



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

SINGLE BAND CDMA WITH BLUETOOTH + EDR

MODEL NUMBER: SA001

FCC ID: V65SA001

REPORT NUMBER: 09U12730-1

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Prepared for

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

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
<u>---</u>	<u>07/23/09</u>	<u>Initial Issue</u>	<u>T. Chan</u>

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: SINGLE BAND CDMA WITH BLUETOOTH + EDR

MODEL NUMBER: SA001

SERIAL NUMBER: SSAE1000010

DATE TESTED: JULY 22 AND 23, 2009

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.

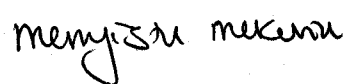
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section.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

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) +
Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 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 Corporation.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum ERP peak 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	23.9	245.5
Mid CH - 836.52		25.0	316.2
High CH - 848.31		24.5	281.8

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

The worst-case is, EUT with highest emissions. To determine the worst-case, the EUT was investigated in X, Y, and Z orientations for both slide in and out, and the worst-case among the above orientations with AC/DC adapter. After the investigations, the worst-position was turned out to be a slide out Y-position without an AC 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) > 65535
> Network ID (NID) > 2

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	HS-YDA	0203PQA	DoC

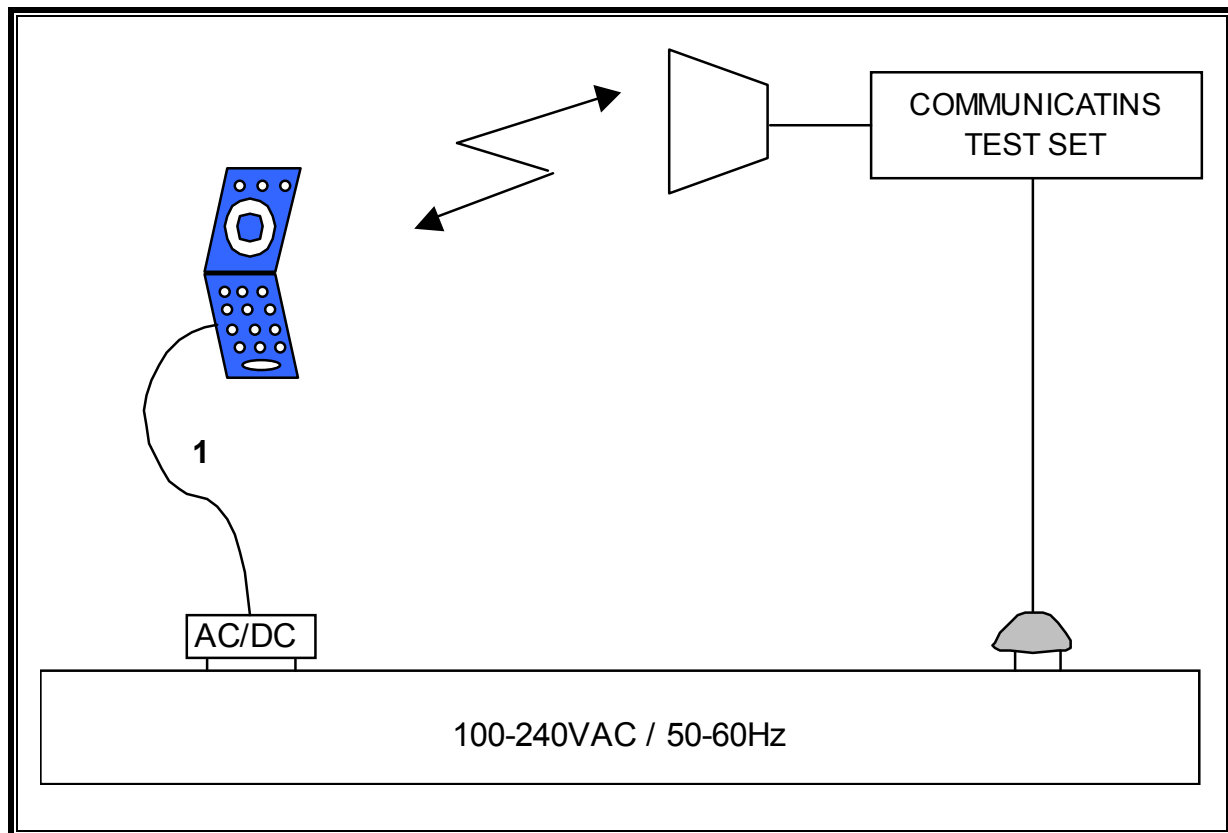
I/O CABLES

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	C01063	02/04/10
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01016	01/14/10
Antenna, Horn, 18 GHz	EMCO	3115	C00783	01/29/10
Antenna, Horn, 18 GHz	EMCO	3115	C00943	01/29/10
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	88447	08/28/10
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01161	08/06/09

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.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17

RESULTS

CELL OUTPUT POWER (ERP)

High Frequency Substitution Measurement Compliance Certification Services Chamber B							
Company:		KYOCERA CORPORATION					
Project #:		09U12731					
Date:		7/22/2009					
Test Engineer:		MENGISTU MEKURIA					
Configuration:		EUT ALONE					
Mode:		TX, CDMA CELL BAND					
Test Equipment:							
Receiving: SunoI T130, 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	-15.4	V	32.6	17.2	38.5	-21.3	
824.70	-6.43	H	30.4	23.9	38.5	-14.5	
836.52	-14.1	V	32.7	18.6	38.5	-19.8	
836.52	-5.79	H	30.7	25.0	38.5	-13.5	
848.31	-14.2	V	32.0	17.8	38.5	-20.7	
848.31	-6.3	H	30.8	24.5	38.5	-14.0	
Rev. 1.24.7							

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (e): 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)

RESULTS

CELL SPURIOUS & HARMONIC (ERP)

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement										
Company:		KYOCERA CORPORATION								
Project #:		09U12730								
Date:		7/22/2009								
Test Engineer:		MENGISTU MEKURIA								
Configuration:		EUT ALONE								
Mode:		TX, CELL CDMA MODE								
Chamber		Pre-amplifier			Filter			Limit		
5m Chamber B		T145 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 CH. (824.70 MHz)										
1.649	-52.2	H	3.0	37.2	35.5	1.0	-49.5	-13.0	-36.5	
2.474	-48.3	H	3.0	39.8	35.4	1.0	-42.8	-13.0	-29.8	
3.299	-60.7	H	3.0	44.0	35.5	1.0	-51.3	-13.0	-38.3	
4.124	-62.8	H	3.0	46.7	35.2	1.0	-50.4	-13.0	-37.4	
1.649	-52.0	V	3.0	36.8	35.5	1.0	-49.8	-13.0	-36.8	
2.474	-44.8	V	3.0	41.7	35.4	1.0	-37.5	-13.0	-24.5	
3.299	-61.6	V	3.0	44.1	35.5	1.0	-52.0	-13.0	-39.0	
4.124	-60.2	V	3.0	46.2	35.2	1.0	-48.3	-13.0	-35.3	
MIC CH. (836.52 MHz)										
1.673	-53.3	H	3.0	37.5	35.5	1.0	-50.4	-13.0	-37.4	
2.510	-42.4	H	3.0	39.9	35.4	1.0	-36.9	-13.0	-23.9	
3.346	-61.8	H	3.0	44.1	35.5	1.0	-52.2	-13.0	-39.2	
4.183	-63.2	H	3.0	46.8	35.2	1.0	-50.6	-13.0	-37.6	
1.673	-52.3	V	3.0	37.1	35.5	1.0	-49.7	-13.0	-36.7	
2.510	-40.7	V	3.0	41.8	35.4	1.0	-33.3	-13.0	-20.3	
3.346	-59.0	V	3.0	44.3	35.5	1.0	-49.3	-13.0	-36.3	
4.183	-59.4	V	3.0	46.3	35.2	1.0	-47.3	-13.0	-34.3	
HI CH. (848.31 MHz)										
1.697	-51.4	H	3.0	37.7	35.5	1.0	-48.2	-13.0	-35.2	
2.545	-47.4	H	3.0	40.1	35.4	1.0	-41.7	-13.0	-28.7	
3.393	-61.3	H	3.0	44.3	35.5	1.0	-51.5	-13.0	-38.5	
4.242	-63.3	H	3.0	47.0	35.2	1.0	-50.6	-13.0	-37.6	
1.697	-49.6	V	3.0	37.4	35.5	1.0	-46.7	-13.0	-33.7	
2.545	-45.3	V	3.0	42.0	35.4	1.0	-37.7	-13.0	-24.7	
3.393	-58.9	V	3.0	44.4	35.5	1.0	-49.0	-13.0	-36.0	
4.242	-62.2	V	3.0	46.4	35.2	1.0	-50.0	-13.0	-37.0	
Rev. 03.03.09										