FCC CFR47 PART 22H AND 24E
CLASS II PERMISSIVE CHANGE
CERTIFICATION TEST REPORT

FOR

CDMA CELL PCS MODULE

MODEL NUMBER: PA3490U-1EVD

FCC ID: CJ6UPA3490G3

REPORT NUMBER: 06U10651-1

ISSUE DATE: OCTOBER 27, 2006

Prepared for
TOSHIBA CORPORATION DIGITAL MEDIA NETWORK COMPANY
OME COMPLEX, 2-9, SUEHIRO-CHO
TOKYO, 198-8710, JAPAN

Prepared by
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Revision History

Rev.	Issue Date	Revisions	Revised By
--	10/27/06	Initial Issue	Thu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: TOSHIBA CORPORATION DIGITAL MEDIA NETWORK COMPANY
OME COMPLEX, 2-9, SUEHIRO-CHO
TOKYO, 198-8710, JAPAN

EUT DESCRIPTION: CDMA CELL PCS MODULE

MODEL: PA3490U-1EVD

SERIAL NUMBER: 76019899J

DATE TESTED: SEPTEMBER 15-18, 2006

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22 SUBPART H	NO NON-COMPLIANCE NOTED
FCC PART 24 SUBPART E	NO NON-COMPLIANCE NOTED

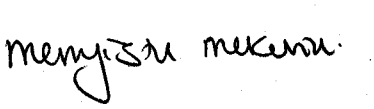
Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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 SUPERVISOR
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/EIA 603C (2004), ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and FCC CFR 47 Part 22H and 24E.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, 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
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 Cell PCS Module installed in a Toshiba Tablet.

The radio module is manufactured by Novatel Wireless Inc.

5.2. CLASS II PERMISSIVE CHANGE DESCRIPTION

The major changes filed under this application include:

Change #1: The EUT module is being used in a different host;
Change #2: Collocation with Bluetooth module;
Change #3: Collocation with Wireless LAN module.

The maximum output power for RF antenna port is 24.5dBm based on the original grant.

5.3. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak output power of ERP and EIRP as follows:

Part 22 (824 - 849MHz) & Part 24 (1850 - 1910MHz) Authorized Band:

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
824.7 - 848.31	CDMA	22.30	169.82

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
1851.25 - 1908.75	CDMA	29.00	794.33

Note: RBW=VBW=3MHz

5.4. WORST-CASE CONFIGURATION AND MODE

Based on the previous pre-scanned results from the different modulations, EVDO is determined to be the worst-case scenario for fundamental ERP /EIRP measurement and radiated spurious emissions tests.

The Mobile position and portable X, Y and Z positions have been investigated, the worst-case configuration has been evaluated at Y portable position for both bands of @ 850MHz band and @ 1900MHz have a higher reading at the fundamental ERP / EIRP of output power.

5.5. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes 2x monopole antennas with a maximum gain of 0.8dBi for cell band and 1.6dBi gain for PCS band.

5.6. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.
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5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Toshiba	Portege R	76019899J	DoC
AC Adapter	Toshiba	PA3282U-2ACA	G71C00025C10	DoC
Wireless Communications Test Set	Agilent	E5515C	GB42361381	NA
Horn	EMCO	3115	2238	NA

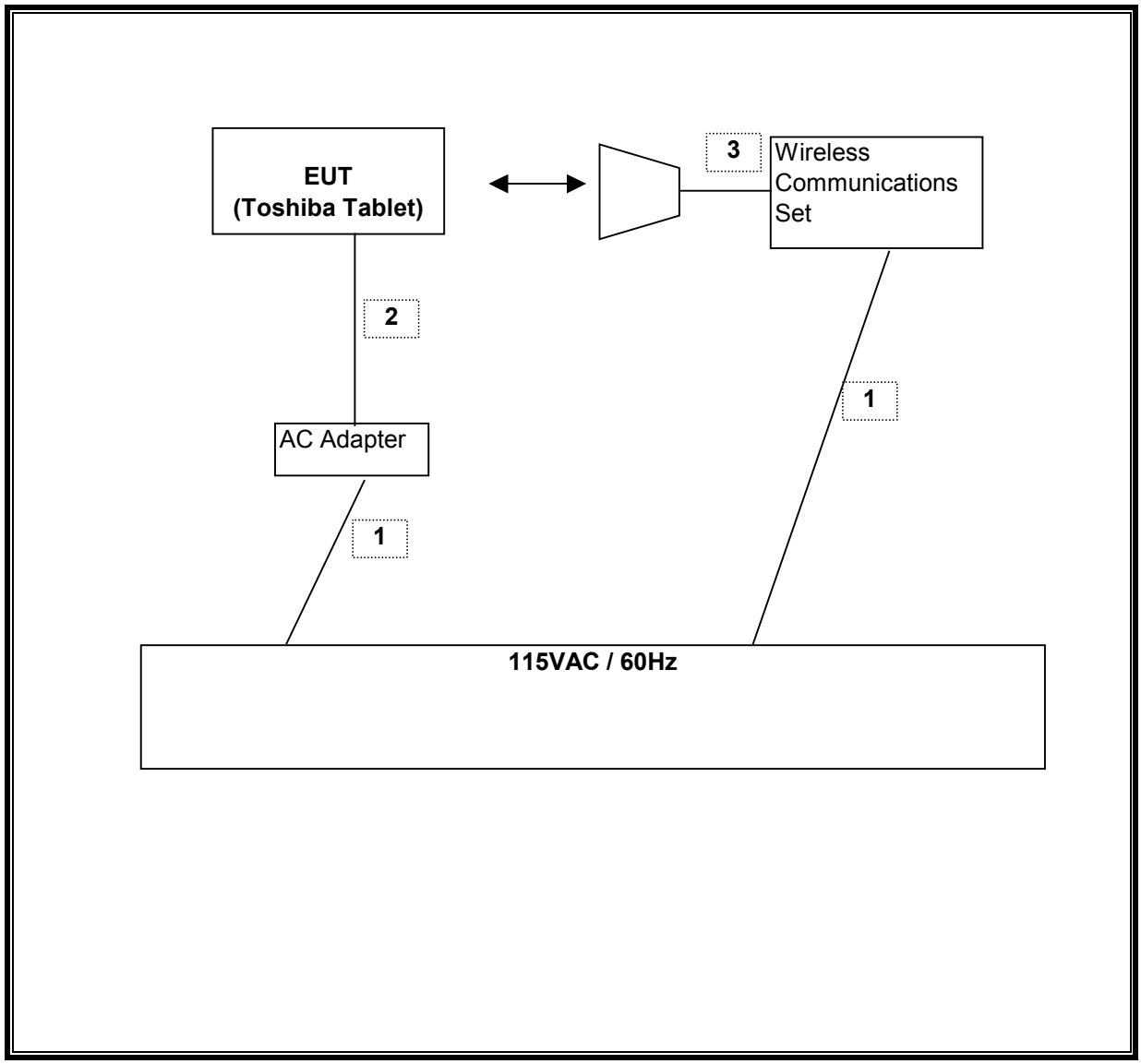
I/O CABLES

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	Horn	1	RF Out	Un-shielded	2m	To Link EUT and Test Set

TEST SETUP

The EUT is installed inside the Toshiba Tablet during the tests. The Wireless Test Set used to link EUT

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**	**Serial Number**	**Cal Due**
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent / HP	E4446A	MY43360112	5/3/07
Antenna, Horn 1 ~ 18 GHz	ETS	3117	29301	4/22/07
Preamplifier, 1 ~ 26.5 GHz	Agilent / HP	8449B	3008A00561	10/3/07
EMI Receiver, 9 kHz ~ 2.9 GHz	Agilent / HP	8542E	3942A00286	2/4/07
RF Filter Section	Agilent / HP	85420E	3705A00256	2/4/07
Antenna, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A121003	9/3/07
Wireless Communications Test Set	Agilent	8960 Series 10	GB42361381	05/07/07
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	2238	04/22/07
Signal Generator, 10 MHz ~ 20 GHz	Agilent / HP	83732B	US34490599	10/5/07
2.7GHz HPF	MicroTronic	HPM13194	2	CNR
1.5GHz HPF	MicroTronic	HPM13195	1	CNR

7. LIMITS AND RESULTS

7.1. RADIATED RF POWER OUTPUT

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 603C Clause 2.2.17

RESULTS

No non-compliance noted.

850 MHz CDMA Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.7	21.40	138.04
Middle	836.5	22.30	169.82
High	848.31	19.70	93.33

1900 MHz CDMA Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1851.25	24.90	309.03
Middle	1880.00	29.00	794.33
High	1908.75	26.60	457.09

NOTE: RBW=VBW=3MHz

CDMA 850 Output Power (ERP)

Cellular Fundamental Substitution Measurement
Compliance Certification Services, Morgan Hill Immunity Chamber

Company: Toshiba America Information Systems, Inc
Project #: 06U10651
Date: 10/16/2006
Test Engineer: Mengistu Mekuria
Configuration: EUT
Mode: TX (CDMA - US Cellular)
Worst Case --Y Position

Test Equipment:
Receiving: EMCO LP T17, and 12 ft Chin SMA Cable (Setup this one for testing EUT)
Substitution: Dipole ETS S/N: 1629, and 6ft SMA Cable Warehouse S/N: 208947 002

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel									
824.70	92.0	V	17.6	0.5	0.0	17.1	38.5	-21.4	
824.70	96.2	H	21.9	0.5	0.0	21.4	38.5	-17.0	
Mid Channel									
836.52	93.5	V	18.9	0.6	0.0	18.3	38.5	-20.1	
836.52	97.4	H	22.9	0.6	0.0	22.3	38.5	-16.1	
High Channel									
848.31	93.3	V	18.7	0.7	0.0	18.0	38.5	-20.5	
848.31	95.0	H	20.4	0.7	0.0	19.7	38.5	-18.8	

CDMA1900 Output Power (EIRP)

Compliance Certification Services, Morgan Hill Immunity Chamber

Company: Toshiba America Information Systems, Inc
Project #: 06U10651
Date: 10/16/2006
Test Engineer: Mengistu Mekuria
Configuration: EUT
Mode: TX (CDMA - PCS)
Worst Case--Y Position

Test Equipment:
Receiving: Horn T59, and Chin SMA Cables 2 & 12 ft (Setup this one for testing EUT)
Substitution: Horn T60, and 6ft SMA Cable Warehouse S/N: 208947 002

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel									
1.850	91.4	V	17.5	0.9	8.3	24.9	33.0	-8.1	
1.850	90.5	H	14.4	0.9	8.3	21.8	33.0	-11.2	
Mid Channel									
1.880	94.6	V	21.5	0.9	8.3	29.0	33.0	-4.1	
1.880	93.5	H	18.7	0.9	8.3	26.1	33.0	-6.9	
High Channel									
1.910	92.4	V	19.1	0.9	8.4	26.6	33.0	-6.4	
1.910	88.2	H	13.1	0.9	8.4	20.6	33.0	-12.4	

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (a) 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.

§24.238 (a) 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)

ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 24.238 (b)

TEST RESULTS

No non-compliance noted.

CDMA 850 MHz Spurious & Harmonic (ERP)

Cellular Harmonic Substitution Measurement
Compliance Certification Services, Morgan Hill Immunity Chamber

Company: Toshiba America Information Systems, Inc
Project #: 06U10651
Date: 10/16/2006
Test Engineer: Mengistu Mekuria
Configuration: EUT
Mode: TX/Rx (CDMA - US Cellular)

Test Equipment:
Receiving: Horn T59, Pre-amp T34, Chin SMA Cables 2 & 12 ft (Setup this one for testing EUT)
Substitution: Horn T60, 6ft SMA Cable Warehouse S/N: 208947 002

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel (824.7MHz)									
1.649	55.8	V	-57.5	0.8	4.9	-53.4	-13.0	-40.4	
2.474	54.0	V	-56.3	1.0	7.1	-50.2	-13.0	-37.2	
1.649	55.6	H	-58.7	0.8	4.9	-54.6	-13.0	-41.6	
2.474	53.0	H	-57.7	1.0	7.1	-51.5	-13.0	-38.5	
Mid Channel (836.52MHz)									
1.673	58.5	V	-54.6	0.8	5.0	-50.4	-13.0	-37.4	
2.510	56.5	V	-53.0	1.0	7.1	-46.8	-13.0	-33.8	
1.673	58.9	H	-55.3	0.8	5.0	-51.2	-13.0	-38.2	
2.510	55.6	H	-55.4	1.0	7.1	-49.3	-13.0	-36.3	
High Channel (848.31MHz)									
1.697	60.6	V	-52.3	0.8	5.1	-48.1	-13.0	-35.1	
2.545	55.6	V	-53.2	1.0	7.1	-47.0	-13.0	-34.0	
3.393	52.6	V	-52.0	1.2	9.2	-44.0	-13.0	-31.0	
1.697	58.4	H	-55.3	0.8	5.1	-51.1	-13.0	-38.1	
2.545	55.8	H	-55.5	1.0	7.1	-49.4	-13.0	-36.4	
3.393	51.9	H	-55.7	1.2	7.4	-49.5	-13.0	-36.5	

CDMA 1900 MHz Spurious & Harmonic (EIRP)

PCS Harmonic Substitution Measurement
Compliance Certification Services, Morgan Hill Immunity Chamber

Company: Toshiba America Information Systems, Inc
Project #: 06U10651
Date: 10/16/2006
Test Engineer: Mengistu Mekuria
Configuration: EUT
Mode: TX/Rx (CDMA - PCS)

Test Equipment:
Receiving: Horn T59, Pre-amp T34, and Chin SMA Cables 2 & 12 ft (Setup this one for testing EUT)
Substitution: Horn T60, and 6ft SMA Cable Warehouse S/N: 208947 002

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Channel (1851.25MHz)									
3.703	53.3	V	-51.7	1.2	9.7	-43.3	-13.0	-30.3	
5.554	50.4	V	-52.2	1.6	11.0	-42.8	-13.0	-29.8	
3.703	50.5	H	-56.0	1.2	9.7	-47.6	-13.0	-34.6	
5.554	49.9	H	-52.1	1.6	11.0	-42.7	-13.0	-29.7	
Mid Channel (1880MHz)									
3.760	57.8	V	-46.7	1.3	9.7	-38.3	-13.0	-25.3	
5.640	51.5	V	-51.3	1.7	11.2	-41.8	-13.0	-28.8	
3.760	53.6	H	-52.5	1.3	9.7	-44.0	-13.0	-31.0	
5.640	50.7	H	-51.2	1.7	11.2	-41.7	-13.0	-28.7	
High Channel (1908.75MHz)									
3.818	54.5	V	-49.7	1.3	9.7	-41.2	-13.0	-28.2	
5.726	49.2	V	-53.4	1.7	11.3	-43.7	-13.0	-30.7	
3.818	50.7	H	-54.6	1.3	9.7	-46.2	-13.0	-33.2	
5.726	50.9	H	-51.3	1.7	11.3	-41.7	-13.0	-28.7	