



**RADIATED SPURIOUS EMISSIONS PORTIONS OF
CLASS II PERMISSIVE CHANGE
FCC CFR47 PART 24 SUBPART E**

**CERTIFICATION TEST REPORT
FOR
SINGLE BAND 1xRTT CDMA PHONE**

FCC MODEL NUMBER: K33BIC-04 AND S1310

FCC ID: OVF-K33BIC04

REPORT NUMBER: 12U114461-1, Revision A

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Prepared for

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NVLAP LAB CODE 200065-0

Revision History

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---	06/21/12	Initial Issue	T. Chan
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA COMMUNICATIONS, INC.
8611 BALBOA AVENUE
SAN DIEGO, CA 92123, U.S.A

EUT DESCRIPTION: SINGLE BAND 1XRTT CDMA PHONE

MODEL: K33BIC-04 AND S1310

SERIAL NUMBER: 268435459907099554

DATE TESTED: JUNE 21, 2012

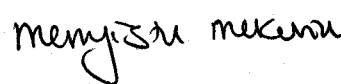
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 24E	PASS

Compliance Certification Services, Inc. (UL 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 UL 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 UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:

Tested By:



THU CHAN
ENGINEERING MANAGER
UL CCS

MENGISTU MEKURIA
EMC ENGINEER
UL CCS

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 Part 24.

3. FACILITIES AND ACCREDITATION

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

UL 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 Single Band CDMA Phone that is manufactured by Kyocera Communications, Inc.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum Average EIRP output powers as follows:

Part 24 PCS Band

Frequency range (MHz)	Modulation	Average EIRP			
		dBm	mW		
1851.25 – 1908.75	CDMA 2000	23.16	207.0		

5.1. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

Changes filed under this application are PCB board, LCD type, and RF power amplifier due to component shortages.

5.2. SOFTWARE AND FIRMWARE

The EUT is linked with Rohde & Schwarz Communication Test Set.

5.3. WORST-CASE CONFIGURATION AND MODE

The worst-case is defined EUT with highest emissions. To determine the worst-case, the EUT was investigated for X, Y, and Z-orientations, and the worst orientation among X, Y, or Z with AC/DC adapter and headset, after the investigations, the worst-case was turned out to be X-Position with AC Adapter and with headset.

PROCEDURE USED TO ESTABLISH TEST SIGNAL

3G-CDMA2000 1xRTT

This procedure assumes the Agilent E5515C 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) > 4145
> Network ID (NID) > 0
> Initial Registration Channel > 1125 (PCS)

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.

5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Kyocera	TXTVL1048	1	NA
Headset	Generic	NA	NA	NA

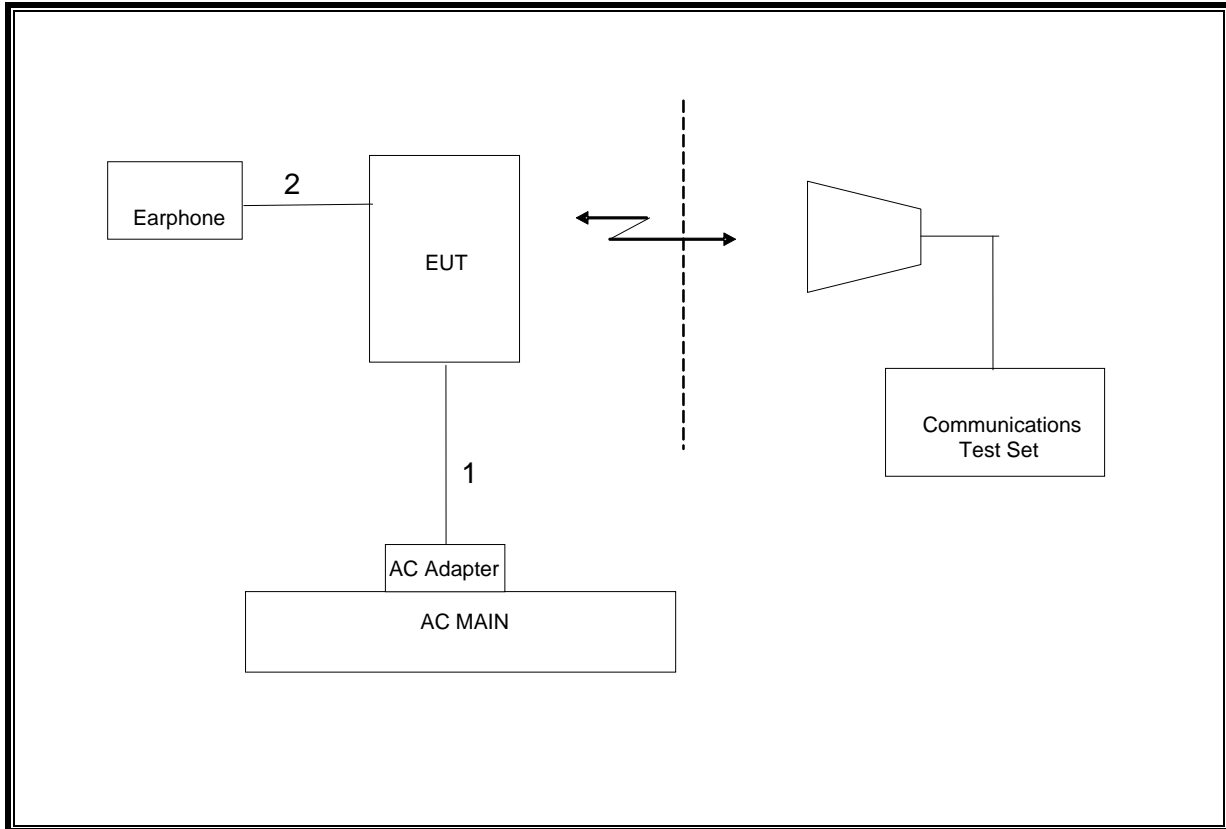
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	USB	Un-Shielded	1.8m	N/A
2	Mic	1	Earphone	Un-shielded	1.5m	Mic on Cable

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
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	03/22/13
Signal Generator, 20 GHz	Agilent / HP	83732B	C00774	07/14/12
Communication Test Set	Agilent / HP	E5515C	C01086	06/20/13
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	07/12/12
Antenna, Horn, 18 GHz	EMCO	3115	C01218	09/01/12
Antenna, Horn, 18 GHz	EMCO	3115	C00943	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR

7. LIMITS AND RESULTS

7.1. RADIATED OUTPUT POWER

LIMITS

24.232(b) & RSS133 § 6.4 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 & FCC 24.238 (b), (g) (1)(2)(3).

RESULTS

PCS AVERAGE OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
Company:		KYOCERA						
Project #:		12U14461						
Date:		6/212012						
Test Engineer:		MENGISTU MEKURIA						
Configuration:		EUT WITH HEADSET AND AC ADAPTER						
Mode:		TX, PCS BAND CDMA 2000, 1xRTT						
Test Equipment:								
Receiving: Horn T59, and Camber B SMA Cables								
Substitution: Horn T217 Substitution, 4ft SMA Cable (44839001) Warehouse								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.851	9.1	V	0.85	8.00	16.23	33.0	-16.8	
1.851	15.4	H	0.85	8.00	22.58	33.0	-10.4	
1.880	8.5	V	0.85	8.10	15.78	33.0	-17.2	
1.880	14.9	H	0.85	8.10	22.14	33.0	-10.9	
1.909	8.7	V	0.85	8.14	16.03	33.0	-17.0	
1.909	15.9	H	0.85	8.14	23.16	33.0	-9.8	
Rev. 3.17.11								

PCS PEAK OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
Company:		KYOCERA						
Project #:		12U14461						
Date:		6/212012						
Test Engineer:		MENGISTU MEKURIA						
Configuration:		EUT WITH HEADSET AND AC ADAPTER						
Mode:		TX, PCS BAND CDMA 2000, 1xRTT						
Test Equipment:								
Receiving: Horn T59, and Camber B SMA Cables								
Substitution: Horn T217 Substitution, 4ft SMA Cable (44839001) Warehouse								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.851	15.4	V	0.85	8.00	22.54	33.0	-10.5	
1.851	21.4	H	0.85	8.00	28.57	33.0	-4.4	
1.880	14.9	V	0.85	8.10	22.17	33.0	-10.8	
1.880	21.2	H	0.85	8.10	28.49	33.0	-4.5	
1.909	14.5	V	0.85	8.14	21.82	33.0	-11.2	
1.909	21.8	H	0.85	8.14	29.11	33.0	-3.9	
Rev. 3.17.11								

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§24.238 (a), RSS-133 § 6.5.1 (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 24.238 (b), (g) (1)(2)(3).

RESULTS

PCS Spurious & Harmonic (EIRP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: KYOCERA
Project #: 12U14461
Date: 6/212012
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH HEADSET AND AC ADAPTER
Mode: TX, PCS BAND CDMA 2000, 1xRTT

Chamber
 5m Chamber B

Pre-amplifier
 T145 8449B

Filter
 Filter 1

Limit
 Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25MHz									
3.703	-15.9	V	3.0	35.4	1.0	-50.3	-13.0	-37.3	
5.554	-19.9	V	3.0	35.4	1.0	-54.3	-13.0	-41.3	
3.703	-13.8	H	3.0	35.4	1.0	-48.1	-13.0	-35.1	
5.554	-18.9	H	3.0	35.4	1.0	-53.3	-13.0	-40.3	
Mid Ch, 1880.00MHz									
3.760	-16.5	V	3.0	35.3	1.0	-50.8	-13.0	-37.8	
5.640	-20.0	V	3.0	35.4	1.0	-54.4	-13.0	-41.4	
3.760	-15.0	H	3.0	35.3	1.0	-49.3	-13.0	-36.3	
5.640	-18.8	H	3.0	35.4	1.0	-53.2	-13.0	-40.2	
High Ch, 1908.75MHz									
3.818	-15.5	V	3.0	35.3	1.0	-49.8	-13.0	-36.8	
5.726	-19.9	V	3.0	35.4	1.0	-54.3	-13.0	-41.3	
3.818	-15.9	H	3.0	35.3	1.0	-50.2	-13.0	-37.2	
5.726	-17.7	H	3.0	35.4	1.0	-52.2	-13.0	-39.2	

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.