RADIATED SPURIOUS EMISSIONS PORTIONS OF

FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E

CERTIFICATION TEST REPORT
FOR

Dual Band CDMA Mobile Phone +BT2.1+WIFI (2.4GHz)
MODEL NUMBER: C5155

FCC ID: V65C5155

REPORT NUMBER: 12U14359-1

ISSUE DATE: MARCH 31, 2012

Prepared for

KYOCERA COMMUNICATIONS, INC.
8611 BALBOA AVENUE
SAN DIEGO, CA 92123, USA

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	03/31/12	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, USA

EUT DESCRIPTION: Dual Band CDMA Mobile Phone +BT2.1+WIFI (2.4GHz)

MODEL: C5155

SERIAL NUMBER: 268435457816726144

DATE TESTED: MARCH 31, 2012

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H AND 24E	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

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CHIN PANG
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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, 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:

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 dual Band CDMA Mobile Phone +BT2.1+WIFI (2.4GHz).

5.2. MAXIMUM OUTPUT POWER

The transmitter maximum peak ERP and average EIRP output powers are as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	ERP Output Power (dBm)	ERP Output Power (mW)
Low CH - 824.70	CDMA2000	27.70	588.8
Mid CH - 836.52		28.20	660.7
High CH - 848.31		28.10	645.7

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Output Power (dBm)	EIRP Output Power (mW)
Low CH - 1851.25	CDMA2000	25.17	328.9
Mid CH - 1880.00		24.91	309.7
High CH - 1908.75		25.12	325.1

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 on X, Y, and Z Positions with EUT Open and Closed and with an AC Adapter and headset and the worst case were determined to be at Z-orientation with headset and AC adapter for cell and PCS bands.

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 Adapter (EUT)	Kyocera	5AAXAD026ULA-B910S-001Y	E185124	DoC
Headset	Kyocera	N/A	NA	NA

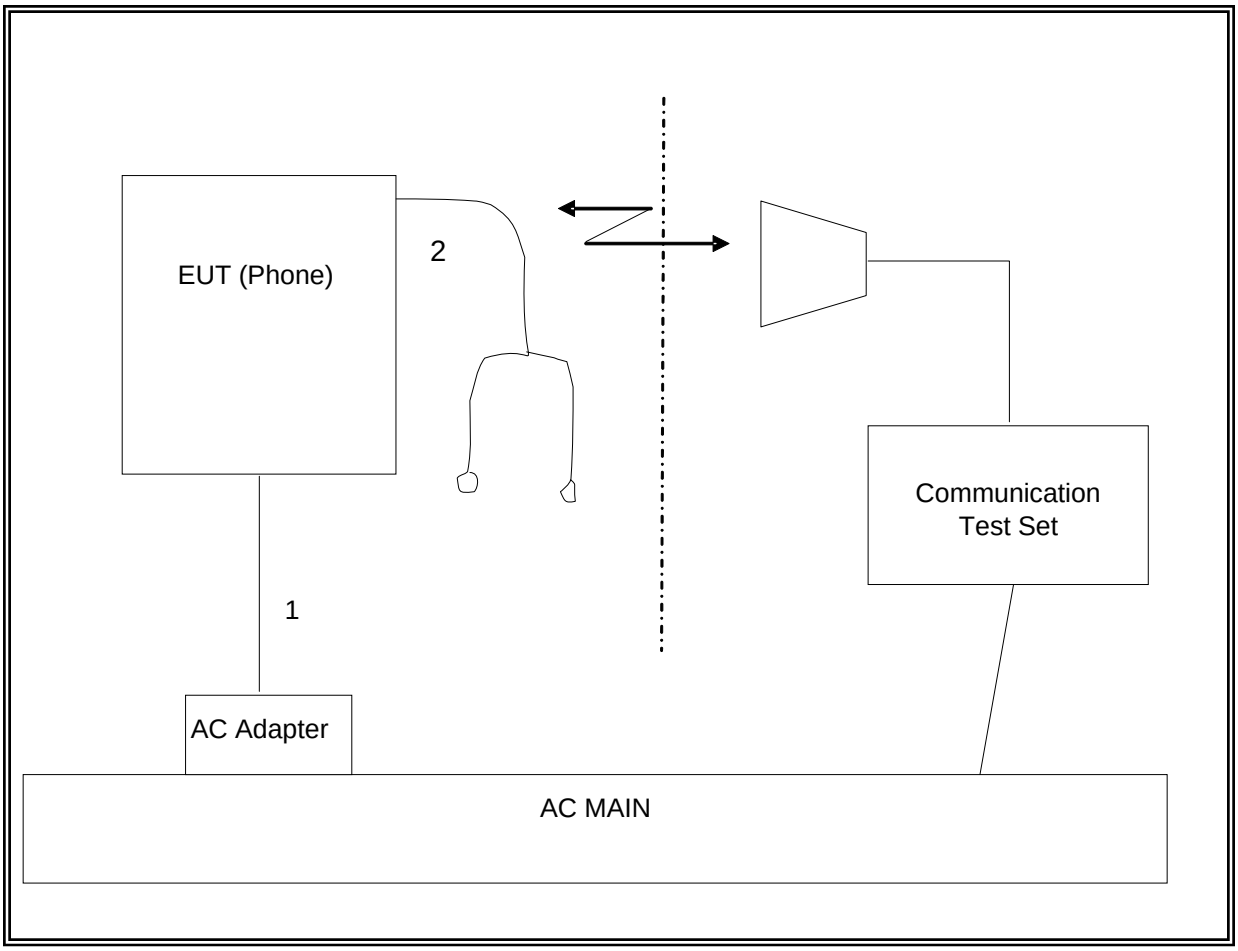
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Micro-USB	Un-Shielded	1.5 m	NA
2	Audio	1	3.5 mm Audio Jack	Un-Shielded	1 m	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 Due**
Antenna, Horn, 18 GHz	EMCO	3115	C00872	06/29/12
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	11/11/12
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01159	05/11/12
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	07/12/12
Communication Test Set	Agilent / HP	E5515C	C01086	06/17/12
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689`	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/16/12
Signal Generator, 20 GHz	Agilent / HP	83732B	C00774	07/14/12
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121C DB4	C00993	07/16/12

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) & 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

RESULTS

Mode	Channel	f (MHz)	ERP /EIRP	
			dBm	mW
Cell	1013	824.20	27.70	588.84
	384	836.60	28.20	660.69
	777	848.80	28.10	645.65
PCS	25	824.20	25.17	328.85
	600	836.60	24.91	309.74
	1175	848.80	25.12	325.09

CELL OUTPUT POWER (ERP)

High Frequency Substitution Measurement
Compliance Certification Services Chamber A

Company: KYOCERA
Project #: 12U14359
Date: 03/31/12
Test Engineer: Chin Pang
Configuration: EUT with earphone
Mode: TX, CELL BAND CDMA MODE
Worxt Case at Z position with Earphone

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 # 245182002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.70	22.20	V	0.5	0.0	21.70	38.5	-16.7	
824.70	28.20	H	0.5	0.0	27.70	38.5	-10.7	
Mid Ch								
836.52	22.20	V	0.5	0.0	21.70	38.5	-16.7	
836.52	28.70	H	0.5	0.0	28.20	38.5	-10.2	
High Ch								
848.31	22.80	V	0.5	0.0	22.30	38.5	-16.1	
848.31	28.60	H	0.5	0.0	28.10	38.5	-10.3	

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PCS OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber A

Company: KYOCERA
Project #: 12U14359
Date: 03/31/12
Test Engineer: Chin Pang
Configuration: EUT with Headset and AC Adapter
Mode: TX, PCS BAND CDMA MODE

Test Equipment:
Receiving: Horn T73, and Camber A SMA Cables
Substitution: Horn T60 Substitution, 4ft SMA Cable (SN # 245182002) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	17.4	V	0.85	8.62	25.17	33.0	-7.8	
1.851	14.3	H	0.85	8.47	21.92	33.0	-11.1	
Mid Ch								
1.880	17.3	V	0.85	8.46	24.91	33.0	-8.1	
1.880	14.9	H	0.85	8.36	22.41	33.0	-10.6	
High Ch								
1.909	17.7	V	0.85	8.30	25.12	33.0	-7.9	
1.909	13.3	H	0.85	8.25	20.70	33.0	-12.3	

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7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

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

RESULTS

CELL SPURIOUS & HARMONIC (ERP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: KYOCERA
Project #: 12U14359
Date: 03/31/12
Test Engineer: Chin Pang
Configuration: EUT with headset and AC Adapter
Mode: TX, CELL band CDMA Mode

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.70MHz									
1.649	-3.2	V	3.0	38.2	1.0	-40.3	-13.0	-27.3	
2.474	-14.3	V	3.0	37.5	1.0	-50.8	-13.0	-37.8	
1.649	-6.4	H	3.0	38.2	1.0	-43.6	-13.0	-30.6	
2.474	-18.0	H	3.0	37.5	1.0	-54.5	-13.0	-41.5	
Mid Ch, 836.52MHz									
1.673	-10.9	V	3.0	38.1	1.0	-48.0	-13.0	-35.0	
2.510	-14.2	V	3.0	37.5	1.0	-50.6	-13.0	-37.6	
1.673	-15.2	H	3.0	38.1	1.0	-52.3	-13.0	-39.3	
2.510	-18.9	H	3.0	37.5	1.0	-55.3	-13.0	-42.3	
High Ch, 848.31MHz									
1.697	-7.6	V	3.0	38.1	1.0	-44.7	-13.0	-31.7	
2.545	-12.0	V	3.0	37.5	1.0	-48.5	-13.0	-35.5	
1.697	-13.0	H	3.0	38.1	1.0	-50.1	-13.0	-37.1	
2.545	-19.7	H	3.0	37.5	1.0	-56.1	-13.0	-43.1	

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

PCS SPURIOUS & HARMONIC (EIRP)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: KYOCERA
Project #: 12U14359
Date: 03/31/12
Test Engineer: Chin Pang
Configuration: EUT with headset and AC Adapter
Mode: TX, PCS Band CDMA Mode

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	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	-11.1	V	3.0	36.8	1.0	-46.9	-13.0	-33.9	
5.554	-8.7	V	3.0	36.3	1.0	-44.0	-13.0	-31.0	
7.405	-8.2	V	3.0	36.6	1.0	-43.7	-13.0	-30.7	
3.703	-9.0	H	3.0	36.8	1.0	-44.8	-13.0	-31.8	
5.554	-8.1	H	3.0	36.3	1.0	-43.3	-13.0	-30.3	
7.405	-7.1	H	3.0	36.6	1.0	-42.7	-13.0	-29.7	
Mid Ch, 1880.00MHz									
3.760	-7.9	V	3.0	36.8	1.0	-43.7	-13.0	-30.7	
5.640	-8.6	V	3.0	36.3	1.0	-43.9	-13.0	-30.9	
7.520	-8.0	V	3.0	36.6	1.0	-43.6	-13.0	-30.6	
3.760	-9.8	H	3.0	36.8	1.0	-45.6	-13.0	-32.6	
5.640	-7.4	H	3.0	36.3	1.0	-42.7	-13.0	-29.7	
7.520	-6.9	H	3.0	36.6	1.0	-42.5	-13.0	-29.5	
High Ch, 1908.75MHz									
3.818	-9.8	V	3.0	36.7	1.0	-45.5	-13.0	-32.5	
5.726	-6.5	V	3.0	36.3	1.0	-41.8	-13.0	-28.8	
7.635	-7.9	V	3.0	36.6	1.0	-43.5	-13.0	-30.5	
3.818	-7.7	H	3.0	36.7	1.0	-43.4	-13.0	-30.4	
5.726	-4.3	H	3.0	36.3	1.0	-39.6	-13.0	-26.6	
7.635	-4.8	H	3.0	36.6	1.0	-40.4	-13.0	-27.4	

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