

Page 1 of 22 JQA File No. : KL80080453R Issue Date : November 13, 2008

TEST REPORT (SAR EVALUATION)

APPLICANT	:	FUJITSU LIMITED
ADDRESS	:	1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588, Japan
PRODUCTS	:	Cellular Phone
MODEL NO.	:	F-04A
SERIAL NO.	:	353709020001896
FCC ID	:	VQK-F-04A
TEST STANDARD	:	FCC/OET Bulletin 65 Supplement C (Edition 01-01)
TESTING LOCATION	:	Japan Quality Assurance Organization KITA-KANSAI Testing Center 1-7-7, Ishimaru, Minoh-shi, Osaka 562-0027, Japan
TEST RESULTS	:	Passed
DATE OF TEST	:	November 10 ~ 11, 2008

This report must not used by the client to claim product endorsement by NVLAP or NIST or any agency of the U.S. Government.



9. Fukumoto

Yuichi Fukumoto Manager Japan Quality Assurance Organization KITA-KANSAI Testing Center Testing Dept. EMC Division 1-7-7, Ishimaru, Minoh-shi, Osaka 562-0027, Japan

- The measurement values stated in Test Report was made with traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan, National Institute of Information and Communications Technology (NICT) of Japan, and Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zürich, Switzerland.
- The applicable standard, testing condition and testing method which were used for the tests are based on the request of the applicant.
- The test results presented in this report relate only to the offered test sample.
- The contents of this test report cannot be used for the purposes, such as advertisement for consumers.
- This test report shall not be reproduced except in full without the written approval of JQA.



Page 2 of 22

TABLE OF CONTENTS

Page

Docun	nentation	
1	Test Regulation	
2	Test Location	3
3	Recognition of Test Laboratory	3
4	Description of the Equipment Under Test	4
5	Measurement System Diagram	5
6	System Components	6
7	Measurement Process	8
8	Measurement Uncertainties	9
9	Equipment Under Test Modification	
10	Responsible Party	
11	Deviation from Standard	
12	Test Results	
13	Summary	
14	Test Arrangement	
15	Procedures used to Establish Test Signal	
Appen	ndix A: Test Data	
Appen	ndix B: Test Instruments	21
Appen	ndix C: Attachments	

DEFINITIONS FOR ABBREVIATION AND SYMBOLS USED IN THIS TEST REPORT

Equipment Under Test	EMC	: Electromagnetic Compatibility
Associated Equipment	EMI	: Electromagnetic Interference
Not Applicable	EMS	: Electromagnetic Susceptibility
Not Tested	SAR	: Specific Absorption Rate
	Equipment Under Test Associated Equipment Not Applicable Not Tested	Equipment Under TestEMCAssociated EquipmentEMINot ApplicableEMSNot TestedSAR

 \boxtimes - indicates that the listed condition, standard or equipment is applicable for this report.

- indicates that the listed condition, standard or equipment is not applicable for this report.



Page 3 of 22

Documentation

1 Test Regulation

Applied Standard	:	FCC/OET Bulletin 65 Supplement C (Edition 01-01)
		Evaluating Compliance with FCC Guidelines for Human Exposure to Radio-
		frequency Electromagnetic Fields
		Additional Information for Evaluating Compliance of Mobile and Portable
		Devices with FCC Limits for Human Exposure to Radiofrequency Emissions
Test Procedure	:	FCC/OET Bulletin 65 Supplement C (Edition 01-01)
		IEEE Std.1528–2003
		KDB Publication 941225 Rev. 2.0 (October 2007)
Exposure Limits	:	ANSI/IEEE Std. C95.1, 1999 Edition

2 Test Location

KITA-KANSAI Testing Center 7-7, Ishimaru, 1-chome, Minoh-shi, Osaka, 562-0027, Japan KAMEOKA EMC Branch 9-1, Ozaki, Inukanno, Nishibetsuin-cho, Kameoka-shi, Kyoto, 621-0126, Japan

3 Recognition of Test Laboratory

JQA KITA-KANSAI Testing Center Testing Department EMC Division is accredited under ISO/IEC 17025 by following accreditation bodies and the test facility of Testing Division is registered by the following bodies.

VLAC Code	:	VLAC-001-2 (Effective through : April 3, 2010)
NVLAP Lab Code	:	200191-0 (Effective through : June 30, 2009)
BSMI Recognition No.	:	SL2-IS-E-6006, SL2-IN-E-6006, SL2-AI-E-6006
		(Effective through : September 14, 2010)
VCCI Registration No.	:	R-008, R-1117, C-006, C-007, C-1674, C-2143, T-1418, T-1419
		(Effective through : April 3, 2010)
IC Registration No.	:	IC 4125-1, IC 6217-1, IC 6217-2 (Effective through : November 16, 2008)

Accredited as conformity assessment body for Japan electrical appliances and material law by METI. (Effective through : February 22, 2010)



Page 4 of 22

4 Description of the Equipment Under Test

1.	Manufacturer	:	FUJITSU LIMITED 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588, Japan
2.	Products	:	Cellular Phone
3.	Model No.	:	F-04A
4.	Serial No.	:	353709020001896
5.	Product Type	:	Prototype
6.	Date of Manufacture	:	October, 2008
7.	Transmitting Frequency	:	826.40 MHz - 846.60 MHz
8.	Battery Option	:	Lithium-ion Battery Pack CA54310-0005 (770mAh)
9.	Power Rating	:	3.7VDC
10.	EUT Grounding	:	None
11.	Device Category	:	Portable Device (§2.1093)
12.	Exposure Category	:	General Population/Uncontrolled Exposure
13.	FCC Rule Part(s)	:	22(H)
14.	EUT Authorization	:	Certification
15.	Received Date of EUT	:	November 7, 2008



Page 5 of 22

5 Measurement System Diagram

These measurements are performed using the DASY4 automated dosimetric assessment system (manufactured by Schmid & Partner Engineering AG (SPEAG) in Zürich, Switzerland). It consists of high precision robotics system, cell controller system, DASY4 measurement server, personal computer with DASY4 software, data acquisition electronic (DAE) circuit, the Electro-optical converter (EOC), near-field probe, and the twin SAM phantom containing the equivalent tissue. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF).

The Robot is connected to the cell controller to allow software manipulation of the robot. The DAE is connected to the EOC. The DAE performs the signal amplification, signal multiplexing, A/D conversion, offset measurements, mechanical surface detection, collision detection, etc. The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the DASY4 measurement server.





Page 6 of 22

6 System Components

6.1 Probe Specification

Construction	: Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static changes
Calibration	 In air form 10 MHz to 2.5 GHz In head tissue simulating liquid (HSL) and muscle tissue simulating liquid 900 MHz (accuracy ± 11.0%; k=2) 1810 MHz (accuracy ± 11.0%; k=2) 1950 MHz (accuracy ± 11.0%; k=2) 2450 MHz (accuracy ± 11.8%; k=2)
Frequency	: 10 MHz to 3 GHz (dosimetry); Linearity: ±0.2 dB (30 MHz to 3 GHz)
Directivity	 ± 0.2 dB in HSL (rotation around probe axis) ± 0.4 dB in HSL (rotation normal probe axis)
Dynamic Range	: 5 μ W/g to >100 mW/g; Linearity: ± 0.2 dB
Surface Detection	: ± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces
Dimensions	 Overall length 330 mm Tip length 16 mm Body diameter 12 mm Tip diameter 6.8 mm Distance from probe tip to dipole centers 2.7 mm



Page 7 of 22

6.2 Twin SAM Phantom

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-2003, CENELEC 50361 and IEC 62209-1. It enables the dosimetric evaluation of left and right head phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.



6.3 Mounting Device for Transmitters

The Mounting Device enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).



6.4 Typical Composition of Ingredients for Liquid Tissue

Ingredients (% by weight)	Frequency (MHz)								
	8	35	19	00	2450				
	Head	Body	Head	Body	Head	Body			
Water	41.45	52.40	54.90	40.40	62.70	73.20			
Salt (NaCl)	1.45	1.40	0.18	0.50	0.50	0.04			
Sugar	56.00	45.00	0.00	58.00	0.00	0.00			
HEC	1.00	1.00	0.00	1.00	0.00	0.00			
Bactericide	0.10	0.10	0.00	0.10	0.00	0.00			
Triton X-100	0.00	0.00	0.00	0.00	36.80	0.00			
DGBE	0.00	0.00	44.92	0.00	0.00	26.70			

Salt: 99+% Pure Sodium ChlorideSugar: 98+% Pure SucroseWater: De-ionized, 16 MΩ+ resistivityHEC: Hydroxyethyl CelluloseDGBE: 99+% Di (ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbuthyl)phenyl]ether

The composition of ingredients is according to FCC/OET Bulletin 65 Supplement C.



Page 8 of 22

7 Measurement Process

Area Scan for Maximum Search :

The SAR distribution at the exposed side of the head was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15 mm \times 15 mm. The evaluation on the measured area scan gives the interpolated maximum (hot spot) of the measured area.

Cube Scan for Spatial Peak SAR Evaluation :

The 1g and 10g peak evaluations were available for the predefined cube $5\times5\times7$ scans. The grid spacing was 8 mm \times 8 mm \times 5 mm. The first procedure is an extrapolation to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume in a 1mm grid (35000 points). In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is moved around until the highest averaged SAR is found. This last procedure is repeated for a 10g cube. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

Extrapolation:

The extrapolation is based on a least square algorithm. Through the points in the first 3 cm in all z-axis, polynomials of order four are calculated. This polynomial is then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from one another.

Interpolation :

The maximum interpolated value is searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) are computed by the 3D spline algorithm. The 3D spline is composed of three one-dimensional splines with the "Not a knot" –condition (x, y and z –directions). The volume is integrated with the trapezoidal algorithm.



Page 9 of 22

8 Measurement Uncertainties

Uncertainty Component	Tol.	Prob. Dist.	Div.	c_i	c_i	Std. Unc. (± %)		v _i
	(± 70)			(1g)	(10g)	1g	10g	
Measurement System								
Probe calibration	5.9	N	1	1	1	5.9	5.9	8
Axial isotropy	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
Hemispherical isotropy	9.6	R	$\sqrt{3}$	0.7	0.7	3.9	3.9	×
Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	8
System detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	8
Readout electronics	0.4	N	1	1	1	0.4	0.4	8
Response time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
Integration time	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	8
RF ambient conditions – noise	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
RF ambient conditions - reflections	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe positioner mechanical tolerance	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
Probe positioning with respect to phantom shell	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Extrapolation, interpolation and integration	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
algorithms for max. SAR evaluation								
Test Sample Related								
Test sample positioning	3.4	N	1	1	1	3.4	3.4	23
Device holder uncertainty	2.9	N	1	1	1	2.9	2.9	5
Output power variation – SAR drift measurement	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and Tissue Parameters								
Phantom uncertainty	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Liquid conductivity – deviation from target	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
Liquid Conductivity – measurement uncertainty	3.2	Ν	1	0.64	0.43	2.0	1.4	5
Liquid Permittivity – deviation from target	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
Liquid Permittivity – measurement uncertainty	3.0	Ν	1	0.6	0.49	1.8	1.5	5
Combined Standard Uncertainty		RSS				11.0	10.7	
Expanded Uncertainty (95% Confidence Interval)		k=2				22.0	21.4	
NOTES 1. Tol. : tolerance in influence quantity 2. Prob. Dist. : probability distributions								

3. N, R : normal, rectanglar

4. Div. : divisor used to obtain standard uncertainty

5. c_i : sensitivity coefficient

6. Std. Unc. : standard uncertainty

7. Measurement uncertainties are according to IEEE Std. 1528 and IEC 62209-1.



Page 10 of 22

9 Equipment Under Test Modification

- \boxtimes No modifications were conducted by JQA to achieve compliance to the limitations.
- □ To achieve compliance to the limitations, the following changes were made by JQA during the compliance test.

The modifications will be implemented in all production models of this equipment.

Applicant	: Not Applicable
Date	: Not Applicable
Typed Name	: Not Applicable
Position	: Not Applicable

Signatory: <u>Not Applicable</u>

10 Responsible Party

Responsible Party of Test Item (Product)

Responsible Party :

Contact Person :

Signatory

11 Deviation from Standard

- \boxtimes No deviations from the standard described in clause 1.
- □ The following deviations were employed from the standard described in clause 1.



Page 11 of 22

12 Test Results

12.1 SAR Measurement for Head Configuration

Maximum SAR (1g)	<u>0.595</u> mW/g at	<u>826.40</u> MHz
Phantom Position	🗌 - Left Head	🛛 - Right Head
Device Position	🛛 - Cheek/Touch	🗌 - Ear/Tilt
Antenna Position	🗌 - In 🗌 - Out	\boxtimes - Fixed
Modulation Type		WCDMA
Remarks :		

12.2 SAR Measurement for Body-worn Configuration

Maximum SAR (1g)	<u>0.588</u> m	W/g at	836.40	MHz
Body-worn Carry Accessories	🗌 - Supplied	d	🛛 - Not su	pplied
Separation Distance between Device and Phantom			<u> </u>	1
Modulation Type			WCDM	A
Remarks :				



Page 12 of 22

13 Summary

General Remarks :

The EUT was tested according to the requirements of the following standard.

FCC/OET Bulletin 65 Supplement C (Edition 01-01)

The test configuration is shown in clause 14 to 15.

The conclusion for the test items of which are required by the applied regulation is indicated under the test results.

Determining compliance with the limits in this report was based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Test Results:

The "as received" sample;

- \boxtimes fulfill the test requirements of the regulation mentioned on clause 1.
- □ doesn't fulfill the test requirements of the regulation mentioned on clause 1.

Reviewed by:

Shigeru Kinoshita Deputy Manager Testing Dept. EMC Div. JQA KITA-KANSAI Testing Center

Tested by:

Yasuhisa Sakai Assistant Manager Testing Dept. EMC Div. JQA KITA-KANSAI Testing Center



Page 13 of 22

14 Test Arrangement

14.1 Cheek-Touch Position

- 1. Position the device with the vertical center line of the body of the device and the horizontal line crossing the center of the ear piece in a plane parallel to the sagittal plane of the phantom.
- 2. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference points (M, RE and LE) and align the center of the ear piece with the line RE-LE.
- 3. Translate the mobile phone box towards the phantom with the ear piece aligned with the line RE-LE until the phone touches the ear.
- 4. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of



the box until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



14.2 Ear-Tilt Position

- 1. Position the device in the "Cheek/Touch Position".
- 2. While maintaining the device in the reference plane and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.





Page 14 of 22

14.3 Body-worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. Both the physical spacing to the body of the user as dictated by the accessory and the materials used in an accessory affect the SAR produced by the transmitting device. For purpose of determining test requirements, accessories may be divided into two categories: those that do not contain metallic components and those that do.



When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.



Lap-held device (e.g. laptop computer)

SAR is tested for a lap-held position with the bottom of the computer in direct contact against a flat phantom.



Page 15 of 22

15 Procedures used to Establish Test Signal

The following procedures had been used to prepare the EUT for the SAR test.

To setup the desire channel frequency and the maximum output power, a Radio Communication Tester "Anritsu, MT8815B" was used to program the EUT.

System Configuration	:	W-CDMA (MX882000C 10.23 #002)
Test Loop Mode	:	Mode 1
TPC Bit Pattern	:	All 1

Conducted power measurements:

	Conducted Power (dBm)					
Configuration	$4132 ext{ ch}$	4182 ch	$4233 ext{ ch}$			
	(826.40 MHz)	(836.40 MHz)	(846.60 MHz)			
12.2 kbps RMC	23.86	23.84	23.69			
64 kbps RMC	23.86	23.83	23.69			
$144 ext{ kbps RMC}$	23.87	23.82	23.67			
384 kbps RMC	23.86	23.84	23.67			
12.2 kbps Voice AMR	23.87	23.85	23.69			

SAR in voice and data modes is measured using a 12.2 kbps RMC. SAR in voice AMR configurations and for other spreading codes are not required when the maximum average output of each channel is less than ¹/₄ dB higher than that measured in 12.2 kbps RMC.

Maximum conducted power was measured by replacing the antenna with an adapter for conductive measurements, before and after the SAR measurements was done.

Please refer to internal photo for the place of antennas.



Page 16 of 22

Appendix A: Test Data

A.1 Tissue Verification

The tissue dielectric parameters of the tissue medium at the middle of a device transmission band should be within $\pm 5\%$ of the parameters specified at that target frequency. It is verified by using the dielectric probe and the network analyzer.



Tissue Verification Results :

Ambient Conditions : 22°C 41%Date : November 11, 2008							
Liquid		Description	Townst	M	Deviation	Limit	
Frequency	Temp. [°C]	Parameters	Target	Measured	[%]	[%]	
Heed 000 MH-			41.5	40.78	-1.73	± 5	
Head 900 MHz	22.0	Conductivity	0.97	0.940	-3.09	± 5	
Head 835 MHz	22.0	Permittivity	41.5	41.53	+0.07	± 5	
		Conductivity	0.90	0.879	-2.33	± 5	
Ambient Conditions :	22°C 39%			Date	e : November	10, 2008	
		Permittivity	55.0	54.05	-1.73	± 5	
Body 900 MHZ	22.0	Conductivity	1.05	1.025	-2.38	± 5	
	22.0	Permittivity	55.2	54.75	-0.82	± 5	
BOOY 835 MHZ	22.0	Conductivity	0.97	0.963	-0.72	± 5	



Page 17 of 22

A.2 System Validation

The power meter PM1 (including Attenuator) measures the forward power at the location of the validation dipole connector. The signal generator is adjusted for 250 mW at the dipole connector and the power meter PM2 is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2.

The dipole antenna is matched to be used near flat phantom filled with tissue simulating solution. A specific distance holder is used in the positioning of the antenna to ensure correct spacing between the phantom and the dipole.



System Validation Results :

System Validation Dipole : D900V2, S/N: 153							
Ambient Conditions : 22°C 41%Depth of Liquid : 15.0 cmDate : November 11, 2						11, 2008	
Liquid		Measu	Measured SAR (mW/g)		Deviation	Limit	
Medium	Temp. [°C]	1g SAR	Normalized to 1 W	Target	[%]	[%]	
Head 900 MHz	22.0	2.51	10.04	10.9	-7.89	± 10	
Ambient Conditions : 22°C 39%Depth of Liquid : 15.0 cmDate : November 10, 200					10, 2008		
Body 900 MHz	22.0	2.78	11.12	11.1	+0.18	± 10	
NOTES :		•			•		

1. The results were normalized to 1 W forward power.

2. The target SAR values of SPEAG validation dipoles are given in the calibration data.



Page 18 of 22

A.3 SAR Measurement Data

A.3.1 Left Head

Check/Touch Position							
						11 2008	
Test Position	Freq Channel	uency MHz	Tx Power [dBm]	Power Drift [dB]	Limit [mW/g]	SAR (1g) [mW/g]	Tissue Temp. [°C]
	4132	826.40				**	
Cheek/Touch	4182	836.40	23.84	0.015	1.6	0.442	22.0
	4233	846.60				**	
	4132	826.40				**	
Ear/Tilt	4182	836.40	23.84	-0.050	1.6	0.104	22.0
	4233	846.60				**	
NOTES :							

1. Depth of Liquid : 15.0 cm

2. Transmitter power was measured at the antenna-conducted terminal.

3. SAR is measured using a 12.2 kbps RMC.

4. The SAR result marked at ** is optional, because the SAR measured at the middle channel for that configuration is at least 3.0 dB lower than the SAR limit.



Page 19 of 22

A.3.2 Right Head

CONFIDENTIAL							
Che	eek/Touch Pos	ition		E	ar/Tilt Pos	sition	
WCDMA Band-V	(Duty Cycle: 1	100 %, Crest F	'actor: 1)	Date : November 11, 2008			11, 2008
Test Position	Frequ Channel	lency MHz	Tx Power [dBm]	Power Drift [dB]	Limit [mW/g]	SAR (1g) [mW/g]	Tissue Temp. [°C]
	4132	826.40	23.86	0.007		0.595	22.0
Cheek/Touch	4182	836.40	23.84	-0.087	1.6	0.518	22.0
	4233	846.60	23.69	-0.033		0.468	22.0
	4132	826.40				**	
Ear/Tilt	4182	836.40	23.84	-0.052	1.6	0.105	22.0
	4233	846.60				**	
NOTES : 1. Depth of Liquid	d : 15.0 cm						

2. Transmitter power was measured at the antenna-conducted terminal.

3. SAR is measured using a 12.2 kbps RMC.

4. The SAR result marked at ** is optional, because the SAR measured at the middle channel for that configuration is at least 3.0 dB lower than the SAR limit.



Page 20 of 22 $\,$

A.3.3 Body-worn Position

CONFIDENTIAL							
WCDMA Band-V	(Duty Cycle:	100 %, Crest F	actor: 1)		Date :	November	10, 2008
Separation Distance	Freq Channel	uency MHz	Tx Power [dBm]	Power Drift [dB]	Limit [mW/g]	SAR (1g) [mW/g]	Tissue Temp. [°C]
	4132	826.40	23.86	-0.038		0.498	22.0
$1.5~{ m cm}$	4182	836.40	23.84	-0.022	1.6	0.588	22.0
	4233	846.60	23.69	-0.048		0.493	22.0

NOTES :

1. Depth of Liquid : 15.0 cm

2. Transmitter power was measured at the antenna-conducted terminal.

3. SAR is measured using a 12.2 kbps RMC.

4. The earphone wire connected to the EUT to simulate hand-free operation in a body-worn configuration.



Page 21 of 22

Appendix B: Test Instruments

Туре	Model	Manufacturer	ID No.	Last Cal.	Interval
E-Field Probe	ET3DV6	SPEAG	S-2	2007/11	1 Year
DAE	DAE3 V1 (SN 328)	SPEAG		2008/3	1 Year
Robot	RX60L	SPEAG	S-7	N/A	N/A
Probe Alignment Unit	LB1RX60L	SPEAG	S-13	N/A	N/A
Network Analyzer	8720ES (SN US39172611)	Agilent		2008/9	1 Year
Dielectric Probe Kit	85070D	Agilent	B-54	N/A	N/A
900MHz Dipole	D900V2	SPEAG	S-4	2007/11	1 Year
Signal Generator	E8257D	Agilent	B-39	2008/7	1 Year
RF Amplifier	A0840-3833-R	R&K	A-34	N/A	N/A
Low Pass Filter	LSM1000-4BA	LARK	D-90	2007/11	1 Year
Radio Communication Analyzer	MT8815B	Anritsu	B-69	2008/9	1 Year
Power Meter	E4417A	Agilent	B-51	2008/6	1 Year
Power Sensor	E9300B	Agilent	B-32	2008/6	1 Year
Power Sensor	E9323A	Agilent	B-59	2008/6	1 Year
Attenuator	4T-10	Weinschel	D-73	2008/6	1 Year
Attenuator	4T-10	Weinschel	D-74	2008/6	1 Year



Page 22 of 22

Appendix C: Attachments

Exhibit	Contents	No. of page(s)
1	System Validation Plots	2
2	SAR Test Plots	11
3	Dosimetric E-Field Probe – ET3DV6, S/N: 1679	9
4	System Validation Dipole – D900V2, S/N: 153	9