

# EMI TEST REPORT

**Test Report No. : 30LE0267-HO-B**

**Applicant** : Sharp Corporation, Communication Systems Group.  
**Type of Equipment** : Cellular Phone  
**Model No.** : SH-01C  
**FCC ID** : APYHRO00129  
**Test standard** : FCC Part 15 Subpart B 2010 Class B  
**Test Result** : Complied

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report must not be used by the customer product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

**Date of test:** September 13, 2010

**Representative test engineer:**



Hisayoshi Sato  
Engineer of EMC Service

**Approved by:**



Mitsuru Fujimura  
Manager of EMC Service



NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation. \*As for the range of Accreditation in NVLAP, you may refer to the WEB address, <http://www.ul.com/japan/jpn/pages/services/emc/about/mark1/index.jsp#nvlap>

**UL Japan, Inc.**

**Head Office EMC Lab.**

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MF058b (15.09.10)

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## **SECTION 1: Customer information**

Company Name : Sharp Corporation, Communication Systems Group.  
Address : 2-13-1 Iida Hachihonmatsu HigashiHiroshima-City, Hiroshima,  
739-0192 Japan  
Telephone Number : +81-82-420-1825  
Facsimile Number : +81-82-420-1829  
Contact Person : Kazuo Sugimoto

## **SECTION 2: Equipment under test (E.U.T.)**

### **2.1 Identification of E.U.T.**

Type of Equipment : Cellular Phone  
Model No. : SH-01C  
Serial No. : Refer to Section 4, Clause 4.2  
Receipt Date of Sample : September 10, 2010  
Country of Mass-production : Japan  
Condition of EUT : Production prototype  
(Not for Sale: This sample is equivalent to mass-produced items.)  
Modification of EUT : No Modification by the test lab

### **2.2 Product description**

Feature of EUT : Tetra-band (800/850/1700/2000)WCDMA & GSM Dual mode Cellular Phone /  
Bluetooth/W-LAN, Felica & 1.5GHz Band Satellite Receiver (GPS) enable  
- GSM (EU: 900/1800M, 1900M)  
- WCDMA (EU: 2000M, USA: 850M, JPN: 800/1700/2000M)  
Clock frequency(ies) in the system : 48MHz (Oscillator), 500.5MHz (CPU Clock)

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## **SECTION 3: Test specification, procedures & results**

### **3.1 Test specification**

Test Specification : FCC Part 15 Subpart B 2010, final revised on January 22, 2010 and effective March 1, 2010

Title : FCC 47CFR Part15 Radio Frequency Device  
Subpart B Unintentional Radiators

### **3.2 Procedures and results**

<b>Item</b>	<b>Test Procedure</b>	<b>Limits</b>	<b>Deviation</b>	<b>Worst margin</b>	<b>Result</b>
Conducted emission	FCC: ANSI C63.4: 2003 7. AC powerline conducted emission measurements	Class B	N/A	[QP] 15.6dB 0.16820MHz, N [AV] 16.2dB 3.59472MHz, N	Complied
Radiated emission	FCC: ANSI C63.4: 2003 8. Radiated emission measurements	Class B	N/A	1.4dB 797.637MHz, Horizontal, QP	Complied

\*Note: UL Japan, Inc's EMI Work Procedure QPM05.

### **3.3 Addition to standard**

No addition, exclusion nor deviation has been made from the standard.

### 3.4 Uncertainty

#### EMI

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Test room (semi-anechoic chamber)	Conducted emission (+dB)
	150kHz-30MHz
No.1	2.6dB
No.2	2.9dB
No.3	3.3dB
No.4	2.8dB

Test room (semi-anechoic chamber)	Radiated emission (10m*)(±dB)		
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz
No.1	2.7dB	4.8dB	5.0dB
No.2	-	-	-
No.3	-	-	-
No.4	-	-	-

\*10m = Measurement distance

Test room (semi-anechoic chamber)	Radiated emission						
	(3m*)(+dB)			(1m*)(+dB)		(0.5m*)(+dB)	
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	1GHz -10GHz	10GHz -18GHz	18GHz -26.5GHz	26.5GHz -40GHz
No.1	2.9dB	4.8dB	5.0dB	3.9dB	4.3dB	4.5dB	4.3dB
No.2	3.5dB	4.8dB	5.1dB	4.0dB	4.2dB	4.4dB	4.2dB
No.3	3.8dB	4.6dB	4.7dB	4.0dB	4.2dB	4.5dB	4.2dB
No.4	3.5dB	4.4dB	4.9dB	4.0dB	4.2dB	4.6dB	4.2dB

\*3m/1m/0.5m = Measurement distance

#### Conducted Emission test

The data listed in this test report has enough margin, more than the site margin.

#### Radiated emission test (3m)

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

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### 3.5 Test Location

UL Japan, Inc. Head Office EMC Lab. \*NVLAP Lab. code: 200572-0  
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN  
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	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	313583	2973C-1	19.2 x 11.2 x 7.7m	7.0 x 6.0m	No.1 Power source room
No.2 semi-anechoic chamber	655103	2973C-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 semi-anechoic chamber	148738	2973C-3	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.3 Preparation room
No.3 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 semi-anechoic chamber	134570	2973C-4	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.4 Preparation room
No.4 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.5 semi-anechoic chamber	-	-	6.0 x 6.0 x 3.9m	6.0 x 6.0m	-
No.6 shielded room	-	-	4.0 x 4.5 x 2.7m	4.75 x 5.4 m	-
No.6 measurement room	-	-	4.75 x 5.4 x 3.0m	4.75 x 4.15 m	-
No.7 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.8 measurement room	-	-	3.1 x 5.0 x 2.7m	N/A	-
No.9 measurement room	-	-	8.0 x 4.5 x 2.8m	2.0 x 2.0m	-
No.10 measurement room	-	-	2.6 x 2.8 x 2.5m	2.4 x 2.4m	-
No.11 measurement room	-	-	3.1 x 3.4 x 3.0m	2.4 x 3.4m	-

\* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

### 3.6 Test set up, Data of EMI, and Test instruments

Refer to APPENDIX.

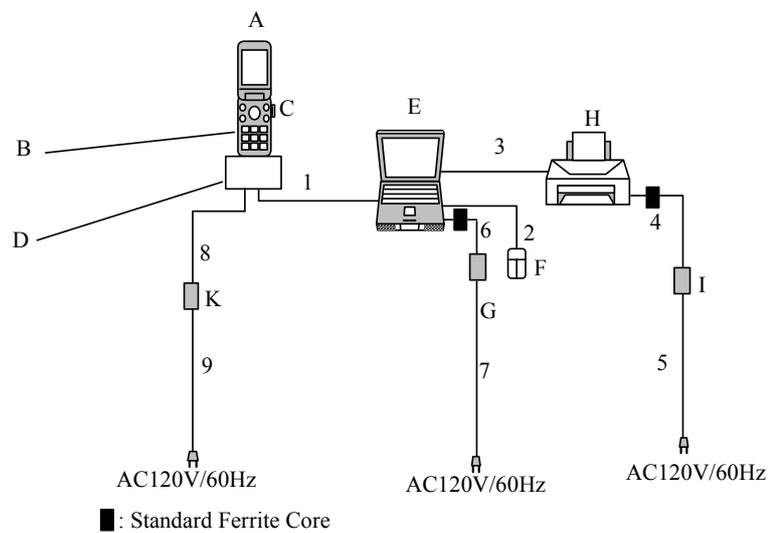
## SECTION 4: Operation of E.U.T. during testing

### 4.1 Operating mode(s)

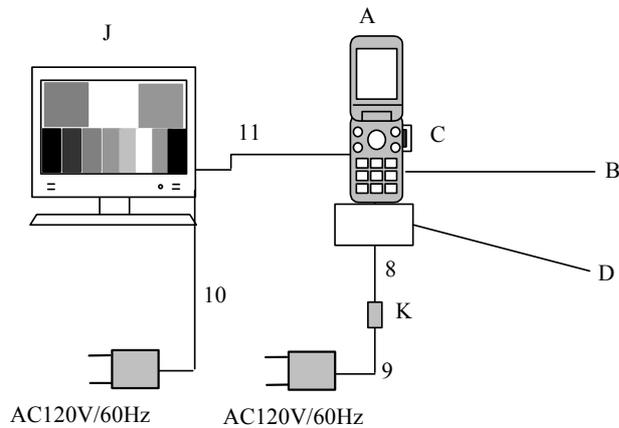
The mode(s) : 1) USB Data Com mode  
The USB data is communicated between EUT and Personal computer (Pair of EUT).  
2) Standby mode  
Standby state for USB communication.

### 4.2 Configuration and peripherals

1) USB Data Com mode



2) Standby mode



**Description of EUT and Support equipment**

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Cellular Phone	SH-01C	004401112855149	Sharp Corporation	EUT
B	Lithium-Ion Battery	Battery Pack SH23	-	Sharp Corporation	EUT
C	microSD Memory Card	SD-C08G	0852K93900Y	Toshiba	-
D	Desktop Holder	SH34	-	Sharp Corporation	EUT
E	Personal Computer	PP11L	0D4571-48643-58P-1053	DELL	-
F	Mouse	M-UAG120	G83C0007F310	Logitech	-
G	AC Adapter(PC)	PA-1650-05D2	0F7970-71615-77H-0D63	DELL	-
H	Printer	895Cxi	SG8BA1W18J	Hewlett-Packard	-
I	AC Adapter (Printer)	C4557-60004	C8L01B	Hewlett-Packard	-
J	Monitor	RDT231WLM(BK)	01236656AJ	MITSUBISHI	-
K	AC Adapter(set)	MAS-BH0008-A002	-	NEC	-

**List of cables used**

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	USB Data Cable	0.75	Shielded	Shielded	-
2	Mouse Cable	0.70	Shielded	Shielded	-
3	Printer Cable	2.00	Shielded	Shielded	-
4	DC Power Cable(Printer)	2.00	Unshielded	Unshielded	-
5	AC Power Cable(Printer)	1.75	Unshielded	Unshielded	-
6	DC Power Cable(PC)	1.85	Unshielded	Unshielded	-
7	AC Power Cable(PC)	0.90	Unshielded	Unshielded	-
8	DC Power Cable(set)	1.50	Unshielded	Unshielded	-
9	AC Power Cable(set)	0.56	Unshielded	Unshielded	-
10	AC Power Cable(Monitor)	1.80	Unshielded	Unshielded	-
11	HDMI Cable	1.50	Shielded	Shielded	-

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## **SECTION 5: Conducted Emission**

### **5.1 Operating environment**

Test place : No.1 semi anechoic chamber.  
Temperature : See data  
Humidity : See data

### **5.2 Test configuration**

EUT was placed on a urethane platform of nominal size, 1.0m by 1.5m, raised 0.8m above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT and its peripherals was aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from the LISN/AMN and excess AC cable was bundled in center. I/O cables that were connected to the other peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN/AMN to the input power source. All unused 50 ohm connectors of the LISN/AMN were resistivity terminated in 50 ohm when not connected to the measuring equipment. Photographs of the set up are shown in Appendix 1.

Frequency range : 0.15 MHz-30MHz  
EUT position : Table top  
EUT operation mode : See Clause 4.1

### **5.3 Test procedure**

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT within a semi anechoic chamber. The EUT was connected to a Line Impedance Stabilization Network (LISN)/ Artificial Mains network (AMN). An overview sweep with peak detection has been performed. The measurements have been performed with a quasi-peak detector and if required, with an average detector.

The conducted emission measurements were made with the following detector function of the test receiver.

Detector Type : Quasi-Peak and Average  
IF Bandwidth : 9 kHz

### **5.4 Test result**

Summary of the test results: Pass

Date: September 13, 2010

Test engineer: Hisayoshi Sato

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## **SECTION 6: Radiated Emission**

### **6.1 Operating environment**

Test place : No.1 semi anechoic chamber  
Temperature : See data  
Humidity : See data

### **6.2 Test configuration**

EUT was placed on a urethane platform of nominal size, 1.0m by 1.5m, raised 0.8m above the conducting ground plane. The EUT was set on the edge of the tabletop.  
Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Photographs of the set up are shown in Appendix 1.

### **6.3 Test conditions**

Frequency range : 30MHz-300MHz (Biconical antenna) / 300MHz-1000MHz (Logperiodic antenna)  
1000MHz -6000MHz (Horn antenna)  
Test distance : 3m  
EUT position : Table top  
EUT operation mode : See Clause 4.1

### **6.4 Test procedure**

The height of the measuring antenna varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.  
The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.  
The radiated emission measurements were made with the following detector function of the test receiver and the Spectrum analyzer.

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver	Spectrum Analyzer
IF Bandwidth	QP: BW 120kHz	PK: RBW:1MHz/VBW: 3MHz AV *1): RBW:1MHz/VBW:10Hz

\*1) When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

The test was made on EUT at the normal use position.

### **6.5 Test result**

Summary of the test results: Pass

Date: September 13, 2010

Test engineer: Hisayoshi Sato

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**APPENDIX 1: Photographs of test setup**

**Conducted Emission**

**This page has been submitted for a separate exhibit.**

**Radiated Emission**

**This page has been submitted for a separate exhibit.**

**APPENDIX 2: Data of EMI test**

**Conducted Emission**

**DATA OF CONDUCTED EMISSION TEST**

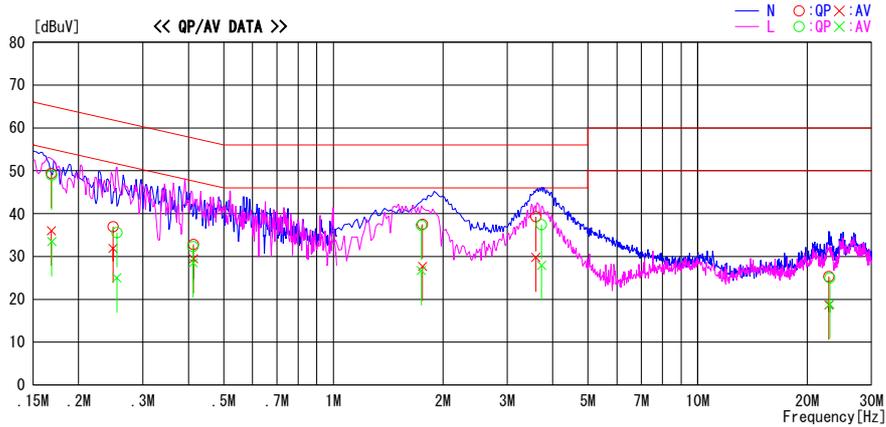
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2010/09/13

Report No. : 30LE0267-HO

Temp./Humi. : 23deg. C / 64%  
Engineer : Motoya Imura

Mode / Remarks : USB Data Com Mode

LIMIT : FCC15.107(a) QP  
FCC15.107(a) AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.16820	36.2	22.8	13.2	49.4	36.0	65.0	55.0	15.6	19.0	N	
0.24833	23.6	18.6	13.3	36.9	31.9	61.8	51.8	24.9	19.9	N	
0.41314	19.5	16.2	13.3	32.8	29.5	57.6	47.6	24.8	18.1	N	
1.75793	24.0	14.2	13.5	37.5	27.7	56.0	46.0	18.5	18.3	N	
3.59472	25.5	16.0	13.8	39.3	29.8	56.0	46.0	16.7	16.2	N	
22.92821	9.7	3.1	15.6	25.3	18.7	60.0	50.0	34.7	31.3	N	
0.16874	35.8	20.3	13.2	49.0	33.5	65.0	55.0	16.0	21.5	L	
0.25461	22.3	11.7	13.3	35.6	25.0	61.6	51.6	26.0	26.6	L	
0.41223	19.0	15.2	13.3	32.3	28.5	57.6	47.6	25.3	19.1	L	
1.74339	23.8	13.2	13.5	37.3	26.7	56.0	46.0	18.7	19.3	L	
3.73020	23.6	14.1	13.8	37.4	27.9	56.0	46.0	18.6	18.1	L	
23.04530	9.4	3.3	15.6	25.0	18.9	60.0	50.0	35.0	31.1	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV]=READING [dBuV]+C. F [dB] (L ISN LOSS+CABLE LOSS)  
Except for the above table : adequate margin data below the limits.

\*The test result is rounded off to one or two decimal places, so some differences might be observed.

## Conducted Emission

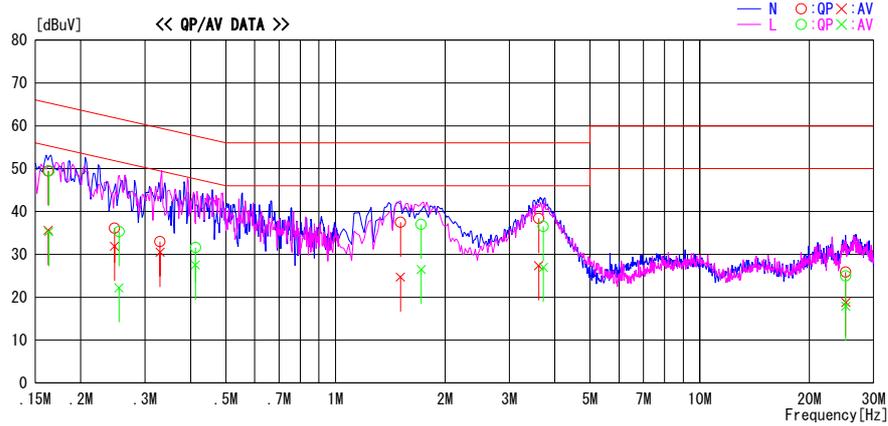
### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2010/09/13

Report No. : 30LE0267-H0  
 Temp./Humi. : 23deg. C / 64%  
 Engineer : Motoya Imura

Mode / Remarks : Standby Mode

LIMIT : FCC15.107(a) QP  
 FCC15.107(a) AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.16269	36.3	22.4	13.2	49.5	35.6	65.3	55.3	15.8	19.7	N	
0.24720	22.8	18.6	13.3	36.1	31.9	61.9	51.9	25.8	20.0	N	
0.32987	19.7	17.2	13.3	33.0	30.5	59.5	49.5	26.5	19.0	N	
1.50772	24.0	11.2	13.5	37.5	24.7	56.0	46.0	18.5	21.3	N	
3.61263	24.6	13.6	13.8	38.4	27.4	56.0	46.0	17.6	18.6	N	
25.13812	10.2	3.1	15.7	25.9	18.8	60.0	50.0	34.1	31.2	N	
0.16338	36.3	22.1	13.2	49.5	35.3	65.3	55.3	15.8	20.0	L	
0.25461	22.0	8.9	13.3	35.3	22.2	61.6	51.6	26.3	29.4	L	
0.41255	18.3	14.2	13.3	31.6	27.5	57.6	47.6	26.0	20.1	L	
1.71783	23.5	13.0	13.5	37.0	26.5	56.0	46.0	19.0	19.5	L	
3.72014	22.7	13.2	13.8	36.5	27.0	56.0	46.0	19.5	19.0	L	
25.13812	9.3	2.2	15.7	25.0	17.9	60.0	50.0	35.0	32.1	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)  
 Except for the above table : adequate margin data below the limits.

\*The test result is rounded off to one or two decimal places, so some differences might be observed.

## Radiated Emission

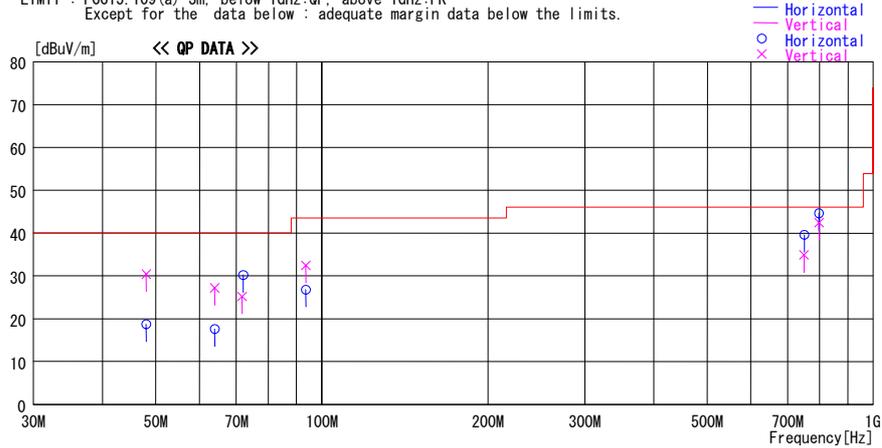
### DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2010/09/13

Report No. : 30LE0267-HO  
Temp./Humi. : 24deg. C / 62%  
Engineer : Hisayoshi Sato

Mode / Remarks : USB Data Com Mode

LIMIT : FCC15.109(a) 3m, below 1GHz:QP, above 1GHz:PK  
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
			[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
48.033	52.5	QP	11.5	-33.6	30.4	134	100	Vert.	40.0	9.6	
48.033	40.8	QP	11.5	-33.6	18.7	123	100	Hori.	40.0	21.3	
63.917	53.2	QP	7.3	-33.3	27.2	242	100	Vert.	40.0	12.8	
63.928	43.6	QP	7.3	-33.3	17.6	252	300	Hori.	40.0	22.4	
71.663	51.9	QP	6.5	-33.2	25.2	253	117	Vert.	40.0	14.8	
72.037	56.9	QP	6.5	-33.2	30.2	120	245	Hori.	40.0	9.8	
93.535	56.4	QP	8.8	-32.8	32.4	123	116	Vert.	43.5	11.1	
93.545	50.8	QP	8.8	-32.8	26.8	136	209	Hori.	43.5	16.7	
748.994	40.9	QP	21.2	-27.3	34.8	30	257	Vert.	46.0	11.2	
749.995	45.6	QP	21.3	-27.3	39.6	106	100	Hori.	46.0	6.4	
797.637	49.5	QP	22.0	-26.9	44.6	136	100	Hori.	46.0	1.4	
798.030	47.3	QP	22.0	-26.9	42.4	62	173	Vert.	46.0	3.6	

CHART:WITH FACTOR ANT TYPE: -30MHz:LOOP, 30-300MHz:BICONICAL, 300MHz-1000MHz:LOGPERIODIC, 1000MHz-:HORN  
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

\*The limit is rounded down to one decimal place.  
\*The test result is rounded off to one or two decimal places, so some differences might be observed.

## Radiated Emission

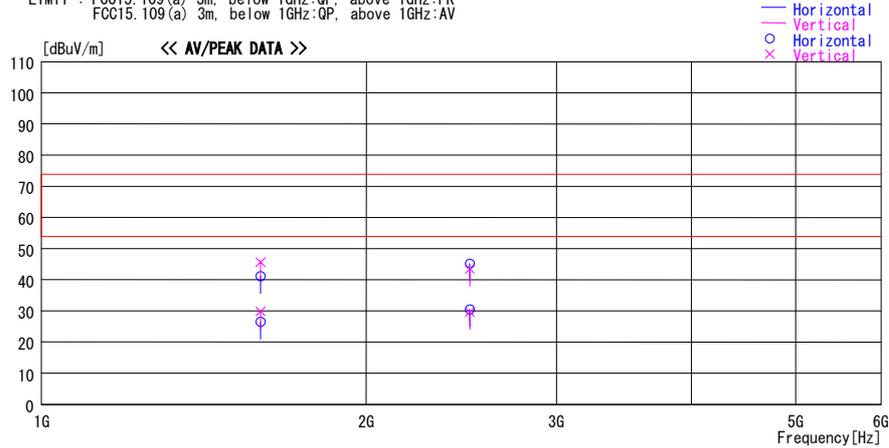
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UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2010/09/13

Report No. : 30LE0267-H0  
Temp./Humi. : 24deg. C / 62%  
Engineer : Hisayoshi Sato

Mode / Remarks : USB Data Com Mode

LIMIT : FCC15.109 (a) 3m, below 1GHz:QP, above 1GHz:PK  
FCC15.109 (a) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
			[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1595.597	38.8	AV	25.6	-34.6	29.8	0	100	Vert.	53.9	24.1	
1595.597	54.6	PK	25.6	-34.6	45.6	0	100	Vert.	73.9	28.3	
1595.838	50.2	PK	25.6	-34.6	41.2	0	100	Hori.	73.9	32.7	
1595.838	35.5	AV	25.6	-34.6	26.5	0	100	Hori.	53.9	27.4	
2493.257	36.6	AV	27.0	-34.0	29.6	300	100	Vert.	53.9	24.3	
2493.257	50.5	PK	27.0	-34.0	43.5	300	100	Vert.	73.9	30.4	
2493.386	52.1	PK	27.0	-34.0	45.1	70	100	Hori.	73.9	28.8	
2493.386	37.5	AV	27.0	-34.0	30.5	70	100	Hori.	53.9	23.4	

CHART:WITH FACTOR ANT TYPE:-30MHz:LOOP, 30-300MHz:BICONICAL, 300MHz-1000MHz:LOGPERIODIC, 1000MHz-:HORN  
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

\*The limit is rounded down to one decimal place.  
\*The test result is rounded off to one or two decimal places, so some differences might be observed.

### **APPENDIX 3: Test instruments**

#### **EMI Test Instruments**

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881f	CE, RE	2010/07/02 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	MOS01	CE, RE	2010/02/09 * 12
MJM-01	Measure	KDS	ES19-55	-	CE, RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE, RE	-
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	100084	CE, RE	2009/12/17 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	8127383	CE(AE)	2010/07/04 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	8127384	CE(EUT)	2010/07/28 * 12
MTA-06	Terminator	MCL	BTRM-50	1 9951	CE	2010/02/02 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/TSJ	5D-2W(20m)/3D-2W(7.5m)/RG400u(1.5m)/RFM-E421(Switcher)	-/ 01068(Switcher)	CE	2010/01/05 * 12
MAT-64	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2010/02/04 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032007	RE	2009/10/03 * 12
KLA-04	Logperiodic Antenna	Schwarzbeck	USLP9143	361	RE	2010/07/24 * 12
MAT-08	Attenuator(6dB)	Weinschel Corp	2	BK7971	RE	2009/11/13 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TSJ	-	-	RE	2009/10/09 * 12
MPA-20	Pre Amplifier	Elena	EPA-4020YA	030801	RE	2010/03/23 * 12
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	253	RE	2010/06/29 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	233010(1m) / 292410(5m)	RE	2009/09/16 * 12
MPA-01	Pre Amplifier	Agilent	8449B	3008A01671	RE	2010/02/12 * 12

**The expiration date of the calibration is the end of the expired month.**

**All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.**

**As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.**

#### **Test Item:**

**CE: Conducted emission**

**RE: Radiated emission**

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