



**RADIATED SPURIOUS EMISSIONS PORTIONS OF
FCC CFR47 PART 22 SUBPART H
CERTIFICATION TEST REPORT
FOR
SINGLE-BAND 1xRTT CDMA PHONE WITH BLUETOOTH**

MODEL NUMBER: SA002

FCC ID: V65SA002

REPORT NUMBER: 10U13058-1, Revision A

ISSUE DATE: FEBRUARY 22, 2010

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>
--	02/09/10	Initial Issue	T. Chan
A	02/22/10	Revised company address	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>	6
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>	13
8. SETUP PHOTOS	15

1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: SINGLE-BAND 1XRTT CDMA PHONE WITH BLUETOOTH

MODEL: SA002

SERIAL NUMBER: SSAEP000148

DATE TESTED: FEBRUARY 04, 2010

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22H	PASS (Radiated Portion)

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.

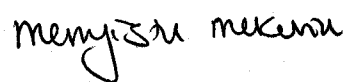
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. 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:



MENGISTU MEKURIA
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, and FCC CFR 47 Part 22.

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:

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

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

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 Bluetooth featured Single-band CDMA Phone that manufactured by Kyocera Corporations.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum ERP 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	27.3	537.0
Mid CH - 836.52		25.6	363.1
High CH - 848.31		25.3	338.8

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

The worst-position was the EUT with highest emissions. To determine the worst-case, the EUT was investigated for X, Y, and Z-Positions, and the worst position among X, Y, and Z with slide-out and AC/DC adapter, after the investigations, the worst-position was turned out to be a Z-position slide-out without AC/DC adapter.

PROCEDURE USED TO ESTABLISH TEST SIGNAL

3G-CDMA2000 1xRTT

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) > 2
> Network ID (NID) > 65535

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	KDDI	0203PQA	HS-XLA	N/A

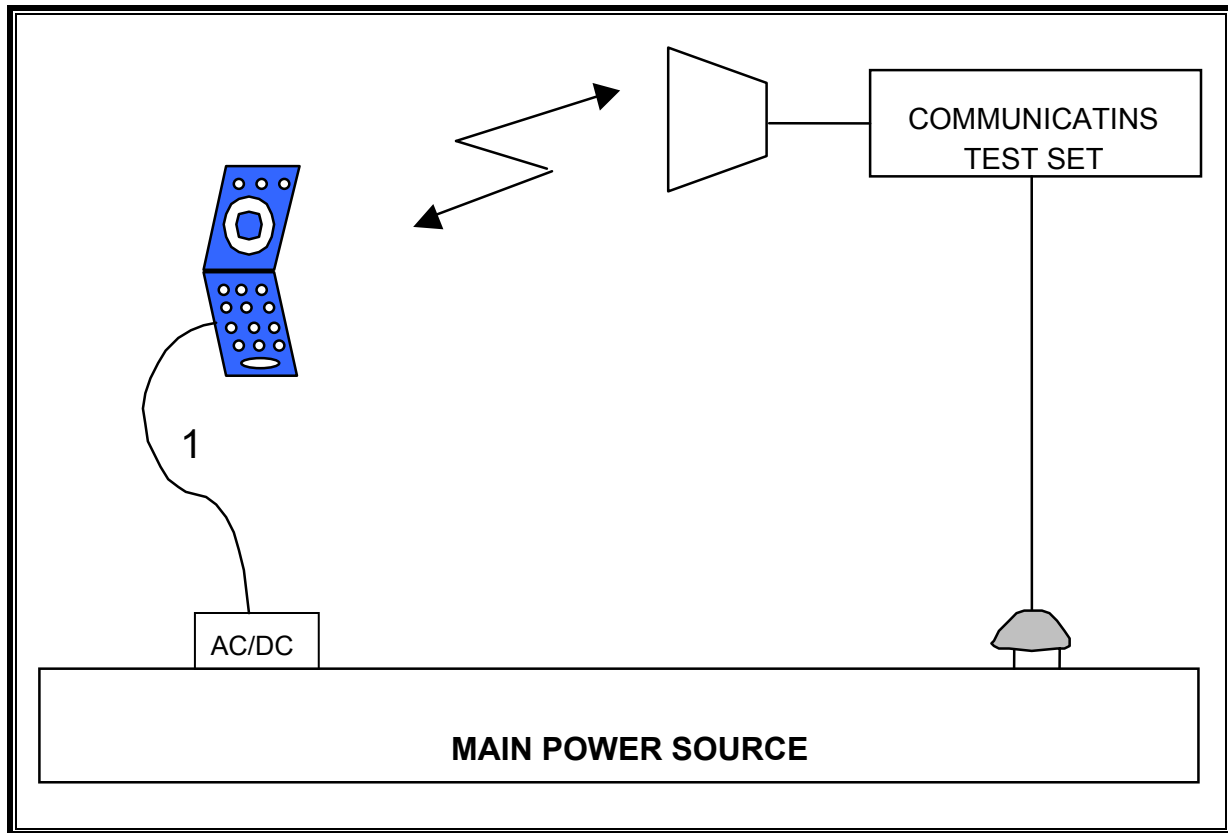
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Flat-Jack	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	08/04/10
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	12/16/10
Antenna, Horn, 18 GHz	EMCO	3115	C00945	07/29/10
Antenna, Horn, 18 GHz	EMCO	3115	C00943	07/29/10
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/14/10
Dipole	Speag	D900V2	NA	11/16/11
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689	CNR
Signal Generator	R & S	SMP04	C00953	02/16/11
Communications Test Set	Agilent / HP	E5515C	C01086	06/16/10
Spectrum Analyzer, 44 GHz	Agilent / HP	E4440A	C01179	08/24/10

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.

RSS-132 § 4.4 The maximum ERP shall be 6.3 Watts for mobile stations.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17, RSS-132.

RESULTS

CELL OUTPUT POWER (ERP)

High Frequency Substitution Measurement Compliance Certification Services Chamber A							
Company:	KYOCERA WIRELESS						
Project #:	10U13058						
Date:	2/4/2010						
Test Engineer:	MENGISTU MEKURIA						
Configuration:	STAND-ALONE EUT						
Mode:	TX, CDMA CELL BAND						
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
824.70	-7.5	V	34.8	27.3	38.5	-11.2	
824.70	-19.7	H	30.5	10.8	38.5	-27.6	
836.52	-7.5	V	33.1	25.6	38.5	-12.8	
836.52	-21.7	H	31.2	9.5	38.5	-28.9	
848.31	-6.9	V	32.1	25.3	38.5	-13.2	
848.31	-21.8	H	31.2	9.4	38.5	-29.1	
Rev. 1.24.7							

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (e) and §24.238 (a), RSS-132 § 4.5.1, (a) (i) & (b): 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), (g)(1)(2)(3), RSS-132,

RESULTS

CELL SPURIOUS & HARMONIC (ERP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: KYOCERA WIRELESS
Project #: 10U13058
Date: 2/4/2010
Test Engineer: MENGISTU MEKURIA
Configuration: STAND-ALONE EUT
Mode: TX, CDMA CELL BAND

Chamber

Pre-amplifier

Filter

Limit

5m Chamber A

T144 8449B

Filter 1

FCC PART 22

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 Channel (824.7 MHz)										
1.649	-58.1	H	3.0	36.6	38.2	1.0	-58.7	-13.0	-45.7	
1.649	-50.9	V	3.0	36.8	38.2	1.0	-51.2	-13.0	-38.2	
2.474	-60.1	V	3.0	41.7	37.5	1.0	-54.9	-13.0	-41.9	
Mid Channel (836.52 MHz)										
1.673	-54.8	H	3.0	36.8	38.1	1.0	-55.1	-13.0	-42.1	
1.673	-50.9	V	3.0	37.1	38.1	1.0	-50.9	-13.0	-37.9	
2.510	-61.2	V	3.0	41.8	37.5	1.0	-55.8	-13.0	-42.8	
Hi Channel (848.3 MHz)										
1.697	-57.8	H	3.0	37.0	38.1	1.0	-57.8	-13.0	-44.8	
1.697	-53.1	V	3.0	37.4	38.1	1.0	-52.8	-13.0	-39.8	
2.545	-61.5	V	3.0	42.0	37.5	1.0	-56.0	-13.0	-43.0	

Note: No other emissions were detected greater than -50 dBm to the limit

Rev. 03.03.09