



EMI TEST REPORT

Test Report No. : 29IE0173-HO-A

Applicant : Sharp Corporation, Communication Systems Group.
Type of Equipment : Cellular Phone
Model No. : 936SH
FCC ID : APYHRO00103
Test regulation : FCC Part 15 Subpart B 2009 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:

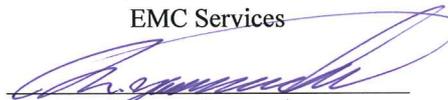
July 13, 2009

Tested by:



Keisuke Kawamura
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)

CONTENTS	PAGE
SECTION 1: Customer information	3
SECTION 2: Equipment under test (E.U.T.)	3
SECTION 3: Test specification, procedures & results	4
SECTION 4: Operation of E.U.T. during testing	7
SECTION 5: Conducted Emission	9
SECTION 6: Radiated Emission	10
APPENDIX 1: Photographs of test setup.....	11
Conducted Emission	11
Radiated Emission	12
Worst Case Position (Horizontal: Z-axis/ Vertical:X-axis).....	13
APPENDIX 2: Data of EMI test	14
Conducted Emission	14
Radiated Emission	16
APPENDIX 3: Test instruments	20

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 : +81-82-420-1827
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. : 936SH
Serial No. : 004401/11/203203/8
Receipt Date of Sample : July 10, 2009
Rating : AC120V/60Hz, DC4.0V
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

Sharp Corporation, Communication Systems Group., Model No: 936SH is the Cellular Phone.

Clock frequency : CPU: 26MHz
RTC: 32.768kHz
Internal: 208MHz

Feature of EUT : 936SH is WCDMA & Tri-band (900/1800/1900) GSM Dual mode Cellular Phone. It has the function that Bluetooth wireless technology interface for establishing contact and transmitting data with certain device.

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SECTION 3: Test specification, procedures & results

3.1 Test specification

Test Specification : FCC Part 15 Subpart B 2009, final revised on February 27, 2009
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] 13.5dB, 3.76098MHz, L [AV] 16.4dB, 0.16796MHz, L	Complied
Radiated emission	ANSI C63.4: 2003 8. Radiated emission measurements	Class B	N/A	4.6dB, 72.405MHz, QP 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	3.7dB
No.2	3.7dB
No.3	3.7dB
No.4	3.7dB

Test room (semi-anechoic chamber)	Radiated emission (10m*)(+dB)			Radiated emission (3m*)(+dB)					
	9kHz-30MHz	30MHz-300MHz	300MHz-1GHz	9kHz-30MHz	30MHz-300MHz	300MHz-1GHz	1GHz-18GHz	18GHz-26.5GHz	26.5GHz-40GHz
No.1	3.1dB	4.4dB	3.9dB	3.2dB	3.8dB	3.9dB	5.0dB	5.0dB	5.4dB
No.2	-	-	-	3.2dB	4.4dB	4.0dB	5.0dB	5.2dB	5.4dB
No.3	-	-	-	3.2dB	4.2dB	3.8dB	5.0dB	5.3dB	5.3dB
No.4	-	-	-	3.2dB	4.0dB	3.8dB	5.0dB	5.3dB	5.3dB

*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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	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

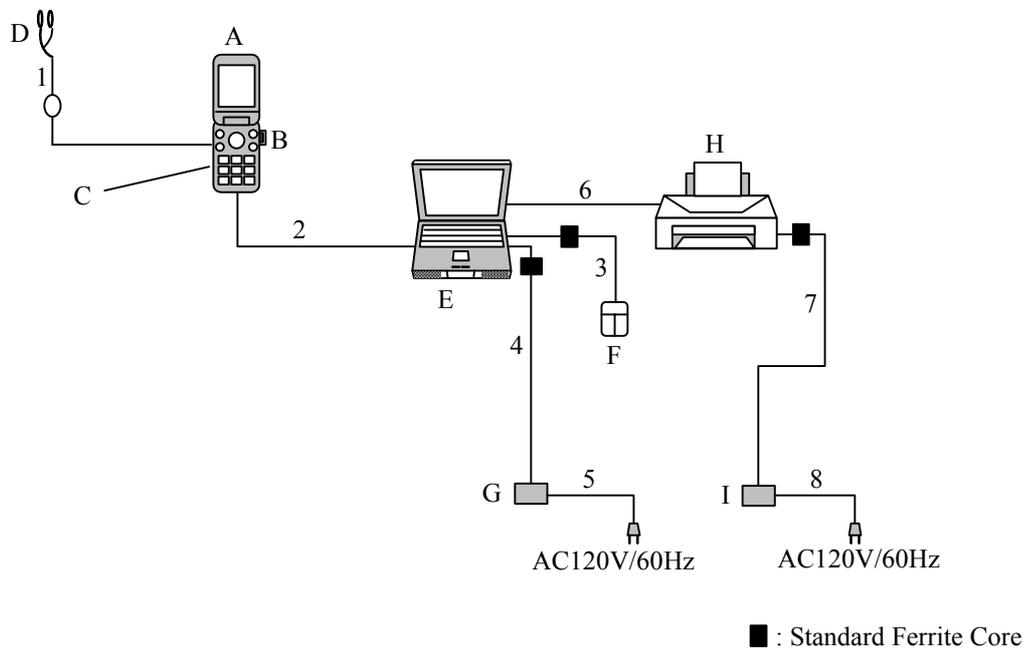
Refer to APPENDIX 1 to 3 or 4.

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	936SH	004401/11/203203/8	SHARP	EUT
B	microSD Memory Card	SDSDQ-128	None	SanDisk	-
C	Lithium-Ion Battery	SHBCC1	RIA	SHARP	EUT
D	Stereo Handsfree	RPHoHA019AFSB	1	SHARP	EUT
E	Personal Computer	PP11L	CN-0D4571-48643-55V-1651	Dell	DoC
F	Mouse	M-BE55	LZE21450232	Logitech	DoC
G	AC Adapter (PC)	PA-1650-05D2	CN-0F7970-71615-561-14A1	Dell	DoC
H	Printer	895Cxi	SG8BL1W16V	Hewlett Packard	DoC
I	AC Adapter (Printer)	C4557-60004	C8K28B	Hewlett Packard	DoC

List of cables used

No.	Name	Length (m)	Shield	
			Cable	Connector
1	Stereo Handsfree	1.70	Unshielded	Unshielded
2	USB Data Cable	0.80	Shielded	Shielded
3	Mouse Cable	0.72	Unshielded	Unshielded
4	AC Adapter Cable(PC)	1.76	Unshielded	Unshielded
5	AC Power Cable(PC)	0.85	Unshielded	Unshielded
6	Parallel Cable	1.65	Shielded	Shielded
7	AC Adapter Cable (printer)	2.00	Unshielded	Unshielded
8	AC Power Cable (printer)	1.75	Unshielded	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: July 13, 2009

Test engineer: Keisuke Kawamura

UL Japan, Inc.

Head Office EMC Lab.

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

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver	Spectrum Analyzer
IF Bandwidth	QP: BW 120kHz	PK: RBW:1MHz/VBW: 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 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: July 13, 2009

Test engineer: Keisuke Kawamura

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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: Z-axis/ Vertical:X-axis)

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APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

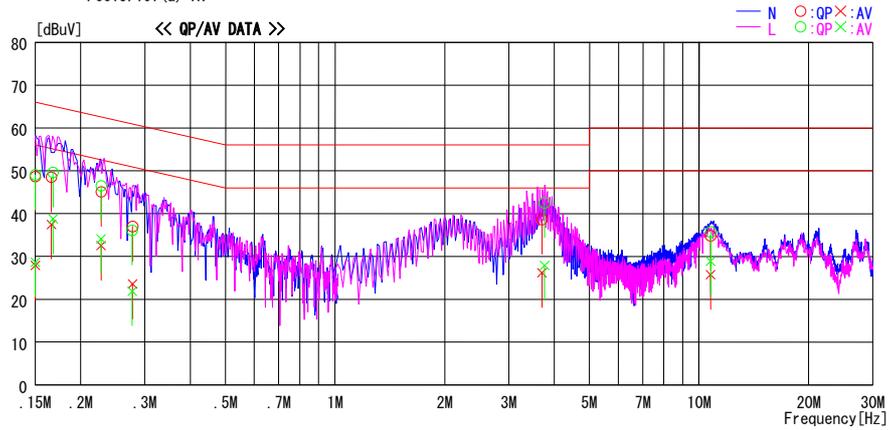
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2009/07/13

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : 936SH
Serial No. : 004401/11/203203/8

Report No. : 29IE0173-H0
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C / 64%
Engineer : Keisuke Kawamura

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]		
0.15000	48.9	28.5	0.2	49.1	28.7	66.0	56.0	17.0	27.3	L	
0.15000	48.4	27.7	0.2	48.6	27.9	66.0	56.0	17.4	28.1	N	
0.16796	49.4	38.6	0.2	49.6	38.8	65.1	55.1	15.5	16.4	L	
0.16616	48.3	37.3	0.2	48.5	37.5	65.2	55.2	16.7	17.7	N	
0.22742	46.2	33.8	0.3	46.5	34.1	62.5	52.5	16.0	18.4	L	
0.22756	44.8	32.2	0.3	45.1	32.5	62.5	52.5	17.4	20.0	N	
0.27702	35.9	21.6	0.3	36.2	21.9	60.9	50.9	24.7	29.0	L	
0.27775	36.7	23.2	0.3	37.0	23.5	60.9	50.9	23.9	27.4	N	
3.70132	38.0	25.5	0.7	38.7	26.2	56.0	46.0	17.4	19.8	N	
3.76098	41.7	27.1	0.8	42.5	27.9	56.0	46.0	13.5	18.1	L	
10.76507	34.1	27.3	1.6	35.7	28.9	60.0	50.0	24.3	21.1	L	
10.75651	33.2	24.1	1.6	34.8	25.7	60.0	50.0	25.2	24.3	N	

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

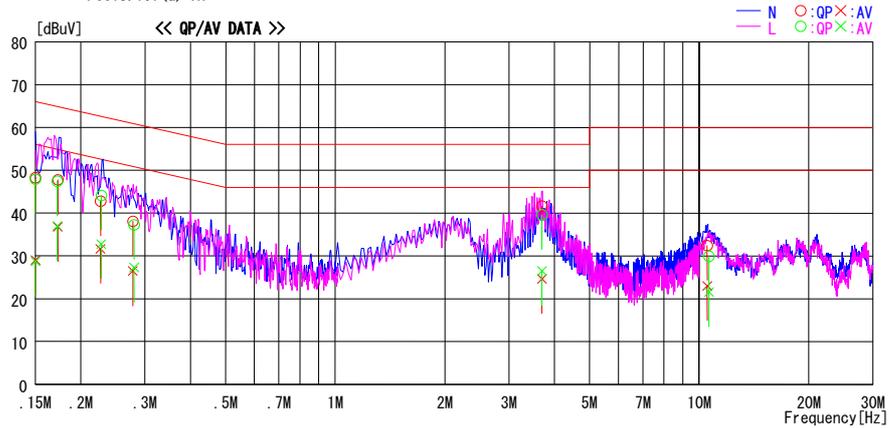
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2009/07/13

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : 936SH
Serial No. : 004401/11/203203/8

Report No. : 29IE0173-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C / 64%
Engineer : Keisuke Kawamura

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	48.1	28.8	0.2	48.3	29.0	66.0	56.0	17.7	27.0	N	
0.17292	47.6	36.6	0.2	47.8	36.8	64.8	54.8	17.1	18.1	N	
0.22638	42.5	31.4	0.3	42.8	31.7	62.6	52.6	19.8	20.9	N	
0.27800	37.8	26.2	0.3	38.1	26.5	60.9	50.9	22.8	24.4	N	
3.69819	41.0	24.0	0.7	41.7	24.7	56.0	46.0	14.4	21.3	N	
10.52324	30.9	21.5	1.5	32.4	23.0	60.0	50.0	27.6	27.0	N	
0.15000	47.7	28.6	0.2	47.9	28.8	66.0	56.0	18.1	27.2	L	
0.17251	47.3	36.8	0.2	47.5	37.0	64.8	54.8	17.3	17.8	L	
0.22767	43.9	32.5	0.3	44.2	32.8	62.5	52.5	18.4	19.7	L	
0.28012	37.0	27.0	0.3	37.3	27.3	60.8	50.8	23.5	23.5	L	
3.69533	38.9	25.8	0.7	39.6	26.5	56.0	46.0	16.4	19.5	L	
10.64017	28.3	20.0	1.6	29.9	21.6	60.0	50.0	30.1	28.4	L	

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

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

Radiated Emission

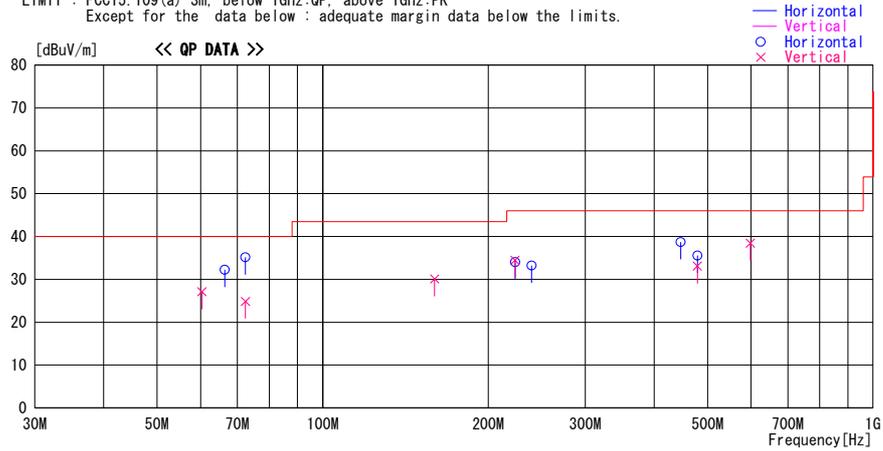
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2009/07/13

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : 936SH
Serial No. : 004401/11/203203/8
Report No. : 29IE0173-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C / 64%
Engineer : Keisuke Kawamura

Mode / Remarks : USB Data Com Mode Worst-axis:(Hori:Z , 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	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
			[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
60.336	39.9	QP	8.0	-20.8	27.1	282	100	Vert.	40.0	12.9	
66.371	45.7	QP	7.3	-20.7	32.3	295	300	Hori.	40.0	7.7	
72.405	48.9	QP	6.8	-20.5	35.2	304	237	Hori.	40.0	4.8	
72.406	38.6	QP	6.8	-20.5	24.9	152	100	Vert.	40.0	15.1	
159.781	33.7	QP	15.4	-19.0	30.1	48	100	Vert.	43.5	13.4	
223.687	35.7	QP	16.8	-18.0	34.5	27	100	Vert.	46.0	11.5	
223.685	35.2	QP	16.8	-18.0	34.0	174	211	Hori.	46.0	12.0	
239.664	34.2	QP	17.0	-17.9	33.3	163	221	Hori.	46.0	12.8	
447.364	38.4	QP	17.4	-17.1	38.7	302	100	Hori.	46.0	7.3	
479.316	34.6	QP	18.0	-17.0	35.6	298	100	Hori.	46.0	10.4	
479.324	32.1	QP	18.0	-17.0	33.1	20	130	Vert.	46.0	12.9	
598.516	35.5	QP	19.3	-16.4	38.4	355	100	Vert.	46.0	7.6	

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

*The limit is rounded down to one decimal place.

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

Radiated Emission

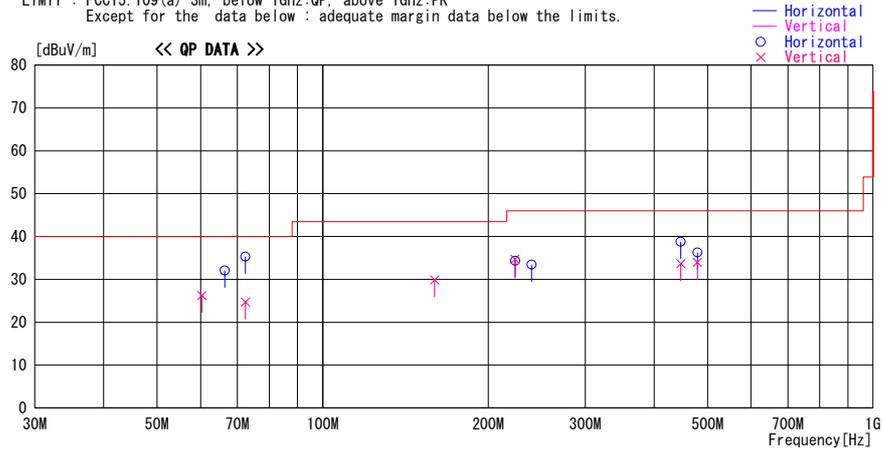
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Temp./Humi. : 25deg. C / 64%
Engineer : Keisuke Kawamura

Mode / Remarks : Standby Mode Worst-axis:(Hori:Z , 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	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
			[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
60.333	39.1	QP	8.0	-20.8	26.3	155	100	Vert.	40.0	13.8	
66.370	45.5	QP	7.3	-20.7	32.1	292	299	Hori.	40.0	7.9	
72.405	49.1	QP	6.8	-20.5	35.4	302	265	Hori.	40.0	4.6	
72.402	38.4	QP	6.8	-20.5	24.7	135	100	Vert.	40.0	15.3	
159.781	33.5	QP	15.4	-19.0	29.9	67	100	Vert.	43.5	13.6	
223.688	35.6	QP	16.8	-18.0	34.4	179	232	Hori.	46.0	11.6	
223.684	35.9	QP	16.8	-18.0	34.7	36	100	Vert.	46.0	11.3	
239.665	34.4	QP	17.0	-17.9	33.5	158	284	Hori.	46.0	12.6	
447.362	38.5	QP	17.4	-17.1	38.8	297	100	Hori.	46.0	7.2	
447.365	33.4	QP	17.4	-17.1	33.7	159	100	Vert.	46.0	12.4	
479.320	35.3	QP	18.0	-17.0	36.3	304	100	Hori.	46.0	9.7	
479.320	33.0	QP	18.0	-17.0	34.0	17	127	Vert.	46.0	12.0	

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

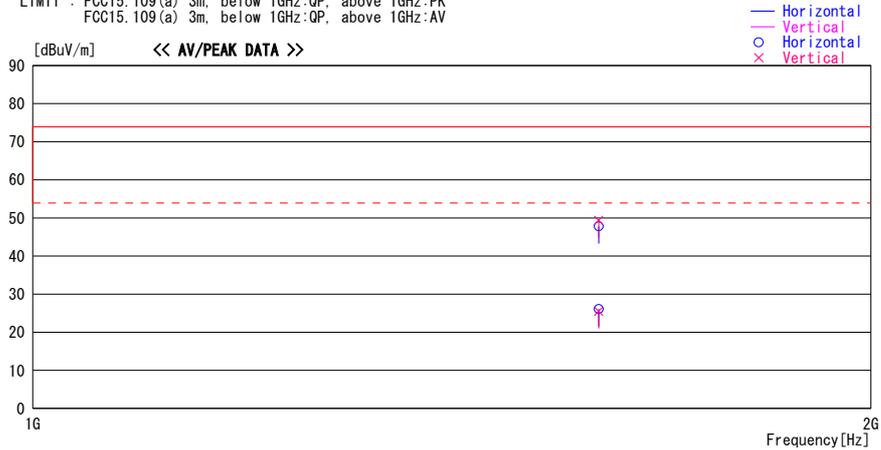
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2009/07/13

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : 936SH
Serial No. : 004401/11/203203/8
Report No. : 29IE0173-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C / 64%
Engineer : Keisuke Kawamura

Mode / Remarks : USB Data Com Mode Worst-axis(Hori:Z , 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]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
1596.650	57.8	PK	26.3	-34.7	49.4	223	100	Vert.	73.9	24.5	
1596.650	33.9	AV	26.3	-34.7	25.5	223	100	Vert.	53.9	28.4	
1596.653	56.2	PK	26.3	-34.7	47.8	251	100	Hori.	73.9	26.1	
1596.653	34.5	AV	26.3	-34.7	26.1	251	100	Hori.	53.9	27.8	

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

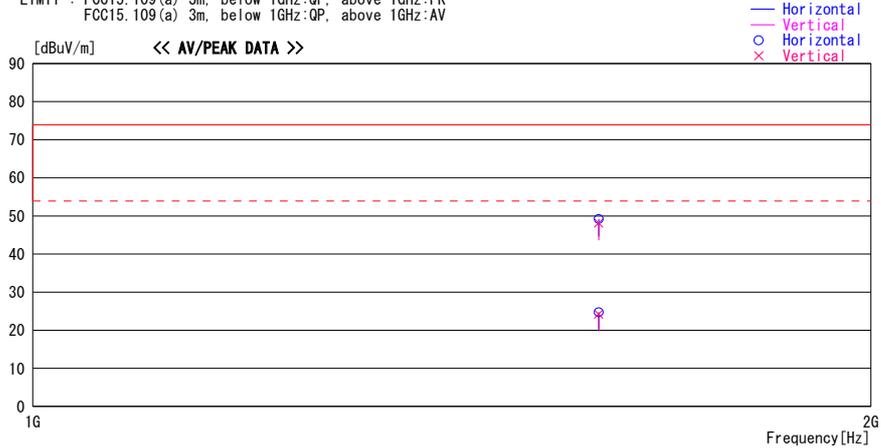
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2009/07/13

Company : Sharp Corporation
Kind of EUT : Cellular Phone
Model No. : 936SH
Serial No. : 004401/11/203203/8
Report No. : 29IE0173-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C / 64%
Engineer : Keisuke Kawamura

Mode / Remarks : Standby Mode Worst-axis(Hori:Z , 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]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
1596.650	56.6	PK	26.3	-34.7	48.2	223	100	Vert.	73.9	25.7	
1596.650	32.7	AV	26.3	-34.7	24.3	223	100	Vert.	53.9	29.6	
1596.653	57.6	PK	26.3	-34.7	49.2	251	100	Hori.	73.9	24.7	
1596.653	33.2	AV	26.3	-34.7	24.8	251	100	Hori.	53.9	29.1	

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.

APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	RE/CE	2009/06/26 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	VHA9103200 7	RE	2008/11/12 * 12
MLA-09	Logperiodic Antenna	Schwarzbeck	USLP9143B	9143B006	RE	2008/11/12 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	BL1069	RE	2008/11/14 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent /TSJ	-	-	RE	2008/10/02 * 12
MPA-04	Pre Amplifier	Agilent	8447D	2944A09965	RE	2009/07/03 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	100084	RE/CE	2008/12/01 * 12
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MOS-01	Digital Humidity Indicator	N.T	NT-1800	MOS01	RE/CE	2009/02/06 * 12
MJM-01	Measure	KDS	ES19-55	-	RE/CE	-
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	253	RE	2009/06/15 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	233010(1m) / 292410(5m)	RE	2008/09/09 * 12
MPA-01	Pre Amplifier	Agilent	8449B	3008A01671	RE	2009/02/12 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	8127383	CE(EUT)	2009/06/22 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	8127384	CE(AE)	2008/07/01 * 12
MTA-06	Terminator	MCL	BTRM-50	1 9951	CE	2009/02/17 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	-	CE	2008/12/16 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2008/11/07 * 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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