



**RADIATED SPURIOUS EMISSIONS PORTIONS OF
FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
CERTIFICATION TEST REPORT**

FOR

DUAL BAND CDMA WITH BLUETOOTH

MODEL NUMBER: SCP-3810

FCC ID: V65SCP-3810

REPORT NUMBER: 09U12612-2, Revision A

ISSUE DATE: JUNE 09, 2009

Prepared for

**KYOCERA CORPORATION
C/O KYOCERA COMMUNICATION INC
10300 CAMPUS POINT DRIVE
SAN DIEGO, CA. 92121**

Prepared by

**COMPLIANCE CERTIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	06/02/09	Initial Issue	T. Chan
A	06/09/09	Revised model number and company name.	A. Zaffar

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. CALIBRATION AND UNCERTAINTY	5
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	5
4.2. <i>SAMPLE CALCULATION</i>	5
4.3. <i>MEASUREMENT UNCERTAINTY</i>	5
5. EQUIPMENT UNDER TEST	6
5.1. <i>DESCRIPTION OF EUT</i>	6
5.2. <i>MAXIMUM OUTPUT POWER</i>	6
5.3. <i>SOFTWARE AND FIRMWARE</i>	7
5.4. <i>WORST-CASE CONFIGURATION AND MODE</i>	7
5.5. <i>DESCRIPTION OF TEST SETUP</i>	8
6. TEST AND MEASUREMENT EQUIPMENT	10
7. LIMITS AND RESULTS	11
7.1. <i>RADIATED OUTPUT POWER</i>	11
7.2. <i>FIELD STRENGTH OF SPURIOUS RADIATION</i>	14
8. SETUP PHOTOS	17

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA CORPORATION
C/O KYOCERA COMMUNICATION INC
10300 CAMPUS POINT DRIVE
SAN DIEGO, CA. 92121

EUT DESCRIPTION: DUAL BAND CDMA CELL PHONE WITH BLUETOOTH

MODEL: SCP-3810

SERIAL NUMBER: 3810E017

DATE TESTED: MAY 29 – JUNE 02, 2009

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
Radiated emissions portions of FCC PART 22H, 24E,	Pass

Compliance Certification Services, Inc. (CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:



THU CHAN
EMC MANAGER
COMPLIANCE CERTIFICATION SERVICES

Tested By:



VIEN TRAN
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603C, FCC CFR 47 Part 2, FCC CFR 47 Part 22H, 24E.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamplifier Gain (dB)}$$

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a dual band CDMA cell phone with Bluetooth. The radio module is manufactured by Sanyo Co.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum ERP & EIRP output powers as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low CH - 824.70	CDMA2000	29.7	933.3
Mid CH - 836.52		29.3	851.1
High CH - 848.81		26.0	398.1

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1851	CDMA2000	30.2	1047.1
Mid CH - 1880		30.7	1174.9
High CH - 1909		27.6	575.4

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT has been evaluated at X, Y, Z-axis, and AC/DC adapter. The highest measured output power was at X-Axis with AC/DC adapter and flip open condition for Cell and PCS bands.

PROCEDURE USED TO ESTABLISH TEST SIGNAL

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
CDMA2000 Mobil Test	B.10.11, L

1xRTT

- Call Setup > Shift & Preset
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > RC3 (Fwd3, Rvs3)
- FCH Service Option (SO) Setup > 55
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
> R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Cell Info > Cell Parameters > System ID (SID) > 4395
> Network ID (NID) > 0

Once "Active Cell" show "Connected" then change "Rvs Power Ctrl" from "Active bits" to "All Up bits" to get the maximum power.

Worst-case Measurement Result @ Low, Middle and High Channel

Worst-case Measurement Result for Low, Middle and High Channel under Radio Configuration RC3 and Service Option 55.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Sanyo	SCP-20ADT	1409B	N/A

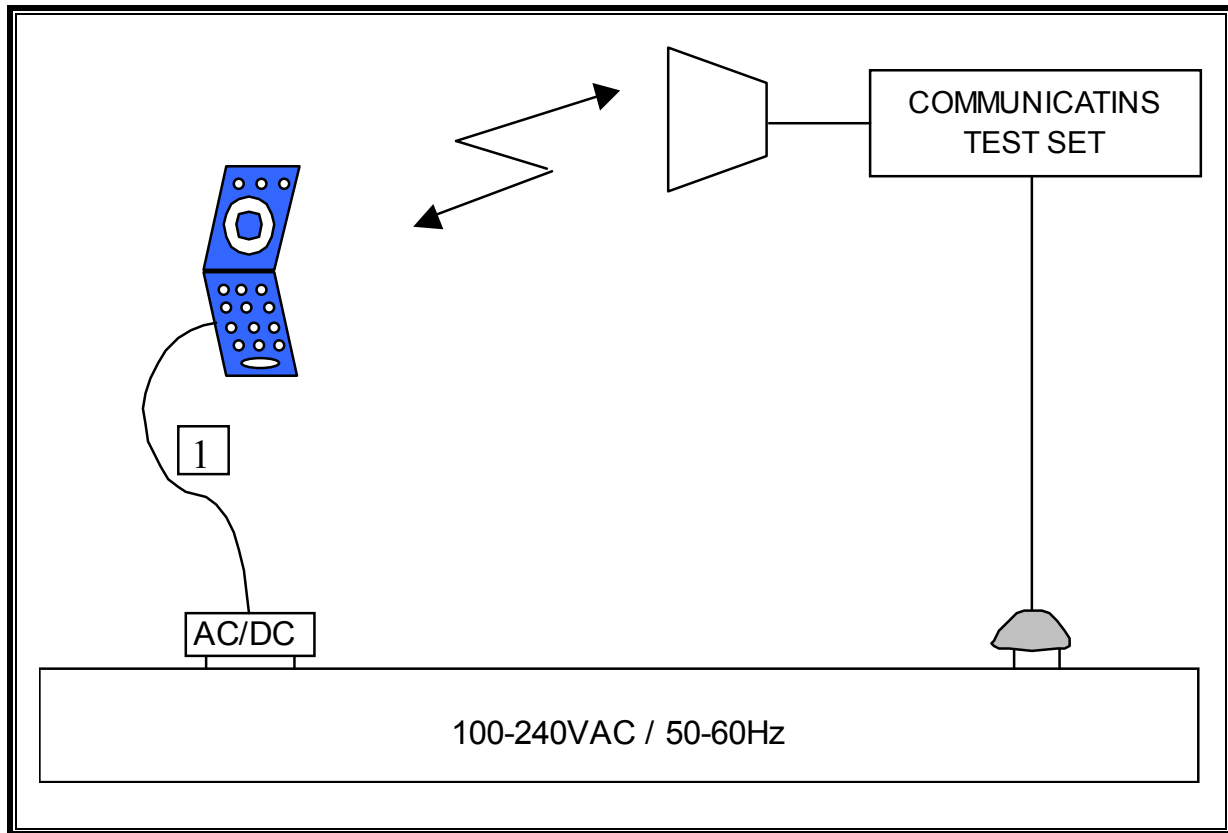
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Mini-USB	Un-Shielded	2.0 m	N/A

TEST SETUP

The EUT is a CDMA phone and is tested as a standalone configuration. Communications Test Set is used to link the device under test.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	08/05/09
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	02/11/10
Antenna, Horn, 18 GHz	ETS	3117	C01005	04/22/10
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Communications Test Set	R & S	CMU200	C001131	04/16/10
Communications Test Set	Agilent / HP	E5515C	C01086	06/16/10
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	10/08/09

7. LIMITS AND RESULTS

7.1. RADIATED OUTPUT POWER

LIMITS

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17

RESULTS

CELL BAND - OUTPUT POWER (ERP)

High Frequency Substitution Measurement Compliance Certification Services Chamber A							
Company:		CompTest					
Project #:		09U12612					
Date:		6/1/2009					
Test Engineer:		Vien Tran					
Configuration:		EUT with AC adapter and Earphone					
Mode:		CDMA, Cell_Low_Mid_High Channels					
Test Equipment:							
Receiving: Sunol T122, and 3m Chamber N-type Cable (Setup this one for testing EUT)							
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.							
f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel							
824.70	-16.0	V	33.1	17.1	38.5	-21.4	
824.70	-1.4	H	31.2	29.7	38.5	-8.7	
Mid Channel							
836.52	-11.1	V	33.1	22.0	38.5	-16.4	
836.52	-1.9	H	31.2	29.3	38.5	-9.1	
High Channel							
845.81	-12.8	V	33.1	20.3	38.5	-18.1	
845.81	-5.2	H	31.2	26.0	38.5	-12.4	
Rev. 1.24.7							

PCS BAND - OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services Chamber A							
Company:		CompTest					
Project #:		09U12612					
Date:		6/2/2009					
Test Engineer:		Vien Tran					
Configuration:		EUT with AC Adapter & Earphone					
Mode:		CDMA, PCS Band					
Test Equipment:							
Receiving: Horn T73, and Camber B SMA Cables							
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse							
f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Channel							
1.851	-9.7	V	39.9	30.2	33.0	-2.8	Peak
1.851	-11.0	H	40.1	29.2	33.0	-3.8	Peak
Mid Channel							
1.880	-9.2	V	39.9	30.7	33.0	-2.3	Peak
1.880	-12.6	H	40.1	27.6	33.0	-5.5	Peak
High Channel							
1.909	-12.3	V	39.9	27.6	33.0	-5.4	Peak
1.909	-13.1	H	40.1	27.0	33.0	-6.0	Peak
Rev. 1.24.7							

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 22.917 (b), FCC 24.238 (b)

RESULTS

CELL BAND - HARMONIC & SPUR (ERP)

Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: CompTest
 Project #: 09U12612
 Date: 6/2/2009
 Test Engineer: Vien Tran
 Configuration: EUT with AC Adapter & Earphone
 Mode:l CDMA, Cell Band

Chamber
 5m Chamber A

Pre-amplifer
 T144 8449B

Filter
 Filter 1

Limit
 FCC 22 TX

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low CH 824.7 MHz										
1.649	-40.4	V	3.0	36.8	38.2	1.0	-40.7	-13.0	-27.7	
1.649	-39.1	H	3.0	36.6	38.2	1.0	-39.7	-13.0	-26.7	
Mid CH 836.52 MHz										
1.673	-43.4	V	3.0	37.1	38.1	1.0	-43.5	-13.0	-30.5	
1.673	-41.9	H	3.0	36.8	38.1	1.0	-42.2	-13.0	-29.2	
High CH 848.31 MHz										
1.697	-46.2	V	3.0	37.4	38.1	1.0	-45.9	-13.0	-32.9	
1.697	-44.2	H	3.0	37.0	38.1	1.0	-44.3	-13.0	-31.3	
No other emissions were found within 20dB from the limit of the system noise up to 10th harmonic										
Rev. 03.03.09										

PCS BAND - HARMONIC & SPUR (EIRP)

Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: CompTest
 Project #: 09U12612
 Date: 6/2/2009
 Test Engineer: Vien Tran
 Configuration: EUT with AC Adapter & Earphone
 Mode: CDMA, PCS Band

Chamber

5m Chamber A

Pre-amplifier

T144 8449B

Filter

Filter 1

Limit

FCC 24 Tx

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low CH 1.851 GHz										
3.701	-52.9	V	3.0	44.9	36.8	1.0	-43.8	-13.0	-30.8	
3.701	-51.5	H	3.0	45.0	36.8	1.0	-42.3	-13.0	-29.3	
Mid CH 1.880 GHz										
3.760	-51.7	V	3.0	45.1	36.8	1.0	-42.4	-13.0	-29.4	
3.760	-53.7	H	3.0	45.2	36.8	1.0	-44.3	-13.0	-31.3	
High CH 1.9088 GHz										
3.818	-56.1	V	3.0	45.2	36.7	1.0	-46.6	-13.0	-33.6	
3.818	-55.0	H	3.0	45.3	36.7	1.0	-45.4	-13.0	-32.4	
No other emissions were detected within 20dB from the limit of the system noise up to 10th harmonic.										

Rev. 03.03.09