

Applicant:	Kyocera	
FCC ID:	V65SCP-3810	
Report #:	CT-V65-20RF-0509-R0	

Hearing Aid Compatibility (HAC) RF Emissions

FCC 47 CFR Part 20.19

Test Report

For

Kyocera Corporation c/o Kyocera Communication Inc.

Product: Dual-band CDMA Phone

Model: SCP-3810



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ATTESTATION

The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested.

The test equipment used was suitable for the tests performed and within manufacturer's published specifications and operating parameters.

The test methods were consistent with the methods described in the relevant standards.

Product:	Dual-Band CDMA Cellular Phone with Bluetooth	
Model #:	SCP-3810	
FCC ID:	V65SCP-3810	
Tested in accordance with:	FCC 47 CFR Part 20.19	
	ANSI C63.19-2007	
Test performed by:	Comptest Services LLC	
Test Requested by:	KYOCERA Corporation	
C/o KYOCERA Communication Inc		
	10300 Campus Point Drive	
	San Diego, CA 92121 United States	
Date of Test:	May 27, 2009 – May 29, 2009	

Responsible Engineer	Reviewed and approved by:	
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Don Ouk	Tammy To	
Test Engineer	Quality Manager	



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SUMMARY OF TESTING

Rule Part	Test Description	Section #	Verdict
FCC § 20.19(b), §6.3(v), §7.3(v)	HAC RF Emissions	4	Pass
ANSI C63.19-2007 HAC M Category:			M4

2 EQUIPMENT UNDER TEST INFORMATION

Product:	Dual-Band CDMA Cellular Phone		
FCC ID:	V65SCP-3810		
Model Number:	SCP-3810		
EUT Serial Number:	268435457816702556		
Type:	[] Identical Prototype,		
	[X] Pre-Production,		
	[] Production		
Device Category:	Portable		
RF Exposure Environment:	General Population / Uncontrolled		
Antenna:	Internal		
Detachable Antenna:	Yes		
External Input:	Audio/Digital Data		
Quantity:	Quantity production is planned		
Modes:	800 CDMA	1900 CDMA	
Multiple Access Scheme:	CDMA	CDMA	
TX Frequency (MHz):	824 – 849	1850 - 1910	
Rated RF Conducted Output Power (dBm)	25.0	24.5	



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3 TEST CONDITIONS

3.1 Ambient Conditions	
All tests were performed under the following	g environmental conditions:
Ambient Temperature:	23 ± 2 Degrees C
Tissue simulating liquid temperature:	22 ± 1 Degrees C
Relative Humidity (RH):	0% <rh 80%<="" <="" td=""></rh>
Atmospheric Pressure:	101.3kPa + 10 to -5 kPa

3.2 RF characteristics of the test site

All HAC measurements were performed inside a shielded room that provide isolation from external EM fields, with the RF ambient at least 20 dB below the intended measurement limits.

3.3 Test Signal, Frequencies and Output Power

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.

Peak and Average conducted power were measured to ensure worst case power configuration was tested:

CONFIGURATION		CONDUCTED POWER	
(Full Rate)		CDMA 800 (ch 383)	CDMA 1900 (ch 600)
		Average (dBm)	Average (dBm)
SO2	RC1	24.93	24.57
	RC3	24.94	24.53
SO55	RC1	24.91	24.55
	RC3	24.99	24.56
SO32	RC3 (+ SCH) Full Rate	24.94	24.55
	RC3 (+ F-SCH)	24.91	24.57

In all operating modes, the phone was set to rated maximum RF power level and the measurements were performed on low, mid and high channels.

The measurement system measures power drift during HAC testing by comparing E/H-field in the same location at the beginning and at the end of measurement. These records were used to monitor stability of power output during tests. Conducted RF power measurements were also performed before and after each HAC measurements to confirm the output power.

During tests, the EUT was put in in-call mode and controlled by a CDMA simulator to generate the required signal and power:

Protocol:	6 (IS-2000)
Radio Configuration:	3



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Power Control:	All Up Bits
Service Option:	55
Data Rate:	Full

EUT Operating Conditions

The EUT was tested with the follow configurations and conditions, if applicable:

- X Fully charged standard battery as supplied with the handset
- X Open configuration at ear use position.
 - Both retracted and extended antenna positions,
- X Back-light always ON
- X Simultaneous transmission with Bluetooth transmitter ON*

Note: *The Bluetooth transmitter was not enable during tests, since the intended use of the CDMA transmitter does not include support simultaneous operation when held to ear.



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4 DESCRIPTION OF TEST EQUIPMENT

4.1 Test Equipment Used

Below is a list of the calibrated equipment used for the measurements.

The calibration certificates of E-field and H-field probes are attached in Appendix A.

Description	Manufacturer	Model Number	Serial Number	Cal Due Date
Power Meter	Giga-tronics	8541C	1831306	07/16/09
Signal Generator	Hewlett Packard	E4421B	US38440337	07/14/09
Radio Communication Tester	Agilent	8960	GB44052789	08/13/09
Data Acquisition	Speag	DAE4	530	04/15/10
E-field Probe	Speag	ER3DV6	2341	03/10/10
H-field Probe	Speag	H3DV5	6123	08/18/09
Dipole Antenna (835MHz)	Speag	CD835V3	1020	04/26/10
Dipole Antenna (1880MHz)	Speag	CD1880V3	1015	04/26/10

4.2 Near Field Measurement System

The measurements were performed with Dasy4 automated near-field scanning system comprised of high precision robot, robot controller, computer, near-field probe, probe alignment sensor, non-conductive phone positioner, Test Arch and software extension. The overall expanded uncertainty (K=2) of the measurement system is $\pm 10.9\%$ and $\pm 14.7\%$ for H-field and E-field resp. The measurement uncertainty budget is given in section 6.



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4.3 Isotropic E-	Field Probe
Model	■ ER3DV6
Construction	 One dipole parallel, two dipoles normal to probe axis
	Built-in shielding against static charges
	■ PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	■ In air from 100 MHz to 3.0 GHz (absolute accuracy ± 6%; k=2)
Frequency	■ 100MHz to 6 GHz
	■ Linearity: ± 0.2dB (100MHz to 3GHz)
Directivity	■ ± 0.2 dB in air (rotation around probe axis)
	■ ± 0.4 dB in air (rotation normal to probe axis)
Dynamic Range	■ 2 V/m to > 1000 V/m
	■ Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 16 mm)
	■ Tip diameter: 8 mm (Body: 12 mm)
	 Distance from probe tip to dipole centers: 2.5 mm
Application	 General near-field measurements up to 6 GHz
	Field component measurements
	Fast automatic scanning in phantoms

4.4 Isotropic -Field	Probe
Model	■ H3DV6
Construction	 Three concentric loop sensors with 3.8 mm loop diameters
	 Resistively loaded detector diodes for linear response
	 Built-in shielding against static charges
	 PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Frequency	■ 200 MHz to 3 GHz (± 6.0%, k=2); Output linearized
Directivity	■ ± 0.25 dB (spherical isotropy error)
Dynamic Range	■ 10 mA/m to 2 A/m at 1 GHz
E-Field Interference	< 10% at 3 GHz (for plane wave)
Dimensions	Overall length: 330 mm (Tip: 40 mm)
	■ Tip diameter: 6 mm (Body: 12 mm)
	 Distance from probe tip to dipole centers: 3 mm
Application	 General magnetic near-field measurements up to 3 GHz
	 Field component measurements
	 Surface current measurements
	 Measurements in air or liquids
	 Low interaction with the measured field

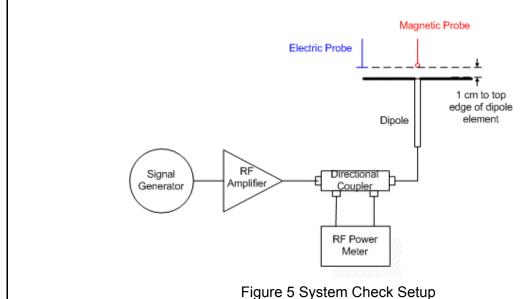


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SYSTEM VALIDATION

5.1 Dipole Validation Setup

The probes are calibrated annually by the manufacturer. The HAC measurements of the device were done within 24 hours of system accuracy verification, which was done using calibration dipoles. Unmodulated continous wave of power level of 20dBm was supplied to a dipole antenna placed under Test Arch. The measurement probes are positioned over the illuminated dipole at 10mm distance from the top surface of the dipole element to the calibration reference point of the sensor, defined by the probe manufacturer.





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5.2 Dipole Validation Results

The length of the dipole was scanned with both E and H-field probes and the maxium values for each were recorded. The validation results are in the table below and printouts of the validation test are attached in Appendix B. All the measured parameters were within the specification.

Freq. (MHz)	Parameter	Target (SPEAG)	Measured	Delta (%)	Limit (%)	Test date
835	E dB(V/m)	159.5	153.6	-3.70	± 25	5/28/09
	H dB(A/m)	0.458	0.426	-6.97	± 25	5/27/09
1880	E dB(V/m)	140.4	145.8	3.85	± 25	5/29/09
	H dB(A/m)	0.466	0.437	-6.16	± 25	5/27/09



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DESCRIPTION OF TEST PROCEDURE

6.1 Test Positions

The device was placed on a non-conductive phone positioner under the Test Arch.

6.2 RF Emission Measurements Reference and Plane

Figure 6.2 illustrates the references and reference plane that shall be used in the EUT emissions measurement:

- The grid is 5 cm by 5 cm area that is divided into 9 evenly sized blocks or sub-grids.
- The grid is centered on the audio frequency output transducer (speaker) of the EUT.
- The grid is in a reference plane, which is defined as the planar area that contains the highest point in the area of the phone that normally rests against the user's ear. It is parallel to the centerline of the receiver of the EUT and is defined by the points of the receiver-end of the EUT, which, in normal handset use, rest against the ear.
- The measurement plane is parallel to, and 1.5 cm in front of, the reference plane.

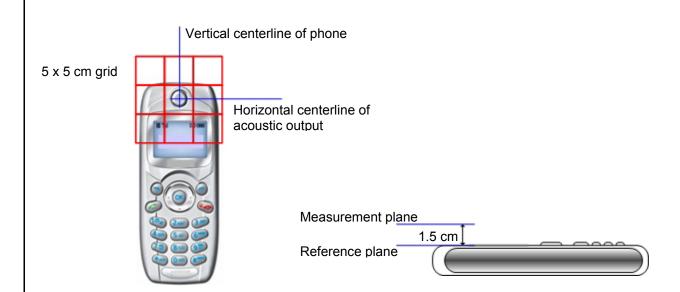


Figure 6.2 – Measurement Reference and Plane

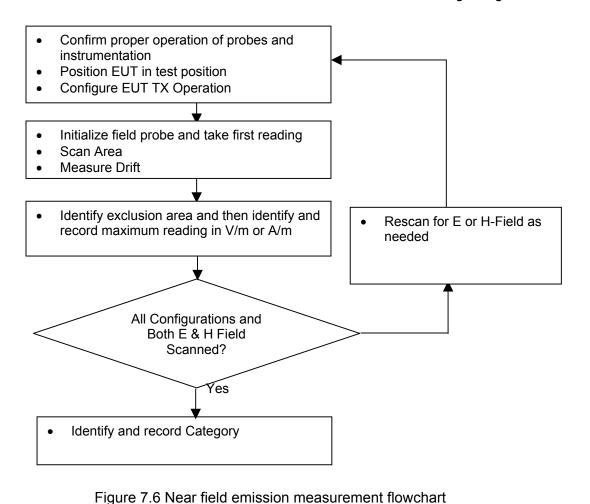


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6.3 RF Emissions Measurement Procedures

Flowchart below shows the near field emission measurement:

- 1. The center of the probe was scan to the edges of the grid. Accordingly the total area covered by the outside edge of the probe was the 5 cm by 5 cm area, increased by half (½) the probe diameter on all sides.
- 2. The nearest point on the probe measurement element(s) was held 1.0 cm from the EUT reference plane.
- 3. The probe element is that portion of the probe that is designed to receive and sense the field being measured.
- 4. The physical body of the probe housing was not used when setting this 1.0 cm distance as this would place the sensing elements at an indeterminate distance from the reference plane.
- 5. The step size of the scan is set to 5 mm or less.
- 6. Up to three blocks were excluded for each field measurement.
 - The center block containing the EUT output was not excluded.
 - A maximum of five blocks were excluded for both E- and H-field measurements for the EUT output being measured. Stated differently, the center sub-grid or block and 3 other blocks were common to both the E- and H-field measurements for a given grid.





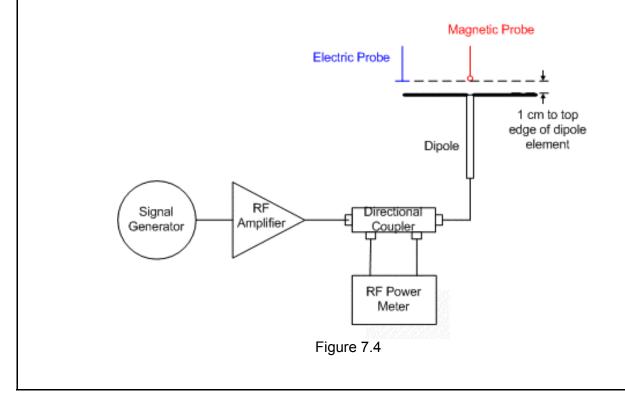
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PROBE MODULATION FACTOR (PMF)

7.1 PMF Measurement Procedures

A calibration was made of the modulation response of the probe and its instrumentation chain. This calibration was performed with the field probe, attached to its instrumentation. The response of the probe system to a CW field at the frequency of interest is compared to its response to a modulated signal with equal peak amplitude to that of a CW signal. The field level of the test signals shall be more than 10 dB above the ambient level and the noise floor of the instrumentation being used. The ratio of the CW reading to that taken with a modulated reading was applied to the DUT measurements. The measurement procedures are as following:

- 1. Fix the field probe in a set location relative to the dipole antenna, as illustrated in Figure 7.4.
- 2. Setup the wireless device (EUT) with intended signal at the intended measurement frequency.\
- 3. Record the reading of the probe measurement system.
- 4. Replace the wireless device with a RF signal generator producing an unmodulated CW signal and set to the wireless device operating frequency.
- 5. Set the peak power of the unmodulated signal to equal that recorded from the wireless device
- 6. Record the reading of the probe measurement system of the unmodulated CW signal.
- 7. The ratio of probe reading (CW) in step 6 to the probe reading (EUT) in step 3 is the modulation factor.





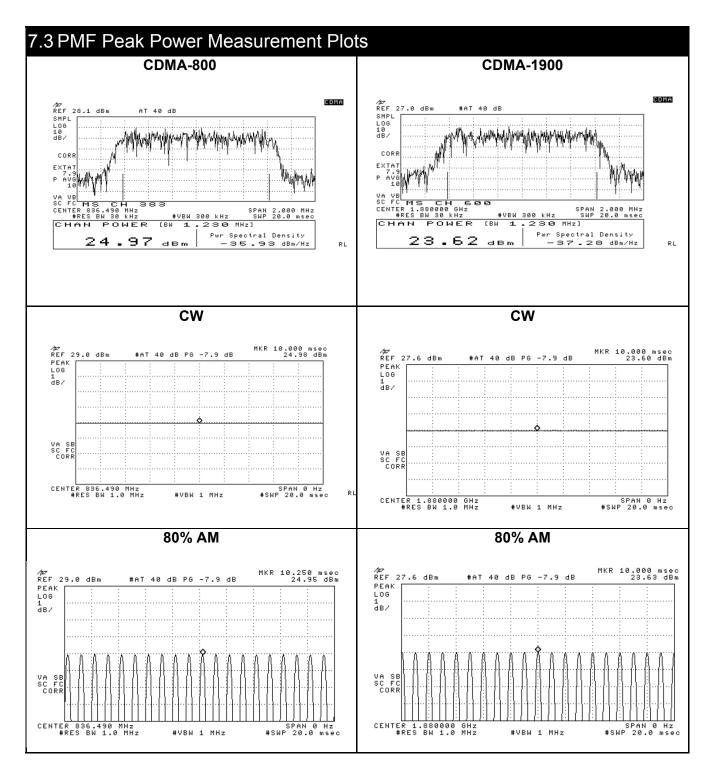
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7.2 PMF Test Results

The modulation factors obtained by above method shall be applied to readings taken of the actual WD, in order to obtain an accurate peak field reading.

wd, in order to obtain an accurate peak field reading.								
	E-Field							
Frequency (MHz)	Peak Power (dBm)	Protocol	Protocol Reading (V/m)	Modulation Factor				
835	24.98	CW	103.9					
	24.97	CDMA (full rate)	106.3	0.98				
	24.95	AM	66.54	1.56				
1880	23.60	CW	70.76					
	23.62	CDMA (full rate)	73.12	0.97				
	23.63	AM	46.97	1.51				
		H-Field						
Frequency (MHz)	Peak Power (dBm)	Protocol	Protocol Reading (A/m)	Modulation Factor				
835	24.97	CW	0.312					
	24.95	CDMA (full rate)	0.319	0.98				
	24.94	AM	0.206	1.51				
1880	23.82	CW	0.294					
	23.81	CDMA (full rate)	0.305	0.96				
	23.83	AM	0.189	1.56				







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EMISSION DATA EXTRACTION AND POSTPROCESSING

At the end of the measurements, the DASY4 system automatically evaluates the slot-averaged results, exclusion of the three highest subgrid, application of the AWF factor per ANSI-C63.19 requirements.

The following AWF factors were used for the standard transmission protocols:

Standard	Technology	AWF
TIA/EIA/IS-2000	CDMA	0
TIA/EIA-136	TDMA (50 Hz)	0
J-STD-007	GSM (217)	-5
T1/T1P1/3GPP	UMTS (WCDMA)	0
iDEN™	TDMA(22 and 11 Hz)	0

Table 8.1 Articulation Weighting Factor (AWF)

All DASY4 measurements are in RMS values. The Dasy4 system incorporates the crest factor of the signal in the computation of the RMS values. Although the software also has the capability to estimate the peak field by applying a square root of the crest factor value to the readings, the probe modulation factor was applied manually instead per ANSI C63.19 in the measurement tables in this report using equation:

Peak Field = (DASY4 reading) x PMF

where DASY4 reading = measurement from DASY4 in V/m or A/m PMF = Probe Modulation Factor in linear unit



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MEASUREMENT UNCERTAINTY

Table 8.1 shows the uncertainty budget for HAC free field assessment according to ANSI C63.19-2007. The budget is valid for the frequency range 800 MHz - 3 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be smaller.

Uncertainty Description	Uncert . Value (± %)	Prob Dist.	Div.	C _i (E)	C _i (H)	Stand. Uncert (E) (±%)	Stand. Uncert (H) (±%)		
Measurement system	(= 13)								
Probe calibration	5.1	N	1	1	1	5.1	5.1		
Axial isotropy of the probe	4.7	R	√3	1	1	2.7	2.7		
Sensor displacement	16.5	R	√3	1	0.14 5	9.5	1.4		
Boundary effects	2.4	R	√3	1	1	1.4	1.4		
Probe linearity	4.7	R	√3	1	1	2.7	2.7		
Scaling to Peak Envelope Power	2.0	R	√3	1	1	1.2	1.2		
System Detection limit	tem Detection limit 1.0 R $\sqrt{3}$ 1 1					0.6	0.6		
Readout electronics	0.3	N	1	1	1	0.3	0.3		
Response time	0.8	R	√3	1	1	0.5	0.5		
Integration time	2.6	R	√3	1	1	1.5	1.5		
RF ambient conditions	3.0	R	√3	1	1	1.7	1.7		
RF Reflections	12	R	√3	1	1	6.9	6.9		
Probe Positioner	1.2	R	√3	1	0.67	0.7	0.5		
Probe positioning	4.7	R	√3	1	0.67	2.7	1.8		
Extrap. and integration	1.0	R	√3	1	1	0.6	0.6		
Test Sample Related									
Device positioning vertical	4.7	R	√3	1	0.67	2.7	1.8		
Device Positioning Lateral	1.0	R	√3	1	1	0.6	0.6		
Device Holder and Phantom	2.4	R	√3	1	1	1.4	1.4		
Power drift 5.0 R $\sqrt{3}$ 1 1					1	2.9	2.9		
Phantom and Setup Related									
Phantom thickness	2.4	R	√3	1	0.67	1.4	0.9		
	Combined Standard Uncertainty:								
Extended S						29.4	21.8		
Extended	Standard	Uncert	ainty o	n Field	(k=2):	14.7	10.9		

N: Normal R: Rectangular

Table 9.1 Worst-Case uncertainty budget for HAC free field assessment



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10 RF EMISSIONS TESTS

10.1 Emission Limits

FCC: § 20.19, ANSI C63.19-2007

IC:

Table 10.1 shows the M-rating criteria from ANSCI C63.19. All digital transmission modes in all frequency bands contained in a HAC phone must meet M3 or M4 levels.

Near Field	Wireless Device RF Parameters [AWF = 0]					
Catagony	E-Field E	missions	H-Field	Emissions		
Category	dB(V/m) Peak	V/m Peak	dB(A/m) Peak	V/m Peak		
Freq < 960 MHz						
M1	56.0 to 61.0 631.0 to 1122.0		5.6 to 10.6	1.91 to 3.39		
M2	51.0 to 56.0	354.8 to 631.0	0.6 to 5.6	1.07 to 1.91		
М3	46.0 to 51.0	199.5 to 354.8	-4.4 to 0.6	0.60 to 1.07		
M4	< 46.0 < 199.5		< -4.4	< 0.60		
		Freq > 960 M	Hz			
M1	11 46.0 to 51.0 199.5 to 354.8		-4.4 to 0.6	0.60 to 1.07		
M2	41.0 to 46.0	112.2 to 199.5	-9.4 to -4.4	0.34 to 0.60		
M3	36.0 to 41.0	63.1 to 112.2	-14.4 to -9.4	0.19 to 0.34		
M4	< 36.0	< 63.1	< -14.4	< 0.19		

Table 10.1 RF Emission Limits



10.2 CDMA 800 Test Results									
Configurati	ion:	Open w	rith Standard I	Antenna	a:	Fixed			
				CDMA 80	00 E-Field				
Ch.	Bac	klight	Bluetooth	Power	Dasy4 Reading	PMF	Pe	eak Field	Category
#				dBm	V/m			A/m	M
1013		ON	OFF	24.97	36.7	1.00		36.7	4
383		ON	OFF	24.99	37.1	1.00		37.1	4
777		ON	OFF	24.73	43.9	1.00		43.9	4
777	(OFF	OFF	24.73	43.1	1.00		43.1	4
777 (360)		ON	OFF	24.73	42.3	1.00		42.3	4
777 (BT)		ON	ON	24.73	42.2	1.00		42.2	4
				CDMA 80	00 H-Field				
Ch.	Bac	klight	Bluetooth	Power	Dasy4 Reading	PMF	Pe	ak Field	Category
#				dBm	A/m		_	A/m	M
1013		ON	OFF	24.97	0.06	1.00		0.06	4
384		ON	OFF	24.99	0.065	1.00		0.065	4
777		ON	OFF	24.73	0.073	1.00		0.073	4
777	(OFF	OFF	24.73	0.073	1.00		0.073	4
777 (360)		ON	OFF	24.73	0.074	1.00		0.074	4
777 (BT)		ON	ON	24.73	0.074	1.00		0.074	4



10.3 CE	10.3 CDMA 1900 Test Results							
Configura	tion:	Oper	n with Standard	Antenn	a: Fixed	d		
				CDMA 190	0 E-Field			
Ch.	Back	light	Bluetooth	Power	Dasy4 Reading	PMF	Peak Field	Category
#				dBm	V/m		A/m	М
25	10	V	OFF	24.48	30.4	1.00	30.4	4
600	01	V	OFF	24.56	30.8	1.00	30.8	4
1175	10	V	OFF	24.46	24.3	1.00	24.3	4
25	OF	F	OFF	24.48	30.8	1.00	30.8	4
25 (360)	10	V	OFF	24.48	30.7	1.00	30.7	4
25 (BT)	10	V	ON	24.48	29.6	1.00	29.6	4
				CDMA 190	0 H-Field			
Ch.	Back	light	Bluetooth	Power before Test	Dasy4 Reading	PMF	Peak Field	Category
#				dBm	A/m		A/m	M
25	10	V	OFF	24.48	0.102	1.00	0.102	4
600	0	N	OFF	24.56	0.092	1.00	0.092	4
1175	10	N	OFF	24.46	0.077	1.00	0.077	4
25	OF	F	OFF	24.48	0.101	1.00	0.101	4
25 (360)	10	N	OFF	24.48	0.102	1.00	0.102	4
25 (BT)	10	N	ON	24.48	0.098	1.00	0.098	4



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10.4 Worst-Case Configuration Evaluation

The probe was rotated 360° at Azimuth axis in the worst case configuration. The rotation was performed at the location of maximum field strength in the included blocks.

CDMA 800 H-Field							
Config	uration:	Open with Standard Battery		Antenna:	Fixed		
Ch.	Backlight	Bluetooth	Conducted Power	Peak Field	PMF	Peak Field	Category
#			dBm	A/m		A/m	M
777	ON	OFF	24.73	42.3	1.00	42.3	4

CDMA 1900 E-Field							
Config	uration:	Open with Standard Battery		Antenna:	a: Fixed		
Ch.	Backlight	Bluetooth	Conducted Power	Peak Field	PMF	Peak Field	Category
#			dBm	V/m		V/m	M
25	ON	OFF	24.48	30.7	1.00	30.7	4

Data plots are shown in Appendix C



APPENDIX A: PROBE CALIBRATION CERTIFICATION

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerlscher Kalibrierdienst
C Service sulsse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA

Multilateral Agreement for the recognition of calibration certificates

Client

Kyocera USA

Certificate No: ER3-2341 Mar09

Accreditation No.: SCS 108

Object	ER3DV6 - SN:2	3/1	
, or other states of the state	Harris Douglas Harris College		
Calibration procedure(s)	QA CAL-02.v5 Calibration proc evaluations in a	edure for E-field probes optimized F	for close near field
Calibration date:	March 10, 2009		
Condition of the calibrated item	In Tolerance		
The measurements and the unc	ertainties with confidence	tional standards, which realize the physical uniprobability are given on the following pages and only facility: environment temperature $(22 \pm 3)^{\circ}$ C	d are part of the certificate.
Calibration Equipment used (M8	TE critical for calibration)		
3.3	TE critical for calibration)	Cal Date (Certificate No.)	Scheduled Calibration
Primary Standards		Cal Date (Certificate No.) 1-Apr-08 (No. 217-00788)	Apr-09
Primary Standards Power meter E4419B	ID#		
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A	ID# GB41293874	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788)	Apr-09 Apr-09 Apr-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c)	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865)	Apr-09 Apr-09 Apr-09 Jul-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b)	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00787)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b)	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00787) 1-Jul-08 (No. 217-00866)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00787) 1-Jul-08 (No. 217-00866) 1-Oct-08 (No. ER3-2328_Oct08)	Apr-09 Apr-09 Apr-09 Jul-09 Jul-09 Oct-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b)	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00787) 1-Jul-08 (No. 217-00866)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 20 dB Attenuator Reference Probe ER3DV6 DAE4	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00787) 1-Jul-08 (No. 217-00866) 1-Oct-08 (No. ER3-2328_Oct08)	Apr-09 Apr-09 Apr-09 Jul-09 Jul-09 Oct-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6 DAE4	ID# GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328 SN: 789	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00867) 1-Jul-08 (No. 217-00866) 1-Oct-08 (No. ER3-2328_Oct08) 19-Dec-08 (No. DAE4-789_Dec08)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09 Oct-09 Dec-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6 DAE4 Secondary Standards RF generator InP 8648C	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328 SN: 789 ID #	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00867) 1-Jul-08 (No. 217-00866) 1-Oct-08 (No. ER3-2328_Oct08) 19-Dec-08 (No. DAE4-789_Dec08) Check Date (in house)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09 Oct-09 Dec-09 Scheduled Check
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6 DAE4 Secondary Sandards RF generator IsP 8648C Network Analyzer HP 8753E	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328 SN: 789 ID # U\$3642U01700 U\$37390585 Name	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00788) 1-Jul-08 (No. 217-00787) 1-Jul-08 (No. 217-00865) 1-Oct-08 (No. ER3-2328_Oct08) 19-Dec-08 (No. DAE4-789_Dec08) Check Date (in house) 4-Aug-99 (in house check Oct-07) 18-Oct-01 (in house check Oct-08)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09 Oct-09 Dec-09 Scheduled Check In house check: Oct-09
Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6 DAE4 Reference Pro	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328 SN: 789 ID # US3642U01700 US37390585	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00865) 31-Mar-08 (No. 217-00867) 1-Jul-08 (No. 217-00866) 1-Oct-08 (No. ER3-2328_Oct08) 19-Dec-08 (No. DAE4-789_Dec08) Check Date (in house) 4-Aug-99 (in house check Oct-07) 18-Oct-01 (in house check Oct-08)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09 Oct-09 Dec-09 Scheduled Check In house check: Oct-09 In house check: Oct-09
Calibration Equipment used (M8 Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Reference 30 dB Attenuator Reference Probe ER3DV6 DAE4 Secondary Sændards RF generator HP 8648C Network Analyzer HP 8753E Calibrated by:	ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: S5129 (30b) SN: 2328 SN: 789 ID # U\$3642U01700 U\$37390585 Name	1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Apr-08 (No. 217-00788) 1-Jul-08 (No. 217-00788) 1-Jul-08 (No. 217-00787) 1-Jul-08 (No. 217-00865) 1-Oct-08 (No. ER3-2328_Oct08) 19-Dec-08 (No. DAE4-789_Dec08) Check Date (in house) 4-Aug-99 (in house check Oct-07) 18-Oct-01 (in house check Oct-08)	Apr-09 Apr-09 Apr-09 Jul-09 Apr-09 Jul-09 Oct-09 Dec-09 Scheduled Check In house check: Oct-09 In house check: Oct-09

Certificate No: ER3-2341_Mar09

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Applicant: Kyocera FCC ID: V65SCP-3810 CT-V65-20RF-0509-R0 Report #:

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst s Service suisse d'étalonnage C Servizio svizzero di taratura s Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client

Certificate No: H3-6123 Aug08

Accreditation No.: SCS 108

Kyocera USA (cyneistage(c)necitalia(cynei H3DV6 - SN:6123 Object QA CAL-03.v5 Calibration procedure(s) Calibration procedure for H-field probes optimized for close near field evaluations in air August 18, 2008 Calibration date: Condition of the calibrated item This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%. Calibration Equipment used (M&TE critical for calibration) Scheduled Calibration Primary Standards ID# Cal Date (Certificate No.) GB41293874 Power meter E4419B 1-Apr-08 (No. 217-00788) Apr-09 Power sensor E4412A MY41495277 1-Apr-08 (No. 217-00788) Арг-09 Apr-09 Power sensor E4412A MY41498087 1-Apr-08 (No. 217-00788) Reference 3 dB Attenuator SN: S5054 (3c) 1-Jul-08 (No. 217-00865) Jul-09 Reference 20 dB Attenuator SN: S5086 (20b) 31-Mar-08 (No. 217-00787) Apr-09 Reference 30 dB Attenuator SN: S5129 (30b) Jul-09 1-Jul-08 (No. 217-00866) SN: 6182 2-Oct-07 (No. H3-6182_Oct07) Oct-08 Reference Probe H3DV6 Apr-09 DAE4 SN: 654 24-Apr-08 (No. DAE4-654_Apr08) Secondary Standards ID# Check Date (in house) Scheduled Check US3642U01700 In house check: Oct-09 RF generator HP 8648C 4-Aug-99 (in house check Oct-07) In house check: Oct-08 US37390585 18-Oct-01 (in house check Oct-07) Network Analyzer HP 8753E Function Signature Name Technical Manager Calibrated by: Katja Pokovic Approved by: Issued: August 25, 2008 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: H3-6123_Aug08 Page 1 of 9



Applicant:	Kyocera
FCC ID:	V65SCP-3810
Report #:	CT-V65-20RF-0509-R0

12 APPENDIX B: SYSTEM VALIDATION DATA PLOTS

(See attachment)

13 APPENDIX C: TEST RESULTS/PLOTS

(See attachment)

14 APPENDIX D: PHOTO TEST SETUP

(see attachment)