RADIATED SPURIOUS EMISSIONS PORTIONS OF

FCC CFR47 PART 90 SUBPART S

CERTIFICATION TEST REPORT
FOR

Dual Band 1xRTT CDMA with Bluetooth

MODEL NUMBER: E4255

FCC ID: V65E4255

REPORT NUMBER: 11U13905-4

ISSUE DATE: AUGUST 5, 2011

Prepared for

KYOCERA COMMUNICATIONS, INC.
9520 TOWNE CENTER DRIVE
SAN DIEGO, CA 92121, USA

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	08/05/11	Initial Issue	T. Chan

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA COMMUNICATIONS, INC.
9520 TOWNE CENTER DRIVE
SAN DIEGO, CA 92121, USA

EUT DESCRIPTION: Dual Band 1xRTT CDMA with Bluetooth

MODEL: E4255

SERIAL NUMBER: 2684354578167222935

DATE TESTED: AUGUST 1 - 4, 2011

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 90 Subpart S	PASS (Radiated Portion)

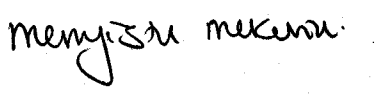
Compliance Certification Services, Inc. (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties 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. 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 UL CCS By:

THU CHAN
ENGINEERING MANAGER
UL CCS

Tested By:



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 47 Part 90 Subpart S.

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:

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 dual band CDMA Phone that manufactured by Kyocera Corporation.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak ERP output powers as follows:

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low CH - 817.90	CDMA2000	28.66	734.5
High CH - 823.10		30.84	1213.4

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent or Rohde & Schwarz 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 on X, Y, and Z Positions, and the worst position is determined to be at Y position with 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.

Application	Rev, License
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	Kyocera	SCP-31ADT	SSW 2001	N/A
Headset	N/A	N/A	N/A	N/A

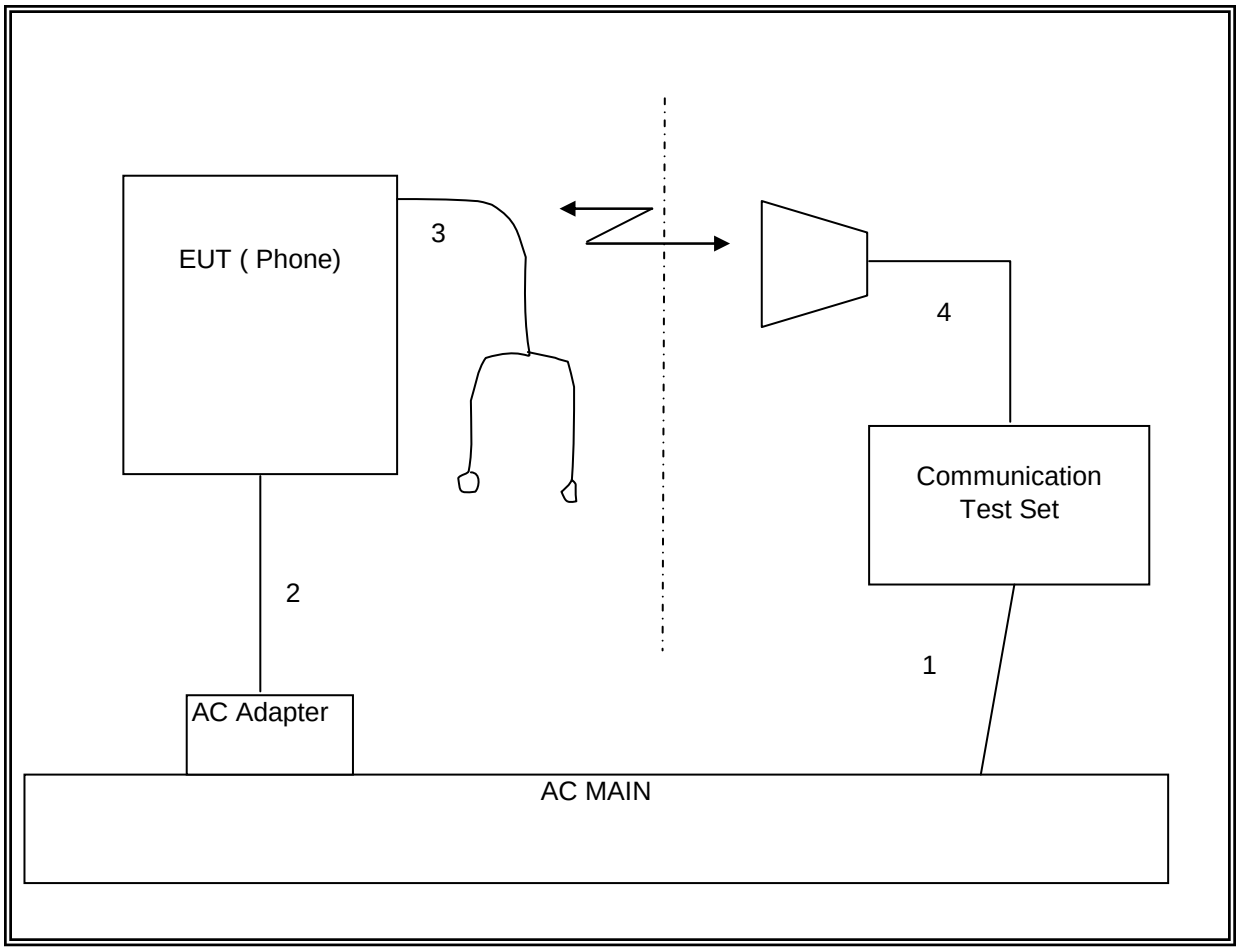
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	2m	NA
2	DC	1	DC	Un-shielded	2m	NA
3	Jack	1	Headset	Un-shielded	2m	NA
4	RF in/Out	1	Horn	Shielded	2m	NA

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 Date**	**Cal Due**
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	1/19/2011	4/28/2012
Communications Test Set	Rohde & Schwarz	CMU200	A0U268074	6/4/2011	CNR
Communications Test Set	Agilent / HP	E5515C	C01086	--	07/17/12
Antenna, Horn, 18 GHz	EMCO	3115	C00945	6/29/2011	6/29/2012
Antenna, Horn, 18 GHz	EMCO	3115	C01218	CNR	CNR
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	40371	07/16/12
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	7/12/2011	7/12/2012
Dipole	EMCO	3121C-DB4	00-22117	7/17/11	7/16/12
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	--	CNR	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02686	CNR	CNR
Signal Generator, 20 GHz	Agilent / HP	83732B	C00774	7/14/2010	7/14/2012

7. LIMITS AND RESULTS

7.1. RADIATED OUTPUT POWER

LIMITS

§ 90.635 Limitations on power and antenna height.

(a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.

(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

Table—Equivalent Power and Antenna Heights for Base Stations in the 851–869 MHz and 935–940 MHz Bands Which Have a Requirement for a 32 km (20 mi) Service Area Radius

Antenna height (ATT) meters (feet)	Effective radiated power (watts)[1,2,4]
Above 1,372 (4,500)	65
Above 1,220 (4,000) to 1,372 (4,500)	70
Above 1,067 (3,500) to 1,220 (4,000)	75
Above 915 (3,000) to 1,067 (3,500)	100
Above 763 (2,500) to 915 (3,000)	140
Above 610 (2,000) to 763 (2,500)	200
Above 458 (1,500) to 610 (2,000)	350
Above 305 (1,000) to 458 (1,500)	600
Up to 305 (1,000)	[3]1,000

1Power is given in terms of effective radiated power (ERP).

2Applicants in the Los Angeles, CA, area who demonstrate a need to serve both the downtown and fringe areas will be permitted to utilize an ERP of 1 kw at the following mountaintop sites: Santiago Park, Sierra Peak, Mount Lukens, and Mount Wilson.

3Stations with antennas below 305 m (1,000 ft) (AAT) will be restricted to a maximum power of 1 kw (ERP).

CELL OUTPUT POWER (ERP)

High Frequency Substitution Measurement
Compliance Certification Services Chamber A

Company: KYOCERA
Project #: 11U13905
Date: 08/04/11
Test Engineer: MENGISTU MEKURIA
Configuration: EUT WITH HEADSET AND AC ADAPTER
Mode: TX, CELL BAND CDMA MODE, BC10

Test Equipment:
Receiving: Sunol T122, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 193961002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
817.90	29.16	V	0.5	0.0	28.66	50.0	-21.3	
817.90	21.52	H	0.5	0.0	21.02	50.0	-29.0	
823.10	31.34	V	0.5	0.0	30.84	50.0	-19.2	
823.10	22.28	H	0.5	0.0	21.78	50.0	-28.2	

Rev. 3.17.11

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§ 90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

CELL SPURIOUS & HARMONIC (ERP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: KYOCERA
Project #: 11U13905
Date: 08/04/11
Test Engineer: STEVE AGUILAR
Configuration: EUT WITH AC ADAPTER AND HEADPHONE
Mode: TX, CELL BAND CDMA MODE

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	FCC Part 90

f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
GHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Channel (817.9MHz)									
1.636	2.8	V	3.0	38.2	1.0	-34.4	-13.0	-21.4	
2.453	-20.1	V	3.0	37.5	1.0	-56.6	-13.0	-43.6	
3.271	-21.9	V	3.0	37.1	1.0	-58.1	-13.0	-45.1	
1.636	3.7	H	3.0	38.2	1.0	-33.5	-13.0	-20.5	
2.453	-20.7	H	3.0	37.5	1.0	-57.2	-13.0	-44.2	
3.271	-22.7	H	3.0	37.1	1.0	-58.8	-13.0	-45.8	
High Channel (823.1MHz)									
1.646	-8.8	V	3.0	38.2	1.0	-45.9	-13.0	-32.9	
2.469	-21.4	V	3.0	37.5	1.0	-57.9	-13.0	-44.9	
3.292	-20.4	V	3.0	37.1	1.0	-56.5	-13.0	-43.5	
1.646	-7.8	H	3.0	38.2	1.0	-45.0	-13.0	-32.0	
2.469	-21.7	H	3.0	37.5	1.0	-58.2	-13.0	-45.2	
3.292	-23.0	H	3.0	37.1	1.0	-59.2	-13.0	-46.2	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									