



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

FOR

CDMA CELL-PCS MODULE IN TOSHIBA LAPTOP

MODEL NUMBER: PA3547E-1HSD

FCC ID: CJ6UPA3547G3

REPORT NUMBER: 07U11255-1

ISSUE DATE: AUGUST 13, 2007

Prepared for
**TOSHIBA CORPORATION
OME COMPLEX, 2-9, SUEHIRO-CHO
TOKYO, 198-8710, JAPAN**

Prepared by
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: CDMA CELL-PCS MODULE IN TOSHIBA LAPTOP

MODEL: PA3547E-1HSD

SERIAL NUMBER: 57107656H

DATE TESTED: AUGUST 8-11, 2007

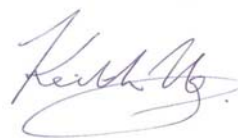
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22 SUBPART H	NO NON-COMPLIANCE NOTED

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:

Tested By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

KEITH NG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603A (2001), FCC CFR 47 Part 2, and FCC CFR 47 Part 22.

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 Cell-PCS Module installed in Toshiba TECRA M9 Laptop.

The module supports GSM 850/1900, GPRS, EGPRS, WCDMA 850/1900, and WCDMA+HSPDA. Device capabilities are documented in the theory of operation.

The radio module is manufactured by Tyco Electronics.

5.2. MAXIMUM OUTPUT POWER

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

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

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
824.2 - 848.75	GPRS	26.50	446.68
824.2 - 848.75	EGPRS	24.90	309.03
826.5 - 846.6	WCDMA	23.10	204.17
826.5 - 846.6	WCDMA+HSPDA	23.60	229.09

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
1850.25 - 1909.8	GPRS	27.20	524.81
1850.25 - 1909.8	EGPRS	26.30	426.58
1852.4 - 1907.6	WCDMA	26.80	478.63
1852.4 - 1907.6	WCDMA+HSPDA	27.20	524.81

NOTE: RBW=VBW=8MHz

5.3. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

The major change under this application is that the subject-approved module is being used in a different host.

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an antenna TMZ010, with a maximum gain of -0.99dBi for Cell band and 1.63dBi for PCS band.

5.5. SOFTWARE AND FIRMWARE

The following settings were used to configure the Wireless Communications Test Set, Agilent 8960 Series 10, E5515C.

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

GPRS Mode

- Call Setup > Shift & Preset
- Active Cell > Active Cell (GPRS)
- Connection Type > ETSI Type A
- BCH Parameters > Cell Band > PCS or GSM850 (US band)
- TCH Parameters > Traffic Band > PCS or GSM850 (US band)
 - > MS TX Level > 3 (33dBm for Cell band); 3 (30dBm for PCS band)
- PDTCH > Multislot Config > 1 Down, 4 Up
 - > MS TX Level > 3 (33dBm Cell band); 3 (30dBm PCS band)
 - > Coding Scheme > CS-4
- Press "Start Data Connection"

EGPRS Mode

- Call Setup > Shift & Preset
- Active Cell > Active Cell (EGPRS)
- Connection Type > ETSI Type A
- BCH Parameters > Cell Band > PCS or GSM850 (US band)
- TCH Parameters > Traffic Band > PCS or GSM850 (US band)
 - > MS TX Level > 6 (27dBm Cell band); 5 (26dBm PCS band)
- PDTCH > Multislot Config > 1 Down, 4 Up
 - > MS TX Level > 6 (27dBm Cell band); 5 (26dBm PCS band)
 - > Modulation Coding Scheme > Downlink > As Uplink
 - > Uplink > MSC-5 (8PSK)
- Press "Start Data Connection" and you will see "Transferring"

UMTS

- Call Setup > Shift & Preset
- Cell Parameters: PS Domain Information > Present
 - ATT (IMSI Attach) Flag State > Set
- Security Parameter - System Operations > None
- Channel Type:
 - RMC: 12.2k, 64k, 144k, or 384k
 - AMC: 12.2 UL / 64/ DL AM RMC, 12.2 UL / 144/ DL AM RMC, or 12.2 UL / 384/ DL AM RMC,
- Paging Service: RB Test Mode
- Channel (UARFCN) Parms:

	<u>PCS band</u>	<u>Cell band</u>
▪ DL Channel:	9662 / 9800 / 9938	4357 / 4407 / 4458
▪ UL Channel:	9262 / 9400 / 9538	4132 / 4182 / 4233
- DL DTCH Data: All Ones
- RLC Reestablish: Off
- Call Limit State: Off
- Call Drop Timer: Off
- SRB Config.: 13.6k DCCH
- UE Target Power: 25 dBm
- UL CL Power Ctrl Parameters
 - UL CL Power Ctrl Mode: All Up Bits

HSDPA

- Uplink Parameter:
 - UPLINK DPCH Bc / Bd Control: Manual
 - Manual Uplink DPCH Bc: 9
 - Manual Uplink DPCH Bd: 15
- Channel Type: 12.2k+HSDPA
- HSDPA Parameters:
 - HSDPA RB Test Mode Setup
 - HS-DSCH Configuration Type: FRC
 - FRC Type: **H-Set 3**
 - CN Domain: CS Domain
 - Uplink 64k DTCH for HSDPA Loopback State: On
 - HS-DSCH Data Pattern: All Ones
 - RLC Header on HS-DSCH: Present
 - HSDPA Uplink Parameters
 - DeltaACK: 5
 - DeltaNACK: 5
 - DeltaCQI: 2

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Toshiba	TECRA M9	57107656H	DoC
AC/DC Adaptor	Toshiba	PA3283U-5ACA	G71C0006Q210	DoC
Wireless Communications Test Set	Agilent	E5515C	10092	DoC

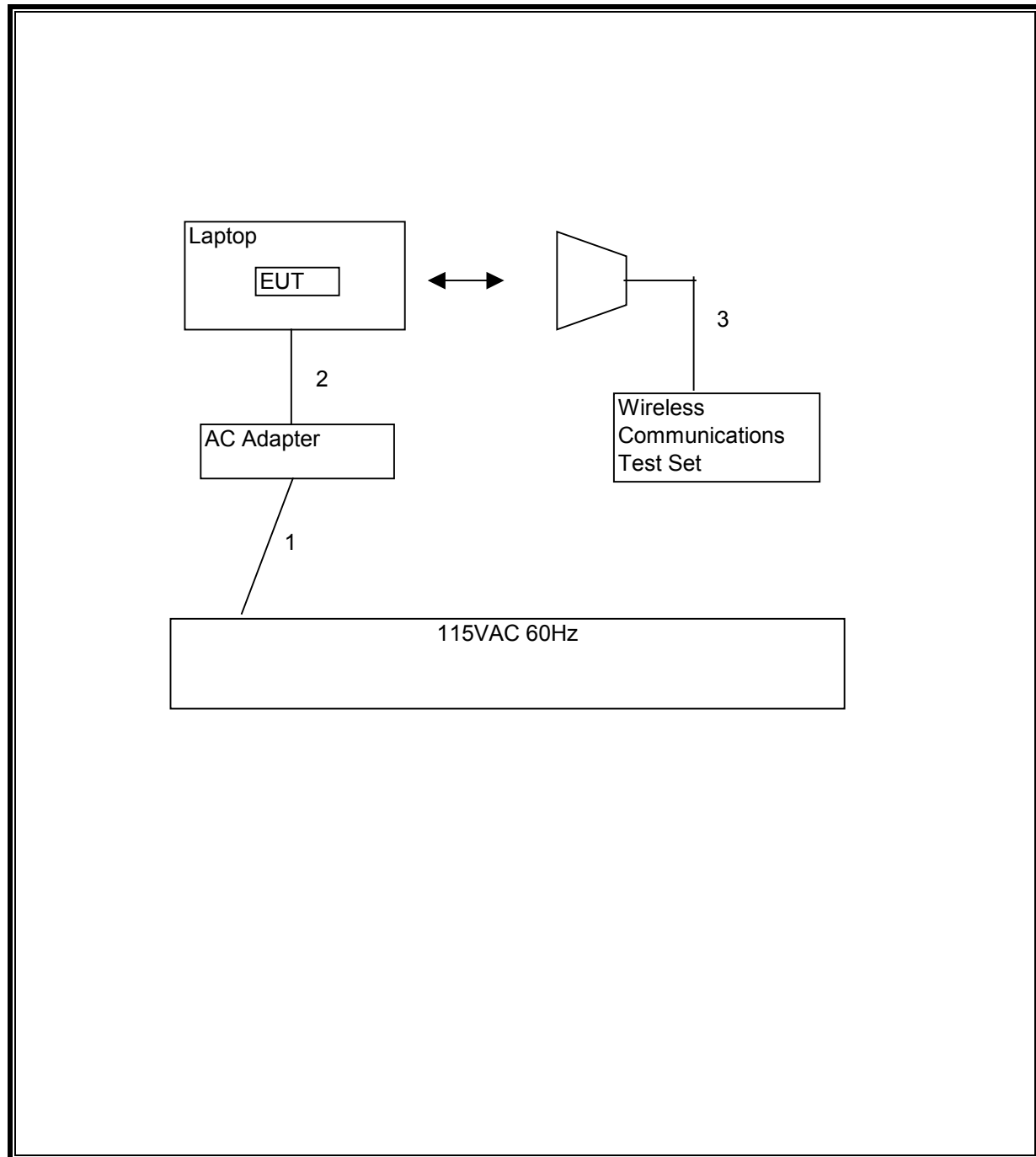
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	2	US 115V	Un-shielded	2m	NA
2	DC	1	D C	Un-shielded	2m	NA
3	RF In/Out	1	N-Type	Un-shielded	2m	To link EUT

TEST SETUP

The EUT module is installed in the laptop during the tests. Test software exercised the radio card.

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
Wireless Communications Test Set	Agilent	E5515C	10092	10/19/2007
2.7GHz HPF	MicroTronic	HPM13194	2	CNR
1.5GHz HPF	MicroTronic	HPM13195	1	CNR
Signal Generator 2 -40 GHz	R & S	SMP04	DE 34210	6/2/2008
Signal Generator 1024 MHz	R & S	SMY01	DE 12311	5/11/2008
Dipole	EMCO	3121C-DB2	22435	3/25/2008
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	4/22/2008
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent / HP	E4446A	MY45300064	3/18/2008
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	4/15/2008
Preamplifier, 1 ~ 26.5 GHz	Agilent / HP	8449B	3008A00561	10/3/2007
Antenna, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A121003	8/13/2007

7. LIMITS AND RESULTS

7.1. 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 603 Clause 2.2.17

RESULTS

No non-compliance noted.

850 MHz GPRS Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.2	26.40	436.52
Middle	837	26.30	426.58
High	848.8	26.50	446.68

1900 MHz GPRS Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.2	26.30	426.58
Middle	1880.00	26.40	436.52
High	1909.8	27.20	524.81

NOTE: RBW=VBW=8MHz.

850 MHz EGPRS Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.2	24.90	309.03
Middle	837	24.30	269.15
High	848.8	24.90	309.03

1900 MHz EGPRS Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.2	24.50	281.84
Middle	1880.00	24.20	263.03
High	1909.8	26.30	426.58

850 MHz WCDMA Modulation

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	826.4	21.70	147.91
Middle	836.4	23.10	204.17
High	846.6	22.80	190.55

1900 MHz WCDMA Modulation

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1852.4	24.00	251.19
Middle	1880.00	24.10	257.04
High	1907.6	26.80	478.63

NOTE: RBW=VBW=8MHz

850 MHz WCDMA+HSDPA Modulation

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	826.4	21.90	154.88
Middle	836.4	23.60	229.09
High	846.6	23.10	204.17

1900 MHz WCDMA+HSDPA Modulation

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1852.4	25.00	316.23
Middle	1880.00	23.20	208.93
High	1907.6	27.20	524.81

NOTE: RBW=VBW=8MHz

GSM 850 GPRS (ERP)

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

Company: Toshiba Information Systems, Inc.
Project #: 07U11255
Date: 08/08/07
Test Engineer: Keith Ng
Configuration: EUT with charger
Mode: GSM 850 GPRS

Test Equipment:

Receiving: Smol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.20	100.3	V	26.7	0.5	0.0	26.2	38.5	-12.2	
824.20	102.2	H	26.9	0.5	0.0	26.4	38.5	-12.1	
836.50	99.5	V	26.5	0.6	0.0	25.9	38.5	-12.5	
836.50	102.0	H	26.9	0.6	0.0	26.3	38.5	-12.2	
848.80	99.9	V	26.7	0.7	0.0	26.0	38.5	-12.4	
848.80	102.7	H	27.2	0.7	0.0	26.5	38.5	-12.0	

Rev. 1.24.7

GSM 850 EGPRS (ERP)

High Frequency Substitution Measurement Compliance Certification Services, Fremont 5m Chamber Company: Toshiba Information Systems, Inc. Project #: 07U11255 Date: 08/08/07 Test Engineer: Keith Ng Configuration: EUT with charger Mode: GSM 850 EGPRS <u>Test Equipment:</u> Receiving: Sumol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002									
f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.20	97.7	V	24.1	0.5	0.0	23.6	38.5	-14.9	
824.20	100.7	H	25.4	0.5	0.0	24.9	38.5	-13.6	
837.00	97.2	V	24.2	0.6	0.0	23.6	38.5	-14.8	
837.00	100.0	H	24.9	0.6	0.0	24.3	38.5	-14.1	
848.80	98.8	V	25.6	0.7	0.0	24.9	38.5	-13.6	
848.80	100.7	H	25.2	0.7	0.0	24.5	38.5	-13.9	
Rev. 1.24.7									

WCDMA 850 (ERP)

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

Company: Toshiba Information Systems, Inc.
Project #: 07U11255
Date: 08/10/07
Test Engineer: Keith Ng
Configuration: EUT with charger
Mode: WCDMA 12.2K RMC Cell Band

Test Equipment:

Receiving: Sunol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
826.40	95.8	V	22.2	0.5	0.0	21.7	38.5	-16.7	
826.40	91.5	H	16.2	0.5	0.0	15.7	38.5	-22.8	
836.40	96.7	V	23.7	0.6	0.0	23.1	38.5	-15.4	
836.40	96.3	H	21.2	0.6	0.0	20.6	38.5	-17.8	
846.60	96.7	V	23.5	0.7	0.0	22.8	38.5	-15.6	
846.60	91.3	H	15.8	0.7	0.0	15.1	38.5	-23.3	

Rev. 1.24.7

WCDMA 850 +HSDPA (ERP)

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

Company: Toshiba Information Systems, Inc.
Project #: 07U11255
Date: 08/10/07
Test Engineer: Keith Ng
Configuration: EUT with charger
Mode: PCS WCDMA 12.2k RMC + HSDPA

Test Equipment:

Receiving: Sunol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
826.40	96.0	V	22.4	0.5	0.0	21.9	38.5	-16.5	
826.40	92.8	H	17.5	0.5	0.0	17.0	38.5	-21.4	
836.40	97.2	V	24.2	0.6	0.0	23.6	38.5	-14.8	
836.40	93.0	H	17.9	0.6	0.0	17.3	38.5	-21.1	
846.60	97.0	V	23.8	0.7	0.0	23.1	38.5	-15.3	
846.60	93.6	H	18.1	0.7	0.0	17.4	38.5	-21.0	

Rev. 1.24.7

GSM 1900 GPRS (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services, Morgan Hill 5m Chamber Site Company: Toshiba Information Systems, Inc. Project #: 07U11255 Date: 08/08/07 Test Engineer: Ninous Davoudi Configuration: EUT with charger Mode: GSM 1900 GPRS Test Equipment: Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT) Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
L ch									
1850	91.2	V	17.8	0.9	8.3	25.2	33.0	-7.8	
1850	92.9	H	18.9	0.9	8.3	26.3	33.0	-6.7	
M ch									
1880	91.7	V	17.4	0.9	8.3	24.8	33.0	-8.2	
1880	93.8	H	19.0	0.9	8.3	26.4	33.0	-6.6	
H ch									
1910	91.5	V	18.1	0.9	8.4	25.6	33.0	-7.4	
1910	92.6	H	19.8	0.9	8.4	27.2	33.0	-5.8	
Rev. 124.7									

GSM 1900 EGPRS (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Company: Toshiba Information Systems, Inc.
Project #: 07U11255
Date: 08/08/07
Test Engineer: Ninous Davoudi
Configuration: EUT with charger
Mode: GSM 1900 EGPRS

Test Equipment:

Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT)
Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002

f GHz	SA reading (dBuV/m)	Ant. PoL (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
L ch									
1.850	88.9	V	15.5	0.9	8.3	22.9	33.0	-10.1	
1.850	91.0	H	17.1	0.9	8.3	24.5	33.0	-8.5	
M ch									
1.880	88.8	V	14.5	0.9	8.3	22.0	33.0	-11.0	
1.880	91.6	H	16.8	0.9	8.3	24.2	33.0	-8.8	
H ch									
1.910	87.6	V	14.3	0.9	8.4	21.8	33.0	-11.2	
1.910	91.7	H	18.8	0.9	8.4	26.3	33.0	-6.7	

Rev. 1.24.7

WCDMA 1900 (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Company: Toshiba Information Systems, Inc.
Project #: 07U11255
Date: 08/08/07
Test Engineer: Ninous Davoudi
Configuration: EUT with charger
Mode: PCS WCDMA 12.2k RMC

Test Equipment:

Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT)
Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002

f GHz	SA reading (dBuV/m)	Ant. Pol (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
L ch									
1.852	88.0	V	14.6	0.9	8.3	22.0	33.0	-11.0	
1.852	90.5	H	16.6	0.9	8.3	24.0	33.0	-9.0	
M ch									
1.880	87.5	V	13.2	0.9	8.3	20.6	33.0	-12.4	
1.880	91.5	H	16.7	0.9	8.3	24.1	33.0	-8.9	
H ch									
1.908	89.1	V	15.7	0.9	8.4	23.2	33.0	-9.8	
1.908	92.1	H	19.3	0.9	8.4	26.8	33.0	-6.2	

Rev. 124.7

WCDMA 1900 +HSDPA (EIRP)

High Frequency Fundamental Measurement									
Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Toshiba Information Systems, Inc.									
Project #: 07U11255									
Date: 08/08/07									
Test Engineer: Ninous Davoudi									
Configuration: EUT with charger									
Mode: PCS WCDMA 12.2k RMC + HSDPA									
Test Equipment:									
Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002									
f GHz	SA reading (dBuV/m)	Ant. Pol (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
L ch									
1.852	88.3	V	14.9	0.9	8.3	22.3	33.0	-10.7	
1.852	91.5	H	17.6	0.9	8.3	25.0	33.0	-8.0	
M ch									
1.880	88.6	V	14.3	0.9	8.3	21.8	33.0	-11.3	
1.880	90.5	H	15.7	0.9	8.3	23.2	33.0	-9.8	
H ch									
1.908	88.0	V	14.7	0.9	8.4	22.2	33.0	-10.8	
1.908	92.6	H	19.7	0.9	8.4	27.2	33.0	-5.8	
Rev. 1.24.7									

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (a) & §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), & FCC 24.238 (b)

RESULTS

No non-compliance noted.

GSM 850 GPRS

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont 5m B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Keith Ng										
Configuration: EUT with charger										
Mode: GSM850 GPRS										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		☒ High Pass Filter				
T73; S/N: 6717 @3m				FCC 22						
Hi Frequency Cables						Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz		
☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)						T145 Agilent 3008A				
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
LO CH 824.2MHz										
1.500	47.9	V	-58.7	3.7	7.6	5.5	-56.9	-13.0	-43.9	
1.648	55.1	V	-50.9	3.8	8.0	5.8	-49.0	-13.0	-36.0	
2.473	60.3	V	-42.1	4.9	9.5	7.4	-39.6	-13.0	-26.6	
3.000	45.2	V	-55.2	5.3	9.8	7.6	-52.9	-13.0	-39.9	
1.467	42.1	H	-64.0	3.6	7.5	5.4	-62.2	-13.0	-49.2	
1.500	48.3	H	-57.7	3.7	7.6	5.5	-55.8	-13.0	-42.8	
1.648	61.9	H	-43.4	3.8	8.0	5.8	-41.4	-13.0	-28.4	
2.473	63.5	H	-38.8	4.9	9.5	7.4	-36.3	-13.0	-23.3	
3.000	45.0	H	-55.4	5.3	9.8	7.6	-53.1	-13.0	-40.1	
MID CH 836.4MHz										
1.500	46.8	V	-59.8	3.7	7.6	5.5	-58.0	-13.0	-45.0	
1.674	51.8	V	-54.0	3.9	8.0	5.9	-52.0	-13.0	-39.0	
2.511	57.7	V	-44.6	4.9	9.6	7.4	-42.1	-13.0	-29.1	
3.000	40.1	V	-60.4	5.3	9.8	7.6	-58.1	-13.0	-45.1	
1.500	49.6	H	-56.4	3.7	7.6	5.5	-54.6	-13.0	-41.6	
1.674	55.5	H	-49.7	3.9	8.0	5.9	-47.7	-13.0	-34.7	
2.511	62.8	H	-39.3	4.9	9.6	7.4	-36.8	-13.0	-23.8	
3.000	45.0	H	-55.3	5.3	9.8	7.6	-53.0	-13.0	-40.0	
HI CH 848.8MHz										
1.500	46.4	V	-60.3	3.7	7.6	5.5	-58.5	-13.0	-45.5	
1.698	51.0	V	-54.7	3.9	8.1	5.9	-52.7	-13.0	-39.7	
2.546	51.9	V	-50.3	4.9	9.6	7.4	-47.8	-13.0	-34.8	
3.000	45.8	V	-54.7	5.3	9.8	7.6	-52.4	-13.0	-39.4	
1.500	49.0	H	-46.5	3.7	7.6	5.5	-44.7	-13.0	-31.7	
1.698	53.1	H	-42.3	3.9	8.1	5.9	-40.3	-13.0	-27.3	
2.546	55.1	H	-39.8	4.9	9.6	7.4	-37.3	-13.0	-24.3	
3.000	43.6	H	-56.7	5.3	9.8	7.6	-54.4	-13.0	-41.4	

Rev. 412.7

GSM 850 EGPRS

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont Sm B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Keith Ng										
Configuration: EUT with charger										
Mode: GSM850 EGPRS										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		High Pass Filter				
T73; S/N: 6717 @3m				FCC 22						
Hi Frequency Cables				Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz				
☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)				T145 Agilent 3008A						
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
LO CH	824.2MHz									
1.500	46.3	V	-60.4	3.7	7.6	5.5	-58.6	-13.0	-45.6	
1.648	53.0	V	-53.0	3.8	8.0	5.8	-51.0	-13.0	-38.0	
2.473	50.1	V	-52.3	4.9	9.5	7.4	-49.8	-13.0	-36.8	
3.000	42.3	V	-58.2	5.3	9.8	7.6	-55.9	-13.0	-42.9	
1.500	48.1	H	-57.9	3.7	7.6	5.5	-56.1	-13.0	-43.1	
1.648	55.5	H	-49.8	3.8	8.0	5.8	-47.9	-13.0	-34.9	
2.473	54.8	H	-47.4	4.9	9.5	7.4	-44.9	-13.0	-31.9	
3.000	43.8	H	-56.6	5.3	9.8	7.6	-54.2	-13.0	-41.2	
MID CH	836.4MHz									
1.500	45.9	V	-60.8	3.7	7.6	5.5	-58.9	-13.0	-45.9	
1.674	48.3	V	-57.5	3.9	8.0	5.9	-55.5	-13.0	-42.5	
2.511	51.7	V	-50.6	4.9	9.6	7.4	-48.1	-13.0	-35.1	
3.000	43.0	V	-57.5	5.3	9.8	7.6	-55.2	-13.0	-42.2	
1.500	48.1	H	-57.9	3.7	7.6	5.5	-56.1	-13.0	-43.1	
1.674	64.2	H	-40.9	3.9	8.0	5.9	-38.9	-13.0	-25.9	
2.511	55.6	H	-46.5	4.9	9.6	7.4	-44.0	-13.0	-31.0	
3.000	43.5	H	-56.8	5.3	9.8	7.6	-54.5	-13.0	-41.5	
HI CH	848.8MHz									
1.500	46.1	V	-60.6	3.7	7.6	5.5	-58.8	-13.0	-45.8	
1.698	44.2	V	-61.6	3.9	8.1	5.9	-59.5	-13.0	-46.5	
2.546	44.8	V	-57.3	4.9	9.6	7.4	-54.8	-13.0	-41.8	
3.000	43.3	V	-57.1	5.3	9.8	7.6	-54.8	-13.0	-41.8	
1.500	47.7	H	-47.7	3.7	7.6	5.5	-45.9	-13.0	-32.9	
1.698	47.6	H	-47.9	3.9	8.1	5.9	-45.8	-13.0	-32.8	
2.546	46.6	H	-48.3	4.9	9.6	7.4	-45.8	-13.0	-32.8	
3.000	43.1	H	-57.3	5.3	9.8	7.6	-54.9	-13.0	-41.9	

Rev. 412.7

WCDMA 850

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont Sm B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Ninous Davoudi										
Configuration: EUT with Charger										
Mode: Cell Band WCDMA										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		High Pass Filter				
T73; S/N: 6717 @3m				FCC 22						
Hi Frequency Cables										
☐ (2 ft)		☐ (2 ~ 3 ft)		☐ (4 ~ 6 ft)		☒ (12 ft)		Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz
						T145 Agilent 3008A				
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										
1.594	55.3	V	-51.0	3.8	7.8	5.7	-49.0	-13.0	-36.0	
1.656	55.0	V	-51.0	3.9	8.0	5.8	-49.0	-13.0	-36.0	
1.746	58.6	V	-47.0	4.0	8.2	6.1	-44.9	-13.0	-31.9	
2.537	56.3	V	-45.9	4.9	9.6	7.4	-43.4	-13.0	-30.4	
1.688	53.5	H	-51.6	3.9	8.1	5.9	-49.6	-13.0	-36.6	
1.905	54.0	H	-50.1	4.2	8.6	6.4	-47.8	-13.0	-34.8	
2.254	53.8	H	-49.3	4.6	9.3	7.1	-46.8	-13.0	-33.8	
Mid ch										
1.536	56.5	V	-50.0	3.7	7.7	5.6	-48.2	-13.0	-35.2	
1.588	54.9	V	-51.4	3.8	7.8	5.7	-49.5	-13.0	-36.5	
1.656	56.2	V	-49.8	3.9	8.0	5.8	-47.8	-13.0	-34.8	
1.762	57.5	V	-48.0	4.0	8.2	6.1	-45.9	-13.0	-32.9	
1.599	53.1	H	-52.4	3.8	7.9	5.7	-50.5	-13.0	-37.5	
1.637	53.7	H	-51.6	3.8	7.9	5.8	-49.7	-13.0	-36.7	
1.798	54.1	H	-50.5	4.0	8.3	6.2	-48.4	-13.0	-35.4	
High ch										
1.577	55.5	V	-50.8	3.8	7.8	5.7	-48.9	-13.0	-35.9	
1.599	55.3	V	-50.9	3.8	7.9	5.7	-49.0	-13.0	-36.0	
1.669	55.1	V	-50.8	3.9	8.0	5.9	-48.8	-13.0	-35.8	
1.781	57.4	V	-48.0	4.0	8.3	6.1	-45.9	-13.0	-32.9	
1.594	53.5	H	-40.9	3.8	7.8	5.7	-39.0	-13.0	-26.0	
1.691	54.9	H	-39.6	3.9	8.1	5.9	-37.6	-13.0	-24.6	
3.105	53.9	H	-39.2	5.4	9.8	7.6	-37.0	-13.0	-24.0	

Rev. 4.12.7

WCDMA 850 + HSDPA

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont 5m B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Ninous Davoudi										
Configuration: EUT with Charger										
Mode: Cell Band WCDMA + HSDPA										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		High Pass Filter				
T73; S/N: 6717 @3m				FCC 22						
Hi Frequency Cables				Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz				
☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)				T145 Agilent 3008A						
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										
1.750	61.6	V	-43.9	4.0	8.2	6.1	-41.9	-13.0	-28.9	
1.938	54.2	V	-50.4	4.2	8.7	6.5	-48.1	-13.0	-35.1	
2.467	59.4	V	-43.0	4.9	9.5	7.4	-40.5	-13.0	-27.5	
2.874	74.8	V	-26.1	5.2	9.7	7.6	-23.8	-13.0	-10.8	
1.620	53.4	H	-52.0	3.8	7.9	5.8	-50.0	-13.0	-37.0	
2.456	55.4	H	-46.9	4.9	9.5	7.4	-44.4	-13.0	-31.4	
2.882	57.3	H	-43.4	5.2	9.7	7.6	-41.1	-13.0	-28.1	
3.128	54.0	H	-45.8	5.4	9.8	7.6	-43.6	-13.0	-30.6	
Mid ch										
1.573	54.7	V	-51.6	3.7	7.8	5.6	-49.7	-13.0	-36.7	
1.648	55.3	V	-50.7	3.8	8.0	5.8	-48.7	-13.0	-35.7	
1.762	57.8	V	-47.6	4.0	8.2	6.1	-45.5	-13.0	-32.5	
2.466	62.0	V	-40.5	4.9	9.5	7.4	-37.9	-13.0	-24.9	
1.686	54.1	H	-51.0	3.9	8.1	5.9	-49.0	-13.0	-36.0	
2.452	59.9	H	-42.4	4.9	9.5	7.4	-39.9	-13.0	-26.9	
2.872	73.2	H	-27.5	5.2	9.7	7.6	-25.2	-13.0	-12.2	
5.092	52.7	H	-39.0	7.1	10.8	8.7	-37.4	-13.0	-24.4	
High ch										
1.629	54.2	V	-51.9	3.8	7.9	5.8	-49.9	-13.0	-36.9	
1.785	58.0	V	-47.4	4.0	8.3	6.2	-45.3	-13.0	-32.3	
1.989	53.8	V	-50.6	4.3	8.8	6.6	-48.3	-13.0	-35.3	
2.460	54.4	V	-48.1	4.9	9.5	7.4	-45.6	-13.0	-32.6	
1.693	53.2	H	-41.2	3.9	8.1	5.9	-39.2	-13.0	-26.2	
1.785	53.5	H	-40.9	4.0	8.3	6.2	-38.7	-13.0	-25.7	
1.958	53.5	H	-40.9	4.2	8.7	6.6	-38.6	-13.0	-25.6	
2.869	54.0	H	-46.8	5.2	9.7	7.6	-44.4	-13.0	-31.4	

Rev. 412.7

GSM 1900 GPRS

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont 5m B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Ninous Davoudi										
Configuration: EUT with Charger										
Mode: GSM1900 GPRS										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		☒ High Pass Filter				
T73; S/N: 6717 @3m				FCC 24						
Hi Frequency Cables						Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz		
☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)						T145 Agilent 3008A				
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low ch										
5.990	53.5	V	-39.6	7.6	12.2	10.1	-35.0	-13.0	-22.0	
7.040	54.4	V	-36.3	8.1	12.3	10.2	-32.0	-13.0	-19.0	
7.110	54.4	V	-36.2	8.1	12.4	10.2	-32.0	-13.0	-19.0	
9.260	55.2	V	-33.2	9.3	13.0	10.8	-29.5	-13.0	-16.5	
3.300	53.1	H	-45.9	5.6	9.8	7.6	-41.7	-13.0	-28.7	
7.010	53.1	H	-36.8	8.1	12.3	10.2	-32.5	-13.0	-19.5	
9.340	52.3	H	-36.0	9.4	13.0	10.9	-32.3	-13.0	-19.3	
13.330	54.4	H	-24.5	12.3	15.3	13.2	-21.5	-13.0	-8.5	
Mid ch										
8.540	53.7	V	-35.6	8.8	12.9	10.7	-31.6	-13.0	-18.6	
9.250	56.8	V	-31.6	9.3	13.0	10.8	-27.9	-13.0	-14.9	
12.870	54.2	V	-25.7	12.3	15.1	12.9	-22.8	-13.0	-9.8	
13.670	55.1	V	-24.4	12.3	15.4	13.2	-21.4	-13.0	-8.4	
3.270	53.2	H	-45.9	5.6	9.8	7.6	-41.7	-13.0	-28.7	
8.530	53.1	H	-35.1	8.8	12.9	10.7	-31.1	-13.0	-18.1	
14.110	55.4	H	-22.7	12.4	15.3	13.2	-19.7	-13.0	-6.7	
15.490	55.0	H	-23.4	12.7	15.8	13.7	-20.2	-13.0	-7.2	
High ch										
3.110	53.6	V	-46.4	5.4	9.8	7.6	-42.0	-13.0	-29.0	
3.610	53.0	V	-44.5	5.9	9.7	7.6	-40.6	-13.0	-27.6	
9.250	56.2	V	-32.2	9.3	13.0	10.8	-28.5	-13.0	-15.5	
17.110	55.2	V	-15.7	13.2	13.6	11.5	-15.3	-13.0	-2.3	
6.790	53.0	H	-38.5	8.0	12.3	10.1	-34.2	-13.0	-21.2	
7.050	53.7	H	-37.6	8.1	12.3	10.2	-33.4	-13.0	-20.4	
9.320	52.4	H	-37.1	9.3	13.0	10.8	-33.5	-13.0	-20.5	
10.370	51.9	H	-32.2	10.4	13.5	11.4	-29.2	-13.0	-16.2	
Rev. 412.7										

GSM 1900 EGPRS

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont 5m B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Ninous Davoudi										
Configuration: EUT with Charger										
Mode: GSM1900 EGPRS										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		☒ High Pass Filter				
T73; S/N: 6717 @3m				FCC 24						
Hi Frequency Cables				Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz				
☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)				T145 Agilent 3008A						
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low ch										
3.360	53.1	V	-45.6	5.6	9.8	7.6	-41.5	-13.0	-28.5	
3.740	52.5	V	-44.4	6.0	9.7	7.6	-40.7	-13.0	-27.7	
6.490	52.6	V	-39.1	7.8	12.3	10.1	-34.7	-13.0	-21.7	
8.510	53.6	V	-35.8	8.8	12.9	10.7	-31.7	-13.0	-18.7	
3.780	52.1	H	-44.5	6.0	9.7	7.6	-40.8	-13.0	-27.8	
5.210	52.1	H	-39.3	7.2	10.9	8.8	-35.6	-13.0	-22.6	
7.010	53.1	H	-36.8	8.1	12.3	10.2	-32.6	-13.0	-19.6	
8.870	53.5	H	-34.1	8.9	12.8	10.7	-30.2	-13.0	-17.2	
Mid ch										
4.050	53.5	V	-42.0	6.2	9.7	7.6	-38.5	-13.0	-25.5	
7.000	53.1	V	-37.6	8.1	12.3	10.2	-33.3	-13.0	-20.3	
9.400	56.0	V	-32.1	9.4	13.0	10.9	-28.5	-13.0	-15.5	
13.770	54.2	V	-25.2	12.4	15.4	13.2	-22.2	-13.0	-9.2	
3.120	53.9	H	-46.0	5.4	9.8	7.6	-41.6	-13.0	-28.6	
3.740	52.9	H	-43.9	6.0	9.7	7.6	-40.2	-13.0	-27.2	
6.790	53.0	H	-37.4	8.0	12.3	10.1	-33.1	-13.0	-20.1	
8.640	53.7	H	-34.3	8.8	12.9	10.7	-30.3	-13.0	-17.3	
High ch										
4.010	52.7	V	-42.8	6.2	9.7	7.5	-39.3	-13.0	-26.3	
6.790	53.8	V	-37.2	8.0	12.3	10.1	-32.9	-13.0	-19.9	
7.860	53.8	V	-36.0	8.5	12.8	10.7	-31.7	-13.0	-18.7	
15.480	55.7	V	-22.6	12.7	15.8	13.7	-19.4	-13.0	-6.4	
3.730	53.5	H	-39.5	6.0	9.7	7.6	-35.7	-13.0	-22.7	
6.300	52.7	H	-39.2	7.8	12.2	10.1	-34.7	-13.0	-21.7	
9.340	52.1	H	-37.3	9.4	13.0	10.9	-33.7	-13.0	-20.7	
12.730	54.3	H	-26.5	12.2	14.9	12.8	-23.8	-13.0	-10.8	

Rev. 4.12.7

WCDMA 1900

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont 5m B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Ninous Davoudi										
Configuration: EUT with Charger										
Mode: PCS WCDMA										
Test Equipment:										
EMCO Horn 1-18GHz		Horn > 18GHz		Limit		☒ High Pass Filter				
T73; S/N: 6717 @3m				FCC 24						
Hi Frequency Cables				Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz				
☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)				T145 Agilent 3008A						
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low ch										
3.700	53.6	V	-43.4	5.9	9.7	7.6	-39.6	-13.0	-26.6	
6.970	53.6	V	-37.1	8.1	12.3	10.2	-32.8	-13.0	-19.8	
8.860	53.1	V	-35.7	8.9	12.8	10.7	-31.8	-13.0	-18.8	
11.050	52.6	V	-30.3	11.2	13.8	11.7	-27.7	-13.0	-14.7	
3.700	53.4	H	-43.6	5.9	9.7	7.6	-39.8	-13.0	-26.8	
7.030	53.4	H	-36.5	8.1	12.3	10.2	-32.3	-13.0	-19.3	
7.810	53.8	H	-35.3	8.5	12.8	10.6	-30.9	-13.0	-17.9	
8.870	53.5	H	-34.1	8.9	12.8	10.7	-30.2	-13.0	-17.2	
Mid ch										
3.760	55.3	V	-41.4	6.0	9.7	7.6	-37.7	-13.0	-24.7	
6.970	54.0	V	-36.6	8.1	12.3	10.2	-32.4	-13.0	-19.4	
7.680	53.9	V	-36.1	8.4	12.7	10.6	-31.8	-13.0	-18.8	
9.400	53.2	V	-35.0	9.4	13.0	10.9	-31.3	-13.0	-18.3	
3.760	56.7	H	-40.0	6.0	9.7	7.6	-36.3	-13.0	-23.3	
6.960	53.7	H	-36.3	8.1	12.3	10.2	-32.1	-13.0	-19.1	
8.720	53.6	H	-34.3	8.9	12.9	10.7	-30.3	-13.0	-17.3	
13.560	55.0	H	-23.8	12.3	15.3	13.2	-20.8	-13.0	-7.8	
High ch										
3.820	68.0	V	-28.5	6.0	9.7	7.5	-24.8	-13.0	-11.8	
6.810	53.4	V	-37.6	8.0	12.3	10.1	-33.3	-13.0	-20.3	
7.050	53.9	V	-36.8	8.1	12.3	10.2	-32.6	-13.0	-19.6	
3.820	69.2	H	-22.6	6.0	9.7	7.5	-18.9	-13.0	-5.9	
7.070	53.5	H	-36.9	8.1	12.3	10.2	-32.6	-13.0	-19.6	
11.940	54.4	H	-29.7	12.1	14.1	11.9	-27.7	-13.0	-14.7	
14.070	56.0	H	-22.2	12.4	15.4	13.2	-19.3	-13.0	-6.3	
Rev. 4.12.7										

WCDMA 1900 + HSDPA

High Frequency Substitution Measurement										
Compliance Certification Services, Fremont 5m B-Chamber										
Company: Toshiba America Information Systems, Inc.										
Project #: 07U11255										
Date: 08/09/07										
Test Engineer: Ninous Davoudi										
Configuration: EUT with Charger										
Mode: PCS WCDMA + HSDPA										
Test Equipment:										
EMCO Horn 1-18GHz T73; S/N: 6717 @3m			Horn > 18GHz			Limit FCC 24		☒ High Pass Filter		
Hi Frequency Cables ☐ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☒ (12 ft)				Pre-amplifier 1-26GHz T145 Agilent 3008A		Pre-amplifier 26-40GHz				
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low ch										
6.820	53.9	V	-37.0	8.0	12.3	10.1	-32.7	-13.0	-19.7	
8.610	52.2	V	-37.1	8.8	12.9	10.7	-33.0	-13.0	-20.0	
10.100	51.9	V	-34.2	10.2	13.4	11.2	-30.9	-13.0	-17.9	
6.970	53.0	H	-37.0	8.1	12.3	10.2	-32.8	-13.0	-19.8	
7.730	52.6	H	-36.6	8.4	12.8	10.6	-32.2	-13.0	-19.2	
8.550	53.4	H	-34.8	8.8	12.9	10.7	-30.7	-13.0	-17.7	
Mid ch										
3.760	53.5	V	-43.3	6.0	9.7	7.6	-39.6	-13.0	-26.6	
5.380	51.7	V	-40.6	7.3	11.1	8.9	-36.9	-13.0	-23.9	
7.300	53.6	V	-36.8	8.2	12.5	10.3	-32.5	-13.0	-19.5	
3.760	53.0	H	-41.7	6.0	9.7	7.6	-38.0	-13.0	-25.0	
6.960	53.8	H	-36.2	8.1	12.3	10.2	-31.9	-13.0	-18.9	
8.450	53.0	H	-35.3	8.8	12.9	10.7	-31.2	-13.0	-18.2	
High ch										
3.820	66.3	V	-30.2	6.0	9.7	7.5	-26.5	-13.0	-13.5	
7.060	53.9	V	-36.7	8.1	12.3	10.2	-32.5	-13.0	-19.5	
8.730	52.9	V	-36.1	8.9	12.9	10.7	-32.1	-13.0	-19.1	
3.820	67.7	H	-24.1	6.0	9.7	7.5	-20.5	-13.0	-7.5	
6.970	53.6	H	-36.8	8.1	12.3	10.2	-32.5	-13.0	-19.5	
7.710	54.1	H	-36.0	8.4	12.7	10.6	-31.7	-13.0	-18.7	
Rev. 412.7										

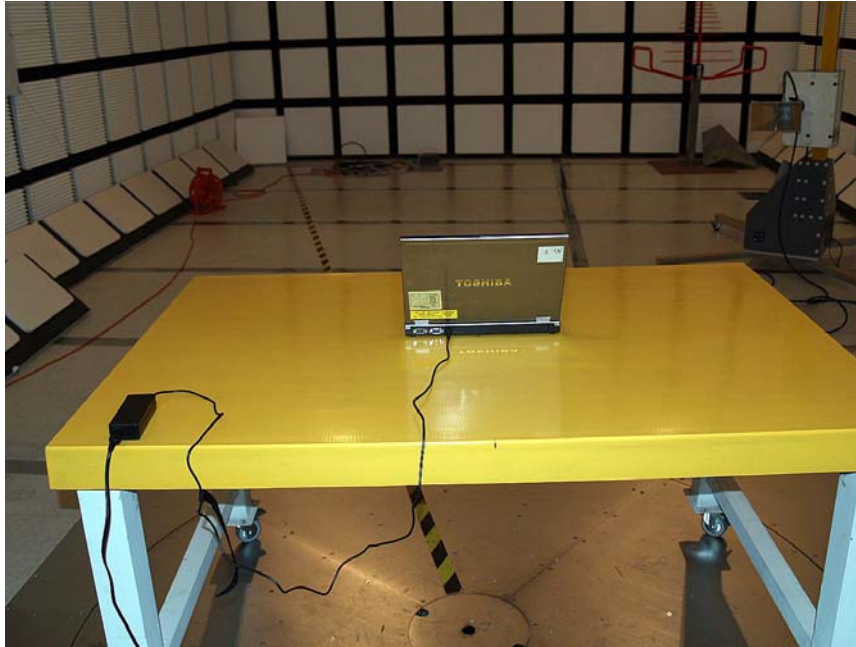
Note: No other emissions were found up to 10th harmonic and 30-1000MHz of 20dB below the system noise.

8. SETUP PHOTOS

RADIATED RF MEASUREMENT SETUP



RADIATED BACK PHOTO



END OF REPORT