



EMI TEST REPORT

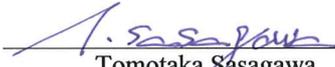
Test Report No. : 29DE0165-HO

Applicant : Sharp Corporation, Communication Systems Group.
Type of Equipment : Cellular Phone
Model No. : CDMA E05SH
FCC ID : APYHRO00093
Test regulation : FCC Part 15 Subpart B 2008 Class B
Test Result : Complied

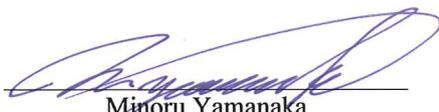
1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national 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: February 9, 2009

Tested by:


Tomotaka Sasagawa
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.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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MF060b (09.01.08)

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SECTION 1: Customer information

Company Name : Sharp Corporation, Communication Systems Group.
Brand Name : SHARP
Address : 2-13-1 Iida Hachihonmatsu Higashihiroshima-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 E05SH
Serial No. : SSHCD000837
Rating : AC 120V/60Hz, DC4.0V
Receipt Date of Sample : February 6, 2009
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 E05SH is 1XEV-DO Hybrid CDMA Tri-Band Cellular Phone.
The CDMA E05SH has the function that Bluetooth wireless technology interface for establishing contact and transmitting data with certain devices, FeliCa technology featuring easy changing and payments as Mobile Wallet.

Clock frequency : 19.2MHz, 32.768kHz, 384MHz

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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] 14.9dB, L, 0.15000MHz [AV] 11.3dB, L, 0.51532MHz/1.13526MHz	Complied
Radiated emission	ANSI C63.4: 2003 8. Radiated emission measurements	Class B	N/A	6.3dB, 108.410MHz, QP Horizontal	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
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.

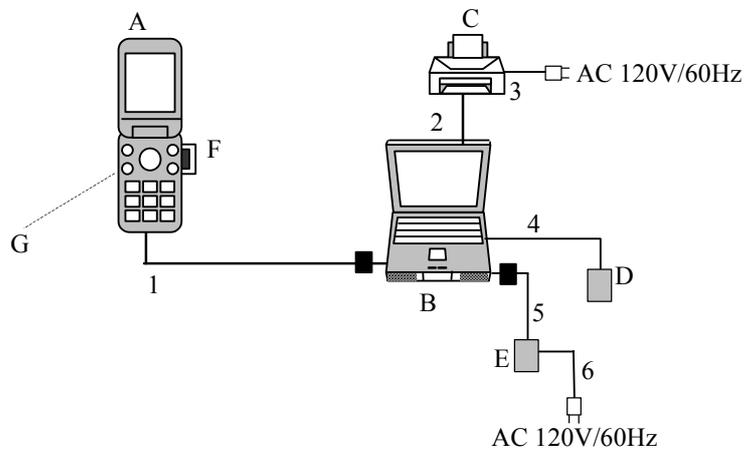
SECTION 4: Operation of E.U.T. during testing

4.1 Operating modes

Operating mode : 1) USB Data Com mode
2) Standby mode

Justification : The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals



■ : 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	CDMA E05SH	SSHCD000837	SHARP	EUT
B	PC	DELL PP10L	8LH3H1X	DELL	-
C	Printer	BJF860	K10201	Canon	DOC
D	USB Mouse	DELL M05UOA	G0N00FiF	DELL	-
E	AC Adapter (PC)	AA22850	-	DELL	-
F	micro SD Memory Card	64MB type	-	PANASONIC	-
G	Lithium-ion Battery	05SHUSA	-	SHARP	3.7V,930mA (3.5Wh)

List of cables used

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

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SECTION 5: Conducted Emission

5.1 Operating environment

Test place : No.2 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.

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: February 9, 2009

Test engineer: Tomotaka Sasagawa

UL Japan, Inc.

Head Office EMC Lab.

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SECTION 6: Radiated Emission

6.1 Operating environment

Test place : No.2 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 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: 1MHz 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 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: February 9, 2009

Test engineer: Tomotaka Sasagawa

UL Japan, Inc.

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APPENDIX 1: Photographs of test setup

Conducted Emission

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Radiated Emission

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

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APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

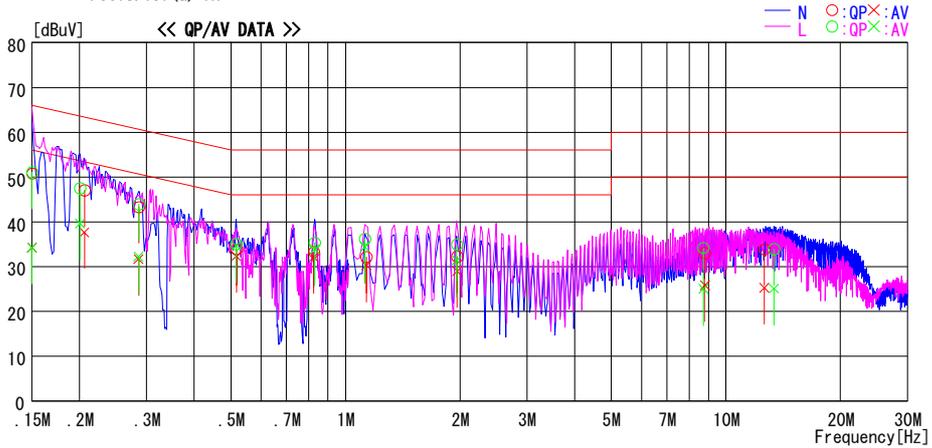
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2009/02/09

Company : Sharp Corporation
Kind of EUT : Cellular phone
Model No. : CDMA E05SH
Serial No. : SSHC000837

Report No. : 29DE0165-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg.C / 41%
Engineer : Tomotaka Sasagawa

Mode / Remarks : USB Date 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]		
0.15000	50.5	33.9	0.3	50.8	34.2	66.0	56.0	15.2	21.8	N	
0.20593	46.7	37.3	0.3	47.0	37.6	63.4	53.4	16.4	15.8	N	
0.28599	43.0	31.3	0.3	43.3	31.6	60.6	50.6	17.3	19.0	N	
0.51665	33.6	32.0	0.3	33.9	32.3	56.0	46.0	22.1	13.7	N	
0.82649	32.9	31.7	0.4	33.3	32.1	56.0	46.0	22.7	13.9	N	
1.13467	31.8	29.9	0.4	32.2	30.3	56.0	46.0	23.8	15.8	N	
1.96552	31.8	28.5	0.5	32.3	29.0	56.0	46.0	23.8	17.0	N	
8.79560	31.8	24.6	1.2	33.0	25.8	60.0	50.0	27.0	24.2	N	
12.62522	32.4	23.7	1.5	33.9	25.2	60.0	50.0	26.1	24.8	N	
0.15000	50.8	34.0	0.3	51.1	34.3	66.0	56.0	14.9	21.7	L	
0.20056	47.2	39.4	0.3	47.5	39.7	63.6	53.6	16.1	13.9	L	
0.28599	43.6	31.9	0.3	43.9	32.2	60.6	50.6	16.7	18.4	L	
0.51613	34.8	34.3	0.3	35.1	34.6	56.0	46.0	21.0	11.4	L	
0.82996	34.9	33.5	0.4	35.3	33.9	56.0	46.0	20.7	12.1	L	
1.12541	35.8	34.0	0.4	36.2	34.4	56.0	46.0	19.8	11.6	L	
1.96152	34.5	30.9	0.5	35.0	31.4	56.0	46.0	21.1	14.6	L	
8.72315	33.0	23.8	1.2	34.2	25.0	60.0	50.0	25.8	25.0	L	
13.36532	32.4	23.6	1.5	33.9	25.1	60.0	50.0	26.1	24.9	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.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

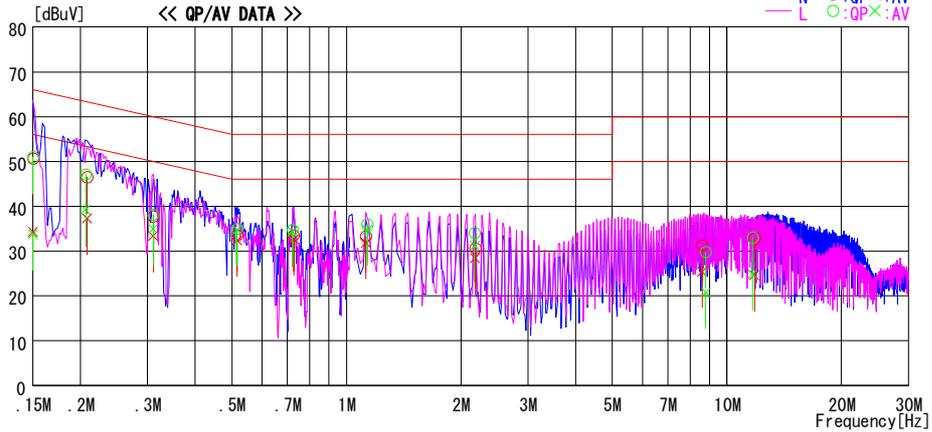
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2009/02/09

Company : Sharp Corporation
Kind of EUT : Cellular phone
Model No. : CDMA E05SH
Serial No. : SSHC0000837

Report No. : 29DE0165-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg.C / 41%
Engineer : Tomotaka Sasagawa

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]		
0.15000	50.4	34.0	0.3	50.7	34.3	66.0	56.0	15.4	21.8	N	
0.20806	46.2	37.0	0.3	46.5	37.3	63.3	53.3	16.8	16.0	N	
0.31040	37.5	33.1	0.3	37.8	33.4	60.0	50.0	22.3	16.6	N	
0.51613	33.3	32.1	0.3	33.6	32.4	56.0	46.0	22.5	13.6	N	
0.72710	33.2	32.2	0.4	33.6	32.6	56.0	46.0	22.4	13.4	N	
1.12541	32.9	31.4	0.4	33.3	31.8	56.0	46.0	22.7	14.2	N	
2.17964	30.1	27.9	0.5	30.6	28.4	56.0	46.0	25.4	17.6	N	
8.61410	30.1	24.3	1.2	31.3	25.5	60.0	50.0	28.7	24.5	N	
11.80761	31.4	23.1	1.5	32.9	24.6	60.0	50.0	27.1	25.4	N	
0.15000	50.7	33.5	0.3	51.0	33.8	66.0	56.0	15.0	22.2	L	
0.20649	46.8	38.8	0.3	47.1	39.1	63.3	53.3	16.2	14.2	L	
0.31053	37.9	34.6	0.3	38.2	34.9	60.0	50.0	21.8	15.1	L	
0.51532	34.7	34.4	0.3	35.0	34.7	56.0	46.0	21.0	11.3	L	
0.72141	34.3	34.0	0.4	34.7	34.4	56.0	46.0	21.3	11.6	L	
1.13526	35.5	34.4	0.4	35.9	34.8	56.0	46.0	20.1	11.3	L	
2.17060	33.5	30.7	0.5	34.0	31.2	56.0	46.0	22.0	14.8	L	
8.79504	28.6	19.6	1.2	29.8	20.8	60.0	50.0	30.2	29.2	L	
11.68567	31.6	23.4	1.5	33.1	24.9	60.0	50.0	26.9	25.1	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

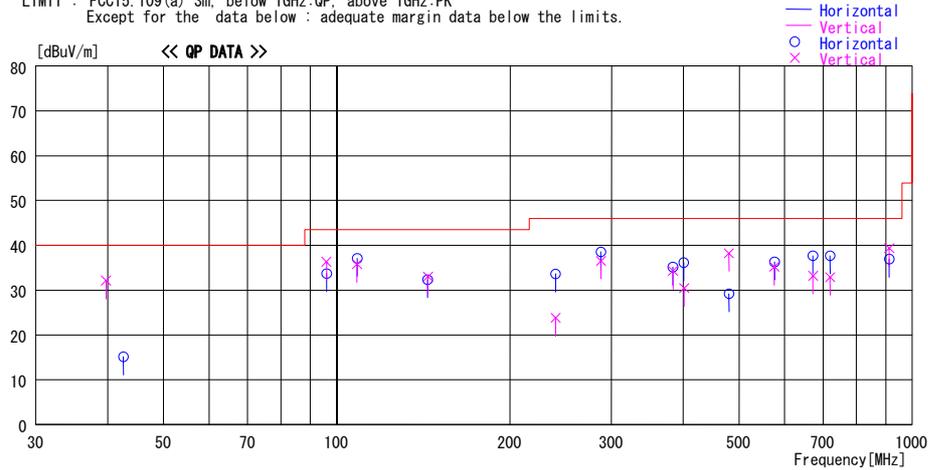
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2009/02/09

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : CDMA E05SH
Serial No. : SSHC000837
Report No. : 29DE0165-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C. / 41%
Engineer : Tomotaka Sasagawa

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 [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]					
39.751	40.1	QP	13.9	-21.9	32.1	Vert.	40.0	7.9	
42.600	24.1	QP	12.8	-21.8	15.1	Hori.	40.0	24.9	
96.001	45.2	QP	9.6	-21.1	33.7	Hori.	43.5	9.8	
96.003	47.8	QP	9.6	-21.1	36.3	Vert.	43.5	7.2	
108.471	45.2	QP	11.5	-20.9	35.8	Vert.	43.5	7.7	
108.642	46.5	QP	11.5	-20.9	37.1	Hori.	43.5	6.4	
143.850	38.2	QP	14.6	-20.5	32.3	Hori.	43.5	11.2	
144.002	38.8	QP	14.7	-20.5	33.0	Vert.	43.5	10.5	
240.149	26.2	QP	17.1	-19.5	23.8	Vert.	46.0	22.2	
240.149	36.0	QP	17.1	-19.5	33.6	Hori.	46.0	12.4	
287.850	36.1	QP	19.4	-19.0	36.5	Vert.	46.0	9.5	
287.850	38.2	QP	19.4	-19.0	38.6	Hori.	46.0	7.4	
383.679	37.6	QP	16.8	-19.2	35.2	Hori.	46.0	10.8	
383.997	36.7	QP	16.8	-19.2	34.3	Vert.	46.0	11.7	
400.973	37.8	QP	17.5	-19.2	36.1	Hori.	46.0	9.9	
401.499	32.1	QP	17.5	-19.2	30.4	Vert.	46.0	15.6	
480.002	30.1	QP	18.3	-19.2	29.2	Hori.	46.0	16.8	
480.003	39.1	QP	18.3	-19.2	38.2	Vert.	46.0	7.8	
576.006	35.1	QP	19.0	-18.9	35.2	Vert.	46.0	10.8	
576.499	36.2	QP	19.0	-18.9	36.3	Hori.	46.0	9.7	
672.001	36.5	QP	19.6	-18.4	37.7	Hori.	46.0	8.3	
672.168	32.0	QP	19.6	-18.4	33.2	Vert.	46.0	12.8	
720.002	30.8	QP	20.2	-18.1	32.9	Vert.	46.0	13.1	
720.002	35.6	QP	20.2	-18.1	37.7	Hori.	46.0	8.3	
912.010	34.2	QP	21.8	-16.7	39.3	Vert.	46.0	6.7	
912.024	31.8	QP	21.8	-16.7	36.9	Hori.	46.0	9.1	

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

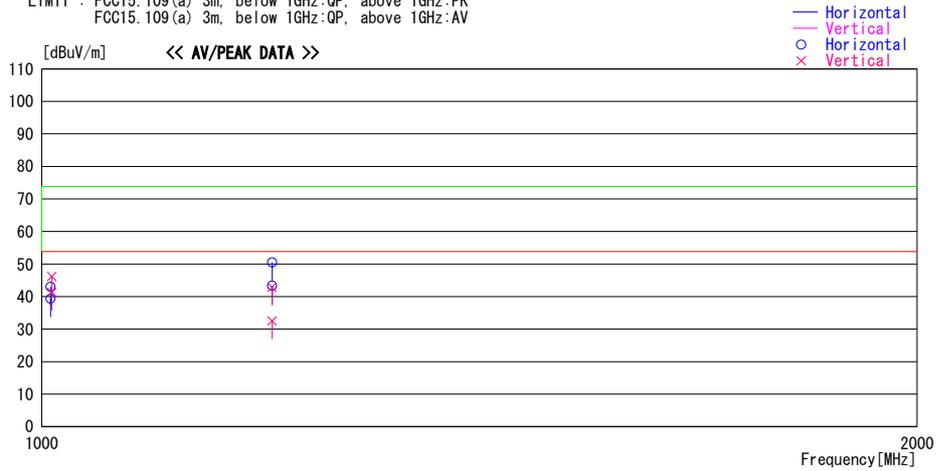
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2009/02/09

Company : Sharp Corporation	Report No. : 29DE0165-HO
Kind of EUT : Cellular Phone	Power : AC 120V / 60Hz
Model No. : CDMA E05SH	Temp./Humi. : 25deg.C / 41%
Serial No. : SSHGD000837	Engineer : Tomotaka Sasagawa

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 [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]					
1006.998	50.9	PK	24.4	-32.3	43.0	Hori.	73.9	30.9	
1006.998	47.2	AV	24.4	-32.3	39.3	Hori.	53.9	14.6	
1008.001	49.2	AV	24.4	-32.3	41.3	Vert.	53.9	12.6	
1008.001	54.1	PK	24.4	-32.3	46.2	Vert.	73.9	27.7	
1199.988	39.4	AV	24.9	-31.8	32.5	Vert.	53.9	21.4	
1199.988	49.8	PK	24.9	-31.8	42.9	Vert.	73.9	31.0	
1200.000	50.2	AV	24.9	-31.8	43.3	Hori.	53.9	10.6	
1200.000	57.4	PK	24.9	-31.8	50.5	Hori.	73.9	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.

Radiated Emission

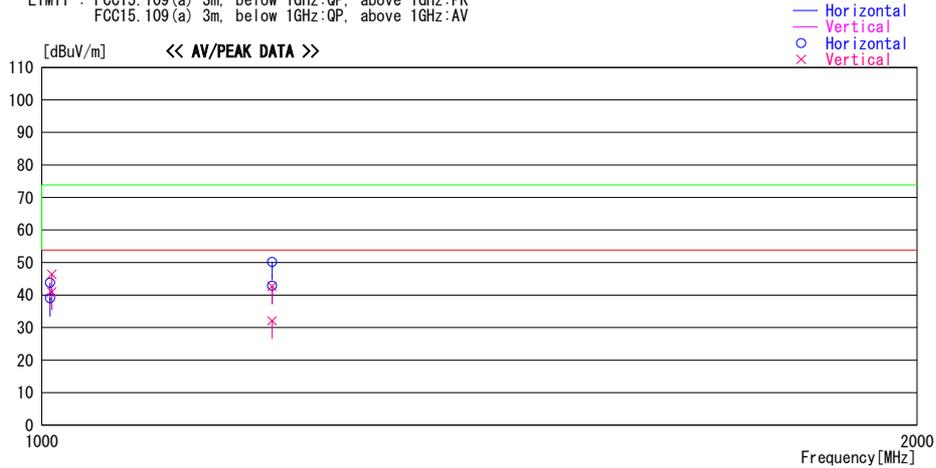
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2009/02/09

Company : Sharp Corporation	Report No. : 29DE0165-HO
Kind of EUT : Cellular Phone	Power : AC 120V / 60Hz
Model No. : CDMA E05SH	Temp./Humi. : 25deg. C. / 41%
Serial No. : SSHCD000837	Engineer : Tomotaka Sasagawa

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 [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]					
1006.667	51.7	PK	24.4	-32.3	43.8	Hori.	73.9	30.1	
1006.667	47.0	AV	24.4	-32.3	39.1	Hori.	53.9	14.8	
1008.021	48.9	AV	24.4	-32.3	41.0	Vert.	53.9	12.9	
1008.021	54.3	PK	24.4	-32.3	46.4	Vert.	73.9	27.5	
1199.950	39.0	AV	24.9	-31.8	32.1	Vert.	53.9	21.8	
1199.950	49.7	PK	24.9	-31.8	42.8	Vert.	73.9	31.1	
1200.017	49.8	AV	24.9	-31.8	42.9	Hori.	53.9	11.0	
1200.017	57.1	PK	24.9	-31.8	50.2	Hori.	73.9	23.7	

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	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	CE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	CE	2009/02/05 * 12
MJM-05	Measure	PROMART	SEN1955	-	CE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	CE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	MY46180856	CE	2008/11/25 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	CE	2008/04/02 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(AE)	2008/02/19 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(EUT)	2008/02/20 * 12
MTA-07	Terminator	MCL	BTRM-50	1 9944	CE	2008/02/04 * 12
MCC-13	Coaxial Cable	Fujikura/Agilent	-	-	CE	2008/02/15 * 12
MAEC-02	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2009/02/05 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	MY46180856	RE	2008/11/25 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	RE	2008/04/02 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2008/10/18 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2008/10/18 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2008/02/15 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2008/11/14 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2008/09/04 * 12
MAEC-02	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2009/02/05 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	MY46180856	RE	2008/11/25 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2009/01/31 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	295123(5m) / 287573(1m)	RE	2008/11/27 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2008/09/17 * 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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