



EMI TEST REPORT

Test Report No. : 29CE0002-HO

Applicant : Sharp Corporation
Type of Equipment : Cellular Phone
Model No. : SH1810C
FCC ID : APYHRO00083
Test regulation : FCC Part 15 Subpart B 2008 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: October 15, 2008

Tested by:

Kazufumi Nakai
EMC Services

Approved by :

Minoru Yamanaka
Assistant Manager of EMC Services



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://uljapan.co.jp/emc/nvlap.html>

UL Japan, Inc.

Head Office EMC Lab.

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MF060b (09.01.08)

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SECTION 1: Customer information

Company Name : Sharp Corporation
Address : 2-13-1 Iida Hachihonmatsu, Higashihiroshima-City, Hiroshima, 739-0192,
Japan
Telephone Number : +81-82-420-1837
Facsimile Number : +81-82-420-1654
Contact Person : Tetsuya Maekawa

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

2.1 Identification of E.U.T.

Type of Equipment : Cellular Phone
Model No. : SH1810C
Serial No. : 004401/11/164139/1
Rating : AC 120V/60Hz, DC4.0V
Receipt Date of Sample : October 15, 2008
Country of Mass-production : China
Condition of EUT : Engineering 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

Model No: SH1810C (referred to as the EUT in this report) is the Cellular Phone.

Clock frequency(ies) in the system : 32.768kHz, 26MHz, 208MHz

SECTION 3: Test specification, procedures & results

3.1 Test specification

Test Specification : FCC Part 15 Subpart B 2008, final revised on May 19, 2008
Title : FCC 47CFR Part15 Radio Frequency Device
Subpart B Unintentional Radiators

3.2 Procedures and results

Item	Test Procedure	Limits	Deviation	Worst margin	Result
Conducted emission	ANSI C63.4: 2003 7. AC powerline conducted emission measurements	Class B	N/A	[QP] 12.7dB, 4.92172MHz, N [AV] 8.3dB, 4.85455MHz, L	Complied
Radiated emission	ANSI C63.4: 2003 8. Radiated emission measurements	Class B	N/A	11.0dB, 483.838MHz / 506.884MHz, QP, Vertical	Complied

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

*These tests were performed without any deviations from test procedure except for addition or exclusion.

3.3 Additions or deviations to standards

No addition, deviation, nor exclusion has been made from standards.

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	Conducted emission	Radiated emission (10m*)			Radiated emission (3m*)			Radiated emission (3m*)	
	150kHz-30MHz	9kHz-30MHz	30MHz-300MHz	300MHz-1GHz	9kHz-30MHz	30MHz-300MHz	300MHz-1GHz	1GHz-18GHz	18GHz-40GHz
No.1 semi-anechoic chamber (±)	3.7dB	3.1dB	4.4dB	4.2dB	3.2dB	3.8dB	3.9dB	5.9dB	6.1dB
No.2 semi-anechoic chamber (±)	3.7dB	-	-	-	3.2dB	4.4dB	4.0dB	5.9dB	6.1dB
No.3 semi-anechoic chamber (±)	3.7dB	-	-	-	3.2dB	4.6dB	4.0dB	5.9dB	6.1dB
No.4 semi-anechoic chamber (±)	3.7dB	-	-	-	3.2dB	3.9dB	3.9dB	5.9dB	6.1dB

*10m/3m = 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 test report has enough margin, more than the site margin.

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3.5 Test Location

UL Japan, Inc. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
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Telephone : +81 596 24 8116 Facsimile : +81 596 24 8124

	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

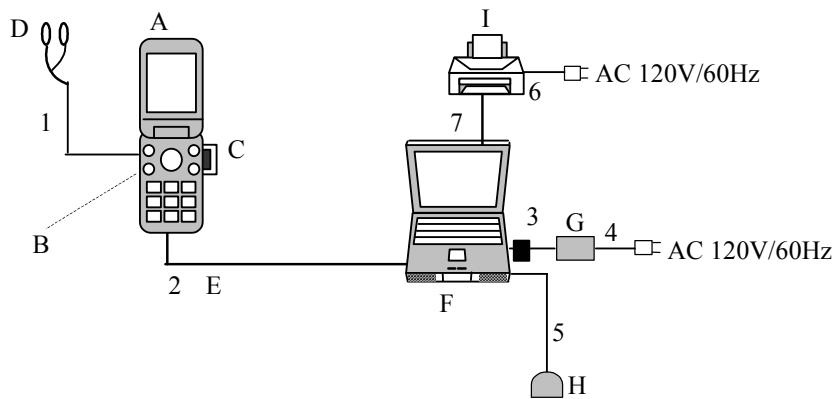
Refer to APPENDIX 1 to 3.

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

4.1 Operating modes

The mode is used : 1) USB Data Com mode
2) Standby mode

4.2 Configuration and peripherals [Conducted emission test]



■ : Standard Ferrite Core

*Cabling and setup were taken into consideration and test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Cellular Phone	SH1810C	004401/11/164139/1	SHARP	EUT
B	Rechargeable Lithium-ion Battery	XN-1BT22	RIA	SANYO	EUT
C	microSD Memory Card	SDSDQ-1024	01	SanDisk	EUT
D	Stereo Handsfree	XN-1ER90	01	HOSIDEN	EUT
E	USB Data Cable	XN-1DC31	-	HOSIDEN	Peripheral(cable)
F	Personal Computer	PP01L	CN-04P240-48643-32M-3708	Dell	DOC
G	AC Adapter (PC)	ADP-90FB	CN-06G356-48661-32H-OBJ9	Dell	-
H	Mouse	X06-08477	63618-OEM-1245101-5	Microsoft	DOC
I	Printer	BJF860	K10201	Canon	DOC

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	Stereo Handsfree	1.7	Unshielded	Unshielded	-
2	USB Data Cable	1.2	Shielded	Unshielded	-
3	AC Adapter Cable (Dell PC)	1.8	Unshielded	Unshielded	-
4	AC Power Cable (Dell PC)	1.8	Unshielded	Unshielded	-
5	Mouse Cable	1.8	Unshielded	Unshielded	-
6	AC Cable	1.8	Unshielded	Unshielded	-
7	Parallel Cable	2.0	Shielded	Shielded	-

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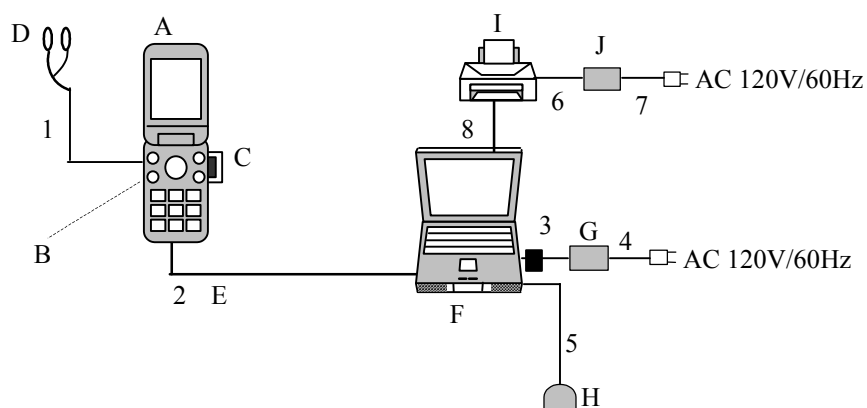
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[Radiated emission test]



■ : Standard Ferrite Core

*Cabling and setup were taken into consideration and test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Cellular Phone	SH1810C	004401/11/164139/1	SHARP	EUT
B	Rechargeable Lithium-ion Battery	XN-1BT22	RIA	SANYO	EUT
C	microSD Memory Card	SDSDQ-1024	01	SanDisk	EUT
D	Stereo Handsfree	XN-1ER90	01	HOSIDEN	EUT
E	USB Data Cable	XN-1DC31	-	HOSIDEN	Peripheral(cable)
F	Personal Computer	PP01L	CN-04P240-48643-32M-3708	Dell	DOC
G	AC Adapter (PC)	ADP-90FB	CN-06G356-48661-32H-OBJ9	Dell	-
H	Mouse	X06-08477	63618-OEM-1245101-5	Microsoft	DOC
I	Printer	K10190	XADP01190	Canon	DOC
J	AC Adapter (Printer)	AD-360U	01729379	Canon	-

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	Stereo Handsfree	1.7	Unshielded	Unshielded	-
2	USB Data Cable	1.2	Shielded	Unshielded	-
3	AC Adapter Cable (Dell PC)	1.8	Unshielded	Unshielded	-
4	AC Power Cable (Dell PC)	1.8	Unshielded	Unshielded	-
5	Mouse Cable	1.8	Unshielded	Unshielded	-
6	AC Adapter Cable (Printer)	1.0	Unshielded	Unshielded	-
7	AC Power Cable (Printer)	1.5	Unshielded	Unshielded	-
8	Printer Cable	0.8	Shielded	Unshielded	-

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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: October 15, 2008

Test engineer: Kazufumi Nakai

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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 -2000MHz (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 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 test was made with the detector (RBW/VBW) in the following table.
When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

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

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

6.5 Test result

Summary of the test results: Pass

Date: October 15, 2008

Test engineer: Kazufumi Nakai

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.

Worst Case Position (Horizontal: X-axis/ Vertical:X-axis)

This page has been submitted for a separate exhibit.

APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

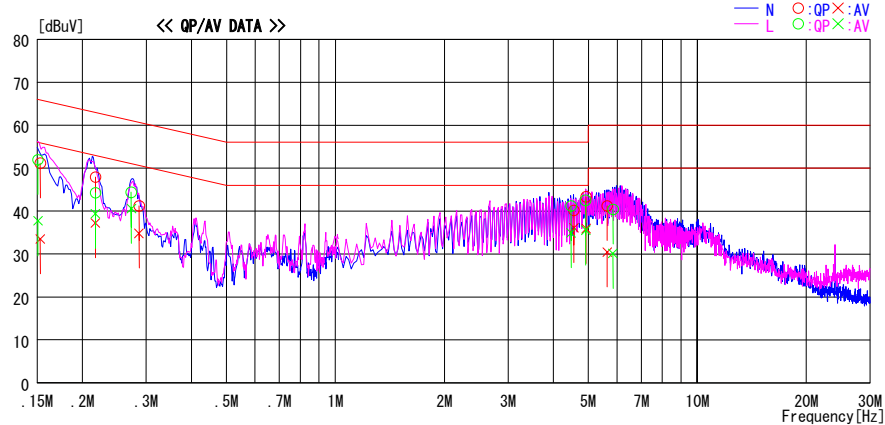
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/10/15

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : SH1810C
Serial No. : 004401/11/164139/1

Report No. : 29CE0002-HO
Power : AC120V / 60Hz
Temp./Humi. : 23deg. C / 61%
Engineer : Kazufumi Nakai

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]		
0.15281	51.0	33.3	0.2	51.2	33.5	65.8	55.8	14.6	22.3	N	
0.21723	47.7	37.0	0.2	47.9	37.2	62.9	52.9	15.0	15.7	N	
0.28675	40.9	34.5	0.3	41.2	34.8	60.6	50.6	19.4	15.8	N	
4.55817	39.3	35.2	0.9	40.2	36.1	56.0	46.0	15.8	9.9	N	
4.92172	42.3	34.9	1.0	43.3	35.9	56.0	46.0	12.7	10.1	N	
5.63633	40.1	29.3	1.1	41.2	30.4	60.0	50.0	18.8	19.6	N	
0.15070	51.8	37.5	0.2	52.0	37.7	66.0	56.0	14.0	18.3	L	
0.21723	44.1	39.2	0.2	44.3	39.4	62.9	52.9	18.6	13.5	L	
0.27288	44.1	40.3	0.3	44.4	40.6	61.0	51.0	16.6	10.4	L	
4.47626	40.3	34.0	0.9	41.2	34.9	56.0	46.0	14.8	11.1	L	
4.91333	41.5	34.5	1.0	42.5	35.5	56.0	46.0	13.5	10.5	L	
5.84262	39.3	29.0	1.1	40.4	30.1	60.0	50.0	19.6	19.9	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN factor+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

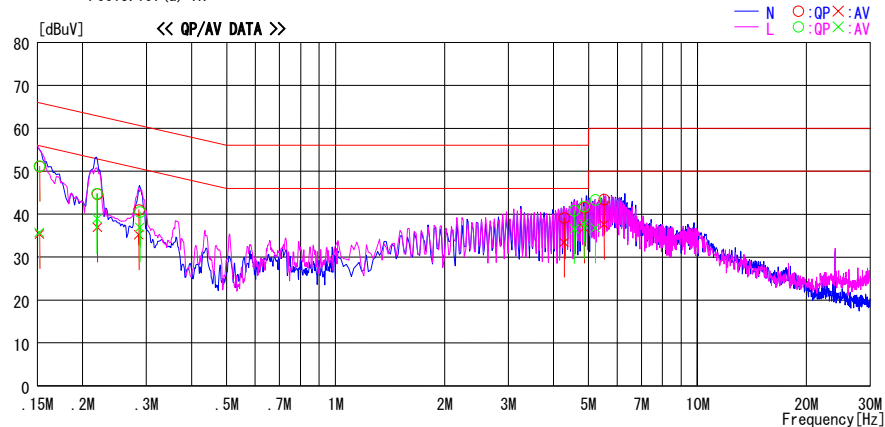
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Date : 2008/10/15

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : SH1810C
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Report No. : 29CE0002-HO
Power : AC120V / 60Hz
Temp./Humi. : 23deg.C / 61%
Engineer : Kazufumi Nakai

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]		
0.15220	50.9	35.2	0.2	51.1	35.4	65.9	55.9	14.8	20.5	N	
0.21983	44.5	36.7	0.2	44.7	36.9	62.8	52.8	18.1	15.9	N	
0.28602	40.7	34.9	0.3	41.0	35.2	60.6	50.6	19.6	15.4	N	
4.27884	38.2	32.5	0.9	39.1	33.4	56.0	46.0	16.9	12.6	N	
4.86243	40.5	35.7	1.0	41.5	36.7	56.0	46.0	14.5	9.3	N	
5.51431	42.3	36.5	1.1	43.4	37.6	60.0	50.0	16.6	12.4	N	
0.15180	51.0	35.6	0.2	51.2	35.8	65.9	55.9	14.7	20.1	L	
0.21937	44.6	38.7	0.2	44.8	38.9	62.8	52.8	18.0	13.9	L	
0.28796	40.2	36.6	0.3	40.5	36.9	60.6	50.6	20.1	13.7	L	
4.56711	39.9	35.7	0.9	40.8	36.6	56.0	46.0	15.2	9.4	L	
4.85455	40.9	36.8	0.9	41.8	37.7	56.0	46.0	14.2	8.3	L	
5.21875	42.3	35.7	1.0	43.3	36.7	60.0	50.0	16.7	13.3	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C. F [dB] (LISN factor + 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

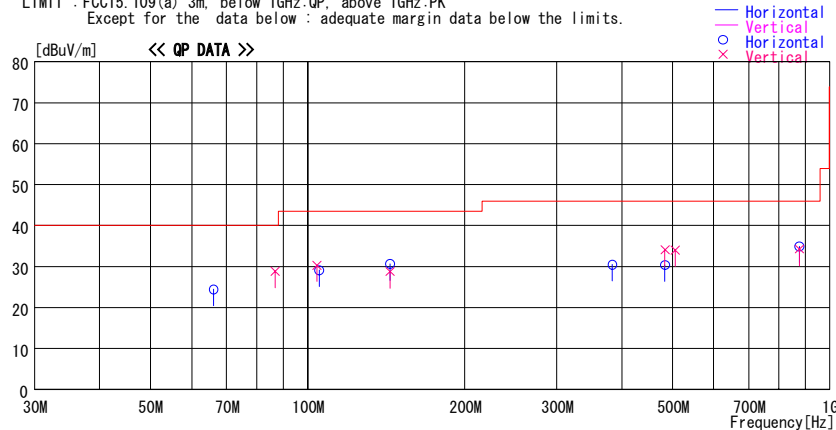
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Model No. : SH1810C
Serial No. : 004401/11/164139/1
Report No. : 29CE0002-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 61%
Engineer : Kazufumi Nakai

Mode / Remarks: USB Data Com Mode, Worst-axis(Hori:X, Vert:X)

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



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
66.100	37.8	QP	7.3	-20.7	24.4	70	278	Hori.	40.0	15.6	
86.759	41.5	QP	7.6	-20.3	28.8	119	100	Vert.	40.0	11.2	
104.311	39.8	QP	10.4	-19.9	30.3	155	100	Vert.	43.5	13.2	
105.354	38.5	QP	10.5	-19.9	29.1	182	180	Hori.	43.5	14.4	
144.008	33.6	QP	14.4	-19.3	28.7	177	100	Vert.	43.5	14.8	
144.009	35.5	QP	14.4	-19.3	30.6	206	136	Hori.	43.5	12.9	
383.333	31.3	QP	16.2	-17.0	30.5	128	100	Hori.	46.0	15.5	
483.837	33.2	QP	17.9	-17.0	34.1	180	100	Vert.	46.0	11.9	
483.838	29.5	QP	17.9	-17.0	30.4	68	100	Hori.	46.0	15.6	
506.876	32.7	QP	18.2	-16.9	34.0	174	100	Vert.	46.0	12.0	
875.528	28.2	QP	21.2	-14.5	34.9	169	100	Hori.	46.0	11.1	
875.528	27.5	QP	21.2	-14.5	34.2	176	100	Vert.	46.0	11.8	

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

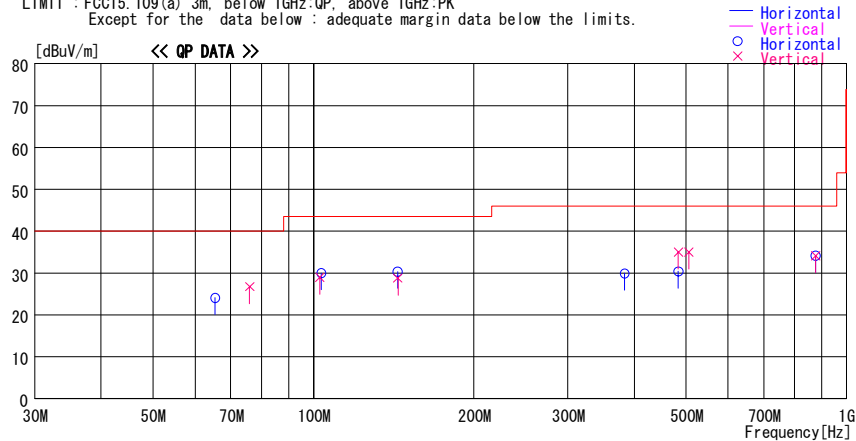
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Report No. : 29CE0002-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 61%
Engineer : Kazufumi Nakai

Mode / Remarks: Standby Mode, Worst-axis(Hori:X, Vert:X)

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



Frequency	Reading	DET	Antenna	Loss &	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
65.433	37.4	QP	7.4	-20.7	24.1	247	310	Hori.	40.0	15.9	
75.962	40.6	QP	6.5	-20.4	26.7	188	100	Vert.	40.0	13.3	
102.949	38.5	QP	10.3	-19.9	28.9	161	100	Vert.	43.5	14.6	
103.531	39.5	QP	10.4	-19.9	30.0	175	167	Hori.	43.5	13.5	
144.015	35.2	QP	14.4	-19.3	30.3	190	131	Hori.	43.5	13.2	
144.168	33.6	QP	14.4	-19.3	28.7	196	100	Vert.	43.5	14.8	
383.342	30.7	QP	16.2	-17.0	29.9	121	100	Hori.	46.0	16.1	
483.831	29.5	QP	17.9	-17.0	30.4	78	100	Hori.	46.0	15.6	
483.838	34.1	QP	17.9	-17.0	35.0	182	100	Vert.	46.0	11.0	
506.884	33.7	QP	18.2	-16.9	35.0	175	100	Vert.	46.0	11.0	
875.520	27.4	QP	21.2	-14.5	34.1	174	100	Vert.	46.0	11.9	
875.537	27.4	QP	21.2	-14.5	34.1	129	109	Hori.	46.0	11.9	

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

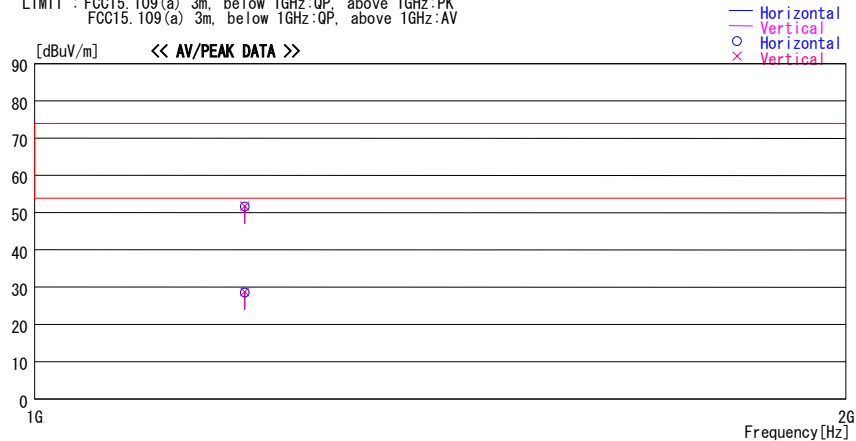
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/10/15

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : SH1810C
Serial No. : 004401/11/164139/1
Report No. : 29CE0002-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 61%
Engineer : Kazufumi Nakai

Mode / Remarks: USB Data Com Mode, Worst-axis(Hori:X, Vert:X)

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



Frequency	Reading	DET	Antenna	Loss &	Level	Polar.	Limit	Margin	Comment
			Factor	Gain					
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
1196.523	61.9	PK	24.7	-34.9	51.7	Hori.	73.9	22.2	
1196.523	62.0	PK	24.7	-34.9	51.8	Vert.	73.9	22.2	
1196.523	38.8	AV	24.7	-34.9	28.6	Hori.	53.9	25.3	
1196.523	39.0	AV	24.7	-34.9	28.8	Vert.	53.9	25.1	

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

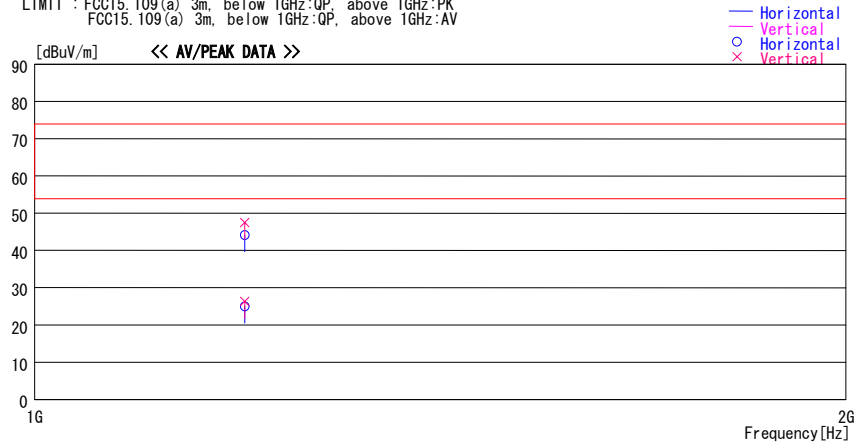
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/10/15

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : SH1810C
Serial No. : 004401/11/164139/1
Report No. : 29CE0002-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 61%
Engineer : Kazufumi Nakai

Mode / Remarks: Standby Mode, Worst-axis(Hori:X, Vert:X)

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



Frequency	Reading	DET	Antenna	Loss &	Level	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]		[dBuV/m]	[dB]	
1196.486	57.7	PK	24.7	-34.9	47.5	Vert.	73.9	26.4	
1196.486	54.4	PK	24.7	-34.9	44.2	Hori.	73.9	29.7	
1196.486	36.5	AV	24.7	-34.9	26.3	Vert.	53.9	27.6	
1196.486	35.2	AV	24.7	-34.9	25.0	Hori.	53.9	28.9	

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 equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE/CE	2007/11/23 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/10/21 * 12
MLA-09	Logperiodic Antenna	Schwarzbeck	USLP9143B	RE	2008/01/12 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2007/11/14 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TSJ	-	RE	2008/10/02 * 12
MPA-04	Pre Amplifier	Agilent	8447D	RE	2008/07/23 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE/CE	2007/10/19 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE/CE	-
MOS-01	Digital Humidity Indicator	N.T	NT-1800	RE/CE	2007/11/12 * 12
MJM-01	Measure	KDS	ES19-55	RE/CE	-
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2008/06/27 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	CE(AE)	2008/07/01 * 12
MTA-06	Terminator	MCL	BTRM-50	CE	2008/02/04 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	CE	2007/12/27 * 12
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2008/01/19 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2008/09/09 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2008/02/12 * 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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