



EMI TEST REPORT

Test Report No. : 10005918H-B

Applicant : Sharp Corporation, Communication Systems Group.
Type of Equipment : Cellular Phone
Model No. : 204SH
FCC ID : APYHRO00188
Test standard : FCC Part 15 Subpart B 2012 Class B
Test Result : Complied

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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 4, 2013

Representative test engineer:

Hiroshi Kukita
Engineer of WiSE Japan,
UL Verification Service

Approved by:

Takahiro Hatakeda
Leader of WiSE Japan,
UL Verification Service



NVLAP LAB CODE: 200572-0

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UL Japan, Inc.

Head Office EMC Lab.

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13-EM-F0429

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SECTION 1: Customer information

Company Name : Sharp Corporation, Communication Systems Group.
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. : 204SH
Serial No. : Refer to Section 4, Clause 4.2
Receipt Date of Sample : February 28, 2013
Country of Mass-production : China
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

Feature of EUT : 204SH is Quad-band (FDD I/FDD V/FDD VIII/FDD XI) WCDMA
Cellular Phone.
The EUT has the function that Bluetooth wireless technology interface
and wireless LAN technical interface for establishing contact and
transmitting data with certain device.
Clock frequencies in the system : CPU: 1.4GHz (max)
RTC: 32.763kHz
Source oscillation: 19.2MHz / 24.576MHz (CPU)

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SECTION 3: Test specification, procedures & results

3.1 Test specification

Test Specification : FCC Part 15 Subpart B: 2012, final revised on December 27, 2012 and effective January 28, 2013

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: 2009 7. AC powerline conducted emission measurements	Class B	N/A	[QP] 13.0dB 3.69968MHz, L [AV] 9.9dB 0.17073MHz, L	Complied
Radiated emission	ANSI C63.4: 2009 8. Radiated emission measurements	Class B	N/A	7.8dB 447.356MHz, Horizontal, QP	Complied

*Note: UL Japan, Inc's EMI Work Procedure 13-EM-W0420.

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	3.5dB
No.2	3.6dB
No.3	3.6dB
No.4	3.6dB

Test room (semi-anechoic chamber)	Radiated emission						
	(3m*)(+dB)				(1m*)(+dB)		(0.5m*)(+dB)
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	1GHz -10GHz	10GHz -18GHz	18GHz -26.5GHz	26.5GHz -40GHz
No.1	4.3dB	5.0dB	5.1dB	4.9dB	5.8dB	4.4dB	4.3dB
No.2	4.3dB	5.2dB	5.1dB	5.0dB	5.7dB	4.3dB	4.2dB
No.3	4.6dB	5.0dB	5.1dB	5.0dB	5.7dB	4.5dB	4.2dB
No.4	4.8dB	5.2dB	5.0dB	5.0dB	5.7dB	5.2dB	4.2dB

*3m/1m/0.5m = 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.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Cellular Phone	204SH	004401/11/472714/8	Sharp Corporation	EUT
B	microSD Memory Card	SD-MD008GA	None	TOSHIBA	-
C	Lithium-Ion Battery	SHBEY1	VLA	Sharp Corporation	EUT
D	Personal Computer	PP11L	CN-0D4571-48643-55V-1651	Dell	-
E	Mouse	M-BE55	LZE21450232	Logitec	-
F	AC Adapter (PC)	PA-1650-05D2	CN-0F7970-71615-561-14A1	Dell	-
G	Printer	895Cxi	SG8BL1W16V	Hewlett Packard	-
H	AC Adapter(Printer)	C4557-60004	C8K28B	Hewlett Packard	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	USB Data Cable	0.80	Shielded	Shielded	-
2	Mouse Cable	0.72	Unshielded	Unshielded	-
3	AC Adaptor Cable (PC)	1.76	Unshielded	Unshielded	-
4	AC Power Cable (PC)	0.85	Unshielded	Unshielded	-
5	Parallel Cable	1.65	Shielded	Shielded	-
6	AC Adapter Cable (printer)	2.00	Unshielded	Unshielded	-
7	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 3.

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: March 4, 2013

Test engineer: Hiroshi Kukita

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 Appendix3.

6.3 Test conditions

Frequency range : 30MHz-300MHz (Biconical antenna) / 300MHz-1000MHz (Logperiodic antenna)
1000MHz-10000MHz (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: 3MHz 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 representative X-axis since no difference was found among each position.

6.5 Test result

Summary of the test results: Pass

Date: March 4, 2013

Test engineer: Hiroshi Kukita

UL Japan, Inc.

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APPENDIX 1: Data of EMI test

Conducted Emission

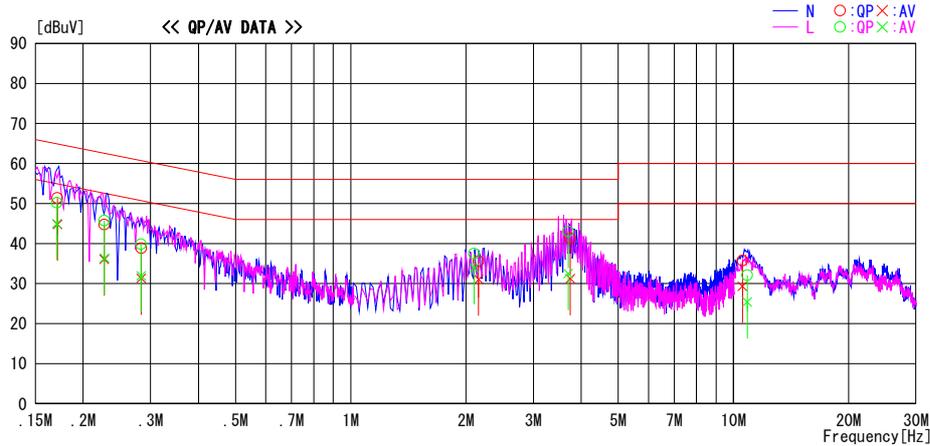
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2013/03/04

Report No. : 10005918H
Temp./Humi. : 20deg. C / 34% RH
Engineer : Hiroshi Kukita

Mode / Remarks : USB Data Com Mode

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



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]		
0.17138	38.2	31.6	13.2	51.4	44.8	64.9	54.9	13.5	10.1	N	
0.22706	31.4	22.8	13.3	44.7	36.1	62.6	52.6	17.9	16.5	N	
0.28375	25.5	18.0	13.3	38.8	31.3	60.7	50.7	21.9	19.4	N	
2.15730	22.0	17.5	13.6	35.6	31.1	56.0	46.0	20.4	14.9	N	
3.74400	27.5	17.4	13.8	41.3	31.2	56.0	46.0	14.7	14.8	N	
10.55480	21.1	14.7	14.6	35.7	29.3	60.0	50.0	24.3	20.7	N	
0.17073	37.0	31.8	13.2	50.2	45.0	64.9	54.9	14.7	9.9	L	
0.22724	32.4	23.0	13.3	45.7	36.3	62.5	52.5	16.8	16.2	L	
0.28336	26.5	18.7	13.3	39.8	32.0	60.7	50.7	20.9	18.7	L	
2.10140	23.9	20.3	13.6	37.5	33.9	56.0	46.0	18.5	12.1	L	
3.69968	29.2	18.7	13.8	43.0	32.5	56.0	46.0	13.0	13.5	L	
10.86120	17.5	10.8	14.6	32.1	25.4	60.0	50.0	27.9	24.6	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C. F[dB] (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

*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.

Conducted Emission

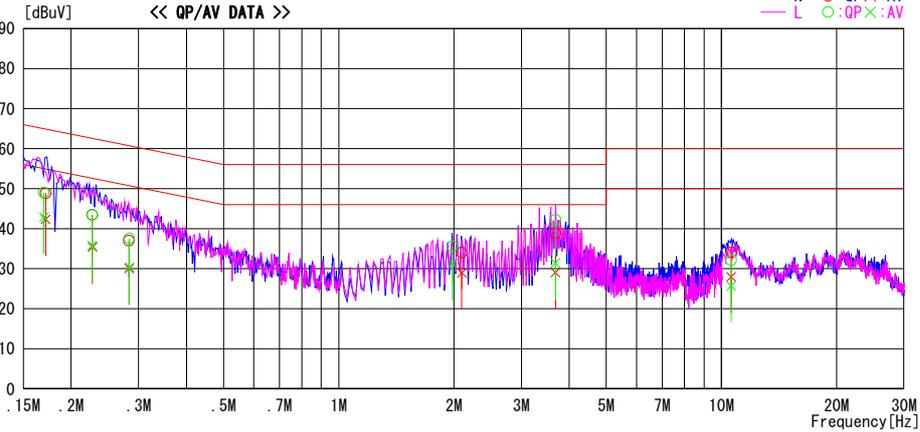
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2013/03/04

Report No. : 10005918H
Temp./Humi. : 20deg. C / 34% RH
Engineer : Hiroshi Kukita

Mode / Remarks : Standby Mode

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



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]		
0.17144	35.6	29.1	13.2	48.8	42.3	64.9	54.9	16.1	12.6	N	
0.22721	30.2	22.1	13.3	43.5	35.4	62.6	52.6	19.1	17.2	N	
0.28330	23.7	16.8	13.3	37.0	30.1	60.7	50.7	23.7	20.6	N	
2.09600	20.4	15.4	13.6	34.0	29.0	56.0	46.0	22.0	17.0	N	
3.68280	25.0	15.3	13.8	38.8	29.1	56.0	46.0	17.2	16.9	N	
10.60260	19.5	13.4	14.6	34.1	28.0	60.0	50.0	25.9	22.0	N	
0.16977	35.8	29.7	13.2	49.0	42.9	65.0	55.0	16.0	12.1	L	
0.22689	30.1	22.5	13.3	43.4	35.8	62.6	52.6	19.2	16.8	L	
0.28378	24.3	17.1	13.3	37.6	30.4	60.7	50.7	23.1	20.3	L	
1.98400	22.1	17.7	13.5	35.6	31.2	56.0	46.0	20.4	14.8	L	
3.68560	28.4	17.6	13.8	42.2	31.4	56.0	46.0	13.8	14.6	L	
10.60300	17.5	11.1	14.6	32.1	25.7	60.0	50.0	27.9	24.3	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 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
(Below 1GHz)

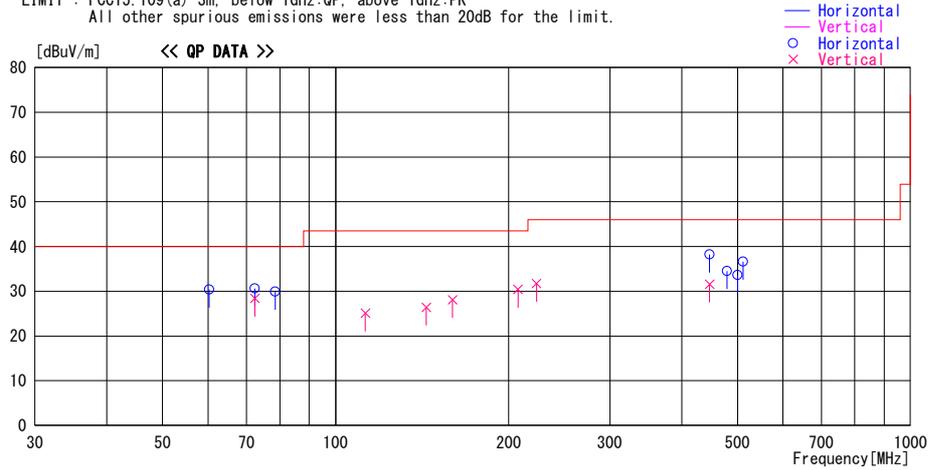
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2013/03/04

Report No. : 10005918H
Temp./Humi. : 20deg. C / 34% RH
Engineer : Hiroshi Kukita

Mode / Remarks : USB Data Com Mode, Worst axis Hori:X axis Ver:Y axis

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	Loss&	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
60.328	53.1	QP	8.2	-30.9	30.4	284	300	Hori.	40.0	9.6	
72.386	54.6	QP	6.7	-30.7	30.6	147	275	Hori.	40.0	9.4	
72.387	52.4	QP	6.7	-30.7	28.4	274	100	Vert.	40.0	11.6	
78.491	53.7	QP	6.8	-30.6	29.9	286	239	Hori.	40.0	10.1	
112.719	42.9	QP	12.4	-30.2	25.1	306	100	Vert.	43.5	18.4	
143.793	41.6	QP	14.8	-30.0	26.4	277	100	Vert.	43.5	17.1	
159.770	42.5	QP	15.5	-29.9	28.1	155	100	Vert.	43.5	15.4	
207.701	42.8	QP	17.0	-29.4	30.4	6	100	Vert.	43.5	13.1	
223.678	43.6	QP	17.2	-29.1	31.7	333	100	Vert.	46.0	14.3	
447.356	47.3	QP	17.9	-27.0	38.2	285	100	Hori.	46.0	7.8	
447.356	40.7	QP	17.9	-27.0	31.6	267	100	Vert.	46.0	14.4	
479.310	43.2	QP	18.0	-26.7	34.5	93	100	Hori.	46.0	11.5	
500.369	42.0	QP	18.1	-26.5	33.6	359	237	Hori.	46.0	12.4	
511.265	44.7	QP	18.3	-26.4	36.6	227	100	Hori.	46.0	9.4	

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
(Below 1GHz)

DATA OF RADIATED EMISSION TEST

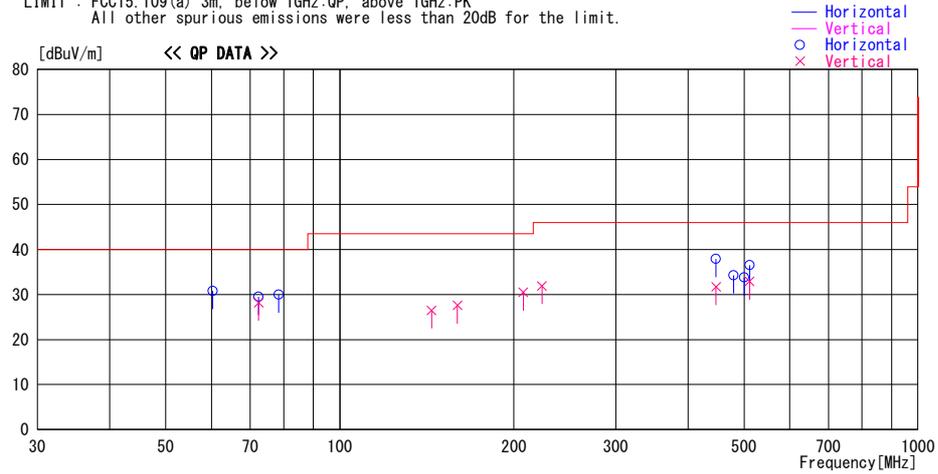
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2013/03/04

Report No. : 10005918H

Temp./Humi. : 20deg. C / 34% RH
Engineer : Hiroshi Kukita

Mode / Remarks : Standby Mode, Worst axis Hori:X axis Ver:X axis

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	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
			[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
60.323	53.5	QP	8.2	-30.9	30.8	279	328	Hori.	40.0	9.2	
72.391	53.5	QP	6.7	-30.7	29.5	299	400	Hori.	40.0	10.5	
72.391	52.2	QP	6.7	-30.7	28.2	236	100	Vert.	40.0	11.8	
78.422	53.8	QP	6.8	-30.6	30.0	130	236	Hori.	40.0	10.0	
144.168	41.7	QP	14.8	-30.0	26.5	282	100	Vert.	43.5	17.0	
159.767	42.0	QP	15.5	-29.9	27.6	201	100	Vert.	43.5	15.9	
207.702	42.9	QP	17.0	-29.4	30.5	5	100	Vert.	43.5	13.0	
223.680	43.8	QP	17.2	-29.1	31.9	339	100	Vert.	46.0	14.1	
447.359	40.8	QP	17.9	-27.0	31.7	179	100	Vert.	46.0	14.3	
447.359	47.0	QP	17.9	-27.0	37.9	287	100	Hori.	46.0	8.1	
479.310	43.0	QP	18.0	-26.7	34.3	93	100	Hori.	46.0	11.7	
500.390	42.2	QP	18.1	-26.5	33.8	0	238	Hori.	46.0	12.2	
511.267	44.6	QP	18.3	-26.4	36.5	232	100	Hori.	46.0	9.5	
511.266	41.0	QP	18.3	-26.4	32.9	176	100	Vert.	46.0	13.1	

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
(Above 1GHz)

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2013/03/04

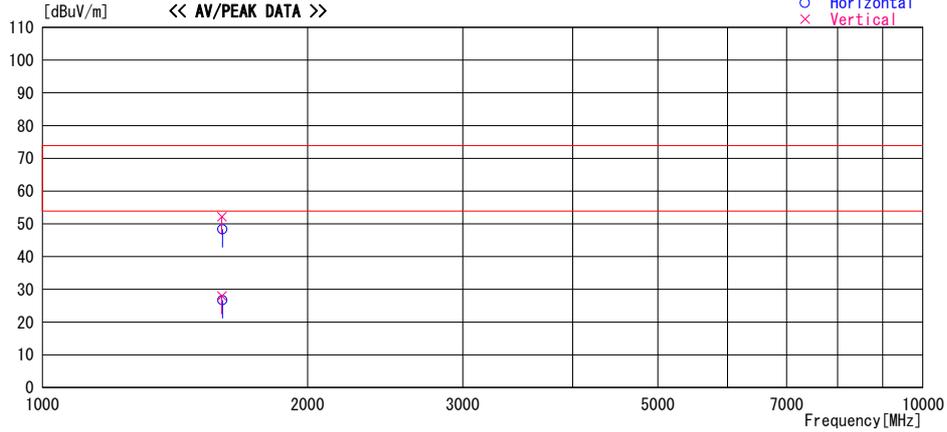
Report No. : 10005918H

Temp./Humi. : 20deg. C / 34% RH
Engineer : Hiroshi Kukita

Mode / Remarks : USB Data Com Mode, Worst axis Hori:X axis Ver:X axis

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

— Horizontal
— Vertical
○ Horizontal
× Vertical



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]	
1598.344	61.2	PK	25.8	-34.8	52.2	102	100	Vert.	73.9	21.7	
1598.344	37.0	AV	25.8	-34.8	28.0	102	100	Vert.	53.9	25.9	
1601.611	57.3	PK	25.8	-34.8	48.3	322	100	Hori.	73.9	25.6	
1601.611	35.7	AV	25.8	-34.8	26.7	322	100	Hori.	53.9	27.2	

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)

*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
(Above 1GHz)

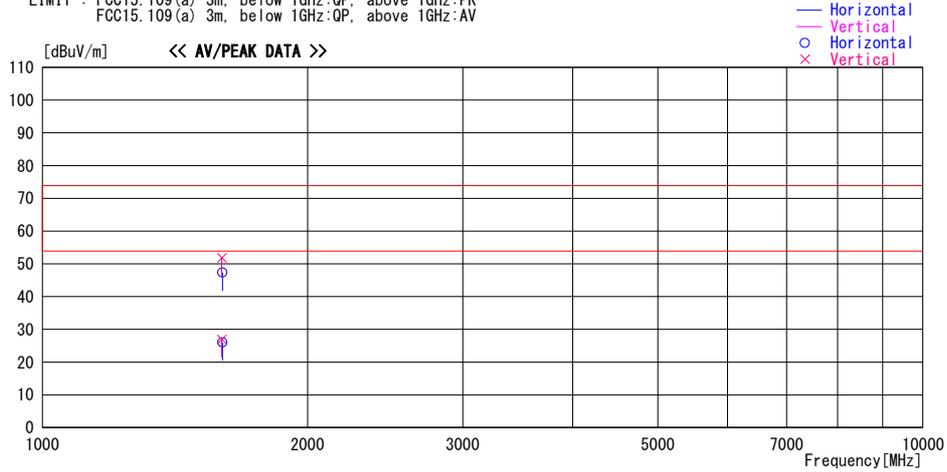
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2013/03/04

Report No. : 10005918H
Temp./Humi. : 20deg. C / 34% RH
Engineer : Hiroshi Kukita

Mode / Remarks : Standby Mode, Worst axis Hori:X axis Ver:X axis

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	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
			[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
1598.320	60.9	PK	25.8	-34.8	51.9	121	100	Vert.	73.9	22.0	
1598.320	36.0	AV	25.8	-34.8	27.0	121	100	Vert.	53.9	26.9	
1601.604	56.4	PK	25.8	-34.8	47.4	301	100	Hori.	73.9	26.5	
1601.604	35.0	AV	25.8	-34.8	26.0	301	100	Hori.	53.9	27.9	

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 2: Test instruments

EMI Test Instruments

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	RE/CE	2012/08/01 * 12
MOS-27	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q26	RE/CE	2013/02/26 * 12
MJM-01	Measure	KDS	ES19-55	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MTR-09	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	RE/CE	2012/06/14 * 12
KBA-05	Biconical Antenna	Schwarzbeck	BBA9106	2513	RE	2012/11/18 * 12
KLA-04	Logperiodic Antenna	Schwarzbeck	USLP9143	361	RE	2012/11/18 * 12
MAT-08	Attenuator(6dB)	Weinschel Corp	2	BK7971	RE	2012/11/06 * 12
MCC-02	Coaxial Cable	Suhner/storm/Agilent/TSJ	-	-	RE	2012/09/13 * 12
MPA-19	Pre Amplifier	MITEQ	MLA-10K01-B01-35	1237616	RE	2013/02/07 * 12
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	253	RE	2012/06/27 * 12
MCC-142	Microwave Cable	Junkosha	MWX221	1203S213(1m)/ 1204S063(5m)	RE	2012/04/23 * 12
MPA-01	Pre Amplifier	Agilent	8449B	3008A01671	RE	2013/02/22 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EUT)	2013/01/07 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	8127384	CE(AE)	2012/03/01 * 12
MTA-28	Terminator	TME	CT-01	-	CE	2012/11/20 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/TSJ	5D-2W(20m) /3D-2W(7.5m)/ RG400u(1.5m)/ RFM-E421(Switcher)	-/01068 (Switcher)	CE	2013/01/23 * 12
MAT-64	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2013/01/09 * 12

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data 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 Emissions

RE: Radiated Emissions

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