



**FCC CFR47 PART 22H AND PART 24E
CERTIFICATION TEST REPORT**

FOR

CDMA TRANSCEIVER MODULE

MODEL NUMBER: M300

FCC ID: OVFKWC-M300

REPORT NUMBER: 08U12059-1

ISSUE DATE: SEPTEMBER 10, 2008

Prepared for

**KYOCERA WIRELESS CORP.
10300 CAMPUS POINT DRIVE
SAN DIEGO, CA 92121, U.S.A.**

Prepared by

**COMPLIANCE CERTIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, USA
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	09/08/08	Initial Issue	T. Chan

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA WIRELESS CORP.
10300 CAMPUS POINT DRIVE
SAN DIEGO, CA 92121, U.S.A.

EUT DESCRIPTION: CDMA TRANSCEIVER MODULE

MODEL: M300

SERIAL NUMBER: FFM30000001499

DATE TESTED: SEPTEMBER 5 -7, 2008

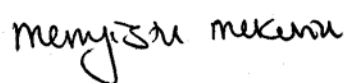
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22 SUBPART H	PASS
FCC PART 24 SUBPART E	PASS

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

Tested By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

MENGISTU MEKURIA
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603C (2004), FCC CFR 47 Part 2, FCC CFR 47 Part 22H, 24E.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

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. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Radiated Emission, Above 2000 MHz	+/- 4.3 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a CDMA transceiver module that manufactured by Kyocera Wireless Corporations.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak ERP and EIRP 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		29.8	955.0
High CH - 848.31		29.7	933.3

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1851.25	CDMA2000	29.6	912.0
Mid CH - 1880.00		31.2	1318.3
High CH - 1908.75		31.1	1288.2

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

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 > 32(+F-SCH)
- 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) > 0

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 32(+F-SCH).

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Kyocera	TXTVL10077	809S-001	DoC
Test Fixture	N/A	20-K4102-01	M300PK3	N/A
Antenna	N/A	N/A	N/A	N/A

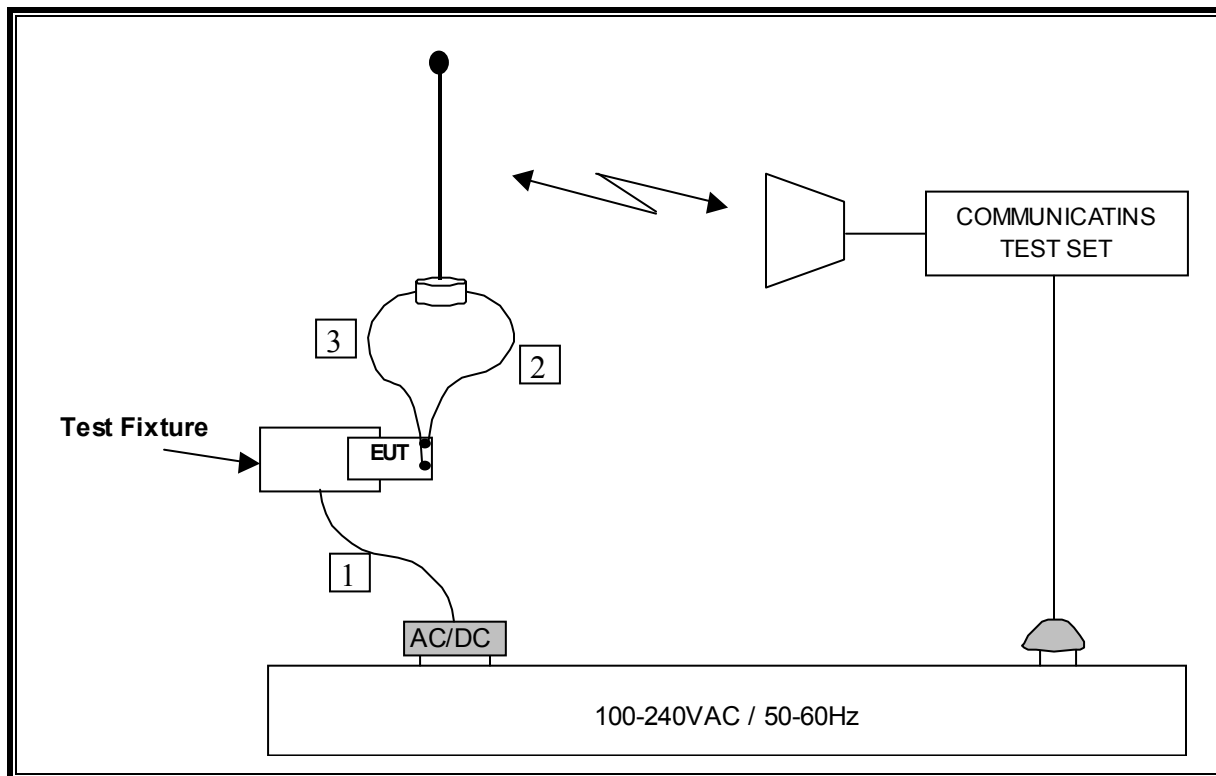
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC Input	1	Mini-USB	Un-Shielded	2.0 m	N/A
2	Antenna	1	SMA/Antenna Port	Shielded	2.0 M	CDMA Antenna
3	Antenna	1	SMA/Antenna Port	Shielded	2.0 M	GPS Antenna

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.

RADIATED TEST SETUP DIAGRAM



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	09/27/08
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01016	09/29/08
Antenna, Horn, 18 GHz	EMCO	3115	C00783	04/22/09
Antenna, Horn, 18 GHz	EMCO	3115	C00872	04/22/09
Dipole	Speag	D900V2	NA	11/16/08
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	03/03/09
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Signal Generator	R & S	SMP04	C00953	02/16/09
Communications Test Set	Agilent / HP	E5515C	C01086	06/16/09

7. LIMITS AND RESULTS

7.1. RADIATED OUTPUT POWER

LIMIT

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(b) 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

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		29.8	955.0
High CH - 848.31		29.7	933.3

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low CH - 1851.25	CDMA2000	29.6	912.0
Mid CH - 1880.00		31.2	1318.3
High CH - 1908.75		31.1	1288.2

RESULTS

CELL BAND CDMA OUTPUT POWER (ERP)

High Frequency Substitution Measurement									
Compliance Certification Services, Fremont 5m Chamber A									
Company:		KYOCERA WIRELESS							
Project #:		08U12059							
Date:		9/7/2008							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUTWITH EXTERNAL ANTENNA AND AC POWER ADAPTER							
Mode:		TX CELL BAND							
Test Equipment:									
Receiving: Smol T130, and 5m Chamber N-type Cable (Setup this one for testing EUT)									
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 187208002.									
f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.70	102.3	V	27.8	0.5	0.0	27.3	38.5	-11.1	
824.70	96.9	H	20.7	0.5	0.0	20.2	38.5	-18.2	
837.00	105.2	V	30.4	0.6	0.0	29.8	38.5	-8.6	
837.00	98.3	H	22.7	0.6	0.0	22.1	38.5	-16.3	
848.31	104.4	V	30.4	0.7	0.0	29.7	38.5	-8.8	
848.31	97.7	H	22.0	0.7	0.0	21.3	38.5	-17.1	
Rev. 1.24.7									

PCS BAND CDMA OUTPUT POWER (EIRP)

High Frequency Fundamental Measurement									
Compliance Certification Services, Fremont 5m Chamber A									
Company:		KYOCERA WIRELESS							
Project #:		08U12059							
Date:		9/5/2008							
Test Engineer:		MENGISTU MEKURIA							
Configuration:		EUT WITH EXTERNAL ANTENNA AND AC POWER ADAPTER							
Mode:		TX PCS BAND							
<u>Test Equipment:</u>									
Receiving: Horn T60, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T73 Substitution, 6ft SMA Cable Warehouse									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
1.850	93.1	V	21.3	0.7	9.1	29.6	33.0	-3.4	
1.850	85.8	H	13.4	0.7	9.1	21.8	33.0	-11.3	
1.880	94.9	V	22.8	0.7	9.1	31.2	33.0	-1.8	
1.880	86.9	H	14.5	0.7	9.1	22.8	33.0	-10.2	
1.909	94.8	V	22.7	0.7	9.1	31.1	33.0	-1.9	
1.909	87.2	H	15.2	0.7	9.1	23.6	33.0	-9.4	
Rev. 1.24.7									

CELL BAND CDMA SPURIOUS & HARMONIC (ERP)

High Frequency Substitution Measurement
 Compliance Certification Services, Fremont 5m A-Chamber

Company: KYOCERA WIRELESS
 Project #: 08U12059
 Date: 9/7/2008
 Test Engineer: MENGISTU MEKURIA
 Configuration: EUT WITH EXTERNAL ANTENNA
 Mode: TX CELL BAND CDMA

Test Equipment:

EMCO Horn 1-18GHz
T60; S/N: 2238 @3m

Horn > 18GHz

Limit
FCC 22

High Pass Filter

Hi Frequency Cables

(2 ft)
 (2 ~ 3 ft)
 (4 ~ 6 ft)
 (12 ft)

Pre-amplifier 1-26GHz
Agilent 3008A00561

Pre-amplifier 26-40GHz

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch. (824.7 MHz)										
1.649	62.2	V	-42.0	3.8	7.1	4.9	-40.9	-13.0	-27.9	
2.474	48.2	V	-53.6	4.9	9.3	7.1	-51.4	-13.0	-38.4	
3.299	50.1	V	-48.3	5.6	9.4	7.3	-46.5	-13.0	-33.5	
4.124	56.2	V	-39.4	6.3	10.0	7.8	-37.9	-13.0	-24.9	
4.948	57.0	V	-37.8	7.0	11.0	8.8	-35.9	-13.0	-22.9	
5.773	51.5	V	-40.7	7.5	11.4	9.2	-39.0	-13.0	-26.0	
1.649	54.9	H	-48.5	3.8	7.1	4.9	-47.5	-13.0	-34.5	
2.474	42.9	H	-58.7	4.9	9.3	7.1	-56.5	-13.0	-43.5	
3.299	44.9	H	-53.4	5.6	9.4	7.3	-51.7	-13.0	-38.7	
4.124	48.3	H	-47.0	6.3	10.0	7.8	-45.5	-13.0	-32.5	
4.948	52.8	H	-41.6	7.0	11.0	8.8	-39.8	-13.0	-26.8	
5.773	46.3	H	-44.9	7.5	11.4	9.2	-43.2	-13.0	-30.2	
Mid Ch. (836.52 MHz)										
1.670	63.8	V	-40.3	3.9	7.1	5.0	-39.2	-13.0	-26.2	
2.506	48.9	V	-52.8	4.9	9.3	7.1	-50.6	-13.0	-37.6	
3.346	51.7	V	-46.5	5.6	9.5	7.3	-44.8	-13.0	-31.8	
4.183	55.1	V	-40.5	6.3	10.0	7.9	-38.9	-13.0	-25.9	
5.019	59.1	V	-34.3	7.1	11.0	8.9	-32.4	-13.0	-19.4	
5.857	50.5	V	-41.7	7.5	11.5	9.4	-39.9	-13.0	-26.9	
1.670	55.9	H	-47.5	3.9	7.1	5.0	-46.4	-13.0	-33.4	
2.506	48.1	H	-53.4	4.9	9.3	7.1	-51.2	-13.0	-38.2	
3.346	53.0	H	-45.1	5.6	9.5	7.3	-43.4	-13.0	-30.4	
4.183	51.6	H	-43.6	6.3	10.0	7.9	-42.0	-13.0	-29.0	
5.019	53.7	H	-38.7	7.1	11.0	8.9	-36.8	-13.0	-23.8	
5.857	44.5	H	-46.7	7.5	11.5	9.4	-44.9	-13.0	-31.9	
Hi Ch. (848.31 MHz)										
1.697	59.5	V	-44.6	3.9	7.2	5.1	-43.4	-13.0	-30.4	
2.545	46.4	V	-55.1	4.9	9.3	7.1	-52.9	-13.0	-39.9	
3.393	54.3	V	-43.7	5.7	9.5	7.3	-42.1	-13.0	-29.1	
4.242	58.5	V	-37.0	6.4	10.1	8.0	-35.4	-13.0	-22.4	
5.090	59.8	V	-33.3	7.1	11.0	8.9	-31.5	-13.0	-18.5	
5.938	49.8	V	-42.4	7.6	11.6	9.5	-40.5	-13.0	-27.5	
1.697	56.3	H	-47.1	3.9	7.2	5.1	-45.9	-13.0	-32.9	
2.545	45.2	H	-56.2	4.9	9.3	7.1	-54.0	-13.0	-41.0	
3.393	55.2	H	-42.7	5.7	9.5	7.3	-41.0	-13.0	-28.0	
4.242	55.9	H	-39.2	6.4	10.1	8.0	-37.7	-13.0	-24.7	
5.090	54.0	H	-38.1	7.1	11.0	8.9	-36.3	-13.0	-23.3	
5.938	47.5	H	-43.6	7.6	11.6	9.5	-41.7	-13.0	-28.7	

Rev. 412.7

