



EMI TEST REPORT

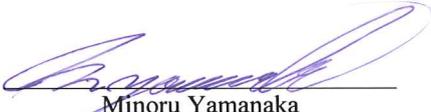
Test Report No. : 29BE0193-HO

Applicant : Sharp Corporation, Communication Systems Group.
Type of Equipment : Cellular Phone
Model No. : DM003SH
FCC ID : APYHRO00079
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: September 27, 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.htm>

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, Communication Systems Group.
Address : 2-13-1 Iida Hachihonmatsu, Higashihiroshima-shi, Hiroshima,
739-0192, Japan
Telephone Number : +81-82-420-1591
Facsimile Number : +81-82-420-1572
Contact Person : Hiroyuki Uwatoko

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

2.1 Identification of E.U.T.

Type of Equipment : Cellular Phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5
Rating : AC 120V/60Hz, DC4.0V
Receipt Date of Sample : September 27, 2008
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: DM003SH (referred to as the EUT in this report) is the Cellular Phone.

Clock frequency(ies) in the system : 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] 14.3dB, 0.15120MHz, L [AV] 9.5dB, 4.838803MHz, L | Complied |
| Radiated emission | ANSI C63.4: 2003 8. Radiated emission measurements | Class B | N/A | 10.0dB, 875.521MHz, 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

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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

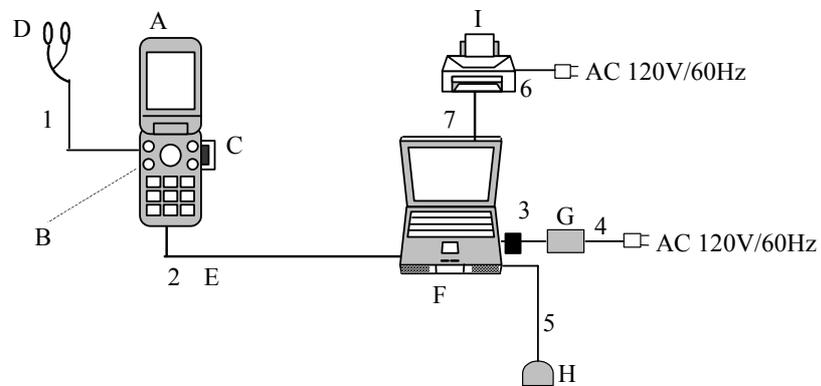
Refer to APPENDIX 1 to 3.

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 worst case conditions.

Description of EUT and Support equipment

| No. | Item | Model number | Serial number | Manufacturer | Remark |
|-----|----------------------------------|----------------|--------------------------|--------------|-------------------|
| A | Cellular Phone | DM003SH | 004401/11/157113/5 | SHARP | EUT |
| B | Rechargeable Lithium-ion Battery | SHBBX1 | REA | SHARP | EUT |
| C | microSD Memory Card | SDSDQ-128 | 01 | SanDisk | EUT |
| D | Stereo Handsfree | RPHOHA019AF SB | 01 | SHARP | EUT |
| E | USB Data Cable | XN-1DC30 | - | SHARP | 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 | 0.8 | 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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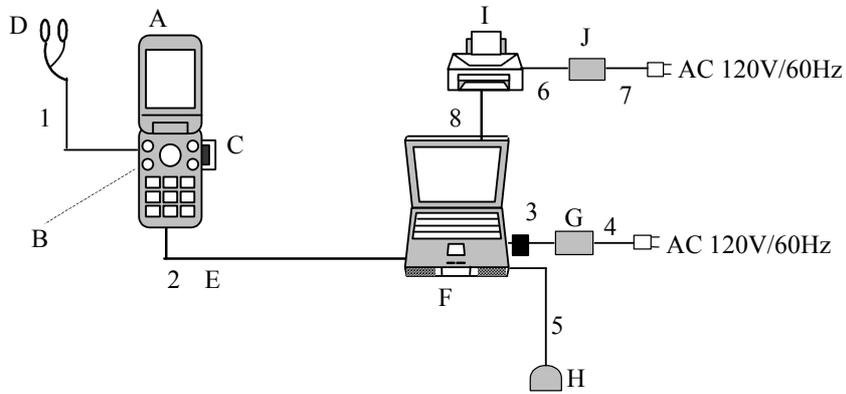
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[Radiated emission test]



■ : Standard Ferrite Core

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

Description of EUT and Support equipment

| No. | Item | Model number | Serial number | Manufacturer | Remark |
|-----|----------------------------------|----------------|--------------------------|--------------|-------------------|
| A | Cellular Phone | DM003SH | 004401/11/157113/5 | SHARP | EUT |
| B | Rechargeable Lithium-ion Battery | SHBBX1 | REA | SHARP | EUT |
| C | microSD Memory Card | SDSDQ-128 | 01 | SanDisk | EUT |
| D | Stereo Handsfree | RPHOHA019AF SB | 01 | SHARP | EUT |
| E | USB Data Cable | XN-1DC30 | - | SHARP | 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 | 0.8 | 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 | - |

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 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 27, 2008

Test engineer: Kazufumi Nakai

UL Japan, Inc.

Head Office EMC Lab.

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SECTION 6: Radiated Emission

6.1 Operating environment

Test place : 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 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: September 27, 2008

Test engineer: Kazufumi Nakai

UL Japan, Inc.

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APPENDIX 1: Photographs of test setup

Conducted Emission

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Radiated Emission

This page has been submitted for a separate exhibit.

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

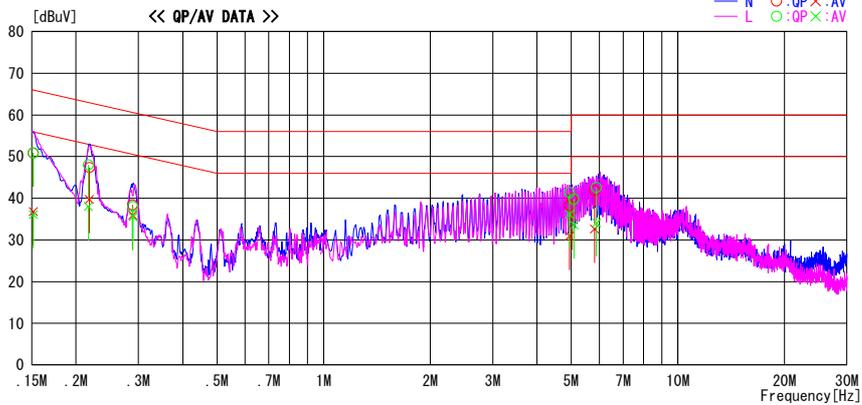
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2008/09/27

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5

Report No. : 29BE0193-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C / 44%
Engineer : Kazufumi Nakai

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] | | |
| 0.15140 | 50.6 | 36.6 | 0.2 | 50.8 | 36.8 | 65.9 | 55.9 | 15.1 | 19.1 | N | |
| 0.21806 | 47.1 | 39.4 | 0.3 | 47.4 | 39.7 | 62.9 | 52.9 | 15.5 | 13.2 | N | |
| 0.28896 | 38.1 | 35.6 | 0.3 | 38.4 | 35.9 | 60.6 | 50.6 | 22.2 | 14.7 | N | |
| 4.93995 | 37.5 | 30.2 | 0.7 | 38.2 | 30.9 | 56.0 | 46.0 | 17.8 | 15.1 | N | |
| 5.02046 | 39.1 | 34.9 | 0.8 | 39.9 | 35.7 | 60.0 | 50.0 | 20.1 | 14.3 | N | |
| 5.81985 | 41.1 | 31.8 | 0.8 | 41.9 | 32.6 | 60.0 | 50.0 | 18.1 | 17.4 | N | |
| 0.15155 | 50.6 | 35.9 | 0.2 | 50.8 | 36.1 | 65.9 | 55.9 | 15.1 | 19.8 | L | |
| 0.21668 | 47.7 | 37.7 | 0.3 | 48.0 | 38.0 | 62.9 | 52.9 | 14.9 | 14.9 | L | |
| 0.28959 | 37.7 | 35.2 | 0.3 | 38.0 | 35.5 | 60.5 | 50.5 | 22.5 | 15.0 | L | |
| 4.94265 | 40.7 | 35.5 | 0.7 | 41.4 | 36.2 | 56.0 | 46.0 | 14.6 | 9.8 | L | |
| 5.08840 | 39.0 | 32.8 | 0.8 | 39.8 | 33.6 | 60.0 | 50.0 | 20.2 | 16.4 | L | |
| 5.88897 | 41.8 | 33.3 | 0.8 | 42.6 | 34.1 | 60.0 | 50.0 | 17.4 | 15.9 | 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.

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Conducted Emission

DATA OF CONDUCTED EMISSION TEST

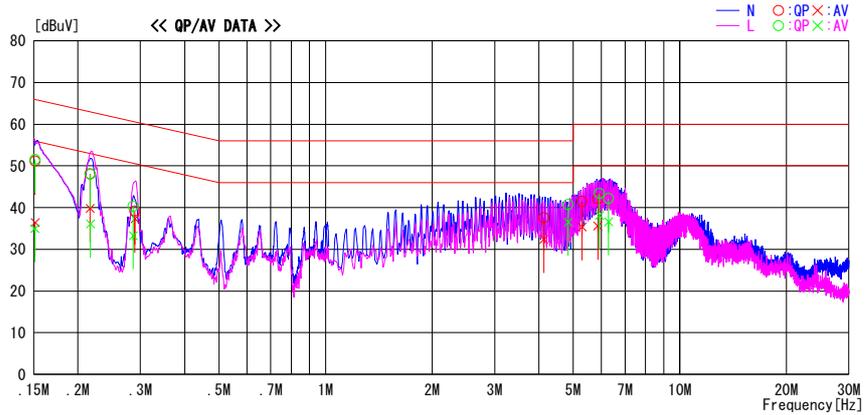
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/27

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5

Report No. : 29BE0193-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C / 44%
Engineer : Kazufumi Nakai

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] | | |
| 0.15135 | 51.0 | 36.2 | 0.2 | 51.2 | 36.4 | 65.9 | 55.9 | 14.7 | 19.5 | N | |
| 0.21652 | 47.8 | 39.5 | 0.3 | 48.1 | 39.8 | 63.0 | 53.0 | 14.9 | 13.2 | N | |
| 0.28954 | 38.9 | 37.0 | 0.3 | 39.2 | 37.3 | 60.5 | 50.5 | 21.3 | 13.2 | N | |
| 4.12985 | 37.0 | 31.8 | 0.6 | 37.6 | 32.4 | 56.0 | 46.0 | 18.4 | 13.6 | N | |
| 5.29883 | 40.7 | 34.6 | 0.8 | 41.5 | 35.4 | 60.0 | 50.0 | 18.5 | 14.6 | N | |
| 5.86737 | 41.3 | 34.8 | 0.8 | 42.1 | 35.6 | 60.0 | 50.0 | 17.9 | 14.4 | N | |
| 0.15120 | 51.4 | 34.8 | 0.2 | 51.6 | 35.0 | 65.9 | 55.9 | 14.3 | 20.9 | L | |
| 0.21692 | 47.7 | 35.8 | 0.3 | 48.0 | 36.1 | 62.9 | 52.9 | 14.9 | 16.8 | L | |
| 0.28644 | 40.0 | 33.0 | 0.3 | 40.3 | 33.3 | 60.6 | 50.6 | 20.3 | 17.3 | L | |
| 4.83880 | 40.0 | 35.8 | 0.7 | 40.7 | 36.5 | 56.0 | 46.0 | 15.3 | 9.5 | L | |
| 5.92834 | 42.6 | 37.3 | 0.8 | 43.4 | 38.1 | 60.0 | 50.0 | 16.6 | 11.9 | L | |
| 6.29211 | 41.4 | 35.8 | 0.8 | 42.2 | 36.6 | 60.0 | 50.0 | 17.8 | 13.4 | 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

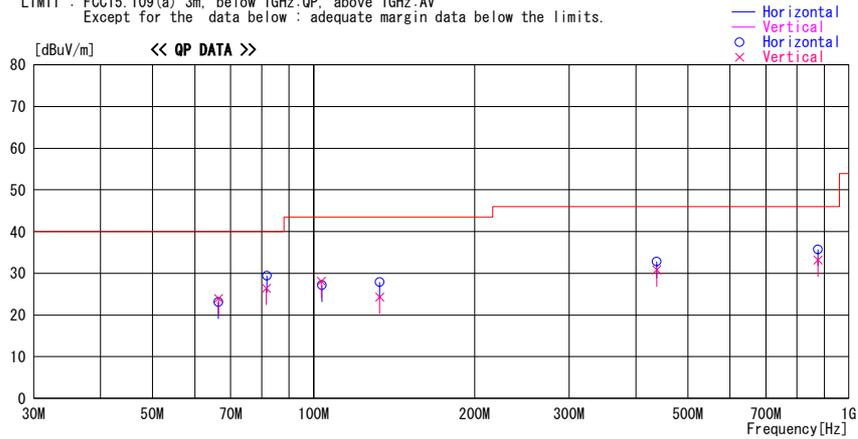
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/27

Company : Sharp Corporation
Kind of EUT : Cellular phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5
Report No. : 29BE0193-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 44%
Operator : Kazufumi Nakai

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

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



| 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] | | | | | | | |
| 66.394 | 40.3 | QP | 7.1 | -24.3 | 23.1 | 43 | 329 | Hori. | 40.0 | 16.9 | |
| 66.458 | 41.2 | QP | 7.1 | -24.3 | 24.0 | 189 | 100 | Vert. | 40.0 | 16.0 | |
| 81.615 | 43.7 | QP | 6.7 | -24.0 | 26.4 | 298 | 100 | Vert. | 40.0 | 13.6 | |
| 81.771 | 46.7 | QP | 6.7 | -24.0 | 29.4 | 58 | 239 | Hori. | 40.0 | 10.6 | |
| 103.355 | 41.3 | QP | 10.6 | -23.8 | 28.1 | 162 | 100 | Vert. | 43.5 | 15.4 | |
| 103.669 | 40.4 | QP | 10.6 | -23.8 | 27.2 | 195 | 183 | Hori. | 43.5 | 16.3 | |
| 132.912 | 34.0 | QP | 13.8 | -23.5 | 24.3 | 334 | 168 | Vert. | 43.5 | 19.2 | |
| 132.932 | 37.6 | QP | 13.8 | -23.5 | 27.9 | 267 | 222 | Hori. | 43.5 | 15.6 | |
| 437.752 | 35.5 | QP | 18.5 | -21.2 | 32.8 | 279 | 100 | Hori. | 46.0 | 13.2 | |
| 437.757 | 33.5 | QP | 18.5 | -21.2 | 30.8 | 5 | 141 | Vert. | 46.0 | 15.2 | |
| 875.513 | 30.5 | QP | 23.3 | -18.1 | 35.7 | 125 | 116 | Hori. | 46.0 | 10.3 | |
| 875.513 | 28.0 | QP | 23.3 | -18.1 | 33.2 | 125 | 100 | Vert. | 46.0 | 12.8 | |

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.

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Radiated Emission

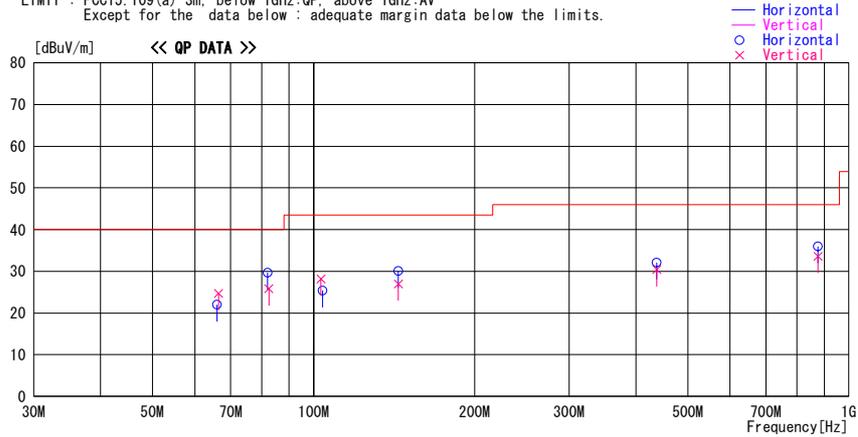
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/27

Company : Sharp Corporation
Kind of EUT : Cellular phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5
Report No. : 29BE0193-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 44%
Operator : Kazufumi Nakai

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

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



| 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] | | | | | | | |
| 66.018 | 39.2 | QP | 7.1 | -24.3 | 22.0 | 29 | 306 | Hori. | 40.0 | 18.0 | |
| 66.469 | 41.9 | QP | 7.1 | -24.3 | 24.7 | 222 | 100 | Vert. | 40.0 | 15.3 | |
| 82.085 | 46.9 | QP | 6.8 | -24.0 | 29.7 | 73 | 211 | Hori. | 40.0 | 10.3 | |
| 82.506 | 42.9 | QP | 6.9 | -24.0 | 25.8 | 275 | 100 | Vert. | 40.0 | 14.2 | |
| 103.212 | 41.4 | QP | 10.6 | -23.8 | 28.2 | 191 | 100 | Vert. | 43.5 | 15.3 | |
| 103.943 | 38.5 | QP | 10.7 | -23.8 | 25.4 | 205 | 321 | Hori. | 43.5 | 18.1 | |
| 144.013 | 38.9 | QP | 14.6 | -23.4 | 30.1 | 287 | 253 | Hori. | 43.5 | 13.4 | |
| 144.014 | 35.8 | QP | 14.6 | -23.4 | 27.0 | 201 | 100 | Vert. | 43.5 | 16.5 | |
| 437.753 | 33.1 | QP | 18.5 | -21.2 | 30.4 | 6 | 134 | Vert. | 46.0 | 15.6 | |
| 437.756 | 34.8 | QP | 18.5 | -21.2 | 32.1 | 270 | 100 | Hori. | 46.0 | 13.9 | |
| 875.518 | 28.4 | QP | 23.3 | -18.1 | 33.6 | 132 | 127 | Vert. | 46.0 | 12.4 | |
| 875.521 | 30.8 | QP | 23.3 | -18.1 | 36.0 | 126 | 115 | Hori. | 46.0 | 10.0 | |

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

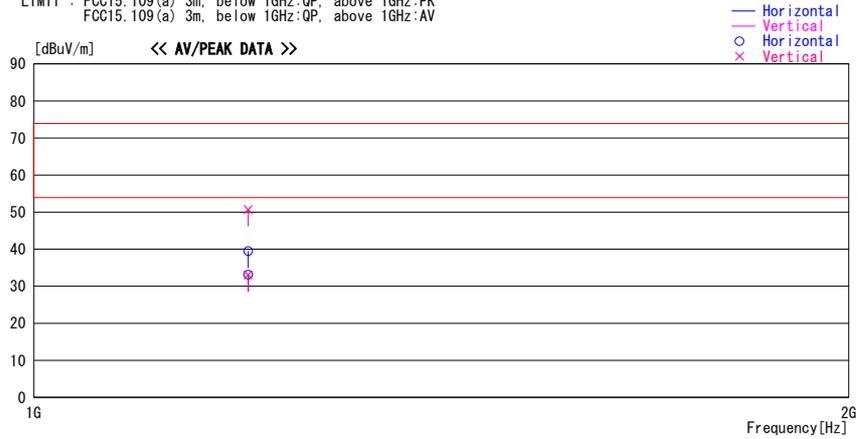
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2008/09/27

Company : Sharp Corporation
Kind of EUT : Cellular phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5
Report No. : 29BE0193-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23deg. C. / 44%
Operator : 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 [MHz] | Reading [dBuV] | DET | Antenna | Loss& | Level [dBuV/m] | Polar. | Limit | Margin | Comment |
|-----------------|----------------|-----|---------------|-----------|----------------|--------|----------|--------|---------|
| | | | Factor [dB/m] | Gain [dB] | | | [dBuV/m] | [dB] | |
| 1200.001 | 46.7 | PK | 24.9 | -32.1 | 39.5 | Hori. | 73.9 | 34.4 | |
| 1200.001 | 40.3 | AV | 24.9 | -32.1 | 33.1 | Hori. | 53.9 | 20.8 | |
| 1200.001 | 57.9 | PK | 24.9 | -32.1 | 50.7 | Vert. | 73.9 | 23.2 | |
| 1200.001 | 40.3 | AV | 24.9 | -32.1 | 33.1 | Vert. | 53.9 | 20.8 | |

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

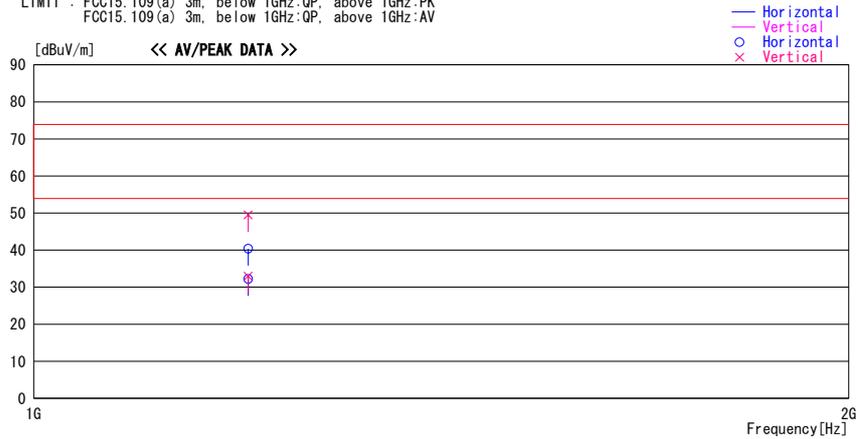
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/27

Company : Sharp Corporation
Kind of EUT : Cellular phone
Model No. : DM003SH
Serial No. : 004401/11/157113/5
Report No. : 29BE0193-HO
Power : AC 120V / 60Hz
Temp./Humi. : 23eg. C. / 44%
Operator : 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 [MHz] | Reading [dBuV] | DET | Antenna | | Level [dBuV/m] | Polar. | Limit [dBuV/m] | Margin [dB] | Comment |
|--------------------|-------------------|-----|------------------|-----------------------|-------------------|--------|-------------------|----------------|---------|
| | | | Factor [dB/m] | Loss& Gain [dB] | | | | | |
| 1200.018 | 47.6 | PK | 24.9 | -32.1 | 40.4 | Hori. | 73.9 | 33.5 | |
| 1200.018 | 39.4 | AV | 24.9 | -32.1 | 32.2 | Hori. | 53.9 | 21.7 | |
| 1200.018 | 56.7 | PK | 24.9 | -32.1 | 49.5 | Vert. | 73.9 | 24.4 | |
| 1200.018 | 40.2 | AV | 24.9 | -32.1 | 33.0 | Vert. | 53.9 | 20.9 | |

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-04 | Anechoic Chamber | TDK | Semi Anechoic Chamber 3m | RE/CE | 2008/03/27 * 12 |
| MOS-15 | Thermo-Hygrometer | Custom | CTH-180 | RE/CE | 2008/01/10 * 12 |
| MJM-07 | Measure | PROMART | SEN1955 | RE/CE | - |
| MSTW-14 | EMI measurement program | TSJ | TEPTO-DV | RE/CE | - |
| MSA-05 | Spectrum Analyzer | Advantest | R3273 | RE/CE | 2008/06/25 * 12 |
| MTR-07 | Test Receiver | Rohde & Schwarz | ESCI | RE/CE | 2007/09/14 * 12 |
| MBA-05 | Biconical Antenna | Schwarzbeck | BBA9106 | RE | 2008/01/12 * 12 |
| MLA-08 | Logperiodic Antenna | Schwarzbeck | UKLP9140-A | RE | 2008/01/12 * 12 |
| MCC-50 | Coaxial cable | UL Japan | - | RE | 2008/03/17 * 12 |
| MAT-31 | Attenuator(6dB) | TME | UFA-01 | RE | 2008/03/10 * 12 |
| MPA-14 | Pre Amplifier | SONOMA INSTRUMENT | 310 | RE | 2008/03/06 * 12 |
| MHA-21 | Horn Antenna 1-18GHz | Schwarzbeck | BBHA9120D | RE | 2008/08/11 * 12 |
| MCC-56 | Microwave Cable 1G-26.5GHz | Suhner | SUCOFLEX104 | RE | 2008/03/12 * 12 |
| MSA-10 | Spectrum Analyzer | Agilent | E4448A | RE | 2008/02/27 * 12 |
| MPA-12 | MicroWave System Amplifier | Agilent | 83017A | RE | 2008/03/13 * 12 |
| MLS-06 | LISN(AMN) | Schwarzbeck | NSLK8127 | CE(AE) | 2008/02/19 * 12 |
| MLS-07 | LISN(AMN) | Schwarzbeck | NSLK8127 | CE(EUT) | 2008/02/20 * 12 |
| MTA-07 | Terminator | MCL | BTRM-50 | CE | 2008/02/04 * 12 |
| MCC-113 | Coaxial cable | Fujikura/Suhner/TSJ | - | CE | 2008/07/03 * 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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