

EMI TEST REPORT

Test Report No. : 30EE0255-HO

Applicant : Sharp Corporation, Communication Systems Group
Type of Equipment : Cellular Phone
Model No. : CDMA SH008
FCC ID : APYHRO00120
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:

March 2 and 3, 2010

Tested by:


Tomotaka Sasagawa
EMC Services

Approved by:


Yutaka Yoshida
Group Leader 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 (06.08.09)

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SECTION 1: Customer information

Company Name : Sharp Corporation, Communication Systems Group
Address : 2-13-1, Iida Hachihonmatsu, Higashi-Hiroshima City, Hiroshima,
739-0192 Japan
Telephone Number : +81-82-420-1630
Facsimile Number : +81-82-420-1624
Contact Person : Hachiroh Hidaka

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

2.1 Identification of E.U.T.

Type of Equipment : Cellular Phone
Model No. : CDMA SH008
Serial No. : Refer to Section 4, Clause 4.2
Receipt Date of Sample : March 2, 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

Model No: CDMA SH008 (referred to as the EUT in this report) is the Cellular Phone.

Feature of EUT : Model No: CDMA SH008 is 1XEV-DO Hybrid CDMA Tri-Band Cellular
Phone.
CDMA SH008 is designed by Sharp Corporation exclusively for au,
a cellular phone carrier owned by KDDI corporation in Japan.
Clock frequency(ies) in the system : CPU: 19.2MHz, 384MHz
RTC: 32.768kHz

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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

Item	Test Procedure	Limits	Deviation	Worst margin	Result
Conducted emission	FCC: ANSI C63.4: 2003 7. AC powerline conducted emission measurements	Class B	N/A	[QP] 15.5dB 0.20796MHz, L [AV] 14.9dB 1.13777MHz, N	Complied
Radiated emission	FCC: ANSI C63.4: 2003 8. Radiated emission measurements	Class B	N/A	8.2dB 665.432MHz Horizontal	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)			Radiated emission					
				(3m*)(±dB)					(1m*)(±dB)
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	1GHz -18GHz	18GHz -26.5GHz	26.5GHz -40GHz
No.1	2.7dB	4.8dB	5.0dB	2.9dB	4.8dB	5.0dB	3.9dB	4.5dB	4.4dB
No.2	-	-	-	3.5dB	4.8dB	5.1dB	4.0dB	4.3dB	4.2dB
No.3	-	-	-	3.8dB	4.6dB	4.7dB	4.0dB	4.5dB	4.4dB
No.4	-	-	-	3.5dB	4.4dB	4.9dB	4.0dB	4.6dB	4.5dB

*10m/3m/1m = 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
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
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

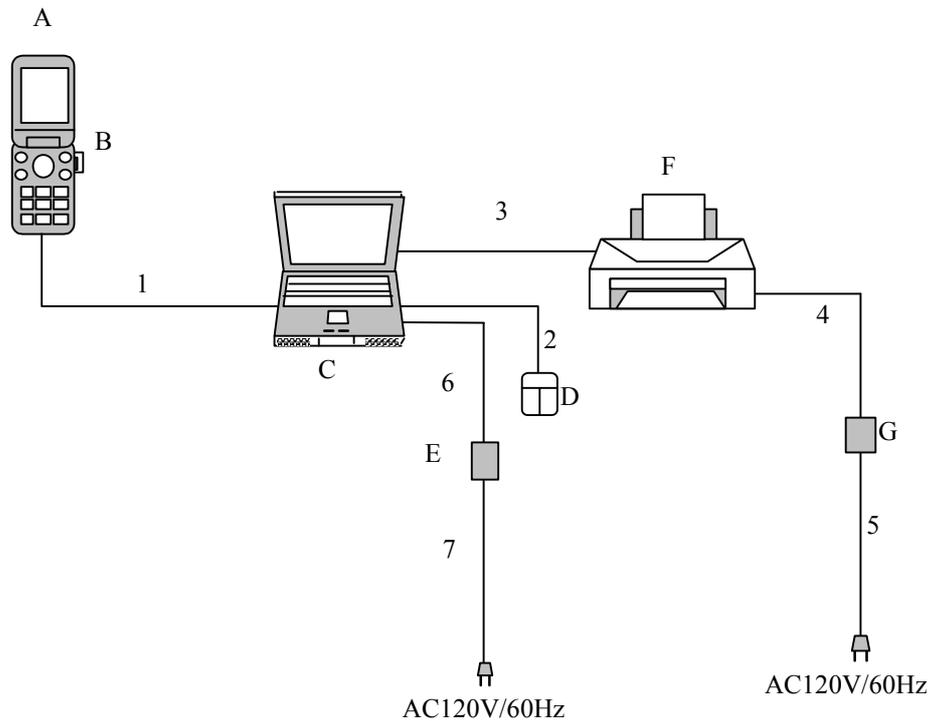
Refer to APPENDIX 1 to 3.

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

4.1 Operating modes

The mode(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



*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	CDMA SH008	SSHDU000944	Sharp Corporation	EUT
B	micro SD Memory Card	(64MB type)	-	PANASONIC	-
C	PC	DELL PP10L	8LH3H1X	DELL	-
D	Mouse	DELL M05UOA	G0N00FiF	DELL	-
E	AC Adaptor(PC)	AA22850	-	DELL	-
F	Printer	C6414A	CNOB11C1H2	Hewlett Packard	-
G	AC Adapter (Printer)	C6409-60014	AA21210	Hewlett Packard	-

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	USB Data Cable	0.8	Shielded	Shielded	-
2	Mouse Cable	1.9	Unshielded	Unshielded	-
3	Pararell Cable	2.0	Shielded	Shielded	-
4	DC Cable (Printer)	1.9	Unshielded	Unshielded	-
5	AC Cable (Printer)	0.9	Unshielded	Unshielded	-
6	AC Charger Cable (PC)	1.9	Unshielded	Unshielded	-
7	AC Power Cable (PC)	0.9	Unshielded	Unshielded	-

SECTION 5: Conducted Emission

5.1 Operating environment

Test place : No.4 semi anechoic chamber
Temperature : See data
Humidity : See data

5.2 Test configuration

EUT was placed 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

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

Date: March 3, 2010

Test engineer: Tomotaka Sasagawa

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SECTION 6: Radiated Emission

6.1 Operating environment

Test place : No.3 and No.4 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 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 *1)
IF Bandwidth	QP: BW 120kHz	PK: RBW:1MHz/VBW: 3MHz AV *2): RBW:1MHz/VBW:10Hz

*1) The Spectrum Analyzer was used in 3dB resolution bandwidth.

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

- 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

*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.

Date: March 2 and 3, 2010

Test engineer: Tomotaka Sasagawa

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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.

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

This page has been submitted for a separate exhibit.

APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

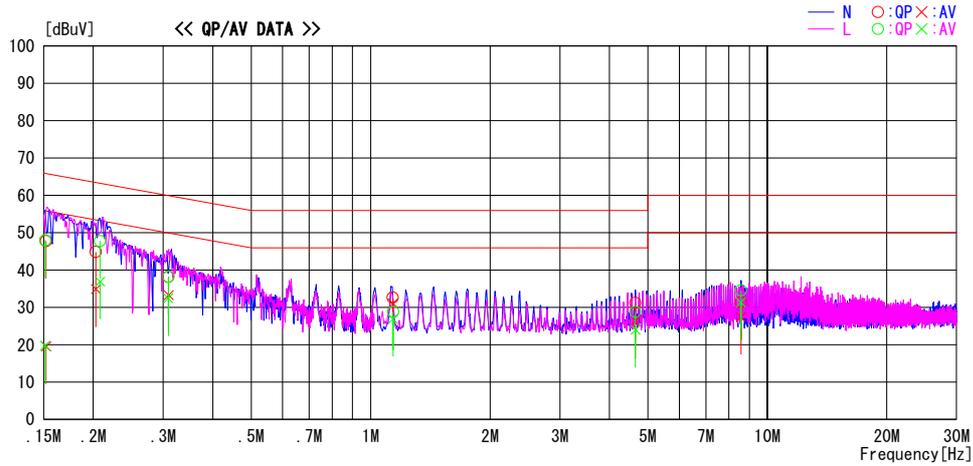
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2010/03/03

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : CDMA SH008
Serial No. : SSHDU000944

Report No. : 30DE0255-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24deg. C / 38%
Engineer : Tomotaka Sasagawa

Mode / Remarks : USB Data Com mode

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



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15208	34.5	6.3	13.3	47.8	19.6	65.9	55.9	18.1	36.3	N	
0.20307	31.5	21.6	13.3	44.8	34.9	63.5	53.5	18.7	18.6	N	
0.30927	24.9	20.0	13.3	38.2	33.3	60.0	50.0	21.8	16.7	N	
1.13777	19.4	17.8	13.3	32.7	31.1	56.0	46.0	23.3	14.9	N	
4.64991	17.6	12.8	13.6	31.2	26.4	56.0	46.0	24.8	19.6	N	
8.57937	17.6	13.6	13.9	31.5	27.5	60.0	50.0	28.5	22.5	N	
0.15126	34.7	6.5	13.3	48.0	19.8	65.9	55.9	17.9	36.1	L	
0.20796	34.5	23.7	13.3	47.8	37.0	63.3	53.3	15.5	16.3	L	
0.30922	24.9	19.1	13.3	38.2	32.4	60.0	50.0	21.8	17.6	L	
1.13924	15.5	13.7	13.3	28.8	27.0	56.0	46.0	27.2	19.0	L	
4.65170	15.2	10.4	13.6	28.8	24.0	56.0	46.0	27.2	22.0	L	
8.57483	20.7	17.5	13.9	34.6	31.4	60.0	50.0	25.4	18.6	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.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

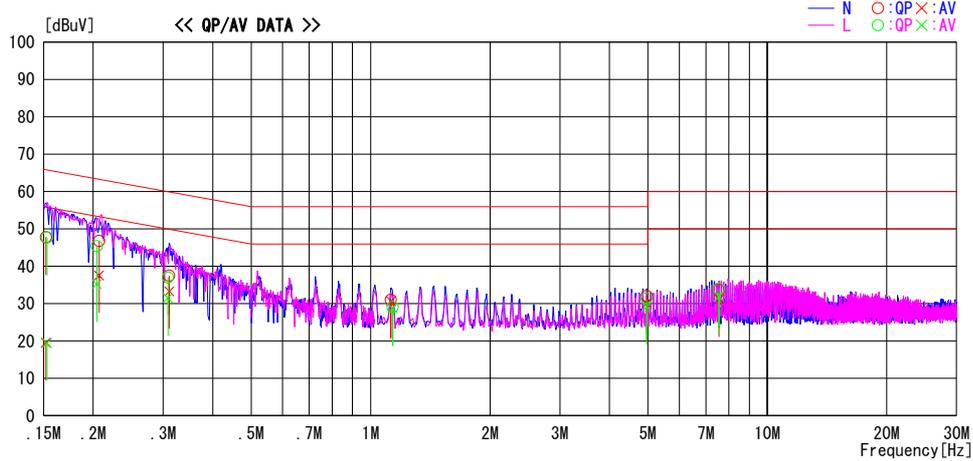
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/03/03

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : CDMA SH008
Serial No. : SSHDU000944

Report No. : 30DE0255-H0
Power : AC 120V / 60Hz
Temp./Humi. : 24deg.C / 38%
Engineer : Tomotaka Sasagawa

Mode / Remarks : Standby mode

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



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15183	34.4	6.2	13.3	47.7	19.5	65.9	55.9	18.2	36.4	N	
0.20689	33.5	24.3	13.3	46.8	37.6	63.3	53.3	16.5	15.7	N	
0.31095	24.2	20.0	13.3	37.5	33.3	59.9	49.9	22.4	16.6	N	
1.12512	17.7	17.4	13.3	31.0	30.7	56.0	46.0	25.0	15.3	N	
4.96047	18.3	16.3	13.7	32.0	30.0	56.0	46.0	24.0	16.0	N	
7.55571	19.8	17.4	13.8	33.6	31.2	60.0	50.0	26.4	18.9	N	
0.15281	34.4	6.2	13.3	47.7	19.5	65.8	55.8	18.1	36.3	L	
0.20423	32.1	21.9	13.3	45.4	35.2	63.4	53.4	18.0	18.2	L	
0.30831	23.7	18.2	13.3	37.0	31.5	60.0	50.0	23.0	18.5	L	
1.13614	15.8	15.4	13.3	29.1	28.7	56.0	46.0	26.9	17.3	L	
4.96171	17.7	15.5	13.7	31.4	29.2	56.0	46.0	24.6	16.8	L	
7.54466	20.1	18.1	13.8	33.9	31.9	60.0	50.0	26.1	18.1	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.

Radiated Emission

DATA OF RADIATED EMISSION TEST

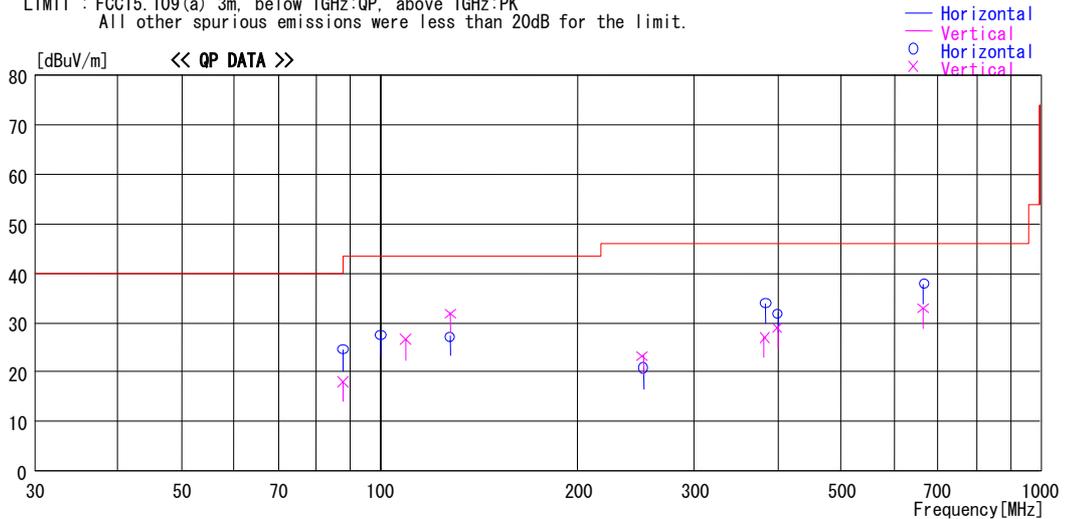
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
 Date : 2010/03/02

Company : Sharp Corporation
 Kind of EUT : Cellular Phone
 Model No. : CDMA SH008
 Serial No. : SSHDU000944

Report No. : 30EE0255-HO
 Power : AC 120V / 60Hz
 Temp./Humi. : 23deg. C / 39%
 Engineer : Tomotaka Sasagawa

Mode / Remarks : USB Data Com mode

LIMIT : FCC15.109(a) 3m, below 1GHz:QP, above 1GHz:PK
 All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dBm]	Loss & Gain [dB]							
87.999	34.5	QP	7.7	-24.1	18.1	211	100	Vert.	40.0	21.9	
87.999	40.8	QP	7.7	-24.1	24.4	223	213	Hori.	40.0	15.6	
99.999	41.4	QP	10.1	-24.0	27.5	255	298	Hori.	43.5	16.0	
109.321	38.9	QP	11.5	-23.8	26.6	0	100	Vert.	43.5	16.9	
127.803	37.5	QP	13.5	-23.6	27.4	312	221	Hori.	43.5	16.1	
127.842	41.9	QP	13.5	-23.6	31.8	127	100	Vert.	43.5	11.7	
250.004	28.1	QP	17.6	-22.4	23.3	43	100	Vert.	46.0	22.7	
250.994	25.6	QP	17.6	-22.4	20.8	145	105	Hori.	46.0	25.2	
383.410	37.9	QP	17.3	-21.4	33.8	298	100	Hori.	46.0	12.2	
382.321	31.1	QP	17.3	-21.4	27.0	49	100	Vert.	46.0	19.0	
400.942	35.6	QP	17.5	-21.3	31.8	110	100	Hori.	46.0	14.2	
400.402	32.8	QP	17.5	-21.3	29.0	176	100	Vert.	46.0	17.0	
665.432	36.1	QP	21.5	-19.8	37.8	219	100	Hori.	46.0	8.2	
665.213	31.1	QP	21.5	-19.8	32.8	0	100	Vert.	46.0	13.2	

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)

Radiated Emission

DATA OF RADIATED EMISSION TEST

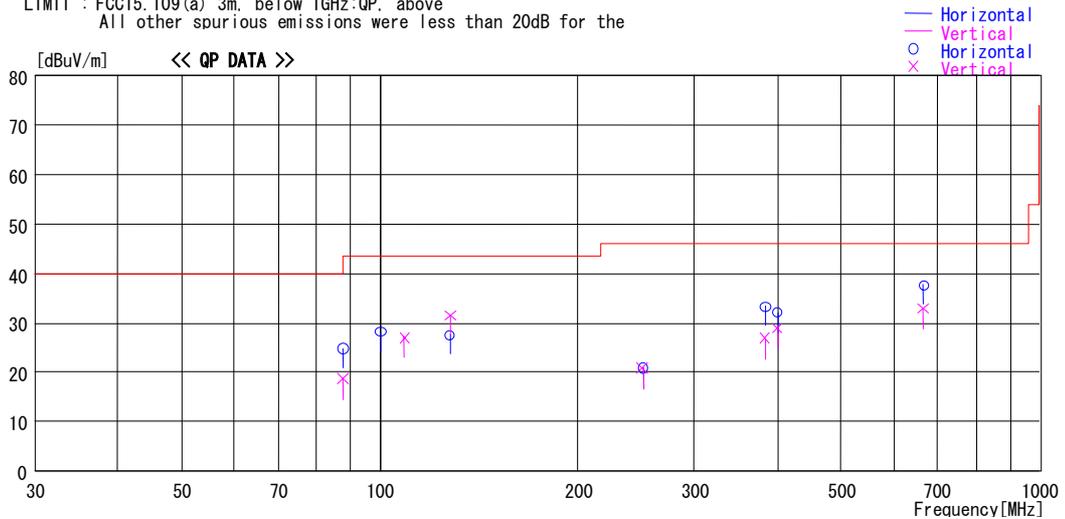
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic
Date : 2010/03/02

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : CDMA SH008
Serial No. : SSHDU000944

Report No. : 30EE0255-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C / 39%
Engineer : Tomotaka Sasagawa

Mode / Remarks : Standby mode

LIMIT : FCC15.109(a) 3m, below 1GHz:QP, above
All other spurious emissions were less than 20dB for the



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dBm]	Loss& Gain [dB]							
87.999	35.1	QP	7.7	-24.1	18.7	211	100	Vert.	40.0	21.3	
87.999	41.2	QP	7.7	-24.1	24.8	245	198	Hori.	40.0	15.2	
99.954	42.1	QP	10.1	-24.0	28.2	269	301	Hori.	43.5	15.3	
109.031	39.5	QP	11.5	-23.8	27.2	0	100	Vert.	43.5	16.3	
127.931	37.8	QP	13.5	-23.6	27.7	339	229	Hori.	43.5	15.8	
127.851	41.6	QP	13.5	-23.6	31.5	115	100	Vert.	43.5	12.0	
250.003	25.6	QP	17.6	-22.4	20.8	29	100	Vert.	46.0	25.2	
250.931	25.8	QP	17.6	-22.4	21.0	149	109	Hori.	46.0	25.0	
383.431	37.5	QP	17.3	-21.4	33.4	324	100	Hori.	46.0	12.6	
382.951	30.9	QP	17.3	-21.4	26.8	76	100	Vert.	46.0	19.2	
400.941	35.9	QP	17.5	-21.3	32.1	117	100	Hori.	46.0	13.9	
400.032	32.8	QP	17.5	-21.3	29.0	198	100	Vert.	46.0	17.0	
665.421	35.9	QP	21.5	-19.8	37.6	223	100	Hori.	46.0	8.4	
665.941	31.0	QP	21.5	-19.8	32.7	0	100	Vert.	46.0	13.3	

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)

Radiated Emission

DATA OF RADIATED EMISSION TEST

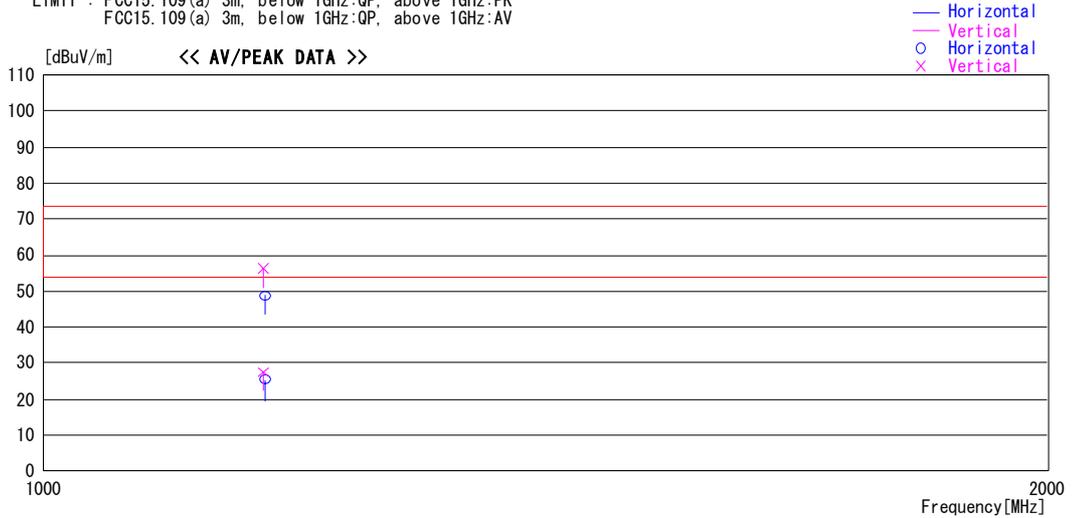
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/03/03

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : CDMA SH008
Serial No. : SSHDU000944

Report No. : 30EE0255-HO
Power : AC 12.0V / 60Hz
Temp./Humi. : 23deg.C / 39%
Engineer : Tomotaka Sasagawa

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		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss & Gain [dB]							
1165.321	57.2	PK	24.2	-32.6	48.8	21	100	Hori.	73.9	25.1	
1165.321	33.7	AV	24.2	-32.6	25.3	21	100	Hori.	53.9	28.6	
1164.532	64.7	PK	24.2	-32.6	56.3	23	100	Vert.	73.9	17.6	
1164.532	35.9	AV	24.2	-32.6	27.5	23	100	Vert.	53.9	26.4	

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)

Radiated Emission

DATA OF RADIATED EMISSION TEST

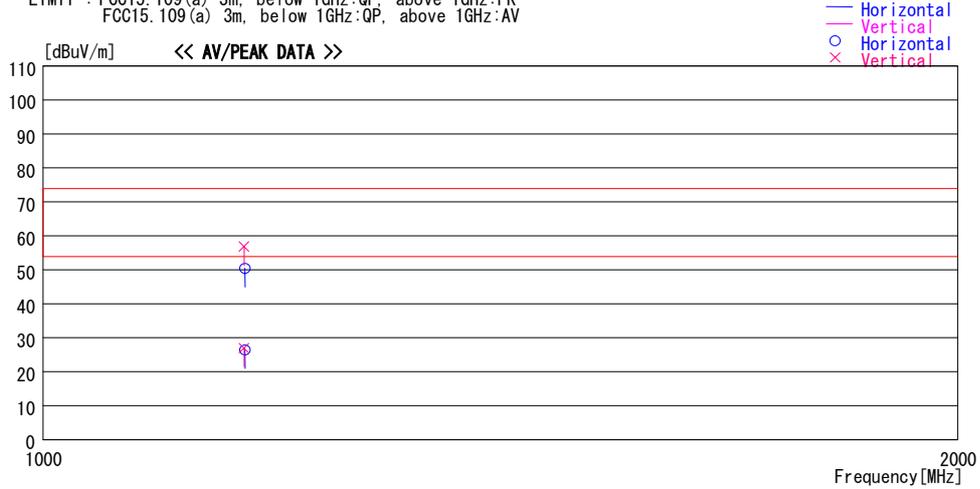
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/03/03

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : CDMA SH008
Serial No. : SSHDU000944

Report No. : 30EE0255-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24deg.C / 38%
Engineer : Tomotaka Sasagawa

Mode / Remarks: Standby

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 [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
1165.310	58.9	PK	24.2	-32.6	50.5	9	100	Hori.	73.9	23.4	
1165.310	34.9	AV	24.2	-32.6	26.5	9	100	Hori.	53.9	27.4	
1164.551	65.2	PK	24.2	-32.6	56.8	112	100	Vert.	73.9	17.1	
1164.551	35.4	AV	24.2	-32.6	27.0	112	100	Vert.	53.9	26.9	

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)

APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2010/02/01 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	RE	2010/02/09 * 12
MJM-06	Measure	PROMART	SEN1955	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MSA-09	Spectrum Analyzer	Advantest	R3273	95090115	RE	2009/12/11 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2009/06/30 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2010/01/23 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	N/A	RE	2010/01/23 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2009/07/02 * 12
MAT-09	Attenuator(6dB)	Weinschel Corp	2	BK7973	RE	2009/11/12 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2009/03/18 * 12
MAEC-04	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2010/02/02 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	RE/CE	2010/02/09 * 12
MJM-07	Measure	PROMART	SEN1955	-	RE/CE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2009/08/25 * 12
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	9120D-557	RE	2009/08/10 * 12
MCC-57	Microwave Cable	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2009/11/17 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	MY39500780	RE	2009/03/19 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE	2009/12/15 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	CE	2009/10/23 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE (EUT)	2010/02/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE (AE)	2010/02/05 * 12
MTA-31	Terminator	TME	CT-01	-	CE	2010/01/20 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(5m)/421-010(1m)/suciform141-PE(1m)/RFM-E121(Switcher)	-/04178	CE	2009/07/01 * 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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