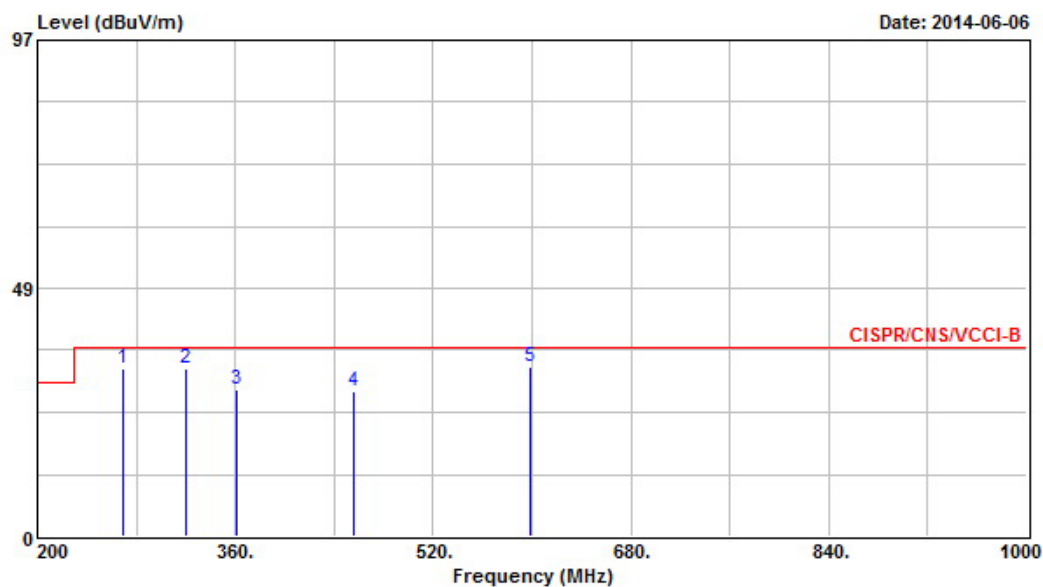
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	232.000	23.70	-13.30	37.00	41.83	11.29	1.96	31.38	Peak	---	---
2	356.800	27.85	-9.15	37.00	41.99	14.72	2.47	31.33	Peak	---	---
3	464.800	28.40	-8.60	37.00	39.86	17.00	2.89	31.35	Peak	---	---
4	499.200	31.52	-5.48	37.00	42.20	17.64	3.01	31.33	Peak	---	---
5	599.200	31.17	-5.83	37.00	39.99	19.04	3.37	31.23	Peak	---	---
6	649.600	28.74	-8.26	37.00	37.34	19.16	3.49	31.25	Peak	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	119.960	21.53	-8.47	30.00	39.51	12.21	1.41	31.60	Peak	---	---
2	128.090	24.12	-5.88	30.00	42.35	11.92	1.44	31.59	QP	---	---
3	147.990	23.59	-6.41	30.00	42.89	10.70	1.55	31.55	Peak	---	---
4	167.190	24.99	-5.01	30.00	44.89	9.95	1.65	31.50	Peak	---	---
5	178.260	20.08	-9.92	30.00	40.47	9.40	1.69	31.48	Peak	---	---
6	200.060	20.79	-9.21	30.00	41.00	9.42	1.80	31.43	Peak	---	---

Horizontal



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Remark	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	269.600	32.81	-4.19	37.00	49.28	12.72	2.12	31.31 Peak	---	---
2 @	320.000	32.75	-4.25	37.00	47.91	13.79	2.34	31.29 Peak	---	---
3	360.800	28.76	-8.24	37.00	42.79	14.82	2.49	31.34 Peak	---	---
4	456.000	28.37	-8.63	37.00	40.03	16.84	2.86	31.36 Peak	---	---
5 @	599.200	33.06	-3.94	37.00	41.88	19.04	3.37	31.23 QP	---	---

6.4 Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW



REAR VIEW



7. List of Measuring Equipment Used

< Conducted Emission >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESCS 30	100167	9 kHz - 2.75 GHz	Nov. 05, 2013	Conduction (CO01-NH)
LISN	SCHAFFNER	NNB41	06/10024	9kHz - 30MHz	Dec. 05, 2013	Conduction (CO01-NH)
LISN	KYORITSU	KNW-407	8-1010-15	9kHz - 30MHz	N/A	Conduction (CO01-NH)
Power Filter	CORCOM	MR12030	N/A	30A*2	N/A	Conduction (CO01-NH)
RF Cable-CON	Suhner Switzerland	RG223/U	CB004	9kHz - 30MHz	Dec. 11, 2013	Conduction (CO01-NH)

※ Calibration Interval of instruments listed above is one year.

< Radiated Emission >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Open Area Test Site	SPORTON	OATS-10	OS02-NH	30 MHz - 1 GHz 10m, 3m	Dec. 30, 2013	Radiation (OS02-NH)
Amplifier	BURGEON	BPA-530	100203	0.01 MHz - 3 GHz	May 19, 2014	Radiation (OS02-NH)
Receiver	R&S	ESCI	100497	9 kHz - 3 GHz	Apr. 24, 2014	Radiation (OS02-NH)
Bilog Antenna	CHASE	CBL6122B	2884	30 MHz - 2 GHz	Feb. 28, 2014	Radiation (OS02-NH)
Turn Table	EMCO	2080	9508-1805	0 - 360 degree	N/A	Radiation (OS02-NH)
Antenna Mast	ETS	2075-2	2385	1 m - 4 m	N/A	Radiation (OS02-NH)
RF Cable-R10m	MIYAZAKI	5DFB	CB044	30 MHz - 1 GHz	Aug. 30, 2013	Radiation (OS02-NH)

※ Calibration Interval of instruments listed above is one year.

APPENDIX A. Photographs of EUT

