SAR Test Report on

Dual-Band Tri-mode AMPS/CDMA Cellular Phone with Bluetooth

FCC Part 22 & 24 Certification

FCC ID:	**OVFKWC-K24B**
MODEL:	**K323, K323P**
DATE:	**July 31, 2006**

STATEMENT OF COMPLIANCE

Kyocera Wireless Corp declares under its sole responsibility that the product, FCC ID: OVFKWC-K24B to which this declaration relates, is in conformity with the appropriate General Population/Uncontrolled RF exposure standards, recommendations and guidelines. It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices.

Any deviations from these standards, guidelines and recommended practices are noted: NONE.

Date of Test:	July 17 – July 20, 2006
Test performed by:	Kyocera Wireless Corp 10300 Campus Point Drive San Diego, CA 92121
Report Prepared by:	Christy Le, Regulatory Engineer
Report Reviewed by:	C.K., Li Engineer, Sr. Staff/ Manager

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1 INTRODUCTION

This test report describes an environmental evaluation measurement of specific absorption rate (SAR) distribution in simulated human head tissues exposed to radio frequency (RF) radiation from a wireless portable device manufactured by Kyocera Wireless Corp. (KWC). These measurements were performed for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC). The testing was performed in accordance with FCC OET Bulletin 65 Supplement C (01/01) and IEEE P1528/D1.2 issued on April 21, 2003.

2 EQUIPMENT UNDER TEST (EUT)

The wireless device is described as follows:

FCC ID:	OVFKWC-K24B		
Product:	Tri-mode Dual-Band Analog/Digital Phone		
Trade Name:	Kyocera Wireless Corp.		
Model Number:	K323P		
EUT S/N:	F0000007572161		
Type:	[ ] Identical Prototype, [X] Pre-production		
Device Category:	Portable		
RF Exposure Environment:	General Population / Uncontrolled		
Antenna Type:	Internal Monopole	**Antenna Location:**	Top of the Lower Flip
Detachable Antenna:	No	**Antenna Dimensions:**	37.5 (L), 18.7(W), 7.5 (H)
External Input:	Audio/Digital Data		
Quantity:	Quantity production is planned		
FCC Rule Parts:	§22H	§22H	§24H
Modes:	800 AMPS	800 CDMA	1900 CDMA
Multiple Access Scheme:	FDMA	CDMA	CDMA
Duty Cycle:	1:1	1:1	1:1
TX Frequency (MHz):	824 – 849	824 – 849	1850 - 1910
Emission Designators:	40K0F1D, 40K0F8W	1M25F9W	1M25F9W
Max. Output Power (W):	0.261 ERP	0.261 ERP	0.175 EIRP

3 PRODUCT DESCRIPTION

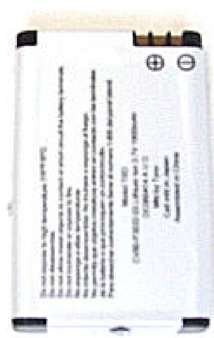
The phones OVFKWC-K24B are Tri-mode Dual-Band 1XRTT products with Bluetooth feature. The Bluetooth transmitter uses Frequency Hopping Spread Spectrum (FHSS) technique and is designed to operate in the 2400 – 2483 MHz band. The transmitter is a Class 3 Bluetooth device designed to communicate with other Bluetooth devices as per the industrial standard. The Bluetooth chipset and the antenna are mounted on the PCB of the EUT. The maximum gain of the Bluetooth antenna is measured to be 2 dBi.

The phones have assisted GPS software feature enabled to meet the emergency location requirements of the FCC's E911 Phase II mandate. The Tri-mode architecture is defined as 1900MHz (PCS CDMA), 800MHz (cellular CDMA and AMPS).

The phone is designed in compliance with the technical specifications for compatibility of mobile and base stations in the Cellular Radio telephone service contained in “Cellular System Mobile Station -Land Station Compatibility Specification” as specified in OET Bulletin 53 and TIA Standards

4 ACCESSORIES:

<table>
<tr><td colspan="2">KWC Battery Model: Standard: CV90-P3030-05 (3.7V, 1000mAh) and CV90-P3031-03 (3.7V, 900mAh)
Extended (high capacity battery): CV90-P3032-03 (3.7V, 1800mAh)</td></tr>
<tr><td colspan="2">
1000mAh Battery

900mAh Battery

Extended Battery</td></tr>
<tr><td>KWC Holster Model: CV90-M2288-01</td><td>Standard Case Model: CV90-M2293-01</td></tr>
<tr><td></td><td></td></tr>
</table>

5 SAR TEST RESULT SUMMARY

This device has been tested for localised specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE Std. C95.1 ~ 1992 and has been tested in accordance with the measurement procedures specified in IEEE P1528_D1.2. Normal antenna operating positions were incorporated, with the device transmitting at frequencies consistent with normal usage of the device. The device has been shown capable of compliance for localised specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE std. C95.1-1992

5.1 Maximum Results Found during SAR Evaluation

The equipment is deemed to fulfil the requirements if the measured values are less than or equal to the limit.

5.2 Head Configuration

Mode	Ch/f(MHz)	Conducted Power (dBm)	Device Position	Flip Position	Measured (mW/g)	Result
AMPS	383 (836.49)	24.93	Right Cheek	Open	1.43	PASSED
CDMA-800	383 (836.49)	24.91	Right Cheek	Open	1.42	PASSED
CDMA-1900	1175 (1908.75)	23.09	Left Cheek	Open	1.47	PASSED

5.3 Body Worn Configuration (with KWC body worn accessories)

Mode	Ch/f(MHz)	Conducted Power (dBm)	Device Position	Flip Position	Measured (mW/g)	Result
AMPS	799 (848.97)	24.95	Waist level	Closed	1.03	PASSED
CDMA-800	777 (848.31)	24.90	Waist level	Closed	0.904	PASSED
CDMA-1900	600 (1880.0)	23.08	Waist level	Open	0.413	PASSED

5.4 Measurement Uncertainty

Combined Uncertainty (Assessment & Source)	± **10.46**
Extended Uncertainty (k=2)	± **21.22**

6 TEST CONDITIONS

6.1 Ambient Conditions

All tests were performed under the following environmental conditions:

Ambient Temperature:	22 ± 1 Degrees C
Tissue simulating liquid temperature:	22 ± 1 Degrees C
Humidity:	38 %
Pressure:	1015 mB

6.2 RF characteristics of the test site

All SAR measurements were performed inside a shielded room that provide isolation from external EM fields.

The E-field probes of the DASY 4 system are capable of detecting signals as low as 5µW/g in the liquid dielectric. External fields are minimising by the shielded room, leaving the phone as the dominant radiation source. Two 2-foot square ferrite panels are placed on the floor of the room beneath the phantom area of the DASY system to minimise reflected energy that would otherwise re-enter the phantom and combine constructively or destructively with the desired fields. These ferrite panels provide roughly 12 to 13 dB of attenuation in the frequency range of 900 MHz, and 7 to 8 dB of attenuation in the frequency range of 1.9 GHz.

6.3 Test Signal, Frequencies and Output Power

The device was controlled by using Kyocera Wireless Phone Support Toolkit, Test Code Controller.

In all operating bands, the measurements were performed on low, mid and high channels.
The phone was set to nominal maximum power level during all tests and at the beginning of the each test.

DASY4 system measures power drift during SAR testing by comparing E-field in the same location at the beginning and at the end of measurement. These records were used to monitor stability of power output.

6.3.1 CDMA2000 Test conditions

The device supports CDMA2000 in 1X (Phase I, Protocol revision 6) mode only. CDMA2000 1X includes TIA/EIA-95B as a subset and was approved for publishing in July 1999. It provides voice and data capabilities within a standard 1.25 MHz CDMA channel. This RF bandwidth is identical to the legacy IS-95 B system standard.

To perform SAR tests, the phone was placed in test code mode to transmit maximum power at full rate for the specified channel. The CDMA signal tested was TIA/EIA-95B based, i.e. RC1, SR1 and R-FCH only and full rate. SAR value depends on the transmitter power level and the duty cycle of the power being transmitted. The test device was placed in the test code mode in order to maintain the maximum outputs in all applicable modes during the entire SAR testing. Since the tests were conducted at all channels with phone transmitting maximum power and at full rate, these measurements would indicate the maximum possible SAR value for that particular channel irrespective of RC's, SO's and other data rates. As long as these measurements demonstrate SAR compliance, it should also demonstrate compliance for other configurations that were not tested.

Table 6.3 below shows the max. power level vs RCs

CONFIGURATION	CONDUCTED POWER			
	CDMA 800 (ch 383)		CDMA 1900 (ch 1175)	
	Peak (dBm)	Average (dBm)	Peak (dBm)	Average (dBm)
RC1, SO2, Full Rate	29.28	25.07	27.15	23.06
RC1, SO55, Full Rate	29.19	25.08	27.12	23.08
RC2, SO9, Full Rate	29.20	25.04	27.15	22.96
RC2, SO55, Full Rate	29.24	25.07	27.12	22.89
RC3, SO2, Full Rate	28.87	25.02	26.62	22.84
RC3, SO55, Full Rate	29.30	25.23	27.17	23.19
RC43, SO2, Full Rate	29.08	25.01	26.96	22.87
RC43, SO55, Full Rate	29.06	25.04	26.90	22.86
RC54, SO9, Full Rate	29.11	25.03	26.90	22.84
RC54, SO55, Full Rate	29.14	25.04	26.84	22.85
RC3, SO32, (+ F-SCH) Full Rate	29.20	25.06	26.87	22.91
RC3, SO32, (+ SCH) Full Rate	29.05	25.01	26.93	22.87
TCC MODE	29.71	25.51	27.27	22.97

Table 6.3 RC Configuration tested @ “all up” power control bit.

6.4 Device Test Conditions

The EUT was tested with a fully charged battery as supplied with the handset. Conducted RF power measurements were performed before and after each SAR measurements to confirm the output power.

7 DESCRIPTION OF THE TEST EQUIPMENT

7.1 Dosimetric System

The measurements were performed with an automated DASY4 near-field scanning system (as shown in Figure 7.1), manufactured by Schmid & Partner Engineering AG (SPEAG) of Zurich, Switzerland. The system is comprised of high precision robot, robot controller, computer, near-field probe, probe alignment sensor and the SAM phantom containing brain or muscle equivalent material. The overall RSS uncertainty of the measurement system is ±10.46% with an expanded uncertainty of ±21.22% (K=2). The measurement uncertainty budget is given in section 10. Below is a list of the calibrated equipment used for the measurements:

Test Equipment	Serial Number	Cal. Due Date
DASY4 DAE4	602	08-30-06
E-field Probe ET3DV6	1714	09-06-06
Dipole Validation kit, D835V2	453	01-11-08
Dipole Validation kit, D1900V2	5d003	03-21-08

The calibration records of E-field probe and dipoles are attached in Appendix C and Appendix D respectively.

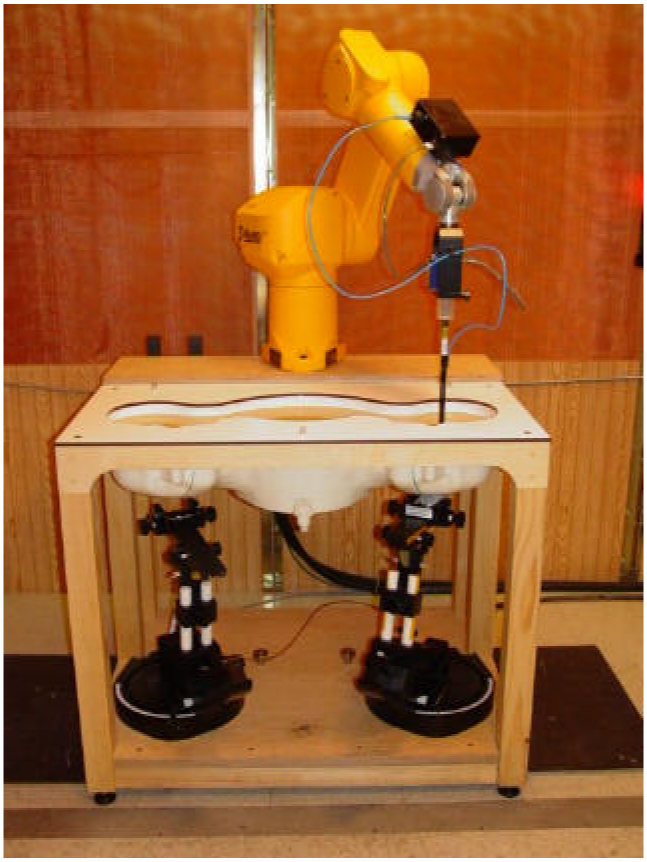


Figure 7.1 DASY 4 System

7.2 Additional equipment needed in validation

Test Equipment	Serial Number	Cal. Due Date
Signal Generator, Marconi Instruments 2026	US37231039	03-16-07
Power meter, Giga-tronics 8541C	1835328	03-03-07
Power Sensor, Giga-tronics 80601A	1830275	05-11-07
Serial Network Analyzer, HP 8753D	3410A04138	02-23-07
Thermometer	186700	04-22-07
Dielectric Probe, HP 85070E	--	no cal required

7.3 Tissue Stimulants

All dielectric parameters of tissue stimulants were measured within 24 hours of SAR measurements. The depth of the tissue stimulant in the ear reference point and flat reference point of the phantom were at least 15 cm. during all the tests. The depth of the liquid is measured by running a program that brings the probe to the bottom surface of the phantom then raise it up 15 centimeters. The operator at this point performs a visual inspection and makes sure that the liquid level is at or above the probe tip.

The list of ingredients and the percent composition used for the Head and Muscle tissue simulates are listed in the table below:

	835 MHz		1900 MHz	
Ingredient	***HEAD***	***MUSCLE***	***HEAD***	***MUSCLE***
Water	51.07%	65.45%	54%	69.91%
Cellulose	0.23%	--	--	--
Glycol monobutyl	--	--	44.91%	29.96%
Sugar	47.31%	34.31%	--	--
Preventol	0.24%	0.1%	--	--
Salt	1.15%	0.62%	0.21%	0.13%

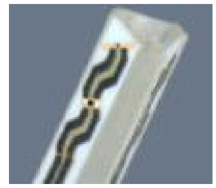
The ingredients above are adopted from Application Note: Recipes for Head/Muscle Tissue Simulating Liquid by SPEAG.

7.4 Phantoms Description

SAM v4.0 phantom, manufactured by SPEAG, was used during the measurement. It has fiberglass shell integrated in a wooden table. The shape of the shell corresponds to the phantom defined in IEEE 1528/D1.2. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. Reference markings on the phantom allow the complete set-up of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

The thickness of phantom shell is 2mm except for the ear, where an integrated ear spacer provides 6mm spacing from the tissue boundary. Manufacturer reports tolerance in shell thickness to be ± 0.1mm**.**

7.5 Isotropic E-Field Probe

Model:	• ET3DV6 
Construction:	• Symmetrical design with triangular core • Built-in optical fiber for surface detection system • Built-in shielding against static charges • PEEK enclosure material (resistant to organic solvents, e.g., glycol)
Calibration:	• Calibration certificate in Appendix C
Frequency:	• 10MHz to 3GHz (dosimetry); Linearity: ±0.2dB (30MHz to 3GHz)
Optical Surface:	• ±0.2mm repeatability in air and clear liquid over diffuse reflecting
Detection:	• Surface
Directivity:	• ±0.2dB in HSL (rotation around probe axis) • ±0.4dB in HSL (rotation normal to probe axis)
Dynamic Range:	• 5 uW/g to > 100 mW/g; Linearity: ±0.2dB
Dimensions:	• Overall length: 330mm • Tip length: 16mm • Body diameter: 12mm • Tip diameter: 6.8mm • Distance from probe tip to dipole centers: 2.7mm
Application:	• General dosimetry up to 3GHz • Compliance tests of mobile phones • Fast automatic scanning in arbitrary phantoms.

8 SYSTEM VALIDATION

The probes are calibrated annually by the manufacturer. Dielectric parameters of the stimulating liquids are measured with an automated Hewlett Packard 85070E dielectric probe in conjunction with an Agilent E5062A ENA serial network analyser.

The SAR measurements of the device were done within 24 hours of system accuracy verification, which was done using the dipole validation kit. Power level of 20dBm was supplied to a dipole antenna placed under the flat section of SAM phantom. The validation results are in the table below and printouts of the validation test are attached in Appendix A. All the measured parameters are within the specification.

The system validation with head tissues was used for the device testing in muscle. Based on OET 65 Supplement C EAB Part 22/24 SAR review Reminder Sheet 01/2002, this is a valid test.

Tissue	**Freq. (MHz)**	**Description**	**Validation SAR (mW/g), 1g**	**Dielectric Parameters**		**Temp. (°C)**	**Test date**	**Comments** Validation testing -
				ϵ_r	σ (S/m)			
Head	835	Measured	1.02	41.14	0.920	22±1	7-14-06	For device testing in Head
		Measured	0.920	41.23	0.910	22±1	7-15-06	For device testing in Head
		Measured	0.944	40.45	0.914	22±1	7-17-06	For device testing in Head and Muscle
		Measured	0.917	40.92	0.898	22±1	7-18-06	For device testing in Head and Muscle
		Measured	0.969	41.35	0.920	22±1	7-19-06	For device testing in Head and Muscle
		Measured	0.917	42.31	0.923	22±1	7-20-06	For device testing in Head and Muscle
		Measured	1.01	42.37	0.923	22±1	8-02-06	For device testing in Head and Muscle
		Measured	1.00	40.96	0.896	22±1	8-03-06	For device testing in Head and Muscle
		SPEAG Reference	**1.02**	**42.8**	**0.94**	**--**	**04-20-04**	
		FCC Reference*	**--**	**41.5**	**0.90**	**20-26**	**--**	
	1900	Measured	3.84	39.43	1.43		7-20-06	For device testing in Head
		Measured	3.96	39.15	1.434		7-21-06	For device testing in Head and Muscle
		Measured	3.79	40.09	1.413		7-22-06	For device testing in Head and Muscle
		Measured	4.11	39.83	1.47		8-01-06	For device testing in Head and Muscle
		SPEAG Reference	**4.28**	**38.8**	**1.47**	**--**	**03-17-04**	
		FCC Reference*	**--**	**40.0**	**1.40**	**20-26**	**--**	
Muscle	835	Measured	--	54.19	0.968		7-17-06	For device testing in Muscle
		Measured	--	55.34	0.963		7-18-06	For device testing in Muscle
		Measured	--	55.53	0.975		7-19-06	For device testing in Muscle
		Measured	--	56.85	0.975		7-20-06	For device testing in Muscle
		Measured	--	56.53	0.959		8-02-06	For device testing in Muscle
		Measured	--	55.86	0.957		8-03-06	For device testing in Muscle
		FCC Reference*	**--**	**55.2**	**0.97**	**--**	**--**	
	1900	Measured	--	53.81	1.506		7-21-06	For device testing in Muscle
		Measured	--	53.81	1.50		7-22-06	For device testing in Muscle
		Measured	--	53.81	1.534		8-01-06	For device testing in Muscle
		FCC Reference*	**--**	**53.3**	**1.52**	**20-26**	**--**	

FCC reference values are adopted from OET Bulletin 65 (97-01) Supplement C (01-01).

9 DESCRIPTION OF THE TEST PROCEDURE

Measurements were made on both left hand side and right hand side of the phantom.

The device was position against phantom according to OET Bulletin 65 (97-01) Supplement C (01-01). Definitions of terms used in aligning the device to a head phantom are available in IEEE Standard P1528/D1.2 “Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”

9.1 Test Positions

The device was placed in the holder. The bottom of the device aligns with the bottom of the holder clamp to provide a standard positioning and ensure enough free space for antenna.

Device holder was provided by SPEAG together with DASY4.

9.1.1 Initial Ear Position

The device was initially positioned with the earpiece region pressed against the ear spacer of a head phantom parallel to the “Neck-Front” (N-F) line defined along the base of the ear spacer that contains the “Ear Reference Point” (ERP). The “test device reference point” (point A) is aligned to the ERP on the head phantom and the “vertical centerline” is aligned to the “phantom reference plane”.

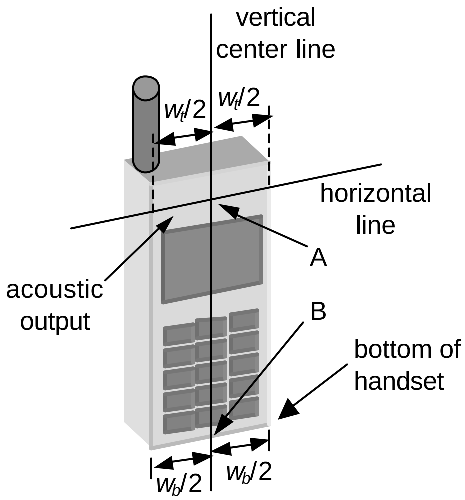


Figure 7-1 – Handset vertical and horizontal reference lines.

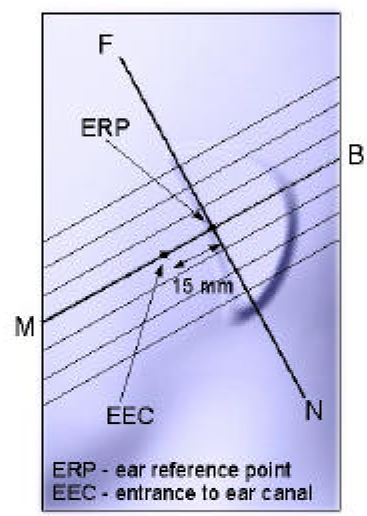


Figure 7-2 - Close up side view of phantom showing the ear region.

9.1.2 Cheek Position

"Initial ear position" alignments are maintained and the device is brought toward the mouth of the head phantom by pivoting along the "Neck-Front" line until any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom or when any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

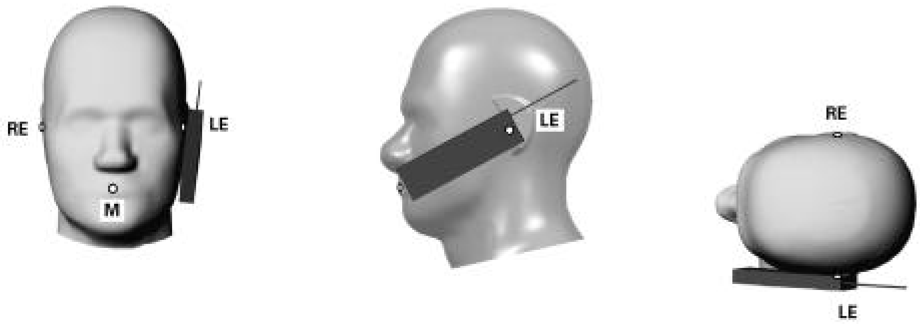


Figure 7.3 - Phone position 1, "cheek" or "touch" position.

9.1.3 Tilt Position

In the "cheek position", if the earpiece of the device is not in full contact with the phantom's ear spacer and the peak SAR location for the "cheek position" is located at the ear spacer region or corresponds to the earpiece region of the handset, the device is returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer. Otherwise, the device is moved away from the cheek perpendicular to the line passes through both "ear reference points" for approximate 2-3cm. While it is in this position, the device is tilted away from the mouth with respect to the "test device reference point" by 15^o. After the tilt, it is then moved back toward the head perpendicular to the line passes through both "ear reference point" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process is repeated with a tilt angle less than 15^o so that the device and its antenna would touch the phantom simultaneously.

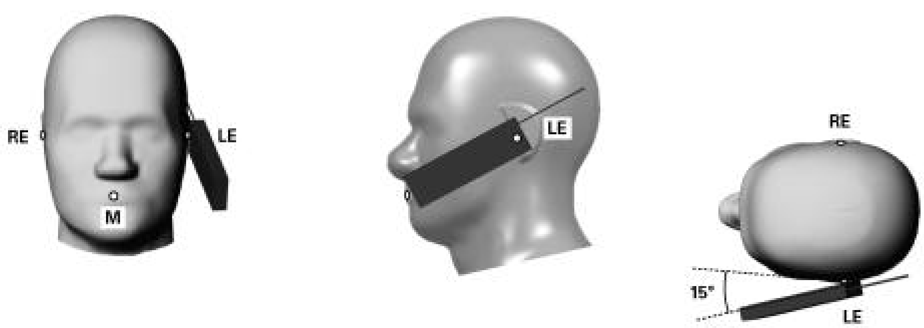


Figure 7.3 - Phone position 2, "tilted" position.

9.1.4 Body Worn Configuration

KWC body worn accessories were tested for the FCC RF exposure compliance. The device was positioned into the carrying case and placed below the flat phantom. Hands-free headset was connected during measurements.

The SAR levels were also measured with 15.0mm air space for the hands-free application, which allow user to use other body-worn holster that contains no metal and provides at least 15.0mm separation from the closest point of the handset to the body.

9.2 Scan Procedures

First, coarse scans are used for a quick determination of the field distribution. Then an area scan measures all reachable points, it computes all of the field maxima found in the scanned area, within a range of 2dB as specified in IEEE P1528, (see the configuration below). For cases where multiple maxima were detected, the number of zoom scans could be increased accordingly.

Next a cube scan, 7x7x7 points (spacing between each point is 5x5x5mm), is performed around the highest E-field value to determine the averaged SAR-distribution over 1g. If two peaks are within 2dB of the highest one, two zoom scans are performed to provide the evaluations. A fine resolution volume scan determines the one-gram average SAR for both peaks.

9.3 SAR Averaging Methods

The maximum SAR value is average over its volume using interpolation and extrapolation.

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the “Not a knot” –condition [W. Gander, Computermathematik, p. 141-150] (x, y and z –directions) [numerical Recipes in C, Second Edition, p 123].

The extrapolation is based on least square algorithm [W. Gander, Computermathematik, p. 168-180]. Through the points in the first 30mm 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 1mm from one another.

10 MEASUREMENT UNCERTAINTY

Description of individual measurement uncertainty

Uncertainty Description	Uncert. Value (± %)	Prob. Dist.	Div	C_i^1 1g	Stand. Uncert (1g) (±%)	V_i^2 or V_{eff}
Measurement system						
Probe calibration	4.8	N	1	1	4.8	8
Axial isotropy	4.7	R	v3	0.7	1.9	8
Hemispherical Isotropy	9.6	R	v3	0.7	3.9	8
Boundary effects	1.0	R	v3	1	0.6	8
Linearity	4.7	R	v3	1	1.0	8
System Detection limit	1.0	R	v3	1	0.5	8
Readout Electronics	1.0	N	1	1	1.0	8
Response Time	0.8	R	v3	1	0.5	8
Integration Time	2.6	R	v3	1	1.5	8
RF ambient conditions	3.0	R	v3	1	1.7	8
Mech. Constrains of robot	0.4	R	v3	1	0.2	8
Probe positioning	2.9	R	v3	1	1.7	8
Extrapolation, integration and Integration Algorithms for Max. SAR Evaluation	1.0	R	v3	1	0.6	8
Test Sample Related						
Device positioning	3.0	N	1	1	3.0	8
Device Holder	3.0	N	1	1	3.0	8
Power drift	7.0	N	v3	1	4.0	8
Phantom and setup						
Phantom uncertainty	4.0	R	v3	1	2.3	8
Liquid conductivity (target)	5.0	R	v3	0.6	1.7	8
Liquid conductivity (meas.)	5.0	N	1	0.6	3.0	8
Liquid permittivity (target)	5.0	R	v3	0.6	1.7	8
Liquid permittivity (meas.)	5.0	N	1	0.6	1.5	8
Combined Standard Uncertainty:					**10.46**	
Extended Standard Uncertainty (k=2):					**21.22**	

N: Normal
R: Rectangular

11 TEST DATA

11.1 Head SAR Test Results

The following tables list the SAR results for all battery configurations and with the bluetooth feature “on” or off in every operating mode. The extended battery and the bluetooth feature on were tested based on the worst case at every position of the phone with the standard battery. The maximum SAR results (in bold **blue** color) between all battery configurations and bluetooth feature “on” in each modes and device positions (cheek or tilt) are shown in Appendix B as SAR distribution printouts. Z-axis plots for each mode were also included to show that the liquid was deep enough. The rest of the SAR distribution plots are substantially similar or equivalent to the plots submitted regardless of the channel, battery and whether the bluetooth feature is turned on or off.

AMPS HEAD		**Channel:**		991	383	799
		Frequency (MHz):		824.04	836.49	848.97
		Conducted Power (dBm):		24.96	24.93	24.95
Configuration	**Test Position**	**Flip Position**	**Antenna Position**	**SAR, 1g (W/kg)**		
K323/K323P with 1000mAh standard battery	**Left** Cheek/Touch	Open	Fixed	0.623	1.21/ *1.16	1.15
	Left Ear/Tilt	Open	Fixed		0.173	
	Right Cheek/Touch	Open	Fixed	0.709	**1.43/***1.28	1.33
	Right Ear/Tilt	Open	Fixed		0.211	
K323/K323P with 900mAh standard battery	**Left** Cheek/Touch	Open	Fixed		1.19	
	Left Ear/Tilt	Open	Fixed		0.192	
	Right Cheek/Touch	Open	Fixed		1.40	
	Right Ear/Tilt	Open	Fixed		0.213	
K323/K323P With extended battery	**Left** Cheek/Touch	Open	Fixed		1.14	
	Left Ear/Tilt	Open	Fixed		0.207/ *0.194	
	Right Cheek/Touch	Open	Fixed		1.30	
	Right Ear/Tilt	Open	Fixed		0.246/ *0.215	

Note: If the SAR measured at the mid-channel is at least 3dB lower than the SAR limit, testing at the low and high channels were no longer performed.

** Means the phone was tested with Bluetooth on*

CDMA 800 HEAD			Channel:	1013	383	777
			Frequency (MHz):	824.70	836.49	848.31
			Conducted Power (dBm):	24.95	24.91	24.90
Configuration	**Test Position**	**Flip Position**	**Antenna Position**	**SAR, 1g (W/kg)**		
K323P w/ 1000mAh standard battery	**Left** Cheek/Touch	Open	Fixed	0.622	1.19/*1.20	1.07
	Left Ear/Tilt	Open	Fixed		0.201	
	Right Cheek/Touch	Open	Fixed	0.725	**1.42/**1.35	1.23
	Right Ear/Tilt	Open	Fixed		0.228	
K323P w/ 900mAh standard battery	**Left** Cheek/Touch	Open	Fixed		1.18	
	Left Ear/Tilt	Open	Fixed		0.194	
	Right Cheek/Touch	Open	Fixed		1.40	
	Right Ear/Tilt	Open	Fixed		0.219	
K323P w/ extended battery	**Left** Cheek/Touch	Open	Fixed		1.14	
	Left Ear/Tilt	Open	Fixed		0.21/*0.19	
	Right Cheek/Touch	Open	Fixed		1.27	
	Right Ear/Tilt	Open	Fixed		0.219	

Note: If the SAR measured at the mid-channel is at least 3dB lower than the SAR limit, testing at the low and high channels were no longer performed.

** Means the phone was tested with Bluetooth on*

CDMA 1900 HEAD			Channel:	25	600	1175
			Frequency (MHz):	1851.25	1880	1908.75
			Conducted Power (dBm):	23.14	23.08	23.09
Configuration	**Test Position**	**Flip Position**	**Antenna Position**	**SAR, 1g (W/kg)**		
K323 w/ 1000mAh standard battery	**Left** Cheek/Touch	Open	Fixed	1.04	1.17	1.36**/*1.47**
	Left Ear/Tilt	Open	Fixed		0.313	
	Right Cheek/Touch	Open	Fixed	1.03	1.18	1.28/*1.33
	Right Ear/Tilt	Open	Fixed		0.33/*0.35	
K323 w/ 900mAh standard battery	**Left** Cheek/Touch	Open	Fixed	1.07	1.17	1.29
	Left Ear/Tilt	Open	Fixed		0.315/*0.338	
	Right Cheek/Touch	Open	Fixed	1.05	1.21	1.27
	Right Ear/Tilt	Open	Fixed		0.32	
K323 w/ extended battery	**Left** Cheek/Touch	Open	Fixed			1.19
	Left Ear/Tilt	Open	Fixed		0.220	
	Right Cheek/Touch	Open	Fixed			1.27
	Right Ear/Tilt	Open	Fixed		0.252	

Note: If the SAR measured at the mid-channel is at least 3dB lower than the SAR limit, testing at the low and high channels were no longer performed.

** Means the phone was tested with Bluetooth on*

11.2 Body Worn SAR Test Result

The device was tested with a 25mm air gap and with KWC body-worn accessories. The extended battery and bluetooth feature "on" was tested based on the worst case found with the standard battery. The maximum SAR results (in bold **blue** color) between battery configurations, flip positions, and bluetooth feature "on" for each mode and in each accessory are shown in Appendix B as SAR distribution printouts. The rest of the SAR distributions are substantially similar or equivalent to the plots submitted, regardless of the flip position, the accessory used, and whether the bluetooth feature is on or off.

Waist Level SAR with KWC Body Worn Accessories

AMPS BODY				**Channel:**	991	383	799
				Frequency (MHz):	824.04	836.49	848.97
				Conducted Power (dBm):	24.96	24.93	24.95
Configuration	**Accessories**	**Test Position**	**Flip Position**	**Phone Position**	**SAR, 1g (W/kg)**		
K323 w/ 1000mAh standard battery	Air Gap – 15mm	Flat	Closed	Face Down		0.513	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down		**0.78**	
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.337	
	Air Gap – 15mm	Flat	Open	Face Down		0.491	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		**0.685**	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.293	
K323 w/ 900mAh standard battery	Air Gap – 15mm	Flat	Closed	Face Down		0.549	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down	0.541	0.827	**0.915**
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.337	
	Air Gap – 15mm	Flat	Open	Face Down		0.472	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		**0.685**	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.295	
K323 w/ extended battery	Air Gap – 15mm	Flat	Closed	Face Down		0.345	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down			**1.02**
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.313	
	Air Gap – 15mm	Flat	Open	Face Down		0.43	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down	0.603	0.862	**1.01**
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.204	

Note: If the SAR measured at the mid-channel is at least 3dB lower than the SAR limit, testing at the low and high channels were no longer perform

** Means the phone was tested with Bluetooth on*

CDMA 800 BODY				**Channel:**	1013	383	777
				Frequency (MHz):	824.70	836.49	848.31
				Conducted Power (dBm):	24.95	24.91	24.90
Configuration	**Accessories**	**Test Position**	**Flip Position**	**Phone Position**	**SAR, 1g (W/kg)**		
K323 w/ 1000mAh standard battery	Air Gap – 15mm	Flat	Closed	Face Down		0.487	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down	0.525	0.817	0.878
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.331	
	Premium Case: (CV90-M2294-01)	Flat	Closed	Face Down		0.324	
	Air Gap – 15mm	Flat	Open	Face Down		0.510	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		0.706	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.322	
K323 w/ 900mAh standard battery	Air Gap – 25mm	Flat	Closed	Face Down		0.531/ *0.574	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down		0.764	
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.343/ *0.323	
	Air Gap – 15mm	Flat	Open	Face Down		0.553/ *0.59	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		0.704	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.333/ *0.288	
K323 w/ extended battery	Air Gap – 25mm	Flat	Closed	Face Down		0.414	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down			0.892/ ***0.904**
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.281	
	Air Gap – 15mm	Flat	Open	Face Down		0.428	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		0.821/ *0.676	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.266	

Note: If the SAR measured at the mid-channel is at least 3dB lower than the SAR limit, testing at the low and high channels were no longer performed.
** Means the phone was tested with Bluetooth on*

CDMA 1900 BODY		**Channel:**			25	600	1175
		Frequency (MHz):			1851.25	1880	1908.75
		Conducted Power (dBm):			23.14	23.08	23.09
Configuration	**Accessories**	**Test Position**	**Flip Position**	**Phone Position**	**SAR, 1g (W/kg)**		
K323 w/ 1000mAh standard battery	Air Gap – 15mm	Flat	Closed	Face Down		0.141	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down		0.218	
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.854	
	Air Gap – 15mm	Flat	Open	Face Down		0.133/ *0.113	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		0.315	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.117/ *0.081	

K323 w/ 900mAh standard battery	Air Gap – 15mm	Flat	Closed	Face Down		0.168/ *0.118	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down		0.245	
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.113/ *0.109	
	Air Gap – 15mm	Flat	Open	Face Down		0.114	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		0.287	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.110	

K323 w/ extended battery	Air Gap – 15mm	Flat	Closed	Face Down		0.108	
	Kyocera Holster: (CV90-M2288-01)	Flat	Closed	Face Down		0.257/ *0.232	
	Standard Case: (CV90-M2293-01)	Flat	Closed	Face Down		0.0989	
	Air Gap – 15mm	Flat	Open	Face Down		0.0913	
	Kyocera Holster: (CV90-M2288-01)	Flat	Open	Face Down		**0.413/** *0.332	
	Standard Case: (CV90-M2293-01)	Flat	Open	Face Down		0.0843	

Note: If the SAR measured at the mid-channel is at least 3dB lower than the SAR limit, testing at the low and high channels were no longer performed.

** Means the phone was tested with Bluetooth on*

12 LIST OF APPENDIX

Appendix	Description	Note
A	Validation Test Plots	*Please see separate attachment*
B	SAR Distribution Plots	*Please see separate attachment*
C	Probe Calibration Parameters	*Please see separate attachment*
D	Dipole Calibration Parameters	*Please see separate attachment*
E	EUT Setup Photos	*Please see separate attachment*